

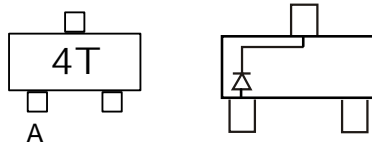


# MMBD301

Pin Configuration  
 Top View

## Features

- High Efficiency UHF and VHF Detector Applications.
- Low Capacitance and Low Reverse Leakage
- Extremely Low Minority Carrier Lifetime – 15ps (Typ)
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"



## 30 Volts Schottky Barrier Diodes

## Maximum Ratings

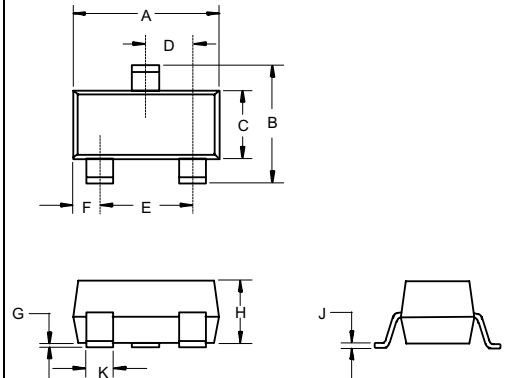
- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	30	V
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	$P_{TOT}$	200 2.0	mW mW/°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

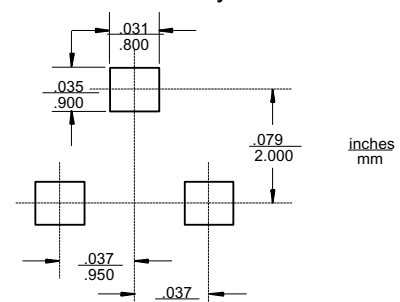
Characteristic	Symbol	Min	Typ	Max	Test Cond.
Reverse Breakdown Voltage	$V_{(BR)R}$	30V			$I_R = 10\mu\text{A}$ $T_A = 25^\circ\text{C}$
Forward Voltage	$V_F$		0.52V 0.38V	0.60V 0.45V	$I_{FM} = 10\text{mA};$ $I_{FM} = 1.0\text{mA};$
Reverse Leakage	$I_R$		13nA	200nA	$V_R = 25\text{Volts}$
Junction Capacitance	$C_J$		0.9pF	1.5pF	Measured at $f = 1.0\text{MHz},$ $V_R = 15\text{V}$

## SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

## Suggested Solder Pad Layout



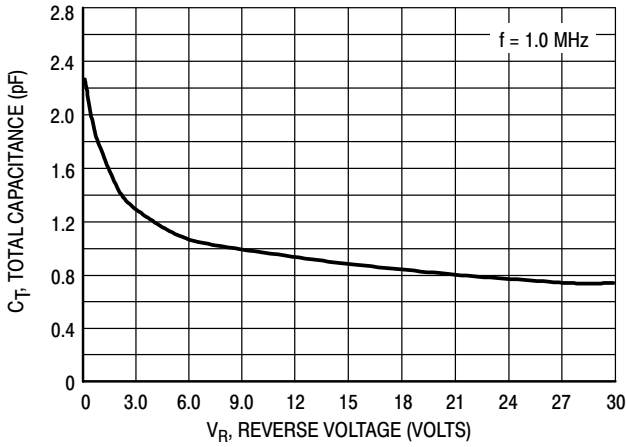


Figure 1. Total Capacitance

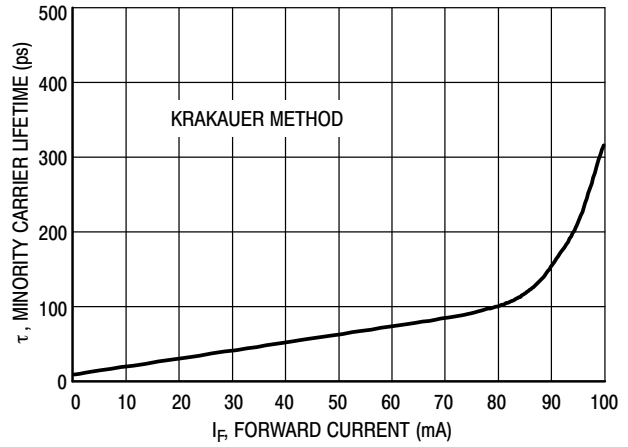


Figure 2. Minority Carrier Lifetime

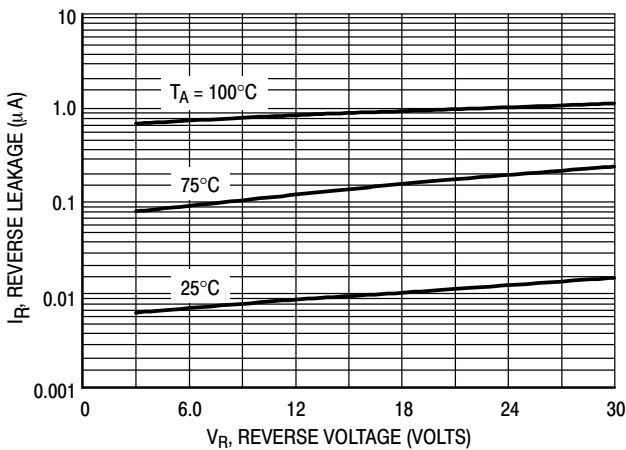


Figure 3. Reverse Leakage

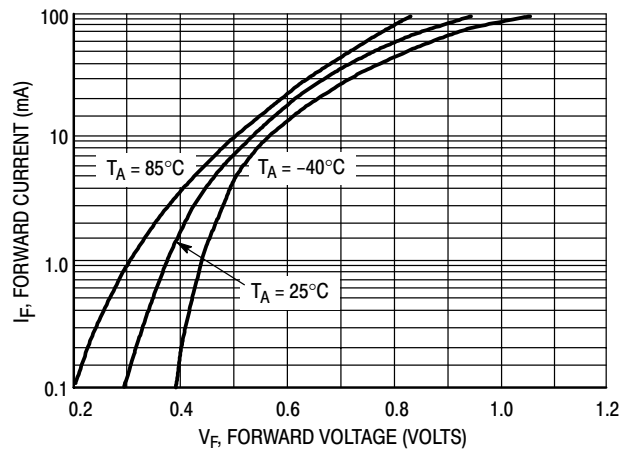


Figure 4. Forward Voltage

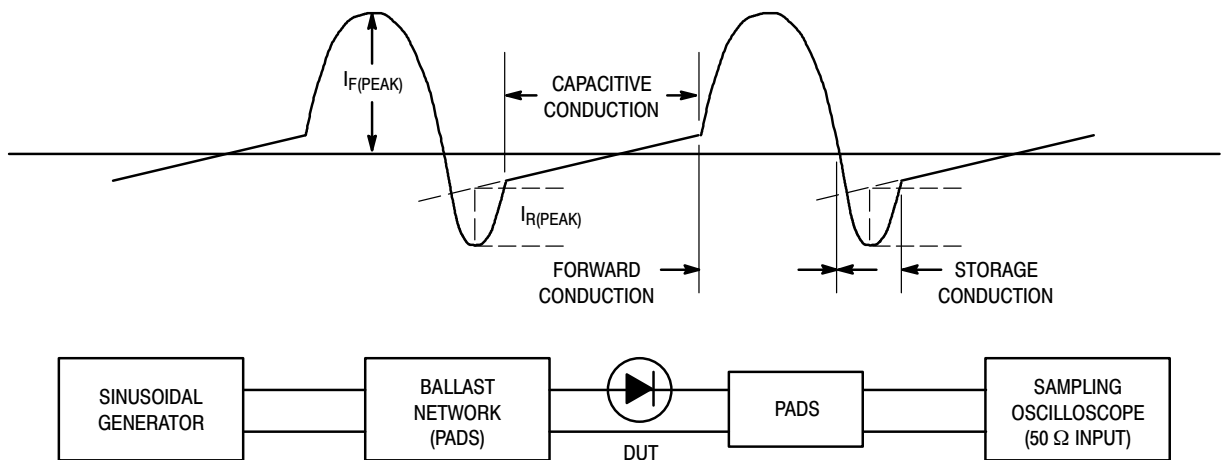


Figure 5. Krakauer Method of Measuring Lifetime



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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