

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

MMDL770T1

**1.0 pF SCHOTTKY
BARRIER DIODE**



**PLASTIC SOD- 323
CASE 477**

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

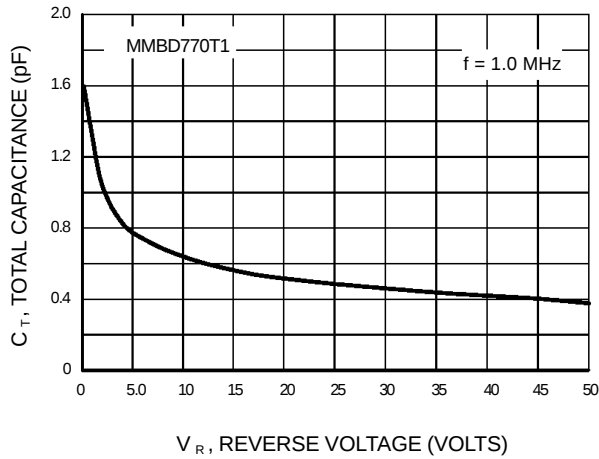


Figure 1. Total Capacitance

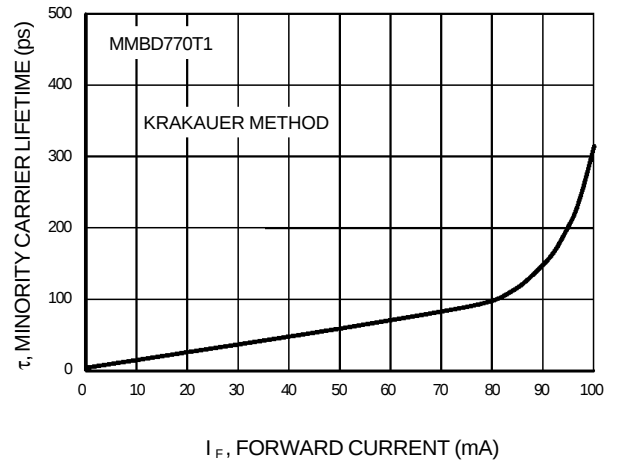


Figure 2. Minority Carrier Lifetime

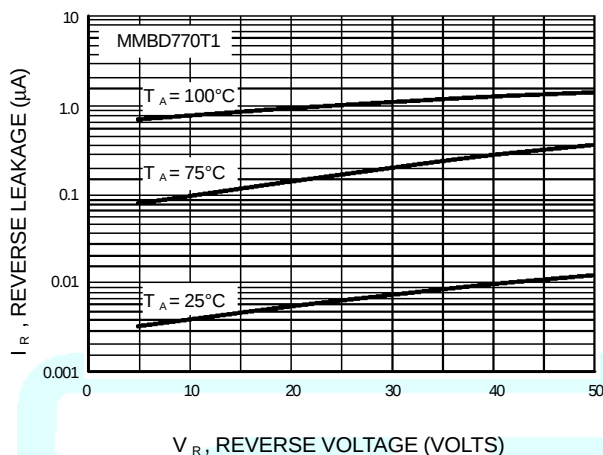


Figure 3. Reverse Leakage

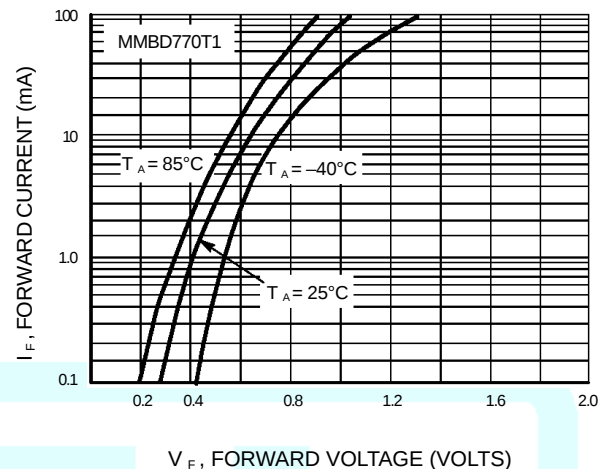
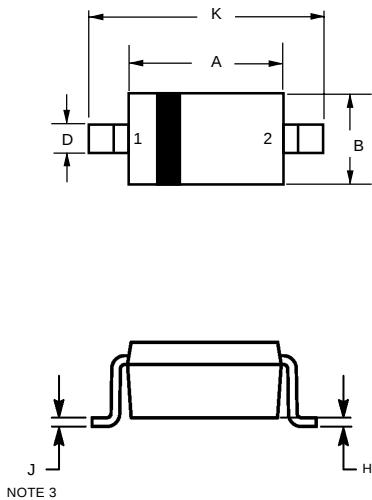


Figure 4. Forward Voltage

MMDL770T1

PACKAGE DIMENSIONS

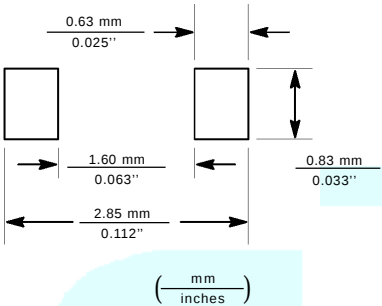
SOD-323
PLASTIC PACKAGE
CASE 477-02
ISSUE A



- 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