MMBD330T1, MMBD770T1

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
- Pb–Free Packages are Available

MAXIMUM RATINGS

Rating		Symbol	Value	Unit
Reverse Voltage	MMBD330T1 MMBD770T1	V _R	30 70	Vdc
Forward Continuous Current (DC)		١ _F	200	mA
Nonrepetitive Peak Forward Current (Note 1)		I _{FSM}	1.0	A
Forward Power Dissipation $T_A = 25^{\circ}C$		P _F	120	mW
Junction Temperature		TJ	-55 to +125	°C
Storage Temperature Range		T _{stg}	-55 to +150	°C

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.

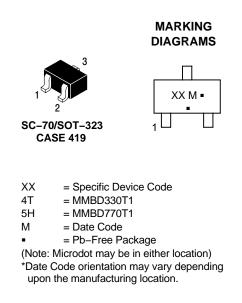
1. 60 Hz Halfsine.



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ORDERING INFORMATION

Device	Package	Shipping [†]			
MMBD330T1	SC-70	3000/Tape & Reel			
MMBD330T1G	SC–70 (Pb–Free)	3000/Tape & Reel			
MMBD770T1	SC-70	3000/Tape & Reel			
MMBD770T1G	SC–70 (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.

Preferred devices are recommended choices for future use and best overall value.

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

Characteristic	Symbol	Min	Тур	Max	Unit	
Reverse Breakdown Voltage $(I_R = 10 \ \mu A)$	MMBD330T1 MMBD770T1	V _{(BR)R}	30 70			Volts
Diode Capacitance ($V_R = 15$ Volts, f = 1.0 MHZ) ($V_R = 20$ Volts, f = 1.0 MHZ)	MMBD330T1 MMBD770T1	CT		0.9 0.5	1.5 1.0	pF
Reverse Leakage ($V_R = 25 V$) ($V_R = 35 V$)	MMBD330T1 MMBD770T1	I _R		13 9.0	200 200	nAdc
Forward Voltage $(I_F = 1.0 \text{ mAdc})$ $(I_F = 10 \text{ mA})$ $(I_F = 1.0 \text{ mAdc})$ $(I_F = 10 \text{ mA})$	MMBD330T1 MMBD770T1	VF	- - - -	0.38 0.52 0.42 0.70	0.45 0.60 0.50 1.0	Vdc

TYPICAL CHARACTERISTICS MMBD330T1

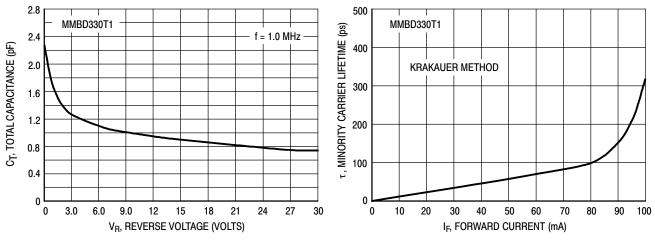
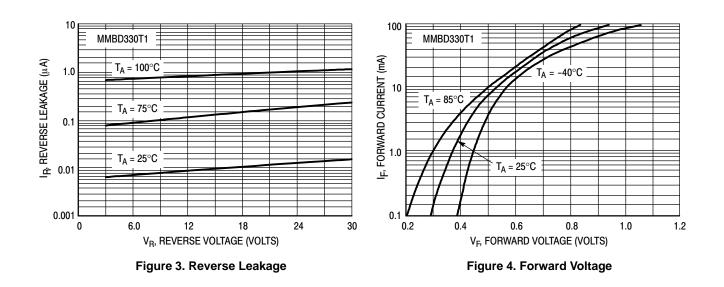


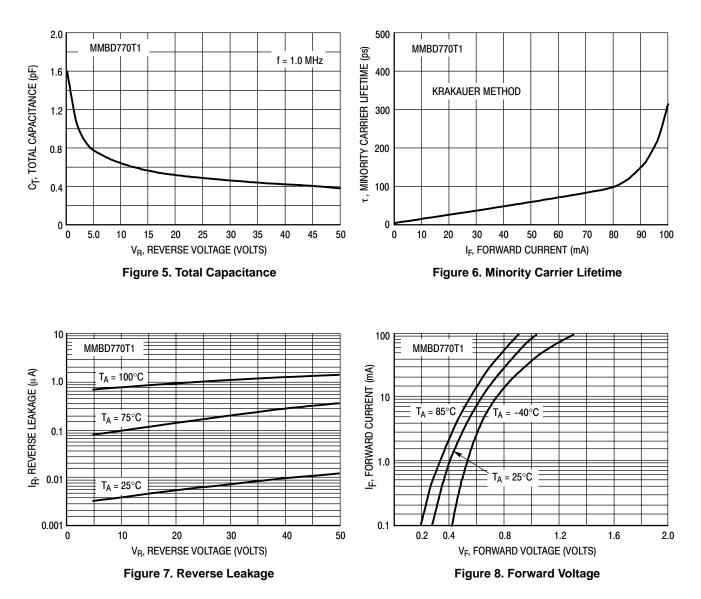


Figure 2. Minority Carrier Lifetime



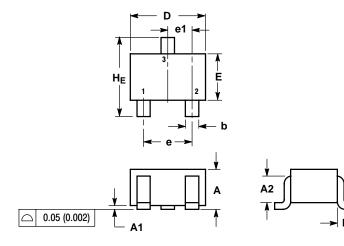
MMBD330T1, MMBD770T1

TYPICAL CHARACTERISTICS MMBD770T1



PACKAGE DIMENSIONS

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

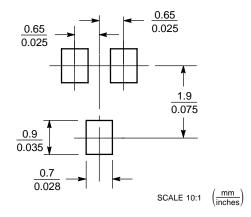


NOTES: 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M. 1982.

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	0.7 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
Е	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1	0.65 BSC			0.026 BSC		
L	0.425 REF			0.017 REF		
HE	2.00	2.10	2.40	0.079	0.083	0.095

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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