

# isc Silicon NPN Power Transistor

## 2SC2028

### DESCRIPTION

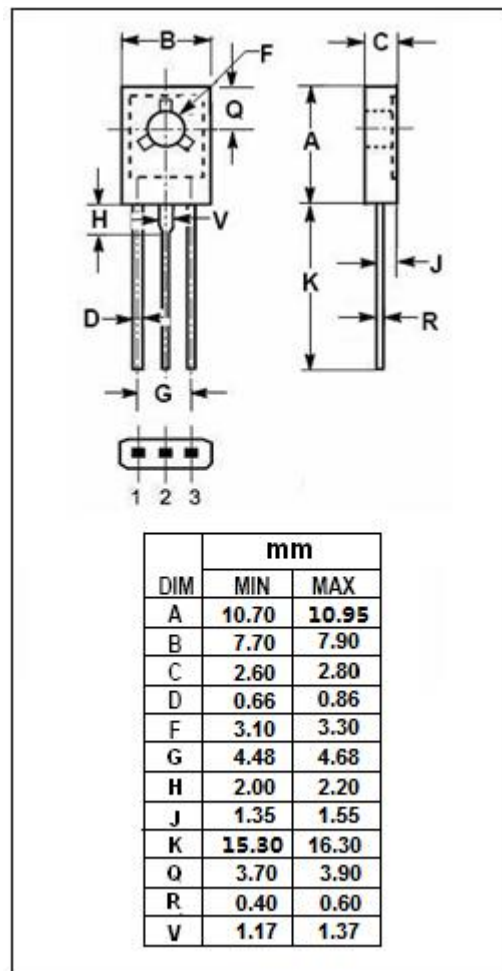
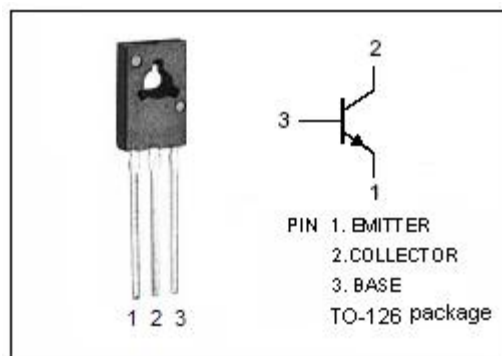
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 50V(\text{Min})$
- Good Linearity of  $h_{FE}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for low-frequency power amplification

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

| SYMBOL    | PARAMETER   | VALUE   | UNIT               |
|-----------|---|---------|--------------------|
| $V_{CBO}$ | Collector-Base Voltage                                    | 80      | V                  |
| $V_{CEO}$ | Collector-Emitter Voltage                                 | 50      | V                  |
| $V_{EBO}$ | Emitter-Base Voltage                                      | 6       | V                  |
| $I_C$     | Collector Current-Continuous                              | 1.5     | A                  |
| $P_C$     | Collector Power Dissipation<br>@ $T_a=25^{\circ}\text{C}$ | 5       | W                  |
| $T_J$     | Junction Temperature                                      | 150     | $^{\circ}\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                                 | -55~150 | $^{\circ}\text{C}$ |



**isc Silicon NPN Power Transistor****2SC2028****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

| SYMBOL               | PARAMETER                            | CONDITIONS   | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>(BR)CEO</sub> | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> = 30mA ; I <sub>B</sub> = 0                           | 50  |      |     | V    |
| V <sub>(BR)EBO</sub> | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = 1mA ; I <sub>C</sub> = 0                            | 6   |      |     | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 500mA; I <sub>B</sub> = 50mA                        |     |      | 0.5 | V    |
| I <sub>CBO</sub>     | Collector Cutoff Current             | V <sub>CB</sub> = 80V; I <sub>E</sub> = 0                            |     |      | 1   | μ A  |
| I <sub>EBO</sub>     | Emitter Cutoff Current               | V <sub>EB</sub> = 6V; I <sub>C</sub> = 0                             |     |      | 1   | μ A  |
| h <sub>FE</sub>      | DC Current Gain                      | I <sub>C</sub> = 100mA ; V <sub>CE</sub> = 5V                        | 90  |      | 320 |      |
| f <sub>T</sub>       | Current-Gain—Bandwidth Product       | I <sub>C</sub> = 100mA; V <sub>CE</sub> = 5V                         |     | 250  |     | MHz  |
| C <sub>OB</sub>      | Output Capacitance                   | I <sub>E</sub> = 0 ; V <sub>CB</sub> = 10V, f <sub>test</sub> = 1MHz |     | 18   | 40  | pF   |

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