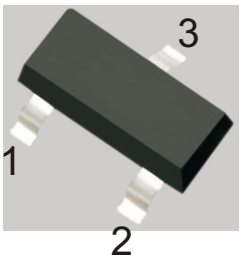
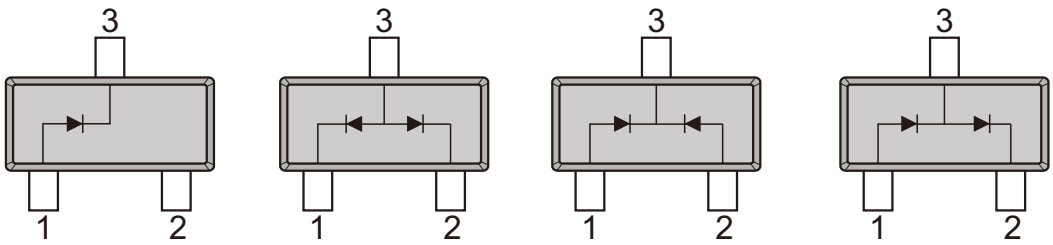
Switching Diodes

SOT-23



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



MMBD4148A MMBD4148CA MMBD4148CC MMBD4148SE

Maximum Ratings @Ta=25℃

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	200	mA
Peak Forward Surge Current @t=1.0μs @ t=1.0s	I_{FSM}	2.0 0.5	A
Power Dissipation	P_D	350	mW
Thermal Resistance Junction to Ambient (1)	R_{thJA}	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ +150	℃

(1): The data tested by surface mounted on a 1 inch FR-4 board with 1OZ copper

Electrical Characteristics @Ta=25℃

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R=1μA	100			V
Forward voltage	V_F	I_F=10mA			1.0	V
Reverse current	I_{R1}	V_R=75V			5.0	uA
	I_{R2}	V_R=25V			25	nA
Capacitance between terminals	C_T	V_R=0V,f=1MHz			4.0	pF
Reverse recovery time	t_{rr}	I_F= 10mA, V_R=6V I_{rr}=0.1XI_R, R_L=100Ω			4.0	ns

Fig.1 Power Derating Curve

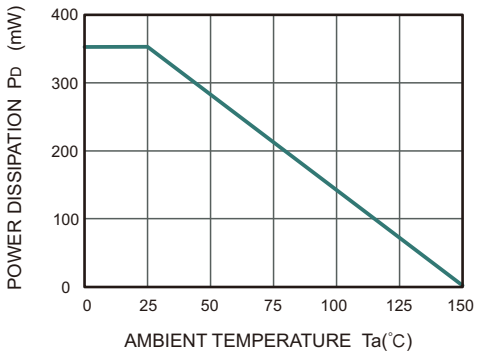


Fig.2 Reverse Characteristics

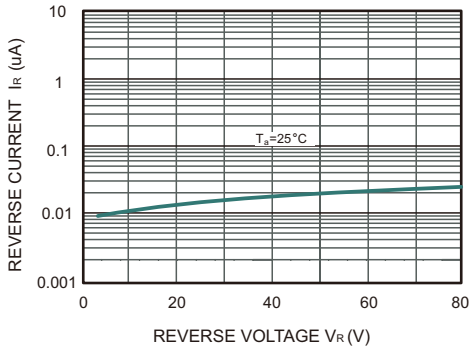


Fig.3 Forward Characteristics

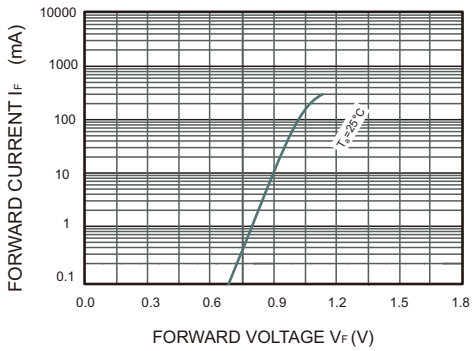


Fig.4 Capacitance Characteristics

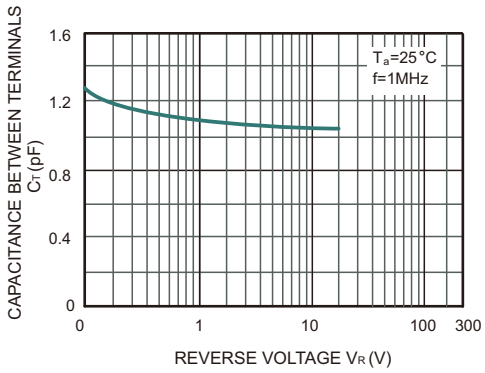
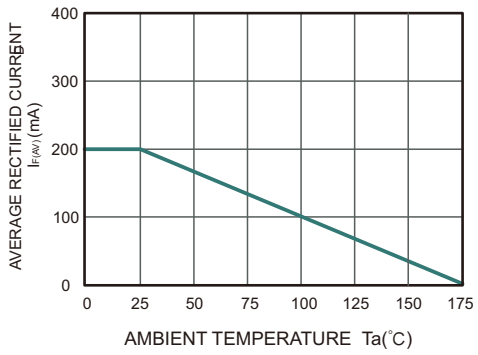
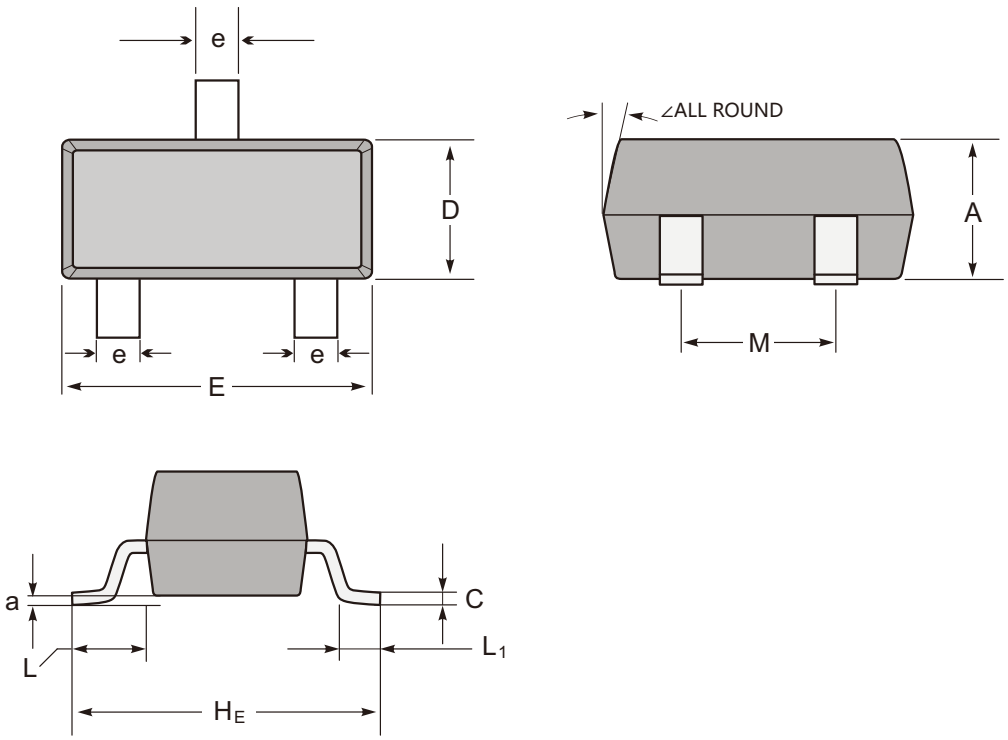


Fig.5 **Semiconductor Intrinsic Property**



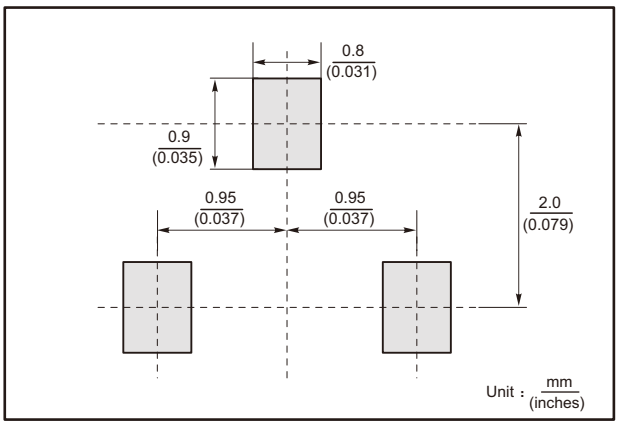
SOT-23 Package Outline Dimensions



SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a	∠
mm	max	1.1	0.20	1.4	3.0	2.6	0.6	1.95	0.55 (ref)	0.36 (ref)	0.15	12°
	min	0.9	0.08	1.2	2.8	2.2	0.35	1.7			0.0	
mil	max	43	7.9	55	118	102	24	77	22 (ref)	14 (ref)	6	
	min	35	3.1	47	110	87	13	67			0.0	

The recommended mounting pad size



Marking

Type number	Marking code
MMBD4148A	5H
MMBD4148CA	D6
MMBD4148CC	D5
MMBD4148SE	D4

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