



# MMBD4448W6

## SURFACE MOUNT FAST SWITCHING DIODE ARRAY

### FEATURES

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

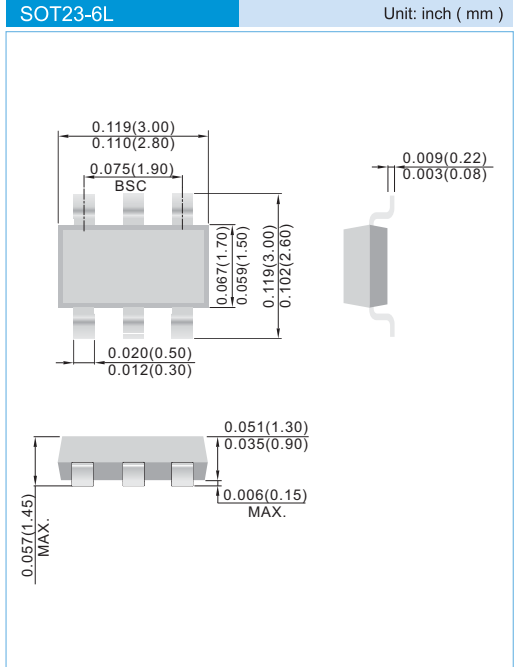
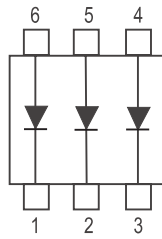
Case: SOT23-6L, Plastic

Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.014 grams

Polarity: See Diagram Below

Marking Code : B48



### MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise specified )

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	80	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current (Note1)	$I_{FM}$	500	mA
Average Rectified Output Current (Note1)	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$	$I_{FSM}$	4.0	A
@ $t=1.0\text{s}$		2.0	

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	$P_D$	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified )

Characteristic	Symbol	Test Condition	Min	Max	Unit
Reverse Breakdown Voltage (Note 2)	$V_{BR}$	$I_R=2.5\mu\text{A}$	80	-	V
Forward Voltage	$V_F$	$I_F=5.0\text{mA}$ $I_F=10\text{mA}$ $I_F=100\text{mA}$ $I_F=150\text{mA}$	0.62 - - -	0.720 0.855 1.000 1.250	V
Reverse Current (Note 2)	$I_R$	$V_R=75\text{V}$ $V_R=75\text{V}, T_J=150^\circ\text{C}$ $V_R=25\text{V}, T_J=150^\circ\text{C}$ $V_R=20\text{V}$	-	2.5 50 30 25	$\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$ nA
Total Capacitance	$C_T$	$V_R=6\text{V}, f=1.0\text{MHz}$	-	3.5	pF
Reverse Recovery Time	$T_{RR}$	$V_R=6\text{V}, I_F=5\text{mA}$	-	4.0	ns

- Notes : 1.Device mounted on FR-4 PCB 70 x 60 x 1mm pad layout.  
2.Short duration pulse test used to minimize self-heating effect.  
3.No purposely added lead.

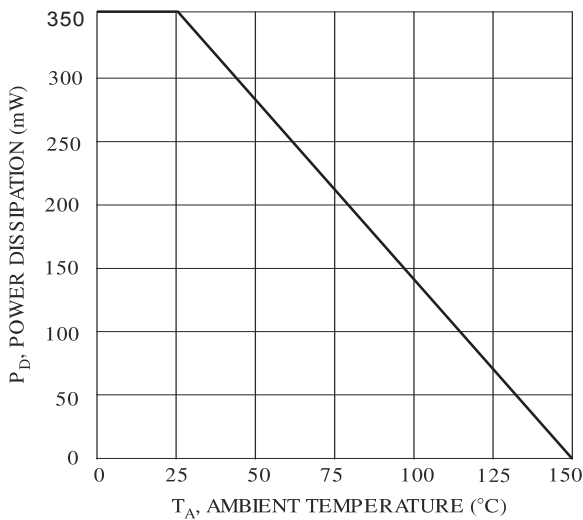


Fig. 1 Power Derating Curve, Total Package

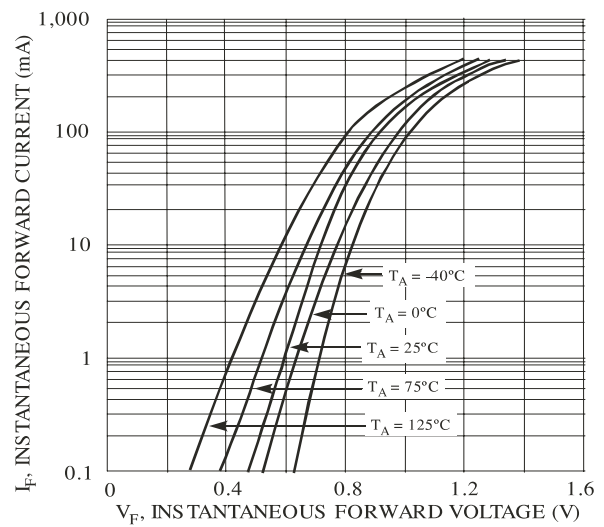


Fig. 2 Typical Forward Characteristics, Per Element

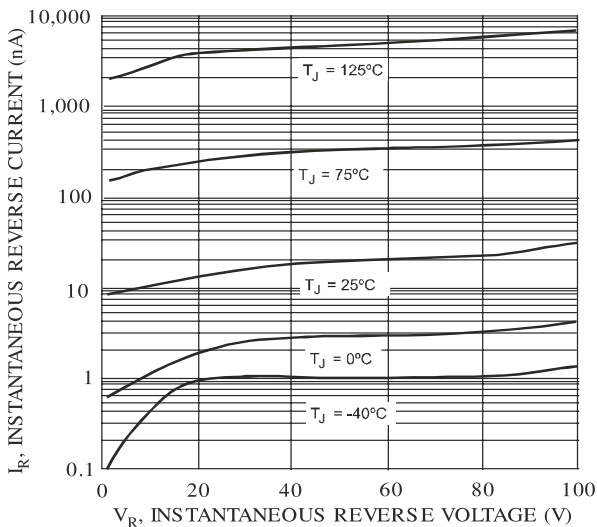


Fig. 3 Typical Reverse Characteristics, Per Element

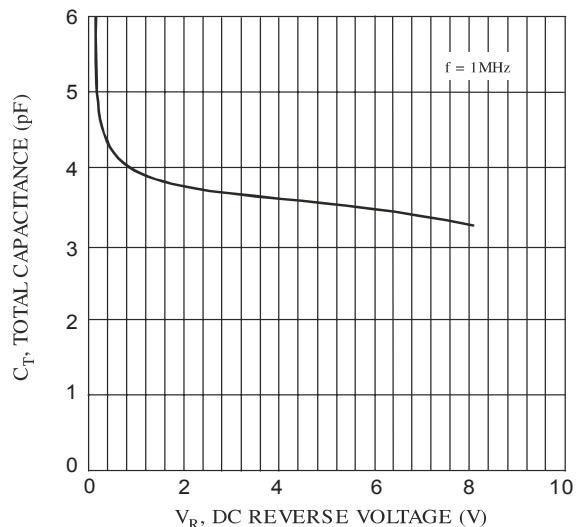
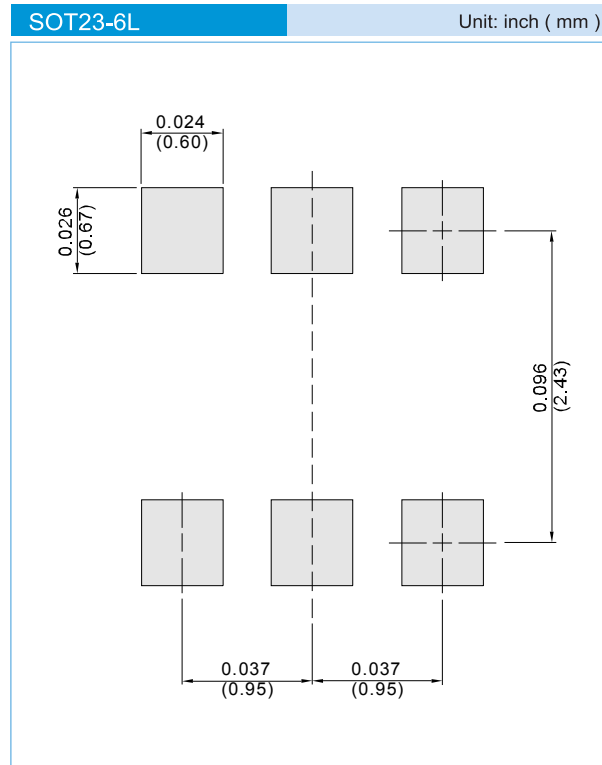


Fig. 4 Total Capacitance vs. Reverse Voltage, Per Element



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 10K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel



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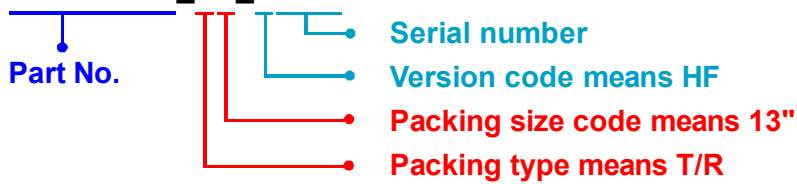
## Part No\_packing code\_Version

MMBD4448W6\_R1\_00001

MMBD4448W6\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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