

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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2SC4913

Silicon NPN Triple Diffused

RENESAS

ADE-208-895 (Z)

1st. Edition

September 2000

Application

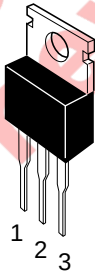
High voltage amplifier

Features

- High breakdown voltage
- $V_{(BR)CEO} = 2000 \text{ V min}$

Outline

TO-220AB



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

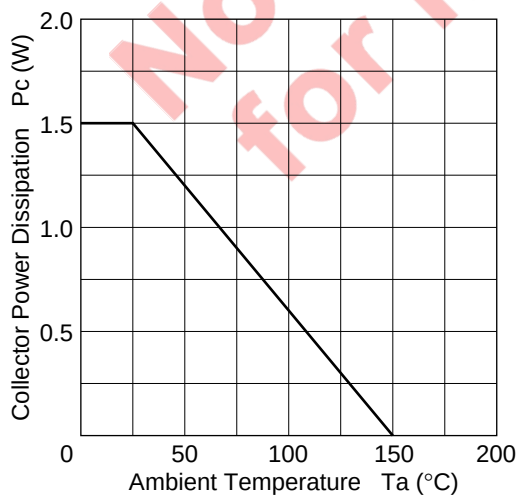
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	2000	V
Collector to emitter voltage	V_{CEO}	2000	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	20	mA
Collector peak current	$I_{C(peak)}$	40	mA
Collector power dissipation	P_C	1.5	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

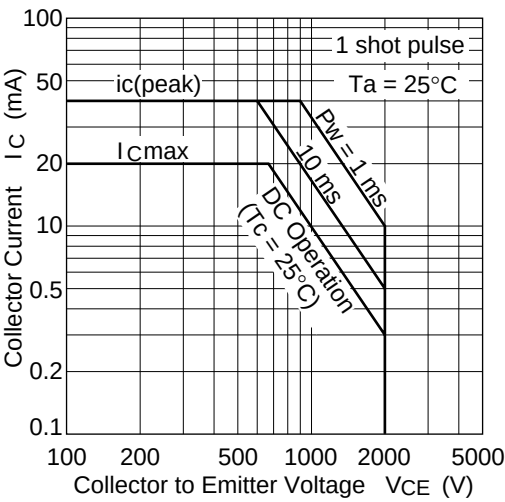
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector cutoff current	I_{CES}	—	—	500	μA	$V_{CE} = 2000\text{ V}, R_{BE} = 0$
Collector cutoff current	I_{CEO}	—	—	5	mA	$V_{CE} = 2000\text{ V}, R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	500	μA	$V_{EB} = 6\text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}	10	—	—	—	$V_{CE} = 5\text{ V}, I_C = 1\text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	5.0	V	$I_C = 10\text{ mA}, I_B = 2\text{ mA}$

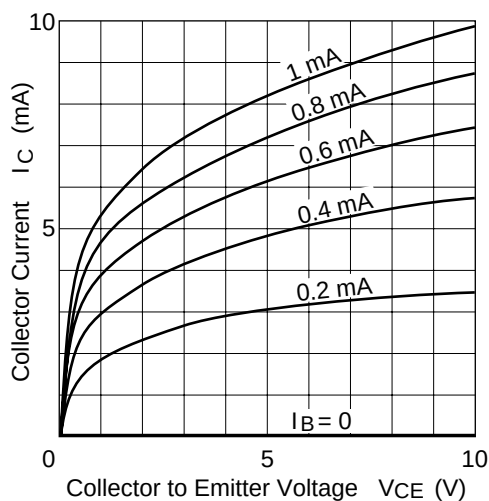
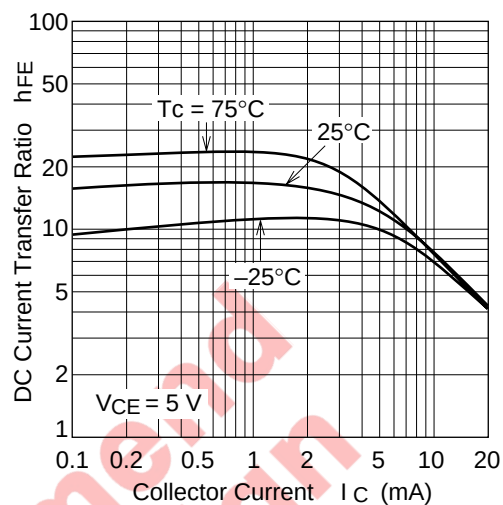
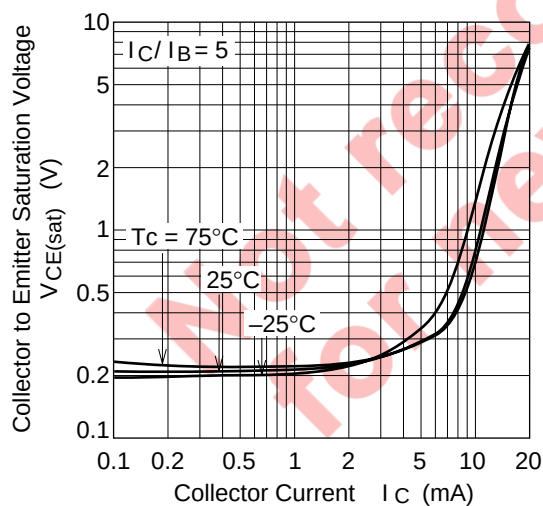
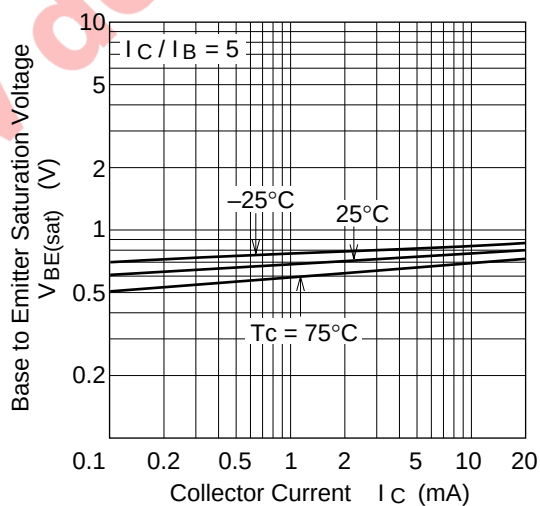
Maximum Collector Power Dissipation Curve



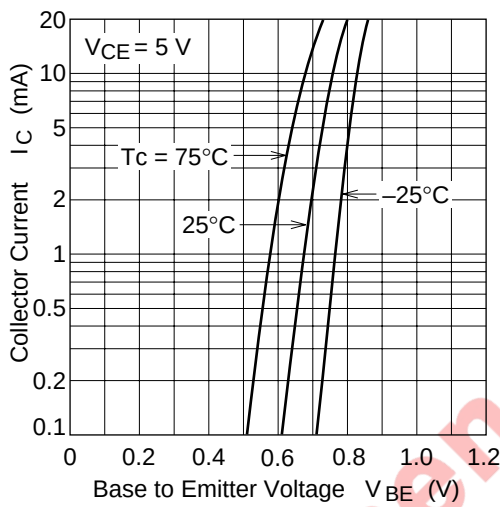
Area of Safe Operation



Typical Output Characteristics

DC Current Transfer Ratio
vs. Collector CurrentCollector to Emitter Saturation Voltage
vs. Collector CurrentBase to Emitter Saturation Voltage
vs. Collector Current

Collector Current vs. Base to Emitter Voltage



Not recommended
for new design

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