



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

**SDR9JUF & UFSMS
 thru
 SDR9MUF & UFSMS**

**9 AMP
 800-1000 Volts
 70 nsec
 ULTRA FAST RECOVERY
 RECTIFIER**

DESIGNER'S DATA SHEET

Part Number / Ordering Information^{1/}

SDR9 _ UF _ _

└ Screening^{2/} = None
 TX = TX Level
 TXV = TXV Level
 S = S Level

└ Package ___ = None
 SMS = Surface Mount Square Tab

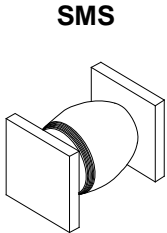
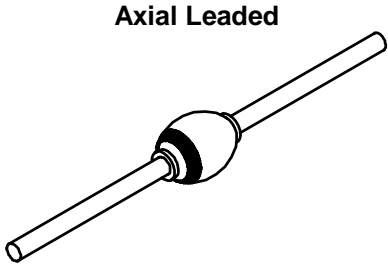
└ Recovery Time
 UF = Ultra Fast

└ Voltage
 J = 600 V
 K = 800 V
 M = 1000 V

- Features:
- Ultra Fast Recovery: 70 nsec maximum
 - PIV to 1000 Volts
 - Low Reverse Leakage Current
 - Hermetically Sealed
 - Single Chip Construction
 - Replaces Larger DO-4 Rectifiers
 - Low Thermal Resistance
 - Fast and Hyper Fast Recovery Available. Contact Factory.
 - TX, TXV, and S-Level Screening Available^{2/}

Maximum Ratings		Symbol	Value	Units
DC Blocking Voltage	SDR9JUF & UFSMS SDR9KUF & UFSMS SDR9MUF & UFSMS	V_{RRM} V_{RWM} V_R	600 800 1000	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$)		I_o	9	Amps
Repetitive 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}	125	Amps
Operating & Storage Temperature		Top & Tstg	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Leads, L = .125" (Axial Lead) Junction to End Tab (Surface Mount)		$R_{\theta JL}$ $R_{\theta JE}$	8 4	$^\circ\text{C/W}$

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





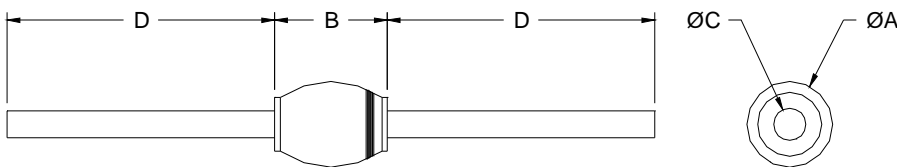
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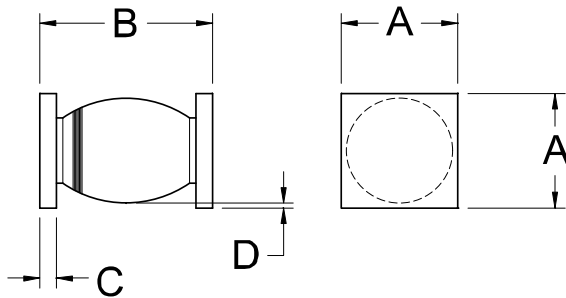
Electrical Characteristics		Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop (300-500 μ s pulse)	$I_F = 3A, T_A = 25^\circ C$	V_{F1}	---	1.50	Vdc
	$I_F = 9A, T_A = 25^\circ C$	V_{F2}	---	1.90	
	$I_F = 9A, T_A = -55^\circ C$	V_{F3}	---	2.10	
Reverse Leakage Current (Rated V_R , 300 μ s pulse minimum)	$T_A = 25^\circ C$	I_{R1}	---	10	μA
	$T_A = 100^\circ C$	I_{R2}	---	250	
Junction Capacitance ($V_R = 10 V, T_A = 25^\circ C, f = 1MHz$)		C_J	---	80	pF
Reverse Recovery Time ($I_F = 500 mA, I_R = 1A, I_{RR} = 0.25A, T_A = 25^\circ C$)		t_{rr}	---	70	nsec

Case Outline: Axial



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

Case Outline: SMS



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

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 #: RC0057C

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