

TEST REPORT

Report No.: BCTC2606320245-2E

Applicant: Shenzhen Creality 3D Technology Co., Ltd.

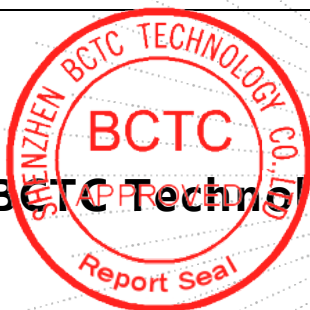
Product Name: 3D Printer

Test Model: Ender-3 V3 Mega Combo

Tested Date: 2026-06-11 to 2026-08-08

Issued Date: 2026-08-26

Shenzhen BCTC Technology Co., Ltd.



FCC ID:2AXH6ENDER3V3MEGA

Product Name: 3D Printer

Trademark:   

Model/Type Reference: Ender-3 V3 Mega Combo,Ender-3 V3 Mega,Ender-3 V5 Max,Ender-3 V5 Max Combo,Ender-3 V5 Mega,Ender-3 V5 Mega Combo

Prepared For: Shenzhen Creality 3D Technology Co., Ltd.

Address: 18F, JinXiuHongDu Building, Meilong Blvd., Longhua Dist., Shenzhen,China 518131

Manufacturer: Shenzhen Creality 3D Technology Co., Ltd.

Address: 18F, JinXiuHongDu Building, Meilong Blvd., Longhua Dist., Shenzhen,China 518131

Prepared By: Shenzhen BCTC Technology Co., Ltd.

Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.

Sample Received Date: 2026-06-11

Sample Tested Date: 2026-06-11 to 2026-08-08

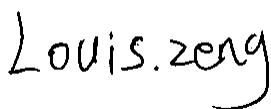
Report No.: BCTC2606320245-2E

Test Standards: 47 CFR Part 15 Subpart C (clause 15.225)
ANSI C63.10-2020

Test Results: PASS

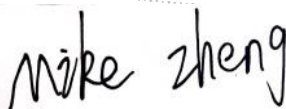
Remark: This is NFC radio test report.

Prepared by :



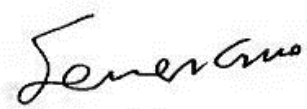
Louis Zeng

Reviewer by :



Mike Zheng

Approved by:



Sewen Guo

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(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2606320245-2E	2026-08-26	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	Conducted Emission	15.207	PASS*
2	Radiated Spurious Emission	Part 15.209(a), 15.225(d)	PASS*
3	20dB Occupied Bandwidth	15.215	PASS*
4	Band Edge Emission	Part 15.209(a), 15.225(a)(b)(c)	PASS*
5	Transmitter Frequency Stability (Temperature & Voltage Variation)	Part 15.225(e)	PASS*
6	Antenna Requirement	15.203	PASS
NOTE1: N/A (Not Applicable) NOTE2:"*" indicates that the test results are determined base on 47 CFR Part 15 Subpart C (clause 15.225). And the test results are took into account measurement uncertainty (see section 3 for measurement uncertainty information)			

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2:2011/AMD2:2018. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=5.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=5.0dB
5	Conducted Emission(150kHz-30MHz)	U=3.0dB
6	Power Spectral Density	U=3.46dB
7	Peak Power	U=0.31dB
8	Occupied Bandwidth/Frequency Range	U=3.46%
9	Conducted output power uncertainty	U=0.55dB
10	Frequency Error	U= 53.50 Hz
11	Frequency Drift	U=0.64 KHz
12	Temperature	U= 0.59 °C
13	Humidity	U= 5.3 %

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4. Product Information And Test Setup

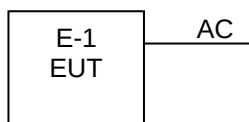
4.1 Product Information

Model/Type Reference:	Ender-3 V3 Mega Combo,Ender-3 V3 Mega,Ender-3 V5 Max,Ender-3 V5 Max Combo,Ender-3 V5 Mega,Ender-3 V5 Mega Combo
Model Differences:	The following models of equipment we produce are exactly the same in terms of electrical, mechanical and physical structure. The only difference lies in the model name. Finally, we chose the Ender-3 V3 Mega Combo as the test model.
Operation Frequency:	13.56 MHz
Modulation Type:	ASK
Number Of Channel	1 CH
Antenna installation:	Internal antenna
Ratings:	AC 100-240V~, 50/60Hz Max. Power: 850-1250W Steady-state Power: 250-300W
Remark:	Remark: ☒The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information. The laboratory assumes no responsibility for its authenticity. ☐The antenna gain of the product is provided by the customer, and the test data is affected by the customer information. The laboratory assumes no responsibility for its authenticity.

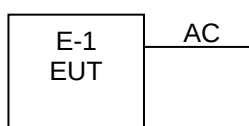
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	3D Printer	N/A	Ender-3 V3 Mega Combo	N/A	EUT
E-2	N/A	N/A	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	N/A	N/A

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Channel List	
Channel	Frequency(MHz)
01	13.56

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

For All Mode	Description
Mode 1	TX Mode ANT1
Mode 2	TX Mode ANT2
Mode 3	TX Mode ANT3
Mode 4	TX Mode ANT4

Description	
Final Test Mode	Description
Mode 1	TX Mode ANT1(The worst mode)

Note: Since the products cannot be sent simultaneously, only one antenna can be used for transmission at a time. The other antennas will not work. After the operation is completed, they will proceed to the next antenna in sequence and stop there. This process repeats. We have tested all four antennas, and the report only shows the worst mode.

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Technology Co., Ltd.

Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.

The site and apparatus are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-1:2019 other equivalent standards.

FCC Test Firm Registration Number: 754702

ANAB certificate registration number is: CN3479

5.2 Test Instrument Used

Conducted emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESCI	101421	2025.08.30	2026.08.29
AMN	SCHWHRZBECK	NSLK8128	05152	2026.01.22	2027.01.21
AMN	SCHWHRZBECK	NSLK8127	8127739	2025.09.16	2026.09.15
Pulse Limiter	SCHWHRZBECK	VTSD 9561-F-N	00547	2025.08.30	2026.08.29
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31
Software	EZ-EMC	Ver.EMC-CON 3A1	/	/	/

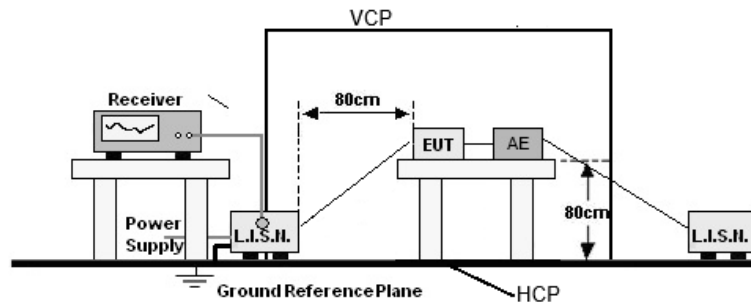
Radiated Emissions Test (966 Chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	2023.09.25	2026.09.24
Loop Antenna	Schwarzbeck	FMZB1519B	00014	2026.01.05	2027.01.04
Broadband antenna	SCHWHRZBECK	VULB9168	01620	2025.08.29	2026.08.28
Horn antenna (1 GHz -18GHz)	SCHWARZBECK	BBHA 9120 D	2792	2025.08.29	2026.08.28
Horn antenna (18 GHz -40GHz)	SCHWARZBECK	BBHA9170	00822	2025.12.29	2026.12.28
Receiver	R&S	ESR	1316	2025.08.30	2026.08.29
Spectrum Analyzer	R&S	FSV40	101328	2026.01.22	2027.01.21
Amplifier	SCHWHRZBECK	BBV9744	568	2025.08.30	2026.08.29
Amplifier	EMC INSTRUMENT	EMC0518A45 SEE	EMT-SZ2233	2025.08.30	2026.08.29

	S CORPORATIO N				
Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35- HG	2034381	2026.05.09	2027.05.08
Band 2.4G-2.5G Filter	COM-MW	ZBSF6-C5150 -5350-1117	2220980	2025.08.30	2026.08.29
RF cable 3# (9kHz-6GHz)	Yunyi	10M	/	2025.08.30	2026.08.29
RF cable 9# (9kHz-1GHz)	Yunyi	2M	/	2025.10.28	2026.10.27
RF cable 5# (1GHz -18GHz)	SKET	9M	18038626	2025.08.30	2026.08.29
RF cable 6# (1GHz -18GHz)	SKET	5M	#10	2025.09.05	2026.09.04
RF cable 10# (18GHz-40GHz)	/	2M	2M	2026.05.09	2027.05.08
RF cable 11# (18GHz-40GHz)	/	2.5M	2.5M	2026.05.09	2027.05.08
Temperature & Humidity	Wetest	HTC-1	/	2025.09.05	2026.09.04
Communication test set	R&S	CMW500	157483	2025.08.30	2026.08.29
Software	EZ-EMC	Ver.FA-03A2	/	/	/

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Spectrum Analyzer	Keysight	N9020A	MY51287403	2025.08.30	2026.08.29
Signal Generator	Keysight	N5182A	MY50144088	2025.08.30	2026.08.29
Power Sensor	Keysight	U2001	MY51250006	2025.10.28	2026.10.27
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31
Communication test set	R&S	CMW500	157483	2025.08.30	2026.08.29
Radio frequency control box	MWRFTest	MW100-RFCB	\	\	\
Software	MWRFTest	MTS 8310	V 3.0.0.0	\	\
D.C. Power Supply	Elektro-Automati k GmbH & Co.KG	D-41747 Viersen	6230316	2025.09.30	2026.08.29
Temperature and humidity test chamber	Auchno	OJN-9606-408 L	19120183	2025.07.09	2026.07.08

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:
1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

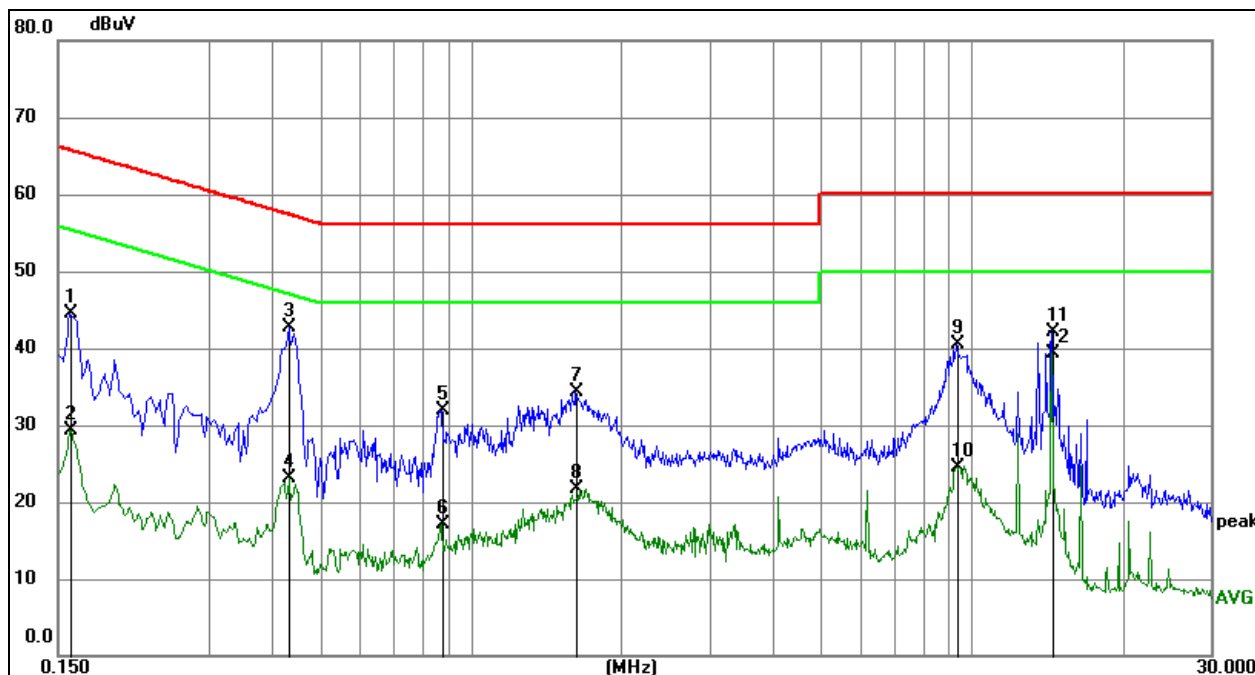
- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N.).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

6.5 Test Result

Temperature:	26.4 °C	Relative Humidity:	53%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	L



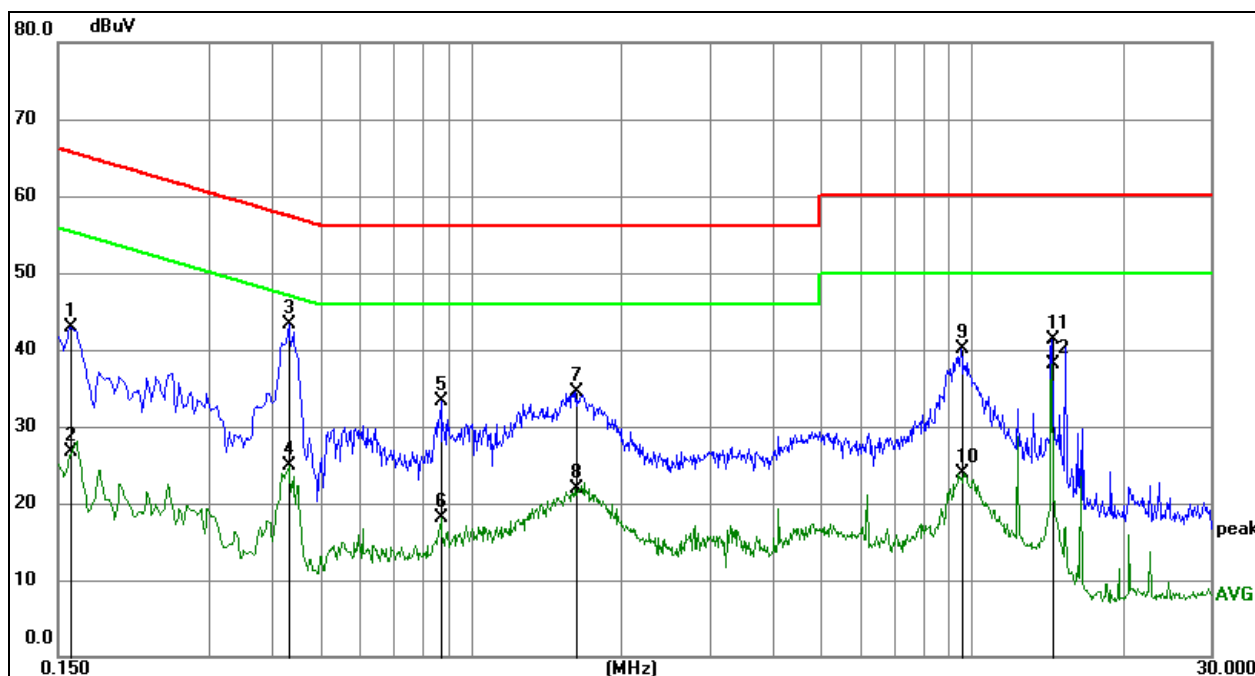
Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss+ Limiter (10dB).
3. Margin = (Reading+ Factor)-Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1590	33.87	10.59	44.46	65.52	-21.06	QP
2	0.1590	18.66	10.59	29.25	55.52	-26.27	AVG
3	0.4335	32.10	10.52	42.62	57.19	-14.57	QP
4	0.4335	12.57	10.52	23.09	47.19	-24.10	AVG
5	0.8790	21.42	10.54	31.96	56.00	-24.04	QP
6	0.8790	6.50	10.54	17.04	46.00	-28.96	AVG
7	1.6215	23.68	10.55	34.23	56.00	-21.77	QP
8	1.6215	11.18	10.55	21.73	46.00	-24.27	AVG
9	9.3255	29.49	11.09	40.58	60.00	-19.42	QP
10	9.3255	13.48	11.09	24.57	50.00	-25.43	AVG
11	14.4465	30.69	11.33	42.02	60.00	-17.98	QP
12 *	14.4465	28.03	11.33	39.36	50.00	-10.64	AVG

* Indicates the worst data.

Temperature:	26.4 °C	Relative Humidity:	53%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	N


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss+ Limiter (10dB).
3. Margin = (Reading+ Factor)-Limit

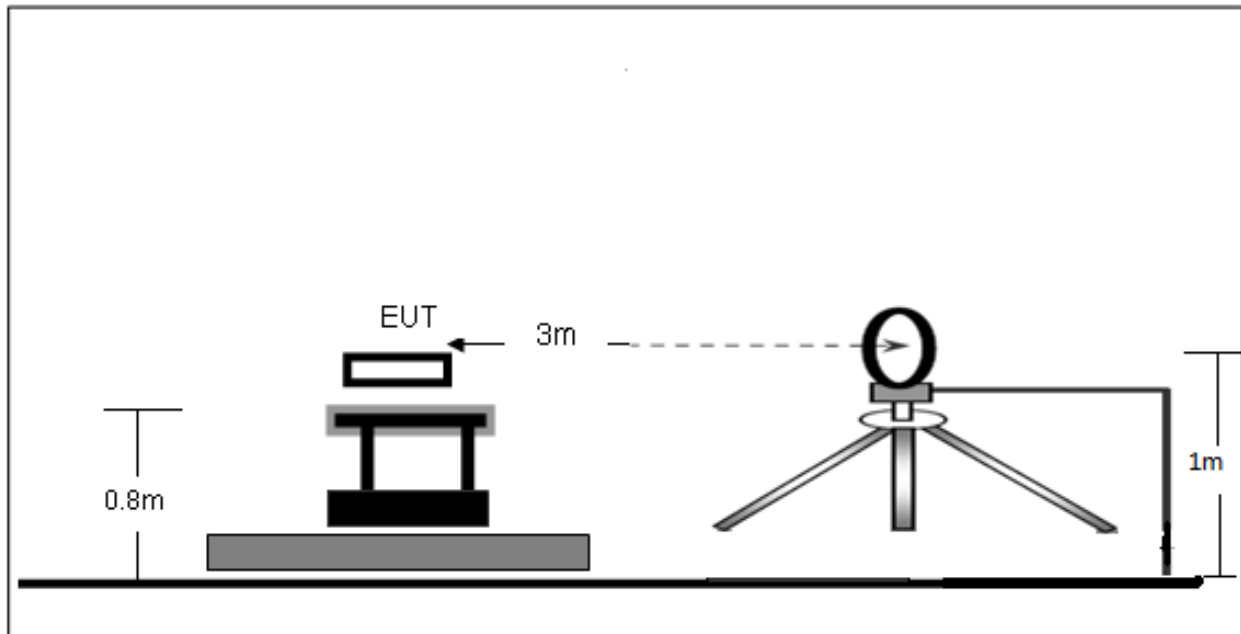
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1590	32.38	10.59	42.97	65.52	-22.55	QP
2	0.1590	16.04	10.59	26.63	55.52	-28.89	AVG
3	0.4335	32.84	10.52	43.36	57.19	-13.83	QP
4	0.4335	14.46	10.52	24.98	47.19	-22.21	AVG
5	0.8745	22.86	10.54	33.40	56.00	-22.60	QP
6	0.8745	7.48	10.54	18.02	46.00	-27.98	AVG
7	1.6215	23.97	10.55	34.52	56.00	-21.48	QP
8	1.6215	11.32	10.55	21.87	46.00	-24.13	AVG
9	9.5190	28.92	11.09	40.01	60.00	-19.99	QP
10	9.5190	12.78	11.09	23.87	50.00	-26.13	AVG
11	14.4420	30.04	11.33	41.37	60.00	-18.63	QP
12 *	14.4420	26.74	11.33	38.07	50.00	-11.93	AVG

* Indicates the worst data.

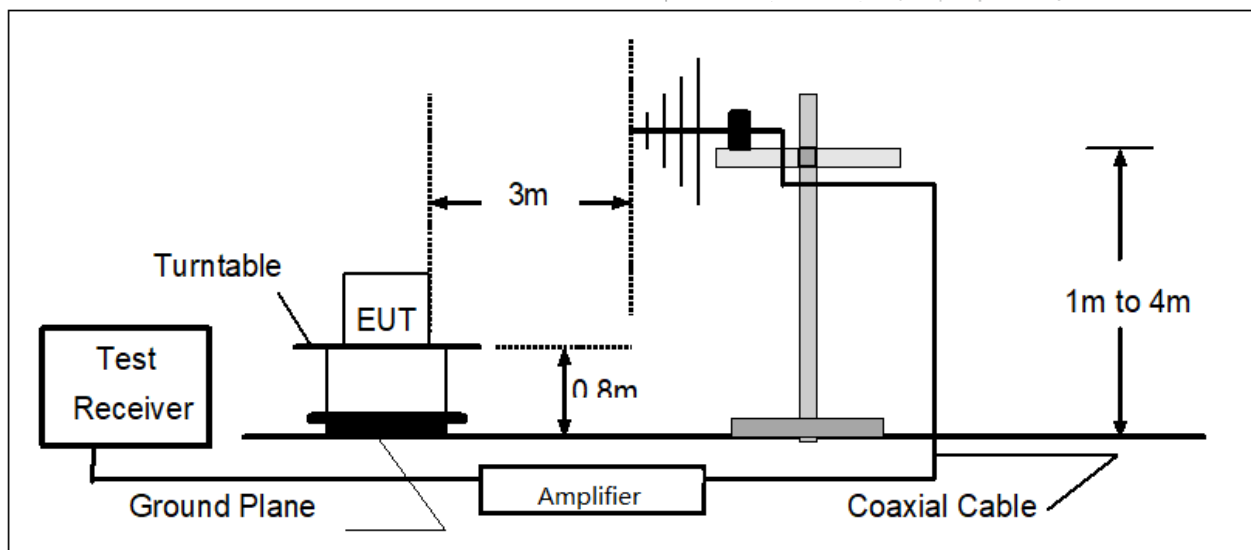
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	$10000 * 2400/F(kHz)$	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(kHz)$	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 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 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.
- 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 table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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.

Above 1GHz test procedure as below:

- Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- Test the EUT in the lowest channel ,the middle channel ,the Highest channel.

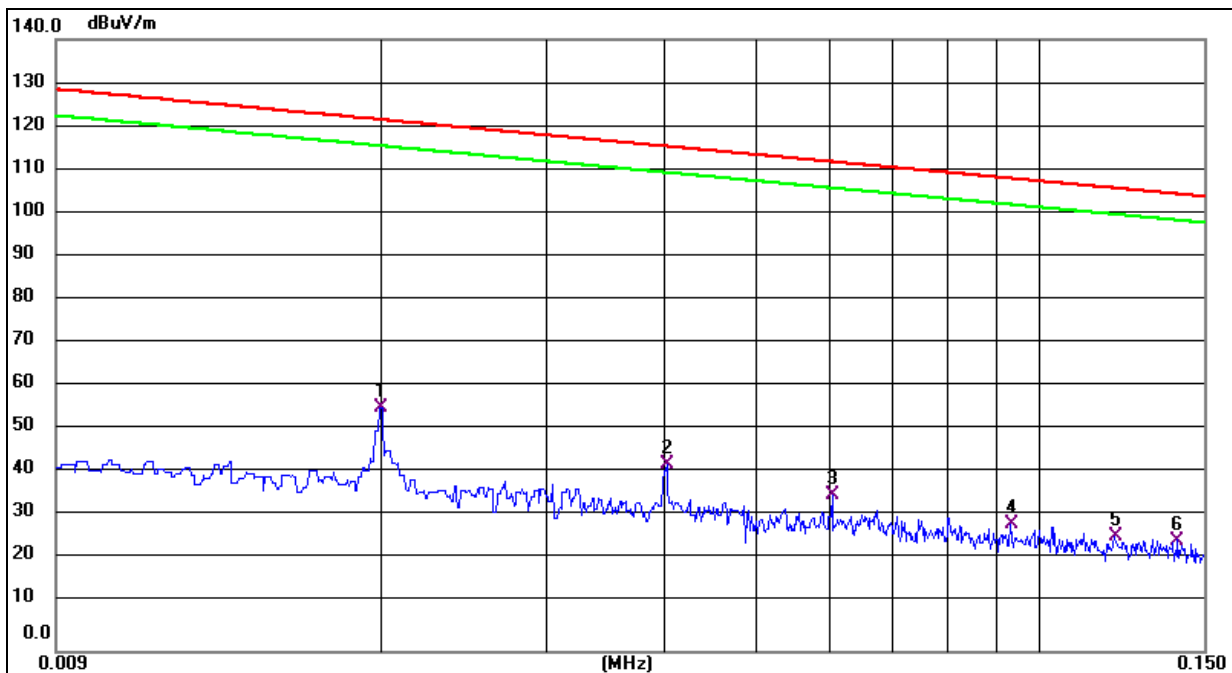
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

7.3 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.4 Test Result

Temperature:	23.1°C	Relative Humidity:	55%
Pressure:	101 kpa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	Coaxial



Remark:

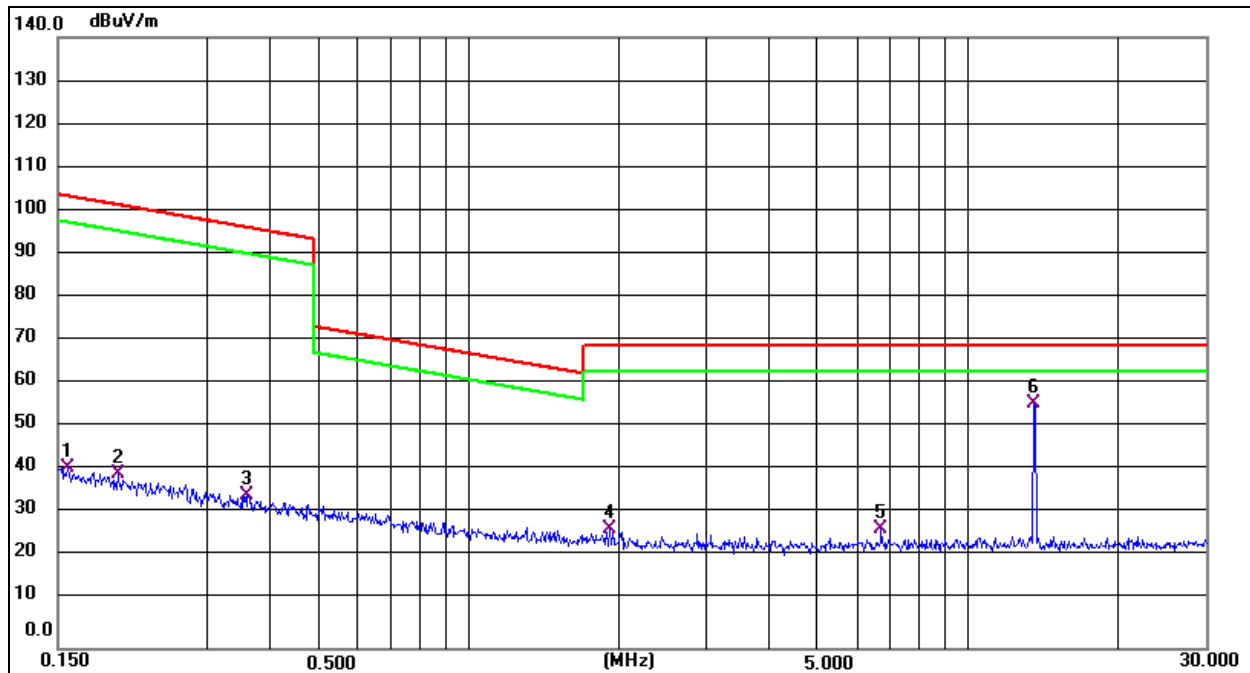
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Margin = (Reading + Factor) – Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	0.0200	67.26	-11.52	55.74	121.57	-65.83	QP
2	0.0401	54.45	-11.44	43.01	115.53	-72.52	QP
3	0.0602	47.34	-11.56	35.78	112.00	-76.22	QP
4	0.0933	40.76	-11.39	29.37	108.20	-78.83	QP
5	0.1205	37.51	-11.20	26.31	105.98	-79.67	QP
6	0.1404	36.86	-11.31	25.55	104.65	-79.10	QP

* Indicates the worst data.

Temperature:	23.1°C	Relative Humidity:	55%
Pressure:	101 kpa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	Coaxial



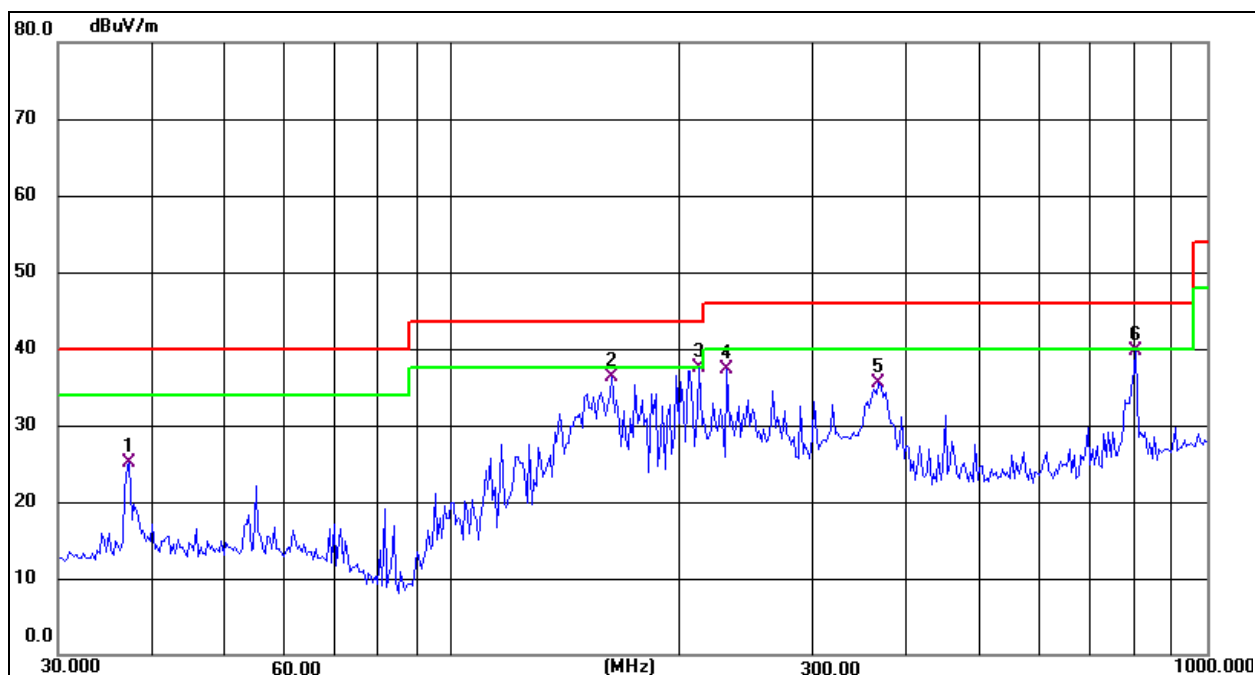
Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Margin = (Reading + Factor) – Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.1565	52.71	-11.06	41.65	103.71	-62.06	QP
2	0.1976	51.20	-11.01	40.19	101.68	-61.49	QP
3	0.3596	46.68	-11.56	35.12	96.49	-61.37	QP
4	1.9182	38.83	-11.38	27.45	69.54	-42.09	QP
5	6.6978	38.19	-10.87	27.32	69.54	-42.22	QP
6 *	13.5508	66.77	-10.72	56.05	69.54	-13.49	QP

* Indicates the worst data.

Between 30MHz – 1GHz

Temperature:	23.1 °C	Relative Humidity:	55%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	Horizontal



Remark:

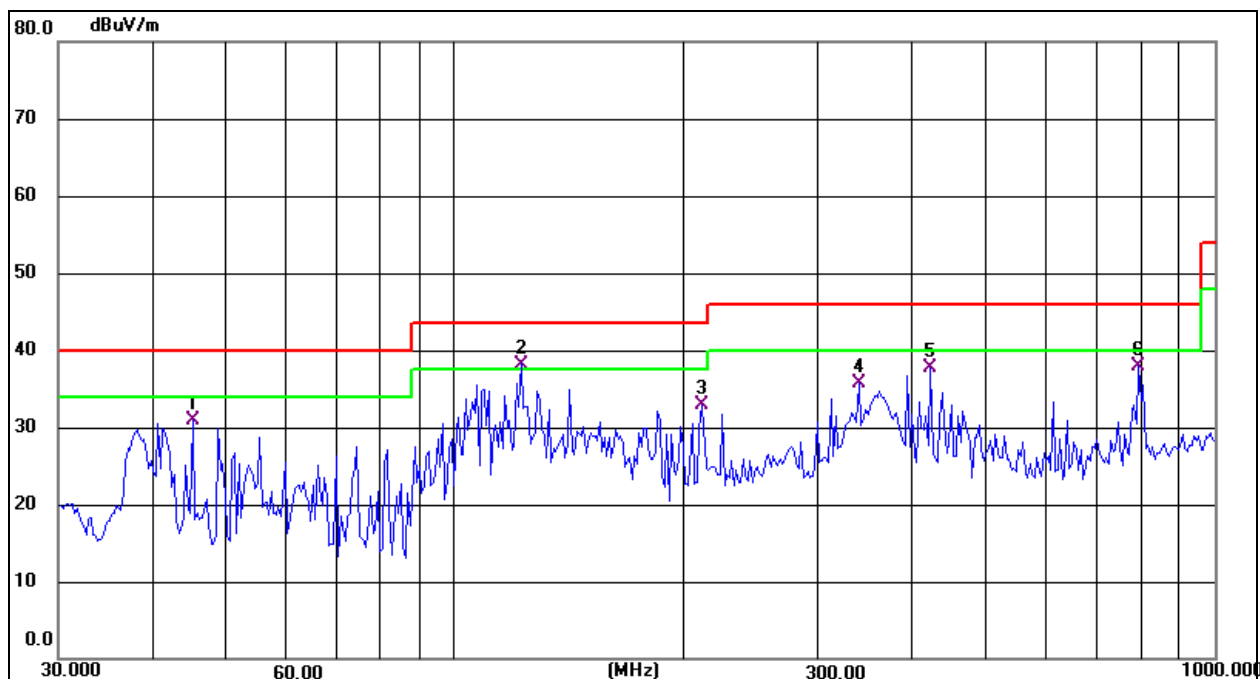
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Margin = (Reading + Factor) – Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	37.2855	37.10	-11.91	25.19	40.00	-14.81	QP
2	162.6106	46.62	-10.37	36.25	43.50	-7.25	QP
3 *	212.2695	51.19	-13.75	37.44	43.50	-6.06	QP
4	230.9068	49.40	-12.06	37.34	46.00	-8.66	QP
5	366.8231	43.78	-8.22	35.56	46.00	-10.44	QP
6	804.6028	38.70	1.01	39.71	46.00	-6.29	QP

* Indicates the worst data.

Temperature:	23.1 °C	Relative Humidity:	55%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	Vertical



Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Margin = (Reading + Factor) – Limit

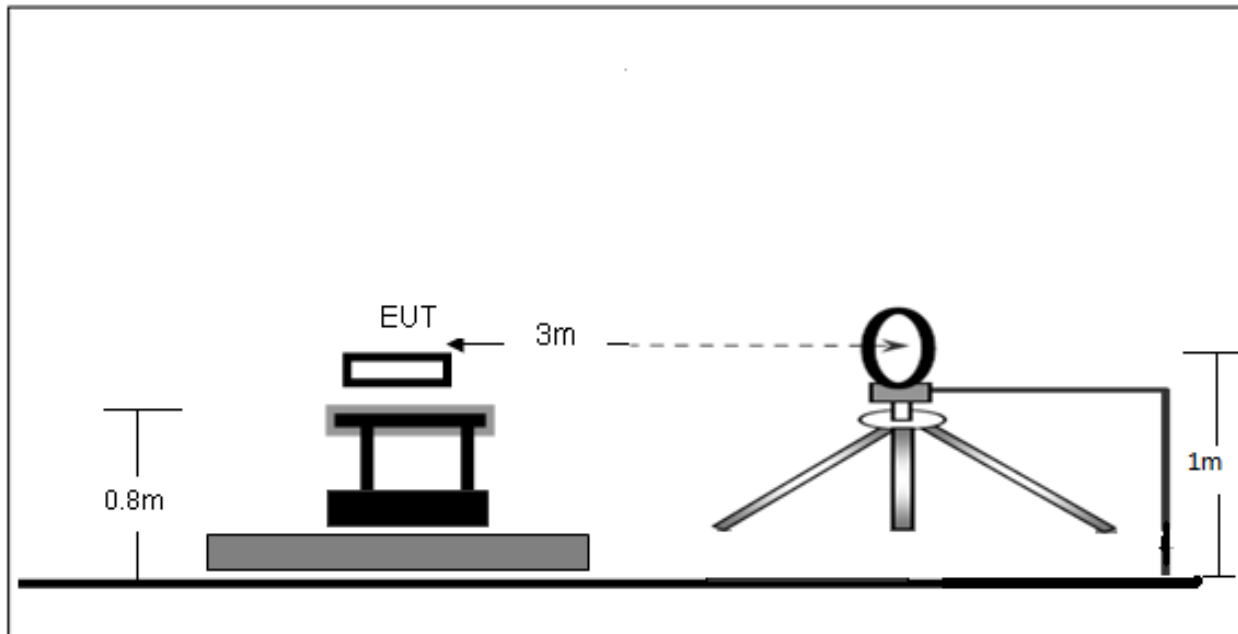
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	45.0583	42.32	-11.42	30.90	40.00	-9.10	QP
2 *	121.9755	50.38	-12.18	38.20	43.50	-5.30	QP
3	210.7860	46.69	-13.83	32.86	43.50	-10.64	QP
4	339.5888	44.80	-9.10	35.70	46.00	-10.30	QP
5	422.0577	44.35	-6.56	37.79	46.00	-8.21	QP
6	793.3960	37.29	0.63	37.92	46.00	-8.08	QP

* Indicates the worst data.

8. Radiated Band Emission Measurement

8.1 Block Diagram Of Test Setup

Radiated Emission Test-Up Frequency Below 30MHz



8.2 Limit

FCC Part15 C Section 15.209 and 15.225

LIMITS OF RADIATED EMISSION MEASUREMENT (Below 30MHz)

- (a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
- (b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- (c) 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.
- (d) 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](#).

Field Strength of Fundamental Emissions and Spectrum Mask					
Emissions	(uV/m)@30m	(dBuV/m)@30m	(dBuV/m)@10m	(dBuV/m)@3m	(dBuV/m)@1m
Fundamental	15848	84.0	103.1	124.0	143.1
Quasi peak measurement of the fundamental.					

Spectrum Mask					
Freq. of Emission (MHz)	(uV/m)@30m	(dBuV/m)@30m	(dBuV/m)@10m	(dBuV/m)@3m	(dBuV/m)@1m
1.705~13.110	30	29.5	48.6	69.5	88.6
13.110~13.410	106	40.5	59.6	80.5	99.6
13.410~13.553	334	50.5	69.6	90.5	109.6
13.553~13.567	15848	84.0	103.1	124.0	143.1
13.567~13.710	334	50.5	69.6	90.5	109.6
13.710~14.010	106	40.5	59.6	80.5	99.6
14.010~30.000	30	29.5	48.6	69.5	88.6

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

8.3 Test Procedure

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 100 kHz for $f < 1$ GHz(30MHz to 1GHz), 200Hz for $f < 150$ KHz(9KHz to 150KHz), 9KHz for $f < 30$ MHz(150KHz to 30KHz)

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

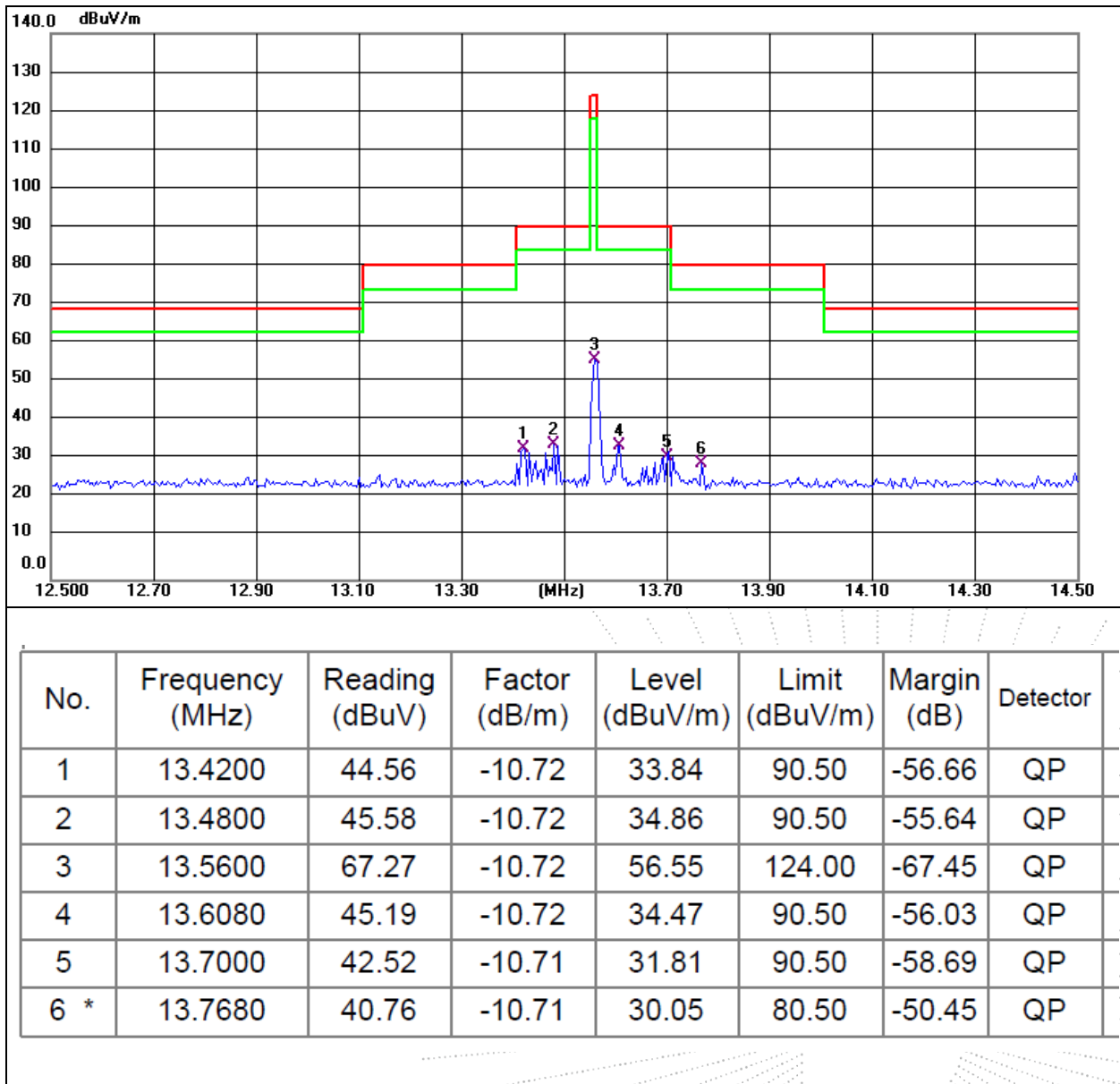
Follow the guidelines in ANSI C63.10-2020 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data. Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{dwell time}/100 \text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Repeat above procedures until all frequency measured was complete.

8.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.5 Unless otherwise a special operating condition is specified in the follows during the testing. The report only show the worst antenna Polarity's data.

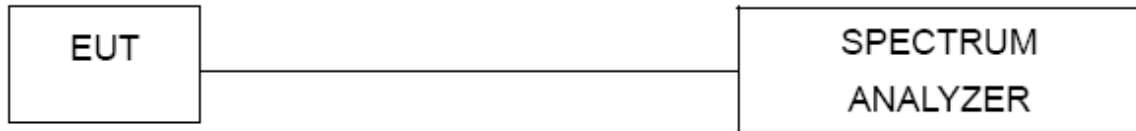
8.5 Test Result



* Indicates the worst data.

9. Bandwidth Test

9.1 Block Diagram Of Test Setup



9.2 Test Procedure

FCC Part15 (15.215)	
Section	Test Item
15.215	Bandwidth

1. Set RBW = 1% to 5% of the OBW
2. Set the video bandwidth (VBW) $\geq$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

9.3 EUT Operation Conditions

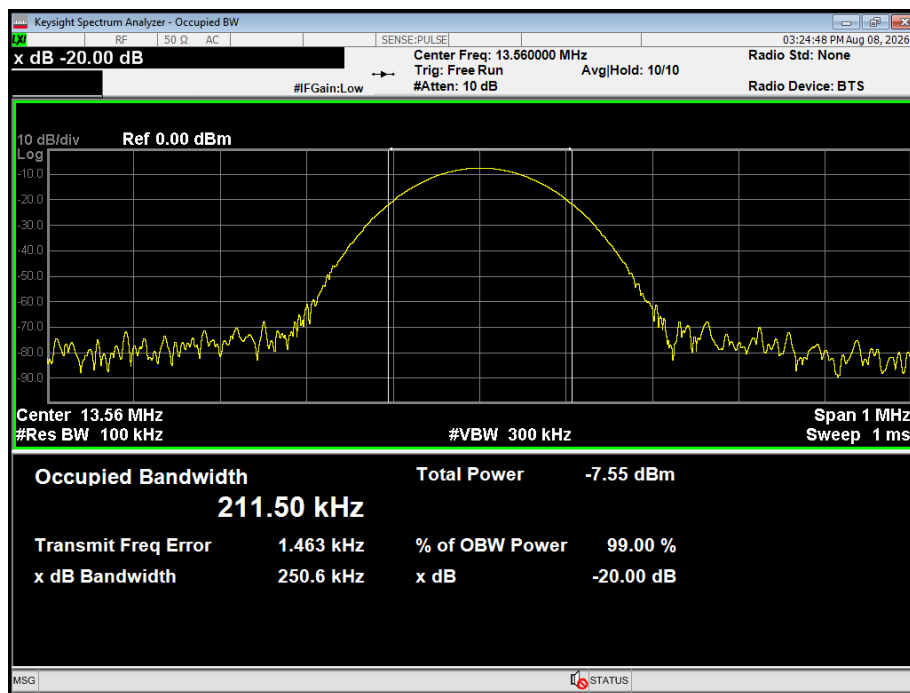
The EUT tested system was configured as the statements of 4.2 Unless otherwise a special operating condition is specified in the follows during the testing.

9.4 Test Result

Temperature:	26°C	Relative Humidity:	54%
Test Mode:	ASK	Test Voltage:	AC120V/60Hz

Frequency (MHz)	20dB bandwidth K(Hz)
13.56	250.6

TX CH 01



10. Transmitter Frequency Stability

10.1 Block Diagram Of Test Setup



10.2 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.

Limit: $\pm 0.01\%$ of 13.56MHz=1356Hz

10.3 Test Procedure

According to ANSI C63.10-2020 Section 6.8

Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that

have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 min, 5 min, and 10 min after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more than 10 °C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

10.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.5 Unless otherwise a special operating condition is specified in the follows during the testing.

10.5 Test Result

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Test Voltage:	AC120V/60Hz
Test Mode :	TX Mode		

Test Conditions			Frequency Deviation		Limit(Hz)	Result
Frequency MHz	Power(V)	Temperature (℃)	Measured Freq. (MHz)	Frequency Error(Hz)		
13.56	120	-20	13.5407	-19.3	1356	PASS
	120	-10	13.5428	-17.2	1356	
	120	0	13.5411	-18.9	1356	
	120	10	13.5489	-11.1	1356	
	120	20	13.5457	-14.3	1356	
	120	30	13.5458	-14.2	1356	
	120	40	13.5439	-16.1	1356	
	120	50	13.548	-12.0	1356	
	102	20	13.5423	-17.7	1356	
	138	20	13.5471	-12.9	1356	

11. Antenna Requirement

11.1 Standard Requirement

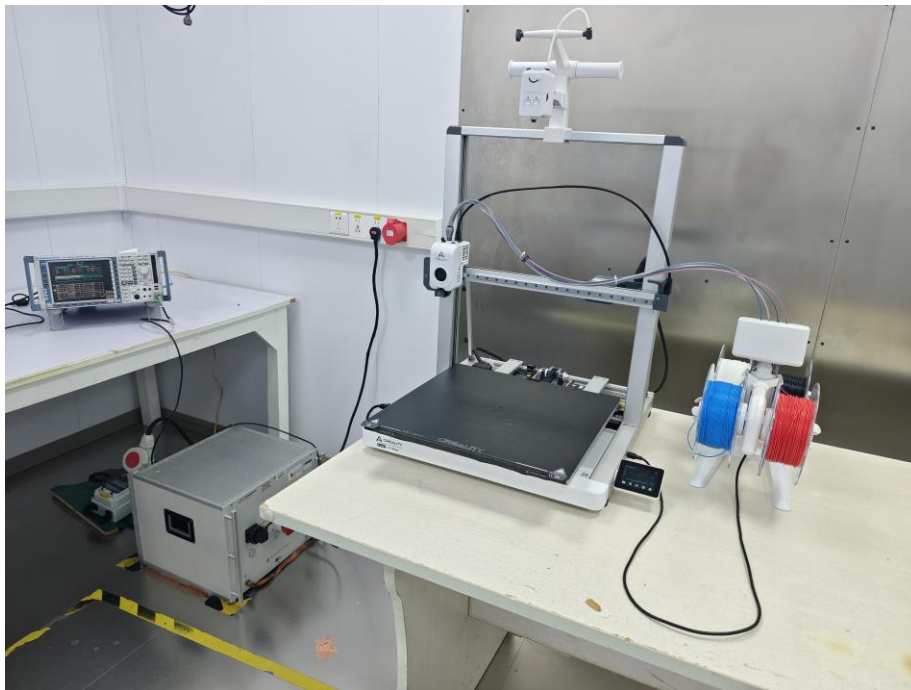
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§ 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

11.2 EUT Antenna

The EUT antenna is internal antenna, It comply with the standard requirement.

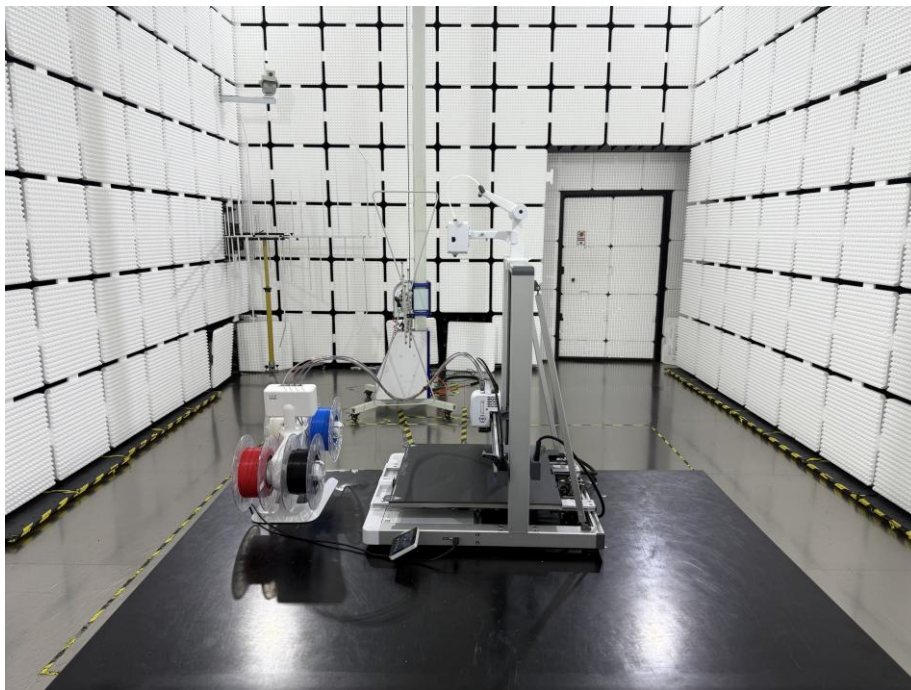
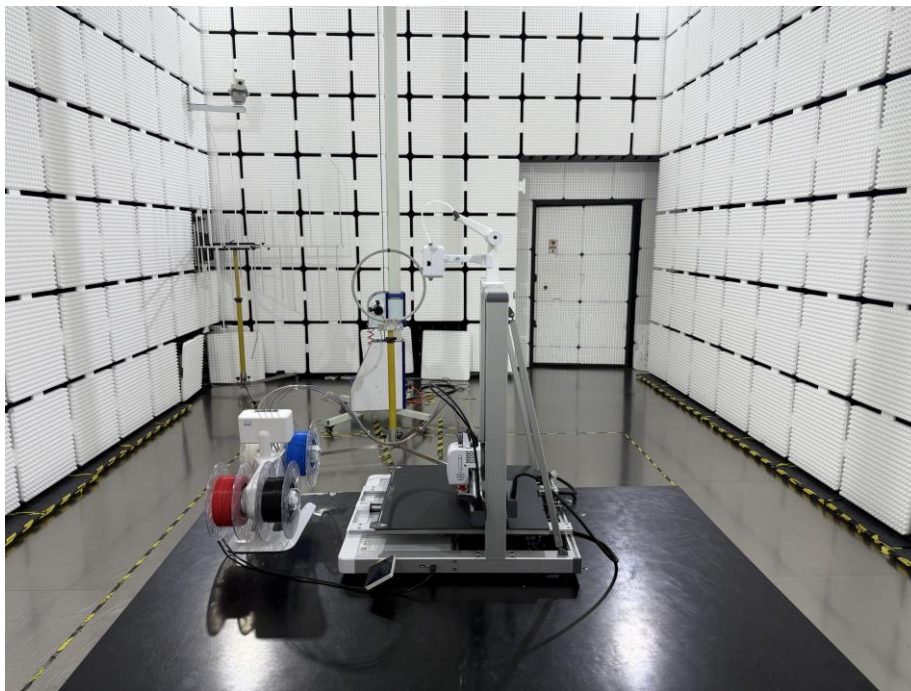
12. EUT Test Setup Photographs

Conducted emissions



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Radiated Measurement



STATEMENT

1. The equipment lists are traceable to the International System of Units (SI)
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC 17025:2017.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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***** END *****