



# Solid State Devices, Inc.

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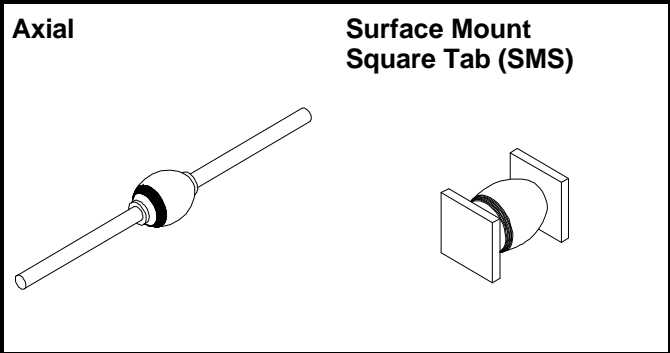
## SPD6557 Series

**6 AMPS**  
**1300 VOLTS**  
**5 msec**  
**STANDARD RECOVERY**  
**RECTIFIER**

### Designer's Data Sheet

#### FEATURES:

- Standard Recovery: 5  $\mu$ sec maximum
- PIV up to 1500 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Single Chip Construction
- High Voltage Replacement for 1N5553 & 1N5554
- Low Thermal Resistance
- Available with 0.040" diameter leads
- TX, TXV, and Space Level Screening Available
- Fast Recovery Versions Available. Contact Factory.
- For higher voltages-See SSDI p/n SDR6W



MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD6557	$V_{RRM}$ $V_{RWM}$ $V_R$	1300	Volts
	SPD6556		1200	
	SPD6555		1000	
	SPD6554		800	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A=25^\circ\text{C}$ )		$I_O$	6	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, Superimposed on $I_O$ , allow junction to reach equilibrium between pulses, $T_A=25^\circ\text{C}$ )		$I_{FSM}$	150	Amps
Operating and Storage Temperature		$T_{OP}$ & $T_{stg}$	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead, $L = 0.125$ " (Axial Lead)		$R_{qJL}$	8	$^\circ\text{C/W}$
Junction to End Tab (Surface Mount)		$R_{qJE}$	4	

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

DATA SHEET #: RC0086D

DOC



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**SPD6557 Series**

ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 6$ Amps, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$T_A = 25^\circ\text{C}$	$V_{F1}$	—	1.15	Volts
	$T_A = -55^\circ\text{C}$	$V_{F2}$	—	1.30	Volts
<b>Reverse Leakage Current</b> (At Rated $V_R$ , 300 $\mu\text{sec}$ pulse minimum)	$T_A = 25^\circ\text{C}$	$I_{R1}$	—	5.0	mA
	$T_A = 100^\circ\text{C}$	$I_{R2}$	—	50	mA
<b>Breakdown Voltage</b> ( $I_R = 50 \mu\text{A}$ , $T_A = 25^\circ\text{C}$ )	<b>SPD6557</b>	$V_{BR}$	1300	—	Volts
	<b>SPD6556</b>		1200	—	
	<b>SPD6555</b>		1000	—	
	<b>SPD6554</b>		800	—	
<b>Junction Capacitance</b> ( $V_R = 10 V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1$ MHz)		$C_J$	—	50	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	ms

**Case Outline: (Axial)**

DIM	MIN	MAX
A	—	0.215"
B	0.210"	0.300"
C	0.047"	0.053"
D	1.00"	—

**Case Outline: (SMS)**

DIM	MIN	MAX
A	0.195"	0.230"
B	0.260"	0.350"
C	0.020"	0.030"
D	0.002"	—

Note: Dimensions prior to soldering.

**NOTES:**  
 Consult manufacturing for operating curves.