



## SURFACE MOUNT HIGH VOLTAGE SWITCHING DIODE ARRAY

This device features two series-connected diode pairs which can be connected to form a full-wave bridge. It is housed in a very small SOT-23 6L surface mount package.

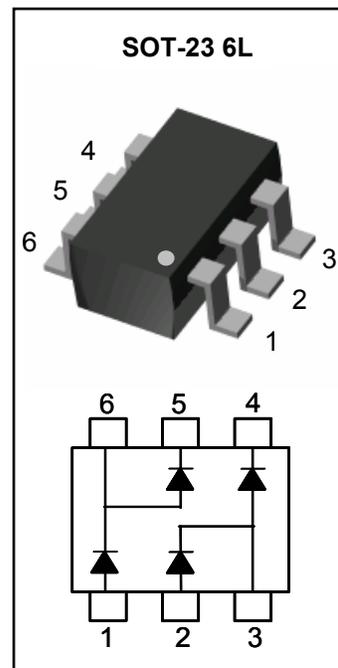
### FEATURES

- High Reverse Voltage Rating
- Fast Switching Speed
- Low Capacitance
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### APPLICATIONS

- Power Supplies
- High Speed Rectification

Marking Code: B34



### MAXIMUM RATINGS (Per Diode) $T_J = 25^{\circ}\text{C}$ Unless otherwise noted

Rating	Symbol	Value	Units
Repetitive Peak Reverse Voltage	$V_{RRM}$	350	V
Continuous Reverse Voltage	$V_R$	300	V
RMS Reverse Voltage	$V_{RMS}$	212	V
Continuous Forward Current (Note 1)	$I_F$	225	mA
Peak Repetitive Forward Current (Note 1)	$I_{FRM}$	625	mA
Non-repetitive Peak Forward Current, $t = 1\text{sec}$ , Square Wave	$I_{FSM}$	1.0	A
Total Power Dissipation (Note 1)	$P_{tot}$	350	mW
Operating Junction Temperature Range	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^{\circ}\text{C}$

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient (Note 1)	$R_{thja}$	357	$^{\circ}\text{C}/\text{W}$

Note 1. FR-5 Board 1.0 x 0.75 x 0.062 in.



## ELECTRICAL CHARACTERISTICS (Per Diode) $T_j = 25^\circ\text{C}$ Unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage (Note 1)	$V_{BR}$	$I_{BR} = 150\mu\text{A}$	350	-	-	V
Forward Voltage (Note 1)	$V_F$	$I_F = 20\text{mA}$	-	0.82	0.87	V
		$I_F = 100\text{mA}$	-	0.95	1.0	
		$I_F = 200\text{mA}$	-	1.0	1.25	
Reverse Leakage Current (Note 1)	$I_R$	$V_R = 240\text{V}$ $V_R = 240\text{V}$ $T_j = 150^\circ\text{C}$	-	0.02 0.5	0.1 100	$\mu\text{A}$
Total Capacitance	$C_T$	0Vdc Bias, $f = 1\text{MHz}$	-	1.7	5.0	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 30\text{mA}$ , $I_{RR} = 3\text{mA}$ $R_L = 100\text{ohms}$	-	-	50	ns

Note 1. Short duration pulse test to avoid self-heating effect

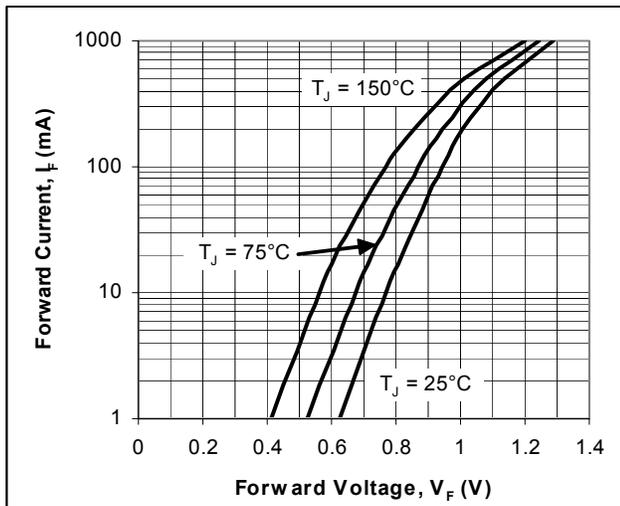


Fig. 1. Typical Forward Characteristics

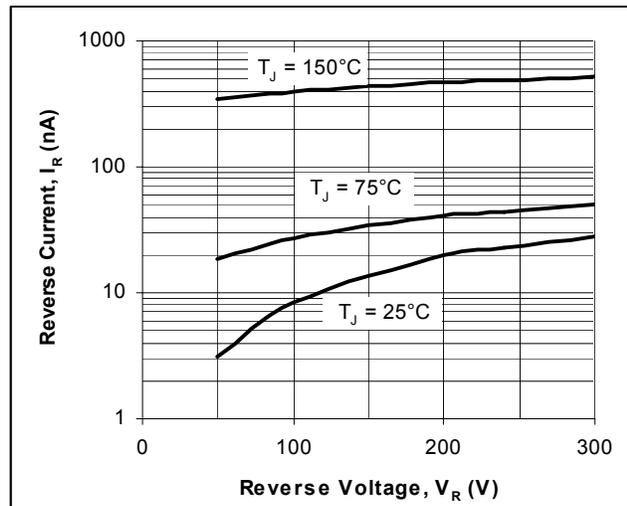


Fig. 2. Typical Reverse Characteristics

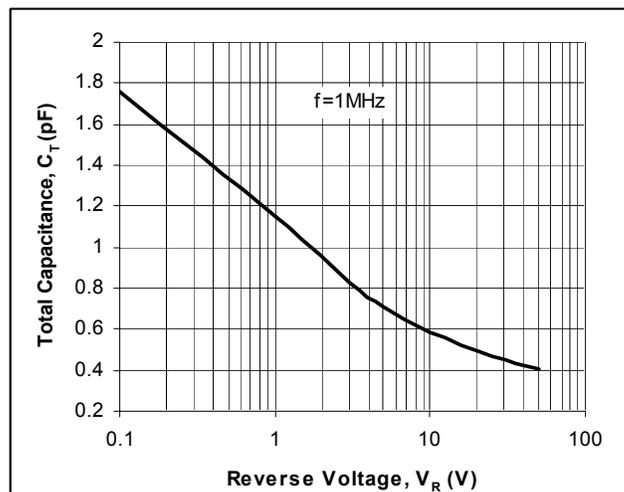
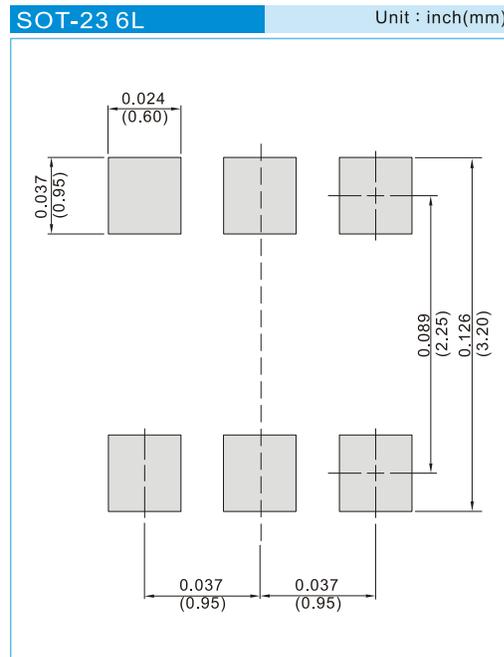
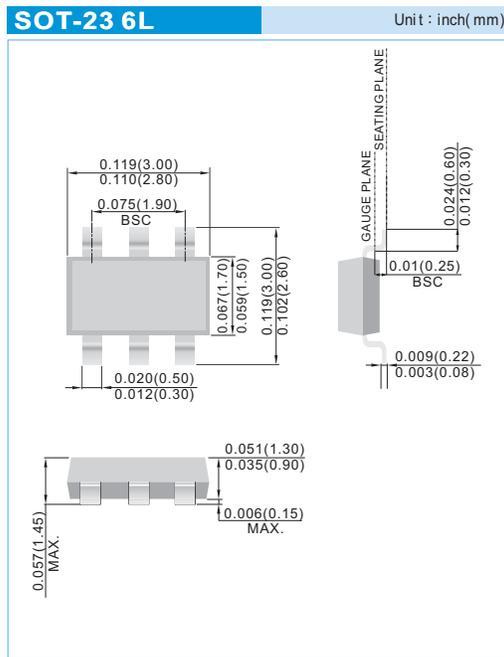


Fig. 3. Typical Capacitance



## PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS



## ORDERING INFORMATION

- MMBD3004BRM T/R7 - 7" reel, 3K units per reel. Pin 1 towards tape sprocket holes
- MMBD3004BRM T/R7R - 7" reel, 3K units per reel. Pin 1 away from tape sprocket holes
- MMBD3004BRM T/R13 - 13" reel, 10K units per reel. Pin 1 towards tape sprocket holes
- MMBD3004BRM T/R13R - 13" reel, 10K units per reel. Pin 1 away from tape sprocket holes



# MMBD3004BRM

## Part No\_packing code\_Version

MMBD3004BRM\_R1\_00001  
 MMBD3004BRM\_R2\_00001  
 MMBD3004BRM\_S1\_00001  
 MMBD3004BRM\_S2\_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>			



## MMBD3004BRM

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