

BAT42 - BAT43

FEATURES :

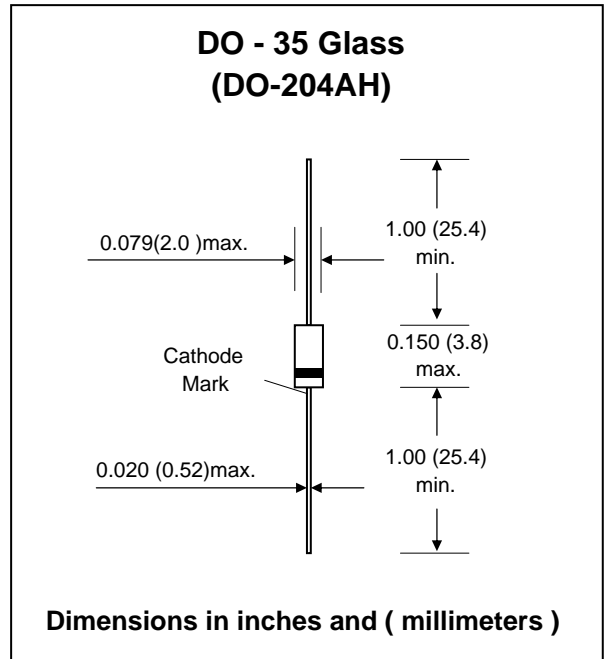
- For general purpose applications.
- These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electro-static discharges
- These diodes are also available in the MiniMELF case with the type designations 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 ⁽¹⁾	mA
Repetitive Peak Forward Current at $t_p < 1s$,	I_{FRM}	500 ⁽¹⁾	mA
Forward Surge Current at $t_p < 10 ms$,	I_{FSM}	4 ⁽¹⁾	A
Power Dissipation , $T_a = 65 ^\circ C$	P_D	200 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300 ⁽¹⁾	$^\circ C/W$
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	$^\circ C$

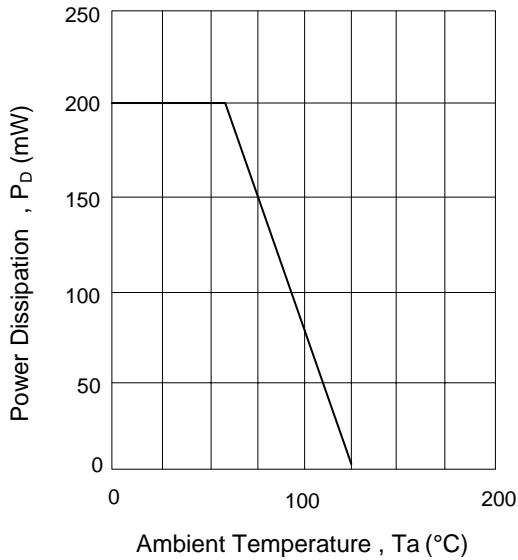
Note: (1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.

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

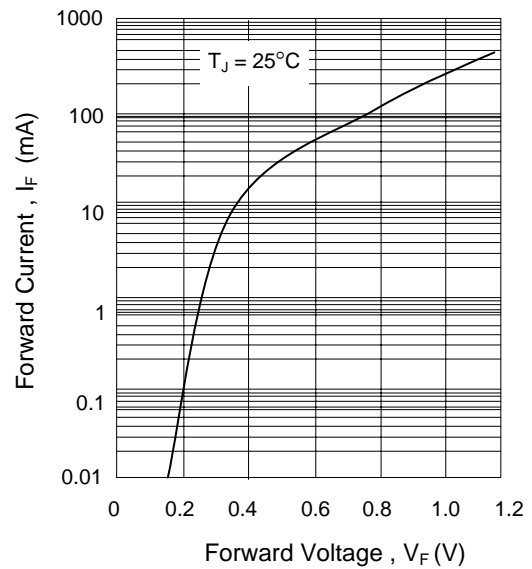
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu A$ (pulsed)	30	-	-	V
Reverse Current	I_R	$V_R = 25 V$	-	-	0.5	μA
Pulse Test $t_p < 300 \mu s$, $\delta < 2\%$		$V_R = 25 V$, $T_J = 100^\circ C$	-	-	100	
Forward Voltage	V_F	$I_F = 200mA$	-	-	1.00	V
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

