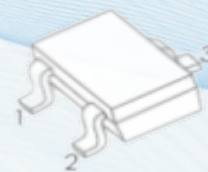


MMBD3004 Silicon Epitaxial Planar Diode

High Voltage Switching Diode

Features

- Fast switching speed
- High Conductance
- High Reverse Breakdown Voltage



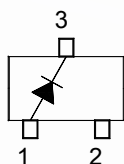
SOT-23

MMBD3004

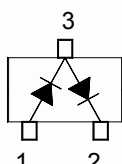
MMBD3004SE

MMBD3004CC

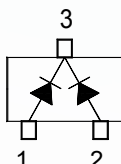
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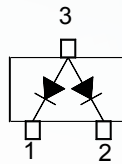
Marking: HC



Marking: PY



Marking: PZ



Marking: RA

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	350	V
Working Peak Reverse Voltage	V_{RWM}	300	V
Reverse 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}	4	A
		1	
		at $t = 1\ \mu\text{s}$	
		at $t = 1\ \text{s}$	
Power Dissipation	P_d	350	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage	V_F	-	0.87	V
at $I_F = 20\ \text{mA}$			1.25	
at $I_F = 100\ \text{mA}$			-	
at $I_F = 200\ \text{mA}$			-	
Reverse Current	I_R	-	100	nA
at $V_R = 240\ \text{V}$			100	μA
at $V_R = 240\ \text{V}, T_j = 150^\circ\text{C}$			-	-
Reverse Breakdown Voltage	$V_{(BR)R}$	350	-	V
at $I_R = 100\ \mu\text{A}$				
Total Capacitance	C_T	-	5	pF
at $V_R = 0, f = 1\ \text{MHz}$				
Reverse Recovery Time	t_{rr}	-	50	ns
at $I_F = I_R = 30\ \text{mA}, i_{rr} = 0.1\ I_R, R_L = 100\ \Omega$				

TYPICAL CHARACTERISTICS

Fig.1 Typical Forward Characteristics

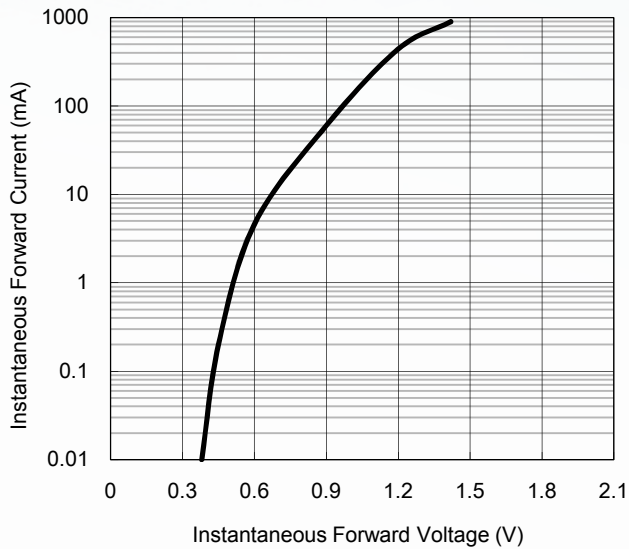


Fig. 2 Typical Reverse Characteristics

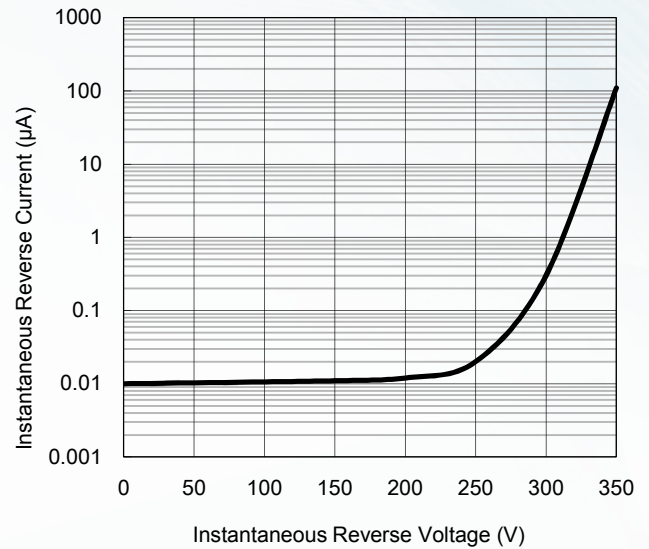


Fig.3 Admissible Power Dissipation Curve

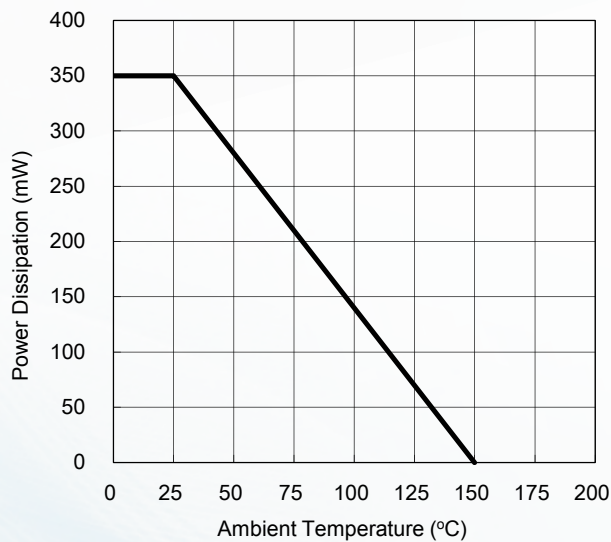
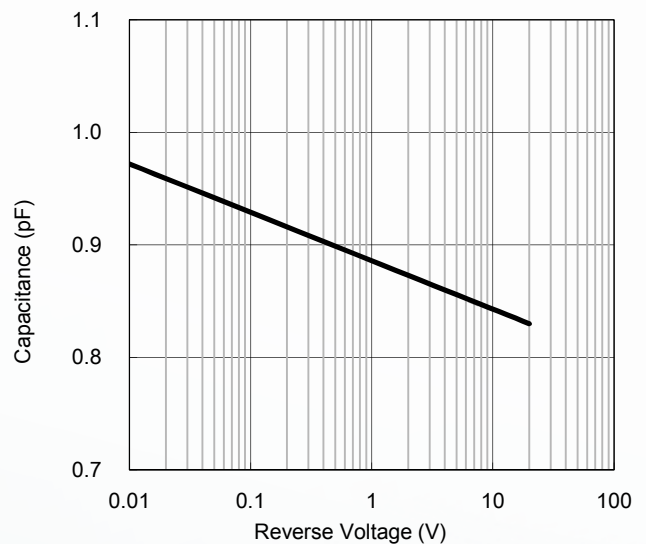


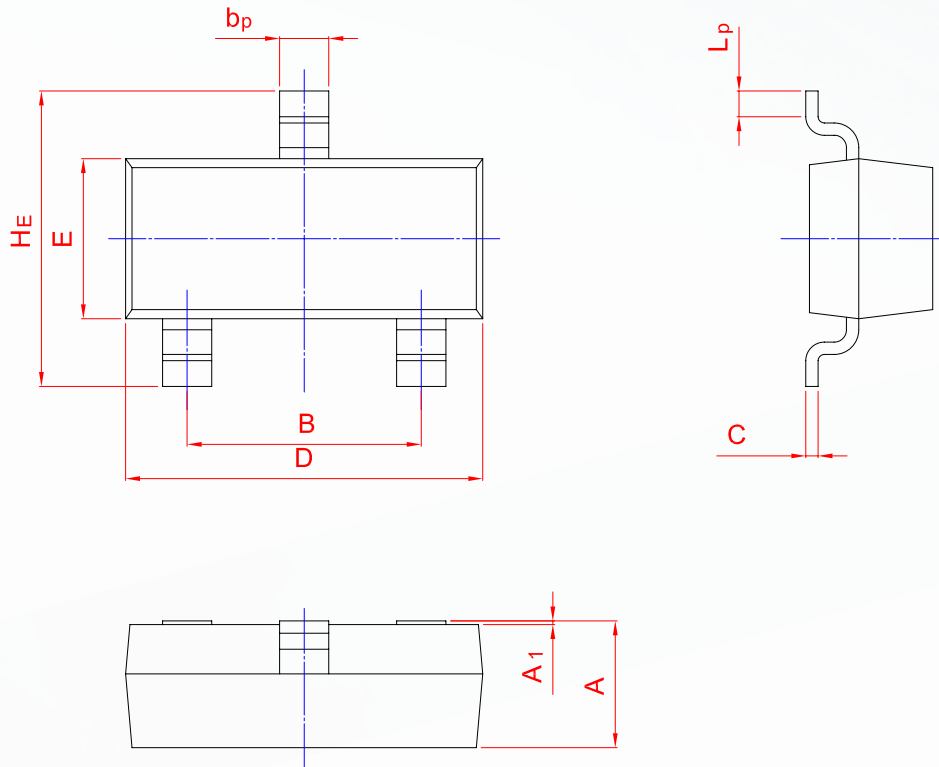
Fig.4 Typical Capacitance VS. Reverse Voltage



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20