



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-4474 \* Fax: (562) 404-1773  
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**SPD6557 Series**

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

**Designer's Data Sheet**

**SPD65**

**Screening**<sup>2/</sup>  
 \_\_\_ = Not Screened  
 TX = TX Level  
 TXV = TXV  
 S = S Level

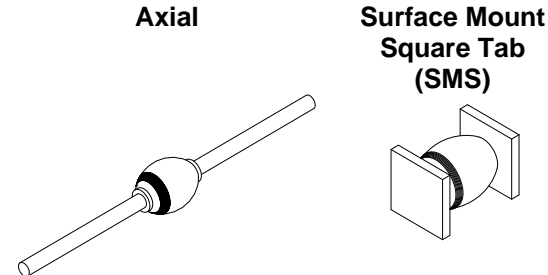
**Package Type**  
 \_\_\_ = Axial  
 SMS = Surface Mount Square Tab

**Family/Voltage**  
 54 = 800 V  
 55 = 1000 V  
 56 = 1200 V  
 57 = 1300 V

- FEATURES:**
- Standard Recovery: 5 μsec 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<sup>2/</sup>
  - Fast Recovery Versions Available. Contact Factory.
  - For higher voltages-See SSDI p/n SDR6W

MAXIMUM RATINGS	Symbol	Value	Units
<b>Peak Repetitive Reverse Voltage and DC Blocking Voltage</b>	SPD6557 SPD6556 SPD6555 SPD6554	1300 1200 1000 800	Volts
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz, Sine Wave, T <sub>A</sub> =25°C)	I <sub>O</sub>	6	Amps
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, Superimposed on I <sub>O</sub> , allow junction to reach equilibrium between pulses, T <sub>A</sub> =25°C)	I <sub>FSM</sub>	150	Amps
<b>Operating and Storage Temperature</b>	T <sub>OP</sub> & T <sub>stg</sub>	-65 to +175	°C
<b>Maximum Thermal Resistance</b> Junction to Lead, L = 0.125" (Axial Lead) Junction to End Tab (Surface Mount)	R <sub>θJL</sub> R <sub>θJE</sub>	8 4	°C/W

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



<b>NOTE:</b> All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	<b>DATA SHEET #: RC0086E</b>	<b>DOC</b>
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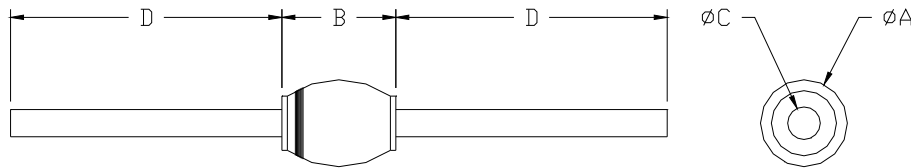
# SPD6557 Series

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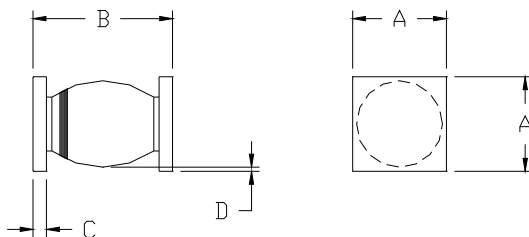
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ( $I_F = 6$ Amps, $T_A = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse)	$T_A = 25^\circ\text{C}$	$V_{F1}$	—	1.15	Volts
	$T_A = -55^\circ\text{C}$	$V_{F2}$	—	1.30	Volts
Reverse Leakage Current (At Rated $V_R$ , 300 $\mu\text{sec}$ pulse minimum)	$T_A = 25^\circ\text{C}$	$I_{R1}$	—	5.0	$\mu\text{A}$
	$T_A = 100^\circ\text{C}$	$I_{R2}$	—	50	$\mu\text{A}$
Breakdown Voltage ( $I_R = 50 \mu\text{A}$ , $T_A = 25^\circ\text{C}$ )	<b>SPD6557</b>	$V_{BR}$	1300	—	Volts
	<b>SPD6556</b>		1200	—	
	<b>SPD6555</b>		1000	—	
	<b>SPD6554</b>		800	—	
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, $T_A = 25^\circ\text{C}$ )		$t_{rr}$	—	5	$\mu\text{s}$

### 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.

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DOC