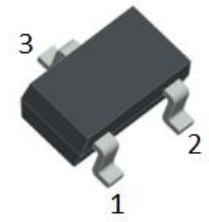
Technical Data
Data Sheet N0600, Rev. B

MMBD4148 SURFACE MOUNT FAST SWITCHING DIODE

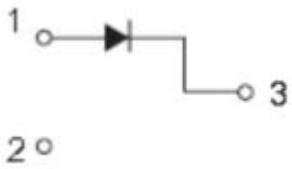


SOT-23

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-O
- 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_A=25°C unless otherwise specified

Characteristic	Symbol	Limits	Units
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	I_F	300	mA
Average Rectified Output Current	Io	150	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.0	A
Power Dissipation	P_d	350	mW
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

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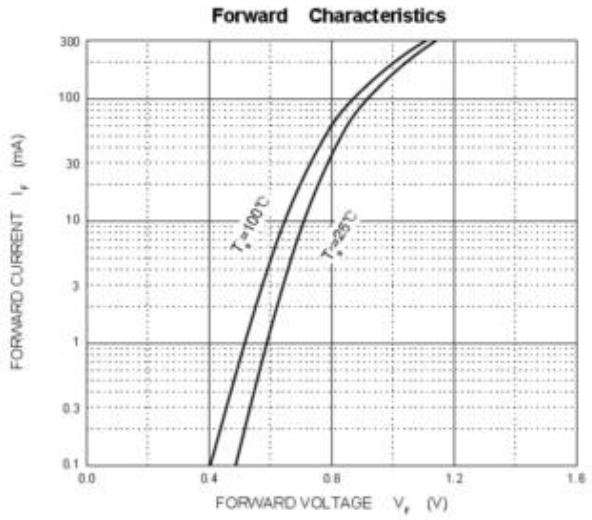
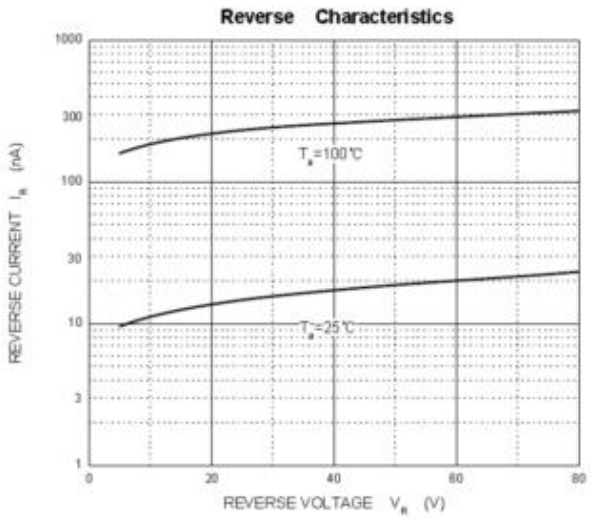
Electrical Characteristics @T_A=25°C unless otherwise specified

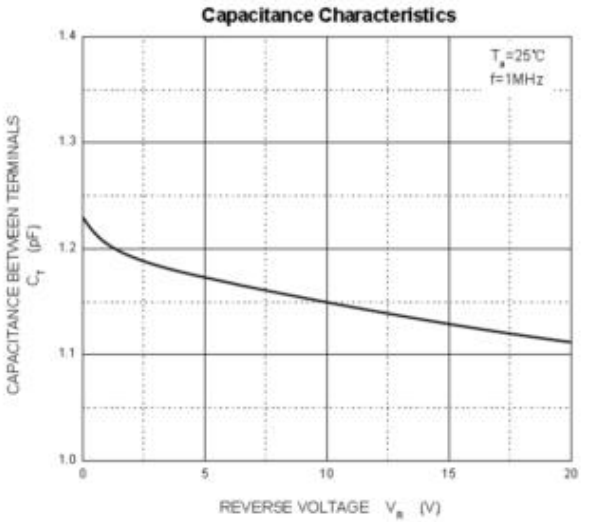
Characteristic	Symbol	Min	Max	Units	Test Condition
Forward Voltage *	V_F	-	0.715 0.855 1.00 1.25	V	@I_F=1mA @I_F=10mA @I_F=50mA @I_F=150mA
Reverse Leakage Current *	I_R	-	2.5 25	uA nA	@V_R=75V @V_R=20V
Junction Capacitance	Cj	-	2.0	pF	V_R=0V, f=1.0MHz
Reverse Recovery Time	t_{rr}	-	4.0	ns	I_F=I_R=10mA,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

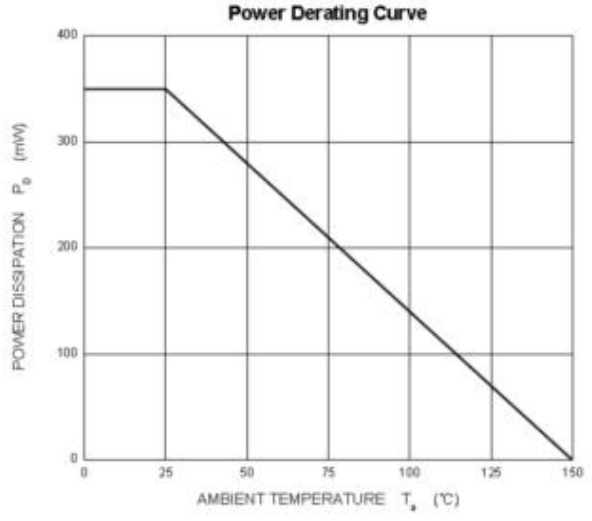
* Pulse width < 300 μs, duty cycle < 2%
Note: 1. Device mounted on fiberglass substrate 40×40×1.5m

Ratings and Characteristics Curves









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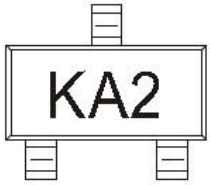
Ordering Information

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

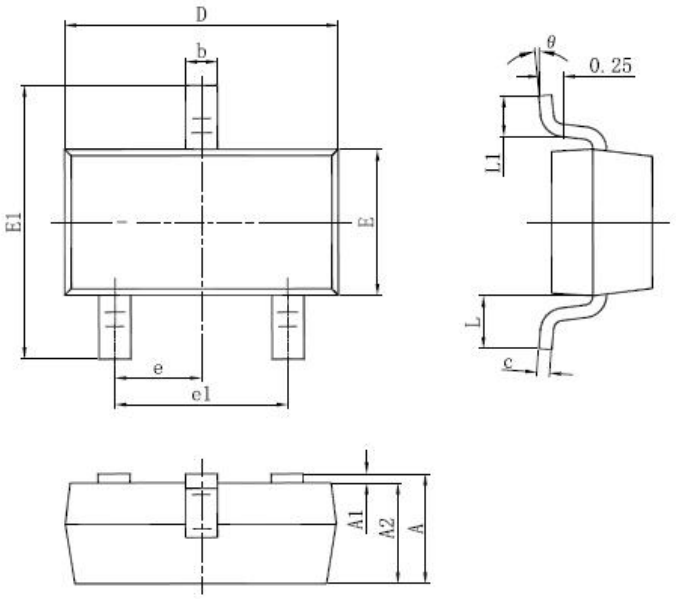
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



KA2 = Marking Code

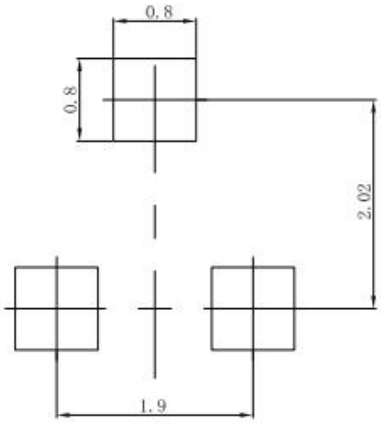
Mechanical Dimensions SOT-23



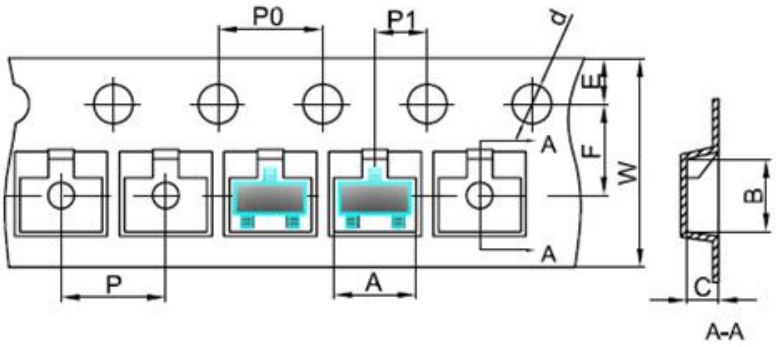
SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050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