MJ2267 (SILICON)
MJ2268

PNP SILICON POWER TRANSISTORS

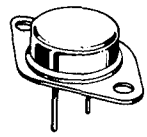
. . . designed for medium-speed switching and high-power amplifier applications. These devices can be directly substituted for germanium types.

- Low $V_{CE(sat)}$ = 1.0 Vdc (Max) @ I_C = 4.0 Adc
- f_T = 3.0 MHz (Min)
- h_{FE} = 20-100 @ I_C = 4.0 Adc
- Excellent Safe Area Limits (Figures 2 and 3)
- Recommended For Use to I_C = 4.0 Adc

5 AMPERES
POWER TRANSISTORS

PNP SILICON

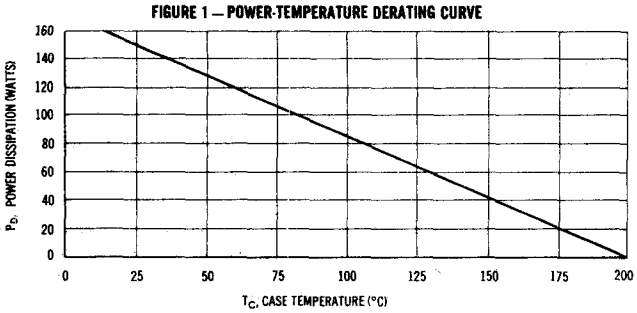
40-55 VOLTS
150 WATTS



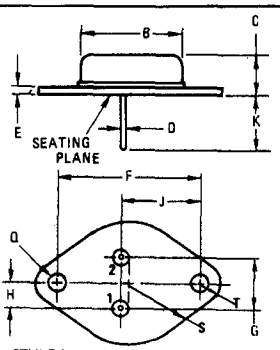
MAXIMUM RATINGS

Characteristic	Symbol	MJ2267	MJ2268	Unit
Collector-Emitter Voltage	V_{CEO}	40	55	Vdc
Collector-Base Voltage	V_{CB}	40	55	Vdc
Emitter-Base Voltage	V_{EB}	5.0	5.0	Vdc
Collector Current - Continuous	I_C	5.0		Adc
Base Current	I_B	3		Adc
Power Dissipation @ T_C = 25°C Derate above 25°C	P_D	150 0.86		Watts W/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		°C

FIGURE 1 — POWER-TEMPERATURE DERATING CURVE



Safe Area Limits are indicated by Figures 2, 3. Both limits are applicable and must be observed.



STYLE 1:
PIN 1. BASE
2. EMITTER
CASE: COLLECTOR

DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
B	—	22.23	—	0.875
C	6.35	11.43	0.250	0.450
D	0.97	1.09	0.038	0.043
E	—	3.43	—	0.135
F	29.90	30.40	1.177	1.197
G	10.67	11.18	0.420	0.440
H	5.21	5.72	0.205	0.225
J	16.64	17.15	0.655	0.675
K	7.92	—	0.312	—
Q	3.84	4.09	0.151	0.161
S	—	13.34	—	0.525
T	—	4.78	—	0.188

All JEDEC dimensions and notes apply

CASE 1-03
(TO-3)

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Characteristics		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage (1) (I_C = 200 mAdc, I_B = 0)	MJ2267	$V_{CEO(sus)}$	40	—	Vdc
	MJ2268		55	—	
Collector Cutoff Current		I_{CEX}			mAdc
(V_{CE} = 40 Vdc, V_{BE} = 1.5 Vdc)	MJ2267		—	1.0	
(V_{CE} = 60 Vdc, V_{BE} = 1.5 Vdc)	MJ2268		—	1.0	
(V_{CE} = 20 Vdc, V_{BE} = 1.5 Vdc, T_C = 150°C)	MJ2267		—	5.0	
(V_{CE} = 30 Vdc, V_{BE} = 1.5 Vdc, T_C = 150°C)	MJ2268		—	5.0	
Emitter-Base Cutoff Current (V_{EB} = 5.0 Vdc, I_C = 0)		I_{EBO}	—	5.0	mAdc
ON CHARACTERISTICS					
DC Current Gain		h_{FE}			—
(I_C = 1.0 Adc, V_{CE} = 2.0 Vdc)	Both Types		20	—	
(I_C = 4.0 Adc, V_{CE} = 2.0 Vdc)(1)	Both Types		20	100	
Collector-Emitter Saturation Voltage (1) (I_C = 4.0 Adc, I_B = 0.4 Adc)	Both Types	$V_{CE(sat)}$	—	1.0	Vdc
Base-Emitter Saturation Voltage (1) (I_C = 4.0 Adc, I_B = 0.4 Adc)	Both Types	$V_{BE(sat)}$	—	1.5	Vdc
DYNAMIC CHARACTERISTICS					
Current-Gain — Bandwidth Product (I_C = 0.5 Adc, V_{CE} = 10 Vdc)		f_T	3.0	—	MHz

(1) Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.

ACTIVE REGION SAFE OPERATING AREAS

FIGURE 2 — MJ2267

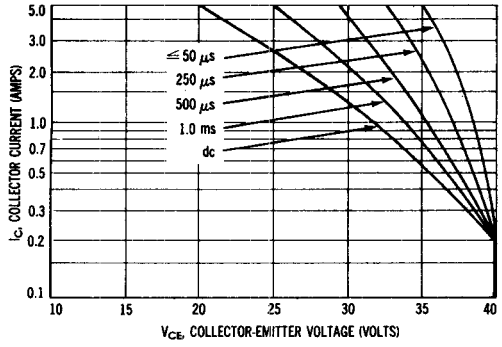
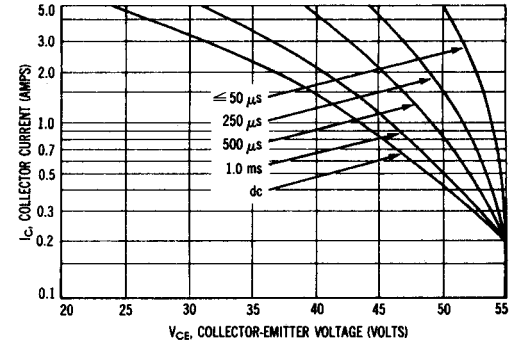


FIGURE 3 — MJ2268



The Safe Operating Area Curves indicate I_C — V_{CE} limits below which the device will not go into secondary breakdown. Collector load lines for specific circuits must fall within the applicable Safe Area to avoid causing a collector-emitter short. (Duty cycle of the excursions make no significant change in these safe areas.) To insure operation below the maximum T_J, the power-temperature derating curve must be observed for both steady state and pulse power conditions.

NOTE: For additional design curves, please refer to Type 2N3789.