

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!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

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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2SC2610

Silicon NPN Triple Diffused

RENESAS

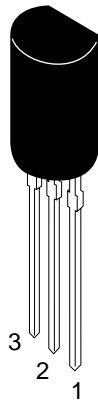
ADE-208-1068 (Z)
1st. Edition
Mar. 2001

Application

- High voltage amplifier
- TV Video output

Outline

TO-92MOD



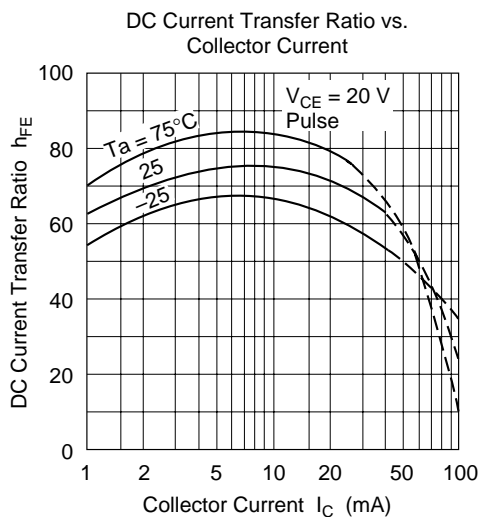
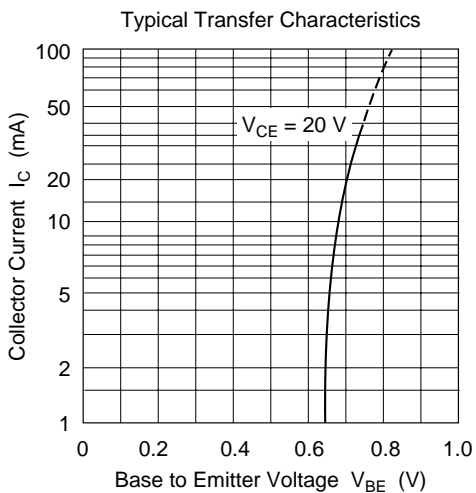
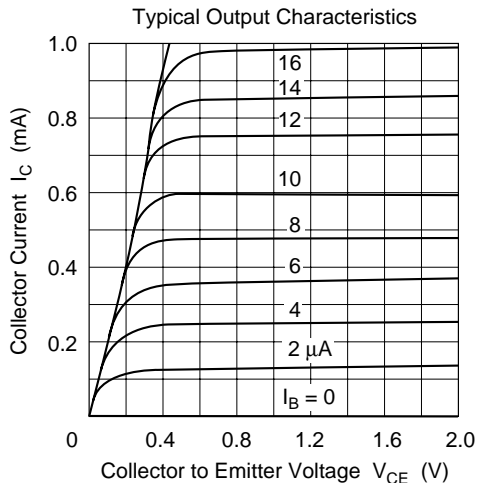
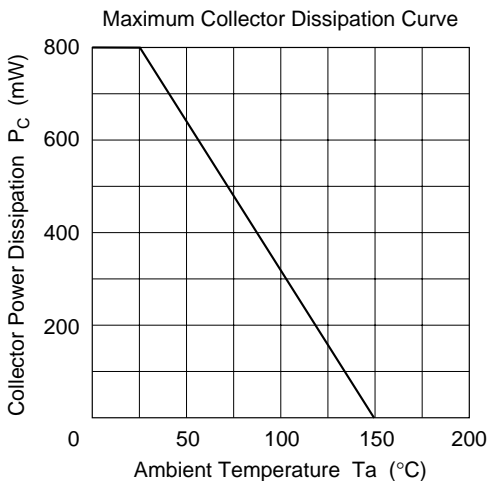
1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

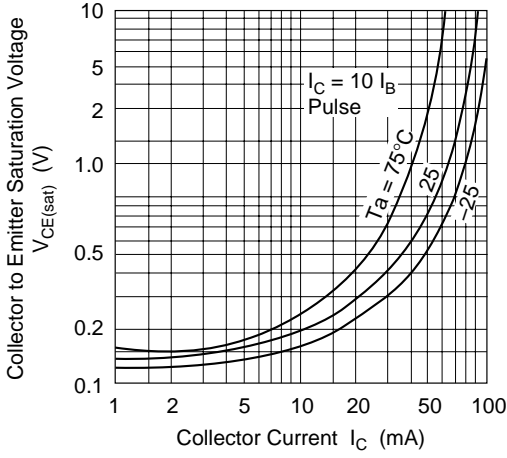
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	300	V
Collector to emitter voltage	V_{CEO}	300	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_{C}	100	mA
Collector power dissipation	P_{C}	800	mW
Junction temperature	T_{j}	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

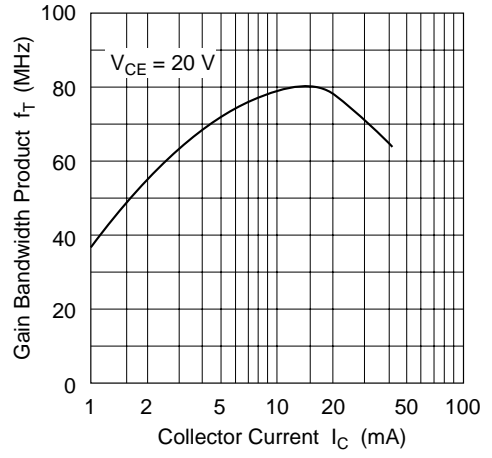
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	300	—	—	V	$I_{\text{C}} = 10 \mu\text{A}$, $I_{\text{E}} = 0$
Collector to emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	300	—	—	V	$I_{\text{C}} = 1 \text{ mA}$, $R_{\text{BE}} =$
Emitter to base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	5	—	—	V	$I_{\text{E}} = 10 \mu\text{A}$, $I_{\text{C}} = 0$
Collector cutoff current	I_{CEO}	—	—	1.0	μA	$V_{\text{CE}} = 250 \text{ V}$, $R_{\text{BE}} =$
DC current transfer ratio	h_{FE}	30	—	200		$V_{\text{CE}} = 20 \text{ V}$, $I_{\text{C}} = 20 \text{ mA}$
Collector to emitter saturation voltage	$V_{\text{CE}(\text{sat})}$	—	—	1.5	V	$I_{\text{C}} = 20 \text{ mA}$, $I_{\text{B}} = 2 \text{ mA}$
Gain bandwidth product	f_{T}	50	80	—	MHz	$V_{\text{CE}} = 20 \text{ V}$, $I_{\text{C}} = 20 \text{ mA}$
Collector output capacitance	C_{ob}	—	—	4.0	pF	$V_{\text{CB}} = 20 \text{ V}$, $I_{\text{E}} = 0$, $f = 1 \text{ MHz}$



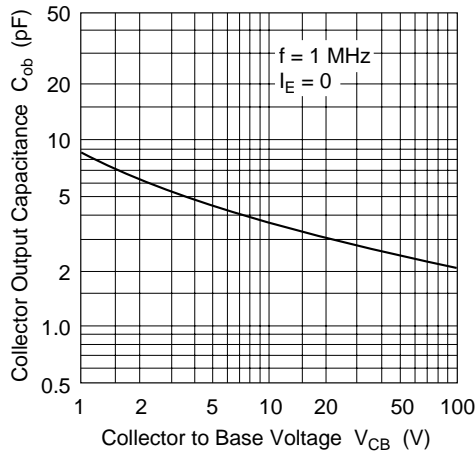
Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current

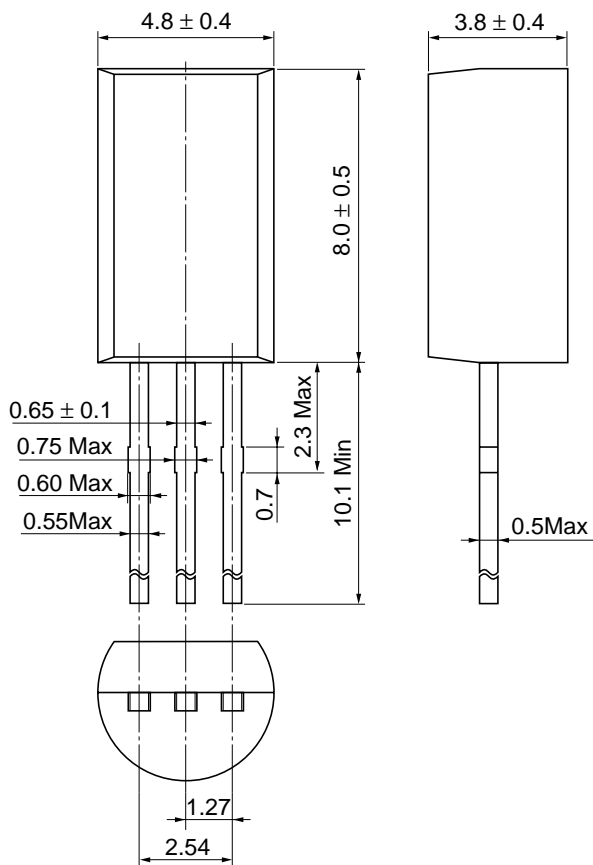


Collector Output Capacitance vs. Collector to Base Voltage



Package Dimensions

As of January, 2001
Unit: mm



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

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