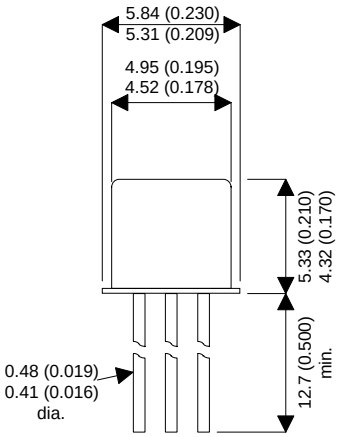
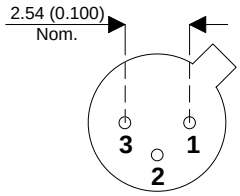
2N2894

PNP SILICON TRANSISTOR

MECHANICAL DATA
Dimensions in mm (inches)





TO18

Underside View

PIN1 – EMITER PIN 2 – BASE PIN 3 – COLLECTOR

FEATURES

- **SILICON PNP TRANSISTOR**
- **HIGH SPEED, LOW SATURATION SWITCH**

APPLICATIONS:

GENERAL PURPOSE SWITCHING APPLICATIONS

ABSOLUTE MAXIMUM RATINGS (T_A = 25°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°C	360mW
		Derate above 25°C	2.06mW / °C
P_D	Total Device Dissipation	@ T_C =25°C	12W
		Derate above 25°C	6.85mW / °C
T_{STG} , T_J	Operating and Storage Temperature Range		–65 to +200°C

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SEME LAB

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

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

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

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