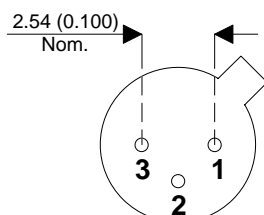
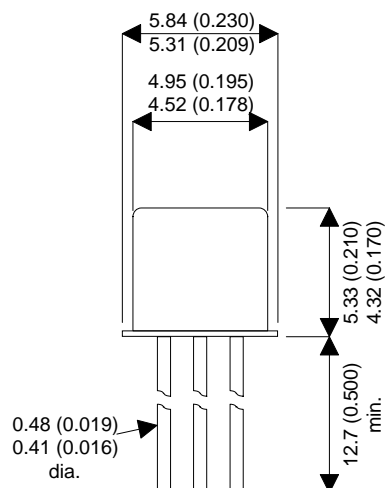


MECHANICAL DATA

Dimensions in mm (inches)



TO-18 (TO-206AA) CASE

PIN CONFIGURATION

Pin 1 – Emitter Pin 2 – Base Pin 3 – Collector

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

FEATURES

- SILICON NPN TRANSISTOR
- METAL CASE (JEDEC TO-18)
- HIGH SPEED SWITCHING

APPLICATIONS:

SUITABLE FOR HIGH SPEED SWITCHING APPLICATIONS

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector-Base Voltage ($I_E = 0V$)	60V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0V$)	40V
V_{EBO}	Emitter Base Voltage ($I_C = 0V$)	5V
I_C	Collector Current	0.8A
P_{tot}	Total Dissipation @ $T_{amb} = 25^{\circ}C$	0.5W
P_{tot}	Total Dissipation @ $T_{case} = 25^{\circ}C$	1.8W
T_{stg}	Storage Temperature	-65 to $200^{\circ}C$
T_j	Max Operating Junction Temperature	$175^{\circ}C$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO} Collector Cutoff Current	$V_{\text{CB}}=50\text{V}$ $I_{\text{E}}=0\text{V}$			10	nA
	$T_{\text{amb}}=150^{\circ}\text{C}$			10	μA
I_{EBO} Emitter Cutoff Current	$V_{\text{EB}}=3\text{V}$ $I_{\text{C}}=0\text{V}$			10	nA
$V_{(\text{BR})\text{CBO}}$ Collector-Base Breakdown Voltage	$I_{\text{C}}=10\mu\text{A}$ $I_{\text{E}}=0\text{A}$	60			V
$V_{(\text{BR})\text{CEO}}^*$ Collector-Emitter Breakdown Voltage	$I_{\text{C}}=10\text{mA}$ $I_{\text{B}}=0\text{V}$	30			V
$V_{(\text{BR})\text{EBO}}$ Emitter-Base Breakdown Voltage	$I_{\text{E}}=10\mu\text{A}$ $I_{\text{C}}=0\text{V}$	5			V
$V_{\text{CE(sat)}}^*$ Collector-Emitter Saturation Voltage	$I_{\text{C}}=150\text{mA}$ $I_{\text{B}}=15\text{mA}$			0.4	V
	$I_{\text{C}}=500\text{mA}$ $I_{\text{B}}=50\text{mA}$			1.6	V
$V_{\text{BE(sat)}}^*$ Base-Emitter Saturation Voltage	$I_{\text{C}}=150\text{mA}$ $I_{\text{B}}=15\text{mA}$			1.3	V
	$I_{\text{C}}=500\text{mA}$ $I_{\text{B}}=50\text{mA}$			2.6	V
h_{FE}^* DC Current Gain	$I_{\text{C}}=0.1\text{mA}$ $V_{\text{CE}}=10\text{V}$	20			
	$I_{\text{C}}=1\text{mA}$ $V_{\text{CE}}=10\text{V}$	25			
	$I_{\text{C}}=10\text{mA}$ $V_{\text{CE}}=10\text{V}$	35			
	$I_{\text{C}}=150\text{mA}$ $V_{\text{CE}}=10\text{V}$	40			
	$I_{\text{C}}=500\text{mA}$ $V_{\text{CE}}=10\text{V}$	20			
	$I_{\text{C}}=150\text{mA}$ $V_{\text{CE}}=1\text{V}$	20			
f_{T} Transition Frequency ($f=100\text{MHz}$)	$I_{\text{C}}=20\text{mA}$ $V_{\text{CE}}=20\text{V}$	250			MHz
C_{CBO} Collector-Base Capacitance ($f=100\text{kHz}$)	$I_{\text{E}}=0\text{A}$ $V_{\text{CB}}=10\text{V}$			8	pF
R_{thJC} Thermal Resistance Junction-Case				83.3	$^{\circ}\text{C/W}$
R_{thJA} Thermal Resistance Junction-Ambient				300	

* Pulsed: Pulse duration = 300 μs , duty cycle = 1%