

2SC4591

Silicon NPN Epitaxial

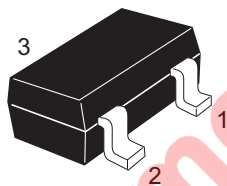
REJ03G0728-0300
(Previous ADE-208-1111A)
Rev.3.00
Aug.10.2005

Application

UHF / VHF wide band amplifier

Outline

RENESAS Package code: PLSP0003ZB-A
(Package name: MPAK)



- 1. Emitter
- 2. Base
- 3. Collector

Note: Marking is "XM-".

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	15	V
Collector to emitter voltage	V_{CEO}	9	V
Emitter to base voltage	V_{EBO}	1.5	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

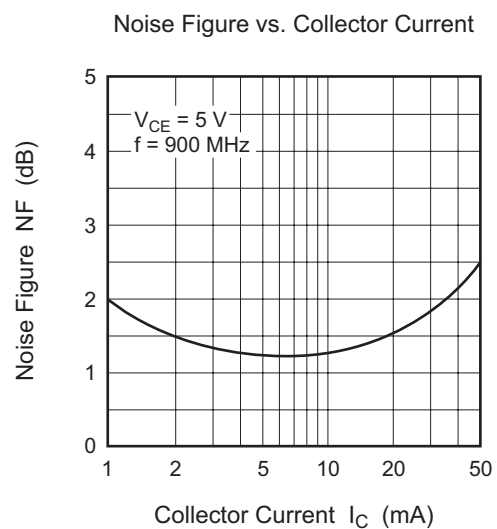
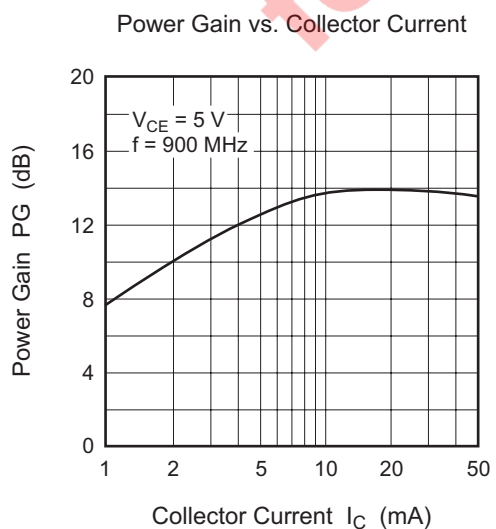
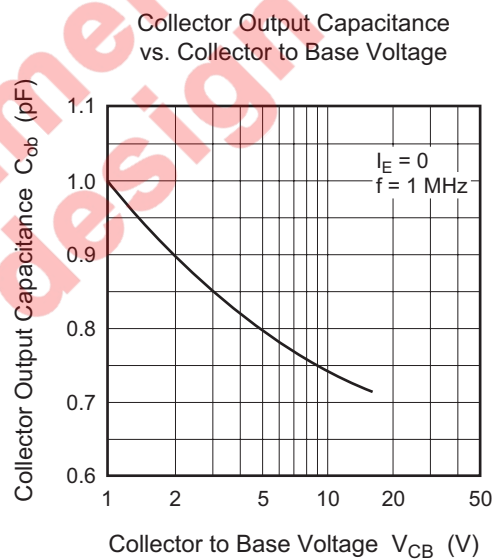
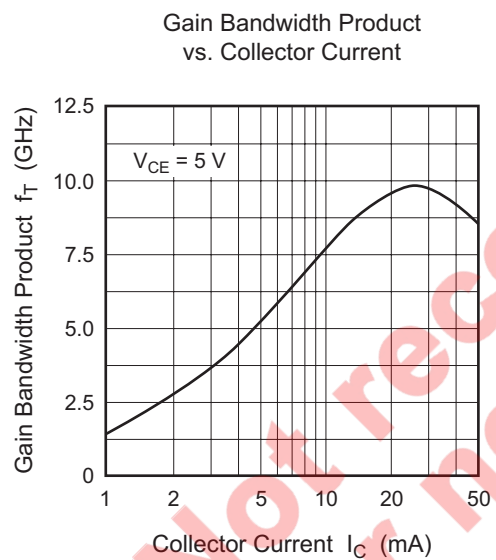
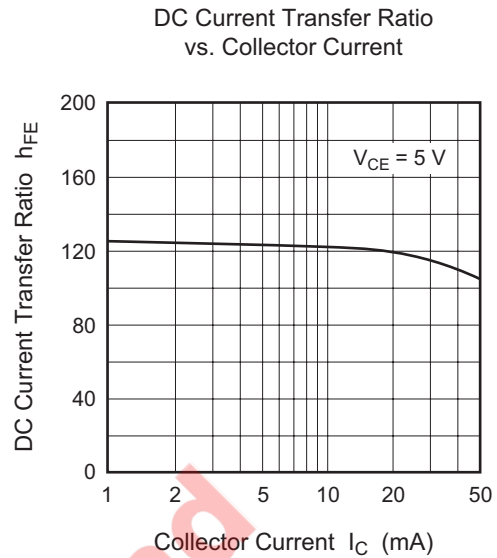
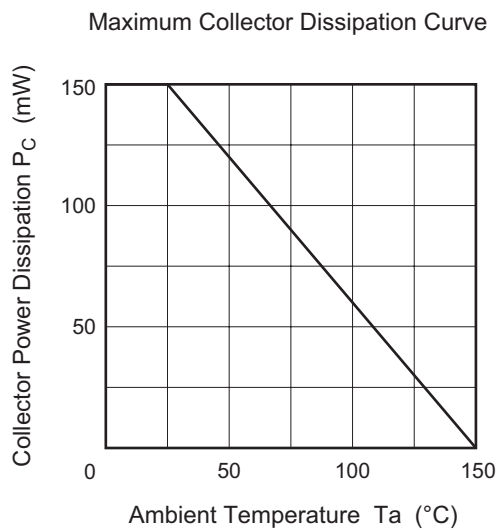
Electrical Characteristics

(Ta = 25°C)

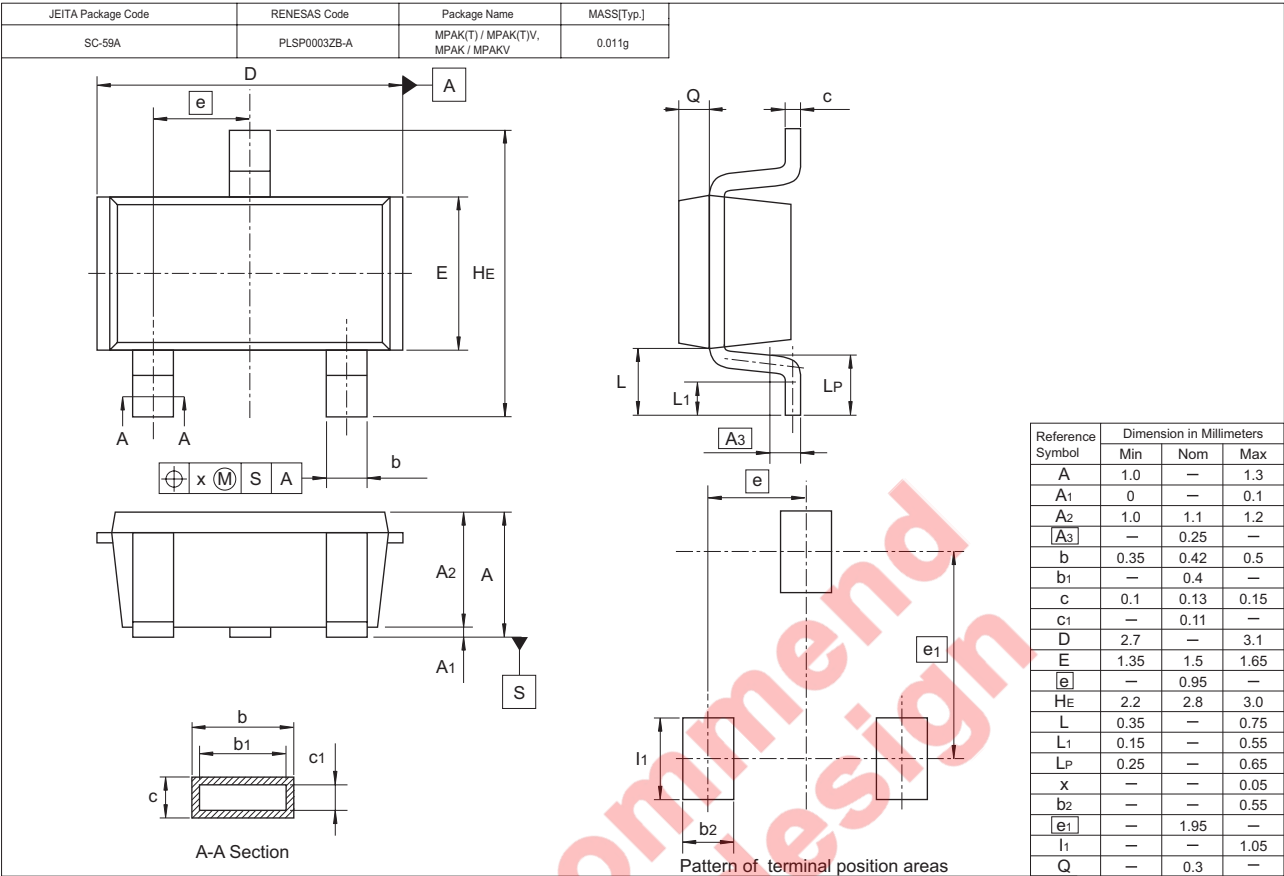
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	15	—	—	V	$I_C = 10\ \mu A$, $I_E = 0$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 12\ V$, $I_E = 0$
	I_{CEO}	—	—	1	mA	$V_{CE} = 9\ V$, $R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 1.5\ V$, $I_C = 0$
DC current transfer ratio	h_{FE}	40	120	250	—	$V_{CE} = 5\ V$, $I_C = 20\ mA$
Collector output capacitance	C_{ob}	—	0.8	1.5	pF	$V_{CB} = 5\ V$, $I_E = 0$, $f = 1\ MHz$
Gain bandwidth product	f_T	6.5	9.0	—	GHz	$V_{CE} = 5\ V$, $I_C = 20\ mA$
Power gain	PG	9.5	12.5	—	dB	$V_{CE} = 5\ V$, $I_C = 20\ mA$, $f = 900\ MHz$
Noise figure	NF	—	1.2	2.5	dB	$V_{CE} = 5\ V$, $I_C = 5\ mA$, $f = 900\ MHz$

Not recommended
for new design

Main Characteristics



Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SC4591XM-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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