FCC Test Report

Product Name	AG9+ Wireless Headset for PS4
Model No	051-044R-NA
FCC ID.	X5B-051-044RNA

Applicant	Performance Designed Products, LLC
Address	14144 Ventura Blvd., Suite 200 Sherman Oaks, CA91423 USA

Date of Receipt	Apr. 11, 2016
Issue Date	Jun. 02, 2016
Report No.	1640303R-RFUSP25V00
Report Version	V1.0

Testing Laboratory
3023

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
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The test report shall not be reproduced without the written approval of QuieTek Corporation.

Test Report

Issue Date: Jun. 02, 2016
Report No.: 1640303R-RFUSP25V00

Product Name	AG9+ Wireless Headset for PS4
Applicant	Performance Designed Products, LLC
Address	14144 Ventura Blvd., Suite 200 Sherman Oaks, CA91423 USA
Manufacturer	Performance Designed Products, LLC
Model No.	051-044R-NA
EUT Rated Voltage	DC 3.7V (Power by Battery)
EUT Test Voltage	DC 3.7V (Power by Battery)
Trade Name	pdp, Afterglow
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2015 ANSI C63.4: 2014, ANSI C63.10: 2013 KDB 558074 D01 DTS Meas Guidance v03r05
Test Result	Complied

Documented By : Rita Huang

(Senior Adm. Specialist / Rita Huang)

Tested By : Steven Tsai

(Engineer / Steven Tsai)

Approved By :

(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	AG9+ Wireless Headset for PS4
Trade Name	pdp, Afterglow
Model No.	051-044R-NA
FCC ID.	X5B-051-044RNA
Frequency Range	2403.35 – 2479.35MHz
Channel Control	Auto
Channel Separation	2MHz
Antenna Gain	Refer to the table “Antenna List”
Channel Number	39
Type of Modulation	Pi/4 DQPSK
Antenna Type	Printed on PCB
USB Cable	Non-Shielded, 2.0m
Audio Cable	Non-Shielded, 1.2m

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	TATUNG	051-044R (Ant 1) 051-044R (Ant 2)	5.48dBi for 2.4 GHz

Note: The antenna of EUT is conform to FCC 15.203

Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 1:	2403.35 MHz	Channel 11:	2423.35 MHz	Channel 21:	2443.35 MHz	Channel 31:	2463.35 MHz
Channel 2:	2405.35 MHz	Channel 12:	2425.35 MHz	Channel 22:	2445.35 MHz	Channel 32:	2465.35 MHz
Channel 3:	2407.35 MHz	Channel 13:	2427.35 MHz	Channel 23:	2447.35 MHz	Channel 33:	2467.35 MHz
Channel 4:	2409.35 MHz	Channel 14:	2429.35 MHz	Channel 24:	2449.35 MHz	Channel 34:	2469.35 MHz
Channel 5:	2411.35 MHz	Channel 15:	2431.35 MHz	Channel 25:	2451.35 MHz	Channel 35:	2471.35 MHz
Channel 6:	2413.35 MHz	Channel 16:	2433.35 MHz	Channel 26:	2453.35 MHz	Channel 36:	2473.35 MHz
Channel 7:	2415.35 MHz	Channel 17:	2435.35 MHz	Channel 27:	2455.35 MHz	Channel 37:	2475.35 MHz
Channel 8:	2417.35 MHz	Channel 18:	2437.35 MHz	Channel 28:	2457.35 MHz	Channel 38:	2477.35 MHz
Channel 9:	2419.35 MHz	Channel 19:	2439.35 MHz	Channel 29:	2459.35 MHz	Channel 39:	2479.35 MHz
Channel 10:	2421.35 MHz	Channel 20:	2441.35 MHz	Channel 30:	2461.35 MHz		

Note:

1. The EUT is an AG9+ Wireless Headset for PS4 with a built-in 2.4GHz WLAN transceiver.
2. Device contains a diversity function, only worst case is shown in the report.
3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
5. The EUT is using two the same SISO antennas(Ant1&Ant2) and only the worst case(Ant1) is shown in the report.
6. These tests are conducted on a sample for the purpose of demonstrating compliance of 2.4GHz transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices

Test Mode:	Mode 1: Transmit

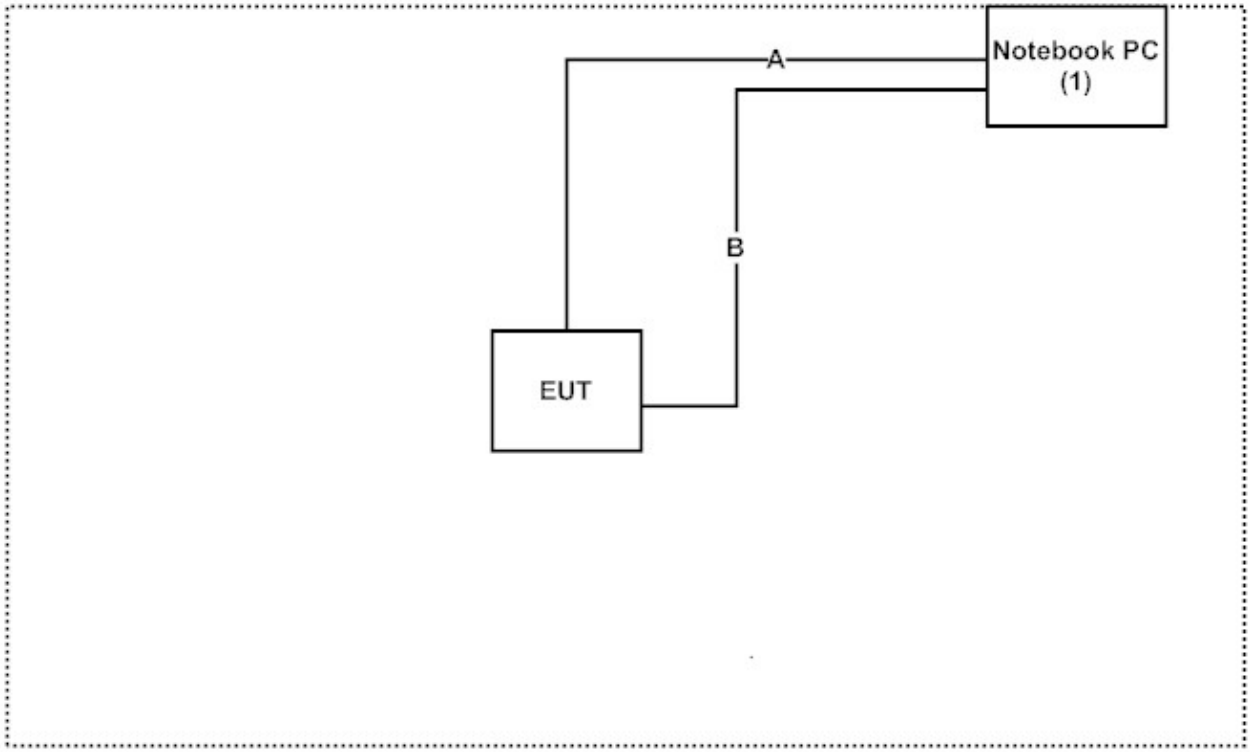
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	PP18L	36119001664	Non-Shielded, 0.8m

Signal Cable Type		Signal cable Description
A	USB Cable	Non-Shielded, 2.0m
B	Audio Cable	Non-Shielded, 1.2m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown in Section 1.4.
(2) Execute “VMI debug.exe (v1.1.6.47)” on the Notebook PC.
(3) Configure the test mode, the test channel, and the data rate.
(4) Press “OK” to start the continuous Transmit.
(5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site: http://www.quietek.com/chinese/about/certificates.aspx?bval=5

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site: http://www.quietek.com/

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Site Name: Quietek Corporation
Site Address: No.5-22, Ruishukeng,
Linkou Dist. New Taipei City 24451,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Conducted Emission

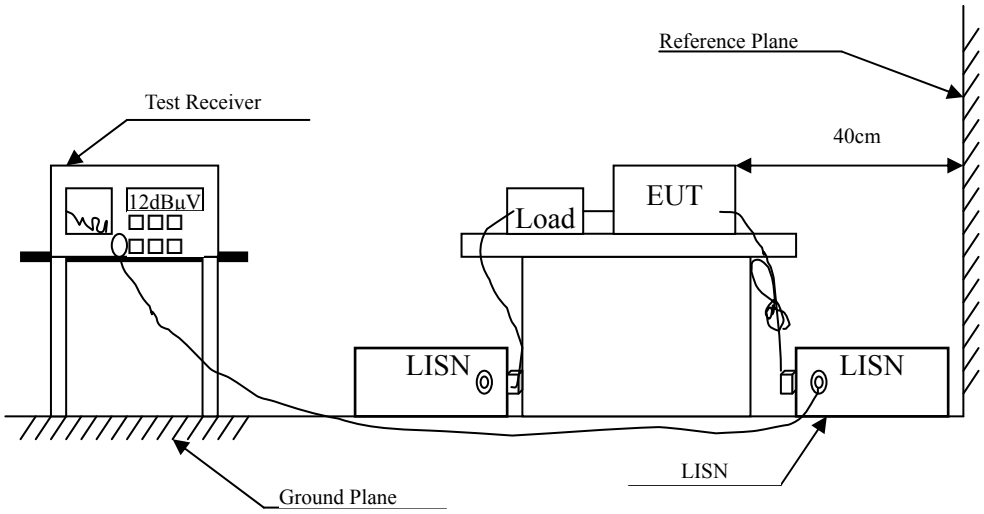
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2015	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2016	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2016	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2016	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2016	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

2.2. Test Setup



2.3. Limits

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

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and Peripherals are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

The EUT was setup to ANSI C63.4: 2014; tested to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : AG9+ Wireless Headset for PS4
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 1: Transmit (2441.35MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.189	9.774	41.440	51.214	-13.672	64.886
0.252	9.779	34.470	44.249	-18.837	63.086
0.451	9.784	26.660	36.444	-20.956	57.400
2.115	9.933	22.920	32.853	-23.147	56.000
3.724	9.978	21.230	31.208	-24.792	56.000
9.255	10.077	27.500	37.577	-22.423	60.000
Average					
0.189	9.774	29.260	39.034	-15.852	54.886
0.252	9.779	20.100	29.879	-23.207	53.086
0.451	9.784	15.270	25.054	-22.346	47.400
2.115	9.933	13.970	23.903	-22.097	46.000
3.724	9.978	14.130	24.108	-21.892	46.000
9.255	10.077	22.170	32.247	-17.753	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : AG9+ Wireless Headset for PS4
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 1: Transmit (2441.35MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.189	9.834	39.650	49.484	-15.402	64.886
0.322	9.844	28.860	38.704	-22.382	61.086
0.435	9.853	27.830	37.683	-20.174	57.857
2.052	9.988	24.840	34.828	-21.172	56.000
3.002	10.024	23.420	33.444	-22.556	56.000
9.166	10.163	23.580	33.743	-26.257	60.000
Average					
0.189	9.834	30.370	40.204	-14.682	54.886
0.322	9.844	18.970	28.814	-22.272	51.086
0.435	9.853	16.200	26.053	-21.804	47.857
2.052	9.988	15.590	25.578	-20.422	46.000
3.002	10.024	10.770	20.794	-25.206	46.000
9.166	10.163	17.380	27.543	-22.457	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

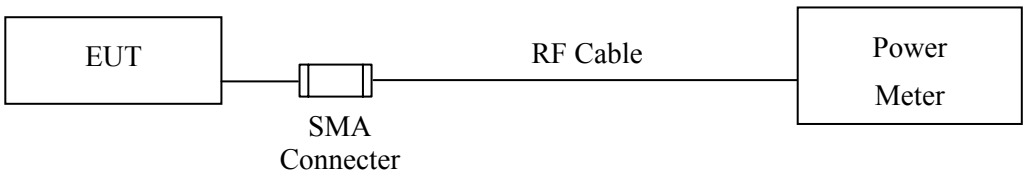
3.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2016
X	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2016

Note: 1. All equipments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup



3.3. Limit

The maximum peak power shall be less 1Watt.

3.4. Test Procedure

Tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.2 PKPM1 Peak power meter method.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : AG9+ Wireless Headset for PS4
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
01	2403.35	4.28	<30dBm	Pass
20	2441.35	3.88	<30dBm	Pass
39	2479.35	3.40	<30dBm	Pass

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the radiated emission test:

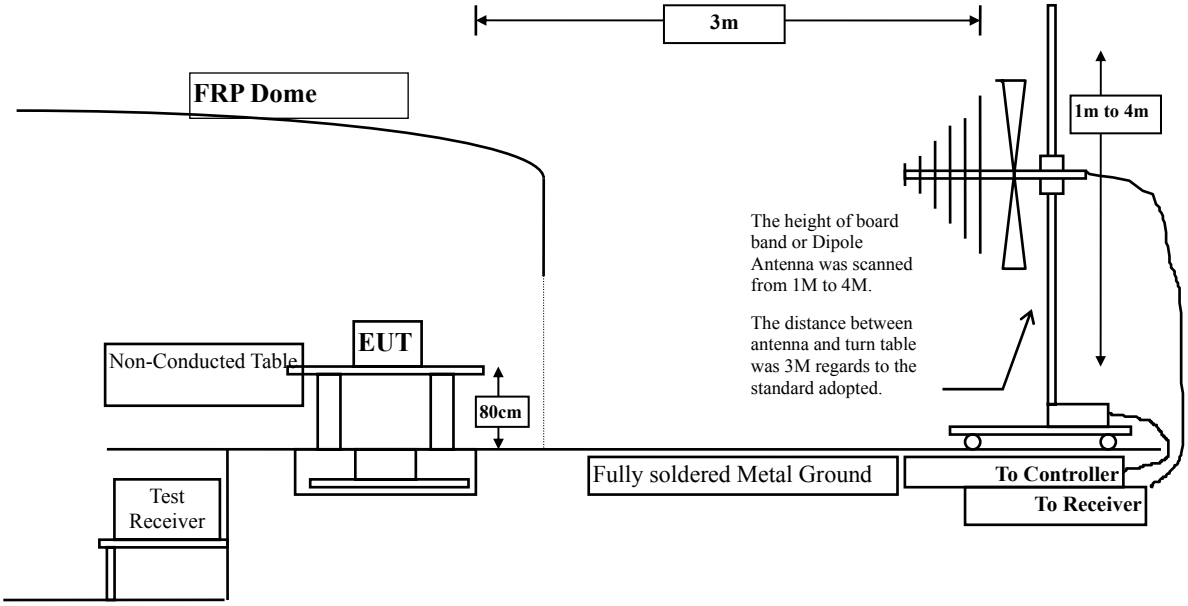
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2016
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2016
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2016
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun, 2016

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2016
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2016
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2016
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

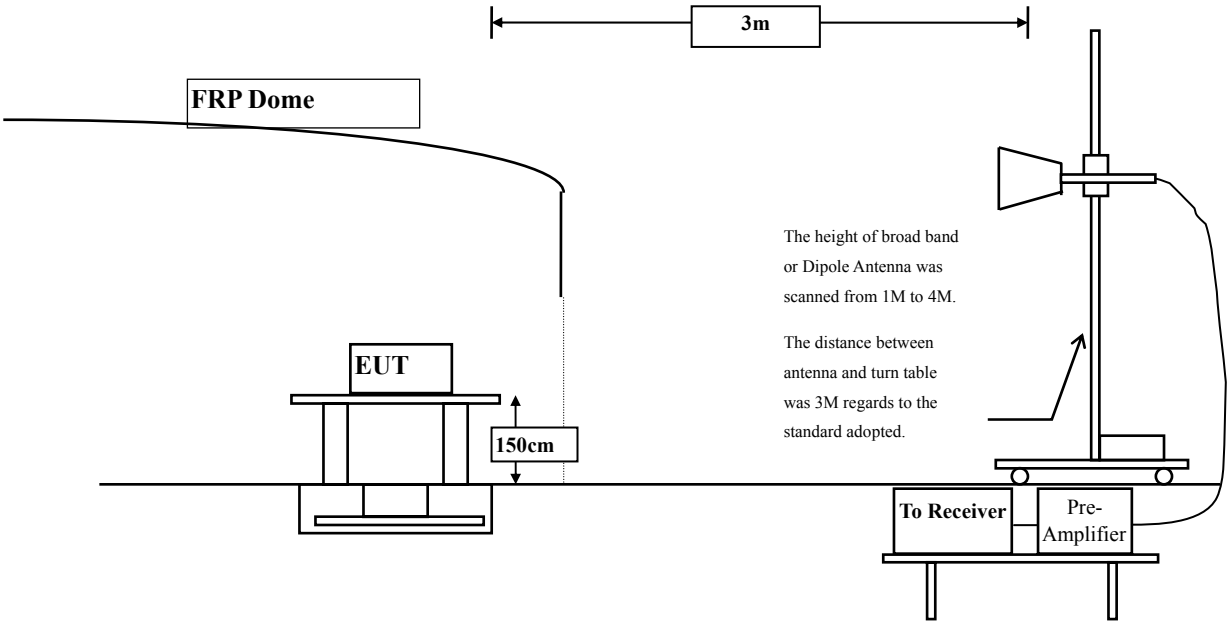
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup

Below 1GHz



Above 1GHz



4.3. Limits

➢ **General Radiated Emission Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
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

Remarks: 1. RF Voltage (dBμV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : AG9+ Wireless Headset for PS4
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2403.35MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4806.700	3.331	41.260	44.590	-29.410	74.000
7210.050	10.205	41.249	51.454	-22.546	74.000
9613.400	13.656	40.271	53.927	-20.073	74.000
Vertical					
Peak Detector:					
4806.700	6.623	42.081	48.703	-25.297	74.000
7210.050	11.071	41.340	52.411	-21.589	74.000
9613.400	14.063	39.540	53.603	-20.397	74.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : AG9+ Wireless Headset for PS4
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2441.35MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
4882.700	2.999	42.330	45.328	-28.672	74.000
7324.050	11.851	41.960	53.811	-20.189	74.000
9765.400	12.556	40.880	53.436	-20.564	74.000
Vertical Peak Detector:					
4882.700	5.706	41.460	47.165	-26.835	74.000
7324.050	12.736	41.120	53.857	-20.143	74.000
9765.400	13.019	40.927	53.946	-20.054	74.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : AG9+ Wireless Headset for PS4
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2479.35MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4958.700	2.764	41.660	44.424	-29.576	74.000
7438.050	12.548	40.820	53.368	-20.632	74.000
9917.400	13.441	40.270	53.712	-20.288	74.000
Vertical					
Peak Detector:					
4958.700	5.556	42.170	47.726	-26.274	74.000
7438.050	13.423	40.290	53.713	-20.287	74.000
9917.400	13.960	39.970	53.930	-20.070	74.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : AG9+ Wireless Headset for PS4
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2441.35MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
245.347	-6.345	40.356	34.010	-11.990	46.000
364.679	-1.380	37.418	36.039	-9.961	46.000
493.841	-0.540	33.674	33.134	-12.866	46.000
598.229	3.994	31.841	35.835	-10.165	46.000
754.681	4.230	26.490	30.720	-15.280	46.000
832.554	5.788	29.827	35.615	-10.385	46.000
Vertical					
251.437	-7.515	32.118	24.603	-21.397	46.000
369.231	-2.830	28.788	25.958	-20.042	46.000
500.154	-0.801	30.226	29.425	-16.575	46.000
598.134	-2.995	32.664	29.669	-16.331	46.000
833.299	2.242	31.559	33.801	-12.199	46.000
945.558	6.594	25.619	32.213	-13.787	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

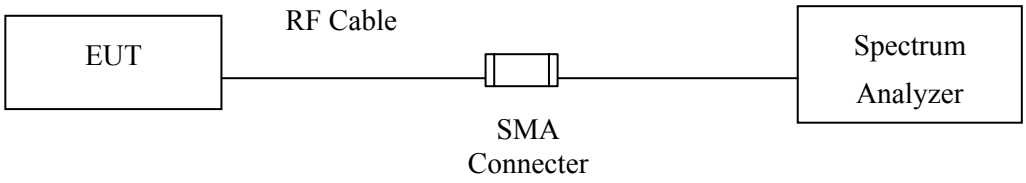
5. RF Antenna Conducted Test

5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2016
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2016
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016

Note: 1. All equipments are calibrated every one year.
2. The test instruments Marked "X" are used to measure the final test results.

5.2. Test Setup



5.3. Limits

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.4. Test Procedure

The EUT was tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

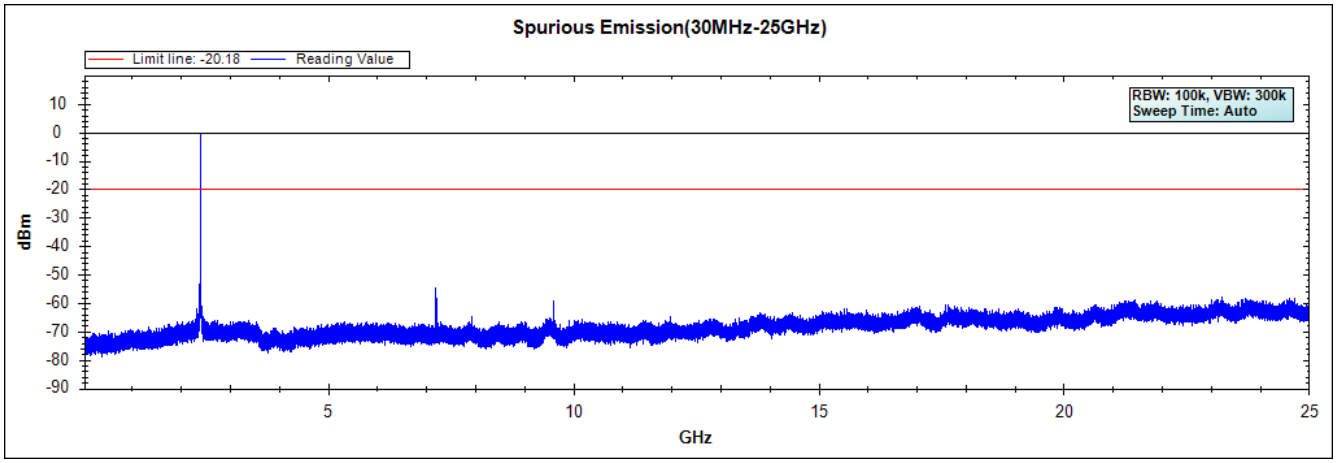
5.5. Uncertainty

± 150Hz

5.6. Test Result of RF antenna conducted test

Product	:	AG9+ Wireless Headset for PS4
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit

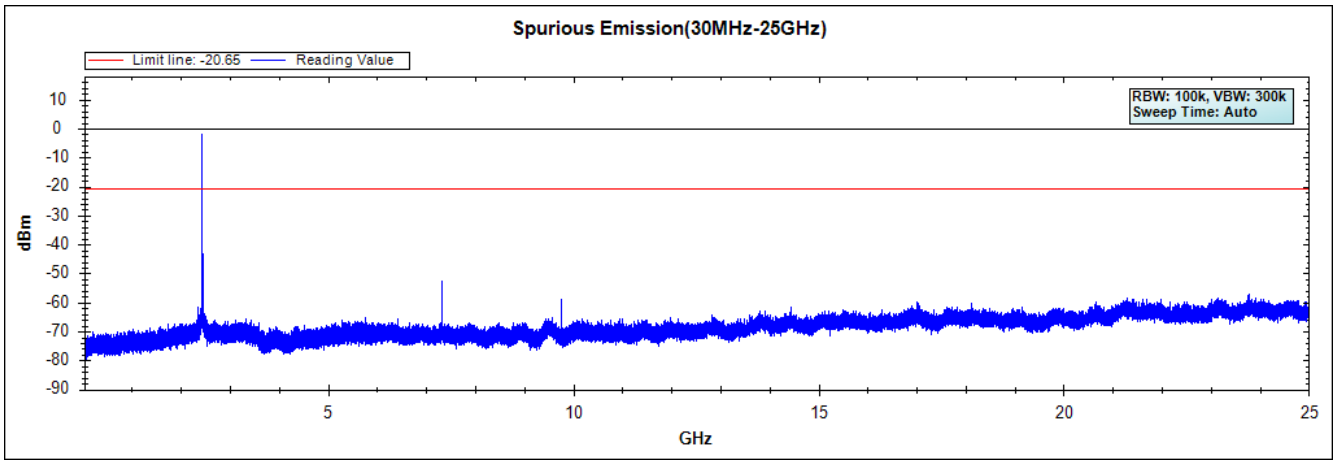
Channel 01 (2403.35MHz) 30M-25GHz



Note: The above test pattern is synthesized by multiple of the frequency range.

Product	:	AG9+ Wireless Headset for PS4
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit

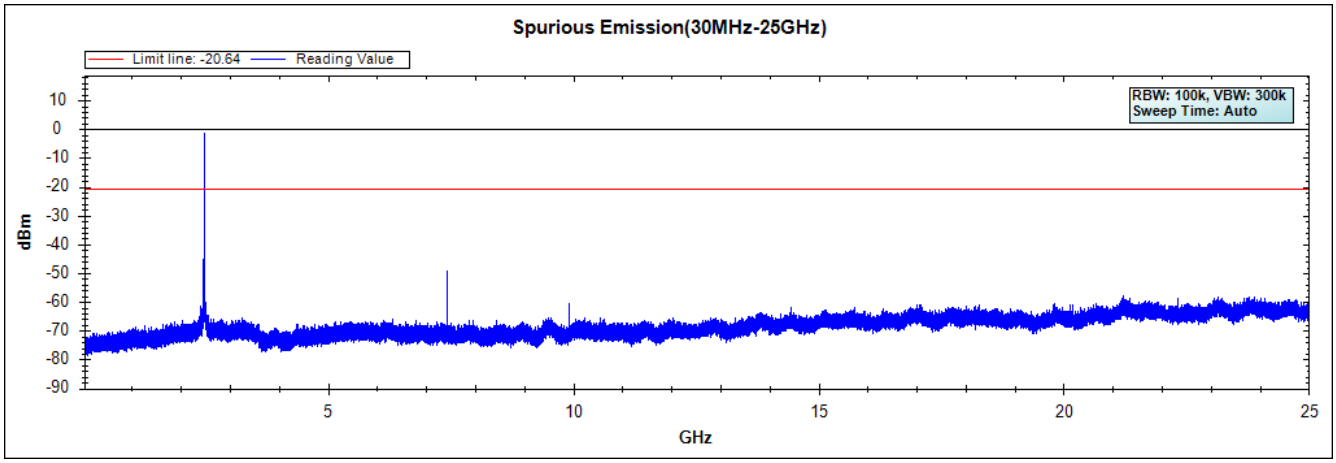
Channel 20 (2441.35MHz) 30M-25GHz



Note: The above test pattern is synthesized by multiple of the frequency range.

Product	:	AG9+ Wireless Headset for PS4
Test Item	:	RF antenna conducted test
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit

Channel 39 (2479.35MHz) 30M-25GHz



Note: The above test pattern is synthesized by multiple of the frequency range.

6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2016
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2016
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016

RF Radiated Measurement:

The following test equipments are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2016
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2016
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2016
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun, 2016

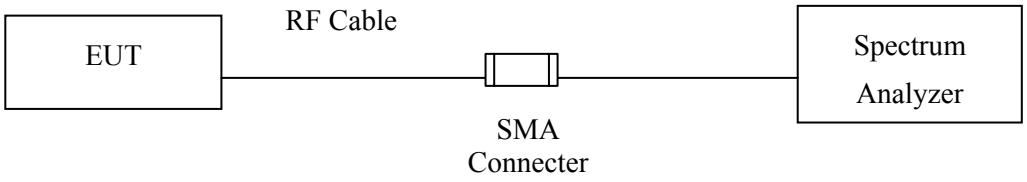
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2016
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2016
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2016
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

2. The test instruments marked with "X" are used to measure the final test results.

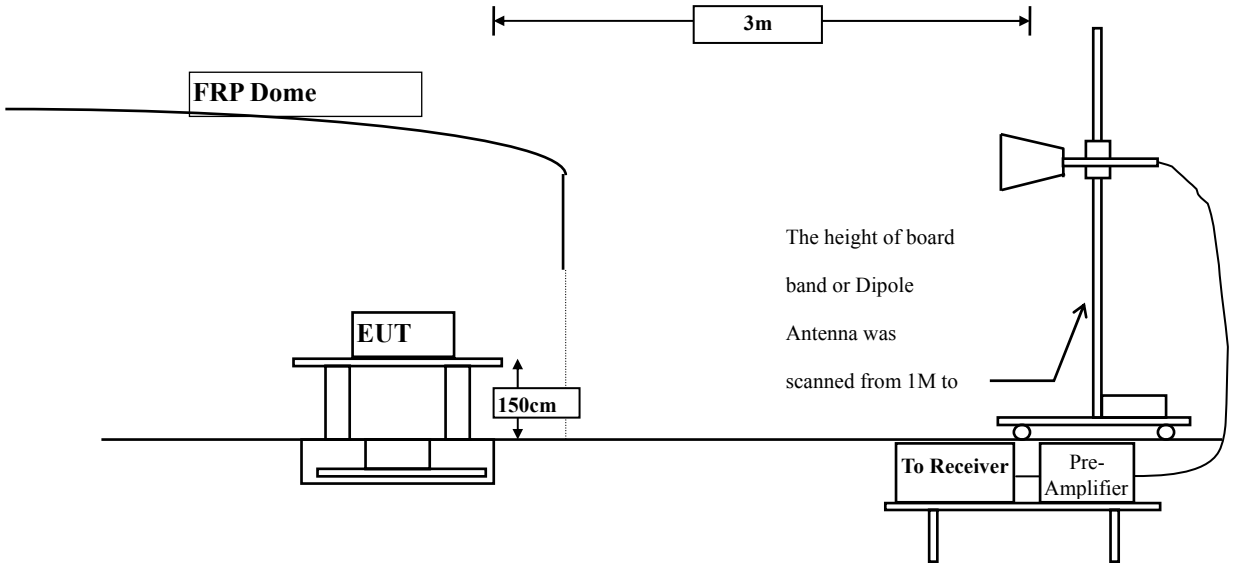
6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz



6.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

6.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

Product : AG9+ Wireless Headset for PS4
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2403.35MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-1.131	48.888	47.757	74.00	54.00	Pass
01 (Peak)	2400.000	-1.084	69.167	68.084	--	--	--
01 (Peak)	2403.600	-1.064	96.232	95.168	--	--	--
01 (Average)	2390.000	-1.131	34.327	33.196	74.00	54.00	Pass
01 (Average)	2400.000	-1.084	58.753	57.670	--	--	--
01 (Average)	2403.400	-1.065	93.074	92.009	--	--	--

Figure Channel 01: Horizontal (Peak)

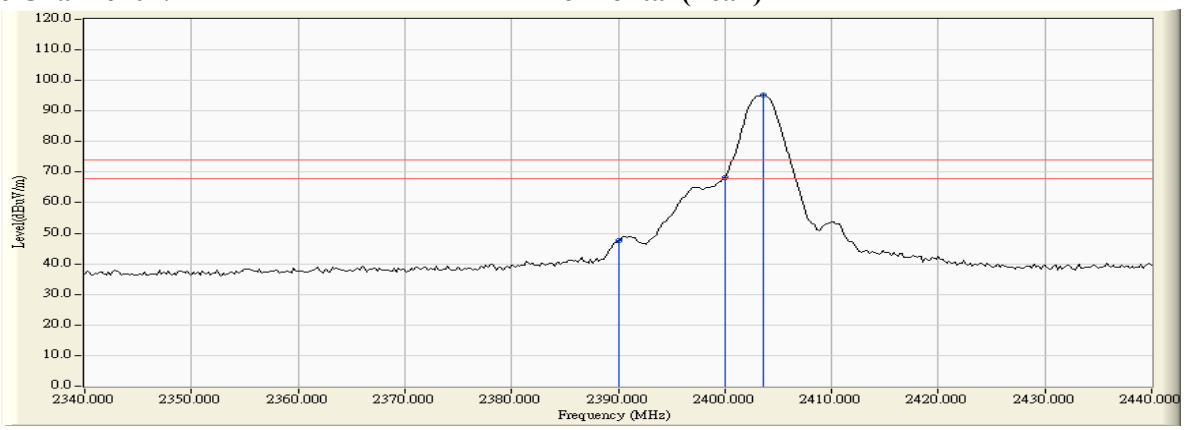
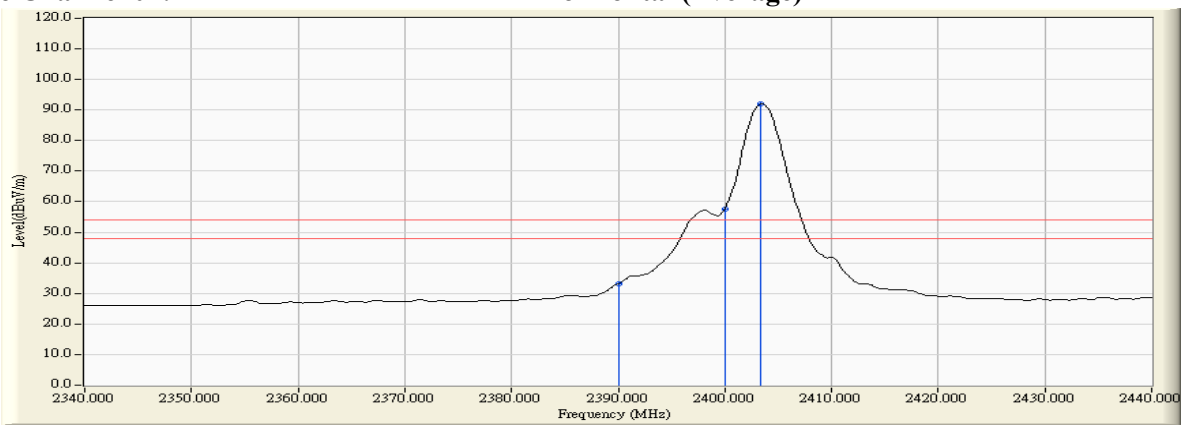


Figure Channel 01: Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : AG9+ Wireless Headset for PS4
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2403.35MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	-1.725	44.846	43.121	74.00	54.00	Pass
01 (Peak)	2400.000	-1.733	63.560	61.828	--	--	--
01 (Peak)	2403.600	-1.726	90.590	88.865	--	--	--
01 (Average)	2390.000	-1.725	29.461	27.736	74.00	54.00	Pass
01 (Average)	2400.000	-1.733	52.709	50.977	--	--	--
01 (Average)	2403.400	-1.726	87.005	85.279	--	--	--

Figure Channel 01: Vertical (Peak)

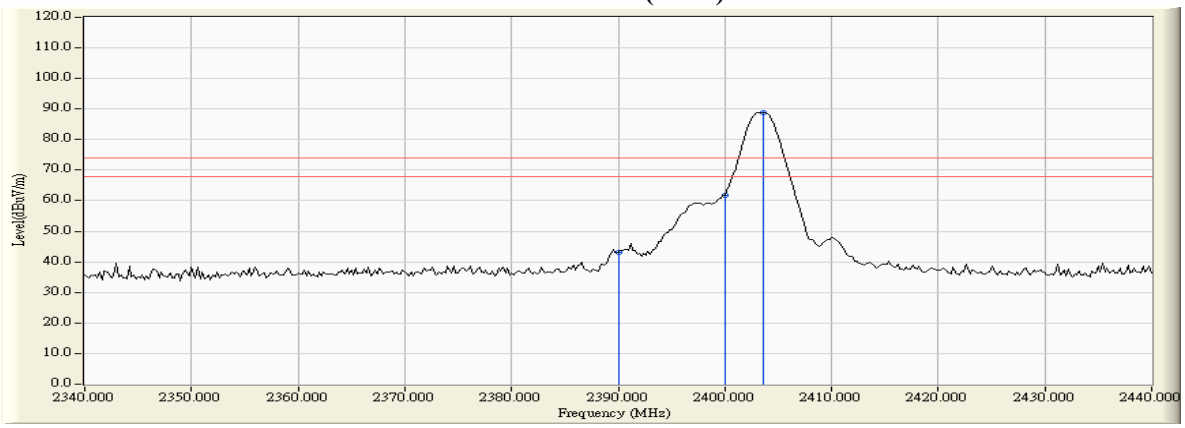
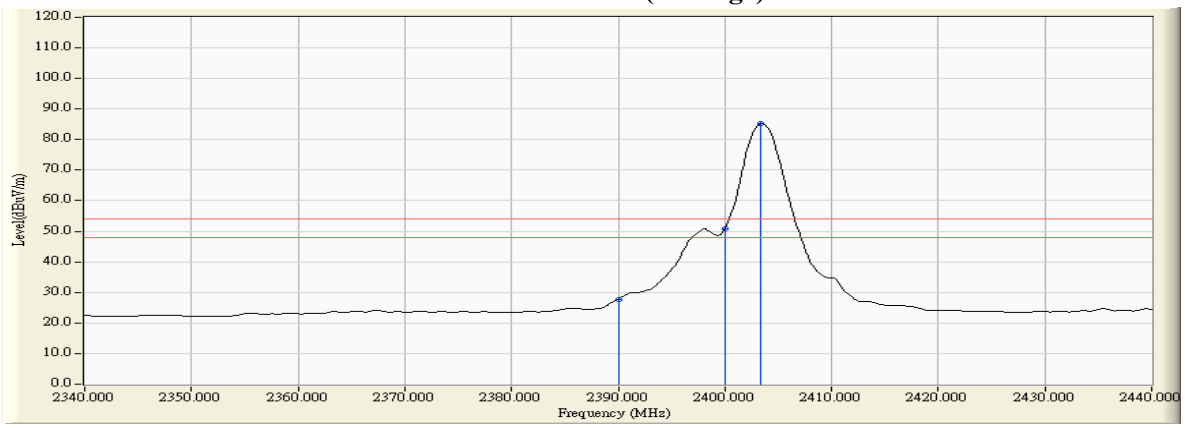


Figure Channel 01: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : AG9+ Wireless Headset for PS4
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2479.35MHz)

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
39 (Peak)	2479.300	-0.585	95.055	94.470	--	--	--
39 (Peak)	2483.500	-0.558	58.094	57.536	74.00	54.00	Pass
39 (Average)	2479.300	-0.585	90.789	90.204	--	--	--
39 (Average)	2483.500	-0.558	54.049	53.491	74.00	54.00	Pass

Figure Channel 39: Horizontal (Peak)

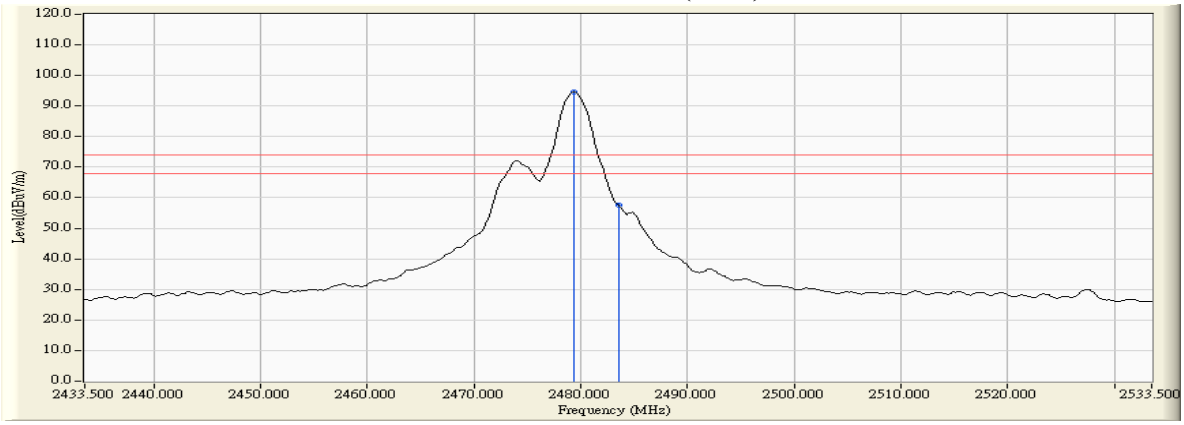
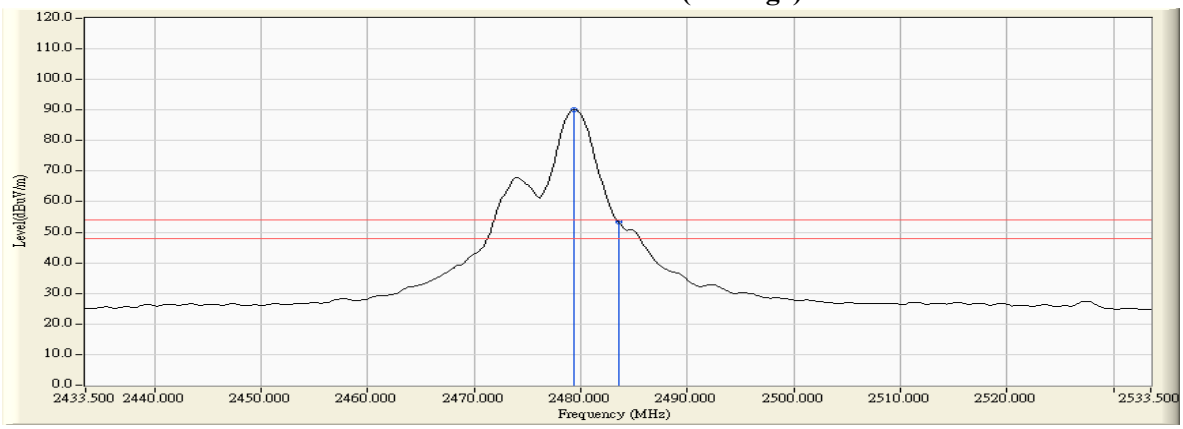


Figure Channel 39: Horizontal (Average)



Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : AG9+ Wireless Headset for PS4
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2479.35MHz)

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
39 (Peak)	2479.100	-1.329	91.849	90.520	--	--	--
39 (Peak)	2483.500	-1.305	63.292	61.987	74.00	54.00	Pass
39 (Average)	2479.500	-1.327	88.960	87.633	--	--	--
39 (Average)	2483.500	-1.305	52.000	50.695	74.00	54.00	Pass

Figure Channel 39: Vertical (Peak)

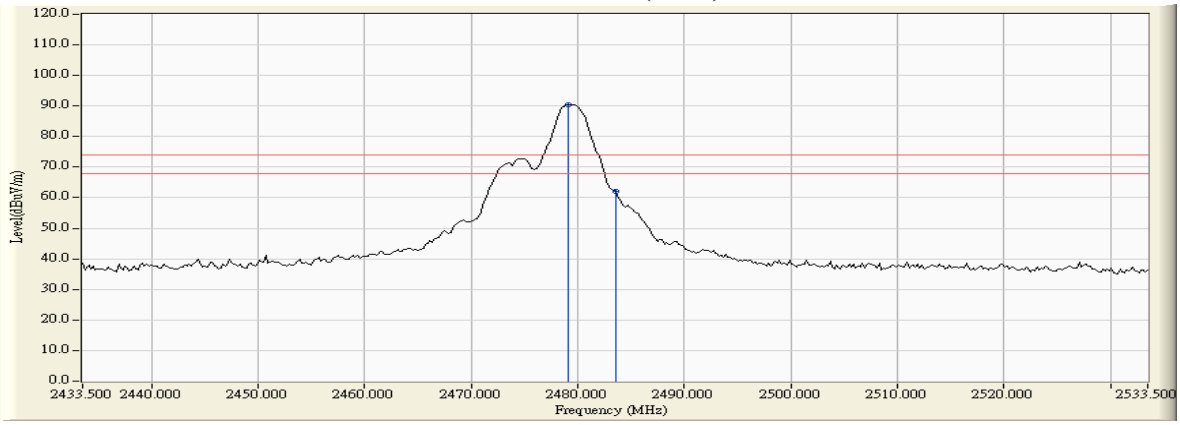
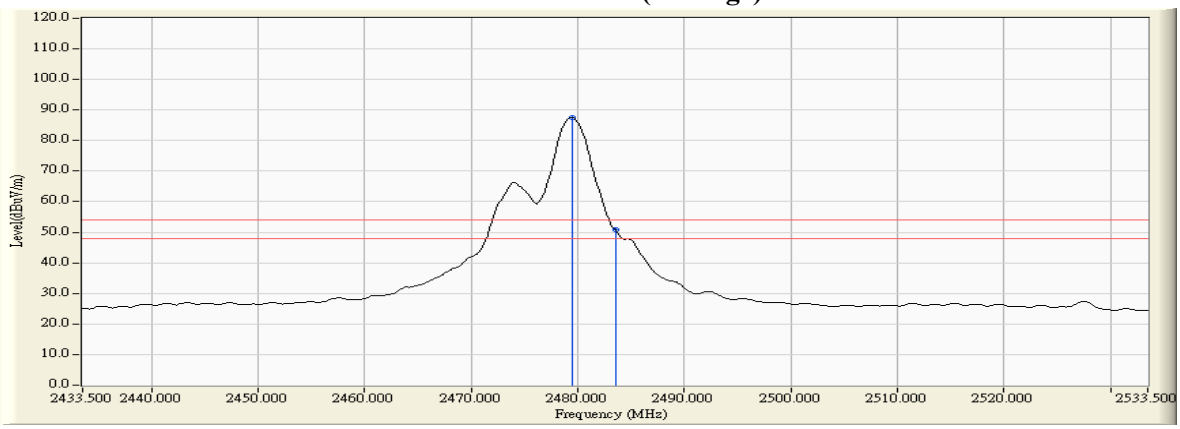


Figure Channel 39: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

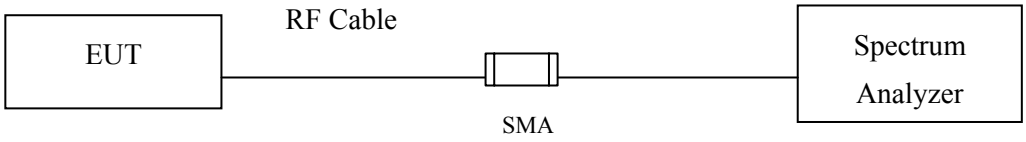
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2016
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2016
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100kHz , VBW≥3*RBW

7.5. Uncertainty

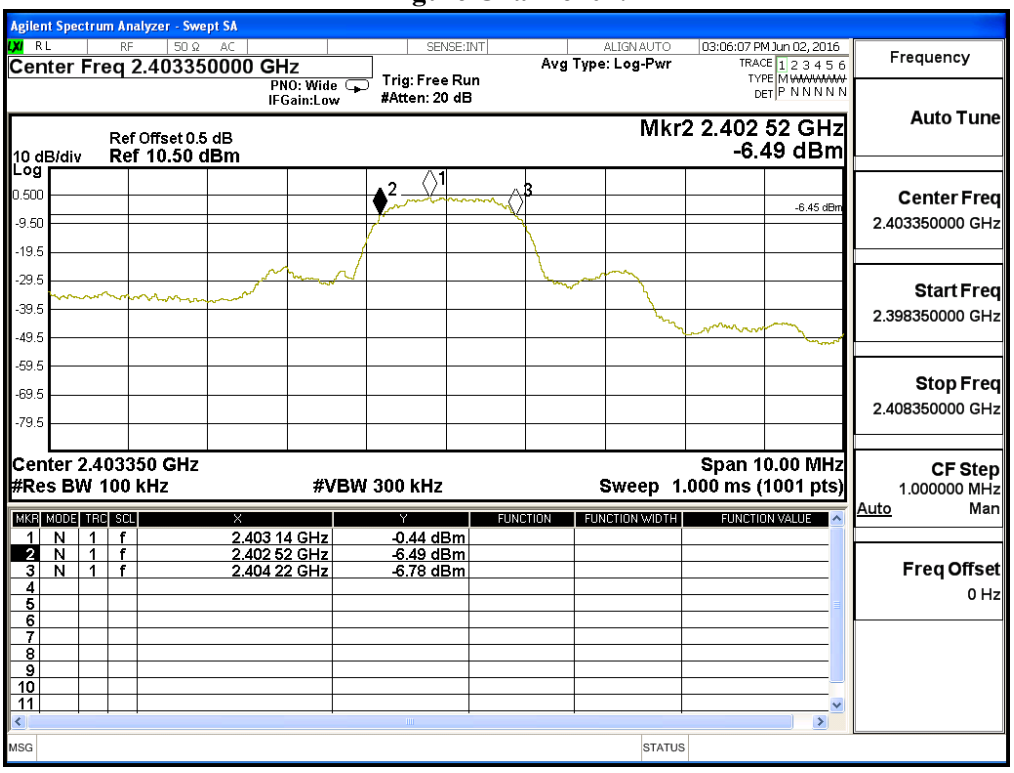
± 150Hz

7.6. Test Result of Occupied Bandwidth

Product : AG9+ Wireless Headset for PS4
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2403.35MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2403.35	1700	>500	Pass

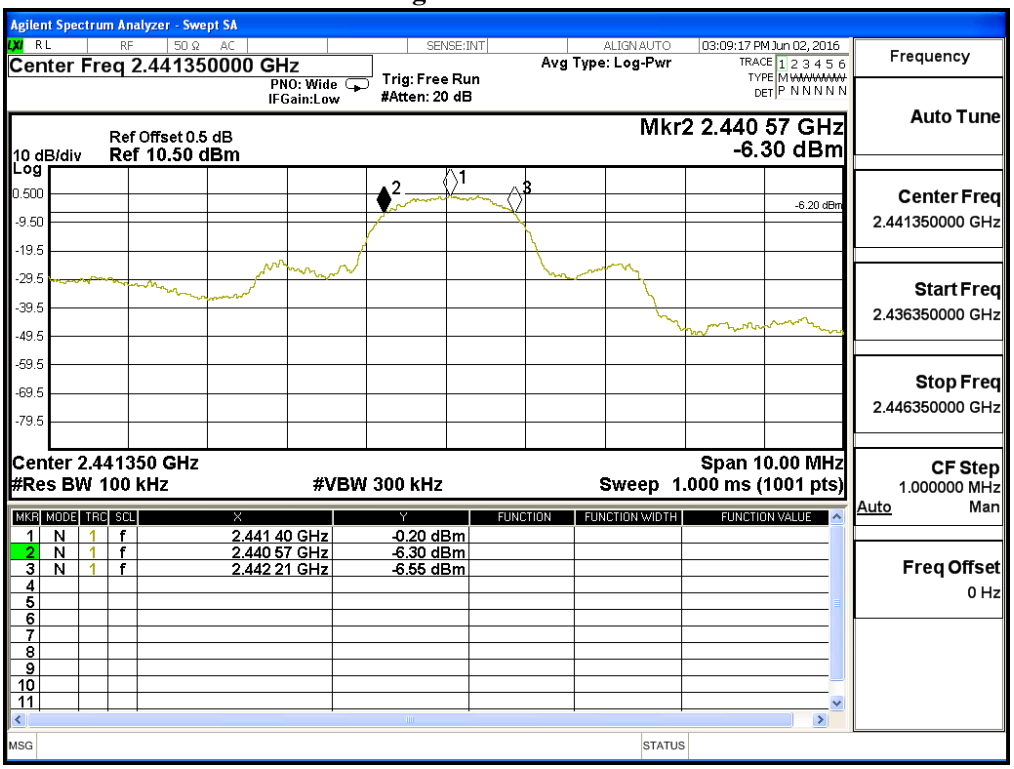
Figure Channel 01:



Product : AG9+ Wireless Headset for PS4
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2441.35MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
20	2441.35	1640	>500	Pass

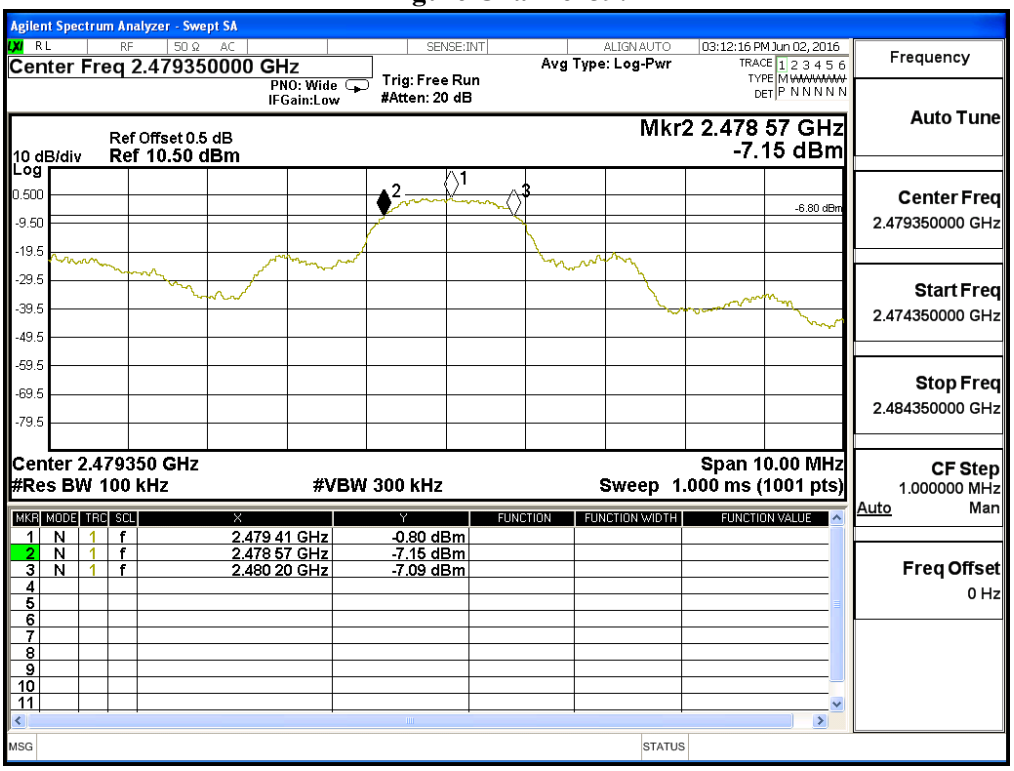
Figure Channel 20:



Product : AG9+ Wireless Headset for PS4
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2479.35MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
39	2479.35	1630	>500	Pass

Figure Channel 39:



8. Power Density

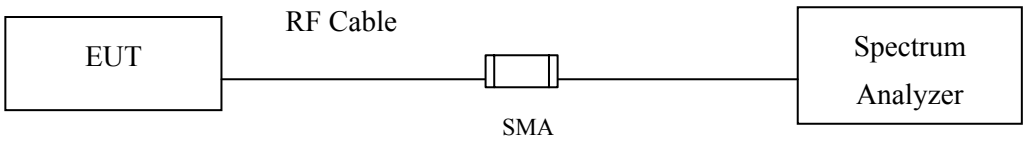
8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2016
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2016
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

8.2. Test Setup



8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013, the maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

8.5. Uncertainty

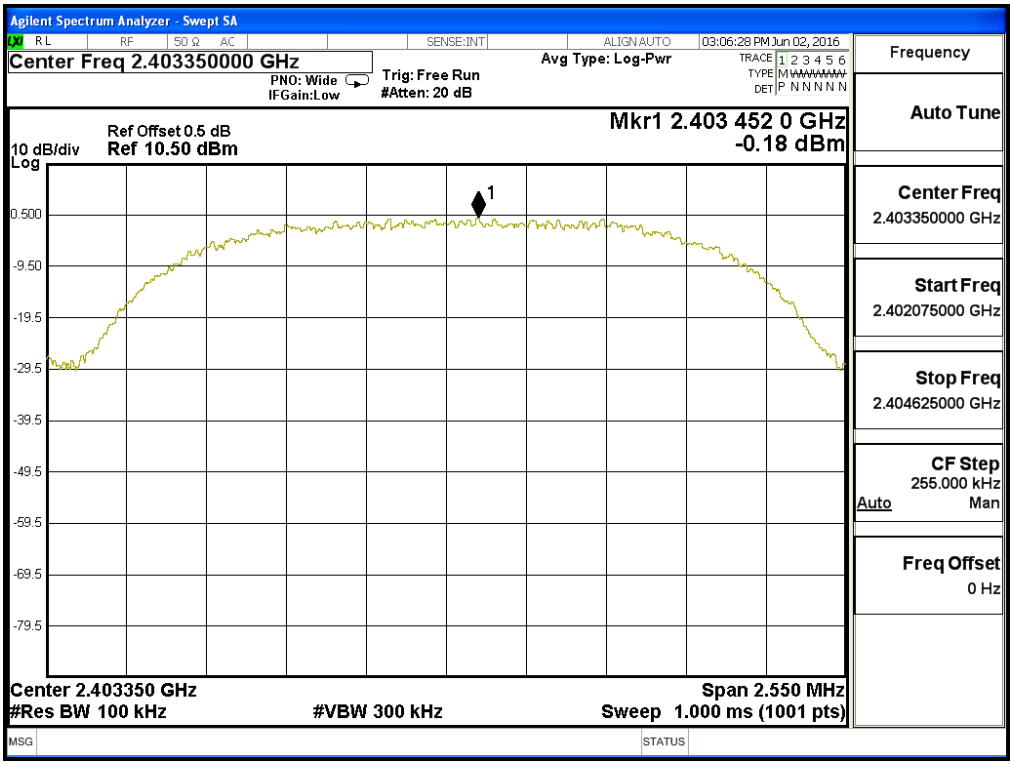
± 1.27 dB

8.6. Test Result of Power Density

Product : AG9+ Wireless Headset for PS4
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit(2403.35MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2403.35	-0.18	< 8dBm	Pass

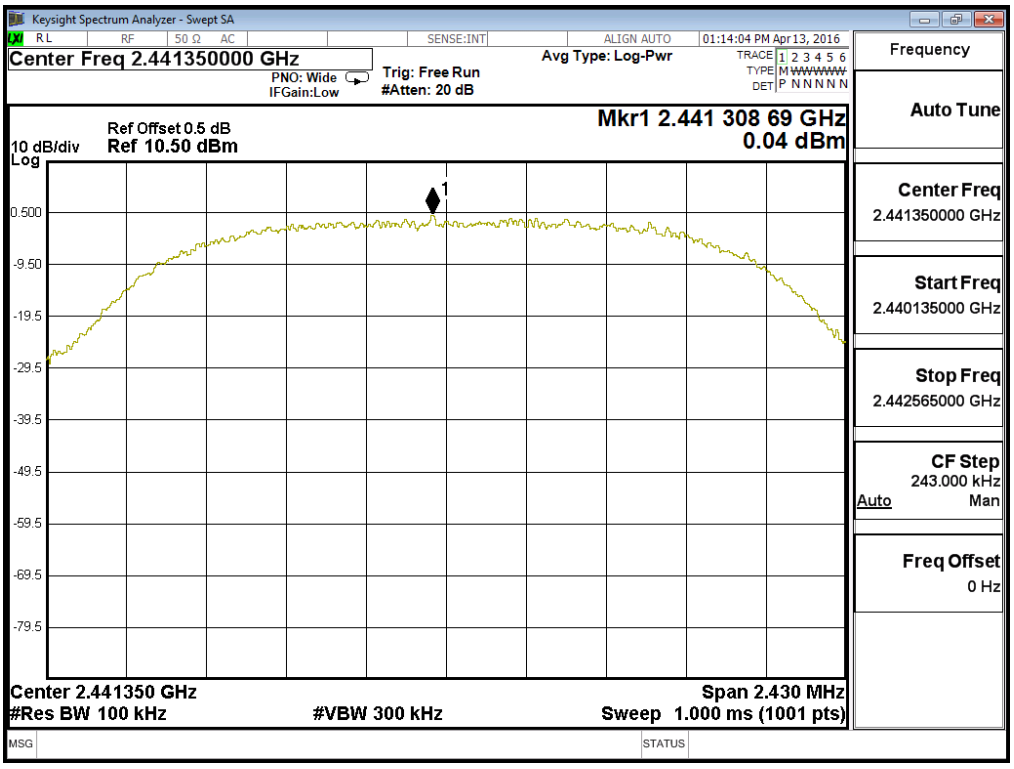
Figure Channel 01:



Product : AG9+ Wireless Headset for PS4
Test Item : Power Density Data
Test Site : No.3OATS
Test Mode : Mode 1: Transmit (2441.35MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
20	2441.35	-0.65	< 8dBm	Pass

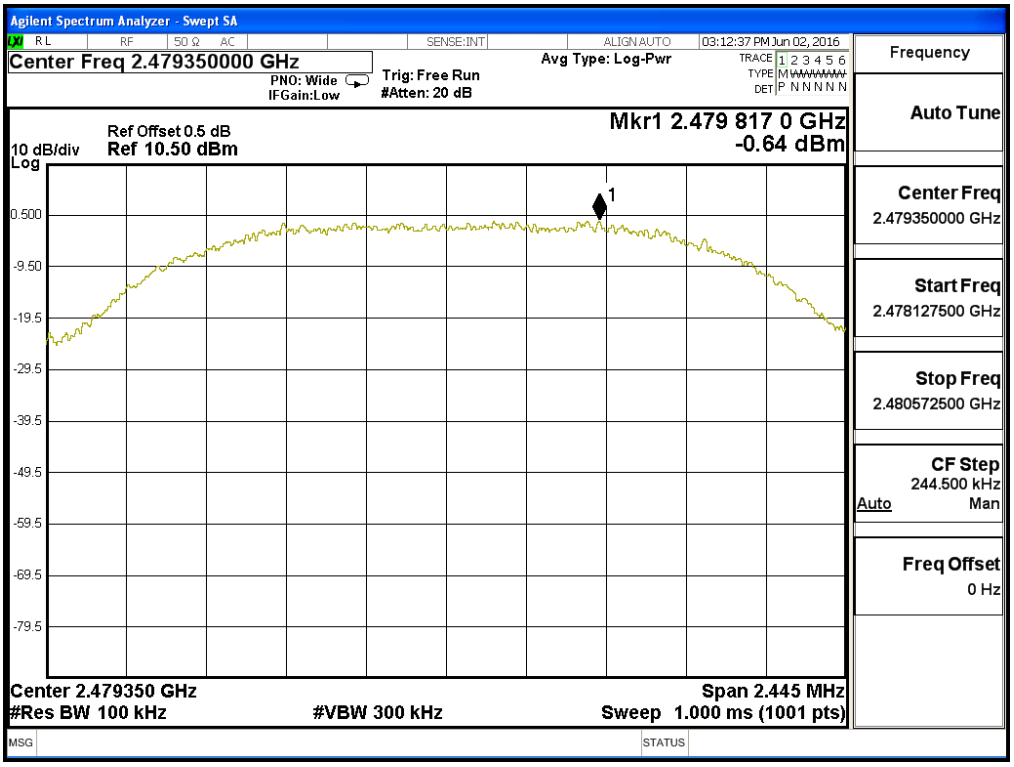
Figure Channel 20:



Product : AG9+ Wireless Headset for PS4
Test Item : Power Density Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (2479.35MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
39	2479.35	-0.64	< 8dBm	Pass

Figure Channel 39:



9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs