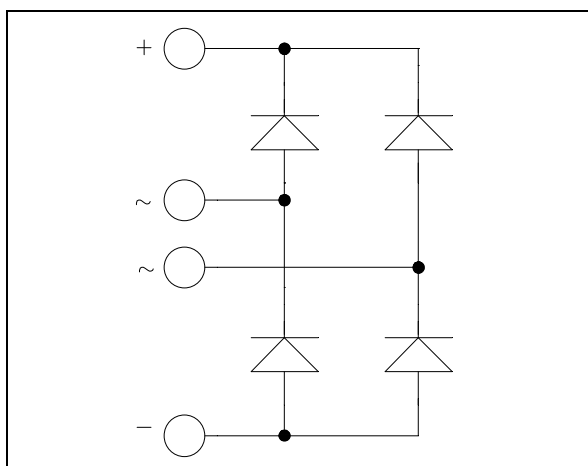


ISOTOP[®] Schottky Diode Full Bridge Power Module

$V_{RRM} = 100V$
 $I_F = 40A @ T_c = 80^\circ C$

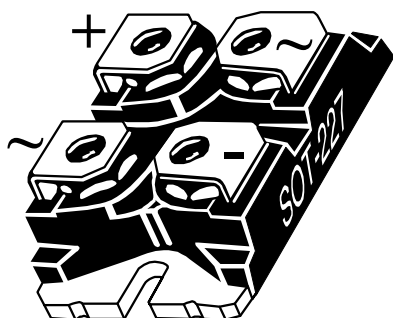


Application

- Switch mode power supplies rectifier
- Induction heating
- Welding equipment

Features

- Ultra fast recovery times
- Soft recovery characteristics
- High current
- Very low stray inductance
- High level of integration
- ISOTOP[®] Package (SOT-227)



Benefits

- Outstanding performance at high frequency operation
- Low losses
- Low noise switching
- Direct mounting to heatsink (isolated package)
- Low junction to case thermal resistance
- RoHS Compliant

Absolute maximum ratings

| Symbol | Parameter | | | Max ratings | Unit |
|------------------|---|--------|-----------------------|-------------|------|
| V _R | Maximum DC reverse Voltage | | | 100 | V |
| V _{RRM} | Maximum Peak Repetitive Reverse Voltage | | | | |
| I _{FAV} | Rectangular, d=0.5 | | T _C = 80°C | 40 | A |
| I _{FSM} | Non-Repetitive Forward Surge Current | t=10ms | T _J = 45°C | 450 | |

CAUTION: These Devices are sensitive to Electrostatic Discharge. Proper Handling Procedures Should Be Followed. See application note APT0502 on www.microsemi.com

All ratings @ $T_j = 25^{\circ}\text{C}$ unless otherwise specified

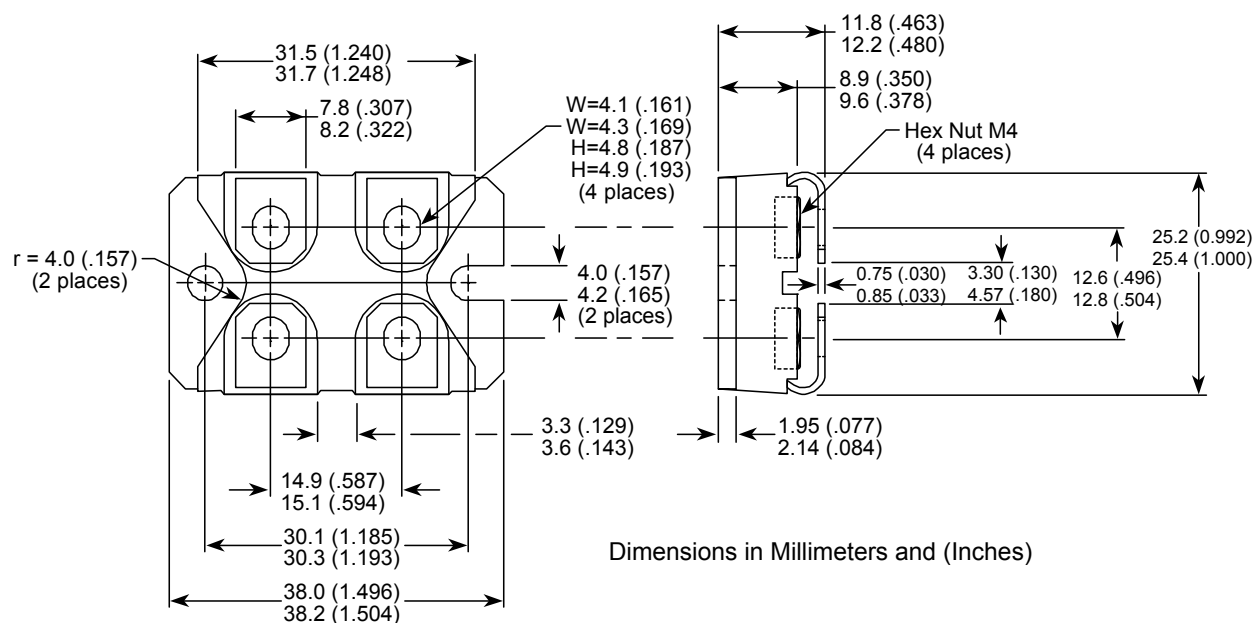
Electrical Characteristics

| Symbol | Characteristic | Test Conditions | Min | Typ | Max | Unit |
|--------|-----------------|---------------------|-----------------------------|------|-----|------|
| I_R | Reverse Current | $V_R = 100\text{V}$ | $T_j = 25^{\circ}\text{C}$ | 1 | | mA |
| | | | $T_j = 125^{\circ}\text{C}$ | 10 | | |
| V_F | Forward Voltage | $I_F = 40\text{A}$ | $T_j = 25^{\circ}\text{C}$ | 0.88 | | V |
| | | | $T_j = 125^{\circ}\text{C}$ | 0.7 | | |

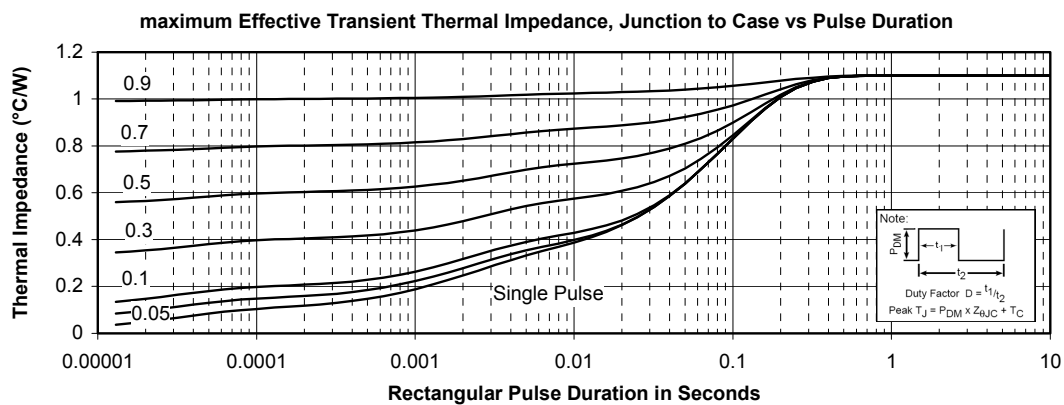
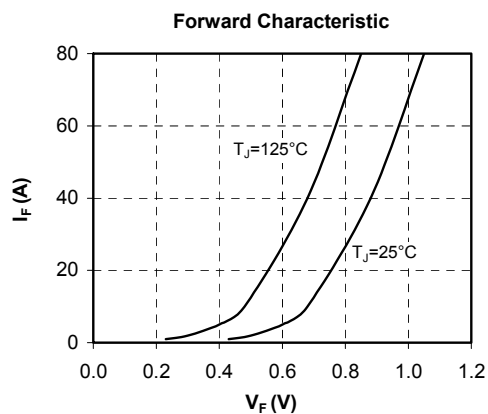
Thermal and package characteristics

| Symbol | Characteristic | Min | Typ | Max | Unit |
|----------------|--|------|------|-----|----------------------|
| R_{thJC} | Junction to Case Thermal resistance | | | 1.1 | $^{\circ}\text{C/W}$ |
| R_{thJA} | Junction to Ambient | | | 20 | |
| V_{ISOL} | RMS Isolation Voltage, any terminal to case $t = 1$ min, 50/60Hz | 2500 | | | V |
| T_j, T_{STG} | Storage Temperature Range | -55 | | 150 | $^{\circ}\text{C}$ |
| T_L | Max Lead Temp for Soldering: 0.063" from case for 10 sec | | | 300 | |
| Torque | Mounting torque (Mounting = 8-32 or 4mm Machine and terminals = 4mm Machine) | | | 1.5 | N.m |
| Wt | Package Weight | | 29.2 | | g |

SOT-227 (ISOTOP[®]) Package Outline



Typical Performance Curve



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