



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

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 – SHM40FSMS

**50-250 mAmp
1500 – 14000 VOLTS
FAST RECOVERY
HIGH VOLTAGE
RECTIFIER**

FEATURES:

- Fast Recovery: 150-200 nsec Maximum
- PIV to 14000 Volts
- Hermetically Sealed Axial Lead Package
- Void-Free Construction
- Metallurgically Bonded
- 175°C Maximum Operating Temperature
- Also Available in Standard and Ultra Fast Recovery Versions. Contact Factory.
- TX, TXV, and Space Level Screening Available^{2/}

ELECTRICAL CHARACTERISTICS

Part Number	Peak Inverse Voltage	Average Rectifier Current			Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle)	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Impedance	
Symbol	PIV	I ₀			IR @ PIV		V _F ^{4/}	I _{FSM}	t _{RR} ^{2/}	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 = I₀. Max. forward voltage measured with instantaneous forward pulse of 300μsec minimum.

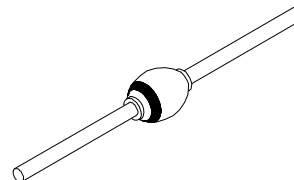
^{5/} Max. lead/end tab temp for soldering is 250°C, 3/8" from the case for 5 sec maximum.

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

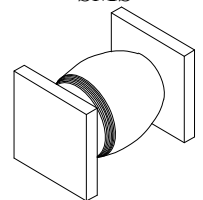
^{7/} Reverse Recovery Test Conditions: IF=50mA, IR=100mA, IRR=25mA, TA=25°C.

^{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.

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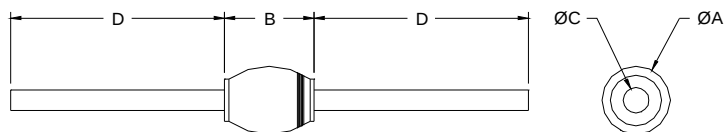
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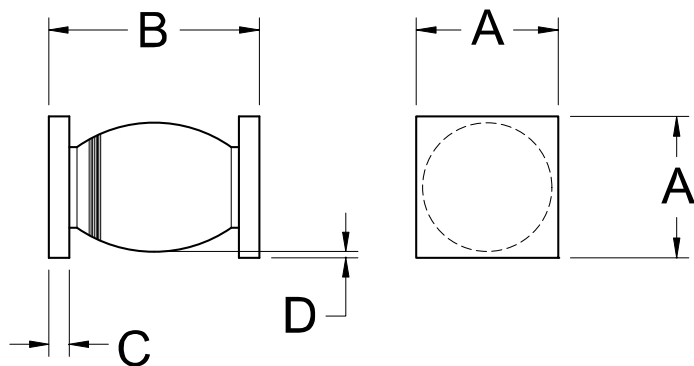
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PACKAGE OUTLINE: Axial



PACKAGE OUTLINE: Surface Mount Square Tab



SHM15F-SHM140F and SHM15FSMS – SHM40FSMS

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"	---

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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