

BAT47 THRU BAT48

SMALL SIGNAL SCHOTTKY DIODES

勝特力材料 886-3-5753170
胜特力电子(上海) 86-21-54151736
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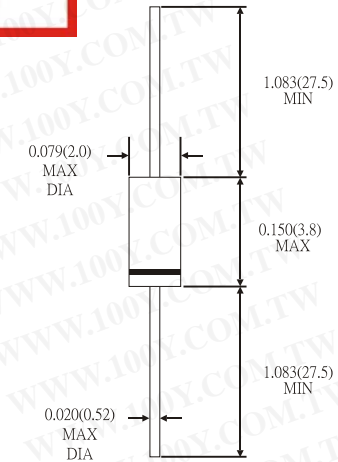
FEATURES

- 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 Mini-MELF case with the type designation LL47, in the Micro-MELF case with type designation MCL47

MECHANICAL DATA

- Case : DO-35 glass case
- Polarity : Color band denotes cathodes end
- Weight : Approx. 0.13 gram

DO-35



Dimensions in inches and (millimeters)

ABSOLUTE RATINGS(LIMITING VALUES)

	Symbols	Value		Units
		BAT47	BAT48	
Repetitive Peak Reverse Voltage	V_{RRM}	20	40	V
Forward Continuous Current at $T_A=25^{\circ}C$	I_F	350 ¹⁾		mA
Repetitive Peak Forward Current at $t_p < 1s, \delta < 0.5, T_A=25^{\circ}C$	I_{FRM}	1 ¹⁾		A
Surge forward current at $t_p < 10mS, T_A=25^{\circ}C$	I_{FSM}	7.5 ¹⁾		A
Power Dissipation ¹⁾ at $T_A=65^{\circ}C$	P_{tot}	330 ¹⁾		mW
Junction temperature	T_J	125		$^{\circ}C$
Ambient Operating temperature Range	T_A	-65 to +125		$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 to +150		$^{\circ}C$

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

ELECTRICAL CHARACTERISTICS

	Symbols	BAT47	BAT48	Units
Reverse breakdown voltage Tested with 10 μ A Pulses	$V_{(BR)R}$	20	40	V
Maximum Forward voltage Pulse Test $t_p < 300\mu s, \delta < 2\%$ at $I_F=0.1mA$, at $I_F=10mA$, at $I_F=300mA$	V_F	0.25	0.25	V
	V_F	0.40	0.40	V
	V_F	1.0	0.90	V
Maximum Leakage current pulse test $t_p < 300\mu s, \delta < 2\%$ at $V_R=10V$ at $V_R=10V, T_J=60^{\circ}C$ at $V_R=20V$ at $V_R=20V, T_J=60^{\circ}C$ at $V_R=40V$ at $V_R=40V, T_J=60^{\circ}C$	I_R	4	2	μA
	I_R	20	15	μA
	I_R	10	5	μA
	I_R	30	25	μA
	I_R		25	μA
	I_R		50	μA
Typical Capacitance at $V_R=1V, f=1MHz$	C_J	12	12	pF
Maximum Thermal resistance junction to ambient Air	$R_{\theta JA}$	300 ¹⁾	300 ¹⁾	K/W

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature(DO-35)

RATINGS AND CHARACTERISTIC CURVES BAT47 THRU BAT48

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

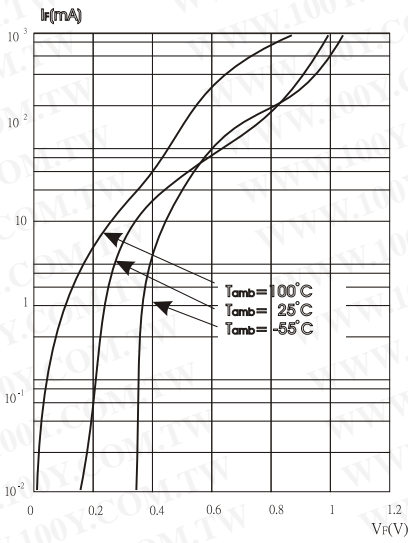


Figure 2. Forward current versus forward voltage (typical values)

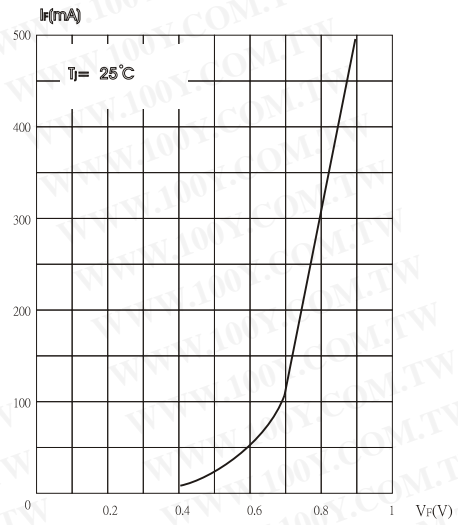


Figure 3. Reverse current versus ambient temperatures

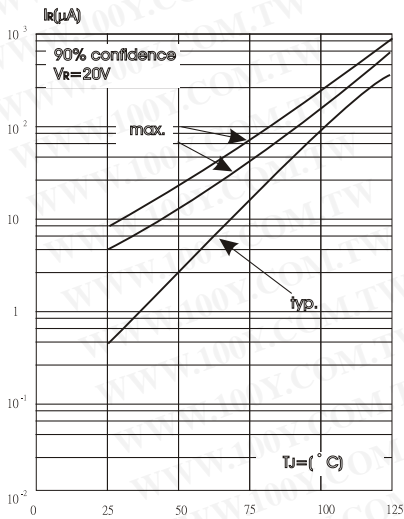


Figure 4. Reverse current versus continuous Reverse voltage (typical values)

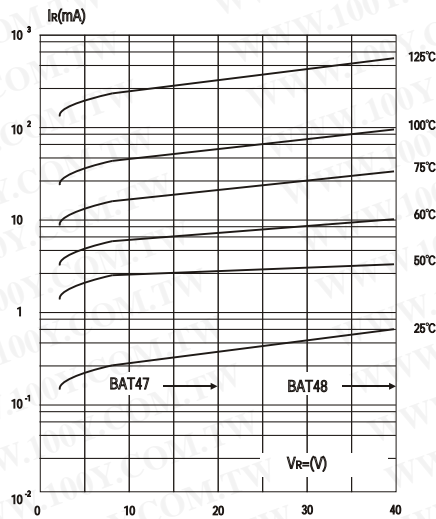
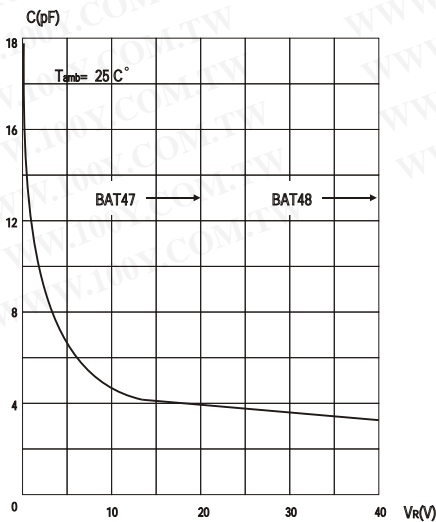


Figure 5. Capacitance C versus reverse applied voltage V_r (typical values)



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