

## SOT-89 Plastic-Encapsulate Transistors

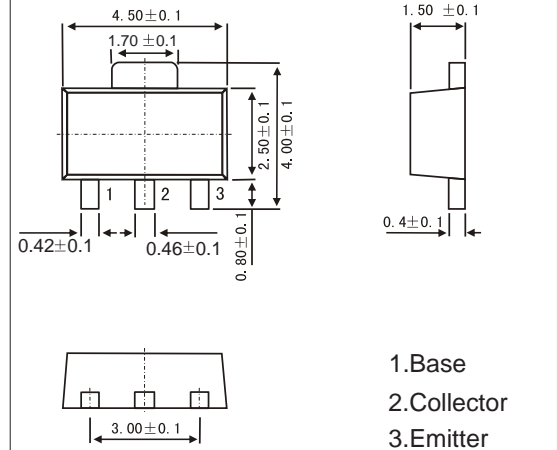
### Features

- Suitable for output stage of 3 watts amplifier
- Small flat package
- $PC = 1.0$  to  $2.0$  W (mounted on a ceramic substrate)
- Complementary to 2SA1203
- NPN Transistors

### MECHANICAL DATA

- Case style: SOT-89 molded plastic
- Mounting position: any

SOT-89



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter                               | Symbol    | Rating      | Unit |
|---|-----------|-------------|------|
| Collector - Base Voltage                | $V_{CB0}$ | 30          | V    |
| Collector - Emitter Voltage             | $V_{CEO}$ | 30          |      |
| Emitter - Base Voltage                  | $V_{EBO}$ | 5           |      |
| Collector Current - Continuous          | $I_C$     | 1.5         | A    |
| Base Current                            | $I_B$     | 0.3         |      |
| Collector Power Dissipation<br>(Note.1) | $P_C$     | 500<br>1000 | mW   |
| Junction Temperature                    | $T_J$     | 150         |      |
| Storage Temperature Range               | $T_{stg}$ | -55 to 150  |      |

Note.1: Mounted on a ceramic substrate (250 mm<sup>2</sup> × 0.8 t)

### PACKAGE INFORMATION

| Device  | Package | Shipping       |
|---------|---------|----------------|
| 2SC2883 | SOT-89  | 1000/Tape&Reel |

| Parameter                            | Symbol        | Test Conditions                   | Min | Typ | Max | Unit |
|--------------------------------------|---------------|-----------------------------------|-----|-----|-----|------|
| Collector- base breakdown voltage    | $V_{CB0}$     | $I_C = 1mA, I_E = 0$              | 30  |     |     | V    |
| Collector- emitter breakdown voltage | $V_{CEO}$     | $I_C = 10mA, I_B = 0$             | 30  |     |     |      |
| Emitter - base breakdown voltage     | $V_{EBO}$     | $I_E = 1mA, I_C = 0$              | 5   |     |     |      |
| Collector-base cut-off current       | $I_{CBO}$     | $V_{CB} = 30V, I_E = 0$           |     |     | 0.1 | uA   |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5V, I_C = 0$            |     |     | 0.1 |      |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 1.5A, I_B = 30mA$          |     |     | 2   | V    |
| Base - emitter saturation voltage    | $V_{BE(sat)}$ | $I_C = 1.5A, I_B = 30mA$          |     |     | 1.2 |      |
| Base - emitter voltage               | $V_{BE}$      | $V_{CE} = 2V, I_C = 500mA$        |     |     | 1   |      |
| DC current gain                      | $h_{FE}$      | $V_{CE} = 2V, I_C = 500mA$        | 100 |     | 320 |      |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = 10V, I_E = 0, f = 1MHz$ |     |     | 40  | pF   |
| Transition frequency                 | $f_T$         | $V_{CE} = 2V, I_C = 500mA$        |     | 120 |     | MHz  |

### Classification of $h_{FE}$

| Type    | 2SC2883-O | 2SC2883-Y |
|---------|-----------|-----------|
| Range   | 100-200   | 160-320   |
| Marking | GO*       | GY*       |

# RATINGS AND CHARACTERISTIC CURVES

## ■ Typical Characteristics

