



FCC 47 CFR PART 15 SUBPART B

Applicant : Netgear Incorporated
Address : 350 East Plumeria Drive San Jose, CA 95134 United States
Product Type : Mobile HotSpot
Trade Name : Netgear
Model Number : AC771S
FCC ID : PY3AC771S
Applicable Standard : FCC 47 CFR PART 15 SUBPART B: Oct., 2014
ANSI C63.4: 2014
Receive Date : Jul. 27, 2015
Test Period : Jul. 28 ~ Jul. 30, 2015
Issue Date : Aug. 06, 2015

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
Taoyuan County 334, Taiwan R.O.C.
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Aug. 06, 2015	Initial Issue	

Verification of Compliance

Issued Date: 08/06/2015

Applicant : Netgear Incorporated
Address : 350 East Plumeria Drive San Jose, CA 95134 United States
Product Type : Mobile HotSpot
Trade Name : Netgear
Model Number : AC771S
FCC ID : PY3AC771S
EUT Rated Voltage : DC 5V, 1A
Test Voltage : 120 Vac / 60 Hz
Applicable Standard : FCC 47 CFR PART 15 SUBPART B: Oct., 2014
ANSI C63.4: 2014
Test Result : Complied
Performing Lab. : A Test Lab Techno Corp.

No. 140-1, Changan Street, Bade City,
Taoyuan County 334, Taiwan R.O.C.
Tel : +886-3-2710188 / Fax : +886-3-2710190



Taiwan Accreditation Foundation accreditation number: 1330
<http://www.atl-lab.com.tw/e-index.htm>

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By : Misty Wu Reviewed By : Frank Lin
(Manager) (Misty Wu) (Testing Engineer) (Frank Lin)

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1 General Information

1.1 Summary of Test Result

Emission			
Standard	Item	Result	Remark
FCC 47 CFR PART 15 SUBPART B ANSI C63.4	Conducted Emission	PASS	Meet Class B limit
FCC 47 CFR PART 15 SUBPART B ANSI C63.4	Radiated Emission	PASS	Meet Class B limit

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Test Item		Frequency Range	Uncertainty (dB)
Conducted Emission	AC Power Port	9kHz ~ 30MHz	2.8

Test Item	Test Site	Frequency Range	Uncertainty (dB)
Radiated Emission	TE06	30MHz ~ 1000MHz	Horizontal 5.2
			Vertical 5.5
	TE01	1000MHz ~ 6000MHz	4.7
		6000MHz ~ 18000MHz	5.1
		18000MHz ~ 265000MHz	5.6
		265000MHz ~ 400000MHz	5.1
	TE09	1000MHz ~ 6000MHz	4.3
		6000MHz ~ 18000MHz	4.6
		18000MHz ~ 265000MHz	5.6
		18000MHz ~ 400000MHz	5.1

Note: The Vertical and Horizontal measurement uncertainty of 1GHz to 6GHz is evaluated and choose which polarity is worst value.

2 EUT Description

Applicant	Netgear Incorporated 350 East Plumeria Drive San Jose, CA 95134 United States		
Manufacturer	Netgear Incorporated 350 East Plumeria Drive San Jose, CA 95134 United States		
Product Type	Mobile HotSpot		
Trade Name	Netgear		
Model Number	AC771S		
FCC ID	PY3AC771S		
Class II Permissive change	Add AC adapter source		
Component List			
Power adapter(1)	Trade Name	NETGEAR	Model Number SSW-2458
	I/P: 110-240VAC, 50/60Hz, 0.2A O/P: 5VDC, 1A		
Power adapter(2)	Trade Name	NETGEAR	Model Number MU05BT050100-A1
	I/P: 100-240VAC, 50/60Hz, 0.15A O/P: 5VDC, 1A		

EUT Modify Description :

Add keyparts source			
Description	Manufacturer	Model Number	Remark
Power adapter(1)	NETGEAR	SSW-2458	I/P: 110-240VAC, 50/60Hz, 0.2A O/P: 5VDC, 1A
Power adapter(2)	NETGEAR	MU05BT050100-A1	I/P: 100-240VAC, 50/60Hz, 0.15A O/P: 5VDC, 1A
Original Report: 1303FE11-02			

I/O Port Description :

I/O Port Types	Q'TY	Test Description
1). USB Port	1	Connected to AC Adapter

3 Test Methodology

3.1. Decision of Test Mode

3.1.1. The following test mode(s) were scanned during the preliminary test:

Pre-Test Mode	
Mode 1	: CDMA850 + Wi-Fi Link with AC Adapter (SSW-2458) Mode
Mode 2	: CDMA1900 + Wi-Fi Link with AC Adapter (SSW-2458) Mode
Mode 3	: CDMA1900 + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 4	: GSM850 + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 5	: GSM1900 + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 6	: WCDMA Band II+ Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 7	: WCDMA Band I V + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 8	: LTE Band 25 + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 9	: LTE Band 26 + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 10	: LTE Band 41 + Wi-Fi Link with AC Adapter (MU05BT050100-A1) Mode
Mode 11	: Link PC Mode
Mode 12	: IDLE Mode

3.1.2. After the preliminary scan, the following test mode was found to produce the highest emission level.

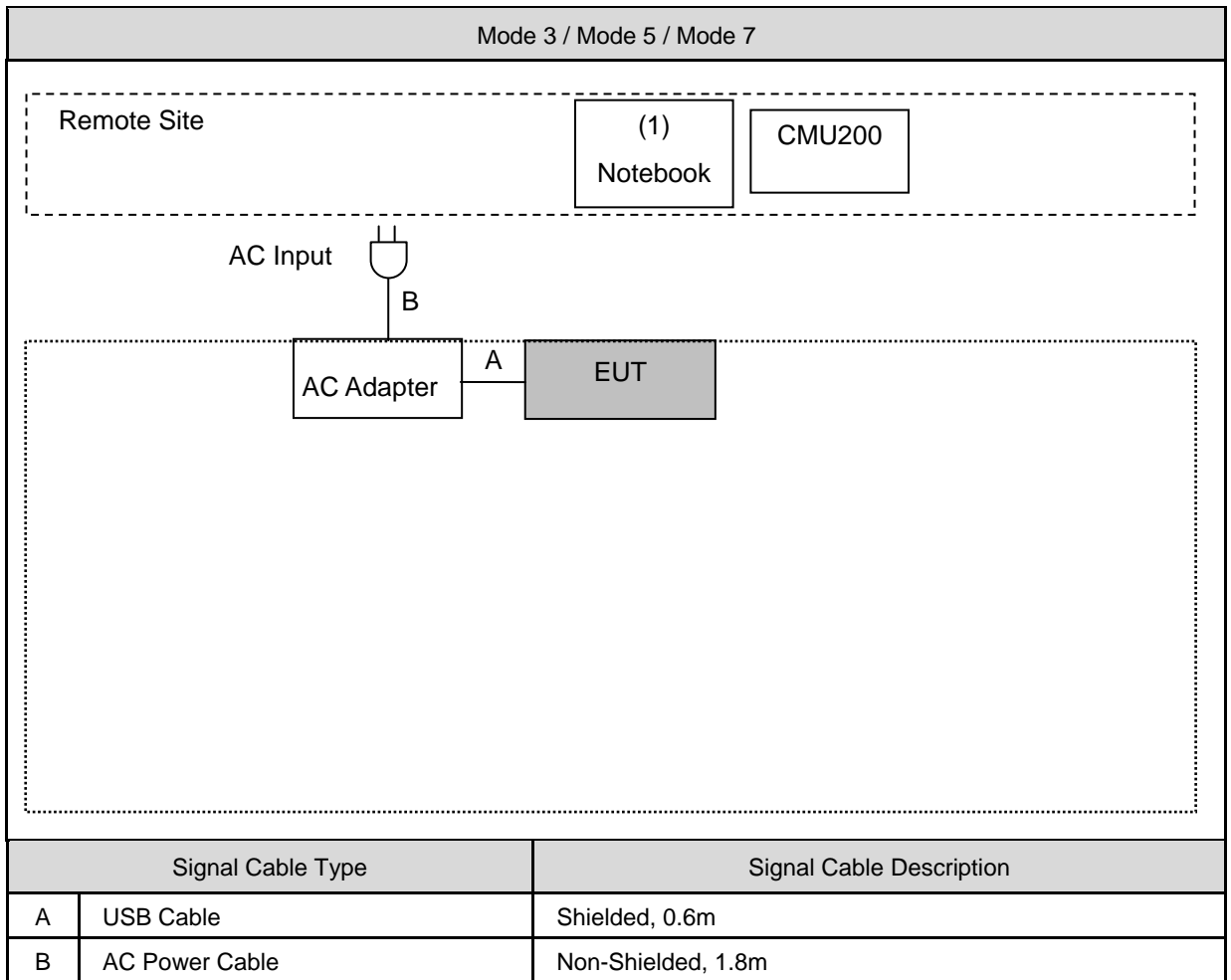
Final Test Mode			
Emission	Conducted Emission		Mode 3 / Mode 5 / Mode 7 / Mode 8
	Radiated Emission	Below 1GHz	Mode 3 / Mode 5 / Mode 7 / Mode 8
		Above 1GHz	Mode 3 / Mode 5 / Mode 7 / Mode 8

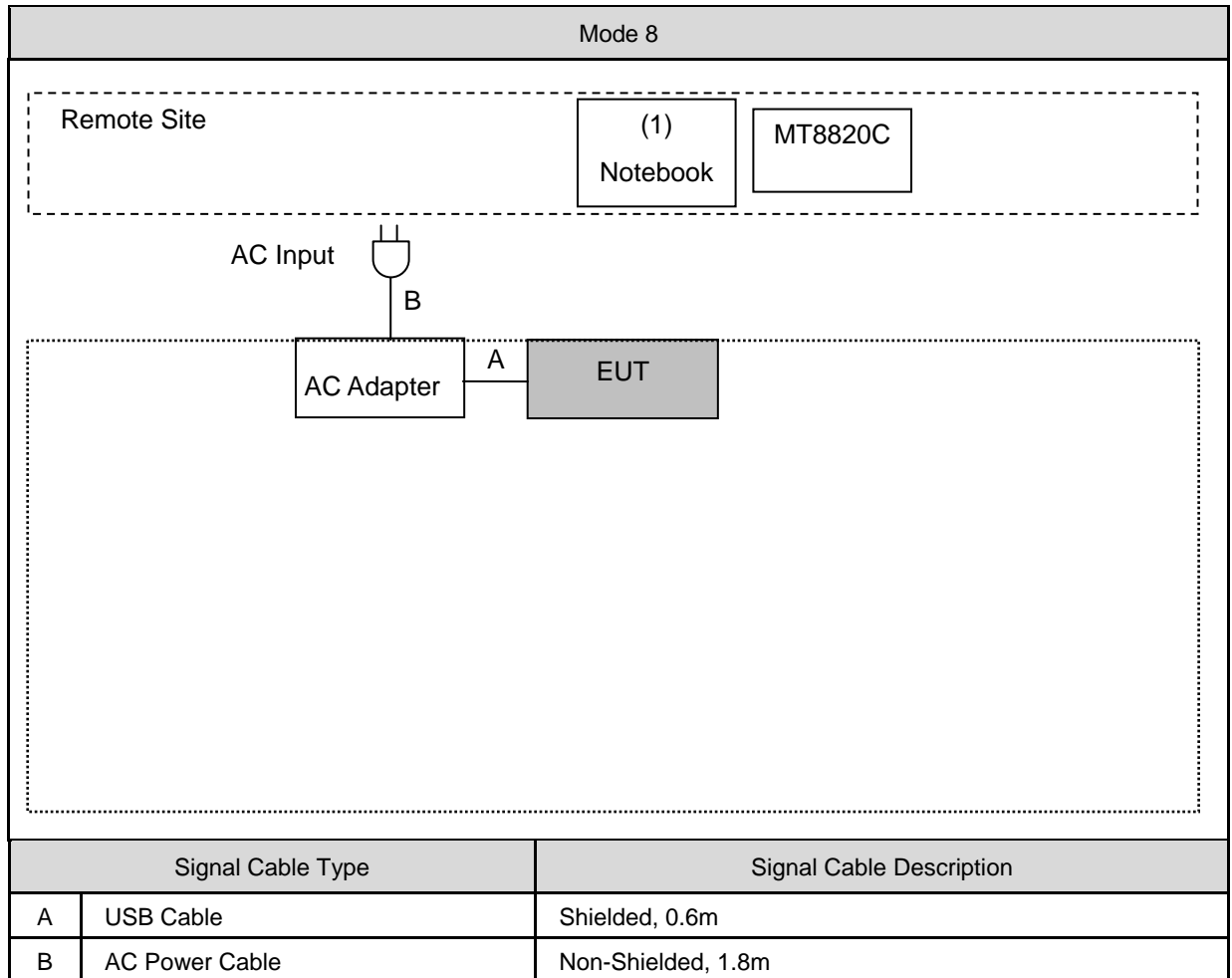
Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

3.2. EUT Exercise Software

1	Setup the EUT and simulators as shown on 3.3.
2	The EUT will start to operate function
3	The EUT link to (CMU200) for 3G, link to (MT8820C) for 4G
4	Notebook Link to the EUT (Wi-Fi)
5	Start to test and get the worst reading.

3.3. Configuration of Test System Details





Devices Description				
	Product	Manufacturer	Model Number	Power Cord
(1)	Notebook	DELL	LAPTITU	Non-Shielded, 0.8m

3.4. Test Site Environment

Items	Test Item	Required (IEC 60068-1)	Actual
Temperature (°C)	Conducted Emission	15-35	26
Humidity (%RH)		25-75	60
Barometric pressure (mbar)		860-1060	950
Temperature (°C)	Radiated Emission	15-35	26
Humidity (%RH)		25-75	60
Barometric pressure (mbar)		860-1060	950

4 Emission Test

4.1. Conducted Emission Measurement

4.1.1. Limit

A.C. Mains Conducted Interference Limit

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

Note: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases in line with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

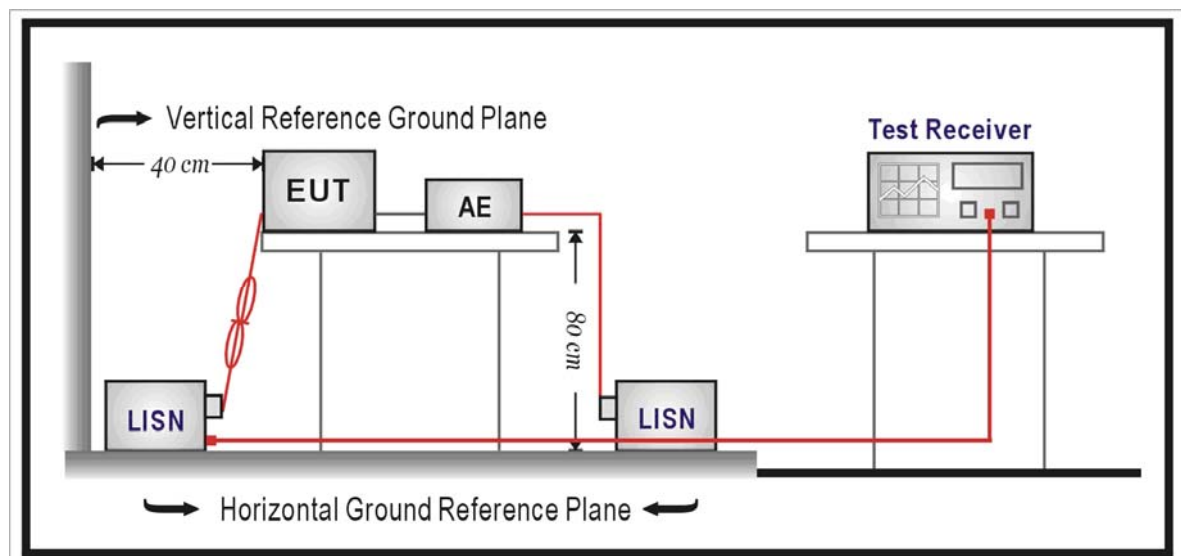
4.1.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Test Receiver	R&S	ESCI	100367	06/16/2015	1 year
LISN	R&S	ENV216	101040	03/10/2015	1 year
LISN	R&S	ENV216	101041	03/06/2015	1 year
Test Site	ATL	TE02	TE02	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

4.1.3. Test Setup

A.C. mains setup



4.1.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

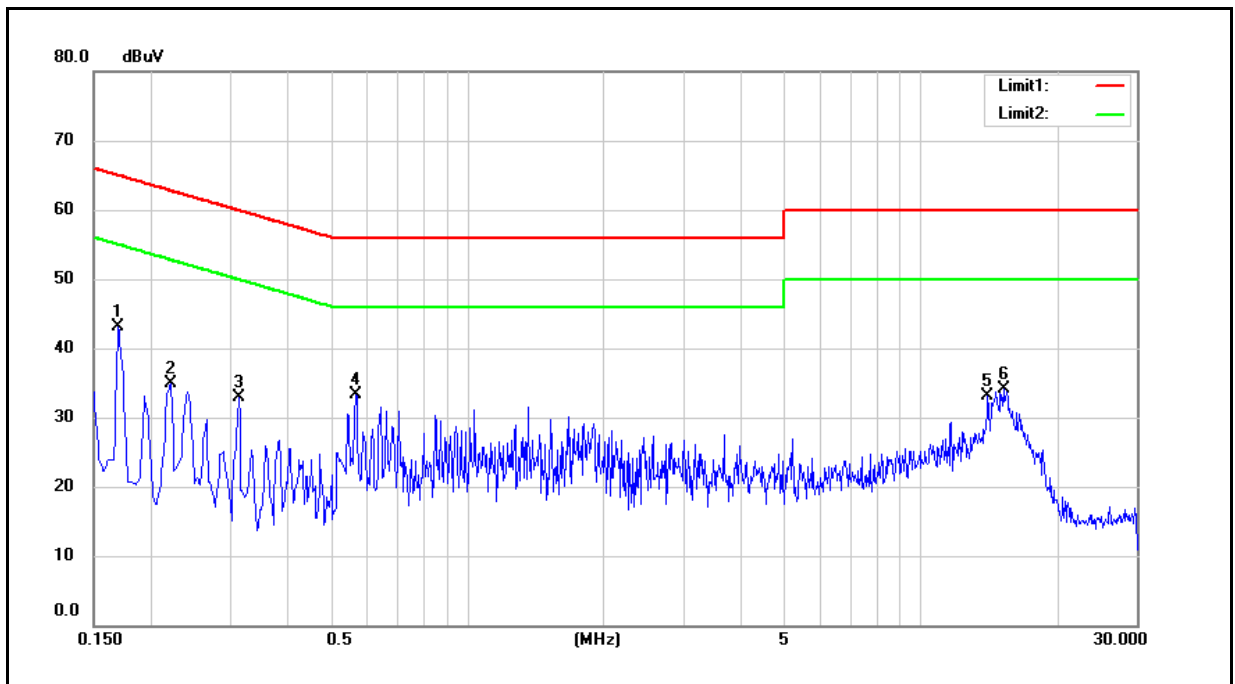
For A.C. mains conducted interference, measured both sides of A.C. lines and carried out using quasi-peak and average detector receivers of maximum conducted interference.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. The voltage limits shall be met. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.

4.1.5. Test Result

Standard:	FCC Part 15B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

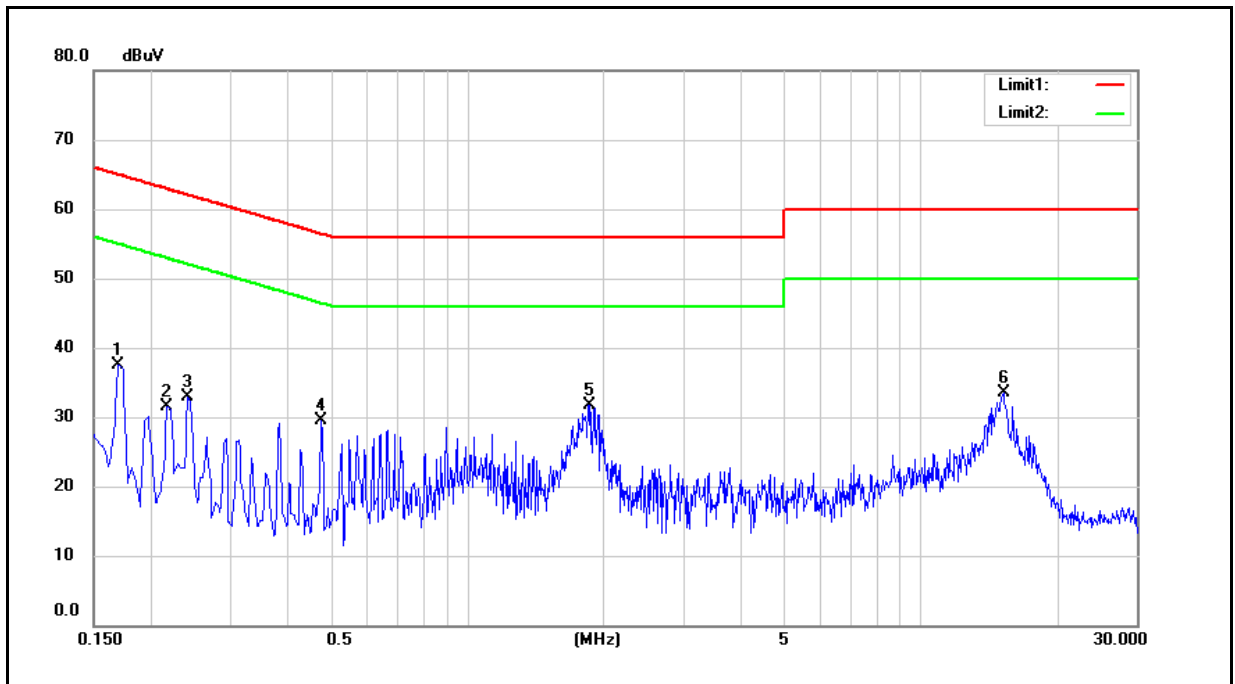


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1700	22.98	7.08	9.58	32.56	16.66	64.96	54.96	-32.40	-38.30	Pass
2	0.2220	18.77	4.03	9.58	28.35	13.61	62.74	52.74	-34.39	-39.13	Pass
3	0.3140	14.15	0.44	9.59	23.74	10.03	59.86	49.86	-36.12	-39.83	Pass
4	0.5700	15.64	5.12	9.60	25.24	14.72	56.00	46.00	-30.76	-31.28	Pass
5	14.0900	12.27	-1.23	10.00	22.27	8.77	60.00	50.00	-37.73	-41.23	Pass
6	15.2980	15.33	0.21	10.02	25.35	10.23	60.00	50.00	-34.65	-39.77	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

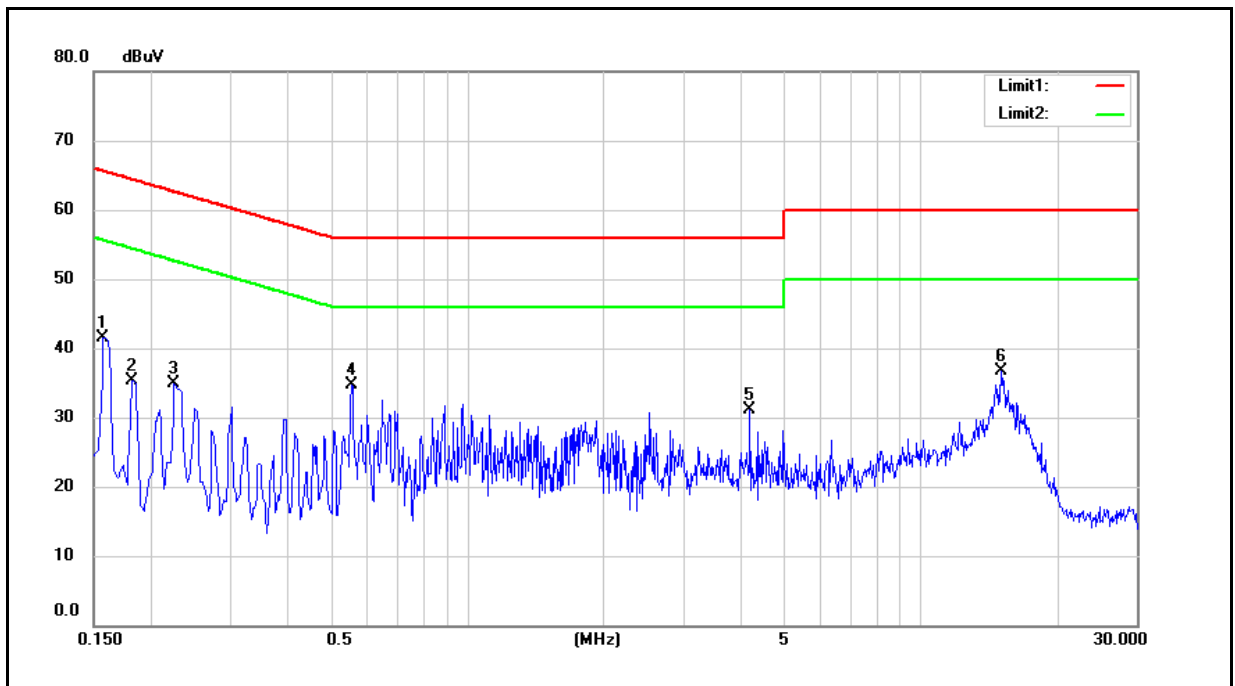


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1700	24.35	10.58	9.58	33.93	20.16	64.96	54.96	-31.03	-34.80	Pass
2	0.2180	18.88	7.64	9.58	28.46	17.22	62.89	52.89	-34.43	-35.67	Pass
3	0.2420	20.74	7.23	9.58	30.32	16.81	62.03	52.03	-31.71	-35.22	Pass
4	0.4780	11.44	0.05	9.60	21.04	9.65	56.37	46.37	-35.33	-36.72	Pass
5	1.8660	17.95	9.72	9.66	27.61	19.38	56.00	46.00	-28.39	-26.62	Pass
6	15.2300	13.97	-1.65	10.03	24.00	8.38	60.00	50.00	-36.00	-41.62	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

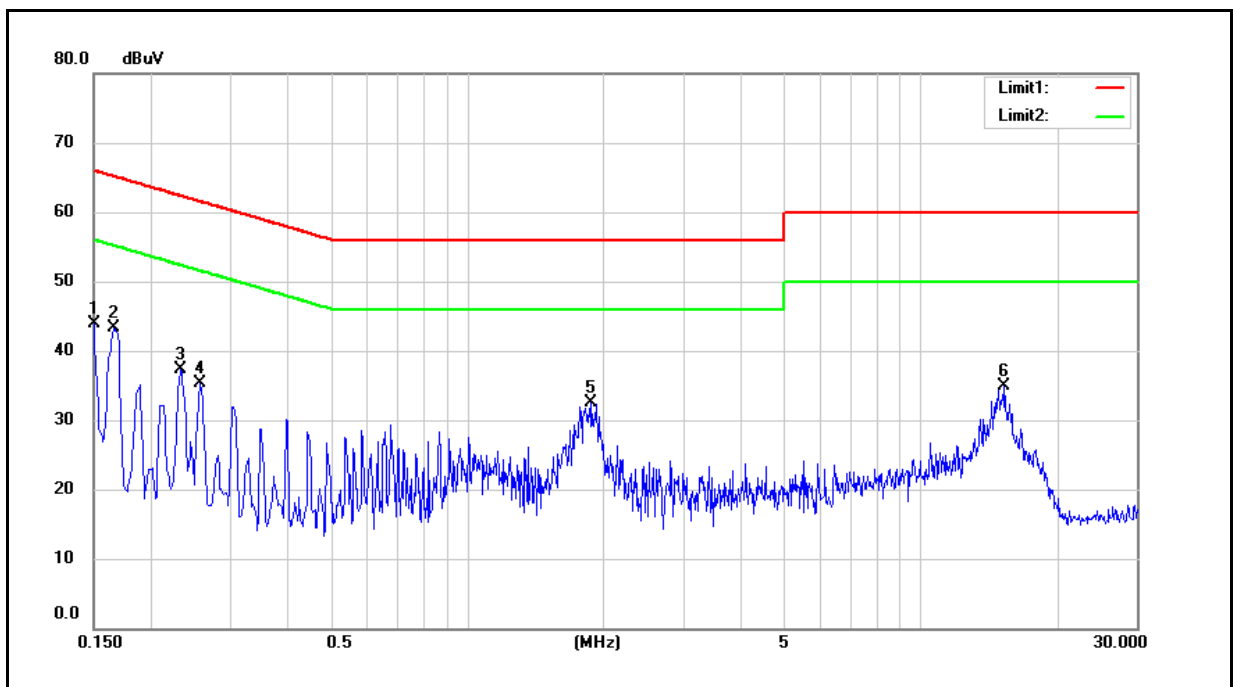


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	26.41	11.24	9.58	35.99	20.82	65.57	55.57	-29.58	-34.75	Pass
2	0.1825	20.51	5.94	9.58	30.09	15.52	64.37	54.37	-34.28	-38.85	Pass
3	0.2260	7.28	0.57	9.58	16.86	10.15	62.60	52.60	-45.74	-42.45	Pass
4	0.5580	11.62	2.04	9.60	21.22	11.64	56.00	46.00	-34.78	-34.36	Pass
5	4.2180	2.61	-2.63	9.72	12.33	7.09	56.00	46.00	-43.67	-38.91	Pass
6	15.1260	15.56	0.38	10.02	25.58	10.40	60.00	50.00	-34.42	-39.60	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

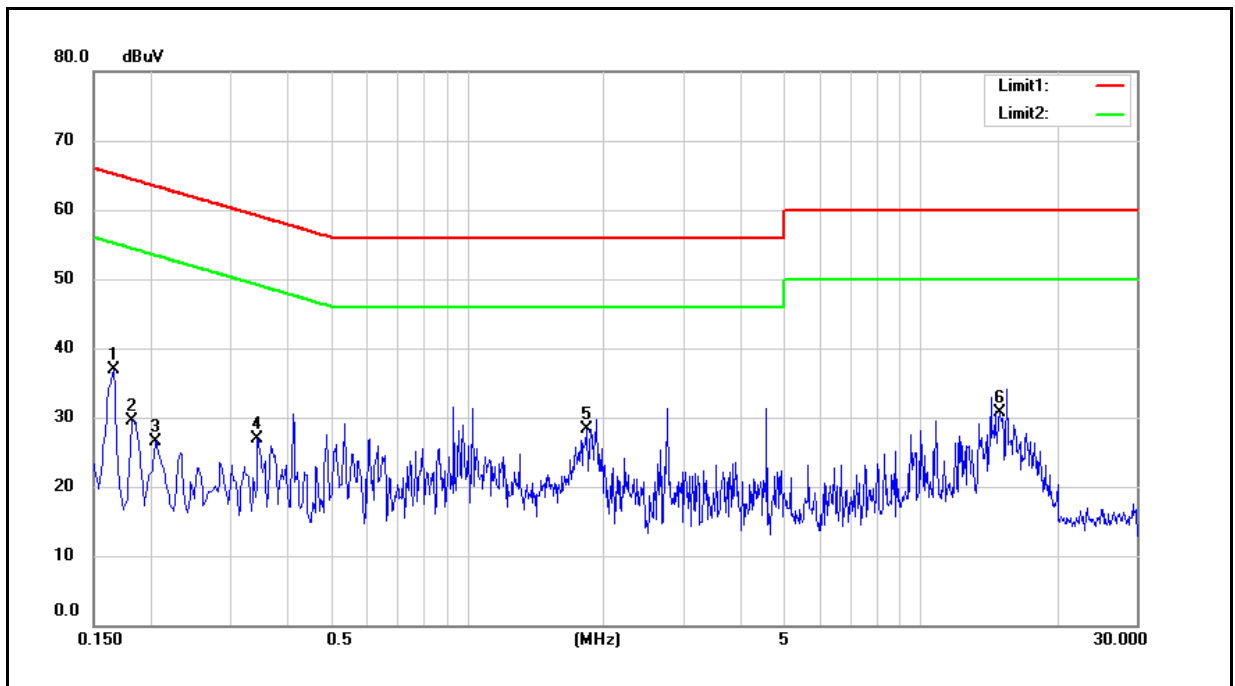


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	21.23	7.21	9.58	30.81	16.79	66.00	56.00	-35.19	-39.21	Pass
2	0.1660	19.94	5.47	9.58	29.52	15.05	65.16	55.16	-35.64	-40.11	Pass
3	0.2340	8.52	1.70	9.58	18.10	11.28	62.31	52.31	-44.21	-41.03	Pass
4	0.2580	10.70	0.85	9.59	20.29	10.44	61.50	51.50	-41.21	-41.06	Pass
5	1.8820	15.91	6.60	9.67	25.58	16.27	56.00	46.00	-30.42	-29.73	Pass
6	15.3340	8.63	-4.25	10.03	18.66	5.78	60.00	50.00	-41.34	-44.22	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 7	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

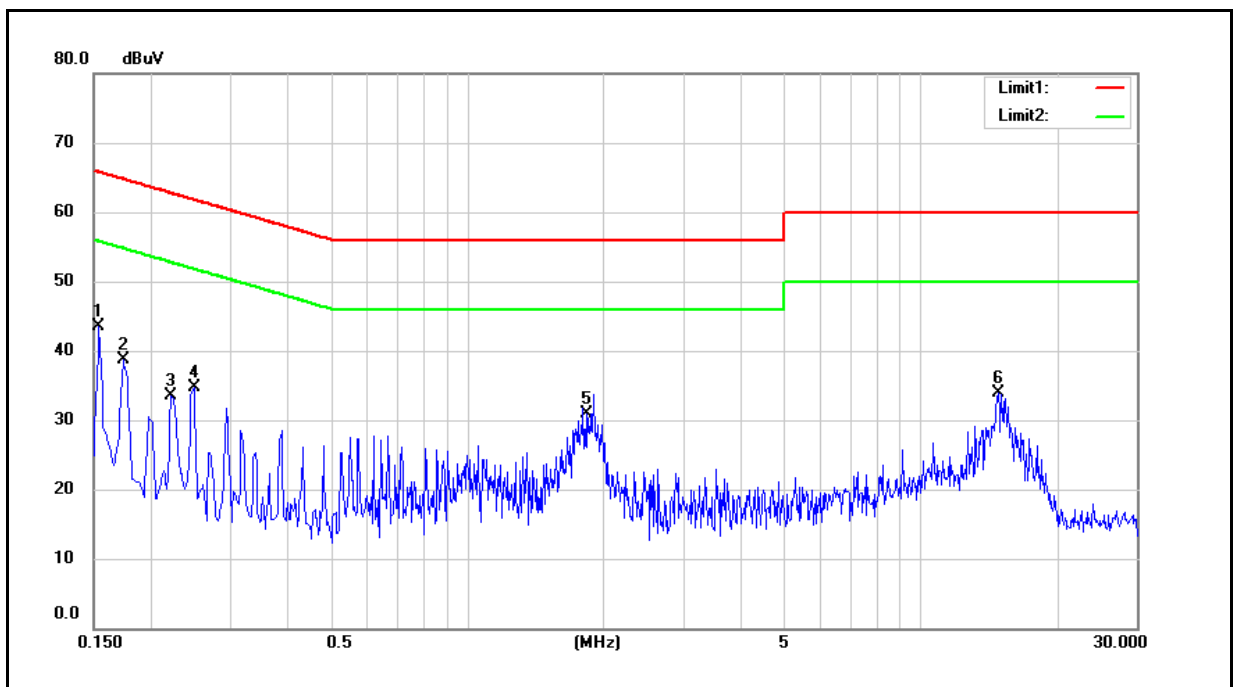


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1660	19.28	4.07	9.58	28.86	13.65	65.16	55.16	-36.30	-41.51	Pass
2	0.1820	16.58	3.25	9.58	26.16	12.83	64.39	54.39	-38.23	-41.56	Pass
3	0.2060	11.91	0.74	9.58	21.49	10.32	63.37	53.37	-41.88	-43.05	Pass
4	0.3460	9.16	0.28	9.59	18.75	9.87	59.06	49.06	-40.31	-39.19	Pass
5	1.8460	12.11	4.16	9.65	21.76	13.81	56.00	46.00	-34.24	-32.19	Pass
6	14.9900	16.11	2.48	10.02	26.13	12.50	60.00	50.00	-33.87	-37.50	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 7	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

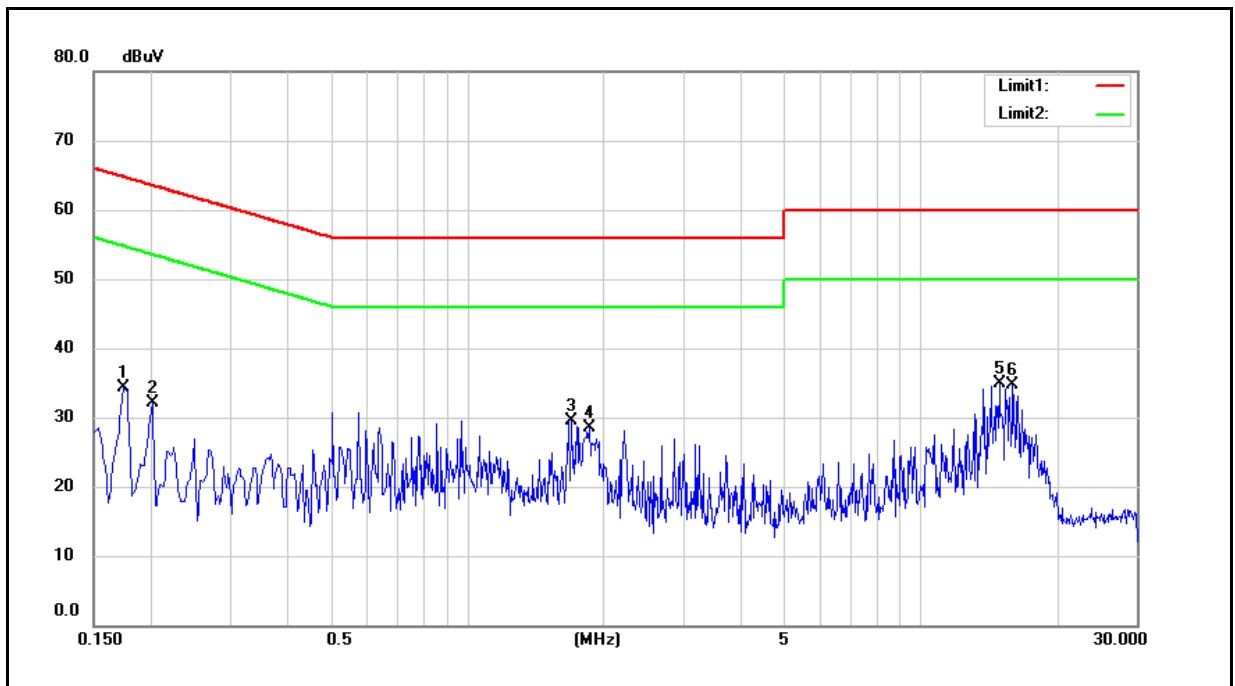


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	27.79	13.63	9.58	37.37	23.21	65.78	55.78	-28.41	-32.57	Pass
2	0.1740	23.72	8.02	9.58	33.30	17.60	64.77	54.77	-31.47	-37.17	Pass
3	0.2220	20.22	5.80	9.58	29.80	15.38	62.74	52.74	-32.94	-37.36	Pass
4	0.2500	18.38	4.71	9.59	27.97	14.30	61.76	51.76	-33.79	-37.46	Pass
5	1.8340	14.19	8.84	9.66	23.85	18.50	56.00	46.00	-32.15	-27.50	Pass
6	14.8700	14.10	-0.64	10.02	24.12	9.38	60.00	50.00	-35.88	-40.62	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 8	Date:	07/29/2015
		Test By:	Frank Lin
Description:			

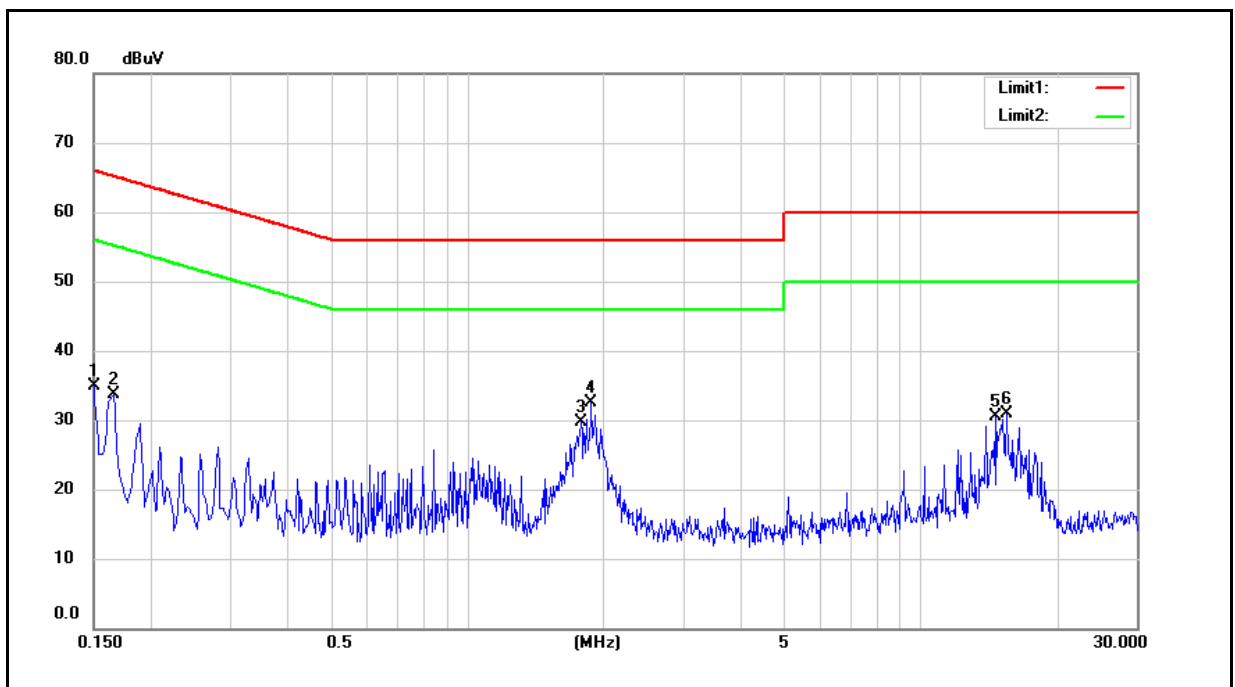


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1740	19.01	2.44	9.58	28.59	12.02	64.77	54.77	-36.18	-42.75	Pass
2	0.2020	13.19	3.18	9.58	22.77	12.76	63.53	53.53	-40.76	-40.77	Pass
3	1.7020	9.71	2.74	9.65	19.36	12.39	56.00	46.00	-36.64	-33.61	Pass
4	1.8660	6.45	1.70	9.65	16.10	11.35	56.00	46.00	-39.90	-34.65	Pass
5	14.9100	13.88	-1.18	10.02	23.90	8.84	60.00	50.00	-36.10	-41.16	Pass
6	16.0380	11.92	-2.55	10.05	21.97	7.50	60.00	50.00	-38.03	-42.50	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15B	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 8	Date:	07/29/2015
		Test By:	Frank Lin
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	21.42	7.08	9.58	31.00	16.66	66.00	56.00	-35.00	-39.34	Pass
2	0.1660	20.06	5.78	9.58	29.64	15.36	65.16	55.16	-35.52	-39.80	Pass
3	1.7900	15.85	6.80	9.66	25.51	16.46	56.00	46.00	-30.49	-29.54	Pass
4	1.8820	20.01	9.92	9.67	29.68	19.59	56.00	46.00	-26.32	-26.41	Pass
5	14.6460	7.79	-4.29	10.02	17.81	5.73	60.00	50.00	-42.19	-44.27	Pass
6	15.4940	9.44	-3.50	10.03	19.47	6.53	60.00	50.00	-40.53	-43.47	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

4.2. Radiated Interference Measurement

4.2.1. Limit

Under 1GHz test shall not exceed following value

FCC 47 CFR PART 15 SUBPART B				
Frequency range (MHz)	Class A		Class B	
	Distance (m)	dBuV/m	Distance (m)	dBuV/m
30 to 88	10	39	3	40
88 to 216	10	43.5	3	43.5
216 to 960	10	46.4	3	46
Above 960	10	49.5	3	54

CISPR 22				
Frequency range (MHz)	Class A		Class B	
	Distance (m)	dBuV/m	Distance (m)	dBuV/m
30 to 230	10	40	10	30
230 to 1000	10	47	10	37

Above 1GHz test shall not exceed following value

Frequency (MHz)	dBuV/m (Distance 3m)			
	Class A		Class B	
	Average	Peak	Average	Peak
1000 ~ 40000	60	80	54	74

- Remark:
1. The tighter limit shall apply at the edge between two frequency bands.
 2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 3. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)
 4. Peak detector limit is corresponding to 20 dB above the maximum permitted average limit.

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or in which the device operated or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

4.2.2. Test Instruments

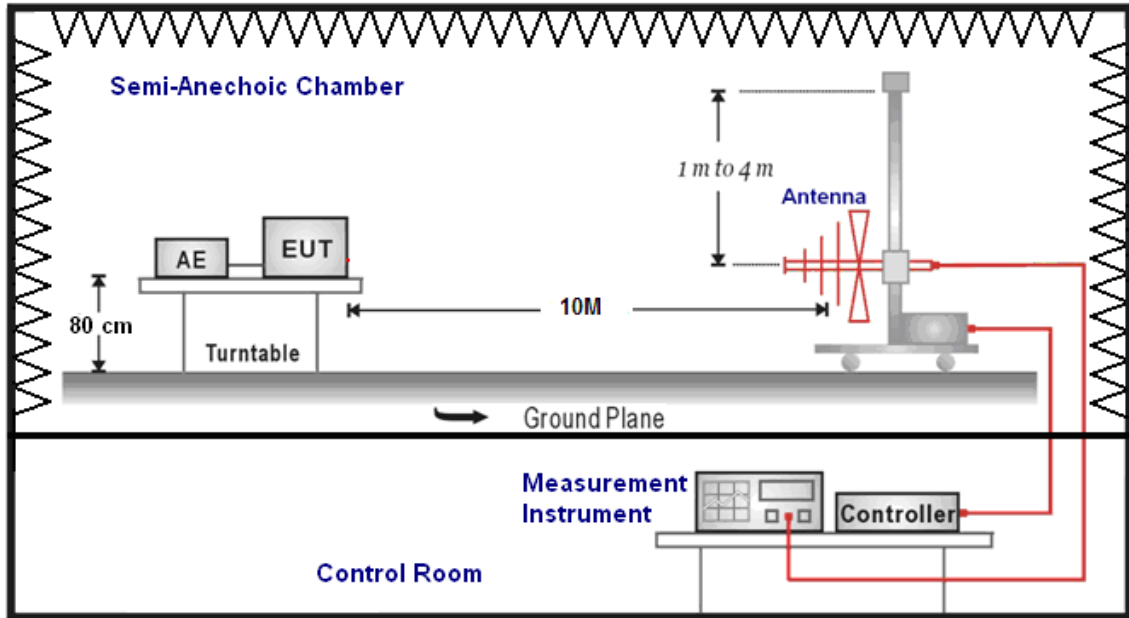
10 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Pre Amplifier	Agilent	8447D	2944A11120	01/09/2015	1 year
Pre Amplifier	Agilent	8447D	2944A11119	01/09/2015	1 year
Test Receiver	R&S	ESCI	100722	10/24/2014	1 year
Test Receiver	R&S	ESCI	101000	12/05/2014	1 year
Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB 9160	9160-3268	06/04/2015	1 year
Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB 9160	9160-3273	11/19/2014	1 year
Universal Radio Communication Tester	R&S	CMU200	109369	10/21/2014	2 year
Universal Radio Communication Tester	Anritsu	MT8820C	6201300618	07/09/2015	2 year
Test Site	ATL	TE06	TE06	08/09/2014	1 year

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
RF Pre-selector	Agilent	N9039A	MY46520256	01/06/2015	1 year
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/06/2015	1 year
Pre Amplifier	Agilent	8449B	3008A02237	02/24/2015	1 year
Pre Amplifier	Agilent	8447D	2944A10961	02/24/2015	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/12/2015	1 year
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	07/06/2015	1 year
Universal Radio Communication Tester	R&S	CMU200	109369	10/21/2014	2 year
Universal Radio Communication Tester	Anritsu	MT8820C	6201300618	07/09/2015	2 year
Test Site	ATL	TE01	888001	08/28/2014	1 year

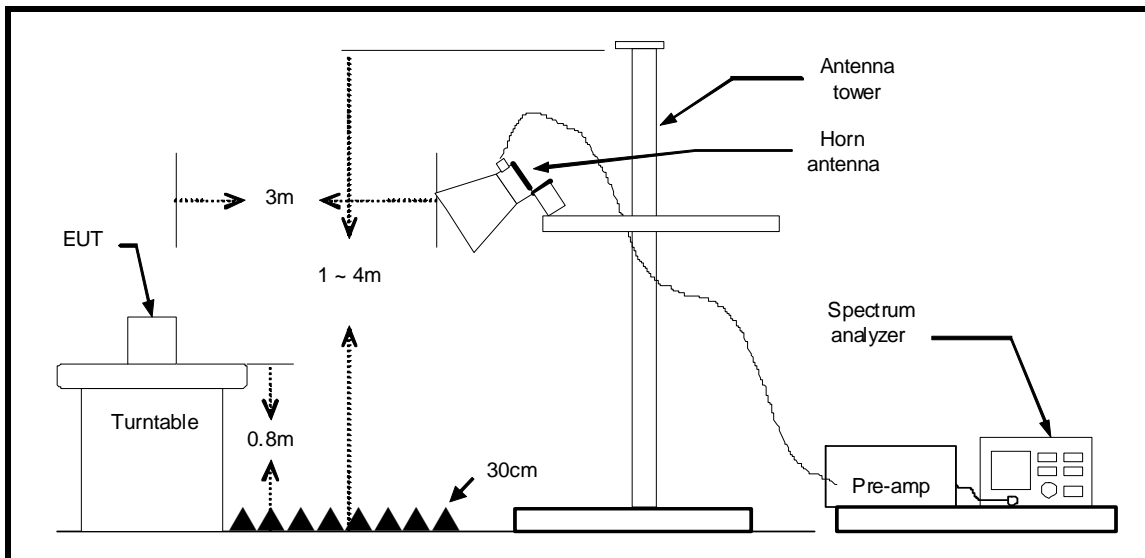
Note: N.C.R. = No Calibration Request.

4.2.3. Setup

Below 1GHz



Above 1GHz



4.2.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 10 meters for under 1GHz, and 3 meter for above 1GHz, the highest frequency performed according to internal source frequency of the EUT, the specification was below:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 - 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

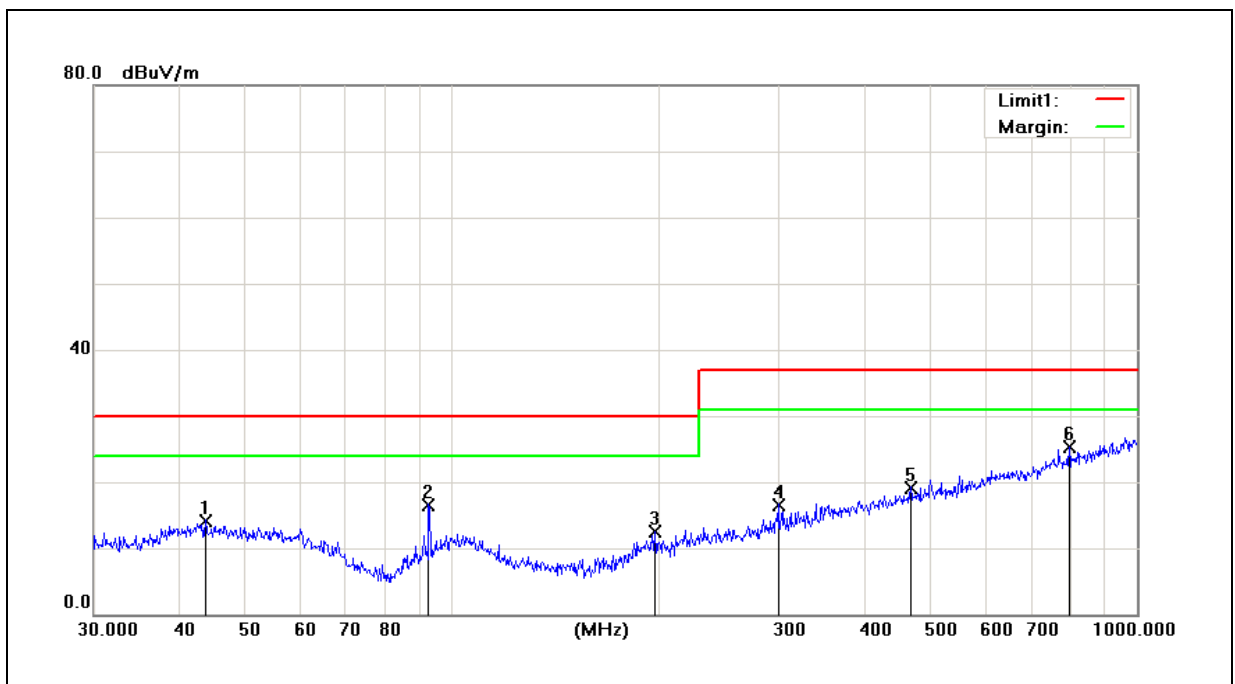
According to this standard paragraph 15.109, as an alternative to the radiated emission limits, digital devices may be shown to comply with the standards contained in Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement".

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

Radiated emissions were investigated over the frequency range from 30MHz to 1GHz using a receiver bandwidth of 120 kHz. Radiated was performed at an antenna to EUT distance of 10 meters.

4.2.5. Test Result

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

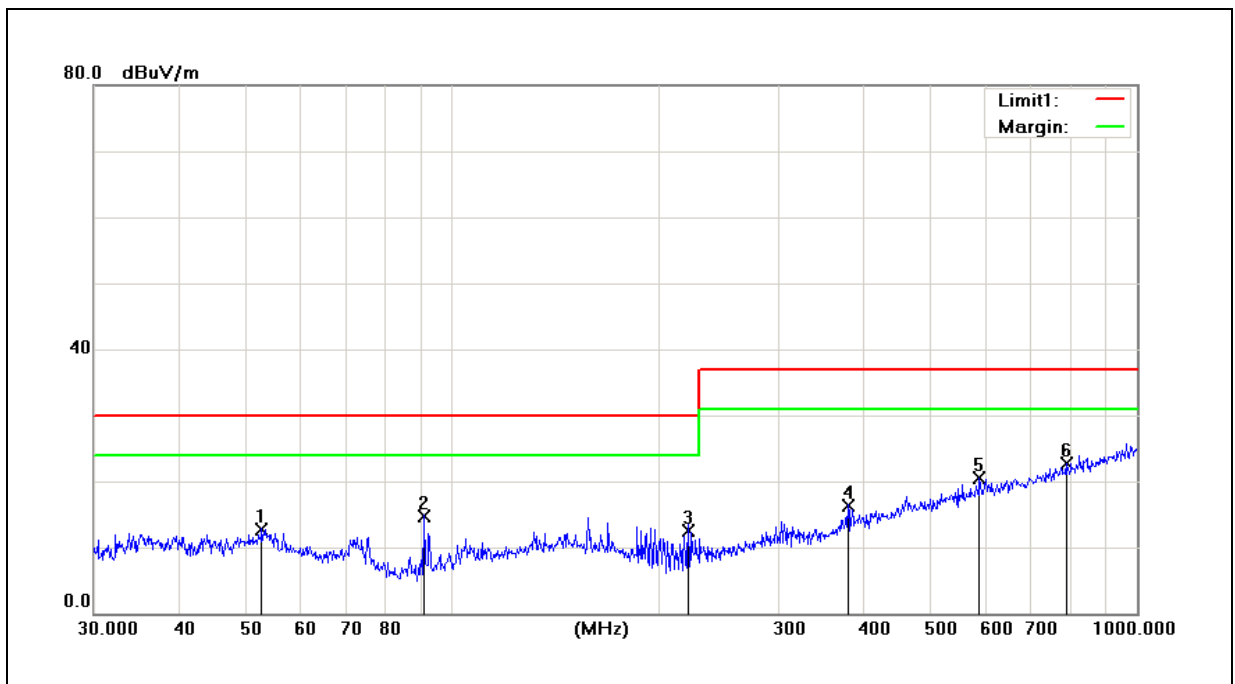


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	43.6584	26.06	-11.86	14.20	30.00	-15.80	100	0	QP
2	92.4624	31.55	-14.95	16.60	30.00	-13.40	400	222	QP
3	197.8928	26.01	-13.51	12.50	30.00	-17.50	200	357	QP
4	299.3158	26.60	-10.00	16.60	37.00	-20.40	400	0	QP
5	467.2350	25.74	-6.54	19.20	37.00	-17.80	200	143	QP
6	796.1830	25.81	-0.51	25.30	37.00	-11.70	400	319	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

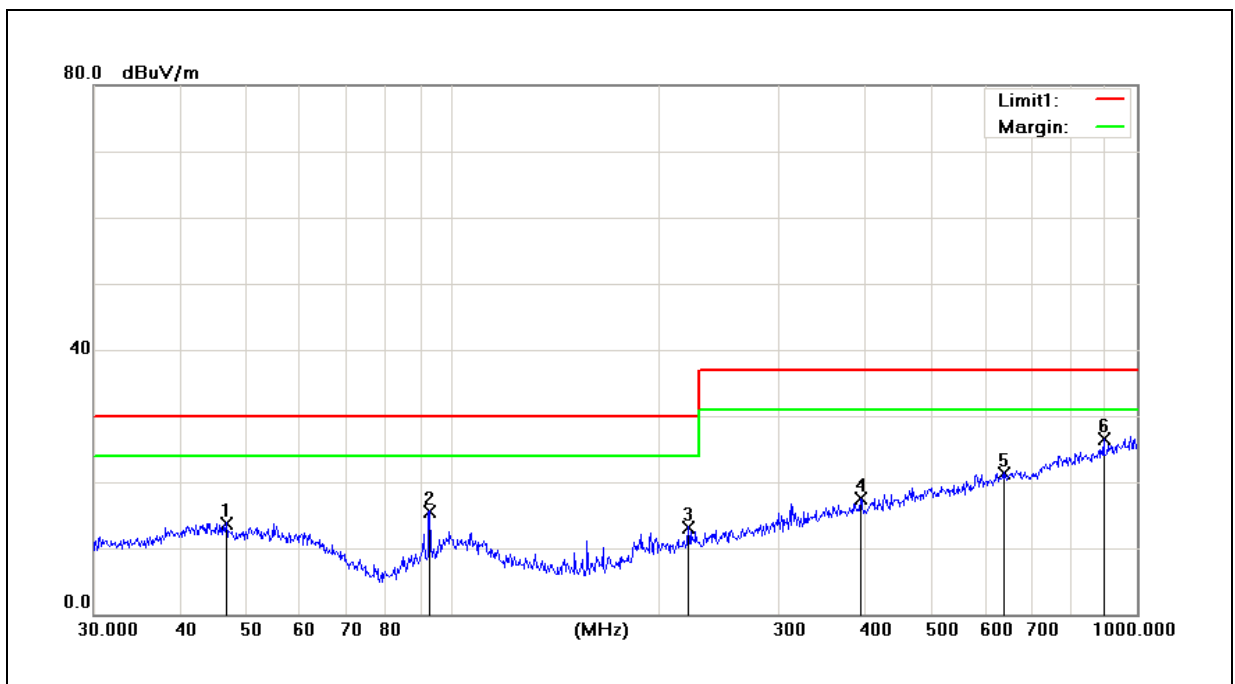


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	52.7600	27.15	-14.35	12.80	30.00	-17.20	100	222	QP
2	91.1746	33.53	-18.73	14.80	30.00	-15.20	200	111	QP
3	221.3921	27.42	-14.92	12.50	30.00	-17.50	300	125	QP
4	378.5843	25.65	-9.25	16.40	37.00	-20.60	100	359	QP
5	588.9051	24.47	-3.97	20.50	37.00	-16.50	200	350	QP
6	787.8513	22.71	-0.01	22.70	37.00	-14.30	100	273	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

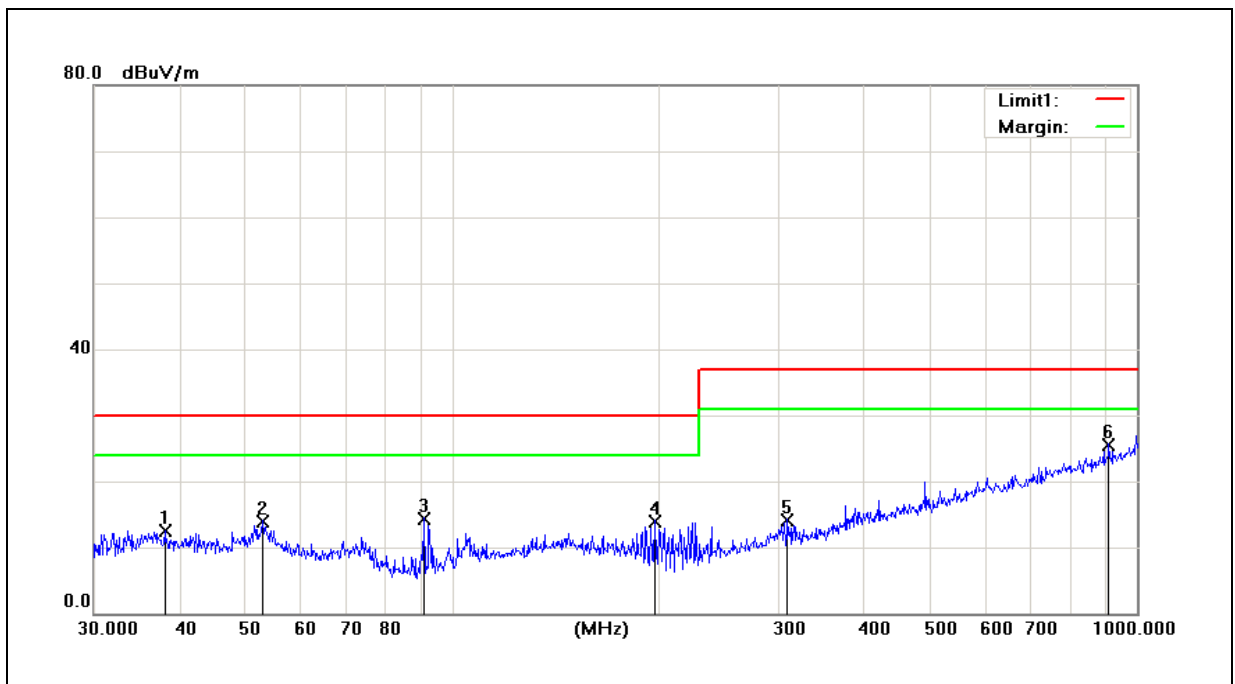


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	46.8303	25.71	-11.91	13.80	30.00	-16.20	400	359	QP
2	92.7871	30.47	-14.87	15.60	30.00	-14.40	300	223	QP
3	221.3921	25.99	-12.79	13.20	30.00	-16.80	400	282	QP
4	394.8545	25.27	-7.77	17.50	37.00	-19.50	200	0	QP
5	638.3686	24.70	-3.30	21.40	37.00	-15.60	400	3	QP
6	893.8567	26.34	0.16	26.50	37.00	-10.50	200	73	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

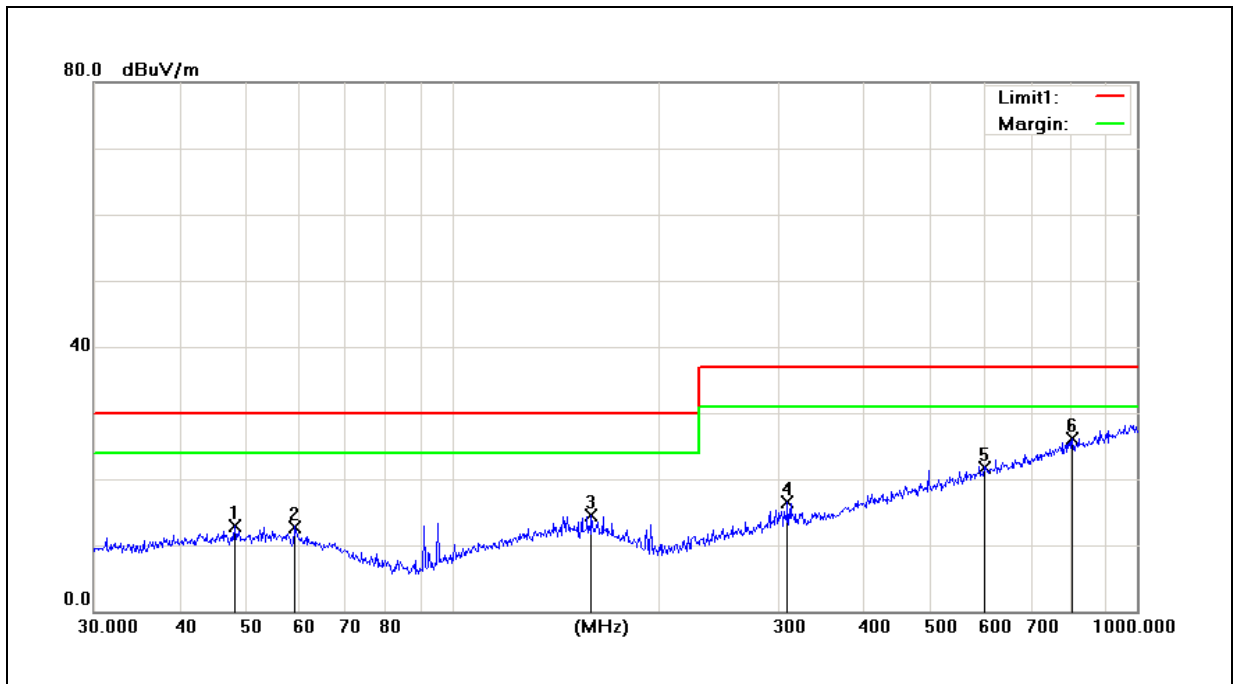


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	38.0783	27.78	-15.28	12.50	30.00	-17.50	300	46	QP
2	52.9453	28.35	-14.35	14.00	30.00	-16.00	100	9	QP
3	91.1746	33.13	-18.73	14.40	30.00	-15.60	200	36	QP
4	197.8928	29.48	-15.48	14.00	30.00	-16.00	100	125	QP
5	308.9126	24.93	-10.73	14.20	37.00	-22.80	200	209	QP
6	909.6667	23.28	2.32	25.60	37.00	-11.40	100	351	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 7 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

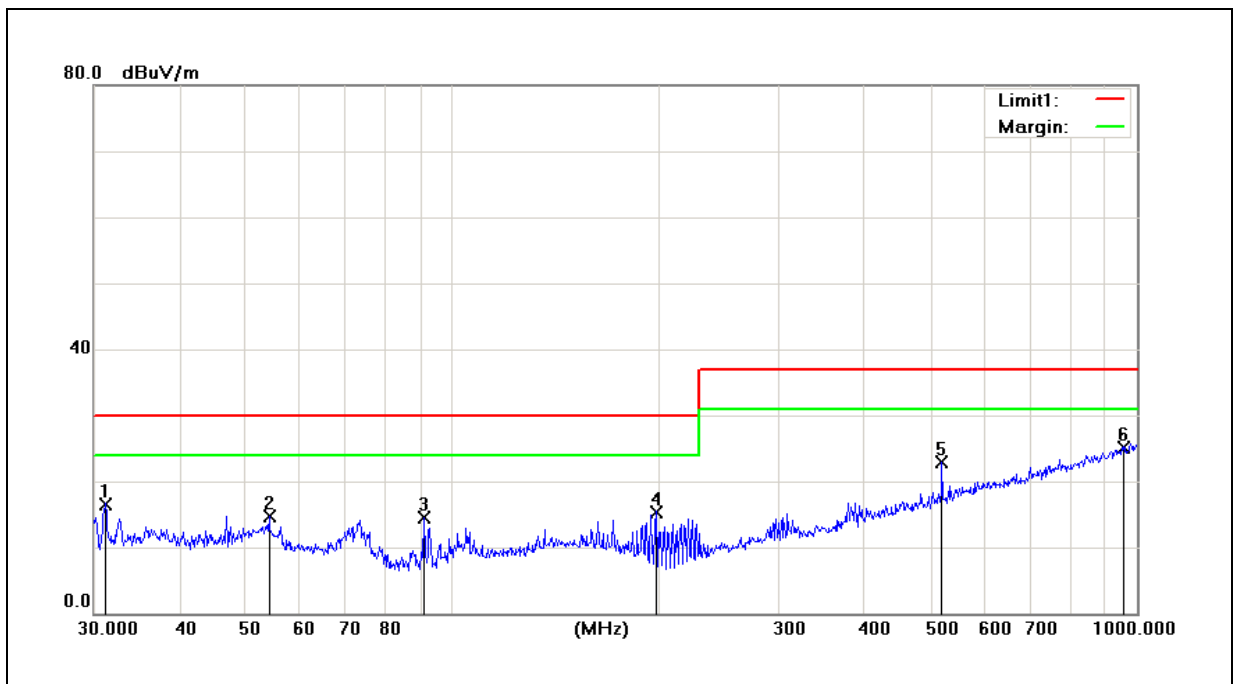


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	48.1625	27.13	-14.23	12.90	30.00	-17.10	200	235	QP
2	59.0251	27.24	-14.44	12.80	30.00	-17.20	100	0	QP
3	159.7844	27.11	-12.61	14.50	30.00	-15.50	400	357	QP
4	308.9125	27.03	-10.53	16.50	37.00	-20.50	400	189	QP
5	599.3212	25.41	-3.61	21.80	37.00	-15.20	200	359	QP
6	804.6028	25.67	0.43	26.10	37.00	-10.90	100	294	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 7 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

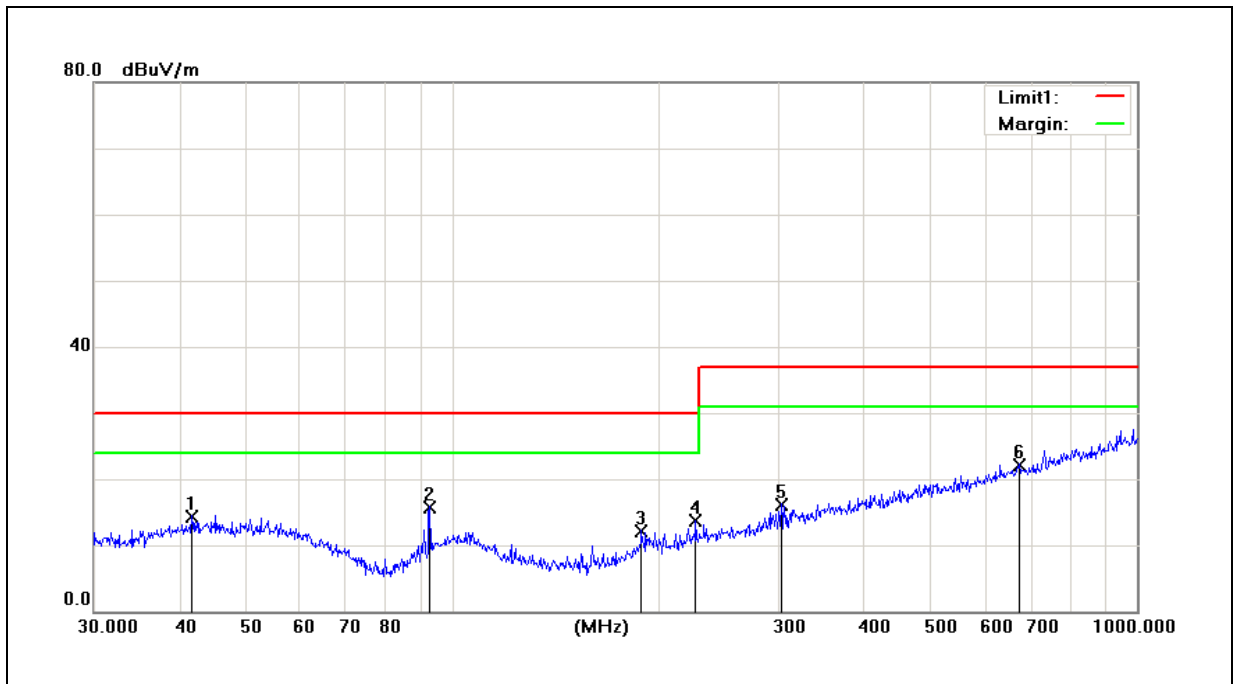


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	31.1798	33.03	-16.43	16.60	30.00	-13.40	100	309	QP
2	54.0711	29.37	-14.67	14.70	30.00	-15.30	101	0	QP
3	91.1746	33.74	-19.14	14.60	30.00	-15.40	200	131	QP
4	198.5880	31.40	-16.00	15.40	30.00	-14.60	100	333	QP
5	519.0650	29.05	-6.05	23.00	37.00	-14.00	195	0	QP
6	955.4381	22.18	3.02	25.20	37.00	-11.80	400	1	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 8 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

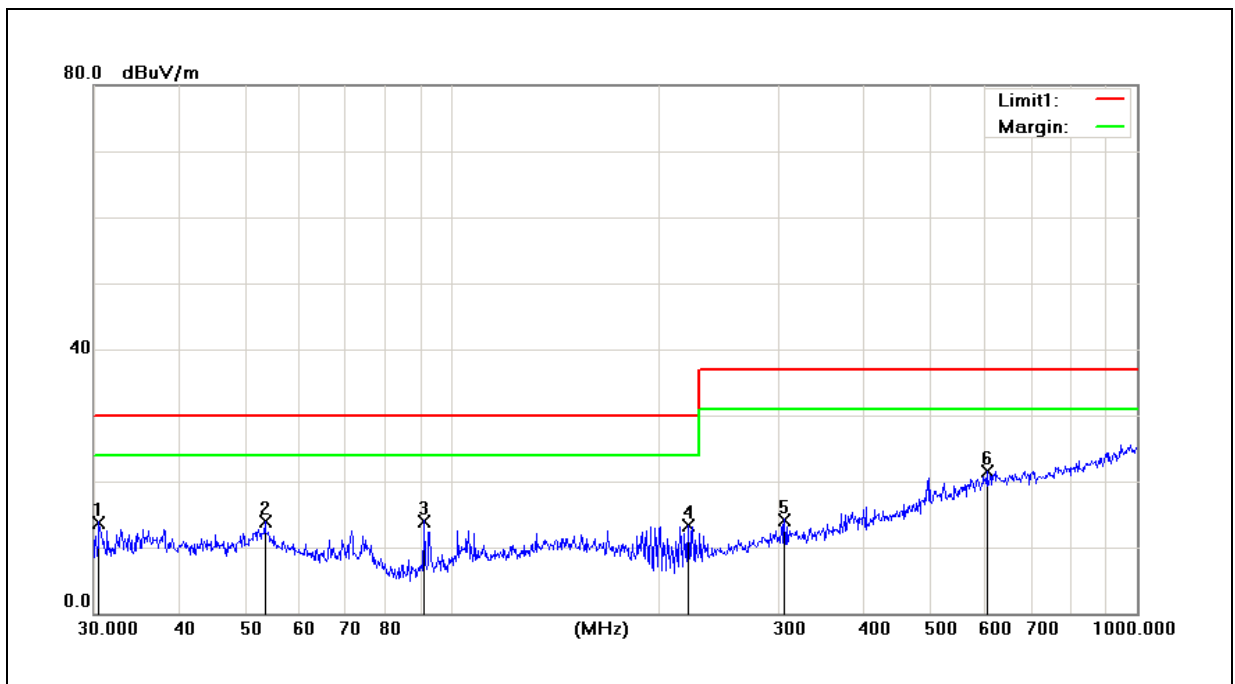


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	41.7130	26.38	-11.98	14.40	30.00	-15.60	400	125	QP
2	92.7871	30.67	-14.87	15.80	30.00	-14.20	400	304	QP
3	189.0743	25.89	-13.69	12.20	30.00	-17.80	300	263	QP
4	226.8936	26.13	-12.43	13.70	30.00	-16.30	300	309	QP
5	302.4812	26.09	-9.89	16.20	37.00	-20.80	200	111	QP
6	672.8444	25.07	-2.87	22.20	37.00	-14.80	400	359	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	CISPR 22	Test Distance:	10m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 8 (30MHz~1GHz)	Date:	07/29/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

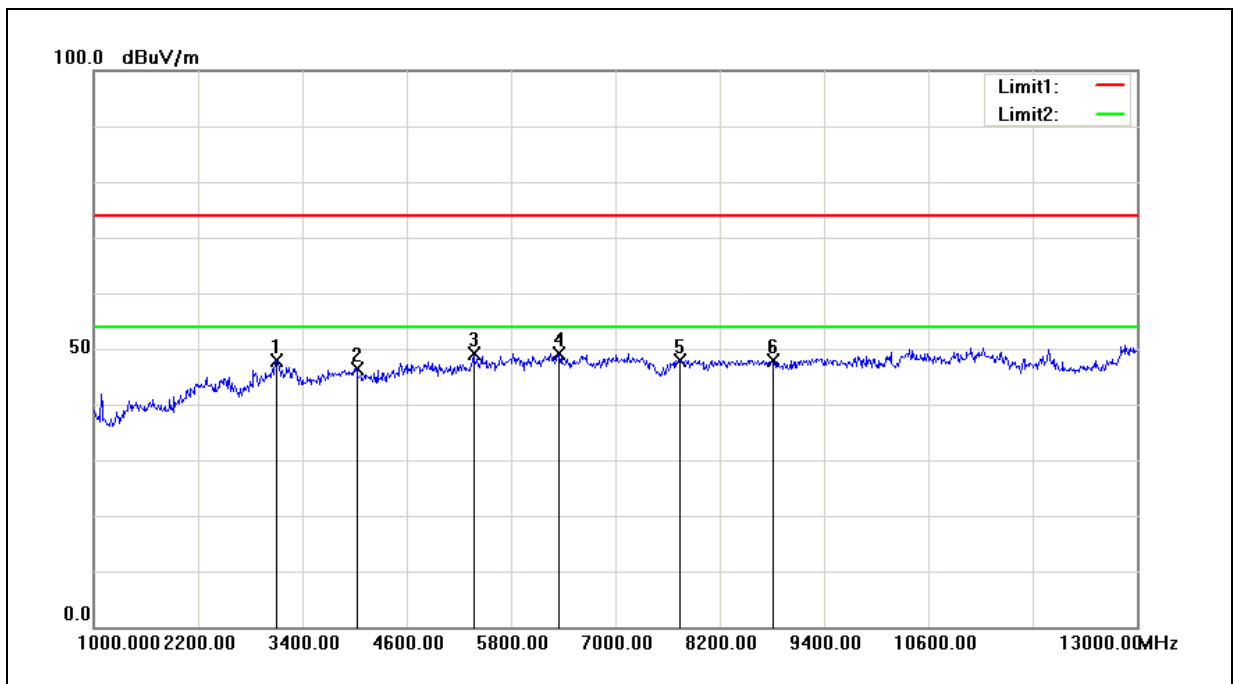


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	30.5306	29.72	-15.92	13.80	30.00	-16.20	300	359	QP
2	53.3180	28.26	-14.36	13.90	30.00	-16.10	100	328	QP
3	91.1746	32.73	-18.73	14.00	30.00	-16.00	200	180	QP
4	221.3921	28.22	-14.92	13.30	30.00	-16.70	100	166	QP
5	305.6800	25.03	-10.83	14.20	37.00	-22.80	200	194	QP
6	603.5392	25.06	-3.56	21.50	37.00	-15.50	100	359	QP

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

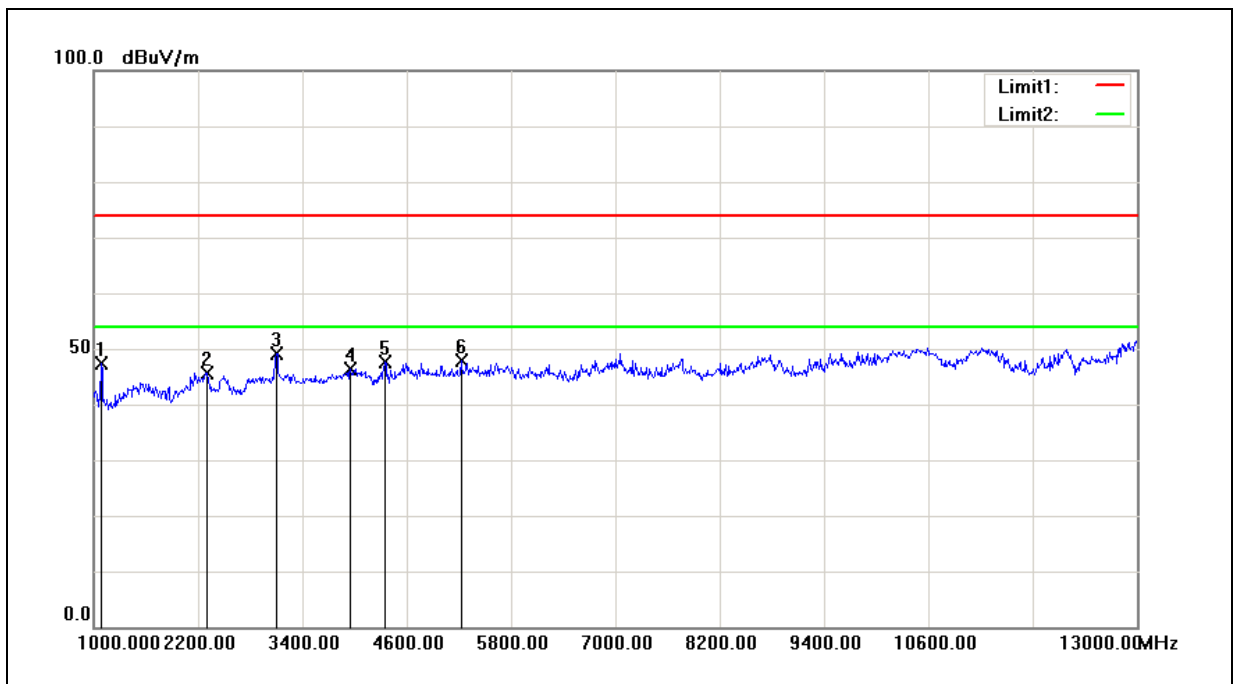


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3100.000	42.50	5.37	47.87	74.00	-26.13	peak
2	4024.000	38.97	7.38	46.35	74.00	-27.65	peak
3	5368.000	39.22	9.90	49.12	74.00	-24.88	peak
4	6352.000	37.63	11.58	49.21	74.00	-24.79	peak
5	7744.000	35.31	12.68	47.99	74.00	-26.01	peak
6	8812.000	34.19	13.80	47.99	74.00	-26.01	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 3 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

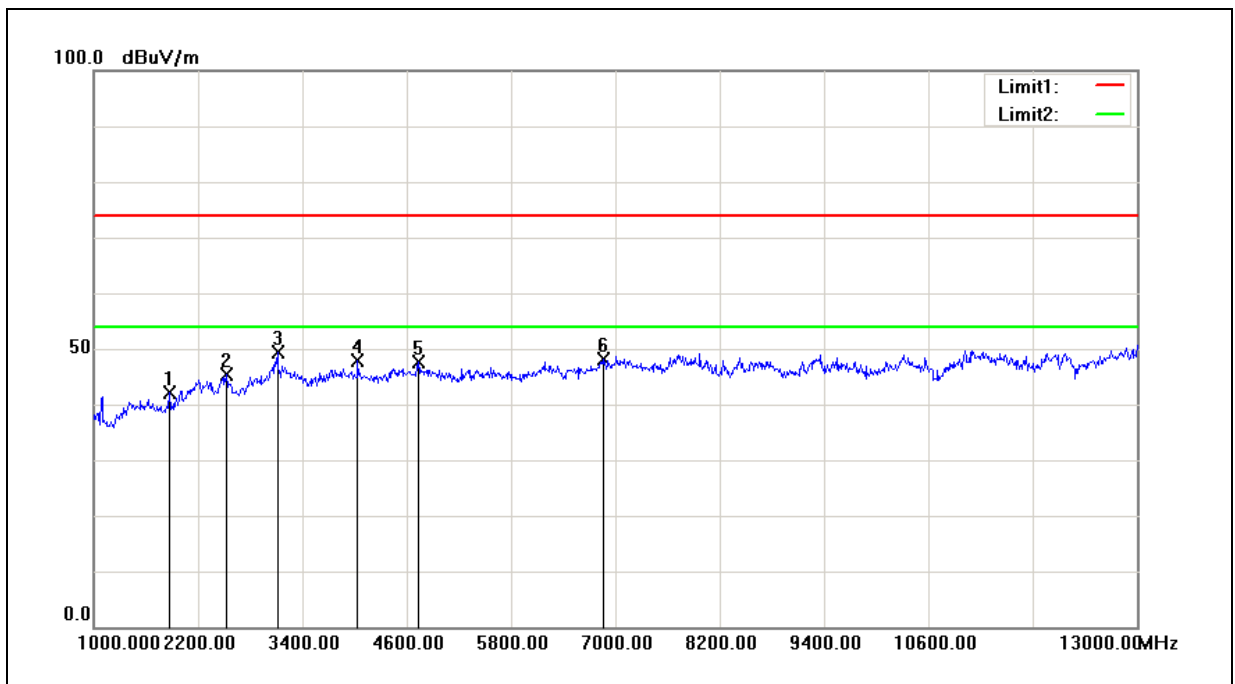


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1084.000	50.65	-3.32	47.33	74.00	-26.67	peak
2	2296.000	42.58	3.15	45.73	74.00	-28.27	peak
3	3100.000	43.80	5.37	49.17	74.00	-24.83	peak
4	3952.000	39.21	7.20	46.41	74.00	-27.59	peak
5	4348.000	39.65	7.89	47.54	74.00	-26.46	peak
6	5224.000	38.13	9.71	47.84	74.00	-26.16	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

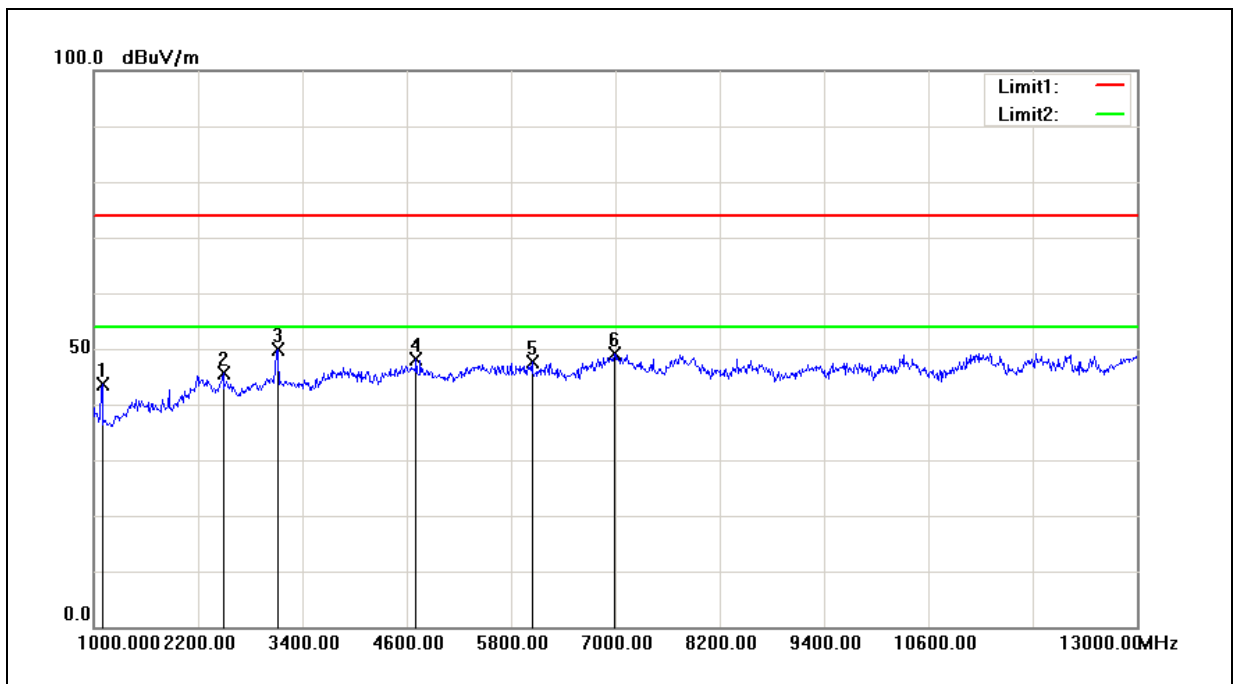


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1876.000	41.10	0.92	42.02	74.00	-31.98	peak
2	2524.000	41.25	4.01	45.26	74.00	-28.74	peak
3	3112.000	44.08	5.38	49.46	74.00	-24.54	peak
4	4036.000	40.44	7.39	47.83	74.00	-26.17	peak
5	4732.000	38.95	8.70	47.65	74.00	-26.35	peak
6	6856.000	36.22	11.83	48.05	74.00	-25.95	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 5 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

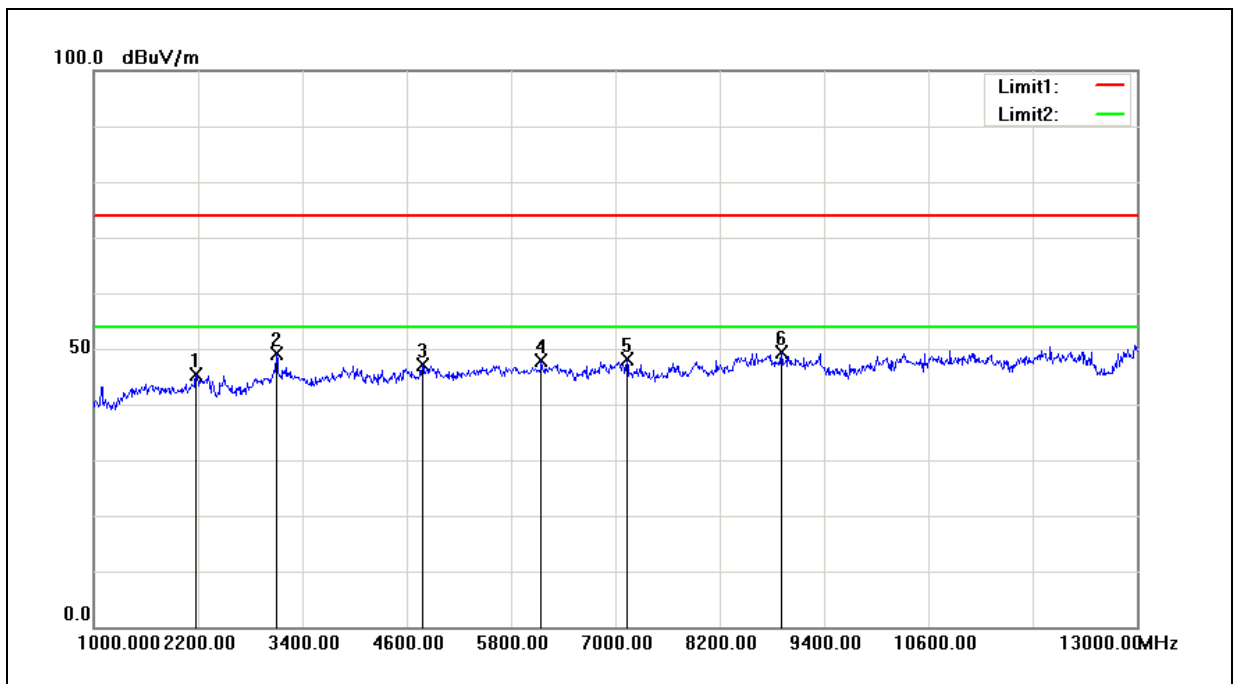


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1096.000	46.86	-3.29	43.57	74.00	-30.43	peak
2	2488.000	41.74	3.90	45.64	74.00	-28.36	peak
3	3112.000	44.61	5.38	49.99	74.00	-24.01	peak
4	4708.000	39.45	8.64	48.09	74.00	-25.91	peak
5	6040.000	36.38	11.29	47.67	74.00	-26.33	peak
6	6988.000	37.29	11.87	49.16	74.00	-24.84	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 7 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

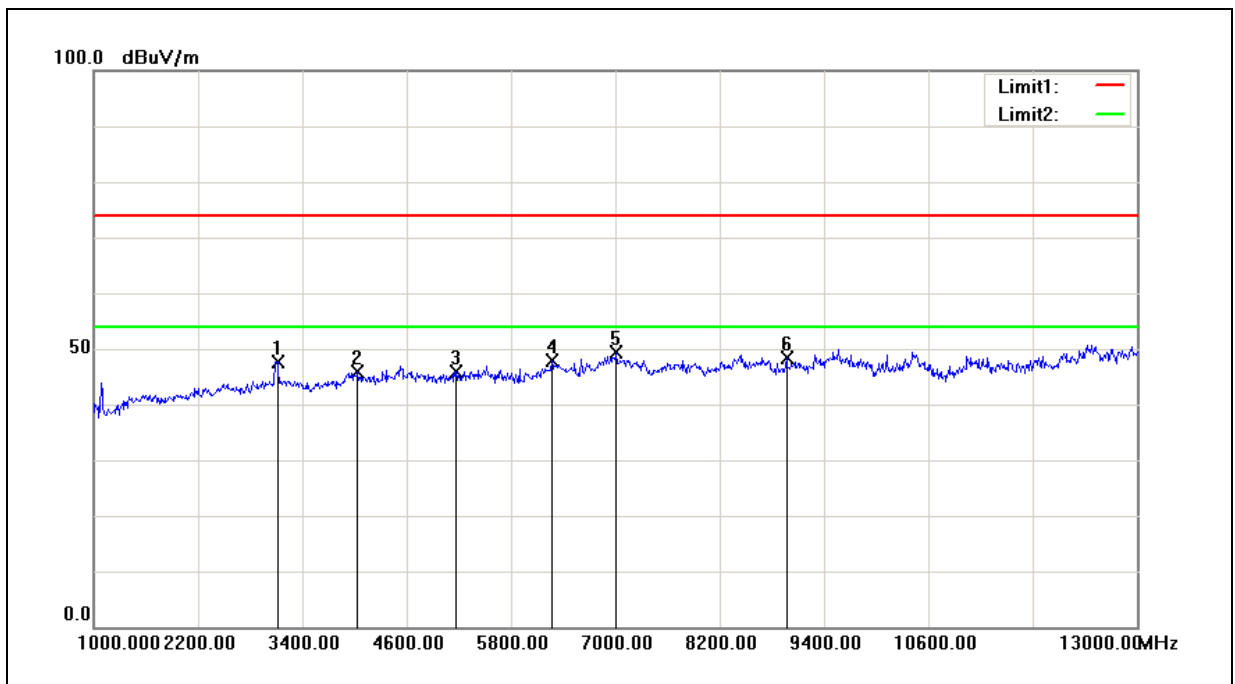


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2176.000	42.68	2.68	45.36	74.00	-28.64	peak
2	3100.000	43.78	5.37	49.15	74.00	-24.85	peak
3	4780.000	38.32	8.83	47.15	74.00	-26.85	peak
4	6148.000	36.59	11.39	47.98	74.00	-26.02	peak
5	7132.000	36.11	11.99	48.10	74.00	-25.90	peak
6	8908.000	35.38	13.95	49.33	74.00	-24.67	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 7 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin

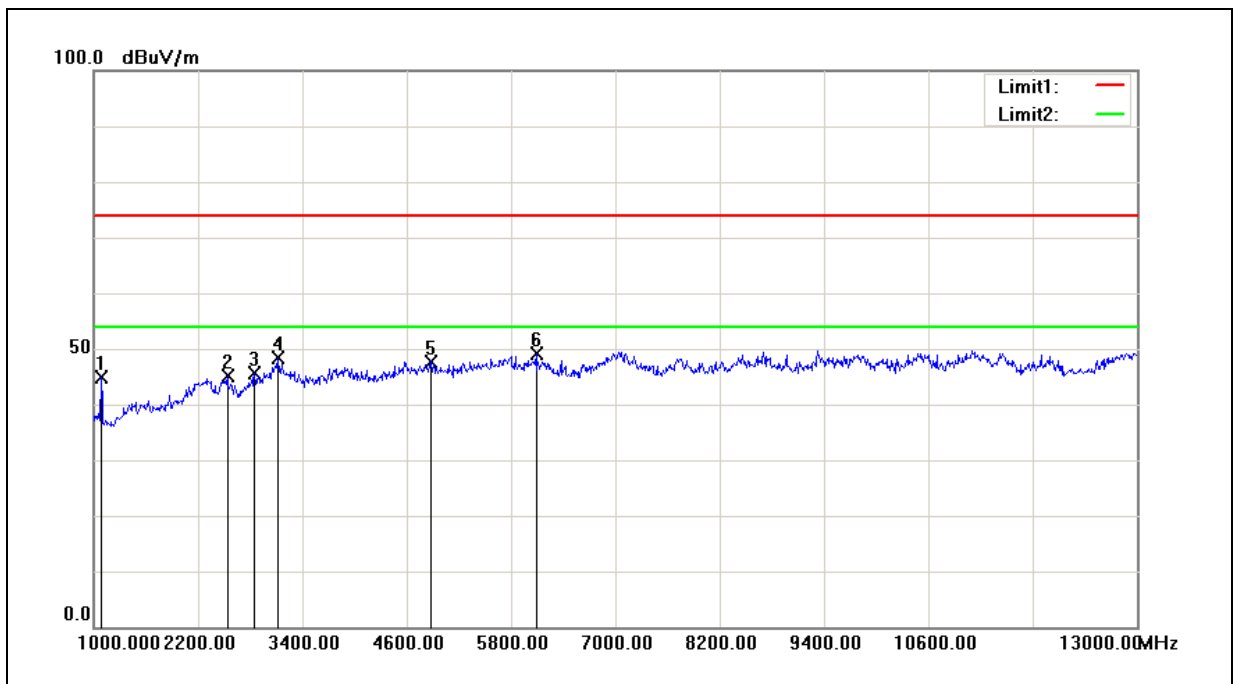


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3112.000	42.34	5.38	47.72	74.00	-26.28	peak
2	4036.000	38.55	7.39	45.94	74.00	-28.06	peak
3	5164.000	36.18	9.62	45.80	74.00	-28.20	peak
4	6268.000	36.39	11.51	47.90	74.00	-26.10	peak
5	7012.000	37.39	11.88	49.27	74.00	-24.73	peak
6	8968.000	34.43	14.05	48.48	74.00	-25.52	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 8 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Horizontal	Test By:	Frank Lin

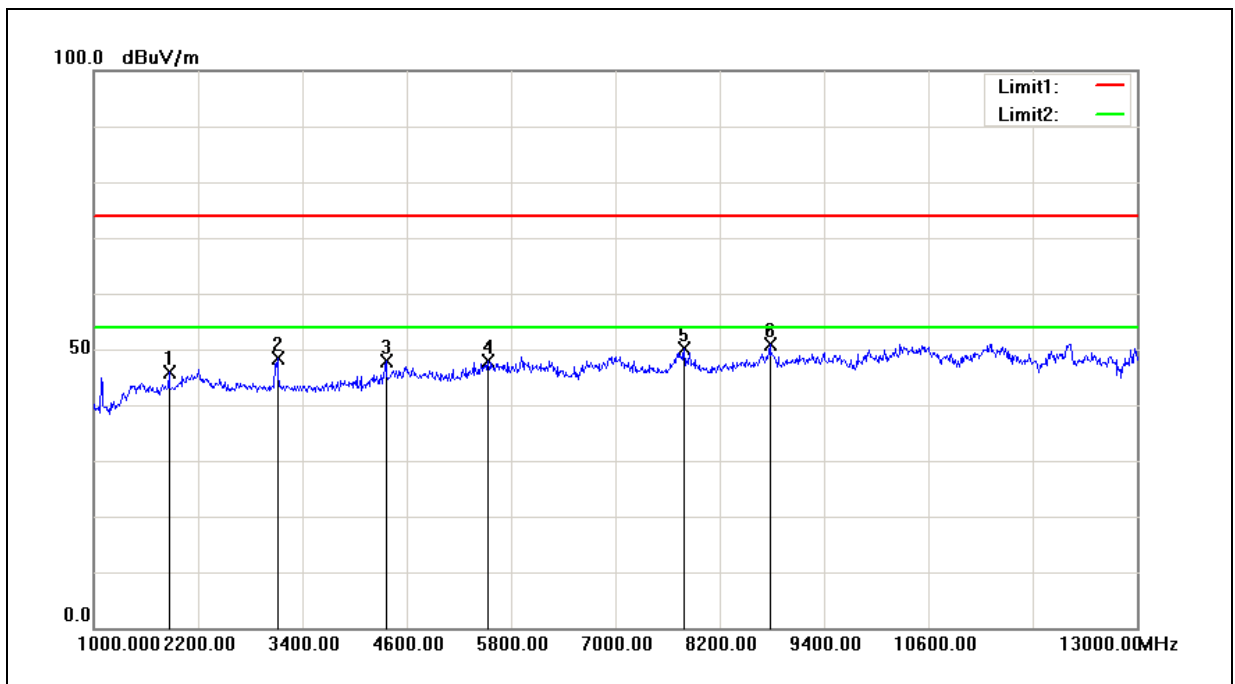


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1084.000	48.28	-3.32	44.96	74.00	-29.04	peak
2	2536.000	41.20	4.04	45.24	74.00	-28.76	peak
3	2848.000	40.72	4.83	45.55	74.00	-28.45	peak
4	3112.000	42.89	5.38	48.27	74.00	-25.73	peak
5	4876.000	38.67	9.08	47.75	74.00	-26.25	peak
6	6088.000	37.78	11.33	49.11	74.00	-24.89	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Standard:	FCC Part 15B	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC771S	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Test Mode:	Mode 8 (1GHz~13GHz)	Date:	07/30/2015
Ant.Polar.:	Vertical	Test By:	Frank Lin



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1864.000	45.18	0.81	45.99	74.00	-28.01	peak
2	3112.000	42.92	5.38	48.30	74.00	-25.70	peak
3	4360.000	39.89	7.90	47.79	74.00	-26.21	peak
4	5536.000	37.62	10.18	47.80	74.00	-26.20	peak
5	7792.000	37.31	12.74	50.05	74.00	-23.95	peak
6	8776.000	37.00	13.76	50.76	74.00	-23.24	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).