

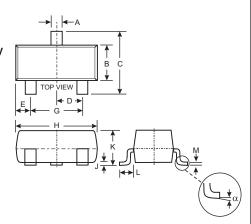
SURFACE MOUNT SWITCHING DIODE

Features

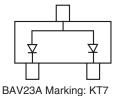
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Lead Free/RoHS Compliant (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability

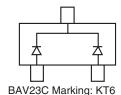
Mechanical Data

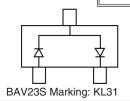
- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020C
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagrams Below
- Marking: See Diagrams Below & Page 2
- Weight: 0.008 grams (approximate)



SOT-23									
Dim	Min	Max							
Α	0.37	0.51							
В	1.20	1.40							
С	2.30	2.50							
D	0.89	1.03							
E	0.45	0.60							
G	1.78	2.05							
Н	2.80	3.00							
J	0.013	0.10							
K	0.903	1.10							
L	0.45	0.61							
M	0.085	0.180							
α	0°	8°							
All Dimensions in mm									







Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic		Value				
Repetitive Peak Reverse Voltage	V _{RRM}	250	V			
Working Peak Reverse Voltage DC Blocking Voltage	V _{RWM} V _R	200	V			
RMS Reverse Voltage	V _{R(RMS)}	141	V			
Forward Continuous Current (Note 2)	I _{FM}	400	mA			
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu s$ @ $t=100\mu s$ @ $t=100m s$	I _{FSM}	9.0 3.0 1.7	А			
Repetitive Peak Forward Surge Current (Note 2)	I _{FRM}	625	mA			
Power Dissipation (Note 2)	P _d	350	mW			
Thermal Resistance Junction to Ambient Air (Note 2)	R _{θJA}	357	°C/W			
Operating and Storage Temperature Range	T_j , T_{STG}	-65 to +150	°C			

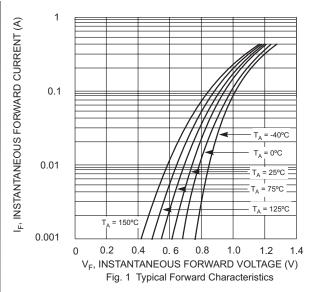
Electrical Characteristics @ TA = 25°C unless otherwise specified

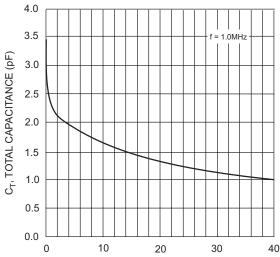
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	250	_	V	I _R = 100μA
Forward Voltage (Note 1)	V _F	_	1.0 1.25	V	I _F = 100mA I _F = 200mA
Reverse Current @ Rated DC Blocking Voltage (Note 1)	I _R	_	100	nA μA	$T_j = 25^{\circ}C$ $T_j = 150^{\circ}C$
Total Capacitance	Ст	_	5.0	pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	_	50	ns	$I_F = I_R = 30 \text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$

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

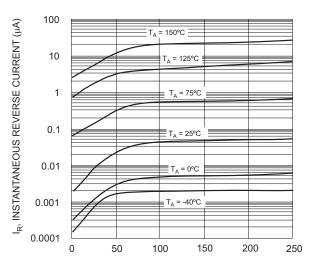
- Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
- 3. No purposefully added lead.







 $\label{eq:VR} {\rm V_{R},\,REVERSE\,\,VOLTAGE\,\,(V)}$ Fig. 3 Typical Capacitance vs. Reverse Voltage



V_R, INSTANTANEOUS REVERSE VOLTAGE (V) Fig. 2 Typical Reverse Characteristics

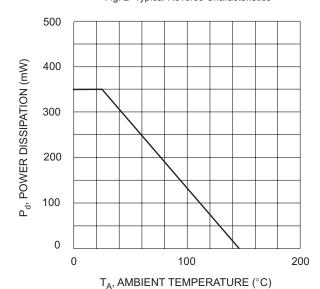


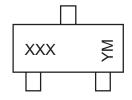
Fig. 4 Power Dissipation Derating

Ordering Information (Note 4)

Device	Packaging	Shipping
BAV23A-7-F BAV23C-7-F BAV23S-7-F	SOT-23	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



XXX = Product Type Marking Code (See Page 1)
YM = Date Code Marking
Y = Year ex: N = 2002

M = Month ex: 9 = September

Date Code Key

Year	2001	2002	2003	2004		2005	2006	2007	2008	2009
Code	М	N	Р	R		S	Т	U	V	W
Month	.lan	Feb Marc	h Anr	May	.lun	.lul.	Aug	Sen	Oct I	Nov Dec

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D



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