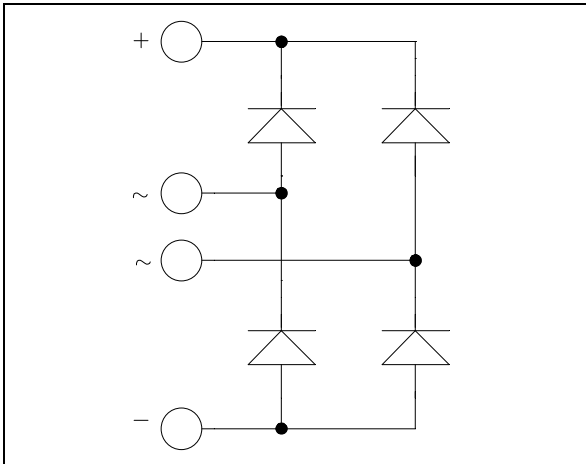


ISOTOP® Schottky Diode Full Bridge Power Module

$V_{RRM} = 45V$
 $I_F = 40A @ T_c = 80^\circ C$

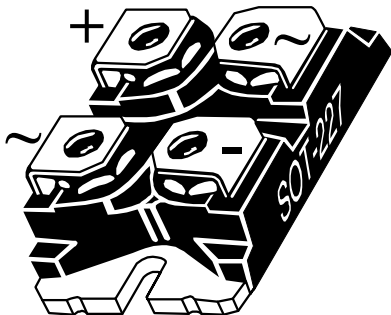


Application

- 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	45	V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
I_{FAV}	Rectangular, $d = 0.5$	$T_C = 80^\circ C$ 40	A
I_{FSM}	Non-Repetitive Forward Surge Current	$t = 10ms$ $T_J = 45^\circ C$ 450	

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

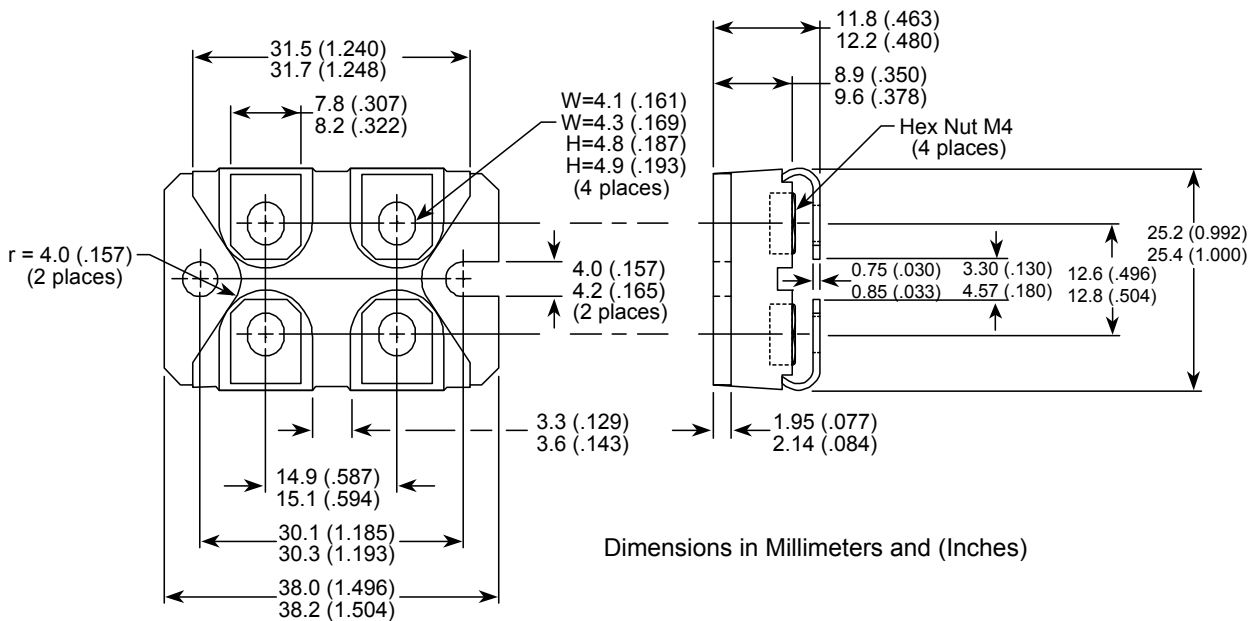
All ratings @ $T_j = 25^\circ\text{C}$ unless otherwise specified

Electrical Characteristics

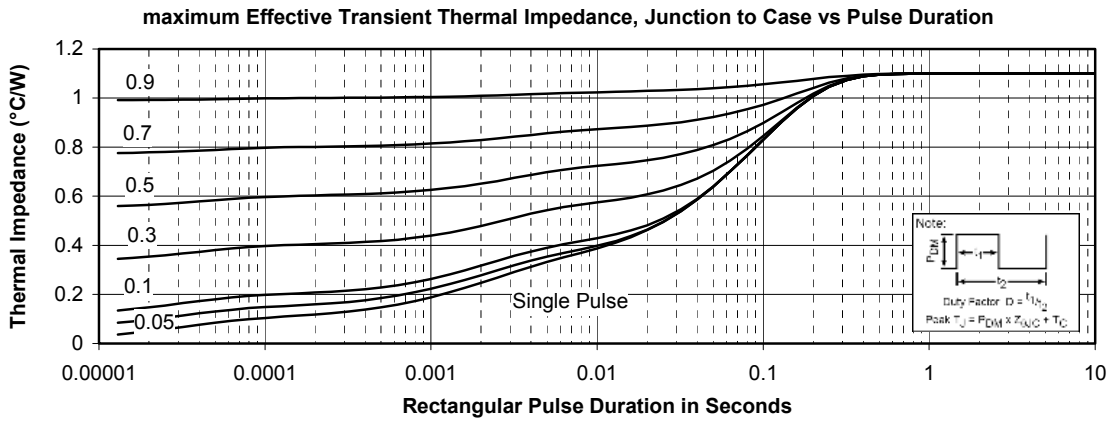
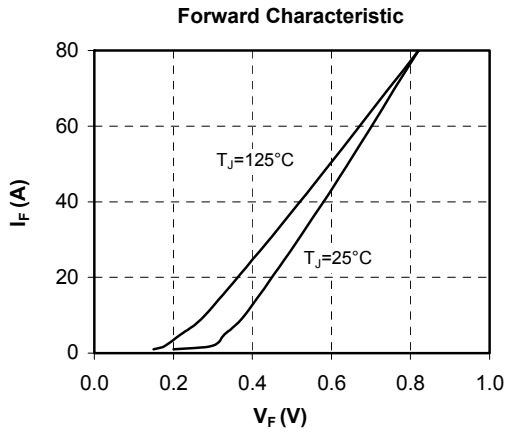
Symbol	Characteristic	Test Conditions	Min	Typ	Max	Unit
I_R	Reverse Current	$V_R = 45\text{V}$	$T_j = 25^\circ\text{C}$		20	mA
			$T_j = 125^\circ\text{C}$		200	
V_F	Forward Voltage	$I_F = 40\text{A}$	$T_j = 25^\circ\text{C}$		0.58	V
			$T_j = 125^\circ\text{C}$		0.48	

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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