2SA1052

Silicon PNP Epitaxial

HITACHI

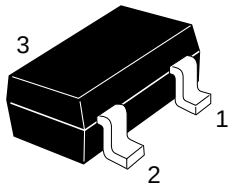
ADE-208-1006A (Z)
2nd. Edition
Mar. 2001

Application

Low frequency 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}	–30	V
Collector to emitter voltage	V_{CEO}	–30	V
Emitter to base voltage	V_{EBO}	–5	V
Collector current	I_C	–100	mA
Emitter current	I_E	100	mA
Collector power dissipation	P_C	150	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

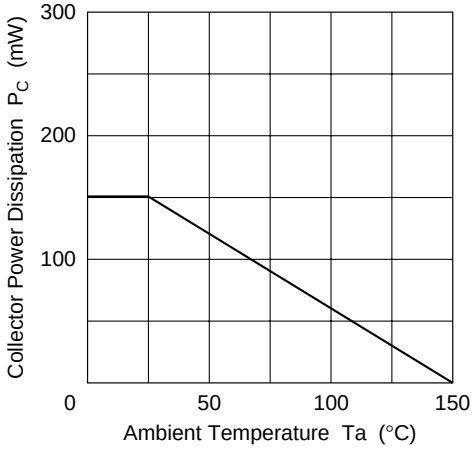
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	–30	—	—	V	I_C = –10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–30	—	—	V	I_C = –1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–5	—	—	V	I_E = –10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–0.5	µA	V_{CB} = –20 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–0.5	µA	V_{EB} = –2 V, I_C = 0
DC current transfer ratio	h_{FE}*[1]	100	—	500		V_{CE} = –12 V, I_C = –2 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–0.2	V	I_C = –10 mA, I_B = –1 mA
Base to emitter voltage	V_{BE}	—	—	–0.75	V	V_{CE} = –12 V, I_C = –2 mA

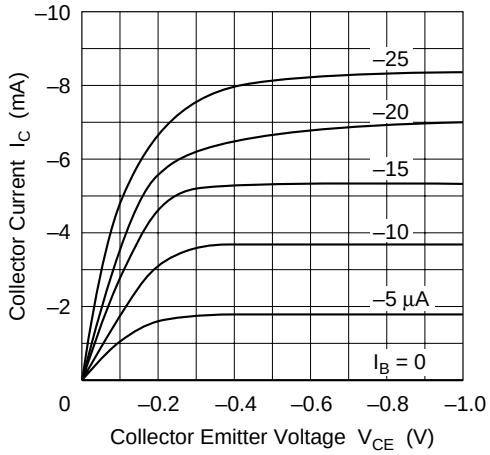
Note: 1. The 2SA1052 is grouped by h_{FE} as follows.

Grade	B	C	D
Mark	MB	MC	MD
h_{FE}	100 to 200	160 to 320	250 to 500

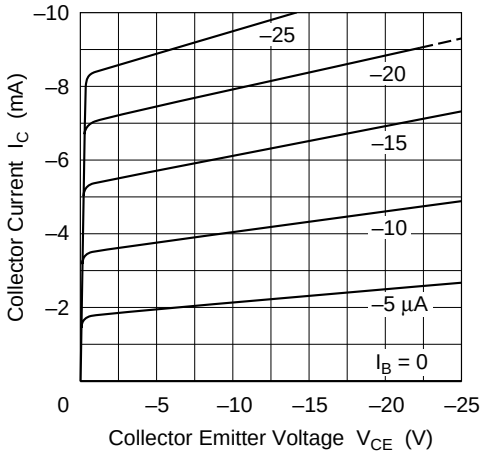
Maximum Collector Dissipation Curve



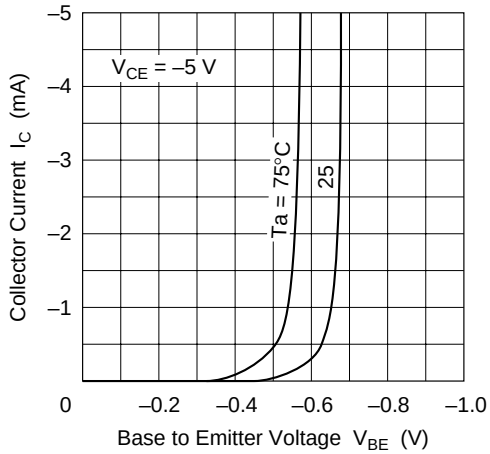
Typical Output Characteristics (1)



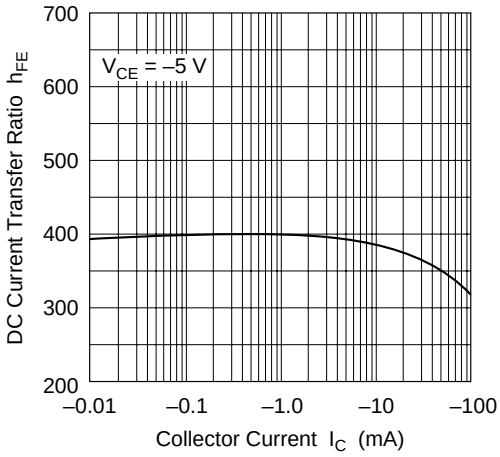
Typical Output Characteristics (2)



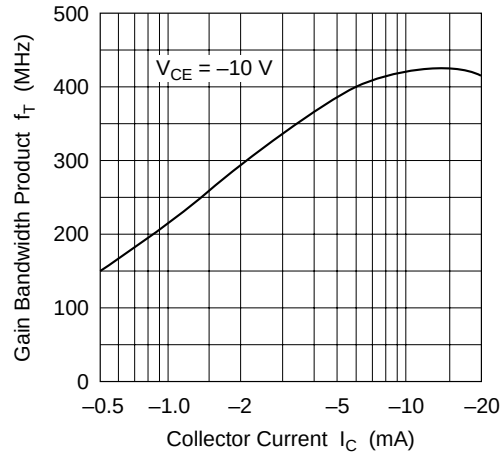
Typical Transfer Characteristics



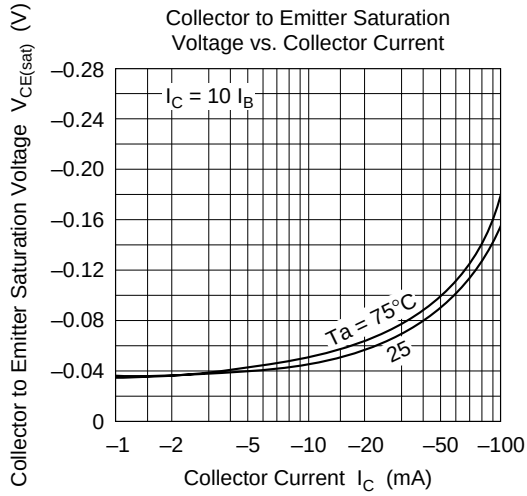
DC Current Transfer Ratio vs. Collector Current



Gain Bandwidth Product vs. Collector Current



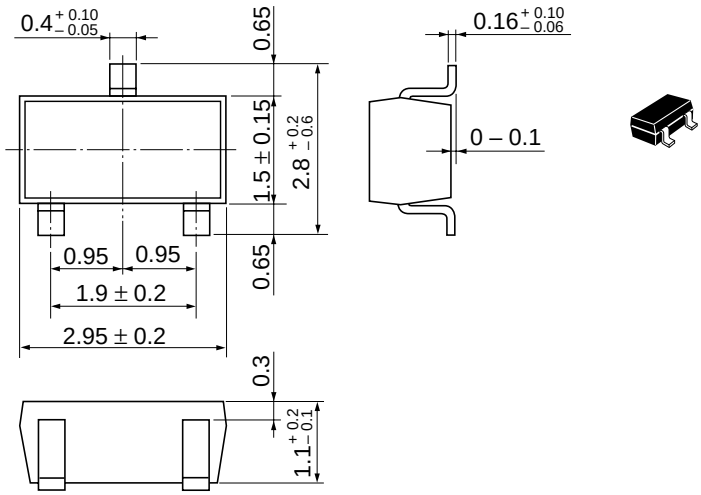
Collector to Emitter Saturation Voltage vs. Collector Current



Package Dimensions

As of January, 2001

Unit: mm



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

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