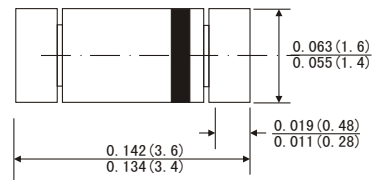


### FEATURES

- 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°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



### 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	$V_{RRM}$	30	V
Forward Continuous Current at $T_A=25^\circ\text{C}$	$I_F$	200 <sup>1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1\text{s}, \delta < 0.5, T_A=25^\circ\text{C}$	$I_{FRM}$	500 <sup>1)</sup>	mA
Surge forward current at $t_p < 10\text{ms}, T_A=25^\circ\text{C}$	$I_{FSM}$	4 <sup>1)</sup>	A
Power Dissipation at $T_A=65^\circ\text{C}$	$P_{tot}$	200 <sup>1)</sup>	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Ambient Operating temperature Range	$T_A$	-65 to+125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to+150	$^\circ\text{C}$

1) Valid provided that electrodes are kept at ambient temperature

### ELECTRICAL CHARACTERISTICS

	Symbols	Min.	Typ.	Max.	Unis
Reverse breakdown voltage Tested with 100 $\mu\text{A}$	$V_{(BR)R}$	30			V
Forward voltage Pulse Test $t_p < 300\mu\text{s}, \delta < 2\%$ at $I_F=200\text{mA}$ , at $I_F=10\text{mA}$ , at $I_F=50\text{mA}$ , at $I_F=2\text{mA}$ , at $I_F=15\text{mA}$	$V_F$ LL42 LL42 LL43 LL43	0.26		1 0.4 0.65 0.33 0.45	V V V V V
Leakage current Pulse Test $t_p < 300\mu\text{s}, \delta < 2\%$ at $V_R=25\text{V}, T_J=100^\circ\text{C}$	$I_R$ $I_{R1}$			0.5 100	$\mu\text{A}$ $\mu\text{A}$
Junction Capacitance at $V_R=1\text{V}, f=1\text{MHz}$	$C_J$		7		pF
Reverse recovery time Form $I_F=10\text{mA}, I_R=10\text{mA}, I_R=1\text{mA}$	$t_{rr}$			5	ns
Detection efficiency at $R_L=15\text{k}\Omega, C_L=300\text{pF}, f=45\text{MHz}, V_R=2\text{V}$	$\eta$	80			%
Thermal resistance junction to ambient Air	$R_{\theta JA}$			300 <sup>1)</sup>	K/W

1) Valid provided that electrodes are kept at ambient temperature

# RATINGS AND CHARACTERISTIC CURVES LL42/LL43

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

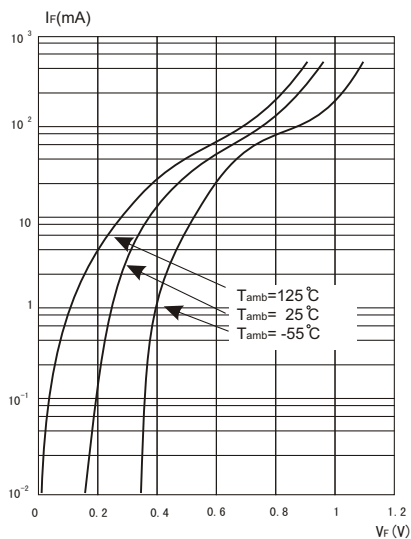


Figure 2. Forward current versus forward voltage (typical values)

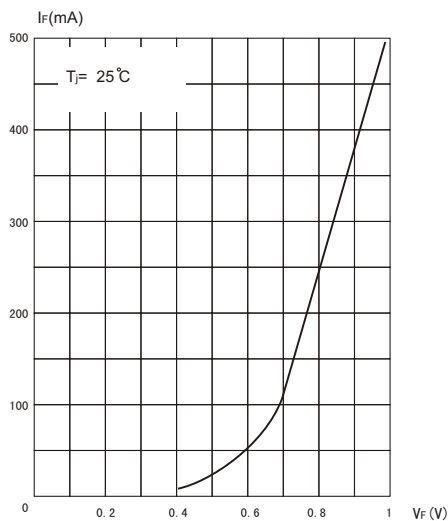
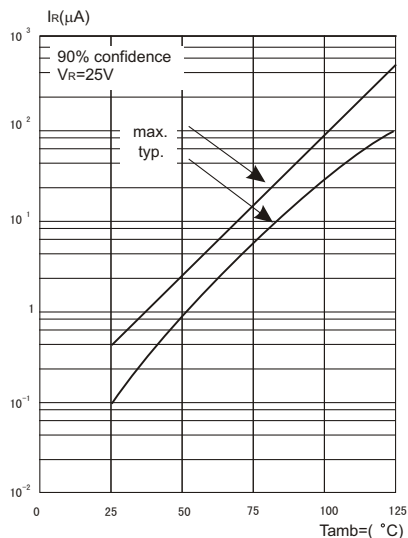


Figure 3. Reverse current versus ambient temperature (typical values)



# RATINGS AND CHARACTERISTIC CURVES LL42/LL43

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

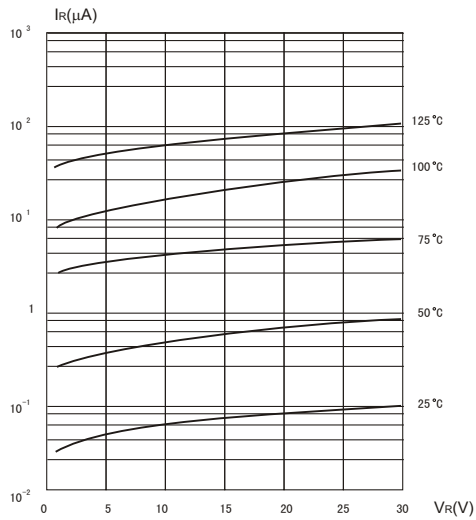


Figure 5.Capacitance  $C_J$  versus reverse applied voltage  $V_R$  (typical values)

