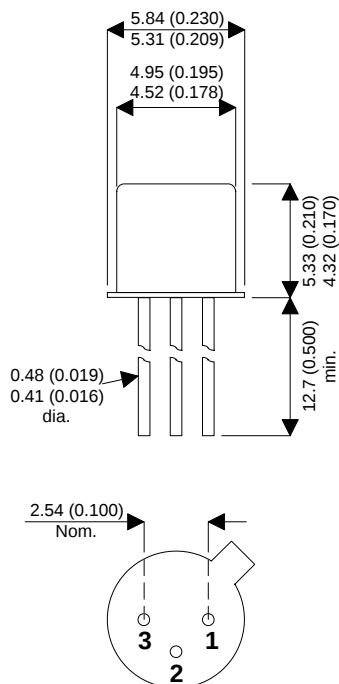


MECHANICAL DATA

Dimensions in mm (inches)



TO-18 METAL PACKAGE

Underside View

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	-150V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	-150V
V_{EBO}	Emitter – Base Voltage ($I_B = 0$)	-6V
I_C	Collector Current	0.1A
P_D	Total Device Dissipation $T_A = 25^{\circ}C$	0.4W
P_D	Total Device Dissipation $T_C = 25^{\circ}C$	1.4W
T_{stg}	Storage Temperature	-55 to 200°C
T_J	Max Operating Junction Temperature	200°C
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	438°C/W
$R_{\theta JC}$	Thermal Resistance Junction to Case	125°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 Continued ($T_A = 25^\circ\text{C}$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit.
$V_{(BR)CBO}$ Collector - Base Breakdown Voltage (1)	$I_C = -10\mu\text{A}$, $I_E = 0$	-150			V
$V_{(BR)CEO}$ Collector - Emitter Breakdown Voltage (1)	$I_C = -2\text{mA}$, $I_B = 0$	-150			V
I_{CBO} Collector Cut Off Current	$V_{CB} = -100\text{V}$, $I_E = 0$		-0.2	-10	nA
	$V_{CB} = -100\text{V}$, $I_E = 0$ $T_A = 125^\circ\text{C}$		-0.03	-10	μA
$V_{(BR)EBO}$ Emitter - Base Breakdown Voltage (1)	$I_E = -10\mu\text{A}$, $I_C = 0$	-6			V
$V_{CE(sat)}$ Collector - Emitter Saturation Voltage (1)	$I_C = -10\text{mA}$, $I_B = -1\text{mA}$		-0.1	-0.5	V
$V_{BE(sat)}$ Base - Emitter Saturation Voltage (1)	$I_C = -10\text{mA}$, $I_B = -1\text{mA}$		-0.74	-0.9	V
h_{FE} DC Current Gain (1)	$I_C = -1\text{mA}$, $V_{CE} = -10\text{V}$	40	85		
	$I_C = -10\text{mA}$, $V_{CE} = -10\text{V}$	40	100		
	$I_C = -10\mu\text{A}$, $V_{CE} = -10\text{V}$ $T_A = -55^\circ\text{C}$		30		
f_T Current Gain - Bandwidth Product	$I_C = -1\text{mA}$, $V_{CE} = -10\text{V}$, $f = 20\text{ MHz}$		50		MHz
	$I_C = -10\text{mA}$	60			
C_{EBO} Emitter- Base Capacitance	$V_{EB} = -0.5\text{V}$, $I_E = 0$, $f = 1\text{ MHz}$		20	25	pF
C_{CBO} Collector- Base Capacitance	$V_{CB} = -5\text{V}$, $I_E = 0$, $f = 1\text{ MHz}$		5	7	pF

(1) Pulse test : Pulse Width < 300 μs ,Duty Cycle < 2%