



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

SDR7PF thru SDR7TF Series

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR9

— — — —

Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

Recovery Time

F = Fast Recovery (200 nS max)

Voltage/Family

P = 1300V

R = 1400V

T = 1500V

**7.0 AMP
FAST RECOVERY RECTIFIER
1300 – 1500 VOLTS**

FEATURES:

- PIV to 1500 Volts
- Hermetically Sealed
- Low Reverse Leakage Current
- Single Chip Construction
- Replaces Larger DO-4 Rectifiers
- Low Thermal Resistance
- Available in Axial & Square Tab Versions
- TX, TXV, and S-Level Screening Available^{2/}
- Standard, and Ultra Fast Recovery Versions Available- Contact Factory

MAXIMUM RATINGS ^{3/}

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR7PF	V_{RRM}	1300	Volts
	SDR7RF	V_{RWM}	1400	
	SDR7TF	V_R	1500	
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$)		I_o	7.0	Amps
Peak Surge Current (8.3 ms pulse, half sine wave, superimposed on I_o , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)		I_{FSM}	70	Amps
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175	$^\circ\text{C}$
Thermal Resistance	Junction to Lead for Axial, L = .125"	$R_{\theta JL}$	8	$^\circ\text{C/W}$
	Junction to End Tab for Surface Mount	$R_{\theta JE}$	4	

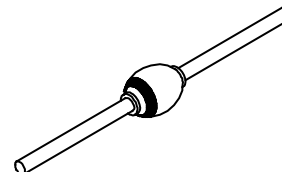
NOTES:

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

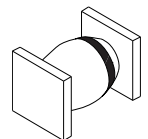
^{2/} Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C.

Axial Leaded



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 #: RC0137A

DOC



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

SDR7PF thru SDR7TF Series

ELECTRICAL CHARACTERISTICS^{3/}				
CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (pulsed)	$I_F = 7.0 \text{ Adc}, T_A = +25^\circ\text{C}$	V_{F1}	1.55	Vdc
	$I_F = 3.0 \text{ Adc}, T_A = +25^\circ\text{C}$	V_{F2}	1.30	
	$I_F = 7.0 \text{ Adc}, T_A = -55^\circ\text{C}$	V_{F3}	1.65	
Reverse Leakage Current ($V_R = 80\%$ rated)	$T_A = +25^\circ\text{C}$	I_{R1}	2.0	μA
	$T_A = +100^\circ\text{C}$	I_{R2}	80	
Minimum Breakdown Voltage ($I_R = 50 \mu\text{A}$)	SDR7PF	B_{VR}	1300	V (min)
	SDR7RF		1400	
	SDR7TF		1500	
Junction Capacitance ($V_R = 10 \text{ Vdc}, f = 1\text{MHz}, T_A = 25^\circ\text{C}$)		C_J	50	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}	200	ns

Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	---	.170	A (SMS)	.170	.180
B	.210	.250	B	.260	.300
C	.037	.043	C	.020	.030
D	1.000	---	D	.002	---

AXIAL	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 #: RC0137A

DOC