

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/} SDR2UF Screening ^{2/} STAN SCREENING TAN SCREENING PACKAGE TYPE SCREENING STAN SCREENING SCREENING SCREENING SCREENING FAST SCREENING Voltage/Family

1.8 = 1800V

2 = 2000V

SDR2UF1.8 and SMS SDR2UF2.0 and SMS

2 AMPS 1800 - 2000 VOLTS 70 nsec ULTRA FAST RECOVERY RECTIFIER

FEATURES:

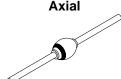
- Ultra Fast Recovery: 70 nsec maximum
- PIV to 2400 Volts
- Low Reverse Leakage Current
- Hermetically Sealed
- Low Thermal Resistance
- Low trr Change at High Temperature (typical: trr = 120ns @ 100°C)
- TX, TXV, and Space Level Screening Available ^{2/}
- Fast Recovery Versions Available. Contact Factory.
- Single Junction Construction
- Replaces 1N6512 and 1N6513 in many applications.

MAXIMUM RATINGS		Symbol	Value	Units
Reverse Voltage	SDR2UF1.8 & SMS SDR2UF2.0 & SMS	$oldsymbol{V_{RRM}}{oldsymbol{V_{RWM}}} oldsymbol{V_{R}}$	1800 2000	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T _A =25°C)		lo	2	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°C)		I _{FSM}	30	Amps
Temperature Range	Operating Storage	T _{OP} T _{stg}	-65 to +175 -65 to +200	°C
Maximum Thermal Resistance Junction to Lead, L = 0.125" (Axial Lead) Junction to End Tab (Surface Mount)		$R_{ hetaJL}$	6 4	°C/W

NOTES:

1/ For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screening Based on MIL-PRF-19500. Screening Flow Available on Request.



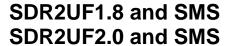
Surface Mount Square Tab (SMS)



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

DATA SHEET #: RC0063E

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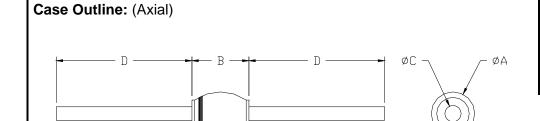




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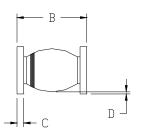
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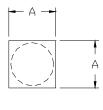
ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Unit
Breakdown Voltage $(I_R = 50 \mu A, T_A = 25^{\circ}C, 300\mu sec minimum Pulse)$	SDR2UF1.8 & SMS SDR2UF2.0 & SMS	BV _R	=	1800 2000	Volts
Instantaneous Forward Voltage Drop (T _A = 25°C, 300 – 500 μsec Pulse)	I _{F1} =1 A I _{F2} =2 A	V _{F1} V _{F2}	_	3.60 4.20	Volts Volts
Instantaneous Forward Voltage Drop (T _A = -55°C, 300 – 500 μsec Pulse)	I _{F3} =1 A I _{F4} =2 A	V _{F3} V _{F4}	=	3.80 4.60	Volts Volts
Reverse Leakage Current (V _R =85% rated V _R , 300μsec minimum Pulse)	$T_A = 25^{\circ}C$ $T_A = 100^{\circ}C$	I _{R1}	_	1.5 200	μ Α μ Α
Junction Capacitance $(V_R = 50 V_{DC}, T_A = 25^{\circ}C, f = 1 MHz)$		CJ	_	20	pF
Reverse Recovery Time $(I_F = 500 \text{ mA}, I_R = 1 \text{ A}, I_{RR} = 250 \text{ mA}, T_A = 25^{\circ}\text{C})$		t _{rr}	_	70	ns



DIM	MIN	MAX
Α		0.170"
В	0.240"	0.270"
С	0.045"	0.051"
D	1.00"	

Case Outline: (SMS)





DIM	MIN	MAX		
Α	0.195"	0.205"		
В	0.290"	0.330"		
С	0.020"	0.030"		
D	0.002"			