

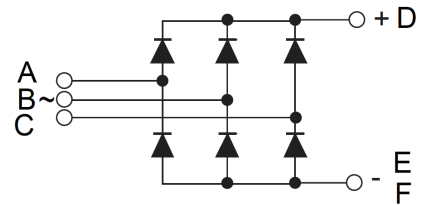
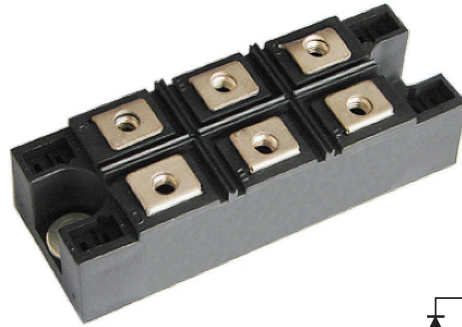
160MT80K thru 160MT160K

Feature

- Package with screw terminals
- Isolation voltage 4000V~
- Blocking voltage up to 1800V
- Low forward voltage drop

Application

- Supplies for DC power equipment
- Input rectifier for PWM inverter
- Battery DC power supplies
- Field supply for DC motors



Maximum value

| Symbol | Parameter | Rating | | | | | Unit |
|--------|-------------------------------------|---------|----------|----------|----------|----------|------|
| | | 160MT80 | 160MT120 | 160MT140 | 160MT160 | 160MT180 | |
| VRRM | Reverse peak repetitive voltage | 800 | 1200 | 1400 | 1600 | 1800 | V |
| VRSM | Reverse peak non-repetitive voltage | 900 | 1300 | 1500 | 1700 | 1900 | V |

| Symbol | Test Conditions | Maximum Ratings | Unit | |
|------------------------------------|---|---|------------------------------|----|
| I_{dAV} | $T_C=110^{\circ}C$, module | 161 | A | |
| I_{dAV} | $T_A=45^{\circ}C$ ($R_{thCA}=0.6K/W$), module | 201 | | |
| I_{FSM} | $T_{VJ}=45^{\circ}C$ $V_R=0$ | $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 1340 1500 | |
| | $T_{VJ}=T_{VJM}$ $V_R=0$ | $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 1200 1260 | |
| I^2t | $T_{VJ}=45^{\circ}C$ $V_R=0$ | $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 10200 9300 | |
| | $T_{VJ}=T_{VJM}$ $V_R=0$ | $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine | 7900 6600 | |
| T_{VJ} T_{VJM} T_{stg} | | -40...+150 150 -40...+150 | $^{\circ}C$ | |
| V_{ISOL} | 50/60Hz, RMS $I_{ISOL} \leq 1mA$ | $t=1min$ $t=1s$ | 2500 4000 | V~ |
| M_d | Mounting torque (M5) Terminal connection torque (M5) | | $5 \pm 15\%$ $5 \pm 15\%$ | Nm |
| Weight | typ. | | 176 | g |

160MT80K thru 160MT160K

| Symbol | Test Conditions | Characteristic Values | Unit |
|------------|--|------------------------|-----------|
| I_R | $V_R=V_{RRM}; T_{VJ}=25^{\circ}C$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$ | ≤ 0.2 ≤ 5 | mA |
| V_F | $I_F=200A; T_{VJ}=25^{\circ}C$ | ≤ 1.49 | V |
| V_{TO} | For power-loss calculations only | 0.8 | V |
| r_T | $T_{VJ}=T_{VJM}$ | 5 | $m\Omega$ |
| R_{thJC} | per diode per module | 0.73 0.12 | K/W |
| R_{thJK} | per diode per module | 0.90 0.17 | K/W |
| d_s | Creeping distance on surface | 10 | mm |
| d_A | Creepage distance in air | 9.4 | mm |
| a | Max. allowable acceleration | 50 | m/s^2 |

Performance Curves

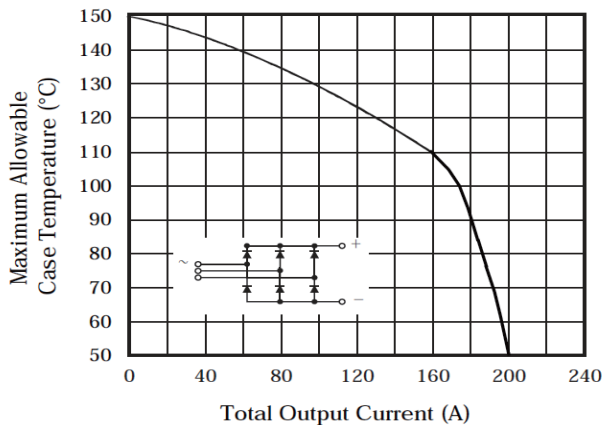


Fig. 1 - Current Ratings Characteristic

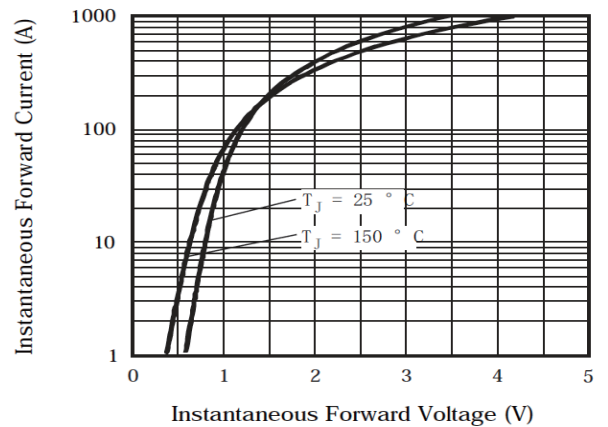


Fig. 2 - Forward Voltage Drop Characteristics

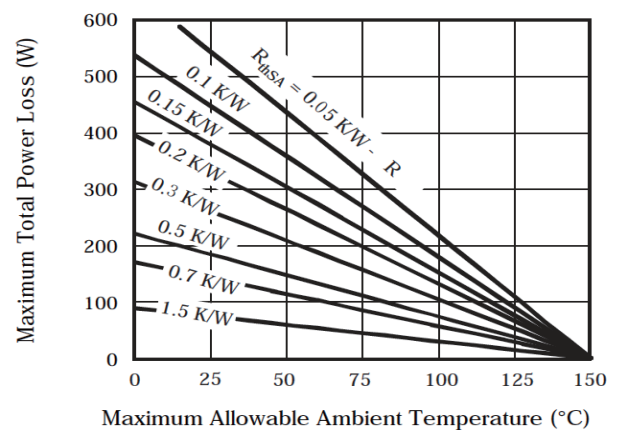
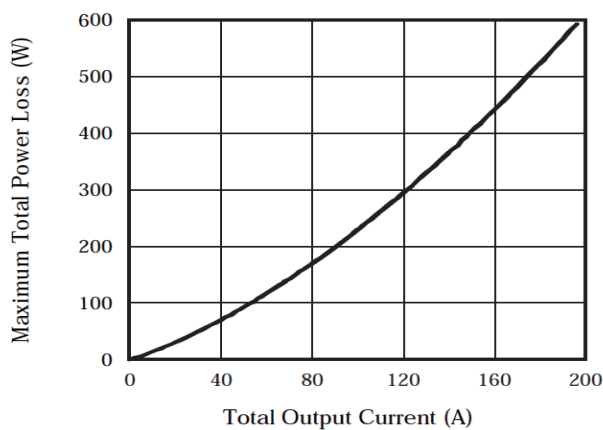


Fig. 3 - Total Power Loss Characteristics

160MT80K thru 160MT160K

Performance Curves

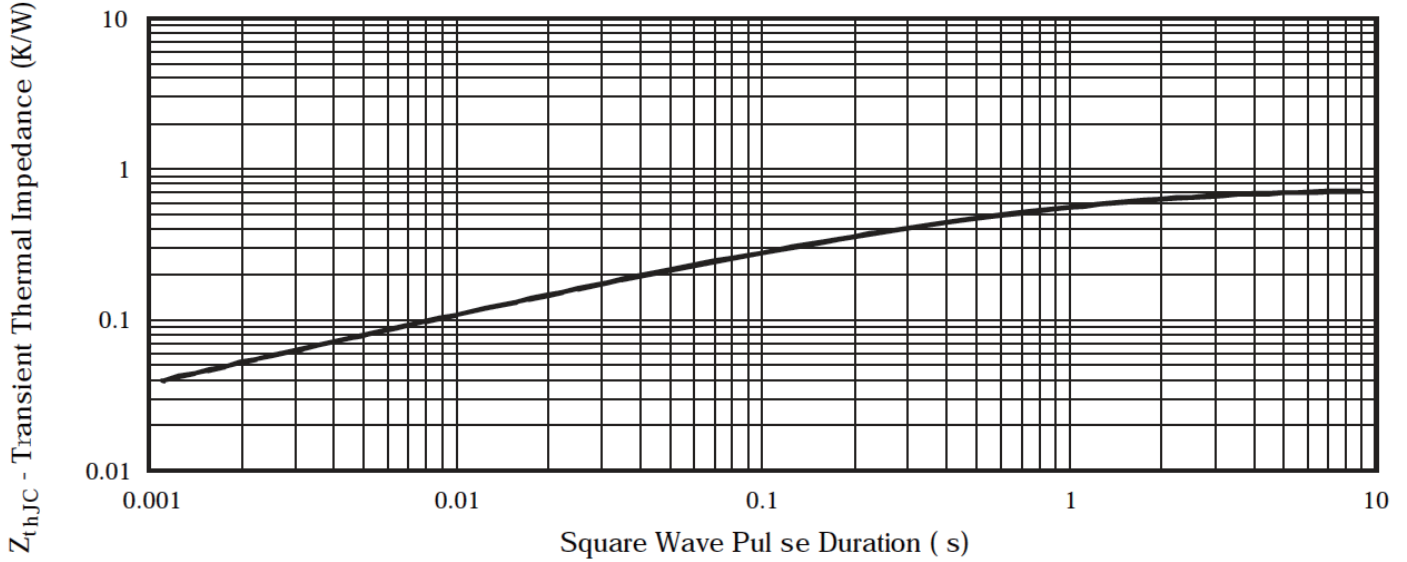


Fig.4 - Thermal Impedance Z_{thJC} Characteristic

Dimensions in mm (1mm=0.0394")

Screws M5 x 0.8 length 10

