FCC TEST REPORT

Test report
On Behalf of
AMBIR TECHNOLOGY INC.
For
Barcode Scanner
Model No.: BR300, BR200

FCC ID: 2AH6G-BR200BR300

Prepared for :	**AMBIR TECHNOLOGY INC.** **820 Sivert Drive, Wood Dale, Illinois, 60191 United States**
Prepared By :	**Shenzhen HUAK Testing Technology Co., Ltd.** **1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**
Date of Test:	**Aug. 16, 2022 ~ Sept. 22, 2022**
Date of Report:	**Sept. 22, 2022**
Report Number:	**HK2209164151-E**

TEST RESULT CERTIFICATION

Applicant's name.....: AMBIR TECHNOLOGY INC.

Address .....: 820 Sivert Drive, Wood Dale, Illinois, 60191 United States

Manufacture's Name .....: AMBIR TECHNOLOGY INC.

Address .....: 820 Sivert Drive, Wood Dale, Illinois, 60191 United States

Product description

Trade Mark: N/A

Product name .....: Barcode Scanner

Model and/or type reference .: BR300, BR200

Standards.....: FCC Rules and Regulations Part 15 Subpart C Section 15.249
ANSI C63.10: 2013

Date of Test.....:

Date (s) of performance of tests .....: **Aug. 16, 2022 ~ Sept. 22, 2022**

Date of Issue.....: **Sept. 22, 2022**

Test Result .....: **Pass**

Testing Engineer : Gary Qian

(Gary Qian)

Technical Manager : Eden Hu

(Eden Hu)

Authorized Signatory : Jason Zhou

(Jason Zhou)

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** Modified History **

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Sept. 22, 2022	Jason Zhou

1. TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

DESCRIPTION OF TEST		RESULT
CONDUCTED EMISSIONS TEST	§ 15.207	COMPLIANT
RADIATED EMISSION TEST	§ 15.249 (a) / §15.209	COMPLIANT
BAND EDGE	§ 15.249 (d)/ §15.209	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	§ 15.215 (c)	COMPLIANT
ANTENNA REQUIREMENT	§ 15.203	COMPLIANT

1.2 INFORMATION OF THE TEST LABORATORY

Shenzhen HUAK Testing Technology Co., Ltd.
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization：
A2LA Accreditation Code is 4781.01.
FCC Designation Number is CN1229.
Canada IC CAB identifier is CN0045.
CNAS Registration Number is L9589.

1.3 MEASUREMENT UNCERTAINTY

Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty(Above 1GHz)	=	4.06dB, k=2

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Barcode Scanner
Model Name	BR300
Serial Model	BR200
Model Difference	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: BR200
FCC ID	2AH6G-BR200BR300
Antenna Type	Spring Antenna
Antenna Gain	0.5dBi
Equipment	Barcode Scanner
Operation frequency	2410MHz-2470MHz
Number of Channels	61CH
Modulation Type	GFSK
Power Source	DC 5V from Adapter or DC 7.4V from Battery
Power Rating	DC 5V from Adapter or DC 7.4V from Battery

2.2 Carrier Frequency of Channels

Description of Channel:							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2410	17	2426	33	2442	49	2458
2	2411	18	2427	34	2443	50	2459
3	2412	19	2428	35	2444	51	2460
4	2413	20	2429	36	2445	52	2461
5	2414	21	2430	37	2446	53	2462
6	2415	22	2431	38	2447	54	2463
7	2416	23	2432	39	2448	55	2464
8	2417	24	2433	40	2449	56	2465
9	2418	25	2434	41	2450	57	2466
10	2419	26	2435	42	2451	58	2467
11	2420	27	2436	43	2452	59	2468
12	2421	28	2437	44	2453	60	2469
13	2422	29	2438	45	2454	61	2470
14	2423	30	2439	46	2455		
15	2424	31	2440	47	2456		
16	2425	32	2441	48	2457		

2.3 Operation of EUT during testing

Operating Mode

The mode is used: **Transmitting mode**

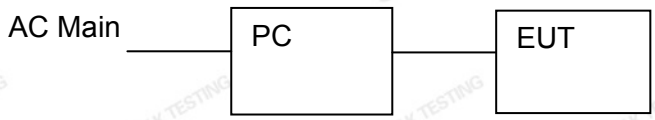
Low Channel: 2402MHz

Middle Channel: 2440MHz

High Channel: 2470MHz

2.4 DESCRIPTION OF TEST SETUP

Operation of EUT during conducted testing and Under 1 GHz radiation testing:



Operation of EUT during Above 1 GHz radiation testing:

● PC information
Model: TP00067A
Input: DC20V, 2.25-3.25A
Output: 5VDC, 0.5A

The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position

2.5 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	R&S	ENV216	HKE-002	Feb. 18, 2022	1 Year
2.	Receiver	R&S	ESR-7	HKE-010	Feb. 18, 2022	1 Year
3.	RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 18, 2022	1 Year
4.	Spectrum analyzer	R&S	FSP40	HKE-025	Feb. 18, 2022	1 Year
5.	Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 18, 2022	1 Year
6.	Preamplifier	Schwarzbeck	BBV 9743	HKE-006	Feb. 18, 2022	1 Year
7.	EMI Test Receiver	Rohde & Schwarz	ESCI 7	HKE-010	Feb. 18, 2022	1 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	HKE-012	Feb. 18, 2022	1 Year
9.	Loop Antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Feb. 18, 2022	1 Year
10.	Horn Antenna	Schewarzbeck	9120D	HKE-013	Feb. 18, 2022	1 Year
11.	Pre-amplifier	EMCI	EMC051845SE	HKE-015	Feb. 18, 2022	1 Year
12.	Pre-amplifier	Agilent	83051A	HKE-016	Feb. 18, 2022	1 Year
13.	EMI Test Software EZ-EMC	Tonscend	JY3120-B Version	HKE-083	N/A	N/A
14.	Power Sensor	Agilent	E9300A	HKE-086	Feb. 18, 2022	1 Year
15.	Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 18, 2022	1 Year
16.	Signal generator	Agilent	N5182A	HKE-029	Feb. 18, 2022	1 Year
17.	Signal Generator	Agilent	83630A	HKE-028	Feb. 18, 2022	1 Year
18.	Shielded room	Shiel Hong	4*3*3	HKE-039	Dec. 17, 2020	3 Year
19.	High gain antenna	Schewarzbeck	LB-180400KF	HKE-054	Feb. 18, 2022	1 Year

3. CONDUCTED EMISSIONS TEST

3.1 Conducted Power Line Emission Limit

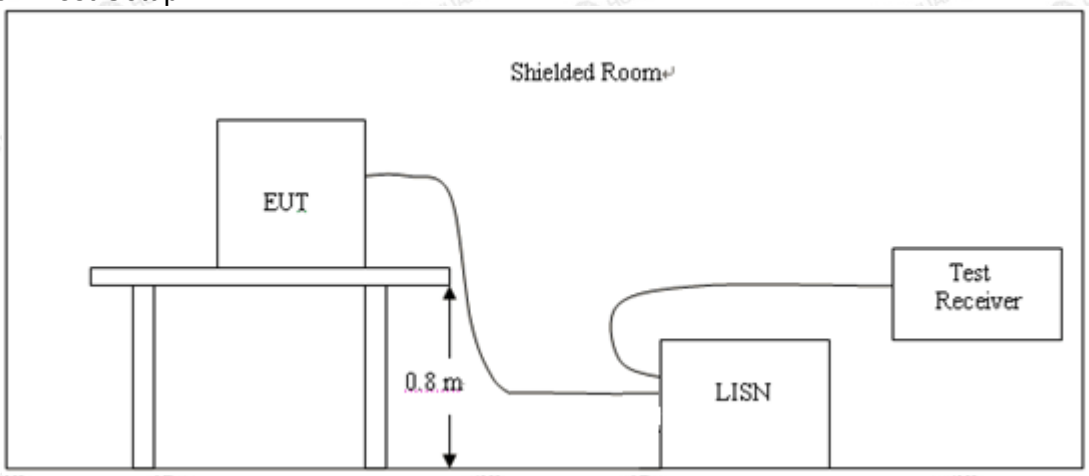
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

3.2 Test Setup

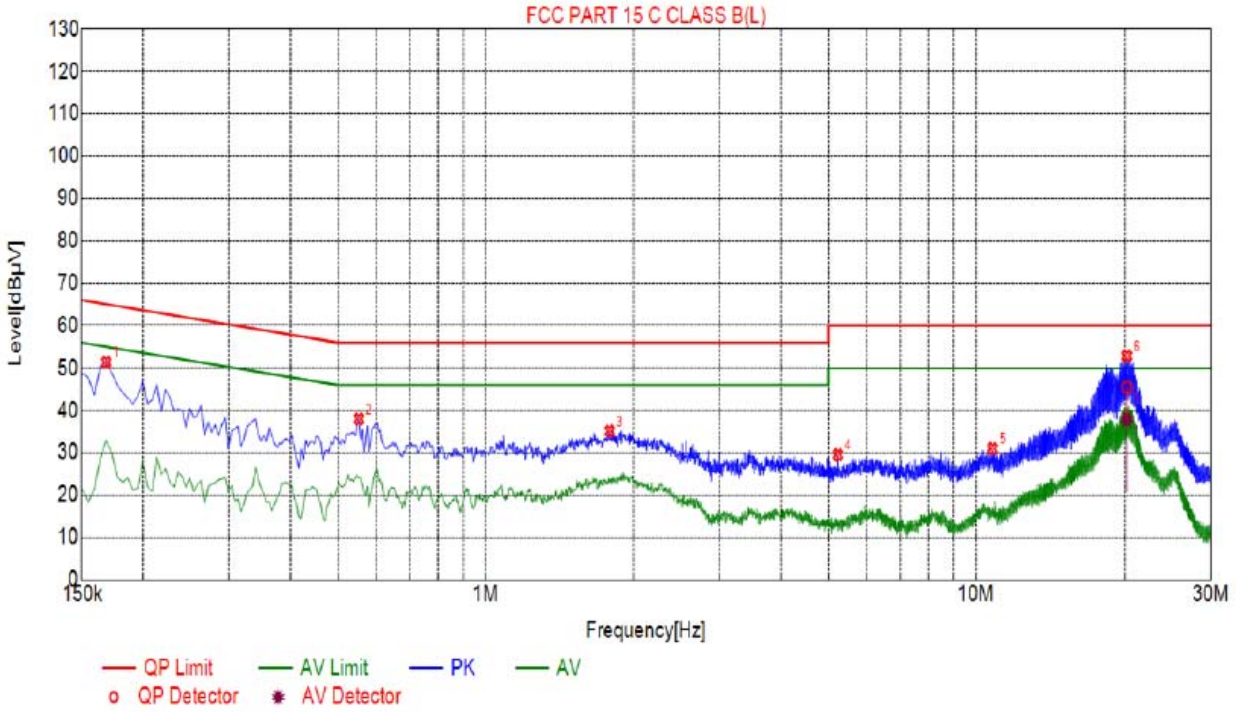


3.3 Test Procedure

1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2, Support equipment, if needed, was placed as per ANSI C63.10.
3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5, All support equipments received AC power from a second LISN, if any.
6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

3.4 Test Result

Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1680	51.41	20.01	65.06	13.65	31.40	PK	L
2	0.5505	38.02	20.06	56.00	17.98	17.96	PK	L
3	1.7880	35.12	20.14	56.00	20.88	14.98	PK	L
4	5.2305	29.53	20.26	60.00	30.47	9.27	PK	L
5	10.8150	30.97	20.02	60.00	29.03	10.95	PK	L
6	20.1930	52.89	20.11	60.00	7.11	32.78	PK	L

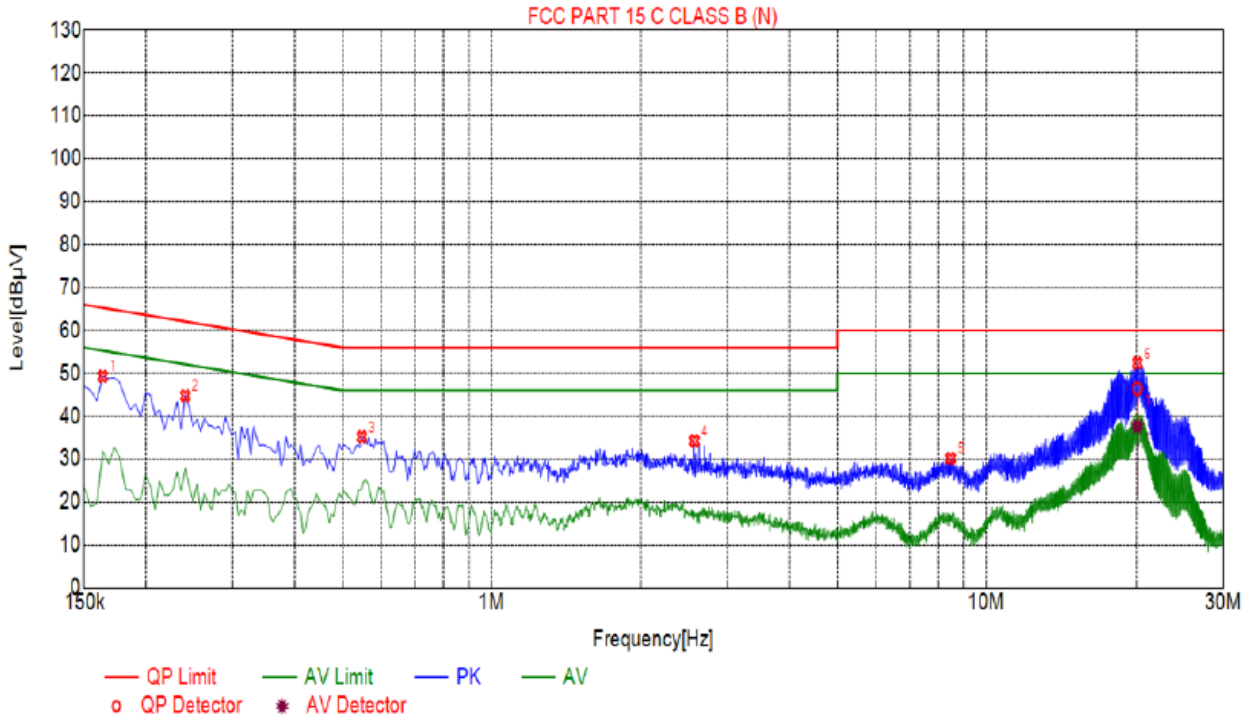
Final Data List											
NO.	Freq. [MHz]	Correction factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	QP Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	AV Reading [dBµV]	Type
1	20.1930	20.11	45.49	60.00	14.51	25.38	37.94	50.00	12.06	17.83	L

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

Test Specification: Neutral



Suspected List

NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1635	49.31	19.98	65.28	15.97	29.33	PK	N
2	0.2400	44.76	20.03	62.10	17.34	24.73	PK	N
3	0.5460	35.16	20.06	56.00	20.84	15.10	PK	N
4	2.5710	34.23	20.20	56.00	21.77	14.03	PK	N
5	8.4795	30.12	20.13	60.00	29.88	9.99	PK	N
6	20.0985	52.40	20.11	60.00	7.60	32.29	PK	N

Final Data List

NO.	Freq. [MHz]	Correction factor[dB]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	QP Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	AV Reading [dBµV]	Type
1	20.0985	20.11	46.40	60.00	13.60	26.29	37.66	50.00	12.34	17.55	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

4 RADIATED EMISSION TEST

4.1 Radiation Limit

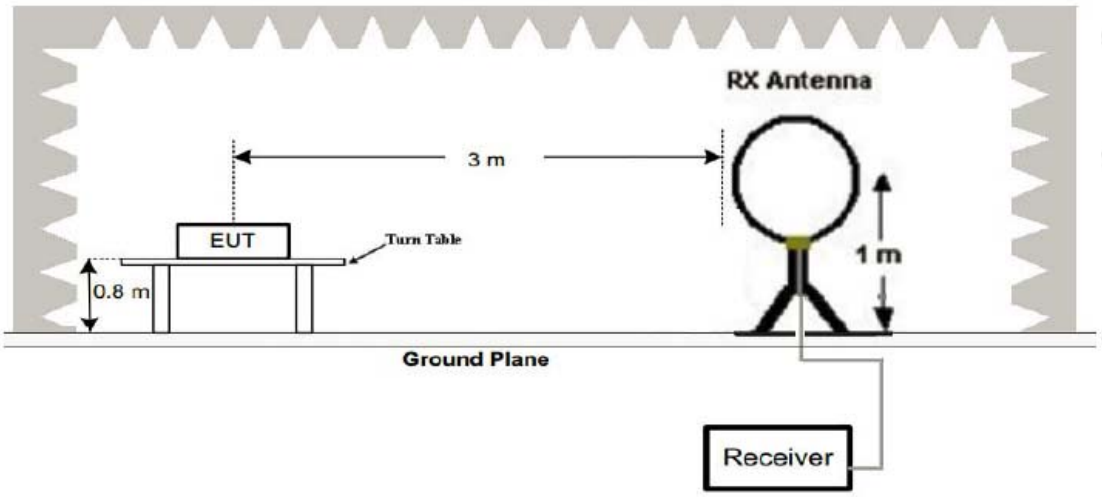
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values：

Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	3	54	500

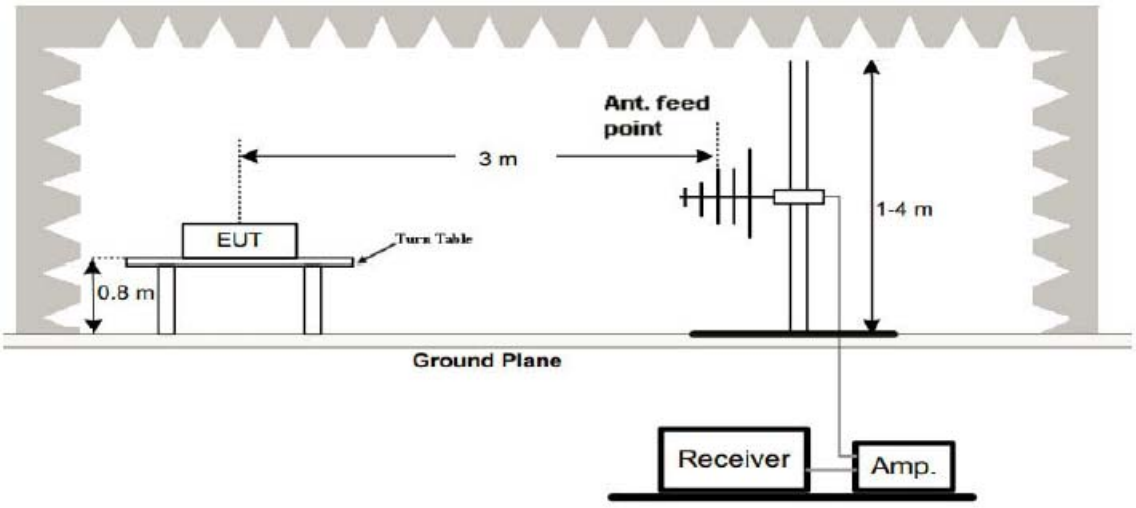
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

4.2 Test Setup

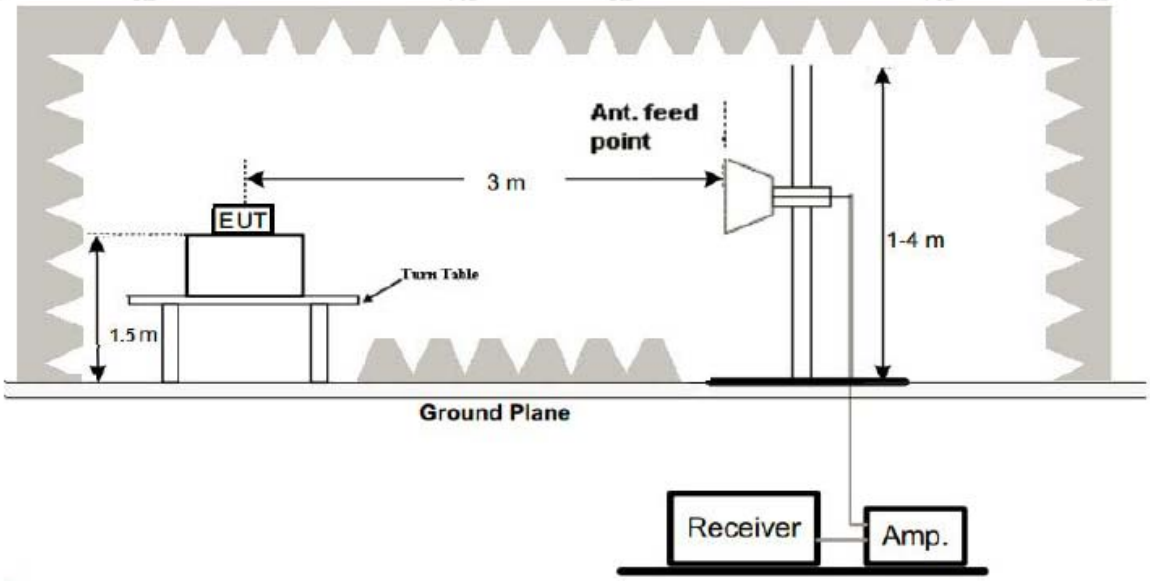
（1）Radiated Emission Test-Up Frequency Below 30MHz



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



（3）Radiated Emission Test-Up Frequency Above 1GHz



4.3 Test Procedure

1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

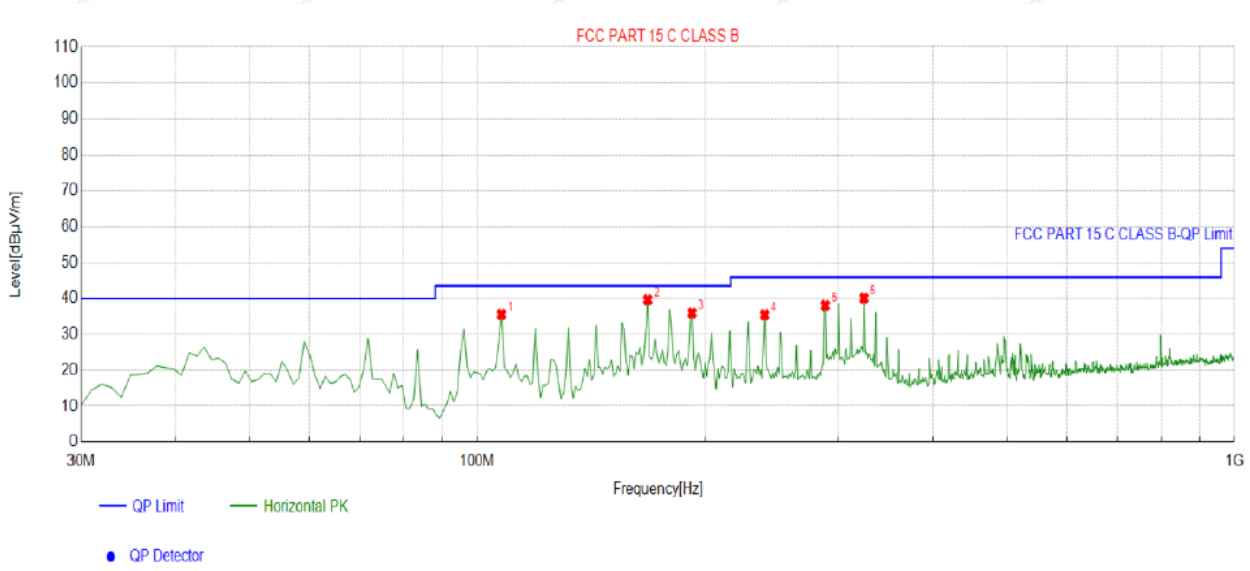
Note:
For battery operated equipment, the equipment tests shall be performed using a new battery.

4.4 Test Result

PASS

Below 1GHz Test Results:

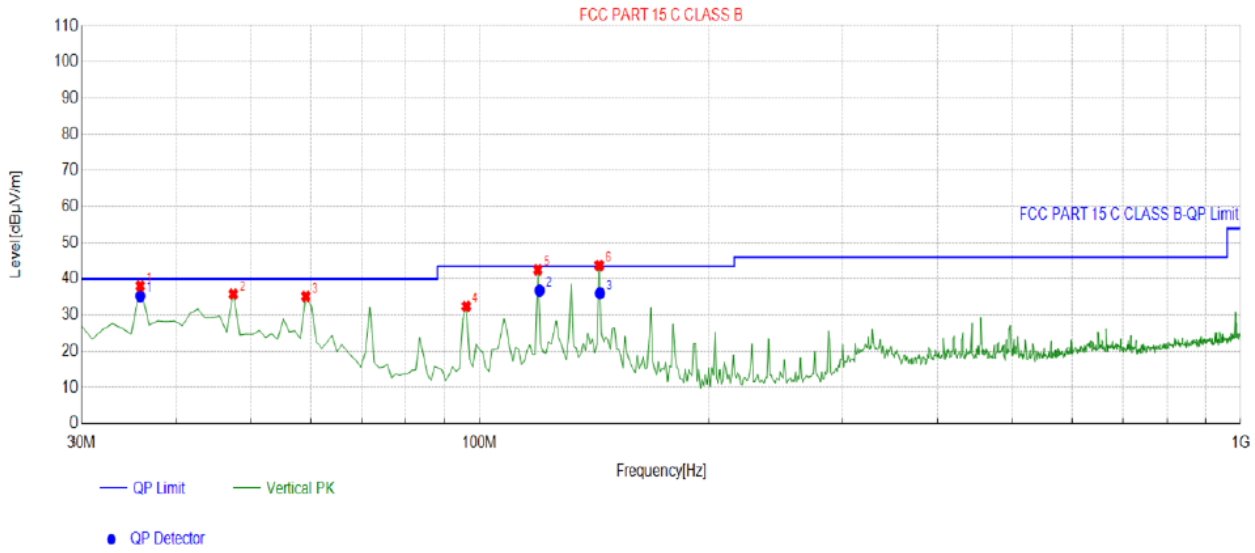
Antenna polarity: H



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	107.6777	-14.47	50.04	35.57	43.50	7.93	100	303	Horizontal
2	167.8779	-16.75	56.36	39.61	43.50	3.89	100	359	Horizontal
3	192.1522	-16.47	52.47	36.00	43.50	7.50	100	311	Horizontal
4	239.7297	-13.00	48.45	35.45	46.00	10.55	100	15	Horizontal
5	288.2783	-12.30	50.33	38.03	46.00	7.97	100	7	Horizontal
6	324.2042	-11.34	51.43	40.09	46.00	5.91	100	29	Horizontal

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin =Limit – Level

Antenna polarity: V



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	35.8258	-15.65	53.74	38.09	40.00	1.91	100	3	Vertical
2	47.4775	-14.77	50.59	35.82	40.00	4.18	100	132	Vertical
3	59.1291	-14.48	49.72	35.24	40.00	4.76	100	253	Vertical
4	96.0260	-15.91	48.37	32.46	43.50	11.04	100	6	Vertical
5	119.3293	-15.48	58.02	42.54	43.50	0.96	100	1	Vertical
6	143.6036	-18.07	61.79	43.72	43.50	-0.22	100	36	Vertical

Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	35.8258	-15.65	50.97	35.32	40.00	4.68	100	3	Vertical
2	119.9406	-15.47	52.30	36.83	43.50	6.67	140	260.1	Vertical
3	143.9237	-18.07	54.14	36.07	43.50	7.43	150	21.7	Vertical

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin =Limit – Level

Remark:
(1) Measuring frequencies from 9 KHz to the 1 GHz, Radiated emission test from 9KHz to 30MHz was verified, and no any emission was found except system noise floor.
(2) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(3) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

Above 1 GHz Test Results:

CH Middle (2410MHz)

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2410	96.88	-5.71	91.17	114	-22.83	peak
2410	81.54	-5.71	75.83	94	-18.17	AVG
4820	55.02	-3.51	51.51	74	-22.49	peak
4820	39.88	-3.51	36.37	54	-17.63	AVG
7230	52.13	-0.82	51.31	74	-22.69	peak
7230	35.62	-0.82	34.8	54	-19.2	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2410	96.32	-5.71	90.61	114	-23.39	peak
2410	79.62	-5.71	73.91	94	-20.09	AVG
4820	55.33	-3.51	51.82	74	-22.18	peak
4820	80.49	-3.51	76.98	54	22.98	AVG
7230	51.02	-0.82	50.2	74	-23.8	peak
7230	32.54	-0.82	31.72	54	-22.28	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH Middle (2440MHz)

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2440	96.35	-5.71	90.64	114	-23.36	peak
2440	73.48	-5.71	67.77	94	-26.23	AVG
4880	56.67	-3.51	53.16	74	-20.84	peak
4880	44.15	-3.51	40.64	54	-13.36	AVG
7320	55.25	-0.82	54.43	74	-19.57	peak
7320	33.66	-0.82	32.838	54	-21.162	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2440	95.99	-5.71	90.28	114	-23.72	peak
2440	78.49	-5.71	72.78	94	-21.22	AVG
4880	54.61	-3.51	51.1	74	-22.9	peak
4880	40.01	-3.51	36.5	54	-17.5	AVG
7320	53.26	-0.82	52.44	74	-21.56	peak
7320	36.99	-0.82	36.17	54	-17.83	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH High (2470MHz)

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2470	94.72	-5.65	89.07	114	-24.93	peak
2470	77.19	-5.65	71.54	94	-22.46	AVG
4940	53.65	-3.43	50.22	74	-23.78	peak
4940	43.19	-3.43	39.76	54	-14.24	AVG
7410	54.98	-0.75	54.23	74	-19.77	peak
7410	35.58	-0.75	34.83	54	-19.17	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2470	98.72	-5.65	93.07	114	-20.93	peak
2470	78.03	-5.65	72.38	94	-21.62	AVG
4940	56.11	-3.43	52.68	74	-21.32	peak
4940	33.64	-3.43	30.21	54	-23.79	AVG
7410	50.02	-0.75	49.27	74	-24.73	peak
7410	32.11	-0.75	31.36	54	-22.64	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Remark：
(1) Measuring frequencies from 1 GHz to the 25 GHz。
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4)The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak
detection at frequency above 1GHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5 BAND EDGE

5.1 Limits

FCC PART 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

5.2 Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 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. Set RBW to 1MHz and VBM to 3MHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength.The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 1MHz and VBW to 3MHz, to measure the conducted peak band edge.

5.3 Test Result

PASS

Radiated Band Edge Test:

Operation Mode: TX CH Low (2410MHz)

Horizontal (Worst case)

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2310	56.24	-5.81	50.43	74	-23.57	peak
2310	/	-5.81	/	54	/	AVG
2390	54.12	-5.84	48.28	74	-25.72	peak
2390	/	-5.84	/	54	/	AVG
2400	53.28	-5.84	47.44	74	-26.56	peak
2400	/	-5.84	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2310	54.19	-5.81	48.38	74	-25.62	peak
2310	/	-5.81	/	54	/	AVG
2390	55.62	-5.84	49.78	74	-24.22	peak
2390	/	-5.84	/	54	/	AVG
2400	54.26	-5.84	48.42	74	-25.58	peak
2400	/	-5.84	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Operation Mode: TX CH High (2470MHz)

Horizontal (Worst case)

Frequency (MHz)	Reading Result (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.50	56.12	-5.65	50.47	74	-23.53	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	54.82	-5.65	49.17	74	-24.83	peak
2500.00	/	-5.65	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Reading Result (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2483.50	55.02	-5.65	49.37	74	-24.63	peak
2483.50	/	-5.65	/	54	/	AVG
2500.00	54.87	-5.65	49.22	74	-24.78	peak
2500.00	/	-5.65	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						
Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.						

6 OCCUPIED BANDWIDTH MEASUREMENT

6.1 Test Setup

Same as Radiated Emission Measurement

6.2 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation.
3. Based on ANSI C63.10 section 6.9.2: RBW= 100KHz. VBW= 300 KHz, Span=20MHz.
4. The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

6.3 Measurement Equipment Used

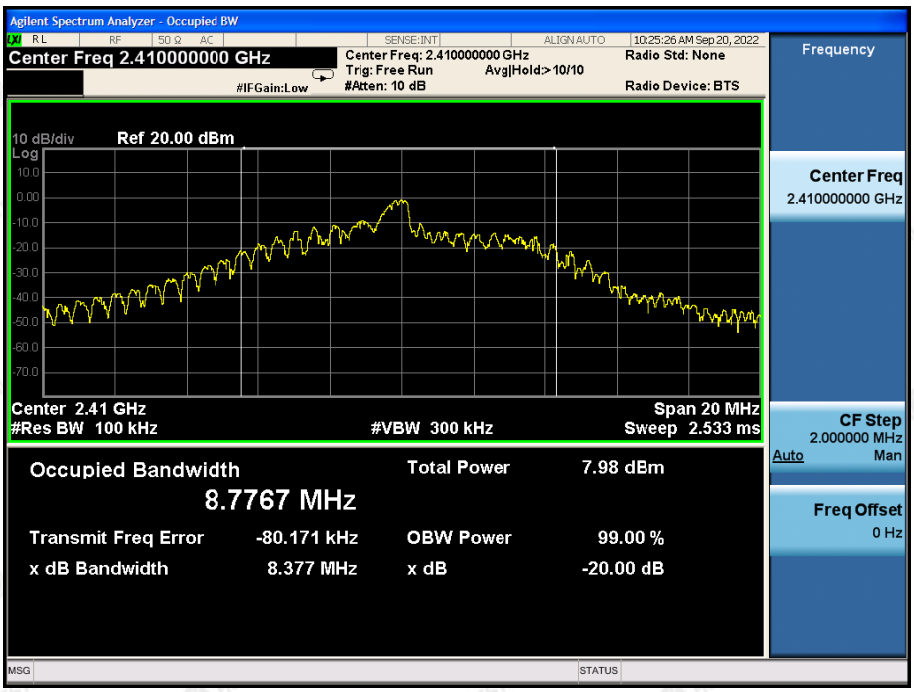
Same as Radiated Emission Measurement

6.4 Test Result

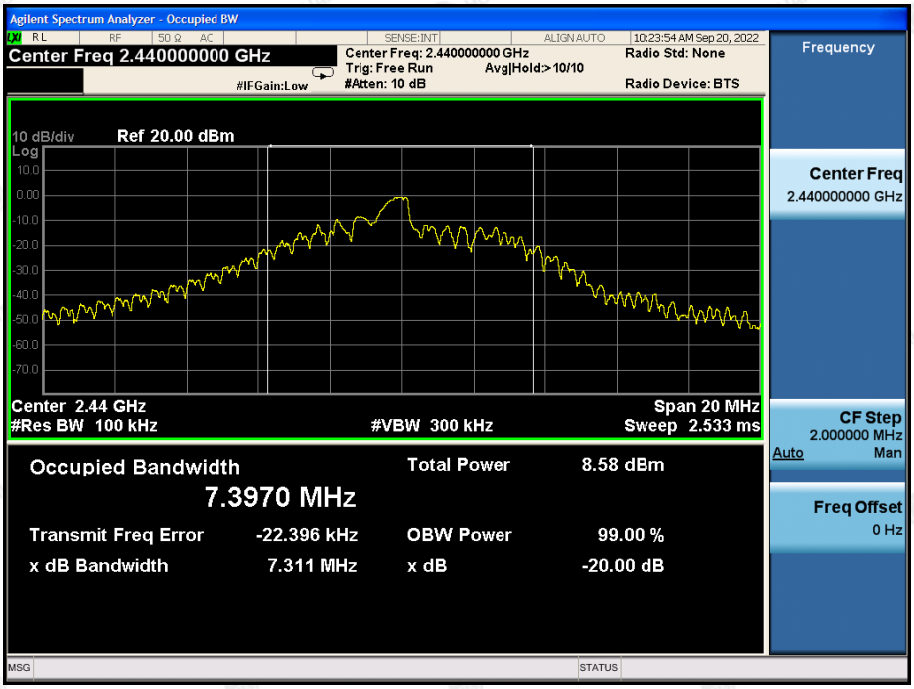
PASS

Frequency	20dB Bandwidth (MHz)	Result
2410 MHz	8.377	**PASS**
2440 MHz	7.311	**PASS**
2470 MHz	5.197	**PASS**

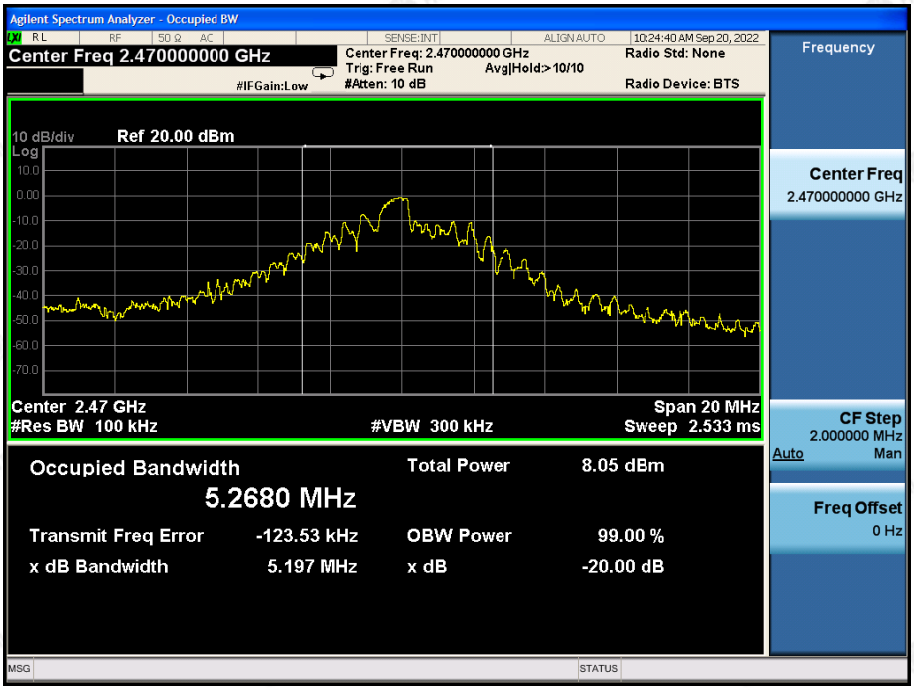
CH: 2402MHz



CH: 2440MHz



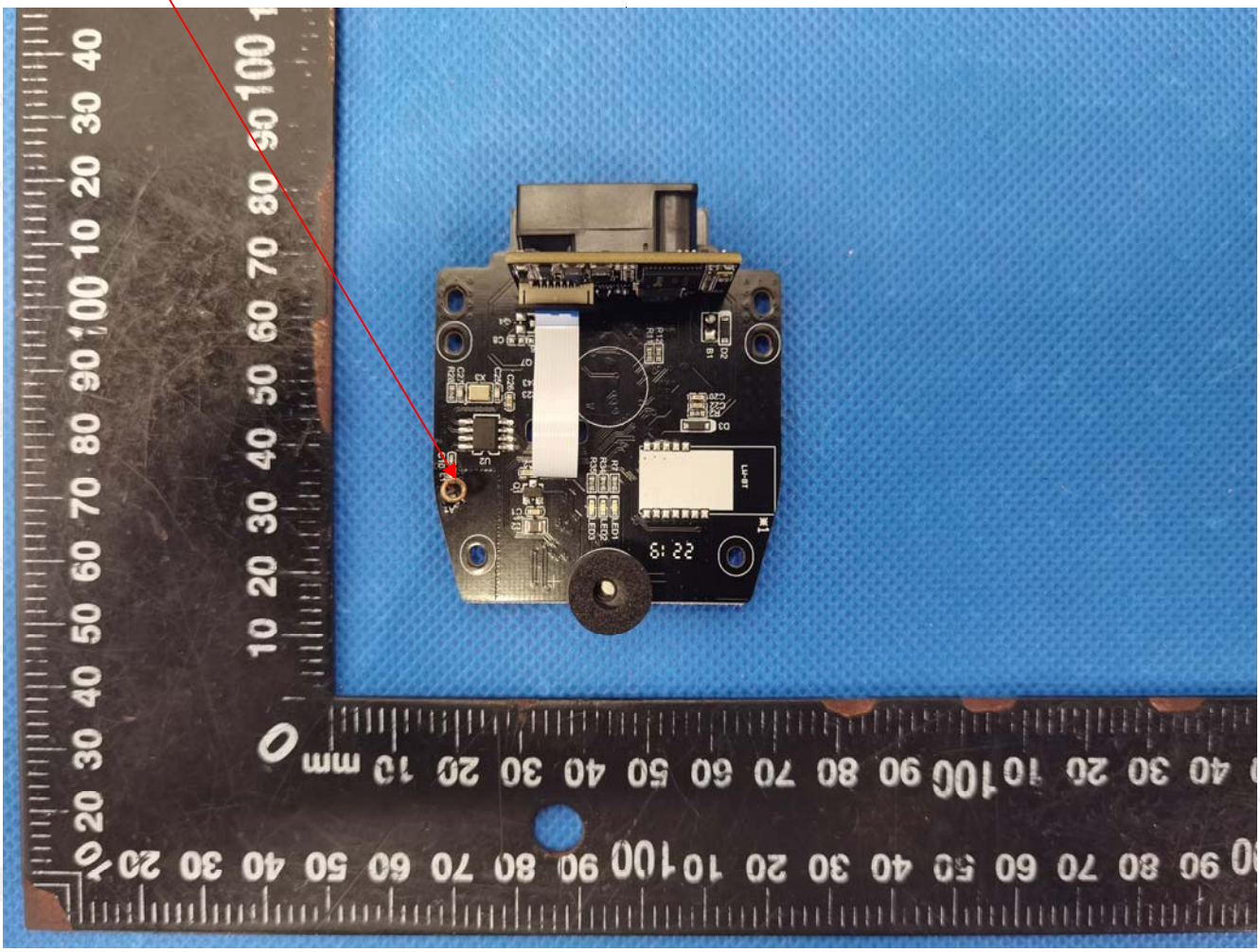
CH: 2470MHz



7 ANTENNA REQUIREMENT

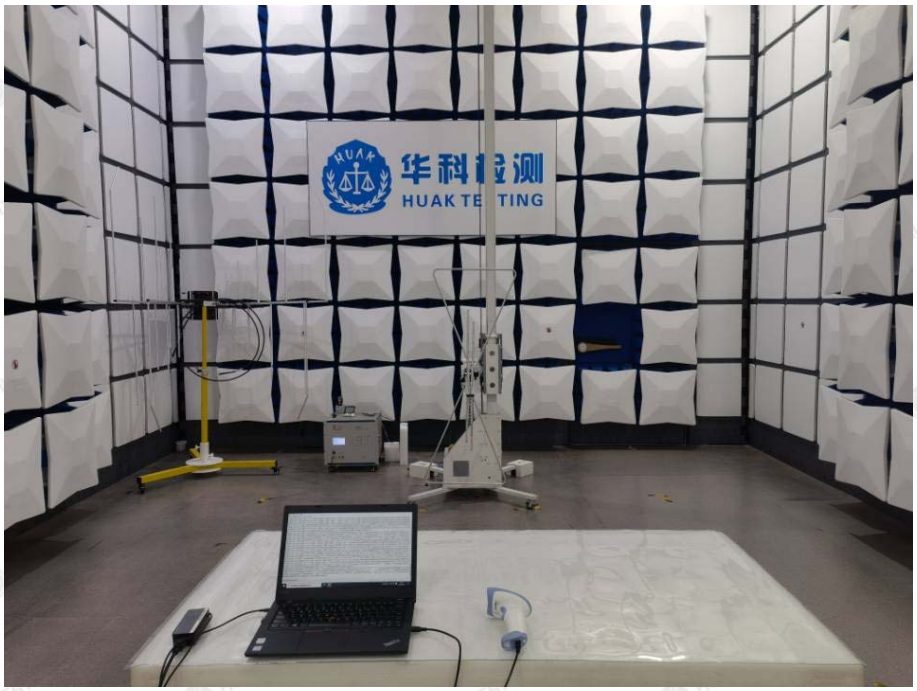
Standard Applicable
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna Connected Construction
The antenna used in this product is a Spring Antenna which permanently attached. It conforms to the standard requirements, The directional gains of antenna used for transmitting is 0.5dBi.

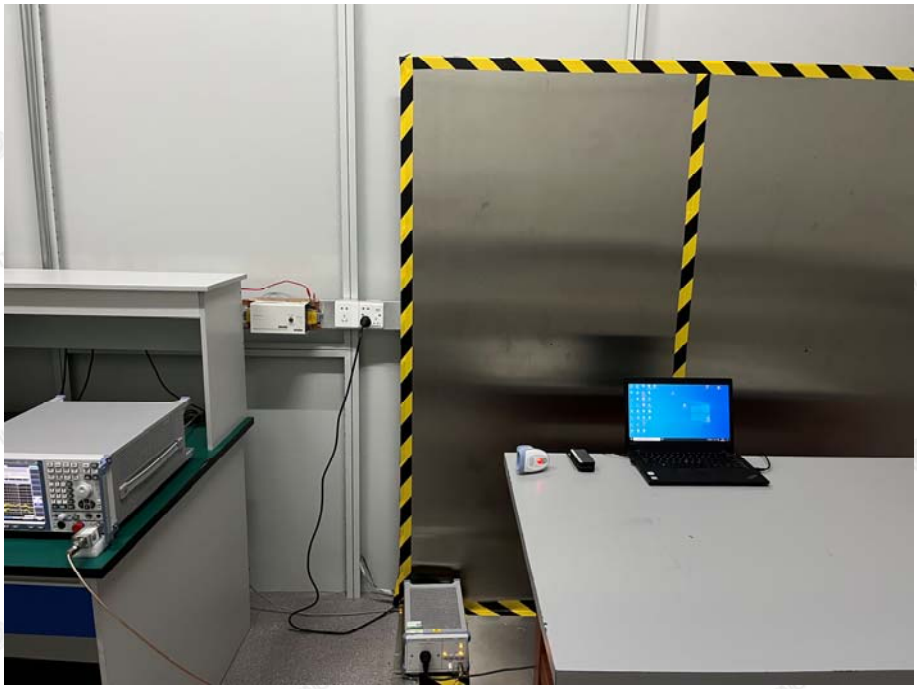


8 PHOTOGRAPH OF TEST

8.1 Radiated Emission



8.2 Conducted Emission



9 PHOTOS OF THE EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos

---------End of test report---------

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