



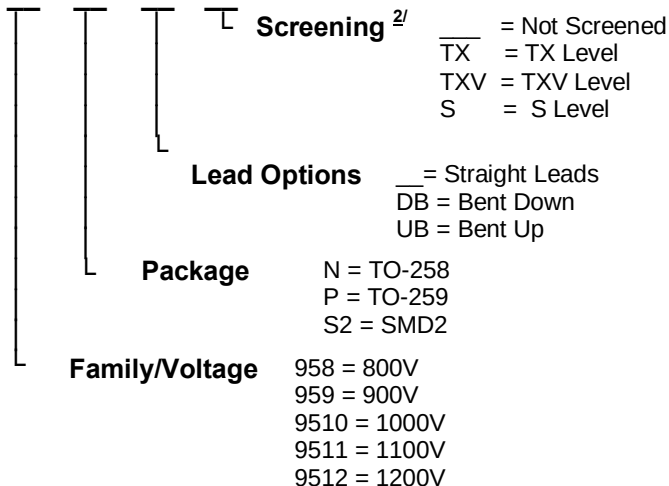
Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

DESIGNER'S DATA SHEET

Part Number/Ordering Information ^{1/}

SDR



SDR958 thru SDR9512 Series

50 AMP
800 -1200 Volts
100 nsec
Ultrafast Recovery
Rectifier

Features:

- Ultra Fast Recovery: 80 nsec typical
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Faster Recovery Times Available – Contact Factory
- TX, TXV, Space Level Screening Available - Consult Factory

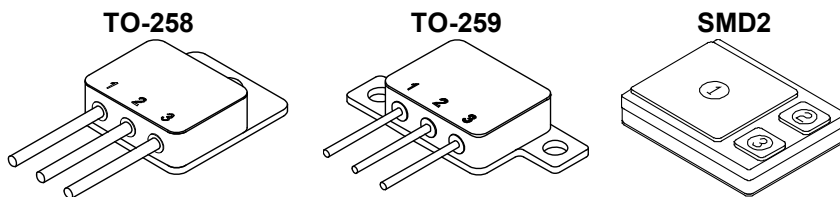
Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDR958	V_{RRM}	800	Volts
	SDR959		900	
	SDR9510	V_{RWM}	1000	
	SDR9511		1100	
	SDR9512	V_R	1200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^{\circ}\text{C}$) ^{3/}		I_o	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , Allow Junction to Reach Equilibrium Between Pulses, $T_A = 25^{\circ}\text{C}$) ^{3/}		I_{FSM}	500	Amps
Operating & Storage Temperature		Top & Tstg	-65 to +200	$^{\circ}\text{C}$
Maximum Thermal Resistance Junction to Case ^{3/}	N&P SMD2	$R_{\theta JC}$	0.45 0.3	$^{\circ}\text{C/W}$

Notes:

^{1/} For Ordering Information, Price, Operating Curves, and Availability - Contact Factory

^{2/} Screening per MIL-PRF-19500

^{3/} Pins 2&3 connected



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

DATA SHEET #: RU0113C

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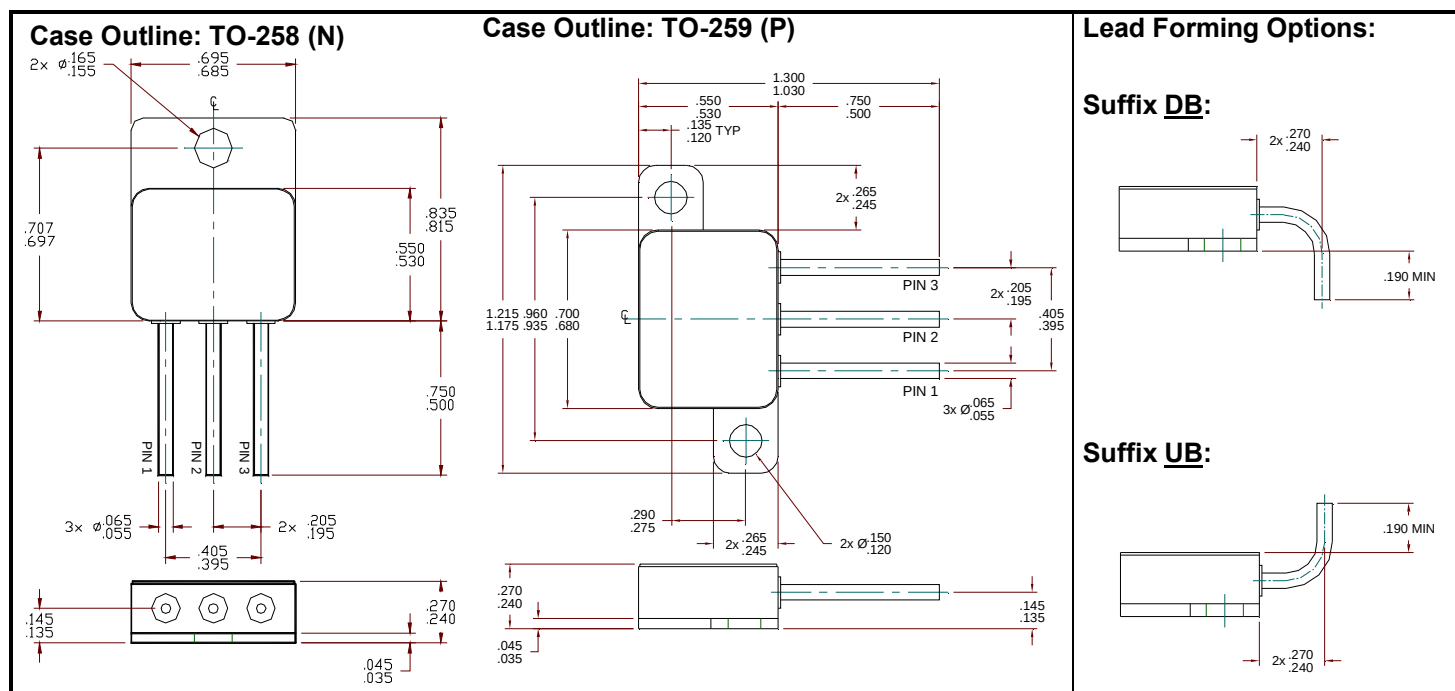


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Electrical Characteristics ^{3/}		Symbol	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _A = 25°C, 300 μsec pulse)	I _F = 20Adc	V _{F1}	1.10	--	Volts
	I _F = 50Adc		1.25	1.7	
	I _F = 100Adc		1.40	2.0	
Instantaneous Forward Voltage Drop T _A = -55°C T _A = -55°C T _A = 100°C T _A = 100°C	I _F = 20Adc	V _{F2}	1.20	--	Volts
	I _F = 50Adc		1.30	1.80	
	I _F = 20Adc		0.95	--	
	I _F = 50Adc		1.15	1.60	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300 μsec pulse minimum)		I _{R1}	50	100	μA
Reverse Leakage Current (Rated V _R , T _A = 100°C, 300 μsec pulse minimum) (Rated V _R , T _A = 125°C, 300 μsec pulse minimum) (Rated V _R , T _A = 150°C, 300 μsec pulse minimum)		I _{R2}	3.0 7.0 17.0	10 -- --	mA
Junction Capacitance (V _R = 5 Vdc, T _A = 25°C, f = 1MHz) (V _R = 10 Vdc, T _A = 25°C, f = 1MHz)		C _J	180 160	-- 250	pF
Reverse Recovery Time (I _F = 500 mA, I _R = 1A, I _{RR} = 0.25A) (I _F = 10 A, dI _F /dt = 100A/us) (I _F = 10 A, dI _F /dt = 100A/us) (I _F = 10 A, dI _F /dt = 45A/us) (I _F = 10 A, dI _F /dt = 45A/us) (I _F = 10 A, dI _F /dt = 45A/us) (I _F = 10 A, dI _F /dt = 45A/us)	T _A = 25°C T _A = 25°C T _A = 25°C T _A = 25°C T _A = 25°C T _A = 100°C T _A = 100°C	t _{rr1} t _{rr2} I _{RM2} t _{rr3} I _{RM3} t _{rr4} I _{RM4}	100 135 8.0 210 4.0 330 7.5	150 -- -- -- -- -- --	nsec nsec A nsec A nsec A



Pin1: Cathode

Pin2: Anode

Pin3: Anode

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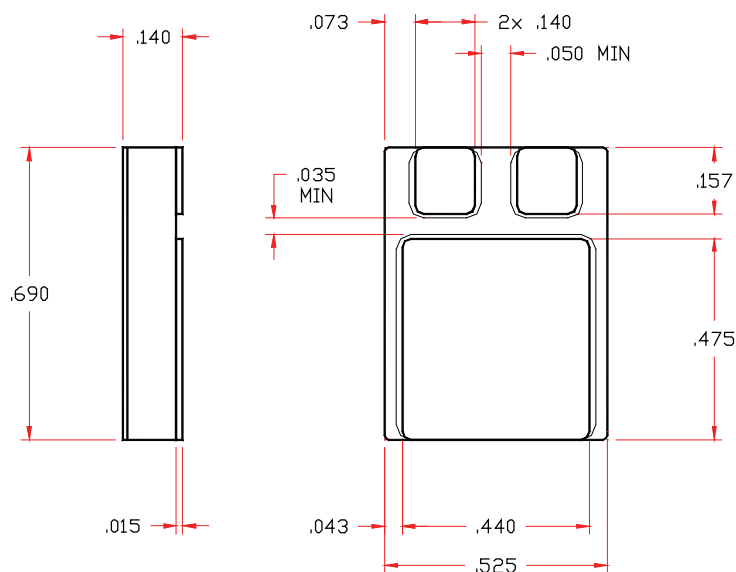


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Case Outline: SMD2(S2)



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