DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

2N6259

SILICON NPN TRANSISTOR

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	2N6259	Unit
Collector-base voltage	V_{CBO}	170	V
Collector-emitter voltage	V_{CEO}	150	V
Emitter-base voltage	V_{EBO}	7.0	V
Collector current – continuous	I_C	16	A
Collector current – peak	I_{CM}	30	A
Base current – continuous **Peak**	I_B	4.0 15	A
Total power dissipation **Derate above 25°C**	P_D	150 0.857	W W/°C
Junction and storage temperature range	T_J, T_{stg}	-65 to 200	°C
Thermal resistance, junction to case	$R_{\Theta JC}$	1.17	°C/W

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Conditions	2SC1325A		Unit
			Min	Max	
Collector-emitter voltage sustaining voltage(1)	$V_{CEO(sus)}$	I_C = 100mA, I_B = 0	150	-	V
Collector cutoff current	I_{CEO}	V_{CE} = 130V, I_B = 0	-	10	mA
Collector cutoff current	I_{CEX}	V_{CE} = 150V, $V_{BE(off)}$ = 1.5V	-	2.0	mA
Collector cutoff current	I_{CBO}	V_{CE} = 150V, I_E = 0	-	2.0	mA
Emitter cutoff current	I_{EBO}	V_{EB} = 7V, I_C = 0	-	5.0	mA
DC current gain(1)	h_{FE}	I_C = 8.0A, V_{CE} = 2V I_C = 16A, V_{CE} = 2V	15 10	60 -	-
Collector-emitter saturation voltage(1)	$V_{CE(sat)}$	I_C = 8.0A, I_B = 800mA I_C = 16A, V_{CE} = I_B = 3.2A	- -	1.0 2.5	V
Base-emitter on voltage(1)	$V_{BE(on)}$	I_C = 8.0A, V_{CE} = 2.0V	-	2.0	V

Note 1: Pulse test: pulse width = 300µs, duty cycle = 2%.

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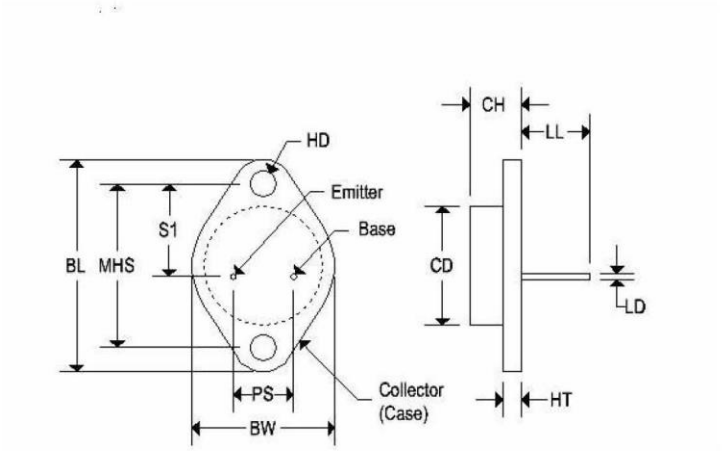
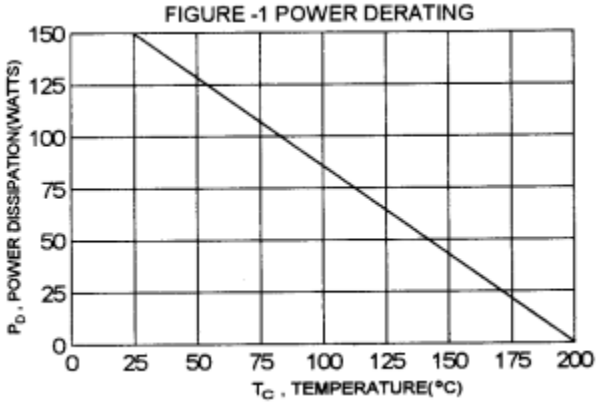
MECHANICAL CHARACTERISTICS

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

FIGURE -1 POWER DERATING



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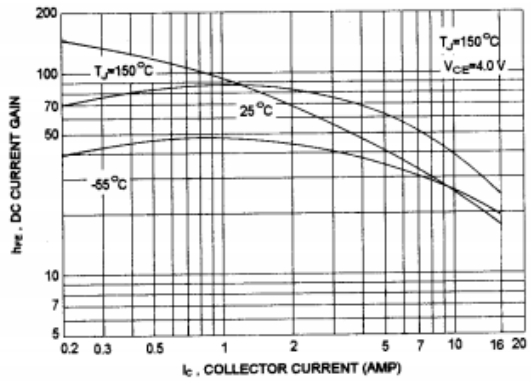
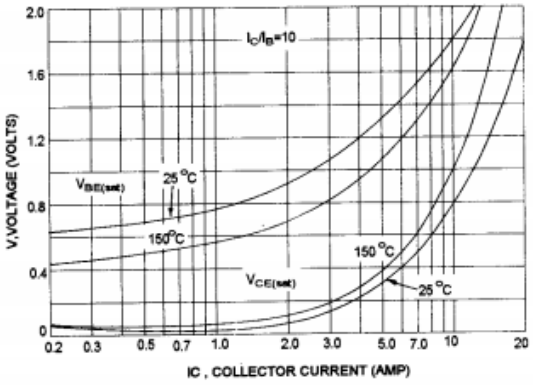
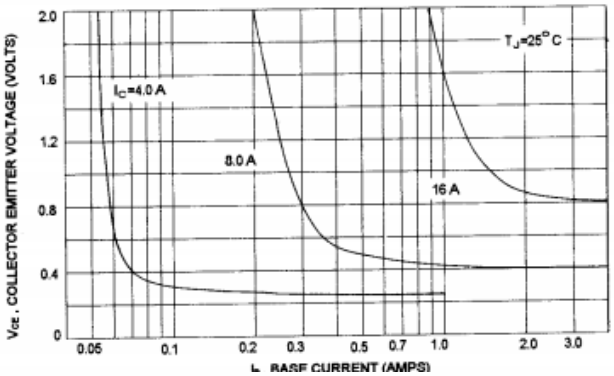
DC CURRENT GAIN



"ON" VOLTAGES



COLLECTOR SATURATION REGION



FORWARD BIAS SAFE OPERATING AREA (SOA)