



BAV3004W

SURFACE MOUNT LOW LEAKAGE DIODE

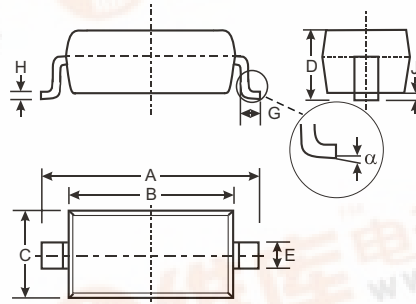
NEW PRODUCT

Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Low Leakage Current
- Fast Switching Speed
- High Reverse Breakdown Voltage

Mechanical Data

- Case: SOD-123, Molded Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Date Code and Type Code
Type Code: 4P, See Page 2
- 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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAV3004W	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage DC Blocking Voltage	V_{RWM} V_R	300	V
RMS Reverse Voltage	$V_{R(RMS)}$	212	V
Forward Continuous Current	I_{FM}	225	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	I_{FSM}	4.0 1.0	A
Power Dissipation	P_d	400	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	312	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	350	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage (Note 1)	V_{FM}	—	0.78 0.93 1.03	0.87 1.0 1.25	V	$I_F = 20\text{mA}$ $I_F = 100\text{mA}$ $I_F = 200\text{mA}$
Leakage Current (Note 1)	I_{RM}	—	30 35	100 100	nA μA	$V_R = 240\text{V}, T_j = 25^\circ\text{C}$ $V_R = 240\text{V}, T_j = 150^\circ\text{C}$
Junction Capacitance	C_j	—	1.0	5.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	—	50	ns	$I_F = I_R = 30\text{mA}$, $I_{rr} = 3.0\text{mA}, R_L = 100\Omega$

Notes: 1. Short duration pulse test to minimize self-heating effect.

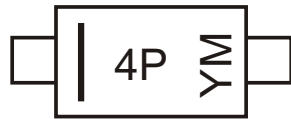


Ordering Information (Note 2)

Device	Packaging	Shipping
BAV3004W-7	SOD-123	3000/Tape & Reel

Notes: 2. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

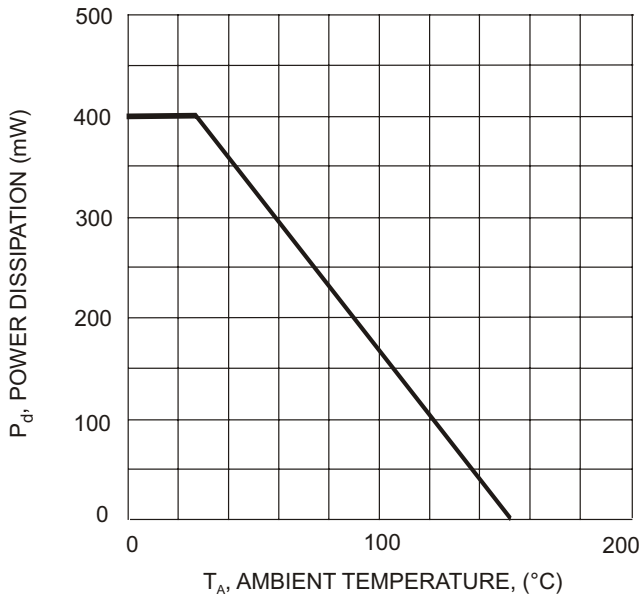


4P = Product Type Marking Code
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009
Code	N	P	R	S	T	U	V	W

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



T_A , AMBIENT TEMPERATURE, (°C)
 Fig. 1 Power Derating Curve

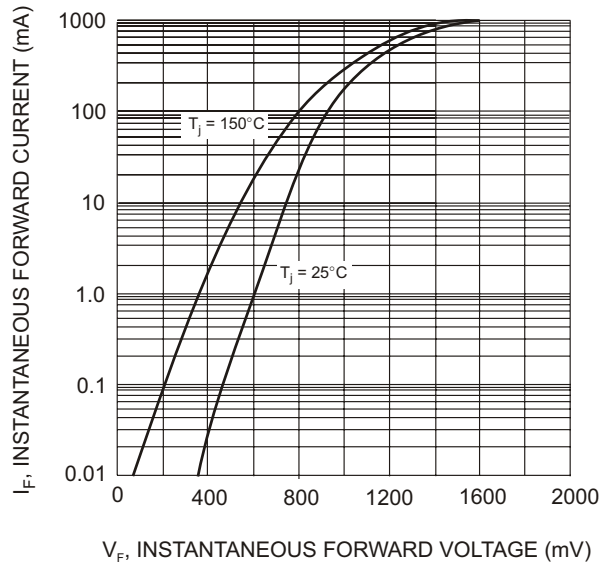
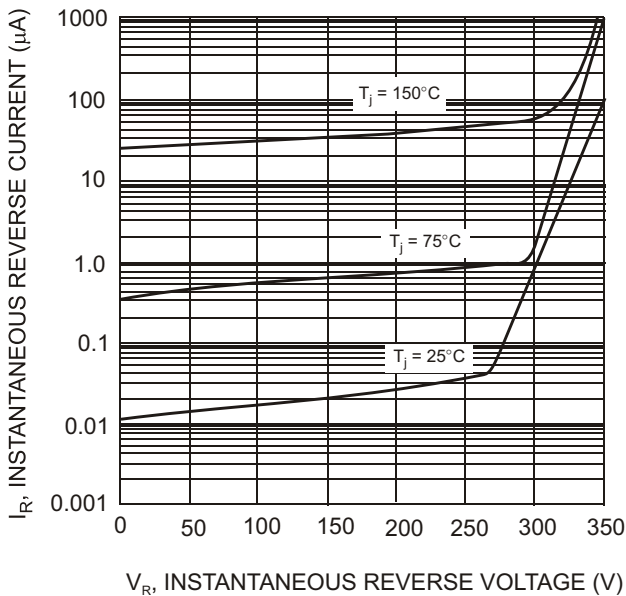
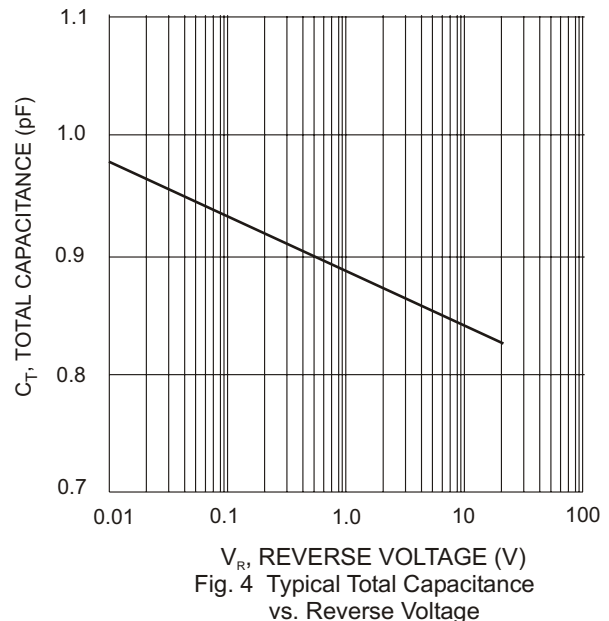


Fig. 2 Typical Forward Characteristics



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
 Fig. 3 Typical Reverse Characteristics



V_R , REVERSE VOLTAGE (V)
 Fig. 4 Typical Total Capacitance vs. Reverse Voltage