PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada,CA 90638
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

SDR1ASM,SMM&SMS thru SDR1MSM,SMM&SMS

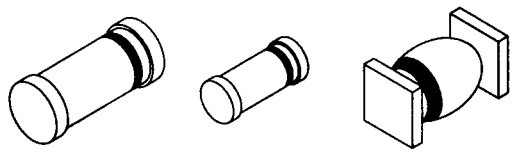
Designer's Data Sheet

1 AMP
50-1000 VOLTS
50-70 nsec
ULTRA FAST
RECTIFIER

FEATURES:

- Ultra Fast Recovery: 50-70 nsec Max. @ 25°C
  80-120 nsec Max. @ 100°C
- PIV to 1000 Volts (1200 Volt version available)
- Hermetically Sealed
- Low Reverse Leakage Current
- Single Chip Construction
- For High Efficiency Applications
- Available in both round and square tab versions
- Metallurgically Bonded
- TX, TXV and Space Level Screening

SM(ROUND) **SMM(MINI)** **SMS(SQUARE)**



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage **SDR1ASM,SMM&SMS**	V_{RRM} V_{RWM} V_R	50	**Volts**
SDR1BSM,SMM&SMS		100	
SDR1DSM,SMM&SMS		200	
SDR1GSM,SMM&SMS		400	
SDR1JSM,SMM&SMS		600	
SDR1KSM,SMM&SMS		800	
SDR1MSM,SMM&SMS		1000	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	I_O	1	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, TA=25°C)	I_{FSM}	25	**Amps**
Operating and storage temperature	**Top & Tstg**	-65 to +175	**°C**
Maximum Thermal Resistance Junction to End Tab	$R_{\theta JE}$	28	**°C/W**

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

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ELECTRICAL CHARACTERISTICS

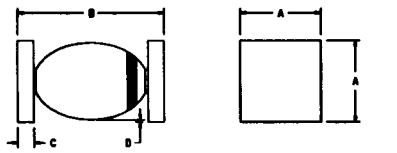
CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (I_F = 1Adc, T_A=25°C, 300µs Pulse)	SDR1ASMM-MSMM SDR1ASM-MSM SDR1ASMS-JSMS SDR1KSMS-MSMS	VF	2.7 2.3 1.7 1.9	Vdc
Instantaneous Forward Voltage Drop (I_F = 1 Adc, T_A=-55°C, 300µs Pulse)	SDR1ASMM-MSMM SDR1ASM-MSM SDR1ASMS-JSMS SDR1KSMS-MSMS	VF	2.85 2.45 1.85 2.05	Vdc
Reverse Leakage Current (Rated VR, T_A=25°C, 300µs pulse minimum)		IR	5	µA
Reverse Leakage Current (Rated V_R, T_A=100°C, 300µs pulse minimum)		IR	500	µA
Junction Capacitance (V_R = 10 Vdc, T_A=25°C, f= 1 MHz)		CJ	20	pf
Reverse Recovery Time (I_F =500ma, I_R = 1A, I_{RR}=250mA, T_A=25°C)	SDR1ASMM-MSMM SDR1ASM-MSM SDR1ASMS-JSMS SDR1KSMS-MSMS	trr	70 70 50 70	nsec

SM (ROUND)			SMM (MINI)		SMS(SQUARE)	
DIM	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
A	.190"	.210"	.135"	.145"	.127"	.140"
B	.095"	.105"	.075"	.085"	.200"	.280"
C	.010"	.030"	.010"	.030"	.022"	.028"
D	---	---	---	---	.002"	---

Dimensions are prior to solder dip

SM & SMM

SMS



TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified