
2SB874

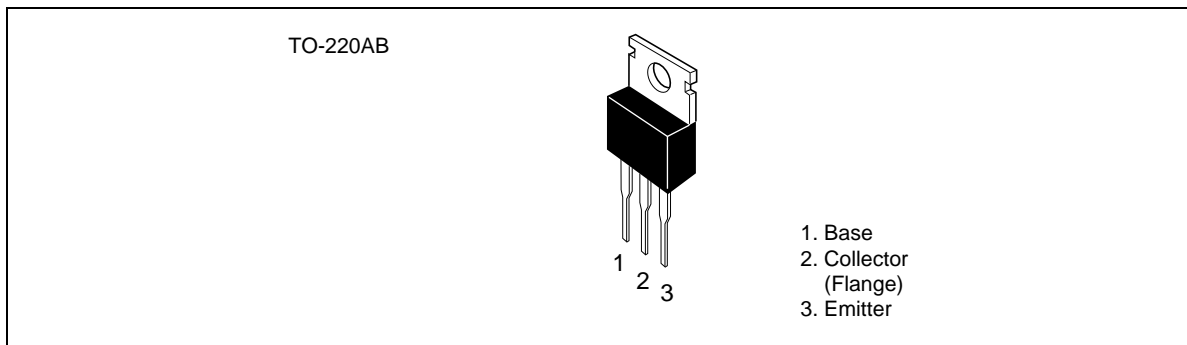
Silicon PNP Epitaxial

HITACHI

Application

Low frequency power amplifier complementary pair with 2SD1177

Outline



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	-100	V
Collector to emitter voltage	V_{CEO}	-60	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_{C}	-2	A
Collector peak current	$I_{\text{C(peak)}}$	-3	A
Collector power dissipation	P_{C}^{*1}	20	W
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note: 1. Value at $T_{\text{c}} = 25^\circ\text{C}$

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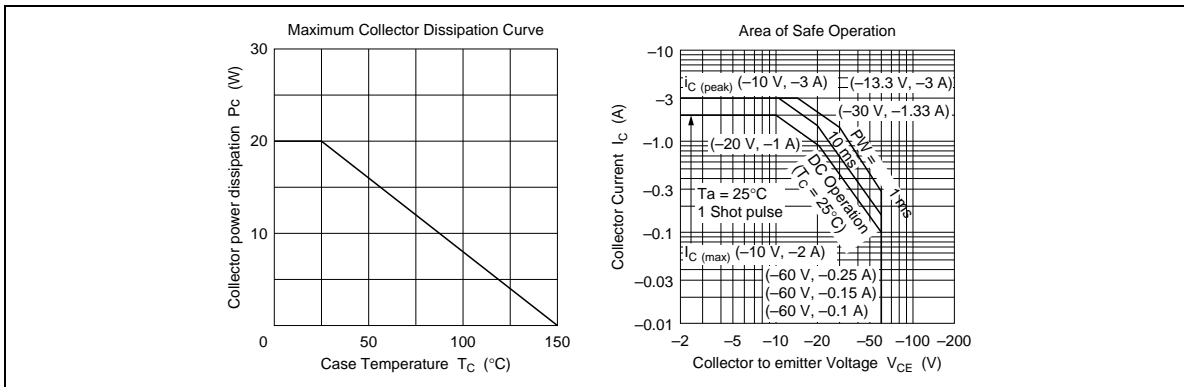
Electrical Characteristics (Ta = 25°C)

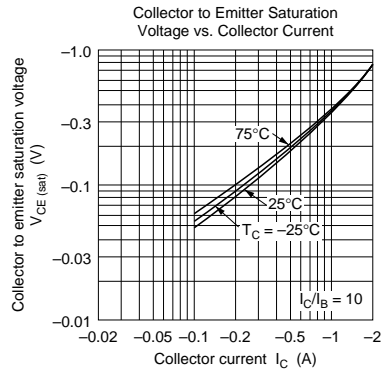
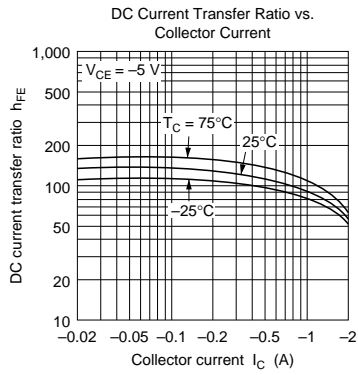
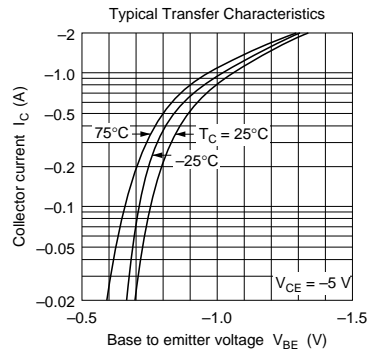
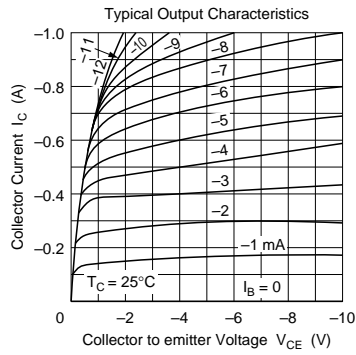
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-100	—	—	V	$I_C = -1 \text{ mA}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-60	—	—	V	$I_C = -10 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -1 \text{ mA}, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-1.0	μA	$V_{CB} = -80 \text{ V}, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	-1.0	μA	$V_{EB} = -5 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE1}^{*1}	60	—	200		$V_{CE} = -5 \text{ V}, I_C = -0.5 \text{ A}^{*2}$
	h_{FE2}	40	—	—		$V_{CE} = -5 \text{ V}, I_C = -2 \text{ A}^{*2}$
Base to emitter voltage	V_{BE}	—	—	-1.4	V	$V_{CE} = -5 \text{ V}, I_C = -2 \text{ A}^{*2}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.6	-1.0	V	$I_C = -1.5 \text{ A}, I_B = -0.15 \text{ A}^{*2}$
Gain bandwidth product	f_T	—	250	—	MHz	$V_{CE} = -5 \text{ V}, I_C = -0.5 \text{ A}^{*2}$
Collector output capacitance	C_{ob}	—	50	—	pF	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$

Notes: 1. The 2SB874 is grouped by h_{FE} as follows.

2. Pulse test

B	C
60 to 120	100 to 200





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