



**Solid State Devices, Inc.**

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**SPD0802 and SMS  
thru  
SPD1002 and SMS**

**2 AMP  
80 - 100 VOLTS  
SCHOTTKY  
RECTIFIER**

**Designer's Data Sheet**

**Part Number/Ordering Information <sup>1/</sup>**

**SPD**

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**Screening <sup>2/</sup>**

    — = Not Screened

    TX = TX Level

    TXV = TXV

    S = S Level

**Package Type**

    — = Axial Leaded

    SMS = Surface Mount Square Tab

**Family/Voltage**

    0802 = 80 V

    0902 = 90 V

    1002 = 100 V

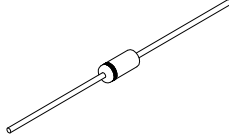
- Features:**
- PIV to 100 Volts
  - Extremely Low Forward Voltage Drop
  - Low Reverse Leakage Current
  - High Surge Capacity
  - HV/Replacement for 1N5817 - 1N5819 Series
  - Hermetically Sealed
  - TX, TXV, and Space Level Screening Available<sup>2/</sup>
  - Category III metallurgical bond per MIL PRF 19500 appendix A

Maximum Ratings		Symbol	Value	Units
<b>Reverse Voltage</b>	SPD0802 & SMS	VRRM	80	Volts
	SPD0902 & SMS	VRWM	90	
	SPD1002 & SMS	VR	100	
<b>Average Rectified Forward Current</b> (Resistive Load, 60Hz, Sine Wave, T <sub>L</sub> or T <sub>E</sub> = 55 °C)		I <sub>o</sub>	2	Amps
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave Superimposed on I <sub>o</sub> , allow junction to reach equilibrium between pulses, T <sub>A</sub> = 25°C)		I <sub>FSM</sub>	40	Amps
<b>Operating and Storage Temperature Range</b>		T <sub>OP</sub> & T <sub>STG</sub>	-55 to +250	°C
<b>Maximum Thermal Resistance</b> Junction to Lead, L = .25" (Axial Lead) Junction to End Tab (Surface Mount)		R <sub>θJL</sub>	15	°C/W
		R <sub>θJE</sub>	12	

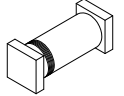
**NOTES:**

- <sup>1/</sup> For Ordering Information, Price, and Availability- Contact Factory.
- <sup>2/</sup> Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

**Axial Lead**



**Surface Mount Square Tab**





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**SPD0802 and SMS  
 thru  
 SPD1002 and SMS**

Electrical Characteristic		Symbol	Min	Max	Units
<b>Instantaneous Forward Voltage Drop</b> (Tj = 25°C, 300 - 500 µsec pulse)	If = 0.5A	<b>Vf1</b>	---	<b>0.73</b>	<b>Volts</b>
	If = 1A	<b>Vf2</b>	---	<b>0.85</b>	
	If = 2A	<b>Vf3</b>	---	<b>0.95</b>	
<b>Instantaneous Forward Voltage Drop</b> (IF = 1A, 300 - 500 µsec pulse)	TA = -55C	<b>Vf4</b>	---	<b>0.88</b>	<b>Volts</b>
	TA = 100C	<b>Vf5</b>	---	<b>0.78</b>	
<b>Reverse Leakage Current</b> (Vr = Rated Vr, TA = 25°C, 300 µsec min pulse)		<b>Ir1</b>	---	<b>100</b>	<b>µA</b>
<b>Reverse Leakage Current</b> (Vr = Rated Vr, TA = 100°C, 300 µsec min pulse)		<b>Ir2</b>	---	<b>2</b>	<b>mA</b>
<b>Junction Capacitance</b> (Vr=10 Vdc, TA=25°C, f=1MHz)		<b>Cj</b>	---	<b>40</b>	<b>pF</b>

**Consult manufacturing for operating curves**

	DIMENSIONS		
	DIM	MIN	MAX
	A	0.155"	0.185"
	B	0.080"	0.107"
	C	1.00"	--
	D	.028"	0.32"
	DIMENSIONS		
	DIM	MIN	MAX
	A	0.200"	0.235"
	B	0.125"	0.135"
	C	0.020"	0.030"
	D	0.002"	--

**Dimensions prior to solder dip**

<p><b>NOTE:</b> All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.</p>	<p><b>DATA SHEET #: RS0006E</b></p>	<p><b>DOC</b></p>
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