



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.

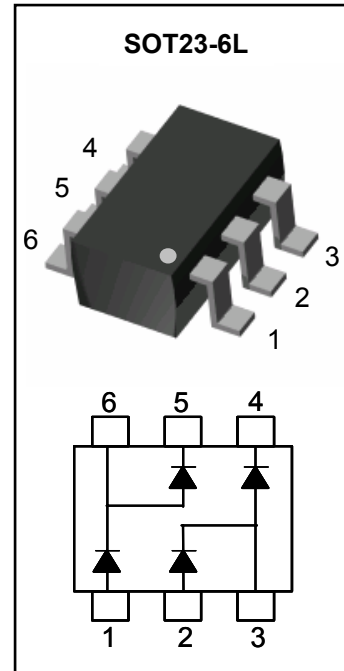
FEATURES

- 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) $T_J = 25^{\circ}\text{C}$ 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	$V_R = 240\text{V}$	-	0.02	0.1	μA
		$V_R = 240\text{V}$ $T_j = 150^\circ\text{C}$	-	0.5	100	
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

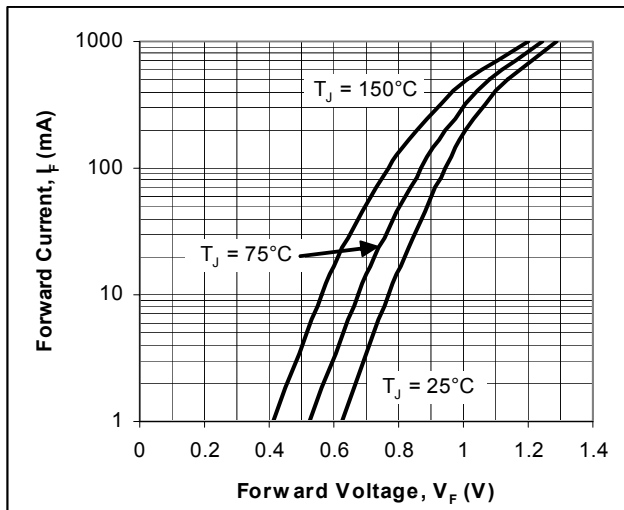


Fig. 1. Typical Forward Characteristics

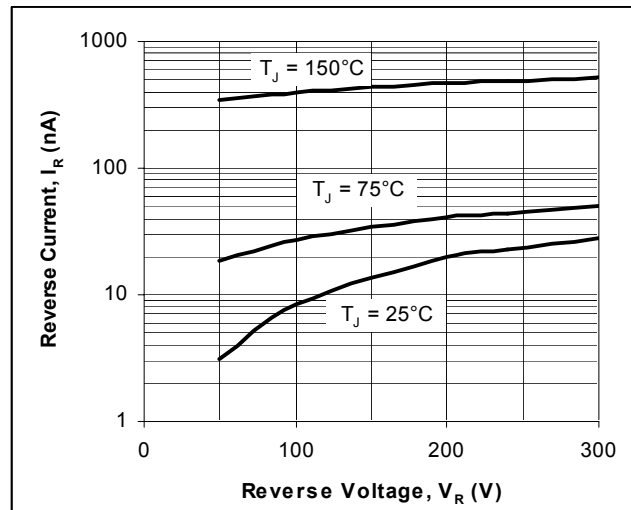


Fig. 2. Typical Reverse Characteristics

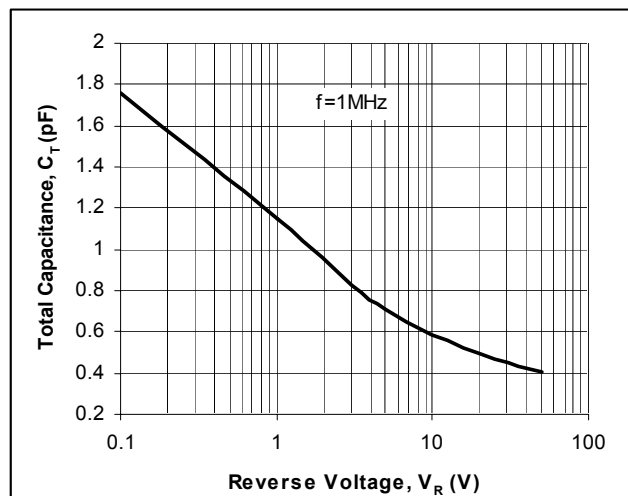
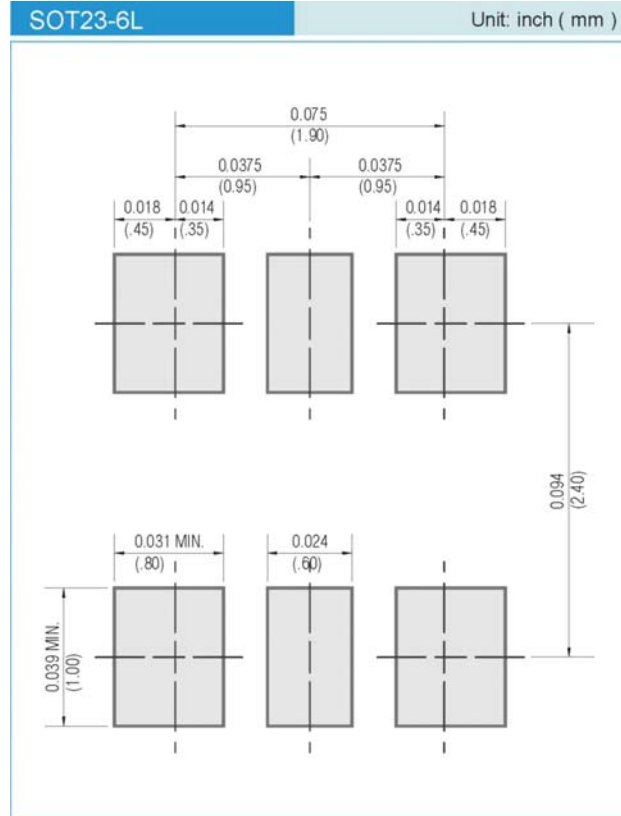
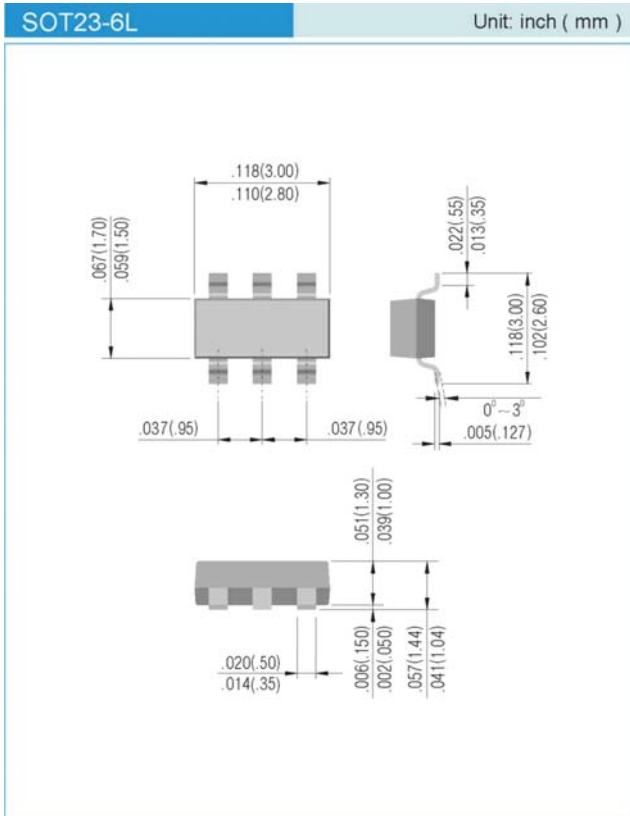


Fig. 3. Typical Capacitance



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

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