

MEASUREMENT REPORT

FCC PART 15.247 & IC RSS-247 802.11g

FCC ID: 2ASFG-CS1500H

IC: 24914-CS1500H

APPLICANT: Carestream Dental LLC

Application Type: Certification

Product: Intraoral Camera

Model No.: CS 1500, Wireless

FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s): Part 15 Subpart C (Section 15.247)

IC Rule(s): RSS-247 Issue 2, RSS-GEN Issue 5

Test Procedure(s): ANSI C63.10-2013, KDB 558074 D01v05r02

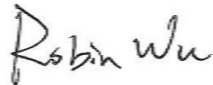
Test Date: March 05 ~ June 06, 2019

Reviewed By:



(Kevin Guo)

Approved By:



(Robin Wu)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1904WSU015-U1	Rev. 01	Initial report	04-29-2019	Invalid
1904WSU015-U1	Rev. 02	Add 99% Bandwidth	06-06-2019	Valid

CONTENTS

Description	Page
§2.1033 General Information	6
1. INTRODUCTION	7
1.1. Scope	7
1.2. MRT Test Location	7
2. PRODUCT INFORMATION	8
2.1. Feature of Equipment under Test	8
2.2. Product Specification Subjective to this Report.....	8
2.3. Operation Frequency / Channel List	9
2.4. Test Mode	9
2.5. Description of Test Software.....	9
2.6. Duty Cycle	9
2.7. Test Configuration	10
2.8. EMI Suppression Device(s)/Modifications.....	10
2.9. Labeling Requirements.....	10
3. DESCRIPTION OF TEST	11
3.1. Evaluation Procedure	11
3.2. AC Line Conducted Emissions	11
3.3. Radiated Emissions.....	12
4. ANTENNA REQUIREMENTS.....	13
5. TEST EQUIPMENT CALIBRATION DATE	14
6. MEASUREMENT UNCERTAINTY.....	16
7. TEST RESULT	17
7.1. Summary	17
7.2. 99%Bandwidth Measurement.....	18
7.2.1. Test Limit	18
7.2.2. Test Procedure used.....	18
7.2.3. Test Setting.....	18
7.2.4. Test Setup.....	18
7.2.5. Test Result.....	19
7.3. 6dB Bandwidth Measurement.....	20
7.3.1. Test Limit	20
7.3.2. Test Procedure used.....	20
7.3.3. Test Setting.....	20

7.3.4.	Test Setup.....	20
7.3.5.	Test Result.....	21
7.4.	Output Power Measurement.....	22
7.4.1.	Test Limit	22
7.4.2.	Test Procedure Used	22
7.4.3.	Test Setting.....	22
7.4.4.	Test Setup.....	23
7.4.5.	Test Result.....	24
7.5.	Power Spectral Density Measurement.....	26
7.5.1.	Test Limit	26
7.5.2.	Test Procedure Used	26
7.5.3.	Test Setting.....	26
7.5.4.	Test Setup.....	26
7.5.5.	Test Result.....	27
7.6.	Conducted Band Edge and Out-of-Band Emissions.....	28
7.6.1.	Test Limit	28
7.6.2.	Test Procedure Used	28
7.6.3.	Test Setting.....	28
7.6.4.	Test Setup.....	29
7.6.5.	Test Result.....	30
7.7.	Radiated Spurious Emission Measurement.....	32
7.7.1.	Test Limit	32
7.7.2.	Test Procedure Used	32
7.7.3.	Test Setting.....	32
7.7.4.	Test Setup.....	34
7.7.5.	Test Result.....	35
7.8.	Radiated Restricted Band Edge Measurement.....	40
7.8.1.	Test Limit	40
7.8.2.	Test Procedure Used	43
7.8.3.	Test Setting.....	43
7.8.4.	Test Setup.....	44
7.8.5.	Test Result.....	45
7.9.	AC Conducted Emissions Measurement.....	53
7.9.1.	Test Limit	53
7.9.2.	Test Setup.....	53
7.9.3.	Test Result.....	54
8.	CONCLUSION.....	56
	Appendix A – Test Setup Photograph.....	57

Appendix B – EUT Photograph 58

§2.1033 General Information

Applicant:	Carestream Dental LLC
Applicant Address:	3625 Cumberland Boulevard, Suite 700 Atlanta, GA USA 30339
Manufacturer:	Carestream Dental LLC
Manufacturer Address:	3625 Cumberland Boulevard, Suite 700 Atlanta, GA USA 30339
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
Test Device Serial No.:	N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 893164) test facility with the site description report on file and has met all the requirements specified in ANSI C63.4-2014.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-20025, G-20034, C-20020, T-20020) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications, Radio and SAR testing.



1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The measurement facility compliant with the test site requirements specified in ANSI C63.4-2014.



2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name:	Intraoral Camera
Model No.:	CS 1500, Wireless
WiFi Specification	802.11g

2.2. Product Specification Subjective to this Report

Frequency Range	802.11g: 2412 ~ 2462MHz
Channel Number:	802.11g: 11
Type of Modulation	802.11g: OFDM
Data Rate:	802.11g: 6/9/12/18/24/36/48/54Mbps
Antenna type	Chip Antenna
Antenna Gain	1 dBi

Note: For other features of this EUT, test report will be issued separately.

2.3. Operation Frequency / Channel List

Wi-Fi 802.11g

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

2.4. Test Mode

Test Mode	Mode 1: Transmit by 802.11g
-----------	-----------------------------

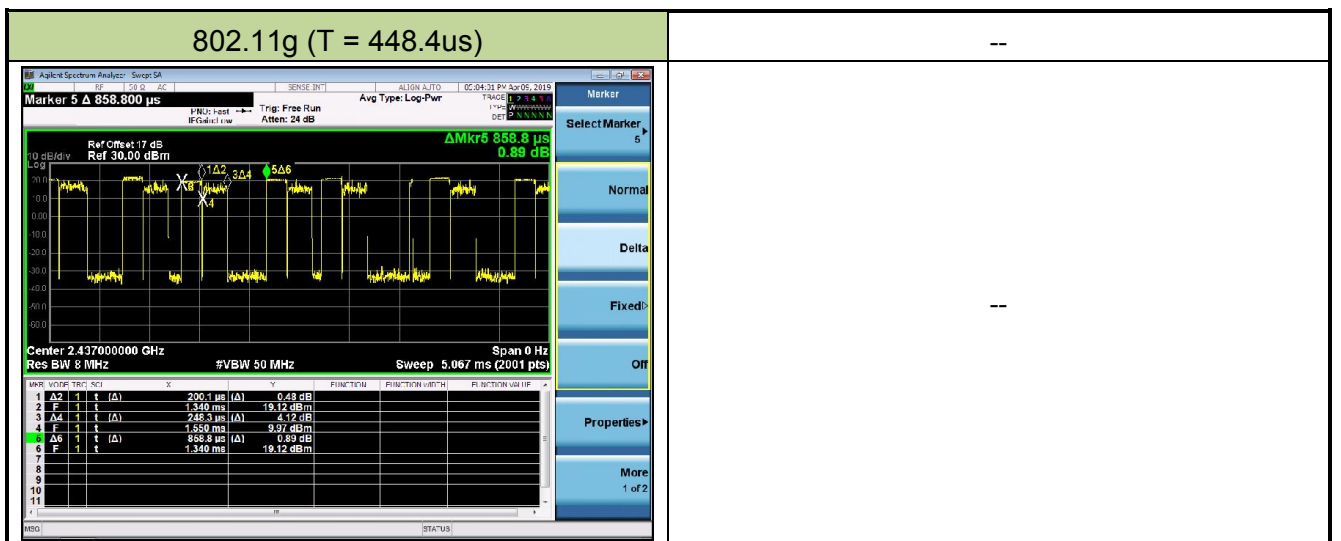
2.5. Description of Test Software

The test utility software used during testing was engineering directive ordered by applicant.

2.6. Duty Cycle

2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycle was determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11g	52.2%



2.7. Test Configuration

The **Intraoral Camera** was tested per the guidance of ANSI C63.10-2013. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.8. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.9. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

RSP-100 Issue 11 Section 3

The manufacturer, importer or distributor shall meet the labelling requirements set out in this section for every unit:

- (i) prior to marketing in Canada, for products manufactured in Canada
- (ii) prior to importation into Canada, for imported products

For information regarding the e-labelling option, see Notice 2014–DRS1003. The label for the certified product represents the manufacturer's or importer's compliance with Innovation, Science and Economic Development Canada's (ISED) regulatory requirements.

Please see attachment for IC label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and were used in the measurement of the device.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. A MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-25GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antenna of the device is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The device unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions - SR2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2020/04/15
Two-Line V-Network	R&S	ENV 216	MRTSUE06002	1 year	2019/06/14
Two-Line V-Network	R&S	ENV 216	MRTSUE06003	1 year	2019/06/14
Thermohygrometer	Testo	608-H1	MRTSUE06404	1 year	2019/08/14
Shielding Anechoic Chamber	MIX-BEP	Chamber-SR2	MRTSUE06214	N/A	N/A

Radiated Emissions - AC1

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2019/08/13
PXA Signal Analyzer	Keysight	9030B	MRTSUE06395	1 year	2019/09/25
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2019/11/09
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2020/03/31
Broad Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2019/10/19
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2019/12/17
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2019/11/16
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2019/06/12
Thermohygrometer	Testo	608-H1	MRTSUE06403	1 year	2019/08/14
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06213	1 year	2019/05/01

Radiated Emission - AC2

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Keysight	N9038A	MRTSUE06125	1 year	2019/08/13
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2019/11/09
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2019/10/19
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06171	1 year	2019/11/09
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06024	1 year	2019/12/17
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2019/11/16
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2019/06/12
Temperature/Humidity Meter	Minggao	ETH529	MRTSUE06170	1 year	2019/12/13
Anechoic Chamber	RIKEN	Chamber-AC2	MRTSUE06213	1 year	2019/05/01

Conducted Test Equipment - TR3

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2020/04/15
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06452	1 year	2019/07/19
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2019/11/16
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2019/07/19
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2019/07/05
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2019/11/16
Thermohygrometer	testo	608-H1	MRTSUE06401	1 year	2019/08/14

Software	Version	Function
EMI Software	V3	EMI Test Software

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement - SR2
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 150kHz~30MHz: 3.46dB
Radiated Emission Measurement – AC1
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz ~ 1GHz: 4.18dB 1GHz ~ 25GHz: 4.76dB
Radiated Emission Measurement – AC2
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 9kHz ~ 1GHz: 3.86dB 1GHz ~ 25GHz: 4.33dB
Spurious Emissions, Conducted - TR3
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.78dB
Output Power - TR3
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.13dB
Power Spectrum Density - TR3
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 1.15dB
Occupied Bandwidth - TR3
Measuring Uncertainty for a Level of Confidence of 95% ($U=2Uc(y)$): 0.28%

7. TEST RESULT

7.1. Summary

FCC Section(s)	IC Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
N/A	RSS-GEN [6.7]	99% Bandwidth	N/A	Conducted	Pass	Section 7.2
15.247(a)(2)	RSS-247 [5.2]	6dB Bandwidth	$\geq 500\text{kHz}$		Pass	Section 7.3
15.247(b)(3)	RSS-247 [5.4(4)]	Output Power	$\leq 30\text{dBm}$		Pass	Section 7.4
15.247(e)	RSS-247 [5.2]	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$		Pass	Section 7.5
15.247(d)	RSS-247 [5.5]	Band Edge / Out-of-Band Emissions	$\leq 30\text{dBc(Average)}$		Pass	Section 7.6
15.205 15.209	RSS-247 [5.5]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 7.7 & 7.8
15.207	RSS-Gen [8.8]	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.9

Notes:

- 1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 2) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.

7.2. 99%Bandwidth Measurement

7.2.1.Test Limit

N/A

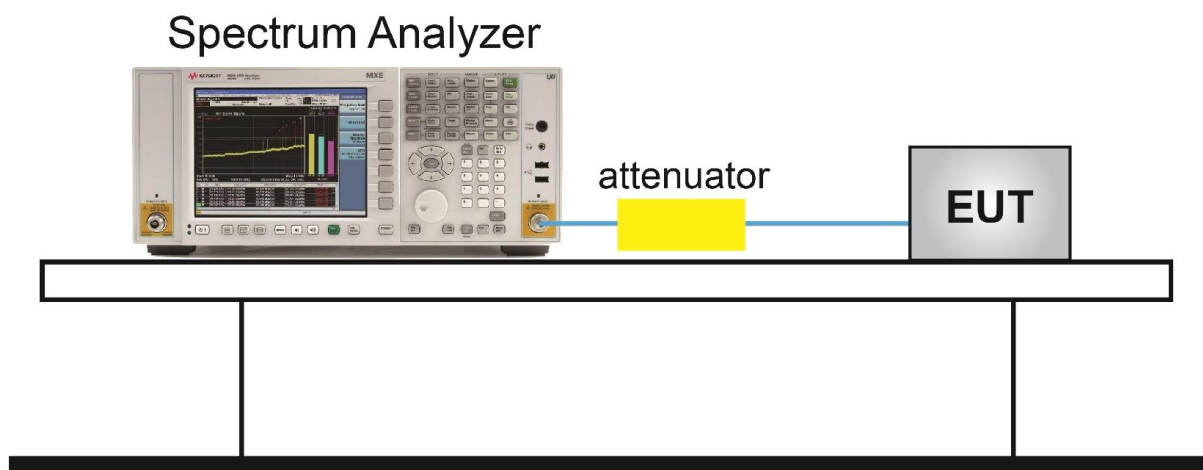
7.2.2.Test Procedure used

ANSI C63.10-2013 Section 6.9.3

7.2.3.Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. Span = 1.5 times to 5.0 times the OBW.
3. RBW = 1 % to 5 % of the OBW.
4. VBW $\geq 3 \times$ RBW.
5. Detector = Peak.
6. Trace mode = max hold.
7. Use the 99 % power bandwidth function of the instrument.

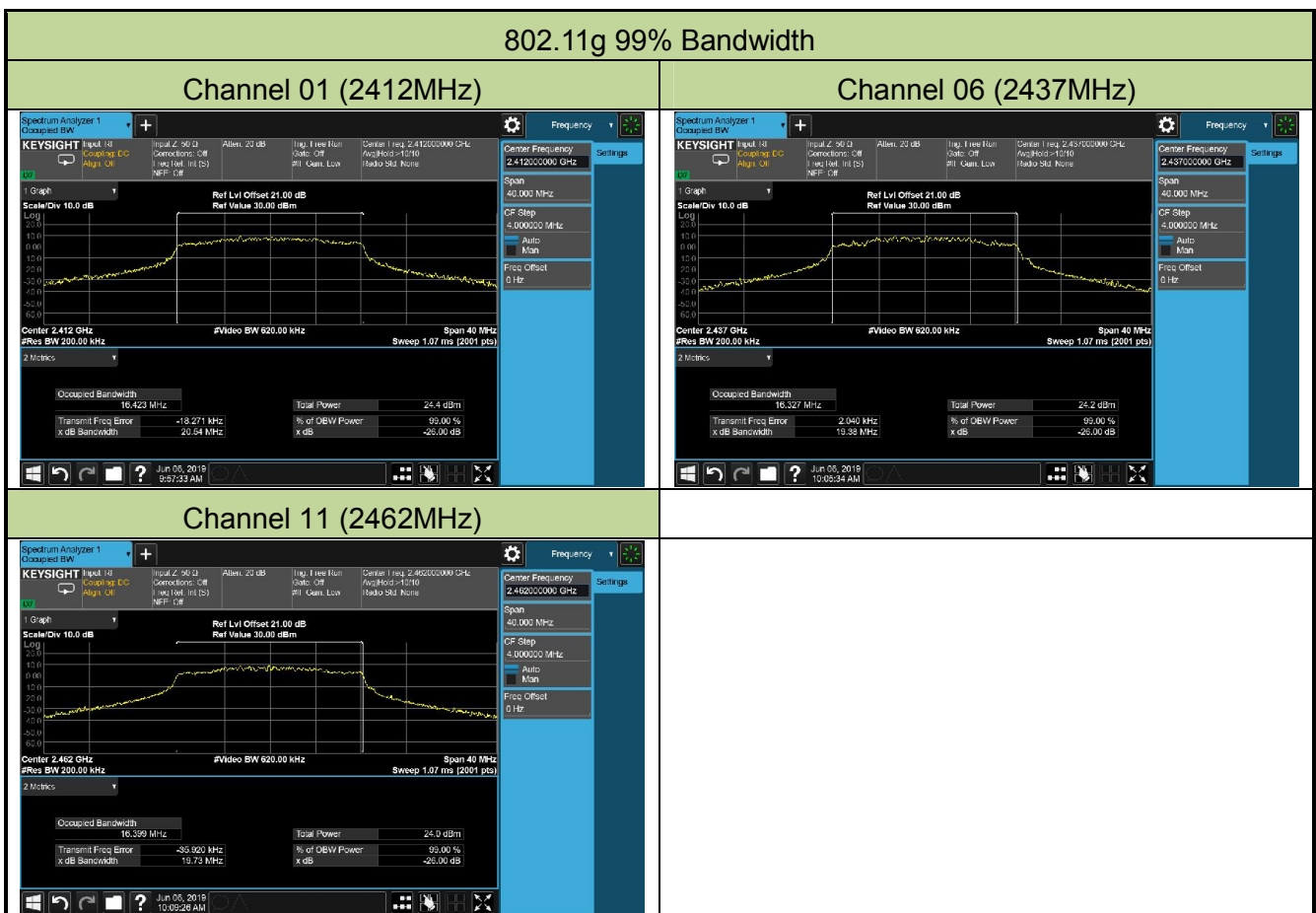
7.2.4.Test Setup



7.2.5. Test Result

Product	Intraoral Camera	Temperature	25°C
Test Engineer	Hunk Li	Relative Humidity	56%
Test Site	TR3	Test Date	2019/06/06

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	99% Bandwidth (MHz)	Result
802.11g	6Mbps	01	2412	16.40	Pass
802.11g	6Mbps	06	2437	16.33	Pass
802.11g	6Mbps	11	2462	16.40	Pass



7.3. 6dB Bandwidth Measurement

7.3.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

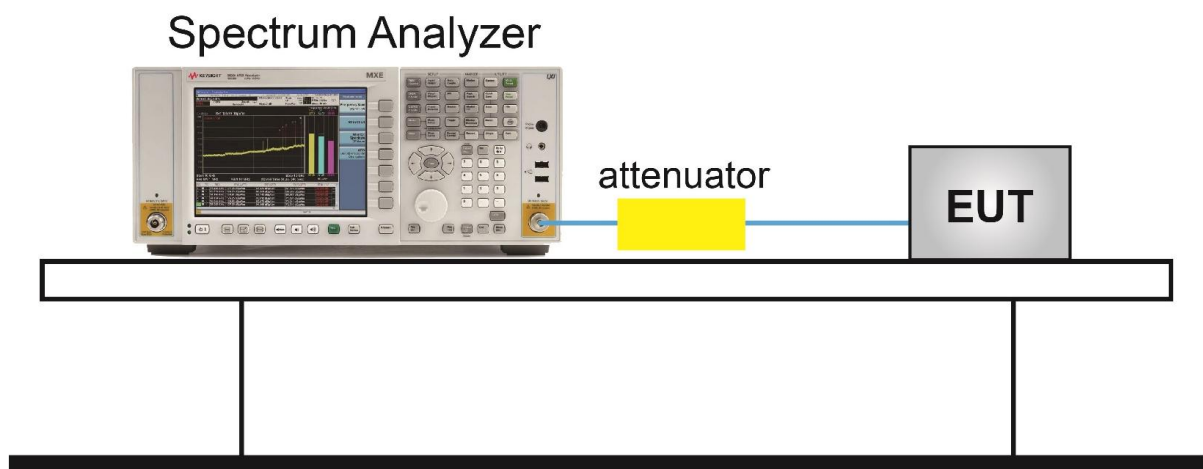
7.3.2. Test Procedure used

ANSI C63.10-2013 - Section 11.8.2 Option 2

7.3.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace was allowed to stabilize

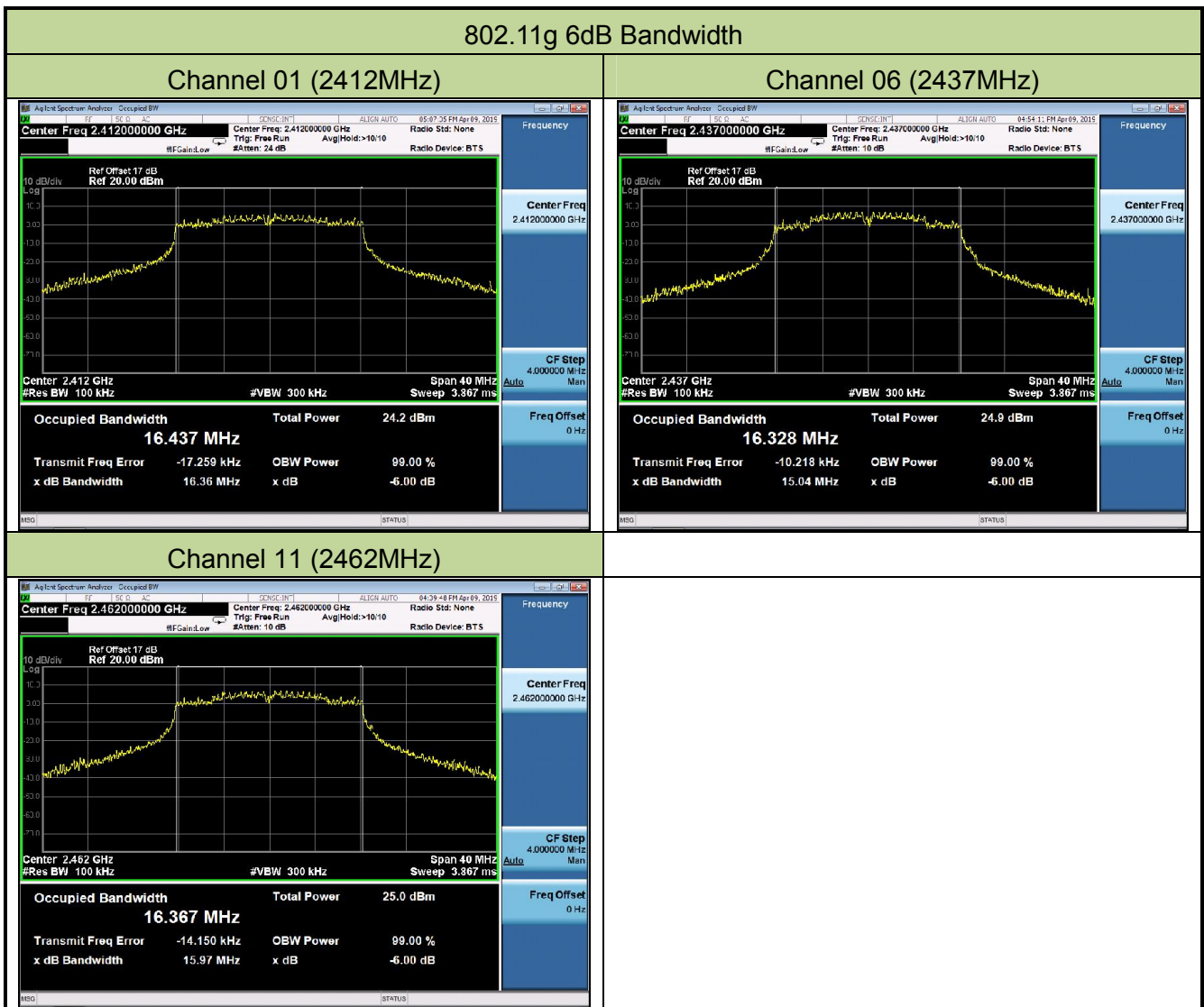
7.3.4. Test Setup



7.3.5. Test Result

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Amy Zhang	Relative Humidity	54%
Test Site	TR3	Test Date	2019/04/09

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11g	6Mbps	01	2412	16.36	≥0.5	Pass
802.11g	6Mbps	06	2437	15.04	≥0.5	Pass
802.11g	6Mbps	11	2462	15.97	≥0.5	Pass



7.4. Output Power Measurement

7.4.1. Test Limit

The maximum conducted output power shall not exceed 1 Watt (30dBm) and the E.I.R.P shall not exceed 4 Watt (36dBm).

The total conducted output power shall be reduced by 1 dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6dBi.

7.4.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.9.1.3 PKPM1 Peak-reading power meter method

ANSI C63.10-2013 - Section 11.9.2.3.2 Method AVGPM-G

7.4.3. Test Setting

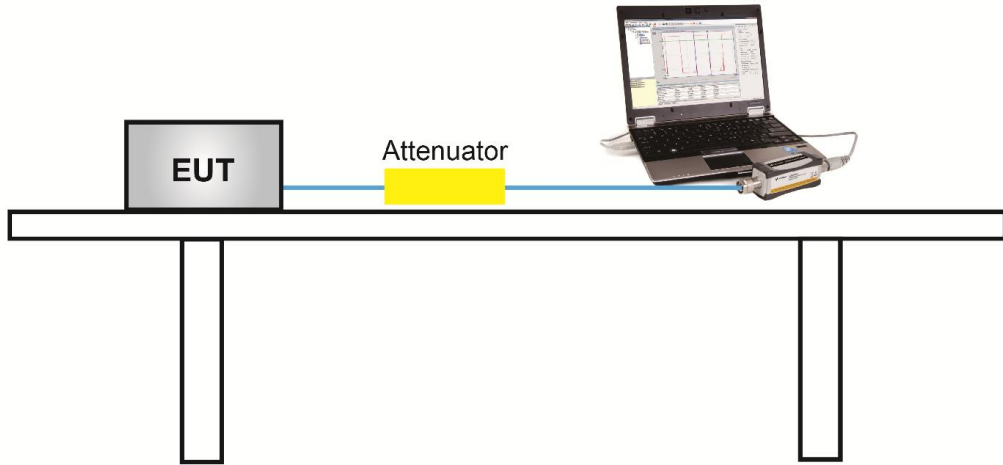
Method PKPM1 (Peak power measurement)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Method AVGPM-G (Measurement using a gated RF average-reading power meter)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

7.4.4. Test Setup



7.4.5. Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (gray marker) for final test of each channel.

Output power at various data rates:

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate / MCS	Average Power (dBm)
802.11g	20	06	2437	6Mbps	16.25
				24Mbps	16.21
				54Mbps	16.16

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Amy Zhang	Relative Humidity	54%
Test Site	TR3	Test Date	2019/04/09

Test Result of Peak Output Power

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Peak Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
11g	1Mbps	01	2412	22.04	≤ 30.00	23.04	≤ 36.00	Pass
11g	1Mbps	06	2437	22.13	≤ 30.00	23.13	≤ 36.00	Pass
11g	1Mbps	11	2462	22.63	≤ 30.00	23.63	≤ 36.00	Pass

Note: EIRP (dBm) = Peak Power (dBm) + Antenna Gain (dBi), Antenna Gain (dBi) = 1 dBi.

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
11g	1Mbps	01	2412	16.12	≤ 30.00	17.12	≤ 36.00	Pass
11g	1Mbps	06	2437	16.25	≤ 30.00	17.25	≤ 36.00	Pass
11g	1Mbps	11	2462	16.34	≤ 30.00	17.34	≤ 36.00	Pass

Note: EIRP (dBm) = Average Power (dBm) + Antenna Gain (dBi), Antenna Gain (dBi) = 1 dBi.

7.5. Power Spectral Density Measurement

7.5.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

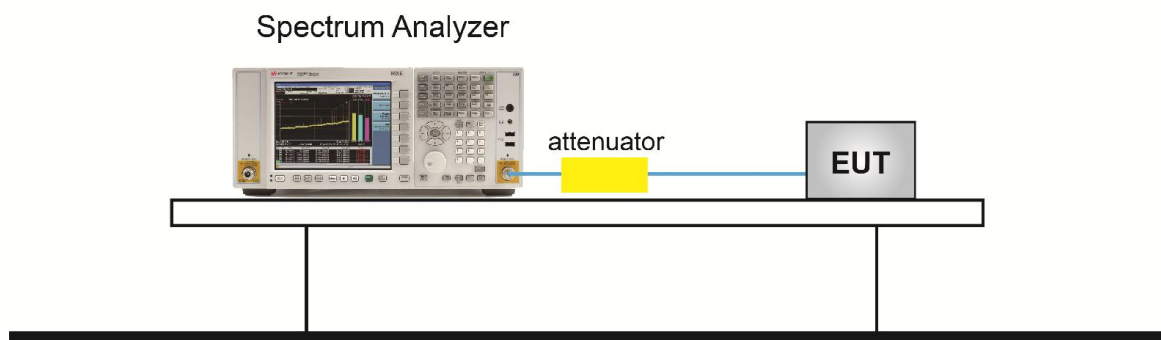
7.5.2. Test Procedure Used

ANSI C63.10 Section 11.10.2

7.5.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

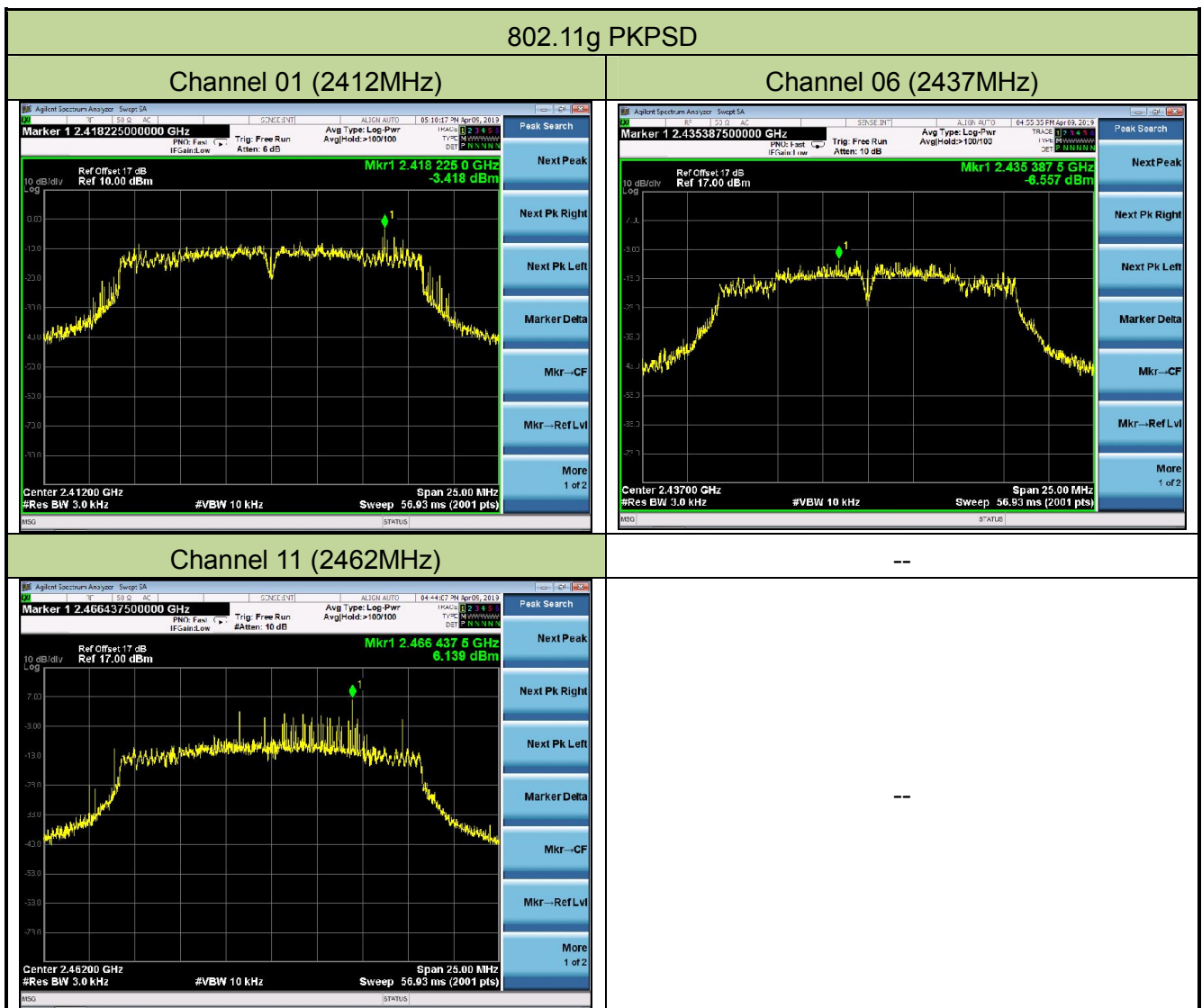
7.5.4. Test Setup



7.5.5. Test Result

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Amy Zhang	Relative Humidity	54%
Test Site	TR3	Test Date	2019/04/09

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Peak PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
11g	1Mbps	01	2412	-3.42	≤ 8.0	Pass
11g	1Mbps	06	2437	-6.56	≤ 8.0	Pass
11g	1Mbps	11	2462	6.14	≤ 8.0	Pass



7.6. Conducted Band Edge and Out-of-Band Emissions

7.6.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

7.6.2. Test Procedure Used

ANSI C63.10 Section 11.11

7.6.3. Test Setting

Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

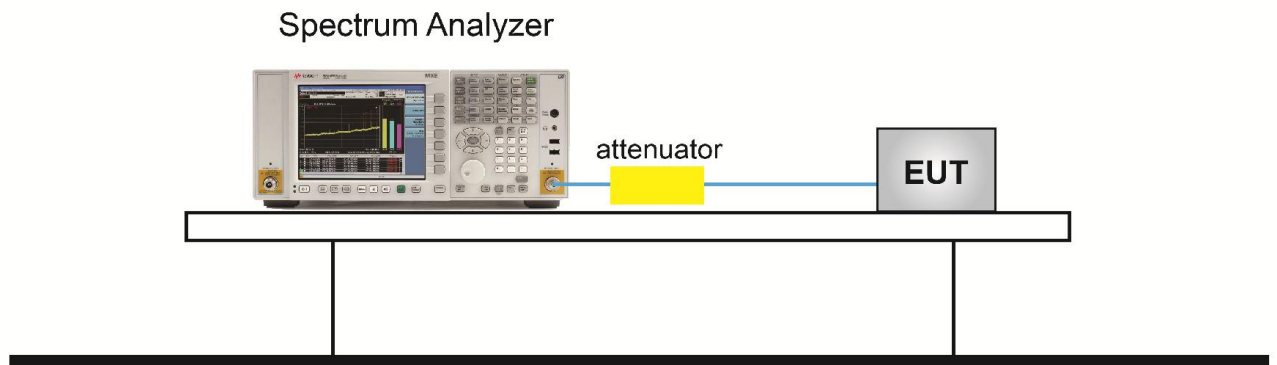
Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 1.3MHz
3. VBW = 4MHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

Test Notes

1. RBW was set to 1.3MHz rather than 100 kHz in order to increase the measurement speed.
2. The display line shown in the following plots denotes the limit at 20dB below the fundamental emission level measured in a 100 kHz bandwidth. However, since the traces in the following plots are measured with a 1.3MHz RBW, the display line may not necessarily appear to be 30dB below the level of the fundamental in a 1.3MHz bandwidth.
3. For plots showing conducted spurious emissions near the limit, the frequencies were investigated with a reduced RBW to ensure that no emissions were present.

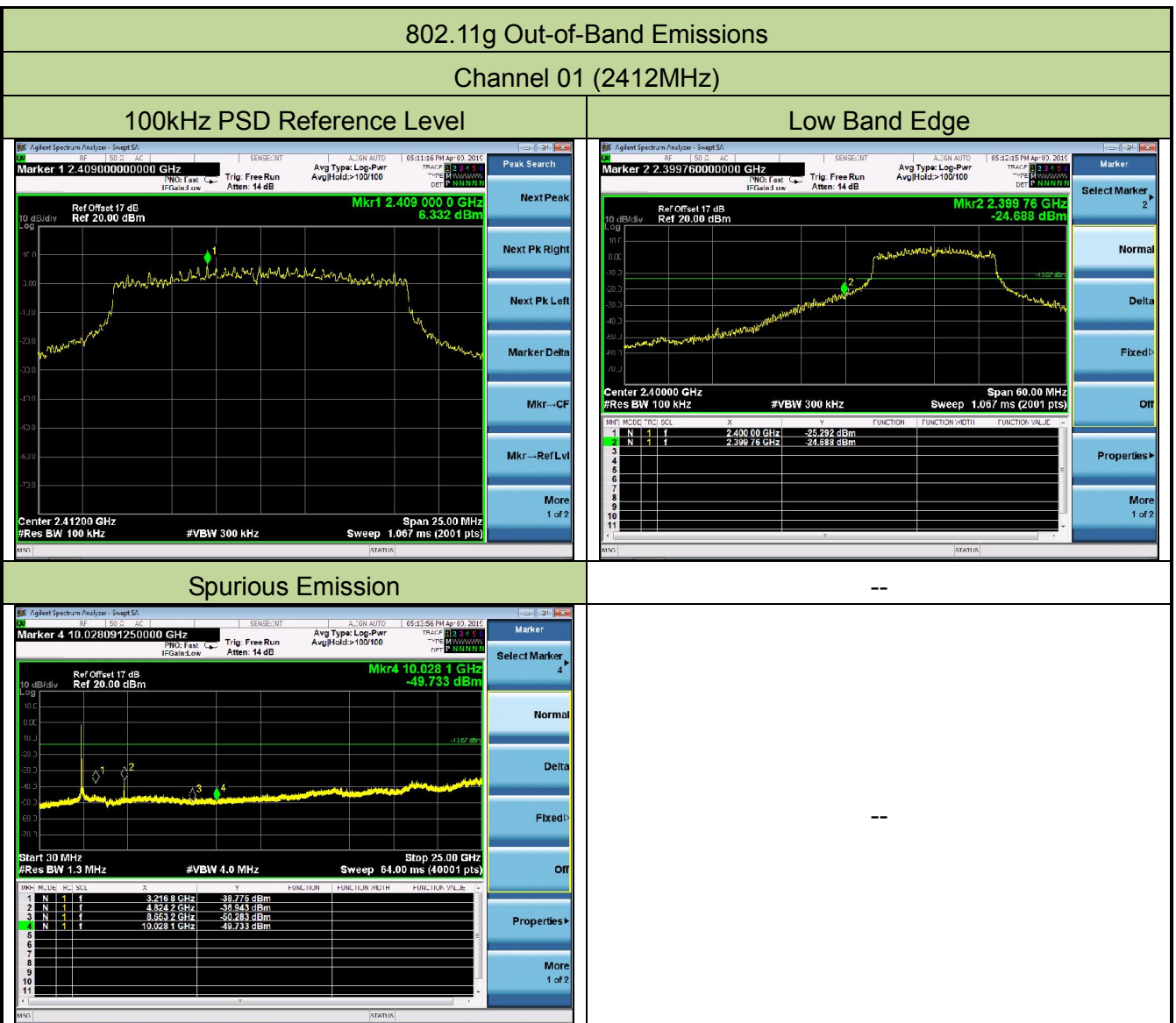
7.6.4. Test Setup



7.6.5. Test Result

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Amy Zhang	Relative Humidity	54%
Test Site	TR3	Test Date	2019/04/09

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit	Result
11g	6Mbps	01	2412	20dBc	Pass
11g	6Mbps	06	2437	20dBc	Pass
11g	6Mbps	11	2462	20dBc	Pass

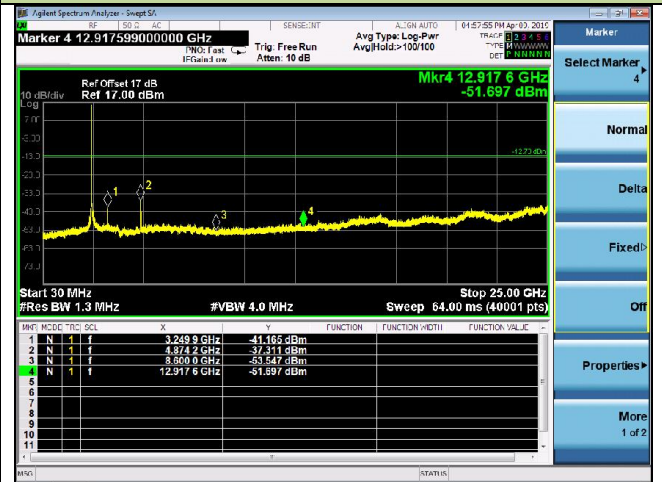


Channel 06 (2437MHz)

100kHz PSD Reference Level

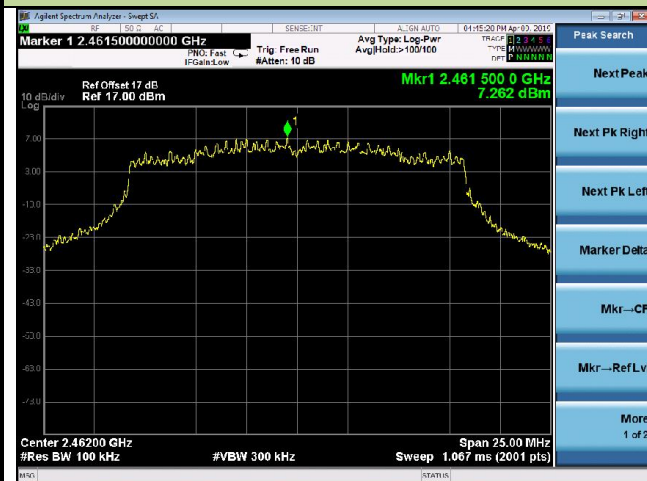


Spurious Emission



Channel 11 (2462MHz)

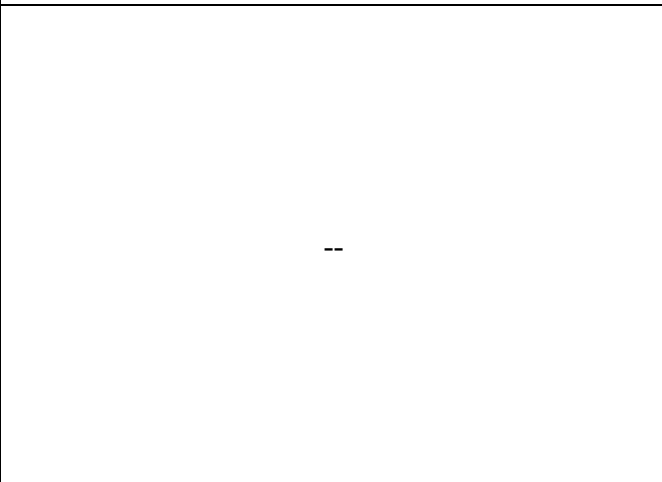
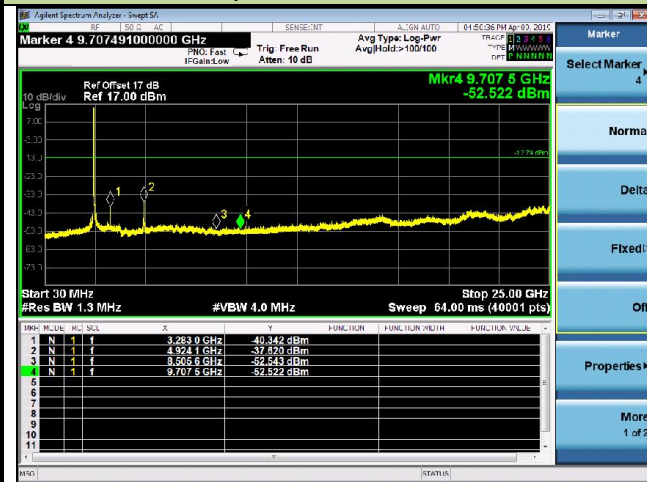
100kHz PSD Reference Level



High Band Edge



Spurious Emission



7.7. Radiated Spurious Emission Measurement

7.7.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.7.2. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.7.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

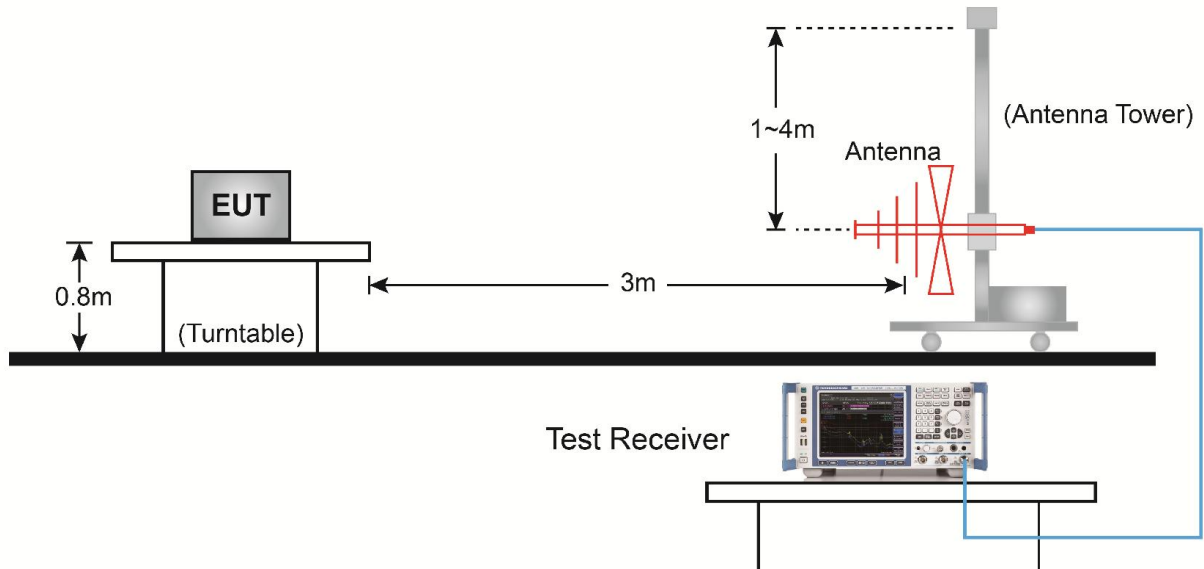
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

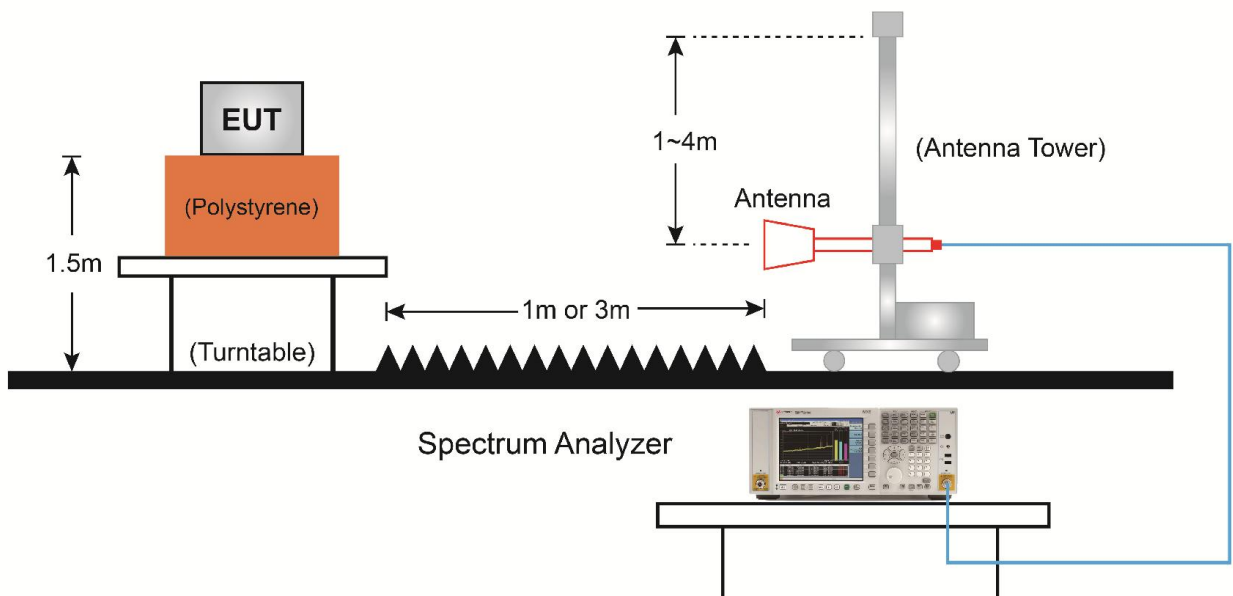
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.7.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



7.7.5. Test Result

Product	Intraoral Camera	Temperature	26°C
Test Engineer	Flag Yang	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/05
Test Mode:	802.11g	Test Channel:	01
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4034.5	37.6	3.4	41.0	74.0	-33.0	Peak	Horizontal
	5029.0	36.6	6.4	43.0	74.0	-31.0	Peak	Horizontal
*	6933.0	35.2	11.1	46.3	79.3	-33.0	Peak	Horizontal
*	10086.5	31.5	16.9	48.4	79.3	-30.9	Peak	Horizontal
	3992.0	38.9	3.2	42.1	74.0	-31.9	Peak	Vertical
	4825.0	36.0	5.9	41.9	74.0	-32.1	Peak	Vertical
*	6550.5	35.0	10.2	45.2	79.3	-34.1	Peak	Vertical
*	9865.5	32.0	16.7	48.7	79.3	-30.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (99.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Intraoral Camera	Temperature	26°C
Test Engineer	Flag Yang	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/05
Test Mode:	802.11g	Test Channel:	06
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3796.5	38.4	2.7	41.1	74.0	-32.9	Peak	Horizontal
	4893.0	36.2	6.0	42.2	74.0	-31.8	Peak	Horizontal
*	6516.5	36.0	9.9	45.9	79.7	-33.8	Peak	Horizontal
*	9857.0	32.4	16.7	49.1	79.7	-30.6	Peak	Horizontal
	3992.0	38.1	3.2	41.3	74.0	-32.7	Peak	Vertical
	4969.5	36.3	6.1	42.4	74.0	-31.6	Peak	Vertical
*	6525.0	36.0	10.0	46.0	79.7	-33.7	Peak	Vertical
*	10163.0	33.6	17.0	50.6	79.7	-29.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (99.7dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Intraoral Camera	Temperature	26°C
Test Engineer	Flag Yang	Relative Humidity	56%
Test Site	AC1	Test Date	2019/03/05
Test Mode:	802.11g	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4255.5	37.0	4.2	41.2	74.0	-32.8	Peak	Horizontal
	4978.0	37.2	6.2	43.4	74.0	-30.6	Peak	Horizontal
*	6975.5	36.1	11.2	47.3	77.9	-30.6	Peak	Horizontal
*	9772.0	33.1	16.2	49.3	77.9	-28.6	Peak	Horizontal
	3992.0	38.7	3.2	41.9	74.0	-32.1	Peak	Vertical
	5046.0	36.0	6.5	42.5	74.0	-31.5	Peak	Vertical
*	7162.5	35.6	12.5	48.1	77.9	-29.8	Peak	Vertical
*	9899.5	31.8	16.6	48.4	77.9	-29.5	Peak	Vertical

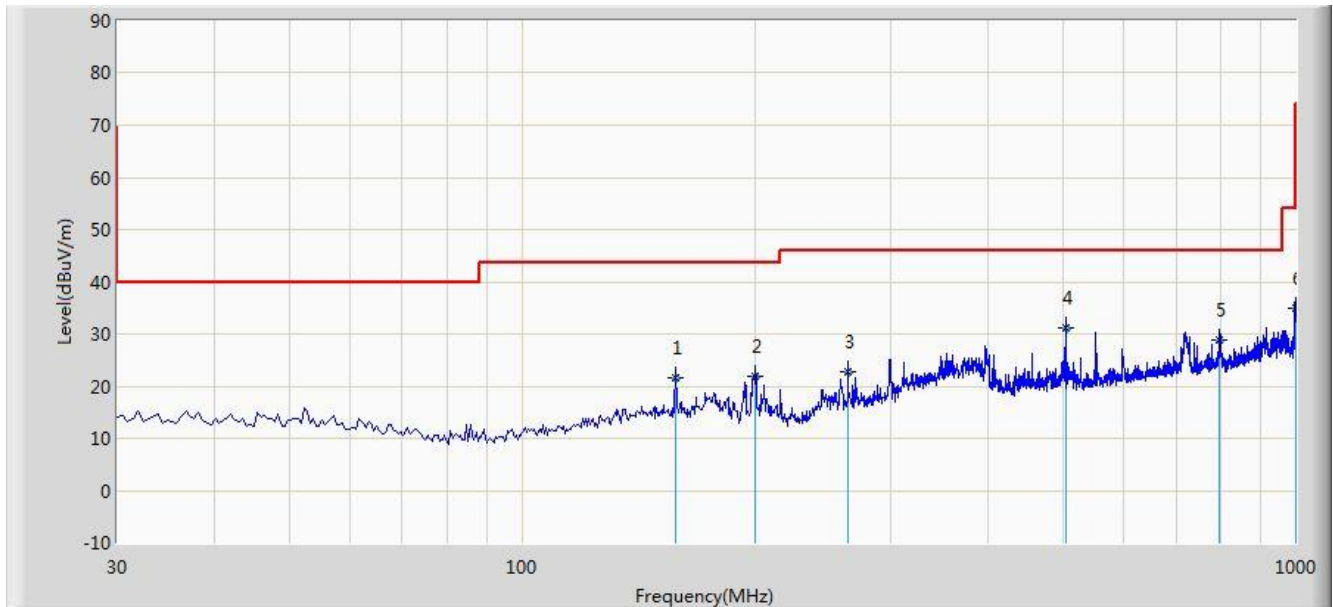
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/03/05 - 16:17
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: By Battery
Test Mode: Worst mode	



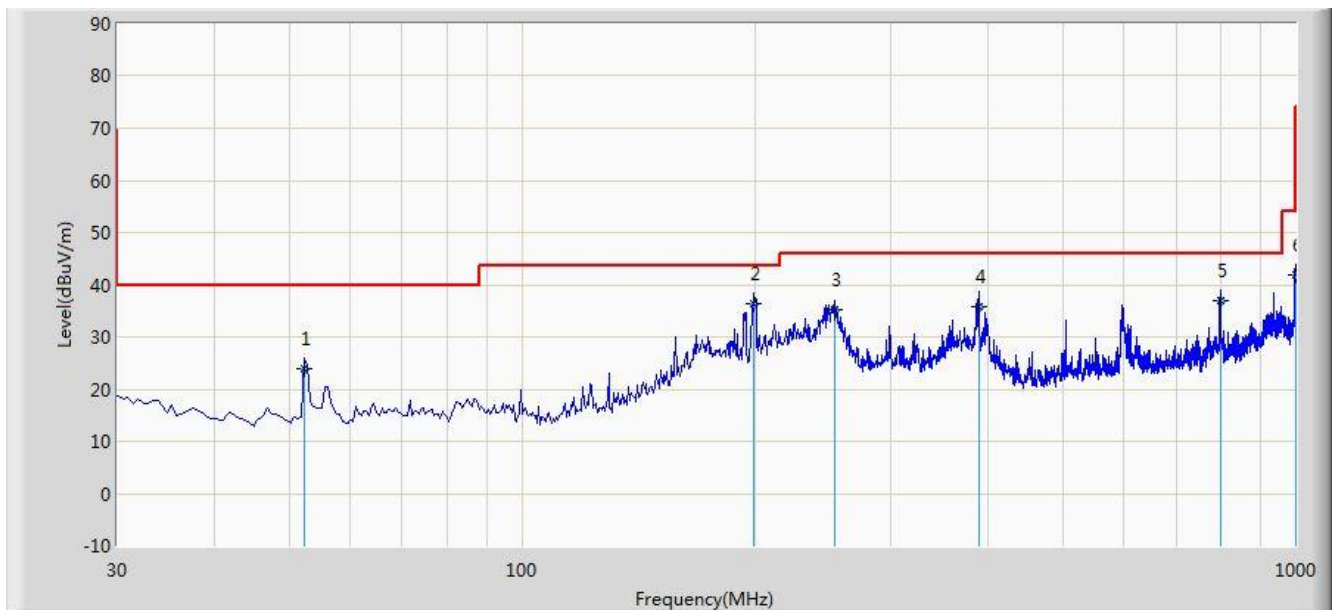
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			158.040	21.550	6.252	-21.950	43.500	15.298	QP
2			200.235	21.769	10.565	-21.731	43.500	11.204	QP
3			263.780	22.642	9.260	-23.358	46.000	13.383	QP
4		*	503.856	31.142	12.498	-14.858	46.000	18.644	QP
5			796.885	28.927	5.636	-17.073	46.000	23.291	QP
6			998.650	34.984	9.825	-19.016	54.000	25.159	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2019/03/05 - 16:21
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Intraoral Camera	Power: By Battery
Test Mode: Worst mode	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			52.310	23.916	9.888	-16.084	40.000	14.028	QP
2		*	199.265	36.267	25.024	-7.233	43.500	11.243	QP
3			253.585	35.090	21.987	-10.910	46.000	13.103	QP
4			389.580	35.838	19.459	-10.162	46.000	16.380	QP
5			800.180	36.975	13.658	-9.025	46.000	23.316	QP
6			998.565	41.817	16.658	-12.183	54.000	25.158	QP

Note 1: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.8. Radiated Restricted Band Edge Measurement

7.8.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 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	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	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 - 156.525	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	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

For RSS-Gen Section 8.10 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 8.10 of RSS-Gen, must also comply with the radiated emission limits specified in Section 8.9.

Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	149.9 - 150.5	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.525225	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	--
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	334.5 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

All out of band emissions appearing in a restricted band as specified in Section 8.10 of the RSS-Gen must not exceed the limits shown in Table per Section 8.9.

RSS-Gen Section 8.9			
Frequency [MHz]	Magnetic field strength (H-Field) [uA/m]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	6.37/F(F in kHz)	--	300
0.490 - 1.705	63.7/F(F in kHz)	--	30
1.705 - 30	0.08	--	30
30 - 88	--	100	3
88 - 216	--	150	3
216 - 960	--	200	3
Above 960	--	500	3

7.8.2. Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.8.3. Test Setting

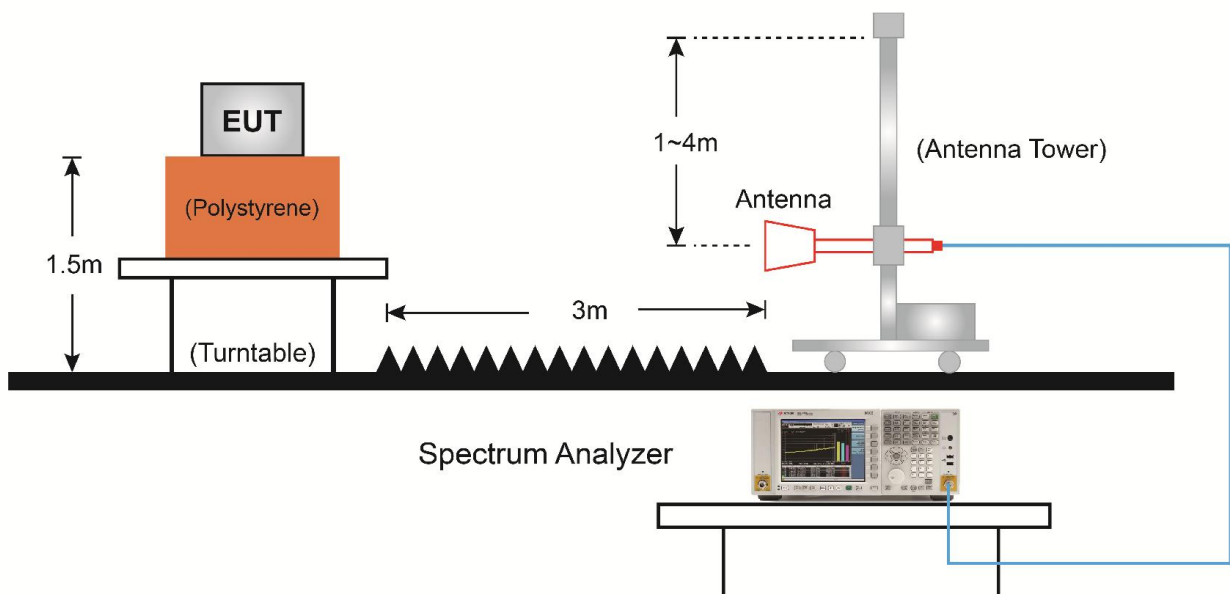
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

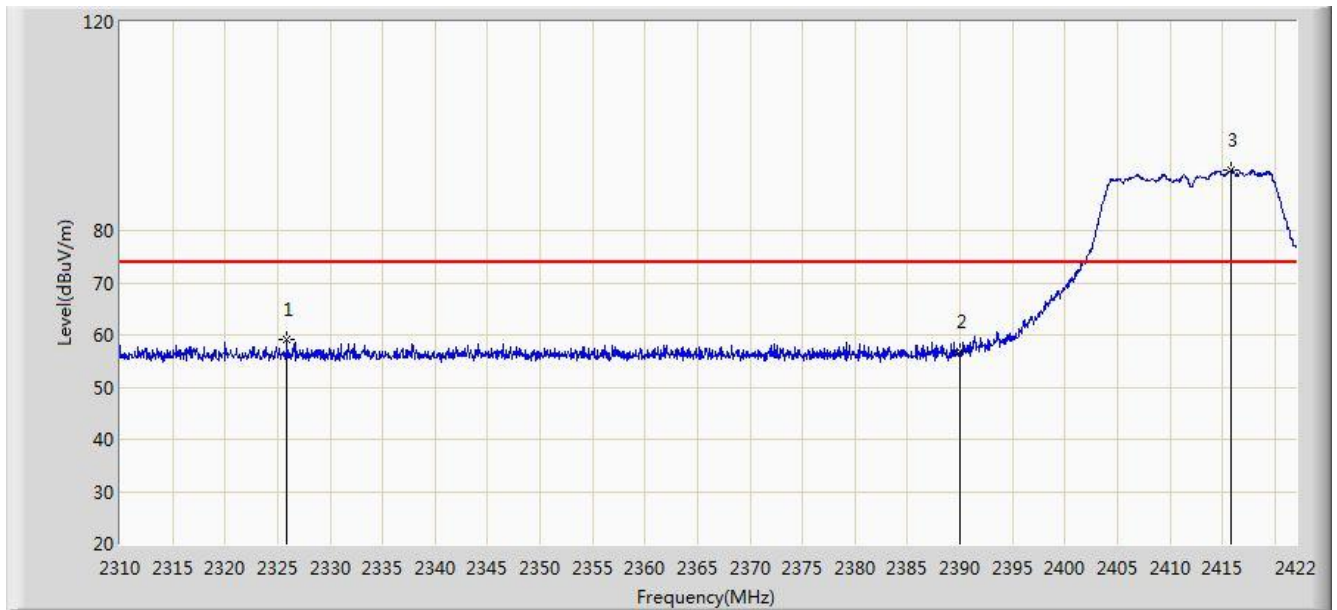
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

7.8.4. Test Setup



7.8.5. Test Result

Site: AC1	Time: 2019/03/05 - 17:17
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

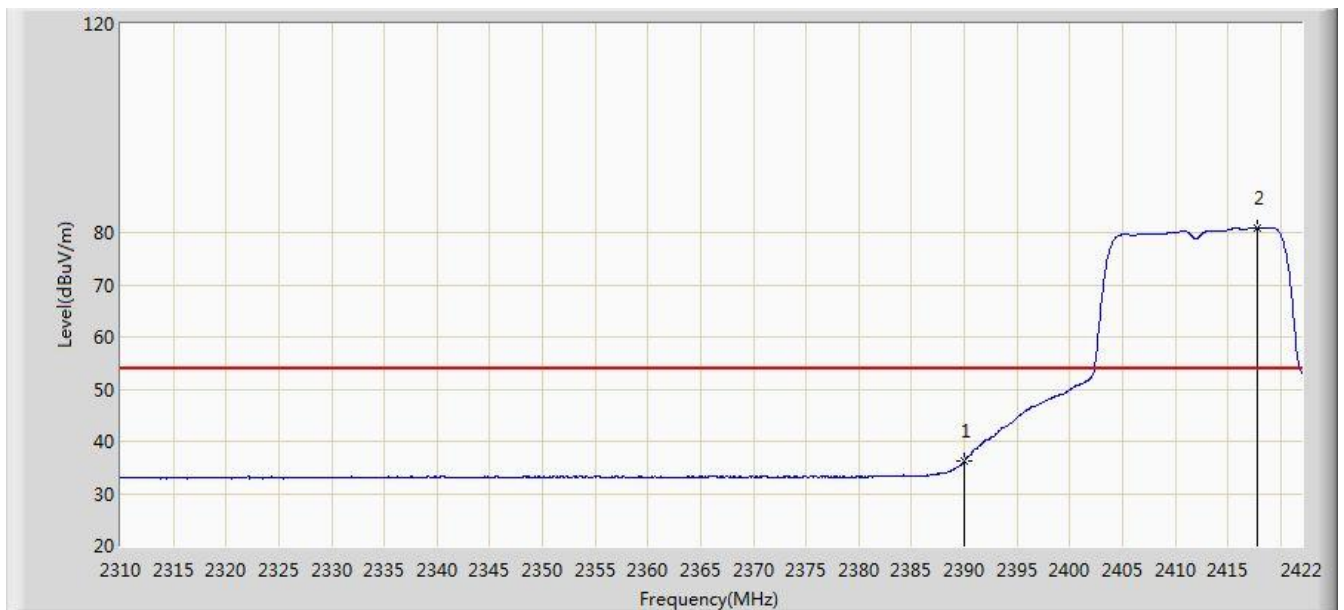


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2325.904	59.210	26.716	-14.790	74.000	32.494	PK
2			2390.000	56.912	24.585	-17.088	74.000	32.327	PK
3		*	2415.840	91.621	59.338	N/A	N/A	32.283	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:20
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

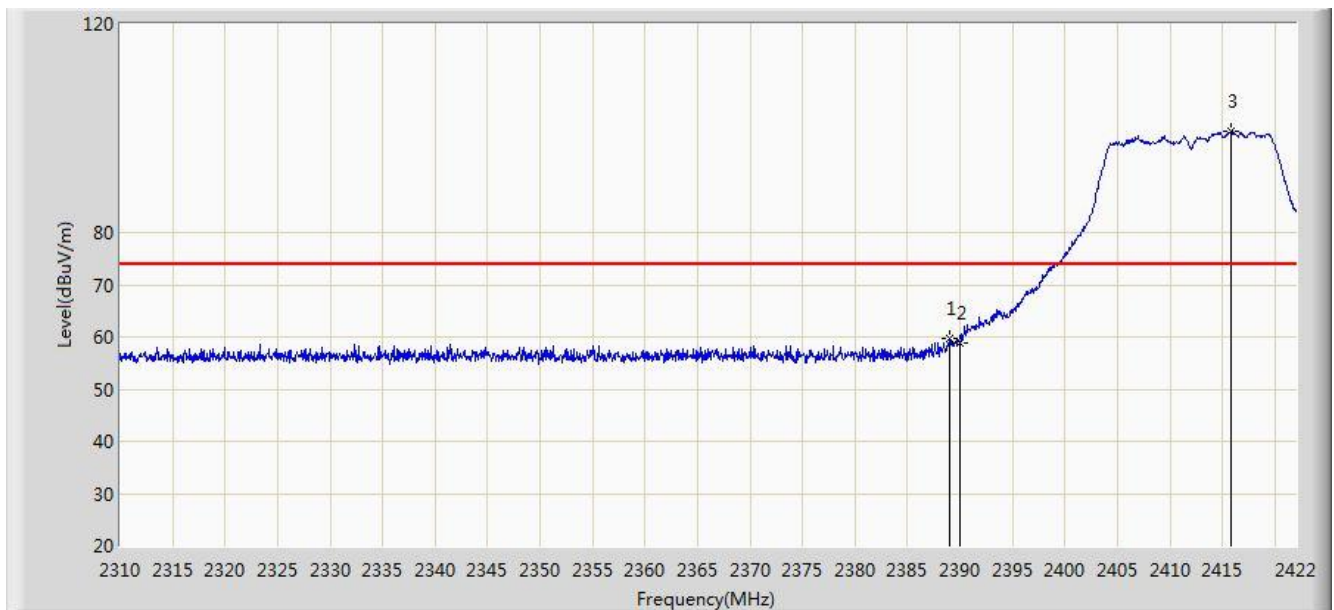


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	36.301	3.974	-17.699	54.000	32.327	AV
2		*	2417.856	80.899	48.617	N/A	N/A	32.282	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:23
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

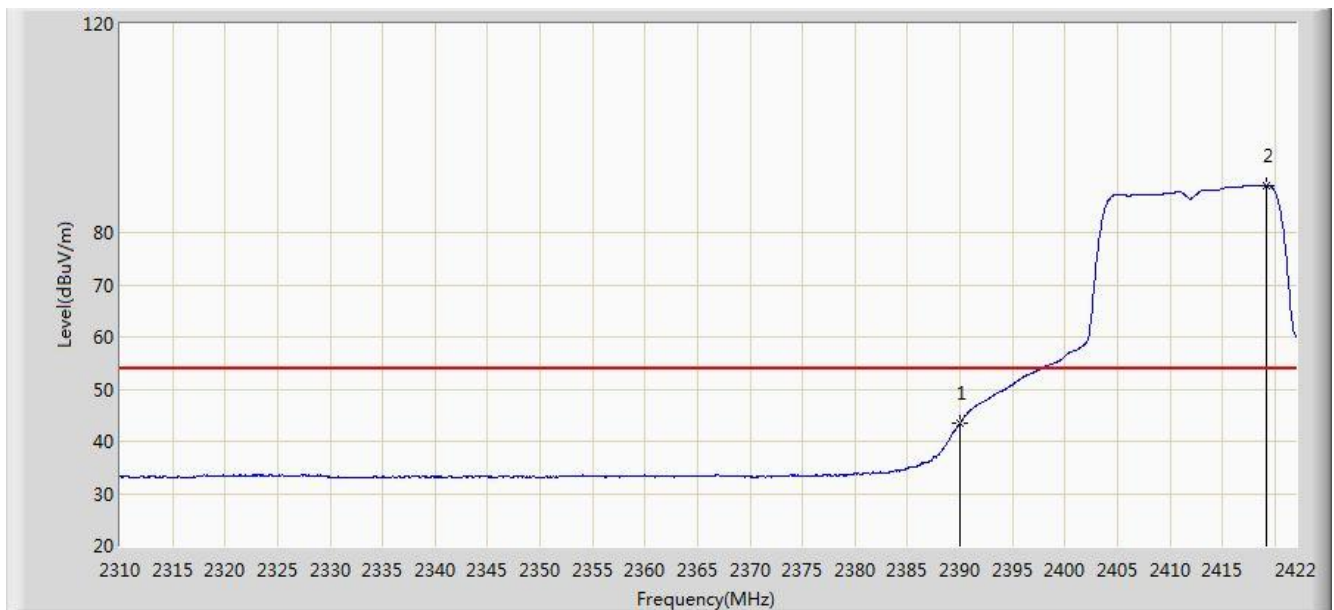


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.016	59.744	27.416	-14.256	74.000	32.328	PK
2			2390.000	58.882	26.555	-15.118	74.000	32.327	PK
3		*	2415.784	99.330	67.047	N/A	N/A	32.283	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:26
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2412MHz	

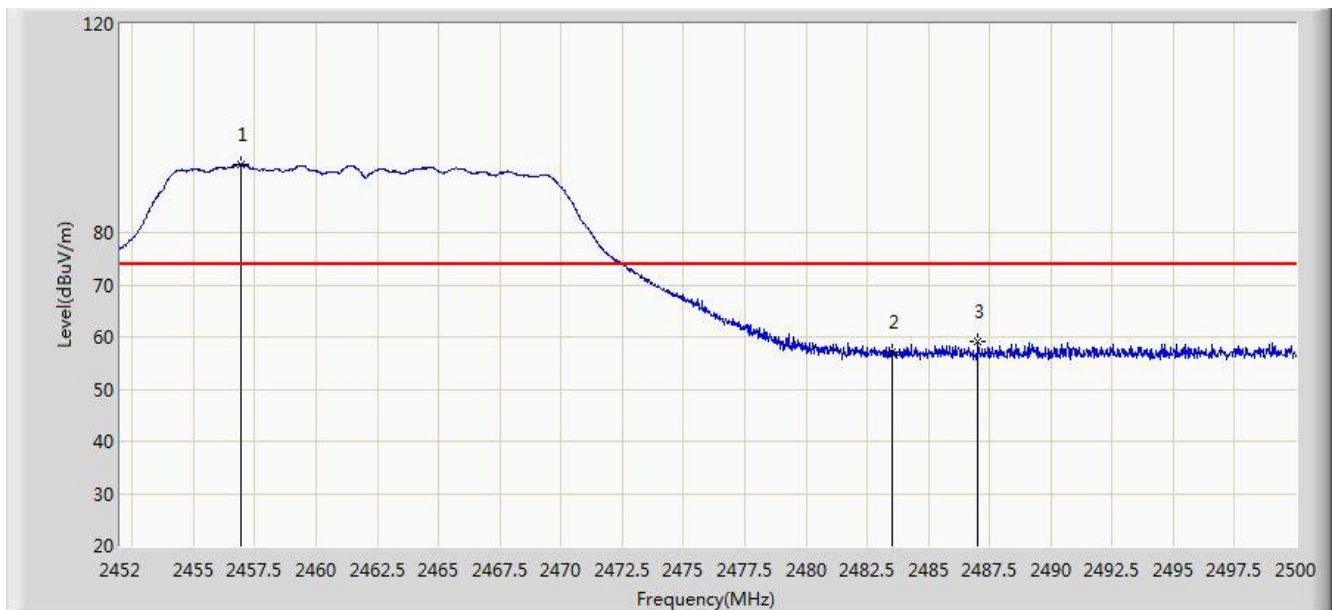


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	43.516	11.189	-10.484	54.000	32.327	AV
2		*	2419.200	89.045	56.763	N/A	N/A	32.282	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:04
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

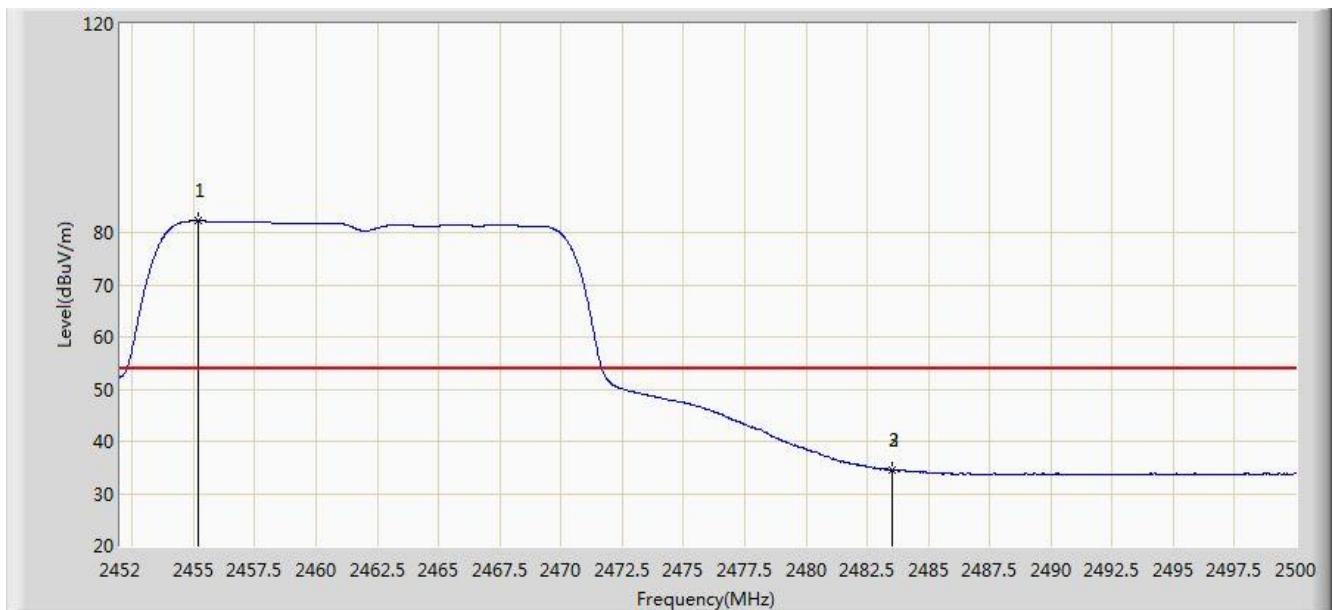


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.944	93.083	60.813	N/A	N/A	32.270	PK
2			2483.500	57.128	24.789	-16.872	74.000	32.340	PK
3			2487.016	59.032	26.679	-14.968	74.000	32.353	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:07
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

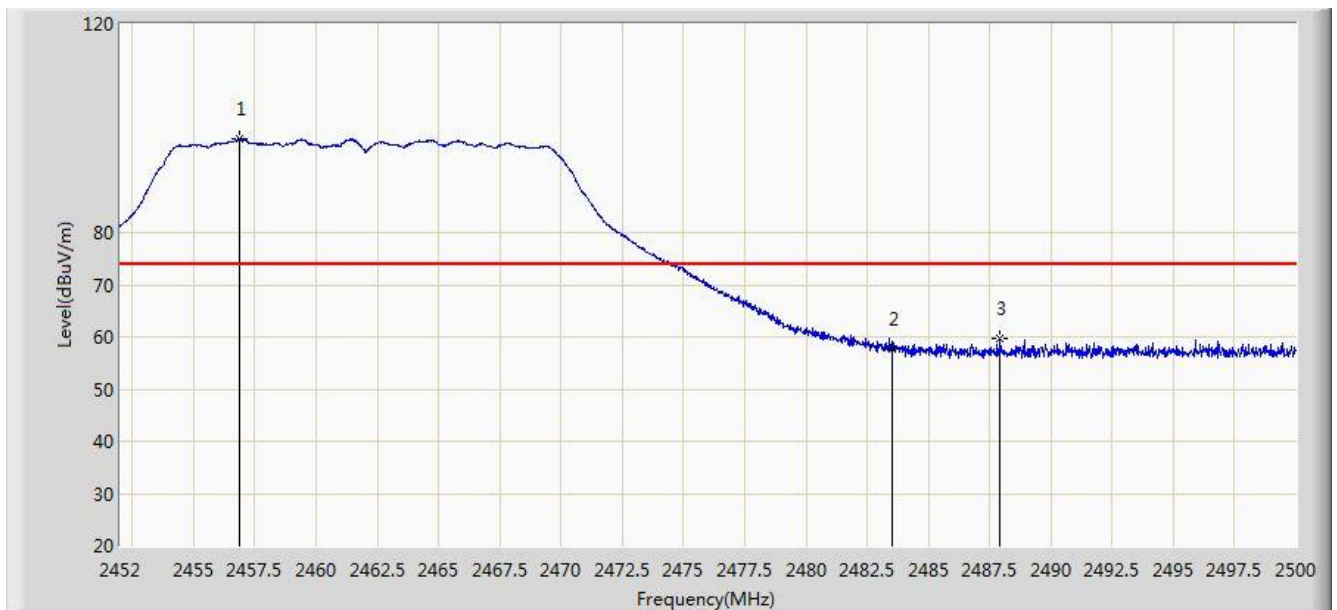


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2455.192	82.237	49.970	N/A	N/A	32.266	AV
2			2483.500	34.527	2.188	-19.473	54.000	32.340	AV
3			2483.536	34.537	2.198	-19.463	54.000	32.340	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:10
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	

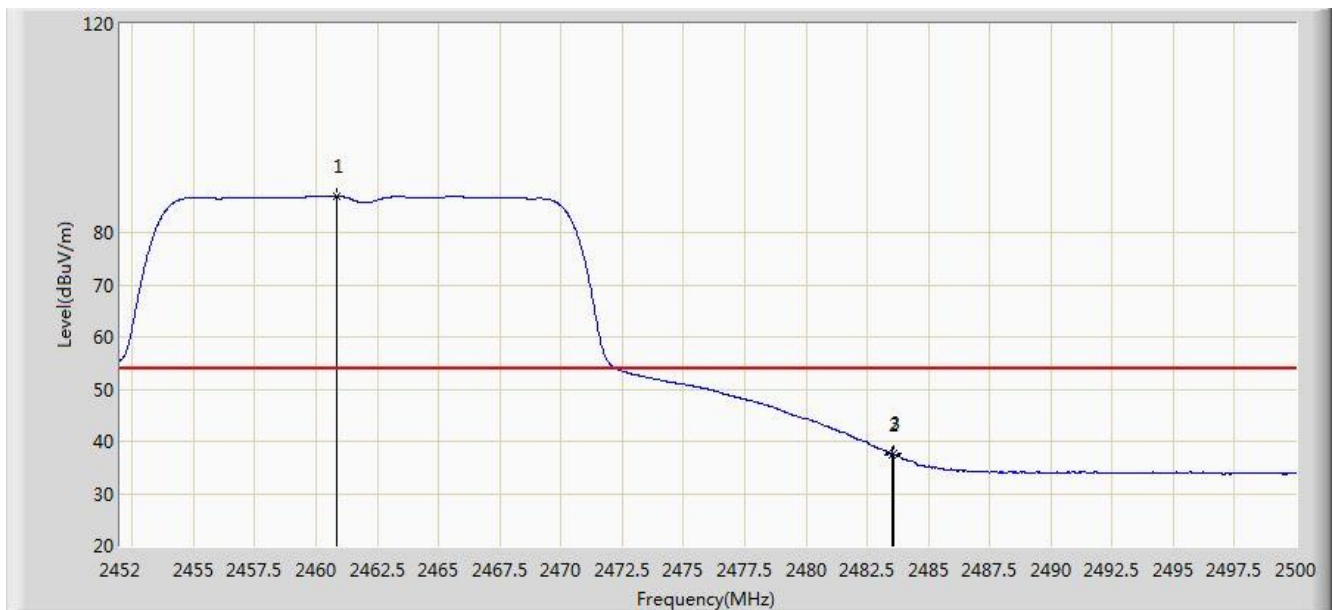


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.896	97.888	65.618	N/A	N/A	32.270	PK
2			2483.500	57.777	25.438	-16.223	74.000	32.340	PK
3			2487.928	59.663	27.306	-14.337	74.000	32.357	PK

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/03/05 - 17:14
Limit: FCC_Part15_Band Edge(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: By Battery
Test Mode: Transmit by 802.11g at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.832	86.970	54.692	N/A	N/A	32.278	AV
2			2483.500	37.498	5.159	-16.502	54.000	32.340	AV
3			2483.560	37.649	5.310	-16.351	54.000	32.340	AV

Note: Measure Level (dB μ V/m) = Reading Level (dB μ V) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.9. AC Conducted Emissions Measurement

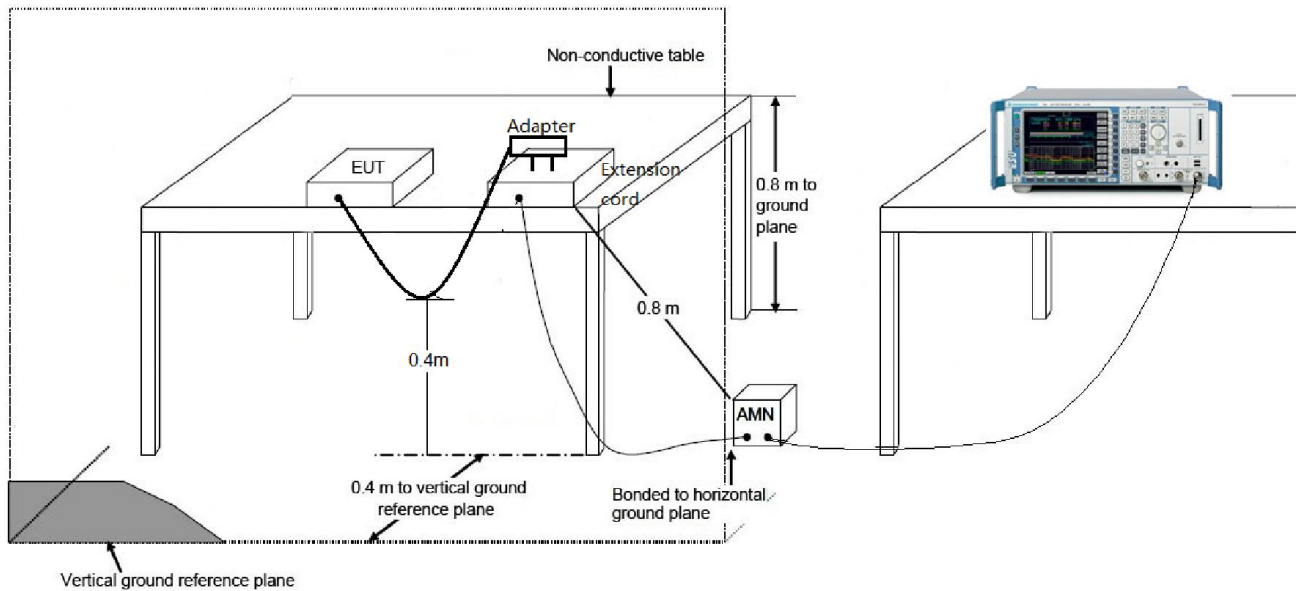
7.9.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 ~ 0.50	66 ~ 56	56 ~ 46
0.50 ~ 5.0	56	46
5.0 ~ 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

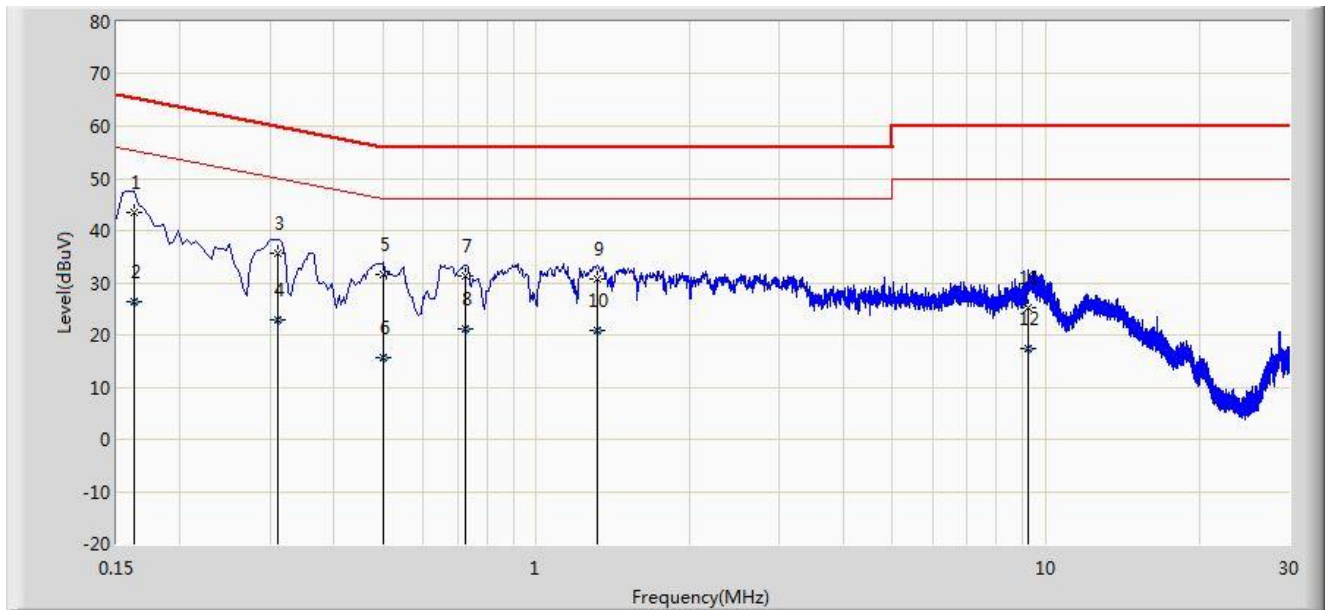
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.9.2. Test Setup



7.9.3. Test Result

Site: SR2	Time: 2019/03/05 - 18:52
Limit: FCC_Part15.207_CE_AC Power	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Intraoral Camera	Power: AC 120V/60Hz
Note: Transmit by 802.11g at Channel 2412MHz	

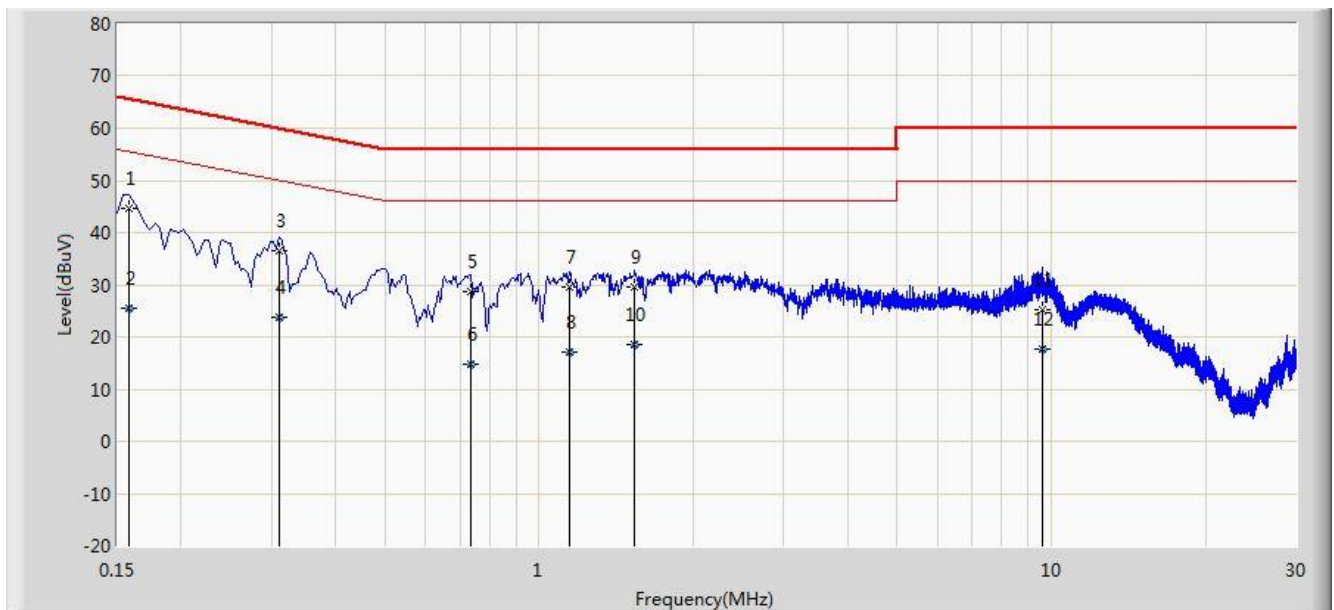


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.162	43.478	33.381	-21.883	65.361	10.097	QP
2			0.162	26.280	16.183	-29.081	55.361	10.097	AV
3			0.310	35.666	25.654	-24.304	59.970	10.012	QP
4			0.310	22.880	12.868	-27.090	49.970	10.012	AV
5			0.502	31.620	21.463	-24.380	56.000	10.157	QP
6			0.502	15.525	5.368	-30.475	46.000	10.157	AV
7			0.726	31.267	21.218	-24.733	56.000	10.050	QP
8			0.726	21.095	11.045	-24.905	46.000	10.050	AV
9			1.318	30.619	20.723	-25.381	56.000	9.896	QP
10			1.318	20.906	11.010	-25.094	46.000	9.896	AV
11			9.234	25.198	15.037	-34.802	60.000	10.160	QP
12			9.234	17.337	7.177	-32.663	50.000	10.160	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SR2	Time: 2019/03/05 - 18:56
Limit: FCC_Part15.207_CE_AC Power	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Intraoral Camera	Power: AC 120V/60Hz
Note: Transmit by 802.11g at Channel 2412MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.158	44.564	34.275	-21.004	65.568	10.290	QP
2			0.158	25.602	15.312	-29.967	55.568	10.290	AV
3			0.310	36.437	26.392	-23.533	59.970	10.045	QP
4			0.310	23.820	13.775	-26.151	49.970	10.045	AV
5			0.734	28.654	18.599	-27.346	56.000	10.056	QP
6			0.734	14.784	4.729	-31.216	46.000	10.056	AV
7			1.146	29.469	19.565	-26.531	56.000	9.904	QP
8			1.146	17.187	7.283	-28.813	46.000	9.904	AV
9			1.534	29.454	19.565	-26.546	56.000	9.888	QP
10			1.534	18.501	8.612	-27.499	46.000	9.888	AV
11			9.590	25.335	15.151	-34.665	60.000	10.185	QP
12			9.590	17.788	7.603	-32.212	50.000	10.185	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **Intraoral Camera** is in compliance with Part 15C of the FCC Rules & RSS-247 Issue 2 of ISED Rules..

————— The End —————

Appendix A – Test Setup Photograph

Refer to “1904WSU015-UT” file.

Appendix B – EUT Photograph

Refer to “1904WSU015-UE” file.