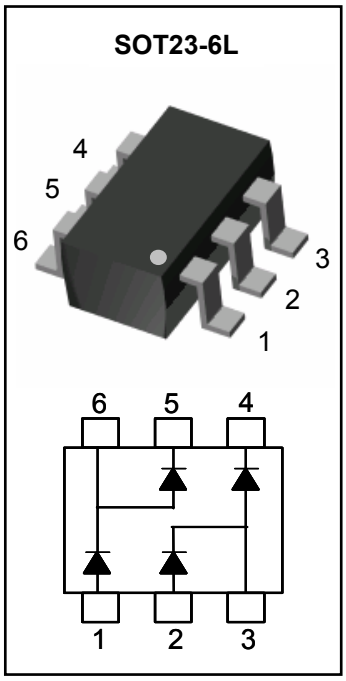
MMBD3004BRM

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 SOT23-6L surface mount package.



FEATURES

- **High Reverse Voltage Rating**
- **Fast Switching Speed**
- **Low Capacitance**
- **100% Matte Tin Finish (LEAD-FREE PRODUCT)**

APPLICATIONS

- **Power Supplies**
- **High Speed Rectification**

Marking Code: 304

MAXIMUM RATINGS (Per Diode) T_J = 25°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 = 1sec, 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	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient (Note 1)	R_{thja}	357	°C/W

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

ELECTRICAL CHARACTERISTICS (Per Diode) Tj = 25°C Unless otherwise noted

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

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

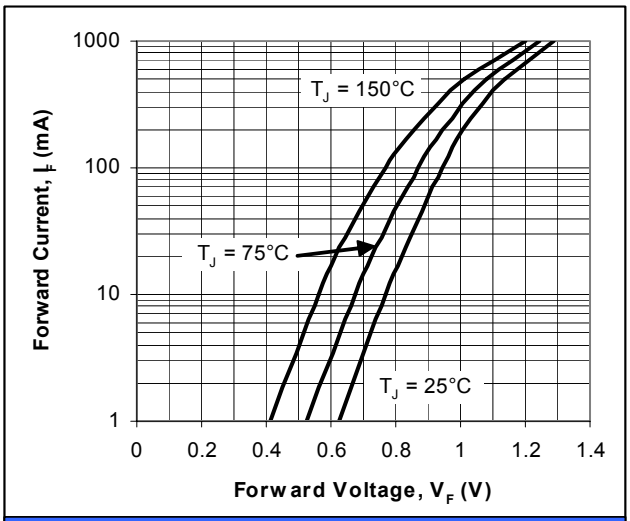


Fig. 1. Typical Forward Characteristics

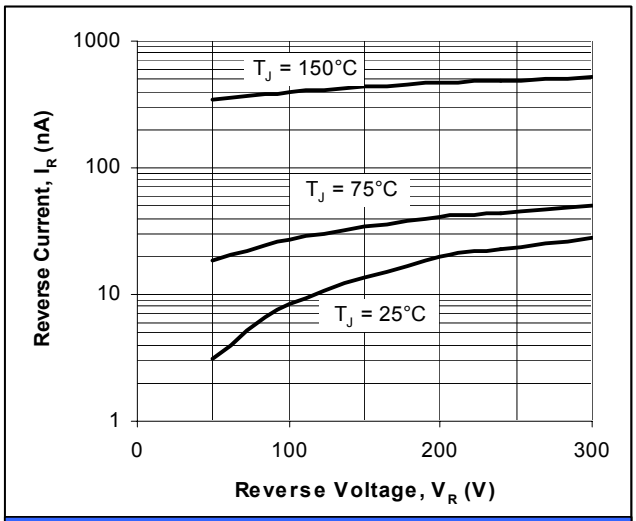


Fig. 2. Typical Reverse Characteristics

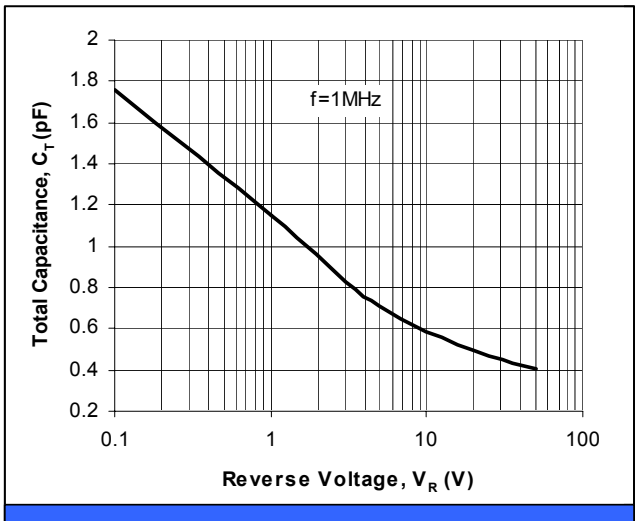
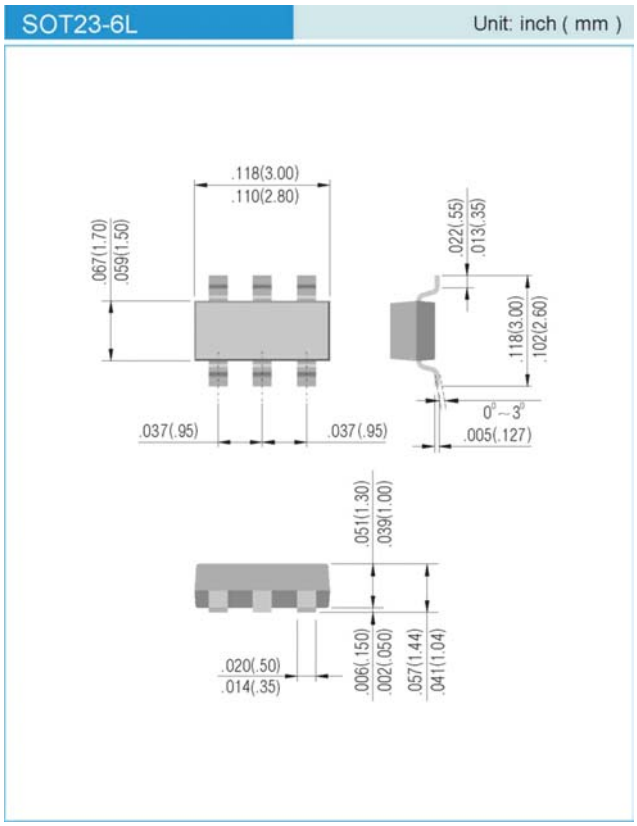
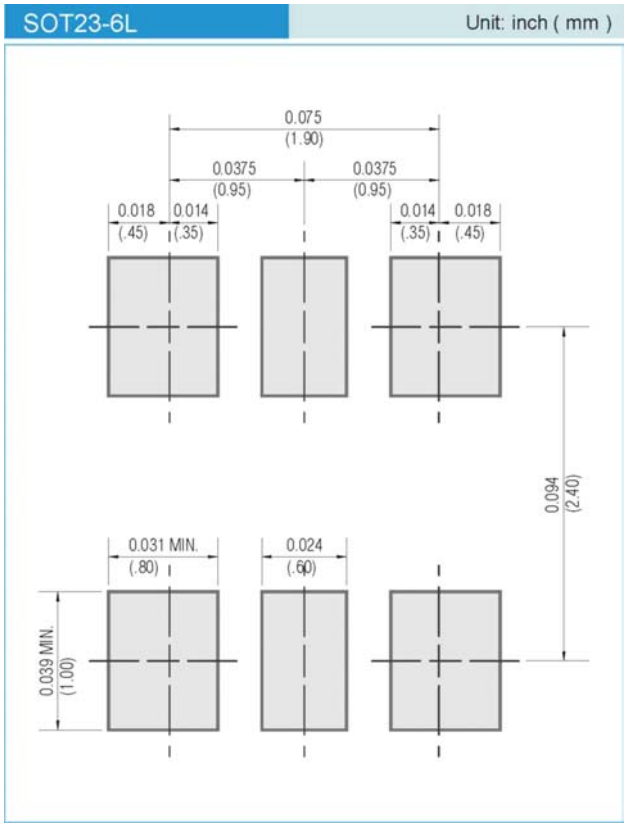


Fig. 3. Typical Capacitance

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