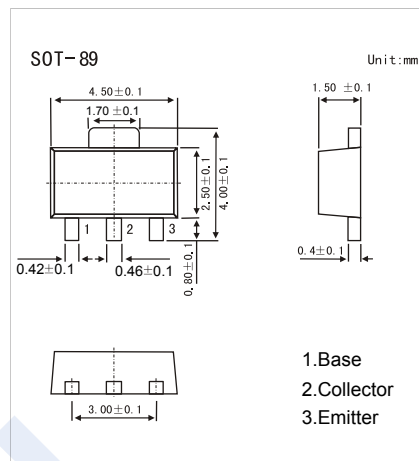


## NPN Transistors

## 2SD1368

## ■ Features

- Low frequency power amplifier
- Complementary to 2SB1002

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                          | Symbol    | Rating     | Unit             |
|------------------------------------|-----------|------------|------------------|
| Collector - Base Voltage           | $V_{CB0}$ | 100        | V                |
| Collector - Emitter Voltage        | $V_{CE0}$ | 50         |                  |
| Emitter - Base Voltage             | $V_{EB0}$ | 6          |                  |
| Collector Current - Continuous     | $I_C$     | 1          | A                |
| Collector Current - Pulse (Note.1) | $I_{CP}$  | 1.5        |                  |
| Collector Power Dissipation        | $P_C$     | 1          | W                |
| Junction Temperature               | $T_J$     | 150        | $^\circ\text{C}$ |
| Storage Temperature Range          | $T_{stg}$ | -55 to 150 |                  |

Note.1:  $PW \leq 10 \text{ ms}$ , Duty cycle  $\leq 20\%$ .

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                            | Symbol        | Test Conditions                                           | Min | Typ | Max | Unit          |
|--------------------------------------|---------------|-----------------------------------------------------------|-----|-----|-----|---------------|
| Collector-base breakdown voltage     | $V_{CB0}$     | $I_C = 100 \mu\text{A}$ , $I_E = 0$                       | 100 |     |     | V             |
| Collector-emitter breakdown voltage  | $V_{CE0}$     | $I_C = 1 \text{ mA}$ , $R_{BE} = \infty$                  | 50  |     |     |               |
| Emitter - base breakdown voltage     | $V_{EB0}$     | $I_E = 100 \mu\text{A}$ , $I_C = 0$                       | 6   |     |     |               |
| Collector-base cut-off current       | $I_{CBO}$     | $V_{CB} = 80 \text{ V}$ , $I_E = 0$                       |     |     | 0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 5 \text{ V}$ , $I_C = 0$                        |     |     | 0.1 |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 1 \text{ A}$ , $I_B = 100 \text{ mA}$              |     |     | 0.3 | V             |
| Base - emitter saturation voltage    | $V_{BE(sat)}$ | $I_C = 1 \text{ A}$ , $I_B = 100 \text{ mA}$              |     |     | 1.2 |               |
| DC current gain                      | $h_{FE}$      | $V_{CE} = 2 \text{ V}$ , $I_C = 0.1 \text{ A}$            | 100 |     | 500 |               |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = 10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$ |     | 20  |     | pF            |
| Transition frequency                 | $f_T$         | $V_{CE} = 2 \text{ V}$ , $I_C = 10 \text{ mA}$            |     | 100 |     | MHz           |

■ Classification of  $h_{FE}$ 

| Type    | 2SD1368-A | 2SD1368-B | 2SD1368-C |
|---------|-----------|-----------|-----------|
| Range   | 100-200   | 160-320   | 250-500   |
| Marking | CA        | CB        | CC        |

## NPN Transistors

### 2SD1368

#### ■ Typical Characteristics

