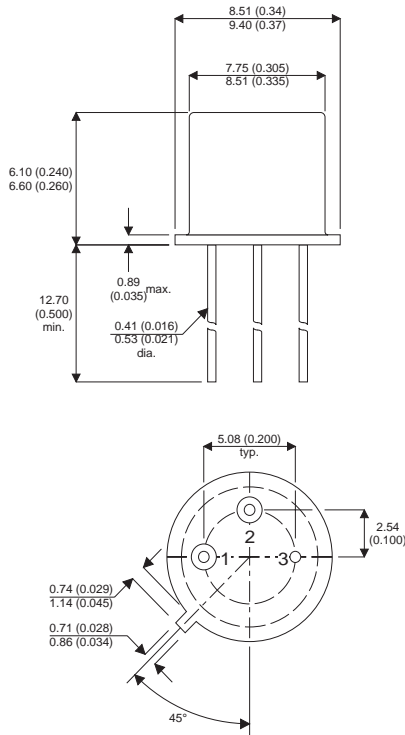


MECHANICAL DATA

Dimensions in mm(inches)

PNP SILICON TRANSISTOR



FEATURES

- FAST SWITCHING
- HIGH PULSE POWER

APPLICATIONS

- POWER SWITCHING CIRCUITS
- MOTOR CONTROL

TO39 (TO205AD)

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

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

V_{CBO}	Collector – Base Voltage	- 100V
V_{CEO}	Collector – Emitter Voltage	- 80V
V_{EBO}	Emitter – Base Voltage	- 5V
I_C	Collector Current	- 3A
I_B	Base Current	- 2A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	1W
T_{amb}	Ambient Operating Temperature	-55°C to +200°C
T_{stg}	Storage Temperature	-55°C to +200°C

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.

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
h_{21E}	Static Value of Common Emitter Forward Current Transfer Ratio	$V_{CE} = -10\text{V}$ $I_C = -0.15$	50		250	—
		$V_{CE} = -10\text{V}$ $I_C = -2\text{A}$	15			
		$V_{CE} = -10\text{V}$ $I_C = -1\text{mA}$	20			
f_T	Transistion Frequency	$V_{CE} = -5\text{V}$ $f = 20\text{MHz}$ $I_C = -100\text{mA}$	50			MHz
I_{CBO}	Collector Base Cut- Off Current.	$V_{CB} = -80\text{V}$ $I_E = 0$			- 100	nA
		$t = 150^{\circ}\text{C}$			- 100	μA
I_{EBO}	Emitter–Base Cut-off Current				- 100	nA
h_{21e}	Small Signal Common Emitter Forward Current Transfer Ratio	$V_{EB} = -4\text{V}$ $V_{CE} = -5\text{V}$ $I_C = -10\text{mA}$	25			—
$V_{CE(sat)^*}$	Collector – Emitter Saturation Voltage*	$f = 1\text{KHz}$			- 0.3	V
		$I_C = -150\text{mA}$ $I_B = -15\text{mA}$			- 0.6	
$V_{BE(sat)^*}$	Base – Emitter Saturation Voltage*	$I_C = -1\text{A}$ $I_B = -0.1\text{A}$			- 0.95	V
		$I_C = -150\text{mA}$ $I_B = -15\text{mA}$			- 1.3	
C_{22b}	Common – Base Output Capacitance	$V_{CB} = -10\text{V}$ $f = 1\text{MHz}$ $I_E = 0$			80	pF

*Pulse Conditions: Pulse Length = $300\mu\text{s}$ duty cycle = 1.5%