

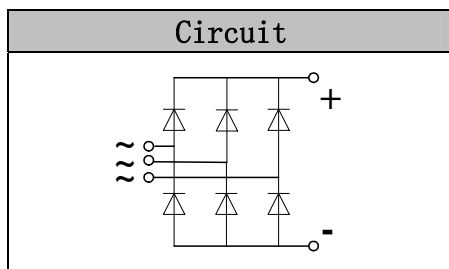
MD100S08M5
MD100S12M5
MD100S16M5
MD100S18M5

Features

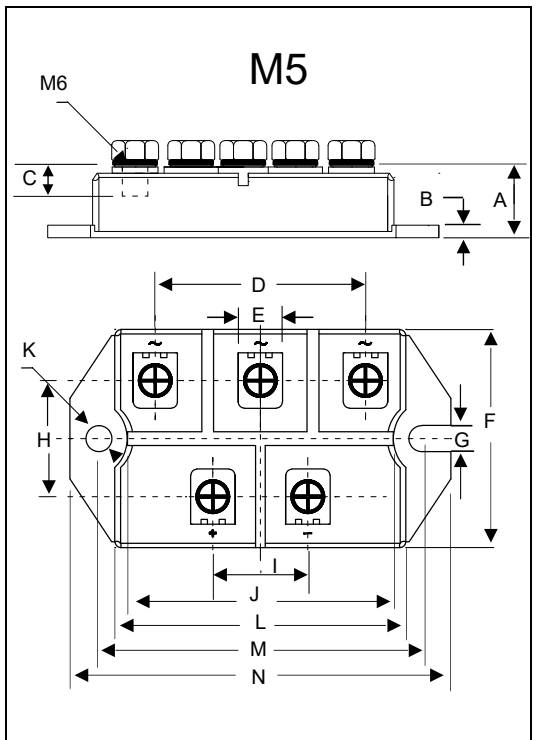
- Lead Free Finish/RoHS Compliant (NOTE 1)("P" Suffix designates RoHS Compliant. See ordering information)
- Blocking Voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip

Applications

- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers



100 Amp
GLASS PASSIVATED
THREE PHASE
RECTIFIER BRIDGE
800~1800 Volts



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.650 | 0.689 | 16.50 | 17.50 | |
| B | 0.098 | 0.138 | 2.50 | 3.50 | |
| C | 0.256 | 0.295 | 6.50 | 7.50 | |
| D | 2.028 | 2.067 | 51.50 | 52.50 | |
| E | 0.453 | 0.492 | 11.50 | 12.50 | |
| F | 2.106 | 2.146 | 53.50 | 54.50 | |
| G | 0.236 | 0.276 | 6.00 | 7.00 | |
| H | 1.043 | 1.083 | 26.50 | 27.50 | |
| I | 0.965 | 1.004 | 24.50 | 25.50 | |
| J | 2.579 | 2.618 | 65.50 | 66.50 | |
| K | 0.256 | | 6.50 | | Φ |
| L | 2.815 | 2.854 | 71.50 | 72.50 | |
| M | 3.130 | 3.169 | 79.50 | 80.50 | |
| N | 3.681 | 3.720 | 93.50 | 94.50 | |

Module Type

| TYPE | VRRM | VRSM |
|------------|-------|-------|
| MD100S08M5 | 800V | 900V |
| MD100S12M5 | 1200V | 1300V |
| MD100S16M5 | 1600V | 1700V |
| MD100S18M5 | 1800V | 1900V |

Maximum Ratings

| Symbol | Conditions | Values | Units |
|-------------------|--|-------------|------------------|
| I _D | Three phase, full wave T _c =100°C | 100 | A |
| I _{FSM} | t=10mS T _{vj} =45°C | 920 | A |
| i ² t | t=10mS T _{vj} =45°C | 4200 | 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(M6) | 5±15% | Nm |
| M _s | To heatsink(M6) | 5±15% | Nm |
| Weight | Module (Approximately) | 194 | g |

Thermal Characteristics

| Symbol | Conditions | Values | Units |
|----------------------|------------|--------|-------|
| R _{th(j-c)} | Per diode | 0.9 | °C/W |
| R _{th(c-s)} | Module | 0.03 | °C/W |

Electrical Characteristics

| Symbol | Conditions | Values | | | Units |
|-----------------|---|--------|------|----------|----------|
| | | Min. | Typ. | Max. | |
| V _{FM} | T=25°C I _F =300A | — | 1.70 | 1.90 | V |
| I _{RD} | T _{vj} =25°C V _{RD} =V _{RRM} T _{vj} =150°C V _{RD} =V _{RRM} | — | — | 0.3 5 | mA mA |

Performance Curves

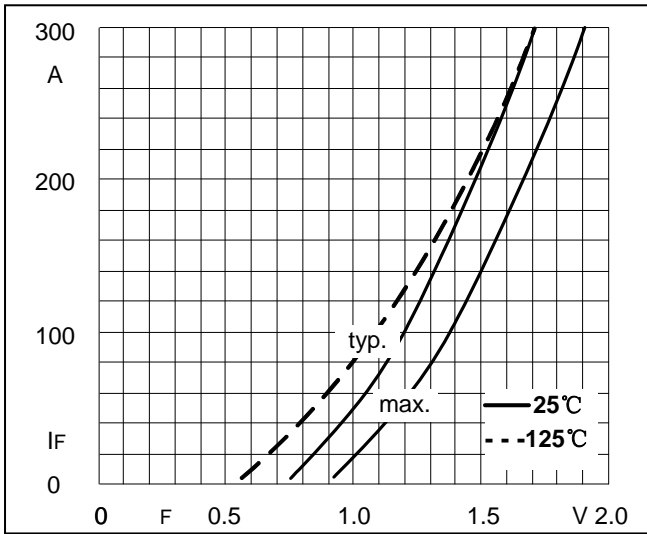


Fig1. Forward Characteristics

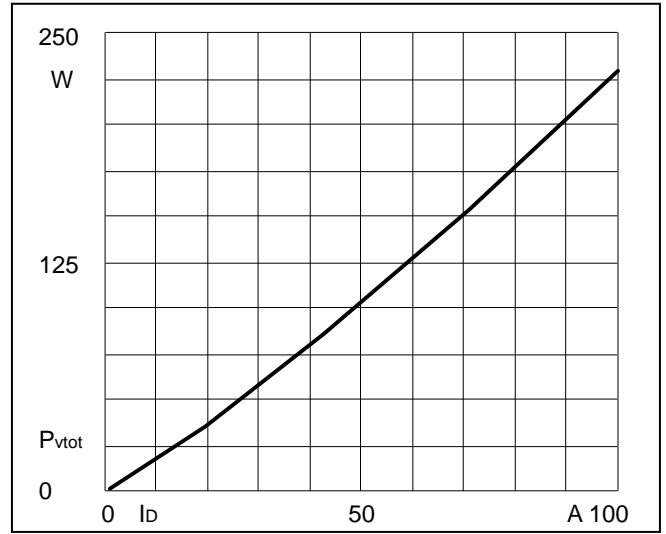


Fig2. Power dissipation

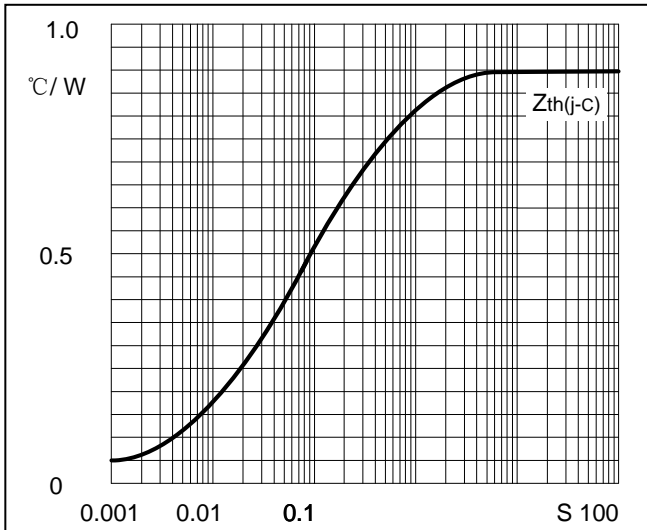


Fig3. Transient thermal impedance

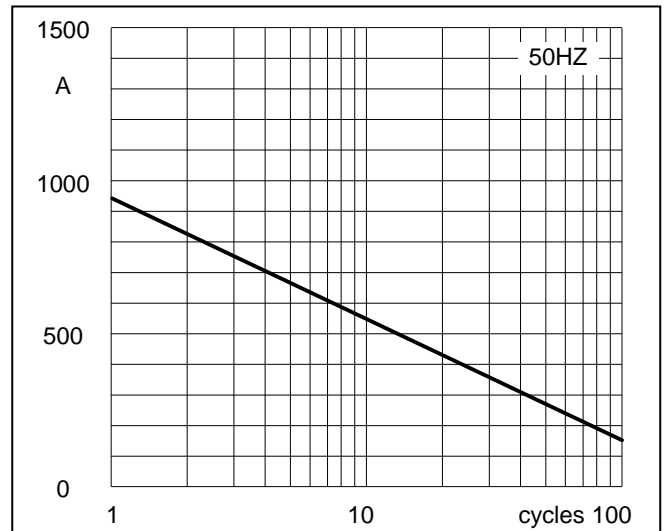


Fig4. Max Non-Repetitive Forward Surge Current

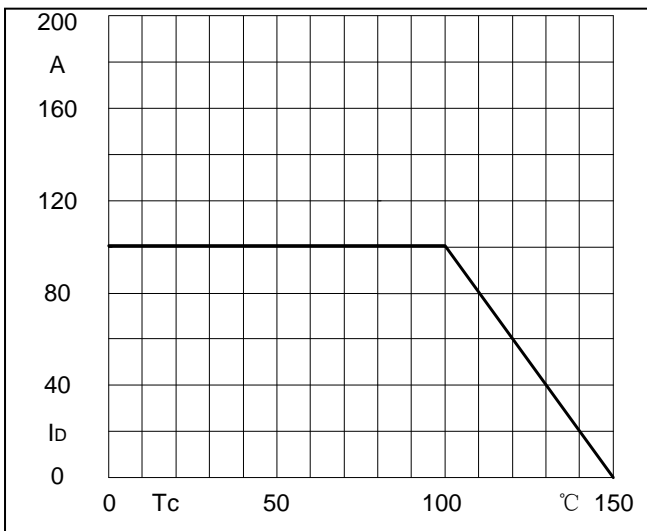


Fig5. Forward Current Derating Curve



Ordering Information :

| Device | Packing |
|----------------|---------------------------|
| Part Number-BP | Bulk: 6PCS/BOX ;60PCS/CTN |

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