



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

**SPD5550
 Thru
 SPD5554 Series**

**5 AMPS, 200 thru 1000 VOLTS
 2 μ sec
 STANDARD RECOVERY
 RECTIFIER**

- FEATURES:**
- Standard Recovery: 2 μ sec maximum
 - PIV up to 1000 Volts
 - Low Reverse Leakage Current
 - Hermetically Sealed
 - Single Chip Construction
 - Replacement for 1N5550 thru 1N5554 Series
 - Low Thermal Resistance
 - For Higher Voltages-See SSDI p/n SDR6557 Series
 - TX, TXV, and Space Level Screening Available^{2/}
 - Fast Recovery Versions Available. Contact Factory.

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SPD

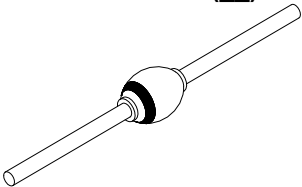
^{2/} **Screening**
 — = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

^{2/} **Package Type**
 — = Axial Leaded
 SMS = Surface Mount Square Tab

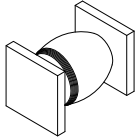
^{2/} **Voltage/Family**
 5550 = 200V
 5551 = 400V
 5552 = 600V
 5553 = 800V
 5554 = 1000V

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD5550	V_{RRM} V_{RWM} V_R	200	Volts
	SPD5551		400	
	SPD5552		600	
	SPD5553		800	
	SPD5554		1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	$T_{EC}=130^{\circ}C$ (SMS)	I_O	5.0	Amps
	$T_L=30^{\circ}C$ at .375" (Axial)		1.3	
	$T_A=55^{\circ}C$ PCB Mount		1.3	
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}	100	Amps
Operating and Storage Temperature		T_{OP} & T_{stg}	-65 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Lead, L = 0.375" (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	22 6.5	$^{\circ}C/W$

Axial Leaded (—)



Square Tab Surface Mount (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 #: RC0112B

DOC



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**SPD5550
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ELECTRICAL CHARACTERISTICS	Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 9$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	$T_A = 25^\circ\text{C}$ V_{F1}	—	1.20	Volts
	$T_A = -55^\circ\text{C}$ V_{F2}	—	1.50	Volts
Reverse Leakage Current (At Rated V_R , 300 μsec pulse minimum)	$T_A = 25^\circ\text{C}$ I_{R1}	—	5.0	μA
	$T_A = 100^\circ\text{C}$ I_{R2}	—	20	μA
Breakdown Voltage ($I_R = 50 \mu\text{A}$, $T_A = 25^\circ\text{C}$)	SPD5550	200	—	Volts
	SPD5551	400	—	
	SPD5552	600	—	
	SPD5553	800	—	
	SPD5554	1000	—	
Junction Capacitance ($V_R = 10 V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1$ MHz)	C_J	—	50	μF
Reverse Recovery Time ($I_F = 500$ mA, $I_R = 1$ A, $I_{RR} = 250$ mA, $T_A = 25^\circ\text{C}$)	t_{rr}	—	2	μs

<p>Case Outline: (Axial)</p>	<table border="1" style="margin: auto;"> <thead> <tr> <th>DIM</th> <th>MIN</th> <th>MAX</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>—</td> <td>0.170"</td> </tr> <tr> <td>B</td> <td>0.210"</td> <td>0.250"</td> </tr> <tr> <td>C</td> <td>0.037"</td> <td>0.043"</td> </tr> <tr> <td>D</td> <td>1.00"</td> <td>—</td> </tr> </tbody> </table>	DIM	MIN	MAX	A	—	0.170"	B	0.210"	0.250"	C	0.037"	0.043"	D	1.00"	—
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NOTES:

- 1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.
- 2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.