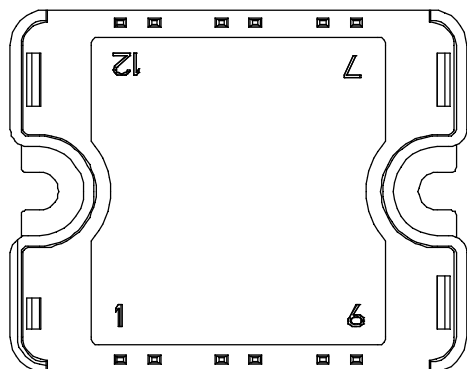
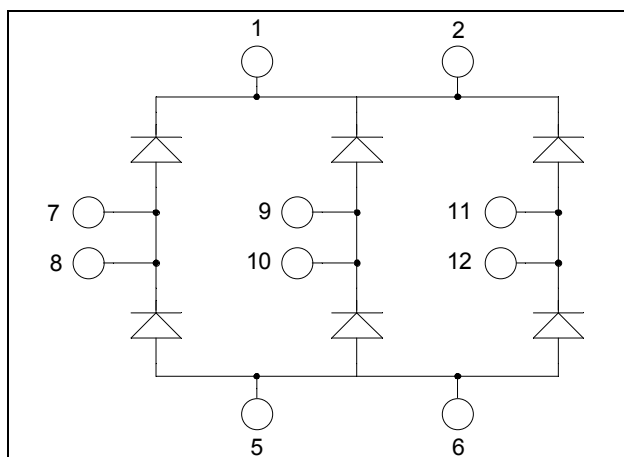


3 Phase rectifier bridge Power Module

$$V_{RRM} = 1600V$$

$$I_C = 40A @ T_c = 80^{\circ}C$$



All multiple inputs and outputs must be shorted together
 1/2 ; 5/6 ; 7/8 ; 9/10 ; 11/12

Application

- Input rectifiers for inverter
- Battery DC power supply

Features

- High blocking voltage
- High surge current
- Low leakage current
- Very low stray inductance
 - Symmetrical design
- High level of integration

Benefits

- Solderable terminals for easy PCB mounting
- Direct mounting to heatsink (isolated package)
- Low profile
- RoHS compliant

Absolute maximum ratings

Symbol	Parameter			Max ratings	Unit
V _R	Maximum DC reverse Voltage			1600	V
V _{RRM}	Maximum Peak Repetitive Reverse Voltage				
I _F	DC Forward Current		T _C = 80°C	40	A
I _{FSM}	Non-Repetitive Forward Surge Current	t=10ms	T _J = 45°C	400	

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

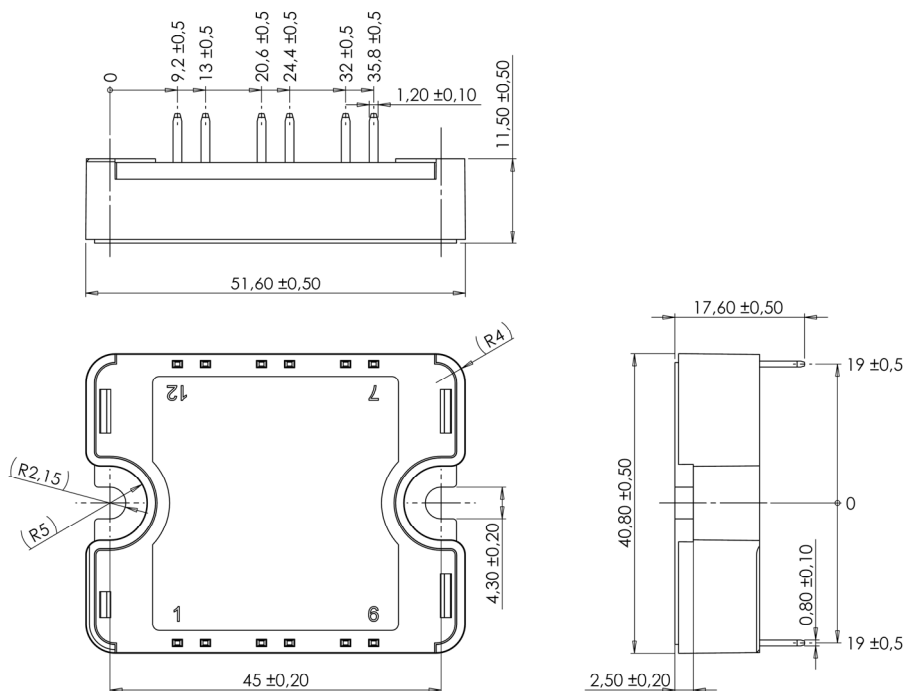
Electrical Characteristics

Symbol	Characteristic	Test Conditions	Min	Typ	Max	Unit
I_R	Reverse Current	$V_R = 1600\text{V}$	$T_j = 25^\circ\text{C}$	20		μA
			$T_j = 125^\circ\text{C}$	2		mA
V_F	Forward Voltage	$I_F = 40\text{A}$	$T_j = 25^\circ\text{C}$	1.3		V
			$T_j = 125^\circ\text{C}$	1.1		
V_T	On – state Voltage			0.8		V
r_T	On – state Slope resistance			10.5		$\text{m}\Omega$

Thermal and package characteristics

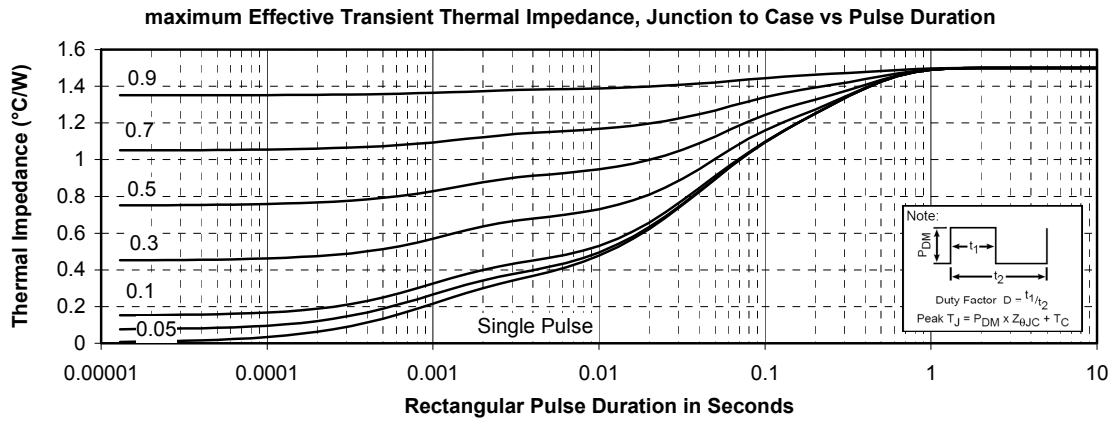
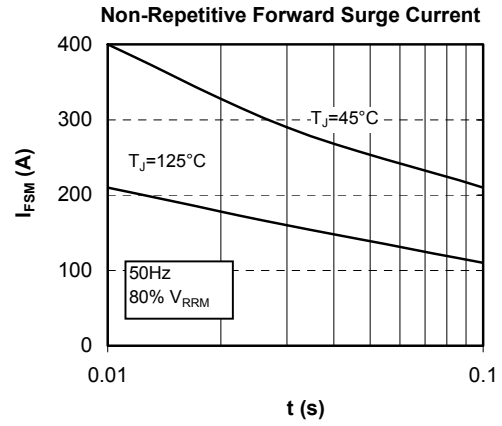
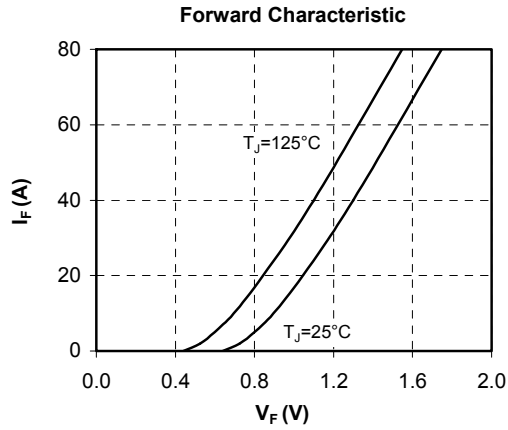
Symbol	Characteristic			Min	Typ	Max	Unit
R _{thJC}	Junction to Case Thermal Resistance					1.5	°C/W
V _{ISOL}	RMS Isolation Voltage, any terminal to case t =1 min, 50/60Hz			4000			V
T _J	Operating junction temperature range			-40		150	°C
T _{STG}	Storage Temperature Range			-40		125	
T _C	Operating Case Temperature			-40		100	
Torque	Mounting torque	To heatsink	M4	2		3	N.m
Wt	Package Weight					80	g

SP1 Package outline (dimensions in mm)



See application note 1904 - Mounting Instructions for SP1 Power Modules on www.microsemi.com

Typical Performance Curve



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