Certificate

Issue Date: April 15, 2021
Ref. Report No. ISL-21LR066FB

Product Name	:	Bluetooth 5.1 Module
Model(s)	:	BT40; BT40F; BT40E
Brand	:	Fanstel
Applicant	:	Fanstel Corporation, Taipei
Address	:	10F-10, No. 79, Sec. 1, Hsin Tai Wu Rd., Hsi-Chih, New Taipei City 221 Taiwan

We, **International Standards Laboratory Corp.**, hereby certify that:

The sample ISL received which bearing the trade name and model specified above has shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified. (refer to Test Report if any modifications were made for compliance). And Our laboratories is the accredited laboratories and are approved according to ISO/IEC 17025.

Standards:

FCC CFR Title 47 Part 15 Subpart B: Section 15.107 and 15.109
ANSI C63.4-2014
Class B

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.
The determination of the test results is determined by customer agreement, regulations or standard document specifications.
The Laboratory evaluates measurement inaccuracies based on regulatory or standard document specifications and is listed in the report for reference. The quantitative project part judges the conformity of the test results based on the evaluation results of the standard cited uncertainty, and the qualitative project does not temporarily evaluate the measurement uncertainty.

Angus Chu

Angus Chu / Director

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No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan

FCC TEST REPORT

of

CFR 47 Part 15 Subpart B Class B

Application Type: Supplier's Declaration of Conformity

Product :	**Bluetooth 5.1 Module**
Model(s):	**BT40; BT40F; BT40E**
Brand:	**Fanstel**
Applicant:	**Fanstel Corporation, Taipei**
Address:	**10F-10, No. 79, Sec. 1, Hsin Tai Wu Rd., Hsi-Chih, New Taipei City 221 Taiwan**

Test Performed by:

International Standards Laboratory Corp. LT Lab.
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No. 120, Lane 180, Hsin Ho Rd., Lung-Tan Dist., Tao Yuan City 325, Taiwan

Report No.: **ISL-21LR066FB**
Issue Date : **April 15, 2021**

Testing Laboratory
0997

Contents of Report

1. General

1.1 Certification of Accuracy of Test Data

Standards:	FCC CFR Title 47 Part 15 Subpart B: Section 15.107 and 15.109 ANSI C63.4-2014 Class B
Equipment Tested:	Bluetooth 5.1 Module
Model:	BT40; BT40F; BT40E
Brand:	Fanstel
Applicant:	Fanstel Corporation, Taipei
Sample received Date:	March 5, 2021
Final test Date:	refer to the date of test data
Test Site:	Chamber 19; Conduction 02; Immunity02
Test Distance:	3m (above1GHz-18GHz)
Temperature:	refer to each site test data
Humidity:	refer to each site test data
Input power:	Conduction input power: AC 120 V / 60 Hz Radiation input power: AC 120 V / 60 Hz
Test Result:	**PASS**
Report Engineer:	Gigi Yeh
Test Engineer:	Jason Chao Jason Chao
Approved By:	_____ Jerry Liu / ***Assistant Manager***

1.2 Description of EUT

EUT

General:

Product Name	Bluetooth 5.1 Module
Brand Name	Fanstel
Model Name	BT40; BT40F; BT40E
Model Difference	Antenna difference
Power Supply	5Vdc from USB (JIG)
USB port	one (JIG)

Model Summaries:

module	BT40F (PCB Ant.)	BT40	BT40E (Dipole Ant.)
SoC	nRF5340 QKAA	nRF5340 QKAA	nRF5340 QKAA
Size	15x20.8x1.9mm	14x16x1.9mm	14x16x1.9mm
32 MHz and 32.768 kHz crystals	Integrated	Integrated	Integrated
DC converter inductors, VDD,VDDH	Integrated	Integrated	Integrated
BT Antenna	PCB ANT 0.88dBi	PCB ANT -3.37dBi	Dipole ANT 6dBi
Max TX			
Operating temp.	-40ºC to +105ºC	-40ºC to +105ºC	-40ºC to +105ºC
Availability	Sample	Sample 1Q21	Sample

1.3 Configuration of Tested System

Fig. 1-1 Configuration

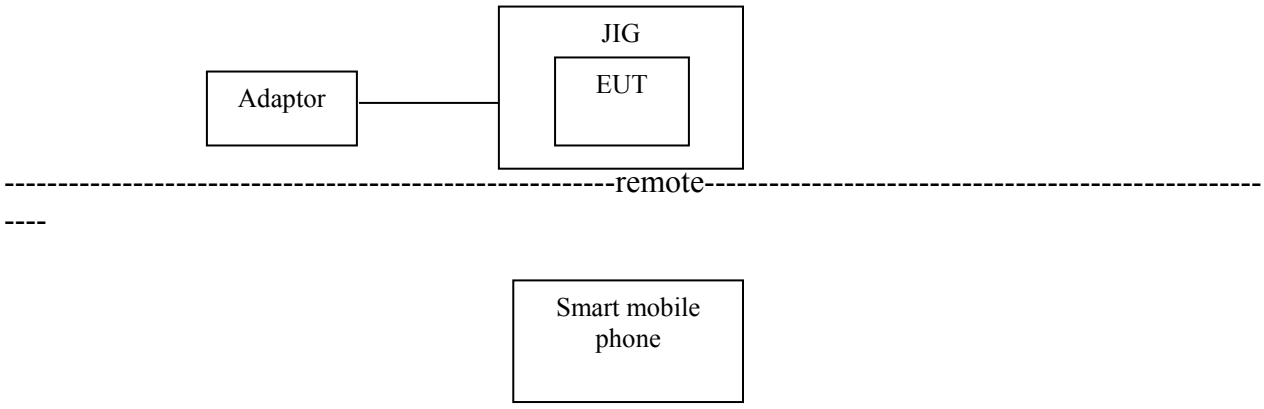


Table 1-1 Support Equipment Used in Tested System

Item	Equipment	Mrf/Brand	Model name	Series No	Data Cable	Power Cable
1	adaptor	Apple	A1385	N/A	N/A	Shielded /1m
2	Smart mobile phone	hTC	PL99110	N/A	N/A	N/A

I/O Cable Condition of EUT and Support Units

Description	Path	Cable Length	Cable Type	Connector Type
USB power cable	Adaptor USB port to JIG micro USB port	1m	Shielded	Metal Head

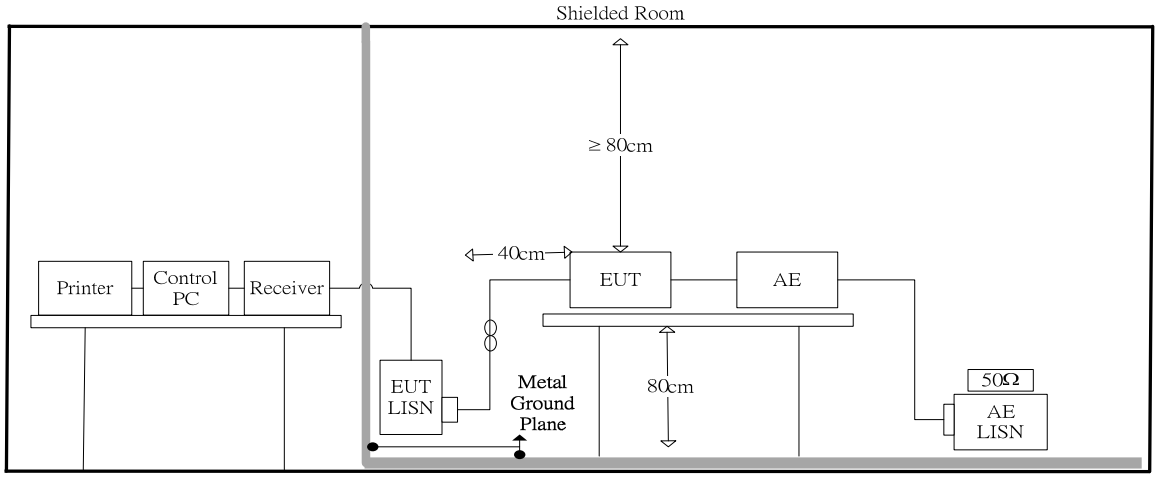
Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

2. Power Line Conducted Emissions

2.1 Test Setup and Procedure

2.1.1 Test Setup



2.1.2 Test Procedure

The measurements are performed in a shielded room test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (50ohm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

The interconnecting cables were arranged and moved to get the maximum measurement. Both the line of power cord, hot and neutral, were measured. All of the interface cables were manipulated according to ANSI C63.4 requirements.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

2.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	150kHz~30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9kHz

2.1.4 Limit

Conducted emissions limits of Class_A equipment. (AC mains power terminals):

Frequency range (MHz)	Quasi-peak (dBμV)	Average (dBμV)
0.15-0.50	79	66
0.50-30	73	60

Note 1: The more stringent limit applies at transition frequencies.

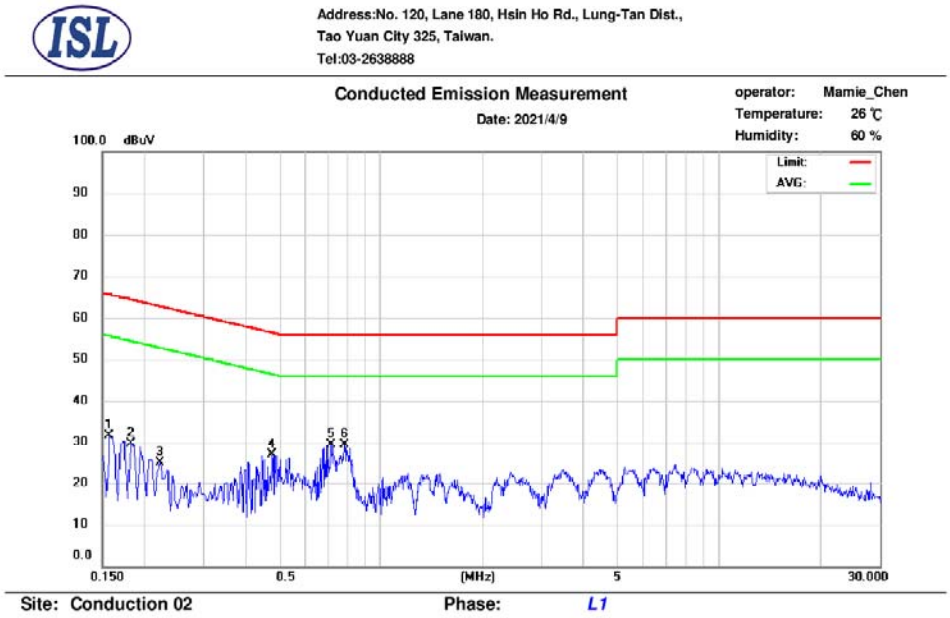
Conducted emissions limits of Class_B equipment. (AC mains power terminals):

Frequency range (MHz)	Quasi-peak (dBμV)	Average (dBμV)
0.15-0.50	66 to 56*	56-46*
0.50-5.0	56	46
5.0-30	60	50
*The limit level in dBμV decreases linearly with the logarithm of frequency.		

Note 1: The more stringent limit applies at transition frequencies.

2.2 Conduction Test Data: Configuration 1

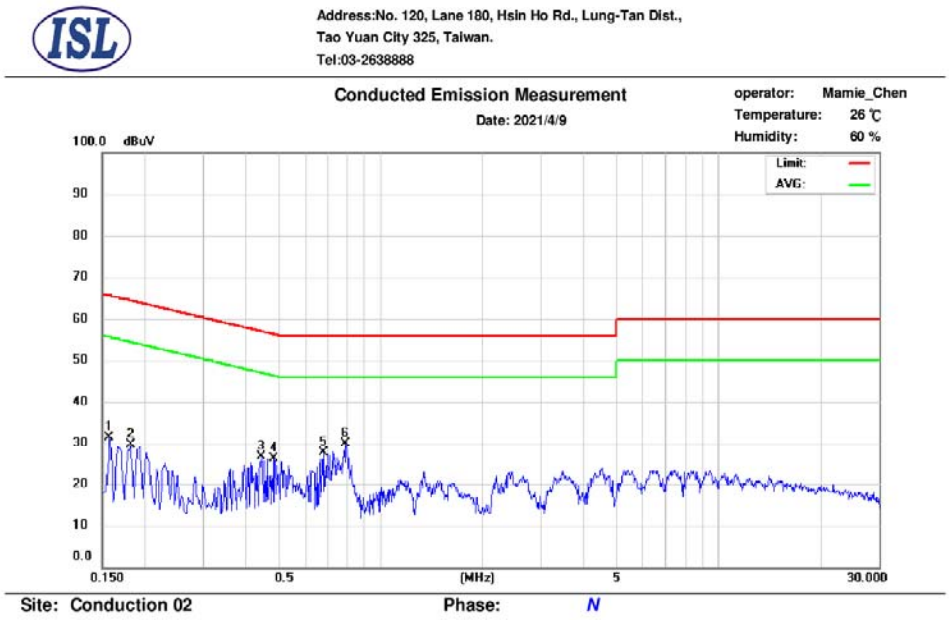
- Line



No.	Frequency (MHz)	QP_R (dBuV)	AVG_R (dBuV)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)
1	0.158	16.04	0.93	9.72	25.76	65.57	-39.81	10.65	55.57	-44.92
2	0.182	13.30	-0.06	9.71	23.01	64.39	-41.38	9.65	54.39	-44.74
3	0.222	8.88	-0.95	9.71	18.59	62.74	-44.15	8.76	52.74	-43.98
4	0.478	9.69	1.02	9.71	19.40	56.37	-36.97	10.73	46.37	-35.64
5	0.714	12.93	6.08	9.73	22.66	56.00	-33.34	15.81	46.00	-30.19
6	0.782	13.93	8.71	9.73	23.66	56.00	-32.34	18.44	46.00	-27.56

Note:
Margin = QP/AVG Emission - Limit
QP/AVG Emission = QP_R/AVG_R + Correct Factor
Correct Factor = LISN Loss + Cable Loss
A margin of -8dB means that the emission is 8dB below the limit
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result.
If peak data can pass, it will be shown in “QP/AVG Correct” column, if not, QP/AVG data will instead.

- Neutral



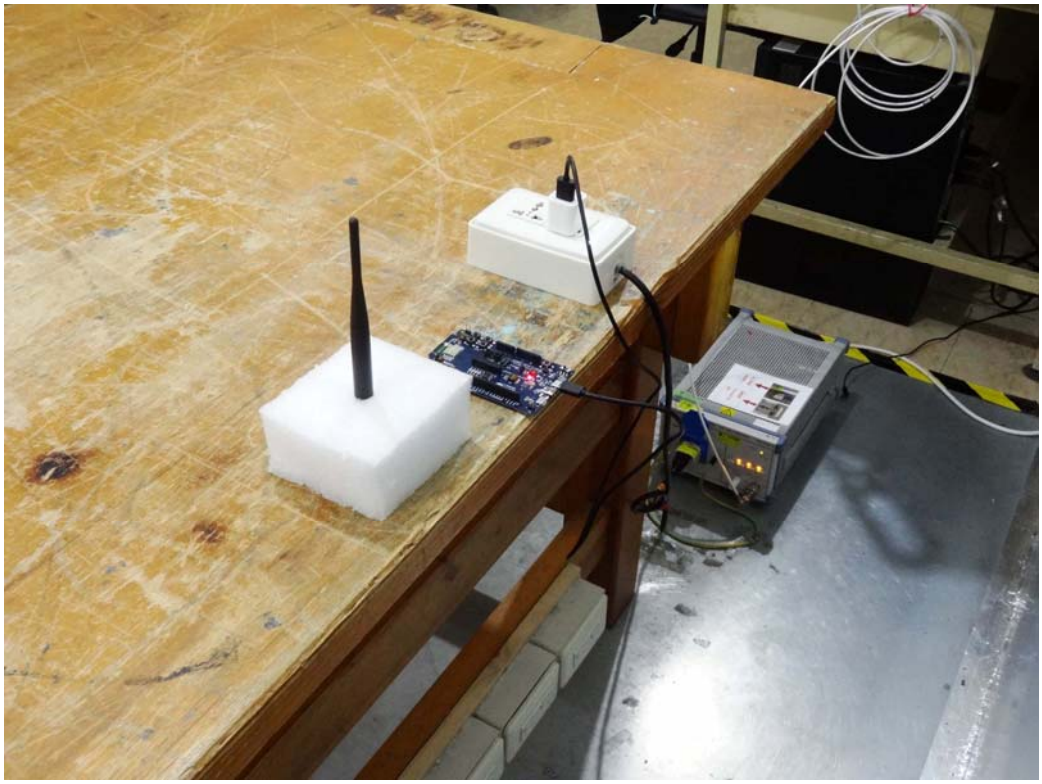
No.	Frequency (MHz)	QP_R (dBuV)	AVG_R (dBuV)	Correct Factor (dB)	QP Emission (dBuV)	QP Limit (dBuV)	QP Margin (dB)	AVG Emission (dBuV)	AVG Limit (dBuV)	AVG Margin (dB)
1	0.158	16.10	0.87	9.72	25.82	65.57	-39.75	10.59	55.57	-44.98
2	0.182	13.27	-0.30	9.71	22.98	64.39	-41.41	9.41	54.39	-44.98
3	0.446	8.85	-1.60	9.71	18.56	56.95	-38.39	8.11	46.95	-38.84
4	0.486	8.96	0.22	9.71	18.67	56.23	-37.56	9.93	46.23	-36.30
5	0.682	11.29	2.83	9.72	21.01	56.00	-34.99	12.55	46.00	-33.45
6	0.790	15.27	8.45	9.72	24.99	56.00	-31.01	18.17	46.00	-27.83

Note:
Margin = QP/AVG Emission - Limit
QP/AVG Emission = QP_R/AVG_R + Correct Factor
Correct Factor = LISN Loss + Cable Loss
A margin of -8dB means that the emission is 8dB below the limit
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result.
If peak data can pass, it will be shown in “QP/AVG Correct” column, if not, QP/AVG data will instead.

2.3 Test Setup Photo

Front View

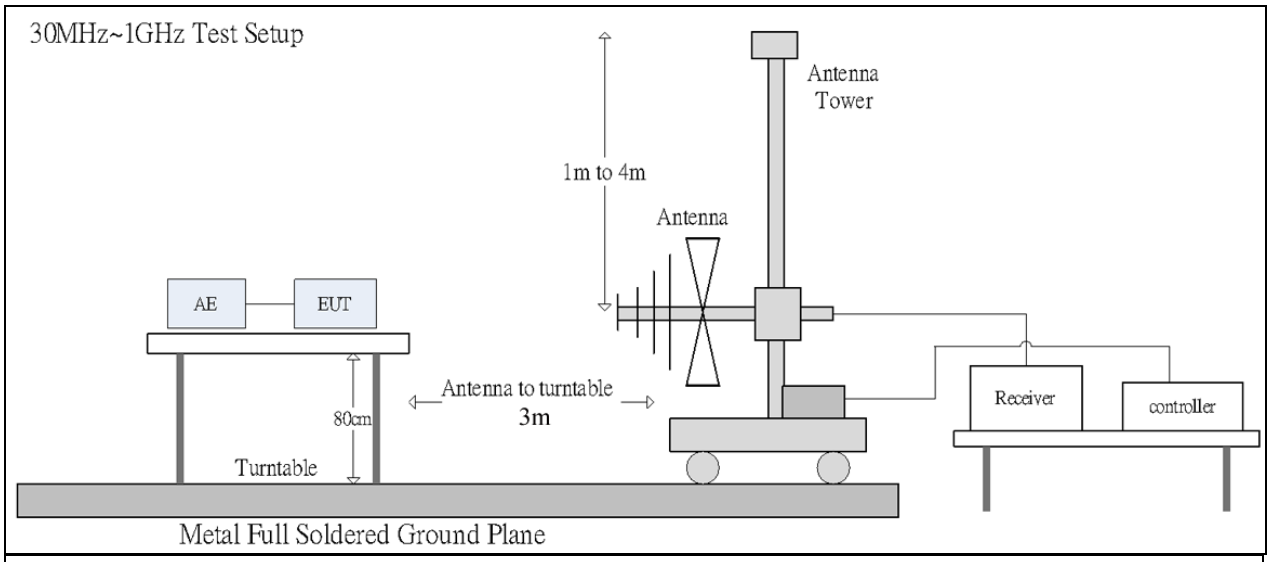
Back View

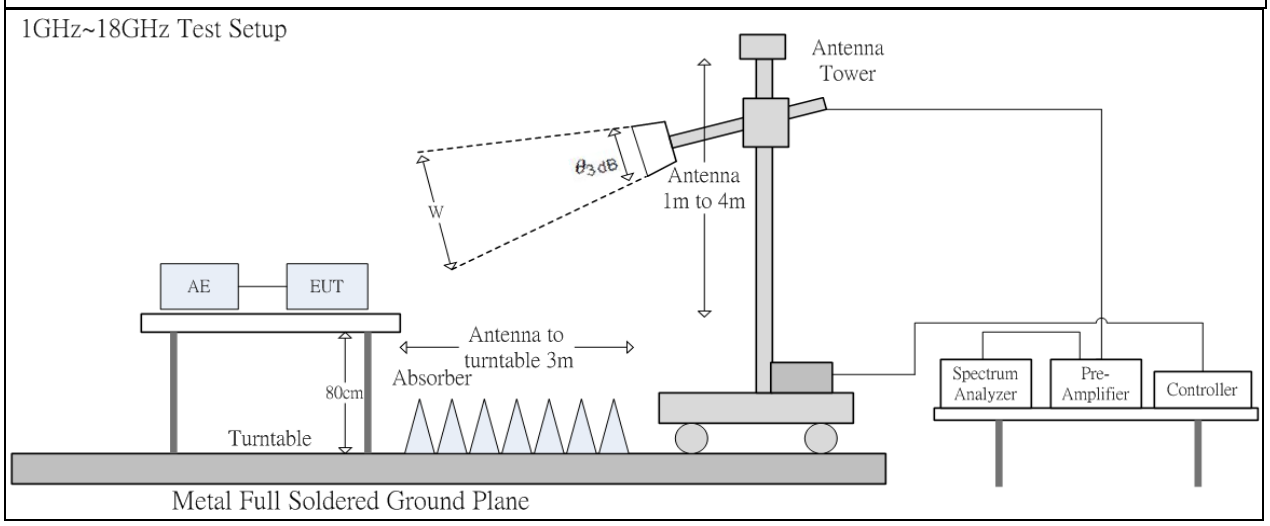


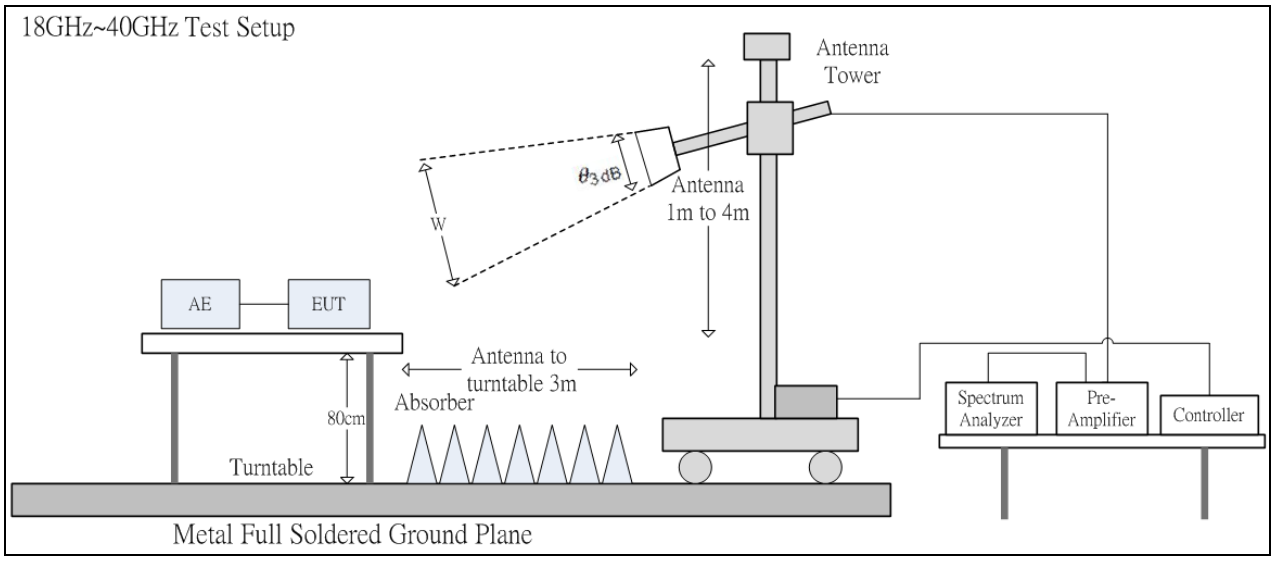
3. Radiated Emissions

3.1 Test Setup and Procedure

3.1.1 Test Setup







The 3dB beam width of the horn antenna used for the test is as shown in the table below.

1GHz~18GHz

Frequency GHz	E-plane	H-plane	$\theta_{3\,dB}$(min)	d= 3 m
				w (m)
1	88°	147°	88°	5.79
2	68°	119°	68°	4.04
3	73°	92°	73°	4.44
4	70°	89°	70°	4.20
5	55°	60°	55°	3.12
6	63°	62°	62°	3.60
7	48°	49°	48°	2.67
8	39°	46°	39°	2.12
9	32°	42°	32°	1.72
10	30°	39°	30°	1.61
11	32°	35°	32°	1.72
12	35°	32°	35°	1.89
13	34°	31°	31°	1.66
14	32°	27°	27°	1.44
15	36°	26°	26°	1.39
16	40°	28°	28°	1.50
17	43°	26°	26°	1.39
18	41°	22°	22°	1.17

18 GHz~26.5 GHz

Frequency GHz	E-plane	H-plane	$\theta_{3\,dB}$(min)	d= 1 m	d= 3 m
				w (m)	w (m)
18	11.4°	12.7°	11.4°	0.199	0.598
19	10.9°	12.4°	10.9°	0.190	0.572
20	10.8°	12.4°	10.8°	0.189	0.567
21	9.8°	12°	9.8°	0.171	0.514
22	9.7°	11°	9.7°	0.169	0.509
23	10°	11.8°	10°	0.174	0.524
24	9°	11°	9°	0.157	0.472
25	10°	12.3°	10°	0.174	0.524
26	9.9°	11.1°	9.9°	0.173	0.519
26.5	9.4°	11.3°	9.4°	0.164	0.493

26 GHz~40 GHz

Frequency GHz	E-plane	H-plane	$\theta_{3\,dB}$(min)	d= 1 m	d= 3 m
				w (m)	w (m)
26	12°	12.2°	12°	0.210	0.631
27	13°	10.5°	10.5°	0.184	0.551
28	13.2°	12.3°	12.3°	0.216	0.647
29	11.5°	12.8°	11.5°	0.201	0.604
30	12°	8°	8°	0.140	0.420
31	11.5°	10.1°	10.1°	0.177	0.530
32	11.8°	10°	10°	0.175	0.525
33	11.8°	9.5°	9.5°	0.166	0.499
34	11.6°	10°	10°	0.175	0.525
35	10.9°	9.8°	9.8°	0.171	0.514

36	11.8°	8.6°	8.6°	0.150	0.451
37	12.9°	10.5°	10.5°	0.184	0.551
38	12°	10.3°	10.3°	0.180	0.541
39	11.8°	9.8°	9.8°	0.171	0.514
40	12.5°	11.2°	11.2°	0.196	0.588

3.1.2 Test Procedure

The radiated emissions test will then be repeated on the chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipment are set up on the turntable of one of 3 meter chamber. Desktop EUT are set up on a wooden stand 0.8 meter above the ground or floor-standing arrangement shall be placed on the horizontal ground reference plane. The test volume for a height of up to 30 cm may be obstructed by absorber placed on the ground plane.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. The highest emissions between 30 MHz to 1000 MHz were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The highest emissions between 1 GHz to 40 GHz were analyzed in details by operating the spectrum analyzer in peak and average mode to determine the precise amplitude of the emissions.

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the antenna in the cone of radiation from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response. At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum measurement. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings. All of the interface cables were manipulated according to ANSI C63.4 requirements.

The highest internal source of the EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes. If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.

3.1.3 Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range: 30MHz--1000MHz
Detector Function: Quasi-Peak Mode
Resolution Bandwidth: 120kHz

Frequency Range: Above 1000MHz
Detector Function: Peak/Average Mode
Resolution Bandwidth: 1MHz

3.1.4 Limit

Radiated emissions limits of Class_A equipment

Frequency range (MHz)	at 10 m distance (dBμV/m)
30 - 88	49.5
88 - 216	54
216 – 960	56.9
Above 960	60
Note: The more stringent limit applies at transition frequencies.	

Radiated emissions limits of Class_B equipment

Frequency range (MHz)	at 3 m distance (dBμV/m)
30 - 88	40
88 - 216	43.5
216 – 960	46
Above 960	54
Note: The more stringent limit applies at transition frequencies.	

3.2 Radiation Test Data: Configuration 1
- Radiated Emissions (Horizontal)

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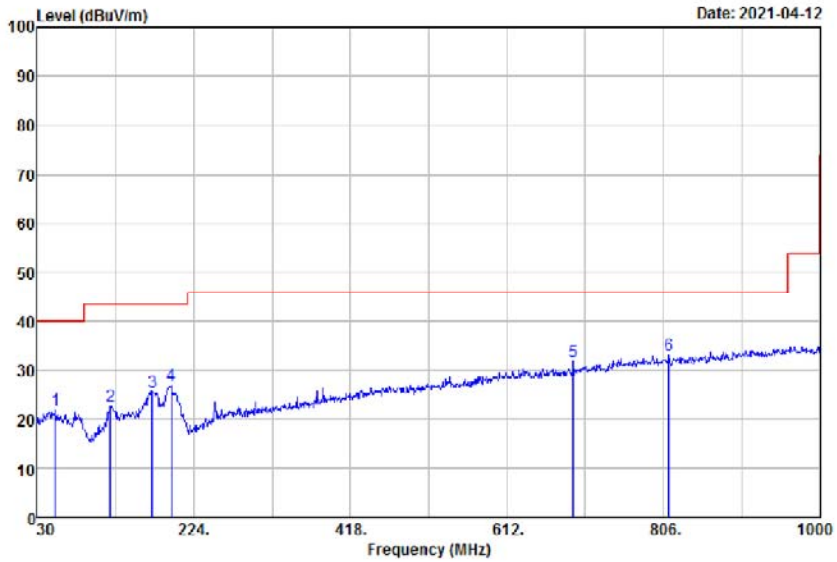

Condition: FCC CLASS B 3M PK 3m HORIZONTAL
Site : Chamber I9

Operator : Jason

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	52.31	27.95	-6.19	21.76	40.00	-18.24	Peak	HORIZONTAL
2	120.21	30.58	-7.85	22.73	43.50	-20.77	Peak	HORIZONTAL
3	172.59	31.61	-5.88	25.73	43.50	-17.77	Peak	HORIZONTAL
4	195.87	35.44	-8.50	26.94	43.50	-16.56	Peak	HORIZONTAL
5	694.45	29.42	2.31	31.73	46.00	-14.27	Peak	HORIZONTAL
6	812.79	28.76	4.38	33.14	46.00	-12.86	Peak	HORIZONTAL

- 1 -

* Note:
Margin = Emission – Limit
Emission = Radiated Amplitude + Correct Factor
Correct Factor = Antenna Correction Factor + Cable Loss – Pre-Amplifier Gain
A margin of -8dB means that the emission is 8dB below the limit
Antenna Distance: 3 meters
Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement.

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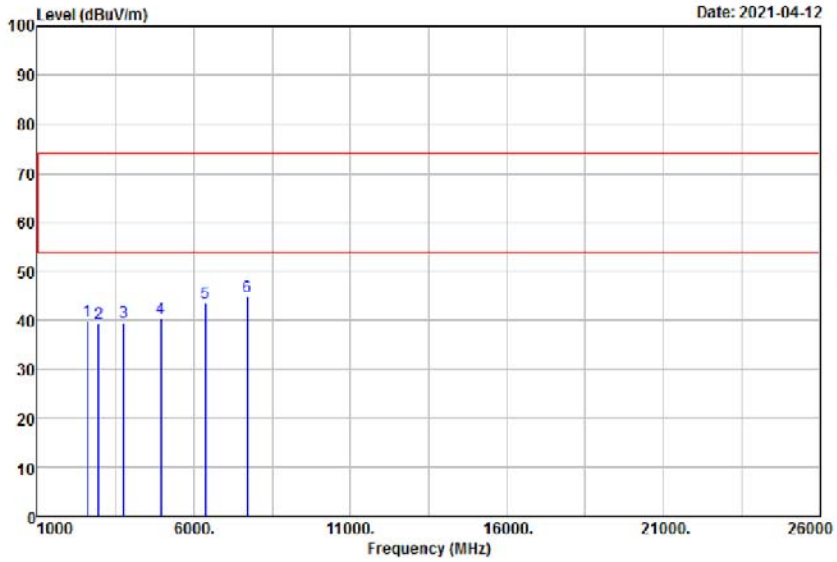

Condition: FCC CLASS B 3M PK 3m HORIZONTAL
Site : Chamber I9

Operator : Jason

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	2600.00	50.85	-11.23	39.62	74.00	-34.38	Peak	HORIZONTAL
2	2950.00	49.91	-10.63	39.28	74.00	-34.72	Peak	HORIZONTAL
3	3750.00	48.45	-9.01	39.44	74.00	-34.56	Peak	HORIZONTAL
4	4950.00	47.18	-6.93	40.25	74.00	-33.75	Peak	HORIZONTAL
5	6375.00	47.24	-3.76	43.48	74.00	-30.52	Peak	HORIZONTAL
6	7700.00	47.52	-2.79	44.73	74.00	-29.27	Peak	HORIZONTAL

- 1 -

* Note:
Margin = Emission – Limit
Emission = Radiated Amplitude + Correct Factor
Correct Factor = Antenna Correction Factor + Cable Loss – Pre-Amplifier Gain
A margin of -8dB means that the emission is 8dB below the limit
Antenna Distance: 3 meters
Above 1GHz test, if the peak measured value meets the average limit, it is unnecessary to perform the average measurement.

-Radiated Emissions (Vertical)

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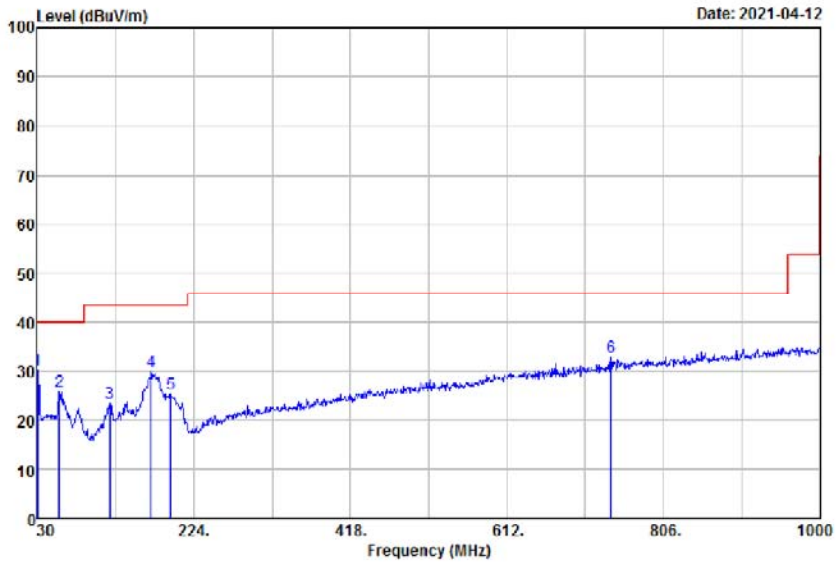

Condition: FCC CLASS B 3M PK 3m VERTICAL
Site : Chamber I9

Operator : Jason

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	30.00	37.72	-7.51	30.21	40.00	-9.79	Peak	VERTICAL
2	57.16	32.35	-6.50	25.85	40.00	-14.15	Peak	VERTICAL
3	119.24	31.35	-7.99	23.36	43.50	-20.14	Peak	VERTICAL
4	170.65	35.59	-5.76	29.83	43.50	-13.67	Peak	VERTICAL
5	194.90	33.87	-8.42	25.45	43.50	-18.05	Peak	VERTICAL
6	741.01	29.39	3.47	32.86	46.00	-13.14	Peak	VERTICAL

- 1 -

* Note:
Margin = Emission – Limit
Emission = Radiated Amplitude + Correct Factor
Correct Factor = Antenna Correction Factor + Cable Loss – Pre-Amplifier Gain
A margin of -8dB means that the emission is 8dB below the limit
Antenna Distance: 3 meters
Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement.

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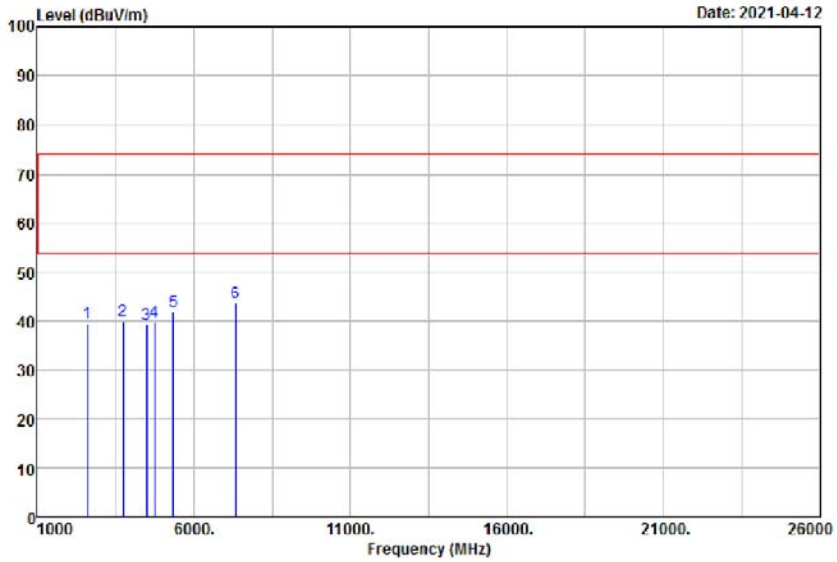


Condition: FCC CLASS B 3M PK 3m VERTICAL
Site : Chamber I9

Operator : Jason

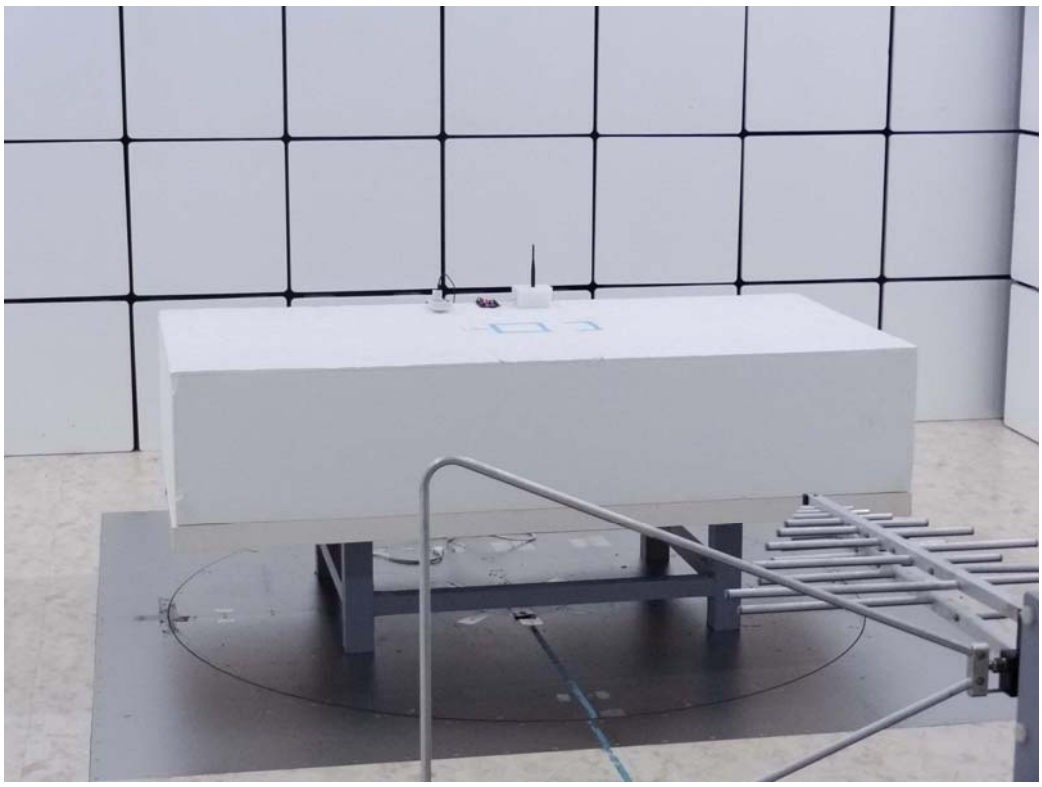
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	2600.00	50.73	-11.23	39.50	74.00	-34.50	Peak	VERTICAL
2	3725.00	49.12	-9.09	40.03	74.00	-33.97	Peak	VERTICAL
3	4475.00	46.89	-7.62	39.27	74.00	-34.73	Peak	VERTICAL
4	4725.00	47.08	-7.22	39.86	74.00	-34.14	Peak	VERTICAL
5	5350.00	47.77	-5.94	41.83	74.00	-32.17	Peak	VERTICAL
6	7325.00	47.09	-3.40	43.69	74.00	-30.31	Peak	VERTICAL

- 1 -

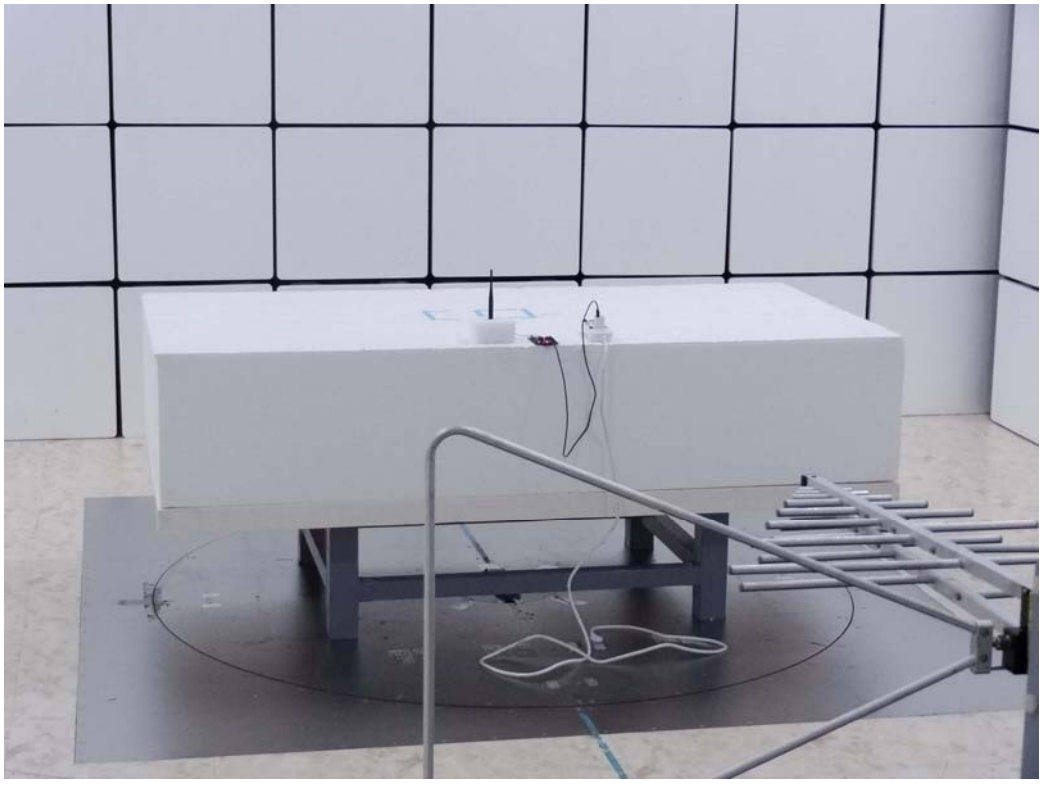
* Note:
Margin = Emission – Limit
Emission = Radiated Amplitude + Correct Factor
Correct Factor = Antenna Correction Factor + Cable Loss – Pre-Amplifier Gain
A margin of -8dB means that the emission is 8dB below the limit
Antenna Distance: 3 meters
Above 1GHz test, if the peak measured value meets the average limit, it is unnecessary to perform the average measurement.

3.3 Test Setup Photo

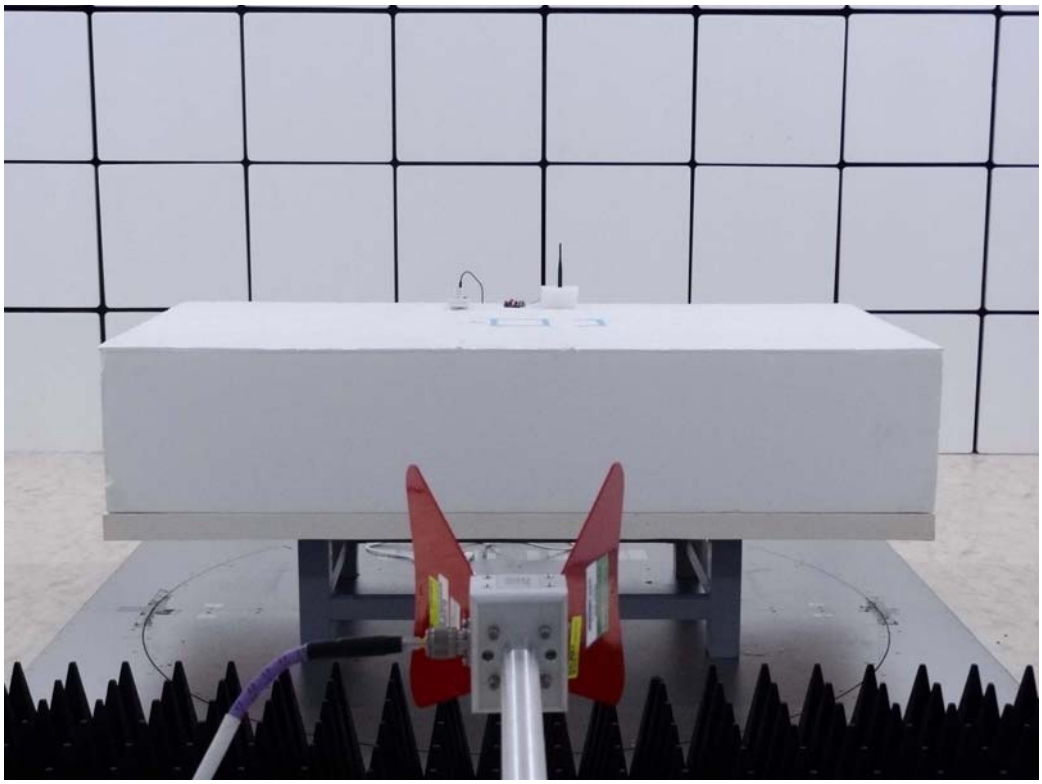
Front View (30MHz~1GHz)



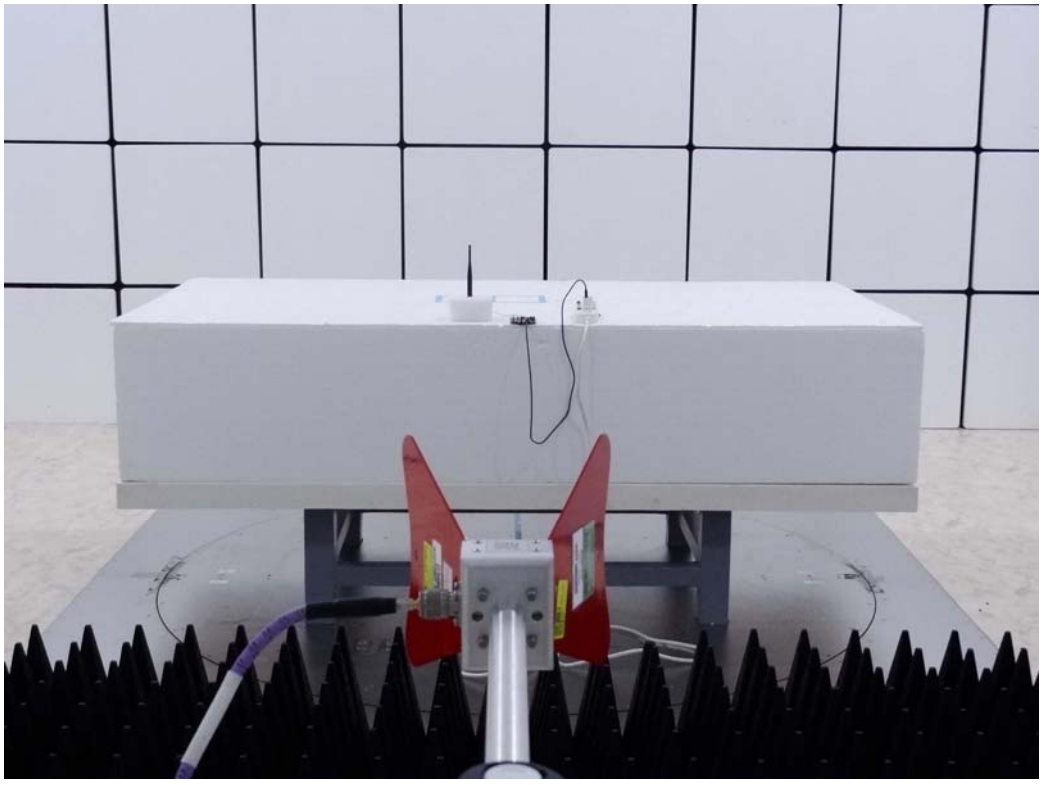
Back View (30MHz~1GHz)



Front View (above 1GHz)



Back View (above 1GHz)



4. Appendix

4.1 Appendix A: Warning Labels

Label Requirements

A Class B digital device subject to authorization under Supplier's Declaration of Conformity of FCC shall carry a label which includes the following statement:

*** * * W A R N I N G * * ***

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Devices subject to authorization under Supplier's Declaration of Conformity may be labeled with FCC logo on a voluntary basis as a visual indication that the product complies with the applicable FCC requirements

The sample label shown shall be permanently affixed at a conspicuous location on the device and be readily visible to the user at the time of purchase.

When the device is so small or for such use that it is impracticable to label it with the statement specified under (§15.19 Labeling requirements) paragraph (a) of this section in a font that is four-point or larger, and the device does not have a display that can show electronic labeling, then the information required by this paragraph shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

4.2 Appendix B: Warning Statement

Statement Requirements

The operators' manual for a Class B digital device shall contain the following statements or their equivalent:

*** * * W A R N I N G * * ***

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equivalent.

*** * * * * * * * * ***

If the EUT was tested with special shielded cables the operator's manual for such product shall also contain the following statements or their equivalent:

Shielded interface cables and/or AC power cord, if any, must be used in order to comply with the emission limits.

4.3 Appendix C: Test Equipment

4.3.1 Test Equipment List

Location	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Conduction 02	LISN 26	R&S	ENV216	102378	11/27/2020	11/27/2021
Conduction 02	LISN 21	R&S	ENV216	101476	07/21/2020	07/21/2021
Conduction 02	Conduction 02-1 Cable	WOKEN	CFD 300-NL	Conduction 02 -1	09/18/2020	09/18/2021
Conduction 02	EMI Receiver 14	ROHDE& SCHWARZ	ESCI	101034	05/22/2020	05/22/2021
Conduction 02	ISN T4 07	Teseq GmbH	ISN T400A	30449	08/02/2020	08/02/2021
Conduction 02	ISN T8 10	Teseq GmbH	ISN T800	42773	08/02/2020	08/02/2021

Location Conducted	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Chamber 19	Spectrum analyzer	R&S	FSV40	101919	08/13/2020	08/13/2021
Chamber 19	EMI Receiver	R&S	ESR3	102461	05/05/2020	05/05/2021
Chamber 19	Loop Antenna	EM	EM-6879	271	05/21/2020	05/21/2021
Chamber 19	Bilog Antenna (30MHz-1GHz)	Schwarzbeck	VULB9168 w 6dB Att.	9168-736	02/22/2021	02/22/2022
Chamber 19	Horn antenna (1GHz-18GHz)	ETS LINDGREN	3117	00218718	09/25/2020	09/25/2021
Chamber 19	Horn antenna (18GHz-26GHz)	Com-power	AH-826	081001	11/23/2020	11/23/2021
Chamber 19	Horn antenna (26GHz-40GHz)	Com-power	AH-640	100A	03/11/2021	03/11/2022
Chamber 19	Preamplifier (9kHz-1GHz)	HP	8447F	3113A04621	06/19/2020	06/19/2021
Chamber 19	Preamplifier (1GHz-26GHz)	EM	EM01M26G	060681	05/04/2020	05/04/2021
Chamber 19	Preamplifier (26GHz-40GHz)	MITEQ	JS4-26004000 -27-5A	818471	05/04/2020	05/04/2021
Chamber 19	RF Cable (9kHz-18GHz)	HUBER SUHNER	Sucoflex 104A & 18GHz SMA(M)-SMA(M)-10M	MY817/4A & 20200525	12/25/2020	12/25/2021
Chamber 19	RF Cable (18GHz-40GHz)	HUBER SUHNER	Sucoflex 102	27963/2&37421 /2	11/19/2020	11/19/2021
Chamber 19	Signal Generator	Anritsu	MG3692A	20311	01/03/2021	01/03/2022
Chamber 19	Test Software	Audix	E3 Ver:6.12023	N/A	N/A	N/A

4.3.2 Software for Controlling Spectrum/Receiver and Calculating Test Data

Site	Filename	Version	Issue Date
Conduction	EZ EMC	ISL-03A2	3/6/2013

4.4 Appendix D: Uncertainty of Measurement

The laboratory measurement uncertainty accordance with refers to CISPR 16-4-2. If Ulab is less than or equal to Ucispr in Table 1, then the test report may either state the value of Ulab or state that Ulab is less than Ucispr.
The coverage factor k = 2 yields approximately a 95 % level of confidence.

<Conduction 02>
AMN: ±2.94dB
ISN T4: ±3.11dB
ISN T8: ±3.09dB
CVP: ±3.62dB
CP: ±2.88dB

<Chamber 19 (3M)>
1GHz~6GHz: ±4.94dB

4.5 Appendix E: Photographs of EUT

Please refer to the File of **ISL-21LR066P**

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