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

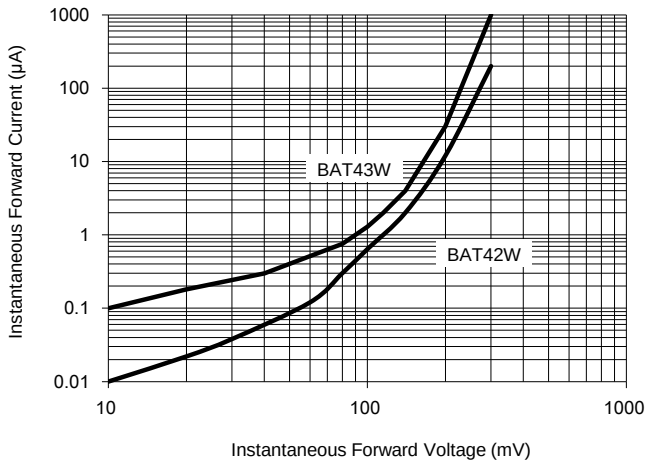


Fig. 2 Typical Forward Characteristics

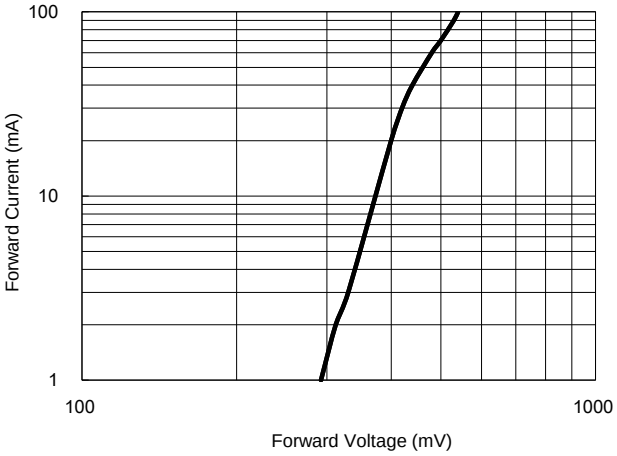


Fig. 3 Typical Reverse Characteristics

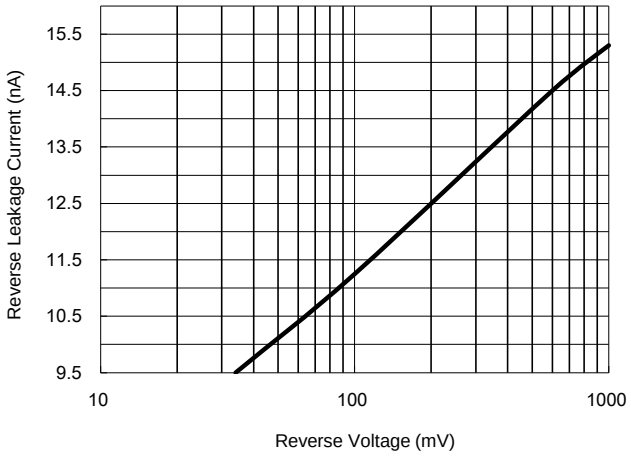
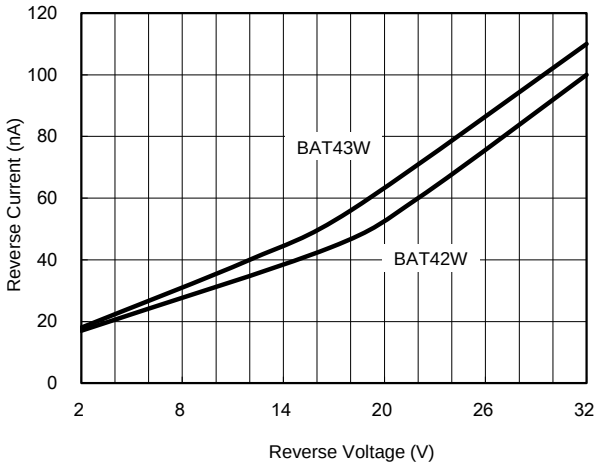


Fig. 4 Typical Reverse Characteristics



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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

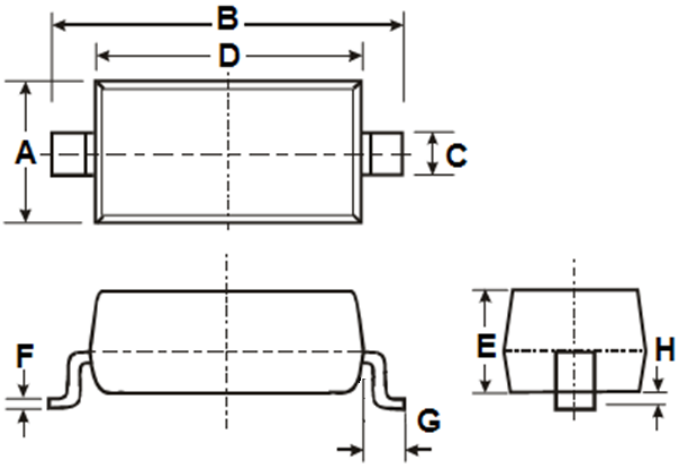
Note 1: "x" is Device Code from "2" - "3".

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

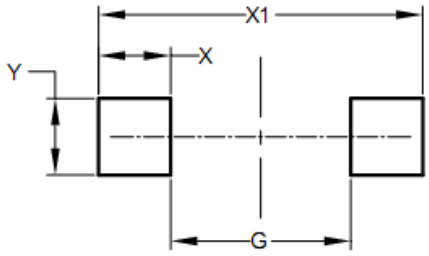
PACKAGE OUTLINE DIMENSIONS

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

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