

# MMDL770T1

## Schottky Barrier Diode

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.

- Extremely Low Minority Carrier Lifetime
- Very Low Capacitance – 1.0 pF @ 20 V
- Low Reverse Leakage – 200 nA (max)
- High Reverse Voltage – 70 Volts (min)
- Available in 8 mm Tape and Reel
- Device Marking: 5H

### MAXIMUM RATINGS

Symbol	Rating	Value	Unit
$V_R$	Reverse Voltage	70	Vdc

### THERMAL CHARACTERISTICS

Symbol	Characteristic	Max	Unit
$P_D$	Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$ Derate above 25°C	200 1.57	mW mW/°C
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	635	°C/W
$T_J, T_{stg}$	Junction and Storage Temperature Range	-55 to +150	°C

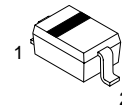
\*FR-5 Minimum Pad



**ON Semiconductor™**

<http://onsemi.com>

## 1.0 pF SCHOTTKY BARRIER DIODE



PLASTIC  
SOD-323  
CASE 477



### ORDERING INFORMATION

Device	Package	Shipping
MMDL770T1	SOD-323	3000 / Tape & Reel

# MMDL770T1

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \mu\text{A}$ )	$V_{(BR)R}$	70	–	–	Volts
Diode Capacitance ( $V_R = 20 \text{ Volts}$ , $f = 1.0 \text{ MHz}$ )	$C_T$	–	0.5	1.0	pF
Reverse Leakage ( $V_R = 35 \text{ V}$ )	$I_R$	–	9.0	200	nAdc
Forward Voltage ( $I_F = 1.0 \text{ mAdc}$ ) ( $I_F = 10 \text{ mA}$ )	$V_F$	–	0.7	1.0	Vdc

## TYPICAL CHARACTERISTICS

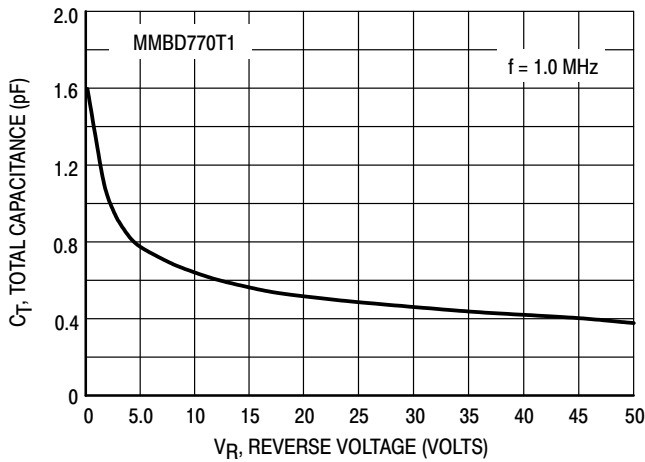


Figure 1. Total Capacitance

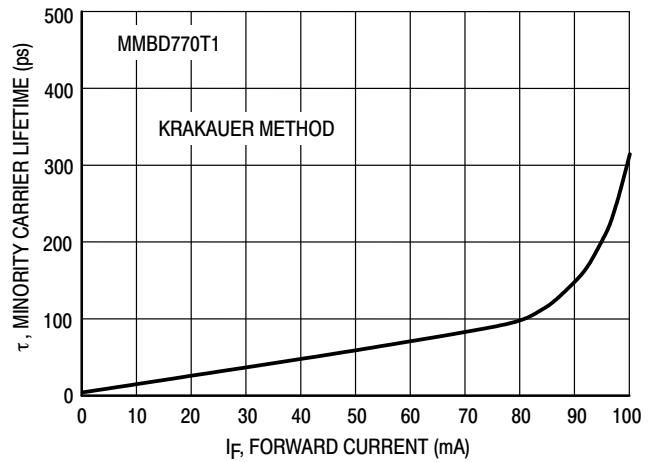


Figure 2. Minority Carrier Lifetime

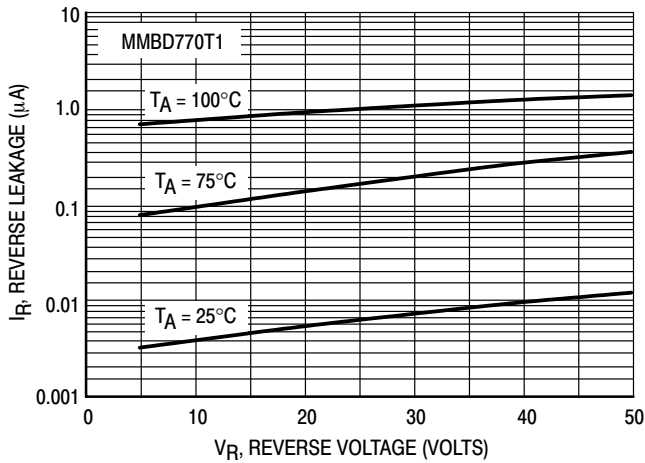


Figure 3. Reverse Leakage

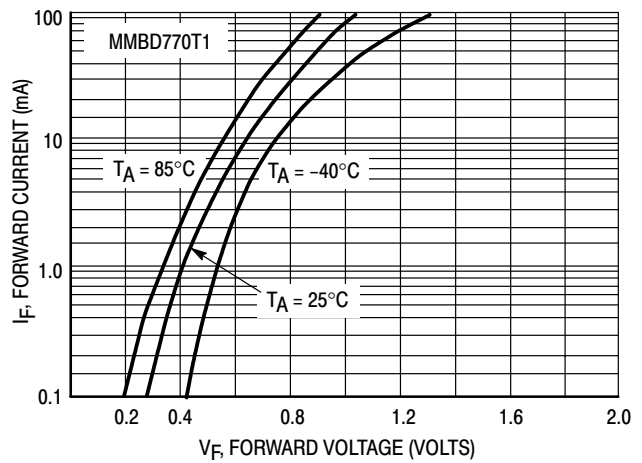
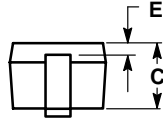
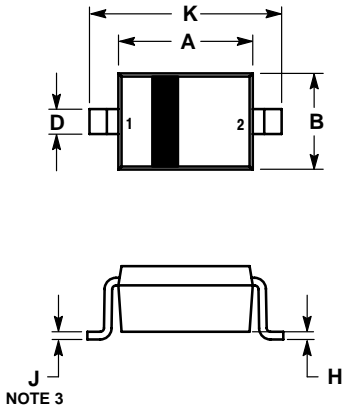


Figure 4. Forward Voltage

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## PACKAGE DIMENSIONS

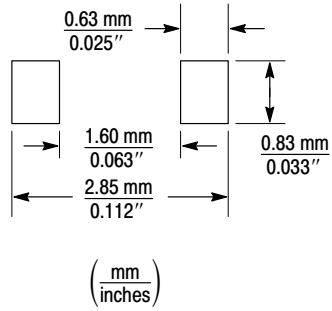
**SOD-323**  
**PLASTIC PACKAGE**  
**CASE 477-02**  
**ISSUE A**




- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
  2. CONTROLLING DIMENSION: MILLIMETERS.
  3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106

STYLE 1:  
 PIN 1. CATHODE  
 2. ANODE



**SOD-323**  
**Soldering Footprint**

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