

**SPTECH Silicon NPN Power Transistor**

**MJE15032**

**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 250V(\text{Min})$
- DC current gain -  
:  $h_{FE} = 50 (\text{Min}) @ I_C = 0.5 A$   
:  $h_{FE} = 10 (\text{Min}) @ I_C = 2.0 A$
- Complement to Type MJE15033

**APPLICATIONS**

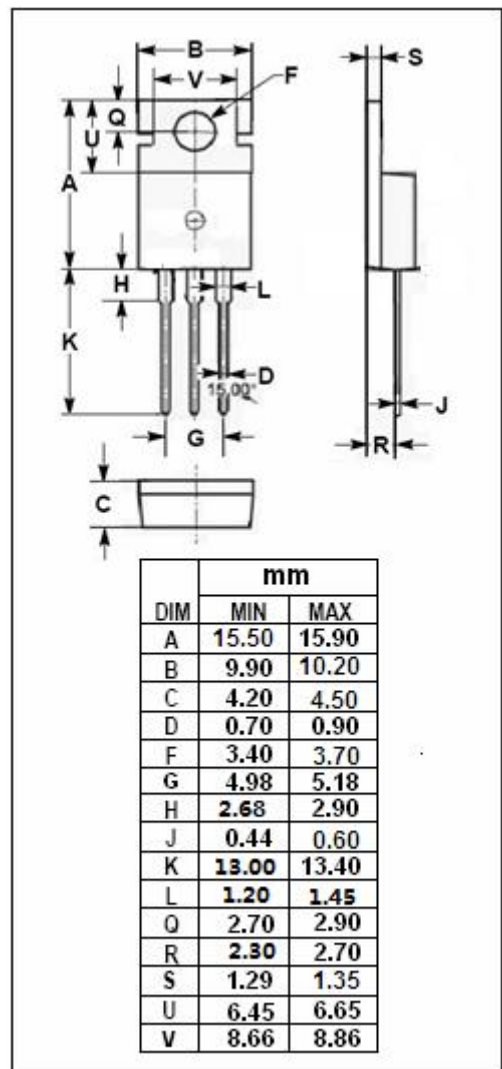
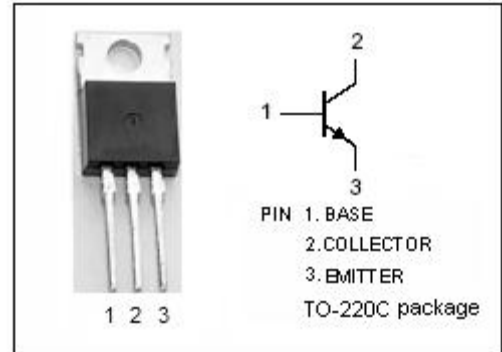
- Designed for use as high-frequency drivers in audio amplifiers.

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

| SYMBOL    | PARAMETER   | VALUE   | UNIT |
|-----------|---|---------|------|
| $V_{CBO}$ | Collector-Base Voltage                              | 250     | V    |
| $V_{CEO}$ | Collector-Emitter Voltage                           | 250     | V    |
| $V_{EBO}$ | Emitter-Base Voltage                                | 5       | V    |
| $I_C$     | Collector Current -Continuous                       | 8       | A    |
| $I_{CM}$  | Collector Current-Peak                              | 16      | A    |
| $I_B$     | Base Current  | 2       | A    |
| $P_C$     | Collector Power Dissipation<br>@ $T_a = 25^\circ C$ | 2       | W    |
|           | Collector Power Dissipation<br>@ $T_c = 25^\circ C$ | 50      |      |
| $T_j$     | Junction Temperature                                | 150     | °C   |
| $T_{stg}$ | Storage Temperature                                 | -65~150 | °C   |

**THERMAL CHARACTERISTICS**

| SYMBOL       | PARAMETER                               | MAX  | UNIT |
|--------------|---|------|------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case    | 2.5  | °C/W |
| $R_{th j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | °C/W |



## ELECTRICAL CHARACTERISTICS

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

| SYMBOL                | PARAMETER                            | CONDITIONS   | MIN | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|-----|------|
| V <sub>CEO(SUS)</sub> | Collector-Emitter Sustaining Voltage | I <sub>C</sub> = 10mA ; I <sub>B</sub> = 0                               | 250 |     | V    |
| V <sub>CE(sat)</sub>  | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 1A ; I <sub>B</sub> = 0.1A                              |     | 0.5 | V    |
| V <sub>BE(on)</sub>   | Base-Emitter On Voltage              | I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V                               |     | 1.0 | V    |
| I <sub>CBO</sub>      | Collector Cutoff Current             | V <sub>CB</sub> = 150V; I <sub>E</sub> = 0                               |     | 10  | μ A  |
| I <sub>EBO</sub>      | Emitter Cutoff Current               | V <sub>EB</sub> = 5V; I <sub>C</sub> = 0                                 |     | 10  | μ A  |
| h <sub>FE-1</sub>     | DC Current Gain                      | I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 5V                             | 50  |     |      |
| h <sub>FE-2</sub>     | DC Current Gain                      | I <sub>C</sub> = 1A ; V <sub>CE</sub> = 5V                               | 50  |     |      |
| h <sub>FE-3</sub>     | DC Current Gain                      | I <sub>C</sub> = 2A ; V <sub>CE</sub> = 5V                               | 10  |     |      |
| f <sub>T</sub>        | Current Gain-Bandwidth Product       | I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 10V; f <sub>test</sub> = 1.0MHz | 30  |     | MHz  |