

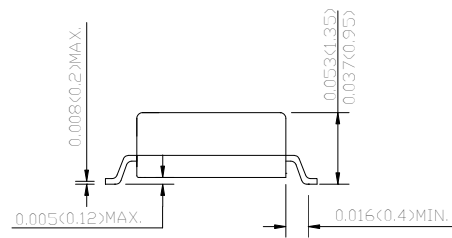
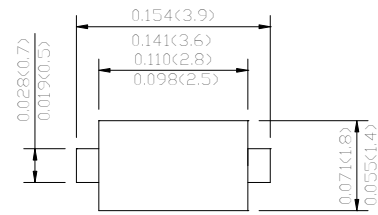
### FEATURES

- High-Surge-Capability
- Low Forward Voltage
- Low-Profile-Package
- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix Designates Compliant. See ordering information)

### MECHANICAL DATA

- Packaging: Powerlite-123
- Marking Code: SM5817PL---K2; SM5818PL---K3 ; SM5819PL---K4
- Case Material: Molded Plastic. UL Flammability
- Classification Rating 94V-0 and MSL rating 1

Powerlite-123



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbols	SM5817PL	SM5818PL	SM5819PL	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS Voltage	$V_{RMS}$	14	27	28	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	Volts
Average Forward Rectified Current @ $T_A = 50^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30.0			Amp
Maximum Forward Voltage at 1.0A DC	$V_F$	0.45	0.56	0.60	Volts
Maximum Reverse Current @ Rated $T_A = 25^\circ\text{C}$ Reverse Voltage @ $T_A = 100^\circ\text{C}$	$I_R$	0.1 9.0			mAmp
Typical Thermal Resistance (Note2) $T_J = 25^\circ\text{C}$	$R_{\theta JA}$	80			$^\circ\text{C}/\text{W}$
Typical Junction capacitance	$C_J$	110			pF
Operating Temperature Range	$T_J$	-65 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150			$^\circ\text{C}$

### NOTES:

1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.
2. Thermal Resistance : PC Board Mounted on 0.2\*0.2"(5\*5mm) copper pad area.

### RATINGS AND CHARACTERISTIC CURVES (SM5817PL THRU SM5819PL)

Fig. 1-TYPICAL FORWARD CURRENT

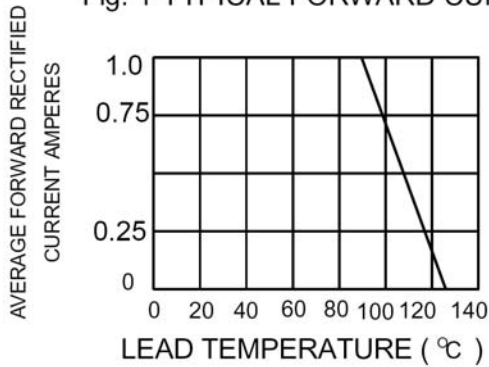


Fig. 2-TYPICAL FORWARD CHARACTERISTICS

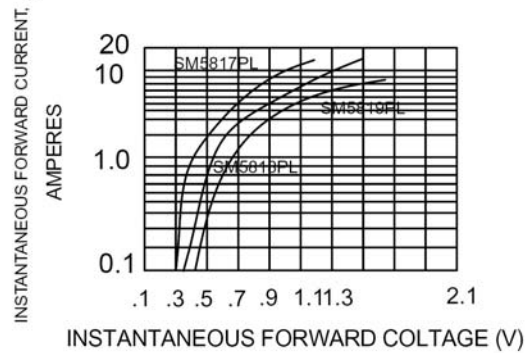


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

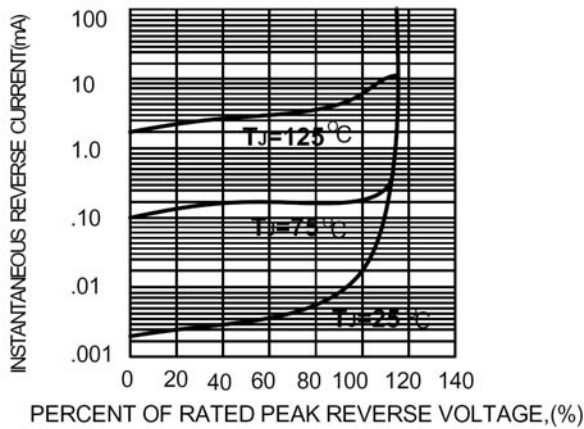


Fig. 4-FORWARD SURGE CURRENT

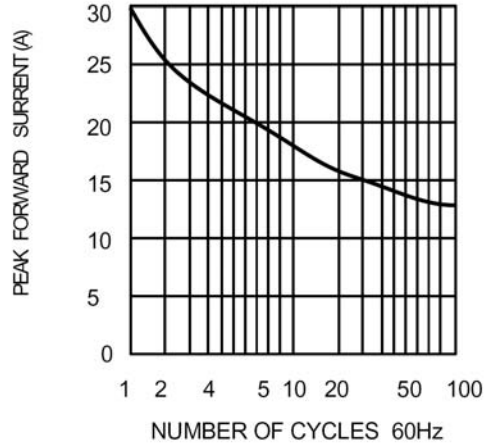


Fig. 5-TYPICAL JUNCTION CAPACITANCE

