



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

SUM60F thru SUM90F and SUM60FSMS thru SUM90FSMS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SUM

— — —

Screening ^{2/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Package Type

— = Axial Leaded

SMS = Surface Mount Square Tab

Voltage/Family

60F = 6,000V

70F = 7,000V

80F = 8,000V

90F = 9,000V

500 mA

6,000 thru 9,000 VOLTS

180 ns FAST RECOVERY
RECTIFIER

FEATURES:

- PIV to 9,000 Volts
- Hermetically Sealed Axial and Square Tab Surface Mount Package
- Fast Recovery 180 nsec Maximum ^{4/}
- Void Free Construction
- Metallurgically Bonded
- 175°C Maximum Operating Temperature
- TX, TXV, and S-Level Screening Available ^{2/}
- Also Available in Ultra Fast Versions, Consult Factory

MAXIMUM RATINGS ^{3/} ^{6/}

RATING		SYMBOL	VALUE	UNIT
Peak Inverse Voltage	SUM60F and SUM60FSMS	PIV	6000	Volts
	SUM70F and SUM70FSMS		7000	
	SUM80F and SUM80FSMS		8000	
	SUM90F and SUM90FSMS		9000	
Average Rectified Current	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_{O1} I_{O2}	500 300	mA
Surge Current (1 Cycle)		I_{FSM}	25	Amps
Operating & Storage Temperature ^{5/}		T_J and T_{STG}	-65 to +175	°C

NOTES:

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

^{2/} Screened to MIL-PRF-19500.

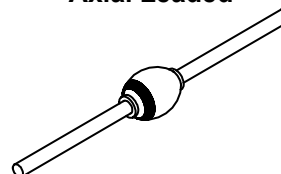
^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C.

^{4/} $I_F = 500\text{mA}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{mA}$, $T_A = 25^\circ\text{C}$

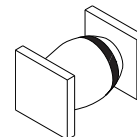
^{5/} Maximum lead/end temperature for soldering is 250°C, 3/8" from case for 5 sec. maximum.

^{6/} Operating and testing over 10,000 V/inch may require encapsulation or immersion in suitable dielectric material.

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 #: RC0037C

DOC



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**SUM60F thru SUM90F
and
SUM60FSMS thru SUM90FSMS**

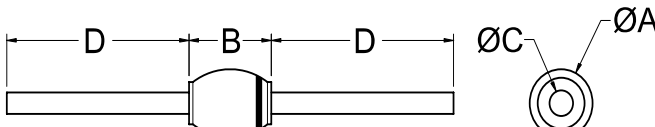
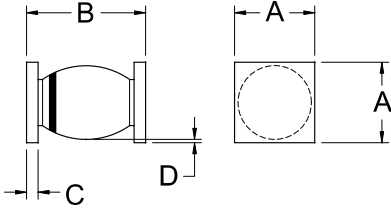
ELECTRICAL CHARACTERISTICS ^{3/ 6/}

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Maximum Forward Voltage (300 μ s pulse minimum) $I_F = 500 \text{ mA}$	V_F	13.5	Vdc
Maximum Reverse Leakage Current ($V_R = \text{Rated}$) $(T_A = +25^\circ\text{C})$ $(T_A = +100^\circ\text{C})$	I_{R1} I_{R2}	1.0 15	μA μA
Maximum Junction Capacitance $V_R = 100 \text{ Vdc}$, $f = 1 \text{ MHz}$	C_J	8	pF
Maximum 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}	180	ns
Typical Thermal Impedance Junction to Lead for Axial, $L = .375"$ Junction to End Tab for Surface Mount	$R_{\theta JL}$ $R_{\theta JE}$	18 18	$^\circ\text{C/W}$

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3/ Unless Otherwise Specified, All Electrical Characteristics @25°C.
4/ $I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$, $T_A = 25^\circ\text{C}$
5/ Maximum lead/end temperature for soldering is 250°C, 3/8" from case for 5 sec. maximum.
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Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM	Minimum	Maximum
A	.065	.165	A	.170	.180
B	---	.350	B	.330	.380
C	.047	.053	C	.020	.030
D	1.00	---	D	.002	---
AXIAL			SMS		
					

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