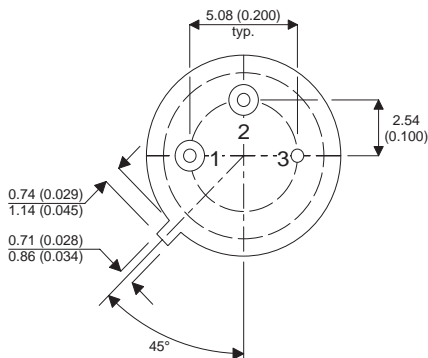
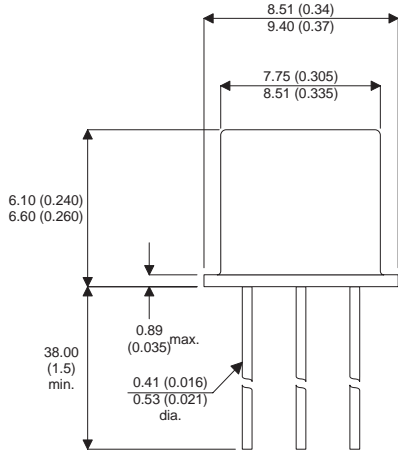


**MECHANICAL DATA**

Dimensions in mm (inches)



**TO-5 (TO-205AA)**

**Underside View**

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

**HIGH VOLTAGE  
PNP TRANSISTOR**

**FEATURES**

- LOW SATURATION VOLTAGE
- LOW LEAKAGE AT HIGH TEMPERATURE
- CECC SCREENING OPTIONS
- SPACE QUALITY LEVELS OPTIONS
- JAN LEVEL SCREENING OPTIONS

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

$V_{CER}$	Collector-Base Voltage ( $R_{BE} = 1K$ )	500V
$V_{CEO}$	Collector-Emitter Voltage ( $I_B = 0V$ )	450V
$V_{CBO}$	Collector Base Voltage ( $I_E = 0V$ )	500V
$I_C$	Collector Current	1A
$I_B$	Base Current	0.5A
$P_{tot}$	Total Dissipation @ $T_{amb} = 25^{\circ}C$	2W
	Derate Above $100^{\circ}C$	20mW/ $^{\circ}C$
$T_j$	Operating And Storage Junction Temperature	-65 to $200^{\circ}C$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$BV_{CEO}^*$ Collector Emitter Breakdown Voltage	$I_C=50mA$	450			V
$BV_{CER}^*$ Collector Emitter Breakdown Voltage	$I_C=100\mu A$ $R_{BE} = 1K$	500			
$BV_{CBO}$ Collector Base Breakdown Voltage	$I_C=100\mu A$	500			
$BV_{EBO}$ Emitter Base Breakdown Voltage	$I_E=20\mu A$	6			
$I_{CBO}$ Collector Cutoff Current	$V_{CB}=500V$			500	nA
$I_{EBO}$ Emitter Cutoff Current	$V_{EB}=4V$			250	
$h_{FE}^*$ DC Current Gain	$I_C=1mA$ $V_{CE}=10V$	20		200	—
	$I_C=25mA$ $V_{CE}=10V$	40		250	
	$I_C=100mA$ $V_{CE}=15V$	20		200	
$V_{CE(SAT)}^*$ Collector Emitter Saturation Voltage	$I_C=25mA$ $I_B=2.5mA$			3.0	V
$V_{BE(SAT)}^*$ Base Emitter Saturation Voltage	$I_C=25mA$ $I_B=2.5mA$			1.0	
$f_T$ Current Gain Bandwidth Product	$I_C=10mA$ $V_{CE} =20V$ $f=5MHz$	20			MHz

**SWITCHING TIMES** ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$t_d$ Delay Time	$V_{CC}=150V$ $I_C=100mA$ $I_{B1}=I_{B2}=10mA$			700	ns
$t_r$ Rise Time				1500	
$t_s$ Storage Time				3	$\mu S$
$t_f$ Fall Time				200	ns

\* Pulsed: Pulse Duration = 300 $\mu s$ , duty cycle = 1.5%