



THE DATASHEET OF MJE2955T





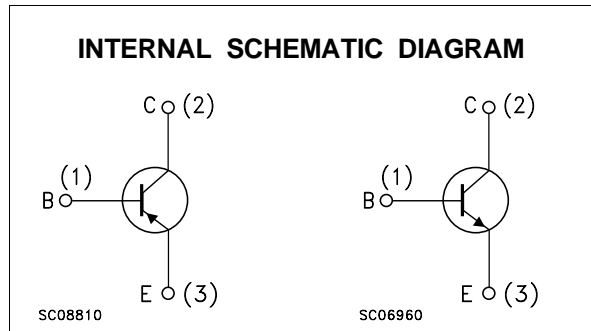
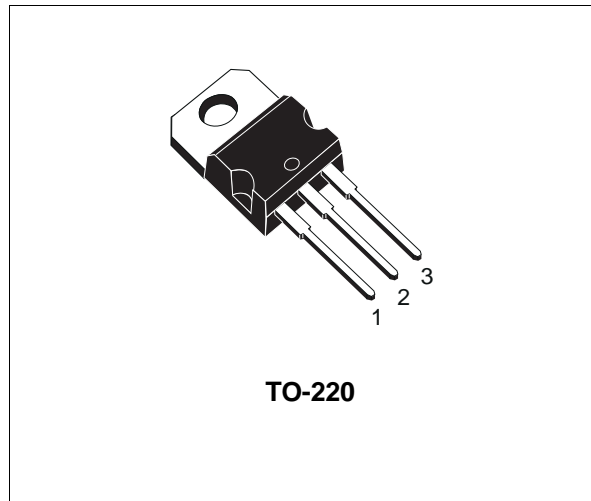
MJE2955T
MJE3055T

COMPLEMENTARY SILICON POWER TRANSISTORS

- STMicroelectronics PREFERRED SALESTYPES
- COMPLEMENTARY PNP - NPN DEVICES

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.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		NPN	MJE3055T	
		PNP	MJE2955T	
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 $T_{case} \leq 25\text{ }^\circ\text{C}$		75	W
T_{stg}	Storage Temperature		-55 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature		150	$^\circ\text{C}$

For PNP types voltage and current values are negative.

MJE2955T / MJE3055T

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.66	°C/W
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ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = 30 V				700	μA
I _{CEX}	Collector Cut-off Current (V _{BE} = 1.5V)	V _{CE} = 70 V T _{case} = 150°C				1 5	mA mA
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB0} = 70 V T _{case} = 150°C				1 10	mA mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EBO} = 5 V				5	mA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 200 mA		60			V
V _{CE(sat)*}	Collector-Emitter Sustaining Voltage	I _C = 4 A I _C = 10 A	I _B = 0.4 A I _B = 3.3 A			1.1 8	V V
V _{BE(on)*}	Base-Emitter on Voltage	I _C = 4 A	V _{CE} = 4 V			1.8	V
h _{FE}	DC Current Gain	I _C = 4 A I _C = 10 A	V _{CE} = 4 V V _{CE} = 4 V	20 5		70	
f _T	Transistor Frequency	I _C = 500 mA f = 500 KHz	V _{CE} = 10 V	2			MHz

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

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