

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

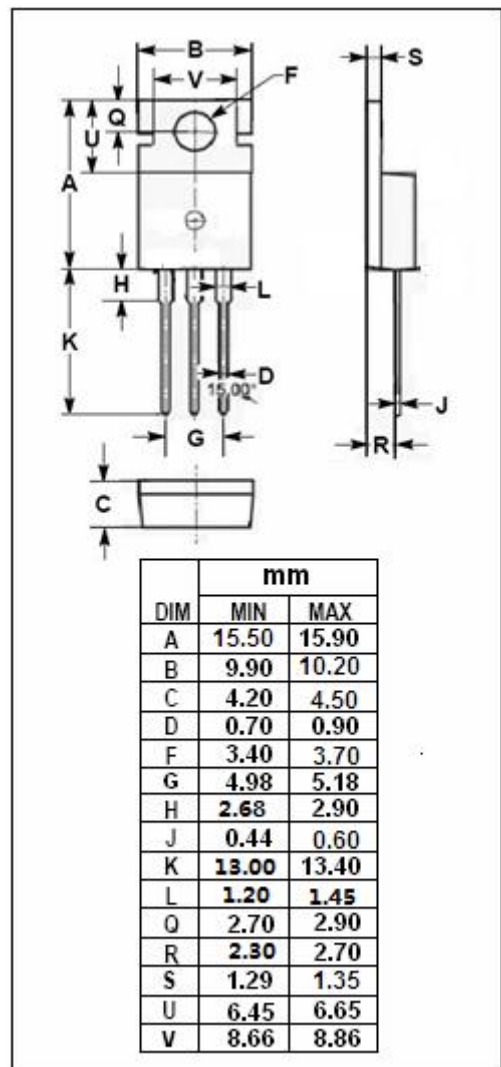
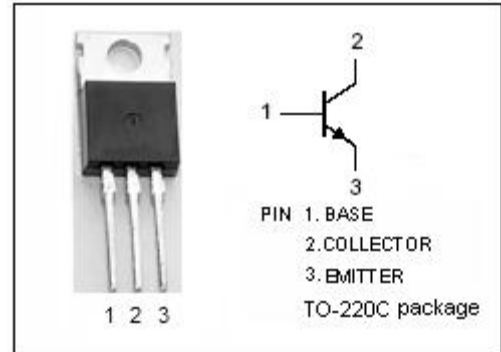
- Designed for use as high-frequency drivers in audio amplifiers.

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 @ $T_a=25^\circ C$ | 2 | W |
| | Collector Power Dissipation @ $T_c=25^\circ C$ | 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_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|-----------------------|--------------------------------------|--------------------------------------------------------------------------|-----|-----|------|
| V _{CEO(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 10mA ; I _B = 0 | 250 | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1A ; I _B = 0.1A | | 0.5 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 1A ; V _{CE} = 5V | | 1.0 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 150V; I _E = 0 | | 10 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | 10 | μ A |
| h _{FE-1} | DC Current Gain | I _C = 0.5A ; V _{CE} = 5V | 50 | | |
| h _{FE-2} | DC Current Gain | I _C = 1A ; V _{CE} = 5V | 50 | | |
| h _{FE-3} | DC Current Gain | I _C = 2A ; V _{CE} = 5V | 10 | | |
| f _T | Current Gain-Bandwidth Product | I _C = 0.5A; V _{CE} = 10V; f _{test} = 1.0MHz | 30 | | MHz |