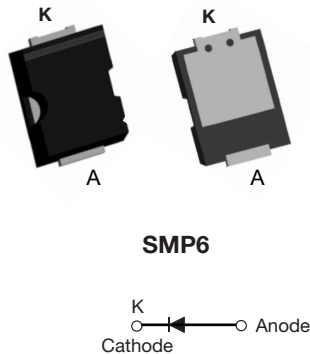


Trench MOS Barrier Schottky Rectifier



Features

- Advanced trench technology
- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead Free Finish, RoHS Compliant

Applications

- DC/DC Converters
- AC/DC Adaptors
- Switching Power Supplies
- Freewheeling Diodes

Maximum ratings and electrical characteristics (T_J = 25°C unless otherwise noted)

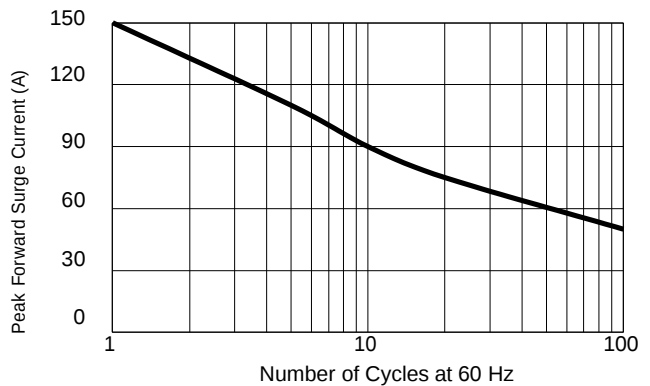
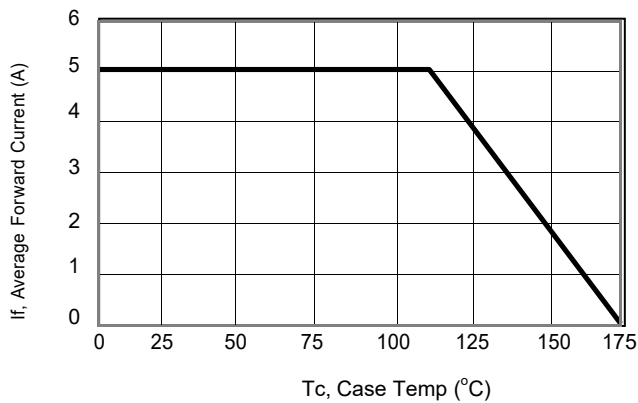
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V _{RRM}	300		V
Maximum average forward rectified current	per diode		I _{F(AV)}	5		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	80		A
Operating junction and storage temperature range			T _J , T _{STG}	-65 to +175		°C
Typical thermal resistance per leg	SMP6		R _{θJC}	25		°C/W
Instantaneous forward voltage per diode			V _{F(1)}	TYP.	MAX.	V
	I _F =1A	T _J =25°C		0.76	0.81	
	I _F =1A	T _J =125°C		0.71	-	
	I _F =5A	T _J =25°C		0.89	0.95	
	I _F =5A	T _J =125°C		0.83	-	
Instantaneous reverse current per diode at rated reverse voltage		T _J =25°C	I _{R(2)}	1	5	uA
		T _J =125°C		-	200	uA

Notes:

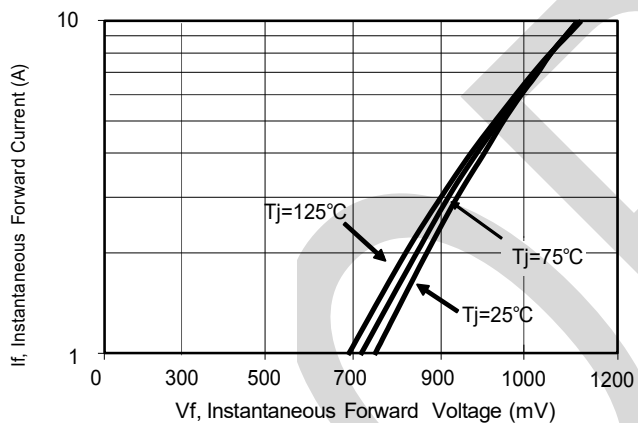
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

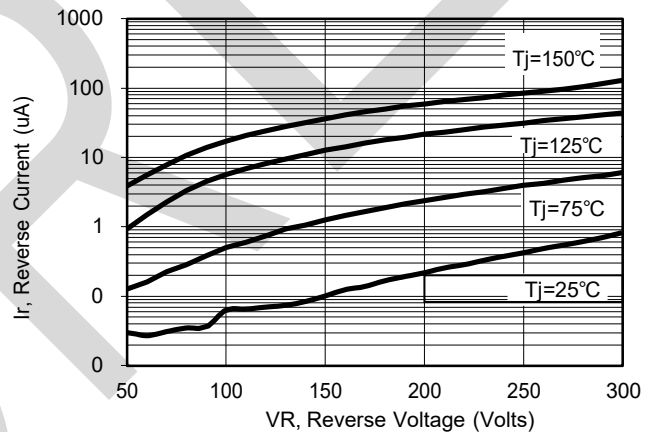
The forward voltage and forward current curve



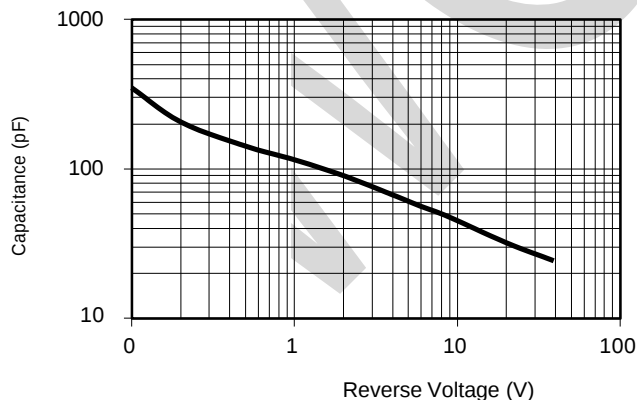
Current Derating, Case



Maximum Repetitive Surge Current

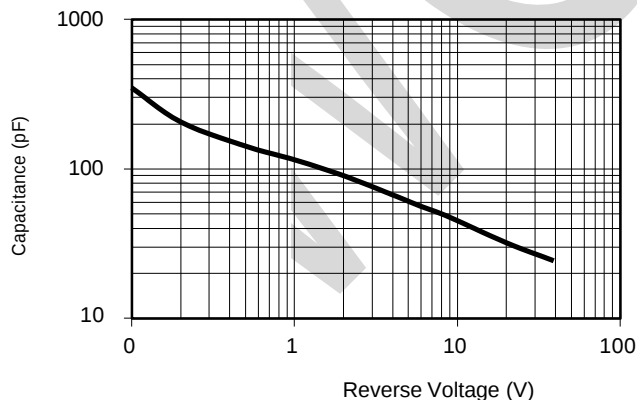


Typical Forward Voltage



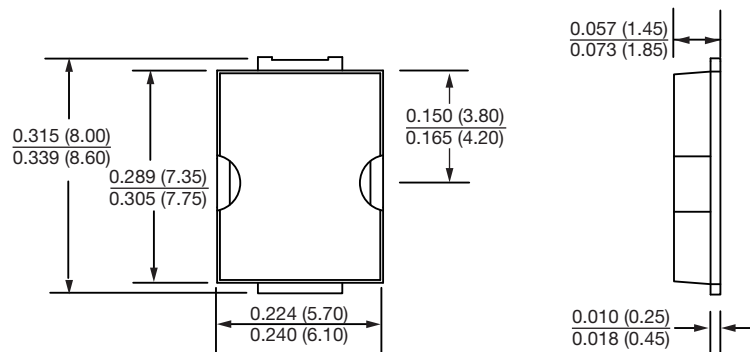
Typical Reverse Current

Typical Junction Capacitance

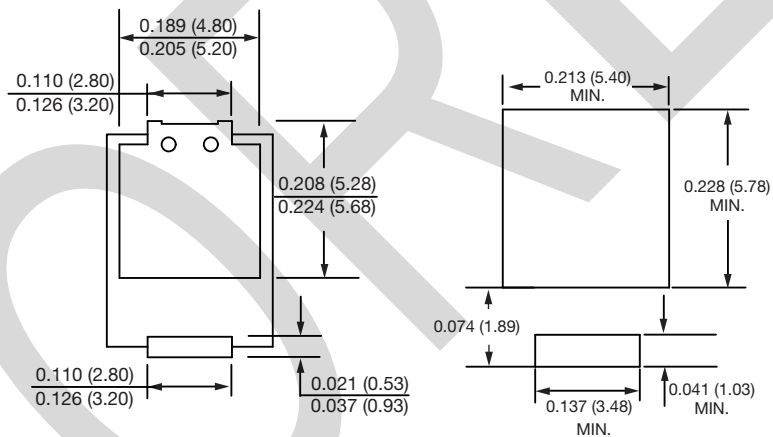


PACKAGE OUTLINE DIMENSIONS

SMP6



Mounting Pad Layout



Dimensions in inches and (millimeters)