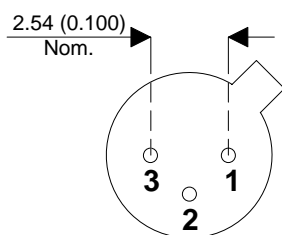
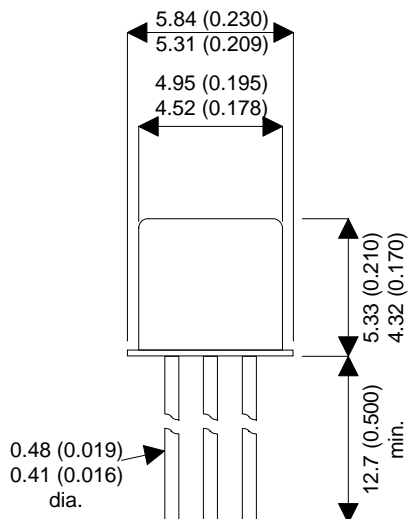


## MECHANICAL DATA

Dimensions in mm (inches)



### TO-18 (TO-206AA) PACKAGE

PIN 1 – Emitter    PIN 2 – Base    PIN 3 – Collector

## HIGH VOLTAGE PNP SILICON TRANSISTOR

### FEATURES

- Hermetic Metal Package
- Screening Options Available

### APPLICATIONS:

All Semelab hermetically sealed products can be processed in accordance with the requirements of BS, CECC and JAN specifications

## ABSOLUTE MAXIMUM RATINGS (T<sub>C</sub> = 25°C unless otherwise stated)

V <sub>CBO</sub>	Collector – Base Voltage		-300V
V <sub>CEO</sub>	Collector – Emitter Voltage		-300V
V <sub>EBO</sub>	Emitter – Base Voltage		-5V
I <sub>C</sub>	Continuous Collector Current		-0.5A
P <sub>D</sub>	Total Device Dissipation	T <sub>A</sub> = 25°C	0.5W
		Derate above 25°C	2.86mW/°C
P <sub>D</sub>	Total Device Dissipation	T <sub>C</sub> = 25°C	2.5W
		Derate above 25°C	14.3mW/°C
T <sub>J</sub> , T <sub>STG</sub>	Operating Junction & Storage Temperature Range		-65 to 200°C
R <sub>θJC</sub>	Thermal Resistance, Junction – Case		70°C/W

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** ( $T_A = 25^\circ\text{C}$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit	
<b>OFF CHARACTERISTICS</b>						
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	$I_C = -10\text{mA}$ $I_B = 0$	-300		V	
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	$I_C = -100\mu\text{A}$ $I_E = 0$	-300			
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	$I_E = 100\mu\text{A}$ $I_C = 0$	-6			
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -250\text{V}$ $I_E = 0$		-50	nA	
$I_{CEO}$	Collector Cut-off Current	$V_{CE} = -300\text{V}$ $I_B = 0$		-500		
$I_{EBO}$	Emitter Cut-off Current	$V_{BE} = -5\text{V}$ $I_C = 0$		-50		
<b>ON CHARACTERISTICS</b>						
$h_{FE}$	DC Current Gain	$V_{CE} = -1\text{V}$ $I_C = -1\text{mA}$	30	45	—	
		$V_{CE} = -10\text{V}$ $I_C = -10\text{mA}$	35	50		
		$V_{CE} = -10\text{V}$ $I_C = -30\text{mA}$	35	55		150
		$V_{CE} = -10\text{V}$ $I_C = -100\text{mA}$		40		
$V_{CE(sat)}$	Collector – Emitter Saturation Voltage	$I_C = -10\text{mA}$ $I_B = -1\text{mA}$		-0.15	-0.3	V
		$I_C = -30\text{mA}$ $I_B = -3\text{mA}$		-0.25	-0.4	
$V_{BE(sat)}$	Base – Emitter Saturation Voltage	$I_C = -10\text{mA}$ $I_B = -1\text{mA}$			-0.8	V
		$I_C = -30\text{mA}$ $I_B = -3\text{mA}$			-0.9	
<b>DYNAMIC CHARACTERISTICS</b>						
$f_T$	Current Gain Bandwidth Product	$I_C = -20\text{mA}$ $V_{CE} = -20\text{V}$ $f = 20\text{MHz}$	50	110	200	MHz
$C_{ob}$	Output Capacitance	$I_E = 0$ $V_{CB} = -20\text{V}$ $f = 1\text{MHz}$		3.5		pF
$C_{ib}$	Input Capacitance	$I_C = 0$ $V_{EB} = -0.5\text{V}$ $f = 1\text{MHz}$		45		
$t_{on}$	Turn-On Time	$I_{B1} = -10\text{mA}$ $I_C = -50\text{mA}$ $V_{CC} = -100\text{V}$		100		ns
$t_{off}$	Turn-Off Time	$I_{B2} = -10\text{mA}$ $I_C = -50\text{mA}$ $V_{CC} = -100\text{V}$		400		

\* Pulse Test:  $t_p \leq 300\mu\text{s}$ ,  $d \leq 2\%$ .