

## INCHANGE SEMICONDUCTOR

## **isc Silicon PNP Power Transistors**

## NJW1302G

#### DESCRIPTION

- With TO-3PN packaging
- · Reliable performance at higher powers
- · Accurate reproduction of Input signal
- · Greater dynamic range
- · Minimum Lot-to-Lot variations for robust device performance and reliable operation

#### **APPLICATIONS**

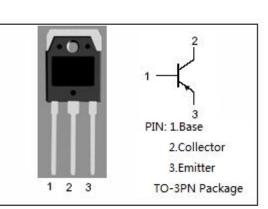
- · Switching regulators
- High frequency inverters
- General purpose power amplifiers

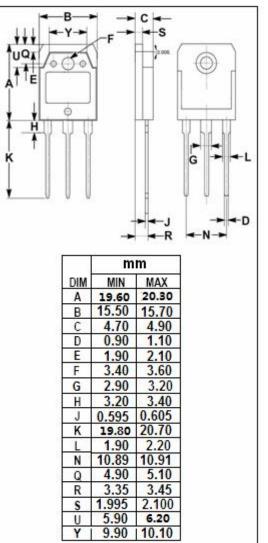
### ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL           | PARAMETER   | VALUE   | UNIT |
|------------------|---|---------|------|
| Vсво             | Collector-Base Voltage                            | -250    | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage                         | -250    | v    |
| V <sub>CEX</sub> | Collector-Emitter Voltage<br>V <sub>EB</sub> = 5V | -250    | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage                              | -5      | V    |
| lc               | Collector Current-Continuous                      | -15     | А    |
| I <sub>CM</sub>  | Collector Current-Peak                            | -30     | А    |
| lв               | Base Current-Continuous                           | -1.6    | А    |
| Ρτ               | Total Power Dissipation<br>@ T <sub>c</sub> =25℃  | 200     | W    |
| TJ               | Junction Temperature                              | 150     | °C   |
| T <sub>stg</sub> | Storage Temperature Range                         | -65~150 | °C   |

#### THERMAL CHARACTERISTICS

| SYMBOL              | PARAMETER                            | МАХ  | UNIT |
|---------------------|--------------------------------------|------|------|
| R <sub>th j-c</sub> | Thermal Resistance, Junction to Case | 0.63 | °C/W |







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### **ELECTRICAL CHARACTERISTICS**

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| SYMBOL                | PARAMETER                            | CONDITIONS                                   | MIN  | TYP. | МАХ  | UNIT |
|-----------------------|--------------------------------------|--|------|------|------|------|
| V <sub>CEO(SUS)</sub> | Collector-Emitter Sustaining Voltage | I <sub>c</sub> =- 100mA; I <sub>B</sub> = 0  | -250 |      |      | V    |
| V <sub>CE(sat)</sub>  | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -8A; I <sub>B</sub> =- 0.8A |      |      | -0.6 | V    |
| $V_{BE(on)}$          | Base-Emitter On Voltage              | I <sub>C</sub> = -8A;V <sub>CE</sub> = -5V   |      |      | -1.5 | V    |
| I <sub>СВО</sub>      | Collector Cutoff Current             | V <sub>CB</sub> =- 250V                      |      |      | -50  | mA   |
| ICEO                  | Collector Cutoff Current             | V <sub>CE</sub> =- 250V                      |      |      | -50  | mA   |
| I <sub>EBO</sub>      | Emitter Cutoff Current               | V <sub>EB</sub> =- 5V                        |      |      | -5   | mA   |
| h <sub>FE-1</sub>     | DC Current Gain                      | I <sub>C</sub> = -0.1A; V <sub>CE</sub> =-5V | 75   |      | 150  |      |
| h <sub>FE-2</sub>     | DC Current Gain                      | I <sub>C</sub> = -1A; V <sub>CE</sub> = -5V  | 75   |      | 150  |      |
| h <sub>FE-3</sub>     | DC Current Gain                      | I <sub>C</sub> = -3A; V <sub>CE</sub> = -5V  | 75   |      | 150  |      |
| h <sub>FE-4</sub>     | DC Current Gain                      | I <sub>C</sub> =- 5A; V <sub>CE</sub> = -5V  | 60   |      |      |      |
| h <sub>FE-5</sub>     | DC Current Gain                      | I <sub>C</sub> =- 8A; V <sub>CE</sub> = -5V  | 45   |      |      |      |

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