



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

**SPD5817SM
Thru
SPD5819SM**

**1 AMP
20 – 40 VOLTS
SCHOTTKY RECTIFIER**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD _ _ _

- L Screening ^{2/}
 - _ = Not Screened
 - TX = TX Level
 - TXV = TXV
 - S = S Level
- L Package Type
 - SM = Surface Mount Round Tab
- L Voltage/Family
 - 5817 = 20 V
 - 5818 = 30 V
 - 5819 = 40 V

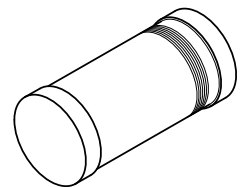
- FEATURES:**
- Extremely Low Forward Voltage Drop
 - Hermetically Sealed Surface Mount Package
 - For High Efficiency Applications
 - High Surge Capability
 - Axial Lead Versions Available
TX, TXV, or Space Level Screening Available ^{2/}

MAXIMUM RATINGS ^{3/}

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD5817SM SPD5818SM SPD5819SM	V_{RRM} V_{RWM} V_R	20 30 40	V
Average Rectified Output Current (Resistive Load, 60 Hz, Sine Wave, $T_A= 25^\circ\text{C}$)		I_O	1	A
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A= 25^\circ\text{C}$)		I_{FSM}	25	A
Operating and Storage Temperature		T_{OP} & T_{STG}	-55 to +125	$^\circ\text{C}$
Maximum Thermal Resistance Junction to End Tab		$R_{\theta JE}$	55	$^\circ\text{C/W}$

NOTES:

- 1/ For ordering information, Price, and Availability- Contact Factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request
- 3/ Unless otherwise specified, all electrical ratings/characteristics @ 25°C .



SURFACE MOUNT ROUND TAB



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ELECTRICAL CHARACTERISTICS ^{3/}				
CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (I _F = 1 Adc, T _A = 25°C, 300-500 μs Pulse)	SPD5817SM	V _{F1}	0.55	Vdc
	SPD5818SM		0.65	
	SPD5819SM		0.70	
Instantaneous Forward Voltage Drop (I _F = 1 Adc, T _A = -55°C, 300-500 μs Pulse)	SPD5817SM	V _{F2}	0.57	Vdc
	SPD5818SM		0.67	
	SPD5819SM		0.72	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300 μs Pulse Minimum)		I _{R1}	0.50	mA
Reverse Leakage Current (Rated V _R , T _A = 100°C, 300 μs Pulse Minimum)		I _{R2}	10	mA
Junction Capacitance (V _R = 5 Vdc, T _A = 25°C, f= 1 MHz)		C _J	120	pF

<p>Case Outline- Surface Mount Round Tab*</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="3" style="text-align: left; padding: 5px;">DIMENSIONS</th> </tr> <tr> <th style="text-align: left; padding: 5px;">Dimension</th> <th style="text-align: center; padding: 5px;">Minimum</th> <th style="text-align: center; padding: 5px;">Maximum</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">ØA</td> <td style="text-align: center; padding: 5px;">.090"</td> <td style="text-align: center; padding: 5px;">.105"</td> </tr> <tr> <td style="text-align: center; padding: 5px;">B</td> <td style="text-align: center; padding: 5px;">.189"</td> <td style="text-align: center; padding: 5px;">.205"</td> </tr> <tr> <td style="text-align: center; padding: 5px;">C</td> <td style="text-align: center; padding: 5px;">.016"</td> <td style="text-align: center; padding: 5px;">.024"</td> </tr> <tr> <td colspan="3" style="padding: 5px;"> <p>Note: Dimensions are prior to solder dipping</p> </td> </tr> </tbody> </table>	DIMENSIONS			Dimension	Minimum	Maximum	ØA	.090"	.105"	B	.189"	.205"	C	.016"	.024"	<p>Note: Dimensions are prior to solder dipping</p>		
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* For information on curves, contact the Factory Representative for Engineering Assistance.