

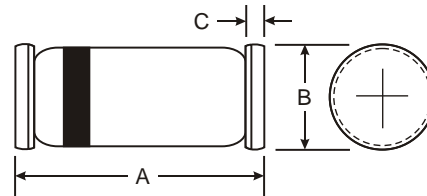
**NOT RECOMMENDED FOR NEW DESIGNS**  
**PLEASE USE SD103AW - SD103CW**

### Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Reverse Recovery Time
- **Lead Free Finish, RoHS Compliant (Note 3)**

### Mechanical Data

- Case: MiniMELF
- Case Material: Glass. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Sn97.5Ag2.5. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Ordering Information: See Last Page
- Marking: Cathode Band Only
- Weight: 0.05 grams (approximate)



MiniMELF		
Dim	Min	Max
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	LLSD103A	LLSD103B	LLSD103C	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	30	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	21	14	V
Forward Continuous Current (Note 1)	I <sub>FM</sub>	350			mA
Repetitive Peak Forward Current @ t = 1.0s	I <sub>FRM</sub>	1.0			A
Non-Repetitive Peak Forward Surge Current @ t = 1.0s @ t = 10ms	I <sub>FSM</sub>	1.5 7.5			A
Power Dissipation (Note 1)	P <sub>d</sub>	400			mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>JA</sub>	250			°C/W
Operating Temperature Range	T <sub>j</sub>	-55 to +125			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150			°C

### Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V <sub>F</sub>			0.37 0.60	V	I <sub>F</sub> = 20mA I <sub>F</sub> = 200mA
Peak Reverse Current (Note 2)	I <sub>R</sub>			5.0	μA	V <sub>R</sub> = 30V V <sub>R</sub> = 20V V <sub>R</sub> = 10V
Total Capacitance	C <sub>T</sub>		50		pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>			10	ns	I <sub>F</sub> = I <sub>R</sub> = 50mA to 200mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100

- Note: 1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
2. Short duration test pulse used to minimize self-heating effect.
3. EC Directive 2002/95/EC (RoHS) revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied where applicable, see EU Directive Annex Notes 5 and 7.

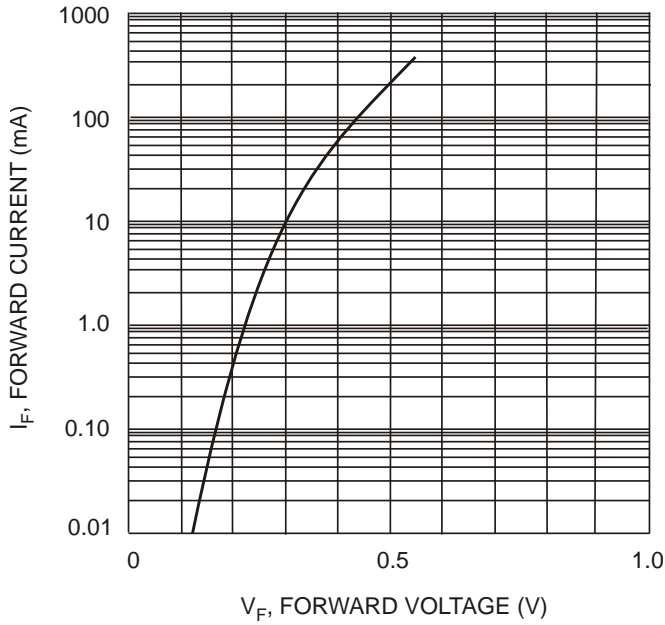


Fig. 1 Typical Forward Characteristics

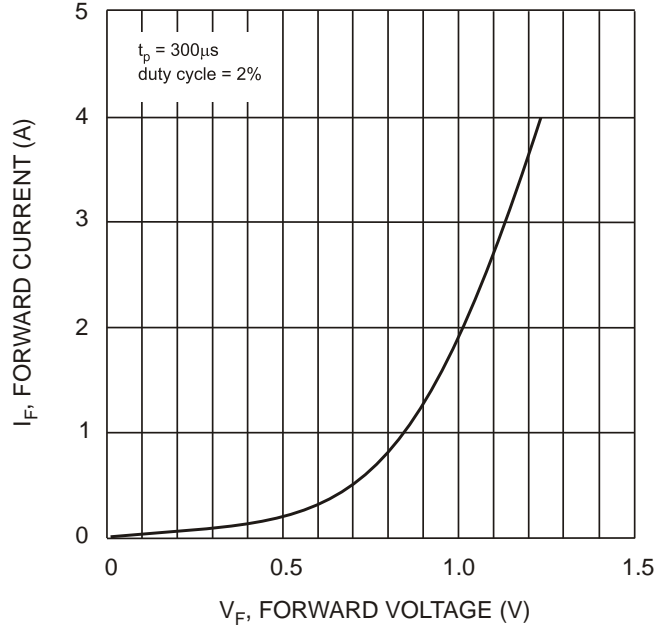


Fig. 2 Typical High Current Forward Characteristics

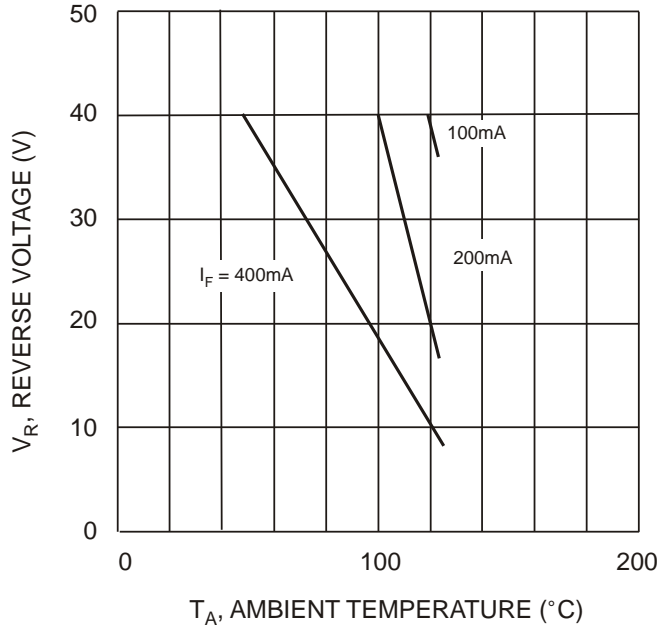


Fig. 3 Blocking Voltage Derating Curves

**Ordering Information** (Note 4)

Device	Packaging	Shipping
LLSD103A-7	MiniMELF	2.5K/Tape & Reel, 7-inch
LLSD103A-13	MiniMELF	10K/Tape & Reel, 13-inch
LLSD103B-7	MiniMELF	2.5K/Tape & Reel, 7-inch
LLSD103B-13	MiniMELF	10K/Tape & Reel, 13-inch
LLSD103C-7	MiniMELF	2.5K/Tape & Reel, 7-inch
LLSD103C-13	MiniMELF	10K/Tape & Reel, 13-inch

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

IMPORTANT NOTICE

Diodes, Inc. and its subsidiaries reserve the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. Diodes, Inc. does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

The products located on our website at [www.diodes.com](http://www.diodes.com) are not recommended for use in life support systems where a failure or malfunction of the component may directly threaten life or cause injury without the expressed written approval of Diodes Incorporated.