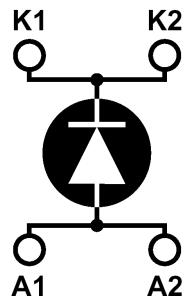
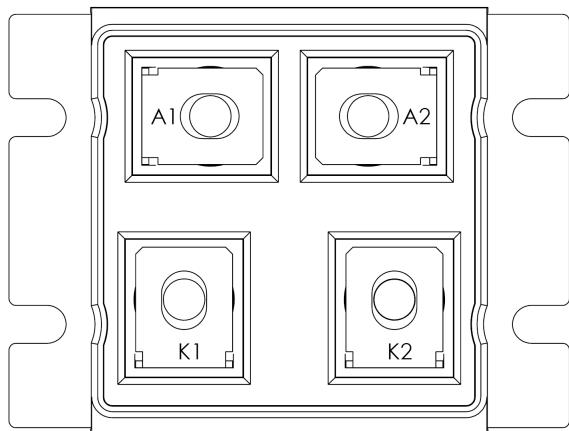


***Single diode
Power Module***
 $V_{CES} = 400V$
 $I_C = 500A @ T_c = 80^\circ C$

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	DC reverse Voltage		400	V
V_{RRM}	Peak Repetitive Reverse Voltage			
$I_{F(AV)}$	Average Forward Current	Duty cycle = 50%	$T_c = 25^\circ C$ $T_c = 80^\circ C$	500 500
$I_{F(RMS)}$	RMS Forward Current		850	A
I_{FSM}	Non-Repetitive Forward Surge Current		$T_j = 25^\circ C$	5000

CAUTION: These Devices are sensitive to Electrostatic Discharge. Proper Handling Procedures Should Be Followed

Electrical Characteristics

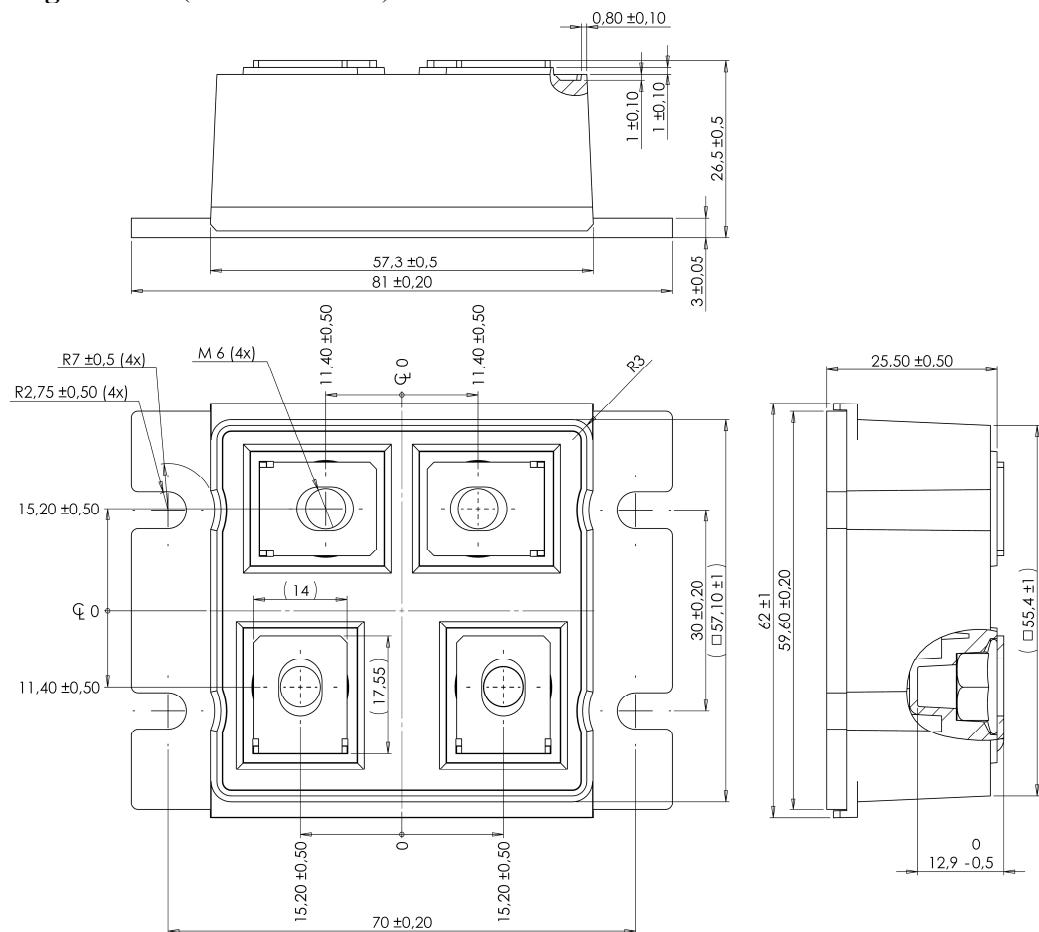
Symbol	Characteristic	Test Conditions		Min	Typ	Max	Unit
V _F	Diode Forward Voltage	I _F = 500A		1.3	1.5		V
		I _F = 1000A		1.6			
		I _F = 500A	T _j = 125°C	1.2			
I _{RM}	Maximum Reverse Leakage Current	V _R = 400V	T _j = 25°C			2000	μA
			T _j = 125°C			5000	
C _T	Junction Capacitance	V _R = 200V		1300			pF

Dynamic Characteristics

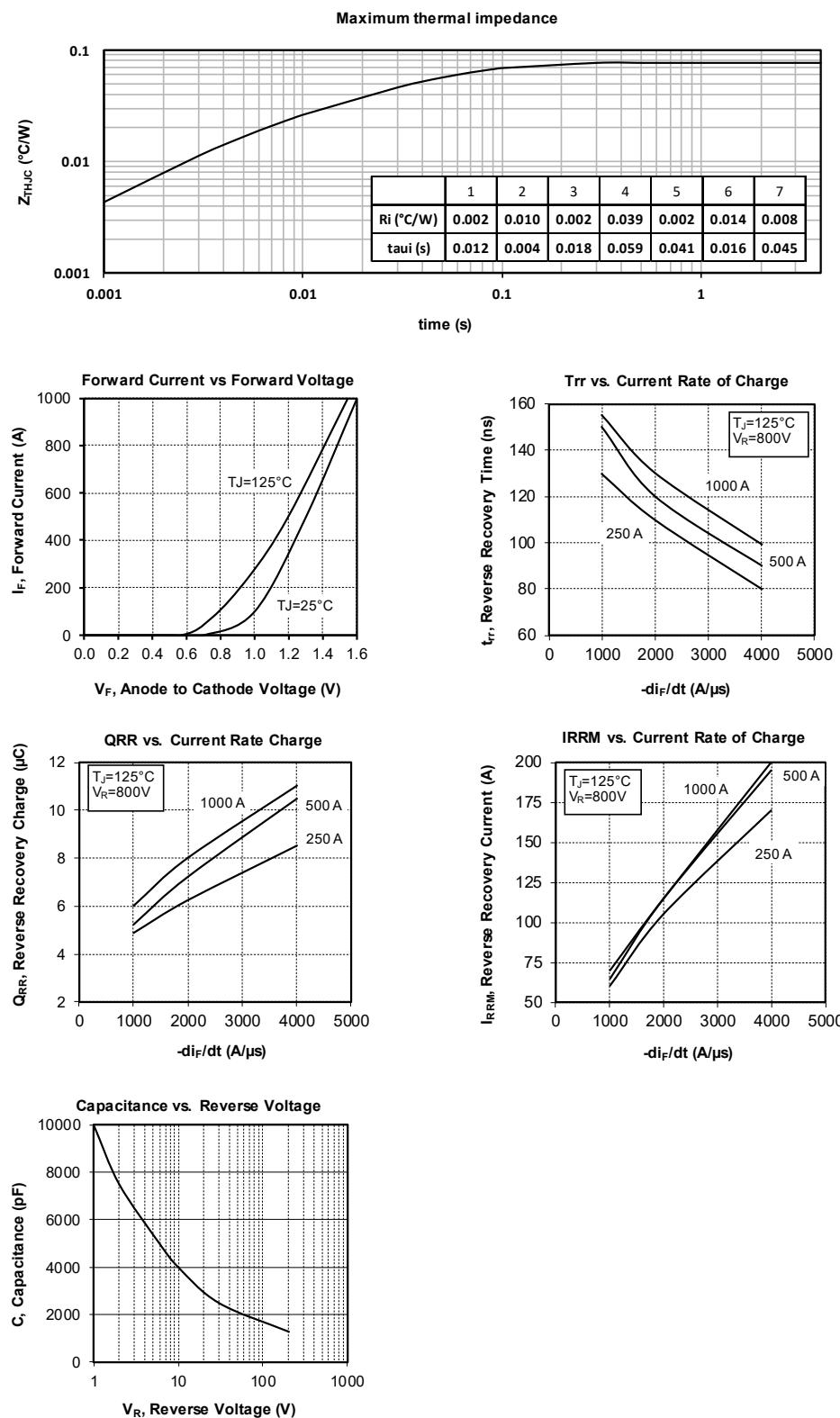
Symbol	Characteristic	Test Conditions		Min	Typ	Max	Unit
t _{rr}	Reverse Recovery Time	I _F = 500A	T _j = 25°C	50			ns
			T _j = 125°C	150			
Q _{rr}	Reverse Recovery Charge	V _R = 268V di/dt=1000A/μs	T _j = 25°C	750			nC
			T _j = 125°C	5250			
I _{rr}	Reverse Recovery Current		T _j = 25°C	30			A
			T _j = 125°C	65			
t _{rr}	Reverse Recovery Time	I _F = 500A	T _j = 125°C	90			ns
Q _{rr}	Reverse Recovery Charge	V _R = 268V di/dt=4000A/μs		10.5			μC
I _{rr}	Reverse Recovery Current			195			A

Thermal and package characteristics

Symbol	Characteristic			Min	Max	Unit
R _{thJC}	Junction to Case Thermal Resistance			0.08		°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 _{JOP}	Recommended junction temperature under switching conditions		-40	T _{jmax} -25		
T _{STG}	Storage Temperature Range		-40	125		
T _C	Operating Case Temperature		-40	125		
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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