



FCC Test Report

Application No.: DNT2505190384R5221-07346

Applicant: Shenzhen jiyaxiang audio Electronics Co., Ltd

Address of Applicant: Building 7, xufa Industrlal Park, liyuhe Industrial Zone, gongminglou village, Shenzhen

EUT Description: Wireless microphone

Model No.: U30, V15

FCC ID: 2BC75-U30

Power Supply: Input:DC 5V & DC 3.7V From Battery

Trade Mark: /

Standards: 47 CFR FCC Part 2, Subpart J
47 CFR Part 15, Subpart C
ANSI C63.10: 2013
ETSI EN 300 422-1 V2.2.1 (2021-11)

Date of Receipt: 2025/05/20

Date of Test: 2025/05/23 to 2025/07/04

Date of Issue: 2025/07/04

Test Result: **PASS**

Prepared By: Wayne Lin (Testing Engineer)

Reviewed By: Pengyils chen (Project Engineer)

Approved By: Yefei Shan (Manager)



Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

Dongguan DN Testing Co., Ltd.

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**Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V2.0	/	July.04, 2025	Valid	Original Report



1 Test Summary

Test Item	Test Requirement	Test Method	Test Result	Result
Maximum Radiated Power	15.236(d)	ANSI C63.10 :2013	Clause 3.2	PASS
Occupied Bandwidth	15.236(f)(1)	ANSI C63.10 :2013	Clause 3.3	PASS
Emissions within the band	15.236(g)(1)	ETSI EN 300 422-1 V2.2.1 Section 4.2.4.2.2	Clause 3.4	PASS
Spurious Emissions	15.236(g)(4)	ETSI EN 300 422-1 V2.2.1 Section 4.2.4.1.2	Clause 3.5	PASS
Frequency Stability	15.236(f)(1)(iii)	15.236(f)(1)(iii)	Clause 3.6	PASS
AC Power Line Conducted Emissions	15.207	ANSI C63.10 :2013	Clause 3.7	PASS

Note:

1. "N/A" denotes test is not applicable in this test report.



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2 General Information

2.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfu Road, Wusha Liwu, Chang 'an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

2.2 General Description of EUT

Manufacturer:	Shenzhen jiayuxiang audio Electronics Co., Ltd
Address of Manufacturer:	Building 7, xufa Industrial Park, liyuhe Industrial Zone, gongminglou village, Shenzhen
EUT Description:	Wireless microphone
Test Model No.:	U30
Additional Model(s):	V15
Chip Type:	KT0641
Serial Number	PR2505190384R5221
Power Supply	Input:DC 5V & DC 3.7V From Battery
Trade Mark:	N/A
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	658.81MHz-662.33MHz
Declared Channel Bandwidth:	75KHz
Type of Modulation:	FSK
Sample Type:	☒ Portable Device, ☐ Module, ☐ Mobile Device
Antenna Type:	☐ External, ☒ Integrated
Antenna Ports	☒ Ant 1, ☐ Ant 2, ☐ Ant 3
Antenna Gain*:	☒ Provided by applicant
	-1.26dBi
RF Cable*:	☒ Provided by applicant
	0.5dB(0.6~1GHz); 0.8dB(1.4~2GHz); 1.0dB(2.1~2.7GHz); 1.5dB(3~4GHz); 1.8dB(4.4~6GHz);

Remark:

*All models are just appearance colors different, motherboard, PCB circuit board, chip, electronic components is all the same.

*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



2.3 Channel List

Operation Frequency of each channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	658.81MHz	2	658.93MHz	3	659.23MHz	4	661.73MHz
5	662.33MHz						

2.4 Test Environment and Mode

Operating Environment:	
Temperature:	-20~50 °C
Humidity:	45~56 % RH
Atmospheric Pressure:	101.0~101.30 KPa
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

2.5 Power Setting of Test Software

Software Name	N/A		
Frequency(MHz)	658.81	659.23	662.33
Setting	Default	Default	Default

2.6 Description of Support Units

The EUT has been tested independent unit.



2.7 Test Facility

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

Lab A:

• **FCC, USA**

Designation Number: CN1348

• **A2LA (Certificate No. 7050.01)**

DONGGUAN DN TESTING CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 7050.01.

• **Innovation, Science and Economic Development Canada**

DONGGUAN DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory. CAB identifier is CN0149.

IC#: 30755.

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

No.	Item	Measurement Uncertainty
1	Occupied Bandwidth	$\pm 0.0196\%$
2	Maximum Conducted Output Power	± 0.686 dB

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 3.0 dB (150kHz to 30MHz)
2	Radiated Emission	± 4.8 dB (Below 1GHz)
		± 4.8 dB (1GHz to 6GHz)
		± 4.5 dB (6GHz to 18GHz)
		± 5.02 dB (Above 18GHz)



2.9 Equipment List

For Connect EUT Antenna Terminal Test					
Description	Manufacturer	Model	Serial Number	Cal date	Due date
Signal Generator	Keysight	N5181A-6G	MY48180415	2024-10-23	2025-10-22
Signal Generator	Keysight	N5182B	MY57300617	2024-10-23	2025-10-22
Power supply	Keysight	E3640A	ZB2022656	2024-10-23	2025-10-22
Radio Communication Tester	R&S	CMW500	105082	2024-10-23	2025-10-22
Spectrum Analyzer	Aglient	N9010A	MY52220200	2024-10-23	2025-10-22
BT/WIFI Test Software	Tonscend	JS1120 V3.1.83	NA	NA	NA
RF Control Unit	Tonscend	JS0806-2	22F8060581	NA	NA
Power Sensor	Anritsu	ML2495A	2129005	2024-10-23	2025-10-22
Pulse Power Sensor	Anritsu	MA2411B	1911397	2024-10-23	2025-10-22
temperature and humidity box	SCOTEK	SCD-C40-80PRO	6866682020008	2024-10-23	2025-10-22
RF Cable	ETS-LINDGREN	RFC-NMS-100-NMS-350-IN	NA	2024-10-23	2025-10-22

Test Equipment for Conducted Emission					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Receiver	R&S	ESCI3	101152	2024-10-23	2025-10-22
LISN	R&S	ENV216	102874	2024-10-23	2025-10-22
ISN	R&S	ENY81-CA6	1309.8590.03	2024-10-23	2025-10-22
RF Cable	ETS-LINDGREN	Cable-CE TS01	/	2024-10-23	2025-10-22

Test Equipment for Radiated Emission(30MHz-1000MHz)					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Receiver	R&S	ESR7	102497	2024-10-23	2025-10-22
Test Software	ETS-LINDGREN	TiLE-FULL	NA	NA	NA
RF Cable	ETS-LINDGREN	RE Cable-TS01	NA	2024-10-23	2025-10-22
Log periodic antenna	ETS-LINDGREN	VULB 9168	01475	2022-11-28	2025-11-27



Pre-amplifier	Schwarzbeck	BBV9743B	00423	2024-10-23	2025-10-22
Attenuator 1	Shanghai Huaxiang	TS2-6-18-A	22061803	2025-5-6	2026-5-5
Attenuator 2	Shanghai Huaxiang	TS2-6-6-A	230927163	2025-5-6	2026-5-5

Test Equipment for Radiated Emission(Above 1000MHz)					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Frequency analyser	Keysight	N9010A	MY52221458	2024-10-23	2025-10-22
RF Cable	ETS-LINDGREN	RE Cable-TS02	NA	2024-10-23	2025-10-22
Horn Antenna	ETS-LINDGREN	3117	00252567	2022-11-28	2025-11-27
Double ridged waveguide antenna	ETS-LINDGREN	3116C	00251780	2022-11-28	2025-11-27
Test Software	ETS-LINDGREN	TILE-FULL	NA	NA	NA
Pre-amplifier	ETS-LINDGREN	3117-PA	252567	2024-10-23	2025-10-22
Pre-amplifier	ETS-LINDGREN	3116C-PA	251780	2024-10-23	2025-10-22

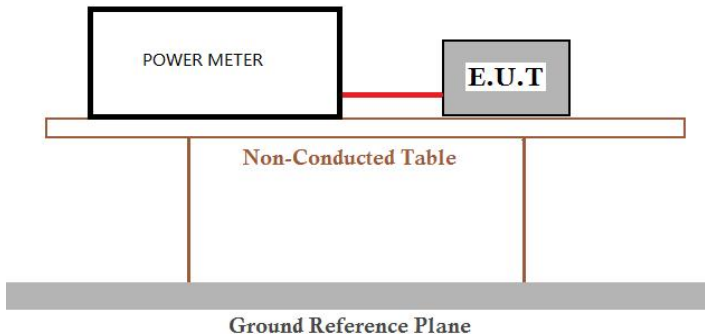
2.10 Assistant equipment used for test

Code	Equipment	Manufacturer	Model No.	Equipment No.
1	Adapter	GaoFanDe	GFDQ3-0502000U	NA



3 Test results and Measurement Data

3.1 Maximum Radiated Power

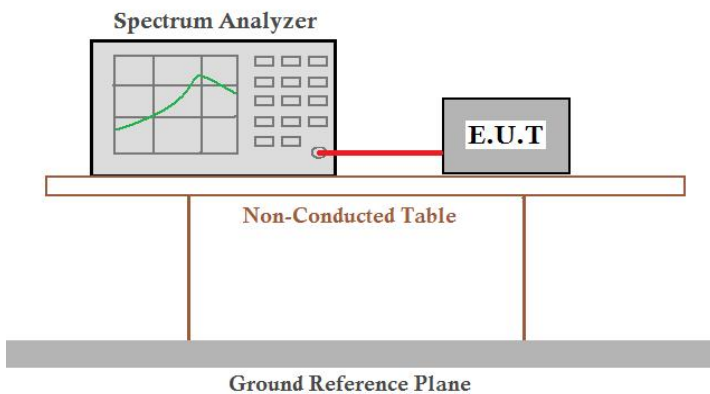
Test Requirement:	47 CFR Part 15C Section 15.236(d)
Test Method:	ANSI C63.10: 2013 Section 11.9.1.3
Test Setup:	
Instruments Used:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of FSK
Limit:	In the 600 MHz guard band and the 600 MHz duplex gap: 20 mW(13.01dBm) EIRP.
Test Results:	Pass

Test Data

Test Mode	Antenna	Freq(MHz)	Conducted Power [dBm]	Gain (dBi)	EIRP	Limit [dBm]	Verdict
FSK	Ant1	658.81	-21.29	-1.26	-22.55	≤13.01	PASS
		659.23	-21.33	-1.26	-22.59	≤13.01	PASS
		662.33	-18.97	-1.26	-20.23	≤13.01	PASS

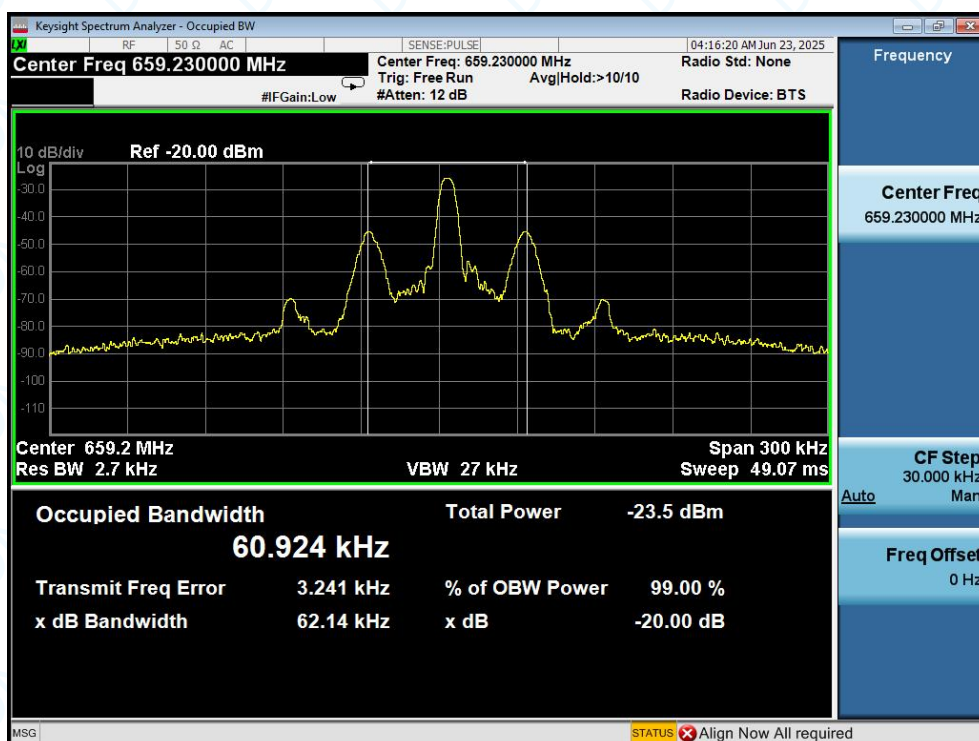
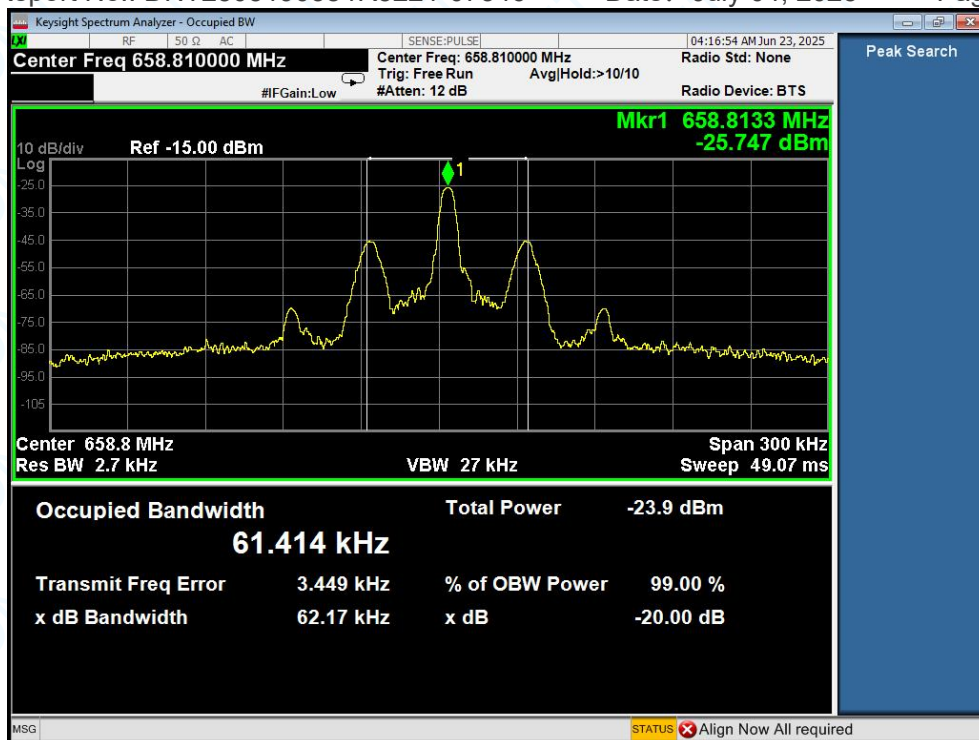


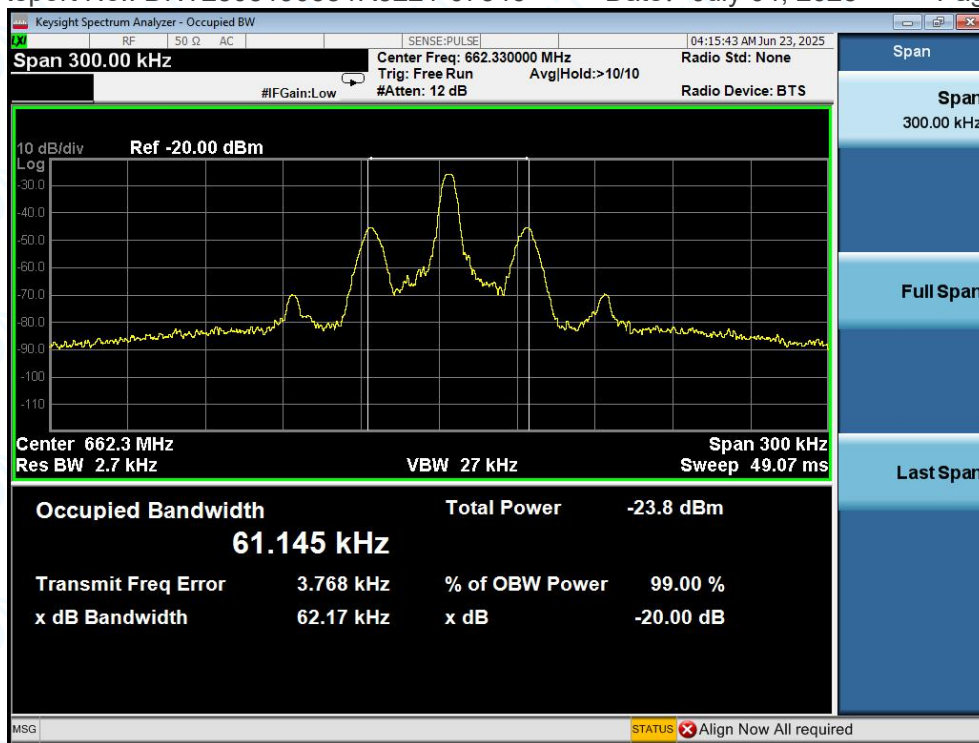
3.2 Occupied Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.236(f)(1)
Test Method:	ANSI C63.10 :2013 Section 6.9.3
Test Setup:	
Test Instruments:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of FSK
Limit:	200KHz
Test Results:	Pass

Test Data

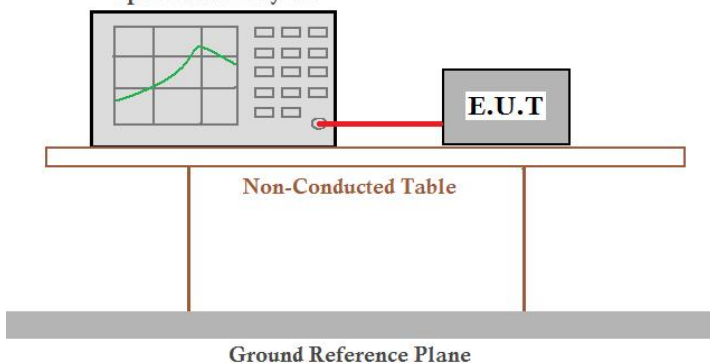
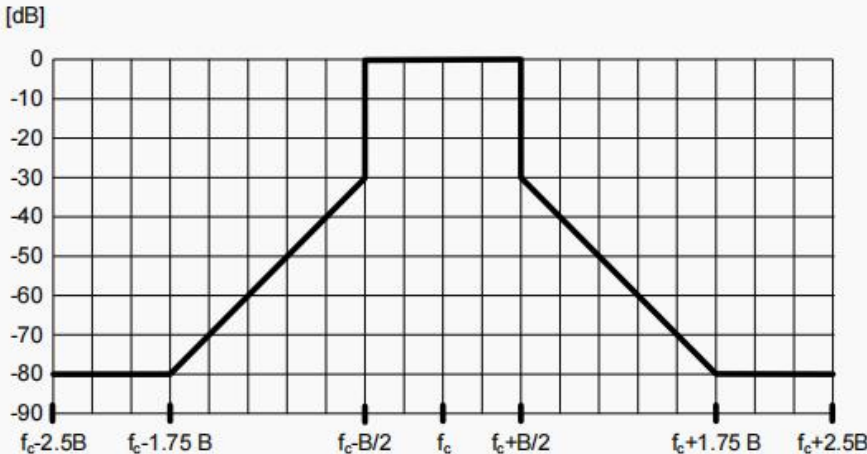
Frequency(MHz)	OCB(KHZ)	Limit(KHz)	Verdict
658.81	61.414	200	PASS
659.23	60.924	200	PASS
662.33	61.145	200	PASS







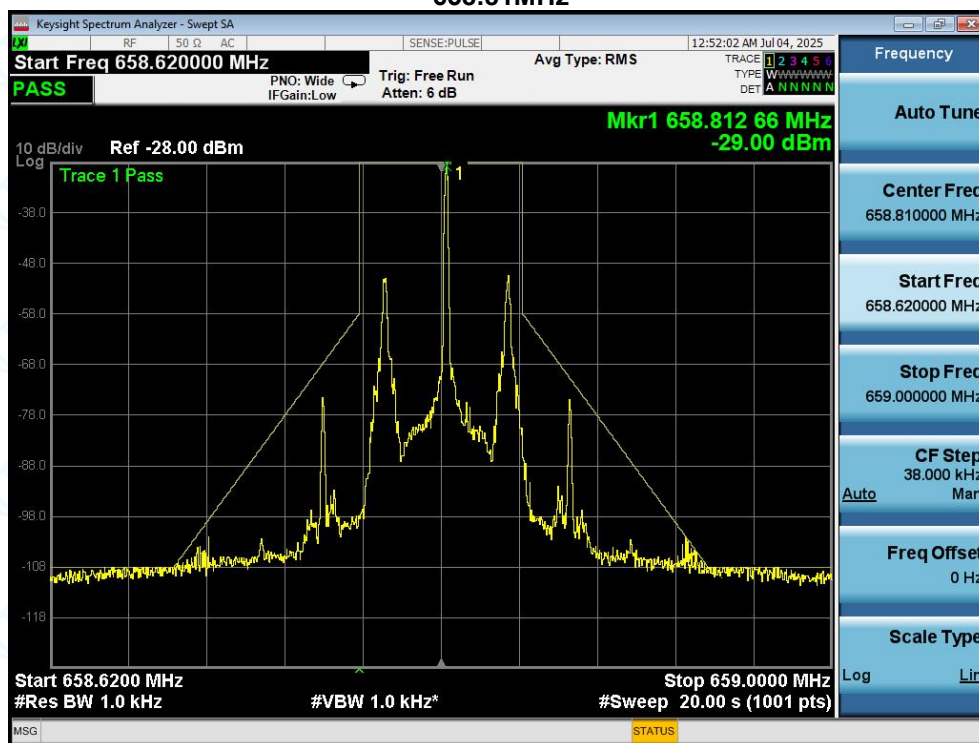
3.3 Emissions within the band

Test Requirement:	47 CFR Part 15C Section 15.236(g)
Test Method:	ETSI EN 300 422-1 V2.2.1 Section 4.2.4.2.2
Test Setup:	Spectrum Analyzer  Non-Conducted Table Ground Reference Plane
Test Instruments:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of FSK
Limit:	[dB]  Figure 2: Transmit spectral power mask for equipment employing digital modulation, except WMAS, RBW = 1 kHz
Test Results:	Pass

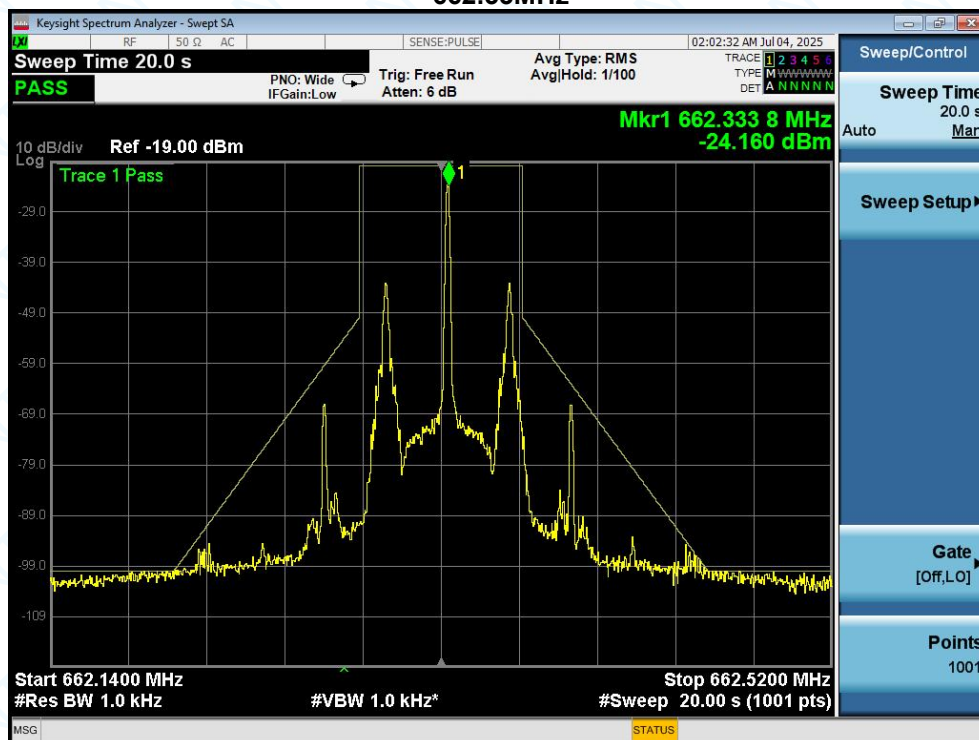


Test data

658.81MHz



662.33MHz





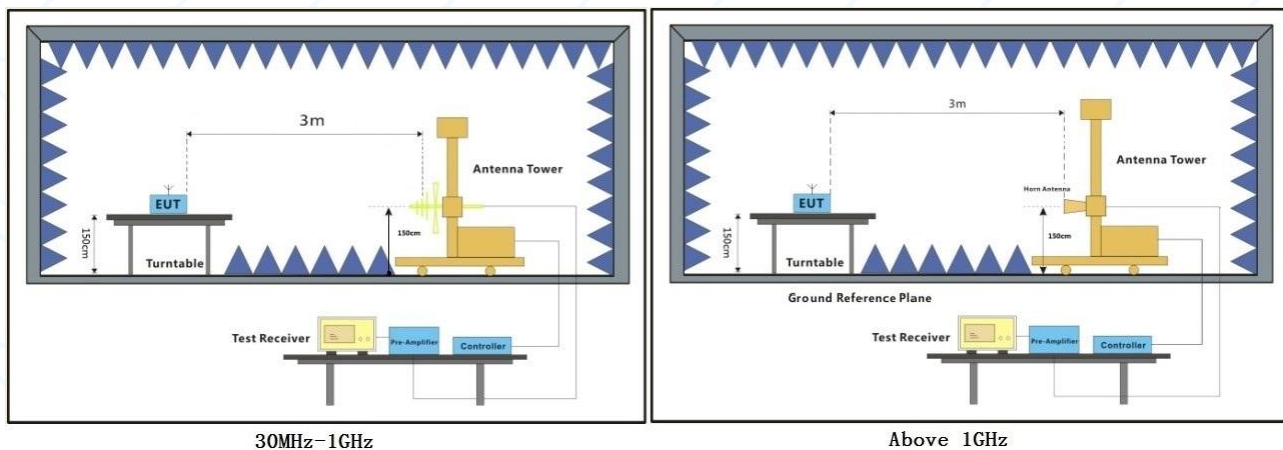
3.4 Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.236(g)																																	
Test Method:	ETSI EN 300 422-1 V2.2.1 Section 4.2.4.1.2																																	
Measurement Distance:	3m																																	
Limit:	Table 4: Transmitter unwanted emission limits (from ERC Recommendation 74-01 [2]) <table><tr><th>Frequency range</th><th>Maximum power</th><th>RBW</th></tr><tr><td>9 kHz - 150 kHz</td><td>-36 dBm</td><td>1 kHz</td></tr><tr><td>150 kHz - 30 MHz</td><td>-36 dBm</td><td>10 kHz</td></tr><tr><td>30 MHz - 1 GHz</td><td>-36 dBm</td><td>$F_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $F_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz</td></tr><tr><td>except:</td><td></td><td></td></tr><tr><td>47 MHz - 74 MHz</td><td>-54 dBm</td><td>100 kHz</td></tr><tr><td>87,5 MHz - 118 MHz</td><td></td><td></td></tr><tr><td>174 MHz - 230 MHz</td><td>-54 dBm</td><td>$F_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $F_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz</td></tr><tr><td>470 MHz - 862 MHz</td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td>$1 \text{ GHz} < f \leq F_{\text{upper}}$</td><td>-30 dBm</td><td>$F_c + 2,5 B \leq f \leq f_c + 10 B$: 30 kHz $F_c + 10 B < f \leq f_c + 12 B$: 300 kHz $f > f_c + 12 B$: 1 MHz $f < f_c - 12 B$: 1 MHz $f_c - 12 B \leq f < f_c - 10 B$: 300 kHz $f_c - 10 B \leq f \leq f_c - 2,5 B$: 30 kHz</td></tr></table>	Frequency range	Maximum power	RBW	9 kHz - 150 kHz	-36 dBm	1 kHz	150 kHz - 30 MHz	-36 dBm	10 kHz	30 MHz - 1 GHz	-36 dBm	$F_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $F_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz	except:			47 MHz - 74 MHz	-54 dBm	100 kHz	87,5 MHz - 118 MHz			174 MHz - 230 MHz	-54 dBm	$F_c + 2,5 B \leq f \leq f_c + 4 B$: 1 kHz $F_c + 4 B < f \leq f_c + 10 B$: 10 kHz $f > f_c + 10 B$: 100 kHz $f < f_c - 10 B$: 100 kHz $f_c - 10 B \leq f < f_c - 4 B$: 10 kHz $f_c - 4 B \leq f \leq f_c - 2,5 B$: 1 kHz	470 MHz - 862 MHz						$1 \text{ GHz} < f \leq F_{\text{upper}}$	-30 dBm	$F_c + 2,5 B \leq f \leq f_c + 10 B$: 30 kHz $F_c + 10 B < f \leq f_c + 12 B$: 300 kHz $f > f_c + 12 B$: 1 MHz $f < f_c - 12 B$: 1 MHz $f_c - 12 B \leq f < f_c - 10 B$: 300 kHz $f_c - 10 B \leq f \leq f_c - 2,5 B$: 30 kHz
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3.4.1 E.U.T. Operation

Operating Environment:					
Temperature:	22.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.0 kPa
Test mode:					
Test mode:Through Pre-scan, find the the worst case of FSK					

3.4.2 Test Setup Diagram





3.4.3 Measurement Procedure and Data

1. The measurement procedure follows the clause 5.4.4 of the EN 300 422-1 V2.2.1
2. The EUT was placed on a turntable with 1.5m height.
3. The test distance between the receiving antenna and the EUT is 3meter below 1GHz frequency range, and 3 meter which is in far field test condition for measured frequency above 1GHz, while the receiving (test) antenna scanning from 1m to 4m height in an OATS or SAR (or in a FAR the height scan is omitted).
4. Set EUT in continuous transmitting with maximum output power.
5. The table was rotated from 0 to 360 degree to search the highest radiated emission.
6. Repeating step 2 and 5 for each polarization and channel to find the worst emission level.
7. The results obtained are compared to the limits in order to prove compliance with the requirement.

Remark: General substitution method is used for calibration. For test sites with a fixed setup of the measurement antenna(s) and a reproducible positioning of the UUT, correction values from a verified site calibration may be used alternatively. So using Pre-Test Site Calibration Correction Factor to Determine EUT Emission Power. The system correction factor for each frequency in dB using the following equation:

$$\text{Correction Factor [CF]} = \text{Pref [dBm]} - \text{Prec [dBm]}$$

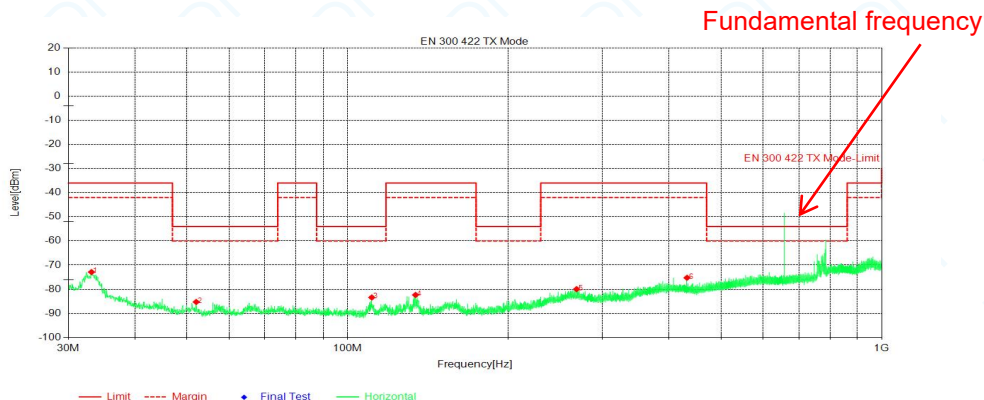


Test Data

For 30-1000MHz

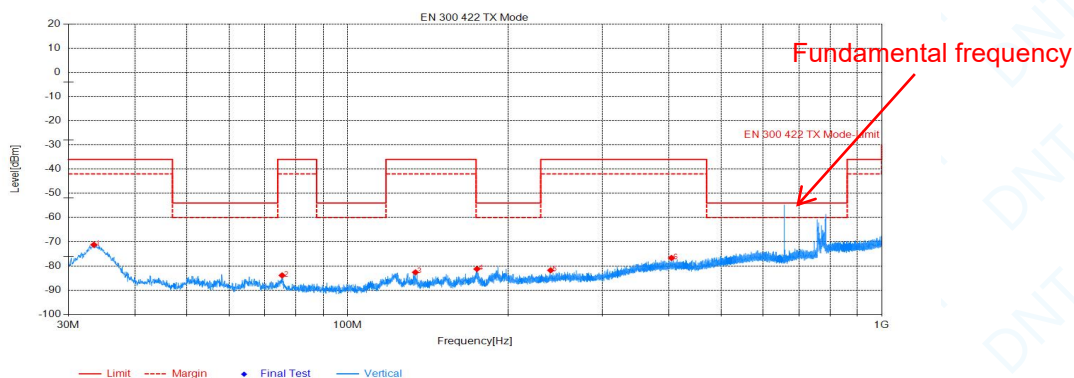
658.8MHz

Horizontal:



NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	33.15	-73.32	0.43	-72.89	-36.00	36.89	150	122
2	52.07	-78.30	-6.99	-85.29	-54.00	31.29	150	285
3	111.00	-75.47	-7.94	-83.41	-54.00	29.41	150	260
4	134.04	-75.10	-7.27	-82.37	-36.00	46.37	150	58
5	268.39	-79.83	-0.14	-79.97	-36.00	43.97	150	237
6	431.99	-77.50	2.25	-75.25	-36.00	39.25	150	285

Vertical:

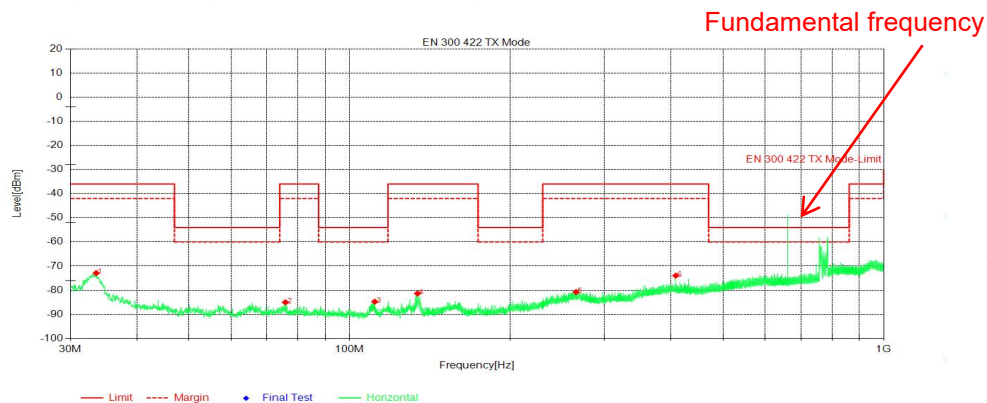


NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	33.49	-70.93	-0.34	-71.27	-36.00	35.27	150	299
2	75.40	-76.72	-7.21	-83.93	-36.00	47.93	150	347
3	133.99	-76.42	-6.25	-82.67	-36.00	46.67	150	347
4	174.68	-76.37	-4.92	-81.29	-54.00	27.29	150	347
5	240.02	-78.78	-3.04	-81.82	-36.00	45.82	150	232
6	404.10	-78.76	2.03	-76.73	-36.00	40.73	150	116



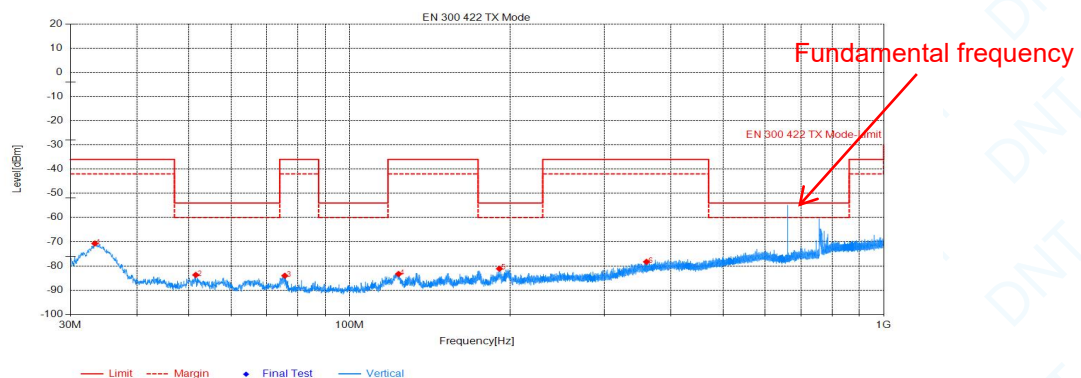
662.3MHz

Horizontal:



NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	33.54	-72.97	0.06	-72.91	-36.00	36.91	150	76
2	75.83	-77.69	-7.33	-85.02	-36.00	49.02	150	32
3	111.48	-76.78	-7.97	-84.75	-54.00	30.75	150	306
4	134.04	-74.10	-7.27	-81.37	-36.00	45.37	150	96
5	265.43	-80.53	-0.21	-80.74	-36.00	44.74	150	353
6	408.03	-76.45	2.49	-73.96	-36.00	37.96	150	76

Vertical:



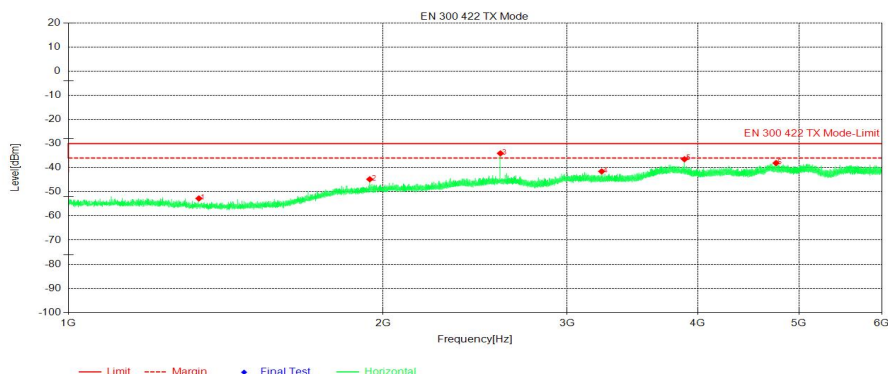
NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	33.35	-70.55	-0.20	-70.75	-36.00	34.75	150	146
2	51.54	-77.58	-6.16	-83.74	-54.00	29.74	150	215
3	75.64	-76.84	-7.23	-84.07	-36.00	48.07	150	56
4	123.51	-76.61	-6.74	-83.35	-36.00	47.35	150	324
5	190.79	-76.58	-4.60	-81.18	-54.00	27.18	150	324
6	359.72	-79.63	1.31	-78.32	-36.00	42.32	150	146



For 1000-12750MHz

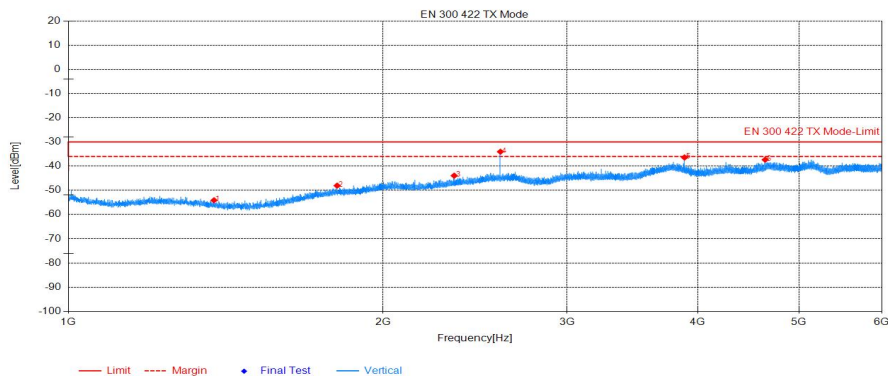
658.8MHz

Horizontal:



NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1333.41	-47.52	-5.23	-52.75	-30.00	22.75	150	0
2	1942.64	-45.08	0.27	-44.81	-30.00	14.81	150	44
3	2590.46	-36.58	2.51	-34.07	-30.00	4.07	150	92
4	3237.89	-44.45	2.89	-41.56	-30.00	11.56	150	306
5	3885.52	-42.07	5.57	-36.50	-30.00	6.50	150	0
6	4753.95	-44.69	6.60	-38.09	-30.00	8.09	150	235

Vertical:

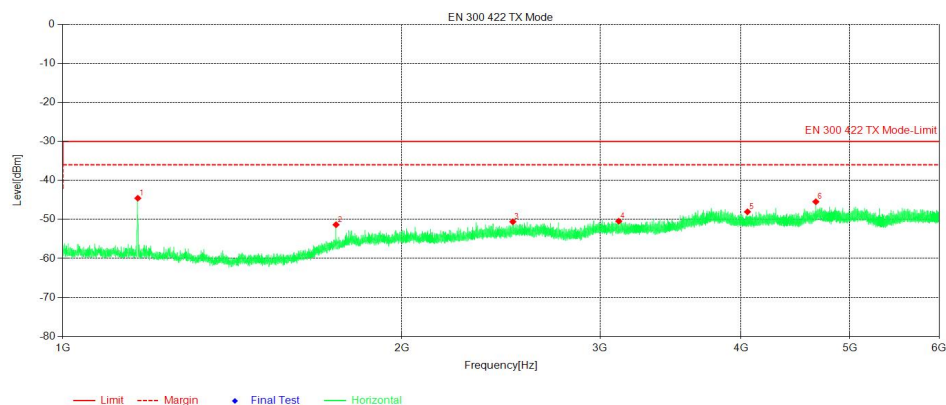


NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1378.42	-48.43	-5.69	-54.12	-30.00	24.12	150	358
2	1807.83	-47.30	-0.77	-48.07	-30.00	18.07	150	59
3	2339.85	-45.28	1.32	-43.96	-30.00	13.96	150	168
4	2590.46	-37.26	3.21	-34.05	-30.00	4.05	150	33
5	3885.92	-41.90	5.47	-36.43	-30.00	6.43	150	33
6	4641.75	-44.29	6.94	-37.35	-30.00	7.35	150	211



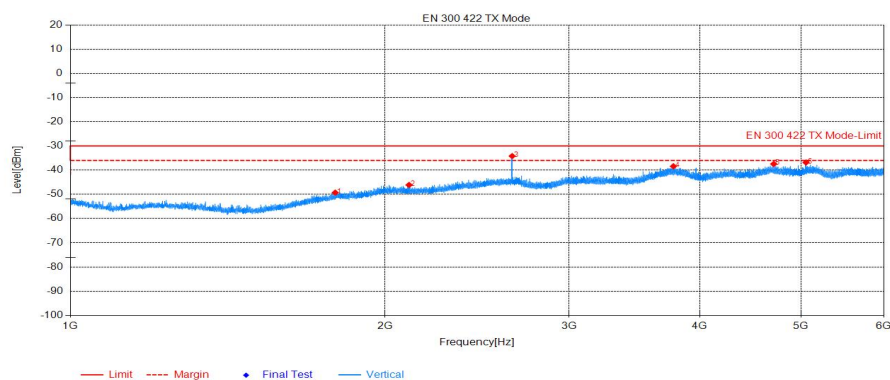
662.3MHz

Horizontal:



NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1334.21	-47.67	-5.24	-52.91	-30.00	22.91	150	218
2	1954.24	-47.21	0.30	-46.91	-30.00	16.91	150	346
3	2647.07	-37.98	2.29	-35.69	-30.00	5.69	150	92
4	3201.09	-44.57	2.76	-41.81	-30.00	11.81	150	2
5	3970.52	-43.80	5.73	-38.07	-30.00	8.07	150	23
6	4824.35	-43.54	6.56	-36.98	-30.00	6.98	150	0

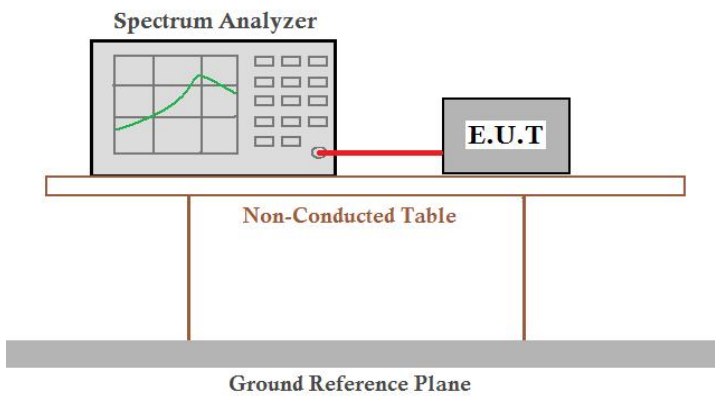
Vertical:



NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1792.43	-48.40	-0.91	-49.31	-30.00	19.31	150	85
2	2109.04	-46.65	0.51	-46.14	-30.00	16.14	150	14
3	2646.87	-37.12	2.93	-34.19	-30.00	4.19	150	14
4	3775.51	-43.99	5.57	-38.42	-30.00	8.42	150	250
5	4709.15	-44.26	6.79	-37.47	-30.00	7.47	150	206
6	5056.56	-43.64	6.79	-36.85	-30.00	6.85	150	186



3.5 Frequency Stability

Test Requirement:	47 CFR Part 15C Section 15.236(f)(1)(iii)
Test Method:	47 CFR Part 15C Section 15.236(f)(1)(iii)
Test Setup:	
Test Instruments:	Refer to section 2.9 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the the worst case of FSK
Limit:	The frequency tolerance of the carrier signal shall be maintained within $\pm 0.005\%$ 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. Battery operated equipment shall be tested using a new battery.

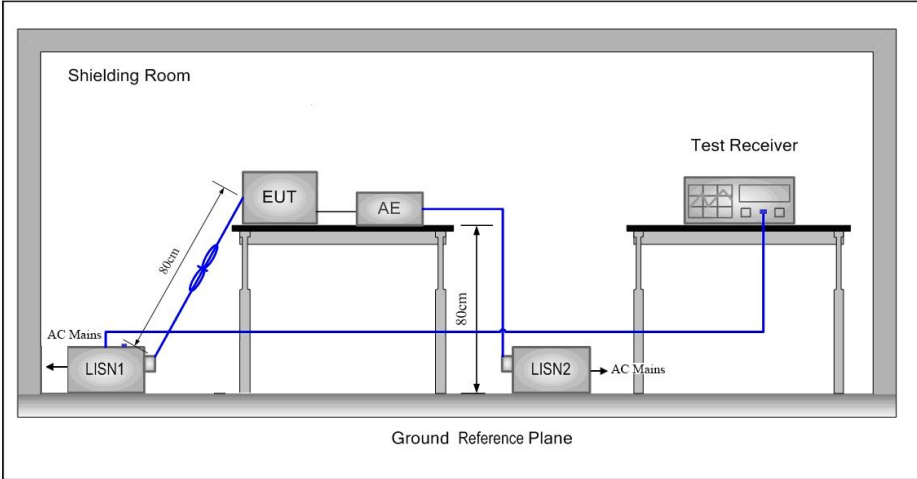
Reference Frequency: 658.81MHz

Power supply	Temperature($^{\circ}$ C)	Frequency Error (Hz)	FrequencyError (ppm)
DC 3.15V	25	3125	5.36
DC 3.7V	25	3163	5.43
DC 4.26V	25	3115	5.34

Temperature($^{\circ}$ C)	Frequency Error (Hz)	FrequencyError (ppm)	Limit(ppm)	Result
50	3124	5.36	50	PASS
40	3139	5.39		
30	3158	5.42		
20	3161	5.42		
10	3128	5.37		
0	3134	5.38		
-10	3158	5.42		
-20	3169	5.44		



3.6 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10: 2013		
Test Frequency Range:	150kHz to 30MHz		
Limit:	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 Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 2013 on conducted measurement.		
Test Setup:			
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates at lowest, middle and highest channel. Charge + Transmitting mode.		



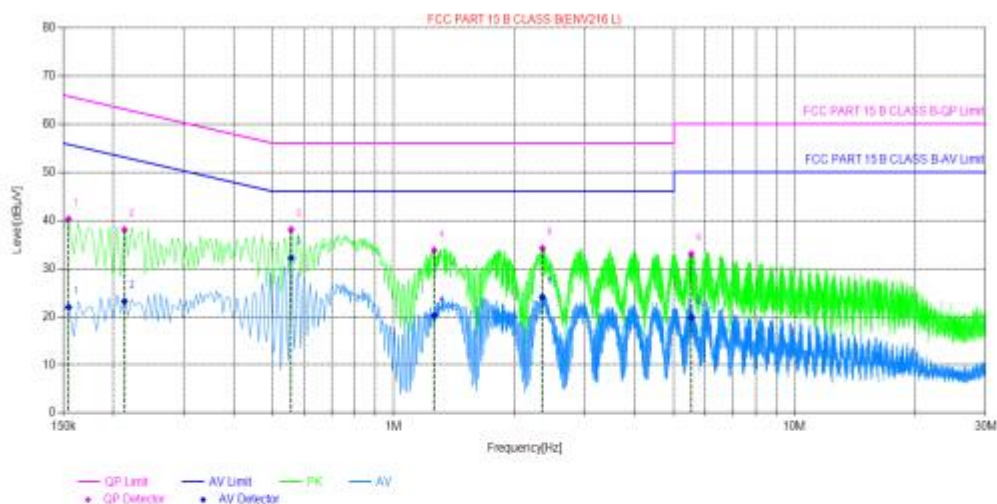
Final Test Mode:	Charge + Transmitting mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 2.9 for details
Test Results:	Pass

Measurement Data

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

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

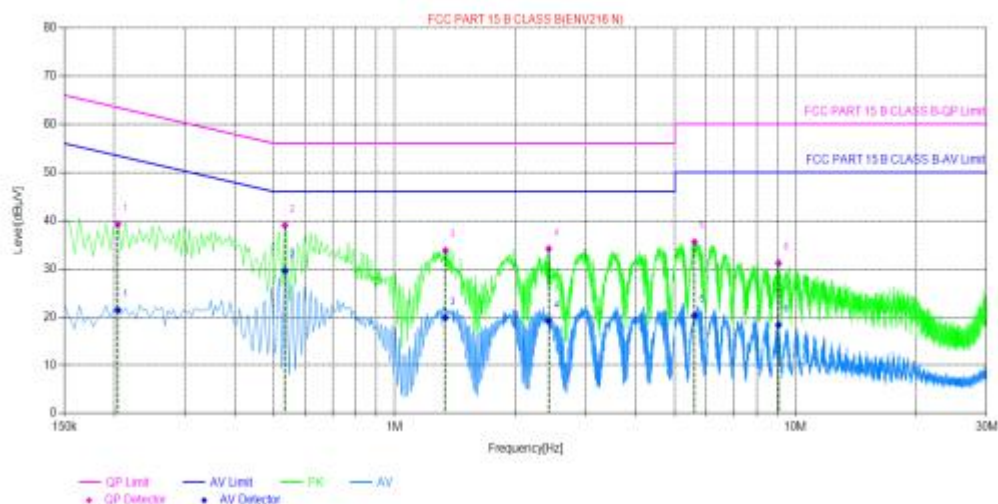
Live Line:



Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.1545	9.90	40.27	65.75	25.48	21.96	55.75	33.79	PASS
2	0.213	9.93	38.05	63.09	25.04	23.19	53.09	29.90	PASS
3	0.555	9.84	38.07	56.00	17.93	32.20	46.00	13.80	PASS
4	1.2615	9.73	33.80	56.00	22.20	20.29	46.00	25.71	PASS
5	2.3505	9.74	34.21	56.00	21.79	24.08	46.00	21.92	PASS
6	5.5275	9.81	33.01	60.00	26.99	19.77	50.00	30.23	PASS



Neutral Line:



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBuV]	QP Limit [dBuV]	QP Margin [dB]	AV Value [dBuV]	AV Limit [dBuV]	AV Margin [dB]	Verdict
1	0.204	9.86	39.24	63.45	24.21	21.41	53.45	32.04	PASS
2	0.5325	9.73	39.03	56.00	16.97	29.57	46.00	16.43	PASS
3	1.338	9.71	33.83	56.00	22.17	19.86	46.00	26.14	PASS
4	2.4225	9.82	34.16	56.00	21.84	19.23	46.00	26.77	PASS
5	5.5995	9.98	35.60	60.00	24.40	20.26	50.00	29.74	PASS
6	9.0735	9.86	31.21	60.00	28.79	18.35	50.00	31.65	PASS

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including LISN Factor and the Cable Factor etc.), The basic equation is as follows:

$$\text{Result Level} = \text{Reading Level} + \text{Correct Factor}(\text{including LISN Factor, Cable Factor etc.})$$

---The End Report---