



STANDARD RECOVERY THREE PHASE DEVICES 50A

Features

High Surge Capability
Types Up to 1600V V_{RRM}

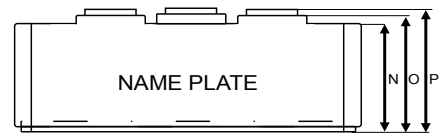
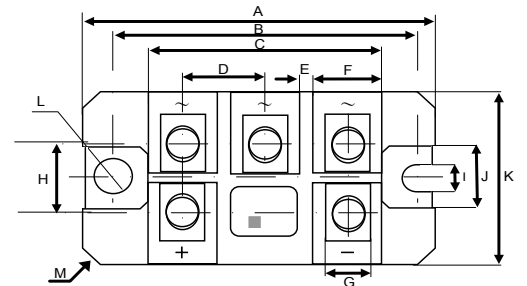
50 Amp Rectifier
400-1600 Volts

Maximum Ratings

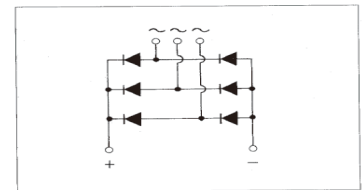
Operating Temperature: -40°C to $+150^{\circ}\text{C}$

Storage Temperature: -40°C to $+150^{\circ}\text{C}$

| Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum DC Blocking Voltage |
|-------------|--|-----------------------------|
| M3P50A-040 | 400V | 400V |
| M3P50A-060 | 600V | 600V |
| M3P50A-080 | 800V | 800V |
| M3P50A-100 | 1000V | 1000V |
| M3P50A-120 | 1200V | 1200V |
| M3P50A-140 | 1400V | 1400V |
| M3P50A-160 | 1600V | 1600V |



Inner Circuit Schematic



Electrical Characteristics @ 25 °C Unless Otherwise Specified

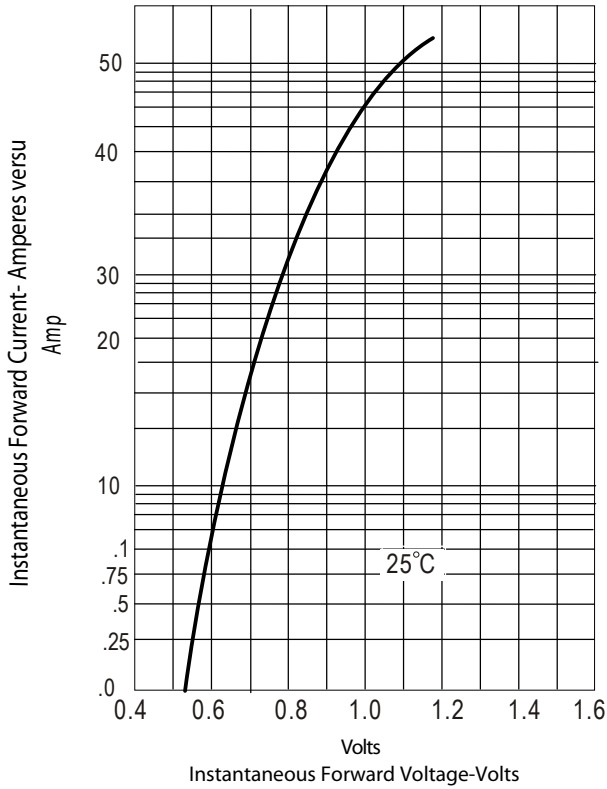
| | | | |
|---|-----------------|---------------------------------|--|
| Average Forward Current (Per leg) | $I_{F(AV)}$ | 50 A | $T_C = 120^{\circ}\text{C}$ 400V~1000V $T_C = 85^{\circ}\text{C}$ 1200V~1600V |
| Peak Forward Surge Current | I_{FSM} | 1000A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage * (Per leg) | V_F | 1.10V | $I_{FM} = 50\text{A}$ $T_J = 25^{\circ}\text{C}$ |
| Maximum Instantaneous Reverse Current At Rated DC Blocking Voltage (Per leg) | I_R | 10 μA 10 mA | $T_J = 25^{\circ}\text{C}$ $T_J = 150^{\circ}\text{C}$ |
| Maximum Thermal Resistance Junction To Case (Per leg) | $R_{\theta jc}$ | 1.0 $^{\circ}\text{C}/\text{W}$ | |

| DIM | Inches | | Millimeters | |
|-----|-------------|----------|-------------|--------|
| | Min | Max | Min | Max |
| A | 3.15 | --- | 80 | --- |
| B | 2.60 | --- | 66 | --- |
| C | 2.01 | --- | 51 | --- |
| D | 0.71 | --- | 18 | --- |
| E | 0.16 | --- | 4 | --- |
| F | 0.57 | --- | 14.5 | --- |
| G | 0.40 | --- | 10.2 | --- |
| H | 0.63 | --- | 16 | --- |
| I | 0.26 | --- | 6.7 | --- |
| J | 0.55 | --- | 14 | --- |
| K | 1.57 | --- | 40 | --- |
| L | $\phi 0.26$ | --- | $\phi 6.7$ | --- |
| M | 4-CS | | | |
| N | --- | 0.90 MAX | --- | 23 MAX |
| O | --- | 1.06 MAX | --- | 27 MAX |
| P | --- | 1.14 MAX | --- | 29 MAX |

Pulse Test: Pulse Width 300 μsec . Duty Cycle < 2%



Figure.1-Typical Forward Characteristics



Figur.2-Forward Derating Curve

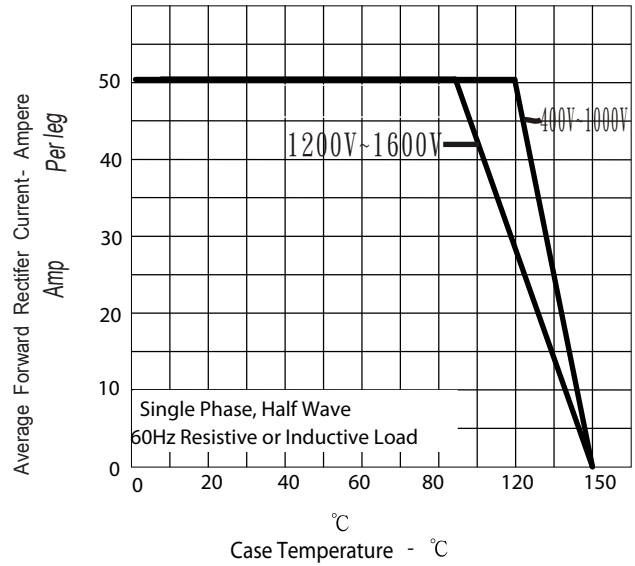


Figure.3-Peak Forward Surge Current

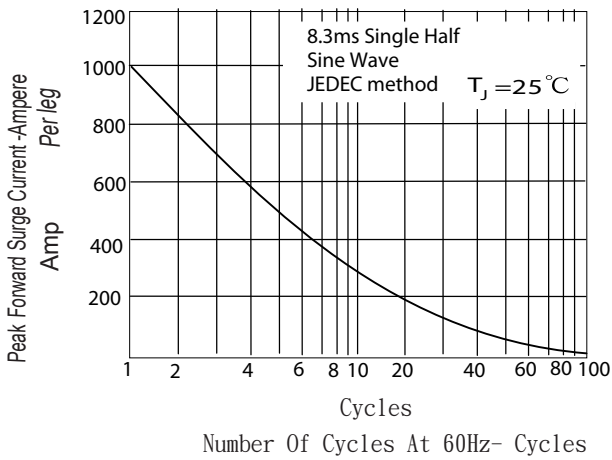


Figure.4- Typical Reverse Characteristics

