

## MINI MELF Glass-Encapsulate Diodes

Small Signal Fast Switching Diodes

### Features

- $V_R$  75V
- $I_{FAV}$  150mA
- Fast Switching Device (TRR <4.0 nS)

### Applications

- Extreme fast switches



### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Repetitive peak reverse voltage	$V_{RRM}$	V		100
Reverse voltage	$V_R$	V		75
Peak forward surge current	$I_{FSM}$	A	$t_p=1\mu s$	2
Repetitive peak forward current	$I_{FRM}$	mA		500
Forward continuous current	$I_F$	mA		300
Average forward current	$I_{FAV}$	mA	$V_R=0$	150
Power dissipation	$P_{tot}$	mW		500 <sup>1)</sup>
Thermal resistance	$R_{thJA}$	°C/W	junction to ambient air	300 <sup>1)</sup>
Maximum junction temperature	$T_J$	°C		175
Storage temperature range	$T_{stg}$	°C		-65 to +175

### Notes:

Valid provided that electrodes are kept at ambient temperature

---

**Electrical Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

---

Item	Symbol	Unit	Conditions	Max
Forward voltage	$V_F$	mV	$I_F=50\text{mA}$	1000
Reverse current	$I_R$	nA	$V_R=20\text{V}$	25
	$I_R$	$\mu\text{A}$	$V_R=20\text{V}, T_j=150^\circ\text{C}$	50
	$I_R$	$\mu\text{A}$	$V_R=75\text{V}$	5
Breakdown voltage	$V_{(BR)}$	V	$I_R=100\mu\text{A}, t_p/T=0.01, t_p=0.3\text{ms}$	100(min)
Diode capacitance	$C_D$	pF	$V_R=0, f=1\text{MHz}, V_{HF}=50\text{mV}$	4
Reverse recovery time	$t_{rr}$	ns	$I_F=I_R=10\text{mA}, i_R=1\text{mA}$	8
	$t_{rr}$	ns	$I_F=10\text{mA}, V_R=6\text{V}, i_R=0.1\times I_R, R_L=100\Omega$	4

## Typical Characteristics

FIG1: Forward Current vs. Forward Voltage

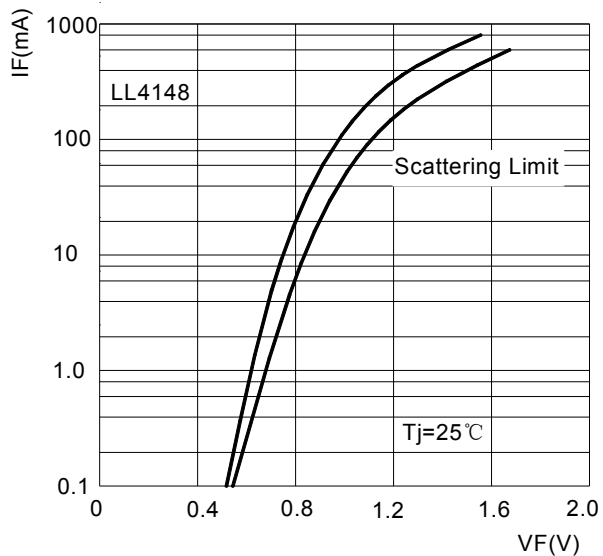


FIG2: Reverse Current vs. Reverse Voltage

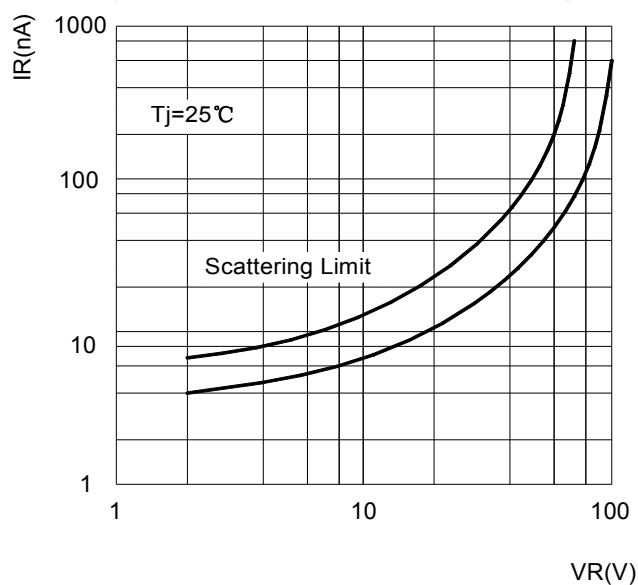
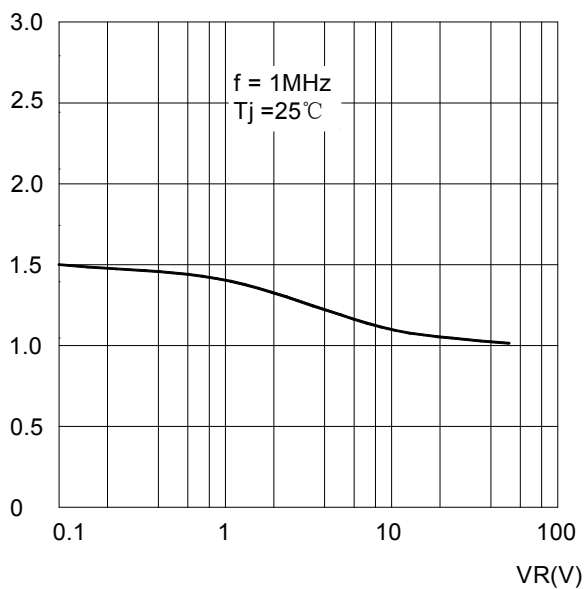


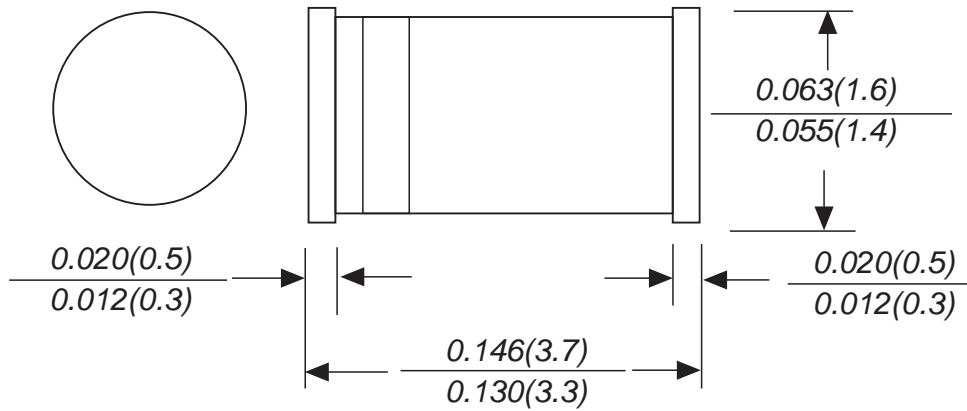
FIG3: Diode Capacitance vs. Reverse Voltage



---

## MINI MELF Package Outline Dimensions

---

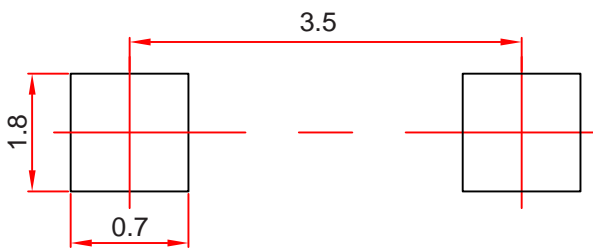


Dimensions in millimeters

---

## MINI MELF Suggested Pad Layout

---



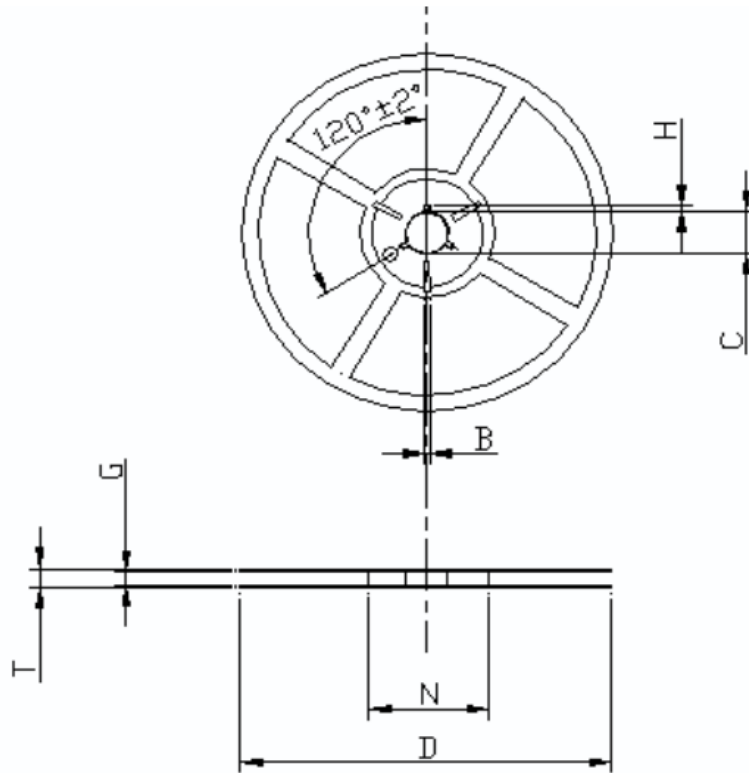
**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

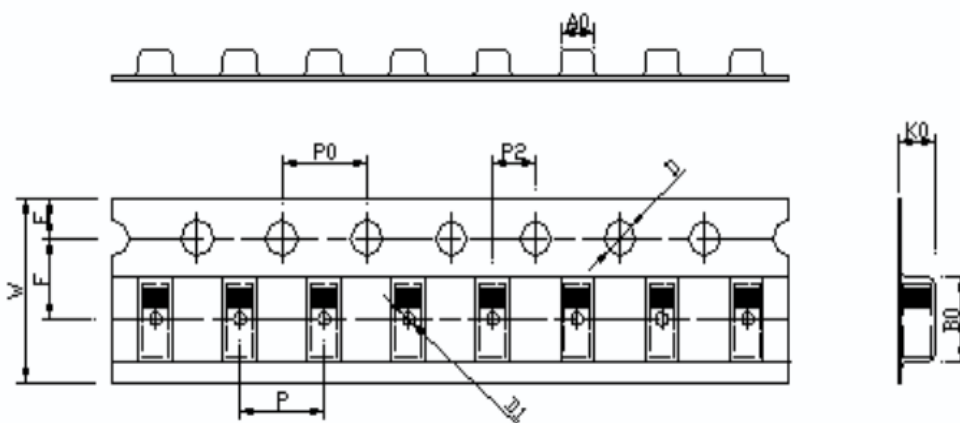
**NOTICE**

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

# Reel Taping Specifications For Surface Mount Devices- MINI MELF



SYMBOL	B	C	D	G	H	N	T
SIZE(mm)	$2 \pm 0.5$	$13 \pm 0.5$	$178 \pm 2$	$8.4 \pm 1.5$	$4 \pm 0.5$	60	$< 14.9$



SYMBOL	W	P	E	F	D	D1	P0	P2	A0	B0	K0
SIZE(mm)	$8.0 \pm 0.1$	$4.0 \pm 0.1$	$1.75 \pm 0.1$	$3.5 \pm 0.05$	$1.5 \pm 0.1$	$1.0 \pm 0.1$	$4.0 \pm 0.1$	$2.0 \pm 0.05$	$1.70 \pm 0.1$	$3.80 \pm 0.1$	$1.85 \pm 0.1$