

To our customers,

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## Old Company Name in Catalogs and Other Documents

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

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

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EOL product

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# 2SC3512

Silicon NPN Epitaxial

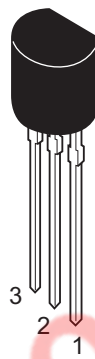
REJ03G0714-0300  
Rev.3.00  
Apr 20, 2006

## Application

UHF / VHF wide band amplifier

## Outline

RENESAS Package code: PRSS0003DA-C  
(Package name: TO-92 (2))



1. Base
2. Emitter
3. Collector

## Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	15	V
Collector to emitter voltage	$V_{CEO}$	11	V
Emitter to base voltage	$V_{EBO}$	2	V
Collector current	$I_C$	50	mA
Collector power dissipation	$P_C$	600	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

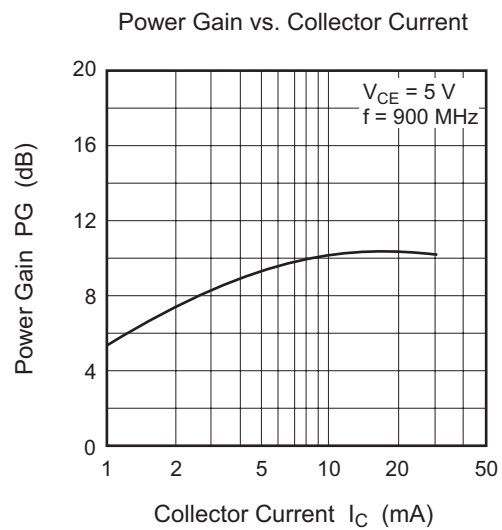
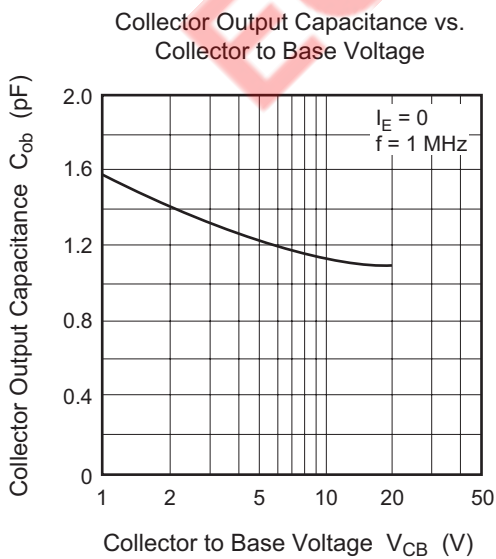
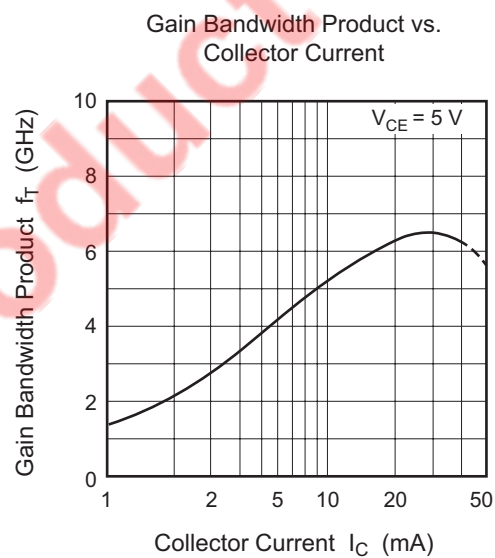
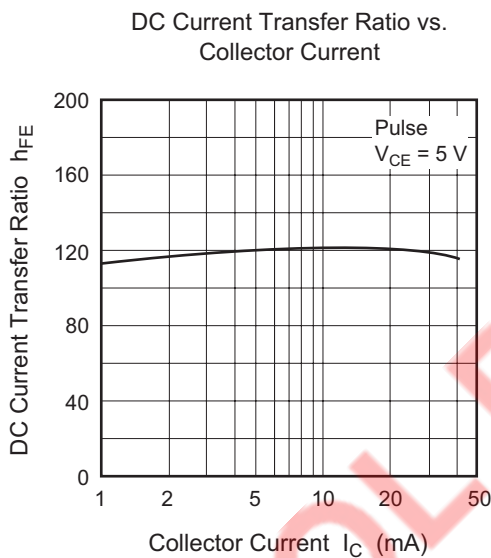
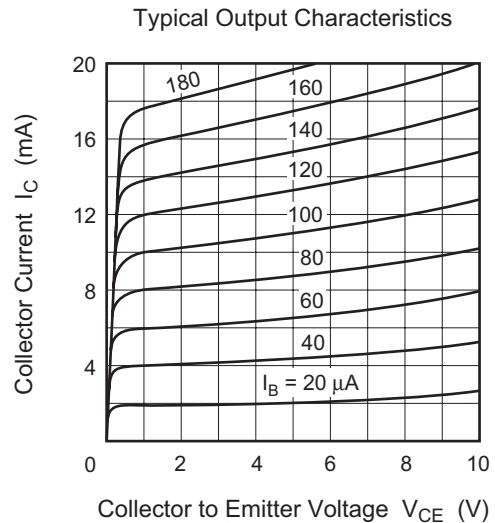
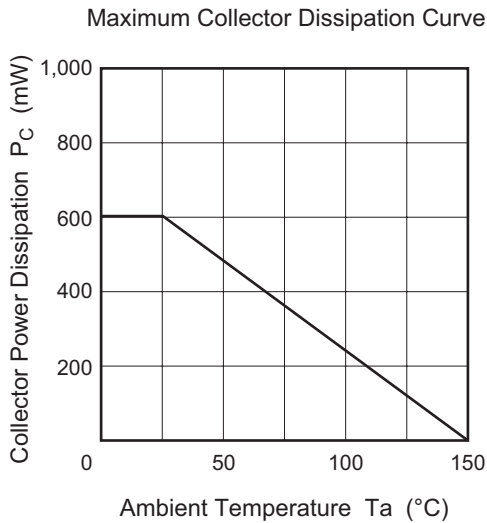
## Electrical Characteristics

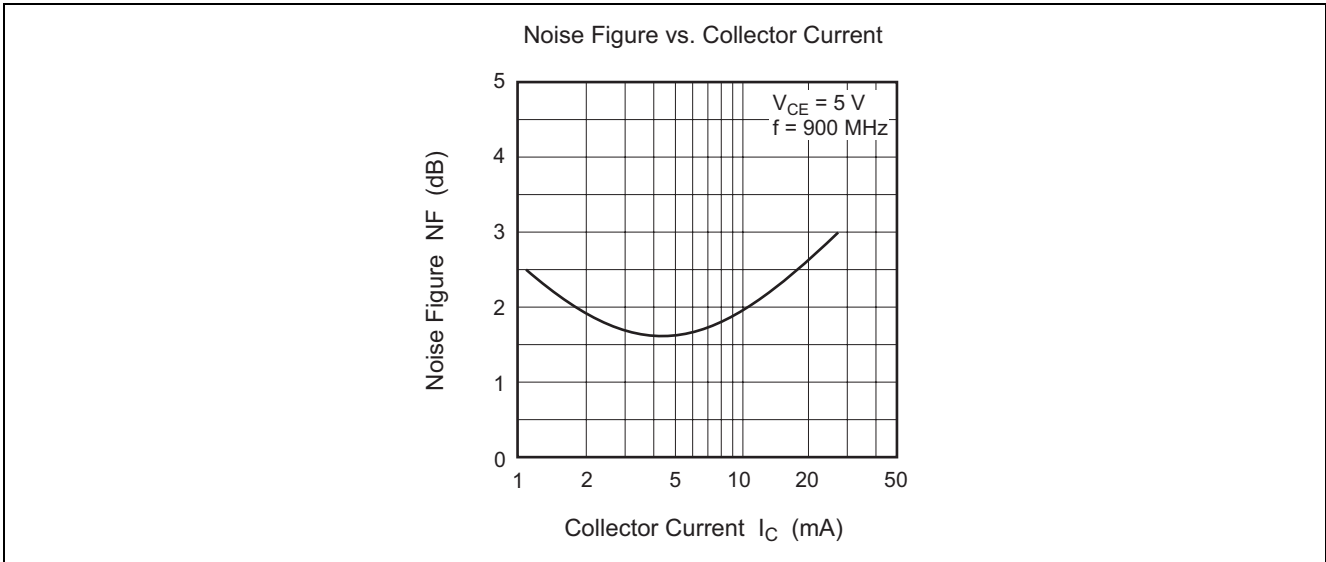
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	15	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to cutoff current	$I_{CEO}$	—	—	1	$\mu A$	$V_{CE} = 10 V, R_{BE} = \infty$
Emitter cutoff current	$I_{EBO}$	—	—	1	$\mu A$	$V_{EB} = 1 V, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	1	$\mu A$	$V_{CB} = 12 V, I_E = 0$
DC current transfer ratio	$h_{FE}$	50	120	250		$V_{CE} = 5 V, I_C = 20 mA$
Collector output capacitance	$C_{ob}$	—	1.2	1.6	pF	$V_{CB} = 5 V, I_E = 0, f = 1 MHz$
Gain bandwidth product	$f_T$	—	6.0	—	GHz	$V_{CE} = 5 V, I_C = 20 mA$
Power gain	PG	—	10.5	—	dB	$V_{CE} = 5 V, I_C = 20 mA,$ $f = 900 MHz$
Noise figure	NF	—	1.6	—	dB	$V_{CE} = 5 V, I_C = 5 mA,$ $f = 900 MHz$

EOL Product

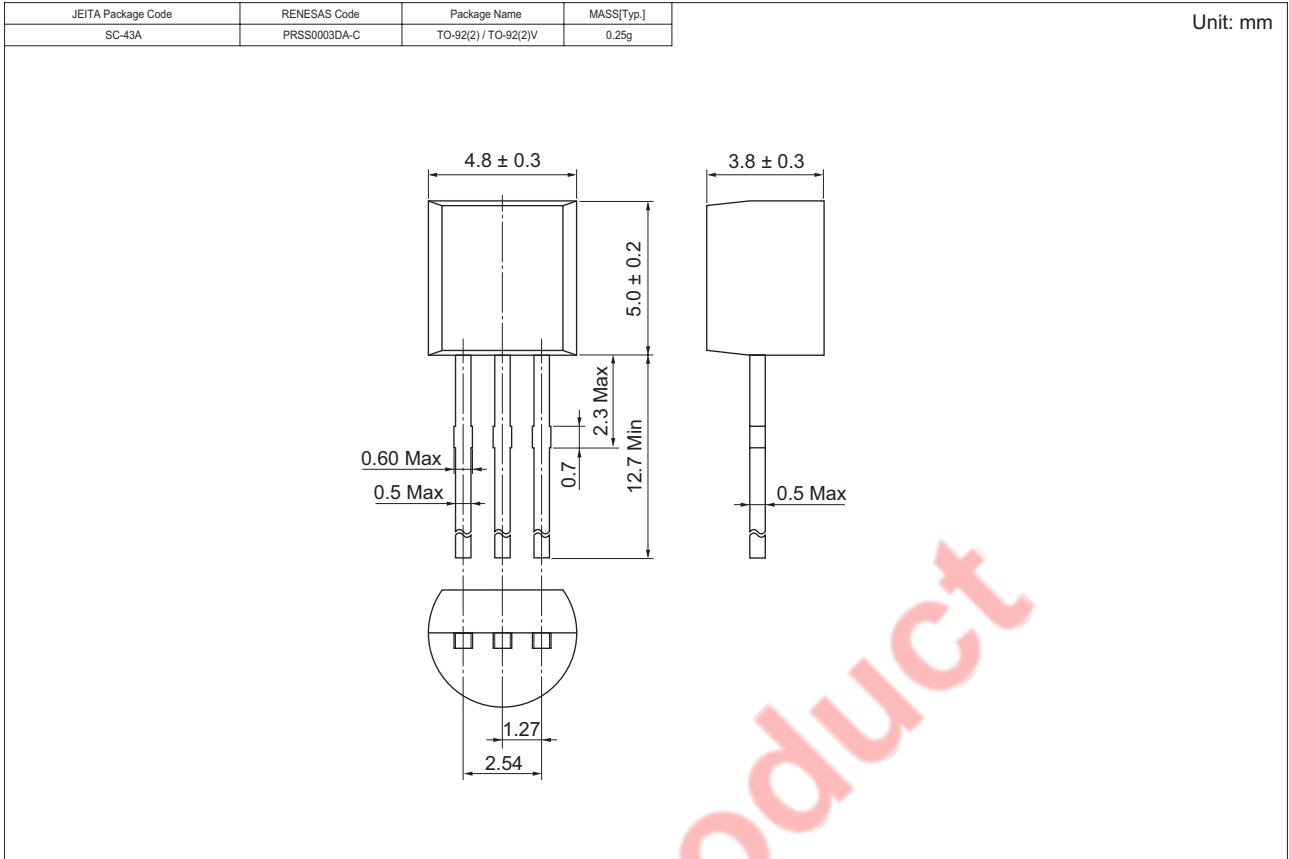
### Main Characteristics





EOL Product

Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SC3512TZ-E	2500	Hold Box, Radial Taping

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**Renesas Technology America, Inc.**

450 Holger Way, San Jose, CA 95134-1368, U.S.A  
Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

**Renesas Technology Europe Limited**

Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.  
Tel: <44> (1628) 585-100, Fax: <44> (1628) 585-900

**Renesas Technology (Shanghai) Co., Ltd.**

Unit 204, 205, AZIACenter, No.1233 Lujiazui Ring Rd, Pudong District, Shanghai, China 200120  
Tel: <86> (21) 5877-1818, Fax: <86> (21) 6887-7898

**Renesas Technology Hong Kong Ltd.**

7th Floor, North Tower, World Finance Centre, Harbour City, 1 Canton Road, Tsimshatsui, Kowloon, Hong Kong  
Tel: <852> 2265-6688, Fax: <852> 2730-6071

**Renesas Technology Taiwan Co., Ltd.**

10th Floor, No.99, Fushing North Road, Taipei, Taiwan  
Tel: <886> (2) 2715-2888, Fax: <886> (2) 2713-2999

**Renesas Technology Singapore Pte. Ltd.**

1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632  
Tel: <65> 6213-0200, Fax: <65> 6278-8001

**Renesas Technology Korea Co., Ltd.**

Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea  
Tel: <82> (2) 796-3115, Fax: <82> (2) 796-2145

**Renesas Technology Malaysia Sdn. Bhd**

Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia  
Tel: <603> 7955-9390, Fax: <603> 7955-9510