

# BAT42 - BAT43

## FEATURES :

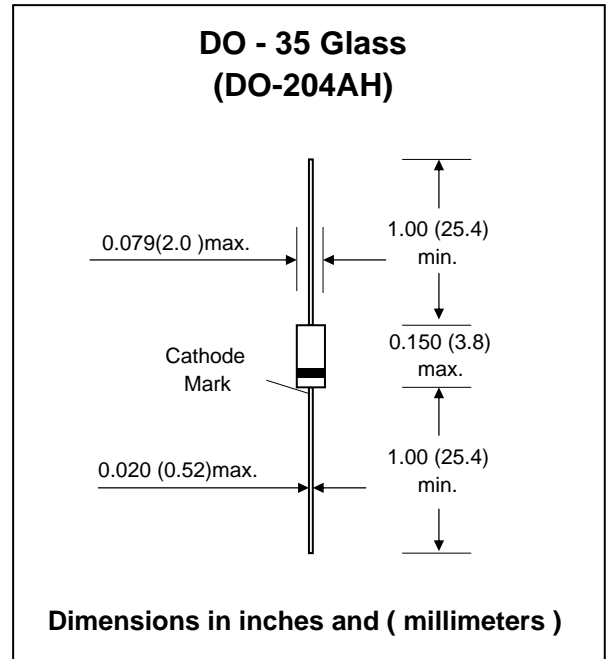
- For general purpose applications.
- These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electro-static discharges
- These diodes are also available in the MiniMELF case with the type designations 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 $t_p < 10 ms$ ,	$I_{FSM}$	4 <sup>(1)</sup>	A
Power Dissipation , $T_a = 65 ^\circ C$	$P_D$	200 <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	$^\circ C$

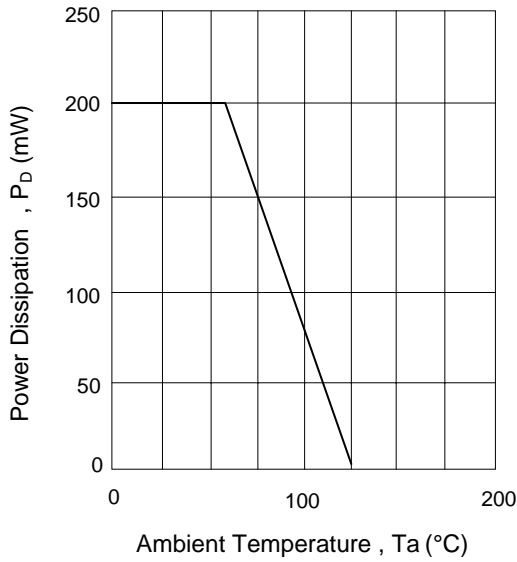
**Note:** (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

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

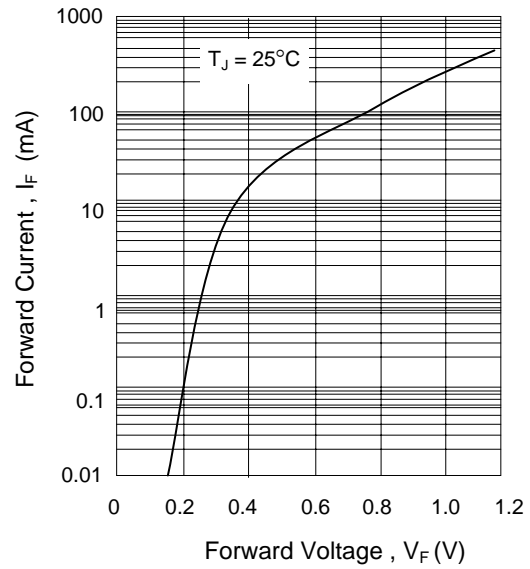
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu A$ (pulsed)	30	-	-	V
Reverse Current	$I_R$	$V_R = 25 V$	-	-	0.5	$\mu A$
Pulse Test $t_p < 300 \mu s$ , $\delta < 2\%$		$V_R = 25 V$ , $T_J = 100^\circ C$	-	-	100	
Forward Voltage	$V_F$	$I_F = 200mA$	-	-	1.00	V
Pulse Test $t_p < 300 \mu s$ , $\delta < 2\%$	BAT42 , 43 BAT42 BAT43 BAT43	$I_F = 10mA$	-	-	0.40	
		$I_F = 50mA$	-	-	0.65	
		$I_F = 2mA$	0.26	-	0.33	
		$I_F = 15mA$	-	-	0.45	
Diode Capacitance	$C_d$	$V_R = 1V$ , $f = 1MHz$	-	7	-	pF
Reverse Recovery Time	$T_{rr}$	$I_F = 10mA$ , $I_R = 10mA$ , $I_{rr} = 1mA$ , $R_L = 100\Omega$	-	-	5	ns

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

**Admissible Power Dissipation vs. Ambient Temperature**



**Typical Forward Characteristics**



**Typical Reverse Characteristics**

