



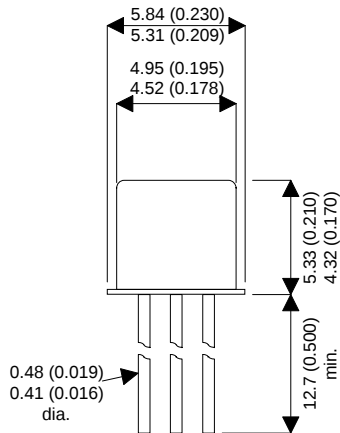
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SEMELAB

2N2894

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 $+200^\circ\text{C}$



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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 Breakdown Voltage	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 f = 100MHz I _C = 30mA	400			MHz
C _{ob} Output Capacitance	V _{CB} = 5V I _E = 0 f = 140KHz			6	pF
C _{ib} Input Capacitance	V _{BE} = 0.5V I _C = 0 f = 140KHz			6	
t _{on} Turn on Time	V _{CC} = 2V I _C = 30mA I _{B1} = - I _{B2} = 1.5mA			60	ns
t _{off} Turn off Time				90	

* Pulse Test: t_p ≤ 300μs, δ ≤ 1%.