

isc Silicon NPN Power Transistor

3DF1C

DESCRIPTION

- With TO-66 packaging
- Large collector current
- Low collector saturation voltage
- High power dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

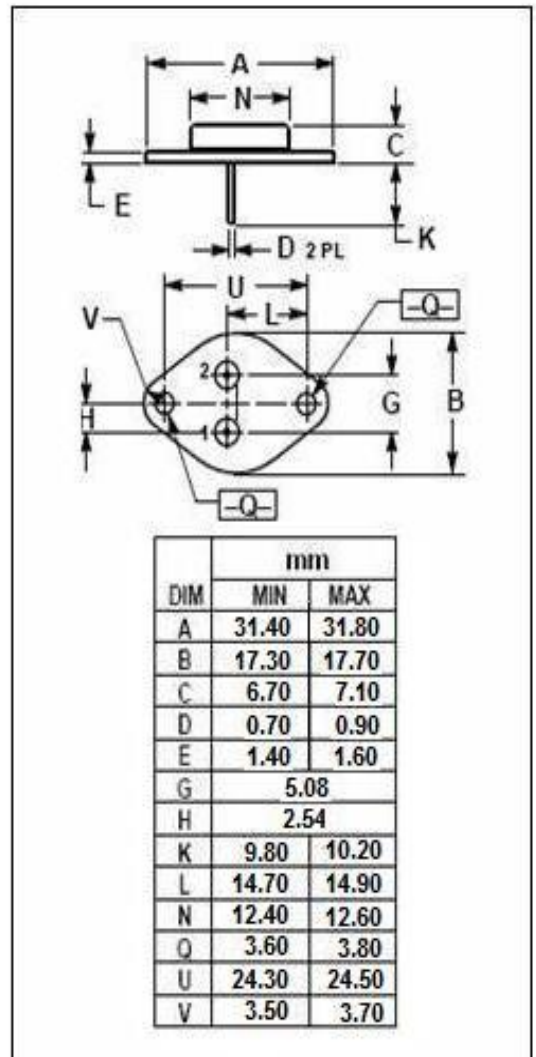
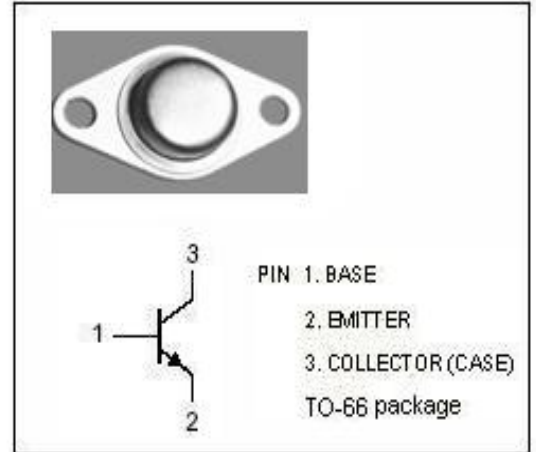
- Designed for use in DC-DC converter
- Driver of solenoid or motor

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--|---------|------|
| V _{CBO} | Collector-Base Voltage | 200 | V |
| V _{CEO} | Collector-Emitter Voltage | 150 | V |
| V _{EBO} | Emitter-Base Voltage | 6 | V |
| I _C | Collector Current-Continuous | 1.5 | A |
| P _D | Total Power Dissipation@T _C =75°C | 10 | W |
| T _J | Max.Junction Temperature | 175 | °C |
| T _{stg} | Storage Temperature | -55~175 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|-------------------------------------|-----|------|
| R _{th j-c} | Thermal Resistance,Junction to Case | 10 | °C/W |



isc Silicon NPN Power Transistor**3DF1C****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|--------------------------------------|---------------------------------------|-----|-----|------|
| BV_{CBO} | Collector-Base Sustaining Voltage | $I_C=1\text{mA}; I_E=0$ | 200 | | V |
| BV_{CEO} | Collector-Emitter Sustaining Voltage | $I_C=1\text{mA}; I_B=0$ | 150 | | V |
| BV_{EBO} | Emitter-Base Sustaining Voltage | $I_E=0.5\text{mA}; I_C=0$ | 6 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=0.75\text{A}; I_B=0.075\text{A}$ | | 0.8 | V |
| I_{CEO} | Collector Cutoff Current | $V_{CE}=100\text{V}; I_B=0$ | | 0.2 | mA |
| h_{FE} | DC Current Gain | $I_C=0.75\text{A}; V_{CE}=10\text{V}$ | 15 | | |

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