Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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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 SUM70F and SUM70FSMS SUM80F and SUM80FSMS SUM90F and SUM90FSMS	**PIV**	6000 7000 8000 9000	Volts
Average Rectified Current	T_A = 25°C T_A = 100°C	$\mathbf{I_{O1}}$ $\mathbf{I_{O2}}$	500 300	mA
Surge Current (1 Cycle)		$\mathbf{I_{FSM}}$	25	Amps
Operating & Storage Temperature [5/]		$\mathbf{T_J}$ **and** $\mathbf{T_{STG}}$	-65 to +175	°C

NOTES:

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

2/ Screened to MIL-PRF-19500.

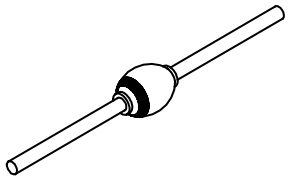
3/ Unless Otherwise Specified, All Electrical Characteristics @25ºC.

4/ I_F = 500mA, I_R = 1A, I_{RR} = 250mA, T_A = 25°C

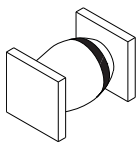
5/ Maximum lead/end temperature for soldering is 250°C, 3/8" from case for 5 sec. maximum.

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

Axial Leaded



SMS



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ELECTRICAL CHARACTERISTICS 3/ 6/

CHARACTERISTICS		SYMBOL	VALUE	UNIT
Maximum Forward Voltage (300µs pulse minimum)	I_F = 500 mA	V_F	13.5	Vdc
Maximum Reverse Leakage Current (V_R = Rated)	(T_A = +25°C) (T_A =+100°C)	I_{R1} I_{R2}	1.0 15	µA µA
Maximum Junction Capacitance V_R = 100 Vdc, f = 1MHz		C_J	8	pF
Maximum Reverse Recovery Time I_F = 500mA, I_R = 1A, I_{RR} = 250mA, T_A = 25°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	°C/W

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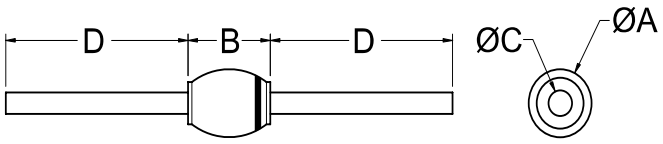
Package Outlines:

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