

isc Silicon NPN Power Transistor

2SD1037

**DESCRIPTION**

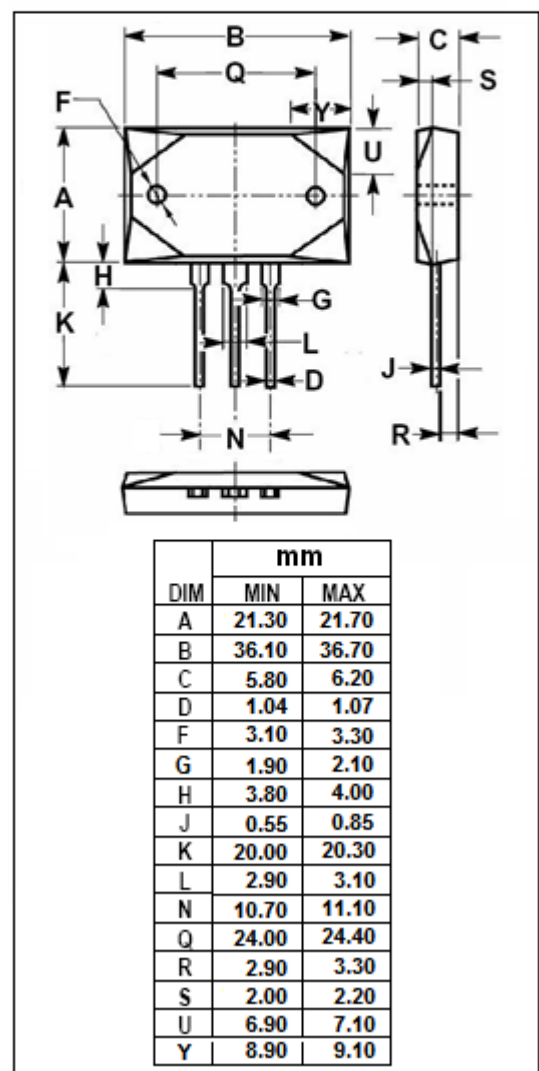
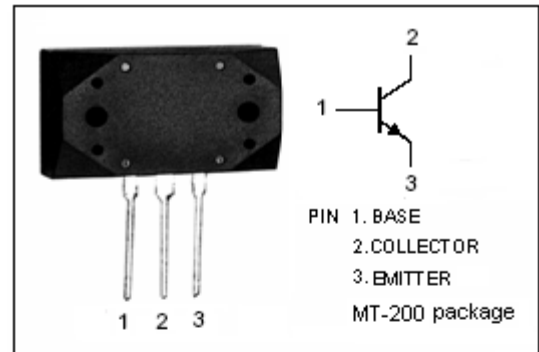
- High Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = 150V(\text{Min})$
- Good Linearity of  $h_{FE}$

**APPLICATIONS**

- Designed for audio and general purpose applications.

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

| SYMBOL    | PARAMETER   | VALUE   | UNIT             |
|-----------|---|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                                  | 150     | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                               | 120     | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                    | 6       | V                |
| $I_C$     | Collector Current-Continuous                            | 30      | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_C=25^\circ\text{C}$ | 180     | W                |
| $T_J$     | Junction Temperature                                    | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                               | -55~150 | $^\circ\text{C}$ |



**isc Silicon NPN Power Transistor****2SD1037****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  | $I_C=50\text{mA}; I_B=0$                                  | 120 |      |     | V             |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=10\text{A}; I_B=1\text{A}$                           |     |      | 0.5 | V             |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage      | $I_C=10\text{A}; I_B=1\text{A}$                           |     |      | 1.0 | V             |
| $I_{CBO}$     | Collector Cutoff Current             | $V_{CB}=80\text{V}; I_E=0$                                |     |      | 5   | $\mu\text{A}$ |
| $I_{EBO}$     | Emitter Cutoff Current               | $V_{EB}=6\text{V}; I_C=0$                                 |     |      | 5   | $\mu\text{A}$ |
| $h_{FE}$      | DC Current Gain                      | $I_C=10\text{A}; V_{CE}=4\text{V}$                        | 20  |      |     |               |
| $C_{OB}$      | Output Capacitance                   | $I_E=0; V_{CB}=10\text{V}; f_{\text{test}}=1.0\text{MHz}$ |     | 210  |     | pF            |
| $f_T$         | Current-Gain—Bandwidth Product       | $I_E=-2\text{A}; V_{CE}=12\text{V}$                       |     | 1.5  |     | MHz           |