



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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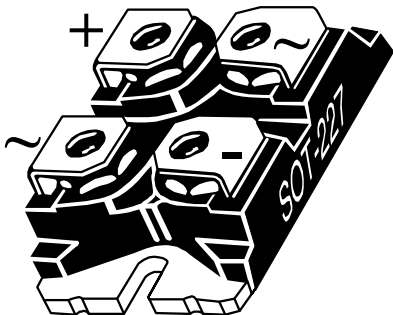
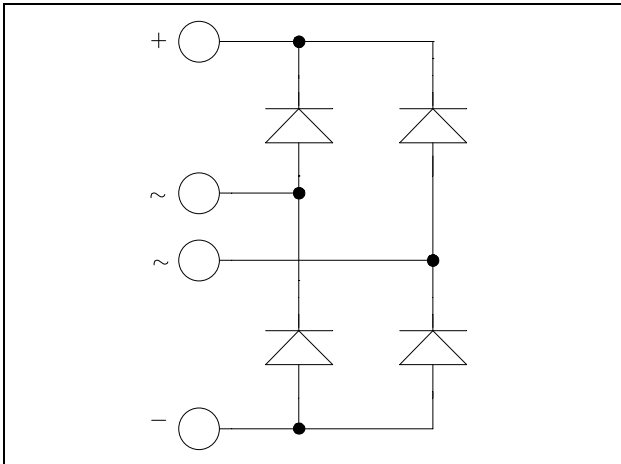
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ISOTOP[®] Fast Diode
Full Bridge Power Module

$V_{RRM} = 1200V$
 $I_F = 50A @ T_c = 80^{\circ}C$



Application

- Switch mode power supplies rectifier
- Induction heating
- Welding equipment
- High speed rectifiers

Features

- Ultra fast recovery times
- Soft recovery characteristics
- 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			1200	V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage			1200	V
$I_{F(AV)}$	Maximum Average Forward Current	Duty cycle = 50%	$T_c = 80^{\circ}C$	50	A
I_{FRM}	Maximum repetitive forward current limited by T_{Jmax}	8.3ms	$T_J = 45^{\circ}C$	100	

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

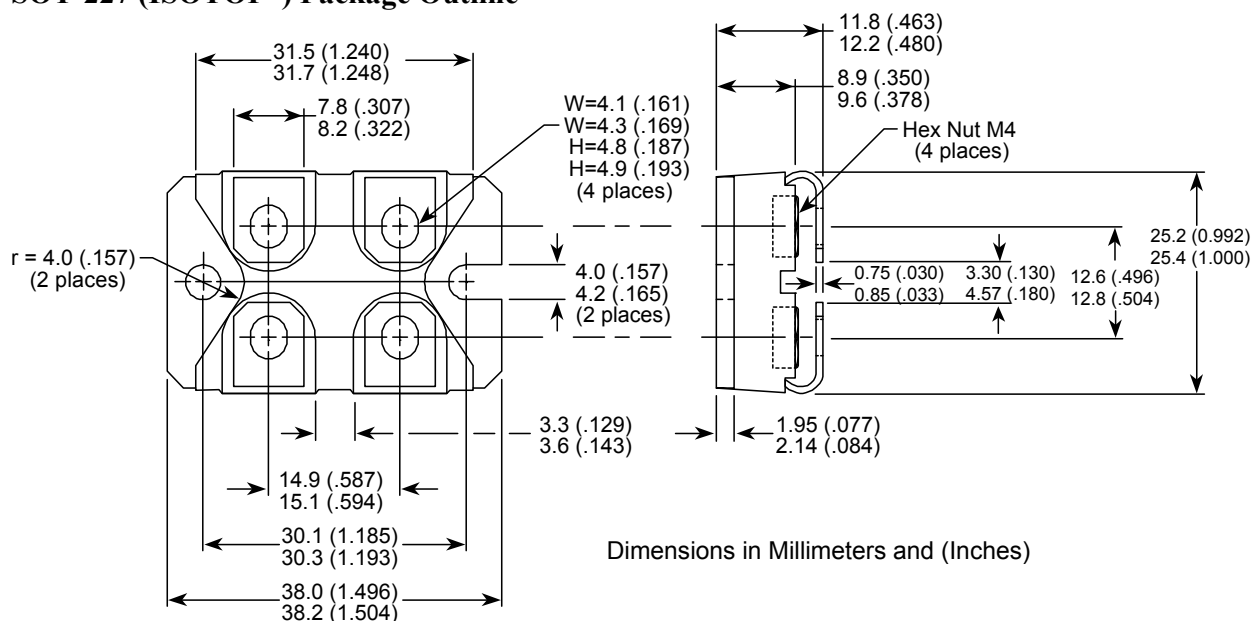
Symbol	Characteristic	Test Conditions	Min	Typ	Max	Unit	
V_F	Diode Forward Voltage	$I_F = 50\text{A}$	$T_j = 25^\circ\text{C}$		1.6	2.1	V
			$T_j = 125^\circ\text{C}$		1.6		
I_{RM}	Maximum Reverse Leakage Current	$V_R = 1200\text{V}$	$T_j = 25^\circ\text{C}$			250	μA
			$T_j = 125^\circ\text{C}$			500	

Dynamic Characteristics

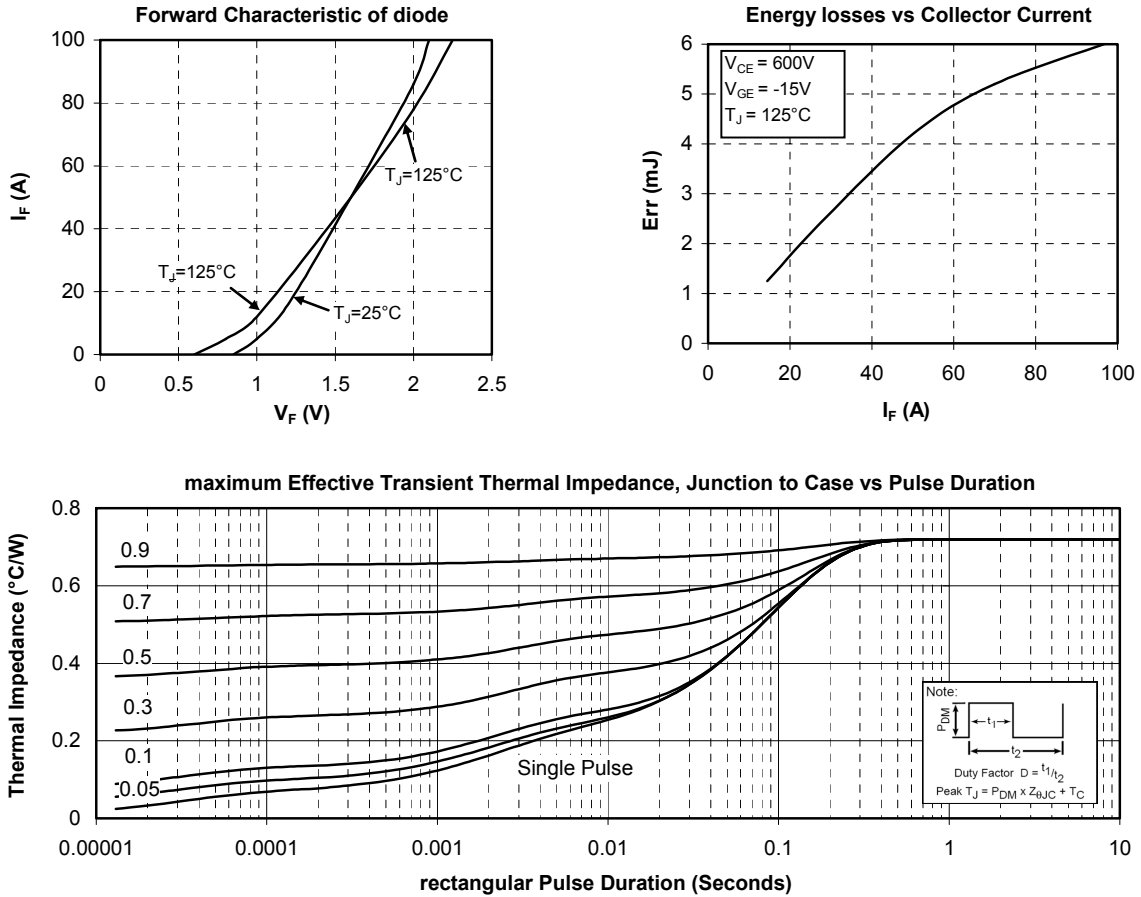
Symbol	Characteristic	Test Conditions	Min	Typ	Max	Unit	
t_{rr}	Reverse Recovery Time	$I_F = 50\text{A}$ $V_R = 600\text{V}$ $di/dt = 1900\text{A}/\mu\text{s}$	$T_j = 25^\circ\text{C}$		170		ns
			$T_j = 125^\circ\text{C}$		280		
Q_{rr}	Reverse Recovery Charge		$T_j = 25^\circ\text{C}$		5.6		μC
			$T_j = 125^\circ\text{C}$		9.9		
E_{rr}	Reverse Recovery Energy		$T_j = 25^\circ\text{C}$		2.2		mJ
			$T_j = 125^\circ\text{C}$		4.1		

Thermal and package characteristics

Symbol	Characteristic	Min	Typ	Max	Unit
R_{thJC}	Junction to Case Thermal resistance			0.72	$^\circ\text{C}/\text{W}$
R_{thJA}	Junction to Ambient			20	
V_{ISOL}	RMS Isolation Voltage, any terminal to case $t = 1\text{ min}$, 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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