



Solid State Devices, Inc.

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Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SHM	F		
		L Screening ^{2/}	= None TX = TX Level TXV = TXV Level S = S Level
		L Package	= Axial Leaded SMS = Surface Mount Square Tab
		L Recovery Time	F = Fast Recovery
		L Voltage	15 = 1500 V 60 = 6000 V 20 = 2000 V 80 = 8000 V 25 = 2500 V 100 = 10000 V 30 = 3000 V 120 = 12000 V 40 = 4000 V 140 = 14000 V 50 = 5000 V

SHM15F – SHM140F and SHM15FSMS – SHM140FSMS

50 – 250 mA, 1500 – 14000 VOLTS FAST RECOVERY HIGH VOLTAGE RECTIFIER

FEATURES:

- Fast Recovery: 150 – 200 nsec Maximum
- PIV to 14000 Volts
- Hermetically Sealed
- Available in Axial Leaded and Surface Mount Square Tab Versions
- Metallurgically Bonded
- 175°C Maximum Operating Temperature
- Also Available in Standard and Ultrafast Recovery Versions – Contact Factory
- TX, TXV, and Space Level Screening Available^{2/}
- Limited Availability – Replacement Data Sheet: RC0196

ELECTRICAL CHARACTERISTICS

Part Number	Peak Inverse Voltage	Average Rectifier Current			Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle) 8.3 mS sine	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance	
Symbol	PIV	I _O			IR @ PIV		V _F ^{4/}	I _{FSM}	t _{RR} ^{7/}	C _J	θ _{JL}	θ _{JE}
Units	Volts	mA			μA		Volts	Amps	nsec	pF	°C/W	
Conditions		25°C	100°C		25°C	100°C	25°C	25°C	25°C	V _R = 100V f _T = 1MHZ	SHM	SMS
			Axial	SMS								
SHM15F	1500	250	160	185	1.0	25	8.0	15	150	8	65	55
SHM20F	2000	250	160	185	1.0	25	8.0	15	150	8	65	55
SHM25F	2500	250	160	185	1.0	25	8.0	15	150	8	65	55
SHM30F	3000	150	100	110	1.0	25	12	10	150	4	65	55
SHM40F	4000	150	100	110	1.0	25	12	10	150	4	65	55
SHM50F	5000	150	100	110	1.0	25	12	10	150	4	65	55
SHM60F	6000	100	65	75	1.0	25	18	5	150	2	65	55
SHM80F	8000	100	65	75	1.0	25	18	5	150	2	65	55
SHM100F	10000	100	65	75	1.0	25	18	5	150	2	65	55
SHM120F	12000	100	65	75	1.0	25	20	5	150	2	65	55
SHM140F	14000	50	35	40	1.0	25	24	1	200	2	95	85

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

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

^{3/} Operating and testing over 10,000 V/inch may require encapsulation or immersion in a suitable dielectric material.

^{4/} I_F = I_O; Max. forward voltage measured with instantaneous forward pulse of 300 μsec minimum.

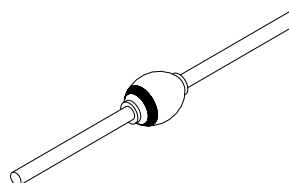
^{5/} Max. lead/end tab temp for soldering is 250°C, 3/8" from the case for 5 sec maximum.

^{6/} Operating and storage temperature: -65°C to +175°C.

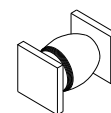
^{7/} Reverse Recovery Test Conditions: I_F=50mA, I_R=100mA, I_{RR}=25mA, T_A=25°C.

^{8/} Consult manufacturing for operating curves.

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 #: RV0011D

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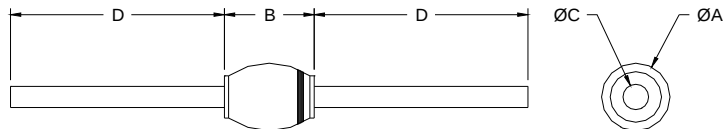
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**SHM15F – SHM140F
and
SHM15FSMS – SHM40FSMS**

PACKAGE OUTLINE: Axial



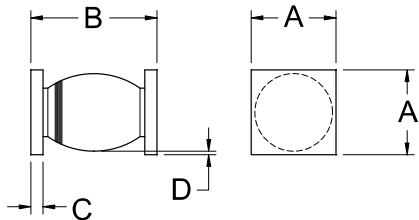
DIMENSIONS: SHM15-50

DIM	MIN	MAX
A	---	.140"
B	---	.300"
C	.025"	.033"
D	1.00"	---

DIMENSIONS: SHM60-140

DIM	MIN	MAX
A	---	.140"
B	---	.400"
C	.025"	.033"
D	1.00"	---

PACKAGE OUTLINE: Surface Mount Square Tab



DIMENSIONS: SHM15-50

DIM	MIN	MAX
A	.127"	.140"
B	.280"	.320"
C	.022"	.028"
D	.002"	---

DIMENSIONS: SHM60-140

DIM	MIN	MAX
A	.127"	.140"
B	.360"	.450"
C	.022"	.028"
D	.002"	---

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