

2SD1138

Silicon NPN Triple Diffused

RENESAS

ADE-208-908 (Z)

1st. Edition

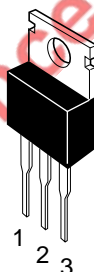
September 2000

Application

Low frequency high voltage power amplifier TV vertical deflection output complementary pair with 2SB861

Outline

TO-220AB



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

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V _{CBO}	200	V
Collector to emitter voltage	V _{CEO}	150	V
Emitter to base voltage	V _{EBO}	6	V
Collector current	I _C	2	A
Collector peak current	I _{C (peak)}	5	A
Collector power dissipation	P _C	1.8	W
	P _C ^{*1}	30	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−45 to +150	°C

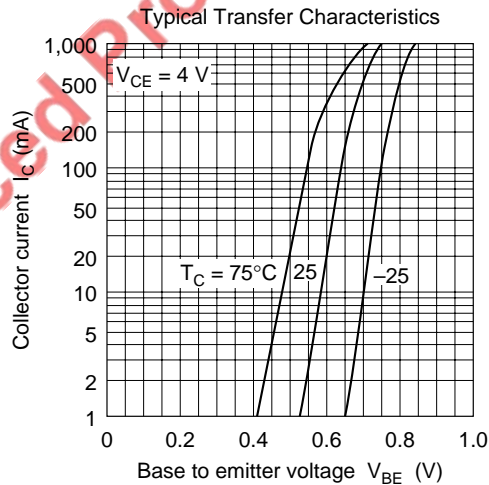
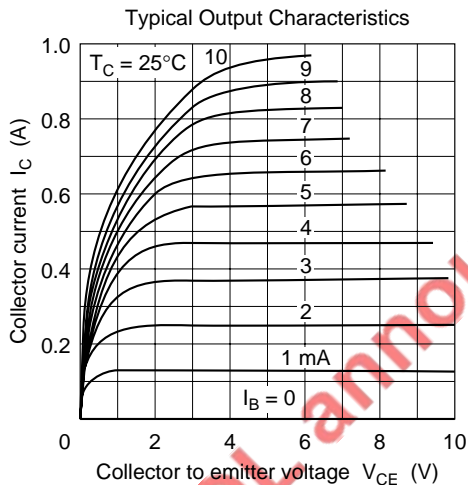
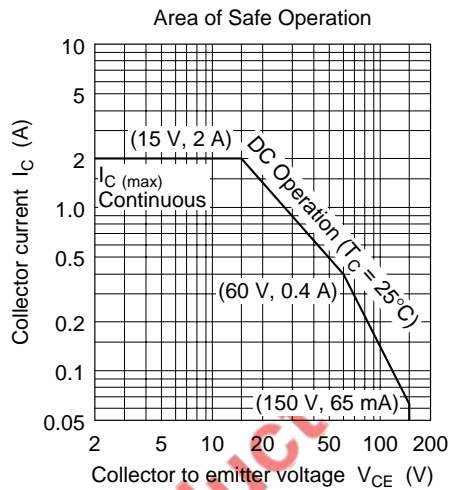
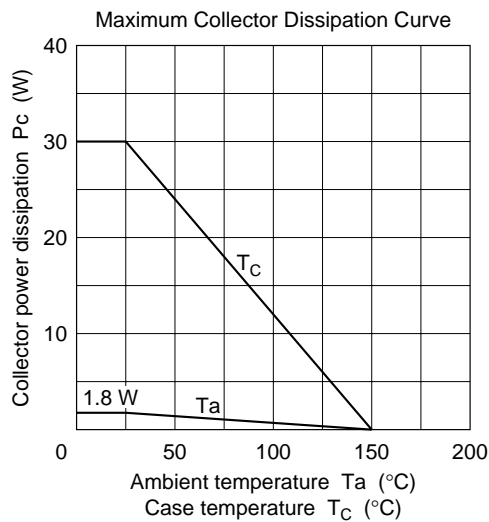
Note: 1. Value at T_C = 25°C.

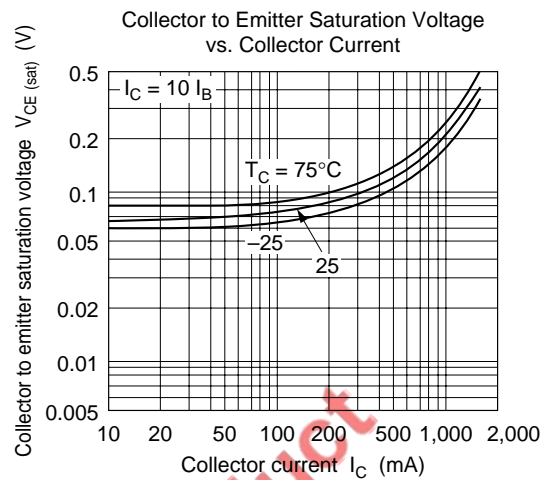
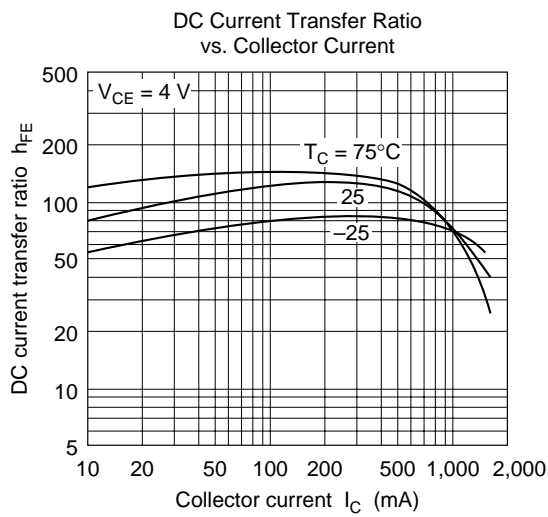
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	V _{(BR)CEO}	150	—	—	V	I _C = 50 mA, R _{BE} = ∞
Emitter to base breakdown voltage	V _{(BR)EBO}	6	—	—	V	I _E = 5 mA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	1	μA	V _{CB} = 120 V, I _E = 0
DC current transfer ratio	h _{FE1} ^{*1}	60	—	320		V _{CE} = 4 V, I _C = 50 mA
	h _{FE2}	60	—	—		V _{CE} = 10 V, I _C = 500 mA ^{*2}
Collector to emitter saturation voltage	V _{CE (sat)}	—	—	3.0	V	I _C = 500 mA, I _B = 50 mA ^{*2}
Base to emitter voltage	V _{BE}	—	—	1.0	V	V _{CB} = 4 V, I _C = 50 mA
Collector output capacitance	Cob	—	20	—	pF	V _{CB} = 100 V, I _E = 0, f = 1 MHz

Note: 1. The 2SD1138 is grouped by h_{FE1} as follows.
2. Pulse test.

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





EOL announced Product

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