HITACHI

2SB1407Ⓛ/Ⓢ

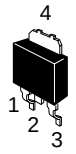
Silicon PNP Epitaxial
Low Frequency Power Amplifier
Complementary Pair with 2SD2121 Ⓛ/Ⓢ

Absolute Maximum Ratings (Ta = 25°C)

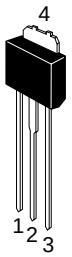
Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	–35	V
Collector to emitter voltage	V_{CEO}	–35	V
Emitter to base voltage	V_{EBO}	–5	V
Collector current	I_C	–2.5	A
Collector peak current	$i_{C(peak)}$	–3	A
Collector power dissipation	P_C*1	18	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

Note: 1. Value at T_C = 25°C.

DPAK



Ⓢ Type



Ⓛ Type

1. Base
2. Collector
3. Emitter
4. Collector

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	–35	—	—	V	I_C = –1 mA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–35	—	—	V	I_C = –10 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–5	—	—	V	I_E = –1 mA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–20	µA	V_{CB} = –35 V, I_E = 0
DC current transfer ratio	h_{FE1}*1	60	—	320		V_{CE} = –2 V, I_C = –0.5 A*2
	h_{FE2}	20	—	—		V_{CE} = –2 V, I_C = –1.5 A*2
Base to emitter voltage	V_{BE}	—	—	–1.5	V	V_{CE} = –2 V, I_C = –1.5 A*2
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–1.0	V	I_C = –2 A, I_B = –0.2 A*2

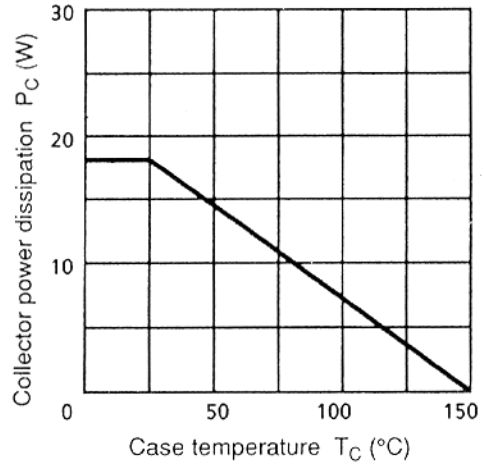
Notes: 1. The 2SB1407 Ⓛ / Ⓢ is grouped by h_{FE1} as follows.

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

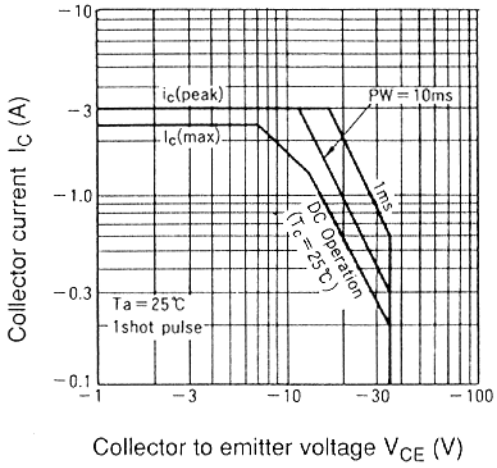
2. Pulse Test.

2SB1407 (L)/(S)

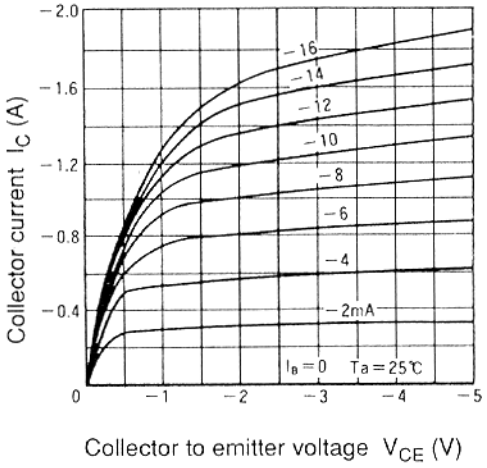
Maximum Collector Dissipation Curve



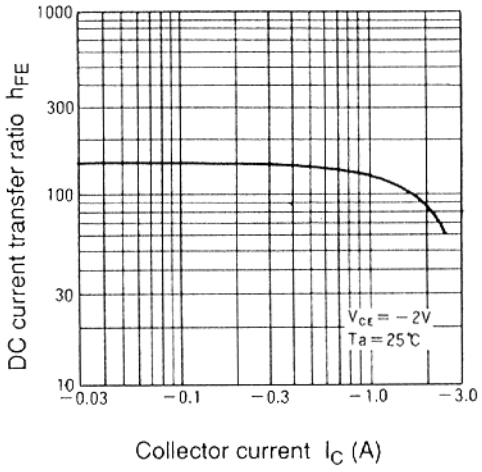
Area of Safe Operation



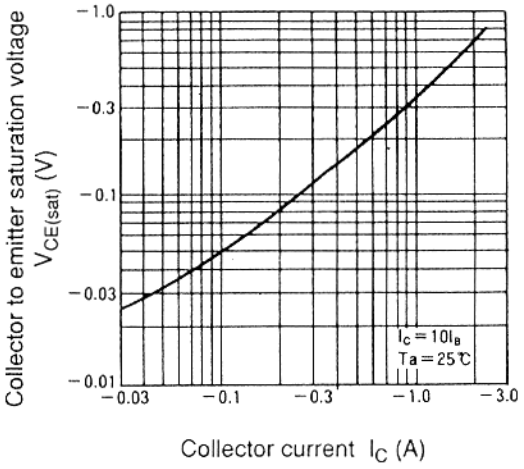
Typical Output Characteristics



DC Current Transfer Ratio vs. Collctor Current



Saturation Voltage vs. Collector Current



Typical Transfer Characteristics