

MRS600.22

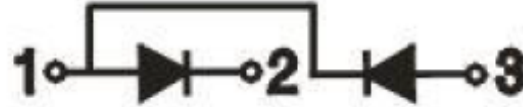
Diodes module

Features:

- Isolated mounting base 3000V~
- Pressure contact technology with increased power cycling capability
- Space and weight savings
- UL recognized, file no. E312789

Typical applications:

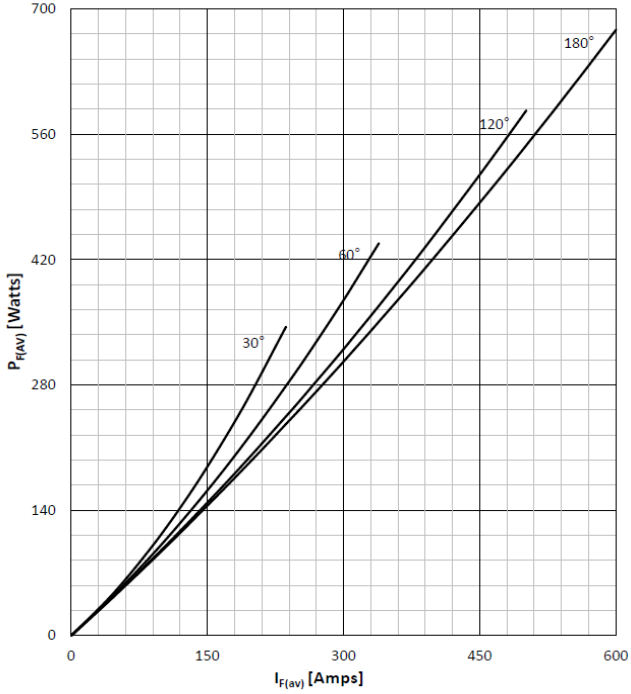
- AC/DC motor drives
- Various rectifiers
- DC supply for PWM inverter



| Symbol | Characteristics | Test Conditions | Value | | | Unit |
|------------------------|---|---|-------|------|-------|-----------------------------|
| | | | Min | Typ | Max | |
| $V_{RSM/DSM}$ | Non-repetitive reverse/forward blocking voltage | $T_j = 150^{\circ}\text{C}$ | | | 2300 | V |
| $V_{RRM/DRM}$ | Repetitive reverse/forward blocking voltage | $T_j = 150^{\circ}\text{C}$ | | | 2200 | V |
| $I_{F(AV)}$ | Forward average current | 180° half sine wave 50Hz $T_c = 106^{\circ}\text{C}$ | | | 600 | A |
| $I_{F(RMS)}$ | Forward square root current | 180° half sine wave 50Hz $T_c = 106^{\circ}\text{C}$ | | | 942 | A |
| I_{RRM} I_{DRM} | Repetitive peak current | at V_{DRM}/V_{RRM} $T_j = 150^{\circ}\text{C}$ | | | 40 | mA |
| I_{FSM} | Forward surge current | 10ms half sine wave without reverse voltage $T_j = 150^{\circ}\text{C}$ | | | 29 | kA |
| $I^2 t$ | $I^2 t$ for fusing coordination | | | | 4205 | kA^2s |
| V_{FO} | Threshold voltage | $T_j = 150^{\circ}\text{C}$ | | | 0.914 | V |
| r_F | Forward slope resistance | $T_j = 150^{\circ}\text{C}$ | | | 0.145 | $\text{m}\Omega$ |
| V_{FM} | Peak forward voltage | $T = 25^{\circ}\text{C}$; $I_F = 1500\text{A}$ | | | 1.18 | V |
| $R_{th(j-c)}$ | Thermal resistance junction to case | Single side cooled per chip | | | 0.065 | $^{\circ}\text{C}/\text{W}$ |
| $R_{th(c-s)}$ | Thermal resistance case to sink | Single side cooled per chip | | | 0.020 | $^{\circ}\text{C}/\text{W}$ |
| V_{ISO} | Isolation voltage | 50Hz, RMS, $t = 1\text{min}$, $I_{ISO} : 1\text{mA (MAX)}$ | 3000 | | | V |
| F_M | Mounting torque - copper plate (M6) | | | 6.0 | | N·m |
| | Mounting torque - terminal (M10) | | | 12.0 | | N·m |
| T_{stg} | Storage Temperature | | -40 | | 150 | $^{\circ}\text{C}$ |
| T_j | Operating Temperature | | -40 | | 150 | $^{\circ}\text{C}$ |
| W_t | Weight | | | 1480 | | g |
| Outline | M90 | | | | | |

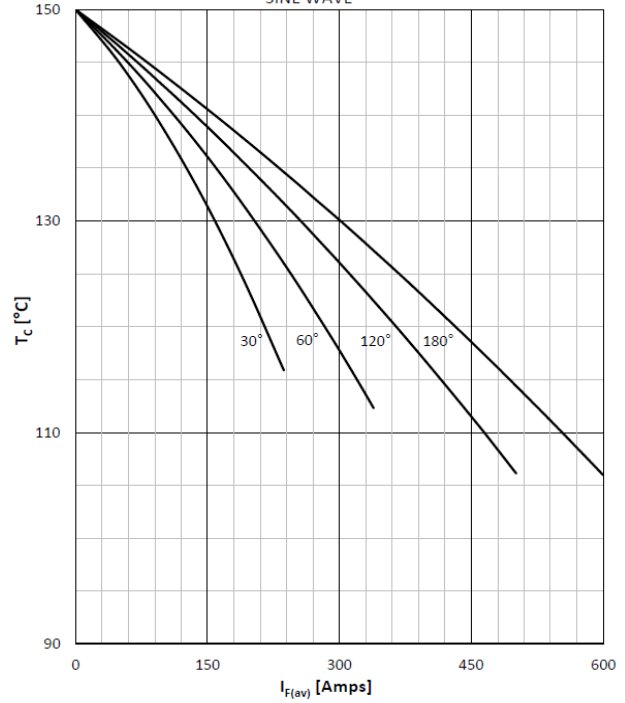
DISSIPATION CHARACTERISTICS

SINE WAVE



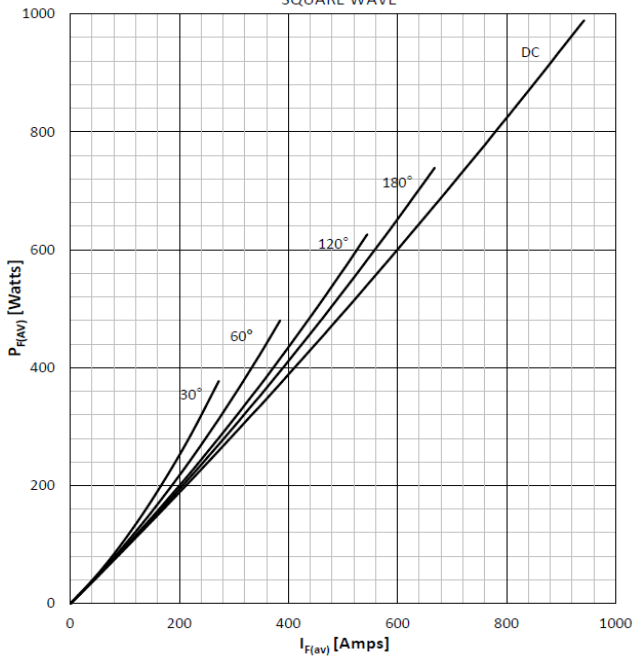
FORWARD CURRENT DERATING CURVE

SINE WAVE



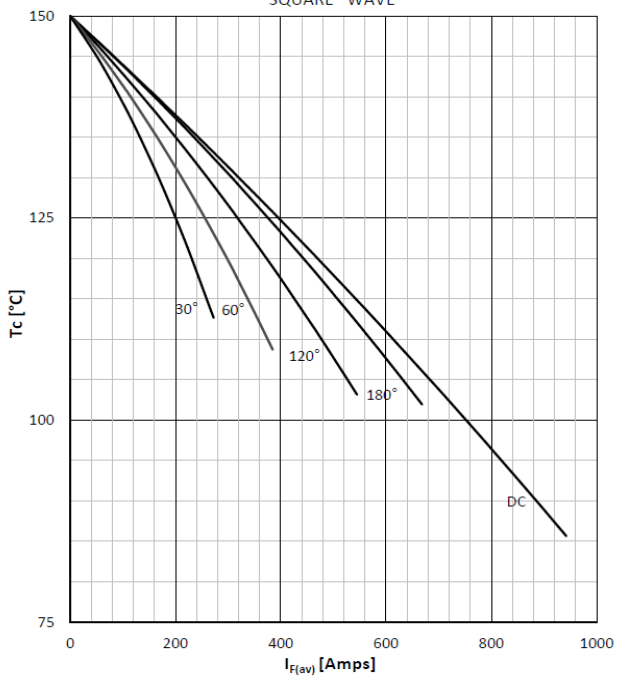
DISSIPATION CHARACTERISTICS

SQUARE WAVE

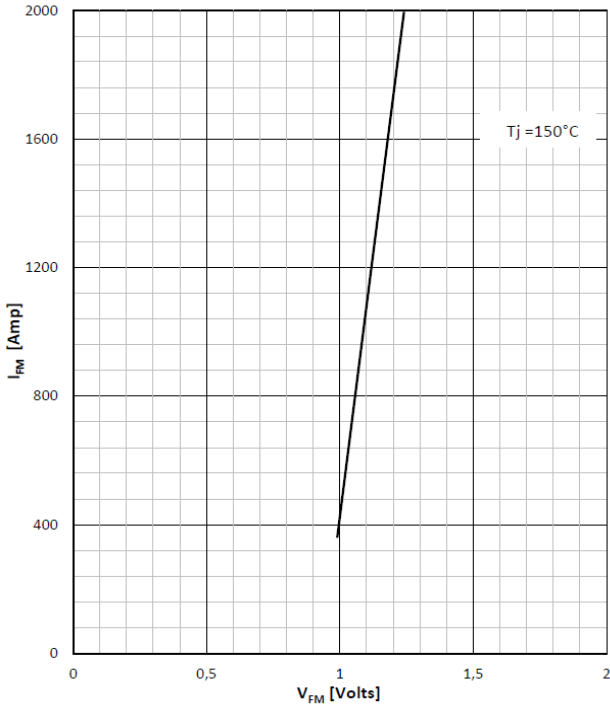


FORWARD CURRENT DERATING CURVE

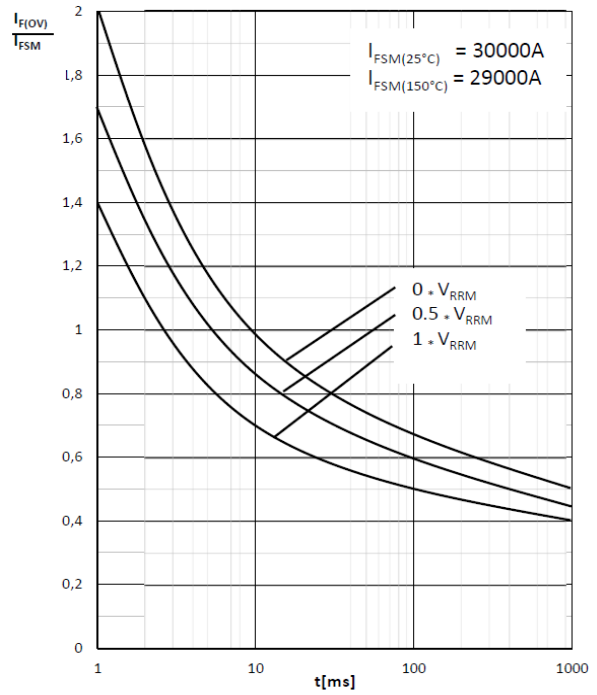
SQUARE WAVE



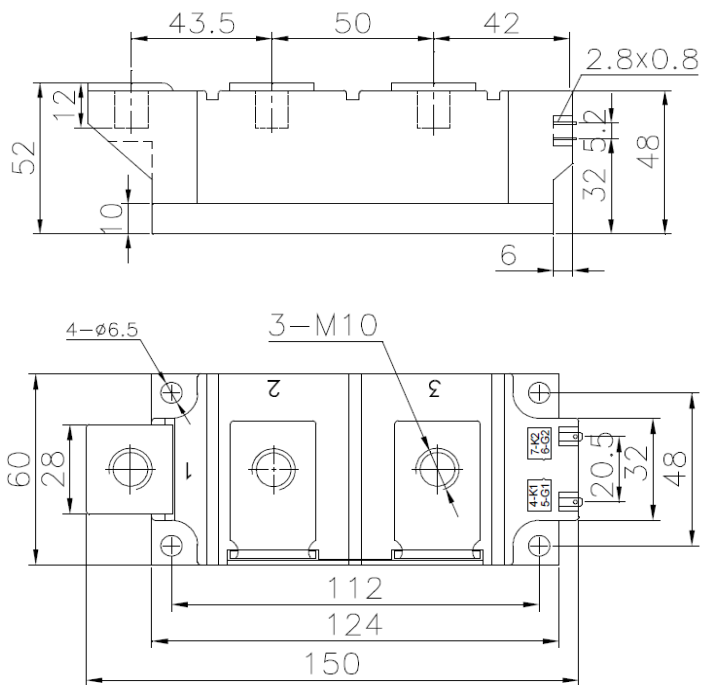
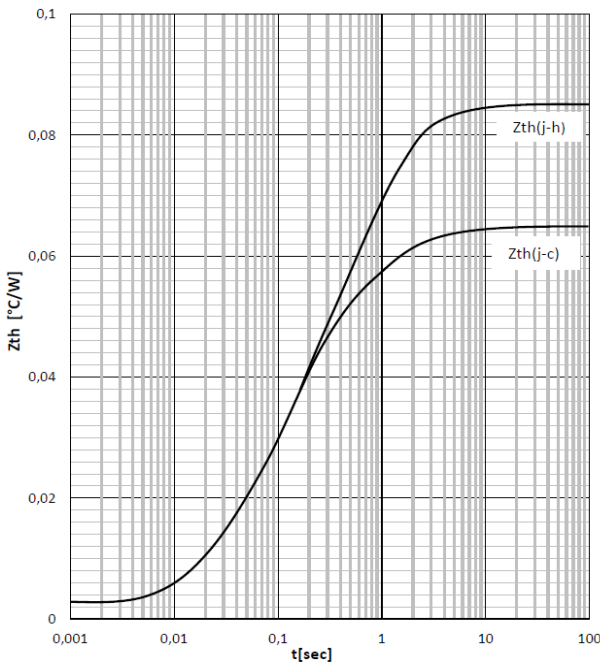
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



(dimensions in mm)

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