

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

Ratings	Symbol	2N6294 2N6296	2N6295 2N6297	Unit
Collector-base voltage	V_{CBO}	60	80	V
Collector-emitter voltage	V_{CEO}	60	80	V
Emitter-base voltage	V_{EBO}	5.0		V
Continuous collector current	I_C	4.0		A
Peak	I_{cm}	8.0		A
Base current	I_B	80		mA
Total device dissipation @ $T_C = 25^\circ\text{C}$	P_D	50		W
Junction temperature	T_J	150		$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 to +200		$^\circ\text{C}$
Thermal resistance, junction to case	$R_{\theta JC}$	3.5		$^\circ\text{C}/\text{W}$

Note 1: Derate linearly at 0.428W/ $^\circ\text{C}$ above $T_C > 0^\circ\text{C}$.

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

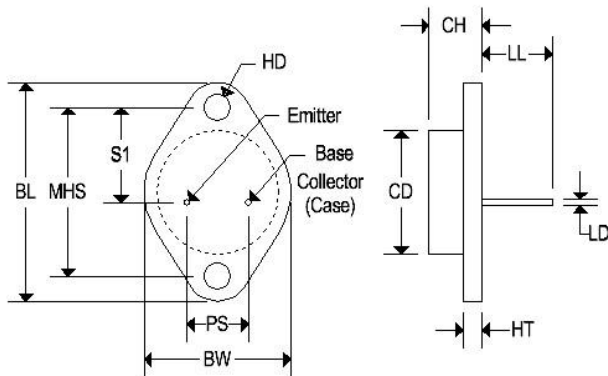
Characteristics		Symbol	Min	Max	Unit
ON CHARACTERISTICS					
Collector- emitter breakdown voltage $I_C = 50\text{mA}$	2N6294, 2N6296	$V_{CEO(sus)}$	60	-	V
	2N6295, 2N6297		80	-	
Collector emitter saturation voltage $I_C = 2.0\text{A}, I_B = 8\text{mA}$ $I_C = 4.0\text{A}, I_B = 40\text{mA}$		$V_{CE(sat)}$	-	2.0	V
			-	3.0	
Base emitter saturation voltage $I_C = 4.0\text{A}, I_B = 40\text{mA}$		$V_{BE(sat)}$	-	4.0	V
Base emitter on-voltage $I_C = 2\text{A}, V_{CE} = 3\text{V}$		$V_{BE(on)}$	-	2.8	V
Collector cutoff current $V_{CE} = \text{Rated } V_{CE}, V_{BE(off)} = 1.5\text{V}$ $V_{CE} = \text{Rated } V_{CE}, V_{BE(off)} = 1.5\text{V}, T_C = 150^\circ$		I_{CEX}	-	0.5	mA
			-	5.0	
Collector cutoff current $V_{CE} = \frac{1}{2} \text{ Rated } V_{CEO}, I_B = 0$		I_{CEO}	-	0.5	mA
Emitter cutoff current $V_{EB} = 5.0\text{V}, I_C = 0$		I_{EBO}	-	2.0	mA
DC current gain $I_C = 2.0\text{A}, V_{CE} = 3\text{V}$ $I_C = 4.0\text{A}, V_{CE} = 3\text{V}$		h_{FE}	750	18000	-
			100	-	
Transition frequency $I_C = 1.5\text{A}, V_{CE} = 3\text{V}, f = 1\text{MHz}$		f_T	4.0	-	MHz
Output capacitance $V_{CB} = 10\text{V}, I_E = 0, f = 0.1\text{MHz}$		C_{obo}	-	120	pF

2N6294-2N6295 – NPN 2N6296-2N6297-PNP

NPN SILICON POWER TRANSISTORS

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	0.545	11.303	13.843
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