SEMICONDUCTOR

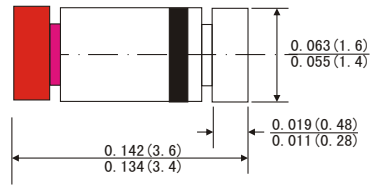
LL42,LL43

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.
- These diodes are also available in the DO-35 case with the type designation BAT42 to BAT43.
- High temperature soldering guaranteed: 260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MiniMELF



Dimensions in inches and (millimeters)

MECHANICAL DATA

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

ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Forward Continuous Current at T_A=25˚C	I_F	200 [1]	mA
Repetitive Peak Forward Current at t_p < 1s, δ < 0.5, T_A=25˚C	I_{FRM}	500 [1]	mA
Surge forward current at t_p < 10ms , T_A=25˚C	I_{FSM}	4 [1]	A
Power Dissipation at T_A=65˚C	P_{tot}	200 [1]	mW
Junction Temperature	T_J	125	℃
Ambient Operating temperature Range	T_A	-65 to+125	℃
Storage Temperature Range	T_{STG}	-65 to+150	℃
1) Valid provided thatelectrodes are kept at ambient temperature			

ELECTRICAL CHARACTERISTICS

		Symbols	Min.	Typ.	Max.	Unis
Reverse breakdown voltage Tested with 100μA		$V_{(BR)R}$	30			V
Forward voltage Pulse Test t_p < 300μs,δ < 2% at I_F=200mA, at I_F=10mA, at I_F=50mA, at I_F=2mA, at I_F=15mA	 LL42 LL42 LL43 LL43	 VF VF VF VF VF	 0.26	 	 1 0.4 0.65 0.33 0.45	 V V V V V
Leakage current Pulse Test t_p < 300μs,δ < 2% at V_R=25V at V_R=25V, T_J=100℃		I_R I_R			0.5 100	μA μA
Junction Capacitance at V_R=1V ,f=1MHz		C_J		7		pF
Reverse recovery time Form I_F=10mA,I_R=10mA,I_R=1mA		trr			5	ns
Detection efficiency at R_L=15kΩ C_L=300pF,f=45MHz, V_R=2V		η	80			%
Thermal resistance junction to ambient Air		$R_{\theta JA}$			300 [1]	K/W
1) Valid provided that electrodes are kept at ambient temperature						

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

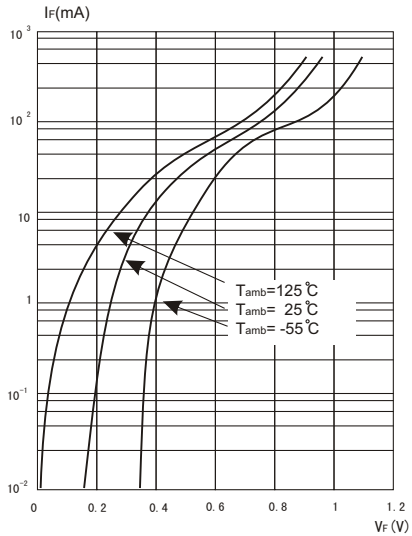

Figure 2. Forward current versus forward voltage (typical values)

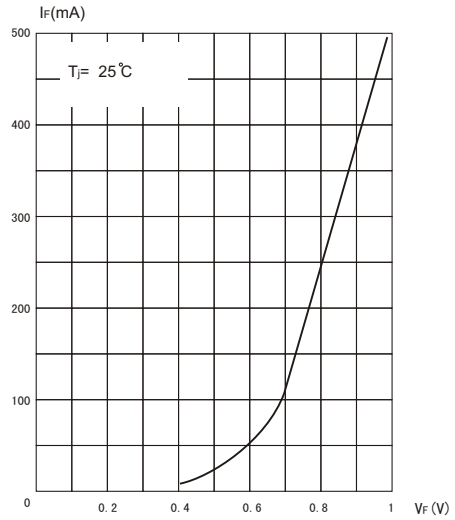

Figure 3.Reverse current versus ambient temperature(typical values)

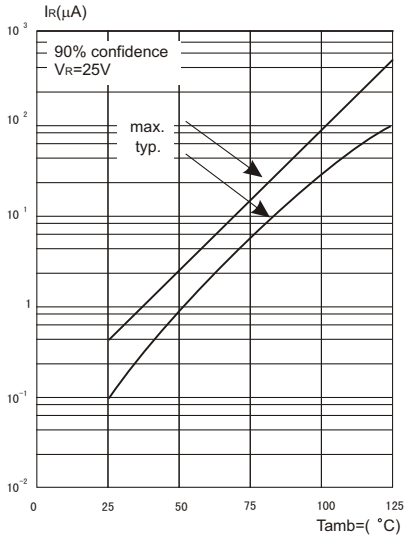

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Figure 4.Reverse current versus continuous Reverse voltage(typical values)

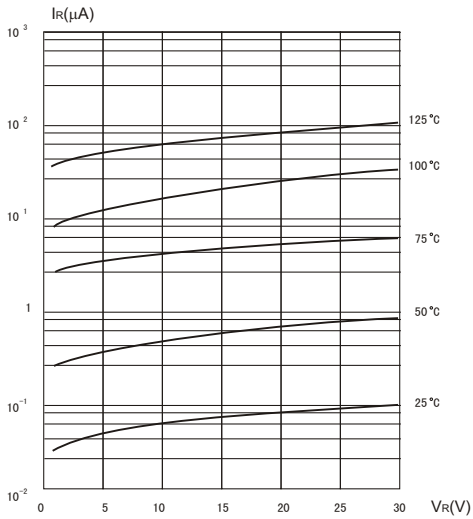
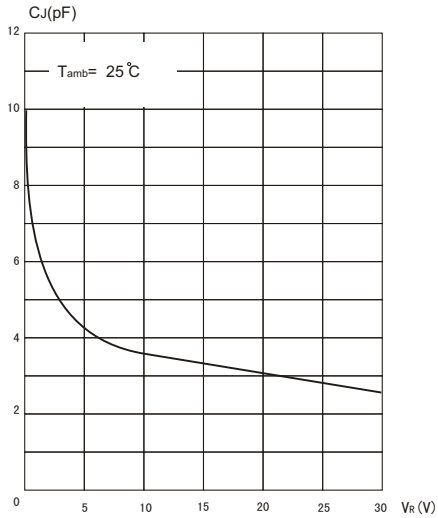


Figure 5.Capacitance C_J versus reverse applied voltage V_R (typical values)



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