

To all our customers

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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

Cautions

Keep safety first in your circuit designs!

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Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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2SC4693

Silicon NPN Epitaxial Planar

RENESAS

ADE-208-1119 (Z)

1st. Edition

Mar. 2001

Application

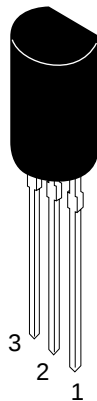
VHF Wide band amplifier

Features

- High gain bandwidth product
 $f_T = 2.5 \text{ GHz Typ.}$
- Large collector power dissipation
 $P_C = 900 \text{ mW}$

Outline

TO-92MOD



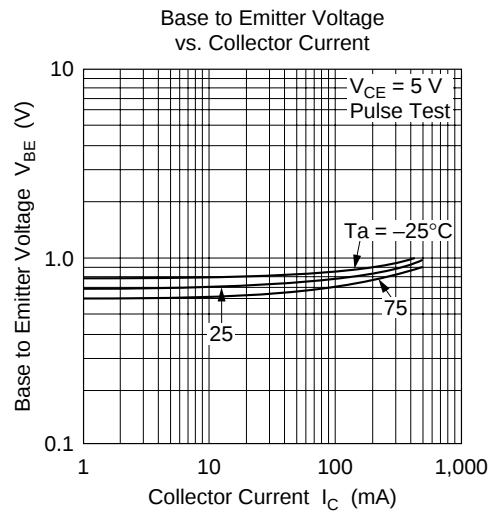
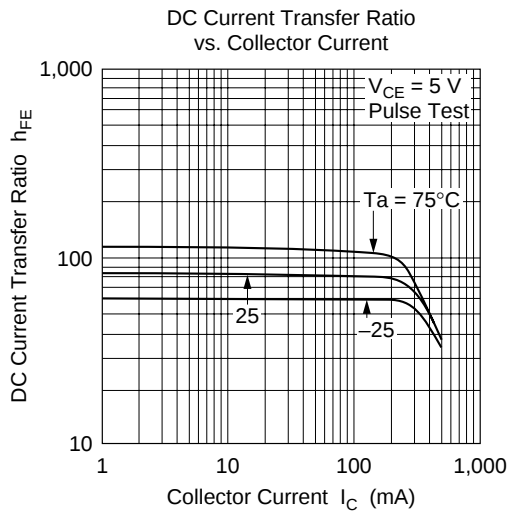
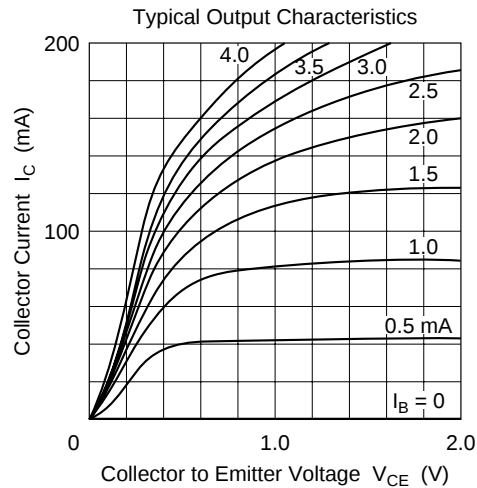
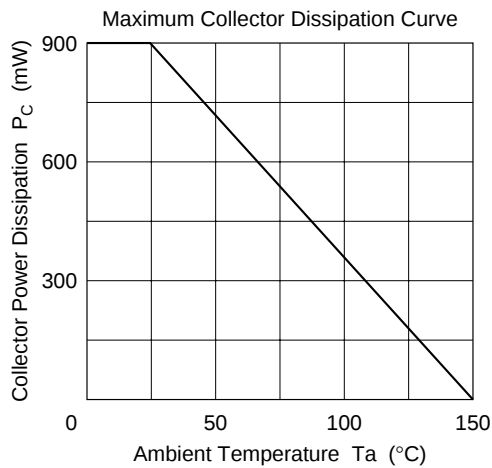
1. Emitter
2. Collector
3. Base

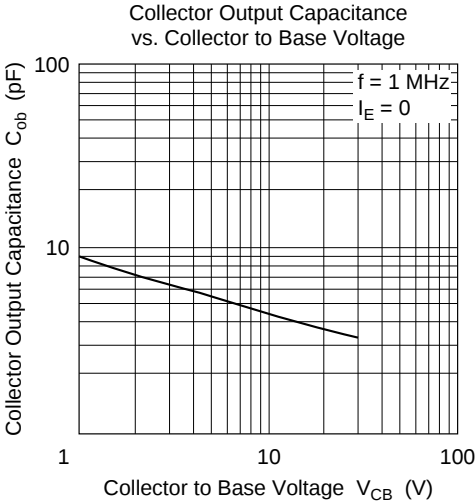
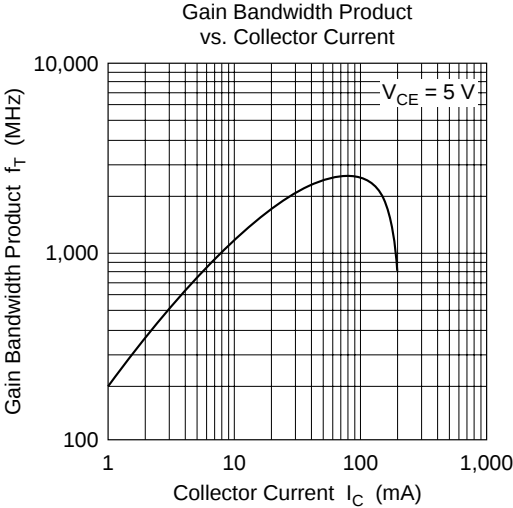
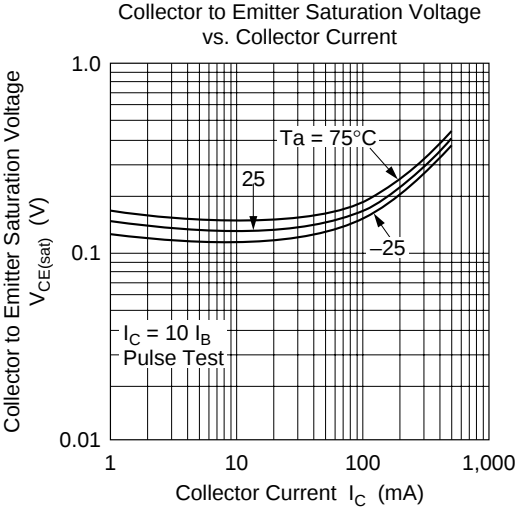
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	300	mA
Collector peak current	$i_{C(peak)}$	500	mA
Collector power dissipation	P_C	900	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

Electrical Characteristics (Ta = 25°C)

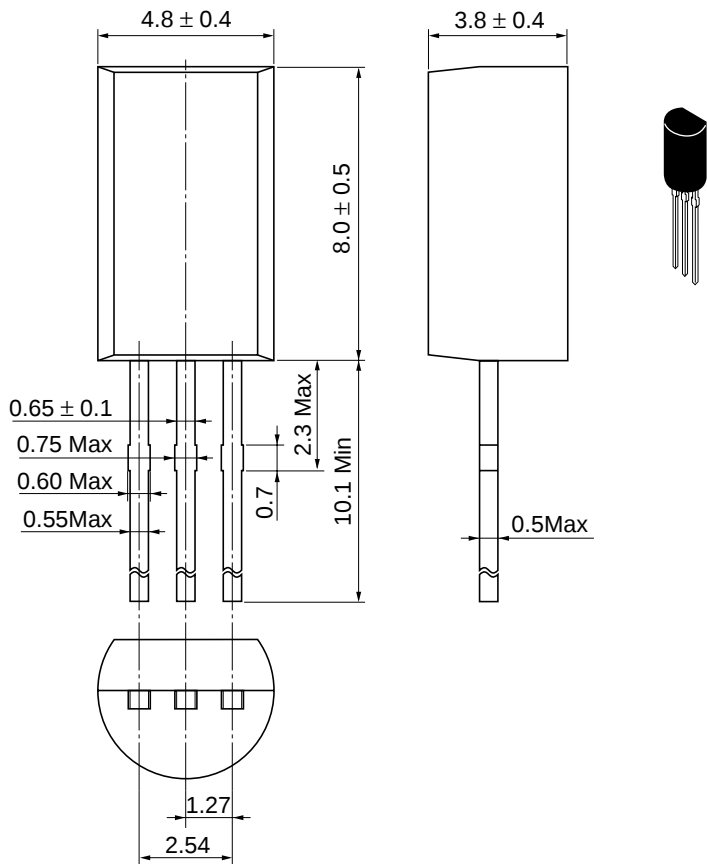
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	30	—	—	V	$I_C = 100\ \mu A$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1\ mA$, $R_{BE} =$
Collector cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 25\ V$, $I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3\ V$, $I_C = 0$
DC current transfer ratio	h_{FE}	50	—	200		$V_{CE} = 5\ V$, $I_C = 50\ mA$
Gain bandwidth product	f_T	1.5	2.5	—	GHz	$V_{CE} = 5\ V$, $I_C = 50\ mA$
Collector output capacitance	C_{ob}	—	4.5	—	pF	$V_{CB} = 10\ V$, $I_E = 0$, $f = 1\ MHz$





Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	TO-92 Mod
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.35 g

Cautions

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