

isc Silicon NPN Power Transistor

BDY79

DESCRIPTION

- Continuous Collector Current- $I_C = 4A$
- Collector Power Dissipation-
: $P_C = 25W @ T_C = 25^\circ C$

APPLICATIONS

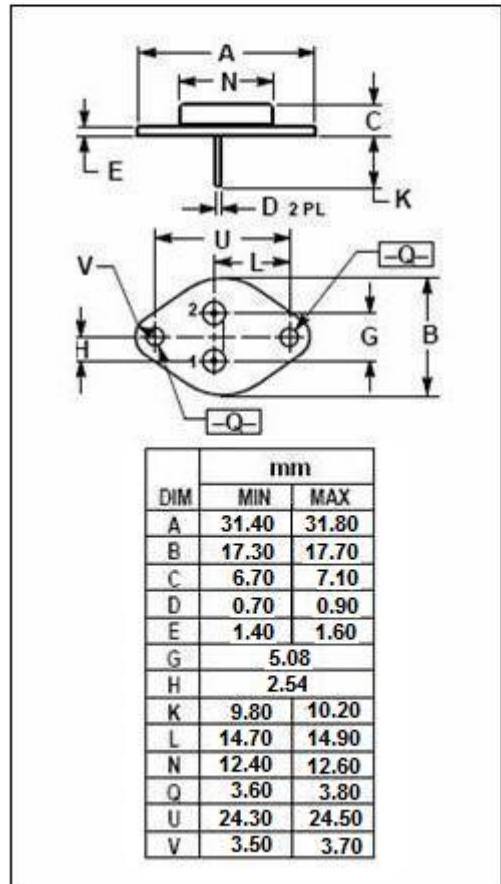
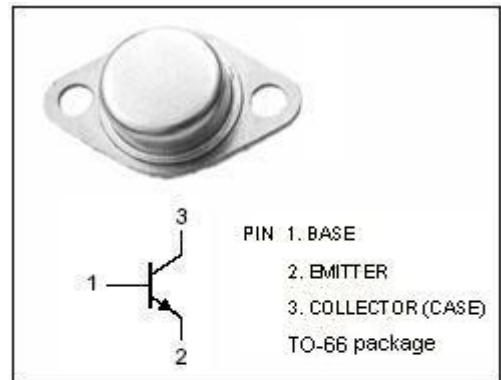
- Designed for general purpose switching and amplifier applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|---------|------------|
| V_{CBO} | Collector-Base Voltage | 150 | V |
| V_{CEX} | Collector-Emitter Voltage $V_{BE} = -1.5V$ | 150 | V |
| V_{CEO} | Collector-Emitter Voltage | 120 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 4 | A |
| I_B | Base Current-Continuous | 2 | A |
| P_C | Collector Power Dissipation @ $T_C = 25^\circ C$ | 25 | W |
| T_J | Junction Temperature | 200 | $^\circ C$ |
| T_{stg} | Storage Temperature | -65~200 | $^\circ C$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|--------------------------------------|-----|--------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 7.0 | $^\circ C/W$ |



isc Silicon NPN Power Transistor**BDY79****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|-----------------|--------------------------------------|---|-----|------------|------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C=100\text{mA}; I_B=0$ | 120 | | V |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C=1\text{mA}; I_E=0$ | 150 | | V |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C=0.5\text{A}; I_B=50\text{mA}$ | | 1.0 | V |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C=3\text{A}; I_B=1\text{A}$ | | 3.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C=0.5\text{A}; V_{CE}=4\text{V}$ | | 2.0 | V |
| I_{CEX} | Collector Cutoff Current | $V_{CE}=150\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=150\text{V}; V_{BE}=-1.5\text{V}, T_C=150^\circ\text{C}$ | | 1.0 5.0 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=7\text{V}; I_C=0$ | | 1.0 | mA |
| h_{FE-1} | DC Current Gain | $I_C=0.5\text{A}; V_{CE}=4\text{V}$ | 25 | 100 | |
| h_{FE-2} | DC Current Gain | $I_C=3\text{A}; V_{CE}=4\text{V}$ | 5 | | |
| f_T | Current Gain-Bandwidth Product | $I_C=0.2\text{A}; V_{CE}=10\text{V}$ | 8 | | MHz |