



# DATA SHEET

## MMBD717/A/C/S

### SURFACE MOUNT SCHOTTKY DIODES

**VOLTAGE** 20 Volts **CURRENT** 0.2 Amperes

**SOT-23** Unit: inch (mm)

#### FEATURES

- Very Low  $V_F$ : 0.32V (Typ) at  $I_F = 1\text{mA}$
- Low Capacitance: 2.5 pF (Max) at  $V_R=1\text{V}$
- Extremely Fast Switching Speed
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

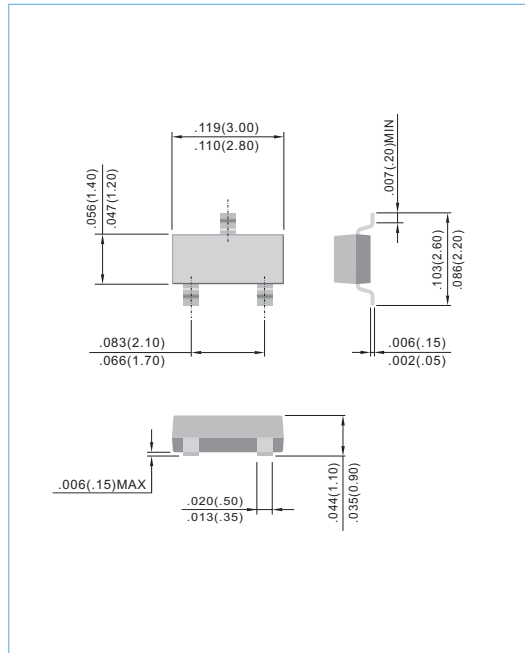
#### MECHANICAL DATA

Case: SOT-23, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Approx. Weight: 0.008 gram

Marking: P40,P72,P73,P74



#### ABSOLUTE RATINGS

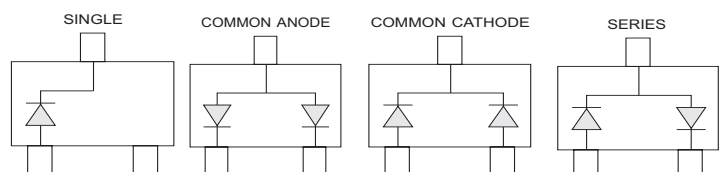
PARAMETER	Symbol	Value	Units
Maximum Reverse Voltage	$V_R$	20	V
Peak Reverse Voltage	$V_{RRM}$	20	V
Maximum Forward Current	$I_F$	0.2	A

#### THERMAL CHARACTERISTICS

PARAMETER	Symbol	MMBD717	MMBD717A	MMBD717C	MMBD717S	Units
Power Dissipation (Note 1)	$P_{TOT}$	200				mW
Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	556				$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_J$	-55 to 150				$^{\circ}\text{C}$
Storage Temperature at Temp=25 $^{\circ}\text{C}$	$T_{STG}$	-55 to 150				$^{\circ}\text{C}$
Circuit Figure		SINGLE	COMMON ANODE	COMMON CATHODE	SERIES	

Note:

1. FR-5 Board = 1.0 x 0.75 x 0.062 in.

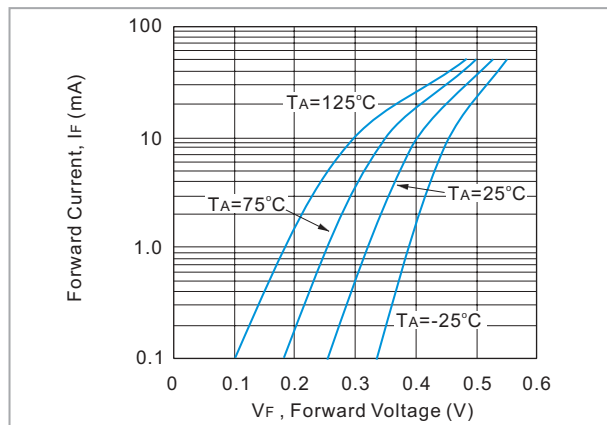




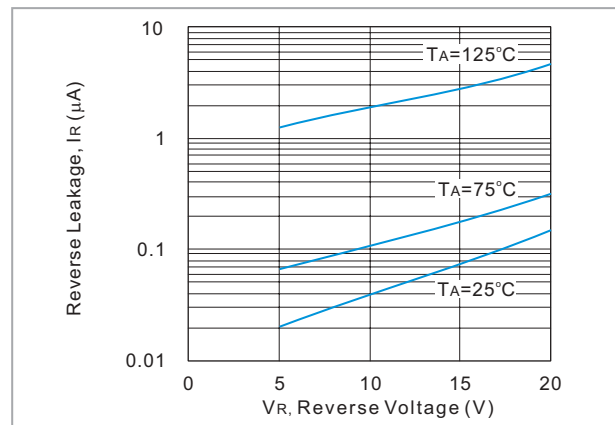
**ELECTRICAL CHARACTERISTICS** (each diode) ( $T_j = 25^\circ\text{C}$  unless otherwise noted)

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=10\ \mu\text{A}$	20	--	--	V
Reverse Leakage Current	$I_R$	$V_R=10\ \text{V}$	--	--	1.0	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=1.0\text{mA}$	--	--	0.37	V
Maximum Junction Capacitance	$C_J$	$V_R=1\text{V}, f=1.0\text{MHz}$	--	--	2.5	pF

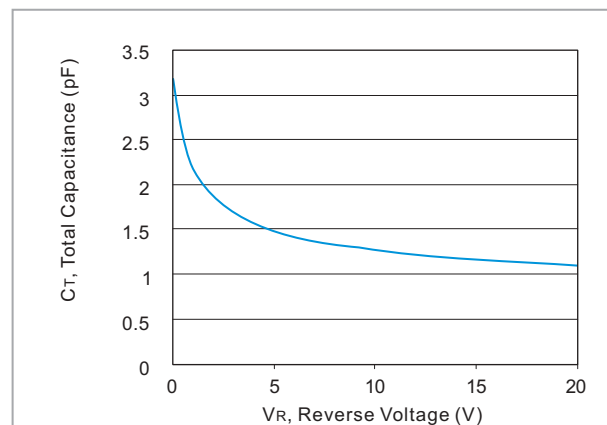
**ELECTRICAL CHARACTERISTICS CURVE**



**Fig. 1. Typical Forward Voltage**



**Fig. 2. Typical Reverse Leakage**



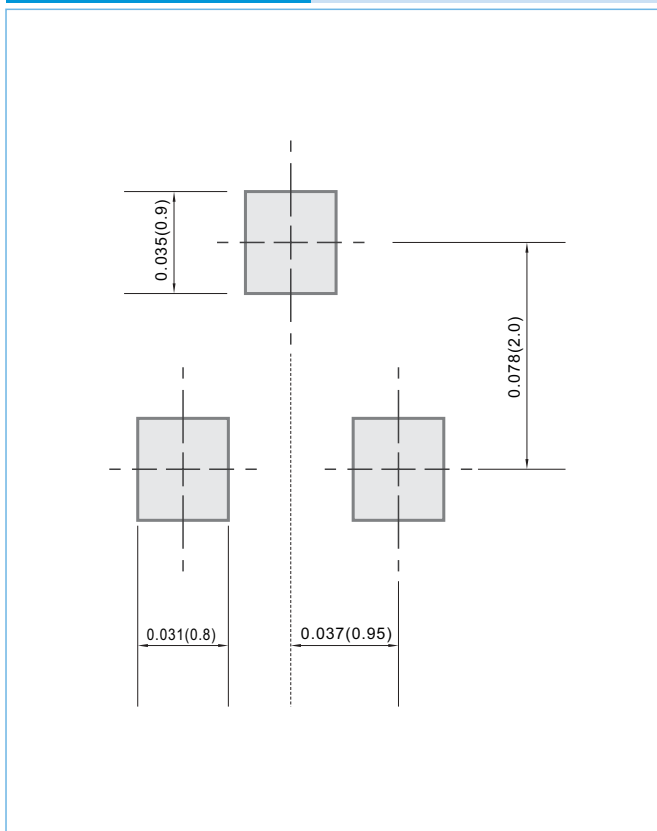
**Fig. 3. Typical Total Capacitance**



## MOUNTING PAD LAYOUT

SOT-23

Unit: inch (mm)



## ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 3.0K per 7" plastic Reel

## LEGAL STATEMENT

### IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.

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