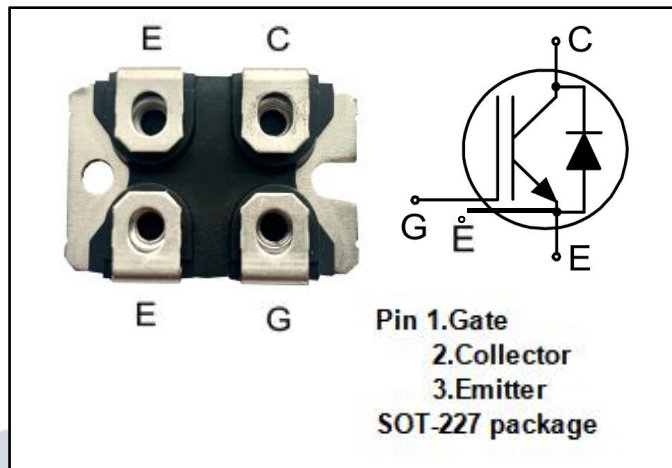


DESCRIPTION

- Short Circuit Capability
- High Current Handling Capability

APPLICATIONS

- Power Inverters
- UPS
- Motor Drives
- Welding Machines
- SMPS
- High Frequency Power Inverters



ABSOLUTE MAXIMUM RATINGS

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---------------------------------------------------------------|----------|------------------|
| V_{CES} | Collector-Emitter Voltage | 650 | V |
| V_{GES} | Gate-Emitter Voltage | ± 20 | V |
| I_c | Collector Current @ $T_c=25^\circ\text{C}$ | 200 | A |
| | Collector Current @ $T_c=110^\circ\text{C}$ | 110 | A |
| I_{CM} | Pulsed Collector Current @ $T_c=25^\circ\text{C}, 1\text{ms}$ | 670 | A |
| I_F | Diode Forward Current @ $T_c=110^\circ\text{C}$ | 70 | A |
| P_D | Power Dissipation @ $T_c=25^\circ\text{C}$ | 750 | W |
| T_j | Operating Junction Temperature | -55~175 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~175 | $^\circ\text{C}$ |



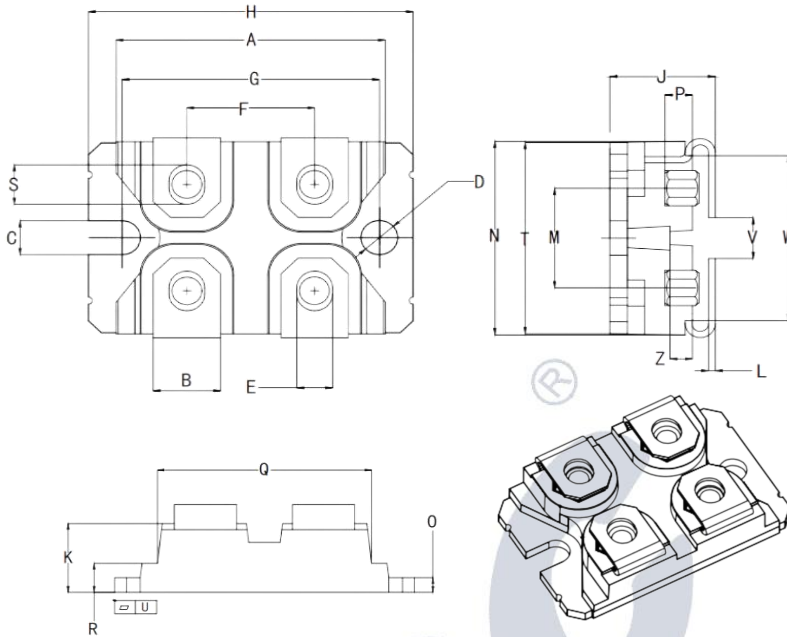
THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--------------------------------------------|------|------|
| R _{th j-c} | Thermal Resistance, Junction to Case IGBT | 0.2 | °C/W |
| R _{th j-c} | Thermal Resistance, Junction to Case diode | 0.42 | °C/W |

STATIC CHARACTERISTICS (T_J = 25 °C unless otherwise specified)

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYPE | MAX | UNIT |
|----------------------|--------------------------------------|---------------------------------------------------------------------|-----|------|------|------|
| V _{CES} | Collector-Emitter Breakdown Voltage | V _{GE} =0, I _C = 0.25mA | 650 | -- | -- | V |
| V _{GE(th)} | Gate-Emitter Threshold Voltage | V _{GE} = V _{CE} , I _C =4mA | 4.0 | -- | 6.5 | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 110A, V _{CE} = 15V, T _C =25°C | -- | -- | 2.35 | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 110A, V _{CE} = 15V, T _C =150°C | -- | 2.50 | -- | V |
| I _{CES} | Zero Gate Voltage Collector Current | V _{CE} = 650V, V _{GE} =0 | -- | -- | 50 | uA |
| I _{GES} | Gate-Emitter Leakage Current | V _{GE} = ±20V, V _{CE} =0 | -- | -- | ±100 | nA |
| V _F | Diode Forward Voltage | I _F = 100A, T _J =25°C | -- | -- | 2.3 | V |
| | | I _F = 100A, T _J =150°C | -- | 1.8 | -- | V |

PACKAGE OUTLINE
Dimensions in mm



| DIM | Millimeter | |
|-----|------------|-------|
| | min | max |
| A | 31.40 | 31.60 |
| B | 7.70 | 8.10 |
| C | 4.20 | 4.40 |
| D | 4.20 | 4.40 |
| E | 4.10 | 4.40 |
| F | 14.90 | 15.10 |
| G | 30.10 | 30.30 |
| H | 38.00 | 38.40 |
| J | 12.00 | 12.60 |
| K | 9.35 | 9.65 |
| L | 0.74 | 0.84 |
| M | 12.30 | 12.70 |
| N | 24.40 | 25.00 |
| O | 1.90 | 2.10 |
| P | 2.92 | 3.32 |
| Q | 26.60 | 27.00 |
| R | 3.80 | 4.20 |
| S | 4.95 | 5.45 |
| T | 23.70 | 24.30 |
| U | 0 | 0.10 |
| V | 3.50 | 5.50 |
| W | 20.15 | 20.45 |
| Z | 2.50 | 2.70 |

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