



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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**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
- Package Type
 - SM = Surface Mount Round Tab
- Voltage/Family
 - 5817 = 20V
 - 5818 = 30V
 - 5819 = 40V

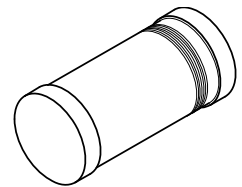
- FEATURES:**
- Extremely Low Forward Voltage Drop
 - Hermetically Sealed Surface Mount Package
 - For High Efficiency Applications
 - High Surge Capability
 - Axial Lead Versions Available
TX, TXV, or Space Level Screening Available^{2/}

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 | Volts |
| Average Rectified Output Current (Resistive Load, 60Hz, Sine Wave, TA=25°C) | I_O | 1 | Amps |
| Peak Surge Current ^{3/} (8.3 ms Pulse, Half Sine Wave, superimposed on I_O , allow junction to reach equilibrium between pulses, TA=25°C) | I_{FSM} | 25 | Amps |
| Operating and Storage Temperature | T_{OP} & T_{STG} | -55 to +125 | C |
| Maximum Thermal Resistance Junction to End Tab | $R_{\theta JE}$ | 40 | °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 ($I_F = 1 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300-500 μs Pulse) | SPD5817SM SPD5818SM SPD5819SM | V_{F1} | 0.55 0.65 0.70 | Vdc |
| Instantaneous Forward Voltage Drop ($I_F = 1 \text{ Adc}$, $T_A = -55^\circ\text{C}$, 300-500 μs Pulse) | SPD5817SM SPD5818SM SPD5819SM | V_{F2} | 0.57 0.67 0.72 | Vdc |
| Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs Pulse Minimum) | | I_{R1} | 0.50 | mA |
| Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs Pulse Minimum) | | I_{R2} | 10 | mA |
| Junction Capacitance ($V_R = 5 \text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$) | | C_J | 120 | pF |

| <u>Case Outline- Surface Mount Round Tab*</u> | DIMENSIONS | | |
|---|-------------------|---------|---------|
| | Dimension | Minimum | Maximum |
| | $\varnothing A$ | .090" | .105" |
| | B | .189" | .205" |
| | C | .016" | .022" |
| Note: Dimensions are prior to solder dipping | | | |

* For information on curves, contact the Factory Representative for Engineering Assistance.