2SA1337

Silicon PNP Epitaxial

HITACHI

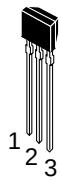
ADE-208-1014A (Z)
2nd. Edition
Mar. 2001

Application

- Low frequency low noise amplifier
- HF amplifier

Outline

SPAK



1. Emitter
2. Collector
3. Base

Hitachi semiconductor

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	–55	V
Collector to emitter voltage	V_{CEO}	–50	V
Emitter to base voltage	V_{EBO}	–5	V
Collector current	I_C	–100	mA
Collector power dissipation	P_C	300	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

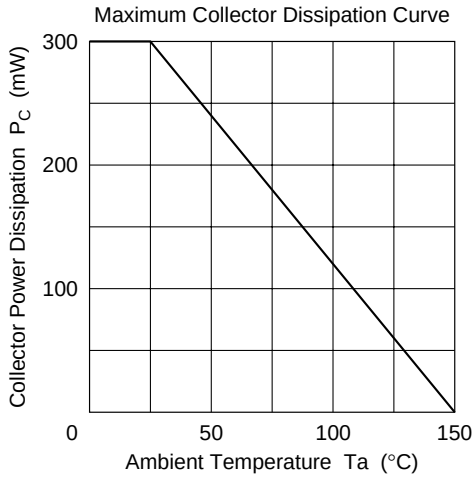
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	–55	—	—	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	$V_{(BR)EBO}$	–5	—	—	V	I_E = –10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–0.5	µA	V_{CB} = –18 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–0.5	µA	V_{EB} = –2 V, I_C = 0
DC current transfer ratio	h_{FE}*[1]	100	—	320		V_{CE} = –12 V, I_C = –2 mA
Base to emitter voltage	V_{BE}	—	—	–0.75	V	V_{CE} = –12 V, I_C = –2 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–0.2	V	I_C = –10 mA, I_B = –1 mA
Gain bandwidth product	f_T	—	200	—	MHz	V_{CE} = –12 V, I_C = –2 mA
Collector output capacitance	Cob	—	—	4.5	pF	V_{CB} = –10 V, I_E = 0, f = 1 MHz
Noise figure	NF	—	1.0	5.0	dB	V_{CE} = –6 V, I_C = –0.1 mA, R_g = 1 kΩ, f = 1 kHz

Note: 1. The 2SA1337 is grouped by h_{FE} as follows.

B	C
100 to 200	160 to 320

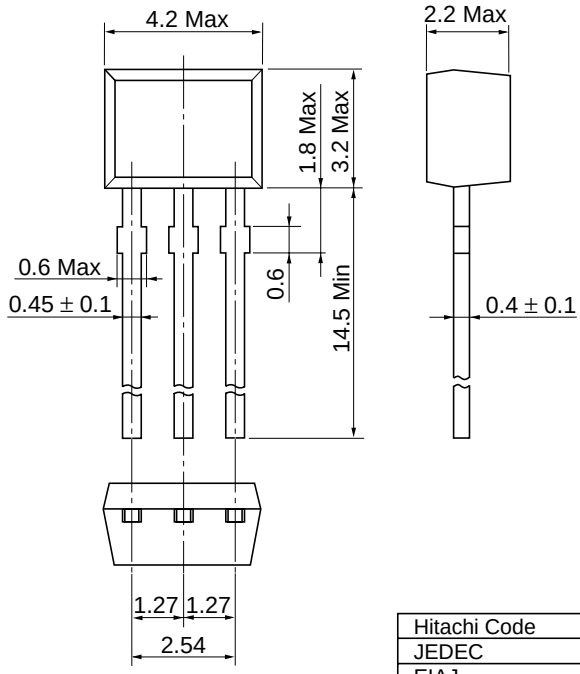
See characteristic curves of 2SA1052.


Maximum Collector Dissipation Curve
Collector Power Dissipation P_C (mW)
300
200
100
0
50
100
150
Ambient Temperature Ta (°C)

Package Dimensions

As of January, 2001

Unit: mm



Hitachi Code	SPAK
JEDEC	—
EIAJ	—
Mass (reference value)	0.10 g

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