TEST REPORT

Report No.	CISRR24013016503
Project No.	CISR240130165
FCC ID	2BE3U-C6
Applicant	CND Electronic Technology (shenzhen) Co.,Ltd
Address	5thh Floor, Xinhua industrial Building No.7,Nanshan District,Shenzhen,China
Manufacturer	CND Electronic Technology (shenzhen) Co.,Ltd
Address	5thh Floor, Xinhua industrial Building No.7,Nanshan District,Shenzhen,China
Product Name	Encoder
Trade Mark	CND LIVE
Model/Type reference	C6
Listed Model(s)	CX
Standard	Part 15 Subpart E Section 15.407
Test date	January 30, 2024 ~ February 23, 2024
Issue date	February 23, 2024
Test result	**Complied**

Rory Huang

Prepared by: Rory Huang

Genry Long

Approved by: Genry Long

The test results relate only to the tested samples.

The test report should not be reproduced except in full without the written approval of Shenzhen Bangce Testing Technology Co., Ltd.

Contents

1. REPORT VERSION

Version No.	Issue date	Description
00	February 23, 2024	Original

2. SUMMARY OF TEST RESULT

Report clause	Test Item	Standard Requirement	Result
5.1	Antenna Requirement	15.203	PASS
5.2	AC Conducted Emission	15.207	PASS
5.3	Peak Output Power	15.407 (a)	PASS
5.4	6 dB Bandwidth	15.407 (e)	PASS
5.5	99% Occupied Bandwidth	-	PASS*1
5.6	Power spectral density	15.407 (a)	PASS
5.7	Conducted Band Edge and Spurious Emission	15.407/15.209	PASS
5.8	Radiated Band Edge Emission	15.407/15.209	PASS
5.9	Radiated Spurious Emission	15.407/15.209	PASS
5.10	Frequency Stability	15.407 (g)	PASS

Note:

– The measurement uncertainty is not included in the test result.

– *1: No requirement on standard, only report these test data.

3. SUMMARY

3.1. Product Description

Main unit information:	
Product Name:	Encoder
Trade Mark:	CND LIVE
Model No.:	C6
Listed Model(s):	CX
Power supply:	Input: DC 12V/1A
Hardware version:	V1.0
Software version:	V1.0

3.2. Radio Specification Description

Technology:	802.11a/n/ac/ax(HT20), 802.11n/ac/ax(HT40), 802.11ac/ax(HT80)
Modulation:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK) 802.11ax: OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
Operation frequency:	5745MHz~5825MHz
Channel number:	5 channels for 20MHz bandwidth(5745MHz~5825MHz) 2 channels for 40MHz bandwidth(5755MHz~5795MHz) 1 channels for 80MHz bandwidth(5775MHz)
Channel separation:	5MHz
Antenna type:	External Antenna
Antenna gain:	0.2dBi for 5.8GWIFI

3.3. Modification of EUT

No modifications are made to the EUT during all test items.

3.4. Testing Site

Laboratory Name	Shenzhen Bangce Testing Technology Co., Ltd.
Laboratory Location	101, building 10, Yunli Intelligent Park, Shutianpu community, Matian Street, Guangming District, Shenzhen, Guangdong, China
FCC registration number	736346

3.5. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS (dBuV/m) = RA (dBuV) + AF (dB/m) + CL (dB) – AG (dB)

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

3.6. DISTURBANCE Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

CD (dBuV) = RA (dBuV) + PL (dB) + CL (dB)

Where CD = Conducted Disturbance	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	PL = 10 dB Pulse Limiter Factor

4. TEST CONFIGURATION

4.1. Test frequency list

Channel	Frequency (MHz)		
	802.11a/n/ac/ax(HT20)	802.11n/ac/ax(HT40)	802.11n/ac/ax(HT80)
CH-L	5745	5755	5775
CH-M	5785	--	--
CH-H	5825	5795	--

4.2. Test mode

For RF test items:	
The engineering test program(sscom5.1.3) was provided and enabled to make EUT continuous transmitting.	
Test Item	Modulation
Conducted test item	DSSS
Radiated test item	DSSS
Remark: – For radiated test item, the worst mode 802.11a was reported only, because this data rate has the highest RF output power at preliminary tests. – The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.	

4.3. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Item	Equipment name	Trade Name	Model No.
1	Power Adapter	Shenzhen Fangxin Technology Co., Ltd.	FX18U-120100K

4.4. Test sample information

Type	sample no.
Engineer sample	CISR240130165-1#
Normal sample	CISR240130165-2#

4.5. Testing environmental condition

Type	Requirement	Actual
Temperature:	15~35°C	25°C
Relative Humidity:	25~75%	50%
Air Pressure:	860~1060mbar	1000mbar

4.6. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	AC Conducted Emission	1.63dB
2	Peak Output Power	1.34dB
3	Power Spectral Density	1.34dB
4	6dB Bandwidth	0.002%
5	99% Occupied Bandwidth	0.002%
6	Conducted Band Edge and Spurious Emission	1.93dB
7	Radiated Band Edge Emission	3.76dB for 30MHz-1GHz 3.80dB for above 1GHz
8	Radiated Spurious Emission	3.76dB for 30MHz-1GHz
		3.80dB for above 1GHz
9	Frequency Stability	±25Hz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.7. Equipment Used during the Test

Equipment	Manufacture	Model No.	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	SKET	9.3*6.3*6	N/A	2021.10.15	3Year
Spectrum analyzer	Agilent	N9020A	MY50530263	2024.01.08	1Year
Receiver	ROHDE&SCHWARZ	ESCI	100853	2024.01.08	1Year
Spectrum analyzer	R&S	FSV-40N	/	2024.01.08	1Year
Bilog Antenna	Schwarzbeck	VULB 9163	1463	2023.01.09	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	2487	2023.01.09	2Year
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	/	2023.01.09	2Year
RF Cable	Tonscend	Cable 1	/	2024.01.08	1Year
RF Cable	Tonscend	Cable 2	/	2024.01.08	1Year
RF Cable	SKET	Cable 3	/	2024.01.08	1Year
Pre-amplifier	Tonscend	TAP9K3G32	AP21G806153	2024.01.08	1Year
Pre-amplifier	Tonscend	TAP01018050	AP22E806229	2024.01.08	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8127	/	2024.01.08	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	2024.01.08	1 Year
Horn Antenna	SCHWARZBECK	BBHA9170	1130	2023.01.09	2 Year
Preamplifier	Tonscend	TAP18040048	AP21C806126	2024.01.08	1 Year
variable-frequency power source	Pinhong	PH1110	/	2024.01.08	1 Year
6dB Attenuator	SKET	DC-6G	/	N/A	N/A
Artificial power network	Schwarzbeck	NSLK8127	8127-01096	2024.01.08	1 Year
EMI Test Receiver	Rohde&schwarz	ESCI7	100853	2024.01.08	1 Year
8-wire Impedance Stabilization Network	Schwarzbeck	NTFM 8158	8158-00337	2024.01.08	1 Year
Artificial power network	Schwarzbeck	ENV216	/	2024.01.08	1 Year
Antenna tower	SKET	Bk-4AT-BS	AT2021040101-V1	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Antenna Requirement

Standard Applicable	**FCC CFR Title 47 Part 15 Subpart C Section 15.203:** An intentional radiator shall be designed to ensure that no antenna other than that furnished by the response-ble 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. **FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1) (I):** (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.
Description	The antenna type is a PCB antenna, Refer to the below antenna photo.

Remark: The antenna gain is provided by the customer , if the data provided by the customer is not accurate, Shenzhen Bangce Testing Technology Co., Ltd. does not assume any responsibility.

5.2. AC Conducted Emission

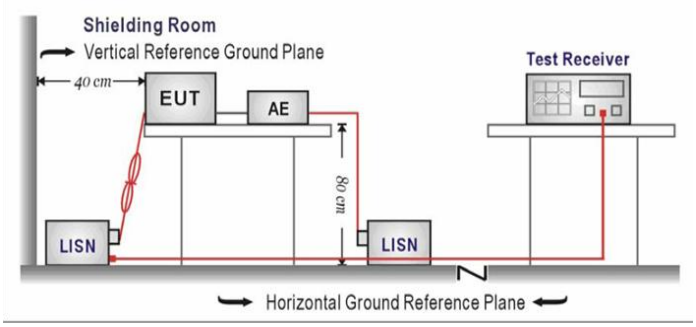
Limit:

FCC CFR Title 47 Part 15 Subpart C Section 15.207

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

Test configuration:



Test procedure:

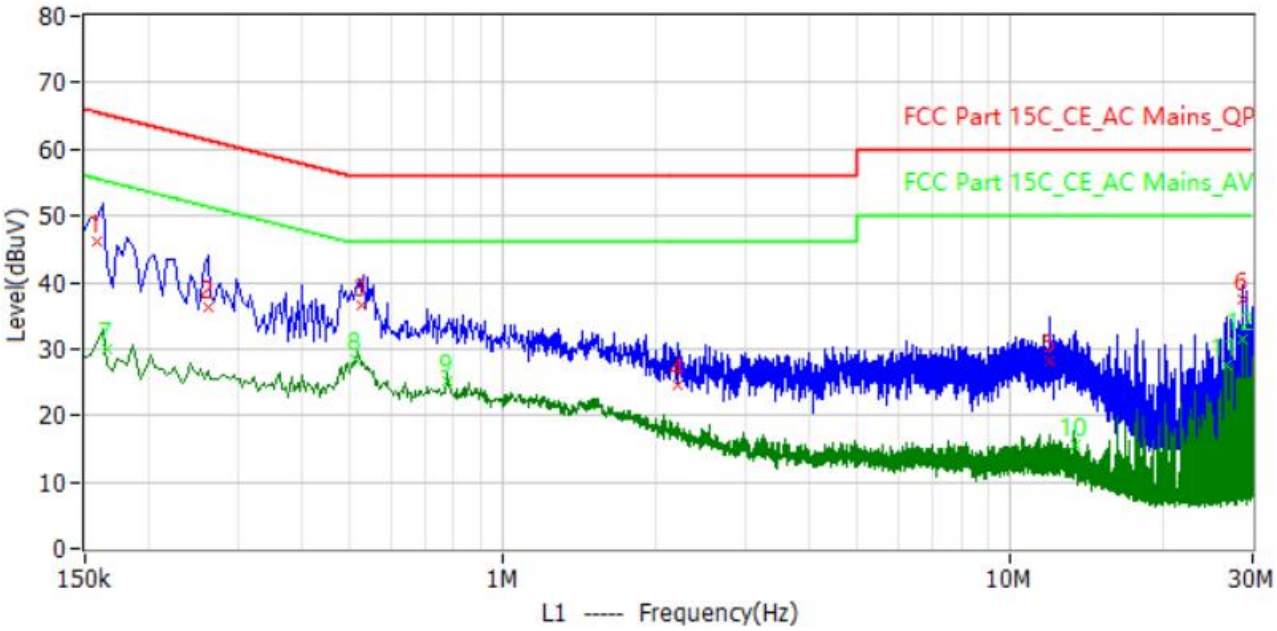
1. The EUT was setup according to ANSI C63.10 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

Test mode: Refer to the clause 4.3

Result: **Passed**

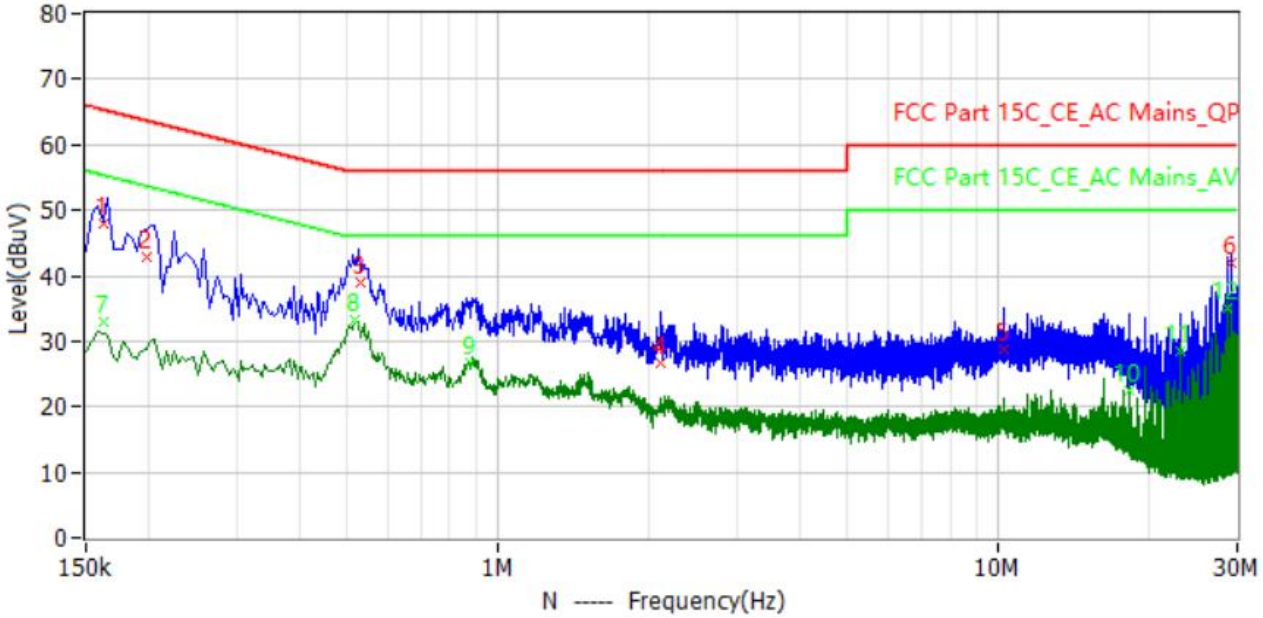
Have pre-scan all test channel, found 11a mode CH149 which it was worst case, so only show the worst case's data on this report.

Test Line:	L



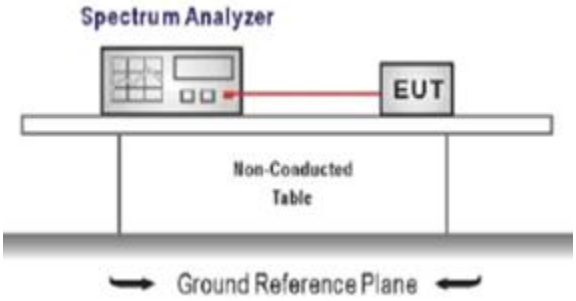
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Phase
1	158.000kHz	65.6	46.0	-19.6	46.0	0.0	QP	L1
2	262.000kHz	61.4	36.3	-25.1	36.2	0.1	QP	L1
3	526.000kHz	56.0	36.5	-19.5	36.4	0.1	QP	L1
4	2.206MHz	56.0	24.5	-31.5	24.4	0.1	QP	L1
5	11.894MHz	60.0	28.3	-31.7	28.0	0.3	QP	L1
6	28.686MHz	60.0	37.6	-22.4	37.0	0.6	QP	L1
7	166.000kHz	55.2	29.9	-25.3	29.9	0.0	CAV	L1
8	510.000kHz	46.0	28.6	-17.4	28.5	0.1	CAV	L1
9	778.000kHz	46.0	25.2	-20.8	25.1	0.1	CAV	L1
10	13.482MHz	50.0	15.5	-34.5	15.2	0.3	CAV	L1
11	26.610MHz	50.0	27.6	-22.4	27.0	0.6	CAV	L1
12	28.686MHz	50.0	31.5	-18.5	30.9	0.6	CAV	L1

Test Line:	N

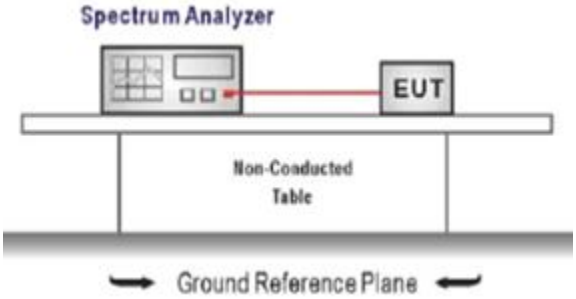


No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Phase
1	162.000kHz	65.4	48.0	-17.4	47.9	0.1	QP	N
2	198.000kHz	63.7	42.9	-20.8	42.9	0.0	QP	N
3	530.000kHz	56.0	39.0	-17.0	38.9	0.1	QP	N
4	2.114MHz	56.0	26.7	-29.3	26.6	0.1	QP	N
5	10.242MHz	60.0	28.8	-31.2	28.5	0.3	QP	N
6	29.234MHz	60.0	41.8	-18.2	41.1	0.7	QP	N
7	162.000kHz	55.4	33.0	-22.4	32.9	0.1	CAV	N
8	518.000kHz	46.0	33.2	-12.8	33.2	0.0	CAV	N
9	878.000kHz	46.0	26.7	-19.3	26.6	0.1	CAV	N
10	18.306MHz	50.0	22.6	-27.4	22.1	0.5	CAV	N
11	23.130MHz	50.0	28.6	-21.4	28.0	0.6	CAV	N
12	28.686MHz	50.0	35.2	-14.8	34.5	0.7	CAV	N

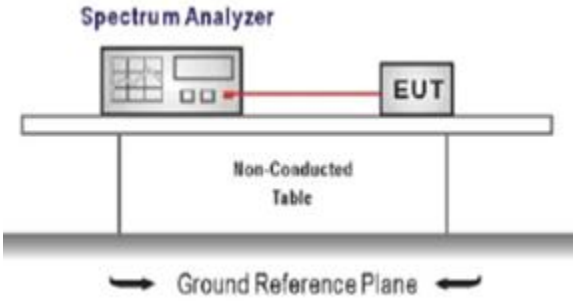
5.3. Peak Output Power

Limit:	**FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(1):** For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
Test configuration:	
Test procedure:	1. The transmitter output was connected to the spectrum analyzer through an attenuator, the pathloss was compensated to the results for each measurement. 2. Set to the maximum power setting and enable the EUT transmit continuously 3. Use the following spectrum analyzer settings: Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel RBW≥ the 20 dB bandwidth of the emission being measured, VBW≥RBW Sweep = auto, Detector function = peak, Trace = max hold 4. Measure and record the results in the test report.
Test mode:	Refer to the clause 4.3
Test data:	Refer to the Appendix C
Result:	**Passed**

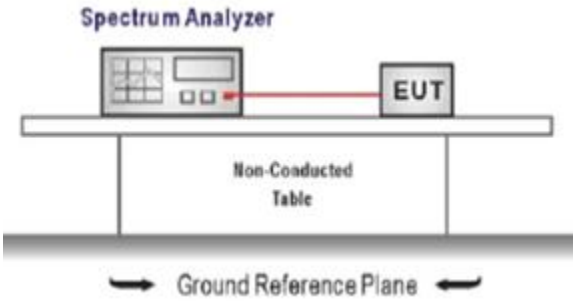
5.4. 6 dB Bandwidth

Limit:	Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.
Test configuration:	
Test procedure:	1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement. 2. Set to the maximum power setting and enable the EUT transmit continuously 3. Use the following spectrum analyzer settings: Span = approximately 2 to 3 times the 6 dB bandwidth, centered on a Test channel RBW ≥ 1%~5% of the 6 dB bandwidth, VBW ≥ 3*RBW Sweep = auto, Detector function = peak, Trace = max hold 4. Measured the spectrum width with power higher than 6dB below carrier.
Test mode:	Refer to the clause 4.3
Test data:	Refer to the Appendix C
Result:	**Passed**

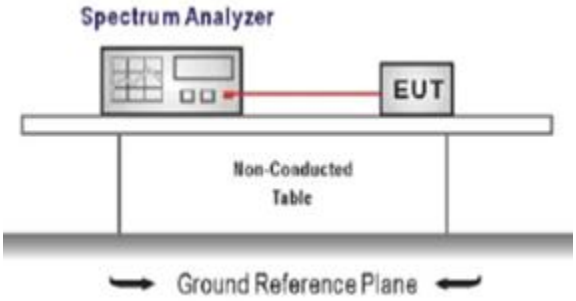
5.5. 99% Occupied Bandwidth

Limit:	--
Test configuration:	
Test procedure:	1. Connect the antenna port(s) to the spectrum analyzer input. 2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output andthe spectrum analyzer). Center Frequency =channel center frequency Span≥1.5 x OBW RBW = 1%~5%OBW, VBW ≥ 3 × RBW Sweep time= auto couple Detector = Peak, Trace mode = max hold 3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
Test mode:	Refer to the clause 4.3
Test data:	Refer to the Appendix C
Result:	**Passed**

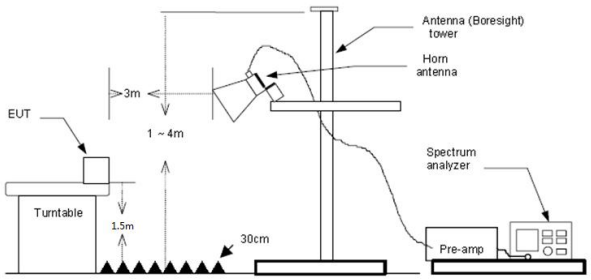
5.6. Power spectral density

Limit:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.
Test configuration:	
Test procedure:	1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance. 2. Set the RBW ⩾ 3 kHz. 3. Set the VBW ⩾ 3× RBW. 4. Set the span to 1.5 times the DTS channel bandwidth. 5. Detector = peak. 6. Sweep time = auto couple. 7. Trace mode = max hold. 8. Allow trace to fully stabilize. 9. Use the peak marker function to determine the maximum power level. 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat. 11. The resulting peak PSD level must be 8dBm.
Test mode:	Refer to the clause 4.3
Test data:	Refer to the Appendix C
Result:	**Passed**

5.7. Conducted Band edge and Spurious Emission

Limit:	**FCC CFR Title 47 Part 15 Subpart C Section15.247 (d):** In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test configuration:	
Test procedure:	1. Connect the antenna port(s) to the spectrum analyzer input. 2. Emission level measurement Set the center frequency and span to encompass frequency range to be measured RBW = 100 kHz, VBW ≥ 3 x RBW Detector = peak, Sweep time = auto couple, Trace mode = max hold Allow trace to fully stabilize Use the peak marker function to determine the maximum amplitude level. 3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer. 4. Ensure that the amplitude of all unwanted emission outside of the authorized frequency band excluding restricted frequency bands) are attenuated by at least the minimum requirements specified (at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz). Report the three highest emission relative to the limit.
Test mode:	Refer to the clause 4.3
Test data:	Refer to the Appendix C
Result:	**Passed**

5.8. Radiated Band edge Emission

Limit:	**FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):** In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, Radiated Emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the Radiated Emissions limits specified in §15.209(a) (see §15.205(c)).
Test configuration:	
Test procedure:	1. The EUT was setup and tested according to ANSI C63.10 . 2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. 3. The EUT waspositioned such that the distance from antenna to the EUT was 3 meters. 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. Thisis repeated for both horizontal and vertical polarization of the antenna. In order to find themaximum emission, all of the interface cables were manipulated according to ANSI C63.10 on radiated measurement. 5. Use the following spectrum analyzer settings: a) Span shall wide enough to fully capture the emission being measured b) Set RBW=100kHz for <1GHz, VBW=3*RBW, Sweep time=auto, Detector=peak, Trace=max hold c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement For average measurement: use duty cycle correction factor method (DCCF) Averager level = Peak level + DCCF
Test mode:	Refer to the clause 4.3
Result:	**Passed**

Note:

1) Level= Reading + Factor; Factor =Antenna Factor+ Cable Loss- Preamp Factor
2) Margin = Limit - Level
3) Average measurement was not performed if peak level is lower than average limit
4) The other emission levels were very low against the limit.

Test channel:CH149									
Freq. (MHz)	Reading (dBuv)	Ant. Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Remark	Polarity
5725.00	67.28	28.62	4.08	38.62	-5.92	74	12.64	Peak	Horizontal
5725.00	51.58	28.62	4.08	38.62	-5.92	54	8.34	Average	Horizontal
5725.00	69.78	28.62	4.08	38.62	-5.92	74	10.14	Peak	Vertical
5725.00	50.05	28.62	4.08	38.62	-5.92	54	9.87	Average	Vertical

Test channel:CH163									
Freq. (MHz)	Reading (dBuv)	Ant. Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Remark	Polarity
5850.00	68.80	29.45	3.91	40.17	-6.81	74	12.01	Peak	Horizontal
5850.00	51.78	29.45	3.91	40.17	-6.81	54	9.03	Average	Horizontal
5850.00	66.26	29.45	3.91	40.17	-6.81	74	14.55	Peak	Vertical
5850.00	51.76	29.45	3.91	40.17	-6.81	54	9.05	Average	Vertical

5.9. Radiated Spurious Emission

Limit:

FCC CFR Title 47 Part 15 Subpart C Section 15.209

Frequency	Limit (dBuV/m)	Value
0.009 MHz ~0.49 MHz	2400/F(kHz) @300m	Quasi-peak
0.49 MHz ~ 1.705 MHz	24000/F(kHz) @30m	Quasi-peak
1.705 MHz ~30 MHz	30 @30m	Quasi-peak

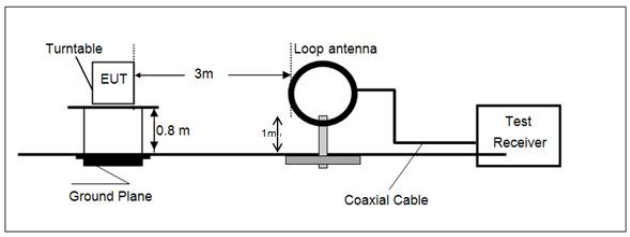
Limit dBuV/m @3m = Limit dBuV/m @300m + 40*log(300/3

Limit dBuV/m @3m = Limit dBuV/m @30m +40*log(30/3)

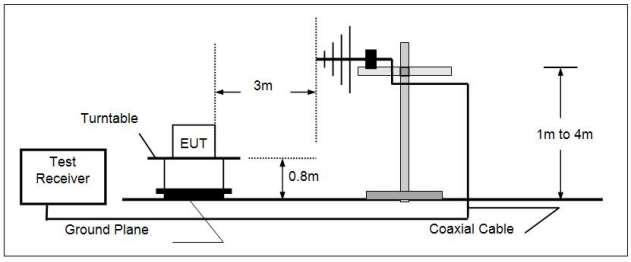
Frequency	Limit (dBuV/m @3m)	Value
30MHz~88MHz	40.00	Quasi-peak
88MHz~216MHz	43.50	Quasi-peak
216MHz~960MHz	46.00	Quasi-peak
960MHz~1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

Test configuration:

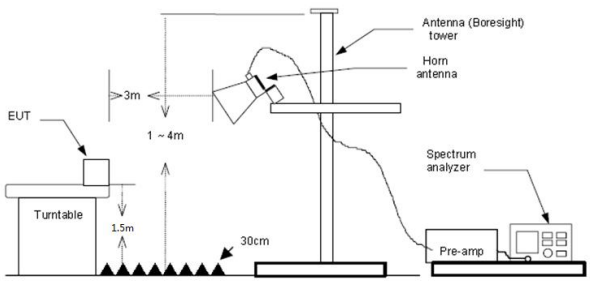
9kHz~30MHz



30 MHz ~ 1 GHz



Above 1 GHz



Test procedure:	1. The EUT was setup and tested according to ANSI C63.10. 2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level. 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower. 4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines. 5. Set to the maximum power setting and enable the EUT transmit continuously. 6. Use the following spectrum analyzer settings a) Span shall wide enough to fully capture the emission being measured; b) Below 1 GHz: RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold; If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. c) Set RBW=1MHz, VBW=3MHz for >1GHz, Sweep time=auto, Detector=peak, Trace=max hold for Peak measurement For average measurement: use duty cycle correction factor method (DCCF) Averager level = Peak level + DCCF
Test mode:	Refer to the clause 4.3
Result:	**Passed**

Note:

1) Level= Reading + Factor/Transd; Factor/Transd =Antenna Factor+ Cable Loss- Preamp Factor
2) Margin = Limit – Level
3) Average measurement was not performed if peak level is lower than average limit(54 dBuV/m) for above 1GHz.
4) The other emission levels were very low against the limit.
5) This test was performed with EUT in X, Y, Z position and the worse case was found when EUT in X position.

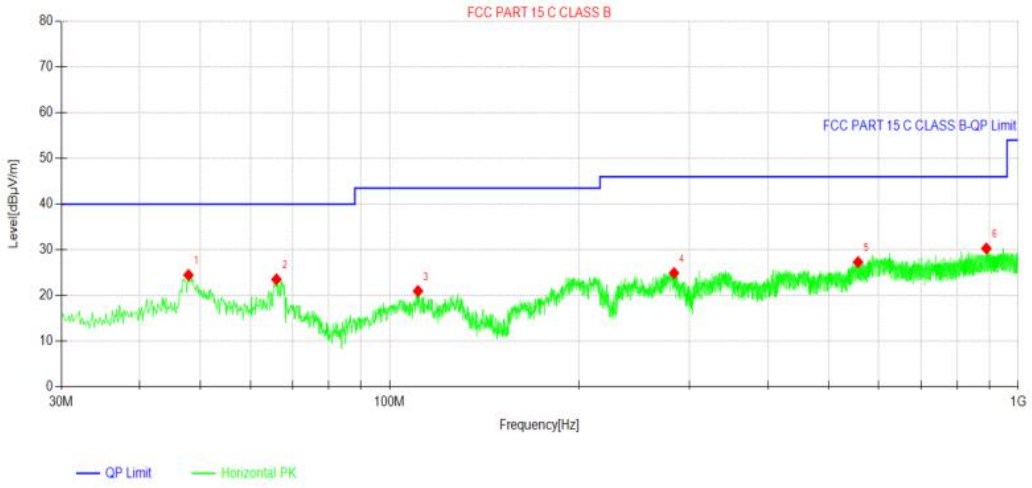
For 9 kHz ~ 30 MHz

The EUT was pre-scanned this frequency band, found the radiated level 20dB lower than the limit, so don't show data on this report.

For 30 MHz ~ 1000 MHz

Have pre-scan all test channel, found 11a mode CH149 which it was worst case, so only show the worst case's data on this report.

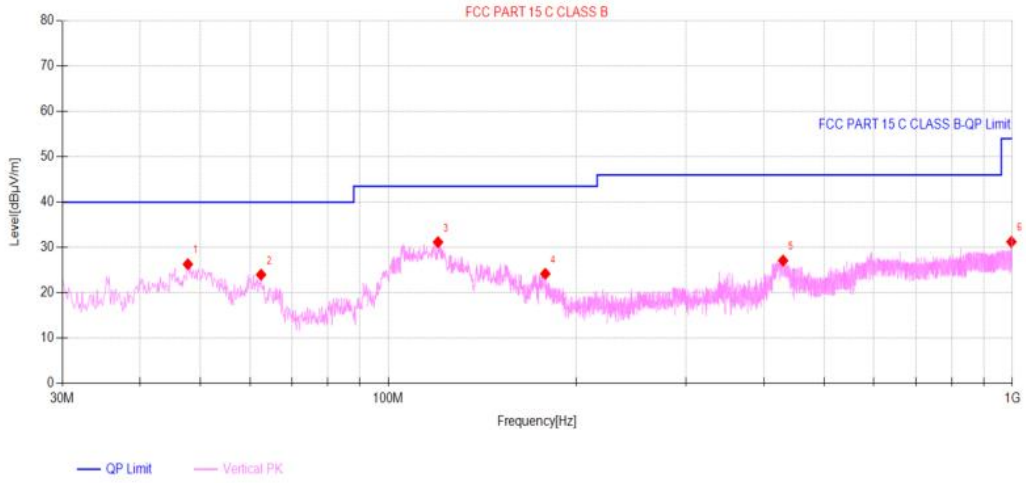
Polarization:	Horizontal



Suspected Data List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	47.8237	24.45	15.52	40.00	15.55	Horizontal	PASS
2	66.0112	23.50	12.60	40.00	16.50	Horizontal	PASS
3	110.8738	20.95	13.48	43.50	22.55	Horizontal	PASS
4	283.2912	24.89	15.25	46.00	21.11	Horizontal	PASS
5	555.8612	27.28	20.79	46.00	18.72	Horizontal	PASS
6	889.6625	30.27	25.41	46.00	15.73	Horizontal	PASS

Polarization:	Vertical



Suspected Data List

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Polarity	Verdict
1	47.7025	26.28	15.52	40.00	13.72	Vertical	PASS
2	62.495	23.97	13.44	40.00	16.03	Vertical	PASS
3	120.0888	31.16	12.12	43.50	12.34	Vertical	PASS
4	178.41	24.17	11.50	43.50	19.33	Vertical	PASS
5	428.9125	27.08	18.34	46.00	18.92	Vertical	PASS
6	996.12	31.23	26.30	54.00	22.77	Vertical	PASS

For 1 GHz ~ 40 GHz

Have pre-scan all test channel, found 11a mode which it was worst case, so only show the worst case's data on this report.

Test channel:CH149									
Freq. (GHz)	Reading (dBuv)	Ant. Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Remark	Polarity
11.49	68.20	31.33	4.23	38.62	-3.06	74	8.86	Peak	Horizontal
11.49	50.51	31.33	4.23	38.62	-3.06	54	6.55	Average	Horizontal
11.49	66.60	31.33	4.23	38.62	-3.06	74	10.46	Peak	Vertical
11.49	51.78	31.33	4.23	38.62	-3.06	54	5.28	Average	Vertical

Test channel:CH157									
Freq. (GHz)	Reading (dBuv)	Ant. Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Remark	Polarity
11.57	71.10	30.26	4.09	38.29	-3.94	74	6.84	Peak	Horizontal
11.57	49.63	30.26	4.09	38.29	-3.94	54	8.31	Average	Horizontal
11.57	66.33	30.26	4.09	38.29	-3.94	74	11.61	Peak	Vertical
11.57	49.61	30.26	4.09	38.29	-3.94	54	8.33	Average	Vertical

Test channel:CH163									
Freq. (MHz)	Reading (dBuv)	Ant. Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Remark	Polarity
11.65	64.57	31.97	4.11	38.47	-2.39	74	11.82	Peak	Horizontal
11.65	50.60	31.97	4.11	38.47	-2.39	54	5.79	Average	Horizontal
11.65	65.04	31.97	4.11	38.47	-2.39	74	11.35	Peak	Vertical
11.65	50.49	31.97	4.11	38.47	-2.39	54	5.90	Average	Vertical

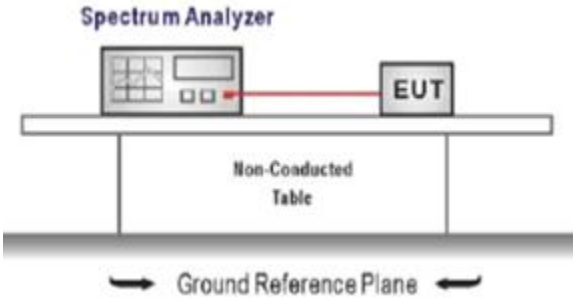
Notes:

1). Measuring frequencies from 9 KHz ~ 40GHz, emissions are attenuated more than 20dB below the permissible limits generated frequency to 30MHz.

2). Radiated emissions measured in frequency range from 9 KHz ~ 40GHz were made with an instrument using Peak detector mode.

3). 18~40GHz at least have 20dB margin. No recording in the test report.

5.10. Frequency Stability

Limit:	According to FCC § 15.407(g) "Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual." According to FCC § 2.1055(a) "The frequency stability shall be measured with variation of ambient temperature as follows:" (1) From −30° to + 50° centigrade for all equipment except that specified in paragraphs (a) (2) and (3) of this section. (2) From −20° to + 50° centigrade for equipment to be licensed for use in the Maritime Services under part 80 of this chapter, except for Class A, B, and S Emergency Position Indicating Radiobeacons (EPIRBS), and equipment to be licensed for use above 952 MHz at operational fixed stations in all services, stations in the Local Television Transmission Service and Point-to-Point Microwave Radio Service under part 21 of this chapter, equipment licensed for use aboard aircraft in the Aviation Services under part 87 of this chapter, and equipment authorized for use in the Family Radio Service under part 95 of this chapter. (3)From 0° to + 50° centigrade for equipment to be licensed for use in the Radio Broadcast Services under part 73 of this chapter.
Test configuration:	
Test procedure:	The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum anzlyer via feed through attenators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low engouh to obtain the desired frequency resoluation and measure EUT 20 degree operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30 degree. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure wuth 10 degree increased per stage until the highest temperature of +50 degree reached.
Test mode:	Refer to the clause 4.3
Test data:	Refer to the Appendix C
Result:	**Passed**

6. TEST SETUP PHOTOS

Please Refer to Report: CISRR24013016501

7. EXTERNAL AND INTERNAL PHOTOS

7.1. External Photos

Please Refer to Report: CISRR24013016501

7.2. Internal photos

Please Refer to Report: CISRR24013016501

------End of the report------