

# BAT42 - BAT43

## FEATURES :

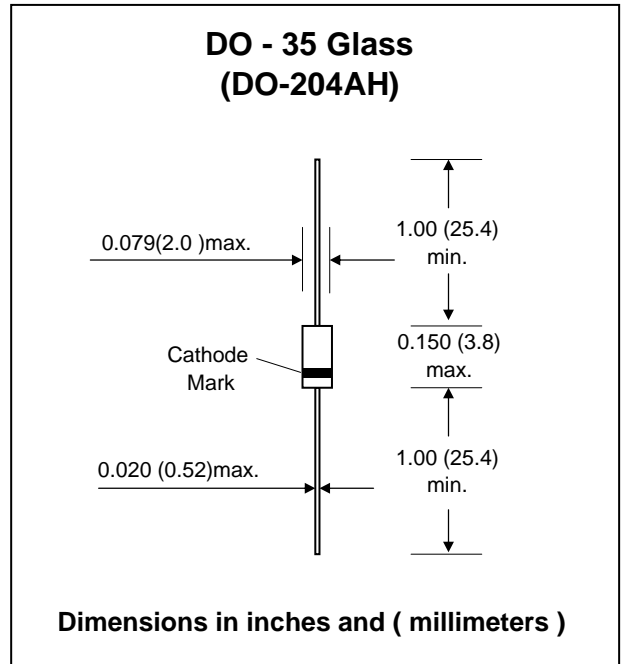
- For general purpose applications.
- These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electro-static discharges
- These diodes are also available in the MiniMELF case with the type designations LL42 to LL43.
- **Pb / RoHS Free**

## MECHANICAL DATA :

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

# SCHOTTKY BARRIER DIODES



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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Continuous Forward Current	$I_F$	200 <sup>(1)</sup>	mA
Repetitive Peak Forward Current at $t_p < 1s$ ,	$I_{FRM}$	500 <sup>(1)</sup>	mA
Forward Surge Current at $t_p < 10ms$ ,	$I_{FSM}$	4 <sup>(1)</sup>	A
Power Dissipation , $T_a = 65\text{ }^\circ\text{C}$	$P_D$	200 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300 <sup>(1)</sup>	$^\circ\text{C/W}$
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Ambient Operating Temperature Range	$T_a$	-65 to + 125	$^\circ\text{C}$
Storage temperature range	$T_s$	-65 to + 150	$^\circ\text{C}$

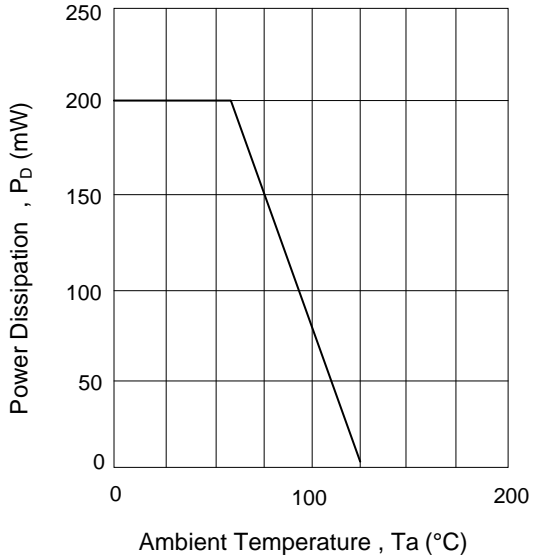
**Note:** (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature .

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

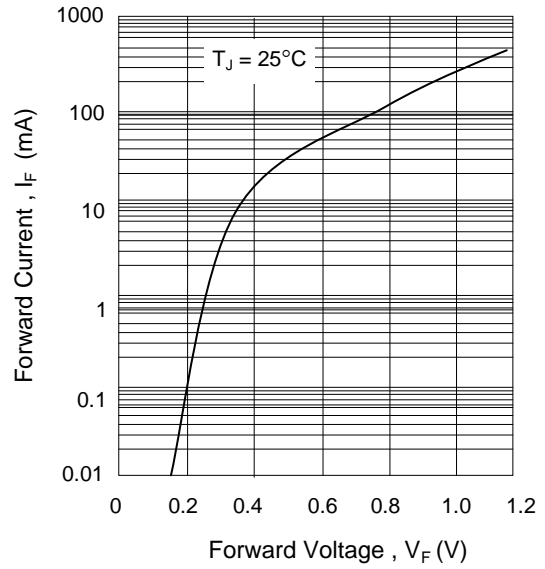
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\text{ }\mu\text{A}$ (pulsed)	30	-	-	V	
Reverse Current	$I_R$	$V_R = 25\text{ V}$	-	-	1.0	$\mu\text{A}$	
Pulse Test $t_p < 300\mu\text{s}$ , $\delta < 2\%$		$V_R = 25\text{ V}$ , $T_J = 100^\circ\text{C}$	-	-	100		
Forward Voltage	$V_F$	$I_F = 200\text{ mA}$	-	-	1.00	V	
Pulse Test $t_p < 300\mu\text{s}$ , $\delta < 2\%$		BAT42 , 43	$I_F = 10\text{ mA}$	-	-		0.40
		BAT42	$I_F = 50\text{ mA}$	-	-		0.65
		BAT43	$I_F = 2\text{ mA}$	0.26	-		0.33
		BAT43	$I_F = 15\text{ mA}$	-	-		0.45
Diode Capacitance	$C_d$	$V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	-	7	-	pF	
Reverse Recovery Time	$T_{rr}$	$I_F = 10\text{ mA}$ , $I_R = 10\text{ mA}$ , $I_{rr} = 1\text{ mA}$ , $R_L = 100\Omega$	-	-	5	ns	

**RATING AND CHARACTERISTIC CURVES ( BAT42 AND BAT43 )**

**Admissible Power Dissipation vs. Ambient Temperature**



**Typical Forward Characteristics**



**Typical Reverse Characteristics**

