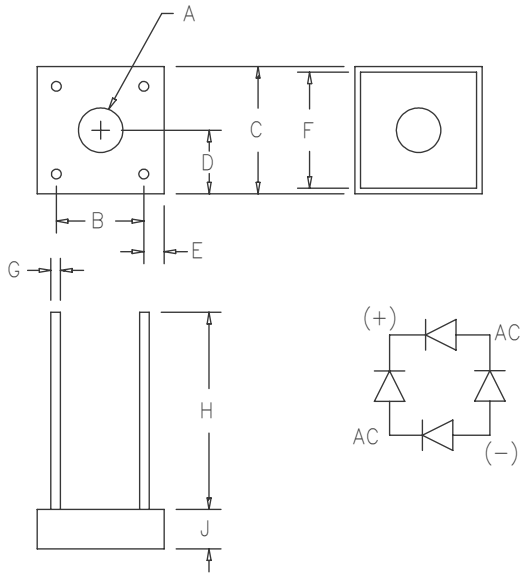
# Fast Recovery Bridge Rectifiers

# VJ248XM – VJ648XM




| Dim. | Inches | | Millimeter | | |
|---|---|---|---|---|---|
| | Minimum | Maximum | Minimum | Maximum | Notes |
| A | .137 | .167 | 3.84 | 2.21 | Dia. |
| B | .411 | .441 | 10.44 | 11.20 | |
| C | .600 | .620 | --- | --- | |
| D | .295 | .310 | --- | --- | |
| E | .076 | .096 | --- | --- | |
| F | .545 | .555 | 13.85 | 14.10 | |
| G | .076 | .096 | .970 | 1.07 | |
| H | 1.0 Min. | | 25.40 Min. | | |
| J | .195 | .215 | 4.95 | 5.46 | |

| Microsemi Catalog Number | Peak Reverse Voltage |
|---|---|
| VJ248XM | 200V |
| VJ448XM | 400V |
| VJ648XM | 600V |

- 10 Amps DC Output
- 80 Amp Surge Current
- $V_{RRM}$ to 600V
- 2000V Isolation
- Glass Passivated Die
- ROHS Compliant

## Electrical Characteristics

| | | |
|---|---|---|
| DC Current Output | $I_O$ 10 Amps | $T_C$ = 70°C |
| Maximum surge current | $I_{FSM}$ 80 Amps | 8.3ms, half sine |
| Max. $I^2t$ for Fusing | $I^2t$ 27 $A^2s$ | |
| Max. peak forward voltage per leg | $V_{FM}$ 1.5 Volts | $I_{FM}$ = 1.0A; $T_J$ = 25°C* |
| Max. peak reverse current per leg | $I_{RM}$ 10µA | $V_{RRM}$, $T_J$ = 25°C |
| Max. reverse recovery time | $t_{rr}$ 200 nS | $I_F$ = 1A, $I_R$ = 2A, $I_{RR}$ = .5A |

*Pulse test: Pulse width 300µsec, Duty cycle 2%

## Thermal and Mechanical Characteristics

| | | |
|---|---|---|
| Storage temperature range | $T_{STG}$ | –55°C to 175°C |
| Operating junction temp range | $T_J$ | –55°C to 150°C |
| Maximum thermal resistance | $R_{\Theta JC}$ | 3°C/W Junction to case |
| Mounting torque | | 12–15 inch pounds (#6 screw) |
| Weight | | .14 ounces (4.5 grams) typical |

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Figure 1
Typical Forward Characteristics – Per Leg

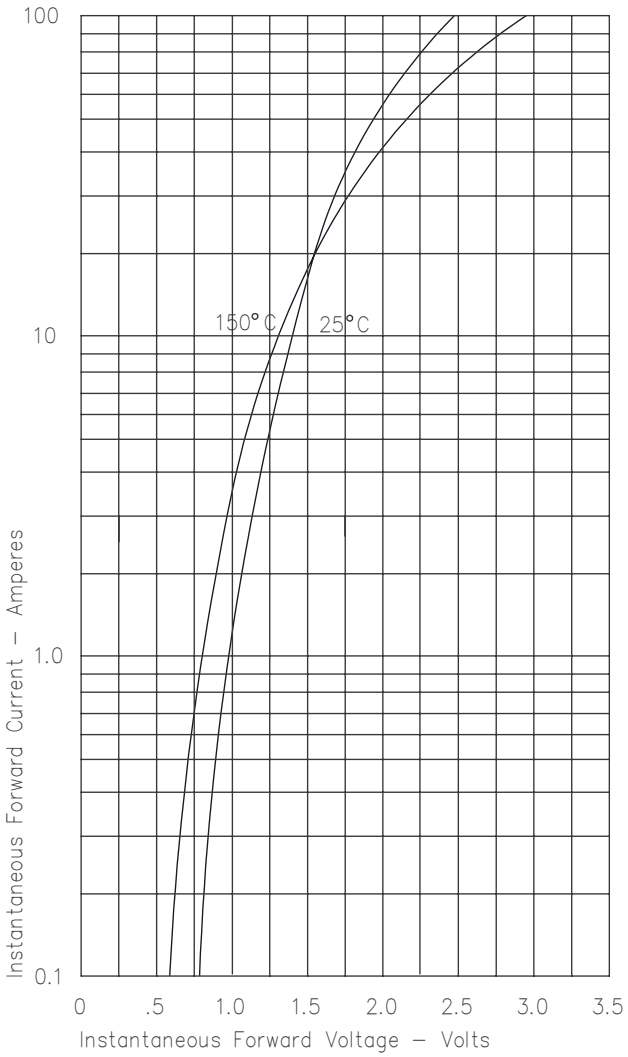


Figure 2
Typical Reverse Characteristics – Per Leg

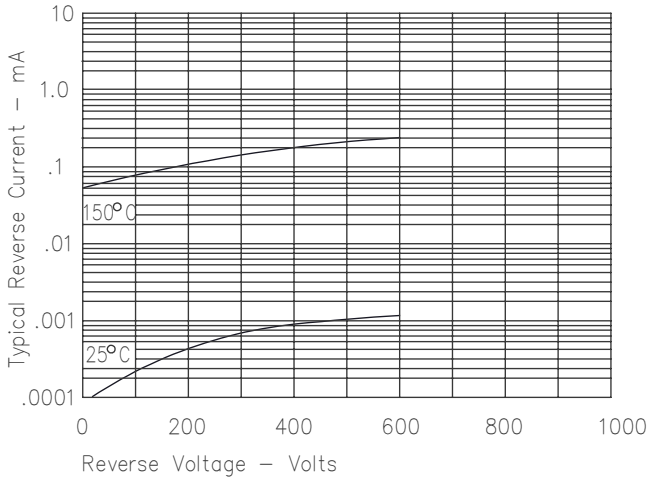


Figure 3
Forward Current Derating – Per Leg