2SA1029, 2SA1030

Silicon PNP Epitaxial

REJ03G0633-0300
(Previous ADE-208-1004A)
Rev.3.00
Aug.10.2005

Application

- Low frequency amplifier
- Complementary pair with 2SC458 and 2SC2308

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	2SA1029	2SA1030	Unit
Collector to base voltage	V_{CBO}	–30	–55	V
Collector to emitter voltage	V_{CEO}	–30	–50	V
Emitter to base voltage	V_{EBO}	–5	–5	V
Collector current	I_C	–100	–100	mA
Emitter current	I_E	100	100	mA
Collector power dissipation	P_C	300	300	mW
Junction temperature	Tj	150	150	°C
Storage temperature	Tstg	–55 to +150	–55 to +150	°C

Electrical Characteristics

(Ta = 25°C)

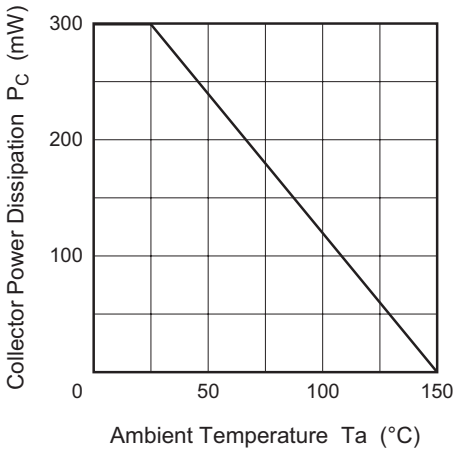
Item	Symbol	2SA1029			2SA1030			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	–30	—	—	–55	—	—	V	I_C = –10 µA, I_E = 0
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	–30	—	—	–50	—	—	V	I_C = –1 mA, R_{BE} = ∞
Emitter to base breakdown voltage	$V_{(BR)EBO}$	–5	—	—	–5	—	—	V	I_E = –10 µA, I_C = 0
Collector cutoff current	I_{CBO}	—	—	–0.5	—	—	–0.5	µA	V_{CB} = –18 V, I_E = 0
Emitter cutoff current	I_{EBO}	—	—	–0.5	—	—	–0.5	µA	V_{EB} = –2 V, I_C = 0
DC current trnsfer ratio	h_{FE}*[1]	100	—	500	100	—	320		V_{CE} = –12 V, I_C = –2 mA
Base to emitter voltage	V_{BE}	—	—	–0.8	—	—	–0.8	V	V_{CE} = –12 V, I_C = –2 mA
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	–0.2	—	—	–0.2	V	I_C = –10 mA, I_B = –1 mA
Gain bandwidth product	f_T	200	280	—	200	280	—	MHz	V_{CB} = –12 V, I_C = –2 mA
Collector output capacitance	Cob	—	3.3	4.0	—	3.3	4.0	pF	V_{CB} = –10 V, I_E = 0, f = 1 MHz

Note: 1. The 2SA1029 and 2SA1030 are grouped by h_{FE} as follows.

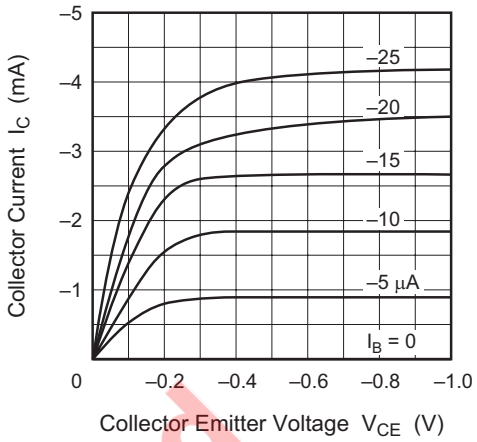
	B	C	D
2SA1029	100 to 200	160 to 320	250 to 500
2SA1030	100 to 200	160 to 320	—

Main Characteristics

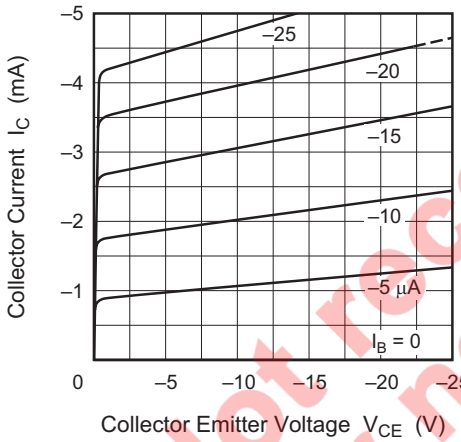
Maximum Collector Dissipation Curve



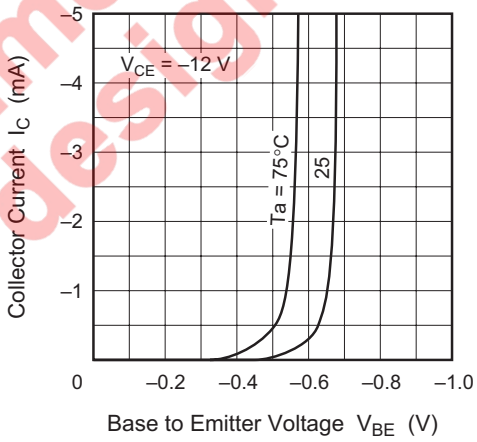
Typical Output Characteristics (1)



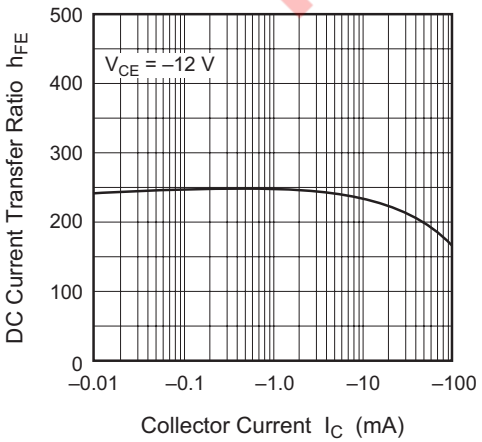
Typical Output Characteristics (2)



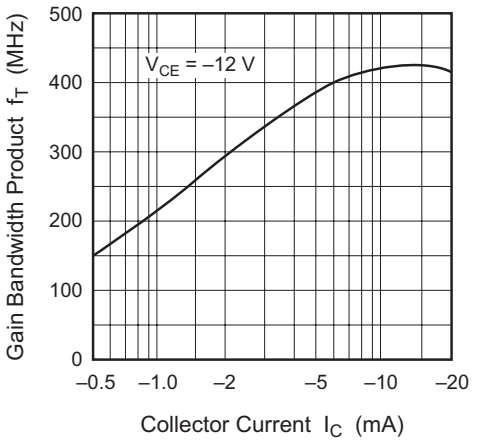
Typical Transfer Characteristics

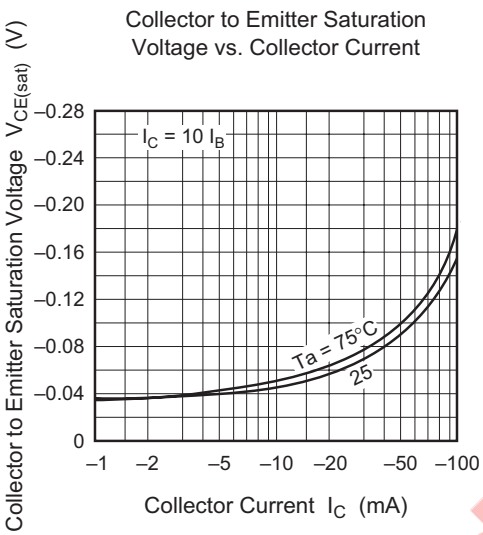


DC Current Transfer Ratio vs. Collector Current



Gain Bandwidth Product vs. Collector Current

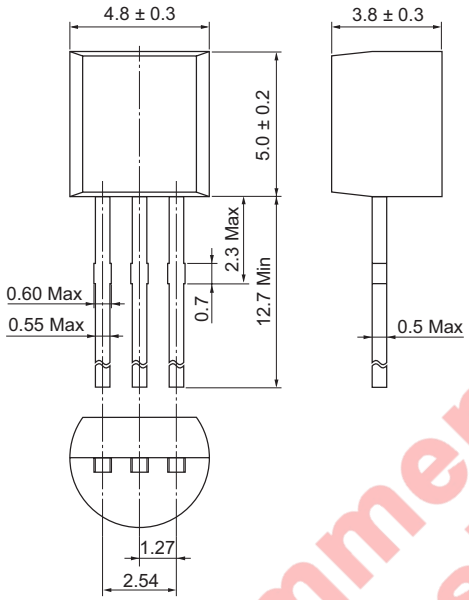




Package Dimensions

JEITA Package Code	RENESAS Code	Package Name	MASS[Typ.]
SC-43A	PRSS0003DA-A	TO-92(1) / TO-92(1)V	0.25g

Unit: mm



Ordering Information

Part Name	Quantity	Shipping Container
2SA1029BTZ 2SA1029CTZ 2SA1029DTZ 2SA1030BTZ 2SA1030CTZ	2500	Hold Box, Radial 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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http://www.renesas.com

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