

MJE3055T

General Purpose and Switching Applications

- DC Current Gain Specified to I_C =10A
 High Current Gain-Bandwidth Product : f_T = 2MHz (Min.)



1.Base 2.Collector 3.Emitter

NPN Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector -Base Voltage	70	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	10	Α
I _B	Base Current	6	Α
P _C	Collector Dissipation (T _C =25°C)	75	W
P _C	Collector Dissipation (T _a =25°C)	0.6	W
TJ	Junction Temperature	150	°C
T _{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV _{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 200 \text{mA}, I_B = 0$	60		V
I _{CEO}	Collector Cut-off Current	$V_{CE} = 30V, I_{B} = 0$		700	μΑ
I _{CEX1} I _{CEX2}	Collector Cut-off Current	$V_{CE} = 70V, V_{BE}(off) = -1.5V$ $V_{CE} = 70V, V_{BE}(off) = -1.5V$ @ $T_{C} = 150^{\circ}C$		1 5	mA mA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = 5V, I_{C} = 0$		5	mA
h _{FE}	*DC Current Gain	$V_{CE} = 4V, I_{C} = 4A$ $V_{CE} = 4V, I_{C} = 10A$	20 5	100	
V _{CE} (sat)	*Collector-Emitter Saturation Voltage	I _C = 4A, I _B = 0.4A I _C = 10A, I _B = 3.3A		1.1 8	V
V _{BE} (on)	*Base-Emitter On Voltage	$V_{CE} = 4V, I_{C} = 4A$		1.8	V
f _T	Current Gain Bandwidth Product	$V_{CE} = 10V, I_{C} = 500mA$	2		MHz

^{*} Pulse test: PW≤300μs, duty cycle≤2% Pulse

Typical Characteristics

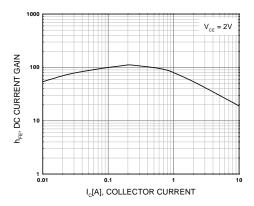


Figure 1. DC current Gain

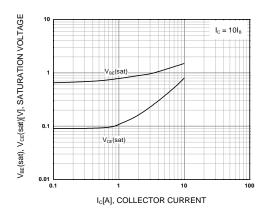


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

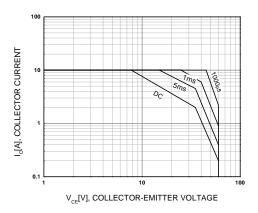


Figure 3. Safe Operating Area

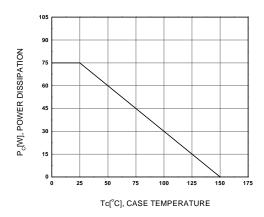
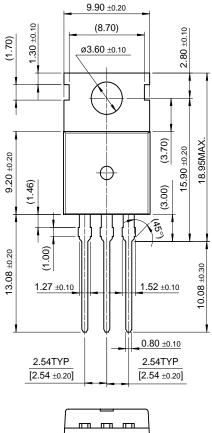


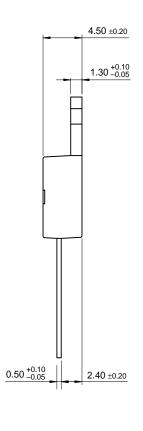
Figure 4. Power Derating

Rev. A1, February 2001

Package Demensions

TO-220





10.00 ±0.20

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