

**isc Silicon PNP Power Transistor****2SB1658****DESCRIPTION**

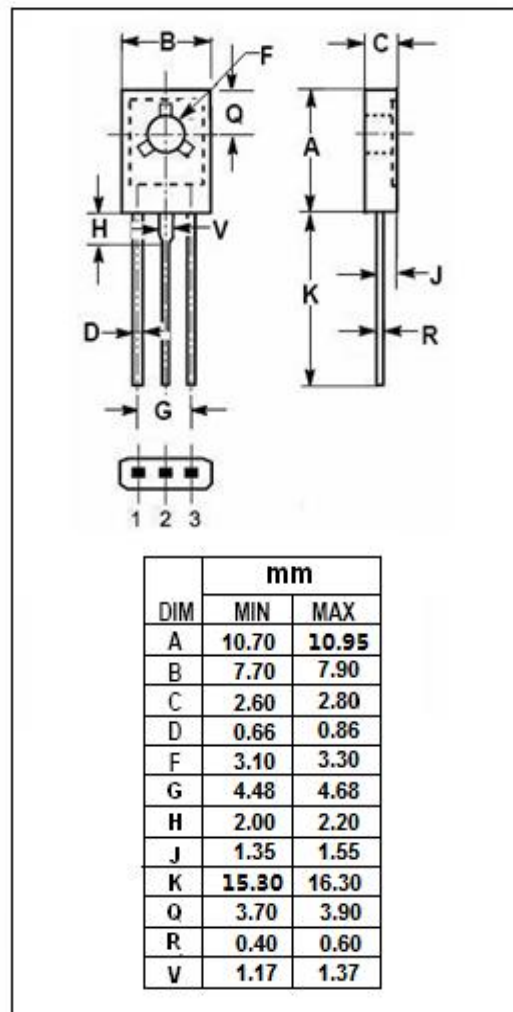
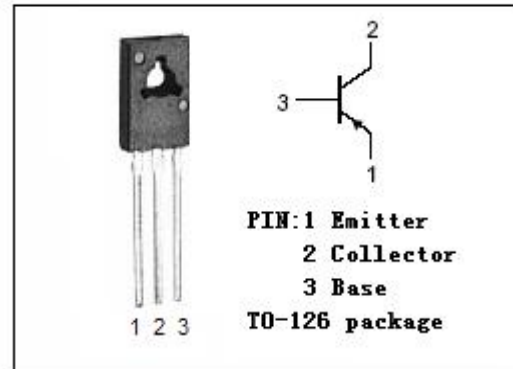
- High Collector Current  $-I_C = -5A$
- High DC Current Gain-  
:  $h_{FE} = 150 \sim 600 @ I_C = -1A$
- Low-Collector Saturation Voltage-  
:  $V_{CE(sat)} = -0.15V(\text{Max.}) @ I_C = -1A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for audio frequency amplifier and switching applications.

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

| SYMBOL    | PARAMETER   | VALUE   | UNIT             |
|-----------|---|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                                    | -30     | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                                 | -30     | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                      | -6      | V                |
| $I_C$     | Collector Current-Continuous                              | -5      | A                |
| $I_{CP}$  | Collector Current-Pulse                                   | -10     | A                |
| $I_B$     | Base Current-Continuous                                   | -2      | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_C = 25^\circ\text{C}$ | 10      | W                |
|           | Collector Power Dissipation<br>@ $T_a = 25^\circ\text{C}$ | 1       |                  |
| $T_J$     | Junction Temperature                                      | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                                 | -55~150 | $^\circ\text{C}$ |



**isc Silicon PNP Power Transistor****2SB1658****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

| SYMBOL                 | PARAMETER                            | CONDITIONS  | MIN | TYP. | MAX   | UNIT |
|------------------------|--------------------------------------|---|-----|------|-------|------|
| V <sub>CE(sat)-1</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -1A; I <sub>B</sub> = -50mA                        |     |      | -0.15 | V    |
| V <sub>CE(sat)-2</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -2A; I <sub>B</sub> = -0.1A                        |     |      | -0.25 | V    |
| V <sub>CE(sat)-3</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -4A; I <sub>B</sub> = -0.2A                        |     |      | -0.5  | V    |
| V <sub>BE(sat)</sub>   | Base-Emitter Saturation Voltage      | I <sub>C</sub> = -1A; I <sub>B</sub> = -0.1A                        |     |      | -1.5  | V    |
| I <sub>CBO</sub>       | Collector Cutoff Current             | V <sub>CB</sub> = -30V; I <sub>E</sub> = 0                          |     |      | -0.1  | μ A  |
| I <sub>EBO</sub>       | Emitter Cutoff Current               | V <sub>EB</sub> = -6V; I <sub>C</sub> = 0                           |     |      | -0.1  | μ A  |
| h <sub>FE-1</sub>      | DC Current Gain                      | I <sub>C</sub> = -1A; V <sub>CE</sub> = -2V                         | 150 |      | 600   |      |
| h <sub>FE-2</sub>      | DC Current Gain                      | I <sub>C</sub> = -4A; V <sub>CE</sub> = -2V                         | 50  |      |       |      |
| C <sub>OB</sub>        | Output Capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> = -10V, f <sub>test</sub> = 1MHz |     | 100  |       | pF   |

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