



Rectifier Diode Modules

V_{RRM} 800 to 1800V

I_{FAV} 800 A

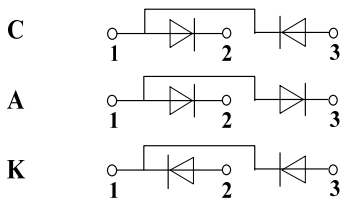
Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Features

- Blocking voltage: 800 to 1800V
- Heat transfer through aluminum oxide ceramic isolated metal baseplate

Circuit



Module Type

| TYPE | | | V _{RRM} | V _{RSM} |
|------------|------------|------------|------------------|------------------|
| MD800C08D6 | MD800A08D6 | MD800K08D6 | 800V | 900V |
| MD800C12D6 | MD800A12D6 | MD800K12D6 | 1200V | 1300V |
| MD800C16D6 | MD800A16D6 | MD800K16D6 | 1600V | 1700V |
| MD800C18D6 | MD800A18D6 | MD800K18D6 | 1800V | 1900V |

Maximum Ratings

| Symbol | Conditions | Values | Units |
|-------------------|--|------------|------------------|
| I _{FAV} | Single phase ,half wave 180° conduction T _c =85°C | 800 | A |
| I _{FSM} | t=10mS T _{vj} =45°C | 30000 | A |
| i ² t | t=10mS T _{vj} =45°C | 4500000 | A ² s |
| V _{isol} | a.c.50HZ;r.m.s.;1min | 3000 | V |
| T _{vj} | | -40 to 150 | °C |
| T _{stg} | | -40 to 125 | °C |
| M _t | To terminals(M12) | 9±15% | Nm |
| M _s | To heatsink(M8) | 5±15% | Nm |
| Weight | Module (Approximately) | 3500 | g |

Thermal Characteristics

| Symbol | Conditions | Values | Units |
|----------------------|------------|--------|-------|
| R _{th(j-c)} | Per diode | 0.03 | °C/W |
| R _{th(c-s)} | Module | 0.01 | °C/W |

Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|-----------------|---|--------|------|------|-------|
| | | Min. | Typ. | Max. | |
| V _{FM} | T=25°C I _F =2400A | — | — | 1.8 | V |
| I _{RD} | T _{vj} =T _{vjM} V _{RD} =V _{RRM} | — | — | 35 | mA |

Performance Curves

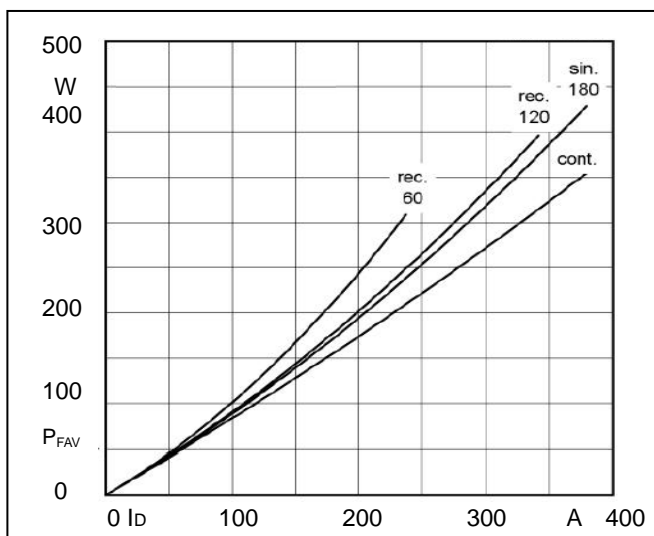


Fig1. Power dissipation

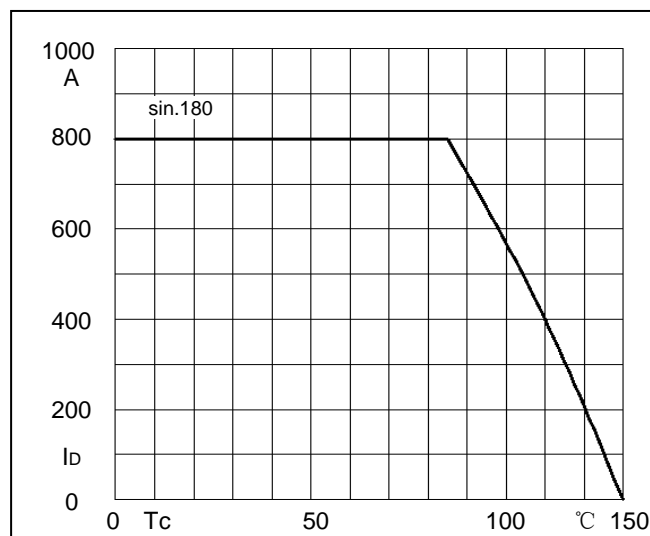


Fig2. Forward Current Derating Curve

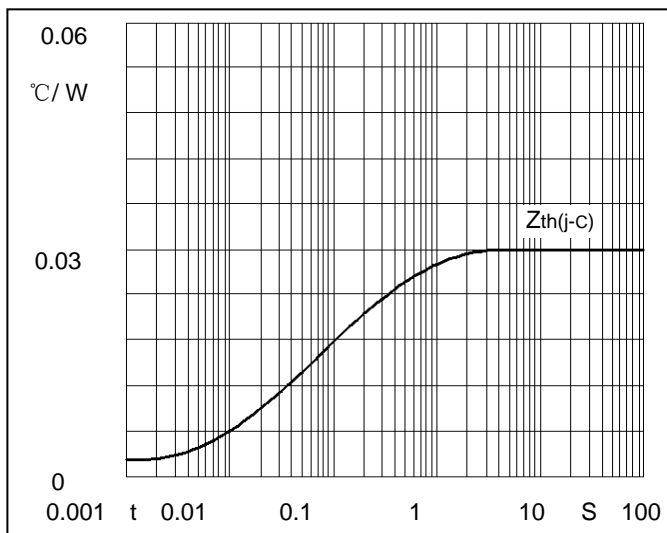


Fig3. Transient thermal impedance

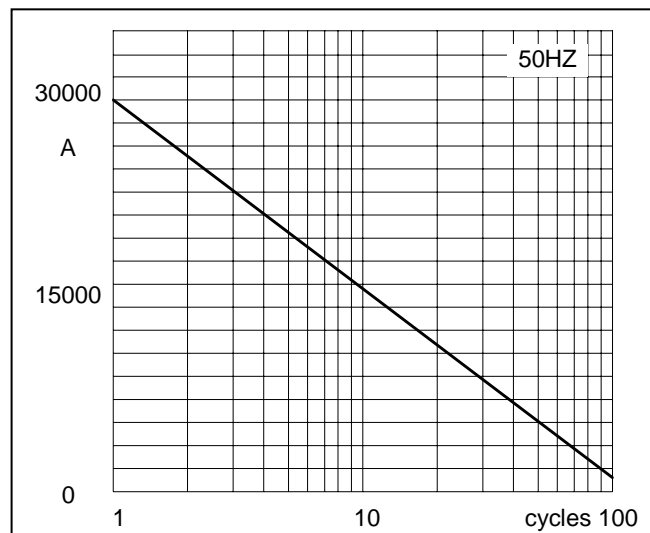


Fig4. Max Non-Repetitive Forward Surge Current

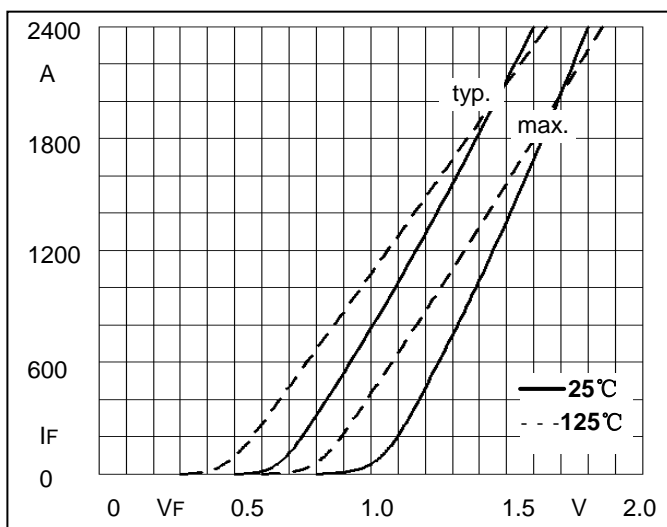


Fig5. Forward Characteristics

