2SA1566

Silicon PNP Epitaxial

HITACHI

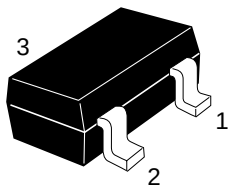
ADE-208-1021 (Z)
1st. Edition
Mar. 2001

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}	–120	V
Collector to emitter voltage	V_{CEO}	–120	V
Emitter to base voltage	V_{EBO}	–5	V
Collector current	I_C	–100	mA
Collector power dissipation	P_C	150	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

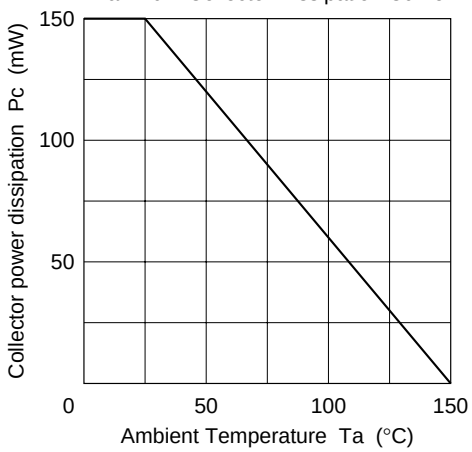
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	–120	—	—	V	I_C = –10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–120	—	—	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}	—	—	–0.1	µA	V_{CB} = –70 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–0.1	µA	V_{EB} = –2 V, I_C = 0
DC current transfer ratio	h_{FE}*[1]	250	—	800		V_{CE} = –12 V, I_C = –2 mA*[2]
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–0.15	V	I_C = –10 mA, I_B = –1 mA*[2]
Base to emitter voltage	$V_{BE(sat)}$	—	—	–1.0	V	I_C = –10 mA, I_B = –1 mA*[2]

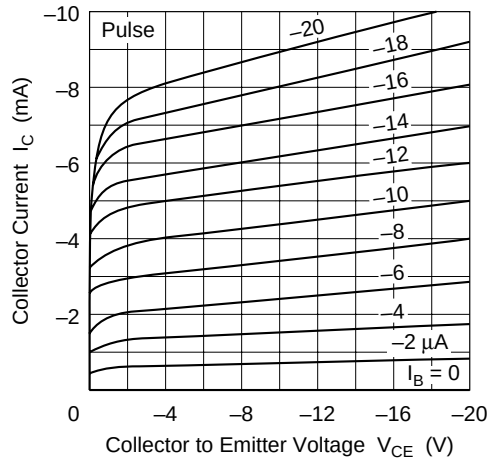
Notes: 1. The 2SA1566 is grouped by h_{FE} as follows.
2. Pulse test

Grade	D	E
Mark	JID	JIE
h_{FE}	250 to 500	400 to 800

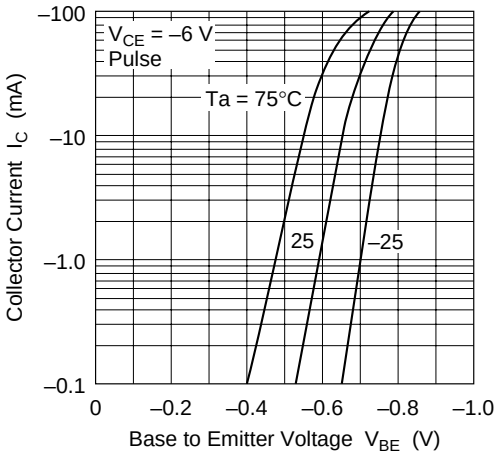
Maximum Collector Dissipation Curve



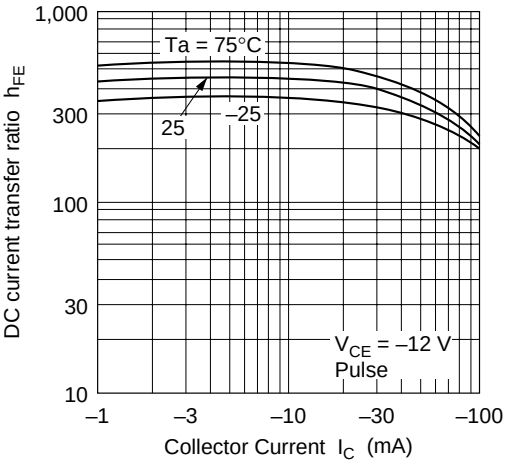
Typical Output Characteristics



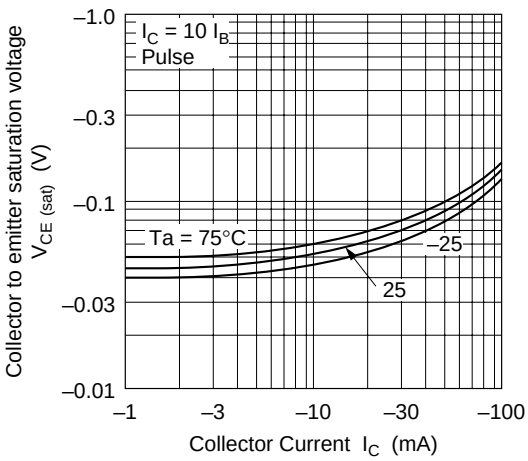
Typical Transfer Characteristics



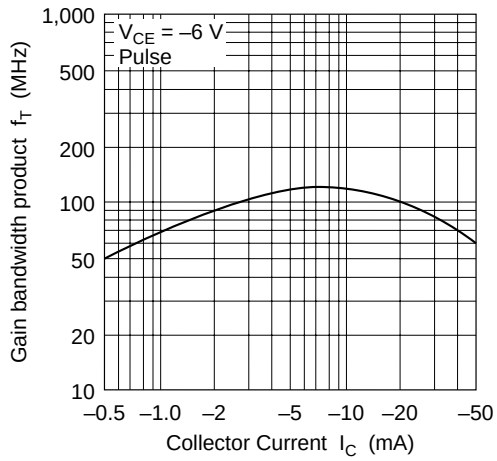
DC Current Transfer Ratio vs. Collector Current



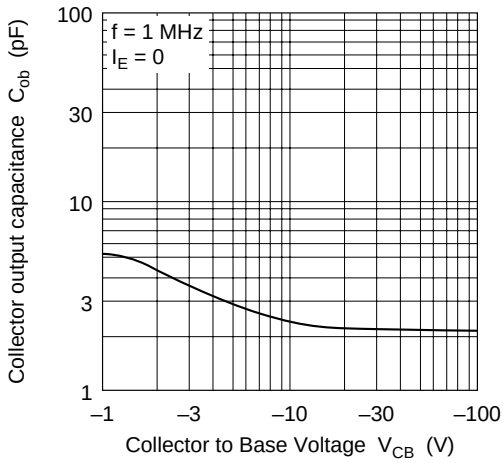
Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current

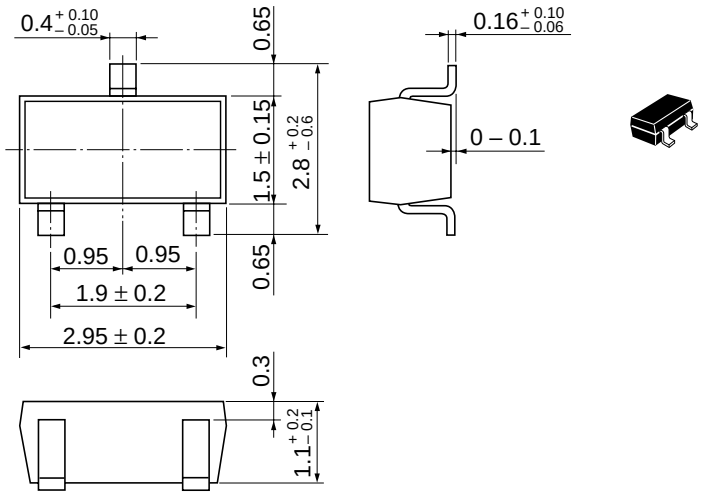


Collector Output Capacitance vs. Collector to Base Voltage



Package Dimensions

As of January, 2001
Unit: mm



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

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