



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

**SPD5817 thru SPD5819
 SPD5817SMS thru SPD5819SMS
 SPD5817VSMS thru SPD5819VSMS**

Designer's Data Sheet

Part Number / Ordering Information ^{2/}
SPD 5817 _____

L Screening ^{3/}
 TX = TX Level
 TXV = TXV Level,
 S = S-Level
 ___ = Not Screened

Package
 SMS = Square Tab Surface Mount
 ___ = Axial Lead

Extra Inspection ^{1/}
 V = MIL-STD-750, METHOD 2076
 ___ = None

Voltage / Family 5817 = 20V
 5818 = 30V
 5819 = 40V

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

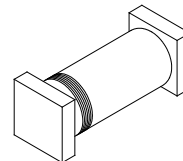
- FEATURES:**
- Extremely Low Forward Voltage Drop
 - High Surge Capability
 - Hermetically Sealed
 - Low Profile Surface Mount Package Available
 - TX, TXV, and Space Level Screening Available^{3/}
 - Extra Inspection per MIL-STD-750, Method 2076 Available

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD5817, SMS ^{1/}	V_{RRM}	20	Volts
	SPD5818, SMS ^{1/}	V_{RWM}	30	
	SPD5819, SMS ^{1/}	V_R	40	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$)		I_O	1	Amps
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	Amps
Operating and Storage Temperature		$T_{OP} \ \& \ T_{stg}$	-55 to +125	$^\circ\text{C}$
Maximum Thermal Resistance	Junction to Lead, L= 3/8"	$R_{\theta JL}$	80	$^\circ\text{C/W}$
	Junction to End Tab	$R_{\theta JE}$	40	

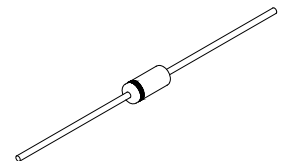
NOTES:

- ^{1/} Part number may have letter 'V' preceding 'SMS'.
^{2/} For ordering information, price, and availability, contact factory.
^{3/} Screening based on MIL-PRF-19500. Screening flows available on request.

Surface Mount Square Tab (SMS)



Axial Lead Diode





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ELECTRICAL CHARACTERISTICS ^{1/}		Symbol	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 1A_{DC}$, $T_A = 25^\circ C$, 300-500 μs Pulse)	SPD5817, SMS	V_{F1}	0.55	Volts
	SPD5818, SMS	V_{F2}	0.65	
	SPD5819, SMS	V_{F3}	0.70	
Instantaneous Forward Voltage Drop ($I_F = 1A_{DC}$, $T_A = -55^\circ C$, 300-500 μs Pulse)	SPD5817, SMS	V_{F4}	0.57	Volts
	SPD5818, SMS	V_{F5}	0.67	
	SPD5819, SMS	V_{F6}	0.72	
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ C$, 300 μs minimum Pulse)		I_{R1}	100	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ C$, 300 μs minimum Pulse)		I_{R2}	10	mA
Junction Capacitance ($V_R = 5 V_{DC}$, $T_A = 25^\circ C$, $f = 1 MHz$)		C_J	110	pF

SMS CASE OUTLINE:

DIMENSIONS ^{2/}		
CODE	MIN.	MAX.
A	.125"	.135"
B	.180"	.235"
C	.022"	.028"
D	.005"	---

LEADED CASE OUTLINE:

DIMENSIONS ^{2/}		
CODE	MIN.	MAX.
A	.080"	.107"
B	.155"	.185"
C	1.00"	---
D	.028"	.034"

NOTES: 1/ Part number may have letter 'V' preceding 'SMS'.
2/ Dimensions are prior to solder dipping