

# MMBD202CCW-AH

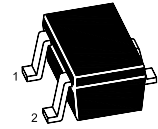
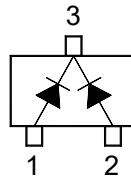
## Silicon Epitaxial Planar Switching Diode

### Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF),  
RoHS compliant

### Application

- Ultra high speed switching



SOT-323 Plastic Package

1. Anode 2. Anode 3. Cathode

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

Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	$V_{RM}$	80	V
Reverse Voltage	$V_R$	80	V
Average Forward Current	$I_{F(AV)}$	100	mA
Maximum Peak Forward Current	$I_{FM}$	300	mA
Non-repetitive Peak Forward Surge Current ( $t = 1 \mu\text{s}$ )	$I_{FSM}$	4	A
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

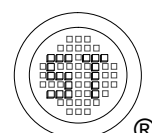
### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	625	$^\circ\text{C/W}$

<sup>1)</sup> Device mounted on FR-4 PCB with minimum recommended pad layout.

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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$	$V_{BR(R)}$	80	-	V
Forward Voltage at $I_F = 100 \text{ mA}$	$V_F$	-	1.2	V
Reverse Current at $V_R = 70 \text{ V}$	$I_R$	-	0.1	$\mu\text{A}$
Total Capacitance at $V_R = 6 \text{ V}$ , $f = 1 \text{ MHz}$	$C_T$	-	3.5	pF
Reverse Recovery Time at $V_R = 6 \text{ V}$ , $I_F = 10 \text{ mA}$ , $R_L = 100 \Omega$ , $I_{RR} = 0.1 \times I_R$	$t_{rr}$	-	4	ns



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## Electrical Characteristics Curves

Fig. 1 Power Derating Curve

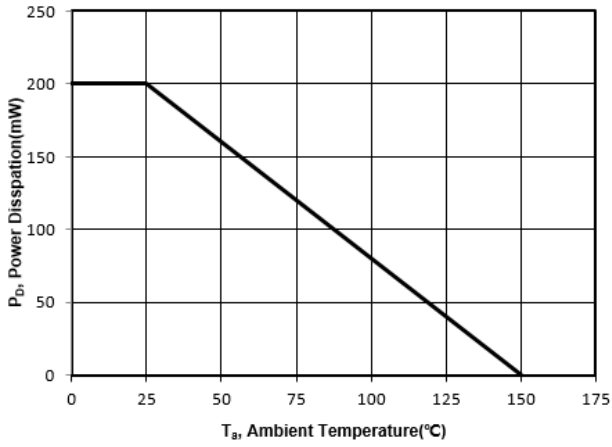


Fig 2. Capacitance Characteristics

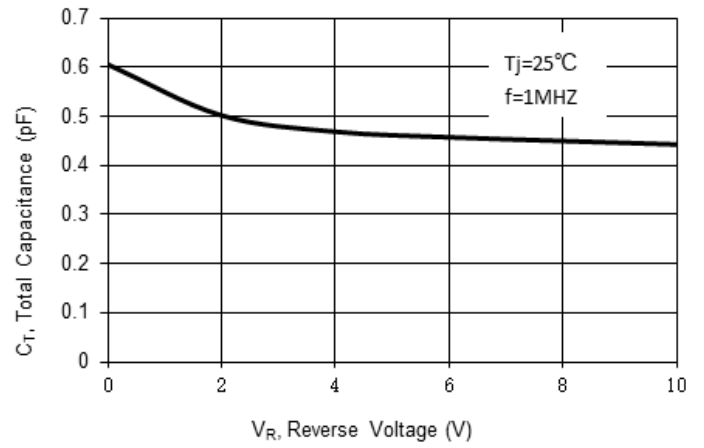


Fig 3. Reverse Characteristics

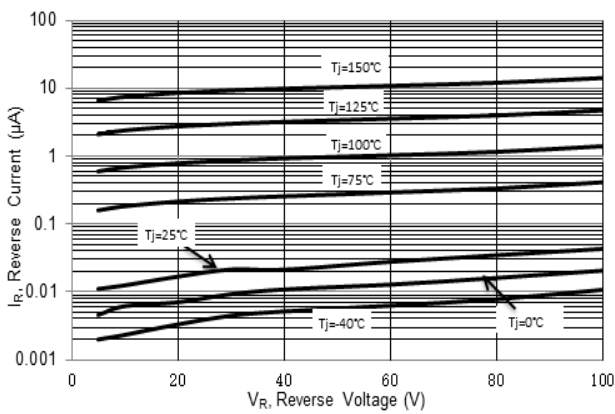
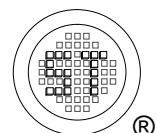
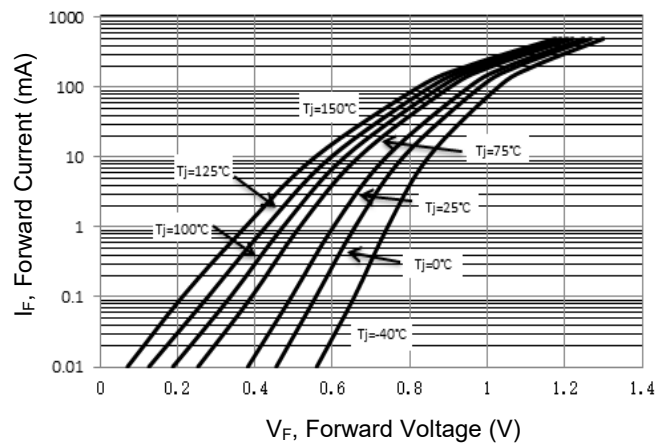


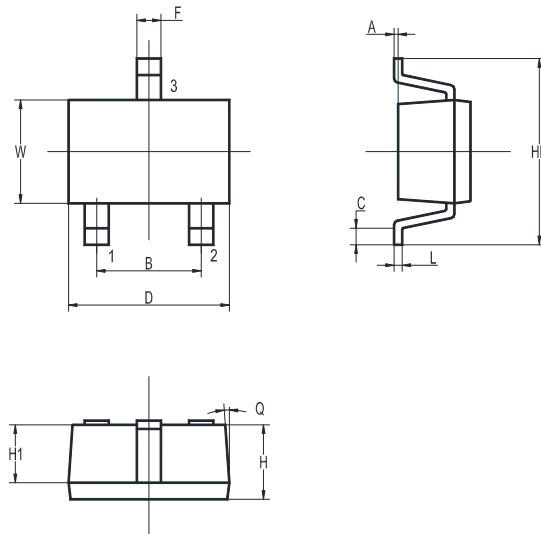
Fig 4. Forward Characteristics



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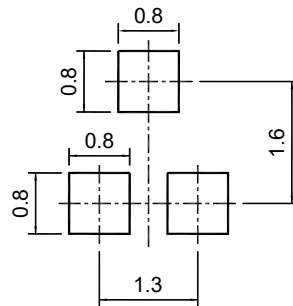
## Package Outline Dimensions (Units: mm)

SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

## Recommended Soldering Footprint

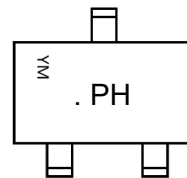


## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

- " PH " = Part No.
  - " • " = HAF (Halogen and Antimony Free)
  - " YM " = Date Code Marking
  - " Y " = Year
  - " M " = Month
- Font type: Arial



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