



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^{2/}
 ___ = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

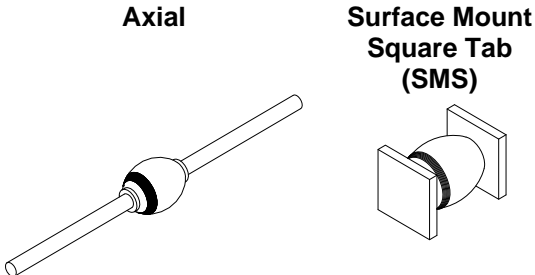
Package Type
 ___ = Axial
 SMS = Surface Mount Square Tab

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^{2/}
 - 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 SPD6556 SPD6555 SPD6554	V_{RRM} V_{RWM} 1000 V_R 800	Volts
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) Junction to End Tab (Surface Mount)	$R_{\theta JL}$ $R_{\theta JE}$	8 4	$^\circ\text{C/W}$

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





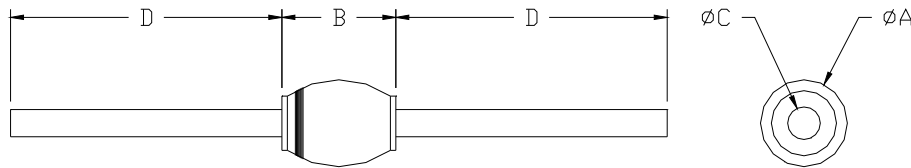
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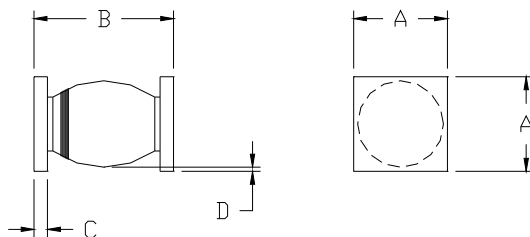
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 6$ Amps, $T_A = 25^\circ\text{C}$, 300 μsec Pulse)	$T_A = 25^\circ\text{C}$	V_{F1}	—	1.15	Volts
	$T_A = -55^\circ\text{C}$	V_{F2}	—	1.30	Volts
Reverse Leakage Current (At Rated V_R , 300 μsec pulse minimum)	$T_A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

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.

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

DATA SHEET #: RC0086E

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