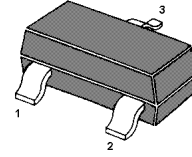
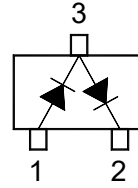


# MMBD7000S

## Silicon Epitaxial Planar Switching Diode

### Features

- Fast switching speed
- High Conductance



1. Anode 2. Cathode. 3. Cathode/ Anode  
SOT-23 Plastic Package

### Applications

- For general purpose switching

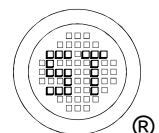
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	100	V
Forward Current	$I_F$	200	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	1 2	A
		at $t = 1\text{ s}$ at $t = 1\text{ }\mu\text{s}$	
Power Dissipation	$P_D$	350	mW
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	357	$^\circ\text{C/W}$

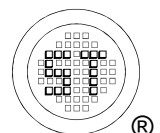
<sup>1)</sup> Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



# MMBD7000S

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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 100\text{ mA}$ at $I_F = 150\text{ mA}$	$V_F$	0.55 0.67 0.75 -	0.7 0.82 1.1 1.25	V
Reverse Current at $V_R = 50\text{ V}$ at $V_R = 100\text{ V}$ at $V_R = 50\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	$I_R$	- - -	1 3 100	$\mu\text{A}$
Total Capacitance at $V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	-	2	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ , $I_{rr} = 0.1 \times I_R$ , $V_R = 6\text{ V}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	-	4	ns



# MMBD7000S

## Electrical Characteristics Curves

Fig 1. Power Derating Curve

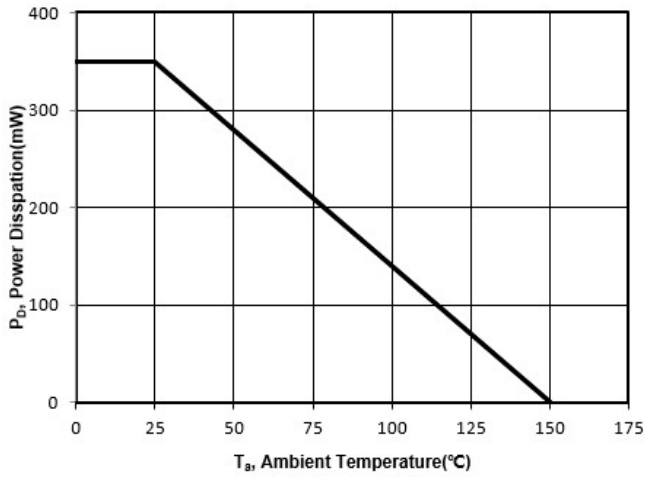


Fig 2. Capacitance Characteristics

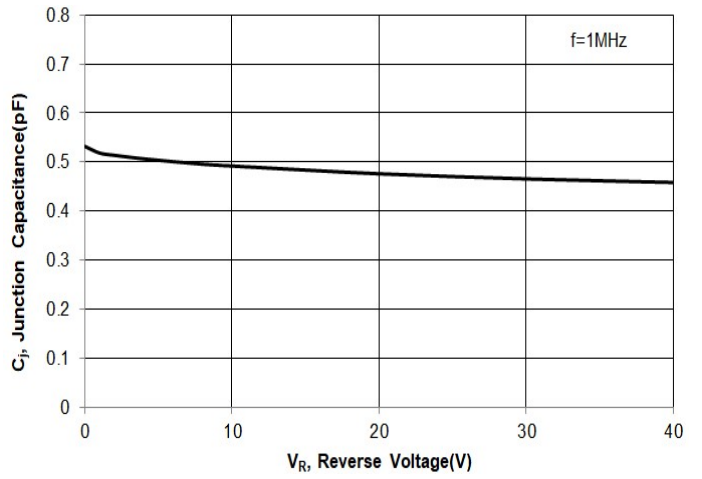


Fig 3. Reverse Characteristics

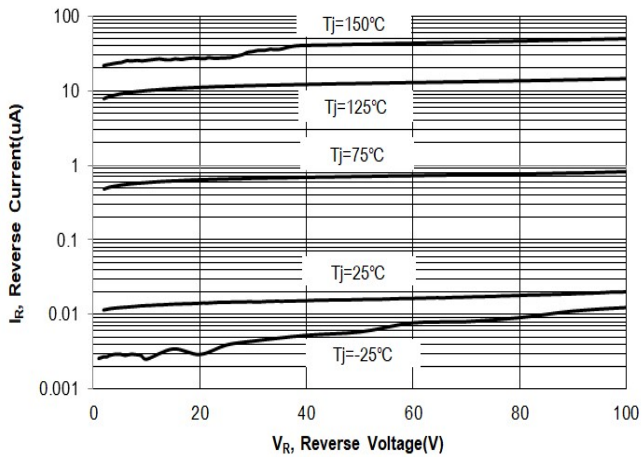
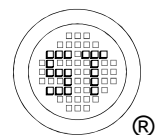
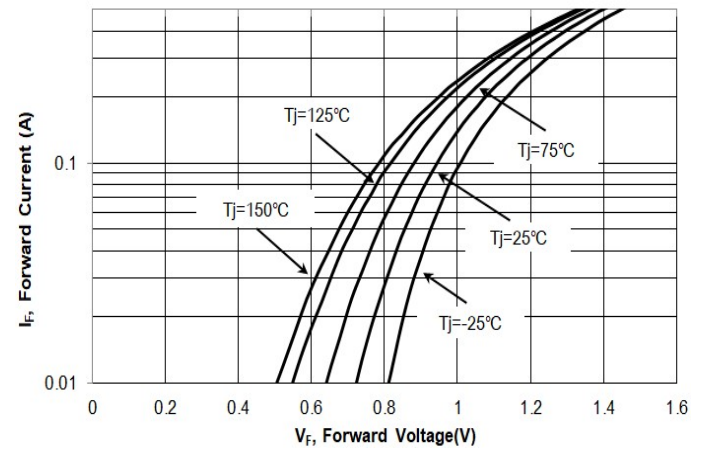


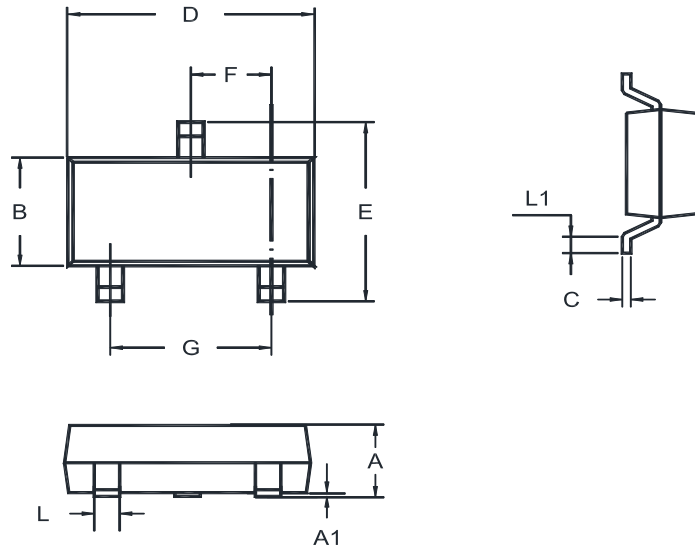
Fig 4. Forward Characteristics



# MMBD7000S

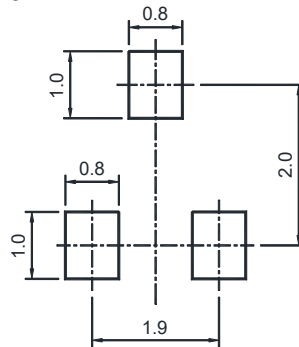
## Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

## Recommended Soldering Footprint

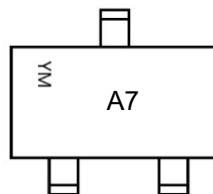


## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

- " A7 " = Part No.
  - " YM " = Date Code Marking
  - " Y " = Year
  - " M " = Month
- Font type: Arial



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