



# MMBD3004S

## HIGH VOLTAGE SURFACE MOUNT SWITCHING DIODE

**VOLTAGE** 350 Volts **POWER** 250 mWatts **SOT-23** Unit: inch (mm)

### FEATURES

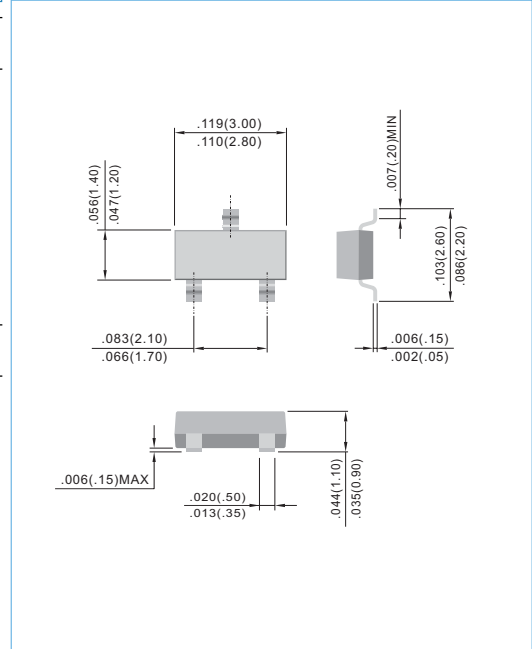
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- High Conductance
- High Reverse Breakdown Voltage Rating
- Pb free product are available : 99% Sn above can meet RoHS environment substance directive request

### MECHANICAL DATA

Case: SOT-23, Plastic

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

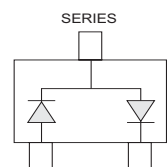
Approx. Weight: 0.008 gram



### MAXIMUM RATINGS(T<sub>A</sub>=25°C, unless otherwise specified)

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	350	V
Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RWM</sub> V <sub>R</sub>	300	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	212	V
Forward Continuous Current (Note 1)	I <sub>F</sub>	225	mA
Peak Repetitive Forward Current (Note 1)	I <sub>FRM</sub>	625	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0μs @ t=1.0s	I <sub>FSM</sub>	4.0 1.0	A
Power Dissipation (Note 1)	P <sub>d</sub>	250	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	500	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 150	°C

Notes : 1. Part mounted on FR-4 board with recommended pad layout.





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

CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Reverse Breakdown Voltage (Note 2)	$V_{BR}$	350	-	-	V	$I_R=150\mu\text{A}$
Forward Voltage (Note 2)	$V_F$	-	0.78 0.93 1.03	0.87 1.0 1.25	V	$I_F=20\text{mA}$ $I_F=100\text{mA}$ $I_F=200\text{mA}$
Reverse Current (Note 2)	$I_R$	-	30 35	100 100	nA $\mu\text{A}$	$V_R=240\text{V}$ $V_R=240\text{V}, T_J=150^{\circ}\text{C}$
Total Capacitance	$C_T$	-	1.0	5.0	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	-	-	50	ns	$I_F=I_R=30\text{mA}$ $I_{rr}=3.0\text{mA}, R_L=100\Omega$

Notes : 2. Short duration test pulse used to minimize self-heating effect



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## ELECTRICAL CHARACTERISTICS CURVES

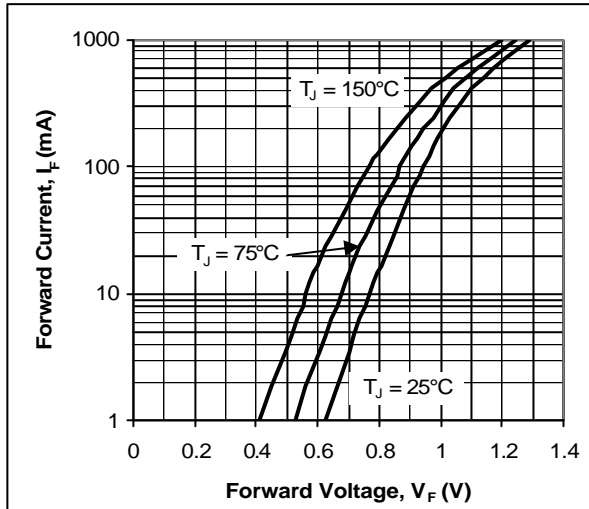


Fig. 1. Typical Forward

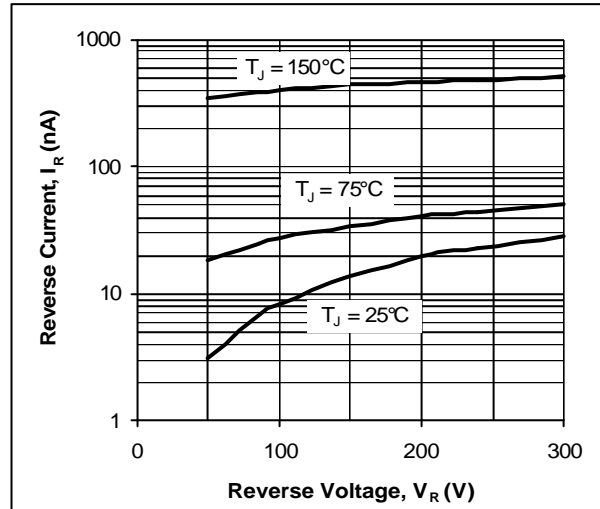


Fig. 2. Typical Reverse

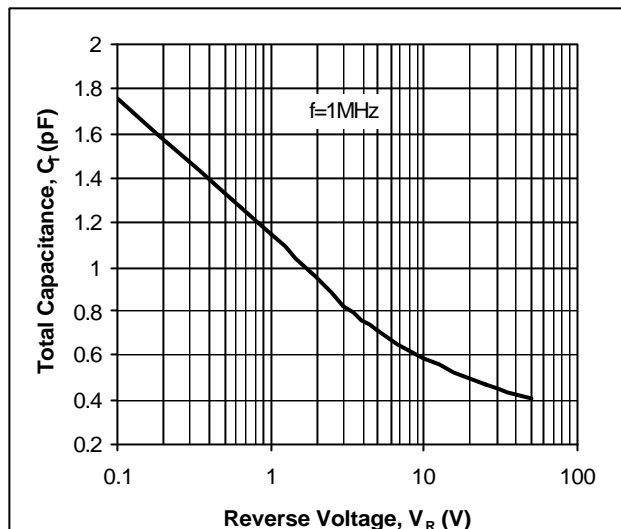
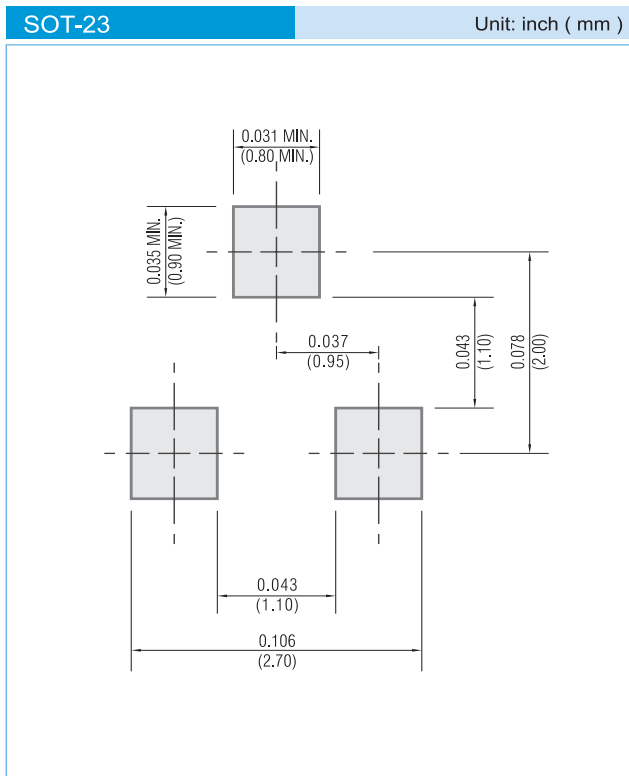


Fig. 3. Typical Capacitance



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 3K per 7" plastic Reel

### LEGAL STATEMENT

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