

VOL.  
25  
Bk. 6  
August  
1980

DISCRETE SERIES  
Volume 25 Book 6  
August 1980

TRANSISTOR  
DISCONTINUED DEVICES

# EDITION '16

September 1980 through August 1981

# TRANSISTOR DISCONTINUED DEVICES

D.A.T.A. BOOK<sup>®</sup>

# D.A.T.A. BOOK<sup>®</sup>

Electronic Information Service

EIS  
EDITION  
**16**  
D.A.T.A.  
INC.

# Now — a semiconductor/IC type number alone will get you **INSTANT PRODUCT CLASS AND SOURCE DATA**

The **MASTER TYPE LOCATOR** —  
the **New D.A.T.A.BOOK®** with instant  
answers to questions like these:

- "That's the type number, sure. But what kind of device is it?"
- "Who makes this device and what's their address?"
- "Where do you get the essential specs on the device fast . . ."

## INSTANT TYPE IDENTIFICATION

Numeric/alpha-numeric listings combined with D.A.T.A.'s unique Product Class Code let you identify a device instantly when you know the type number.

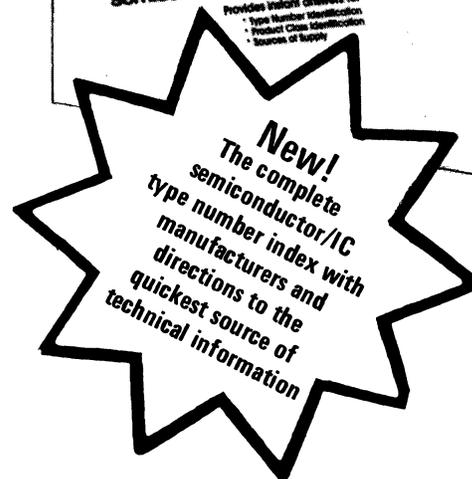
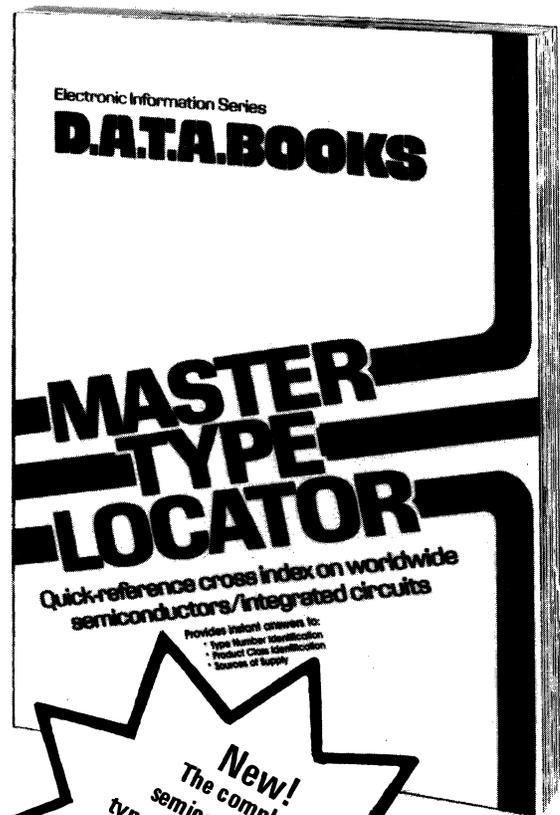
And coverage is the most complete available today. 151,500 discrete types appear, including 29,900 Transistors, 50,600 Diodes, 22,300 Thyristors, plus duplicate reference to 40,100 Power Semiconductors in these three classes; and 8,600 Optoelectronic devices. 47,000 IC types are listed, including 16,000 Digital, 9,800 Interface, 7,900 Memory and 13,300 Linear devices. Incorporated in these totals are over 11,300 JEDEC and 6,500 military-qualified devices. In all, the MTL identifies 100 separate product classes.

## INSTANT MANUFACTURER INFORMATION

Manufacturers of these devices are referenced in the Tabulation section. A flip of the pages takes you to the complete address. And that makes requesting additional information — or ordering — as simple as turning a page.

## INSTANT ACCESS TO TECHNICAL DATA

If you need technical data instantly and are a D.A.T.A.-BOOK subscriber, the Product Class Code tells you which D.A.T.A.BOOK to consult. It even tells you what Technical Sections to go to!



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D.A.T.A., Inc. is a subsidiary of CORDURA PUBLICATIONS, INC. 2251 San Diego Ave., Suite A216 San Diego CA 92110  
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Discontinued Transistor Edition is published in August.

Subscription Rates: Current prices on Order Card.

Change of Address: When sending change of address, please include old address; preferably the label from the latest edition.

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# TRANSISTOR DISCONTINUED DEVICES D.A.T.A. BOOK<sup>®</sup>

Edition 16  
13,375 Types  
Obsolete Since 1956

September 1980 through August 1981  
147 Manufacturers

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# HOW TO MAKE MAXIMUM USE OF THIS D.A.T.A.BOOK

To make maximum use of this D.A.T.A.BOOK, select the particular known-unknown situation below that defines your problem, and follow the instructions as indicated.

Refer to all editions of TRANSISTOR D.A.T.A.BOOK.

1	<p>KNOWN: Type Number (2N1106; 2N3406) UNKNOWN: Manufacturer(s), Address(es)</p> <ol style="list-style-type: none"><li>Turn to Type Number Cross-Index (see Table of Contents), and locate the subject type number.</li><li>Note the 3- or 4-letter Manufacturer Code, e.g., TII, GESY, alongside the type number.</li><li>Use the list of Manufacturers Codes, Names and Addresses in back of the book to identify the manufacturer.</li></ol>
2	<p>KNOWN: Type Number (2N1106) UNKNOWN: Its Electrical Characteristics</p> <ol style="list-style-type: none"><li>Turn to Type Number Cross-Index and locate the subject type number.</li><li>Note the page and line number, e.g., 82-85, alongside the type number.</li><li>Locate the type number as noted, in the technical sections.</li></ol>
3	<p>KNOWN: Type Number UNKNOWN: Current Equivalents or Similar Types</p> <ol style="list-style-type: none"><li>Turn to Type Number Cross-Index and locate the subject type number.</li><li>Observe whether the subject type has been replaced by another type, and whether the replacement type is itself current (cur) or obsolete (obs).</li><li>If the replacement type is obsolete, look for it in the Type Number Cross-Index of this book; if current, in the Type Number Cross-Index of the current TRANSISTOR D.A.T.A.BOOK.</li><li>If no replacement type is indicated, turn to the technical section in this book and locate the subject type. Then turn to the corresponding section of the current TRANSISTOR D.A.T.A.BOOK, and survey the type numbers in that section to select a suitable replacement. (In doing this, use the sequencing parameters at the top corner of the page.)</li></ol>

# INTERPRETER SYMBOLS & CODES EXPLAINED

ALL VALUES ARE TYPICAL AND @ 25°C UNLESS OTHERWISE INDICATED BY COLUMN HEADINGS OR SYMBOLS.

FOLLOWING TYPE NO. & IN TYPE NO. CROSS-INDEX:

$\%$   $\Delta$  } Used when two or more manufacturers assign the same type number to different devices.  
 $\#$   $\square$  }

- RT ..... Indicates replacement type; consult manufacturer.

## SYMBOLS & CODES COMMON TO MORE THAN ONE TECHNICAL SECTION

**TYPE NO.**

- † - Switching type, also listed in Section 12
- ∅ - Chopper, also listed in Section 15, Category 10
- \* - These types also included elsewhere with other characteristics. See Type No. Cross Index for alternate line number.
- § - Radiation resistant devices, also listed in Section 15, Category 13.

**STRUCTURE**  
(All Sections except 6 & 7)

- A - Alloy
- AN - Annular
- D - Diffused or Drift
- DM - Diffused Mesa
- E - Epitaxial
- EA - Epitaxial Amular
- EM - Epitaxial Mesa
- F - Fused
- G - Grown
- GA - Gallium Arsenide
- H - Hometaxial
- MA - Micro Alloy
- MD - Micro alloy Diffused
- ME - Mesa

**MOS** - Metal Oxide Silicon

- PA - Precision Alloy
- PC - Point Contact
- PD - Precision alloy Diffused
- PE - Planar Epitaxial
- PL - Planar
- PS - Passivated
- S - Surface barrier
- \* - Matched pair
- $\Delta$  - Switching, other uses
- $\square$  - Chopper, other uses
- $\emptyset$  - Noise figure 8db or below
- † - Plastic package
- $\%$  - Overlay
- # - Radiation resistant device
- \$ - Tetrode

**ENGLISH-RUSSIAN ALPHABET  
TRANSLITERATION FOR USSR TYPES**

ENGLISH	RUSSIAN	ENGLISH	RUSSIAN
A	А	L	Л
B	Б	M	М
V	В	N	Н
G	Г	O	О
D	Д	P	П
E	Е	R	Р
SZ	Ж	S	С
I	И	T	Т
K	К	U	У

**LINE NO.**

- ▼ - New Type
- ◆ - Revised Specifications
- # - Non-JEDEC type manufactured outside U.S.A.

**LEAD CODE**  
See LEAD CODE IDENTIFICATION GUIDE at end of Section 16 of the current TRANSISTOR D.A.T.A.BOOK for all codes and symbols.

## 2. GERMANIUM PNP - 3. GERMANIUM NPN - 4. SILICON PNP - 5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION  
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL DISS @25°C (W)		2 fab (Hz)	DERATE IN FREE AIR W/°C		ABS MAX RATINGS @25°C				TYPICAL h PARAMETERS				Cob (F)	STRUCTURE	DWG Y200 s/a TO200 Ser.	# L C O A D E
		M E	A M		X P	BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	BIAS		COMMON EMITTER						
										hfe	hoe (mhos)	hie (Ω)	hre (X.0001)					
3																		

- 3** ∅ - With infinite heat sink  
Following symbols indicate temperature at which derating starts:  
 † - 40°C      § - 70°C  
 \* - 45°C      Δ - 85°C  
 # - 50°C      \$ - 100°C  
 □ - 60°C      ▼ - Above 100°C  
 ◆ - Min.
- 4** † -  $f_{\alpha e}$   
 § - Gain bandwidth product ( $f_t$ )  
 \* - Maximum frequency of oscillation  
 ∅ - Figure of merit (frequency for unity power gain)  
 # - Rated max. operating frequency  
 Δ - Minimum  
 □ - Maximum
- 5** ∅ - With infinite heat sink
- 6** \* - 50-65°C  
 ∅ - 70-80°C  
 # - 85-100°C  
 ◆ - 110-125°C  
 † - 130-135°C  
 \$ - 140-165°C  
 § - 170-200°C  
 ▼ - Over 200°C  
 A - Ambient  
 C - Case  
 J - Junction  
 S - Storage
- 8** # - BVCEX or punch through  
 ∅ - BVCEs  
 § - BVCEr  
 □ - BVceo (sus)  
 \* - Pulsed  
 \$ - Indicates min. values given for BVcbo, BVceo, and BVebo.  
 ◆ - Indicates values given for BVcbo, BVceo, and BVebo are not breakdown voltage.
- 10** # - Pulsed or Peak  
 \$ - Minimum  
 ▼ - Indicates Negative Value; may apply to BVcbo and/or BVebo
- 11** ∅ - At VCB < max. VCB (see mfr. spec.)  
 # - ICeX  
 § - ICeS  
 \* - ICeR  
 Δ - ICeO  
 □ - ICeV  
 † - At temp. >25°C  
 ◆ - At temp. 25°C case  
 \$ - Typical  
 ▼ - Indicates Negative Value; may apply to BVcbo and/or BVebo
- 12** ∅ - VCE  
 ▼ - Indicates Negative Value; may apply to BVcbo and/or BVebo
- 13** ∅ - IC      Δ - IB  
 ▼ - Indicates Negative Value; may apply to BVcbo and/or BVebo
- 14** † - hFE  
 # - Pulsed  
 § - hFC  
 \* - Available in selected ranges  
 Δ - Minimum  
 □ - Maximum  
 b - h parameters are hob, h<sub>ib</sub>, h<sub>rb</sub>
- 15** □ - Maximum
- 16** ▼ - Reverse DC current gain for bi-directional transistor (omit column multiplier)
- 17** Δ - Minimum
- 18** □ - Maximum  
 \$ - Ccb  
 † - Cre  
 § - Cce

• SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION  
 ▲ SEE TYPE No. SYMBOLS & CODES

**INTERPRETER**  
**SYMBOLS & CODES EXPLAINED**

**6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL**  
**7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL**

IN ORDER OF (1) DISSIPATION  
(2) TYPE No.

LINE No.	TYPE No.	1 MAX. DEVICE DISS @ 25°C (W)	MAX. Vp (V)	MAX. Id=0 Vds (V)	ABS MAX RATINGS @ 25°C		MAX. Id (A)	MAX. Ig (A)	MAX. Idss @ Vgs=0 & Vds > Vp (A)	MAX. Igss @ Vgs > Vp & Vds = 0 (A)	TEST COND		COMMON SOURCE		PARAMETERS @ 25°C		DERATE		STRUC-TURE	DWG #	# C	
					BVdss (V)	BVgss (V)					Vgs (V)	Vds (V)	gfs (mhos)	r(DS) (Ω)	Yos (F)	on (F)	Cis (F)	FREE AIR W/°C (°C)				MAX TEMP (°C)
<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>20</b>	<b>21</b>					

**2** ▼ - Matched type, also listed in Section 15, Category 6  
◆ - Phototransistor  
NOTE: For dual gate devices, Gate 1 specifications apply.

**3** Δ - With infinite heat sink (applies also to Derate column)  
† - Above 25°C; for additional information, consult manufacturer.  
# - Per Channel

**4** † - VGS (Cut Off)  
Δ - VGST (Threshold)  
% - Typical  
# - Minimum

**5** Δ - Depletion Mode, Type A  
§ - Depletion-Enhancement Mode, Type B  
\* - Enhancement Mode, Type C

**6** Δ - BVDSO  
† - BVDSX  
\* - BV DGS  
∅ - BV DGO  
# - Min  
\$ - Typical

**7** Δ - BV DGO  
\* - BV DGS  
∅ - BV GSO  
\$ - Typical  
# - Minimum

**10** Δ - Idss @ VGS = 0 and VDS ≈ Vp  
∅ - VGS > 0  
# - Minimum  
\* - Typical  
% - Pulsed  
§ - VGS < 0

**11** Δ - IGDO

**12** ∅ - ID in mA  
∅ - ID in Amps

**13** Δ - VGD  
† - VDG

**14** Following symbols apply to both columns, may only be used in one:

**15** † - Pulsed  
% - High frequency (Yfs) (A/V)  
∅ - YFS (A/V)  
§ - gfg  
∅ - ID (on) in Amps  
Δ - Typical  
\* - Transconductance (gm)

**16** Δ - Yis  
§ - Yog  
† - Not at given test conditions  
% - Maximum  
\* - Pulsed

**17** % - Maximum  
Δ - Not given at test conditions  
† - RDS (on) at VDS = 0

**18** # - Ciss (Output Shorted)  
Δ - Cdgs  
% - Not given at test conditions  
\* - Typical  
∅ - Cds  
∅ - Cdgo  
§ - Cigs  
\$ - Crss  
† - Cgss

**20** A - Ambient  
C - Case  
J - Junction  
S - Storage

**21 STRUCTURE**

D - Diffused  
E - Epitaxial  
GA - Gallium Arsenide  
Ge - Germanium  
H - Hometaxial  
M - MOS  
PE - Planar Epitaxial  
PL - Planar  
VM - VMOS  
# - Junction type  
\* - Insulated gate (MOS type)  
§ - Matched pair  
Δ - Switching, other uses  
∅ - Chopper, other uses  
∅ - Noise figure 8db or below  
† - Plastic package  
\$ - Tetrode  
% - Insulated gate (MNOS type)  
◆ - Diode protected gates

NOTE: All devices silicon unless otherwise indicated

● SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION

▲ SEE TYPE No. SYMBOLS & CODES

**INTERPRETER  
SYMBOLS & CODES EXPLAINED**

**SYMBOLS & CODES COMMON TO MORE THAN ONE TECHNICAL SECTION**

**TYPE NO.**  
 † - Switching type, also listed in Section 12  
 ∅ - Chopper, also listed in Section 15, Category 10  
 \* - These types also included elsewhere with other characteristics. See Type No. Cross Index for alternate line number.  
 § - Radiation resistant devices, also listed in Section 15, Category 13.

**STRUCTURE**  
 (All Sections except 6 & 7)  
 A - Alloy  
 AN - Annular  
 D - Diffused or Drift  
 DM - Diffused Mesa  
 E - Epitaxial  
 EA - Epitaxial Amular  
 EM - Epitaxial Mesa  
 F - Fused  
 G - Grown  
 GA - Gallium Arsenide  
 H - Hometaxial  
 MA - Micro Alloy  
 MD - Micro alloy Diffused  
 ME - Mesa

**MOS** - Metal Oxide Silicon  
 PA - Precision Alloy  
 PC - Point Contact  
 PD - Precision alloy Diffused  
 PE - Planar Epitaxial  
 PL - Planar  
 PS - Passivated  
 S - Surface barrier  
 \* - Matched pair  
 △ - Switching, other uses  
 ∅ - Chopper, other uses  
 ∅ - Noise figure 8db or below  
 † - Plastic package  
 % - Overlay  
 # - Radiation resistant device  
 \$ - Tetrode

**ENGLISH-RUSSIAN ALPHABET  
TRANSLITERATION FOR USSR TYPES**

ENGLISH	RUSSIAN	ENGLISH	RUSSIAN
A	А	L	Л
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V	В	N	Н
G	Г	O	О
D	Д	P	П
E	Е	R	Р
SZ	Ж	S	С
I	И	T	Т
K	К	U	У

**LINE NO.**  
 ▼ - New Type  
 ◆ - Revised Specifications  
 # - Non-JEDEC type manufactured outside U.S.A.

**LEAD CODE**  
 See LEAD CODE IDENTIFICATION GUIDE at end of Section 16 of the current TRANSISTOR D.A.T.A.BOOK for all codes and symbols.

**8. GERMANIUM PNP - 9. GERMANIUM NPN - 10. SILICON PNP - 11. SILICON NPN - HIGH POWER TRANSISTORS**

IN ORDER OF (1) MIN. DERATING FACTOR & (2) TYPE No.

LINE No.	TYPE No.	1 MIN DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE		f <sub>ae</sub>	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # s/a TO200 Ser.	# CODE
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo @ MAX Vcb (A)	BIAS Ic (A)						
3																		

**3** Also applies to J to F (Junction to Flange)  
 The following symbols indicate temp at which derating starts:  
 † - 40°C      ◆ - 80°C  
 \* - 45°C      \$ - 100°C  
 # - 50°C      ∅ - Free Air  
 ∅ - 60°C      ▼ - Typical Value  
 § - 75°C      △ - > 100°C

**4** ∅ - With infinite heat sink  
 The following symbols indicate conditions at which Pc is measured:  
 † - 40°C      \$ - 100°C  
 \* - 45°C      ▼ - Power output  
 # - 50°C      △ - Pulsed  
 ∅ - 60°C      % - Min.  
 § - 70°C  
 ◆ - 80°C

**5** \* - 50-65°C      § - 170-200°C  
 ∅ - 70-80°C      ▼ - Over 200°C-  
 # - 85-100°C      A - Ambient  
 ◆ - 110-125°C      C - Case  
 † - 130-135°C      J - Junction  
 § - 140-165°C      S - Storage

**6** ∅ - I<sub>E</sub>  
 # - Pulsed or peak  
 † - At Temp. 25°C case  
 \$ - Minimum  
 ▼ - Indicates Negative Value

**7** ∅ - I<sub>E</sub>  
 # - Pulsed  
 \$ - Minimum  
 ▼ - Indicates Negative Value

**8** † - At temp. 25°C case  
 \$ - Minimum  
 ▼ - Indicates Negative Value

**9** † - At temp. 25°C case  
 \$ - Minimum  
 ▼ - Indicates Negative Value

**10** # - BV<sub>CEX</sub> or punch-through  
 ∅ - BV<sub>CES</sub>  
 § - BV<sub>CER</sub>  
 ∅ - BV<sub>ceo</sub>(SUS)  
 \* - Pulsed  
 \$ - Minimum  
 † - At temp. 25°C case  
 ◆ - Indicates values given for BV<sub>cbo</sub>, BV<sub>ceo</sub>, and BV<sub>ebo</sub>, are not breakdown voltages.  
 ▼ - Indicates Negative Value

**11** ∅ - At V<sub>CB</sub> < max. V<sub>CB</sub> (see mfr. spec.)  
 # - I<sub>CEX</sub>      ∅ - I<sub>CEV</sub>  
 \$ - I<sub>CES</sub>      † - At temp. > 250°C  
 \* - I<sub>CER</sub>      ◆ - At temp. 25°C case  
 △ - I<sub>CEO</sub>      \$ - Typical  
 ▼ - Indicates Negative Value

**12** ∅ - V<sub>ce</sub>  
 ▼ - Indicates Negative Value

**13** △ - I<sub>E</sub>  
 ∅ - I<sub>B</sub>  
 ▼ - Indicates Negative Value

**14** † - h<sub>fe</sub>  
 # - Pulsed  
**15** ∅ - Typical  
 \* - Available to selected range narrower than indicated

**16** # - Rated max. operating frequency  
 † - f<sub>αb</sub>  
 § - Gain bandwidth product (f<sub>T</sub>)  
 \* - Maximum frequency of oscillation  
 ∅ - Figure of merit (frequency for unity power gain)  
 △ - Minimum  
 ∅ - Maximum

**17** ▼ - Typical value  
 # - Pulsed

**18** ∅ - Maximum      # - t<sub>f</sub>  
 ∅ - t<sub>d</sub> + t<sub>r</sub> = T<sub>on</sub>      † - t<sub>s</sub> + t<sub>f</sub> = T<sub>off</sub>  
 \$ - t<sub>s</sub>      \* - T<sub>on</sub> + T<sub>off</sub>  
 △ - t<sub>d</sub> + t<sub>r</sub> + t<sub>f</sub> = Sat. Sw. Time

• SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION      ▲ SEE TYPE No. SYMBOLS & CODES

**INTERPRETER  
SYMBOLS & CODES EXPLAINED**

**SYMBOLS & CODES COMMON TO MORE THAN ONE TECHNICAL SECTION**

**TYPE NO.**

- † - Switching type, also listed in Section 12
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**ENGLISH-RUSSIAN ALPHABET  
TRANSLITERATION FOR USSR TYPES**

ENGLISH	RUSSIAN	ENGLISH	RUSSIAN
A	А	L	Л
B	Б	M	М
V	В	N	Н
G	Г	O	О
D	Д	P	П
E	Е	R	Р
SZ	Ж	S	С
I	И	T	Т
K	К	U	У

**STRUCTURE**

(All Sections except 6 & 7)

- A - Alloy
- AN - Annular
- D - Diffused or Drift
- DM - Diffused Mesa
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- H - Hometaxial
- MA - Micro Alloy
- MD - Micro alloy Diffused
- ME - Mesa

**MOS**

- Metal Oxide Silicon

- PA - Precision Alloy
- PC - Point Contact
- PD - Precision alloy Diffused
- PE - Planar Epitaxial
- PL - Planar
- PS - Passivated
- S - Surface barrier
- \* - Matched pair
- △ - Switching, other uses
- ∇ - Chopper, other uses
- ∅ - Noise figure 8db or below
- † - Plastic package
- % - Overlay
- # - Radiation resistant device
- \$ - Tetrode

**LINE NO.**

- ▼ - New Type
- ◆ - Revised Specifications
- # - Non-JEDEC type manufactured outside U.S.A.

**LEAD CODE**

See LEAD CODE IDENTIFICATION GUIDE at end of Section 16 of the current TRANSISTOR D.A.T.A.BOOK for all codes and symbols.

THESE TYPES ALSO INCLUDED ELSEWHERE WITH OTHER CHARACTERISTICS  
SEE TYPE NO. CROSS INDEX FOR ADDITIONAL PAGE & LINE NO.

**12. SWITCHING TRANSISTORS**

IN ORDER OF (1) MAX RISE TIME, (2)  $f_{\beta}$  & (3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME $t_r$ (s)	MAX DELAY TIME $t_d$ (s)	MAX STORE TIME $t_s$ (s)	MAX FALL TIME $t_f$ (s)	MAX Pc AIR @ 25°C (W)	BIAS $V_{cb}$ (V)	$I_e$ (A)	hFE	MAX. SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-NPN N-NPN	MAX. TEMP. T (°C)	MAX. Y200 s/a TO200 Ser.	DWG # L C E O A D E
3	2	1	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

- 3** † -  $f_{\beta}$
- § - Gain Bandwidth product ( $f_T$ )
  - \* - Maximum frequency of oscillation
  - ∅ - Figure of merit (frequency for unity power gain)
  - # - Rated operating frequency
  - △ - Minimum
  - ∇ - Maximum

- 4** \$ - Charge storage time constant
- 5** ▼ - Stored base charge - picocoulomb
- ◆ - Total switching time
  - ∅ -  $T_{on} = t_r + t_d$
  - † - Typical value

- 6** ∅ -  $T_{off} = t_s + t_f$
- 7** † - Typical value
- \* -  $T_{on} + T_{off} = t_d + t_r + t_f + t_s$
  - ∇ -  $T_d$  (off)

- 8** ∅ - With infinite heat sink
- The following symbols indicate temperature at which derating starts:
- † - 40°C
  - \* - 45°C
  - # - 50°C
  - ∇ - 60°C
  - § - 70°C
  - ◆ - 80°C
  - \$ - 100°C or greater
  - △ - Pulsed

- 9** ∅ -  $V_{CE}$

- 10** ∅ -  $I_c$
- △ -  $I_B$

- 11** † -  $h_{fe}$
- # - Pulsed
  - △ - Minimum
  - ∇ - Maximum
  - \* - Available to selected range narrower than indicated
  - § -  $Y_{fs}$  in millimho (FETs only). Bias values are  $V_{DS}$  and  $I_D$ .

- 12** § -  $R_{on}$  (FETs only)
- # - Pulsed
  - ▼ - Typical value
  - \* -  $r_{ds}$  (on)

- 13** ∇ - Maximum
- \$ -  $C_{cb}$
  - § -  $C_{iss}$  (FETs only)

- 14** † -  $r'_{bb}$

- 15** N - NPN or "N" channel
- P - PNP or "P" channel
- § - Field effect transistor

- 16** Ge - Germanium
- Si - Silicon

- 17** A - Ambient
- C - Case
- J - Junction
- S - Storage

• SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION

▲ SEE TYPE No. SYMBOLS & CODES

**INTERPRETER  
SYMBOLS & CODES EXPLAINED**

**13. DARLINGTON TRANSISTORS**

IN ORDER OF (1) MIN DERATING FACTOR  
(2) MIN hFE (3) IC TEST (4) TYPE No.

LINE No.	4 TYPE No.	POL. & MAT. N-NPN P-PNP	1 MIN DERATE J TO C (W/°C)	hFE		TEST		ABSOLUTE MAX RATINGS @ 25°C					MAX COLL (CASE) DISS-Pc (W)	M A X T °C	MAX ICBO @ 25°C (A)	ft (Hz)	MAX SAT RES (Ω)	S T U R U E C	DWG No	L C E O A D E
				2 MIN hFE	MAX hFE	VCE	IC	IC	IB	IC	IB	IC								

- |   |   |  |
|---|---|--|
| <p><b>3</b> N - NPN<br/>P - PNP<br/>Si - Silicon<br/>Ge - Germanium<br/>C - Complementary pair</p> <p><b>4</b> Also applies to J to F (Junction to Flange)<br/>† - 40°C<br/>* - 45°C<br/># - 50°C<br/>∅ - 60°C<br/>§ - 75°C</p> <p><b>5</b> † - h<sub>FE</sub><br/># - Pulsed</p> <p><b>6</b> ∅ - Typical<br/>* - Available to selected range narrower than indicated</p> <p><b>7</b> ∅ - V<sub>CB</sub><br/>▼ - Indicates Negative Value</p> <p><b>8</b> Δ - I<sub>E</sub><br/>∅ - I<sub>B</sub><br/>▼ - Indicates Negative Value</p> <p><b>9</b> ∅ - I<sub>E</sub><br/># - Pulsed or Peak<br/>† - At temp. 25°C case<br/>§ - Minimum<br/>▼ - Indicates Negative Value</p> | <p><b>10</b> ∅ - I<sub>E</sub><br/># - Pulsed<br/>§ - Minimum<br/>▼ - Indicates Negative Value</p> <p><b>11</b> † - At temp. 25°C case</p> <p><b>12</b> § - Minimum<br/>▼ - Indicates Negative Value</p> <p><b>13</b> # - BV<sub>CEx</sub> or punch-through<br/>∅ - BV<sub>CES</sub><br/>§ - BV<sub>CER</sub><br/>§ - Minimum<br/>* - Pulsed<br/>∅ - BV<sub>CEO</sub> (SUS)<br/>† - At temp. 25°C case<br/>♦ - Indicates values given for BV<sub>cb0</sub>, BV<sub>ceo</sub>, and BV<sub>ebo</sub>, are not breakdown voltages.<br/>▼ - Indicates Negative Value</p> <p><b>14</b> The following symbols indicate temp. at which derating starts:<br/>† - 40°C<br/>* - 45°C<br/># - 50°C<br/>∅ - 60°C<br/>§ - 70°C<br/>♦ - 80°C<br/>§ - 100°C<br/>∅ - At ambient temp.<br/>▼ - Power output<br/>Δ - Pulsed<br/>% - Minimum</p> | <p><b>15</b> * - 50-65°C<br/>∅ - 70-80°C<br/># - 85-100°C<br/>♦ - 110-125°C<br/>† - 130-135°C<br/>§ - 140-165°C</p> <p><b>16</b> ∅ - At V<sub>CB</sub> &lt; Max. V<sub>CB</sub> (see Mfr. spec.)<br/># - I<sub>CEx</sub><br/>§ - I<sub>CES</sub><br/>* - I<sub>CER</sub><br/>Δ - I<sub>CEO</sub><br/>∅ - I<sub>CEV</sub><br/>§ - Typical<br/>♦ - At temp. 25°C case<br/>† - At temp. &gt; 25°C<br/>▼ - Indicates Negative Value</p> <p><b>17</b> # - Rated max. operating frequency<br/>† - f<sub>αb</sub><br/>* - Max. frequency of oscillation<br/>∅ - Figure of merit (frequency for unity power gain)<br/>Δ - Minimum<br/>§ - f<sub>αe</sub><br/>∅ - Maximum</p> <p><b>18</b> ▼ - Typical value<br/># - Pulsed</p> |
|---|---|--|
- Symbols indicate temp. at which derating starts.

**15. MISCELLANEOUS TRANSISTORS**

IN ORDER OF: (1) CATEGORY, (2) TYPE NO.

LINE No.	2 TYPE No.	1 CATEGORY	U STRUC- TURE	M DWG #	L C E O A D E	DESCRIPTION

- |   |   |  |
|---|---|--|
| <p><b>3</b> 1 - Avalanche Mode<br/>2 - Bi-directional<br/>3 - Field effect<br/>5 - Complementary symmetry (PNP &amp; NPN) matched pair<br/>6 - Matched pair<br/>7 - Phototransistor (now listed in the OPTOELECTRONICS D.A.T.A.BOOK)<br/>9 - Unijunction:<br/>N-N-type emitter (P-type base)<br/>P-P-type emitter (N-type base)</p> | <p>10 - Chopper<br/>11 - Unmatched composite (dual/quad)<br/>13 - Radiation resistant devices<br/>14 - Pressure/temperature sensors<br/>15 - Transistor chips<br/>16 - Switching<br/>18 - RF power amplifier (rated below 300 MHz)<br/>19 - Other</p> | <p><b>4</b> N - NPN or N channel<br/>P - PNP or P channel</p> <p><b>5</b> GA - Gallium Arsenide<br/>Ge - Germanium<br/>Si - Silicon<br/>GS - Germanium and Silicon (composite)<br/>Mo - Molybdenum</p> <p><b>8</b> See "TECHNICAL TERM DEFINITIONS" Section on Page 520.</p> |
|---|---|--|

• SEE SYMBOLS AND CODES COMMON TO MORE THAN ONE SECTION

▲ SEE TYPE NO. SYMBOLS & CODES

# TECHNICAL TERM DEFINITIONS

<p><b>B</b> — Illumination intensity.</p> <p><b>BV<sub>CBO</sub></b> — Breakdown voltage, collector-to-base; emitter open-circuit.</p> <p><b>BV<sub>CEO</sub></b> — Breakdown voltage, collector-to-emitter; base open-circuit.</p> <p><b>BV<sub>CER</sub></b> — Breakdown voltage, collector-to-emitter; with specified base-to-emitter resistance.</p> <p><b>BV<sub>CES</sub></b> — Breakdown voltage, collector-to-emitter; with base short-circuit to emitter.</p> <p><b>BV<sub>CEX</sub></b> — Breakdown voltage, collector-to-emitter; with specified circuit between base and emitter.</p> <p><b>BV<sub>DGO</sub></b> — Breakdown voltage, drain-to-gate; source open circuit (FET).</p> <p><b>BV<sub>DSX</sub></b> — Breakdown voltage, drain-to-source; with specified circuit between gate and source (FET).</p> <p><b>BV<sub>EBO</sub></b> — Breakdown voltage, emitter-to-base; collector open-circuit.</p> <p><b>BV<sub>GD</sub></b> — Breakdown voltage, gate-to-drain (FET).</p> <p><b>BV<sub>GDS</sub></b> — Breakdown voltage, gate-to-drain; with source short-circuit to drain (FET).</p> <p><b>BV<sub>GSS</sub></b> — Breakdown voltage, gate-to-source, with drain short-circuit to source (FET).</p> <p><b>C<sub>ob</sub></b> — Output capacitance with input AC open-circuit, common base.</p> <p><b>C<sub>iss</sub></b> — Small-signal, short-circuit input capacitance, common source (FET).</p> <p><b>C<sub>rss</sub></b> — Magnitude of small-signal, short-circuit reverse transfer capacitance, common source (FET).</p> <p><b>f<sub>αb</sub></b> — Small-signal short-circuit forward current transfer ratio cut off frequency, common base (alpha cut off frequency).</p> <p><b>f<sub>αe</sub></b> — Small-signal short-circuit forward current transfer ratio cut-off frequency, common emitter (beta cut off frequency).</p> <p><b>f<sub>t</sub></b> — Extrapolated unity gain frequency (gain bandwidth product). Product of the common-emitter current transfer ratio and the frequency of measurement at a frequency where the current gain is decreasing at the rate of 6 db per octave. This frequency is also known as the Transition Frequency.</p> <p><b>g<sub>fs</sub></b> — Common source forward transconductance (FET).</p> <p><b>h<sub>FE</sub></b> — DC forward current transfer ratio, common emitter.</p> <p><b>h<sub>fe</sub></b> — Small signal forward current transfer ratio, common emitter.</p> <p><b>h<sub>ib</sub></b> — Small signal value of the short-circuit input impedance, common base.</p> <p><b>h<sub>ie</sub></b> — Small signal value of the short-circuit input impedance, common emitter.</p>	<p><b>h<sub>ob</sub></b> — Small signal value of the open-circuit output admittance, common base.</p> <p><b>h<sub>oe</sub></b> — Small signal value of the open-circuit output admittance, common emitter.</p> <p><b>h<sub>rb</sub></b> — Small signal value of the open-circuit reverse voltage transfer ratio, common base.</p> <p><b>h<sub>re</sub></b> — Small signal value of the open-circuit reverse voltage transfer ratio, common emitter.</p> <p><b>I<sub>B</sub></b> — Base current, DC.</p> <p><b>I<sub>B(Sat)</sub></b> — Base saturation current.</p> <p><b>I<sub>B2(mod)</sub></b> — Interbase modulated current (UJT).</p> <p><b>I<sub>C</sub></b> — Collector current, DC.</p> <p><b>I<sub>C(Sat)</sub></b> — Collector saturation current.</p> <p><b>I<sub>CBO</sub></b> — Collector cutoff current, DC, emitter open-circuit.</p> <p><b>I<sub>CES</sub></b> — Collector cutoff current, DC, with base shorted to emitter.</p> <p><b>I<sub>CEX</sub></b> — Collector cutoff current, DC, with specified circuit between base and emitter.</p> <p><b>I<sub>D</sub></b> — Drain Current, DC (FET).</p> <p><b>I<sub>D(on)</sub></b> — "On" drain current (FET).</p> <p><b>I<sub>DSS</sub></b> — Drain current at zero gate voltage (FET).</p> <p><b>I<sub>E</sub></b> — Emitter current, DC.</p> <p><b>I<sub>EB20</sub></b> — Emitter reverse current, base-one open-circuit, DC (UJT).</p> <p><b>I<sub>CEO</sub></b> — Collector cutoff current with base open-circuit</p> <p><b>I<sub>CER</sub></b> — Collector cutoff current with external base-to-emitter resistance</p> <p><b>I<sub>G</sub></b> — Gate current, DC (FET).</p> <p><b>I<sub>GSS</sub></b> — Gate source reverse current at zero drain-to-source voltage (FET).</p> <p><b>I<sub>off</sub></b> — Offset current, DC (FET).</p> <p><b>I<sub>P</sub></b> — Peak point emitter current (UJT).</p> <p><b>I<sub>P(3)</sub></b> — Third order intercept point</p> <p><b>I<sub>V</sub></b> — Valley point emitter current (UJT).</p> <p><b>n</b> — Intrinsic standoff ratio (UJT).</p> <p><b>NF</b> — Noise factor or noise figure.</p> <p><b>λ<sub>s</sub></b> — Wave length of maximum sensitivity.</p> <p><b>P<sub>c</sub></b> — Collector power dissipation.</p> <p><b>P<sub>d</sub></b> — Power dissipation.</p> <p><b>P<sub>o</sub></b> — Power output.</p> <p><b>P<sub>o1db</sub></b> — Power output at 1.0 db compression point.</p> <p><b>P<sub>T</sub></b> — Total power dissipation.</p>	<p><b>R<sub>BBO</sub></b> — Interbase resistance, with emitter open circuit.</p> <p><b>r<sub>ds(on)</sub></b> — Drain-to-source bulk resistance (FET).</p> <p><b>t<sub>d</sub></b> — Delay time.</p> <p><b>t<sub>f</sub></b> — Fall Time</p> <p><b>t<sub>off</sub></b> — Turn-off time = t<sub>s</sub> + t<sub>f</sub>.</p> <p><b>t<sub>on</sub></b> — Turn-on time = t<sub>d</sub> + t<sub>r</sub>.</p> <p><b>t<sub>r</sub></b> — Rise time.</p> <p><b>t<sub>s</sub></b> — Storage time.</p> <p><b>S<sub>RCE</sub></b> — Collector-emitter radiation sensitivity.</p> <p><b>S<sub>ICE</sub></b> — Collector-emitter illumination sensitivity.</p> <p><b>V<sub>BE</sub></b> — Base-to-emitter voltage, DC.</p> <p><b>V<sub>B2E</sub></b> — Base-two-to-emitter voltage, DC (UJT).</p> <p><b>V<sub>B2B1</sub></b> — Interbase voltage, DC (UJT).</p> <p><b>V<sub>BE(Sat)</sub></b> — Base-to-emitter saturation voltage.</p> <p><b>V<sub>CB</sub></b> — Collector-to-base voltage, DC.</p> <p><b>V<sub>CBO</sub></b> — Collector-to-base voltage, DC, emitter open.</p> <p><b>V<sub>cc</sub></b> — Supply Voltage.</p> <p><b>V<sub>CE</sub></b> — Collector-to-emitter voltage, DC.</p> <p><b>V<sub>CE(Sat)</sub></b> — Collector-to-emitter saturation voltage.</p> <p><b>V<sub>CEO</sub></b> — Collector-to-emitter voltage, DC, base open.</p> <p><b>V<sub>DS</sub></b> — Drain-to-source voltage (FET).</p> <p><b>V<sub>EB1</sub></b> — Emitter-to-base one voltage, DC (UJT).</p> <p><b>V<sub>EBO</sub></b> — Emitter-to-base voltage, DC, collector open.</p> <p><b>V<sub>EB1(Sat)</sub></b> — Emitter saturation voltage (UJT).</p> <p><b>V<sub>GS</sub></b> — Gate-to-source voltage, DC (FET).</p> <p><b>V<sub>GS(off)</sub></b> — Gate-to-source cutoff voltage (FET).</p> <p><b>V<sub>GS(th)</sub></b> — Gate-to-source threshold voltage (FET).</p> <p><b>V<sub>OB1</sub></b> — Base-one peak pulse voltage (UJT).</p> <p><b>V<sub>off</sub></b> — Offset voltage.</p> <p><b>V<sub>p</sub></b> — Peak point emitter voltage (UJT).</p> <p><b>V<sub>p</sub></b> — Drain-to-source pinch-off voltage (FET).</p> <p><b>V<sub>v</sub></b> — Valley point emitter voltage (UJT).</p> <p><b>Y<sub>FE</sub></b> — DC forward transmittance with output short-circuit</p> <p><b>Y<sub>fs</sub></b> — Magnitude of small signal, short-circuit forward transadmittance, common source (FET).</p> <p><b>Y<sub>FS</sub></b> — DC Forward transadmittance (FETS)</p> <p><b>Y<sub>os</sub></b> — Magnitude of small signal, short-circuit output admittance, common source (FET).</p>
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## CHOPPERS

<b>V<sub>(off)</sub></b>	— Emitter offset voltage.
<b>I<sub>(off)</sub></b>	— Emitter offset current.
<b>h<sub>FE(inv)</sub></b>	— DC current gain, inverted connection.
<b>R<sub>d</sub></b>	— Inverted dynamic saturation resistance.
<b>r<sub>s(on)</sub></b>	— "On" series resistance.

## DOUBLE COLLECTOR DEVICES

<b>V<sub>C1C2</sub></b>	— Collector one-collector two voltage.
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## FOR DOUBLE EMITTER CHOPPER DEVICES

<b>V<sub>E1B0</sub> or V<sub>E2B0</sub></b>	— Emitter-to-base voltage, DC, collector open.
<b>V<sub>E1C0</sub> or V<sub>E2C0</sub></b>	— Emitter-to-Collector voltage, DC, base open.
<b>V<sub>E1E2</sub> or V<sub>E2E1</sub></b>	— Emitter one-emitter two offset voltage.
<b>I<sub>E1E20</sub></b>	— Emitter cutoff current.

## MATCHED PAIRS

### NOTE:

- a. For all matching parameter ratios one (1) is always the smaller of the two (2) value of the parameter.
- b. For differential values, if one (1) is always the smaller of the two (2) value, the differential is a negative number.

<b>h<sub>FE1</sub>/h<sub>FE2</sub></b>	— DC current gain ratio.
<b>V<sub>BE1</sub> - V<sub>BE2</sub></b>	— Base-emitter differential voltage.
<b>ΔV<sub>BE1</sub> - V<sub>BE2</sub> / ΔT</b>	— Base-emitter differential voltage change due to a change in temperature.
<b>I<sub>DSS1</sub> / I<sub>DSS2</sub></b>	— Zero gate voltage-drain current ratio.
<b>g<sub>m1</sub> / g<sub>m2</sub></b>	— Transconductance ratio.
<b> V<sub>GS1</sub> - V<sub>GS2</sub> </b>	— Gate-source differential voltage.
<b>ΔV<sub>GS1</sub> - V<sub>GS2</sub> / ΔT</b>	— Gate-source differential voltage change due to a change in temperature.

# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
0T3	THCF	91-27	2N110	ΔWEC	47-73	JAN2N491	GESY	159-99	2N784A/51	SYL	80-52	2N1042-2T	none	89-78
1B1055	THCF	91-28	2N115	ΔWEC	104-14	JAN2N492	TII	159-100	2N789	RTN	65-67	2N1042-20	none	99-79
Repl.by D11B1055 Cur.	none			AMP					SCA	SSI	65-69	2N1043-20	SODI	99-80
1G2	THCF	92-85	2N123/5	STC	45-59	JAN2N493	TII	159-101	2N790	ARTN	65-69	2N1043-20	none	99-81
1T3	THCF	91-28		SYL	147-89	JAN2N494	GESY	159-102	2N791	ARTN	65-69	2N1044-20	none	99-82
2AC127	RTCF	138-1	2N127	ΔTII	51-30	JAN2N495	TII	159-102	2N792	ARTN	65-70	2N1044-20	SODI	99-83
2AC187	RTCF	152-76	JAN2N129	SPR	34-97	JAN2N496	GESY	159-102	2N793	ARTN	65-71	2N1044-20	none	99-84
2AC177	MULB	155-48	2N138A	ΔRTN	44-41	JAN2N495	PHIL	53-89	2N799	ARTN	38-42	2N1045-20	none	99-85
2ACY18	NTLB	155-49	2N138B	ΔRTN	107-10	2N495/18	SPR	53-90	2N800	ARTN	149-94	2N1045-20	SODI	99-86
2ACY17	MULB	155-50	2N142	ΔSYL	107-10	JAN2N496	PHIL	53-88			38-43	2N1045-20	none	99-87
2ACY19	NTLB	155-51	2N143	CBS	98-92	2N496/18	SPR	146-48	2N811	ARTN	149-95	2N1045-20	none	99-88
2AD140	MULB	155-52	2N148A	GEM	51-48			54-1	2N812	ARTN	38-44	2N1047C	ΔTII	124-12
2AD161	RTCF	155-53	2N149	TII	51-49	2N501/18	SYL	146-49	2N813	ARTN	38-45	2N1048C	ΔTII	124-13
2AS215	RTCF	155-53	2N149A	TII	51-50			140-44	2N814	ARTN	38-79	2N1049C	ΔTII	124-14
2AT128	SERA	155-54	2N150	TII	51-51	2N509	WEC	48-45	2N817	ARTN	38-80	2N1050C	ΔTII	124-15
2AT329	SERA	155-55	2N150A	TII	51-52	2N528	WEC	100-8			51-59	JAN2N1081	none	84-22
2AT331	SERA	155-56	2N159	ΔSPR	39-81			147-103			149-30	JAN2N1082	none	67-100
2BC119	SGAI	155-57	JAN2N174	DEL	146-58	JAN2N528	none	98-62	2N818	ARTN	51-60	2N1106	ΔTII	86-90
2BC138	SGAI	155-58	MOTA	RCAS	104-15	2N534	ΔPHIL	34-42	2N819	ARTN	149-31	2N1115A	ΔGESY	45-36
2BC139	SGAI	155-59	2N179	ΔMOTA	104-16	ETC	WEC	48-72	2N820	ARTN	149-15	2N1127	ΔPHIL	98-47
2BC142	SGAI	155-60	2N195	TEC	41-103	JAN2N539AM	SODI	100-101	2N821	ARTN	51-62	2N1131A/51	ΔSYL	56-26
2BC143	SGAI	155-61	2N196	TEC	41-100				2N822	GIC	149-16			142-70
2BC144	SGAI	155-62	2N197	TEC	41-99	JAN2N539M	SODI	100-102	2N822	ARTN	51-63	2N1132/51	SYL	56-28
2BC221	SGAI	155-63	2N198	TEC	41-98						149-17			
2BC222	SGAI	155-64	2N199	TEC	41-95	2N541A	TEC	68-32	2N824	ARTN	51-58	2N1132/TNT	TEC	61-22
2BC286	SGAI	155-65	2N200	TEC	41-104	2N544/33	SYL	40-51			149-18	2N1132/TPT	TEC	53-19
2BC288	SGAI	155-66	2N204	TEC	51-82	2N559	ΔWEC	46-11	2N834/46	SCA	32-43	2N1132A/46	TEC	54-20
2BD117	SGAI	155-67	2N205	TEC	51-80			151-89	2N834/51	TEC	141-87	2N1132B/46	SYL	59-30
2BD131	MULB	155-68	2N214MP	GEM	155-73	JAN2N559/1	MOTA	none	2N834/51	TEC	77-64	2N1132B/51	SYL	56-29
	PHIL		2N217EQ	APX	43-89	Repl.by JAN2N559 Cur.			2N835/46	SCA	141-88			
2BD181	RTCF	155-69	2N220	GIC	37-93	JAN2N559/2	MOTA	none	2N835/46	TEC	82-44	2N1135	ΔPHIL	53-29
2BD182	RTCF	155-70	2N223	ΔMAL	98-2	Repl.by JAN2N559 Cur.			2N835/51	SYL	140-74	2N1135A	ΔPHIL	53-30
2BD183	RTCF	155-71	2N234	ΔSODI	101-4	JAN2N559/3	MOTA	none	2N835/51	TEC	77-61	JAN2N1158A	PHIL	38-6
2C111	SGAI	161-29	2N236	ΔSODI	101-5	Repl.by JAN2X2N559 Cur.			2N841/46	SCA	140-75	JAN2N1196	none	57-70
2C415	SGAI	78-109		BACE		2N577	ΔMULB	159-28			74-107	JAN2N1199A	none	66-21
			2N247/33	SYL	42-102	2N591/5	STC	35-90	2N841/51	TEC	66-11	2N1200	ΔPHIL	63-54
2C425	SGAI	82-81	2N248	ΔTII	34-101				2N841/KVT	TEC	88-34	JAN2N1200	TEC	63-57
				ETC		JAN2N604M	none		2N841/TNT	TEC	63-68	2N1201	ΔPHIL	63-56
2C444	SGAI	82-31	2N258	ΔRTN	55-45	Repl.by JAN2N604 Cur.			2N841/TPT	TEC	66-12	JAN2N1201	none	63-59
			2N259	ΔRTN	55-46	2N624	ΔSYL	42-39	2N846	ΔPHIL	37-50	2N1208/I	STC	128-31
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2G222	STI	104-63	2N260A	ΔCLE	54-84			147-104	2N846B	ΔPHIL	46-4	2N1210/I	STC	128-33
	TIIB		2N261	ΔCLE	54-85	2N625	ΔSYL	52-47			140-50	2N1211/I	STC	128-34
2G225	STI	104-64	2N262	ΔCLE	54-87	2N647/22	GEM	52-47	2N847	ARTN	67-98	2N1212/I	STC	128-35
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2G228	STI	104-65	2N266	ΔGESY	38-15	2N649/22	SYL	52-48	2N848	ARTN	67-99	2N1242A	HUG	108-33
	TIIB		JAN2N274	RCAS	40-46	2N676	ADV	161-32			141-61	2N1250/I	STC	128-13
2G229	STI	104-66	2N290	ΔDEL	103-74	2N694	ΔWEC	42-69	JAN2N851	none	76-80	2N1261A	MIN	100-103
	TIIB		2N300	ΔPHIL	103-74	JAN2N694	none	41-84	JAN2N852	none	140-31	2N1262A	MIN	100-104
2G230	STI	104-67		SPR	none	2N701	MOTA	62-91			76-81	2N1263A	MIN	100-105
	TIIB		JAN2N300	none	35-38	2N706/51	SYL	138-51			140-32	2N1284	ΔSYL	36-5
2G240	TIIB	100-62	2N301B	ITT	105-17				2N865A	ΔTCY	56-20	2N1284/13	SYL	53-10
2G301	SGAI	38-61	2N301G	ITT	105-18	2N706/KVT	TEC	88-48			144-78	2N1289	ΔGESY	51-68
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2SA72	TOSJ	36-96	2SA214	NIPJ	none	2SA350	HITJ	40-83	2SA472	†TOSJ	36-92	2SA1100D	†MITJ	56-83
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25C443	MITJ	87-40	25C658	MITJ	67-9	25C991	TOSJ	85-34	25C1396	†NECJ	74-16	25C2282	†NECJ	111-43
25C444	MITJ	87-84	25C659	MITJ	66-99	25C992	TOSJ	85-35	25C1409A	†HITJ	119-49	25C2287K	†NECJ	111-44
25C445	MITJ	87-85	25C660	MITJ	67-14	25C999	TOSJ	137-12	25C1410A	†HITJ	119-50	25C2287M	†NECJ	111-45
25C447	MITJ	121-60	25C661	MITJ	67-15	25C999A	TOSJ	137-13	25C1411	†FCAJ	67-102	25C2288K	†NECJ	111-46
25C448	MITJ	121-61	25C662	MITJ	67-28	25C1002	TOSJ	111-10			142-85	25C2288M	†NECJ	111-47
25C449	MITJ	121-62	25C663	MITJ	67-34	25C1003	TOSJ	111-11	25C1412	†FCAJ	84-25	25C2289K	†NECJ	111-48
25C450	MITJ	121-63	25C665	MITJ	115-4	25C1005	TSAJ	137-14	25C1416A	TOSJ	68-105	25C2289M	†NECJ	111-49
25C451	MITJ	121-64	25C668	TSAJ	64-93	25C1005A	TSAJ	137-15	25C1418	†HITJ	121-69	25C2297	†HITJ	122-42
25C452	MITJ	120-99	25C679	HITJ	122-31	25C1011	MITJ	117-21	25C1422	†FCAJ	72-11	25C2303	none	111-50
25C453	MITJ	120-100	25C679H	HITJ	139-98	25C1015	MITJ	123-88	25C1451	†FCAJ	86-28	25C2320LE	†MITJ	76-9
25C454L	HITJ	69-65	25C685A	†HITJ	119-21	25C1021	MITJ	126-96	25C1452	†FCAJ	86-29	25C2320LF	†MITJ	76-10
25C458L	HITJ	69-66	25C685H	†HITJ	117-10	25C1022	MITJ	126-97	25C1453	†TOSJ	86-70	25C2320LG	†MITJ	76-11
25C465	HITJ	69-105	25C686	NECJ	87-92	25C1023	†FCAJ	66-74	25C1456	NECJ	120-31	25C2321	FCAJ	130-53
25C468H	HITJ	69-83	25C688	MITJ	120-13	25C1024	TSAJ	111-12	25C1473	†MATJ	72-90	25C2322	FCAJ	134-45
			25C691	MITJ	117-16	25C1026	†FCAJ	66-75	25C1476	TOSJ	111-29	25C2323	FCAJ	134-46
25C470	SONY	86-74	25C692	MITJ	119-48	25C1035	TSAJ	67-4	25C1479	†FCAJ	113-55	25C2329	†NECJ	111-51
25C475	NECJ	66-29	25C694	TSAJ	64-11	25C1036	TSAJ	67-5	25C1480	†FCAJ	163-105	25C2330	†NECJ	111-52
25C476	NECJ	66-30	25C695	NECJ	63-11	25C1045	TSAJ	111-13	25C1479	†FCAJ	116-36	25C2357	FCAJ	134-55
25C487	†TOSJ	120-28	25C699	MITJ	117-17	25C1046	TSAJ	111-14			163-106			149-99
25C488H	HITJ	140-78	25C700	MITJ	114-20	25C1048	TSAJ	84-82	25C1481	†FCAJ	118-106	25C2358	FCAJ	134-56
25C490	†TOSJ	120-63	25C701	MITJ	114-21	25C1055H	†HITJ	122-34			163-107			149-100
25C493	†TOSJ	126-87	25C702	MITJ	117-18			147-61	25C1482	†FCAJ	120-73	25C2393	†TOSJ	118-48
25C494	†TOSJ	126-88	25C705	TSAJ	64-95	25C1061K	†HITJ	122-35			163-108			164-83
25C500	†TOSJ	84-105	25C707H	†HITJ	67-19			147-22						

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2SD32	♦MATJ	51-108	2SD402	NECJ	121-72	2SK170	♦TOSJ	81-31	3N25/501	TH	34-82	3TX632	♦PPC	118-109
2SD33	FCAJ	52-20	2SD404G	TOSJ	111-60	2SK17R	♦TOSJ	91-32	3N26	ΔTH	64-101	3TX820	♦PPC	114-7
2SD34	FCAJ	52-72	2SD416	TSAJ	111-61	2SK17Y	♦TOSJ	91-33	3N27	ΔTH	64-102	3TX821	♦PPC	115-14
2SD35	MATJ	51-74	2SD445	ORIJ	152-6	2SK19BL	♦TOSJ	91-102	3N29	GESY	51-42	3TX822	♦PPC	118-110
2SD36	MATJ	51-75	2SD459	♦SHEJ	151-24	2SK19GR	♦TOSJ	91-103	3N30	GESY	51-45	3TX830	♦PPC	114-8
2SD38	FCAJ	52-73			152-83	2SK19Y	♦TOSJ	91-104	3N31	GESY	51-39	3TX831	♦PPC	115-15
2SD43A	TOSJ	51-93	2SD460	♦SHEJ	151-25	2SK24C	♦TSAJ	91-34	3N32	TH	65-1	3TX832	♦PPC	119-1
2SD44	TOSJ	51-69			152-84	2SK24D	♦TSAJ	91-35	3N33	ΔTH	65-5	3UT40	MITJ	92-4
2SD48	♦FCAJ	120-75	2SD461	♦HITJ	130-55	2SK24E	♦TSAJ	91-36	3N35A	ΔTH	65-14	4C43	♦GESY	94-26
2SD52	♦FCAJ	129-109	2SD463	♦SHEJ	150-45	2SK24F	♦TSAJ	91-37			159-89	4D20	♦GESY	none
2SD54	♦FCAJ	134-57			153-17	2SK24G	♦TSAJ	91-38	3N36	ΔGESY	51-12	Repl.by D4D20	Cur.	none
2SD57	MITJ	121-70	2SD464	♦SHEJ	150-46	2SK32	NECJ	92-90		FTFH		4D21	♦GESY	none
2SD58	MITJ	121-71			153-18	2SK50	MATJ	91-1	3N37	ΔGESY	51-13	Repl.by D4D21	Cur.	none
2SD60	MITJ	126-109	2SD474K	♦HITJ	62-46	2SK56	MATJ	91-39		FTFH		4D22	♦GESY	none
2SD61	SONY	51-96			144-20	2SK57	NECJ	91-40	3N56	TEC	65-54	Repl.by D4D22	Cur.	none
2SD62	SONY	51-97	2SD475-	♦HITJ	125-35	2SK59	♦HITJ	91-18			159-90	4D24	GESY	64-103
2SD63	SONY	51-98	2SD475A	♦HITJ	125-36	2SK66	♦MATJ	91-41	3N57	TEC	65-55	4D25	GESY	64-104
2SD66	SONY	51-95	2SD476	♦HITJ	125-37	2SK69	♦NECJ	97-63			159-91	4D26	GESY	64-105
2SD67	TSAJ	111-56	2SD476A	♦HITJ	125-38	2SK70	♦NECJ	97-91	3N96	SIX	4G2		THCF	92-95
2SD70	NECJ	119-52	2SD477	♦HITJ	124-28	2SK73	MATJ	97-92			156-8	4JD1A17	GESY	44-107
2SD71	NECJ	119-53	2SD478	♦HITJ	124-29	2SK84	♦MATJ	91-42	3N97	SIX	89-90	4JD1A73	GESY	42-25
2SD75	HITJ	52-34	2SD514	MITJ	137-34	2SK95	SHEJ	97-49			156-9	4JD1B2	GESY	46-95
2SD75A	HITJ	52-35	2SD518	♦FCAJ	122-51	2SK96	SHEJ	97-50	3N98	RCA	91-68	4JD1B3	GESY	46-96
2SD75AH	♦HITJ	52-29			149-10	2SK132	♦HITJ	97-102			154-32	4JD1B4	GESY	46-97
		147-101	2SD519	FCAJ	130-83	2SK148	♦MATJ	91-43	3N99	RCA	91-69	4JD3B1	GESY	51-46
2SD75H	♦HITJ	52-30			150-35	2SK154	♦MATJ	95-23			154-33	4JD4A2	GESY	65-105
		147-102	2SD520	MITJ	153-29	2SK158	♦MATJ	91-23	3N112	TEC	53-31	4JD4A3	GESY	65-106
2SD77A	♦HITJ	52-31	2SD521	MITJ	153-28	2SN654AC	none	110-47			160-66	4JD4A4	GESY	65-107
2SD77AH	♦HITJ	52-32	2SD528H	♦HITJ	153-30	2T11	SONY	35-92	3N113	ΔSPR	53-32	4JD4A5	GESY	65-108
		147-98	2SD530	FCAJ	138-3	2T12	SONY	35-93		TCY	160-67	4JD7A35	GESY	116-29
2SD77H	♦HITJ	52-33			152-78	2T13	SONY	35-94	3N127	ΔTEC	67-103	4JD12C101	GESY	160-69
		147-99	2SD578	♦HITJ	124-30	2T14	SONY	none			160-68	4JD12C102	GESY	160-70
2SD78A	♦NECJ	119-54	2SD578A	♦HITJ	124-31	2T14A	SONY	39-41	3S001	THB	159-92	4JD12X009	♦GESY	161-39
2SD96	♦HITJ	52-75	2SD579	♦HITJ	125-39	2T15	SONY	39-42	3S002	THB	65-16	4JD12X010	GESY	161-40
2SD100	TOSJ	52-64	2SD581	♦HITJ	128-100	2T16	SONY	39-43			159-93	4JD12X011	GESY	161-41
2SD100A	TOSJ	52-71	2SD581A	♦HITJ	128-101	2T17	SONY	39-44	3S003	THB	159-94	4JD12X012	GESY	161-42
2SD101	TOSJ	52-65	2SD582	♦HITJ	133-1	2T51	SONY	51-17	3S004	THB	65-17	4JD12X013	GESY	160-71
2SD103	♦TOSJ	122-44	2SD582A	♦HITJ	133-2	2T52	SONY	51-16			159-95	4JD12X014	GESY	161-43
2SD104	♦TOSJ	52-27	2SD585	MITJ	153-16	2T53	SONY	51-14	3S111	NECJ	89-18	4JD12X043	GESY	156-10
2SD105	♦TOSJ	52-28	2SD597	♦MATJ	128-102	2T54	SONY	51-15			147-62	4JD12X047	GESY	156-11
2SD107	TOSJ	137-16	2SD598	♦MATJ	130-56	2T55	SONY	51-18	3SK15	MITJ	91-44	4JD12X070	GESY	160-72
2SD108	TOSJ	137-17	2SD604	♦HITJ	133-3	2T56	SONY	51-19	3SK15A	MITJ	91-45	4JD12X132	GESY	161-44
2SD118BL	♦TOSJ	132-104	2SD610	♦NECJ	122-52	2T57	SONY	51-20	3SK16	MITJ	91-46	4JD20A7	GESY	127-9
2SD118R	♦TOSJ	132-105	2SD611	♦FCAJ	122-53	2T58	SONY	51-21	3SK17	MITJ	91-47	4JD20A8	GESY	127-10
2SD118Y	♦TOSJ	132-106	2SD616	♦TSAJ	128-103	2T63	SONY	51-70	3SK18	MITJ	91-48	4JX16A567	GESY	69-56
2SD119BL	♦TOSJ	132-107	2SD619	♦FCAJ	83-45	2T64	SONY	51-73	3SK19	MITJ	91-49	4JX16A667	GESY	67-104
2SD119R	♦TOSJ	132-108	2SD620	FCAJ	111-62	2T65	SONY	51-76	3SK23	TOSJ	91-105	4JX16A667/G	GESY	67-105
2SD119Y	♦TOSJ	132-109	2SD651H	♦HITJ	152-74		TTKJ	3SK30	HITJ	HITJ	91-106	4JX16A667/O	GESY	67-106
2SD120	HITJ	112-78	2SD658H	♦HITJ	115-10	2T66	SONY	51-77	3SK30A	HITJ	91-107	4JX16A667/R	GESY	67-107
2SD121	HITJ	112-79	2SD671	♦MATJ	84-88		TTKJ	3SK32	♦MATJ	HITJ	91-97	4JX16A667/Y	GESY	67-108
2SD122	HITJ	116-37	2SD673	♦HITJ	128-104	2T67	SONY	51-71	NECJ	NECJ	92-57	4JX16A668	GESY	67-109
2SD123	HITJ	116-38	2SD674	♦HITJ	130-57	2T69	SONY	51-81	3SK35	TOSJ	91-108	4JX16A668/O	GESY	67-110
2SD124	HITJ	120-92	2SD675	♦HITJ	133-4	2T71	SONY	51-36	3SK38	TOSJ	91-109	4JX16A668/O	GESY	68-1
2SD125	HITJ	120-93	2SD676	♦HITJ	134-60		TTKJ	3SK39	♦MATJ	TOSJ	92-58	4JX16A668/Y	GESY	68-2
2SD127	SONY	52-66	2SD678	MATJ	152-70	2T72	SONY	51-37	TOSJ	TOSJ	92-92	4JX16A669	GESY	68-3
2SD127A	SONY	52-67	2SD678A	MATJ	152-71		TTKJ	3SK55	TOSJ	TOSJ	92-93	4JX16A669/G	GESY	68-4
2SD128	SONY	52-68	2SD708RDW1	none	88-67	2T73	SONY	51-38	TOSJ	♦TOSJ	92-94	4JX16A669/Y	GESY	68-5
2SD136	FCAJ	116-46	2SD708RDW2	none	88-68	2T76	SONY	51-34	none	none	95-57	4JX16B670/G	GESY	68-6
2SD137	FCAJ	116-47	2SD708RDW3	none	88-69	2T78	SONY	51-41	none	none	91-110	4JX16B670/R	GESY	68-7
2SD142	NECJ	119-55	2SD708RDW4	none	88-70	2T85	SONY	52-50	3SK81	none	92-1	4JX16B670/Y	GESY	68-8
2SD143	NECJ	119-56	2SD708RDW5	none	88-71	2T201	SONY	34-102	3SK83	none	92-2	4Z9-4Z12	GESY	154-34
2SD144	NECJ	119-57	2SD723	♦HITJ	125-40	2T204	SONY	34-103	3SK85	none	92-3	5	♦SSE	160-73
2SD150	NECJ	120-34	2SD724	♦HITJ	124-32	2T205	SONY	34-105	3T201	SONY	51-44	5B24	GESY	160-6
2SD152	NECJ	119-58	2SD726	♦HITJ	125-41	2T3011	SONY	100-9	3T202	SONY	51-43	5B25	GESY	160-7
2SD153	NECJ	132-110	2SD735	♦HITJ	133-5	2T3021	SONY	100-10	3T203	SONY	51-40	5C28	GESY	160-8
2SD154	NECJ	120-76	2SD736	♦HITJ	133-6	2T3031	SONY	100-11	3TE120	BRUB	134-47	5C29	GESY	160-9
2SD162	FCAJ	51-53	2SD736AA	♦HITJ	133-7	2T3032	SONY	100-12		ITT		5C30	GESY	160-10
2SD167	FCAJ	52-49	2SD736AB	♦HITJ	133-8	2T3033	SONY	100-13	3TE130	BRUB	127-6	5E29	GESY	160-11
2SD168	♦FCAJ	152-79	2SD736AC	♦HITJ	133-9	2T3041	SONY	155-104		ITT		5G2	THCF	92-96
2SD170A	♦HITJ	107-7	2SD738	♦HITJ	134-61	2T3042	SONY	155-105	3TE140	ITT	120-78	5G514	GESY	160-12
2SD175M	♦FCAJ	125-74	2SD738AA	♦HITJ	134-62	2T3043	SONY	155-106	3TE150	BRUB	117-58	5G515	GESY	160-13
2SD177M	♦FCAJ	130-81	2SD738AB	♦HITJ	134-63	2V205	SGAI	57-72		ITT		5G516	GESY	160-14
2SD178	MATJ	52-62	2SD738AC	♦HITJ	134-64			161-37	3TE160	BRUB	113-104	6	♦SSE	160-74
2SD178A	MATJ	52-63	2SD749	♦MATJ	126-110	2V362	ELBR	43-9		ITT		6B10	GESY	130-84
2SD179	NECJ	137-26	2SD754	♦HITJ	85-47	2V363	ELBR	43-4	3TE220	ITT	127-7	6G2	THCF	92-97
2SD181	NECJ	132-46	2SD760	♦HITJ	122-54	2V435	SGAI	59-86	3TE225	ITT	none	7A30	GESY	none
2SD181A	♦NECJ	130-82	2SD778	♦MATJ	81-48			161-38	Repl.by 2N5214	Cur.		Repl.by D7A30	Cur.	none

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7D33	GESY	none	11C201B20	GESY	114-88	16K2	GESY	70-21	109WC	WESY	none	151-26	WESY	135-71
Repl.by 2N3591	Cur.		11C203B20	GESY	114-87	16K3	GESY	69-104	Repl.by 2N2747	Cur.				150-101
7D34	GESY	none	11C205B20	GESY	114-88	16L2	GESY	68-94	109WD	WESY	none	151-28	WESY	135-72
Repl.by 2N3592	Cur.		11C207B20	GESY	none	16L3	GESY	68-99	Repl.by 2N2748	Cur.				150-102
7E1	GESY	none	Repl.by D11C207B20	Cur.		16L4	GESY	69-3	109XA	WESY	none	151-30	WESY	132-65
Repl.by D7E1	Obs.		11C210B20	GESY	114-89	16L5	GESY	69-7	Repl.by 2N2751	Cur.				150-103
7E2	GESY	none	11C211B20	GESY	114-90	16L22	GESY	68-95	109XB	WESY	none	152-26	WESY	135-73
Repl.by D7E2	Cur.		11C551	GESY	63-79	16L23	GESY	68-100	Repl.by 2N2752	Cur.				150-104
7E3	GESY	none	11C551-2.3	GESY	none	16L24	GESY	69-4	109XC	WESY	none	152-28	WESY	135-74
Repl.by D7E3	Obs.		Repl.by D11C551-2.3	Cur.		16L25	GESY	69-8	Repl.by 2N2753	Cur.				150-105
7E4	GESY	none	11C553	GESY	63-80	16L42	GESY	68-96	109XD	WESY	none	152-30	WESY	132-66
Repl.by 2N2204	Cur.		11C553-2.3	GESY	none	16L43	GESY	none	Repl.by 2N2754	Cur.				150-106
7F1	GESY	112-102	Repl.by D11C553-2.3	Cur.		16L44	GESY	none	111T2	THCF	86-93	153-26	WESY	135-50
Repl.by D7F1	Obs.		11C557	GESY	63-81	16L44	GESY	none	THCI		138-96			150-39
7F2	GESY	none	11C557-2.3	GESY	none	16L45	GESY	68-97	115UA	WESY	none	153-28	WESY	135-51
Repl.by D7F2	Obs.		Repl.by D11C557-2.3	Cur.		16L62	GESY	none	Repl.by 2N1809	Cur.				150-40
7F3	GESY	none	11C702	GESY	75-5	16L63	GESY	none	115UB	WESY	none	153-30	WESY	135-52
Repl.by D7F3	Obs.		11C704	GESY	75-6	Repl.by 2N3855A	Cur.		Repl.by 2N1810	Cur.				150-41
7F4	GESY	none	11C710	GESY	75-7	16L64	GESY	none	115UC	WESY	none	154-26	WESY	135-53
Repl.by D7F4	Obs.		11C1051	GESY	63-82	Repl.by 2N3856A	Cur.		Repl.by 2N1811	Cur.				150-42
7F13	GESY	112-103	11C1053	GESY	63-83	16T1	FTHF	98-14	115UD	WESY	none	154-28	WESY	135-54
Repl.by D7G1	Obs.		11C1057	GESY	63-84	16X1	GESY	none	Repl.by 2N1812	Cur.				150-43
7G1	GESY	none	11C1536	GESY	87-10	Repl.by 2N3877A	Cur.		115UE	WESY	none	154-30	WESY	135-55
Repl.by D7G1	Obs.		11CF1	GESY	112-73	16X2	GESY	none	Repl.by 2N1813	Cur.				150-44
7G2	GESY	none	11CF2	GESY	112-74	Repl.by 2N3877	Cur.		115UF	WESY	none	154T1	THCF	41-16
Repl.by D7G2	Obs.		11CF3	GESY	112-75	17T1	FTHF	49-66	Repl.by 2N1814	Cur.		155T1	THCF	41-23
7G3	GESY	none	11CF4	GESY	112-80	18T1	THCF	49-67	115WA	WESY	none	156-04	WESY	132-57
Repl.by D7G3	Obs.		11CF5	GESY	112-81	20A10	SSSE	160-78	Repl.by 2N1816	Cur.		156-06	WESY	132-58
7G4	GESY	none	11CF6	GESY	112-82	20A11	GESY	127-11	115WB	WESY	none	156-08	WESY	132-59
Repl.by 2N2995	Cur.		11CF7	GESY	112-83	20A12	GESY	127-12	Repl.by 2N1817	Cur.		156-10	WESY	132-60
7G13	GESY	113-14	11CF8	GESY	112-84	20C1	GESY	122-56	115WC	WESY	none	156-043	WESY	130-61
7G33	GESY	none	11G702	GESY	62-10	21-18	none	95-58	Repl.by 2N1818	Cur.		156-044	WESY	130-62
Repl.by 2N2726	Cur.		11G703	GESY	62-11	22MPG5	STC	161-50	115WD	WESY	none	156-064	WESY	130-63
7G34	GESY	none	11G1052	GESY	62-12	22MPS5	STC	161-51	Repl.by 2N1819	Cur.		156-083	WESY	130-64
Repl.by 2N2727	Cur.		11G1053	GESY	62-13	23K3	SSD	161-51	115XA	WESY	none	156-084	WESY	130-65
10B551	GESY	160-75	11T1	FTHF	98-9	23K5	SSD	none	Repl.by 2N1823	Cur.		156-104	WESY	130-66
10B553	GESY	64-38	11T2	FTHF	65-3	Repl.by 3N73	Cur.		115XB	WESY	none	156-123	WESY	130-67
10B553-2.3	GESY	64-18	12A8	AEIL	156-12	25T1	CDLF	34-98	Repl.by 2N1824	Cur.		156-124	WESY	130-68
Repl.by D10B553-2.3	Cur.		12A104	WESY	156-13	25T2	FTHF	83-28	115XC	WESY	none	156-143	WESY	130-69
10B555	GESY	64-19	12A105	GESY	156-14	26T1	CDLF	34-99	Repl.by 2N1825	Cur.		156-144	WESY	130-70
10B555-2.3	GESY	64-19	12A107	GESY	156-15	26T2	FTHF	83-29	115XD	WESY	none	156-164	WESY	130-71
Repl.by D10B555-2.3	Cur.		12A108	GESY	156-16	26T2C	THCF	111-66	Repl.by 2N1826	Cur.		156T1	THCF	41-24
10B556	GESY	64-20	12A304	GESY	156-17	28T2	FTHF	83-30	115YA	WESY	none	157T1	THCF	41-27
10B556-2.3	GESY	64-20	12A308	GESY	156-18	28T2C	THCF	83-31	Repl.by 2N1830	Cur.		159T1	THCF	41-34
Repl.by D10B556-2.3	Cur.		12A904	GESY	156-19	28T2	FTHF	111-67	115YB	WESY	none	160T1	THCF	41-37
10B701	GESY	62-17	12C101	GESY	160-76	28T2C	FTHF	83-31	Repl.by 2N1831	Cur.		161T1	THCF	41-38
10B705	GESY	142-47	12C102	GESY	160-77	30T2	THCF	156-38	115YC	WESY	none	161T2	THCF	none
10B1051	GESY	none	12E109	GESY	none	31N2	SSD	none	Repl.by 2N1832	Cur.		162T1	THCF	41-41
Repl.by D10B1051	Cur.		Repl.by D12E109	Cur.		31N2	SSD	none	115YD	WESY	none	162T2	THCF	none
10B1055	GESY	none	12G1	GESY	156-20	32N2	SSD	none	Repl.by 2N1833	Cur.		163-26	WESY	136-44
Repl.by D10B1055	Cur.		12G2	GESY	156-21	32N2	SSD	none	118UA	WESY	none	163-28	WESY	150-91
10C573	GESY	64-21	12G101	GESY	156-22	32N2	SSD	none	Repl.by 2N2226	Cur.		163-28	WESY	136-45
10C573-2.3	GESY	64-21	12G301	GESY	156-23	33K3	SSD	none	118UB	WESY	none	163-30	WESY	150-92
Repl.by D10C573-2.3	Cur.		12H301	GESY	156-24	34N2	SSD	none	Repl.by 2N2227	Cur.		163-30	WESY	136-46
10C574	GESY	64-22	12H302	GESY	156-25	35N2	SSD	none	118UC	WESY	none	164-26	WESY	150-93
10C574-2.3	GESY	64-22	12H303	GESY	156-26	35N2	SSD	none	Repl.by 2N2228	Cur.		164-28	WESY	136-48
Repl.by D10C574-2.3	Cur.		12H901	GESY	156-27	38N2	SSD	36-9	118UD	WESY	none	164-30	WESY	150-95
10D556-2.3	GESY	64-55	12H902	GESY	156-28	38N2	SSD	36-12	Repl.by 2N2229	Cur.		164-30	WESY	136-49
10D701	GESY	62-19	12J301	GESY	156-29	38T1	FTHF	41-72	118XA	WESY	none	180T2	THCF	129-31
10D702	GESY	62-21	12J302	GESY	156-30	38T1	FTHF	41-73	Repl.by 2N2230	Cur.		181T2	THCF	129-32
10E1051	GESY	62-2	12J303	GESY	156-31	39N2	SSD	41-73	118XB	WESY	none	182T2	THCF	129-33
10G1051	GESY	140-12	12J901	GESY	156-32	39N2	SSD	41-73	Repl.by 2N2231	Cur.		183T2	THCF	129-34
10G1052	GESY	62-3	12J902	GESY	156-33	39T1	FTHF	41-73	118XC	WESY	none	184T2	THCF	129-35
Repl.by D10G1052	Cur.		12J905	GESY	156-34	39T2	THCF	41-73	Repl.by 2N2232	Cur.		185T2	THCF	129-36
10H551	GESY	63-60	12T1	FTHF	98-10	39T2	SSD	41-73	118XD	WESY	none	200A	TII	none
10H551-2.3	GESY	63-60	12T2	FTHF	65-4	40N2	SSD	41-73	Repl.by 2N2233	Cur.		201A	MOTA	none
Repl.by D10H551-2.3	Cur.		12X006	WESY	161-45	40N2	SSD	41-73	121T2	THCF	70-16	201B	MOTA	46-5
10H553	GESY	63-61	12X008	WESY	161-46	41N2	SSD	41-73	122T2	THCF	70-17	201M	MOTA	46-6
10H553-2.3	GESY	63-61	12X010	GESY	none	41N2	SSD	41-73	123T2	THCF	70-18	202A	TII	none
Repl.by D10H553-2.3	Cur.		Repl.by D12X010	Cur.		42N2	SSD	41-73	125T1	CDLF	49-52	202A	TII	none
10H1051	GESY	63-62	12X011	GESY	none	42N2	SSD	41-73	125UA	WESY	none	219BLY-A	RTCF	52-26
10H1053	GESY	63-63	Repl.by D12X011	Cur.		44T1	THCF	49-50	Repl.by 2N2109	Cur.		251M1	DEL	none
10T2	FTHF	65-2	12X012	GESY	none	64EPA	RTCF	65-42	125UB	WESY	none	251M	DEL	none
11B551	GESY	63-69	Repl.by D12X012	Cur.		64EPB	RTCF	65-43	Repl.by 2N2111	Cur.		251M	DEL	none
11B551-2.3	GESY	63-69	12X013	GESY	none	64T1	THCF	45-61	125UD	WESY	none	286-1BFY	WALG	92-5
Repl.by D11B551-2.3	Cur.		12X014	GESY	none	65T1	THCF	45-63	Repl.by 2N2112	Cur.		300	TII	none
11B552	GESY	63-76	Repl.by D12X014	Cur.		70T2	THCF	160-15	125UE	WESY	none	301	TII	none
11B552-2.3	GESY	63-76	12X015	GESY	none	78EP	RTCF	77-71	Repl.by 2N2113	Cur.		302	TII	none
Repl.by D11B552-2.3	Cur.		Repl.by D12X015	Cur.		80T2	THCF	143-26	125UF	WESY	none	302	TII	none
11B554	GESY	63-97	12X040	WESY	161-47	81T2	THCF	77-44	Repl.by 2N2114					

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423			1034	CLE	35-66	1713-1802	WESY	130-99	1781-1240	STC	136-56	41009	†RCA	118-59
(cont.)	TII		1035	CLE	35-67	1717-0402	†WESY	122-72		WESY				164-7
Repl.by 2N852 Cur.			1036	CLE	35-68	1717-0405	†WESY	122-73	1781-1260	STC	136-57	41009A	†RCA	118-60
424	TII	none	1320	CLE	35-69	1717-0602	†WESY	122-74		WESY				164-8
Repl.by 2N2381 Cur.			1330	CLE	35-70	1717-0605	†WESY	122-75	1781-1440	STC	136-58	41010	†RCA	119-59
425	TII	none	1340	CLE	35-71	1717-0802	†WESY	122-76		WESY				164-9
Repl.by 2N2390 Cur.			1350	CLE	35-72	1717-0805	†WESY	122-77	1859	WEC	none	41025	†RCA	117-22
426	TII	none	1360	CLE	35-73	1717-1002	†WESY	122-78	Repl.by 2N28	Obs.				164-10
Repl.by 2N2391 Obs.			1390	CLE	36-6	1717-1005	†WESY	122-79	1893	WEC	none	41026	†RCA	122-12
427	TII	none	1392	TII	none	1717-1202	†WESY	122-80	Repl.by 2N21	Obs.				164-11
Repl.by 2N2392 Obs.						1717-1205	†WESY	122-81	2074	WEC	none	41027	†RCA	117-23
428	TII	none	1400	CLE	36-11	1717-1402	†WESY	122-82	Repl.by 2N463	Obs.				164-12
Repl.by 2N2393 Cur.			1401-0205	WESY	137-35	1717-1405	†WESY	122-83	2075	WEC	none	41028	†RCA	122-13
429	TII	none	1401-0207	WESY	137-36	1717-1602	†WESY	122-84	Repl.by 2N528	Obs.				164-13
Repl.by 2N2394 Cur.			1401-0210	WESY	137-37	1717-1605	†WESY	122-85	2081	WEC	none	41042	†RCA	134-43
430	TII	none	1401-0215	WESY	137-38	1717-1802	†WESY	122-86	Repl.by 2N1841	Obs.				none
Repl.by 2N849 Cur.			1401-0220	WESY	137-39	1723-2005	†WESY	133-82	2082	WEC	none	Repl.by 43104	Obs.	154-37
431	†RCA	none	1401-0225	WESY	137-40	1726-0405	†WESY	133-83	Repl.by 2N1675	Obs.				GME
Repl.by 2N850 Cur.			1401-0405	WESY	137-41	1726-0410	†WESY	133-84	2097	WEC	none	A3T918	†TII	71-110
432	TII	none	1401-0410	WESY	137-42	1726-0605	†WESY	133-85	Repl.by 2N559	Obs.				†TII
Repl.by 2N2395 Cur.			1401-0605	WESY	137-44	1726-0810	†WESY	133-86	2141	WEC	none	A3T929	†TII	71-87
433	TII	none	1401-0610	WESY	137-45	1726-0815	†WESY	133-87	Repl.by 2N1645	Obs.				†TII
Repl.by 2N2396 Cur.			1401-0617	WESY	137-46	1726-1005	†WESY	133-88	2702	CTR	117-74			140-29
440C-C	MAL	98-16	1401-0620	†WESY	137-47	1726-1010	†WESY	133-89	2704	CTR	120-36	A3T2221A	†TII	71-106
440C-E	MAL	98-17				1726-1205	†WESY	133-90	2849-1	UNI	88-18			141-2
441C	MAL	98-18	1401-0805	WESY	137-48	1726-1210	†WESY	133-91			117-96	A3T2222	†TII	71-107
442C-A	MAL	98-19	1401-0807	WESY	137-49	1726-1405	†WESY	133-92	2849-2	UNI	145-78			140-30
442C-D	MAL	98-20	1401-0810	WESY	137-50	1726-1410	†WESY	133-93			88-19	A3T2222A	†TII	71-108
450	TII	none	1401-1005	WESY	137-51	1726-1605	†WESY	133-94			125-77			141-8
Repl.by 2N849 Cur.			1401-1010	WESY	137-52	1726-1610	†WESY	133-95	2849-3	UNI	145-79	A3T2484	†TII	71-91
451	TII	none	1401-1017	WESY	137-53	1726-1805	†WESY	133-96			88-20	A3T2894	†TII	55-39
Repl.by 2N850 Cur.			1401-1205	WESY	137-54	1726-1810	†WESY	133-97			117-97			143-67
474	TII	none	1401-1207	WESY	137-55	1748-0620	SSI	133-98	2850-3	†UNI	145-80	A3T2906	†TII	55-25
Repl.by 2N928 Cur.			1401-1210	WESY	137-56		†WESY	none	2851-3	†UNI	118-51			142-9
475	TII	none	1401-1220	WESY	137-57	Repl.by 2N6046	Obs.		2851-3	†UNI	144-96	A3T2906A	†TII	55-26
Repl.by 2N930 Cur.						1748-1020	SSI	none	2852-3	†UNI	118-52			142-10
490	TII	none	1401-1225	WESY	150-67		†WESY	none	2852-3	†UNI	144-97	A3T2907	†TII	55-27
Repl.by 2N780 Cur.						Repl.by 2N6047	Obs.		2853-3	†UNI	118-53			142-11
501	TII	none	1401-1405	WESY	137-58	1748-1420	SSI	none	2853-3	†UNI	144-92	A3T2907A	†TII	55-28
Repl.by 3N25 Obs.			1401-1407	WESY	137-59		†WESY	none	2854-3	†UNI	118-54			142-12
501T1	THCF	41-39	1401-1410	WESY	137-60	Repl.by 2N6048	Obs.		2854-3	†UNI	144-98	A3T3011	†TII	71-109
503T1	THCF	41-40	1401-1415	WESY	137-61	1756-0440	WESY	132-53			148-55			140-3
504T1	THCF	41-33						148-42	2855-3	†UNI	145-1	A5T3824	†TSC	92-98
505T1	THCF	41-35	1401-1420	WESY	137-63	1756-0460	WESY	132-54			118-56	A25-12	†CTR	126-71
506T1	THCF	41-42						148-106	2856-3	†UNI	144-99	A25Q	†PLSB	161-53
507T1	THCF	41-43	1401-1425	WESY	137-64	1763-0415	†WESY	133-99			118-57	A50-12	†CTR	130-103
508T1	THCF	41-36				1763-0425	†WESY	133-100	3604	LCTF	144-93	A104	†APX	74-47
528BSY	†VALG	91-70	1410	CLE	36-17	1763-0615	†WESY	133-101	3607	LCTF	51-24	A106	†APX	74-48
551B	GESY	160-16	1441-0415	WESY	150-72	1763-0625	†WESY	133-102	3609	LCTF	51-26	A108	†APX	74-49
602	TII	none	1441-0420	WESY	150-73	1763-0815	†WESY	133-103	5552-4	†UNI	112-98	A111	†APX	74-51
Repl.by 2N997 Cur.			1441-0425	WESY	150-74	1763-0825	†WESY	133-104			144-94	A115	†SGAI	74-52
605	TII	none	1441-0615	WESY	150-75	1763-1015	†WESY	133-105	6232-4	†UNI	121-47	A116	†APX	74-53
Repl.by 2N2432 Cur.			1441-0620	WESY	150-76	1763-1025	†WESY	133-106			146-106	A130	†APX	79-56
703B	GESY	83-17	1441-0625	WESY	150-77	1763-1215	†WESY	133-107	11005	GME	154-35			PHIC
800B	TII	159-29	1441-0815	WESY	147-107	1763-1225	†WESY	133-108	31004	GME	154-36	A132	†APX	79-57
801B	GESY	72-69	1441-0820	WESY	150-78	1763-1415	†WESY	133-109	35821EOpt200	†HPA	86-48			PHIC
886	TII	none	1441-0825	WESY	150-79	1763-1425	†WESY	133-110	35822B	†HPA	78-64	A133	†APX	75-13
Repl.by 2N2411 Cur.			1441-1015	WESY	150-80	1763-1615	†WESY	134-1	35822EOpt200	†HPA	78-65	A134	†APX	76-82
887	TII	none	1441-1020	WESY	150-81	1763-1625	†WESY	134-2	35823B	†HPA	86-49	A135	†APX	76-83
Repl.by 2N2412 Cur.			1441-1025	WESY	150-82	1763-1815	†WESY	134-3	35823E	†HPA	86-50	A136	†APX	76-84
898	TII	none	1441-1215	WESY	150-83	1768-0415	†WESY	112-26	35825B	†HPA	82-78	A137	†APX	76-85
Repl.by 2N985 Cur.			1441-1220	WESY	150-84	1768-0425	†WESY	112-27	35825EOpt200	†HPA	82-79	A138	†APX	76-86
903	TII	none	1441-1225	WESY	150-85	1768-0615	†WESY	112-28	35830A	†HPA	113-57	A139	†APX	76-87
Repl.by 2N1149 Cur.			1441-1415	WESY	150-86	1768-0625	†WESY	112-29	35833B	†HPA	113-58	A151	†APX	62-51
904	TII	none	1441-1420	WESY	150-87	1768-0815	†WESY	112-30	35833E	†HPA	113-59	A152	†APX	62-52
Repl.by 2N1150 Cur.			1441-1425	WESY	150-88	1768-0825	†WESY	112-31	35834B	†HPA	113-60	A153	†APX	62-53
904A	TII	none	1561-1615	STC	135-30	1768-1015	†WESY	112-32	35834E	†HPA	113-61	A154	†APX	76-75
Repl.by 2N1151 Cur.						1768-1025	†WESY	112-33	35861B	†HPA	78-66	A155	†APX	76-19
905	TII	none	1561A603	STC	136-11	1768-1215	†WESY	112-34	35862B	†HPA	78-70	A157	†APX	76-60
Repl.by 2N1152 Cur.						1768-1225	†WESY	112-35	35865B	†HPA	78-67	A157A	†APX	76-88
906	TII	none	1561A608	STC	135-31	1768-1415	†WESY	112-36	35865E	†HPA	78-68	A157B	†APX	76-89
Repl.by 2N1149 Cur.						1768-1425	†WESY	112-37	35865EOpt100	†HPA	78-69	A157C	†APX	76-90
907	TII	none	1561A615	STC	135-32	1768-1615	†WESY	134-4	40053	RCA	none	A158	†APX	76-61
Repl.by 2N1150 Cur.						1768-1825	†WESY	134-5		STI		A158B	†APX	76-91
908	TII	none	1571-32	WESY	121-82	1768-1815	†WESY	134-6	Repl.by 2N3053	Cur.		A158C	†APX	76-92
Repl.by 2N1151 Cur.			1571-33	WESY	121-83	1771-0440	†WESY	112-47	40342	RCA	120-67	A159	†APX	76-93
909	TII	none	1571-34	WESY	121-84	1771-0450	†WESY	112-48		STI		A159B	†APX	76-94
Repl.by 2N1152 Cur.			1571-35	WESY	121-85	1771-0460								



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ASY62	ITT	51-91	AT360	SERA	86-106	AT1138A	SERA	102-48	B3161	SODI	none	B3631	SODI	125-107
	SIHG		AT361	SERA	86-107	AT1138B	♦SERA	102-49	Repl. by 2N3628	Cur.		B3632	SODI	125-108
ASY63	ITT	46-82	AT362	SERA	86-108	AT1425	♦AVA	none	B3162	SODI	none	B3633	SODI	125-109
		149-101	AT363	SERA	86-109	Repl. by AT1825	Cur.		Repl. by 2N3629	Cur.		B3634	SODI	125-110
ASY64	ITT	154-14	AT364	SERA	86-110	AT1445	♦AVA	none	B3163	SODI	none	B3746	♦SODI	113-16
ASY66	ITT	154-15	AT365	SERA	87-1	Repl. by AT1845	Cur.		Repl. by 2N3630	Cur.		B3747	♦SODI	113-65
ASY67	MULB	42-57	AT366	SERA	87-2	AT1445A	♦AVA	none	B3456	SODI	129-39	B3748	♦SODI	113-66
ASY71	VALG	44-81	AT367	SERA	87-3	Repl. by AT1845A	Cur.		B3458	SODI	116-50	B3749	♦SODI	116-84
ASY72	ITT	51-88	AT368	SERA	87-4	AT1833	SERA	102-50	B3459	SODI	129-40	B3750	♦SODI	116-85
ASY82	AEIL	47-38	AT370	SERA	80-54	AT1834	SERA	102-51	B3459A	SODI	129-41	B5000	♦SODI	129-42
		150-48	AT380	SERA	81-65	AT2625	♦AVA	82-77	B3460	SODI	none	B5001	♦SODI	124-82
ASY83	AEIL	47-64	AT381	SERA	81-66	AT/AF1	NTLB	43-15	Repl. by 2N4225	Cur.		B5002	♦SODI	124-83
		149-105	AT382	SERA	81-67	AT/AF2	NTLB	43-16	B3461	SODI	none	B5021	SODI	124-84
ASY84	AEIL	47-39	AT383	SERA	81-68	AT/RF1	NTLB	43-34	Repl. by 2N4226	Cur.		B5022	SODI	124-85
		150-49	AT384	SERA	81-69	AT/RF2	NTLB	43-48	B3465	♦SODI	116-51	B5031	SODI	124-86
ASY85	AEIL	47-65	AT385	SERA	81-70	AT/S13	NTLB	43-41	B3466	♦SODI	116-52	B5032	SODI	124-87
		149-106	AT386	SERA	81-71	AU105	SIEG	101-35	B3531	SODI	116-53	B5041	SODI	124-88
ASY86	THOB	52-52	AT387	SERA	81-72			149-28	B3532	SODI	116-54	B5042	SODI	124-89
		150-2	AT388	SERA	81-73	AU108F	SGAI	102-52	B3533	SODI	116-55	B5051	SODI	124-90
ASY87	THOB	52-56	AT390	SERA	59-32	AU206	SGAI	102-53	B3534	SODI	116-56	B5052	SODI	124-91
		149-21	AT391	AVA	59-33	AU210	SGAI	102-54	B3535	SODI	116-57	B10060	SODI	103-102
ASY88	THOB	52-53		SERA	59-34	AU213	SGAI	102-55	B3536	SODI	116-58	B10061	SODI	103-103
		150-3	AT392	SERA	59-35	AU221A	SGAI	102-56	B3537	SODI	116-59	B10062	SODI	103-104
ASY89	THOB	52-57	AT393	SERA	59-35	AU222A	SGAI	102-57	B3538	SODI	117-59	B10063	SODI	103-105
		149-22	AT394	SERA	59-36	AUY30	THCF	102-58	B3539	SODI	117-60	B10064	SODI	101-41
ASY90	SGAI	46-70	AT395	SERA	59-37				B3540	SODI	117-61	B10065	SODI	103-106
ASY91	SGAI	46-71	AT396	SERA	59-38	AUY31	THCF	102-59	B3541	SODI	117-62	B10066	SODI	103-107
ASZ10	ALGG	45-70	AT397	SERA	59-39				B3542	SODI	117-63	B10067	SODI	103-108
		147-27	AT398	SERA	59-40	AUY32	THCF	102-60	B3543	SODI	117-64	B10068	SODI	103-109
ASZ11	PHIN	44-11	AT399	SERA	59-41				B3544	SODI	117-65	B10069	SODI	101-42
ASZ12	PHIN	44-15	AT400	SERA	76-64	AUY33	THCF	102-61	B3545	SODI	117-66	B10142	SODI	102-64
ASZ161	none	151-81	AT401	SERA	76-65				B3546	SODI	117-67	B10142A	SODI	102-65
ASZ20N	ELMA	42-96	AT402	SERA	76-66	AUY35	SGAI	99-54	B3547	SODI	125-78	B10142B	SODI	102-66
ASZ30	ALGG	34-91	AT403	SERA	76-67	AUY36	SGAI	99-55	B3548	SODI	125-79	B10143	SODI	102-67
		147-28	AT404	SERA	76-68	AUY38	SGAI	102-62	B3549	SODI	125-80	B10143A	SODI	102-68
AT16	♦AVA	71-43	AT405	SERA	76-69	AUZ11	ALGG	99-13	B3550	SODI	125-81	B10143B	SODI	102-69
AT17	♦AVA	71-44	AT406	SERA	76-100	B2	NECJ	66-101	B3551	SODI	125-82	B10144	SODI	102-105
AT17A	♦AVA	71-45	AT407	SERA	76-101				B3552	SODI	125-83	B10144A	SODI	102-106
AT25	♦AVA	71-46	AT410	SERA	56-88	B2-B	♦CTR	117-24	B3553	SODI	125-84	B10144B	SODI	102-107
AT25A	♦AVA	71-47	AT412	SERA	56-89	B3	NECJ	66-102	B3554	SODI	125-85	B10474	♦SODI	101-43
AT25B	♦AVA	71-48	AT413	SERA	56-90				B3555	SODI	125-86	B10475	♦SODI	100-78
AT50	♦AVA	82-63	AT414	SERA	56-91	B4	NECJ	66-103	B3556	SODI	125-87	B10912	♦SODI	102-70
AT50A	♦AVA	82-69	AT415	SERA	56-92				B3557	SODI	125-88	B10913	♦SODI	102-71
AT51	♦AVA	82-64	AT416	SERA	56-93	B5-8	♦CTR	120-101	B3558	SODI	125-89	B102000	SODI	104-33
AT52	♦AVA	82-65	AT417	SERA	56-94	B70-12	♦CTR	133-79	B3559	SODI	125-90	B102001	SODI	104-34
AT74	SERA	47-40	AT418	SERA	56-95	B113	BACE	101-36	B3560	SODI	125-91	B102002	SODI	104-35
AT74S	SERA	47-41	AT419	SERA	56-96				B3561	SODI	125-92	B102003	SODI	104-36
AT101	♦AVA	71-49	AT420	SERA	80-23	B114	SODI	101-37	B3562	SODI	125-93	B103000	SODI	104-37
AT101A	♦AVA	71-50	AT421	SERA	80-24	B121	SODI	101-38	B3563	SODI	125-94	B103001	SODI	104-38
AT128	SERA	48-83	AT422	SERA	80-25	B134	BACE	102-102	B3564	SODI	125-95	B103002	SODI	104-39
AT140	♦AVA	71-51	AT423	SERA	80-26				B3565	SODI	125-96	B103003	SODI	104-40
AT141	♦AVA	71-52	AT424	SERA	80-27	B134A	BACE	102-103	B3566	SODI	125-97	B103004	SODI	104-41
AT200	SGAI	99-22	AT425	SERA	80-28				B3567	SODI	125-98	B113000	♦SODI	104-80
AT201	♦AVA	71-53	AT426	SERA	80-55	B134B	BACE	102-104	B3568	SODI	117-68	B113001	♦SODI	104-81
		100-14	AT427	SERA	80-56				B3569	SODI	117-69	B113002	♦SODI	104-82
AT201A	♦AVA	82-70	AT430	SERA	58-20	B177	SODI	100-106	B3570	SODI	117-101	B113003	♦SODI	104-83
AT202	AVA	82-75	AT431	SERA	58-21	B178	SODI	100-107	B3571	SODI	117-102		151-85	
AT209	SGAI	98-105	AT432	SERA	58-22	B179	SODI	100-108	B3572	SODI	117-103	B113004	♦SODI	104-84
AT209	SGAI	46-64	AT433	SERA	58-23	B1013	SODI	none	B3573	SODI	117-104		151-86	
AT210	SGAI	46-65	AT434	SERA	58-24	Repl. by 2N2282	Cur.		B3574	SODI	117-105	B113005	♦SODI	104-85
AT220	♦AVA	86-88	AT435	SERA	58-25	B1013A	SODI	none	B3575	SODI	117-106		151-87	
AT240	♦AVA	82-71	AT436	SERA	58-26	Repl. by 2N2283	Cur.		B3576	SODI	117-107	B143000	♦SODI	117-110
AT240A	♦AVA	82-72	AT437	SERA	58-27	B1013B	SODI	none	B3577	SODI	125-99	B143001	♦SODI	118-1
AT241	♦AVA	82-73	AT438	SERA	58-28	Repl. by 2N2284	Cur.		B3578	SODI	125-100	B143002	♦SODI	118-2
AT242	♦AVA	82-74	AT440	SERA	86-36	B1017	SODI	101-39	B3579	SODI	125-101	B143003	♦SODI	118-3
AT270	SGAI	none	AT441	SERA	86-37	B1022	SODI	48-81	B3580	SODI	125-102	B143004	♦SODI	118-4
Repl. by ASY90	Obs.		AT442	SERA	86-38	B1085	♦SODI	101-40	B3581	SODI	125-103	B143005	♦SODI	118-5
AT275	SGAI	none	AT443	SERA	86-39	B1110	SODI	104-32	B3582	SODI	125-104	B143006	♦SODI	118-6
Repl. by ASY91	Obs.		AT444	SERA	86-40	B1151	SODI	103-95	B3583	SODI	125-105	B143007	♦SODI	118-7
AT301	♦AVA	113-3	AT445	SERA	86-41	B1151A	SODI	103-96	B3584	SODI	125-106	B143008	♦SODI	118-8
AT310	SERA	69-67	AT446	SERA	86-42	B1151B	SODI	103-97	B3585	SODI	122-92	B143009	♦SODI	118-9
AT311	SERA	69-68	AT447	SERA	86-43	B1152	SODI	103-98	B3586	SODI	122-93	B143010	♦SODI	118-10
AT312	SERA	69-69	AT448	SERA	86-44	B1152A	SODI	103-99	B3587	SODI	122-94	B143011	♦SODI	118-11
AT313	SERA	69-70	AT450	SERA	54-92	B1152B	SODI	103-100	B3588	SODI	122-95	B143012	♦SODI	118-12
AT314	SERA	69-71	AT450%	SGAI	102-46	B1154	SODI	49-51	B3589	SODI	122-96	B143013	♦SODI	118-13
AT315	SERA	69-72	AT451	SERA	54-93	B1178	♦SODI	103-101	B3590	SODI	122-97	B143014	♦SODI	118-14
AT316	SERA	69-73	AT452	SERA	54-94	B1274	SODI	none	B3591	SODI	122-98	B143015	♦SODI	118-15
AT318	SERA	73-41	AT453	SERA	55-78	Repl. by 2N2291	Cur.		B3592	SODI	122-99	B143016	♦SODI	118-16
AT319	SERA	73-42	AT454	SERA	55-79	B1274A	SODI	none	B3593	SODI	122-100	B143017	♦SODI	118-17
AT320	♦AVA	113-4	AT455	SERA	60-102	Repl. by 2N2292	Cur.		B3594	SODI	116-60	B143018	♦SODI	118-18
AT321	SERA	73-43	AT460											

# 1. TYPE No. CROSS INDEX

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
B146010	ALGG	127-25	BC156A	ALGG	62-40	SC507	SGAI	79-103	BCW50	SGAI	83-35	BCY49	MULB	55-47
B146011	SODI	127-26	BC156B	ALGG	62-41	BC507A	SGAI	79-104	BCW51	TIID	78-23	BCY50	ITT	68-11
B146012	SODI	127-27	BC156C	ALGG	62-42	BC507B	SGAI	79-105	BCW52	TIID	56-109		SELG	
B146013	SODI	127-28	BC157VI	SIEG	56-55	BC508	SGAI	79-106	BCW54	ITTT	78-102	BCY50I	SELG	72-96
B146014	SODI	127-29	BC158VI	SIEG	56-56	BC508A	SGAI	79-107	BCW55	ITTT	78-103	BCY51	ITT	75-8
B149000	SODI	124-46	BC167Z	ALGG	71-74	BC508B	SGAI	79-108	BCW57B	RTCF	55-4		SELG	
B149001	SODI	124-47	BC168Z	ALGG	71-75	BC508C	SGAI	79-109		VALG		BCY511	SELG	72-91
B149002	SODI	124-48	BC169Z	ALGG	71-76	BC509	SGAI	79-110	BCW62	TIID	55-29	BCY58-9	CAR	58-7
B149003	SODI	124-49	BC175	AEIL	84-18	BC509B	SGAI	80-1	BCW62A	TIID	55-30	BCY58-10	CAR	79-82
B149004	SODI	124-50	BC180	AEIL	79-94	BC509C	SGAI	80-2	BCW62B	TIID	55-31	BCY78A	ITTT	57-73
B149005	SODI	124-51	BC190A	ITT	76-21	BC510	SGAI	80-3	BCW63A	TIID	55-32	BCY78B	ITTT	57-74
B170000	SODI	130-105	BC190B	ITT	76-22	BC510B	SGAI	80-4	BCW63B	TIID	55-33	BCY78C	ITTT	57-75
B170001	SODI	130-106	BC194	ALGG	64-80	BC510C	SGAI	80-5	BCW63C	TIID	55-34	BCY78D	ITTT	57-76
B170002	SODI	130-107			140-104	BC512	TIID	56-98	BCW64	TIID	55-35	BCY79A	ITTT	57-77
B170003	SODI	130-108	BC196A	ALGG	54-31	BC512A	TIID	56-99	BCW64A	TIID	55-36	BCY79B	ITTT	57-78
B170004	SODI	130-109	BC196B	ALGG	54-39	BC512B	TIID	56-100	BCW64B	TIID	55-37	BCY79C	ITTT	57-79
B170005	SODI	130-110	BC196VI	ALGG	54-20	BC513	TIID	56-101	BCW64C	TIID	55-38	BCY96	TAGS	57-68
B170006	SODI	131-1	BC197	ALGG	62-59	BC513A	TIID	56-102	BCW73-16	SIEG	82-95	BCY96B	TAGS	59-17
B170007	SODI	131-2	BC197A	ALGG	62-60	BC513B	TIID	56-103			145-10	BCY97	TAGS	57-69
B170008	SODI	131-3	BC197B	ALGG	62-61	BC513C	TIID	56-104	BCW73-25	SIEG	82-96	BCY97B	TAGS	59-18
B170009	SODI	131-4	BC198	ALGG	62-62	BC514	TIID	56-105			145-11	BCY98B	TAGS	59-19
B170010	SODI	131-5	BC198A	ALGG	62-63	BC514A	TIID	56-106	BCW73-40	SIEG	82-97	BCZ10	APX	55-57
B170011	SODI	131-6	BC198B	ALGG	62-64	BC514B	TIID	56-107			145-12		PHIC	PHIN
B170012	SODI	131-7	BC198C	ALGG	62-65	BC514C	TIID	56-108	BCW74-16	SIEG	82-98		RTCF	VALG
B170013	SODI	131-8	BC199	ALGG	62-66	BC520	CAR	85-69			145-13	BCZ11	APX	55-69
B170014	SODI	131-9	BC199B	ALGG	62-67	BC521	CAR	85-70	BCW74-25	SIEG	82-99		MULB	PHIC
B170015	SODI	131-10	BC199C	ALGG	62-68	BC522	CAR	85-71			145-14		PHIN	RTCF
B170016	SODI	131-11	BC210	THCF	82-105	BC522C	CAR	85-72	BCW74-40	SIEG	82-100			VALG
B170017	SODI	131-12		THCI		BC522D	CAR	85-73			145-15	BCZ12	APX	55-58
B170018	SODI	131-13	BC212VI	SIEG	56-97	BC522E	CAR	85-74	BCW75-10	SIEG	59-80		PHIC	PHIN
			BC215A	THCF	59-55	BC523	CAR	85-75			145-16		RTCF	VALG
B170019	SODI	131-14		THCI		BC523B	CAR	85-76	BCW75-16	SIEG	59-81	BCZ13	APX	53-21
				THCF	59-56	BC523C	CAR	85-77			145-17		PHIN	RTCF
B170020	SODI	131-15	BC215B	THCF	59-56	BC526	CAR	85-78	BCW75-25	SIEG	59-82		VALG	
				THCI		BC526A	CAR	85-79			145-18	BCZ14	APX	53-22
B170021	SODI	131-16	BC216A	SGAI	88-22	BC526B	CAR	85-80	BCW76-10	SIEG	59-83		RTCF	
			BC216B	SGAI	88-23	BC526C	CAR	85-81			145-19		VALG	
B170022	SODI	131-17	BC220	SGAI	68-98	BC526C	CAR	85-81			59-84	BD106	ITT	118-87
			BC221	MEHK	56-66	BC527-6	CAR	60-66	BCW76-16	SIEG	145-20	BD106A	ITT	118-88
B170023	SODI	131-18	BC222	SGAI	76-70	BC527-10	CAR	60-67			59-85	BD106B	ITT	118-89
			BC226	SGAI	86-103	BC527-25	CAR	60-69	BCW76-25	SIEG	145-21	BD107	ITT	118-90
B170024	SODI	131-19	BC236	THCF	74-108	BC528-6	CAR	60-70	BCW77-16	SIEG	88-26	BD107A	ITT	118-91
				THCI		BC528-10	CAR	60-71			145-22	BD107B	ITT	118-92
B170025	SODI	131-20	BC237Z	ALGG	71-76	BC528-16	CAR	60-72	BCW77-25	SIEG	88-27	BD109	SIEG	120-102
				APX		BC528-25	CAR	60-73			145-23	BD109-6	SIEG	121-42
B170026	SODI	131-21	BC238Z	ALGG	71-77	BC530	CAR	60-73	BCW77-40	SIEG	88-28	BD109-10	SIEG	121-43
				APX		BC531	CAR	60-64			145-24	BD109-16	SIEG	121-44
B176000	SODI	131-22	BC239Z	ALGG	71-83	BC532	CAR	60-64	BCW78-16	SIEG	88-29	BD111	SGAI	122-110
B176001	SODI	131-23		APX		BC533	CAR	60-65			145-25	BD112	SGAI	123-1
B176002	SODI	131-24	BC255	TIID	85-48	BC534	CAR	60-65	BCW78-25	SIEG	88-30	BD113	SGAI	123-2
B176003	SODI	131-25	BC270	SGAI	75-83	BC535	CAR	60-65			145-26	BD116	SGAI	123-3
B176004	SODI	131-26	BC271	SGAI	76-1	BC537-6	CAR	85-82	BCW78-40	SIEG	88-31	BD118	SGAI	123-4
B176005	SODI	131-27	BC272	SGAI	76-2	BC537-10	CAR	85-83			145-27	BD119	SGAI	119-3
B176006	SODI	131-28	BC280A	SGAI	79-38	BC537-16	CAR	85-84	BCW79-10	SIEG	61-14	BD120	SGAI	119-60
B176007	SODI	131-29	BC280B	SGAI	79-39	BC537-25	CAR	85-85			145-28	BD131/BD132	APX	155-26
B176008	SODI	131-30	BC280C	SGAI	79-40	BC538-6	CAR	85-86	BCW79-16	SIEG	61-15		PHIN	RTCF
B176009	SODI	131-31	BC281A	SGAI	57-82	BC538-10	CAR	85-87			145-29	BD131A	PHIS	120-43
B176010	SODI	131-32	BC281B	SGAI	57-83	BC538-16	CAR	85-88	BCW79-25	SIEG	61-16	BD132A	PHIS	108-103
B176011	SODI	131-33	BC281C	SGAI	57-84	BC538-25	CAR	85-89			145-30	BD135-BD136MP	APX	156-79
B176012	SODI	131-34	BC288	SGAI	87-45	BC582	TIID	75-88	BCW80-10	SIEG	61-17		APX	RTCF
B176013	SODI	131-35		TADI		BC582A	TIID	75-89			145-31	BD137-BD138MP	APX	156-80
B176014	SODI	131-36	BC289A	SGAI	79-41	BC582B	TIID	75-90	BCW80-16	SIEG	61-18		APX	RTCF
B176015	SODI	131-37	BC289B	SGAI	79-42	BC583	TIID	75-91			145-32	BD139-BD140MP	APX	156-81
B176024	SODI	131-38	BC290B	SGAI	79-43	BC583A	TIID	75-92	BCW80-25	SIEG	61-19		APX	RTCF
B176025	SODI	131-39	BC290C	SGAI	79-44	BC583B	TIID	75-93			145-33	BD145	RTCF	123-5
B176026	SODI	131-40	BC291A	SGAI	57-85	BC583C	TIID	75-94	BCW82	TIID	71-93		VALG	
B176027	SODI	131-41	BC291D	SGAI	57-86	BC584	TIID	75-95	BCW82A	TIID	71-94	BD148	SIEG	121-94
B176028	SODI	131-42	BC292A	SGAI	57-87	BC584B	TIID	75-96	BCW82B	TIID	71-95	BD149	SIEG	121-95
B176029	SODI	131-43	BC292B	SGAI	57-88	BC584C	TIID	75-97	BCW83	MEHK	62-97	BD162	SGAI	121-96
B177000	SODI	134-7	BC293	SGAI	87-46	BC808PCL	none	56-57			145-34	BD163	SGAI	121-97
BB3	SSCF	160-17	BC295	SGAI	68-101	BC635/636	RTCF	155-23	BCW83A	TIID	71-96	BD191	SGAI	124-52
BB4A	SSCF	160-18	BC297-7	MEHK	58-79	BC637/638	RTCF	155-24	BCW83B	TIID	71-97	BD192	SGAI	124-53
BB4B	SSCF	160-19	BC327-01	ELMA	59-41	BC639/640	RTCF	155-25	BCW83C	TIID	71-98	BD193	SGAI	124-54
BB5	SSCF	160-20	BC327/BC328	SIEG	156-76	BC727-10	CAR	60-55	BCW84	TIID	71-99	BD213-45	ALGG	132-71
BB5A	SSCF	160-21	BC328-01	ELMA	59-42	BC727-16	CAR	60-56	BCW84B	TIID	71-100	BD213-45/BD214-45	ALGG	155-27
BB5B	SSCF	160-22	BC337-01	ELMA	82-15	BC727-25	CAR	60-57	BCW84C	TIID	71-101		ALGG	132-72
BB5C	SSCF	160-23	BC337-16%	none	85-65	BC727-40	CAR	60-58	BCW87	SIEG	67-69	BD213-60/BD214-60	ALGG	155-28
BB12	SSCF	160-24	BC337-25%	none	85-66	BC728-10	CAR	60-59	BCW88	SIEG	54-43		ALGG	132-73
BB14	SSCF	160-25	BC338-01	ELMA	82-16	BC728-16	CAR	60-60			88-32	BD213-80	ALGG	155-29
BB18	SSCF	160-26	BC338/BC328	SIEG	156-77	BC728-25	CAR	60-61	BCW98A	ALGG	62-47	BD213-80/BD214-80	ALGG	132-74
BC100														

# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
BD265A	RTCF	183-75	BF109	(cont.)		BF320C	TIIB	89-44	BFW17	(cont.)		BFY30	ITTT	82-85
BD265B	RTCF	163-76	PHIN	PHIC	VALG	BF329	SGAI	74-3	TADI	RTCF	VALG	BFY37I	ITTT	66-78
BD265L	RTCF	163-77	BF110	SIEG	VALG	BF330	SGAI	74-14	BFW19	SGAI	85-40	BFY39-1	RTCF	75-100
BD266/267	RTCF	155-30	BF111	SIEG	VALG	BF332	SGAI	71-78	TADI	TADI		BFY39-2	RTCF	75-101
BD266A/267A	RTCF	155-31		TADI	VALG	BF333	SGAI	71-73	BFW24	SGAI	87-33	BFY39-3	RTCF	75-102
BD266B/267B	RTCF	155-32	BF114	ALGG	VALG	BF334	SGAI	73-94	TADI	TADI		BFY39I	RTCF	73-105
BD266L	RTCF	163-78		SIEG	VALG	BF335	RTCF	73-81	BFW25	SGAI	87-41	BFY45	RTCF	85-1
BD267L	RTCF	163-79	BF115Δ	THCF	VALG				TADI	TADI				
BD271	RTCF	124-92		THCI	VALG				BFW26	SGAI	87-34	BFY47	RTCF	62-93
	VALG		BF115I	none	VALG	BF340	TIID	55-81	TADI	TADI		BFY48	RTCF	62-94
BD272	RTCF	109-56	BF118	ITT	VALG	BF341	TIID	55-82	BFW41	LTTF	67-33	TADI	RTCF	62-95
	VALG			TIIB	VALG	BF342	TIID	55-83	TADI	TADI				
BD273	RTCF	124-93	BF119	ITT	VALG	BF344	SGAI	67-6	BFW42	LTTF	83-1	BFY49	RTCF	62-95
	VALG			TIIB	VALG	BF345	SGAI	67-7	BFW46	LTTF		TADI	RTCF	87-101
BD274	RTCF	109-57	BF121	ITT	VALG				Repl.by 2N3924 Cur.	none		BFY50I	RTCF	140-28
	VALG			TIIB	VALG	BF364	RTCF	76-77	BFW47	VALG		BFY51I	RTCF	72-97
BD275	RTCF	124-94	BF123	ITT	VALG	BF365	RTCF	76-25	Repl.by 2N3553 Cur.	none		BFY55	RTCF	72-92
	VALG			TIIB	VALG	BF377	ALGG	78-8	BFW51	SGAI	156-82			none
BD276	RTCF	109-58	BF125	ITT	VALG	BF378	ALGG	78-9	TADI	TADI		ELMA	PHIC	NASG
	VALG			TIIB	VALG	BF379	ALGG	57-31	BFW51A	SGAI	156-83	PHIN	PHIN	PHIN
BD400	TIID	121-73	BF127	ITT	VALG	BF384	TIID	74-7	TADI	TADI		RTCF	TADI	TADI
BD433A	SIEG	124-110	BF137	ITT	VALG	BF385	TIID	74-8	BFW52	SGAI	156-84	TIIF	VALG	VALG
BD433B	SIEG	125-1	BF140	THCF	VALG	BF390	SGAI	115-21	BFW52A	SGAI	156-85	Repl.by 2N2297 Cur.		none
BD433C	SIEG	125-2		THCI	VALG	BF397A	TIID	60-45	TADI	TADI		APX	APX	APX
BD434A	SIEG	109-60	BF140A	THCF	VALG	BF397B	TIID	60-46	BFW57	ELMA	79-18	PHIC	PHIC	PHIC
BD434B	SIEG	109-61		THCI	VALG	BF398A	TIID	60-47	MULB	PHIC	143-94	PHIN	PHIN	PHIN
BD434C	SIEG	109-62	BF154	MEHK	VALG	BF398B	TIID	60-48	BFW58	ELMA	79-19	TADI	TADI	TADI
BD435A	SIEG	125-3		SGAI	VALG	BF411	ALGG	75-75	MULB	PHIC	143-95	TIIF	TIIF	TIIF
BD435B	SIEG	125-4	BF157B	SGAI	VALG	BF412	ALGG	75-76	BFW59	ELMA	79-20	Repl.by 2N1613 Cur.		none
BD435C	SIEG	125-5	BF162	SGAI	VALG	BF413	ALGG	74-92	MULB	PHIC	143-96	BFY68	RTCF	APX
BD436A	SIEG	109-63	BF163	SGAI	VALG	BF424	ITT	55-110	BFW66	SGAI	88-5	PHIC	PHIN	PHIN
BD436B	SIEG	109-64	BF164	SGAI	VALG	BF497	SGAI	70-29	TADI	TADI	145-36	TIIF	TIIF	TIIF
BD436C	SIEG	109-65	BF165	SGAI	VALG	BF509	none	57-36	BFW67	SGAI	87-35	RTCF	RTCF	RTCF
BD461	TIID	125-6	BF168	ALGG	VALG	BF689K	SIEG	71-36	TADI	TADI		Repl.by 2N1711 Cur.		none
BD462	TIID	109-66	BF169	CAR	VALG	BFQ31AR	FERR	70-32	BFW69	SGAI	88-66	BFY68A	RTCF	86-23
BD463	TIID	125-7		THCF	VALG	FQ038	MULB	117-25	BFW71	SGAI	83-109	BFY69	ALGG	64-78
BD464	TIID	109-67	BF176	CAR	VALG	FQ039	MULB	117-26			145-37	BFY69A	ALGG	64-79
BD585	ALGG	126-14	BF186	APX	VALG	FQ040	MULB	117-27	BFW73	SGAI	78-2	BFY85A	ALGG	71-66
BD585-BD586	ALGG	155-33		MULB	VALG	BFR14	SIEG	74-28	BFW73A	SGAI	78-3			
BD586	ALGG	109-93		PHIN	VALG	BFR15	SIEG	74-38	BFW74	SGAI	78-4	BFY85B	ALGG	156-87
BD587	ALGG	126-15		VALG	VALG	BFR22	SGAI	114-30	BFW75	SGAI	78-5			
BD587-BD588	ALGG	155-34	BF187	THCF	VALG				TADI	TADI	78-10	BFY86A	ALGG	156-88
BD588	ALGG	109-94		THCI	VALG	BFR25	SGAI	81-35	BFW76A	SGAI	78-10			
BD589	ALGG	126-16	BF188	THCF	VALG				TADI	TADI	78-11	BFY86B	ALGG	156-89
BD589-BD590	ALGG	155-35		THCI	VALG	BFR26	LTTF	77-31	BFW77	SGAI	74-17			
BD590	ALGG	109-95	BF189	THCF	VALG	BFR34	SIEG	77-41	BFW77A	SGAI	74-19	BFY87	ALGG	156-90
BD595	ALGG	128-3		THCI	VALG	BFR35	SIEG	71-42	BFW79	SGAI	67-48	BFY87A	ALGG	62-44
BD595-BD596	ALGG	155-36	BF196-01	ELMA	VALG	BFR83	APX	114-31	BFW87	ELMA	74-20	BFY90B	MULB	62-45
BD596	ALGG	110-10	BF197-01	ELMA	VALG	BFS10	SGAI	88-65		ELMA	142-30	BFY99	SIEG	70-70
BD597	ALGG	128-4	BF206	THCF	VALG	BFS11	SGAI	67-31	BFW88	MULB	57-3	BFZ10	ASMB	114-10
BD597-BD598	ALGG	155-37		THCI	VALG	BFS12	SGAI	61-6		MULB	142-13	BLX42	SODI	108-67
BD598	ALGG	110-11	BF207	THCF	VALG	BFS13E	SGAI	62-72	BFW89	ELMA	57-12	BLX88	LTTF	83-2
BD599	ALGG	128-5		THCI	VALG	BFS13F	SGAI	62-73		MULB	142-31	BLY10	ITT	119-61
BD599-BD600	ALGG	155-38	BF208	THCF	VALG	BFS13G	SGAI	62-74	BFW90	ELMA	57-4			
BD600	ALGG	110-12		THCI	VALG	BFS14E	SGAI	53-11		MULB	142-14	BLY11	ITT	143-38
BD663A	SGAI	130-18	BF209	THCF	VALG	BFS14F	SGAI	53-12	BFW91	ELMA	57-5			
BD663B	SGAI	130-19		THCI	VALG	BFS14G	SGAI	53-13		MULB	142-15	BLY12	ITT	145-70
BD695	ALGG	152-85	BF213	THCF	VALG	BFS15E	SGAI	62-75	BFW99	RTCF	77-93	BLY15	BRUB	119-63
BD696	ALGG	152-86		THCI	VALG	BFS15F	SGAI	62-76	BFW99	SIEG	71-38			
BD697	ALGG	152-87	BF214	THCF	VALG	BFS15G	SGAI	62-77	BFX10	SGAI	156-86	BLY15A	ITT	118-98
BD700	ALGG	152-88		THCI	VALG	BFS16E	SGAI	53-17	BFX14	ELMA	88-6	BLY16	ITT	118-83
BD701	ALGG	152-89	BF215	THCF	VALG	BFS16F	SGAI	53-18		SGAI		BLY17A	MULB	129-43
BD702	ALGG	152-90		THCI	VALG	BFS16G	SGAI	53-19	BFX32	ALGG	77-88			
BD1530	SSCF	153-21	BF216	AEIL	VALG	BFS18CA	SIEG	64-81		TADI		BLY17C	RTCF	129-44
BD1540	SSCF	153-22	BF217	AEIL	VALG	BFS19CB	SIEG	64-83	BFX42	SGAI	78-16	BLY20	RTCF	119-64
BD1550	SSCF	153-23	BF218	AEIL	VALG	BFS22	APX	116-32			163-17		VALG	VALG
BD1560	SSCF	153-24	BF219	AEIL	VALG				BFX45	TADI	65-18	BLY21	RTCF	119-65
BD2530	SSCF	153-25	BF220	AEIL	VALG	ELMA	PHIN			RTCF	146-94		VALG	VALG
BD2540	SSCF	153-26	BF223	ALGG	VALG	BFS22R	APX	116-33	BFX47	VALG	67-86	BLY22	SIEG	118-30
BD2550	SSCF	153-27	BF226	THCF	VALG	BFS23	APX	116-34	BFX49	RTCF	114-9		TADI	TADI
BDX22	SGAI	122-14	BF227	THCI	VALG				BFX52	RTCF	79-21	BLY25	SGAI	125-8
BDX24	SGAI	122-15		THCI	VALG	ELMA	PHIN			RTCF	143-53	BLY26	SGAI	125-9
BDX33Δ	none	152-91	BF228	ALGG	VALG	RTCF				TADI	114-98	BLY27	THCF	119-4
BDX62L	RTCF	163-80	BF229	ALGG	VALG	BFS23R	APX	116-35	BFX53	ALGG	78-11			
BDX63L	RTCF	163-81	BF230	ALGG	VALG	BFS26E	SGAI	53-14	BFX61	TADI		BLY28	THCI	119-5
BDX64L	RTCF	163-82	BF232	ALGG	VALG	BFS26F	SGAI	53-15		THCF				
BDX65L	RTCF	163-83	BF233	SIEG	VALG	BFS26G	SGAI	53-16	BFX63	APX	92-59	BLY29	THCI	119-6
BDX66L	RTCF	163-84	BF233-2Δ	CAR	VALG	BFS27E	SGAI	62-79		MULB				
BDX67L	RTCF	163-85	BF233-3Δ	NSC	VALG	BFS27G	SGAI	62-80	ELMA	PHIN		BLY30	SGAI	147-32
BDY15	ITT	118-102	BF233-6	NSC	VALG	BFS27G	SGAI	62-80	PHIC	PHIN				
BDY15A	ITT	118-93		NPC	VALG	BFS28R	APX	92-10	RTCF	VALG	87-67	BLY37	SGAI	147-34
BDY15B	ITT	118-94		THCF	VALG	BFS29P	TIIB	66-61	BFX68A	SGAI				
BDY15C	ITT	118-95		THCI	VALG	BFS30	TIIB	75-98		TADI	62-101	BLY37	PHIN	139-9
BDY16	ITT	118-96	BF235	NPC	VALG	BFS30P	TIIB	66-62	BFX75	RTCF	62-102		VALG	VALG
BDY16A	ITT	118-103		THCF	VALG	BFS31	TIIB	75-99	BFX77	TADI	69-90	BLY40	LTTF	134-66
BDY16B	ITT	118-97	BF254	THCI	VALG	BFS31P	TIIB	66-63		THCF		BLY47	THCI	111-77
BDY17	ITT	131-44	BF260	SGAI										

# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
BLV60	VALG	none	BSV44B	ITT	80-29	BSW63	VALG	none	BSY23	none	BUY88	♦MULB	129-48	
Repl.by 2N3632 Cur.	TADI	111-85	BSV45A	ITT	60-30	Repl.by 2N2221A Cur.	VALG	none	(cont.)	♦MOTA	C1-2-12	♦CTR	142-79	
BLV61	TADI	111-85	BSV45B	ITT	60-31	BSW64	VALG	none	Repl.by 2N834 Obs.	ITT	77-36	♦CTR	144-99	
BLV62	TIIB	111-86	BSV46	ITT	59-59	Repl.by 2N2222A Cur.	VALG	none	BSY29	ITT	139-11	♦CTR	147-14	
BLV63	TIIB	111-87	BSV47A	ITT	59-60	BSW66Δ	♦MULB	87-47	TADI	ITT	139-21	♦CTR	147-28	
BLV64	♦SGAI	126-17	BSV47B	ITT	59-61			148-83	ITT	139-11	C2-8	♦CTR	147-28	
BLV65	♦SGAI	109-96	BSV48A	ITT	59-62	BSW67Δ	♦MULB	87-48	BSY32	ITT	64-24	CTR	164-15	
BLV66	♦SGAI	122-17	BSV48B	ITT	59-63			148-84	BSY33	ITT	139-51	CTR	164-15	
BLV70	♦SGAI	124-56	BSV49A	ITT	59-64	BSW68Δ	♦MULB	87-49	C5	ITT	64-25	NECJ	66-33	
BLV72	♦SGAI	136-18	BSV49B	ITT	59-65			148-85	BSY36	ITT	139-40	♦CTR	120-103	
BLV74	♦SGAI	118-31	BSV50E	SGAI	140-95	BSW70	♦MULB	72-13	C7	ITT	64-39	NECJ	54-14	
BLV76	♦ELMA	114-95	BSV50F	SGAI	140-95	BSW72	TADI	59-66	C8	ITT	139-15	NECJ	54-16	
	RTCF		BSV50G	SGAI	140-95	BSW73	♦CAR	59-67	BSY42	ITT	156-92	CTR	164-17	
	VALG		BSV51	ALGG	72-93	BSW74	♦CAR	59-68	BSY43	ITT	64-26	CTR	164-18	
	ALGG		BSV52R	none	71-84	BSW75	♦CAR	59-69	BSY47	ITT	139-52	CTR	120-104	
	ALGG				138-80	BSW76	♦CAR	59-68	BSY48	ITT	82-37	CTR	164-17	
BLV78	ALGG	118-61	BSV53	TIIB	138-80	BSW77	♦CAR	59-68	BSY49	SIEG	141-30	CTR	164-18	
BLV79	ALGG	120-80	BSV53P	TIIB	138-81	BSW78	♦CAR	59-69	BSY50	SIEG	141-30	CTR	120-95	
BLV80	ALGG	117-70			66-105	BSW79	♦CAR	59-69	BSY50	ITT	141-58	CTR	164-19	
BLV81	ALGG	120-48	BSV54	TIIB	138-82	BSW80	♦CAR	59-69	BSY50	ITT	141-58	CTR	164-19	
BLV86	SGAI	119-7			77-42	BSW81	TADI	59-69	BSY50	ITT	141-58	CTR	164-19	
BLV87	APX	120-49	BSV54P	TIIB	138-83	BSW82	ITT	69-108	BSY50	ITT	141-58	CTR	164-19	
	ELMA				66-106	BSW83	ITT	139-59	BSY59	♦SIEG	139-10	SGAI	80-32	
	RTCF				138-84	BSW84	ITT	139-73	TADI	TADI	148-90	SLCB	92-107	
	VALG				138-84	BSW85	ITT	70-9	SIEG	SIEG	149-58	SLCB	92-13	
BLV88	APX	121-98	BSV55	TIIB	141-22	BSW86	ITT	139-88	TIIF	TIIF	142-17	C101	55-49	
	ELMA		BSV55A	TIIB	141-22	BSW87	ITT	55-12	RTCF	RTCF	74-103	C102	55-54	
	RTCF				57-26	BSW88	ITT	143-70	TADI	TADI	123-9	C103	none	
	VALG		BSV55AP	TIIB	143-69	BSW89	ITT	83-94	SGAI	SGAI	130-16	Repl.by 2N1642 Cur.	♦TCY	55-65
	ALGG				54-41	BSW90	ITT	83-95	ETIF	ETIF	131-51	C11E	SGAI	154-10
BLV89	APX	124-57	BSV55P	TIIB	143-69	BSW91	ITT	83-96	SGAI	SGAI	131-52	C112	TCY	143-88
	ELMA		BSV56A	ALGG	160-30	BSW92	♦THCF	83-97	ETIF	ETIF	131-53	C118	TCY	55-59
	RTCF		BSV56B	ALGG	160-31	BSW93	♦THCI	83-97	SGAI	SGAI	108-16	C119	TCY	55-60
	VALG		BSV56C	ALGG	160-32	BSW94	SGAI	83-97	♦RTCF	♦RTCF	131-54	C201	TCY	154-17
BLV91	APX	119-43	BSV56D	ALGG	160-33	BSW95	♦ALGG	72-1	SGAI	SGAI	131-55	C202	TCY	154-19
	ELMA		BSV56E	ALGG	160-34	BSW96	♦ALGG	146-33	BU100	BU100	111-93	C302	TCY	154-20
	RTCF		BSV56F	ALGG	160-35	BSW97	♦ALGG	146-35	BU110	BU110	111-93	C301A	TCY	154-21
	VALG		BSV56G	ALGG	160-36	BSW98	♦ALGG	146-35	BU111	BU111	111-93	C302	TCY	154-21
BLV92	APX	121-99	BSV56H	ALGG	160-37	BSW99	♦ALGG	146-35	BU112	BU112	111-93	C302	TCY	154-21
	ELMA		BSV56I	ALGG	160-38	BSW88A	ALGG	146-35	BU122	BU122	131-55	C401	TCY	154-22
	RTCF		BSV56J	ALGG	160-39	BSW88B	ALGG	146-35	BU127	BU127	111-93	C402	TCY	154-23
	VALG		BSV56K	ALGG	160-40	BSW89	♦ALGG	146-35	BU128	BU128	111-93	C403	TCY	154-23
BLV93	APX	124-58	BSV56L	ALGG	160-41	BSW89A	ALGG	146-35	BU130	BU130	131-54	C407	SGAI	68-69
	ELMA		BSV56M	ALGG	160-42	BSW89B	ALGG	146-35	BU131	BU131	131-54	C413N	♦TCY	96-49
	RTCF		BSV56N	ALGG	160-43	BSW90	ALGG	146-35	BU210	BU210	131-56	C420	SGAI	75-42
	VALG		BSV56FA	SIEG	145-38	BSW91	♦ALGG	146-35	BU211	BU211	131-57	C424	SGAI	123-13
BLV95	ALGG	117-71	BSV65FB	SIEG	66-90	BSW92	♦THCF	146-38	BU212	BU212	131-58	C434	SGAI	147-13
BLV96	ALGG	120-24			145-39	BSW93	♦THCI	146-109	BU218	BU218	132-94	C442	SGAI	79-85
BLV98	ELMA	111-88	BSV83	SGAI	61-9	BSW94	SGAI	146-109	BU218	BU218	132-94	C450	SGAI	68-82
	MULB		BSV85	SGAI	80-30	BSW95	SGAI	146-109	BU218	BU218	132-94	C502	TCY	154-24
BLV99	RTCF	111-89	BSV85	SGAI	80-30	BSW95A	SGAI	146-109	BU218	BU218	132-94	C610	TCY	154-38
BM70-12	♦CTR	135-40	BSW10	♦ALGG	85-35	BSX19∅	none	146-109	BU225	BU225	147-45	C611	TCY	154-39
BM80-28	CTR	164-86	BSW11	ALGG	82-69	BSX20%	VALG	80-92	ALGG	ALGG	111-95	C612	TCY	154-40
BM100-12	CTR	164-87	BSW12	ALGG	82-69	BSX20∅	none	80-92	BSU30	BSU30	126-20	C613	TCY	154-41
BM150-12	CTR	164-88	BSW13	♦SIEG	82-69	BSX23	ITT	139-74	BSU31	BSU31	126-21	C614	TCY	154-42
BN12	♦SSCF	160-27	BSW19A	ALGG	140-72	BSX23	ITT	139-74	BSU32	BSU32	126-21	C615	TCY	154-43
BOX24	none	111-90	BSW19V	ALGG	146-26	BSX31	SGAI	81-9	BSU37	BSU37	133-10	C620	TCY	154-44
BPX30	♦RTCF	159-30	BSW20	♦ALGG	146-27	BSX34	SGAI	81-9	BSU77	BSU77	133-10	C621	TCY	154-45
BPX59	ALGG	159-31	BSW20A	ALGG	146-25			160-83	BUX26	BUX26	130-46	C622	TCY	154-46
BPY62	SIEG	159-32	BSW20V	ALGG	146-28			90-77	BUX27	BUX27	130-47	C623	TCY	154-47
BPY66	♦SGAI	159-33	BSW30	♦SGAI	146-28	BSX35	SGAI	160-84	BUY10	BUY10	123-10	C624	TCY	154-48
BSC1015	SODI	135-87	BSW31	♦SGAI	143-41	BSX62B	TADI	57-33	BUY11	BUY11	123-11	C625	TCY	154-49
BSC1015A	SODI	135-88	BSW33	♦RTCF	143-42	BSX62C	SIEG	143-65	BUY13	BUY13	131-59	C631	TCY	154-50
BSC1015B	SODI	135-89	BSW34	♦RTCF	143-42	BSX62D	SIEG	114-36	BUY16	BUY16	126-22	C632	TCY	154-51
BSC1016	SODI	135-90	BSW34	♦RTCF	143-42	BSX63B	SIEG	114-37	BUY17	BUY17	126-22	C633	TCY	154-52
BSC1016A	SODI	135-91	BSW33	♦RTCF	143-42	BSX63C	SIEG	114-38	BUY18	BUY18	126-22	C640	TCY	154-53
BSC1016B	SODI	135-92	BSW33	♦RTCF	143-42	BSX66	TADI	76-30	BUY19	BUY19	126-22	C641	TCY	154-54
BSS10	SGAI	76-105	BSW34	♦RTCF	143-42	BSX67	♦VALG	146-97	BUY26	BUY26	149-72	C642	TCY	154-55
BSS11	TADI	111-91	BSW34	♦RTCF	143-42	BSX68	♦VALG	146-97	BUY27	BUY27	149-72	C643	TCY	154-56
BSS12	TADI	139-72	BSW35	♦RTCF	143-42	BSX69	♦VALG	146-97	BUY28	BUY28	149-72	C650	TCY	154-57
BSS13	TADI	140-4	BSW39	♦RTCF	143-42	BSX70	♦VALG	146-97	BUY28	BUY28	149-72	C651	SGAI	87-107
BSS14	TADI	114-32	BSW40	ALGG	142-110	BSX71	♦VALG	146-97	BUY27	BUY27	151-73	C652	TCY	154-59
BSS19	♦TIID	71-89	BSW42	♦CAR	143-19	BSX79A	ALGG	76-32	BUY27	BUY27	112-44	C653	TCY	154-60
BSS20	♦TIID	71-90	BSW44	♦THCF	57-16	BSX79B	ALGG	146-39	BUY27	BUY27	112-44	C660	TCY	154-61
BSS21	♦TIID	71-90	BSW44	♦THCF	57-16	BSX80	ALGG	146-40	BUY27	BUY27	112-44	C667	TCY	154-61
BSS22	♦TIID	71-90	BSW44	♦THCF	57-16	BSX81	♦ALGG	72-3	BUY27	BUY27	112-44	C667	TCY	154-61
BSS23	ALGG	143-10	BSW44	♦THCF	57-16	BSX81A	ALGG	146-41	BUY27	BUY27	112-44	C667	TCY	154-61
BSS25	SIEG	142-73	BSW44	♦THCF	57-16	BSX81B	ALGG	146-42	BUY27	BUY27	112-44	C667	TCY	154-61
BSS30	SGAI	113-40	BSW44	♦THCF	57-16	BSX83	SGAI	146-43	BUY27	BUY27	112-44	C667	TCY	154-61
BSS31	TADI	113-41	BSW44	♦THCF	57-16	BSX84	SGAI	146-44	BUY27	BUY27	112-44	C667	TCY	154-61
BSS32	SGAI	113-42	BSW44	♦THCF	57-16	BSX84	SGAI	146-45	BUY27	BUY27	112-44	C667	TCY	154-61
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F120A	AMF	127-101			142-50	FPO100	†FSC	159-51			142-18	GET536	MULB	47-6
F121	AMF	128-67	FM709	SGAI	77-72	FPT100	†FSC	159-52	FT3645	†FSC	59-88	GET538	MULB	47-7
F121A	AMF	128-68			139-85	FSP1	SGAI	157-64			142-19	GET571	MULB	101-45
F122	AMF	128-69	FM720A	SGAI	81-36	FSP2	FSC	none	FT3820	†FSC	89-45	GET572	MULB	101-46
F122A	AMF	128-70	FM870	†FSC	81-42	Repl.by 2N2060	Cur.		INL	TSC		GET573	MULB	101-47
F123	AMF	128-71				FSP5	FSC	159-53	FT3838	SGAI	142-20	GET574	MULB	101-48
F123A	AMF	128-72	FM871	†FSC	81-43	FSP22	FSC	161-84			155-41	GET581	MULB	101-49
F124	AMF	128-73				FSP42-1	SGAI	63-20	FT4017	†FSC	161-87	GET582	MULB	101-50
F124A	AMF	128-74	FM910	SGAI	81-39	FSP42-1	SGAI	63-21				GET583	MULB	101-51
FE100	TSC	none	FM911	SGAI	81-37	FSP165	SGAI	62-81	FT4018	†FSC	161-88	GET584	MULB	101-52
Repl.by 2N3452	Cur.		FM1100	†NSC	96-82	FSP165	SGAI	62-99				GET585	MULB	101-53
FE100A	TSC	none			157-33	FSP166	SGAI	63-22	FT4019	†FSC	161-89	GET586	MULB	101-54
Repl.by 2N3455	Cur.		FM1100A	NSC	96-83	FSP166-1	SGAI	63-23				GET589	MULB	38-92
FE102	TSC	none	FM1101	†NSC	96-84	FSP215	SGAI	62-83	FT4020	†FSC	157-67	GET692	MULB	38-94
Repl.by 2N3453	Cur.				157-34	FSP242-1	SGAI	62-100				GET693	MULB	38-95
FE102A	TSC	none	FM1101A	NSC	96-85	FSP270-1	SGAI	53-20	FT4021	†FSC	157-68	GET706	†GESY	80-60
Repl.by 2N3456	Cur.		FM1102	†NSC	96-86	FSP289-1	SGAI	62-98				GET708	†GESY	80-61
FE104	TSC	none			157-35	FSP400	FSC	154-77	FT4022	†FSC	157-69			142-52
Repl.by 2N3454	Cur.		FM1102A	NSC	96-87	FSP598	ΔGIC	161-85				GET870	MULB	38-62
FE104A	TSC	none	FM1103	†NSC	96-88	FT001	LTF	84-57	FT4023	†FSC	157-70	GET871	MULB	38-54
Repl.by 2N3457	Cur.				157-36	FT002	LTF	84-58				GET872	MULB	38-81
FE200	TSC	none	FM1103A	NSC	96-89	FT003	LTF	84-80	FT4024	†FSC	157-71	GET873	MULB	38-55
Repl.by 2N3066	Cur.		FM1104	†NSC	96-90	FT004	SSCF	84-51				GET874	MULB	38-82
FE202	TSC	none			157-37	FT004A	LTF	84-70	FT4025	†FSC	157-72	GET875	MULB	38-90
Repl.by 2N3067	Cur.		FM1104A	NSC	96-91	FT005	LTF	82-6				GET880	MULB	43-29
FE204	TSC	none	FM1105	†NSC	96-92	FT006	LTF	82-7	FT4354	†FSC	59-109	GET881	MULB	43-30
Repl.by 2N3068	Cur.				157-38	FT008	LTF	82-26			145-40	GET882	MULB	43-44
FE250	TSC	154-66	FM1105A	NSC	96-93	FT008A	LTF	82-27	FT4355	†FSC	59-110	GET883	MULB	42-21
FE252	TSC	154-67	FM1106	†NSC	96-94	FT012	LTF	111-100			145-41	GET884	MULB	42-30
FE254	TSC	154-68			157-39	FT0019H	SGAI	57-109	FT4356	†FSC	60-1	GET885	MULB	43-50
FE300	TSC	none	FM1106A	NSC	96-95	FT0019M	SGAI	57-110			145-42	GET887	MULB	43-31
Repl.by 2N3069	Cur.		FM1107	†NSC	96-96	FT020	LTF	none	FT5040	†FSC	60-2	GET888	MULB	43-43
FE302	TSC	none			157-40	Repl.by BFW36	Cur.				140-99	GET889	MULB	43-38
Repl.by 2N3070	Cur.		FM1107A	NSC	96-97	FT023	LTF	74-109	FT5041	†FSC	60-3	GET890	MULB	43-45
FE304	TSC	none	FM1108	†NSC	96-98	FT024	LTF	74-110			141-40	GET891	MULB	43-32
Repl.by 2N3071	Cur.				157-41	FT025	LTF	75-21	FT5722R	†FCAJ	71-56	GET892	MULB	43-46
FE350	TSC	154-69	FM1108A	NSC	96-99	FT026	LTF	75-22			164-33	GET895	MULB	43-51
FE352	TSC	154-70	FM1109	†NSC	96-100	FT027	LTF	119-8	FT5726DR	†FCAJ	71-57	GET896	MULB	43-10
FE354	TSC	154-71			157-42	FT34A	FSC	148-86	FT5727BR	†FCAJ	71-61	GET897	MULB	43-11
FE400	TSC	none	FM1109A	NSC	96-101			121-59	FT5727BR	†FCAJ	164-35	GET898	MULB	43-12
Repl.by 2N3436	Cur.		FM1110	†NSC	96-102	FT34B	FSC	148-87	FT5727DR	†FCAJ	71-58	GET914	†GESY	80-62
FE400A	TSC	none			157-43	FT34C	†FSC	87-50			164-36	GET929	†GESY	79-67
Repl.by 2N3458	Cur.		FM1110A	NSC	96-103	FT34C	†FSC	148-88	FT5728BR	†FCAJ	164-37	GET930	†GESY	79-68
FE402	TSC	none	FM1111	†NSC	96-104	FT34D	†FSC	87-51	FT5728DR	†FCAJ	71-59	GET931	MULB	38-91
Repl.by 2N3437	Cur.				157-44			148-89			164-38	GET2221	†GESY	80-34
FE402A	TSC	none	FM1111A	NSC	96-105	FT40	SGAI	163-18	FT6200	FSC	none	GET2221A	†GESY	80-35
Repl.by 2N3459	Cur.		FM1200	†NSC	96-106			none	Repl.by 2N1978	Cur.				141-73
FE404	TSC	none			157-45	FT044	LTF	none	FT7207A	SGAI	126-73	GET2222A	†GESY	80-63
Repl.by 2N3438	Cur.		FM1201	†NSC	96-107	Repl.by 2N1565	Cur.		FT7207B	SGAI	126-74			141-80
FE404A	TSC	none			157-46	FT45	SGAI	70-2	FTR118	†FSC	83-103	GET2369	†GESY	80-83
Repl.by 2N3460	Cur.		FM1202	†NSC	96-108	FT052	LTF	82-25			164-104			139-55
FE0654A	†FSC	92-21	FM1203	†NSC	96-109	FT053	LTF	82-28	FTR158	†FSC	83-104	GET2483	GESY	79-54
INL	TSC				157-48	FT57	†FSC	96-17			164-105	GET2484	†GESY	79-61
FE0654B	†FSC	92-22	FM1204	†NSC	96-110				FTR168	†FSC	83-110	GET2904	†GESY	58-29
INL	TSC				157-49	FT107A	†FSC	74-33			165-1			142-21
FE0654C	†FSC	92-23	FM1205	†NSC	97-1	FT107B	†FSC	74-34	FTR174	†FSC	52-77	GET2905	†GESY	58-30
FE1600	†FSC	154-72			157-50	FT107C	†FSC	74-35	FV914	SGAI	67-78			142-22
FE3819	†FSC	95-60	FM1206	†NSC	97-2	FT118	†FSC	67-82			142-51	GET2906	†GESY	58-31
INL	TSC				157-51	FT400A	FSC	109-100	FV918	SGAI	67-85	GET2907	†GESY	58-32
FE4302	†FSC	93-16	FM1207	†NSC	97-3	FT400B	FSC	109-101	FV2369A	SGAI	67-83			142-24
FE4303	†FSC	93-17			157-52	FT0654A	†FSC	93-19			139-78	GET3013	†GESY	80-84
FE4304	†FSC	93-18	FM1208	†NSC	97-4	INL	TSC	93-20	FV2484	SGAI	67-71			139-110
	TSC				157-53	FT0654B	†FSC	143-76	FV2894	SGAI	54-53	GET3014	†GESY	80-85
FE5245	†FSC	95-61	FM1209	†NSC	97-5	INL	TSC	93-21	FV3014	SGAI	67-79			140-35
INL	TSC				157-54	FT0654C	†FSC	93-22			140-34	GET3562	GESY	72-33
FE5246	†FSC	95-62	FM1210	†NSC	97-6	INL	TSC	93-22	FV3299	SGAI	67-73	GET3563	†GESY	73-105
INL	TSC				157-55	FT0654D	†FSC	143-56			163-56	GET3638	†GESY	58-50
FE5247	†FSC	95-63	FM1211	†NSC	97-7	INL	TSC	93-23	FV3300	SGAI	67-75			143-99
INL	TSC				157-56	FT0654E	†FSC	93-23	FV3300	SGAI	67-75	GET3638A	†GESY	58-51
FE5457	†FSC	94-91	FM1613	SGAI	81-40	FT701	†FSC	161-86			141-100	GET3646	†GESY	80-86
INL	TSC		FM1711	SGAI	81-41				FV3502	SGAI	54-50			143-100
FE5458	†FSC	94-92	FM1893	SGAI	81-38	FT704	†FSC	90-39			141-100			140-51
INL	TSC		FM2242	FSC	79-30				FV3503	SGAI	54-51	GET3903	†GESY	78-83
FE5459	†FSC	94-93			141-46	FT709	†FSC	77-73			141-101	GET3904	†GESY	78-86
INL	TSC		FM2368	SGAI	77-52			140-13	FV3962	SGAI	54-45	GET3905	†GESY	57-41
FE5484	†FSC	94-94			139-62	FT1210	FSC	none	GA5319	WEC	none	GET3906	†GESY	57-44
INL	TSC		FM2369	SGAI	140-9	Repl.by 2N917	Obs.					GET5305	†GESY	152-40
FE5485	†FSC	94-95			142-34	FT1315	SGAI	81-10	Repl.by 2N537	Obs.		GET5306	†GESY	152-42
INL	TSC		FM2846	SGAI	80-33			139-77	GA52609	WEC	none	GET5307	†GESY	152-43
FE5486	†FSC	94-96			143-71	FT1324B	FSC	81-29	Repl.by GA53270	Obs.		GET5308A	†GESY	152-41
INL	TSC		FM2894	SGAI	57-24				GA52829	WEC	43-20	GET5307	†GESY	152-41
FF400	TCY	91-62			143-71	FT1324C	FSC	81-20	GA52830	WEC	49-65	GET5308	†GESY	152-44
FG34	TSC	154-73	FM3014	SGAI	77-33				GA52837	WEC	43-37	GET5308A	†GESY	152-45
FG35	TSC	154-74			140-41	FT1341	FSC	81-7	GA52996	WEC	48-55	GF45017	WEC	none
FG36	TSC	154-75	FM3954A	†NSC	97-8				GA53080	ΔWEC	155-42	Repl.by 2N528	Obs.	
FG37	TSC	154-76			157-57	FT1607R	†FCAJ	115-35	GA53104	WEC	43-18	GFT20	ITT	39-56
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		161-83			157-59	FT1702	†FSC	115-36	GA53194	WEC	42-72	GFT20/15	TKAD	39-57
FJ100	†FSC	90-38	FM3955A	†NSC	97-10			164-103	GA53213	WEC	43-8	GFT20/30	TKAD	39-58
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NS400	NSC	59-92	NS6209	NSC	160-107		PHIC			ITTT			THCF	THCI
NS430	NSC	83-56	NS6210	NSC	160-108	OC84	MULB	49-84	OC469	BRUB	54-78	PBC184	NPC	75-104
NS431	NSC	83-56					PHIC			ITTT			THCF	THCI
NS432	NSC	83-58	NS6211	NSC	160-109	OC169	APX	36-43	OC469K	BRUB	55-64	PD3L	NECJ	159-79
NS433	NSC	83-58					VALG			ITTT		PD6	NECJ	159-80
NS434	NSC	83-59	NS6212	NSC	160-110	OC170	PHIN	41-53	OC470	BRUB	54-81	PE5010	FSC	77-35
NS435	NSC	83-60	NS6213	NSC	160-111		APX			ITTT		PE5013	FSC	77-9
NS436	NSC	83-62	NS6214	NSC	160-112		MULB			BRUB	55-68	PE5015	FSC	77-9
NS437	NSC	83-63	NS7000	NSC	158-18	OC171	PHIN	41-54	OC470K	BRUB	55-68	PEP2	AEIL	77-10
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NS475	NAS	81-82	NS7002	NSC	158-20		NTLB			BRUB	55-43	PEP6	AEIL	77-11
NS476	NAS	81-83	NS7003	NSC	158-21	OC303	PHIN	42-87	OC480K	BRUB	59-90	PEP7	AEIL	142-56
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NS478	NAS	81-85	NS7200	NSC	158-23	OC304/1	BRUB	42-88	OC601	ALGG	35-79	PEP9	AEIL	142-59
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NS663	NSC	59-6	NS7303	NSC	158-28		ITTT		OC604SP	ALGG	46-33	PEP9	AEIL	76-39
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NS731	NAS	81-88	NS9001	NSC	142-97	OC306/1	BRUB	42-89	OC623	ALGG	34-73	PET1075	PHIL	79-89
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NS734A	NAS	81-95	NS9400	NSC	116-26		ITTT		OC702A	BRUB	57-53	PET6001	PHIL	80-94
NS792	NSC	none	NS9420	NAS	119-26	OC307-1	BRUB	42-81	OC702B	BRUB	57-53	PET6002	PHIL	81-2
Repl. by 2N2403 Obs.						OC307-2	BRUB	42-82	OC703	BRUB	57-47	PET6003	PHIL	79-91
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NS1111	NSC	138-98	NS9728	NSC	69-91	OC330	ITTT	35-51	OC977	PHIC	159-74	PET8250	PHIL	77-55
		154-3				OC331	NPC	34-78	OD603	MULB	99-16	PET8251	PHIL	77-63
NS1112	NSC	154-4	NS9730	NSC	69-92		BRUB		OD603/50	ALGG	99-17	PET8300	PHIL	58-2
NS1116	NSC	138-99	NS9731	NSC	69-93	OC340	ITTT	35-53	OD650	AEG	104-57	PET8301	PHIL	58-3
		154-5	NSD127	NSC	119-27		ITTT		OD650B	AEG	104-54	PET8302	PHIL	58-4
NS1234	NSC	60-12	NSD128	NSC	119-28	OC341	NPC	34-79	OD651	AEG	104-55	PET8303	PHIL	58-5
NS1355	NAS	85-9	NSD129	NSC	119-29		BRUB		OD651A	AEG	104-56	PET8304	PHIL	58-6
NS1356	NSC	87-96	NSP42C	NSC	109-103		ITTT		OD652	AEG	none	PET8350	PHIL	48-40
NS1500	NSC	63-106	NTS870	NSC	149-27	OC342	BRUB	34-80	Repl. by ADY18 Cur.		none	PET8351	PHIL	48-42
NS1510	NSC	63-107				OC343	BRUB	34-81	ON285A	VALG	91-26	PET8352	PHIL	48-41
		149-102	OC3H	VANN	42-16		ITTT		OS13	TOSJ	159-75	PET8353	PHIL	48-43
NS1672	NSC	59-22	OC3L	VANN	42-33	OC344	BRUB	34-82	OS15	TOSJ	159-76	PET9001	PHIL	80-95
NS1673	NSC	59-23	OC3LP	VANN	42-104		ITTT		OS17	TOSJ	159-77	PET9001A	PHIL	139-25
NS1674	NSC	59-24	OC3LR	VANN	42-105	OC350	BRUB	34-86	OS17	TOSJ	159-78	PET9002	PHIL	80-96
NS1675	NSC	59-25	OC3N	VANN	42-41		ITTT		P346	SGAI	77-54	PET9002A	PHIL	139-26
NS1861	NSC	58-98	OC4-0	VANN	42-45	OC360	ITTT	35-52	P346A	SGAI	139-64	PET9002A	PHIL	80-97
NS1862	NSC	58-99	OC4H	VANN	42-17		NPC		P1003	TSC	140-84	PET9002A	PHIL	139-66
NS1863	NSC	56-18	OC4K	VANN	42-34	OC361	BRUB	34-81	P1004	TSC	154-81	PET9003	PHIL	141-51
NS1864	NSC	56-19	OC4L	VANN	42-107		ITTT		P1005	TSC	154-82	PET9004	PHIL	143-30
NS1900	NSC	79-79	OC4LP	VANN	42-108	OC362	BRUB	34-82	P1027	TSC	89-106	PET9021	PHIL	80-66
NS1960	NAS	85-10	OC4LR	VANN	42-109		ITTT		P1028	TSC	89-107	PET9022	PHIL	141-52
NS1972	NSC	81-96	OC4N	VANN	42-42	OC363	BRUB	34-85	P1029	TSC	89-108	PF510	PHIL	80-67
NS1973	NSC	81-97	OC5-0	VANN	42-46		ITTT		P1029	TSC	89-109	PFN3066	DIC	143-31
NS1974	NSC	81-98	OC5K	VANN	42-35	OC364	BRUB	34-88	P1069E	TSC	89-110		90-4	
NS1975	NSC	81-99	OC5L	VANN	42-110		ITTT		P1117E	TSC	90-1		90-4	
NS1975	NSC	81-99	OC5LP	VANN	43-1	OC390	ITTT	37-78	P1118E	TSC	90-2	PFN3069	DIC	159-81
NS2100	NSC	145-81	OC5LR	VANN	43-2	OC400	ITTT	37-80	P1119E	TSC	90-3		90-4	
		87-97	OC5N	VANN	42-43	OC410	ITTT	37-83			90-3		90-3	
		145-82	OC16	MULB	none	OC430	BRUB	54-70			none	PFN3458	DIC	159-82
NS2310	NSC	154-6	Repl. by 2N115 Obs.				ITTT		PA1000	TSC	57-101		90-3	
NS2311	NSC	154-7	OC27	AMP	none	OC430K	BRUB	54-71	PA1001	TSC	58-1	PH244N	AMEN	159-83
NS2525	NSC	73-74	Repl. by 2N1315 Obs.				ITTT		PA6015C	PHIB	155-44		159-84	
NS3000	NSC	160-29	OC30A	VALG	99-14	OC440	BRUB	54-72	PADT20	APX	none	PMT011	PSI	63-35
		160-30	OC30B	VALG	99-15		ITTT		Repl. by 2N2089 Cur.		none	PMT012	PSI	63-36
NS3001	NSC	160-31	OC32	NPC	35-89	OC440K	BRUB	55-51	PADT21	APX	none	PMT013	PSI	63-37
		160-32	OC33	NPC	35-101		ITTT		Repl. by 2N2090 Cur.		none	PMT014	PSI	63-38
NS3039	NSC	160-94	OC34	NPC	35-106	OC443	ITTT	54-75	PADT22	APX	none	PMT015	PSI	63-39
		163-107	OC34	NPC	35-106	OC443K	ITTT	55-61	Repl. by 2N2091 Cur.		none	PMT016	PSI	63-40
NS3040														

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
PMT215	TRWS	84-106	PT850	TRWS	88-60	PT6635	TRWS	118-69	QD104-71	QDC	77-59	RE3778	SODI	117-47
PMT216	TRWS	84-106	PT850A	TRWS	88-61	PT6636	TRWS	120-21			158-39		USC	
		140-92	PT851	PSI	none	PT6669	TRWS	113-105	QD104-78	QDC	82-42	RE3779	SODI	117-48
PMT217	TRWS	80-100	Repl.by 2N1838	Cur.		PT6905	TRWS	134-87			158-40		USC	
PMT218	TRWS	73-16	PT852	PSI	none			147-55	QD150-71	QDC	84-4	RE3780	SODI	120-1
PMT219	TRWS	73-17	Repl.by 2N1839	Cur.		PT6905A	TRWS	134-88	QD150-78	QDC	86-84		USC	
PMT220	TRWS	72-66	PT853	PSI	none			148-95	QD200-71	QDC	75-49	RE3781	SODI	120-41
PMT221	PSI	73-92	Repl.by 2N1840	Cur.		PT6905B	TRWS	134-89	QD200-78	QDC	75-50		USC	
PMT222	TRWS	64-50	PT886	TRWS	84-45			148-96	QD201-71	QDC	75-51	RE3797	SODI	124-19
PMT223	TRWS	74-6	PT887	TRWS	84-46	PT6905C	TRWS	134-90	QD201-78	QDC	75-52		USC	
		140-93	PT888	TRWS	84-47			148-97	QD203-71	QDC	75-53	RE3798	SODI	124-20
PMT224	TRWS	72-36	PT896	TRWS	111-102	PT6907	TRWS	130-5	QD203-78	QDC	75-54		USC	
PMT225	TRWS	64-7	PT897	TRWS	84-48	PT6939	TRWS	131-80	QD204-71	QDC	75-55	RE3800	SODI	127-47
PMT1767M	TRWS	64-33	PT898	TRWS	84-27			147-56	QD204-78	QDC	75-56		USC	
PMT1767P	TRWS	64-34	PT900	TRWS	134-84	PT6963	TRWS	129-68	QD400-71	QDC	57-20	RE3805	SODI	114-64
PMT1767T	TRWS	64-35	PT900-1	PSI	134-85	PT6984	TRWS	131-81			158-41		USC	
PMT1787M	PSI	73-33	PT901	PSI	none			148-77	QD400-78	QDC	58-101	RE3842	SODI	108-73
PMT1787P	PSI	64-36	Repl.by 2N1899	Cur.		PT6988	TRWS	131-82			158-42		USC	
PMT1787T	PSI	73-34	PT901-1	TRWS	none			148-78	QD401-71	QDC	57-21	RE3843	SODI	108-77
PN70	NTLB	55-8	Repl.by 2N1902	Cur.		PT6994	TRWS	133-19			158-43		USC	
PN71	NTLB	55-6	PT902	TRWS	none			UNI	QD401-78	QDC	58-102	RE3844	SODI	109-92
PN72	NTLB	55-7	Repl.by 2N1900	Cur.		PT6995	TRWS	133-20			158-44		USC	
PN107	NTLB	69-79	PT902-1	TRWS	none			UNI	QD402-71	QDC	57-27	RE3845	SODI	109-104
PN108	NTLB	69-80	Repl.by 2N1903	Cur.		PT6996	TRWS	134-8			158-45		USC	
PN109	NTLB	69-81	PT903	TRWS	none			UNI	QD402-78	QDC	58-103	RE4001	RTN	68-60
PN393Δ	none	95-107	Repl.by 2N1901	Cur.		PT7015	AMC	152-19			158-46	RE4002	RTN	68-88
PN929	NTLB	68-51	PT903-1	TRWS	none	PT7016	AMC	152-20	QD403-71	QDC	57-28	RE4010	RTN	68-89
PN930	NTLB	68-52	Repl.by 2N1904	Cur.		PT7903	TRWS	123-43			158-47	RE5001	RTN	70-38
PN3690	FSC	85-90	PT1515	TRWS	113-84			UNI	QD403-78	QDC	58-104	RE5002	RTN	70-39
PN3819	NTLB	95-108	PT1544	TRWS	114-14	PT7904	TRWS	123-44			158-48	RF2065	THCM	114-65
PN4313	NSC	60-42	PT1545	TRWS	114-15			UNI	QD404-71	QDC	57-29	RF2073	THCM	114-66
PN4343	NSC	90-44	PT1558	TRWS	113-101	PT7905	TRWS	123-45			158-49	RF2084	THCM	119-39
PN4391Δ	none	95-109	PT1559	TRWS	113-85			UNI	QD404-78	QDC	58-105	RH120	THCM	68-25
PN4392Δ	none	95-110	PT1835	TRWS	85-11	PT7906	TRWS	123-46			158-50			139-32
PN4416Δ	none	96-1	PT1836	TRWS	82-21			UNI	R2	RAU	34-83	RH3761	SODI	85-39
PN4423	NSC	60-41	PT1837	TRWS	82-22	PT7907	TRWS	123-47	R3	RAU	34-87		USC	
PN5141	NSC	60-40	PT1937	TRWS	131-78			UNI	R212	TUNE	45-66	RH3762	SODI	114-67
PN5163Δ	none	96-2				PT7908	TRWS	123-48	RA1	GESY	162-26		USC	
PPT720	PSI	80-38	PT1941	TRWS	132-83			UNI	RA1A	GESY	162-27	RH3778	SODI	117-49
PSA844P	HITJ	53-1				PT7909	TRWS	123-49	RA1B	GESY	162-28		USC	
PSA1004	HITJ	53-2	PT1949	TRWS	127-44			UNI	RA1C	GESY	162-29	RH3787	SODI	117-50
PSA1033	HITJ	53-50				PT7910	TRWS	123-50	RA2	GESY	162-30		USC	
PSC1766	HITJ	62-9	PT1963	TRWS	127-45			UNI	RA2A	GESY	162-31	RM3001	RTN	162-36
PSC2277	HITJ	88-59	PT2523	TRWS	88-24	PT7911	TRWS	123-51	RA2B	GESY	162-32	RM3002	RTN	162-37
PSC2399	HITJ	62-22	PT2524	TRWS	88-25			UNI	RA3	GESY	162-33	RM3005	RTN	152-18
PSC2400	HITJ	62-1	PT2525	TRWS	87-11	PT7912	TRWS	128-20	RA3A	GESY	162-34	RM3010	RTN	162-38
		139-14	PT2525A	TRWS	114-103			UNI	RA3B	GESY	162-35	RM3022	RTN	152-17
PSC2401	HITJ	152-25	PT2540	TRWS	88-21	PT7913	TRWS	128-21	RAC1C15/16	none	155-46	RM3036	RTN	97-93
PSD754	HITJ	62-2	PT2575	TRWS	87-12			UNI	RCA1B07	RCA	152-105	RM5008D	RTN	90-62
PT13	STL	163-32	PT2600	TRWS	120-17	PT7914	TRWS	128-22	RCA1B08	RCA	152-106	RM8007D	RTN	90-63
PT23	STL	163-33	PT2610	TRWS	118-84			UNI	RCA101	RCA	110-38	RN1020	RTN	89-50
PT53	STL	163-34	PT2620	TRWS	117-40	PT7915	TRWS	128-23	RCA102	RCA	110-39	RN1030	RTN	89-51
PT200	TRWS	none	PT2620A	TRWS	117-41			UNI	RCA103	RCA	110-40	RN1030A	RTN	89-52
Repl.by 2N4038	Cur.		PT2622	TRWS	120-18	PT7916	TRWS	128-24	RCA104	RCA	110-41	RN3020	RTN	89-53
PT201	TRWS	none	PT2630	TRWS	118-85			UNI	RCA105	RCA	110-29	RN3020R	RTN	89-54
Repl.by 2N4039	Cur.		PT2634	TRWS	121-14	PT7917	TRWS	128-25	RCA201	RCA	130-32	RN3030	RTN	89-55
PT320	TRWS	154-84	PT2635	TRWS	121-15			UNI	RCA202	RCA	130-33	RN3030R	RTN	89-56
PT515	TRWS	none				PT7918	TRWS	128-26	RCA203	RCA	130-34	RS1875	RTN	108-45
Repl.by 2N1339	Cur.		PT2640	TRWS	117-42			UNI	RCA204	RCA	130-35	RT10	SIX	163-23
PT516	TRWS	none	PT2660	TRWS	117-43	PT7919	TRWS	128-27	RCA205	RCA	129-99	RT20	SIX	163-24
Repl.by 2N1340	Cur.		PT2670	TRWS	117-44			UNI	RCA370	RCA	109-83	RT150A	RTCF	98-37
PT517	TRWS	none				PT7920	TRWS	128-28	RCA371	RCA	109-84	RT150B	RTCF	98-38
Repl.by 2N1341	Cur.		PT2690	TRWS	120-19			UNI	RCA508	RCA	134-9	RT409E	RHE	82-3
PT518	TRWS	none	PT2760	PSI	80-39	PT7921	TRWS	132-74	RCA520	RCA	125-52		RTN	
Repl.by 2N1335	Cur.		PT2981	TRWS	129-67			UNI	RCA521	RCA	125-53	RT482	RHE	84-96
PT519	TRWS	none	PT2993	TRWS	124-64	PT7922	TRWS	132-75	RCA2001	RCA	115-103		RTN	
Repl.by 2N1336	Cur.							UNI	RCA2003	RCA	132-56	RT483	RHE	84-97
PT520	TRWS	none	PT3473	TRWS	84-86	PT7923	TRWS	132-76			164-62		RTN	
Repl.by 2N1337	Cur.		PT3501	TRWS	114-63			UNI	RCA2005	RCA	120-83	RT484	RHE	84-98
PT522	TRWS	none	PT3539	PPC	none	PT7927	TRWS	132-77			164-63		RTN	
Repl.by 2N1505	Cur.		Repl.by TIC3539	Cur.				UNI	RCA2010	RCA	122-9	RT497M	RTN	none
PT523	TRWS	none	PT3540	PPC	none	PT7928	TRWS	132-78			164-64	Repl.by 2N2310	Cur.	
Repl.by 2N1506	Cur.		Repl.by TIC3540	Cur.				UNI	RCA2023-12	RCA	129-69	RT498M	RTN	none
PT530	PSI	none	PT3690	TRWS	120-20	PT7929	TRWS	132-79			164-65	Repl.by 2N2311	Cur.	
Repl.by 2N1709	Cur.		PT3691	TRWS	111-103			UNI	RCA2310	RCA	126-50	RT656M	RTN	none
PT530-1	TRWS	none	PT3760	TRWS	81-3	PT7956	TRWS	123-52	RCA3001	RCA	115-104	Repl.by 2N2312	Cur.	
Repl.by 2N1710	Cur.		PT3986	TRWS	118-62			UNI	RCA3003	RCA	118-64	RT657M	RTN	none
PT530A	PSI	none				PT7957	TRWS	123-53	RCA3005	RCA	120-26	Repl.by 2N2313	Cur.	
Repl.by 2N2783	Cur.		PT4144	PPC	119-44			UNI	RCA9113	RCA	134-91	RT679M	RTN	none
PT531	PSI	none	PT4690	TRWS	119-75	PT7958	TRWS	128-29			150-7	Repl.by 2N697	Cur.	
Repl.by 2N2874	Cur.		PT4800	TRWS	87-43			UNI	RCA9113A	RCA	134-92	RT696AM	RHE	82-4
PT601	TRWS	119-37	PT4816	TRWS	87-102	PT7959	TRWS	128-30			150-8		RTN	
PT612	TRWS	119-38	PT4830	TRWS	87-103			UNI	RCA9113B	RCA	134-93	RT696M	RTN	none
PT613	PSI	none	PT4925	TRWS	116-103	PT-H3	STL	163-35			150-9	Repl.by 2N2314	Cur.	



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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
SE9563	FSC	108-27	SFT233	◆NPC	49-64	SFT918A	NPC	158-61	SNT204	TEC	83-28	SSP3300	◆UNI	134-101
SE9570	FSC	109-46	THCF	THCI		THCF	THCI		SO1	SPR	none			148-71
SE9571	FSC	109-47	SFT234	◆NPC	49-56	SFT918B	NPC	158-62	SO2	SPR	none	SSP3301	◆UNI	134-102
SE9572	FSC	109-48	THCF	THCI		THCF	THCI		SO3	SPR	none			148-72
SE9573	FSC	109-49	SFT234A	NPC	49-57	SG0034	◆FSC	121-75	SO679R	none	55-16	SSP3302	◆UNI	134-14
SEC1077	SEC	129-80	THCF	THCI					SO5550	none	68-110			148-73
SEC1078	SEC	129-81	SFT235	◆NPC	49-58	SG0034A	◆FSC	147-37	SP328F	RTN	162-49	SSP3303	◆UNI	134-15
SEC1079	SEC	129-82	SFT237	◆NPC	45-28	SG0400	◆FSC	109-53	SP328QF	RTN	162-50	SSP3850	◆UNI	127-51
SEC1080	SEC	129-83	SFT238	◆NPC	102-83	SG0400A	◆FSC	109-54	SP706F	RTN	162-52			145-107
SEC1477	SEC	135-95	SFT239	NPC	102-84	SG0403	◆FSC	108-99	SP708F	RTN	162-53	SSP3851	◆UNI	127-52
SEC1478	SEC	135-96	SFT240	◆NPC	102-85	SG0403A	◆FSC	108-100	SP929QF	RTN	162-54			145-108
SEC1479	SEC	135-97	SFT241	NPC	48-26	SG6207	◆FSC	121-77	SP930QF	RTN	162-55	SSP3852	◆UNI	127-53
SEC1480	SEC	135-98	SFT242	NPC	48-33	SG6207A	◆FSC	121-78	SP1132F	RTN	162-56			145-109
SE53819	NPC	92-44	SFT243	◆NPC	48-30	SG7207	◆FSC	124-79	SP1711F	RTN	162-57	SSP3853	◆UNI	127-54
SFF103	THCF	89-57	SFT244	THCF	48-12	SG7207A	◆FSC	124-80	SP1890F	RTN	162-58			145-110
SFF121	THCF	89-58	SFT245	THCF	48-13	SG8207	◆FSC	130-1	SP1893F	RTN	162-59	SST610	SSE	162-99
SFT106	MIFI	45-27	SFT250	◆NPC	102-86	SI211N	◆AMEN	96-3	SP2060F	RTN	158-70	ST01	PLSB	76-74
SFT107	THCF	45-53	SFT251	NPC	48-24	SI212N	◆AMEN	96-4	SP2218AF	RTN	162-60	ST02	PLSB	80-68
SFT108	THCF	45-72	SFT252	NPC	48-31	SI213N	◆AMEN	96-5	SP2221AF	RTN	162-61			138-62
SFT113	THCF	99-71	SFT253	NPC	48-31	SI214N	◆AMEN	96-6	SP2221AQF	RTN	162-62	ST03	PLSB	80-69
SFT114	THCF	99-72	SFT259	THCF	48-36	SI215N	◆AMEN	96-7	SP2221F	RTN	162-63			138-63
SFT115	THCF	45-90	SFT260	THCF	52-37	SI216N	◆AMEN	96-8	SP2221QF	RTN	162-64	ST3	THCF	154-85
SFT121	THCF	47-32	SFT261	THCF	52-39	SI222N	AMEN	93-103	SP2223AF	RTN	158-71	ST04	PLSB	80-70
SFT122	THCF	47-45	SFT262	THCF	52-42	SI223N	AMEN	93-104	SP2483QF	RTN	162-65			138-64
SFT123	THCF	47-66	SFT264	THCF	105-6	SI224N	AMEN	93-105	SP2604QF	RTN	162-66	ST05	PLSB	80-71
SFT124	◆NPC	49-31	SFT265	◆NPC	105-7	SI225N	AMEN	93-106	SP2904AF	RTN	162-67			138-65
SFT125	◆NPC	49-34	SFT266	◆NPC	105-8	SI226N	AMEN	93-107	SP2904QF	RTN	162-68	ST06	PLSB	79-80
SFT125P	◆NPC	49-35	SFT267	◆NPC	105-9	SI232N	AMEN	92-45	SP2904F	RTN	162-69	ST9	TEC	none
SFT126	THCF	45-41	SFT268	THCF	105-10	SI233N	◆AMEN	92-46	SP2906AF	RTN	162-70	Repl.by 2N1417	Cur.	ROSG
SFT127	THCF	45-54	SFT288	◆NPC	146-53	SI234N	◆AMEN	92-47	SP2906AQF	RTN	162-71	ST10	TEC	none
SFT128	THCF	45-74	SFT298	◆NPC	52-44	SI235N	◆AMEN	92-48	SP2906QF	RTN	162-72			162-72
SFT130	◆NPC	49-70	SFT306	◆NPC	144-58	SI236N	◆AMEN	92-49	SP2906QD	RTN	162-73	Repl.by 2N470	Cur.	TEC
SFT131	◆NPC	49-73	SFT307	◆NPC	45-29	SI237N	◆AMEN	92-50	SP2906QF	RTN	162-74	ST11	TEC	none
SFT131P	◆NPC	49-74	SFT308	◆NPC	45-29	SI244N	◆AMEN	92-49	SP2908QF	RTN	162-75	Repl.by 2N473	Cur.	TEC
SFT135	THCF	45-22	SFT315	◆NPC	43-55	SI245N	◆AMEN	92-50	SP2920F	RTN	162-76	ST12	TEC	none
SFT136	THCF	45-55	SFT316	◆NPC	43-65	SI246N	◆AMEN	93-108	SP2946F	RTN	162-77	Repl.by 2N478	Cur.	TEC
SFT141	THCF	47-18	SFT317	◆NPC	43-65	SI246N	◆AMEN	93-109	SP3020F	RTN	162-78	ST13	TEC	none
SFT142	THCF	47-26	SFT319	◆NPC	45-77	SI341P	AMEN	93-110	SP3115F	RTN	162-79	Repl.by 2N476	Cur.	TEC
SFT143	◆NPC	49-32	SFT320	◆NPC	45-77	SI342P	AMEN	143-2	SP3116F	RTN	162-80	ST14	TEC	none
SFT144	◆NPC	49-33	SFT321	NPC	47-33	SI343P	AMEN	143-3	SP3133F	RTN	162-81	Repl.by 2N541	Cur.	TEC
SFT145	◆NPC	49-71	SFT322	◆NPC	47-47	SI345P	AMEN	163-103	SP3134F	RTN	162-82	ST15	TEC	68-34
SFT146	◆NPC	49-72	SFT323	◆NPC	47-67	SI346P	AMEN	163-104	SP3135F	RTN	162-83	ST20	ROSG	160-50
SFT150	THCF	101-102	SFT325	◆NPC	47-58	SI351P	AMEN	143-4	SP3136F	RTN	162-84	ST25A	NECJ	65-109
SFT151	THCF	47-27	SFT325	◆NPC	47-58	SL100	NPC	143-4	SP3253QD	RTN	162-85	ST25B	NECJ	65-110
SFT152	THCF	47-46	SFT337	◆NPC	45-30	Repl.by 2N4292	Cur.	59-26	SP3762QD	RTN	162-86	ST25C	NECJ	66-1
SFT153	THCF	47-62	SFT351	◆NPC	47-28	SL200	NPC	141-94	SP7056	NSC	112-6	Repl.by 2N1418	Cur.	TEC
SFT155	THCF	43-78	SFT352	◆NPC	47-48	SL201	NPC	59-27	SP8300	SGAI	158-73	ST30	PLSB	none
SFT162	NPC	48-52	SFT353	◆NPC	47-63	Repl.by 2N4284	Cur.	59-28	SP8302	SGAI	158-74			162-74
SFT163	◆NPC	43-83	SFT353	◆NPC	47-63	SL300	NPC	141-94	SP8303	SGAI	158-75	Repl.by 2N471	Cur.	TEC
SFT171	NPC	42-63	SFT355	◆NPC	47-63	SL300A	PLSB	59-28	SP8304	SGAI	158-76	ST31	PLSB	none
SFT172	NPC	42-64	SFT355	◆NPC	47-63	SL303A	PLSB	141-95	SP8307	SGAI	158-77	Repl.by 2N474	Cur.	TEC
SFT173	NPC	42-65	SFT357	◆NPC	43-73	SL303B	PLSB	141-95	SP8309	SGAI	158-78	Repl.by 2N477	Cur.	TEC
SFT174	NPC	42-66	SFT357	◆NPC	43-73	SL360	◆PLSB	141-95	SP8310	SGAI	158-79	ST32	PLSB	none
SFT184	NPC	52-36	SFT357	◆NPC	43-73	SL404	◆NSC	55-76	SP8311	SGAI	158-80	Repl.by 2N479	Cur.	TEC
SFT185	THCF	154-25	SFT357	◆NPC	43-73	SL918	PIHS	55-76	SP8400	SGAI	84-72	ST33	PLSB	none
SFT186	◆NPC	87-93	SFT357	◆NPC	43-73	SLM3693	PIHS	77-81	SP8401	SGAI	84-73	Repl.by 2N477	Cur.	TEC
SFT187	NPC	87-72	SFT357	◆NPC	43-73	SMT100	◆SODI	77-81	SP8402	SGAI	84-73	ST33	PLSB	none
SFT190	THCF	101-103	SFT357	◆NPC	43-73	SMT101	◆SODI	77-81	SP8402	SGAI	84-73	Repl.by 2N477	Cur.	TEC
SFT192	THCF	101-104	SFT357	◆NPC	43-73	SMT102	◆SODI	77-81	SP8411	FSC	162-87	Repl.by 2N477	Cur.	TEC
SFT211	THCF	102-80	SFT357	◆NPC	43-73	SMT103	◆SODI	77-81	SP8412	FSC	162-88	Repl.by 2N477	Cur.	TEC
SFT212	◆NPC	101-105	SFT357	◆NPC	43-73	SMT104	◆SODI	77-81	SP8412A	FSC	162-89	Repl.by 2N477	Cur.	TEC
SFT213	◆NPC	102-81	SFT357	◆NPC	43-73	SMT105	◆SODI	77-81	SP8412A	FSC	162-90	Repl.by 2N477	Cur.	TEC
SFT214	◆NPC	102-82	SFT357	◆NPC	43-73	SMT105	◆SODI	77-81	SP8413	FSC	162-91	Repl.by 2N477	Cur.	TEC
SFT222	◆NPC	48-29	SFT357	◆NPC	43-73	SN101	CSC	158-65	SP8413	FSC	162-91	Repl.by 2N475	Cur.	TEC
SFT223	◆NPC	48-38	SFT357	◆NPC	43-73	SN102	CSC	158-65	SP8413A	FSC	162-92	Repl.by 2N475	Cur.	TEC
SFT226	THCF	45-47	SFT357	◆NPC	43-73	SN109	CSC	158-65	SP8414	SGAI	162-93	Repl.by 2N480	Cur.	TEC
SFT227	◆NPC	145-105	SFT357	◆NPC	43-73	SN109	CSC	158-67	SP8414A	SGAI	162-94	Repl.by 2N480	Cur.	TEC
SFT228	THCF	45-58	SFT357	◆NPC	43-73	SN109	CSC	158-67	SP8588	FSC	162-95	Repl.by 2N543	Cur.	TEC
SFT229	THCF	45-71	SFT357	◆NPC	43-73	SN109	CSC	158-67	SP8588A	FSC	162-96	Repl.by 2N543	Cur.	TEC
SFT229	NPC	45-84	SFT357	◆NPC	43-73	SN109	CSC	158-67	SP8588A	FSC	162-96	Repl.by 2N543	Cur.	TEC
SFT232	◆NPC	143-91	SFT357	◆NPC	43-73	SN109	CSC	158-67	SP10800	◆FSC	162-97	ST51	PLSB	160-51
SFT232	THCF	49-63	SFT357	◆NPC	43-73	SN109	CSC	158-67	SP10801	◆FSC	162-98	ST51	PLSB	77-16
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SP10810	◆FSC	162-99	ST51	PLSB	160-52
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SP10811	◆FSC	162-99	ST51	PLSB	77-18
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SPC40	PLSB	161-13	ST57	PLSB	77-20
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SPC42	PLSB	79-48	ST58	PLSB	138-69
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SPC50	PLSB	161-14	ST58	PLSB	80-72
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SPC51	PLSB	74-77	ST59	PLSB	142-64
			SFT357	◆NPC	43-73	SN109	CSC	158-67	SPC52	PLSB	161-15	ST59	PLSB	80-73
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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
SU2411	TSC	94- 6	T1276	PHIL	none	T1738	PHIL	none	T2057	PHIL	none	T2679	PHIL	none
		158- 95	Repl.by 2N496	Cur.		Repl.by 2N1749	Cur.		Repl.by 2N858	Cur.		Repl.by 2N2399	Cur.	
SU2412	TSC	94- 7	T1282	PHIL	none	T1740	PHIL	none	T2058	PHIL	none	T2691	PHIL	none
		158- 96	Repl.by 2N1428	Obs.		Repl.by 2N1427	Cur.		Repl.by 2N860	Cur.		Repl.by 2N2710	Cur.	
SVT7573	none	147- 31	T1312	PHIL	none	T1756	PHIL	none	T2059	PHIL	none	T2788	PHIL	37- 32
SWT274	SWT	42- 51	Repl.by 2N501	Cur.		Repl.by 2N1416	Cur.		Repl.by 2N861	Cur.		T2857	PHIL	69- 61
SWT1516	SWT	41- 59	T1314	PHIL	none	T1788	PHIL	none	T2060	PHIL	none	T2878	PHIL	37- 17
SWT2188	SWT	41- 93	Repl.by 2N504	Cur.		Repl.by 2N240	Cur.		Repl.by 2N862	Cur.		T2896	PHIL	37- 8
SYL1182	SYL	none	T1317	PHIL	90- 32	T1789	PHIL	none	T2061	PHIL	none	T2945	PHIL	37- 49
	Repl.by 2N2354		T1322	PHIL	none	Repl.by 2N499	Cur.		Repl.by 2N863	Cur.		T2946	PHIL	37- 37
SYL1326	SYL	51- 72	Repl.by 2N503	Cur.		T1796	PHIL	44- 82	T2062	PHIL	none	T3000	PHIL	none
SYL1327	SYL	52- 41	T1326	PHIL	none	T1806	PHIL	none	Repl.by 2N864	Cur.		Repl.by 2N779A	Cur.	
SYL1380	SYL	52- 11	Repl.by 2N598	Cur.		Repl.by 2N1158	Obs.		T2071	PHIL	none	T3002	PHIL	none
SYL1454	SYL	51-103	T1327	PHIL	none	T1807	PHIL	none	Repl.by 2N865	Cur.		Repl.by 2N396A	Cur.	
SYL1468	SYL	52- 12	Repl.by 2N1122A	Cur.		Repl.by 2N1204	Cur.		T2088	PHIL	none	T3003	PHIL	none
SYL1591	SYL	52- 13	T1328	PHIL	none	T1808	PHIL	none	Repl.by 2N2182	Obs.		Repl.by 2N404	Cur.	
SYL1592	SYL	41- 89	Repl.by 2N1122A	Obs.		Repl.by 2N1494	Cur.		T2089	PHIL	none	T3004	PHIL	none
SYL1617	SYL	52- 14	T1334	PHIL	none	T1814	PHIL	none	Repl.by 2N2184	Obs.		Repl.by 2N428	Cur.	
SYL1655	SYL	45- 67	Repl.by 2N597	Cur.		Repl.by 2N1746	Cur.		T2110	PHIL	none	T3005	PHIL	none
SYL1684	SYL	43- 49	T1342	PHIL	none	T1822	PHIL	none	Repl.by 2N600	Obs.		Repl.by 2N598	Cur.	
SYL1690	SYL	43- 35	Repl.by 2N502	Cur.		Repl.by 2N1472	Obs.		T2119	PHIL	none	TA1575	RCA	none
SYL1697	SYL	43- 24	T1343	PHIL	none	T1826	PHIL	none	Repl.by 2N1499A	Cur.		Repl.by 2N270	Cur.	
SYL1717	SYL	43- 36	Repl.by 2N1118	Cur.		T1831	PHIL	none	T2144	PHIL	none	TA1575B	RCA	none
SYL1750	SYL	52- 15	T1344	PHIL	none	Repl.by 2N1750	Obs.		Repl.by 2N2181	Obs.		Repl.by 2N586	Cur.	
SYL1986	SYL	none	Repl.by 2N1119	Cur.		T1832	PHIL	none	T2145	PHIL	none	TA1614	RCA	none
	Repl.by 2N1684		T1346	PHIL	none	Repl.by 2N1742	Cur.		Repl.by 2N2183	Obs.		Repl.by 2N301	Cur.	
SYL1987	SYL	none	Repl.by 2N599	Cur.		T1833	PHIL	none	T2159	PHIL	none	TA1620A	RCA	none
	Repl.by 2N1685		T1347	PHIL	none	Repl.by 2N1743	Cur.		Repl.by 2N599	Cur.		Repl.by 2N647	Cur.	
SYL2120	SYL	41- 90	Repl.by 2N670	Obs.		T1850	PHIL	none	T2172	PHIL	none	TA1620B	RCA	none
SYL2189	SYL	44- 70	T1381	PHIL	none	Repl.by 2N1411	Cur.		Repl.by 2N395	Cur.		Repl.by 2N649	Cur.	
SYL2245	SYL	none	Repl.by 2N1200	Obs.		T1851	PHIL	none	T2173	PHIL	none	TA1628	RCA	none
	Repl.by 2N1779		T1382	PHIL	none	Repl.by 2N1752	Cur.		Repl.by 2N317A	Cur.		Repl.by 2N274	Cur.	
SYL2246	SYL	none	Repl.by 2N1201	Obs.		T1858	PHIL	none	T2186	PHIL	none	TA1650A	RCA	none
	Repl.by 2N1780		T1383	PHIL	none	Repl.by 2N1745	Cur.		Repl.by 2N779A	Cur.		Repl.by 2N331	Cur.	
SYL2248	SYL	none	Repl.by 2N1199A	Obs.		T1859	PHIL	none	T2187	PHIL	none	TA1655B	RCA	none
	Repl.by 2N1782		T1392	PHIL	none	Repl.by 2N1744	Cur.		Repl.by 2N846A	Cur.		Repl.by 2N579	Cur.	
SYL2249	SYL	none	Repl.by 2N1126	Obs.		T1866	PHIL	none	T2198	PHIL	none	TA1658	RCA	none
	Repl.by 2N1783		T1393	PHIL	none	Repl.by 2N393	Cur.		Repl.by 2N2086	Cur.		Repl.by 2N370	Cur.	
SYL2250	SYL	none	Repl.by 2N671	Obs.		T1871	PHIL	none	T2211	PHIL	none	TA1659	RCA	none
	Repl.by 2N1784		T1395	PHIL	none	Repl.by 2N1663	Obs.		Repl.by 2N2048	Cur.		Repl.by 2N371	Cur.	
SYL2300	SYL	none	Repl.by 2N600	Obs.		T1885	PHIL	none	T2299	PHIL	none	TA1660	RCA	none
	Repl.by 2N781		T1396	PHIL	none	Repl.by 2N773	Obs.		Repl.by 2N2087	Cur.		Repl.by 2N372	Cur.	
SYL2301	SYL	none	Repl.by 2N1124	Cur.		T1886	PHIL	none	T2327	PHIL	none	TA1662	RCA	none
	Repl.by 2N782		T1397	PHIL	none	Repl.by 2N774	Obs.		Repl.by 2N976	Cur.		Repl.by 2N373	Cur.	
SYL2494	SYL	none	Repl.by 2N1125	Cur.		T1887	PHIL	none	T2329	PHIL	none	TA1682	RCA	none
	Repl.by 2N783		T1398	PHIL	none	Repl.by 2N775	Obs.		Repl.by 2N779B	Obs.		Repl.by 2N561	Cur.	
SYL3013	SYL	154- 12	Repl.by 2N1127	Obs.		T1888	PHIL	none	T2330	PHIL	none	TA1682A	RCA	none
SYL3613	SYL	44- 35	T1431	PHIL	none	Repl.by 2N776	Obs.		Repl.by 2N846B	Obs.		Repl.by 2N1014	Obs.	
T15145	none	108- 24	Repl.by 2N672	Cur.		T1889	PHIL	none	T2331	PHIL	none	TA1697	RCA	none
T15146	none	108- 25	T1447	PHIL	none	Repl.by 2N777	Obs.		Repl.by 2N977	Obs.		Repl.by 2N584	Cur.	
T0003	PHIL	none	Repl.by 2N1429	Cur.		T1890	PHIL	none	T2340	PHIL	none	TA1703B	RCA	none
	Repl.by 2N207		T1472	PHIL	none	Repl.by 2N778	Obs.		Repl.by 2N2380	Cur.		Repl.by 2N1319	Cur.	
T0004	PHIL	none	Repl.by 2N1495	Cur.		T1891	PHIL	none	T2351	PHIL	41- 91	TA1704	RCA	none
	Repl.by 2N207A		T1473	PHIL	none	Repl.by 2N770	Obs.		T2352	PHIL	none	Repl.by 2N581	Cur.	
T0005	PHIL	none	Repl.by 2N1496	Cur.		T1892	PHIL	none	Repl.by 2N977	Obs.		TA1705	RCA	none
	Repl.by 2N207B		T1474	PHIL	none	Repl.by 2N772	Obs.		T2357	PHIL	none	Repl.by 2N1170	Cur.	
T6K40	SHEJ	152- 4	Repl.by 2N1500	Cur.		T1893	PHIL	none	Repl.by 2N2187	Cur.		TA1706	RCA	none
T0012	PHIL	none	T1475	PHIL	none	Repl.by 2N771	Obs.		T2363	PHIL	none	Repl.by 2N582	Cur.	
	Repl.by 2N536		Repl.by 2N673	Obs.		T1895	PHIL	none	Repl.by 2N2185	Cur.		TA1730	RCA	none
T0014	PHIL	none	T1501	PHIL	none	Repl.by 2N1158A	Obs.		T2364	PHIL	37- 20	Repl.by 2N591	Cur.	
	Repl.by 2N535B		Repl.by 2N1118A	Cur.		T1902	PHIL	none	T2392	PHIL	none	TA1731	RCA	none
T0015	PHIL	none	T1510	PHIL	none	Repl.by 2N396A	Cur.		Repl.by 2N2375	Cur.		Repl.by 2N374	Cur.	
	Repl.by 2N535A		Repl.by 2N501A	Cur.		T1903	PHIL	none	T2393	PHIL	none	TA1755	RCA	none
T20A6	SHEJ	98- 39	T1512	PHIL	none	Repl.by 2N404	Cur.		Repl.by 2N2376	Cur.		Repl.by 2N640	Cur.	
T0031	PHIL	none	Repl.by 2N601	Obs.		T1904	PHIL	none	T2415	PHIL	none	TA1756	RCA	none
	Repl.by 2N534		T1537	PHIL	none	Repl.by 2N428	Cur.		Repl.by 2N2186	Cur.		Repl.by 2N641	Cur.	
T0033	PHIL	none	Repl.by 2N1123	Obs.		T1905	PHIL	35- 39	T2417	PHIL	none	TA1757	RCA	none
	Repl.by 2N535		T1546	PHIL	none			140- 45	Repl.by 2N1204A	Obs.		Repl.by 2N642	Cur.	
T1000	PHIL	48- 59	Repl.by 2N1129	Cur.		T1930	PHIL	none	T2418	PHIL	none	TA1759	RCA	none
T1001	PHIL	48- 60	T1548	PHIL	none	Repl.by 2N768	Cur.		Repl.by 2N1494A	Cur.		Repl.by 2N585	Cur.	
	Repl.by 2N223		Repl.by 2N128	Cur.		T1937	PHIL	none	T2448	PHIL	none	TA1763	RCA	none
T1013	PHIL	none	T1558	PHIL	none	Repl.by 2N779	Obs.		Repl.by 2N706B	Cur.		Repl.by 2N1300	Cur.	
	Repl.by 2N223		Repl.by 2N1676	Cur.		T1947	PHIL	none	T2452	PHIL	none	TA1763A	RCA	none
T1025	PHIL	none	T1573	PHIL	none	Repl.by 2N1500	Cur.		Repl.by 2N2274	Cur.		Repl.by 2N1301	Cur.	
	Repl.by 2N354		Repl.by 2N1130	Cur.		T1961	PHIL	none	Repl.by 2N2276	Cur.		TA1763B	RCA	none
T1028	PHIL	none	T1574	PHIL	none	Repl.by 2N1754	Cur.		Repl.by 2N2278	Cur.		Repl.by 2N1683	Cur.	
	Repl.by 2N128		Repl.by 2N1128	Cur.		T1967	PHIL	none	T2454	PHIL	none	TA1765	RCA	none
T1032	PHIL	none	T1581	PHIL	none	Repl.by 2N769	Cur.		Repl.by 2N2278	Cur.		Repl.by 2N176	Cur.	
	Repl.by 2N346		Repl.by 2N1677	Cur.		T1973	PHIL	none	T2455	PHIL	none	TA1766	RCA	none
T1034	PHIL	none	T1591	PHIL	none	Repl.by 2N1499A	Cur.		Repl.by 2N2280	Cur.		Repl.by 2N351	Cur.	
	Repl.by 2N232		Repl.by 2N1478	Cur.		T1992	PHIL	none	T2469	PHIL	none	TA1767	RCA	none
T1038	PHIL	none	T1623	PHIL	none	Repl.by 2N846	Obs.		Repl.by 2N2275	Cur.		Repl.by 2N356	Cur.	
	Repl.by 2N240		Repl.by 2N502A	Cur.		T2015	PHIL	none	T2470	PHIL	none	TA1771	RCA	none
T1040	PHIL	none	T1655	PHIL	none	Repl.by 2N1785	Cur.		Repl.by 2N2277	Cur.		Repl.by 2N357	Cur.	
	Repl.by 2N352		Repl.by 2N674	Cur.		T2016	PHIL	none	T2471	PHIL	none	TA1772	RCA	none
T1041	PHIL	none	T1656	PHIL	none	Repl.by 2N1786	Cur.		Repl.by 2N2279	Cur.		Repl.by 2N358	Cur.	
	Repl.by 2N													

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IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
TA1861	RCA	none	TA7130	RCA	none	TE3606A	TSC	78-97	THP47	FTHF	98-100	TI485	TII	75-64
Repl.by 2N1179	Cur.		Repl.by 2N5804	Obs.		TE3607	TSC	142-62	THP61	FTHF	65-74	TI490	TII	138-52
TA1881	RCA	none	TA7130A	RCA	none			69-97	THP62	FTHF	65-75	Repl.by 2N780	Cur.	none
Repl.by 2N307	Cur.		Repl.by 2N5805	Obs.				142-82	THP106	FTHF	65-99	TI492	♦TII	65-93
TA1882	RCA	none	TA7361	RCA	none	TE3662	TSC	74-1	THP169	FTHF	154-100	TI493	♦TII	65-7
Repl.by 2N955	Cur.		Repl.by 40605	Cur.		TE3663	TSC	74-2	THP170	FTHF	154-101	TI494	♦TII	65-8
TA1890	RCA	none	TA7420	RCA	none	TE3702	TSC	56-37	THP171	FTHF	154-102	TI495	♦TII	65-9
Repl.by 2N456	Cur.		Repl.by 2N5840	Cur.		TE3703	TSC	56-38	THP172	FTHF	154-103	TI496	♦TII	84-39
TA1891	RCA	none	TA7513	RCA	none	TE3704	TSC	75-57	THP501	THCF	41-31	TI500	TII	99-100
Repl.by 2N457	Cur.		Repl.by 2N5838	Cur.		TE3705	TSC	75-58	THP502	THCF	41-32	TI501	TII	99-101
TA1920	RCA	none	TA7530	RCA	none	TE3706	TSC	75-59	TI155	TII	162-103	TI540	TII	99-100
Repl.by 2N794	Cur.		Repl.by 2N5839	Cur.		TE3707	TSC	72-58	TI158	♦TII	99-96	TI602	TII	none
TA1920A	RCA	none	TA-D93	TADI	162-100	TE3708	TSC	72-59	TI158A	♦TII	99-97	Repl.by 2N997	Obs.	none
Repl.by 2N795	Cur.		TA-M93	TADI	158-97	TE3709	TSC	72-60	TI158AL	♦TII	99-98	TI605	TII	none
TA1920B	RCA	none	TAB101	RTCF	162-101	TE3710	TSC	72-61	TI158L	♦TII	99-99	Repl.by 2N2432	Cur.	none
Repl.by 2N796	Cur.		TAD93	TADI	162-102	TE3711	TSC	72-62	TI320	TII	41-94	TI607	TII	none
TA1938	RCA	none	TAM93	TADI	160-53	TE3843	TSC	68-92	TI321	TII	41-97	Repl.by 2N2692	Cur.	none
Repl.by 2N3118	Cur.		TC0914	GME	81-8	TE3844	TSC	68-103	TI363	TII	42-60	TI607A	TII	none
TA1939	RCA	none			142-66	TE3845	TSC	69-9	TI364	TII	42-61	Repl.by 2N2692	Cur.	none
Repl.by 2N3118	Cur.	117-14	TC0918	GME	70-63	TE3854	TSC	69-1	TI365	TII	45-104	TI608	TII	none
TA2084	RCA	none	TC2369A	GME	81-30	TE3854A	TSC	69-2	TI389	TII	45-105	Repl.by 3N74	Cur.	none
TA2090A	RCA	none			139-92	TE3855	TSC	69-12	TI395	TII	45-106	TI609	TII	none
Repl.by 2N2938	Cur.		TC2483	GME	79-64	TE3855A	TSC	69-13	TI396	TII	45-107	Repl.by 3N76	Cur.	none
TA2235A	RCA	none	TC2484	GME	79-65	TE3859	TSC	69-16	TI397	TII	45-100	TI610	TII	none
Repl.by 2N2405	Cur.		TC3114	♦SPR	77-87	TE3859A	TSC	68-104	TI398	TII	45-101	Repl.by 2N3035	Cur.	none
TA2275	RCA	none	TC3200	♦SPR	66-93	TE3860	TSC	69-17	TI399	TII	45-102	TI611	TII	none
Repl.by 2N2895	Cur.		TD5452	♦TSC	158-98	TE3900	TSC	68-27	TI400	♦TII	39-18	Repl.by 2N3034	Cur.	none
TA2276	RCA	none	TD5453	♦TSC	158-99	TE3900A	TSC	68-28	TI401	♦TII	39-19	TI612	TII	none
Repl.by 2N2896	Cur.		TD5454	♦TSC	158-100	TE3901	TSC	68-29	TI402	♦TII	39-20	Repl.by 2N3033	Cur.	none
TA2277	RCA	none	TD5902	♦TSC	94-8	TE3903	TSC	78-84	TI403	♦TII	39-21	TI613	TII	none
Repl.by 2N2897	Cur.				158-101			141-76	TI407	♦TII	73-100	Repl.by 2N2639	Cur.	none
TA2278	RCA	none	TD5902A	TSC	94-9	TE3904	TSC	78-87	TI408	♦TII	73-93	TI614	TII	none
Repl.by 2N2898	Cur.				158-102			141-86	TI409	♦TII	73-75	Repl.by 2N2640	Cur.	none
TA2279	RCA	none	TD5903	TSC	94-10	TE3905	TSC	57-42	TI410	TII	70-42	TI615	TII	none
Repl.by 2N2899	Cur.				158-103			141-71	TI411	TII	75-63	Repl.by 2N2641	Cur.	none
TA2280	RCA	none	TD5903A	TSC	94-11	TE3906	TSC	57-15	TI412	TII	none	TI616	TII	none
Repl.by 2N2900	Cur.				158-104			141-77	TI412	TII	none	Repl.by 2N2642	Cur.	none
TA2307	RCA	none	TD5904	TSC	94-12	TE4123	TSC	78-85	Repl.by 2N3704	Cur.	none	TI617	TII	none
Repl.by 2N3375	Cur.				158-105	TE4124	TSC	78-88	TI413	TII	none	Repl.by 2N2643	Cur.	none
TA2333	RCA	none	TD5904A	TSC	94-13	TE4125	TSC	57-43	TI413	TII	none	TI618	TII	none
Repl.by 2N2857	Cur.				158-106	TE4126	TSC	57-45	Repl.by 2N3705	Cur.	none	Repl.by 2N2644	Cur.	none
TA2359A	RCA	none	TD5905	TSC	94-14	TE4256	TSC	68-30	TI414	TII	none	TI619	TII	none
Repl.by 2N2873	Obs.				158-107	TE4409	TSC	78-89	Repl.by 2N3706	Cur.	none	Repl.by 2N2802	Cur.	none
TA2388	RCA	none	TD5905A	TSC	94-15	TE4410	TSC	78-90	TI415	TII	none	TI620	TII	none
Repl.by 2N3229	Cur.				158-108	TE4424	TSC	79-49	Repl.by 2N3707	Cur.	none	Repl.by 2N2803	Cur.	none
TA2402A	RCA	none	TD5906	TSC	94-16	TE4425	TSC	84-17	TI416	TII	none	TI621	TII	none
Repl.by 2N3054	Cur.				158-109	TE4951	TSC	80-41	Repl.by 2N3707	Cur.	none	Repl.by 2N2804	Cur.	none
TA2403A	RCA	none	TD5906A	TSC	94-17	TE4952	TSC	142-37	TI416	TII	none	TI622	TII	none
Repl.by 2N3055	Cur.				158-110			80-42	TI417	TII	none	Repl.by 2N2805	Cur.	none
TA2404	RCA	none	TD5907	TSC	94-18	TE4953	TSC	142-38	Repl.by 2N3708	Cur.	none	TI623	TII	none
Repl.by 2N2953	Cur.				159-1			80-43	TI417	TII	none	Repl.by 2N2806	Cur.	none
TA2458	RCA	none	TD5907A	TSC	94-19	TE4954	TSC	142-39	TI418	TII	none	TI624	TII	none
Repl.by 2N3439	Cur.				159-2			80-44	Repl.by 2N3710	Cur.	none	Repl.by 2N2807	Cur.	none
TA2462	RCA	none	TD5908	TSC	94-20	TE5086	TSC	142-40	TI418	TII	none	TI625	TII	none
Repl.by 2N3118	Cur.				159-3	TE5087	TSC	57-38	TI419	TII	none	Repl.by 2N2060	Cur.	none
TA2468A	RCA	none	TD5908A	TSC	94-21	TE5088	TSC	57-39	Repl.by 2N3711	Cur.	none	TI693	TII	none
Repl.by 2N3442	Cur.				159-4	TE5089	TSC	78-71	TI419	TII	73-76	Repl.by 2N2386	Cur.	none
TA2469A	RCA	none	TD5909	TSC	94-22	TE5089	TSC	78-72	TI420	TII	none	TI694	TII	none
Repl.by 2N3441	Cur.				159-5	TE5249	TSC	74-87	Repl.by 2N2387	Cur.	none	Repl.by 2N2497	Cur.	none
TA2470	RCA	none	TD5909A	TSC	94-23	TE5309	TSC	78-101	TI421	TII	none	TI695	TII	none
Repl.by 2N3440	Cur.				159-6	TE5310	TSC	78-102	Repl.by 2N2388	Cur.	none	Repl.by 2N2498	Cur.	none
TA2492	RCA	none	TD5911	TSC	94-24	TE5311	TSC	78-103	TI422	TII	none	TI696	TII	none
Repl.by 2N3263	Cur.				159-7	TE5365	TSC	57-89	Repl.by 2N851	Cur.	none	Repl.by 2N2499	Cur.	none
TA2493	RCA	none	TD5911A	TSC	94-25	TE5366	TSC	57-90	TI423	TII	none	TI697	TII	none
Repl.by 2N3264	Cur.				159-8	TE5367	TSC	57-91	Repl.by 2N852	Cur.	none	Repl.by 2N2500	Cur.	none
TA2494	RCA	none	TD5912	TSC	94-26	TE5368	TSC	80-45	TI424	TII	none	TI711A	TII	46-7
Repl.by 2N3265	Cur.				159-9			142-41	Repl.by 2N2389	Cur.	none	TI712	TII	none
TA2495	RCA	none	TD5912A	TSC	94-27	TE5369	TSC	80-46	TI425	TII	none	Repl.by 2N2413	Cur.	none
Repl.by 2N3266	Cur.				159-10			142-42	Repl.by 2N2390	Cur.	none	TI801	TII	none
TA2501	RCA	none	TDA407	♦APX	81-32	TE5370	TSC	80-47	TI426	TII	none	Repl.by 2N3036	Cur.	none
Repl.by 2N3262	Cur.		TDA412	APX	81-33			142-43	Repl.by 2N2391	Obs.	none	TI802	TII	none
TA2510	RCA	none	TDA420	♦APX	81-34	TE5371	TSC	80-48	TI427	TII	none	Repl.by 2N3037	Cur.	none
Repl.by 2N3583	Cur.		TE697	APX	82-93			142-44	Repl.by 2N2392	Obs.	none	TI803	TII	none
TA2511	RCA	none	TE706	TSC	146-77	TE5376	TSC	80-74	TI428	TII	none	Repl.by 2N3038	Cur.	none
Repl.by 2N3584	Cur.				73-77	TE5377	TSC	80-75	Repl.by 2N2393	Cur.	none	TI804	TII	none
TA2512	RCA	none	TE1420	TSC	138-76	TE5378	TSC	58-45	TI429	TII	none	Repl.by 2N3039	Cur.	none
Repl.by 2N3585	Cur.				82-94	TE5379	TSC	58-46	Repl.by 2N2394	Cur.	none	TI805	TII	none
TA2513	RCA	none	TE1990	TSC	146-78	TE5447	TSC	56-39	TI430	TII	none	Repl.by 2N3040	Cur.	none
Repl.by 2N3230	Cur.				82-86	TE5448	TSC	56-40	Repl.by 2N849	Cur.	none	TI806	TII	none
TA2514	RCA	none	TE2369	TSC	73-80	TE5449	TSC	75-60	TI431	TII	none	Repl.by 2N3043	Cur.	none
Repl.by 2N3231	Cur.				139-56	TE5450	TSC	75-61	Repl.by 2N850	Cur.	none	TI807	TII	none
TA2551	RCA	none	TE2484	TSC	74-82	TE5451	TSC	75-62	TI432	TII	none	Repl.by 2N3044	Cur.	none
Repl.by 2N3553	Cur.		TE2711	TSC	72-37	TF49	SIEG	38-68	Repl.by 2N2395	Cur.	none	TI808	TII	none
TA2606	RCA	none	TE2712	TSC	72-38	TF65	SIEG	34-43	TI433	TII	none	Repl.by 2N3045	Cur.	none
Repl.by 2N3478	Cur.													







# 1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE

TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line
ZT1484	♦FERB	121-30												
ZT1485	♦FERB	121-31												
ZT1486	♦FERB	121-32												
ZT1487	♦FERB	127-102												
		149-76												
ZT1488	♦FERB	127-103												
		149-77												
ZT1489	♦FERB	127-104												
		149-78												
ZT1490	♦FERB	127-105												
		149-79												
ZT1511	FERB	127-106												
ZT1512	FERB	127-107												
ZT1513	FERB	127-108												
ZT1514	FERB	127-109												
ZT1613	♦FERB	87-38												
ZT1700	♦FERB	114-83												
ZT1701	♦FERB	121-33												
ZT1702	♦FERB	127-70												
ZT1703	♦FERB	127-110												
ZT1708	♦FERB	76-55												
		142-27												
ZT1711	♦FERB	87-44												
ZT2015	♦FERB	134-11												
ZT2016	♦FERB	134-12												
ZT2102	♦FERB	112-70												
ZT2205	♦FERB	76-56												
		142-28												
ZT2206	♦FERB	76-57												
		142-29												
ZT2270	♦FERB	114-84												
ZT2368	FERB	80-107												
		139-70												
ZT2369	FERB	80-108												
		139-82												
ZT2369A	FERB	80-109												
		139-83												
ZT2475	♦FERB	77-79												
ZT2476	♦FERB	140-88												
		85-27												
ZT2477	♦FERB	141-3												
		85-28												
		141-4												
ZT2631	FERB	112-21												
ZT2708	♦FERB	70-52												
ZT2857	FERB	70-89												
ZT2876	FERB	117-9												
ZT2887	♦FERB	120-22												
ZT2938	♦FERB	77-34												
		141-59												
ZT3053	FERB	none												
Repl.by 2N3053	Cur.													
ZT3229	FERB	none												
Repl.by 2N3229	Obs.													
ZT3262	FERB	none												
Repl.by 2N3262	Cur.													
ZT3375	FERB	118-44												
ZT3439	FERB	none												
Repl.by 2N3439	Cur.													
ZT3440	FERB	114-107												
ZT3441	FERB	121-34												
ZT3512	FERB	none												
Repl.by 2N3512	Cur.													
ZT3600	FERB	none												
Repl.by 2N3600	Cur.													
ZT3866	FERB	none												
Repl.by 2N3866	Cur.													
ZT6255	♦FERB	165-13												
ZTX350	♦FERB	90-26												
ZTX382A	♦FERB	79-22												
ZTX383A	♦FERB	79-23												
ZTX384A	♦FERB	79-24												
ZTX3702	♦FERB	59-105												
ZTX3703	♦FERB	59-106												
ZTX3704	♦FERB	83-80												
ZTX3705	♦FERB	83-81												
ZTX3706	♦FERB	83-82												
ZTX3707	♦FERB	83-12												
ZTX3708	♦FERB	83-13												
ZTX3709	♦FERB	83-14												
ZTX3710	♦FERB	83-15												
ZTX3711	♦FERB	83-16												





















2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION (2) fab & (3) TYPE No.

Table with columns: LINE No., TYPE No., MAX. COLL. DISS. @ 25°C (W), DERATE IN FREE AIR W/C, T A M E X P, ABS MAX RATINGS @ 25°C (V, I, P), MAX. Icbo @ MAX Vcb (V), TYPICAL h PARAMETERS (Vcb, Ie, hfe), COMMON EMITTER (hoe, hie, hre), Cob (pF), STRUC-TURE, DWG #, Y200 s/a, TO200 Ser., # L E A O D E.

































# 4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION  
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1] MAX. COLL. DISS. @25°C (W)	2] DERATE IN FREE AIR W/°C (Hz)	M E A M X P	T ABS MAX RATINGS @25°C					MAX. Icbo @MAX Vcb (A)	TYPICAL 'h' PARAMETERS						Cob (F)	STRUC-TURE	DWG # Y200 s/a TO200 Ser.	L O A D E
					BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	BIAS			COMMON EMITTER								
									Vcb (V)		Ie (A)	hfe	hoe (mhos)	hie (Ω)	hre (X.0001)					
1#	BC380-6	800m	100M	4.5m	\$J	40	40	5.0	500m	100n	5.0	50m	40	1Δ			10p	PE	TO39	A
2#	BC360-10	800m	100M	4.5m	\$J	40	40	5.0	500m	100n	5.0	50m	63	1Δ			10p	PE	TO39	A
3#	BC360-16	800m	100M	4.5m	\$J	40	40	5.0	500m	100n	5.0	50m	100	1Δ			10p	PE	TO39	A
4#	BC381-6	800m	100M	4.5m	\$J	60	60	5.0	500m	100n	5.0	50m	40	1Δ			10p	PE	TO39	A
5#	BC381-10	800m	100M	4.5m	\$J	60	60	5.0	500m	100n	5.0	50m	63	1Δ			10p	PE	TO39	A
6#	BFS12	800m	100M	4.5m	\$J	40	40	5.0	1	0.05	1.0	150m	40	1Δ#			35p	PE	TO39	A
7#	BSV83†	800m	100M	4.0m	\$J	90	80	5.0	1.0	10u	5.0	150m	70	†			25p	PE	TO39	A
8#	2SA560	800m	150M		\$J	80	60	5.0	800m	.50u	2.0	150m	60	†			19p	PE	TO39	A
9#	TX116-1	800m	150M		†A	60		5.0	50m	1.0u	2.0	10m	60	†	b	35	3.0p	ME		
10#	TX116-2	800m	150M		†A	60		5.0	50m	1.0u	2.0	10m	60	†	b	35	3.0p	ME		
11#	TX116-3	800m	150M		†A	60		5.0	50m	1.0u	2.0	10m	60	†	b	35	3.0p	ME		
12#	KSA1145	800m	200M	6.4m	\$J	150	150	5.0	-50m	100n	-5	-10m	80	†*Δ			2.5p	E	R195h	B
13	MM1712†	800m	200M	4.5m	\$J	60	50	5.0		50n	1.0	150m	100	1Δ			6.0p	EΔ	TO5	A
14#	BCW79-10†	870m	100M	5.0m	\$J		32	5.0	800m		1.0	100m	160	1Δ			18p	PE	TO39	A
15#	BCW79-16†	870m	100M	5.0m	\$J		32	5.0	800m		1.0	100m	250	1Δ			18p	PE	TO39	A
16#	BCW79-25†	870m	100M	5.0m	\$J		32	5.0	800m		1.0	100m	400	1Δ			18p	PE	TO39	A
17#	BCW80-10†	870m	100M	5.0m	\$J		45	5.0	800m		1.0	100m	160	1Δ			18p	PE	TO39	A
18#	BCW80-16†	870m	100M	5.0m	\$J		45	5.0	800m		1.0	100m	250	1Δ			18p	PE	TO39	A
19#	BCW80-25†	870m	100M	5.0m	\$J		45	5.0	800m		1.0	100m	400	1Δ			18p	PE	TO39	A
20#	BCX35	880m	360M	5.9m	\$J		80	5.0	600m	100n	1.0	150m	40	1Δ			12p	PE†	S1	A
21	2N2303/KVT	2.0	96M	11m			50	5.0		1.0u	10	150m	75	†#Δ			45p	D	X30	
22	2N1132/KVT	3.0	96M	16m			50	5.0		1.0u	10	500u	30	†#Δ	1.0u	35	8.0p	45p	D	X30
23#	BCX36	880m	360M	5.9m	\$J		60	5.0	600m	100n	1.0	150m	80	1Δ			12p	PE†	S1	A
24#	BCX37	880m	360M	5.9m	\$J		40	5.0	600m	100n	1.0	150m	40	1Δ			12p	PE†	S1	A

























5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION (2) fab & (3) TYPE No.

Table with columns: LINE No., TYPE No., MAX. COLL. DISS. @25°C (W), DERATE IN FREE AIR W/°C, T M A M X P, ABS MAX RATINGS @25°C (V, V, V, A), MAX. Icb0 @MAX Vcb (A), TYPICAL h' PARAMETERS (Vcb, Ie, hfe), COMMON EMITTER (hoe, hie, hre), Cob (F), STRUC-TURE, DWG Y200 s/a TO2000 Ser., # L E O D E.





















5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION (2) fab & (3) TYPE No.

Table with columns: LINE No., TYPE No., 1 MAX. COLL. DISS. @25°C (W), 2 fab, DERATE IN FREE AIR W/C (Hz), T M A M X P, ABS MAX RATINGS @25°C (BVcbo, BVceo, BVebo, Ic, Icb), MAX. lcb0 @MAX Vcb (A), TYPICAL 'h' PARAMETERS (Vcb, Ie, hfe), COMMON EMITTER (hoe, hie, hre), Cob (F), STRUC TURE, DWG Y200 s/a TO200 Ser., # L E O D E C O D E.









































# 8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	2] TYPE No.	1] MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. @ 25°C		BIAS		MIN	MAX	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG Y200 s/a TO200 Ser.	# L C O D E		
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo (A)	MAX Vcb (A)	Vcb (V)	Ic (A)									MIN	MAX
1	TIG05	2.0	150	∅	#S	50	5.0	50	30	35	300u∅	2.0∅	30	20	80	200k∅	23m		A	TO3				
2	TIG06	2.0	150	∅	#S	50	5.0	75	30	45	200u∅	2.0∅	30	20	80	200k∅	13m		A	TO3				
3	TIG07	2.0	150	∅	#S	50	5.0	100	30	55	200u∅	2.0∅	30	20	80	200k∅	13m		A	TO3				
4	TIG08	2.0	150	∅	#S	50	5.0	50	30	35	300u∅	2.0∅	30	20	80	200k∅	23m		A	TO41				
5	TIG09	2.0	150	∅	#S	50	5.0	75	30	45	200u∅	2.0∅	30	20	80	200k∅	13m		A	TO41				
6	TIG10	2.0	150	∅	#S	50	5.0	100	30	55	200u∅	2.0∅	30	20	80	200k∅	13m		A	TO41				
7	TS609	2.0	∅	170	∅	∅	15	4.0	40	20	40	∅	8.0m	2.0∅	5.0	20		10kt		15u	A	TO36		
8	MP800	3.0	250	∅	∅	∅	150		20	60	12m∅	2.0∅	150	15									A	
9	MP801	3.0	250	∅	∅	∅	150		20	45	12m∅	2.0∅	150	15									A	
10	MP900†	3.0	250	∅	∅	∅	150		80	2.0	60	10m	2.0∅	70	20		3.0m	25u					A	
11	MP901†	3.0	250	∅	∅	∅	150		110	2.0	90	10m	2.0∅	70	20		3.0m	25u					A	
12	MP902†	3.0	250	∅	∅	∅	150		140	2.0	120	10m	2.0∅	70	20		3.0m	25u					A	

# 9. GERMANIUM NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Icbo @ 25°C (A)	hFE			MAX. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200	# L E A D E
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)		BIAS Vcb (V)	Ic (A)	MIN					
1#	AC181K	2.5m∅	2.5 ∅		#J	1.0		32	10	24 s	20u∅	1.0∅	600m	50				* X9b	
2#	AC194	2.5m∅	1.0 #		#C	1.0		25	10	25 ∅	25u∅	1.0∅	400mΔ	200 ∅				T01	
3#	AC194K	2.5m∅	1.0 #		#C	1.0		25	10	25 ∅	25u∅	1.0∅	400mΔ	200 ∅				T01	
4#	2SD191	2.9m∅			∅J	15		30	12	25	14n∅	1.0∅	.05	20	130			T09	
5#	2SD192	2.9m∅			∅J	15		30	12	25	14n∅	1.0∅	.05	40	130			T09	
6#	2SD194	5.0m∅			∅J	40		32	12	32	14n∅	1.0∅	.15	40	150			T09	
7#	2SD170A	10m∅	600m∅		#J	500m		32	12	25	5.0mΔ	1.0∅	150m	70	300			T01	A
8#	AC175	25m	1.1 ∅*		#J	1.0		25	10	18 *	35u∅	2.0∅	150m	60	#			X9	A
9#	AC179	25m	1.1 ∅*		#J	700m		20	10	15 *	10u∅s	2.0∅	150m	60	#			X9	A
10	2N142	80m∅			∅J	800m		60	30	30	5.0m	12	50m	40	#			MM1	A
11	2N468	200m∅	12		#J	3.0	500m	60	15	45	2.0m	2.0∅	1.0	15	80				
12	LT5164	200m			#J	3.0	.50	80	15	60	3.0m	2.0∅	1.0	15	80				
13	LT5165	200m			#J	3.0	.50	35	15	30	1.0m	2.0∅	1.0	15	80				
14	LT5202	286m			#J	1.0		60	30	60	6.0∅	.25		10					
15	LT5210	286m			#J	1.0		30	15	15	10m	1.0∅	.50	10				T013	
16	2N6251	20M	1.5 ∅		#S			40	20	40 ∅	100u	1.5∅	500m	40			500n∇	A	































# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREQ AIR @ 25°C (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. I <sub>c</sub> @ 25°C (A)	hFE		f <sub>ae</sub> (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #/a TO200 Ser.	L E O A D E	
					I <sub>c</sub> (A)	I <sub>b</sub> (A)	V <sub>cb0</sub> (V)	V <sub>eb0</sub> (V)	V <sub>ceo</sub> (V)		MIN	MAX							
1#	BD112	200m#	20	\$J			80	5.0	60	10u	10	1.0	50	#	130	DPE	T03		
2#	BD113	200m	20	\$J	10	2.0	60	5.0	60	10u	2.0	2.0	40	#	90	PE	T03	A	
3#	BD116	200m#	15	\$J	3.0		80	5.0	60	10u	2.0	2.0	20	#		PE	T03		
4#	BD118	200m#	20	\$J			80	5.0	60	10u	5.0	1.0	30	#	90	DPE	T03		
5#	BD145	200m	15	\$J	5.0	1.0	60	5.0	60	10u	10	500m	45	#	100	PEΔ	T03	∅	
6#	BD251	200m	20	\$J	3.0		40	5.0	40	10u	5.0	2.0	20	#	25	PE	T03		
7#	BDY34	200m*	21	\$J	3.0		45	5.5	40	100u	2.0	2.0	30	#	300	PETΔ	T0126	B	
8#	BLY12	200m	3.0	\$J	1.5		60	4.0	30	100u	2.0	2.0	30	#	100	PE	T03		
9#	BU100	200m\$	15	\$J	10	2.0	150	5.0	60	10u	2.0	2.0	40	#	90	DPE	T03		
10#	BUY10T	200m	2.5	\$J	800m	150m	40	6.0	20	1.0m	2.0	100m	15	#	60	PE	T03		
11#	BUY11T	200m	2.5	\$J	900m	150m	40	6.0	20	1.0m	2.0	100m	40	#	100	PE	T03		
12#	BUY19T	200m\$	20	\$J	10		80	6.0	40	10u	2.0	2.0	40	#	85	DPE	T059	∅	
13#	C434T	200m\$	15	\$J			100	6.0	50	10u	2.0	2.0	30	#	100	DPE	T03	∅	
14#	CP400	200m\$	15	\$J			40	5.0	40	10u	5.0	2.0	25	#	75	DPE	T03	∅	
15#	CP401	200m\$	15	\$J			60	5.0	60	10u	5.0	2.0	25	#	75	DPE	T03	∅	
16#	CP402	200m\$	15	\$J			100	5.0	100	10u	5.0	2.0	25	#	75	DPE	T03	∅	
17#	CP404	200m\$	15	\$J			80	5.0	60	10u	5.0	1.0	30	#	120	DPE	T03	∅	
18#	CP405	200m\$	15	\$J			80	5.0	60	10u	5.0	2.0	50	#	150	DPE	T03	∅	
19#	CP406T	200m\$	15	\$J	10		60	5.0	60	10u	10	2.0	40	#	120	DPE	T03	∅	
20#	CP407T	200m\$	15	\$J	5.0		60	5.0	60	10u	10	500m	30	#	140	DPE	T03	∅	
21#	CP408T	200m\$	15	\$J	2.0		40	5.0	40	10u	10	500m	30	#	150	DPE	T03	∅	
22#	CP701	200m	15	\$J	5.0		60	5.0	40	10u	2	2.0	30	#	70	DPE	T03	∅	
23#	CP702	200m	15	\$J	3.0		60	5.0	40	10u	2	2.0	30	#	70	DPE	T03	∅	
24#	DM10-12B	200m	3	\$J	2.5		4.0	3.0	∅						960m#		MT91	R	
25	MHT6901	200m	20		5.0	5.0	145	8.0	125	1.0u	2.0	1.0	20	#	60		T066		
26	MHT6902	200m	20		5.0	5.0	170	8.0	150	1.0u	2.0	1.0	20	#	60		T066		
27	MHT6903	200m	20		5.0	5.0	195	8.0	175	1.0u	2.0	1.0	20	#	60		T066		
28	MHT6904	200m	20		5.0	5.0	220	8.0	200	1.0u	2.0	1.0	20	#	60		T066		
29	MHT6905	200m	20		5.0	5.0	145	8.0	125	1.0u	2.0	1.0	40	#	120		T066		
30	MHT6906	200m	20		5.0	5.0	170	8.0	150	1.0u	2.0	1.0	40	#	120		T066		
31	MHT6907	200m	20		5.0	5.0	195	8.0	175	1.0u	2.0	1.0	40	#	120		T066		
32	MHT6908	200m	20		5.0	5.0	220	8.0	200	1.0u	2.0	1.0	40	#	120		T066		
33	MHT7511	200m\$	20	\$J	60		60	5.0	40	1.0u	5.0	2.0	60	#	40M\$		T08		
34	MHT7512	200m\$	20	\$J	80		80	5.0	60	1.0u	5.0	2.0	60	#	40M\$		T08		
35	MHT7513	200m\$	20	\$J	100		100	5.0	80	1.0u	5.0	2.0	60	#	40M\$		T08		
36	MHT7514	200m\$	20	\$J	60		60	5.0	40	1.0u	5.0	4.0	120	#	50M\$		T08		
37	MHT7515	200m\$	20	\$J	80		80	5.0	60	1.0u	5.0	4.0	120	#	50M\$		T08		
38	MHT7516	200m\$	20	\$J	100		100	5.0	80	1.0u	5.0	4.0	120	#	50M\$		T08		
39	MHT7517	200m\$	20	\$J	60		60	5.0	40	1.0u	5.0	100			60M\$		T08		
40	MHT7518	200m\$	20	\$J	80		80	5.0	60	1.0u	5.0	100			60M\$		T08		
41	MHT7519	200m\$	20	\$J	100		100	5.0	80	1.0u	5.0	100			60M\$		T08		
42	MJE3520	200m	250	\$J	3.0	2.0	30	4.0	30	100u	1.0	1.0	25	#			B16d	B	
43	PT7903T	200m	35	\$A	5.0	3.0	90	6.0	70	100m	5.0	1.0	30	#	75M	500m	150n	T03	∅
44	PT7904T	200m	35	\$A	5.0	3.0	90	6.0	70	100m	5.0	1.0	40	#	75M	400m	150n	T03	∅
45	PT7905T	200m	35	\$A	5.0	3.0	120	6.0	70	100m	5.0	1.0	30	#	75M	500m	150n	T03	∅
46	PT7906T	200m	35	\$A	5.0	3.0	120	6.0	100	100m	5.0	1.0	30	#	75M	600m	150n	T03	∅
47	PT7907T	200m	35	\$A	5.0	3.0	120	6.0	100	100m	5.0	1.0	40	#	75M	500m	150n	T03	∅
48	PT7908T	200m	35	\$A	5.0	3.0	160	8.0	100	100m	5.0	1.0	30	#	75M	600m	150n	T03	∅
49	PT7909T	200m	35	\$A	5.0	3.0	170	6.0	140	100m	5.0	1.0	15	#	75M	700m	150n	T03	∅
50	PT7910T	200m	35	\$A	5.0	3.0	170	6.0	140	100m	5.0	1.0	30	#	75M	600m	150n	T03	∅
51	PT7911T	200m	35	\$A	5.0	3.0	200	8.0	140	100m	5.0	1.0	15	#	75M	700m	150n	T03	∅
52	PT7956T	200m	35	\$A	5.0	3.0	225	6.0	200	1.0u	5.0	1.0	10	#	75M	1.0	150n	T03	∅
53	PT7957T	200m	35	\$A	5.0	3.0	325	6.0	300	1.0u	5.0	1.0	10	#	75M	1.0	150n	T03	∅
54	SDT7511	200m\$	20	\$J	60		60	5.0	40	1.0u	5.0	2.0	60	#	40M\$		T08		
55	SDT7512	200m\$	20	\$J	80		80	5.0	60	1.0u	5.0	2.0	60	#	40M\$		T08		
56	SDT7513	200m\$	20	\$J	100		100	5.0	80	1.0u	5.0	2.0	60	#	40M\$		T08		
57	SDT7514	200m\$	20	\$J	60		60	5.0	40	1.0u	5.0	4.0	120	#	50M\$		T08		
58	SDT7515	200m\$	20	\$J	80		80	5.0	60	1.0u	5.0	4.0	120	#	50M\$		T08		
59	SDT7516	200m\$	20	\$J	100		100	5.0	80	1.0u	5.0	4.0	120	#	50M\$		T08		
60	SDT7517	200m\$	20	\$J	60		60	5.0	40	1.0u	5.0	100			60M\$		T08		
61	SDT7518	200m\$	20	\$J	80		80	5.0	60	1.0u	5.0	100			60M\$		T08		
62	SDT7519	200m\$	20	\$J	100		100	5.0	80	1.0u	5.0	100			60M\$		T08		
63	SE3030	200m\$	15	\$J	10	2.0	150	5.0	60	10u	10	500m	150	#	100M\$	1.0u#	DPE	T03	∅
64	SE3031	200m\$	15	\$J	10	2.0	150	5.0	60	10u	10	500m	125	#	100M\$	1.0u#	DPE	T03	∅
65	SE3032	200m\$	15	\$J	10	2.0	60	5.0	60	10u	10	500m	150	#	100M\$	1.0u#	DPE	T03	∅
66	SE3033	200m\$	15	\$J	10	2.0	60	5.0	60	10u	10	500m	125	#	100M\$	1.0u#	DPE	T03	∅
67	SE3035	200m#	20	\$J	40	2.0	40	5.0	40	10u	5.0	500m	30	#	260	DPL	T03	∅	
68	SE3036	200m#	15	\$J	40	2.0	40	5.0	40	10u	5.0	500m	30	#	260	DPE	T03	∅	
69	SE3040	200m\$	15	\$J	5.0	2.0	80	6.0	40	1.0u	2.0	2.0	40	#	120	DPL	T066	∅	
70	SE3041	200m\$	15	\$J	5.0	2.0	120	6.0	60	1.0u	2.0	2.0	40	#	120	DPE	T066	∅	
71	SE9060	200m	2	\$J	2.0		6.0	8.0	80	10u	5.0	1.0	30	#	90	DPL	MD10e	∅	
72	SE9061	200m	2	\$J	2.0		6.0	8.0	80	10u	5.0								



# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX. FREE AIR @ 25°C (W)	M T A X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. V <sub>cb</sub> @ 25°C		hFE		f <sub>a</sub> e (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	# C O A D E	
					I <sub>c</sub> (A)	I <sub>b</sub> (A)	V <sub>cb</sub> (V)	V <sub>eb</sub> (V)	V <sub>ceo</sub> (V)	I <sub>cb</sub> (A)	V <sub>cb</sub> (V)	I <sub>c</sub> (A)	MIN							MAX
1#	BD433B	300m	45	§J	4.0	1.0	20	5.0	20	100μ	1.0	500m	160	400	3.0MΩΔ		ET	T0126	BØ	
2#	BD433C	300m	45	§J	4.0	1.0	20	5.0	20	100μ	1.0	500m	250	630	3.0MΩΔ		ET	T0126	BØ	
3#	BD435A	300m	45	§J	4.0	1.0	32	5.0	32	100μ	1.0	500m	100	250	3.0MΩΔ		ET	T0126	BØ	
4#	BD435B	300m	45	§J	4.0	1.0	32	5.0	32	100μ	1.0	500m	160	400	3.0MΩΔ		ET	T0126	BØ	
5#	BD435C	300m	45	§J	4.0	1.0	32	5.0	32	100μ	1.0	500m	250	630	3.0MΩΔ		ET	T0126	BØ	
6#	BD461	300m	1.2	§S	4.0		35	6.0	30	50μ	1.0	50m	75	300		500m	D	B21a	BØ	
7#	BD463	300m	1.2	§S	4.0		35	6.0	35	50μ	1.0	50m	60	300		700m	D	B21a	BØ	
8#	BLY25	300m§	30	§J	5.0		120	8.0	80	50μΔ	5.0	2.0	100	300	70MΩΔ		DPE	T059	BØ	
9#	BLY26	300m§	30	§J	5.0		100	8.0	60	50μΔ	5.0	2.0	40 #		70MΩΔ	300m	DPE	T059	BØ	
10#	CP430	300m#	30	§J	5.0		100	8.0	60	10μ	5.0	2.0	40	120 #	140MΩΔ		DPE	T03	CØ	
11#	CP431	300m#	30	§J	5.0		100	8.0	60	10μ	5.0	2.0	100	300 #	150MΩΔ		DPE	T03	CØ	
12#	CP432	300m#	30	§J	5.0		120	8.0	80	10μ	5.0	2.0	40	120 #	140MΩΔ		DPE	T03	CØ	
13#	CP433	300m#	30	§J	5.0		120	8.0	80	10μ	5.0	2.0	100	300 #	150MΩΔ		DPE	T03	CØ	
14#	CP657	300m	30	§J	5.0		120	6.0	100	10μ	5.0	2.0	25	95 #	50MΩ		PE	T03	H	
15#	SDT7711	300m	55	§	15	3.0	80	20	40	10μ	5.0	5.0	20	80	5.0M		PL	T0111		
16#	SDT7712	300m	55	§	15	3.0	80	20	60	10μ	5.0	5.0	20	80	5.0M		PL	T0111		
17#	SDT7713	300m	55	§	15	3.0	100	20	80	10μ	5.0	5.0	20	80	5.0M		PL	T0111		
18#	SDT7714	300m	55	§	15	3.0	120	20	100	10μ	5.0	5.0	20	80	5.0M		PL	T0111		
19#	SDT7715	300m	55	§	15	3.0	140	20	125	10μ	5.0	5.0	20	80	5.0M		PL	T0111		
20#	SDT7716	300m	55	§	15	3.0	165	20	150	10μ	5.0	5.0	20	80	5.0M		PL	T0111		
21#	UPT410A†	300m	38	§S	3.5	2.0	200	5.0	200	100μ*	5.0	1.0	30	90 #	10MΩΔ	500m#	PL	T066	CØ	
22#	UPT411A†	300m	38	§S	3.5	2.0	300	5.0	300	100μ*	5.0	1.0	30	90 #	10MΩΔ	500m#	PL	T066	CØ	
23#	UPT413A†	300m	38	§S	2.0	1.0	400	5.0	400	100μ*	5.0	500m	20	80 #	10MΩΔ	1.0 #	PL	T066	CØ	
24#	UPT423A†	300m	38	§S	3.5	2.0	400	5.0	400	100μ*	5.0	1.0	30	90 #	10MΩΔ	500m#	PL	T066	CØ	
25#	UPT430A†	300m	38	§S	5.0	2.0	400	5.0	400	100μ*	5.0	2.5	15	45 #	10MΩΔ	240m#	PL	T066	CØ	
26#	UPT431A†	300m	38	§S	5.0	2.0	400	5.0	400	100μ*	5.0	2.5	15	35 #	10MΩΔ	240m#	PL	T03	CØ	
27#	UPT1022†	300m	30	§S	15	5.0	80	5.0	60	10μ*	5.0	5.0	40 #		50MΩ	100m#	PL	T066	CØ	
28#	UPT1023†	300m	30	§S	15	5.0	100	5.0	80 *	10μ*	5.0	5.0	40 #		50MΩ	100m#	PL	T066	CØ	
29#	UPT1024†	300m	30	§S	15	5.0	120	5.0	100 *	10μ*	5.0	5.0	40 #		50MΩ	100m#	PL	T066	CØ	
30#	UPT1025†	300m	30	§S	15	5.0	150	5.0	100 *	10μ*	5.0	5.0	40 #		50MΩ	100m#	PL	T066	CØ	
31#	A522	303mØ	45	§J	5.0	1.0	60	6.0	35	50μ	0.0	1.5	30	100	80MΩ		PE	T03		
32#	A523	303mØ	45	§J	5.0	1.0	90	6.0	60	50μ	0.0	1.5	30	100	80MΩ		PE	T03		
33#	PT4926	303m	53	§	10	5.0	100	5.0	80	1.0m	5.0	5.0	80	200	60M	250m	PE	T03	A	
34#	25C1863†	320m	40	§J	7.0	2.0	150	7.0	100	100μ	5.0	5.0	15 #		200m#	350n#	EM	F12b	CØ	
35#	25D475	320m	40	§J	4.0		70	5.0	50	1.0μ	4.0	1.0	35	320	7.0MΩ	500m	D	B17a	BØ	
36#	25D475A	320m	40	§J	4.0		70	5.0	60	1.0μ	4.0	1.0	35	320	7.0MΩ	500m	D	B17a	BØ	
37#	25D476	320m	40	§J	4.0		70	5.0	50	1.0μ	4.0	1.0	35	320	7.0MΩ	500m	D	Y220b	DØ	
38#	25D476A	320m	40	§J	4.0		70	5.0	60	1.0μ	4.0	1.0	35	320	7.0MΩ	500m	D	Y220b	DØ	
39#	25D579	320m	40	§J	4.0	1.0	100	4.0	80	100μΔ	4.0	50m	60	320 *	7.0MΩ	900m	D	T066	CØ	
40#	25D723	320m	40	§J	4.0		100	4.0	100	100μΔ	4.0	50m	25	350	1.0		D	Y220b	DØ	
41#	25D726	320m	40	§J	4.0		100	5.0	80	100μ	5.0	1.0	35	320 *	3.0MΩ	1.0	D	Y220b	DØ	
42#	MJE2521	320m	40	§J	3.0	1.0	60	5.0	60	200μ	4.0	200m	40	200 #	3.0MΩΔ		Δ	X104	DØ	
43#	MJE2522	320m	40	§J	3.0	1.0	40	5.0	40	200μ	4.0	1.0	20	100 #	3.0MΩΔ		Δ	X104	DØ	
44#	MJE2523	320m	40	§J	3.0	1.0	60	5.0	60	200μ	4.0	1.0	20	100 #	3.0MΩΔ		Δ	X104	DØ	
45#	MJE3054	320m	40	§J	4.0	2.0	90	5.0	55	1.0m#	4.0	500m	25	100 #	30kΔ		Δ	X104	DØ	
46#	MJE3521	320m	40	§J	4.0	2.0	40	4.0	40	100μ	1.0	1.0	40 #				Δ	B16d	BØ	
47#	MJE4921	320m	40	§J	3.0	1.0	40	5.0	40	100μ	1.0	500m	20	100 #	3.0MΩΔ		Δ	B23	DØ	
48#	MJE4922	320m	40	§J	3.0	1.0	60	5.0	60	100μ	1.0	500m	20	100 #	3.0MΩΔ		Δ	B23	DØ	
49#	MJE4923	320m	40	§J	3.0	1.0	80	5.0	80	100μ	1.0	500m	20	100 #	3.0MΩΔ		Δ	B23	DØ	
50#	MJE5190J	320m	40	§J	4.0	1.0	40	5.0	40	100μ	2.0	1.5	25	250	2.0MΩΔ			B16	BØ	
51#	MJE5191J	320m	40	§J	4.0	1.0	60	5.0	60	100μ	2.0	1.5	25	250	2.0MΩΔ			B16	BØ	
52#	RCA520	320m	40	§J	5.0	2.0	30	5.0	30	100μ	1.0	1.0	25 #				E	Y220b	LØ	
53#	RCA521	320m	40	§J	5.0	2.0	40	5.0	40	100μ	1.0	1.0	40 #				E	Y220b	LØ	
54#	RCA45190	320m	40	§J	7.0	2.0	40	5.0	40	100μ	2.0	1.5	25	100 #			E	Y220b	LØ	
55#	RCA45191	320m	40	§J	7.0	2.0	60	5.0	60	100μ	2.0	1.5	25	100 #			E	Y220b	LØ	
56#	RCA45192	320m	40	§J	7.0	2.0	80	5.0	80	100μ	2.0	1.5	25	80 #			E	Y220b	LØ	
57#	3TE230	322m	48	§J	4.0	1.5	80	4.0	80	100μ	5.0	1.5	10 #	60			DPE	T03		
58#	NAS31†	325m	2.0	§J	3.0	1.0	40	5.0	40	300μΔ	4.0	3.0	10	50 #	3.0MΩΔ	500nØ	D	B17a	BØ	
59#	NAS31A†	325m	2.0	§J	3.0	1.0	60	5.0	60	300μΔ	4.0	3.0	10	50 #	3.0MΩΔ	500nØ	D	B17a	BØ	
60#	NAS31B†	325m	2.0	§J	3.0	1.0	80	5.0	80	300μΔ	4.0	3.0	10	50 #	3.0MΩΔ	500nØ	D	B17a	BØ	
61#	NAS31C†	325m	2.0	§J	3.0	1.0	100	5.0	100	300μΔ	4.0	3.0	10	50 #	3.0MΩΔ	500nØ	D	B17a	BØ	
62#	25C1329	330mØ	58	§J	8.0		50	5.0	25	1.0m	10	5.0	20 #		100MΩΔ		D	T87	SØ	
63#	2N1657	333m		§J	2.0		60	3.0		5.0m	5.0	1.0	15		1.0M†		D	MS3		
64#	JAN2N5304§	333mΔ	25	§J	10 †	2.0	50 †	6.0†	40	10μ	2.0	2.0	30	120 #		120m#	PE	Δ	T061	AØ
65#	25C736	333m	50	§J	5.0	1.0	135	5.0	60	500n	10	1.0	25	70 #		200m	PE	T03		
66#	25C1259	333mØ	50	§J	6.0		36	4.0	18	2.0mØ	10	3.0	15 #		125MΔ		PE	MT87	S	
67#	25C1297	333mØ	50	§J	3.5		50	4.0	25	1.0m	10	2.0	15 #		170MΔ		PE	T87	S	
68#	25C1806	333m	50	§J	4.0		45	4.0	45 §	2.0m	25	200m	10	180 #			PE			
69#	25C2103*	333m	50	§J	6.0	6.0 Ø	40	4.0	18	1.0m	5.0	3.0	10	150 #			PE	T151	R	
70#	25D26	333m	50	§J	7.0		40	5.0	30	100μ	4.0	5.0	5.0	100			PE	T03	CØ	
71#	25D26A	333m	50	§J	7.0		60	5.0	40	100μ	4.0	5.0	5.0	100			PE	T03	CØ	
72#	25D26B	333m	50	§J	7.0		100	5.0	60	100μ	4.0	5.0	5.0	100			PE	T03	CØ	
73#	25D26C	333m	50	§J	7.0		150	5.0	80	100μ	4.0	5.0	5.0	100			PE	T03	CØ	
74#	25D175M	333m	50	§J	5.0		100	6.0	60	20μ	4.0	5.0	15	45		500k†	D	T03	CØ	
75#	3TX003	333m	53	§J	5.0		100	5.0	80	10m	5.0	5.0	10			150k	PE	T03	CØ	
76#	31X004	333m	53	§J	5.0		60	3.0	50	10m	5.0	5.0	10			150k	PE	T03	CØ	
77#	2849-2†	333m	2.0	§S																

# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX. FREE AIR @ 25°C (W)	Pc	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Vcb @ 25°C			hFE		f <sub>ae</sub> (Hz)	MAX. SAT. RES. (s)	tr (s)	STRUCTURE	DWG #	Y200 s/a 20200 Ser.	# C O A D D E
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo (A)	Vcb (V)	Vcb (A)	MIN	MAX							
1	B145002	333m	25	s	J	10	2.0	50	5.0	40	1.0m	100	3.0	120	240				Δ	T061	A	
2	B145003	333m	25	s	J	10	2.0	70	5.0	60	1.0m	100	3.0	45	90				Δ	T061	A	
3	B145004	333m	25	s	J	10	2.0	70	5.0	60	1.0m	100	3.0	70	140				Δ	T061	A	
4	B145005	333m	25	s	J	10	2.0	70	5.0	60	1.0m	100	3.0	120	240				Δ	T061	A	
5	B145006	333m	25	s	J	10	2.0	90	5.0	80	1.0m	100	3.0	45	90				Δ	T061	A	
6	B145007	333m	25	s	J	10	2.0	90	5.0	80	1.0m	100	3.0	70	140				Δ	T061	A	
7	B145008	333m	25	s	J	10	2.0	90	5.0	80	1.0m	100	3.0	120	240				Δ	T061	A	
8	B145009	333m	25	s	J	10	2.0	50	5.0	40	1.0m	100	3.0						Δ	T061	A	
9	B145010	333m	25	s	J	10	2.0	50	5.0	40	1.0m	100	3.0						Δ	T061	A	
10	B145011	333m	25	s	J	10	2.0	70	5.0	60	1.0m	100	3.0						Δ	T061	A	
11	B145012	333m	25	s	J	10	2.0	70	5.0	60	1.0m	100	3.0						Δ	T061	A	
12	B145013	333m	25	s	J	10	2.0	90	5.0	80	1.0m	100	3.0						Δ	T061	A	
13	B145014	333m	25	s	J	10	2.0	90	5.0	80	1.0m	100	3.0						Δ	T061	A	
14	BD585	333m	42	s	J	4.0	1.5	45	5.0	45	100u	2.0	2.0	25	#	3.0M\$Δ			HT	B4	BØ	
15	BD587	333m	42	s	J	4.0	1.5	45	5.0	60	100u	2.0	2.0	25	#	3.0M\$Δ			HT	B4	BØ	
16	BD589	333m	42	s	J	4.0	1.5	45	5.0	80	100u	2.0	2.0	15	#	3.0M\$Δ			HT	B4	BØ	
17	BLV64	333m#	50	s	J	5.0		80	6.0	60	10u\$	5.0	5.0	20	#	70M\$Δ			DPE	T059	A	
18	BLY70	333m#	33	s	J	5.0		100	6.0	80	10u\$	5.0	5.0	20	#	70M\$Δ			DPE	T059	A	
19	BU310	333m#	25	s	J	6.0	2.0	6.0	6.0	100	1.5	5.0	2.0	20		25M\$	100m	1.0u#	DA	T03	CØ	
20	BU311	333m#	25	s	J	6.0	2.0	6.0	6.0	125	1.5	5.0	1.5	15		25M\$	200m	1.0u#	DA	T03	CØ	
21	BU312	333m#	25	s	J	6.0	2.0	6.0	6.0	150	1.5	5.0	1.5	10		25M\$	300m	1.0u#	DA	T03	CØ	
22	BUY14	333m	15	s	J	8.0	1.5	80	5.0	60	200u	1.7	6.0	11	25	11M\$	7.0u#		ME	MD17b		
23	BUY35	333m	25	s	J	4.0		80	6.0	250	15m\$†	5.0	3.0	5.0	20	#	20M\$			DA	T03	CØ
24	CP704	333m	30	s	J	5.0		80	6.0	60	10u\$†	5.0	3.0	20	#	40M\$	340m		DPE	T03	CØ	
25	DT3200	333m	15	s	J	5.0	330m	45	8.0	30	15u	5.0	3.0	15	45		600m		D	T08		
26	DT3201	333m	15	s	J	5.0	330m	80	8.0	60	15u	5.0	3.0	15	45		600m		D	T08		
27	DT4011	333m\$	30	s	J	5.0	1.0	100	8.0	70	50u	5.0	3.0	20	70		500m		D	T03		
28	MHT6308	333m\$	30	s	J	5.0	500m	60	8.0	40	1.0u	2.0	1.0	20	60	#	30M\$	500m		PLD	MT42	
29	MHT6309	333m\$	30	s	J	5.0	500m	80	8.0	60	1.0u	2.0	1.0	20	60	#	30M\$	500m		PLD	MT42	
30	MHT6310	333m\$	30	s	J	5.0	500m	100	8.0	80	1.0u	2.0	1.0	20	60	#	30M\$	500m		PLD	MT42	
31	MHT6311	333m\$	30	s	J	5.0	500m	60	8.0	40	1.0u	2.0	1.0	40	120	#	30M\$	500m		PLD	MT42	
32	MHT6312	333m\$	30	s	J	5.0	500m	80	8.0	60	1.0u	2.0	1.0	40	120	#	30M\$	500m		PLD	MT42	
33	MHT6313	333m\$	30	s	J	5.0	500m	100	8.0	80	1.0u	2.0	1.0	40	120	#	30M\$	500m		PLD	MT42	
34	MHT6314	333m\$	30	s	J	5.0	500m	60	8.0	40	1.0u	2.0	1.0	100	#	30M\$	500m		PLD	MT42		
35	MHT6315	333m\$	30	s	J	5.0	500m	80	8.0	60	1.0u	2.0	1.0	100	#	30M\$	500m		PLD	MT42		
36	MHT6316	333m\$	30	s	J	5.0	500m	100	8.0	80	1.0u	2.0	1.0	100	#	30M\$	500m		PLD	MT42		
37	MHT6408	333m\$	30	s	J	5.0	500m	60	8.0	40	1.0u	2.0	1.0	20	60	#	30M\$	500m		PLD	MT53	GN
38	MHT6409	333m\$	30	s	J	5.0	500m	80	8.0	60	1.0u	2.0	1.0	20	60	#	30M\$	500m		PLD	MT53	GN
39	MHT6410	333m\$	30	s	J	5.0	500m	100	8.0	80	1.0u	2.0	1.0	20	60	#	30M\$	500m		PLD	MT53	GN
40	MHT6411	333m\$	30	s	J	5.0	500m	60	8.0	40	1.0u	2.0	1.0	40	120	#	30M\$	500m		PLD	MT53	GN
41	MHT6412	333m\$	30	s	J	5.0	500m	80	8.0	60	1.0u	2.0	1.0	40	120	#	30M\$	500m		PLD	MT53	GN
42	MHT6413	333m\$	30	s	J	5.0	500m	100	8.0	80	1.0u	2.0	1.0	40	120	#	30M\$	500m		PLD	MT53	GN
43	MHT6414	333m\$	30	s	J	5.0	500m	60	8.0	40	1.0u	2.0	1.0	100	#	30M\$	500m		PLD	MT53	GN	
44	MHT6415	333m\$	30	s	J	5.0	500m	80	8.0	60	1.0u	2.0	1.0	100	#	30M\$	500m		PLD	MT53	GN	
45	MHT6416	333m\$	30	s	J	5.0	500m	100	8.0	80	1.0u	2.0	1.0	100	#	30M\$	500m		PLD	MT53	GN	
46	NS9002†	333m\$	30	s	J	5.0	500m	200	8.0	80	200m	5.0	1.0	30		250m\$Δ	250u†		PE	MT42	AØ	
47	NS9210†	333m	50	s	J	5.0	.50	200	5.0	200	.01m	15	2.0	20	#	100M\$	1.5	.08u\$	PE	T061		
48	NS9211†	333m	50	s	J	5.0	.50	250	5.0	250	.01m	15	2.0	20	#	100M\$	1.5	.08u\$	PE	T061		
49	PT5929†	333m	53	s	A	10	5.0	100	5.0	90	1.0u	5.0	5.0	80	200	75M\$	250m	200nØ	PL	T059	A	
50	RCA2310	333m\$	41	s	J	3.5		45	3.5†		500u#	5.0	5.0	15	120	2.3G#			%	W24	AC	
51	ST18015	333m	30	s	J	5.0	375	10	375		10	2.5	2.0	20		10M	500m		PE	T059		
52	ST18016	333m	30	s	J	5.0	300	10	300		10	2.5	2.0	20		10M	500m		PE	T059		
53	ST18017	333m	30	s	J	5.0	250	10	250		10	2.5	2.0	20		10M	500m		PE	T059		
54	ST18018	333m	30	s	J	5.0	200	10	200		10	2.5	2.0	20		10M	500m		PE	T059		
55	ST92006	333m	30	s	J	2.0	125	10	80	20u	10	1.0	1.0	20	120	10M	2.0	1.5u	P	T059		
56	ST92007	333m	30	s	J	2.0	145	10	100	20u	10	1.0	1.0	20	120	10M	2.0		P	T059		
57	ST92008	333m	30	s	J	2.0	170	10	120	20u	10	1.0	1.0	20	120	10M	2.0	1.5u	P	T059		
58	STC1001	333mØ					100		40		4.0	1.5			1.0M†			D		T0111		
59	STT6309	333m	30	s	J	5.0	500m	80	8.0	60	1.0u	5.0	1.0	20	60	#	30M\$		PL	T0111		
60	STT6310	333m	30	s	J	5.0	500m	100	8.0	80	1.0u	5.0	1.0	20	60	#	30M\$		PL	T0111		
61	STT6312	333m	30	s	J	5.0	500m	80	8.0	60	1.0u	5.0	1.0	40	120	#	30M\$		PL	T0111		
62	STT6313	333m	30	s	J	5.0	500m	100	8.0	80	1.0u	5.0	1.0	40	120	#	30M\$		PL	T0111		
63	STT6315	333m	30	s	J	5.0	500m	80	8.0	60	1.0u	5.0	1.0	100	#	30M\$		PL	T0111			
64	STT6316	333m	30	s	J	5.0	500m	100	8.0	80	1.0u	5.0	1.0	100	#	30M\$		PL	T0111			
65	STT6409	333m	30	s	J	5.0	500m	80	8.0	60	1.0u	5.0	1.0	20	60	#	30M\$		PL	T0111		
66	STT6410	333m	30	s	J	5.0	500m	100	8.0	80	1.0u	5.0	1.0	20	60	#	30M\$		PL	T0111		
67	STT6412	333m	30	s	J	5.0	500m	80	8.0	60	1.0u	5.0	1.0	40	120	#	30M\$		PL	T0111		
68	STT6413	333m	30	s	J	5.0	500m	100	8.0	80	1.0u	5.0	1.0	40	120	#	30M\$		PL	T0111		
69	STT6415	333m	30	s	J	5.0	500m	80	8.0	60	1.0u	5.0	1.0	100	#	30M\$		PL	T0111			
70	STT6416	333m	30	s	J	5.0	500m	100	8.0	80	1.0u	5.0	1.0	100	#	30M\$		PL	T0111			
71	A25-12	343m	60	s	J	5.0		4.0	18		1.0m	5.0	4.5	10		50M#			PL	T91	R	
72	3TE609	360m	60	s	J	8.0	1.0	80	4.0	60	1.0m	5.0	4.5	10		250M			PL	T62a	R	
73	FT7207A	361m\$	30	s	J	5.0		120	8.0	80	10u\$Ø	5.0	2.0	Ø	40	120	#	70M\$				



# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W/C)	Pc A X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Vcbo @ 25°C (A)		BIAS hFE		f <sub>ae</sub> (Hz)	MAX. SAT. RES. (s)	tr (s)	STRUCTURE	DWG. # Y200 s/a TO200 Ser.	# LEADS	CODE	
					Ic (A)	Ib (A)	Vcbo (V)	Vcbo (V)	Vcbo (V)	Ic (A)	Ic (A)	MIN	MAX								
1	DT00P	430m	75		8.0			4.0	50			1.0G									
2	DM100P	430m	75		8.0			4.0	50			1.0G									
3#	BD595	434m	55	§	8.0	2.5	45	5.0	45*	100u	2.0	3.0	25	#		Ht	B4	BØ			
4#	BD597	434m	55	§	8.0	2.5	60	5.0	60*	100u	2.0	3.0	25	#		Ht	B4	BØ			
5#	BD599	434m	55	§	8.0	2.5	80	5.0	80*	100u	2.0	3.0	15	#		Ht	B4	BØ			
6	CM25-12	434m	75	§	5.0			4.0	36								W57	R			
7	STC1080	434m	75	§	3.0			10	40	10m	15	1.0	12		36	750m	Δ	TO3	CØ		
8	STC1081	434m	75	§	3.0			10	60	10m	15	1.0	12		36	750m	Δ	TO3	CØ		
9	STC1082	434m	75	§	3.0			10	80	10m	15	1.0	12		36	750m	Δ	TO3	CØ		
10	STC1083	434m	75	§	5.0			10	40	10m	15	2.0	10		30	500m	Δ	TO3	CØ		
11	STC1084	434m	75	§	5.0			10	60	10m	15	2.0	10		30	500m	Δ	TO3	CØ		
12	STC1085	434m	75	§	5.0			10	80	10m	15	2.0	10		30	500m	Δ	TO3	CØ		
13	2N1250/I	450m		§	5.0		60	10	60	10m	12	2.0	15		60	2.5M†		MS3			
14	STC1550	450m	85	§	3.0			10	40	10m	15	1.0	12		36	750m	Δ	MT10			
15	STC1551	450m	85	§	3.0			10	60	10m	15	1.0	12		36	750m	Δ	MT10			
16	STC1552	450m	85	§	3.0			10	80	10m	15	1.0	12		36	750m	Δ	MT10			
17	STC1553	450m	85	§	5.0			10	40	10m	15	2.0	10		30	500m	Δ	MT10			
18	STC1554	450m	85	§	5.0			10	60	10m	15	2.0	10		30	500m	Δ	MT10			
19	STC1555	450m	85	§	5.0			10	80	10m	15	2.0	10		30	500m	Δ	MT10			
20	PT7912†	454m	80	§	90			60	70		5.0	3.0	200		400	100m		TO3	CØ		
21	PT7913†	454m	80	§	90			60	70		5.0	3.0	50		250	100m		TO3	CØ		
22	PT7914†	454m	80	§	120			80	70		5.0	3.0	30		30	100m		TO3	CØ		
23	PT7915†	454m	80	§	120			60	100		5.0	3.0	200		400	100m		TO3	CØ		
24	PT7916†	454m	80	§	120			60	100		5.0	3.0	50		250	100m		TO3	CØ		
25	PT7917†	454m	80	§	160			80	100		5.0	3.0	30		30	100m		TO3	CØ		
26	PT7918†	454m	80	§	170			60	140		5.0	3.0	100		300	100m		TO3	CØ		
27	PT7919†	454m	80	§	170			60	140		5.0	3.0	30		150	100m		TO3	CØ		
28	PT7920†	454m	80	§	200			80	140		5.0	3.0	20		20	100m		TO3	CØ		
29	PT7958†	454m	80	§	225			60	200		5.0	3.0	10		10	100m		TO3	CØ		
30	PT7959†	454m	80	§	325			60	300		5.0	3.0	10		10	100m		TO3	CØ		
31	2N1208/I	455m		§	5.0			60	10	60	12	2.0	15		60	2.5M†	2.5	.90u	MT10		
32	2N1209/I	455m		§	5.0			45	5.0	60	12	2.0	20		80	2.5M†	2.5	.90u	MT10		
33	2N1212/I	455m		§	5.0			60	10	60	12	2.0	12		36	2.5M†	5.0	1.1u	MT10		
34	2N2032/I	455m		§	3.0			45	5.0	60	2.0m	4.0	2.0	20		20	2.5M†	2.5	.90u	MS3	
35	STC1500	455m		§	2.5			60	6.0	40	4.0	.80	15		60	2.5M†	4.0	.90u	MT10		
36	40934	456m	5.7	§	500m			36	3.5	14	300uΔ					900m			PE	MM14	R
37	AMF101	476m	85	§	4.0			30	50	30		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
38	AMF102	476m	85	§	4.0			60	50	60		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
39	AMF103	476m	85	§	4.0			100	50	100		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
40	AMF107	476m	85	§	4.0			30	50	30		15	1.0	10		50	1.5M†	5.0	MEA	MT10	
41	AMF108	476m	85	§	4.0			60	50	60		15	1.0	10		50	1.5M†	5.0	MEA	MT10	
42	AMF109	476m	85	§	4.0			100	50	100		15	1.0	10		50	1.5M†	5.0	MEA	MT10	
43	AMF110	476m	85	§	4.0			60	50	60		15	1.0	10		50	1.5M†	1.5	MEA	MT10	
44	AMF111	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.5M†	5.0	MEA	MT10	
45	AMF112	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.0M†	5.0	MEA	MS3	
46	AMF113	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.0M†	1.5	MEA	MS3	
47	AMF114	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.5M†	1.5	MEA	MT10	
48	AMF121	476m	85	§	4.0			55	50	55		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
49	AMF121A	476m	85	§	4.0			55	50	55		15	1.0	10		50	1.0M†	800m	MEA	MS3	
50	AMF122	476m	85	§	4.0			45	50	45		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
51	AMF122A	476m	85	§	4.0			45	50	45		15	1.0	10		50	1.0M†	800m	MEA	MS3	
52	AMF123	476m	85	§	4.0			35	50	35		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
53	AMF123A	476m	85	§	4.0			35	50	35		15	1.0	10		50	1.0M†	800m	MEA	MS3	
54	AMF124	476m	85	§	4.0			25	50	25		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
55	AMF124A	476m	85	§	4.0			25	50	25		15	1.0	10		50	1.0M†	800m	MEA	MS3	
56	F101	476m	85	§	4.0			30	50	30		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
57	F102	476m	85	§	4.0			60	50	60		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
58	F103	476m	85	§	4.0			100	50	100		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
59	F107	476m	85	§	4.0			30	50	30		15	1.0	10		50	1.5M†	5.0	MEA	MT10	
60	F108	476m	85	§	4.0			60	50	60		15	1.0	10		50	1.5M†	5.0	MEA	MT10	
61	F109	476m	85	§	4.0			100	50	100		15	1.0	10		50	1.5M†	5.0	MEA	MT10	
62	F110	476m	85	§	4.0			60	50	60		15	1.0	10		50	1.5M†	1.5	MEA	MT10	
63	F111	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.5M†	5.0	MEA	MT10	
64	F112	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.0M†	5.0	MEA	MS3	
65	F113	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.0M†	1.5	MEA	MS3	
66	F114	476m	85	§	7.5			60	50	60		15	2.0	10		50	1.5M†	1.5	MEA	MT10	
67	F121	476m	85	§	4.0			55	50	55		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
68	F121A	476m	85	§	4.0			55	50	55		15	1.0	10		50	1.0M†	800m	MEA	MS3	
69	F122	476m	85	§	4.0			45	50	45		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
70	F122A	476m	85	§	4.0			45	50	45		15	1.0	10		50	1.0M†	800m	MEA	MS3	
71	F123	476m	85	§	4.0			35	50	35		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
72	F123A	476m	85	§	4.0			35	50	35		15	1.0	10		50	1.0M†	800m	MEA	MS3	
73	F124	476m	85	§	4.0			25	50	25		15	1.0	10		50	1.0M†	5.0	MEA	MS3	
74	F124A	476m	85	§	4.0			25	50	25		15	1.0	10		50	1.0M†	800m	MEA	MS3	
75	STC1101	476m		§	6.0	3.0		100	10	40		4.0	1.5	10		50	1.0M†	2.0	D		
76	STC1102	476m		§	6.0	3.0		100	10	55		4.0	1.5	10		50	1.0M†	2.0	D		
77	STC1103	476m		§	6.0	3.0		60	10	40		4.0	1.5	25		75	1.0M†	.67	D		
78	STC1104	476m		§	6.0	3.0		100	10	55		4.0	1.5	25		75	1.0M†	.67	D		
79	STC1105	476m		§	7.5			30	30	30		4.0	2.0	10		†	.75		MS3		
80	STC1105A	476m		§	7.5			60	60	60		4.0	2.0	10		†	.75		MS3		
81	STC1106	476m		§	7.5			30	30	30		4.0	5.0	10							

# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR & (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc (W)	M T A E P	ABSOLUTE MAX. RATINGS @ 25°C						BIAS		MIN	MAX	f <sub>ae</sub> (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200 Ser.	# L O D E		
						Ic (A)	Ib (A)	V <sub>cb</sub> (V)	V <sub>eb</sub> (V)	V <sub>ceo</sub> (V)	lcb <sub>o</sub> @ MAX V <sub>cb</sub> @ 25°C (A)	V <sub>cb</sub> (V)	V <sub>cb</sub> (A)										
1	2N16801	485m	85	0	S	2.0		60	10	80	10	15	1.0	45	135	25M $\Delta$	4.0	110n $\emptyset$	PD $\Delta$	MS3			
2	2N16811	485m	85	0	S	2.0		80	10	80	10	15	1.0	45	135	25M $\Delta$	4.0	110n $\emptyset$	PD $\Delta$	MS3			
3	2N16821	485m	85	0	S	2.0		100	10	100	10	15	1.0	45	135	25M $\Delta$	4.0	110n $\emptyset$	PD $\Delta$	MS3			
4	2N1722A/1	485m	85	0	S	7.5		180		120		5.0	5.0	20				300m			TO81		
5	2N1724A/1	485m	85	0	S	7.5		180		120		5.0	5.0	20				300m			TO81		
6	2N1894	485m	85	0	S	2.0		60	10	60	10	15	1.0	12	60	25M $\Delta$	5.0	110n $\emptyset$	D $\Delta$	MT16			
7	2N1895	485m	85	0	S	2.0		80	10	80	10	15	1.0	12	60	25M $\Delta$	5.0	110n $\emptyset$	D $\Delta$	MT16			
8	2N1896	485m	85	0	S	2.0		60	10	60	10	15	1.0	45	135	25M $\Delta$	4.0	110n $\emptyset$	D $\Delta$	MT16			
9	2N1897	485m	85	0	S	2.0		80	10	80	10	15	1.0	45	135	25M $\Delta$	4.0	110n $\emptyset$	D $\Delta$	MT16			
10	2N1898	485m	85	0	S	2.0		100	10	100	10	15	1.0	45	135	25M $\Delta$	4.0	110n $\emptyset$	D $\Delta$	MT16			
11	STC7114	485m	85	0	S	7.5		80	60	80	60	4.0	2.0	50	150			380m			TO53		
12	STC7115	485m	85	0	S	7.5		100	80	100	80	4.0	2.0	50	150			380m			TO53		
13	STC7116	485m	85	0	S	7.5		120	100	120	100	4.0	2.0	50	150			380m			TO53		
14	STC7117	485m	85	0	S	7.5		140	120	140	120	4.0	2.0	50	150			380m			TO53		
15	STC7518	485m	85	0	S	7.5		80	80	80	80	4.0	2.0	50	150			380m			TO81		
16	STC7519	485m	85	0	S	7.5		100	80	100	80	4.0	2.0	50	150			380m			TO81		
17	STC7520	485m	85	0	S	7.5		120	100	120	100	4.0	2.0	50	150			380m			TO81		
18	STC7521	485m	85	0	S	7.5		140	120	140	120	4.0	2.0	50	150			380m			TO81		
19#	25Z20	500m	75	0	A	1.0	.50		120		10m	10	.50	10	30	3M $\uparrow$			D	MS3			
20#	25C21	500m	75	0	J	2.0		60	5.5	60	10m	10	1.0	15		35	500m	.12u	ME	TO3			
21#	25C241	500m	75	0	J	5.0		60	5.0	60	10m	10	1.0	15		35	500m		ME	TO3			
22#	25C242	500m	75	0	J	5.0		100	5.0	65	10m	10	1.0	15		35	500m		ME	TO3			
23#	25C243	500m	75	0	J	5.0		140	5.0	80	10m	10	1.0	15		35	500m		ME	TO3			
24#	25C244	500m	75	0	J	6.5		60	5.0	60	50m	10	1.0	15		35	500m		ME	TO3			
25#	25C246	500m	75	0	J	6.5		180	5.0	180	20m	10	1.0	15		35	500m		ME	TO3			
26#	25C11321	500m	30	0	J	2.5	1.0	1.2k	6.0	500	1.0m	5.0	500m	20	#	180			PE	TO3		C $\emptyset$	
27#	25C2038	500m	75	0	J	5.0		70	4.0	40	1.0m	2.5	500m	20	#	180			PE	TO3		C $\emptyset$	
28#	25D12	500m	60	0	J	2.5		75	4.0	40	1.0m	4.0	1.0	25	#	75	20M $\Delta$	800m	ME	TO3			
29	3TE610	500m	87	0	J	8.0		80	4.0	60	1.0m	5.0	1.0	10		150	250M		PL	T62a			
30	3TE611	500m	87	0	J	8.0		60	4.0	30	1.0m	5.0	4.5	10		150	100M		PL	T62a			
31#	180T2	500m	85	0	J	6.0	3.0	60	10	60	4.0	2.0	2.0	15	#	180	10M $\Delta$		ME	TO3			
32#	181T2	500m	85	0	J	6.0	3.0	100	10	90	4.0	2.0	2.0	15	#	180	10M $\Delta$		ME	TO3			
33#	182T2	500m	85	0	J	6.0	3.0	200	10	140	4.0	2.0	2.0	15	#	180	10M $\Delta$		ME	TO3			
34#	183T2	500m	85	0	J	6.0	3.0	300	10	180	4.0	2.0	2.0	15	#	180	10M $\Delta$		ME	TO3			
35#	184T2	500m	85	0	J	6.0	3.0	400	10	200	4.0	2.0	2.0	15	#	180	10M $\Delta$		ME	TO3			
36#	185T2	500m	85	0	J	6.0	3.0	500	10	250	4.0	2.0	2.0	15	#	180	10M $\Delta$		ME	TO3			
37	B3045	500m	20	0	J	2.0	.50			15	.05m	5.0	.50	20				D	TO3				
38	B3046	500m	20	0	J	2.0	.50			15	.05m	5.0	.50	20				D	TO41				
39	B3456	500m	25	0	J	1.0			6.0	60	25u $\emptyset$	10	1.0	30			200M $\Delta$	250m	PE	TO81			
40	B3459	500m	25	0	J	1.0		80	8.0	40	5.0u $\emptyset$	5.0	1.0	40		150	200M $\Delta$	200m	PE	TO81			
41	B3459A	500m	25	0	J	1.0		100	8.0	60	5.0u $\emptyset$	5.0	1.0	40		150	200M $\Delta$	200m	PE	TO81			
42	B5000	500m	25	0	J	3.0	1.0			35	1.5m $\uparrow$	14	500m	30			250	*	PE	TO81			
43#	BLY17A	500m	75	0	J	10	2.0	100	5.0	100	10m $\emptyset$	10	5.0				70k $\Delta$		D	TO36			
44#	BLY17C	500m	75	0	J	10	2.0	100	5.0	100	10m $\emptyset$	10	5.0				70k $\Delta$		D	TO36			
45#	BUY181	500m	62	0	J	7.0	2.0	300	5.0	150	10u $\emptyset$	5.0	1.0	30	#			50M $\Delta$		D	TO3		
46#	BUY861	500m	62	0	J	7.0	2.0	200	5.0	100	10u $\emptyset$	5.0	1.0	30				45M $\Delta$	142m	PE	TO3		
47#	BUY871	500m	62	0	J	7.0	2.0	300	5.0	150	8.0u $\emptyset$	5.0	2.0	30				45M $\Delta$	185m	PE	TO3		
48#	BUY881	500m	62	0	J	7.0	2.0	400	5.0	150	10u $\emptyset$	5.0	1.0	30				45M $\Delta$	185m	PE	TO3		
49	MHT7011	500m	50	0	J	10	2.0	60	5.0	40	1.0u $\emptyset$	5.0	5.0	20		60	#	15M $\Delta$		PL	TO81		
50	MHT7012	500m	50	0	J	10	2.0	80	5.0	60	1.0u $\emptyset$	5.0	5.0	20		60	#	15M $\Delta$		PL	TO81		
51	MHT7013	500m	50	0	J	10	2.0	100	5.0	80	1.0u $\emptyset$	5.0	5.0	20		60	#	15M $\Delta$		PL	TO81		
52	MHT7014	500m	50	0	J	10	2.0	60	5.0	40	1.0u $\emptyset$	5.0	5.0	40		120	#	15M $\Delta$		PL	TO81		
53	MHT7015	500m	50	0	J	10	2.0	80	5.0	60	1.0u $\emptyset$	5.0	5.0	40		120	#	15M $\Delta$		PL	TO81		
54	MHT7016	500m	50	0	J	10	2.0	100	5.0	80	1.0u $\emptyset$	5.0	5.0	40		120	#	15M $\Delta$		PL	TO81		
55	MHT7017	500m	50	0	J	10	2.0	60	5.0	40	1.0u $\emptyset$	5.0	5.0	100	#			15M $\Delta$		PL	TO81		
56	MHT7018	500m	50	0	J	10	2.0	80	5.0	60	1.0u $\emptyset$	5.0	5.0	100	#			15M $\Delta$		PL	TO81		
57	MHT7019	500m	50	0	J	10	2.0	100	5.0	80	1.0u $\emptyset$	5.0	5.0	100	#			15M $\Delta$		PL	TO81		
58	MHT7801	500m	50	0	J	10	5.0	225	7.0	200	1.0u $\emptyset$	5.0	5.0	20		60		30M $\Delta$	100m	PL	TO81		
59	MHT7802	500m	50	0	J	10	5.0	250	7.0	225	1.0u $\emptyset$	5.0	5.0	20		60		30M $\Delta$	100m	PL	TO81		
60	MHT7803	500m	50	0	J	10	5.0	275	7.0	250	1.0u $\emptyset$	5.0	5.0	20		60		30M $\Delta$	100m	PL	TO81		
61	MHT7804	500m	50	0	J	10	5.0	325	7.0	300	1.0u $\emptyset$	5.0	5.0	20		60		30M $\Delta$	100m	PL	TO81		
62	MHT7805	500m	50	0	J	10	5.0	350	7.0	325	1.0u $\emptyset$	5.0	5.0	20		60		30M $\Delta$	100m	PL	TO81		
63	MHT7806	500m	50	0	J	10	5.0	150	5.0	150	1.0u $\emptyset$	5.0	5.0	10	#			30M $\Delta$		PL	MT50a		A
64	MHT7807	500m	50	0	J	10	5.0	200	5.0	200	1.0u $\emptyset$	5.0	5.0	15	#					PL	MT50a		A
65	MHT7808	500m	50	0	J	10	5.0	250	5.0	250	1.0u $\emptyset$	5.0	5.0	15	#					PL	MT50a		A
66	MHT7809	500m	50	0	J	10	5.0	300	5.0	300	1.0u $\emptyset$	5.0	5.0	15	#					PL	MT50a		A
67	PT2981	500m	88	0	S	10		130	6.0	80	1.0m	5.0	10	15		90			PL	W39			
68	PT6963	500m	80	0	S	20		120	8.0														

# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J TO C (W/°C)	MAX FREE AIR @ 25°C (W)	Pc	M T A E X P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Vcb @ 25°C		hFE		f <sub>ae</sub> (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # L C O	# L C O
						Ic (A)	Ib (A)	Vcbo (V)	Vvbo (V)	Vvceo (V)	Icbo (A)	MAX Vcb (V)	Vcb (V)	Ic (A)						
1	SG8207	533m	80	00	\$J	10	1	6.0†	80	80	100	5.0	5.0	30	90	30M\$Δ		DPE	T066	A A
2	SG8207A	533m	80	00	\$J	10	1	6.0†	80	80	100	5.0	5.0	70	300	40M\$Δ		DPE	T066	B A
3	TIP65	533m	40	00	\$J	1.5	1.0	5.0	600	600	100	10	1.0	8.0					B3	B A
4	TIP66	533m	40	00	\$J	1.5	1.0	5.0	600	600	100	10	1.0	8.0					B3	B A
5	PT6907	555m	75	00	\$	30	10	100	6.0	6.0	5.0m	3.0	15	30	150	150M		PLD	T063	A
6	STC389	556m										4.0	1.5							
7	DM40-28BY	560m	95	00	\$S	6.0	1	3.5	50	50	100	15	6.0	12	60	10M\$Δ	5.2	PL	T053	
8	2N3577	564m	85	00	\$S	2.0	500m	10	80	80	100	15	6.0	40	90	40M\$Δ		PL	T03	
9	NPC14-1A	565m	100	00	\$J	10	4.0	6.0†	60	60	10	2.0	2.0	40	90	40M\$Δ		PL	T03	
10	NPC14-1B	565m	100	00	\$J	10	4.0	6.0†	60	60	10	2.0	2.0	40	90	40M\$Δ		PL	T03	
11	NPC14-2	565m	100	00	\$J	10	4.0	6.0†	60	60	10	2.0	2.0	40	90	40M\$Δ		PL	T03	
12	BCX40	570m	10	00	\$J	5.0		5.0	80	80	10	2.0	2.0	40	250	40M\$Δ		PE	T039	
13	2N2403	571m	8.0	00	\$	1.0		5.0	60	60	50	2.5	600m	20	60	150M†	2.5	EΔ	T05	
14	CM40-12	571m	100	00	\$J	7.0		4.0	36	36	50	2.5	600m	20	60	470M†		PE	W57	R
15	SD1089A	571m	100	00	\$J	7.0		4.0	16	16	50	2.5	250m	20	60	470M†		PE	W55a	
16	BU110	588m	30	00	\$J	8.0	2.5	6.0	150	150	15m	1.5	6.0	8.0		15M\$		DΔ	F9d	
17	BUY44	588m	30	00	\$J	7.0	2.5	6.0	150	150	15m	1.5	6.0	8.0		25M\$		DΔ	T03	
18	BD663A	598m	1.8	00	\$J	10	4.0	5.0†	45	45	5.0mΔ	2.0	2.0	25	250	250m	250m	DΔ	Y220a	
19	BD663B	598m	1.8	00	\$J	10	4.0	5.0†	45	45	5.0mΔ	2.0	2.0	25	250	250m	250m	DΔ	Y220b	
20	BUY55-4†	600ms	60	00	\$J	10	2.0	150	6.0	125	1.0m	2.0	2.0	25	63	20M\$		D	T03	
21	BUY55-6†	600ms	60	00	\$J	10	2.0	150	6.0	125	1.0m	2.0	2.0	40	100	20M\$		D	T03	
22	BUY55-10†	600ms	60	00	\$J	10	2.0	150	6.0	125	1.0m	2.0	2.0	63	160	20M\$		D	T03	
23	BUY56-4†	600ms	60	00	\$J	10	2.0	250	6.0	160	1.0m	2.0	2.0	25	63	20M\$		D	T03	
24	BUY56-6†	600ms	60	00	\$J	10	2.0	250	6.0	160	1.0m	2.0	2.0	40	100	20M\$		D	T03	
25	BUY56-10†	600ms	60	00	\$J	10	2.0	250	6.0	160	1.0m	2.0	2.0	63	160	20M\$		D	T03	
26	BUY72-4†	600ms	60	00	\$J	10	2.0	280	6.0	200	1.0m	2.0	2.0	25	63	20M\$		D	T03	
27	BUY72-6†	600ms	60	00	\$J	10	2.0	280	6.0	200	1.0m	2.0	2.0	40	100	20M\$		D	T03	
28	BUY72-10†	600ms	60	00	\$J	10	2.0	280	6.0	200	1.0m	2.0	2.0	63	160	20M\$		D	T03	
29	MJE5977	600m	75	00	\$J	5.0	2.0	60	50	40	1.0mΔ	2.0	2.5	20	120	2.0M\$Δ	240m	DΔ	B23	
30	MJE5978	600m	75	00	\$J	5.0	2.0	60	50	40	1.0mΔ	2.0	2.5	20	120	2.0M\$Δ	240m	DΔ	B23	
31	MJE5979	600m	75	00	\$J	5.0	2.0	60	50	40	1.0mΔ	2.0	2.5	20	120	2.0M\$Δ	240m	DΔ	B23	
32	RCA201	600m	75	00	\$J	7.0	3.0	40	40	40	100	2.0	2.0	25	150	150M		Δ	Y220b	
33	RCA202	600m	75	00	\$J	7.0	3.0	40	40	40	100	2.0	2.0	25	150	150M		Δ	Y220b	
34	RCA203	600m	75	00	\$J	7.0	3.0	60	40	60	100	2.0	1.0	30	150	150M		Δ	Y220b	
35	RCA204	600m	75	00	\$J	7.0	3.0	60	40	60	100	2.0	1.0	30	150	150M		Δ	Y220b	
36	UPT410†	600m	73	00	\$J	3.5	2.0	200	5.0	200	100	5.0	1.0	30	90	10M\$Δ	500m	PL	T03	
37	UPT411†	600m	73	00	\$J	3.5	2.0	300	5.0	300	100	5.0	1.0	30	90	10M\$Δ	500m	PL	T03	
38	UPT413†	600m	55	00	\$J	2.0	1.0	400	5.0	400	100	5.0	500m	20	80	10M\$Δ	1.0	PL	T03	
39	UPT423†	600m	73	00	\$J	3.5	2.0	400	5.0	400	100	5.0	1.0	30	90	10M\$Δ	500m	PL	T03	
40	UPT430†	600m	75	00	\$J	5.0	2.0	400	5.0	400	100	5.0	2.5	15	45	10M\$Δ	240m	PL	T03	
41	UPT431†	600m	75	00	\$J	5.0	2.0	400	5.0	400	100	5.0	2.5	15	35	10M\$Δ	240m	PL	T03	
42	UPT1032†	600m	60	00	\$J	15	5.0	80	5.0	60	10	5.0	5.0	40		50M\$	133m	PL	T03	
43	UPT1033†	600m	60	00	\$J	15	5.0	100	5.0	80	10	5.0	5.0	40		50M\$	133m	PL	T03	
44	UPT1034†	600m	60	00	\$J	15	5.0	120	5.0	100	10	5.0	5.0	40		50M\$	133m	PL	T03	
45	UPT1035†	600m	60	00	\$J	15	5.0	150	5.0	100	10	5.0	5.0	40		50M\$	133m	PL	T03	
46	BUX26	602m	60	00	\$J	6.0	2.0	7.0	350	350	15m	5.0	1.0	7.0		20M\$	1.2	PL	T03	
47	BUX27	602m	60	00	\$J	6.0	2.0	7.0	400	400	15m	5.0	1.0	7.0		20M\$	1.6	PL	T03	
48	AMF201	625m	85	00	\$C	13		5.0	30	30	15	10	10		1.0M†	400m	ME	MD19		
49	AMF201A	625m	85	00	\$C	13		5.0	30	30	15	10	10		1.0M†	400m	ME	MD19		
50	BU131†	625m	40	00	\$J	10	3.0	300	5.0	300	1.0m	5.0	7.0	5.0		300m	200	PL	T03	
51	D56W1	625m	78	00	\$J	5.0	2.0	1.4k	10	10	10	5.0	2.5	3.0		10M\$	300m	ME	T03	
52	D56W2	625m	78	00	\$J	5.0	2.0	1.4k	10	10	10	5.0	3.5	3.0		1.4	600m	ME	T03	
53	25C2321	640m	80	00	\$J	8.0	2.0	130	4.5	130	50	5.0	500m	50	200	60M\$	400m	PE	T03	
54	25D322	640m	80	00	\$J	7.0		120	7.0	80	300	5.0	4.0	30	120	60M\$	250m	DM	T03	
55	25D461	640m	80	00	\$J	3.0		250	8.0	250	100	5.0	1.0	40	170	1.0M\$	166m	D	T03	
56	25D598	640m	80	00	\$J	8.0		120	5.0	120	1.0m	5.0	1.0	40	200	6.0M\$	250m	D	T03	
57	25D674	640m	80	00	\$J	7.0	2.0	120	5.0	120	1.0m	5.0	1.0	35	200	6.0M\$	250m	D	T03	
58	25D825AB	640m	80	00	\$J	7.0		120	5.0	120	1.0m	5.0	1.0	60	120	25M\$		D	F53	
59	25D825AC	640m	80	00	\$J	7.0		120	5.0	120	1.0m	5.0	1.0	100	200	25M\$		D	F53	
60	25D5888A	640	80	00	\$J	7.0		150	5.0	130	50	5.0	1.0	40	200	15M\$		D	B66	
61	156-043	660m	115	00	\$J	15	7.0	50	6.0	40	10	3.0	3.0	18	55			DΔ	T03	
62	156-044	660m	115	00	\$J	15	7.0	50	6.0	40	10	3.0	3.0	20	70			DΔ	T03	
63	156-064	660m	115	00	\$J	15	7.0	70	7.0	60	10	3.0	3.0	20	70			DΔ	T03	
64	156-083	660m	115	00	\$J	15	7.0	90	6.0	80	10	3.0	3.0	18	55			DΔ	T03	
65	156-084	660m	115	00	\$J	15	7.0	80	7.0	80	10	3.0	3.0	20	70			DΔ	T03	
66	156-104	660m	115	00	\$J	15	7.0	110	7											

## 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	2	TYPE No.	1	MIN. DERATE J to C (W/C)	MAX FREQ AIR @ 25°C (W)	Pc	ABSOLUTE MAX. RATINGS @25°C					MAX. hFE		f <sub>ae</sub> (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 Ser.	L C O D E			
							Ic (A)	Ib (A)	V <sub>cb</sub> (V)	V <sub>eb</sub> (V)	V <sub>ce</sub> (V)	MAX. I <sub>c</sub> @ 25°C (A)	MAX. I <sub>b</sub> @ 25°C (A)									
1		B170006		666m	60	∅	6.0	3.0	100	5.0	100	30m†	4.0	500m	20	120 *	15k	400m	DM	T03	C	
2		B170007		666m	90	∅	10	5.0	100	5.0	100	30m†	4.0	500m	20	120 *	15k	270m	DM	T03	C	
3		B170008		666m	120	∅	15	7.0	100	5.0	100	30m†	4.0	500m	20	120 *	15k	300m	DM	T03	C	
4		B170009		666m	60	∅	6.0	3.0	50	2.0	40	30m†	4.0	1.0	30			400m	DM	T03	C	
5		B170010		666m	90	∅	10	5.0	50	2.0	40	30m†	4.0	3.0	20			270m	DM	T03	C	
6		B170011		666m	120	∅	15	7.0	50	2.0	40	30m†	4.0	5.0	12			300m	DM	T03	C	
7		B170012		666m	60	∅	6.0	3.0	80	2.0	70	30m†	4.0	1.0	30			400m	DM	T03	C	
8		B170013		666m	90	∅	10	5.0	80	2.0	70	30m†	4.0	3.0	20			270m	DM	T03	C	
9		B170014		666m	120	∅	15	7.0	80	2.0	70	30m†	4.0	5.0	12			300m	DM	T03	C	
10		B170015		666m	60	∅	6.0	3.0	100	2.0	100	30m†	4.0	1.0	30			400m	DM	T03	C	
11		B170016		666m	90	∅	10	5.0	100	2.0	100	30m†	4.0	3.0	20			270m	DM	T03	C	
12		B170017		666m	120	∅	15	7.0	100	2.0	100	30m†	4.0	5.0	12			300m	DM	T03	C	
13		B170018†		666m	60	∅	6.0	3.0	50	5.0	40	30m†	4.0	1.0	30			400m	DM	T03	C	
14		B170019†		666m	90	∅	10	5.0	50	5.0	40	30m†	4.0	3.0	20			270m	DM	T03	C	
15		B170020†		666m	120	∅	15	7.0	50	5.0	40	30m†	4.0	5.0	12			300m	DM	T03	C	
16		B170021†		666m	60	∅	6.0	3.0	80	5.0	70	30m†	4.0	1.0	30			400m	DM	T03	C	
17		B170022†		666m	90	∅	10	5.0	80	5.0	70	30m†	4.0	3.0	20			270m	DM	T03	C	
18		B170023†		666m	120	∅	15	7.0	80	5.0	70	30m†	4.0	5.0	12			300m	DM	T03	C	
19		B170024†		666m	60	∅	6.0	3.0	100	5.0	100	30m†	4.0	1.0	30			400m	DM	T03	C	
20		B170025†		666m	90	∅	10	5.0	100	5.0	100	30m†	4.0	3.0	20			270m	DM	T03	C	
21		B170026†		666m	120	∅	15	7.0	100	5.0	100	30m†	4.0	5.0	12			300m	DM	T03	C	
22		B176000		666m	50	∅	5.0	2.5	250	5.0	250 #	2.0u	5.0	100m	25					T03	C	
23		B176001		666m	50	∅	5.0	2.5	250	5.0	250 #	2.0u	5.0	500m	20					T03	C	
24		B176002		666m	50	∅	5.0	2.5	250	5.0	250 #	2.0u	5.0	1.5	10					T03	C	
25		B176003		666m	50	∅	5.0	2.5	250	5.0	250 #	2.0u	5.0	2.5	10					T03	C	
26		B176004		666m	50	∅	5.0	2.5	400	5.0	400 #	2.0u	5.0	100m	25					T03	C	
27		B176005		666m	50	∅	5.0	2.5	400	5.0	400 #	2.0u	5.0	500m	20					T03	C	
28		B176006		666m	50	∅	5.0	2.5	400	5.0	400 #	2.0u	5.0	1.5	10					T03	C	
29		B176007		666m	50	∅	5.0	2.5	400	5.0	400 #	2.0u	5.0	2.5	10					T03	C	
30		B176008		666m	50	∅	5.0	2.5	550	5.0	550 #	2.0u	5.0	100m	25					T03	C	
31		B176009		666m	50	∅	5.0	2.5	550	5.0	550 #	2.0u	5.0	500m	20					T03	C	
32		B176010		666m	50	∅	5.0	2.5	550	5.0	550 #	2.0u	5.0	1.5	10					T03	C	
33		B176011		666m	50	∅	5.0	2.5	550	5.0	550 #	2.0u	5.0	2.5	10					T03	C	
34		B176012		666m	50	∅	5.0	2.5	650	5.0	650 #	2.0u	5.0	100m	25					T03	C	
35		B176013		666m	50	∅	5.0	2.5	650	5.0	650 #	2.0u	5.0	500m	20					T03	C	
36		B176014		666m	50	∅	5.0	2.5	650	5.0	650 #	2.0u	5.0	1.5	10					T03	C	
37		B176015		666m	50	∅	5.0	2.5	650	5.0	650 #	2.0u	5.0	2.5	10					T03	C	
38		B176024		666m	50	∅	5.0	2.5	400	5.0	400 #	2.0u	5.0	1.5	10					T03	C	
39		B176025		666m	50	∅	5.0	2.5	400	5.0	400 #	2.0u	5.0	2.5	10					T03	C	
40		B176026		666m	50	∅	5.0	2.5	550	5.0	550 #	2.0u	5.0	1.5	10					T03	C	
41		B176027		666m	50	∅	5.0	2.5	550	5.0	550 #	2.0u	5.0	2.5	10					T03	C	
42		B176028		666m	50	∅	5.0	2.5	650	5.0	650 #	2.0u	5.0	1.5	10					T03	C	
43		B176029		666m	50	∅	5.0	2.5	650	5.0	650 #	2.0u	5.0	2.5	10					T03	C	
44#		BDY17		666m	115	∅	10	2.0	80	7.0	60	5.0m	4.0	6.0 Δ	10			1.0M\$		T03	C	
45#		BDY18		666m	115	∅	10	2.0	120	7.0	70	5.0m	4.0	8.0 Δ	10			1.0M\$		T03	C	
46#		BDY19		666m	115	∅	10	2.0	150	7.0	80	5.0m	4.0	10 Δ	10			1.0M\$		T03	C	
47#		BDY96/011		666m	40	∅	10	4.0	6.0\$	400	500u\$	5.0	2.0	30	∅			10M\$	300m	350n∅	T03	C
48#		BDY97/011		666m	40	∅	10	4.0	6.0\$	300	500u\$	5.0	2.0	30	∅			10M\$	300m	350n∅	T03	C
49#		BDY99†		666m	∅	∅	10	4.0	6.0	250	500u\$	5.0	10	20	#			10M\$	300m	600n#	T03	C
50#		BLY72		666m	100	#	10		80	6.0	60	10u\$	5.0	5.0	20			10M\$	170m		T03	C
51#		BU115		666m	50	∅	20	8.0	800	10	600 \$	2.0m	5.0	5.0	20			10M\$	100m		T03	C
52#		BU116		666m	50	∅	20	8.0	400	10	300 \$	2.0m	5.0	5.0	20			10M\$	200m		T03	C
53#		BU117		666m	50	∅	20	8.0	250	10	200 \$	2.0m	5.0	5.0	20			10M\$	200m		T03	C
54#		BU121		666m	50	∅	15	5.0	8.0	320	320 ∅	5.0	5.0	6.0	7.0			6.0M\$	290m	1.2ut	T03	C
55#		BU122		666m	50	∅	5.0		8.0	250	∅	5.0	5.0	1.0	25			10M\$	930m		T03	C
56#		BU210		666m*	85	∅	12	5.0	400	7.0	250	1.0m\$	2.5	10	5.0			15M\$			T03	T
57#		BU211		666m*	85	∅	12	5.0	600	7.0	300	1.0m\$	2.5	10	5.0			15M\$			T03	T
58#		BU212		666m*	85	∅	12	5.0	750	7.0	350	1.0m\$	2.5	10	4.0			15M\$			T03	T
59#		BUY13		666m	50	∅	8.0	2.0	120	5.0	70	200u	1.7	6.0	11			11M			T03	T
60		DTS665		666m	3.5	∅	3.5	2.0	700	5.0	500	250uΔ	5.0	1.0	30			2.5M\$Δ	800m	500n	T03	C
61		MHT7201		666m	50	∅	10		225	8.0	200	1.0u	5.0	5.0	20			50M\$Δ			T03	A
62		MHT7202		666m	50	∅	10		225	8.0	225	1.0u	5.0	5.0	20			50M\$Δ			T03	A
63		MHT7203		666m	50	∅	10		275	8.0	250	1.0u	5.0	5.0	20			50M\$Δ			T03	A
64		MHT7204		666m	50	∅	10		325	8.0	300	1.0u	5.0	5.0	20			50M\$Δ			T03	A
65		MHT7205		666m	50	∅	10		350	8.0	325	1.0u	5.0	5.0	20			50M\$Δ			T03	A
66		MHT7601		666m	60	∅	10	5.0	60	8.0	40	500n	5.0	5.0	40			60M\$	100m		T03	C
67		MHT7602		666m	60	∅	10	5.0	80	8.0	60	500n	5.0	5.0	40			60M\$	100m		T03	C
68		MHT7603		666m	60	∅	10	5.0	100	8.0	80	500n	5.0	5.0	40			60M\$	100m		T03	C
69		MHT7604		666m	60	∅	10	5.0	140	8.0	120	500n	5.0	5.0	40			60M\$	100m		T03	C
70		MHT7605		666m	60	∅	10	5.0	170	8.0	150	500n	5.0	5.0	40			60M\$	120m		T03	C
71		MHT7606		666m	60	∅	10	5.0	220	8.0	200	500n	5.0	5.0	40			60M\$	120m		T03	C
72		MHT7607		666m	60	∅	10	5.0	60	8.0	40	500n	5.0	5.0	20			60M\$	100m		T03	C
73		MHT7608		666m	60	∅	10	5.0	80	8.0	60	500n	5.0	5.0	20			60M\$	100m		T03	C
74		MHT7609		666m	60	∅	10	5.0	100	8.0	80	500n	5.0	5.0	20			60M\$	100m		T03	C
75																						

# 11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR  
& (2) TYPE No.

LINE No.	2	TYPE No.	1	MAX	M T	ABSOLUTE MAX. RATINGS @25°C					MAX.	hFE		f <sub>ae</sub>	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	DWG #	L C
			MIN. DERATE J TO C (W/C)	FREE AIR @ 25°C (W)	A X E M P	lc (A)	lb (A)	BVcbo (V)	BVebo (V)	BVceo (V)	lcbo @ 25°C (A)	Vcbo (V)	Vcbo (A)						
1	2	ST18011	666m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PE	TO81	
2		ST18012	666m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PE	TO81	
3		ST18013	666m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PE	TO81	
4		ST18014	666m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PE	TO81	
5		STC4242	666m	117	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO21	∅
6		STS1121	666m	117	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO3	C∅
7		STS1122	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO3	C∅
8		STS1131	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO3	C∅
9		STS1132	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO3	C∅
10		STS1133	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO3	C∅
11		STS1134	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	DM	TO3	C∅
12		T11121	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
13		T11122	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
14		T11123	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
15		T11124	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
16		T11125	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
17		T11126	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
18		T11141	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
19		T11142	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
20		T11143	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
21		T11144	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
22		T11145	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
23		T11146	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO53	A∅
24		T11151	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	T110	
25		T11152	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	T110	∅
26		T11153	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	T110	∅
27		T11154	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	T110	∅
28		T11155	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	T110	∅
29		T11156	666m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	T110	∅
30		T1X155	666m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PME	TO53	
31		TK3055	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	
32		TK9201	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	
33		TK30551	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
34		TK30552	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
35		TK30553	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
36		TK30554	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
37		TK30555	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
38		TK30556	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
39		TK30557	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
40		TK30558	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
41		TK30559	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
42		TK30560	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	Δ	TO3	C∅
43		XB50-28	666m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		MT91	Z
44		2SC519	667m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO3	
45		2SC521	667m	50	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO3	
46		2SD181	667m	100	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	ME	TO3	C∅
47		CTP1136	667m			∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	A		
48		MRF619	667m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		W61	S
49		MRF620	667m	115	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		W61	S
50		ST66†	667m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
51		ST610†	667m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
52		ST615†	667m	80	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
53		1756-0440†	670m	240	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	EM	TO63	
54		1756-0460†	670m	240	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	EM	TO63	
55		40970*	670m	53	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PE	X123a	R
56		RC A2003*	670m	8.3	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PE	W24	AC
57		156-04	684m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
58		156-06	684m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
59		156-08	684m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
60		156-10	684m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	
61		STC4252	685m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	C∅
62		STC4253	685m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	C∅
63		STC4254	685m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	C∅
64		STC4255	685m	120	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	D	TO3	C∅
65		151-30	700m	100	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	FA	MT1	
66		152-30	700m	100	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	FA	MT1	
67		UPT932†	700m	70	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PL	TO3	C∅
68		UPT933†	700m	70	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PL	TO3	C∅
69		UPT934†	700m	70	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PL	TO3	C∅
70		UPT935†	700m	70	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	PL	TO3	C∅
71		BD213-45	714m	90	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	HT	u97	B∅
72		BD213-60	714m	90	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	HT	B3	B∅
73		BD213-80	714m	90	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	HT	u97	B∅
74		PT7921†	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TO3	C∅
75		PT7922†	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TO3	C∅
76		PT7923†	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TO3	C∅
77		PT7927†	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TO3	C∅
78		PT7928†	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TO3	C∅
79		PT7929†	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TO3	C∅
80		S30-12*	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		W52d	
81		S30-12A*	714m	125	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅	∅		TR2	
82		2N2902	729m	40	∅	∅	∅	∅	∅										





































12. SWITCHING TRANSISTORS

IN ORDER OF (1) MAX RISE TIME, (2) fab & (3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	1 MAX RISE TIME tr (s)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX Pc IN FREE AIR @ 25°C (W)	BIAS			MAX SAT. RES. (Ω)	Cob (F)	r'bb X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L O A D E
								Vcb (V)	Ic (A)	hFE								
1	B170020		800n		500n	1.5u	120	4.0	5.0m	12	300m		N-DM	Si	200J	T03	C	
2	B170023		800n		500n	1.5u	120	4.0	5.0m	12	300m		N-DM	Si	200J	T03	C	
3	B170026		800n		500n	1.5u	120	4.0	5.0m	12	300m		N-DM	Si	200J	T03	C	
4	MP1534A	5.0ktΔ	800n		3.0u	5.0u	90	2.0	3.0	35 Δ	400m		P-A	Ge	110	T041	C	
5	MP1535A	5.0ktΔ	800n		3.0u	5.0u	90	2.0	3.0	35 Δ	400m		P-A	Ge	110	T041	C	
6	MP1536A	5.0ktΔ	800n		3.0u	5.0u	90	2.0	3.0	35 Δ	400m		P-A	Ge	110	T041	C	
7	MP1537A	5.0ktΔ	800n		3.0u	5.0u	90	2.0	3.0	35 Δ	400m		P-A	Ge	110	T041	C	
8	2N5579		10u		10u	150	3.0	4.0	10 Δ #	37m #			N	Si	175J	F45	C	
9	2N5580		10u		10u	150	3.0	4.0	10 Δ #	37m #			N	Si	175J	F46	C	
10	2N6065		10u		15u	56	12	500m	10 Δ	80m			P	Ge	110J	R155	A	
11	2N6066		10u		15u	56	12	500m	10 Δ	80m			P	Ge	110J	R155	A	
12	MP1529A	5.0ktΔ	10u		2.0u	5.0u	90	2.0	3.0	20 Δ	500m		P-A	Ge	110	T041	C	
13	MP1530A	5.0ktΔ	10u		2.0u	5.0u	90	2.0	3.0	20 Δ	500m		P-A	Ge	110	T041	C	
14	MP1531A	5.0ktΔ	10u		2.0u	5.0u	90	2.0	3.0	20 Δ	500m		P-A	Ge	110	T041	C	
15	MP1532A	5.0ktΔ	10u		2.0u	5.0u	90	2.0	3.0	20 Δ	500m		P-A	Ge	110	T041	C	
16	MP1553A	10kt	10u		5.0u	25u	90	2.0	10u	30 Δ	70m		P-A	Ge	100J	T041	C	
17	MP1554A	10kt	10u		5.0u	25u	90	2.0	10u	30 Δ	70m		P-A	Ge	100J	T041	C	
18	MP1555A	10kt	10u		5.0u	25u	90	2.0	10u	30 Δ	70m		P-A	Ge	100J	T041	C	
19	MP1556A	10kt	10u		5.0u	25u	90	2.0	10u	30 Δ	70m		P-A	Ge	100J	T041	C	
20	MP1557A	10kt	10u		5.0u	25u	90	2.0	10u	50 Δ	50m		P-A	Ge	100J	T041	C	
21	MP1558A	10kt	10u		5.0u	25u	90	2.0	10u	50 Δ	50m		P-A	Ge	100J	T041	C	
22	MP1559A	10kt	10u		5.0u	25u	90	2.0	10u	50 Δ	50m		P-A	Ge	100J	T041	C	
23	MP1560A	10kt	10u		5.0u	25u	90	2.0	10u	50 Δ	50m		P-A	Ge	100J	T041	C	
24 #	2SD459	20kt	10u		6.0u	10u	50	5.0	5.0	1.5k Δ	300m		N	Si	150J	B26b	K	
25 #	2SD460	20kt	10u		6.0u	10u	50	5.0	5.0	1.5k Δ	300m		N	Si	150J	B26b	K	
26	A580-0402	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
27	A580-0403	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
28	A580-0405	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
29	A580-0802	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
30	A580-0803	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
31	A580-0805	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
32	A580-1202	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
33	A580-1203	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
34	A580-1205	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
35	A580-1602	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
36	A580-1603	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
37	A580-1605	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
38	A580-1802	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
39	A580-1803	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
40	A580-1805	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
41	A580-2002	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
42	A580-2003	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
43	A580-2005	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
44	A580-2202	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
45	A580-2203	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
46	A580-2205	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
47	A580-2402	250kΔ	10u		4.0u	16u	87	4.0	2.0	15 Δ #	750p		N-E	Si	175J	T03	C	
48	A580-2403	250kΔ	10u		4.0u	18u	87	4.0	3.0	15 Δ #	750p		N-E	Si	175J	T03	C	
49	A580-2405	250kΔ	10u		4.0u	20u	87	4.0	5.0	15 Δ #	750p		N-E	Si	175J	T03	C	
50 #	NKT401	.43M	10.0u		7.0u	15u	50	1.0	3	18 Δ	.14	185p	P	Ge	90J	F9c	C	
51 #	2N2535	8.0kΔ	12u	13u	2.5u	5.0u	10	2.0	1.5	14 Δ	500m		P	Ge	100C	T43	A	
52	2N2536	8.0kΔ	12u	13u	2.5u	5.0u	10	2.0	1.5	14 Δ	500m		P	Ge	100C	T43	A	
53	2N5576		15u		15u	150	3.0	4.0	60	10 Δ #	33m #		N	Si	175J	F45	C	
54	2N5577		15u		15u	150	3.0	4.0	60	10 Δ #	33m #		N	Si	175J	F46	C	
55	2SB282	.25M	15u		15u	25u	30	1.0	6.0	21			P-A	Ge	90J	T03		
56	2SB283	.25M	15u		15u	25u	30	1.0	6.0	53			P-A	Ge	90J	T03		
57	2SB284	.25M	15u		15u	25u	30	1.0	6.0	30			P-A	Ge	90J	T03		
58	2SB285	.25M	15u		15u	25u	30	1.0	6.0	36			P-A	Ge	90J	T03		
59 #	NKT406	.43M	15.0u		6.0u	14u	50	1.0	3	2.1 Δ	.42	185p	P	Ge	90J	F9c	C	
60 #	NKT402	.43M	16.0u		8.0u	20u	50	1.0	3	4.2 Δ	.14	185p	P	Ge	90J	F9c	C	
61 #	NKT403	.43M	16.0u		8.0u	20u	50	1.0	3	3.5 Δ	.42	185p	P	Ge	90J	F9c	C	
62 #	NKT404	.43M	16.0u		8.0u	20u	50	1.0	3	3.5 Δ	.42	185p	P	Ge	90J	F9c	C	
63	2N1821		20u		25u	250	250	4.0	15	10 Δ	100m		N	Si	175J	T049	C	
64	2N1827		20u		25u	250	250	4.0	20	10 Δ	75m		N	Si	175J	T049	C	
65	2N1828		20u		25u	250	250	4.0	20	10 Δ	75m		N	Si	175J	T049	C	
66	2N1834		20u		25u	250	250	4.0	25m	10 Δ			N	Si	175J	T049	C	
67	2N1835		20u		25u	250	250	4.0	25m	10 Δ			N	Si	175J	T049	C	
68	2N2121		20u		25u	250	250	4.0	15m	10 Δ			N	Si	175J	T083	C	
69	2N2128		20u		25u	250	250	4.0	20m	10 Δ			N	Si	175J	T083	C	
70	2N2134		20u		25u	250	250	4.0	25m	10 Δ			N	Si	175J	T083	C	
71	2N2135		20u		25u	250	250	4.0	25m	10 Δ			N	Si	175J	T083	C	
72	JAN2N5156		20u		25u	90	2.0	5.0	250		100m		P	Ge	100A	T03		
73 #	BUY26	10kΔ	20u		3.0u	60u	100	3.0	10	5.5	93m		N-A	Si	100J	MT76		
74 #	BUY27	10kΔ	20u		3.0u	60u	100	3.0	10	5.5	93m		N-A	Si	100J	MT76		
75 #	BUY28	10kΔ	20u		3.0u	60u	100	3.0	10	5.5	93m		N-A	Si	100J	MT76		
76	MP5692	200kΔ	20u		8.0u	15u	120	2.0	40	10 Δ #			P	Ge	110J	T041	C	
77	MP5693	20																



## 13. DARLINGTON TRANSISTORS

IN ORDER OF (1) MIN DERATING FACTOR  
(2) MIN hFE (3) IC TEST (4) TYPE No.

LINE No.	TYPE No.	POL. & MAT. N-NPN P-PNP	1 MIN. DERATE J TO C (W/C)	hFE 2 MIN. Ø-TYP	1-hfe MAX Ø-TYP	TEST		ABSOLUTE MAX RATINGS @ 25°C								MAX COLL (CASE) DISS-Pc (W)	M A X T °C	MAX ICBO @ 25°C (A)	MAX VCB @ 25°C (V)	ft (Hz)	MAX SAT RES (Ω)	S T U R R U C	DWG No	L C O D E
						VCE ØVCB (V)	IC ØIB (A)	IC Ø-IE (A)	IB Ø-IE (A)	BVCBO (V)	BVEBO (V)	BVCEO ØBVCEB (V)												
1	SDM20311	N	570m	1.0k		5.0	10	10	2.0			5.0	40	100	\$J	500u#	20M			T03	A0			
2	SDM20312	N	570m	1.0k		5.0	10	10	2.0			5.0	60	100	\$J	500u#	20M			T03	A0			
3	SDM20313	N	570m	1.0k		5.0	10	10	2.0			5.0	80	100	\$J	500u#	20M			T03	A0			
4	SDM20314	N	570m	1.0k		5.0	10	10	2.0			5.0	100	100	\$J	500u#	20M			T03	A0			
5	SDM213011	PSi	571m	1.0k		5.0	5.0	5.0	2.0			5.0	80	100	\$J	500u*	10M	350m		F4q	KC0			
6	SDM213021	PSi	571m	1.0k		5.0	5.0	5.0	2.0			5.0	80	100	\$J	500u*	10M	350m		F4q	KC0			
7	SDM213031	PSi	571m	1.0k		5.0	5.0	5.0	2.0			5.0	100	100	\$J	500u*	10M	350m		F4q	KC0			
8	SDM213041	PSi	571m	1.0k		5.0	5.0	5.0	2.0			5.0	120	100	\$J	500u*	10M	350m		F4q	KC0			
9	SDM213111	PSi	571m	1.0k		5.0	10	10	2.0			5.0	80	100	\$J	500u*	10M	270m		F4q	KC0			
10	SDM213121	PSi	571m	1.0k		5.0	10	10	2.0			5.0	100	100	\$J	500u*	10M	270m		F4q	KC0			
11	SDM213131	PSi	571m	1.0k		5.0	10	10	2.0			5.0	100	100	\$J	500u*	10M	270m		F4q	KC0			
12	SDM213141	PSi	571m	1.0k		5.0	10	10	2.0			5.0	120	100	\$J	500u*	10M	270m		F4q	KC0			
13	U2T832	N	588m	1.0k		5.0	3.0	5.0	500m			12	200	60 \$	\$S	10u*			PL	F30	KJ0			
14	U2T833	N	588m	1.0k		5.0	3.0	5.0	500m			12	300	60 \$	\$S	10u*		PL	F30	KJ0				
15#	2SB615	PSi	640m	2.0k		4.0	1.0	7.0		110		5.0	110	80	\$J		450m			T03	KF0			
16#	2SD585	NSi	640m	2.0k		4.0	1.0	7.0		110		5.0	110	80	\$J		450m			T03	KF0			
17#	2SD4631	Si	641m	1.5k	3.0kØ	5.0	5.0	7.0	500m		80	4.0	60	80	\$J	500u	300m			F6e	KF			
18#	2SD4641	Si	641m	1.5k	3.0kØ	5.0	5.0	7.0	500m		100	4.0	80	80	\$J	500u	300m			F6e	KF			
19#	2SA10461	PSi	667m	1.0k	20k	3.0	3.0	15		100		5.0	100	100	\$J	50u	286m		PE	T03	C0			
20#	2SC24361	NSi	667m	1.0k	20k	3.0	3.0	15		100		5.0	100	100	\$J	50u	286m		PE	T03	C0			
21#	BD1530	NSi	800m	100		5.0	5.0	15	4.0	300			300	100	\$J	1.0mΔ	7.0M	200m	D	T03	KF0			
22#	BD1540	NSi	800m	100		5.0	5.0	15	4.0	400			400	100	\$J	1.0mΔ	7.0M	200m	D	T03	KF0			
23#	BD1550	NSi	800m	100		5.0	5.0	15	4.0	500			500	100	\$J	1.0mΔ	7.0M	200m	D	T03	KF0			
24#	BD1560	NSi	800m	100		5.0	5.0	15	4.0	600			600	100	\$J	1.0mΔ	7.0M	200m	D	T03	KF0			
25#	BD2530	NSi	800m	100		2.0	10	25	4.0	300			300	100	\$J	1.0mΔ	7.0M	100m	D	T03	KF0			
26#	BD2540	NSi	800m	100		2.0	10	25	4.0	400			400	100	\$J	1.0mΔ	7.0M	100m	D	T03	KF0			
27#	BD2550	NSi	800m	100		2.0	10	25	4.0	500			500	100	\$J	1.0mΔ	7.0M	100m	D	T03	KF0			
28#	2SD521	NSi	800m	200	1.2k	1.5	4.0	8.0		700		6.0	550	100	\$J	1.0m	200m			T03	KF0			
29#	2SD520	NSi	800m	200	1.5k	2.0	4.5	7.0		600		6.0	400	100	\$J	500u	250m		DM	T03	KF0			
30#	2SD528H	NSi	800m	350		3.0	6.0	8.0		600		15	600	100	\$J	5.0uØ	200m			T03	KF0			
31	IR1010	N	800m	500		1.5	3.0	10	1.0			7.0	120	100	\$J	100uΔ	360m			T03	KF0			
32	IR1020	N	800m	1.0k		1.5	3.0	10	1.0			7.0	120	100	\$J	100uΔ	300m			T03	KF0			
33	SE9306	NSi	920m	200 #		4.0	20	30 #	500m#	60		5.0	60	160	\$J	100u\$*	4.0MΔ			T03	KF0			
34	SE9307	NSi	920m	200 #		4.0	20	30 #	500m#	80		5.0	80	160	\$J	100u\$*	4.0MΔ			T03	KF0			
35	SE9308	NSi	920m	200 #		4.0	20	30 #	500m#	100		5.0	100	160	\$J	100u\$*	4.0MΔ			T03	KF0			
36	SE9406	NSi	920m	200 #		4.0	20	30 #	500m#	60		5.0	60	160	\$J	100u\$*	4.0MΔ			T03	KF0			
37	SE9407	NSi	920m	200 #		4.0	20	30 #	500m#	80		5.0	80	160	\$J	100u\$*	4.0MΔ			T03	KF0			
38	SE9408	NSi	920m	200 #		4.0	20	30 #	500m#	100		5.0	100	160	\$J	100u\$*	4.0MΔ			T03	KF0			
39	ET5006	NSi	1.0	8.0		5.0Ø	10	20	4.0	1.0k		15	900	125	\$J	1.0m	200m	D		T03	C0			
40#	2SD8311	NSi	1.0	500 Ø		5.0	10	20	1.0	500		5.0	400	150	\$J	100u	100m		DM	F6k	C0			
41#	2SD8301	NSi	1.0	2.0k	20k	2.0	3.0	5.0		150		7.0	100	30	\$J	50u	500m		PE	B44	DØ			
42	MJ3520	NSi	1.2	500		5.0	4.0	15	1.0	40		5.0	40	150	\$J	5.0mΔ*	625m			T03	KF0			
43	MJ3521	NSi	1.2	500		5.0	4.0	15	400m	100		5.0	80	150	\$J	1.0mΔ*	450m			T03	KF0			

# 15. MISCELLANOUS TRANSISTORS

IN ORDER OF: (1)CATEGORY,(2)TYPE NO.

LINE No.	2] TYPE No.	1] CATEGORY	U STRUCTURE	M DWG #	L C O D E	DESCRIPTION
				Y200 s/a TO200 Ser.		
1	2N1468	1	N-FA	Si TO5		Pc-25W max; Ip-2.0A max; tr-10ns
2	NS1110†	1	N	Si TO18	A0	ICBO-1.0uA max;Ih-300mA;VH-9.0V;IA-2.0mA;Ip-2.0A;BVCEs-110V min.
3	NS1111†	1	N	Si TO18	A0	ICBO-1.0uA max;Ih-300mA;VH-9.0V;IA-2.0mA;Ip-1.5A;BVCEs-60V min.
4	NS1112	1	N	Si TO18	A0	Pt-300 min;BVCEs-150V;Ic-10A peak;tr-1ns max;td-5ns max.
5	NS1116†	1	N	Si TO18	A0	ICBO-1.0uA max;Ih-300mA;VH-9.0V;IA-2.0mA;Ip-2.5A;BVCEs-190V min.
6	NS2310	1	N	Si TO18	A0	Pt-300 min;BVCEs-120V min;Ic-10A peak;tr-2ns max;td-5ns max.
7	NS2311	1	N	Si TO18	A0	Pt-300 min;BVCEs-120V;Ic-10A peak;tr-2ns max;td-5ns max.
8	PADT51	1	P-AD	Ge TO7		Pc-85mW;VBE0-2.0V;tr-1.0ns.
9#	RT1110	1	N-PL	Si TO18	A0	BVCEs-190V max;ICBO-1.0uA max;tr-1.0ns max;tf-2.5ns max.
10#	RT1111	1	N-PL	Si TO18	A0	BVCEs-120V max;ICBO-1.0uA max;tr-1.0ns max;tf-2.5ns max.
11#	RT1116	1	N-PL	Si TO18	A0	BVCEs-280V max;ICBO-1.0uA max;tr-1.0ns max;tf-2.5ns max.
12	SYL3013	1	N-EM	Si TO18		Pc-30W; VBCBO-75V; VBE0-5.0V; Ic-20A; hFE-20 min at Ic-10 ma.
13#	ASY60	2	P-Δ	Ge R47		Pc-20W max; BVCEs-20V; fab-11.0Mc; hFE-50; ICBO-5uA max.
14#	ASY64	2	P-Δ	Ge R47		Pc-20W max; BVCEs-30V; fab-3.5Mc; hFE-35; ICBO-3uA max.
15#	ASY66	2	P-Δ	Ge R47		Pc-20W max; BVCEs-30V; fab-6.0Mc; hFE-35; ICBO-5uA max.
16	C106*	2	P	Si TO5	A0	V0-2.0mV max;hFE-30 min at VCE-50V;RCE(SAT)-4.0 ohms max.
17	C201	2	P-Δ	Si TO5		Pc-25W max;BVCEs-40V;Ic-50mA max;fab-40Mc.
18	C202	2	P-Δ	Si TO5		Pc-25W max;BVCEs-25V;Ic-50mA max;fab-80Mc.
19	C301	2	P-Δ	Si TO5		Pc-25W max;BVCEs-70V;Ic-50mA max;fab-40Mc.
20	C301A	2	P-Δ	Si TO5		Pc-25 max; BVCEs-70V; Ic-50mA MAX; FAB-.04Mc.
21	C302	2	P-Δ	Si TO5		Pc-25W max;BVCEs-12V;Ic-50mA max;fab-80Mc.
22	C401	2	P-Δ	Si TO5		Pc-25W max;BVCEs-40V;Ic-50mA max;fab-40Mc.
23	C402	2	P-Δ	Si TO5		Pc-25W max;BVCEs-15V;Ic-50mA max;fab-80Mc.
24	C502	2	P-Δ	Si TO5		Pc-25W; BVCEs-30V; Ic-50mA; BVCEO-10V.
25#	SFT185	2	P-A	Ge TO5		Pc-15W max;BVCEs-30V;Ic-100mA max;ft-2.0Mc min.
26	TK20C	2	P-A	Ge R47		Pc-20W Max; BVCEs-30V; fab-6.0
27#	TK21C	2	P-Δ	Ge R47		Pc-20W max; BVCEs-30V; fab-2.0Mc; hFE-21; ICBO-3uA max.
28#	TK24C	2	P-A	Ge R47		Pc-20W max; BVCEs-30V; fab-3.5
29#	TK25C	2	P-A	Ge R47		Pc-20W max; BVCEs-20V; fab-11.0
30	2N2457	3	PL	Si TO5		Vpo-5.0V max; ho-125u mhos min; hi-50M ohms Typ.
31	2N2458	3	PL	Si TO51		Vpo-5.0V max; ho-125u mhos min; hi-100M ohms Typ.
32	3N98	3	N	Si R038c		Pc-150mW at 85C;Vds-32V; Id-7.7mA max. at 12V-VDS
33	3N99	3	N	Si R038c		Pc-150mW at 85C;Vds-32V; Id-10.5mA max. at 12V-VDS
34	4Z9-4Z12	3	P	Si TO5		N-Channel
35	11005	3	P	Si L18		Pc-1.0W;BVDS-30V min;IDSS-35nA max;gFS-650 umho. Matched pair
36	31004	3	P	Si		4 Leaded TO5 or TO46; BVDS-25V; IDSS-100mA max; gFS-850u mhos.
37	51009	3	P	Si R038k		BVDS-20V min;IDSS-10nA max;gFS-70 umho;Vgs-20V max.
38	C610	3	N-Δ	Si TO5		Pc-25W max;Vpo-20V max;ho-100u mhos min;IGDO-.10ua;BVGD-40V max.
39	C611	3	N-Δ	Si TO5		Pc-25W max;Vpo-20V max;ho-200u mhos min;IGDO-.10ua;BVGD-40V max.
40	C612	3	N-Δ	Si TO5		Pc-25W max;Vpo-20V max;ho-400u mhos min;IGDO-.10ua;BVGD-40V max.
41	C613	3	N-Δ	Si TO5		Pc-25W max;Vpo-20V max;ho-800u mhos min;IGDO-.10ua;BVGD-40V max.
42	C614	3	N-Δ	Si TO5		Pc-25W max;Vpo-10V max;ho-100u mhos min;IGDO-.10ua;BVGD-40V max.
43	C615	3	N-Δ	Si TO5		Pc-25W max;Vpo-10V max;ho-500u mhos min;IGDO-.10ua;BVGD-40V max.
44	C620	3	N	Si TO5		Pc-25W max;Vpo-10V max;ho-50u mhos min;IGDO-.10ua;NF-5.0db max.
45	C621	3	N	Si TO5		Pc-25W max;Vpo-10V max;ho-50u mhos min;IGDO-.10ua;NF-5.0db max.
46	C622	3	N	Si TO5		Pc-25W max;Vpo-10V max;ho-50u mhos min;IGDO-.10ua;NF-2.0db max.
47	C623	3	N	Si TO5		Pc-25W max;Vpo-10V max;ho-50u mhos min;IGDO-.10ua;NF-2.0db max.
48	C624	3	N	Si TO5		Pc-25W max;Vpo-10V max;ho-50u mhos min;IGDO-.10ua;NF-.50db max.
49	C625	3	N	Si TO5		Pc-25W max;Vpo-10V max;ho-50u mhos min;IGDO-.10ua;NF-.50db max.
50	C631	3	N-Δ	Si TO5		Pc-25W max;Vpo-30V max;ho-125u mhos min;BVGD-150V max.
51	C632	3	N-Δ	Si TO5		Pc-25W max;Vpo-40V max;ho-100u mhos min;BVGD-250V max.
52	C633	3	N-Δ	Si TO5		Pc-25W max;Vpo-40V max;ho-100u mhos min;BVGD-350V max.
53	C640	3	N	Si OV10		Pc-675W max;Vpo-10V max;ho-1000u mhos min;IGDO-.10ua
54	C641	3	N	Si OV10		Pc-675W max;Vpo-10V max;ho-2000u mhos min;IGDO-.10ua
55	C642	3	N	Si OV10		Pc-675W max;Vpo-10V max;ho-3000u mhos min;IGDO-.10ua
56	C643	3	N	Si OV10		Pc-675W max;Vpo-10V max;ho-4500u mhos min;IGDO-.10ua
57	C644	3	N	Si OV10		Pc-675W max;Vpo-10V max;ho-6000u mhos min;IGDO-.10ua
58	C650	3	N-Δ	Si TO5		Pc-25W max; ICBO-.10ua
59	C651	3	N-Δ	Si TO5		Pc-25W max; ICBO-.10ua
60	C652	3	N-Δ	Si TO5		Pc-25W max; ICBO-.10ua
61	C653	3	N-Δ	Si TO5		Pc-25W max; ICBO-.10ua
62	DA102	3	N	Si TO71		Diff.Ampl.;Pc-.75W both sides;BVDGO-50V min;IGSS-.10nA max.
63	DA402	3	N	Si TO71		Diff.Ampl.;Pc-.75W both sides;BVDGO-50V min;IGSS-.25nA max.
64	DPT200	3	N	Si R038h		Insulated Gate;VDS-25V;gm-1500uV min;Enhancement Type
65	DPT201	3	N	Si R038h		Insulated Gate;VDS-25V;gm-1500uV min;Depletion Type
66	FE250	3	N-PL	Si TO18		BVDGO-200V min;gm-400u mhos; Vpo-10V max; IDGO-2.0nA max.
67	FE252	3	N-PL	Si TO18		BVDGO-200V min;gm-300u mhos; Vpo-5.0V max; IDGO-2.0nA max.
68	FE254	3	N-PL	Si TO18		BVDGO-200V min;gm-200u mhos; Vpo-2.5V max; IDGO-2.0nA max.
69	FE350	3	N-PL	Si TO18		BVDGO-200V min;gm-1000u mhos; Vpo-10V max; IDGO-5.0nA max.
70	FE352	3	N-PL	Si TO18		BVDGO-200V min;gm-700u mhos; Vpo-5.0V max; IDGO-5.0nA max.
71	FE354	3	N-PL	Si TO18		BVDGO-200V min;gm-500u mhos; Vpo-2.5V max; IDGO-5.0nA max.
72	FE1600	3	N	Si R179r		BVDGO-30V min; IGSS-2.0nA max; Ron-50 ohms max; Vp-15V max.
73	FG34	3	N-PL	Si TO5		BVDGO-50V min;gm-1.0m mhos; Vpo-20V max; IDGO-.10ua max.
74	FG35	3	N-PL	Si TO5		BVDGO-100V min;gm-1.0m mhos; Vpo-20V max; IDGO-.10ua max.
75	FG36	3	N-PL	Si TO5		BVDGO-150V min;gm-1.0m mhos; Vpo-20V max; IDGO-.10ua max.
76	FG37	3	N-PL	Si TO5		BVDGO-200V min;gm-1.0m mhos; Vpo-20V max; IDGO-.10ua max.
77	FSP400	3	PL	Si		Vpo-3.0V; VDGO-30V; IDGO-.10 na max.
78	MM21021	3	N-MOS	Si R038y		Pd-300mW;VDS-25V;Id-30mA;VGS(TH)4Vmax;Yfs-1000umhos min.
79	MM21031	3	P-MOS	Si R038y		Pd-300mW;VDS-25V;Id-30mA;VGS(TH)5Vmax;Yfs-1000umhos min.
80#	OC800	3	P	Si		Pc-.075W max; BVCEs-50V; gm-.05 umhos min; lgs-.10 ua
81	P1003	3	P-PL	Si R038L		BVDGO-50V min; gm-1000 umhos min; Vp-3.0V max; Pd-30W
82	P1004	3	P-PL	Si R038L		BVDGO-50V min; gm-2500 umhos min; Vp-5.0V max; Pd-30W
83	P1005	3	P-PL	Si R038L		BVDGO-50V min; gm-3500 umhos min; Vp-8.0V max; Pd-30W
84	PT320	3	MOSA S	Si R038y		Pd-120mW;BVDS-25V;BVGS-50V;Yfs-2500umhos;VG8th-3.0V max.
85#	ST3	3	P	Ge		Pc-200mW max; fab-200Mc; BVCEs-100V; TJ-85 deg. C max.
86	SU2000	3	N-PL	Si R038d		BVDGO-50V min;gm-750umhos max;Vp-4.0V max;CDG-.35pt max.
87	SU2020	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.95-1.0;gm1/gm2-.95-1.0
88	SU2021	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.90-1.0;gm1/gm2-.90-1.0
89	SU2022	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.90-1.0;gm1/gm2-.90-1.0
90	SU2023	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.80-1.0;gm1/gm2-.80-1.0
91	SU2024	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.95-1.0;gm1/gm2-.95-1.0
92	SU2025	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.90-1.0;gm1/gm2-.90-1.0
93	SU2026	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.90-1.0;gm1/gm2-.90-1.0
94	SU2027	3	N-PL	Si TO71		Matched Pair;BVDGO-50Vmin;IDSS1/IDSS2-.80-1.0;gm1/gm2-.80-1.0
95	SU2030	3	N-PL	Si TO71	PJ	Matched Pair;BVDGO-50Vmin;gm-300umhos min;gm1/gm2-.95-1.0
96	SU2031	3	N-PL	Si TO71	PJ	Matched Pair;BVDGO-50Vmin;gm-400umhos min;gm1/gm2-.95-1.0
97	SU2033	3	N-PL	Si TO71	PJ	Matched Pair;BVDGO-50Vmin;gm-2500umhos min;gm1/gm2-.95-1.0
98	SU2035	3	N-PL	Si TO71	PJ	Matched Pair;BVDGO-50Vmin;gm-2500umhos min;gm1/gm2-.95-1.0
99	SU2037	3	N-PL	Si TO59		BVDGO-100V min;gm-20,000umhos min;Vp-15V max;Pd-10W at Tc 25 deg.
100#	THP169	3	P	Ge		Max. Pc-80mW; BVCEs-80V;Derate Free Air 3.3 deg.C/mW;85J
101#	THP170	3	P	Ge		Max. Pc-50mW; BVCEs-50V;Derate Free Air 3.3 deg.C/mW;85J
102#	THP171	3	P	Ge		Max. Pc-80mW; BVCEs-80V;Derate Free Air 3.3 deg.C/mW;85J
103#	THP172	3	P	Ge		Max. Pc-50mW; BVCEs-50V;Derate Free Air 3.3 deg.C/mW;85J
104	TIS11	3	P-MOS	Si R38e		BVGS-30V;IDSS-.01mA max;Yfs-800umhos min;Ciss-8.0pt max.
105	TIX690	3	P	Si TO12		Max. Coll diss. 500mW; Max temp. 175 deg. C. J.
106	TIX881	3	P-A	Ge TO11		Pd-150mW; BVDGO-40V min; Yfs-.40u mho max; Yfs-400u mho min.
107	TIX882	3	P-A	Ge TO11		Pd-150mW; BVDGO-40V min; Yfs-.40u mho max; Yfs-600u mho min.
108	TIX883	3	P-A	Ge TO11		Pd-150mW; BVDGO-40V min; Yfs-.40u mho max; Yfs-800u mho min.
109	TIX511	3	PMOS	Si R038y		Pd-300mW;BVDS-30V;IDSS-10nA;VGS(th)-3.0V min;Yfs-800umhos min.
110	U1327	3	N-PL	Si TO18		BVDGO-50V min;gm1-1100umhos;gm2-800umhos;Vps-4.0V max;Pd-300mW.

## 15. MISCELLANEOUS TRANSISTORS

IN ORDER OF: (1)CATEGORY,(2)TYPE NO.

LINE No.	TYPE No.	CATEGORY	STRUCTURE	MATERIAL	DWG #	L C E O D E	DESCRIPTION
1	u3000	3	N-PL	Si	TO18		BVDGO-30V min;gm-300umhos min;Vp-15V max;Pd-225mW.
2	u3001	3	N-PL	Si	TO18		BVDGO-30V min;gm-250umhos min;Vp-10V max;Pd-60mW.
3	u3002	3	N-PL	Si	TO18		BVDGO-30V min;gm-200umhos min;Vp-5.10V max;Pd-15mW.
4	u3010	3	N-PL	Si	TO18		BVDGO-30V min;gm-750umhos min;Vp-15V max;Pd-350mW.
5	u3011	3	N-PL	Si	TO18		BVDGO-30V min;gm-600umhos min;Vp-10V max;Pd-120mW.
6	u3012	3	N-PL	Si	TO18		BVDGO-30V min;gm-500umhos min;Vp-5.0V max;Pd-30mW.
7	X1004	3	N-PL	Si	TO18		4 leaded TO5 or TO46; BVDSS-50V; IDSS-100nA max; gfs-1000u mhos
8#	ZFT16	3	N-PL	Si	L40		Pt-35W;Vpo-5.0V;BVDS-50V;IDO-6.0mA;BVDG-65V.
9#	ZFT18	3	N-PL	Si	L40		Pt-35W;Vpo-5.0V;BVDS-100V;IDO-6.0mA;BVDG-100V.
10	2N1020	4	NPP	Ge	Si		Pc-10W max;BVBCBO-30V; Ic-3.0A max;hFE-15000 Typ/VCE-5.0V;Ic-1.0A.
11#	2ASZ15	5	P-N	Ge	TO3		Darlington;Pt 30W;BVBCBO 100V;hFE1/hFE2 1.25 max.
12	2N67	5	N-A	Δ		Ge	Max. Coll. Dist. 100mW; Ic 50mA;BVBE 50V; Max. Temp 85 deg.CS
13	2NFP4339	5	P-N	Si	ZA25		Vp match 30%;IDSS match 5%;BVGSS 40V max;Pc-30W max.
14	2NFP4340	5	P-N	Si	ZA25		Vp match 30%;IDSS match 5%;BVGSS 40V max;Pc-30W max.
15#	AC127/AC128-01	5	N-P-A	Ge	X9c		Matched pair of AC127-01 and AC128-01;hFE1/hFE2 1.1 at VCB 0.0V;Ic 300mA.
16#	AC127/AC152	5	N-A	Ge	TO1		BVBCBO-32V; Ic-500mA; hFE1/2-1.25
17#	AC128/AC176	5	P-NA	Ge	TO1		hFE1/2 1.2.
18#	AC153/AC176	5	A	Ge	TO7	A	Matched pair of AC153 and AC176.
19#	AC153K-AC176K	5	A	Ge	X9a	A	Matched pair of AC153K and AC176K.
20#	AC154/AC157	5	A	Ge	TO1		Matched pair of AC154 and AC157
21#	AC166/AC168	5	A	Ge	TO1		Matched pair of AC166 and AC168
22#	AC187K-AC188K	5	A	Ge	X9a	A	Matched pair of AC187K and AC188K.
23#	BC635/636	5	N-P-PE	Si	TO92	D	hFE1/hFE2 1.3 at Ic 150mA;VCE 2.0V;Pt 1.0W;VCE(sat) 1.0Ω max.
24#	BC637/638	5	N-P-PE	Si	TO92	D	hFE1/hFE2 1.3 at Ic 150mA;VCE 2.0V;Pt 1.0W;VCE(sat) 1.0Ω max.
25#	BC639/640	5	N-P-PE	Si	TO92	D	hFE1/hFE2 1.3 at Ic 150mA;VCE 2.0V;Pt 1.0W;VCE(sat) 1.0Ω max.
26	BD131/BD132	5	P	Si	TO126	B	Pt 11W;hFE 78 min. at Ic 500m, VCE 12V;hFE1/2 1.2 max.
27#	BD213-45/BD214-45	5	N-P-H	Si	B3	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.5A.
28#	BD213-60/BD214-60	5	N-P-H	Si	B3	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.5A.
29#	BD213-80/BD214-80	5	N-P-H	Si	B3	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.5A.
30#	BD266/267	5	N-P	Si	Y220b	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.5A.
31#	BD266A/267A	5	N-P	Si	Y220b	B	Darlington;Pt 60W;BVBCBO 60V;BVCEO 60V;hFE1/hFE2 2.5 max.
32#	BD266B/267B	5	N-P	Si	Y220b	B	Darlington;Pt 60W;BVBCBO 80V;BVCEO 80V;hFE1/hFE2 2.5 max.
33#	BD585-BD586	5	N-P-H	Si	B4	B	Darlington;Pt 60W;BVBCBO 100V;hFE1/hFE2 2.5 max.
34#	BD587-BD588	5	N-P-H	Si	B4	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic .50A.
35#	BD589-BD590	5	N-P-H	Si	B4	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic .50A.
36#	BD595-BD596	5	N-P-H	Si	B4	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.0A.
37#	BD597-BD598	5	N-P-H	Si	B4	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.0A.
38#	BD599-BD600	5	N-P-H	Si	B4	B	Matched pair;hFE1/hFE2 1.4 max at VCE 2.0V and Ic 1.0A.
39#	FP4339/2N4339	5	N-P	Si	ZA25		Vp match-30%;IDSS match-5%;BVGSS-40V max;Pc-30W max.
40	FP4340/2N4340	5	N-P	Si	ZA25		Vp match-30%;IDSS match-5%;BVGSS-50V max;Pc-30W max.
41	FT3838†	5	Δ	Si	TO89		BVCEO-40V;Ic-600mA max;ft-200Mc;hFE-100 min. at 150mA, 10V.
42	GA53080	5	P	Ge			Max. Coll. Dist. 250mW; Fab 10mC;BVBC 100V; Ic 50mA;BVBE 100V
43	MK433	5	N-P	Si	W52k	R	Matched Pair of MRF432 and MRF433.
44#	PA6015C	5	NPE	Si	R222	F	W/PB6015C;PT 500mW;BVBCBO 25V min;ICBO 500nA max;hFE 120 min;Cob 12pF max
45#	PB6015C	5	PPE	Si	R222	F	W/PA6015C;PT 500mW;BVBCBO 25V min;ICBO 500nA max;hFE 120 min;Cob 12pF max
46	RACT15/16	5	N-P	Si	Y220b	∅	For 20-Watt Full Complementary-Symmetry Audio Amps w/Darlington Output Transistors
47	UD3007†	5	PE	Si	L59		BVBCBO-60V;BVCEO-40V;BVBE0-5.0V;hFE-100-300 at Ic-150mA;ft-200Mc.
48#	2AC187	6	A-N	Ge	TO1		Pt-8W;VCBO-25V max;IC-2A pulsed;hFE-100 min;ft-5MHz.
49#	2ACY17	6	P-A∅	Ge	TO5		hFE 1/2-1.2 max;VBE(1-2)-250mV max.
50#	2ACY18	6	P-A∅	Ge	TO5		hFE 1/2-1.2 max;VBE(1-2)-250mV max.
51#	2ACY19	6	P-A∅	Ge	TO5		hFE 1/2-1.2 max;VBE(1-2)-250mV max.
52#	2AD140	6	P-E	Ge	TO3		Matched Pair of AD140; hFE1/hFE2-1.25 to 1.0
53#	2AD161	6	P-E	Ge	TO9		Pt-4W;VCBO-32V;IC-3A pulsed;hFE-80 min;ft-3MHz.
54#	2AT128	6	P-A	Ge	TO1		Matched Pair of AT128; hFE/hFE2-.83 max.
55#	2AT329	6	N-PL	Si	MM12a		Matched Pair of AT329; hFE/hFE2-.75 max.
56#	2AT331	6	P-PL	Si			Matched Pair of AT331; hFE/hFE2-.75 max.
57#	2BC119	6	N-PE	Si	TO39		Matched Pair of BC119;hFE 1/2 .80min-1.25max at Ic of 300mA.
58#	2BC138	6	N-DPE	Si	TO39		Matched Pair of BC138;hFE 1/2 1.0min-1.25max at Ic of 1.0A.
59#	2BC139	6	P-DPE	Si	TO5		Matched Pair of BC139;hFE1/2-1.25 max;Pt-70W each.
60#	2BC142	6	N-PE	Si	TO39		Matched Pair of BC142;hFE 1/2 .80min-1.0max at Ic of 50mA.
61#	2BC143	6	P-PE	Si	TO39		Matched Pair of BC143;hFE 1/2 .80min-1.25max at Ic of 500mA.
62#	2BC144	6	N-DPE	Si	TO5		Matched Pair of BC144;hFE1/2-1.25 max;Pt-70W each.
63#	2BC221	6	P-DPE	Si	TO105		Matched Pair of BC221;hFE 1/2 1.0min-1.25max at Ic of 200mA.
64#	2BC222	6	N-DPE	Si	TO105		Matched Pair of BC222;hFE 1/2 1.0min-1.25max at Ic of 200mA.
65#	2BC286	6	N-DPE	Si	TO5		Matched Pair of BC286;hFE 1/2 .80min-1.25max at Ic of 500mA.
66#	2BC288	6	N-DPE	Si	TO39		Matched Pair of BC288;hFE 1/2 .80min-1.25max at Ic of 2.0A.
67#	2BD117	6	N-DPE	Si	TO3		Matched Pair of BD117;hFE1/2-.80 min;Pc-30W each at Tc-50deg.C.
68#	2BD131	6	N-PE	Si	TO126	D	Matched Pair of BD131;hFE 280 max;Δ1B 2.0mA max;hFE1/2 1.2 max.
69#	2BD181	6	N	Si			Pt 78W;BVBCBO 55V;BVCEO 45V;hFE1/2 1.3 at Ic 3A;VCE 4.0V.
70#	2BD182	6	N	Si			Pt 117W;BVBCBO 70V;BVCEO 60V;hFE1/2 1.3 at Ic 4A;VCE 4.0V.
71#	2BD183	6	N	Si			Pt 117W;BVBCBO 85V;BVCEO 80V;hFE1/2 1.3 at Ic 3A;VCE 4.0V.
72#	2C444*	6	N-DPL	Si	TO77		Pt-.50W;hFE1/2-.70 min;VBE(1-2)-20mV max;ft-200Mc min.
73	2N214MP	6	N-A	Ge			Max. Coll. Diss. 180mW;Fab 80mC;Max.Temp.85J;Matched pair of 2N214
74	2N2706MP	6	P	Ge	TO1		Matched pair of 2N2706 for hFE1/2.
75	2N3514	6	N	Si	X26		PT-1.4W both sides;VCBO-80V max;VCEO-40V max;VEBO-5.0V max.
76	2N3518	6	N	Si	X27		PT-1.4W both sides;VCBO-100V max;VCEO-60V max;VEBO-7.0V max.
77	2N3519	6	N	Si	X26		PT-1.4W both sides;VCBO-60V max;VCEO-30V max;VEBO-7.0V max.
78	2N3520	6	N	Si	X27		PT-1.4W both sides;VCBO-60V max;VCEO-30V max;VEBO-7.0V max.
79	2N3523	6	N	Si	X26		PT-1.4W both sides;VCBO-70V max;VCEO-55V max;VEBO-7.0V max.
80	2N3524	6	N	Si	X27		PT-1.4W both sides;VCBO-70V max;VCEO-55V max;VEBO-7.0V max.
81	2N4241MP	6	P	Ge	TO1		Matched Pair of 2N4241 for hFE1/2.
82	2N5505*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.5umhos;VGS(1-2)-5mV;VGS(1-2)/Δ-.8mV.
83	2N5506*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.5umhos;VGS(1-2)-15mV;VGS(1-2)/Δ-.8mV.
84	2N5507*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.5umhos;VGS(1-2)-5mV;VGS(1-2)/Δ-1.9mV.
85	2N5509*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.5umhos;VGS(1-2)-25mV;VGS(1-2)/Δ-3.8mV.
86	2N5511*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.0umhos;VGS(1-2)-15mV;VGS(1-2)/Δ-.8mV.
87	2N5512*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.0umhos;VGS(1-2)-5mV;VGS(1-2)/Δ-1.9mV.
88	2N5513*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.0umhos;VGS(1-2)-15mV;VGS(1-2)/Δ-1.9mV.
89	2N5514*	6	P#∅	Si	TO71		Pt-3W;IG(1-2)-50pA;Yos(1-2)-1.0umhos;VGS(1-2)-25mV;VGS(1-2)/Δ-3.8mV.
90#	2OC6	6	P-A	Ge	TO3		Matched Pair of OC20; hFE1/hFE2-1.2 to 1.0
91#	2OC28	6	P-A	Ge	TO3		Matched Pair of OC28;hFE 1/2-1.2
92#	2OC29	6	P-A	Ge	TO3		Matched Pair of OC29;hFE 1/2-1.2
93#	2OC35	6	P-A	Ge	TO3		Matched Pair of OC35;hFE 1/2-1.2
94#	2OC36	6	P-A	Ge	TO3		Matched Pair of OC36;hFE 1/2-1.2
95#	2OC74	6	P	Ge	R8		Matched Pair of OC74;hFE1/2-1.15 at IE-50mA;VCE-6.0V.
96#	2OC83	6	P-A	Ge	R8		Matched Pair of OC83
97#	2OC84	6	P-A	Ge	R8		Matched pair of OC84;hFE1/2-.83 min.
98	2SB30	6	P-A	Ge	TO3		BVBCBO-15V; Ic-50A max; fae-7.0Mc; hFE-68/Ic-20A
99	2SB31	6	P-A	Ge	TO3		BVBCBO-15V; Ic-50A max; fae-7.0Mc; hFE-115/Ic-20A
100#	2SB145	6	P-A	Ge	TO3		BVBCBO-30V; Ic-1.0A max; fae-7.0Mc; hFE-37/Ic-1.0A
101#	2SB146	6	P-A	Ge	TO3		BVBCBO-30V; Ic-1.0A max; fae-7.0Mc; hFE-75/Ic-1.0A
102#	2SC96	6	N-PE	Si	L16		VCEO-15V;Ic-150mA;PC-500mW max;hFE1/hFE2-80-1.0 at 1mA
103	2SFT212	6	P	Ge	TO3	∅	BVBCBO-30V;Pc-30W at Tc;hFE-40 at FC-2.0A;fab-200kc min.
104#	2T3041	6	P	Ge			Max. Thermal Res. 3.0 oC/mW; Matched Pair 2T3031
105#	2T3042	6	P	Ge			Max. Thermal Res. 3.0 oC/mW; Matched Pair 2T3032
106#	2T3043	6	P	Ge			Max. Thermal Res. 3.0 oC/mW; Matched Pair 2T3033
107#	2xOC308	6	P	Ge			Pair of OC308







# 15. MISCELLANEOUS TRANSISTORS

IN ORDER OF: (1)CATEGORY,(2)TYPE NO.

LINE No.	TYPE No.	U S E	STRUC- TURE	M A T	DWG # Y200 s/a TO200 Ser.	L C E O A D E	DESCRIPTION
1	TD5907*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 200pA max;Yfs 1/2 .97 min;VGS(1-2) 5mV max; $\Delta$ VGS/ $\Delta$ T 10uV/C.
2	TD5907A*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2)200pA max;Yfs1/2 .97 min;VGS(1-2)5mV max; $\Delta$ VGS/ $\Delta$ T 10uV/C.
3	TD5908*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 200pA max;Yfs 1/2 .95 min;VGS(1-2) 10mV max; $\Delta$ VGS/ $\Delta$ T 20uV/C.
4	TD5908A*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 200pA max;Yfs 1/2 .95 min;VGS(1-2) 10mV max; $\Delta$ VGS/ $\Delta$ T 20uV/C.
5	TD5909*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 200pA max;Yfs 1/2 .95 min;VGS(1-2) 15mV max; $\Delta$ VGS/ $\Delta$ T 40uV/C.
6	TD5909A*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 200pA max;Yfs 1/2 .95 min;VGS(1-2) 15mV max; $\Delta$ VGS/ $\Delta$ T 40uV/C.
7	TD5911*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 20nA max;IDSS .95 min;VGS(1-2) 10mV max; $\Delta$ VGS/ $\Delta$ T 20uV/C.
8	TD5911A*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 20nA max;IDSS .95 min;VGS(1-2) 10mV max; $\Delta$ VGS/ $\Delta$ T 20uV/C.
9	TD5912*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 20nA max;IDSS .95 min;VGS(1-2) 15mV max; $\Delta$ VGS/ $\Delta$ T 40uV/C.
10	TD5912A*	6	N/O	SI	TO71	PJ	Pt 300mW;IG(1-2) 20nA max;IDSS .95 min;VGS(1-2) 15mV max; $\Delta$ VGS/ $\Delta$ T 40uV/C.
11	TI568*	6	N-PE	SI	TO92		Pt-360mW;Yfs1/2-.95 min;VGS(1-2)-5.0mV max;IGSS1/2-10nA max.
12#	uPA15	6	N-PE	SI	R131	PQ	Pc 600mW max;hFE1/2 .80 min;hFE 40 min at 1.0mA;VBE1/2 10W max
13	U205*	6	N	SI	TO71		Pt-30W;IG(1-2)-5.0nA max;VGS(1-2)-5.0mV max;gfs1/2-.95 min.
14	U206*	6	N	SI	TO71		Pt-30W;IG(1-2)-5.0nA max;VGS(1-2)-10mV max;gfs1/2-.95 min.
15	U207*	6	N	SI	TO71		Pt-30W;IG(1-2)-5.0nA max;VGS(1-2)-15mV max;gfs1/2-.95 min.
16	U280*	6	N#	SI	TO71	PJ	Dual;IDSS1/2 1.0 max;IG(1-2)10nA max;gfs 1/2 1.0 max;VGS(1-2) 10mV max.
17	U281*	6	N#	SI	TO71	PJ	Dual;IDSS1/2 1.0 max;IG(1-2)10nA max;gfs 1/2 1.0 max;VGS(1-2) 25mV max.
18	U282*	6	N#	SI	TO71	PJ	Dual;IDSS1/2 1.0 max;IG(1-2)10nA max;gfs 1/2 1.0 max;VGS81-2) 10mV max.
19	U283*	6	N#	SI	TO71	PJ	Dual;IDSS1/2 1.0 max;IG(1-2)10nA max;gfs 1/2 1.0 max;VGS(1-2) 25mV max.
20	U284*	6	N#	SI	TO71	PJ	Dual;IDSS1/2 1.0 max;IG(1-2)10nA max;gfs 1/2 1.0 max;VGS(1-2) 25mV max.
21	U285*	6	N#	SI	TO71	PJ	Dual;IDSS1/2 1.0 max;IG(1-2)10nA max;gfs 1/2 1.0 max;VGS(1-2) 50mV max.
22	UD1000	6	P-PE	SI	L38		Pt(Both Sides)-200mW;BVCEO-50V;Vo(1-2)-100uV max;IB and IC-20mA.
23	UD2000	6	P-PE	SI	L2n		Pt-400mW;BVCEO-50V;VBE1/2-5.0mV max;hFE1/2-.90 min; $\Delta$ VBE1-2-10uV/degC
24#	ZDT11	6	N-PL	SI	R102a		$\Delta$ VEC-100uV max; VEC-2.0mV.
25#	ZDT20	6	N-PL	SI	R102a		hFE1/hFE2-1.0 max; VBE1-VBE2-20mV max.
26#	ZDT21	6	N-PL	SI	R102a		hFE1/hFE2-1.0 max; VBE1-VBE2-5.0mV max.
27	2N318	7	P-A	Ge			Pc-50mW; VCE-12V max; Sens-25uA/ft can;fab-750kc.
28	2N577	7	P	Ge			Pt-25mW; IC-10mA; Idark-300uA; Photosens-30A/lumen.
29	800	7	N-G	Si	X8	A0	Max. Coll. Dist. 65mW; BVCE 20V; IC 5.0mA; Max. Temp. 75 deg.C.A.
30#	BFX30	7	N-A	Si	X8	A0	Pt-500mW;ICE(D)-1.0uA max;Sens-100mA/mW/cm;tr-3.0usec;tf-3.0usec.
31#	BFX59	7	N-A	Si	X8k	A0	Darlington;Pt 200mW;Ic 5.0mA at EA 100k;tr 200us;tf 150us;Max spectral Sens 780nm.
32#	BPY82	7	N-PE	Si	X8a	A0	Pt-20W;IC-1.0mA min. at B-1000 lux;Sens-.10uM;VCE-15V.
33#	BPY68	7	N-DPL	Si	X52		ID- 10uA max;IL-80mA min;BVCEO-5.0V min.
34	CLR2090	7	N-PEA	Si	L3k		Darlington;Pd 250mW;BVCEO 40V min;IL 600uA min at 20uW/cm sq;tr 100us;tf 150us.
35	CLR2191	7	N-PEA	Si	L3k		Darlington;Pd 250mW;BVCEO 40V min;IL 4.0mA min at 20uW/cm sq;tr 100us;tf 150us.
36	CLT4020	7	N-PEA	Si	u85		Pd 50mW;BVCEO 50V;BVCEO 5.0V, IL 1.2mA max;ID 10nA max;tr 1.5us typ;tf 1.5us typ.
37	CLT4030	7	N-PEA	Si	u85		Pd 50mW;BVCEO 40V;BVCEO 5.0V, IL 3.0mA max;ID 10nA max;tr 1.5us typ;tf 1.5us typ.
38	CLT4160	7	N-PEA	Si	u85a		Pd 50mW;BVCEO 50V;BVCEO 5.0V, IL 3.0mA max;ID 10nA max;tr 1.5us typ;tf 1.5us typ.
39	CLT4170	7	N-PEA	Si	u85a		Pd 50mW;BVCEO 40V;BVCEO 5.0V, IL 5.0mA max;ID 10nA max;tr 1.5us typ;tf 1.5us typ.
40#	ETP	7	P	Ge			Idark-10uA; Ilight-10mA; Sens-.30uA/lumen.
41	EIP	7	P	Ge			Idk-10uA; lit-10mA; Sens-300uA/1m.
42	EP120	7	PS	Si	R110c	DB	Pt 250mW;Sin 400nA/mW/cm sq;IG(DARK) 30pA max;Icss(DARK) 500pA max;Vp 10V max.
43	EP121	7	PS	Si	R110c	DB	Pt 250mW;Sin 400nA/mW/cm sq;IG(DARK) 30pA max;Icss(DARK) 500pA max;Vp 1.5V max.
44	EP122	7	PS	Si	R110c	DB	Pt 250mW;Sin 400nA/mW/cm sq;IG(DARK) 30pA max;Icss(DARK) 500pA max;Vp 4.0V max.
45	EP123	7	PS	Si	R110c	DB	Pt 250mW;Sin 400nA/mW/cm sq;IG(DARK) 30pA max;Icss(DARK) 500pA max;Vp 10V max.
46#	ES3501	7	P-A	Ge	R71		Pc-36mW at 45 deg. C;BVCEO-10V; Ic-10mA max;Photosens-20uA/fc.
47#	ES3511	7	P-A	Ge	R88		Pc-50mW; BVCEO-25V; IC-20mA max; Photosens-1.0uA/Lux
48	FF400*	7	N-EA	SI	TO72	DH	IG(Light)-15nA/FC min;ID(Light)-30uA/FC typ;tr-30ns;tf-50ns.
49	FPN100	7	N-PL	Si	X52		Pt-75mW max;ID-10uA max;IL-80mA max;BVCEO-5.0V min.
50	FPN100	7	N-PL	Si	X52a		Phototrans;Pd-75mW;ID-.10uA max;IL-1.80mA min.
51	FPO100	7	N-PL	Si	X52a		Pt-75mW max;ID-.10uA max;IL-80mA max.
52	FPT100	7	N-PL	Si	R124	A	Pt-100mVmax;ID-10nAmax;IC-25mA;tr-3.0usec.
53	FSP5	7	N-PL	Si	X8		Pc-50W max; BVCEO-100V; Photo-Sens-1.0uA/fc min.
54#	GPT	7	P	Ge			Idark-2.0mA max; Ilight-50mA; Sens-.30uA/1m.
55	GS100	7	N-PLA	Si	u54		Pt-50mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
56	GS102	7	N-PLA	Si	u54		Pt-50mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
57	GS170	7	N-PLA	Si	u54		Pt-50mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
58	GS172	7	N-PLA	Si	u54		Pt-50mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
59	GS300	7	N-PLA	Si	X90a		Pt-50mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
60	GS302	7	N-PLA	Si	X90a		Pt-50mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
61	GS370	7	N-PLA	Si	X90a		Pt-50mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
62	GS372	7	N-PLA	Si	X90a		Pt-50mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max.
63	GS600L	7	N-PLA	Si	X29		Pt-.25W; IL-30mA; ID-10nA; VCE-10V max; Sens-75uA/fc
64	GS601	7	N-PLA	Si	X29		Pt-.25W; IL-20mA; ID-20nA; VCE-5.0V max; Sens-50uA/fc
65	GS611	7	N-PLA	Si	X29		Pt-.25W; IL-3.0mA;ID-(12V)-1.0nA;VCE-12V max;Sens-7.5uA/fc
66	GS614	7	N-PLA	Si	X29		Pt-150mW;IL-5.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-1.5us max;tf-2.0us max.
67	GS680	7	N-PLA	Si	X29		Pt-.25W; IL-40mA; ID-10nA; VCE-5.0V max; Sens-100uA/fc
68	HPA4202	7	N	Si	X40		BVCEO-25V; fae-120Kc; Cob-9.0pf; hFE-400 typ
69	ME510	7	N-PE	Si	TO18		BVCEO-10V; Photosens-2.0uA/fc min. at VCE-5.0V, IB-0.0
70	MRD100*	7	NANT	Si	W6	B	Pd-50mW;BVCEO-80V;BVCEO-40V;ICEO(dark)-100nAmax;Sens.Rad.CEO-100nA/mW/sq.cm.
71	MRD200	7	N-AN	Si	X83		Pt-0.5W;ICEO(dark)-25nA;BVCEO-50V;Sens-2.0uA/lum/ft.sq. min.
72	MRD210	7	N	Si	X83a		BVCEO-50V;ICEO-25nA at 25deg C;SICE-4uA/lum/ft-2min;LS-8um typ
73	MRD250	7	N	Si	X83a		BVCEO-50V;ICEO-25nA at 25deg C;SICE-8uA/lum/ft-2min;LS-8um typ
74	OCP71	7	P	Ge	R9		Pt-50mW; BVCEO-25V; IC-20mA; Sens-.30A/1m
75#	OS13	7	P	Ge	X1		Pc-15mW max; BVCEO-30; Ic-2mA max.
76#	OS15	7	N	Si	X1		Pc-30mW max;BVCEO-30Vmax;Ic-200uA max; Photo-Sens-1uA/500 Lumen.
77#	OS16	7	N	Si	X1		Pc-30mW max;BVCEO-30Vmax;Ic-200uA max; Photo-Sens-4uA/500 Lumen.
78#	OS17	7	N	Si	X1		Pc-30mW max;BVCEO-30Vmax;Ic-200uA max; Photo-Sens-7uA/500 Lumen.
79	PD3L	7	P	Ge			Pc-10W max; BVCEO-50V; IC-5.0mA max.
80	PD6	7	P	Ge			Pc-20mW max; BVCEO-50V; IC-5.0mA max.
81	PFN3066*	7	N-E	SI	TO18	DB	IGSS(light) 3.0nA/fc;ID(light) 2.0uA/fc.
82	PFN3069*	7	N-E	SI	TO18	DB	IGSS(light) 8.0nA/fc;ID(light) 14uA/fc.
83	PFN3458*	7	N-E	SI	TO18	DB	IGSS(light) 10nA/fc;ID(light) 35uA/fc.
84#	PH244N*	7	N-PEA	SI	X8f	DB0	Pd 300mW; IGSS(light) 15nA/FC;ID(light) 100uA/FC.
85	TIL58	7	NPLA	Si	X69a		Pd-50mW;ID-25nAmax;IL-1.0mAmin;tr-2.0usec;BVCEO-50V;BVCEO-8.0V;tf-15usec.
86	TIL78	7	N	Si	X112		Pt 50mW;IL 1.0mA min;ID 25nA max;tr 1.5us typ;tf 15us typ;BVCEO 50V min;BVCEO 7.0Vmin
87	TIL137	7	N	Si	X112		120 element beam lead array;Pt 600mW;ID 100nA max;IL 2.0mA
88	3N25	8	FGD	Ge			Pc-25mW max; fab-200Mc; Ic-2.0mA max.
89	3N35A	8	N	Si	TO12		Pd-.125W;Rsat-300 ohms;ries-20 ohms min;Coep-3.0pf
90	3N56	8	N-A	Si	TO5		Pc-.15W max; BVCEO-18V; IC-30mA max.
91	3N57	8	N-A	Si	TO5		Pc-.15W max; BVCEO-18V; IC-30mA max.
92#	35001	8	N-D	Si			Pc-125mW;BVCEO-30V;Ic-10mA; Gain 18 db ICBO-2uA
93#	35002	8	N-GD	Si	TO12		Pc-125W max; fab-100Mc; BVCEO-30V; Ic-10mA max.
94#	35003	8	N-D	Si			Pc-125mW;BVCEO-30V;Ic-10mA; Gain 20 db ICBO-2uA
95#	35004	8	N-GD S	Si			Pc-125W max; fab-150Mc; BVCEO-30V; Ic-10mA max.
96#	GTA3	8	P	Ge			Pc-2.5mW; fab-200Mc; BVCEO-15V; Ic-2.0mA max.
97	JAN2N489	9	P-N	SI	R33		Pc-45W max;VE-60V max;ISR-.62 max;RBBO-6.8k $\Omega$ max.
98	JAN2N490	9	P-N	SI	R33		Pc-45W max;VE-60V max;ISR-.62 max;RBBO-6.8k $\Omega$ max.
99	JAN2N491	9	P-N	SI	R33		Pc-45W max;VE-60V max;ISR-.68 max;RBBO-6.8k $\Omega$ max.
100	JAN2N492	9	P-N	SI	R33		Pc-45W max;VE-60V max;ISR-.68 max;RBBO-6.8k $\Omega$ max.
101	JAN2N493	9	P-N	SI	R33		Pc-45W max;VE-60V max;ISR-.75 max;RBBO-6.8k $\Omega$ max.
102	JAN2N494	9	P-N	SI	R33		Pc-45W max;VE-60V max;ISR-.75 max;RBBO-6.8k $\Omega$ max.
103#	2N1671AX	9	P	Si			n .62 max;RBB 9.1k $\Omega$ max;Iv 8.0mA min;Ip 25uA max
104#	2N1671BP	9	P	Si			Pt 450mW;RBB 9.1k $\Omega$ max;Iv 8.0mA min;Ip 12uA max.
105#	2N1671CX	9	P	Si			n .62 max;RBB 9.1k $\Omega$ max;Iv 8.0mA min;Ip 2.0uA max
106	2N2213	9	P	Si			Pc-45W; Rbb-9.1 ohms max; VB2B1-40V; VB2E-60V.
107	2N2307	9	P	Si			Pc-250mW;Rbb-9.1kohms max;Ip-2.0A max.
108#	2N2646P	9	P	Si			Pt 300mW;RBB 9.1k $\Omega$ max;Iv 4.0mA min;Ip 12uA max.
108#	2N3406	9	P	Si	R33		Pc-45W;VB2E-60V max;VB2B1-70V max;VEB1(SAT)-5.0V max;Iv-8mA max.
110	2N3482	9	P	Si	R33	GF	Pc-40W;RBBO 6.8kohms max; n .62max;Iv 4.0mA min; Ip2.0uA max.

# 15. MISCELLANEOUS TRANSISTORS

IN ORDER OF: (1)CATEGORY,(2)TYPE NO.

LINE No.	TYPE No.	U	STRUC-TURE	M A T	DWG # Y200 s/a TO200 Ser.	L C E O A D E	DESCRIPTION.
1	2N3679	9	P	Si	L7a		Pt-250mW;ISR-80 max;RBB0-9.1Kohms max;lv-4.2mA min;VOB1-4.0V min.
2#	2SH12	9	N	Si	T05		Pc-450mW;N-47/.62;VBB-4500ohms;IE(DC)-50mA.
3#	2SH13	9	P	Si	T05		Pt-45W.
4#	2SH14	9	P	Si	T05		Pt-45W.
5#	2SH22	9	N	Si	TO18	CB	Pt 200mW;n .85 max;RBB 4.0kOhms min IV 4.0mA min;IP 4.0uA min.
6#	5B24	9	P	Si	T05		P-450mW; ISR-47 min; Ip-25uA max;lv-8.0mA min;IB2 Mod-6.8-30
7	5B25	9	P	Si	T05		P-450mW; ISR-47 min; Ip-25uA max; lv-8.0mA min;IB2 Mod-6.8-30
8	5C28	9	NP	Si	TO18		Pc-30W; ISR-75 max; Rb1b2-12K ohms; IV-8.0mA min; Ip-20mA max.
9	5C29	9	NP	Si	TO18		Pc-30W; ISR-86 max; Rb1b2-12K ohms; IV-20mA min; Ip-12mA max.
10	5C30	9	NP	Si	TO18		Pc-30W; ISR-75 max; Rb1b2-12K ohms; IV-20mA min; Ip-12mA max.
11	5E29	9		Si	TO18		Ip-25uA max;lv-4.0mA min;IEO-12uA;N-68 min., .82 max.
12	5G514	9		Si	TO18		Ip-25uA max;lv-8.0mA min;IEO-12uA;N-47 min., .62 max.
13	5G515	9		Si	TO18		Ip-25uA max;lv-8.0mA min;IEO-12uA;N-47 min., .62 max.
14	5G516	9		Si	TO18		Ip-6.0uA max;lv-8.0mA min;IEO-20uA;N-47 min., .62 max.
15#	70T2	9		Si	RO141C	A	Ip-25uA max;lv-25ma max;N-47 to .85;RBB0-4.0 to 12kohms.
16	551B	9	N	Si	TO18		Pc-45W;ISR-62 max;Rb1b2-6.8K ohms;lv-20mA min;ip-2.0mA max.
17	BB3	9		Si	T05		Pt-450mW;RBB-10kΩ max;VBB-35V max;n-62 max.
18	BB4A	9		Si	T05		Pt-450mW;RBB-10kΩ max;VBB-35V max;n-78 max.
19	BB4B	9		Si	T05		Pt-450mW;RBB-10kΩ max;VBB-35V max;n-78 max.
20	BB5	9		Si	T05		Pt-450mW;RBB-12kΩ max;VBB-60V max;n-75 max.
21	BB5A	9		Si	T05		Pt-450mW;RBB-12kΩ max;VBB-60V max;n-62 max.
22	BB5B	9		Si	T05		Pt-450mW;RBB-12kΩ max;VBB-60V max;n-68 max.
23	BB5C	9		Si	T05		Pt-450mW;RBB-12kΩ max;VBB-60V max;n-75 max.
24#	BB12	9					Ip 1.0uA max;IV 4.0mA min;Max Freq 200kHz;Pt 300mW.
25#	BB14	9					Ip 25uA max;IV 4.0mA min;Max Freq 200kHz;Pt 300mW.
26#	BB18	9					Ip 25uA max;IV 8.0mA min;Max Freq 200kHz;Pt 300mW.
27#	BN12	9					Ip 1.0uA max;lv 4.0mA min;VBB2B1 30V max.
28#	BSS58A	9		Si	R186	CF	Programmable;Ip 150nA max at RG 1.0MΩ;lv 25uA min at RG 1.0MΩ.
29#	BSS58B	9		Si	R186	CF	Programmable;Ip 2.0uA max at RG 1.0MΩ;lv 50uA min at RG 1.0MΩ.
30#	BSV56A	9	P	Si	R33b	CC	RBB 4.7kΩ min;Ip 6.0uA max;lv 4.0mA min;Pd 400mW;intrinsic standoff ratio .56 to .75
31#	BSV56B	9	P	Si	R33b	CC	RBB 4.7kΩ min;Ip 6.0uA max;lv 4.0mA min;Pd 400mW;intrinsic standoff ratio .68 to .82
32#	BSV56C	9	P	Si	R33b	CC	RBB 4.0kΩ min;Ip 25uA max;lv 4.0mA min;Pd 400mW;intrinsic standoff ratio .47 to .82
33#	BSV57A	9	Pt	Si	R186	CB	RBB 4.7kΩ min;Ip 6.0uA max;lv 4.0mA min;Pd 300mW;intrinsic standoff ratio .56 to .75
34#	BSV57C	9	Pt	Si	R186	CB	RBB 4.0kΩ min;Ip 25uA max;lv 4.0mA min;Pd 300mW;intrinsic standoff ratio .47 to .82
35#	BSV58A	9	P	Si	R159	CF	Programmable;Ip 15uA max at RG 1.0MΩ;lv 25uA min at RG 1.0MΩ.
36#	BSV58B	9	P	Si	R159	CF	Programmable;Ip 2.0uA max at RG 1.0MΩ;lv 50uA min at RG 1.0MΩ.
37	D5E29	9	N	Si	R33a	CA	Pt-30W;RBB-9.1kΩ max;IV-25mA max;n-82 max;ip-25uA max.
38	D5E35	9	N	Si	R33a	CA	Pt-30W;RBB-9.1kΩ max;IV-10mA typ;n-82 max.
39	D5E36	9	N	Si	R33a	CA	Pt-30W;RBB-9.1kΩ max;IV-10mA typ;n-82 max.
40	D5E37	9	N	Si	R33a	CA	Pt-30W;RBB 12kohms max;lv 4.0mA min;n .85 max;ip 25uA max.
41	D5E43	9	P	Si	R33c	CA	Pt 300mW;lv 6.0mA min;n .82 max;ip 2.0uA;RBB0 9.1kΩ max.
42	D5E44	9	P	Si	R33c	CA	Pt 300mW;lv 4.0mA min;n .82 max;ip 5.0uA;RBB0 9.1kΩ max.
43	D5E45	9	P	Si	R33c	CA	Pt 300mW;lv 8.0mA min;n .82 max;ip 2.0uA;RBB0 9.1kΩ max.
44	D13K1	9	P	Si	TO18		Programmable;Pt 250mW;lv 50uA max;ip 2.0uA max;Vf 1.5V max.
45	D13K2	9	P	Si	TO18		Programmable;Pt 250mW;lv 25uA max;ip 150nA max;Vf 1.5V max.
46	D13K3	9	P	Si	TO18		Programmable;Pt 250mW;lv 50uA max;ip 300nA max;Vf 1.5V max.
47	MU851	9	N-AN	Si	W6	CB	Pd 200mW;VB2E 30V;VB2B 1 28V;RBB 9.1kohms max;ip 2.0uA max.
48	MU852	9	N-AN	Si	W6	CB	Pd 200mW;VB2E 30V;VB2B 1 28V;RBB 9.1kohms max;ip 2.0uA max.
49	MU853	9	N-AN	Si	W6	CB	Pd 200mW;VB2E 30V;VB2B 1 28V;RBB 9.1kohms max;ip 400nA max.
50#	ST20	9	P	Si	TO72	CA	Pt 200mW;VB2E 20V;VBB 20V;IV 20mA max;fab 20MHz.
51#	ST50	9	P	Si	TO72	CA	Pt-500mW;VB2E-30V;VBB-20V;lv-50mA max;fab-200kHz.
52#	ST50Z	9	P	Si	TO72	CA	Pt-500mW;VB2E-30V;VBB-20V;lv-50mA max;fab-200kHz.
53#	TAM93	9	NPN	Si	T05		Dual 2N930;10% hFE match;5.0mV VBE match;hFE at 10uA-50 min.
54	TIS01	9	P	Si	X20a		Pc-30W;ISR-75 max;RBB-9.1Kohms max;ip-5.0uA max.
55	TIS02	9	P	Si	X20a		Pc-30W;ISR-82 max;RBB-9.1Kohms max;ip-2.0uA max.
56#	TU11	9					Ip 300uA max;lv 4.0mA min;Max Freq 1.0MHz;IEBO 10nA;Max Jct.Temp 125°C.
57#	TU11R	9					Ip 300uA max;lv 4.0mA min;Max Freq 1.0MHz;IEBO 50nA;Max Jct.Temp 125°C.
58	2N2182	10	P	Si	T01		Pc-150mW;VCBO-25V max;VCEO-25V max;VEBO-25V max;Voff-4mV max.
59	2N2183	10	P	Si	T01		Pc-150mW;VCBO-15V max;VCEO-10V max;VEBO-15V max;Voff-3mV max.
60	2N2356*	10	N*	Si	L6		Voff-80uVmax;IEBO 1or2;10nAmax;rs-40Ωmax;ΔIOFF-5nAmax.
61	2N2356A*	10	N	Si	L6		Voff-50uV max;loff-2nA max; BVCEO-7.0V max.
62	2N2871*	10	P	Si	L17j		Voff-1.5mV max;Voff(1-2)-200uV max;hFE-15 min.
63	2N3082*	10	N-PE	Si	L1		ΔVoff-75uV max;rs-40 ohms max;VCEO-20V max;Δloff-5.0mA max.
64	2N3083*	10	N-PE	Si	L1		ΔVoff-75uV max;rs-40 ohms max;VCEO-20V max;Δloff-2.0mA max.
65	2N3586*	10	PA*	Si	X37		Pt-25W max;ΔVoff-500uV max;rs(on)-75 ohm max.
66	3N112*	10	P Δ	Si	L38		Pt-2W;VE1E20-30V;IE1E20-1nA;re1e2-100 ohms;(Vo)1,2-50uV.
67	3N113*	10	P Δ	Si	L38		Pt-2W;VE1E20-50V;IE1E20-1nA;re1e2-100 ohms;(Vo)1,2-50uV.
68	3N127*	10	N	Si	TO72	∅	IB-10mA;IE-10mA;Ceb-2.0pf;Ve-10uV
69	4JD12C101	10	N-PE	Si	L1a		BVCEO-25V;Pt-50W;Vo(1-2)-50uV;ICBO-10nA;ft-50Mc;lo(1-2)-2.0nA
70	4JD12C102	10	N-PE	Si	L1a		BVCEO-25V;Pt-50W;Vo(1-2)-50uV;ICBO-10nA;ft-50Mc;lo(1-2)-2.0nA
71	4JD12X013	10	N-PL	Si	L11		4.2N2356 transistors;Vo(1-2)-50uV;ICBO-10nA;BVCEO-20V
72	4JD12X070	10	N-PL	Si	L11		4.2N2356A transistors;Vo(1-2)-50uV;ICBO-10nA;BVCEO-20V.
73	5	10	N-DM	Si	L6		Matched pair; ICBO-10uA; BVCEO-20V; VEBO-5.0V.
74	6	10	N-DM	Si	X32		Matched pair; ICBO-10uA; BVCEO-20V; VEBO-5.0V.
75	10	10	N-DM	Si	OV13		Matched pair; ICBO-2.0nA; BVCEO-45V; ft-30Mc.
76	12C101	10	N-PL	Si	L1a		Pt-500mW; VCEO-20V; ΔVoff-50uV max; Δloff-2mA max.
77	12C102	10	N-PL	Si	L1a		Pt-500mW; VCEO-20V; ΔVoff-100uV max; Δloff-2.0mA max.
78	20	10	P.A.	Si	OV13		Matched pair; ICBO-2.0nA; BVCEO-20V; VEBO-12V.
79	40460*	10	N-MOS	Si	TO72	DRS	Voff-0.0V;IDS(off)-50nA at VDS-1.0V;VGS-10V;Pt-150mW.
80	A569	10	N	Si	TO18	A	Matched Pair of 2N2599; Voff - ±50uV.
81	A570	10	N	Si	TO18	A	Matched Pair of 2N2570; Voff - ±100uV.
82#	BSV22*	10	N-MOS*	Si	TO72	DW	Pt-200mW;Voff-30uV max;Roff-100MΩ;Cob 4.0pf max.
83#	BSX31	10	N-PLΔ	Si	RO38a		Pt-15W max;ΔVoff-30mV max;IE1E2-30nA max;Rd-200 ohms max.
84#	BSX34	10	N-PL*	Si	TO76		Pt-60W max;Rd-5000 ohms;ID-200mA;Rd-270 ohms;VGST-6V max.
85	C7076*	10	N-PEΔ	Si	TO18	A∅	Voff-2.0mVmax;rs-200Ωmax; BVCEO-15Vmin; IEBO-2.0nA max.
86	D12X013	10	N-PE	Si	L11		Pt-500mW each;VCEO-20V;ΔVoff-100uV max;Δloff-10uA max.
87	D12X070	10	N-PE	Si	L11		Pt-500mW each;VCEO-20V;ΔVoff-50uV max;Δloff-10mA max.
88	MA7805	10	P.A	Si	T05		Ve-1.5mVmax; ΔVoff-100uV max; Rsat-25 ohms max; Tr-15 usec max.
89	MA7816	10	P.A	Si	T05		Voff-250uV max;loff-2.0n Amps max; Rsat-15ohms.
90	ME209*	10	NPE	Si	TO18	A	Voff-500uV max;loff-2.0n Amps max; Rsat-15ohms.
91	ME214*	10	NPE	Si	TO18	A	Voff-500uV max;loff-2.0n Amps max; Rsat-15ohms.
92	ME509	10	N-PE	Si	R13		BVEBO-5.0V; Voff-50uV at IB-150uA; IE-10.0
93	NS3000	10	N	Si	RO38a		Voff-200uV max; Rd-50 ohms max; BVCEO-10V; IEEO-50nA
94	NS3001	10	N	Si	RO38a		Voff-50uV max; Rd-50 ohms max; BVCEO-10V; IEEO-50nA
95	NS3039	10	N	Si	L15a∅		Max(ΔVo/T-30uV/deg.C;Rd-50 ohms;IE1E20-2.0nA;Vo-200uV.)
96	NS3040	10	N	Si	L15a∅		Max(ΔVo/T-30uV/deg.C;Rd-50 ohms;IE1E20-2.0nA;Vo-100uV.)
97	NS3041	10	N	Si	L15a∅		Max(ΔVo/T-30uV/deg.C;Rd-50 ohms;IE1E20-2.0nA;Vo-50uV.)
98	NS3050	10	N	Si	RO38a		Voff-100uV max; Rd-50 ohms max; BVCEO-10V; IEEO-50nA
99	NS3051	10	N	Si	RO38a		Voff-100uV max; Rd-100 ohms max; BVCEO-10V; IEEO-50nA
100	NS3052	10	N	Si	RO38a		Voff-200uV max; Rd-100 ohms max; BVCEO-10V; IEEO-50nA
101	NS3053	10	N	Si	RO38a		Voff-200uV max; Rd-100 ohms max; BVCEO-6.0V; IEEO-50nA
102	NS3108	10	N	Si	L15a		Pd-100mW max; IE * IB-10mA max; VEBO-30V min.
103	NS3109	10	N	Si	L15a		Pd-100mW max; IE * IB-10mA max; VEBO-30V min.
104	NS3110	10	N	Si	L15a		Pd-100mW max; IE * IB-10mA max; VEBO-30V min.
105	NS3300	10	N-PE	Si	TO18	A∅	VCEOoff-8.0mV max;inverse hFE-3.0 min;VCECoff-1.0mV max.
106	NS6208	10	N	Si			Voff-100uV;rd-50Ω max;BVEECS-12V;IEECS-5.0nA max.
107	NS6209	10	N	Si			Voff-50uV;rd-50Ω max;BVEECS-12V;IEECS-5.0nA max.
108	NS6210	10	N	Si	X16		BVCEO-30Vmin;BVCEO-15Vmin;hFE(INV)-2.0min;Voff-1.0mVmax.
109	NS6211	10	N	Si	X16		BVCEO-30Vmin;BVCEO-25Vmin;hFE(INV)-3.0min;Voff-2.0mVmax.
110	NS7630	10	N	Si	L38a		Pt-200mW;BVEIE20-15Vmin;IEIE2CS-2nAmax;Voff-200uV.











# 16. MANUFACTURERS CODES, NAMES & ADDRESSES

## SPACE-SAVERS UTILIZED IN THIS MANUFACTURER LISTING

(\*) — Manufacturer not a current commercial producer — address is that last recorded in our files. Company may or may not be active at this address.

see (code) — Indicates one or more of the following changes have occurred since original letter code was used: (1) Change of code; (2) Change of manufacturer name; (3) Purchase by or combination with another manufacturer.

- (\*) ADV — Advanced Research Association, Box 68, Kensington, MD 20795
- AEG — Allgemeine Elektrizitäts-Gesellschaft — see (ALGG)
- AEIE — Associated Electronics Industries — see (AEIL)
- AEIL — A.E.I. Semiconductors, Ltd., Carholme Rd., Lincoln, England LN1 1SG
- ALGG — AEG-Telefunken, D-7100 Heilbronn, Postfach 1109, West Germany
- AMC — Ampower Semiconductor Corp., 375 Kings Highway, Smithtown, Long Island, NY 11787
- AME — Advanced MicroElectronics, Inc., — see (APX)
- AMEN — Aksjeselskapet Mikro-elektronikk, Knudsrudvn, 3191 Horten, Norway
- (\*) AMF — American Machine & Foundry, Semicon. Dept., P.O. Box 128, Vandalia, OH 45377
- (\*) AMI — American Micro Systems, Inc., 3800 Homestead Rd., Santa Clara, CA 95051
- AMP — Amperex — see (APX)
- APX — Amperex Electronic Corp., Slatersville Div., Slatersville, RI 02876
- ASMB — Associated Semiconductor Manufacturers — see (MULB)
- (\*) AVA — Avantek, Inc., 3175 Bowers Ave., Santa Clara, CA 95051
- BACE — Bendix — see (BEN)
- BEM — Bogue — see (BOG)
- (\*) BEN — Bendix Semiconductor Div., South St., Holmdel, NJ 07733
- (\*) BNT — Burns and Towne, Inc., 18-36 Granite St., Haverhill, MA 01830
- (\*) BOG — Bogue Electric Manufacturing Co., 100 Pennsylvania Ave., Paterson, NJ 07503
- BRDB — G. & E. Bradley — see (LUCB)
- BRUB — Brush Clevite — see (ITT)
- (\*) CAR — Carter Transistor Corp., 29 North Mall, Plainview, NY 11803
- (\*) CBS — CBS Electronics, 900 Chelmsford St., Lowell, MA 01851
- (\*) CDLF — Compagnie Industrielle Francaise des Tubes Electroniques, 50 rue J.P. Timbaud, Courbevoie 92, France
- CLA — Clairex Electronics, Div. of Clairex Corp., 560 So. 3rd Ave., Mt. Vernon, NY 10550
- CLE — Clevite — see (ITT)
- (\*) CPC — C.P. Clare Transistor Corp., 260 Glen Head Rd., Glen Head, Long Island, NY 11545
- CSC — Clark Semiconductors — see (NSC)
- CTR — Communications Transistor Corp., 301 Industrial Way, San Carlos, CA 94070
- DEL — Delco Electronics, Mail Station S105, Kokomo, IN 46901
- (\*) DIC — Dickson Electronics Corp., 310 So. Wells Fargo Ave., Scottsdale, AZ 85252
- DIT — Diode Transistor Co., Inc., 2816 Morris Ave., Union NJ 07083
- (\*) EBAS — Ebauches S.A., Faubourg Hopital 1, Neuchatel, Switzerland
- (\*) EEVB — English Electric Valve Co., Waterhouse Lane, Chelmsford, England
- (\*) ELBR — Electronica Nacional Braileira, 525 Rua Thiers, Sao Paulo, Brazil
- (\*) ELE — Electromation Co., 4254 Glencoe Ave., Venice, CA 90291
- ELMA — Elcoma, 67-71 Mars Rd., Lane Cove N.S.W., 2066, Australia
- (\*) EMLS — Emihus Microcomponents, Ltd., Clive House, 12-18 Queens Rd., Weybridge, Surrey, England
- ETC — Electronic Transistor Corp., 112-15 Northern Blvd., Flushing, NY 11368
- (\*) ETIF — Echanges Techniques Internationaux, 73, Av. Charles de Gaulle, 92202 Neuilly Sur Seine, France
- FCAJ — Fujitsu Ltd., 1015 Kamikodanaka, Nakahara-ku, Kawasaki City, Japan
- FERF — Ferranti Electronics Ltd., Fields New Rd., Chadderton, Oldham OL9 8NP, England
- (\*) FRA — Franel Corp., 8 Ferry St., South River, NJ 08882
- FSC — Fairchild Camera & Instrument Corp., Semicon. Prods, Group, 464 Ellis St., MS14-1055, Mountain View, CA 94042

# 16. MANUFACTURERS CODES, NAMES & ADDRESSES

- (\*) FTC — Fanon Transistor Corp., 439 Frelinghuysen Ave., Newark, NJ 07114
- FTHF — French Thomson-Houston Semiconductor — see (THCF)
- GECEB — General Electric, Ltd., — see (MULB)
- (\*) GEM — Great Eastern Manufacturing Co., 163 Remsen Ave., Brooklyn, NY 11212
- GESY — General Electric Co., SPD, Box 44, W. Genesee St., Auburn, NY 13021
- GIC — General Instrument Corp., 600 W. John St., Hicksville, NY 11802
- GME — General Micro-Electronics — see (PHIL)
- GSE — General Semiconductor Industries, Inc., 2001 W. 10th Pl., P.O. Box 3078, Tempe, AZ 85281
- (\*) GSI — General Sensors, Inc., P.O. Box 798, Garland, TX 75040
- HITJ — Hitachi Ltd., Ohte-machi, 2-62, Chiyoda-Ku, Tokyo, Japan
- (\*) HIVB — Hivac, Ltd., Stonefield Way, Victoria Rd., South Ruislip, England
- HON — Honeywell, Inc., — see (SOD)
- HPA — Hewlett Packard, 350 West Trimble Rd., San Jose, CA 95131
- (\*) HSC — Helios Semiconductor, 11762 Western Ave., P.O. Box 293, Stanton, CA 90680
- (\*) HSD — Hoffman Semiconductor, 1001 Arden Dr., El Monte, CA 91731
- HSDC — Hoffman Semiconductor — see (HSD)
- (\*) HUG — Hughes Aircraft Co., P.O. Box 278, Newport Beach, CA 92663
- HVS — High Voltage Semi-Conductor Specialists, Inc., 869 Yonkers Ave., Yonkers, NY 10704
- INL — Intersil, Inc., 10710 No. Tantau Ave., Cupertino, CA 95014
- INR — International Rectifier, Semicon. Div., 233 Kansas St., El Segundo, CA 90245
- (\*) INRC — International Rectifier Corp. — see (INR)
- ITT — ITT Semiconductors (Intermetall), P.O. Box 840, D-7800, Freiburg, West Germany
- ITTB — ITT Semiconductors (Intermetall) — see (ITT)
- KER — Kertron, Inc. — see (PPC)
- (\*) KOKJ — Kobe Kyogo Corp., Hyogo-ku, Kobe, Japan
- (\*) LCTF — Laboratoire Central De Telecommunications, 46 Ave. de Breteuil, Paris 7e, France
- LTTF — S.A.L.T.T., 78702 Conflans Ste. Honorine, France
- LUCB — Lucas Electrical Co., Ltd., E&S Div., Mere Green Rd., Sutton, Coldfield, West Midlands B75 5BN, England
- MAL — Mallory Distributor Products, P.O. Box 1284, Indianapolis, IN 46206
- MATJ — Matsushita Electronics Corp., Kotari Yakemachi 1, Nagaokakyo City, Kyoto, Japan
- MEHK — Micro Electronics, Ltd., 38 Hung To Rd., Kwun Tong, Kowloon, Hong Kong
- MIC — Microwave Associates, Burlington, MA 01803
- MIFI — Microfarad — see (MISI)
- MIN — Honeywell — see (SOD)
- (\*) MIS — Mini-Systems, Inc., 20 David Rd., No. Attleboro, MA 02761
- MISI — Thomson CSF Componenti — see (THCI)
- MITJ — Mitsubishi Electric Corp., Kita-Itami Works, 4-1 Mizuhara, Itami-shi, Hyogo-ken, Post Code 664, Japan
- MOTA — Motorola Semiconductor Products, 5005 E. McDowell Rd., M370, Phoenix, AZ 85008
- (\*) MSC — MicroSemiconductor Corp., 11250 Playa Ct., Culver City, CA 90230
- MULB — Mullard Ltd., Mullard House, Torrington Pl., London WC1E, England
- (\*) NAC — National Aircraft Corp., 3411 Tulare Ave., Burbank, CA 91502
- NAS — National Semiconductor — see (NSC)
- NASG — North American Semiconductor Co., Ltd., Briennerstrasse 56, 8 Munchen 2, West Germany D8000
- NECJ — Nippon Electric Co., Ltd., 1753 Shimonumabe Nakahara Ku, Kawasaki City, Japan
- NIPJ — Nippon Electric Company — see (NECJ)
- NPC — Nucleonic Products Co., Inc. — (see THCS)
- NSC — National Semiconductor Corp., 2900 Semiconductor Dr., Santa Clara, CA 95051
- (\*) NTLB — Newmarket Transistors Ltd., Exning Rd., Newmarket, Suffolk, England
- (\*) NTR — National Transistor Corp., 1033 No. Fair Oaks Ave., Sunnyvale, CA 94086
- (\*) ORIJ — Origin Electric Co., Ltd., 1-18-1 Takada Toshimaku, Tokyo, Japan

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- PHIB — Philco Radio Televisao, Ltda., Fabrica de Semicondutores, Rua Sta. Virginia, 299 Tatuape, Sao Paulo, Cx. Postal 4753, Brasil
- PHIC — Philips Electronics Ltd., Electron Devices Div., 601 Milner Ave., Scarborough, Ontario, Canada
- (\*) PHIL — Philco Corp., Micro-Electronics Div., 2930 San Ysidro Way, Santa Clara, CA 95051
- PHIN — N.V. Philips Gloeilampenfabrieken, Elcoma Comm. Dept., Bldg. BA, Eindhoven, Netherlands
- PIHS — Piher International Corp., AVDA San Julian S/N, Apart. 177, Granollers, Barcelona, Spain
- PLSB — Plessey Semiconductors, Ltd., Cheney Manor, Swindon, Wiltshire SN2 2QW, England
- PPC — PPC/Kertron, 7516 Central Industrial Dr., Riviera Beach, FL 33404
- PSI — TRW Semiconductors — see (TRW)
- PTI — Power Tech, Inc., 0-02 Fair Lawn Ave., Fair Lawn, NJ 07410
- (\*) QDC — Qualidyne Corporation, 1230 Bordeaux Dr., Sunnyvale, CA 94086
- (\*) RAU — The Rauland Corp., 4245 No. Knox Ave., Chicago, IL 60630
- RCA — RCA Corporation, RCA Solid State Div., Route 202, Somerville, NJ 08876
- RCAS — R. C. A. — see (RCA)
- RHE — Rheem Semiconductor — see (RTN)
- RHM — R-Ohm Corp., P.O. Box 4455, 16931 Milliken Ave., Irvine, CA 92716
- (\*) ROSG — Dr. Ing. Rudolph Rost, Ubbenstrasse 21, Hannover 1, West Germany
- RTCF — R. T. C. LaRadiotechnique-Compelec, 130, Ave. Ledru-Rollin, 75540, Paris Cedex 11, France
- RTN — Raytheon Semiconductor, 350 Ellis St., Mountain View, CA 94042
- SAKJ — Sanken Electric Co., Ltd., 1-22-8 Nishi-Ikebukuro, Toshima-ku, Tokyo, Japan
- SANJ — Tokyo Sanyo — see (TSAJ)
- SCA — Semicoa, 333 McCormick Ave., Costa Mesa, CA 92626
- (\*) SDE — Semiconductor Devices Inc., 970 N. Main St., Orange, CA 92667
- (\*) SEC — Secoa Transistor Corp., — see (STC)
- SELG — Standard Elektrik Lorenz AG — see (ITT)
- SELI — Semiconductors Ltd., Sub. M/S Advani Oerlikon Ltd., Ahmednager Rd., Mile 4/5, Poona-411 014, India
- SEN — Sensitron Semiconductor, 221 W. Industry Ct., Deer Park, NY 11729
- (\*) SERA — Servex Semiconductor Div., P.O. Box 26, Oakleigh, Victoria 3166, Australia
- SET — Semtech Cor., 652 Mitchell Road, Newbury Park, CA 91320
- SGAI — SGS-ATES Componenti Elettronici S.p.A., Via C. Olivetti 2, 20041 Agrate Brianza, Milan, Italy
- SHEJ — Shindengen Electric Mfg. Co., Ltd., New Ohtemachi Bldg., 2-1, 2-chome, Ohtemachi, Chiyoda-ku, Tokyo 100, Japan
- SIC — Signetics Corp., 811 E. Arques Ave., Sunnyvale, CA 94086
- SIEG — Siemens AG, Balanstrasse 73, 8 Munich 80, West Germany
- SIHG — Siemens & Halske, Aktiengesellschaft — see (SIEG)
- SIX — Siliconix Inc., 2201 Laurelwood Rd., Santa Clara, CA 95054
- SLCB — Semitron Ltd., Cricklade, Wiltshire, England
- SOD — Solitron Devices, Inc., 8808 Balboa Ave., San Diego, CA 92123
- SODI — Solitron Devices, Inc., 1177 Blue Heron Blvd., Riviera Beach, FL 33304
- (\*) SOI — Semi-Onics, 4 Broadway, Lowell, MA 01854
- SONY — Sony Corporation, Atsugi, HAN-JI, Gaimu-Ku, P.O. Box 10, Tokyo 149, Japan
- SPC — Solid Power Corp., 440 Eastern Pkwy., Farmingdale, NY 11735
- SPE — Space Power Electronics, Inc., Jeffrey Lane, RD 1, Glen Gardner, NJ 08826
- SPR — Sprague Electric Co., Pembroke Rd., Concord, NH 03301
- SSCF — Le Silicium Semiconductor, 30, Ave. de la Republique, BP1, 94800, Villejuif, France
- SSD — Sperry Semiconductor — see (SOD)
- SSE — Solid State Electronics Co., 15321 Rayen St., Sepulveda, CA 91343
- SSI — Solid State Devices, Inc., 14830 Valley View Ave., La Mirada, CA 90638
- SSS — Solid State Scientific, Inc., - See (SSW)
- SST — Solid State Inc., 46 Farrand St., Bloomfield, NJ 07003
- SSW — Solid State Microwave, Div. Thomson-CSF, Montgomeryville, PA 18936
- STAG — Tekade — see (TKAD)
- STC — Silicon Transistor Corp., Katrina Rd., Chelmsford, MA 01824
- (\*) STCA — Standard Tels. & Cables Pty., Ltd., 252 Botany Rd., Alex., Sydney, Australia
- STI — Semiconductor Technology, Inc., 3131 Southeast Jay St., Stuart, FL 33494

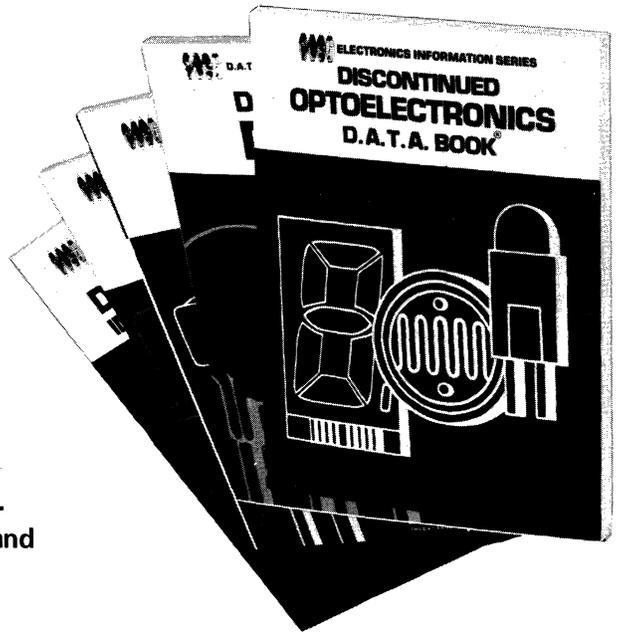
# 16. MANUFACTURERS CODES, NAMES & ADDRESSES

- STL – Stow Laboratories, Inc., Barton Rd., Stow, MA 01775
- SWT – Swampscott Electronics Co., Inc., 41 Spinale Rd., Swampscott, MA 01907
- (\*) SYL – Sylvania Semiconductor, 100 Sylvan Rd., Woburn, MA 01801
- (\*) TADI – Tadiran, Israel Electronics Industries, Ltd., 3 Derech Hashalom (P.O. Box 648), Tel-Aviv 61000, Israel
- TAGS – TAG Semiconductors, Ltd., A Sub. Raytheon Co., Hohlstrasse 610, Zurich, Switzerland
- TCY – Teledyne Crystalonics, Inc., 147 Sherman St., Cambridge, MA 02140
- (\*) TEC – Transatron Electronic Corp., 168 Albion St., Wakefield, MA 01880
- (\*) TEK – Trans-Tek Manufacturing Co., 4405 So. Clinton Ave., So. Plainfield, NJ 07080
- THCF – Thomson CSF, Div. Semiconducteurs Sescosem, 50 Rue Jean Pierre Timbaud, BP5, 92403 Courbevoie, France
- THCI – Thomson-CSF Componenti, Div. Semiconduttori Sescosem, Via Melchiorre Gioia, 72, 20125 Milano, Italy
- THCM – Thomson CSF, Solid State Microwave Div., Montgomeryville, PA 18936
- THCS – Thomson CSF, Semiconductor Div., 6660 Variel Ave., Canoga Park, CA 91303
- THOB – Thorn-AEI – see (AEIL)
- TIC – Transistor International Corp. – see (PPC)
- TII – Texas Instruments, Inc., Semicon. Group, MS84, P.O. Box 225012, Dallas, TX 75265
- TIIB – Texas Instruments Ltd., Manton, Lane, Bedford, England
- TIID – Texas Instruments Deutschland GmbH, 8050 Freising, Haggertystrasse 1, West Germany
- TIIF – Texas Instruments France, Villeneuve, Loubet, France
- (\*) TKAD – Tekade, Schleisfach 870, Nurnberg 2, West Germany
- TOSJ – Toshiba Corporation, c/o Toshiba Trans, Works, 1 Komukai Toshibacho, Saiwai-Ku, Kawasaki-City, Kanagawa 210, Japan
- TRW – TRW Semiconductors, Inc., 14520 Aviation Blvd., Lawndale, CA 90260
- TSAJ – Tokyo Sanyo Electric Co., Ltd., Semicon. Div., Oizumimachi, Oragun, Gumma, Japan
- TSC – Teledyne Semiconductor, 1300 Terra Bella Ave., Mountain View, CA 94043
- TSE – Tung-Sol – see (TUNE)
- TSI – Transistor Specialties, Inc., 3 Electronics Ave., Danvers, MA 01923
- TTKJ – Tokyo Tsushin – see (SONY)
- (\*) TUNE – Tung-Sol Electric, 545 North Arlington Ave., East Orange, NJ 07017
- (\*) TYC – Tyco Semiconductor Corp., Bear Hill, Waltham, MA 02154
- UNI – Unitorde Corp., 580 Pleasant St., Watertown, MA 02712
- USC – Unisem Corporation – see (SOD and SODI)
- USSR – V/O Electronzaganpostavka, 24/2, Ul Usievicha, Moscow 125315, USSR
- (\*) UST – U. S. Transistor Corp., 149 Eileen Way, Syosset, NY 11791
- VALG – Valvo GmbH, Dept. DWE, P.O. Box 993, D2000, Hamburg 1, West Germany
- (\*) VANN – Van Der Heen NV, Maaniweg 156, The Hague, Netherlands
- VSS – Vector Solid State Labs. – see (USC)
- WAB – Walbern Devices, Inc., 1818 E. Elizabeth Ave., Linden, NJ 07036
- (\*) WEC – Western Electric Co., Marion & Vine Streets, Laureldale, PA 19605
- WESY – Westinghouse Electric Corp., Semicon. Dept., Youngwood, PA 15697
- (\*) YECJ – Yaou Electric Co., 1116 Seunaga, Kawasaki, Kanagawa, Japan

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