



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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**SDR9JF thru SDR9MF
 and
 SDR9JFSMS thru SDR9MFSMS
 Series**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR9

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

├── **Package Type**
 = Axial Leaded
 SMS = Surface Mount Square Tab
 ASMS = SMS with .145/.155" End Tab Size

└── **Voltage/Family**
 JF = 600V
 KF = 800V
 MF = 1000V

**9.0 AMPS
 600 – 1000 VOLTS
 250 ns typical FAST RECOVERY
 RECTIFIER**

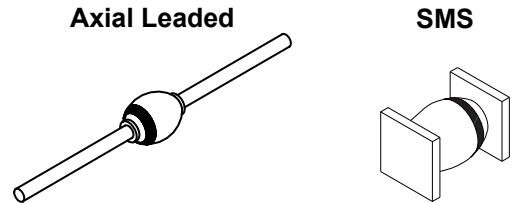
- FEATURES:**
- Fast Reverse Recovery: 250ns Maximum ^{4/}
 - PIV to 1000 Volts
 - Hermetically Sealed
 - Low Reverse Leakage Current
 - Single Chip Construction
 - Replaces Larger DO-4 Rectifiers
 - Low Thermal Resistance
 - Available in Axial & Square Tab Versions
 - TX, TXV, and S-Level Screening Available ^{2/}
 - Ultra Fast and Hyper Fast Recovery Versions Available- Contact Factory

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR9JF & SDR9JFSMS SDR9KF & SDR9KFSMS SDR9MF & SDR9MFSMS	V_{RRM} V_{RWM} V_R	600 800 1000 Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ C$)		I_O	9.0 Amps
Peak Surge Current (8.3 ms pulse, half sine wave, superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ C$)		I_{FSM}	100 Amps
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175 $^\circ C$
Thermal Resistance	Junction to Lead for Axial, $L = .125"$ Junction to End Tab for Surface Mount	$R_{\theta JL}$ $R_{\theta JE}$	8 4 $^\circ C/W$

NOTES:

- 1/** For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.
2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.
3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.
4/ $I_F = 500mA$, $I_R = 1A$, $I_{RR} = 250mA$, $T_A = 25^\circ C$





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ELECTRICAL CHARACTERISTICS ^{3/}				
CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop $I_F = 9.0 \text{ Adc}, 300\text{-}500\mu\text{s pulse}$	$T_A = +25^\circ\text{C}$	V_{F1}	1.15	Vdc
	$T_A = -55^\circ\text{C}$	V_{F2}	1.30	
Reverse Leakage Current Rated V_R , 300 μs pulse minimum	$T_A = +25^\circ\text{C}$	I_{R1}	1.0	μA
	$T_A = +100^\circ\text{C}$	I_{R2}	50	
Junction Capacitance $V_R = 10 \text{ Vdc}, f = 1\text{MHz}, T_A = 25^\circ\text{C}$		C_J	50	pF
Reverse Recovery Time $I_F = 500\text{mA}, I_R = 1\text{A}, I_{RR} = 250\text{mA}, T_A = 25^\circ\text{C}$		t_{rr}	250 typ. 325 max.	ns

Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	---	.170	A (SMS)	.170	.180
B	.210	.250	A (ASMS)	.145	.155
C	.037	.043	B	.260	.300
D	1.000	---	C	.020	.030
			D	.002	---

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

DATA SHEET #: RC0056E

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