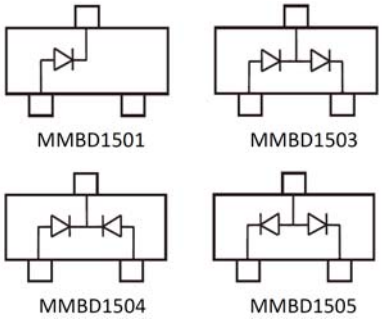
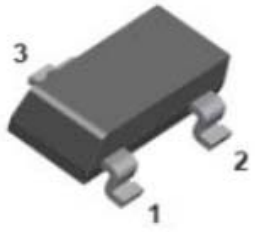
Small Signal Diode





Features

- Moisture sensitivity level 1
- Reverse voltage: 200V
- Average forward current : 200mA

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_a=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			MMBD1501	11
			MMBD1503	13
			MMBD1504	14
			MMBD1505	15
Repetitive peak reverse voltage	V_{RRM}	V	200	
Forward current, per leg	I_F	mA	200	
Non-repetitive Surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	1	
Non-repetitive Surge peak forward current @ t=1ms square wave			2	
Power dissipation	P_D	mW	300	
Junction temperature	T_J	℃	-55 to +150	
Storage temperature	T_{STG}	℃	-55 to +150	

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter	Symbol	UNIT	Conditions	Min	TYP	Max
Reverse voltage	V_R	V	I_R=5uA	200		
Forward voltage	V_{F1}	V	I_F=1mA	0.62		0.75
	V_{F2}	V	I_F=10mA	0.72		0.85
	V_{F3}	V	I_F=50mA	0.8		0.95
	V_{F4}	V	I_F=100mA	0.83		1.1
	V_{F5}	V	I_F=200mA	0.87		1.3
	V_{F6}	V	I_F=300mA	0.9		1.5
Reverse leakage current	I_R	nA	V_R=180V			10
Junction capacitance	Cj	pF	V_R=0V,f=1MHz			4

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	417
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	333

Note:

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

■Characteristics

Fig 1：P_D-Ta Curve

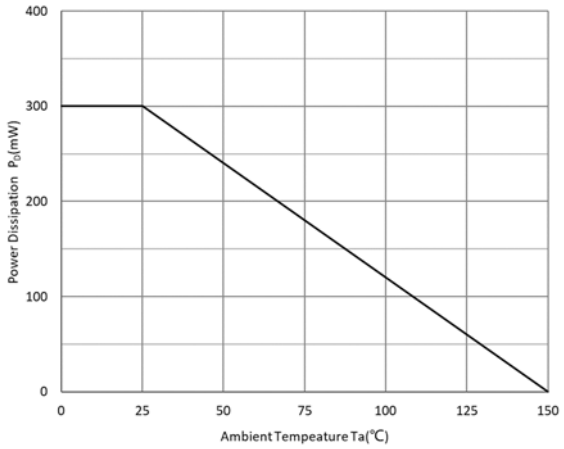


Fig 2：Capacitance Capability

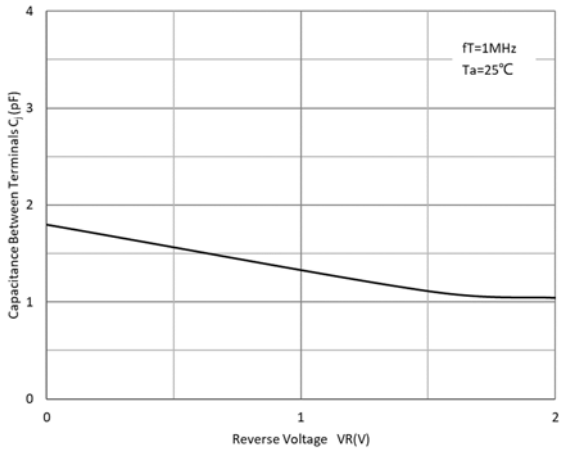


Fig 3：Typical Forward Characteristics

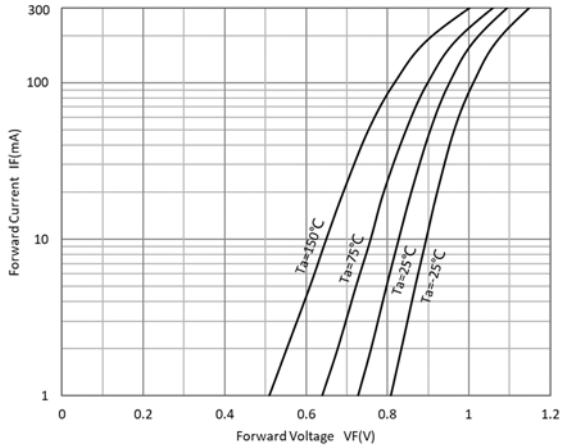
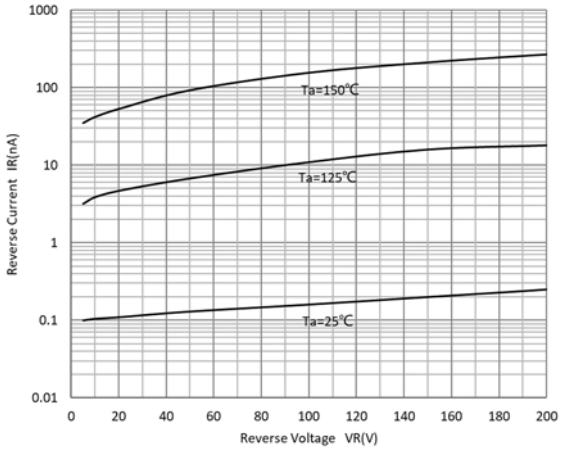


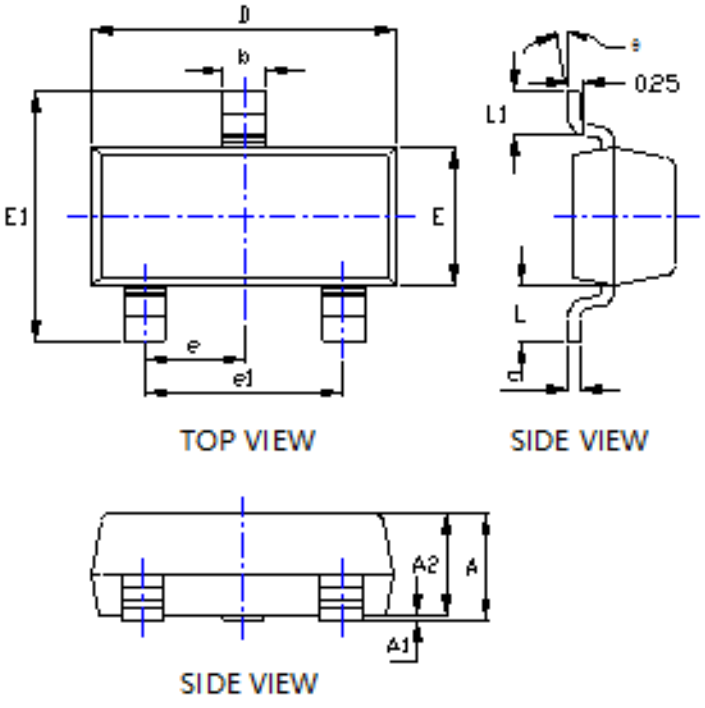
Fig 4：Typical Reverse Characteristics



■Ordering Information

Prefered P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity (pcs)	Delivery mode
MMBD1501	F2	Approximate 0.008	3000	30000	120000	7” reel
MMBD1501	F4	Approximate 0.008	10000	-	210000	13” reel
MMBD1503	F2	Approximate 0.008	3000	30000	120000	7” reel
MMBD1503	F4	Approximate 0.008	10000	-	210000	13” reel
MMBD1504	F2	Approximate 0.008	3000	30000	120000	7” reel
MMBD1504	F4	Approximate 0.008	10000	-	210000	13” reel
MMBD1505	F2	Approximate 0.008	3000	30000	120000	7” reel
MMBD1505	F4	Approximate 0.008	10000	-	210000	13” reel

■ Outline Dimensions



DIMENSIONS				
SYMBOL	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
θ	0°	8°	0°	8°

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