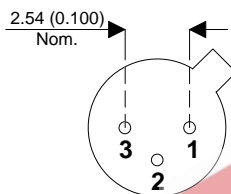
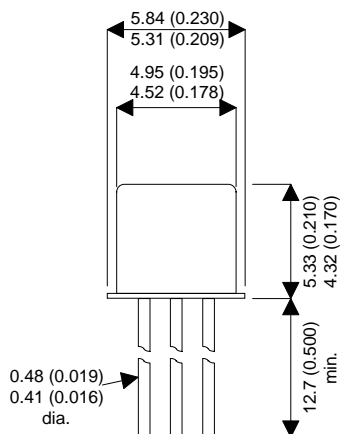


MECHANICAL DATA

Dimensions in mm (inches)



TO18

Underside View

PIN1 – EMITER PIN 2 – BASE PIN 3 – COLLECTOR

PNP SILICON TRANSISTOR

FEATURES

- SILICON PNP TRANSISTOR
- HIGH SPEED, LOW SATURATION SWITCH

APPLICATIONS:

GENERAL PURPOSE SWITCHING APPLICATIONS

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

V_{CBO}	Collector – Base Voltage	12V
V_{CEO}	Collector – Emitter Voltage	12V
V_{EBO}	Emitter – Base Voltage	4V
I_C	Collector Current	200mA
P_D	Total Device Dissipation @ $T_A = 25^\circ\text{C}$	360mW
	Derate above 25°C	2.06mW / $^\circ\text{C}$
P_D	Total Device Dissipation @ $T_C = 25^\circ\text{C}$	12W
	Derate above 25°C	6.85mW / $^\circ\text{C}$
T_{STG}, T_J	Operating and Storage Temperature Range	-65 to +200 $^\circ\text{C}$

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$BV_{CEO(SUS)}$ Collector – Base Breakdown Voltage	$I_C = 10\text{mA}$ $I_B = 0$	12			V
BV_{CES} Collector – Emitter Breakdown Voltage	$I_C = 10\mu\text{A}$ $V_{BE} = 0$	12			
BV_{CBO} Collector – Base Breakdown Voltage	$I_C = 10\mu\text{A}$ $I_E = 0$	12			
BV_{EBO} Emitter Base Breakdown Voltage	$I_E = 100\mu\text{A}$ $I_C = 0$	4			
I_{CBO} Collector Cut-off Current	$V_{CB} = 6\text{V}$ $T_{amb} = 125^\circ\text{C}$			10	μA
I_{CES} Collector Cut-off Current	$V_{CE} = 6\text{V}$ $V_{BE} = 0$			80	nA
I_B Base Current	$V_{CE} = 6\text{V}$ $V_{BE} = 0$			80	
$V_{CE(sat)}$ Collector – Emitter Saturation Voltage	$I_C = 10\text{mA}$ $I_B = 1\text{mA}$			0.15	V
	$I_C = 30\text{mA}$ $I_B = 3\text{mA}$			0.2	
	$I_C = 100\text{mA}$ $I_B = 10\text{mA}$			0.5	
$V_{BE(sat)}$ Base – Emitter On Voltage	$I_C = 10\text{mA}$ $I_B = 1\text{mA}$	0.78		0.98	V
	$I_C = 30\text{mA}$ $I_B = 3\text{mA}$	0.85		1.2.	
	$I_C = 100\text{mA}$ $I_B = 10\text{mA}$			1.7	
h_{FE} DC Current Gain	$I_C = 10\text{mA}$ $V_{CE} = 0.3\text{V}$	30			—
	$I_C = 30\text{mA}$ $V_{CE} = 0.5\text{V}$	40		150	
	$I_C = 30\text{mA}$ $V_{CE} = 0.5\text{V}$ $T_{amb} = -55^\circ\text{C}$	17			
	$I_C = -30\text{mA}$ $V_{CE} = -0.5\text{V}$	25			
f_T Current Gain Bandwidth Product	$V_{CE} = 10\text{V}$ $f = 100\text{MHz}$ $I_C = 30\text{mA}$	400			MHz
C_{ob} Output Capacitance	$V_{CB} = 5\text{V}$ $I_E = 0$ $f = 140\text{KHz}$			6	pF
C_{ib} Input Capacitance	$V_{BE} = 0.5\text{V}$ $I_C = 0$ $f = 140\text{KHz}$			6	
t_{on} Turn on Time	$V_{CC} = 2\text{V}$ $I_C = 30\text{mA}$			60	ns
t_{off} Turn off Time	$I_{B1} = - I_{B2} = 1.5\text{mA}$			90	

* Pulse Test: $t_p \leq 300\mu\text{s}$, $\delta \leq 1\%$.