





SURFACE MOUNT SWITCHING DIODE ARRAY

Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- **High Conductance**
- Two "BAV99" Circuits In One Package
- Lead Free/RoHS Compliant (Note 3)
- Qualified to AEC-Q101 Standards for High Reliability
- "Green" Device (Notes 4 and 5)

Mechanical Data

- Case: SOT-363
- Case Material: Molded Plastic, "Green" Molding Compound (Note 5). UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Matte Tin Finish annealed over Alloy 42 leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking Information: See Page 2
- Ordering Information: See Page 2
 - Weight: 0.006 grams (approximate)

SOT-363







Internal Schematic

Maximum Ratings @T_A = 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	V
RMS Reverse Voltage		V _{R(RMS)}	53	V
Forward Continuous Current	(Note 1)	I _{FM}	215	mA
Non-Repetitive Peak Forward Surge Current	@ t = 1.0μs @ t = 1.0ms @ t = 1.0s	I _{FSM}	2.0 1.0 0.5	А

Thermal Characteristics

Characteristic		Symbol	Value	Unit
Power Dissipation	(Note 1)	P _D	200	mW
Power Dissipation	(Note 2)	P _D	300	mW
Thermal Resistance Junction to Ambient Air	(Note 1)	$R_{ heta JA}$	625	°C/W
Thermal Resistance Junction to Ambient Air	(Note 2)	$R_{ heta JA}$	417	°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 6)	$V_{(BR)R}$	75	_	V	$I_R = 2.5 \mu A$
Forward Voltage	V _F	l	0.715 0.855 1.0 1.25	٧	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Reverse Current (Note 6)	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:

- 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.
- Device mounted on Alumina PCB, 0.4 inch x 0.3 inch x 0.024 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.
- 3. No purposefully added lead.
- Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
- 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.

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



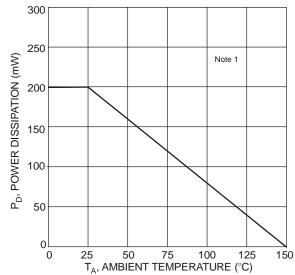
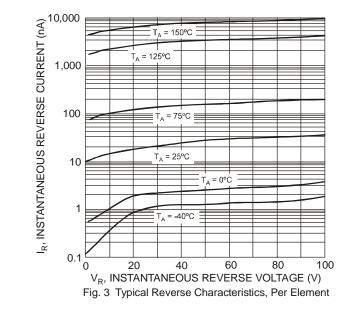


Fig. 1 Power Derating Curve, Total Package



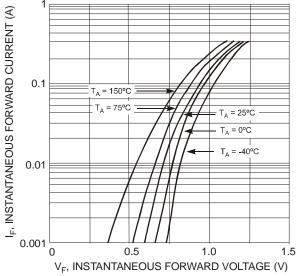


Fig. 2 Typical Forward Characteristics, Per Element

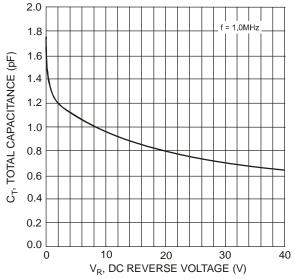


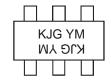
Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element

Ordering Information (Note 7)

Part Number	Case	Packaging		
BAV99DW-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



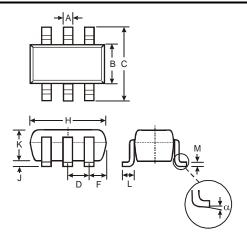
KJG = Product Type Marking Code YM = Date Code Marking Y = Year (ex: N = 2002) M = Month (ex: 9 = September)

Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2111	2012
Code	М	N	Р	R	S	T	U	V	W	Х	Υ	Z
										1		
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

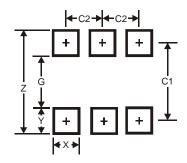


Package Outline Dimensions



SOT-363					
Dim	Min	Max			
Α	0.10	0.30			
В	1.15	1.35			
С	2.00	2.20			
D	0.65	Тур			
F	0.40	0.45			
Н	1.80	2.20			
J	0	0.10			
K	0.90	1.00			
٦	0.25	0.40			
M	0.10	0.22			
α	0°	8°			
All Di	All Dimensions in mm				

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.5
G	1.3
Х	0.42
Y	0.6
C1	1.9
C2	0.65

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