



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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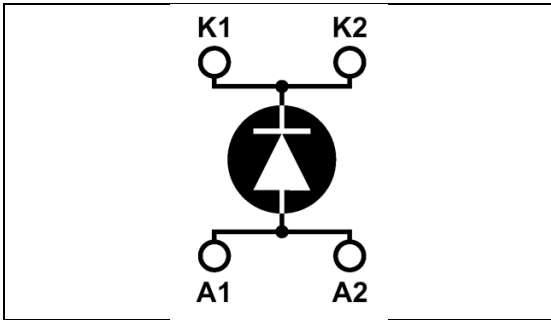
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Single diode Power Module

$V_{RRM} = 200V$
 $I_F = 500A @ T_c = 80^\circ C$



Application

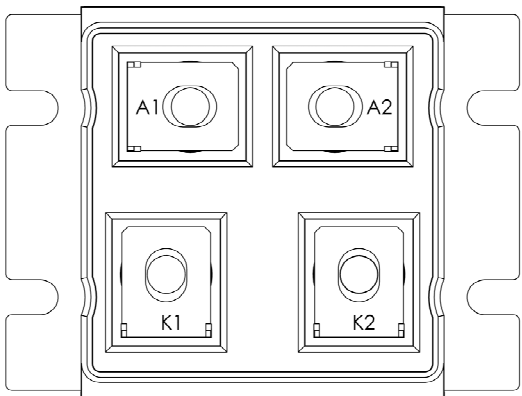
- Anti-Parallel diode
 - Switchmode Power Supply
 - Inverters
- Snubber diode
- Uninterruptible Power Supply (UPS)
- Induction heating
- Welding equipment
- High speed rectifiers
- Electric vehicles

Features

- Ultra fast recovery times
- Soft recovery characteristics
- Very low stray inductance
- High blocking voltage
- High current
- Low leakage current

Benefits


- 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	200	V	
V_{RRM}	Maximum Peak Repetitive Reverse Voltage			
$I_{F(AV)}$	Maximum Average Forward Current	Duty cycle = 50%	$T_c = 25^\circ C$	A
			$T_c = 80^\circ C$	
$I_{F(RMS)}$	RMS Forward Current	1000		
I_{FSM}	Non-Repetitive Forward Surge Current	$T_j = 45^\circ C ; 8.3ms$	5000	

 **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 = 500A		1	1.1	V
		I _F = 1000A		1.4		
		I _F = 500A	T _j = 125°C		0.9	
I _{RM}	Maximum Reverse Leakage Current	V _R = 200V			2.5	mA
C _T	Junction Capacitance	V _R = 200V		2		nF

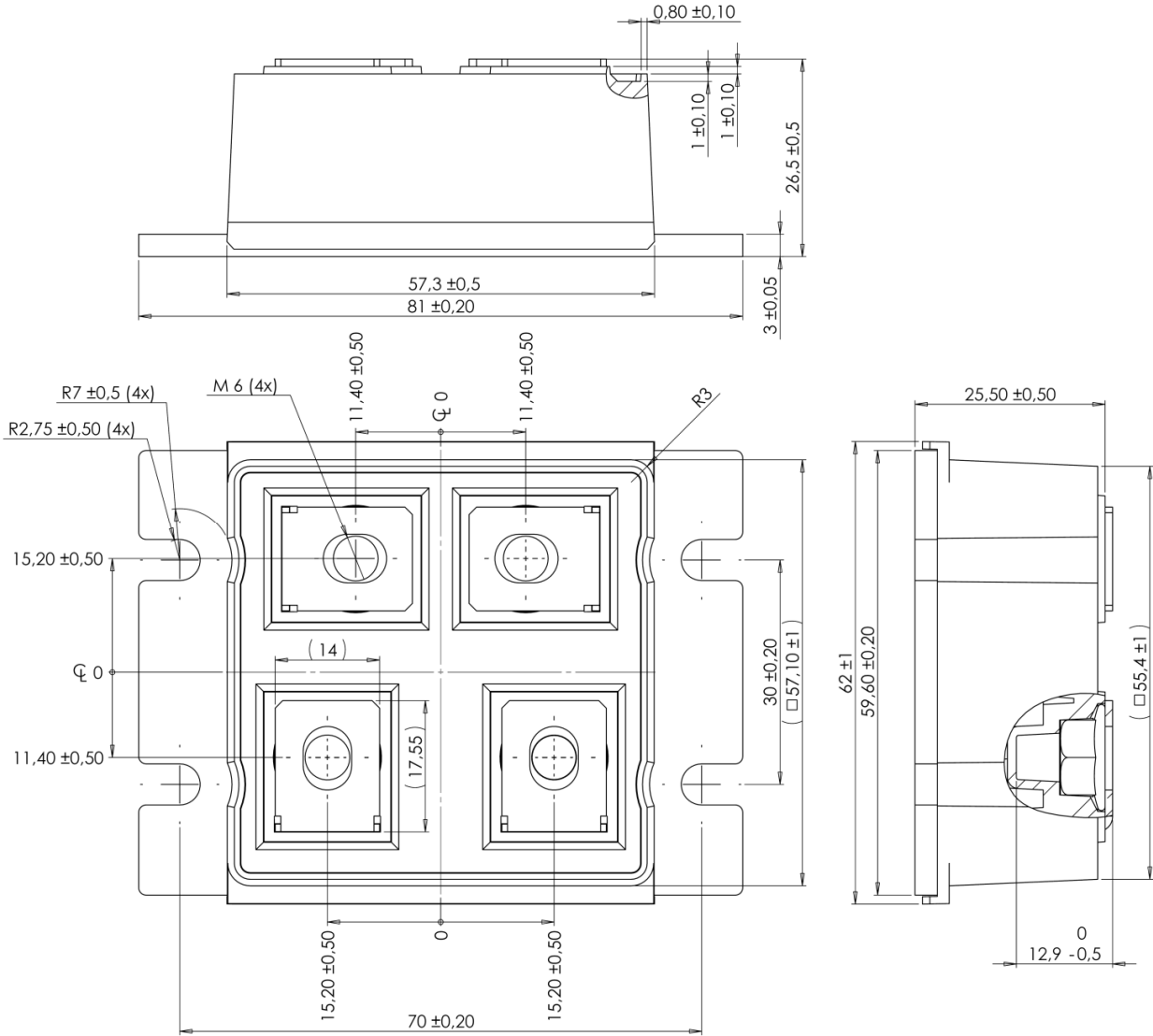
Dynamic Characteristics

<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 = 500A V _R = 133V di/dt=1000A/μs	T _j = 25°C		60		ns
			T _j = 125°C		110		
Q _{RR}	Reverse Recovery Charge		T _j = 25°C		1		μC
			T _j = 125°C		4.2		
I _{RR}	Reverse Recovery Current		T _j = 25°C		30		A
			T _j = 125°C		75		
t _{RR}	Reverse Recovery Time	I _F = 500A V _R = 133V di/dt=5000A/μs	T _j = 125°C		80		ns
Q _{RR}	Reverse Recovery Charge				9.9		μC
I _{RR}	Reverse Recovery Current				220		A
R _{thJC}	Junction to Case Thermal Resistance				0.11	°C/W	

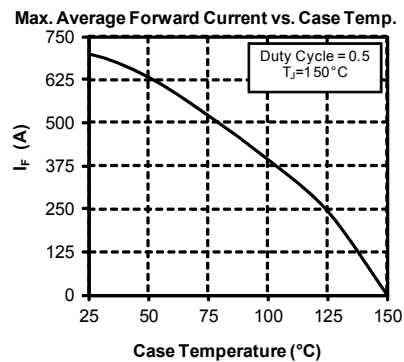
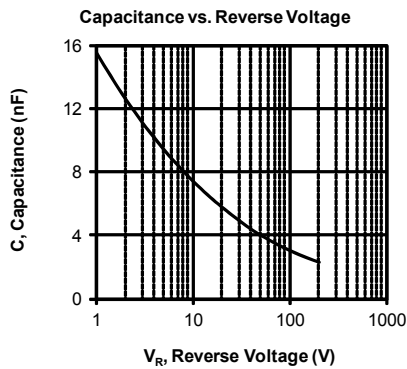
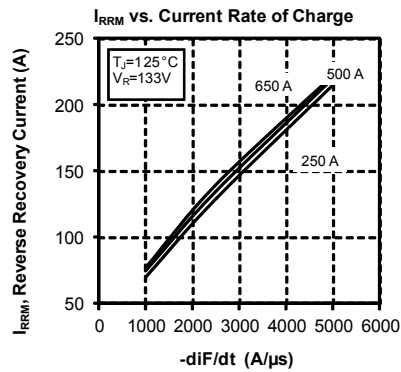
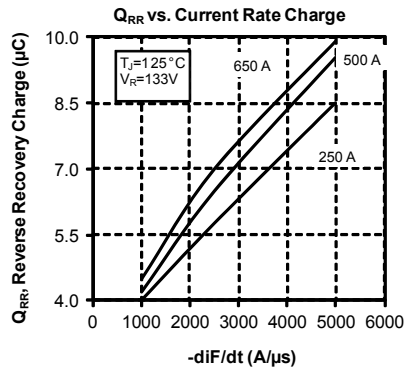
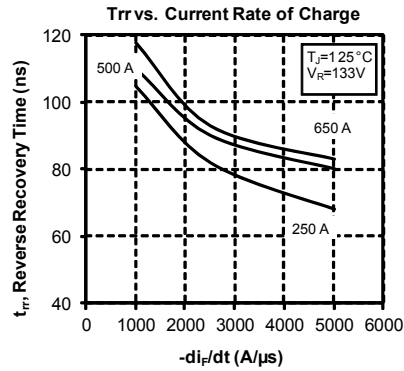
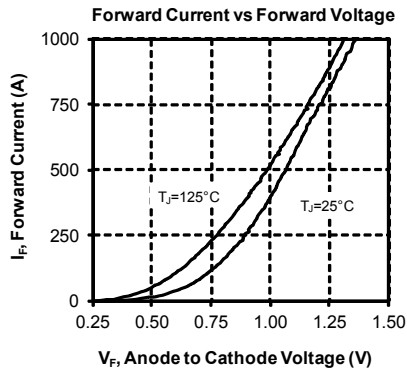
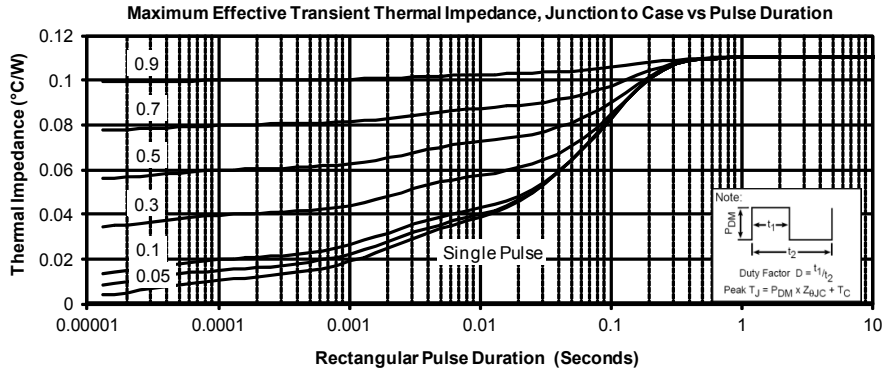
Thermal and package characteristics

<i>Symbol</i>	<i>Characteristic</i>	<i>Min</i>	<i>Max</i>	<i>Unit</i>		
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 _{JOP}	Recommended junction temperature under switching conditions	-40	T _{Jmax} -25			
T _{STG}	Storage Temperature Range	-40	125			
T _C	Operating Case Temperature	-40	100			
Torque	Mounting torque	To heatsink	M5	2.5	3.5	N.m
		For terminals	M6	3	4	
Wt	Package Weight				250	g

LP4 Package outline (dimensions in mm)



Typical Performance Curve



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