



# DATA SHEET

## MMBD452

### SURFACE MOUNT SCHOTTKY DIODE

**VOLTAGE** 30 Volts      **POWER** 200 mWatts

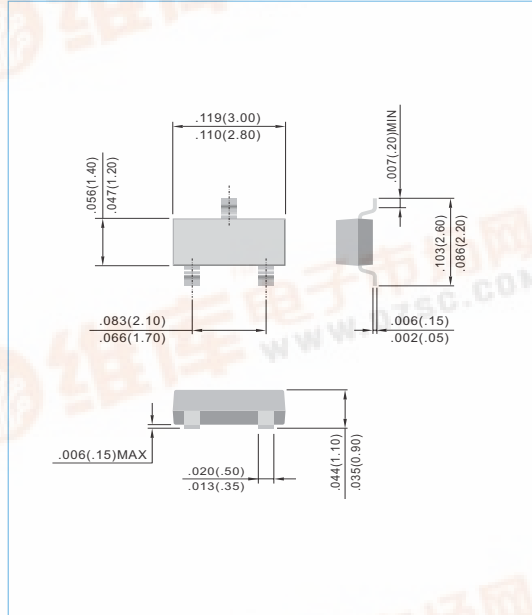
**SOT-23**      Unit: inch (mm)

#### FEATURES

- Low Capacitance: 1.5 pF (Max) at  $V_R = 15V$
- Very Low  $V_F$ : 0.36V (Typ) at  $I_F = 1mA$
- Extremely Fast Switching Speed
- Isolated, Schottky Pairs in Small Surface Mount Package

#### MECHANICAL DATA

Case: SOT-23 plastic  
 Terminals: Solderable per MIL-STD-202, Method 208  
 Approx Weight: 0.008 gram  
 Marking: 452



#### ABSOLUTE RATINGS

PARAMETER	SYMBOL	Value	UNIT
Maximum Reverse Voltage	$V_R$	30	V
Peak Reverse Voltage	$V_{RRM}$	30	V
Maximum Forward Current	$I_F$	0.2	A

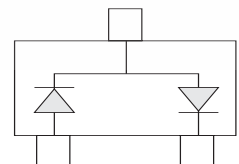
#### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Value	UNIT
Power Dissipation (Note 1)	$P_{tot}$	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	556	$^{\circ}C/W$
Junction Temperature	$T_j$	-55 to 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to 150	$^{\circ}C$

Note

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

#### SERIES

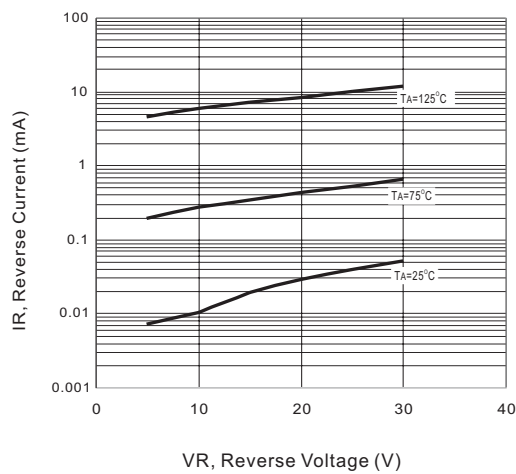




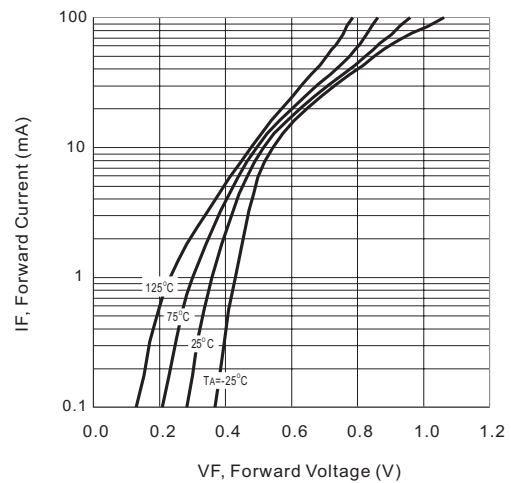
**ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

PARAMETER	SYMBOL	Test Condition	MIN.	TYP.	MAX.	UNIT
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=10\ \mu\text{A}$	30			V
Reverse Leakage Current	$I_R$	$V_R=25\text{V}$			0.2	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=1.0\text{mA}$			0.45	V
Forward Voltage	$V_F$	$I_F=10\text{mA}$			0.6	V
Total Capacitance	$C_T$	$V_R=15\text{V}, f=1.0\text{MHz}$			1.5	pF

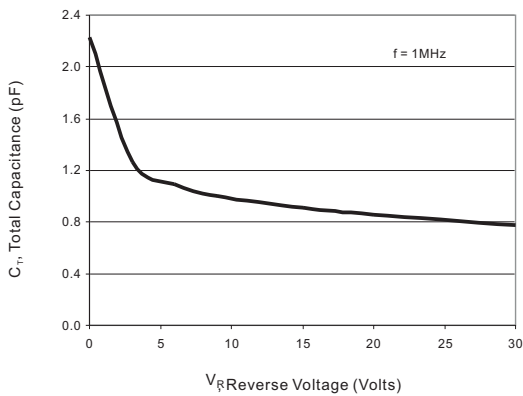
**RATING AND CHARACTERISTIC CURVES**



**Fig.1 TYPICAL REVERSE CHARACTERISTICS**



**Fig.2-TYPICAL FORWARD CHARACTERISTICS**



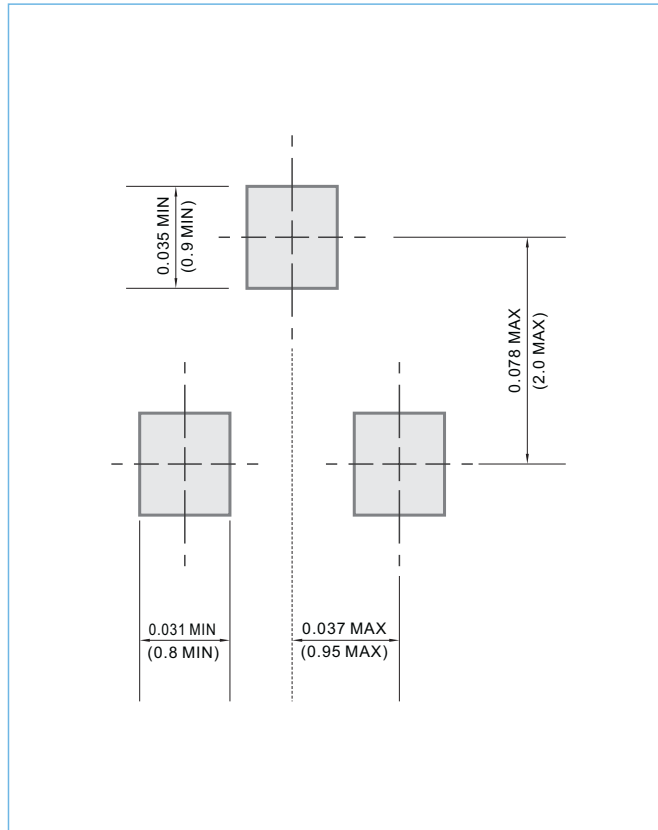
**Fig.3 TYPICAL TOTAL CAPACITANCE**



## MOUNTING PAD LAYOUT

SOT-23

Unit: inch (mm)





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## ORDER INFORMATION

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- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 3.0K per 7" plastic Reel

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## LEGAL STATEMENT

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### 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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