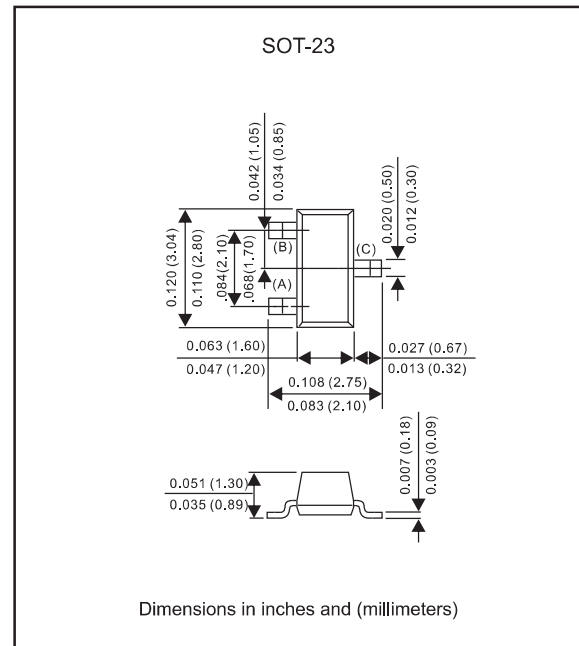


**MMBD4148/CA/CC/SE****350mW Surface Mount Switching Diode-100V****Features**

- Fast switching speed
- For general purpose switching applications
- High conductance
- Lead-free parts meet RoHS requirements
- Suffix "-H" indicates Halogen-free part, ex. MMBD4148-H

**Mechanical data**

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

**Package Outline****Maximum ratings** (AT  $T_A=25^\circ\text{C}$  unless otherwise noted)

PARAMETER	Symbol	Limit	UNIT
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	75	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	53	mA
Forward continuous current	$I_{FM}$	300	mA
Average rectified output current (note 1)	$I_O$	150	mA
Non-repetitive peak forward surge current 8.3ms	$I_{FSM}$	2.0	A
Power dissipation (note 1)	$P_D$	350	mW
Thermal resistance junction to ambient (note 1)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

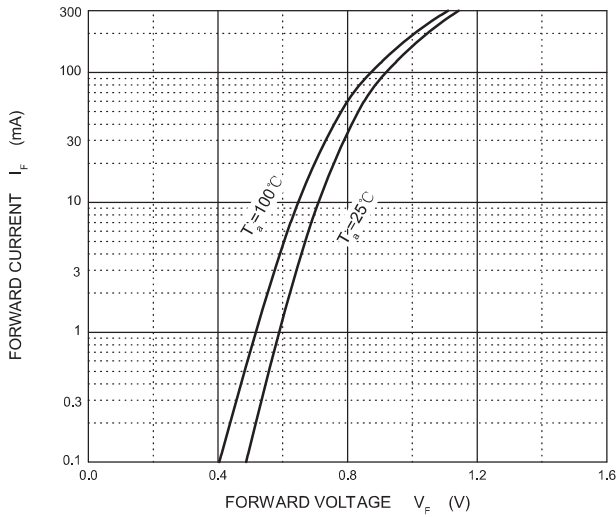
**Electrical characteristics** (AT  $T_A=25^\circ\text{C}$  unless otherwise noted)

PARAMETER	CONDITION	Symbol	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 100\mu\text{A}$	$V_{(BR)R}$	75			V
Forward voltage	$I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 50\text{ mA}$ $I_F = 150\text{ mA}$	$V_F$			0.715 0.855 1.000 1.250	V
Reverse leakage current	$V_R = 20\text{V}, T_J = 25^\circ\text{C}$ $V_R = 75\text{V}, T_J = 25^\circ\text{C}$	$I_R$			25 2.5	nA $\mu\text{A}$
Capacitance between terminals	$V_R = 0, f = 1\text{MHz}$	$C_T$			2.0	pF
Reverse recovery time	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 I_R, R_L = 100\Omega$	$t_{rr}$			4.0	ns

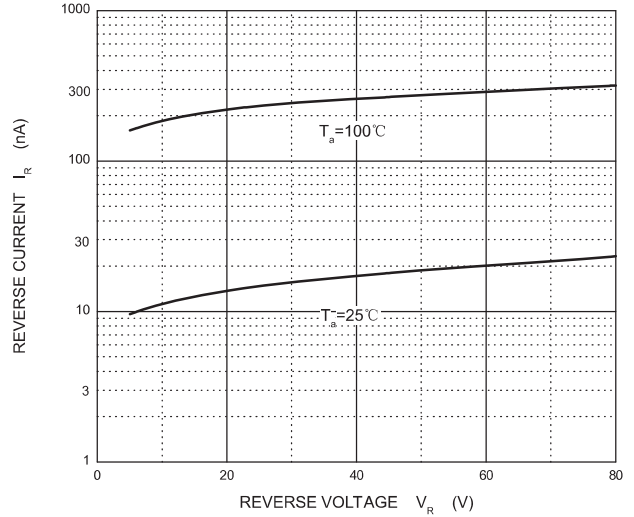
Note 1: Valid provided that electrodes are kept at ambient temperature.

## Rating and characteristic curves (MMBD4148/CA/CC/SE)

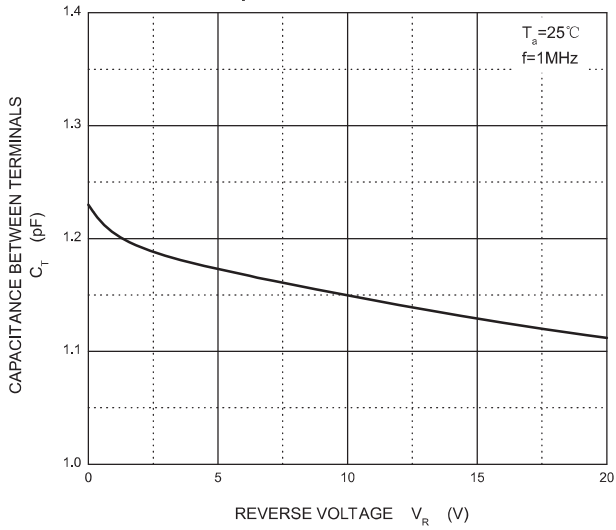
**Forward Characteristics**



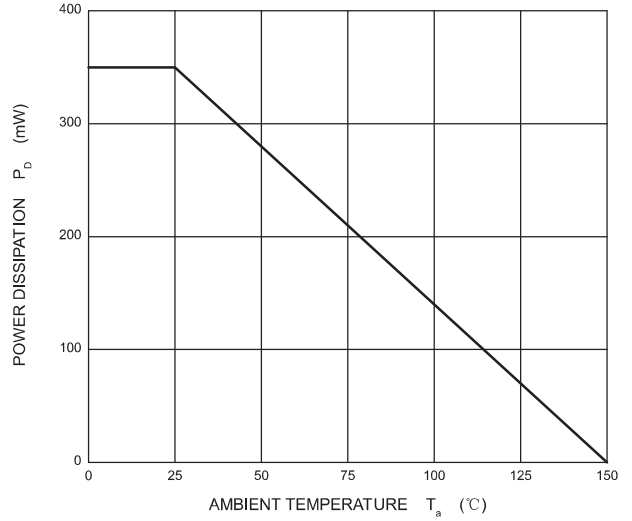
**Reverse Characteristics**



**Capacitance Characteristics**

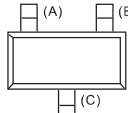
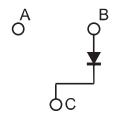
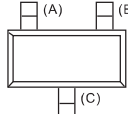
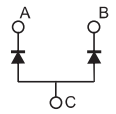
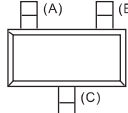
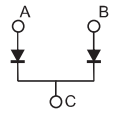
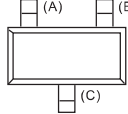
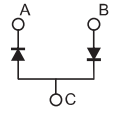


**Power Derating Curve**

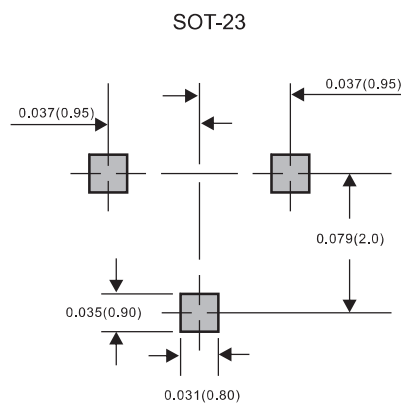


## MMBD4148/CA/CC/SE

## Pinning information

Type number	Marking code	Simplified outline	Symbol
MMBD4148	A6/KA2		
MMBD4148CA	D6		
MMBD4148CC	D5/KD5		
MMBD4148SE	D4		

## Suggested solder pad layout



Dimensions in inches and (millimeters)

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA. (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOT-23	7"	3,000	4.0	30,000	183*123*183	178	382*257*387	240,000	11.6