

**FCC 47 CFR PART 15 SUBPART C &
INDUSTRY CANADA RSS-247 ISSUE 2 February 2017**

CERTIFICATION TEST REPORT

For

Product Name: Video Monitor with Adjustable Lens (Baby Unit)

Model No.: See the Page4

Trademark: VTech

FCC ID: EW780-1318-00

IC: 1135B-80131800

Report No.: ES171103997E

Issue Date: November 03, 2017

Prepared for

VTech Telecommunications Ltd.

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Prepared by

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1 TEST RESULT CERTIFICATION

Applicant:	VTech Telecommunications Ltd. 23/F, Tai Ping Industrial Centre, Block 1, 57 Ting Kok Road, Tai Po, Hong Kong
Manufacturer:	VTech (Dongguan) Telecommunications Limited. VTech Science Park, Xia Ling Bei Management Zone, Liaobu, Dongguan, Guangdong, China
Product Description:	Video Monitor with Adjustable Lens (Baby Unit)
Model Number:	See the Page 4
File Number:	ES171103997E
Date of Test:	23.10.2017 - 02.11.2017

Measurement Procedure Used:

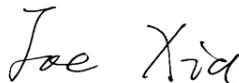
APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR Part 2, Subpart J FCC 47 CFR Part 15, Subpart C IC RSS-GEN, Issue4, November 2014 IC RSS-247 Issue2, February 2017	PASS

The above equipment was tested by EMTEK (SHENZHEN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 2, Part 15.247, IC RSS-247 IC RSS-GEN.

The test results of this report relate only to the tested sample identified in this report.

Date of Test : 23.10.2017 - 02.11.2017

Prepared by : 
Yaping Shen /Editor

Reviewer : 
Joe Xia /Supervisor



Approve & Authorized Signer : 
Lisa Wang/Manager

2 EUT TECHNICAL DESCRIPTION

The EUT is a Video Monitor with Adjustable Lens (Baby Unit) device, it supports general 2.4GHz wireless technology.

According to the declaration of the applicant, the electrical circuit design, PCB layout and construction design are identical for all models, only the model number, amount of baby unit and color of enclosure are different, see below table for details:

Model No.	FCC ID	IC	HVIN	Amount of Baby Unit
VM2211 BU	EW780-1318-00	1135B-80131800	35-200930BU	1 x baby unit
VM2251 BU	EW780-1318-00	1135B-80131800	35-200930BU	1 x baby unit
VM2251-2 BU	EW780-1318-00	1135B-80131800	35-200930BU	2 x baby unit
VM2x51-ab BU	EW780-1318-00	N/A	N/A	a x baby unit
Remark: Test Model: VM2251 BU x=any alphanumeric character is presenting different type packaging. a=any alphanumeric character or blank is presenting number of parent unit. b=any alphanumeric character or blank is presenting color of enclosure.				

Characteristics	Description
Device Type	FHSS
Modulation:	FSK
Operating Frequency Range(s):	2407.500 - 2475.000 MHz
Number of Channels:	21 channels
Channel Spacing	3.375 MHz
Transmit Power Max:	15.115 dBm
Antenna Type	Integral Antenna
Antenna Gain	0 dBi
Operating Voltage	DC 6.0V 400mA input via AC/DC adapter
AC/DC Adapter #1	Model: S003AKU0600040 (TenPao) Input: AC 100-120V / 60Hz, 150mA Output: DC 6.0V@400mA
AC/DC Adapter #2	Model: VT05UUS06040 (VTech) Input: AC 100-120V / 60Hz, 150mA Output: DC 6.0V@400mA
AC/DC Adapter #3	Model: CS3E060040LU (CSEC) Input: AC 100-120V / 60Hz, 200mA Output: DC 6.0V@400mA

Note: for more details, please refer to the User's manual of the EUT.

3 SUMMARY OF TEST RESULT

FCC/IC Part Clause	Test Parameter	Verdict
FCC 15.247(a)(1) RSS-247.5.1(a)	20 dB Bandwidth	PASS
FCC 15.247(a)(1) RSS-247.5.1(b)	Carrier Frequency Separation	PASS
FCC 15.247(a)(1)(iii) RSS-247.5.1(d)	Number of Hopping Frequencies	PASS
FCC 15.247(a)(1) RSS-247.5.4(b)	Average Time of Occupancy (Dwell Time)	PASS
FCC 15.247(b)1 RSS-247.5.4(b)	Maximum Peak Conducted Output Power and EIRP Power	PASS
FCC 15.247(d) RSS-247 5.5	Conducted Spurious Emissions	PASS
FCC Part 15.247(d) & FCC Part 15.209 & FCC Part 15.205 RSS-247 Clause 3.3	Radiated Spurious Emissions	PASS
FCC 15.207 RSS-Gen 8.8	Conducted Emission	PASS
FCC 15.203 RSS-Gen 6.7	Antenna Application	PASS
RSS-Gen.6.6	99% Occupied Bandwidth	PASS
NOTE1: N/A (Not Applicable)		

4 TEST METHODOLOGY

4.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to its specifications, the EUT must comply with the requirements of the following standards:

FCC 47 CFR Part 2, Subpart J

FCC 47 CFR Part 15, Subpart C

ANSI C63.10

DA 00-705

IC RSS-Gen, ISSUE 4 November 2014

IC RSS-247, ISSUE 2 February 2017.

4.2 MEASUREMENT EQUIPMENT USED

4.2.1 Conducted Emission Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/20/2017
L.I.S.N.	Schwarzbeck	NNLK8129	8129203	05/20/2017
50Ω Coaxial Switch	Anritsu	MP59B	M20531	N/A
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	05/21/2017
Voltage Probe	Rohde & Schwarz	TK9416	N/A	05/21/2017
I.S.N	Rohde & Schwarz	ENY22	1109.9508.02	05/21/2017

4.2.2 Radiated Emission Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/21/2017
Pre-Amplifier	HP	8447D	2944A07999	05/20/2017
Bilog Antenna	Schwarzbeck	VULB9163	142	05/20/2017
Loop Antenna	ARA	PLA-1030/B	1029	05/21/2017
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	05/21/2017
Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/20/2017
Cable	Schwarzbeck	AK9513	ACRX1	05/21/2017
Cable	Rosenberger	N/A	FP2RX2	05/21/2017
Cable	Schwarzbeck	AK9513	CRPX1	05/21/2017
Cable	Schwarzbeck	AK9513	CRRX2	05/21/2017

4.2.3 Radio Frequency Test Equipment

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.
Spectrum Analyzer	Agilent	E4407B	88156318	05/20/2017
Power meter	Anritsu	ML2495A	0824006	05/20/2017
Power sensor	Anritsu	MA2411B	0738172	05/20/2017
Spectrum Analyzer	Agilent	N9010A	My53470879	05/20/2017

Remark: Each piece of equipment is scheduled for calibration once a year.

4.3 DESCRIPTION OF TEST MODES

The EUT has been tested under its typical operating condition.

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Frequency and Channel list:

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
01	2407.500	08	2431.125	15	2454.750
02	2410.875	09	2434.500	16	2458.125
03	2414.250	10	2437.875	17	2461.500
04	2417.625	11	2441.250	18	2464.875
05	2421.000	12	2444.625	19	2468.250
06	2424.375	13	2448.000	20	2471.625
07	2427.750	14	2451.375	21	2475.000

Test Frequency and channel:

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2407.500	11	2441.250	21	2475.000

Frequency Hopping Information

Technical Specification	Description																																																																
Hopping Sequence	The 21 channel frequencies are mapped into 64 locations. These 64 locations are divided into 16 groups (from 1 to 16). Each group has 4 numbers from A to D. Below is the number of each location. <table><tr><td>1A</td><td>1B</td><td>1C</td><td>1D</td></tr><tr><td>2A</td><td>2B</td><td>2C</td><td>2D</td></tr><tr><td>3A</td><td>3B</td><td>3C</td><td>3D</td></tr><tr><td>4A</td><td>4B</td><td>4C</td><td>4D</td></tr><tr><td>5A</td><td>5B</td><td>5C</td><td>5D</td></tr><tr><td>6A</td><td>6B</td><td>6C</td><td>6D</td></tr><tr><td>7A</td><td>7B</td><td>7C</td><td>7D</td></tr><tr><td>8A</td><td>8B</td><td>8C</td><td>8D</td></tr><tr><td>9A</td><td>9B</td><td>9C</td><td>9D</td></tr><tr><td>10A</td><td>10B</td><td>10C</td><td>10D</td></tr><tr><td>11A</td><td>11B</td><td>11C</td><td>11D</td></tr><tr><td>12A</td><td>12B</td><td>12C</td><td>12D</td></tr><tr><td>13A</td><td>13B</td><td>13C</td><td>13D</td></tr><tr><td>14A</td><td>14B</td><td>14C</td><td>14D</td></tr><tr><td>15A</td><td>15B</td><td>15C</td><td>15D</td></tr><tr><td>16A</td><td>16B</td><td>16C</td><td>16D</td></tr></table>	1A	1B	1C	1D	2A	2B	2C	2D	3A	3B	3C	3D	4A	4B	4C	4D	5A	5B	5C	5D	6A	6B	6C	6D	7A	7B	7C	7D	8A	8B	8C	8D	9A	9B	9C	9D	10A	10B	10C	10D	11A	11B	11C	11D	12A	12B	12C	12D	13A	13B	13C	13D	14A	14B	14C	14D	15A	15B	15C	15D	16A	16B	16C	16D
	1A	1B	1C	1D																																																													
	2A	2B	2C	2D																																																													
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15A	15B	15C	15D																																																														
16A	16B	16C	16D																																																														
	Each location has its own correspondence frequency, below is the mapping table of correspondence frequencies vs locations. 1A=2407.500MHZ, 1B=2461.500MHZ, 1C=2448.000MHZ, 1D=2434.500MHZ, 2A=2410.875MHZ, 2B=2464.875MHZ, 2C=2451.375MHZ, 2D=2437.875MHZ, 3A=2414.250MHZ, 3B=2468.250MHZ, 3C=2454.750MHZ, 3D=2441.250MHZ, 4A=2417.625MHZ, 4B=2471.625MHZ, 4C=2458.125MHZ, 4D=2444.625MHZ, 5A=2621.000MHZ, 5B=2407.500MHZ, 5C=2461.500MHZ, 5D=2448.000MHZ, 6A=2424.375MHZ, 6B=2410.875MHZ, 6C=2464.875MHZ, 6D=2451.375MHZ, 7A=2427.750MHZ, 7B=2414.250MHZ, 7C=2468.250MHZ, 7D=2454.750MHZ, 8A=2431.125MHZ, 8B=2417.625MHZ, 8C=2471.625MHZ, 8D=2458.125MHZ, 9A=2434.500MHZ, 9B=2621.000MHZ, 9C=2407.500MHZ, 9D=2461.500MHZ, 10A=2437.875MHZ, 10B=2424.375MHZ, 10C=2410.875MHZ, 10D=2464.875MHZ, 11A=2441.250MHZ, 11B=2427.750MHZ, 11C=2414.250MHZ, 11D=2468.250MHZ, 12A=2444.625MHZ, 12B=2431.125MHZ, 12C=2417.625MHZ, 12D=2471.625MHZ, 13A=2448.000MHZ, 13B=2434.500MHZ, 13C=2621.000MHZ, 13D=2407.500MHZ, 14A=2451.375MHZ, 14B=2437.875MHZ, 14C=2424.375MHZ, 14B=2410.875MHZ, 15A=2454.750MHZ, 15B=2441.250MHZ, 15C=2427.750MHZ, 15D=2414.250MHZ, 16A=2458.125MHZ, 16B=2444.625MHZ, 16C=2431.125MHZ, 16D=2475.000MHZ																																																																
	Hopping Sequence: There are 4 hopping sequences as below. 12A-1A-2A-10A-4A-13A-11A-3A-6A-14A-8A-5A-15A-7A-9A-16A- 12B-1B-2B-10B-4B-13B-11B-3B-6B-14B-8B-5B-15B-7B-9B-16B- 12C-1C-2C-10C-4C-13C-11C-3C-6C-14C-8C-5C-15C-7C-9C-16C- 12D-1D-2D-10D-4D-13D-11D-3D-6D-14D-8D-5D-15D-7D-9D-16D-																																																																
	These 4 hopping sequences will be used alternatively.																																																																
Receiver input bandwidth	The receiver bandwidth is equal to the transmitted signal bandwidth. The receiver IF bandwidth is 4.5MHz. When the system is set at receiver mode, the VCO frequency will automatically be set at the desired frequency – 4.5MHz (RX VCO frequency = RX VCO frequency – 4.5MHz). When the system is set at TX mode, the VCO frequency will be automatically set at the desired frequency (TX VCO frequency). As the transmitter (BU) will generate the hopping sequence and send this information to the associated receiver (PU). The receiver will shift frequency according to this information. So the frequency channels of the system can be synchronized.																																																																

5 FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

Bldg 69, Majialong Industry Zone District, Nanshan District, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

5.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

- EMC Lab.
- : Accredited by CNAS, 2016.10.24
The certificate is valid until 2022.10.28
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01: 2006(identical to ISO/IEC17025: 2005)
The Certificate Registration Number is L2291
 - : Accredited by TUV Rheinland Shenzhen, 2010.5.25
The Laboratory has been assessed according to the requirements ISO/IEC 17025.
 - : Accredited by FCC
Designation Number: CN1204
Test Firm Registration Number: 882943.
 - : Accredited by Industry Canada, November 24, 2015
The Certificate Registration Number is 4480A-2

6 TEST SYSTEM UNCERTAINTY

The following measurement uncertainty levels have been estimated for tests performed on the apparatus:

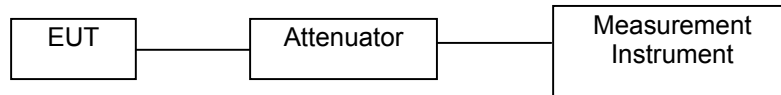
Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-5}$
Maximum Peak Output Power Test	$\pm 1.0\text{dB}$
Conducted Emissions Test	$\pm 2.0\text{dB}$
Radiated Emission Test	$\pm 2.0\text{dB}$
Occupied Bandwidth Test	$\pm 1.0\text{dB}$
Band Edge Test	$\pm 3\text{dB}$
All emission, radiated	$\pm 3\text{dB}$
Antenna Port Emission	$\pm 3\text{dB}$
Temperature	$\pm 0.5^{\circ}\text{C}$
Humidity	$\pm 3\%$

Measurement Uncertainty for a level of Confidence of 95%

7 SETUP OF EQUIPMENT UNDER TEST

7.1 RADIO FREQUENCY TEST SETUP 1

The EUT component's antenna port(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



7.2 RADIO FREQUENCY TEST SETUP 2

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

Below 30MHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The Antenna should be positioned with its plane vertical at the specified distance from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. The center of the loop shall be 1 m above the ground. For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT.

Above 30MHz:

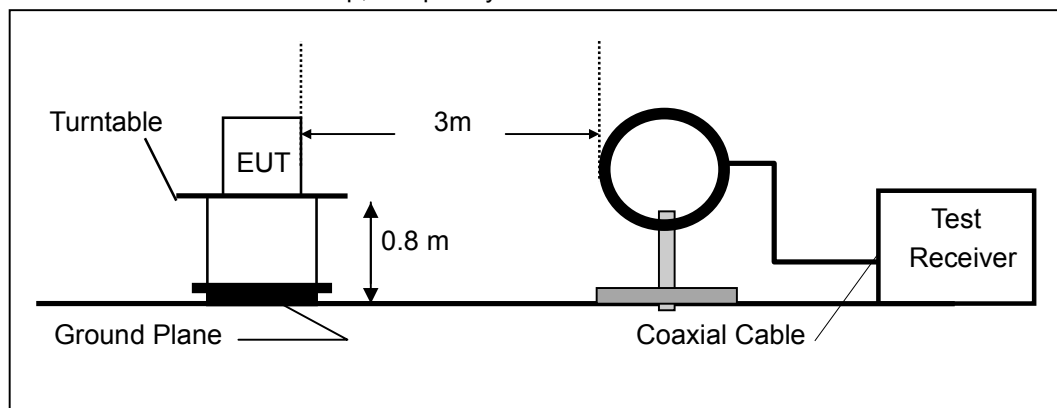
The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

Above 1GHz:

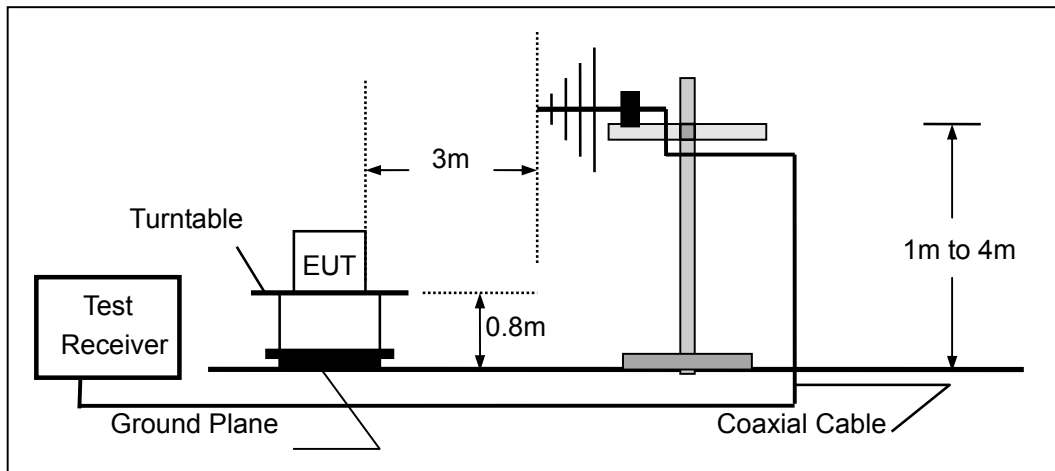
(Note: the FCC's permission to use 1.5 m as an alternative per TCBC Conf call of Dec. 2, 2014.)

The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

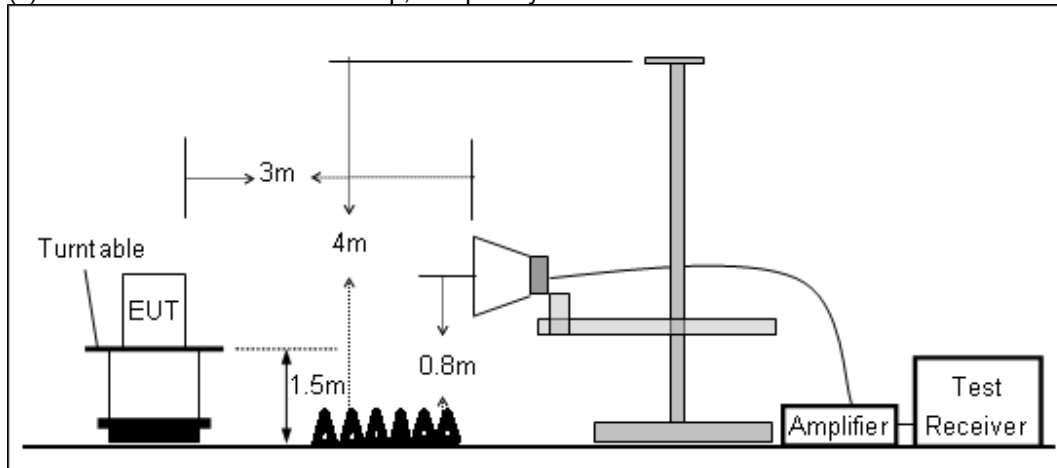
(a) Radiated Emission Test Set-Up, Frequency Below 30MHz



(b) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(c) Radiated Emission Test Set-Up, Frequency above 1000MHz

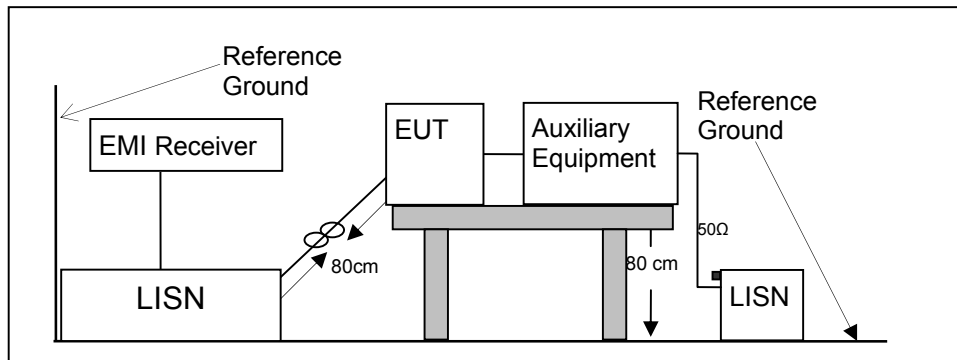


7.3 CONDUCTED EMISSION TEST SETUP

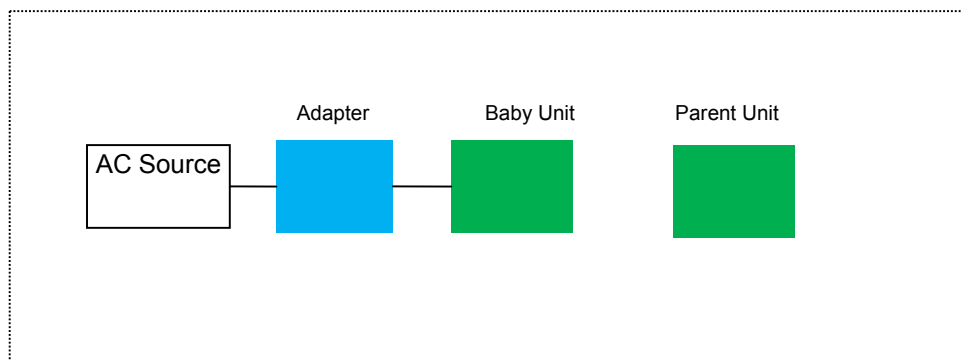
The mains cable of the EUT (Perfect Share Mini) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.8 m.

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.



7.4 BLOCK DIAGRAM CONFIGURATION OF TEST SYSTEM



7.5 SUPPORT EQUIPMENT

Item	Equipment	Mfr/Brand	Model/Type No.	S/N	Note
N/A	N/A	N/A	N/A	N/A	N/A

Notes:

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

8 TEST REQUIREMENTS

8.1 20DB BANDWIDTH

8.1.1 Applicable Standard

According to FCC Part 15.247(a)(1) and IC RSS-247.5.1(a)

8.1.2 Conformance Limit

No limit requirement.

8.1.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.1.4 Test Procedure

The EUT was operating in mode and controlled its channel. Printed out the test result from the spectrum by hard copy function.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 100 kHz.

Set the video bandwidth (VBW) =300 kHz.

Set Span= approximately 2 to 3 times the 20 dB bandwidth

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the markerdelta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission.

If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation.

Measure and record the results in the test report.

Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

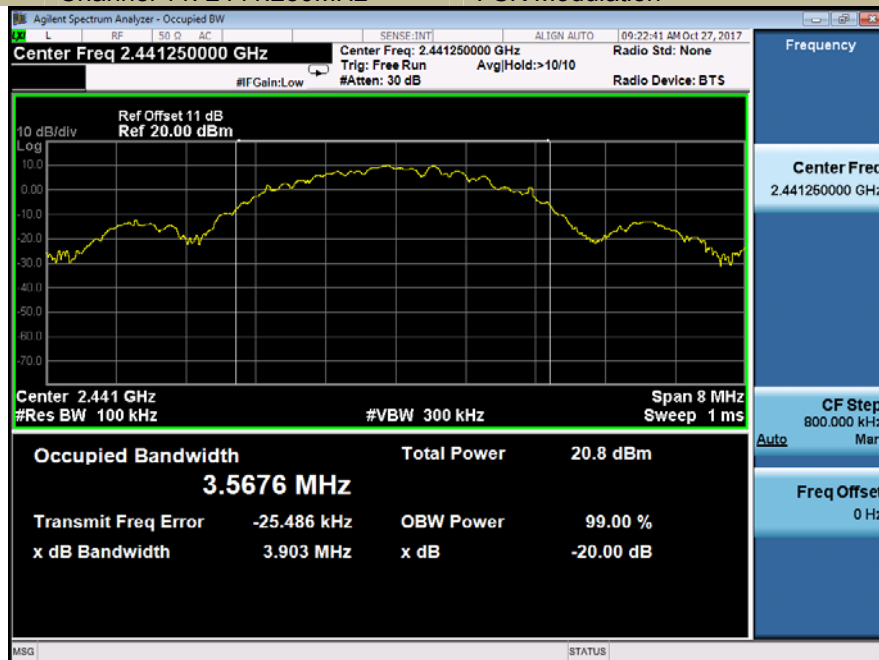
Temperature:	24 °C	Test Date:	October 27, 2017
Humidity:	53 %	Test By:	King Kong

Modulation Mode	Channel Number	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Verdict
FSK	01	2407.500	3902	N/A	PASS
	11	2441.250	3903	N/A	PASS
	21	2475.000	3659	N/A	PASS
Note: N/A (Not Applicable)					

Test Model	20dB Bandwidth Channel 0: 2407.500MHz	FSK Modulation
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Test Model	20dB Bandwidth Channel 11: 2441.250MHz	FSK Modulation
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Test Model	20dB Bandwidth Channel 21: 2475.000MHz	FSK Modulation
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8.2 99%BANDWIDTH

8.2.1 Applicable Standard

According to IC RSS-Gen.6.6

8.2.2 Conformance Limit

No limit requirement.

8.2.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.2.4 Test Procedure

The EUT was operating in fixed frequency mode and controlled its channel. Printed out the test result from the spectrum by hard copy function.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 1%-5% OBW

Set the video bandwidth (VBW) $\geq 100\text{kHz}$.

Set Span= approximately 2 to 3 times the 20 dB bandwidth

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission.

If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation.

Measure and record the results in the test report.

Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

Temperature:	24°C	Test Date:	October 27, 2017
Humidity:	53 %	Test By:	KK

Modulation Mode	Channel Number	Channel Frequency (MHz)	99% Measurement Bandwidth(KHz)	Verdict
FSK	01	2407.500	3543.0	PASS
	11	2441.250	3567.6	PASS
	21	2475.000	3545.4	PASS
Note: Test Plots see the Page 15-16				

8.3 CARRIER FREQUENCY SEPARATION

8.3.1 Applicable Standard

According to FCC Part 15.247(a)(1) and IC RSS-247.5.1(b)

8.3.2 Conformance Limit

Frequency hopping systems operating in the 2400-2483.5MHz band shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

In case of an output power less than 125mW, the frequency hopping system may have channels separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

8.3.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.3.4 Test Procedure

According to FCC Part 15.247(a)(1) & According to IC RSS-247.5.1(b)

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Set the RBW = 100kHz.

Set VBW = 300kHz.

Set the span = wide enough to capture the peaks of two adjacent channels

Set Sweep time = auto couple.

Set Detector = peak.

Set Trace mode = max hold.

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section. Submit this plot.

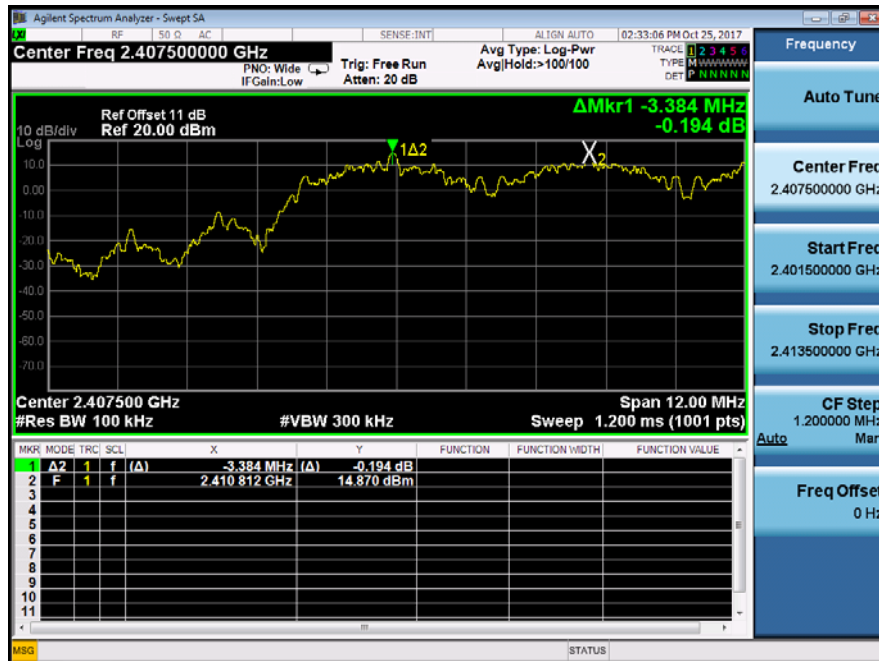
Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

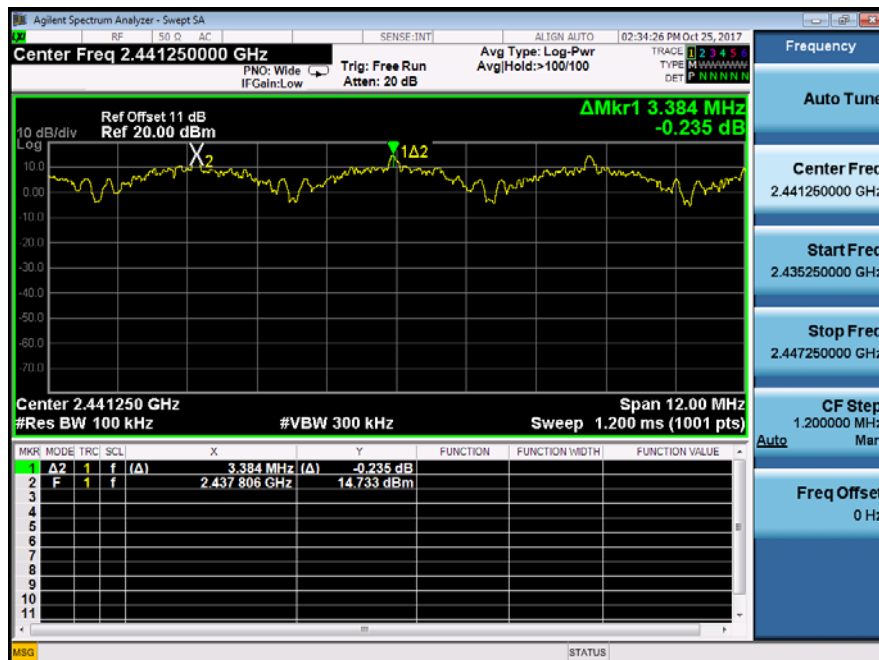
Temperature:	24 °C	Test Date:	October 25, 2017
Humidity:	53 %	Test By:	King Kong

Modulation Mode	Channel Number	Channel Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Verdict
FSK	01	2407.500	3.384	>2.601	PASS
	11	2441.250	3.384	>2.602	PASS
	21	2475.000	3.384	>2.439	PASS
Note: Limit = 20dB bandwidth * 2/3, if it is greater than 25kHz and the output power is less than 125mW (21dBm).					

Test Model	Carrier Frequency Separation Channel 0: 2407.500MHz	FSK Modulation
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Test Model	Carrier Frequency Separation Channel 11: 2441.250MHz	FSK Modulation
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Test Model	Carrier Frequency Separation Channel 21: 2475.000MHz	FSK Modulation
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8.4 NUMBER OF HOPPING FREQUENCIES

8.4.1 Applicable Standard

According to FCC Part 15.247(a)(1)(iii) and RSS-247.5.1(d)

8.4.2 Conformance Limit

Frequency hopping systems operating in the 2400-2483.5MHz band shall use at least 15 channels.

8.4.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.4.4 Test Procedure

- According to FCC Part 15.247(a)(1)(iii) and RSS-247.5.1(d)

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = the frequency band of operation (2400-2483.5MHz)

RBW $\geq$ 100KHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. It may prove necessary to break the span up to sections, in order to clearly show all of the hopping frequencies.

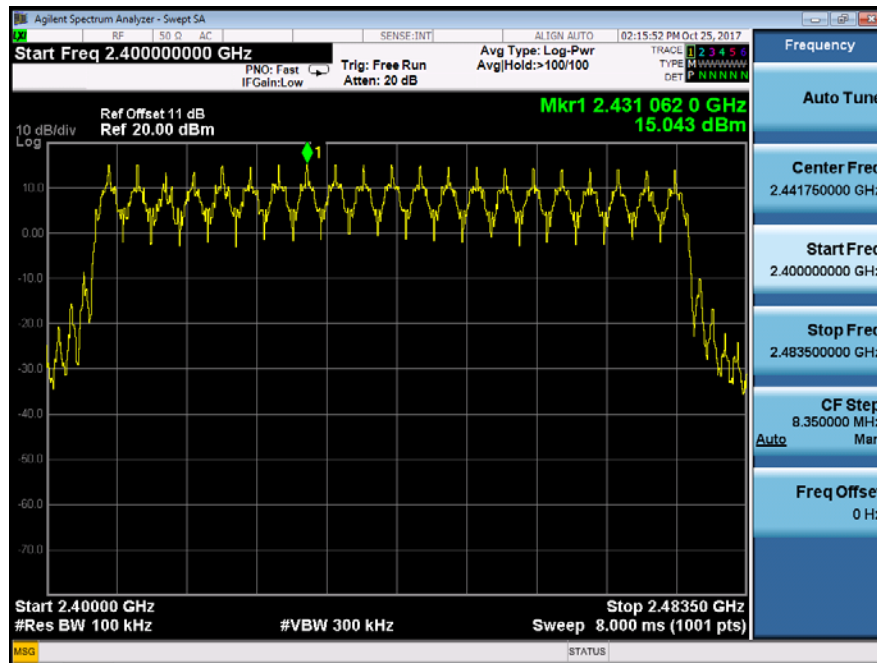
Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

Temperature:	24°C	Test Date:	October 25, 2017
Humidity:	53 %	Test By:	King Kong

Hopping Channel Frequency Range	Quantity of Hopping Channel	Quantity of Hopping Channel limit
2407.500MHz-2475.000MHz	21	> 15

Test Model	Number Of Hopping Frequencies Span: 2400-2483.5MHz	
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8.5 AVERAGE TIME OF OCCUPANCY (DWELL TIME)

8.5.1 Applicable Standard

According to FCC Part 15.247(a)(1)(iii) and RSS-247.5.4(b)

8.5.2 Conformance Limit

For frequency hopping systems operating in the 2400-2483.5MHz band, the average time of occupancy on any channel shall not be greater than 0.4s within a period of 0.4s multiplied by the number of hopping channels employed.

8.5.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.5.4 Test Procedure

- According to FCC Part 15.247(a)(1)(iii) and RSS-247.5.4(b)

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = zero span, centered on a hopping channel

RBW = 1 MHz

VBW $\geq$ RBW

Sweep = as necessary to capture the entire dwell time per hopping channel

Detector function = peak

Trace = max hold

If possible, use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section.

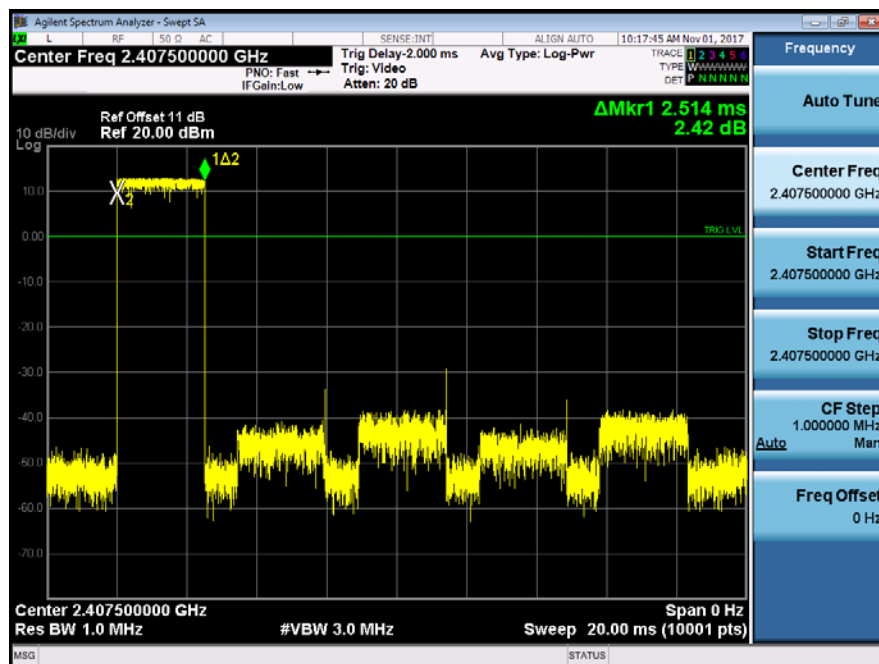
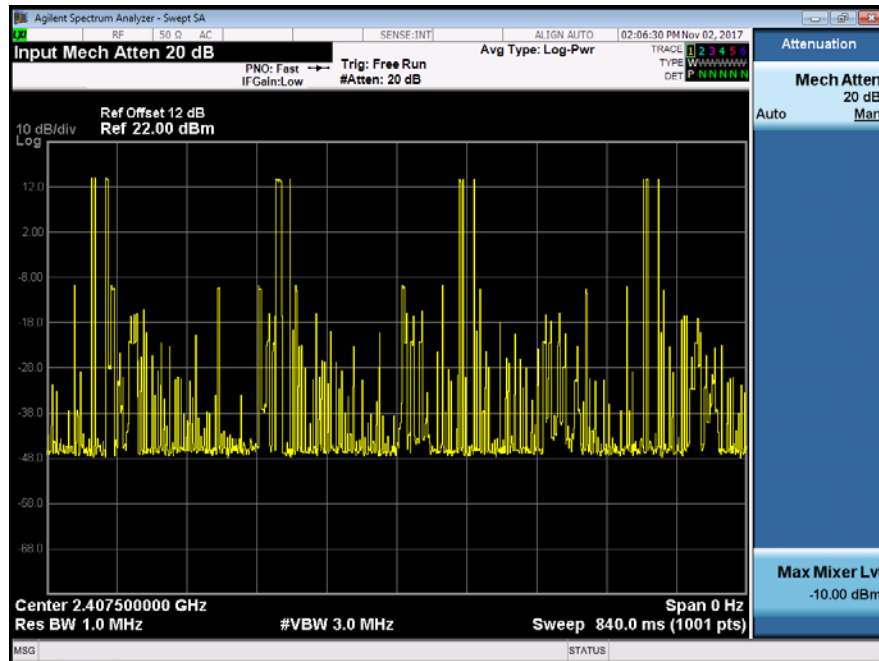
8.5.5 Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

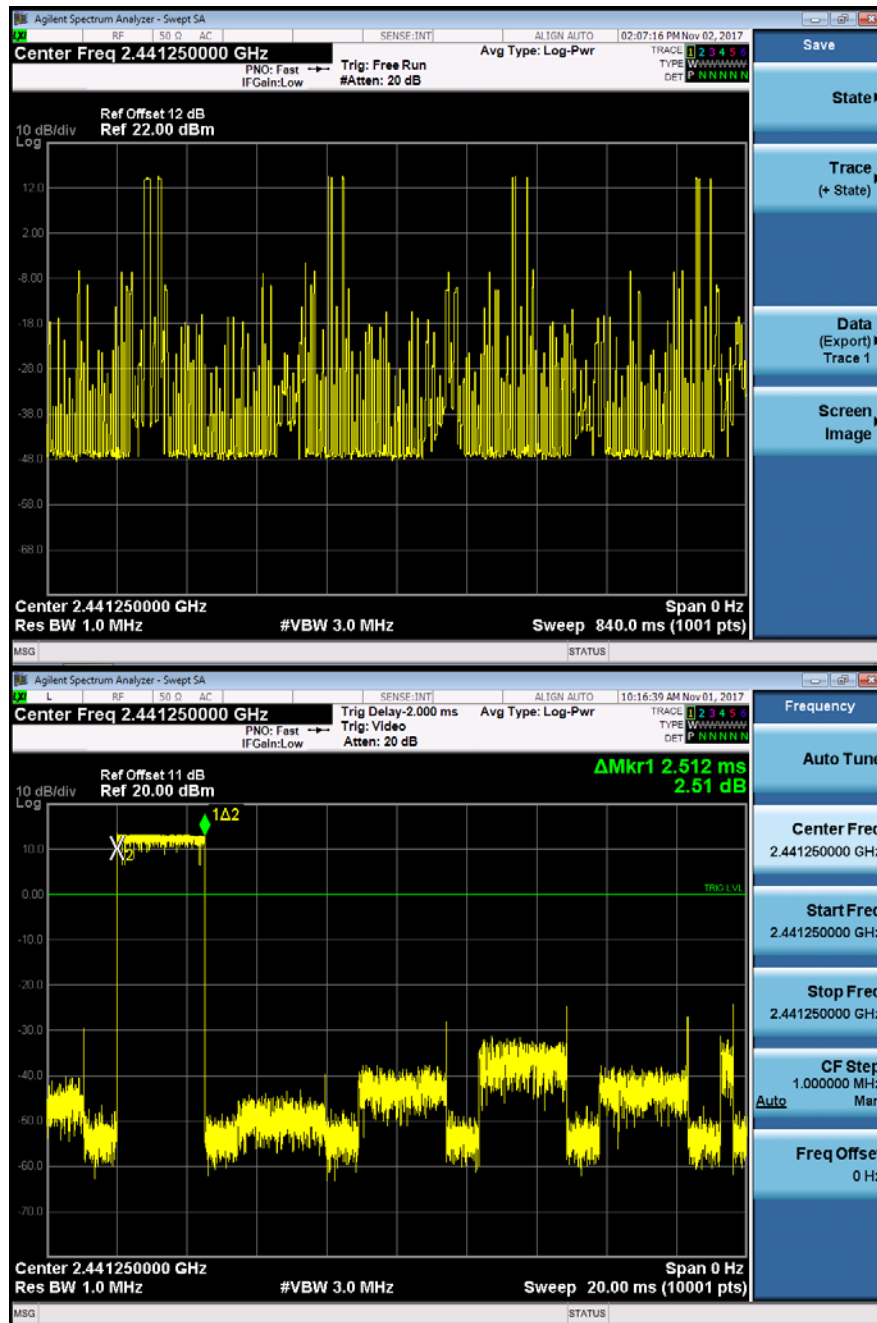
Temperature:	24°C	Test Date:	November 02, 2017
Humidity:	53 %	Test By:	King Kong

Modulation Mode	Channel Number	Channel Frequency (MHz)	Pulse width (ms)	Dwell Time (ms)	Limit (ms)	Verdict
FSK	01	2407.500	2.514	201.12	<400	PASS
	11	2441.250	2.512	200.96	<400	PASS
	21	2475.000	2.514	201.12	<400	PASS
Note: Dwell Time(ms)= Pulse width(ms)*8*10 Period(s)=0.4* number of hopping channels						

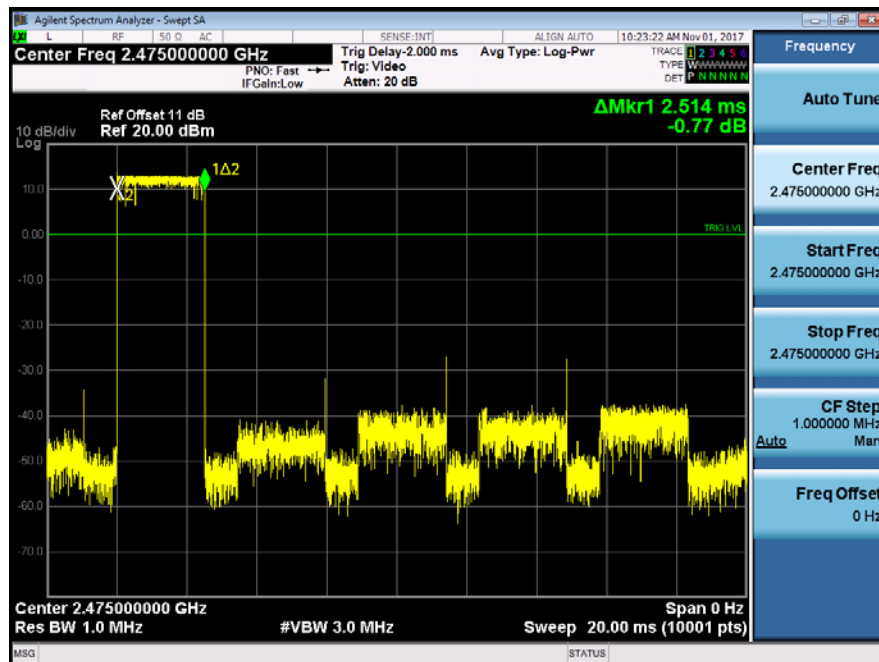
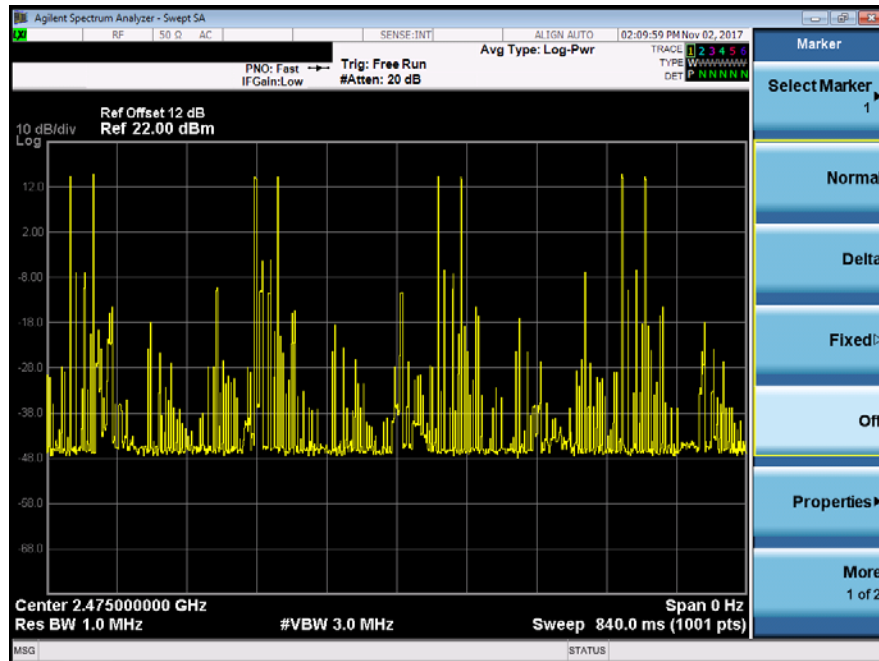
Test Model	AVERAGE TIME OF OCCUPANCY Channel 0: 2407.500MHz	FSK Modulation
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Test Model	AVERAGE TIME OF OCCUPANCY	Channel 11: 2441.250MHz
		FSK Modulation



Test Model	AVERAGE TIME OF OCCUPANCY Channel 21: 2475.000MHz	FSK Modulation
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8.6 MAXIMUM PEAK CONDUCTED OUTPUT POWER AND EIRP POWER

8.6.1 Applicable Standard

According to FCC Part 15.247(b)(1) and RSS-247.5.4(b)

8.6.2 Conformance Limit

The max For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

8.6.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.6.4 Test Procedure

■ According to FCC Part 15.247(b)(1) and RSS-247.5.4(b)

As an alternative to a peak power measurement, compliance with the limit can be based on a measurement of the maximum conducted output power.

Use the following spectrum analyzer settings:

Set Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel (about 10MHz)

Set RBW > the 20 dB bandwidth of the emission being measured (about 3MHz)

Set VBW ≥ RBW

Set Sweep = auto

Set Detector function = peak

Set Trace = max hold

Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission to determine the peak amplitude level.

Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

Temperature:	24 °C	Test Date:	October 26, 2017
Humidity:	53 %	Test By:	King Kong

Operation Mode	Channel Number	Channel Frequency (MHz)	Max Peak Power (dBm)	Limit (dBm)	Verdict
FSK	01	2407.500	15.115	21	PASS
	11	2441.250	14.606	21	PASS
	21	2475.000	14.556	21	PASS
Note: N/A					

Operation Mode	Channel Number	Channel Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Verdict
FSK	01	2407.500	15.115	36	PASS
	11	2441.250	14.606	36	PASS
	21	2475.000	14.556	36	PASS
Note: EIRP= Max Peak Power+Antenna Gain (0dBi)					

8.7 CONDUCTED SUPRIOUS EMISSION

8.7.1 Applicable Standard

According to FCC Part 15.247(d) and IC RSS-247 5.5

8.7.2 Conformance Limit

According to FCC Part 15.247(d) and IC RSS-247 5.5

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, provided the transmitter demonstrates compliance with the peak conducted power limits.

8.7.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.7.4 Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer

■ Reference level measurement

Establish a reference level by using the following procedure:

Set instrument center frequency to DSS channel center frequency.

Set Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel.

Set the RBW = 100 kHz. Set the VBW $\geq 3 \times$ RBW.

Set Detector = peak. Set Sweep time = auto couple.

Set Trace mode = max hold. Allow trace to fully stabilize.

Use the peak marker function to determine the maximum Maximum conduceted level.

Note that the channel found to contain the maximum conduceted level can be used to establish the reference level.

■ Band-edge Compliance of RF Conducted Emissions

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band-edge, as well as any modulation products which fall outside of the authorized band of operation

Set RBW $\geq 1\%$ of the span=100kHz Set VBW $\geq$ RBW

Set Sweep = auto Set Detector function = peak Set Trace = max hold

Allow the trace to stabilize. Set the marker on the emission at the bandedge, or on the highest modulation product outside of the band, if this level is greater than that at the bandedge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission. The marker-delta value now displayed must comply with the limit specified in this Section.

Now, using the same instrument settings, enable the hopping function of the EUT. Allow the trace to stabilize. Follow the same procedure listed above to determine if any spurious emissions caused by the hopping function also comply with the specified limit.

■ Conduceted Spurious RF Conducted Emission

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic.(30MHz to 25GHz). Set RBW = 100 kHz Set VBW $\geq$ RBW

Set Sweep = auto Set Detector function = peak Set Trace = max hold

Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this Section.

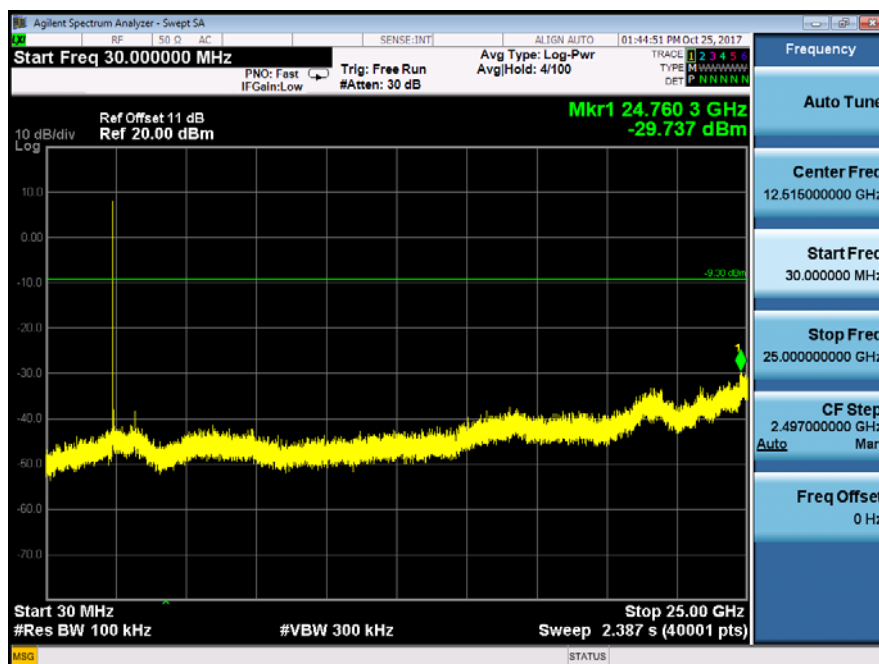
8.7.5 Test Results

All Adapter have been tested, and the worst result(Adapter 1) was report as below:

Test Model	Maximum Conduced Level RBW=100kHz	
	Channel 0: 2407.500MHz	FSK Modulation



Test Model	Conduced Spurious RF Conducted Emission	
	Channel 0: 2407.500MHz	FSK Modulation



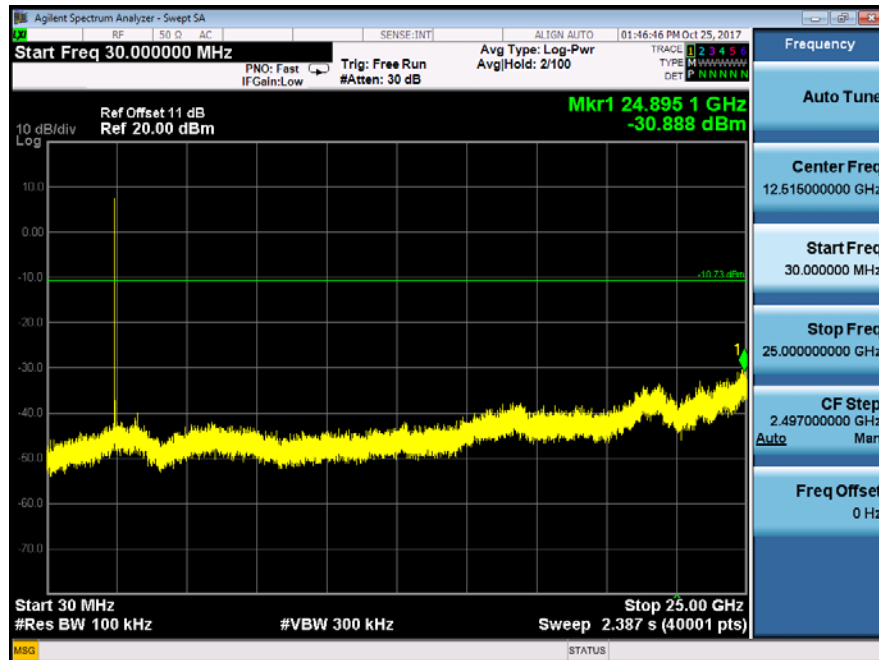
Test Model	Band-edge Conducted Emissions Channel 0: 2407.500MHz	FSK Modulation
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Test Model	Maximum Conducted Level RBW=100kHz Channel 11: 2441.250MHz	FSK Modulation
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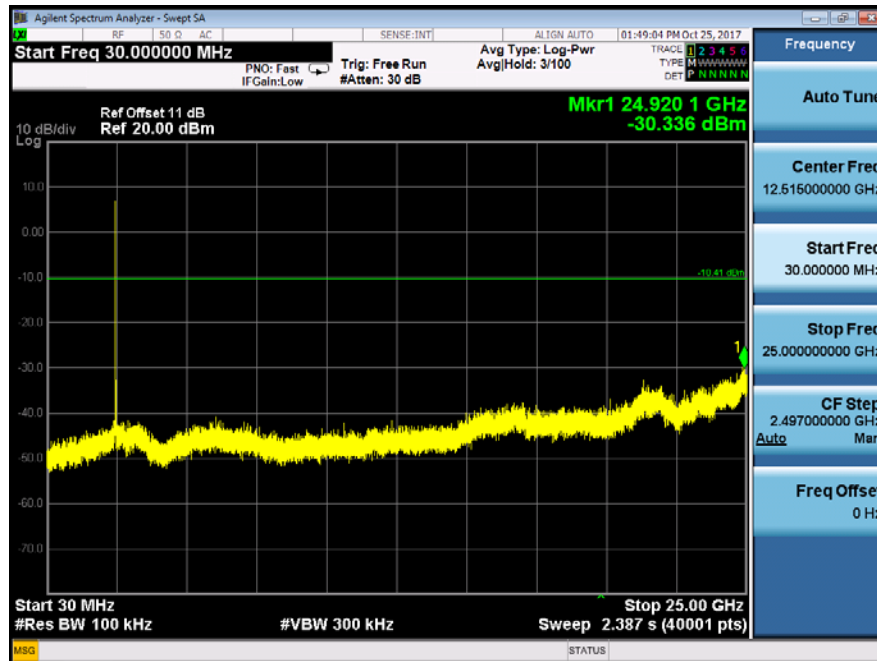
Test Model	Conduceted Spurious RF Conducted Emission	FSK Modulation
	Channel 11: 2441.250MHz	



Test Model	Maximum Conduceted Level RBW=100kHz	FSK Modulation
	Channel 21: 2475.000MHz	



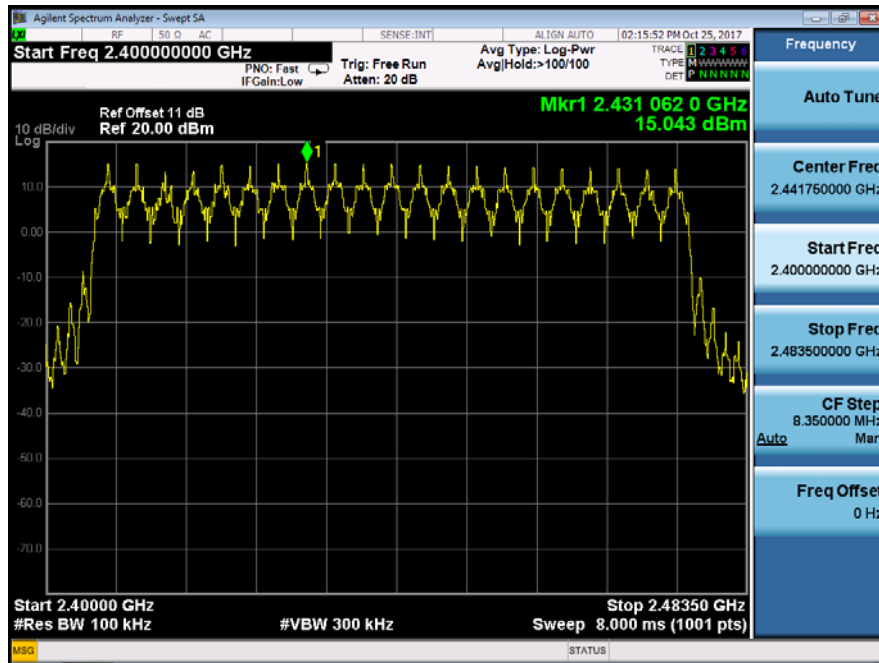
Test Model	Conduceted Spurious RF Conducted Emission	FSK Modulation
	Channel 21: 2475.000MHz	



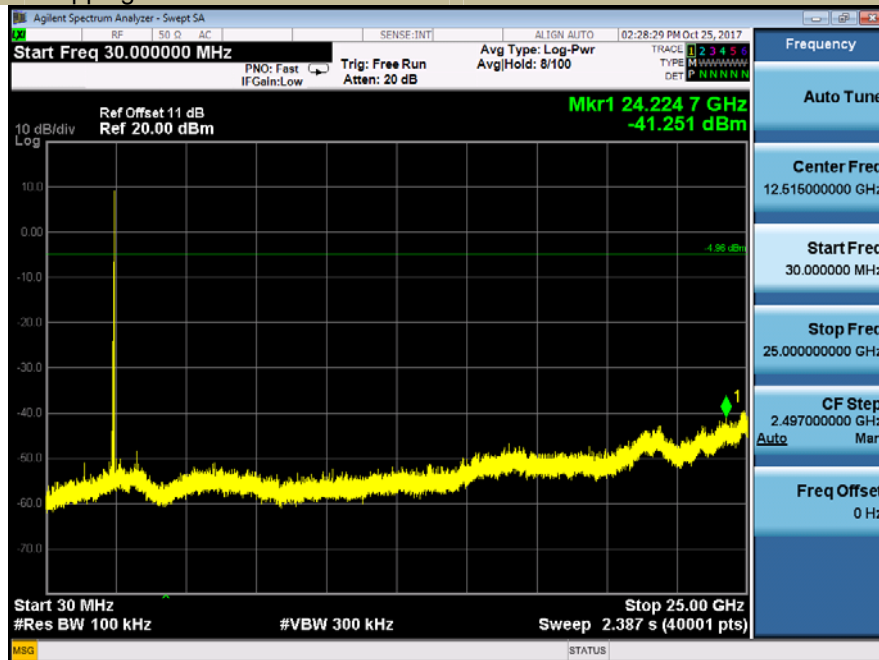
Test Model	Band-edge Conducted Emissions	FSK Modulation
	Channel 21: 2475.000MHz	



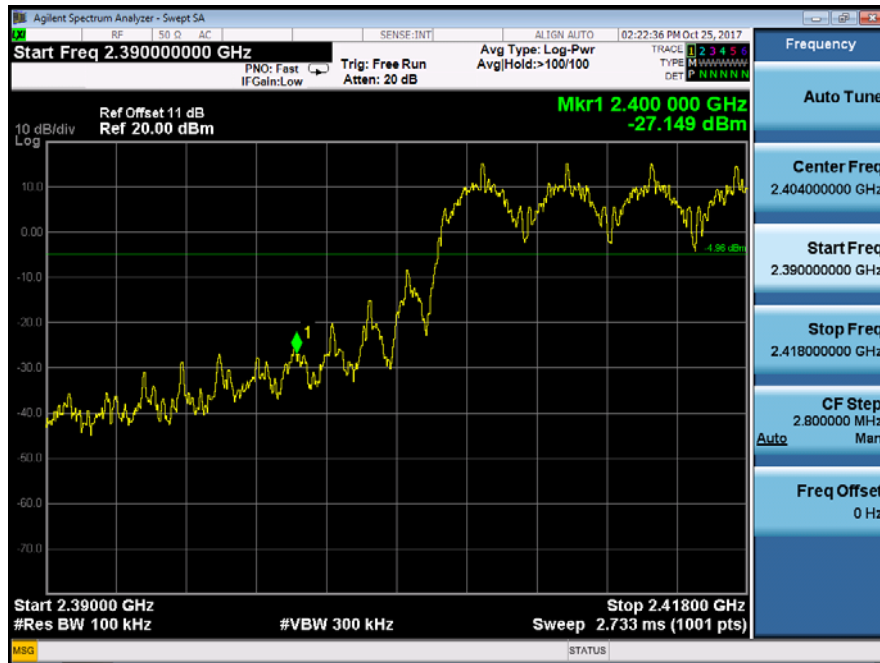
Test Model	Maximum Conduced Level RBW=100kHz Hopping	FSK Modulation
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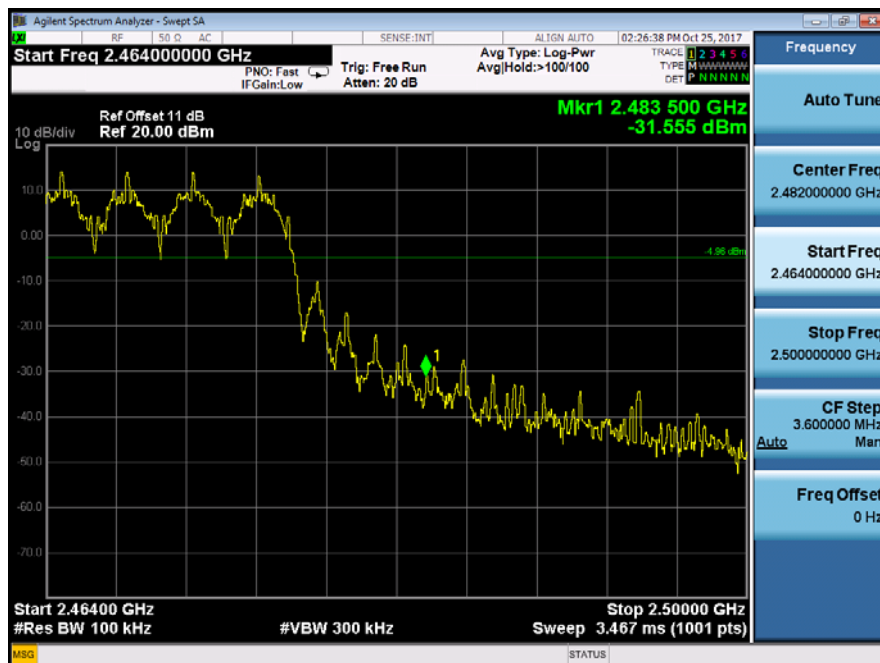
Test Model	Conduced Spurious RF Conducted Emission Hopping	FSK Modulation
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Test Model	Band-edge Conducted Emissions Hopping	FSK Modulation
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Test Model	Band-edge Conducted Emissions Hopping	FSK Modulation
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8.8 RADIATED SPURIOUS EMISSION

8.8.1 Applicable Standard

According to FCC Part 15.247(d), 15.209 and RSS-247 Clause 3.3

8.8.2 Conformance Limit

According to FCC Part 15.247(d): radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

According to FCC Part 15.205, the level of any transmitter spurious emission in Restricted bands shall not exceed the level of the emission specified in the following table

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

8.8.3 Test Configuration

Test according to clause 7.2 radio frequency test setup 2

8.8.4 Test Procedure

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

For Above 1GHz:

The EUT was placed on a turn table which is 0.1m above ground plane.

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

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 1GHz:

The EUT was placed on a turn table which is 0.1m above ground plane.

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

Span = wide enough to fully capture the emission being measured

RBW = 100 kHz for

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 30MHz:

The EUT was placed on a turn table which is 0.1m above ground plane.

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

Span = wide enough to fully capture the emission being measured

RBW = 9kHz

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 150KHz:

The EUT was placed on a turn table which is 0.1m above ground plane.

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

Span = wide enough to fully capture the emission being measured

RBW = 200Hz

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{dwell time}/100 \text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Repeat above procedures until all frequency measured was complete.

8.8.5 Test Results

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	24°C	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	KK
Test mode:	TX Mode		

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Distance extrapolation factor = $40\log(\text{Specific distance}/ \text{test distance})$ (dB);

Limit line = Specific limits(dBuV) + distance extrapolation factor

■ Spurious Emission Above 1GHz (1GHz to 25GHz)

Temperature:	24℃	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	King Kong
Test mode:	FSK Modulation	Frequency:	Channel 0: 2407.500MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
15398.83	V	52.86	30.70	74.00	54.00	-21.14	-23.30
25021.00	V	50.38	34.23	74.00	54.00	-23.62	-19.77
17038.14	H	53.56	31.60	74.00	54.00	-20.44	-22.40
25114.50	H	49.92	34.26	74.00	54.00	-24.08	-19.74

Temperature:	24℃	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	King Kong
Test mode:	FSK Modulation	Frequency:	Channel 11: 2441.250MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
14916.94	V	53.03	31.70	74.00	54.00	-20.97	-22.30
24613.00	V	51.05	36.23	74.00	54.00	-22.95	-17.77
14325.57	H	52.90	31.10	74.00	54.00	-21.10	-22.90
25395.00	H	50.35	34.62	74.00	54.00	-23.65	-19.38

Temperature:	24℃	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	King Kong
Test mode:	FSK Modulation	Frequency:	Channel 21: 2475.000MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
14873.88	V	52.82	30.50	74.00	54.00	-21.18	-23.50
24273.00	V	49.69	32.56	74.00	54.00	-24.31	-21.44
15398.83	H	52.96	30.30	74.00	54.00	-21.04	-23.70
25743.50	H	50.83	34.26	74.00	54.00	-23.17	-19.74

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

■ Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz

Temperature:	24℃	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	King Kong
Test mode:	FSK Modulation	Frequency:	Channel 0: 2407.500MHz

Frequency (MHz)	Polarity H/V	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)
2387.48	H	41.37	74.00	-32.63	27.10	54.00	-26.90
2389.35	V	44.62	74.00	-29.38	31.30	54.00	-22.70

Temperature:	24℃	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	King Kong
Test mode:	FSK Modulation	Frequency:	Channel 21: 2475.000MHz

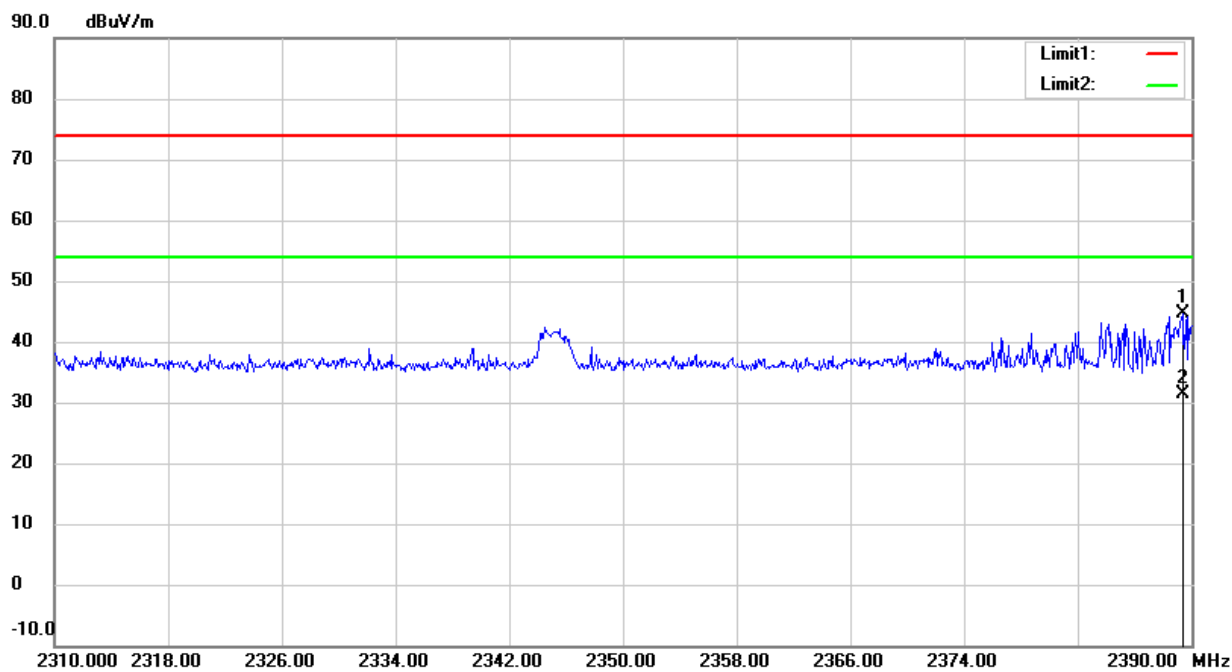
Frequency (MHz)	Polarity H/V	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)
2484.22	H	49.75	74.00	-24.25	38.70	54.00	-15.30
2484.09	V	52.24	74.00	-21.76	42.30	54.00	-11.70

Temperature:	24℃	Test Date:	October 28, 2017
Humidity:	53 %	Test By:	KK
Test mode:	FSK Modulation	Frequency:	Hopping

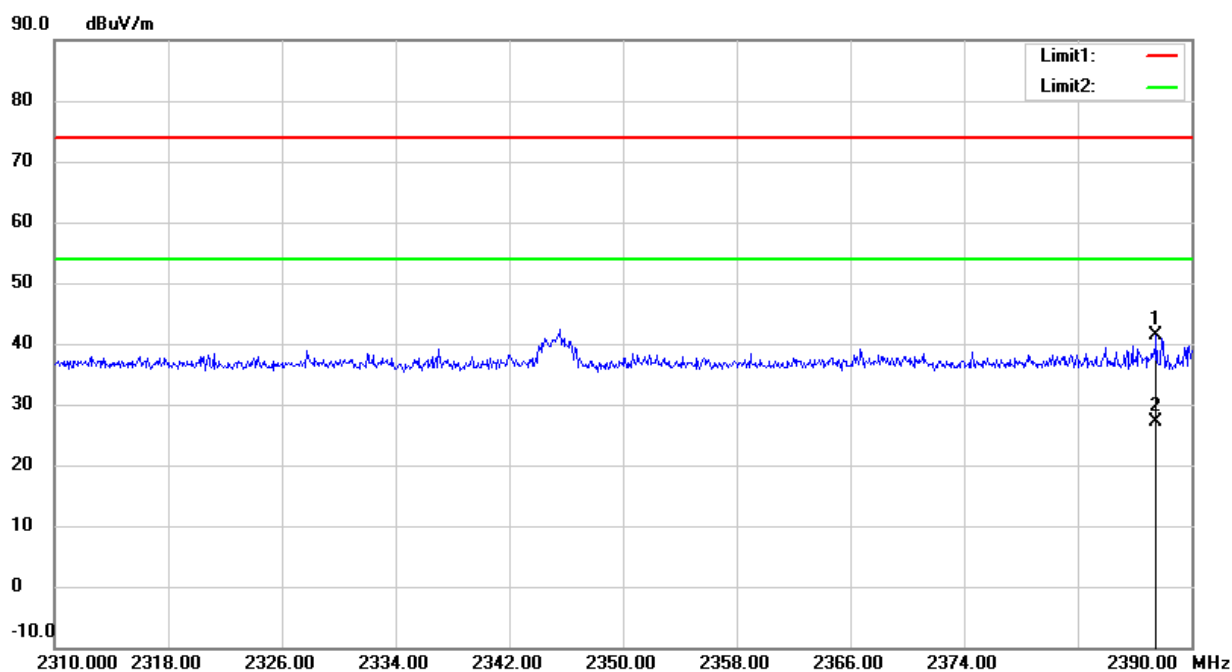
Frequency (MHz)	Polarity H/V	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)	AV(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	Over(dB)
2434.39	H	45.36	74.00	-28.64	30.5	54.00	-23.50
2347.24	V	46.41	74.00	-27.59	31.5	54.00	-22.50
2483.50	H	49.41	74.00	-24.59	33.2	54.00	-20.80
2483.50	V	55.77	74.00	-18.23	40.9	54.00	-13.10

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
(2) Emission Level= Reading Level+Probe Factor +Cable Loss.
(3) Data of measurement within this frequency range shown " -- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

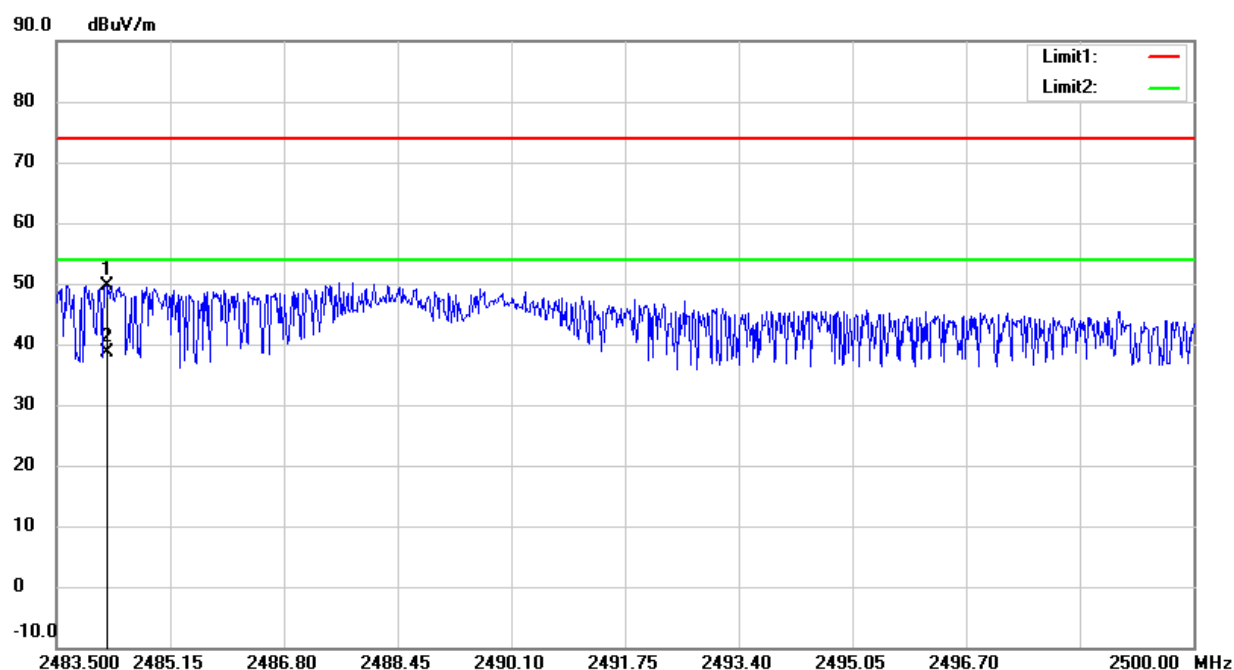
Test Model	Spurious Emission in Restricted Band 2310-2390MHz		
	Channel 0: 2407.500MHz	FSK Modulation	H
	Test By: King Kong		



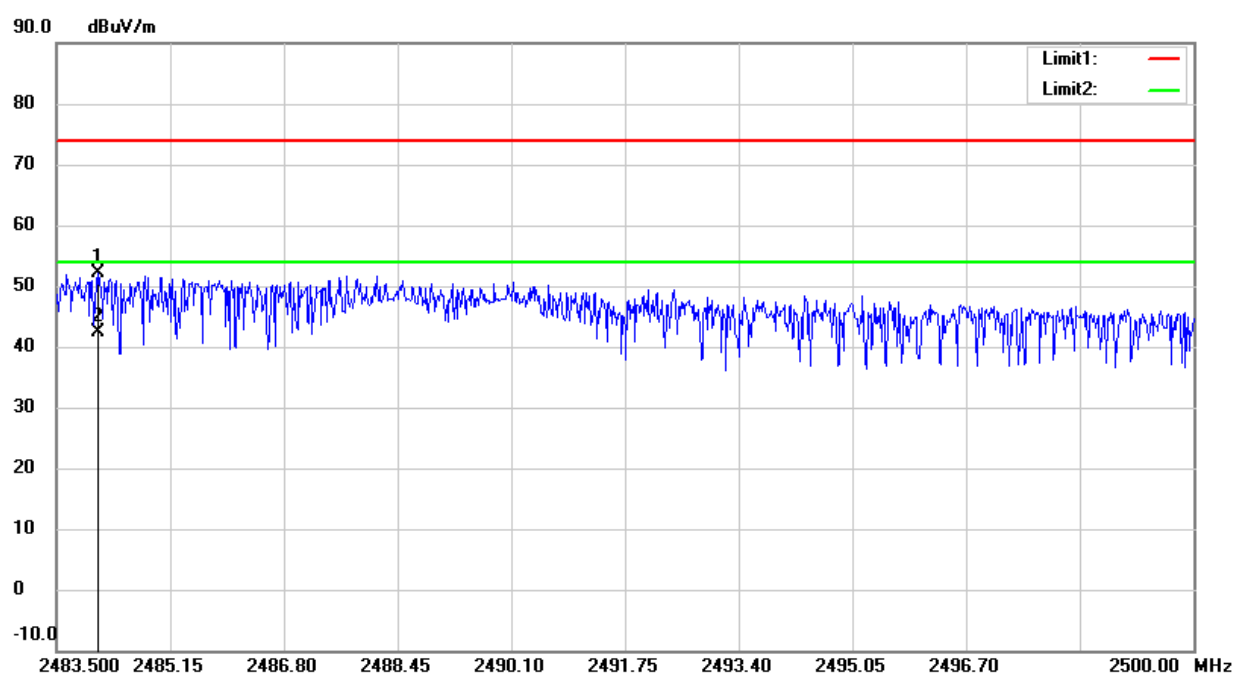
Test Model	Spurious Emission in Restricted Band 2310-2390MHz		
	/v3.0	FSK Modulation	V
	Channel 0: 2407.500MHz	Test By: King Kong	



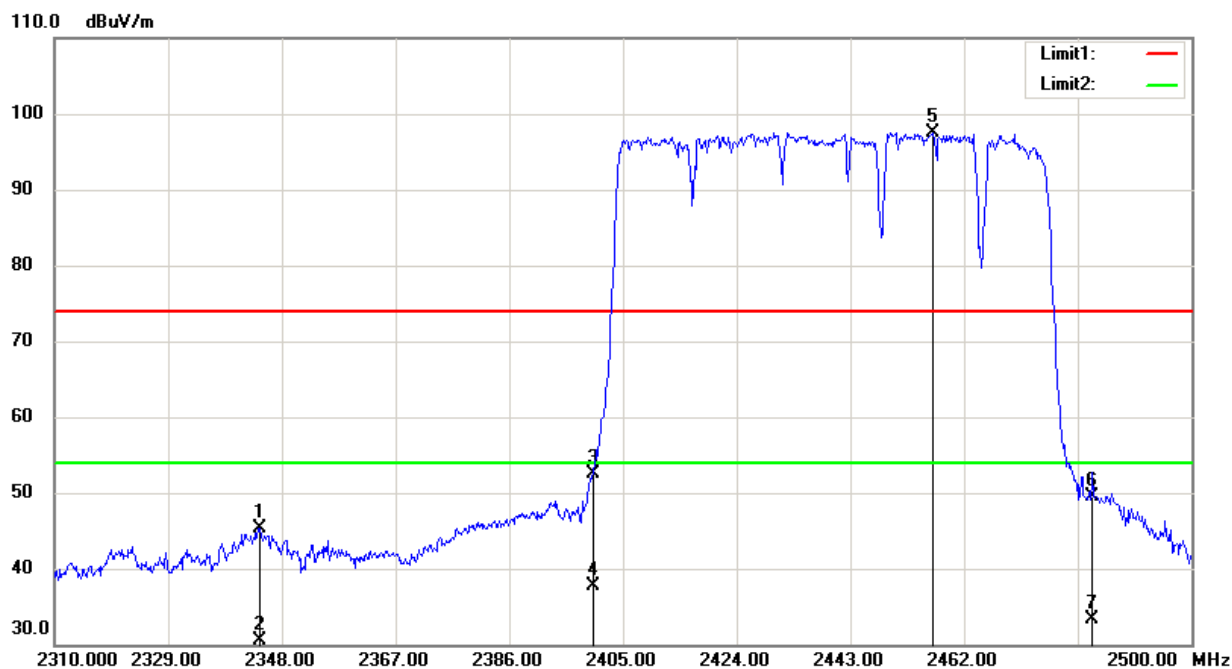
Test Model	Spurious Emission in Restricted Band 2483.5-2500MHz		
	Channel 21: 2475.000MHz	FSK Modulation	H
	Test By: King Kong		



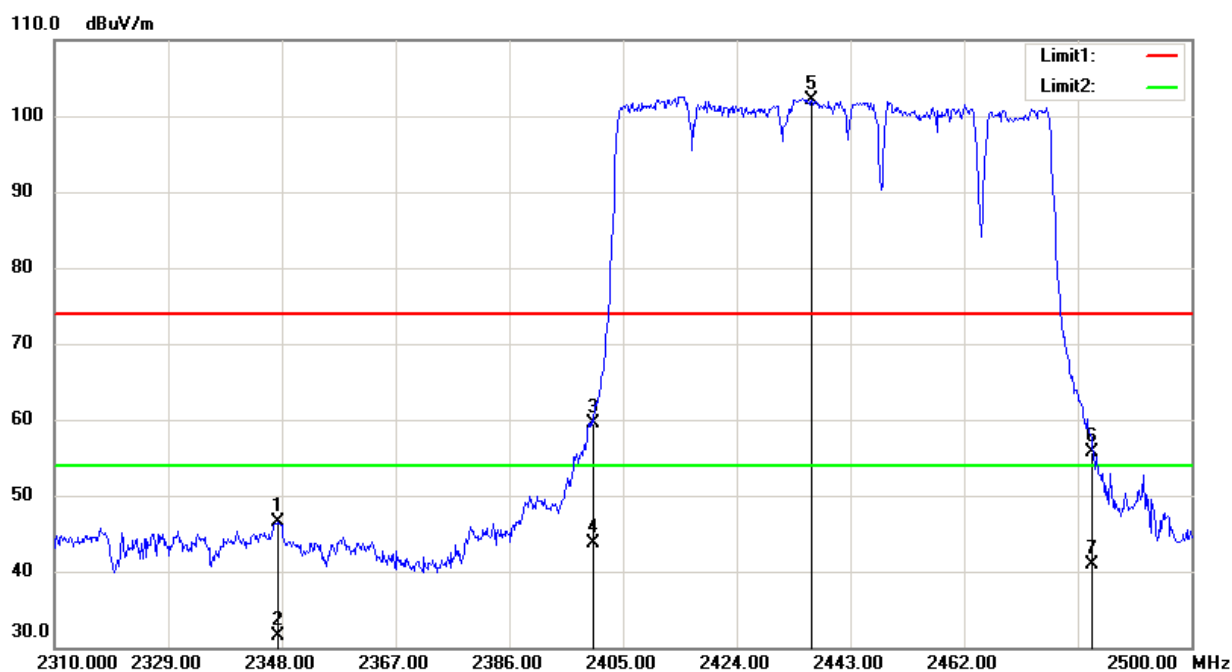
Test Model	Spurious Emission in Restricted Band 2483.5-2500MHz		
	Channel 21: 2475.000MHz	FSK Modulation	V
	Test By: King Kong		



Test Model	Spurious Emission in Restricted Band 2310-2390&2483.5-2500MHz		
	Hopping		FSK Modulation H
	Test By: King Kong		

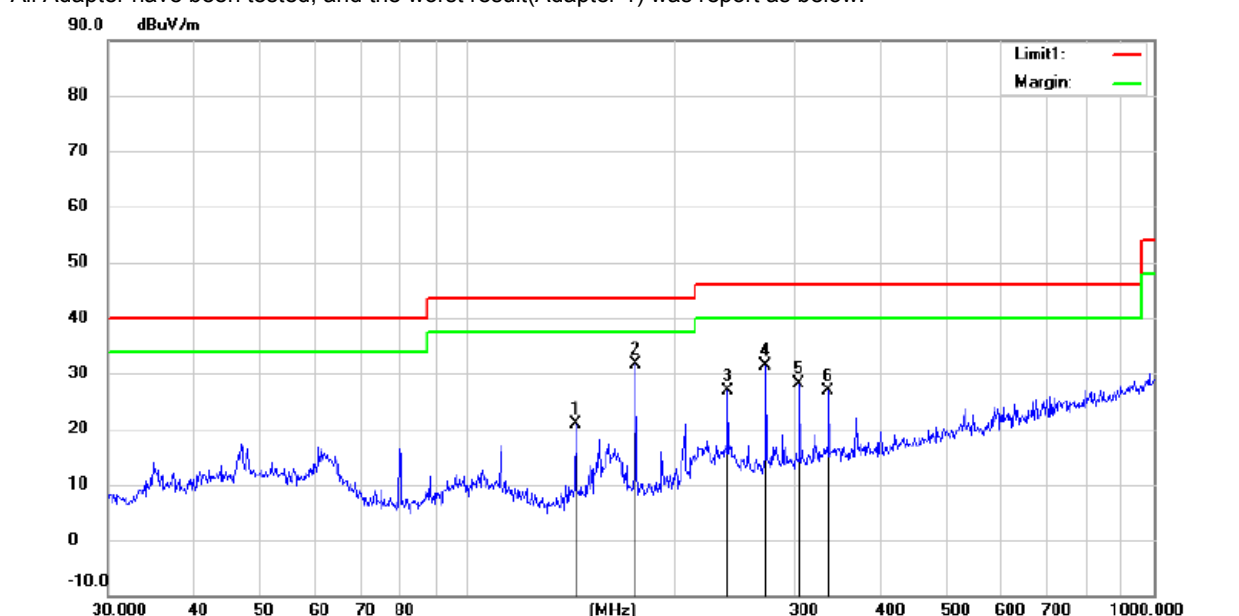


Test Model	Spurious Emission in Restricted Band 2310-2390&2483.5-2500MHz		
	Hopping		FSK Modulation V
	Test By: King Kong		



■ Spurious Emission below 1GHz (30MHz to 1GHz)

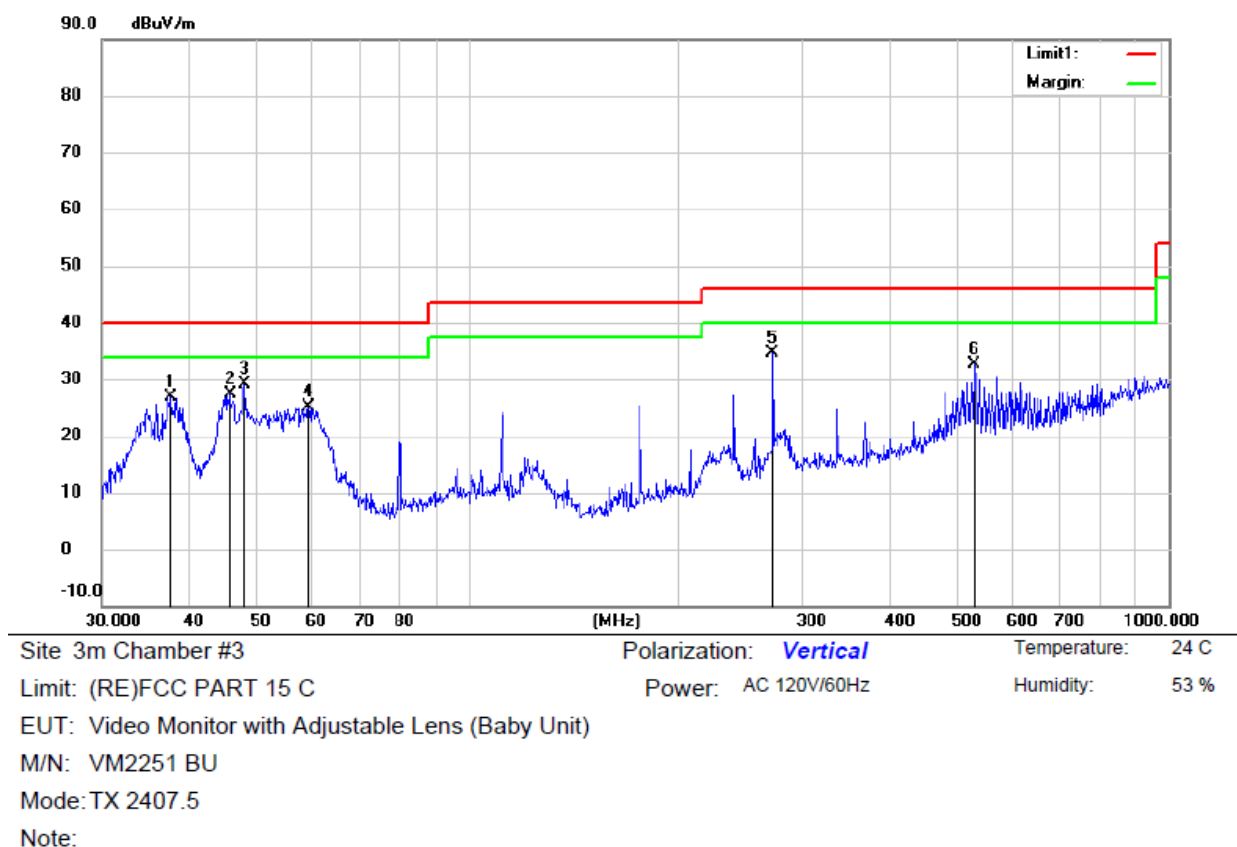
All Adapter have been tested, and the worst result(Adapter 1) was report as below:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		143.8294	40.27	-19.37	20.90	43.50	-22.60	QP		
2	*	176.2685	49.27	-17.67	31.60	43.50	-11.90	QP		
3		239.9873	40.79	-13.90	26.89	46.00	-19.11	QP		
4		272.2776	44.46	-13.19	31.27	46.00	-14.73	QP		
5		304.6100	40.59	-12.36	28.23	46.00	-17.77	QP		
6		336.0350	37.96	-11.02	26.94	46.00	-19.06	QP		

*:Maximum data x:Over limit !:over margin

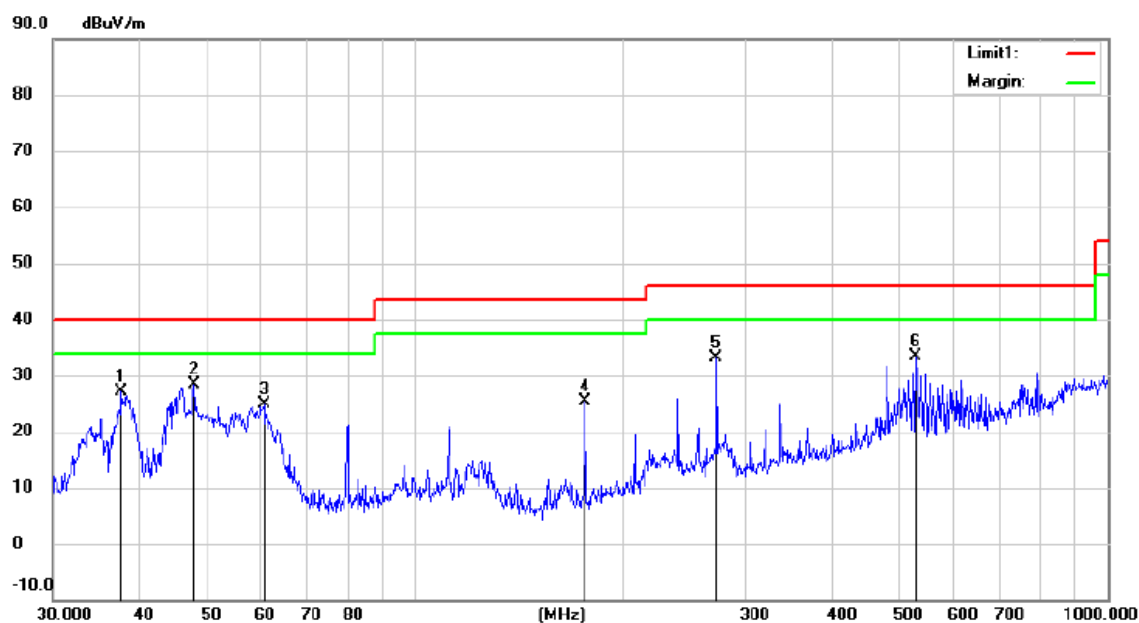
Operator: KK



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		37.6796	42.55	-15.76	26.79	40.00	-13.21	QP		
2		45.6946	41.50	-14.05	27.45	40.00	-12.55	QP		
3	*	47.9940	42.96	-13.79	29.17	40.00	-10.83	QP		
4		59.2323	40.79	-15.54	25.25	40.00	-14.75	QP		
5		272.2776	47.76	-13.19	34.57	46.00	-11.43	QP		
6		528.2458	39.45	-6.74	32.71	46.00	-13.29	QP		

*:Maximum data x:Over limit !:over margin

Operator: KK



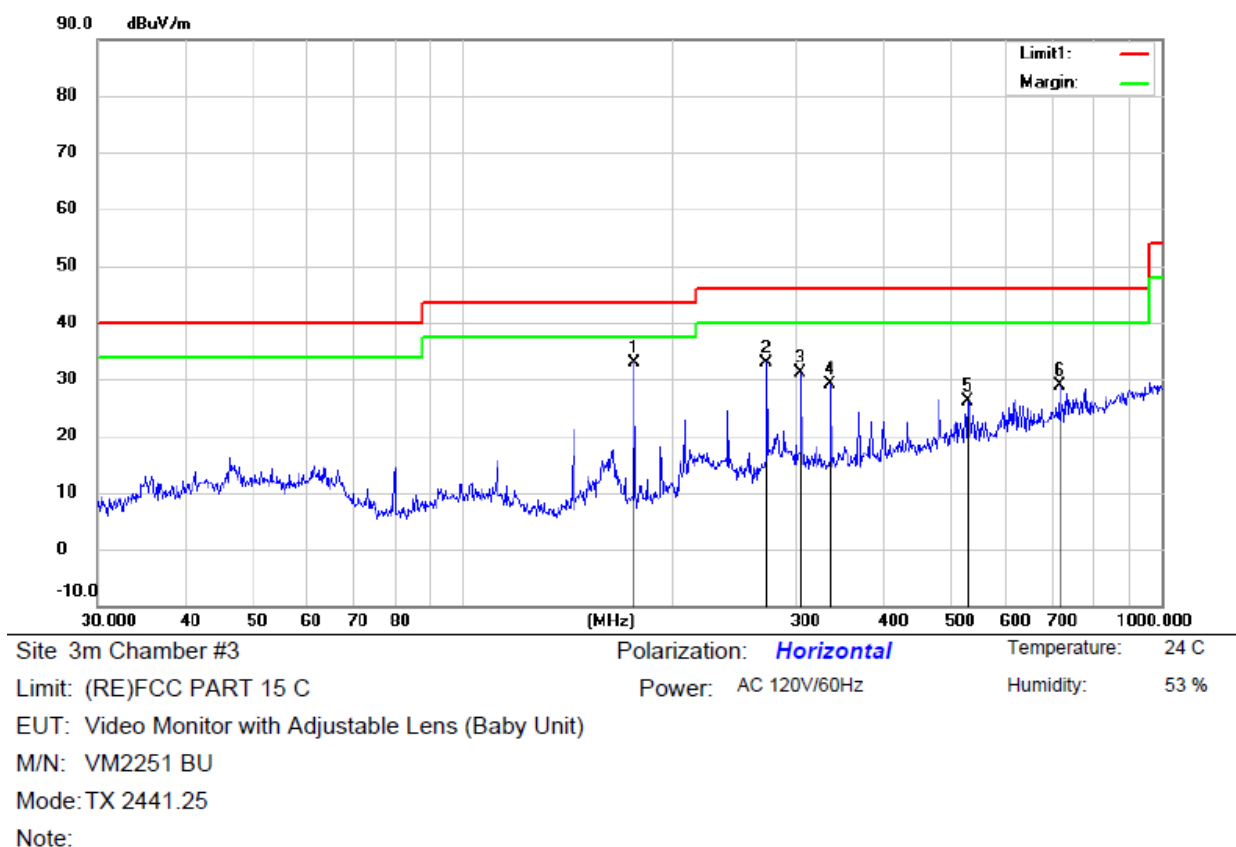
Site 3m Chamber #3
 Limit: (RE)FCC PART 15 C
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: TX 2441.25
 Note:

Polarization: **Vertical**
 Power: AC 120V/60Hz
 Temperature: 24 C
 Humidity: 53 %

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		37.6797	42.85	-15.76	27.09	40.00	-12.91	QP		
2	*	47.9940	42.29	-13.79	28.50	40.00	-11.50	QP		
3		60.4918	40.53	-15.71	24.82	40.00	-15.18	QP		
4		176.2686	43.00	-17.67	25.33	43.50	-18.17	QP		
5		272.2776	46.29	-13.19	33.10	46.00	-12.90	QP		
6		528.2458	40.04	-6.74	33.30	46.00	-12.70	QP		

*:Maximum data x:Over limit !:over margin

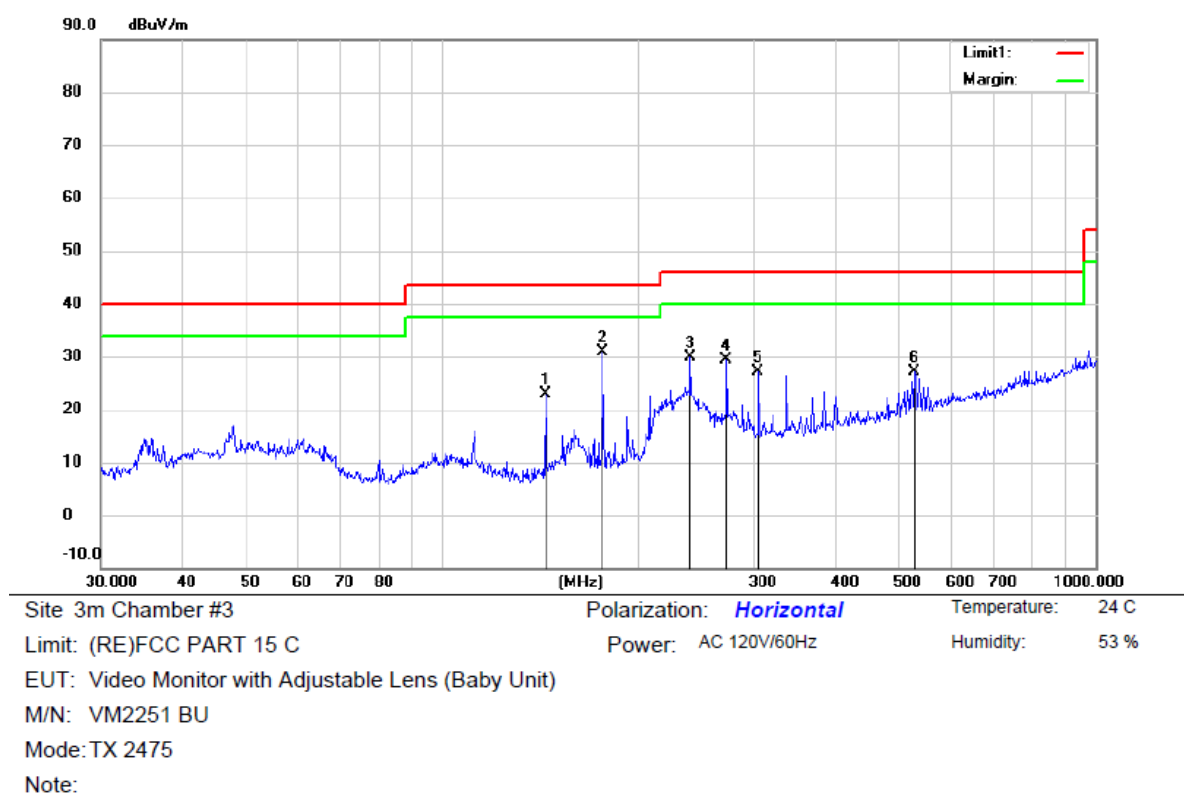
Operator: KK



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1	*	176.2686	50.52	-17.67	32.85	43.50	-10.65	QP		
2		272.2776	45.95	-13.19	32.76	46.00	-13.24	QP		
3		304.6100	43.51	-12.36	31.15	46.00	-14.85	QP		
4		336.0351	40.25	-11.02	29.23	46.00	-16.77	QP		
5		528.2458	32.99	-6.74	26.25	46.00	-19.75	QP		
6		714.1733	32.18	-3.36	28.82	46.00	-17.18	QP		

*:Maximum data x:Over limit !:over margin

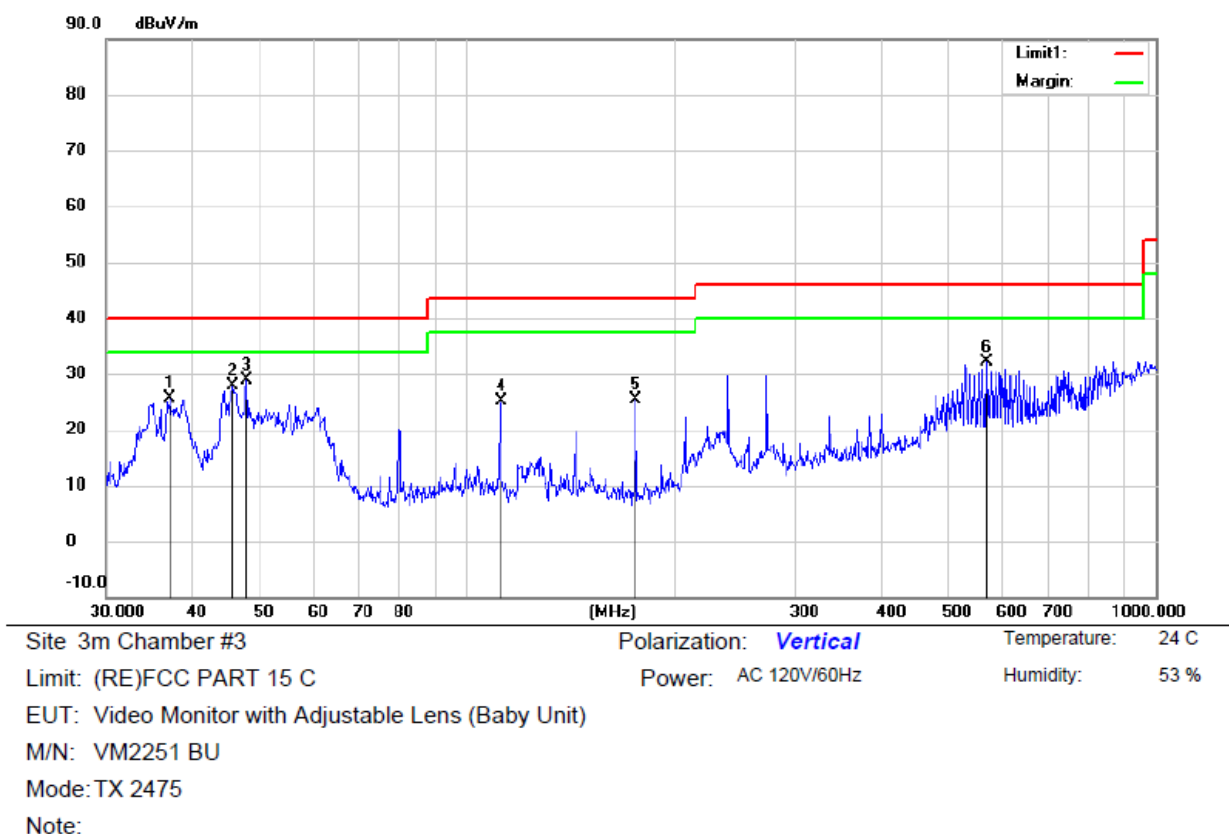
Operator: KK



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		143.8294	42.29	-19.37	22.92	43.50	-20.58	QP		
2	*	176.2685	48.44	-17.67	30.77	43.50	-12.73	QP		
3		239.9873	43.87	-13.90	29.97	46.00	-16.03	QP		
4		272.2776	42.49	-13.19	29.30	46.00	-16.70	QP		
5		304.6100	39.47	-12.36	27.11	46.00	-18.89	QP		
6		528.2458	33.85	-6.74	27.11	46.00	-18.89	QP		

*:Maximum data x:Over limit !:over margin

Operator: KK



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		37.1550	41.51	-16.00	25.51	40.00	-14.49	QP		
2		45.8551	41.82	-14.03	27.79	40.00	-12.21	QP		
3	*	47.9940	42.61	-13.79	28.82	40.00	-11.18	QP		
4		112.1303	41.15	-16.09	25.06	43.50	-18.44	QP		
5		176.2685	43.02	-17.67	25.35	43.50	-18.15	QP		
6		568.6126	38.17	-6.11	32.06	46.00	-13.94	QP		

*:Maximum data x:Over limit !:over margin

Operator: KK

8.9 CONDUCTED EMISSION TEST

8.9.1 Applicable Standard

According to FCC Part 15.207(a)
According to IC RSS-Gen 6.13

8.9.2 Conformance Limit

Conducted Emission Limit		
Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50
Note: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.		

8.9.3 Test Configuration

Test according to clause 7.3 conducted emission test setup

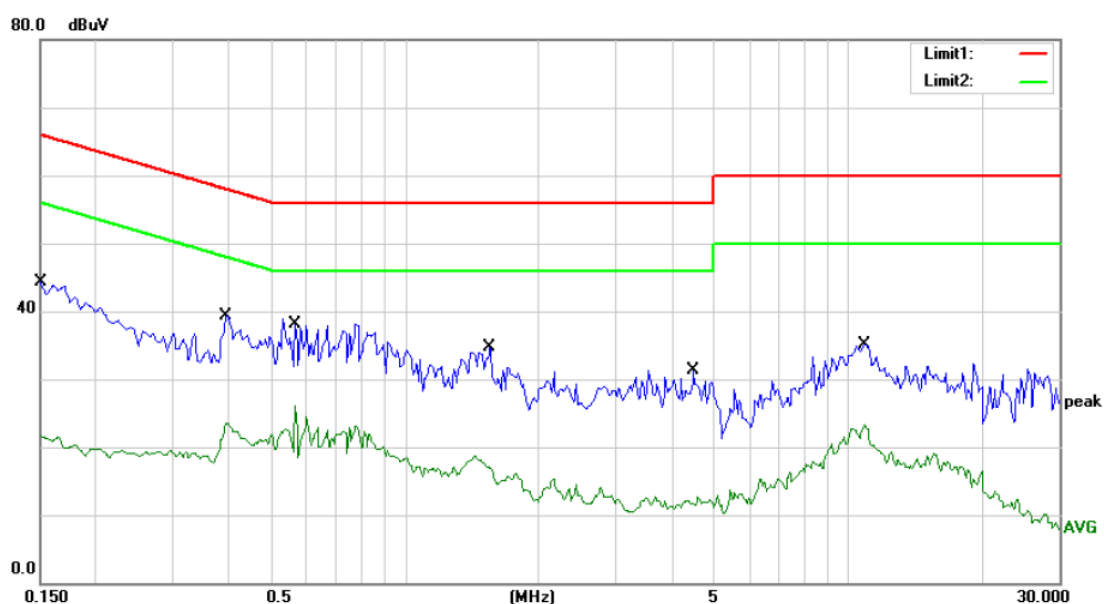
8.9.4 Test Procedure

The EUT was placed on a table which is 0.1m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

8.9.5 Test Results

Pass

We test the EUT at 120V, and show the worst result as bellow.



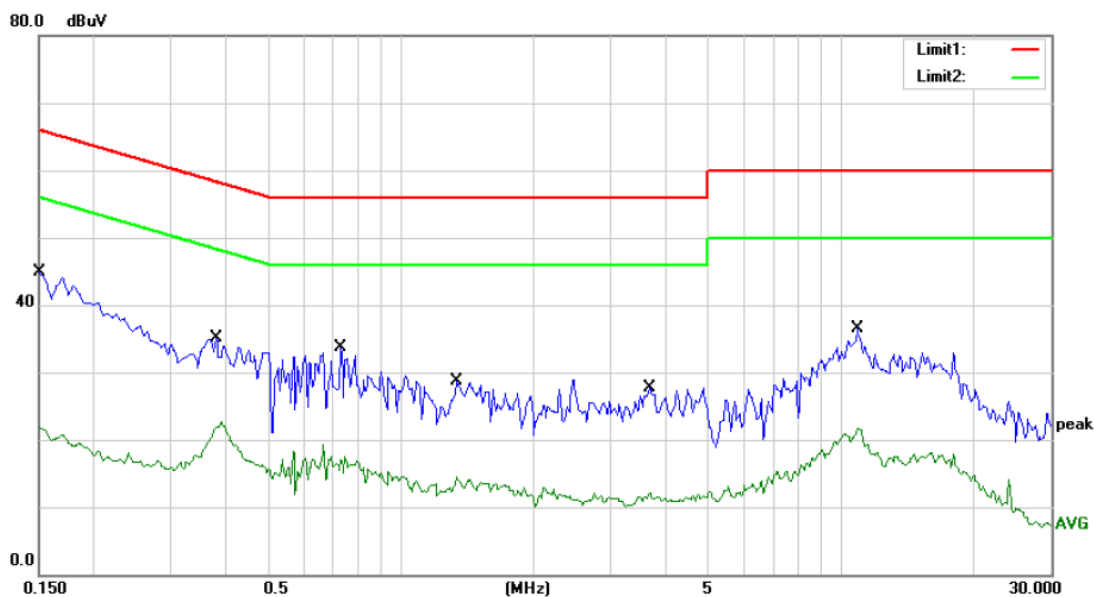
Site Conduction #1
 Limit: (CE)FCC PART 15 C
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: 2.4G Wireless Connecting
 Note: Adapter: CS3E060040LU

Phase: **L1**
 Power: AC 120V/60Hz

Temperature: 22
 Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	44.31	0.00	44.31	66.00	-21.69	QP	
2		0.1500	21.75	0.00	21.75	56.00	-34.25	AVG	
3		0.3950	39.35	0.00	39.35	57.96	-18.61	QP	
4		0.3950	23.50	0.00	23.50	47.96	-24.46	AVG	
5	*	0.5650	38.08	0.00	38.08	56.00	-17.92	QP	
6		0.5650	26.20	0.00	26.20	46.00	-19.80	AVG	
7		1.5600	34.62	0.00	34.62	56.00	-21.38	QP	
8		1.5600	18.79	0.00	18.79	46.00	-27.21	AVG	
9		4.4950	31.28	0.00	31.28	56.00	-24.72	QP	
10		4.4950	12.67	0.00	12.67	46.00	-33.33	AVG	
11		10.8750	35.18	0.00	35.18	60.00	-24.82	QP	
12		10.8750	23.32	0.00	23.32	50.00	-26.68	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan

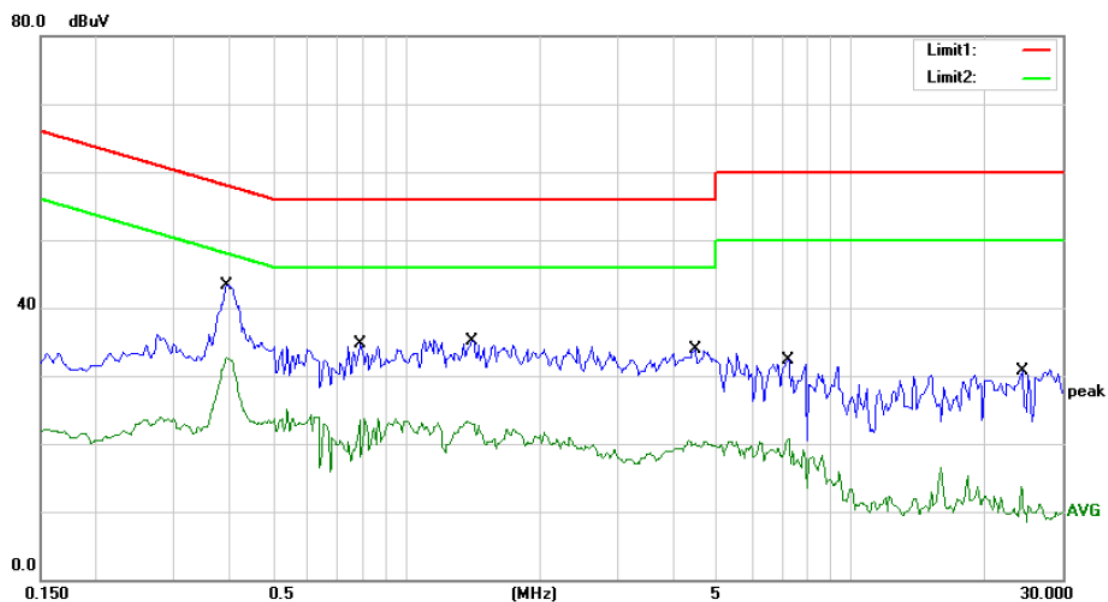


Site Conduction #1
 Limit: (CE)FCC PART 15 C
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: 2.4G Wireless Connecting
 Note: Adapter: CS3E060040LU

Phase: **N** Temperature: 22
 Power: AC 120V/60Hz Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	44.89	0.00	44.89	66.00	-21.11	QP	
2		0.1500	21.92	0.00	21.92	56.00	-34.08	AVG	
3		0.3800	35.02	0.00	35.02	58.28	-23.26	QP	
4		0.3800	22.67	0.00	22.67	48.28	-25.61	AVG	
5		0.7300	33.70	0.00	33.70	56.00	-22.30	QP	
6		0.7300	19.23	0.00	19.23	46.00	-26.77	AVG	
7		1.3350	28.70	0.00	28.70	56.00	-27.30	QP	
8		1.3350	14.42	0.00	14.42	46.00	-31.58	AVG	
9		3.6800	27.61	0.00	27.61	56.00	-28.39	QP	
10		3.6800	12.03	0.00	12.03	46.00	-33.97	AVG	
11		10.8500	36.45	0.00	36.45	60.00	-23.55	QP	
12		10.8500	21.75	0.00	21.75	50.00	-28.25	AVG	

*:Maximum data x:Over limit l:over margin Comment: Factor build in receiver. Operator: Stan

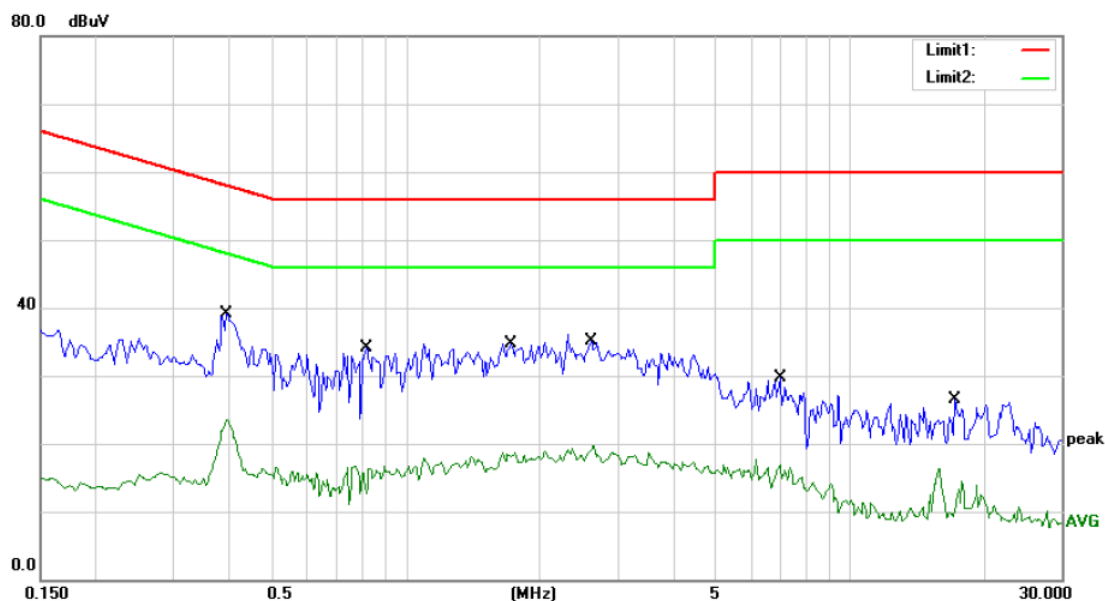


Site Conduction #1
 Limit: (CE)FCC PART 15 C
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: 2.4G Wireless Connecting
 Note: Adapter: S003AKU0600040

Phase: **L1** Temperature: 22
 Power: AC 120V/60Hz Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.3950	43.34	0.00	43.34	57.96	-14.62	QP	
2		0.3950	32.61	0.00	32.61	47.96	-15.35	AVG	
3		0.7900	34.73	0.00	34.73	56.00	-21.27	QP	
4		0.7900	23.77	0.00	23.77	46.00	-22.23	AVG	
5		1.4050	35.07	0.00	35.07	56.00	-20.93	QP	
6		1.4050	23.24	0.00	23.24	46.00	-22.76	AVG	
7		4.4304	33.72	0.00	33.72	56.00	-22.28	QP	
8		4.4304	20.42	0.00	20.42	46.00	-25.58	AVG	
9		7.2500	32.33	0.00	32.33	60.00	-27.67	QP	
10		7.2500	20.78	0.00	20.78	50.00	-29.22	AVG	
11		24.4500	30.79	0.00	30.79	60.00	-29.21	QP	
12		24.4500	13.66	0.00	13.66	50.00	-36.34	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan



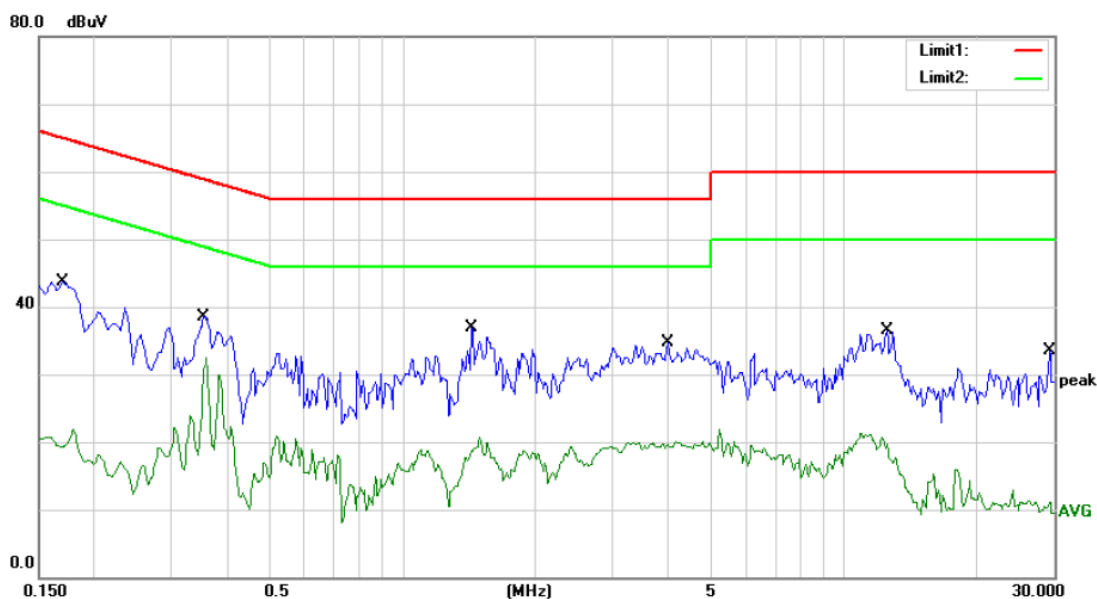
Site Conduction #1
 Limit: (CE)FCC PART 15 C
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: 2.4G Wireless Connecting
 Note: Adapter: S003AKU0600040

Phase: **N**
 Power: AC 120V/60Hz

Temperature: 22
 Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.3950	39.15	0.00	39.15	57.96	-18.81	QP	
2		0.3950	23.58	0.00	23.58	47.96	-24.38	AVG	
3		0.8150	34.19	0.00	34.19	56.00	-21.81	QP	
4		0.8150	16.74	0.00	16.74	46.00	-29.26	AVG	
5		1.7250	34.80	0.00	34.80	56.00	-21.20	QP	
6		1.7250	18.79	0.00	18.79	46.00	-27.21	AVG	
7		2.6150	35.13	0.00	35.13	56.00	-20.87	QP	
8		2.6150	19.71	0.00	19.71	46.00	-26.29	AVG	
9		6.9750	29.64	0.00	29.64	60.00	-30.36	QP	
10		6.9750	17.65	0.00	17.65	50.00	-32.35	AVG	
11		17.2000	26.44	0.00	26.44	60.00	-33.56	QP	
12		17.2000	16.38	0.00	16.38	50.00	-33.62	AVG	

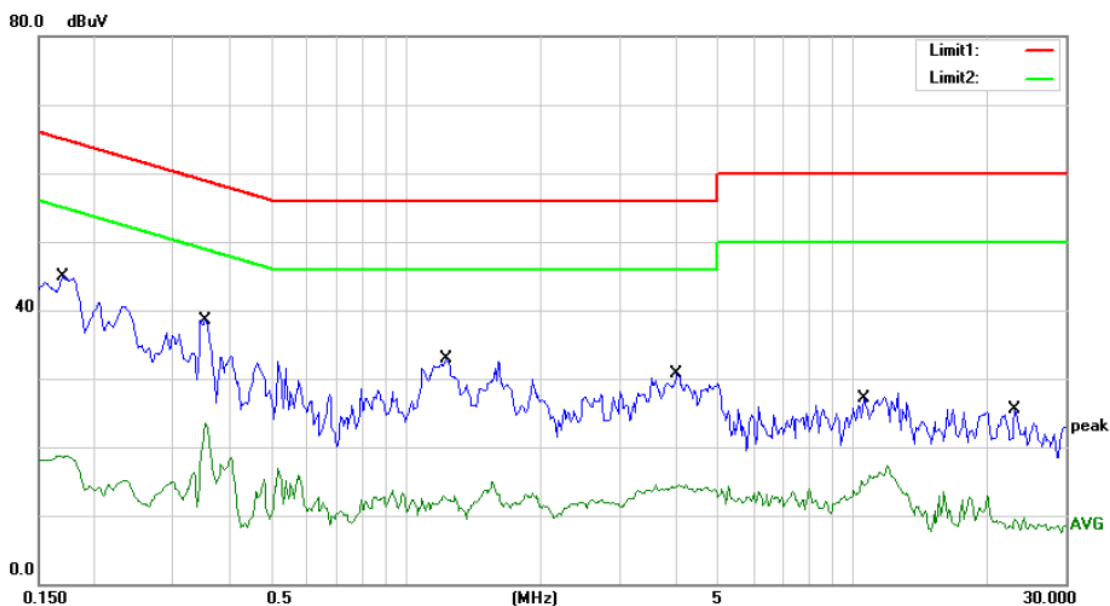
*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan



Site Conduction #1 Phase: **L1** Temperature: 22
 Limit: (CE)FCC PART 15 C Power: AC 120V/60Hz Humidity: 55 %
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: 2.4G Wireless Connecting
 Note: Adapter: VT05UUS06040

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1700	43.72	0.00	43.72	64.96	-21.24	QP	
2		0.1700	21.93	0.00	21.93	54.96	-33.03	AVG	
3		0.3550	38.60	0.00	38.60	58.84	-20.24	QP	
4	*	0.3550	32.57	0.00	32.57	48.84	-16.27	AVG	
5		1.4400	37.00	0.00	37.00	56.00	-19.00	QP	
6		1.4400	20.65	0.00	20.65	46.00	-25.35	AVG	
7		3.9850	34.72	0.00	34.72	56.00	-21.28	QP	
8		3.9850	20.08	0.00	20.08	46.00	-25.92	AVG	
9		12.5250	36.43	0.00	36.43	60.00	-23.57	QP	
10		12.5250	21.29	0.00	21.29	50.00	-28.71	AVG	
11		29.3500	33.43	0.00	33.43	60.00	-26.57	QP	
12		29.3500	12.92	0.00	12.92	50.00	-37.08	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan



Site Conduction #1
 Limit: (CE)FCC PART 15 C
 EUT: Video Monitor with Adjustable Lens (Baby Unit)
 M/N: VM2251 BU
 Mode: 2.4G Wireless Connecting
 Note: Adapter: VT05UUS06040

Phase: **N** Temperature: 22
 Power: AC 120V/60Hz Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1700	44.96	0.00	44.96	64.96	-20.00	QP	
2		0.1700	18.64	0.00	18.64	54.96	-36.32	AVG	
3		0.3550	38.60	0.00	38.60	58.84	-20.24	QP	
4		0.3550	23.52	0.00	23.52	48.84	-25.32	AVG	
5		1.2250	32.81	0.00	32.81	56.00	-23.19	QP	
6		1.2250	14.85	0.00	14.85	46.00	-31.15	AVG	
7		4.0300	30.69	0.00	30.69	56.00	-25.31	QP	
8		4.0300	14.42	0.00	14.42	46.00	-31.58	AVG	
9		10.6000	27.10	0.00	27.10	60.00	-32.90	QP	
10		10.6000	17.30	0.00	17.30	50.00	-32.70	AVG	
11		23.0250	25.47	0.00	25.47	60.00	-34.53	QP	
12		23.0250	12.80	0.00	12.80	50.00	-37.20	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Stan

8.10 ANTENNA APPLICATION

8.10.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203 IC RSS-Gen 6.7	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 15.203 and IC RSS-Gen 6.7, 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. And according to FCC 47 CFR Section 15.247 (b) and IC RSS-Gen 6.7, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

8.10.2 Result

PASS.

The EUT has 1 antenna: a Integral Antenna, the gain is 0 dBi

- Note:
- ☒ Antenna use a permanently attached antenna which is not replaceable.
 - ☐ Not using a standard antenna jack or electrical connector for antenna replacement
 - ☐ The antenna has to be professionally installed (please provide method of installation)

which in accordance to section 15.203, please refer to the internal photos.

-----END OF REPORT-----