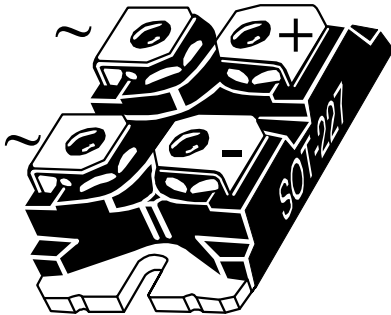
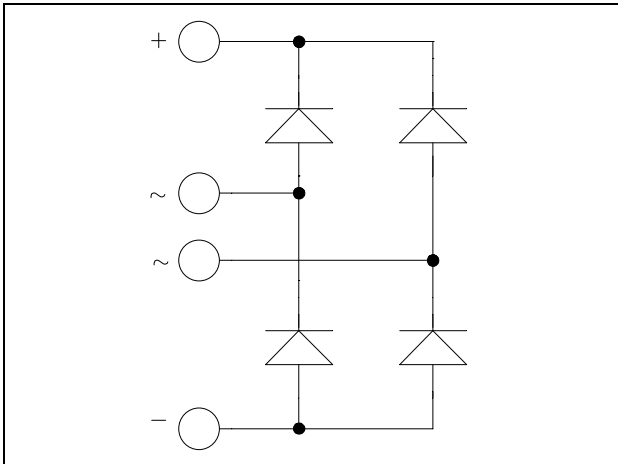


**ISOTOP[®] Rectifier diode
full bridge Power Module**

**$V_{RRM} = 1600V$
 $I_F = 90A @ T_c = 80^\circ C$**



Application

- Input mains rectifier

Features

- Planar double passivated chips
- High blocking voltage
- High current
- Low leakage 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	1600	V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
I_F	DC Forward Current	80	A
I_{FSM}	Non-Repetitive Forward Surge Current	850	
		$t=10ms$	
		$T_C = 90^\circ C$	
		$T_J = 45^\circ C$	

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

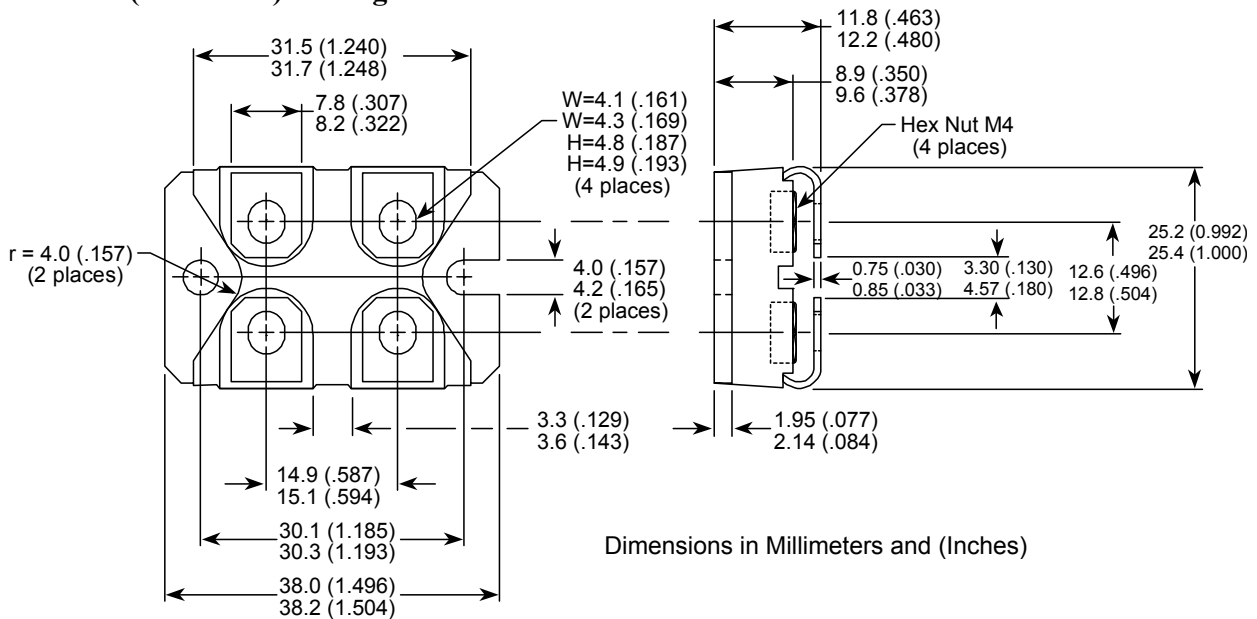
Electrical Characteristics

Symbol	Characteristic	Test Conditions	Min	Typ	Max	Unit
I_R	Reverse Current	$V_R = 1600\text{V}$	$T_j = 25^\circ\text{C}$		50	μA
			$T_j = 125^\circ\text{C}$		4	mA
V_F	Forward Voltage	$I_F = 90\text{A}$	$T_j = 25^\circ\text{C}$		1.3	V
			$T_j = 125^\circ\text{C}$		1.1	
V_T	On – state Voltage			0.8		V
r_T	On – state Slope resistance			4.8		$\text{m}\Omega$

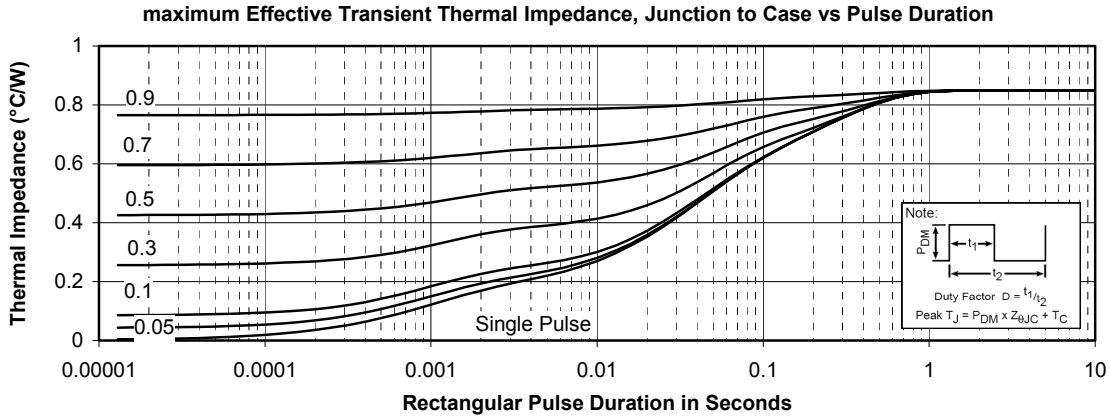
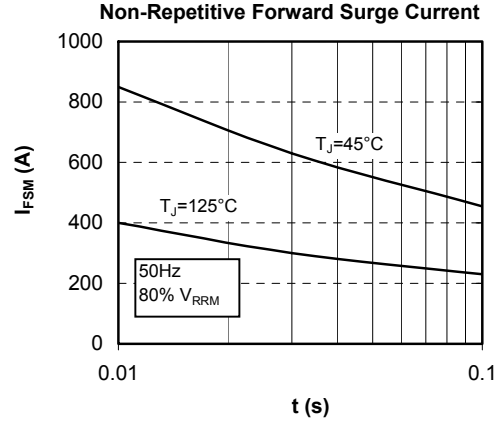
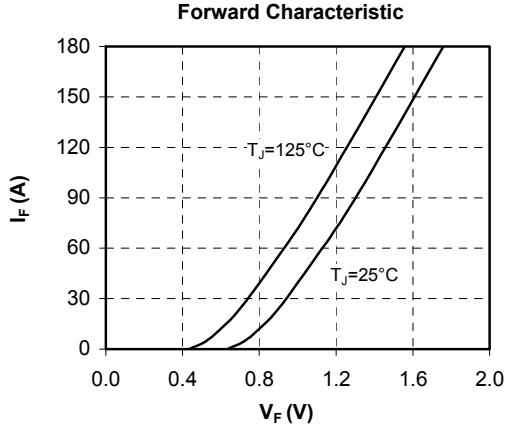
Thermal and package characteristics

Symbol	Characteristic	Min	Typ	Max	Unit
R_{thJC}	Junction to Case Thermal resistance			0.85	$^\circ\text{C}/\text{W}$
R_{thJA}	Junction to Ambient			20	$^\circ\text{C}/\text{W}$
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



ISOTOP® is a registered trademark of ST Microelectronics NV

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