



SOLID STATE DEVICES, INC.

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Designer's Data Sheet

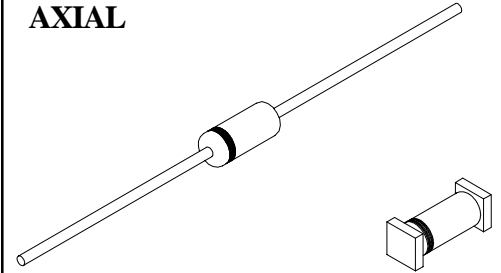
FEATURES:

- PIV to 100 Volts
- Extremely Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Capacity
- High Voltage/Current Replacement for 1N5817 - 1N5819 Series
- Hermetically Sealed
- TX, TXV, and Space Level Screening Available

**SPD0802 and SMS
thru
SPD1002 and SMS**

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

AXIAL



**SURFACE MOUNT
(SMS)**

Maximum Ratings		SYMBOL	VALUE	UNITS
Reverse Voltage	SPD0802 & SMS	V_{RRM}	80	Volts
	SPD0902 & SMS	V_{RWM}	90	
	SPD1002 & SMS	V_R	100	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, T_L or $T_E = 55^\circ C$)		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, $T_A = 25^\circ C$)		I_{FSM}	40	Amps
Operating and Storage Temperature Range		T_{OP} & T_{STG}	-55 TO +125	$^\circ C$
Maximum Thermal Resistance				
Junction to Lead, L = .25" (Axial Lead)		$R_{\theta JL}$	15	$^\circ C/W$
Junction to End Tab (Surface Mount)		$R_{\theta JE}$	12	

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

DATA SHEET #: RS0006C

**SPD0802 and SMS
thru
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Electrical Characteristics		SYMBOL	MIN	MAX	UNITS
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 - 500 μs Pulse)	$I_F = 0.5\text{A}$	V_{F1}	--	0.73	V_{DC}
	$I_F = 1\text{A}$	V_{F2}	--	0.85	
	$I_F = 2\text{A}$	V_{F3}	--	0.95	
Instantaneous Forward Voltage Drop ($I_F = 1\text{A}$, 300 - 500 μs Pulse)	$T_A = -55^\circ\text{C}$	V_{F4}	--	0.88	V_{DC}
	$T_A = 100^\circ\text{C}$	V_{F5}	--	0.78	
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_A = 25^\circ\text{C}$, 300 μs min Pulse)		I_{R1}	--	100	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_A = 100^\circ\text{C}$, 300 μs min Pulse)		I_{R2}	--	2	mA
Junction Capacitance ($V_R = 10\text{V}$, $f = 1\text{ MHz}$, $T_A = 25^\circ\text{C}$)		C_J	--	40	pF

CASE OUTLINE: AXIAL LEAD

DIMENSIONS		
DIM	MIN.	MAX.
A	0.155	0.185"
B	0.080	0.107"
C	1.00"	--
D	.028"	.032"

Dimensions prior to solderdip

CASE OUTLINE: 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 solderdip

NOTES:

Consult manufacturing for operating curves.