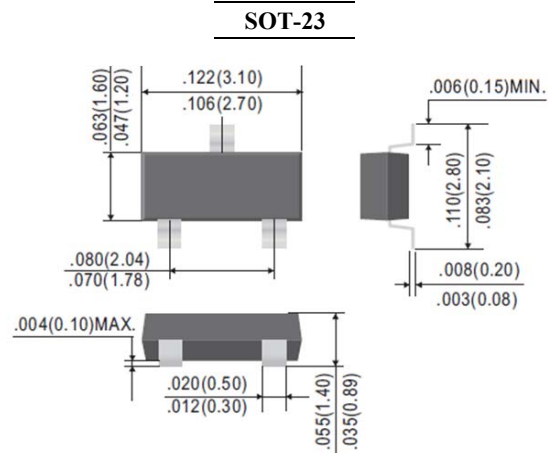
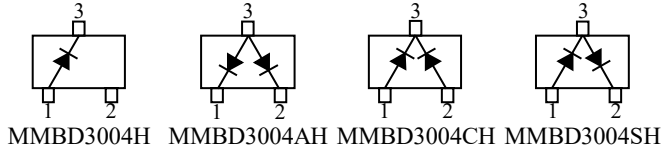




MMBD3004 SERIES SWITCHING DIODES

FEATURES

- Fast switching speed
- High Reverse Breakdown Voltage Rating
- Suffix "H" indicates Halogen-free parts, ex. MMBD3004H.



Dimensions in inch and (millimeter)

Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage	V_{RWM}	300	V
DC Blocking Voltage	V_R	300	V
Continuous Forward Current	I_F	225	mA
Peak Repetitive Forward Current	I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	1	A
		4	
Total Power Dissipation	P_{tot}	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Note :

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Min	Max	Unit
Reverse Breakdown Voltage	$I_R = 100\mu\text{A}$	$V_{BR(R)}$	350	-	V
Forward Voltage	$I_F = 20\text{mA}$	V_F	-	0.87	V
	$I_F = 100\text{mA}$		-	1.00	
	$I_F = 200\text{mA}$		-	1.25	
Reverse Current	$V_R = 240\text{V}$	I_R	-	100	nA
	$V_R = 240\text{V}, T_J = 150^\circ\text{C}$		-	100	μA
Total Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T	-	5.0	pF
Reverse recovery time	$I_F = I_R = 30\text{mA}, I_{tr} = 0.1I_R, R_L = 100\Omega$	t_{rr}	-	50	ns



MMBD3004 SERIES SWITCHING DIODES

RATINGS AND CHARACTERISTIC CURVES

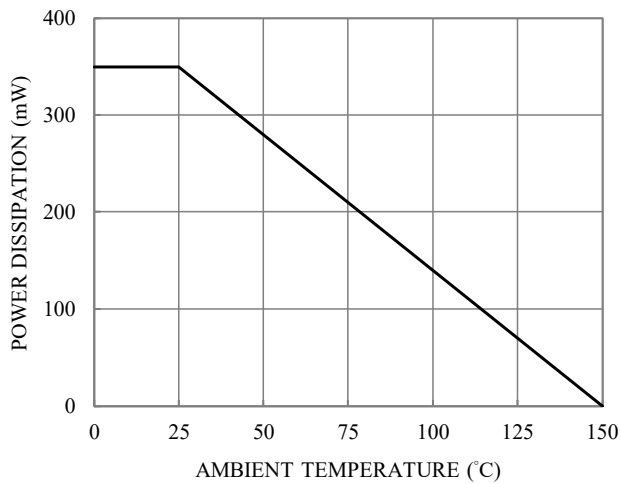


Fig.1-POWER DERATING CURVE

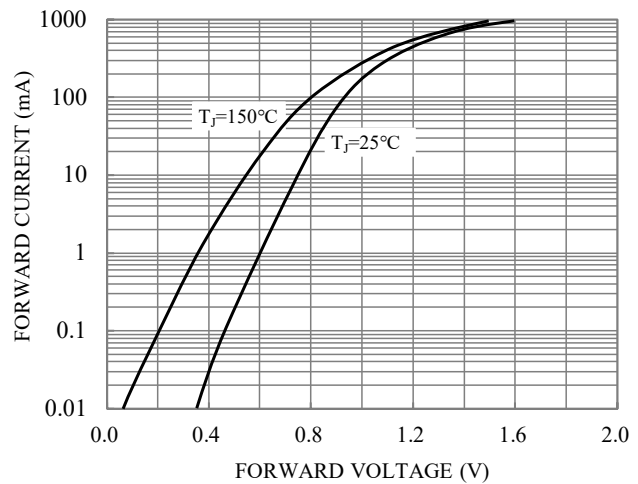


Fig.2-TYPICAL FORWARD CHARACTERISTICS

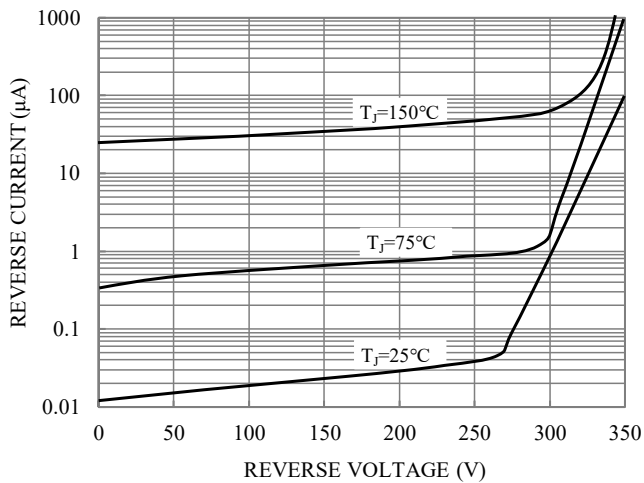


Fig.3-TYPICAL REVERSE CHARACTERISTICS

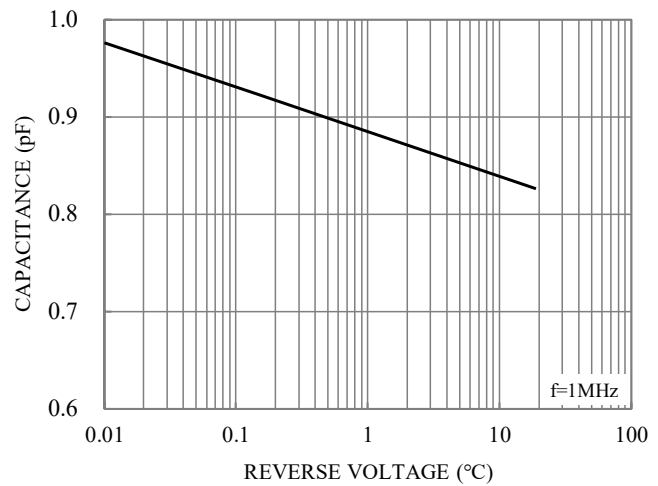
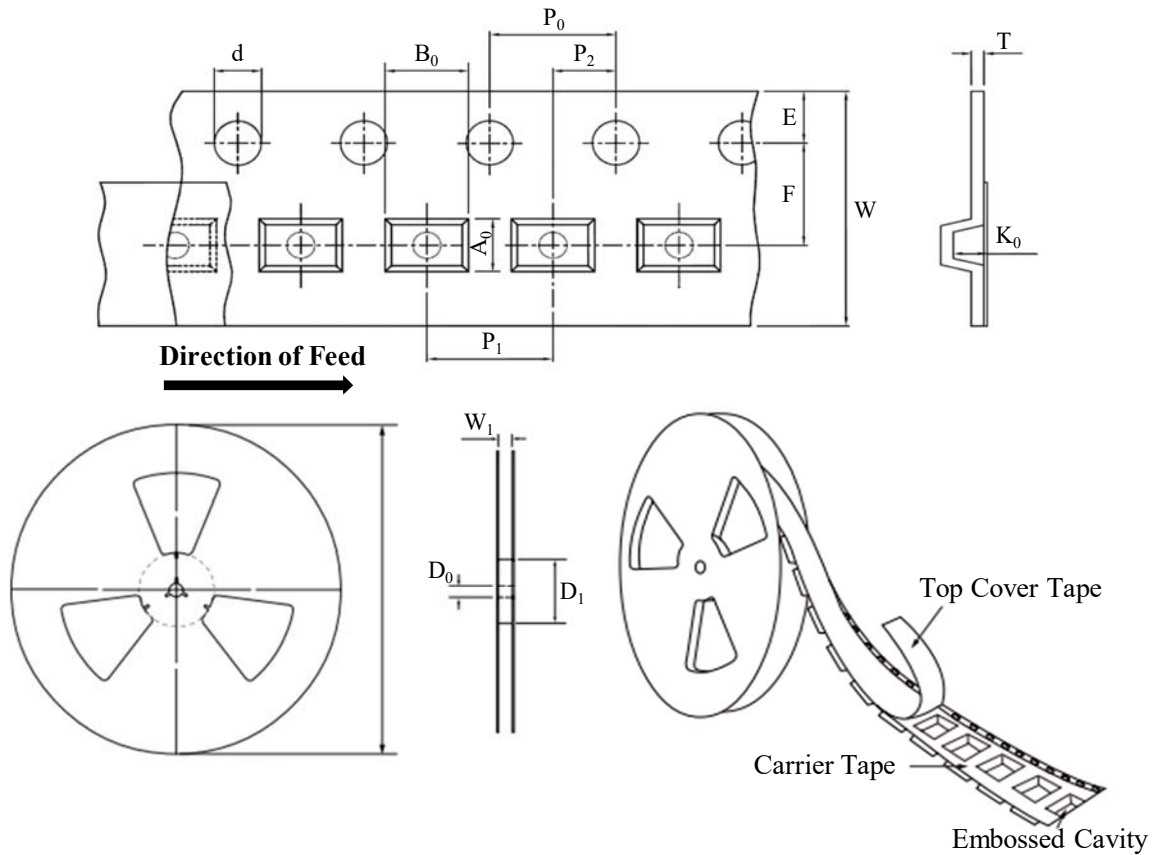


Fig.4-TYPICAL CAPACITANCE



MMBD3004 SERIES SWITCHING DIODES

TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A ₀	3.30 ± 0.10
Carrier length	B ₀	3.00 ± 0.10
Carrier depth	K ₀	1.70 ± 0.10
Sprocket hole	d	1.60 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.50
Reel inner diameter	D ₁	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W ₁	MAX. 14.50

ORDER INFORMATION

Package	Reel Size	Quantity
SOT-23	7"	3,000

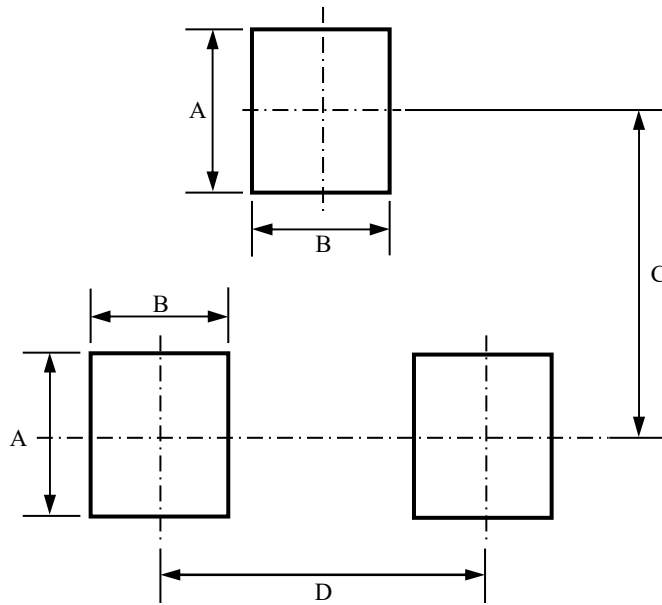
MARKING CODE

Part Number	Marking Code
MMBD3004H	HC
MMBD3004AH	RA
MMBD3004CH	PZ
MMBD3004SH	PY



MMBD3004 SERIES SWITCHING DIODES

SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOT-23	1.00	0.80	2.00	1.90