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# 2SA1350

Silicon PNP Epitaxial

# HITACHI

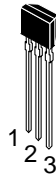
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## Application

- Low frequency low noise amplifier
- HF amplifier

## Outline

SPAK



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-40	V
Collector to emitter voltage	$V_{CEO}$	-30	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-100	mA
Collector power dissipation	$P_C$	300	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

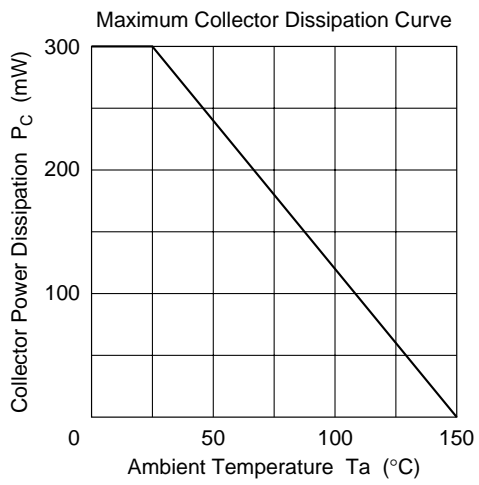
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-40	—	—	V	$I_C = -10\text{ }\mu\text{A}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-30	—	—	V	$I_C = -1\text{ mA}$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10\text{ }\mu\text{A}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-0.5	$\mu\text{A}$	$V_{CB} = -18\text{ V}$ , $I_E = 0$
Emitter cutoff current	$I_{EBO}$	—	—	-0.5	$\mu\text{A}$	$V_{EB} = -2\text{ V}$ , $I_C = 0$
DC current transfer ratio	$h_{FE}^{*1}$	100	—	500		$V_{CE} = -12\text{ V}$ , $I_C = -2\text{ mA}$
Base to emitter voltage	$V_{BE}$	—	—	-0.75	V	$V_{CE} = -12\text{ V}$ , $I_C = -2\text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.2	V	$I_C = -10\text{ mA}$ , $I_B = -1\text{ mA}$
Gain bandwidth product	$f_T$	—	200	—	MHz	$V_{CE} = -12\text{ V}$ , $I_C = -2\text{ mA}$
Collector output capacitance	$C_{ob}$	—	—	4.5	pF	$V_{CB} = -10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$
Noise figure	NF	—	1.0	5.0	dB	$V_{CE} = -6\text{ V}$ , $I_C = -0.1\text{ mA}$ $R_g = 1\text{ k}\Omega$ , $f = 1\text{ kHz}$

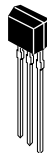
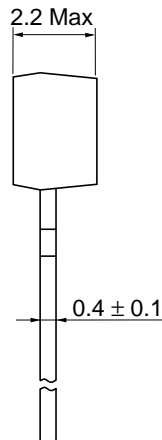
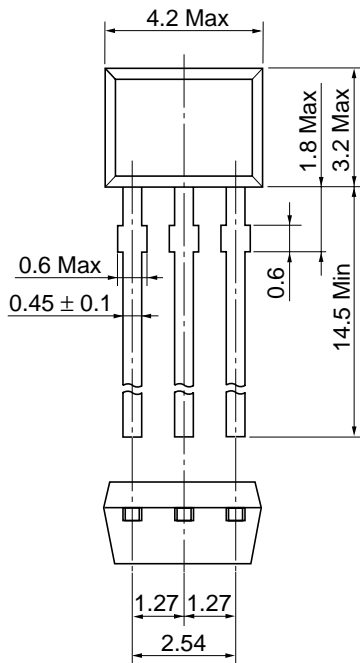
Note: 1. The 2SA1350 is grouped by  $h_{FE}$  as follows.

B	C	D
100 to 200	160 to 320	250 to 500

See characteristic curves of 2SA1031.



Unit: mm



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

## Cautions

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