

PNP SILICON POWER TRANSISTOR

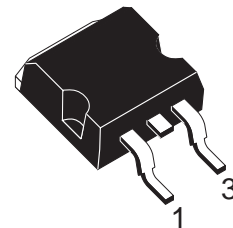
- SURFACE-MOUNTING D²PAK (TO-263) POWER PACKAGE IN TAPE & REEL (SUFFIX "T4")
- ELECTRICALLY SIMILAR TO TIP32B

APPLICATION

- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

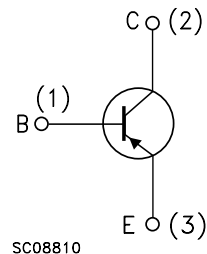
DESCRIPTION

The MJB32B is manufactured using Epitaxial-base Technology for use in medium power linear and switching applications.



**D2PAK
(TO-263)**
(Suffix "T4")

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	-80	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-80	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	-5	V
I_C	Collector Current	-3	A
I_{CM}	Collector Peak Current	-5	A
I_B	Base Current	-1	A
P_{tot}	Total Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$ $T_{amb} \leq 25\text{ }^\circ\text{C}$	40	W
		2	W
T_{stg}	Storage Temperature	-65 to 150	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$

MJB32B

THERMAL DATA

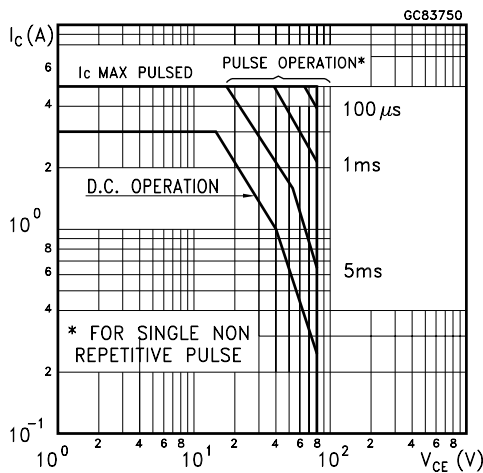
R _{thj-case}	Thermal Resistance Junction-case	Max	3.12	°C/W
R _{thj-amb}	Thermal Resistance Junction-ambient	Max	62.5	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

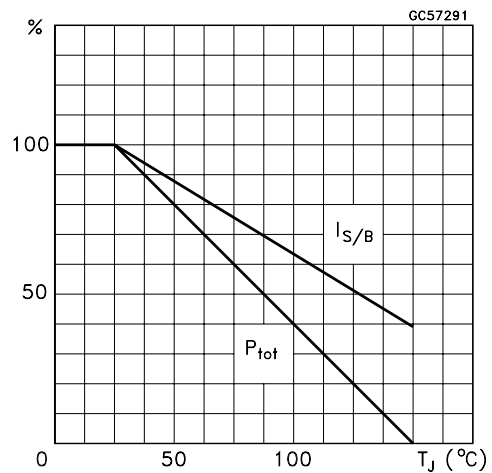
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = -60 V			-50	μA
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = -80 V			-20	μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -5 V			-0.1	mA
V _{CEO(sus)*}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = -30 mA	-80			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = -3 A I _B = -375 mA			-1.2	V
V _{BE*}	Base-Emitter Voltage	I _C = -3 A V _{CE} = -4 V			-1.8	V
h _{FE*}	DC Current Gain	I _C = -1 A V _{CE} = -4 V I _C = -3 A V _{CE} = -4 V	25 10		50	
h _{fe}	Small Signal Current Gain	I _C = -0.5 A V _{CE} = -10 V f = 1 KHZ I _C = -0.5 A V _{CE} = -10 V f = 1 MHZ	20 3			

* Pulsed : pulse duration = 300 μs, duty cycle ≤ 2%

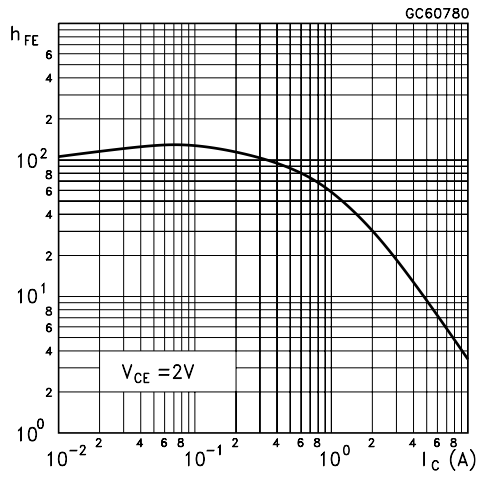
Safe Operating Area



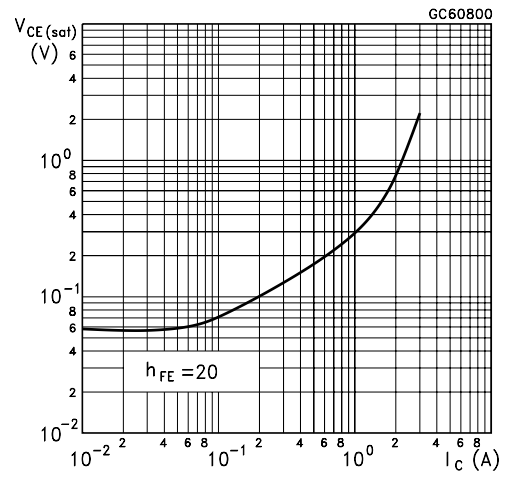
Derating Curves



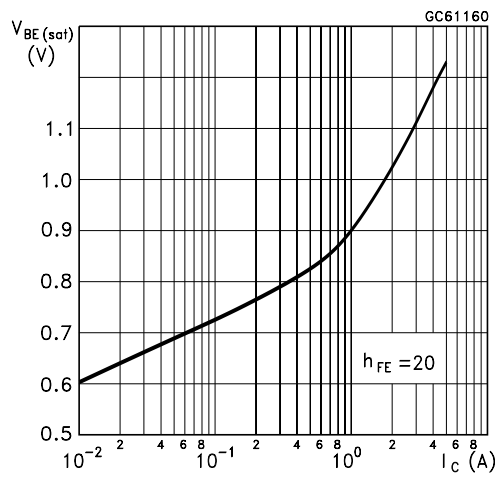
DC Current Gain



Collector-Emitter Saturation Voltage

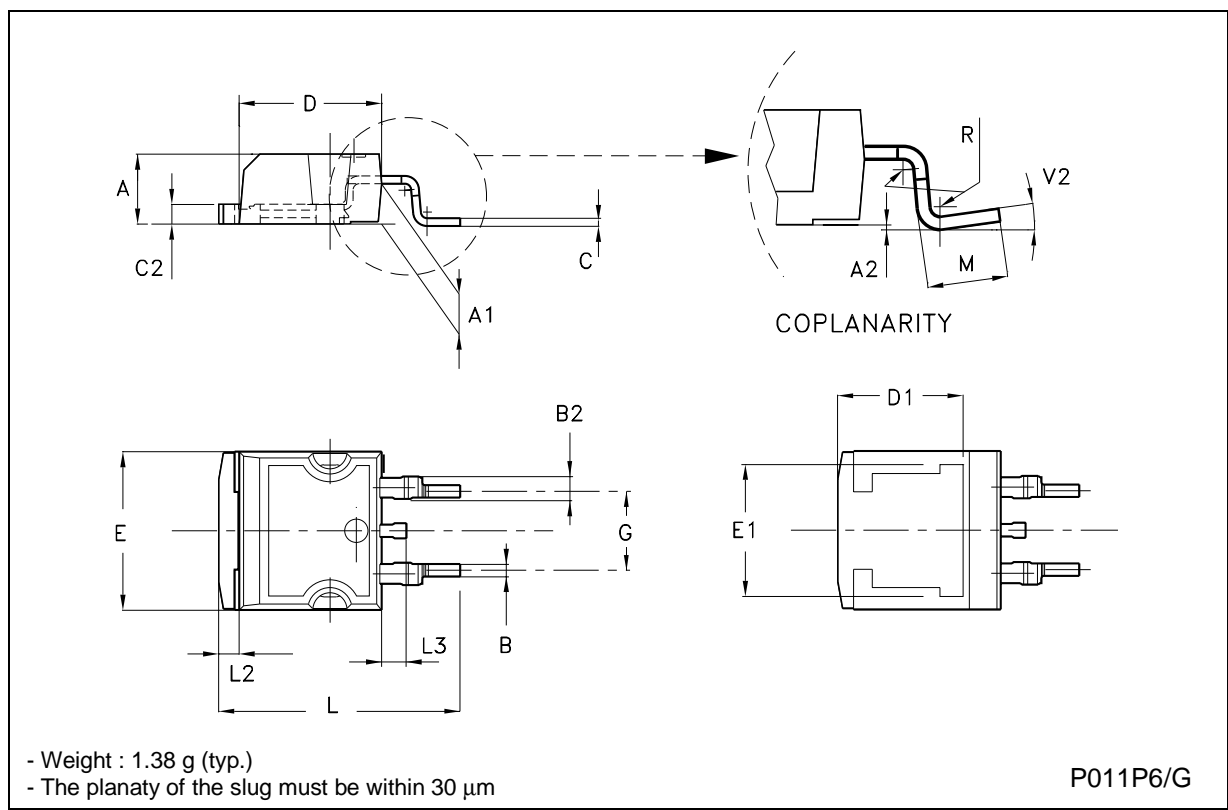


Collector-Base Capacitance



TO-263 (D²PAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.036
B2	1.14		1.70	0.044		0.067
C	0.45		0.60	0.017		0.023
C2	1.23		1.36	0.048		0.053
D	8.95		9.35	0.352		0.368
D1		8.00			0.315	
E	10.00		10.40	0.393		0.409
E1		8.50			0.334	
G	4.88		5.28	0.192		0.208
L	15.00		15.85	0.590		0.624
L2	1.27		1.4	0.050		0.055
L3	1.40		1.75	0.055		0.068
M	2.40		3.2	0.094		0.126
R		0.40			0.016	
V2	0°		8°	0°		8°



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