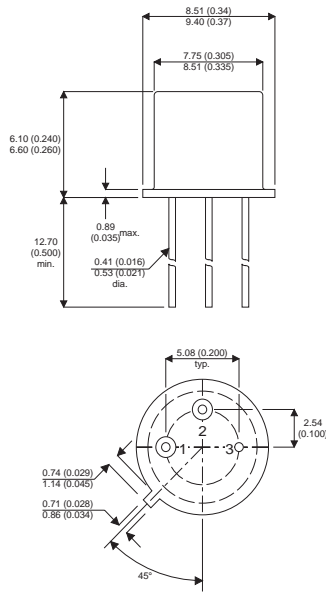


MECHANICAL DATA

Dimensions in mm (inches)



**SMALL SIGNAL
PNP TRANSISTORS**

APPLICATIONS

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

TO39 PACKAGE (TO-205AD)

Underside View

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

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

V_{CB}	Collector – Base Voltage	25V
V_{CE}	Collector – Emitter Voltage	25V
V_{EB}	Emitter – Base Voltage	16V
I_{CM}	Collector Current	100mA
$I_{C(AV)}$	Collector Current ave Over any 20ms	30mA
I_{BM}	Base Current	30mA
$I_{B(AV)}$	Base Current ave Over any 20ms	15mW
I_{EM}	Emitter Current	100mA
$I_{E(AV)}$	Emitter Current ave Over any 20ms	65mA
P_{TOT}	Total Power Dissipation	230mW

Semelab Plc reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Semelab is believed to be both accurate and reliable at the time of going to press. However Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that datasheets are current before placing orders.

THERMAL CHARACTERISTICS

CHARACTERISTICS		
θ_{j-amb}	Junction to Ambient	0.3°C/mW
θ_{j-case}	Junction to Case	0.12°C/mW

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current $V_{CB} = -6V$ $I_E = 0$ $T_{amb} = 100^{\circ}C$		1	100	nA
			0.1	2.5	μA
I_{EBO}	Emitter Cut-off Current $V_{EB} = -6V$ $I_C = 0$ $T_{amb} = 100^{\circ}C$		1	100	nA
			0.1	2.5	μA
h_{FE}	DC Current Gain $I_C = 30mA$ $V_{CE} = -1V$ $I_C = 150mA$ $V_{CE} = -1V$ $I_{CM} = 300mA$ $V_{CE} = -6V$	12	30		—
		10		50	
			15		
$V_{CE(sat)}$	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 $I_C = 500\mu A$ $V_{CE} = -2V$ $f = 1kc/s$ $R_s = 500\Omega$		8		dB
h_{fe}	Small Signal Current Gain $I_C = 10mA$ $V_{CE} = -6V$ $f = 1kc/s$	15	35	100	—
f_T	Transistion Frequency $I_C = 1mA$ $V_{CE} = -6V$	0.45	1.5		MHz

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