

# BAT48

## FEATURES :

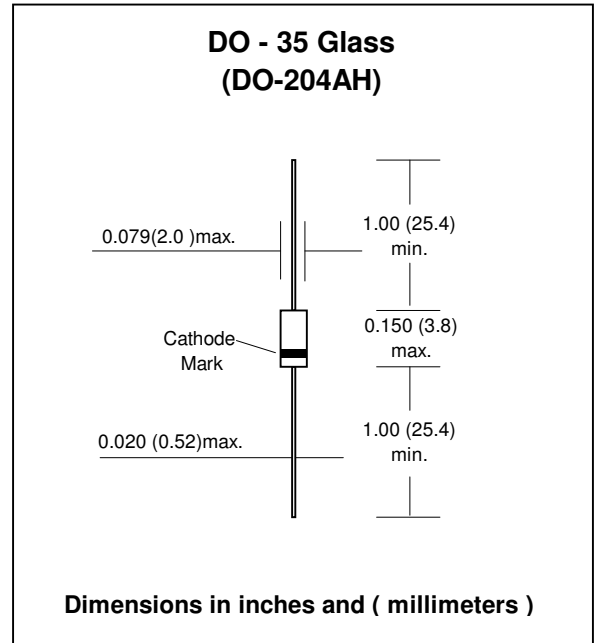
- For general purpose applications
- These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- This diode is also available in the Mini-MELF case with type designations LL48
- Pb / RoHS Free

## MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

## SCHOTTKY BARRIER DIODE



## Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Continuous Forward Current	$I_F$	350 <sup>(1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1s$ ,	$I_{FRM}$	1 <sup>(1)</sup>	A
Forward Surge Current at $t_p < 10ms$ ,	$I_{FSM}$	7.5 <sup>(1)</sup>	A
Power Dissipation , $T_a = 65^\circ C$	$P_D$	330 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300 <sup>(1)</sup>	$^\circ C/W$
Junction Temperature	$T_J$	125	$^\circ C$
Ambient Operating Temperature Range	$T_a$	-65 to + 125	$^\circ C$
Storage temperature range	$T_s$	-65 to + 150	$^\circ C$

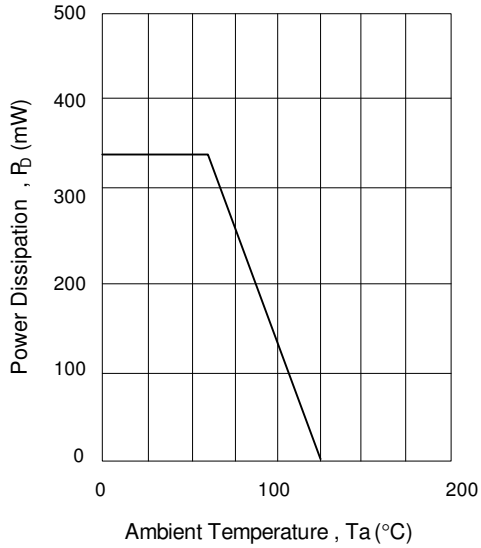
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

## Electrical Characteristics ( $T_J = 25^\circ C$ unless otherwise noted)

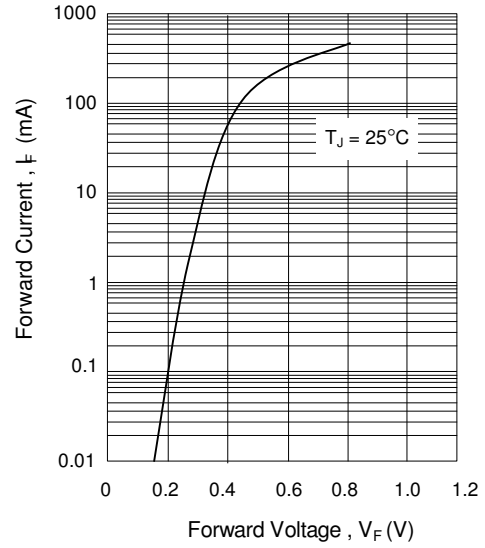
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu A$ (pulsed)	40	-	-	V
Reverse Current	$I_R$	$V_R = 10V$	-	-	2	$\mu A$
Pulse Test $t_p < 300\mu s$ , $\delta < 2\%$		$V_R = 20V$	-	-	5	
		$V_R = 40V$	-	-	25	
Forward Voltage	$V_F$	$I_F = 1mA$	-	-	0.30	V
Pulse Test $t_p < 300\mu s$ , $\delta < 2\%$		$I_F = 10mA$	-	-	0.40	
		$I_F = 30mA$	-	-	0.50	
		$I_F = 100mA$	-	-	0.75	
		$I_F = 500mA$	-	-	0.90	
Diode Capacitance	$C_d$	$V_R = 1V$ , $f = 1MHz$	-	12	-	pF

### RATING AND CHARACTERISTIC CURVES ( BAT48 )

**Admissible Power Dissipation vs. Ambient Temperature**



**Typical Forward Characteristics**



**Typical Reverse Characteristics**

