2SB1059

Silicon PNP Epitaxial

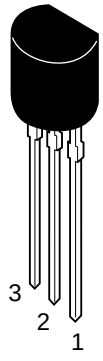
HITACHI

Application

- Low frequency power amplifier
- Complementary pair with 2SD1490

Outline

TO-92 (1)



1. Emitter
2. Collector
3. Base

Hitachi semiconductor

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–70	V
Collector to emitter voltage	V_{CEO}	–50	V
Emitter to base voltage	V_{EBO}	–6	V
Collector current	I_C	–1	A
Collector power dissipation	P_C	0.75	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

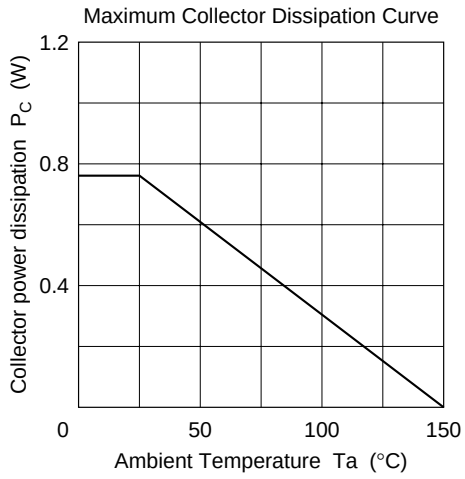
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	–70	—	—	V	I_C = –10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–50	—	—	V	I_C = –1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–6	—	—	V	I_E = –10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–1	µA	V_{CB} = –55 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–0.2	µA	V_{EB} = –6 V, I_C = 0
DC current transfer ratio	h_{FE}*[1]	100	—	320		V_{CE} = –2 V, I_C = –0.1 A
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–0.6	V	I_C = –1 A, I_B = –0.1 A
Gain bandwidth product	f_T	—	65	—	MHz	V_{CE} = –2 V, I_C = –10 mA
Collector output capacitance	Cob	—	35	—	pF	V_{CB} = –10 V, I_E = 0, f = 1 MHz

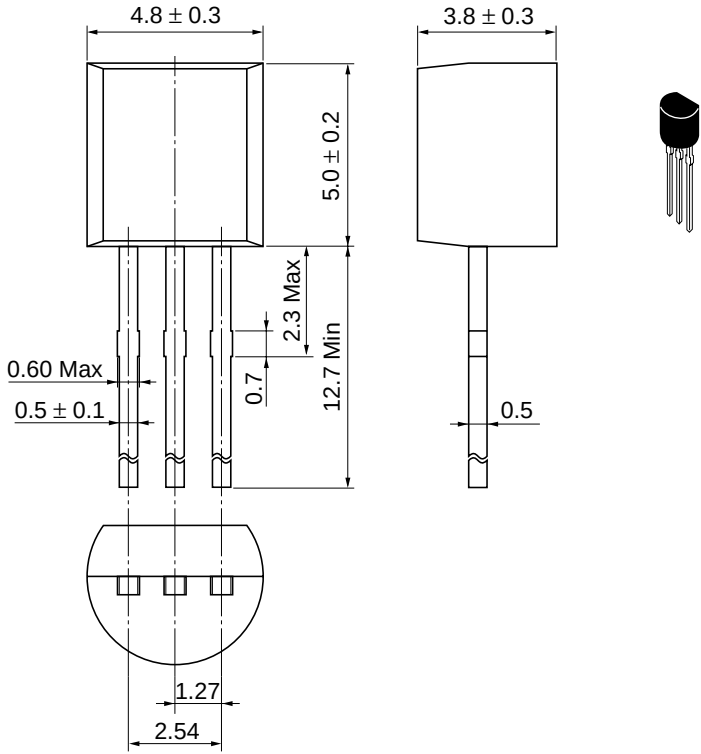
Note: 1. The 2SB1059 is grouped by h_{FE} as follows.

B	C
100 to 200	160 to 320

See characteristic curves of 2SB740.


Maximum Collector Dissipation Curve
Collector power dissipation P_C (W)
1.2
0.8
0.4
0
50
100
150
Ambient Temperature Ta (°C)

Unit: mm



Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Weight (reference value)	0.25 g