

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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2SC5273

Silicon NPN Triple Diffused

RENESAS

ADE-208-897 (Z)

1st. Edition

September 2000

Application

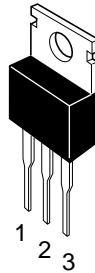
High voltage amplifier

Features

- High brakedown voltage
 $V_{(BR)CEO} = 1300 \text{ V min}$

Outline

TO-220AB



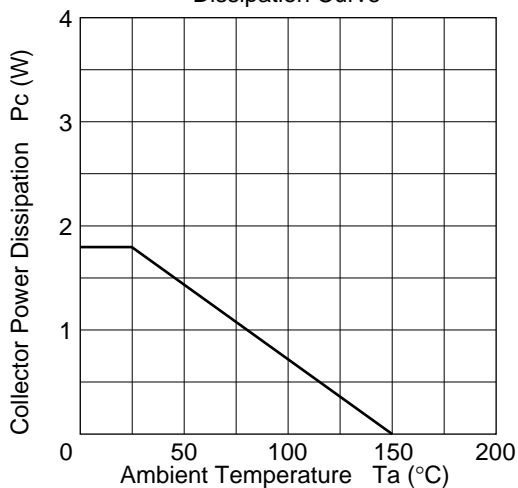
1. Base
2. Collector
(Flange)
3. Emitter

Absolute Maximum Ratings (Ta = 25°C)

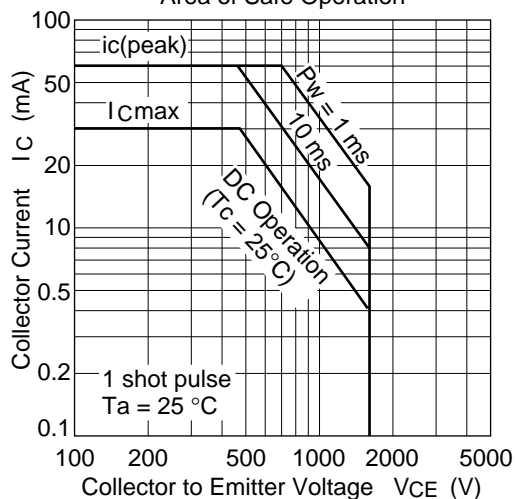
Item	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	1300	V
Collector to emitter voltage	V _{CEO}	1300	V
Emitter to base voltage	V _{EBO}	6	V
Collector current	I _C	30	mA
Collector peak current	I _{C(peak)}	60	mA
Collector power dissipation	P _C	1.8	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	−55 to +150	°C

Electrical Characteristics (Ta = 25°C)

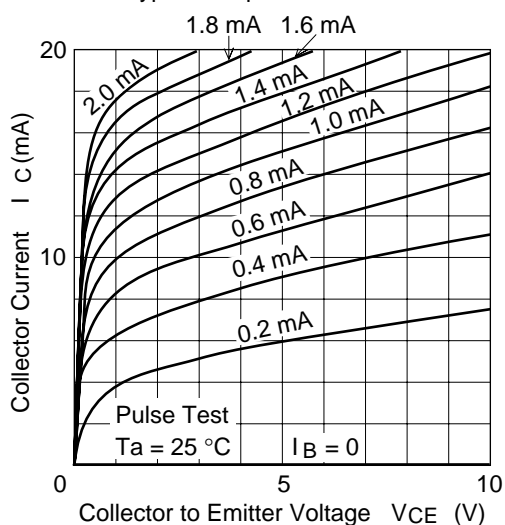
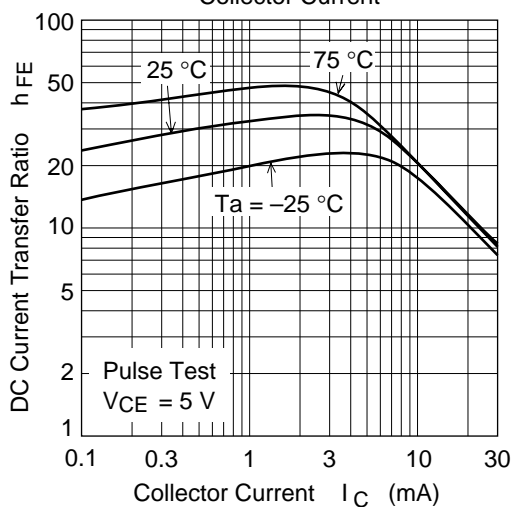
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector cutoff current	I _{CES}	—	—	10	μA	V _{CE} = 1300 V, R _{BE} = 0
Collector cutoff current	I _{CEO}	—	—	100	μA	V _{CE} = 1300 V, R _{BE} =
Emitter cutoff current	I _{EBO}	—	—	10	μA	V _{EB} = 6 V, I _C = 0
DC current transfer ratio	h _{FE}	10	—	—		V _{CE} = 5 V, I _C = 1 mA
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	5.0	V	I _C = 10 mA, I _B = 2 mA
Gain bandwidth product	f _T	—	5.5	—	MHz	V _{CE} = 20 V, I _C = 1 mA
Collector output capacitance	Cob	—	3.4	—	pF	V _{CB} = 100 V, I _E = 0, f = 1 MHz

Maximum Collector Power
Dissipation Curve

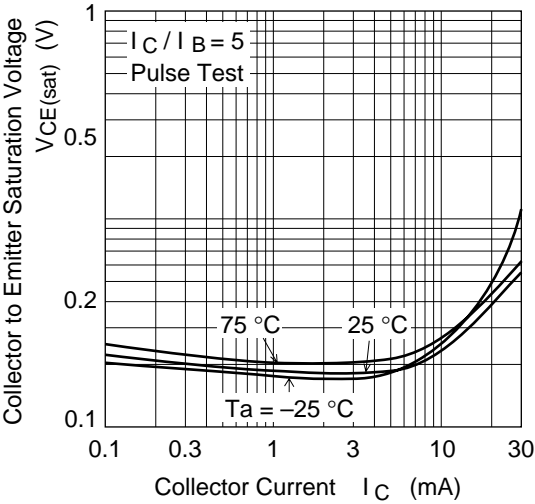
Area of Safe Operation



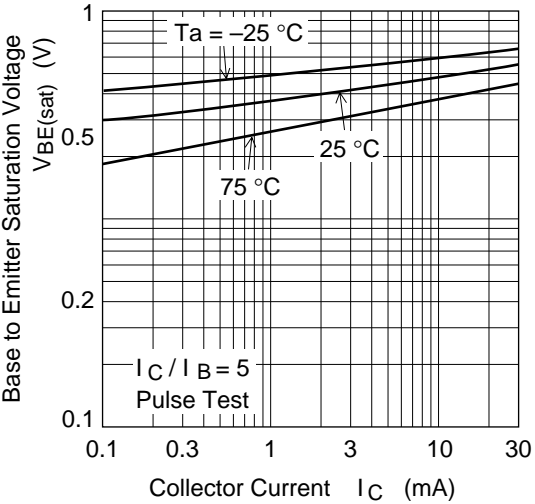
Typical Output Characteristics

DC Current Transfer Ratio vs.
Collector Current

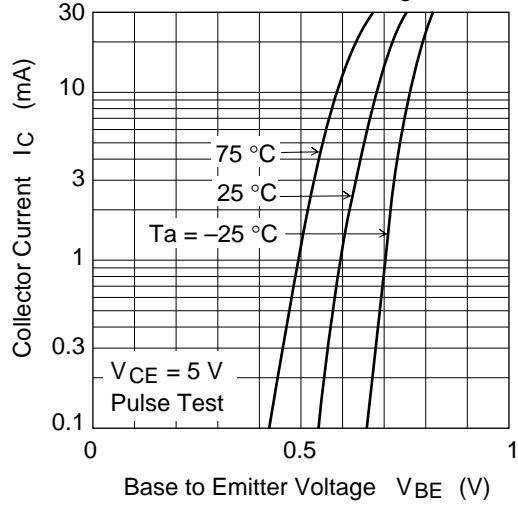
Collector to Emitter Saturation Voltage
vs. Collector Current



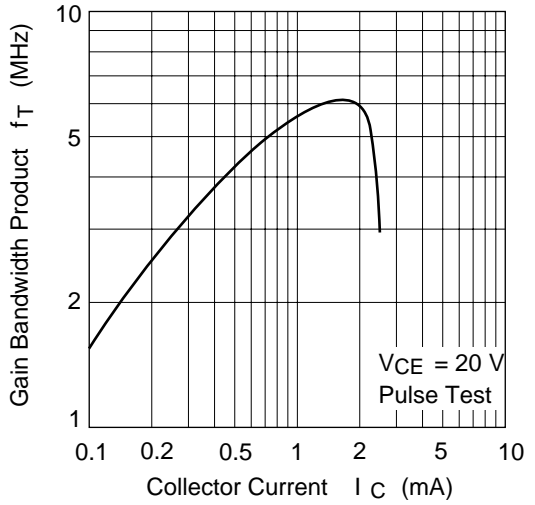
Base to Emitter Saturation Voltage
vs. Collector Current

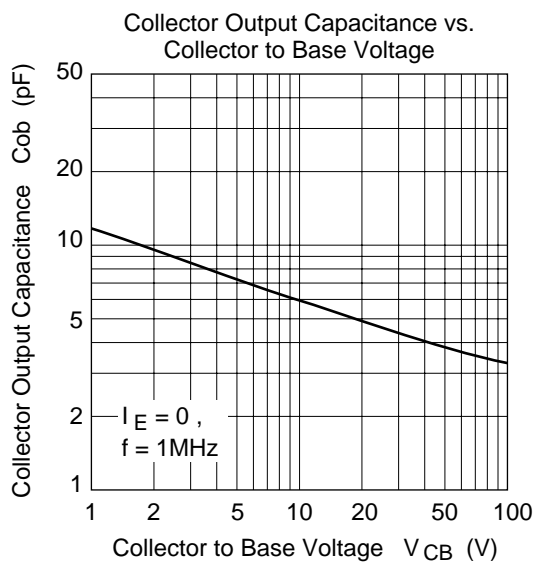


Collector Current vs.
Base to Emitter Voltage



Gain Bandwidth Product vs.
Collector Current





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