

LL103A...LL103C

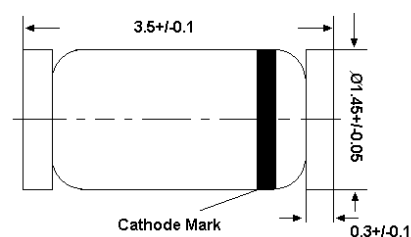
Silicon Schottky Barrier Diodes

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 uses are for click suppression, efficient full wave bridges in telephone subsets, and as blocking diodes in rechargeable low voltage battery systems.

This diode is also available in DO-35 case with type designation SD103A, B, C.

LL-34



Glass case MiniMELF
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

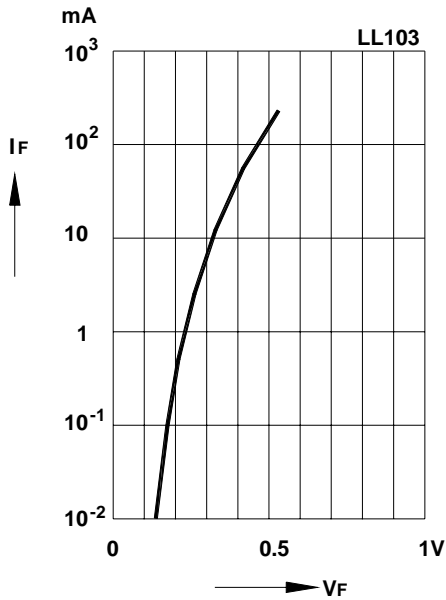
Parameter	Symbol	Value	Unit
Peak Reverse Voltage	LL103A LL103B LL103C	40 30 20	V
Single Cycle Surge 60 Hz sinewave	I_{FSM}	15	A
Power Dissipation (Infinite Heatsink) $T_c = 3/8$ from body Derates at $4\text{ mW}/^\circ\text{C}$ to 0 at $125\text{ }^\circ\text{C}$	P_{tot}	400 ¹⁾	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 175	$^\circ\text{C}$

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

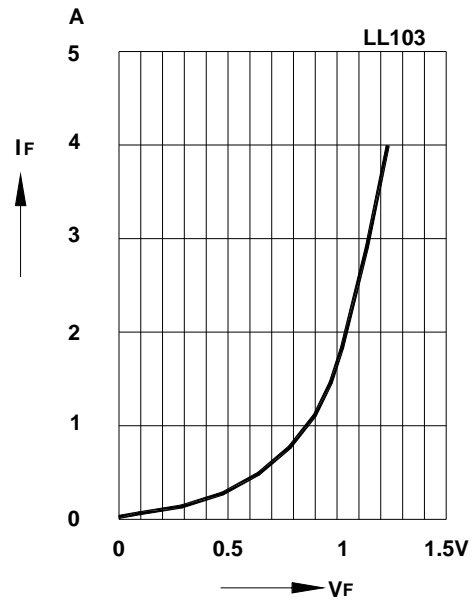
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Typ.	Max.	Unit
Forward Voltage				
Forward Voltage at $I_F = 20\text{ mA}$ at $I_F = 200\text{ mA}$	V_F	- -	0.37 0.6	V
Reverse Current at $V_R = 30\text{ V}$ at $V_R = 20\text{ V}$ at $V_R = 10\text{ V}$	LL103A LL103B LL103C	I_R	- - -	5 5 5
Total Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_{tot}	50	-	pF
Reverse Recovery Time at $I_F = I_R = 5\text{ mA}$ to 200 mA , recover to $0.1 I_R$	t_{rr}	10	-	ns

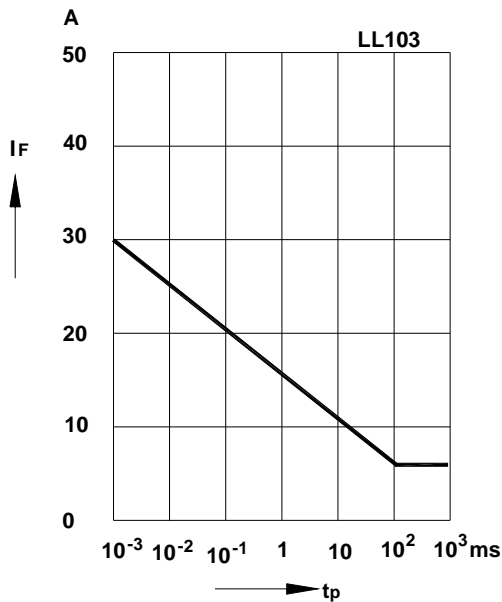
Typical variation of fwd. current vs.fwd.voltage for primary conduction through the Schottky barrier



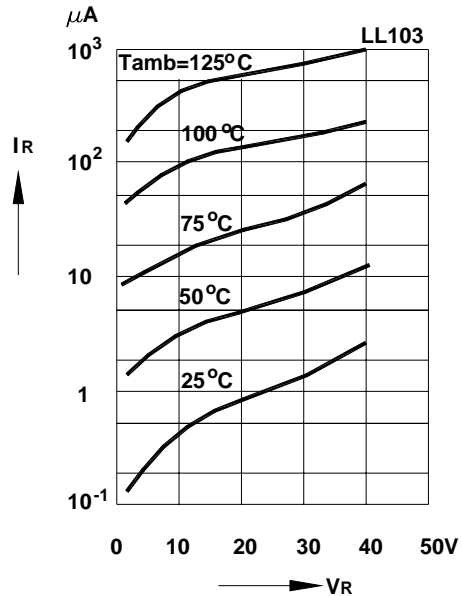
Typical high current forward conduction curve
tp=300μs, duty cycle=2%



Typical non repetitive forward surge current versus pulse width
Rectangular pulse

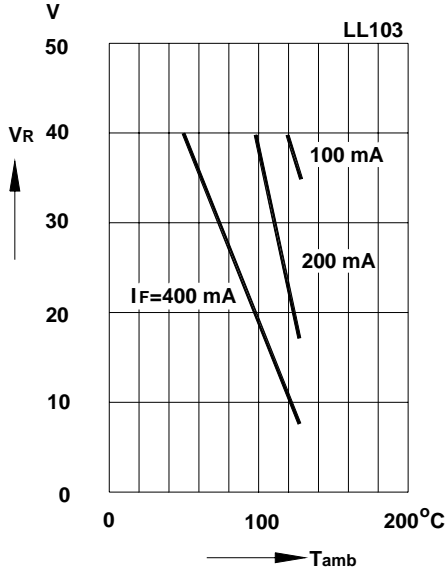


Typical variation of reverse current at various temperatures



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Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage

