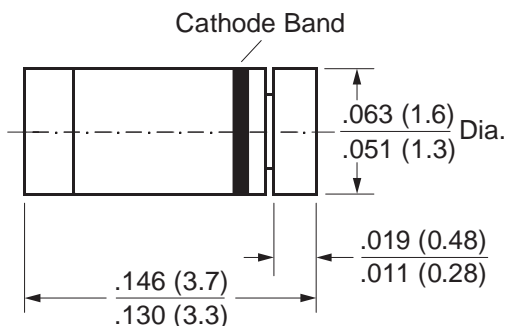


Schottky Diodes

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

MiniMELF (SOD-80C)



Dimensions in inches and (millimeters)

Mechanical Data

Case: MiniMELF Glass Case (SOD-80C)

Weight: approx. 0.05g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Inverse Voltage	V_{RRM}	40 30 20	V
Power Dissipation (Infinite Heatsink)	P_{tot}	400 ⁽¹⁾	mW
Single Cycle Surge 60-Hz Sine Wave	I_{FSM}	15	A
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	300 ⁽¹⁾	°CW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_s	-55 to +150	°C

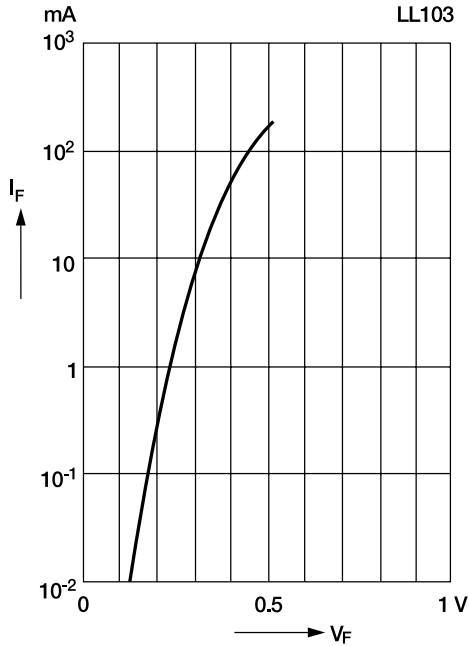
Electrical Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Leakage Current	I_R	$V_R = 30V$ $V_R = 20V$ $V_R = 10V$	—	—	5 5 5	μA
Forward Voltage Drop	V_F	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$	—	—	0.37 0.6	V
Junction Capacitance	C_{tot}	$V_R = 0V, f = 1\text{MHz}$	—	50	—	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 50\text{mA to } 200\text{mA},$ recover to 0.1 I_R	—	—	10	ns

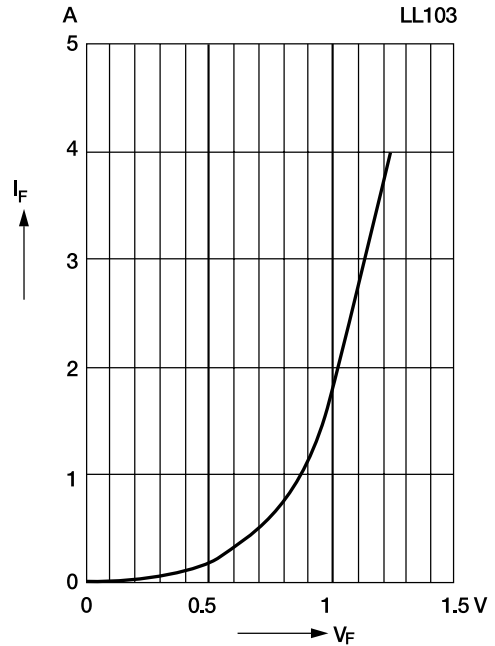
Note: (1) Valid provided that electrodes are kept at ambient temperature.

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

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

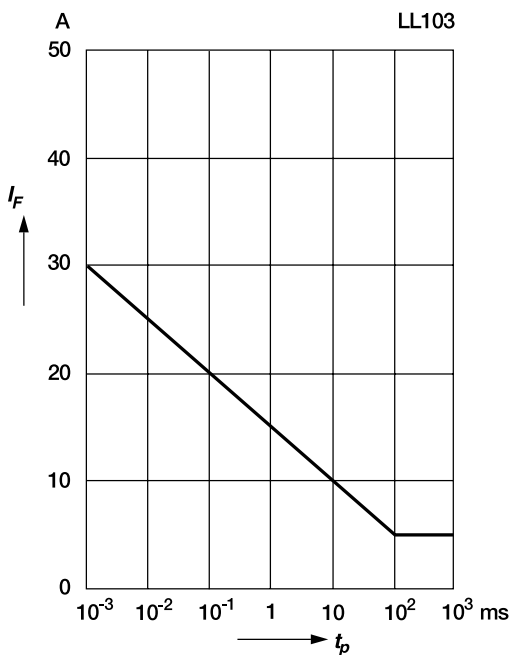


Typical high current forward conduction curve $t_p = 300$ ms, duty cycle = 2%

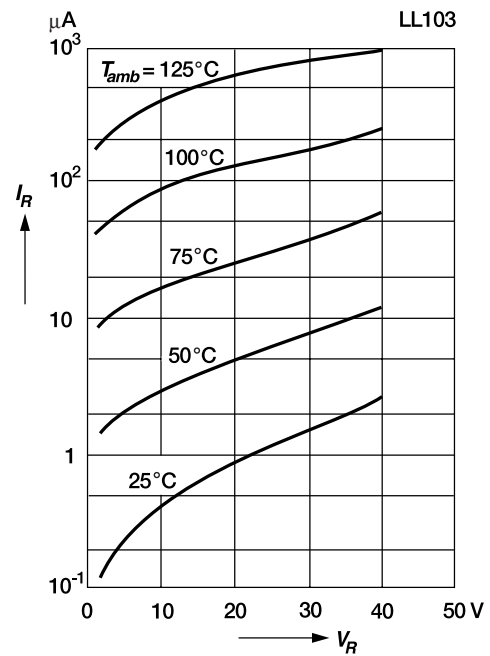


Typical non repetitive forward surge current versus pulse width

Rectangular pulse



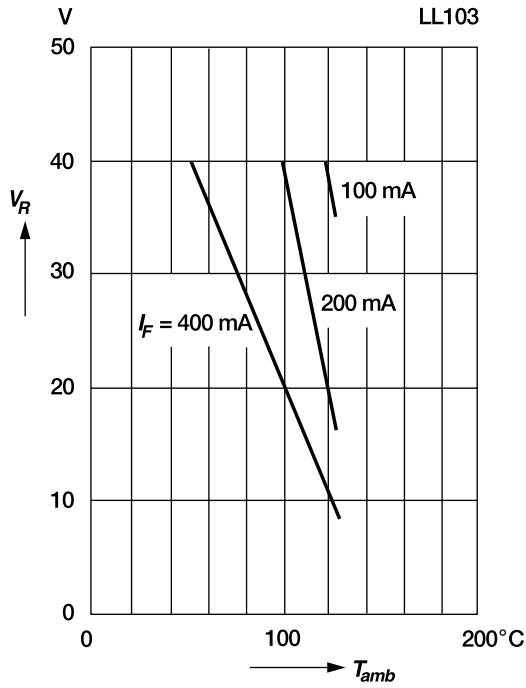
Typical variation of reverse current at various temperatures



LL103A thru LL103C

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage

