

Surface Mount Switching Diodes

(Pb) Lead(Pb)-Free

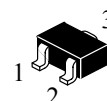
Features:

- * Ultra-Small Surface Mount Package
- * Fast switching Speed
- * For General Purpose Switching Applications
- * High Conductance

Mechanical Data:

- * Terminals: Solderable per MIL-STD-202, Method 208
- * Polarity: See Diagrams Page.2
- * Marking: See Diagrams Page.2
- * Weight: 0.002 grams (approx)

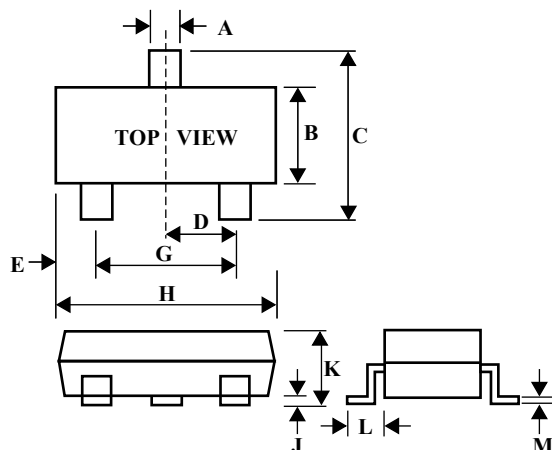
SWITCHING DIODES
250 mAMPERES
80 VOLTS



SOT-523(SC-75)

SOT-523 Outline Dimensions (SC-75)

Unit:mm



SOT-523		
Dim	Min	Max
A	0.30	0.50
B	0.70	0.90
C	1.45	1.75
D	-	0.50
E	0.15	0.40
G	0.80	1.00
H	1.40	1.80
J	0.00	0.10
K	0.70	1.00
L	0.37	0.48
M	0.10	0.25

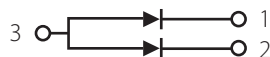
Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Value	Unit
Non-Repitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RRM} V_R	80	V
Forward Continuous Current	I_{FM}	500	mA
Average Rectified Output Current	I_O	250	mA
Non-Repitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{s}$	I_{FSM}	4.0 2.0	A
Power Dissipation	P_d	150	mW
Thermal Resistance	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Junction Temperature Range	T_j	+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to + 150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage $I_R=2.5\mu\text{A}$	$V_{(BR)R}$	80	-	V
Forward Voltage $I_F=5\text{mA}$ $I_F=10\text{mA}$ $I_F=100\text{mA}$ $I_F=150\text{mA}$	V_F	620	720 855 1000 1250	mV
Total Capacitance $V_R=6\text{V}$, $f=1.0\text{MHz}$	C_T	-	3.5	pF
Reverse Current $V_R=70\text{V}$ $V_R=20\text{V}$	I_R	-	0.1 0.025	μA
Reverse Recover Time $V_R=6\text{V}$, $I_F=5\text{mA}$	T_{rr}	-	4.0	nS

Device Marking

Item	Marking	Equivalent Circuit diagram
MMBD4448HT	A3	
MMBD4448HTS	AB	
MMBD4448HTC	A7	
MMBD4448HTA	A6	

Electrical Characteristic curves($T_A=25^{\circ}\text{C}$)

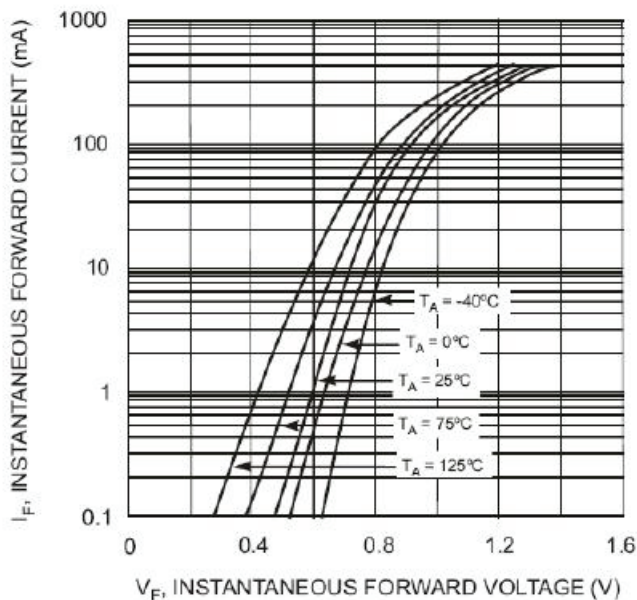


Fig. 1 Typical Forward Characteristics

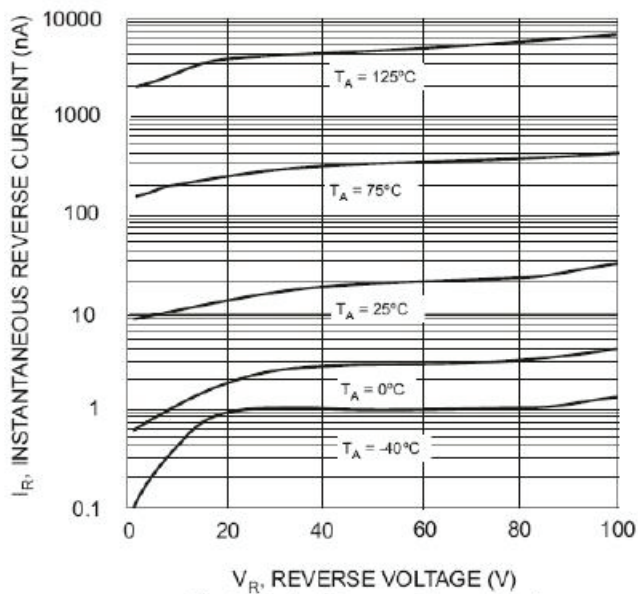


Fig. 2 Typical Reverse Characteristics

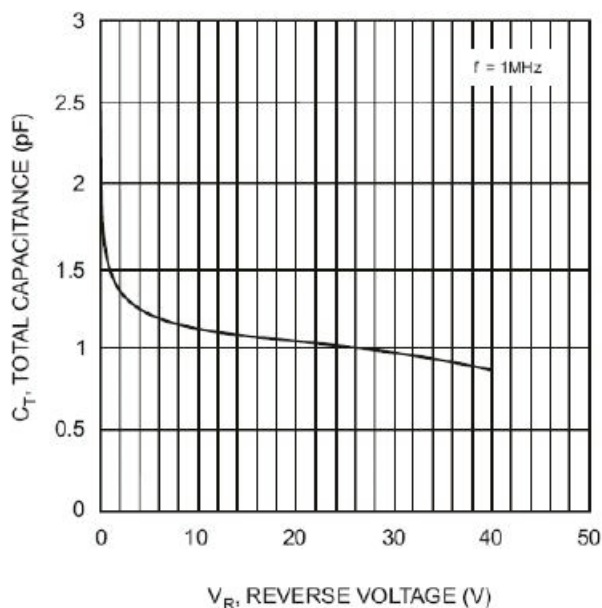


Fig. 3 Typical Capacitance vs. Reverse Voltage

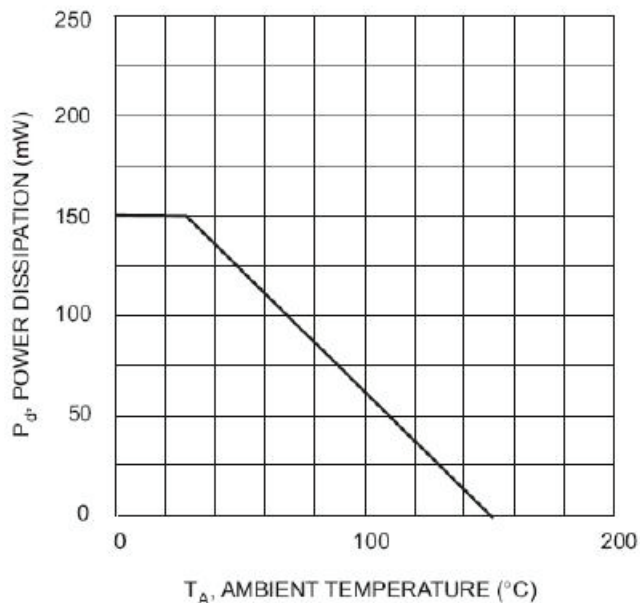


Fig. 4 Power Derating Curve, Total Package