

MINI MELF Glass-Encapsulate Diodes

SCHOTTKY BARRIER DIODE

MINI MELF(SOD-80/ LL- 34)

Features

- Low forward voltage.
- Guard ring protected.
- Hermetically-sealed leaded glass package.
- High breakdown voltage.



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Continuous reverse voltage	V_R	50	V
Continuous forward current	I_F	200	mA
Average forward current	$I_{F(AV)}$	200	mA
Repetitive peak forward current $t_p \leq 1\text{sec.}; \delta \leq 0.5$	I_{FRM}	500	mA
Non-repetitive peak forward current $t_p=10\text{ms}$	I_{FSM}	5	A
Operating ambient temperature	T_{amb}	-65 to +125	$^\circ\text{C}$
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_S	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	R_{thj-a}	320	K/W

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Forward voltage					
at $I_F = 0.1\text{mA}$	V_F	-	-	300	mV
at $I_F = 1\text{mA}$	V_F	-	-	380	mV
at $I_F = 10\text{mA}$	V_F	-	-	450	mV
at $I_F = 30\text{mA}$	V_F	-	-	600	mV
at $I_F = 100\text{mA}$	V_F	-	-	900	mV
Reverse current (Note 1)					
at $V_R = 40\text{V}$	I_R	-	-	5	μA
Reverse recovery time					
at $I_F = 10\text{mA}, I_R = 10\text{mA}, R_L = 100\Omega$	t_{rr}	-	-	4	ns
Diode capacitance					
at $V_R = 1\text{V}, f = 1\text{MHz}$	C_d	-	-	8	pF

Note 1: Pulsed test: $t_p=300\mu\text{s}; \delta=0.02$.

Typical Characteristics

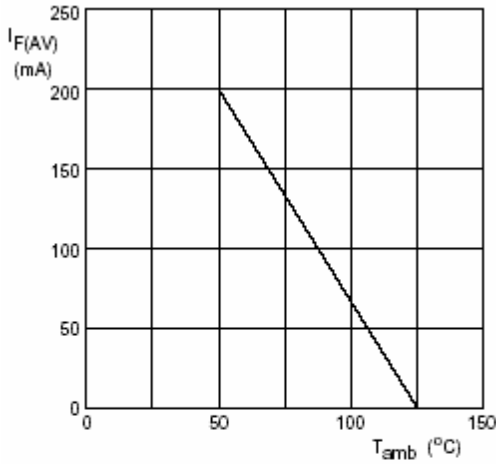
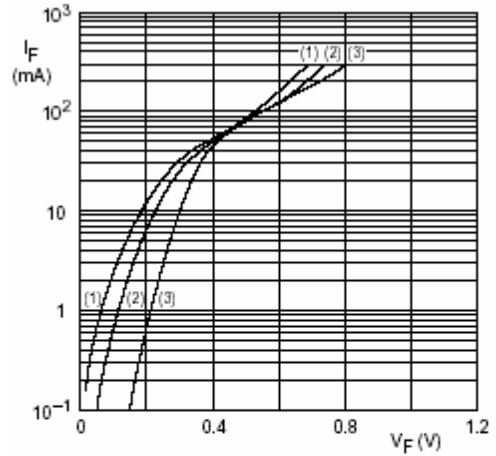
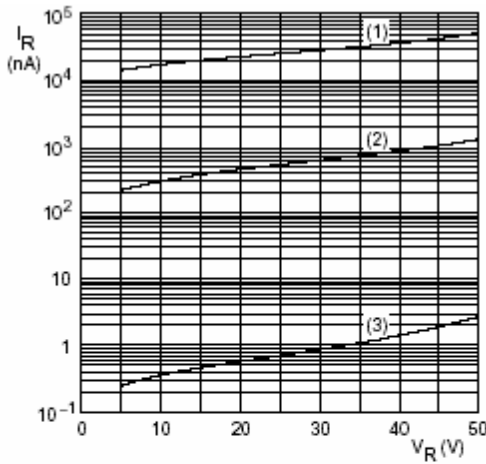


Fig. 1 Derating curve.



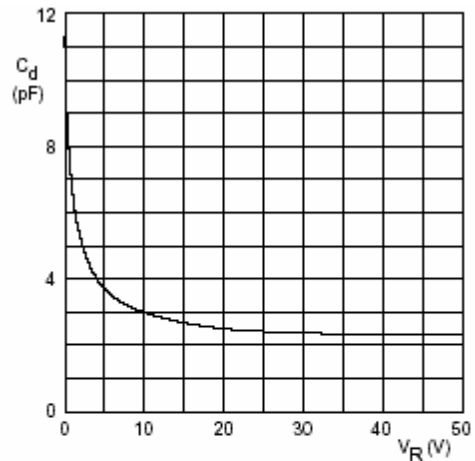
- (1) $T_{amb} = 125^{\circ}C$.
- (2) $T_{amb} = 85^{\circ}C$.
- (3) $T_{amb} = 25^{\circ}C$.

Fig. 2 Forward current as a function of forward voltage; typical values.



- (1) $T_{amb} = 85^{\circ}C$.
- (2) $T_{amb} = 25^{\circ}C$.
- (3) $T_{amb} = -40^{\circ}C$.

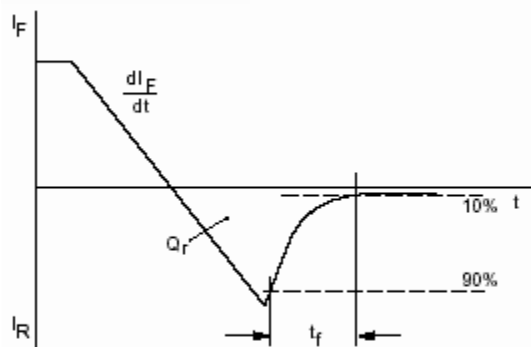
Fig. 3 Reverse current as a function of reverse voltage; typical values.



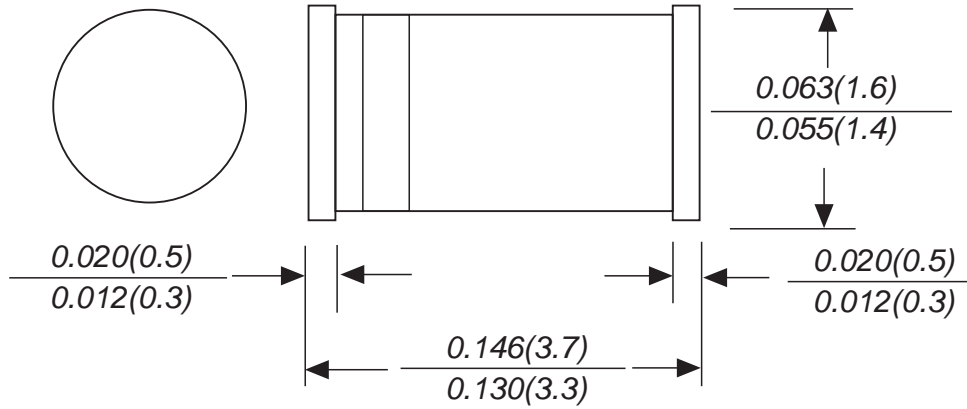
$f = 1 \text{ MHz}$.

Fig. 4 Diode capacitance as a function of reverse voltage; typical values.

Fig. 5 Reverse recovery definitions.

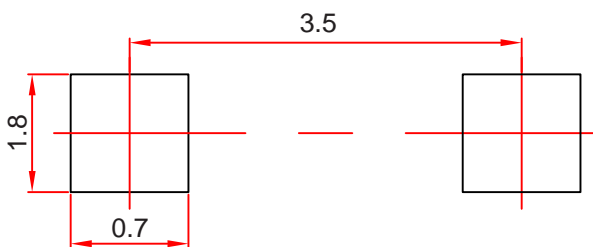


MINI MELF Package Outline Dimensions



Dimensions in millimeters

MINI MELF Suggested Pad Layout



Note:

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

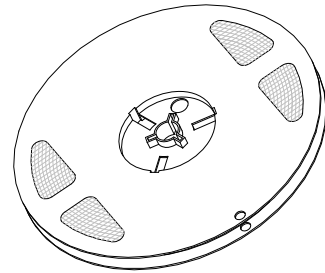
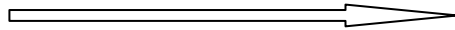
Packaging Specifications for Surface Mounted Glass Diodes

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)

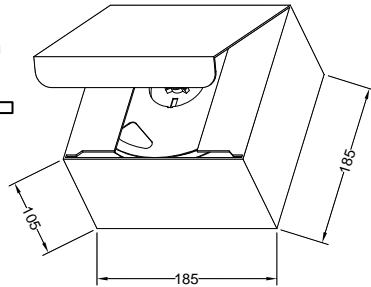
LS-31 (MicroMELF)
 LS-34 (QuadroMELF)
 LL-34 (MiniMELF)
 DO-213AA(MiniMELF)



2,500 pcs per reel



20,000 pcs per box
 8 reels per box



100,000 pcs per carton
 5 boxes per carton

