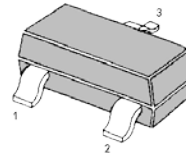


Silicon Epitaxial Planar Switching Diode

High Voltage Switching Diode

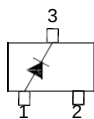
Features

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



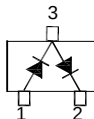
SOT-23 Plastic Package

MMBD3004



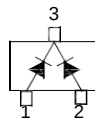
Marking Code: "HC"

MMBD3004SE



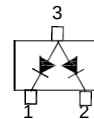
Marking Code: "PY"

MMBD3004CC



Marking Code: "PZ"

MMBD3004CA



Marking Code: "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
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 4	A
		at $t = 1\text{ s}$ at $t = 1\text{ }\mu\text{s}$	
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 1 1.25	V
at $I_F = 20\text{ mA}$ at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$		- - -		
Reverse Current	I_R	-	100 100	nA μA
at $V_R = 240\text{ V}$ at $V_R = 240\text{ V}, T_j = 150^\circ\text{C}$		- -		
Reverse Breakdown Voltage	$V_{(BR)R}$	300	-	V
at $I_R = 100\text{ }\mu\text{A}$				
Total Capacitance	C_T	-	5	pF
at $V_R = 0, f = 1\text{ MHz}$				
Reverse Recovery Time	t_{rr}	-	50	ns
at $I_F = I_R = 30\text{ mA}, I_{rr} = 0.1 I_R, R_L = 100\text{ }\Omega$				

Typical Characteristics

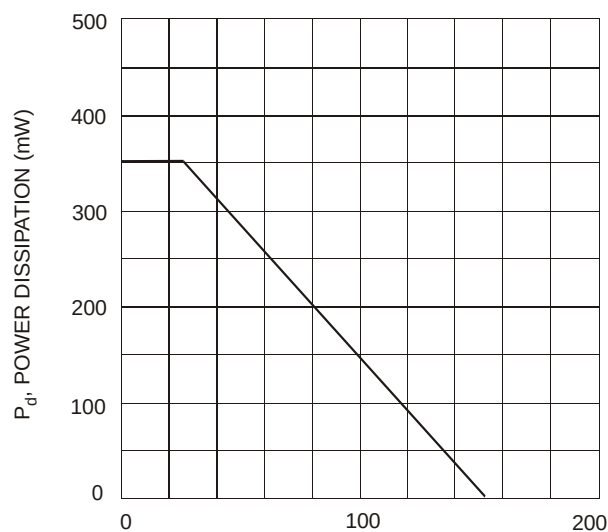


Fig. 1 Power Derating Curve, total package

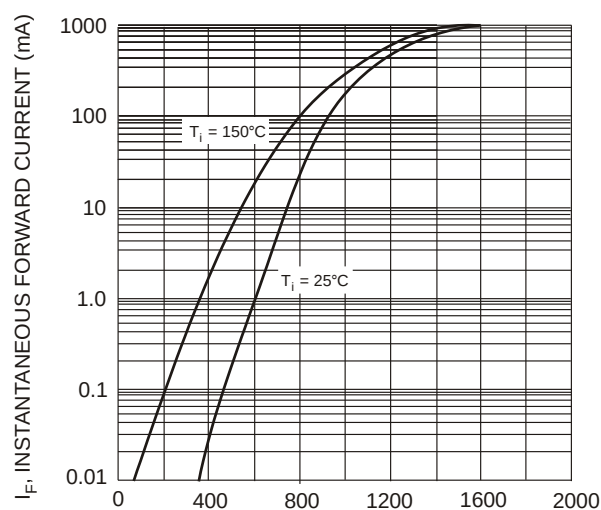


Fig. 2 Typical Forward Characteristics, per element

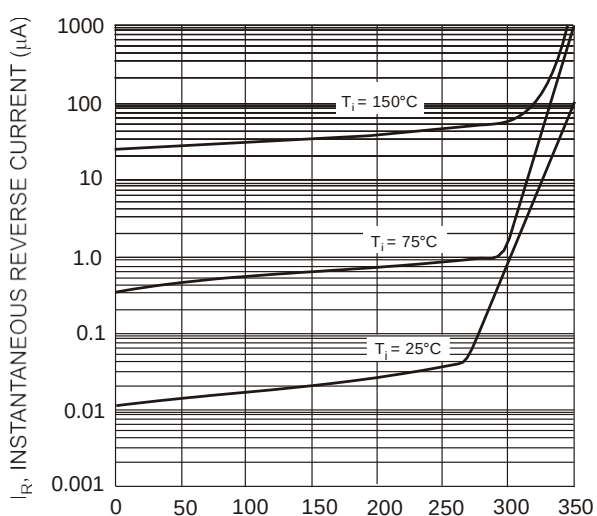


Fig. 3 Typical Reverse Characteristics, per element

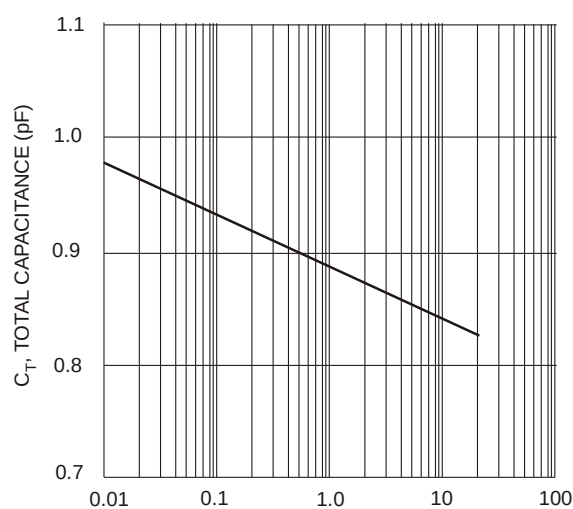
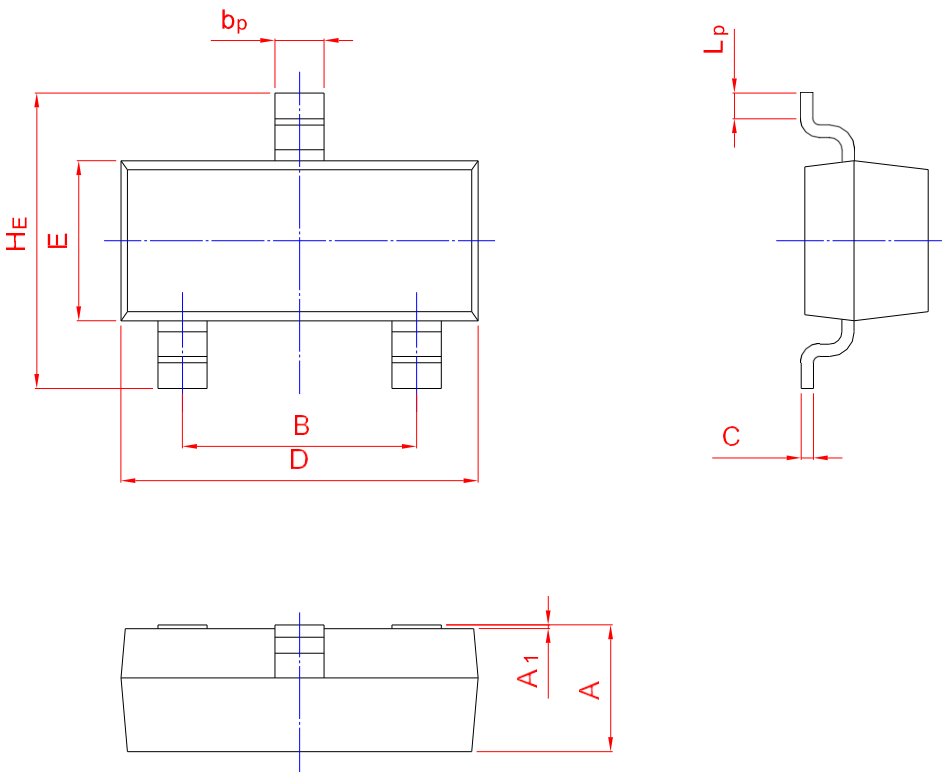
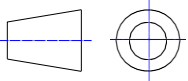


Fig. 4 Typical Total Capacitance vs. Reverse Voltage, per element

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
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