

# FCC Test Report

**FCC ID: OJ2-SP3XX-WSXXX****Computing Device Peripheral**

**Report No.** : TB-FCC123996  
**Applicant** : Hichan Technology Corp.  
**Equipment Under Test (EUT)**  
**EUT Name** : Wireless Storage  
**Model No.** : SP300  
**Serial No.** : Please see page 4.  
**Brand Name** : Wi-Disk  
**Receipt Date** : 2012-06-28  
**Test Date** : 2012-06-30 to 2012-07-09  
**Issue Date** : 2012-07-10  
**Standards** : FCC Part 15: 2011, Subpart B, Class B  
**Test Method** : ANSI C63.4-2003  
**Conclusions** : **PASS**

In the configuration tested, the EUT complied with the standards specified above,  
The EUT technically complies with the FCC requirements

**Test/Witness Engineer** : 

**Approved & Authorized** : 

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

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## 1. General Information About EUT

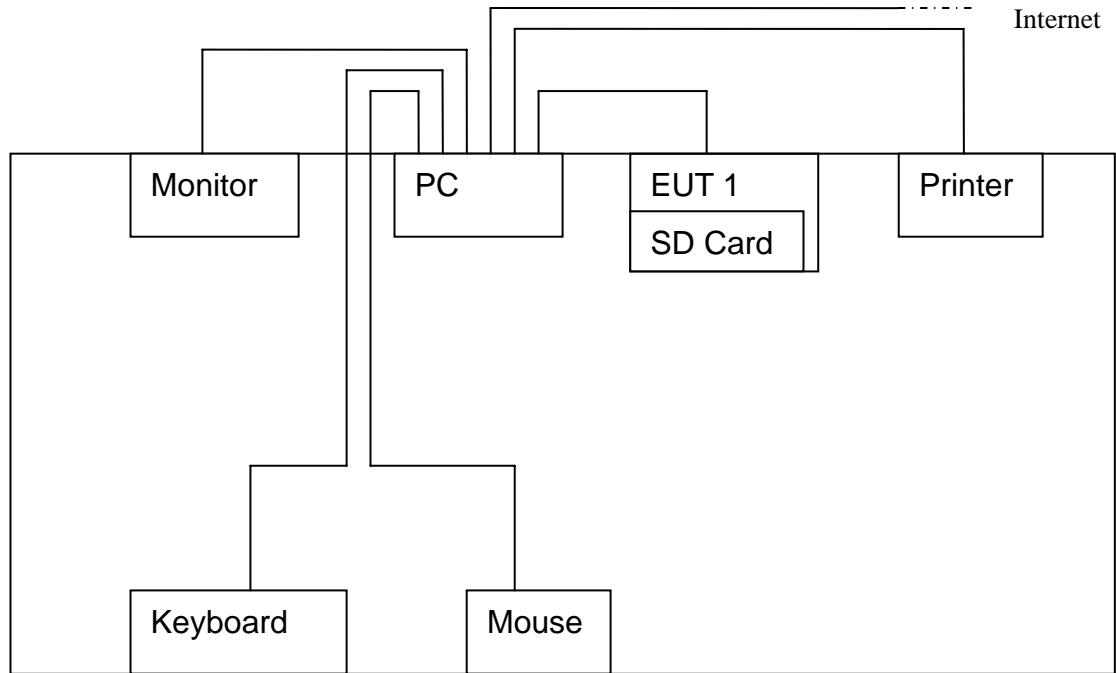
### 1.1 Client Information

<b>Applicant</b>	:	Hichan Technology Corp.
<b>Address</b>	:	12F., No.2,Jian 8th Rd., Zhonghe Dist., New Taipei City 23511, Taiwan
<b>Applicant</b>	:	Hichan Technology Corp.
<b>Address</b>	:	12F., No.2,Jian 8th Rd., Zhonghe Dist., New Taipei City 23511, Taiwan

### 1.2 General Description of EUT (Equipment Under Test)

<b>EUT Name</b>	:	Wireless Storage
<b>Model No.</b>	:	SP300, SP300A, SP300B, SP300C, SP300D, SP300E, WD100,WD200, WD300, WD400, WD500, WS100, WS200, WS300, WS400, WS500, SP310.
<b>Model difference</b>	:	The different models are identical in schematic, structure and critical component, the only different is the appearance.
<b>Power Supply</b>	:	USB Charging from PC. DC Voltage supplied from Li-Polymer battery.
<b>Power Rating</b>	:	USB DC 5V form PC. DC 3.7V 2100mAh from Li-Polymer battery
<b>Connecting I/O Port(s)</b>	:	The equipent have USB port for link with PC, so the equipment is considered as a Computing Device Peripheral.
<b>Note:</b> The equipment have WiFi (802.11b/g/n) mode, WiFi part have test comply with FCC Part 15C Rules. for more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

### 1.3 Block Diagram Showing the Configuration of System Tested



Note: During Testing the EUT is charging and loading data form PC with USB Cable.

#### 1.4 Description of Support Units

Name	Model	S/N	Manufacturer	Used “√”
Printer	HP1505n	VNF3G06957	HP	√
LCD Monitor	E170Sc	----	DELL	√
PC	OPTIPLEX380	----	DELL	√
Keyboard	L100	U01C	DELL	√
Mouse	M-UARDEL7	----	DELL	√
SD Card	2GB	219076	Kingston	√

#### 1.5 Description of Test Mode

Mode	Description
Mode 1: Loading Data form PC	Loading Data from PC

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of the EUT operation mode, and the maximum emission levels of the conducted and radiated emissions are compared to the FCC Part 15 Subpart B (Class B) limits.

Note: The test results for EUT’s RF functions are contained in another Certification Report.

## 1.6 Test Facility

The tests were performed at:

Bontek Compliance Testing Laboratory Ltd

1/F., Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, 518055 China

Tel: 86-755-86337020 Fax: 86-755-86337028

At the time of testing, the Laboratory is accredited. It is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 338263.

The test report was fulfilled by Shenzhen Meihua Electronic Co., Ltd. Shenzhen Meihua Electronic Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements results.

## 2. Test Summary

FCC Part15, Subpart B				
Section	Test Method	Test Item	Limit	Judgment
15.109	ANSI C63.4:2003	Radiated Emission (30M~1GHz)	Class B	PASS
15.107	ANSI C63.4:2003	Conducted Emission (9KHz to 30MHz)	Class B	PASS
<b>Note:</b> N/A is an abbreviation for Not Applicable.				

### 3. Conducted Emission Test

#### 3.1 Test Standard and Limit

3.1.1 Test Standard  
FCC Part 15.107

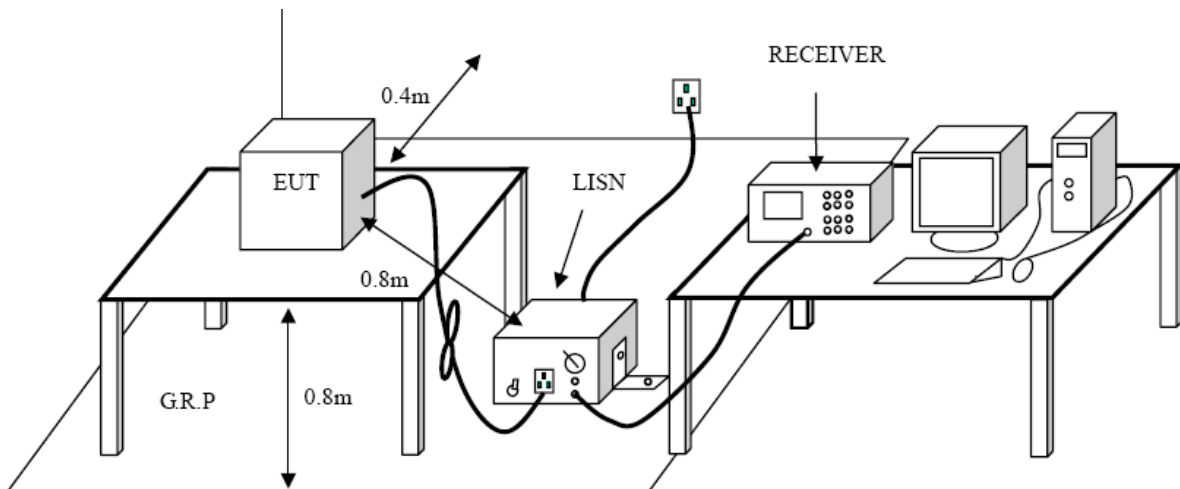
3.1.2 Test Limit

**Conducted Emission Test Limit**

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak Level	Average Level
0.15~0.5	66 ~ 56 *	56 ~ 46 *
0.5~5.0	56.00	46.00
5.0~30.0	60.00	50.00

Notes: (1) \*Decreasing linearly with logarithm of the frequency.  
(2) The lower limit shall apply at the transition frequencies.

#### 3.2 Test Setup



#### 3.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance.

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The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

For the actual test configuration, please refer to the EUT test Photos.

### 3.4 Test Equipment Used

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
EMI Test Receiver	ROHDE& SCHWARZ	ESCI	100627	2011-08-11	2012-08-11
L.I.S.N	ROHDE& SCHWARZ	ENV216	100055	2011-08-11	2012-08-11
L.I.S.N	SCHWARZBEC K	NSLK8127	100056	2011-08-11	2012-08-11

### 3.5 EUT Operating Mode

(1) Setup the EUT and peripherals refer to the description of test mode.

### 3.6 Deviation

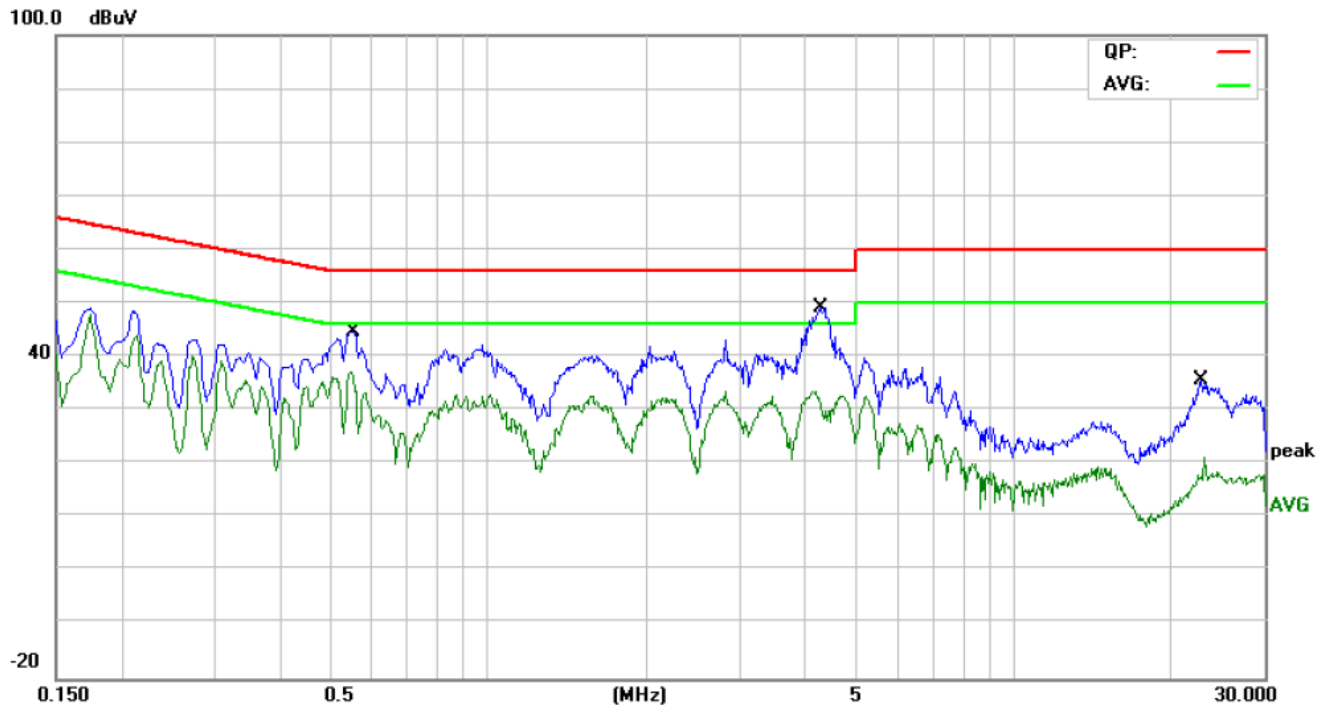
The test is no deviation from the standard.

### 3.7 Test Data

Please see the next page.

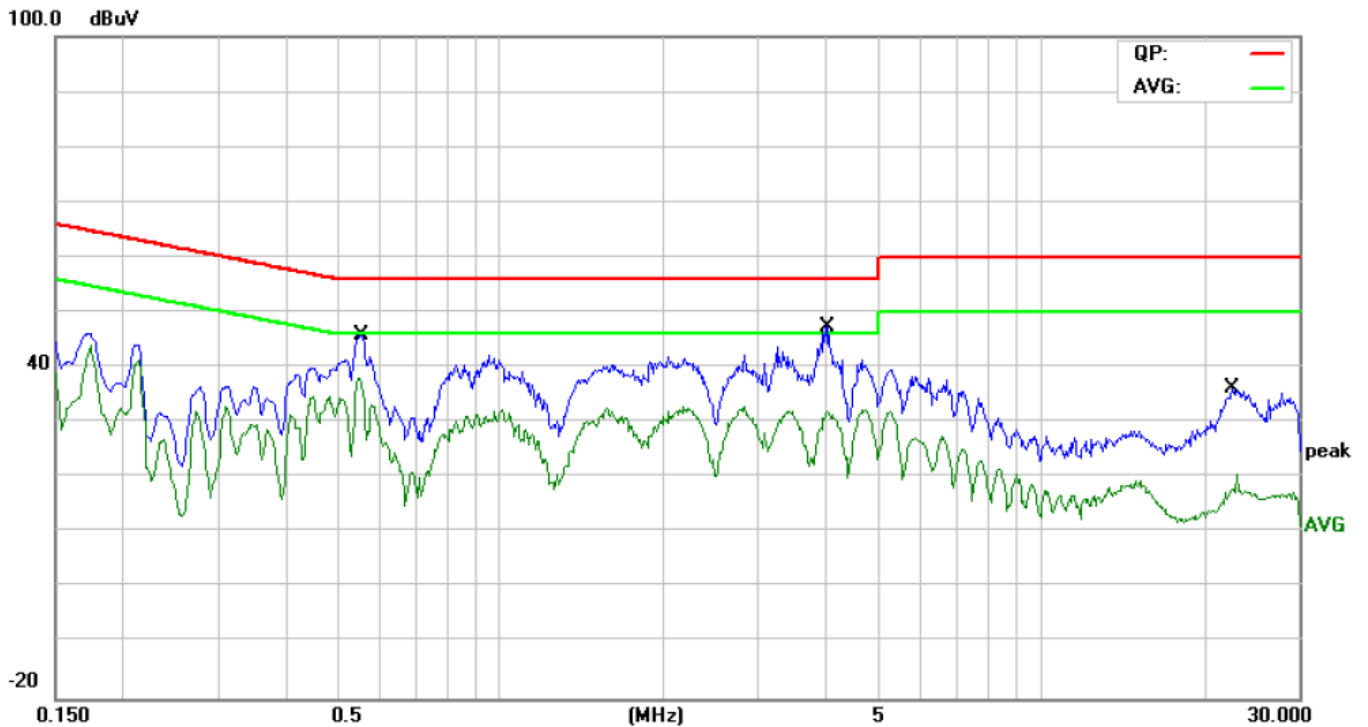


E.U.T :	Wireless Storage	Model Name :	NWS01
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 1: Loading Data and Charging		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.5540	34.90	9.43	44.33	56.00	-11.67	QP	
2	*	0.5540	27.00	9.43	36.43	46.00	-9.57	AVG	
3		4.2700	29.65	9.42	39.07	56.00	-16.93	QP	
4		4.2700	18.98	9.42	28.40	46.00	-17.60	AVG	
5		22.7620	18.67	10.16	28.83	60.00	-31.17	QP	
6		22.7620	6.28	10.16	16.44	50.00	-33.56	AVG	

E.U.T :	Wireless Storage	Model Name :	NWS01
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 1: Normal Mode		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.5540	35.97	9.43	45.40	56.00	-10.60	QP	
2	*	0.5540	28.07	9.43	37.50	46.00	-8.50	AVG	
3		4.0340	29.71	9.41	39.12	56.00	-16.88	QP	
4		4.0340	22.10	9.41	31.51	46.00	-14.49	AVG	
5		22.5459	19.64	10.12	29.76	60.00	-30.24	QP	
6		22.5459	7.01	10.12	17.13	50.00	-32.87	AVG	

## 4. Radiated Emission Test

### 4.1 Test Standard and Limit

#### 4.1.1 Test Standard

FCC Part 15.109

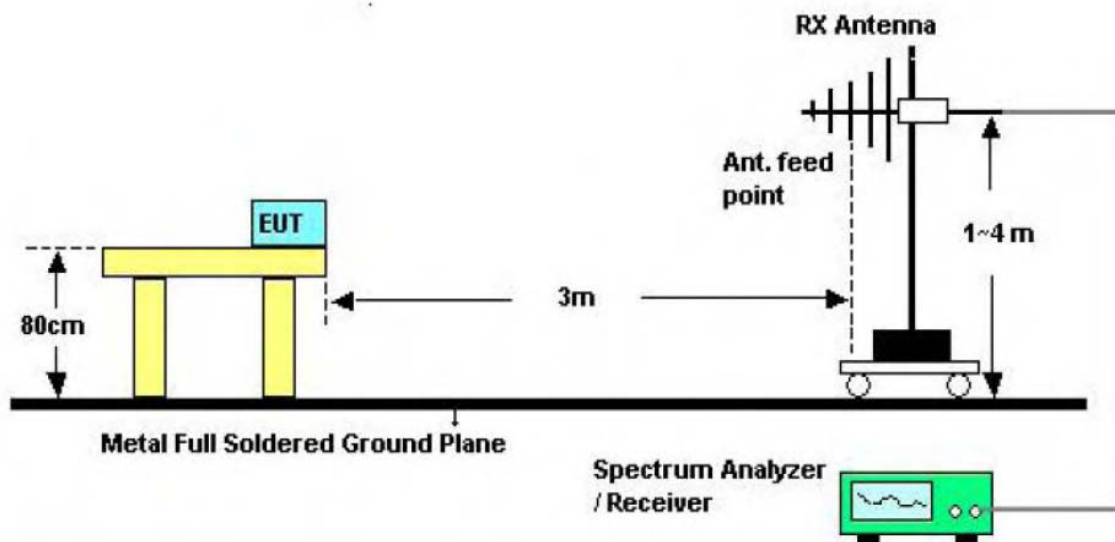
#### 4.1.2 Test Limit

**Radiated Emission Limit**

Frequency (MHz)	Field Strength (dBuV/m)	Measurement Distance (meters)
30~88	40	3
88~216	43.5	3
216~960	46	3
Above 960	54	3

Note: Emission Level(dBuV/m)=20log Emission Level(uV/m)

### 4.2 Test Setup



30MHz to 1000MHz Test Setup

### 4.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency from 30MHz up to 1GHz.
- (2) The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The height of the equipment or of the substitution antenna shall be 0.8m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- (4) The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- (6) For more details, please refer to the EUT Test Photos.

### 4.4 Test Equipment

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
Spectrum Analyzer	Agilent	E7405A	MY45114970	2011-08-12	2012-08-11
Pre-Amplifier	CD	PAM0203	804203	2011-08-12	2012-08-11
RF Switch	CD	RSU-M3	RSU-M3	2011-07-21	2012-07-20
Trilog Broadband Antenna	SCHWARZBEC K	VULB9163	345	2011-07-21	2012-07-20
Coaxial Cable	SCHWARZBEC K	RG214-N-8	11065	2011-08-12	2012-08-11
Broadband Preamplifier 0.5-18GHz	SCHWARZBECK	BBV9718	9718-148	2011-08-12	2012-08-11
Horn Antenna	SCHWARZBEC K	BBHA9120D	667	2011-08-12	2012-08-11
Coaxial Cable	SCHWARZBEC K	AK9513	9513-10	2011-08-12	2012-08-11
Coaxial Cable	SCHWARZBEC K	AK9515H	9515-10	2011-08-12	2012-08-11

### 4.5 EUT Operating Condition

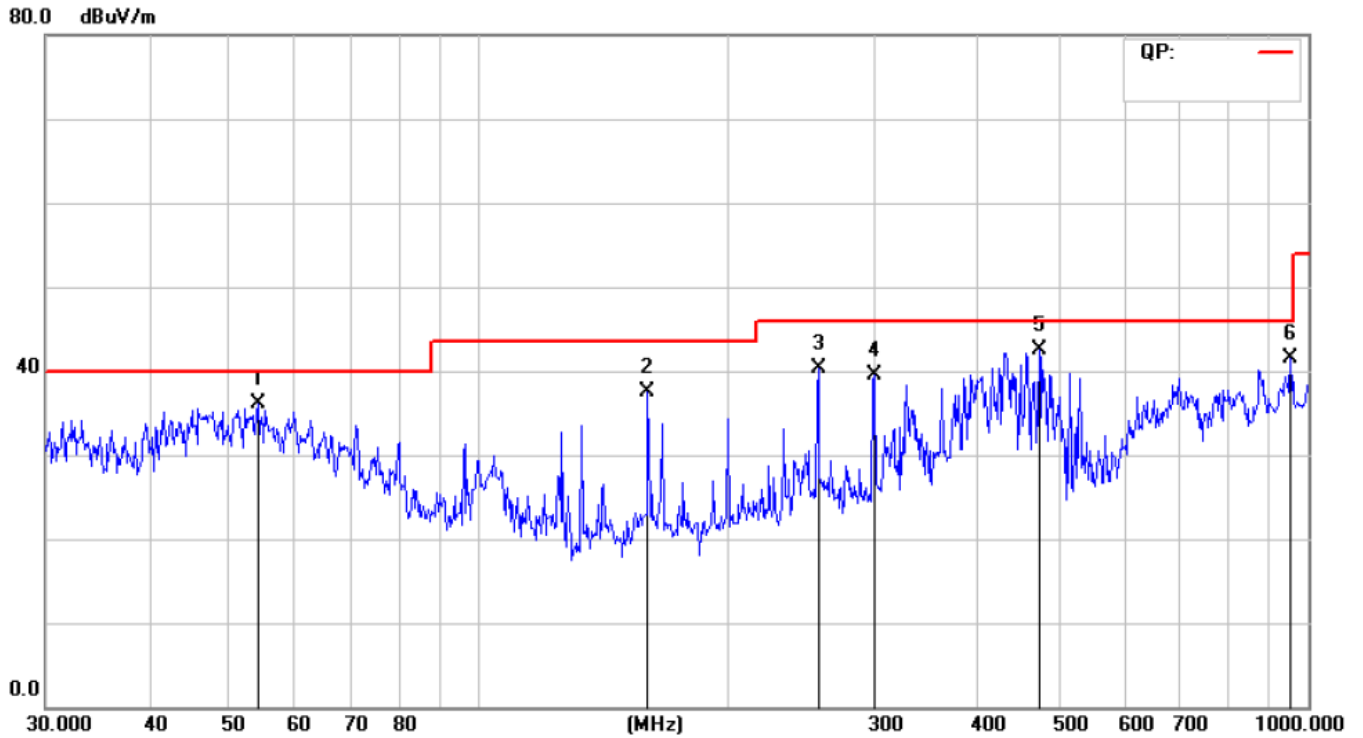
- (1) Setup the EUT and peripherals refer to the description of test mode.

#### 4.6 Deviation

The test is no deviation from the standard.

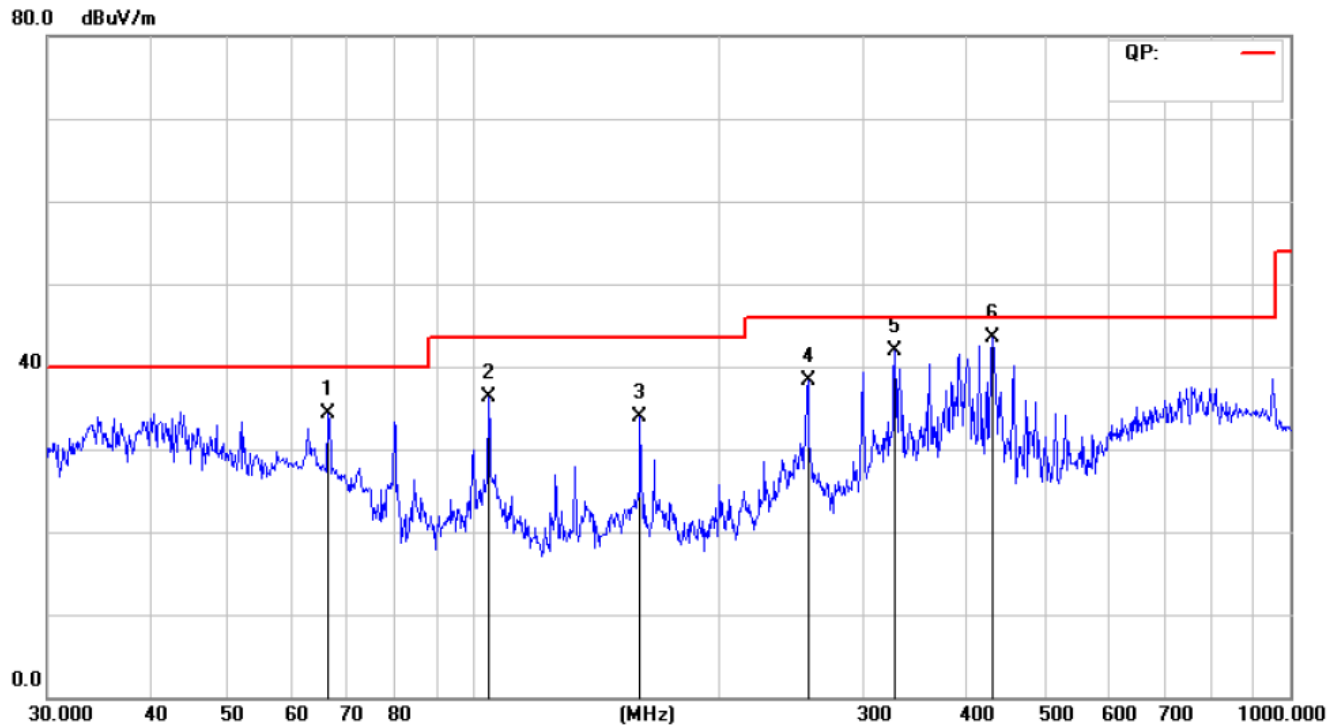
#### 4.7 Test Data

E.U.T :	Wireless Storage	Model Name :	SP300
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	AC 120 V / 60Hz		
Antenna. Pol:	Horizontal		
Test Mode :	Loading Data and Charging		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		54.2610	13.03	23.05	36.08	40.00	-3.92	peak	
2		159.7844	23.79	13.66	37.45	43.50	-6.05	peak	
3		256.5210	23.14	17.23	40.37	46.00	-5.63	peak	
4		299.3158	21.37	18.05	39.42	46.00	-6.58	peak	
5	*	473.8346	19.24	23.25	42.49	46.00	-3.51	peak	
6		952.0937	13.08	28.43	41.51	46.00	-4.49	peak	

E.U.T :	Wireless Storage	Model Name :	SP300
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	AC 120 V / 60Hz		
Antenna. Pol:	Vertical		
Test Mode :	Loading Data and Charging		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		66.2661	22.96	11.32	34.28	40.00	-5.72	peak	
2		104.1701	28.02	8.28	36.30	43.50	-7.20	peak	
3		159.7844	29.78	4.15	33.93	43.50	-9.57	peak	
4		256.5211	29.50	8.73	38.23	46.00	-7.77	peak	
5		327.8873	30.23	11.76	41.99	46.00	-4.01	peak	
6	*	432.5457	29.80	13.71	43.51	46.00	-2.49	peak	