

isc Silicon NPN Power Transistor

MJH16006

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V(\text{Min})$
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

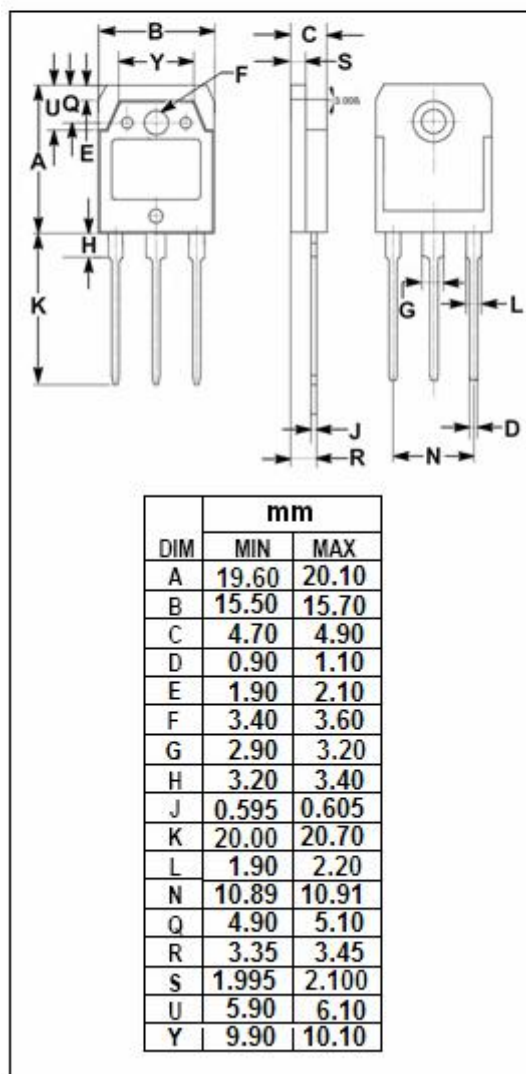
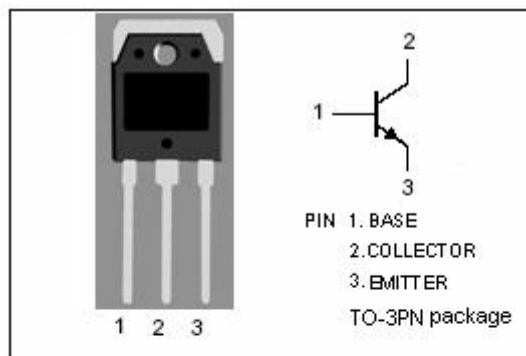
- Designed for high-voltage ,high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line operated switch-mode applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|----------------|---|---------|--------------------|
| V_{CEV} | Collector-Emitter Voltage | 850 | V |
| $V_{CEO(SUS)}$ | Collector-Emitter Voltage | 450 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current-Continuous | 8 | A |
| I_{CM} | Collector Current-Peak | 16 | A |
| I_B | Base Current-Continuous | 6 | A |
| I_{BM} | Base Current-Peak | 12 | A |
| P_C | Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$ | 125 | W |
| T_J | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -65~150 | $^{\circ}\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|-------------------------------------|-----|----------------------|
| $R_{th\ j-c}$ | Thermal Resistance,Junction to Case | 1.0 | $^{\circ}\text{C/W}$ |



isc Silicon NPN Power Transistor**MJH16006****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-----------------|--------------------------------------|--|-----|------|-------------|------|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C=30\text{mA}$; $I_B=0$ | 450 | | | V |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C= 3\text{A}$; $I_B= 0.4\text{A}$ | | | 2.5 | V |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C= 5\text{A}$; $I_B= 0.66\text{A}$ $I_C= 5\text{A}$; $I_B= 0.66\text{A}$, $T_C=100^{\circ}\text{C}$ | | | 3.0 3.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C= 5\text{A}$; $I_B= 0.66\text{A}$ $I_C= 5\text{A}$; $I_B= 0.66\text{A}$, $T_C=100^{\circ}\text{C}$ | | | 1.5 1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=850\text{V}$; $I_E=0$ $V_{CB}=850\text{V}$; $I_E=0$; $T_C=100^{\circ}\text{C}$ | | | 0.25 1.5 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}= 6\text{V}$; $I_C=0$ | | | 1.0 | mA |
| h_{FE} | DC Current Gain | $I_C= 8\text{A}$; $V_{CE}= 5\text{V}$ | 5 | | | |

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