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Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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Not recommended
for new design

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2SD1209(K)

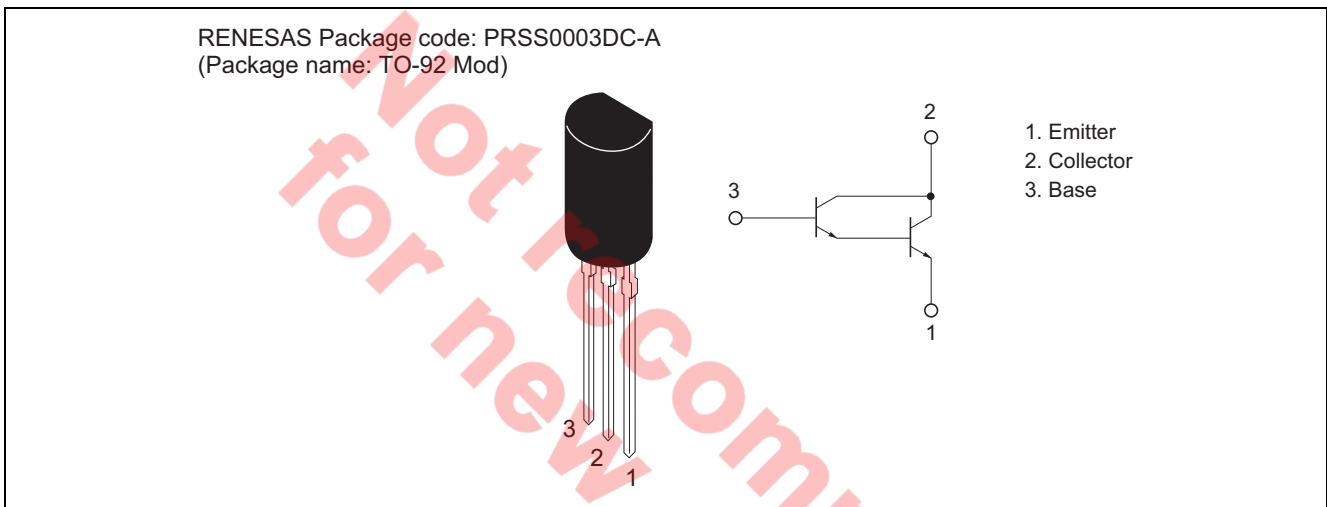
Silicon NPN Epitaxial, Darlington

REJ03G0783-0200
 (Previous ADE-208-1143)
 Rev.2.00
 Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SA1193(K)

Outline



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|---------------|-------------|------|
| Collector to base voltage | V_{CBO} | 60 | V |
| Collector to emitter voltage | V_{CEO} | 60 | V |
| Emitter to base voltage | V_{EBO} | 7 | V |
| Collector current | I_C | 1 | A |
| Collector peak current | $i_{C(peak)}$ | 2 | A |
| Collector power dissipation | P_C | 0.9 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

Electrical Characteristics

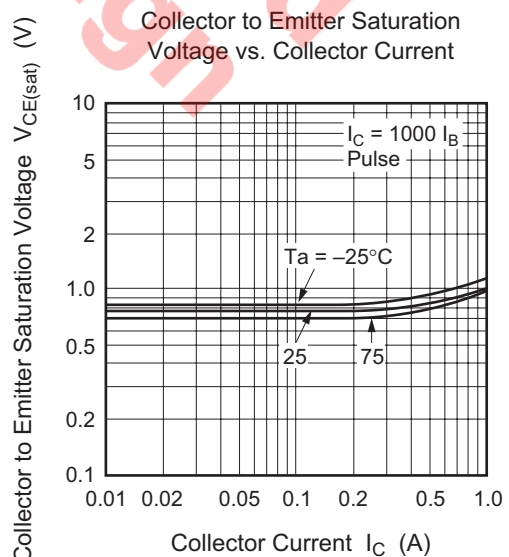
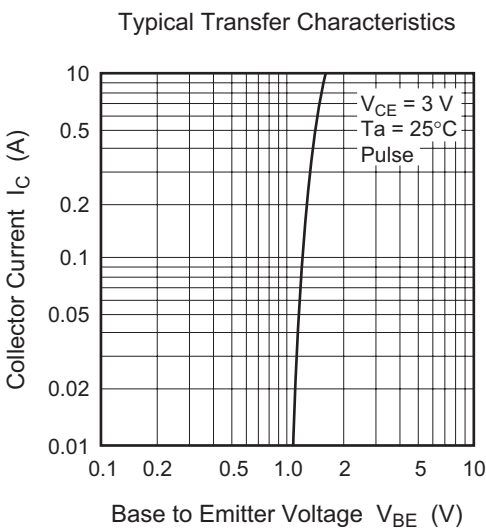
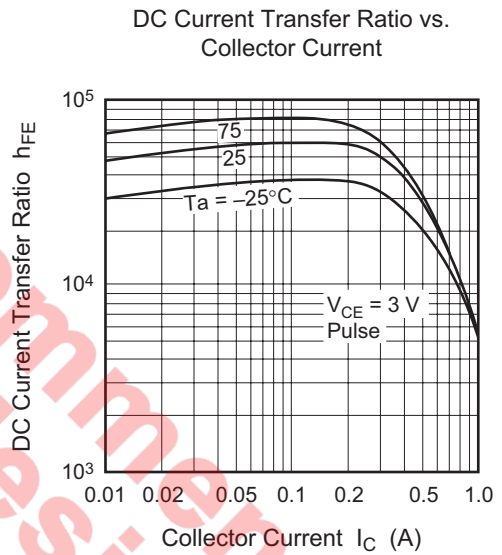
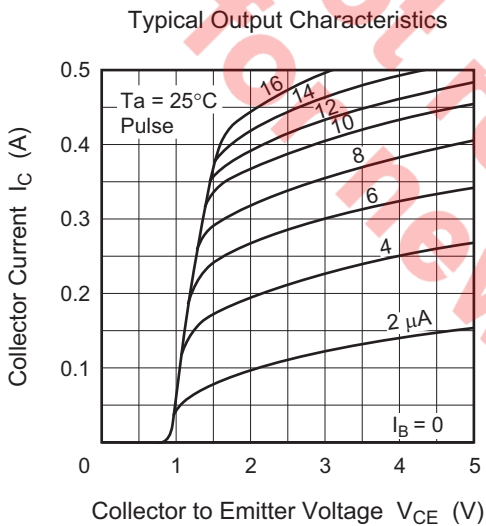
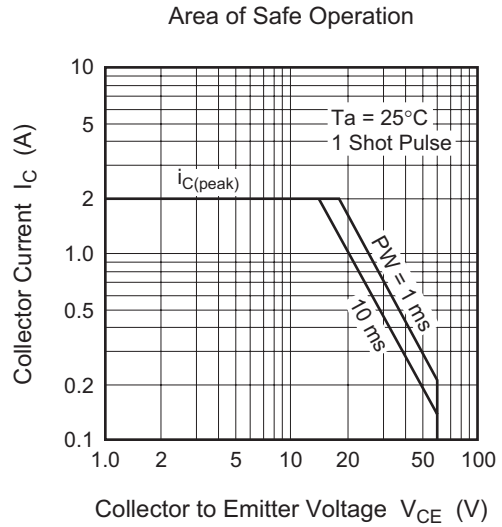
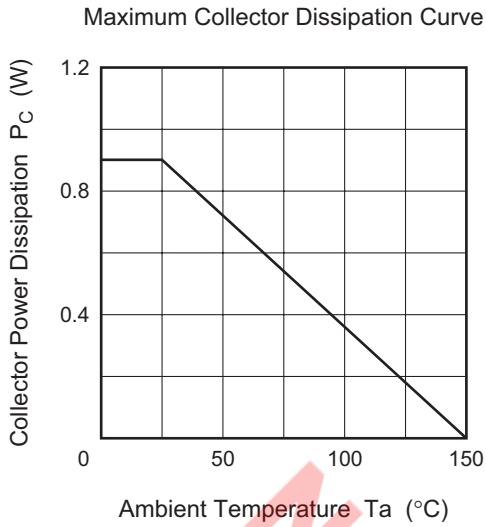
(Ta = 25°C)

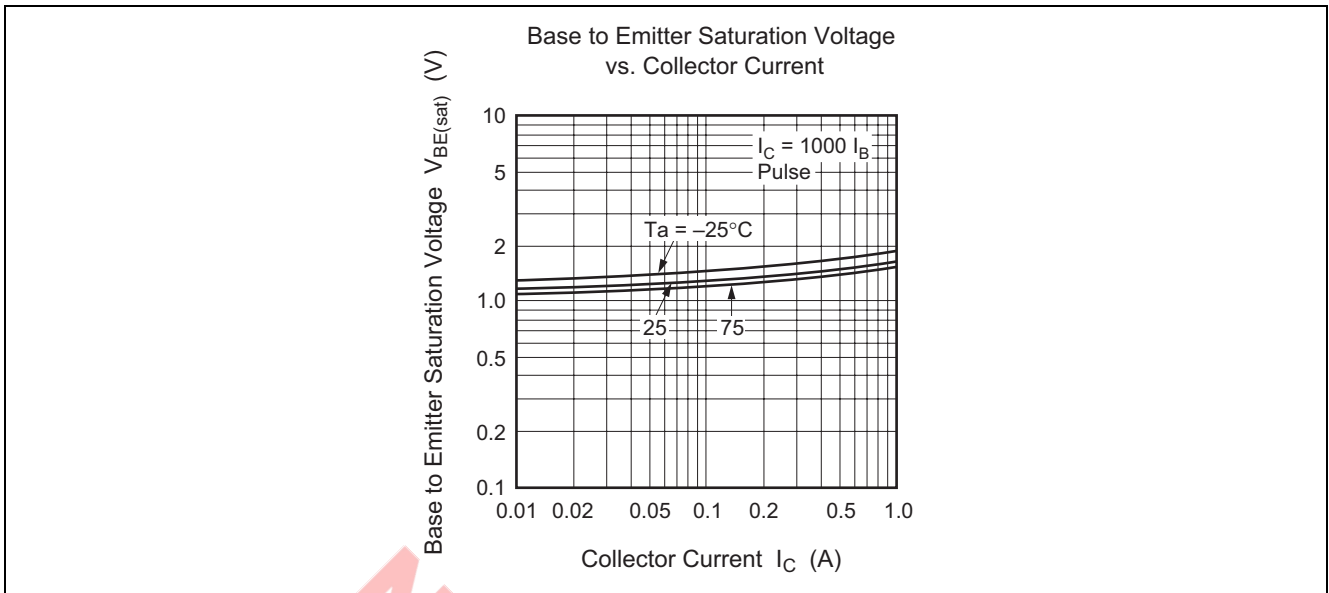
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|------|-----|-----|---------------|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 60 | — | — | V | $I_C = 0.1 \text{ mA}, I_E = 0$ |
| Collector cutoff current | I_{CEO} | — | — | 100 | μA | $V_{CE} = 60 \text{ V}, R_{BE} = \infty$ |
| Emitter cutoff current | I_{EBO} | — | — | 100 | μA | $V_{EB} = 7 \text{ V}, I_C = 0$ |
| DC current transfer ratio | h_{FE} | 4000 | — | — | | $V_{CE} = 3 \text{ V}, I_C = 0.5 \text{ A}^{*1}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 1.5 | V | $I_C = 500 \text{ mA}, I_B = 0.5 \text{ mA}^{*1}$ |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | — | — | 2.0 | V | $I_C = 500 \text{ mA}, I_B = 0.5 \text{ mA}^{*1}$ |

Note: 1. Pulse test

Not recommend
for new design

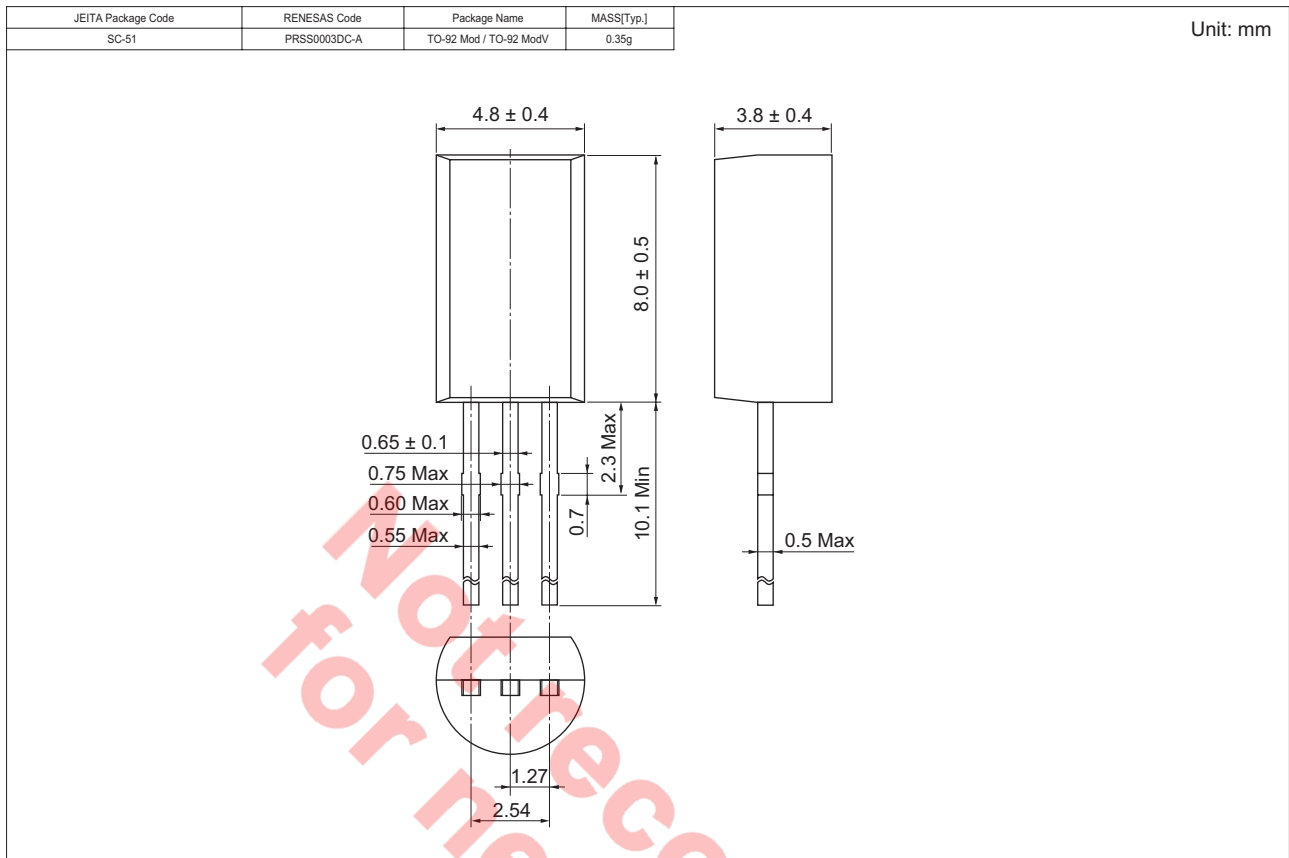
Main Characteristics





Not recommend
for new design

Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|--------------|----------|-------------------------|
| 2SD1209KTZ-E | 2500 | Hold Box, Radial Taping |

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