

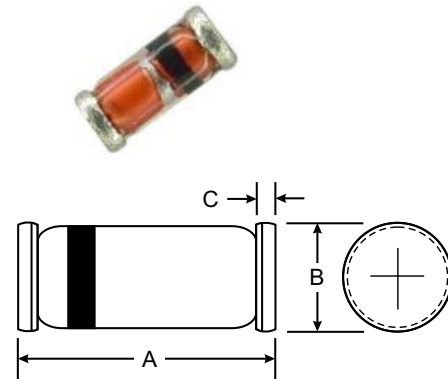
**VOLTAGE RANGE: 20 - 40V**  
**CURRENT: 350 mA**

### Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Low Reverse Recovery Time
- Low Reverse Capacitance

### Mechanical Data

- Case: SOD-80/LL34, Glass
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.05 grams (approx.)



LL34/ SOD-80		
Dim	Min	Max
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	MCL103A	MCL103B	MCL103C	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	40	30	20	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	21	14	V
Forward Continuous Current	I <sub>FM</sub>	350			mA
Repetitive Peak Forward Current @ t ≤ 1.0s	I <sub>FRM</sub>	1.0			A
Non-Repetitive Peak Forward Surge Current 8.3 ms Half Sine Wave	I <sub>FSM</sub>	15			A
Power Dissipation	P <sub>d</sub>	400			mW
Thermal Resistance, Junction to Ambient Air	R <sub>θJA</sub>	300			K/W
Operating Junction Temperature	T <sub>j</sub>	125			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150			°C

### Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	MCL103A MCL103B MCL103C V <sub>(BR)R</sub>	40 30 20	—	—	V	I <sub>RS</sub> = 100μA (pulsed)
Maximum Forward Voltage Drop	V <sub>FM</sub>	—	—	0.37 0.60	V	I <sub>F</sub> = 20mA I <sub>F</sub> = 200mA
Maximum Peak Reverse Current	MCL103A MCL103B MCL103C I <sub>RM</sub>	—	—	5.0	μA	V <sub>R</sub> = 30V V <sub>R</sub> = 20V V <sub>R</sub> = 10V
Junction Capacitance	C <sub>j</sub>	—	50	—	pF	V <sub>R</sub> = 0V, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	—	10	—	ns	I <sub>F</sub> = I <sub>R</sub> = 50mA to 200mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω

## RATINGS AND CHARACTERISTIC CURVES MCL103A THRU MCL103C

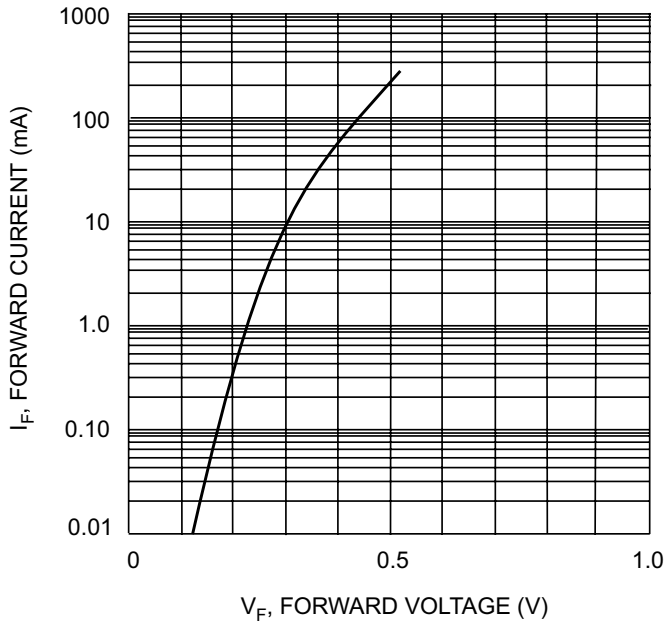


Fig. 1 Typical Forward Characteristics

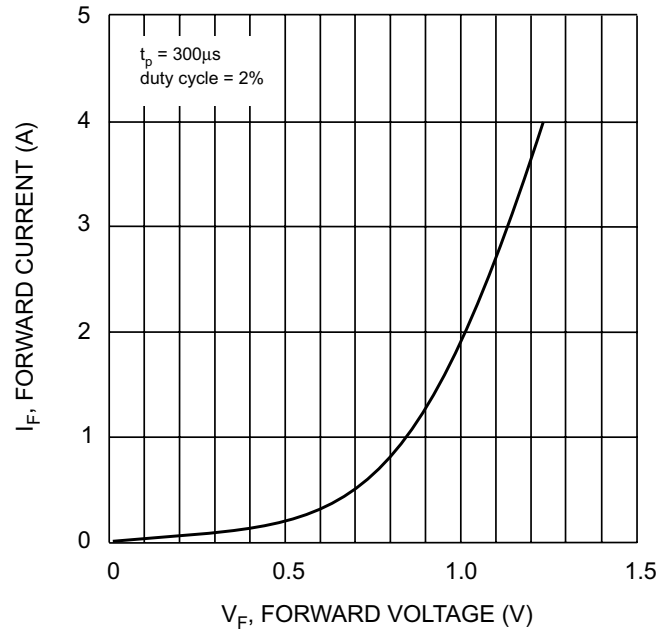


Fig. 2 Typical High Current Fwd Characteristics

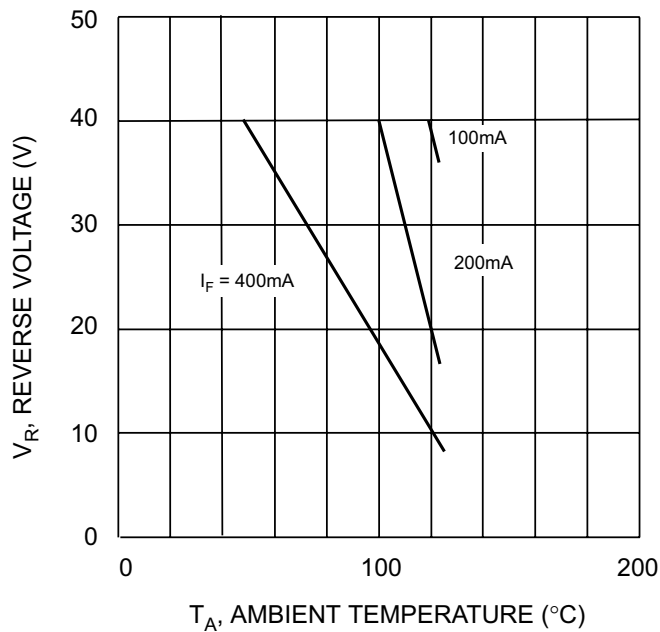


Fig. 3 Blocking Voltage Derating Curves

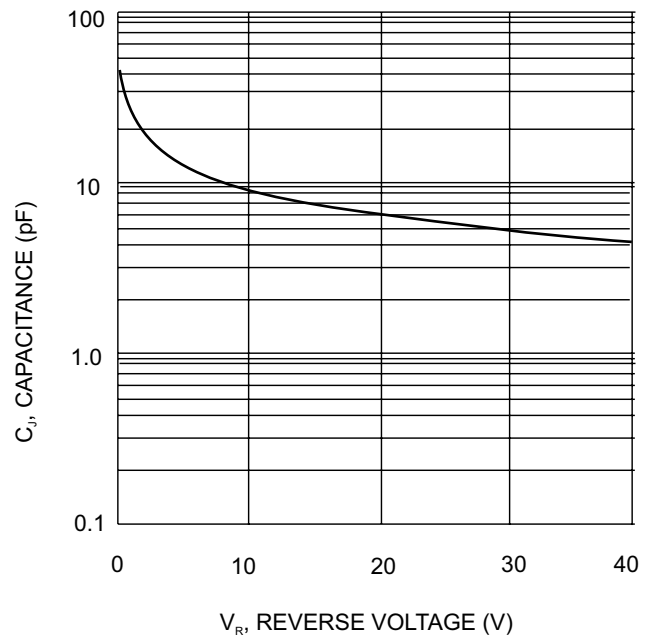


Fig. 4 Typ. Junction Capacitance vs Reverse Voltage