HITACHI

2SB566Ⓚ, 2SB566AⓀ

Silicon PNP Triple Diffused
Low Frequency Power Amplifier Power Switching
Complementary Pair with 2SD476Ⓚ and 2SD476AⓀ

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SB 566Ⓚ	2SB 566AⓀ	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	–55 to +150	–55 to +150	°C

Note: 1. Value at T_C = 25°C.

TO-220AB

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

Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SB566Ⓚ Min	Typ	Max	2SB566AⓀ Min	Typ	Max	Unit	Test condition
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	—	200	60	—	200		V_{CE} = –4 V, I_C = –1 A
	h_{FE2}	35	—	—	35	—	—		V_{CE} = –4 V, I_C = –0.1 A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–1.0	—	—	–1.0	V	I_C = –2 A, I_B = –0.2 A
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	–1.2	—	—	–1.2	V	I_C = –2 A, I_B = –0.2 A
Gain bandwidth product	f_T	—	7	—	—	7	—	MHz	V_{CE} = –4 V, I_C = –0.5 A

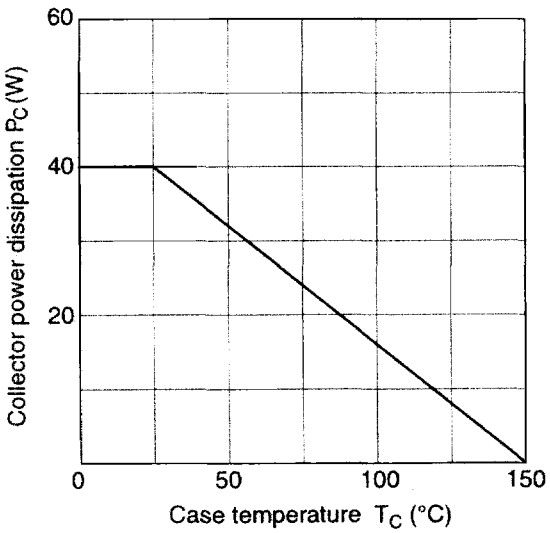
Electrical Characteristics (Ta = 25°C) (cont)

Item	Symbol	2SB556Ⓚ Min	Typ	Max	2SB556AⓀ Min	Typ	Max	Unit	Test condition
Turn on time	t_{on}	—	0.3	—	—	0.3	—	µs	V_{CC} = −10.5 V $I_C = 10I_{B1} = -10I_{B2}$ = −0.5 A
Turn off time	t_{off}	—	3.0	—	—	3.0	—	µs	
Storage time	t_{stg}	—	2.5	—	—	2.5	—	µs	

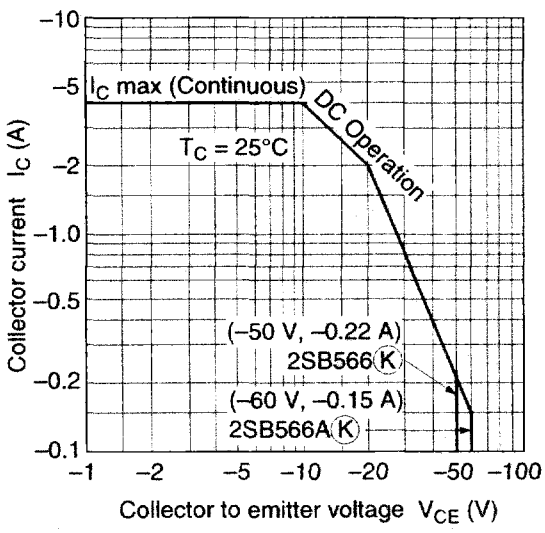
Note: 1. The 2SB566Ⓚ and 2SB566AⓀ are grouped by h_{FE1} as follows.

B	C
60 to 120	100 to 200

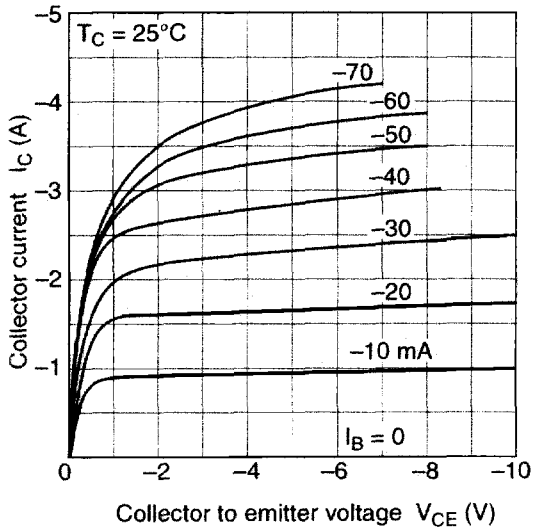
Maximum Collector Dissipation Curve



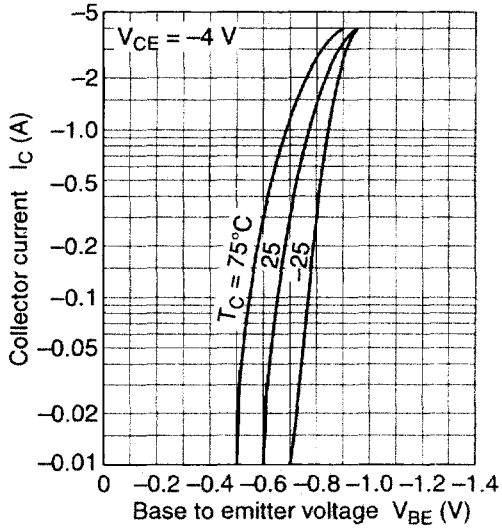
Area of Safe Operation



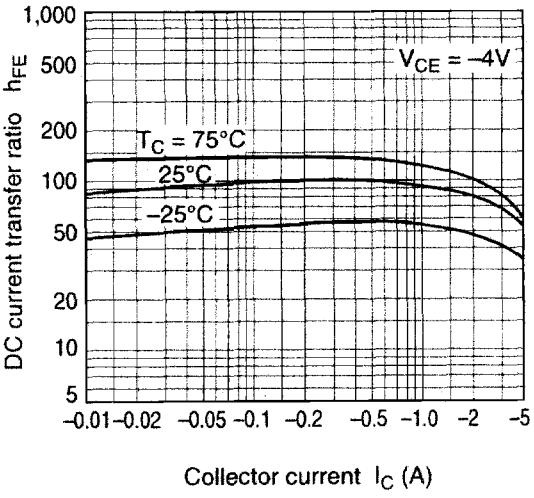
Typical Output Characteristics



Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current