

MMBD352WT1

Dual Schottky Barrier Diode

These devices are designed primarily for UHF mixer applications but are suitable also for use in detector and ultra-fast switching circuits.

Features

- Very Low Capacitance – Less Than 1.0 pF @ Zero Volts
- Low Forward Voltage – 0.5 Volts (Typ) @ $I_F = 10$ mA
- Pb-Free Package is Available

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	7.0	V_{CC}

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	200	mW
		1.6	mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate (Note 2) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300	mW
		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417	$^\circ\text{C/W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	$^\circ\text{C}$

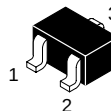
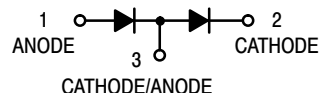
1. FR-5 = $1.0 \times 0.75 \times 0.062$ in.

2. Alumina = $0.4 \times 0.3 \times 0.024$ in. 99.5% alumina.



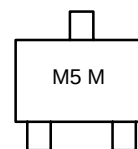
ON Semiconductor®

<http://onsemi.com>



SOT-323 (SC-70)
CASE 419
STYLE 9

MARKING DIAGRAM



M5 = Device Code
M = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
MMBD352WT1	SOT-323	3000/Tape & Reel
MMBD352WT1G	SOT-323 (Pb-Free)	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

MMBD352WT1

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Forward Voltage ($I_F = 10\text{ mA}$)	V_F	–	0.60	V
Reverse Voltage Leakage Current ($V_R = 3.0\text{ V}$) ($V_R = 7.0\text{ V}$)	I_R	– –	0.25 10	μA
Capacitance ($V_R = 0\text{ V}$, $f = 1.0\text{ MHz}$)	C	–	1.0	pF

TYPICAL CHARACTERISTICS

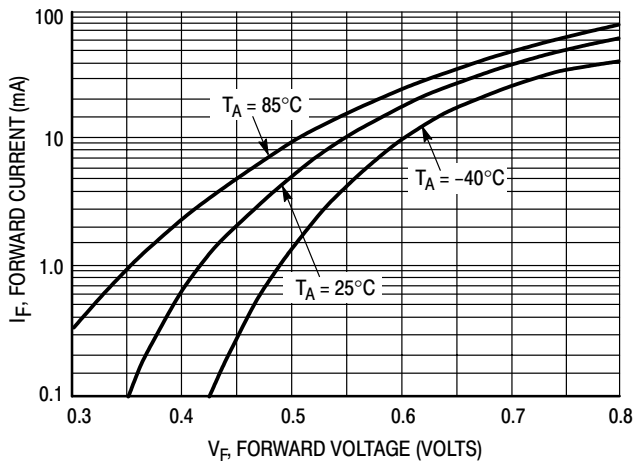


Figure 1. Forward Voltage

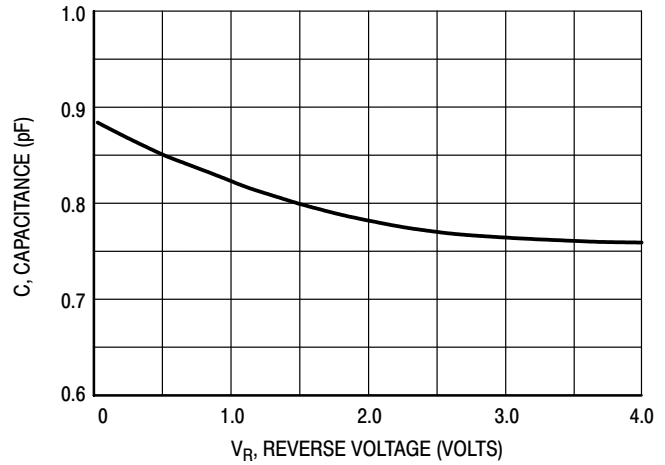
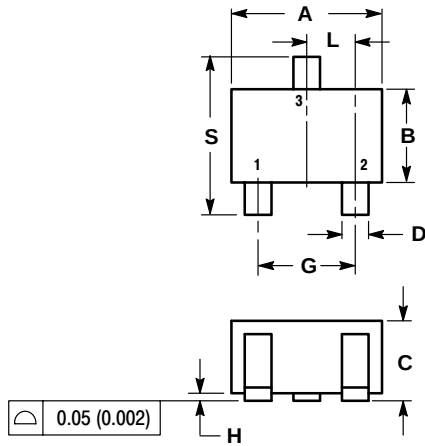


Figure 2. Capacitance

MMBD352WT1

PACKAGE DIMENSIONS

SOT-323 / SC-70
CASE 419-04
ISSUE L



NOTES:

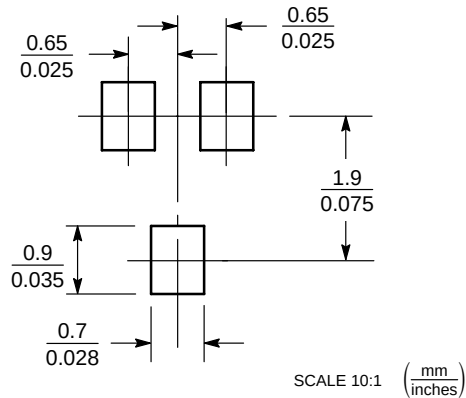
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.032	0.040	0.80	1.00
D	0.012	0.016	0.30	0.40
G	0.047	0.055	1.20	1.40
H	0.000	0.004	0.00	0.10
J	0.004	0.010	0.10	0.25
K	0.017 REF		0.425 REF	
L	0.026 BSC		0.650 BSC	
N	0.028 REF		0.700 REF	
S	0.079	0.095	2.00	2.40

STYLE 9:

- PIN 1. ANODE
- CATHODE
- CATHODE-ANODE

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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