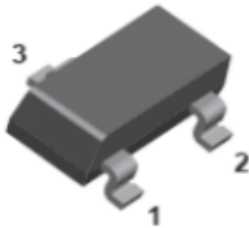
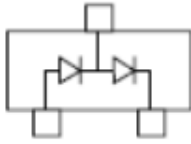


## Dual Switching Diode



**SOT-23**

### Features

- Moisture sensitivity level 1
- Reverse voltage: 300V
- Average forward current : 225mA

### Application

- Signal switching
- High frequency rectifier

### Mechanical data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			4P
Repetitive peak reverse voltage	V <sub>RRM</sub>	V	350
Forward current	I <sub>F</sub>	mA	225
Non-repetitive Surge peak forward current @ t=1us	I <sub>FSM</sub>	A	4
Non-repetitive Surge peak forward current @ t=1s			1
Power dissipation	P <sub>D</sub>	mW	350
Junction temperature	T <sub>J</sub>	°C	-55 to +150
Storage temperature	T <sub>STG</sub>	°C	-55 to +150



# MMBD3004S

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## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V <sub>R</sub>	V	I <sub>R</sub> =150μA	350		
Forward voltage	V <sub>F1</sub>	V	I <sub>F</sub> =20mA			0.87
	V <sub>F2</sub>	V	I <sub>F</sub> =100mA			1
	V <sub>F3</sub>	V	I <sub>F</sub> =200mA			1.25
Reverse leakage current	I <sub>R</sub>	nA	V <sub>R</sub> =240V			100
Junction capacitance	C <sub>j</sub>	pF	V <sub>R</sub> =0V, f=1MHz			5
Reverse recovery time	T <sub>rr</sub>	ns	I <sub>F</sub> =30mA, I <sub>R</sub> =30mA R <sub>L</sub> =100Ω, I <sub>rr</sub> =3mA			50

## ■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	357
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> <sup>(1)</sup>	°C/W	286

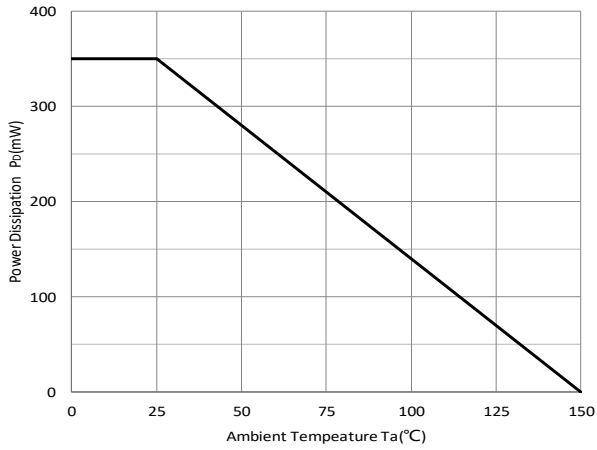
### Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint

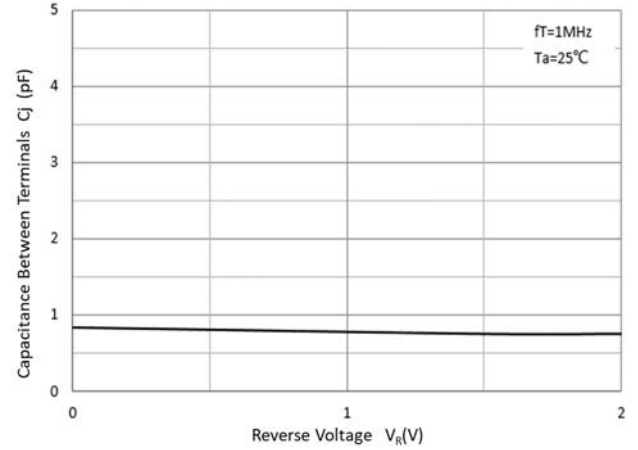


## ■ Characteristics

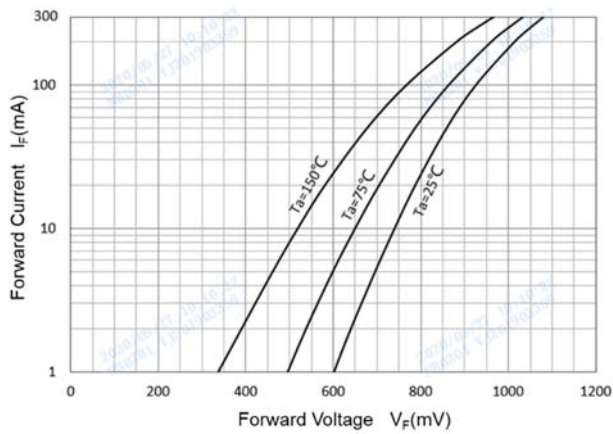
**Fig 1: P<sub>D</sub>-T<sub>a</sub> Curve**



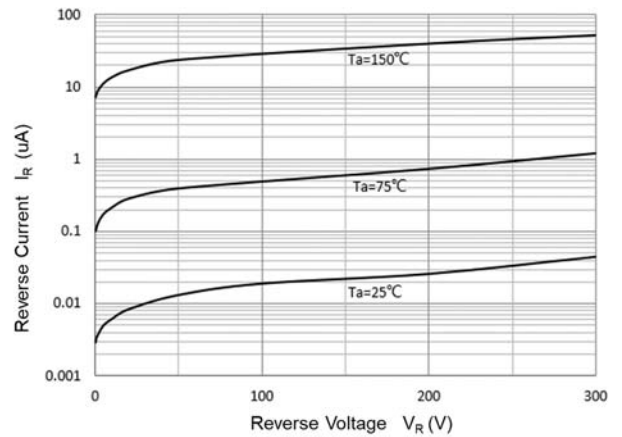
**Fig 2: Capacitance Capability**



**Fig 3: Typical Forward Characteristics**



**Fig 4: Typical Reverse Characteristics**





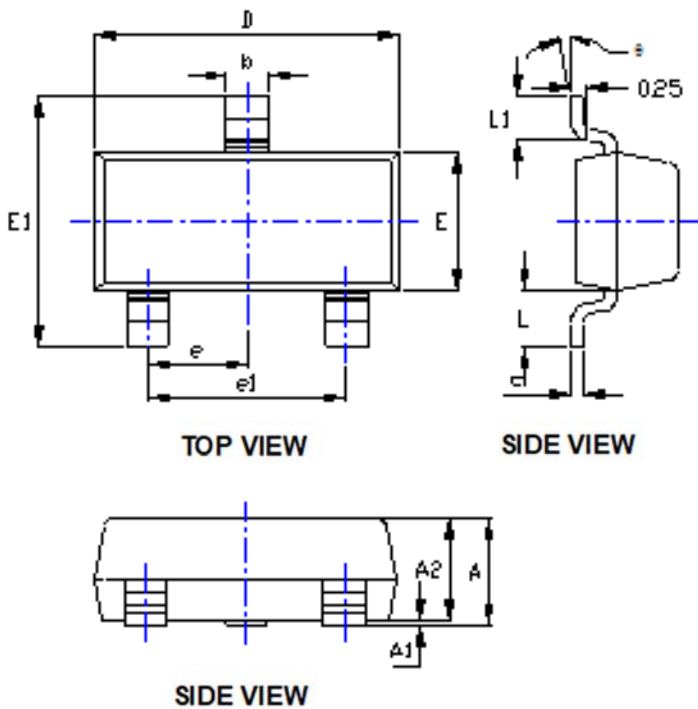
# MMBD3004S

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## Ordering Information

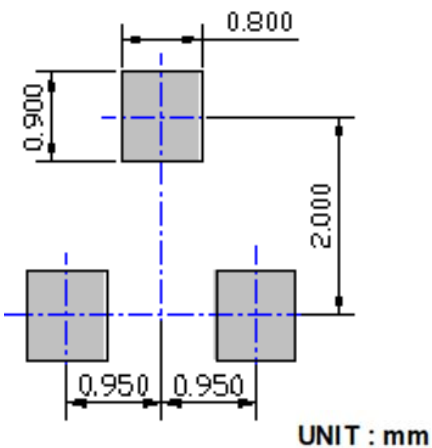
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity (pcs)	Delivery mode
MMBD3004S	F2	Approximate 0.008	3000	30000	120000	7" reel
MMBD3004S	F4	Approximate 0.008	10000	/	210000	13" reel

## Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
$\theta$	0°	8°	0°	8°

## Suggested Pad Layout





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