

2SB1688

Silicon PNP Epitaxial
High voltage amplifier

REJ03G0679-0300
(Previous ADE-208-975A)
Rev.3.00
Aug.10.2005

Features

- High breakdown voltage
 $V_{CEO} = -300V$ min

Outline

RENESAS Package code: PRSS0003DA-A
(Package name: TO-92 (1))



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings

($T_a = 25^\circ C$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-300	V
Collector to emitter voltage	V_{CEO}	-300	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_C	-50	mA
Collector power dissipation	P_C	750	mW
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

Electrical Characteristics

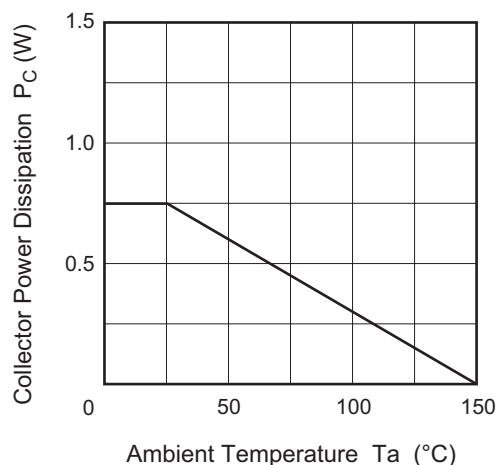
(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector cutoff current	I_{CBO}	—	—	-0.1	μA	$V_{CB} = -300V, I_E = 0$
	I_{CEO}	—	—	-0.1	μA	$V_{CE} = -300V, R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	-10	μA	$V_{EB} = -5V, I_C = 0$
Base to emitter voltage	V_{BE}	—	—	-0.75	V	$V_{CE} = -6V, I_C = -1mA$
DC current transfer ratio	h_{FE}	80	—	160	—	$V_{CE} = -6V, I_C = -2mA$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.9	V	$I_C = -30mA, I_B = -3mA$

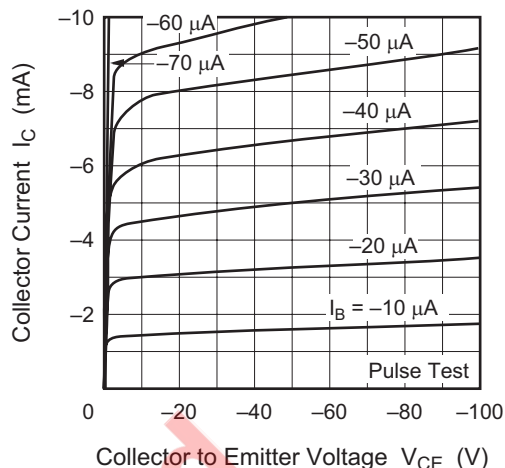
Not recommend
for new design

Main Characteristics

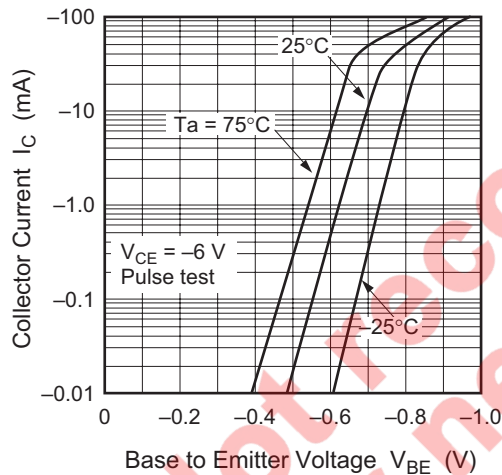
Maximum Collector Dissipation Curve



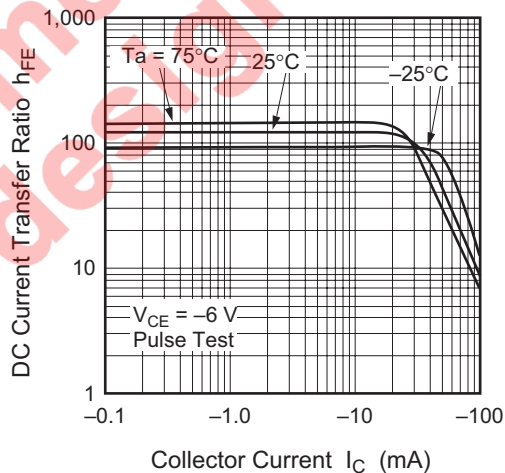
Typical Output Characteristics



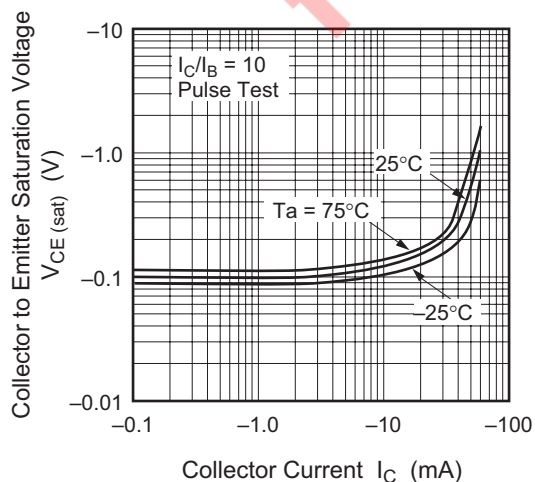
Typical Transfer Characteristics



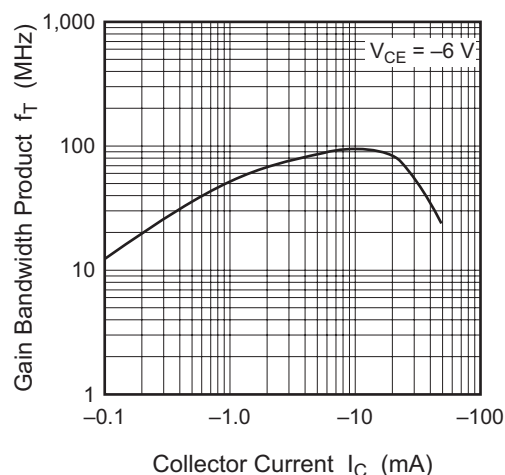
DC Current Transfer Ratio vs. Collector Current

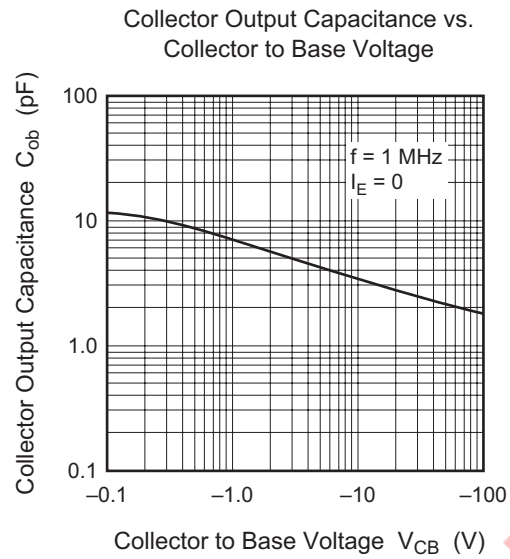


Collector to Emitter Saturation Voltage vs. Collector Current



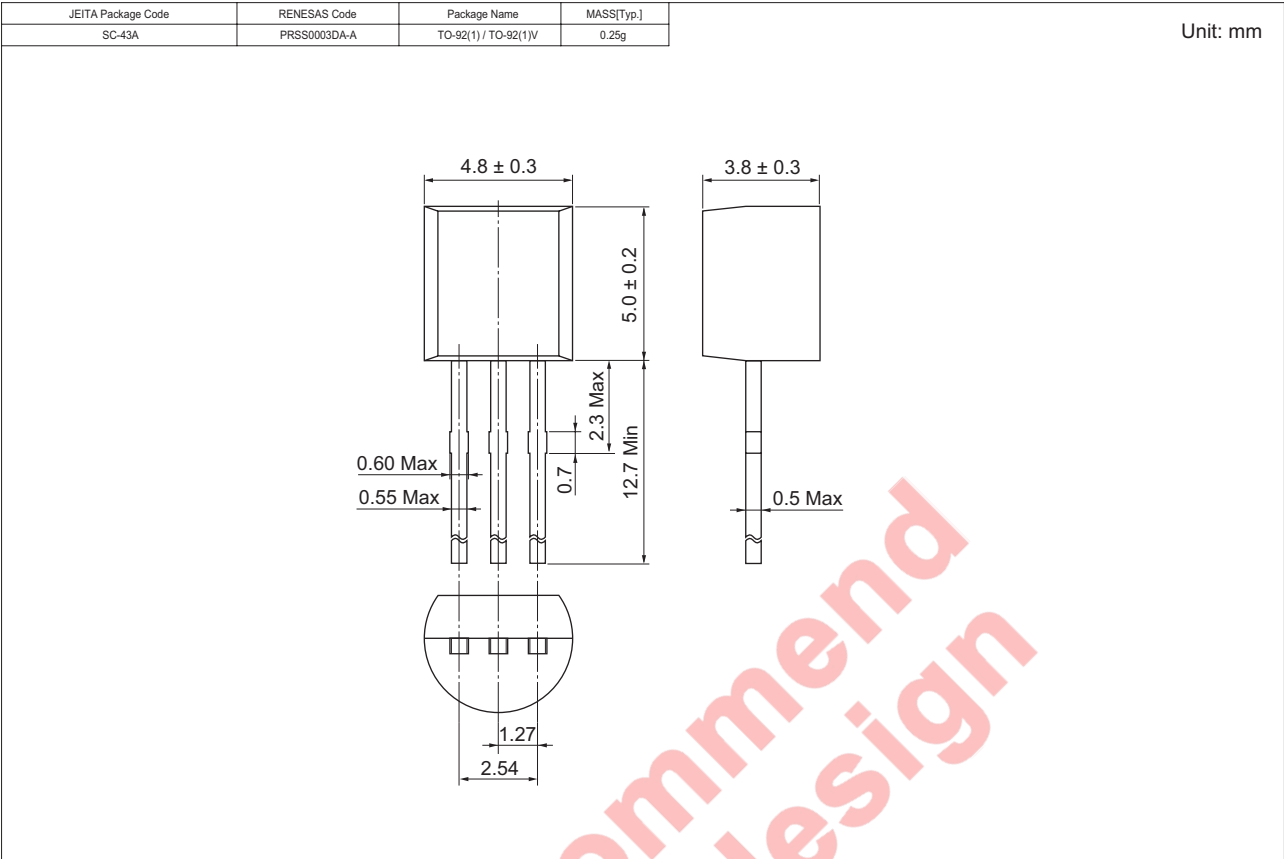
Gain Bandwidth Product vs. Collector Current





Not recommended
for new design

Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SB1688TZ-E	2500	Hold Box, Radial 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.

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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 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