

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

Characteristic	Symbol	2SD869	Unit
Collector-Emitter Voltage	V_{CEO}	600	V
Collector-Emitter Voltage	V_{CBO}	1500	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Collector Current – continuous	I_C	3.5	A
Emitter Current -continuous	I_E	-3.5	A
Total Power Dissipation @ $T_C = 25^\circ\text{C}$	P_D	50	W
Operating and Storage Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise specified)

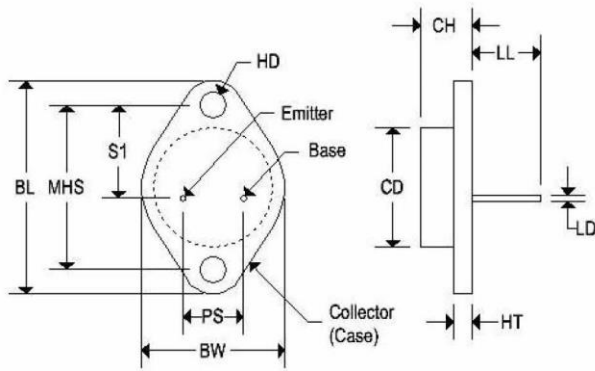
Characteristic	Symbol	Min	Typ	Max	Unit
Collector Cutoff Current ($V_{CB} = 500\text{V}, I_E = 0$)	I_{CBO}	-	-	5	μA
Emitter Base Breakdown Voltage ($I_E = 200\text{mA}, I_C = 0$)	$V_{BR(EBO)}$	5	-	-	V
DC Current Gain ($I_C = 0.5\text{A}, V_{CE} = 5.0\text{V}$)	h_{FE}	8	12	-	-
Collector-Emitter Saturation Voltage ($I_C = 3.0\text{A}, I_B = 0.8\text{A}$)	$V_{CE(sat)}$	-	5	8	V
Base-Emitter Saturation Voltage ($I_C = 3.0\text{A}, I_B = 0.8\text{A}$)	$V_{BE(sat)}$	-	-	1.5	V
Forward Voltage (Damper Diode) ($I_F = 3\text{A}$)	$-V_F$	-	.6	2.0	V
Transition Frequency ($V_{CE} = 10\text{V}, I_C = 0.1\text{A}$)	f_T	-	3	-	MHz
Collector Output Capacitance ($V_{CB} = 10\text{V}, I_E = 0, f = 1.0\text{kHz}$)	C_{ob}	-	95	-	pF
Fall Time ($I_{CP} = 3\text{A}, I_{B1(end)} = 0.8\text{A}$)	t_f	-	0.5	1.0	μs

2SD869

NPN POWER TRANSISTORS

MECHANICAL CHARACTERISTICS

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

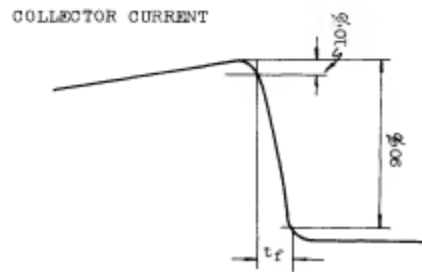
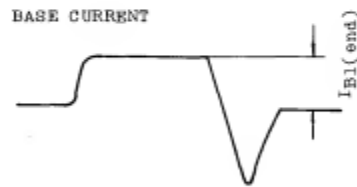
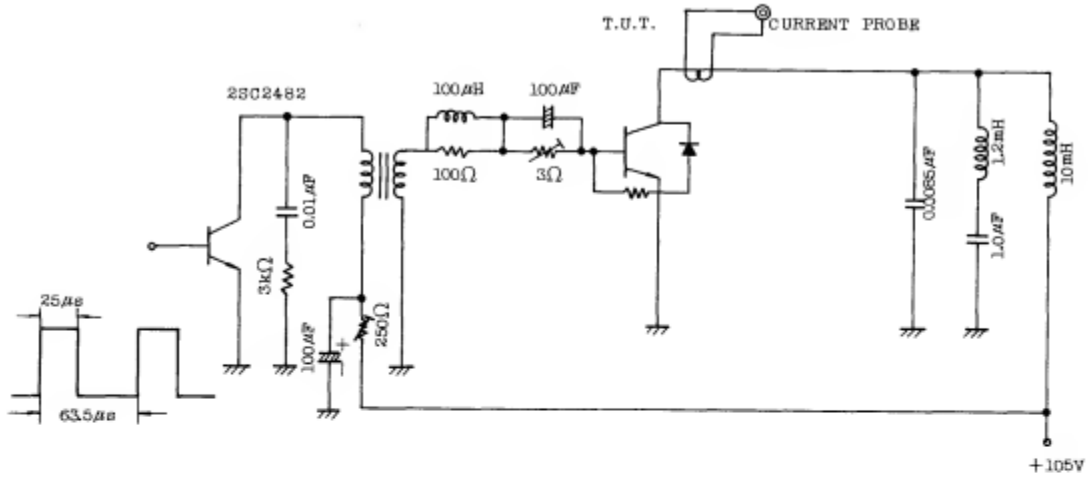


	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	0.060	0.135	1.520	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150

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Fig. t_f TEST CIRCUIT



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