
2SA1171

Silicon PNP Epitaxial

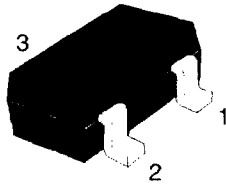
HITACHI

Application

Low frequency small signal amplifier

Outline

MPAK



- 1. Emitter
- 2. Base
- 3. Collector

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	μA	$V_{CB} = -75 \text{ V}$, $I_E = 0$
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.

