

2N4896

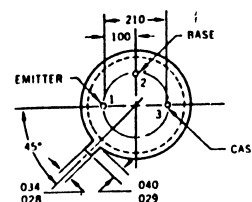
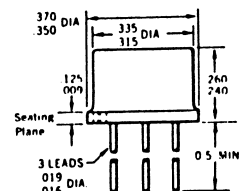
N-P-N Silicon Power Transistor

ABSOLUTE MAXIMUM RATINGS (Note 1)

Maximum Temperatures		
Storage Temperature		-65°C to +200°C
Operating Junction Temperature		200°C
Lead Temperature (60 seconds)		300°C
Maximum Power Dissipation		
Total Dissipation at 25°C Case Temperature	4.0 W	
at 100°C Case Temperature	40 mW/°C	
Linear Derating Factor	0.8 W	
Total Dissipation at 25°C Ambient Temperature	4.57 mW/°C	
Linear Derating Factor		
Maximum Voltage and Current		
V _{CB0} Collector to Base Voltage	120 V	
V _{EB0} Emitter to Base Voltage	6.0 V	
V _{CEO} Collector to Emitter Voltage	60 V	
I _C Collector Current	5.0 A	
I _B Base Current	1.0 A	

PHYSICAL DIMENSIONS

in accordance with
JEDEC (TO-39) outline



NOTES: All dimensions in inches.
Leads are gold plated square.
Lead No. 3 internally connected to case.
Package weight is 1.23 grams.

ELECTRICAL CHARACTERISTICS (25°C Case Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	MIN.	MAX.	UNITS	TEST CONDITIONS
I _{CS}	Collector Cutoff Current		0.1	mA	V _{CE} = 60 V, V _{BE} = 0, T _A = 150°C
			1.0	mA	V _{CE} = 120 V, V _{BE} = 0
			1.0	μA	V _{CE} = 60 V, V _{BE} = 0
I _{EB0}	Emitter Cutoff Current		1.0	μA	V _{EB} = 4.0 V, I _E = 0
			1.0	mA	V _{EB} = 6.0 V, I _E = 0
V _{CEO(sus)}	Collector to Emitter Sustaining Voltage (Notes 4 & 5)	60		V	I _C = 50 mA, I _B = 0
V _{CE(sat)}	Collector to Emitter Saturation Voltage (Notes 5 & 6)		1.0	V	I _C = 5.0 A, I _B = 0.5 A
V _{BE(sat)}	Base to Emitter Voltage (Notes 5 & 6)		1.6	V	I _C = 5.0 A, I _B = 0.5 A
h _{FE}	DC Current Gain (Note 5)	100	300		I _C = 2.0 A, V _{CE} = 2.0 V
		35			I _C = 2.0 A, V _{CE} = 2.0 V, T _A = -55°C
t _r	Rise Time		300	ns	I _C = 5.0 A, I _{B1} = 0.5 A
t _d	Delay Time		50	ns	I _C = 5.0 A, I _{B1} = 0.5 A
t _s	Storage Time		350	ns	I _C = 5.0 A, I _{B1} = I _{B2} = 0.5 A
t _f	Fall Time		300	ns	I _C = 5.0 A, I _{B1} = I _{B2} = 0.5 A
C _{ob}	Output Capacitance		80	pF	I _E = 0, V _{CB} = 10 V, f = 0.14 MHz
C _{ib}	Input Capacitance		500	pF	V _{EB} = 0.5 V, I _C = 0, f = 0.14 MHz
h _{fe}	Magnitude of Common Emitter Small Signal Current Gain	4.0			V _{CE} = 5.0 V, I _C = 0.5 A, f = 20 MHz

