

2SA1121

Silicon PNP Epitaxial

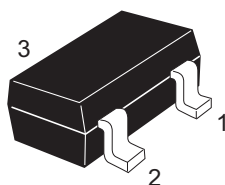
REJ03G0636-0200
(Previous ADE-208-1008)
Rev.2.00
Aug.10.2005

Application

- Low frequency amplifier
- Complementary pair with 2SC2618

Outline

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



1. Emitter
2. Base
3. Collector

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-35	V
Collector to emitter voltage	V_{CEO}	-35	V
Emitter to base voltage	V_{EBO}	-4	V
Collector current	I_C	-500	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)

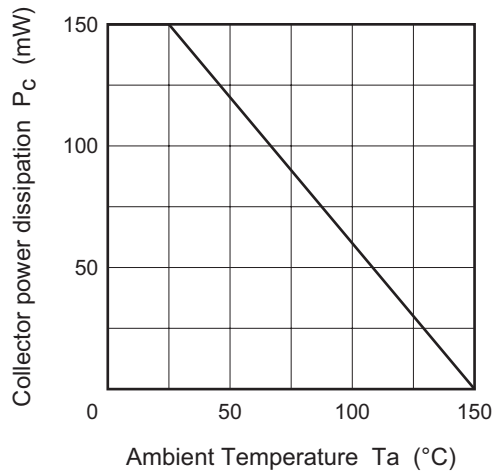
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-35	—	—	V	$I_C = -10\ \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-35	—	—	V	$I_C = -1\ mA, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-4	—	—	V	$I_E = -10\ \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-0.5	μA	$V_{CB} = -20\ V, I_E = 0$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.2	-0.6	V	$I_C = -150\ mA, I_B = -15\ mA$
DC current transfer ratio	h_{FE}^{*1}	100	—	320		$V_{CE} = -3\ V, I_C = -10\ mA$
	h_{FE}	10	—	—		$V_{CE} = -3\ V, I_C = -500\ mA$ (Pulse test)
Base to emitter voltage	V_{BE}	—	-0.64	—	V	$V_{CE} = -3\ V, I_C = -10\ mA$

Note: 1. The 2SA1121 is grouped by h_{FE} as follows.

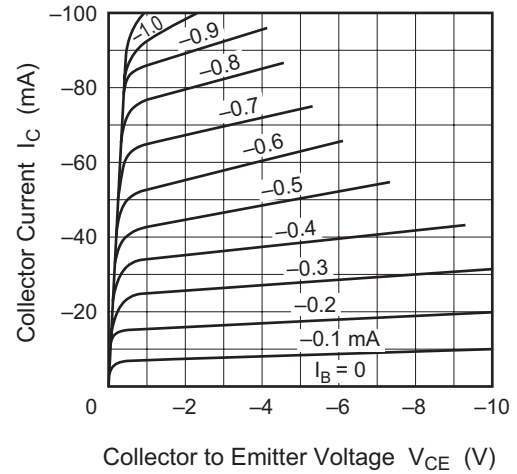
Grade	C	D
Mark	SC	SD
h_{FE}	100 to 200	160 to 320

Main Characteristics

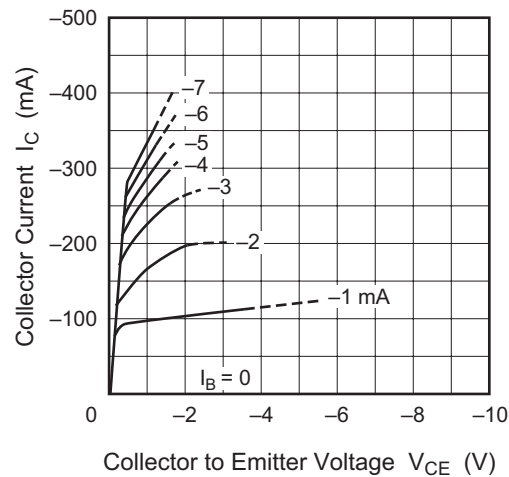
Maximum Collector Dissipation Curve



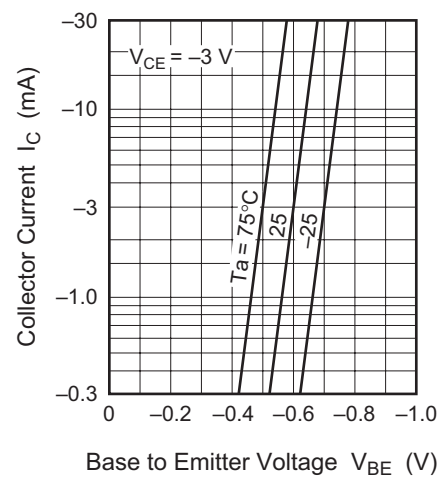
Typical Output Characteristics (1)



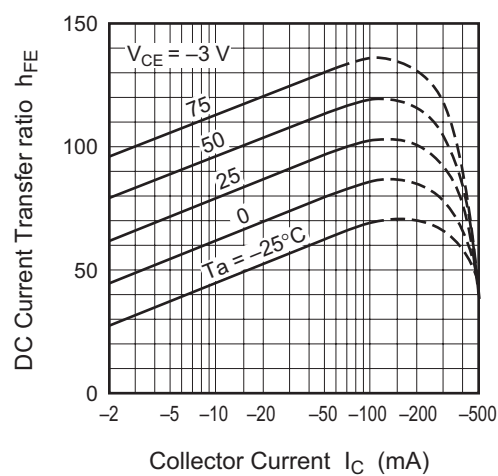
Typical Output Characteristics (2)



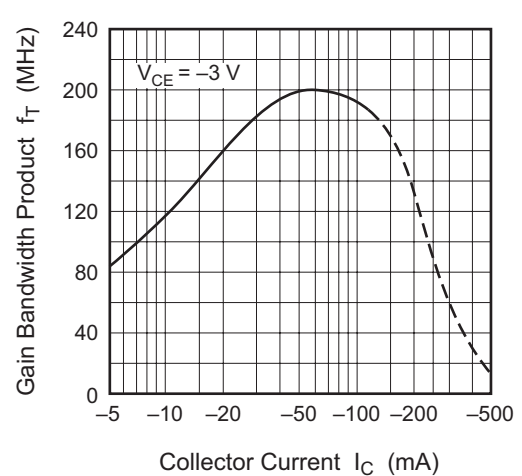
Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current



Gain Bandwidth Product vs. Collector Current



Package Dimensions

JEITA Package Code	RENESESAS Code	Package Name	MASS[Typ.]
SC-59A	PLSP0003ZB-A	MPAK(T) / MPAK(T)IV, MPAK / MPAKV	0.011g

A-A Section

Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	1.0	—	1.3
A ₁	0	—	0.1
A ₂	1.0	1.1	1.2
A ₃	—	0.25	—
b	0.35	0.42	0.5
b ₁	—	0.4	—
c	0.1	0.13	0.15
c ₁	—	0.11	—
D	2.7	—	3.1
E	1.35	1.5	1.65
e	—	0.95	—
HE	2.2	2.8	3.0
L	0.35	—	0.75
L ₁	0.15	—	0.55
L _P	0.25	—	0.65
x	—	—	0.05
b ₂	—	—	0.55
e ₁	—	1.95	—
l ₁	—	—	1.05
Q	—	0.3	—

Ordering Information

Part Name	Quantity	Shipping Container
2SA1121SCTL-E 2SA1121SDTL-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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