PRELIMINARY

SOLID STATE DEVICES, INC

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

SDR1302SMS thru SDR1308SMS

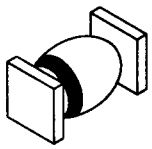
Designer's Data Sheet

3 AMP
200-800 VOLTS
70 nsec
ULTRA FAST
RECTIFIER

FEATURES:

- Ultra Fast Recovery: 70 nsec Max. @ 25°C
  110 nsec Max. @ 100°C
- Single Chip Construction
- PIV to 800 Volts
- Low Reverse Leakage Current
- Hermetically Sealed Surface Mount package
- For High Efficiency Applications
- Replaces Unitrode: UES1304 Series
- Metallurgically Bonded
- Available in axial leaded versions
- TX, TXV and Space Level Screening Available

SURFACE MOUNT
SQUARE TAB



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse and DC Blocking Voltage **SDR1302SMS** **SDR1304SMS** **SDR1306SMS** **SDR1308SMS**	V_{RRM} V_{RWM} V_R	200 400 600 800	**Volts**
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, TA=25°C)	**Io**	3	**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}**	75	**Amps**
Operating and storage temperature	**Top & Tstg**	-65 to +175	**°C**
Maximum Thermal Resistance Junction to End Tab	**$R_{\theta JE}$**	14	**°C/W**

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: RU0095 A	RMD

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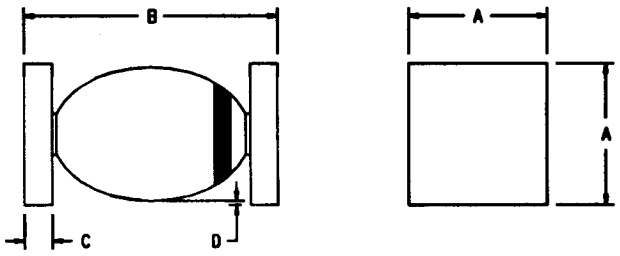
ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (I_F = 3 Adc, T_A=25°C, 300µs Pulse)	VF	1.35	Vdc
Instantaneous Forward Voltage Drop (I_F = 3 Adc, T_A=-55°C, 300µs Pulse)	VF	1.5	Vdc
Reverse Leakage Current (Rated VR, T_A=25°C, 300µs pulse minimum)	IR	20	µA
Reverse Leakage Current (Rated V_R, T_A=100°C, 300µs pulse minimum)	IR	1	mA
Junction Capacitance (V_R = 10 Vdc, T_A=25°C, f= 1MHz)	CJ	50	pf
Reverse Recovery Time (I_F =500ma, I_R = 1A, I_{RR}=250mA, T_A=25°C)	trr	70	nsec

CASE OUTLINE:



Dimensions prior to solder dipping.

DIMENSIONS		
DIM	MIN.	MAX.
A	.172"	.180"
B	.180"	.280"
C	.022"	.028"
D	.002"	---

TYPICAL OPERATING CURVES

TA=25°C Unless otherwise specified