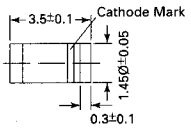
LL103A ... LL103C

Silicon Schottky Barrier Diode
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.

These diodes are delivered taped.
Details see "Taping".



Glass case JMiniMELF

Weight approx. 0.05g
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

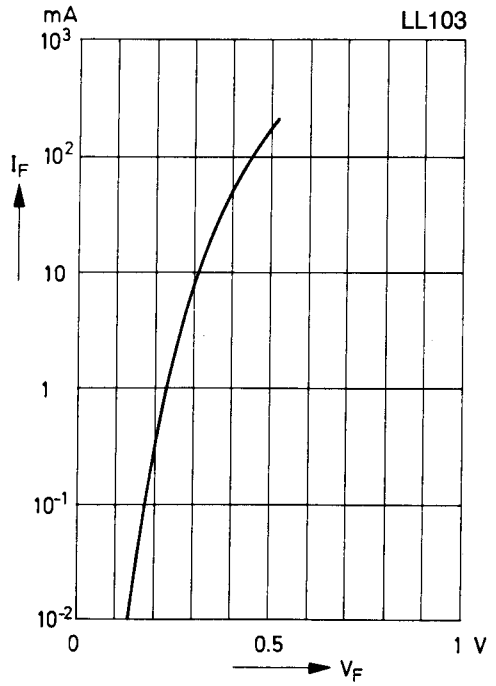
		Symbol	Value	Unit
Peak Reverse Voltage	**LL103A**	V_{RRM}	40	V
	LL103B	V_{RRM}	30	V
	LL103C	V_{RRM}	20	V
Power Dissipation (Infinite Heatsink) Tc = 3/8 " from body derates at 4 mW/°C to 0 at 125 °C		P_{tot}	400 [1]	mW
Junction Temperature		T_j	125	°C
Storage Temperature Range		T_S	-55 to + 175	°C
Single Cycle Surge 60 Hz sinewave		I_{FSM}	15	A

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

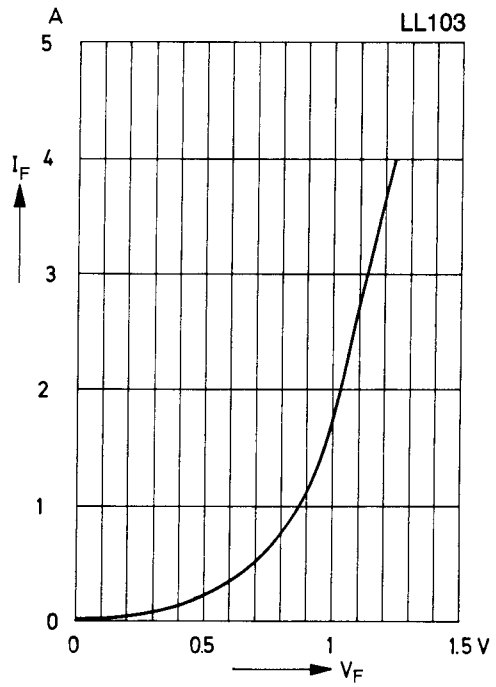
Characteristics at T_j =25 °C

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

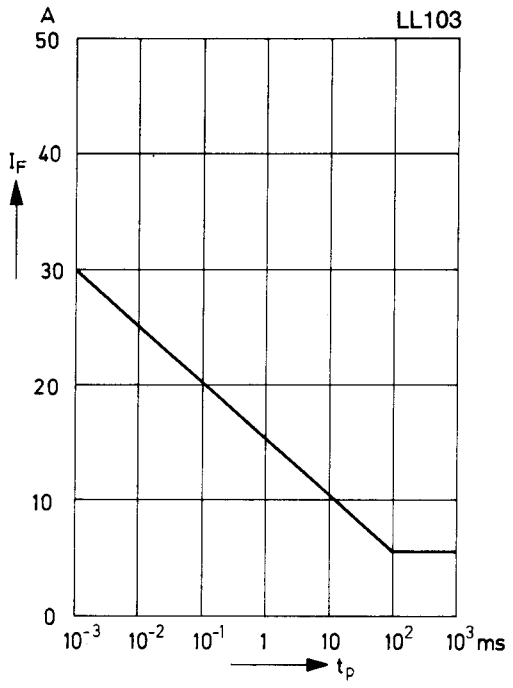
Typical variation of fwd. current vs. fwd. voltage for primary conduction through the Schottky barrier



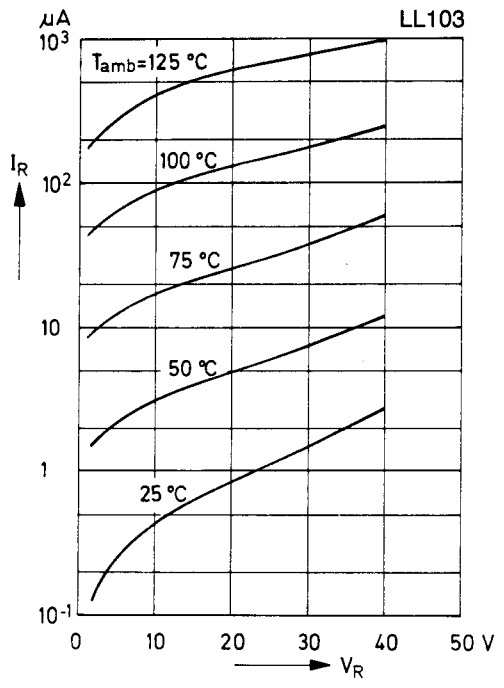
Typical high current forward conduction curve
t_p = 300 µs, duty cycle = 2%



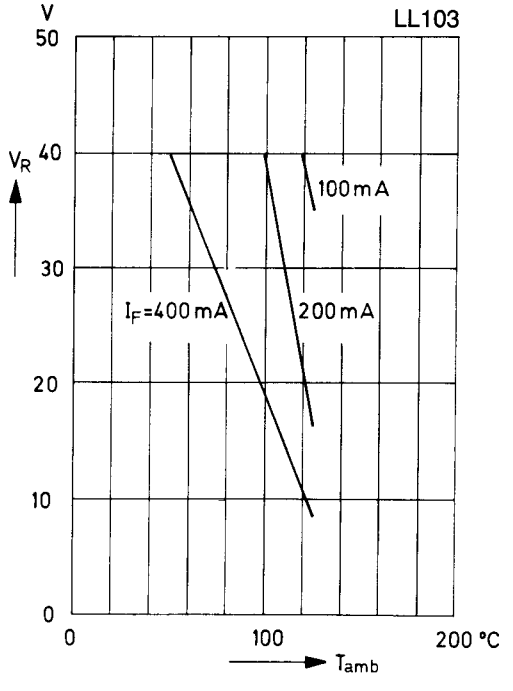
Typical non repetitive forward surge current versus pulse width
Rectangular pulse



Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage