



## SOT-23 Plastic-Encapsulate Diodes

### MMBD4148A/CA/CC/SE SWITCHING DIODE

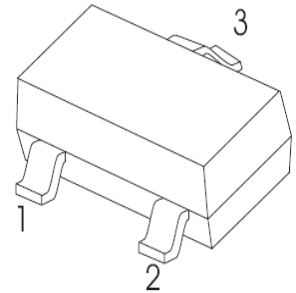
SOT-23

#### FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance

#### Marking:

MMBD4148A	MMBD4148CA	MMBD4148CC	MMBD4148SE
MARKING:5H	MARKING:D6	MARKING:D5	MARKING:D4



Solid dot = Green molding compound device, if none, the normal device

#### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

Parameter	Symbo	Limit	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	72	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	200	mA
Non-Repetitive Peak Forward Surge Current @ 8.3ms	$I_{FSM}$	2.0	A
Power Dissipation	$P_d$	350	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-55~+150	°C

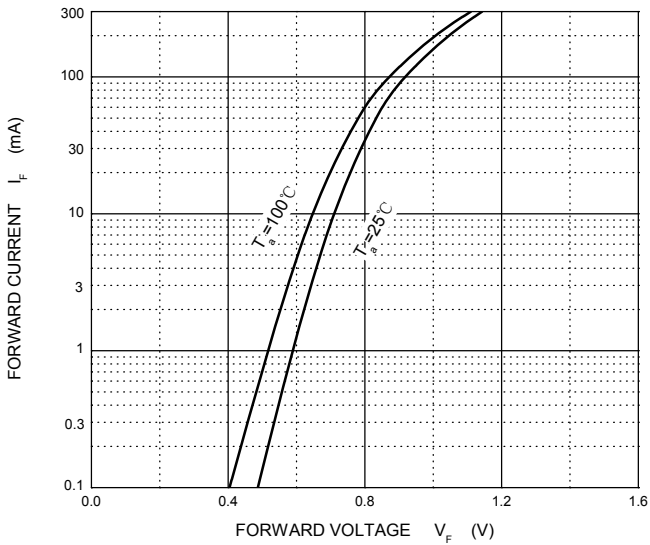
#### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)1}$	100			V	$I_R=100\mu A$
	$V_{(BR)2}$	75			V	$I_R=5\mu A$
Forward voltage	$V_F$			1	V	$I_F=10mA$
Reverse current	$I_{R1}$			5	$\mu A$	$V_R=75V$
	$I_{R2}$			25	nA	$V_R=25V$
Capacitance between terminals	$C_T$			4	pF	$V_R=0V, f=1MHz$
Reverse recovery time	$t_{rr}$			4	ns	$I_F=I_R=10mA, V_R=6V, I_{rr}=0.1I_R, R_L=100\Omega$

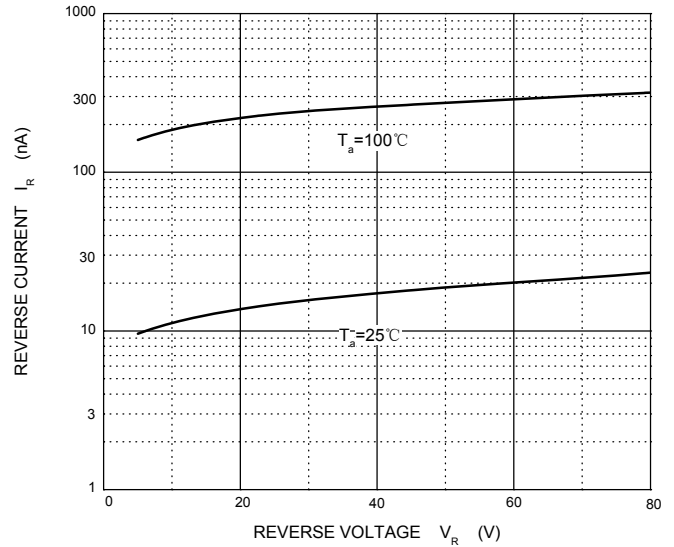


## Typical Characteristics

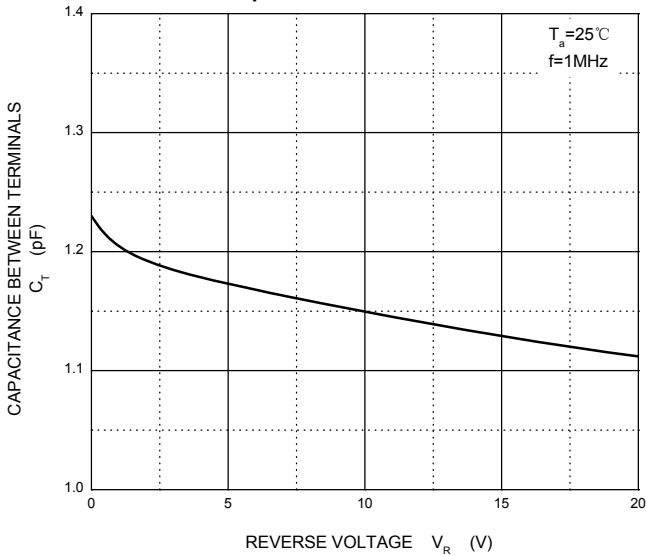
### Forward Characteristics



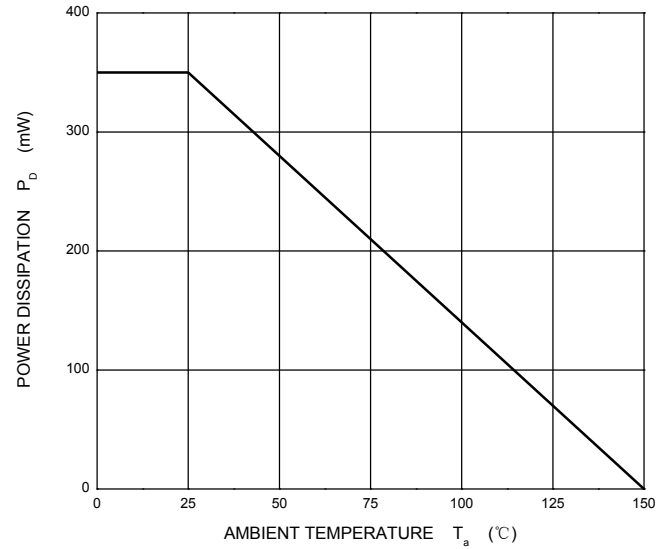
### Reverse Characteristics



### Capacitance Characteristics

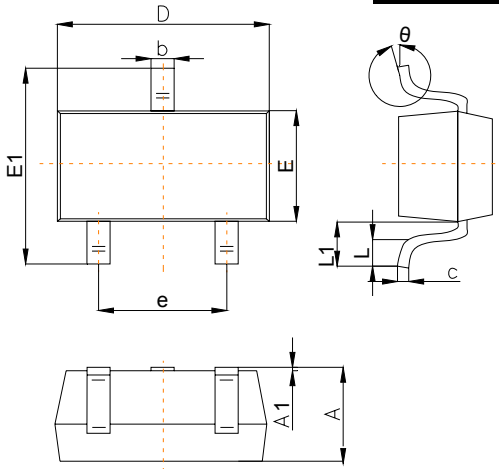


### Power Derating Curve



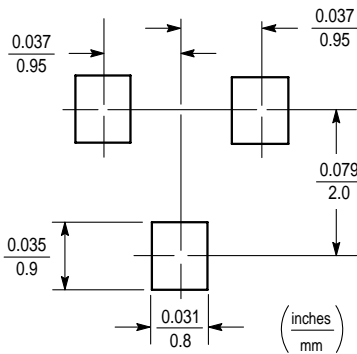
## Outline Drawing

### SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	1.00		1.40
A1			0.10
b	0.35		0.50
c	0.10		0.20
D	2.70	2.90	3.10
E	1.40		1.60
E1	2.4		2.80
e		1.90	
L	0.10		0.30
L1	0.4		
$\theta$	0°		10°

### Suggested Pad Layout



Note:

1. Controlling dimension: in/millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.

### PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
SOT-23	7'	330	3000	203×203×195	45000	438×438×220	180000

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