

Features

- Fast switching
- Low forward voltage drop
- Ultra-small surface mount package
- RoHS compliant with Halogen-free

HF

Applications

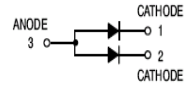
- For general purpose switching applications

Mechanical Data

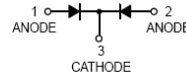
- Case: SOT-523
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



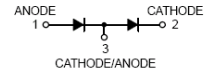
MMBD4448HT



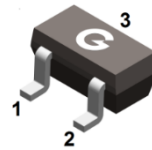
MMBD4448HTA



MMBD4448HTC



MMBD4448HTS



SOT-523

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MMBD4448HT	SOT-523	3000 pcs / Tape & Reel	A3
MMBD4448HTA	SOT-523	3000 pcs / Tape & Reel	A6
MMBD4448HTC	SOT-523	3000 pcs / Tape & Reel	A7
MMBD4448HTS	SOT-523	3000 pcs / Tape & Reel	AB

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V _{RM}	100	V
Peak Repetitive Reverse Voltage	V _{RRM}	85	V
Working Peak Reverse Voltage	V _{RWM}	85	V
DC Reverse Voltage	V _R	85	V
RMS reverse voltage	V _{R(RMS)}	60	V
Continuous Forward Current	I _F	250	mA
Non-repetitive Peak Forward Surge Current (t _p = 1μs)	I _{FSM}	4	A
Non-repetitive Peak Forward Surge Current (t _p = 1s)		2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	165	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	100	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	90	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 2.5\mu\text{A}$	85	-	-	V
Forward Voltage	V_F	$I_F = 5\text{mA}$	-	-	0.72	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 100\text{mA}$	-	-	1.00	V
		$I_F = 150\text{mA}$	-	-	1.25	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}$	-	-	25	nA
		$V_R = 70\text{V}$	-	-	0.1	μA
Capacitance Between Terminals	C_J	$V_R = 6\text{V}, f = 1\text{MHz}$	-	-	3.5	pF
Reverse Recovery Time	t_{rr}	$V_R = 6\text{V}, I_F = 5\text{mA}$	-	-	4	ns

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

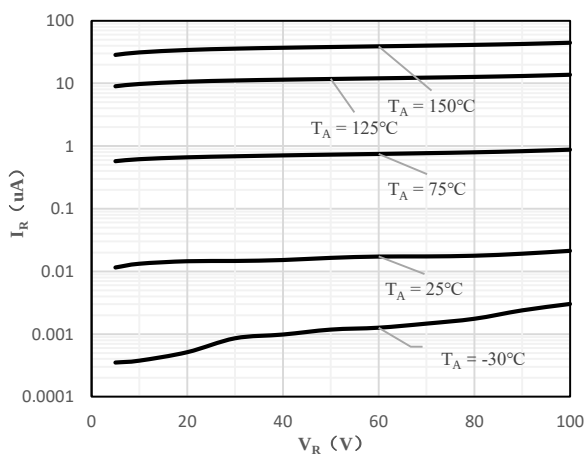


Fig 1 Typical Reverse Characteristic

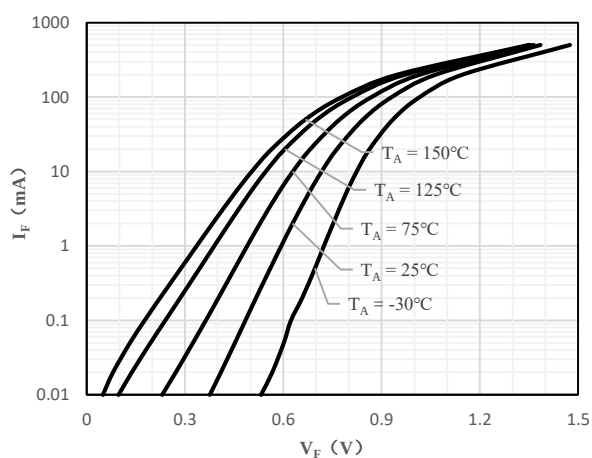


Fig 2 Typical Forward Characteristics

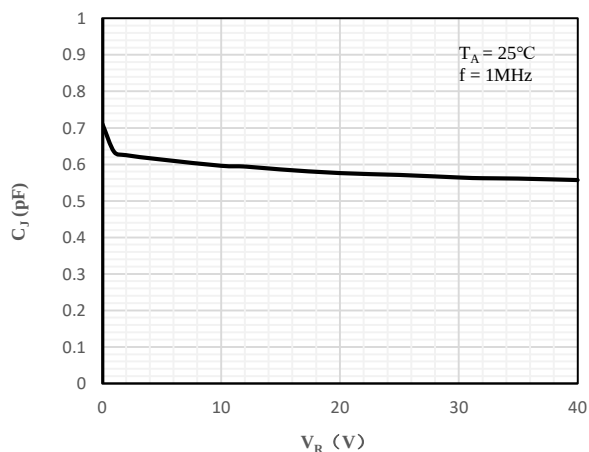


Fig 3 Capacitance Characteristics

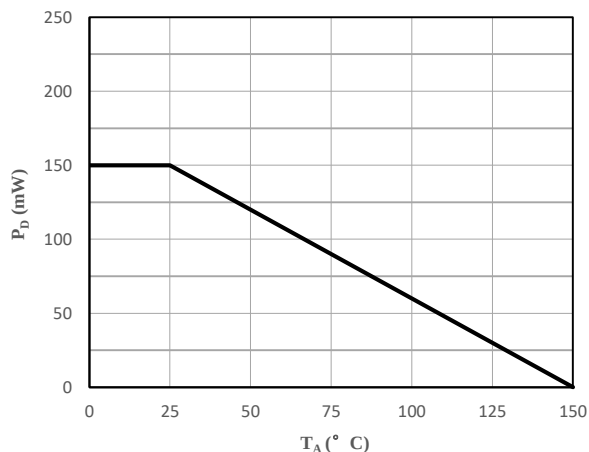
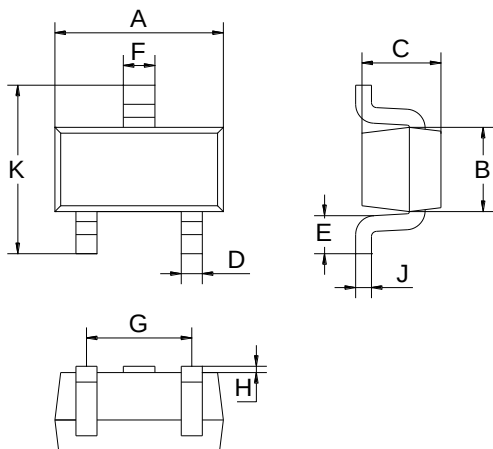


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-523		
Dimension	Min.	Max.
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout (Unit: mm)

SOT-523

