



SURFACE MOUNT SWITCHING DIODE

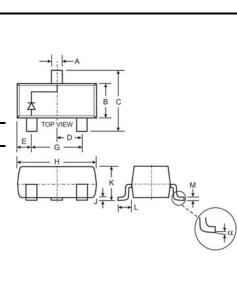
Features

- Fast Switching Speed .
- Surface Mount Package Ideally Suited for Automatic • Insertion
- For General Purpose Switching Applications
- High Conductance
- Lead Free/RoHS Compliant (Note 3)
- 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-020C .
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over
- Alloy 42 leadframe).
- Polarity: See Diagram .
- Marking Information: KA6, KA2, K5D; See Page 3
- Ordering Information: See Page 3
- Weight: 0.008 grams (approximate)

Maximum Ratings @T₄ = 25°C unless otherwise specified



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							
Е	0.45	0.60							
G	1.78	2.05							
Н	2.80	3.00							
J	0.013	0.10							
к	0.903	1.10							
L	0.45	0.61							
М	0.085	0.180							
α	0°	8°							
All Din	nensions	in mm							

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	200	mA		
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I _{FSM}	2.0 1.0	А		
Power Dissipation (Note 1)	P _d	350	mW		
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{ ext{ heta}JA}$	357	°C/W		
Operating and Storage Temperature Range	T _i , T _{STG}	-65 to +150	°C		

Electrical Characteristics @T_A = 25°C unless otherwise specified

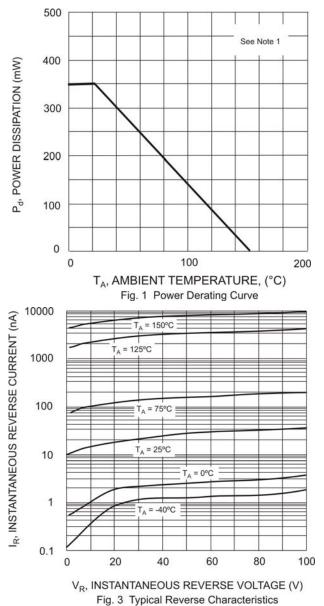
Characteristic	Symbol	Min	Мах	Unit	Test Condition I _R = 100μA		
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	75		V			
Forward Voltage	V _F	_	0.715 0.855 1.0 1.25	V	$I_F = 1.0mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$		
Leakage Current (Note 2)	I _R		1.0 50 30 25	μΑ μΑ μΑ nA	$V_{R} = 75V$ $V_{R} = 75V, T_{i} = 150^{\circ}C$ $V_{R} = 25V, T_{i} = 150^{\circ}C$ $V_{R} = 20V$		
Total Capacitance	CT		2.0	pF	V _R = 0, f = 1.0MHz		
Reverse Recovery Time	t _{rr}	_	4.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$		

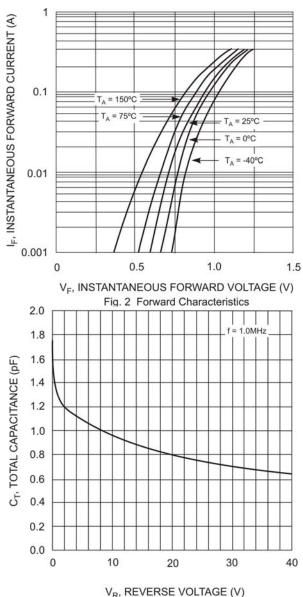
Device mounted on glass epoxy PCB 1.6" x 1.6" x 0.06"; mounting pad for the cathode lead min. $0.93in^2$. Short duration test pulse used to minimize self-heating effect. Notes: 1.

2. 3.

No Purposefully added Lead.







V_R, REVERSE VOLTAGE (V) Fig. 4 Typical Capacitance vs. Reverse Voltage

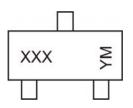


Ordering Information (Note 4)

Device	Packaging	Shipping			
BAS16-7-F	SOT-23	3000/Tape & Reel			
MMBD4148-7-F	SOT-23	3000/Tape & Reel			
MMBD914-7-F	SOT-23	3000/Tape & Reel			

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



 $\begin{array}{l} XXX = \mbox{Product Type Marking Code (See Page 1)} \\ YM = \mbox{Date Code Marking} \\ Y = \mbox{Year ex: } N = 2002 \\ M = \mbox{Month ex: } 9 = \mbox{September} \end{array}$

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	J	к	L	М	Ν	Р	R	S	Т	U	V	W	Х	Y	Z
Month	Jan	Feb		Mar	Apr	Мау	Ju	n	Jul	Aug	Sep	Oc	t I	Nov	Dec
Code	1	2		3	4	5	6		7	8	9	0		Ν	D

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