DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

2SD868

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	2SD868	Unit
Collector-base voltage	V_{CBO}	1500	V
Collector-emitter voltage	V_{CEO}	600	V
Emitter-base voltage	V_{EBO}	5	V
Collector current – continuous	I_C	2.5	A
Emitter current	I_{EBO}	-2.5	A
Total power dissipation	P_D	50	W
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-65 to 150	°C

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

Parameter	Symbol	Conditions	2SD868			Unit
			Min	Typ	Max	
Collector cutoff current	I_{CBO}	V_{CB} = 500V, I_E = 0	-	-	10	µA
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 200mA, I_C = 0	5	-	-	V
DC current gain	h_{FE}	I_C = 0.5A, V_{CE} = 5V	8	12	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 2.0A, I_B = 0.6A	-	5	8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 2.0A, I_B = 0.6A	-	-	1.5	V
Forward voltage (damper diode)	$-V_F$	I_F = 2.5A	-	1.6	2.0	V
Transition frequency	f_T	I_C = 0.1A, V_{CE} = 10V	-	3	-	MHz
Output capacitance	C_{ob}	I_E = 0, V_{CB} = 10V, f = 1MHz	-	95	-	pF
Fall time	t_f	I_{CP} = 2A, I_{B1} (end) = 0.6A	-	0.5	1.0	µs

DIGITRON™ Semiconductors

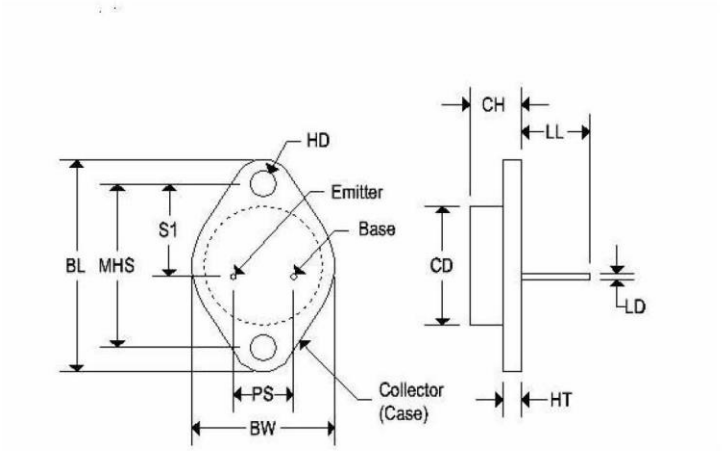
High-reliability discrete products
and engineering services since 1977

2SD868

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

DIGITRON™ Semiconductors

High-reliability discrete products and engineering services since 1977

2SD868

SILICON NPN TRANSISTOR