MMBD7000

Surface Mount Switching Diode

Forward Current - 500 mA
Reverse Voltage - 100V

Features

- Fast Switching Device Signal(TRR<4 nS)
- Power Dissipation of 225mW
- High Stability and High Reliability
- Low Reverse Leakage

Mechanical Data

- Case: SOT23 Package
- Case Material: “Green” Molding Compound UL Flammability Classification Rating 94V-0
- Halogen Free

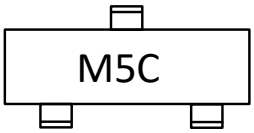
Ordering Information

- Package :SOT23
- Reel Size :7 (inches)
- Quantity Per Reel :3,000 pcs
- Quantity One Box :45,000 pcs
- Quantity One Carton :180,000 pcs

Package Outline

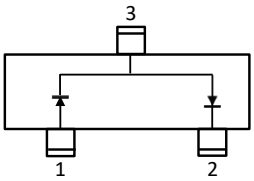
SOT23 Top View

Marking Information



"M5C" = Product Type Marking Code

Device Schematic & PIN Configuration



Maximum Ratings (@TA = +25°C, unless otherwise specified.)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Collector Power Dissipation	P_D	225	mW
Peak Forward Surge Current	I_{FM}	500	mA
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics(@TA = +25°C, unless otherwise specified.)

Parameter	Test Conditions	Symbol	Min	Max	Unit
Reverse Voltage	I_R=100uA	V_{BR}	100	-	V
Reverse Current	V_R=100V	I_R	-	3	uA
	V_R=50V		-	1	uA
Forward Voltage	I_F=1mA	V_F	-	0.72	V
	I_F=10mA		-	0.82	V
	I_F=100mA		-	1.10	V
Capacitance	V_R=0V, F=1MHz	C_T	-	1.5	pF
Reverse Recovery Time	I_F=I_R=10mA, V_R=6V,R_L=100Ω, I_{RR}=-0.1 X IR	T_{RR}	-	4	ns

Rev-0, 3-May-2022

Rating and Characteristic Curves

FIG.1 - Typical Forward Characteristics

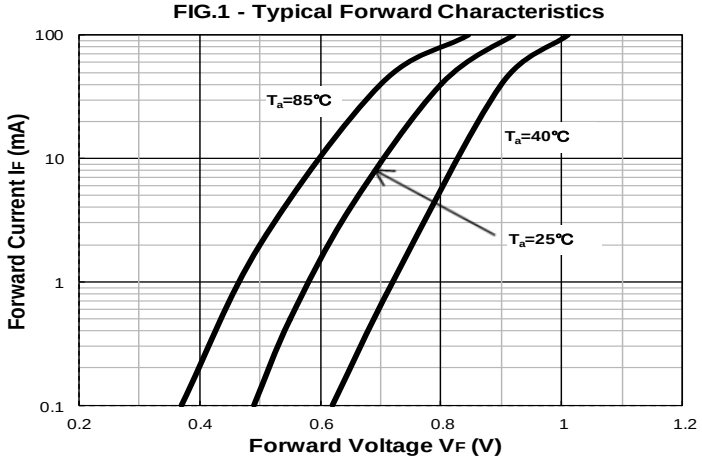


FIG.2 - Typical Reverse Characteristics

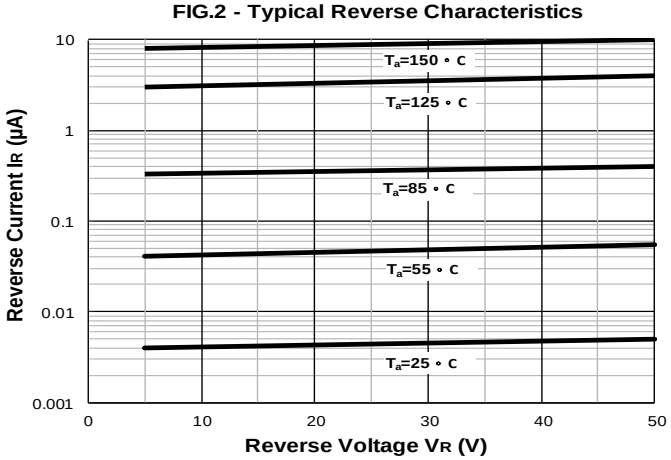
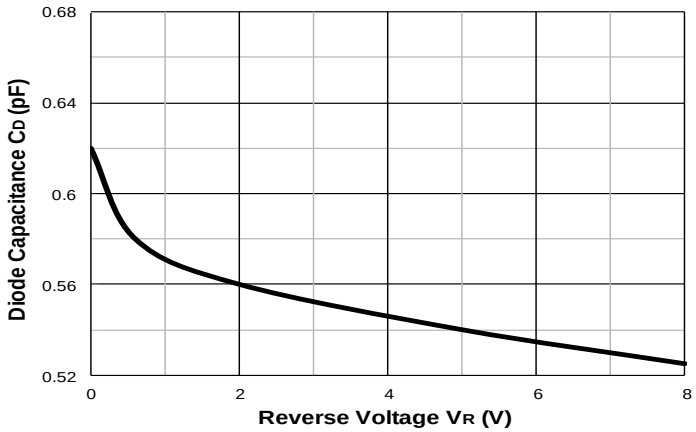
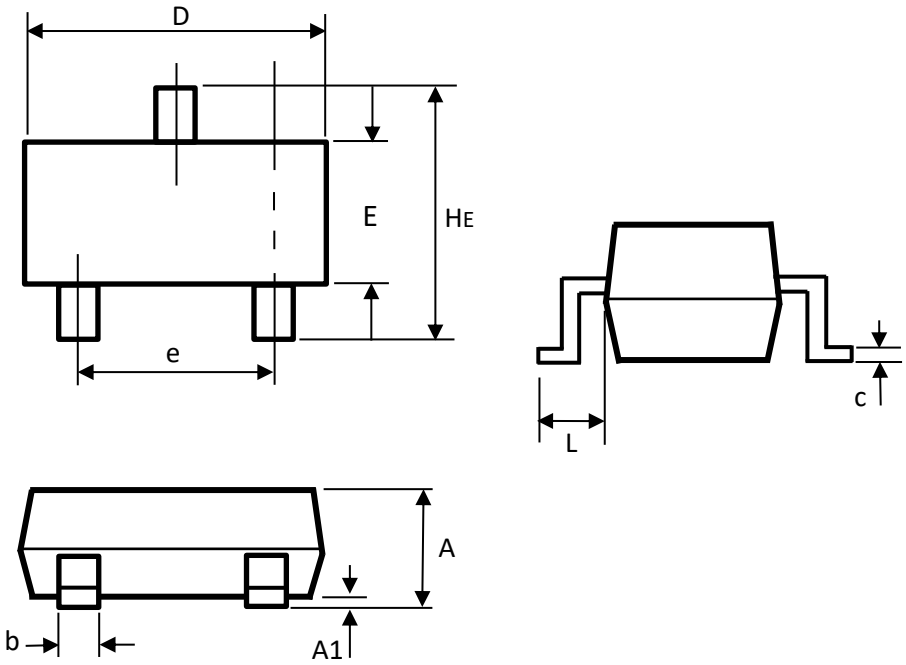


FIG.3 - Typical Capacitance Characteristics



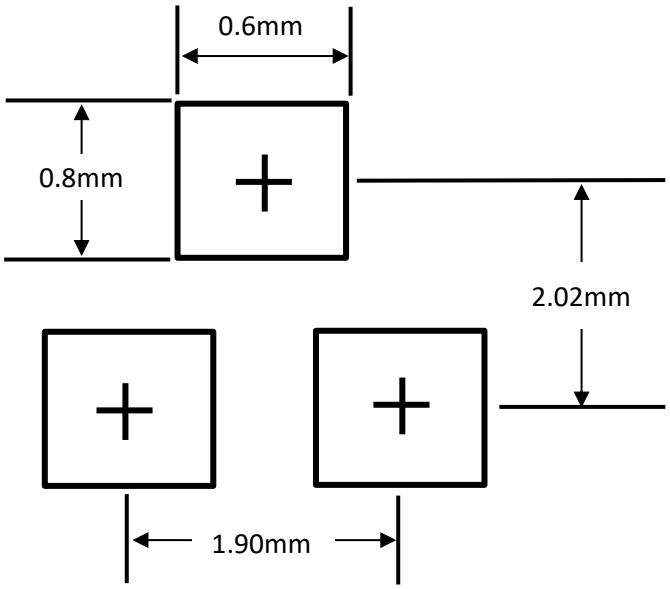
The curve above is for reference only.

Package Outline Dimensions



SOT23 Package		
Dim	Min	Max
A	0.90	1.15
A1	0.00	0.10
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
e	1.80	2.00
L	0.55 REF	
HE	2.25	2.55
All Dimensions in mm		

Suggested Soldering Pad Layout



Note:

1.The pad layout is for reference purposes only.

2.General tolerance ±0.05mm