



Schottky Barrier Diodes

The SD301W, and SD701W devices are spin-offs of our popular MMBD301, and MMBD701 SOT-23 devices. They are designed for high-efficiency UHF and VHF detector applications. Readily available to many other fast switching RF and digital applications.

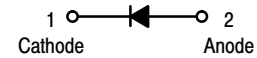
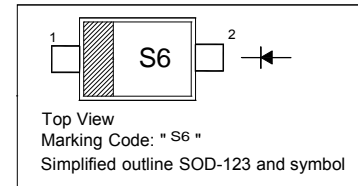
- Extremely Low Minority Carrier Lifetime
- Very Low Capacitance
- Low Reverse Leakage

SD301W SD701W

ON Semiconductor Preferred Devices

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



MAXIMUM RATINGS

Rating	Symbol	Value	Unit	
Reverse Voltage	SD301W SD701W	V_R	30 70	Vdc
Forward Power Dissipation $T_A = 25^\circ\text{C}$	P_F	225	mW	
Junction Temperature	T_J	-55 to +125	$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$	

DEVICE MARKING

MMSD301T1 = XT, MMSD701T1 = XH

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

Characteristic	Symbol	Min	Typ	Max	Unit	
Reverse Breakdown Voltage ($I_R = 10 \mu\text{A}$)	SD301W SD701W	$V_{(BR)R}$	30 70	— —	Volts	
Diode Capacitance ($V_R = 0$, $f = 1.0 \text{ MHz}$, Note 1)	SD301W SD701W	C_T	— —	0.9 0.5	1.5 1.0	pF
Total Capacitance ($V_R = 15 \text{ Volts}$, $f = 1.0 \text{ MHz}$) ($V_R = 20 \text{ Volts}$, $f = 1.0 \text{ MHz}$)	SD301W SD701W	C_T	— —	0.9 0.5	1.5 1.0	pF
Reverse Leakage ($V_R = 25 \text{ V}$) ($V_R = 35 \text{ V}$)	SD301W SD701W	I_R	— —	13 9.0	500 200	nAdc nAdc
Forward Voltage ($I_F = 1.0 \text{ mAdc}$) ($I_F = 10 \text{ mA}$) ($I_F = 1.0 \text{ mAdc}$) ($I_F = 10 \text{ mA}$)	SD301W SD701W	V_F	— — — —	0.38 0.52 0.42 0.7	0.45 0.6 0.5 1.0	Vdc

Preferred devices are ON Semiconductor recommended choices for future use and best overall value.



CHINA BASE
INTERNATIONAL

SOD-123



SD301W-SD701W

www.china-base.com.hk

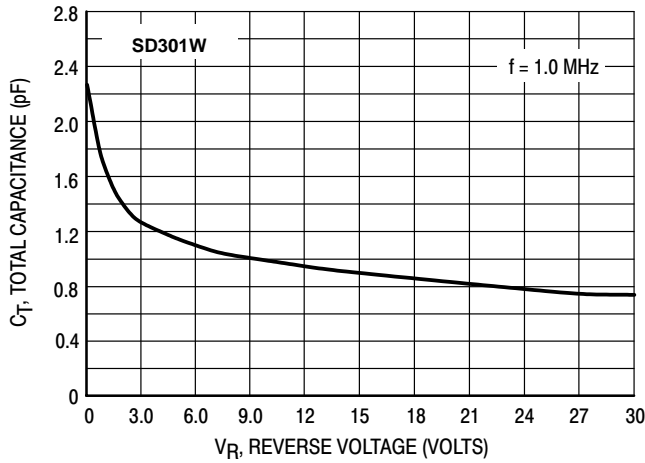


Figure 1. Total Capacitance

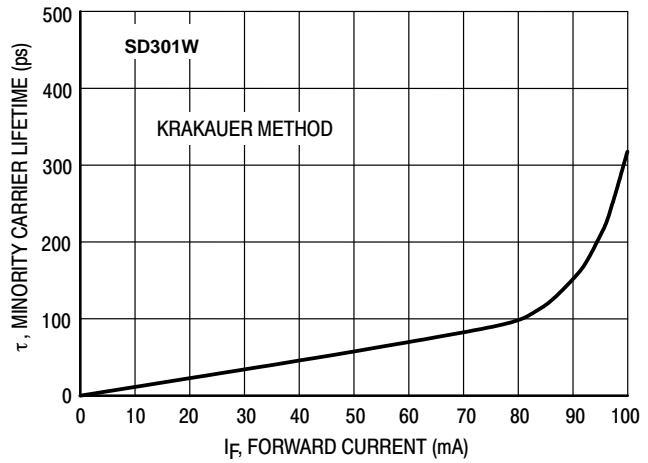


Figure 2. Minority Carrier Lifetime

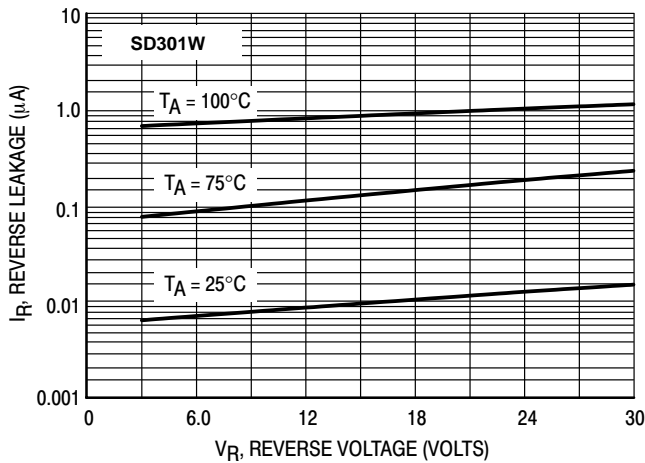


Figure 3. Reverse Leakage

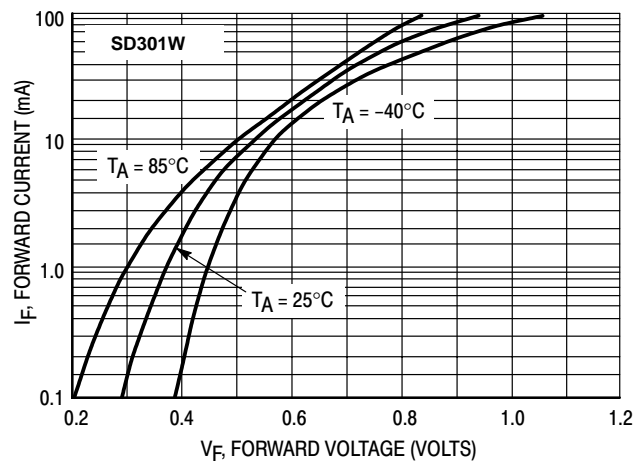


Figure 4. Forward Voltage

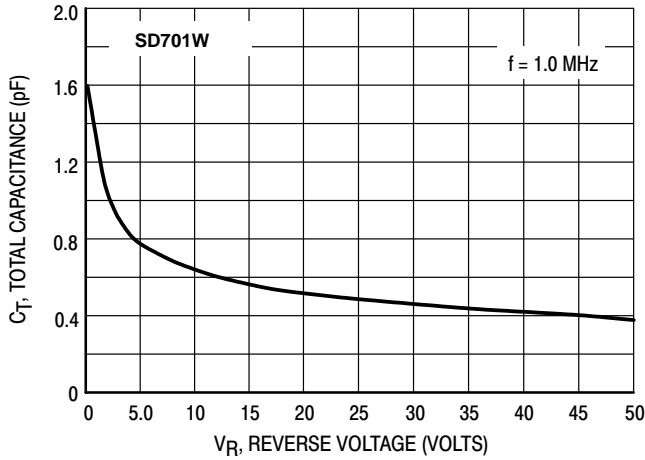


Figure 5. Total Capacitance

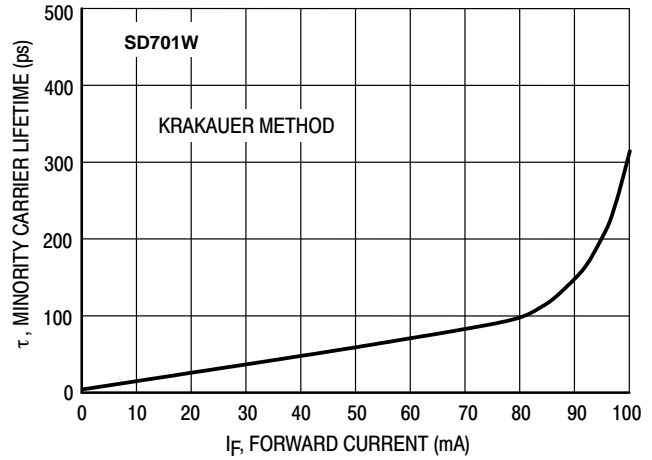


Figure 6. Minority Carrier Lifetime

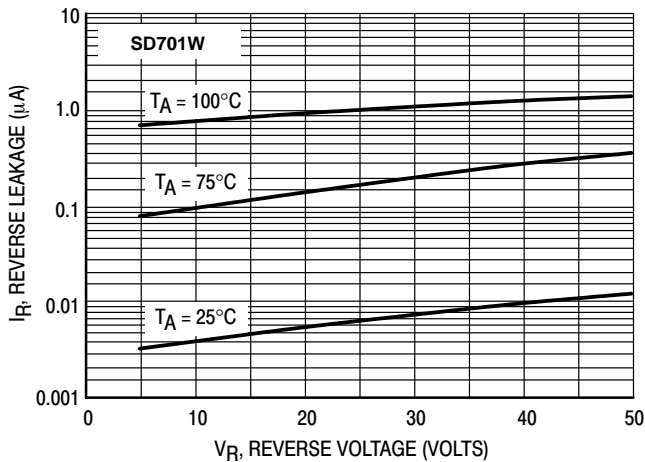


Figure 7. Reverse Leakage

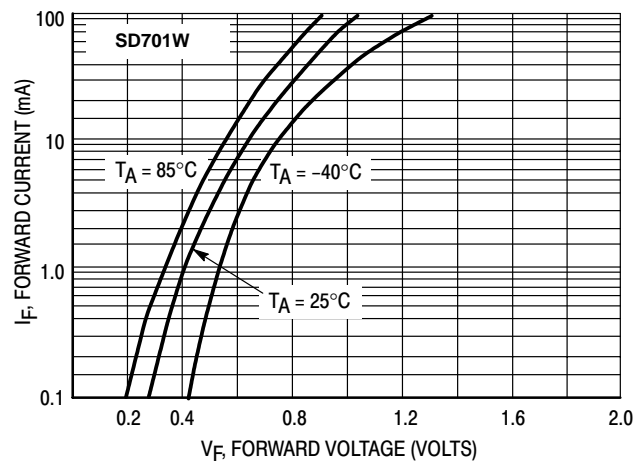


Figure 8. Forward Voltage