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

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

- Case: Bend lead SOD-123 small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- 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°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 < 1.0s	I_{FM}	500		mA
Non-Repetitive Peak Forward Surge Current	@ t < 1.0 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	I_F=200mA	V_F	1.0		V
	I_F=2mA		-	0.33	
	I_F=10mA		0.40	-	
	I_F=15mA		-	0.45	
	I_F=50mA		0.65	-	
Peak Reverse Current	@ V_R=25V & T_J=25°C	I_R	500		nA
Junction Capacitance	V_R=1V, f=1.0MHz	C_J	10		pF
Reverse Recovery Time	(Note 2)	t_{rr}	5		ns
Thermal Resistance Junction to Ambient	(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.

Notes: 2. Test conditions : I_F=10mA, I_R=10mA, R_L=100Ω, I_{RR}=1mA

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

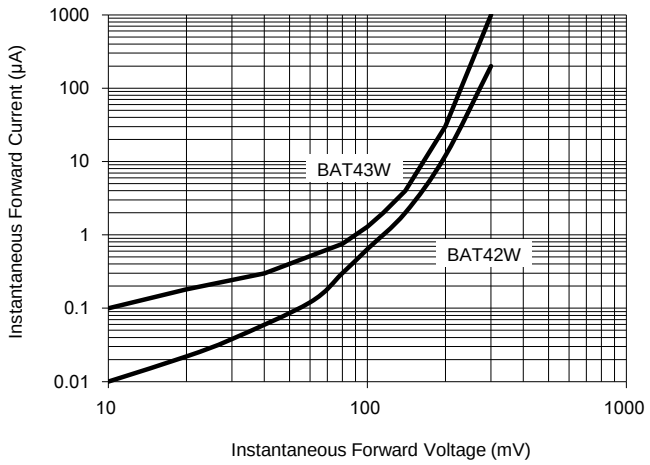


Fig. 2 Typical Forward Characteristics

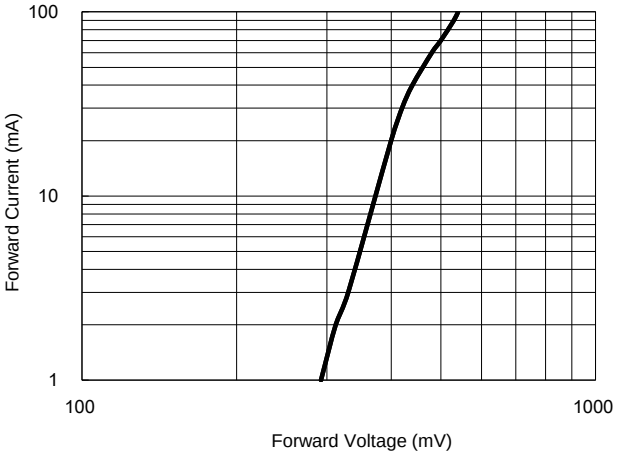


Fig. 3 Typical Reverse Characteristics

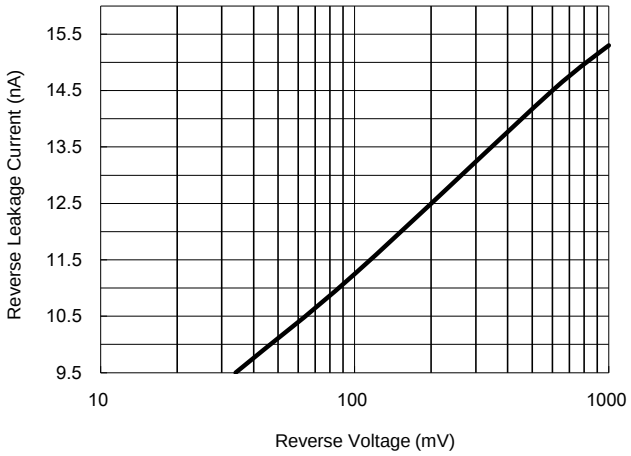
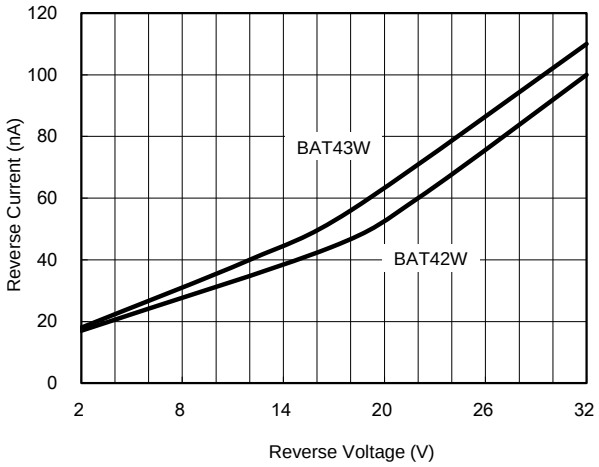


Fig. 4 Typical Reverse Characteristics



Small Signal Product

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

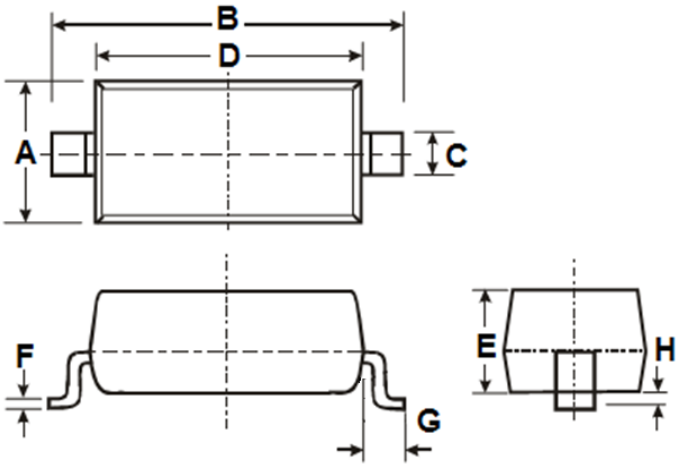
Note 1: "x" is Device Code from "2" - "3".

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

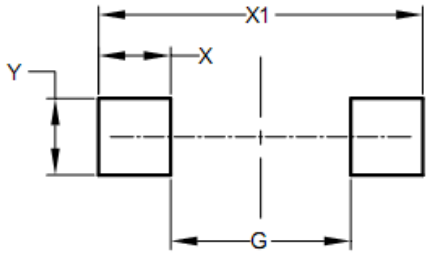
PACKAGE OUTLINE DIMENSIONS

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
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

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taiwan Semiconductor:

BAT43W BAT42W BAT43WS BAT43WS RRG BAT42W RHG BAT43W RHG BAT42WS RRG BAT42WS RR BAT42W RH BAT43WS RR