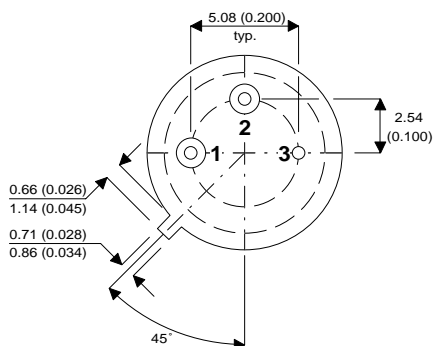
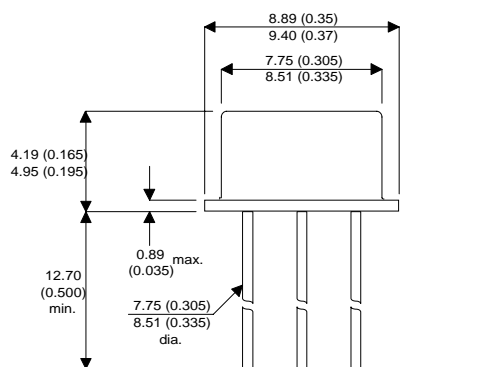


MECHANICAL DATA

Dimensions in mm (inches)



TO-39

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

NPN SILICON TRANSISTORS

DESCRIPTION

The 2N5339X silicon epitaxial planar NPN transistor in jedec TO-39 metal case intended for use as drivers for high power transistors in general purpose, amplifier and switching circuit

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

V_{CBO}	Collector – Base Voltage ($I_E = 0$)	100V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	100V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	6V
I_C	Collector Current	5A
I_{CM}	Collector Peak Current	7A
I_B	Base Current	1A
P_{tot}	Total Dissipation at $T_{case} \leq 25^{\circ}C$	6W
	$T_{amb} \leq 25^{\circ}C$	1W
T_{stg}	Storage Temperature Range	-65 to +200°C
T_j	Junction temperature	200°C

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	29.2	°C/W
$R_{thj-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut Off Current $I_E = 0$ $V_{CB} = 100V$			10	μA
I_{CEX}	Collector Cut Off Current $V_{BE} = 1.5V$ $V_{CE} = 90V$ $T_{case} = 150^{\circ}C$			10 1	μA mA
I_{CEO}	Collector Cut Off Current $I_B = 0$ $V_{CE} = 90V$			100	μA
$V_{CEO(sus)*}$	Collector Emitter Sustaining Voltage $I_B = 0$ $I_C = 50mA$			100	V
$V_{CE(sat)*}$	Collector Emitter Saturation Voltage $I_C = 2A$ $I_B = 0.2A$ $I_C = 5A$ $I_B = 0.5A$			0.7 1.2	V
$V_{BE(sat)*}$	Base Emitter Voltage $I_C = 2A$ $I_B = 0.2A$ $I_C = 5A$ $I_B = 0.5A$			1.2 1.8	V
h_{FE*}	DC Current Gain $I_C = 0.5A$ $V_{CE} = 2V$ $I_C = 2A$ $V_{CE} = 2V$ $I_C = 5A$ $V_{CE} = 2V$	60 60 40		240	—
f_T	Transistion Frequency $I_C = 0.5mA$ $V_{CE} = 10V$	30			MHz
C_{CBO}	Collector Base Capacitance $I_E = 0$ $V_{CB} = 10V$ $f = 0.1MHz$			250	pF
t_{on}	Turn-on Time $I_C = 2A$ $V_{CC} = 40V$ $I_{B1} = 0.2mA$			200	ns
t_s	Storage Time $I_C = 2A$ $V_{CC} = 40V$			2.5	μs
t_f	Fall Time $I_{B1} = - I_{B2} = 0.2A$			200	ns

* Pulse test $t_p = 300\mu s$, Duty Cycle 1.5%