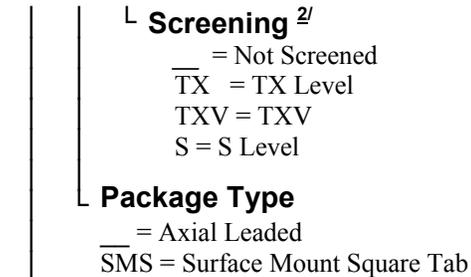



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

Designer's Data Sheet
Part Number/Ordering Information ^{1/}
SPD


Family/Voltage	5615 = 200 V
	5617 = 400 V
	5619 = 600 V
	5621 = 800 V
	5623 = 1000 V

**SPD5615 thru SPD5623
 and
 SPD5615SMS thru SPD5623SMS**

**1.0 AMP
 200 – 1000 VOLTS
 FAST RECOVERY RECTIFIER**

FEATURES:

- **Fast Recovery: 150-500 ns Maximum ^{4/}**
- **Single Chip Construction**
- **PIV to 1000 Volts**
- **Low Thermal Resistance**
- **Low Reverse Leakage Current**
- **Hermetically Sealed**
- **High Surge Rating**
- **Available in Axial and Surface Mount Versions**
- **TX, TXV, and S-Level Screening Available**
- **Replacement for 1N5615 thru 1N5623 Series**
- **Ultra Fast and Hyper Fast Versions available**

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SPD5615 SPD5617 SPD5619 SPD5621 SPD5623	V_{RRM} V_{RWM} V_R	200 400 600 800 1000 Volts
Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	$T_A = 55^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_{O1} I_{O2}	1.00 0.75 Amp
Peak Surge Current (8.3 msec Pulse, Half Sine Wave Superimposed on I_o , allow junction to reach equilibrium between pulses, $T_A = 100^\circ\text{C}$)		I_{FSM}	25 Amps
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +175 °C
Thermal Resistance, Junction to Lead, L = 3/8" (Axial) Junction to End Tab (SMS)		$R_{\theta JL}$ $R_{\theta JE}$	38 7 °C/W

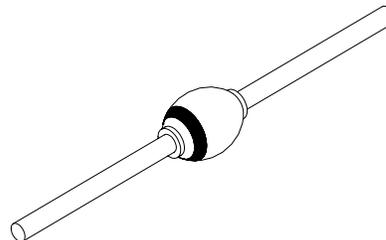
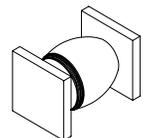
NOTES:

1/ For Ordering Information, Price, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

4/ Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, I_{RR} to .25 Amp.

Axial Leaded

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 #: RC0104A
DOC



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**SPD5615 thru SPD5623
 and
 SPD5615SMS thru SPD5623SMS**

ELECTRICAL CHARACTERISTICS ^{3/ 5/}

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Maximum Instantaneous Forward Voltage Drop ($I_F = 3A_{dc}$, 300- 500 μs Pulse, $T_A = 25^\circ C$)	V_F	1.60	Vdc
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 25^\circ C$)	I_{R1}	.5	μA
Maximum Reverse Leakage Current (Rated V_R , 300 μs Pulse Minimum , $T_A = 100^\circ C$)	I_{R2}	25	μA
Junction Capacitance ($V_R = 12V_{dc}$, $T_A = 25^\circ C$, $f = 1MHz$)	C_J	SPD5615: 45 SPD5617: 35 SPD5619: 25 SPD5621: 20 SPD5623: 15	pf
Maximum Reverse Recovery Time ^{4/}	t_{rr}	SPD5615: 150 SPD5617: 150 SPD5619: 250 SPD5621: 300 SPD5623: 500	ns

<p>Axial Leaded Case Outline:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">DIMENSIONS</th> </tr> <tr> <th>DIM.</th> <th>MIN.</th> <th>MAX.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>---</td> <td>.150"</td> </tr> <tr> <td>B</td> <td>.140</td> <td>.190"</td> </tr> <tr> <td>C</td> <td>.027"</td> <td>.033"</td> </tr> <tr> <td>D</td> <td>.95"</td> <td>---</td> </tr> </tbody> </table>	DIMENSIONS			DIM.	MIN.	MAX.	A	---	.150"	B	.140	.190"	C	.027"	.033"	D	.95"	---	<p>Square Tab Surface Mount Case Outline:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">DIMENSIONS</th> </tr> <tr> <th>DIM.</th> <th>MIN.</th> <th>MAX.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>.128"</td> <td>.132"</td> </tr> <tr> <td>B</td> <td>.190"</td> <td>.240"</td> </tr> <tr> <td>C</td> <td>.022"</td> <td>.028"</td> </tr> <tr> <td>D</td> <td>.001"</td> <td>---</td> </tr> </tbody> </table>	DIMENSIONS			DIM.	MIN.	MAX.	A	.128"	.132"	B	.190"	.240"	C	.022"	.028"	D	.001"	---
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- 4/ Recovery Conditions: $I_F = 0.5$ Amp, $I_R = 1.0$ Amp, I_{RR} to .25 Amp.
- 5/ For information on operating curves, contact factory.