



BAV70DW

SURFACE MOUNT SWITCHING DIODE ARRAY

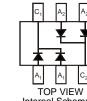
Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- Two "BAV70" Circuits In One Package
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Note 4 and 5)

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic, "Green" Molding Compound. 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).
- Orientation: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.006 grams (approximate)

TOP VIEW



Internal Schematic

Maximum Ratings $@T_A = 25^{\circ}C$ 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	V
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
Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs @ t = 1.0s	I _{FSM}	2.0 1.0	A

SOT-363

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	PD	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{0JA}	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°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}	75	_	V	$I_F = 2.5 \mu A$
Forward Voltage	VF	_	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	_	2.5 50 30 25	μΑ μΑ μΑ nA	$V_R = 75V$ $V_R = 75V$, $T_J = 150^{\circ}C$ $V_R = 25V$, $T_J = 150^{\circ}C$ $V_R = 20V$
Total Capacitance	CT	_	2.0	pF	$V_{R} = 0, f = 1.0MHz$
Reverse Recovery Time	t _{rr}		4.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$

1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout

document AP02001, 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.

3. No purposefully added lead.

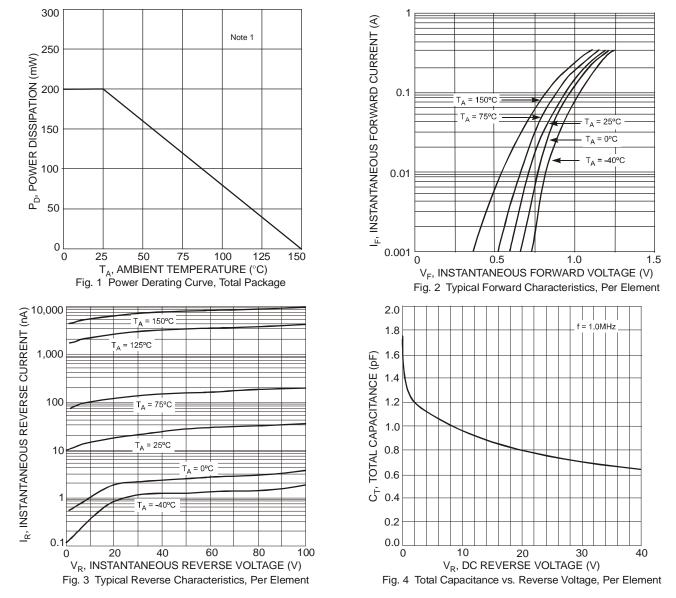
4. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.

5. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb₂O₃ Fire Retardants.

Notes:



BAV70DW



Ordering Information (Note 6)

Part Number	Case	Packaging
BAV70DW-7-F	SOT-363	3000/Tape & Reel

Notes: 6. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

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Marking Information

Date Code Key				MY AL> KIY AU	1	KJA = Prod YM = Date Y = Year e> M = Month	Code Mark :: N = 2002	king	de		
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
Code	М	Ν	Р	R	S	Т	U	V	W	Х	

May

5

Apr

4

Jan

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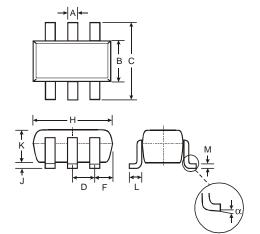
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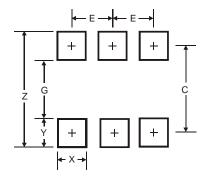
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	SOT-363					
Dim	Min Max					
Α	0.10	0.30				
в	1.15	1.15 1.35				
C	2.00	2.20				
D	0.65 Nominal					
F	0.30	0.40				
Н	1.80	2.20				
J	—	0.10				
ĸ	0.90	1.00				
L	0.25	0.40				
Μ	0.10	0.25				
α	0°	8°				
All Dimensions in mm						

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.5
G	1.3
Х	0.42
Y	0.6
С	1.9
E	0.65

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