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[Diodes Incorporated](#)
[LLSD103A-13](#)

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LLSD103A - 103C

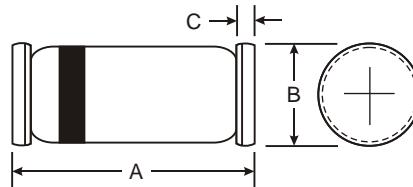
SURFACE MOUNT SCHOTTKY BARRIER DIODE

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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	LLSD103A	LLSD103B	LLSD103C	Unit
Peak Repetitive Reverse Voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	40	30	20	V
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current (Note 1)	I_{FM}		350		mA
Repetitive Peak Forward Current @ $t = 1.0\text{s}$	I_{FRM}		1.0		A
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{s}$ @ $t = 10\text{ms}$	I_{FSM}		1.5 7.5		A
Power Dissipation (Note 1)	P_d		400		mW
Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}		250		$^\circ\text{C}/\text{W}$
Operating Temperature Range	T_j		-55 to +125		$^\circ\text{C}$
Storage Temperature Range	T_{STG}		-55 to +150		$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	V_F			0.37 0.60	V	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$
Peak Reverse Current (Note 2)	I_R			5.0	μA	$V_R = 30\text{V}$ $V_R = 20\text{V}$ $V_R = 10\text{V}$
Total Capacitance	C_T		50		pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}			10	ns	$I_F = I_R = 50\text{mA}$ to 200mA , $I_{rr} = 0.1 \times I_R$, $R_L = 100$

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.

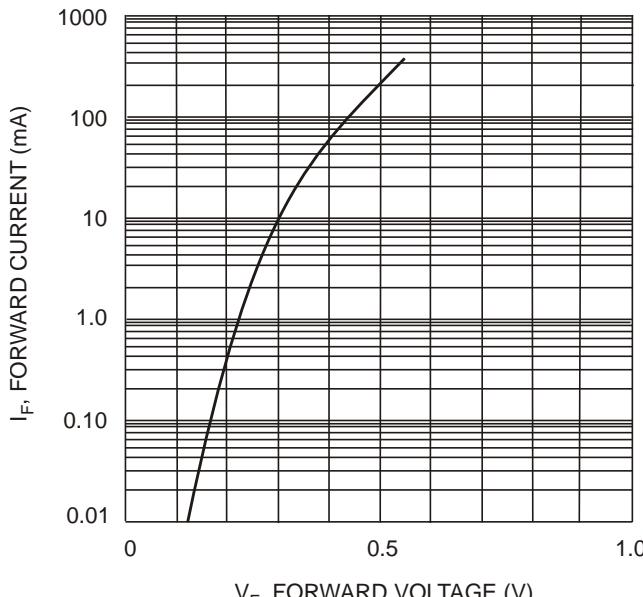


Fig. 1 Typical Forward Characteristics

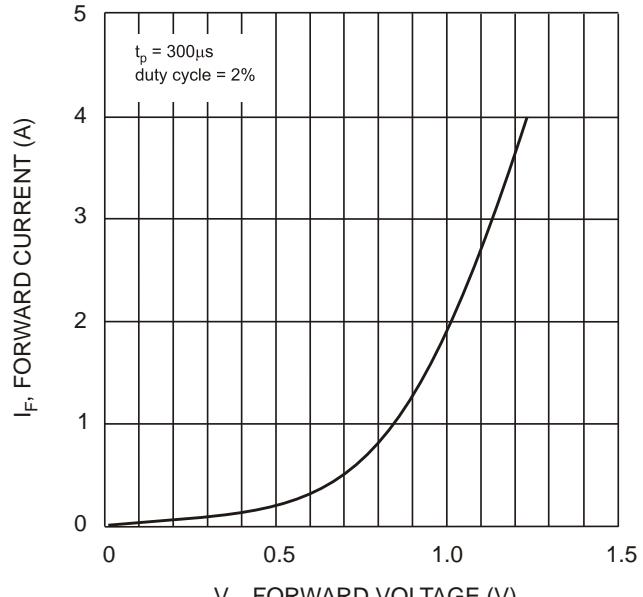


Fig. 2 Typical High Current Forward Characteristics

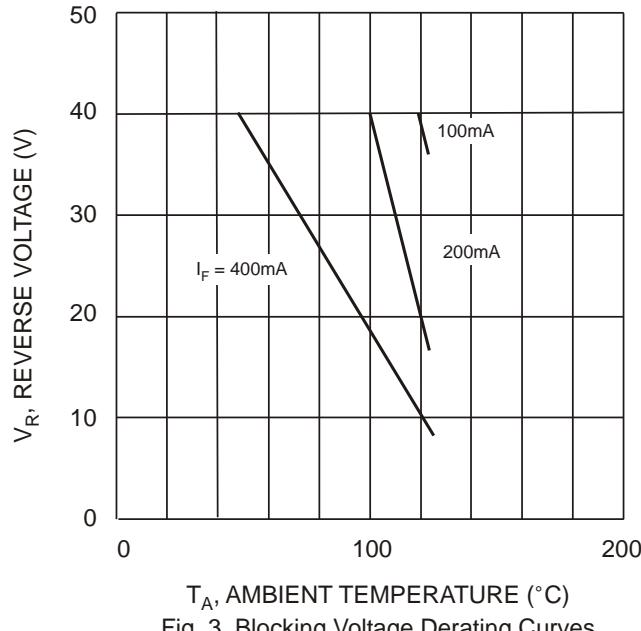


Fig. 3 Blocking Voltage Derating Curves

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>.

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