

2SD974

Silicon NPN Epitaxial

REJ03G0774-0300

Rev.3.00

Oct 06, 2006

Application

- Power switching
- TV horizontal deflection output

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} | 120 | V |
| Collector to emitter voltage | V_{CEO} | 60 | V |
| Emitter to base voltage | V_{EBO} | 5 | V |
| Collector current | I_C | 1 | A |
| Collector peak current | $i_{C(peak)}$ | 1.5 | A |
| Surge collector current | $I_{C(surge)}$ | 4 | 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

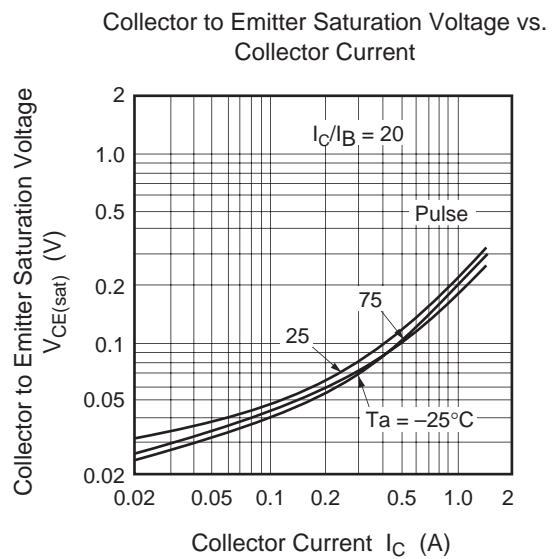
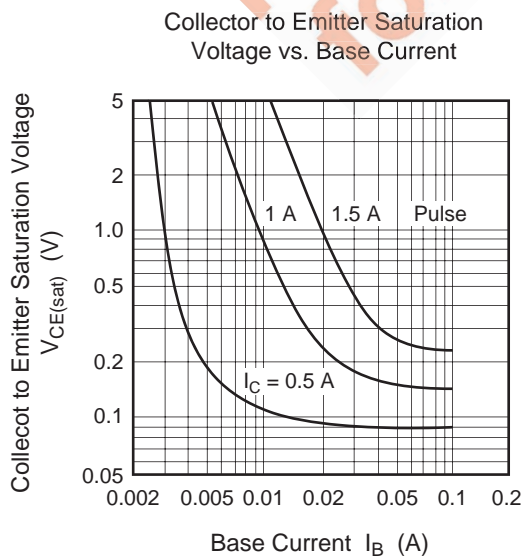
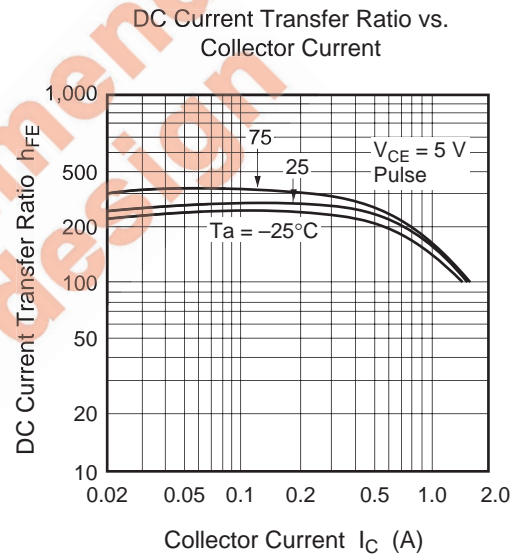
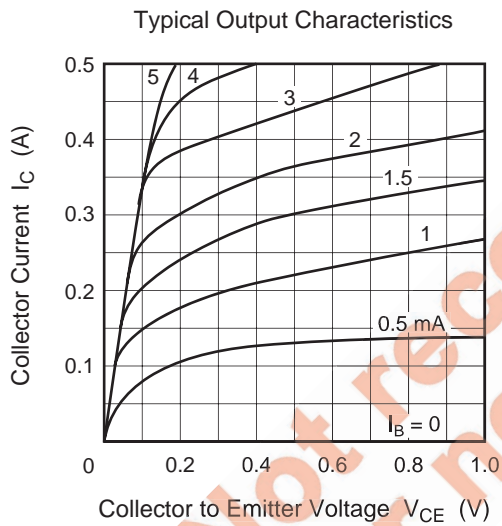
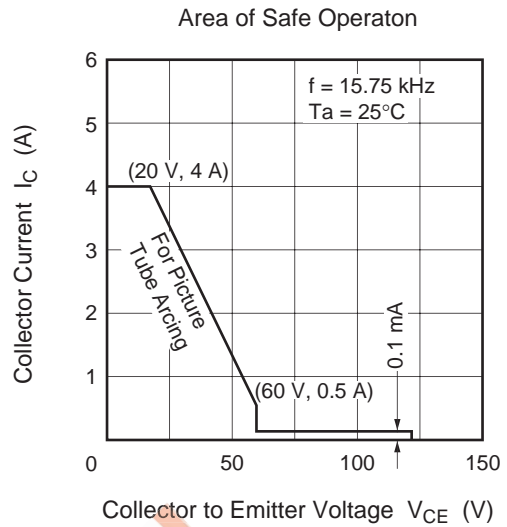
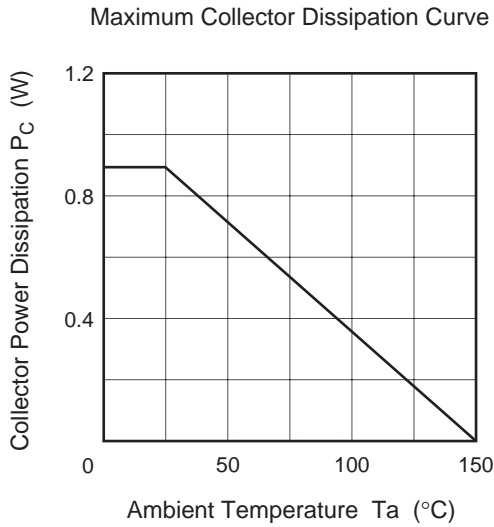
(Ta = 25°C)

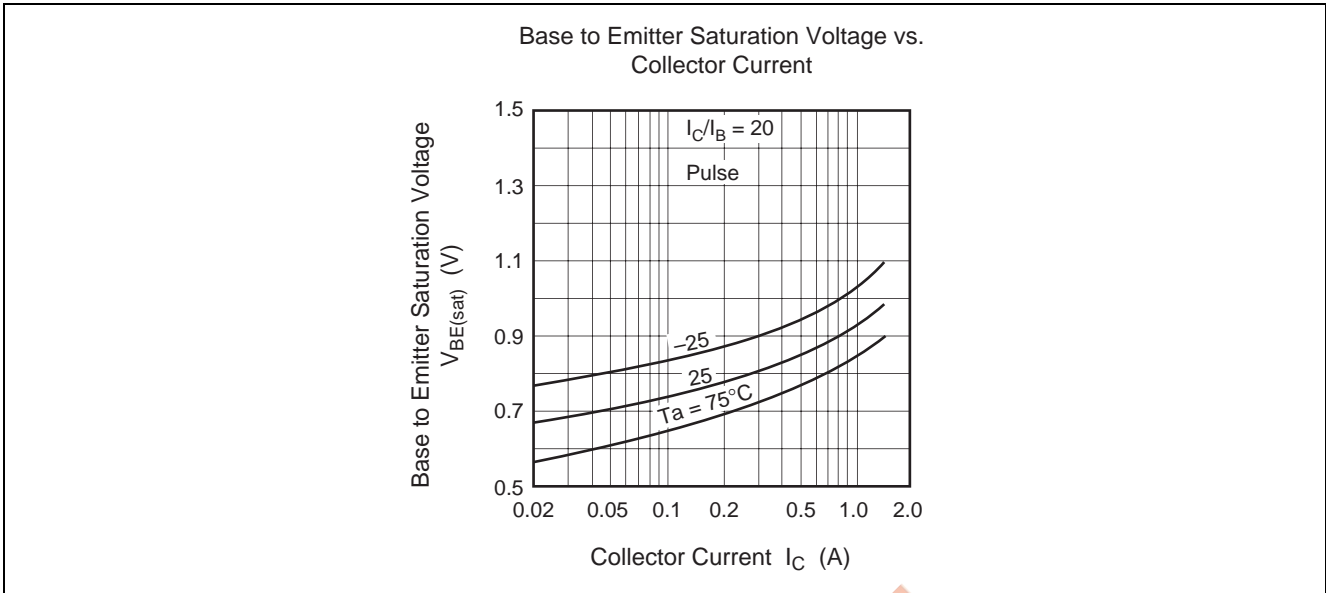
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---------------|-----|-----|-----|---------|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | 120 | — | — | V | $I_C = 10 \mu A, I_E = 0$ |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | 60 | — | — | V | $I_C = 1 mA, R_{BE} = \infty$ |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | 5 | — | — | V | $I_E = 10 \mu A, I_C = 0$ |
| Collector cutoff current | I_{CBO} | — | — | 1.0 | μA | $V_{CB} = 100 V, I_E = 0$ |
| DC current transfer ratio | h_{FE} | 150 | — | — | | $V_{CE} = 5 V, I_C = 1 A^{*1}$ |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | — | — | 0.3 | V | $I_C = 1 A, I_B = 0.05 A^{*1}$ |
| Base to emitter saturation voltage | $V_{BE(sat)}$ | — | — | 1.2 | V | |
| Fall time | t_f | — | 0.4 | — | pF | $I_{CP} = 1 A, I_{B1} = -I_{B2} = 50 mA^{*1}$ |

Note: 1. Pulse test

Not recommend
for new design

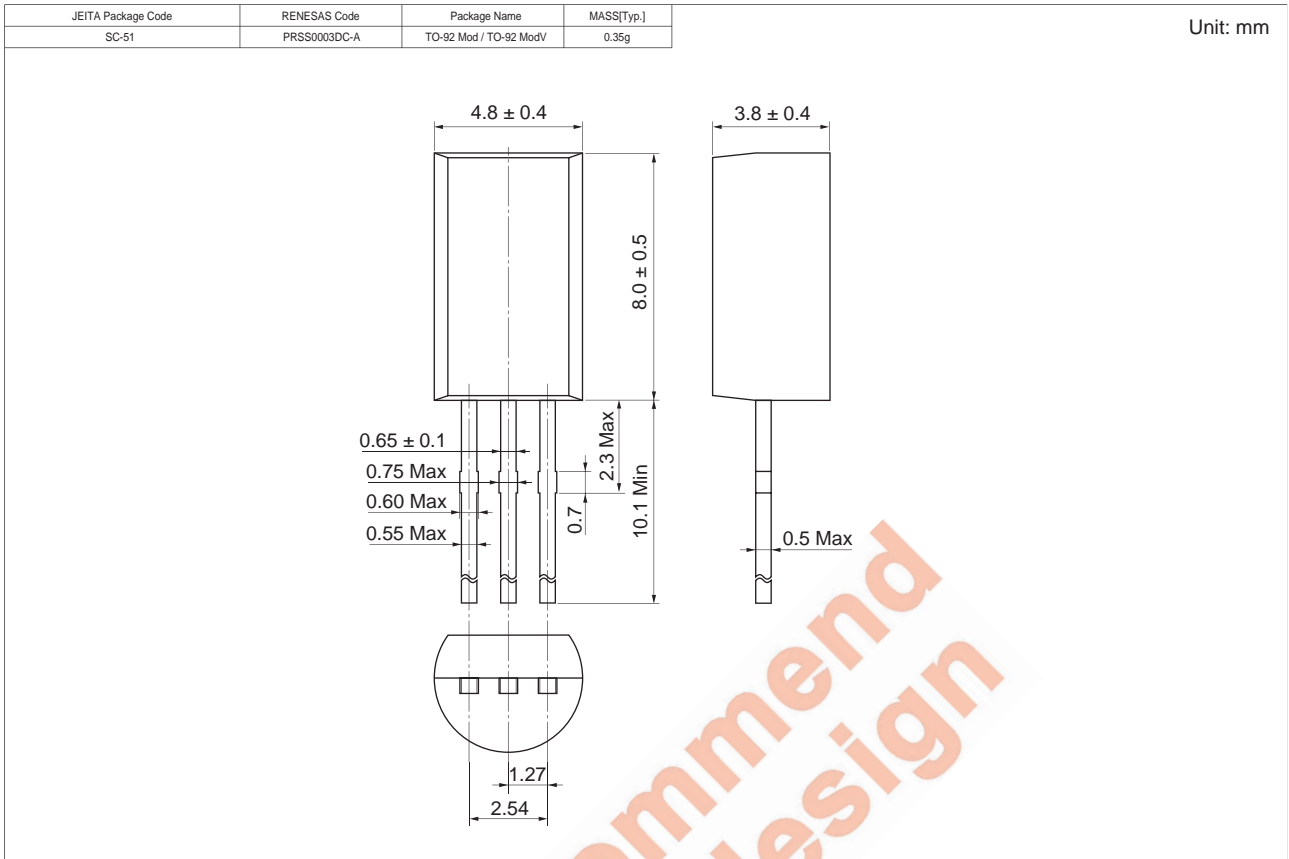
Main Characteristics





Not recommend
for new design

Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|------------|----------|-------------------------|
| 2SD974TZ-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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