



MECHANICAL DATA

Dimensions in mm (inches)

15.7 (0.200) 4.95 (0.195) 4.52 (0.178) 4.52 (0.178) 4.33 (0.710) 4.35 (0.140) 6.210

HIGH SPEED SWITCHING BIPOLAR NPN TRANSISTOR IN A HERMETICALLY SEALED TO-18 PACKAGE

FEATURES

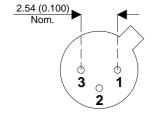
- SILICON NPN TRANSISTOR
- METAL CASE (JEDEC TO-18)

SUITABLE FOR HIGH SPEED SWITCHING

HIGH SPEED SWITCHING

APPLICATIONS:

APPLICATIONS



TO-18 (TO-206AA) CASE PIN CONFIGURATION

Pin 1 – Emitter Pin 2 – Base Pin 3

Pin 3 - Collector

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector-Base Voltage (IE = 0V)	60V
V_{CEO}	Collector-Emitter Voltage (IB = 0V)	40V
V_{EBO}	Emitter Base Voltage (IC = 0V)	5V
$I_{\mathbb{C}}$	Collector Current	0.8A
P_{tot}	Total Dissipation @ Tamb = 25°C	0.5W
P_{tot}	Total Dissipation @ Tcase = 25°C	1.8W
T_{stg}	Storage Temperature	-65 to 200°C
Tj	Max Operating Junction Temperature	175°C

Semelab Plc 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.





ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter		Test Conditions		Min.	Тур.	Max.	Unit
I _{CBO}	Collector Cutoff Current	V _{CB} =50V	I _E =0V			10	nA
			T _{amb} =150℃			10	μΑ
I _{EBO}	Emitter Cutoff Current	V _{EB} =3V	I _C =0V			10	nA
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =10μA	I _E =0A	60			V
V _{(BR)CEO*}	Collector-Emitter Breakdown Voltage	I _C =10mA	I _B =0V	30			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E =10μA	I _C =0V	5			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C =150mA	I _B =15mA			0.4	V
		I _C =500mA	I _B =50mA			1.6	V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C =150mA	I _B =15mA			1.3	V
		I _C =500mA	I _B =50mA			2.6	V
h _{FE} *	DC Current Gain	I _C =0.1mA	V _{CE} =10V	20		200	
		I _C =1mA	V _{CE} =10V	25			
		I _C =10mA	V _{CE} =10V	35			
		I _C =150mA	V _{CE} =10V	40			
		I _C =500mA	V _{CE} =10V	20			
		I _C =150mA	V _{CE} =1V	20			
f _T	Transition Frequency (f=100MHz)	I _C =20mA	V _{CE} =20V	250			MHz
C _{CBO}	Collector-Base Capacitance (f=100kHz)	I _E =0A	V _{CB} =10V			8	pF
R _{thJC}	Thermal Resistance Junction-Case					83.3	°C/W
R _{thJA}	Thermal Resistance Junction-Ambient					300	

^{*} Pulsed: Pulse duration = $300\mu s$, duty cycle = 1%

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