

2SA844

Silicon PNP Epitaxial

REJ03G0630-0200
(Previous ADE-208-320)
Rev.2.00
Aug.10.2005

Application

Low frequency amplifier

Outline

RENESAS Package code: PRSS0003DA-A
(Package name: TO-92 (1))



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-55	V
Collector to emitter voltage	V_{CEO}	-55	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	300	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Electrical Characteristics

(Ta = 25°C)

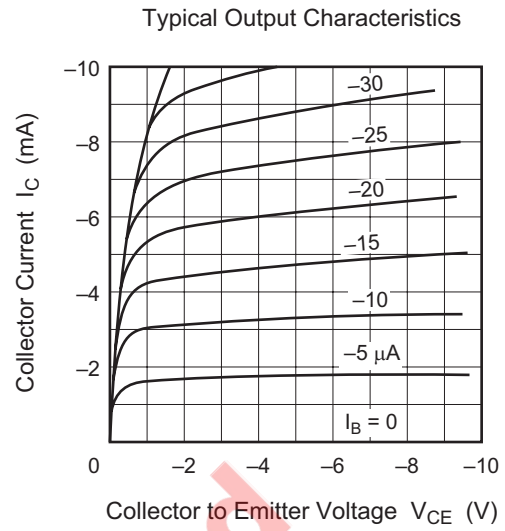
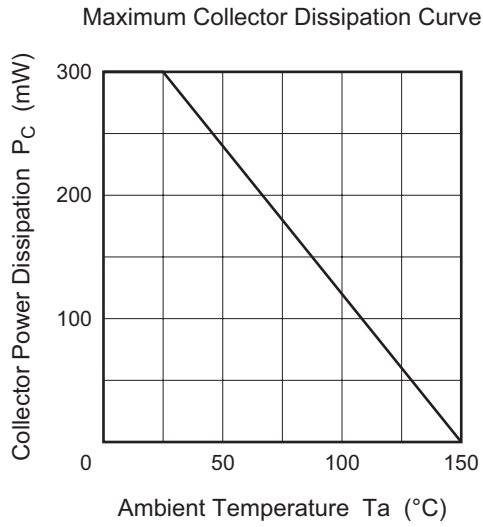
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-55	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-55	—	—	V	$I_C = -1 \text{ mA}, R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-100	nA	$V_{CB} = -18 \text{ V}, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	-50	nA	$V_{EB} = -2 \text{ V}, I_C = 0$
DC current transfer ratio	h_{FE}^{*1}	160	—	500		$V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.1	-0.5	V	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$
Base to emitter voltage	V_{BE}	—	-0.66	-0.75	V	$V_{CE} = -12 \text{ V}, I_C = -2 \text{ mA}$
Gain bandwidth product	f_T	—	200	—	MHz	$V_{CE} = -12 \text{ V}, I_E = -2 \text{ mA}$
Collector output capacitance	C_{ob}	—	2.0	—	pF	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$

Note: 1. The 2SA844 is grouped by h_{FE} as follows.

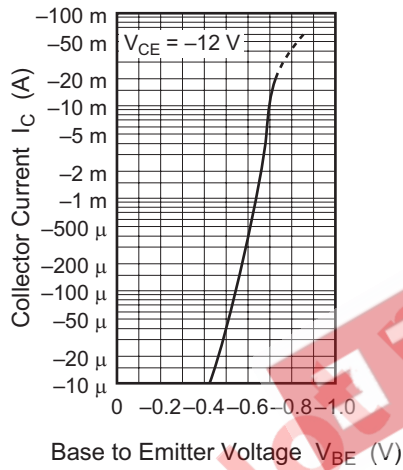
C	D
160 to 320	250 to 500

NOT RECOMMENDED
for new design
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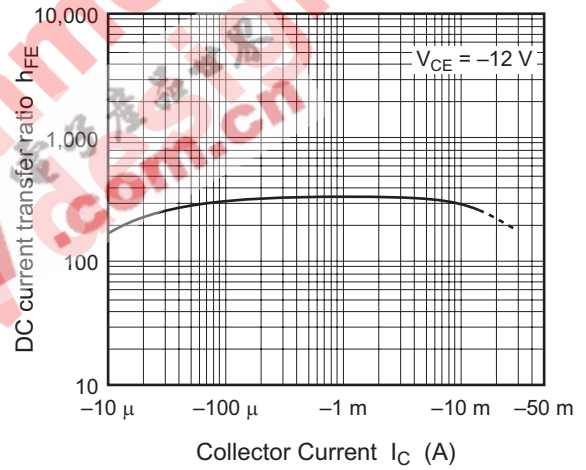
Main Characteristics



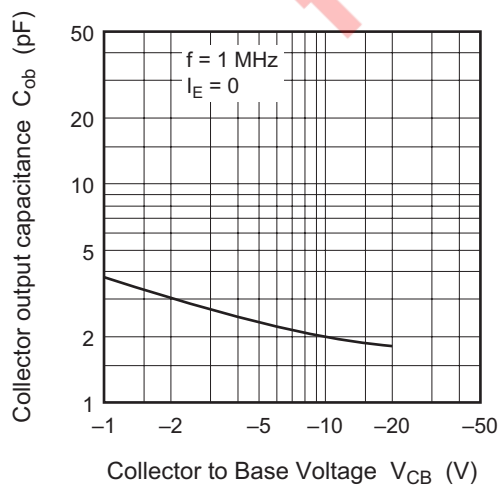
Typical Transfer Characteristics



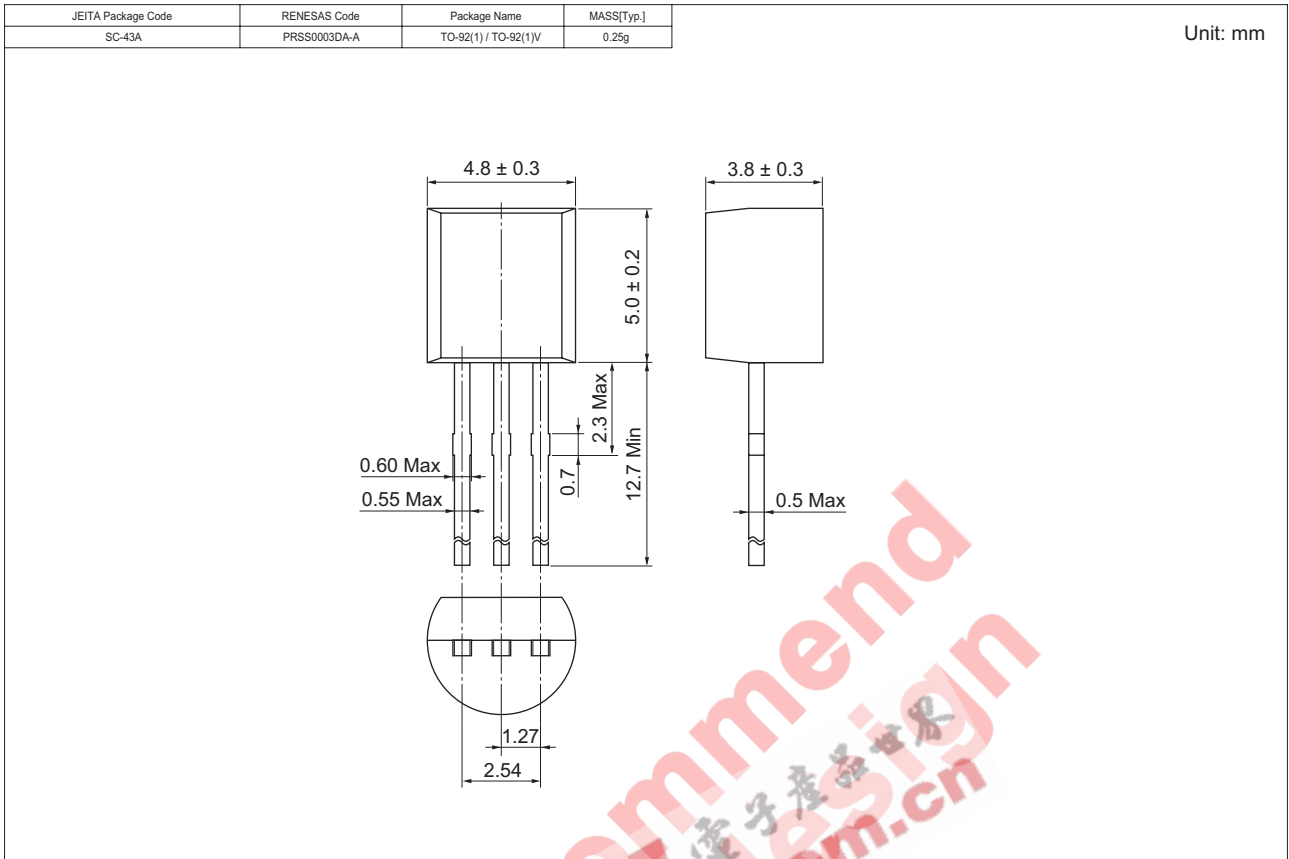
DC Current Transfer Ratio vs. Collector Current



Collector Output Capacitance vs. Collector to Base Voltage



Package Dimensions



Ordering Information

Part Name	Quantity	Shipping Container
2SA844CTZ	2500	Hold Box, Radial Taping
2SA844DTZ		

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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