





DUAL SURFACE MOUNT SWITCHING DIODE

Features

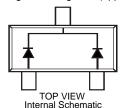
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automated Insertion
- For General Purpose Switching Applications
- **High Conductance**
- Lead, Halogen and Antimony Free, RoHS Compliant "Green" Device (Notes 3 and 4)
- Qualified to AEC-Q101 Standards for High Reliability

Mechanical Data

- Case: SOT-23
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.008 grams (approximate)

SOT-23





Maximum Ratings @TA = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	75	٧
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current (Note 1)	I _{FM}	300	mA
Average Rectified Output Current (Note 1)	lo	150	mA
Repetitive Peak Forward Current	I _{FRM}	450	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 ₁ @ t = 1.1	I IECM	2.0 1.0	А

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_{D}	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{ hetaJA}$	357	°C/W
Operating and Storage Temperature Range	T_J, T_STG	-65 to +150	°C

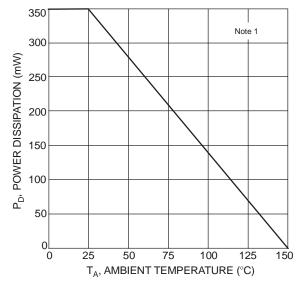
Electrical Characteristics @TA = 25°C unless otherwise specified

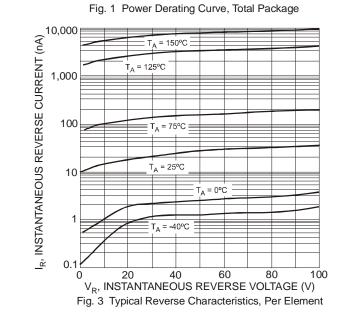
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	75	_	V	$I_R = 2.5 \mu A$
Forward Voltage	V _F	l	0.715 0.855 1.0 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Reverse Current (Note 2)	I _R	l	2.5 50 30 25	μΑ μΑ μΑ nA	$V_R = 75V$ $V_R = 75V$, $T_J = 150$ °C $V_R = 25V$, $T_J = 150$ °C $V_R = 20V$
Total Capacitance	Ст	_	2.0	pF	$V_R = 0$, $f = 1.0MHz$
Reverse Recovery Time	t _{rr}	_	4.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$

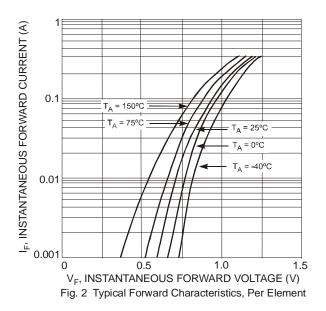
Notes:

- 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.
- Short duration pulse test used to minimize self-heating effect.
- No purposefully added lead. Halogen and Antimony Free.
 Product manufactured with Data Code V9 (week 33, 2008) and newer are built with Green Molding Compound. Product manufactured prior to Date Code V9 are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.









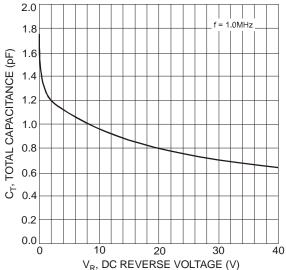


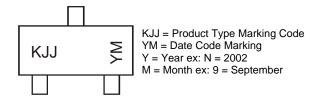
Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element

Ordering Information (Note 5)

- 7			
	Part Number	Case	Packaging
	BAV70-7-F	SOT-23	3000/Tape & Reel

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information

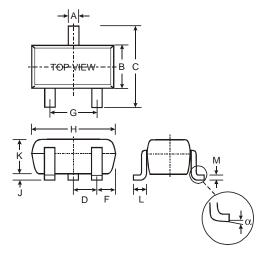


Date Code Key

Year	2000	2001	2002	2003	2004	2005	2006	200	7 2008	2009	2010	2011	2012
Code	L	М	N	Р	R	S	Т	U	V	W	Х	Y	Z
Month	Jan	Feb	Mar	Apr	Ма	y Ju	ın	Jul	Aug	Sep	Oct	Nov	Dec

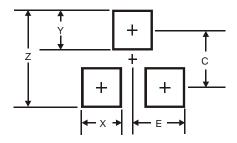


Package Outline Dimensions



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			
F	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					

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.9
X	0.8
Y	0.9
С	2.0
E	1.35

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