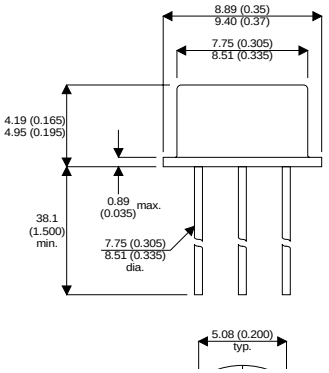
BCY39A

MECHANICAL DATA
Dimensions in mm

SMALL SIGNAL PNP TRANSISTORS IN TO-5



TO-5

Pin1 - Emitter Pin2 - Base Pin3 - Collector

APPLICATIONS

Small signal PNP transistors for relay switching resistor logic circuits and general purpose applications.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage	-64V
V_{CEX}	Collector – Emitter Voltage	-64V
V_{CE}	Collector – Emitter Voltage (I_C = 500mA)	-60V
V_{EBO}	Emitter – Base Voltage	-12V
$I_{C(PK)}$	Peak Collector Current	500mA
$I_{C(AV)}$	Continuous Collector Current	250mA
I_{EM}	Emitter Peak Current	500mA
$I_{E(AV)}$	Continuous Emitter Current	250mA
I_{BM}	Base Peak Current	125mA
$I_{B(AV)}$	Continuous Base Current	125mA
P_{TOT}	Total Power Dissipation	410mW
T_J	Junction Temperature	150°C
T_{stg}	Storage Temperature	150°C

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THERMAL CHARACTERISTICS

	CHARACTERISTIC	
$\theta_{j\text{-amb}}$	Junction To Ambient	0.3°C/mW
$\theta_{j\text{-case}}$	Junction To Case	0.12°C/mW

ELECTRICAL CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-Off Current	V_{CB} = -6V	I_E = 0		1	100	nA
		V_{CB} = -6V T_{amb} = 100°C	I_E = 0		0.1	2.5	µA
I_{EBO}	Emitter Cut-Off Current	V_{EB} = -6V	I_C = 0		1	100	nA
		V_{EB} = -6V T_{amb} = 100°C	I_C = 0		0.1	2.5	µA
h_{FE}	DC Current Gain	I_C = 30mA	V_{CE} = -1V	12	30		—
		I_C = 150mA	V_{CE} = -1V	10		50	
		I_{CM} = 300mA	V_{CE} = -6V		15		
$VCE_{(SAT)}$	Collector-Emitter Saturation Voltage	I_C = 150mA	I_B = 15mA		-0.46	-1.1	V
V_{BE}	Base-Emitter Voltage	I_C = 150mA	I_B = -1V		-1.5	-1.9	
I_B	Base Current	I_E = 150mA	V_{CB} = 0	3		14	mA
NF	Noise Figure	I_C = 500µA f = 1kc/s	V_{CE} = -2V R_S = 500Ω		8		dB
h_{fe}	Small Signal Current Gain	I_C = 10mA f = 1kc/s	V_{CE} = -6V	15	35	100	—
f_T	Transistion Frequency	I_C = 1mA	V_{CE} = -6V	0.45	1.5		MHz

* Pulse test : Pulse Width < 300µs ,Duty Cycle < 2%