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Stocking Distributor

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ON Semiconductor MMBD330T1G

For any questions, you can email us directly: 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)	l _F	200	mA
Nonrepetitive Peak Forward Current (Note 1)	I _{FSM}	1.0	Α
Forward Power Dissipation T _A = 25°C	P _F	120	mW
Junction Temperature	TJ	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°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.

Datasheet of MMBD330T1G - DIODE SCHOTTKY 30V 0.2A SOT-323

Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G

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

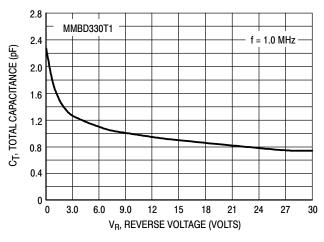
Characteristic	Symbol	Min	Тур	Max	Unit
Reverse Breakdown Voltage (I _R = 10 μA) MMBD330T1G, SMMBD330T1G	V _{(BR)R}	30	_	_	Volts
MMBD770T1G, SMMBD770T1G		70	-	-	
Diode Capacitance (V _R = 15 Volts, f = 1.0 MHZ)	C _T				pF
MMBD330T1G, SMMBD330T1G (V _B = 20 Volts, f = 1.0 MHZ)		-	0.9	1.5	
MMBD770T1G, SMMBD770T1G		-	0.5	1.0	
Reverse Leakage (V _R = 25 V)	I _R				nAdc
MMBD330T1G, SMMBD330T1G (V _R = 35 V)		-	13	200	
MMBD770T1G, SMMBD770T1G		-	9.0	200	
Forward Voltage (I _F = 1.0 mAdc)	V _F				Vdc
MMBD330T1G, SMMBD330T1G		-	0.38	0.45	
$(I_F = 10 \text{ mA})$ $(I_F = 1.0 \text{ mAdc})$		_	0.52	0.60	
MMBD770T1G, SMMBD770T1G		-	0.42	0.50	
$(I_F = 10 \text{ mA})$		_	0.70	1.0	

Datasheet of MMBD330T1G - DIODE SCHOTTKY 30V 0.2A SOT-323

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MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G

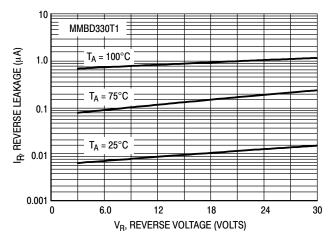
TYPICAL CHARACTERISTICS MMBD330T1G, SMMBD330T1G



500 MMBD330T1 τ, MINORITY CARRIER LIFETIME (ps) 400 KRAKAUER METHOD 300 200 100 0 10 20 30 40 50 60 90 100 IF, FORWARD CURRENT (mA)

Figure 1. Total Capacitance

Figure 2. Minority Carrier Lifetime



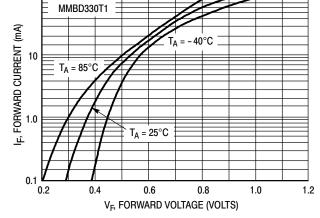


Figure 3. Reverse Leakage

Figure 4. Forward Voltage

Datasheet of MMBD330T1G - DIODE SCHOTTKY 30V 0.2A SOT-323

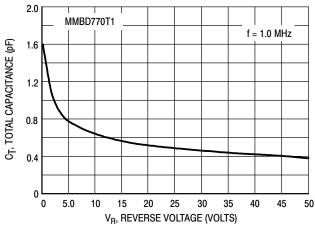
Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

MMBD330T1G, SMMBD330T1G, MMBD770T1G, SMMBD770T1G

TYPICAL CHARACTERISTICS MMBD770T1G, SMMBD770T1G

500

400



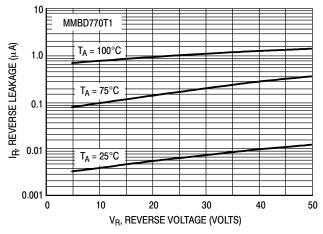
 τ , MINORITY CARRIER LIFETIME (ps) 300 200 100 0 50 0 10 20 100 30 40 50 70 90 I_F, FORWARD CURRENT (mA)

MMBD770T1

KRAKAUER METHOD

Figure 5. Total Capacitance

Figure 6. Minority Carrier Lifetime



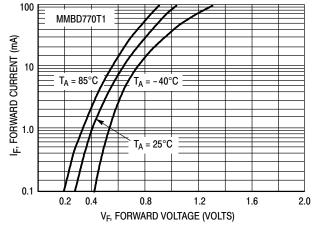


Figure 7. Reverse Leakage

Figure 8. Forward Voltage

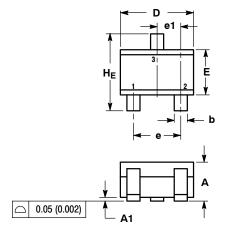
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PACKAGE DIMENSIONS

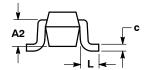
SC-70 (SOT-323) CASE 419-04 ISSUE N



NOTES:

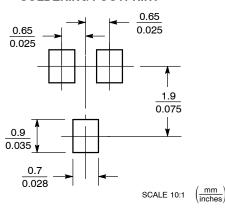
- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- 2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
Α	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2		0.70 REF 0.028 REF			=	
b	0.30	0.35	0.40	0.012	0.014	0.016
С	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
е	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BSC		
L	0.20	0.38	0.56	0.008	0.015	0.022
HE	2.00	2.10	2.40	0.079	0.083	0.095



STYLE 2: PIN 1. ANODE 2. N.C. 3. CATHODE

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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