



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Small Signal Product

Surface Mount, Switching Schottky Barrier Diode

FEATURES

- Low forward voltage drop
- Surface mount device type
- Moisture sensitivity level (MSL): 1
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


SOD-123


MECHANICAL DATA

- Case: Bend lead SOD-123 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guarantee
- High temperature soldering guaranteed : 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 0.01 g (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	BAT42W	BAT43W	UNIT	
Repetitive Peak Reverse Voltage	V_{RRM}	30		V	
Working Peak Reverse Voltage	V_{RWM}				
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 @ $t < 1.0\text{s}$	I_{FM}	500		mA	
Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{ms}$	I_{FSM}	4		A	
Repetitive Peak Forward Surge Current	I_{FRM}	500		mA	
Power Dissipation (Note 1)	P_d	200		mW	
Maximum Forward Voltage	V_F	$I_F=200\text{mA}$	1.0	V	
		$I_F=2\text{mA}$	-		0.33
		$I_F=10\text{mA}$	0.40		-
		$I_F=15\text{mA}$	-		0.45
		$I_F=50\text{mA}$	0.65		-
Peak Reverse Current @ $V_R=25\text{V}$ & $T_J=25^\circ\text{C}$	I_R	500		nA	
Junction Capacitance $V_R=1\text{V}$, $f=1.0\text{MHz}$	C_J	10		pF	
Reverse Recovery Time (Note 2)	t_{rr}	5		ns	
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	625		$^\circ\text{C}$	
Operating Temperature Range	T_J	-55 to +125		$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +125		$^\circ\text{C}$	

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

 Notes: 2. Test conditions : $I_F=10\text{mA}$, $I_R=10\text{mA}$, $R_L=100\Omega$, $I_{RR}=1\text{mA}$

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RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

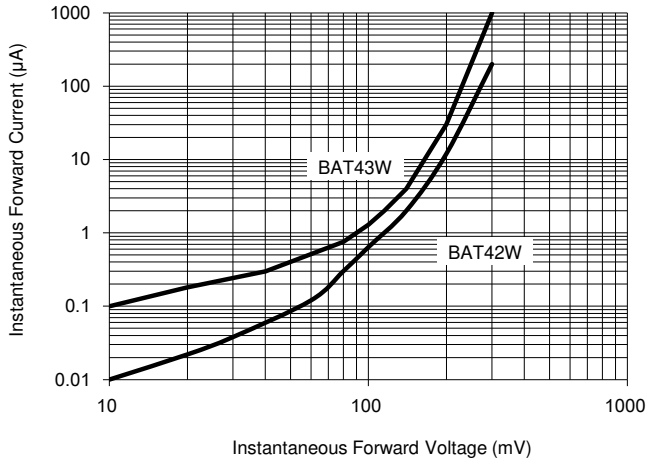


Fig. 2 Typical Forward Characteristics

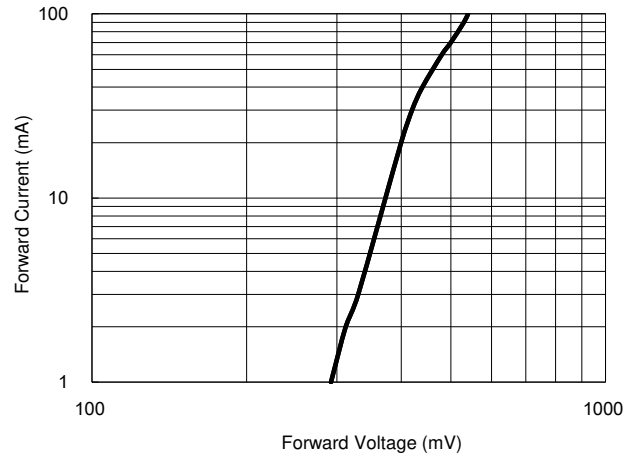


Fig. 3 Typical Reverse Characteristics

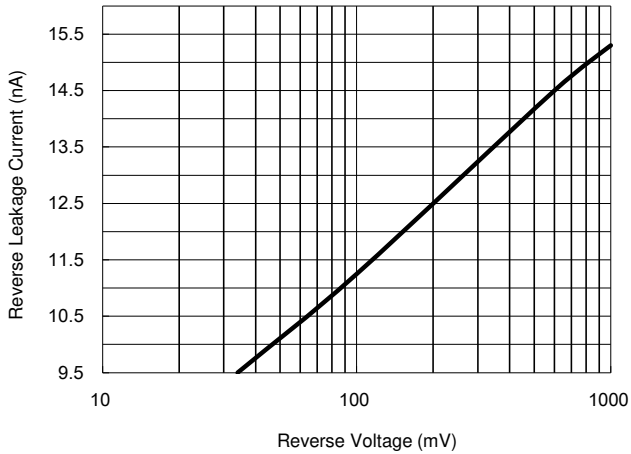
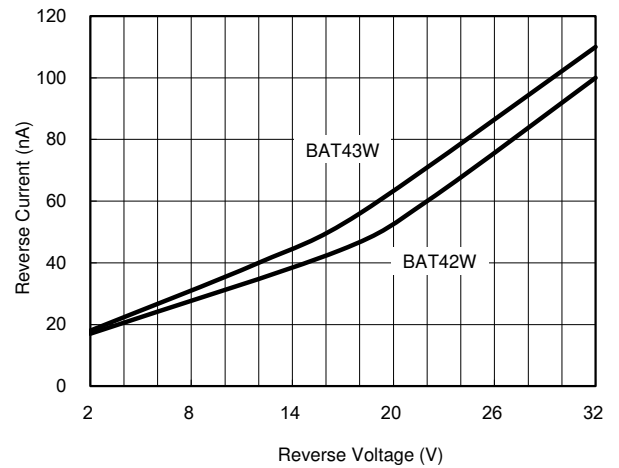


Fig. 4 Typical Reverse Characteristics



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ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BAT4xW (Note 1&2)	RH	G	SOD-123	3K / 7" Reel

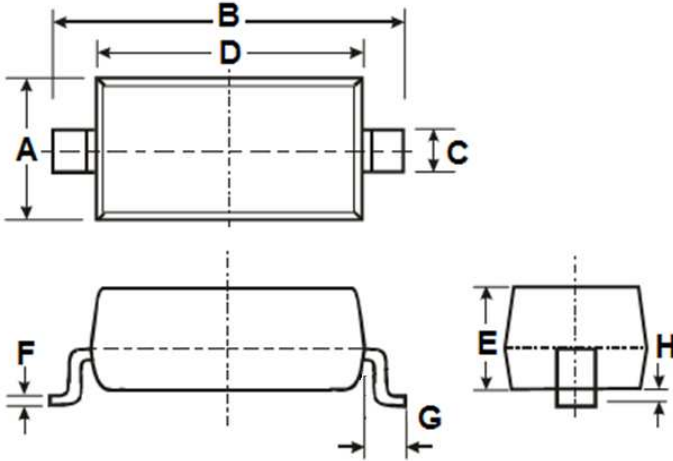
Note 1: "x" is Device Code from "2" - "3".

Note 2: Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAT42W RHG	BAT42W	RH	G	Green compound

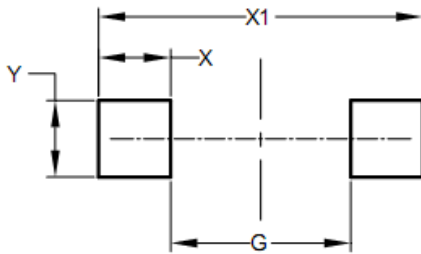
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PACKAGE OUTLINE DIMENSIONS
SOD-123



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

SUGGEST PAD LAYOUT



DIM.	Unit (mm)		Unit (inch)	
	Min	Min	Min	Min
G	2.25		0.089	
X	0.90		0.035	
X1	4.05		0.159	
Y	0.95		0.037	

MARKING

Part No.	Marking
BAT42W	S7
BAT43W	S8

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