



Micro Commercial Components



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MCL103A/B/C

350 mA Schottky Barrier Rectifier 20 to 40 Volts

Features

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Saving space
- High Reliability
- Low reverse current and low forward voltage
- Micro Melf package, fits onto SOD 323/SOT 23 Footprints
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

Maximum Ratings

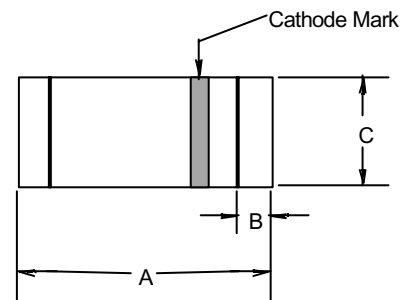
Parameter	Symbol	Value	Test Conditions
Repetitive peak reverse voltage MCL103A MCL103B MCL103C	V_{RRM}	40V 30V 20V	
Repetitive peak forward current	I_{FRM}	1A	
Forward current	I_{FM}	350mA	
Power dissipation	P_D	400mW	
Storage temperature range	T_{stg}	-65~+175 °C	
Junction to ambient	R_{thJA}	250K/W	

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 μ 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

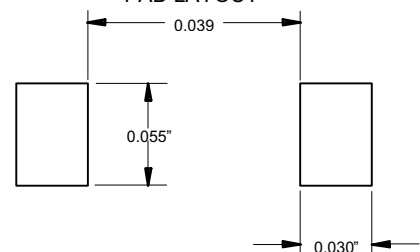
Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 5.

MICROMELF



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	∅

SUGGESTED SOLDER PAD LAYOUT



MCL103A/B/C

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

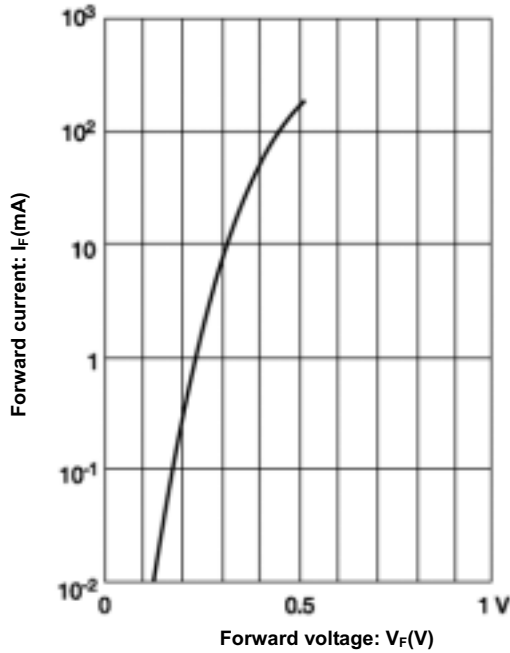


Figure 1. Typical variation of forward current vs. forward voltage for primary conduction through the schottky barrier

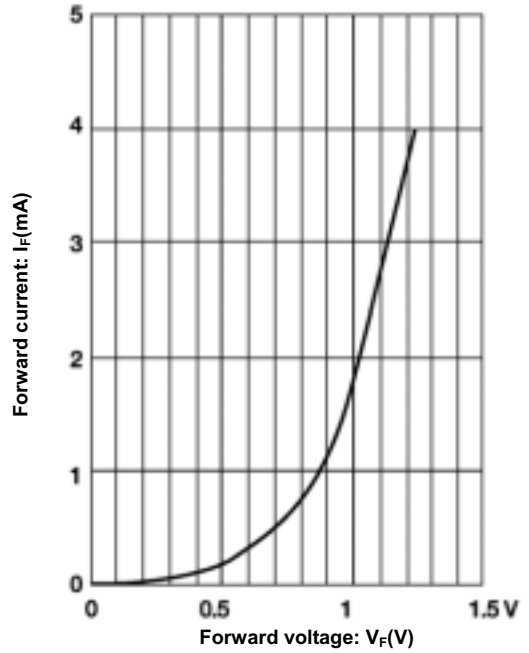


Figure 2. Typical high current forward conduction curve $t_p=300\text{ms}$, duty cycle=2%

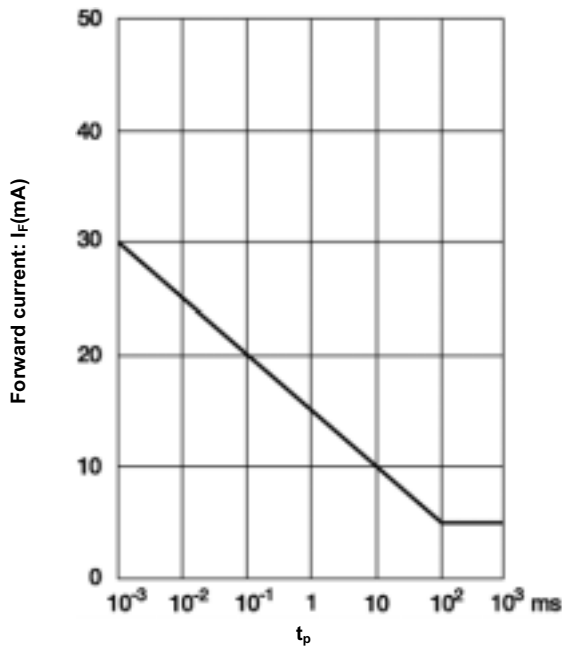


Figure 3. Typical non repetitive forward surge current vs. pulse width

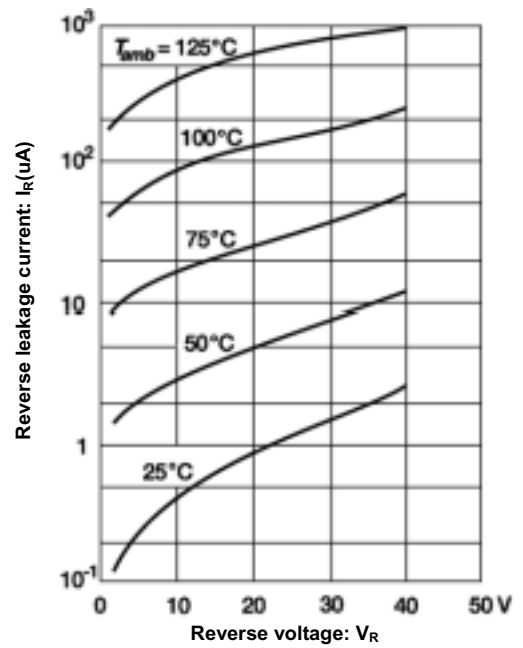


Figure 4. Typical variation of reverse current at various temperatures

MCL103A/B/C

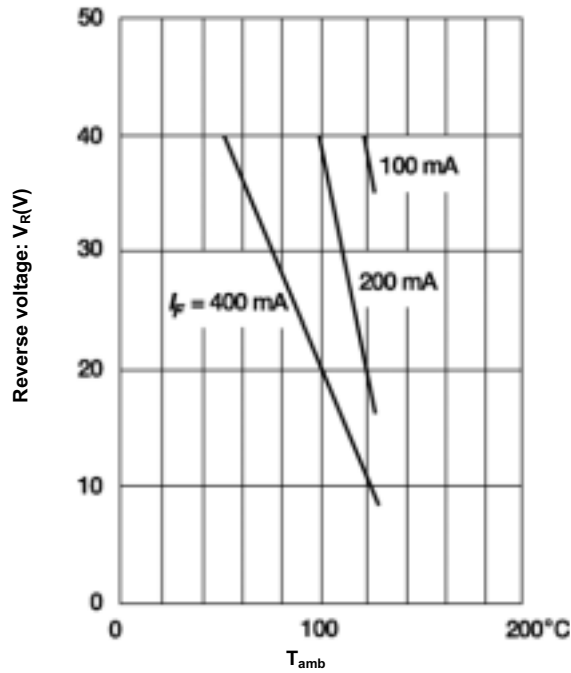


Figure 5. Blocking voltage duration vs. temperature at various average forward current

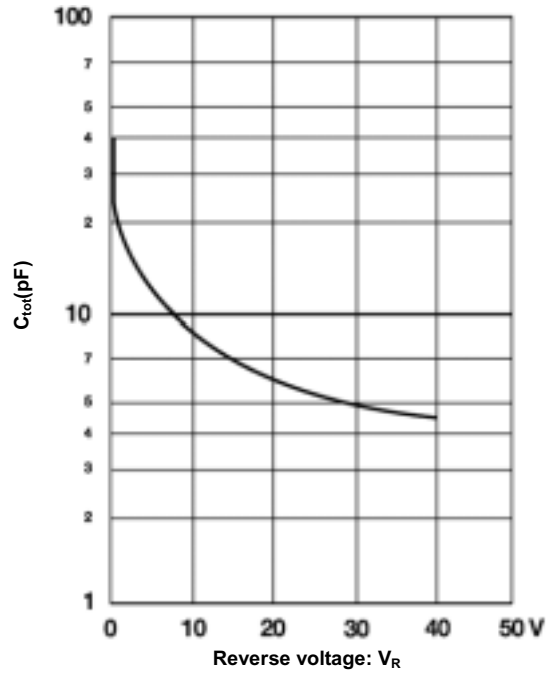


Figure 6. Typical capacitance vs. reverse voltage



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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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