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COMPLEMENTARY SILICON POWER TRANSISTORS

...designed for use in general-purpose amplifier and switching applications

FEATURES:

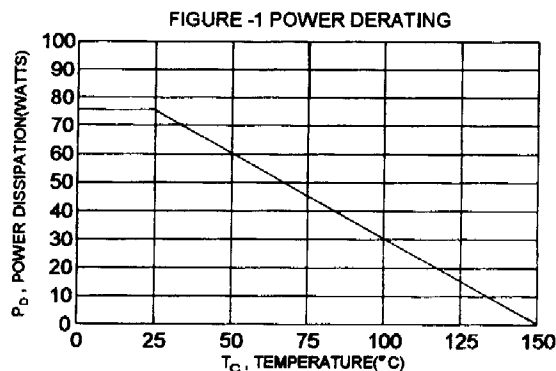
- * Power Dissipation - $P_D = 75 \text{ W}$ @ $T_C = 25^\circ\text{C}$
- * DC Current Gain $h_{FE} = 20 \sim 100$ @ $I_C = 4.0 \text{ A}$
- * $V_{CE(sat)} = 1.1 \text{ V (Max.)}$ @ $I_C = 4.0 \text{ A}$, $I_B = 400 \text{ mA}$

MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	60	V
Collector-Base Voltage	V_{CBO}	70	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current-Continuous	I_C	10	A
Base Current	I_B	6.0	A
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	75 0.6	W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

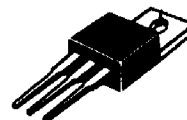
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	1.67	$^\circ\text{C/W}$

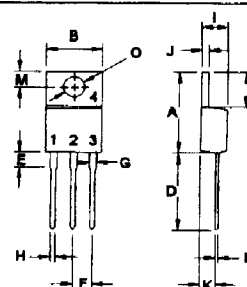


PNP NPN
MJE2955T MJE3055T

10 AMPERE
COMPLEMENTARY SILICON
POWER TRANSISTORS
60 VOLTS
75 WATTS



TO-220



PIN 1.BASE
2.COLLECTOR
3.EMITTER
4.COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.31
B	9.78	10.42
C	5.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	3.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.96
J	1.14	1.38
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

MJE2955T PNP / MJE3055T NPN

ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector - Emitter Sustaining Voltage (1) ($I_C = 200\text{ mA}$, $I_B = 0$)	$V_{CE(sus)}$	60		V
Collector Cutoff Current ($V_{CE} = 30\text{ V}$, $I_B = 0$)	I_{CEO}		0.7	mA
Collector Cutoff Current ($V_{CE} = 70\text{ V}$, $V_{BE(off)} = 1.5\text{ V}$) ($V_{CE} = 70\text{ V}$, $V_{BE(off)} = 1.5\text{ V}$, $T_c = 150^\circ\text{C}$)	I_{CEX}		1.0 5.0	mA
Collector Cutoff Current ($V_{CB} = 70\text{ V}$, $I_E = 0$) ($V_{CB} = 70\text{ V}$, $I_E = 0$, $T_c = 150^\circ\text{C}$)	I_{CBO}		1.0 10	mA
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$, $I_C = 0$)	I_{EBO}		5.0	mA

ON CHARACTERISTICS (1)

DC Current Gain ($I_C = 4.0\text{ A}$, $V_{CE} = 4.0\text{ V}$) ($I_C = 10\text{ A}$, $V_{CE} = 4.0\text{ V}$)	hFE	20 5.0	100	
Collector - Emitter Saturation Voltage ($I_C = 4.0\text{ A}$, $I_B = 0.4\text{ A}$) ($I_C = 10\text{ A}$, $I_B = 3.3\text{ A}$)	$V_{CE(sat)}$		1.1 8.0	V
Base - Emitter On Voltage ($I_C = 4.0\text{ A}$, $V_{CE} = 4.0\text{ V}$)	$V_{BE(on)}$		1.8	V

DYNAMIC CHARACTERISTICS

Current Gain - Bandwidth Product (2) ($I_C = 500\text{ mA}$, $V_{CE} = 10\text{ V}$, $f_i = 500\text{ KHz}$)	f_T	2.0		MHz
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(1) Pulse Test: Pulse width = 300 μs , Duty Cycle $\leq 2.0\%$

(2) $f_T = |h_{fe}| \cdot f_{max}$