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# 2SA1171

Silicon PNP Epitaxial

# HITACHI

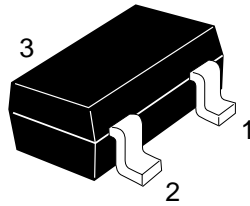
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## Application

Low frequency small signal amplifier

## Outline

MPAK



1. Emitter
2. Base
3. Collector

# 2SA1171

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

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	-90	V
Collector to emitter voltage	$V_{CEO}$	-90	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-50	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

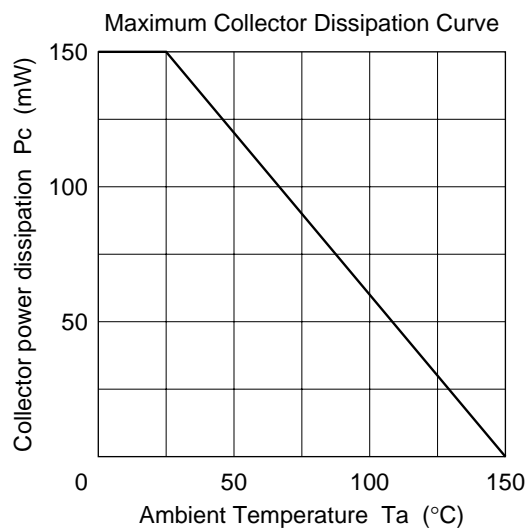
## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-90	—	—	V	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$
Collector cutoff current	$I_{CBO}$	—	—	-0.5	$\mu\text{A}$	$V_{CB} = -75 \text{ V}$ , $I_E = 0$
DC current transfer ratio	$h_{FE}^{*1}$	250	—	800		$V_{CE} = -12 \text{ V}$ , $I_C = -2 \text{ mA}$
Base to emitter voltage	$V_{BE}$	—	—	-0.75	V	$V_{CE} = -12 \text{ V}$ , $I_C = -2 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.5	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	$C_{ob}$	—	1.6	—	pF	$V_{CB} = -25 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$

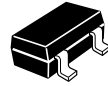
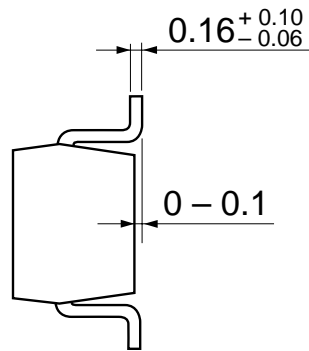
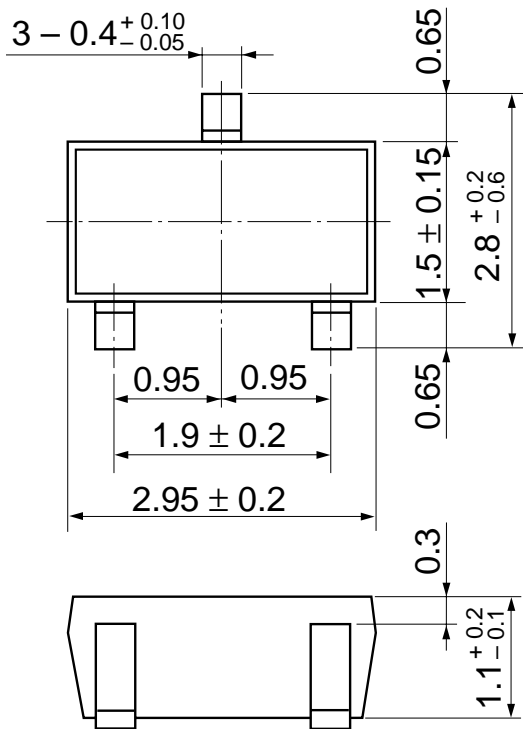
Note: 1. The 2SA1171 is grouped by  $h_{FE}$  as follows.

Grade	D	E
Mark	PD	PE
$h_{FE}$	250 to 500	400 to 800

See characteristic curves of 2SA872.



Unit: mm



Hitachi Code	MPAK
JEDEC	—
EIAJ	Conforms
Weight (reference value)	0.011 g

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