

Small Signal Product

Features

- ◇ Low forward voltage drop
- ◇ Surface mount package ideally suited for automatic insertion
- ◇ Moisture sensitivity level 1
- ◇ High temperature soldering guaranteed : 260°C/10 seconds
- ◇ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

SOD-123



Mechanical Data

- ◇ Case : SOD-123 plastic package
- ◇ Terminal : Matte tin plated, lead free, solderable per MIL-STD-202, method 208 guaranteed
- ◇ Polarity : Color band
- ◇ High temperature soldering guaranteed : 260°C/10 second
- ◇ Marking : BAT42W - S7
BAT43W - S8
- ◇ Weight : 0.01gram (approximately)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacity load, derate current by 20%.

Maximum Ratings

Parameter		Symbol	BAT42W	BAT43W	Units
Repetitive Peak Reverse Voltage		V_{RRM}	30		V
Working Peak Reverse Voltage		V_{RWM}			V
DC Blocking Voltage		V_R			
RMS Reverse Voltage		$V_{R(RMS)}$	21		V
Forward Continue Current (Note 1)		I_{FM}	200		mA
Repetitive Peak Forward Current @ $t < 1.0$ S		I_{FM}	500		mA
Non-Repetitive Peak Forward Surge Current @ $t < 1.0$ mS		I_{FSM}	4.0		A
Repetitive Peak Forward Surge Current		I_{FRM}	500		mA
Power Dissipation (Note 1)		P_d	200		mW
Maximum Forward Voltage $I_F=200mA$ $I_F=2.0mA$ $I_F=10mA$ $I_F=15mA$ $I_F=50mA$		V_F	1.0		V
			--	0.33	
			0.4	--	
			--	0.45	
			0.65	--	
Peak Reverse Current	@ $V_R=25V$ & $T_J=25^\circ C$	I_R	500		nA
Junction Capacitance	$V_R=1, f=1.0MHz$	C_j	10		pF
Reverse Recovery Time (Note 2)		T_{rr}	5		nS
Thermal Resistance Junction to Ambient Air (Note 1)		$R_{\theta JA}$	625		°C
Operating Temperature Range		T_J	-55 to +125		°C
Storage Temperature Range		T_{STG}	-55 to +125		°C

Notes : 1. Valid provided that terminals are kept at ambient temperature.

2. Reverse recovery test conditions : $I_F=10mA$, $I_R=10mA$, $R_L=100\Omega$, $I_{RR}=1mA$

Version : C14

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RATINGS AND CHARACTERISTIC CURVES (BAT42W / BAT43W)

Fig.1 Typical Forward Characteristics

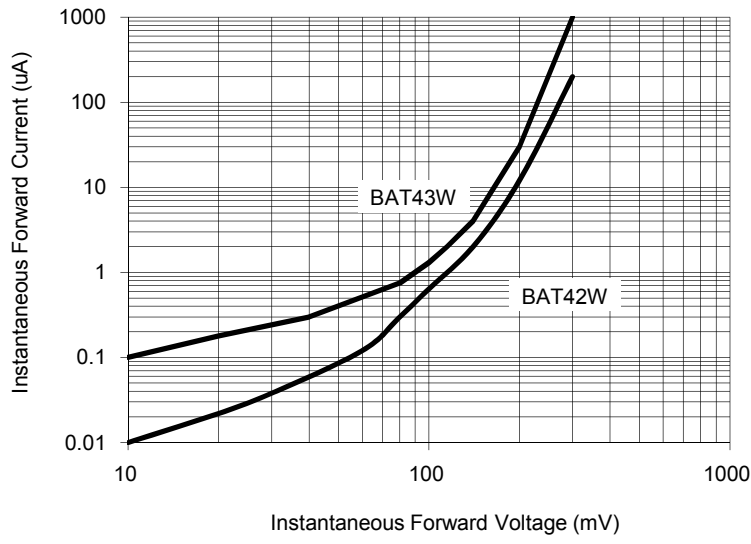


Fig. 2 Typical Forward Characteristics

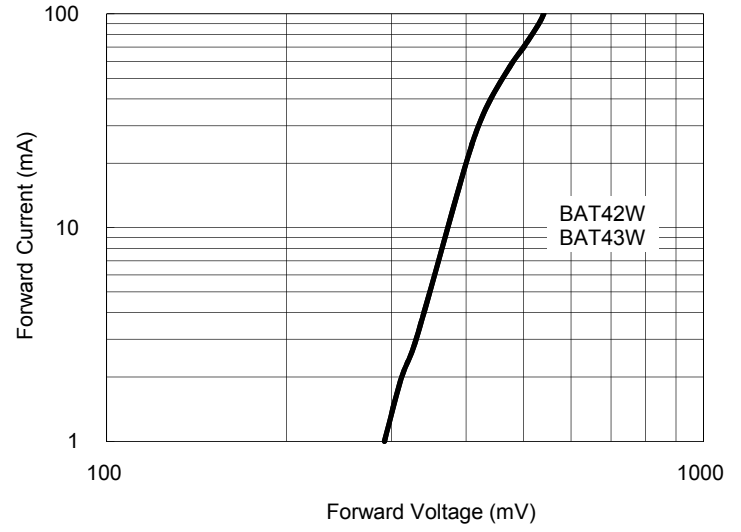


Fig. 3 Typical Reverse Characteristics

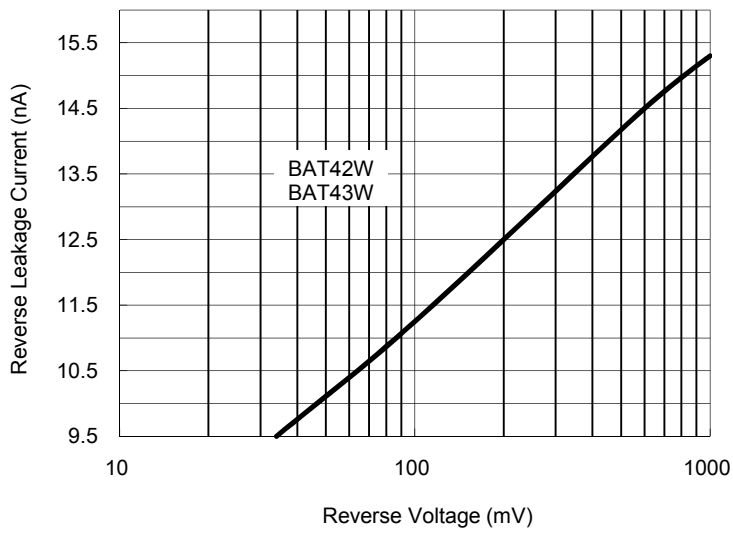
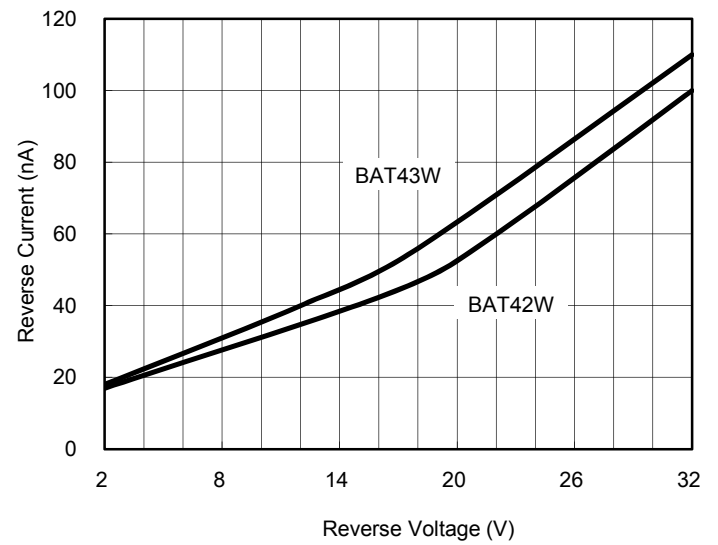


Fig. 4 Typical Reverse Characteristics



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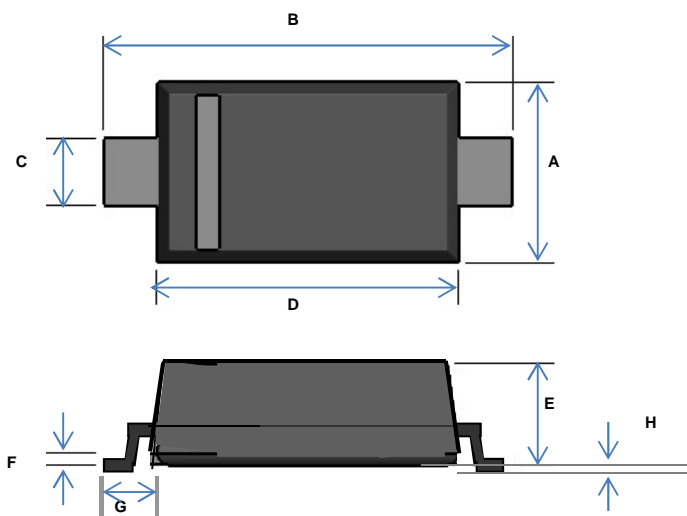
Ordering information (Detail, example)

Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code
BAT4xW (Note 1)	SOD-123	3K / 7" Reel	RP	RPG	(Note 2)
BAT43W	SOD-123	3K / 7" Reel	RP	RPG	

Note 1 : "x" is Device Code from "2" thru "3".

Note 2 : Manufacture special control, if empty means no special control requirement.

Dimensions



DIM.	Unit (inch)		Unit (mm)	
	Min	Max	Min	Max
A	0.055	0.071	1.400	1.800
B	0.140	0.152	3.550	3.850
C	0.018	0.026	0.450	0.650
D	0.100	0.112	2.550	2.850
E	0.041	0.049	1.050	1.250
F	0.002	0.006	0.050	0.150
G	0.02 REF		0.50 REF	
H	0.000	0.004	0.000	0.100



Cathode

Anode