

**isc Silicon PNP Power Transistor**
**2SA768**
**DESCRIPTION**

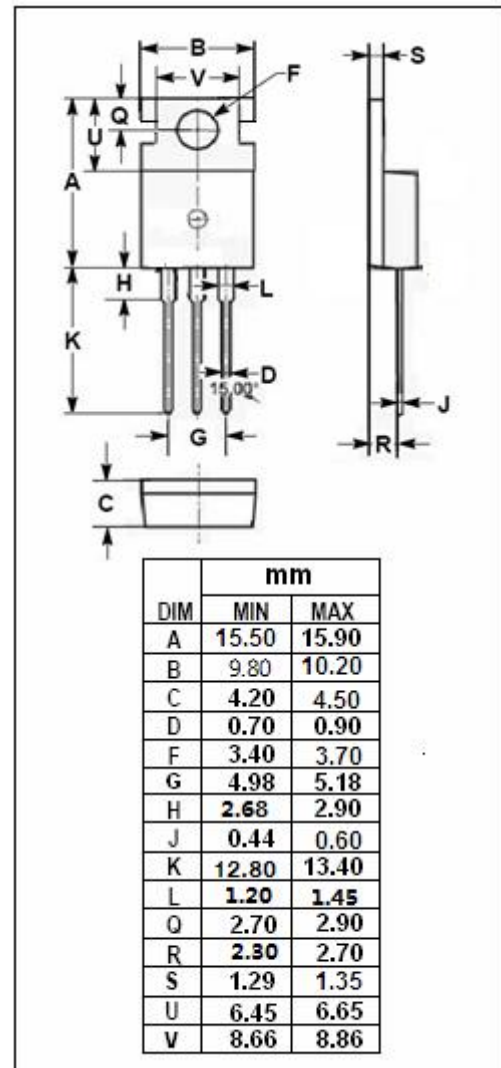
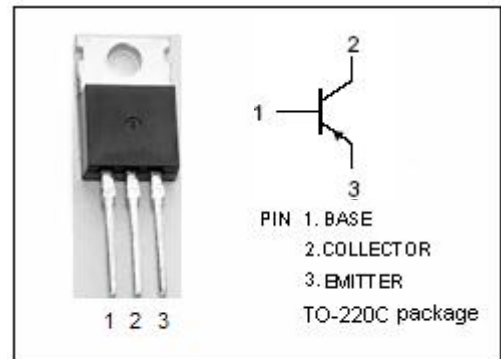
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -60(V)(Min.)$
- Complement to Type 2SC1826
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for audio and general purpose applications.

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

| SYMBOL    | PARAMETER                                       | VALUE   | UNIT       |
|-----------|---|---------|------------|
| $V_{CBO}$ | Collector-Base Voltage                          | -60     | V          |
| $V_{CEO}$ | Collector-Emitter Voltage                       | -60     | V          |
| $V_{EBO}$ | Emitter-Base Voltage                            | -6      | V          |
| $I_C$     | Collector Current-Continuous                    | -4      | A          |
| $I_B$     | Base Collector Current-Continuous               | -1      | A          |
| $P_C$     | Total Power Dissipation<br>@ $T_C = 25^\circ C$ | 30      | W          |
| $T_J$     | Junction Temperature                            | 150     | $^\circ C$ |
| $T_{stg}$ | Storage Temperature Range                       | -55~150 | $^\circ C$ |



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**ELECTRICAL CHARACTERISTICS**

 T<sub>c</sub>=25°C unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                    | MIN | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|---|-----|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> = -25mA; I <sub>B</sub> = 0    | -60 |      |      | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -2A; I <sub>B</sub> = -0.2A  |     |      | -1.0 | V    |
| I <sub>CBO</sub>     | Collector Cutoff Current             | V <sub>CB</sub> = -60V; I <sub>E</sub> = 0    |     |      | -1.0 | mA   |
| I <sub>EBO</sub>     | Emitter Cutoff Current               | V <sub>EB</sub> = -6V; I <sub>C</sub> = 0     |     |      | -1.0 | mA   |
| h <sub>FE</sub>      | DC Current Gain                      | I <sub>C</sub> = -1A; V <sub>CE</sub> = -4V   | 40  |      |      |      |
| f <sub>T</sub>       | Current-Gain—Bandwidth Product       | I <sub>E</sub> = 0.2A; V <sub>CE</sub> = -10V |     | 10   |      | MHz  |

## Switching Times

|                  |              |  |  |      |  |     |
|------------------|--------------|--|--|------|--|-----|
| t <sub>r</sub>   | Rise Time    |  |  | 1.0  |  | μ s |
| t <sub>stg</sub> | Storage Time | I <sub>C</sub> = -2A, R <sub>L</sub> = 3 Ω,<br>I <sub>B1</sub> = -I <sub>B2</sub> = -0.3A, V <sub>CC</sub> = -6V |  | 0.4  |  | μ s |
| t <sub>f</sub>   | Fall Time    |  |  | 0.15 |  | μ s |

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