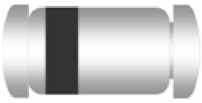
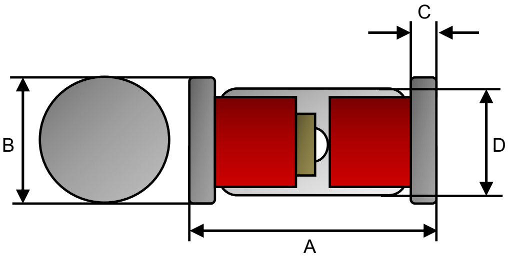
TAIWAN SEMICONDUCTOR

LLDB3-LLDB3TG
150mW Bi-directional Trigger Diode

Small Signal Diode



MINI-MELF (LL34)
HERMETICALLY SEALED GLASS



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

Features

✧Designed for through-Hole Device Type Mounting.
✧Hermetically Sealed Glass.
✧All external suface are corrosion resistant and terminals are readily solderable.
✧High reliability glass passivation insuring parameter stability and protection against junction contamination.
✧Pb free version and RoHS compliant

Mechanical Data

✧Case :MINI-MELF hermetically sealedglass
✧Terminal: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
✧High temperature soldering guaranteed: 270°C/10s
✧Polarity : Indicated by cathode band
✧Weight : 29 ± 2.5 mg

Ordering Information

Part No.	Package	Packing
LLDB3/LLDB3TG L1	MINI-MELF	2.5Kpcs / 7" 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	150	mW
Repetitive Peak Forward Current Pulse Width= 20μsec	I_{FRM}	2	A
Thermal Resistance (Junction to Ambient) (Note 1)	RθJA	400	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-40 to + 125	°C

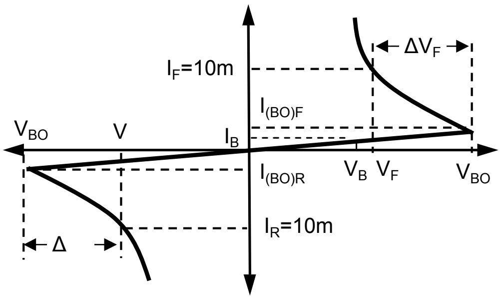
Electrical Characteristics

Type Number			Symbol	LLDB3TG	LLDB3	Units
Break-over Voltage	C=	22nF	V_{BO}	32	32	V
Break-over Voltage Symmetry	C=	22nF	+ / -V_{BO}	+ / - 2	+ / - 3	V
Break-over Current	C=	22nF	I_{BO}	100	15	nA
Maxiumn Leakage Current	V_R=	0.5V	I_R	10		μA
Junction Capacitance	V_R=0, f=1.0MHz		C_J	22.0		nF
Output Voltage			V_O	5		V
Reverse Recovery Time	(Note2)		Trr	1.5		μs

Notes:1. Valid provided that electrodes are kept at ambient temperature
Notes:2. Test Condition : I_F=0.5A, R_L=100Ω

Small Signal Diode

Rating and Characteristic Curves



V_{BO} :Break-Over Voltage at I_{BO}
I_{BO} : Test current for voltage V_{BO}
V_F : Dynamic impedance at I_F
I_B : Test current for voltage V_B
V_B : Voltage at current I_B
I_B : Test current for voltage V_B

FIG 1 Admissible Power Dissipation Curve

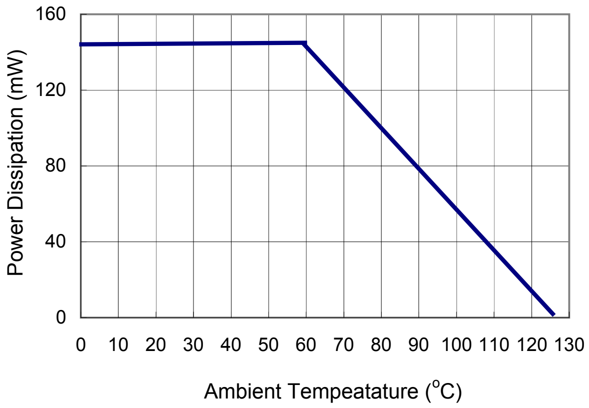


FIG 2 Typical Junction Capacitance

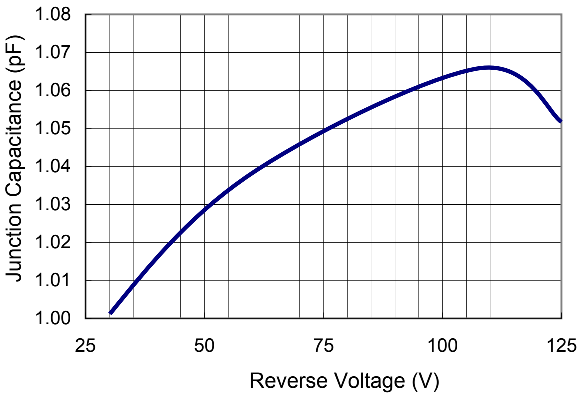


FIG 3 Peak pulse current versus duration