



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

SDR3KHF & SDR3KHFSMS thru SDR3NHF & SDR3NHFSMS

DESIGNER'S DATA SHEET

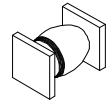
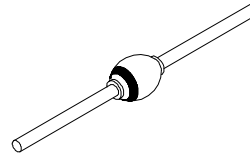
Features:

- Hyper Fast Recovery: 35 nsec maximum
- PIV to 1200 Volts
- Hermetically Sealed
- Void Free Construction
- For High Efficiency Applications
- Single Chip Construction
- Low Reverse Leakage
- TX, TXV, S Level screening Available

3 AMP 800 - 1200 V 35 nsec Hyper Fast Rectifier

Axial Lead Diode

SMS



Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDR3KHF	V_{RRM}	800	Volts
	SDR3MHF	V_{RSM}	1000	
	SDR3NHF	V_R	1200	
Average Rectified Forward Current (Resistive Load, 60 hz Sine Wave, $T_A = 25^\circ\text{C}$)		I_O	3.0	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)		I_{FSM}	70	Amps
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance	Junction to Leads, L = 3/8	$R_{\theta JE}$	20	$^\circ\text{C/W}$
	Junction to Tabs		14	

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

DATA SHEET #: RC0097A

DOC



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**SDR3DHF & SDR3DHFSMS
 thru
 SDR3NHF & SDR3NHFSMS**

Electrical Characteristic			Symbol	Max	Units
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, pulsed)	SDR3KHF – SDR3NHF	3A	V_{F1}	3.1	V_{DC}
		1A	V_{F2}	1.9	
Instantaneous Forward Voltage Drop ($T_A = -55^\circ\text{C}$, pulsed)	SDR3KHF – SDR3NHF	1A	V_{F3}	2.0	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, pulsed)			I_{R1}	10	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, pulsed)			I_{R2}	300	μA
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}	35	nsec
Junction Capacitance ($V_R = 10V_{DC}$, $f = 1\text{MHz}$, $T_A = 25^\circ\text{C}$)			C_J	30	pF

Case Outline: (Axial)

DIM	MIN	MAX
A	—	0.165"
B	—	0.220"
C	0.047"	0.053"
D	0.950"	—

Case Outline: (SMS)

DIM	MIN	MAX
A	0.172"	0.180"
B	0.180"	0.280"
C	0.022"	0.028"
D	0.002"	--