



**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

**SPD1502 thru SPD2002 Series**

**2 AMP  
 150 - 200 VOLTS  
 SCHOTTKY RECTIFIER**

**Designer's Data Sheet**

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

**Screening<sup>2/</sup>**  
 \_\_\_ = Not Screened  
 TX = TX Level  
 TXV = TXV Level  
 S = S Level (for SM, use -S)

**Package Type**  
 \_\_\_ = Axial Leaded  
 SM = Surface Mount Round Tab  
 SMS = Surface Mount Square Tab

**Family/Voltage**  
 1502 = 150 V  
 2002 = 200 V

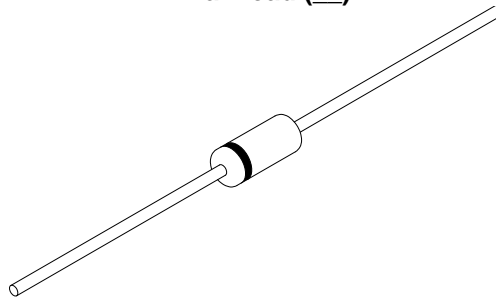
- Features:**
- PIV to 200 Volts
  - Extremely Low Forward Voltage Drop
  - Low Reverse Leakage Current
  - High Surge Capacity
  - Possible Replacement for 1N5802 - 1N5806 Series
  - Hermetically Sealed
  - For low voltage versions, see data sheet RS0006
  - TX, TXV, and Space Level Screening Available<sup>2/</sup>
  - Category III metallurgical bond per MIL-PRF-19500 appendix A

Maximum Ratings	Symbol	Value	Unit
<b>Reverse Voltage</b>	$V_{RRM}$ $V_{RWM}$ $V_R$	150 200	V
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz, Sine Wave, $T_L$ or $T_E = 55^\circ C$ )	$I_o$	2	A
<b>Peak Surge Current</b> (8.3 ms Pulse, allow junction to reach equilibrium between pulses, $T_A = 25^\circ C$ )	$I_{FSM}$	40	A
<b>Operating and Storage Temperature Range</b>	$T_{OP}$ & $T_{STG}$	-55 to +150	$^\circ C$
<b>Maximum Thermal Resistance</b> Junction to Lead, L = .25" (Axial Lead) Junction to End Tab (Surface Mount)	$R_{\theta JL}$ $R_{\theta JE}$	70 50	$^\circ C/W$

**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.

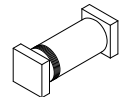
Axial Lead ( )



Surface Mount Round Tab (SM)



Surface Mount Square Tab (SMS)



**NOTE:** All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: SH0077C**

**DOC**



**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

# SPD1502 thru SPD2002 Series

Electrical Characteristic		Symbol	Min	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $T_J = 25^\circ\text{C}$ , 300 - 500 $\mu\text{sec}$ pulse)	$I_F = 0.5 \text{ A}$	$V_{F1}$	---	0.78	V
	$I_F = 1 \text{ A}$	$V_{F2}$	---	0.85	
	$I_F = 2 \text{ A}$	$V_{F3}$	---	0.95	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 1 \text{ A}$ , 300 - 500 $\mu\text{sec}$ pulse)	$T_A = -55^\circ\text{C}$	$V_{F4}$	---	1.10	V
	$T_A = 100^\circ\text{C}$	$V_{F5}$	---	0.78	
<b>Reverse Leakage Current</b> ( $V_R = \text{Rated } V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ min pulse)		$I_{R1}$	---	100	$\mu\text{A}$
<b>Reverse Leakage Current</b> ( $V_R = \text{Rated } V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{sec}$ min pulse)		$I_{R2}$	---	2	mA
<b>Junction Capacitance</b> ( $V_R = 10 \text{ Vdc}$ , $T_A = 25^\circ\text{C}$ , $f = 1 \text{ MHz}$ )		$C_J$	---	40	pF

Consult manufacturing for operating curves

CASE OUTLINE: Axial Lead ( <u>  </u> )	DIMENSIONS		
	DIM	MIN	MAX
	A	0.155"	0.185"
	B	0.080"	0.107"
	C	1.00"	--
	D	0.028"	0.032"
CASE OUTLINE: Surface Mount Round Tab (SM)	DIMENSIONS		
	DIM	MIN	MAX
	A	0.095"	0.105"
	B	0.190"	0.210"
	C	0.015"	0.025"
	D	0.002"	--
CASE OUTLINE: Surface Mount Square Tab (SMS)	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

**NOTE:** All specifications are subject to change without notification. SCDC's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: SH0077C**

**DOC**