2SD1137

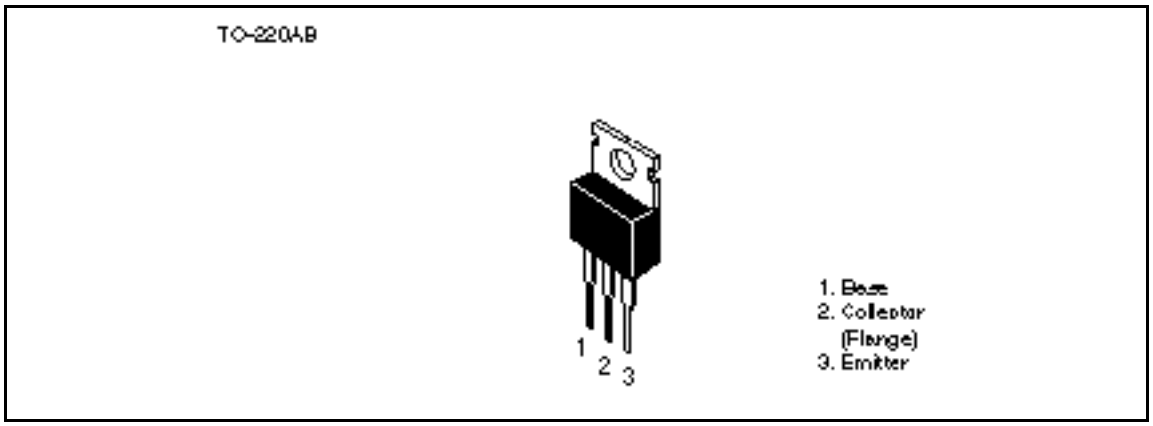
Silicon NPN Triple Diffused

HITACHI

Application

Low frequency power amplifier TV vertical deflection output complementary pair with 2SB860

Outline



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	100	V
Collector to emitter voltage	V_{CEO}	100	V
Emitter to base voltage	V_{EBO}	4	V
Collector current	I_C	4	A
Collector peak current	$I_{C\ (peak)}$	5	A
Collector power dissipation	P_C	1.8	W
	P_C*[1]	40	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–45 to +150	°C

Note: 1. Value at T_C = 25°C.

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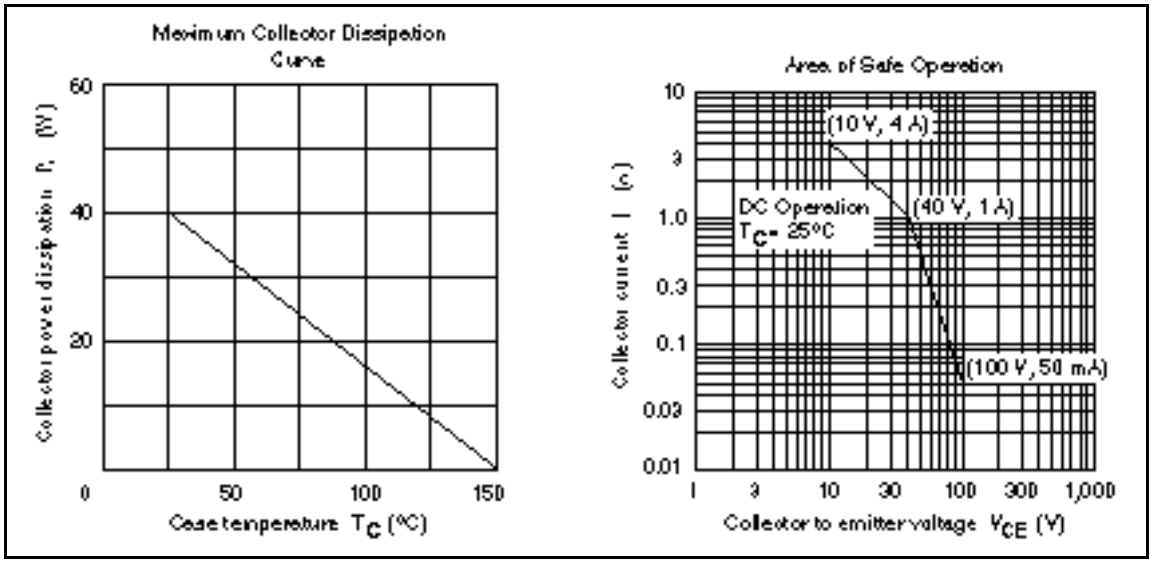
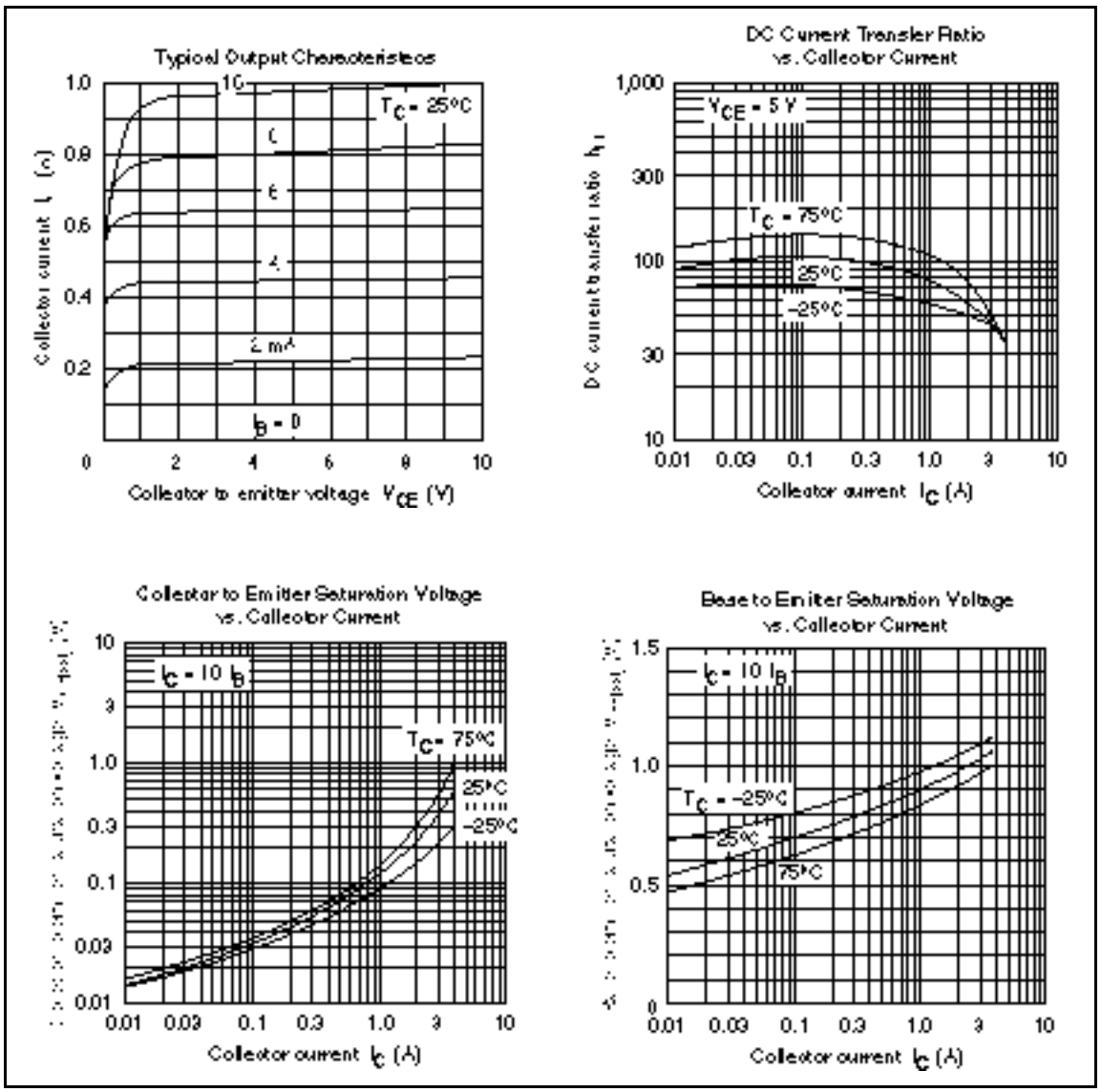
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	100	—	—	V	I_C = 10 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	4	—	—	V	I_E = 1 mA, I_C = 0
Collector cutoff current	I_{CEO}	—	—	100	µA	V_{CE} = 80 V, R_{BE} = ∞
Emitter cutoff current	I_{EBO}	—	—	50	µA	V_{EB} = 3.5 V, I_C = 0
DC current transfer ratio	h_{FE}	50	—	250		V_{CE} = 4 V, I_C = 0.5 A*[1]
		25	—	350		V_{CE} = 4 V, I_C = 50 mA
Collector to emitter saturation voltage	$V_{CE\ (sat)}$	—	—	1.0	V	I_C = 1 A, I_B = 0.1 A

Note: 1. Pulse test.




Typical Output Characteristics
Collector current I_C (A)
Collector to emitter voltage V_{CE} (V)
T_C = 25°C
10
8
6
4
2 mA
I_B = 0
DC Current Transfer Ratio vs. Collector Current
DC current transfer ratio h_{FE}
V_{CE} = 5 V
T_C = 75°C
25°C
–25°C
Collector current I_C (A)
Collector to Emitter Saturation Voltage vs. Collector Current
I_C = 10 I_B
T_C = 75°C
25°C
–25°C
Collector current I_C (A)
Base to Emitter Saturation Voltage vs. Collector Current
I_C = 10 I_B
T_C = –25°C
25°C
75°C
Collector current I_C (A)

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