BORN SEMICONDUCTOR

MMBD4148A/CA/CC/SE

Fast Switching Diode

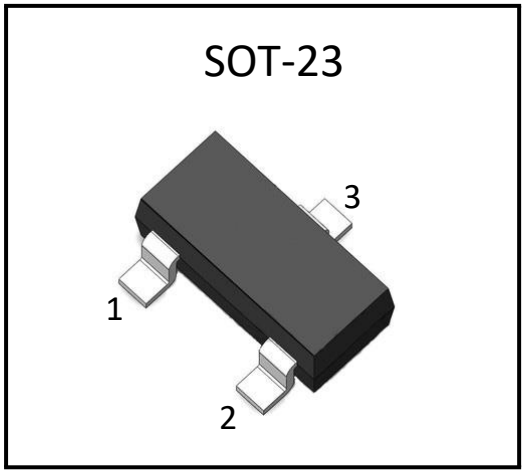
Features

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

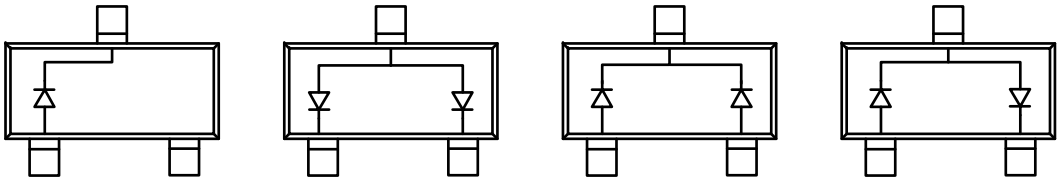
Description

- SOT-23 Small Outline Plastic Package
- Mounting Position: Any

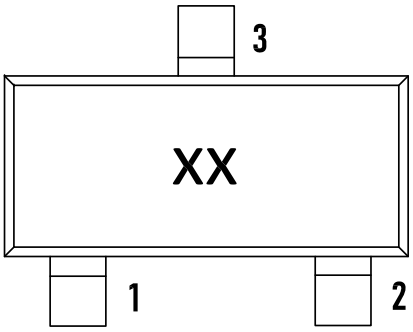
Package



Internal Wiring



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
MMBD4148A	SOT-23	5H	3K	Tape and reel
MMBD4148CA	SOT-23	D6	3K	Tape and reel
MMBD4148CC	SOT-23	D5	3K	Tape and reel
MMBD4148SE	SOT-23	D4	3K	Tape and reel

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Fast Switching Diode

Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	100	V
V_R	Reverse Voltage	75	V
I_O	Average Rectified Current	200	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @t=8.3ms,TA=25°C	2.0	A
P_d	Power Dissipation	350	mV
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	°C/W
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Limits		Unit
			Min.	Max.	
V_{BR}	Reverse Breakdown Voltage	I_R=100uA	75	–	V
I_R	Reverse Leakage Current	V_R=75V	–	5.0	uA
		V_R=25V	–	25	nA
V_F	Forward Voltage	I_F=10mA	–	1.0	V
T_{RR}	Reverse Recovery Time	I_F=I_R=10mA	–	4	nS
		V_R=6V, R_L = 100Ω			
		I_{RR} = 0.1xI_R			
C_T	Capacitance between	V_R = 0V, f=1MHZ	–	4	pF

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Fast Switching Diode

Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

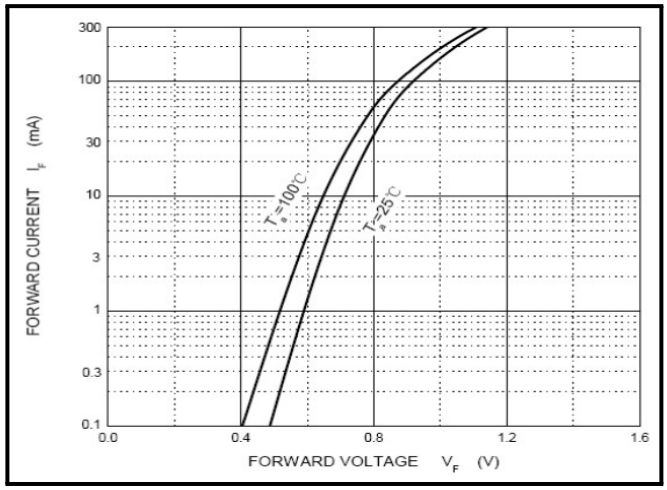


Figure 2: Reverse Characteristics

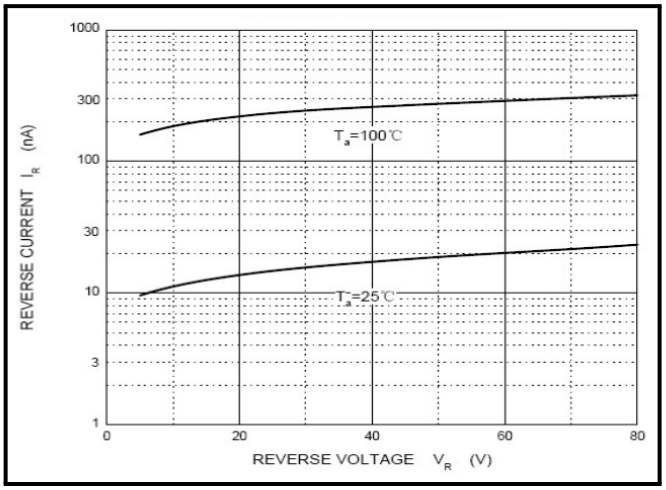


Figure 3: Capacitance Characteristics

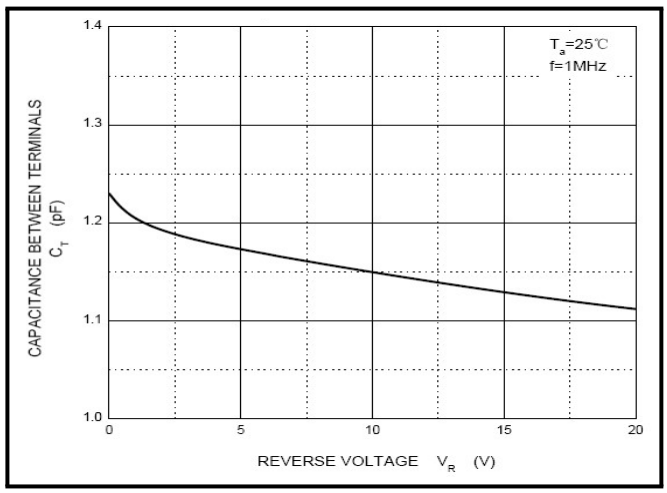
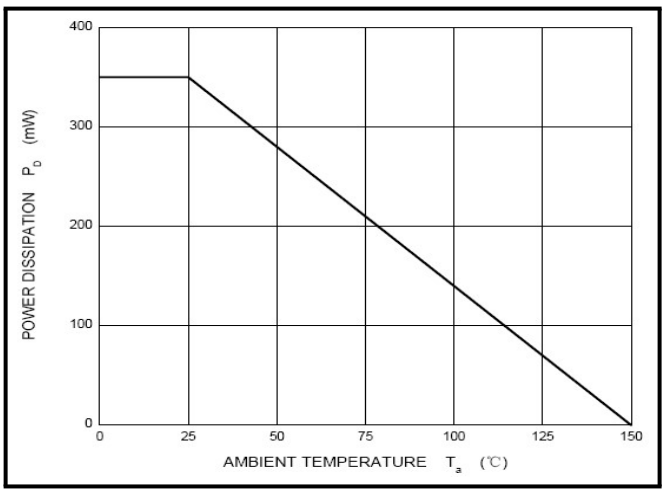


Figure 4: Power Derating Curve



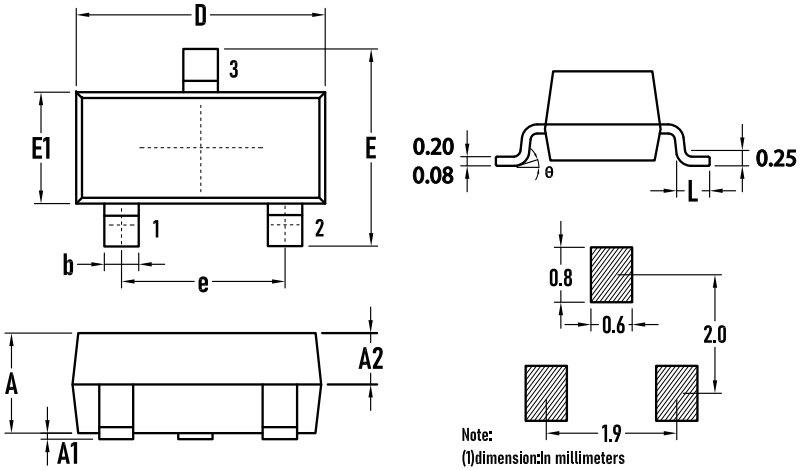
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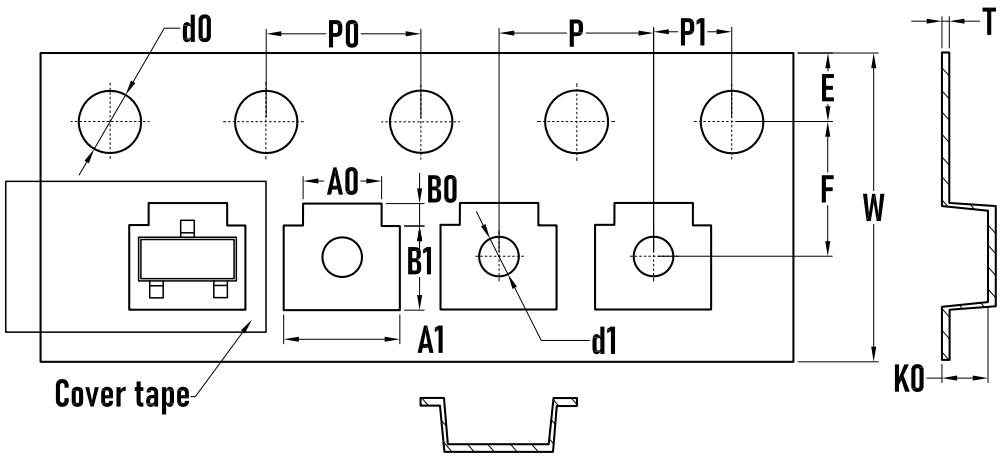
Fast Switching Diode

Outline Drawing - SOT-23



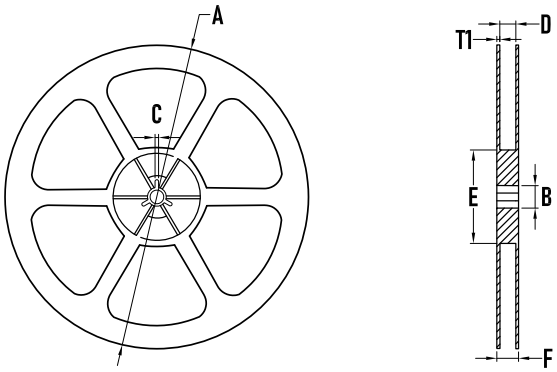
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.01	–	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	–	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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