

To our customers,

Old Company Name in Catalogs and Other Documents

On April 1st, 2010, NEC Electronics Corporation merged with Renesas Technology Corporation, and Renesas Electronics Corporation took over all the business of both companies. Therefore, although the old company name remains in this document, it is a valid Renesas Electronics document. We appreciate your understanding.

Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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Renesas Technology Home Page: <http://www.renesas.com>

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

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2SC4913

Silicon NPN Triple Diffused

RENESAS

ADE-208-895 (Z)
1st. Edition
September 2000

Application

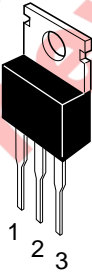
High voltage amplifier

Features

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

Outline

TO-220AB



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

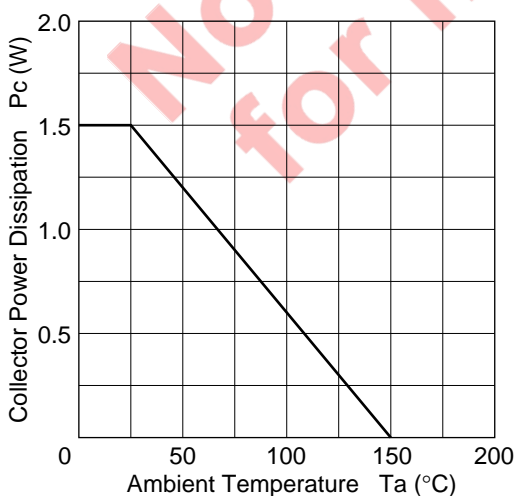
Absolute Maximum Ratings (Ta = 25°C)

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

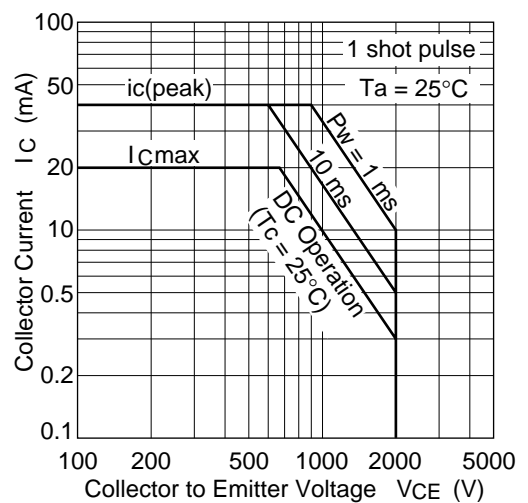
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector cutoff current	I_{CES}	—	—	500	μA	$V_{CE} = 2000 V, R_{BE} = 0$
Collector cutoff current	I_{CEO}	—	—	5	mA	$V_{CE} = 2000 V, R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	500	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	$I_C = 10 mA, I_B = 2 mA$

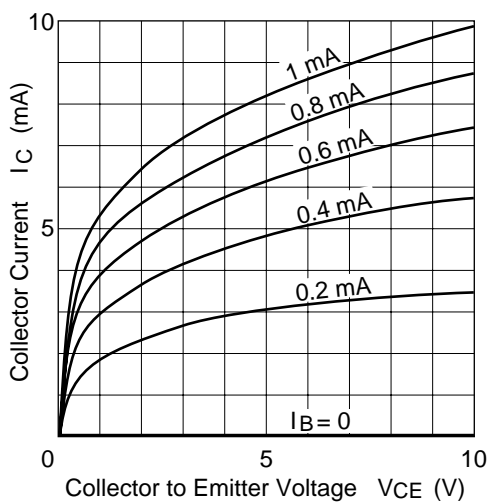
Maximum Collector Power Dissipation Curve



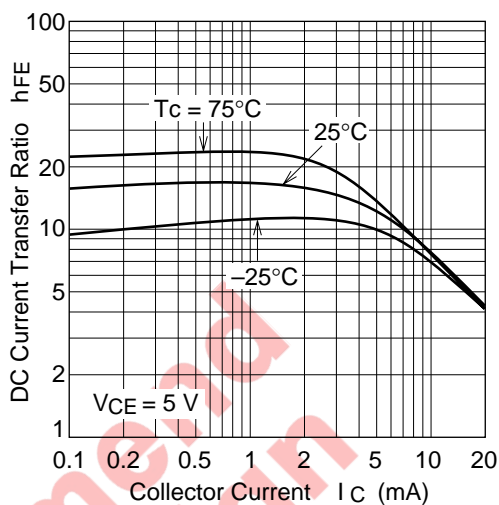
Area of Safe Operation



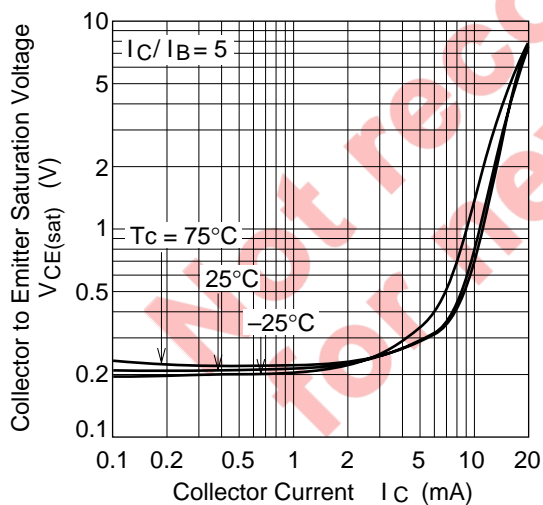
Typical Output Characteristics



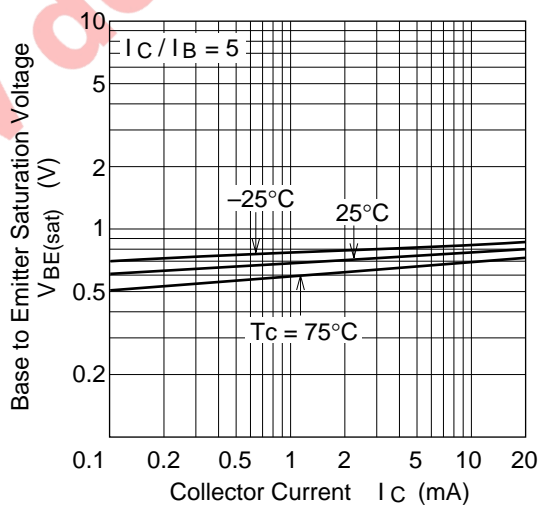
DC Current Transfer Ratio vs. Collector Current



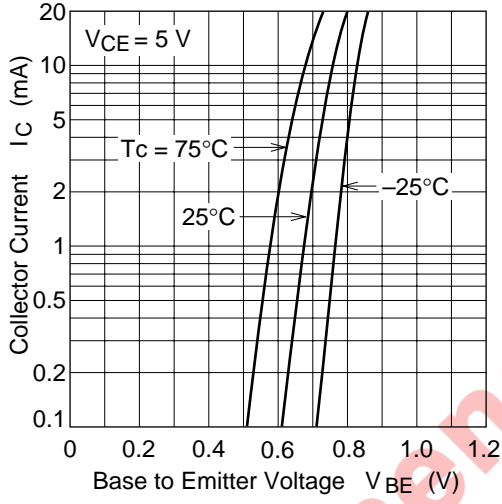
Collector to Emitter Saturation Voltage vs. Collector Current



Base to Emitter Saturation Voltage vs. Collector Current



Collector Current vs. Base to Emitter Voltage



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