

2SA1052

Silicon PNP Epitaxial

REJ03G0634-0300
(Previous ADE-208-1006A)

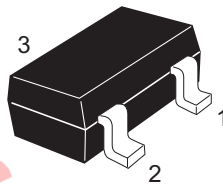
Rev.3.00

Aug.10.2005

Application

Low frequency amplifier

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 _{CB0}	-30	V
Collector to emitter voltage	V _{CEO}	-30	V
Emitter to base voltage	V _{EBO}	-5	V
Collector current	I _C	-100	mA
Emitter current	I _E	100	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)

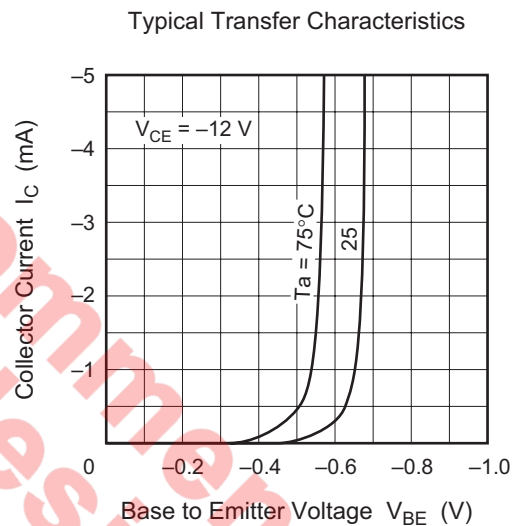
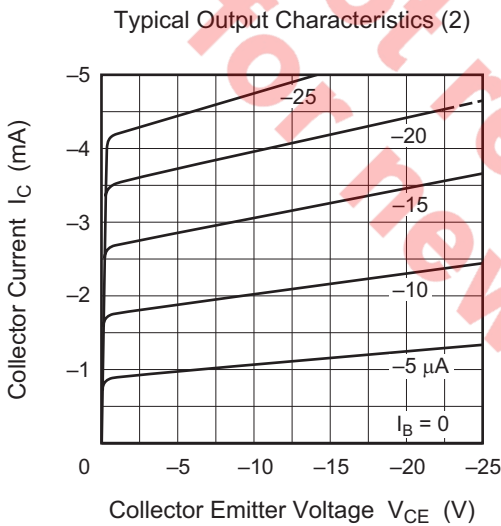
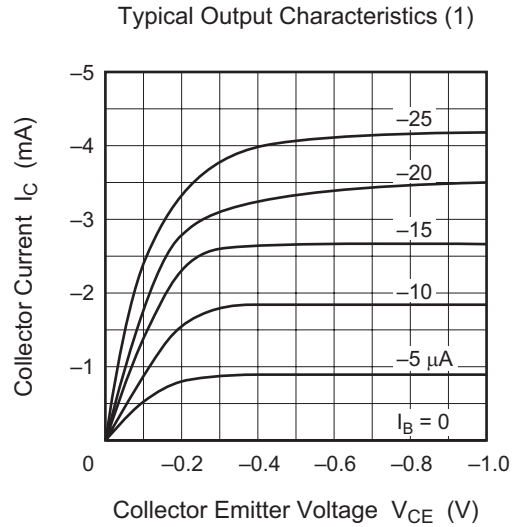
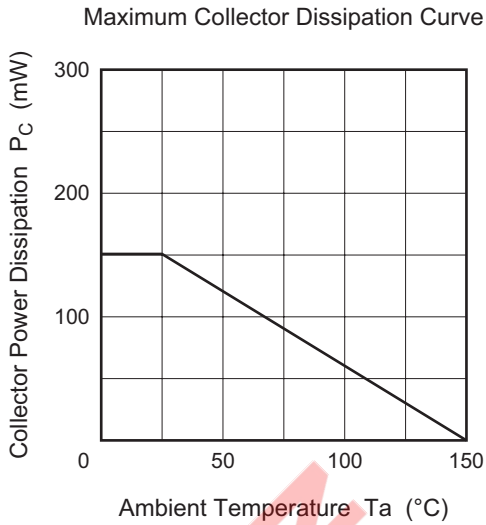
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-30	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-30	—	—	V	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-0.5	μA	$V_{CB} = -20 \text{ V}, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	-0.5	μA	$V_{EB} = -2 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}^{*1}	160	—	500		$V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.2	V	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$
Base to emitter voltage	V_{BE}	—	—	-0.75	V	$V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$

Note: 1. The 2SA1052 is grouped by h_{FE} as follows.

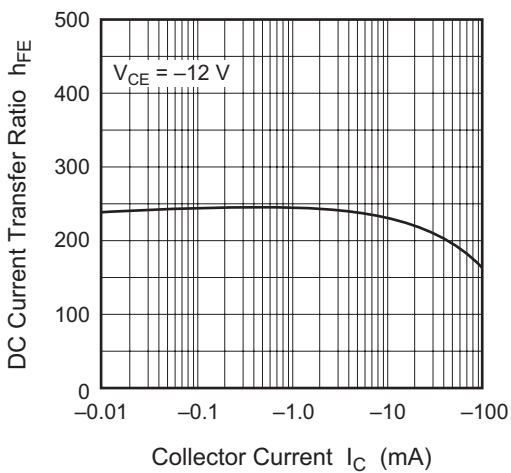
Grade	C	D
Mark	MC	MD
h_{FE}	160 to 320	250 to 500

Not recommend
for new design

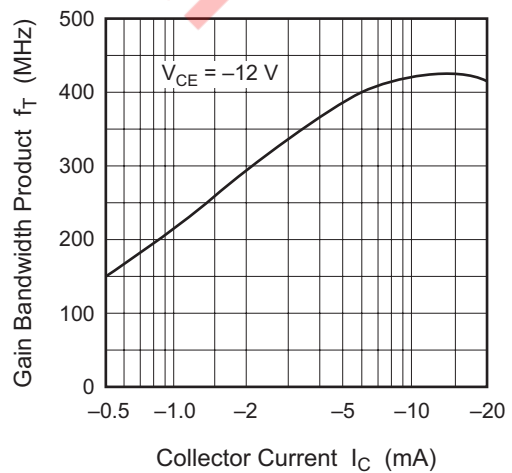
Main Characteristics

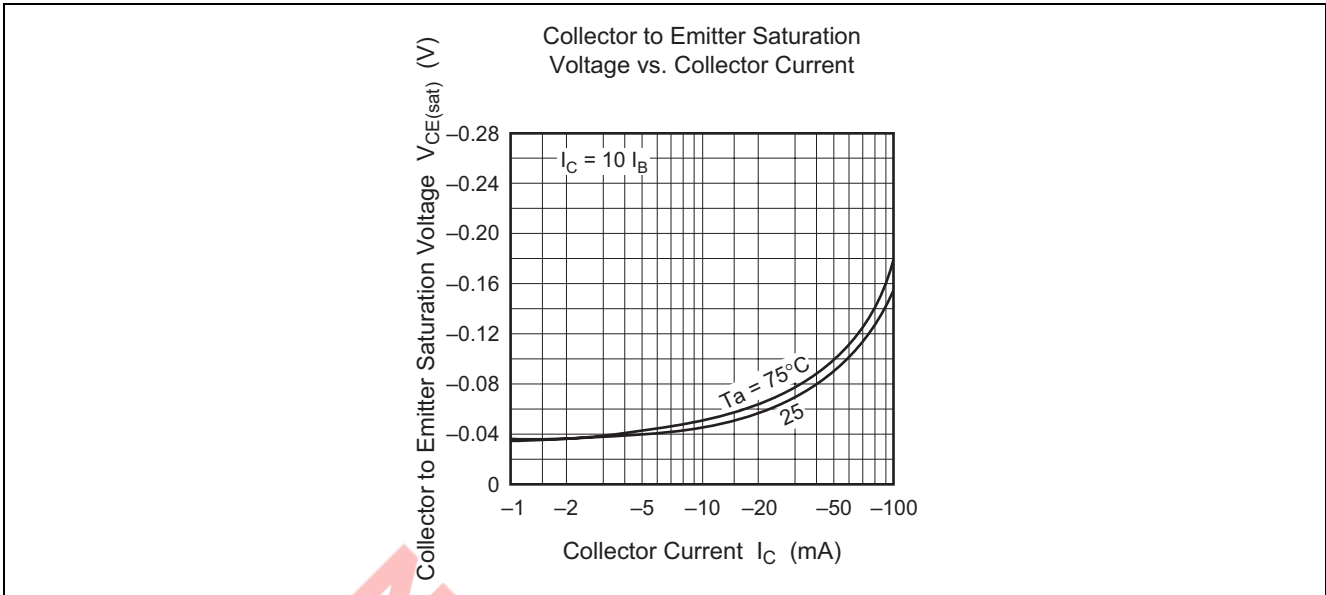


DC Current Transfer Ratio vs. Collector Current



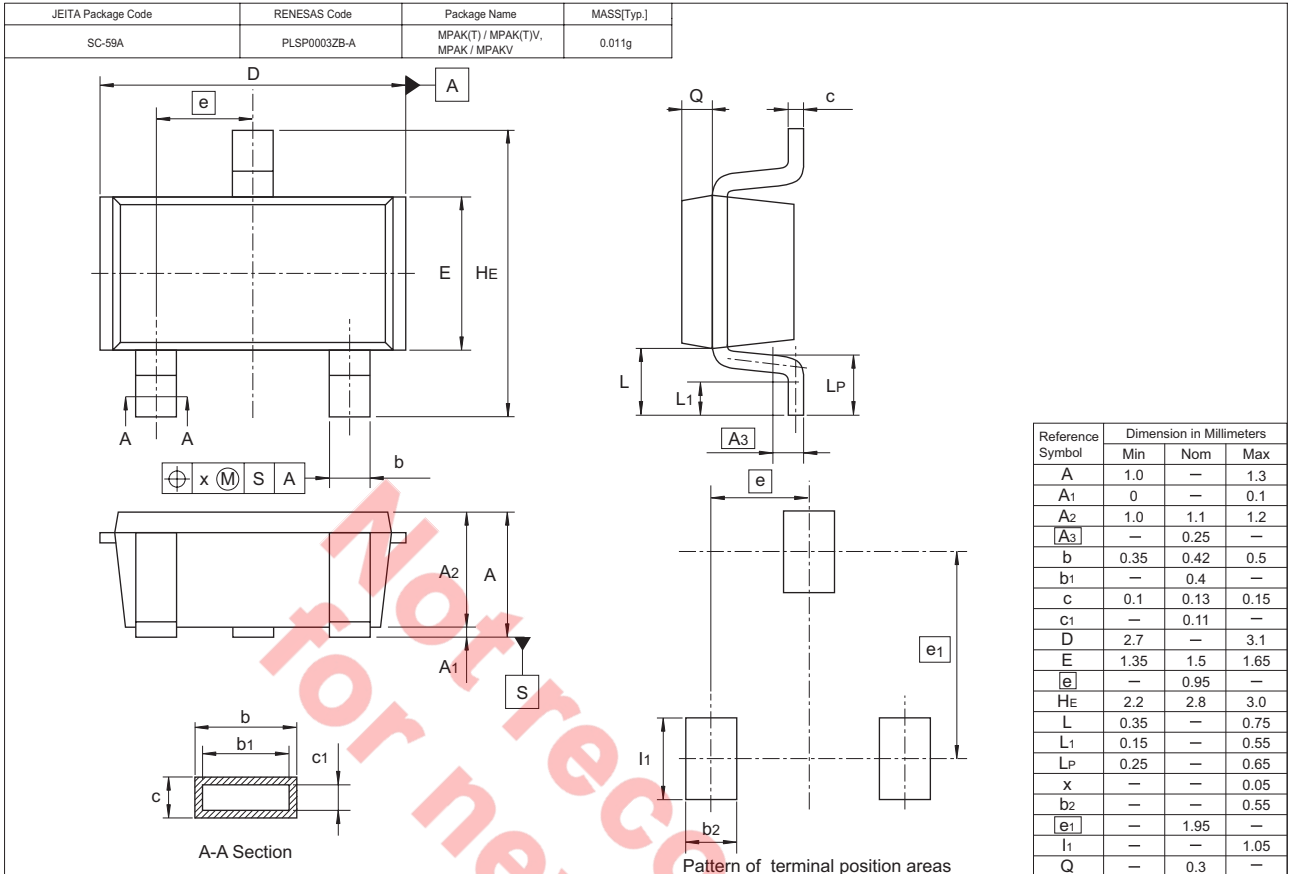
Gain Bandwidth Product vs. Collector Current





Not recommend
for new design

Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SA1052MCTR-E	3000	φ 178 mm Reel, 8 mm Emboss Taping
2SA1052MDTR-E		

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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