



Micro Commercial Components
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MD70A08D1
MD70A12D1
MD70A16D1
MD70A18D1

Features

- Lead Free Finish/RoHS Compliant (NOTE 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Blocking Voltage: 800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

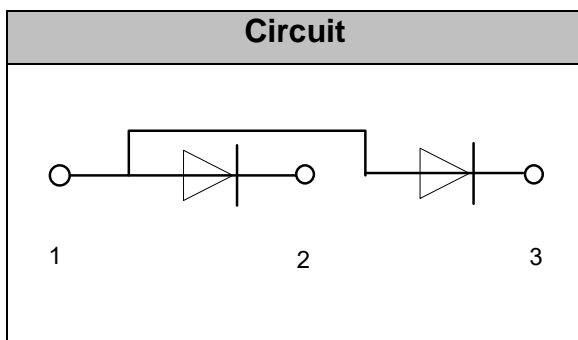
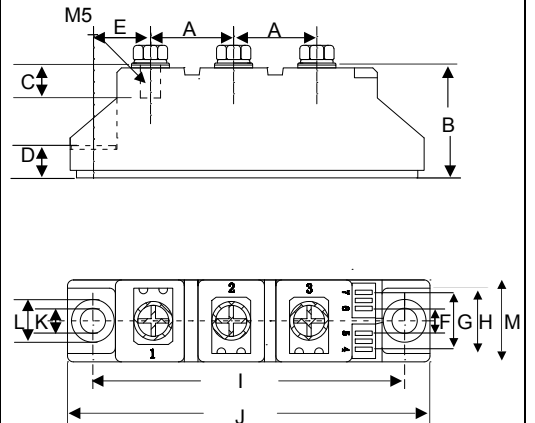
Applications

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



70 Amp
GLASS PASSIVATED
RECTIFIER DIODE
MODULES
800~1800 Volts

D1



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | .776 | .799 | 19.70 | 20.30 | |
| B | 1.169 | 1.193 | 29.70 | 30.30 | |
| C | .343 | .366 | 8.70 | 9.30 | |
| D | .323 | .346 | 8.20 | 8.80 | |
| E | .602 | .622 | 15.30 | 15.80 | |
| F | .224 | .248 | 5.70 | 6.30 | |
| G | .539 | .563 | 13.70 | 14.30 | |
| H | .657 | .681 | 16.70 | 17.30 | |
| I | 3.138 | 3.161 | 79.70 | 80.30 | |
| J | 3.650 | 3.673 | 92.70 | 93.30 | |
| K | | .256 | | 6.50 | ∅ |
| L | .421 | .445 | 10.70 | 11.30 | |
| M | .815 | .839 | 20.70 | 21.30 | |

Module Type

| TYPE | VRRM | VRSM |
|-----------|-------|-------|
| MD70A08D1 | 800V | 900V |
| MD70A12D1 | 1200V | 1300V |
| MD70A16D1 | 1600V | 1700V |
| MD70A18D1 | 1800V | 1900V |

Maximum Ratings

| Symbol | Conditions | Values | Units |
|-------------------|--|------------|------------------|
| IFAV | Single phase ,half wave 180° conduction Tc=102°C | 70 | A |
| IFSM | t=10mS Tvj =45°C | 1400 | A |
| i ² t | t=10mS Tvj =45°C | 9800 | 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 |
| Mt | T terminals(M5) | 3±15% | Nm |
| Ms | T heatsink(M6) | 5±15% | Nm |
| Weight | Module (Approximately) | 100 | g |

Thermal Characteristics

| Symbol | Conditions | Values | Units |
|----------------------|------------|--------|-------|
| R _{th(j-c)} | Per diode | 0.51 | °C/W |
| R _{th(c-s)} | Module | 0.1 | °C/W |

Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|-----------------|--|--------|------|------|-------|
| | | Min. | Typ. | Max. | |
| V _{FM} | T=25°C I _F =200A | — | 1.20 | 1.30 | V |
| I _{RD} | T _{vj} =150°C V _{RD} =VRRM | — | — | 5 | m |

Performance Curves

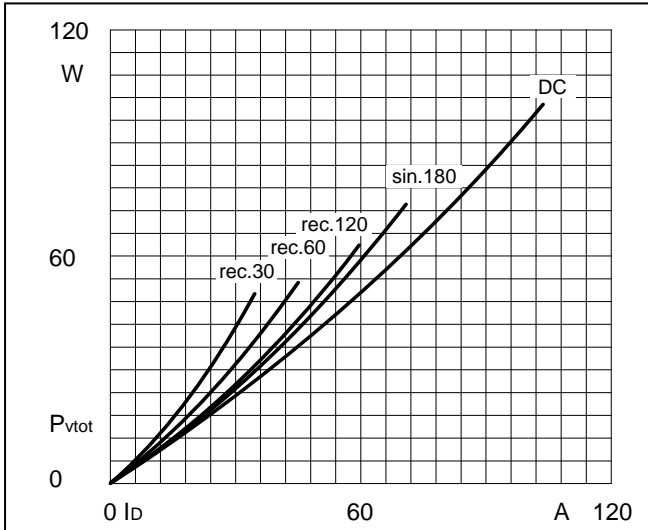


Fig1. Power dissipation

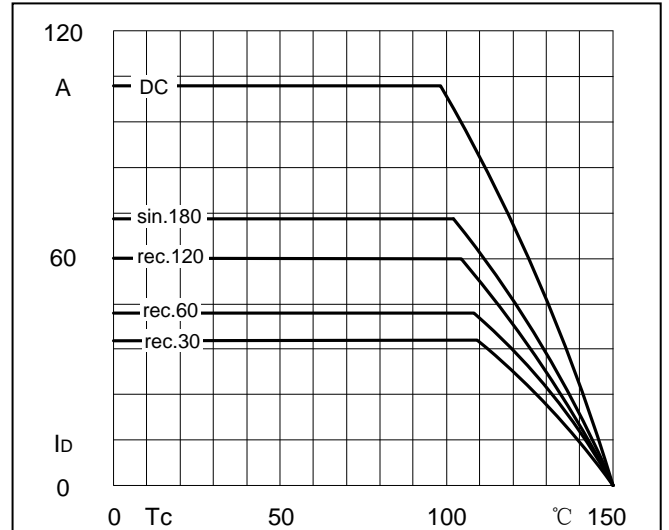


Fig2. Forward Current Derating Curve

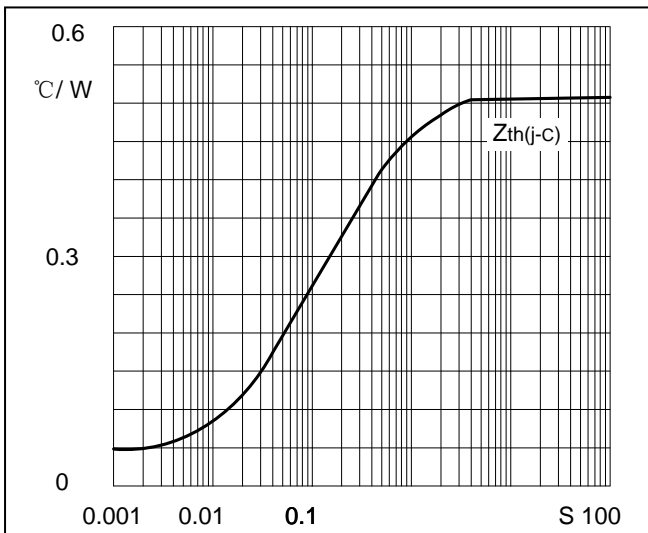


Fig3. Transient thermal impedance

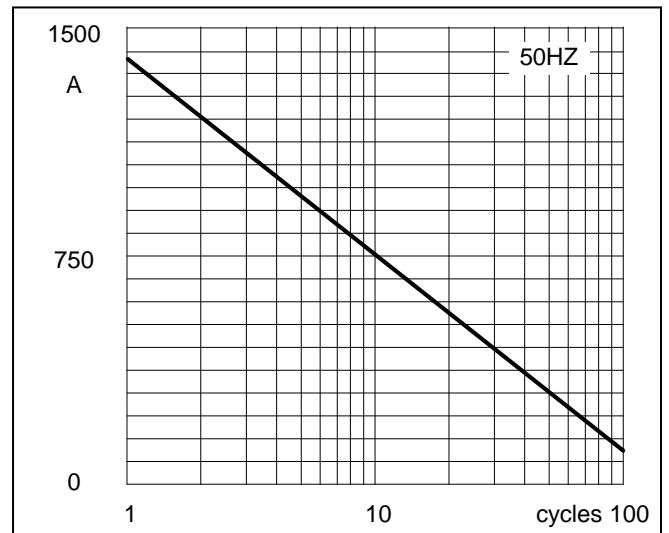


Fig4. Max Non-Repetitive Forward Surge Current

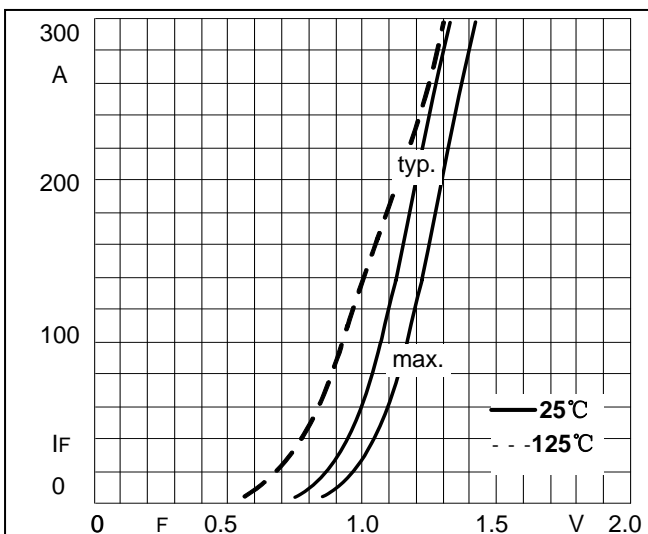


Fig5. Forward Characteristics



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Ordering Information :

| Device | Packing |
|----------------|-----------------------------|
| Part Number-BP | Bulk: 10PCS/BOX ;100PCS/CTN |

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