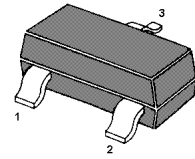
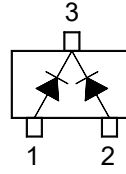


MMBD6100S

Silicon Epitaxial Planar Switching Diode

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



1. Anode 2. Anode 3. Cathode
SOT-23 Plastic Package

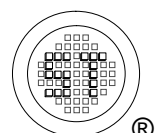
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	70	V
Forward Current	I_F	200	mA
Maximum Peak Forward Current	I_{FM}	300	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	1 2	A
		at $t = 1$ s at $t = 1$ μs	
Power Dissipation	P_D	300	mW
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$

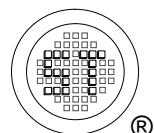
¹⁾ Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



MMBD6100S

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	70	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 100 \text{ mA}$	V_F	0.55 0.85	0.7 1.1	V
Reverse Current at $V_R = 50 \text{ V}$	I_R	-	0.1	μA
Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	2.5	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}$, $I_{rr} = 0.1 \times I_R$, $V_R = 6 \text{ V}$, $R_L = 100 \Omega$	t_{rr}	-	4	ns



MMBD6100S

Electrical Characteristics Curves

Fig. 1 Power Derating Curve

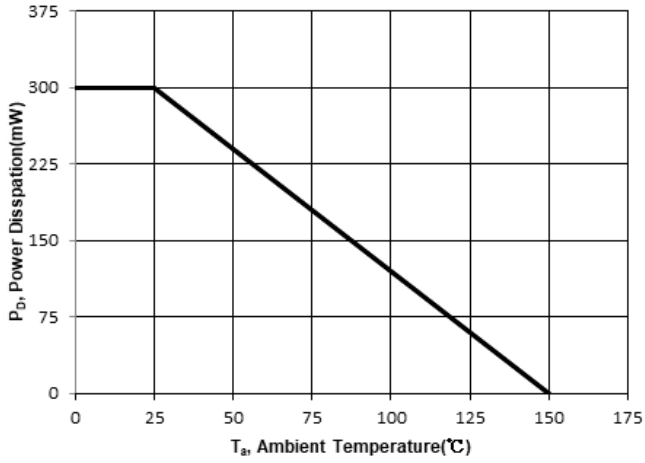


Fig. 2 Capacitance Characteristics

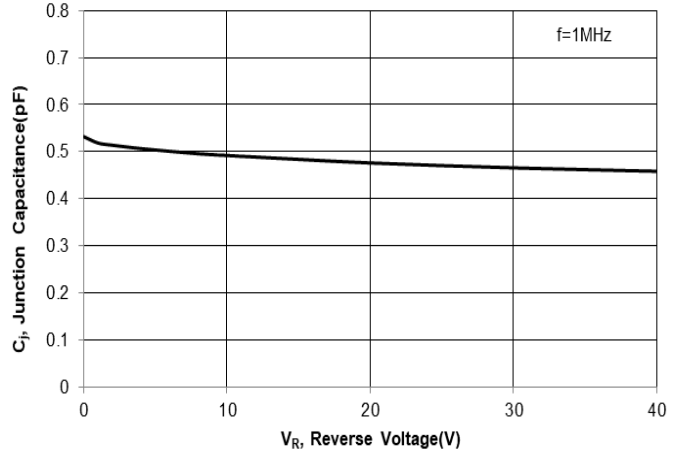


Fig. 3 Reverse Characteristics

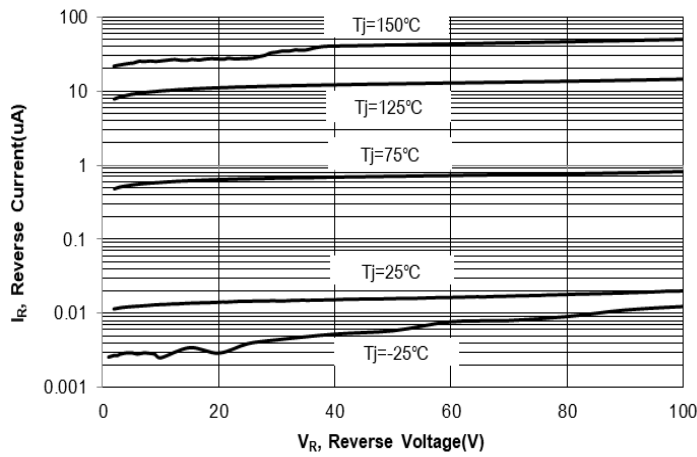
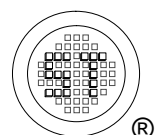
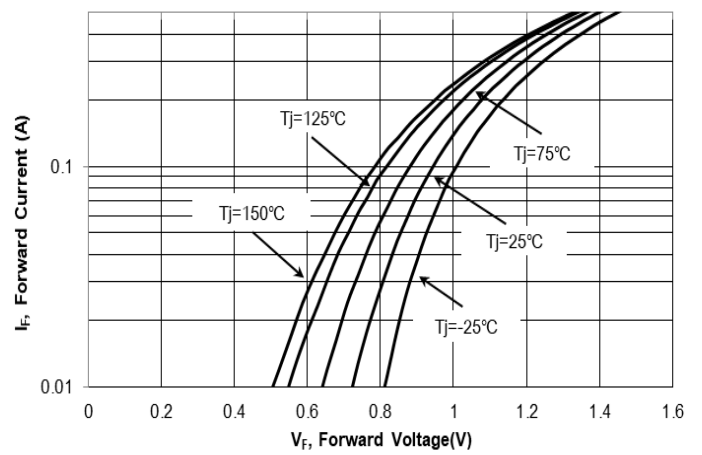


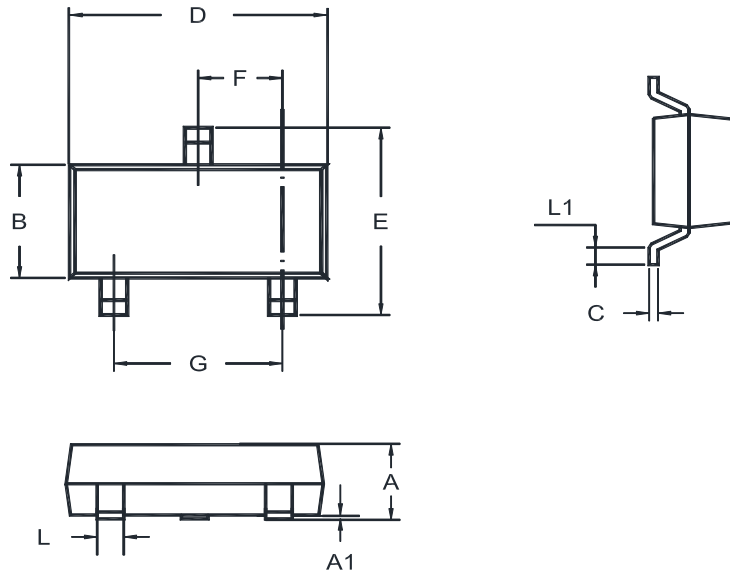
Fig. 4 Forward Characteristics



MMBD6100S

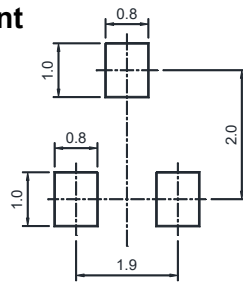
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

Recommended Soldering Footprint

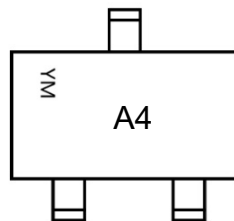


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

- "A4" = Part No.
- "YM" = Date Code Marking
- "Y" = Year
- "M" = Month
- Font type: Arial



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