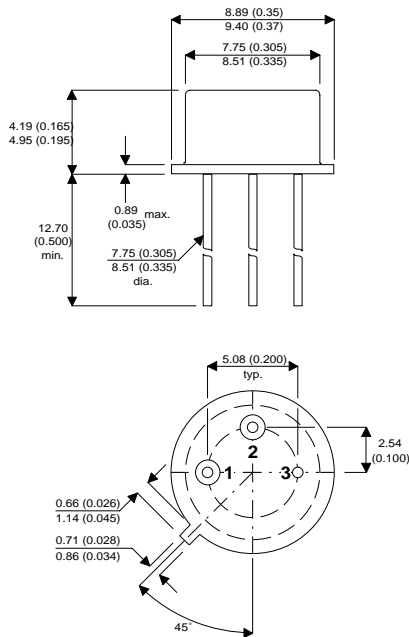


MECHANICAL DATA

Dimensions in mm (inches)



TO39 PACKAGE

Underside View

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

**SILICON NPN
PLANAR TRANSISTOR**

FEATURES

- $V_{CBO} = 100V$
- $V_{CEO} = 60V$
- $I_C = 2A$

DESCRIPTION

General Purpose NPN Transistor in a Hermetic TO39 Package

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

V_{CBO}	Collector – Base Voltage (open emitter)	100V
V_{CER}	Collector – Emitter Voltage ($R_{BE} \leq 50\Omega$)	80V
V_{CEO}	Collector – Emitter Voltage (open base)	60V
V_{EBO}	Emitter – Base Voltage (open collector)	5V
I_C	Collector Current (d.c.)	2A
I_{CM}	Collector Current (peak value)	5A
I_B	Base Current (d.c.)	1A
P_{TOT}	Total Device Dissipation @ $T_C = 50^{\circ}C$	5W
T_{stg}	Storage Temperature	-55 to 175°C
T_j	Junction Temperature	175°C / W
R_{thj-c}	Thermal Resistance Junction to Case	25°C / W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{CEsat}	Collector – Base Saturation Voltage $I_{\text{C}} = 5\text{A}$ $I_{\text{B}} = 5\text{A}$			1	V
V_{BEsat}	Emitter – Base Saturation Voltage $I_{\text{C}} = 5\text{A}$ $I_{\text{B}} = 5\text{A}$			1.8	
I_{CBO}	Collector Cut-off Current $V_{\text{CB}} = 60\text{V}$ $I_{\text{E}} = 0$			10	μA
I_{EBO}	Emitter Cut-off Current $V_{\text{EB}} = 4\text{V}$ $I_{\text{C}} = 0$			10	
h_{FE}	DC Current Gain $V_{\text{CE}} = -5\text{V}$ $I_{\text{C}} = 2\text{A}$	40			—
c_{c}	Collector Capacitance at $f = 1\text{MHz}$ $I_{\text{E}} = I_{\text{e}} = 0$ $V_{\text{CB}} = 10\text{V}$			80	pF
f_{T}	Transistion Frequency at $f = 35\text{MHz}$ $I_{\text{C}} = 0.5\text{A}$ $V_{\text{CE}} = 5\text{V}$		100		MHz
t_{on}	Turn on Time $I_{\text{Con}} = 5\text{A}; I_{\text{Bon}} = -I_{\text{Boff}} = 0.5\text{A}$			0.6	μs
t_{off}	Turn off time $-V_{\text{BEoff}} = 2\text{V}$			1.2	



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