

To our customers,

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## Old Company Name in Catalogs and Other Documents

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

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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## 2SC3380

Silicon NPN Triple Diffused

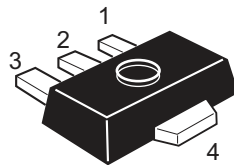
REJ03G0713-0300  
 (Previous ADE-208-1082A)  
 Rev.3.00  
 Aug.10.2005

### Application

- High frequency high voltage amplifier
- High voltage switch

### Outline

RENESAS Package code: PLZZ0004CA-A  
 (Package name: UPAK<sup>®</sup>)



1. Base
2. Collector
3. Emitter
4. Collector (Flange)

Note: Marking is "AS".

\*UPAK is a trademark of Renesas Technology Corp.

### Absolute Maximum Ratings

(Ta = 25°C)

| Item                         | Symbol     | Ratings     | Unit |
|------------------------------|------------|-------------|------|
| Collector to base voltage    | $V_{CBO}$  | 300         | V    |
| Collector to emitter voltage | $V_{CEO}$  | 300         | V    |
| Emitter to base voltage      | $V_{EBO}$  | 5           | V    |
| Collector current            | $I_C$      | 100         | mA   |
| Collector power dissipation  | $P_C^{*1}$ | 1           | W    |
| Junction temperature         | $T_j$      | 150         | °C   |
| Storage temperature          | $T_{stg}$  | -55 to +150 | °C   |

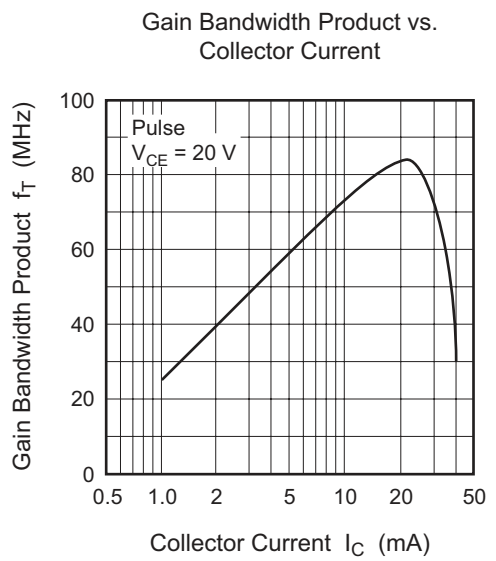
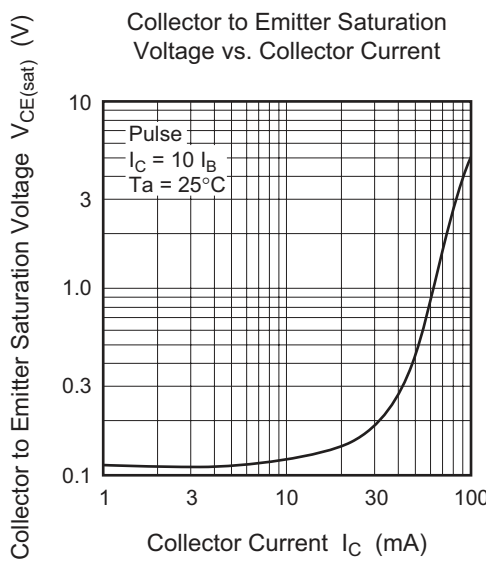
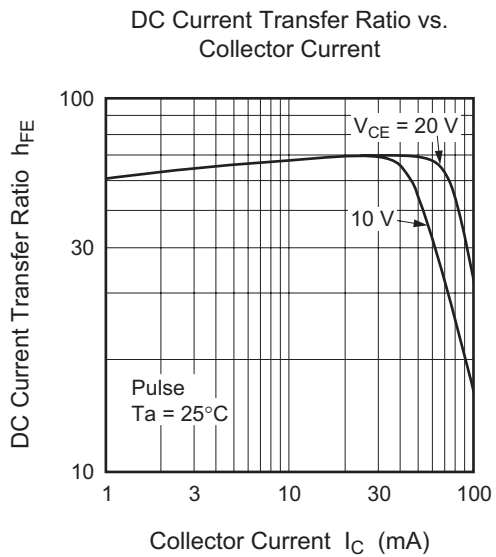
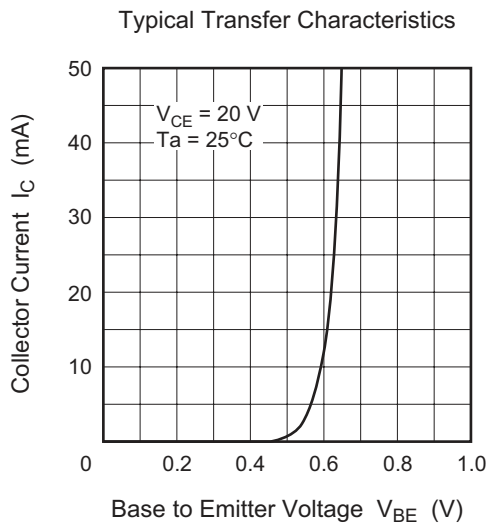
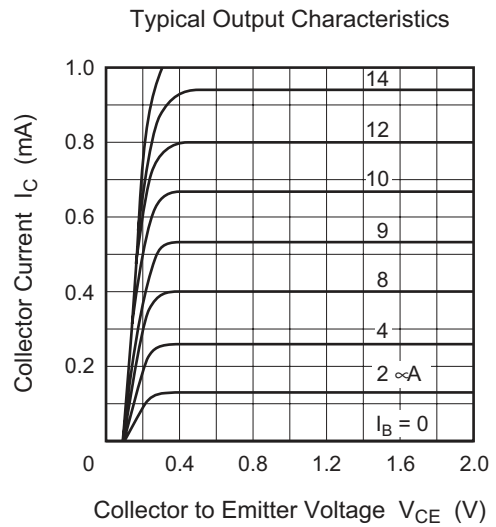
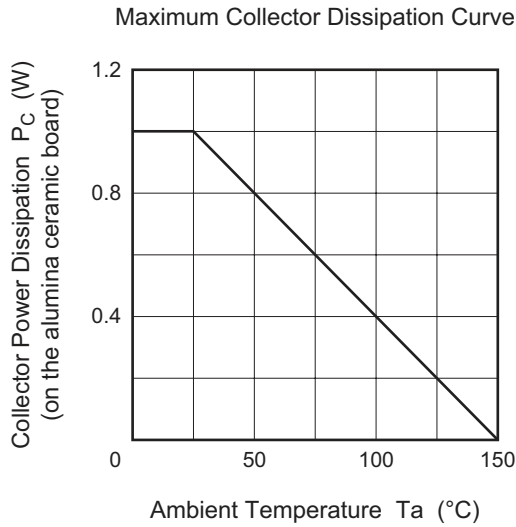
Note: 1. Value on the alumina ceramic board (12.5 · 20 · 0.7 mm)

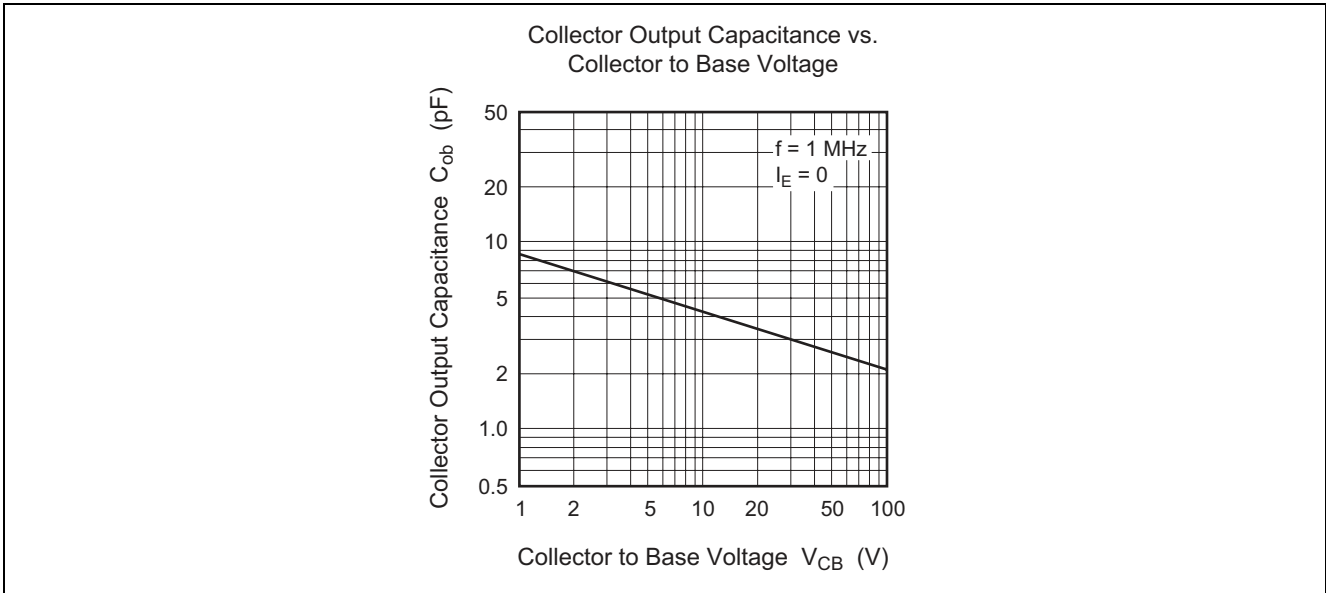
## Electrical Characteristics

(Ta = 25°C)

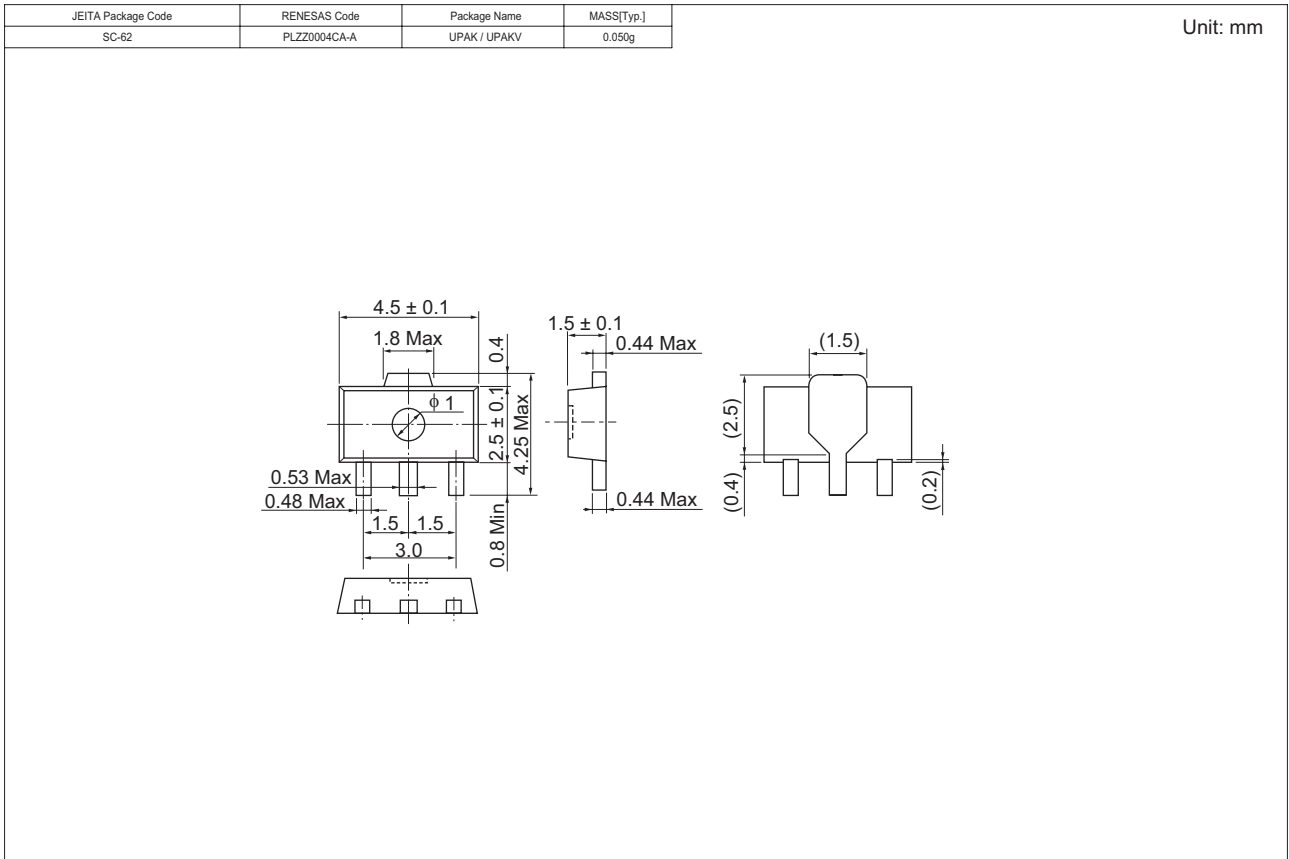
| Item                                    | Symbol        | Min | Typ | Max | Unit    | Test conditions                                     |
|---|---------------|-----|-----|-----|---------|---|
| Collector to base breakdown voltage     | $V_{(BR)CBO}$ | 300 | —   | —   | V       | $I_C = 10 \mu A, I_E = 0$                           |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$ | 300 | —   | —   | V       | $I_C = 1 \text{ mA}, R_{BE} = \infty$               |
| Emitter to base breakdown voltage       | $V_{(BR)EBO}$ | 5   | —   | —   | V       | $I_E = 10 \mu A, I_C = 0$                           |
| Collector cutoff current                | $I_{CEO}$     | —   | —   | 1   | $\mu A$ | $V_{CE} = 250 \text{ V}, R_{BE} = \infty$           |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —   | —   | 1.5 | V       | $I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$           |
| DC current transfer ratio               | $h_{FE}$      | 30  | —   | 200 |         | $V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}$        |
| Gain bandwidth product                  | $f_T$         | —   | 80  | —   | MHz     | $V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}$        |
| Collector output capacitance            | $C_{ob}$      | —   | —   | 4   | pF      | $V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ |

### Main Characteristics





## Package Dimensions



## Ordering Information

| Part Name     | Quantity | Shipping Container                      |
|---------------|----------|---|
| 2SC3380ASTR-E | 1000     | $\phi$ 178 mm Reel, 12 mm Emboss 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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