LL103A - LL103C

SCHOTTKY BARRIER DIODES

FEATURES :

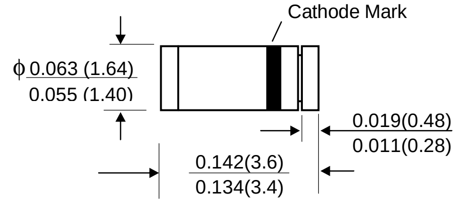
- For general purpose applications
- The LL103A, B, C series is a metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring.
- The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications.
- Other applications are click suppression, efficient full wave bridges in telephone subsets, and blocking diodes in rechargeable low voltage battery systems.
- These diodes are also available in the DO-35 case with type designation SD103A, B, C
- Pb / RoHS Free

MECHANICAL DATA :

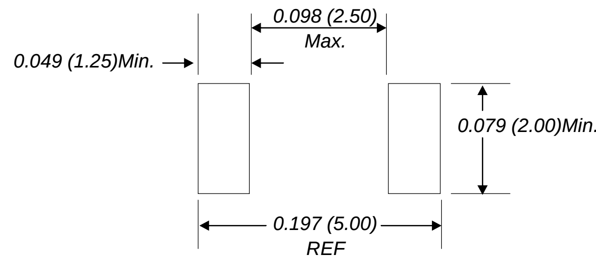
Case: MiniMELF Glass Case (SOD-80C)

Weight: approx. 0.05g

MiniMELF (SOD-80C)



Mounting Pad Layout



Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	LL103A	V_{RRM}	40	V
	LL103B		30	
	LL103C		20	
Single Cycle Surge 60 Hz Sine Wave		I_{FSM}	15	A
Power Dissipation (Infinite Heatsink)		P_D	400(1)	mW
Thermal Resistance Junction to Ambient Air		$R_{\theta JA}$	300(1)	°C/W
Junction Temperature		T_J	125	°C
Storage temperature range		T_S	-55 to + 150	°C

Note: (1) Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter		Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Current	LL103A	I_R	V_R = 30 V	-	-	5	µA
	LL103B		V_R = 20 V	-	-	5	
	LL103C		V_R = 10 V	-	-	5	
Forward Voltage Drop		V_F	I_F = 20mA	-	-	0.37	V
			I_F = 200mA	-	-	0.6	
Diode Capacitance		Cd	V_R = 0 V, f = 1MHz	-	50	-	pF
Reverse Recovery Time		Trr	I_F = I_R = 5mA to 200mA recover to $0.1I_R$	-	10	-	ns

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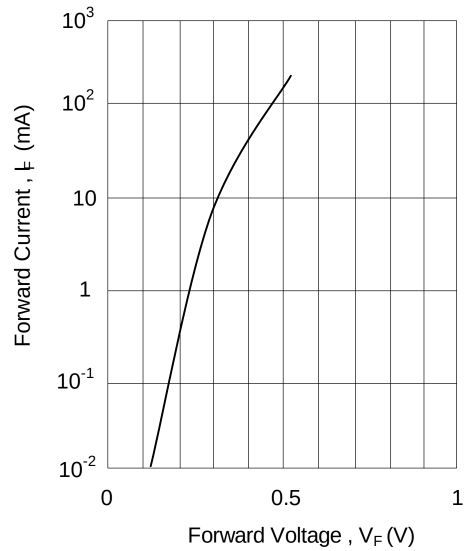
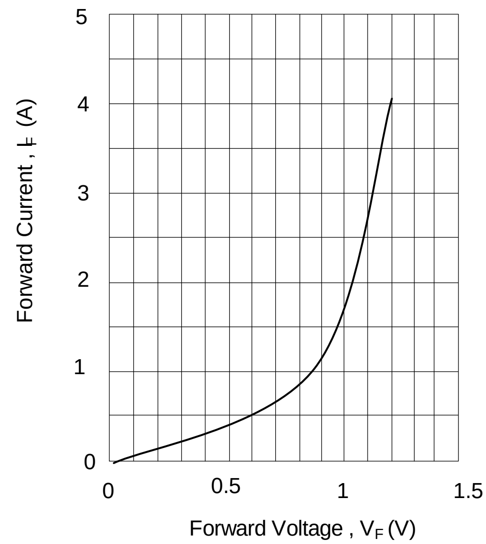
RATING AND CHARACTERISTIC CURVES (LL103A - LL103C)

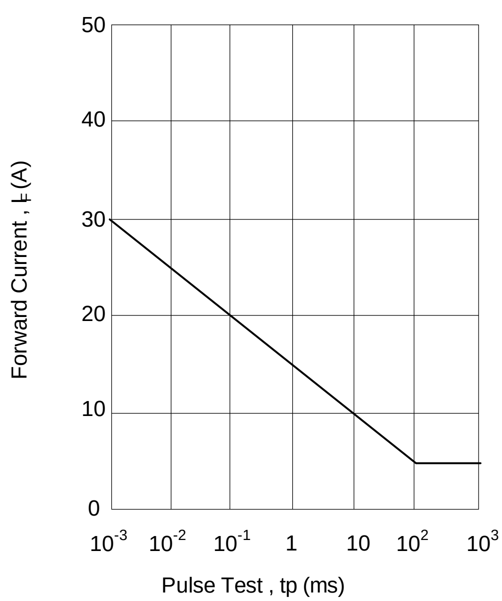
Typical variation of forward current and forward voltage for primary conduction through the schottky barrier



Typical high current forward conduction curve
tp = 300ms , duty cycle = 2%



Typical non repetitive forward surge current versus pulse width Rectangular pulse



Typical variation of reverse current at various temperatures