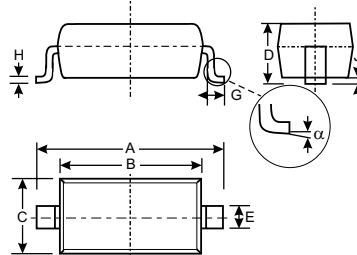


Features

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automatic Insertion

Mechanical Data

- Case: SOD-123, Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Date Code & Type Code, See Page 2
- Type Codes: BAT42W S7
BAT43W S8
- Weight: 0.01 grams (approx.)
- Ordering Information: See Page 2



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

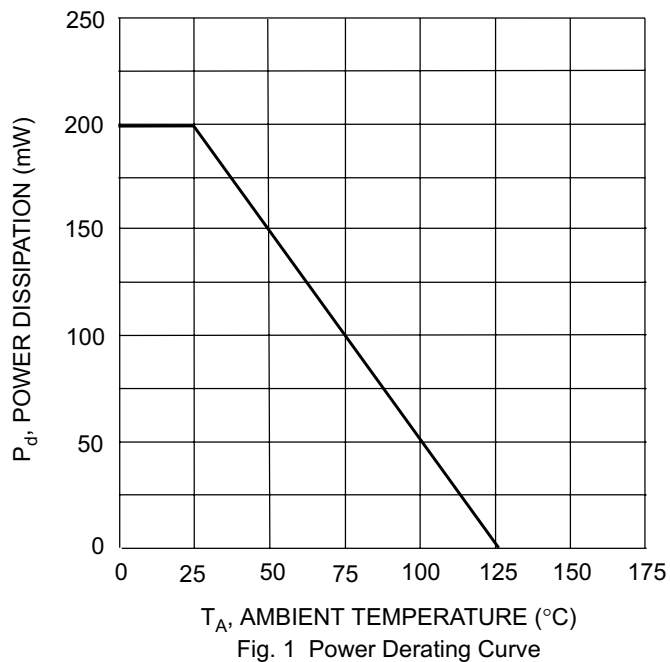
Maximum Ratings @ T_A = 25°C unless otherwise specified

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 (Note 1)	I _{FM}	200	mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s	I _{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current @ t < 10ms	I _{FSM}	4.0	A
Power Dissipation	P _d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	30	—	V	I _R = 100μA
Forward Voltage Drop (Note 2)	V _{FM}	—	1.0 0.40 0.65 0.33 0.45	V	I _F = 200mA I _F = 10mA I _F = 50mA I _F = 2.0mA I _F = 15mA
Peak Reverse Current (Note 2)	I _{RM}	—	500 100	nA μA	V _R = 25V V _R = 25V, T _J = 100°C
Total Capacitance	C _T	—	10	pF	V _R = 1.0V, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	5.0	ns	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω
Rectification Efficiency	η _V	80	—	%	R _L = 15Ω, C _L = 300pF, f = 45MHz, V _{RF} = 2.0V

- Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 2. Short duration pulse test used to minimize self-heating effect.

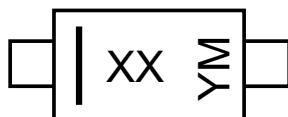


Ordering Information (Note 3)

Device	Packaging	Shipping
BAT42W-7	SOD-123	3000/Tape & Reel
BAT43W-7	SOD-123	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



XX = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: N = 2002)
M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005
Code	J	K	L	M	N	P	R	S

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D