

TEST REPORT

Product : PANEL PC
Trade mark : 
Model/Type reference : IOVU-210AD-RK39
Serial Model : /
Report Number : EED39N00008306
FCC ID : RFH-IOVU-210AD
Date of Issue : July 16, 2021

Test Standards	Result
☒ 47 CFR Part 15.225	PASS

Prepared for:

IEI INTEGRATION CORP.**NO.29,ZHONGXING RD.,XIZHI DIST.,NEW TAIPEI CITY 22161,TAIWAN**

Prepared by:

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检验检测专用章
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16 July 2021

Check No.: 3915514199

Modification Record

No.	Last Report No.	Modification Description
1	EED39N00008306	First report

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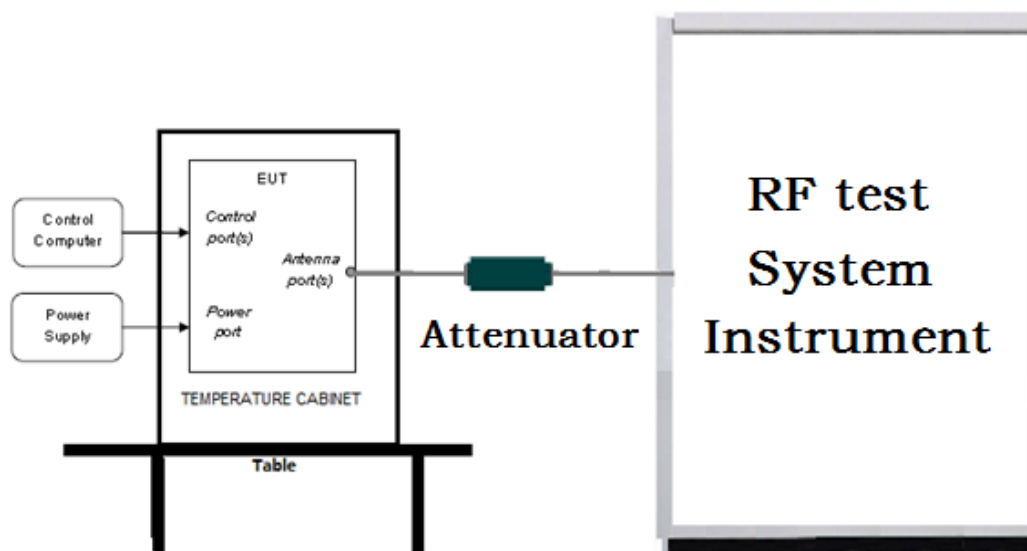
1. Test Summary

Test item	FCC Rules	Result
Antenna Requirement	47 CFR Part 15Subpart C Section 15.203/15.247 (c)	PASS
AC Power Line Conducted Emission	47 CFR Part 15Subpart C Section 15.207	PASS
Transmitter Fundamental Field Strength	47 CFR Part 15Subpart C Section Part 15.225(a)(b)(c)(d)	PASS
Radiated Emissions	Part 15.209(a), 15.225(c)(d)	PASS
Transmitter 20 dB Bandwidth	Part 15.215	PASS
Frequency Stability	15.225(e)	PASS

2. Test Requirement

2.1. Test Setup

For Conducted Test Setup



For Radiated Emissions Test Setup

Radiated Emissions setup:

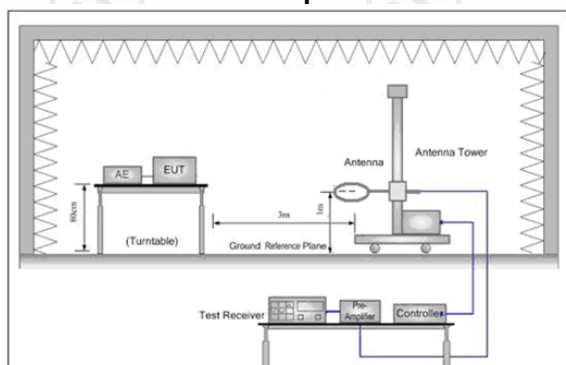


Figure 1. Below 30MHz

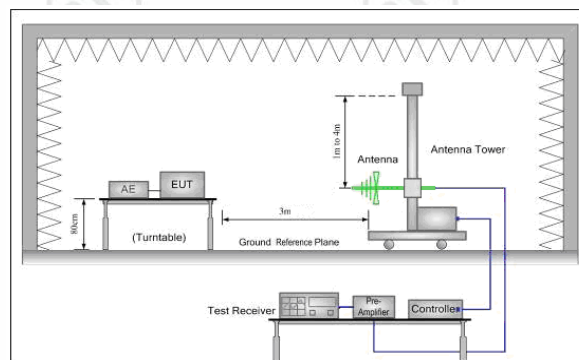


Figure 2. 30MHz to 1GHz

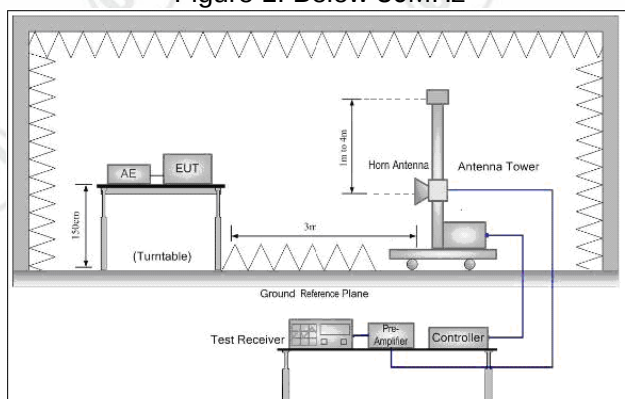


Figure 3. Above 1GHz

3. General Information

3.1. Client Information

Applicant:	IEI INTEGRATION CORP.
Address of Applicant:	NO.29,ZHONGXING RD.,XIZHI DIST.,NEW TAIPEI CITY 22161,TAIWAN
Manufacturer:	IEI INTEGRATION CORP.
Address of Manufacturer:	NO.29,ZHONGXING RD.,XIZHI DIST.,NEW TAIPEI CITY 22161,TAIWAN
Factory:	Armorlink SH Corp.
Address of Factory:	No.515,Shenfu Rd,Xinzhuang Industrial Development Zone,Minhang District,Shanghai,P.R.China

3.2. General Description of EUT

Product Name:	PANEL PC
Model No.(EUT):	IOVU-210AD-RK39
Trade Mark:	
EUT Supports Radios application:	2.4G WIFI: IEEE802.11b/g/n(20MHz), 2412MHz-2462MHz 5G WIFI: IEEE802.11a/ac(HT20)/ac(HT40)/ac(HT80),5150-5350MHz,5470-5725MHz, 5725-5850MHz. Bluetooth BR+EDR& Bluetooth V4.1 BLE NFC13.56MHz
Power Supply:	Model No: FSP060-DHAN3 Input: AC100-240V 1.8A, 50/60Hz Output: DC 12V 5.0A
Sample Received Date:	Feb 09, 2021
Sample tested Date:	Feb 09, 2021 to Apr 13, 2021

3.3. Product Specification subjective to this standard

Operation Frequency:	13.56MHz
Number of Channel:	1
Sample Type:	Mobile production
Antenna Type:	PCB Antenna
Test Voltage:	AC120V/60Hz

3.4. Description of Support Units

The EUT has been tested independently.

3.5. Test Location

All test facilities used to collect the test data are located at Building 18, Zhihui New Town Ecological Industrial Park, No. 1206, Jinyang East Road, Lujia Town, Kunshan, Jiangsu, China.

3.6. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No. 5734.01

Centre Testing International (Suzhou) CO., LTD. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in

Report No. : EED39M00008306

compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration. Laboratories and any additional program requirements in the identified field of testing.

FCC-Designation No.:CN1290

Centre Testing International Group Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The American association for Centre Testing International Group Co., Ltd. EMC laboratory accreditation Designation No.:CN1290

3.7. Deviation from Standards

None.

3.8. Abnormalities from Standard Conditions

None.

3.9. Other Information Requested by the Customer

None.

3.10. Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Occupied Bandwidth	0.56%
2	RF Power conducted	0.59 dB
3	Power Spectral Density, conducted	2.37 dB
4	Unwanted Emission, conducted	2.68 dB
5	All Emission, radiated	4.41 dB(30MHz-1GHz)
		4.99 dB(1GHz-18GHz)
		5.307 dB(18GHz-40GHz)
6	Temperature test	0.54°C
7	Humidity test	1.62%
8	DC and low frequency voltages test	1.14%

4. Equipment List

RF test system					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	R&S	SMB100A	182002	2020-10-23	2021-10-22
Communication test set test set	R&S	CMW500	107929	2020-04-27	2021-04-26
Spectrum Analyzer	R&S	FSV40	101588	2020-10-23	2021-10-22
Vector signal generator	R&S	SMBV100B	101985	2020-10-23	2021-10-22
Temperature/ Humidity Indicator	testo	608-H1	1945222628	2020-12-10	2021-11-08
Switch Automatic control	R&S	OSP-B157W8	101111	2020-10-23	2021-10-22
High-low temperature chamber	GIANT FORCE	GTH-800-40-CP	MAA1908-003	2020-12-08	2021-12-07
Automatic test software	Shenzhen JS TONSCEND	/	V2.6.77.0518	/	/

966 Semi-anechoic Chamber					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESU8	100537	2020-12-10	2021-12-09
Spectrum analyzer	R&S	FSV40	101185	2020-12-10	2021-12-09
Preamplifier (30MHz~1GHz)	SONOMA	317	393347	2020-12-04	2021-12-03
Preamplifier (1GHz~18GHz)	R&S	SCU-18D	1987397	2020-12-10	2021-12-09
Preamplifier (18GHz~40GHz)	/	MTLNA1804003 0235	12009007	2020-10-23	2021-10-22
Loop Antenna (9kHz~30MHz)	TESEQ	HLA6121	54575	2021-02-27	2022-02-26
Antenna (30MHz~1GHz)	SCHWARZBEC K	VULB9163	9163-965	2020-10-16	2021-10-15
Antenna (1GHz~18GHz)	R&S	HF907	102524	2020-12-15	2021-12-14
Antenna (18GHz~40GHz)	R&S	BBHA9170	1032	2020-10-23	2021-10-22
Band rejection filter	Xi'an xingbo	XBLBQ-DZA81	200827-1-02	/	/

5. Radio Technical Requirements Specification

5.1. Reference Documents for Testing

No.	Identity	Document Title
1	FCC Part15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

5.2. Test Results List

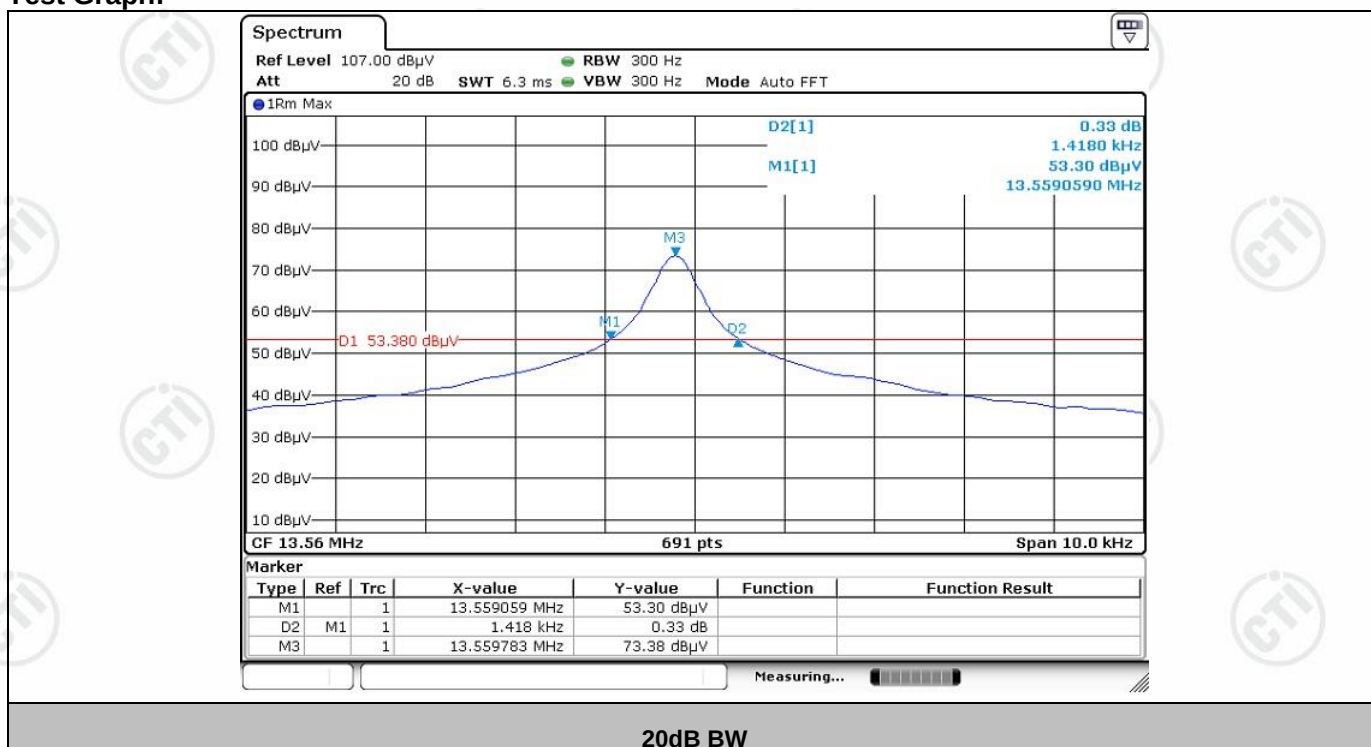
Test requirement	Test item	Verdict	Note
FCC Part 15.215	Transmitter 20 dB Bandwidth	PASS	Appendix A)
Part15C Section 15.203/15.247 (c)	Antenna Requirement	PASS	Appendix B)
Part15C Section 15.207	AC Power Line Conducted Emission	PASS	Appendix C)
Part 15Subpart C Section Part 15.225(a)(b)(c)(d)	Transmitter Fundamental Field Strength	PASS	Appendix D)
Part 15.209(a), 15.225(c)(d)	Radiated Emissions	PASS	Appendix E)
15.225(e)	Frequency Stability	PASS	Appendix F)

Appendix A): Transmitter 20 dB Bandwidth

Result Table:

Frequency (MHz)	20dB BW (KHz)
13.56	1.418

Test Graph:



Appendix B): Antenna Requirement

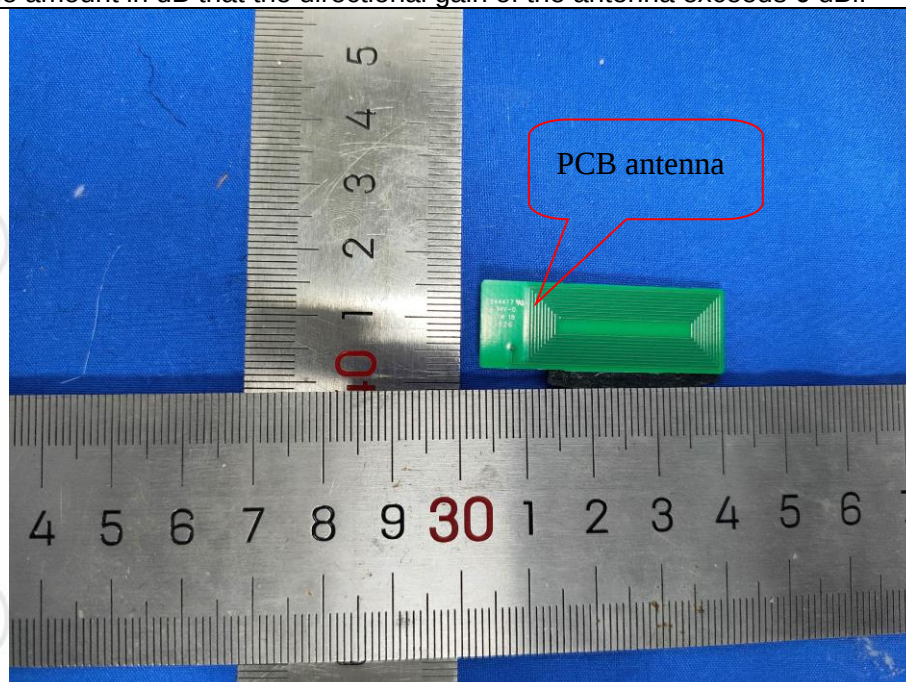
15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is integrated on the main PCB and no consideration of replacement.

Appendix C): AC Power Line Conducted Emission

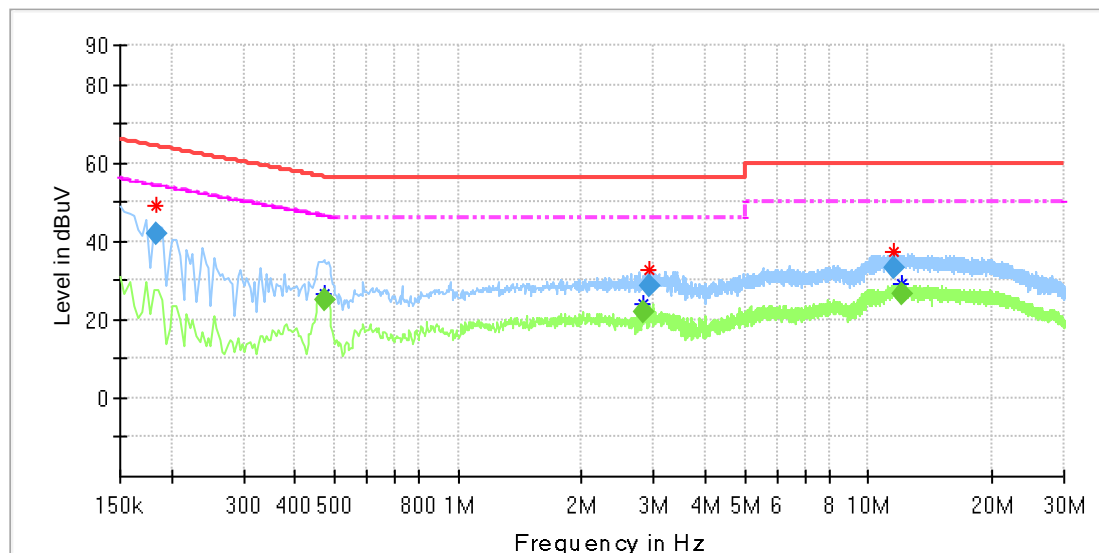
Test Procedure:	Test frequency range :150KHz-30MHz 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.														
Limit:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table> * The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE: The lower limit is applicable at the transition frequency	Frequency range (MHz)	Limit (dBμV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBμV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

L1 line:



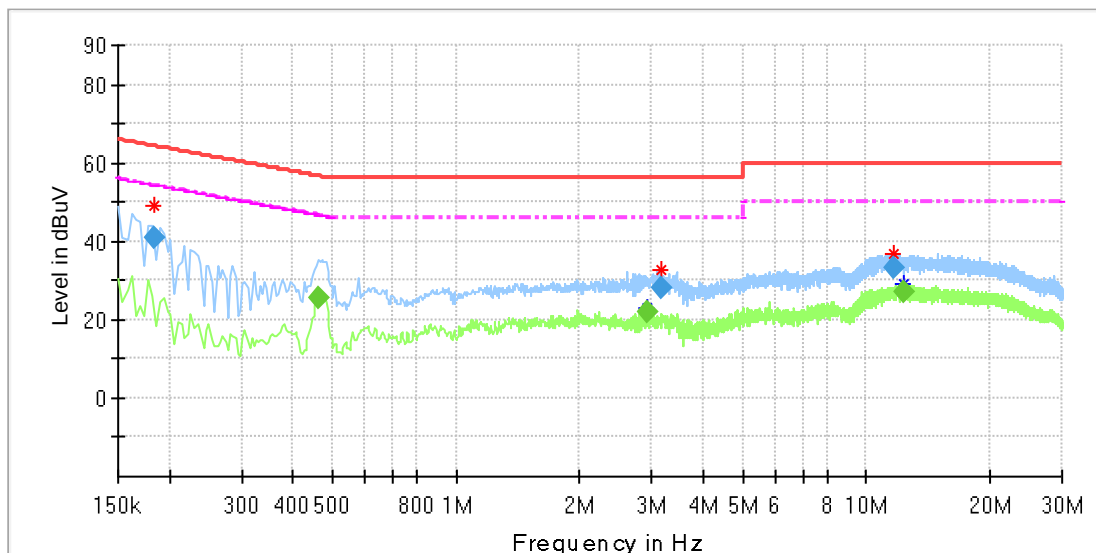
Final_Result

Frequency (MHz)	QuasiPeak (dbuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.183381	41.66	---	64.33	22.67	1000.0	9.000	L1	20.0
0.470750	---	24.99	46.50	21.51	1000.0	9.000	L1	20.1
2.841048	---	21.74	46.00	24.26	1000.0	9.000	L1	20.2
2.919872	28.62	---	56.00	27.38	1000.0	9.000	L1	20.2
11.512544	33.42	---	60.00	26.58	1000.0	9.000	L1	20.0
12.054350	---	26.61	50.00	23.39	1000.0	9.000	L1	20.1

Notes:1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Neutral line:



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	Average (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.183957	40.99	---	64.31	23.31	1000.0	9.000	N	19.9
0.460320	---	25.36	46.69	21.33	1000.0	9.000	N	19.9
2.925850	---	21.86	46.00	24.14	1000.0	9.000	N	19.9
3.152028	27.84	---	56.00	28.16	1000.0	9.000	N	19.9
11.688332	33.27	---	60.00	26.73	1000.0	9.000	N	19.8
12.328840	---	26.93	50.00	23.07	1000.0	9.000	N	19.8

Notes:1. The following Quasi-Peak and Average measurements were performed on the EUT:

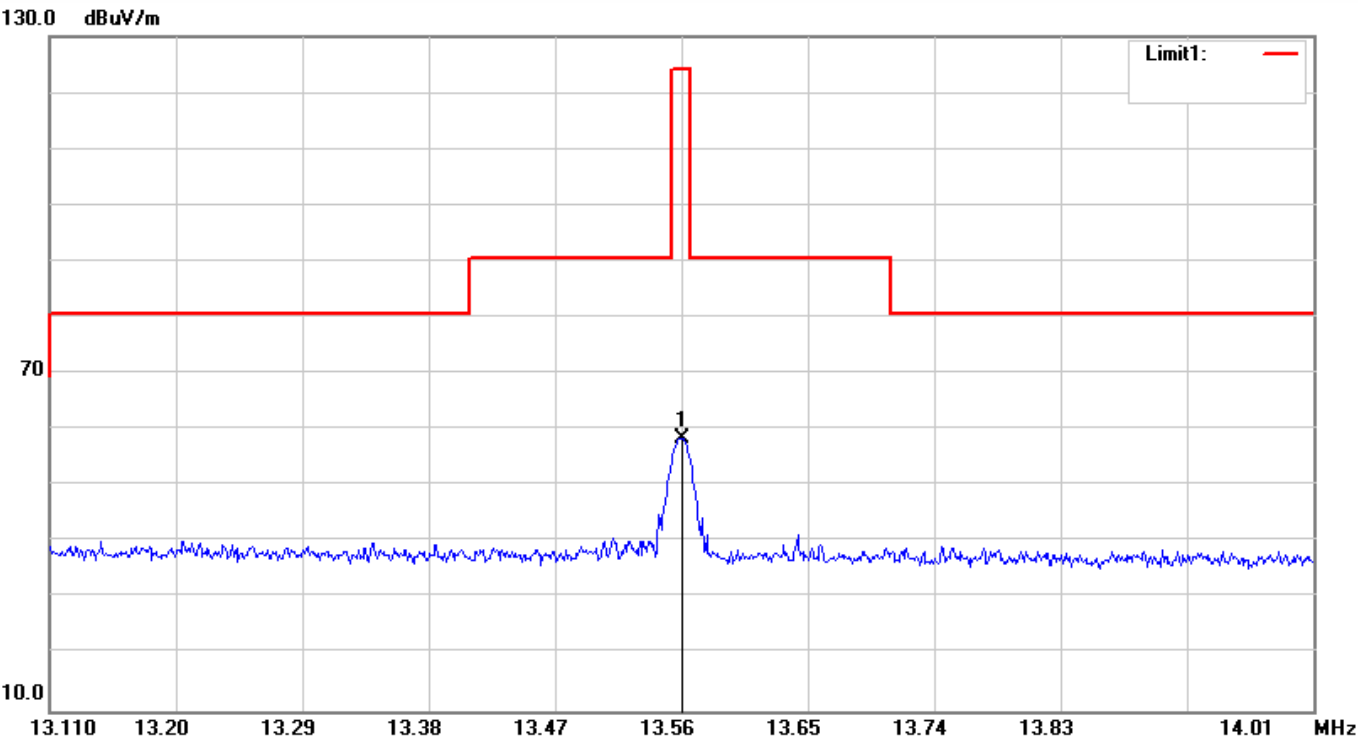
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Appendix D): Transmitter Fundamental Field Strength

Limit:
Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters. The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

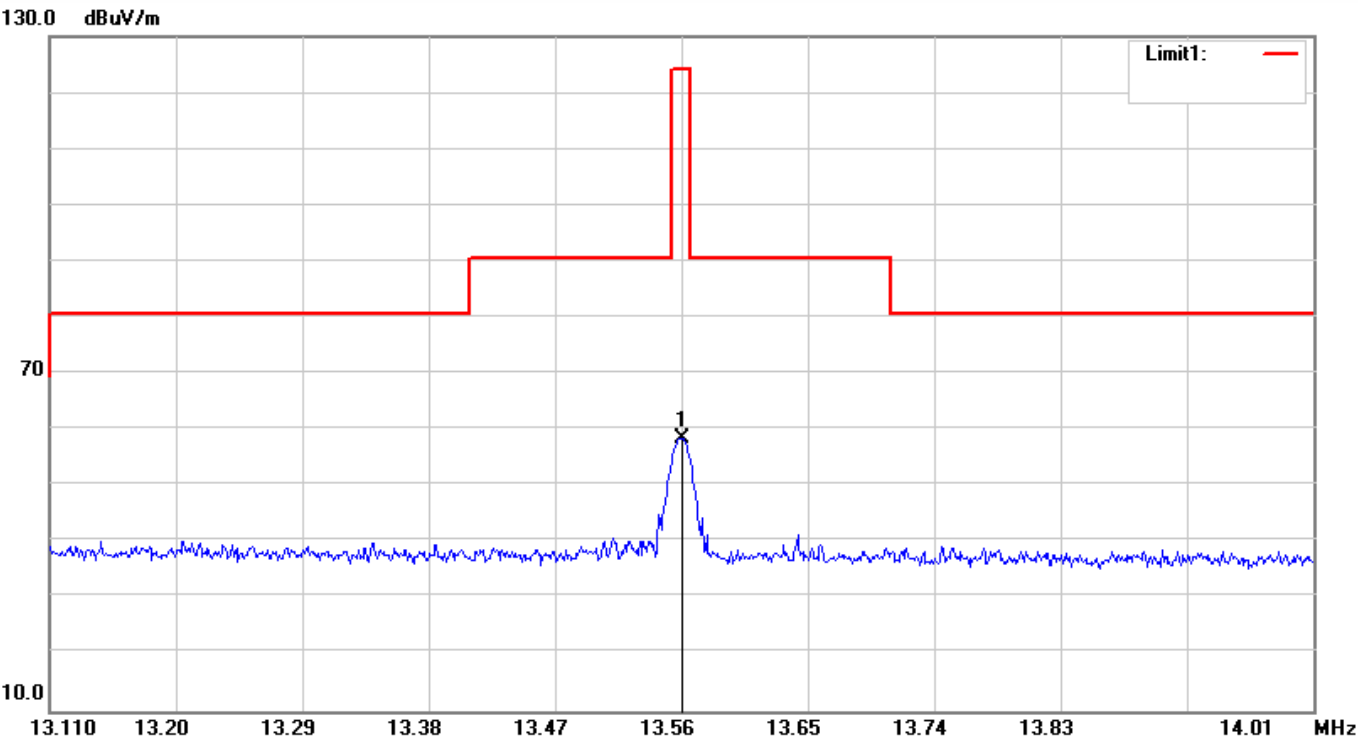
Test result:

Mode:	NFC	Channel:	13.56
Remark:	Horizontal		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	13.5600	37.15	21.38	58.53	124.00	-65.47	100	34	peak

Mode:	NFC	Channel:	13.56
Remark:	Vertical		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	13.5600	37.15	21.38	58.53	124.00	-65.47	100	34	peak

Note:

1) The field strength is calculated by adding the correct Factor. The basic equation with a sample calculation is as follows:
Final Test Level = Reading +Correct Factor
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

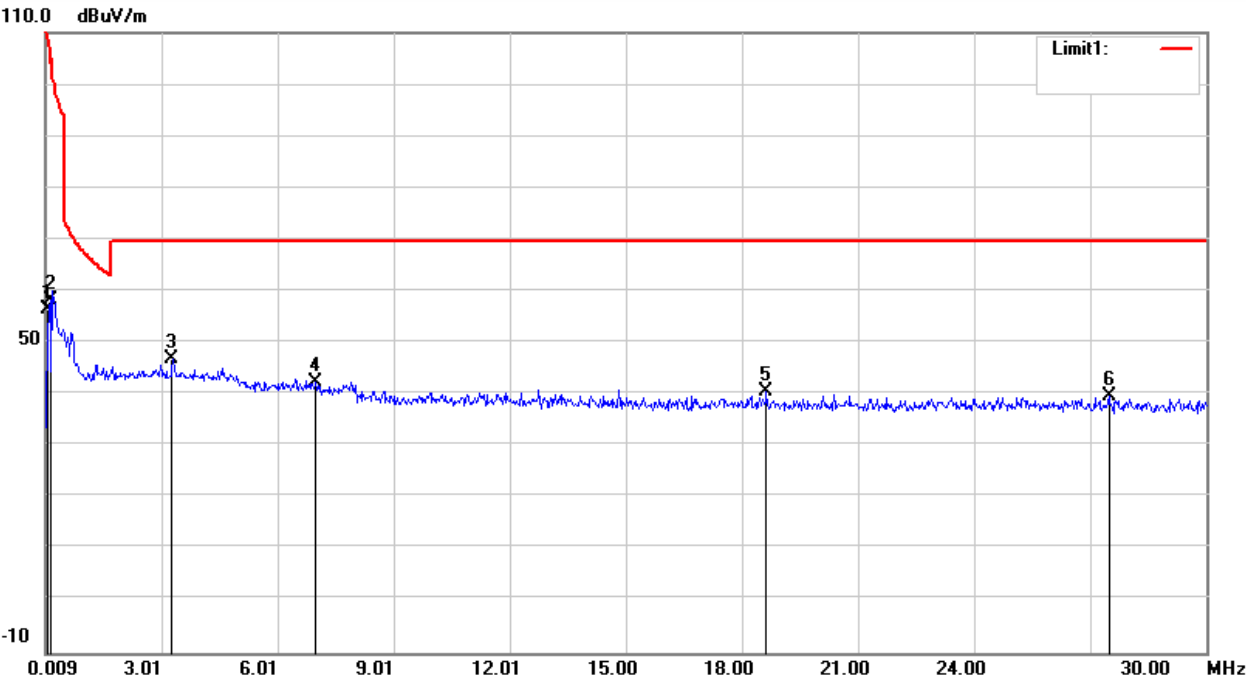
Appendix E): Radiated Emissions

Receiver Setup:	<table><tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr><tr><td>0.009MHz-0.090MHz</td><td>Peak</td><td>10kHz</td><td>30kHz</td><td>Peak</td></tr><tr><td>0.009MHz-0.090MHz</td><td>Average</td><td>10kHz</td><td>30kHz</td><td>Average</td></tr><tr><td>0.090MHz-0.110MHz</td><td>Quasi-peak</td><td>10kHz</td><td>30kHz</td><td>Quasi-peak</td></tr><tr><td>0.110MHz-0.490MHz</td><td>Peak</td><td>10kHz</td><td>30kHz</td><td>Peak</td></tr><tr><td>0.110MHz-0.490MHz</td><td>Average</td><td>10kHz</td><td>30kHz</td><td>Average</td></tr><tr><td>0.490MHz -30MHz</td><td>Quasi-peak</td><td>10kHz</td><td>30kHz</td><td>Quasi-peak</td></tr><tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120kHz</td><td>300kHz</td><td>Quasi-peak</td></tr></table>	Frequency	Detector	RBW	VBW	Remark	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak					
Frequency	Detector	RBW	VBW	Remark																																										
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak																																										
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average																																										
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak																																										
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak																																										
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average																																										
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak																																										
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak																																										
Test Procedure:	Below 1GHz test procedure as below: a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. 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, whichwas mounted on the top of a variable-height antenna tower. c. The antenna height 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.																																													
Limit:	<table><tr><th>Frequency</th><th>Field strength microvolt/meter</th><th>Limit (dBμV/m)</th><th>Remark</th><th>Measurement distance (m)</th></tr><tr><td>0.009MHz-0.490MHz</td><td>2400/F(kHz)</td><td>-</td><td>-</td><td>300</td></tr><tr><td>0.490MHz-1.705MHz</td><td>24000/F(kHz)</td><td>-</td><td>-</td><td>30</td></tr><tr><td>1.705MHz-30MHz</td><td>30</td><td>-</td><td>-</td><td>30</td></tr><tr><td>30MHz-88MHz</td><td>100</td><td>40.0</td><td>Quasi-peak</td><td>3</td></tr><tr><td>88MHz-216MHz</td><td>150</td><td>43.5</td><td>Quasi-peak</td><td>3</td></tr><tr><td>216MHz-960MHz</td><td>200</td><td>46.0</td><td>Quasi-peak</td><td>3</td></tr><tr><td>960MHz-1GHz</td><td>500</td><td>54.0</td><td>Quasi-peak</td><td>3</td></tr><tr><td>Above 1GHz</td><td>500</td><td>54.0</td><td>Average</td><td>3</td></tr></table> Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.	Frequency	Field strength microvolt/meter	Limit (dBμV/m)	Remark	Measurement distance (m)	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30	1.705MHz-30MHz	30	-	-	30	30MHz-88MHz	100	40.0	Quasi-peak	3	88MHz-216MHz	150	43.5	Quasi-peak	3	216MHz-960MHz	200	46.0	Quasi-peak	3	960MHz-1GHz	500	54.0	Quasi-peak	3	Above 1GHz	500	54.0	Average	3
Frequency	Field strength microvolt/meter	Limit (dBμV/m)	Remark	Measurement distance (m)																																										
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300																																										
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30																																										
1.705MHz-30MHz	30	-	-	30																																										
30MHz-88MHz	100	40.0	Quasi-peak	3																																										
88MHz-216MHz	150	43.5	Quasi-peak	3																																										
216MHz-960MHz	200	46.0	Quasi-peak	3																																										
960MHz-1GHz	500	54.0	Quasi-peak	3																																										
Above 1GHz	500	54.0	Average	3																																										

Report No. : EED39M00008306
Radiated Spurious Emissions test Data:

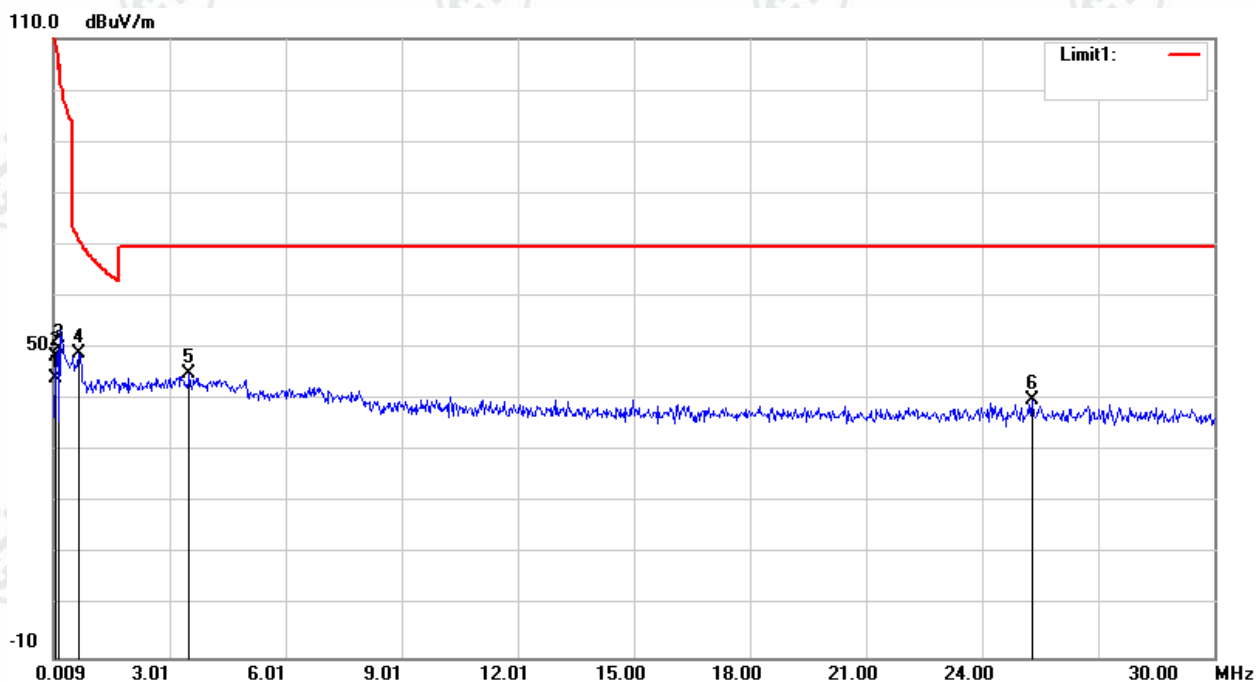
Radiated Emission below 30MHz:

Mode:	NFC	Channel:	13.56
Remark:	Horizontal		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	0.0793	35.43	20.95	56.38	110.09	-53.71	100	203	peak
2	0.1190	36.62	21.63	58.25	106.26	-48.01	100	11	peak
3	3.2843	25.40	21.56	46.96	69.54	-22.58	100	335	peak
4	6.9855	21.01	21.43	42.44	69.54	-27.10	100	101	peak
5	18.6270	19.46	21.02	40.48	69.54	-29.06	100	187	peak
6	27.4627	18.91	20.71	39.62	69.54	-29.92	100	78	peak

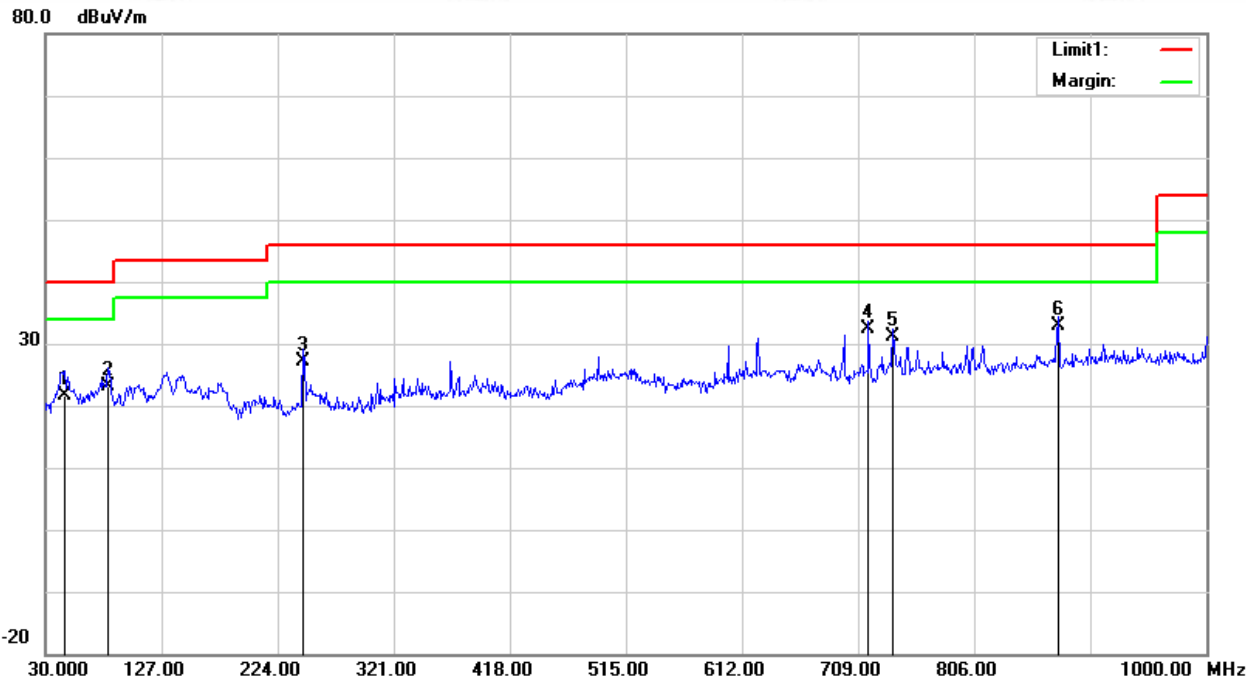
Mode:	NFC	Channel:	13.56
Remark:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	0.0396	24.46	19.63	44.09	116.38	-72.29	100	143	peak
2	0.0793	27.52	20.95	48.47	110.09	-61.62	100	22	peak
3	0.1190	28.26	21.63	49.89	106.26	-56.37	100	185	peak
4	0.6574	27.26	21.57	48.83	71.25	-22.42	100	227	peak
5	3.4932	23.48	21.56	45.04	69.54	-24.50	100	331	peak
6	25.2837	40.09	0.00	40.09	69.54	-29.45	100	46	peak

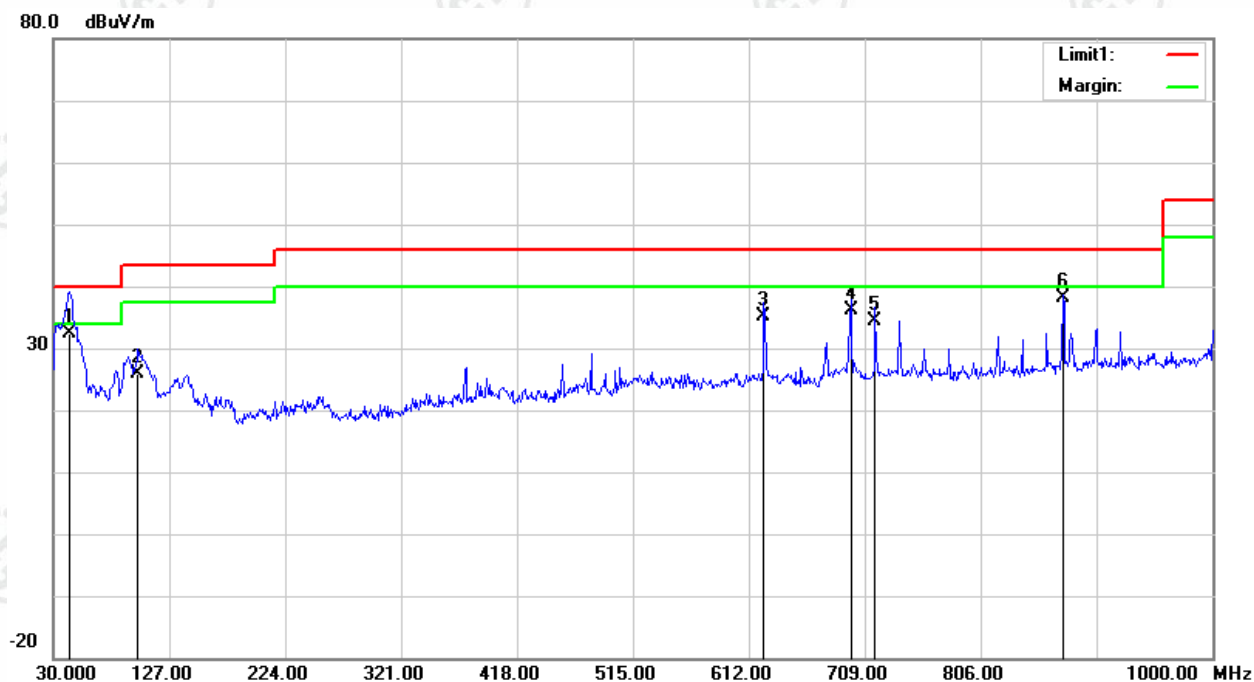
Report No. : EED39M00008306
Radiated Emission 30MHz~1000MHz:

Mode:	NFC	Channel:	13.56
Remark:	Horizontal		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	46.4900	43.92	-22.25	21.67	40.00	-18.33	100	131	QP
2	82.3800	50.44	-27.24	23.20	40.00	-16.80	200	197	QP
3	245.3400	50.12	-22.91	27.21	46.00	-18.79	100	225	QP
4	717.7300	48.17	-15.83	32.34	46.00	-13.66	100	41	QP
5	738.1000	46.39	-15.31	31.08	46.00	-14.92	200	187	QP
6	876.8100	46.98	-14.10	32.88	46.00	-13.12	100	282	QP

Mode:	NFC	Channel:	13.56
Remark:	Vertical		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	43.5800	54.87	-22.55	32.32	40.00	-7.68	100	19	QP
2	100.8100	48.44	-22.47	25.97	43.50	-17.53	100	336	QP
3	624.6100	51.72	-16.50	35.22	46.00	-10.78	100	182	QP
4	697.3600	52.39	-16.31	36.08	46.00	-9.92	100	54	QP
5	717.7300	50.15	-15.83	34.32	46.00	-11.68	100	360	QP
6	874.8700	52.22	-14.13	38.09	46.00	-7.91	100	77	QP

Note:

1) The field strength is calculated by adding the correct Factor. The basic equation with a sample calculation is as follows:

Final Test Level = Reading +Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix F): Frequency Stability

Limit:

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

Result Table:

Maximum frequency error of the EUT with variations in ambient temperature:

Temperature (°C)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Deviation (Hz)	Limit (%)	Limit (Hz)	Verdict
-20	13.56	13.56019	190	0.01	1356	PASS
-10	13.56	13.56022	220	0.01	1356	PASS
0	13.56	13.56010	100	0.01	1356	PASS
10	13.56	13.56008	80	0.01	1356	PASS
20	13.56	13.56014	140	0.01	1356	PASS
30	13.56	13.56.13	130	0.01	1356	PASS
40	13.56	13.56016	160	0.01	1356	PASS
50	13.56	13.56015	150	0.01	1356	PASS

Maximum frequency error of the EUT with variations in nominal operating voltage at an ambient temperature of 20°C (the power supply of PC is AC 120V):

Supply Voltage (V)	Nominal Frequency (MHz)	Measured Frequency (MHz)	Deviation (Hz)	Limit (%)	Limit (Hz)	Verdict
120V	13.56	13.56014	140	0.01	1356	PASS
120V	13.56	13.56012	120	0.01	1356	PASS
102V	13.56	13.56011	110	0.01	1356	PASS
138V	13.56	13.56011	110	0.01	1356	PASS

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

Refer to Report No. EED39N00008301 for test setup photos.

APPENDIX 2 PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Refer to Report No. EED39N00008301 for EUT external and internal photos.

The testing data and results in this report are just for scientific research, education, internal quality control and product development etc.

*** End of Report ***

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