

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

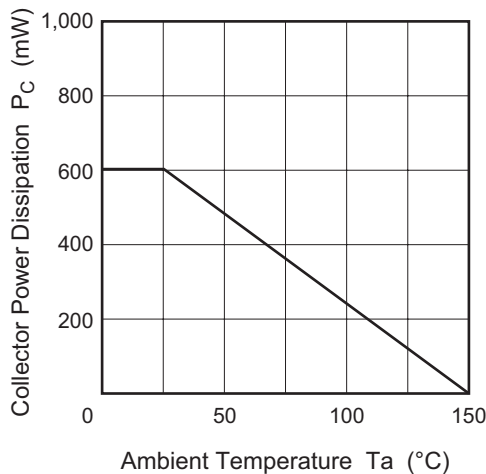
Electrical Characteristics

(Ta = 25°C)

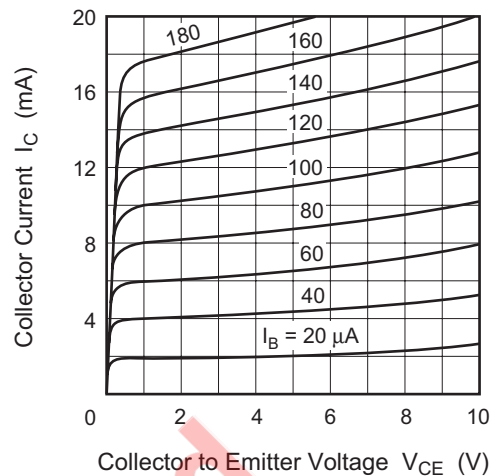
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	15	—	—	V	$I_C = 10\ \mu A, I_E = 0$
Collector to cutoff current	I_{CEO}	—	—	1	μA	$V_{CE} = 10\ V, R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	1	μA	$V_{EB} = 1\ V, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 12\ V, I_E = 0$
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	$V_{CE} = 5\ V, I_C = 5\ mA, f = 900\ MHz$

Not recommend
for new design

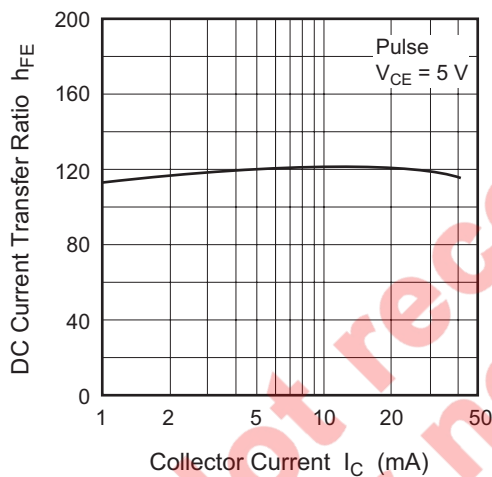
Maximum Collector Dissipation Curve



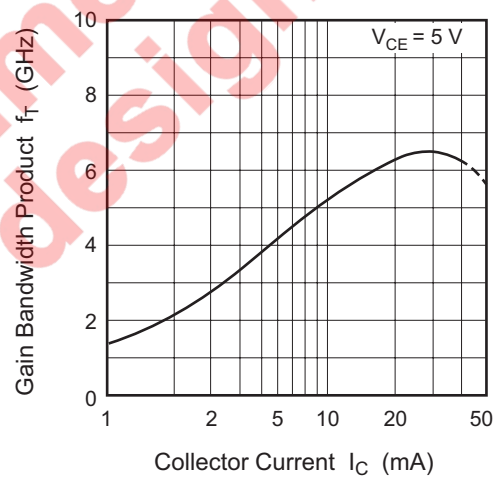
Typical Output Characteristics



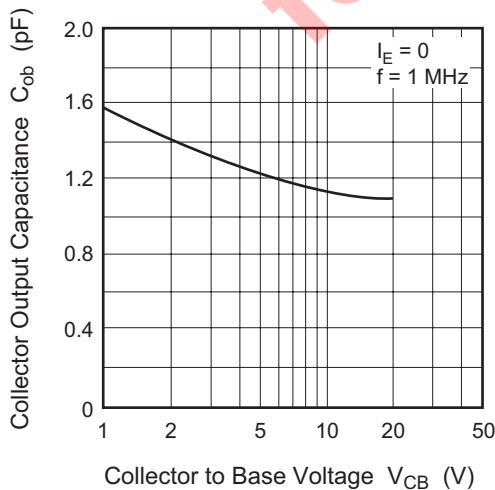
DC Current Transfer Ratio vs. Collector Current



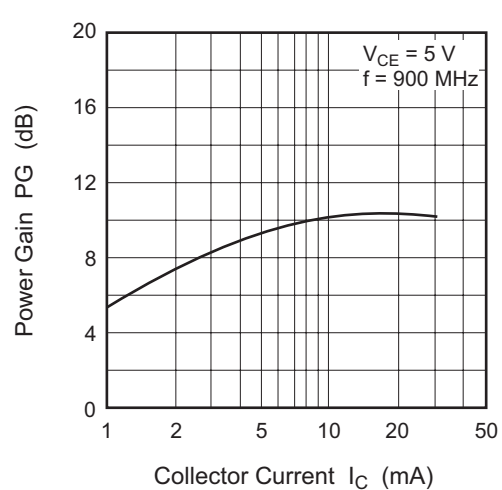
Gain Bandwidth Product vs. Collector Current

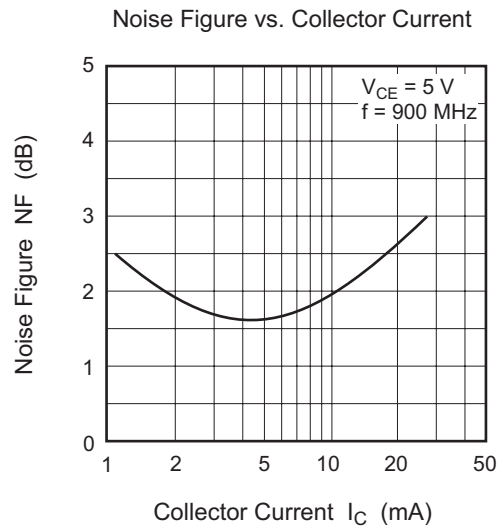


Collector Output Capacitance vs. Collector to Base Voltage



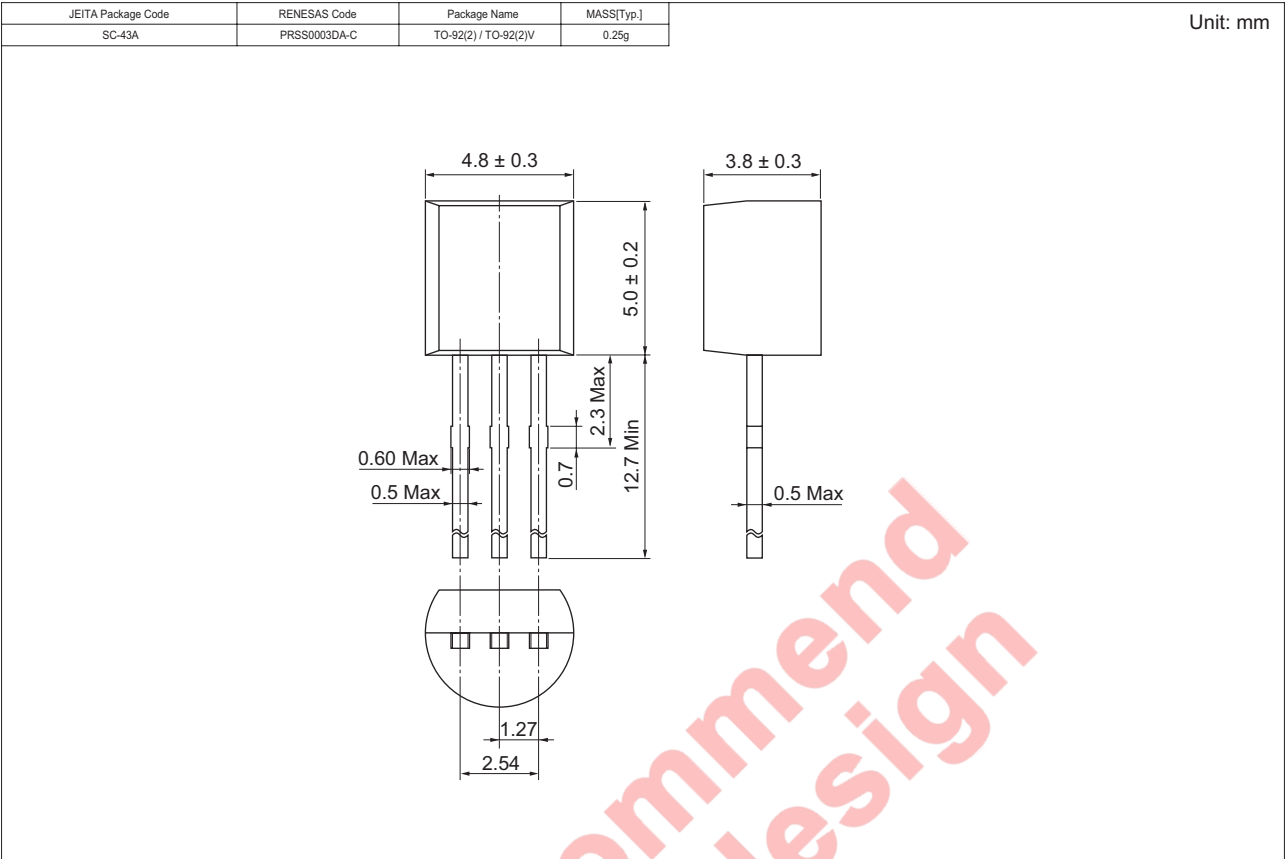
Power Gain vs. Collector Current



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Not recommended
for new design

2SC3512 供应商



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