

LL103A ... LL103C

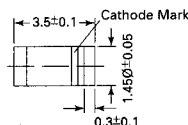
Silicon Schottky Barrier Diode

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

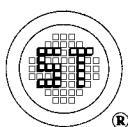
Weight approx. 0.05g

Dimensions in mm

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

	Symbol	Value	Unit
Peak Reverse Voltage LL103A LL103B LL103C	V_{RRM} V_{RRM} V_{RRM}	40 30 20	V V 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 + 175	°C
Single Cycle Surge 60 Hz sinewave	I_{FSM}	15	A

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



SEMTECH ELECTRONICS LTD.

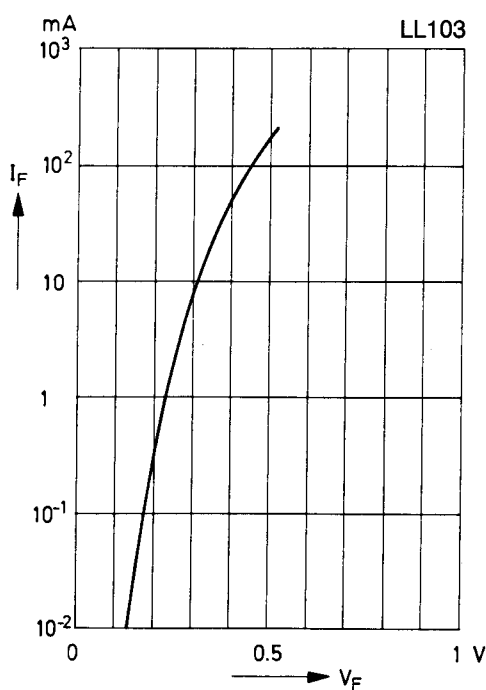
(wholly owned subsidiary of HONEY TECHNOLOGY LTD.)



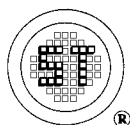
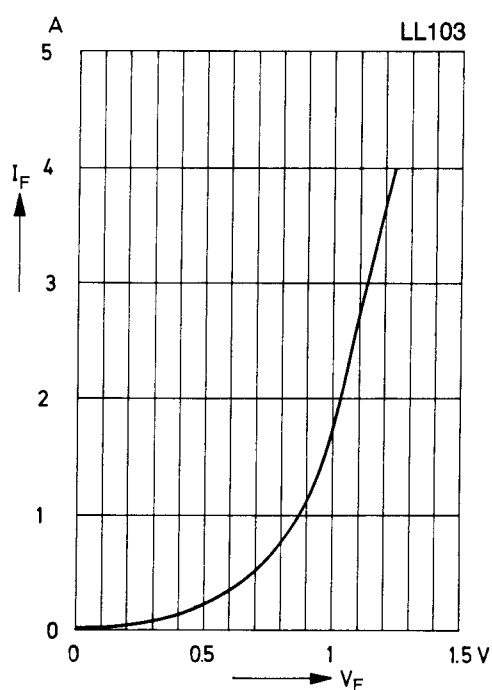
Characteristics at $T_j = 25^\circ\text{C}$

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

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



Typical high current forward conduction curve
 $t_p = 300\text{ }\mu\text{s}$, duty cycle = 2%

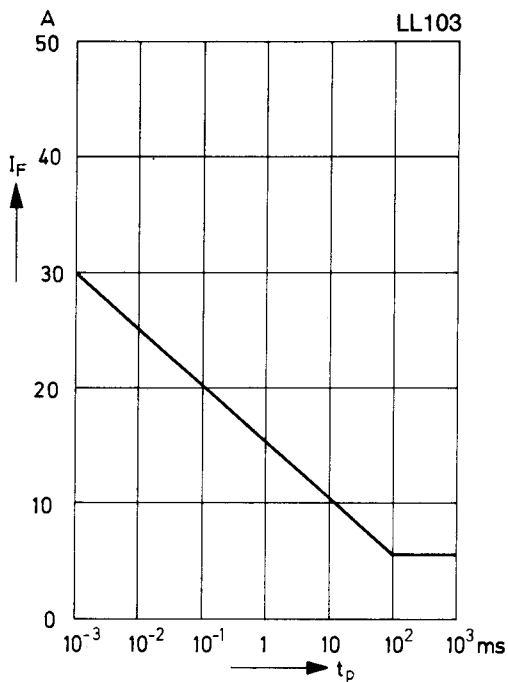


SEMTECH ELECTRONICS LTD.

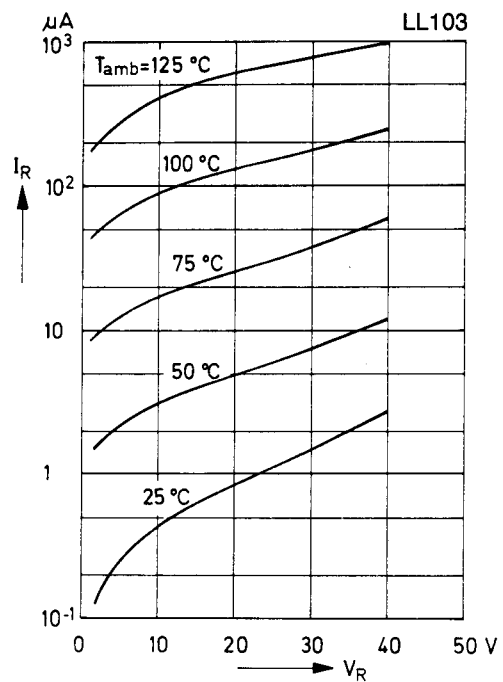
(wholly owned subsidiary of HONEY TECHNOLOGY LTD.)



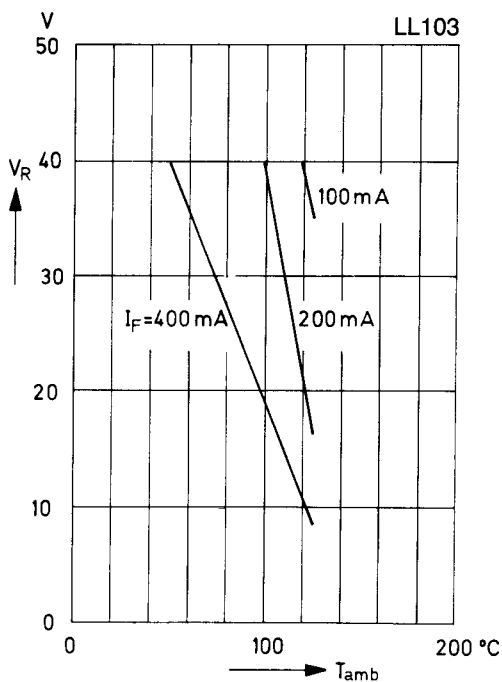
Typical non repetitive forward surge current versus pulse width
Rectangular pulse



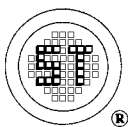
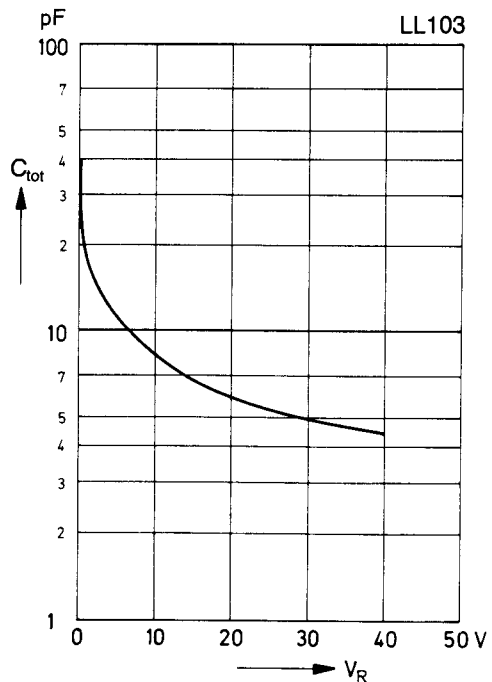
Typical variation of reverse current at various temperatures



Blocking voltage deration versus temperature at various average forward currents



Typical capacitance versus reverse voltage



SEMTECH ELECTRONICS LTD.

(wholly owned subsidiary of HONEY TECHNOLOGY LTD.)

