micross components

# MIMMD110A180DK

**1800V 110A Rectifier Diode Module**
**RoHS Compliant**

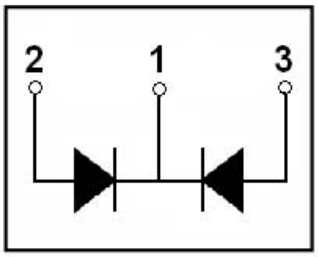
## PRODUCT FEATURES

- Glass Passivated Chip
- Aluminum Oxide Ceramic Isolated Metal Baseplate
- Low Reverse Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Inductance Package



## APPLICATIONS

- Field Supply For DC Motors
- Line Rectifiers For Transistorized AC Motor Controllers
- Non-controllable Rectifiers For AC/DC Converter




## ABSOLUTE MAXIMUM RATINGS

$T_C$=25°C unless otherwise specified

| Symbol | Parameter | Test Conditions | Max. | Unit |
|---|---|---|---|---|
| $V_{RRM}$ | Repetitive Reverse Voltage | | 1800 | V |
| $I_{F(AV)}$ | Average Forward Current | $T_C$=85°C Rectangular, d=0.5 | 110 | A |
| $I_{F(RMS)}$ | RMS Forward Current | $T_C$=85°C Rectangular, d=0.5 | 160 | A |
| $I_{FSM}$ | Non-Repetitive Surge Forward Current | $T_J$=45°C, t=10ms, 50Hz, Sine | 2500 | A |
| | | $T_J$=45°C,t=8.3ms, 60Hz, Sine | 2700 | A |
| $I^2t$ | $I^2t$ (For Fusing) | $T_J$=45°C, t=10ms, 50Hz, Sine | 31250 | $A^2s$ |
| | | $T_J$=45°C,t=8.3ms, 60Hz, Sine | 36450 | $A^2s$ |
| $P_D$ | Power Dissipation | | 416 | W |
| $T_J$ | Junction Temperature | | -40 to +150 | °C |
| $T_{STG}$ | Storage Temperature Range | | -40 to +125 | °C |
| $V_{isol}$ | Insulation Test Voltage | AC, 50Hz, t=1min | 3000 | V |
| Weight | | | 101 | g |

## ELECTRICAL AND THERMAL CHARACTERISTICS

$T_C$=25°C unless otherwise specified

| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| $I_{RM}$ | Reverse Leakage Current | $V_R$=1600V | -- | -- | 200 | μA |
| | | $V_R$=1600V, $T_J$=125°C | -- | -- | 5 | mA |
| $V_F$ | Forward Voltage | $I_F$=200A | -- | 1.3 | 1.5 | V |
| | | $I_F$=200A, $T_J$=125°C | -- | 1.25 | -- | V |
| $R_{\theta JC}$ | Thermal Resistance | Junction-to-Case | -- | -- | 0.30 | °C /W |

## MECHANICAL CHARACTERISTICS

| Symbol | Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Torque | Module-to-Sink | Recommended（M6） | 3 | | 5 | N· m |
| Torque | Module Electrodes | Recommended（M5） | 2.5 | | 5 | N· m |

## DA Package Outline (Dimensions in mm)

