

## **isc** Silicon PNP Power Transistor

# 2SA2151

### DESCRIPTION

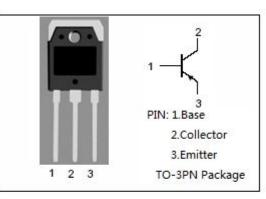
- High Collector-Emitter Breakdown Voltage-V<sub>(BR)CEO</sub>= -200V(Min)
- Good Linearity of h<sub>FE</sub>
- Complement to Type 2SC6011
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

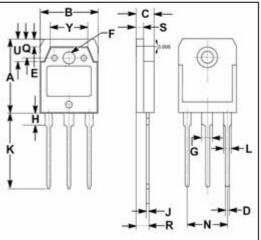
#### **APPLICATIONS**

· Designed for audio and general purpose applications

#### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL           | PARAMETER                                 | VALUE   | UNIT |  |
|------------------|---|---------|------|--|
| V <sub>CBO</sub> | Collector-Base Voltage                    | -200    | V    |  |
| Vceo             | Collector-Emitter Voltage                 | -200    | V    |  |
| V <sub>EBO</sub> | Emitter-Base Voltage                      | -6      | V    |  |
| lc               | Collector Current-Continuous              | -15     | A    |  |
| I <sub>B</sub>   | Base Current-Continuous                   | -4      | A    |  |
| Pc               | Collector Power Dissipation @ $T_C$ =25°C | 160     | W    |  |
| TJ               | Junction Temperature                      | 150     | °C   |  |
| T <sub>stg</sub> | Storage Temperature Range                 | -55~150 | °C   |  |





|     | m     | m     |
|-----|-------|-------|
| DIM | MIN   | MAX   |
| Α   | 19.60 | 20.30 |
| В   | 15.50 | 15.70 |
| С   | 4.70  | 4.90  |
| D   | 0.90  | 1.10  |
| Ε   | 1.90  | 2.10  |
| F   | 3.40  | 3.60  |
| G   | 2.90  | 3.20  |
| Н   | 3.20  | 3.40  |
| J   | 0.595 | 0.605 |
| Κ   | 19.80 | 20.70 |
| L   | 1.90  | 2.20  |
| Ν   | 10.89 | 10.91 |
| Q   | 4.90  | 5.10  |
| R   | 3.35  | 3.45  |
| S   | 1.995 | 2.100 |
| U   | 5.90  | 6.20  |
| Y   | 9.90  | 10.10 |

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## **ELECTRICAL CHARACTERISTICS**

 $T_{c}\text{=}25^{\circ}\!\!\!\mathrm{C}$  unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS  | MIN  | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|---|------|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> = -50mA ; I <sub>B</sub> = 0           | -200 |      |      | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -5A; I <sub>B</sub> = -0.5A          |      |      | -0.5 | V    |
| І <sub>сво</sub>     | Collector Cutoff Current             | V <sub>CB</sub> = -200V ; I <sub>E</sub> = 0          |      |      | -10  | μA   |
| I <sub>EBO</sub>     | Emitter Cutoff Current               | V <sub>EB</sub> = -6V; I <sub>C</sub> = 0             |      |      | -10  | μA   |
| h <sub>FE</sub>      | DC Current Gain                      | I <sub>C</sub> = -3A ; V <sub>CE</sub> = -4V          | 50   |      | 180  |      |
| Сов                  | Output Capacitance                   | I <sub>E</sub> = 0 ; V <sub>CB</sub> = -10V;f= 1.0MHz |      | 450  |      | pF   |
| fT                   | Current-Gain—Bandwidth Product       | IE= 0.5A ; VCE= -12V                                  |      | 20   |      | MHz  |

### h<sub>FE</sub> Classifications

| 0      | Р      | Y      |
|--------|--------|--------|
| 50-100 | 70-140 | 90-180 |

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