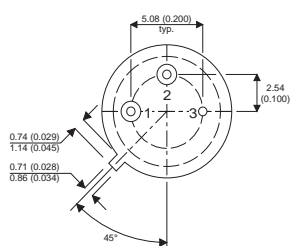
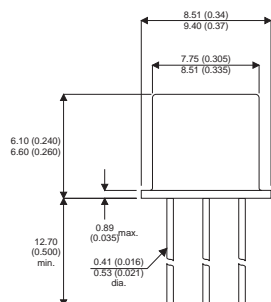


MECHANICAL DATA

Dimensions in mm (inches)



Underside View
TO39 PACKAGE (TO-205AD)

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 @ $T_{amb} = 25^{\circ}C$	0.87W
P_{TOT}	Total Device Dissipation @ $T_{Case} = 50^{\circ}C$	5W
T_{stg}	Storage Temperature	-65 to 200°C
T_j	Junction Temperature	175°C
$R\theta_{j-c}$	Thermal Resistance Junction to Case	25°C / W
$R\theta_{j-a}$	Thermal Resistance Junction to Ambient	172°C / W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{CEsat}	Collector – Emitter Saturation Voltage $I_C = 5A$ $I_B = 0.5A$			1	V
V_{BEsat}	Emitter – Base Saturation Voltage $I_C = 5A$ $I_B = 0.5A$			1.8	
I_{CBO}	Collector Cut-off Current $V_{CB} = 60V$ $I_E = 0$			10	μA
I_{EBO}	Emitter Cut-off Current $V_{EB} = 4V$ $I_C = 0$			10	
h_{FE}	DC Current Gain $V_{CE} = 2V$ $I_C = 5A$	25			—
c_c	Collector Capacitance at $f = 1MHz$ $I_E = I_e = 0$ $V_{CB} = 10V$			80	pF
f_T	Transition Frequency at $f = 20MHz$ $I_C = 0.5A$ $V_{CE} = 5V$	70	100		MHz
t_{on}	Turn on Time $I_{Con} = 5A; I_{Bon} = -I_{Boff} = 0.5A$			0.6	μs
t_{off}	Turn off time $-V_{BEoff} = 2V$			1.2	

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