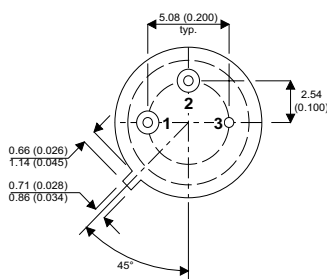
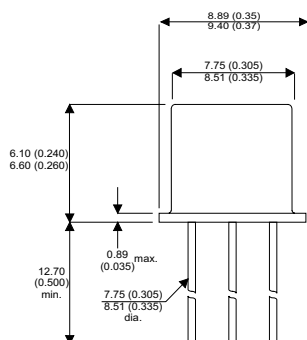


MECHANICAL DATA

Dimensions in mm (inches)



TO39 PACKAGE

Underside View

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

**MEDIUM POWER SILICON
NPN PLANAR TRANSISTOR**

General purpose NPN Transistor
in a hermetic TO39 package.

$V_{CEO} = 100V$

$I_C = 1A$

$P_T = 5W$

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

V_{CBO}	Collector – Base Voltage	120V
V_{CEO}	Collector – Emitter Voltage	100V
V_{EBO}	Emitter – Base Voltage	6V
V_{CER}	Collector – Emitter Sustaining Voltage	100V
I_C	Collector Current	1A
P_{TOT}	Dissipation @ $T_{amb} = 25^{\circ}C$	1W
	@ Case Temp. = $100^{\circ}C$	2.9W
	@ Case Temp. = $25^{\circ}C$	5W
	Derating linearly	$175^{\circ}C$
T_{stg}, T_j	Storage and Operating Junction Temperature	-65 to $175^{\circ}C$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{\text{CEO(SUS)}}$ Collector – Emitter Sustaining Voltage	$I_{\text{C}} = 10\text{mA}$ $I_{\text{B}} = 0$	100			
$V_{\text{CE(sat)}}$ Collector – Emitter Saturation Voltage	$I_{\text{C}} = 200\text{mA}$ $I_{\text{B}} = 20\text{mA}$			1.2	V
$V_{\text{BE(sat)}}$ Base – Emitter Saturation Voltage	$I_{\text{C}} = 200\text{mA}$ $I_{\text{B}} = 20\text{mA}$			1.5	
I_{CBO} Collector Cut-off Current	$V_{\text{CB}} = V_{\text{CE}}$ $I_{\text{E}} = 0$ $T_{\text{amb}} = 100^{\circ}\text{C}$			1 60	
I_{EBO} Emitter - Base Reverse Current	$V_{\text{EB}} = 5\text{V}$ $I_{\text{C}} = 0$			0.1	V
h_{FE} DC Current Gain	$V_{\text{CE}} = 10\text{V}$ $I_{\text{C}} = 10\text{mA}$	30			—
	$V_{\text{CE}} = 10\text{V}$ $I_{\text{C}} = 200\text{mA}$	40		120	
f_{T} Gain Bandwidth Product	$V_{\text{CE}} = 10\text{V}$ $I_{\text{C}} = 50\text{mA}$ $f = 10\text{MHz}$	60	250		MHz
NF Noise Figure	$V_{\text{CE}} = 10\text{V}$ $I_{\text{C}} = 300\mu\text{A}$ $f = 1\text{KHz}$		6		dB
C_{ob} Output Capacitance	$V_{\text{CB}} = 10\text{V}$ $f = 0$			25	pF
C_{ib} Input Capacitance	$V_{\text{EB}} = 1\text{V}$ $f = 0$			100	