

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	2N3789 2N3791	2N3790 2N3792	Units
Collector-base voltage	V_{CBO}	60	80	V
Collector-emitter voltage	V_{CEO}	60	80	V
Emitter base voltage	V_{EB}	7		V
Collector current – continuous	I_C	10		A
Base current – continuous	I_B	4		A
Total power dissipation $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	150	0.857	W 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	R_{thj-c}	1.17		$^\circ\text{C}/\text{W}$

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

Characteristic	Symbol	Min	Max	Unit	
OFF CHARACTERISTICS					
Collector-emitter sustaining voltage ⁽¹⁾ ($I_B = 0, I_C = 200\text{mA}$)	2N3789, 2N3791	$V_{CEO(sus)}$	60	-	V
	2N3790, 2N3792		80	-	
Collector cutoff current ($V_{CE} = 60\text{V}, V_{BE(OFF)} = -1.5\text{V}$) ($V_{CE} = 60\text{V}, V_{BE(OFF)} = -1.5\text{V}$) ($V_{CE} = 60\text{V}, V_{BE(OFF)} = -1.5\text{V}, T_C = 150^\circ\text{C}$) ($V_{CE} = 60\text{V}, V_{BE(OFF)} = -1.5\text{V}, T_C = 150^\circ\text{C}$)	2N3789, 2N3791	I_{CEX}	-	1.0	mA
	2N3790, 2N3792		-	1.0	
	2N3789, 2N3791		-	5.0	
	2N3790, 2N3792		-	5.0	
Emitter cutoff current ($I_C = 0, V_{EB} = 7.0\text{V}$)	I_{EBO}	-	5.0	mA	
ON CHARACTERISTICS					
DC current gain ($I_C = 1.0\text{A}, V_{CE} = 2.0\text{V}$) ($I_C = 3\text{A}, V_{CE} = 2.0\text{V}$)	2N3789, 2N3791	h_{FE}	25	90	-
	2N3790, 2N3792		50	180	
	2N3789, 2N3791		15	-	
	2N3790, 2N3792		30	-	
Collector emitter saturation voltage ($I_C = 4\text{A}, I_B = 0.4\text{A}$) ($I_C = 5\text{A}, I_B = 0.5\text{A}$)	2N3789, 2N3790	$V_{CE(sat)}$	-	1.0	V
	2N3791, 2N3782		-	1.0	

2N3789-2N3792

PNP SILICON POWER TRANSISTORS

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

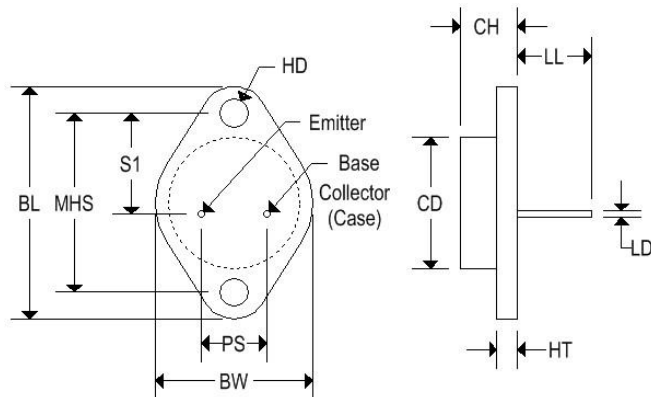
Characteristic	Symbol	Min	Max	Unit	
ON CHARACTERISTICS					
Base emitter on voltage ($I_C = 10\text{A}, V_{CE} = 2.0\text{V}$) ($I_C = 15\text{A}, V_{CE} = 2.0\text{V}$) ($I_C = 20\text{A}, V_{CE} = 4.0\text{V}$) ($I_C = 30\text{A}, V_{CE} = 4.0\text{V}$)	2N3790 2N3789, 2N3792 2N3790 2N3789, 2N3792	$V_{BE(ON)}$	- - - -	1.5 1.7 2.5 3.0	V
DYNAMIC CHARACTERISTICS					
Current gain bandwidth product ⁽²⁾ ($I_C = 1.0\text{A}, V_{CE} = 10\text{V}, f = 1.0\text{MHz}$)	2N3789, 2N3792 2N3790	f_T	4.0 2.0	- -	MHz

Note 1: Pulse duration = 300 μs , duty cycle $\leq 2.0\%$.

Note 2: $f_T = |h_{fe}| \cdot f_{test}$

MECHANICAL CHARACTERISTICS

Case	TO-3
Marking	Alpha-numeric
Pin out	See below



	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	0.060	0.135	1.520	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550	REF	39.370	REF
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150

2N3789-2N3792

PNP SILICON POWER TRANSISTORS

