

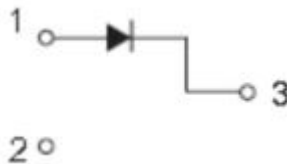
## MMBD4148 SURFACE MOUNT FAST SWITCHING DIODE



### Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material - UL Recognition Flammability Classification 94V-0
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Schematic & Pin Configuration



### Mechanical Characteristics

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Weight: 0.008g

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

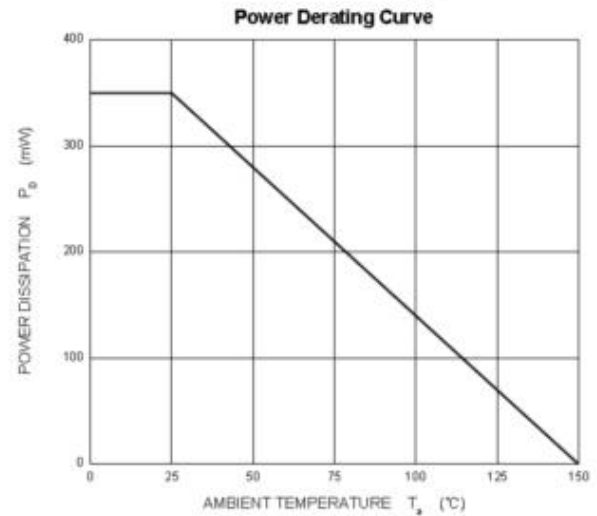
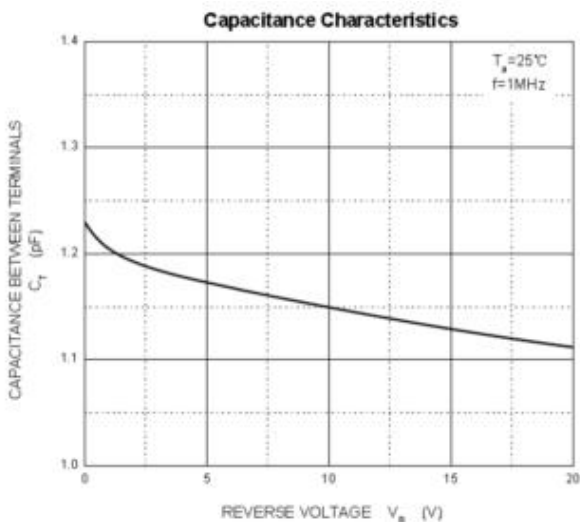
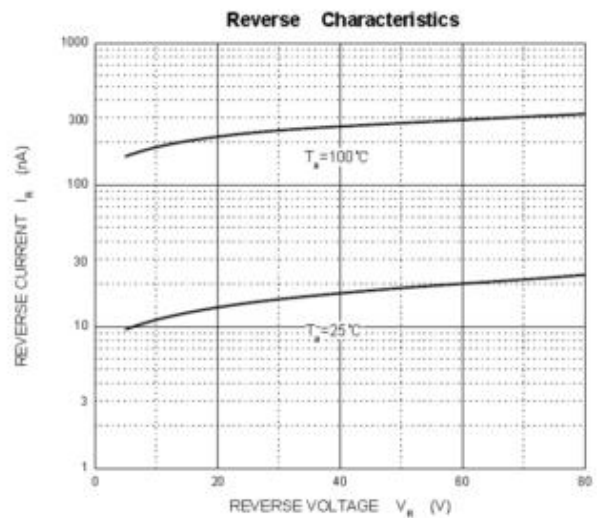
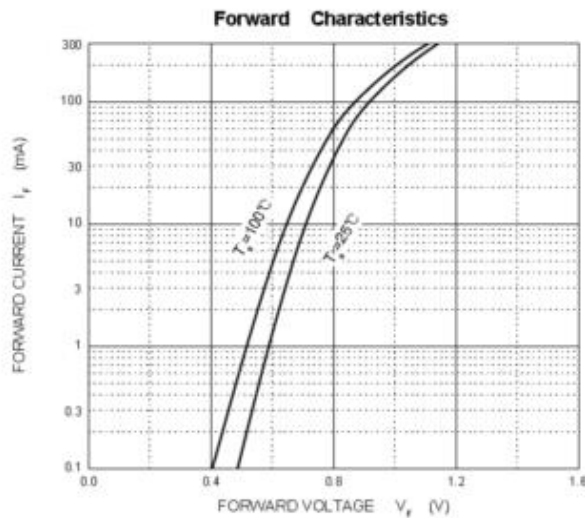
Characteristic	Symbol	Limits	Units
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>R(RM)</sub>	75	V
Working Peak Reverse Voltage	V <sub>R(WM)</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Forward Continuous Current	I <sub>F</sub>	300	mA
Average Rectified Output Current	I <sub>O</sub>	150	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I <sub>FSM</sub>	2.0	A
Power Dissipation	P <sub>d</sub>	350	mW
Typical Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	357	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

**Electrical Characteristics @ $T_A=25^\circ\text{C}$  unless otherwise specified**

Characteristic	Symbol	Min	Max	Units	Test Condition
Forward Voltage *	$V_F$	-	0.715 0.855 1.00 1.25	V	@ $I_F=1\text{mA}$ @ $I_F=10\text{mA}$ @ $I_F=50\text{mA}$ @ $I_F=150\text{mA}$
Reverse Leakage Current *	$I_R$	-	2.5 25	$\mu\text{A}$ nA	@ $V_R=75\text{V}$ @ $V_R=20\text{V}$
Junction Capacitance	$C_j$	-	2.0	pF	$V_R=0\text{V}$ , $f=1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	-	4.0	ns	$I_F=I_R=10\text{mA}$ , $I_{RR}=0.1 \times I_R$

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%  
Note: 1. Device mounted on fiberglass substrate  $40 \times 40 \times 1.5\text{m}$

**Ratings and Characteristics Curves**



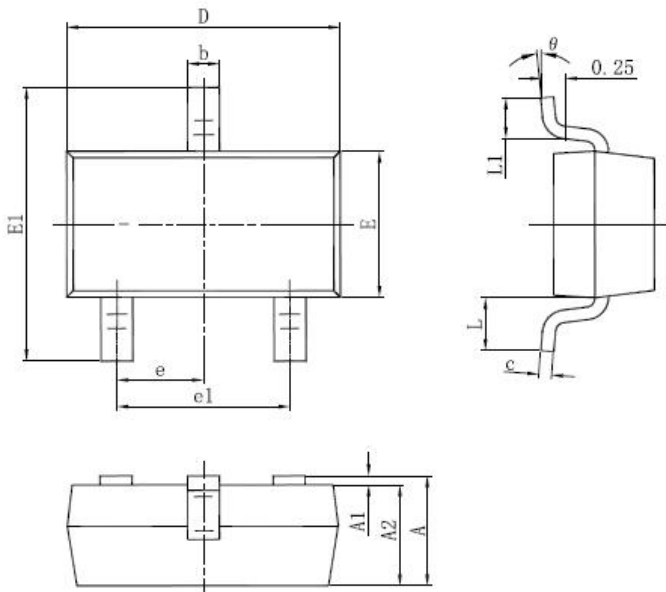
**Ordering Information**

Device	Package	Shipping
MMBD4148	SOT-23 (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

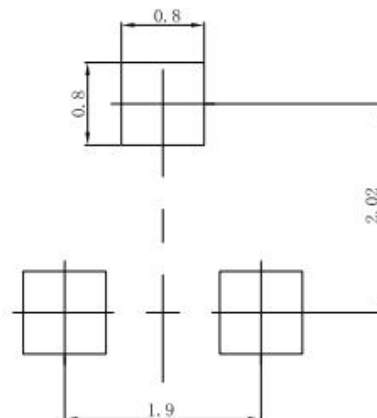
**Marking Diagram**


KA2 = Marking Code

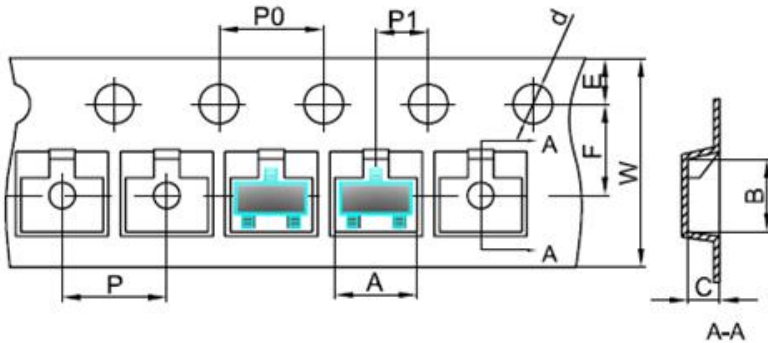
**Mechanical Dimensions SOT-23**


SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050	0.070	0.081
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Note: If date code is before 2016 year, please contact with factory about marking.

**Soldering Pad Layout (Millimeters )**


**Carrier Tape Specification SOT-23**



SYMBOL	Millimeters	
	Min.	Max.
A	3.05	3.25
B	2.67	2.87
C	1.12	1.32
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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