

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

Parameter	Symbol	2SC3156	Unit
Collector-base voltage	V_{CBO}	900	V
Collector-emitter voltage	V_{CEO}	800	V
Emitter-base voltage	V_{EBO}	7.0	V
Collector current – continuous	I_C	6	A
Collector current – peak ⁽¹⁾	I_{CM}	20	A
Base current	I_B	3	A
Total power dissipation	P_D	120	W
Junction and storage temperature range	T_J, T_{stg}	-55 to 150	°C

Note 1: Pulse width $\leq 300\mu s$, duty cycle $\leq 10\%$.

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ C$ unless otherwise noted)

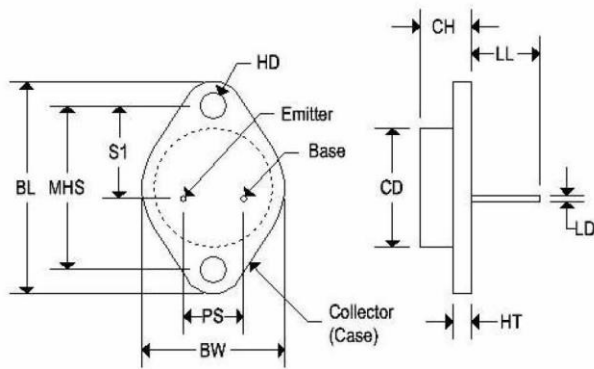
Parameter	Symbol	Conditions	2SC3156			Unit
			Min	Typ	Max	
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 5mA, R_{BE} = \infty$	800	-	-	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 1mA, I_E = 0$	900	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1mA, I_C = 0$	7	-	-	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3.0A, I_B = 0.6A$	-	-	2.0	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3.0A, I_B = 0.6A$	-	-	1.5	V
Collector cutoff current	I_{CBO}	$V_{CB} = 800V, I_E = 0$	-	-	10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	10	μA
DC current gain	h_{FE}	$I_C = 0.4A, V_{CE} = 5V$	10	-	-	-
		$I_C = 2.0A, V_{CE} = 5V$	8	-	-	-
Output capacitance	C_{ob}	$I_E = 0, V_{CB} = 10V, f = 1MHz$	-	120	-	pF
Transition frequency	f_T	$I_C = 0.4A, V_{CE} = 10V$	-	15	-	MHz
Turn-on time	t_{on}	$I_C = 4A, I_{B1} = 0.8A, I_{B2} = -1.6A, V_{CC} = 400V, R_L = 100\Omega$	-	-	1.0	μs
Storage time	t_s		-	-	2.5	μs
Fall time	t_f		-	-	0.7	μs

2SC3156

SILICON NPN TRANSISTOR

MECHANICAL CHARACTERISTICS

Case:	TO-3
Marking:	Alpha-Numeric
Polarity:	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