

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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2SC5225

Silicon NPN Epitaxial Transistor



ADE-208-393A (Z)
2nd. Edition
Mar. 2001

Application

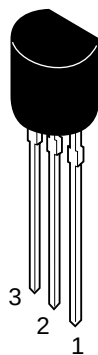
- Wide band video output amplifier for color CRT monitor.
- High frequency high voltage amplifier.
- High speed power switching.

Features

- High voltage large current operation.
 $V_{CEO} = 80 \text{ V}$, $I_C = 300 \text{ mA}$
- High f_T .
 $f_T = 1.4 \text{ GHz}$
- Small output capacitance.
 $C_{ob} = 3 \text{ pF}$

Outline

TO-92 (1)



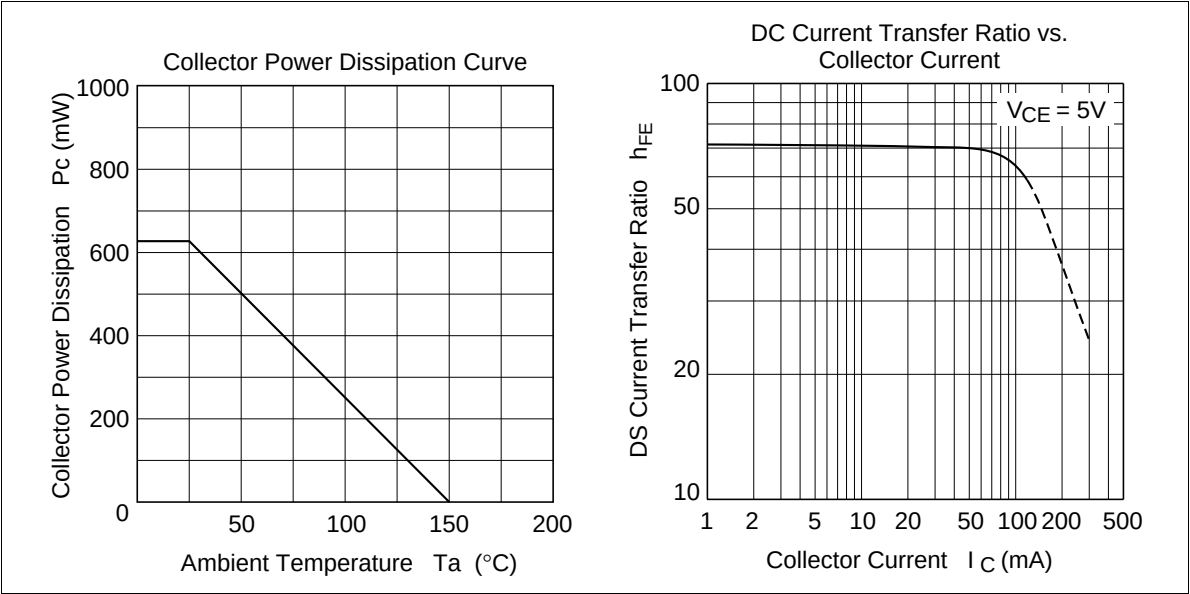
- 1. Emitter
- 2. Collector
- 3. Base

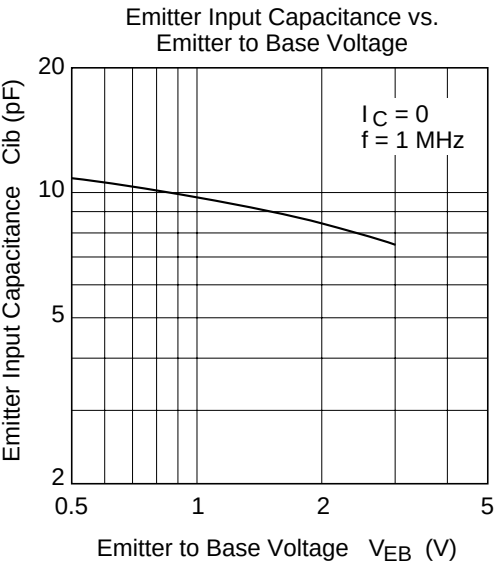
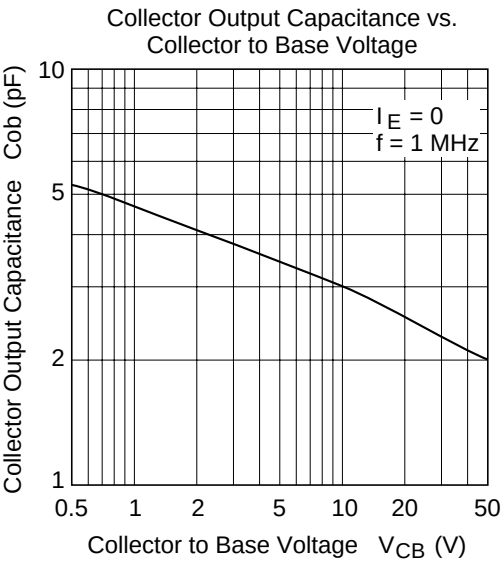
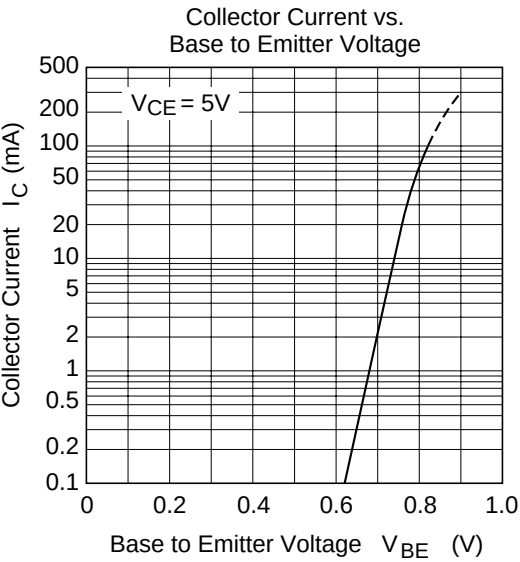
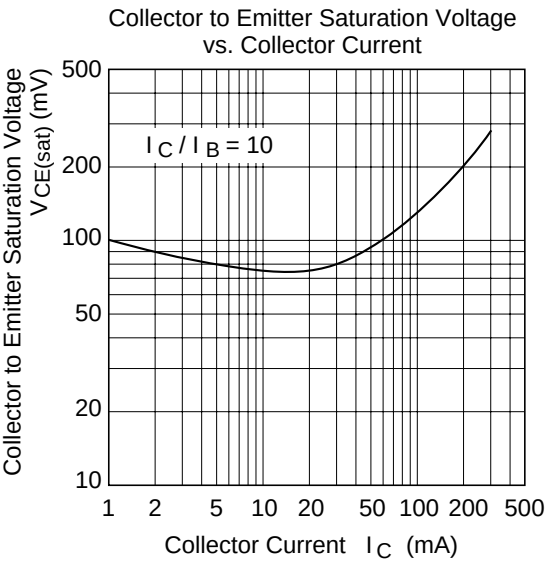
Absolute Maximum Ratings (Ta = 25°C)

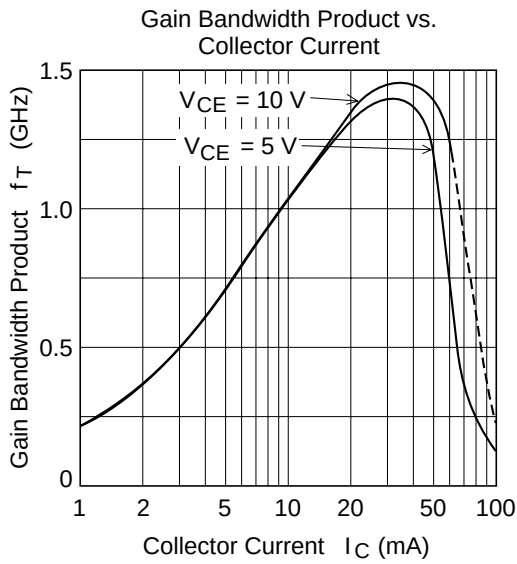
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	100	V
Collector to emitter voltage	V_{CEO}	80	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	300	mA
Collector power dissipation	P_C	625	mW
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	100	—	—	V	$I_C = 100\text{ }\mu\text{A}$, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	80	—	—	V	$I_C = 1\text{ mA}$, $R_{BE} =$
Collector to base cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 80\text{ V}$, $I_E = 0$
Emitter to base cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3\text{ V}$, $I_C = 0$
DC current transfer ratio	h_{FE}	20	70	—		$V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$ Pulse test
Gain bandwidth product	f_T	1.2	1.4	—	GHz	$V_{CE} = 10\text{ V}$, $I_C = 50\text{ mA}$
Emitter input capacitance	C_{ib}	—	13	19	pF	$V_{EB} = 0$, $I_C = 0$, $f = 1\text{ MHz}$
Collector output capacitance	C_{ob}	—	3	4	pF	$V_{CB} = 10\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$

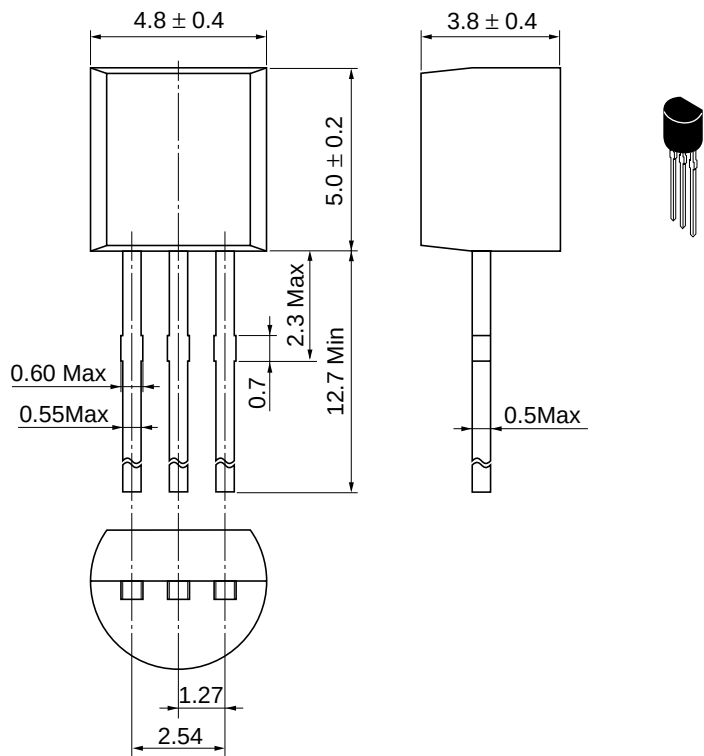






Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	TO-92 (1)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g

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