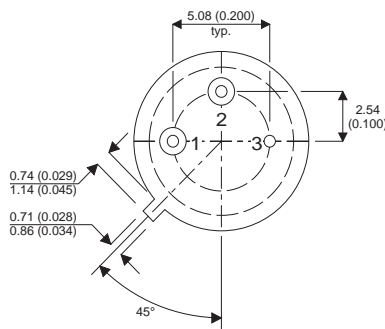
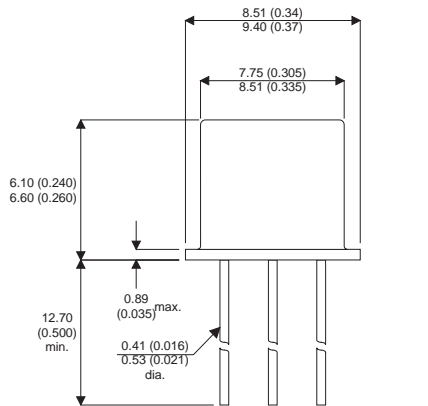


**MECHANICAL DATA**

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.

**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	$\mu\text{A}$
$h_{FE}$	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	$V_{CE} = 10\text{V}$ $f = 100\text{MHz}$	$I_C = 50\text{mA}$ $T_{amb} = 25^\circ\text{C}$	100	360		MHz

**THERMAL CHARACTERISTICS**

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