



Solid State Devices, Inc.

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SPD0802 thru SPD1002 Series

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

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD

Screening ^{2/}

— = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

Package Type

— = Axial Leaded
 SM = Surface Mount Round Tab
 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
 - Possible Replacement for 1N5802 - 1N5806 Series
 - Hermetically Sealed
 - For high voltage versions, see data sheet SH0077
 - TX, TXV, and Space Level Screening Available^{2/}
 - Category III metallurgical bond per MIL-PRF-19500 appendix A

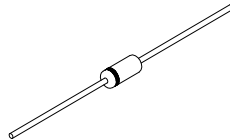
Maximum Ratings		Symbol	Value	Units
Reverse Voltage	SPD0802	V_{RRM}	80	Volts
	SPD0902	V_{RWM}	90	
	SPD1002	V_R	100	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, T_L or $T_E = 55^\circ\text{C}$)		I_O	2	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)		I_{FSM}	40	Amps
Operating and Storage Temperature Range		T_{OP} & T_{STG}	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = .25"$ (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$	70	$^\circ\text{C/W}$
		$R_{\theta JE}$	50	

NOTES:

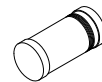
^{1/} For ordering information, price, and availability- Contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

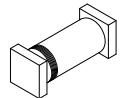
Axial Lead



Surface Mount Round Tab



Surface Mount Square Tab





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Electrical Characteristic		Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop ($T_J = 25^\circ\text{C}$, 300 - 500 μsec pulse)	$I_F = 0.5\text{A}$	V_{F1}	---	0.73	Volts
	$I_F = 1\text{A}$	V_{F2}	---	0.85	
	$I_F = 2\text{A}$	V_{F3}	---	0.95	
Instantaneous Forward Voltage Drop ($I_F = 1\text{A}$, 300 - 500 μsec pulse)	$T_A = -55^\circ\text{C}$	V_{F4}	---	0.88	Volts
	$T_A = 100^\circ\text{C}$	V_{F5}	---	0.78	
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_A = 25^\circ\text{C}$, 300 μsec min pulse)		I_{R1}	---	100	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_A = 100^\circ\text{C}$, 300 μsec min pulse)		I_{R2}	---	2	mA
Junction Capacitance ($V_R = 10\text{ Vdc}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	---	40	pF

Consult manufacturing for operating curves

CASE OUTLINE: Axial Lead	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	DIM	DIM
	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. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RS0006G

DOC