

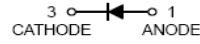
Features

- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

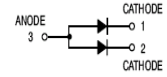
HF

Mechanical Data

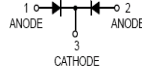
- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



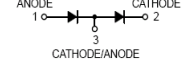
TMMBD4148A



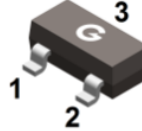
TMMBD4148CA



TMMBD4148CC



TMMBD4148SE



SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TMMBD4148A	SOT-23	3000 pcs / Tape & Reel	5H
TMMBD4148CA	SOT-23	3000 pcs / Tape & Reel	D6
TMMBD4148CC	SOT-23	3000 pcs / Tape & Reel	D5
TMMBD4148SE	SOT-23	3000 pcs / Tape & Reel	D4

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

Parameter	Symbol	Value	Unit
DC Blocking Voltage	V _R	100	V
Average Rectified Output Current	I _F	200	mA
Forward Continuous Current (Max.)	I _{FM}	600	mA
Peak Forward Surge Current, 1ms Single Half-sine-wave	I _{FSM}	2	A
Peak Forward Surge Current, 1s Single Half-sine-wave	I _{FSM}	1	A
Recurrent Peak Forward Current	I _{FRM}	700	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	350	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	342	°C/W
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	208	°C/W
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	187	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a 15mm * 15mm * 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	100	-	-	V
		$I_R = 5\mu\text{A}$	75	-	-	V
Forward Voltage	V_F	$I_F = 10\text{mA}$	-	-	1	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}, T_J = 25^\circ\text{C}$	-	-	25	nA
		$V_R = 75\text{V}, T_J = 25^\circ\text{C}$	-	-	5	μA
		$V_R = 20\text{V}, T_J = 150^\circ\text{C}$	-	-	50	μA
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$	-	-	80	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	4	pF
Reverse Recovery Time	t_{rr}	$I_F = 10\text{mA}, V_R = 6\text{V}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

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

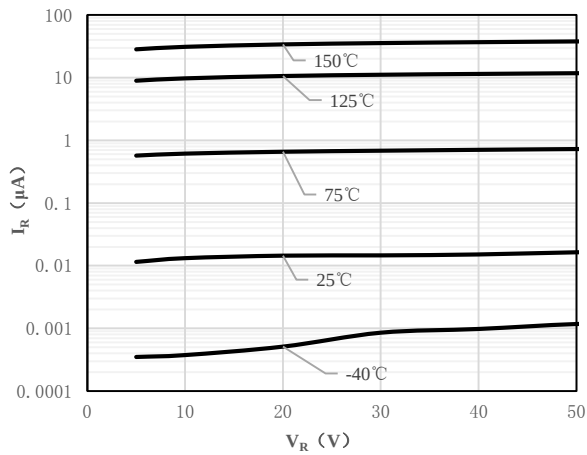


Fig 1 Typical Reverse Characteristic

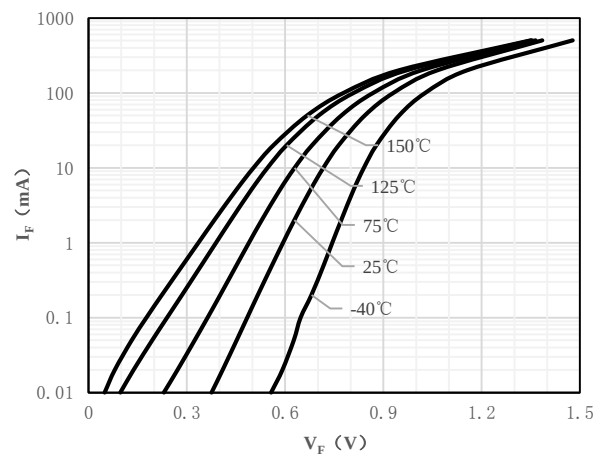


Fig 2 Typical Forward Characteristics

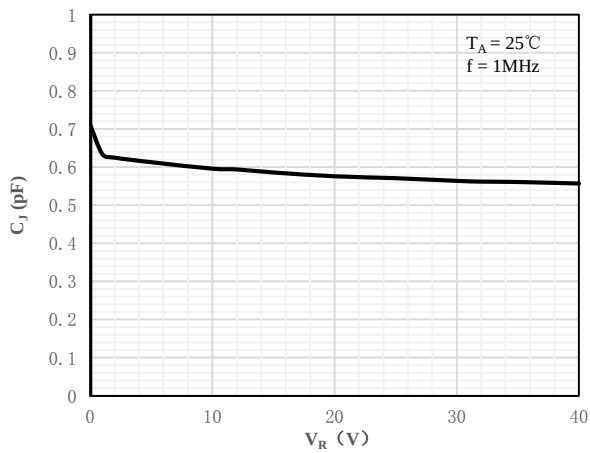


Fig 3 Capacitance vs. Reverse Voltage

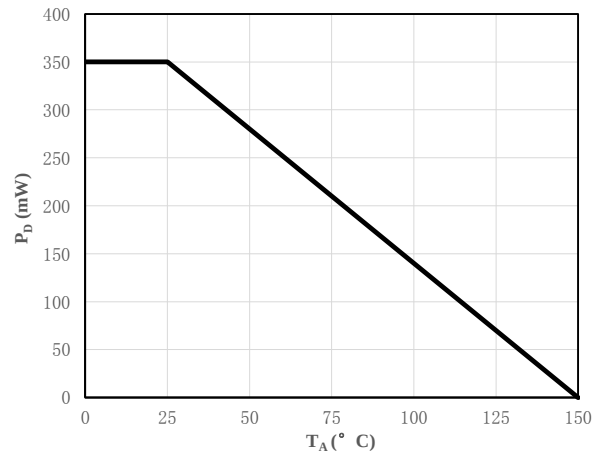
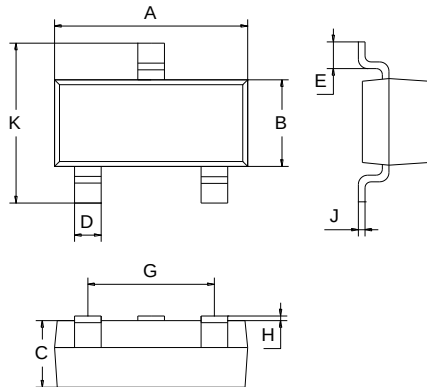


Fig 4 Power Derating Curve

Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23

