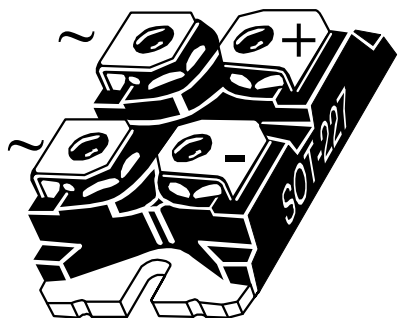
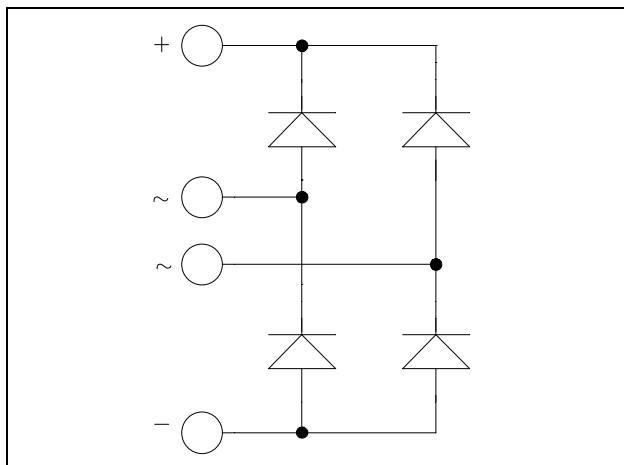


ISOTOP[®] Rectifier diode full bridge Power Module

$$V_{RRM} = 1600V$$

$$I_F = 90A @ T_c = 80^{\circ}C$$



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		T _C = 90°C	80	A
I _{FSM}	Non-Repetitive Forward Surge Current	t=10ms	T _J = 45°C	850	

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

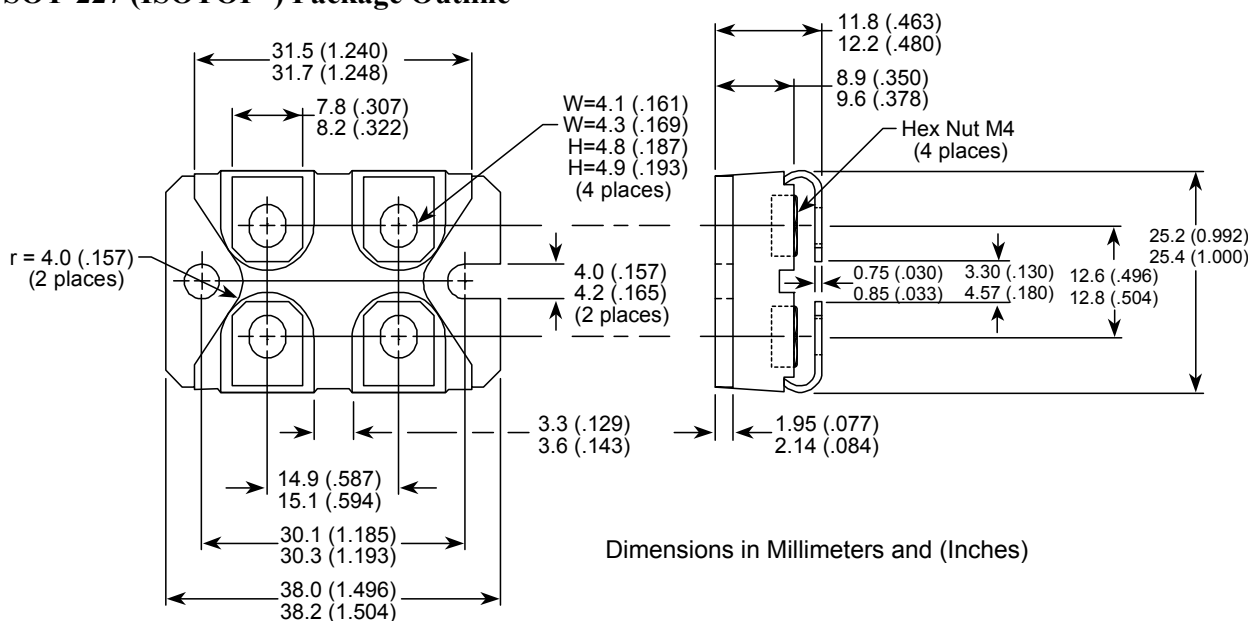
Electrical Characteristics

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		$\text{m}\Omega$

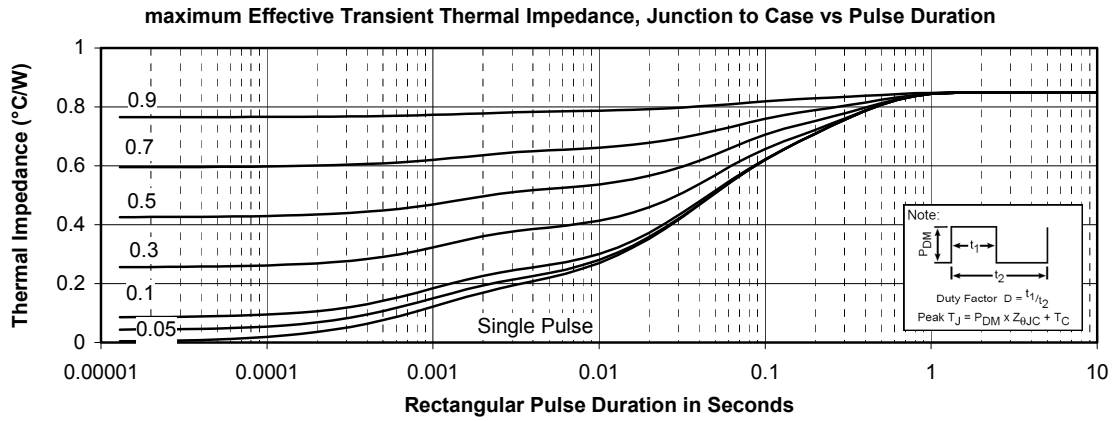
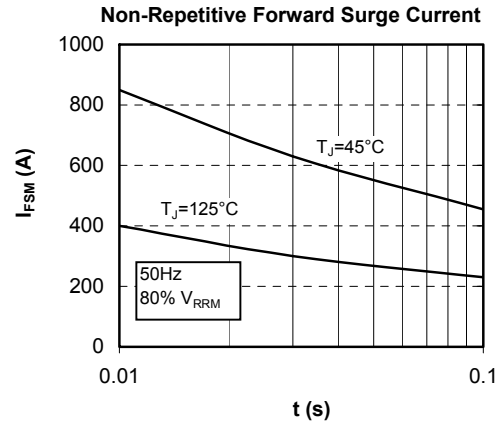
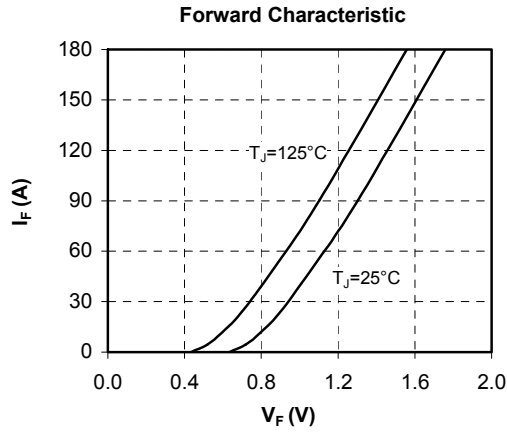
Thermal and package characteristics

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



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