



## Schottky Barrier Diode

### Features

1. Small surface mounting type
2. High reliability
3. Low reverse current and low forward voltage



### Applications

Low current rectification and high speed switching

### Construction

Silicon epitaxial planar

### Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage		LL103A	$V_{RRM}$	40	V
		LL103B	$V_{RRM}$	30	V
		LL103C	$V_{RRM}$	20	V
Repetitive peak forward current	$t_p \leq 1 \text{ s}$		$I_{FRM}$	1	A
Forward current			$I_{FM}$	350	mA
Power dissipation	$T_{amb}=25^{\circ}\text{C}$		$P_V$	400	mW
Storage temperature range			$T_{stg}$	-65~+175	$^{\circ}\text{C}$

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

**Excel Semiconductor**



**Electrical Characteristics**

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

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=20\text{mA}$		$V_F$			0.37	V
	$I_F=200\text{mA}$		$V_F$			0.6	V
Reverse current	$V_R=30\text{V}$	LL103A	$I_R$			5	$\mu\text{A}$
	$V_R=20\text{V}$	LL103B	$I_R$			5	$\mu\text{A}$
	$V_R=10\text{V}$	LL103C	$I_R$			5	$\mu\text{A}$
Diode capacitance	$V_R=V_F=0, f=1\text{MHz}$		$C_D$		50		pF
Reverse recovery time	$I_F=I_R=200\text{mA}$ to $0.1\text{mA } I_R$		$t_{rr}$		10		ns

**Characteristics ( $T_j=25$**

$^\circ\text{C}$  unless otherwise specified)

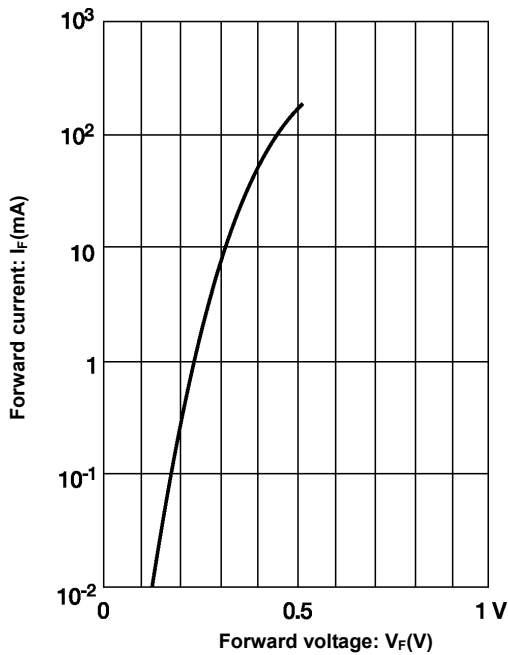


Figure 1. Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier

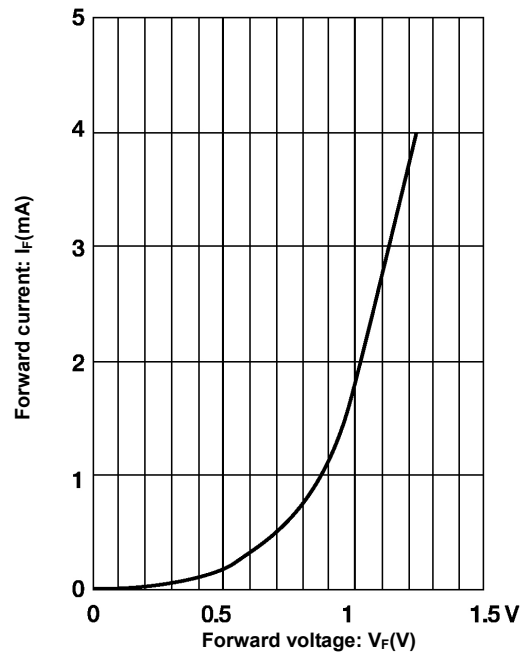


Figure 2. Typical high current forward conduction curve  $t_p=300\text{ms}$ , duty cycle=2%

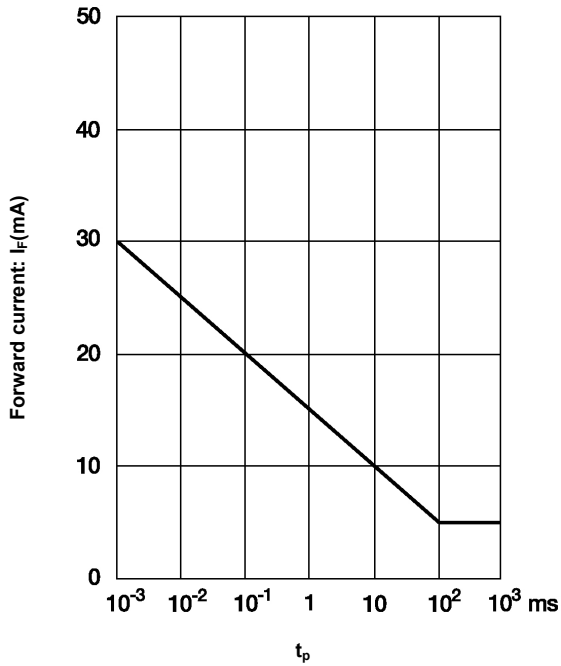


Figure 3. Typical non repetitive forward surge current vs. pulse width

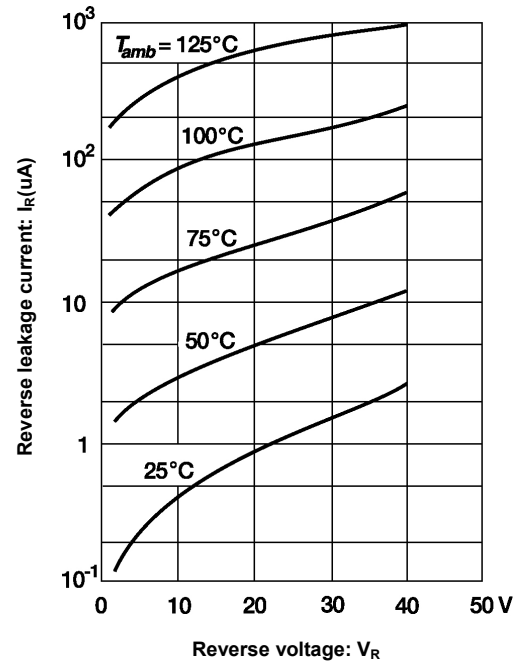


Figure 4. Typical variation of reverse current at various temperatures

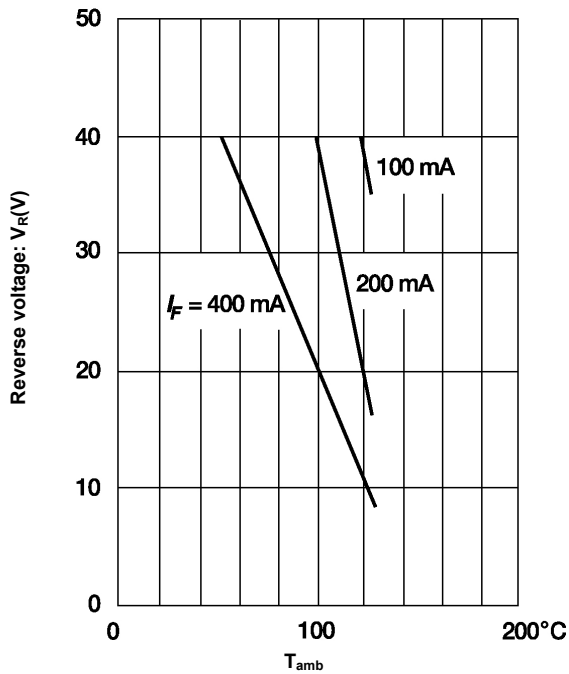


Figure 5. Blocking voltage duration vs. temperature at various average forward current

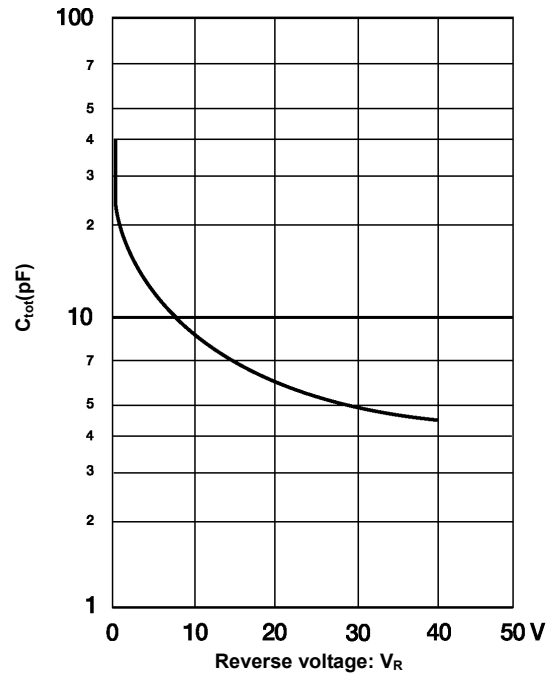
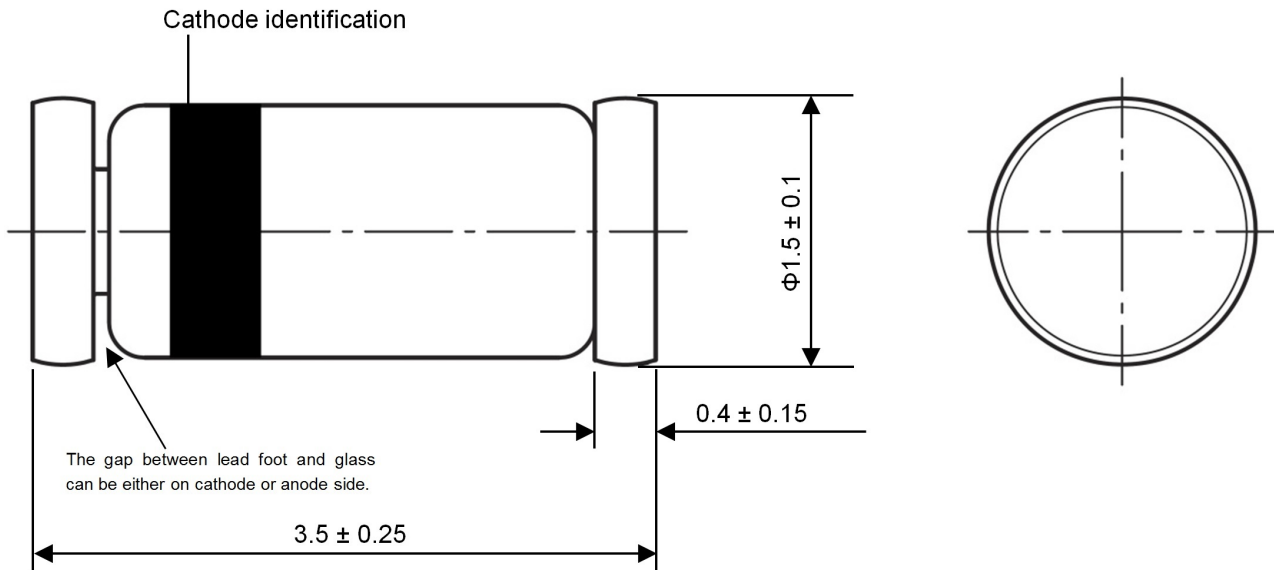


Figure 6. Typical capacitance vs. reverse voltage



Dimensions in mm



Glass Case  
Mini Melf / SOD-80  
JEDEC DO-213 AA