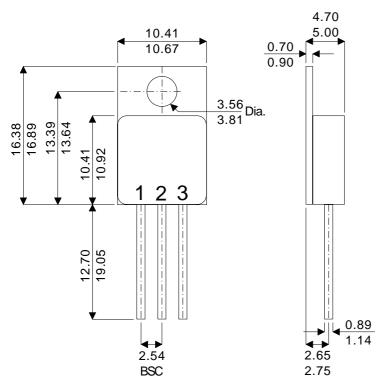




MECHANICAL DATA

Dimensions in mm (inches)



NPN POWER SILICON TRANSISTOR FOR HI-REL **APPLICATIONS**

FEATURES

- HERMETICALLY SEALED TO-220 METAL **PACKAGE**
- ALL LEADS ISOLATED FROM CASE
- CECC, JAN AND SPACE LEVEL SCREENING OPTIONS AVAILABLE

TO-220M (TO-257AB) - Metal Package

Pad 1 - Base Pad 2 - Collector Pad 3 - Emitter

ABSOLUTE MAXIMUM RATINGS (T_C = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Maximum Voltage	110V
V_{CEO}	Collector – Emitter Maximum Voltage	80V
V_{EBO}	Emitter – Base Maximum Voltage	8.0V
$I_{\mathbb{C}}$	Maximum Continious Collector Current	5.0A
I_{B}	Maximum Continious Base Current	500mA
P_{TOT}	Power Dissipation @ T _C = 100°C	20W
	Linear Derating Factor > T _C = 100°C	0.2W/°C
T_J , T_stg	Operating and Storage Temperature Range	−65°C to 200°C
$R_{\theta JC}$	Thermal Resistance Junction to Case	5.0°C/W max.

Semelab PIc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

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ELECTRICAL CHARACTERISTICS (T_{Case} = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Тур.	Max.	Unit
I _{CEO}	Collector – Emitter Cut-off Current	V _{CE} = 50V	$I_B = 0$			100	
I _{CBO}	Collector - Base Cut-off Current	V _{CE} = 80V	$I_E = 0$			0.2	μΑ
I _{EBO}	Emitter – Base Cut-off Current	$V_{EB} = 4V$	I _C = 0			0.2	
V _{(BR)CEO}	Collector – Emitter Breakdown Voltage	I _C = 100mA		80			
V _{(BR)CEO}	Collector – Base Breakdown Voltage	$I_C = 10\mu A$		100			V
V _{(BR)EBO}	Base – Emitter Breakdown Voltage	$I_E = 10\mu A$		8.0			
V _{BE(sat)}	Base – Emitter Saturation Voltage	I _C = 1.0A	I _B = 0.1A			1.2	
V _{CE(sat)}	Collector – Emitter Saturation Voltage	I _C = 1.0A	$I_{B} = 0.1A$			0.25	
		I _C = 5.0A	$I_{B} = 0.5A$			2.0	
h _{FE}	DC Current Gain	I _C = 1.0A	$V_{CE} = 5V$	40		120	
		I _C = 0.5A	V _{CE} = 5V	15			
h _{fe}	High Frequency Forward Current Gain	I _C = 1.0A	V _{CE} = 10V	3.0			
		f = 10MHz		3.0			
C _{obo}	Open Circuit Output Capacitance	f = 1MHz	V _{CB} = 10V			150	pF
t _r	Rise Time	I _C = 1.0A				0.3	
t _s	Storage Time	$V_{CC} = 20V$				2.0	μs
t _f	Fall Time	I _{B1} = 100mA				0.35	

^{*}Pulsed : Pulse duration $\leq 300~\mu s$, duty cycle $\leq 2.0\%$

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