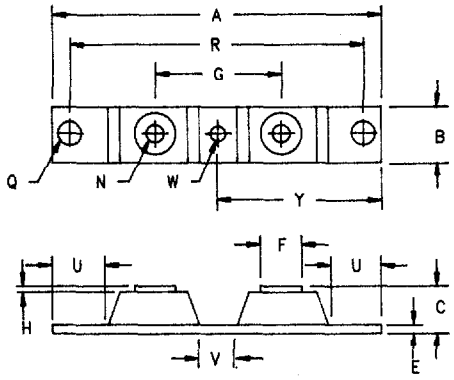
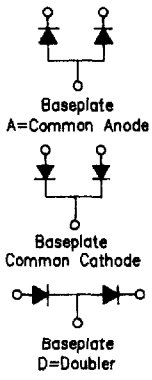
# Twin Diode Module
# TDM150




Notes:
Baseplate: Nickel plated copper; common cathode

| Dim. | Inches | | Millimeters | | |
|---|---|---|---|---|---|
| | Min. | Max. | Min. | Max. | Notes |
| A | --- | 3.630 | --- | 92.20 | |
| B | 0.700 | 0.800 | 17.78 | 20.32 | |
| C | --- | 0.625 | --- | 15.87 | |
| E | 0.120 | 0.130 | 3.05 | 3.30 | |
| F | 0.490 | 0.510 | 12.45 | 12.95 | |
| G | 1.375 BSC | | 34.92 BSC | | |
| H | --- | 0.050 | --- | 1.27 | |
| N | 1/4-20 UNC | | --- | | |
| Q | .280 | .310 | 6.86 | 7.11 | Dia. |
| R | 3.150 BSC | | 80.01 BSC | | |
| U | 0.600 | --- | 15.24 | --- | |
| V | 0.330 | 0.350 | 8.38 | 8.89 | |
| W | 0.170 | 0.190 | 4.32 | 4.82 | Dia. |
| Y | 1.815 BSC | | 46.10 BSC | | |

| Microsemi Catalog Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|---|---|---|
| TDM15002* | 200V | 200V |
| TDM15004* | 400V | 400V |
| TDM15006* | 600V | 600V |
| TDM15008* | 800V | 800V |
| TDM15010* | 1000V | 1000V |
| TDM15012* | 1200V | 1200V |

*Add Suffix A for Common Anode, D for Doubler

- Compact Package
- Glass Passivated Die
- 2 x 150 Amp Current Rating
- Simplifies Circuit Assembly
- High Surge Capacity

## Electrical Characteristics

| | | |
|---|---|---|
| Average forward current per pkg | $I_{F(AV)}$ 300 Amps | $T_C$ = 120°C, half sine, $R_{\theta JC}$ = 0.15°C/W |
| Average forward current per leg | $I_{F(AV)}$ 150 Amps | $T_C$ = 120°C, half sine, $R_{\theta JC}$ = 0.30°C/W |
| Maximum surge current per leg | $I_{FSM}$ 2500 Amps | 8.3 ms, half sine, $T_J$ = 175°C |
| Max $I^2t$ for fusing | $I^2t$ 26000 $A^2s$ | |
| Max peak forward voltage per leg | $V_{FM}$ 1.1 volts | $I_{FM}$ = 200A; $T_J$ = 25°C* |
| Max peak forward voltage per leg | $V_{FM}$ 1.0 volts | $I_{FM}$ = 200A; $T_J$ = 175°C* |
| Max peak reverse current per leg | $I_{RM}$ 5 mA | $V_{RRM}$, $T_J$ = 150°C |
| Typical reverse current per leg | $I_{RM}$ 3.0 uA | $V_{RRM}$, $T_J$ = 25°C |

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

## Thermal and Mechanical Characteristics

| | | |
|---|---|---|
| Storage temp range | $T_{STG}$ | -40°C to 175°C |
| Operating junction temp range | $T_J$ | -40°C to 175°C |
| Max thermal resistance per leg | $R_{\theta JC}$ | 0.3°C/W Junction to case |
| Typical thermal resistance per leg | $R_{\theta CS}$ | 0.08°C/W Case to sink |
| Terminal Torque | | 50 inch pounds maximum |
| Mounting Base Torque (outside holes) | | 40 inch pounds maximum |
| Mounting Base Torque (center hole) | | 10 inch pounds maximum |
| center hole must be torqued first | | |
| Weight | | 2.82 ounces (80 grams) typical |

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Microsemi Corp.
Colorado

# TDM150

Figure 1
Typical Forward Characteristics – Per Leg

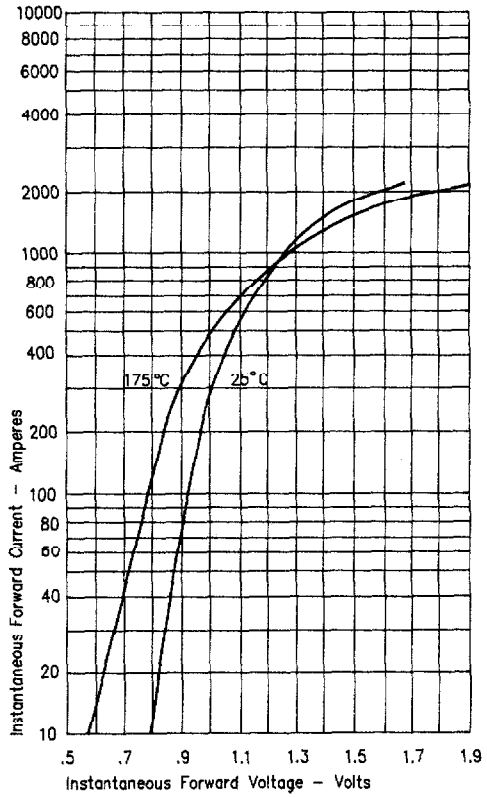


Figure 2
Typical Reverse Characteristics – Per Leg

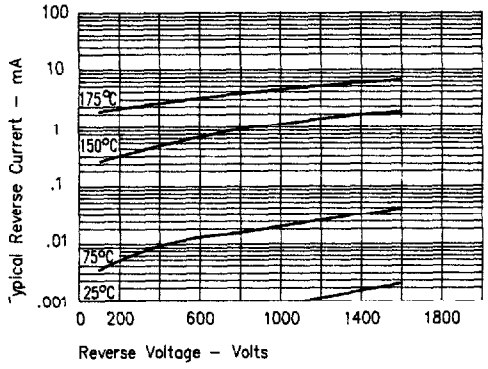


Figure 3
Forward Current Derating – Per Leg

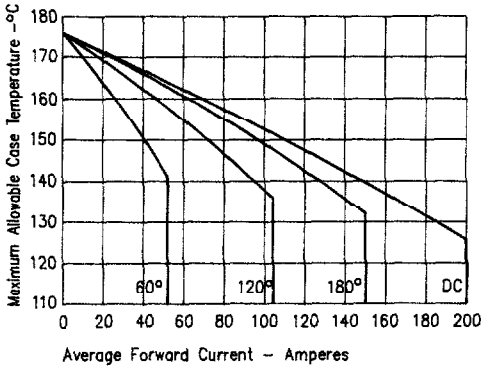


Figure 4
Maximum Forward Power Dissipation – Per Leg

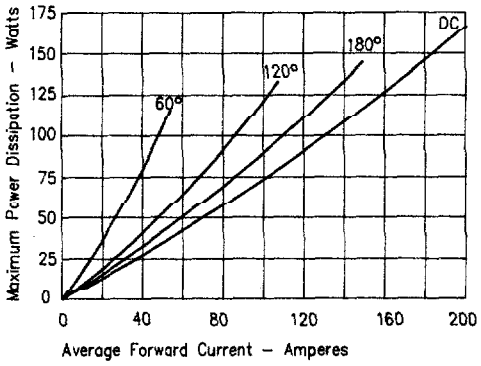


Figure 5
Transient Thermal Impedance – Per Leg

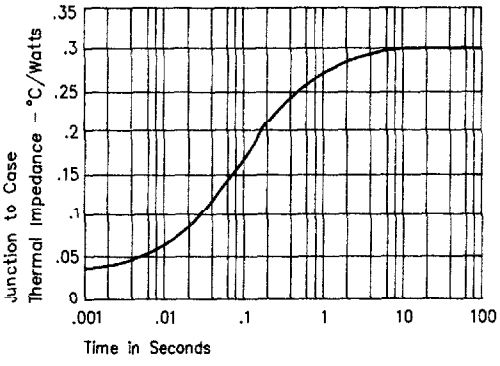

Figure 6
Maximum Nonrepetitive Surge Current – Per Leg