



FCC Test Report

FCC ID: YGB-DV035S

Computer Peripheral

Report No. : TB-FCC111073
Applicant : SHUOYING DIGITAL SCIENCE&TECHNOLOGY(CHINA) Co., Ltd
Equipment Under Test (EUT)
EUT Name : DV
Model No. : DV035S
Serial No. : Not supplied by client
Brand Name : Not supplied by client
Receipt Date : 2011-05-21
Test Date : 2011-05-21 to 2011-06-01
Issue Date : 2011-06-02
Standards : FCC Part 15: 2009, 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

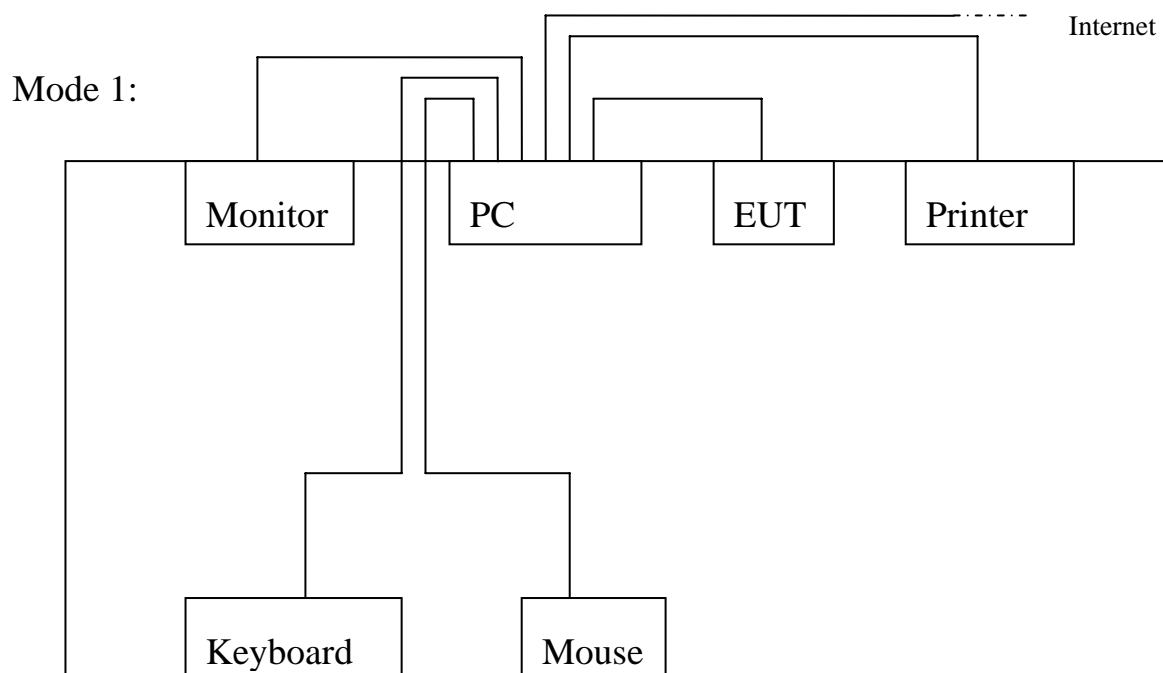
1.1 Client Information

Applicant	:	SHUOYING DIGITAL SCIENCE&TECHNOLOGY(CHINA) Co., Ltd.
Address	:	NO.187, 5 th Binhai Road, Binhai Industrial Park, Economic and technological Development Zone, Wenzhou, Zhejiang, China
Manufacturer	:	SHUOYING DIGITAL SCIENCE&TECHNOLOGY(CHINA) Co., Ltd.
Address	:	NO.187, 5 th Binhai Road, Binhai Industrial Park, Economic and technological Development Zone, Wenzhou, Zhejiang, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	DV
Model No.	:	DV035S
Serial No.	:	Not supplied by client
Model difference	:	N/A
Power Supply	:	DC 4.5V (3*AAA batteries)
Connecting I/O Port(s)	:	Please refer to the User's Manual
Note: For a 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



Mode 2&Mode 3

EUT

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	√

1.5 Description of Test Mode

Mode	Description
Mode 1	Download Mode
Mode 2	Video Record
Mode 3	Play back

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 so the conducted and radiated emission data of bellow only showed the worst case.

1.6 Test Facility

The tests were performed at:

Anbotek Compliance Laboratory Limited

1/F., 1/Build, SEC Industrial Park, No.4 Qianhai Road, Nanshan District, Shenzhen China

Tel: 86-755-26066365 Fax: 86-755-26014772

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 752021.

The test report was fulfilled by Shenzhen Toby Technology Co., Ltd. Shenzhen Toby 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 (9KHz to 30MHz)	Class B	PASS
15.107	ANSI C63.4:2003	Conducted Emission (9KHz to 30MHz)	Class B	PASS
Note: 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

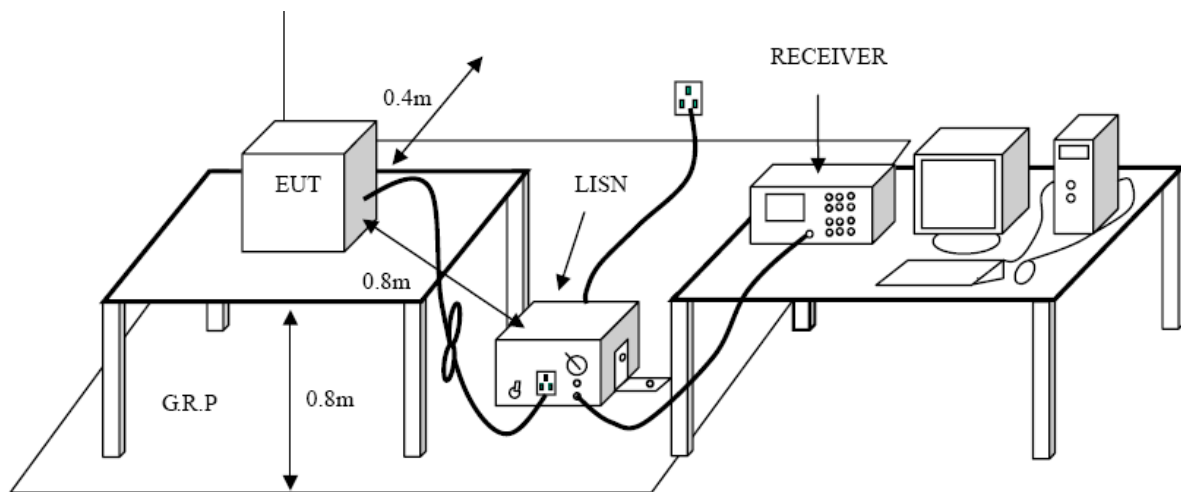
3.1.2 Test Limit

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.

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 Deviation

The test is no deviation from the standard.

3.5 Test Equipment Used

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
EMI Test Receiver	ROHDE& SCHWARZ	ESCI	100627	2010-06-21	2011-06-21
L.I.S.N	ROHDE& SCHWARZ	ENV216	100055	2010-06-21	2011-06-21
L.I.S.N	SCHWARZBEC K	NSLK8127	100056	2010-06-21	2011-06-21

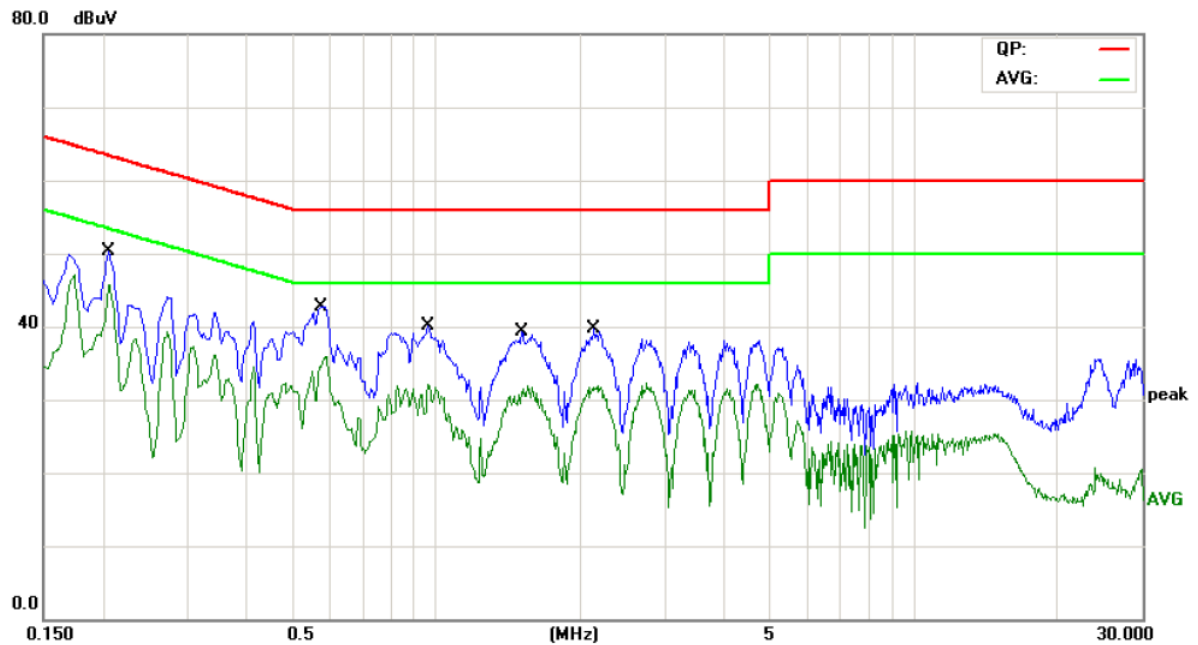
3.6 EUT Operating Mode

Please refer to the description of test mode.

3.7 Test Data

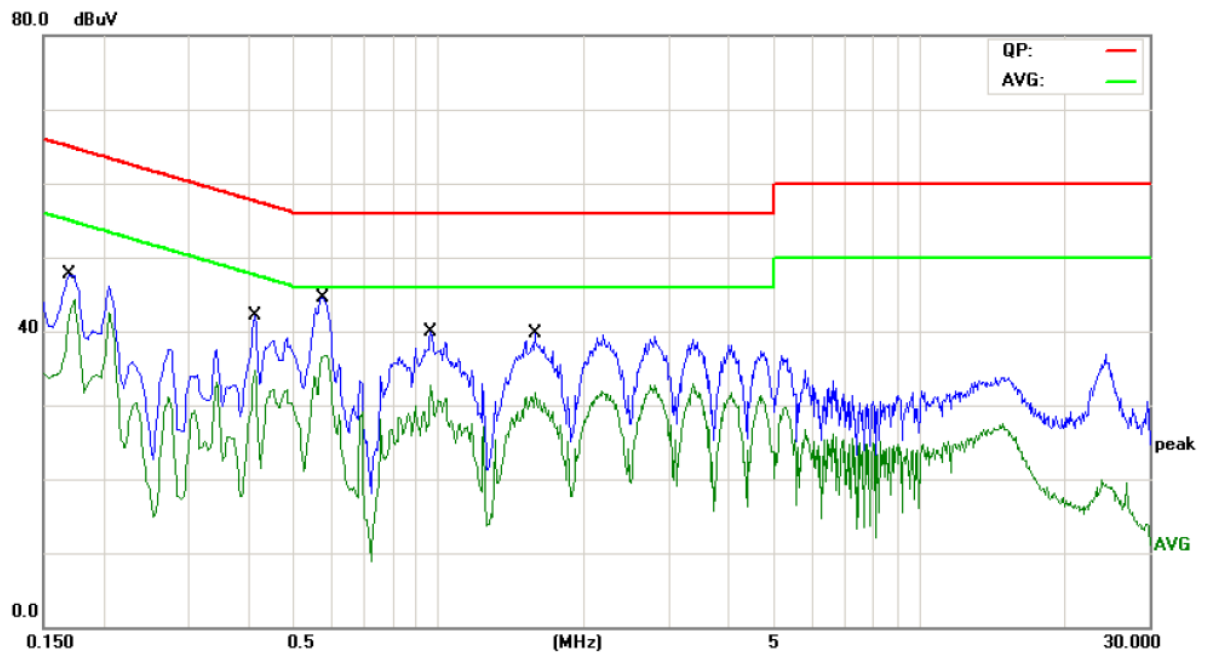
Please see the next page.

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Line		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 1: Download		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2060	38.24	10.28	48.52	63.36	-14.84	QP	
2	*	0.2060	35.27	10.28	45.55	53.36	-7.81	AVG	
3		0.5740	32.34	9.42	41.76	56.00	-14.24	QP	
4		0.5740	25.24	9.42	34.66	46.00	-11.34	AVG	
5		0.9620	28.96	9.34	38.30	56.00	-17.70	QP	
6		0.9620	22.61	9.34	31.95	46.00	-14.05	AVG	
7		1.5100	27.08	9.32	36.40	56.00	-19.60	QP	
8		1.5100	21.53	9.32	30.85	46.00	-15.15	AVG	
9		2.1340	26.77	9.34	36.11	56.00	-19.89	QP	
10		2.1340	21.85	9.34	31.19	46.00	-14.81	AVG	

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Terminal	Neutral		
Test Voltage :	AC 120 V / 60Hz		
Test Mode :	Mode 1: Download		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1700	35.48	10.70	46.18	64.96	-18.78	QP	
2		0.1700	32.98	10.70	43.68	54.96	-11.28	AVG	
3		0.4140	30.42	9.63	40.05	57.57	-17.52	QP	
4		0.4140	24.89	9.63	34.52	47.57	-13.05	AVG	
5		0.5740	34.13	9.45	43.58	56.00	-12.42	QP	
6	*	0.5740	26.97	9.45	36.42	46.00	-9.58	AVG	
7		0.9620	28.77	9.36	38.13	56.00	-17.87	QP	
8		0.9620	22.88	9.36	32.24	46.00	-13.76	AVG	
9		1.5820	27.37	9.35	36.72	56.00	-19.28	QP	
10		1.5820	22.32	9.35	31.67	46.00	-14.33	AVG	

4. Radiated Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

FCC Part 15.109

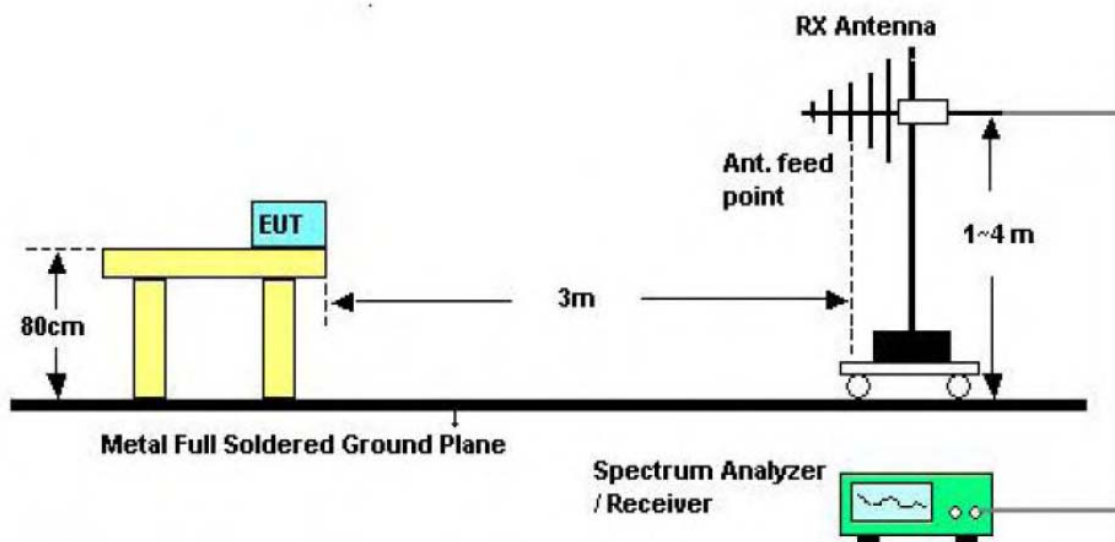
4.1.2 Test Limit

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 Deviation

The test is no deviation from the standard.

4.5 Test Equipment

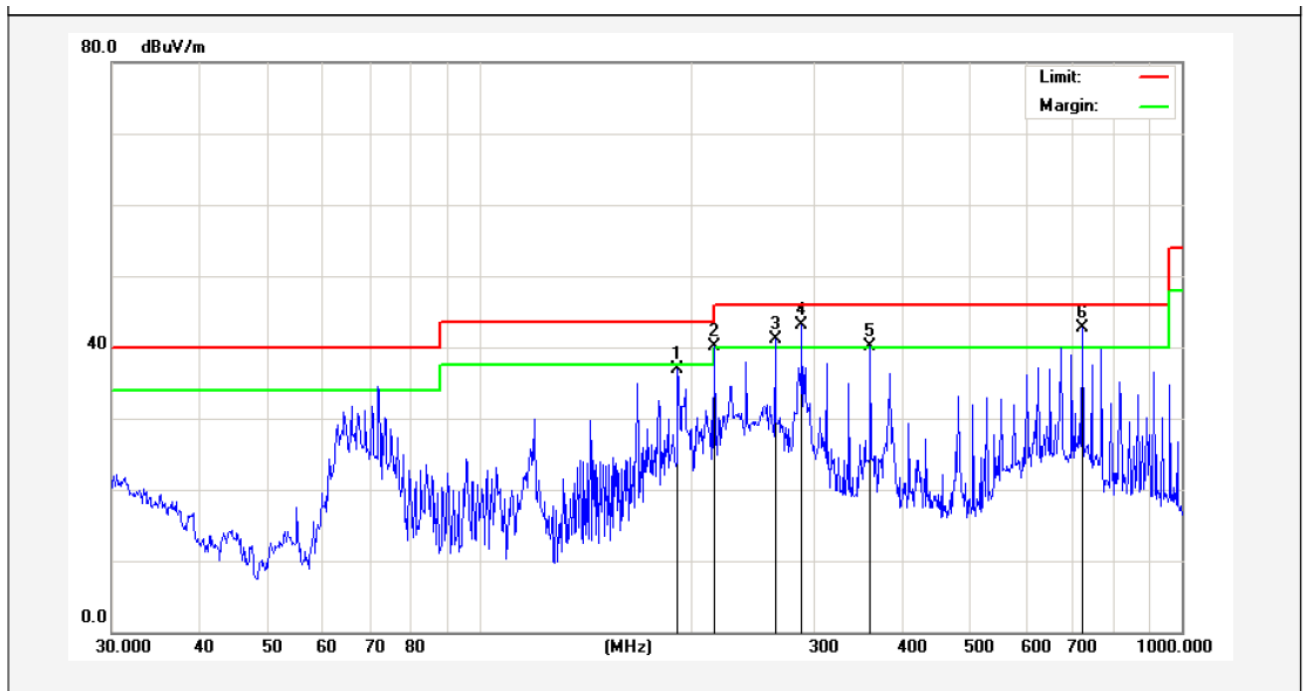
Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
Spectrum Analyzer	Agilent	E7405A	MY45114970	2010-06-21	2011-06-21
Pre-Amplifier	CD	PAM0203	804203	2010-06-21	2011-06-21
RF Switch	CD	RSU-M3	RSU-M3	2010-06-21	2011-06-21
Trilog Broadband Antenna	SCHWARZBEC K	VULB9163	345	2010-06-21	2011-06-21
Coaxial Cable	SCHWARZBEC K	RG214-N-8	11065	2010-06-21	2011-06-21
Broadband Preamplifier 0.5-18GHz	SCHWARZBECK	BBV9718	9718-148	2010-06-21	2011-06-21
Horn Antenna	SCHWARZBEC K	BBHA9120D	667	2010-06-21	2011-06-21
Coaxial Cable	SCHWARZBEC K	AK9513	9513-10	2010-06-21	2011-06-21
Coaxial Cable	SCHWARZBEC K	AK9515H	9515-10	2010-06-21	2011-06-21

4.6 EUT Operating Condition

Please refer to the description of test mode.

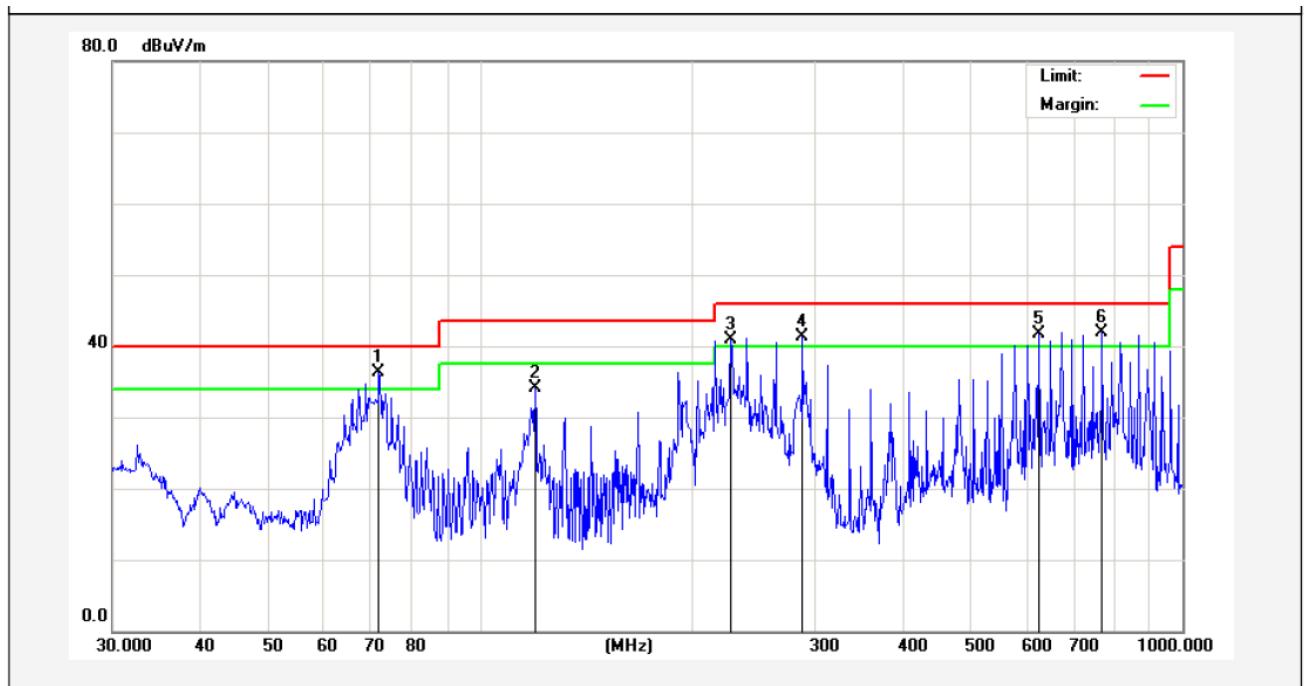
4.7 Test Data

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	AC 120 V / 60Hz		
Antenna. Pol:	Horizontal		
Test Mode :	Mode 1: Download		



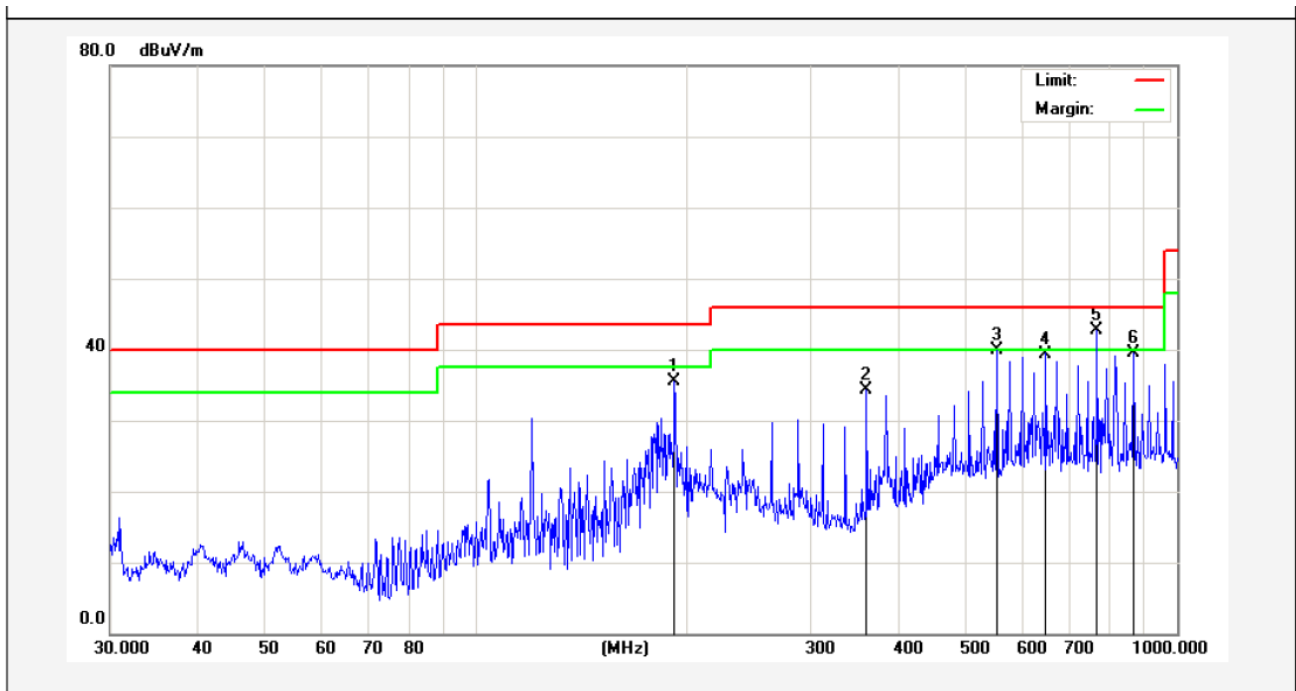
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	191.7450	66.30	-29.46	36.84	43.50	-6.66	peak			
2	216.0240	68.98	-28.78	40.20	46.00	-5.80	peak			
3	263.8190	68.55	-27.35	41.20	46.00	-4.80	peak			
4	287.9904	69.58	-26.50	43.08	46.00	-2.92	peak			
5	360.4476	62.23	-22.19	40.04	46.00	-5.96	peak			
6	721.7259	57.65	-15.03	42.62	46.00	-3.38	peak			

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	AC 120 V / 60Hz		
Antenna. Pol:	Vertical		
Test Mode :	Mode 1: Download		



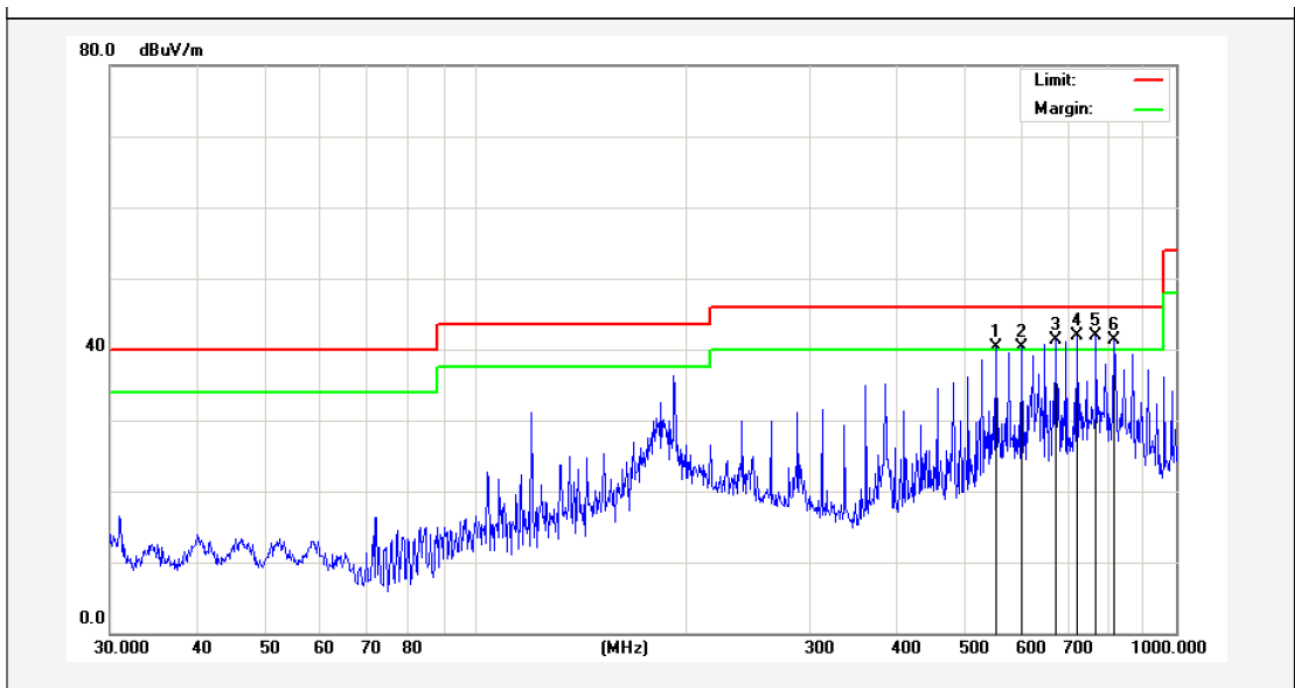
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	71.8319	66.00	-29.63	36.37	40.00	-3.63	peak			
2	119.8555	59.21	-25.03	34.18	43.50	-9.32	peak			
3	227.6904	64.13	-23.23	40.90	46.00	-5.10	peak			
4	287.9904	64.79	-23.50	41.29	46.00	-4.71	peak			
5	625.0778	58.14	-16.35	41.79	46.00	-4.21	peak			
6	768.7481	55.49	-13.49	42.00	46.00	-4.00	peak			

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Horizontal		
Test Mode :	Mode 2: Video Record		



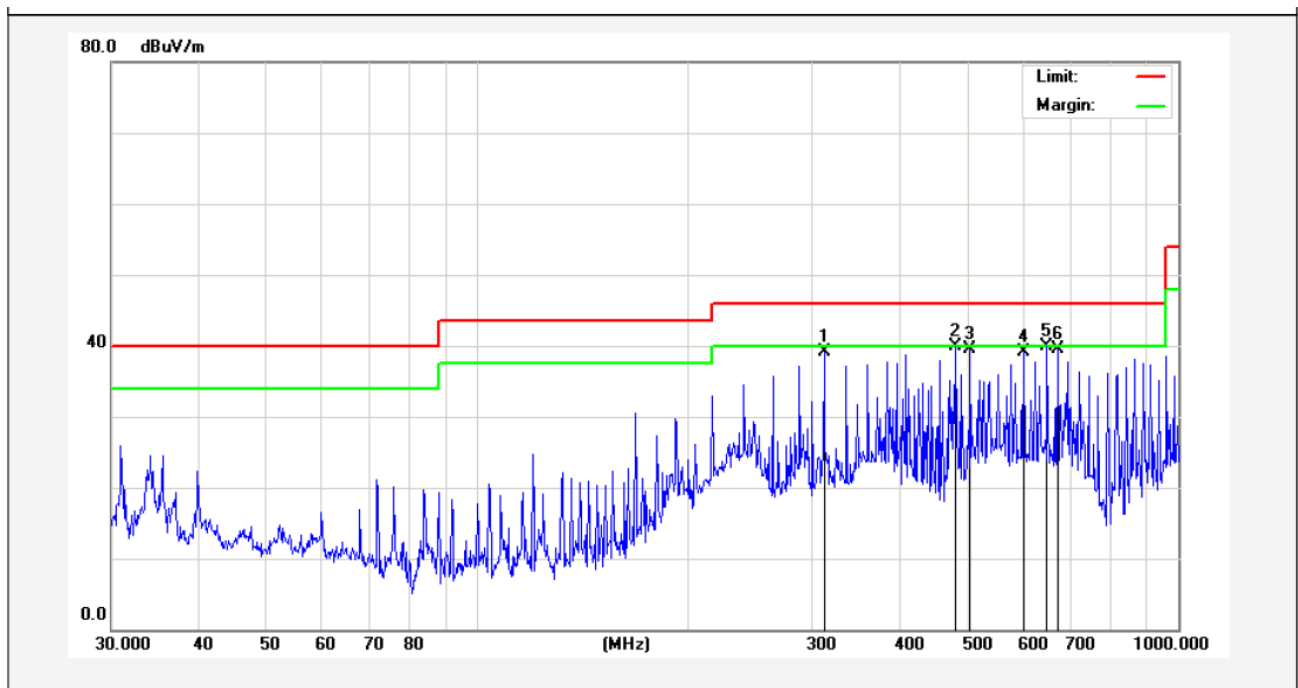
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	191.7450	59.96	-24.46	35.50	43.50	-8.00	peak			
2	360.4476	55.47	-21.19	34.28	46.00	-11.72	peak			
3	552.8831	57.86	-17.89	39.97	46.00	-6.03	peak			
4	649.6597	55.44	-16.04	39.40	46.00	-6.60	peak			
5	768.7481	56.12	-13.49	42.63	46.00	-3.37	peak			
6	866.0878	50.83	-11.30	39.53	46.00	-6.47	peak			

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Vertical		
Test Mode :	Mode 2: Video Record		



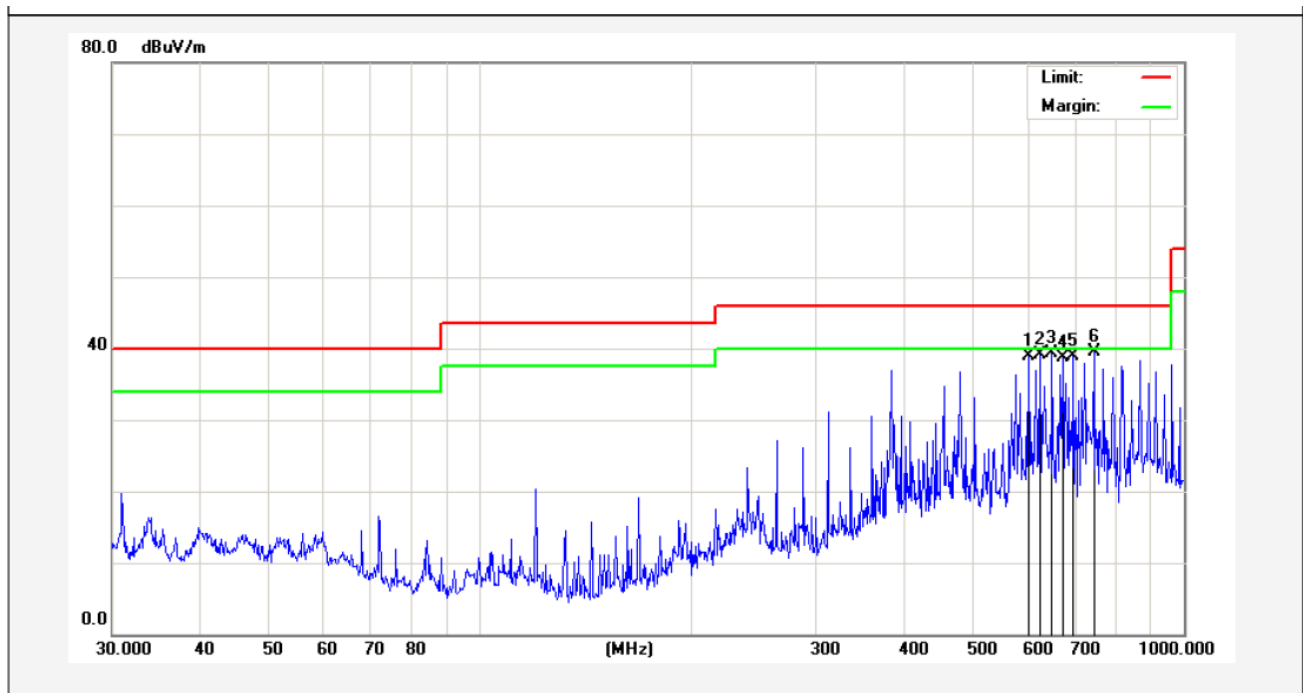
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	552.8831	58.24	-17.89	40.35	46.00	-5.65	peak			
2	601.4265	56.93	-16.65	40.28	46.00	-5.72	peak			
3	672.8444	56.99	-15.76	41.23	46.00	-4.77	peak			
4	721.7259	56.73	-14.81	41.92	46.00	-4.08	peak			
5	768.7481	55.38	-13.49	41.89	46.00	-4.11	peak			
6	815.9678	53.61	-12.31	41.30	46.00	-4.70	peak			

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Horizontal		
Test Mode :	Mode 3: Play Back		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	312.1792	63.90	-24.71	39.19	46.00	-6.81	peak			
2	480.5276	59.78	-19.90	39.88	46.00	-6.12	peak			
3	504.7062	58.71	-19.24	39.47	46.00	-6.53	peak			
4	601.4265	57.69	-18.62	39.07	46.00	-6.93	peak			
5	649.6597	56.92	-17.05	39.87	46.00	-6.13	peak			
6	672.8444	55.89	-16.30	39.59	46.00	-6.41	peak			

E.U.T :	DV	Model Name :	DV035S
Temperature :	26°C	Relative Humidity :	51 %
Test Voltage :	DC 4.5V		
Antenna. Pol:	Vertical		
Test Mode :	Mode 3: Play Back		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	601.4265	55.59	-16.65	38.94	46.00	-7.06	peak			
2	625.0778	55.42	-16.35	39.07	46.00	-6.93	peak			
3	649.6597	55.34	-16.04	39.30	46.00	-6.70	peak			
4	672.8444	54.46	-15.76	38.70	46.00	-7.30	peak			
5	696.8567	54.38	-15.46	38.92	46.00	-7.08	peak			
6	744.8659	53.67	-14.15	39.52	46.00	-6.48	peak			