

## SPTECH Silicon PNP Power Transistor

MJE2955T

## DESCRIPTION

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -60V(\text{Min})$
- High DC Current Gain-  
:  $h_{FE} = 20-100 @ I_C = -4A$
- Complement to Type MJE3055T

## APPLICATIONS

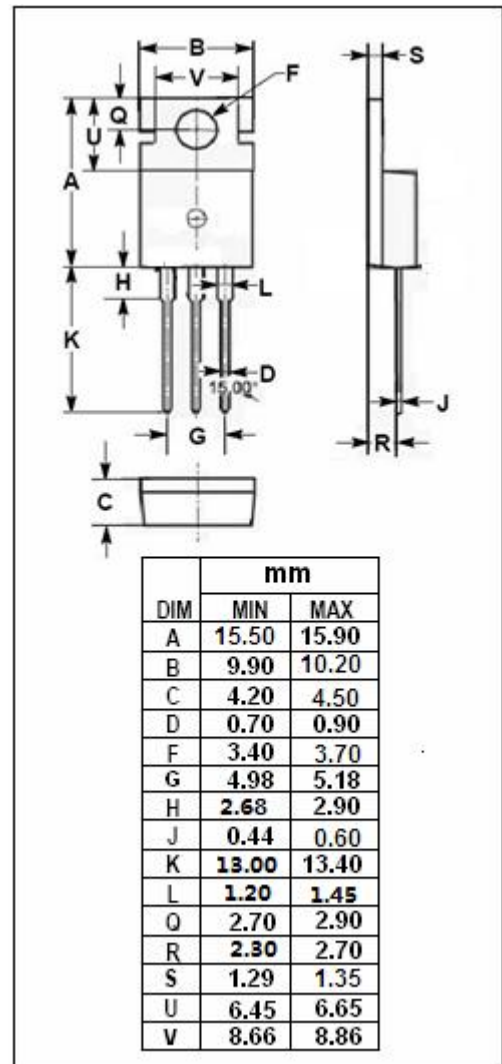
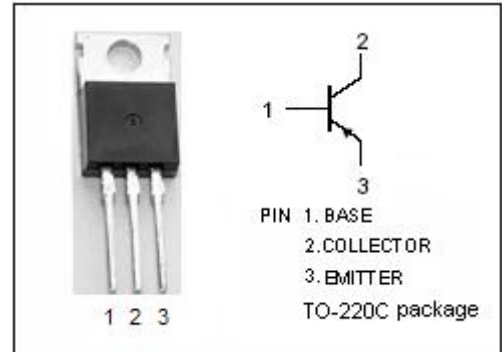
- Designed for use in general-purpose amplifier and switching applications.

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                                               | VALUE   | UNIT             |
|-----------|---------------------------------------------------------|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                                  | -70     | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                               | -60     | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                    | -5      | V                |
| $I_C$     | Collector Current-Continuous                            | -10     | A                |
| $I_B$     | Base Current-Continuous                                 | -6      | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_C=25^\circ\text{C}$ | 75      | W                |
| $T_J$     | Junction Temperature                                    | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                               | -55~150 | $^\circ\text{C}$ |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                            | MAX  | UNIT               |
|---------------|--------------------------------------|------|--------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 1.67 | $^\circ\text{C/W}$ |



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

| SYMBOL          | PARAMETER                            | CONDITIONS                                                                                             | MIN | TYP. | MAX         | UNIT |
|-----------------|--------------------------------------|--------------------------------------------------------------------------------------------------------|-----|------|-------------|------|
| $V_{(BR)CEO}$   | Collector-Emitter Breakdown Voltage  | $I_C = -50\text{mA}$ ; $I_B = 0$                                                                       | -60 |      |             | V    |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C = -4\text{A}$ ; $I_B = -0.4\text{A}$                                                              |     |      | -1.1        | V    |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C = -10\text{A}$ ; $I_B = -3.3\text{A}$                                                             |     |      | -8.0        | V    |
| $V_{BE(on)}$    | Base-Emitter On Voltage              | $I_C = -4\text{A}$ ; $V_{CE} = -4\text{V}$                                                             |     |      | -1.8        | V    |
| $I_{CEO}$       | Collector Cutoff Current             | $V_{CE} = -30\text{V}$ ; $I_B = 0$                                                                     |     |      | -0.7        | mA   |
| $I_{CBO}$       | Collector Cutoff Current             | $V_{CB} = -70\text{V}$ ; $I_E = 0$<br>$V_{CB} = -70\text{V}$ ; $I_E = 0$ ; $T_C = 150^{\circ}\text{C}$ |     |      | -1.0<br>-10 | mA   |
| $I_{EBO}$       | Emitter Cutoff Current               | $V_{EB} = -5\text{V}$ ; $I_C = 0$                                                                      |     |      | -5.0        | mA   |
| $h_{FE-1}$      | DC Current Gain                      | $I_C = -4\text{A}$ ; $V_{CE} = -4\text{V}$                                                             | 20  |      | 100         |      |
| $h_{FE-2}$      | DC Current Gain                      | $I_C = -10\text{A}$ ; $V_{CE} = -4\text{V}$                                                            | 5   |      |             |      |
| $f_T$           | Current Gain-Bandwidth Product       | $I_C = -0.5\text{A}$ ; $V_{CE} = -10\text{V}$ ; $f = 500\text{kHz}$                                    | 2.0 |      |             | MHz  |