

# 2SC4260

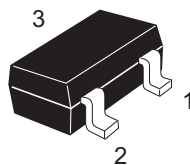
Silicon NPN Epitaxial

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

## Application

UHF frequency converter, Wide band amplifier

## Outline

RENESAS Package code: PTSP0003ZA-A  
(Package name: CMPAK<sup>®</sup>)

1. Emitter
2. Base
3. Collector

Note: Marking is "TI-".

\*CMPAK is a trademark of Renesas Technology Corp.

## Absolute Maximum Ratings

(Ta = 25°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	P <sub>C</sub>	100	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

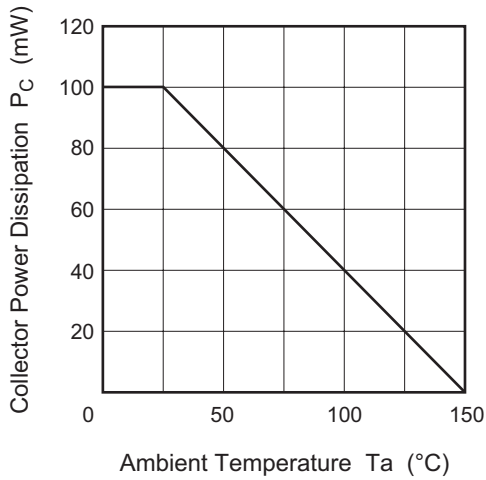
## Electrical Characteristics

(Ta = 25°C)

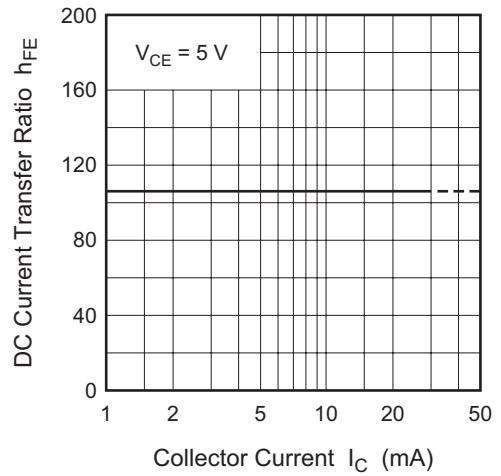
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	25	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector cutoff current	$I_{CBO}$	—	—	0.1	$\mu A$	$V_{CB} = 15 V, I_E = 0$
	$I_{CEO}$	—	—	10	$\mu A$	$V_{CE} = 13 V, R_{BE} = \infty$
Emitter cutoff current	$I_{EBO}$	—	—	0.3	$\mu A$	$V_{EB} = 3 V, I_C = 0$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	$I_C = 20 mA, I_B = 4 mA$
DC current transfer ratio	$h_{FE}$	50	—	180		$V_{CE} = 5 V, I_C = 5 mA$
Collector output capacitance	$C_{ob}$	—	0.85	1.3	pF	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$
Gain bandwidth product	$f_T$	3.0	3.8	—	GHz	$V_{CE} = 5 V, I_C = 5 mA$
Conversion gain	CG	—	19	—	dB	$V_{CC} = 5 V, I_C = 0.8 mA,$ $f = 900 MHz$
Noise figure	NF	—	8	—	dB	$f_{OSC} = 930 MHz (-5dBm),$ $f_{out} = 30 MHz$

Main Characteristics

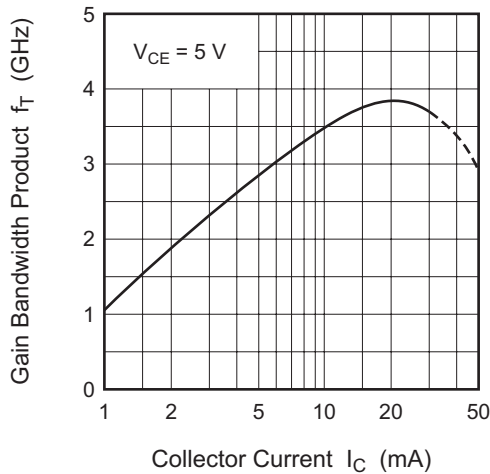
Maximum Collector Dissipation Curve



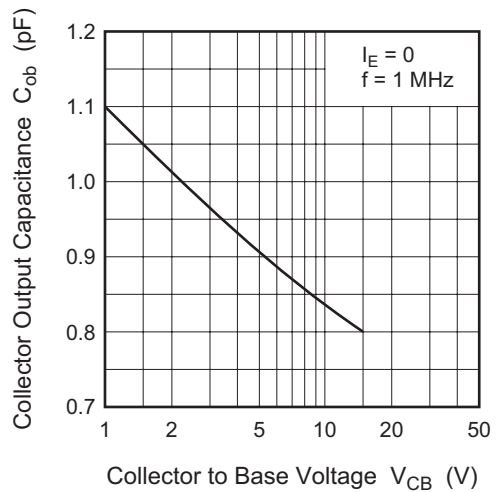
DC Current Transfer Ratio vs. Collector Current



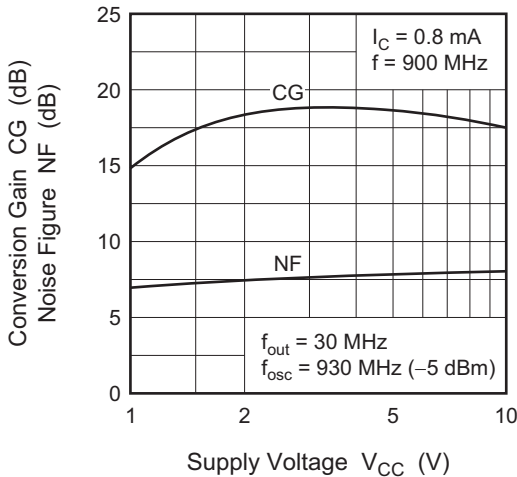
Gain Bandwidth Product vs. Collector Current



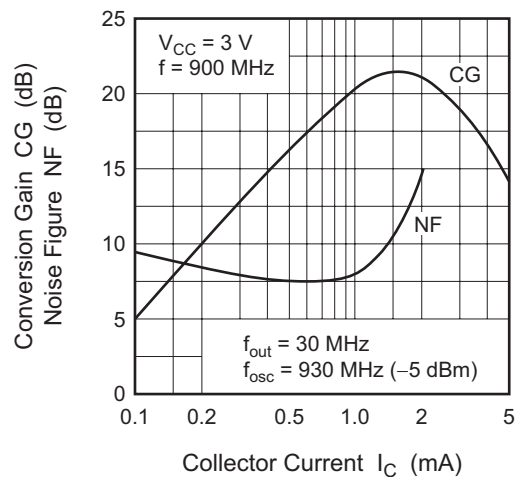
Collector Output Capacitance vs. Collector to Base Voltage



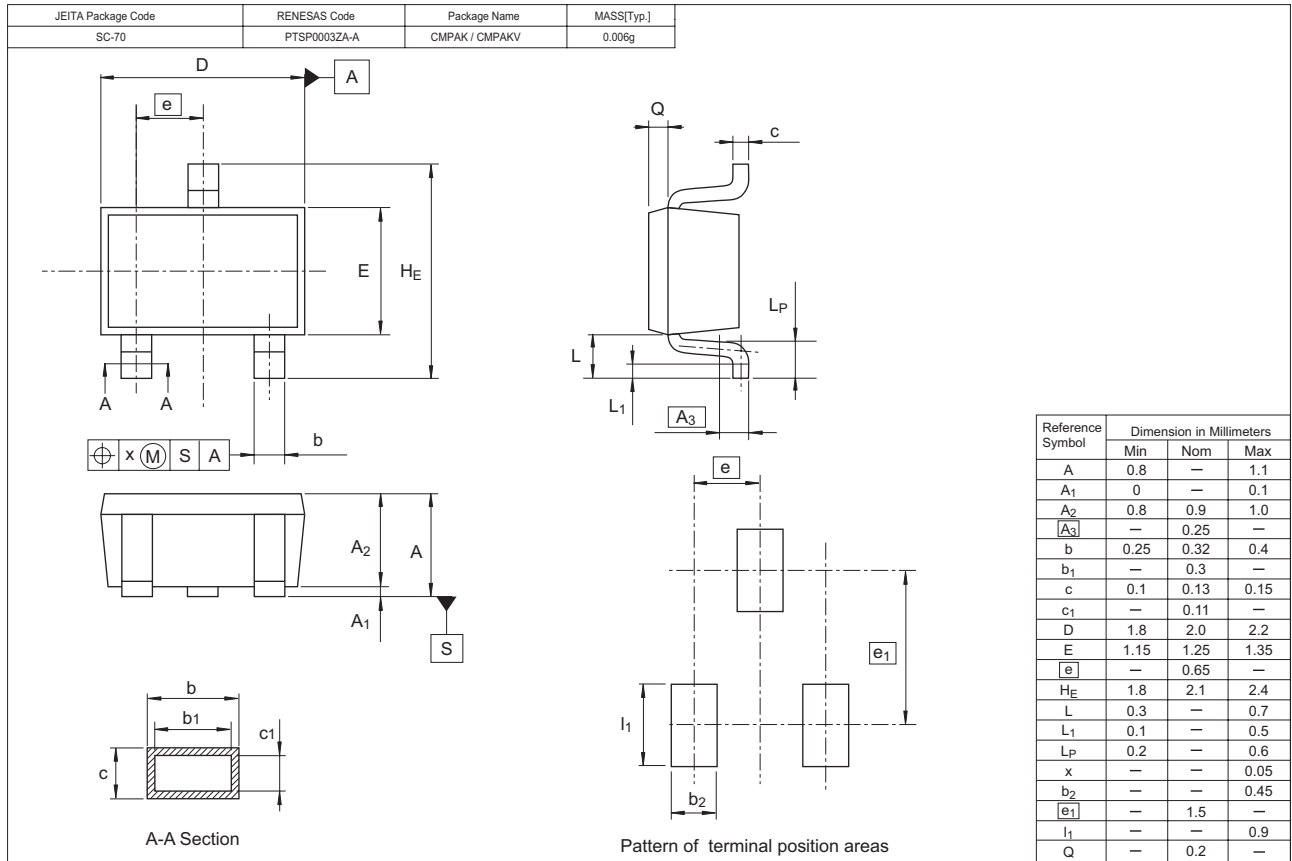
Conversion Gain, Noise Figure vs. Supply Voltage



Conversion Gain, Noise Figure vs. Collector Current



### 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.

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