

SYMBOLS & CODES EXPLAINED

6. "P" Channel 7. "N" Channel — SILICON FIELD EFFECT TRANSISTORS

LINE No.	TYPE No.	1 MAX. DEVICE DISS @ 25°C (W)	2 MAX. Id=0 (V)	3 MAX. Vds (V)	4 ABS. MAX. BVdss (V)	ABSOLUTE MAX. RATINGS @ 25°C				TEST COND.		PARAMETERS @ 25°C COMMON SOURCE		13 Rds (Ω)	14 MAX. Cis (F)	15 IN FREE AIR W/°C	16 MAX. TEMP (°C)	STRUCTURE	DWG Y200 s/s TO200 Ser.	# C A D E
						5 Id (A)	6 Ig (A)	7 Max. Idss @ Vgs=0 (A)	8 Max. Igss @ Vgs>Vp (A)	9 Vgs (V)	10 Vds (V)	11 gfs (mhos)	12 Yos (mhos)							

▼ - Matched Type, also listed in Section 13, Category 6
 ◆ - Phototransistor, also listed in Section 13, Category 7 (See Above Also)

△ - With infinite heat sink
 † - Above 25°C; For additional information, consult manufacturer.

† - VGS (Cut Off)
 △ - VGS (Threshold)
 % - Typical
 # - Minimum

△ - Depletion Mode, Type A
 § - Depletion-Enhancement Mode, Type B
 * - Enhancement Mode, Type C

△ - BV DSO
 † - BV DSX

△ - BV DGO

△ - Typical § - gfg
 † - Pulsed
 % - High Frequency (Vfs)
 □ - YFS

△ - Yis § - Yog
 † - Not given test conditions
 % - Maximum
 * - Pulsed

△ - VGD
 † - VDG

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

∅ - ID in mA

△ - IGDO

△ - IDSS @ VGS = 0 and VDS ≈ Vp
 ∅ - VGS > 0
 # - Minimum
 * - Typical
 % - Pulsed

- Ciss (Output Shorted)
 △ - C dgs
 † - C gss
 % - Not given at test conditions
 * - Typical
 □ - C dss
 ∅ - C dgo § - Cigs

STRUCTURE
 D - Diffused
 E - Epitaxial
 Ge - GermaniumPE
 PE - Planar Epitaxial
 PL - Planar
 # - Junction Type
 * - Insulated Gate (MOS Type)
 § - Matched pair or dual
 △ - Switching, other uses
 % - Chopper, Other uses
 † - Noise figure 8db or below
 H - Plastic Package
 \$ - Hometaxial
 % - Tetrode
 % - Insulated Gate (MNOS Type)

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

□ - Phototransistor Device
 △ - Tetrode Device
 % - Composite Type

8. GERMANIUM PNP 9. GERMANIUM NPN 10. SILICON PNP 11. SILICON NPN — High Power Transistors

LINE No.	TYPE No.	1 MIN. DERATE J to C W/°C	2 MAX. FREE AIR @ 25°C (W)	3 Pcm X M P	ABSOLUTE MAX. RATINGS @ 25°C				9 MAX. Icbo @ 25°C (A)	BIAS hFE		13 fce (Hz)	14 MAX. SAT. RES. (Ω)	15 tr (s)	STRUCTURE	DWG Y200 s/s TO200 Ser.	# C A D E
					4 Ic (A)	5 Ib (A)	6 BVcbo (V)	7 BVceo (V)		8 BVceo (V)	10 MAX Vcb (V)						

† - 40°C ◆ - 80°C
 * - 45°C § - 100°C
 # - 50°C ∅ - Free Air
 □ - 60°C ∇ - Typical Value
 § - 75°C △ - > 100°C
 Symbols indicate temperature at which derating starts.

∅ - With infinite heat sink
 Following symbols indicate temp at which derating starts:
 † - 40°C □ - 60°C ◆ - 80°C
 * - 45°C § - 70°C ∇ - Pulsed
 # - 50°C \$ - 100°C % - Min.

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

∅ - IE \$ - Minimum
 # - Pulsed or Peak
 † - At temperature 25°C Case

∅ - At VCB < Max. VCB (see mfr. spec.)
 # - ICEX * - Icer △ - ICeO
 § - ICES ◆ - At Temp. 25°C Case
 \$ - Typical † - At Temp. > 25°C

- BV CEX or punch-through
 ∅ - BV CES * - Pulsed
 § - BV CER □ - BV ceo(SUS)
 \$ - Minimum

† - At Temp. 25°C Case
 \$ - Minimum
 ∅ - IE
 # - Pulsed
 \$ - Minimum

† - hfe * - Available to selected range narrower than indicated
 # - Pulsed
 ∅ - Typical

□ - Maximum
 ∅ - td + tr = Ton
 § - ts
 # - tf
 † - ts + tf = Toff
 * - Ton + Toff

▼ - Typical Value # - Pulsed

- Rated max. operating frequency
 † - fcb
 § - Gain bandwidth product (fT)
 * - Maximum frequency of oscillation
 ∅ - Figure of merit (frequency for unity power gain)
 △ - Minimum □ - Maximum

\$ - Tetrode
 # - Radiation Resistant Device (Also see top of reverse side of card.)

11. SILICON NPN - HIGH POWER TRANSISTORS

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

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	Pc	M T	ABSOLUTE MAX. RATINGS @ 25°C					MAX. hFE				f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUC-TURE	Y200 s/a TO200 Ser.	DWG #	C O D E
						Ic (A)	Ib (A)	BVcbo (V)	BVebo (V)	BVceo (V)	Icbo @ MAX @ 25°C (A)	Vcb (V)	Ic (A)	MIN							
1	153-241	1.3	200	∅	∅	7.5	3.0	265	25	240	10m#	4.00	1.5	15		866m	3.0u∅	MT58			
2	153-261	1.3	200	∅	∅	7.5	3.0	285	25	260	10m#	4.00	1.5	15		866m	3.0u∅	MT58			
3	153-281	1.3	200	∅	∅	7.5	3.0	305	25	280	10m#	4.00	1.5	15		866m	3.0u∅	MT58			
4	153-301	1.3	200	∅	∅	7.5	3.0	325	25	300	10m#	4.00	1.5	15		866m	3.0u∅	MT58			
5	154-241	1.3	200	∅	∅	7.5	3.0	265	25	240	10m#	4.00	1.5	25		833m	3.0u∅	MT58			
6	154-261	1.3	200	∅	∅	7.5	3.0	285	25	260	10m#	4.00	1.5	25		833m	3.0u∅	MT58			
7	154-281	1.3	200	∅	∅	7.5	3.0	305	25	280	10m#	4.00	1.5	25		833m	3.0u∅	MT58			
8	154-301	1.3	200	∅	∅	7.5	3.0	325	25	300	10m#	4.00	1.5	25		833m	3.0u∅	MT58			
9	DTS1031	1.3	125	∅	∅	15	5.0	80	5.0	60	250uΔ	1.50	5.0	20	55	4.0M\$Δ	180m	550n	DM	TO3	C∅
10	DTS1041	1.3	125	∅	∅	15	5.0	80	5.0	60	250uΔ	1.50	5.0	20	120	4.0M\$Δ	150m	550n	DM	TO3	C∅
11	DTS1051	1.3	125	∅	∅	15	5.0	100	5.0	80	250uΔ	1.50	5.0	20	55	4.0M\$Δ	180m	550n	DM	TO3	C∅
12	DTS1061	1.3	125	∅	∅	15	5.0	110	5.0	90	250uΔ	1.50	5.0	20	55	4.0M\$Δ	180m	550n	DM	TO3	C∅
13	DTS1071	1.3	125	∅	∅	15	5.0	120	5.0	100	250uΔ	1.50	5.0	20	55	4.0M\$Δ	180m	550n	DM	TO3	C∅
14	DTS108	1.3	125	∅	∅	15	5.0	100	5.0	100	250uΔ	1.50	5.0	20	120	4.0M\$Δ	150m	550n	DM	TO3	C∅
15	DTS3704	1.3	∅	∅	∅	2.0	∅	200	∅	200	∅	∅	∅	20	80	115k	1.6		DMΔ	TO41	
16	DTS3704A	1.3	∅	∅	∅	2.0	∅	300	∅	300	∅	∅	∅	20	80	115k	1.6			TO41	
17	DTS3704B	1.3	∅	∅	∅	2.0	∅	400	∅	335	∅	∅	∅	20	80	115k	1.6			TO41	
18	DTS3705	1.3	∅	∅	∅	3.5	∅	200	∅	200	∅	∅	∅	25	75	110k	.80			TO3	
19	DTS3705A	1.3	∅	∅	∅	3.5	∅	300	∅	300	∅	∅	∅	25	75	110k	.80			TO3	
20	DTS3705B	1.3	∅	∅	∅	3.5	∅	400	∅	5.0	∅	∅	∅	25	75	110k	.80			TO3	
21	SDT2101	1.3	∅	∅	∅	#J 150	∅	∅	∅	∅	∅	∅	∅	40	∅	∅	∅			MT41	
22	SDT2110	1.3	∅	∅	∅	#J 150	∅	∅	∅	∅	∅	∅	∅	40	∅	450k\$	∅			MT41a	
23	SDT2111	1.3	∅	∅	∅	#J 175	∅	∅	∅	∅	∅	∅	∅	40	∅	450k\$	∅			MT41a	
24	SDT2112	1.3	∅	∅	∅	#J 200	∅	∅	∅	∅	∅	∅	∅	40	∅	450k\$	∅			MT41a	
25	SDT2150	1.3	∅	∅	∅	#J 150	∅	∅	∅	∅	∅	∅	∅	40	∅	450k\$	∅			R121	
26	SDT2151	1.3	∅	∅	∅	#J 175	∅	∅	∅	∅	∅	∅	∅	40	∅	450k\$	∅			R121	
27	SDT2152	1.3	∅	∅	∅	#J 200	∅	∅	∅	∅	∅	∅	∅	40	∅	450k\$	∅			R121	
28	2N1016B/M	1.4 *	150	∅	∅	7.5	5.0	100	25	100	1.0m	4.00	5.0	10	35	30k	500m	6.0u∅	FΔ	MT1	
29	2N1016C/M	1.4 *	150	∅	∅	7.5	5.0	150	25	150	1.0m	4.00	5.0	10	35	30k	500m	6.0u∅	FΔ	MT1	
30	2N25841	1.4 *	150	∅	∅	5.0	1.0	600	5.0	600	5.0m#	5.00	5.0	10	40	30kΔ	140m	6.0u∅	FΔ	TO36	C∅
31	2N25851	1.4 *	150	∅	∅	5.0	2.0	600	5.0	600	5.0m#	5.00	5.0	25	65	30kΔ	1.0	6.0u∅	FΔ	TO36	C∅
32	151-241	1.4	100	∅	∅	6.0	3.0	265	25	240	10m#	4.00	1.5	22	∅	870m	7.0u∅	F	MT1		A
33	151-261	1.4	100	∅	∅	6.0	3.0	285	25	260	10m#	4.00	1.5	22	∅	870m	7.0u∅	F	MT1		A
34	151-281	1.4	100	∅	∅	6.0	3.0	305	25	280	10m#	4.00	1.5	22	∅	870m	7.0u∅	F	MT1		A
35	152-241	1.4	100	∅	∅	6.0	3.0	265	25	240	10m#	4.00	1.5	37	∅	830m	7.0u∅	F	MT1		A
36	152-261	1.4	100	∅	∅	6.0	3.0	285	25	260	10m#	4.00	1.5	37	∅	830m	7.0u∅	F	MT1		A
37	152-281	1.4	100	∅	∅	6.0	3.0	305	25	280	10m#	4.00	1.5	37	∅	830m	7.0u∅	F	MT1		A
38	1776-04401	1.4 \$	150	∅	∅	7.5	#↑ 15	40	7.0↑	40	2.0m#	3.00	4.0	15	#	20M\$Δ	25m	500n∅	E	TO63	A
39	1776-04601	1.4 \$	150	∅	∅	7.5	#↑ 15	60	7.0↑	40	2.0m#	3.00	6.0	15	#	20M\$Δ	25m	600n∅	E	TO63	A
40	1776-18601	1.4 \$	150	∅	∅	7.5	#↑ 15	180	7.0	180	2.0m#	3.00	6.0	15	#	20M\$Δ	25m	600n∅	E	TO63	A
41	AMF227	1.4 *	150	∅	∅	7.5	#↑ 15	50	5.0	30	4.00	2.0	10		20k	750m		ME	MT1		
42	AMF227A	1.4 *	150	∅	∅	7.5	#↑ 15	50	5.0	60	4.00	2.0	10		20k	750m		ME	MT1		
43	AMF227B	1.4 *	150	∅	∅	7.5	#↑ 15	50	100	∅	4.00	2.0	10		20k	750m		ME	MT1		
44	AMF227C	1.4 *	150	∅	∅	7.5	#↑ 15	50	150	∅	4.00	2.0	10		20k	750m		ME	MT1		
45	AMF228	1.4 *	150	∅	∅	7.5	#↑ 15	50	30	∅	4.00	5.0	10		20k	500m		ME	MT1		
46	AMF228A	1.4 *	150	∅	∅	7.5	#↑ 15	50	60	∅	4.00	5.0	10		20k	500m		ME	MT1		
47	AMF228B	1.4 *	150	∅	∅	7.5	#↑ 15	50	100	∅	4.00	5.0	10		20k	500m		ME	MT1		
48	AMF228C	1.4 *	150	∅	∅	7.5	#↑ 15	50	150	∅	4.00	5.0	10		20k	500m		ME	MT1		
49	AMF229	1.4 *	150	∅	∅	4.0	# 30	50	30	∅	4.00	1.0	10		20k	1.0		ME	MT1		
50	AMF229A	1.4 *	150	∅	∅	4.0	# 60	50	60	∅	4.00	1.0	10		20k	1.0		ME	MT1		
51	AMF229B	1.4 *	150	∅	∅	4.0	# 100	50	100	∅	4.00	1.0	10		20k	1.0		ME	MT1		
52	AMF229C	1.4 *	150	∅	∅	4.0	# 150	50	150	∅	4.00	1.0	10		20k	1.0		ME	MT1		
53	BSC1015	1.4 *	150	∅	∅	7.5	5.0	10	10	30	4.00	2.0	10		20k	750m		DM	MT1		
54	BSC1015A	1.4 *	150	∅	∅	7.5	5.0	10	10	60	4.00	2.0	10		20k	750m		DM	MT1		
55	BSC1015B	1.4 *	150	∅	∅	7.5	5.0	10	100	∅	4.00	2.0	10		20k	750m		DM	MT1		
56	BSC1016	1.4 *	150	∅	∅	7.5	5.0	10	30	∅	4.00	5.0	10		20k	500m		DM	MT1		
57	BSC1016A	1.4 *	150	∅	∅	7.5	5.0	10	60	∅	4.00	5.0	10		20k	500m		DM	MT1		
58	BSC1016B	1.4 *	150	∅	∅	7.5	5.0	10	100	∅	4.00	5.0	10		20k	500m		DM	MT1		
59	SDT2205	1.4	121	∅	∅	5.0	10	10	5.0	5.0	5.0m	1.00	5.0	40	#	120	∅	450k	A	MT23	
60	SDT2305	1.4	121	∅	∅	5.0	10	10	5.0	5.0	5.0m	1.00	5.0	40	#	120	∅	450k	A	TO36	C∅
61	SEC1477	1.4	∅	∅	∅	∅	∅	50	9.0	50	∅	∅	∅		2.0	∅	∅			MT1	
62	SEC1478	1.4	∅	∅	∅	∅	∅	100	9.0	100	∅	∅	∅		2.0	∅	∅			MT1	
63	SEC1479	1.4	∅	∅	∅	∅	∅	50	9.0	50	∅	∅	∅		2.0	∅	∅			MT1	
64	SEC1480	1.4	∅	∅	∅	∅	∅	100	9.0	100	∅	∅	∅		2.0	∅	∅			MT1	
65	STC1015	1.4	150	∅	∅	7.5	5.0	30	10	30	10m	4.00	2.0	10		2.5Mt	750m	900n	D	MT1	
66	STC1015A	1.4	150	∅	∅	7.5	5.0	60	10	60	10m	4.00	2.0	10		2.5Mt	750m	900n	D	MT1	
67	STC1015B	1.4	150	∅	∅	7.5	5.0	100	10	100	10m	4.00	2.0	10		2.5Mt	750m	900n	D	MT1	
68	STC1015C	1.4	150	∅	∅	7.5	5.0	150	10	150	10m	4.00	2.0	10		2.5Mt	750m	900n	D	MT1	
69	STC1015D	1.4	150	∅	∅	7.5	5.0	200	10	200	10m	4.00	2.0	10		2.5Mt	750m	900n	D	MT1	
70	STC1015E	1.4	150	∅	∅	7.5	5.0	250	10	250	10m	4.00	2.0	10		2.5Mt	500m	900n	D	MT1	
71	STC1016	1.4	150	∅	∅	7.5	5.0	30	10	30	10m	4.00	5.0	10		2.5Mt	500m	900n	D	MT1	
72	STC1016A	1.4	150	∅	∅	7.5	5.0	60	10	60	10m										