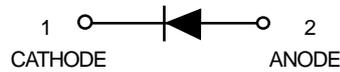


# Schottky Barrier Diode

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



**MMDL770T1**

**1.0 pF SCHOTTKY  
BARRIER DIODE**



**PLASTIC SOD- 323  
CASE 477**

## 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 $25^\circ\text{C}$	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

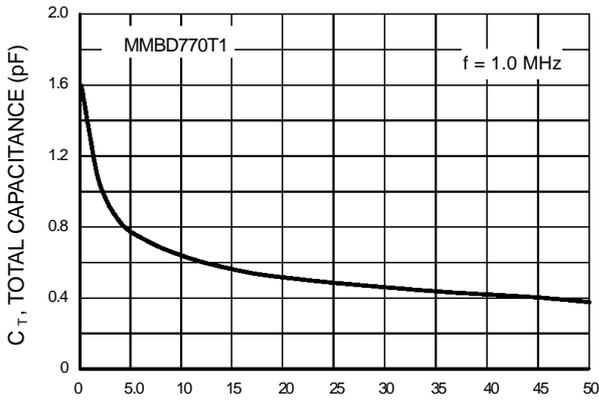
## ORDERING INFORMATION

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

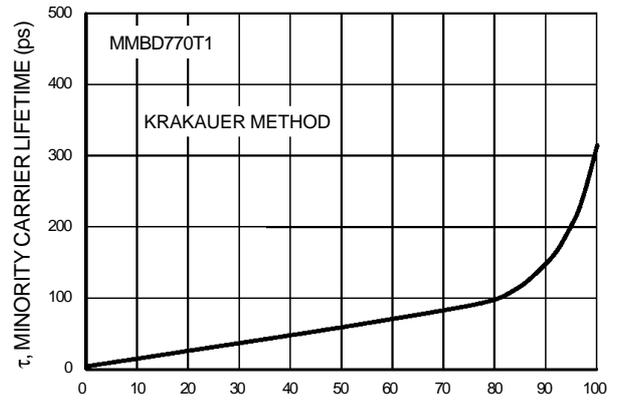
## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

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

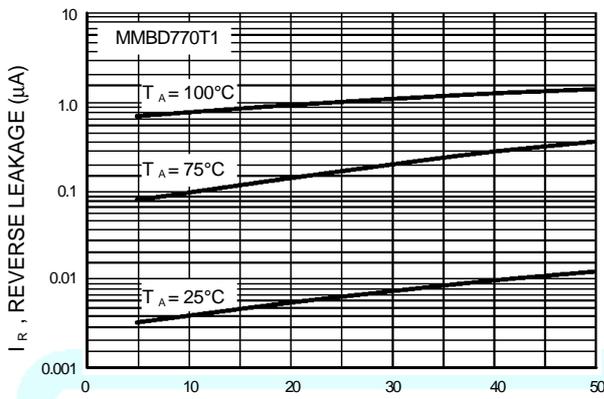
TYPICAL CHARACTERISTICS



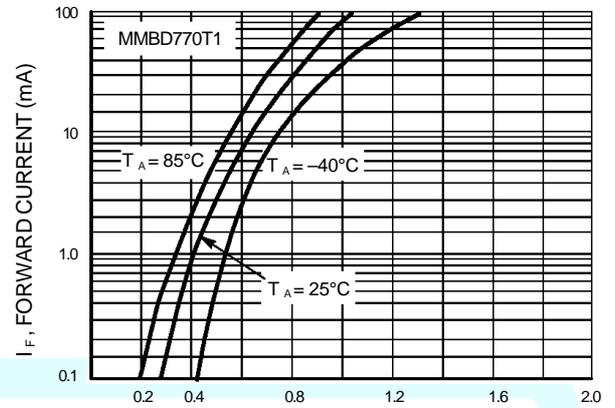
$V_R$ , REVERSE VOLTAGE (VOLTS)  
**Figure 1. Total Capacitance**



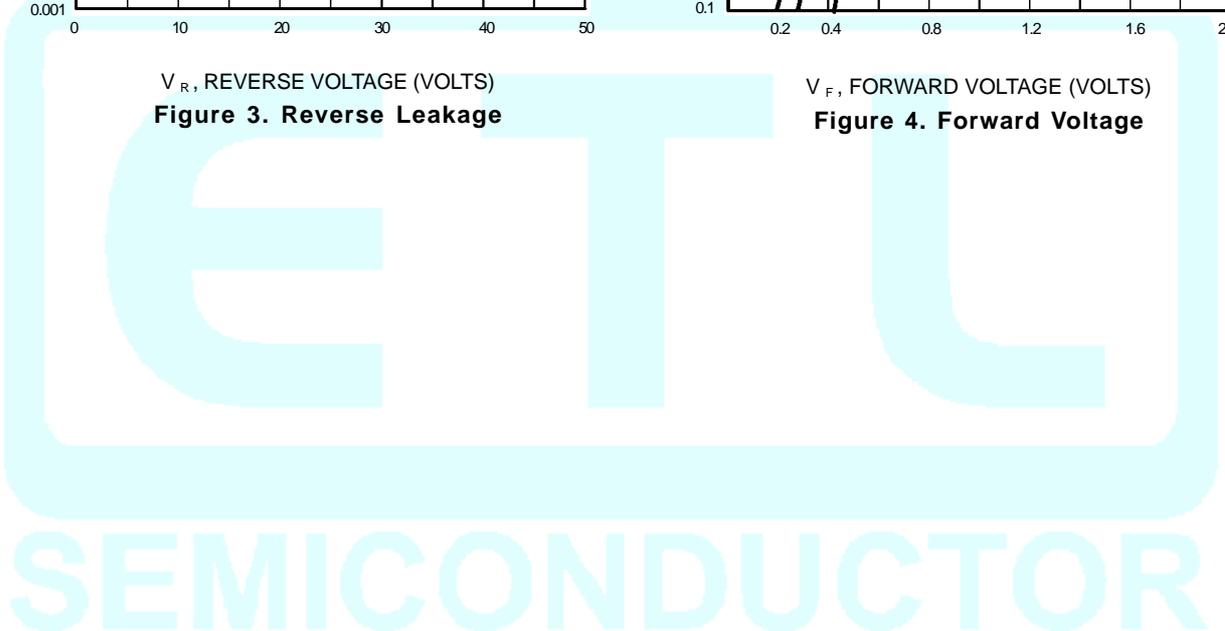
$I_F$ , FORWARD CURRENT (mA)  
**Figure 2. Minority Carrier Lifetime**



$V_R$ , REVERSE VOLTAGE (VOLTS)  
**Figure 3. Reverse Leakage**

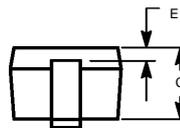
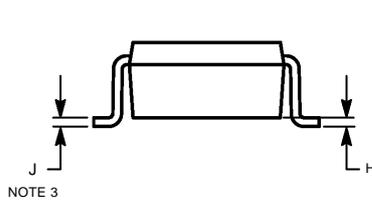
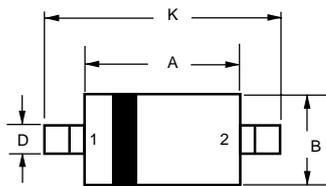


$V_F$ , FORWARD VOLTAGE (VOLTS)  
**Figure 4. Forward Voltage**



PACKAGE DIMENSIONS

SOD-323  
 PLASTIC PACKAGE  
 CASE 477-02  
 ISSUE A



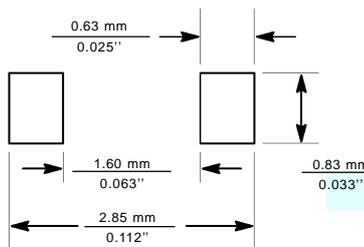
NOTES:

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



( $\frac{\text{mm}}{\text{inches}}$ )

SOD-323  
 Soldering Footprint