

2N6436-2N6438

PNP SILICON POWER TRANSISTORS

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	2N6436	2N6437	2N6438	Units
Collector-base voltage	V_{CBO}	80	100	120	V
Collector-emitter voltage	V_{CEO}	100	120	140	V
Emitter base voltage	V_{EB}	6			V
Collector current – continuous	I_C	25	25	25	A
Collector current – peak	I_C	50	50	50	A
Base current – continuous	I_B	10			A
Total power dissipation $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	200			W
		1.14			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_{th-j-c}	0.875			$^\circ\text{C}/\text{W}$

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-emitter sustaining voltage ⁽¹⁾ ($I_B = 0, I_C = 50\text{mA}$)	2N6436 2N6437 2N6438	80 100 120	- - -	V
Collector cutoff current ($V_{CE} = 40\text{V}, I_B = 0$) ($V_{CE} = 50\text{V}, I_B = 0$) ($V_{CE} = 60\text{V}, I_B = 0$)	2N6436 2N6437 2N6438	- - -	50 50 50	μA
Collector cutoff current ($V_{Cb} = \text{Rated } V_{CB}, I_E = 0$)	I_{CEX}	-	10	μA
Emitter cutoff current ($I_C = 0, V_{EB} = 6.0\text{V}$)	I_{EBO}	-	100	μA
ON CHARACTERISTICS				
DC current gain ($I_C = 0.5\text{A}, V_{CE} = 2.0\text{V}$) ($I_C = 10\text{A}, V_{CE} = 2.0\text{V}$) ($I_C = 25\text{A}, V_{CE} = 2.0\text{V}$)	h_{FE}	30 20 12	- 80 -	-
Collector emitter saturation voltage ($I_C = 10\text{A}, I_B = 1.0\text{A}$) ($I_C = 25\text{A}, I_B = 2.5\text{A}$)	$V_{CE(sat)}$	- -	1.0 1.8	V

2N6436-2N6438

PNP SILICON POWER TRANSISTORS

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

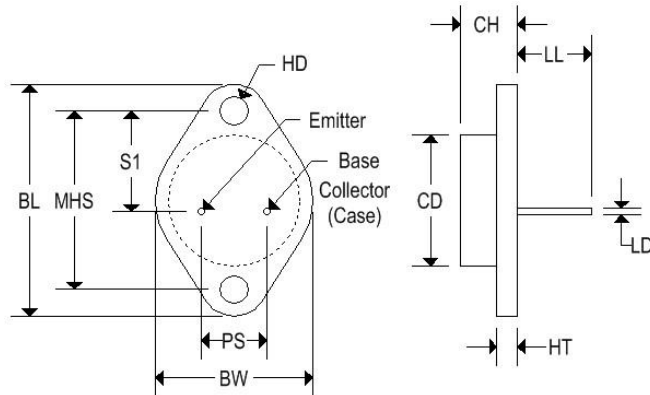
Characteristic	Symbol	Min	Max	Unit
ON CHARACTERISTICS				
Base emitter saturation voltage ($I_C = 10\text{A}, I_B = 1.0\text{A}$) ($I_C = 25\text{A}, I_B = 2.5\text{A}$)	$V_{BE(sat)}$	- -	1.8 2.5	V
DYNAMIC CHARACTERISTICS				
Current gain bandwidth product ⁽²⁾ ($I_C = 1.0\text{A}, V_{CE} = 10\text{V}, f = 10\text{MHz}$)	f_T	40	-	MHz
Output capacitance ($V_{CB} = 10\text{V}, I_E = 0, f = 0.1\text{MHz}$)	h_{fe}	-	700	pF

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

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

MECHANICAL CHARACTERISTICS

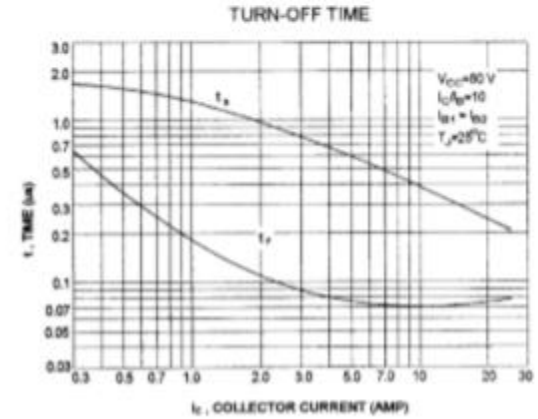
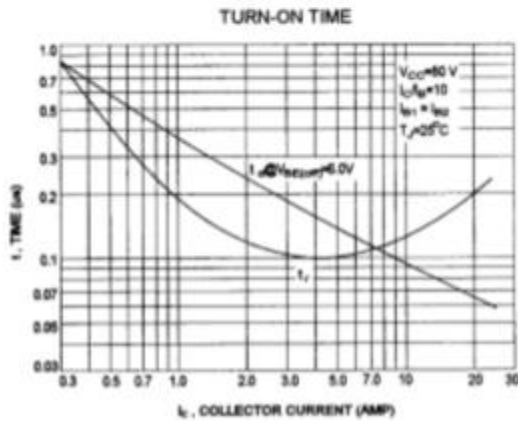
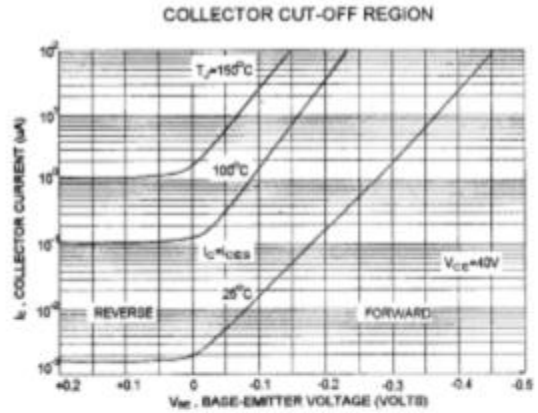
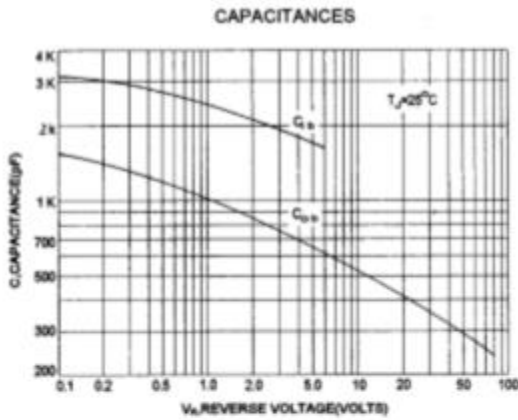
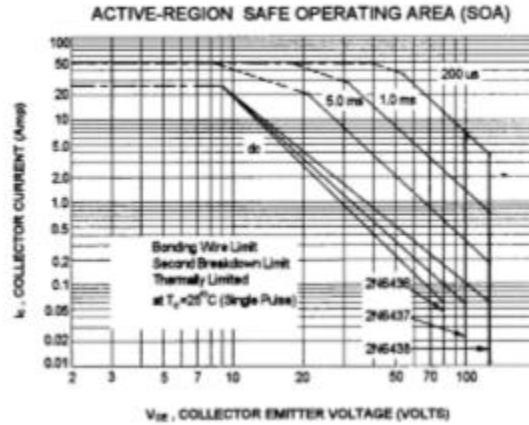
Case	TO-3
Marking	Alpha-numeric
Pin out	See below



	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

2N6436-2N6438

PNP SILICON POWER TRANSISTORS



2N6436-2N6438

PNP SILICON POWER TRANSISTORS

