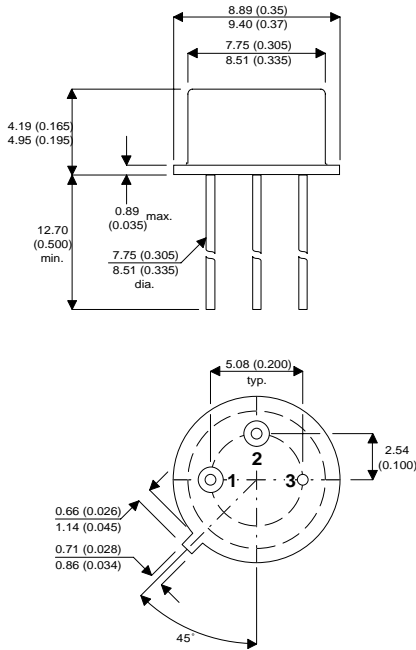


MECHANICAL DATA

Dimensions in mm (inches)

**MEDIUM POWER SILICON
NPN PLANAR TRANSISTOR**



TO39 PACKAGE

Underside View

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

FEATURES

- $V_{CEO} = 40V$
- $I_C = 0.7A$
- $P_{tot} = 5W$

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

V_{CBO}	Collector – Base Voltage	60V
V_{CEO}	Collector – Emitter Voltage	40V
V_{CER}	Collector – Emitter Sustaining Voltage	50V
V_{CEX}	Collector - Emitter Voltage	60V
V_{EBO}	Emitter-Base Voltage	5V
I_C	Collector Current	0.7A
P_{TOT}	Power Dissipation $T_{amb} = 25^{\circ}C$	1W
	$T_{case} = 25^{\circ}C$	5W
T_j	Junction Temperature	200°C
T_{stg}	Storage Temperature	-65 to 200°C
$R_{th(jc)}$	Thermal Resistance Junction to Case	35°C / W
$R_{th(ja)}$	Thermal Resistance Junction to Ambient	175°C / W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(SUS)}$ Collector – Emitter Voltage	$I_C = 100mA$ $I_B = 0$	40			V
$V_{CER(SUS)*}$ Collector – Emitter Voltage	$R_{BE} = 10\Omega$ $I_C = 100mA$	50			
$V_{(BR)CBO*}$ Collector – Base Breakdown Voltage	$I_C = 0.1mA$ $I_E = 0$	60			
$V_{(BR)EBO*}$ Emitter – Base Breakdown Voltage	$I_E = 0.1mA$ $I_C = 0$	5			
I_{CBO} Collector – Base Cut-off Current	$V_{CB} = 30V$ $I_E = 0$			0.25	μA
I_{EBO} Emitter - Base Cut-off Current	$V_{EB} = 4V$ $I_C = 0$			0.25	
$V_{CE(sat)*}$ Collector – Emitter Saturation Voltage	$I_C = 0.15A$ $I_B = 0.015A$			1.4	V
$V_{BE(sat)*}$ Base – Emitter Saturation Voltage	$I_C = 0.15A$ $I_B = 0.015A$			1.7	
h_{21E*} Static Forward Current Transfer ratio	$I_C = 0.15A$ $V_{CE} = 10V$	50		250	—
f_T Transistion Frequency	$V_{CE} = 10V$ $I_C = 0.05A$ $f = 100MHz$	100			MHz
C_{22b} Output Capacitance	$V_{CB} = 10V$ $f = 1MHz$			15	μF
C_{11b} Input Capacitance	$V_{EB} = 10V$ $f = 1MHz$			80	

* Pulsed $t_p = 300\mu S$ $\delta \leq 2\%$