

VOLTAGE RANGE: 20 - 40V

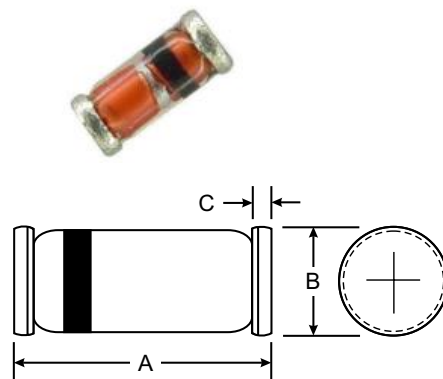
CURRENT: 350 mA

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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	MCL103A	MCL103B	MCL103C	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	30	20	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	28	21	14	V
Forward Continuous Current	I_{FM}	350			mA
Repetitive Peak Forward Current @ $t \leq 1.0\text{s}$	I_{FRM}	1.0			A
Non-Repetitive Peak Forward Surge Current 8.3 ms Half Sine Wave	I_{FSM}	15			A
Power Dissipation	P_d	400			mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	300			K/W
Operating Junction Temperature	T_j	125			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150			$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	40 30 20	—	—	V	$I_{RS} = 100\mu\text{A}$ (pulsed)
Maximum Forward Voltage Drop	V_{FM}	—	—	0.37 0.60	V	$I_F = 20\text{mA}$ $I_F = 200\text{mA}$
Maximum Peak Reverse Current	I_{RM}	—	—	5.0	μA	$V_R = 30\text{V}$ $V_R = 20\text{V}$ $V_R = 10\text{V}$
Junction Capacitance	C_j	—	50	—	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	10	—	ns	$I_F = I_R = 50\text{mA}$ to 200mA , $t_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$

RATINGS AND CHARACTERISTIC CURVES MCL103A THRU MCL103C

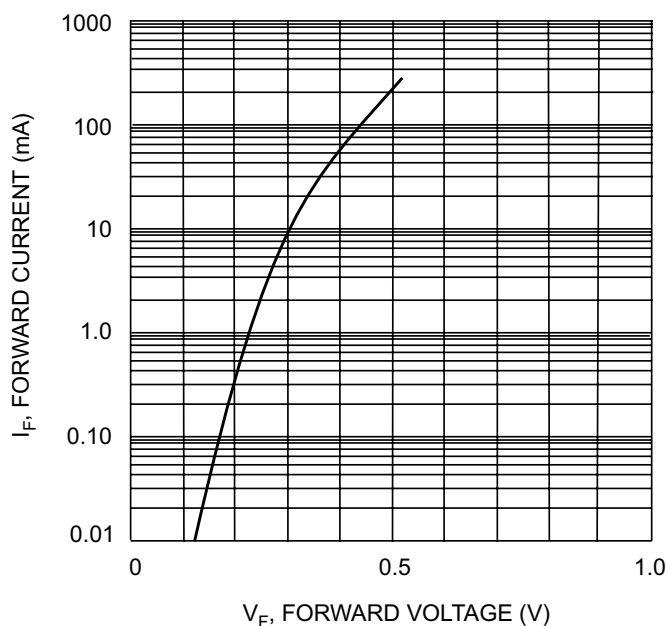


Fig. 1 Typical Forward Characteristics

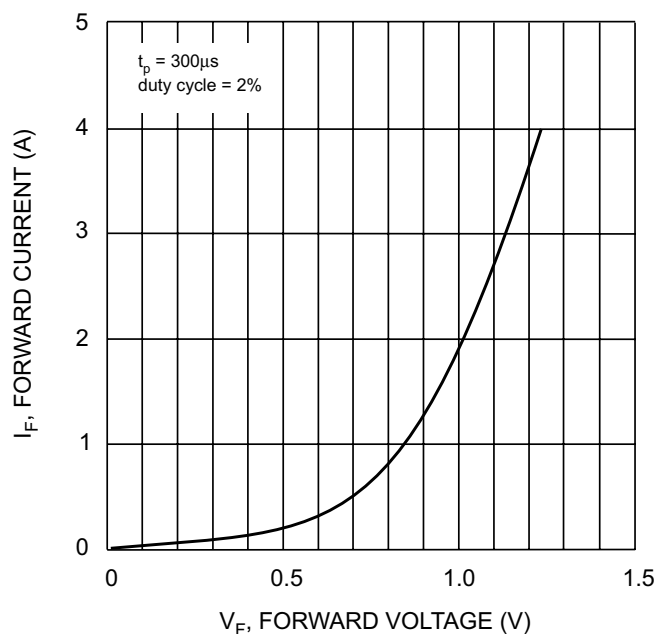


Fig. 2 Typical High Current Fwd Characteristics

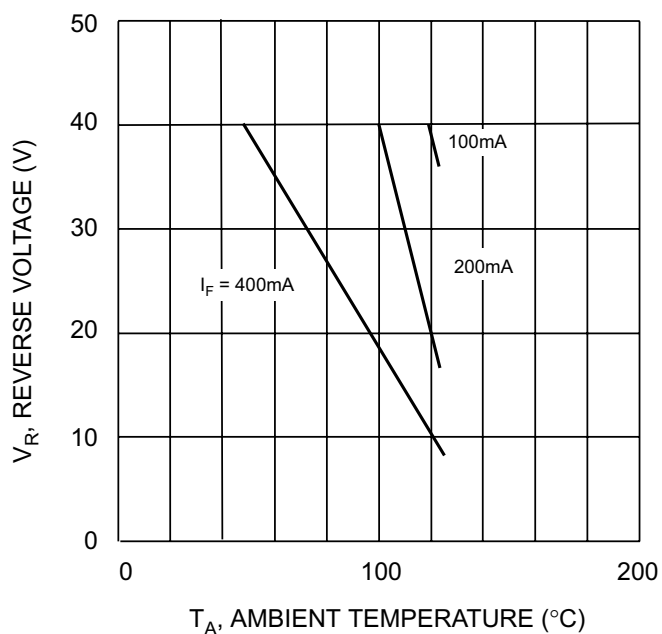


Fig. 3 Blocking Voltage Derating Curves

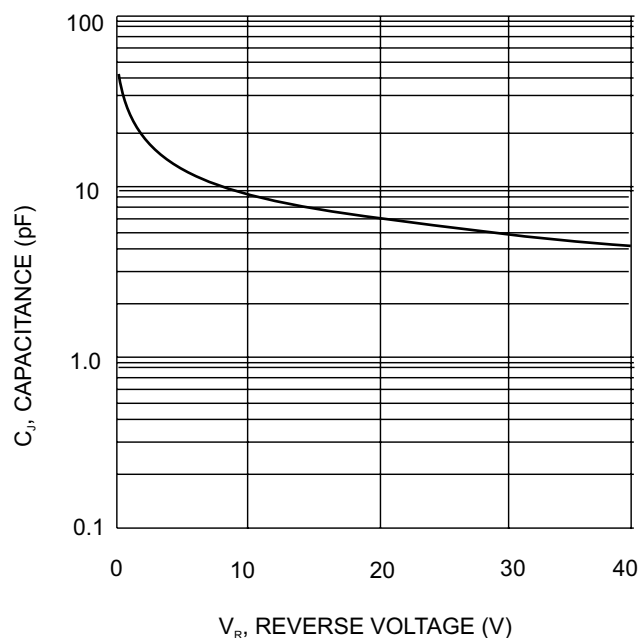


Fig. 4 Typ. Junction Capacitance vs Reverse Voltage