2SA1171

Silicon PNP Epitaxial

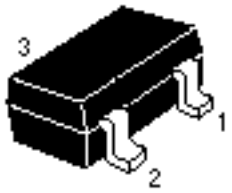
HITACHI

Application

Low frequency small signal amplifier

Outline

MPAK



1. Emitter
2. Base
3. Collector

Hitachi semiconductor

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	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

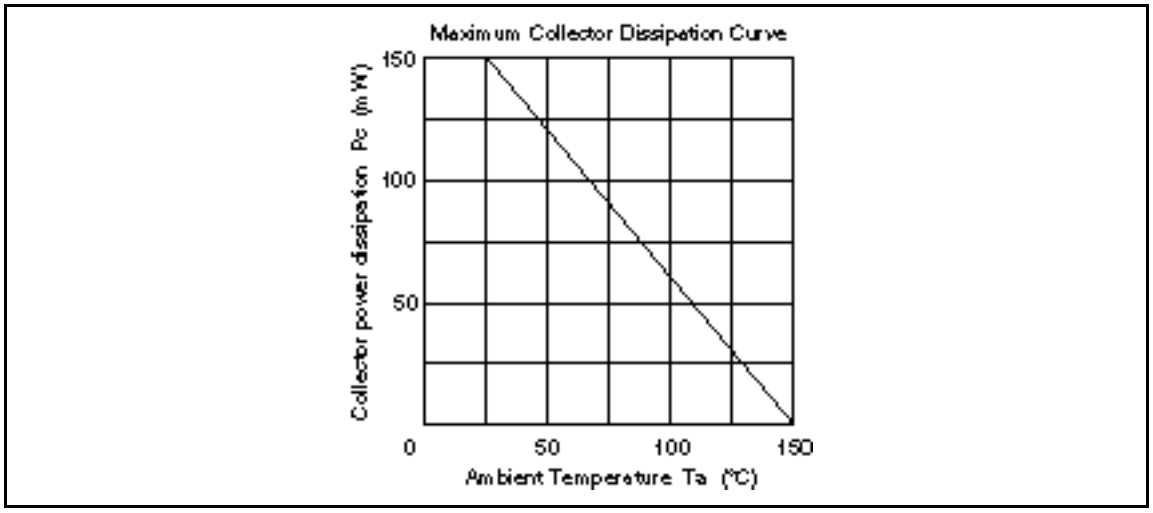
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–90	—	—	V	I_C = –1 mA, R_{BE} = ∞
Collector cutoff current	I_{CBO}	—	—	–0.5	µA	V_{CB} = –75 V, I_E = 0
DC current transfer ratio	h_{FE}*[1]	250	—	800		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	$V_{CE(sat)}$	—	—	–0.5	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	—	1.6	—	pF	V_{CB} = –25 V, I_E = 0, f = 1 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.


Maximum Collector Dissipation Curve
Collector power dissipation Pc (mW)
150
100
50
0
50
100
150
Ambient Temperature Ta (°C)

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