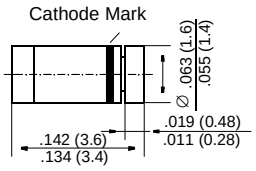
LL103A THRU LL103C

Schottky Diodes

MiniMELF



Dimensions in inches and (millimeters)

FEATURES

- For general purpose applications.
- The LL103A, B, C 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.
- This diode is also available in DO-35 case with the type designation SD103A, B, C, and in the SOD-123 case with type designation SD103AW, SD103BW, SD103CW.

MECHANICAL DATA

Case: MiniMELF Glass Case SOD-80C
Weight: approx. 0.05 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

		Symbol	Value	Unit
Peak Inverse Voltage	**LL103A**	V_{RRM}	40	V
	LL103B	V_{RRM}	30	V
	LL103C	V_{RRM}	20	V
Power Dissipation (Infinite Heatsink) T_C = 3/8″ from Body derates at 4 mW/°C to 0 at 125 °C		P_{tot}	400[1)]	mW
Junction Temperature		T_j	125	°C
Storage Temperature Range		T_S	–55 to +150	°C
Single Cycle Surge 60-Hz Sine Wave		I_{FSM}	15	A

[1)] Valid provided that electrodes are kept at ambient temperature.

GENERAL SEMICONDUCTOR®

LL103A THRU LL103C

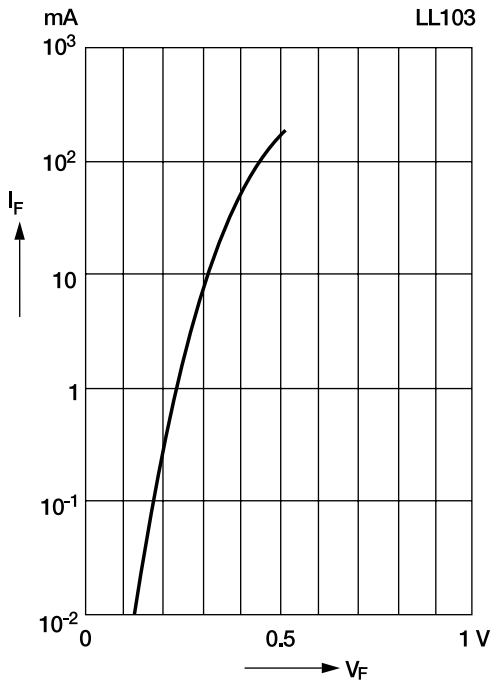
ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

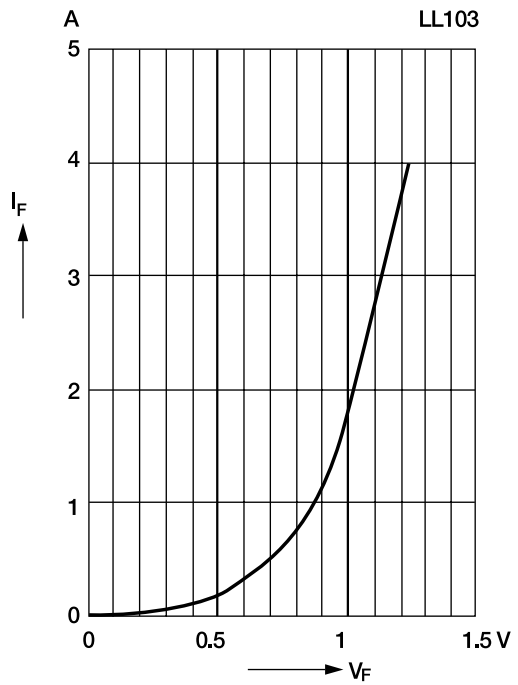
		Symbol	Min.	Typ.	Max.	Unit
Leakage Current at V_R = 30 V at V_R = 20 V at V_R = 10 V	 **LL103A** **LL103B** **LL103C**	 I_R I_R I_R	 – – –	 – – –	 5 5 5	 µA µA µA
Forward Voltage Drop at I_F = 20 mA at I_F = 200 mA		 V_F V_F	 – –	 – –	 0.37 0.6	 V V
Junction Capacitance at V_R = 0 V, f = 1 MHz		C_{tot}	–	50	–	pF
Reverse Recovery Time at I_F = I_R = 50 mA to 200 mA, recover to 0.1 I_R		t_{rr}	–	10	–	ns

RATINGS AND CHARACTERISTIC CURVES LL103A THRU LL103C

Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



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



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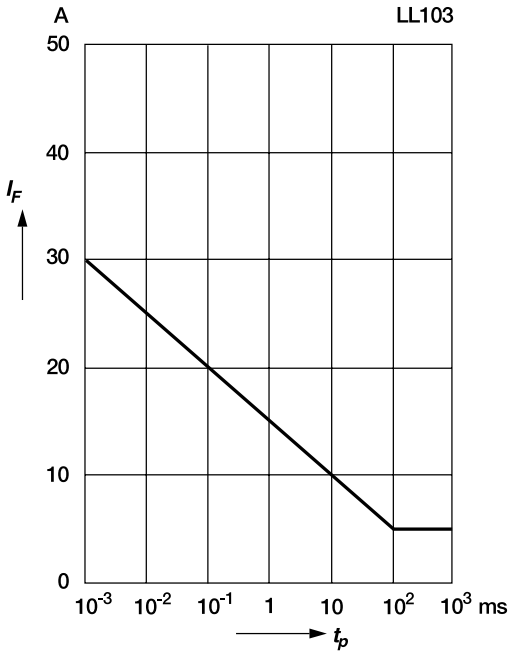
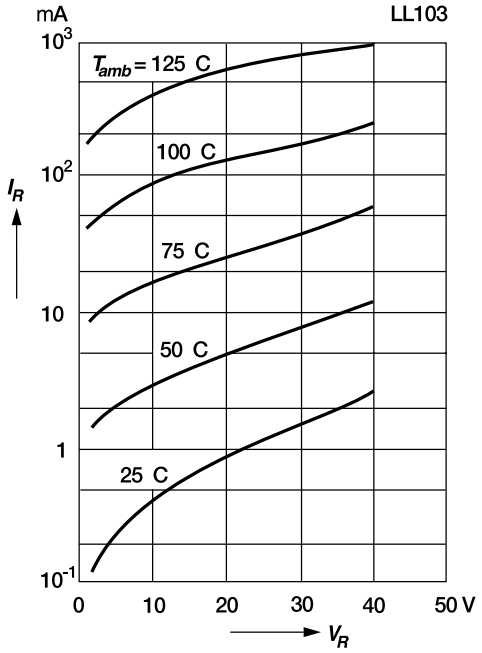
Typical non repetitive forward surge current versus pulse width

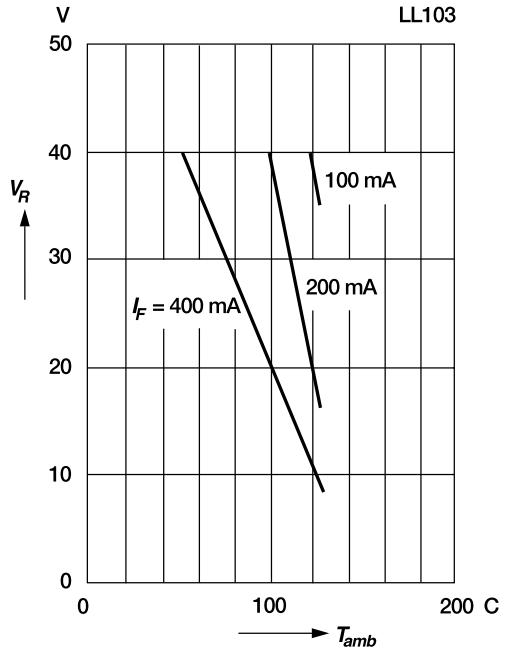
Rectangular pulse



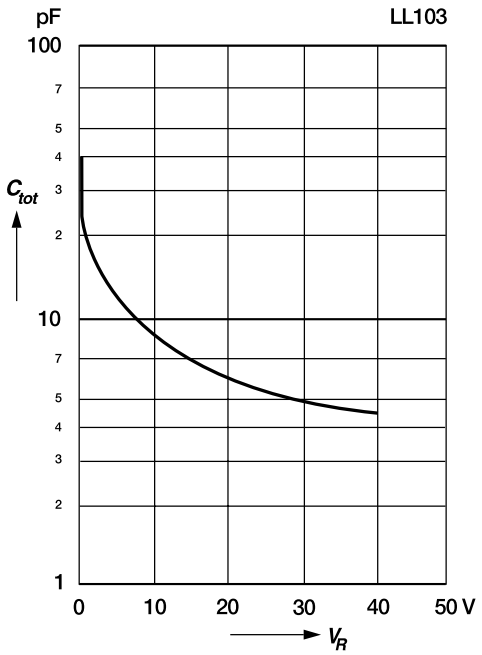
Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage



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