

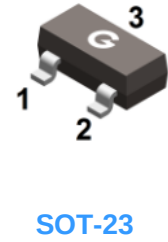
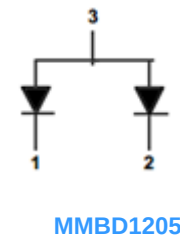
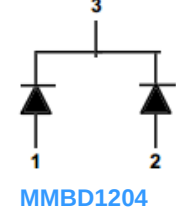
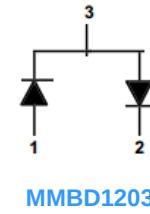
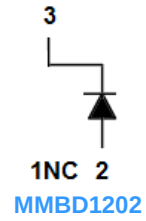
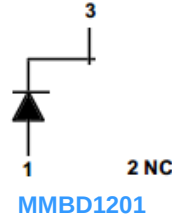
Features

- Fast switching speed
- High conductance

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



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MMBD1201	SOT-23	3000 pcs / Tape & Reel	A01
MMBD1202	SOT-23	3000 pcs / Tape & Reel	A02
MMBD1203	SOT-23	3000 pcs / Tape & Reel	A03
MMBD1204	SOT-23	3000 pcs / Tape & Reel	A04
MMBD1205	SOT-23	3000 pcs / Tape & Reel	A05

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

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	100	V
Working Peak Reverse Voltage	V _{RWM}	100	V
DC Blocking Voltage	V _R	100	V
Forward Continuous Current	I _F	600	mA
Repetitive Peak Forward Current	I _{FRM}	700	mA
Forward Surge Current, t _p = 1s	I _{FSM}	1	A
Forward Surge Current, t _p = 1ms	I _{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation ^{*1}	P_D	350	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	357	°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 glass epoxy PCB 1.6" X 1.6" X 0.06"; mounting pad for the collector lead min. 0.93 in²

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
Forward Voltage	V_F	$I_F = 1\text{mA}$	0.55	-	0.62	V
		$I_F = 10\text{mA}$	0.66	-	0.74	V
		$I_F = 100\text{mA}$	0.82	-	0.92	V
		$I_F = 200\text{mA}$	0.87	-	1.00	V
		$I_F = 300\text{mA}$	-	-	1.1	V
Maximum Peak Reverse Current	I_R	$V_R = 20\text{V}$	-	-	25	nA
		$V_R = 50\text{V}$	-	-	50	nA
		$V_R = 50\text{V}, T_J = 150^\circ\text{C}$	-	-	50	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	2	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

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

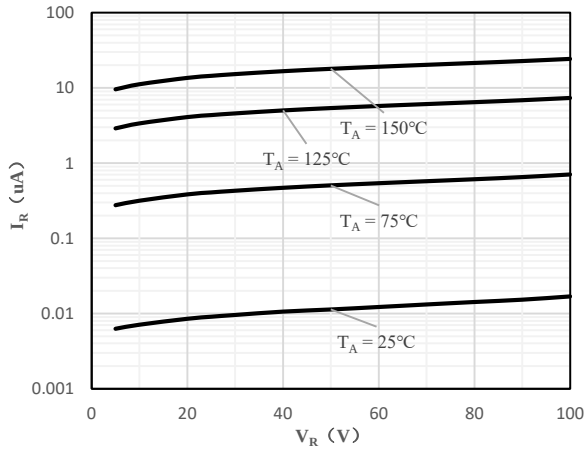


Fig 1 Typical Reverse Characteristic

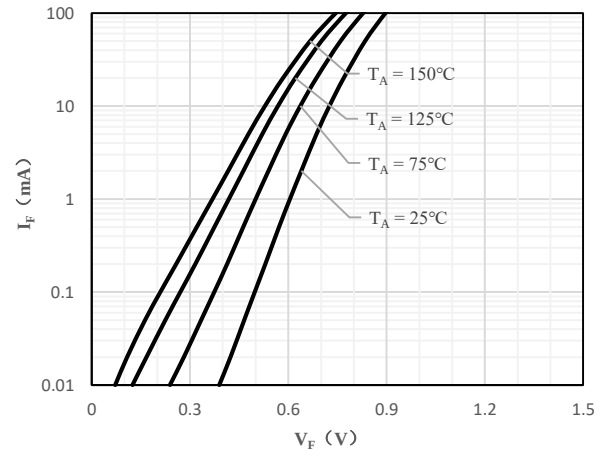


Fig 2 Typical Forward Characteristics

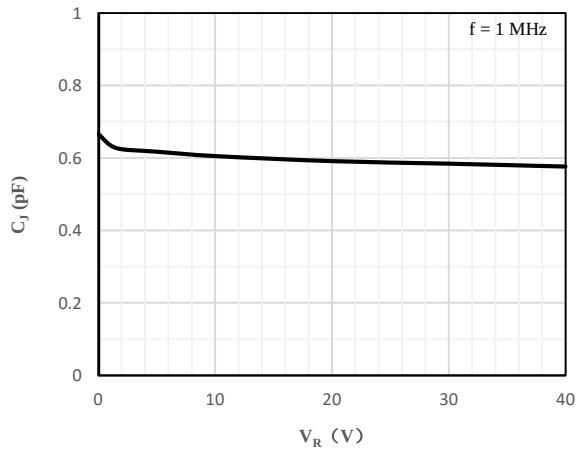


Fig 3 Capacitance vs. Reverse Voltage

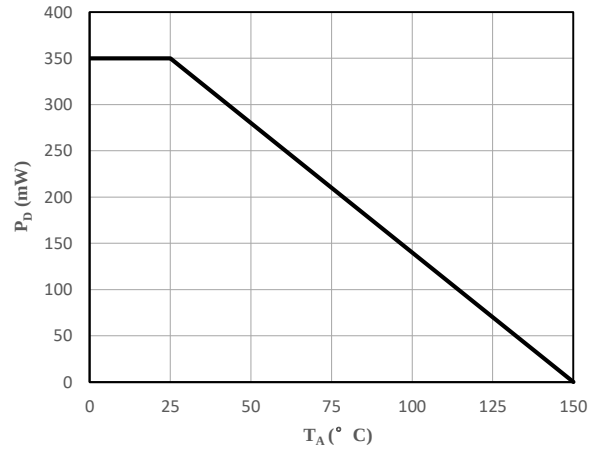
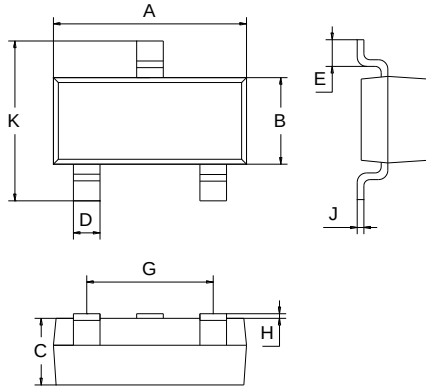


Fig 4 Power Derating Curve

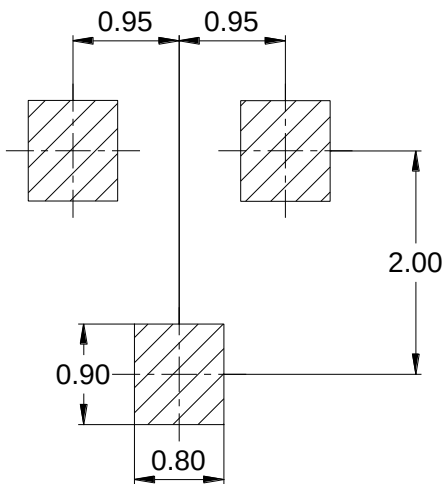
Package Outline Dimensions (Unit: mm)



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



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