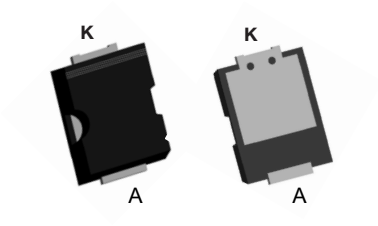
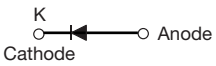
TSP5A300P6

15-NOV-2019

Trench MOS Barrier Schottky Rectifier



SMP6



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 (TJ = 25°C unless otherwise noted)

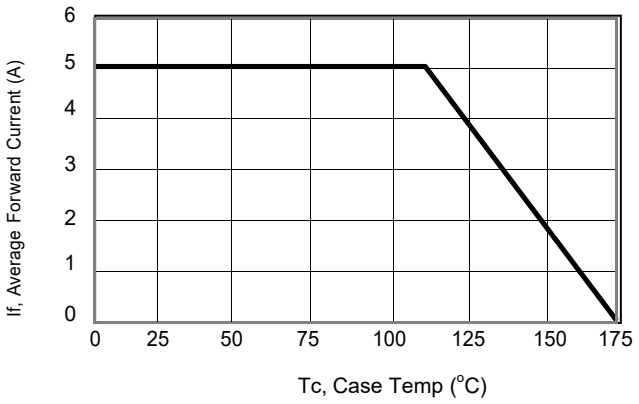
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V_{RRM}	300		V
Maximum average forward rectified current	per diode		$I_{F(AV)}$	5		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I_{FSM}	80		A
Operating junction and storage temperature range			T_J, T_{STG}	-65 to +175		℃
Typical thermal resistance per leg	**SMP6**		$R_{\Theta JC}$	25		°C/W
Instantaneous forward voltage per diode			$V_{F(1)}$	TYP.	MAX.	
	I_F=1A	T_J=25°C		0.76	0.81	V
	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:

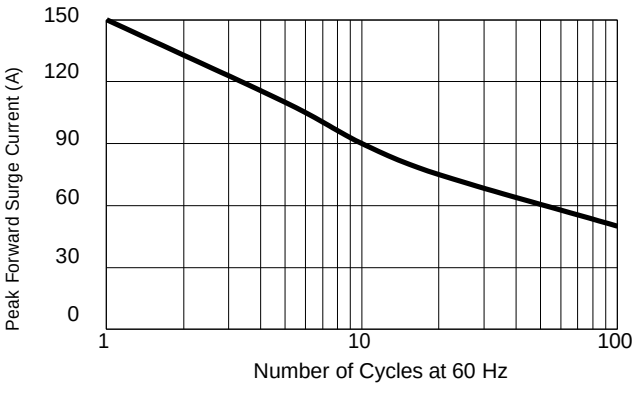
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≦ 40 ms

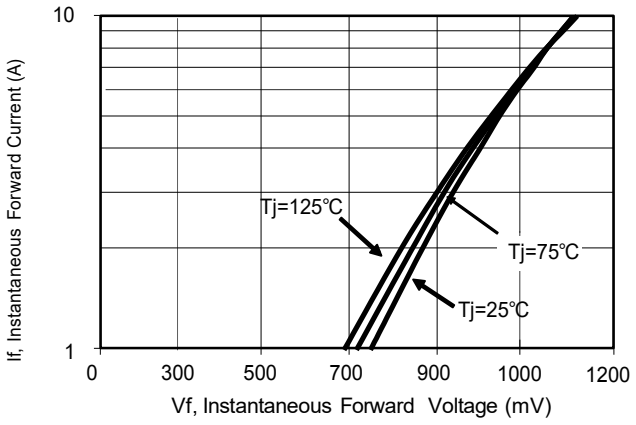
The forward voltage and forward current curve



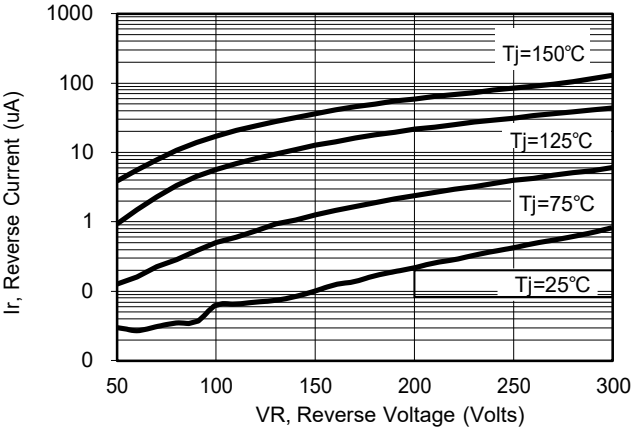
Current Derating, Case



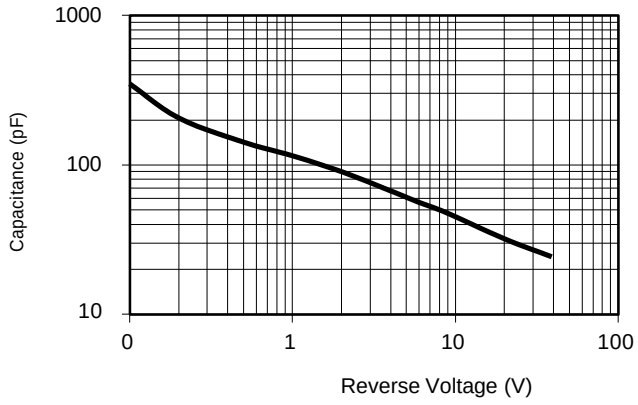
Maximum Repetitive Surge Current



Typical Forward Voltage



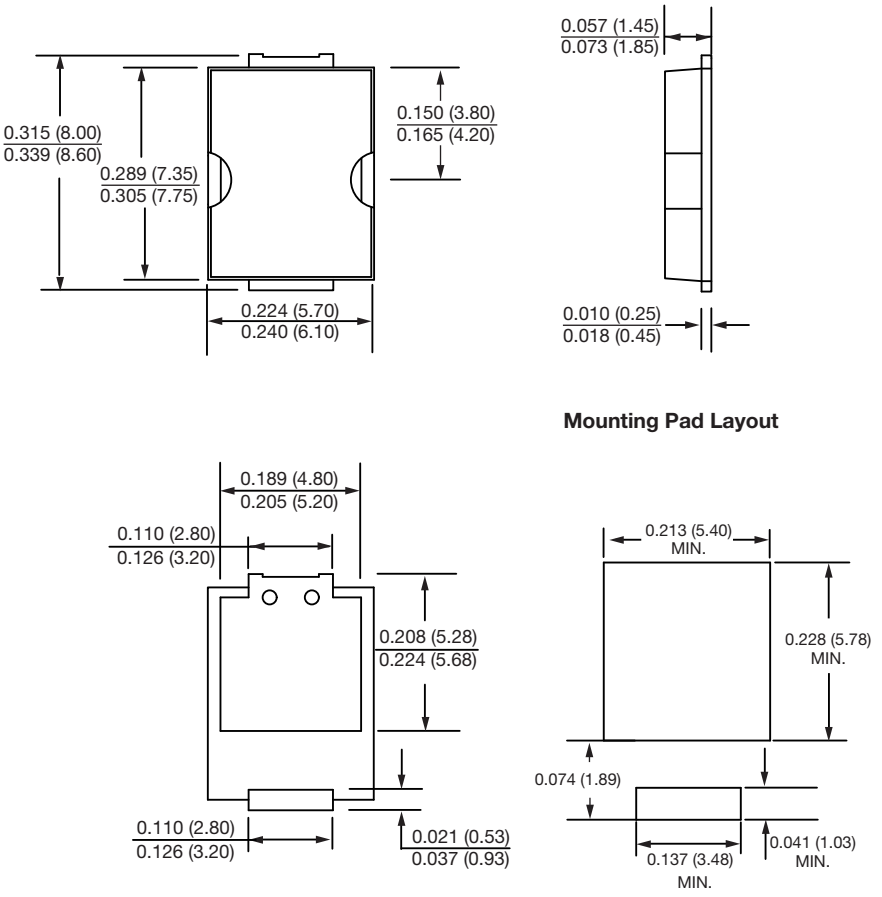
Typical Reverse Current



Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS

SMP6



Dimensions in inches and (millimeters)