

# MCL103A/B/C

## 350 mA Schottky Barrier Rectifier 20 to 40 Volts

### Features

- Saving space
- High Reliability
- Low reverse current and low forward voltage
- Micro Melf package, fits onto SOD 323/SOT 23 Footprints

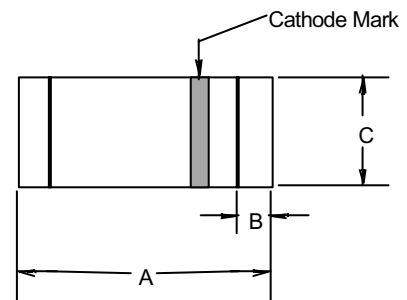
### Maximum Ratings

Parameter	Symbol	Value	Test Conditions
Repetitive peak reverse voltage MCL103A MCL103B MCL103C	$V_{RRM}$	40V 30V 20V	
Repetitive peak forward current	$I_{FRM}$	1A	
Forward current	$I_{FM}$	350mA	
Power dissipation	$P_D$	400mW	
Storage temperature range	$T_{stg}$	-65~+175 °C	
Junction to ambient	$R_{thJA}$	250K/W	

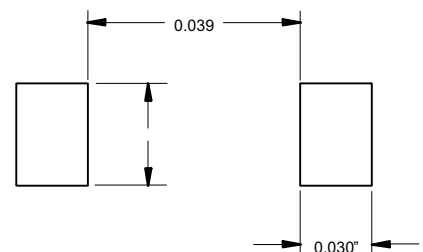
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Value	Test Conditions
Forward voltage	$V_F$	0.37 V 0.6 V	$I_F=20mA$ $I_F=200mA$
Reverse current MCL103A MCL103B MCL103C	$I_R$	5 $\mu$ A	$V_R=30V$ $V_R=20V$ $V_R=10V$
Diode capacitance	$C_D$	50pF	$V_R=V_F=0, f=1MHz$
Reverse recovery time	$t_{rr}$	10ns	$I_F=I_R=200mA$ to 0.1mA

### MICROMELF



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.079	1.8	2.0	
B	.004	.008	.10	.20	
C	.047	.051	1.20	1.30	∅



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Characteristics ( $T_j=25^\circ\text{C}$  unless otherwise specified)

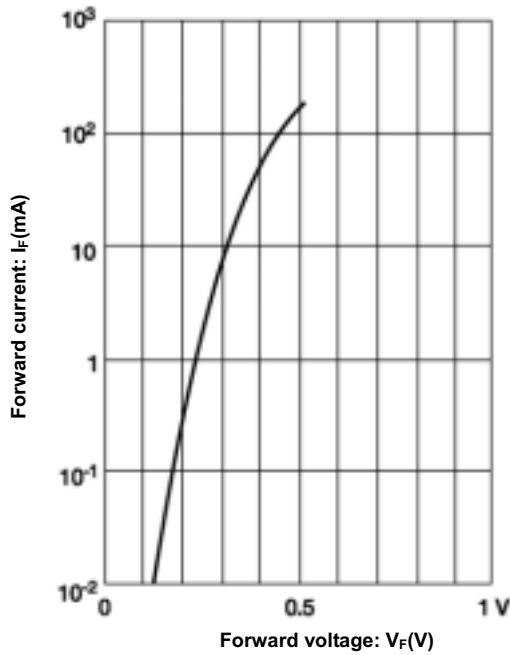


Figure 1. Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier

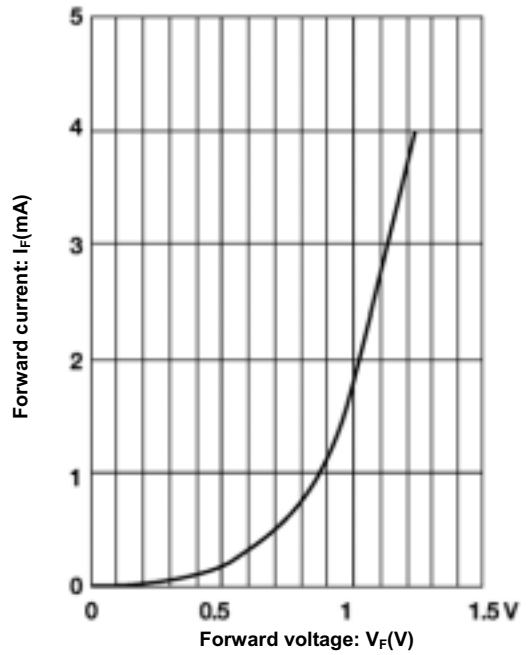


Figure 2. Typical high current forward conduction curve  $t_p=300\text{ms}$ , duty cycle=2%

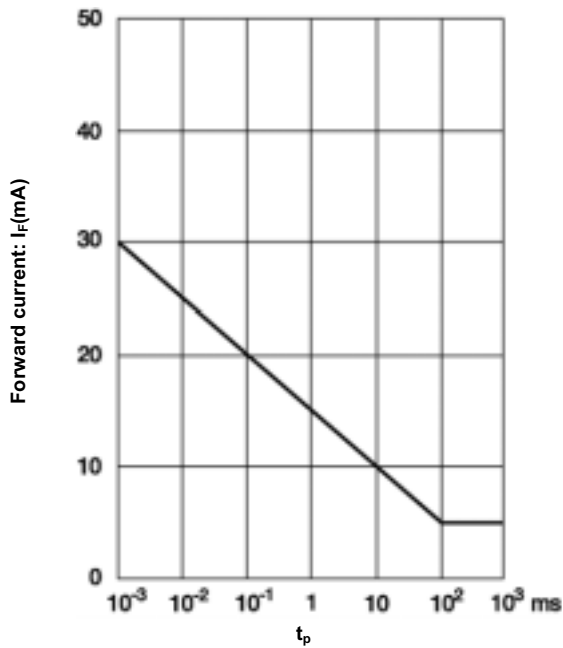


Figure 3. Typical non repetitive forward surge current vs. pulse width

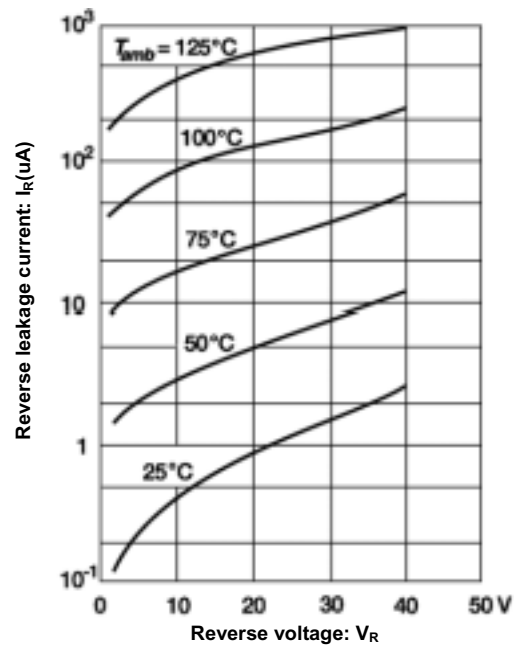


Figure 4. Typical variation of reverse current at various temperatures

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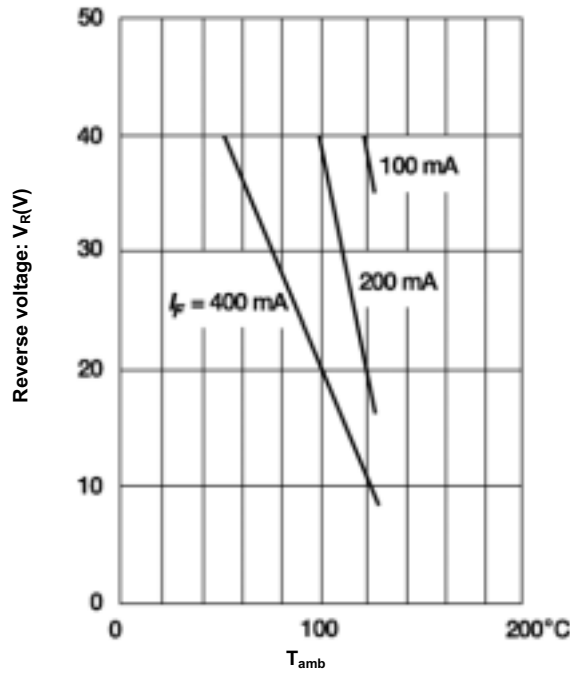


Figure 5. Blocking voltage duration vs. temperature at various average forward current

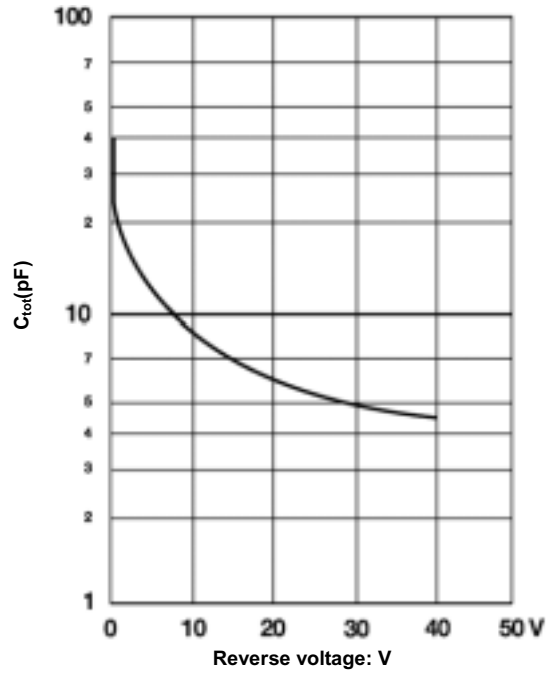


Figure 6. Typical capacitance vs. reverse voltage

