



Test report No. : 4789310719-US-R0-V0
Page : 1 of 120
Issued date : Jan. 16, 2020
FCC ID : K7SWIA001

RADIO TEST REPORT

Product : BOOST↑CHARGE Wireless Charging Pad 10W
Model Name : WIA001
FCC ID : K7SWIA001
Test Regulation : FCC 47 CFR Part 15 Subpart C (Section 15.209)
Received Date : Dec. 6, 2019
Test Date : Dec. 6, 2019 ~ Dec 16, 2019
Issued Date : Jan. 16, 2020

Applicant : Belkin International, Inc.
12045 East Waterfront Drive, Playa Vista, CA 90094 USA

Issued By : Underwriters Laboratories Taiwan Co., Ltd.
Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd.,
Zhudong Township, Hsinchu County, Taiwan



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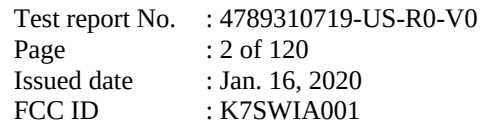




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1. Attestation of Test Results

APPLICANT: Belkin International, Inc.
12045 East Waterfront Drive, Playa Vista, CA 90094 USA

MANUFACTURER Belkin International, Inc.
12045 East Waterfront Drive, Playa Vista, CA 90094 USA

EUT DESCRIPTION: BOOST↑CHARGE Wireless Charging Pad 10W

BRAND: Belkin

MODEL: WIA001

SAMPLE STAGE: Production Unit

DATE of TESTED: Dec. 6, 2019 ~ Dec 16, 2019

APPLICABLE STANDARDS	
STANDARD	Test Results
FCC 47 CFR PART 15 Subpart C (Section 15.209)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:

Cindy Hsin
Project Handler

Date : Jan. 16, 2020

Approved and Authorized By:

Stanley Wu
Senior Project Engineer

Date : Jan. 16, 2020

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2. Summary of Test Results

Summary of Test Results		
FCC Clause	Test Items	Result
15.209	Radiated Emissions	PASS
15.207	AC Power Conducted Emission	PASS
2.1049	20dB Bandwidth	PASS
15.203	Antenna Requirement	PASS

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3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398. The full scope of accreditation can be viewed at http://accreditation.taftw.org.tw/taf/public/basic/viewApplyItems.action?unitNo=3398

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5. Measurement Uncertainty

For statement of conformity, accuracy method (Section 8.2.4 and 8.2.5 of ISO Guide 98-4) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k=2$.

Test Item	Measurement Frequency Range	K	U(dB)
Conducted disturbance at mains terminals ports	0.15MHz ~ 30MHz	2	1.7
Radiated disturbance below 30MHz	9 kHz - 30 MHz	2	2.2
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	2	5.3

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6. Equipment under Test

6.1. Description of EUT

Product	BOOST↑CHARGE Wireless Charging Pad 10W
Brand Name	Belkin
Model Name	WIA001
S/N	35D10F6C900627
Operating Frequency	111-130 kHz
Normal Voltage	Input: DC 5V / 2A Output:5W Input: DC 9V / 2A, 12V / 1.5A Output:10W
Hardware Version	1
Software Version	N/A

Note:

1. The EUT contains following accessory devices

Product	Brand	Model	Description	Remark
Adapter 1	belkin	A138A-120150U-US5	AC Input: 100-240Vac~50/60Hz, 0.5A DC Output: 5V/2A, 9V/2A,12V/1.5A	Black and white (Optional)
Adapter 2	belkin	DSA-18QFB FUS A	AC Input: 100-240Vac~50/60Hz, 0.8A DC Output: 3.6V-6V/2A, 6V-9V/2A, 9V-12V/1.5A	Black and white (Optional)
USB cable	Belkin	F2CU012bt04	Length:1.3m	Black and white (Optional)

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual.

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6.2. Test Condition

Test Item	Test Site No.	Environmental Condition	Input Power	Test Date	Tested by
Radiated Spurious Emission	966-2	24~26°C / 66~70%RH	120Vac / 60 Hz	Dec. 6, 2019 ~ Dec. 10, 2019	Will Chen
AC power Line Conducted Emission	SR1	22~26°C / 60~70%RH	120Vac / 60 Hz	Dec. 12, 2019 ~ Dec. 16, 2019	Will Chen

FCC Test Firm Registration Number: 498077

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6.3. Test Mode Applicability and Tested Channel Detail

Test item	Operating Mode	Descriptions
Radiated Emissions	Standby	EUT Alone powered by AC/DC adapter 1 & adapter 2
	Operating (With & Without 3mm gap)	EUT and smart phone powered by AC/DC adapter 1 & adapter 2 (Phone 5W, 20-50% power charging)
	Operating (With & Without 3mm gap)	EUT and 10W load powered by AC/DC adapter 1 & adapter 2 (10W Load, >90% power charging)
AC Power Line Conducted Emission	Standby	EUT Alone powered by AC/DC adapter 1 & adapter 2
	Operating (With & Without 3mm gap)	EUT and smart phone powered by AC/DC adapter 1 & adapter 2 (Phone 5W, 20-50% power charging)
	Operating (With & Without 3mm gap)	EUT and 10W load powered by AC/DC adapter 1 & adapter 2 (10W Load, >90% power charging)

Note:

1. The fundamental of the EUT was investigated in three orthogonal axes X/Y/Z, it was determined that X axis was worst-case . Therefore, all final radiated testing was performed with the EUT in X axis.
2. For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.
3. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 300 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788 D01.
4. For AC power line conducted emissions, the pre-scan has been determined by AC power 120Vac (worst case)

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7. Test Equipment

Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070827	Nov. 13, 2019	1 year
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	Nov. 19, 2019	1 year
Loop Antenna	ETS lindgren	6502	00213440	Dec. 11, 2018	1 year
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT-N0538	Jan. 14, 2019	1 year
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	Jan. 30, 2019	1 year
RF Cable (9 KHz~18 GHz)	UltraPhase & EMC Instrument	A1K50-UP0358-A1K50-1500&EMC106-NM-SM-2500/7000	170111-4&170219/170102	Jan. 29, 2019	1 year
AC power Line Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	Nov. 19, 2019	1 year
Two-Line V-Network	Rohde & Schwarz	ENV216	102136	Aug. 8, 2019	1 year
Impuls-Begrenzer Pulse Limiter	Rohde & Schwarz	ESH3-Z2	102219-Qt	Aug. 6, 2019	1 year
Cables	HARBOUR INDUSTRIES	LL142	170205-5000-1	Jan. 29, 2019	1 year

UL Software		
Description	Name	Version
Radiated measurement	EZ EMC	1.1.4.2
AC power Line Conducted Emission	EZ EMC	1.1.4.2

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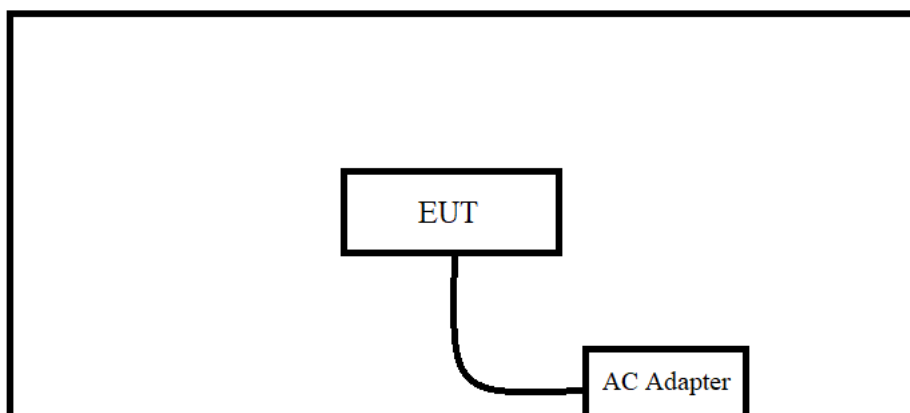
8. Description of Test Setup

Support Equipment

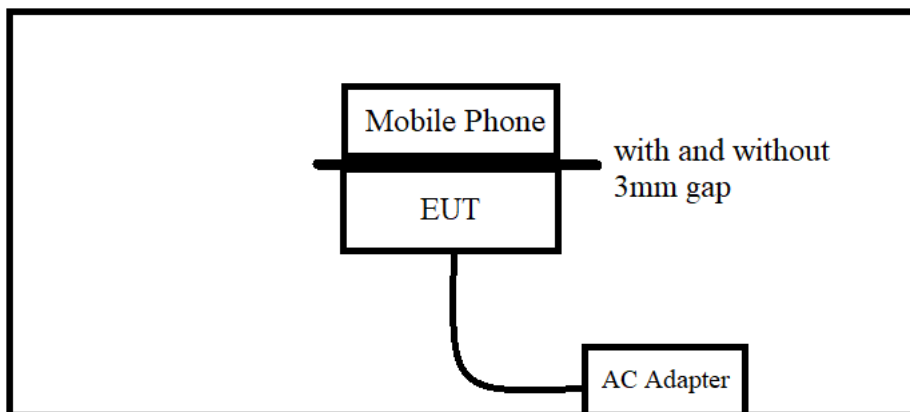
Item	Equipment	Brand Name	Model Name	S/N
1	Phone	Apple	Iphone8	N/A
2	10W Resistor Load	N/A	N/A	N/A

Setup Diagram for Test

STANDBY MODE



OPERATING MODE WITH PHONE



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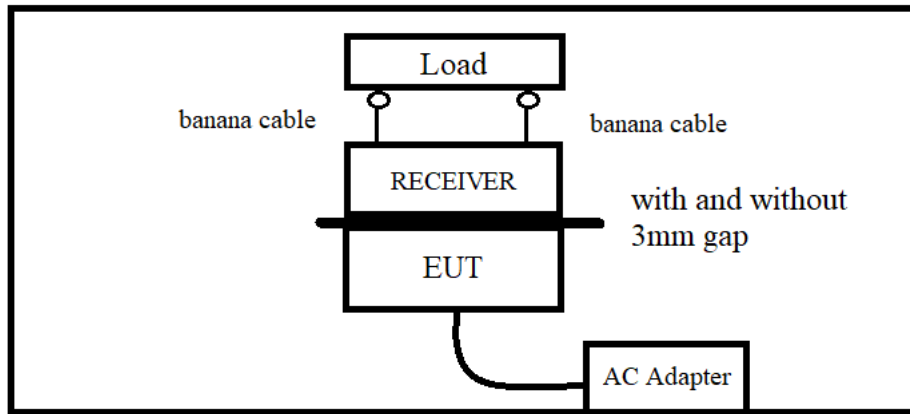
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OPERATING MODE WITH 10W LOAD



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9. Test Results

9.1. Radiated Spurious Emission

Requirements

According to FCC Clause 15.209 (a), Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

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Test Procedures

[For 9 kHz ~ 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 30MHz, the initial step in collecting conducted 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. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. For measurement below 1GHz, the initial step in collecting conducted 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. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Note:

- a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- b. All modes of operation were investigated and the worst-case emissions are reported.

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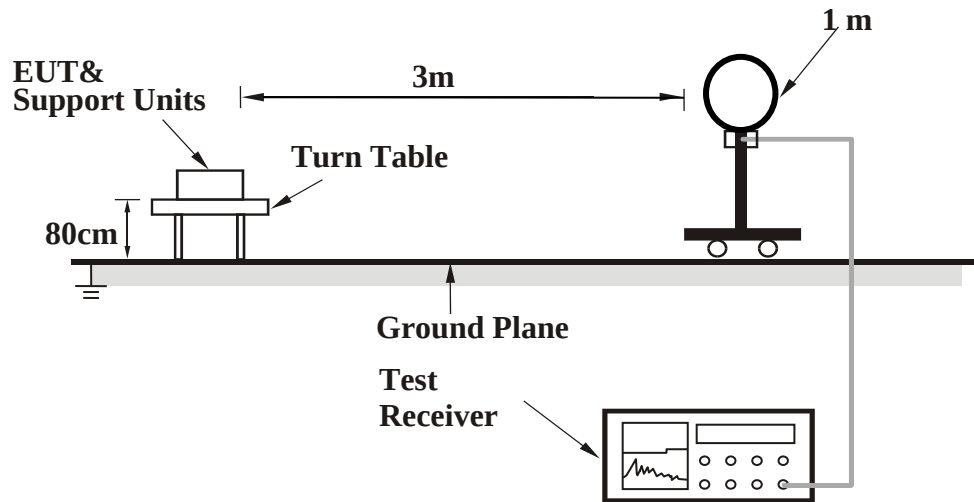
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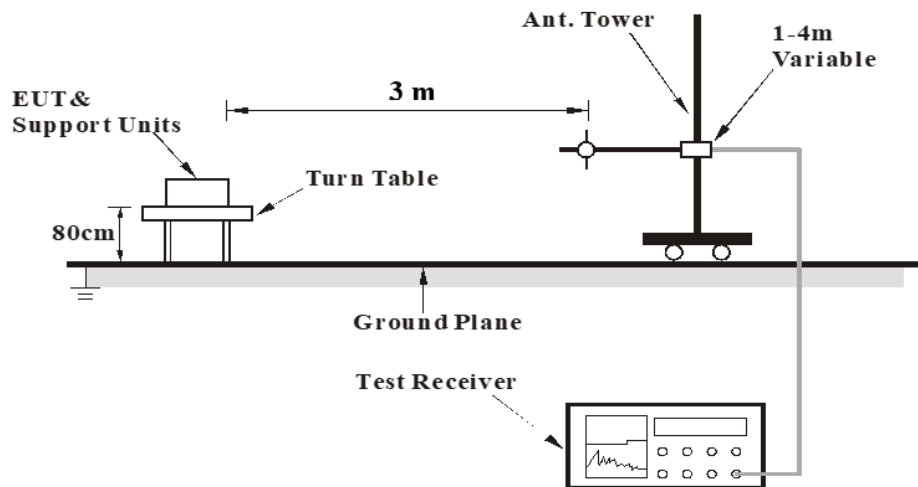
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Test Setup

<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >



For the actual test configuration, please refer to the Setup Configurations.



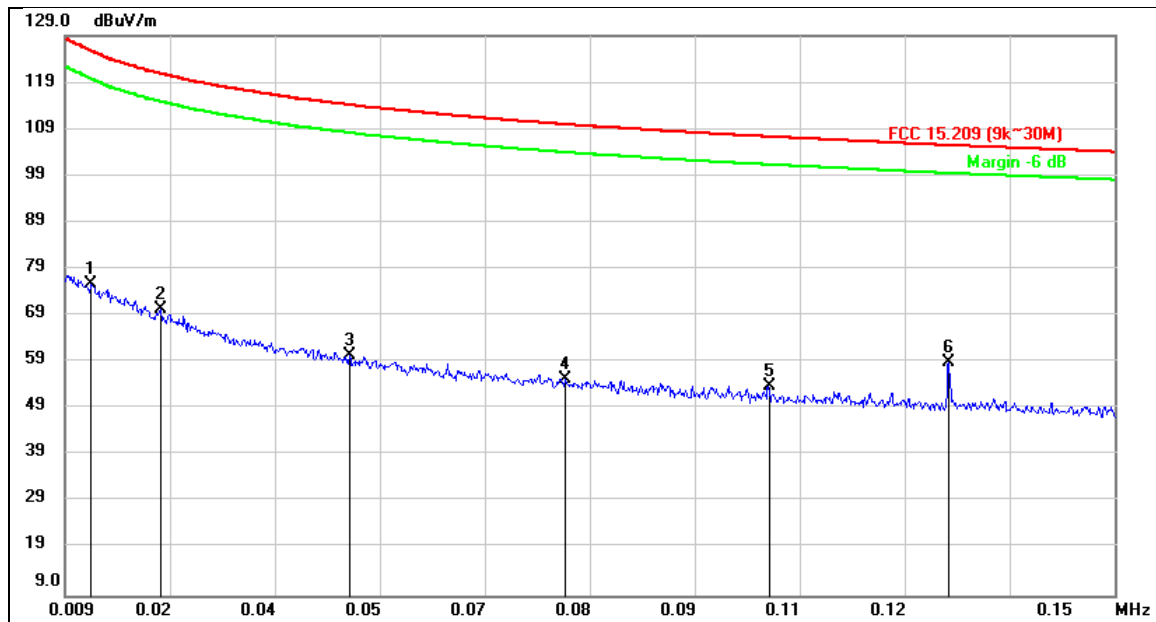
Test Data

9 kHz ~ 30 MHz Data

Standby Mode

Adapter 1

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0125	56.63	19.02	75.65	125.80	-50.15	AVG
2	0.0218	53.84	16.53	70.37	120.89	-50.52	AVG
3	0.0473	47.27	13.11	60.38	114.14	-53.76	AVG
4	0.0763	42.87	12.51	55.38	109.97	-54.59	AVG
5	0.1035	41.66	12.13	53.79	107.33	-53.54	QP
6*	0.1278	46.97	12.10	59.07	105.49	-46.42	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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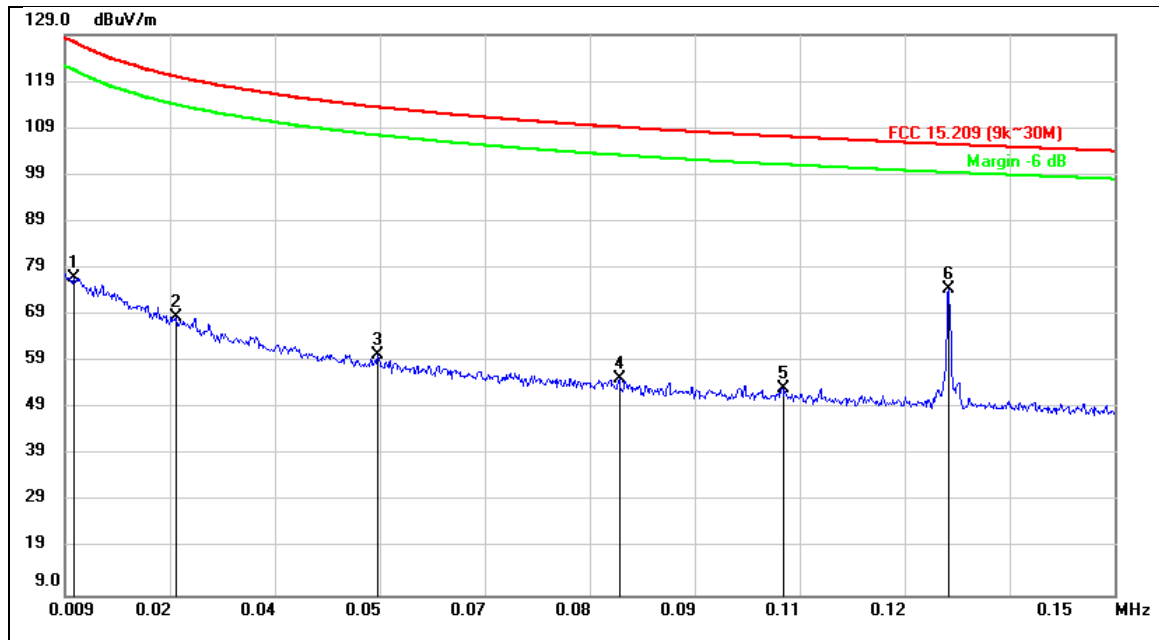
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0103	57.34	19.60	76.94	127.38	-50.44	AVG
2	0.0239	52.65	16.00	68.65	120.07	-51.42	AVG
3	0.0511	47.54	12.88	60.42	113.45	-53.03	AVG
4	0.0834	43.08	12.41	55.49	109.19	-53.70	AVG
5	0.1054	41.25	12.14	53.39	107.18	-53.79	QP
6*	0.1278	62.41	12.11	74.52	105.49	-30.97	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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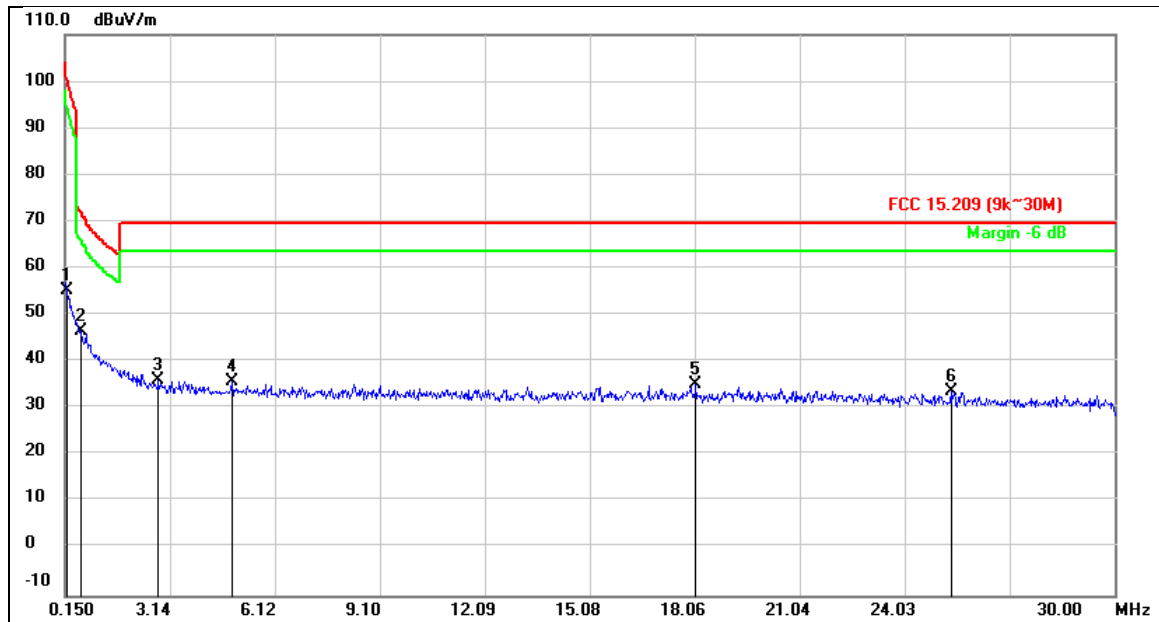
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2117	43.23	12.03	55.26	101.13	-45.87	AVG
2	0.6017	34.86	11.80	46.66	72.02	-25.36	QP
3	2.8146	24.83	11.29	36.12	69.54	-33.42	QP
4	4.9180	24.09	11.61	35.70	69.54	-33.84	QP
5	18.0928	23.63	11.39	35.02	69.54	-34.52	QP
6	25.3603	23.20	10.34	33.54	69.54	-36.00	QP

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.

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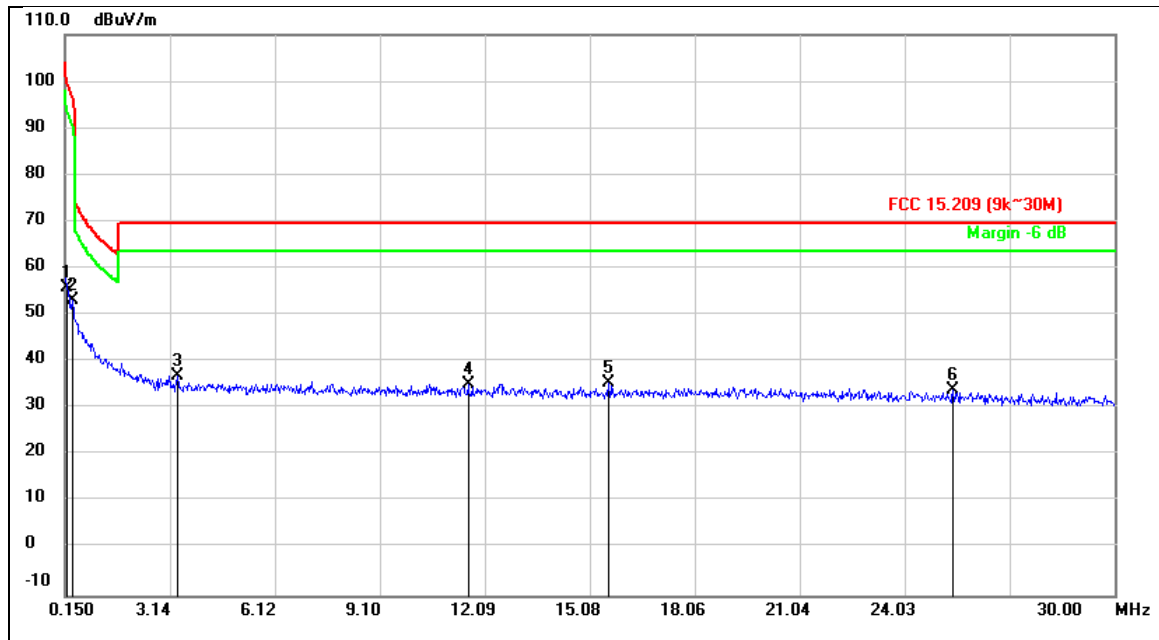
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2256	43.90	12.01	55.91	100.59	-44.68	AVG
2	0.3828	41.32	11.85	53.17	95.99	-42.82	AVG
3	3.3708	25.65	11.31	36.96	69.54	-32.58	QP
4	11.6273	23.71	11.58	35.29	69.54	-34.25	QP
5	15.6382	24.07	11.45	35.52	69.54	-34.02	QP
6	25.4121	23.49	10.33	33.82	69.54	-35.72	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
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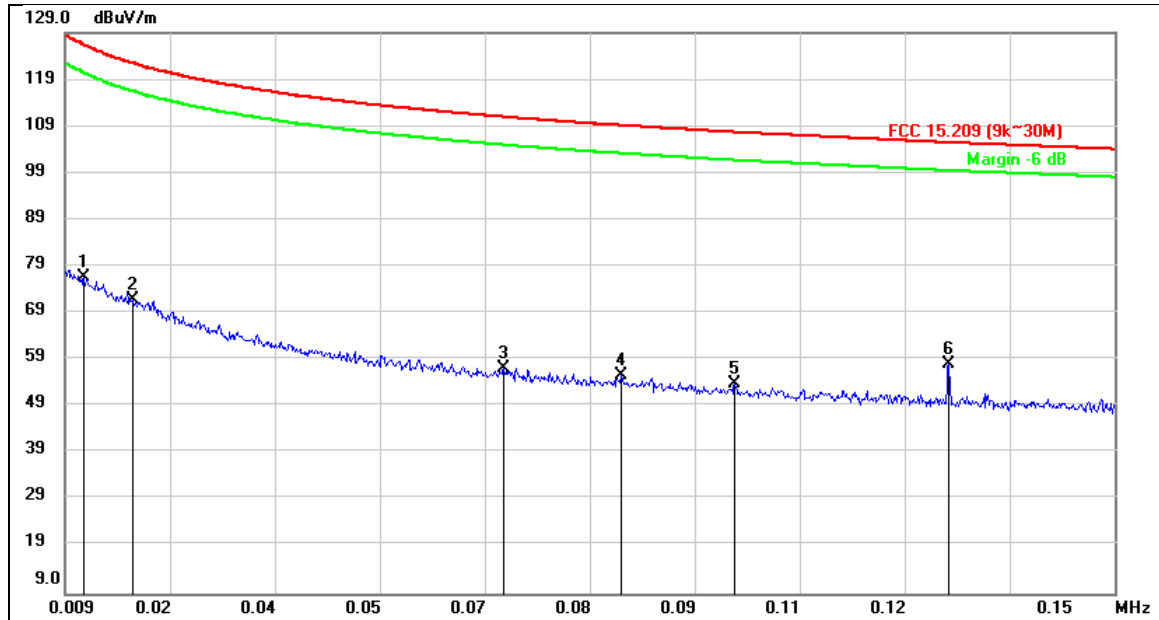
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Doc No: 17-EM-F0972 / 1.0



Adapter 2

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0115	57.23	19.28	76.51	126.52	-50.01	AVG
2	0.0181	54.31	17.52	71.83	122.51	-50.68	AVG
3	0.0679	44.67	12.62	57.29	110.98	-53.69	AVG
4	0.0838	43.29	12.40	55.69	109.15	-53.46	AVG
5	0.0990	41.54	12.16	53.70	107.69	-53.99	QP
6*	0.1276	45.87	12.10	57.97	105.50	-47.53	AVG

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. “*” : Fundamental Frequency.

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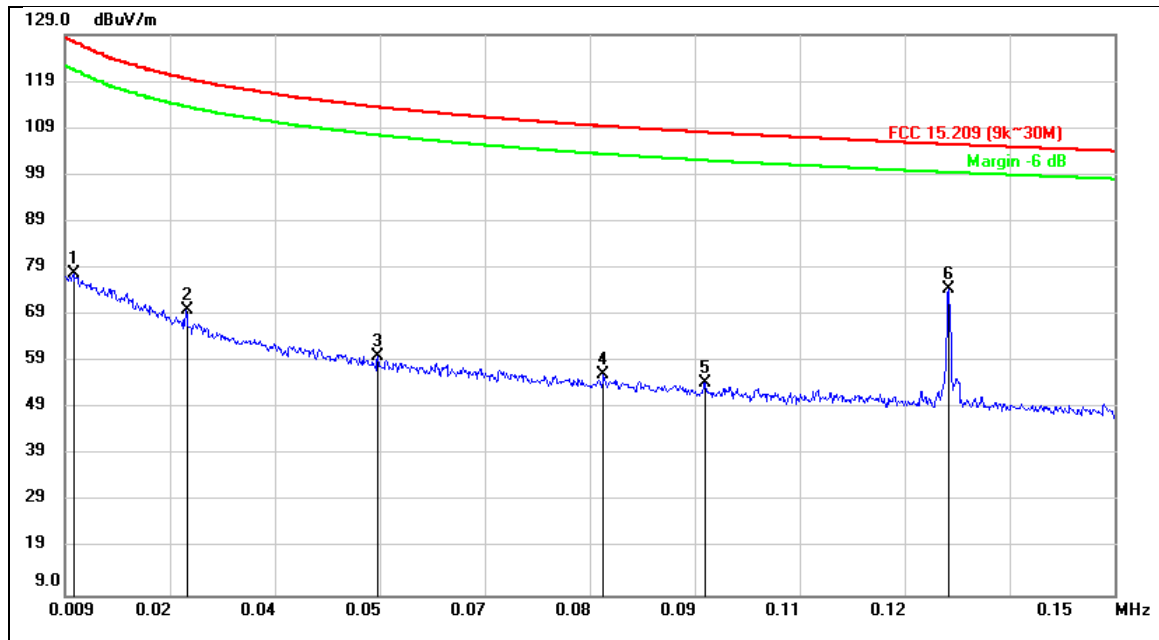
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Doc No: 17-EM-F0972 / 1.0



EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0101	58.17	19.65	77.82	127.53	-49.71	AVG
2	0.0253	54.47	15.61	70.08	119.55	-49.47	AVG
3	0.0511	47.27	12.88	60.15	113.45	-53.30	AVG
4	0.0814	43.80	12.44	56.24	109.40	-53.16	AVG
5	0.0950	42.24	12.22	54.46	108.06	-53.60	QP
6*	0.1278	62.38	12.10	74.48	105.49	-31.01	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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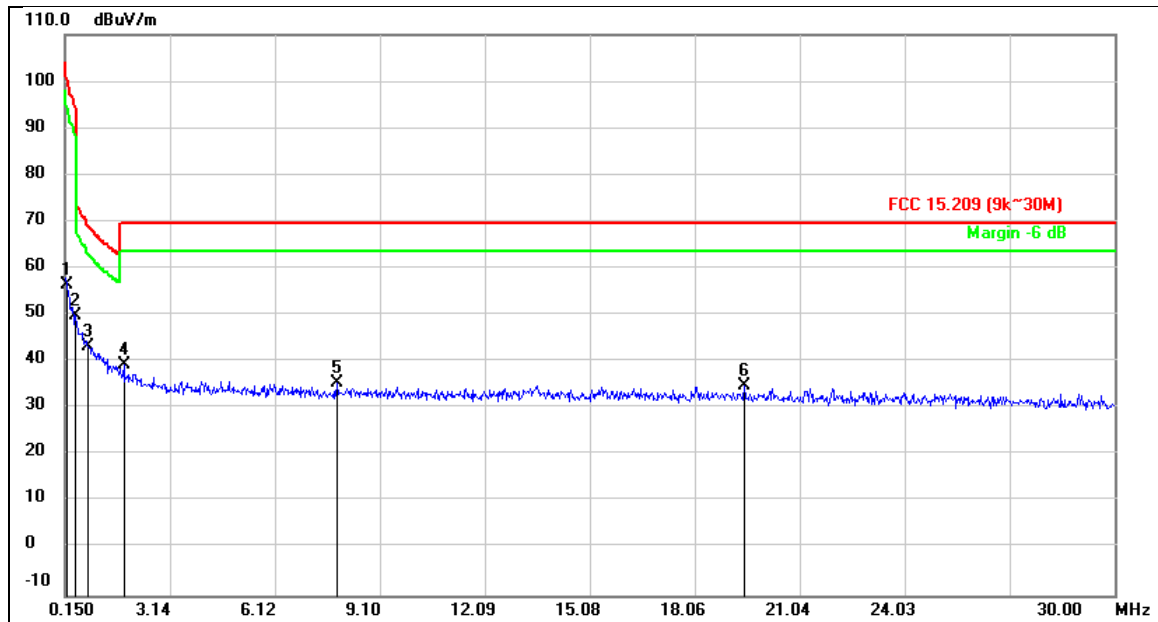
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Doc No: 17-EM-F0972 / 1.0



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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2147	44.31	12.03	56.34	101.01	-44.67	AVG
2	0.4594	37.92	11.83	49.75	94.40	-44.65	AVG
3	0.8236	31.44	11.89	43.33	69.30	-25.97	QP
4	1.8236	27.55	11.70	39.25	69.54	-30.29	QP
5	7.9010	23.68	11.63	35.31	69.54	-34.23	QP
6	19.4768	23.51	11.35	34.86	69.54	-34.68	QP

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.

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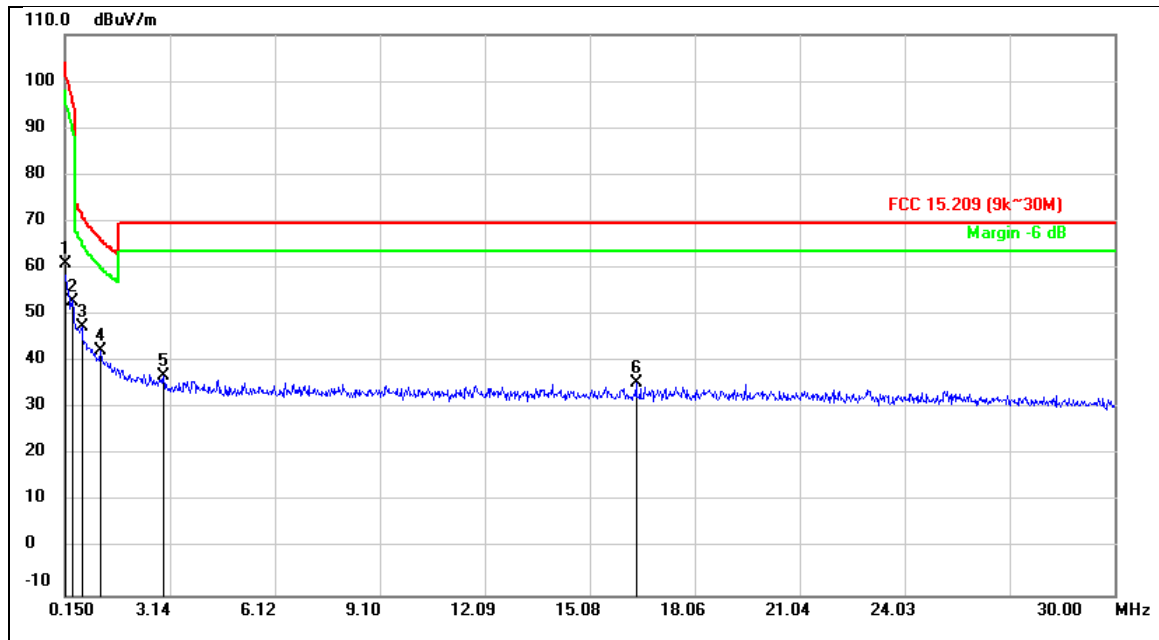
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Doc No: 17-EM-F0972 / 1.0



EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1520	48.82	12.14	60.96	103.97	-43.01	AVG
2	0.3848	41.15	11.85	53.00	95.94	-42.94	AVG
3	0.6394	35.79	11.80	47.59	71.51	-23.92	QP
4	1.1818	30.24	11.98	42.22	66.16	-23.94	QP
5	2.9609	25.78	11.25	37.03	69.54	-32.51	QP
6	16.4123	24.08	11.43	35.51	69.54	-34.03	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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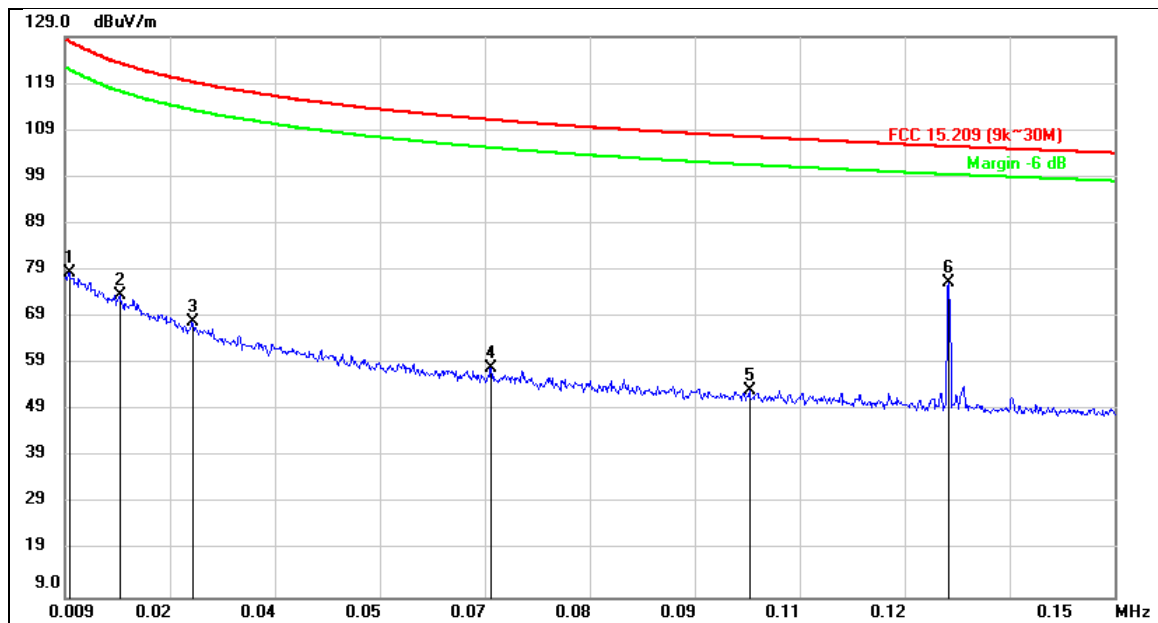


Operating Mode

Adapter 1

Smart phone (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0096	58.78	19.65	78.43	127.91	-49.48	AVG
2	0.0164	55.71	17.97	73.68	123.34	-49.66	AVG
3	0.0262	52.48	15.36	67.84	119.27	-51.43	AVG
4	0.0662	45.44	12.65	58.09	111.21	-53.12	AVG
5	0.1010	41.05	12.14	53.19	107.52	-54.33	QP
6*	0.1276	64.14	12.10	76.24	105.50	-29.26	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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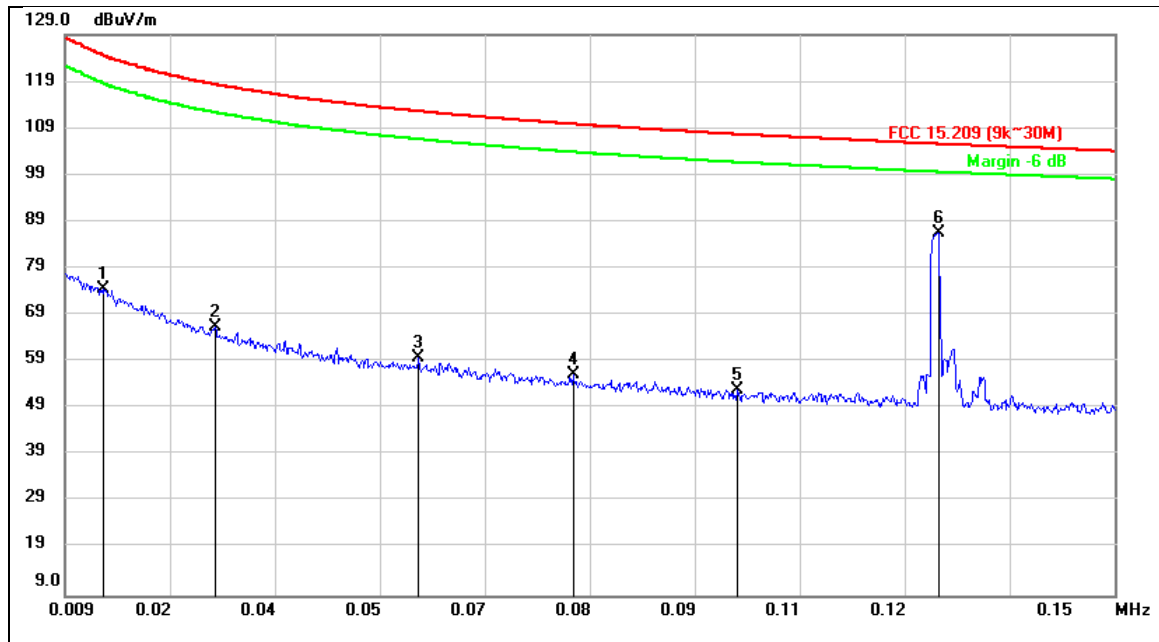
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0143	55.90	18.54	74.44	124.51	-50.07	AVG
2	0.0292	51.79	14.57	66.36	118.31	-51.95	AVG
3	0.0566	46.94	12.79	59.73	112.58	-52.85	AVG
4	0.0773	43.70	12.49	56.19	109.85	-53.66	AVG
5	0.0991	40.83	12.15	52.98	107.68	-54.70	QP
6*	0.1264	74.61	12.08	86.69	105.58	-18.89	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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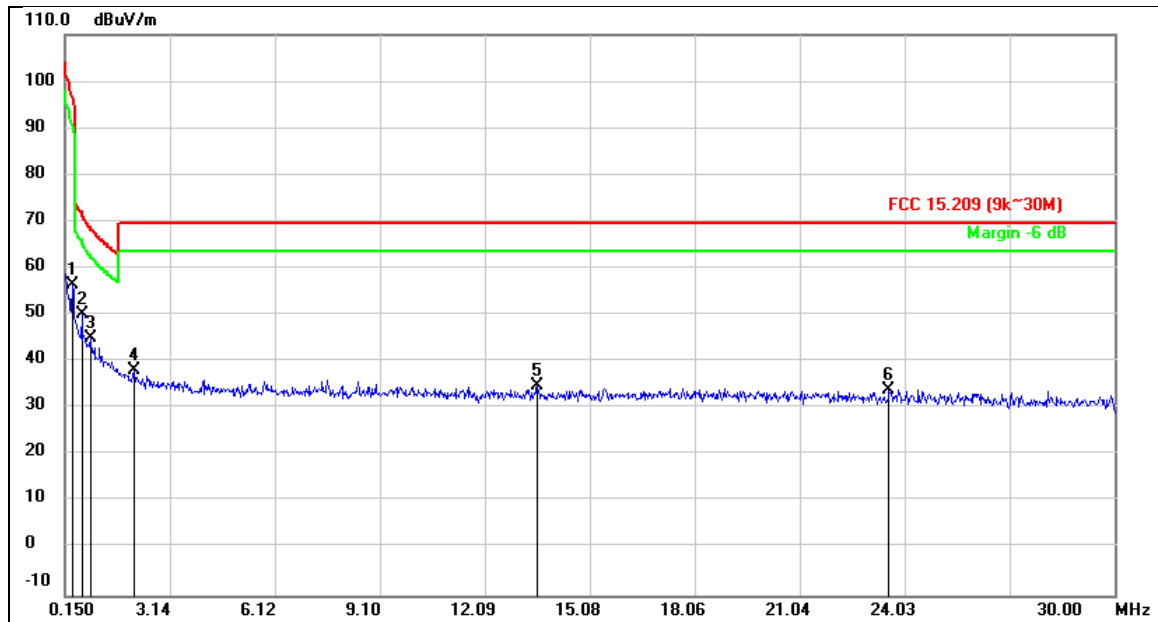
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3848	44.53	11.85	56.38	95.94	-39.56	AVG
2	0.6415	38.25	11.80	50.05	71.48	-21.43	QP
3	0.8943	33.14	11.94	45.08	68.58	-23.50	QP
4	2.1380	26.58	11.57	38.15	69.54	-31.39	QP
5	13.5915	23.26	11.51	34.77	69.54	-34.77	QP
6	23.6001	23.41	10.67	34.08	69.54	-35.46	QP

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.

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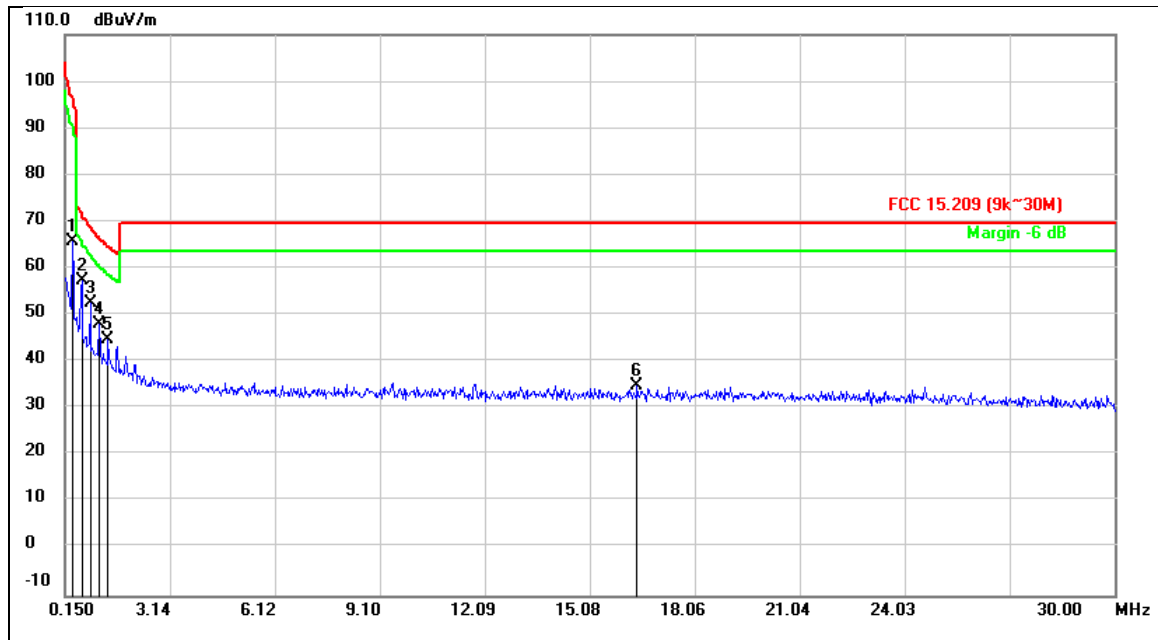
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3789	53.81	11.85	65.66	96.09	-30.43	AVG
2	0.6336	45.43	11.80	57.23	71.59	-14.36	QP
3	0.8873	40.67	11.94	52.61	68.65	-16.04	QP
4	1.1380	36.13	11.99	48.12	66.51	-18.39	QP
5	1.3918	32.87	11.88	44.75	64.73	-19.98	QP
6	16.4372	23.42	11.43	34.85	69.54	-34.69	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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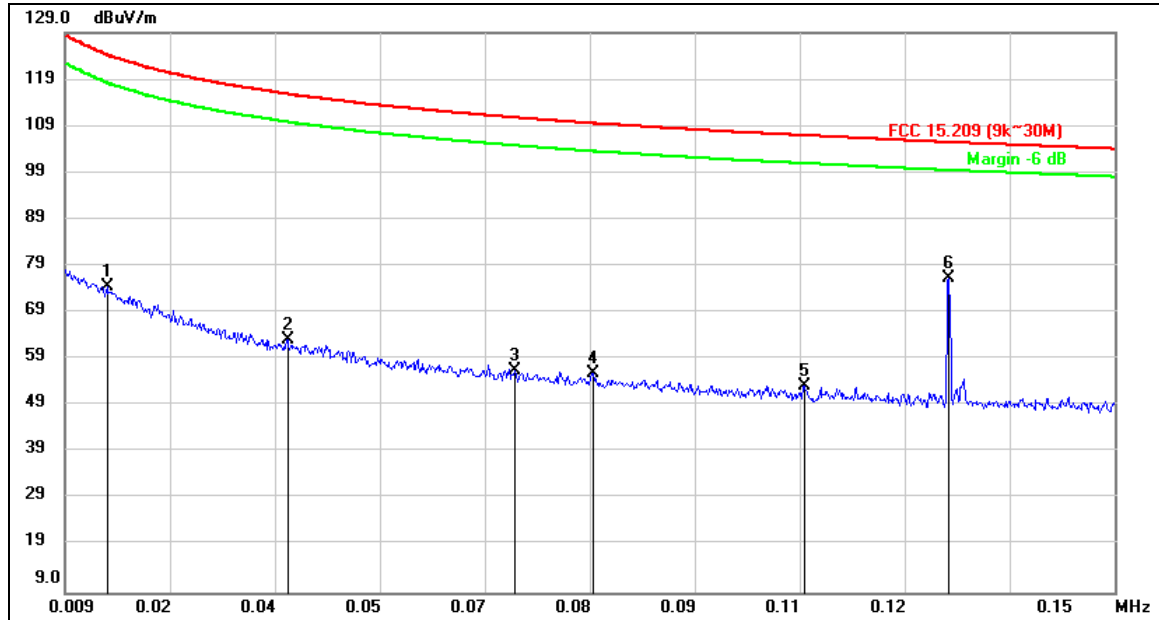
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Smart phone (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0147	56.23	18.43	74.66	124.22	-49.56	AVG
2	0.0389	49.39	13.73	63.12	115.84	-52.72	AVG
3	0.0694	43.92	12.60	56.52	110.78	-54.26	AVG
4	0.0799	43.60	12.46	56.06	109.55	-53.49	AVG
5	0.1083	41.26	12.14	53.40	106.96	-53.56	QP
6*	0.1278	64.25	12.10	76.35	105.49	-29.14	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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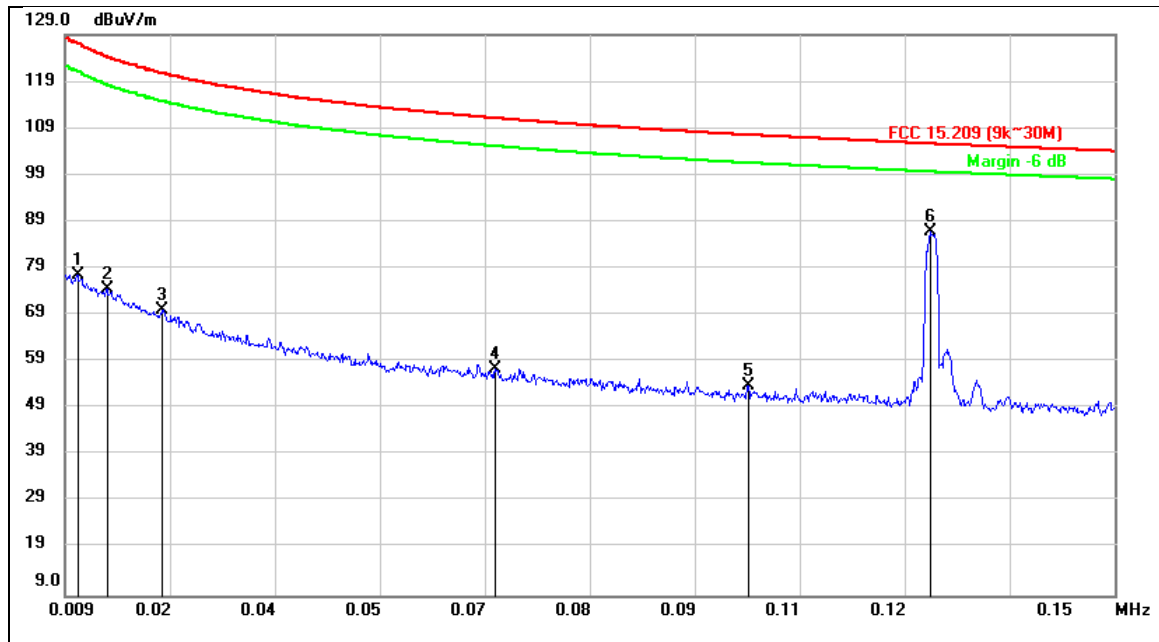
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0107	58.12	19.49	77.61	127.10	-49.49	AVG
2	0.0146	56.14	18.46	74.60	124.30	-49.70	AVG
3	0.0222	53.51	16.43	69.94	120.73	-50.79	AVG
4	0.0669	44.85	12.64	57.49	111.12	-53.63	AVG
5	0.1008	41.75	12.14	53.89	107.54	-53.65	QP
6*	0.1253	74.66	12.07	86.73	105.65	-18.92	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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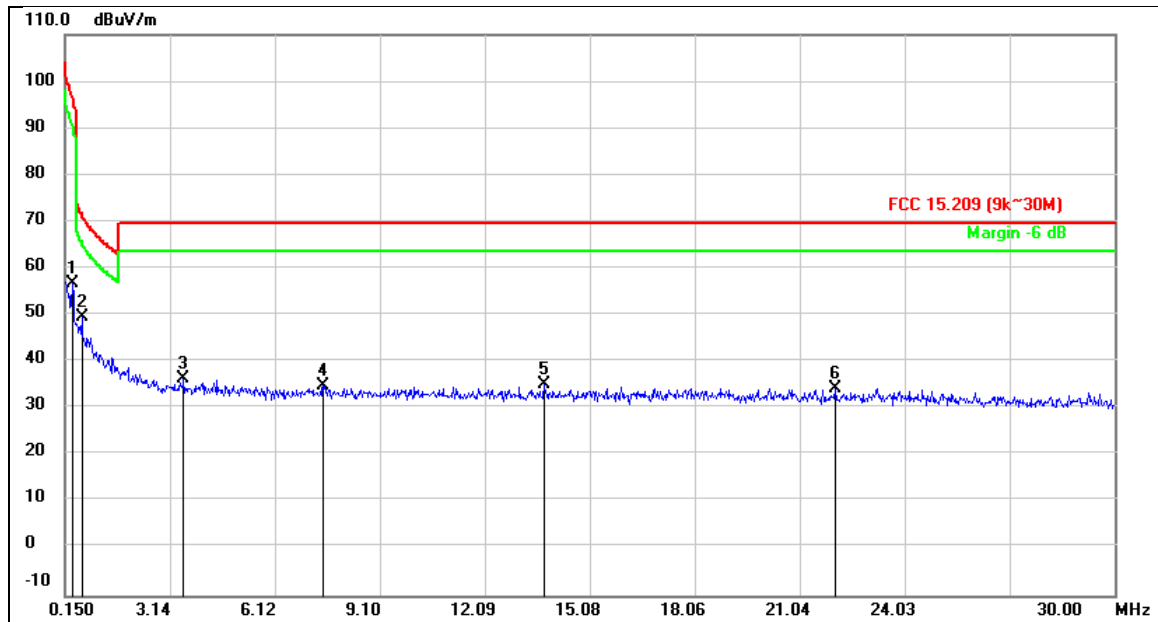
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3848	44.86	11.85	56.71	95.94	-39.23	AVG
2	0.6385	37.87	11.80	49.67	71.52	-21.85	QP
3	3.5479	24.87	11.36	36.23	69.54	-33.31	QP
4	7.5229	23.14	11.63	34.77	69.54	-34.77	QP
5	13.7905	23.52	11.51	35.03	69.54	-34.51	QP
6	22.0659	23.24	10.95	34.19	69.54	-35.35	QP

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.

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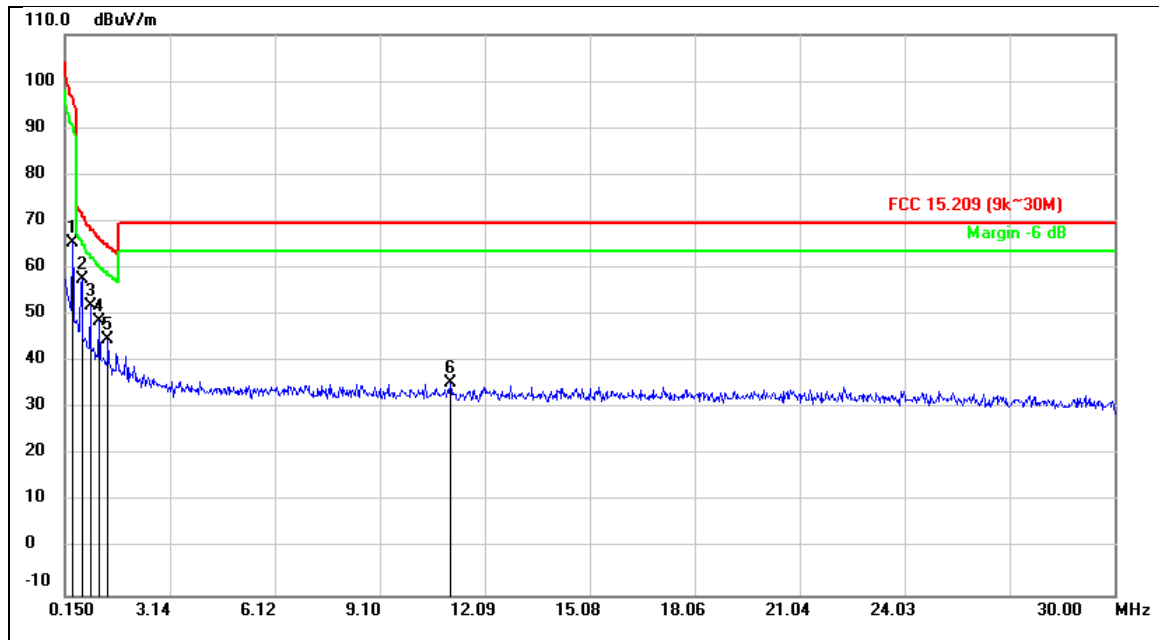
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3779	53.62	11.85	65.47	96.11	-30.64	AVG
2	0.6295	45.91	11.81	57.72	71.64	-13.92	QP
3	0.8823	40.05	11.93	51.98	68.70	-16.72	QP
4	1.1291	36.65	11.99	48.64	66.58	-17.94	QP
5	1.3838	32.75	11.89	44.64	64.79	-20.15	QP
6	11.1198	23.71	11.60	35.31	69.54	-34.23	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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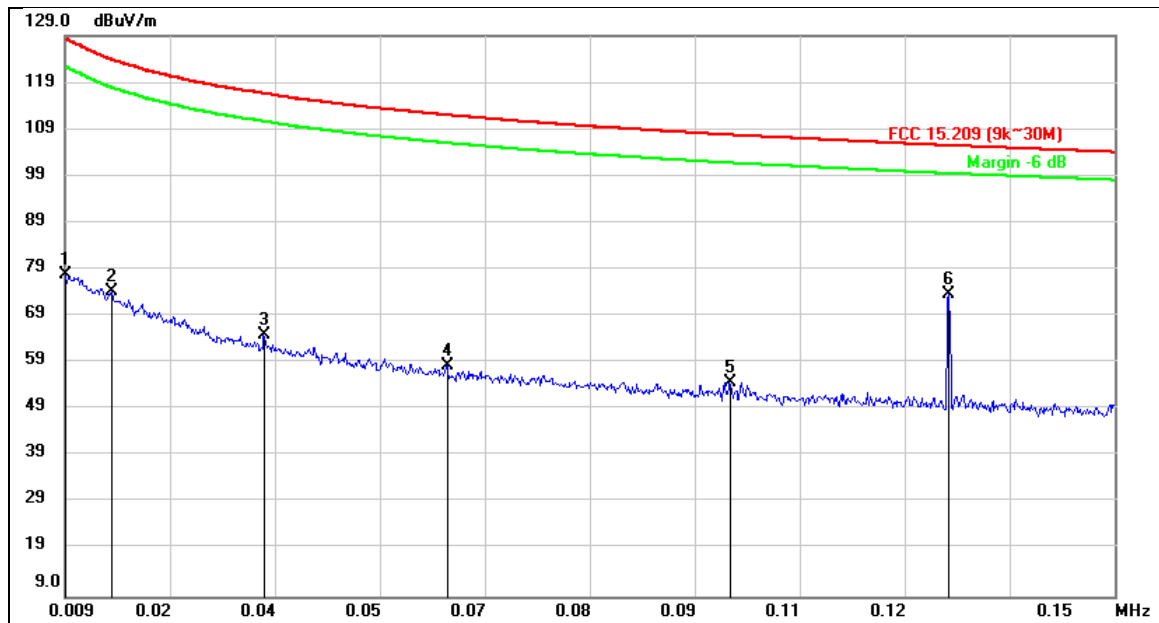
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Adapter 2

Smart phone (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0091	58.35	19.60	77.95	128.29	-50.34	AVG
2	0.0153	56.13	18.26	74.39	123.88	-49.49	AVG
3	0.0358	50.98	13.96	64.94	116.61	-51.67	AVG
4	0.0603	45.62	12.74	58.36	112.00	-53.64	AVG
5	0.0984	42.63	12.17	54.80	107.75	-52.95	QP
6*	0.1278	61.44	12.10	73.54	105.49	-31.95	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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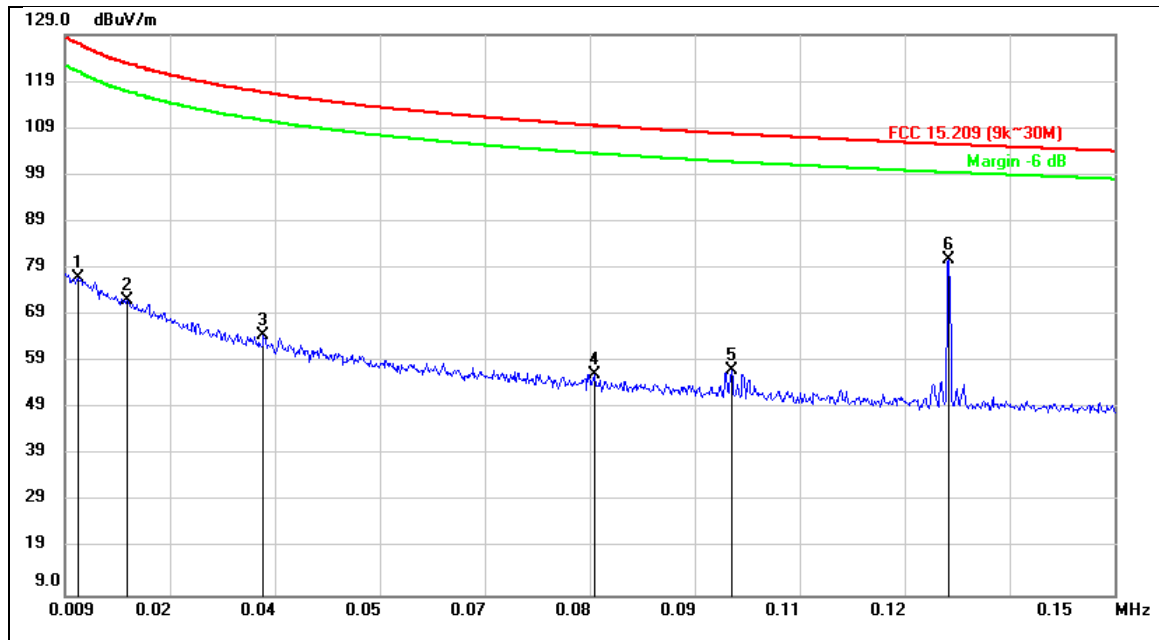
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0107	57.54	19.49	77.03	127.10	-50.07	AVG
2	0.0174	54.40	17.70	72.10	122.85	-50.75	AVG
3	0.0357	50.61	13.97	64.58	116.64	-52.06	AVG
4	0.0801	43.80	12.46	56.26	109.53	-53.27	AVG
5	0.0985	44.98	12.16	57.14	107.74	-50.60	QP
6*	0.1276	68.79	12.10	80.89	105.50	-24.61	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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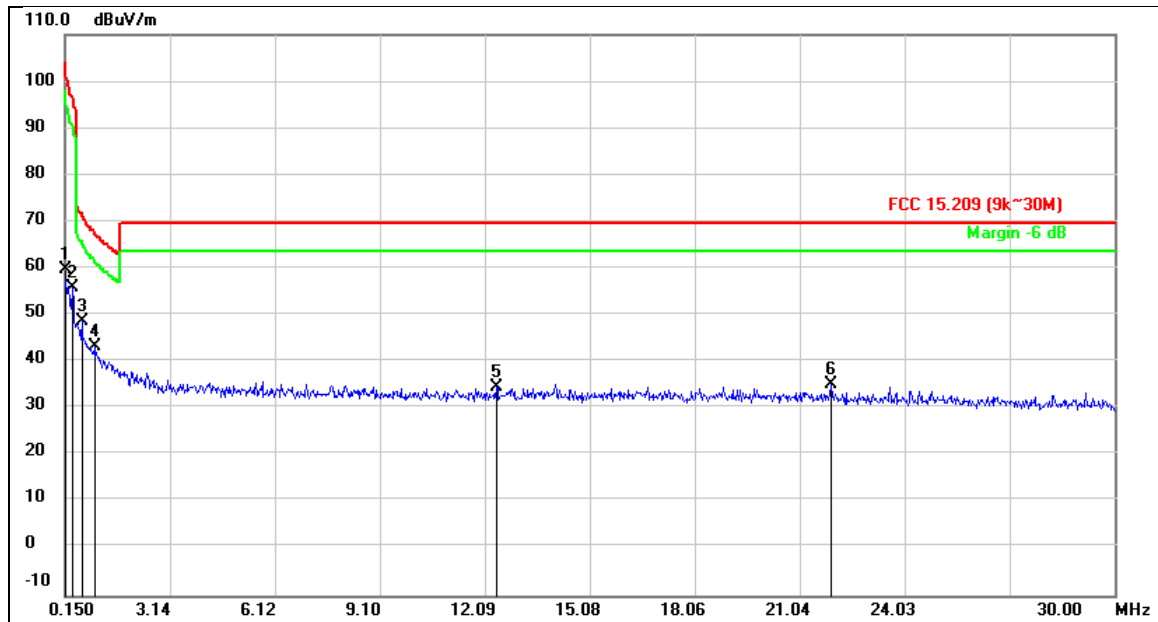
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Doc No: 17-EM-F0972 / 1.0



EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1560	47.65	12.14	59.79	103.76	-43.97	AVG
2	0.3848	43.93	11.85	55.78	95.94	-40.16	AVG
3	0.6385	37.00	11.80	48.80	71.52	-22.72	QP
4	1.0206	31.27	11.99	43.26	67.44	-24.18	QP
5	12.4472	22.98	11.56	34.54	69.54	-35.00	QP
6	21.9584	24.04	10.97	35.01	69.54	-34.53	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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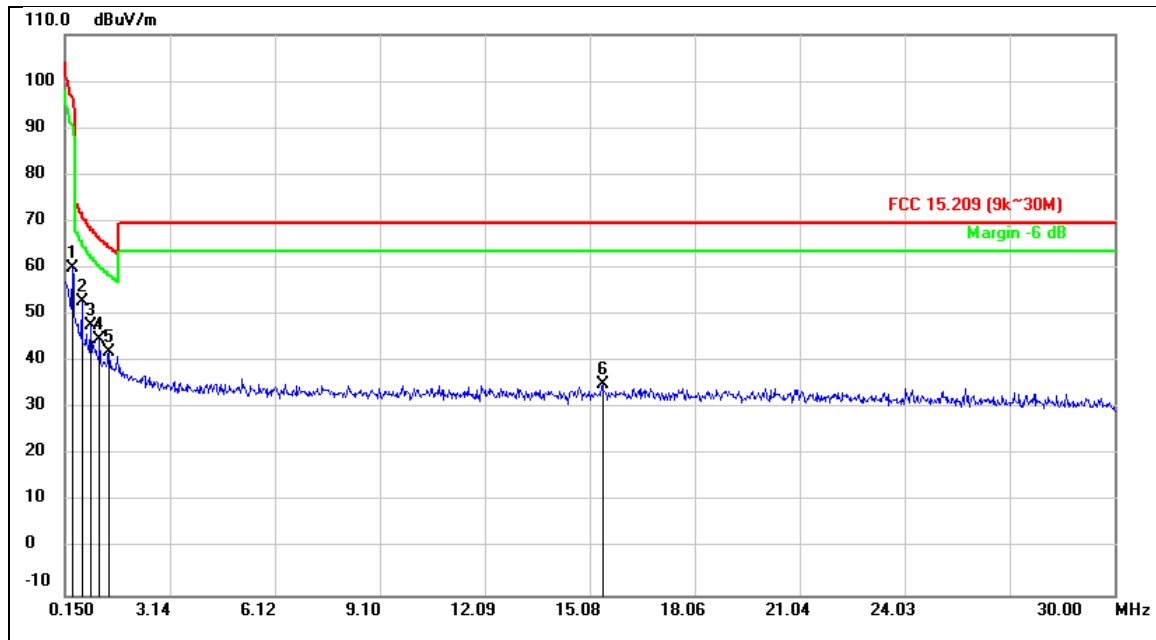
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Doc No: 17-EM-F0972 / 1.0



EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3828	48.21	11.85	60.06	95.99	-35.93	AVG
2	0.6405	41.12	11.80	52.92	71.50	-18.58	QP
3	0.8943	35.93	11.94	47.87	68.58	-20.71	QP
4	1.1510	32.89	11.99	44.88	66.41	-21.53	QP
5	1.4057	30.19	11.88	42.07	64.65	-22.58	QP
6	15.4342	23.63	11.46	35.09	69.54	-34.45	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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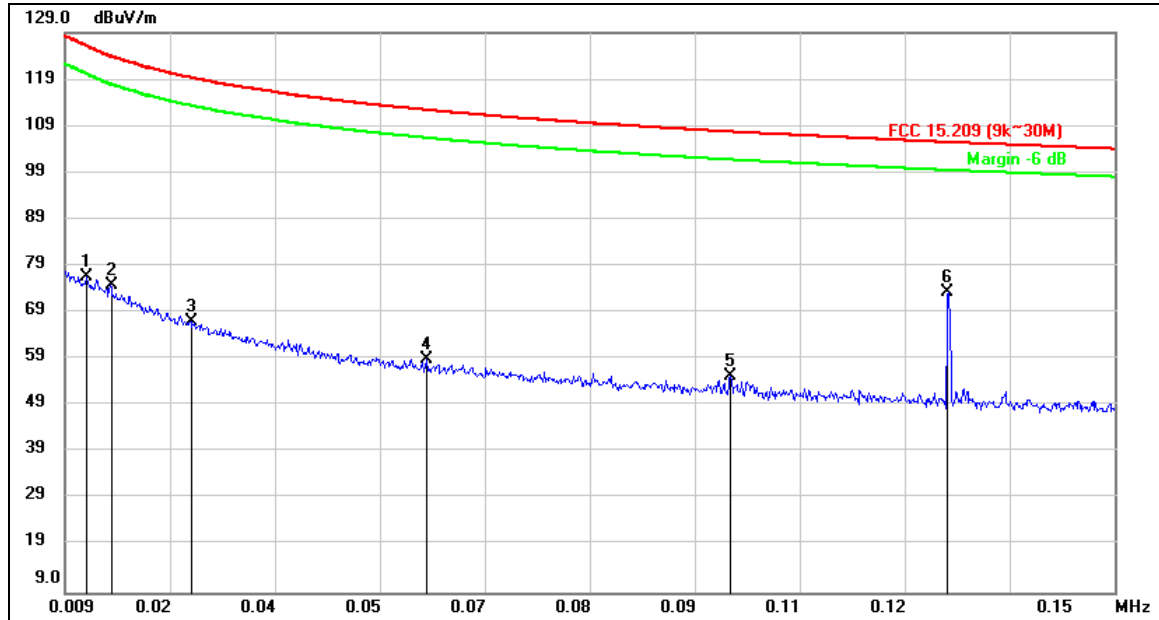
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Doc No: 17-EM-F0972 / 1.0



Smart phone (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0120	57.40	19.15	76.55	126.16	-49.61	AVG
2	0.0152	56.62	18.30	74.92	123.93	-49.01	AVG
3	0.0259	51.67	15.47	67.14	119.36	-52.22	AVG
4	0.0577	46.31	12.78	59.09	112.40	-53.31	AVG
5	0.0984	43.30	12.17	55.47	107.75	-52.28	QP
6*	0.1276	61.35	12.10	73.45	105.50	-32.05	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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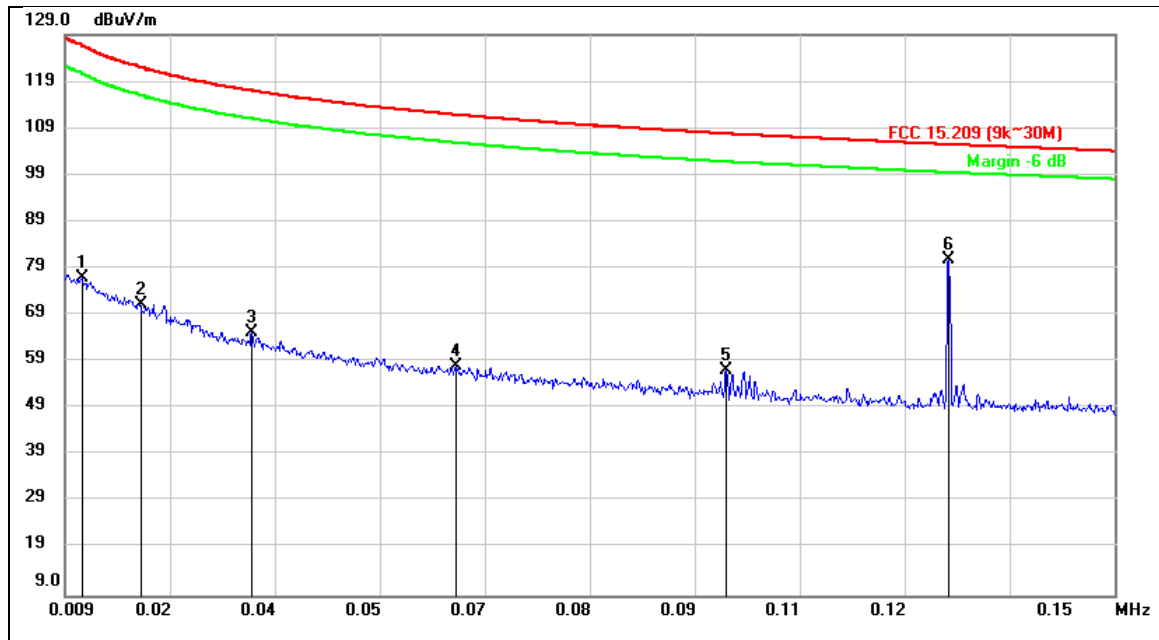
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0113	57.50	19.34	76.84	126.67	-49.83	AVG
2	0.0190	54.04	17.28	71.32	122.07	-50.75	AVG
3	0.0341	51.07	14.09	65.16	117.03	-51.87	AVG
4	0.0615	45.23	12.72	57.95	111.84	-53.89	AVG
5	0.0979	45.03	12.17	57.20	107.79	-50.59	QP
6*	0.1278	68.83	12.10	80.93	105.49	-24.56	AVG

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. “*” : Fundamental Frequency.

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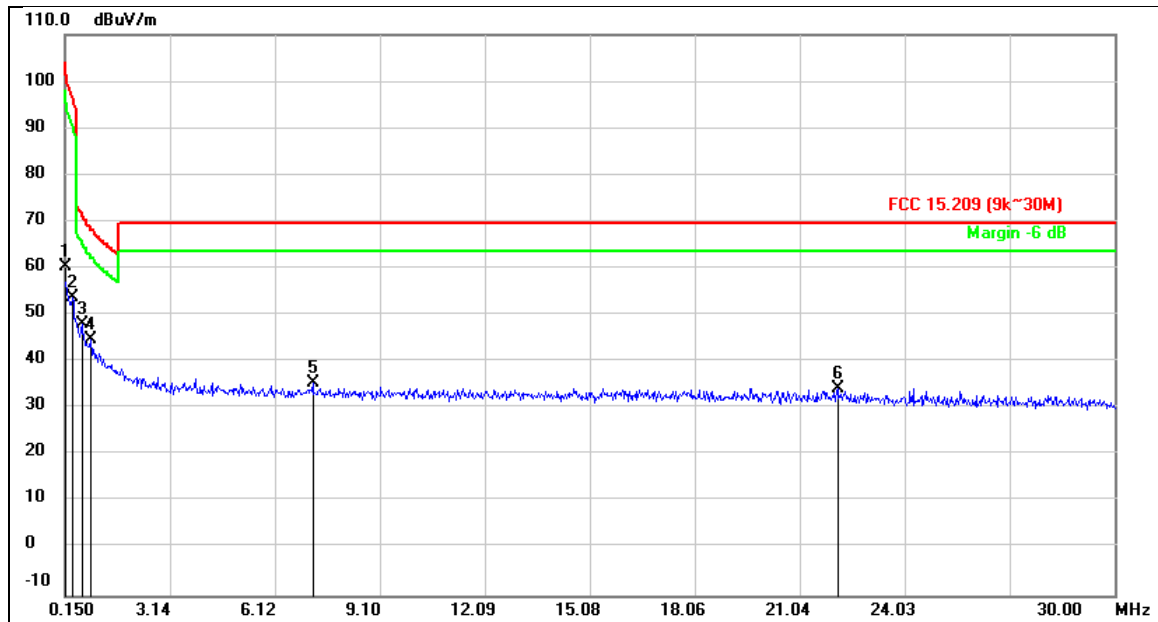
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.1530	48.23	12.14	60.37	103.92	-43.55	AVG
2	0.3848	42.02	11.85	53.87	95.94	-42.07	AVG
3	0.6366	36.27	11.80	48.07	71.55	-23.48	QP
4	0.8953	32.90	11.94	44.84	68.57	-23.73	QP
5	7.2105	23.78	11.63	35.41	69.54	-34.13	QP
6	22.1206	23.43	10.94	34.37	69.54	-35.17	QP

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.

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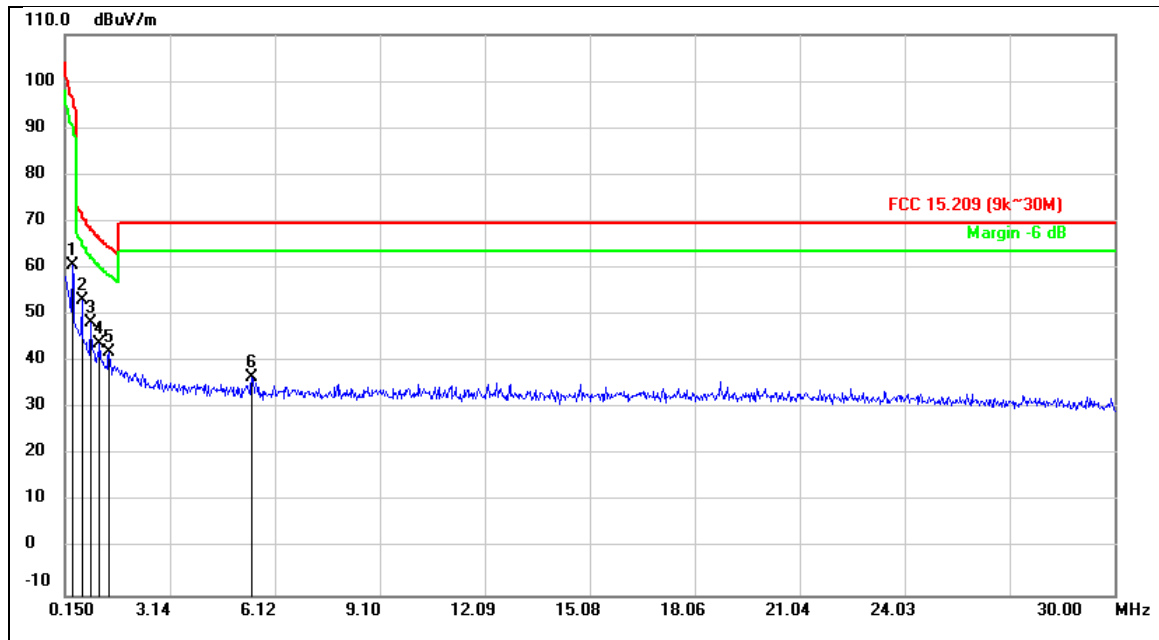
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Doc No: 17-EM-F0972 / 1.0



Test report No. : 4789310719-US-R0-V0
Page : 40 of 120
Issued date : Jan. 16, 2020
FCC ID : K7SWIA001

EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3837	48.70	11.85	60.55	95.97	-35.42	AVG
2	0.6394	41.24	11.80	53.04	71.51	-18.47	QP
3	0.8923	36.36	11.94	48.30	68.60	-20.30	QP
4	1.1480	31.73	11.99	43.72	66.43	-22.71	QP
5	1.4046	30.18	11.88	42.06	64.65	-22.59	QP
6	5.4931	24.89	11.63	36.52	69.54	-33.02	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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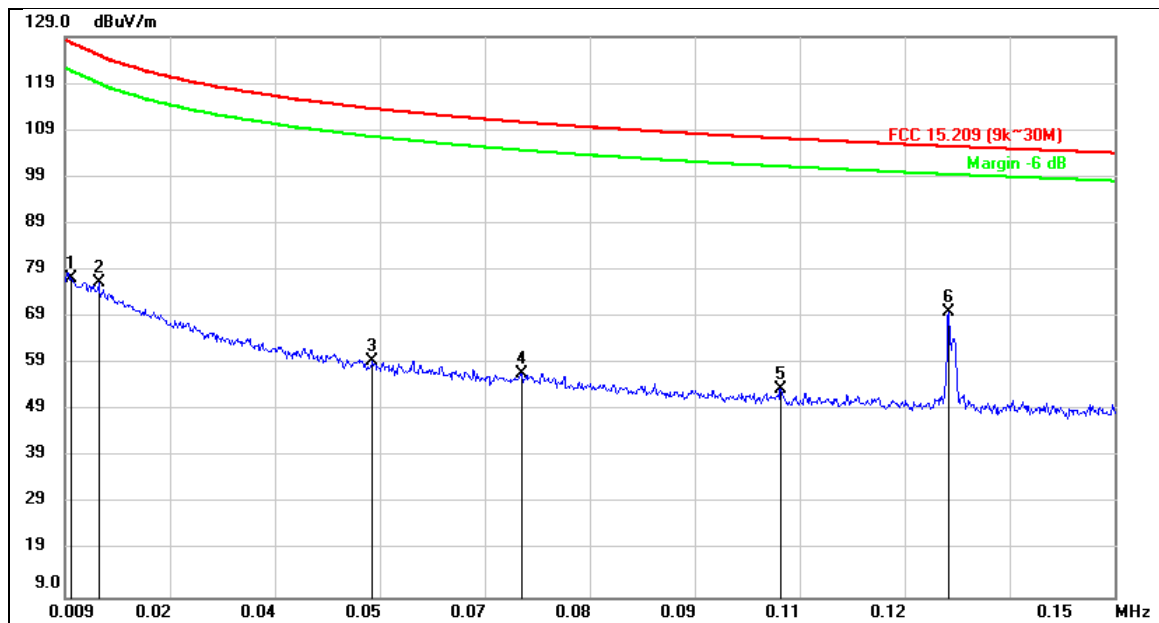


Operating Mode

Adapter 1

10W load (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0100	57.45	19.68	77.13	127.60	-50.47	AVG
2	0.0136	57.71	18.72	76.43	125.01	-48.58	AVG
3	0.0504	46.75	12.89	59.64	113.56	-53.92	AVG
4	0.0703	44.33	12.59	56.92	110.67	-53.75	AVG
5	0.1052	41.46	12.14	53.60	107.20	-53.60	QP
6*	0.1278	57.96	12.10	70.06	105.49	-35.43	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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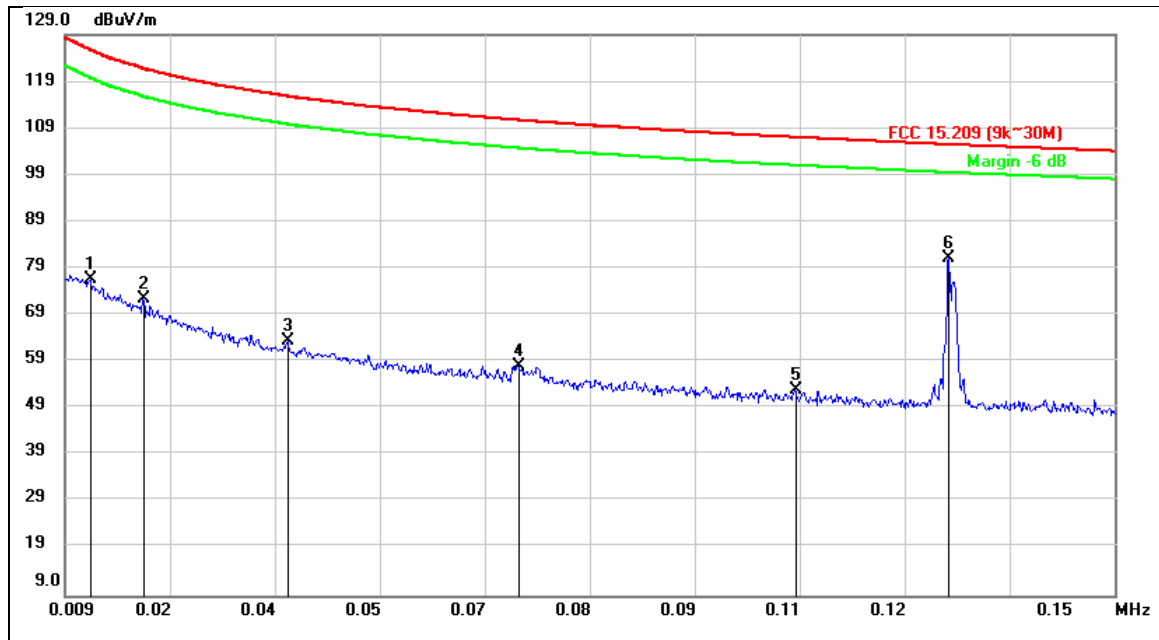
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0125	57.66	19.02	76.68	125.80	-49.12	AVG
2	0.0196	55.21	17.13	72.34	121.78	-49.44	AVG
3	0.0389	49.59	13.74	63.33	115.84	-52.51	AVG
4	0.0699	45.57	12.59	58.16	110.71	-52.55	AVG
5	0.1071	40.76	12.14	52.90	107.05	-54.15	QP
6*	0.1278	69.15	12.11	81.26	105.49	-24.23	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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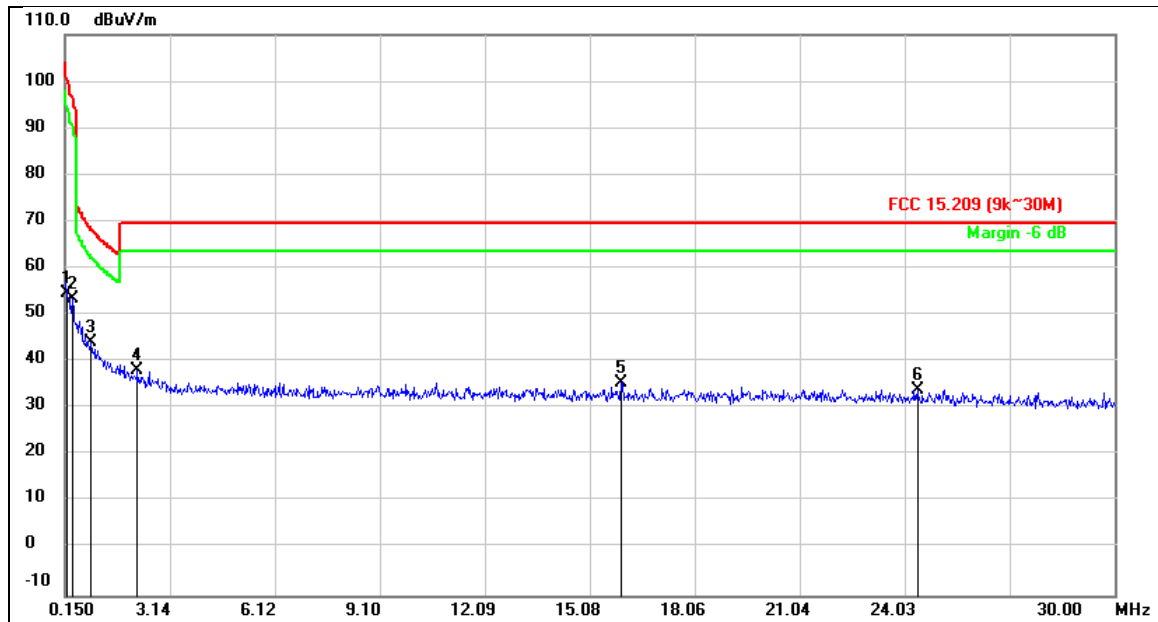
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2167	42.71	12.02	54.73	100.94	-46.21	AVG
2	0.3828	41.74	11.85	53.59	95.99	-42.40	AVG
3	0.8783	32.17	11.93	44.10	68.74	-24.64	QP
4	2.2276	26.71	11.54	38.25	69.54	-31.29	QP
5	16.0004	23.93	11.44	35.37	69.54	-34.17	QP
6	24.4021	23.49	10.52	34.01	69.54	-35.53	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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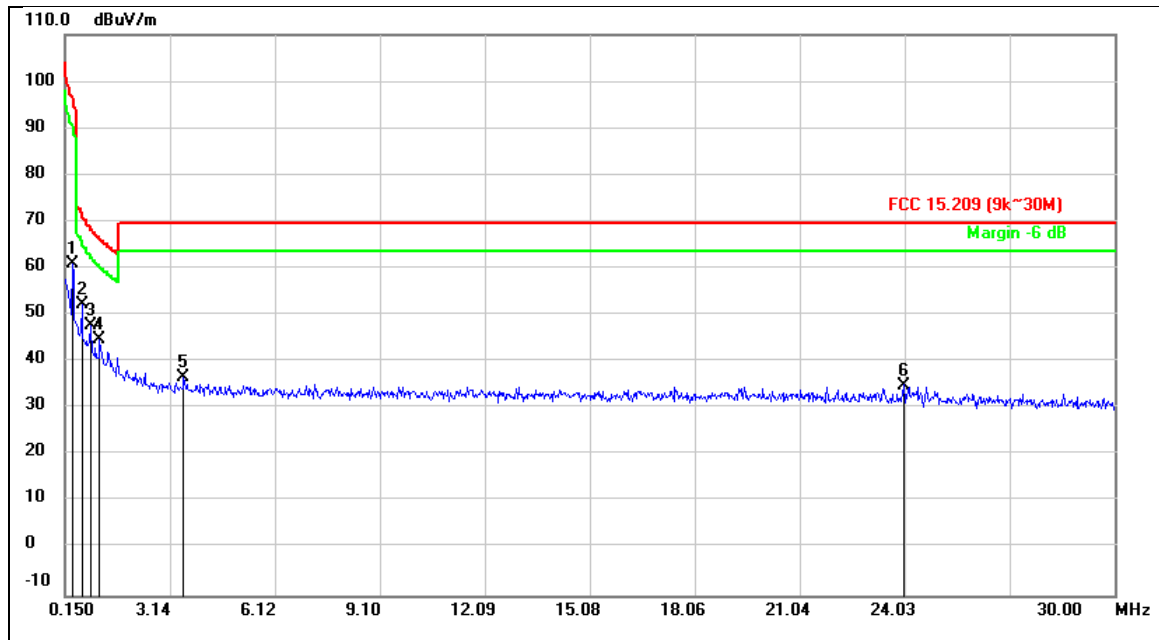
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3858	49.07	11.85	60.92	95.92	-35.00	AVG
2	0.6385	40.35	11.80	52.15	71.52	-19.37	QP
3	0.8953	35.91	11.94	47.85	68.57	-20.72	QP
4	1.1500	32.85	11.99	44.84	66.41	-21.57	QP
5	3.5509	25.19	11.36	36.55	69.54	-32.99	QP
6	24.0161	24.41	10.59	35.00	69.54	-34.54	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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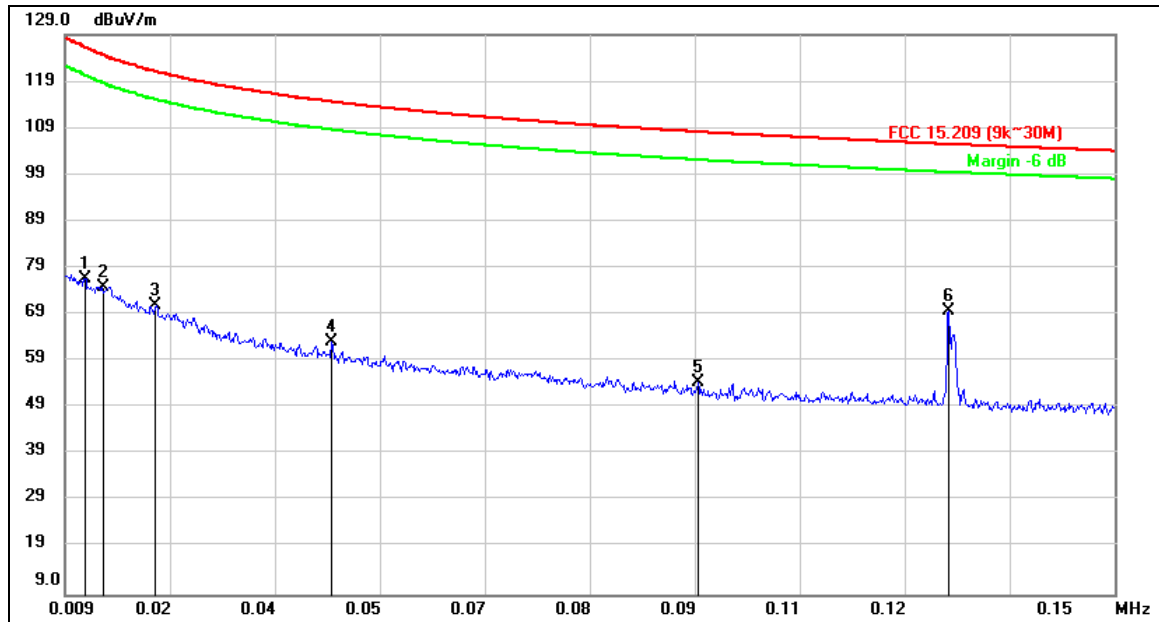
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10W load (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0117	57.49	19.23	76.72	126.38	-49.66	AVG
2	0.0140	56.24	18.61	74.85	124.73	-49.88	AVG
3	0.0212	54.28	16.70	70.98	121.12	-50.14	AVG
4	0.0449	49.91	13.28	63.19	114.61	-51.42	AVG
5	0.0941	42.34	12.22	54.56	108.14	-53.58	QP
6*	0.1278	57.70	12.10	69.80	105.49	-35.69	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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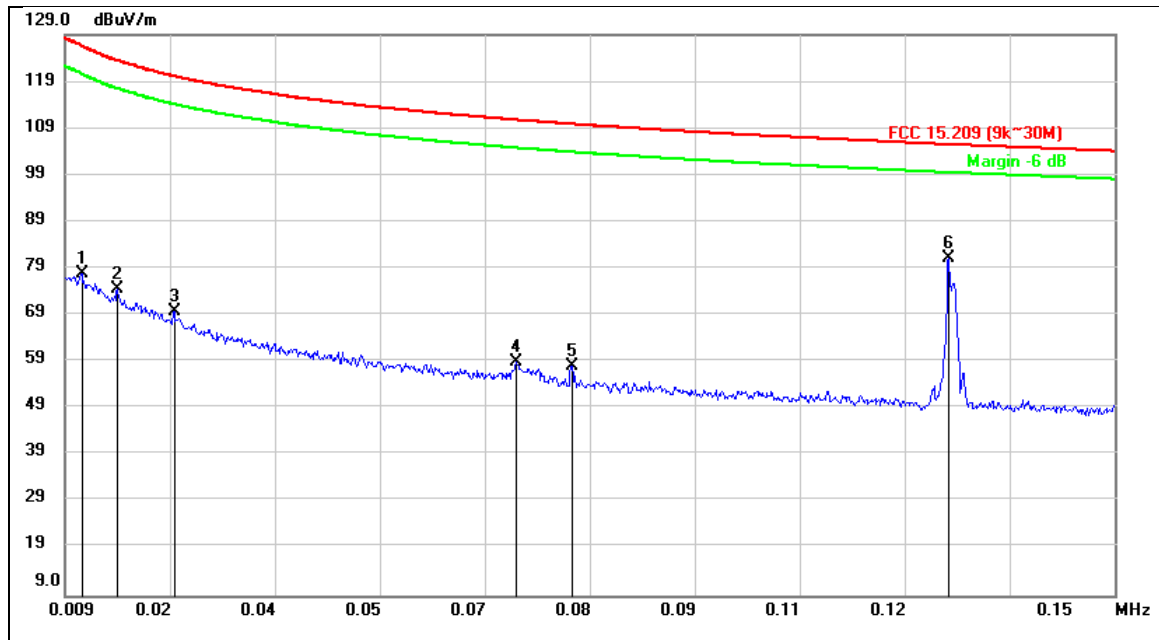
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0113	58.47	19.34	77.81	126.67	-48.86	AVG
2	0.0160	56.53	18.09	74.62	123.54	-48.92	AVG
3	0.0237	53.68	16.05	69.73	120.15	-50.42	AVG
4	0.0697	46.22	12.59	58.81	110.74	-51.93	AVG
5	0.0771	45.53	12.50	58.03	109.88	-51.85	AVG
6*	0.1278	69.16	12.11	81.27	105.49	-24.22	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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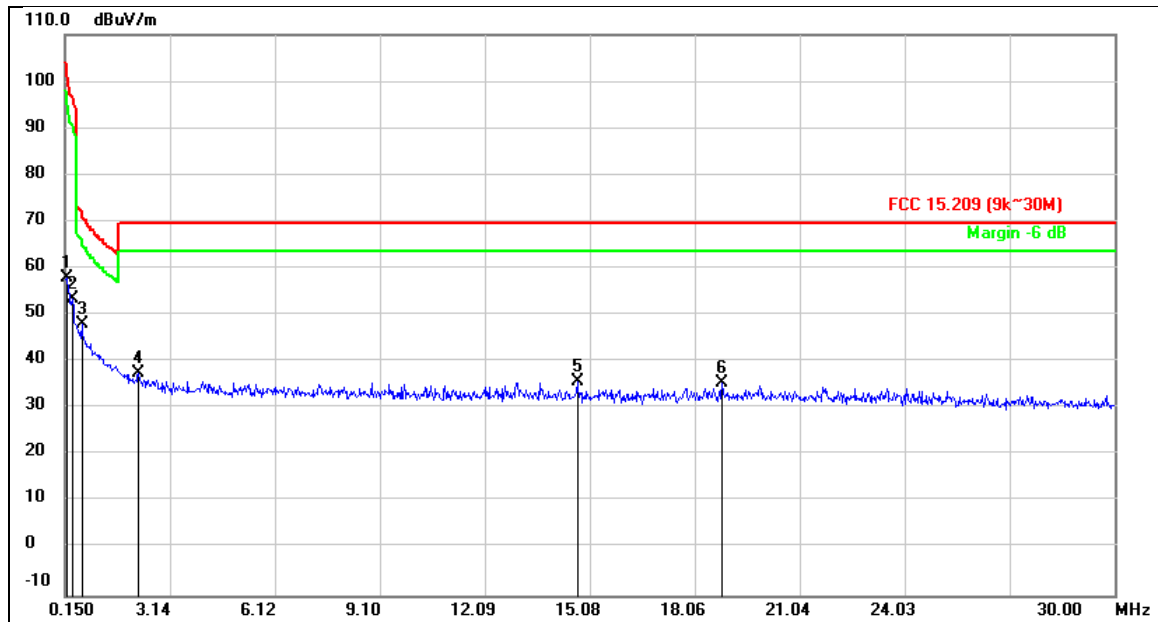
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2256	45.86	12.01	57.87	100.59	-42.72	AVG
2	0.3837	41.59	11.85	53.44	95.97	-42.53	AVG
3	0.6394	36.19	11.80	47.99	71.51	-23.52	QP
4	2.2445	25.98	11.53	37.51	69.54	-32.03	QP
5	14.7387	24.18	11.48	35.66	69.54	-33.88	QP
6	18.8530	24.03	11.36	35.39	69.54	-34.15	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
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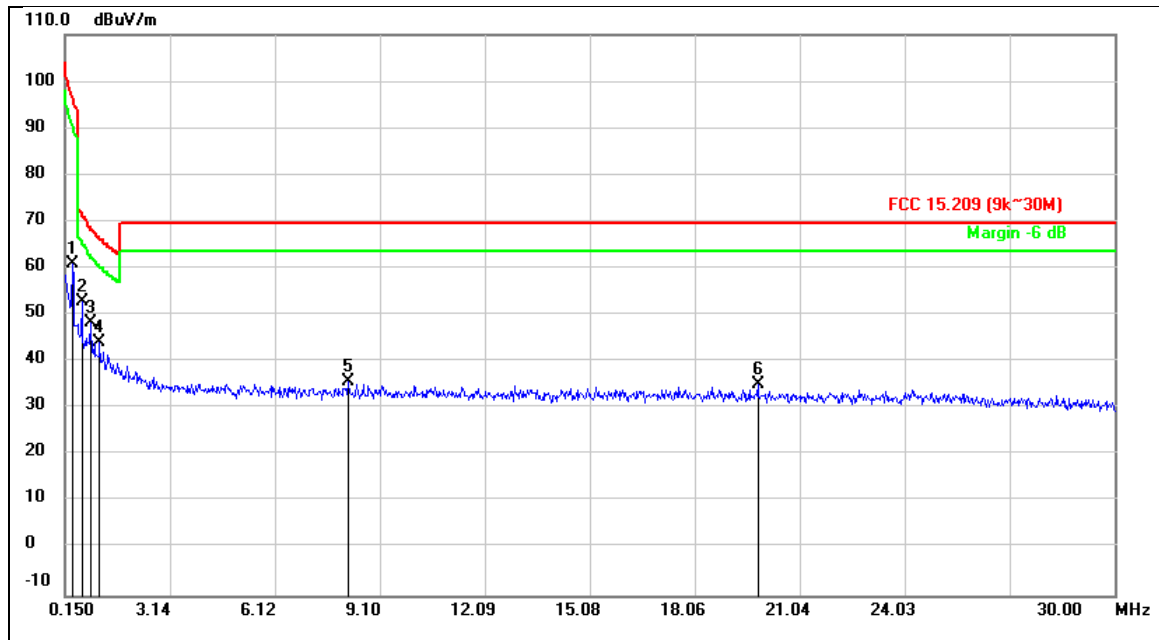
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Doc No: 17-EM-F0972 / 1.0



EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3837	49.23	11.85	61.08	95.97	-34.89	AVG
2	0.6375	41.14	11.80	52.94	71.54	-18.60	QP
3	0.8943	36.28	11.94	48.22	68.58	-20.36	QP
4	1.1520	32.25	11.99	44.24	66.40	-22.16	QP
5	8.2324	24.09	11.63	35.72	69.54	-33.82	QP
6	19.8530	23.80	11.33	35.13	69.54	-34.41	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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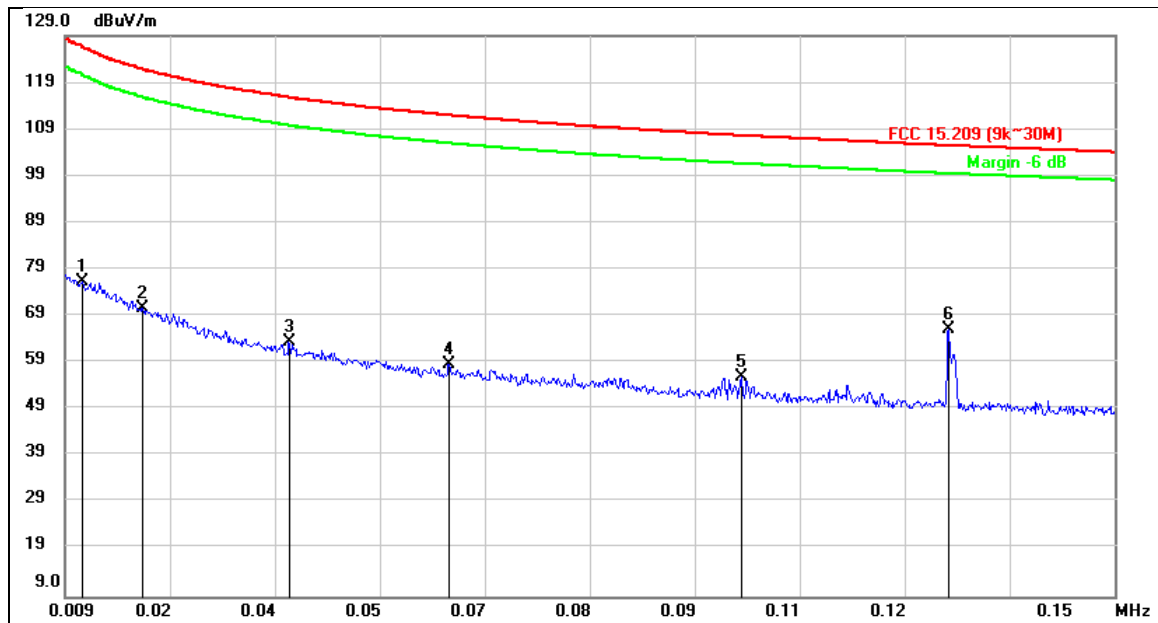
Doc No: 17-EM-F0972 / 1.0



Adapter 2

10W load (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0114	56.98	19.31	76.29	126.59	-50.30	AVG
2	0.0194	53.49	17.18	70.67	121.87	-51.20	AVG
3	0.0392	49.63	13.71	63.34	115.76	-52.42	AVG
4	0.0606	46.02	12.73	58.75	111.96	-53.21	AVG
5	0.0999	43.68	12.14	55.82	107.61	-51.79	QP
6*	0.1276	54.14	12.10	66.24	105.50	-39.26	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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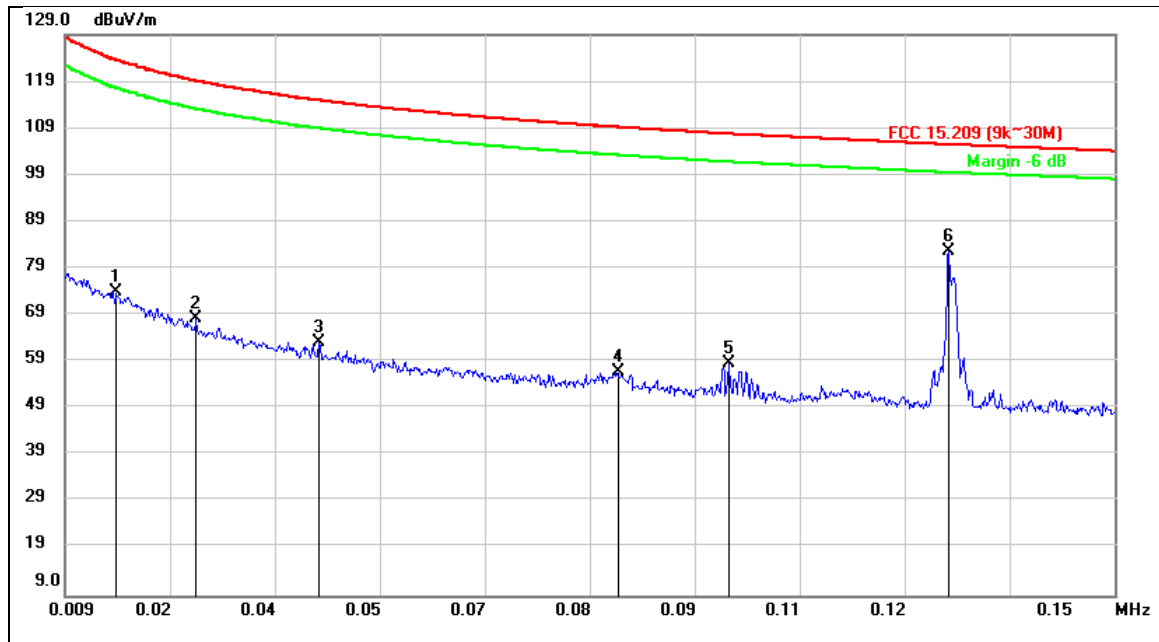
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0155	55.82	18.21	74.03	123.79	-49.76	AVG
2	0.0267	52.94	15.24	68.18	119.11	-50.93	AVG
3	0.0432	49.74	13.41	63.15	114.94	-51.79	AVG
4	0.0831	44.35	12.41	56.76	109.22	-52.46	AVG
5	0.0982	46.54	12.17	58.71	107.77	-49.06	QP
6*	0.1278	70.47	12.10	82.57	105.49	-22.92	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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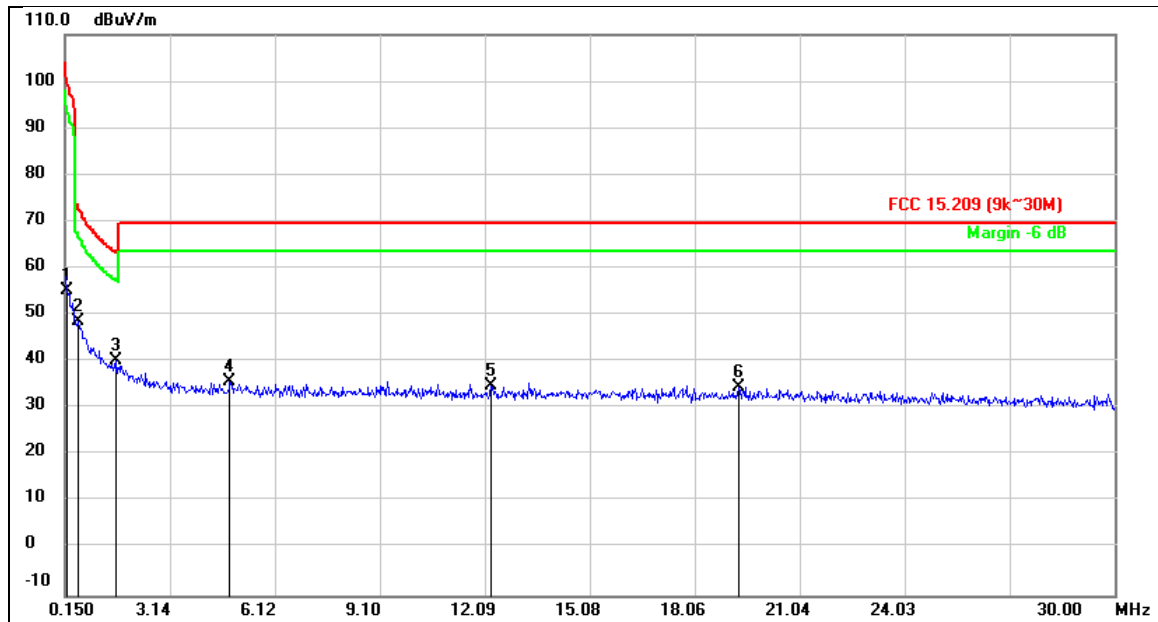
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2157	43.31	12.03	55.34	100.97	-45.63	AVG
2	0.5530	36.83	11.81	48.64	72.78	-24.14	QP
3	1.6236	28.50	11.78	40.28	63.40	-23.12	QP
4	4.8653	24.01	11.60	35.61	69.54	-33.93	QP
5	12.2980	23.36	11.56	34.92	69.54	-34.62	QP
6	19.3426	23.31	11.35	34.66	69.54	-34.88	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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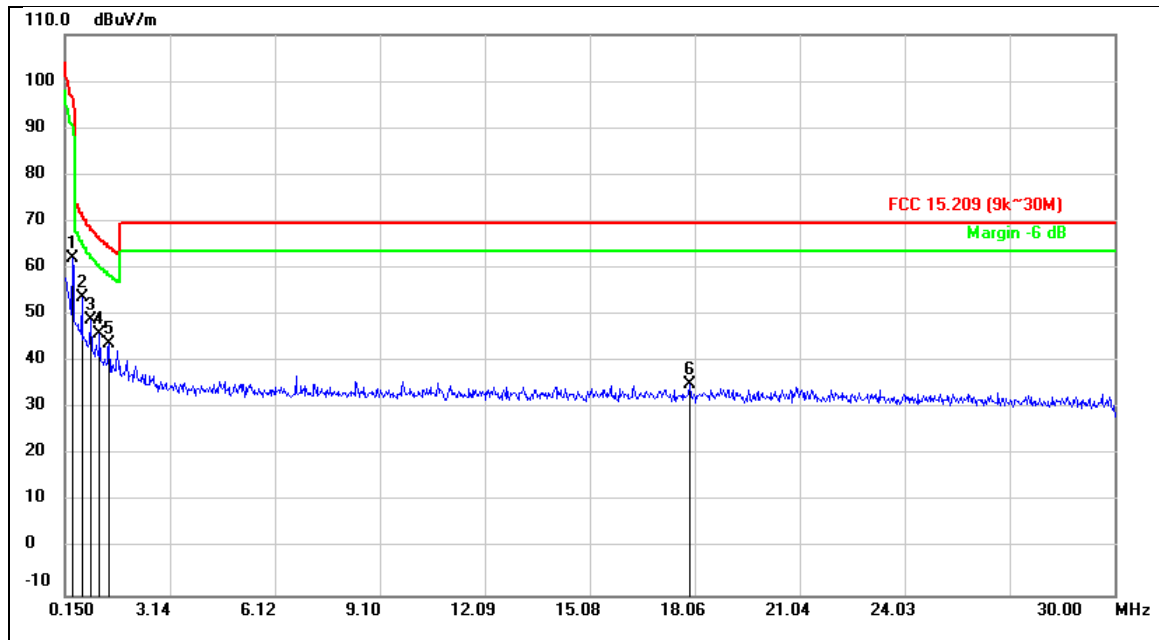
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3828	50.44	11.85	62.29	95.99	-33.70	AVG
2	0.6394	42.06	11.80	53.86	71.51	-17.65	QP
3	0.8932	37.02	11.94	48.96	68.59	-19.63	QP
4	1.1500	33.96	11.99	45.95	66.41	-20.46	QP
5	1.4066	32.12	11.88	44.00	64.64	-20.64	QP
6	17.9286	23.79	11.39	35.18	69.54	-34.36	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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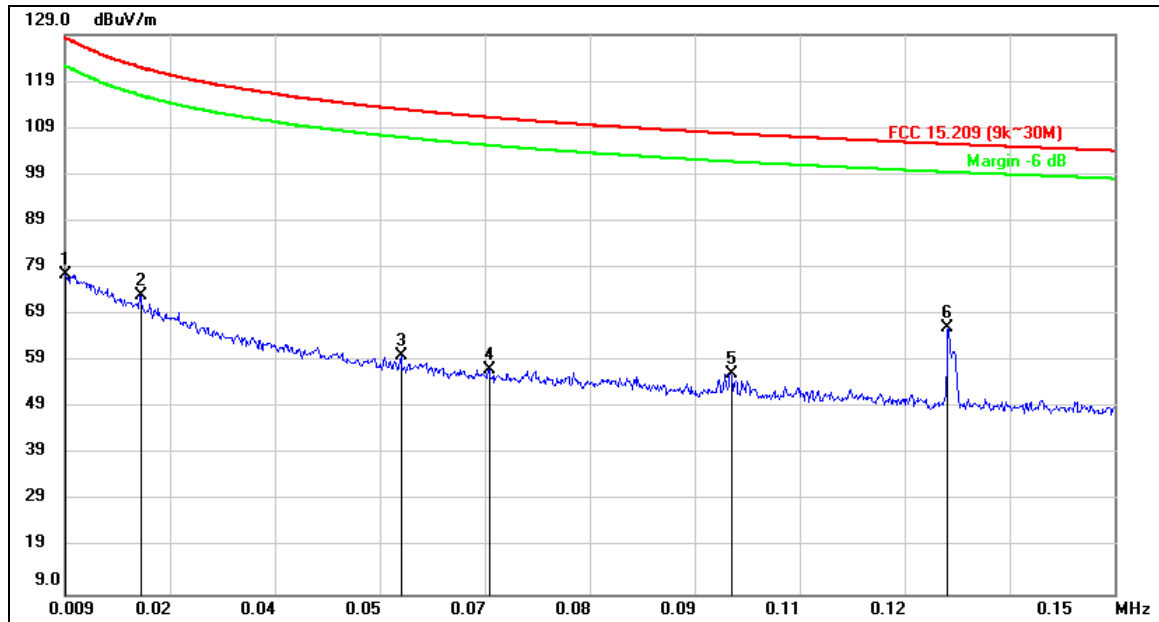
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10W load (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0092	58.02	19.61	77.63	128.27	-50.64	AVG
2	0.0192	55.84	17.24	73.08	121.97	-48.89	AVG
3	0.0542	47.29	12.83	60.12	112.96	-52.84	AVG
4	0.0660	44.55	12.65	57.20	111.24	-54.04	AVG
5	0.0985	44.05	12.16	56.21	107.74	-51.53	QP
6*	0.1276	54.08	12.10	66.18	105.50	-39.32	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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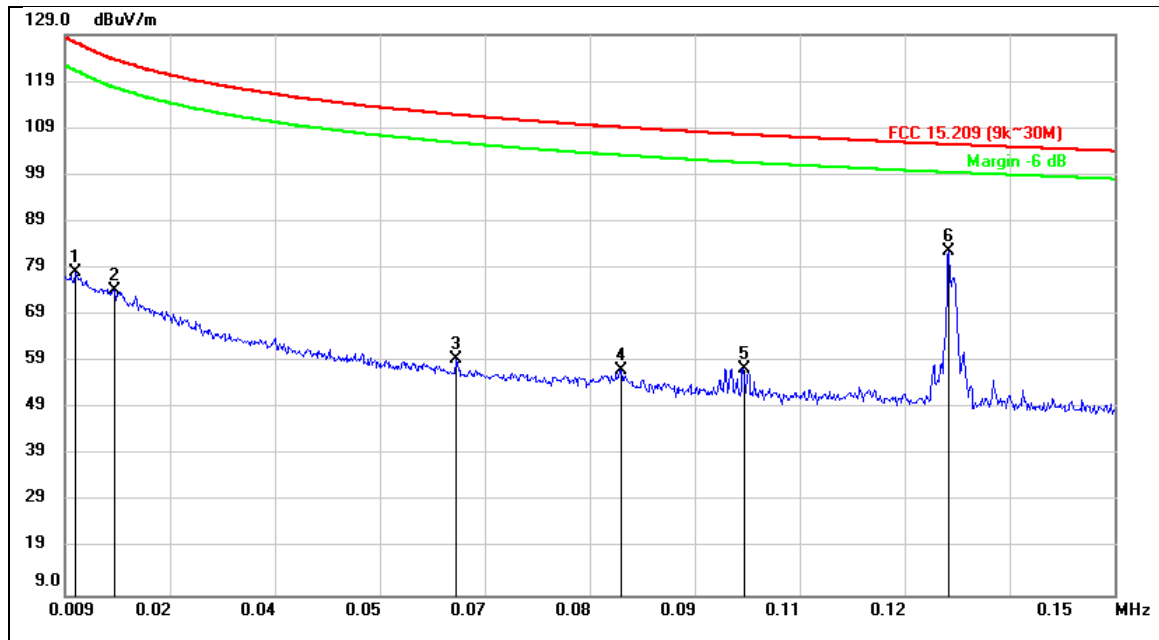
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EUT Test Condition		Measurement Detail	
Frequency Range	9 kHz ~ 0.15 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0105	58.62	19.54	78.16	127.24	-49.08	AVG
2	0.0156	55.99	18.18	74.17	123.74	-49.57	AVG
3	0.0616	46.72	12.71	59.43	111.83	-52.40	AVG
4	0.0837	44.88	12.40	57.28	109.16	-51.88	AVG
5	0.1001	45.44	12.14	57.58	107.59	-50.01	QP
6*	0.1276	70.47	12.10	82.57	105.50	-22.93	AVG

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.
- “*” : Fundamental Frequency.

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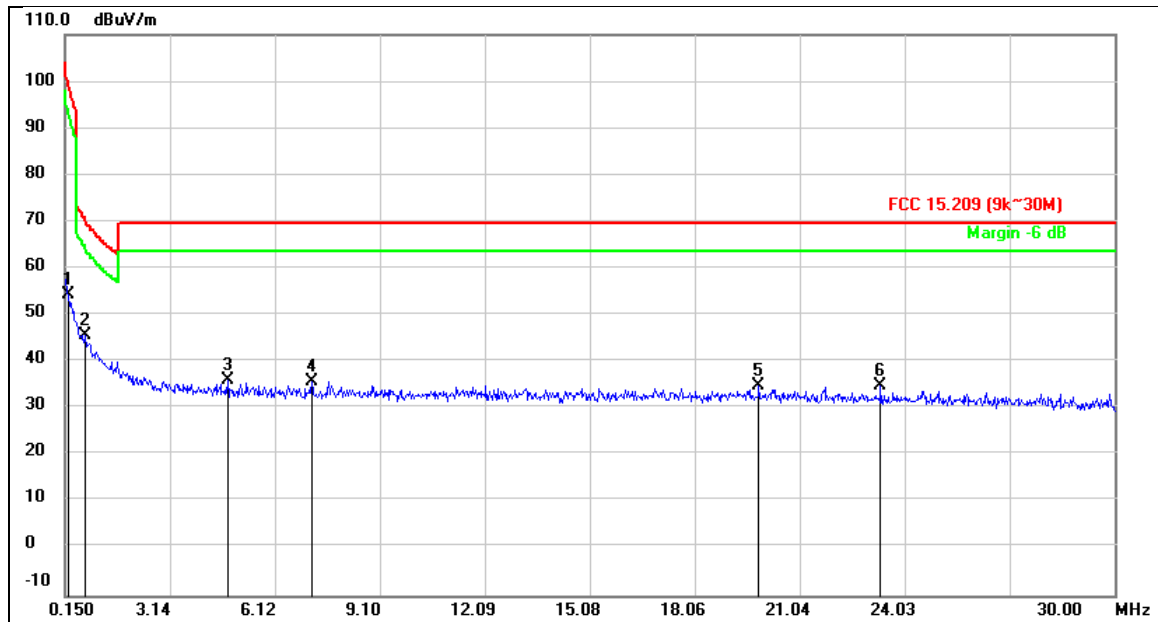
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Perpendicular



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2396	42.22	11.98	54.20	100.05	-45.85	AVG
2	0.7291	33.68	11.85	45.53	70.36	-24.83	QP
3	4.7877	24.39	11.60	35.99	69.54	-33.55	QP
4	7.1677	24.12	11.63	35.75	69.54	-33.79	QP
5	19.9057	23.43	11.33	34.76	69.54	-34.78	QP
6	23.3474	24.02	10.71	34.73	69.54	-34.81	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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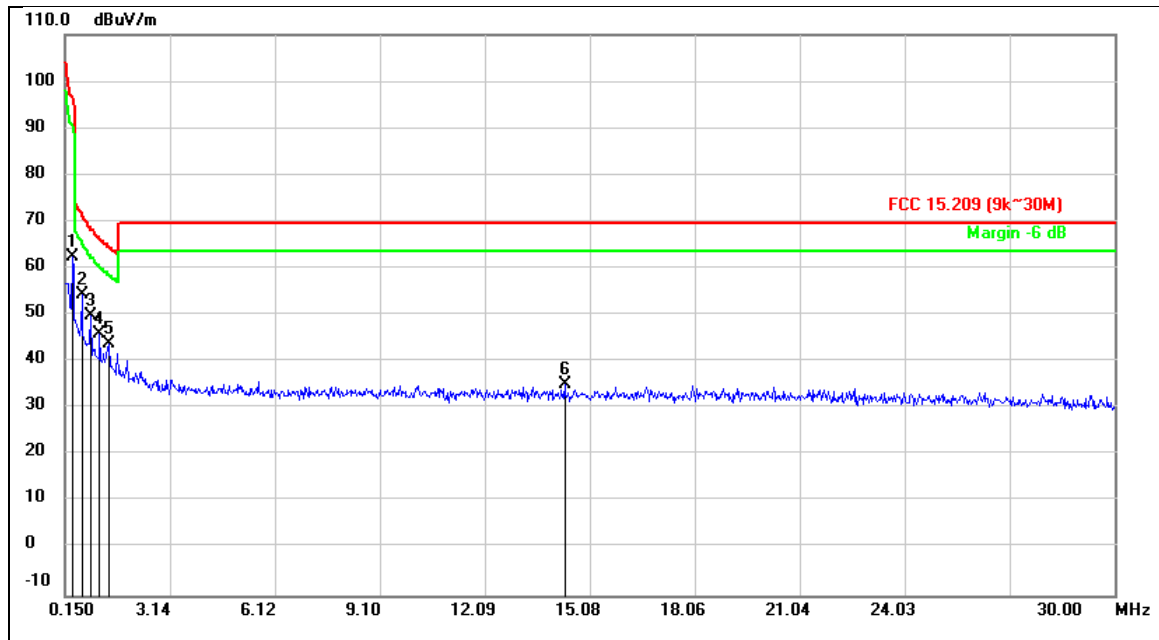
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EUT Test Condition		Measurement Detail	
Frequency Range	0.15 MHz ~ 30 MHz	Antenna Polarity	Parallel



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3837	50.51	11.85	62.36	95.97	-33.61	AVG
2	0.6385	42.58	11.80	54.38	71.52	-17.14	QP
3	0.8943	37.98	11.94	49.92	68.58	-18.66	QP
4	1.1500	34.02	11.99	46.01	66.41	-20.40	QP
5	1.4046	31.85	11.88	43.73	64.65	-20.92	QP
6	14.3865	23.54	11.49	35.03	69.54	-34.51	QP

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The other emission levels were very low against the limit.

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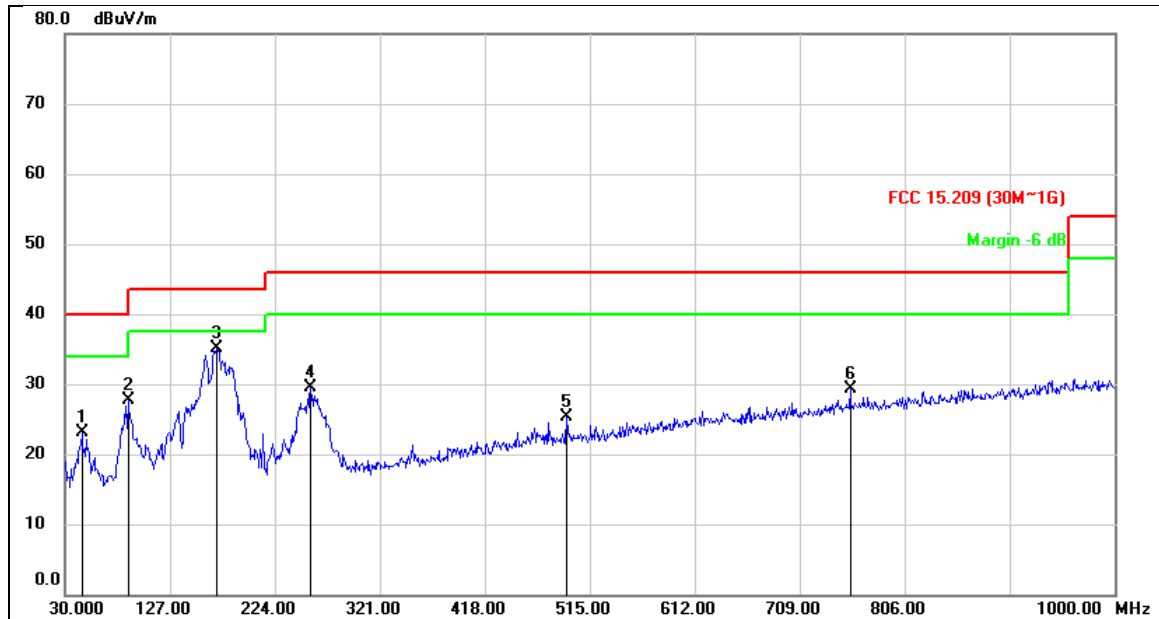


30 MHz ~ 1 GHz Data

Standby Mode

Adapter 1

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	45.5847	38.18	-15.12	23.06	40.00	-16.94	peak
2	88.9113	48.96	-21.18	27.78	43.50	-15.72	peak
3	171.1997	50.47	-15.30	35.17	43.50	-8.33	peak
4	257.6267	45.16	-15.60	29.56	46.00	-16.44	peak
5	494.0480	34.82	-9.50	25.32	46.00	-20.68	peak
6	756.0127	33.72	-4.41	29.31	46.00	-16.69	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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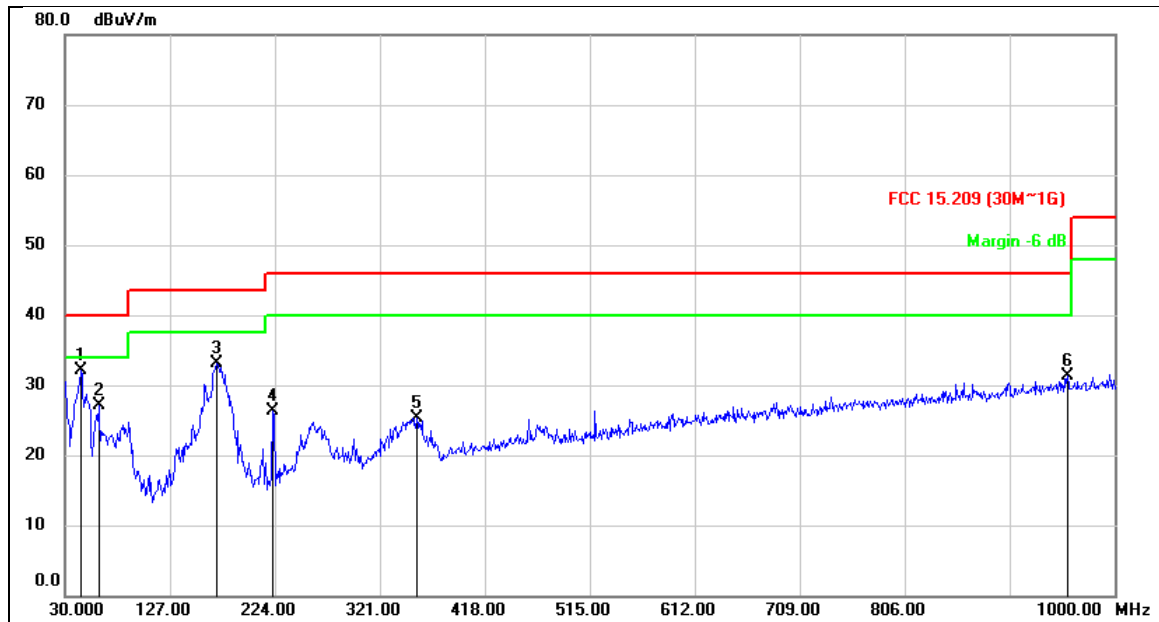
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	44.7117	47.33	-15.19	32.14	40.00	-7.86	peak
2	61.2987	42.88	-15.87	27.01	40.00	-12.99	peak
3	171.1673	48.41	-15.30	33.11	43.50	-10.39	peak
4	222.7713	43.84	-17.45	26.39	46.00	-19.61	peak
5	355.2087	38.15	-12.85	25.30	46.00	-20.70	peak
6	956.4147	32.83	-1.57	31.26	46.00	-14.74	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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Adapter 2

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	89.1053	51.74	-21.20	30.54	43.50	-12.96	peak
2	170.8440	49.71	-15.27	34.44	43.50	-9.06	peak
3	213.3300	48.76	-17.63	31.13	43.50	-12.37	peak
4	266.6800	50.35	-15.21	35.14	46.00	-10.86	peak
5	302.8609	45.07	-14.05	31.02	46.00	-14.98	peak
6	689.9880	34.25	-5.53	28.72	46.00	-17.28	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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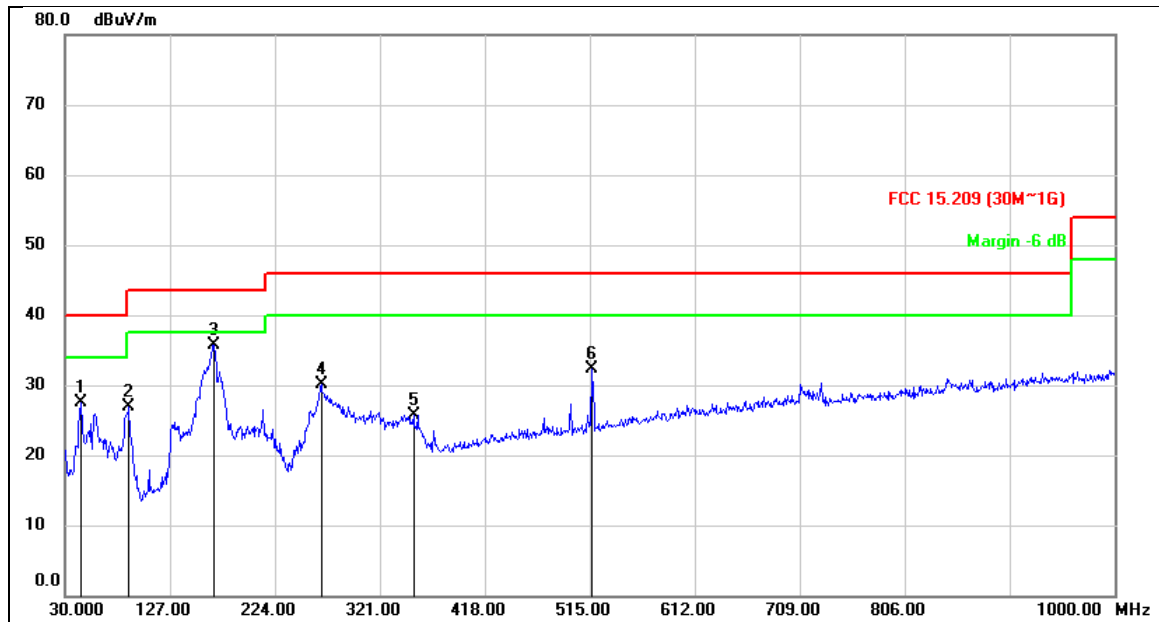
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	44.7117	42.65	-15.19	27.46	40.00	-12.54	peak
2	89.5580	48.06	-21.21	26.85	43.50	-16.65	peak
3	167.9017	50.84	-15.05	35.79	43.50	-7.71	peak
4	266.6800	45.40	-15.21	30.19	46.00	-15.81	peak
5	352.7513	38.74	-12.94	25.80	46.00	-20.20	peak
6	517.1340	41.43	-9.04	32.39	46.00	-13.61	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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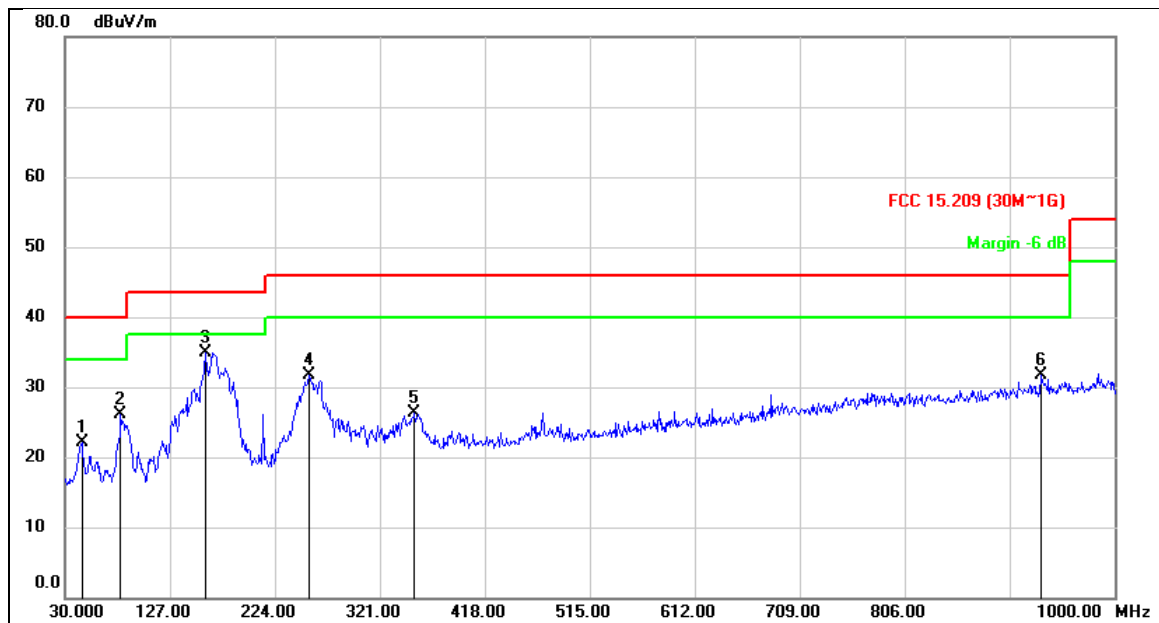


Operating Mode

Adapter 1

Smart phone (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	46.1343	37.18	-15.06	22.12	40.00	-17.88	peak
2	82.1537	46.28	-20.20	26.08	40.00	-13.92	peak
3	160.0123	49.91	-14.97	34.94	43.50	-8.56	peak
4	256.1717	47.38	-15.63	31.75	46.00	-14.25	peak
5	353.8183	39.22	-12.89	26.33	46.00	-19.67	peak
6	932.4233	33.63	-1.88	31.75	46.00	-14.25	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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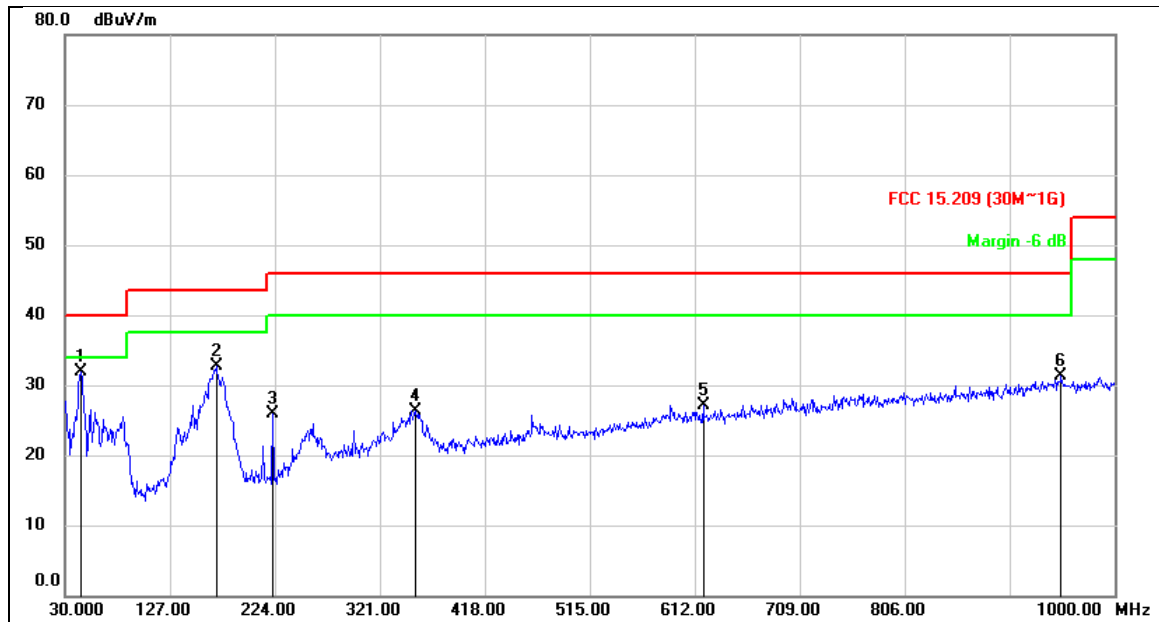
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	44.5500	47.03	-15.20	31.83	40.00	-8.17	peak
2	170.3590	47.83	-15.22	32.61	43.50	-10.89	peak
3	222.7713	43.31	-17.45	25.86	46.00	-20.14	peak
4	354.6267	39.20	-12.87	26.33	46.00	-19.67	peak
5	620.6330	33.71	-6.68	27.03	46.00	-18.97	peak
6	950.5300	32.96	-1.62	31.34	46.00	-14.66	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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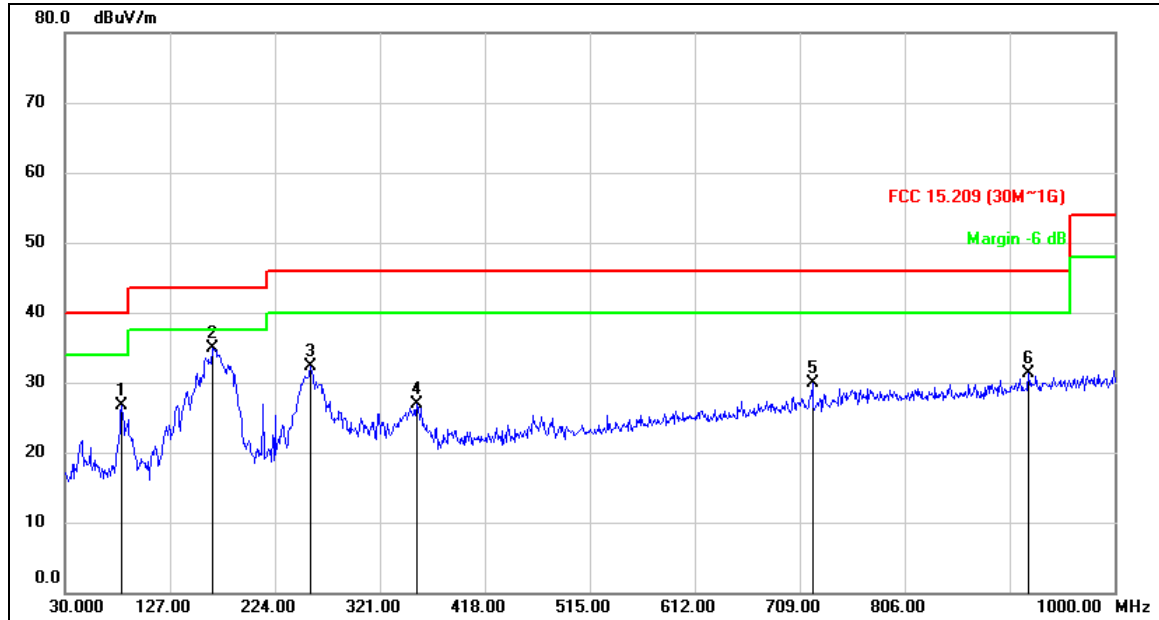
Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0972 / 1.0



Smart phone (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	83.1560	47.04	-20.41	26.63	40.00	-13.37	peak
2	166.8023	49.87	-15.00	34.87	43.50	-8.63	peak
3	257.4003	47.86	-15.60	32.26	46.00	-13.74	peak
4	355.1440	39.72	-12.86	26.86	46.00	-19.14	peak
5	720.6400	35.03	-5.12	29.91	46.00	-16.09	peak
6	921.3007	33.43	-2.09	31.34	46.00	-14.66	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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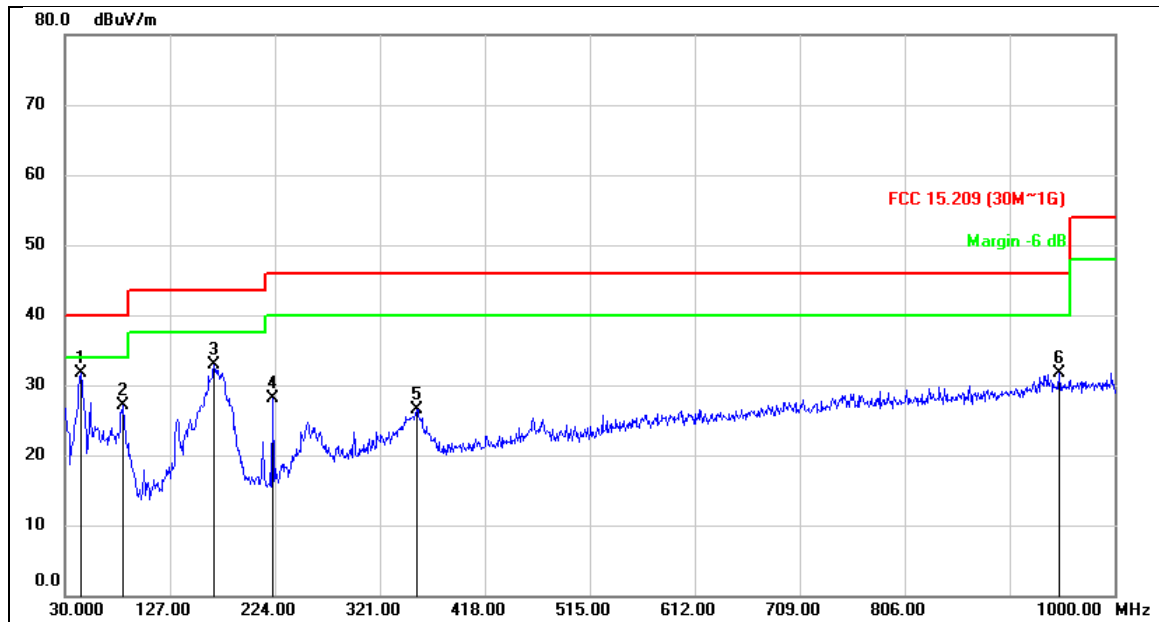
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	44.8410	46.83	-15.18	31.65	40.00	-8.35	peak
2	83.9966	47.74	-20.55	27.19	40.00	-12.81	peak
3	168.4190	47.90	-15.08	32.82	43.50	-10.68	peak
4	222.7713	45.47	-17.45	28.02	46.00	-17.98	peak
5	355.6613	39.32	-12.84	26.48	46.00	-19.52	peak
6	948.6223	33.31	-1.64	31.67	46.00	-14.33	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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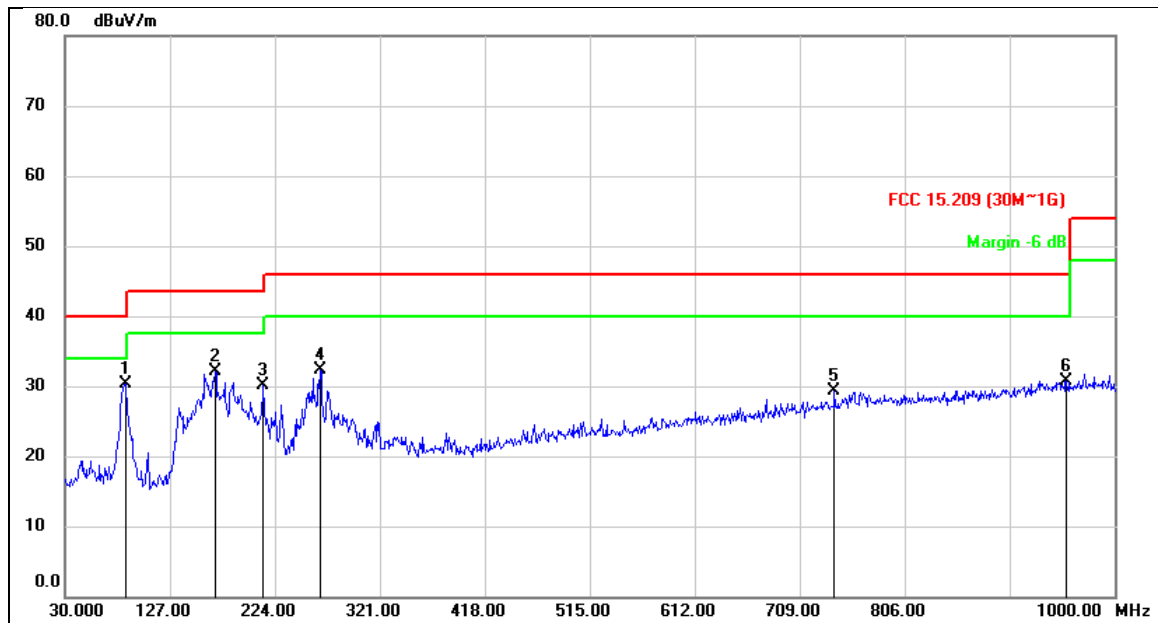
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Adapter 2

Smart phone (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	86.3570	51.23	-20.92	30.31	40.00	-9.69	peak
2	169.6477	47.20	-15.16	32.04	43.50	-11.46	peak
3	213.3300	47.66	-17.63	30.03	43.50	-13.47	peak
4	266.6477	47.55	-15.21	32.34	46.00	-13.66	peak
5	741.0747	33.96	-4.71	29.25	46.00	-16.75	peak
6	955.4123	32.35	-1.58	30.77	46.00	-15.23	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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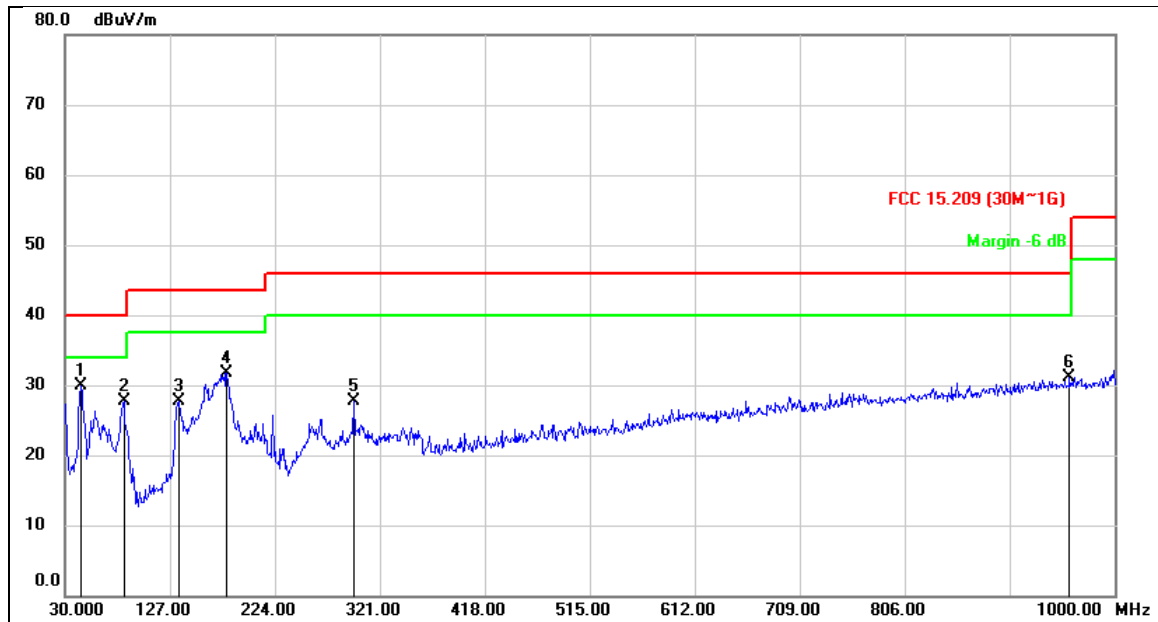
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	44.5823	45.09	-15.20	29.89	40.00	-10.11	peak
2	84.4493	48.32	-20.63	27.69	40.00	-12.31	peak
3	135.4067	44.03	-16.27	27.76	43.50	-15.74	peak
4	179.9297	48.18	-16.38	31.80	43.50	-11.70	peak
5	297.0410	41.90	-14.14	27.76	46.00	-18.24	peak
6	958.5810	32.67	-1.55	31.12	46.00	-14.88	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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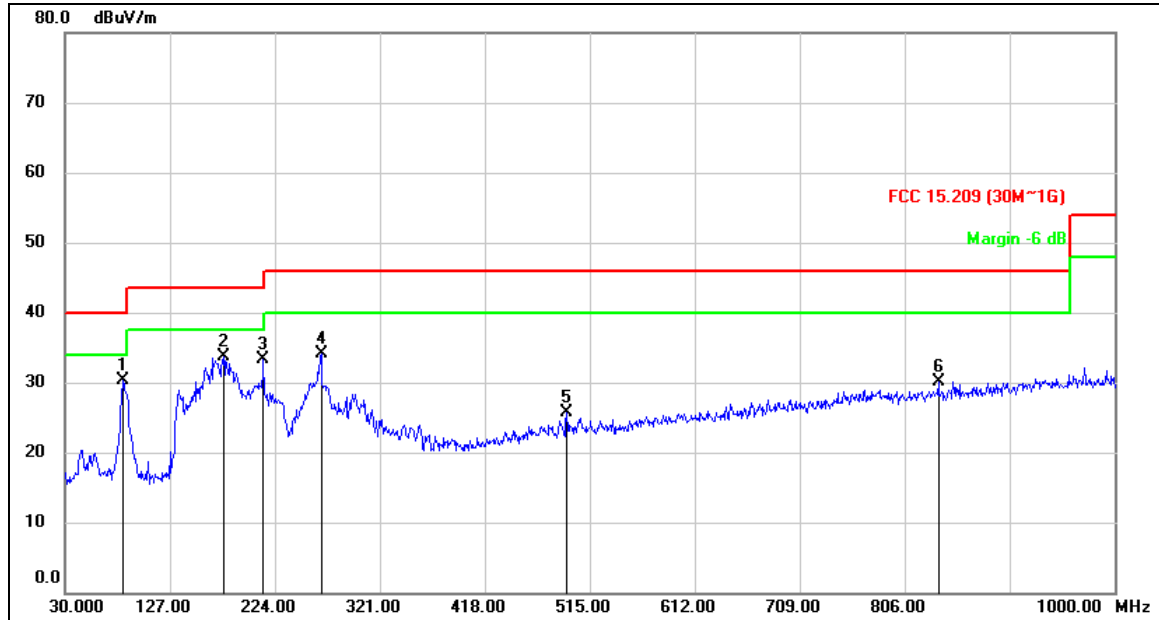
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Doc No: 17-EM-F0972 / 1.0



Smart phone (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	83.9643	50.80	-20.54	30.26	40.00	-9.74	peak
2	177.1167	49.81	-16.06	33.75	43.50	-9.75	peak
3	213.3300	50.98	-17.63	33.35	43.50	-10.15	peak
4	266.6800	49.32	-15.21	34.11	46.00	-11.89	peak
5	493.6600	35.13	-9.51	25.62	46.00	-20.38	peak
6	837.2663	33.67	-3.47	30.20	46.00	-15.80	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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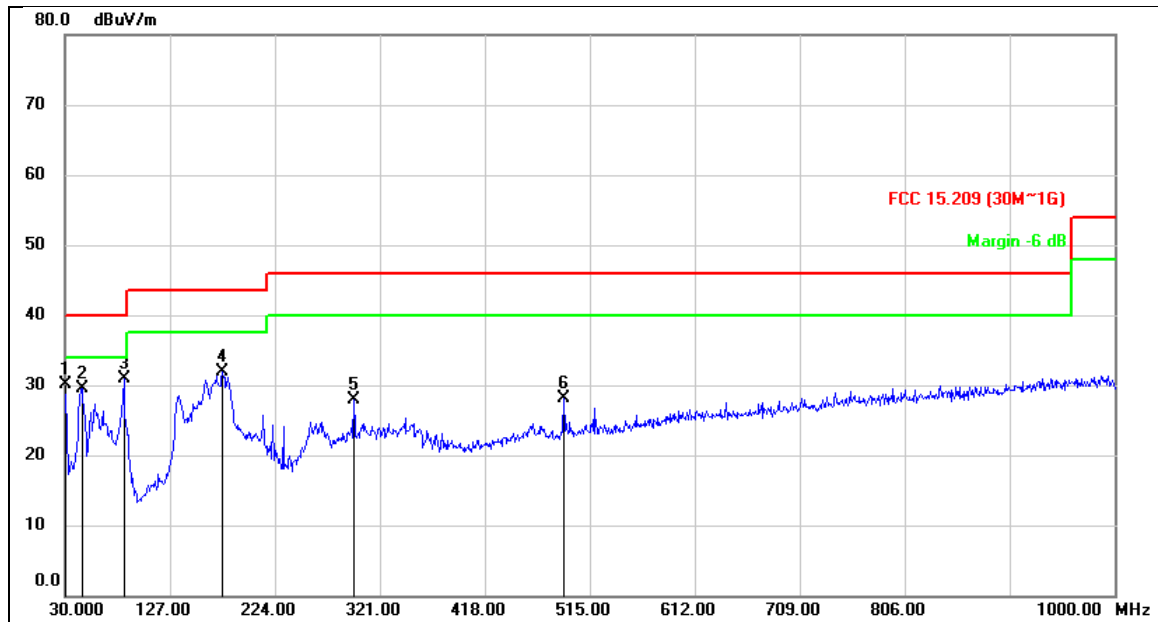
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	30.8083	46.60	-16.49	30.11	40.00	-9.89	peak
2	45.8757	44.68	-15.08	29.60	40.00	-10.40	peak
3	84.5787	51.55	-20.65	30.90	40.00	-9.10	peak
4	176.2760	47.90	-15.94	31.96	43.50	-11.54	peak
5	297.0087	41.98	-14.14	27.84	46.00	-18.16	peak
6	491.4937	37.70	-9.55	28.15	46.00	-17.85	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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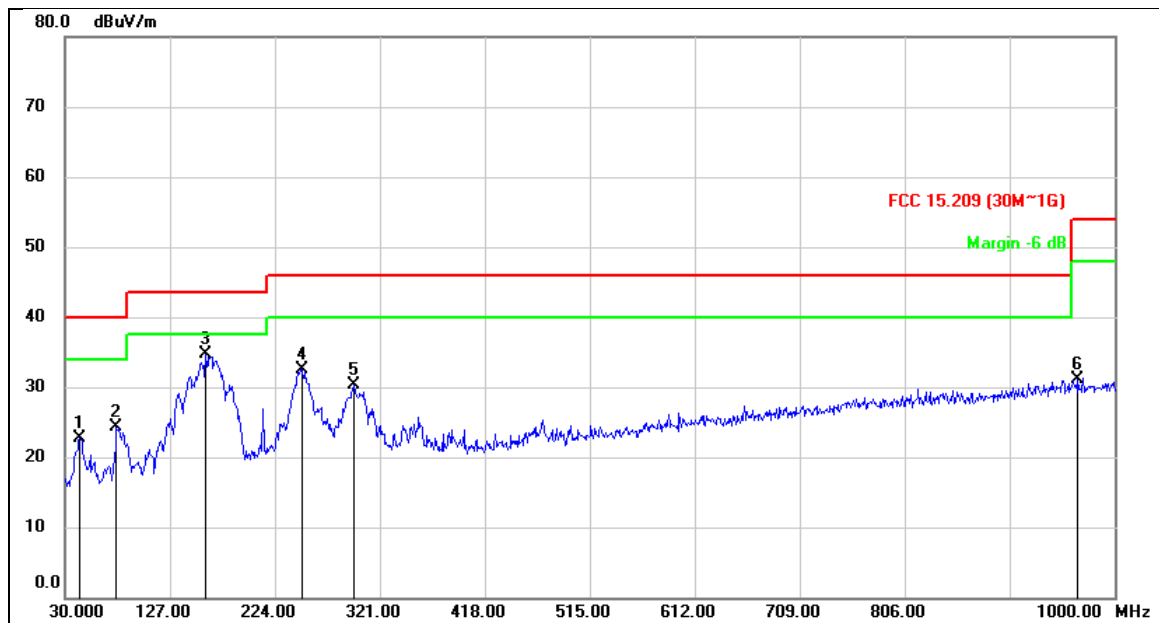


Operating Mode

Adapter 1

10W load (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	44.3560	38.00	-15.22	22.78	40.00	-17.22	peak
2	78.4677	43.62	-19.34	24.28	40.00	-15.72	peak
3	160.0123	49.76	-14.97	34.79	43.50	-8.71	peak
4	250.0283	48.21	-15.76	32.45	46.00	-13.55	peak
5	297.2027	44.51	-14.14	30.37	46.00	-15.63	peak
6	966.6320	32.50	-1.46	31.04	54.00	-22.96	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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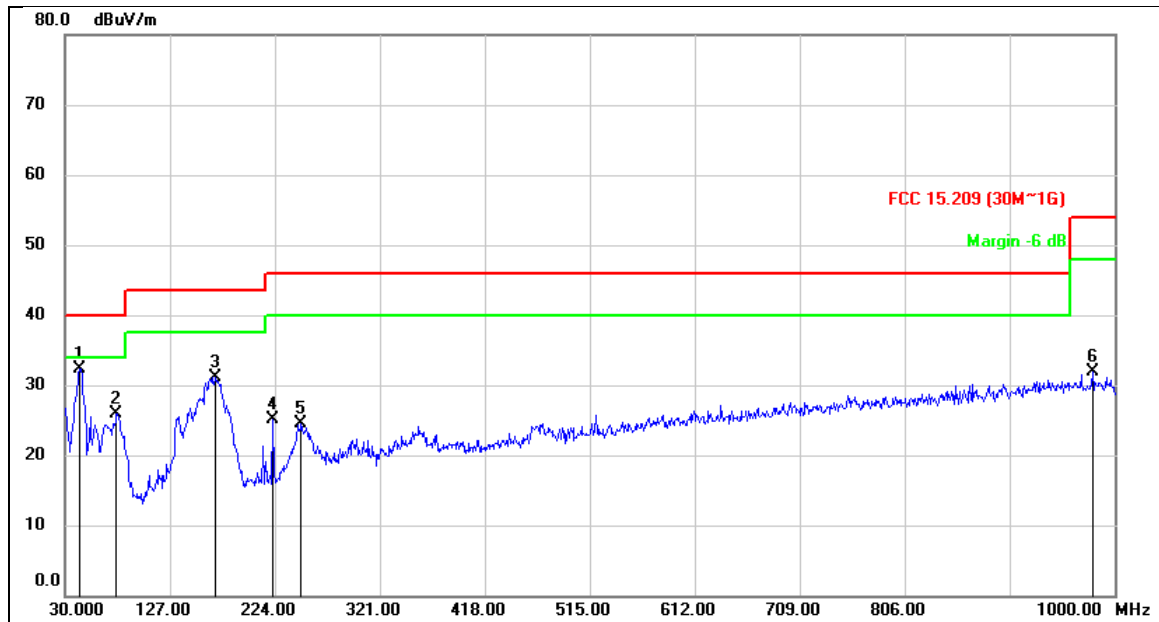
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	44.2913	47.56	-15.22	32.34	40.00	-7.66	peak
2	78.3382	45.22	-19.30	25.92	40.00	-14.08	peak
3	169.1949	46.27	-15.14	31.13	43.50	-12.37	peak
4	222.7390	42.59	-17.45	25.14	46.00	-20.86	peak
5	248.7673	40.30	-15.77	24.53	46.00	-21.47	peak
6	979.8563	33.25	-1.34	31.91	54.00	-22.09	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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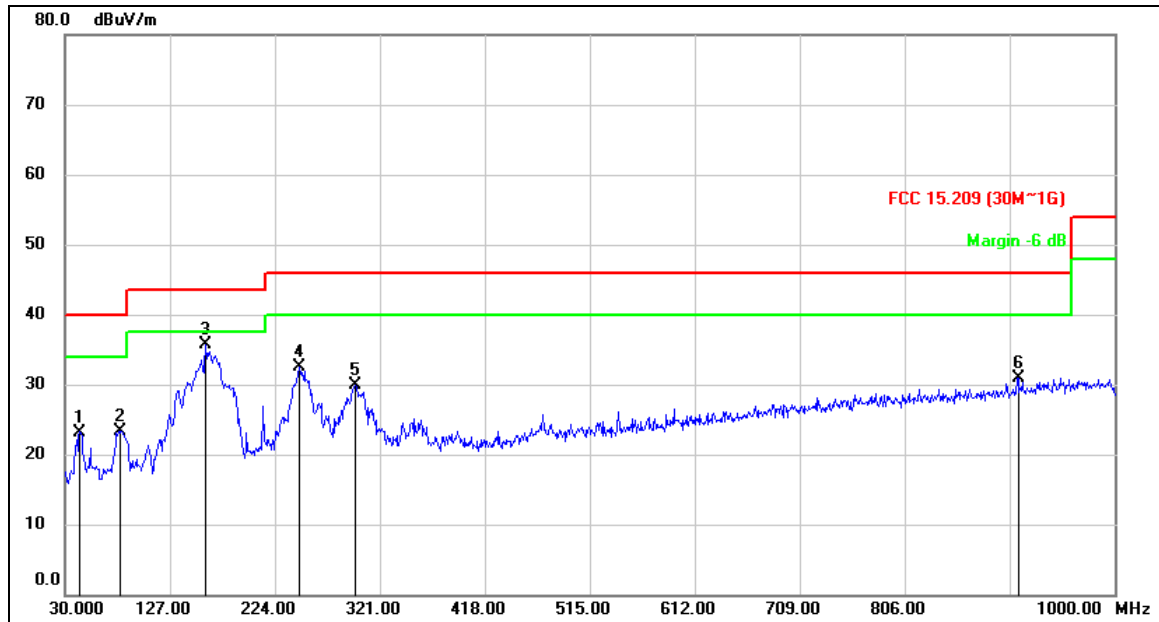
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10W load (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	43.5800	38.46	-15.26	23.20	40.00	-16.80	peak
2	81.2160	43.31	-20.01	23.30	40.00	-16.70	peak
3	160.0447	50.63	-14.97	35.66	43.50	-7.84	peak
4	246.6657	48.27	-15.80	32.47	46.00	-13.53	peak
5	298.2373	44.09	-14.13	29.96	46.00	-16.04	peak
6	910.7600	33.27	-2.32	30.95	46.00	-15.05	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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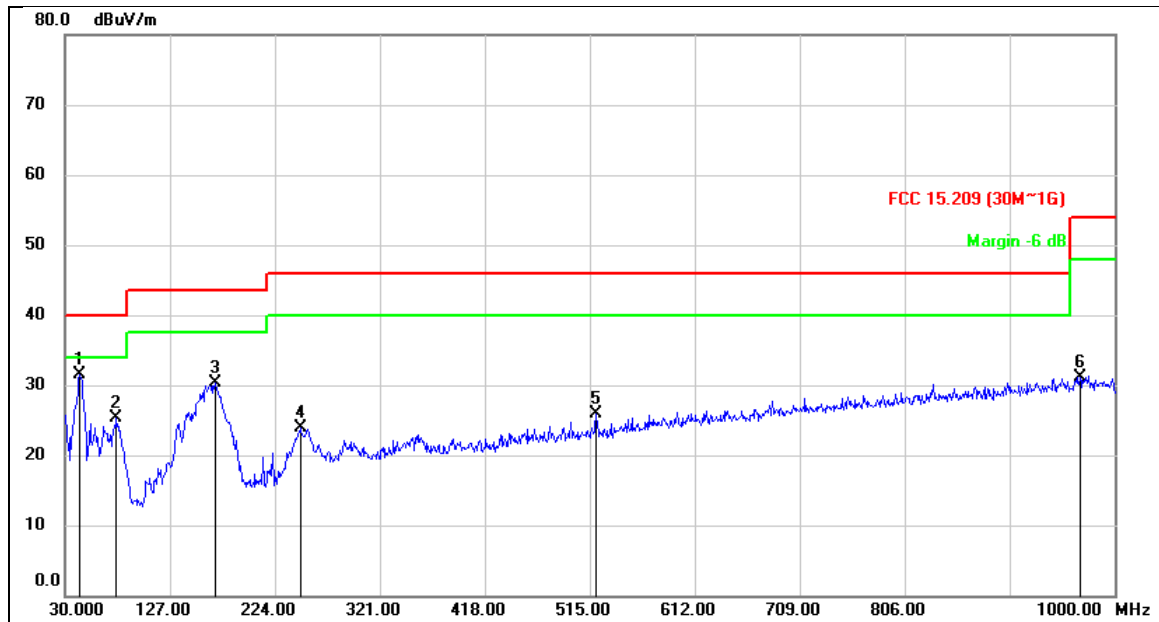
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Test report No. : 4789310719-US-R0-V0
Page : 72 of 120
Issued date : Jan. 16, 2020
FCC ID : K7SWIA001

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	43.5800	46.83	-15.26	31.57	40.00	-8.43	peak
2	78.1119	44.46	-19.24	25.22	40.00	-14.78	peak
3	169.1303	45.34	-15.13	30.21	43.50	-13.29	peak
4	248.0560	39.75	-15.79	23.96	46.00	-22.04	peak
5	521.0140	34.84	-8.97	25.87	46.00	-20.13	peak
6	968.9276	32.62	-1.45	31.17	54.00	-22.83	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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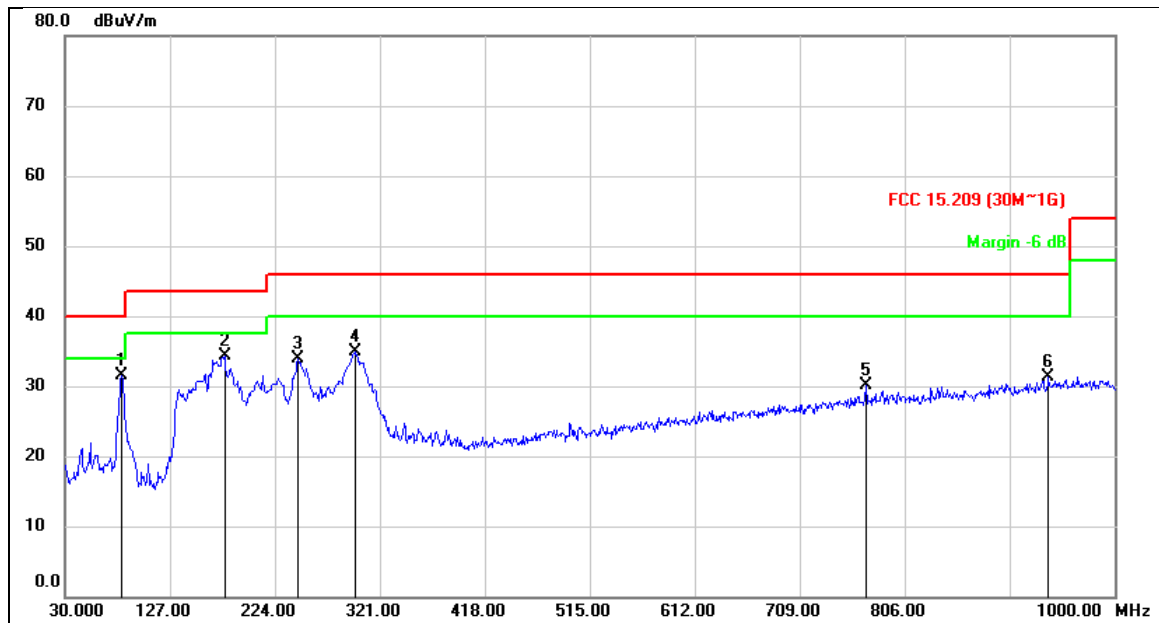
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Adapter 2

10W load (With 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	82.9297	51.86	-20.37	31.49	40.00	-8.51	peak
2	177.5693	50.34	-16.11	34.23	43.50	-9.27	peak
3	246.2777	49.63	-15.81	33.82	46.00	-12.18	peak
4	298.1403	49.06	-14.13	34.93	46.00	-11.07	peak
5	770.7243	34.30	-4.29	30.01	46.00	-15.99	peak
6	939.3427	33.02	-1.77	31.25	46.00	-14.75	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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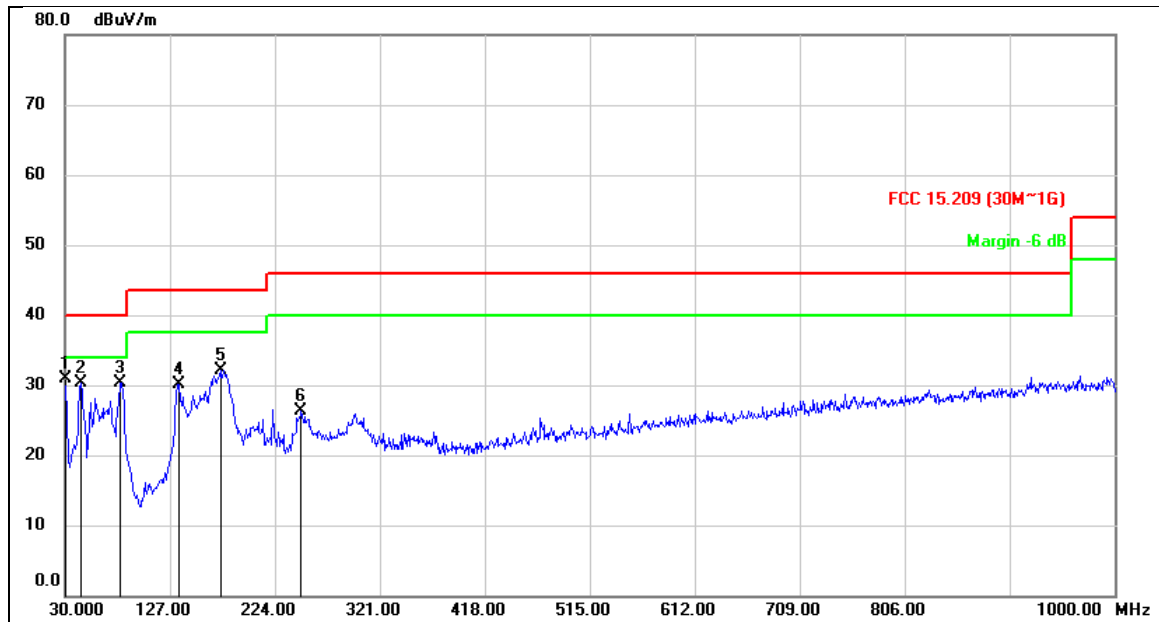
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EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.7760	47.35	-16.50	30.85	40.00	-9.15	peak
2	44.8087	45.51	-15.18	30.33	40.00	-9.67	peak
3	81.8627	50.41	-20.15	30.26	40.00	-9.74	peak
4	134.8570	46.54	-16.35	30.19	43.50	-13.31	peak
5	174.4653	47.74	-15.70	32.04	43.50	-11.46	peak
6	248.5087	42.04	-15.78	26.26	46.00	-19.74	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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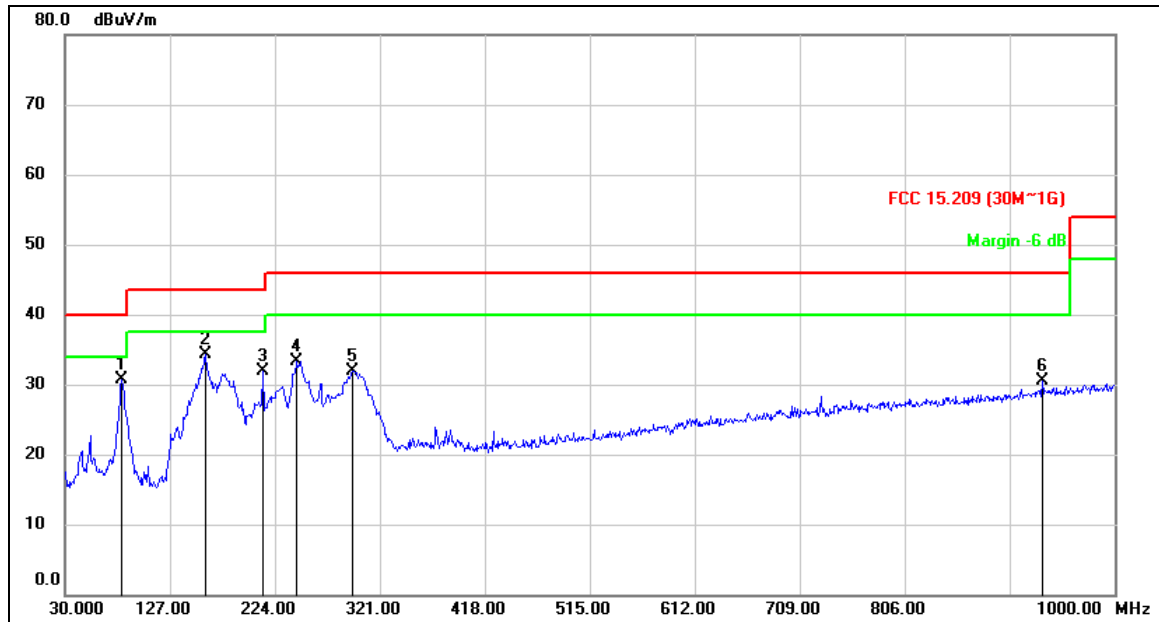
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10W load (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Horizontal



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	83.1237	51.20	-20.40	30.80	40.00	-9.20	peak
2	159.9800	49.34	-14.97	34.37	43.50	-9.13	peak
3	213.3300	49.61	-17.63	31.98	43.50	-11.52	peak
4	244.8873	49.22	-15.84	33.38	46.00	-12.62	peak
5	296.5237	46.02	-14.14	31.88	46.00	-14.12	peak
6	933.3286	32.40	-1.87	30.53	46.00	-15.47	peak

Remarks:

- Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
- Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
- Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
- The peak result complies with QP limit, QP result is deemed to comply with QP limit.
- The other emission levels were very low against the limit.

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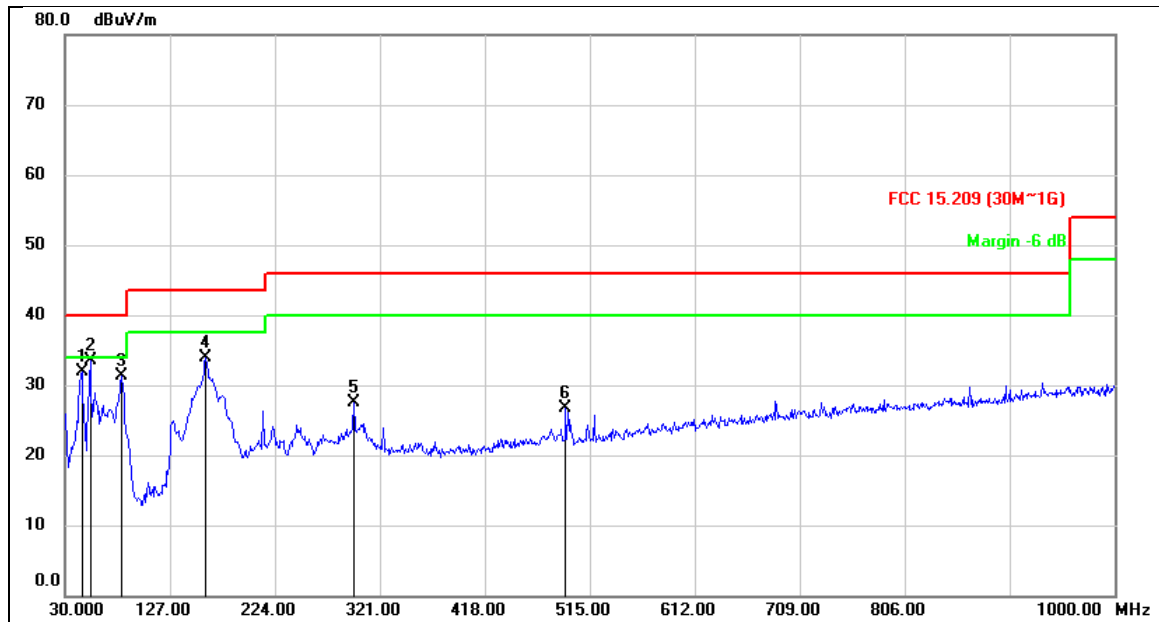
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Doc No: 17-EM-F0972 / 1.0



EUT Test Condition		Measurement Detail	
Frequency Range	30MHz ~ 1 GHz	Antenna Polarity	Vertical



Notation	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	45.5847	46.94	-15.12	31.82	40.00	-8.18	peak
2	53.3123	48.67	-15.11	33.56	40.00	-6.44	peak
3	83.0589	51.71	-20.39	31.32	40.00	-8.68	peak
4	159.9800	48.95	-14.97	33.98	43.50	-9.52	peak
5	297.0087	41.65	-14.14	27.51	46.00	-18.49	peak
6	492.9810	36.25	-9.53	26.72	46.00	-19.28	peak

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The peak result complies with QP limit, QP result is deemed to comply with QP limit.
5. The other emission levels were very low against the limit.

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9.2. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	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 of 0.15 to 0.50MHz.

Test Procedures

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

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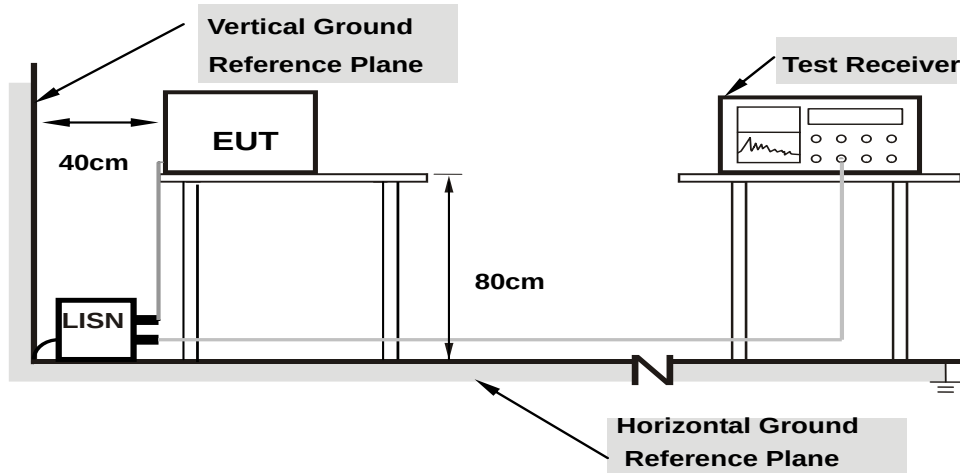
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Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

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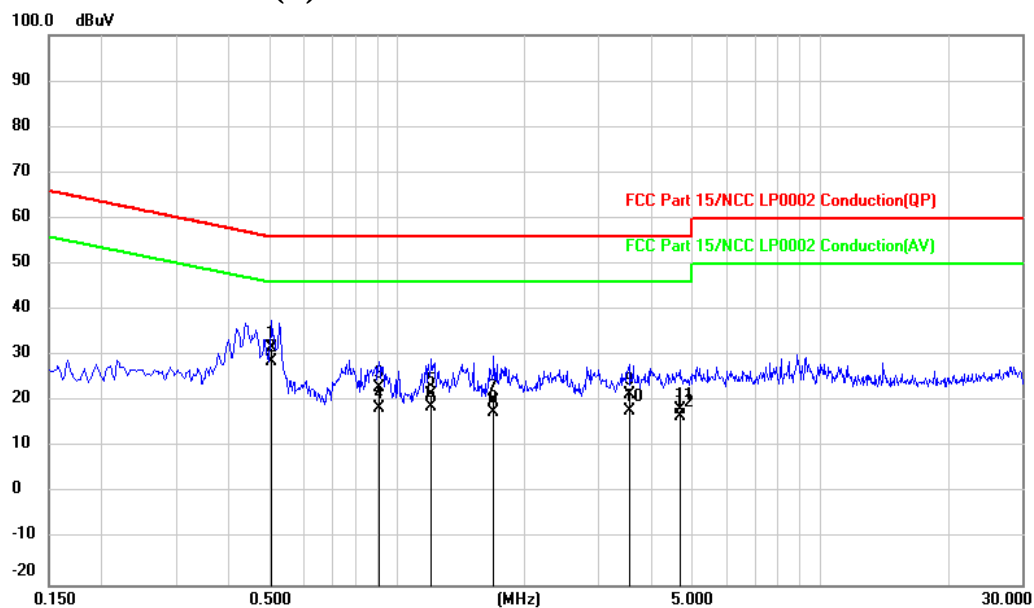
Test Data

Standby Mode

Adapter 1

EUT Test Condition		Measurement Detail	
Mode	Standby Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.5066	12.19	19.61	31.80	56.00	-24.20	QP
2	0.5066	9.21	19.61	28.82	46.00	-17.18	AVG
3	0.9062	3.30	19.62	22.92	56.00	-33.08	QP
4	0.9062	-1.15	19.62	18.47	46.00	-27.53	AVG
5	1.2059	1.91	19.62	21.53	56.00	-34.47	QP
6	1.2059	-0.82	19.62	18.80	46.00	-27.20	AVG
7	1.6940	0.36	19.63	19.99	56.00	-36.01	QP
8	1.6940	-1.86	19.63	17.77	46.00	-28.23	AVG
9	3.5298	1.95	19.68	21.63	56.00	-34.37	QP
10	3.5298	-1.86	19.68	17.82	46.00	-28.18	AVG
11	4.6560	-1.40	19.69	18.29	56.00	-37.71	QP
12	4.6560	-3.09	19.69	16.60	46.00	-29.40	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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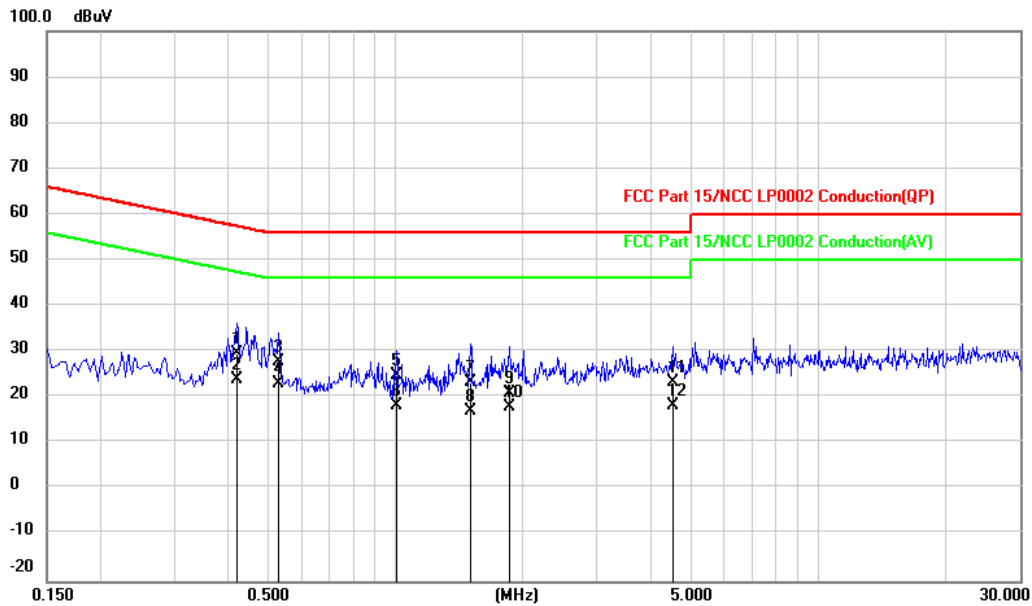
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Phase of Power : Neutral (N)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.4215	10.13	19.62	29.75	57.42	-27.67	QP
2	0.4215	4.45	19.62	24.07	47.42	-23.35	AVG
3	0.5299	8.30	19.62	27.92	56.00	-28.08	QP
4	0.5299	3.58	19.62	23.20	46.00	-22.80	AVG
5	1.0060	5.09	19.62	24.71	56.00	-31.29	QP
6	1.0060	-1.30	19.62	18.32	46.00	-27.68	AVG
7	1.5108	3.63	19.64	23.27	56.00	-32.73	QP
8	1.5108	-2.53	19.64	17.11	46.00	-28.89	AVG
9	1.8620	1.32	19.65	20.97	56.00	-35.03	QP
10	1.8620	-1.70	19.65	17.95	46.00	-28.05	AVG
11	4.5312	3.70	19.71	23.41	56.00	-32.59	QP
12	4.5312	-1.52	19.71	18.19	46.00	-27.81	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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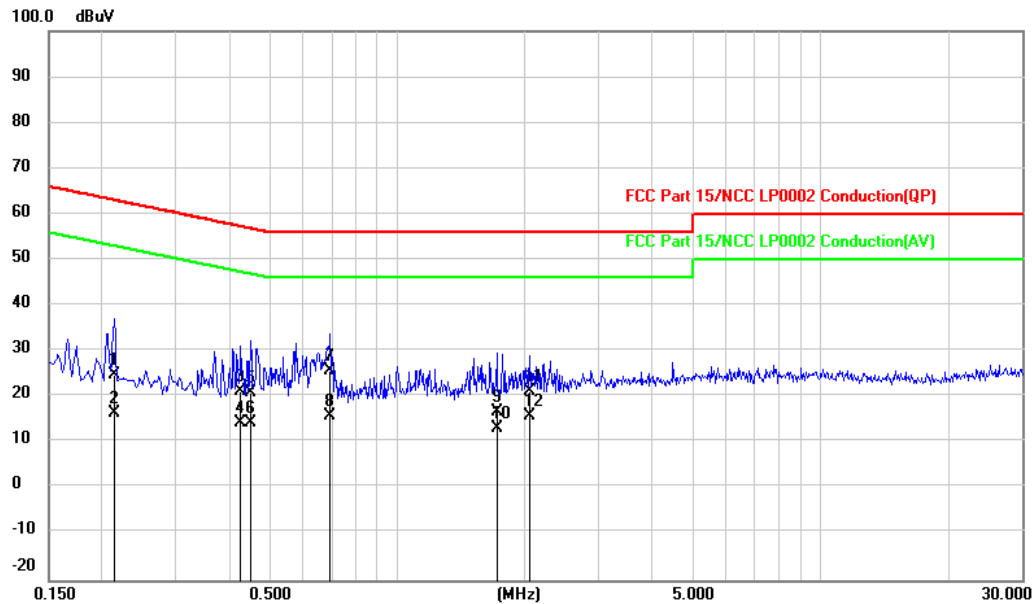
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Adapter 2

EUT Test Condition		Measurement Detail	
Mode	Standby Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.2140	5.36	19.61	24.97	63.05	-38.08	QP
2	0.2140	-3.09	19.61	16.52	53.05	-36.53	AVG
3	0.4260	1.71	19.61	21.32	57.33	-36.01	QP
4	0.4260	-5.31	19.61	14.30	47.33	-33.03	AVG
5	0.4500	1.46	19.61	21.07	56.88	-35.81	QP
6	0.4500	-5.40	19.61	14.21	46.88	-32.67	AVG
7	0.6940	6.20	19.61	25.81	56.00	-30.19	QP
8	0.6940	-3.76	19.61	15.85	46.00	-30.15	AVG
9	1.7220	-2.98	19.63	16.65	56.00	-39.35	QP
10	1.7220	-6.54	19.63	13.09	46.00	-32.91	AVG
11	2.0620	1.71	19.63	21.34	56.00	-34.66	QP
12	2.0620	-3.86	19.63	15.77	46.00	-30.23	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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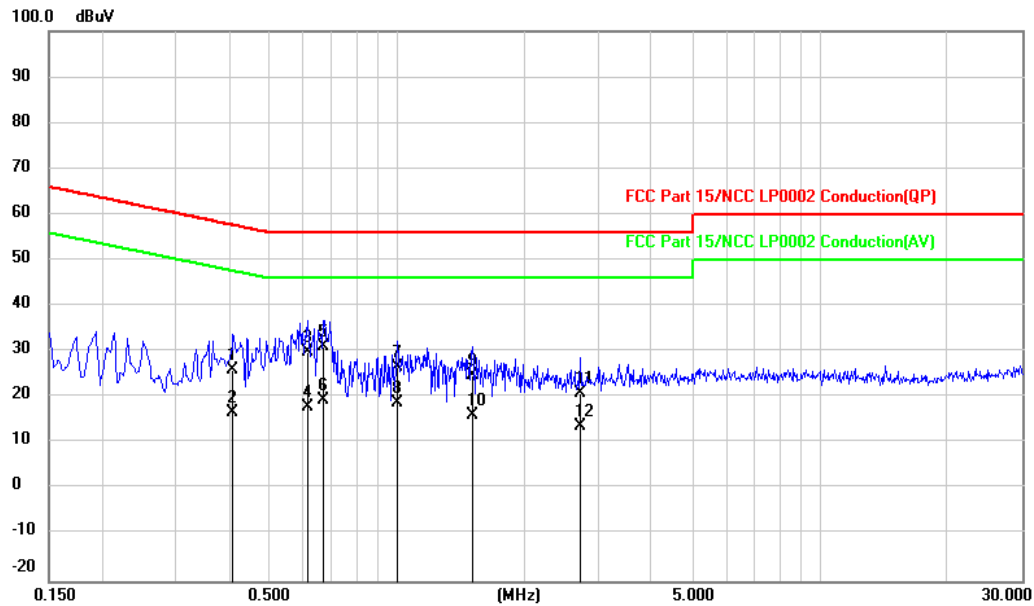
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Phase of Power : Neutral (N)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.4100	6.53	19.62	26.15	57.65	-31.50	QP
2	0.4100	-2.91	19.62	16.71	47.65	-30.94	AVG
3	0.6140	10.29	19.62	29.91	56.00	-26.09	QP
4	0.6140	-1.68	19.62	17.94	46.00	-28.06	AVG
5	0.6700	11.58	19.62	31.20	56.00	-24.80	QP
6	0.6700	-0.13	19.62	19.49	46.00	-26.51	AVG
7	1.0020	7.11	19.62	26.73	56.00	-29.27	QP
8	1.0020	-0.83	19.62	18.79	46.00	-27.21	AVG
9	1.5046	5.08	19.63	24.71	56.00	-31.29	QP
10	1.5046	-3.52	19.63	16.11	46.00	-29.89	AVG
11	2.7139	1.15	19.66	20.81	56.00	-35.19	QP
12	2.7139	-6.02	19.66	13.64	46.00	-32.36	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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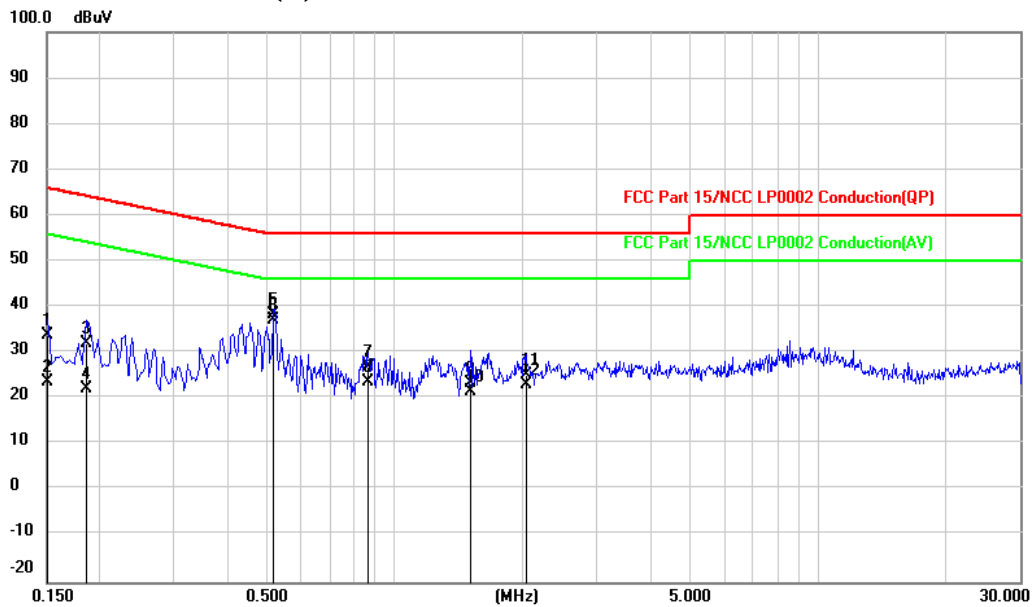
Operating Mode

Adapter 1

Smart phone (With 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1501	14.33	19.62	33.95	65.99	-32.04	QP
2	0.1501	3.91	19.62	23.53	55.99	-32.46	AVG
3	0.1860	12.37	19.61	31.98	64.21	-32.23	QP
4	0.1860	2.40	19.61	22.01	54.21	-32.20	AVG
5	0.5168	18.75	19.61	38.36	56.00	-17.64	QP
6	0.5168	17.49	19.61	37.10	46.00	-8.90	AVG
7	0.8620	7.29	19.62	26.91	56.00	-29.09	QP
8	0.8620	4.15	19.62	23.77	46.00	-22.23	AVG
9	1.5100	3.82	19.63	23.45	56.00	-32.55	QP
10	1.5100	1.93	19.63	21.56	46.00	-24.44	AVG
11	2.0319	5.52	19.63	25.15	56.00	-30.85	QP
12	2.0319	3.31	19.63	22.94	46.00	-23.06	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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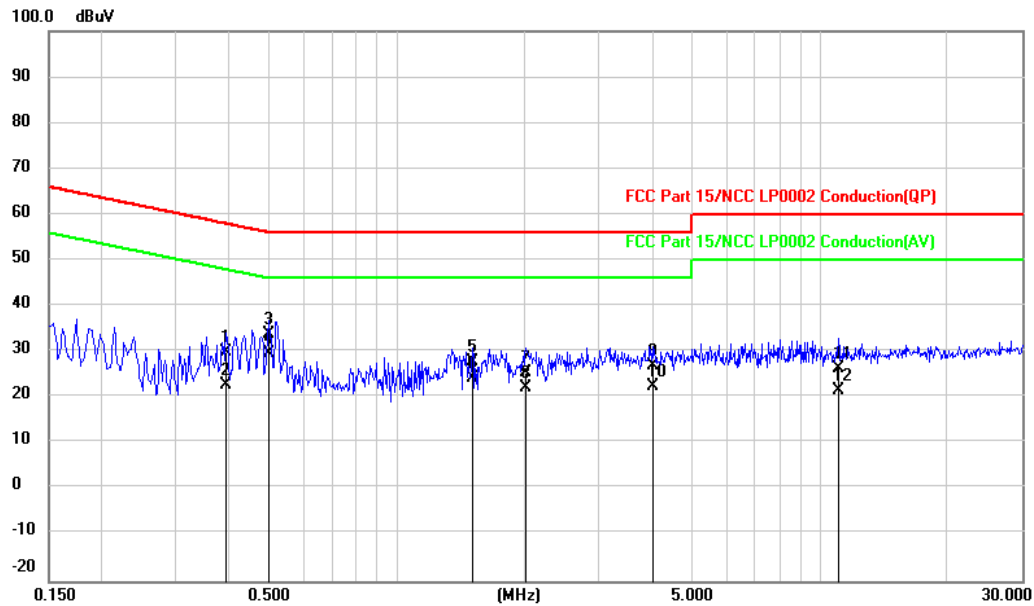
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Phase of Power : Neutral (N)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.3940	10.23	19.62	29.85	57.98	-28.13	QP
2	0.3940	3.17	19.62	22.79	47.98	-25.19	AVG
3	0.4981	14.09	19.62	33.71	56.03	-22.32	QP
4	0.4981	9.96	19.62	29.58	46.03	-16.45	AVG
5	1.5098	8.15	19.63	27.78	56.00	-28.22	QP
6	1.5098	4.54	19.63	24.17	46.00	-21.83	AVG
7	2.0140	5.86	19.65	25.51	56.00	-30.49	QP
8	2.0140	2.41	19.65	22.06	46.00	-23.94	AVG
9	4.0263	7.37	19.69	27.06	56.00	-28.94	QP
10	4.0263	2.72	19.69	22.41	46.00	-23.59	AVG
11	11.0700	6.59	19.79	26.38	60.00	-33.62	QP
12	11.0700	1.81	19.79	21.60	50.00	-28.40	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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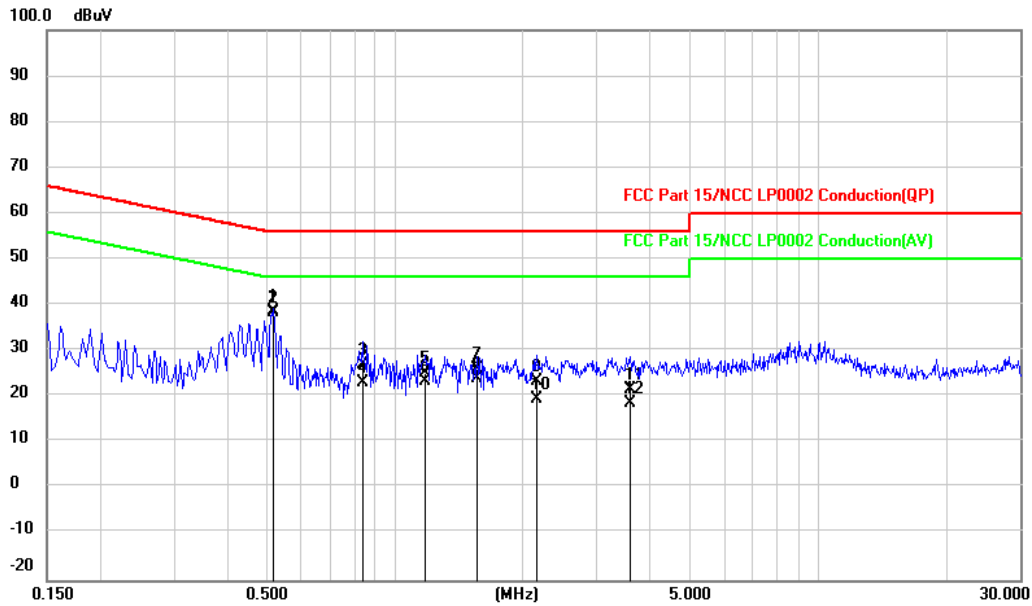
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Smart phone (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.5144	19.04	19.61	38.65	56.00	-17.35	QP
2	0.5144	18.67	19.61	38.28	46.00	-7.72	AVG
3	0.8380	7.23	19.62	26.85	56.00	-29.15	QP
4	0.8380	3.43	19.62	23.05	46.00	-22.95	AVG
5	1.1820	5.65	19.62	25.27	56.00	-30.73	QP
6	1.1820	3.77	19.62	23.39	46.00	-22.61	AVG
7	1.5660	6.31	19.63	25.94	56.00	-30.06	QP
8	1.5660	4.37	19.63	24.00	46.00	-22.00	AVG
9	2.1660	3.80	19.63	23.43	56.00	-32.57	QP
10	2.1660	-0.11	19.63	19.52	46.00	-26.48	AVG
11	3.6020	2.02	19.68	21.70	56.00	-34.30	QP
12	3.6020	-1.03	19.68	18.65	46.00	-27.35	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

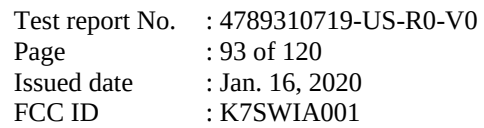
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The graph shows the FCC Part 15/NCC LP0002 Conduction limits. The red line represents the (QP) limit, and the green line represents the (AV) limit. Both limits decrease from 0.150 MHz to 0.500 MHz and then remain constant. The (QP) limit is 65 dBuV from 0.150 to 0.500 MHz and 60 dBuV from 0.500 to 30.000 MHz. The (AV) limit is 55 dBuV from 0.150 to 0.500 MHz and 50 dBuV from 0.500 to 30.000 MHz. The blue line shows the measured conduction, which is below the limits. There are several peaks marked with 'X' and labeled with numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1539	15.98	19.62	35.60	65.79	-30.19	QP
2	0.1539	4.13	19.62	23.75	55.79	-32.04	AVG
3	0.4860	16.30	19.62	35.92	56.24	-20.32	QP
4	0.4860	10.60	19.62	30.22	46.24	-16.02	AVG
5	0.5070	17.24	19.62	36.86	56.00	-19.14	QP
6	0.5070	14.73	19.62	34.35	46.00	-11.65	AVG
7	0.8820	4.73	19.62	24.35	56.00	-31.65	QP
8	0.8820	-1.90	19.62	17.72	46.00	-28.28	AVG
9	1.4900	10.06	19.63	29.69	56.00	-26.31	QP
10	1.4900	5.84	19.63	25.47	46.00	-20.53	AVG
11	4.9260	7.62	19.72	27.34	56.00	-28.66	QP
12	4.9260	2.94	19.72	22.66	46.00	-23.34	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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Doc No: 17-EM-F0972 / 1.0

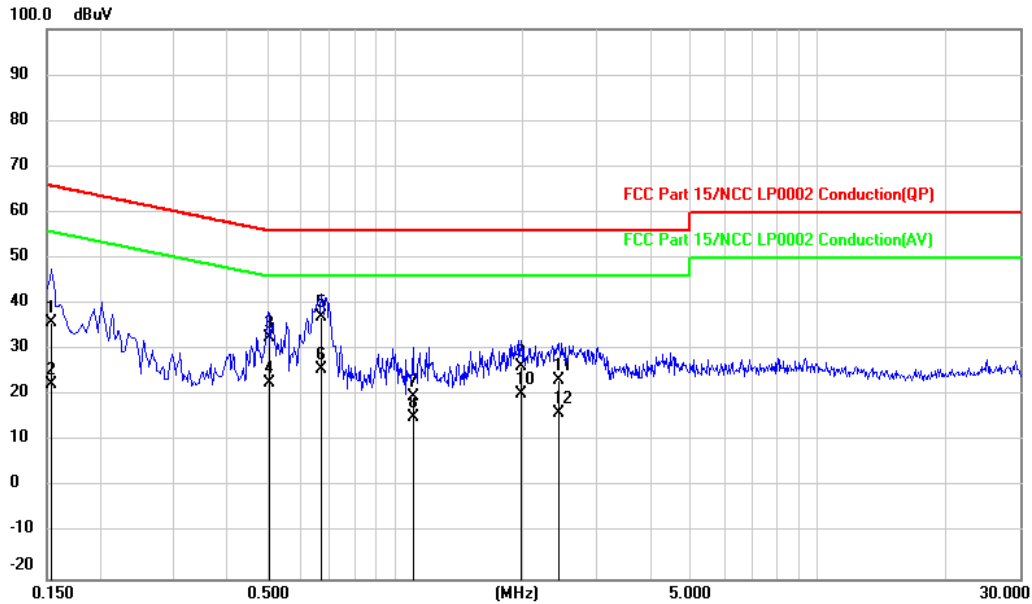


Adapter 2

Smart phone (With 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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Doc No: 17-EM-F0972 / 1.0



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1539	16.37	19.62	35.99	65.79	-29.80	QP
2	0.1539	2.91	19.62	22.53	55.79	-33.26	AVG
3	0.5024	13.15	19.61	32.76	56.00	-23.24	QP
4	0.5024	3.23	19.61	22.84	46.00	-23.16	AVG
5	0.6707	17.40	19.61	37.01	56.00	-18.99	QP
6	0.6707	6.12	19.61	25.73	46.00	-20.27	AVG
7	1.1019	0.28	19.62	19.90	56.00	-36.10	QP
8	1.1019	-4.23	19.62	15.39	46.00	-30.61	AVG
9	1.9900	6.59	19.63	26.22	56.00	-29.78	QP
10	1.9900	0.83	19.63	20.46	46.00	-25.54	AVG
11	2.4420	3.67	19.64	23.31	56.00	-32.69	QP
12	2.4420	-3.50	19.64	16.14	46.00	-29.86	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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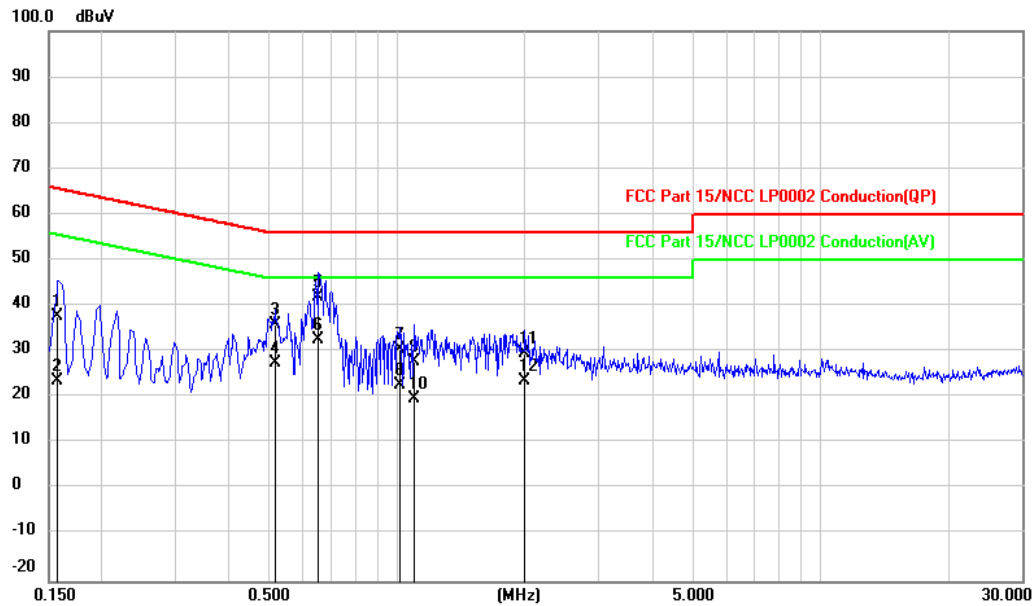
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Doc No: 17-EM-F0972 / 1.0



Phase of Power : Neutral (N)



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Doc No: 17-EM-F0972 / 1.0



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FCC ID : K7SWIA001

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1580	18.09	19.62	37.71	65.57	-27.86	QP
2	0.1580	3.99	19.62	23.61	55.57	-31.96	AVG
3	0.5140	16.35	19.62	35.97	56.00	-20.03	QP
4	0.5140	7.91	19.62	27.53	46.00	-18.47	AVG
5	0.6540	22.30	19.62	41.92	56.00	-14.08	QP
6	0.6540	13.10	19.62	32.72	46.00	-13.28	AVG
7	1.0180	10.82	19.62	30.44	56.00	-25.56	QP
8	1.0180	3.24	19.62	22.86	46.00	-23.14	AVG
9	1.0940	8.23	19.62	27.85	56.00	-28.15	QP
10	1.0940	0.25	19.62	19.87	46.00	-26.13	AVG
11	2.0105	9.94	19.65	29.59	56.00	-26.41	QP
12	2.0105	3.93	19.65	23.58	46.00	-22.42	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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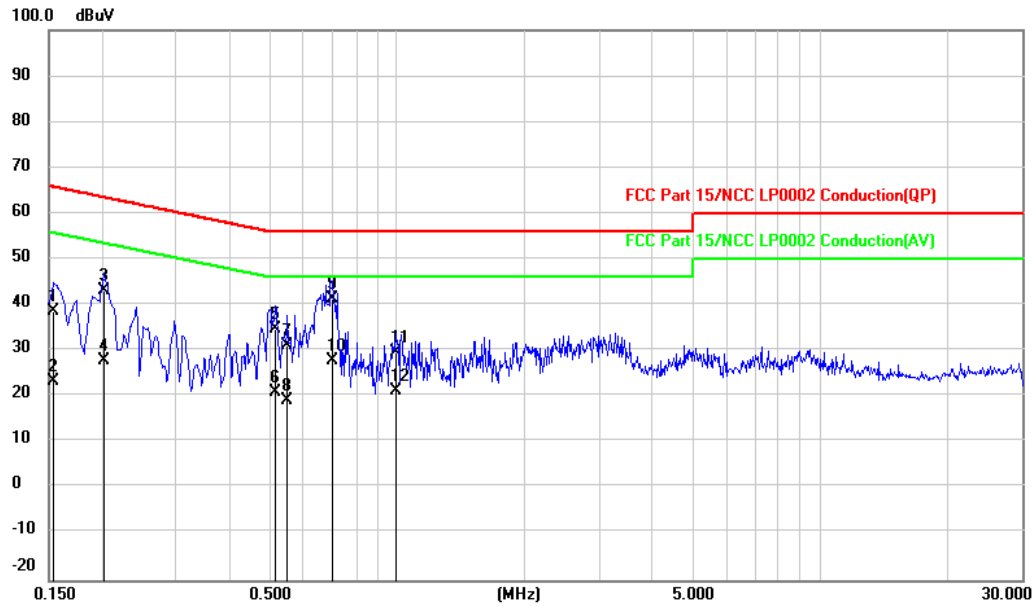
Doc No: 17-EM-F0972 / 1.0



Smart phone (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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Test report No. : 4789310719-US-R0-V0
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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1541	18.89	19.62	38.51	65.78	-27.27	QP
2	0.1541	3.84	19.62	23.46	55.78	-32.32	AVG
3	0.2020	23.69	19.61	43.30	63.53	-20.23	QP
4	0.2020	8.19	19.61	27.80	53.53	-25.73	AVG
5	0.5180	15.23	19.61	34.84	56.00	-21.16	QP
6	0.5180	1.37	19.61	20.98	46.00	-25.02	AVG
7	0.5503	11.48	19.61	31.09	56.00	-24.91	QP
8	0.5503	-0.38	19.61	19.23	46.00	-26.77	AVG
9	0.7019	21.78	19.61	41.39	56.00	-14.61	QP
10	0.7019	8.27	19.61	27.88	46.00	-18.12	AVG
11	0.9940	10.13	19.62	29.75	56.00	-26.25	QP
12	0.9940	1.61	19.62	21.23	46.00	-24.77	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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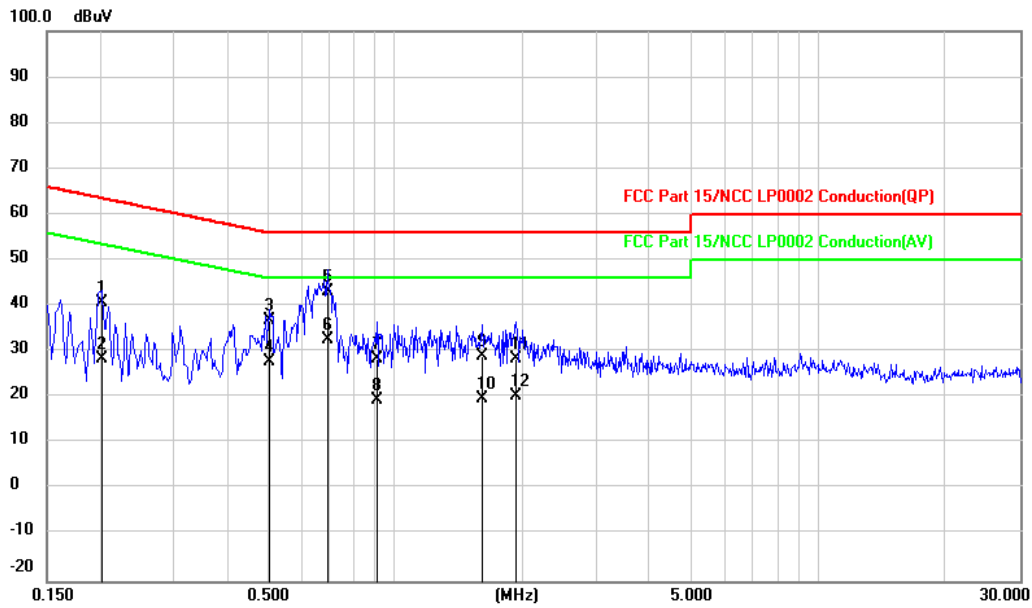
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Phase of Power : Neutral (N)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.2020	21.09	19.62	40.71	63.53	-22.82	QP
2	0.2020	8.74	19.62	28.36	53.53	-25.17	AVG
3	0.5060	17.28	19.62	36.90	56.00	-19.10	QP
4	0.5060	8.15	19.62	27.77	46.00	-18.23	AVG
5	0.6900	23.63	19.62	43.25	56.00	-12.75	QP
6	0.6900	13.15	19.62	32.77	46.00	-13.23	AVG
7	0.9036	8.97	19.62	28.59	56.00	-27.41	QP
8	0.9036	-0.08	19.62	19.54	46.00	-26.46	AVG
9	1.6060	9.36	19.64	29.00	56.00	-27.00	QP
10	1.6060	0.08	19.64	19.72	46.00	-26.28	AVG
11	1.9380	8.72	19.65	28.37	56.00	-27.63	QP
12	1.9380	0.83	19.65	20.48	46.00	-25.52	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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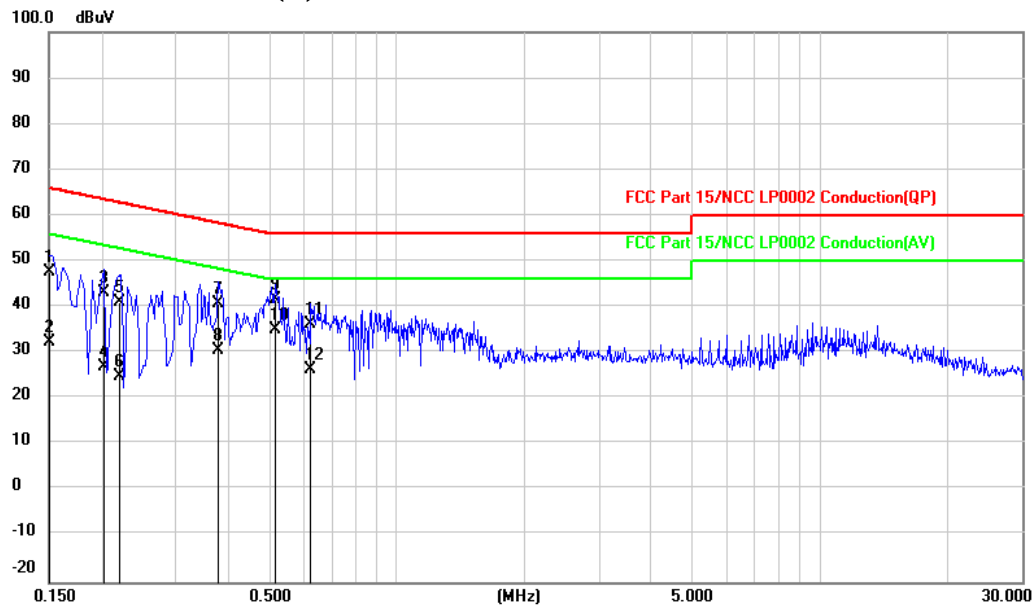
Operating Mode

Adapter 1

10W load (With 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1502	28.12	19.62	47.74	65.99	-18.25	QP
2	0.1502	12.85	19.62	32.47	55.99	-23.52	AVG
3	0.2020	23.53	19.61	43.14	63.53	-20.39	QP
4	0.2020	7.22	19.61	26.83	53.53	-26.70	AVG
5	0.2220	21.52	19.61	41.13	62.74	-21.61	QP
6	0.2220	5.12	19.61	24.73	52.74	-28.01	AVG
7	0.3780	21.25	19.61	40.86	58.32	-17.46	QP
8	0.3780	10.97	19.61	30.58	48.32	-17.74	AVG
9	0.5140	22.03	19.61	41.64	56.00	-14.36	QP
10	0.5140	15.37	19.61	34.98	46.00	-11.02	AVG
11	0.6260	16.65	19.61	36.26	56.00	-19.74	QP
12	0.6260	6.84	19.61	26.45	46.00	-19.55	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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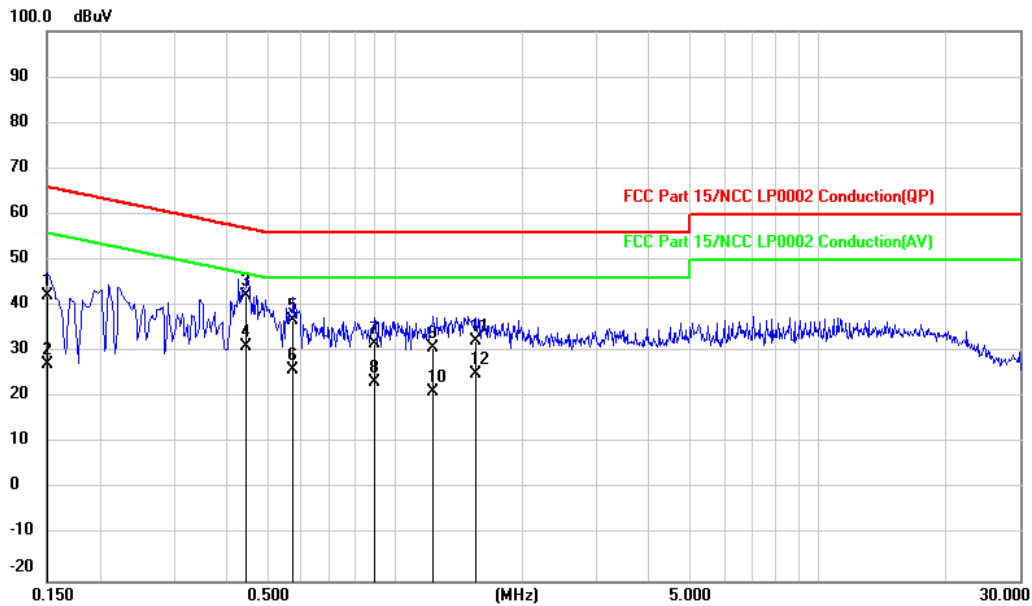
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Phase of Power : Neutral (N)



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Test report No. : 4789310719-US-R0-V0
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FCC ID : K7SWIA001

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1510	22.54	19.62	42.16	65.94	-23.78	QP
2	0.1510	7.66	19.62	27.28	55.94	-28.66	AVG
3	0.4460	22.49	19.62	42.11	56.95	-14.84	QP
4	0.4460	11.66	19.62	31.28	46.95	-15.67	AVG
5	0.5740	17.33	19.62	36.95	56.00	-19.05	QP
6	0.5740	6.49	19.62	26.11	46.00	-19.89	AVG
7	0.8980	12.07	19.62	31.69	56.00	-24.31	QP
8	0.8980	3.60	19.62	23.22	46.00	-22.78	AVG
9	1.2340	11.28	19.62	30.90	56.00	-25.10	QP
10	1.2340	1.68	19.62	21.30	46.00	-24.70	AVG
11	1.5460	12.70	19.64	32.34	56.00	-23.66	QP
12	1.5460	5.37	19.64	25.01	46.00	-20.99	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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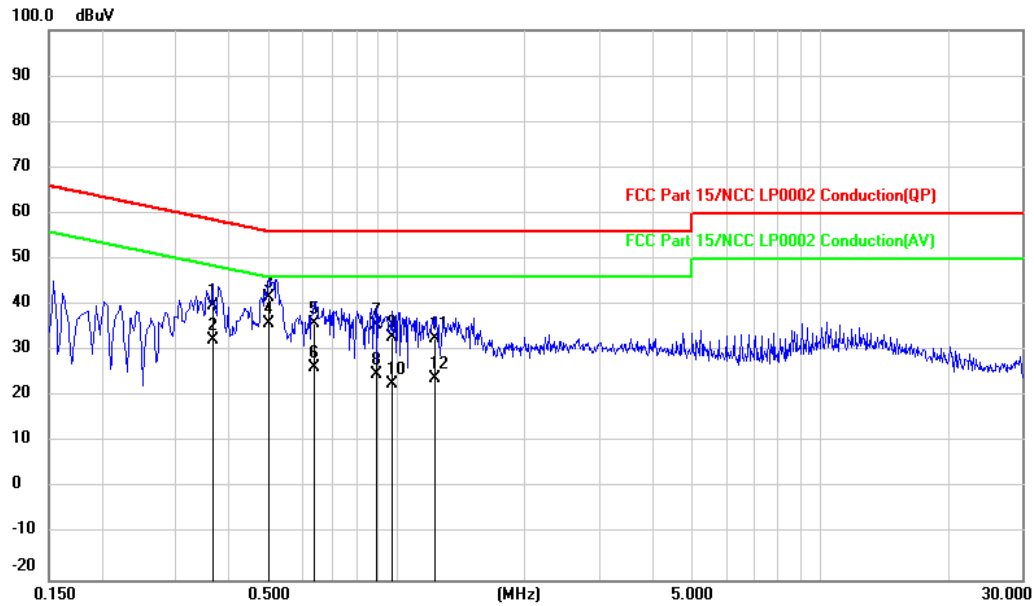
Doc No: 17-EM-F0972 / 1.0



10W load (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.3660	20.14	19.61	39.75	58.59	-18.84	QP
2	0.3660	12.82	19.61	32.43	48.59	-16.16	AVG
3	0.4980	21.98	19.61	41.59	56.03	-14.44	QP
4	0.4980	16.29	19.61	35.90	46.03	-10.13	AVG
5	0.6359	16.26	19.61	35.87	56.00	-20.13	QP
6	0.6359	6.89	19.61	26.50	46.00	-19.50	AVG
7	0.8940	15.92	19.62	35.54	56.00	-20.46	QP
8	0.8940	5.25	19.62	24.87	46.00	-21.13	AVG
9	0.9700	13.21	19.62	32.83	56.00	-23.17	QP
10	0.9700	3.10	19.62	22.72	46.00	-23.28	AVG
11	1.2340	12.91	19.62	32.53	56.00	-23.47	QP
12	1.2340	4.24	19.62	23.86	46.00	-22.14	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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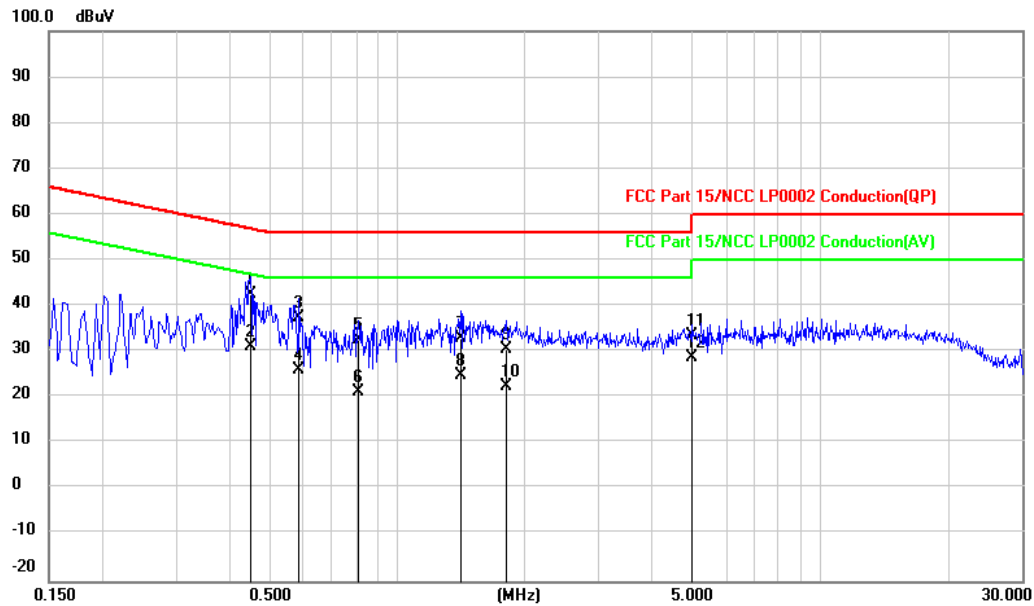
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Doc No: 17-EM-F0972 / 1.0



Phase of Power : Neutral (N)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.4500	22.88	19.62	42.50	56.88	-14.38	QP
2	0.4500	11.60	19.62	31.22	46.88	-15.66	AVG
3	0.5860	17.77	19.62	37.39	56.00	-18.61	QP
4	0.5860	6.41	19.62	26.03	46.00	-19.97	AVG
5	0.8100	12.93	19.62	32.55	56.00	-23.45	QP
6	0.8100	1.64	19.62	21.26	46.00	-24.74	AVG
7	1.4180	13.30	19.63	32.93	56.00	-23.07	QP
8	1.4180	5.17	19.63	24.80	46.00	-21.20	AVG
9	1.8180	10.98	19.65	30.63	56.00	-25.37	QP
10	1.8180	2.94	19.65	22.59	46.00	-23.41	AVG
11	4.9822	13.96	19.72	33.68	56.00	-22.32	QP
12	4.9822	8.93	19.72	28.65	46.00	-17.35	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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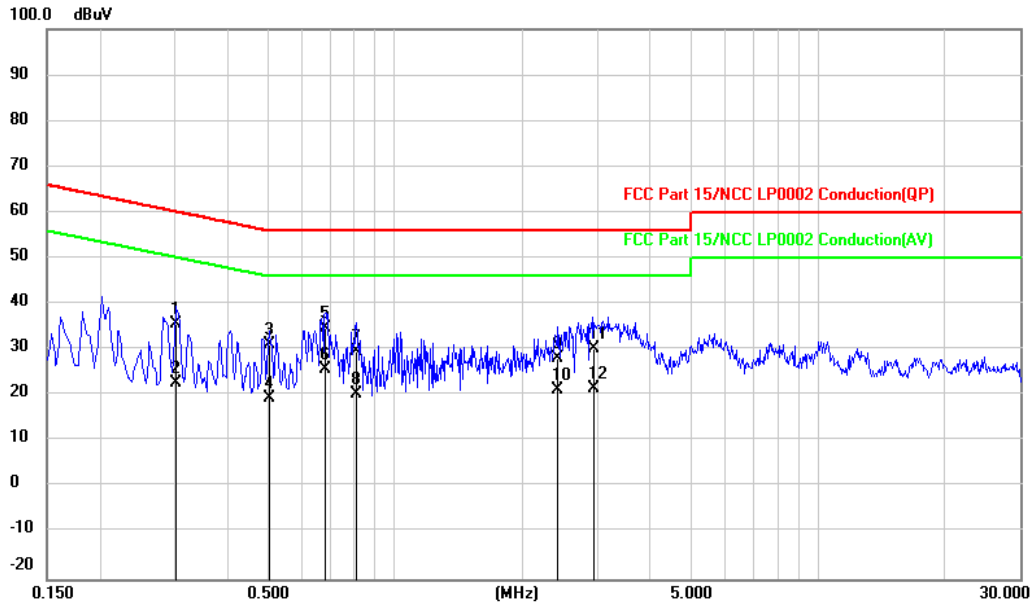


Adapter 2

10W load (With 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.3020	15.97	19.61	35.58	60.19	-24.61	QP
2	0.3020	3.17	19.61	22.78	50.19	-27.41	AVG
3	0.5060	11.41	19.61	31.02	56.00	-24.98	QP
4	0.5060	-0.24	19.61	19.37	46.00	-26.63	AVG
5	0.6860	15.00	19.61	34.61	56.00	-21.39	QP
6	0.6860	6.19	19.61	25.80	46.00	-20.20	AVG
7	0.8100	10.05	19.62	29.67	56.00	-26.33	QP
8	0.8100	0.62	19.62	20.24	46.00	-25.76	AVG
9	2.4260	8.45	19.64	28.09	56.00	-27.91	QP
10	2.4260	1.50	19.64	21.14	46.00	-24.86	AVG
11	2.9383	10.59	19.66	30.25	56.00	-25.75	QP
12	2.9383	1.94	19.66	21.60	46.00	-24.40	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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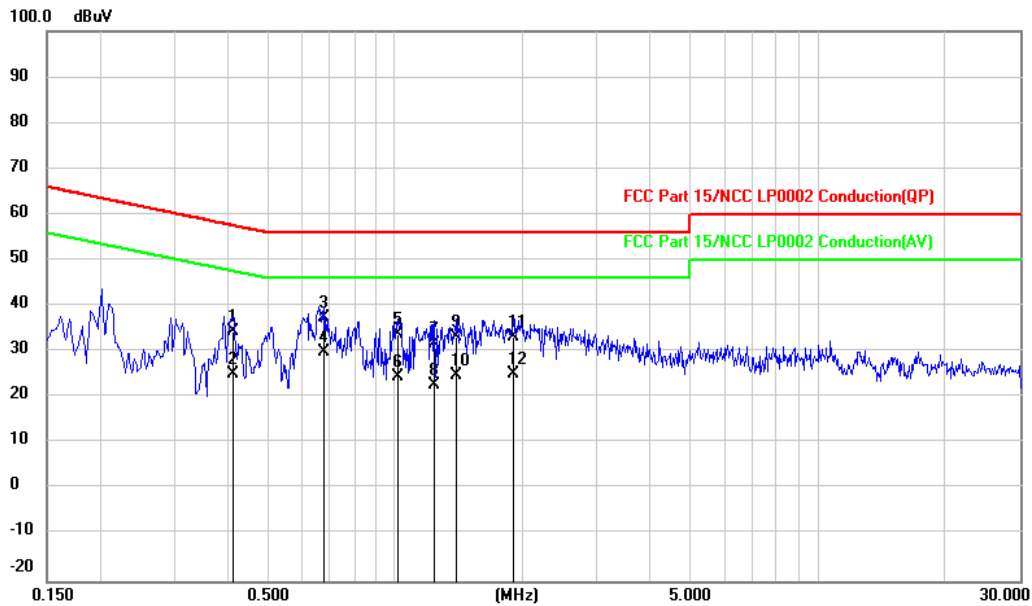
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Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0972 / 1.0



Phase of Power : Neutral (N)



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.4132	14.78	19.62	34.40	57.58	-23.18	QP
2	0.4132	5.67	19.62	25.29	47.58	-22.29	AVG
3	0.6800	17.88	19.62	37.50	56.00	-18.50	QP
4	0.6800	10.31	19.62	29.93	46.00	-16.07	AVG
5	1.0140	14.11	19.62	33.73	56.00	-22.27	QP
6	1.0140	4.97	19.62	24.59	46.00	-21.41	AVG
7	1.2420	12.12	19.62	31.74	56.00	-24.26	QP
8	1.2420	3.17	19.62	22.79	46.00	-23.21	AVG
9	1.4052	13.61	19.63	33.24	56.00	-22.76	QP
10	1.4052	5.30	19.63	24.93	46.00	-21.07	AVG
11	1.9020	13.54	19.65	33.19	56.00	-22.81	QP
12	1.9020	5.64	19.65	25.29	46.00	-20.71	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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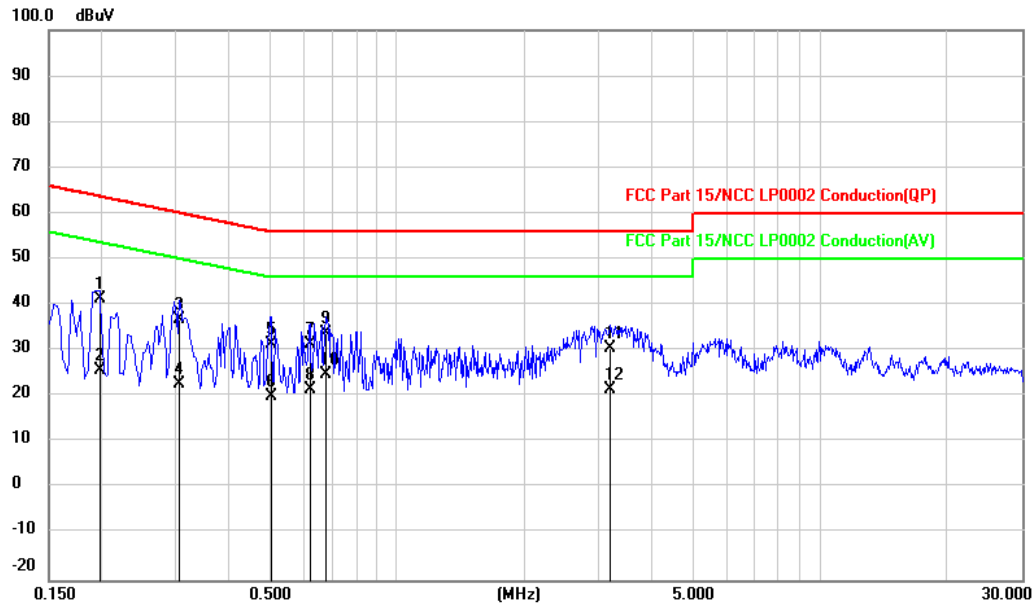
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10W load (Without 3mm gap)

EUT Test Condition		Measurement Detail	
Mode	Operating Mode	Frequency Range	150 kHz ~ 30 MHz

Phase of Power : Line (L)



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Test report No. : 4789310719-US-R0-V0
Page : 116 of 120
Issued date : Jan. 16, 2020
FCC ID : K7SWIA001

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.1988	21.81	19.61	41.42	63.66	-22.24	QP
2	0.1988	6.05	19.61	25.66	53.66	-28.00	AVG
3	0.3048	17.31	19.61	36.92	60.11	-23.19	QP
4	0.3048	3.18	19.61	22.79	50.11	-27.32	AVG
5	0.5028	11.95	19.61	31.56	56.00	-24.44	QP
6	0.5028	0.43	19.61	20.04	46.00	-25.96	AVG
7	0.6200	11.79	19.61	31.40	56.00	-24.60	QP
8	0.6200	1.96	19.61	21.57	46.00	-24.43	AVG
9	0.6821	14.32	19.61	33.93	56.00	-22.07	QP
10	0.6821	5.31	19.61	24.92	46.00	-21.08	AVG
11	3.1938	10.80	19.66	30.46	56.00	-25.54	QP
12	3.1938	1.96	19.66	21.62	46.00	-24.38	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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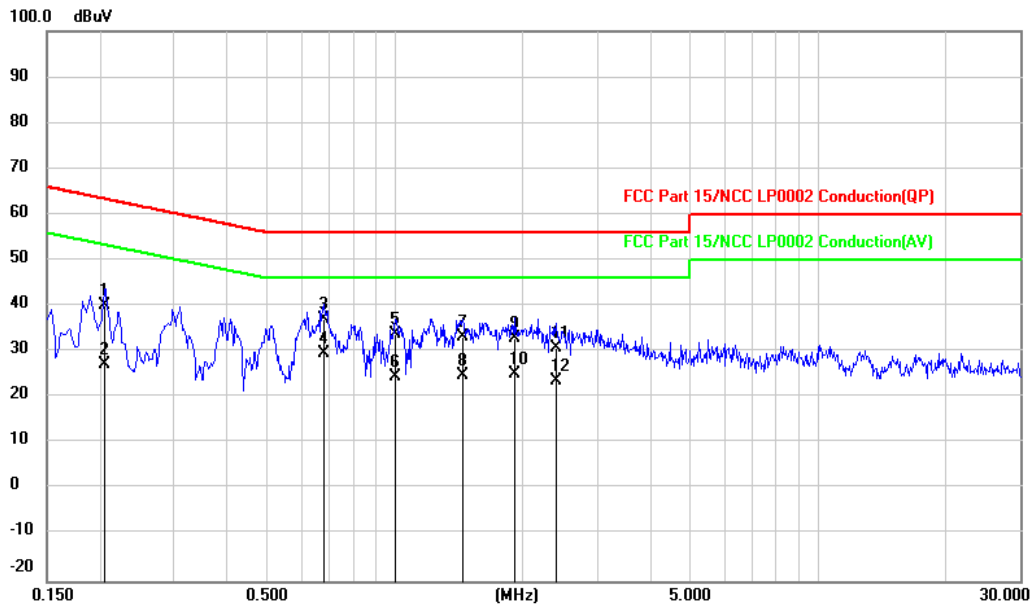
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Phase of Power : Neutral (N)



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Page : 118 of 120
Issued date : Jan. 16, 2020
FCC ID : K7SWIA001

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	dB	(dBuV)	(dBuV)	(dB)	
1	0.2060	20.63	19.62	40.25	63.37	-23.12	QP
2	0.2060	7.54	19.62	27.16	53.37	-26.21	AVG
3	0.6820	17.54	19.62	37.16	56.00	-18.84	QP
4	0.6820	9.97	19.62	29.59	46.00	-16.41	AVG
5	1.0020	14.15	19.62	33.77	56.00	-22.23	QP
6	1.0020	4.95	19.62	24.57	46.00	-21.43	AVG
7	1.4460	13.65	19.63	33.28	56.00	-22.72	QP
8	1.4460	5.22	19.63	24.85	46.00	-21.15	AVG
9	1.9140	13.27	19.65	32.92	56.00	-23.08	QP
10	1.9140	5.44	19.65	25.09	46.00	-20.91	AVG
11	2.4020	11.13	19.66	30.79	56.00	-25.21	QP
12	2.4020	4.10	19.66	23.76	46.00	-22.24	AVG

Remarks:

1. Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB)
2. Margin(dB) = Result value (dBuV) - Limit value (dBuV)
3. Correction Factor(dB) = Insertion loss(dB) + Cable loss(dB)
4. The other emission levels were very low against the limit.

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9.3. 20dB Bandwidth

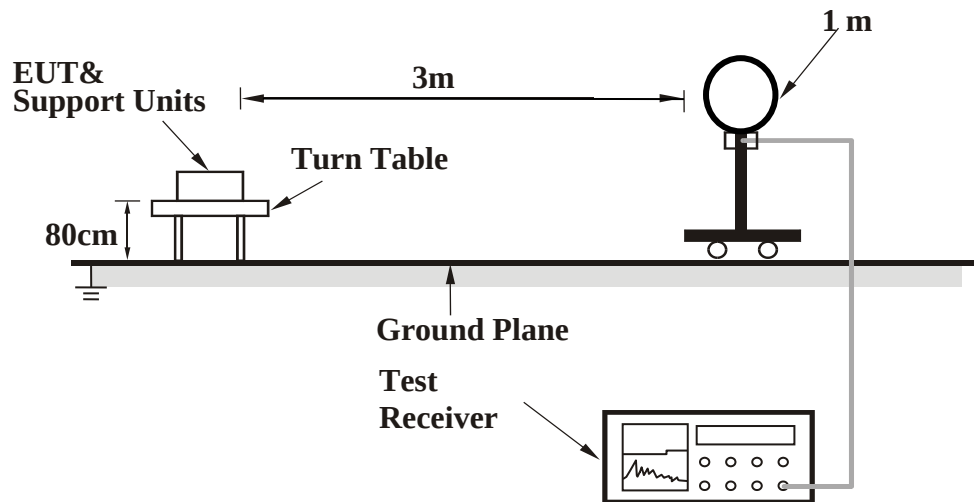
Requirements

The 20 dB bandwidth shall be specified in operating frequency band.

Test Procedures

- The testing follows the guidelines in ANSI C63.10-2013.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The bandwidth of the fundamental frequency was measured by spectrum analyzer with 200Hz RBW and 620Hz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Test Setup



For the actual test configuration, please refer to the Setup Configurations.

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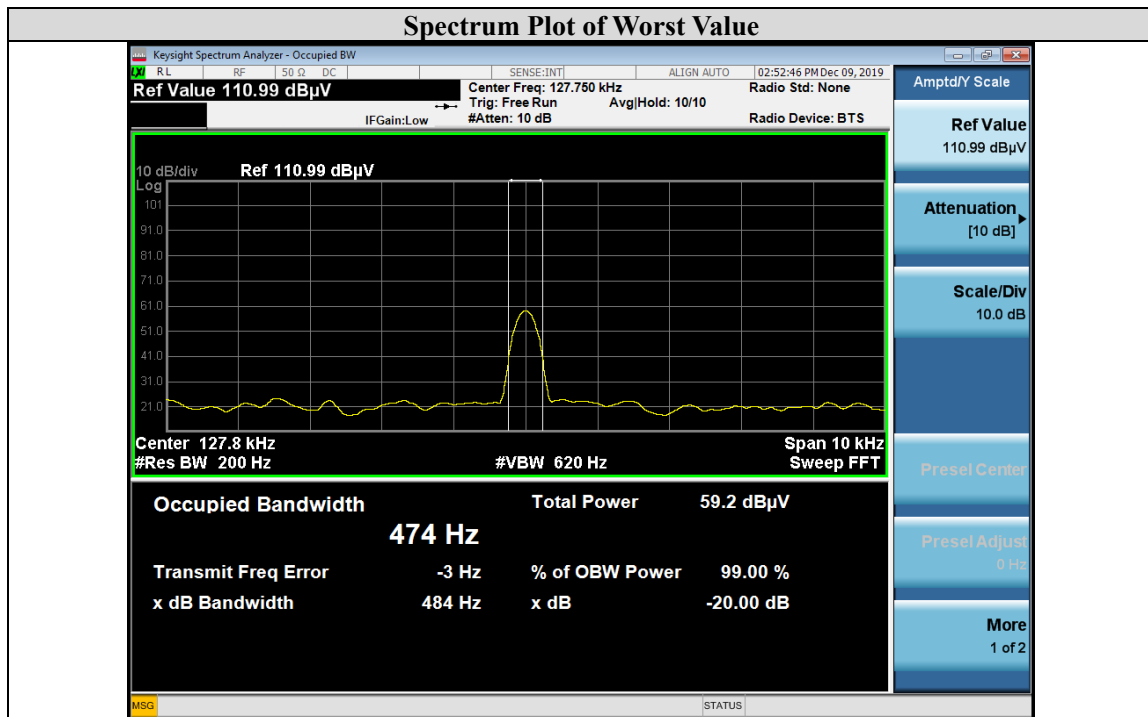
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Test Data

Frequency (kHz)	20dB Bandwidth (kHz)
127.8	0.484



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