



**Solid State Devices, Inc.**

14830 Valley View Blvd \* La Mirada, Ca 90638

Phone: (562) 404-7855 \* Fax: (562) 404-1773

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**SPD5614  
thru  
SPD5622**

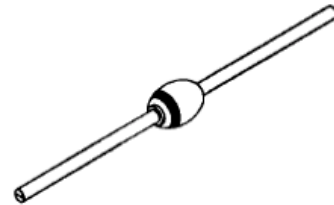
### Designer's Data Sheet

**FEATURES:**

- **Fast Recovery: 5  $\mu$ sec Maximum**
- **PIV 200 to 1000 Volts**
- **Low Reverse Leakage Current**
- **Hermetically Sealed**
- **Single Chip Construction**
- **High Surge Rating**
- **Low Thermal Resistance**
- **Available in Surface Mount Versions**
- **Replaces 1N5614 to 1N5622**
- **TX, TXV, and Space Level Screening Available**

**1 AMP  
200 – 1000 VOLTS  
STANDARD RECOVERY  
RECTIFIER**

AXIAL



MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD5614	$V_{RRM}$	200	Volts
	SPD5616		400	
	SPD5618	$V_{RWM}$	600	
	SPD5620		800	
	SPD5622	$V_R$	1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$ )		$I_O$	1	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on $I_O$ , allow junction to reach equilibrium between pulses, $T_A=25^\circ\text{C}$ )		$I_{FSM}$	30	Amps
Operating and Storage Temperature		$T_J$ & $T_{stg}$	-65 to +175	$^\circ\text{C}$
Thermal Resistance Junction to Leads, $L = \frac{3}{8}"$		$R_{\theta JL}$	35	$^\circ\text{C/W}$

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

DATA SHEET #: R00011B

DOC



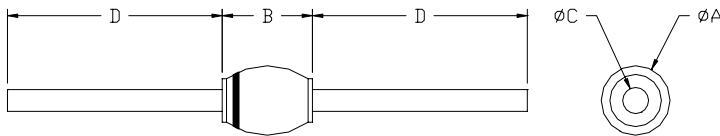
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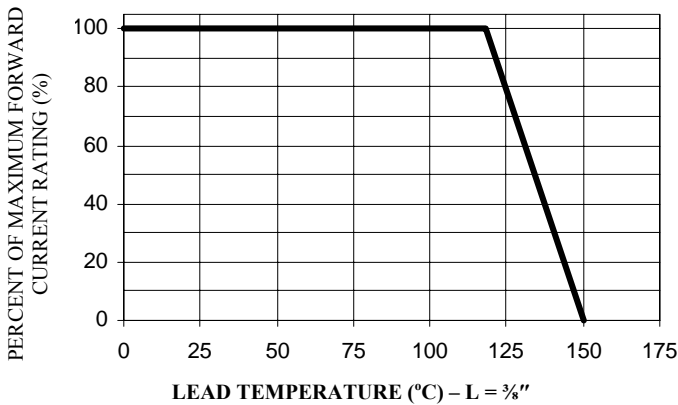
ELECTRICAL CHARACTERISTICS	Symbol	Value	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 1$ Amp, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	$V_F$	1.0	Volts
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 1$ Amp, $T_A = -55^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse)	$V_F$	1.2	Volts
<b>Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 25^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse minimum)	$I_R$	2	$\mu\text{A}$
<b>Max Reverse Leakage Current</b> (Rated $V_R$ , $T_A = 100^\circ\text{C}$ , 300 $\mu\text{s}$ Pulse minimum)	$I_R$	200	$\mu\text{A}$
<b>Max Junction Capacitance</b> ( $V_R = 10$ V <sub>DC</sub> , $T_A = 25^\circ\text{C}$ , $f = 1$ MHz)	$C_J$	20	pf
<b>Reverse Recovery Time</b> ( $I_F = 500$ mA, $I_R = 1$ A, $I_{RR} = 250$ mA, $T_A = 25^\circ\text{C}$ )	$t_{rr}$	5	$\mu\text{sec}$

**CASE OUTLINE: AXIAL**



KEY TO DIMENSIONS		
Section	MIN	MAX
$\phi A$	---	0.150"
B	---	0.180"
$\phi C$	0.027"	0.033"
D	1.00"	---

**TYPICAL OPERATING CURVES**  
 $T_A = 25^\circ\text{C}$  Unless otherwise specified



**FORWARD VOLTAGE vs. FORWARD CURRENT**

