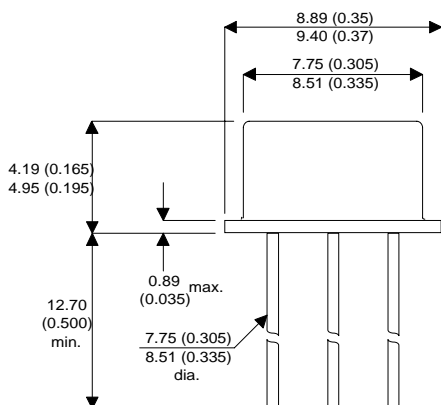


MECHANICAL DATA

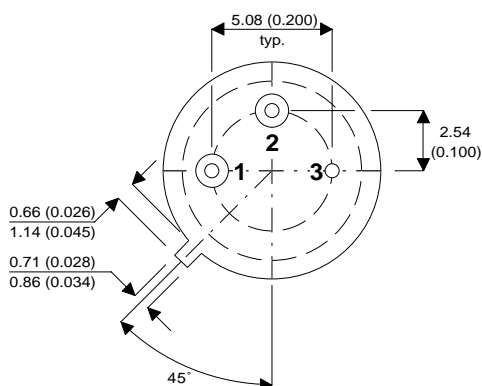
Dimensions in mm (inches)



**HIGH VOLTAGE
MEDIUM CURRENT
SILICON EXPITAXIAL PLANAR
NPN TRANSISTOR**

APPLICATIONS

Intended for High Voltage, High Current, Switching Applications.



TO-39 PACKAGE

Pin 1 – Emitter Pin 2 – Base Pin 3 – Collector

ABSOLUTE MAXIMUM RATINGS

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

V_{CBO}	Collector – Base Voltage	($I_E = 0$)	250V
V_{CEO}	Collector – Emitter Voltage	($I_B = 0$)	200V
V_{EBO}	Emitter – Base Voltage	($I_C = 0$)	6V
I_C	Collector Current		3A
I_{CM}	Peak Collector Current		5A
P_{tot}	Total Power Dissipation	@ $T_{amb} \leq 25^{\circ}C$	1W
		@ $T_{case} \leq 50^{\circ}C$	10W
T_{STG}	Storage Temperature Range		-65 to +200°C
T_J	Maximum Operating Junction Temperature		200°C

ELECTRICAL CHARACTERISTICS

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO} Collector Cut-off Current	$V_{CB} = 200V$ $I_E = 0$			0.1	μA
	$T_C = 150^{\circ}C$			50	
$V_{(BR)CBO}^*$ Collector – Base Breakdown Voltage	$I_C = 100\mu A$ $I_E = 0$	250			V
$V_{CEO(sus)}^*$ Collector – Emitter Sustaining Voltage	$I_C = 20mA$ $I_B = 0$	200			
V_{EBO}^* Collector – Emitter Sustaining Voltage	$I_E = 1mA$ $I_C = 0$	6			
$V_{CE(sat)}^*$ Collector – Emitter Saturation Voltage	$I_C = 0.5A$ $I_B = 50mA$			0.2	
$V_{BE(sat)}^*$ Base – Emitter Saturation Voltage	$I_C = 0.5A$ $I_B = 50mA$			1.1	
h_{FE}^* DC Current Gain	$I_C = 20mA$ $V_{CE} = 5V$	40			—
	$I_C = 0.5A$ $V_{CE} = 5V$	40		80	
	$I_C = 20mA$ $V_{CE} = 2V$ $T_C = -55^{\circ}C$	16			
f_T Transition Frequency	$I_C = 100mA$ $V_{CE} = 10V$	50			MHz
C_{CBO} Collector – Base Capacitance	$I_E = 0$ $V_{CB} = 10V$ $f = 1MHz$			30	pF
t_{on} Turn-On Time	$I_C = 0.5A$ $V_{CC} = 20V$ $I_{B1} = -I_{B2} = 50mA$		0.3		μs
t_{off} Fall Time			1		
$I_{s/b}^{**}$ Second Breakdown Collector Current	$V_{CE} = 50V$	0.2			A

NOTES

* Pulse Test: $t_p = 300\mu s$, $\delta = 1.5\%$

** Pulse Test: 1sec, non-repetitive pulse.