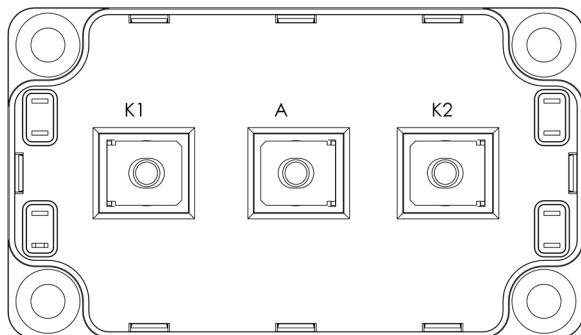
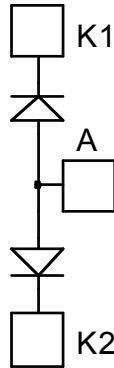


**Dual Common Anode diodes
Power Module**
 $V_{RRM} = 1200V$
 $I_C = 400A @ T_c = 60^\circ C$

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

Absolute maximum ratings

Symbol	Parameter	Max ratings		Unit
V_R	Maximum DC reverse Voltage			V
V_{RRM}	Maximum Peak Repetitive Reverse Voltage	Duty cycle = 50%	$T_c = 25^\circ C$	1200
$I_{F(AV)}$	Maximum Average Forward Current		$T_c = 60^\circ C$	400
$I_{F(RMS)}$	RMS Forward Current	Duty cycle = 50%	$T_c = 45^\circ C$	500
I_{FSM}	Non-Repetitive Forward Surge Current	8.3ms	$T_c = 45^\circ C$	3000

 **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

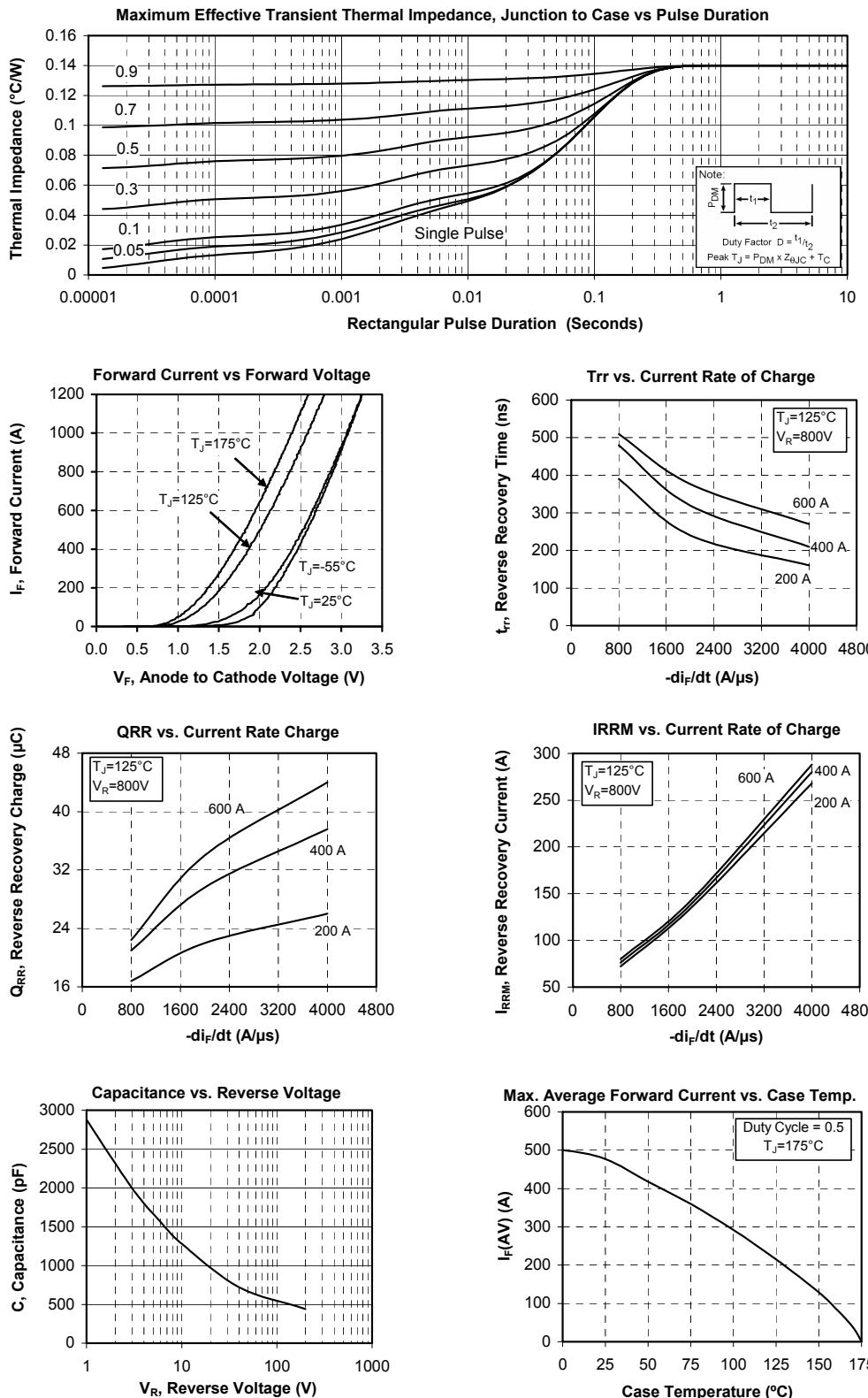
Symbol	Characteristic	Test Conditions		Min	Typ	Max	Unit
V_F	Diode Forward Voltage	$I_F = 400\text{A}$		2.4	3.0		V
		$I_F = 600\text{A}$		2.7			
		$I_F = 400\text{A}$	$T_j = 125^\circ\text{C}$	1.8			
I_{RM}	Maximum Reverse Leakage Current	$V_R = 1200\text{V}$	$T_j = 25^\circ\text{C}$			250	μA
			$T_j = 125^\circ\text{C}$			1000	
C_T	Junction Capacitance	$V_R = 1200\text{V}$			440		pF

Dynamic Characteristics

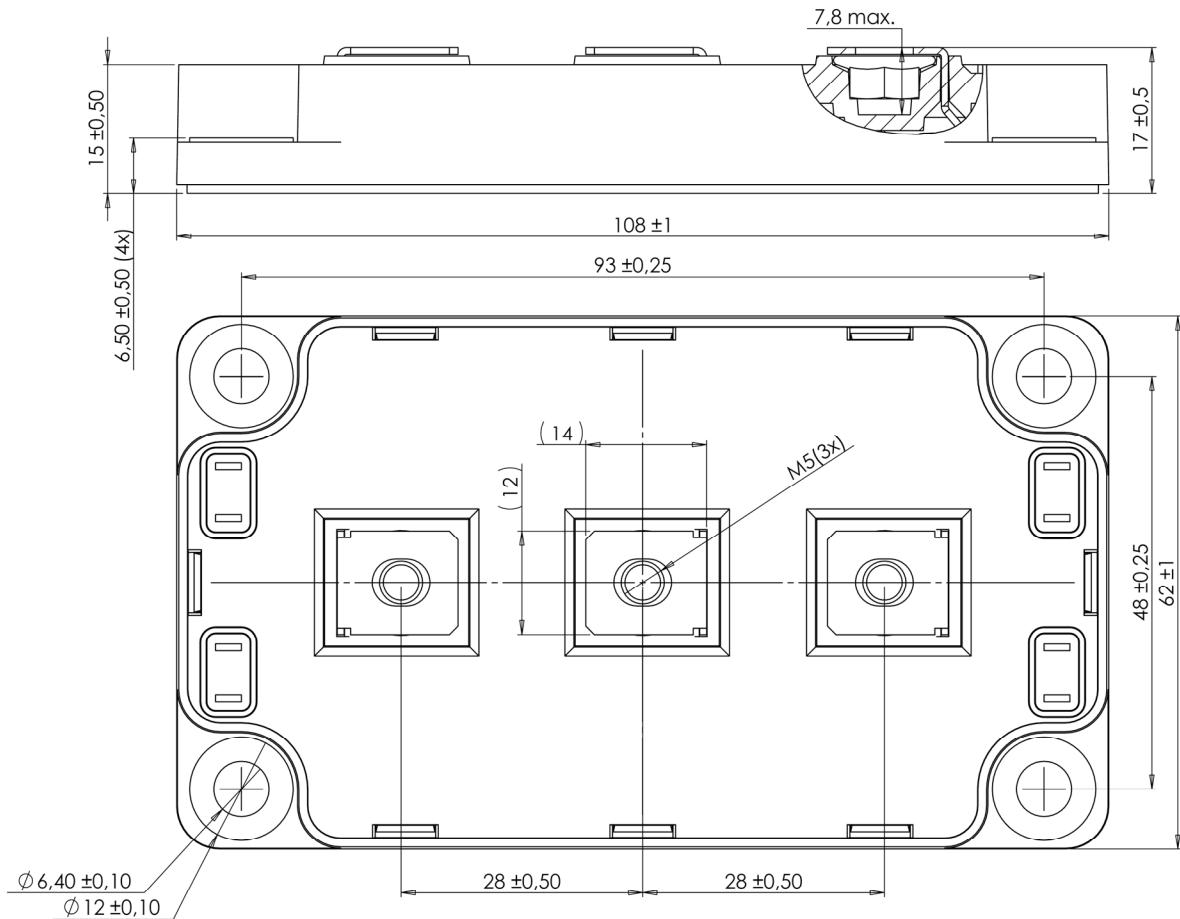
Symbol	Characteristic	Test Conditions		Min	Typ	Max	Unit
t_{rr}	Reverse Recovery Time	$I_F=1\text{A}, V_R=30\text{V}$ $di/dt = 400\text{A}/\mu\text{s}$	$T_j = 25^\circ\text{C}$		45		ns
t_{rr}	Reverse Recovery Time		$T_j = 25^\circ\text{C}$		385		ns
Q_{rr}	Reverse Recovery Charge		$T_j = 125^\circ\text{C}$		480		
Q_{rr}	Reverse Recovery Charge	$I_F = 400\text{A}$ $V_R = 800\text{V}$ $di/dt = 800\text{A}/\mu\text{s}$	$T_j = 25^\circ\text{C}$		4.2		μC
			$T_j = 125^\circ\text{C}$		20.9		
I_{RRM}	Reverse Recovery Current		$T_j = 25^\circ\text{C}$		24		A
			$T_j = 125^\circ\text{C}$		76		
t_{rr}	Reverse Recovery Time	$I_F = 400\text{A}$ $V_R = 800\text{V}$ $di/dt = 4000\text{A}/\mu\text{s}$			210		ns
Q_{rr}	Reverse Recovery Charge				38		μC
I_{RRM}	Reverse Recovery Current				280		A

Thermal and package characteristics

Symbol	Characteristic			Min	Typ	Max	Unit
R_{thJC}	Junction to Case Thermal Resistance					0.14	$^\circ\text{C}/\text{W}$
V_{ISOL}	RMS Isolation Voltage, any terminal to case t=1 min, 50/60Hz			4000			V
T_j	Operating junction temperature range			-40		175	$^\circ\text{C}$
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

Typical Performance Curve


SP6 Package outline (dimensions in mm)



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