PRELIMINARY

SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

SDR1A thru SDR1N

1 AMP 50 - 1200 VOLTS 50 - 80 nsec ULTRA FAST RECTIFIER

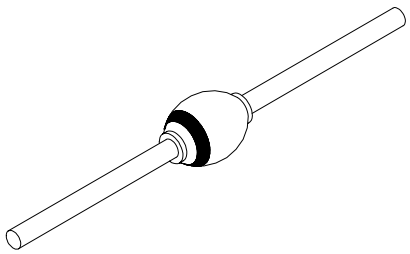
Designer's Data Sheet

FEATURES:

- **Ultra Fast Recovery: 50 - 80 nsec max @ 25°C**
  80 - 120nsec max @ 100°C
- **Single Chip Construction**
- **PIV to 1200 Volts**
- **Low Reverse Leakage Current**
- **Hermetically Sealed**
- **For High Efficiency Applications**
- **Available in Surface Mount Versions**
- **Metallurgically Bonded**

- **TX, TXV, and Space Level Screening Available**

AXIAL



Maximum Ratings		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage	**SDR1A**	V_{RRM} V_{RWM} V_R	**50**	**Volts**
	SDR1B		**100**	
	SDR1D		**200**	
	SDR1G		**400**	
	SDR1J		**600**	
	SDR1K		**800**	
	SDR1M		**1000**	
	SDR1N		**1200**	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, T_A = 25 °C		**Io**	**1**	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	**25**	**Amps**
Operating and Storage Temperature		T_{OP} & T_{STG}	**-65 TO +175**	**°C**
Maximum Thermal Resistance Junction to Lead, L = 3/8"		$R_{\theta JL}$	**35**	**°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 #: RU0005C

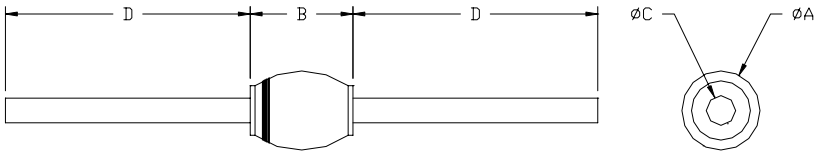
SDR1A thru SPD1N

PRELIMINARY

SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

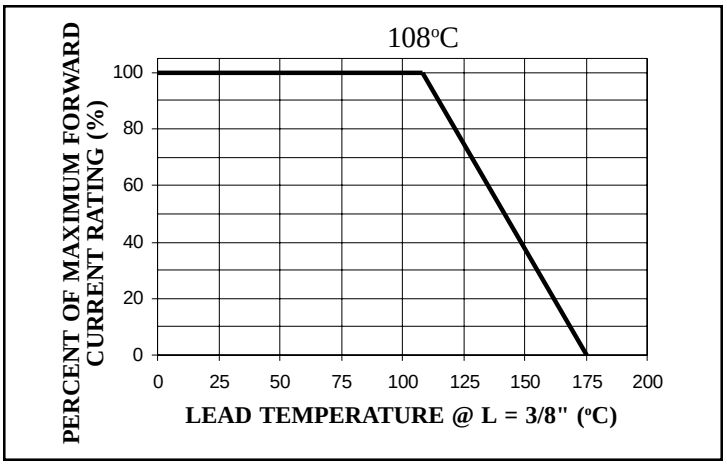
Electrical Characteristics		SYMBOL	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop (I_F = 1A_{DC}, T_A = 25°C, 300 - 500µs Pulse)	**SDR1A - 1J** **SDR1K - 1N**	**V_{F1}**	**1.7** **1.9**	**V_{DC}**
Instantaneous Forward Voltage Drop (I_F = 1A_{DC}, T_A = -55°C, 300 - 500µs Pulse)	**SDR1A - 1J** **SDR1K - 1N**	**V_{F2}**	**2.1** **2.3**	**V_{DC}**
Reverse Leakage Current (Rated V_R , T_A = 25°C, 300 µs minimum Pulse)		**I_{R1}**	**5**	**µA**
Reverse Leakage Current (Rated V_R , T_A = 100°C, 300 µs minimum Pulse)		**I_{R2}**	**0.5**	**mA**
Junction Capacitance (V_R = 10 V_{DC}, T_A = 25°C, f = 1 MHz)		**C_J**	**20**	**pF**
Reverse Recovery Time (I_F = 500 mA, I_R = 1A, I_{RR} = 250 mA, T_A = 25°C)	**SDR1A - 1J** **SDR1K** **SDR1M** **SDR1N**	**t_{RR}**	**50** **60** **70** **80**	**nsec**

CASE OUTLINE:



DIMENSIONS		
DIM	MIN.	MAX.
A	--	0.150"
B	--	0.190"
C	0.027"	0.033"
D	.95"	--

TYPICAL OPERATING CURVES
(T_A = 25°C unless otherwise specified)



FORWARD VOLTAGE