

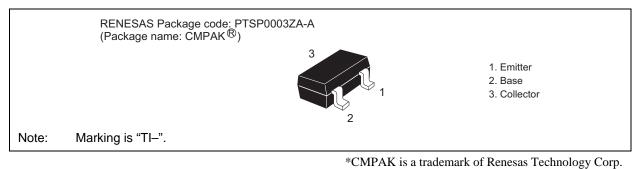
Silicon NPN Epitaxial

REJ03G0718-0300 (Previous ADE-208-1098A) Rev.3.00 Aug.10.2005

## Application

UHF frequency converter, Wide band amplifier

## Outline



## **Absolute Maximum Ratings**

			$(Ta = 25^{\circ}C)$
Item	Symbol	Ratings	Unit
Collector to base voltage	V <sub>CBO</sub>	25	V
Collector to emitter voltage	V <sub>CEO</sub>	13	V
Emitter to base voltage	V <sub>EBO</sub>	3	V
Collector current	I <sub>C</sub>	50	mA
Collector power dissipation	Pc	100	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

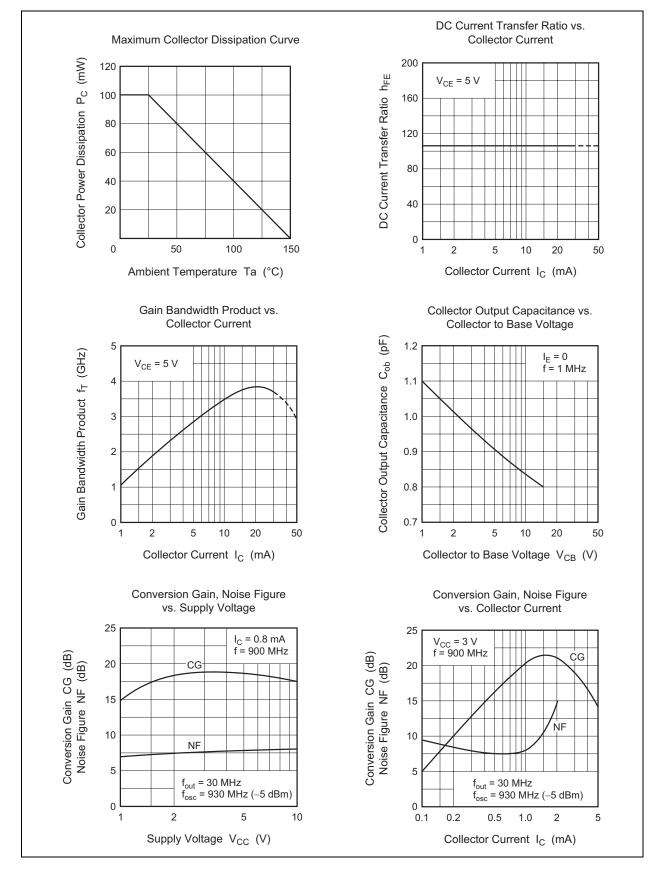


# **Electrical Characteristics**

						$(Ta = 25^{\circ}C)$
Item	Symbol	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	25	—	—	V	$I_{C} = 10 \ \mu A, \ I_{E} = 0$
Collector cutoff current	I <sub>CBO</sub>	_	—	0.1	μΑ	$V_{CB} = 15 \text{ V}, \text{ I}_{E} = 0$
	I <sub>CEO</sub>	—	—	10	μΑ	$V_{CE}$ = 13 V, $R_{BE}$ = $\infty$
Emitter cutoff current	I <sub>EBO</sub>	—	—	0.3	μΑ	$V_{EB} = 3 V, I_{C} = 0$
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>			0.3	V	$I_{C} = 20 \text{ mA}, I_{B} = 4 \text{ mA}$
DC current transfer ratio	h <sub>FE</sub>	50	—	180		$V_{CE} = 5 \text{ V}, I_{C} = 5 \text{ mA}$
Collector output capacitance	Cob	—	0.85	1.3	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1MHz$
Gain bandwidth product	f <sub>T</sub>	3.0	3.8	—	GHz	$V_{CE} = 5 \text{ V}, I_{C} = 5 \text{ mA}$
Conversion gain	CG	_	19	—	dB	$V_{CC} = 5 \text{ V}, I_C = 0.8 \text{ mA},$
						f = 900 MHz
Noise figure	NF	—	8	—	dB	f <sub>OSC</sub> = 930 MHz (–5dBm),
						f <sub>out</sub> = 30 MHz



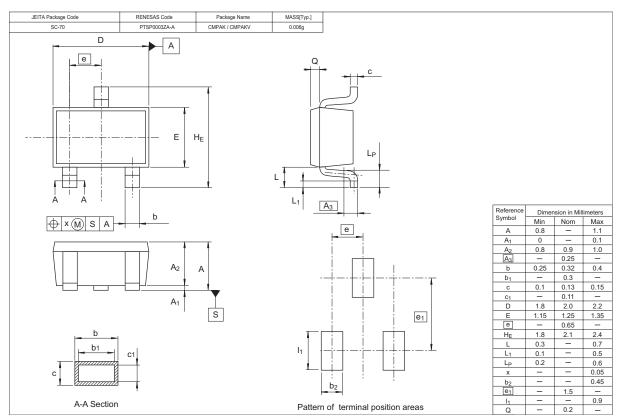
## **Main Characteristics**



Rev.3.00 Aug 10, 2005 page 3 of 4



## **Package Dimensions**



# **Ordering Information**

Part Name	Quantity	Shipping Container
2SC4260TI-TL-E	3000	φ 178 mm Reel, 8 mm Emboss Taping

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.



## RenesasTechnology Corp. Sales Strategic Planning Div. Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan

Keep safety first in your circuit designs! 1. Renesas Technology Corp. 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.

### Notes regarding these materials

- Notes regarding these materials
  1. These materials are intended as a reference to assist our customers in the selection of the Renesas Technology Corp. product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Renesas Technology Corp. or a third party.
  2. Renesas Technology Corp. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.
  3. All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Renesas Technology Corp. or an authorized Renesas Technology Corp. product distributor for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Renesas Technology Corp. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Renesas Technology Corp. by various means, including the Renesas Technology Corp. Semiconductor home page (http://www.renesas.com).
  4. When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Renesas Technology Corp. assumes no responsibility for any damage, liability or other loss resulting from the information products. Renesas Technology Corp. assumes no responsibility for any damage, liability or other loss resulting product data, diagrams, charts, programs, and algorithms, please b

- product contained nerein for any specific purposes, such as apparatus or systems for transportation, vendation, research, acrospace, re



## **RENESAS SALES OFFICES**

Refer to "http://www.renesas.com/en/network" for the latest and detailed information.

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 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 (Shanghai) Co., Ltd.

Unit2607 Ruijing Building, No.205 Maoming Road (S), Shanghai 200020, China Tel: <86> (21) 6472-1001, Fax: <86> (21) 6415-2952

## 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

http://www.renesas.com