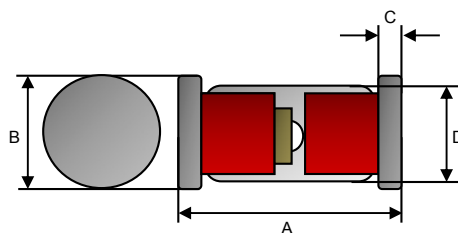


Small Signal Diode

**Mini-MELF (LL34)
HERMETICALLY SEALED GLASS**

Features

- ✧ Fast switching device ($T_{rr} < 4.0\text{ns}$)
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Matte Tin (Sn) lead finish with Nickel (Ni) underplate
- ✧ Pb free version and RoHS compliant
- ✧ All External Surfaces are Corrosion Resistant and Leads are Readily Solderable

Mechanical Data

- ✧ Case : Mini-MELF Package (JEDEC DO-213AC)
- ✧ High temperature soldering guaranteed : $270^{\circ}\text{C}/10\text{s}$
- ✧ Polarity : Indicated by cathode band
- ✧ Weight : $50.8 \pm 0.5\text{ mg}$

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	3.30	3.70	0.130	0.146
B	1.40	1.60	0.055	0.063
C	0.25	0.40	0.010	0.016
D	1.25	1.40	0.049	0.055

Ordering Information

Part No.	Package	Packing
LLxxxx L1	Mini-MELF	2.5Kpcs / 7" Reel
LLxxxx L0	Mini-MELF	10Kpcs / 13" Reel

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P_D	500	mW
Non-Repetitive Peak Reverse Voltage	V_{RSM}	100	V
Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Peak Forward Surge Current Pulse Width 8.3ms	I_{FSM}	2.0	A
Non-Repetitive Peak Forward Current	I_{FM}	450	mA
Mean Forward Current	I_o	150	mA
Thermal Resistance (Junction to Ambient) (Note 1)	$R\theta_{JA}$	300	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-65 to + 200	$^{\circ}\text{C}$

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	100	V
		$I_R=5\mu\text{A}$	75	
Forward Voltage	V_F	LL4448, LL914B $I_F=5.0\text{mA}$	0.62	V
		LL4148 $I_F=10.0\text{mA}$	1.0	
		LL4448, LL914B $I_F=100.0\text{mA}$	1.0	
Reverse Leakage Current	I_R	$V_R=20\text{V}$	25	nA
		$V_R=75\text{V}$	5.0	μA
Junction Capacitance	C_J	$V_R=0, f=1.0\text{MHz}$	4.0	pF
Reverse Recovery Time (Note 2)	T_{rr}		4.0	ns

Notes:1. Valid provided that electrodes are kept at ambient temperature

Notes:2. Reverse Recovery Test Conditions: $I_F=I_R=10\text{mA}$, $R_L=100\Omega$, $I_{RR}=1\text{mA}$

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

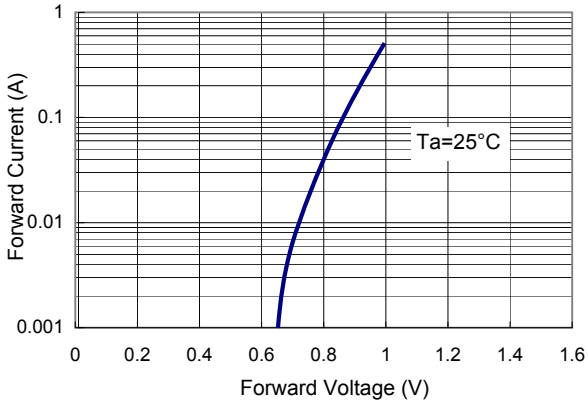


FIG 2 Reverse Current vs Reverse Voltage

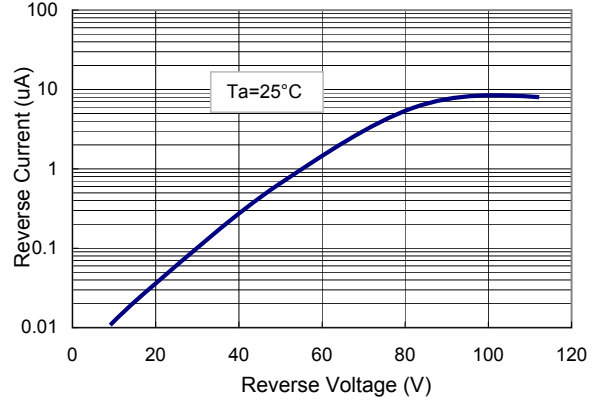


FIG 3 Admissible Power Dissipation Curve

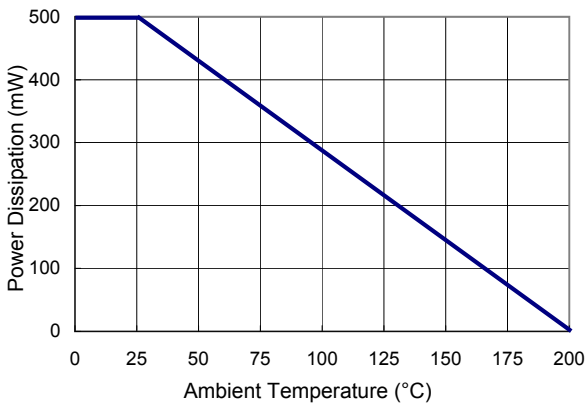


FIG 4 Typical Junction Capacitance

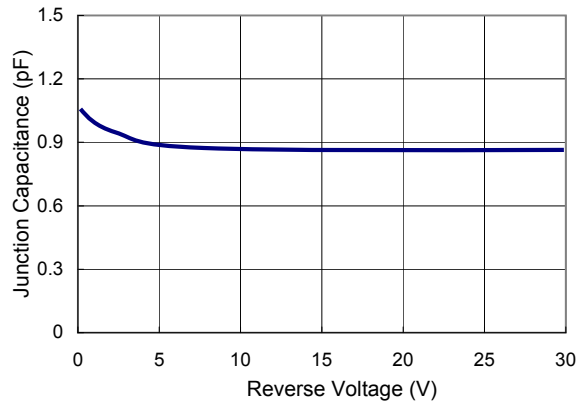


FIG 5 Forward Resistance vs. Forward Current

