

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

Rating	Symbol	2N4898	2N4899	2N4900	Unit
Collector-emitter voltage	$V_{CEO}$	40	60	80	Vdc
Collector-base voltage	$V_{CB}$	40	60	80	Vdc
Emitter-base voltage	$V_{EB}$	5.0			Vdc
Collector current – continuous	$I_C$	1.0 4.0			Adc
Base current	$I_B$	1.0			Adc
Total device dissipation $T_C = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	25 0.143			Watts W/ $^\circ\text{C}$
Operating and storage junction temperature range	$T_J, T_{stg}$	-65 to +200			$^\circ\text{C}$
Thermal resistance, junction to case	$\Theta_{JC}$	7.0			$^\circ\text{C}/\text{W}$

The 4.0 amp maximum value is based upon actual current-handling capability of the device.

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

Characteristics	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector emitter sustaining voltage ( $I_C = 0.1\text{Adc}, I_B = 0$ )	2N4898 2N4899 2N4900	$B_{V_{CEO(sus)}}$	40 60 80	- - - Vdc
Collector cutoff current ( $V_{CE} = 20\text{Vdc}, I_B = 0$ ) ( $V_{CE} = 30\text{Vdc}, I_B = 0$ ) ( $V_{CE} = 40\text{Vdc}, I_B = 0$ )	2N4898 2N4899 2N4900	$I_{CEO}$	- - -	0.5 0.5 0.5 mAdc
Collector cutoff current ( $V_{CE} = \text{rated } V_{CEO}, V_{BE(off)} = 1.5\text{Vdc}$ ) ( $V_{CE} = \text{rated } V_{CEO}, V_{BE(off)} = 1.5\text{Vdc}, T_C = 150^\circ\text{C}$ )		$I_{CEX}$	- -	0.1 1.0 mAdc
Collector cutoff current ( $V_{CB} = \text{rated } V_{CB}, I_E = 0$ )		$I_{CBO}$	-	0.1 mAdc
Emitter cutoff current ( $V_{BE} = 5.0\text{Vdc}, I_C = 0$ )		$I_{EBO}$	-	1.0 mAdc
<b>ON CHARACTERISTICS</b>				
DC current gain <sup>(1)</sup> ( $I_C = 50\text{mAdc}, V_{CE} = 1.0\text{Vdc}$ ) ( $I_C = 500\text{mAdc}, V_{CE} = 1.0\text{Vdc}$ ) ( $I_C = 1.0\text{Adc}, V_{CE} = 1.0\text{Vdc}$ )		$h_{FE}^{(1)}$	40 20 10	- 100 - -
Collector emitter saturation voltage ( $I_C = 1.0\text{Adc}, I_B = 0.1\text{Adc}$ )		$V_{CE(sat)}^{(1)}$	-	0.6 Vdc
Base emitter saturation voltage ( $I_C = 1.0\text{Adc}, I_B = 0.1\text{Adc}$ )		$V_{BE(sat)}^{(1)}$	-	1.3 Vdc

# 2N4898-2N4900

## PNP SILICON MEDIUM POWER TRANSISTORS

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

Characteristics	Symbol	Min	Max	Unit
<b>Base emitter on voltage</b> ( $I_C = 1.0\text{Adc}$ , $V_{CE} = 1.0\text{Vdc}$ )	$V_{BE(on)}^{(1)}$	-	1.3	Vdc
<b>SMALL SIGNAL CHARACTERISTICS</b>				
<b>Current gain - bandwidth product</b> ( $I_C = 250\text{mAdc}$ , $V_{CE} = 10\text{vdc}$ , $f = 1.0\text{MHz}$ )	$f_T$	3.0	-	MHz
<b>Output capacitance</b> ( $V_{CB} = 10\text{Vdc}$ , $I_E = 0$ , $f = 100\text{kHz}$ )	$C_{ob}$	-	100	pF
<b>Small signal current gain</b> ( $I_C = 250\text{mAdc}$ , $V_{CE} = 10\text{Vdc}$ , $f = 1.0\text{kHz}$ )	$h_{fe}$	25	-	-

### MECHANICAL CHARACTERISTICS

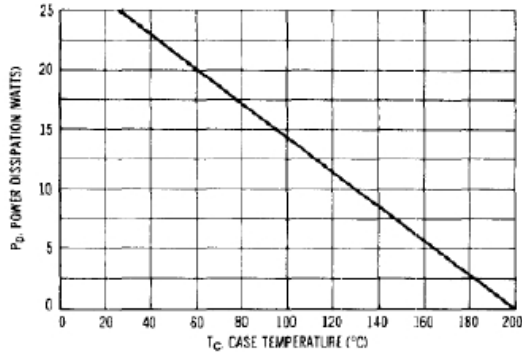
Case	TO-66
Marking	Alpha-numeric
Polarity	See below



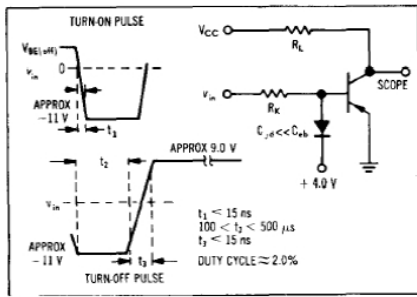
Dim	TO-66			
	Inches		Millimeters	
	Min	Max	Min	Max
BL	1.205	1.280	30.60	32.50
CD	0.445	0.557	11.303	14.148
CH	0.257	0.284	6.540	7.220
LL	0.374	0.413	9.500	10.50
BW	0.680	0.727	17.26	18.46
LD	0.030	0.036	0.760	0.920
HT	0.054	0.065	1.380	1.650
MHS	0.951	0.976	24.16	24.78
S1	0.545	0.614	13.84	15.60
HD	0.131	0.154	3.320	3.920
PS	0.191	0.210	4.860	5.340

# 2N4898-2N4900

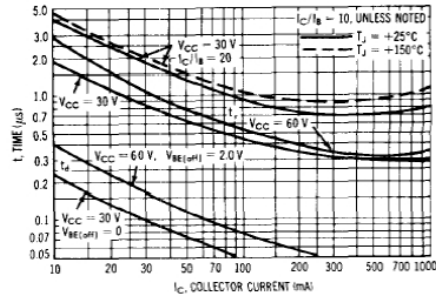
## PNP SILICON MEDIUM POWER TRANSISTORS



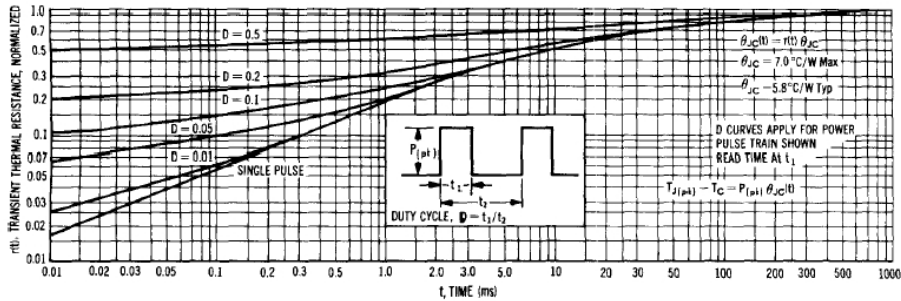
POWER TEMPERATURE DERATING CURVE



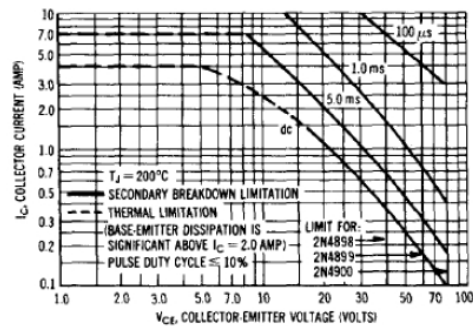
SWITCHING TIME EQUIVALENT CIRCUIT



TURN ON TIME



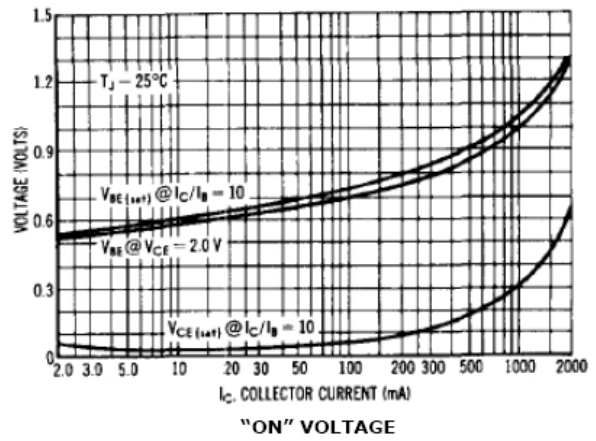
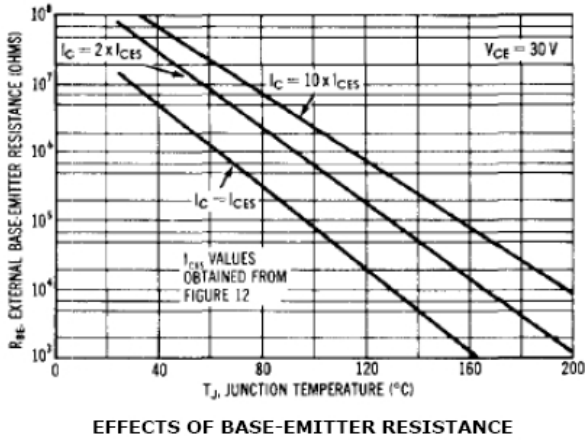
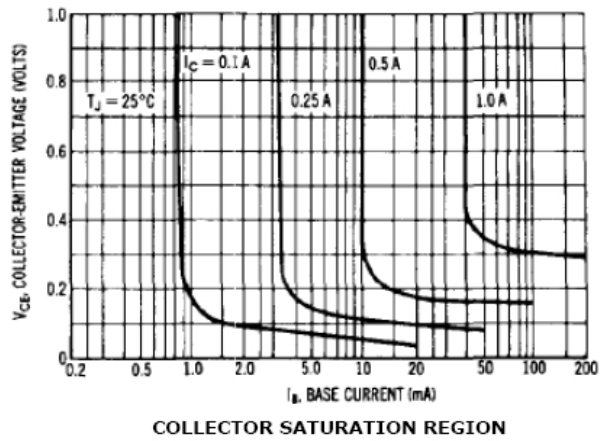
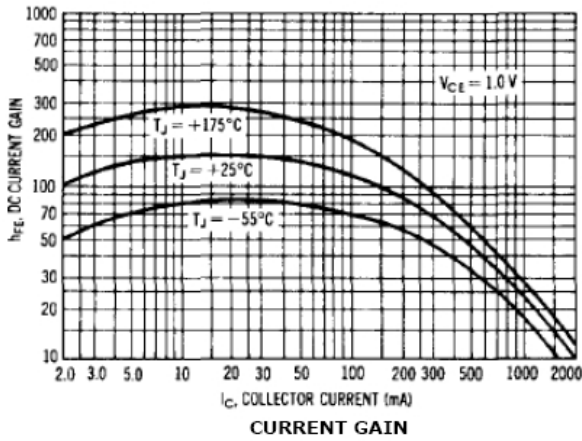
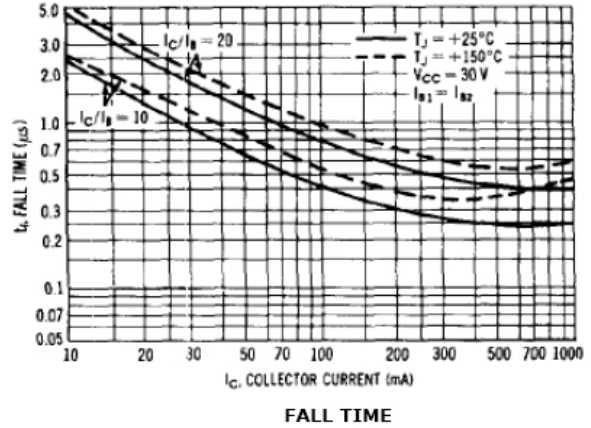
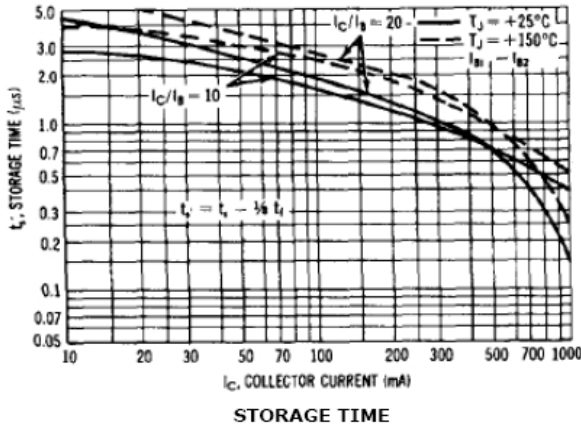
THERMAL RESPONSE



ACTIVE REGION SAFE OPERATING AREA

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