



SEMICONDUCTOR

LL47

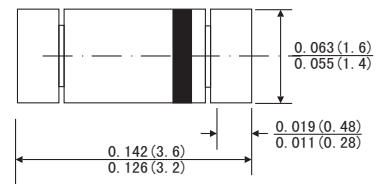
SMALL SIGNAL SCHOTTKY DIODES

## FEATURES

- For general purpose applications
- These diodes features very low turn-on voltage and fast switching.
- 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 BAT47.
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



## MiniMELF



## MECHANICAL DATA

- Case: MiniMELF glass case(SOD-80 )
- Weight: Approx. 0.05 gram

Dimensions in inches and (millimeters)

## ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	Value	Units
Repetitive Peak Reverse Voltage	VRRM	20	V
Forward Continuous Current at $T_A=25^\circ\text{C}$	I <sub>F</sub>	350 <sup>1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1\text{s}$ , $\delta < 0.5$ , $T_A=25^\circ\text{C}$	I <sub>FRM</sub>	1 <sup>1)</sup>	A
Surge forward current at $t_p < 10\text{ms}$ , $T_A=25^\circ\text{C}$	I <sub>FSM</sub>	7.5 <sup>1)</sup>	A
Power Dissipation at $T_A=65^\circ\text{C}$	P <sub>tot</sub>	330 <sup>1)</sup>	mW
Junction temperature	T <sub>J</sub>	125	°C
Ambient Operating temperature Range	T <sub>A</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

## ELECTRICAL CHARACTERISTICS

	Symbols	Min.	Typ.	Max.	Unis
Reverse breakdown voltage Tested with 10 $\mu\text{A}$ Pulses	V(BR)R	100			V
Forward voltage Pulse Test $t_p < 300\mu\text{s}$ , $\delta < 2\%$ at I <sub>F</sub> =0.1mA, at I <sub>F</sub> =10mA, at I <sub>F</sub> =300mA	V <sub>F</sub> V <sub>F</sub> V <sub>F</sub>			0.25 0.40 1	V V V
Leakage current pulse test $t_p < 300\mu\text{s}$ , $\delta < 2\%$ at V <sub>R</sub> =10V at V <sub>R</sub> =10V, T <sub>J</sub> =60°C at V <sub>R</sub> =20V at V <sub>R</sub> =20V, T <sub>J</sub> =60°C	I <sub>R</sub> I <sub>R</sub> I <sub>R</sub> I <sub>R</sub>			4 20 10 30	$\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
Junction Capacitance at V <sub>R</sub> =1V, f=1MHz	C <sub>J</sub>		12		pF
Thermal resistance junction to ambient Air	R <sub>θJA</sub>			300 <sup>1)</sup>	°C/W

1) Valid provided that electrodes are kept at ambient temperature

# RATINGS AND CHARACTERISTIC CURVES LL47

Figure 1. Forward current versus forward voltage at different temperatures (typical values)

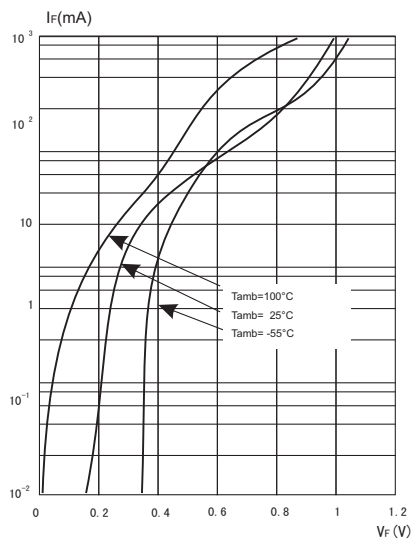


Figure 2. Forward current versus forward voltage (typical values)

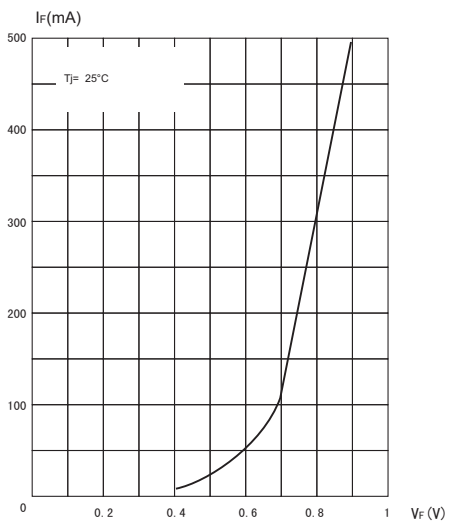
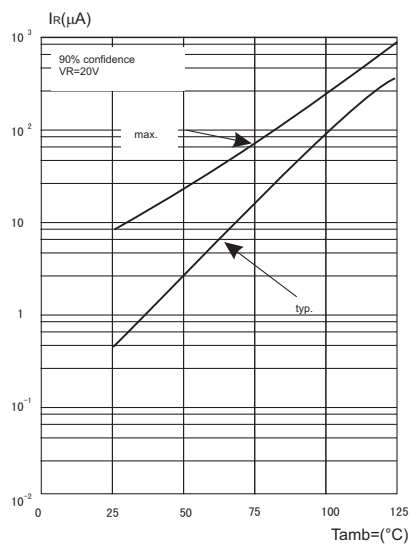


Figure 3. Reverse current versus ambient temperatures



# RATINGS AND CHARACTERISTIC CURVES LL47

Figure 4. Reverse current versus continuous Reverse voltage (typical values)

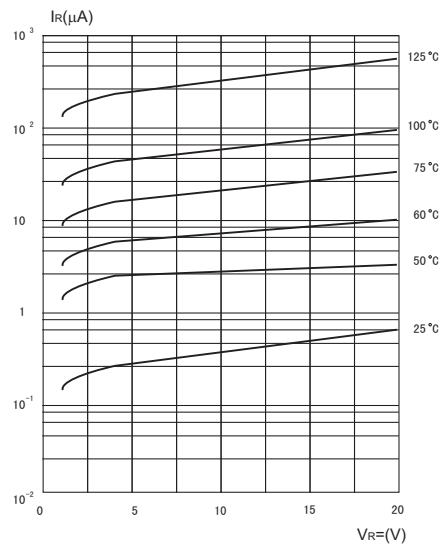


Figure 5. Capacitance  $C_J$  versus reverse applied voltage  $V_R$  (typical values)

