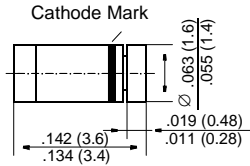


# LL46

## Schottky Diodes

### MiniMELF



Dimensions in inches and (millimeters)

### FEATURES

- ◆ For general purpose applications.
- ◆ These diodes feature low turn-on voltage and high break-down voltage. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- ◆ This diode is also available in the DO-35 case with type designation BAT46 and in the SOD-123 case with type designation BAT46W.



### MECHANICAL DATA

**Case:** MiniMELF Glass Case (SOD-80)

**Weight:** approx. 0.05 g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Forward Continuous Current at $T_{amb} = 25\text{ °C}$	$I_F$	150 <sup>1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1\text{ s}$ , $\delta < 0.5$ , $T_{amb} = 25\text{ °C}$	$I_{FRM}$	350 <sup>1)</sup>	mA
Surge Forward Current at $t_p < 10\text{ ms}$ , $T_{amb} = 25\text{ °C}$	$I_{FSM}$	750 <sup>1)</sup>	mA
Power Dissipation at $T_{amb} = 80\text{ °C}$	$P_{tot}$	200 <sup>1)</sup>	mW
Junction Temperature	$T_j$	125	°C
Ambient Operating Temperature Range	$T_{amb}$	-55 to +125	°C
Storage Temperature Range	$T_S$	-65 to +150	°C

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

# LL46

## ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage tested with 100 $\mu$ A Pulses	$V_{(BR)R}$	100	–	–	V
Forward Voltage Pulse Test $t_p < 300 \mu s$ , $\delta < 2\%$ at $I_F = 0.1 \text{ mA}$	$V_F$	–	–	0.25	V
at $I_F = 10 \text{ mA}$	$V_F$	–	–	0.45	V
at $I_F = 250 \text{ mA}$	$V_F$	–	–	1	V
Leakage Current Pulse Test $t_p < 300 \mu s$ , $\delta < 2\%$ at $V_R = 1.5 \text{ V}$	$I_R$	–	–	0.5	$\mu$ A
at $V_R = 1.5 \text{ V}$ , $T_j = 60 \text{ }^\circ\text{C}$	$I_R$	–	–	5	$\mu$ A
at $V_R = 10 \text{ V}$	$I_R$	–	–	0.8	$\mu$ A
at $V_R = 10 \text{ V}$ , $T_j = 60 \text{ }^\circ\text{C}$	$I_R$	–	–	7.5	$\mu$ A
at $V_R = 50 \text{ V}$	$I_R$	–	–	2	$\mu$ A
at $V_R = 50 \text{ V}$ , $T_j = 60 \text{ }^\circ\text{C}$	$I_R$	–	–	15	$\mu$ A
at $V_R = 75 \text{ V}$	$I_R$	–	–	5	$\mu$ A
at $V_R = 75 \text{ V}$ , $T_j = 60 \text{ }^\circ\text{C}$	$I_R$	–	–	20	$\mu$ A
Capacitance at $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{tot}$	–	10	–	pF
at $V_R = 1 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{tot}$	–	6	–	pF
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	–	–	0.3 <sup>1)</sup>	K/mW

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.