Prüfbericht-Nr.: *Test Report No.:*	16056492 001	**Auftrags-Nr.:** *Order No.:*	174013631	Seite 1 von 34 *Page 1 of 34*
Kunden-Referenz-Nr.: *Client Reference No.:*	352690	**Auftragsdatum:** *Order date.:*	20.May 2014	
Auftraggeber: *Client:*	Seikaku Technical Group Limited Offshore Chambers, P.O. Box 217 Apia, Samoa.			
Prüfgegenstand: *Test item:*	Handheld Transmitter			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	X-100H, X-200H	**FCC ID:** *FCC ID:*	H38X-100H	
Auftrags-Inhalt: *Order content:*	TUV Rheinland - EMC service			
Prüfgrundlage: *Test specification:*	TIA/EIA-603-C-2004 FCC 47 CFR Part 74.861, Subpart H: 2013			

Wareneingangsdatum: *Date of receipt:*	28.May 2014
Prüfmuster-Nr.: *Test sample No.:*	174013631-001
Prüfzeitraum: *Testing period:*	Refer to test report
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Guangdong) Ltd.
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Guangdong) Ltd. EMC Laboratory
Prüfergebnis*: *Test result*:*	Pass

geprüft von / *tested by:*

Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*
21.Oct.2014	Frank Du Project Manager	Frank Du

kontrolliert von / *reviewed by:*

Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*
21.Oct.2014	Liangdong Xie Project Manager	

Sonstiges / *Other:*

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery:*
Prüfmuster vollständig und unbeschädigt
Test item complete and undamaged

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhalt
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	1 = very good	2 = good	3 = satisfactory	4 = sufficient	5 = poor
	P(ass) = passed a.m. test specifications(s)		F(ail) = failed a.m. test specifications(s)	N/A = not applicable	N/T = not tested

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TEST SUMMARY

5.1 RADIATED POWER OUTPUT MEASUREMENT
RESULT: *Pass*

5.2 SPURIOUS RADIATION MEASUREMENT (TX)
RESULT: *Pass*

5.3 MODULATION CHARACTERISTICS MEASUREMENT
RESULT: *Pass*

5.4 OCCUPIED BANDWIDTH
RESULT: *Pass*

5.5 FREQUENCY TOLERANCE
RESULT: *Pass*

5.6 EMISSION MASK
RESULT: *Pass*

5.7 ELECTROMAGNETIC FIELDS
RESULT: *Pass*

Contents

1. General Remarks

1.1. Complementary Materials

All attachments are integral parts of this test report.

2. Test Sites

2.1. Test Facilities

TÜV Rheinland(Guangdong) Ltd. EMC Laboratory.
No.102, 1F of Southwest Warehouse Building, No.767 TianYuan Road, Tianhe District, Guangzhou, P.R.China, 510650
TÜV Rheinland (Guangdong) Ltd. EMC Laboratory is listed on the US Federal Communications Commission list of facilities approved to perform measurements, the register no. 833845.

2.2. List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Type	Manufacturer	S/N	Calibrated until	Calibrated Interval
EMI Test Receiver	ESCI-3	Rohde & Schwarz	100216	16.Mar.2015	1 year
Spectrum Analyzer	FSP30	Rohde & Schwarz	100286	16.Mar.2015	1 year
Trilog-Broadband Antenna	VULB9168 (30MHz-1GHz)	SCHWARZBECK MESSELEKTRONIK	209	16.Mar.2015	2 years
Double-Ridged Waveguide Horn Antenna	HF906 (1-18GHz)	Rohde & Schwarz	100385	16.Mar.2015	2 years
Pre-amplifier	AFS42-00101800-25-S-42	MITEQ	1101599	16.Mar.2015	2 years
Band Reject Filter	BRM50702	Micro-Tronics	023	16.Mar.2015	2 years
Standard Gain Horn Antenna	3160-09 (18-26.5GHz)	EMCO	21642	16.Mar.2015	5 years
Pre-amplifier	AFS33-18002650-30-8P-44	MITEQ	1108282	16.Mar.2015	2 years
3m Anechoic Chamber	N/A	Albatross Project GmbH	N/A	16.Mar.2015	1 year

Kind of Equipment	Type	Manufacturer	S/N	Calibrated until	Calibrated Interval
Loop Antenna	HFH2-Z2 (<30MHz)	Rohde & Schwarz	100111	16.Mar.2015	2 years
EMI Test Receiver	ESCS30	Rohde & Schwarz	100316	16.Mar.2015	1 year
Two-Line V-Network	ESH3-Z5	Rohde & Schwarz	100308	16.Mar.2015	1 year
Pulse Limiter	ESH3-Z2	Rohde & Schwarz	100701	16.Mar.2015	1 year

Conformance of the used measurement and test equipment with the requirements of ISO/IEC 17025:2005 has been confirmed before testing.

2.3. Trace ability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4. Calibration

All equipment requiring calibration is calibrated periodically by the manufacturer or accredited calibration services according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5. Abbreviations

Refer to cover page.

2.6. Measurement Uncertainty

Table 2: Measurement Uncertainty

Testing Item	Frequency Range	Uncertainty
Conducted Emission (Mains port)	0.09MHz - 30MHz	2.68 dB
Radiated Emission (966 Chamber: 3m)	0.09MHz - 30MHz	4.60 dB
Radiated Emission (966 Chamber: 3m)	30MHz – 1000MHz	5.16 dB
Radiated Emission (966 Chamber: 3m)	Above 1000MHz	**4.88** dB

Note:
The uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3. General Product Information

3.1. Product Function and Intended Use

The submitted samples X-100H, X-200H are transmitters of wireless microphone system.
Model X-100H is identical with X-200H except model name. Therefore all tests were performed on X-100H.

3.2. Rating and Physical Characteristics

Product name:	Handheld Transmitter
Model name:	X-100H, X-200H
Rating input:	DC9V (Powered by Battery)
Frequency range:	174-216MHz
Bandwidth:	200kHz
Modulation:	FM
Rated system deviation:	9kHz @ 1000Hz
Antenna:	Integral

List of operating channel and frequency:

174.100 MHz	181.660 MHz	192.250 MHz	203.400 MHz
174.300 MHz	181.900 MHz	192.320 MHz	203.800 MHz
174.500 MHz	182.400 MHz	194.320 MHz	204.250 MHz
174.800 MHz	184.032 MHz	194.500 MHz	204.820 MHz
175.000 MHz	184.320 MHz	194.600 MHz	206.350 MHz
175.500 MHz	184.510 MHz	194.820 MHz	207.320 MHz
175.600 MHz	184.540 MHz	195.250 MHz	209.150 MHz
176.000 MHz	184.800 MHz	195.320 MHz	209.820 MHz
176.300 MHz	185.150 MHz	197.100 MHz	210.250 MHz
176.400 MHz	188.100 MHz	197.150 MHz	212.100 MHz
177.000 MHz	188.500 MHz	197.320 MHz	212.320 MHz
179.300 MHz	189.100 MHz	199.820 MHz	214.820 MHz
180.000 MHz	189.900 MHz	200.320 MHz	215.200 MHz
181.176 MHz	190.320 MHz	202.400 MHz	
181.210 MHz	191.300 MHz	202.900 MHz	
181.430 MHz	191.900 MHz	203.300 MHz	

3.3. Noise Generating or Sources of Interference

1) IC circuits

3.4. Noise Suppressing Parts

None

3.5. Submitted Documents

1) Circuit diagram
2) Block diagram
3) User manual
4) PCB Layout
5) BOM List

4. Test Set-up and Operation Modes

4.1. Test Methodology

The test methodology used is based on the requirement of FCC 47 CFR Part 74.861.

The test methods, which have been used, are based on TIA/EIA-603-C-2004.

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the instructions for use.

4.2. Independent and Test Operation Modes

The basic operation mode is:

A. Transmitter mode

1. Low CH
2. Middle CH
3. High CH

4.3. Special Accessories and Auxiliary Equipment

The EUT was tested as an independent unit with the following equipment:

Description	Manufacturer	Model No.	S/N	Certification
N/A	N/A	N/A	N/A	N/A

4.4. Countermeasures to achieve EMC compliance

The test sample, which has been tested, contained the noise suppression parts as described in the technical document. No additional measures were employed to achieve compliance.

4.5. Test Setup

The test setup was realized on a table of 80cm height during all the tests.

The test arrangement is configured and set according to manufacturer's installations.

Diagram 1 of Configuration for testing other test items

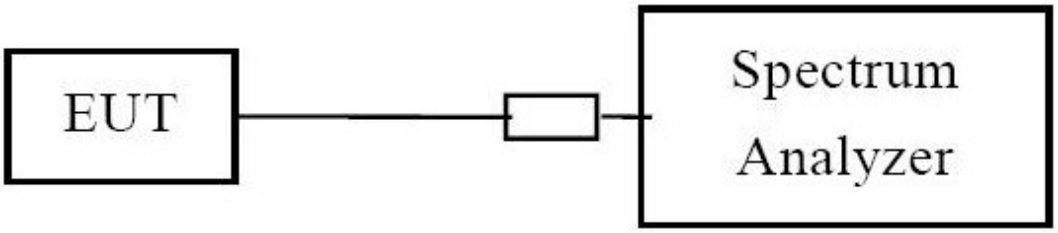
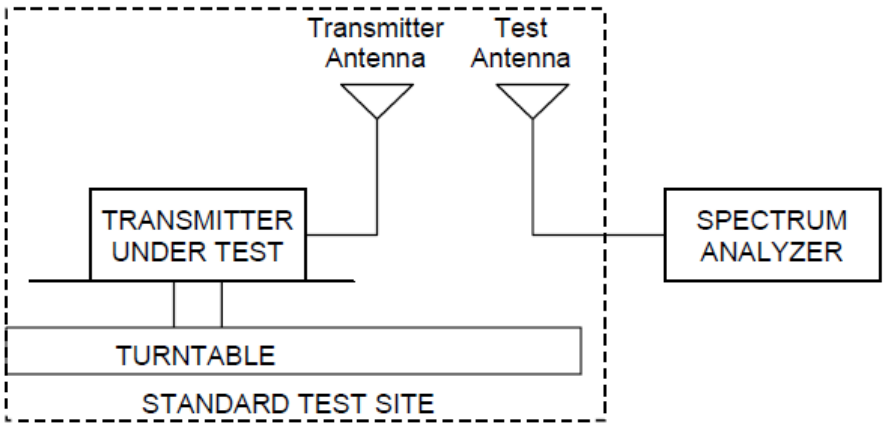


Diagram 2 of Measurement Equipment Configuration for Testing Radiated Emission



5. Test Results E M I S S I O N

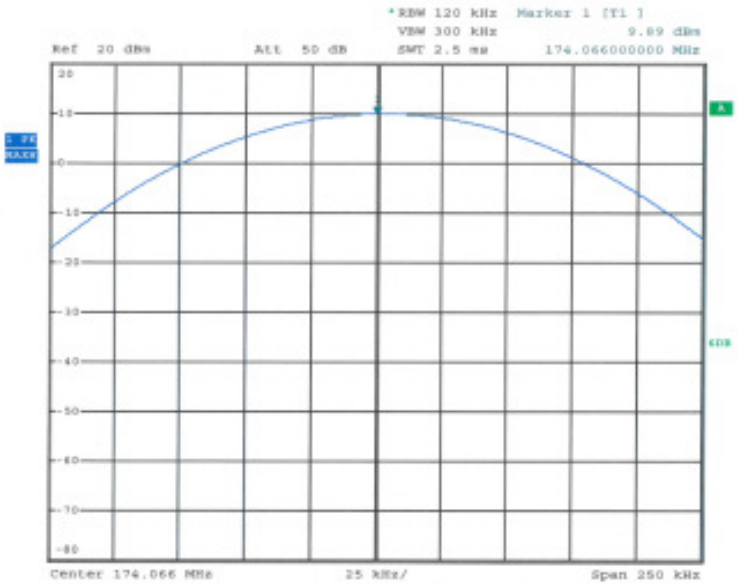
5.1. Conducted power output measurement

RESULT:	**PASS**

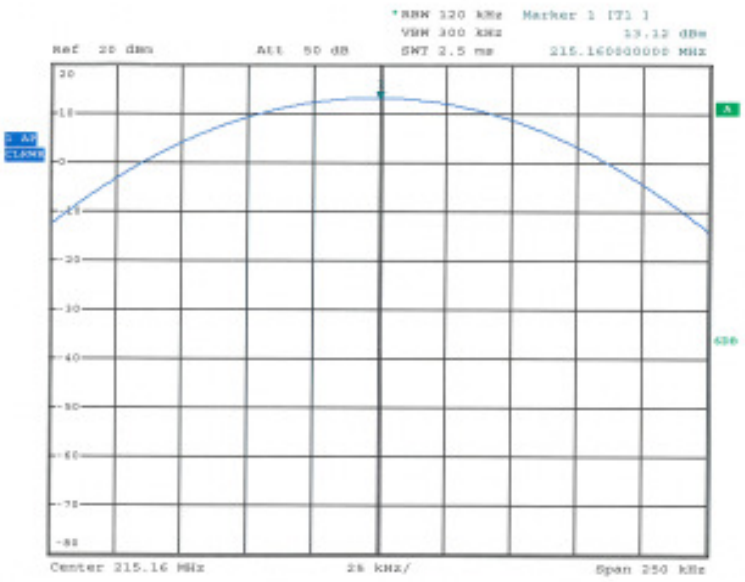
Date of testing	:	17 Oct 2014
Test specification	:	FCC Part 2 Per Section 2.1046(a)
Guide	:	ANSI/TIA-603-C-2004, clause 2.2.17
Limits	:	FCC Part 74 Per Section 74.861(e)(1)
Kind of test site	:	Shielded Room
Operation mode	:	Transmitting (unmodulated)
Temperature	:	23°C
Humidity	:	50%

Figure 1: Conducted Power output measurement

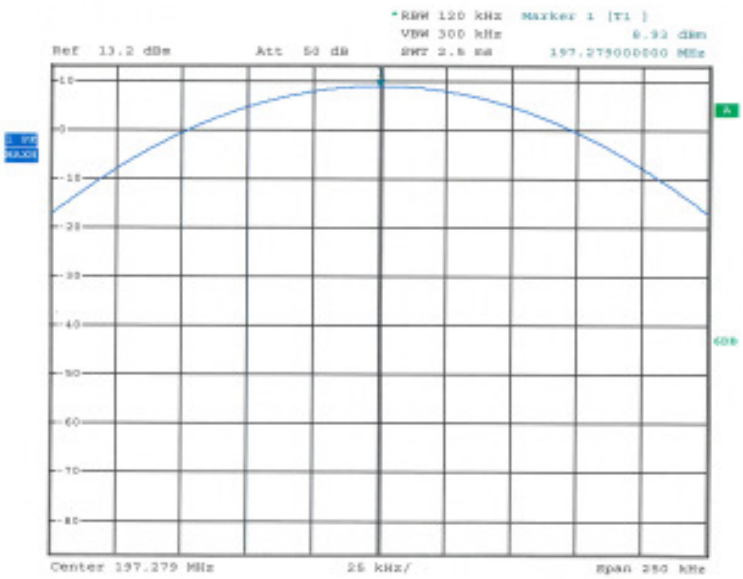
Channel	Transmit power (dBm)	RF power (mW)	Limit (mW)
High	13.12	20.6	50
Mid	8.93	7.9	50
Low	9.89	9.8	50



Wireless microphone X-100H Peak power L



Wireless microphone X-100H Peak power H



Wireless microphone X-100H Peak power M

Sign-off Test Data

5.2. Spurious Radiation Measurement

RESULT:	**PASS**

Date of testing	:	05 May 2014
Test specification	:	FCC Part 2 Per Section 2.1053(a) and 2.1057
Guide	:	ANSI/TIA-603-C-2004, clause 2.2.12
Limits	:	FCC Part 74 Per Section 74.861(e)(6)(iii)*
Kind of test site	:	3m Full-Anechoic Chamber
Operation mode	:	Transmitting (unmodulated)
Temperature	:	23°C
Humidity	:	50%

***) On any frequency removed from the operating frequency by more than 250 percent of the authorized bandwidth: at least 43+10Log10 (mean output power in watts) dB.**

To determine the Limit for Spurious Emissions the following method was used:

Maximum output power in watts:

Maximum output power in Watt: 13.12dBm, 20.6mW (see Figure 1)

The emission must be reduced by:

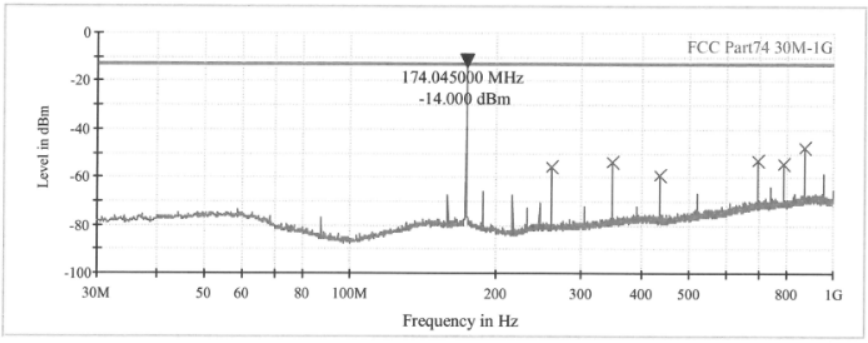
43+10*Log(0.0206) = 26.12 dB

Therefore, the Emission Limit equals:

13.12dBm – 26.12dB = –13 dBm

Below is the final worst result after tested with:
1) Raise and lower the test antenna from 1 m to 6 m and record the highest received signal.
2) Repeat step 1) for seven additional readings at 45 degree interval positions of the turn table.

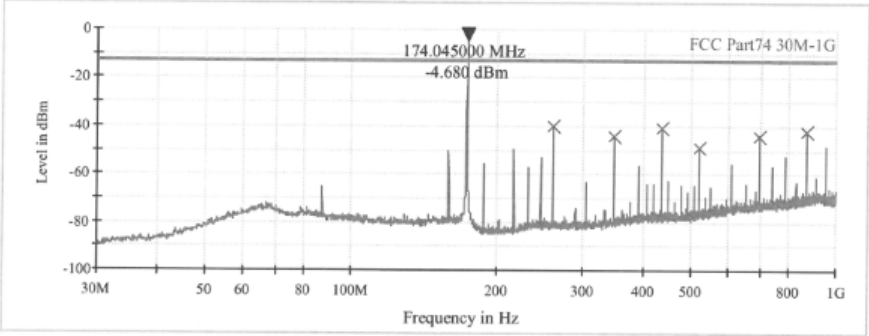
Figure 2: TX Spurious Radiation, 30 – 1000 MHz, Horizontal (Low CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
261.100000	-56.2	1000.0	10.000	H	-83.8	43.2	-13.0
348.300000	-54.3	1000.0	10.000	H	-81.2	41.3	-13.0
435.200000	-58.8	1000.0	10.000	H	-80.3	45.8	-13.0
696.400000	-52.7	1000.0	10.000	H	-74.7	39.7	-13.0
783.550000	-54.7	1000.0	10.000	H	-73.8	41.7	-13.0
870.500000	-48.3	1000.0	10.000	H	-72.5	35.3	-13.0

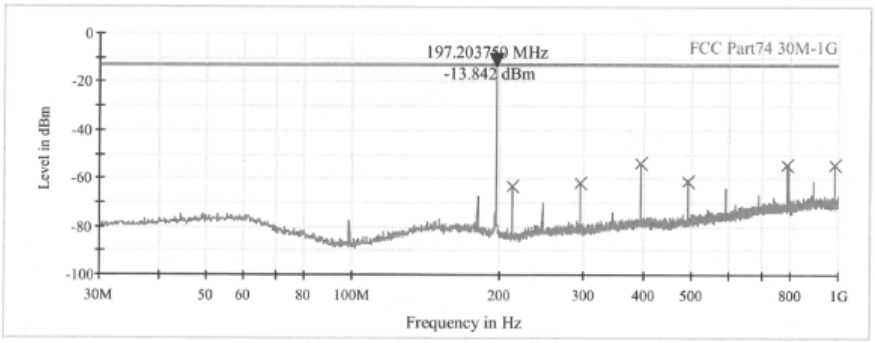
Figure 3: TX Spurious Radiation, 30 – 1000 MHz, Vertical (Low CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
261.100000	-41.2	1000.0	10.000	V	-83.4	28.2	-13.0
348.400000	-43.7	1000.0	10.000	V	-81.8	30.7	-13.0
435.400000	-41.3	1000.0	10.000	V	-79.7	28.3	-13.0
521.800000	-47.6	1000.0	10.000	V	-78.5	34.6	-13.0
696.400000	-44.1	1000.0	10.000	V	-75.3	31.1	-13.0
870.400000	-42.5	1000.0	10.000	V	-72.8	29.5	-13.0

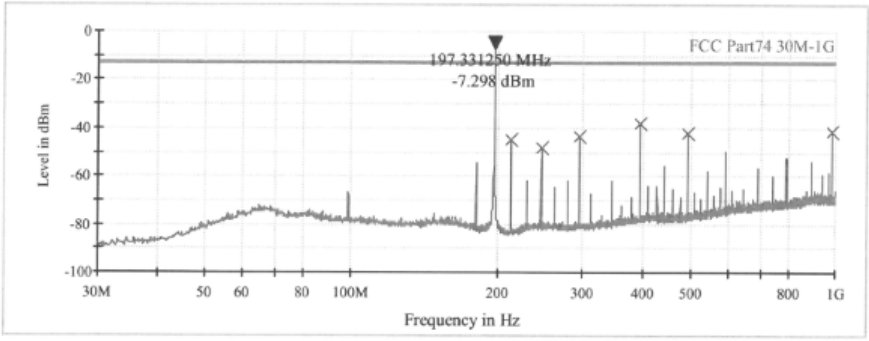
Figure 4: TX Spurious Radiation, 30 – 1000 MHz, Horizontal (Middle CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
213.800000	-62.9	1000.0	10.000	H	-85.9	49.9	-13.0
295.900000	-62.1	1000.0	10.000	H	-83.2	49.1	-13.0
394.700000	-53.7	1000.0	10.000	H	-79.9	40.7	-13.0
493.300000	-61.3	1000.0	10.000	H	-79.3	48.3	-13.0
789.250000	-55.2	1000.0	10.000	H	-73.7	42.2	-13.0
986.800000	-54.2	1000.0	10.000	H	-72.7	41.2	-13.0

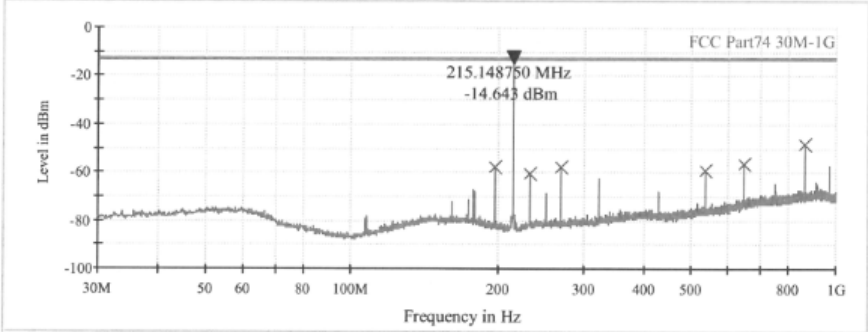
Figure 5: TX Spurious Radiation, 30 – 1000 MHz, Vertical (Middle CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
213.700000	-44.8	1000.0	10.000	V	-85.7	31.8	-13.0
246.700000	-48.2	1000.0	10.000	V	-83.2	35.2	-13.0
295.900000	-44.1	1000.0	10.000	V	-83.4	31.1	-13.0
394.600000	-39.5	1000.0	10.000	V	-79.9	26.5	-13.0
493.300000	-41.7	1000.0	10.000	V	-79.3	28.7	-13.0
986.800000	-42.3	1000.0	10.000	V	-72.7	29.3	-13.0

Figure 6: TX Spurious Radiation, 30 – 1000 MHz, Horizontal (High CH)

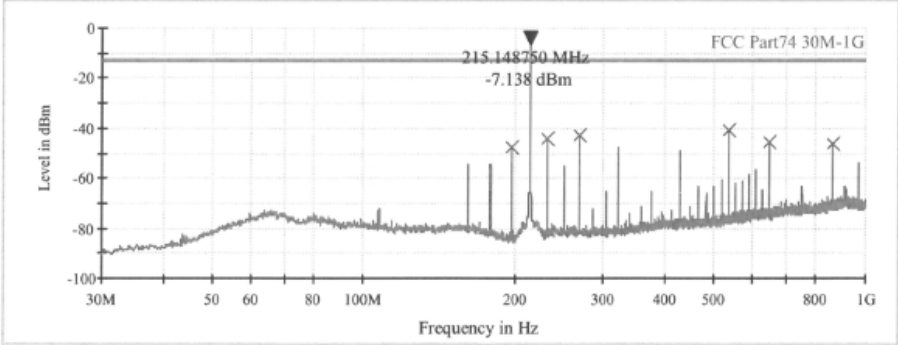


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
197.350000	-57.5	1000.0	10.000	H	-84.8	44.5	-13.0
233.200000	-61.3	1000.0	10.000	H	-84.4	48.3	-13.0
269.100000	-58.2	1000.0	10.000	H	-83.7	45.2	-13.0
538.050000	-58.8	1000.0	10.000	H	-78.4	45.8	-13.0
645.600000	-57.4	1000.0	10.000	H	-76.0	44.4	-13.0
860.800000	-48.4	1000.0	10.000	H	-72.7	35.4	-13.0

Sign-off Test Data

Figure 7: TX Spurious Radiation, 30 – 1000 MHz, Vertical (High CH)

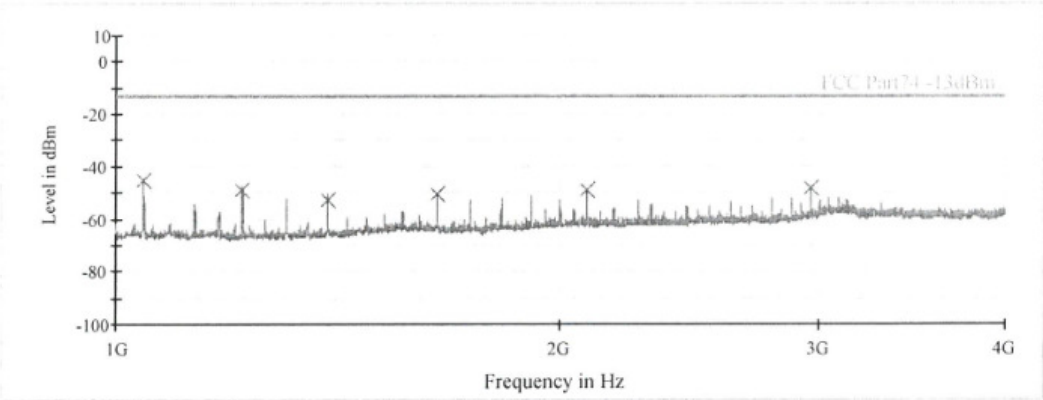


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
197.200000	-48.2	1000.0	10.000	V	-85.8	35.2	-13.0
233.200000	-43.7	1000.0	10.000	V	-83.8	30.7	-13.0
269.200000	-43.0	1000.0	10.000	V	-83.6	30.0	-13.0
538.000000	-41.2	1000.0	10.000	V	-78.2	28.2	-13.0
645.700000	-46.7	1000.0	10.000	V	-75.9	33.7	-13.0
860.800000	-45.8	1000.0	10.000	V	-73.0	32.8	-13.0

Sign-off Test Data

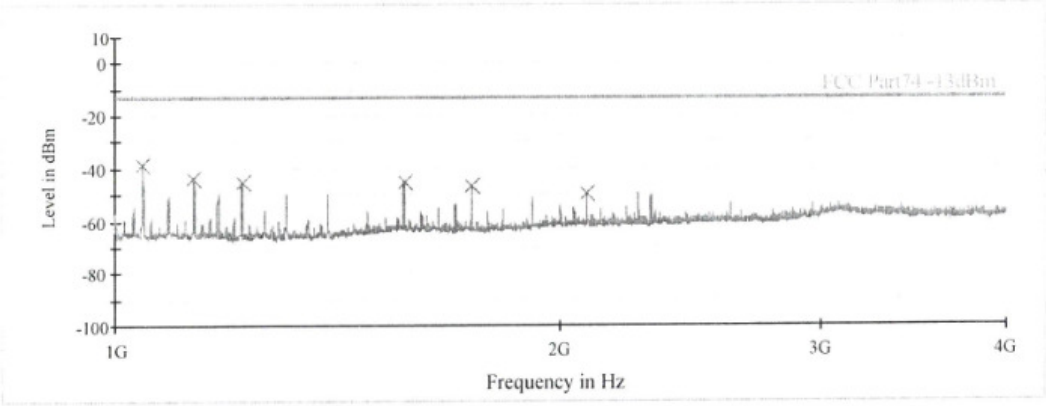
Figure 8: TX Spurious Radiation, Above 1GHz, Horizontal (Low CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
1045.000000	-45.7	1000.0	1000.000	H	-111.6	32.7	-13.0
1218.280000	-49.1	1000.0	1000.000	H	-111.8	36.1	-13.0
1392.280000	-52.8	1000.0	1000.000	H	-111.2	39.8	-13.0
1654.000000	-50.3	1000.0	1000.000	H	-108.8	37.3	-13.0
2089.000000	-49.3	1000.0	1000.000	H	-106.9	36.3	-13.0
2959.360000	-48.7	1000.0	1000.000	H	-102.9	35.7	-13.0

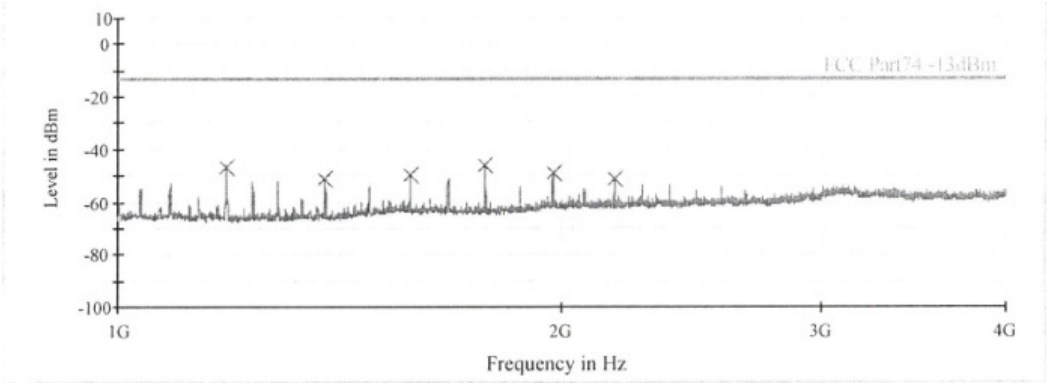
Figure 9: TX Spurious Radiation, Above 1GHz, Vertical (Low CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
1043.860000	-38.5	1000.0	1000.000	V	-111.6	25.5	-13.0
1130.860000	-43.7	1000.0	1000.000	V	-111.7	30.7	-13.0
1219.000000	-45.1	1000.0	1000.000	V	-111.8	32.1	-13.0
1567.360000	-45.3	1000.0	1000.000	V	-109.0	32.3	-13.0
1741.360000	-46.6	1000.0	1000.000	V	-108.9	33.6	-13.0
2089.780000	-49.6	1000.0	1000.000	V	-106.9	36.6	-13.0

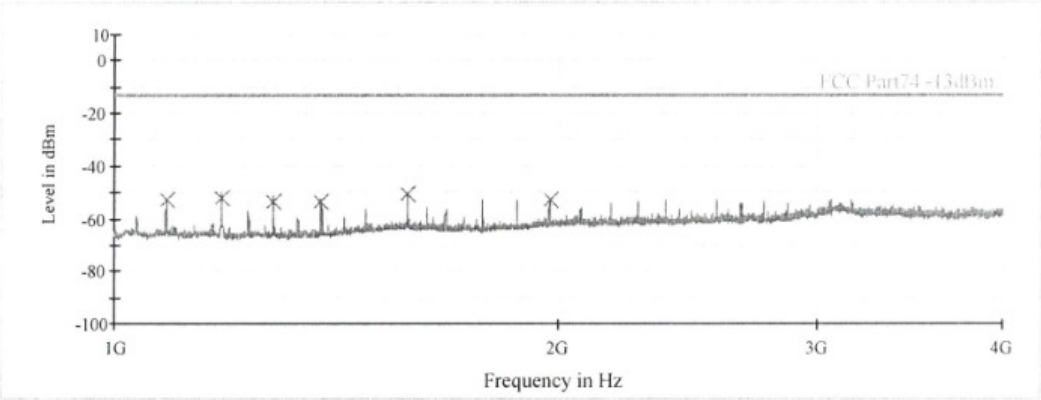
Figure 10: TX Spurious Radiation, Above 1GHz, Horizontal (Middle CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
1184.500000	-46.7	1000.0	1000.000	V	-111.7	33.7	-13.0
1381.780000	-51.5	1000.0	1000.000	V	-111.2	38.5	-13.0
1579.000000	-49.5	1000.0	1000.000	V	-109.0	36.5	-13.0
1775.140000	-46.4	1000.0	1000.000	V	-108.8	33.4	-13.0
1972.780000	-49.1	1000.0	1000.000	V	-107.0	36.1	-13.0
2170.000000	-51.4	1000.0	1000.000	V	-107.1	38.4	-13.0

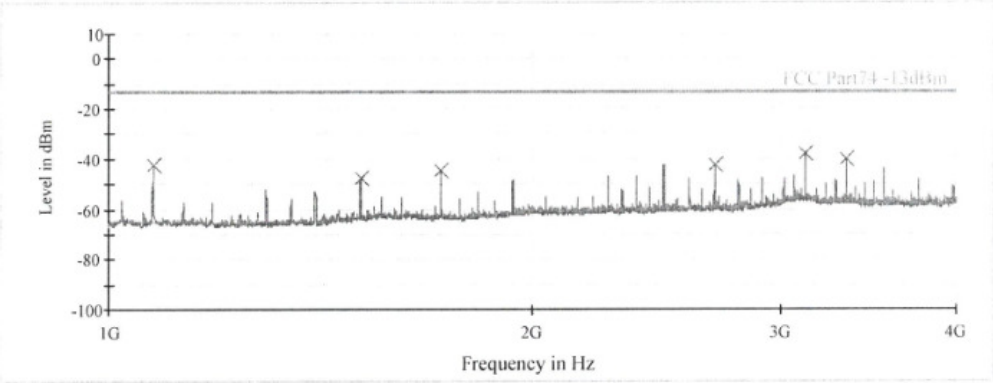
Figure 11: TX Spurious Radiation, Above 1GHz, Vertical (Middle CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
1085.500000	-53.1	1000.0	1000.000	H	-111.6	40.1	-13.0
1183.360000	-52.0	1000.0	1000.000	H	-111.7	39.0	-13.0
1282.000000	-53.7	1000.0	1000.000	H	-111.6	40.7	-13.0
1381.780000	-53.3	1000.0	1000.000	H	-111.2	40.3	-13.0
1578.280000	-50.7	1000.0	1000.000	H	-109.0	37.6	-13.0
1972.780000	-53.1	1000.0	1000.000	H	-107.0	40.1	-13.0

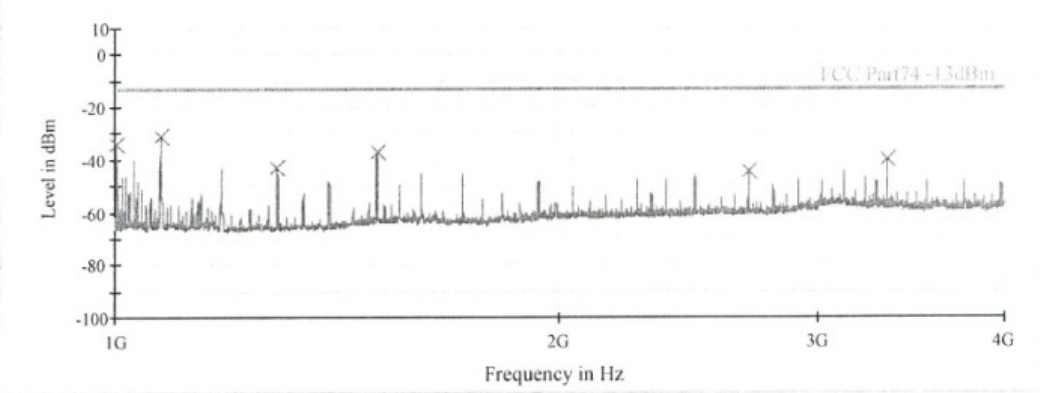
Figure 12: TX Spurious Radiation, Above 1GHz, Horizontal (High CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
1075.780000	-42.2	1000.0	1000.000	H	-111.5	29.2	-13.0
1506.280000	-47.3	1000.0	1000.000	H	-109.7	34.3	-13.0
1721.500000	-44.9	1000.0	1000.000	H	-108.9	31.9	-13.0
2690.140000	-42.4	1000.0	1000.000	H	-104.1	29.4	-13.0
3120.640000	-38.1	1000.0	1000.000	H	-101.6	25.1	-13.0
3335.860000	-40.0	1000.0	1000.000	H	-102.4	27.0	-13.0

Figure 13: TX Spurious Radiation, Above 1GHz, Vertical (High CH)



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBm)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBm)
1004.500000	-34.4	1000.0	1000.000	V	-111.7	21.4	-13.0
1075.360000	-31.1	1000.0	1000.000	V	-111.5	18.1	-13.0
1290.640000	-42.9	1000.0	1000.000	V	-111.6	29.9	-13.0
1507.000000	-37.4	1000.0	1000.000	V	-109.7	24.4	-13.0
2689.360000	-44.6	1000.0	1000.000	V	-104.1	31.6	-13.0
3335.140000	-40.4	1000.0	1000.000	V	-102.4	27.4	-13.0

5.3. Modulation Characteristics measurement

RESULT:	**PASS**

Date of testing	:	26 May 2014
Test specification	:	FCC Part 2 Per Section 2.1047(a) and (b)
Guide	:	ANSI/TIA-603-C-2004, clause 2.2.3
Limits	:	FCC Part 2 Per Section 2.1047(a) and (b)
Operation mode	:	Transmitting
Temperature	:	20°C
Humidity	:	51%

Test procedure:
1). Adjust the audio input to produce 60 percent modulation at 1 kHz, this level is as a reference (0dB) and then vary the input level from –20dB to +20dB. Record the frequency deviation obtained as a function of the input level.
2). Vary the audio frequency from 300 Hz to 3000 Hz and observe the steady-state deviation. Record the maximum deviation.

Figure 14: Modulation Characteristics measurement

Rated system deviation: 9kHz, @1000Hz
Low channel:

Modulation (dB)		-20	-10	0	5	15	20
300Hz	kHz	5.0	8.1	9.1	9.1	12.2	13.0
1000Hz	kHz	5.1	8.5	9.0	9.0	12.0	15. 9
2000Hz	kHz	5.2	8.7	9.1	9.2	12.2	15.5
3000Hz	kHz	5.1	9.1	9.7	10.0	13.0	17.0

Mid channel:

Modulation (dB)		-20	-10	0	5	15	20
300Hz	kHz	4.9	8.2	8.9	9.0	11.8	13.3
1000Hz	kHz	5.3	8.6	9.1	9.0	12.7	16.0
2000Hz	kHz	5.1	8.5	9.3	9.3	12.0	15.7
3000Hz	kHz	5.5	9.3	10.2	10.8	14.0	16.9

High channel:

Modulation (dB)		-20	-10	0	5	15	20
300Hz	kHz	5.5	8.1	9.2	9.3	11.7	13.4
1000Hz	kHz	5.6	8.6	9.1	9.5	12.9	16.5
2000Hz	kHz	5.4	8.7	9.4	9.6	12.3	15.6
3000Hz	kHz	5.3	9.2	10.5	10.7	14.6	17.1

Maximum Deviation:

Reading:	17.1kHz
Limit:	± 75kHz

5.4. Operating bandwidth

RESULT:	**PASS**

Date of testing	:	17 Oct 2014
Test specification	:	FCC Part 2 Per Section 2.1049(c)1
Guide	:	ANSI/TIA-603-C-2004, clause 2.2.11
Limits	:	FCC Part 74 Per Section 74.861(e)(5)*
Operation mode	:	Transmitting (modulated)
Temperature	:	20°C
Humidity	:	51%

*) FCC Part 74 Per Section 74.861(e)(5): The operating bandwidth shall not exceed 200 kHz.

Figure 15: Operating bandwidth

Equipment under test: X-100H
Ambient temperature: 20°C
Relative humidity: 51%
Result: Pass
Remark: RBW=300Hz VBW=1kHz

Channel	Frequency (GHz)	Test Result (kHz)
H	~~215.16~~ 0.21516	123
M	0.197279	164
L	0.174066 ~~0.174.066~~	180

YJX 2014-10-17 Checked

5.5. Frequency tolerance

RESULT:	**PASS**

Date of testing	:	05 May 2014
Test specification	:	FCC Part 2 Per Section 2.1055
Guide	:	ANSI/TIA-603-C-2004, clause 2.2.2
Limits	:	FCC Part 74 Per Section 74.861(e)(4)
Operation mode	:	Transmitting (unmodulated)
Temperature	:	-30°C to 50°C
Humidity	:	51%

Figure 16: Frequency tolerance

Test condition	Power supply	Low Frequency (MHz) (174.1)	Middle Frequency (MHz) (197.32)	High Frequency (MHz) (215.2)
-30°C	DC 9.0V	174.10244	197.31730	215.20330
-20°C	DC 9.0V	174.10272	197.31740	215.20280
-10°C	DC 9.0V	174.10292	197.31730	215.20290
0°C	DC 9.0V	174.10302	197.31770	215.20320
10°C	DC 9.0V	174.10302	197.31760	215.20310
20°C	DC 9.0V	174.10322	197.31770	215.20330
30°C	DC 9.0V	174.10302	197.31790	215.20320
40°C	DC 9.0V	174.10322	197.31810	215.20320
50°C	DC 9.0V	174.10332	197.31790	215.20250
Frequency Error:		0.00332	0.00270	0.00330
Frequency tolerance:		0.0019%	~~0.00086%~~	0.0015%
Frequency Tolerance Limit:		0.005% 0.0014%		

YJX 2014-05-05

Temperature (°C)	Power supply YJX 2014-05-05 Checked	Low Frequency (MHz) (174.1)	Middle Frequency (MHz) (197.32)	High Frequency (MHz) (215.2)
20	DC ~~3.3~~ 9.9V	174.10321	197.31760	215.20320
20	DC ~~3.0~~ 9.0V	174.10322	197.31770	215.20330
20	DC ~~2.7~~ 8.1V	174.10331	197.31740	215.20290
Frequency Error:		0.00331	0.00260	0.00330
Frequency tolerance:		0.0019%	~~0.00086%~~	0.0015%
Frequency Tolerance Limit:		0.005% 0.0013%		

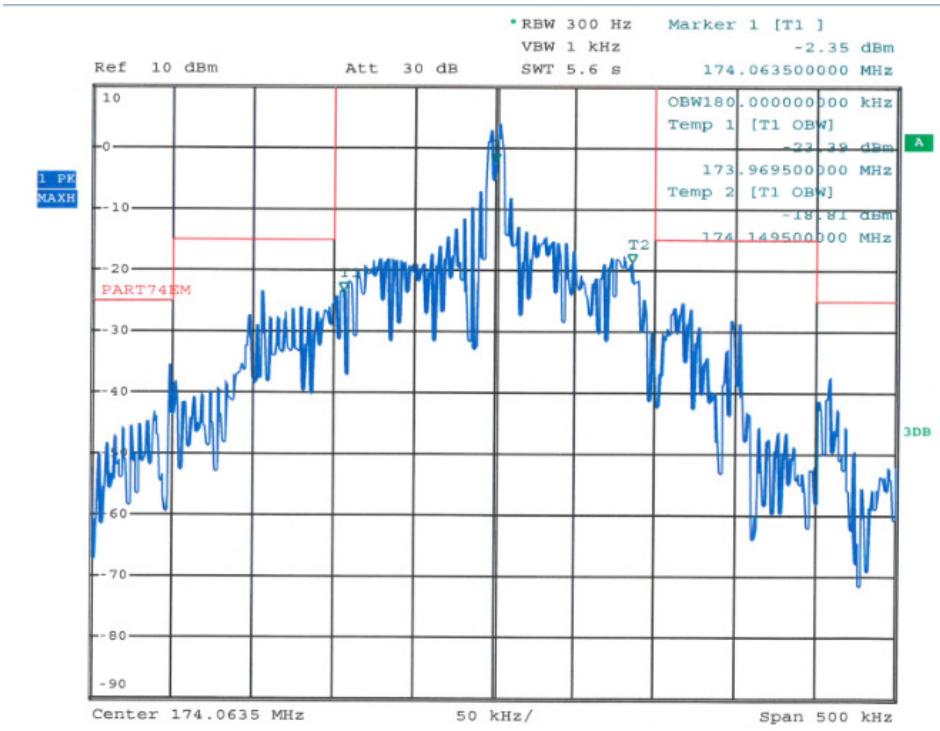
YJX 2014-05-05 Checked

5.6. Emission Mask

RESULT:	**PASS**

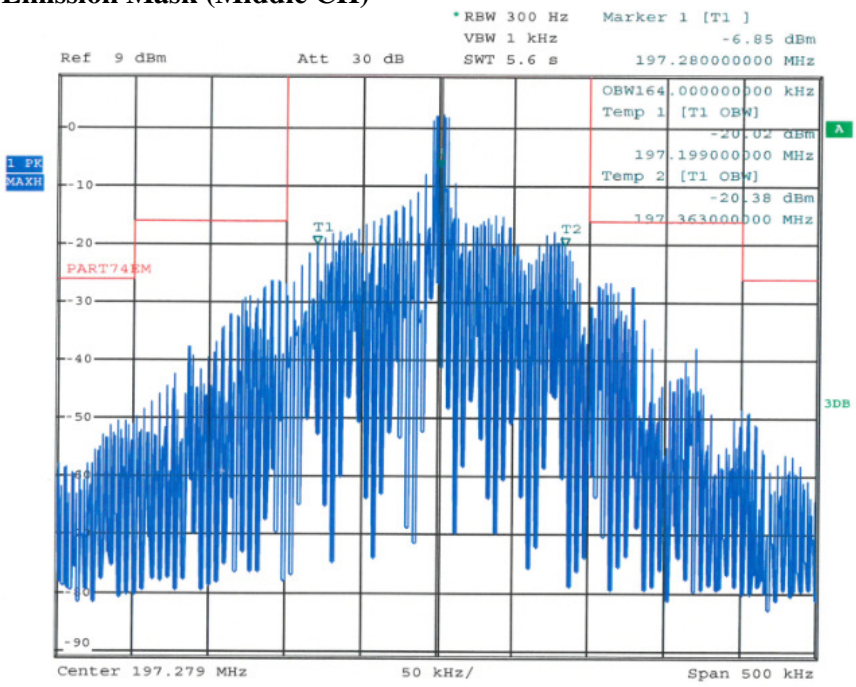
Date of testing	:	17 Oct 2014
Test specification	:	FCC Part 2 Per Section 2.1053(a) and 2.1057
Guide	:	ANSI/TIA-603-C-2004, clause 2.2.12
Limits	:	FCC Part 74 Per Section 74.861(e)(6)
Operation mode	:	Transmitting (modulated)
Temperature	:	20°C
Humidity	:	51%

Figure 17: Emission Mask (Low CH)



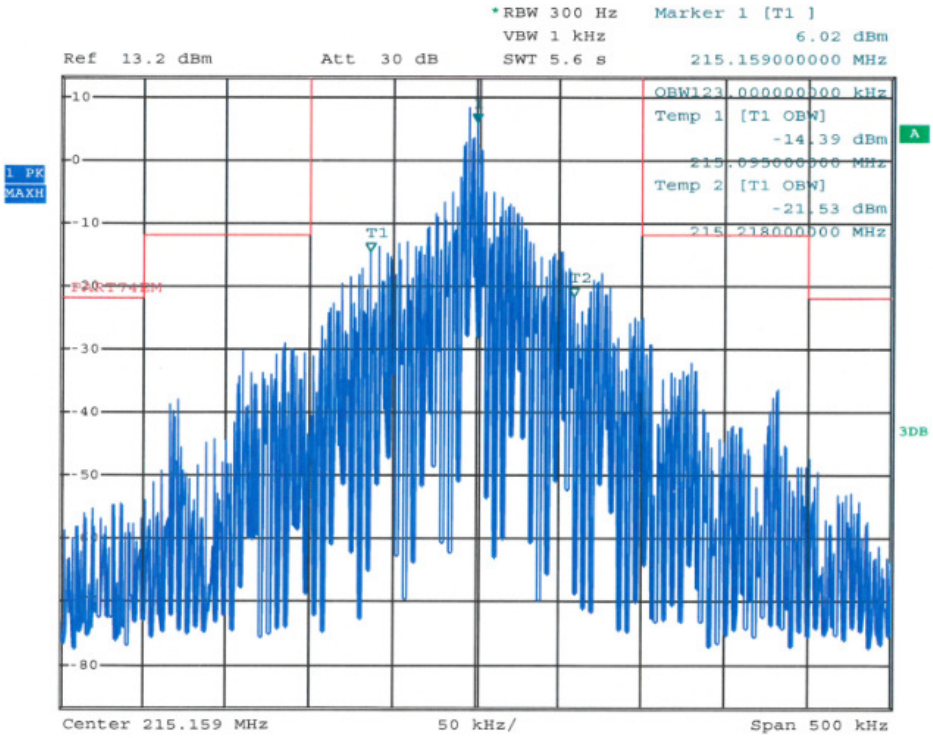
Wireless microphone X-100H emission mask (With 2.5KHz modulating) L

Figure 18: Emission Mask (Middle CH)



Wireless microphone X-100H emission mask (With 2.5KHz modulating) M

Figure 19: Emission Mask (High CH)



Wireless microphone X-100H emission mask (With 2.5KHz modulating) H

5.7. Electromagnetic Fields

RESULT:	**PASS**

Date of testing : 17 Oct 2014
Guide : FCC KDB Publication 447498

The minimum distance for the EUT is <5mm, since maximum peak output power of the transmitter is 20.6mW (13.12dBm) < 27mW, hence the EUTs are excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v05.

6. Photographs of Test Setup

Picture 1: Spurious Radiation Measurement, 30MHz-1GHz

Picture 2: Spurious Radiation Measurement, Above 1GHz

7. List of Tables

8. List of Figures

9. List of Pictures