

2SC1906

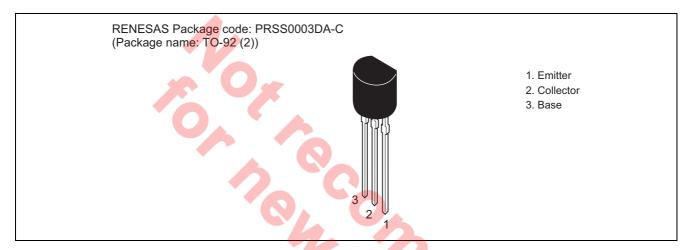
Silicon NPN Epitaxial Planar

REJ03G0693-0200 (Previous ADE-208-1058) Rev.2.00 Aug.10.2005

Application

- VHF amplifier
- Mixer, Local oscillator

Outline



Absolute Maximum Ratings

 $(Ta = 25^{\circ}C)$

Item	Symbol	Ratings	Unit
Collector to base voltage	V _{CBO}	30	V
Collector to emitter voltage	V _{CEO}	19	V
Emitter to base voltage	V_{EBO}	2	V
Collector current	Ic	50	mA
Emitter current	I _E	-5 0	mA
Collector power dissipation	P _C	300	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

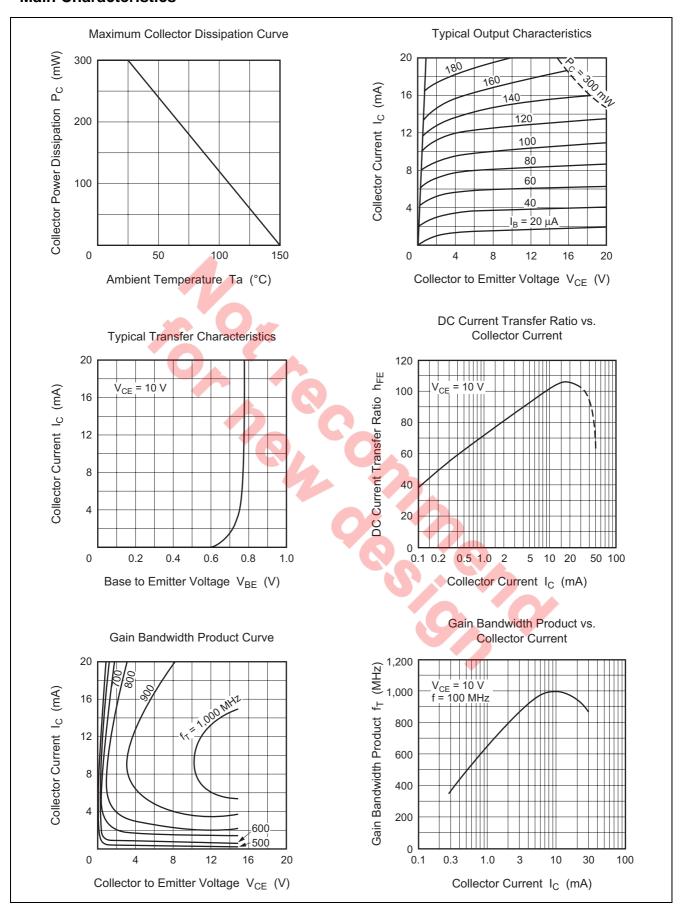
Electrical Characteristics

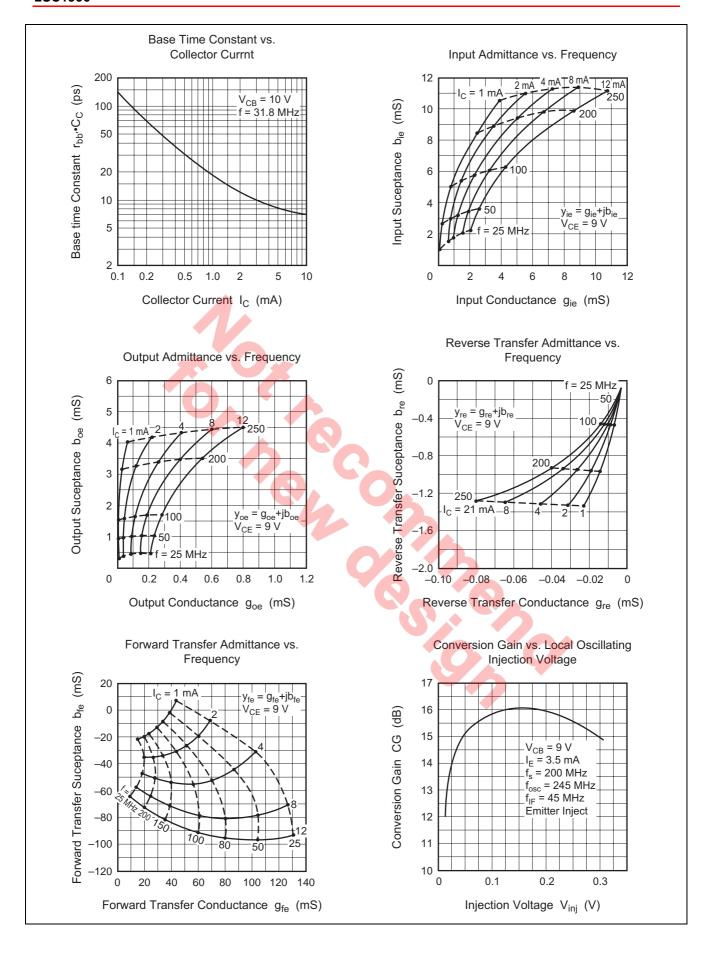
 $(Ta = 25^{\circ}C)$

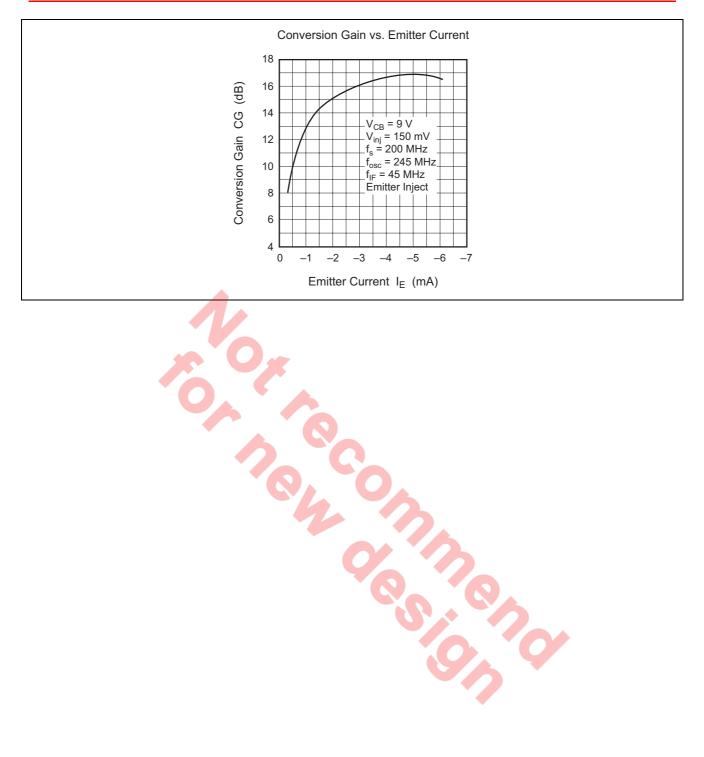
Item	Symbol	Min	Тур	Max	Unit	Test conditions	
Collector to base breakdown voltage	V _{(BR)CBO}	30	_	_	V	$I_C = 10 \mu A, I_E = 0$	
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	19	_	_	V	$I_C = 3 \text{ mA}, R_{BE} = \infty$	
Emitter to base breakdown voltage	V _{(BR)EBO}	2	_	_	V	$I_E = 10 \mu A, I_C = 0$	
Collector cutoff current	I _{CBO}	_	_	0.5	μΑ	$V_{CB} = 10 \text{ V}, I_E = 0$	
DC current transfer ratio	h _{FE}	40	_	_		V _{CE} = 10 V, I _C = 10 mA	
Gain bandwidth product	f⊤	600	1000	_	MHz	V _{CE} = 10 V, I _C = 10 mA	
Collector output capacitance	Cob	_	1.0	2.0	pF	V _{CB} = 10 V, I _E = 0, f = 1 MHz	
Collector to emitter saturation voltage	V _{CE(sat)}	_	0.2	1.0	V	$I_C = 20 \text{ mA}, I_B = 4 \text{ mA}$	
Base time constant	r _{bb′} ∙C _C	_	10	25	ps	V _{CB} = 10 V, I _C = 10 mA, f = 31.8 MHz	
Power gain	PG	_	33	_	dB	$V_{CE} = 10 \text{ V},$ $f = 45 \text{ MHz}$ $I_C = 5 \text{ mA}$	
1		_	18	_	dB	$V_{CE} = 10 \text{ V},$ $f = 200 \text{ MHz}$ $I_{C} = 5 \text{ mA}$	<u>-</u>



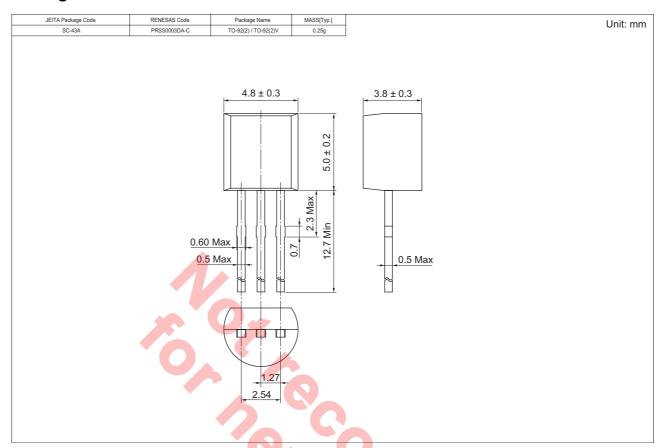
Main Characteristics







Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SC1906TZ-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 Europe Limited
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K.
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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

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