DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

2SD424

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	Test Conditions	Value	Unit
Collector-base voltage	V_{CBO}	Open emitter	180	V
Collector-emitter voltage	V_{CEO}	Open base	180	V
Emitter-base voltage	V_{EBO}	Open collector	5	V
Collector current	I_C		15	A
Base current	I_B		1.5	A
Collector power dissipation	P_C	T_C = 25°C	150	W
Junction temperature	T_J		150	°C
Storage temperature	T_{stg}		-55 ~ 150	°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 0, I_B = 0	180			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 10mA, I_C = 0	5			V
Collector-emitter saturation voltage	V_{CEsat}	I_C = 10A, I_B = 1A			3.0	V
Base-emitter on voltage	V_{BE}	I_C = 10A, V_{CE} = 5V			2.5	V
Collector cut-off current	I_{CBO}	V_{CB} = 90V, I_E = 0			0.1	mA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V, I_C = 0			0.1	mA
DC current gain	h_{FE}	I_C = 2A, V_{CE} = 5V	40		140	
Output capacitance	C_{OB}	I_E =0, V_{CB} = 10V, f = 1.0MHz		300		pF
Transition frequency	f_T	I_C = 2A, V_{CE} = 5V		5		MHz

hFE Classifications

R	O
40-80	70-140

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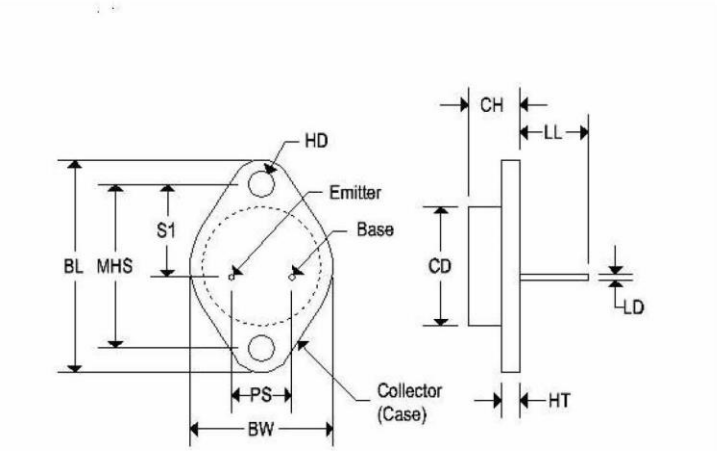
MECHANICAL CHARACTERISTICS

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