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# 2SA1390

Silicon PNP Epitaxial

# HITACHI

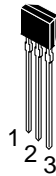
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## Application

Low frequency amplifier

## Outline

SPAK



1. Emitter
2. Collector
3. Base

## 2SA1390

### Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-35	V
Collector to emitter voltage	$V_{CEO}$	-35	V
Emitter to base voltage	$V_{EBO}$	-4	V
Collector current	$I_C$	-500	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)

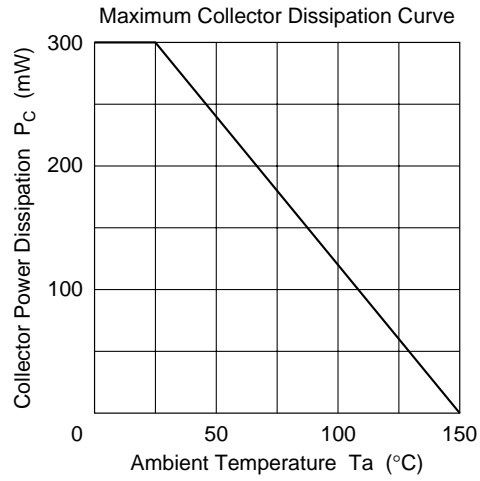
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-35	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-35	—	—	V	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-4	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-0.5	$\mu A$	$V_{CB} = -20 \text{ V}, I_E = 0$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.2	-0.6	V	$I_C = -150 \text{ mA}, I_B = -15 \text{ mA}^{*2}$
DC current transfer ratio	$h_{FE1}^{*1}$	60	—	320		$V_{CE} = -3 \text{ V}, I_C = -10 \text{ mA}$
DC current transfer ratio	$h_{FE2}$	10	—	—		$V_{CE} = -3 \text{ V}, I_C = -500 \text{ mA}^{*2}$
Base to emitter voltage	$V_{BE}$	—	-0.64	—	V	$V_{CE} = -3 \text{ V}, I_C = -10 \text{ mA}$

Notes: 1. The 2SA1390 is grouped by  $h_{FE1}$  as follows.

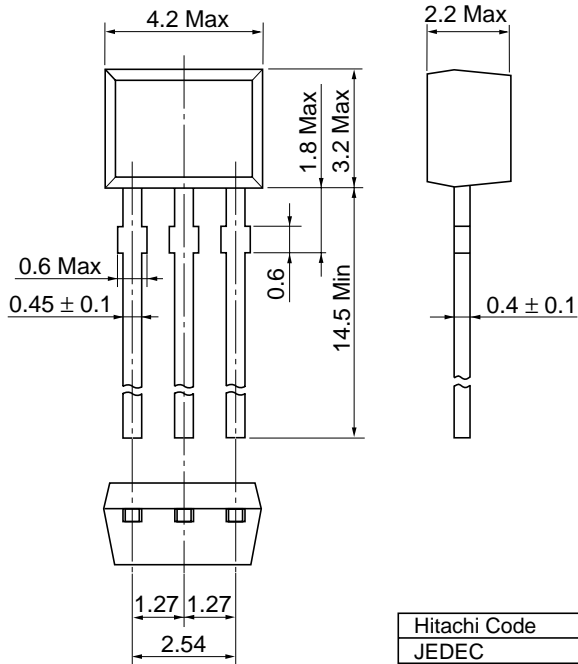
2. Pulse test

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

See characteristic curves of 2SA673.



Unit: mm



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

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