

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/ SRE __ UF L Screening^{2/} = None TX = TX Level TXV = TXV Level S = S Level **Package** = Axial SMS = Surface Mount Square Tab **Recovery Time** UF = Ultra Fast Voltage 10 = 1000 V11 = 1100 V12 = 1200 V13 = 1300 V14 = 1400 V15 = 1500 V

SRE10UF-SRE15UF and SRE10UFSMS-SRE15UFSMS

0.75 AMP

1000 – 1500 Volts

50-70 nsec

HIGH REVERSE ENERGY

ABSORPTION CAPABILITY

ULTRA FAST RECTIFIER

Features:

- Ultra Fast Recovery: 50-70 nsec Max.
- High Reverse Energy Absorption Capability
- Single Chip Construction
- PIV to 1500 Volts
- Low Reverse Leakage Current
- Available in Surface Mount versions
- Metallurgically Bonded
- TX, TXV, and S-Level Screening Available^{2/}

Maximum Ratings		Symbol	Value	Units	
Peak Repetitive Reverse and DC Blocking Voltage		SRE10UF SRE11UF SRE12UF SRE13UF SRE14UF SRE15UF	$egin{aligned} \mathbf{V_{RRM}} \ \mathbf{V_{RWM}} \ \mathbf{V_{R}} \end{aligned}$	1000 1100 1200 1300 1400 1500	Volts
Reverse Energy Voltage Surge (Discharge Voltage Vs from 0.0022µF capacitor)		Vs	200V GREATER THAN RATED VR	Volts	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T _A = 25°C)		Io	0.75	Amps	
Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on Io, Allow Junction to Reach Equilibrium Between Pulses, $T_A = 25^{\circ}C$)		I_{FSM}	20	Amps	
Operating & Storage Temperature		Top & Tstg	-65 to +175	°C	
Maximum Thermal Resistance	Junct	ion to Lead, L = 3/8 " Junction to End Tab	$R_{ heta m JL} \ R_{ heta m JE}$	40 35	°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.

Axial Leaded

SMS (Square)



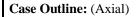


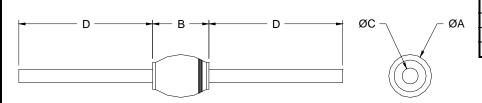
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SRE10UF thru SRE15UF

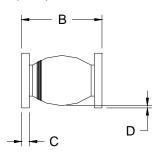
Electrical Characteristics	Symbol	Max	Units
Instantaneous Forward Voltage Drop $(I_F = 0.75 \text{ Adc}, T_A = 25^{\circ}\text{C}, 300 \mu\text{s} \text{pulse})$	$\mathbf{V_F}$	2.5	Vdc
Instantaneous Forward Voltage Drop (I _F = 3 Adc, T _A = -55°C, 300 µs pulse)	V_{F}	2.7	Vdc
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300 µs pulse minimum)	I_R	10	μΑ
Reverse Leakage Current (Rated V_R , $T_A = 100$ °C, 300 μ s pulse minimum)	I_R	500	μΑ
Junction Capacitance $(V_R = 10 \text{ Vdc}, T_A = 25^{\circ}\text{C}, f = 1\text{MHz})$	$C_{\mathbf{J}}$	50	pF
	t _{rr}	50 60 70	nsec

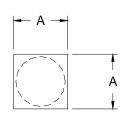




DIMENSIONS					
DIM	MIN	MAX			
A		.160"			
В	.130"	.190"			
C	.027"	.033"			
D	1.00"				

Case Outline: (SMS)





DIMENSIONS				
DIM	MIN	MAX		
A	.160"	.180"		
В	.180"	.240"		
С	.022"	.028"		
D	.002"			