

2SD789

Silicon NPN Epitaxial

REJ03G0772-0300
(Previous ADE-208-1140A)
Rev.3.00
Aug.10.2005

Application

- Low frequency power amplifier
- Complementary pair with 2SB740

Outline

RENESAS Package code: PRSS0003DC-A
(Package name: TO-92 Mod)



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|------------------------------|------------------|-------------|------|
| Collector to base voltage | V _{CBO} | 100 | V |
| Collector to emitter voltage | V _{CEO} | 50 | V |
| Emitter to base voltage | V _{EBO} | 6 | V |
| Collector current | I _C | 1 | 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

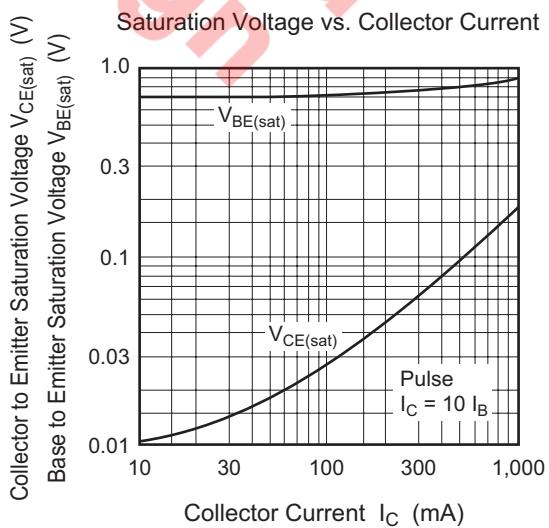
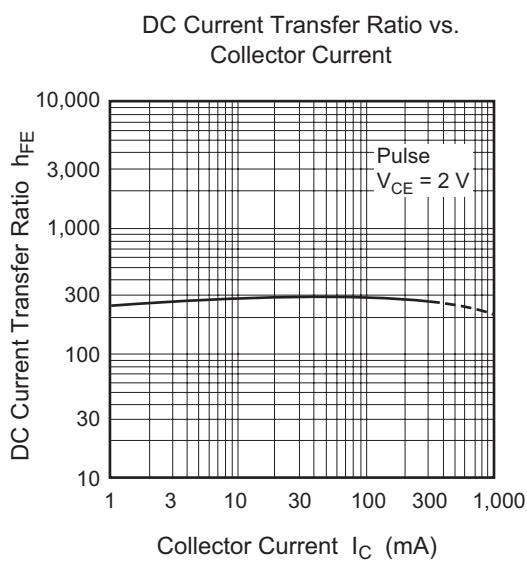
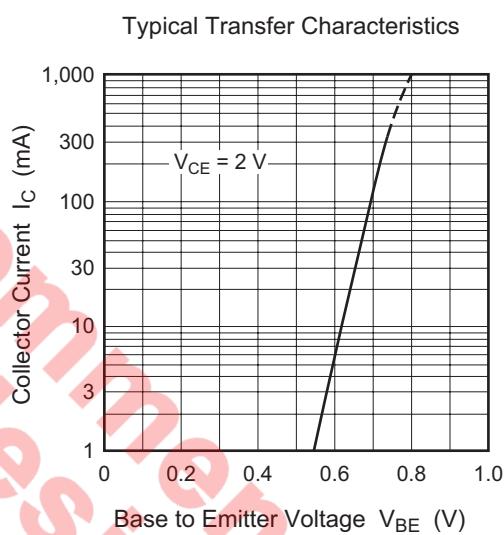
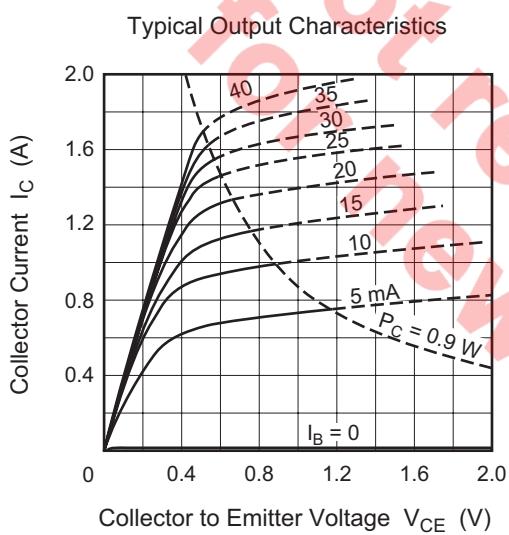
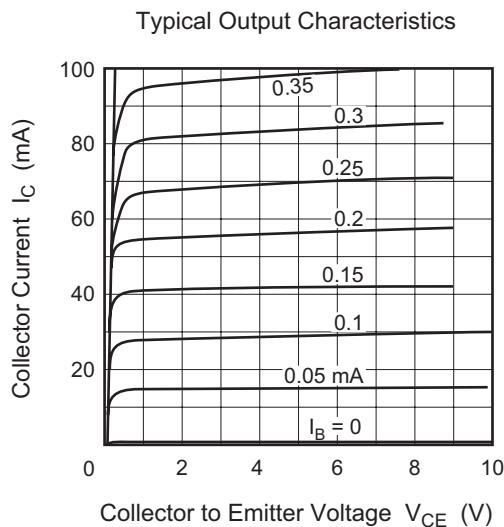
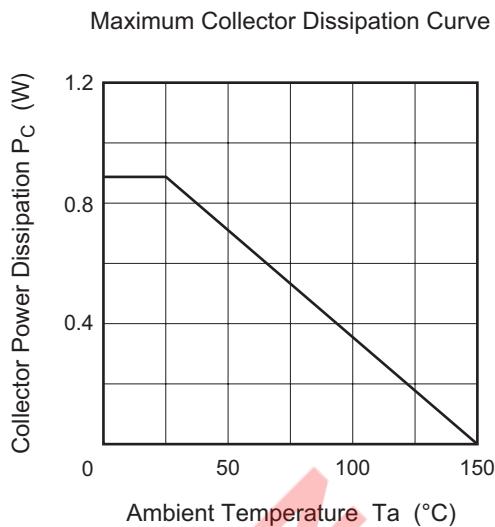
(Ta = 25°C)

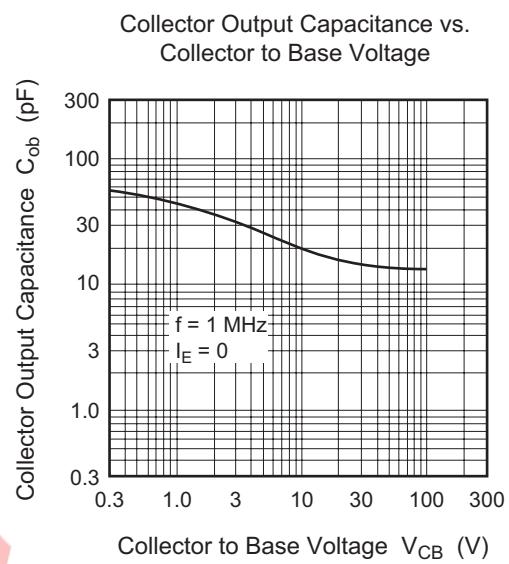
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|-------------------------------|-----|-----|-----|------|--|
| Collector to base breakdown voltage | V _{(BR)CBO} | 100 | — | — | V | I _C = 10 µA, I _E = 0 |
| Collector to emitter breakdown voltage | V _{(BR)CEO} | 50 | — | — | V | I _C = 1 mA, R _{BE} = ∞ |
| Emitter to base breakdown voltage | V _{(BR)EBO} | 6 | — | — | V | I _E = 10 µA, I _C = 0 |
| Collector cutoff current | I _{CBO} | — | — | 1 | µA | V _{CB} = 80 V, I _E = 0 |
| Emitter cutoff current | I _{EBO} | — | — | 0.2 | µA | V _{EB} = 6 V, I _C = 0 |
| DC current transfer ratio | h _{FE} ^{*1} | 160 | — | 800 | | V _{CE} = 2 V, I _C = 0.1A |
| Collector to emitter saturation voltage | V _{CE(sat)} | — | — | 0.3 | V | I _C = 1 A, I _B = 0.1 A |
| Gain bandwidth product | f _T | — | 100 | — | MHz | V _{CE} = 2 V, I _C = 10 mA |
| Collector output capacitance | C _{ob} | — | 20 | — | pF | V _{CB} = 10 V, I _E = 0, f = 1MHz |

Note: 1. The 2SD789 is grouped by h_{FE} as follows.

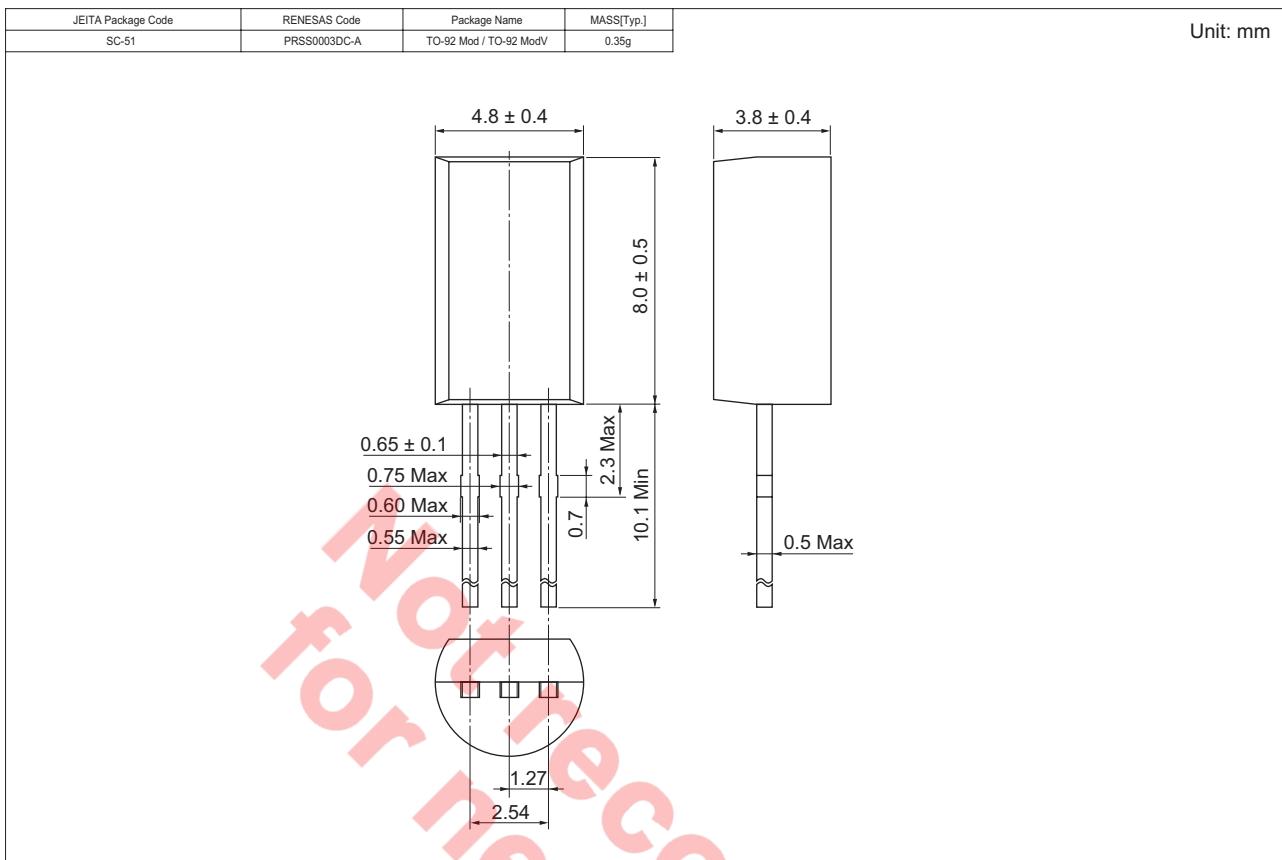
| C | D | E |
|------------|------------|------------|
| 160 to 320 | 250 to 500 | 400 to 800 |

Main Characteristics





Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|-------------|----------|-------------------------|
| 2SD789CTZ-E | 2500 | Hold Box, Radial Taping |
| 2SD789DTZ-E | | |
| 2SD789ETZ-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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Tel: <1> (408) 382-7500, Fax: <1> (408) 382-7501

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Renesas Technology Taiwan Co., Ltd.
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Renesas Technology Singapore Pte. Ltd.
1 Harbour Front Avenue, #06-10, Keppel Bay Tower, Singapore 098632
Tel: <65> 6213-0200, Fax: <65> 6278-8001

Renesas Technology Korea Co., Ltd.
Kukje Center Bldg. 18th Fl., 191, 2-ka, Hangang-ro, Yongsan-ku, Seoul 140-702, Korea
Tel: <82> 2-796-3115, Fax: <82> 2-796-2145

Renesas Technology Malaysia Sdn. Bhd.
Unit 906, Block B, Menara Amcorp, Amcorp Trade Centre, No.18, Jalan Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia
Tel: <603> 7955-9390, Fax: <603> 7955-9510