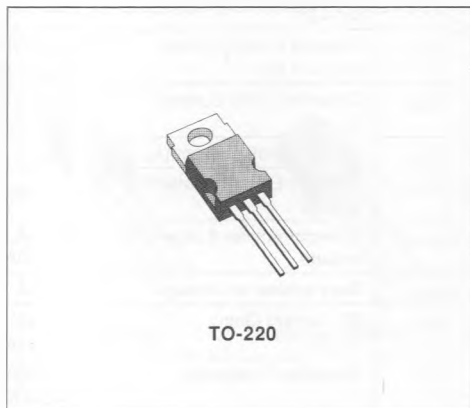


MEDIUM POWER AND SWITCHING APPLICATIONS

DESCRIPTION

The MJE3055T is a silicon epitaxial-base NPN transistor in Jedec TO-220 package. It is intended for power switching circuits and general-purpose amplifiers. The complementary PNP type is MJE2955T.



INTERNAL SCHEMATIC DIAGRAMS



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	60	V
V_{CBO}	Collector-base Voltage ($I_E = 0$)	70	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	5	V
I_C	Collector Current	10	A
I_B	Base Current	6	A
P_{TOT}	Total Power Dissipation at $T_{case} \leq 25^\circ C$	75	W
T_{stg}	Storage Temperature	- 55 to 150	$^\circ C$
T_j	Junction Temperature	150	$^\circ C$

For PNP types voltage and current values are negative.

THERMAL DATA

$R_{th(j-case)}$	Thermal Resistance Junction-case	Max	1.66	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cutoff Current ($I_B = 0$)	$V_{CE} = 30V$			700	μA
I_{CEX}	Collector Cutoff Current ($V_{EB} = 1.5V$)	$V_{CE} = 70V$ $T_{case} = 150^{\circ}C$			1 5	mA mA
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CBO} = 70V$ $T_{case} = 150^{\circ}C$			1 10	mA mA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	$V_{EBO} = 5V$			5	mA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage	$I_C = 200mA$	60			V
$V_{CE(sat)}^*$	Collector-emitter Sustaining Voltage	$I_C = 4A$ $I_B = 0.4A$ $I_C = 10A$ $I_B = 3.3A$			1.1 8	V V
$V_{BE(on)}^*$	Base-emitter on Voltage	$I_C = 4A$ $V_{CE} = 4V$			1.8	V
h_{FE}^*	DC Current Gain	$I_C = 4A$ $V_{CE} = 4V$ $I_C = 10A$ $V_{CE} = 4V$	20 5		70	
f_T	Transition Frequency	$I_C = 500mA$ $V_{CE} = 10V$ $f = 500KHz$	2			MHz

* Pulsed : pulse duration = 300 μs , duty cycle < 2 %.
For PNP type voltage and current values are negative.

Safe Operating Areas.

