



MMBD4148TW / BAS16TW

SURFACE MOUNT FAST SWITCHING DIODE ARRAY

Features

Fast Switching Speed

Ultra-Small Surface Mount Package

For General Purpose Switching Applications

High Conductance

Lead Free/RoHS Compliant (Note 3)

Mechanical Data

Case: SOT-363

Case Material: Molded Plastic. UL Flammability

Classification Rating 94V-0

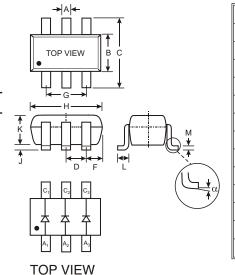
Moisture Sensitivity: Level 1 per J-STD-020C Terminals: Solderable per MIL-STD-202, Method 208 Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe). Please See Ordering Information, Note 5, on

Page 2

Polarity: See Diagram

Marking: KA2 (See Page 2)

Weight: 0.006 grams (approximate)



SOT-363								
Dim	Min	Max						
Α	0.10	0.30						
В	1.15	1.35						
С	2.00 2.20							
D	0.65 N	ominal						
F	0.30	0.40						
Н	1.80	2.20						
J		0.10						
K	0.90	1.00						
L	0.25	0.40						
М	0.10	0.25						
	0	8°						
All Dimensions in mm								

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	V _{RWM} 75			
RMS Reverse Voltage	V _{R(RMS)}	V _{R(RMS)} 53			
Forward Continuous Current (Note 1)	I _{FM}	300	mA		
Average Rectified Output Current (Note 1)	Io	150	mA		
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0s	I _{FSM}	2.0 1.0	А		
Power Dissipation (Note 1)	Pd	200	mW		
Thermal Resistance Junction to Ambient Air (Note 1)	R JA	625	C/W		
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150	С		

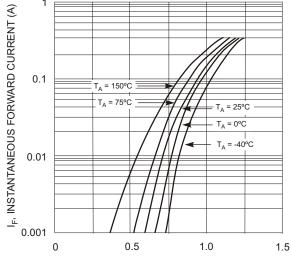
Electrical Characteristics @ TA = 25 C unless otherwise specified

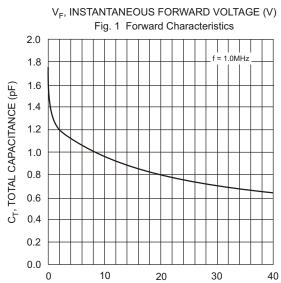
Characteristic	Symbol	Min	Max	Unit	Test Condition			
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	75		V	I _R = 1 A			
Forward Voltage	VF		0.715 0.855 1.0 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA			
Reverse Current (Note 2)	I _R		1.0 50 30 25	A A A nA	$\label{eq:VR} \begin{array}{l} V_R = 75V \\ V_R = 75V, T_j = 150 C \\ V_R = 25V, T_j = 150 C \\ V_R = 20V \end{array}$			
Total Capacitance	C _T		2.0	pF	V _R = 0, f = 1.0MHz			
Reverse Recovery Time	t _{rr}		4.0	ns	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100			

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.
- 2. Short duration test pulse used to minimize self-heating effect.
- 3. No purposefully added lead.





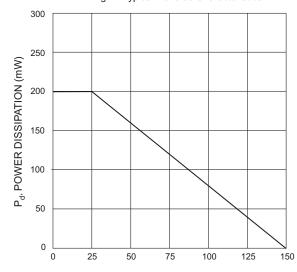


 V_R , REVERSE VOLTAGE (V)

Fig. 3 Typical Capacitance vs. Reverse Voltage

10000 T_A = 150°C T_A = 150°C T_A = 125°C T_A = 125°C T_A = 25°C T_A = 2

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



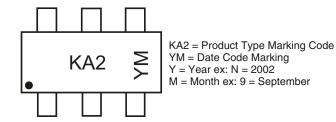
T_A, AMBIENT TEMPERATURE (°C) Fig. 4 Power Derating Curve

Ordering Information (Note 4)

Device	Packaging	Shipping			
MMBD4148TW-7-F	SOT-363	3000/Tape & Reel			
BAS16TW-7-F	SOT-363	3000/Tape & Reel			

Notes: 4. 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	2007	2008	2009	2010	2011	2012
Code	L	М	N	Р	R	S	Т	J	V	W	Х	Υ	Z
Мог	nth	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Co	de	1	2	3	4	5	6	7	8	9	0	N	D



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