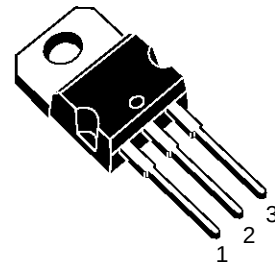


COMPLEMENTARY SILICON POWER TRANSISTORS

■ SGS-THOMSON PREFERRED SALESTYPES

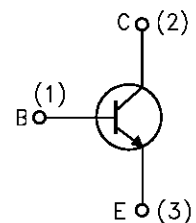
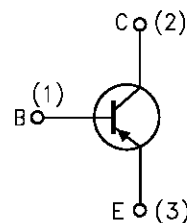
DESCRIPTION

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.



TO-220

INTERNAL SCHEMATIC DIAGRAM



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 $T_{case} \leq 25^\circ\text{C}$	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.

THERMAL DATA

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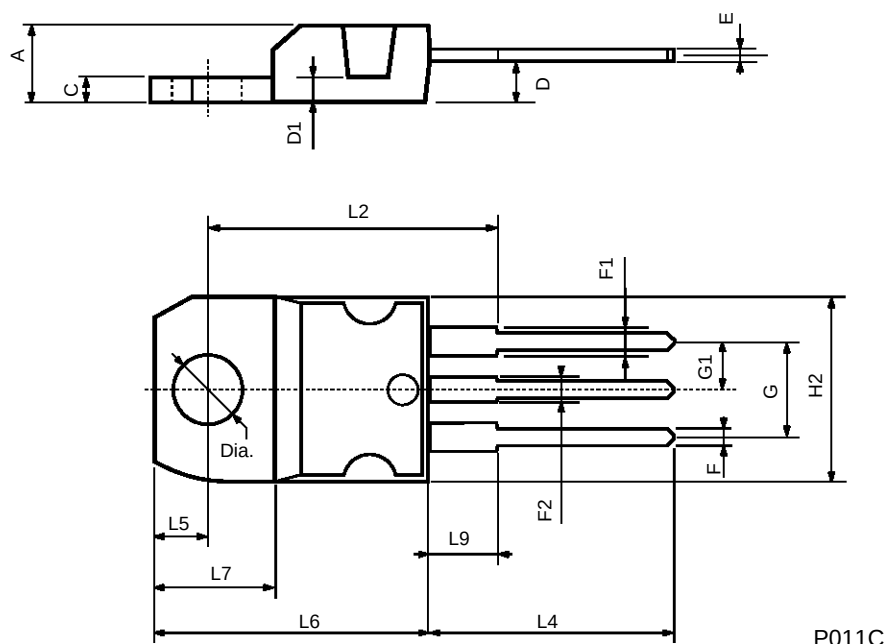
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

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 _{CBO} = 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 _C = 200 mA	60			V
V _{CE(sat)*}	Collector-Emitter Sustaining Voltage	I _C = 4 A I _C = 10 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	20 5		70	
f _T	Transistor Frequency	I _C = 500 mA f = 500 KHz	2			MHz

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

TO-220 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.051
D	2.40		2.72	0.094		0.107
D1		1.27			0.050	
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.203
G1	2.4		2.7	0.094		0.106
H2	10.0		10.40	0.393		0.409
L2		16.4			0.645	
L4	13.0		14.0	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.2		6.6	0.244		0.260
L9	3.5		3.93	0.137		0.154
DIA.	3.75		3.85	0.147		0.151



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