



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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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

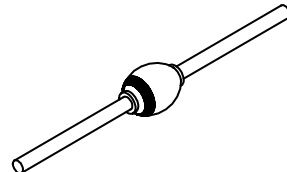
MAXIMUM RATINGS ^{3/ 6/}

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

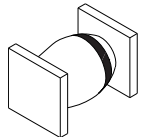
NOTES:

- ^{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 = 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)	$I_F = 500 \text{ mA}$	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 °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