



PRELIMINARY

SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

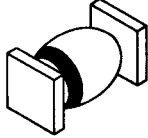
**SHM15FSMS  
thru  
SHM140FSMS**

**Designer's Data Sheet**

- FEATURES:**
- Fast Recovery: 200 nsec Maximum
  - PIV to 14000 Volts
  - Hermetically Sealed
  - Void-Free Construction
  - Metallurgically bonded
  - 175°C Maximum Operating Temperature
  
  - TX, TXV, and Space Level Screening Available

**50-250 mA  
1500-14000 VOLTS  
200 nsec  
HIGH VOLTAGE  
RECTIFIER**

**SURFACE MOUNT  
SQUARE TAB**



**ELECTRICAL CHARACTERISTICS**

Part Number	Peak Inverse Voltage	Average Rectified Current		Maximum Reverse Current @ PIV		Maximum Forward Voltage @ 55°C IO	Maximum Surge Current 1 Cycle	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance
		25°C	100°C	55°C	100°C					
SYMBOL	PIV	IO		IR		VF	IFSM	trr	CJ, fT=1MHz	θJL
UNITS	Volts	25°C mA	100°C mA	55°C μA	100°C μA	25°C Volts	25°C Amps	25°C nsec	@ 100 Volts pf	L=0.25" °C/W
SHM15FSMS	1500	250	185	1.0	25	8	15	150	8	55
SHM20FSMS	2000	250	185	1.0	25	8	15	150	8	55
SHM25FSMS	2500	250	185	1.0	25	8	15	150	8	55
SHM30FSMS	3000	150	110	1.0	25	12	10	150	4	55
SHM40FSMS	4000	150	110	1.0	25	12	10	150	4	55
SHM50FSMS	5000	150	110	1.0	25	12	10	150	4	55
SHM60FSMS	6000	100	75	1.0	25	18	5	150	2	55
SHM80FSMS	8000	100	75	1.0	25	18	5	150	2	55
SHM100FSMS	10000	100	75	1.0	25	18	5	150	2	55
SHM120FSMS	12000	100	75	1.0	25	20	5	150	2	55
SHM140FSMS	14000	50	40	1.0	25	24	1	200	2	85

**NOTES:**

1. Operating and testing over 10,000 V/inch may require encapsulation or immersion in a suitable dielectric material.
2. Max. forward voltage measured with instantaneous forward pulse of 300usec minimum.
3. Max. end tab temp. for soldering is 250°C, for 5 sec maximum.
4. Operating and storage temperature: -65°C to +175°C
5. Reverse Recovery Test Conditions: IF=50mA, IR=100mA, IRR=25mA, TA=25°C

# SHM15FSMS thru SHM140FSMS

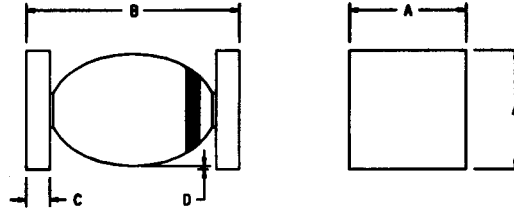
PRELIMINARY



SOLID STATE DEVICES, INC

14849 Firestone Boulevard · La Mirada, CA 90638  
Phone: (714) 670-SSDI (7734) · Fax: (714) 522-7424

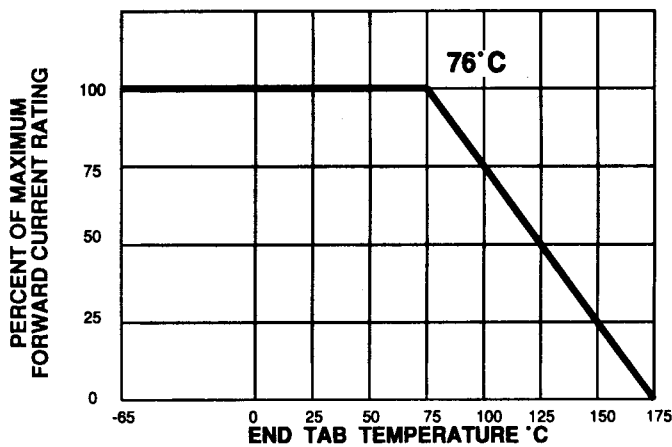
PACKAGE OUTLINE:



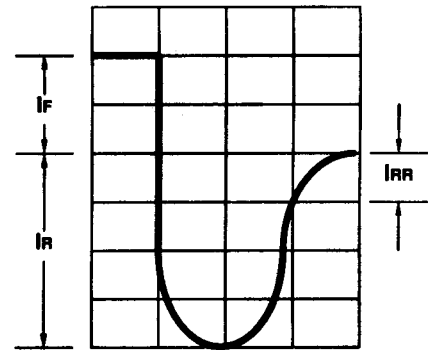
Dimensions prior to solder dipping.

Part Number	DIM. A		DIM. B		DIM. C		DIM. D	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
SHM15-50SMS	.127"	.140"	.280"	.320"	.022"	.028"	.002"	---
SHM60-140SMS	.127"	.140"	.360"	.450"	.022"	.028"	.002"	---

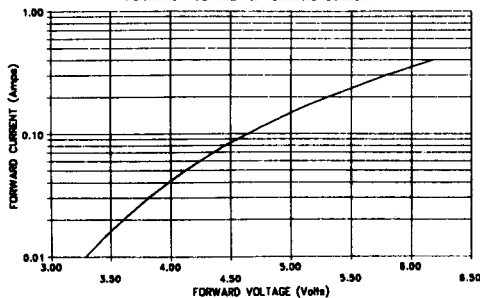
TYPICAL OPERATING CURVES



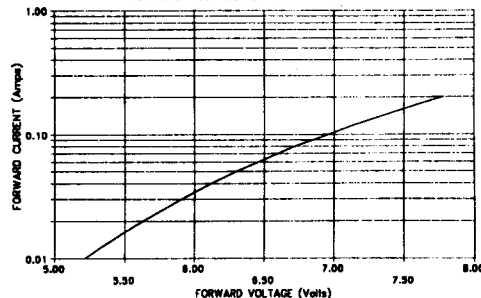
REVERSE RECOVERY WAVE FORM



FORWARD VOLTAGE vs. FORWARD CURRENT



FORWARD VOLTAGE vs. FORWARD CURRENT



For VF curves on SHM60FSMS - SHM100FSMS please contact SSDI.

SHM15FSMS-SHM25FSMS

SHM30FSMS-SHM50FSMS