2SD1133, 2SD1134

Silicon NPN Triple Diffused

HITACHI

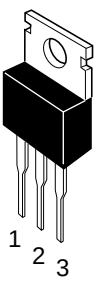
ADE-208-905 (Z)
1st. Edition
Sep. 2000

Application

Low frequency power amplifier complementary pair with 2SB857 and 2SB858

Outline

TO-220AB



1. Base
2. Collector (Flange)
3. Emitter

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings 2SD1133	Ratings 2SD1134	Unit
Collector to base voltage	V_{CBO}	70	70	V
Collector to emitter voltage	V_{CEO}	50	60	V
Emitter to base voltage	V_{EBO}	5	5	V
Collector current	I_C	4	4	A
Collector peak current	$I_{C(peak)}$	8	8	A
Collector power dissipation	P_C*[1]	40	40	W
Junction temperature	Tj	150	150	°C
Storage temperature	Tstg	–45 to +150	–45 to +150	°C

Note: 1. Value at T_C = 25°C.

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Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SD1133 Min	2SD1133 Typ	2SD1133 Max	2SD1134 Min	2SD1134 Typ	2SD1134 Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	70	—	—	70	—	—	V	I_C = 10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	60	—	—	V	I_C = 50 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	5	—	—	V	I_E = 10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	1	—	—	1	µA	V_{CB} = 50 V, I_E = 0
DC current transfer ratio	h_{FE1}*[1]	60	—	320	60	—	320		V_{CE} = 4V I_C = 1 A*[2]
	h_{FE2}	35	—	—	35	—	—		I_C = 0.1 A*[2]
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	1	—	—	1	V	I_C = 2 A, I_B = 0.2 A*[2]
Base to emitter voltage	V_{BE}	—	—	1	—	—	1	V	V_{CE} = 4 V, I_C = 1 A*[2]
Gain bandwidth product	f_T	—	7	—	—	7	—	MHz	V_{CE} = 4 V, I_C = 0.5 A*[2]

Notes: 1. The 2SD1133 and 2SD1134 are grouped by h_{FE1} as follows.
2. Pulse test.

B	C	D
60 to 120	100 to 200	160 to 320