

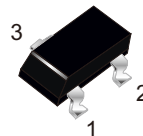
### FEATURES

- Fast switching device( $TRR < 4nS$ )
- Power Dissipation of 225mW
- High Stability and High Reliability
- Low reverse leakage

### MECHANICAL DATA

- Case:SOT-23(TO-236)
- Terminals:Plated solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Marking:M5C

### SOT-23



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbols	Value	Units
Reverse Voltage	$V_R$	100	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Peak Forward Surge Current	$I_{FM}$	500	mA
Power Dissipation at $T_A=25^\circ C$	$P_D$	225	mW
Junction temperature	$T_J$	150	$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ C$
Typical thermal resistance	$R_{\theta JA}$	417	$^\circ C/W$

### ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Min.	Max.	Units
Forward voltage at $I_F=1mA$ $I_F=10mA$ $I_F=100mA$	$V_F$	—	0.72 0.82 1.10	V
Reverse Voltage at $I_R=100\mu A$	$V_{RB}$	100	—	V
Leakage current at $V_R=100V$ $V_R=50V$	$I_R$	—	3.0	$\mu A$
		—	1.0	$\mu A$
Junction capacitance at $V_R=0V$ $f=1MHz$	$C_J$	—	1.5	pF
Reverse recovery time $I_F=I_R=10mA, V_R=6V, RL=100\Omega, I_{RR}=0.1 \times I_R$	$t_{rr}$	—	4	ns

# RATINGS AND CHARACTERISTIC CURVES MMBD7000

## Typical Characteristics Diagrams

Fig.1 Typical Forward Characteristics

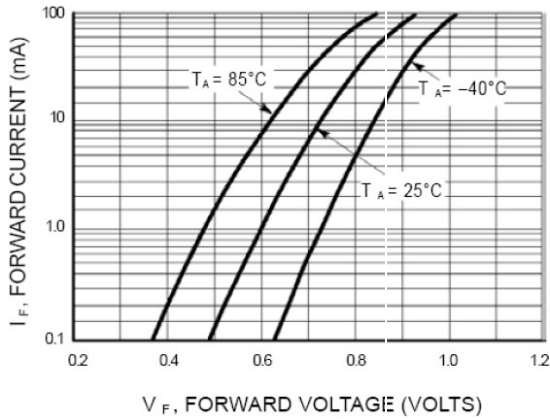


Fig.2 Typical Reverse Characteristics

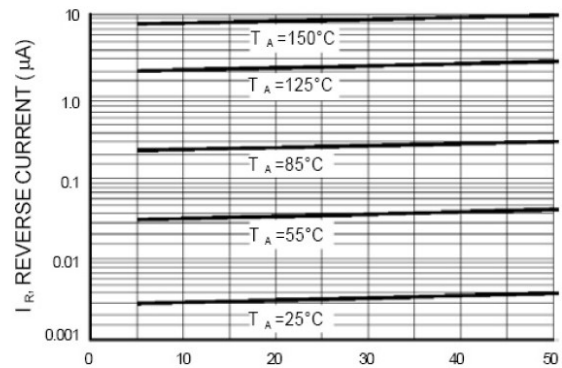
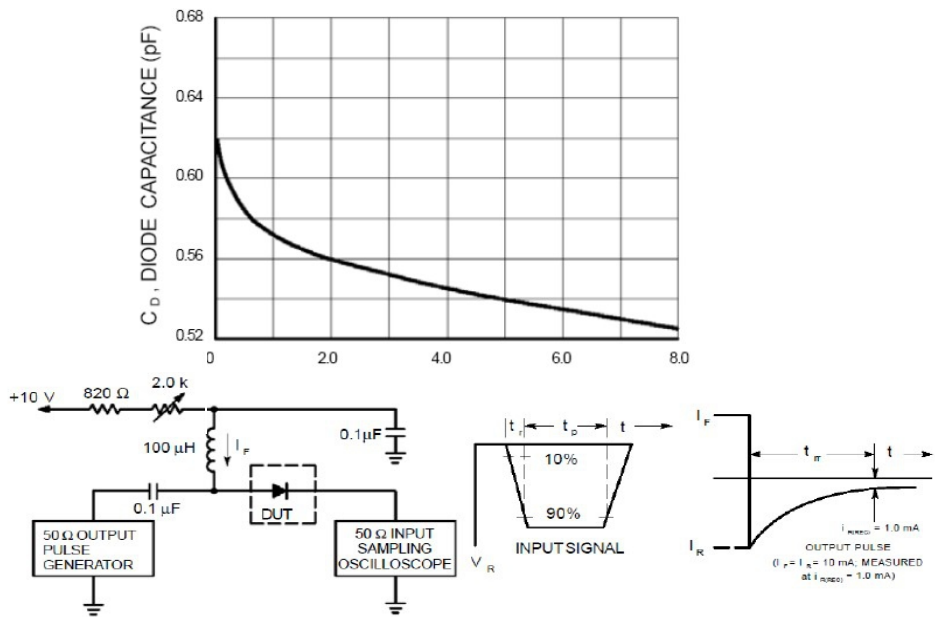


Fig.3 Typical Capacitance Characteristics



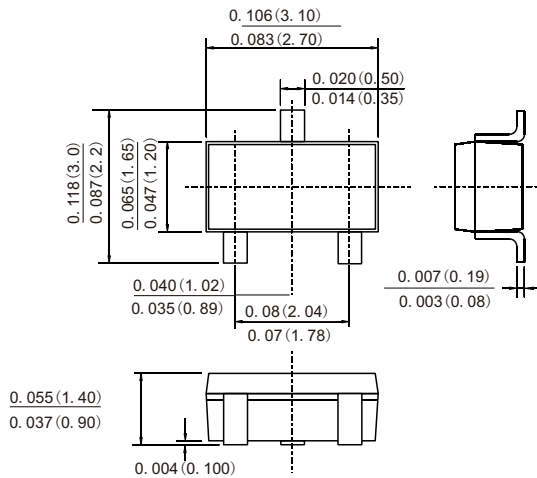
- Notes: 1. A 2.0 k $\Omega$  variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10mA.  
 3.  $t_p \gg t_r$

### Recovery Time Equivalent Test Circuit

# RATINGS AND CHARACTERISTIC CURVES MMBD7000

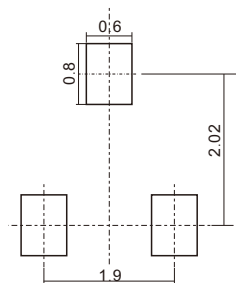
## Outline Dimensions

### SOT-23



Dimensions in inches and (millimeters)

## Suggested pad layout



Dimensions in millimeters

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