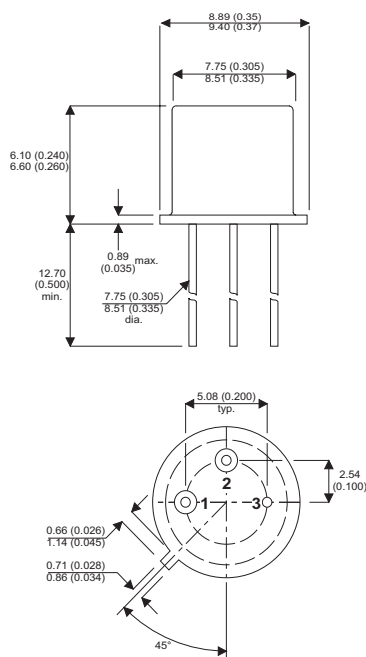


MECHANICAL DATA

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 $200^{\circ}C$
T_j	Operating Junction Temperature	$200^{\circ}C$

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

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

THERMAL CHARACTERISTICS

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