

MEDIUM-POWER PNP SILICON TRANSISTORS

...designed for driver circuits, switching and amplifier applications.

FEATURES:

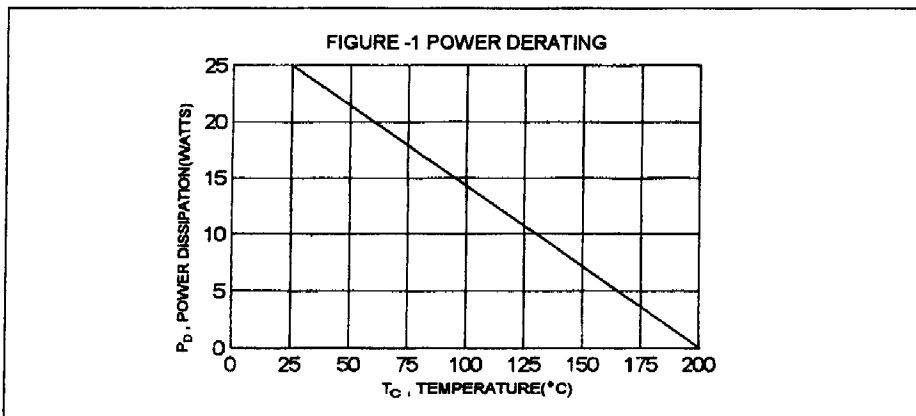
- * Low Collector-Emitter Saturation Voltage
 $V_{CE(sat)} = 0.6 \text{ V (Max.) @ } I_C = 1.0 \text{ A}$
- * Excellent Safe Operating Area
- * Gain Specified to $I_C = 1.0 \text{ Amp.}$
- * 2N4900 Complementary to NPN 2N4912

MAXIMUM RATINGS

Characteristic	Symbol	2N4898	2N4899	2N4900	Unit
Collector-Emitter Voltage	V_{CEO}	40	60	80	V
Collector-Base Voltage	V_{CBO}	40	60	80	V
Emitter-Base Voltage	V_{EBO}	5.0			V
Collector Current-Continuous -Peak	I_C I_{CM}	1.0 4.0			A
Base Current	I_B	1.0			A
Total Power Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	25 0.143			W W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{STG}	- 65 to +200			$^\circ\text{C}$

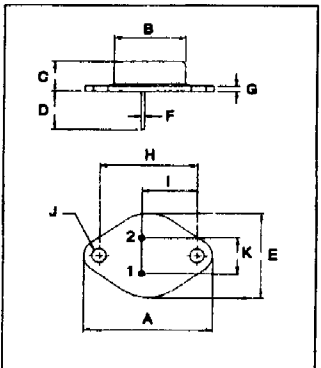
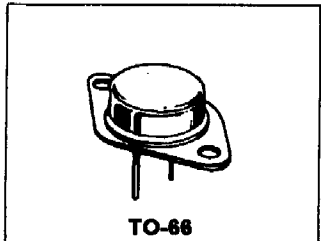
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	$R_{\theta jc}$	7.0	$^\circ\text{C/W}$



PNP
2N4898
2N4899
2N4900

1 AMPERE
PNP SILICON
POWER TRANSISTOR
40- 80 VOLTS
25 WATTS



PN 1. BASE
 2. EMITTER
 COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	30.60	32.52
B	13.85	14.16
C	6.54	7.22
D	9.50	10.50
E	17.28	18.46
F	0.76	0.82
G	1.38	1.65
H	24.16	24.78
I	13.84	15.60
J	3.32	3.92
K	4.88	5.34



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Quality Semi-Conductors

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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector - Emitter Sustaining Voltage (1) ($I_c = 100\text{ mA}$, $I_B = 0$)	2N4898 2N4899 2N4900	$V_{CE(sus)}$	40 60 80	V
Collector Cutoff Current ($V_{CE} = 20\text{ V}$, $I_B = 0$) ($V_{CE} = 30\text{ V}$, $I_B = 0$) ($V_{CE} = 40\text{ V}$, $I_B = 0$)	2N4898 2N4899 2N4900	I_{CEO}	0.5 0.5 0.5	mA
Collector Cutoff Current ($V_{CE} = \text{Rate } V_{CEO}$, $V_{BE(on)} = 1.5\text{ V}$) ($V_{CE} = \text{Rate } V_{CEO}$, $V_{BE(on)} = 1.5\text{ V}$, $T_c = 150^\circ\text{C}$)		I_{CEX}	0.1 1.0	mA
Collector Cutoff Current ($V_{CB} = \text{Rate } V_{CBO}$, $I_E = 0$)		I_{CBO}	0.1	mA
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$, $I_C = 0$)		I_{EBO}	1.0	mA

ON CHARACTERISTICS (1)

DC Current Gain ($I_c = 50\text{ mA}$, $V_{CE} = 1.0\text{ V}$) ($I_c = 500\text{ mA}$, $V_{CE} = 1.0\text{ V}$) ($I_c = 1.0\text{ A}$, $V_{CE} = 1.0\text{ V}$)		hFE	40 20 10	100	
Collector-Emitter Saturation Voltage ($I_c = 1.0\text{ A}$, $I_B = 0.1\text{ A}$)		$V_{CE(sat)}$		0.6	V
Base-Emitter Saturation Voltage ($I_c = 1.0\text{ A}$, $I_B = 0.1\text{ A}$)		$V_{BE(sat)}$		1.3	V
Base-Emitter On Voltage ($I_c = 1.0\text{ A}$, $V_{CE} = 1.0\text{ V}$)		$V_{BE(on)}$		1.3	V

DYNAMIC CHARACTERISTICS

Current Gain - Bandwidth Product (2) ($I_c = 250\text{ mA}$, $V_{CE} = 10\text{ V}$, $f = 1.0\text{ MHz}$)		f_T	3.0		
Output Capacitance ($V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 100\text{ KHz}$)		C_{ob}		100	pF
Small-Signal Current Gain ($I_c = 250\text{ mA}$, $V_{CE} = 10\text{ V}$, $f = 1.0\text{ KHz}$)		h_{fe}	25		

(1) Pulse Test: Pulse width = 300 us, Duty Cycle $\leq 2.0\%$

(2) $f_T = |h_{fe}| \cdot f_{test}$