

MEASUREMENT REPORT

FCC PART 15.247 & IC RSS-247 802.11g

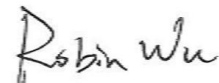
FCC ID: 2ASFG-CS1500D
IC: 24914-CS1500D
APPLICANT: Carestream Dental LLC

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
1904WSU018-U1	Rev. 01	Initial report	04-29-2019	Invalid
1904WSU018-U1	Rev. 02	Add 99% Bandwidth	06-06-2019	Valid

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§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	Dipole Antenna
Antenna Gain	1.6dBi

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
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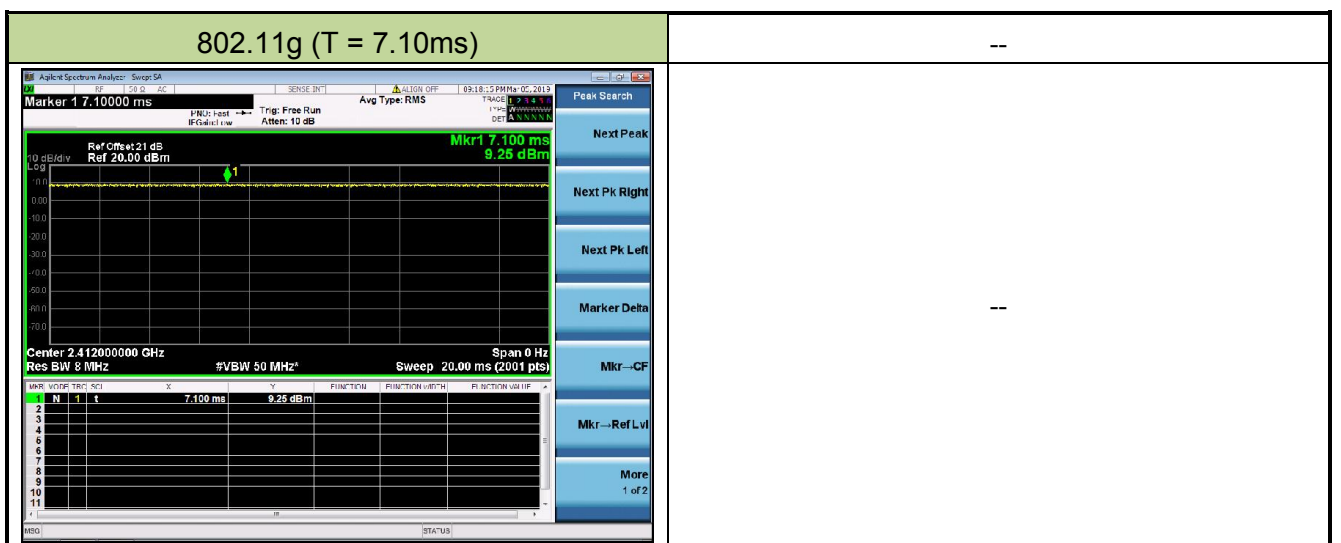
2.5. Description of Test Software

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	100%



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.

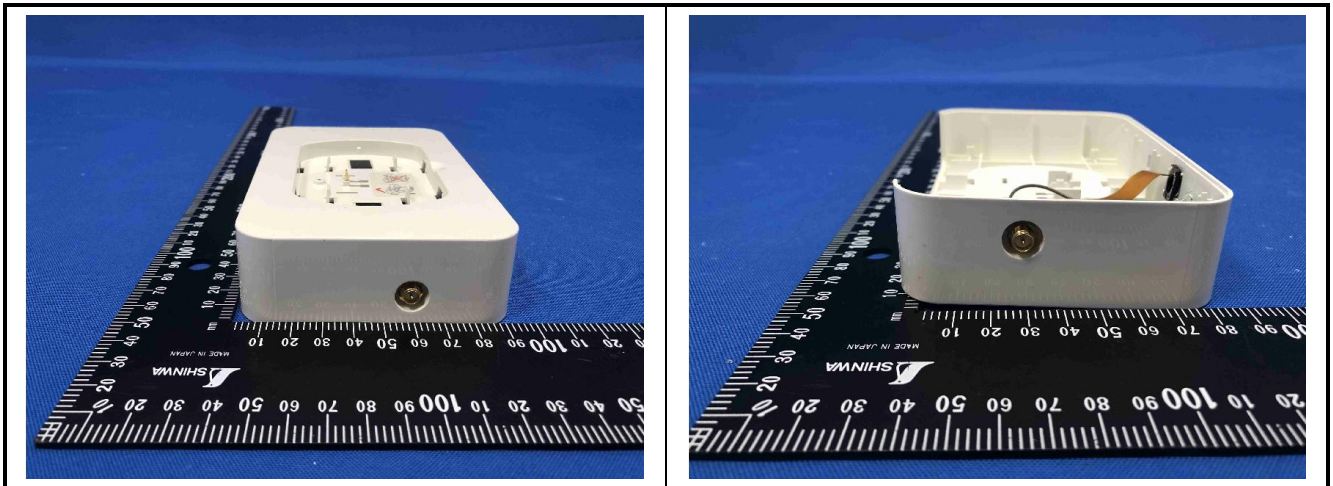
Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the 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 uses a unique connector (Reversed SMA connector).



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

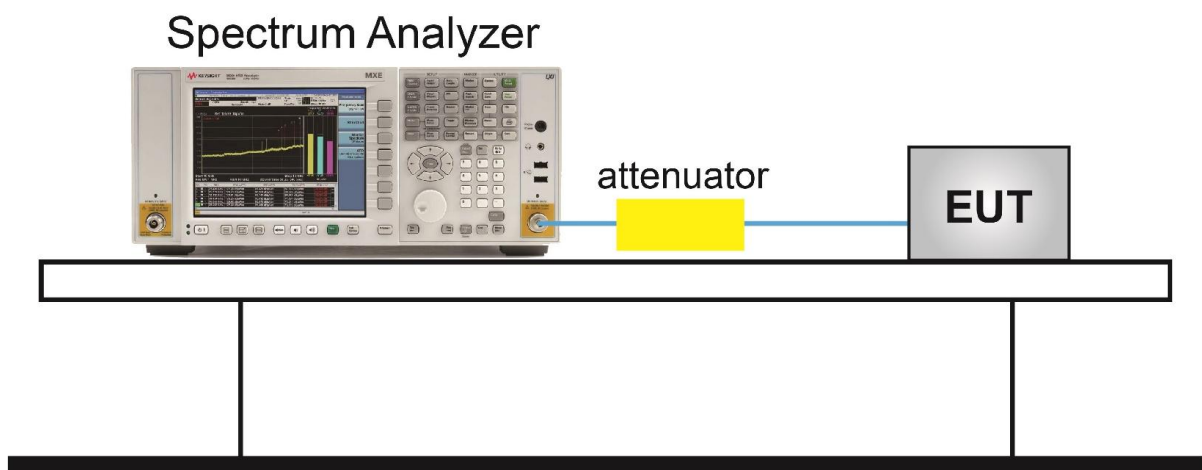
7.2.2.Test Procedure used

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.

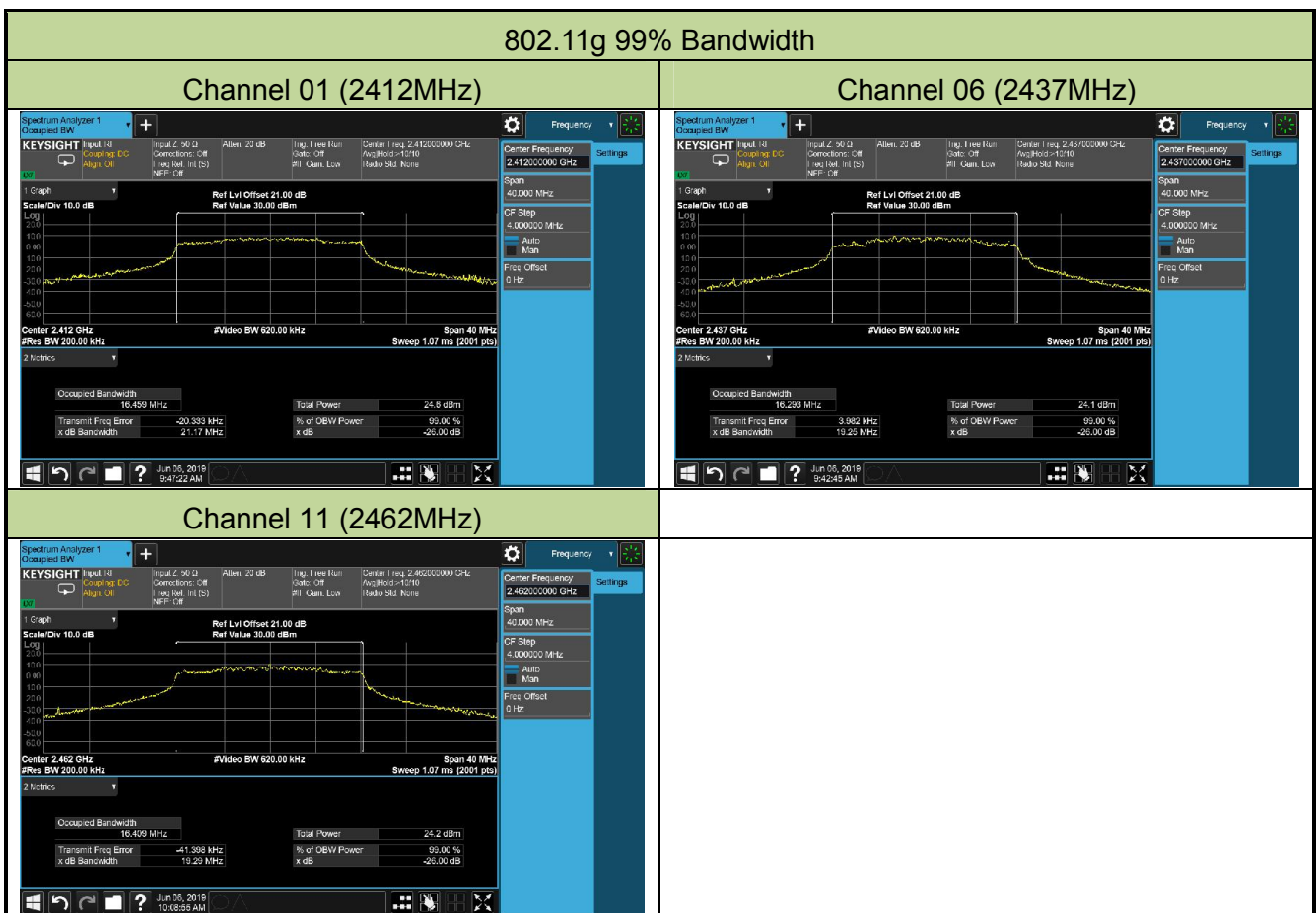
7.2.4.Test Setup



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	16.46	Pass
802.11g	6Mbps	06	2437	16.29	Pass
802.11g	6Mbps	11	2462	16.41	Pass



7.3. 6dB Bandwidth Measurement

7.3.1. Test Limit

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

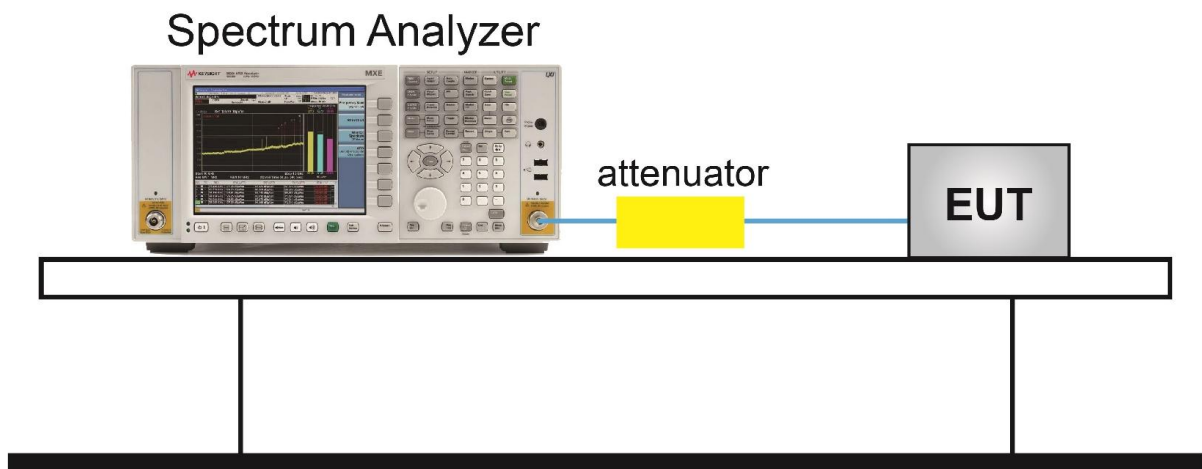
7.3.2. Test Procedure used

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

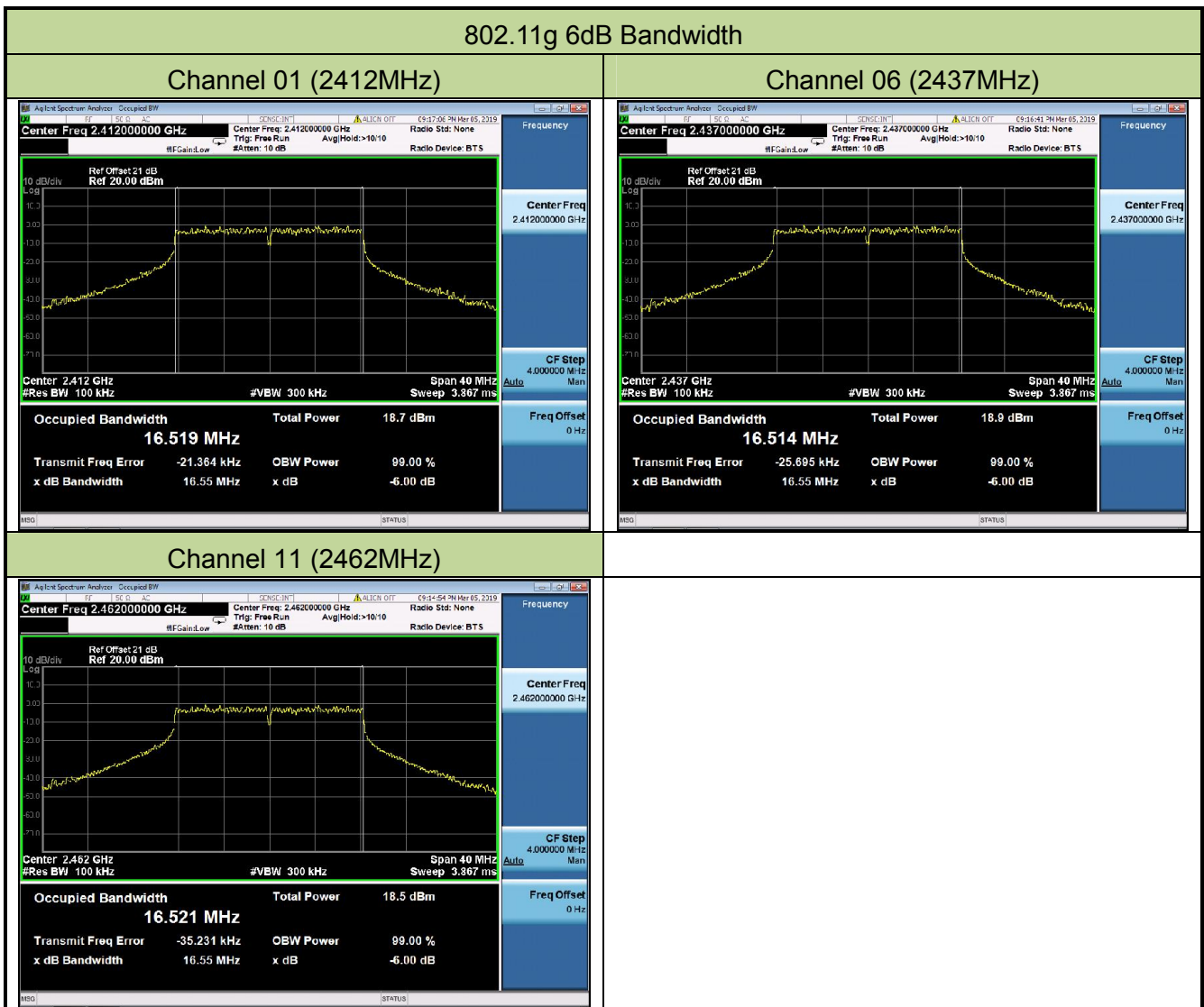
7.3.4. Test Setup



7.3.5. Test Result

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	TR3	Test Date	2019/03/05

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11g	6Mbps	01	2412	16.55	≥0.5	Pass
802.11g	6Mbps	06	2437	16.55	≥0.5	Pass
802.11g	6Mbps	11	2462	16.55	≥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

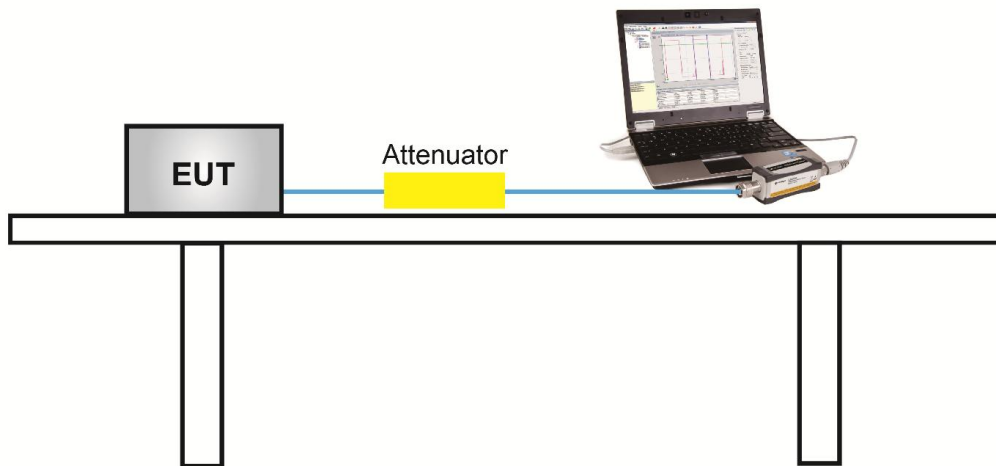
Method PKPM1 (Peak power measurement)

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	12.20
				24Mbps	12.14
				54Mbps	12.06

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	TR3	Test Date	2019/03/05

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	19.81	≤ 30.00	21.41	≤ 36.00	Pass
11g	1Mbps	06	2437	19.81	≤ 30.00	21.41	≤ 36.00	Pass
11g	1Mbps	11	2462	19.12	≤ 30.00	20.72	≤ 36.00	Pass

Note: EIRP (dBm) = Peak Power (dBm) + Antenna Gain (dBi), Antenna Gain (dBi) = 1.6dBi.

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	13.43	≤ 30.00	15.03	≤ 36.00	Pass
11g	1Mbps	06	2437	12.20	≤ 30.00	13.80	≤ 36.00	Pass
11g	1Mbps	11	2462	12.70	≤ 30.00	14.30	≤ 36.00	Pass

Note: EIRP (dBm) = Average Power (dBm) + Antenna Gain (dBi), Antenna Gain (dBi) = 1.6dBi.

7.5. Power Spectral Density Measurement

7.5.1. Test Limit

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

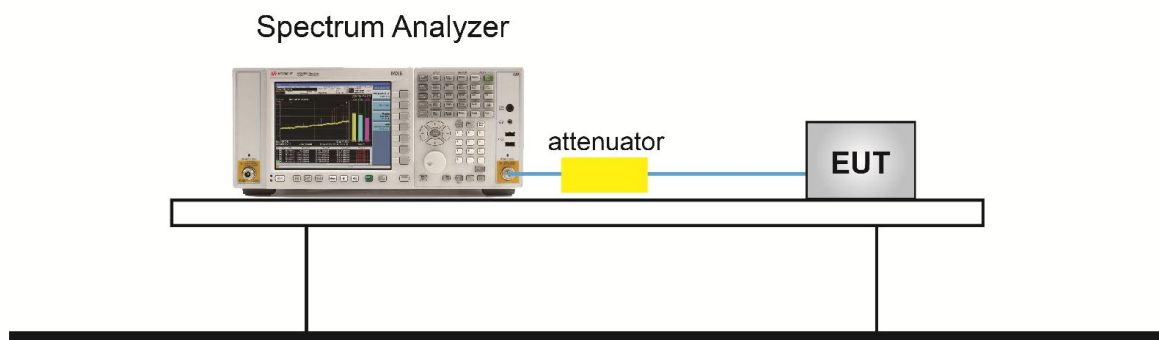
7.5.2. Test Procedure Used

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

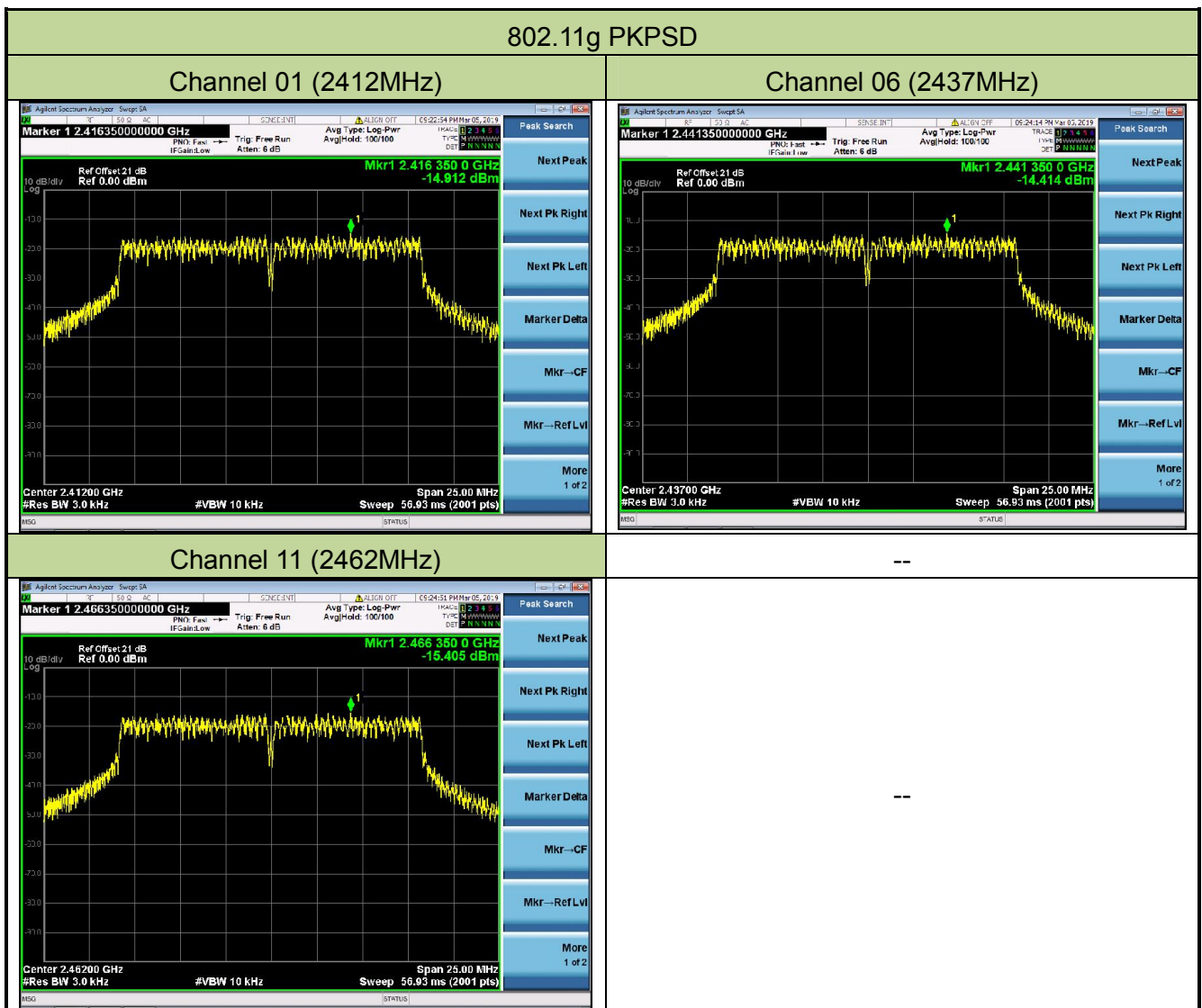
7.5.4. Test Setup



7.5.5. Test Result

Product	Intraoral Camera	Temperature	23°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	TR3	Test Date	2019/03/05

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Peak PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
11g	1Mbps	01	2412	-14.91	≤ 8.0	Pass
11g	1Mbps	06	2437	-14.41	≤ 8.0	Pass
11g	1Mbps	11	2462	-15.41	≤ 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

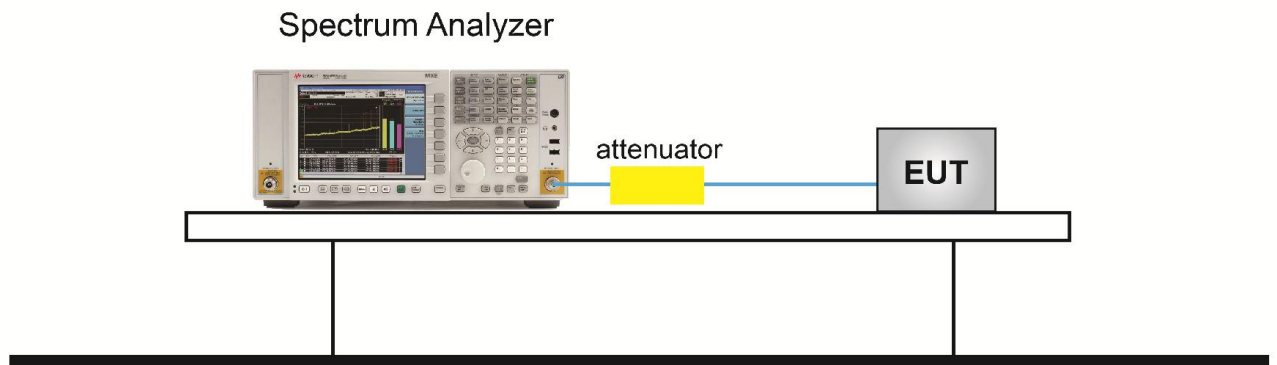
Emission level measurement

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.

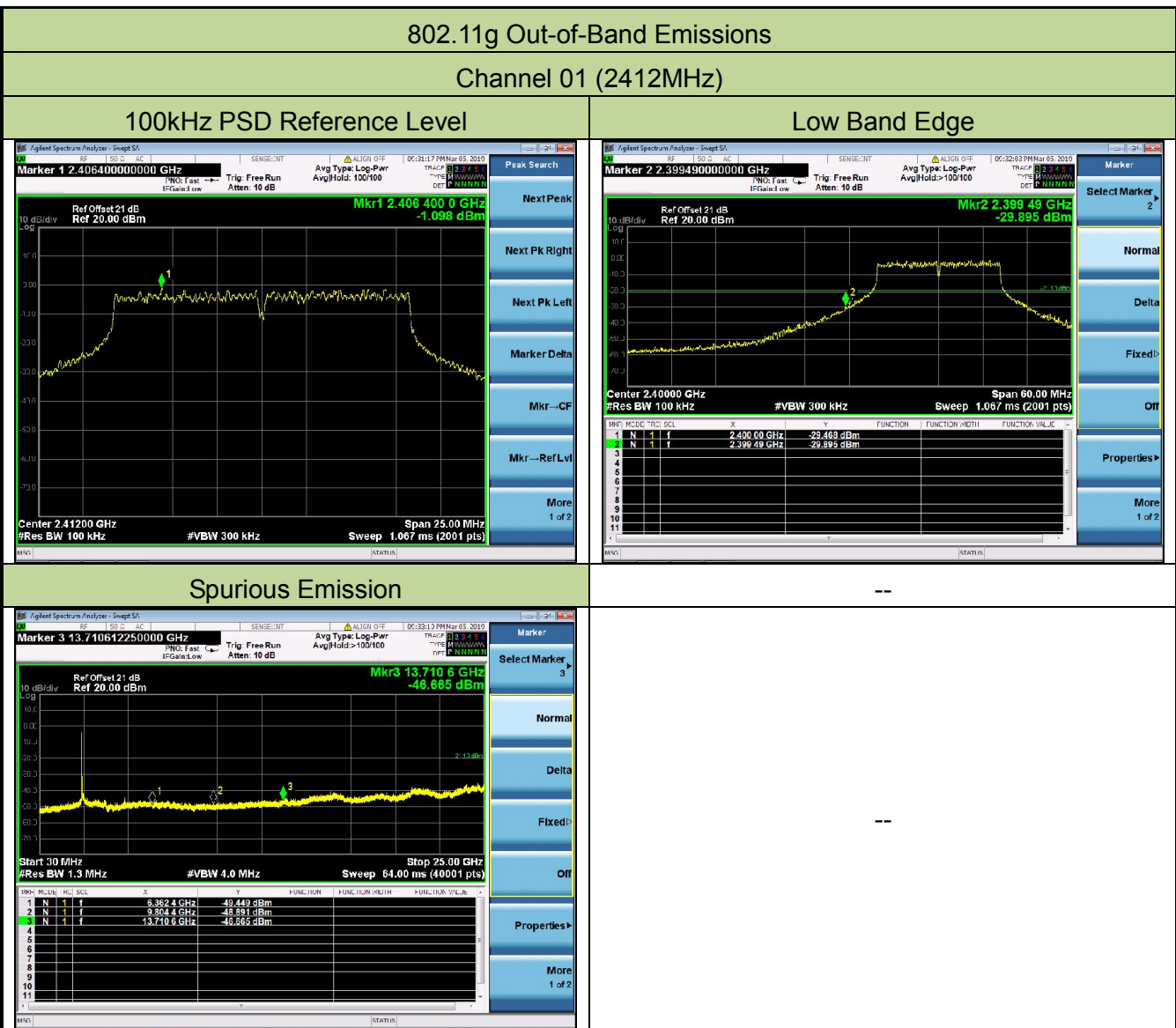
7.6.4. Test Setup



7.6.5. Test Result

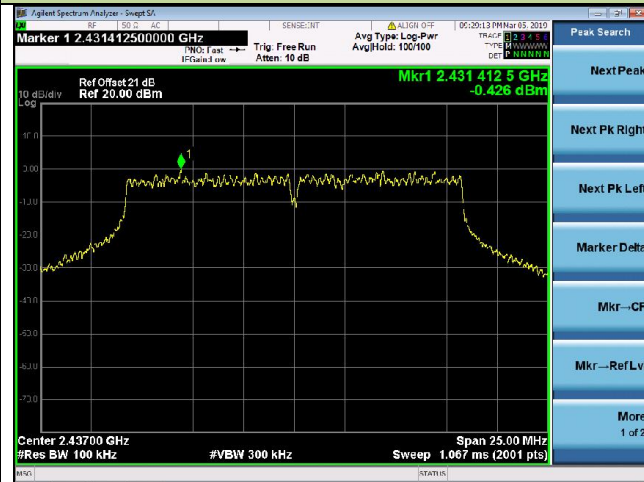
Product	Intraoral Camera	Temperature	23°C
Test Engineer	Dandy Li	Relative Humidity	54%
Test Site	TR3	Test Date	2019/03/05

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

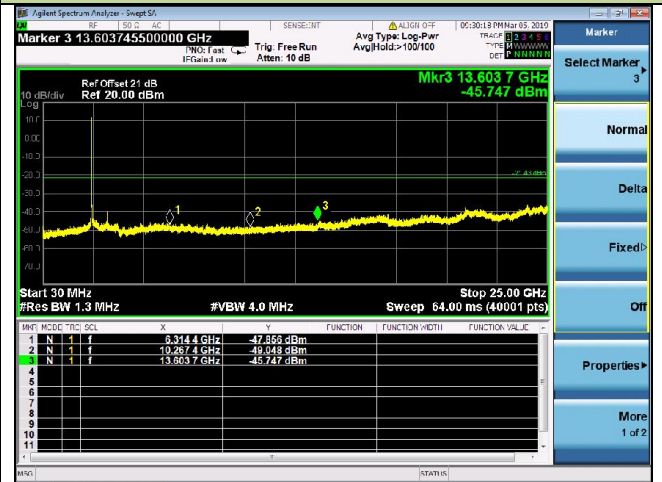


Channel 06 (2437MHz)

100kHz PSD Reference Level

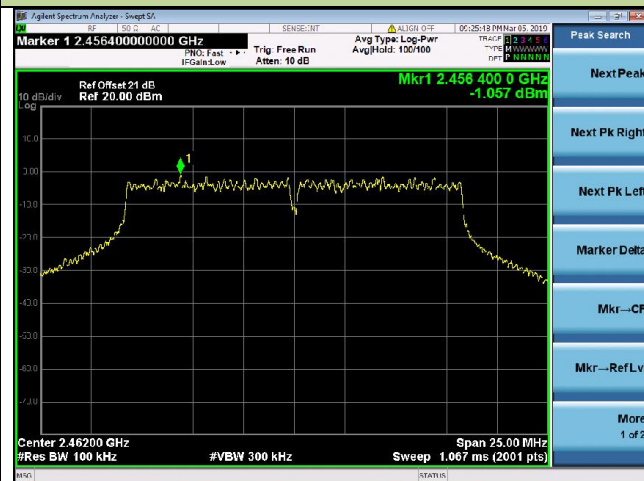


Spurious Emission



Channel 11 (2462MHz)

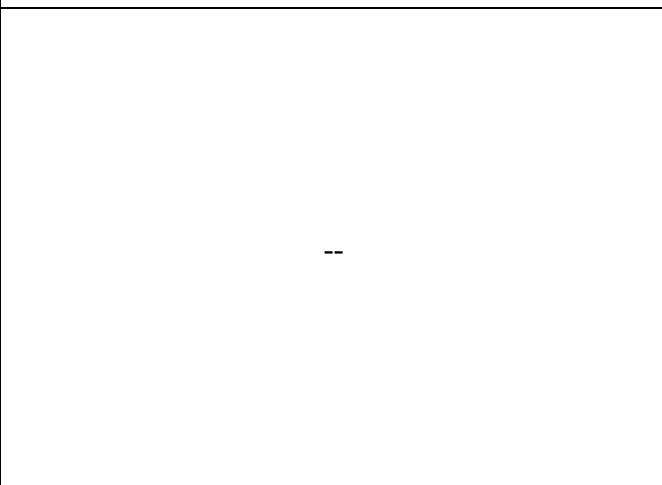
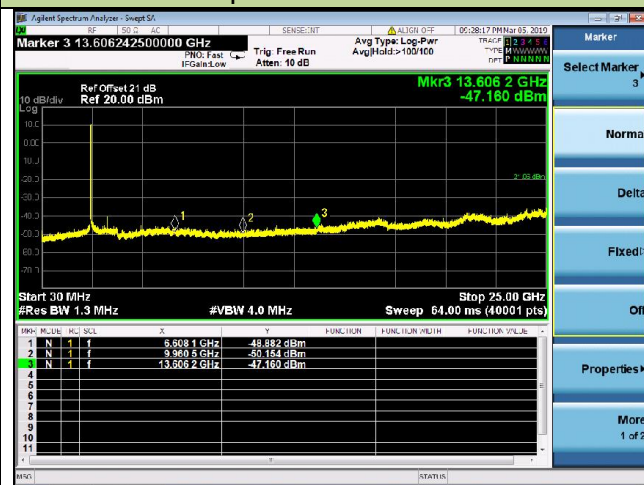
100kHz PSD Reference Level



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

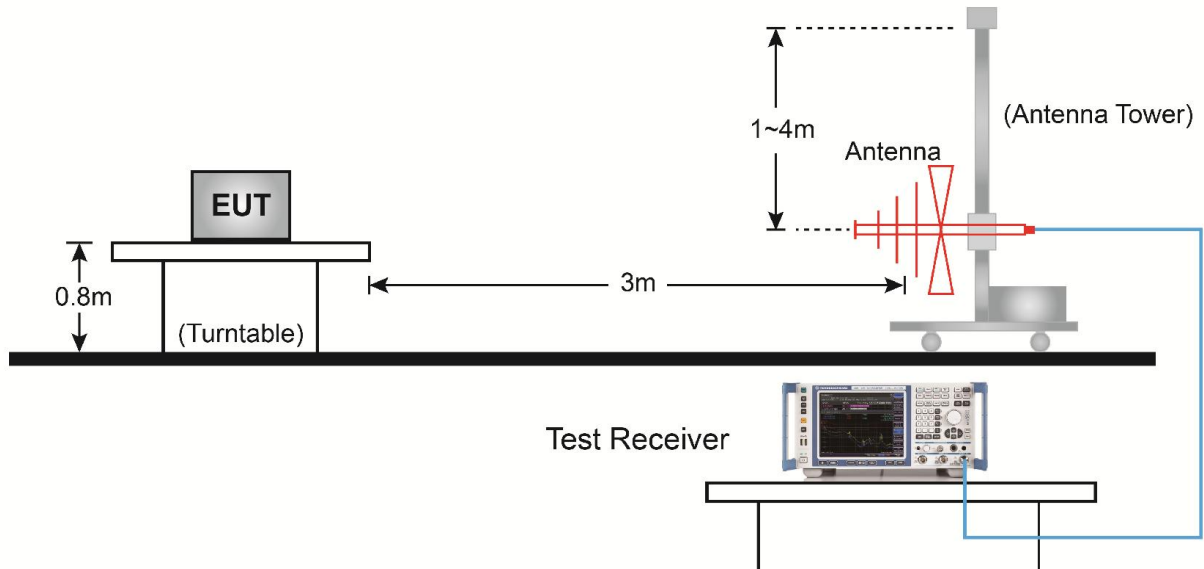
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

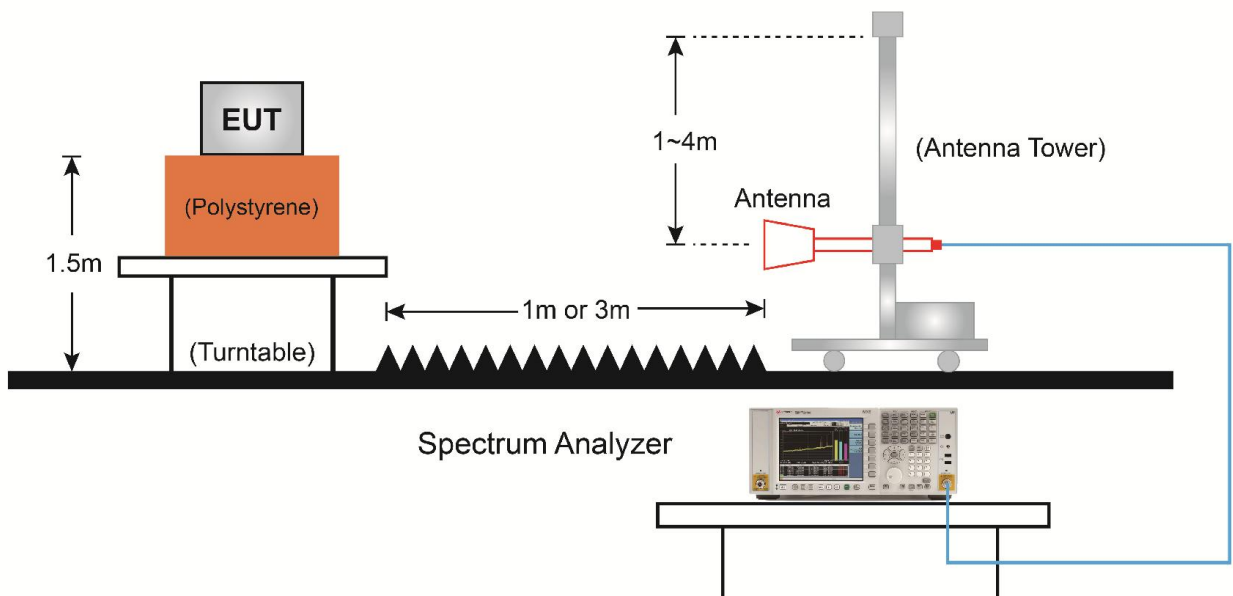
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. 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
	4026.0	36.8	3.4	40.2	74.0	-33.8	Peak	Horizontal
	4825.0	37.5	5.9	43.4	74.0	-30.6	Peak	Horizontal
*	6295.5	35.1	8.7	43.8	81.2	-37.4	Peak	Horizontal
*	10078.0	31.4	17.0	48.4	81.2	-32.8	Peak	Horizontal
	4043.0	36.2	3.5	39.7	74.0	-34.3	Peak	Vertical
	4816.5	36.7	5.9	42.6	74.0	-31.4	Peak	Vertical
*	6491.0	35.0	9.9	44.9	81.2	-36.3	Peak	Vertical
*	10078.0	31.4	17.0	48.4	81.2	-32.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (101.2dBμV/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
	4060.0	37.4	3.5	40.9	74.0	-33.1	Peak	Horizontal
	4884.5	36.3	6.0	42.3	74.0	-31.7	Peak	Horizontal
*	6610.0	35.9	10.2	46.1	83.0	-36.9	Peak	Horizontal
*	9823.0	31.6	16.5	48.1	83.0	-34.9	Peak	Horizontal
	4017.5	37.2	3.4	40.6	74.0	-33.4	Peak	Vertical
	4833.5	35.5	5.9	41.4	74.0	-32.6	Peak	Vertical
*	6576.0	34.7	10.2	44.9	83.0	-38.1	Peak	Vertical
*	10052.5	31.9	16.8	48.7	83.0	-34.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.0dBμV/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
	4221.5	36.1	4.1	40.2	74.0	-33.8	Peak	Horizontal
	4944.0	36.1	6.1	42.2	74.0	-31.8	Peak	Horizontal
*	6329.5	34.0	9.0	43.0	84.1	-41.1	Peak	Horizontal
*	10163.0	31.6	17.0	48.6	84.1	-35.5	Peak	Horizontal
	4094.0	36.6	3.6	40.2	74.0	-33.8	Peak	Vertical
	4927.0	33.8	6.1	39.9	74.0	-34.1	Peak	Vertical
*	6406.0	32.9	9.3	42.2	84.1	-41.9	Peak	Vertical
*	10248.0	31.6	17.2	48.8	84.1	-35.3	Peak	Vertical

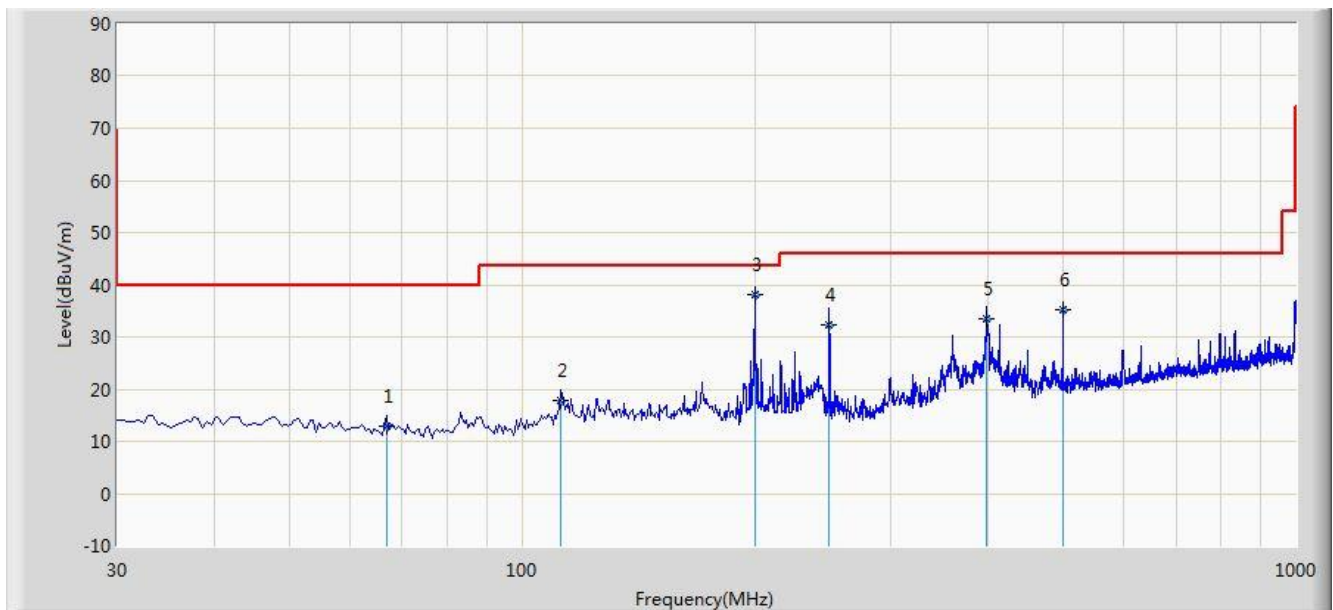
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.1dBμV/m) or 15.209 which is higher.

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 - 15:21
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Worst mode	



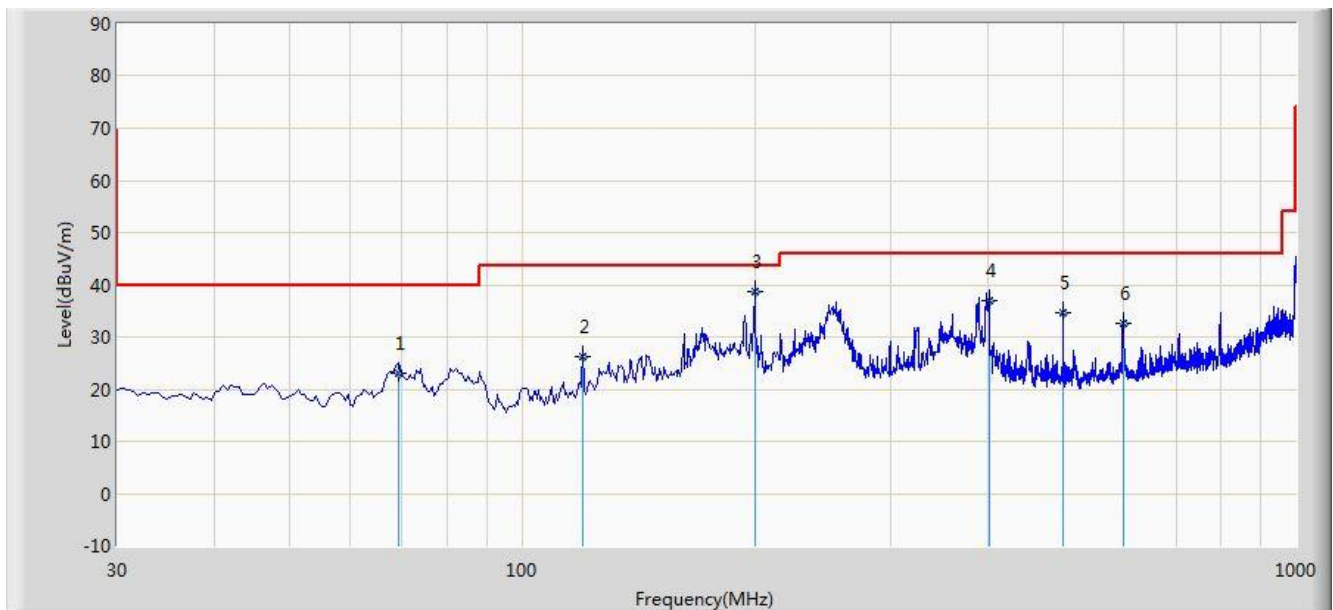
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			66.860	12.802	0.624	-27.198	40.000	12.178	QP
2			112.450	17.809	5.434	-25.691	43.500	12.375	QP
3		*	199.987	38.011	26.800	-5.489	43.500	11.211	QP
4			249.705	32.303	19.286	-13.697	46.000	13.016	QP
5			398.115	33.523	16.978	-12.477	46.000	16.545	QP
6			499.965	35.327	16.758	-10.673	46.000	18.570	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 - 15:23
Limit: FCC_Part15.209_RSE(3m)	Engineer: Flag Yang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Intraoral Camera	Power: AC 120V/60Hz
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			69.285	22.947	11.226	-17.053	40.000	11.721	QP
2			119.725	26.290	13.100	-17.210	43.500	13.190	QP
3		*	199.750	38.644	27.422	-4.856	43.500	11.222	QP
4			401.510	37.062	20.437	-8.938	46.000	16.625	QP
5			499.685	34.647	16.082	-11.353	46.000	18.565	QP
6			599.390	32.612	12.044	-13.388	46.000	20.568	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

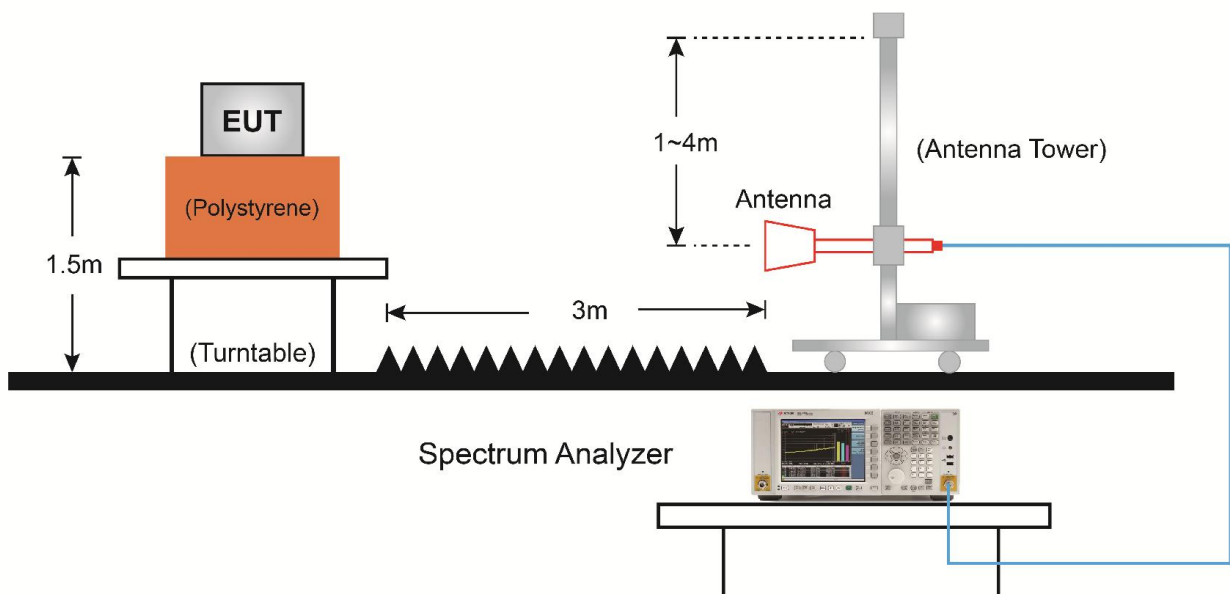
Peak Field Strength Measurements

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)

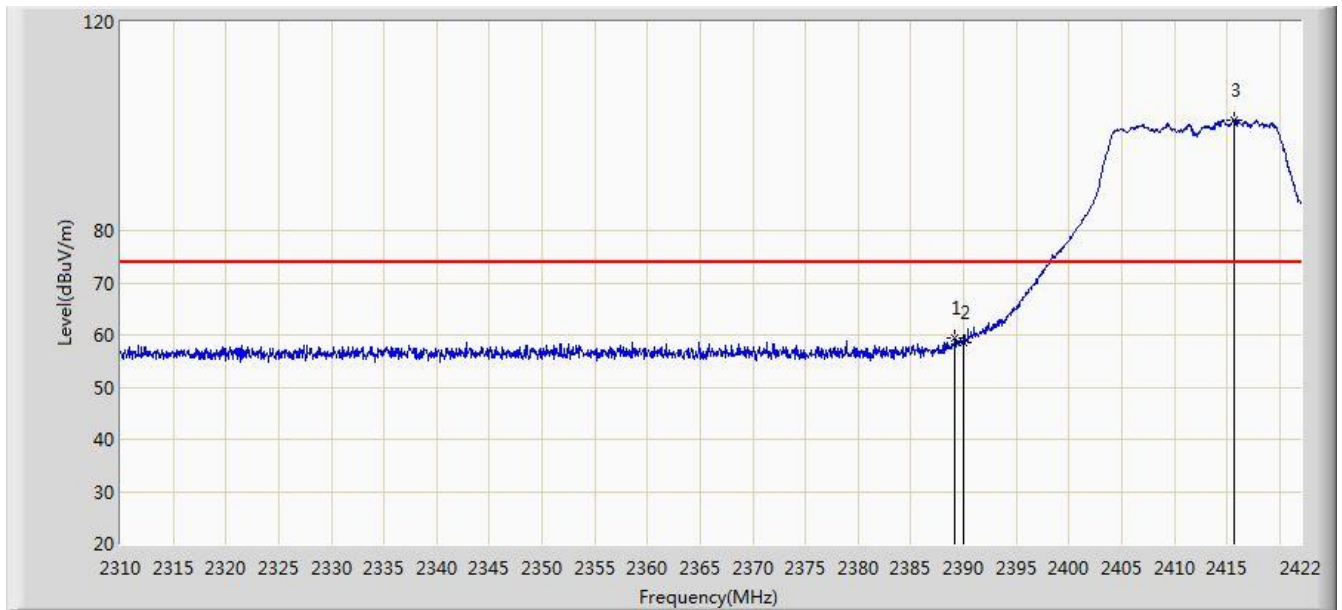
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. 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 - 13:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

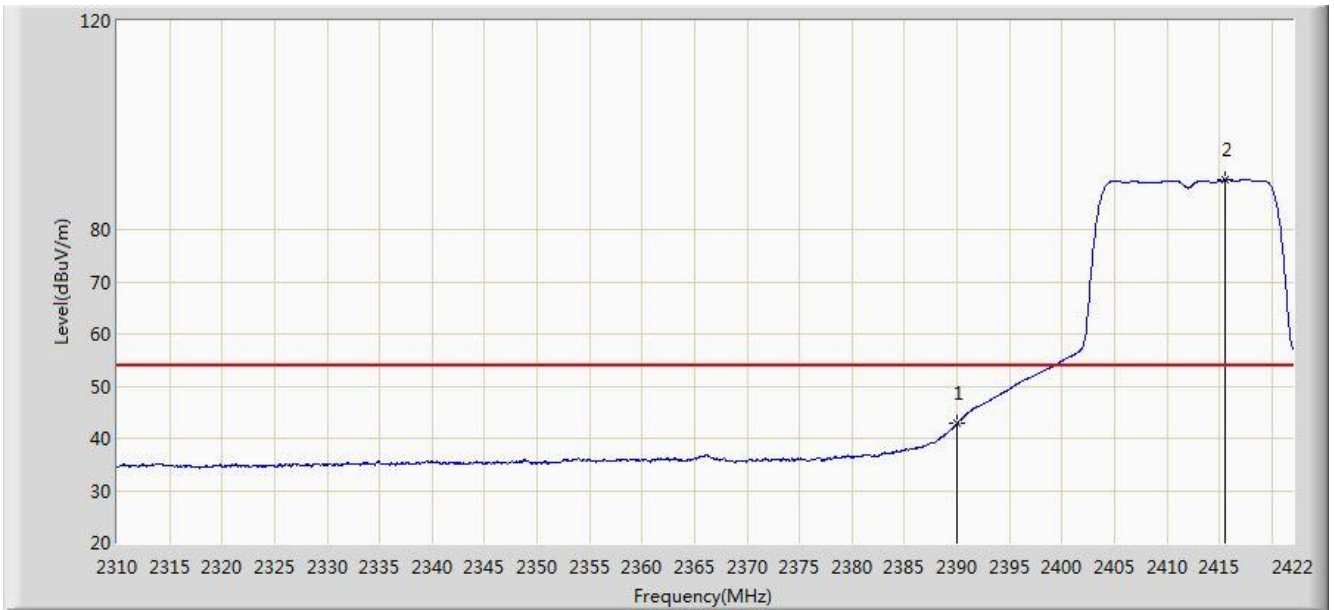


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.184	59.436	27.108	-14.564	74.000	32.328	PK
2			2390.000	58.684	26.357	-15.316	74.000	32.327	PK
3		*	2415.672	101.182	68.899	N/A	N/A	32.283	PK

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 - 13:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

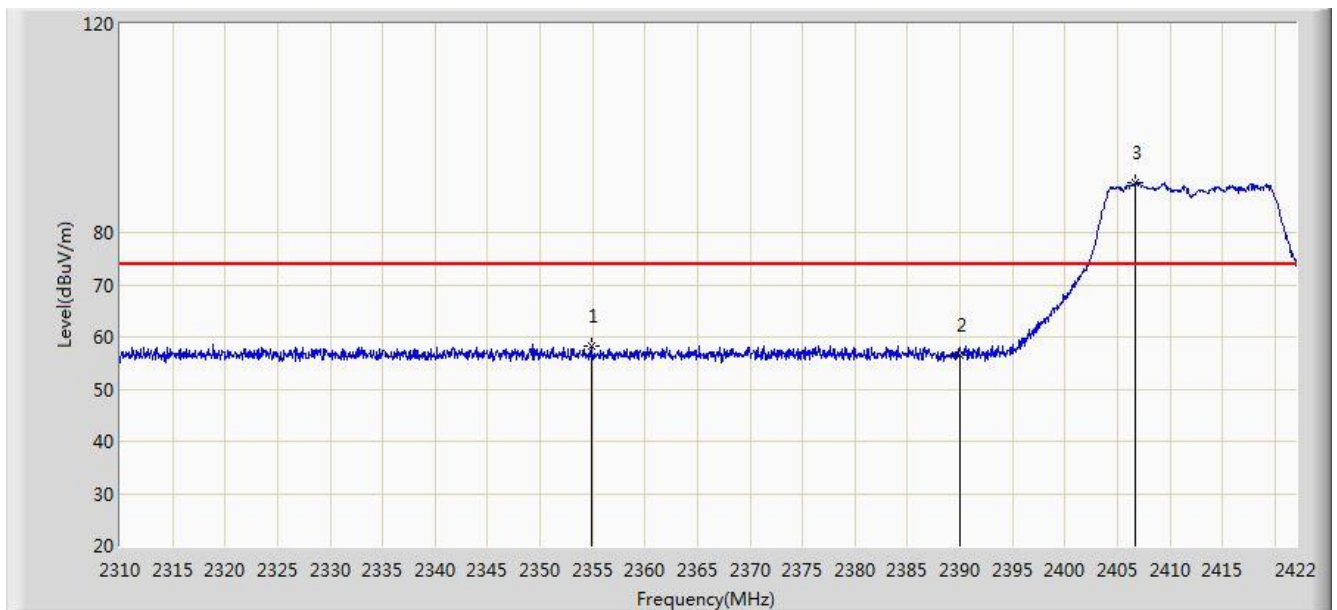


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	42.792	10.465	-11.208	54.000	32.327	AV
2		*	2415.504	89.481	57.198	N/A	N/A	32.284	AV

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 - 13:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

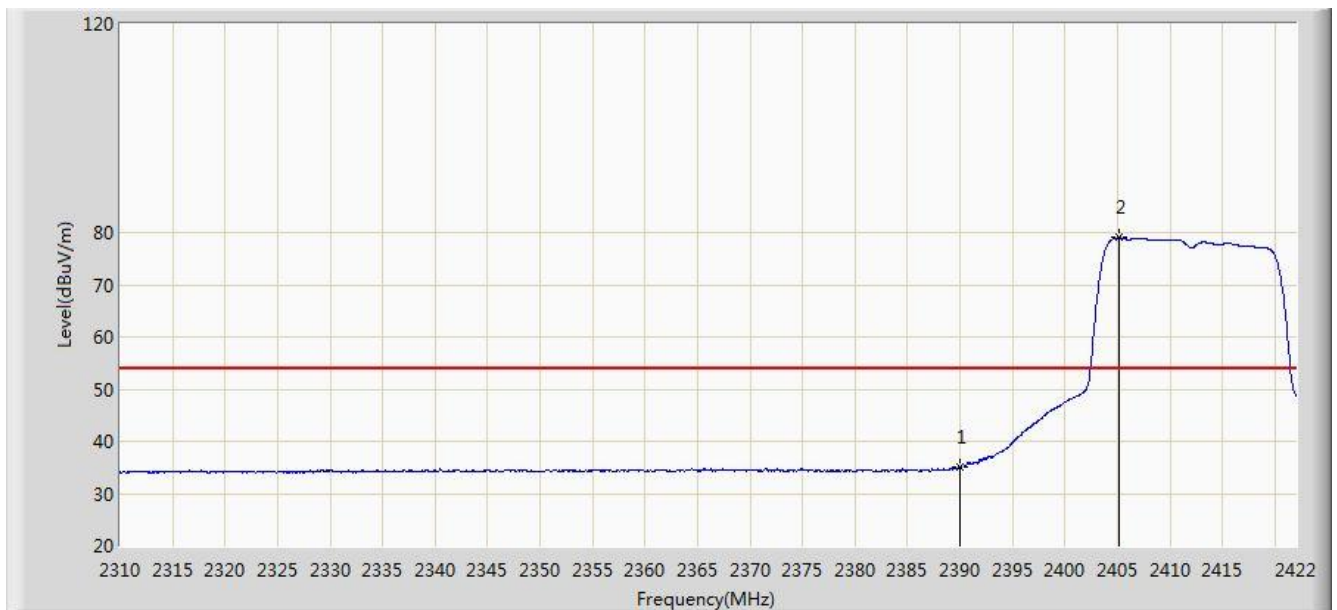


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2354.856	58.381	25.994	-15.619	74.000	32.387	PK
2			2390.000	56.420	24.093	-17.580	74.000	32.327	PK
3		*	2406.768	89.686	57.392	N/A	N/A	32.295	PK

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 - 13:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2412MHz	

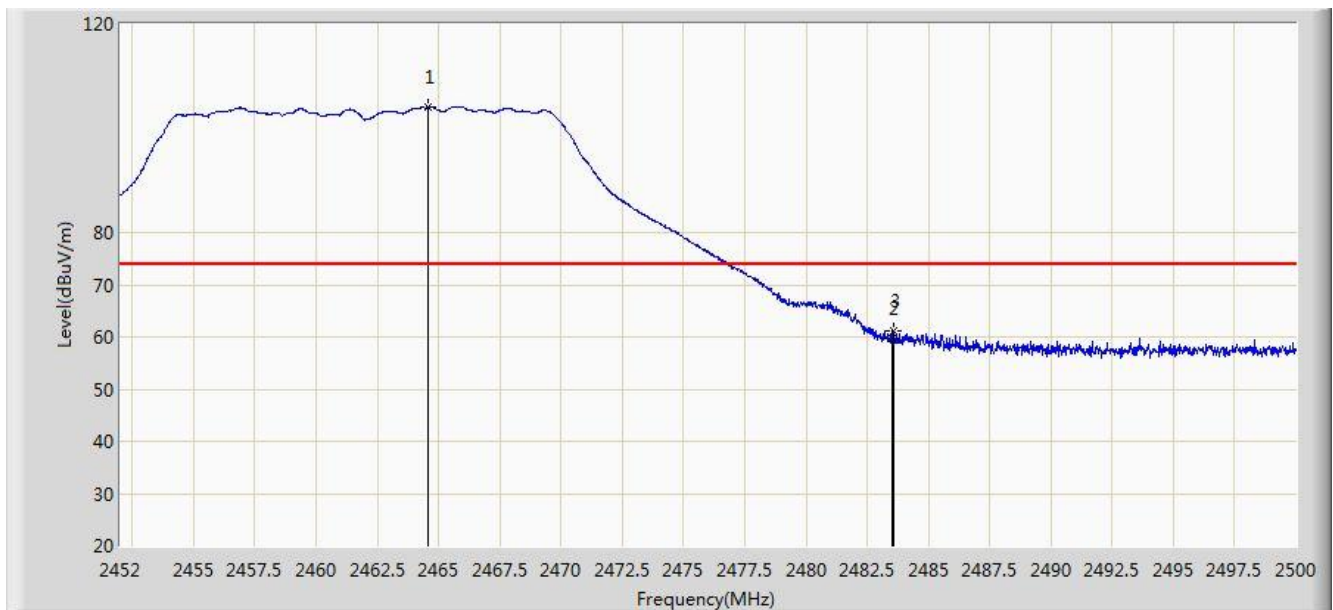


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	35.066	2.739	-18.934	54.000	32.327	AV
2		*	2405.200	79.011	46.713	N/A	N/A	32.298	AV

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 - 14:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

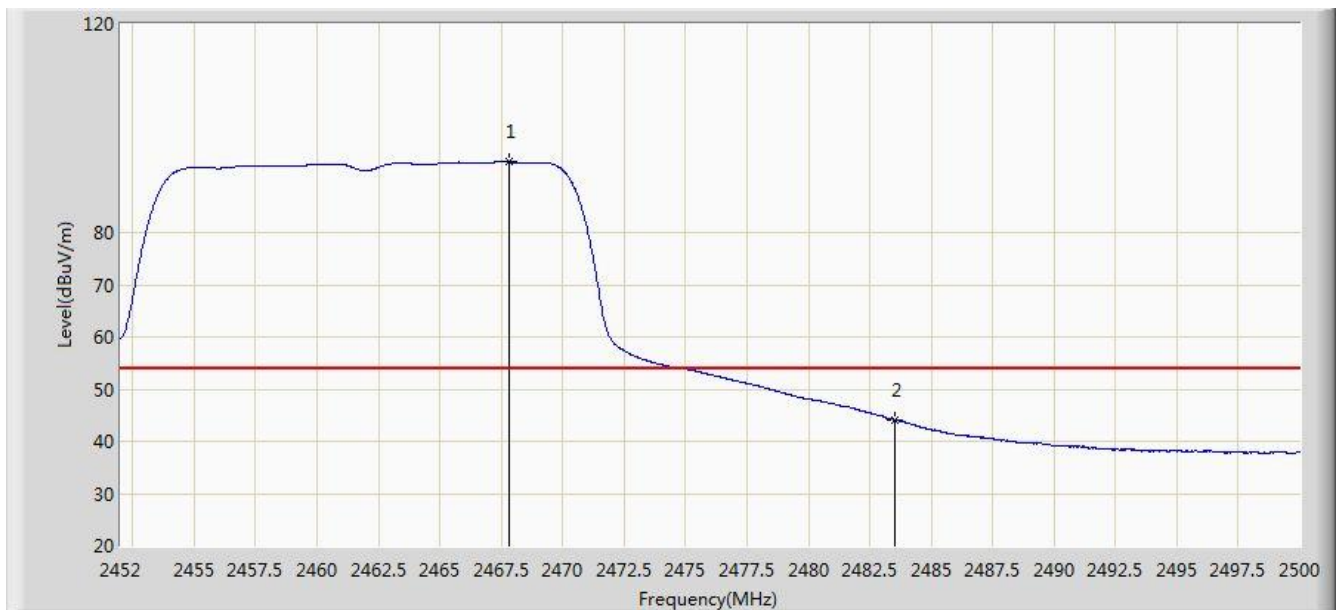


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.552	104.080	71.795	N/A	N/A	32.285	PK
2			2483.500	59.854	27.515	-14.146	74.000	32.340	PK
3			2483.584	61.167	28.828	-12.833	74.000	32.340	PK

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 - 14:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

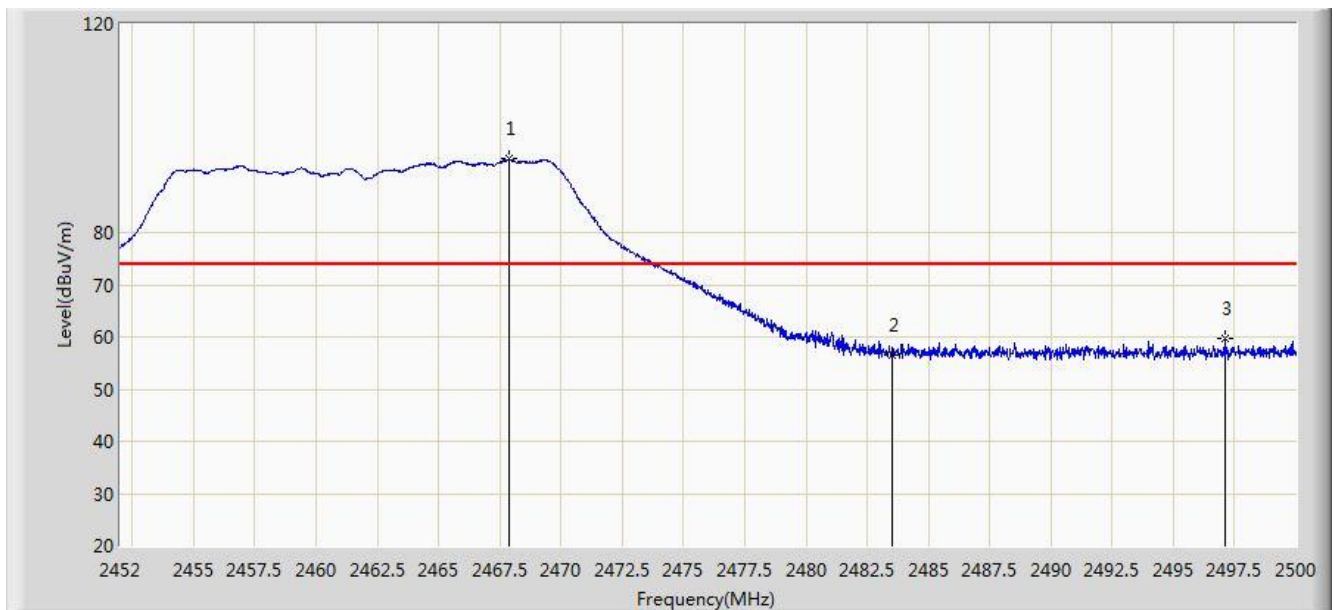


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.792	93.500	61.207	N/A	N/A	32.293	AV
2			2483.500	44.143	11.804	-9.857	54.000	32.340	AV

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 - 14:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at channel 2462MHz	

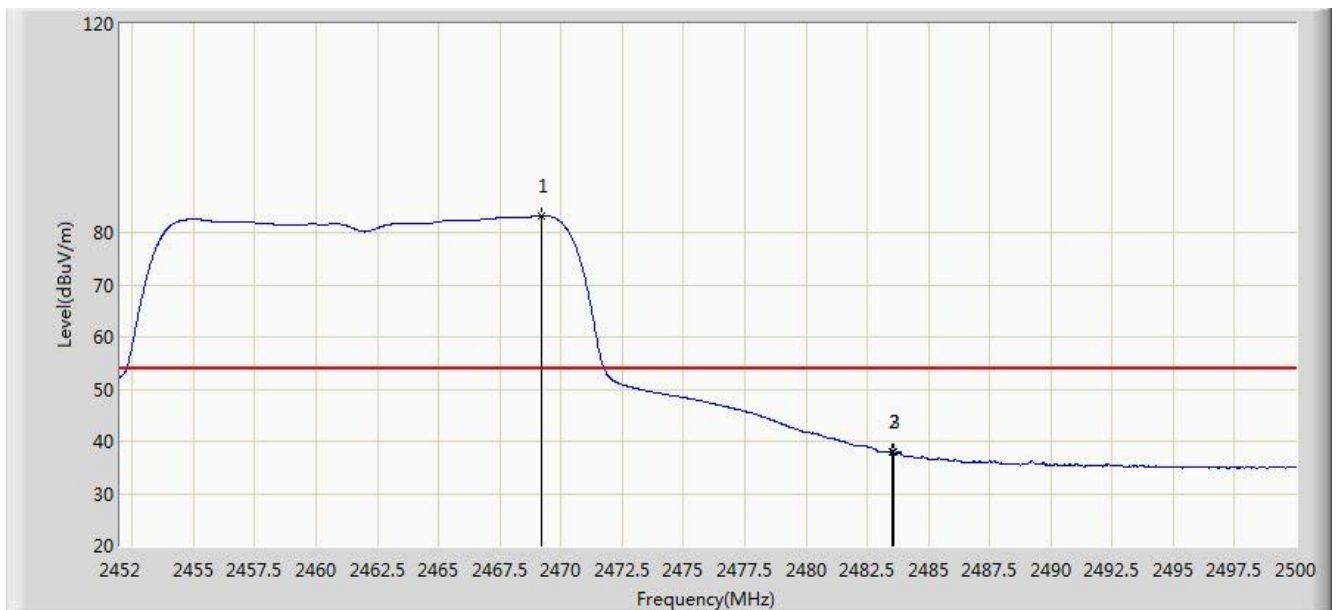


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.888	94.084	61.790	N/A	N/A	32.293	PK
2			2483.500	56.666	24.327	-17.334	74.000	32.340	PK
3			2497.120	59.766	27.376	-14.234	74.000	32.390	PK

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 - 14:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Flag Yang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Intraoral Camera	Power: AC 120V/60Hz
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		*	2469.184	83.229	50.932	N/A	N/A	32.297	AV
2			2483.500	37.848	5.509	-16.152	54.000	32.340	AV
3			2483.560	37.855	5.516	-16.145	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

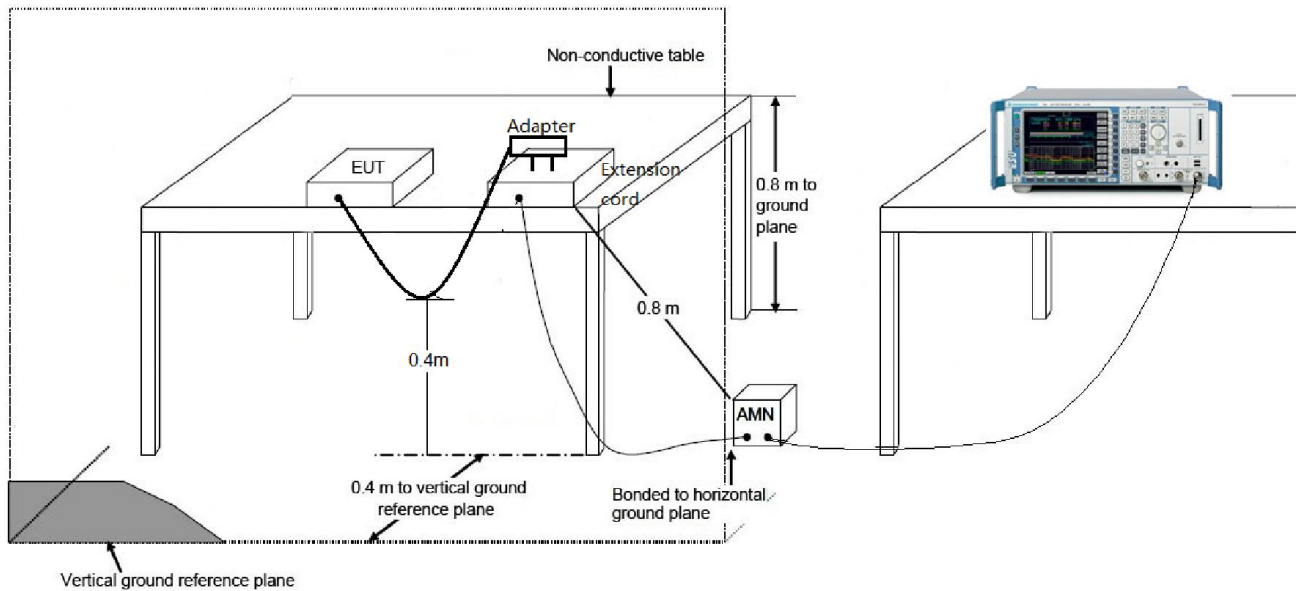
7.9.1. Test Limit

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.

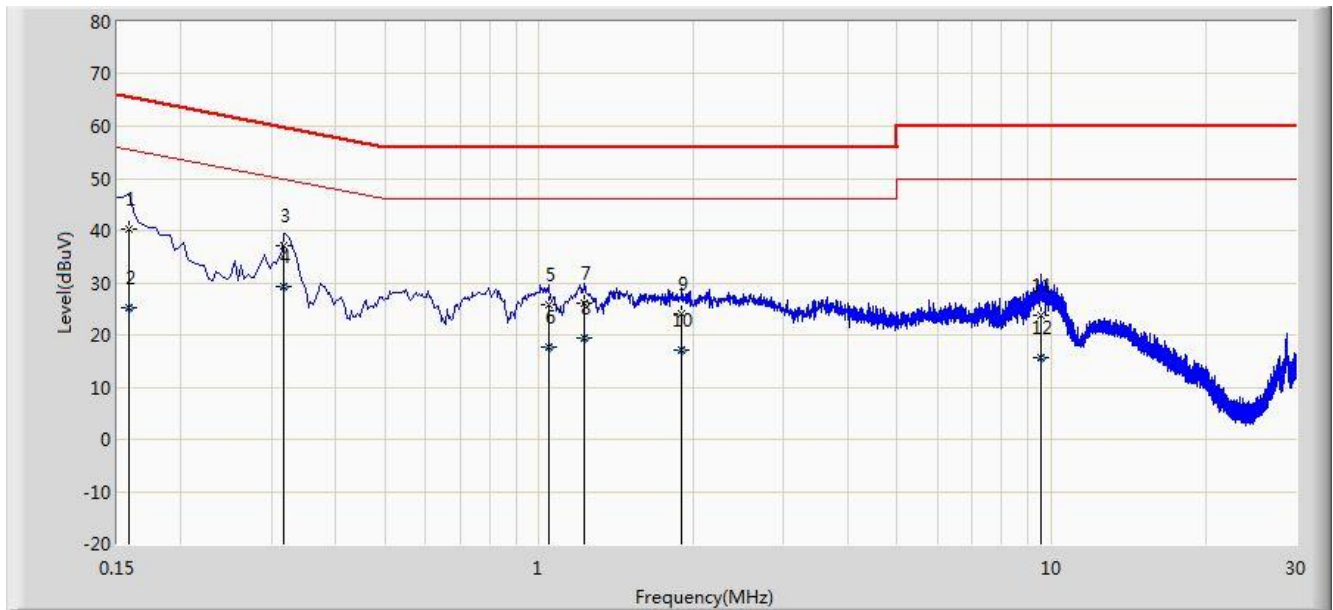
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.9.2. Test Setup



7.9.3. Test Result

Site: SR2	Time: 2019/03/05 - 18:43
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	

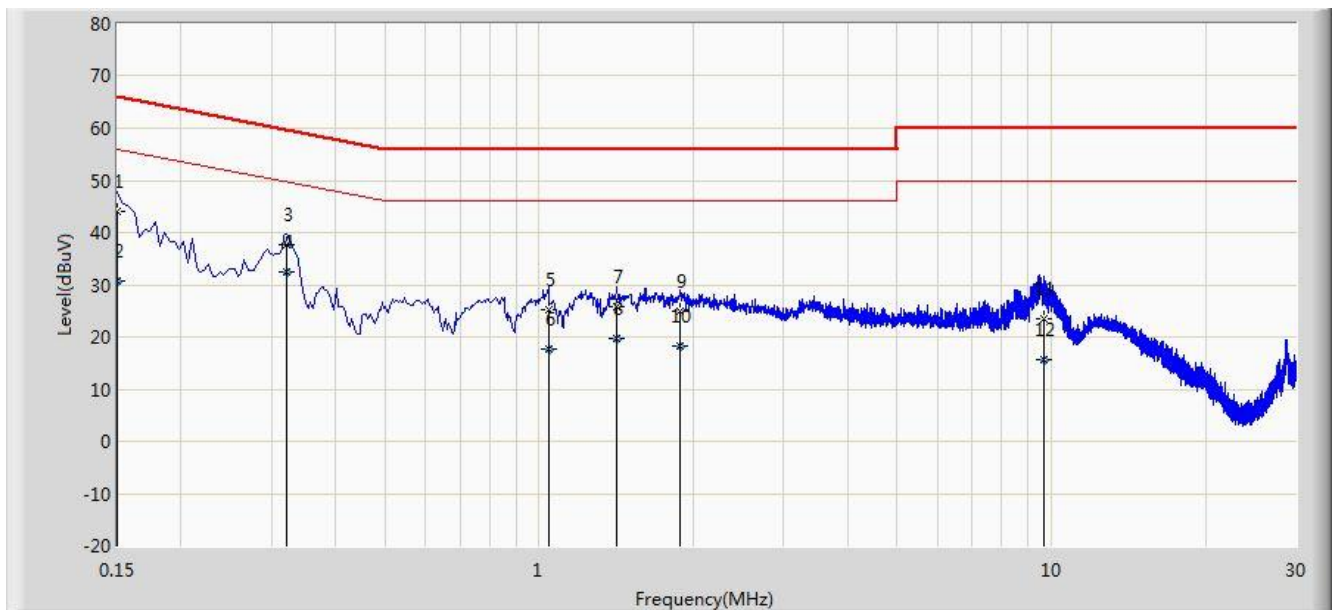


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.158	40.309	29.998	-25.260	65.568	10.311	QP
2			0.158	25.182	14.871	-30.387	55.568	10.311	AV
3			0.318	36.999	26.980	-22.760	59.759	10.018	QP
4		*	0.318	29.396	19.377	-20.363	49.759	10.018	AV
5			1.042	25.812	15.905	-30.188	56.000	9.907	QP
6			1.042	17.598	7.691	-28.402	46.000	9.907	AV
7			1.226	26.026	16.125	-29.974	56.000	9.900	QP
8			1.226	19.465	9.565	-26.535	46.000	9.900	AV
9			1.898	24.183	14.308	-31.817	56.000	9.875	QP
10			1.898	17.218	7.343	-28.782	46.000	9.875	AV
11			9.526	23.854	13.699	-36.146	60.000	10.156	QP
12			9.526	15.521	5.365	-34.479	50.000	10.156	AV

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

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

Site: SR2	Time: 2019/03/05 - 18:47
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			0.150	43.940	32.798	-22.060	66.000	11.142	QP
2			0.150	30.789	19.647	-25.211	56.000	11.142	AV
3			0.322	37.707	27.653	-21.948	59.655	10.054	QP
4		*	0.322	32.374	22.320	-17.281	49.655	10.054	AV
5			1.042	25.312	15.405	-30.688	56.000	9.908	QP
6			1.042	17.807	7.899	-28.193	46.000	9.908	AV
7			1.418	25.705	15.811	-30.295	56.000	9.893	QP
8			1.418	19.758	9.864	-26.242	46.000	9.893	AV
9			1.882	24.860	14.983	-31.140	56.000	9.877	QP
10			1.882	18.296	8.419	-27.704	46.000	9.877	AV
11			9.678	23.393	13.219	-36.607	60.000	10.174	QP
12			9.678	15.740	5.566	-34.260	50.000	10.174	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 “1904WSU018-UT” file.

Appendix B – EUT Photograph

Refer to “1904WSU018-UE” file.