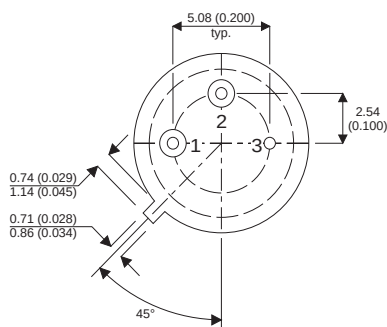
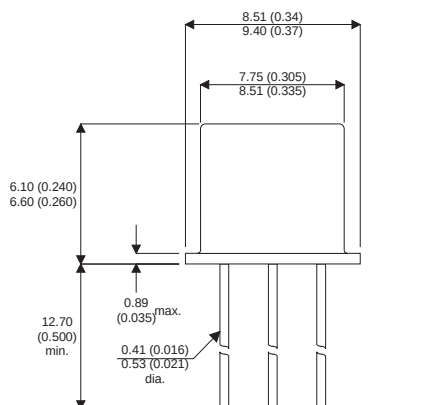


MECHANICAL DATA

Dimensions in mm (inches)



TO39 PACKAGE

Pin 1 = Emitter Pin 2 = Base Pin 3 = Collector

PNP SILICON EPITAXIAL TRANSISTOR

APPLICATIONS

- General Purpose Industrial Applications

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

V_{CBO}	Collector – Base Voltage	60V
V_{CEO}	Collector – Emitter Voltage	60V
V_{EBO}	Emitter – Base Voltage	5V
I_C	Collector Current Continuous	600mA
I_{CM}	Collector Current Peak	600mA
I_{EM}	Emitter Current Peak	600mA
P_{tot}	Total Power Dissipation $T_{amb} < 25^{\circ}C$	600 mW
T_{stg}	Storage Temperature	-65 to 200°C
T_j	Operating Junction Temperature	200°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.

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Issue 2

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{EBO} Emitter Cut-off Current	$V_{EB} = 5.0\text{V}$ $I_C = 0$		30	500	nA
	$V_{EB} = 3\text{V}$ $I_C = 0$		1.0	100	
I_{CBO} Collector Cut-off Current	$V_{CB} = 60\text{V}$ $I_E = 0$		1.0	500	nA
	$V_{CB} = 50\text{V}$ $I_E = 0$		0.5	50	
	$T_j = 100^\circ\text{C}$		0.03	2.0	μA
h_{FE} DC Current Gain	$V_{CE} = 10\text{V}$ $I_C = 0.1\text{mA}$	20	90		—
	$V_{CE} = 10\text{V}$ $I_C = 1\text{mA}$	40	105		
	$V_{CE} = 10\text{V}$ $I_C = 10\text{mA}$	50	125		
	$V_{CE} = 10\text{V}$ $I_C = 50\text{mA}$	50	125		
	$V_{CE} = 10\text{V}$ $I_C = 150\text{mA}$	40	90		
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = 150\text{mA}$ $I_B = 15\text{mA}$		0.15	0.40	V
$V_{BE(sat)}$ Base – Emitter Saturation Voltage	$I_C = 30\text{mA}$ $I_B = 1.0\text{mA}$		0.77	0.90	V
	$I_C = 150\text{mA}$ $I_B = 15\text{mA}$		1.05	1.30	
C_{tc} Collector Capacitance	$V_{CB} = 10\text{V}$ $I_E = I_e = 0$ $f = 1.0\text{MHz}$		6	12	pF
C_{te} Emitter Capacitance	$V_{EB} = 2.0\text{V}$ $I_C = I_c = 0$ $f = 1.0\text{MHz}$		18	30	
f_T Transistion Frequency	$V_{CE} = 10\text{V}$ $I_C = 50\text{mA}$ $f = 100\text{MHz}$ $T_{amb} = 25^\circ\text{C}$	100	360		MHz

THERMAL CHARACTERISTICS

$R_{\theta(j-amb)}$ Thermal Resistance Junction to Ambient			292	$^\circ\text{C/W}$
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