Small Signal Product

High Speed SMD Switching Diode

FEATURES

- Fast switching device (trr<4.0ns)
- Surface device type mounting
- Matte Tin(Sn) terminal finish
- Pb free version and RoHS compliant

MINI MELF

Hermetically Sealed Glass

MECHANICAL DATA

- Case: Mini-MELF Package
- High temperature soldering guaranteed: 270°C/10s
- Polarity: Indicated by black cathode band
- Weight: 31mg (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P_D	500	mW
Repetitive Peak Reverse Voltage	V_{RRM}	75	V
Reverse Voltage	V_R	75	V
Peak Forward Surge Current (Note 1)	I_{FSM}	2	A
Non-Repetitive Peak Forward Current	I_{FM}	450	mA
Mean Forward Current	$I_{F(AV)}$	150	mA
Forward Continuous Current	I_F	150	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Thermal Resistance (Junction to Ambient) (Note 2)	$R_{\theta JA}$	300	°C/W
Junction and Storage Temperature Range	T_J , T_{STG}	-65 to +175	°C

PARAMETER		SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	I_R=100μA	$V_{(BR)}$	100	-	V
	I_R=5μA		75	-	
Forward Voltage		V_F	-	-	V
LL4448, LL914B	I_F=5 mA		0.62	0.72	
LL4148	I_F=50 mA		-	1	
LL4448, LL914B	I_F=100 mA		-	1	
Reverse Leakage Current	V_R=20V	I_R	-	25	nA
	V_R=75V		-	5	μA
Junction Capacitance	V_R=0 f=1.0MHz	C_J	-	4	pF
Reverse Recovery Time	(Note 3)	t_{rr}	-	4	ns

Note 1: Test condition : 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)

Note 2: Valid provided that electrodes are kept at ambient temperature

Note 3: Reverse recovery test conditions : I_F=I_R=10mA, R_L=100Ω, I_{RR}=1mA

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

Fig. 1 Typical Forward Characteristics

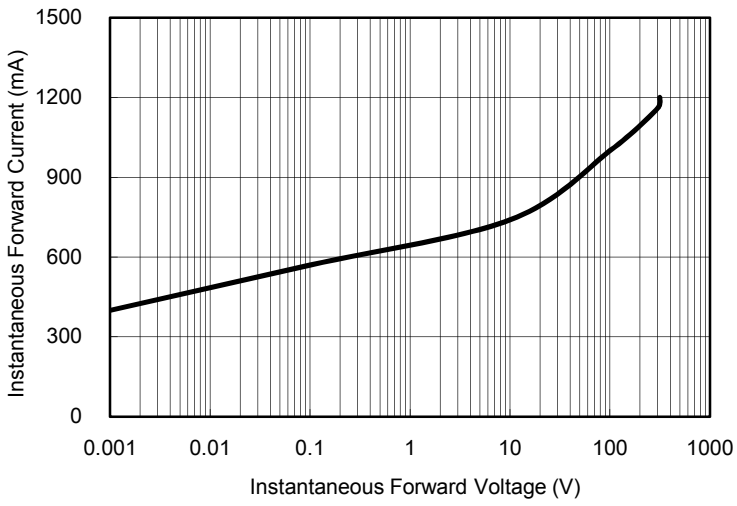


Fig. 2 Reverse Current VS. Reverse Voltage

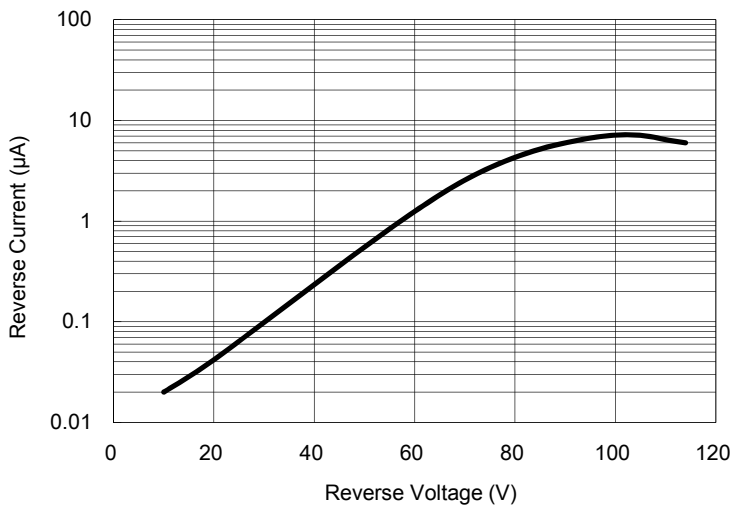


Fig. 3 Admissible Power Dissipation Curve

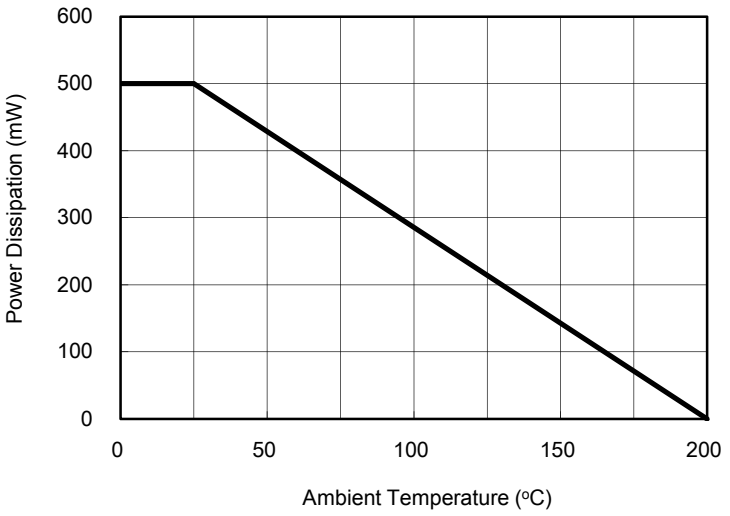


Fig. 4 Typical Junction Capacitance

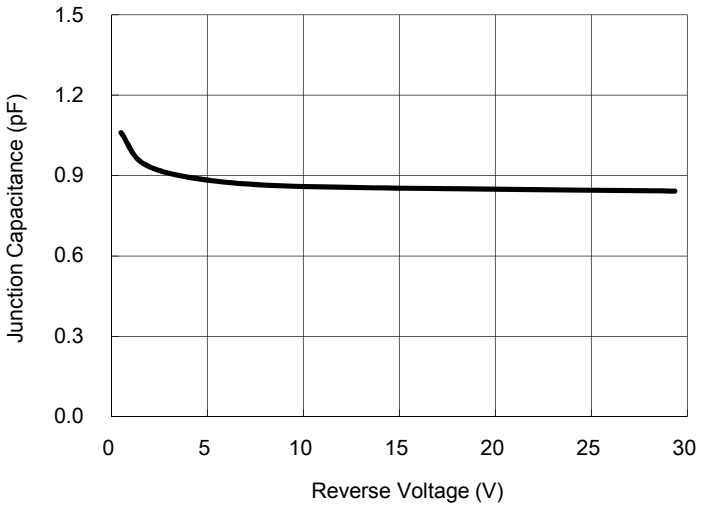
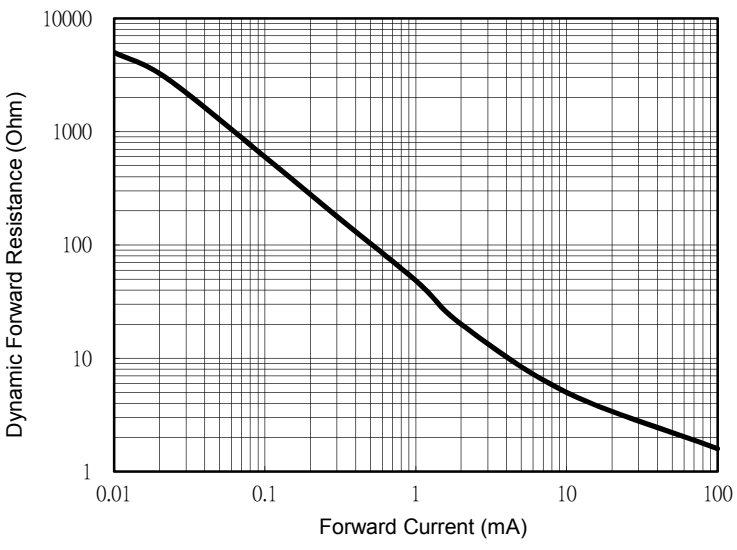
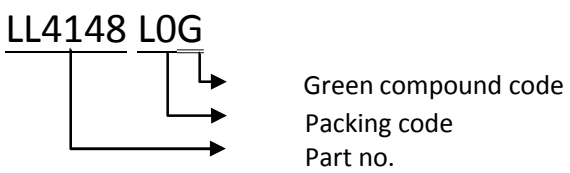


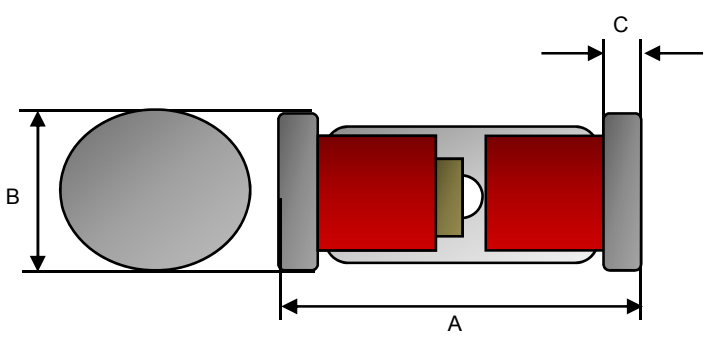
Fig. 5 Forward Resistance VS. Forward Current



ORDER INFORMATION (EXAMPLE)

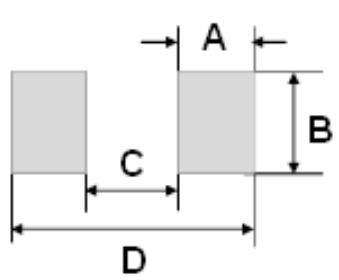


PACKAGE OUTLINE DIMENSION



DIM.	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	0.20	0.50	0.008	0.020

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	1.25	0.049
B	2.00	0.079
C	2.50	0.098
D	5.00	0.197

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