



PRELIMINARY

**SOLID STATE DEVICES, INC**

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

## Designer's Data Sheet

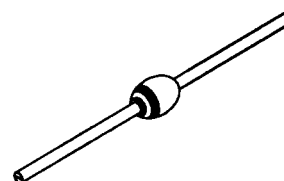
### FEATURES:

- Standard Recovery: 5μsec Maximum
- PIV to 10000 Volts
- Hermetically Sealed
- Void-Free Construction
- Metallurgically bonded
- 175°C Maximum Operating Temperature
- TX, TXV, and Space Level Screening Available

**SHM15  
thru  
SHM100**

**100-250 mA  
1500-10000 VOLTS  
5 μsec  
HIGH VOLTAGE  
RECTIFIER**

**AXIAL**



### 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 |
|-------------|----------------------|---------------------------|----------|-------------------------------|----------|-----------------------------------|-------------------------------|-------------------------------|------------------------------|---------------------------|
| 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 μsec                     | @ 100 Volts pf               | L= .25" °C/W              |
| SHM15       | 1500                 | 250                       | 185      | 1.0                           | 25       | 6                                 | 15                            | 5                             | 8                            | 65                        |
| SHM20       | 2000                 | 250                       | 185      | 1.0                           | 25       | 6                                 | 15                            | 5                             | 8                            | 65                        |
| SHM25       | 2500                 | 250                       | 185      | 1.0                           | 25       | 6                                 | 15                            | 5                             | 8                            | 65                        |
| SHM30       | 3000                 | 150                       | 110      | 1.0                           | 25       | 10                                | 10                            | 5                             | 4                            | 65                        |
| SHM40       | 4000                 | 150                       | 110      | 1.0                           | 25       | 10                                | 10                            | 5                             | 4                            | 65                        |
| SHM50       | 5000                 | 150                       | 110      | 1.0                           | 25       | 10                                | 10                            | 5                             | 4                            | 65                        |
| SHM60       | 6000                 | 100                       | 75       | 1.0                           | 25       | 16                                | 5                             | 5                             | 2                            | 65                        |
| SHM80       | 8000                 | 100                       | 75       | 1.0                           | 25       | 16                                | 5                             | 5                             | 2                            | 65                        |
| SHM100      | 10000                | 100                       | 75       | 1.0                           | 25       | 16                                | 5                             | 5                             | 2                            | 65                        |

### NOTES:

- Operating and testing over 10,000 V/inch may require encapsulation or immersion in a suitable dielectric material.
- Max. forward voltage measured with instantaneous forward pulse of 300μsec minimum.
- Max. lead temp. for soldering is 250°C, 3/8" from the case for 5 sec maximum.
- Operating and storage temperature: -65°C to +175°C
- Reverse Recovery Test Conditions: IF=50mA, IR=100mA, IRR=25mA, TA=25°C

NOTE: All specifications are subject to change without notification.  
SCD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: RV0007 A**

**RMD**

# SHM15 thru SHM100

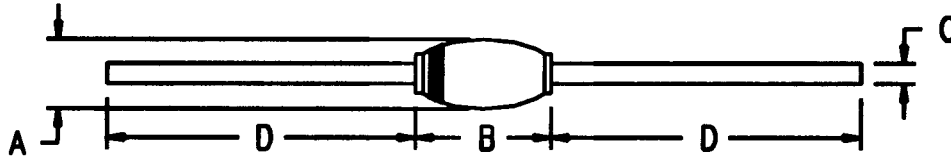
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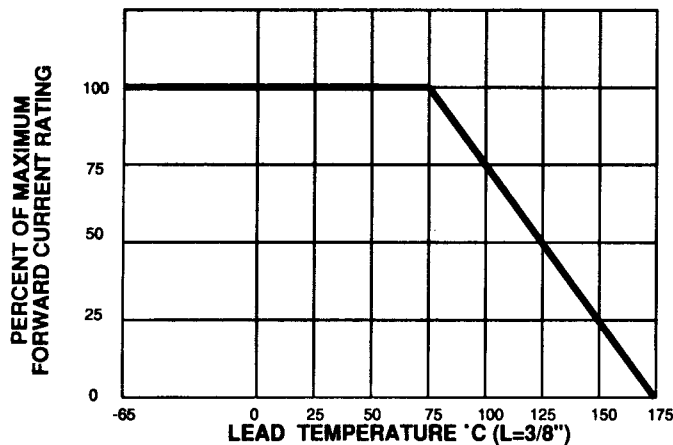
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## PACKAGE OUTLINE:

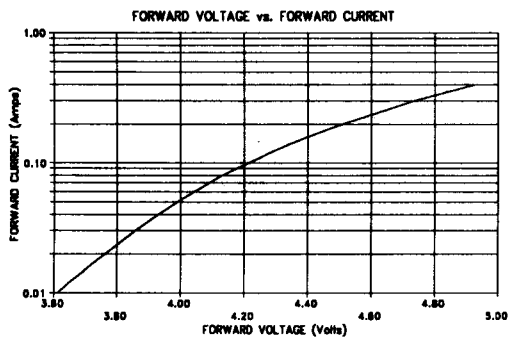
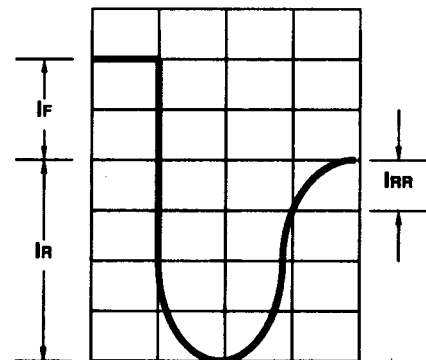


| Part Number | DIM. A |       | DIM. B |       | DIM. C |       | DIM. D |     |
|-------------|--------|-------|--------|-------|--------|-------|--------|-----|
|             | MIN    | MAX   | MIN    | MAX   | MIN    | MAX   | MIN    | MAX |
| SHM15-50    | ---    | .140" | ---    | .300" | .025"  | .033" | 1.0"   | --- |
| SHM60-100   | ---    | .140" | ---    | .400" | .025"  | .033" | 1.0"   | --- |

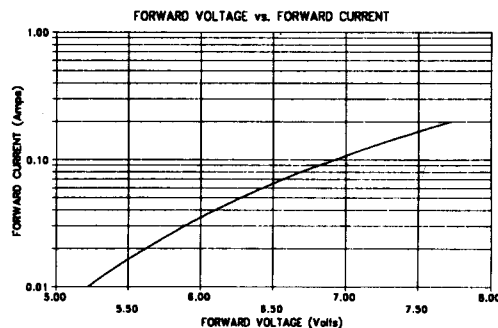
## TYPICAL OPERATING CURVES



## REVERSE RECOVERY WAVE FORM



SHM15-SHM25



SHM30-SHM50

For VF curves on SHM60-SHM100 please contact SSDI.