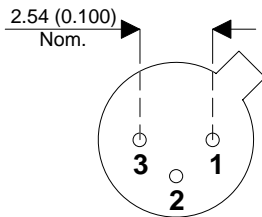
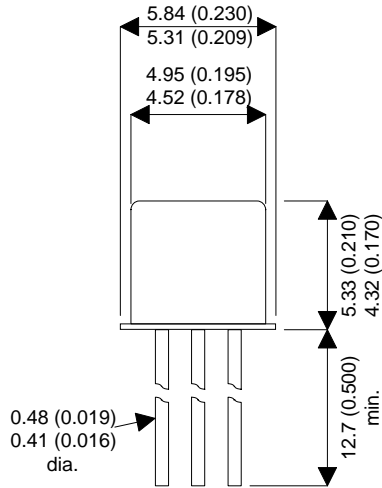


MECHANICAL DATA
Dimensions in mm (inches)



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°C
T_j	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.	Typ.	Max.	Unit
I_{CBO} Collector Cutoff Current	$V_{CB}=50V$ $I_E=0V$			10	nA
	$T_{amb}=150^{\circ}C$			10	μA
I_{EBO} Emitter Cutoff Current	$V_{EB}=3V$ $I_C=0V$			10	nA
$V_{(BR)CBO}$ Collector-Base Breakdown Voltage	$I_C=10\mu A$ $I_E=0A$	60			V
$V_{(BR)CEO}^*$ Collector-Emitter Breakdown Voltage	$I_C=10mA$ $I_B=0V$	30			V
$V_{(BR)EBO}$ Emitter-Base Breakdown Voltage	$I_E=10\mu A$ $I_C=0V$	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	$^{\circ}C/W$
R_{thJA} Thermal Resistance Junction-Ambient				300	

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