



DESCRIPTION

They are designed for high-efficiency UHF and VHF detector applications.
Readily available to many other fast switching RF and digital applications.

The MMSD301//MMSD701 is available in SOD-123 package

ORDERING INFORMATION

Package Type	Part Number
SOD-123	MMSD301
	MMSD701
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

FEATURES

- Extremely Low Minority Carrier Lifetime
- Very Low Capacitance
- Low Reverse Leakage
- Available in SOD-123 package

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

@T_A=25°C, unless otherwise specified

V _R , Reverse Voltage	MMSD301	30V
	MMSD701	70V
P _F , Forward Power Dissipation	225mW	
T _J , Junction Temperature	-55°C~+125°C	
T _{STG} , Storage Temperature Range	-55°C~+150°C	

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A=25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Reverse Breakdown Voltage	V _{(BR)R}	I _R =10μA	MMSD301	30	-	-	V
			MMSD701	70	-	-	
Diode Capacitance	C _T	V _R =0, f=1.0MHz	MMSD301	-	0.9	1.5	pF
			MMSD701	-	0.5	1.0	
Total Capacitance	C _T	V _R =15V, f=1.0MHz	MMSD301	-	0.9	1.5	pF
		V _R =20V, f=1.0MHz	MMSD701	-	0.5	1.0	
Reverse Leakage	I _R	V _R =25V	MMSD301	-	13	200	nA
		V _R =35V	MMSD701	-	9.0	200	nA
Forward Voltage	V _F	I _F =1.0mA	MMSD301	-	0.38	0.45	V
		I _F =10mA		-	0.52	0.6	
		I _F =1.0mA	MMSD701	-	0.42	0.5	
		I _F =10mA		-	0.7	1.0	



TYPICAL CHARACTERISTICS

MMSD301

Figure 1. Total Capacitance

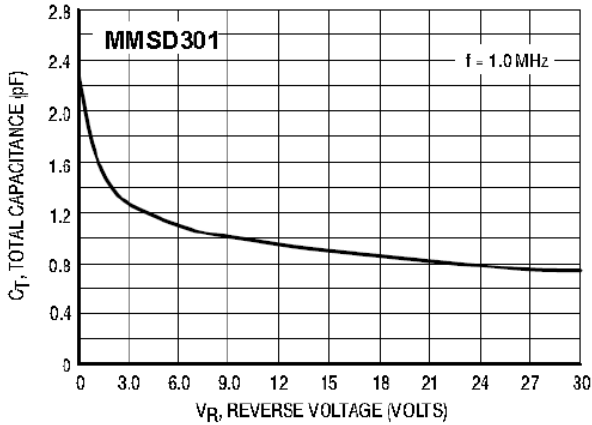


Figure 2. Minority Carrier Lifetime

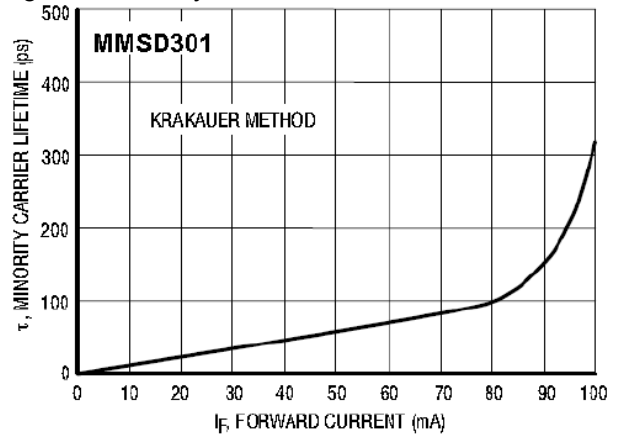


Figure 3. Reverse Leakage

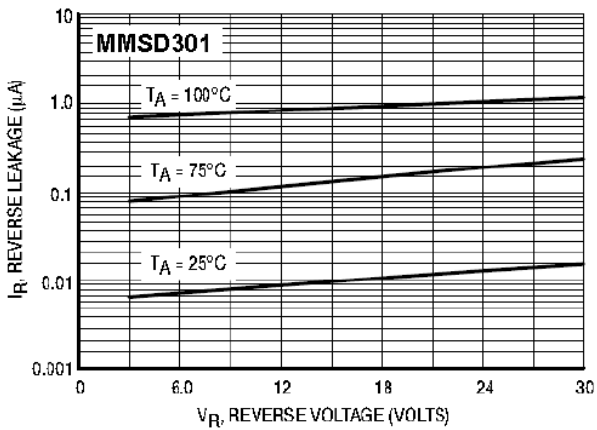
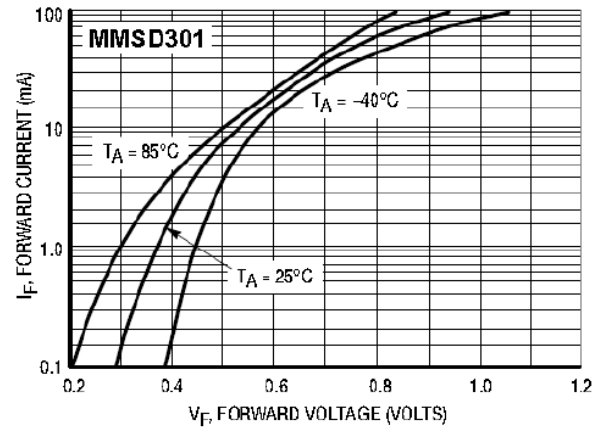


Figure 4. Forward Voltage





MMSD701

Figure 5. Total Capacitance

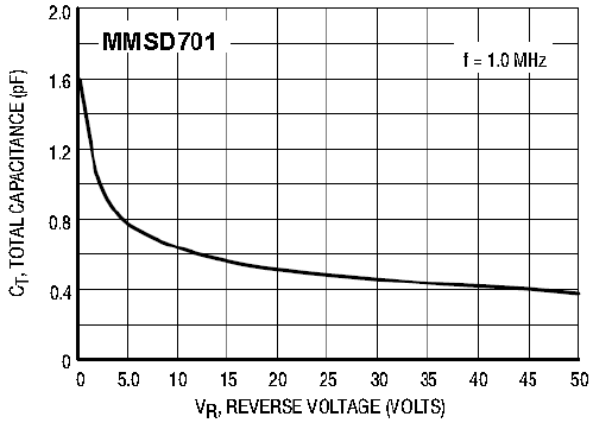


Figure 6. Minority Carrier Lifetime

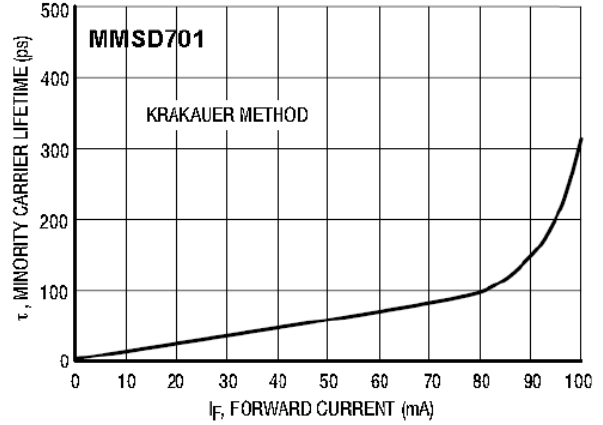


Figure 7. Reverse Leakage

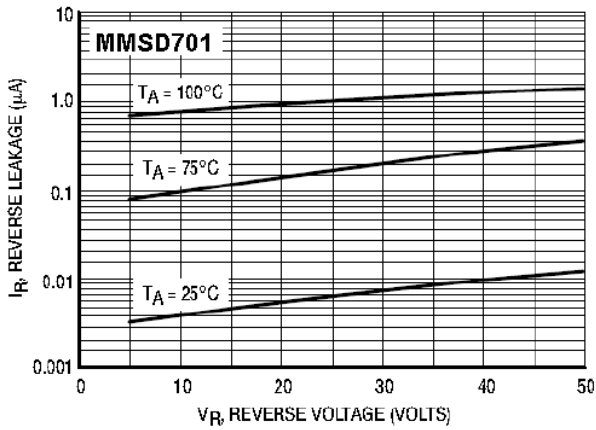
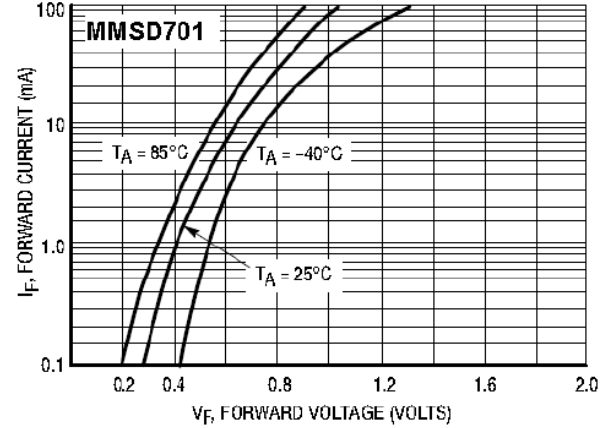


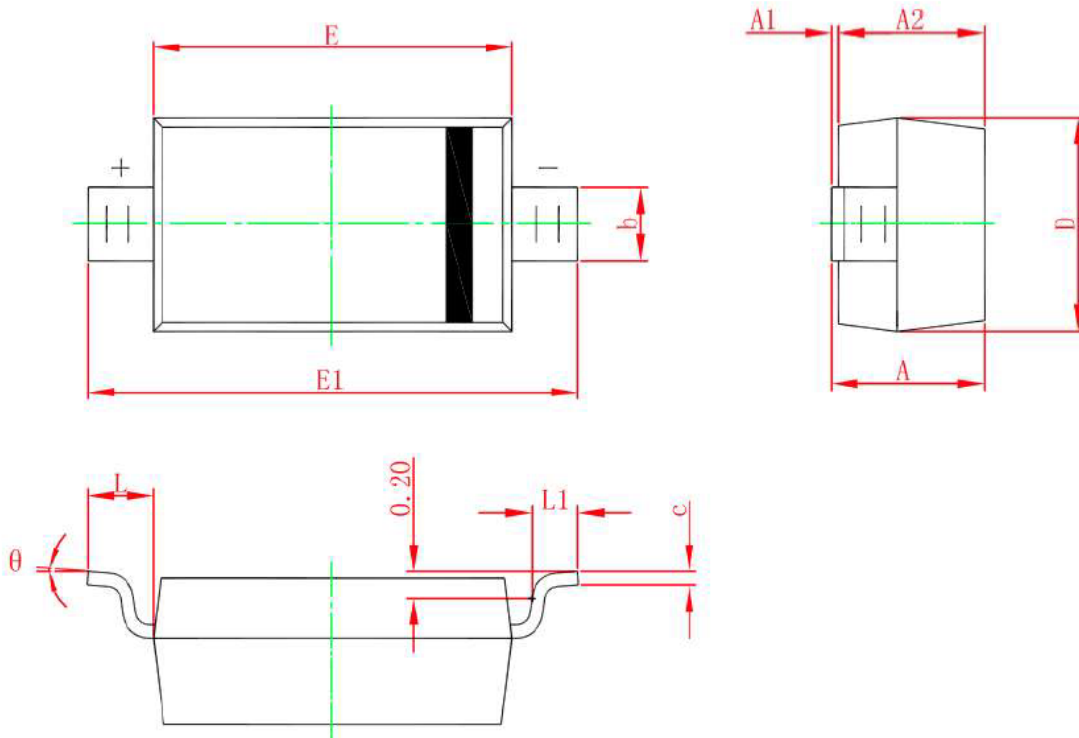
Figure 8. Forward Voltage





PACKAGE INFORMATION

Dimension in SOD-123 (Unit: mm)



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°



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