



2SC1214

Silicon NPN Epitaxial

REJ03G0686-0200
(Previous ADE-208-1050)
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} | 50 | V |
| Collector to emitter voltage | V_{CEO} | 50 | V |
| Emitter to base voltage | V_{EBO} | 4 | V |
| Collector current | I_C | 500 | mA |
| Collector power dissipation | P_C | 600 | mW |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |



Electrical Characteristics

(Ta = 25°C)

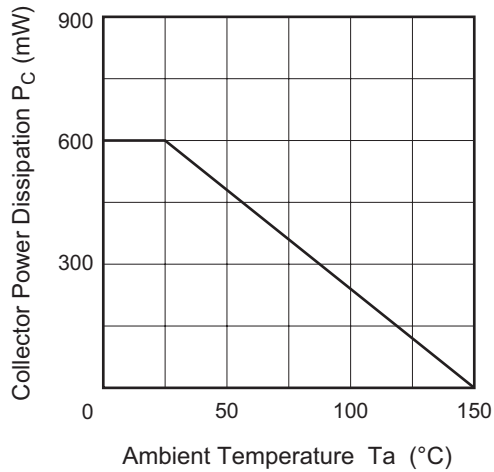
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|------|-----|---------|--|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 50 | — | — | V | $I_C = 10\ \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | 50 | — | — | V | $I_C = 1\ mA, R_{BE} = \infty$ |
| 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 | $V_{CB} = 20\ V, I_E = 0$ |
| DC current transfer ratio | h_{FE}^{*1} | 60 | — | 320 | | $V_{CE} = 3\ V, I_C = 10\ mA$ |
| | h_{FE} | 10 | — | — | | $V_{CE} = 3\ V, I_C = 500\ mA$ (pulse test) |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | 0.2 | 0.6 | V | $I_C = 150\ mA, I_B = 15\ mA$ (Pulse test) |
| Base to emitter voltage | V_{BE} | — | 0.64 | — | V | $V_{CE} = 3\ V, I_C = 10\ mA$ |

Note: 1. The 2SC1214 is grouped by h_{FE} as follows.

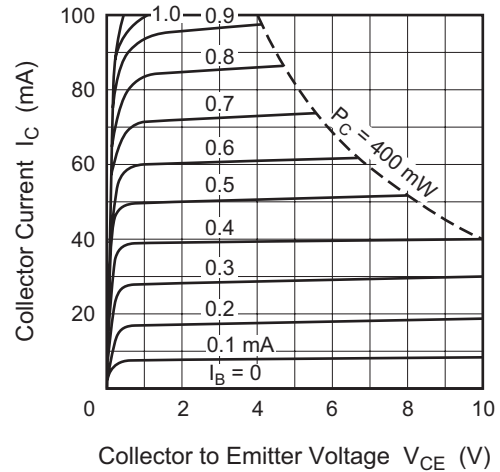
| B | C | D |
|-----------|------------|------------|
| 60 to 120 | 100 to 200 | 160 to 320 |

Main Characteristics

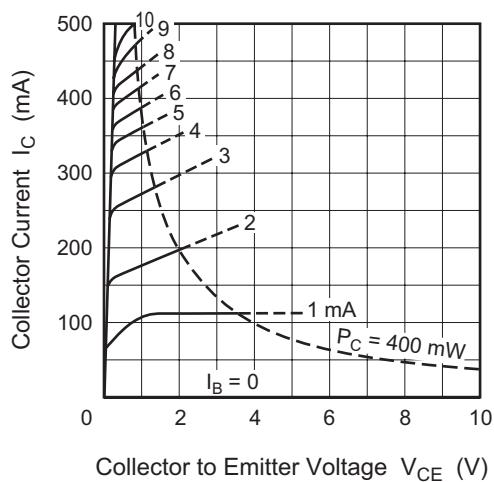
Maximum Collector Dissipation Curve



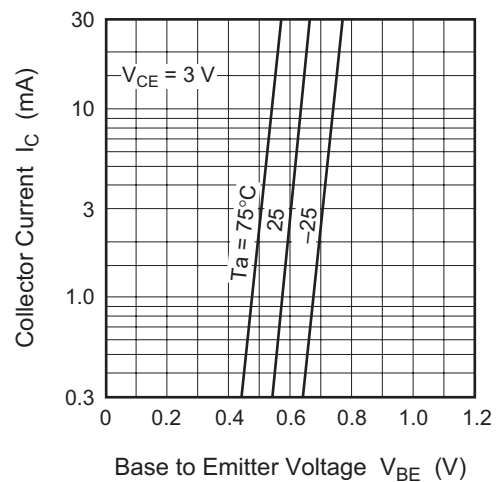
Typical Output Characteristics (1)



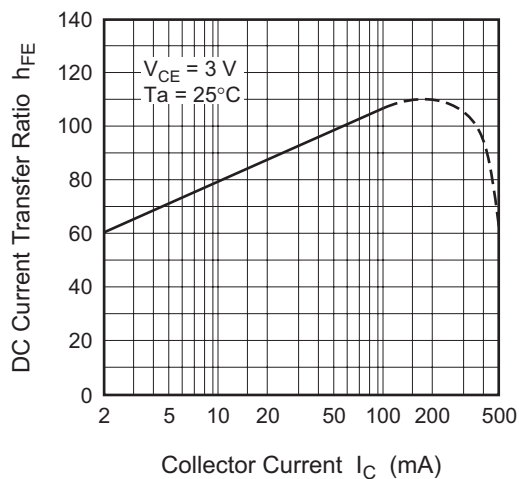
Typical Output Characteristics (2)



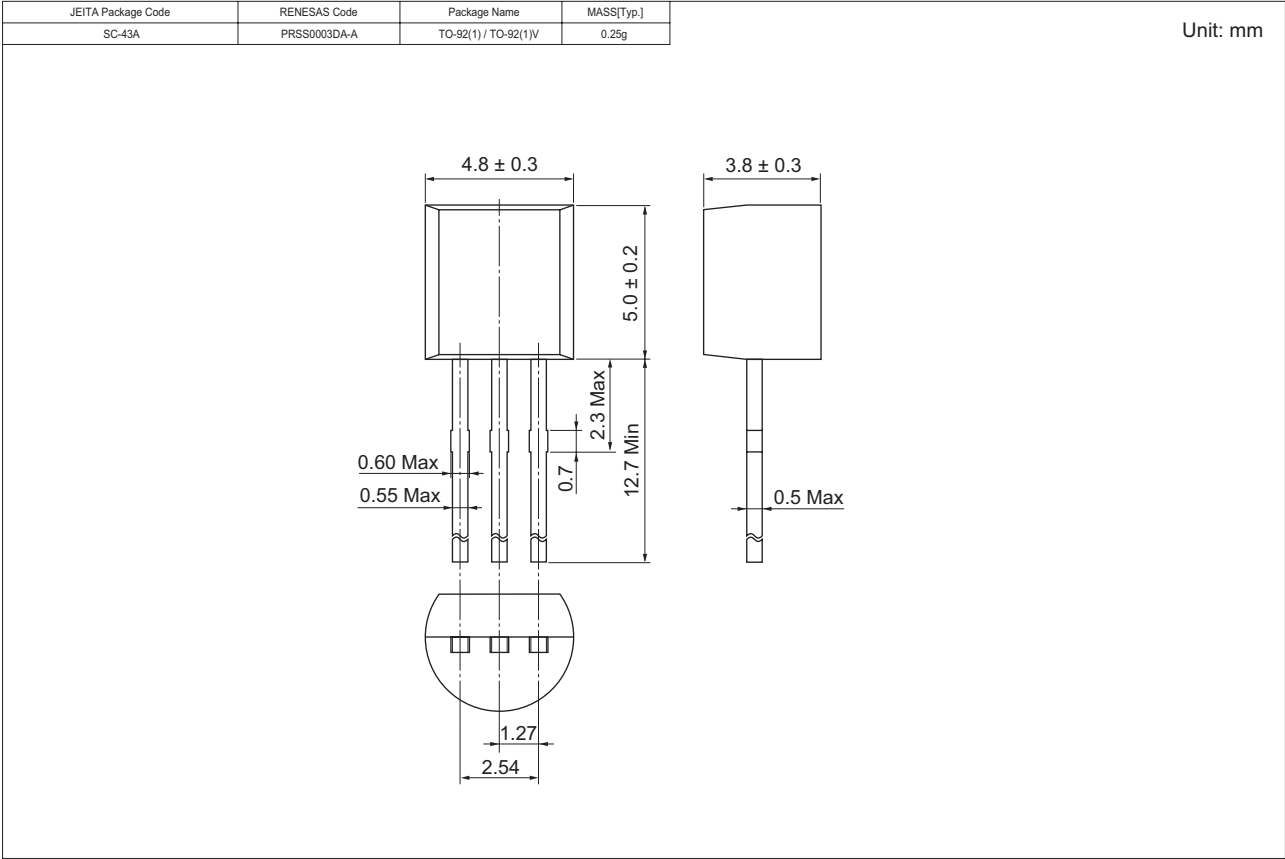
Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current



Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|------------------------------|----------|-------------------------|
| 2SC1214CTZ-E 2SC1214DTZ-E | 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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