



MMBD4448

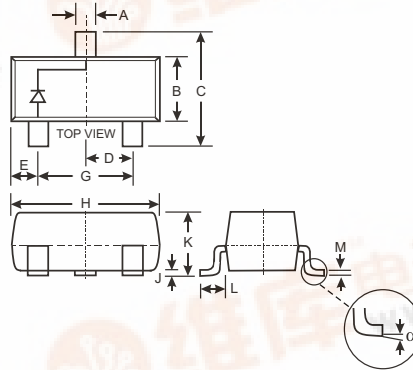
SURFACE MOUNT SWITCHING DIODE

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)**

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: KA3 (See Page 2)
- Weight: 0.008 grams (approx.)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
	0	8
All Dimensions in mm		

Maximum Ratings @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	MMBD4448	Unit
Non-Repetitive Peak Reverse Voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage	V _{RRM}	75	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	53	V
Forward Continuous Current (Note 1)	I _{FM}	500	mA
Average Rectified Output Current (Note 1)	I _O	250	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0s	I _{FSM}	4.0 2.0	A
Power Dissipation (Note 1)	P _d	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{JA}	357	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 _R = 2.5 A
Forward Voltage (Note 2)	V _F	0.62	0.72	V	I _F = 5.0mA I _F = 10mA I _F = 100mA I _F = 150mA
			0.855		
			1.0		
			1.25		
Reverse Current (Note 2)	I _R		2.5	A	V _R = 75V V _R = 75V, T _J = 150 C V _R = 25V, T _J = 150 C V _R = 20V
			50	A	
			30	A	
			25	nA	
Total Capacitance	C _T		4.0	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. Part mounted on FR-4 board with recommended pad layout, 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.

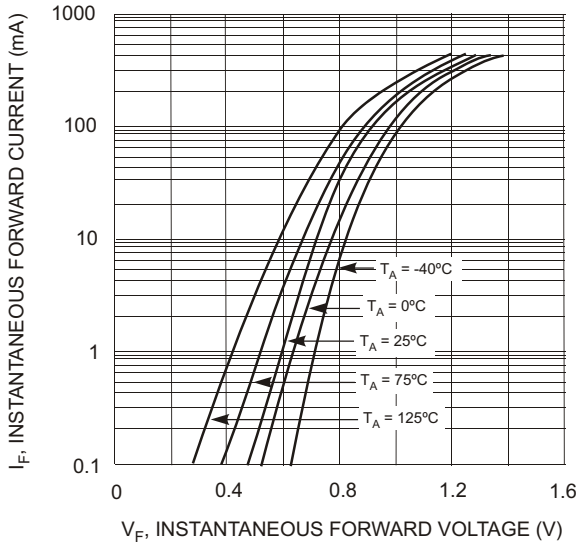


Fig. 1 Typical Forward Characteristics

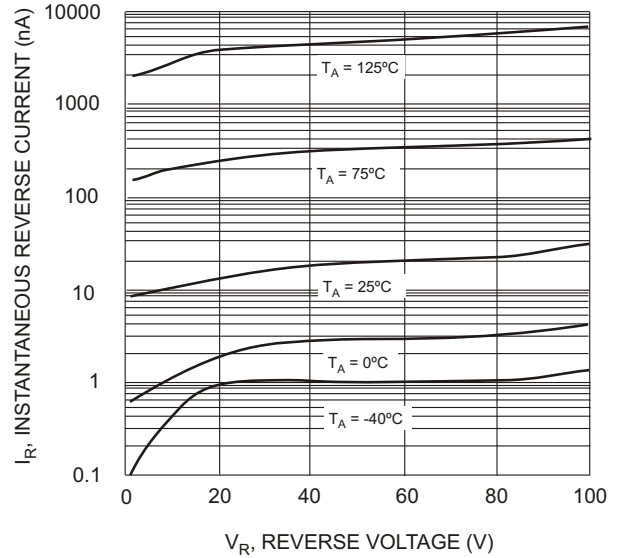


Fig. 2 Typical Reverse Characteristics

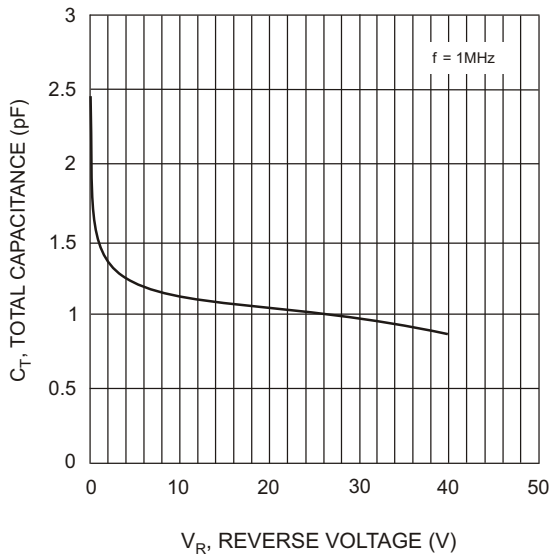


Fig. 3 Typical Capacitance vs. Reverse Voltage

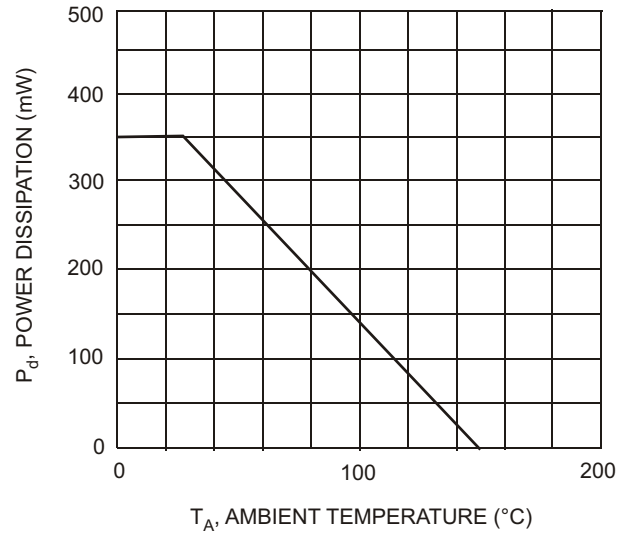


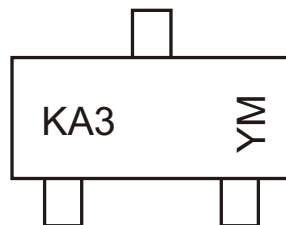
Fig. 4, Max Power Dissipation vs Ambient Temperature

Ordering Information (Note 4)

Device	Packaging	Shipping
MMBD4448-7-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



KA3 = Product Type Marking Code
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
Code	K	L	M	N	P	R	S	T	U	V	W	
Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D



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