

BAT42W/BAT43W SURFACE MOUNT SCHOTTKY BARRIER DIODE

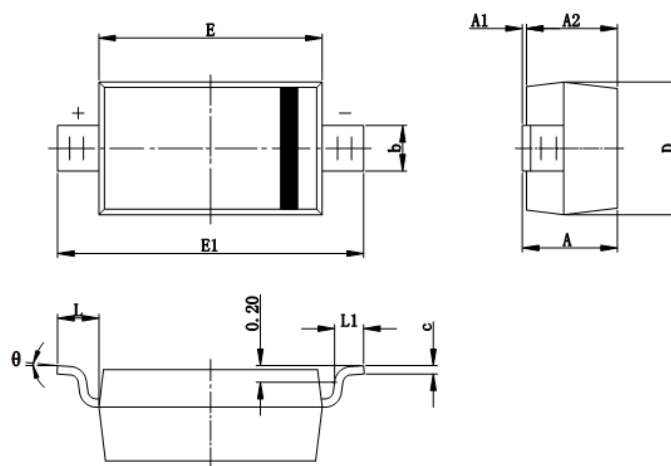
Features:

- 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

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)

Mechanical Dimensions: In mm / Inches



Symbol	Dimensions In Millimeters		Dimensions In 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°

SOD-123(CJ)



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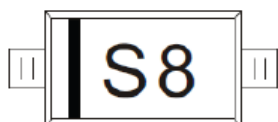
Technical Data
Data Sheet N0713, Rev. A

Green Products

Marking Diagram:



BAT42W



BAT43W

S7/S8 = Part Name

Cautions: Molding resin
Epoxy resin UL: 94V-0

Ordering Information:

Device	Package	Shipping
BAT42W/BAT43W	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.

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- China - Germany - Korea - Singapore - United States •
 - <http://www.smc-diodes.com> - sales@smc-diodes.com •



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Green Products

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

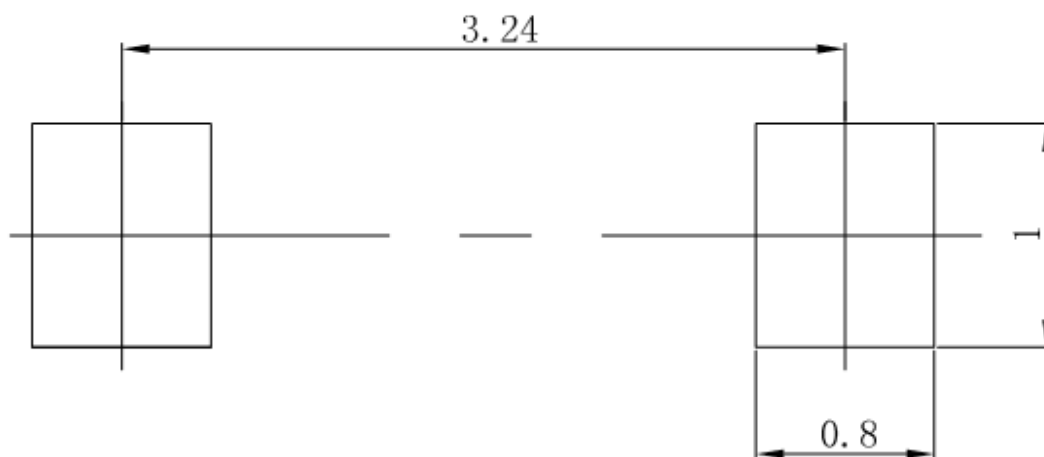
Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	BAT42W/BAT43W	Unit
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	$^\circ\text{C}$

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition	
Reverse Breakdown Voltage	$V_{(BR)}$	30	-	-	V	$I_R=10\mu\text{A}$	
Forward Voltage	All Types	V_F	-	-	1.0	V	$I_F=200\text{mA}$
	BAT42W	V_F	-	-	0.4	V	$I_F=10\text{mA}$
	BAT42W	V_F	-	-	0.65	V	$I_F=50\text{mA}$
	BAT43W	V_F	0.26	-	0.33	V	$I_F=2\text{mA}$
	BAT43W	V_F	-	-	0.45	V	$I_F=15\text{mA}$
Reverse Leakage Current	I_R	-	-	0.5	μA	$V_R=25\text{V}$	
Junction Capacitance	C_j	-	-	10	pF	$V_R=1.0\text{V}, f=1.0\text{MHz}$	

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SOD-123 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.



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