

LL46

Small Signal Schottky Diode

VOLTAGE RANGE: 100 V

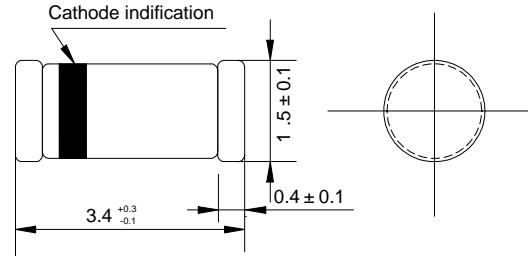
CURRENT: 0.15 A

MINI-MELF



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 is Iso available in the SOD - 123 case with type designation BAT46W and in the DO-35 case wyht type designations BAT46



Dimensions in millimeters

Mechanical Data

- ◇ Case: JEDEC MINI-MELF, glass case
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: Approx. 0.031 grams

ABSOLUTE RATINGS

Parameter	Symbol	Value	UNITS
Repetitive peak reverse voltage	V_R	100.0	V
Forward continuous current @ $t_{amb}=25^\circ\text{C}$	I_F	150 ¹⁾	mA
Repetitive peak forward current @ $t_p < 1\text{s}, \delta \leq 0.5, T_A = 25^\circ\text{C}$	I_{FRM}	350 ¹⁾	mA
Surge forward current @ $t_p < 10\text{ms}, T_A = 25^\circ\text{C}$	I_{FSM}	750 ¹⁾	mA
Power dissipation ¹⁾ @ $T_A = 65^\circ\text{C}$	P_{tot}	150 ¹⁾	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	300 ¹⁾	$^\circ\text{C}/\text{W}$
Junction temperature	T_J	125	$^\circ\text{C}$
Ambient operating temperature range	T_A	-65 --- + 125	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 --- + 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	UNITS
Reverse breakdown voltage	V_R	$I_R = 100 \mu\text{A}(\text{pulsed})$	100.0			V
Leakage current pulse test $t_p < 300 \mu\text{s}, \delta < 2\%$	I_R	$V_R = 1.5\text{V}$			0.5	μA
		$V_R = 1.5\text{V}, T_j = 60^\circ\text{C}$			5.0	
		$V_R = 10\text{V}$			0.8	
		$V_R = 10\text{V}, T_j = 60^\circ\text{C}$			7.5	
		$V_R = 50\text{V}$			2.0	
		$V_R = 50\text{V}, T_j = 60^\circ\text{C}$			15.0	
Forward voltage pulse test $t_p < 300 \mu\text{s}, \delta < 2\%$	V_F	$I_F = 0.1\text{mA}$			0.25	V
		$I_F = 10\text{mA}$			0.45	
		$I_F = 250\text{mA}$			1.0	
Junction capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		10		pF
		$V_R = 1\text{V}, f = 1\text{MHz}$		6		

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

Ratings AND Characteristic Curves

FIG.1 – FORWARD CURRENT VERSUS FORWARD VOLTAGE AT DIFFERENT TEMPERATURES (TYPICAL VALUES)

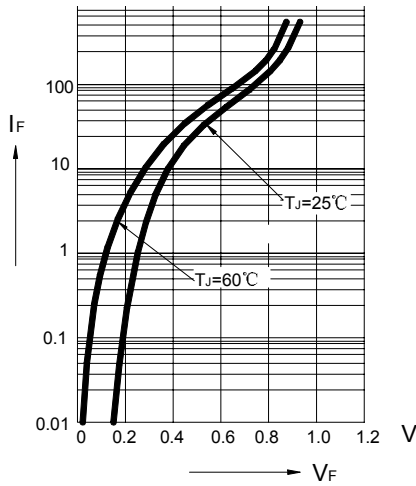


FIG.2 – FORWARD CURRENT VERSUS FORWARD VOLTAGE (TYPICAL VALUES)

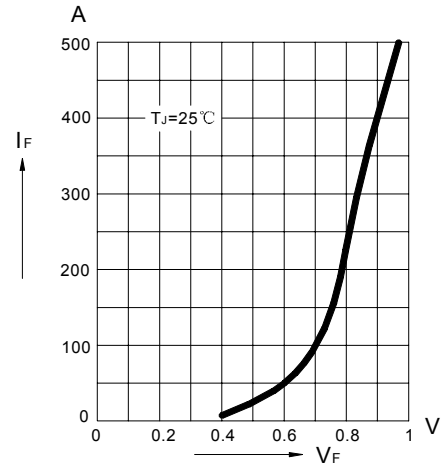
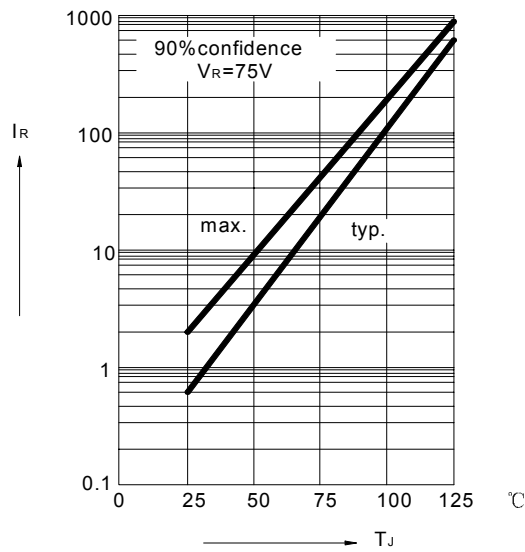


FIG.3 – REVERSE CURRENT VERSUS JUNCTION TEMPERATURE (TYPICAL VALUES)



Ratings AND Characteristic Curves

FIG.4 – REVERSE CURRENT VERSUS CONTINUOUS REVERSE VOLTAGE

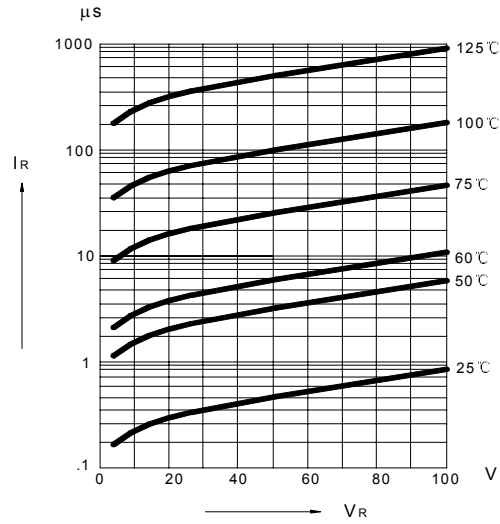


FIG.5 – CAPACITANCE C VERSUS REVERSE APPLIED VOLTAGE V_R (TYPICAL VALUES)

