

isc Silicon NPN Power Transistor

2SC3182

DESCRIPTION

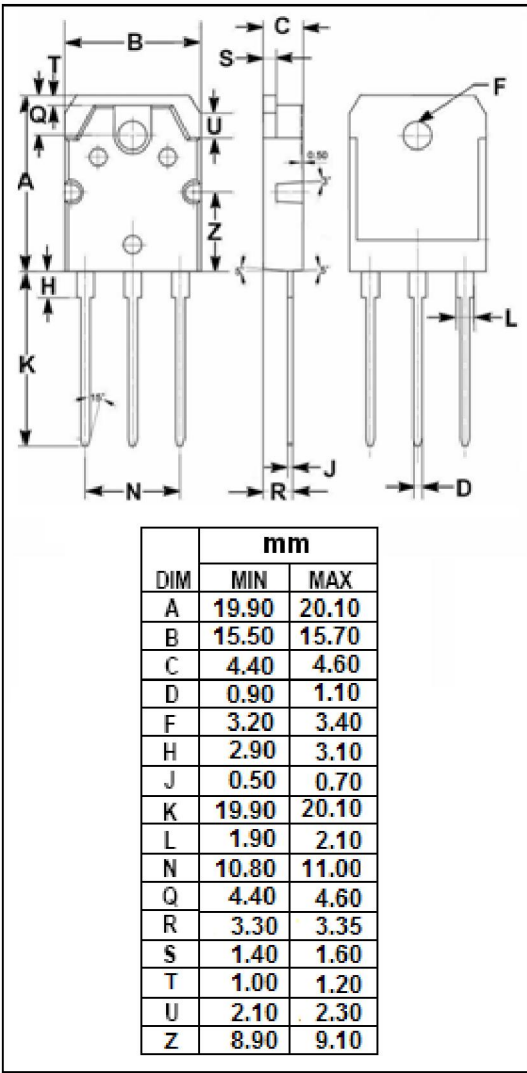
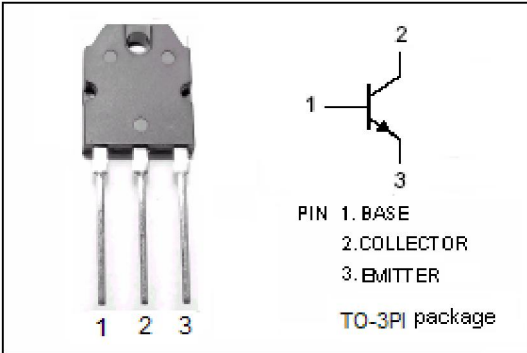
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 2.0V(Max.) @ I_C = 7A$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SA1265

APPLICATIONS

- Power amplifier applications
- Recommend for 70W high fidelity audio frequency amplifier output stage applications

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

| SYMBOL    | PARAMETER                                          | VALUE   | UNIT        |
|-----------|----------------------------------------------------|---------|-------------|
| $V_{CBO}$ | Collector-Base Voltage                             | 140     | V           |
| $V_{CEO}$ | Collector-Emitter Voltage                          | 140     | V           |
| $V_{EBO}$ | Emitter-Base Voltage                               | 5       | V           |
| $I_C$     | Collector Current-Continuous                       | 10      | A           |
| $I_B$     | Base Current-Continuous                            | 1       | A           |
| $P_C$     | Collector Power Dissipation<br>@ $T_C=25^{\circ}C$ | 100     | W           |
| $T_J$     | Junction Temperature                               | 150     | $^{\circ}C$ |
| $T_{stg}$ | Storage Temperature Range                          | -55~150 | $^{\circ}C$ |



**isc Silicon NPN Power Transistor****2SC3182****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  | $I_C=50\text{mA}; I_B=0$                                  | 140 |      |     | V             |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=7\text{A}; I_B=0.7\text{A}$                          |     |      | 2.0 | V             |
| $V_{BE(on)}$  | Base-Emitter On Voltage              | $I_C=5\text{A}; V_{CE}=5\text{V}$                         |     |      | 1.5 | V             |
| $I_{CBO}$     | Collector Cutoff Current             | $V_{CB}=140\text{V}; I_E=0$                               |     |      | 5   | $\mu\text{A}$ |
| $I_{EBO}$     | Emitter Cutoff Current               | $V_{EB}=5\text{V}; I_C=0$                                 |     |      | 5   | $\mu\text{A}$ |
| $h_{FE-1}$    | DC Current Gain                      | $I_C=1\text{A}; V_{CE}=5\text{V}$                         | 55  |      | 160 |               |
| $h_{FE-2}$    | DC Current Gain                      | $I_C=5\text{A}; V_{CE}=5\text{V}$                         | 35  |      |     |               |
| $C_{OB}$      | Output Capacitance                   | $I_E=0; V_{CB}=10\text{V}; f_{\text{test}}=1.0\text{MHz}$ |     | 220  |     | pF            |
| $f_T$         | Current-Gain—Bandwidth Product       | $I_C=1\text{A}; V_{CE}=5\text{V}$                         |     | 30   |     | MHz           |

◆  **$h_{FE-1}$  Classifications**

|        |        |
|--------|--------|
| R      | O      |
| 55-110 | 80-160 |