



BAV756DW

#### QUAD SURFACE MOUNT SWITCHING DIODE ARRAY

#### **Features**

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- One BAV70 Circuit and One BAW56 Circuit In One Package
- Easily Connected As Full Wave Bridge
- Lead Free/RoHS Compliant (Note 3)
- "Green" Device (Notes 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

C.

- 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

TOF VIFW

Weight: 0.006 grams (approximate)

SOT-363 Internal Schematic

# Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

TOP VIEW

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	75	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current (Notes 1 and 2)	I <sub>FM</sub>	300	mA
Average Rectified Output Current (Notes 1 and 2)	lo	150	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	IFSM	2.0 1.0	A

### Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Notes 1 and 2)	PD	200	mW
Power Dissipation $T_S = 60^{\circ}C$ (Note 2)	PD	300	mW
Thermal Resistance Junction to Ambient Air (Notes 1 and 2)	$R_{ heta JA}$	625	°C/W
Thermal Resistance Junction to Soldering Point (Note 2)	R <sub>0</sub> JS	275	°C/W
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150	°C

Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	V <sub>(BR)R</sub>	75		V	I <sub>R</sub> = 2.5μA
Forward Voltage	VF	—	0.715 0.855 1.0 1.25		$I_{F} = 1.0mA$ $I_{F} = 10mA$ $I_{F} = 50mA$ $I_{F} = 150mA$
Reverse Current (Note 6)	I <sub>R</sub>	_	2.5 50 30 25	μA μA	$V_R = 75V$ $V_R = 75V$ , $T_J = 150^{\circ}C$ $V_R = 25V$ , $T_J = 150^{\circ}C$ $V_R = 20V$
Total Capacitance	Ст	_	2.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	_	4.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100\Omega$

Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at Notes: 1.

http://www.diodes.com/datasheets/ap02001.pdf.

2. One or more diodes loaded.

No purposefully added lead. 3.

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

Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date 5. Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb<sub>2</sub>O<sub>3</sub> Fire Retardants.

6. Short duration pulse test used to minimize self-heating effect.



# BAV756DW



# Ordering Information (Notes 5 & 7)

Part Number	Case	Packaging
BAV756DW-7-F	SOT-363	3000/Tape & Reel

Notes: 7. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

### **Marking Information**



KCA = Product Type Marking Code 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	2010	2111	2012
Code	М	Ν	Р	R	S	Т	U	V	W	Х	Y	Z
Month	lan	Feb	Mar	Apr	Mav	Jun	Jul	Aug	Sep	Oct	Nov	Dec
wonth	Jan	гер	Iviai	Арі	iviay	Juli	Jui	Aug	Seh	001	NOV	Dec



# **Package Outline Dimensions**



SOT-363				
Dim	Min	Max		
Α	0.10	0.30		
в	1.15	1.35		
С	2.00	2.20		
D	0.65 Nominal			
F	0.30	0.40		
H	1.80	2.20		
J	_	0.10		
К	0.90	1.00		
L	0.25	0.40		
м	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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