

## 200mW , Hermetically Sealed Glass Fast Switching Schottky Barrier Diodes

### FEATURES

- Hermetically sealed glass
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

### APPLICATIONS

- Adapters
- For switching power supply
- Low stored charge
- Inverter

### MECHANICAL DATA

- Case: DO-35
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$P_D$	200	mW
$V_{RRM}$	30	V
$I_{FSM}$	4	A
$V_F$ at $I_F=200mA$	1	V
$T_J$ Max.	125	°C
Package	DO-35	
Configuration	Single die	



### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	BAT42	BAT43	UNIT
Power dissipation	$P_D$	200		mW
Repetitive peak reverse voltage	$V_{RRM}$	30		V
Maximum DC blocking voltage	$V_R$	30		V
Average forward rectified current	$I_{F(AV)}$	200		mA
Peak forward surge current ( $t < 10ms$ )	$I_{FSM}$	4		A
Junction temperature range	$T_J$	-65 to +125		°C
Storage temperature range	$T_{STG}$	-65 to +125		°C

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Reverse voltage <sup>(2)</sup>	$I_R = 100\ \mu\text{A}$ , $T_J = 25^\circ\text{C}$	$V_R$	30	-	V
Reverse current <sup>(2)</sup>	$V_R = 25\ \text{V}$ , $T_J = 25^\circ\text{C}$	$I_R$	-	500	nA
Forward voltage <sup>(1)</sup>	$I_F = 200\text{mA}$ , $T_J = 25^\circ\text{C}$	$V_F$	-	1.00	V
	$I_F = 10\text{mA}$ , $T_J = 25^\circ\text{C}$		-	0.40	
	$I_F = 50\text{mA}$ , $T_J = 25^\circ\text{C}$		-	0.65	
	$I_F = 200\text{mA}$ , $T_J = 25^\circ\text{C}$		-	1.00	
	$I_F = 2\text{mA}$ , $T_J = 25^\circ\text{C}$		0.26	0.33	
	$I_F = 15\text{mA}$ , $T_J = 25^\circ\text{C}$		-	0.45	
Junction capacitance	1 MHz, $V_R = 1\text{V}$	$C_J$	7 (Typ.)		pF
Reverse recovery time	$I_F = I_R = 10\text{mA}$ $R_L = 100\Omega$ , $I_{RR} = 1\text{mA}$	$t_{rr}$	5 (Typ.)		ns

**Notes:**

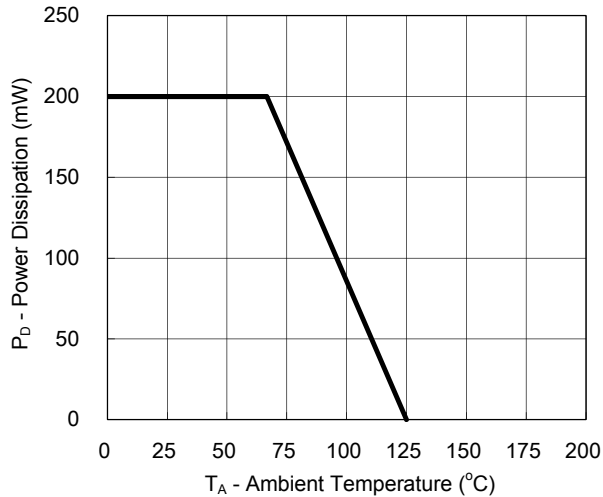
1. Pulse test with  $PW = 0.3\ \text{ms}$
2. Pulse test with  $PW = 30\ \text{ms}$

<b>ORDERING INFORMATION</b>		
PART NO.	PACKAGE	PACKING
BAT42 R0	DO-35	10K / 14" Reel
BAT42 R0G	DO-35	10K / 14" Reel
BAT42 A0	DO-35	5K / Box (Ammo)
BAT42 A0G	DO-35	5K / Box (Ammo)
BAT43 R0	DO-35	10K / 14" Reel
BAT43 R0G	DO-35	10K / 14" Reel
BAT43 A0	DO-35	5K / Box (Ammo)
BAT43 A0G	DO-35	5K / Box (Ammo)

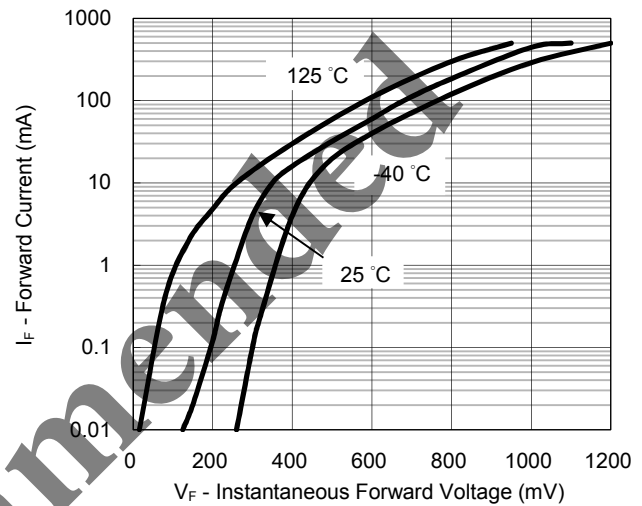
## CHARACTERISTICS CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

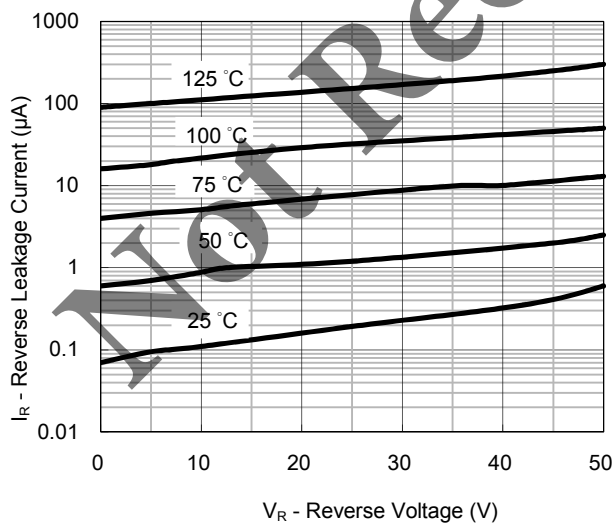
**Fig. 1 Admissible Power Dissipation VS. Ambient Temperature**



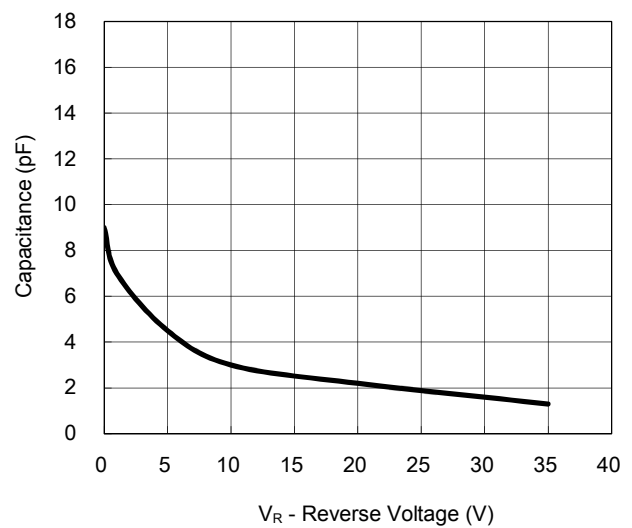
**Fig. 2 Typical Reverse Characteristics**



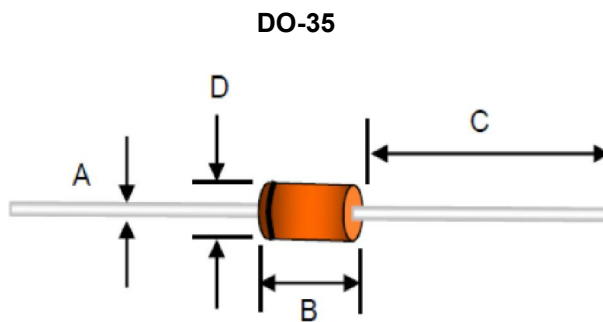
**Fig. 3 Typical Reverse Characteristics**



**Fig. 4 Typical Capacitance VS. Reverse Applied Voltage**

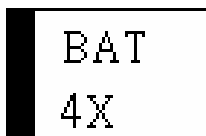


## PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.34	0.60	0.013	0.024
B	2.90	5.08	0.114	0.200
C	25.40	38.10	1.000	1.500
D	1.30	2.28	0.051	0.090

## MARKING DIAGRAM



"x" is device code from "2" - "3".

Not Recommended

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