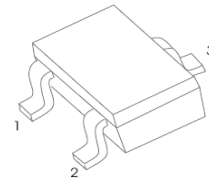
MSV

MMBD4448-series

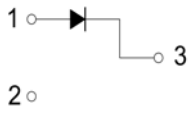
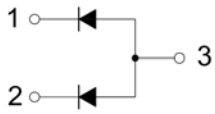
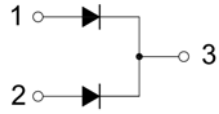
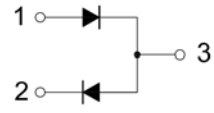
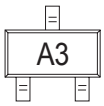
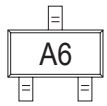
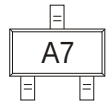
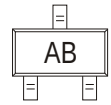
SWITCHING DIODE

FEATURES

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



SOT-523

MMBD4448HT	MMBD4448HTA	MMBD4448HTC	MMBD4448HTS
			
MARKING:A3	**MARKING:A6**	**MARKING:A7**	**MARKING:AB**
			

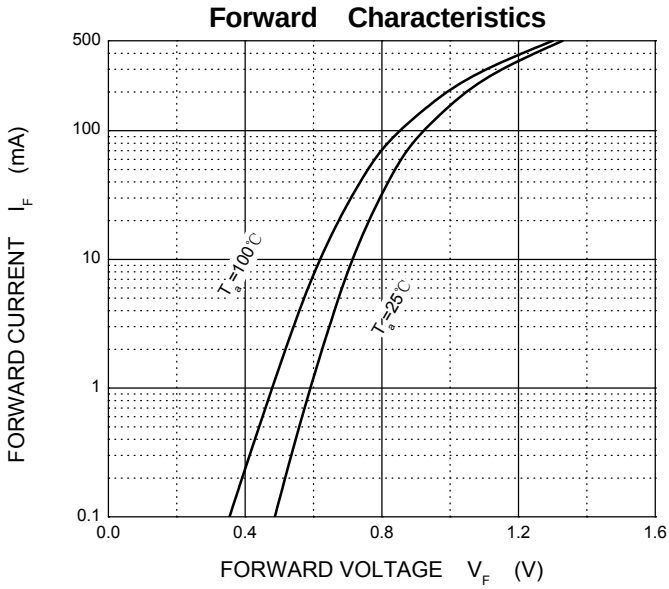
Solid dot = Green molding compound device, if none,the normal device.

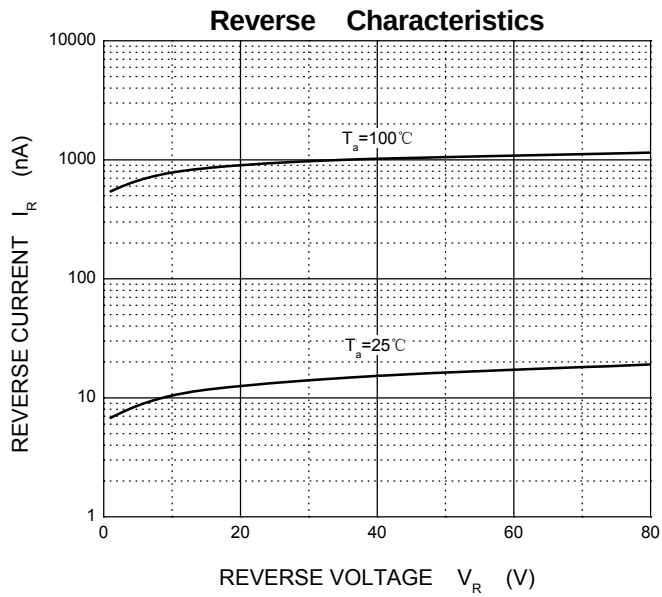
Maximum Ratings and Electrical Characteristics, Single Diode @T_a=25℃

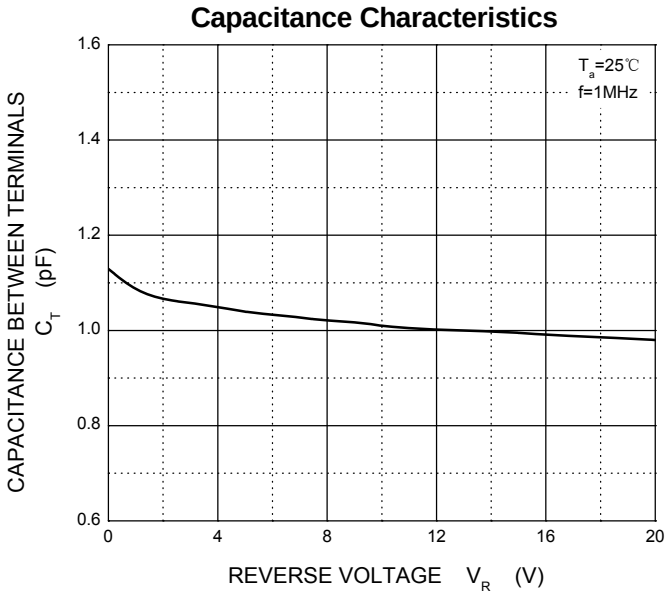
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	80	V
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current	I_{FM}	500	mA
Average Rectified Output Current	I_O	250	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.0	A
Power Dissipation	Pd	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	℃/W
Operation Junction and Storage Temperature Range	T_J ,T_{STG}	-55 ~+150	℃

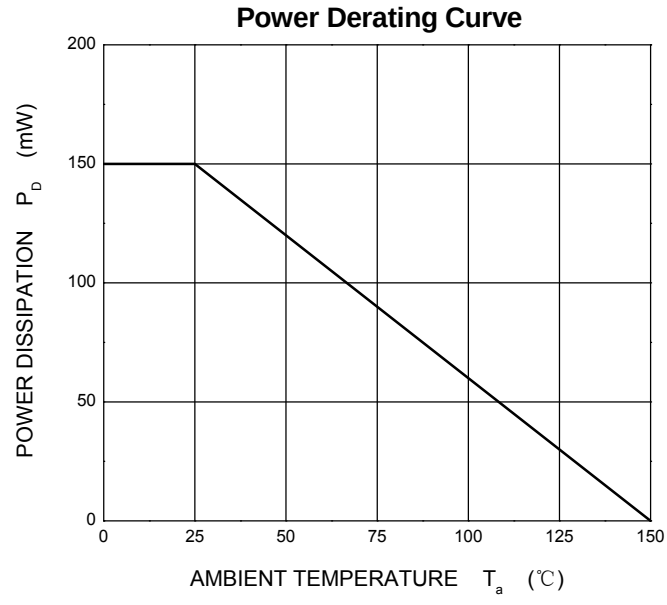
Electrical Ratings @Ta=25℃

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	V_R	80			V	I_R=2.5 μA
Forward voltage	V_{F1}	0.62		0.72	V	I_F=5mA
	V_{F2}			0.855	V	I_F=10mA
	V_{F3}			1.0	V	I_F=100mA
	V_{F4}			1.25	V	I_F=150mA
Reverse current	I_{R1}			0.1	μA	V_R=70V
	I_{R2}			25	nA	V_R=20V
Capacitance between terminals	C_T			3.5	pF	V_R=6V,f=1MHz
Reverse recovery time	t_{rr}			4	ns	I_F=I_R=10mA Irr=0.1XI_R,R_L=100Ω

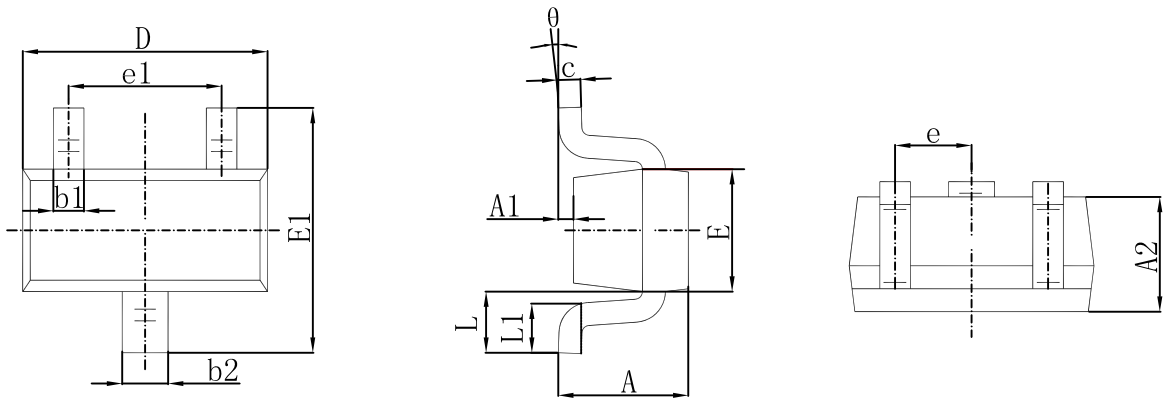

Forward Characteristics
FORWARD CURRENT I_F (mA)
500
100
10
1
0.1
0.0
0.4
0.8
1.2
1.6
T_a=100℃
T_a=25℃
FORWARD VOLTAGE V_F (V)


Reverse Characteristics
REVERSE CURRENT I_R (nA)
10000
1000
100
10
1
0
20
40
60
80
T_a=100℃
T_a=25℃
REVERSE VOLTAGE V_R (V)


Capacitance Characteristics
CAPACITANCE BETWEEN TERMINALS C_T (pF)
1.6
1.4
1.2
1.0
0.8
0.6
0
4
8
12
16
20
T_a=25℃
f=1MHz
REVERSE VOLTAGE V_R (V)

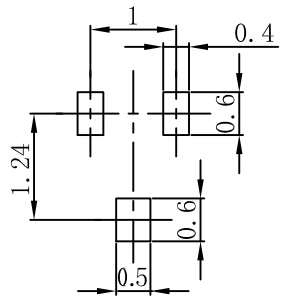

Power Derating Curve
POWER DISSIPATION P_D (mW)
200
150
100
50
0
0
25
50
75
100
125
150
AMBIENT TEMPERATURE T_a (℃)

SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.