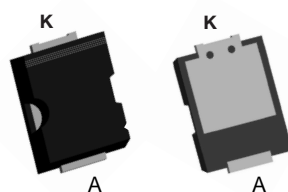




Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junctions
- Ultrafast reverse recovery time for high efficiency
- High forward surge capability
- High temperature soldering: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU and WEEE 2002/96/EC



RoHS
COMPLIANT

SMP6



Mechanical Date

- **Case:**SMP6
Molding compound meets UL 94 V-0 flammability rating
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

Major Ratings and Characteristics

$I_{F(AV)}$	3.0A
V_{RRM}	50V to 600V
I_{FSM}	100A
t_{rr}	35ns
V_F	0.95V, 1.25V, 1.7V
$T_{jmax.}$	150°C

Maximum Ratings & Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Symbol	PES3A	PES3B	PES3C	PES3D	PES3E	PES3G	PES3J	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_M=135^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Typical thermal resistance	$R_{\theta JA}^{(1)}$	55							°C/W
	$R_{\theta JM}^{(2)}$	3							
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Note 1: Free air, mounted on recommended copper pad area; thermal resistance $R_{\theta JA}$ - junction to ambient

2. Mounted on 30 mm x 30 mm pad areas aluminum PCB; thermal resistance $R_{\theta JM}$ - junction to mount measured at cathode side

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions	Symbol	PES3A~PES3D	PES3E~PES3G	PES3J	Unit
Instantaneous forward voltage	$I_F=3.0A$	V_F	0.95	1.25	1.7	V
Reverse current	$V_R=V_{DC}$ $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	5.0			μA
			250			
Reverse recovery time	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$	t_{rr}	35			ns



Characteristic Curves ($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted)

Fig 1. Forward Current Derating Curve

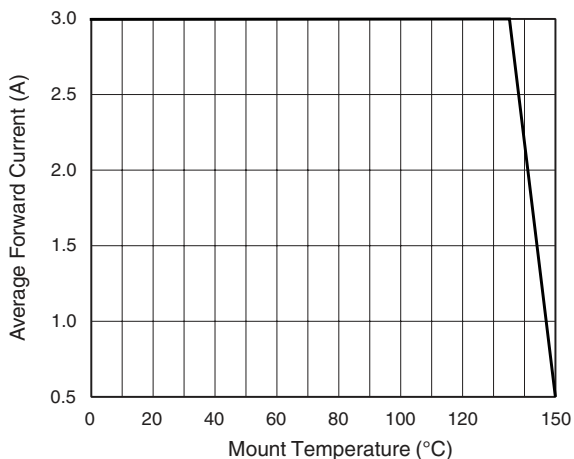


Fig 2. Maximum Non-Repetitive Peak Forward Surge Current

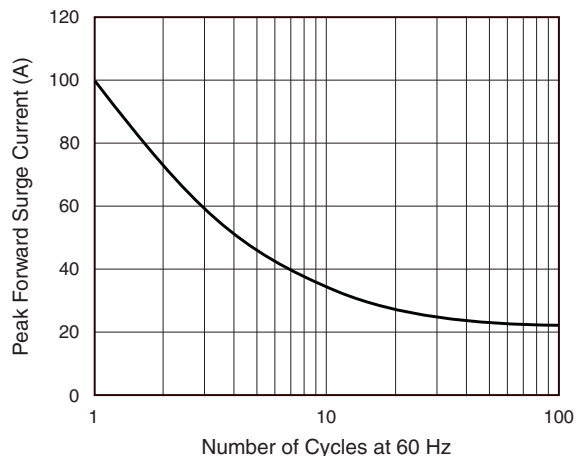


Fig3. Typical Instantaneous Forward Characteristics

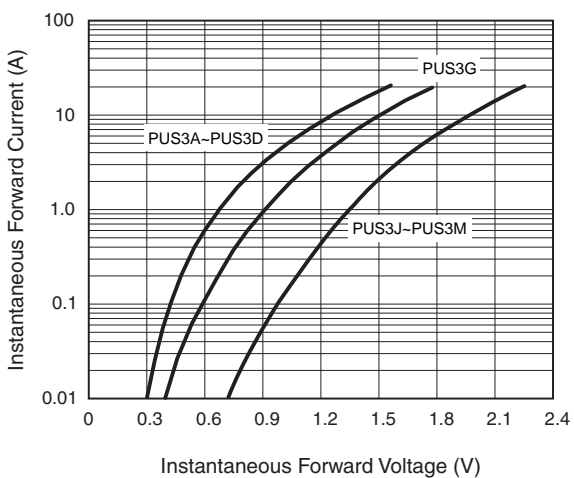
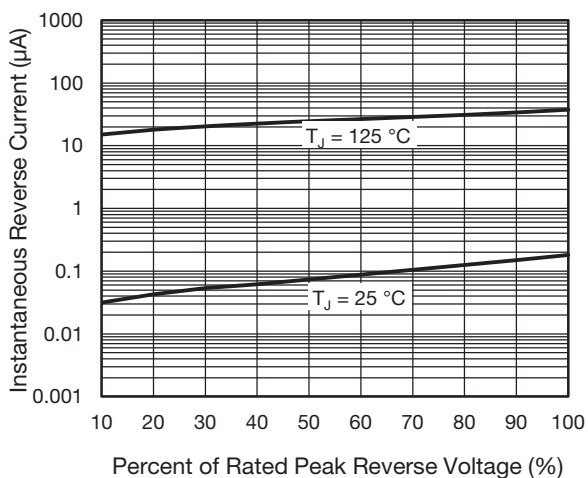


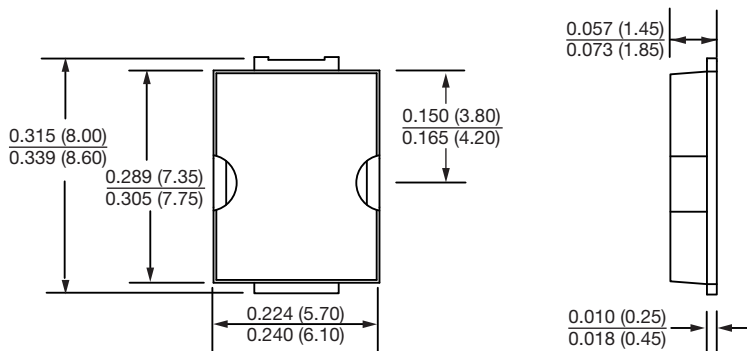
Fig 4. Typical Reverse Characteristics



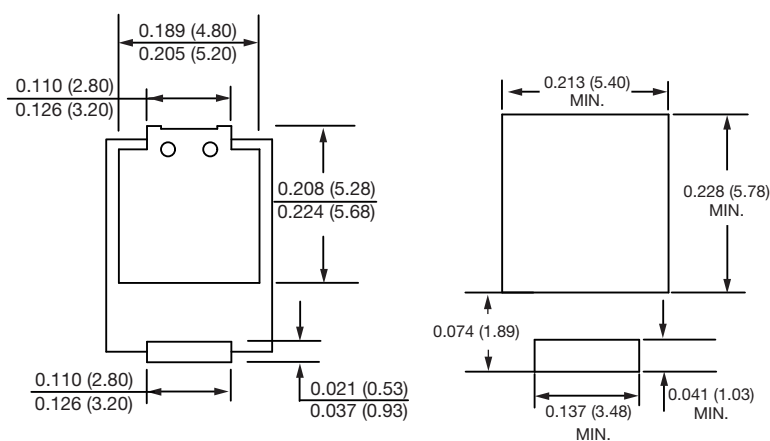


Package Outline

SMP6



Mounting Pad Layout



Dimensions in inches and (millimeters)

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