DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

2N5050-2N5052

NPN SILICON HIGH POWER TRANSISTORS

NFEATURES

- 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	2N5050	2N5051	2N5052	Unit
Collector-Emitter Voltage	V_{CEO}	125	150	200	Vdc
Collector-Base Voltage	V_{CBO}	125	150	200	Vdc
Emitter-Base Voltage	V_{EBO}	7.0			Vdc
Collector Current	I_C	2.0			Adc
Total Power Dissipation T_C = 25°C	P_D	40			W
Junction Temperature	T_J	150			°C
Storage Junction Temperature Range	T_{stg}	-65 to +200			°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	7.0			°C/W

ELECTRICAL CHARACTERSITICS (T_A = 25°C unless otherwise specified)

Characteristics		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage I_C = 10mA, I_B = 0	2N5050 2N5051 2N5052	$V_{CEO(sus)}$	125 150 200	- - -	Vdc
Collector-Emitter Saturation Voltage I_C = 2Adc, I_B = -0.5 Adc		$V_{CE(sat)}$	-	1.2	Vdc
Collector-Base Saturation Voltage I_C = 2Adc, I_B = -0.5 Adc		$V_{BE(sat)}$	-	1.5	Vdc
Base-Emitter On-Voltage I_C = 750mAdc, V_{CE} = 5Vdc		$V_{BE(ON)}$	-	1.2	Vdc
Collector Cutoff Current V_{CE} = 125Vdc, I_B = 0 V_{CE} = 150Vdc, I_B = 0 V_{CE} = 200Vdc, I_B = 0	 2N5050 2N5051 2N5052	I_{CEO}	 - - -	 - 5.0 -	mAdc
Collector Cutoff Current V_{CB} = Rated V_{CBO}, I_E = 0		I_{CBO}	-	0.1	mAdc
Emitter Cutoff Current V_{EB} = 7Vdc, I_C = 0		I_{EBO}	-	1.0	mAdc
DC Current Gain I_C = 750mAdc, V_{CE} = 5.0 Vdc		h_{FE}	25	100	-
Transition Frequency I_C = 500mAdc, V_{CE} = 10Vdc, f = 1MHz		f_T	10 (typ)		MHz

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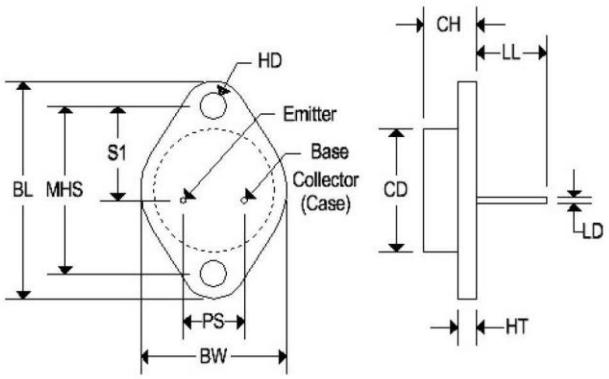
MECHANICAL CHARACTERISTICS

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	0.557	11.303	14.148
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