

To our customers,

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## Old Company Name in Catalogs and Other Documents

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On April 1<sup>st</sup>, 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 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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EOL announced Product

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To all our customers

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The semiconductor operations of Mitsubishi Electric and Hitachi were transferred to Renesas Technology Corporation on April 1st 2003. These operations include microcomputer, logic, analog and discrete devices, and memory chips other than DRAMs (flash memory, SRAMs etc.) Accordingly, although Hitachi, Hitachi, Ltd., Hitachi Semiconductors, and other Hitachi brand names are mentioned in the document, these names have in fact all been changed to Renesas Technology Corp. Thank you for your understanding. Except for our corporate trademark, logo and corporate statement, no changes whatsoever have been made to the contents of the document, and these changes do not constitute any alteration to the contents of the document itself.

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

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

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# 2SC5022

Silicon NPN Triple Diffused

**RENESAS**

ADE-208-896 (Z)  
1st. Edition  
September 2000

## Application

High voltage amplifier

## Features

- High breakdown voltage  $V_{(BR)CEO} = 1500 \text{ V Min}$

## Outline

TO-220FM



1. Base
2. Collector
3. Emitter

EOL announced Product

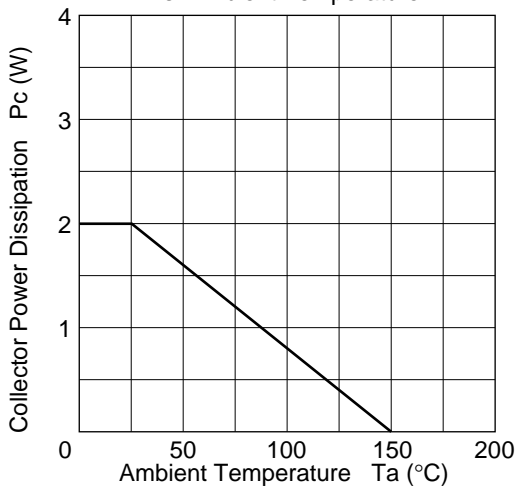
## Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	1500	V
Collector to emitter voltage	$V_{CEO}$	1500	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	$P_C$	2	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

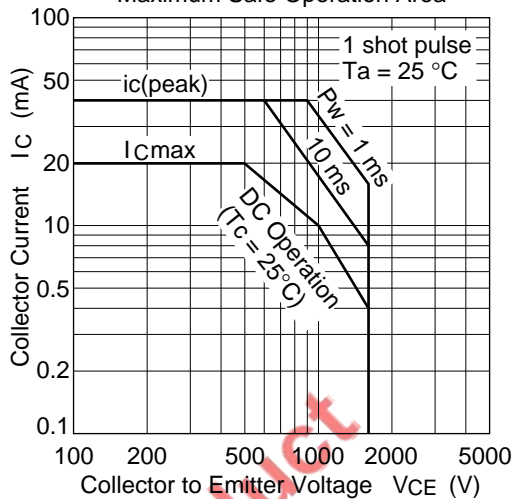
## Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector cutoff current	$I_{CES}$	—	—	10	$\mu A$	$V_{CE} = 1500 V, R_{BE} = 0$
Collector cutoff current	$I_{CEO}$	—	—	100	$\mu A$	$V_{CE} = 1500 V, R_{BE} =$
Emitter cutoff current	$I_{EBO}$	—	—	10	$\mu A$	$V_{EB} = 6 V, I_C = 0$
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	$I_C = 10 mA, I_B = 2 mA$

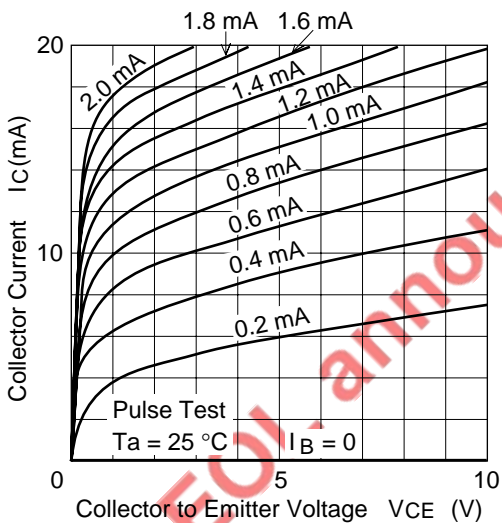
Collector Power Dissipation vs. Ambient Temperature



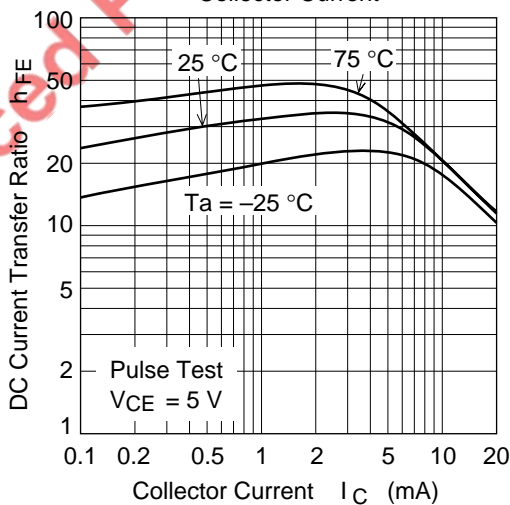
Maximum Safe Operation Area



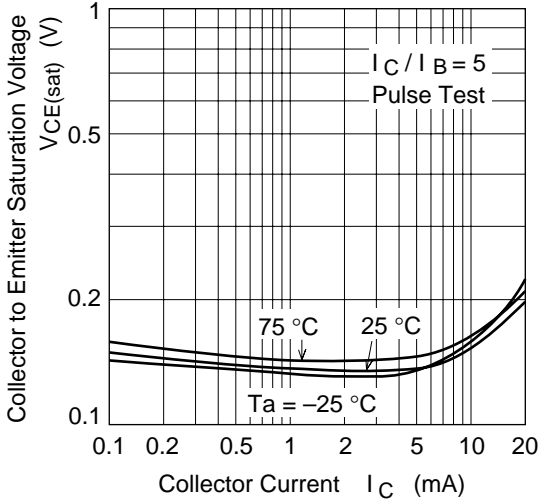
Typical Output Characteristics



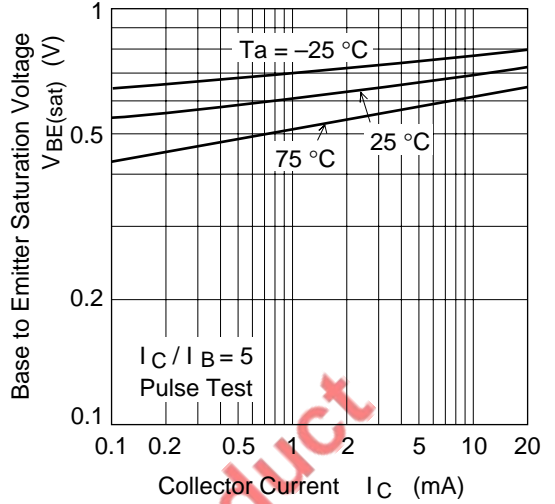
DC Current Transfer Ratio vs. Collector Current



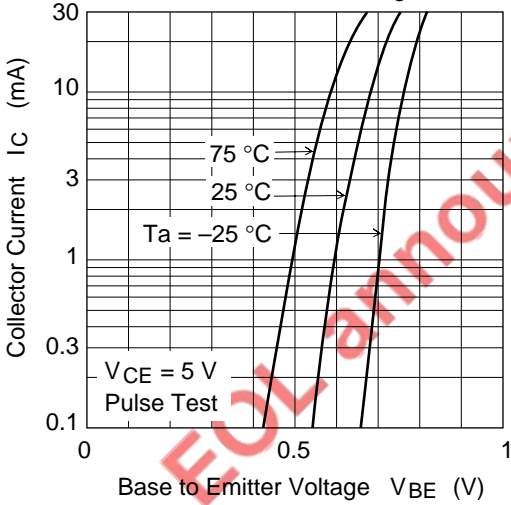
Collector to Emitter Saturation Voltage vs. Collector Current



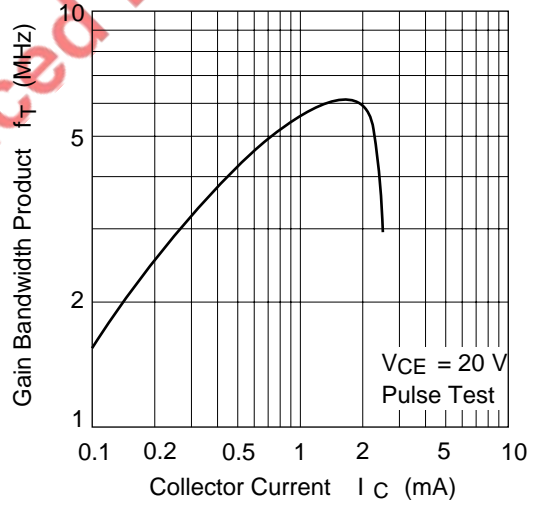
Base to Emitter Saturation Voltage vs. Collector Current



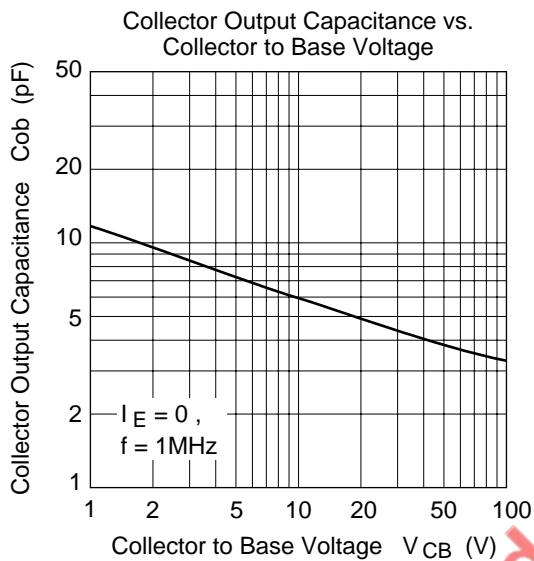
Collector Current vs. Base to Emitter Voltage



Gain Bandwidth Product vs. Collector Current







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