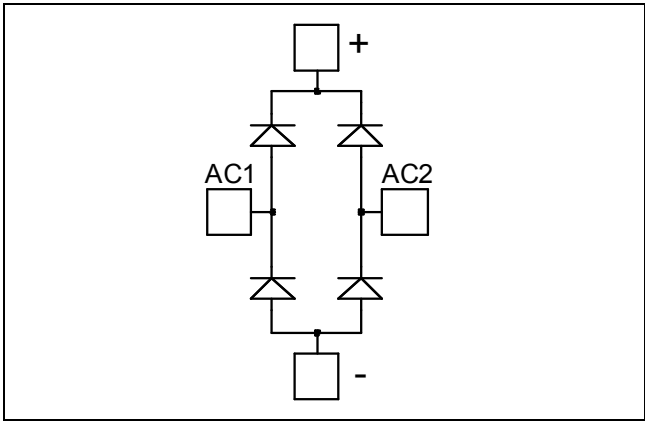


Diode Full Bridge Power Module

$V_{RRM} = 1700V$
 $I_C = 200A @ T_c = 55^\circ C$

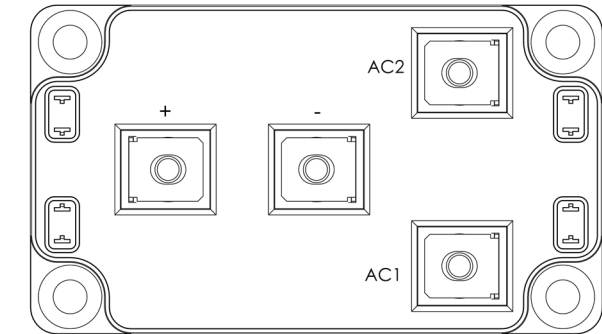


Application

- Uninterruptible Power Supply (UPS)
- 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
 - Symmetrical design
 - M5 power connectors
- High level of integration



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

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

Absolute maximum ratings

Symbol	Parameter	Max ratings	Unit		
V_R	Maximum DC reverse Voltage	1700	V		
V_{RRM}	Maximum Peak Repetitive Reverse Voltage				
$I_{F(AV)}$	Maximum Average Forward Current	Duty cycle = 50%	$T_c = 25^\circ C$	240	A
			$T_c = 55^\circ C$	200	
$I_{F(RMS)}$	RMS Forward Current		250		
I_{FSM}	Non-Repetitive Forward Surge Current	$T_j = 25^\circ C$	600		

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

Electrical Characteristics

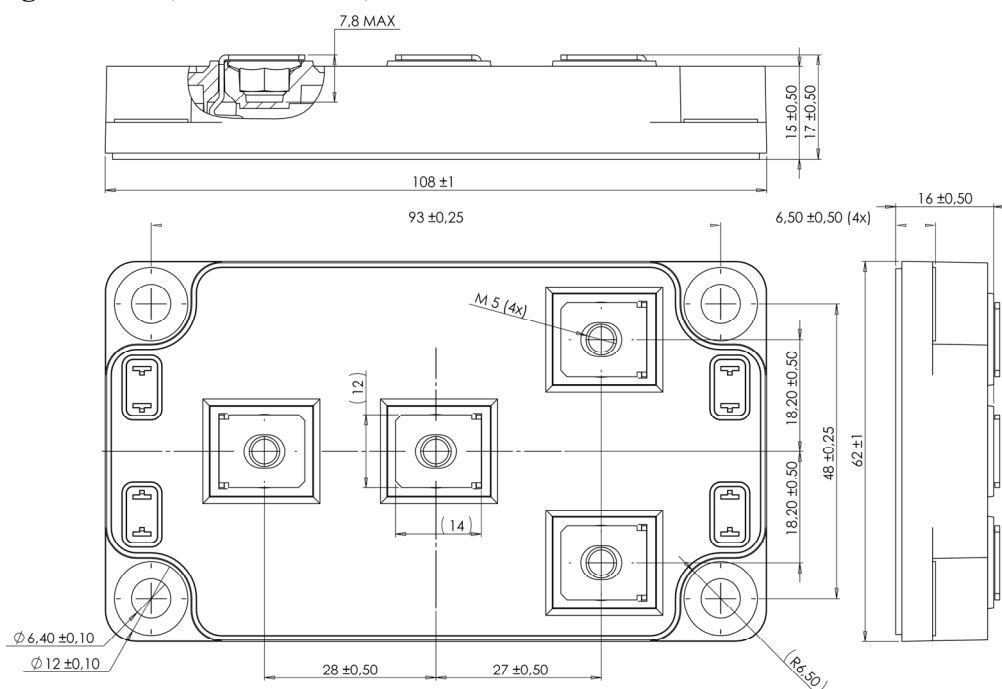
<i>Symbol</i>	<i>Characteristic</i>	<i>Test Conditions</i>		<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>
V _F	Diode Forward Voltage	I _F = 200A	T _j = 25°C		2.2	2.5	V
			T _j = 125°C		2.1		
I _{RM}	Maximum Reverse Leakage Current	V _R = 1700V	T _j = 25°C			350	μA
			T _j = 125°C			600	

Dynamic Characteristics

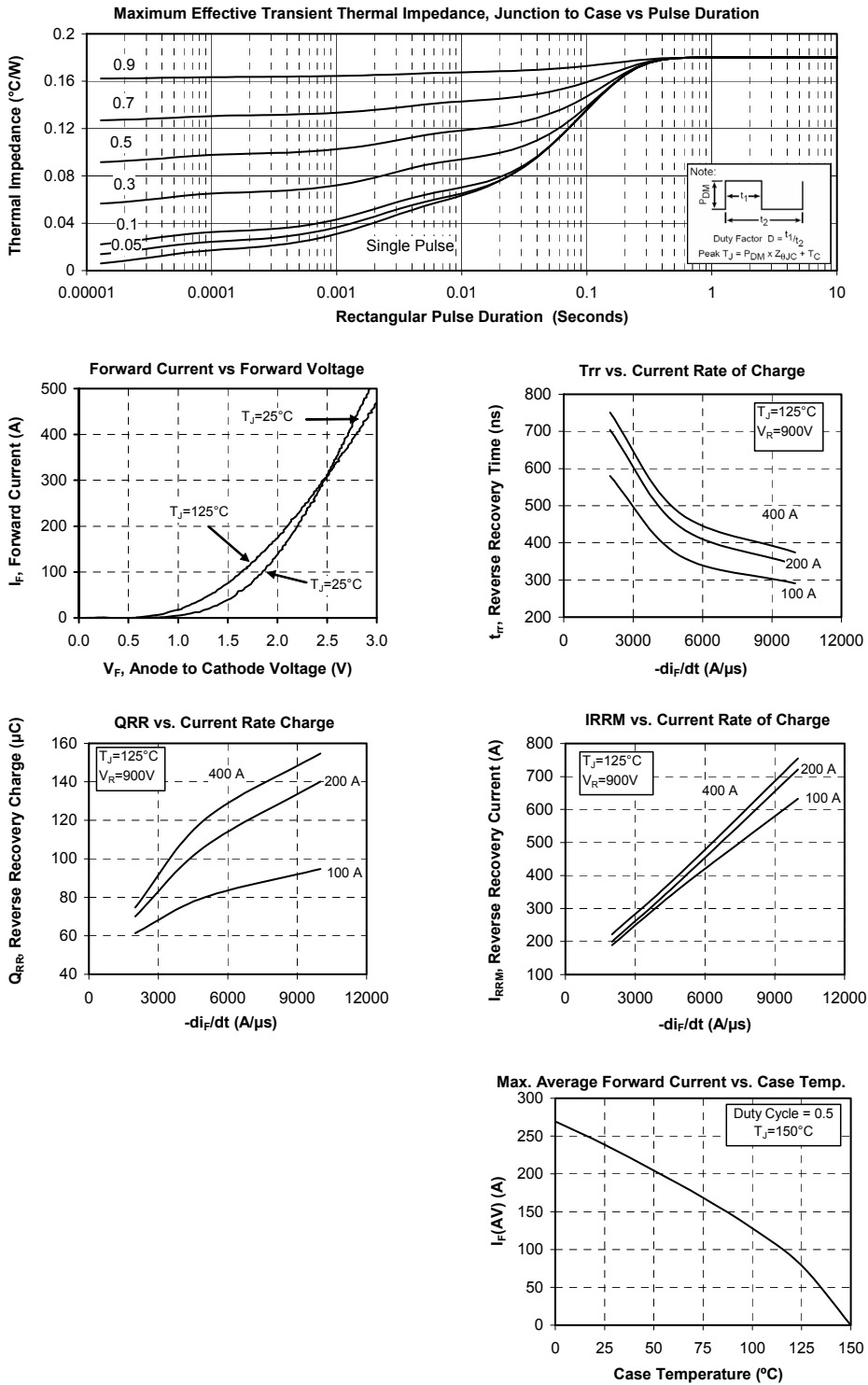
<i>Symbol</i>	<i>Characteristic</i>	<i>Test Conditions</i>		<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>
t _{rr}	Reverse Recovery Time	I _F = 200A V _R = 900V di/dt = 2000A/μs	T _j = 25°C		572		ns
Q _{rr}	Reverse Recovery Charge		T _j = 125°C		704		
			T _j = 25°C			40	
I _R RM	Reverse Recovery Current		T _j = 125°C			70	
			T _j = 25°C			140	
			T _j = 125°C			200	

Thermal and package characteristics

<i>Symbol</i>	<i>Characteristic</i>			<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Unit</i>
R _{thJC}	Junction to Case Thermal Resistance					0.18	°C/W
V _{ISOL}	RMS Isolation Voltage, any terminal to case t = 1 min, 50/60Hz			4000			V
T _J	Operating junction temperature range			-40		150	°C
T _{STG}	Storage Temperature Range			-40		125	
T _C	Operating Case Temperature			-40		100	
Torque	Mounting torque	To heatsink	M6	3		5	N.m
		For terminals	M5	2		3.5	
Wt	Package Weight					300	g

SP6 Package outline (dimensions in mm)


Typical Performance Curve



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