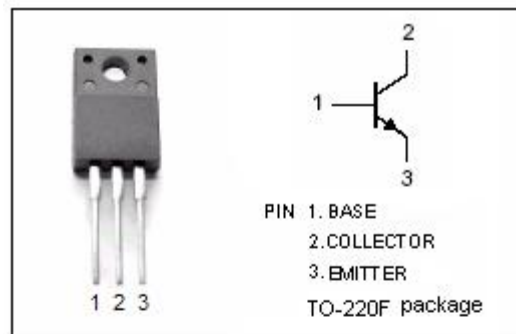


**isc Silicon NPN Power Transistor**
**2SC6082**
**DESCRIPTION**

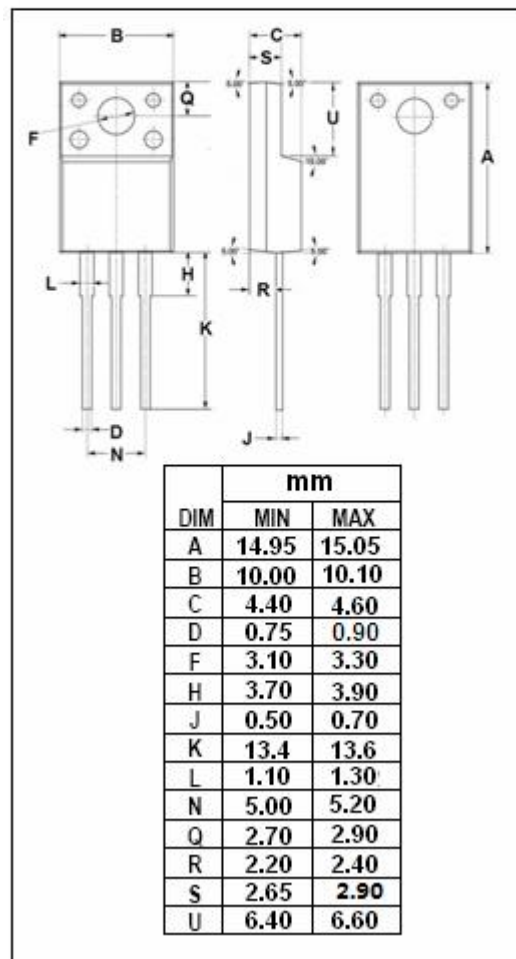
- Large current capacitance
- High speed switching
- Low saturation voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- High speed switching applications


**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

| SYMBOL           | PARAMETER  | VALUE   | UNIT |
|------------------|--|---------|------|
| V <sub>CBO</sub> | Collector-Base Voltage                             | 60      | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage                          | 50      | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage                               | 6       | V    |
| I <sub>C</sub>   | Collector Current- Continuous                      | 15      | A    |
| I <sub>B</sub>   | Base Current- Continuous                           | 3       | A    |
| I <sub>CP</sub>  | Collector Current-Pulse                            | 20      | A    |
| P <sub>C</sub>   | Collector Power Dissipation @ T <sub>a</sub> =25°C | 2       | W    |
|                  | Collector Power Dissipation @ T <sub>c</sub> =25°C | 23      |      |
| T <sub>J</sub>   | Junction Temperature                               | 150     | °C   |
| T <sub>stg</sub> | Storage Temperature Range                          | -55~150 | °C   |



## isc Silicon NPN Power Transistor

2SC6082

## ELECTRICAL CHARACTERISTICS

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

| SYMBOL               | PARAMETER                            | CONDITIONS   | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|-----|------|-----|------|
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = 7.5A; I <sub>B</sub> = 0.375A                         |     |      | 0.4 | V    |
| V <sub>BE(sat)</sub> | Base-Emitter Saturation Voltage      | I <sub>C</sub> = 7.5A; I <sub>B</sub> = 0.375A                         |     |      | 1.2 | V    |
| I <sub>CBO</sub>     | Collector Cutoff Current             | V <sub>CB</sub> = 40V; I <sub>E</sub> = 0                              |     |      | 10  | μA   |
| h <sub>FE-1</sub>    | DC Current Gain                      | I <sub>C</sub> = 330mA; V <sub>CE</sub> = 2V                           | 200 |      | 560 |      |
| h <sub>FE-2</sub>    | DC Current Gain                      | I <sub>C</sub> = 10A; V <sub>CE</sub> = 2V                             | 50  |      |     |      |
| t <sub>stg</sub>     | Storage Time                         |  |     | 560  |     | ns   |
| t <sub>f</sub>       | Fall Time                            | I <sub>C</sub> = 5A, I <sub>B1</sub> = 0.25A; I <sub>B2</sub> = -0.25A |     | 37   |     | ns   |

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