

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[ON Semiconductor](#)  
[MMBD330T1G](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G

## Schottky Barrier Diodes

Schottky barrier diodes are designed primarily for high-efficiency UHF and VHF detector applications. Readily available to many other fast switching RF and digital applications. They are housed in the SOT-323/SC-70 package which is designed for low-power surface mount applications.

### Features

- Extremely Low Minority Carrier Lifetime
- Very Low Capacitance
- Low Reverse Leakage
- Available in 8 mm Tape and Reel
- AEC Qualified and PPAP Capable
- S Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant\*

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage MMBD330T1G, SMMBD330T1G MMBD770T1G, SMMBD770T1G	$V_R$	30 70	Vdc
Forward Continuous Current (DC)	$I_F$	200	mA
Nonrepetitive Peak Forward Current (Note 1)	$I_{FSM}$	1.0	A
Forward Power Dissipation $T_A = 25^\circ\text{C}$	$P_F$	120	mW
Junction Temperature	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. 60 Hz Halfsine.



ON Semiconductor®

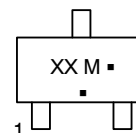
<http://onsemi.com>



SC-70/SOT-323  
CASE 419



### MARKING DIAGRAMS



XX = Specific Device Code  
 4T = MMBD330T1  
 5H = MMBD770T1  
 M = Date Code  
 ■ = Pb-Free Package

(Note: Microdot may be in either location)

\*Date Code orientation may vary depending upon the manufacturing location.

### ORDERING INFORMATION

Device	Package	Shipping†
MMBD330T1G	SC-70 (Pb-Free)	3,000/Tape & Reel
SMMBD330T1G	SC-70 (Pb-Free)	3,000/Tape & Reel
MMBD770T1G	SC-70 (Pb-Free)	3,000/Tape & Reel
SMMBD770T1G	SC-70 (Pb-Free)	3,000/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.

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

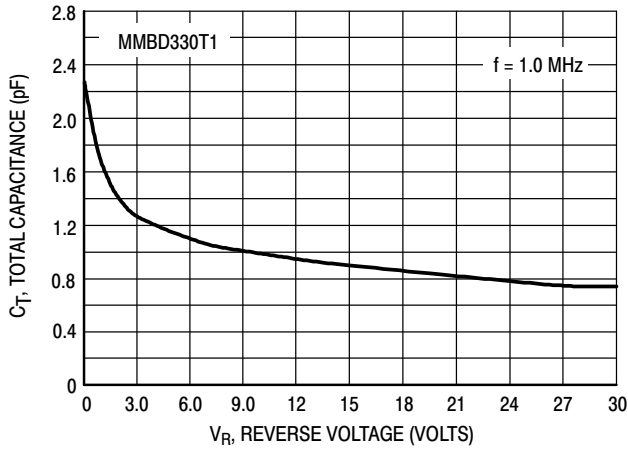
**MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G**

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

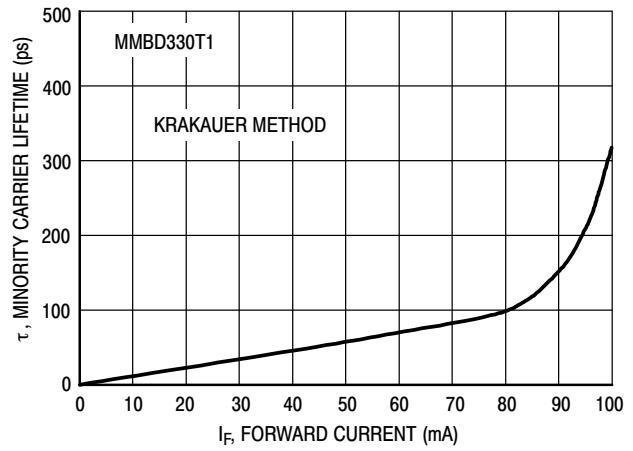
Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \mu\text{A}$ ) MMBD330T1G, SMMBD330T1G MMBD770T1G, SMMBD770T1G	$V_{(BR)R}$	30 70	- -	- -	Volts
Diode Capacitance ( $V_R = 15 \text{ Volts}$ , $f = 1.0 \text{ MHz}$ ) MMBD330T1G, SMMBD330T1G ( $V_R = 20 \text{ Volts}$ , $f = 1.0 \text{ MHz}$ ) MMBD770T1G, SMMBD770T1G	$C_T$	- -	0.9 0.5	1.5 1.0	pF
Reverse Leakage ( $V_R = 25 \text{ V}$ ) MMBD330T1G, SMMBD330T1G ( $V_R = 35 \text{ V}$ ) MMBD770T1G, SMMBD770T1G	$I_R$	- -	13 9.0	200 200	nA <sub>dc</sub>
Forward Voltage ( $I_F = 1.0 \text{ mA}$ ) MMBD330T1G, SMMBD330T1G ( $I_F = 10 \text{ mA}$ ) ( $I_F = 1.0 \text{ mA}$ ) MMBD770T1G, SMMBD770T1G ( $I_F = 10 \text{ mA}$ )	$V_F$	- - - -	0.38 0.52 0.42 0.70	0.45 0.60 0.50 1.0	V <sub>dc</sub>

**MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G**

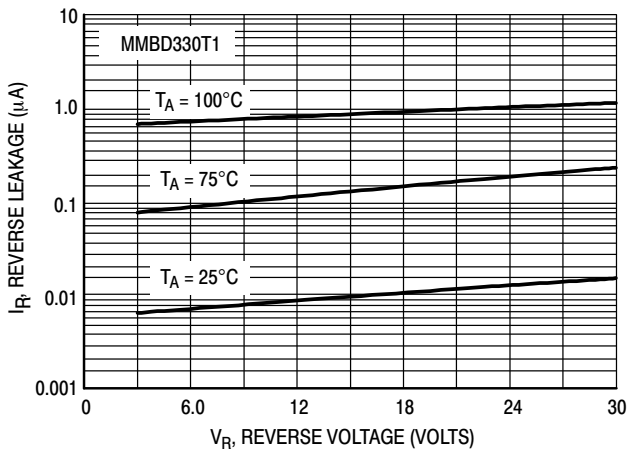
**TYPICAL CHARACTERISTICS  
MMBD330T1G, SMMBD330T1G**



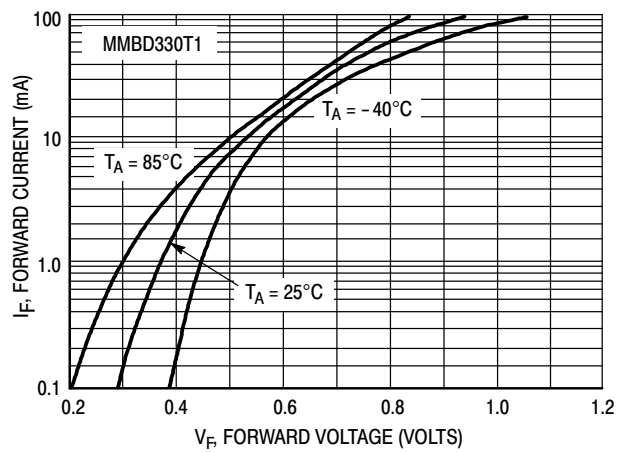
**Figure 1. Total Capacitance**



**Figure 2. Minority Carrier Lifetime**



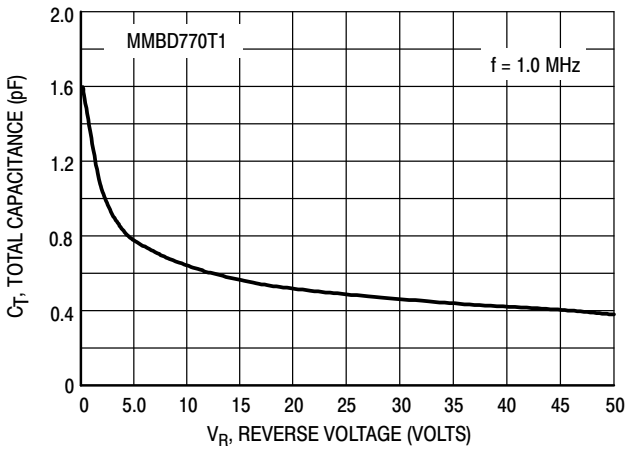
**Figure 3. Reverse Leakage**



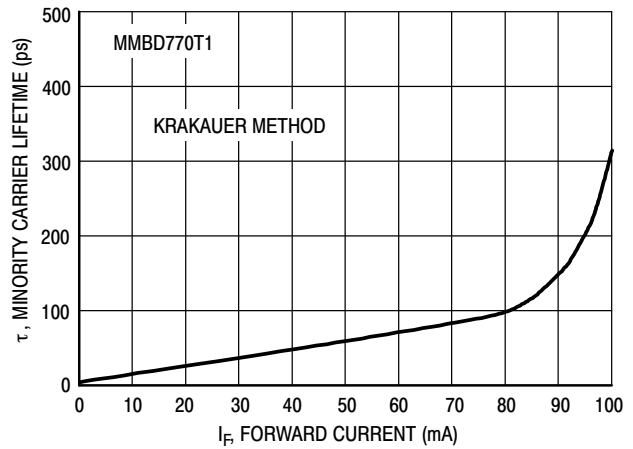
**Figure 4. Forward Voltage**

**MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G**

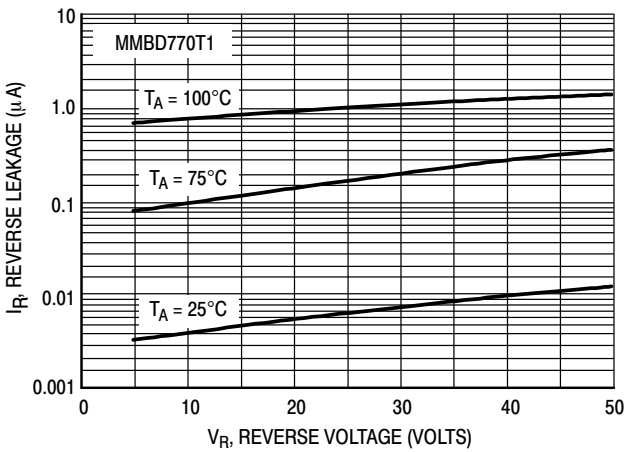
**TYPICAL CHARACTERISTICS  
MMBD770T1G, SMMBD770T1G**



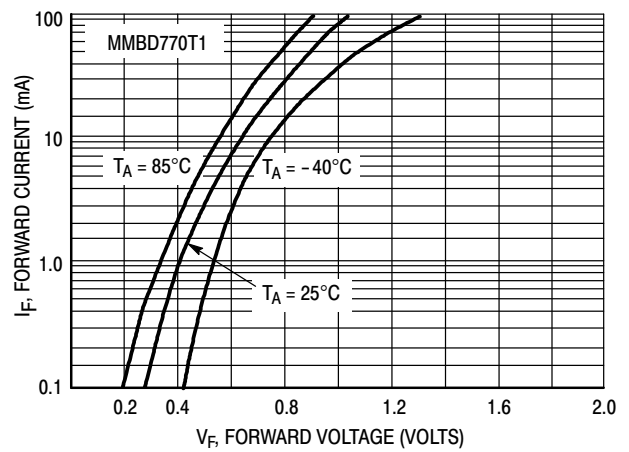
**Figure 5. Total Capacitance**



**Figure 6. Minority Carrier Lifetime**



**Figure 7. Reverse Leakage**



**Figure 8. Forward Voltage**

