



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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BAT42W/BAT43W SURFACE MOUNT SCHOTTKY BARRIER DIODE



Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material —UL Recognition Flammability Classification 94V-0
- Green Products in Compliance with the ROHS Directive
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams(approx.)

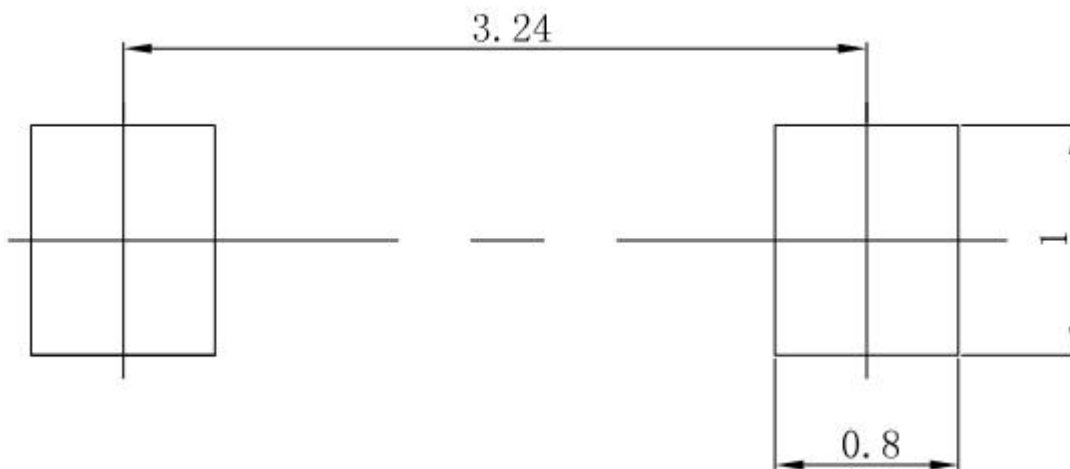
Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

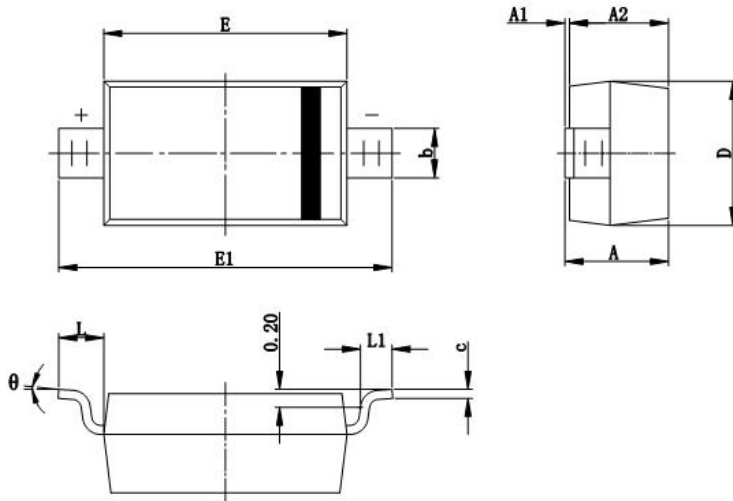
Characteristic	Symbol	BAT42W/BAT43W	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current	I_{FM}	0.2	A
Repetitive Peak Forward Current @ $t < 1.0s$	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	4.0	A
Power Dissipation	P_d	500	mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	200	$^{\circ}\text{C}/\text{W}$
Junction Temperature Range	T_J	125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Units	Test Condition
Reverse Breakdown Voltage	V _(BR)	30	-	-	V	I _R =10μA
Forward Voltage	All Types	V _F	-	-	1.0	V I _F =200mA
	BAT42W	V _F	-	-	0.4	V I _F =10mA
	BAT42W	V _F	-	-	0.65	V I _F =50mA
	BAT43W	V _F	0.26	-	0.33	V I _F =2mA
	BAT43W	V _F	-	-	0.45	V I _F =15mA
Reverse Leakage Current	I _R	-	-	0.5	μA	V _R =25V
Junction Capacitance	C _j	-	-	10	pF	V _R =1.0V, f=1.0MHz

SOD-123 Suggested Pad Layout


- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: ±0.05mm.
 3. The pad layout is for reference purposes only.

Mechanical Dimensions SOD-123


SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Ordering Information

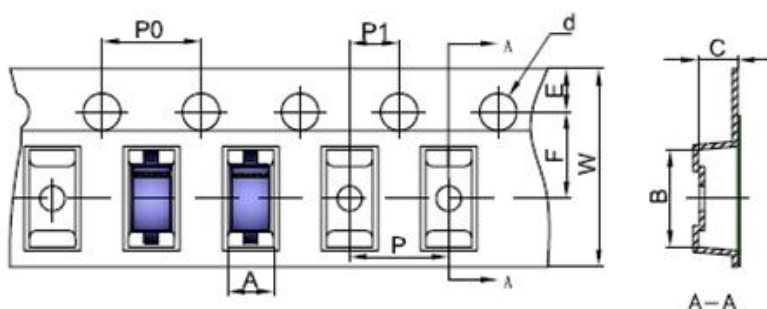
Device	Package	Shipping
BAT42(43)W	SOD-123 (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


BAT42W

BAT43W

Carrier Tape Specification SOD-123


SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	3.89	3.99
C	1.52	1.62
d	1.45	1.65
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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