UMW ESD7351HT1G

1.Features

The ESD7351 Series is designed to protect voltage sensitive components that require ultra-low capacitance from ESD and transient voltage events.

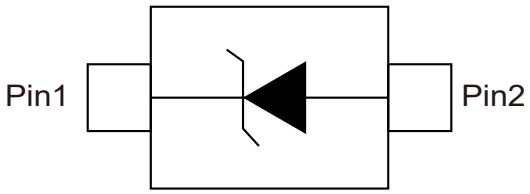
2.Applications

- RF Signal ESD Protection
- RF Switching, PA, and Antenna ESD Protection
- Near Field Communications

3.Features

- Low Capacitance (0.6 pF Max, I/O to GND)
- Low Clamping Voltage
- Stand-off Voltage: 3.3 V
- Low Leakage
- Response Time is < 1ns
- Low Dynamic Resistance < 1Ω

4.Pinning information



SOD-323

5.Absolute Maximum Ratings T_A= 25°C

Parameter		Symbol	Value	Units
IEC 61000−4−2 (ESD)	- Contact		±20	kV
	- Air		±20	kV
Total Power Dissipation on FR−5 Board (Note 1) @ T_A=25°C		P_D	150	mW
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	°C
Lead Solder Temperature − Maximum (10 Second Duration)		T_L	260	°C

Notes:Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. FR−5 = 1.0 x 0.75 x 0.62

6.Electrical Characteristic (T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage (Note 2)	V_{BR}	I_T=1mA	5			V
Reverse Leakage Current	I_R	V_{RWM}=3.3V		<1	50	nA
Clamping Voltage (Note 3)	V_C	I_{PP}=1A			8	V
Clamping Voltage (Note 3)	V_C	I_{PP}=3A			10	V
Junction Capacitance	C_J	V_R=0V, f=1MHz, V_R=0V, f<1GHz		0.43	0.6	pF
Dynamic Resistance	R_{DYN}	TLP Pulse		0.35		Ω

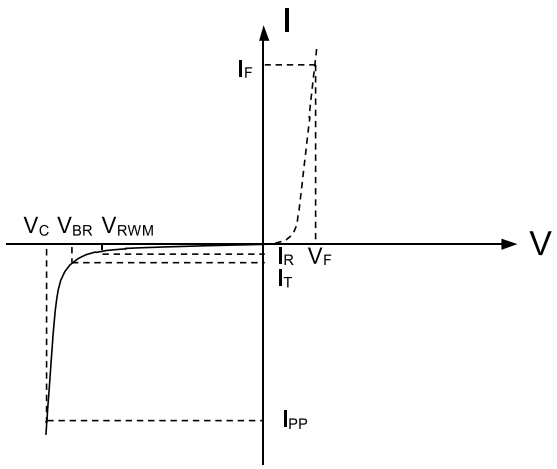
Notes:

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

2. Breakdown voltage is tested from pin 1 to 2.

3. Non−repetitive current pulse at T_A=25°C, per IEC61000−4−5 waveform.

7.Electrical Parameters (T_A=25°C unless otherwise noted)



Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

8.1Typical characteristic

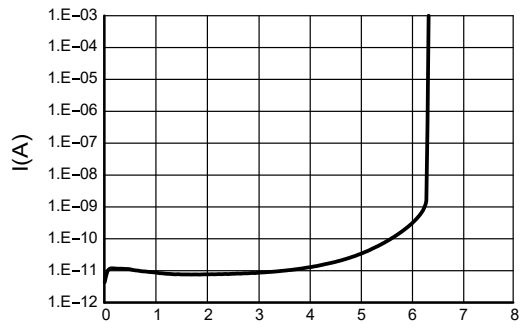


Figure 1: IV Characteristics

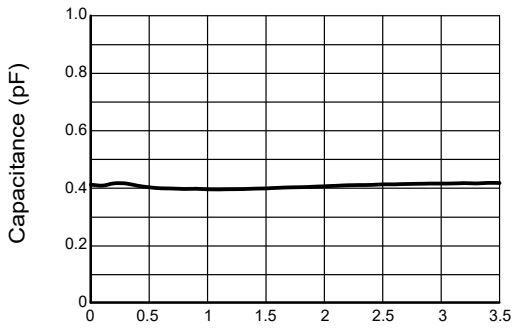


Figure 2: CV Characteristics

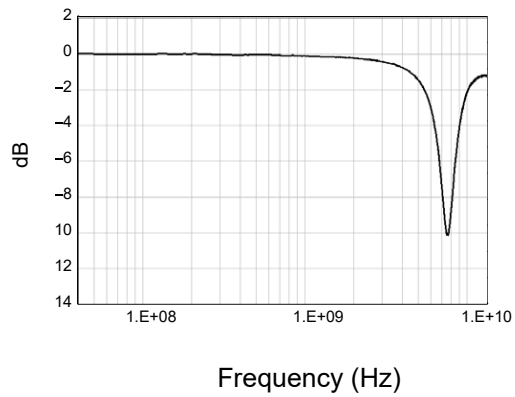


Figure 3: RF Insertion Loss

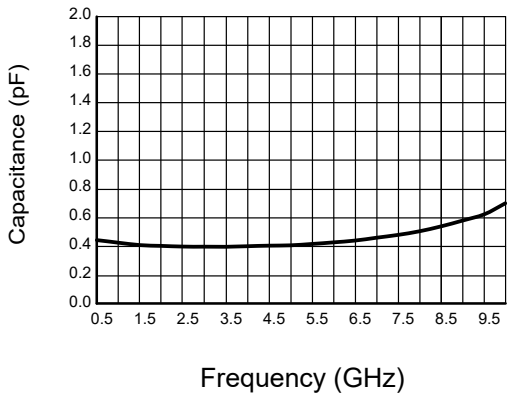


Figure 4: Capacitance over Frequency

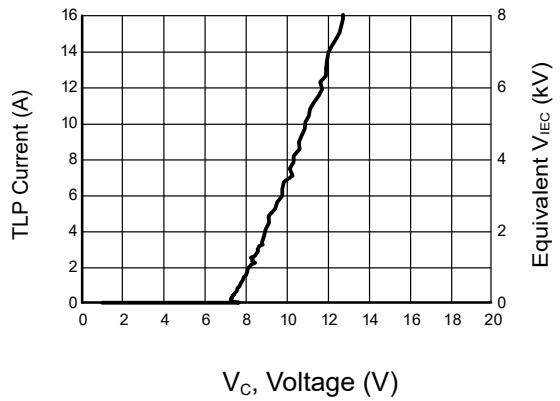


Figure 5: Positive TLP I−V Curve

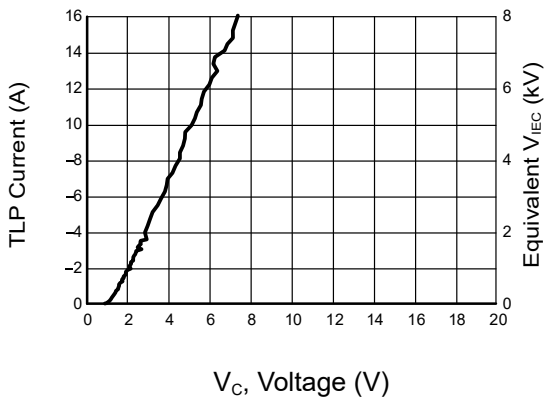


Figure 6: Negative TLP I-V Curve

8.2Typical characteristic

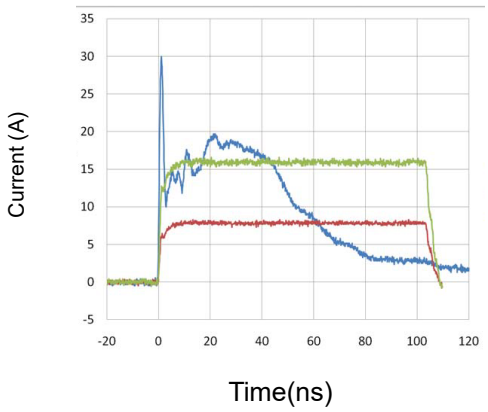
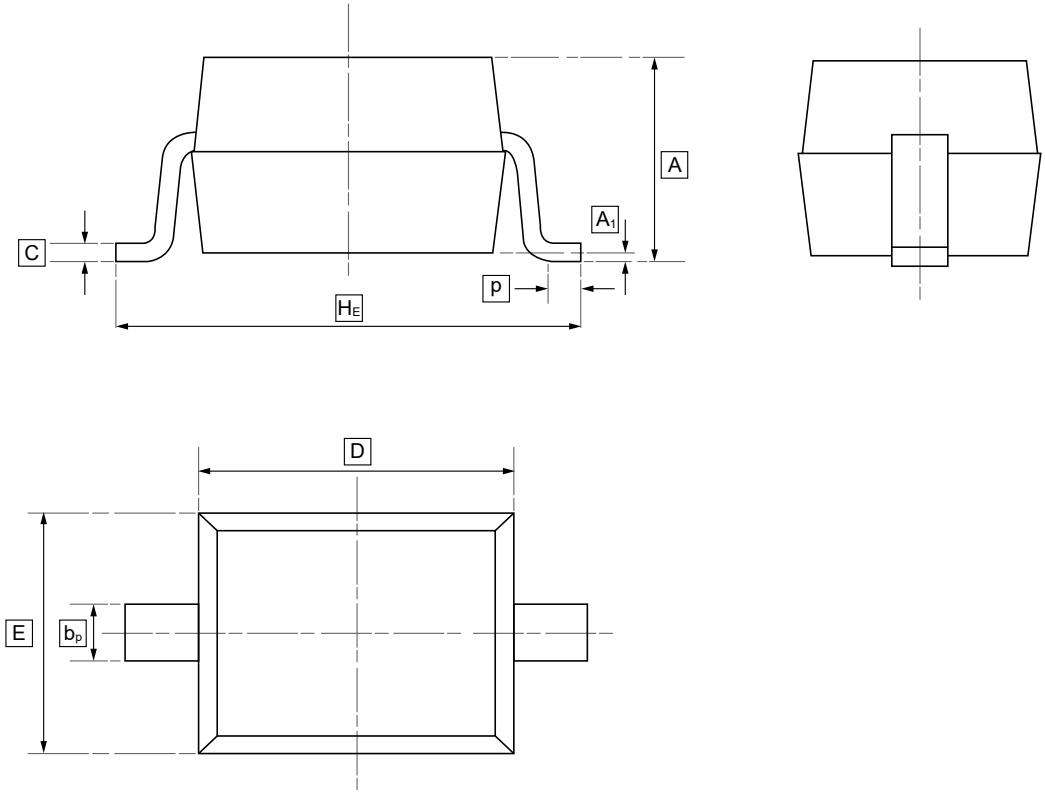


Figure 7: Comparison Between 8 kV IEC 61000-4-2 and 8 A and 16 A TLP Waveforms

9.SOD-323 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b_p	C	D	E	H_E	A_1	p
Min	0.80	0.25	0.10	1.50	1.15	2.30	0.01	0.20
Max	1.20	0.40	0.15	1.80	1.35	2.80	0.10	0.50

10.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW ESD7351HT1G	SOD-323	3000	Tape and reel



11.Disclaimer

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