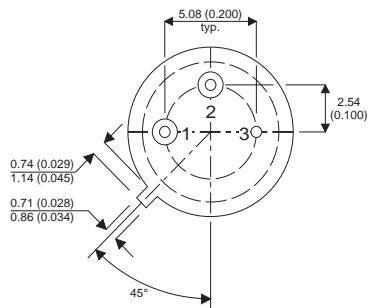
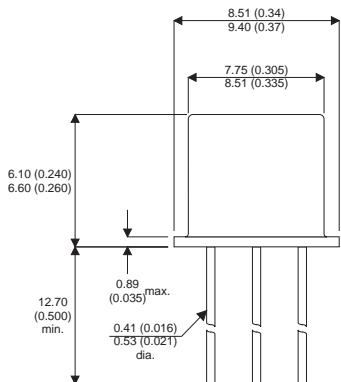


## MECHANICAL DATA

Dimensions in mm(inches)

## PNP SILICON TRANSISTOR



### TO39 (TO205AD)

Pin 1 = Emitter

Pin 2 = Base

Pin 3 = Collector

## FEATURES

- FAST SWITCHING
- HIGH PULSE POWER

## APPLICATIONS

- POWER SWITCHING CIRCUITS
- MOTOR CONTROL

## ABSOLUTE MAXIMUM RATINGS ( $T_{case} = 25^\circ\text{C}$ 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 $T_{case} \leq 25^\circ\text{C}$	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.

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Issue 1

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

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
h21E	Static Value of Common Emitter Forward Current	$V_{CE} = -10V$	$I_C = -0.15$	50		250	—
	Transfer Ratio	$V_{CE} = -10V$	$I_C = -2A$	15			
		$V_{CE} = -10V$	$I_C = -1mA$	20			
$f_T$	Transistion Frequency	$V_{CE} = -5V$ $f = 20MHz$	$I_C = -100mA$	50			MHz
$I_{CBO}$	Collector Base Cut- Off Current.	$V_{CB} = -80V$	$I_E = 0$ $t = 150^\circ C$			-100	nA
$I_{EBO}$	Emitter–Base Cut-off Current					-100	nA
h <sub>21e</sub>	Small Signal Common Emitter Forward Current Transfer Ratio	$V_{EB} = -4V$ $V_{CE} = -5V$	$I_C = -10mA$	25			—
	Collector – Emitter Saturation Voltage*	$f = 1KHz$				-0.3	
$V_{BE(sat)*}$	Base – Emitter Saturation Voltage*	$I_C = -150mA$	$I_B = -15mA$			-0.6	V
	Common – Base Output Capacitance	$V_{CB} = -10V$ $f = 1MHz$	$I_E = 0$			-0.95	
						-1.3	
$C_{22b}$						80	pF

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