FCC Test Report

Product Name : Handheld Remote Methane Leak Detector
Model No. : HS4000

Applicant : Hesai Photonics Technology Co.,Ltd.
Address : Rm. J385, Building 6, No. 1288, Yecheng Rd.,
Jiading Dist., Shanghai City, China

Date of Receipt : Mar. 18, 2019
Test Date : Mar. 18, 2019 ~ Apr. 02, 2019
Issued Date : Apr. 10, 2019
Report No. : 1932089E-IT-US-P01V01
Report Version : V1.0

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Product Name	:	Handheld Remote Methane Leak Detector
Applicant	:	Hesai Photonics Technology Co.,Ltd.
Address	:	Rm. J385, Building 6, No. 1288, Yecheng Rd., Jiading Dist., Shanghai City, China
Manufacturer	:	Hesai Photonics Technology Co., Ltd.
Address	:	Building B, 468 Xinlai Rd, Xuhang Town, Jiading District, Shanghai City, China
Model No.	:	HS4000
Brand Name	:	N/A
EUT Voltage	:	AC 100-240V / 50-60Hz, DC 7.2V
Test Voltage	:	AC 120V/60Hz,DC 7.2V
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart B: 2017 Class B ANSI C63.4: 2014
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,215006, Jiangsu, China TEL: +86-512-62515088 / FAX: +86-512-62515098

Documented By : Angila Zhang

(Project Assistant: Angila Zhang)

Reviewed By : Black Hao

(Supervisor: Black Hao)

Approved By : Jerry Pan

(Manager: Jerry Pan)

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1. General Information

1.1. EUT Description

Product Name	Handheld Remote Methane Leak Detector
Model No.	HS4000
Brand Name	N/A

Component	
AC Adapter	MFR: FRANMAR INTERNATIONAL INC M/N: GE18I12 Input: AC 100-240V, 50/60Hz, 0.7A Output: DC 12V,1.5A

1.2. Mode of Operation

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

(1)According to the functional characteristics , Cross-combination test, select the following test mode as the initial test mode
Mode 1: Charging
Mode 2: Working with vertical placement
Mode 3: Working with horizontal placement
Mode 4: Working with lie down placement
(2) According to the initial test mode, select the following worst mode as the final test
Mode 1: Charging
Mode 2: Working with vertical placement

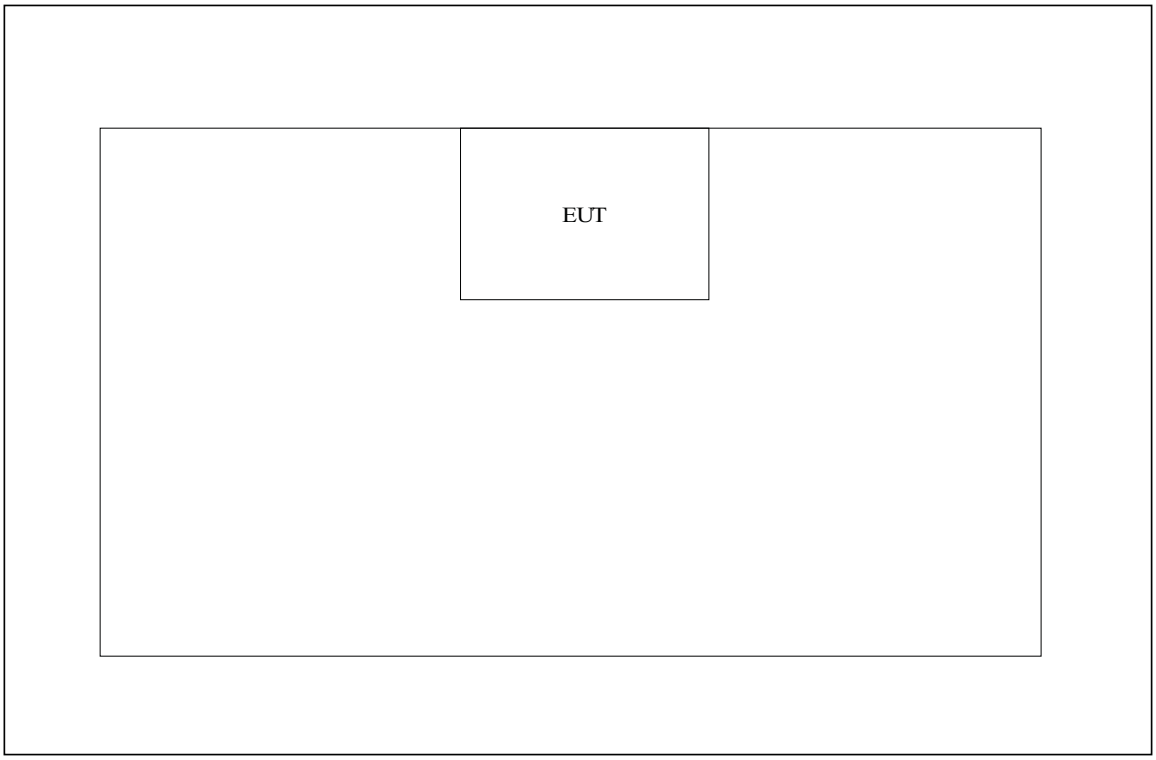
1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

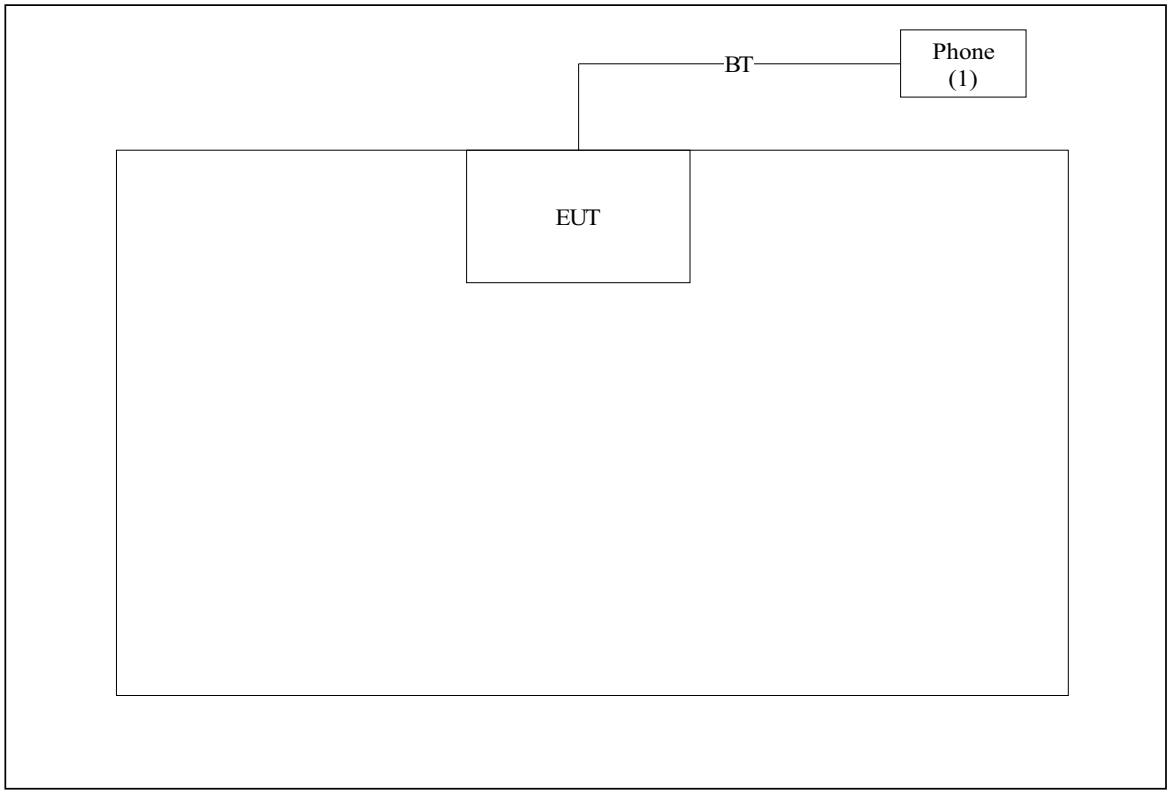
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Phone	HTC	M8	623696	N/A

1.4. Configuration of Tested System

Connection Diagram（Mode 1）



Connection Diagram(Mode 2)



Signal Cable Type		Signal Cable Description
N/A	N/A	N/A

1.5. EUT Exercise Software

Mode 1

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Confirm the EUT working normally.
4	Start test.

Mode 2

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	The EUT and The Phone Communications by BT.
4	Through the control of APP (HS4000View), Record data from measurements transmitted through EUT.
5	Confirm the EUT working normally.
6	Start test.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Test Item	Normative References	Test Performed	Deviation
Conducted disturbance	FCC CFR Title 47 Part 15 Subpart B: 2017 Class B ANSI C63.4: 2014	Yes	No
Radiated disturbance	FCC CFR Title 47 Part 15 Subpart B: 2017 Class B ANSI C63.4: 2014	Yes	No

2.2. List of Test Equipment

Conducted Emission / TR1

Instrument	Manufacturer	Model No.	Serial No.	Cali. Date	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100906	2019.03.04	2020.03.04
Two-Line V-Network	R&S	ENV216	101190	2018.06.09	2019.06.09
Two-Line V-Network	R&S	ENV216	101044	2018.06.09	2019.06.09
Current Probe	R&S	EZ-17	100678	2019.03.07	2020.03.07
50ohm Termination	SHX	TF2	07081402	2018.09.08	2019.09.08
50ohm Termination	SHX	TF2	07081403	2018.09.08	2019.09.08
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
Coaxial Cable	Suhner	RG 223	TR1-C1	2018.04.26	2019.04.26
Temperature/Humidity Meter	Ruitesi	RTS-8S	TR1-TH	2018.10.24	2019.10.24
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A

Radiated Emission / AC1

Instrument	Manufacturer	Model No.	Serial No.	Cali. Date	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100175	2018.09.08	2019.09.08
EMI Test Receiver	R&S	ESCI	100726	2019.03.18	2020.03.18
Preamplifier	Quietek	AP-025C	CHM-0602008	2018.04.10	2019.04.10
Preamplifier	Quietek	AP-025C	CHM-0503006	2018.04.10	2019.04.10
Bilog Antenna	Schaffner	CBL6112B	2931	2018.05.18	2019.05.18
Bilog Antenna	Schaffner	CBL6112B	2933	2018.05.18	2019.05.18
Coaxial Cable	Huber+Suhner	RG 214_U	AC1-L	2018.10.10	2019.10.10
Coaxial Cable	Huber+Suhner	RG 214_U	AC1-R	2018.10.10	2019.10.10
Temperature/Humidity Meter	Ruitesi	RTS-8S	AC1-TH	2018.10.24	2019.10.24
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A

Radiated Emission / AC2

Instrument	Manufacturer	Model No.	Serial No.	Cali. Date	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100573	2019.03.04	2020.03.04
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2018.06.09	2019.06.09
Coaxial Cable	Huber+Suhner	RG 214	AC2-C	2019.02.28	2020.02.28
Temperature/Humidity Meter	Ruitesi	RTS-8S	AC2-TH	2018.10.24	2019.10.24
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A

Radiated Emission / AC3

Instrument	Manufacturer	Model No.	Serial No.	Cali. Date	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100176	2018.09.08	2019.09.08
Bilog Antenna	Teseq GmbH	CBL6112D	27613	2018.06.09	2019.06.09
Coaxial Cable	Huber+Suhner	RG 214	AC3-C	2019.02.28	2020.02.28
Temperature/Humidity Meter	Ruitesi	RTS-8S	AC3-TH	2018.10.24	2019.10.24
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A

Radiated Emission / AC5

Instrument	Manufacturer	Model No.	Serial No.	Cali. Date	Cali. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2018.06.09	2019.06.09
low Noise Amplifier	BXT	NA2651D	LNA17040209	2018.07.16	2019.07.16

DRG Horn Antenna	ETS-Lindgren	3117	00167055	2018.06.09	2019.06.09
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2019.02.28	2020.02.28
Pre-Amplifier	Chengyi	EMC184045SE	980263	2018.09.08	2019.09.08
Coaxial Cable	ROSENBERGER	LA1-C011-2000/3000	AC5-40G	2019.02.08	2020.02.28
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2019.02.23	2020.02.23
Temperature/Humidity Meter	Ruitesi	RTS-8S	AC5-TH	2018.10.24	2019.10.24
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A

2.3. Test Environment

Tests have been performed in a controlled laboratory environment, where the environmental conditions are maintained within the applicable ranges.

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10-40	23
	Humidity (%RH)	25-75	40
	Barometric pressure (mbar)	860-1060	1016
Radiated Emission (30~1000MHz)	Temperature (°C)	10-40	24
	Humidity (%RH)	25-75	41
	Barometric pressure (mbar)	860-1060	1014
Radiated Emission (1~40GHz)	Temperature (°C)	10-40	24
	Humidity (%RH)	25-75	41
	Barometric pressure (mbar)	860-1060	1014

2.4. Measurement Uncertainty

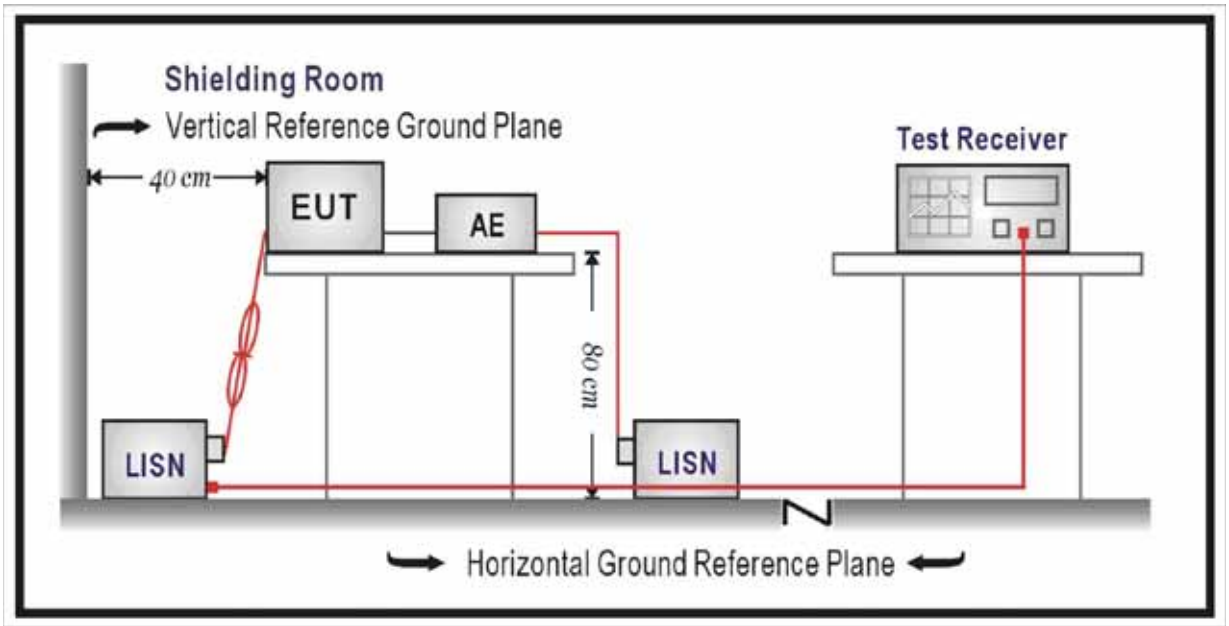
Conducted disturbance / TR1
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 2.80dB 150kHz~30MHz: 2.40dB
Radiated disturbance / AC1
The maximum measurement uncertainty is evaluated as: Horizontal: 30MHz~300MHz: 3.50 dB 300MHz~1GHz: 3.20 dB 1GHz~18GHz: 4.80 dB Vertical: 30MHz~300MHz: 3.60 dB 300MHz~1GHz: 3.10 dB 1GHz~18GHz: 4.50 dB
Radiated disturbance / AC2
The maximum measurement uncertainty is evaluated as: Horizontal: 30MHz~300MHz: 3.60 dB 300MHz~1GHz: 3.10 dB Vertical: 30MHz~300MHz: 3.20 dB 300MHz~1GHz: 3.20 dB
Radiated disturbance / AC3
The maximum measurement uncertainty is evaluated as: Horizontal: 30MHz~300MHz: 3.50 dB 300MHz~1GHz: 3.60 dB Vertical: 30MHz~300MHz: 3.60 dB 300MHz~1GHz: 3.50 dB
Radiated disturbance / AC5
The maximum measurement uncertainty is evaluated as: Horizontal: 30MHz~300MHz: 3.90 dB 300MHz~1GHz: 3.60 dB 1GHz~18GHz: 5.00 dB Vertical: 30MHz~300MHz: 3.80 dB 300MHz~1GHz: 3.50 dB 1GHz~18GHz: 4.80 dB

3. Conducted disturbance

3.1. Test Specification

According to Standard: FCC Part 15.107 Class B, ANSI C63.4

3.2. Test Setup



3.3. Limit

Limits for conducted disturbance of class A ITE		
Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	79	66
0.50 to 30	73	60
NOTE: The lower limit shall apply at the transition frequency.		

Limits for conducted disturbance of class B ITE		
Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
NOTE 1: The lower limit shall apply at the transition frequencies. NOTE 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

3.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50Ω / 50μH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50Ω / 50μH coupling impedance with 50Ωtermination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.

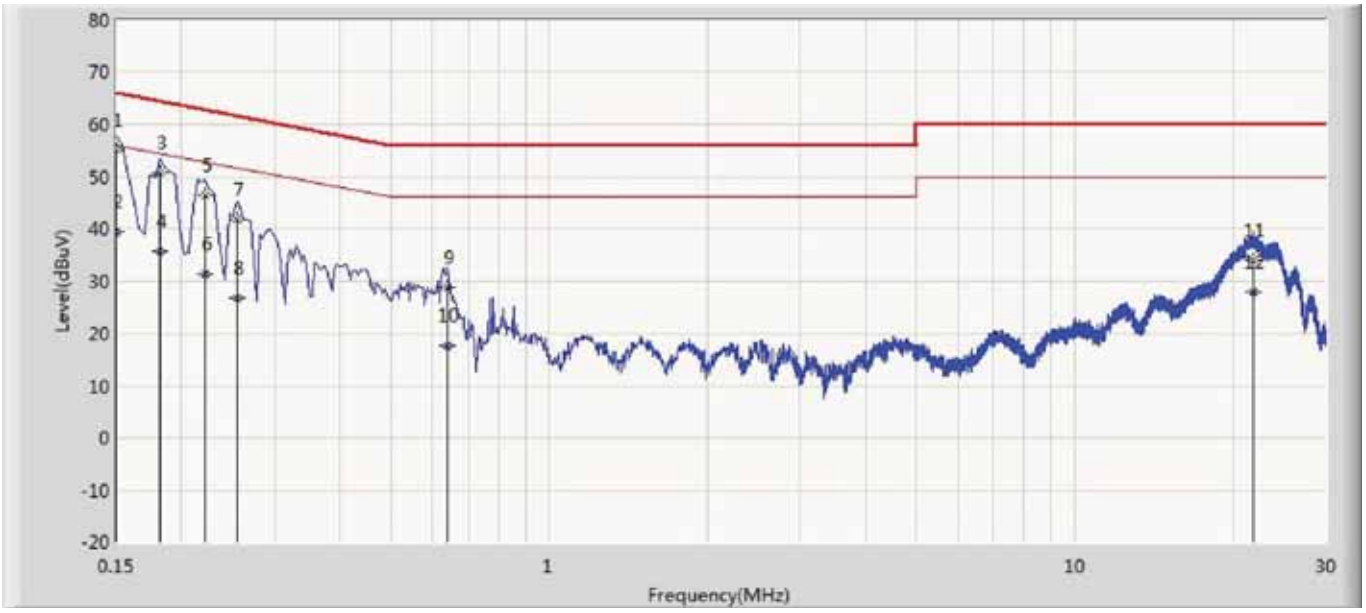
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Deviation from Test Standard

No deviation.

3.6. Test Result

Engineer: Samuel	
Site: TR1	Time: 2019/04/01
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Handheld Remote Methane Leak Detector	Power: AC 120V/60Hz
Note: Mode 1	

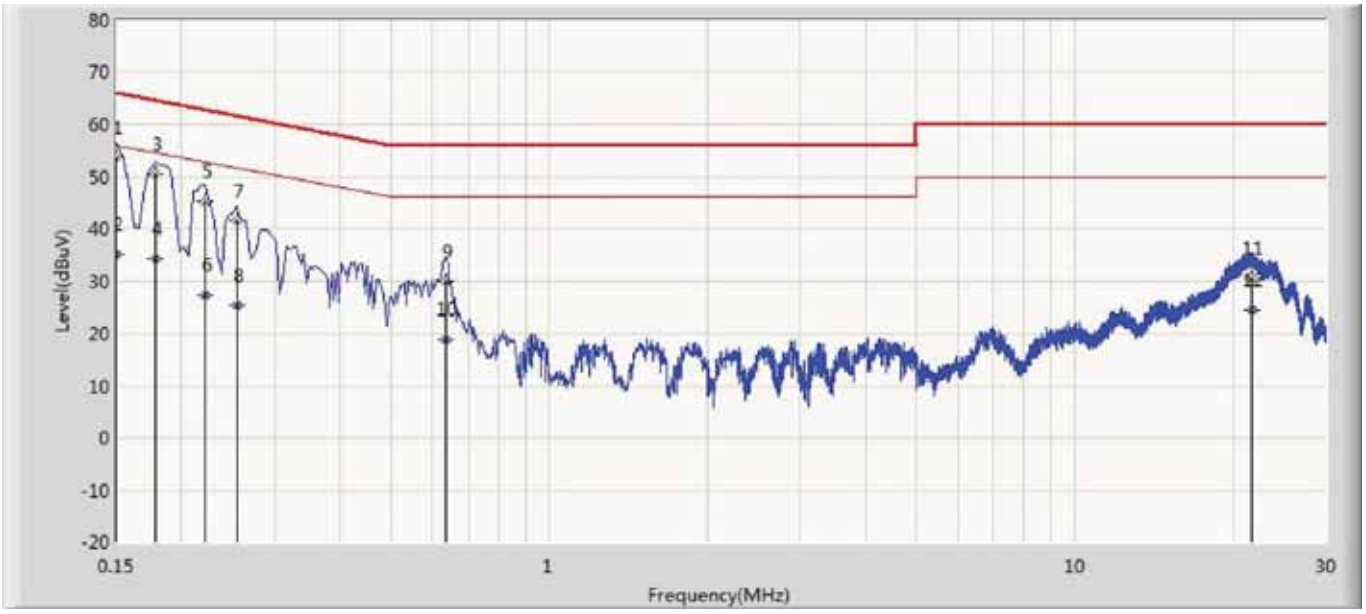


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	55.210	45.571	-10.790	66.000	9.610	0.029	0.000	QP
2		0.150	39.391	29.752	-16.609	56.000	9.610	0.029	0.000	AV
3		0.182	50.832	41.201	-13.562	64.394	9.603	0.028	0.000	QP
4		0.182	35.766	26.135	-18.627	54.394	9.603	0.028	0.000	AV
5		0.222	46.399	36.769	-16.345	62.744	9.600	0.029	0.000	QP
6		0.222	31.247	21.617	-21.497	52.744	9.600	0.029	0.000	AV
7		0.254	41.821	32.189	-19.804	61.625	9.600	0.031	0.000	QP
8		0.254	26.533	16.902	-25.092	51.625	9.600	0.031	0.000	AV
9		0.638	28.742	19.094	-27.258	56.000	9.600	0.048	0.000	QP
10		0.638	17.629	7.981	-28.371	46.000	9.600	0.048	0.000	AV
11		21.786	34.033	23.473	-25.967	60.000	10.258	0.302	0.000	QP
12		21.786	27.776	17.215	-22.224	50.000	10.258	0.302	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Samuel	
Site: TR1	Time: 2019/04/01
Limit: FCC_Part15.107_CE_AC Power_ClassB	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Handheld Remote Methane Leak Detector	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1	*	0.150	53.631	44.008	-12.369	66.000	9.594	0.029	0.000	QP
2		0.150	34.983	25.360	-21.017	56.000	9.594	0.029	0.000	AV
3		0.178	50.305	40.681	-14.274	64.578	9.596	0.028	0.000	QP
4		0.178	34.060	24.436	-20.519	54.578	9.596	0.028	0.000	AV
5		0.222	45.264	35.636	-17.480	62.744	9.599	0.029	0.000	QP
6		0.222	27.168	17.540	-25.576	52.744	9.599	0.029	0.000	AV
7		0.254	41.439	31.810	-20.186	61.625	9.598	0.031	0.000	QP
8		0.254	25.310	15.681	-26.315	51.625	9.598	0.031	0.000	AV
9		0.634	29.908	20.270	-26.092	56.000	9.590	0.048	0.000	QP
10		0.634	18.867	9.229	-27.133	46.000	9.590	0.048	0.000	AV
11		21.678	30.410	19.768	-29.590	60.000	10.341	0.301	0.000	QP
12		21.678	24.448	13.806	-25.552	50.000	10.341	0.301	0.000	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

3.7. Test Photograph

Test Mode: Mode 1

Description: Front View of Conducted disturbance Test Setup

Test Mode: Mode 1

Description: Side View of Conducted disturbance Test Setup

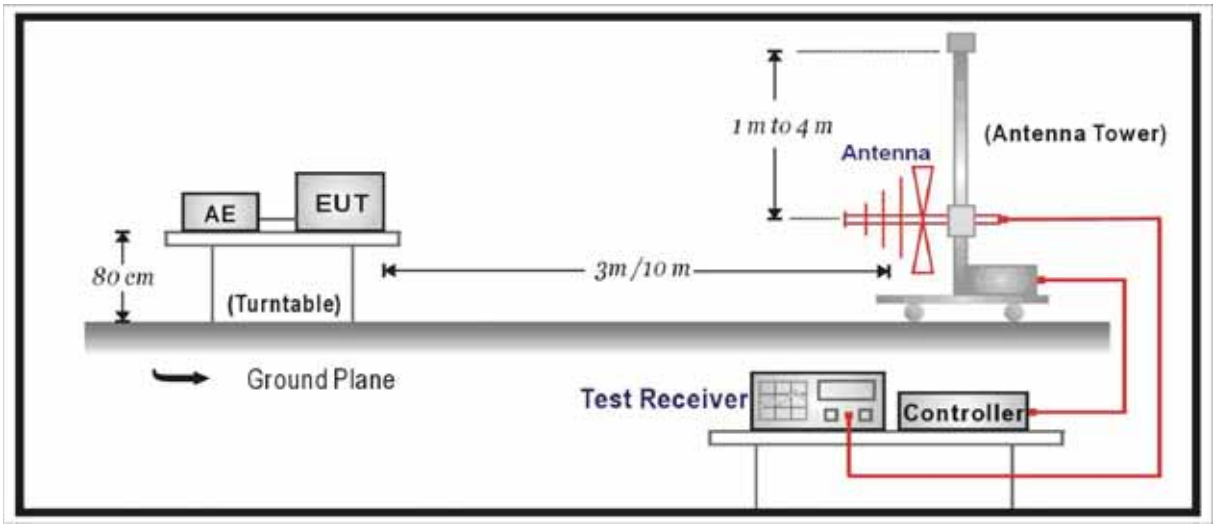
4. Radiated disturbance

4.1. Test Specification

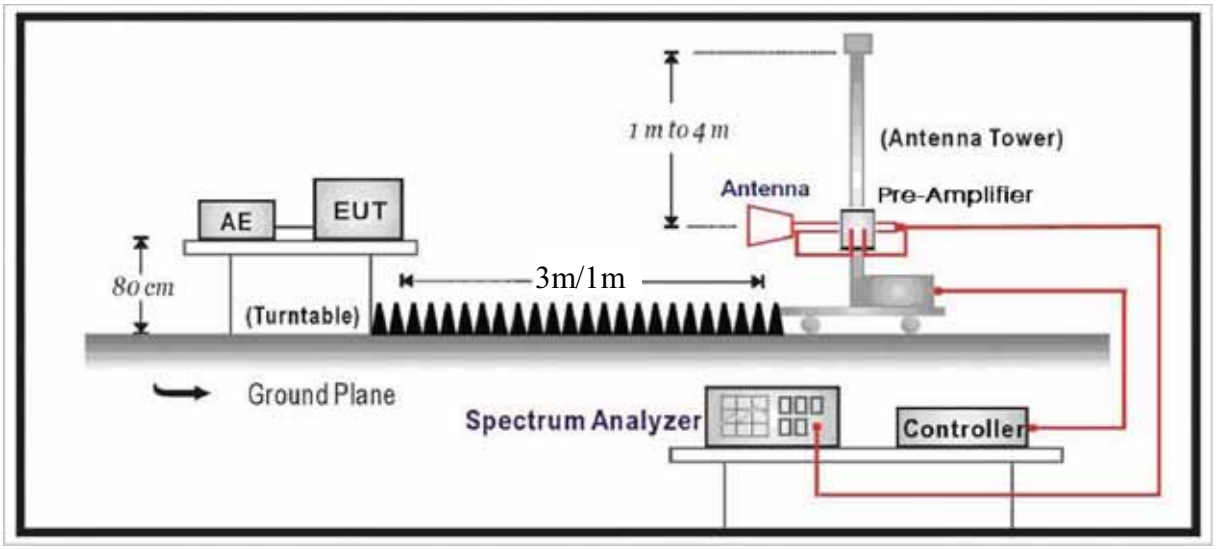
According to Standard: FCC Part 15.109 Class B, ANSI C63.4

4.2. Test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup



4.3. Limit

Limits for Radiated disturbance of class A ITE at a measuring distance of 10m	
Frequency of Emission (MHz)	Field Strength dB(μV/m)
30 to 88	39
88 to 216	43.5
216 to 960	46.4
Above 960	49.5
NOTE: The lower limit shall apply at the transition frequency.	

Limits for Radiated disturbance of class A ITE at a measuring distance of 3m	
Frequency of Emission (MHz)	Field Strength dB(μV/m)
1000 to 18000	60
NOTE: The lower limit shall apply at the transition frequency.	

Limits for Radiated disturbance of class A ITE at a measuring distance of 1m	
Frequency of Emission (MHz)	Field Strength dB(μV/m)
18000 to 40000	69.5
NOTE: The lower limit shall apply at the transition frequency.	

Limits for Radiated disturbance of class B ITE at a measuring distance of 3m	
Frequency of Emission (MHz)	Field Strength dB(μV/m)
30 to 88	40
88 to 216	43.5
216 to 960	46
960 to 18000	54
NOTE: The lower limit shall apply at the transition frequency.	

Limits for Radiated disturbance of class B ITE at a measuring distance of 1m	
Frequency of Emission (MHz)	Field Strength dB(μV/m)
18000-40000	63.5
NOTE: The lower limit shall apply at the transition frequency.	

4.4. Test Procedure

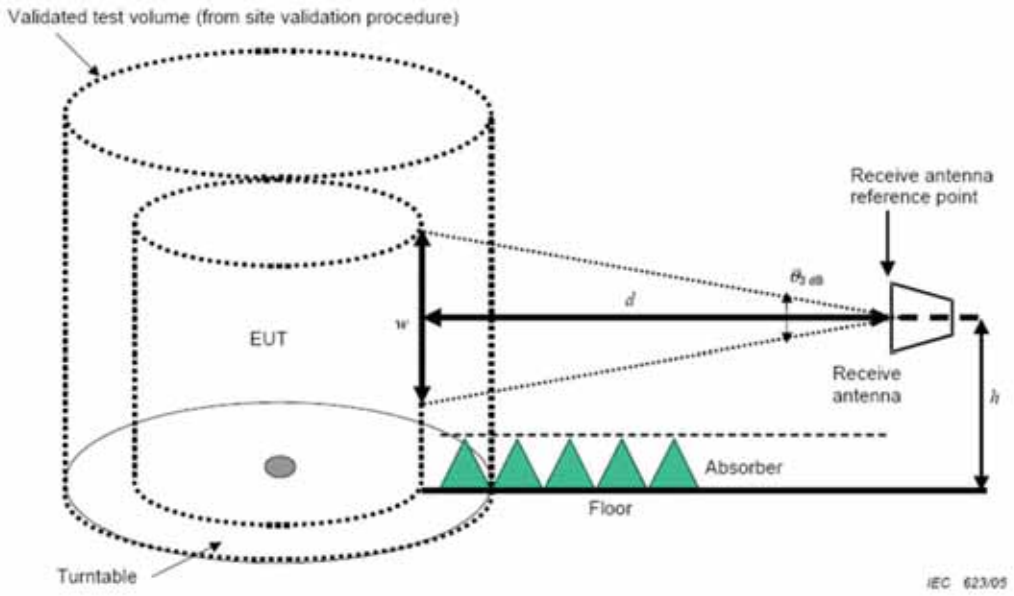
The EUT and its simulators are placed on a turntable which is 0.8 meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be changed during radiated measurement.
The bandwidth below 1GHz setting on the receiver is 120kHz and above 1GHz is 1MHz.

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

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

On any frequency or frequencies below or equal to 1000MHz, the radiated limits shown are based on measuring equipment employing a quasi-peak detector function and above 1000MHz, the radiated limits shown are based measuring equipment employing an average detector function.
When average radiated emission measurement are included emission measurement Above 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

The radiated field measurement method above 1 GHz is based on measurement of the maximum electric field emitted from the EUT as shown below



Measurement method above 1 GHz, receive antenna in vertical polarization

- **Definitions referring to Figure**

Validated test volume: The volume validated during the site validation procedure (see 8.3.3of CISPR 16-1-4). Typically, this is the largest diameter EUT that can be used in the test facility.

EUT: The smallest diameter cylinder that will fully encompass all portions of the actual EUT, including cable racks and a minimum length of 30 cm of cables. The EUT that is located within this cylinder must be capable of rotating about its centre (typically by aremotely controlled turntable). The EUT must be located within the validated test volume. A maximum of 30 cm of ω (see definition of ω below) may be below the height of absorbers on the floor only when the EUT is floor standing and cannot be raised above the height of the absorbers.

θ 3 dB: The minimum 3 dB beamwidth of the receive antenna at each frequency of interest. θ3 dB is the minimum of both the E-plane and H-plane values at each frequency. θ 3dB may be obtained from manufacturer provided data for the receive antenna.

d: The measurement distance (in meters). This is measured as the horizontal distance between the periphery of the EUT and the reference point of the receive antenna.

ω: The dimension of the line tangent to the EUT formed by θ 3 dB at the measurement distance d. Equation (10) shall be used to calculate ω for each actual antenna and measurement distance used. The values of ω shall be included in the test report. This calculation may be based on the manufacturer-provided receive-antenna beamwidth specifications:

$$\omega = 2 \times d \times \tan(0{,}5 \times \theta_{3\,dB})$$

DRG Horn Antenna（M/N: 3117）test dimension of ω

Frequency GHz	θ 3 dB (min) °	ω m
1	90	6.00
2	60	3.46
3	75	4.60
4	60	3.46
5	60	3.46
6	50	2.80
7	45	2.49
8	40	2.18
9	35	1.89
10	30	1.61
11	35	1.89
12	40	2.18
13	35	1.89
14	35	1.89
15	35	1.89
16	35	1.89
17	30	1.61
18	20	1.06

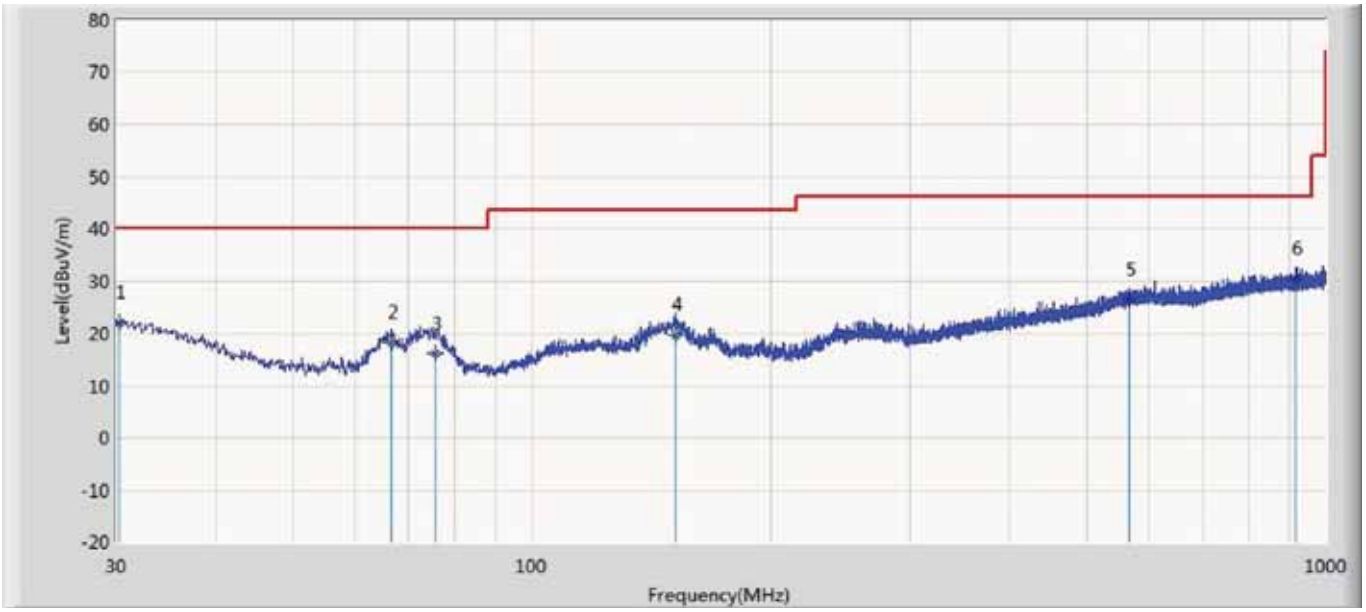
Note: The antenna's moving up and down is determined by ω value for above 1GHz, to ensure that the acceptable range of the testing antenna can cover the whole range of EUT.

4.5. Deviation from Test Standard

No deviation.

4.6. Test Result

Engineer: Barlow	
Site: AC3	Time: 2019/04/01
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: Handheld Remote Methane Leak Detector	Power: AC 120V/60Hz
Note: Mode 1	

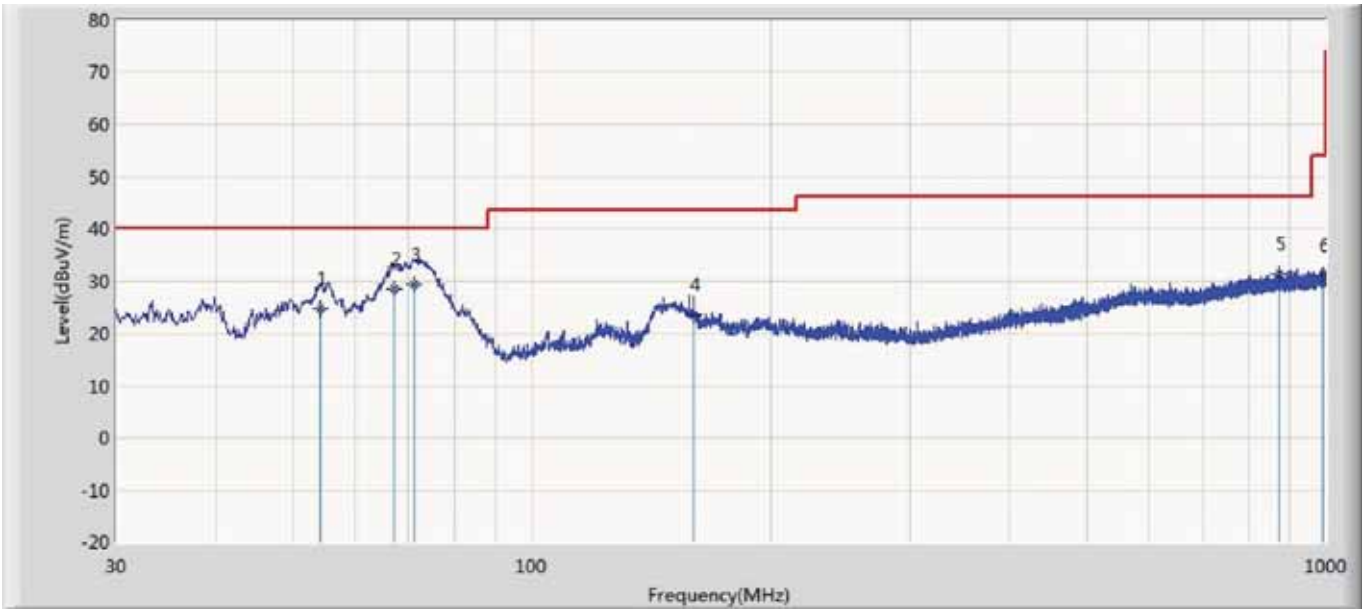


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		30.250	21.901	-2.200	-18.099	40.000	17.646	6.455	0.000	200	32	QP
2		66.520	18.160	5.320	-21.840	40.000	6.157	6.684	0.000	200	23	QP
3		75.650	16.301	2.650	-23.699	40.000	6.920	6.732	0.000	400	124	QP
4		151.620	19.730	2.320	-23.770	43.500	10.321	7.090	0.000	200	326	QP
5		566.250	26.259	-1.210	-19.741	46.000	19.127	8.342	0.000	100	2	QP
6	*	916.250	30.432	0.210	-15.568	46.000	21.087	9.136	0.000	100	126	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Barlow	
Site: AC3	Time: 2019/04/01
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: Handheld Remote Methane Leak Detector	Power: AC 120V/60Hz
Note: Mode 1	

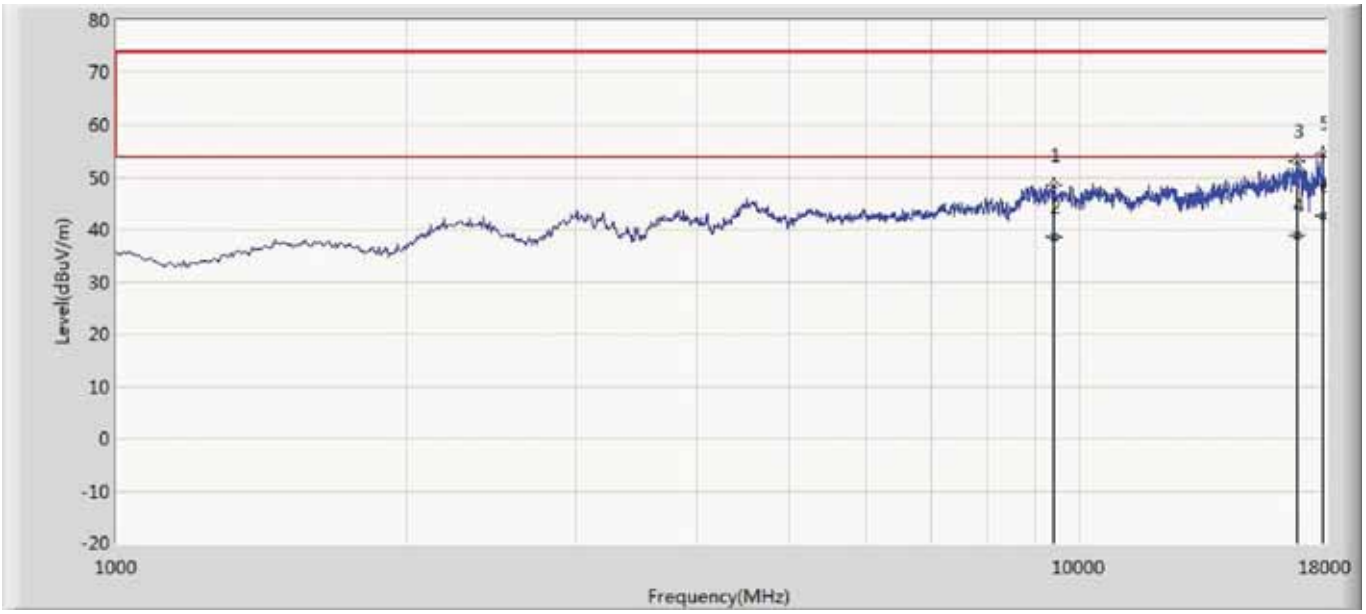


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		54.250	24.570	10.320	-15.430	40.000	7.630	6.620	0.000	100	23	QP
2		67.250	28.469	15.620	-11.531	40.000	6.160	6.690	0.000	200	32	QP
3	*	71.250	29.320	16.250	-10.680	40.000	6.359	6.712	0.000	100	145	QP
4		160.250	23.392	6.320	-20.108	43.500	9.946	7.127	0.000	200	336	QP
5		873.250	31.192	1.250	-14.808	46.000	20.894	9.048	0.000	100	165	QP
6		992.250	31.008	0.320	-22.992	54.000	21.396	9.291	0.000	200	23	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Canon	
Site: AC5	Time: 2019/04/02
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Handheld Remote Methane Leak Detector	Power: AC 120V/60Hz
Note: Mode 1	

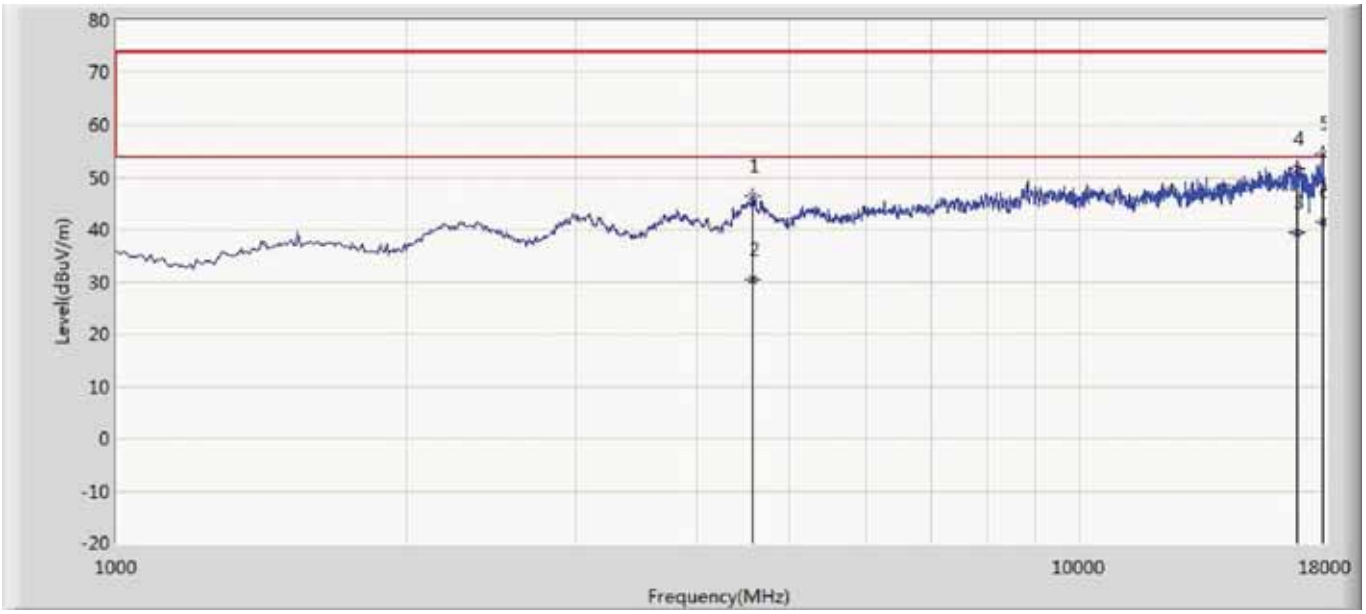


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		9398.000	48.540	40.321	-25.460	74.000	36.539	10.936	39.256	100	23	PK
2		9398.210	38.545	30.320	-15.455	54.000	36.539	10.953	39.267	100	23	AV
3		16827.000	52.958	32.789	-21.042	74.000	41.365	14.959	36.155	100	124	PK
4		16827.120	38.808	18.650	-15.192	54.000	41.365	14.951	36.158	100	124	AV
5		17864.000	54.599	31.317	-19.401	74.000	41.046	17.961	35.725	100	360	PK
6	*	17864.120	42.501	19.250	-11.499	54.000	41.046	17.926	35.721	100	360	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Canon	
Site: AC5	Time: 2019/04/02
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Handheld Remote Methane Leak Detector	Power: AC 120V/60Hz
Note: Mode 1	

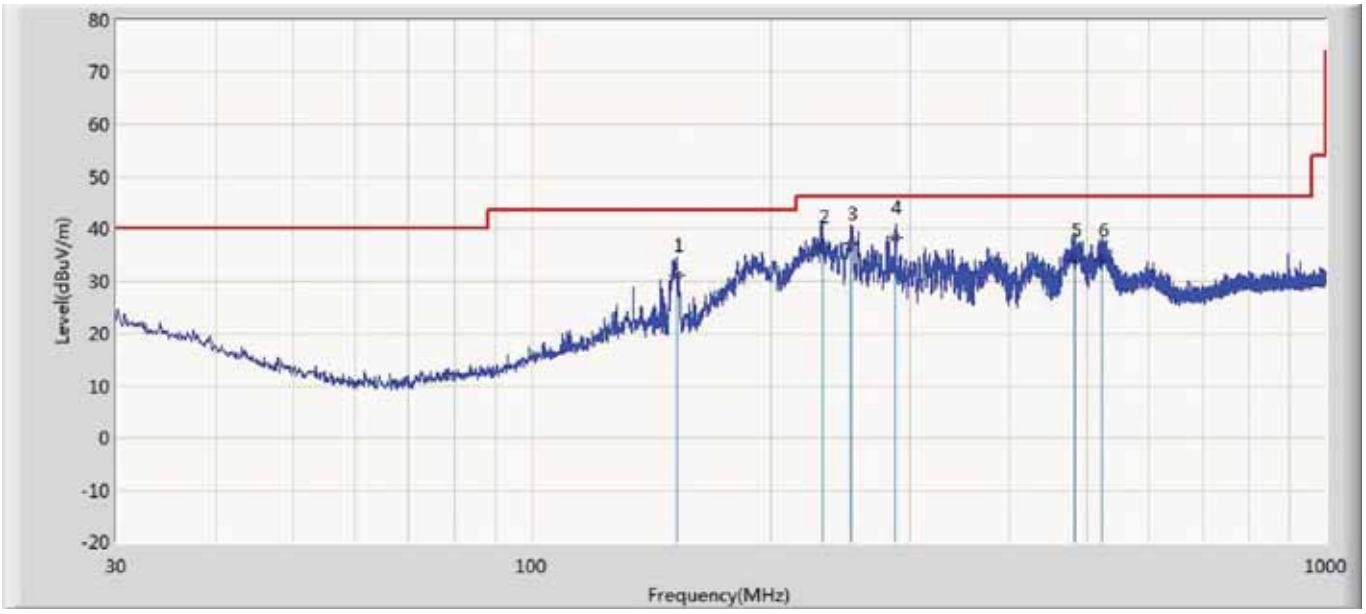


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		4570.000	46.290	45.194	-27.710	74.000	33.914	7.611	40.429	200	360	PK
2		4570.120	30.416	29.320	-23.584	54.000	33.914	7.612	40.430	200	360	AV
3		16818.420	39.324	19.320	-14.676	54.000	41.363	14.228	35.587	100	214	AV
4		16818.500	51.543	31.538	-22.457	74.000	41.364	14.235	35.593	100	214	PK
5		17864.000	54.610	31.328	-19.390	74.000	41.046	17.961	35.725	100	21	PK
6	*	17864.120	41.501	18.250	-12.499	54.000	41.046	17.926	35.721	100	21	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Barlow	
Site: AC3	Time: 2019/04/01
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: Handheld Remote Methane Leak Detector	Power: DC 7.2V
Note: Mode 2	

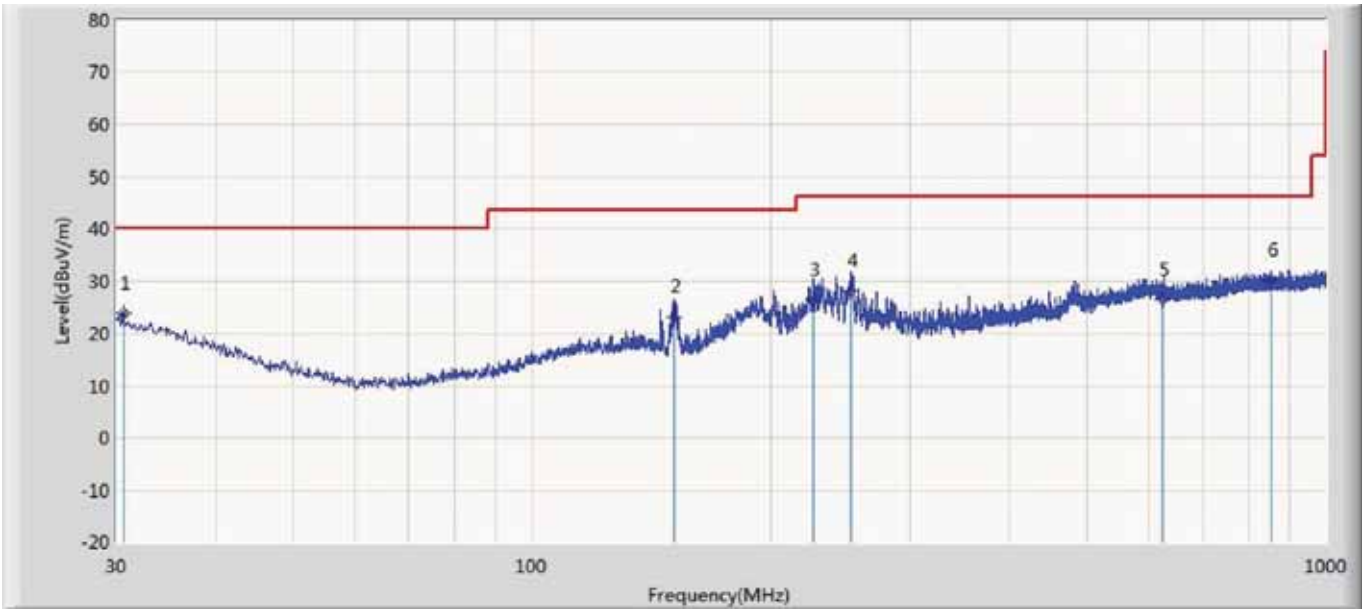


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		152.210	31.031	13.650	-12.469	43.500	10.294	7.087	0.000	200	124	QP
2		231.850	36.394	18.650	-9.606	46.000	10.352	7.392	0.000	200	32	QP
3		252.650	37.112	16.650	-8.888	46.000	12.997	7.465	0.000	100	199	QP
4	*	287.250	38.296	17.250	-7.704	46.000	13.468	7.578	0.000	100	15	QP
5		482.120	34.055	8.650	-11.945	46.000	17.290	8.115	0.000	200	360	QP
6		523.200	34.006	7.540	-11.994	46.000	18.242	8.224	0.000	100	2143	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Barlow	
Site: AC3	Time: 2019/04/01
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: Handheld Remote Methane Leak Detector	Power: DC 7.2V
Note: Mode 2	

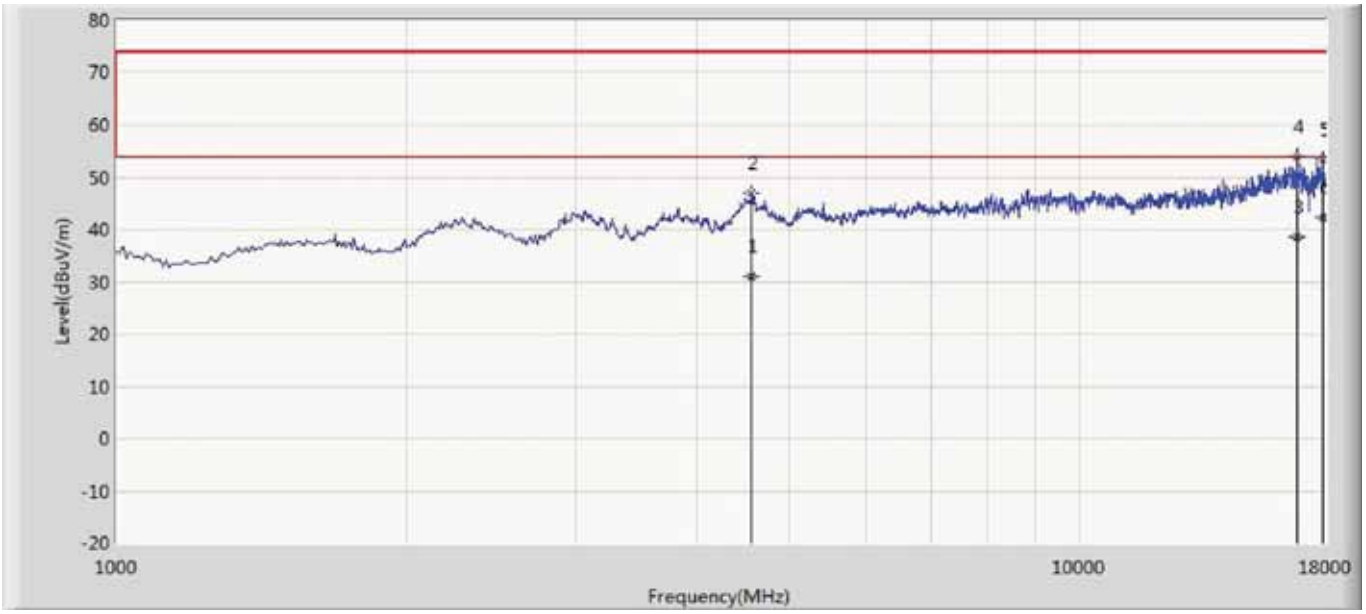


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		30.620	23.740	-0.210	-16.260	40.000	17.492	6.458	0.000	100	21	QP
2		151.420	23.070	5.650	-20.430	43.500	10.329	7.091	0.000	200	214	QP
3		226.320	26.490	9.320	-19.510	46.000	9.795	7.375	0.000	200	23	QP
4		252.650	28.112	7.650	-17.888	46.000	12.997	7.465	0.000	100	51	QP
5		624.200	26.413	-1.320	-19.587	46.000	19.244	8.489	0.000	200	223	QP
6	*	855.250	30.094	0.320	-15.906	46.000	20.769	9.006	0.000	200	3	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Canon	
Site: AC5	Time: 2019/04/02
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Handheld Remote Methane Leak Detector	Power: DC 7.2V
Note: Mode 2	

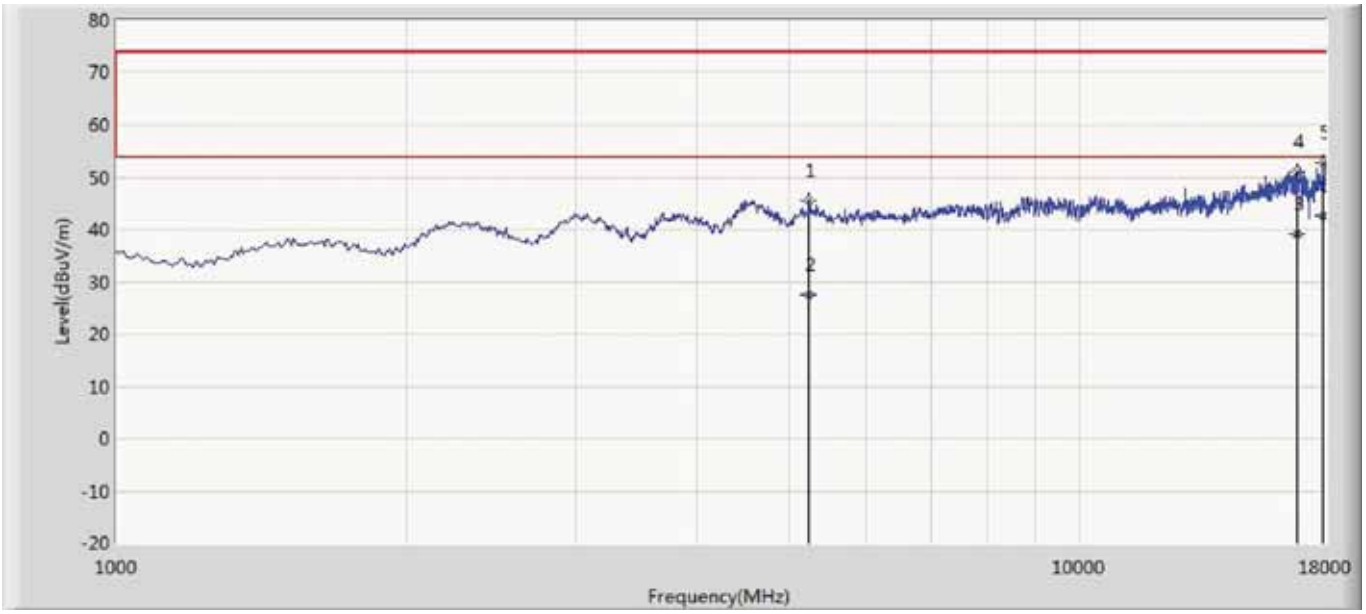


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		4561.210	31.135	30.120	-22.865	54.000	33.912	7.690	40.588	100	214	AV
2		4561.500	46.969	45.952	-27.031	74.000	33.913	7.687	40.582	100	214	PK
3		16818.240	38.650	18.650	-15.350	54.000	41.363	14.212	35.575	100	66	AV
4		16818.500	53.987	33.981	-20.013	74.000	41.364	14.235	35.593	100	66	PK
5		17864.000	53.406	30.124	-20.594	74.000	41.046	17.961	35.725	200	32	PK
6	*	17864.210	42.249	19.021	-11.751	54.000	41.046	17.900	35.719	200	32	AV

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Canon	
Site: AC5	Time: 2019/04/02
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Handheld Remote Methane Leak Detector	Power: DC 7.2V
Note: Mode 2	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		5233.000	45.557	44.719	-28.443	74.000	34.233	7.009	40.404	100	2	PK
2		5233.300	27.488	26.650	-26.512	54.000	34.233	7.010	40.405	100	2	AV
3		16818.240	39.021	19.021	-14.979	54.000	41.363	14.212	35.575	100	145	AV
4		16818.500	51.135	31.130	-22.865	74.000	41.364	14.235	35.593	100	145	PK
5		17864.000	52.763	29.481	-21.237	74.000	41.046	17.961	35.725	200	23	PK
6	*	17864.120	42.571	19.320	-11.429	54.000	41.046	17.926	35.721	200	23	AV

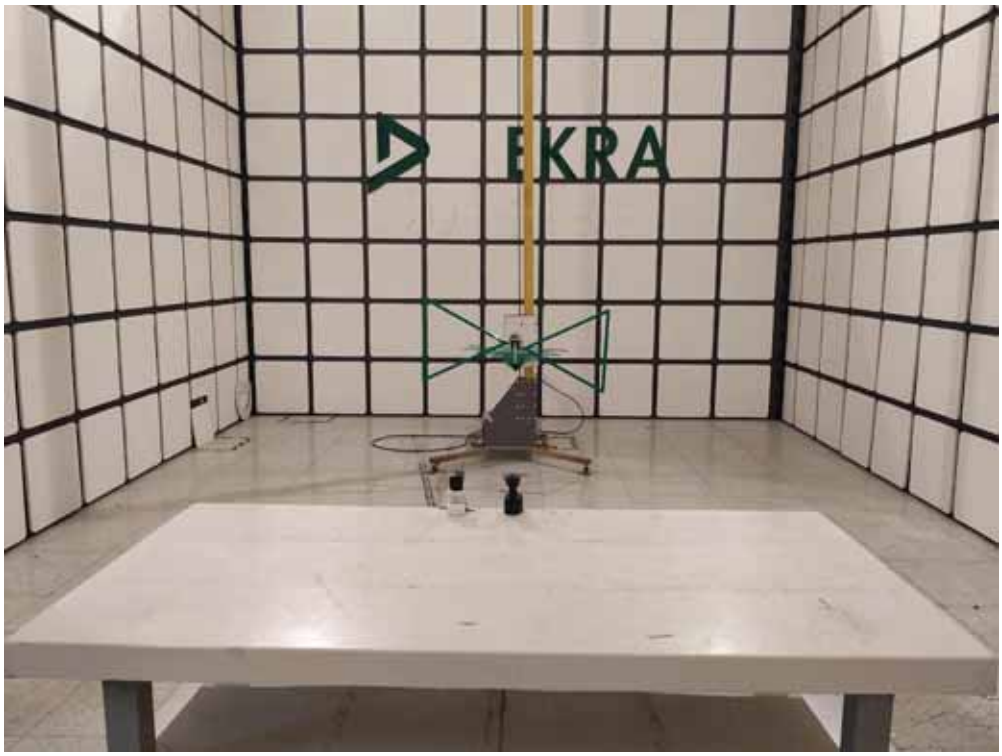
Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.7. Test Photograph

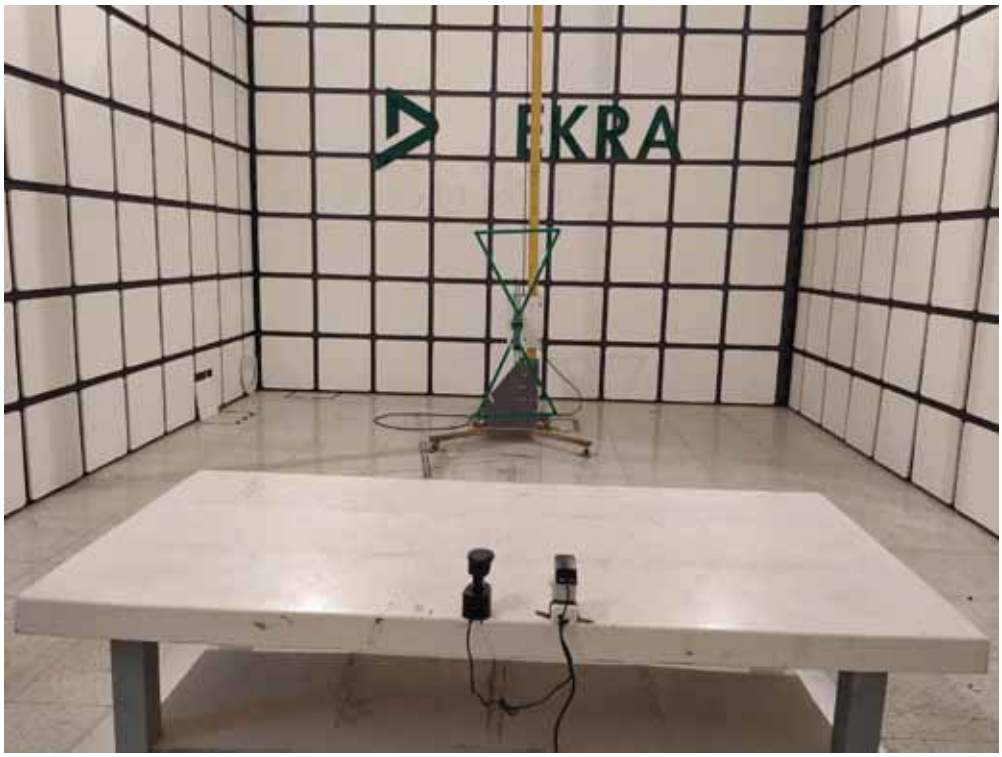
Test Mode: Mode 1

Description: Front View of Radiated disturbance Test Setup (Below 1GHz)



Test Mode: Mode 1

Description: Rear View of Radiated disturbance Test Setup (Below 1GHz)

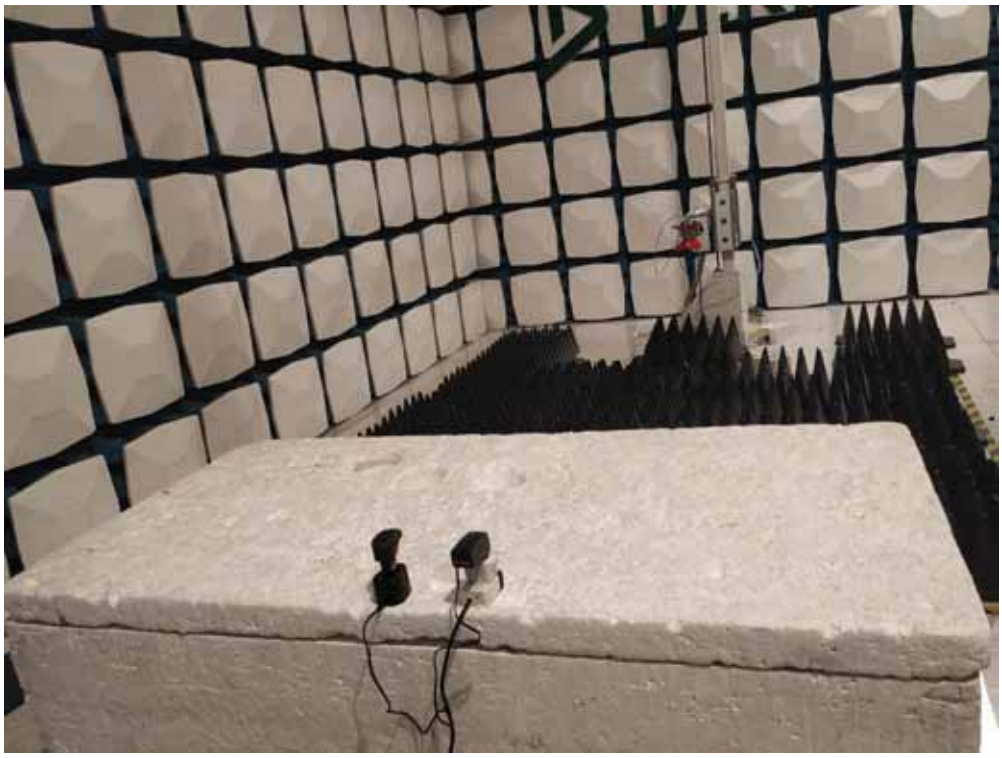


Test Mode: Mode 1

Description: Front View of Radiated disturbance Test Setup (Above 1GHz)

Test Mode: Mode 1

Description: Rear View of Radiated disturbance Test Setup (Above 1GHz)

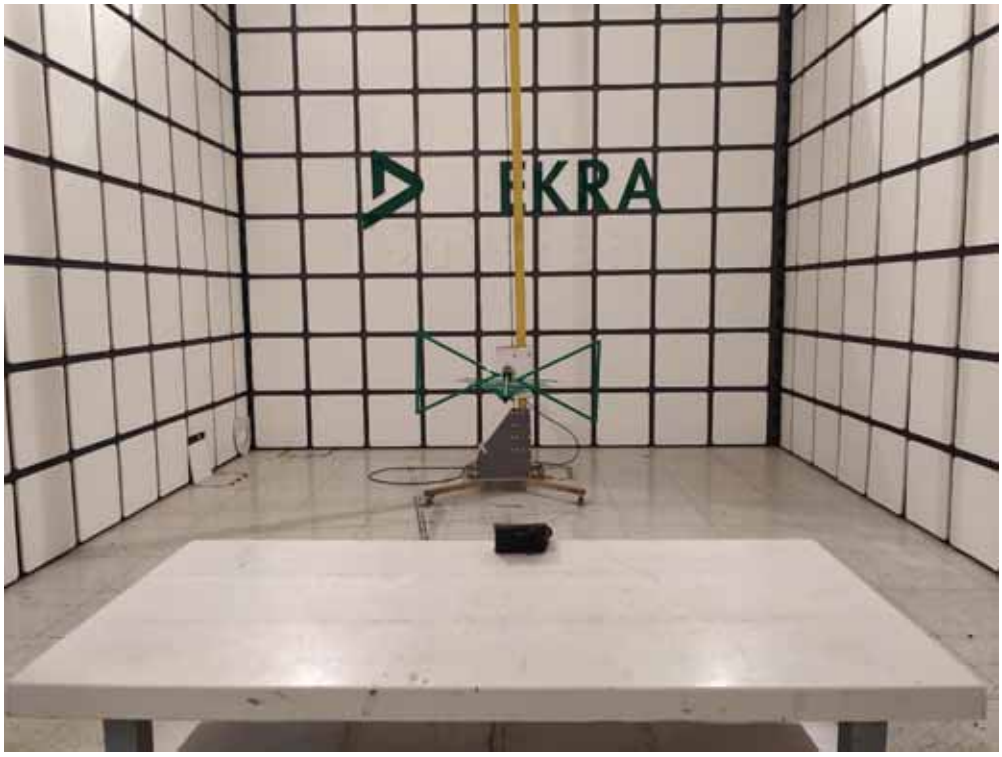


Test Mode: Mode 2

Description: Front View of Radiated disturbance Test Setup (Below 1GHz)

Test Mode: Mode 2

Description: Rear View of Radiated disturbance Test Setup (Below 1GHz)



Test Mode: Mode 2

Description: Front View of Radiated disturbance Test Setup (Above 1GHz)

Test Mode: Mode 2

Description: Rear View of Radiated disturbance Test Setup (Above 1GHz)

5. Attachment

EUT Photograph

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo

(4) EUT Photo

(5) EUT Photo

(6) EUT Photo

(7) EUT Photo

(8) EUT Photo

(9) EUT Photo

(10) EUT Photo

(11) EUT Photo

The End