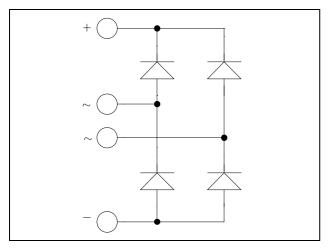


ISOTOP® Rectifier diode full bridge Power Module

$$V_{RRM} = 1600V$$

 $I_F = 40A @ Tc = 80^{\circ}C$

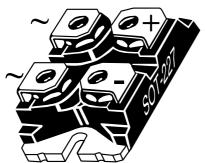


Application

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			1000	V
I_{F}	DC Forward Current		$T_C = 80$ °C	40	٨
I_{FSM}	Non-Repetitive Forward Surge Current	t=10ms	$T_J = 45^{\circ}C$	400	А

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

1 - 4



All ratings @ $T_i = 25$ °C unless otherwise specified

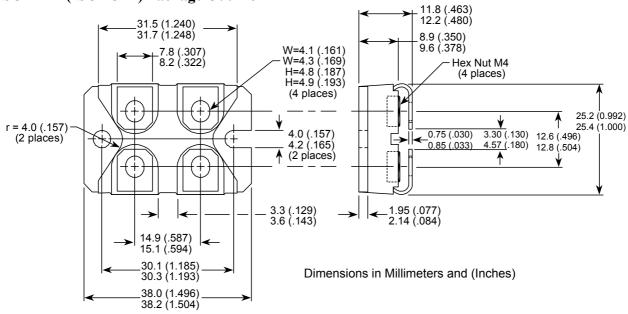
Electrical Characteristics

Symbol	Characteristic	Test Conditions	Test Conditions		Typ	Max	Unit
I_R	Reverse Current	$V_{R} = 1600V$	$T_j = 25$ °C		20		μΑ
1 _R	Reverse Current	V _R - 1000 V	$T_j = 125$ °C		2		mA
$V_{\rm F}$	Forward Voltage	$I_F = 40A$	$T_j = 25^{\circ}C$		1.3		V
		1 _F - 40A	$T_j = 125$ °C		1.1		v
V_{T}	On – state Voltage				0.8		V
r_{T}	On – state Slope resistance				10.5		mΩ

Thermal and package characteristics

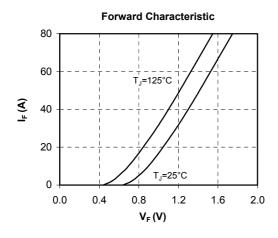
Symbol	Characteristic	Min	Тур	Max	Unit
R_{thJC}	Junction to Case Thermal resistance			1.5	°C/W
R _{thJA}	Junction to Ambient			20	C/ W
V_{ISOL}	RMS Isolation Voltage, any terminal to case t = 1 min, 50/60Hz	2500			V
T_J, T_{STG}	Storage Temperature Range	-55		150	°C
$T_{ m L}$	Max Lead Temp for Soldering:0.063"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

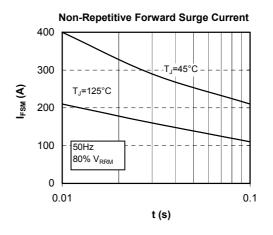
SOT-227 (ISOTOP®) Package Outline

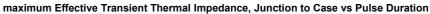


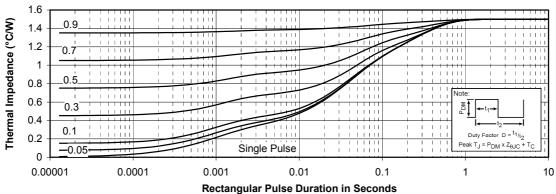


Typical Performance Curve









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