



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/}

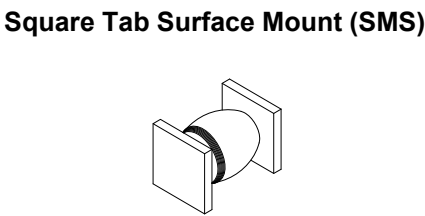
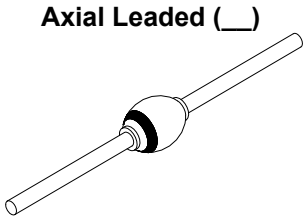
SPD

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

└ **Package Type**
 = Axial Leaded
 SMS = Surface Mount Square Tab

└ **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	$^{\circ}C/W$





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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	V_{BR}	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	pF
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

Case Outline: (Axial)

DIM	MIN	MAX
A	—	0.170"
B	0.210"	0.250"
C	0.037"	0.043"
D	1.00"	—

Case Outline: (SMS)

DIM	MIN	MAX
A	0.170"	0.180"
B	0.260"	0.300"
C	0.020"	0.030"
D	0.002"	—

Note: Dimensions prior to soldering.

NOTES:

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