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

FEATURES

- Extremely Low Minority Carrier Lifetime
- Very Low Capacitance
- Low Reverse Leakage
- 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	

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

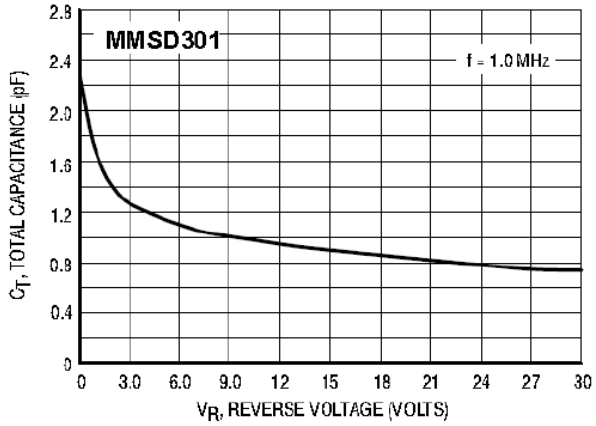


Figure 2. Minority Carrier Lifetime

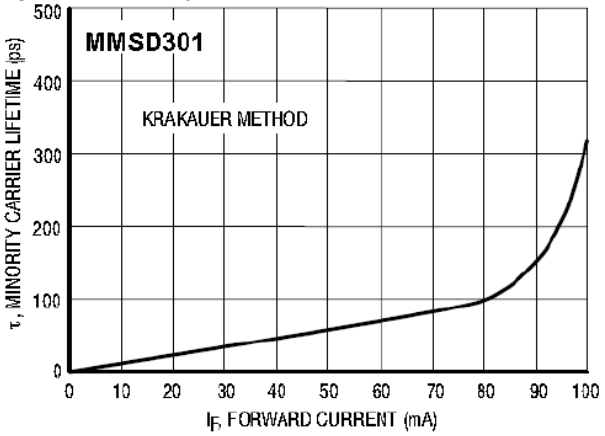


Figure 3. Reverse Leakage

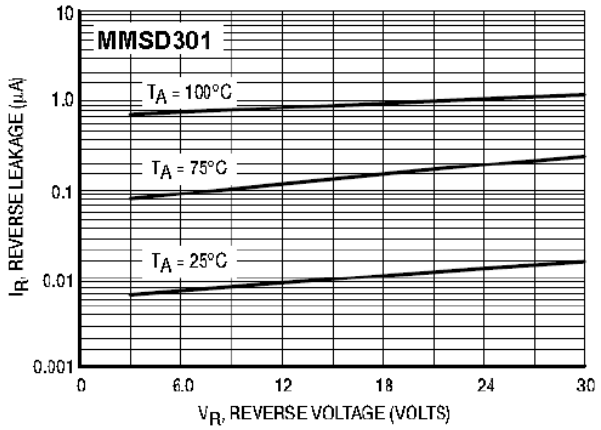
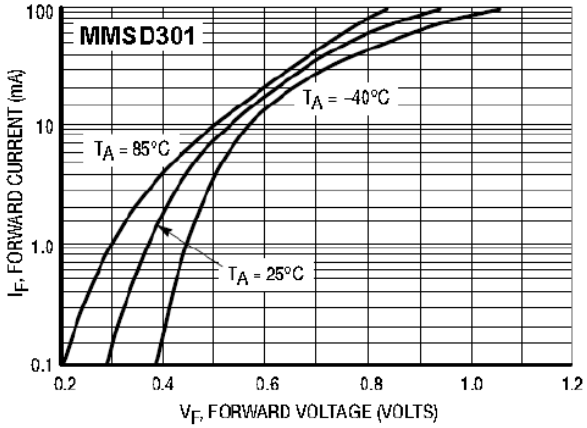


Figure 4. Forward Voltage



MMSD701

Figure 5. Total Capacitance

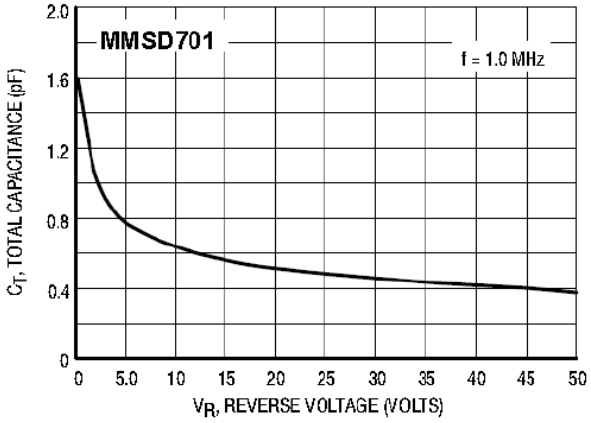


Figure 6. Minority Carrier Lifetime

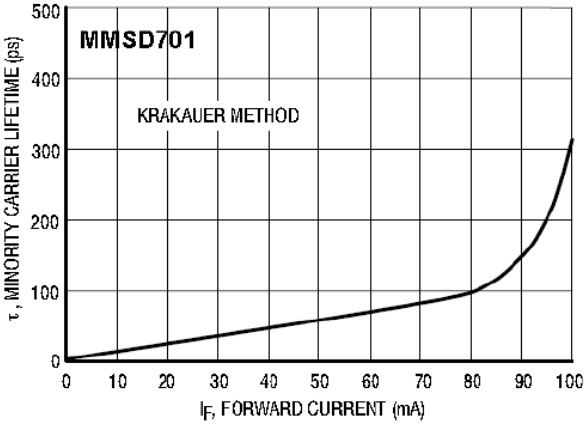


Figure 7. Reverse Leakage

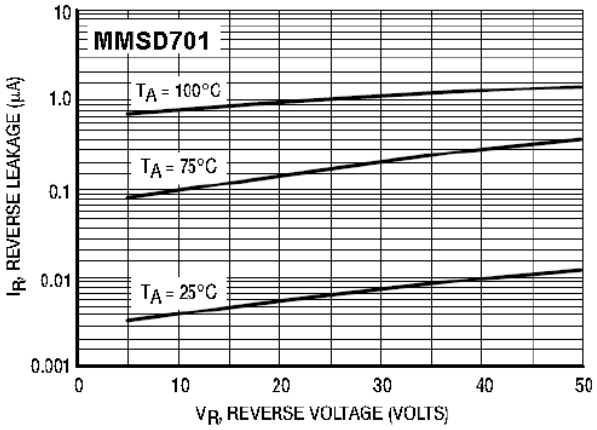
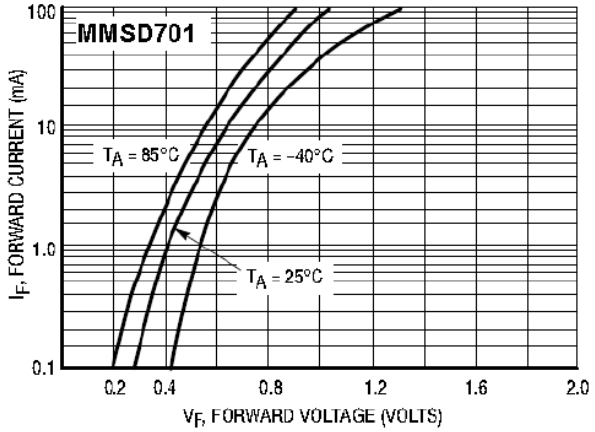
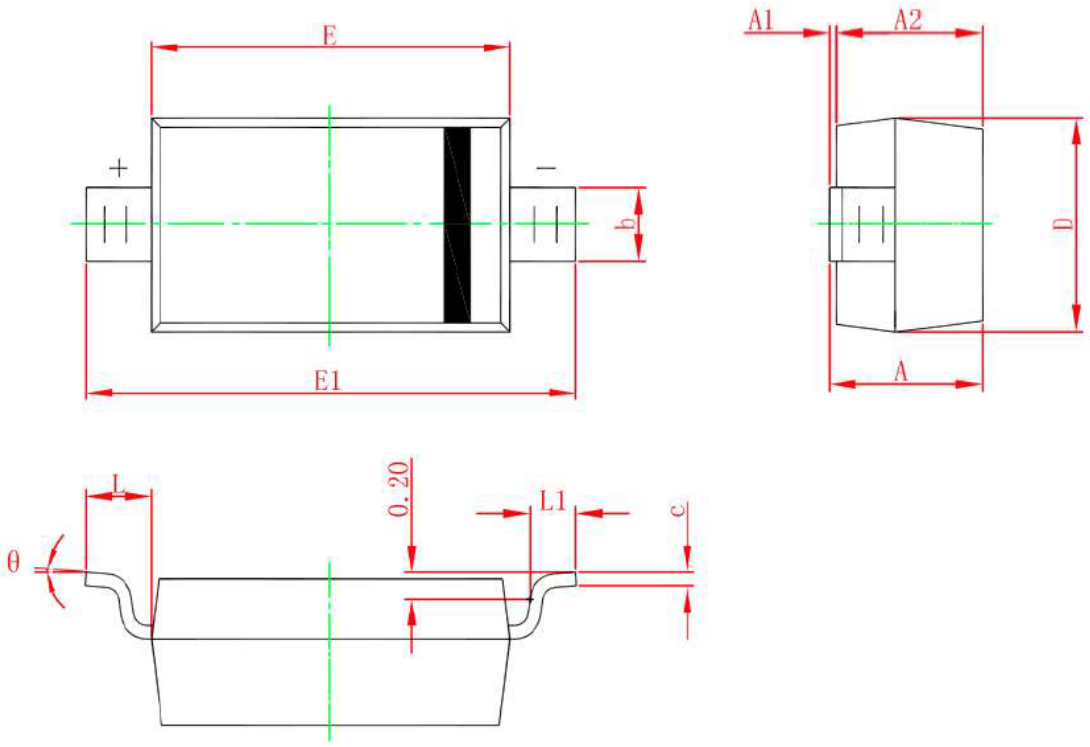


Figure 8. Forward Voltage



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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