

FCC ID:VS9-EXUNI

FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

Goodbetterbest Limited

Product: (1)EX-06 Wireless Gaming Foldable Headset 2.4G (2)EX-05S Universal Wireless Stereo Headset

Model Number: (1)EX6UNI-21(2)E5SUNI-21

FCC ID: VS9-EXUNI

Prepared for: Goodbetterbest Limited

Suites 103-107, Devonshire Business Centre,

Works Road, Letchworth, SG6 1GJ, United Kingdom

Prepared By: Audix Technology (Shenzhen) Co., Ltd.

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Report Number : ACS-F13285

Date of Test : Aug.26~Sep.21, 2013

Date of Report : Oct.16, 2013



FCC ID:VS9-EXUNI

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FCC ID: VS9-EXUNI

TEST REPORT CERTIFICATION

Applicant : Goodbetterbest Limited

EUT Description : (1)EX-06 Wireless Gaming Foldable Headset 2.4G

(2)EX-05S Universal Wireless Stereo Headset

FCC ID : VS9-EXUNI

(A) MODEL NO. : (1)EX6UNI-21(2)E5SUNI-21

(B) SERIAL NO. : N/A

(C) POWER SUPPLY: DC 3.7V; DC 5V

(D) TEST VOLTAGE: DC 5V From PC Input AC 120V/60Hz

Tested for comply with:

FCC Rules and Regulations Part 15 Subpart C: 2012

Test procedure used:

ANSI C63.10:2009

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to confirm comply with all the FCC Part 15 Subpart C requirements.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. This report contains data that are not covered by the NVLAP accreditation. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This Report is made under FCC Part 2.1075. No modifications were required during testing to bring this product into compliance.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : _	Aug.26~ Sep.21, 2013	Report of date:	Oct.16, 2013
Prepared by : _	Julia Zhu Julia Zhu / Assistant	Reviewed by: 信奉希波 (深圳) →	Sunny Lu / Assistant Manager (Shenzhen) Co., Ltd.
	Juna Zhu / Assistant	Audix Technology EMC 部門報告	Sunny Lu / Assistant Manager (Shenzilen) Co., Ltd.
		Stamp only for EMC I	
Approved & Au	thorized Signer:	Signature: Dowid Ji	n 10.66
ripproved & riu	thorized Signer .	David Jin / 1	Manager



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1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION						
Description of Test Item	Standard	Results				
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.10-2009	PASS				
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.10-2009	PASS				
Band Edge Compliance Test	FCC Part 15: 15.249 ANSI C63.10-2009	PASS				
20dB Bandwidth Test	FCC Part 15: 15.215 ANSI C63.10-2009	PASS				



2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product Name : (1)EX-06 Wireless Gaming Foldable Headset 2.4G

(2)EX-05S Universal Wireless Stereo Headset

Model Number : (1)EX6UNI-21(2)E5SUNI-21

FCC ID : VS9-EXUNI

Operation frequency: 2405MHz-2478MHz

Antenna : Integrated PCB antenna, 0dBi gain

Modulation : GFSK

Applicant : Goodbetterbest Limited

Suites 103-107, Devonshire Business Centre, Works

Road, Letchworth, SG6 1GJ, United Kingdom

Audio Cable : Unshielded, Detachable, 1.0m

USB Cable : Unshielded, Detachable, 1.0m

AV In Cable : Unshielded, Detachable, 1.5m

Date of Test : Aug.26~Sep.21, 2013

Date of Receipt : Aug.25, 2013

Sample Type : Prototype production

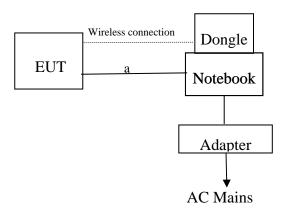
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2.2.Tested Supporting System Details

No.	Description	ACS No.	Manufacturer	Model	Serial Number	Approved type			
		Test PC R	DELL	D430	PP09S	☑ FCC DoC			
1.		Power Cord: Unshielded, Detachable, 1.8m Power Adopter: Manufacture: DELL, M/N:LA65NS1-00							
	DVI Cable: Shielded, Detachable, 4.0m (Power Cord: Unshielded, Detachable, 1.8)								

2.3.EUT Configuration and operation conditions for test.



a: USB Cable

(EUT: (1)EX-06 Wireless Gaming Foldable Headset 2.4G (2)EX-05S Universal Wireless Stereo Headset)



2.4. Test Facility

Site Description Name of Firm

Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen

Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

3m Anechoic Chamber Certificated by FCC, USA

Registration Number: 90454 Valid Date: Feb.22, 2015

3m & 10m Anechoic Chamber Certificated by FCC, USA

Registration Number: 794232 Valid Date: Dec.31, 2015

EMC Lab. Certificated by Industry Canada

Registration Number: IC 5183A-1

Valid Date: Jun.13, 2014

Certificated by DAkkS, Germany Registration No: D-PL-12151-01-01

Valid Date: Feb.01, 2014

Accredited by NVLAP, USA NVLAP Code: 200372-0 Valid Date: Mar.31, 2014

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

Test Item	Uncertainty
Uncertainty for Conduction emission test	3.08dB(9KHz to 150KHz)
in No. 1 Conduction	3.1dB (150KHz to 30MHz)
	3.22 dB(30~200MHz, Polarize: H)
Uncertainty for Radiation Emission test	3.23 dB(30~200MHz, Polarize: V)
in 3m chamber	3.49 dB(200M~1GHz, Polarize: H)
	3.39 dB(200M~1GHz, Polarize: V)
Uncertainty for Radiation Emission test in 3m	5.04 dB(1~6GHz, Distance: 3m)
chamber (1GHz-18GHz)	5.06 dB(6~18GHz, Distance: 3m)
Uncertainty for Radiated Spurious Emission test	3.57dB
in RF chamber	3.37 d B
Uncertainty for Conduction Spurious emission	2.00 dB
test	2.00 dB
Uncertainty for Output power test	0.73 dB
Uncertainty for Power density test	2.00 dB
Uncertainty for Frequency range test	$7x10^{-8}$
Uncertainty for Bandwidth test	83 kHz
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and	0.6℃
humidity	3%

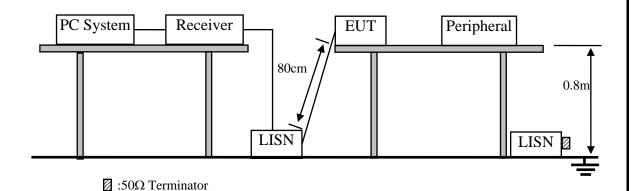


3. POWER LINE CONDUCTED EMISSION TEST

3.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Oct.31, 12	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Oct.31, 12	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 13	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 13	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	May.08, 13	1 Year
6.	RF Cable	Fujikura	3D-2W	No.1	May.08, 13	1Year
7.	Coaxial Switch	Anritsu	MP59B	M50564	May.08, 13	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 13	1 Year

3.2.Block Diagram of Test Setup



3.3. Power Line Conducted Emission Test Limits

	Maximum RF Line Voltage				
Frequency	Quasi-Peak Level	Average Level			
	$dB(\mu V)$	$dB(\mu V)$			
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*			
500kHz ~ 5MHz	56	46			
5MHz ~ 30MHz	60	50			

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. EX-06 Wireless Gaming Foldable Headset 2.4G (EUT)

Model Number: EX6UNI-21

Serial Number: N/A

3.4.2. Support Equipment: As Tested Supporting System Details, in Section 2.2.

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3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 3.2.
- 3.5.2. Turned on the power of all equipment.
- 3.5.3. PC run test software to control EUT work in Tx mode.

3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PC connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2009 on Conducted Emission Test.

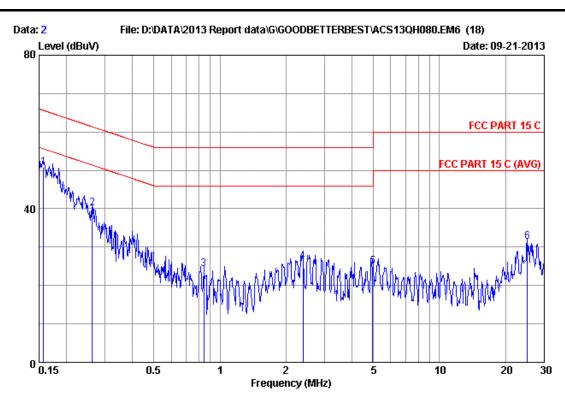
The bandwidth of test receiver (R & S ESHS10) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.7. Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)





Site no :1#conduction Data No :2

Dis./Ant. :** 2012 ESH2-Z5 LINE

Limit :FCC PART 15 C

Env./Ins. :23.8*C/51% Engineer :Nick Huang

EUT :EX-06 Wireless Gaming Foldable Headset 2.4G

Power Rating :DC 5V From PC Input AC 120V/60Hz

Test Mode :Tx Mode

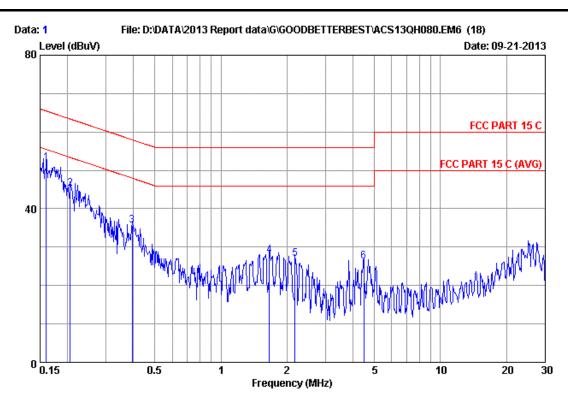
M/N:EX6UNI-21

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15733	0.19	0.01	50.59	50.79	65.60	14.81	QP
2	0.26164	0.19	0.01	39.98	40.18	61.38	21.20	QP
3	0.84378	0.20	0.03	23.99	24.22	56.00	31.78	QP
4	2.384	0.25	0.04	25.99	26.28	56.00	29.72	QP
5	4.952	0.31	0.07	24.66	25.04	56.00	30.96	QP
6	25.188	1.36	0.16	29.80	31.32	60.00	28.68	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.

2.If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.





Site no :1#conduction Data No :1

Dis./Ant. :** 2012 ESH2-Z5 NEUTRAL

Limit :FCC PART 15 C

Env./Ins. :23.8*C/51% Engineer :Nick Huang

EUT :EX-06 Wireless Gaming Foldable Headset 2.4G

Power Rating :DC 5V From PC Input AC 120V/60Hz

Test Mode :Tx Mode

M/N:EX6UNI-21

No 	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15985	0.21	0.01	51.63	51.85	65.47	13.62	QP
2	0.20614	0.21	0.01	44.91	45.13	63.36	18.23	QP
3	0.39344	0.22	0.02	35.43	35.67	57.99	22.32	QP
4	1.662	0.27	0.04	27.59	27.90	56.00	28.10	QP
5	2.178	0.29	0.04	26.68	27.01	56.00	28.99	QP
6	4.478	0.33	0.06	25.91	26.30	56.00	29.70	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.

2.If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



4. RADIATED EMISSION TEST

4.1.Test Equipment

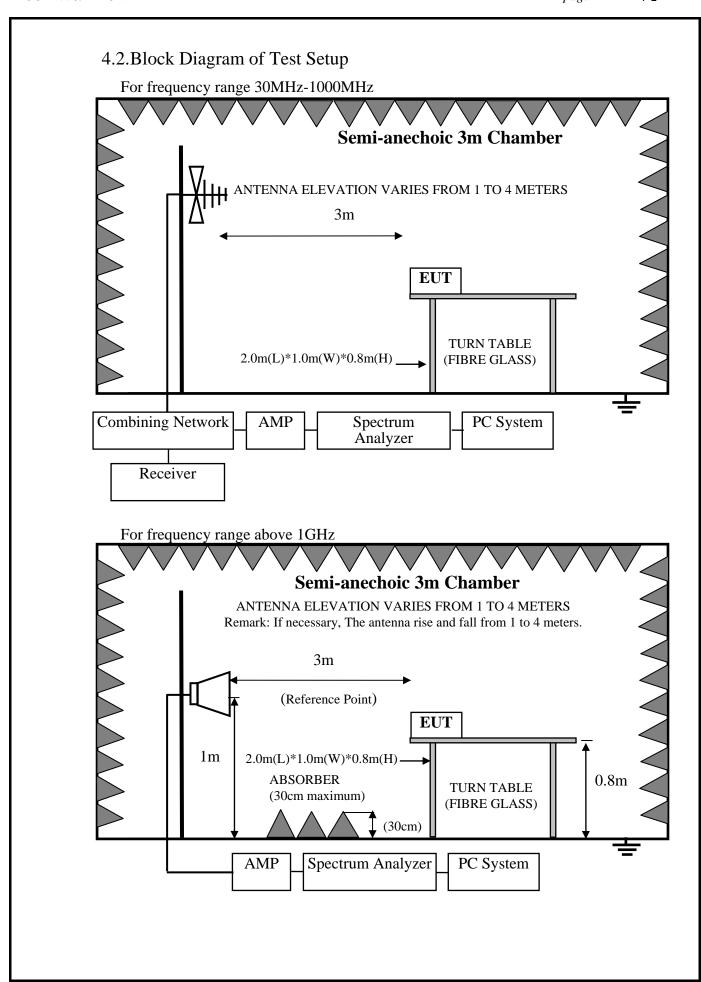
Frequency rang: 30~1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Nov.24, 12	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 13	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 13	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 13	1 Year
5	Bilog Antenna	TESEQ	CBL6112D	35375	May.30, 13	1 Year
6	RF Cable	MIYAZAKI	CFD400-NL	3# Chamber No.1	May.08, 13	1 Year
7	Coaxial Switch	Anritsu	MP59B	M74389	May.08, 13	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4407B	MY41440292	May.08, 13	1 Year
2	Horn Antenna	EMCO	3115	9510-4580	May.28, 13	1 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 13	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX106	77980/6	May.08, 13	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX106	77977/6	May.08, 13	1 Year
6	Horn Antenna	EMCO	3116	00060089	Aug.28, 13	1 Year







4.3. Radiated Emission Limit Standard: FCC 15.209 and 15.249

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMI		
MHz	Meters	μV/m	$dB(\mu V)/m$	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Above 1000MHz	3	74.0 dB(μV)/m (Peak)		
		54.0 dB(µV)/m (Average)		
Field Strength of fundamental emissions for 2.4GHz-2.4835GHz	3	114.0 dB(μV)/m (Peak) 94.0 dB(μV)/m (Average)		

Remark : (1) Emission level $dB\mu V = 20 \log Emission level \mu V/m$

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
- (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.4.EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.5. Operating Condition of EUT

- 4.5.1. Setup the EUT and simulator as shown as Section 4.2.
- 4.5.2. Turned on the power of all equipment.
- 4.5.3. Let EUT work in Tx mode.

4.6.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10-2009 on radiated emission Test.



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During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions.

After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation show in the test setup photos.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz

This device is pulse modulated, a duty cycle factor was used to calculate average level based measured peak level.

The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

4.7. Radiated Emission Test Results

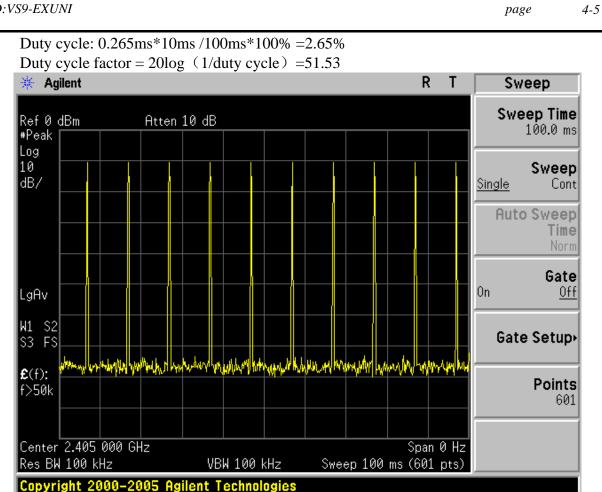
PASS.

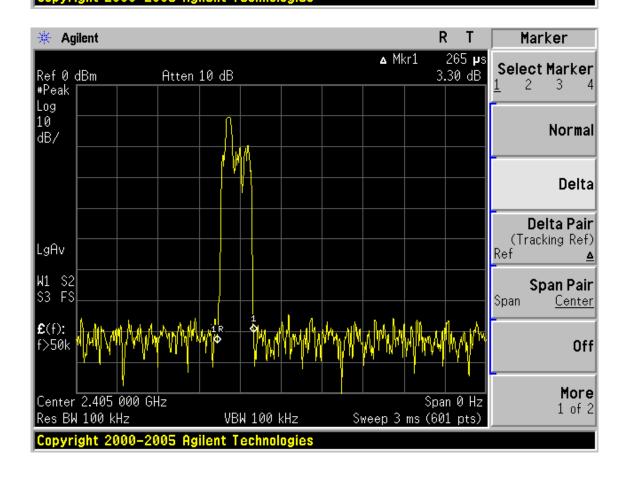
All the emissions from 30MHz to 25GHz were comply with the 15.209 Limit.

Note: The duty cycle factor for calculate average level is 51.53 dB, and average limit is 20dB below peak limit, so if peak measured level comply with peak limit, the average level was deemed to comply with average limit.



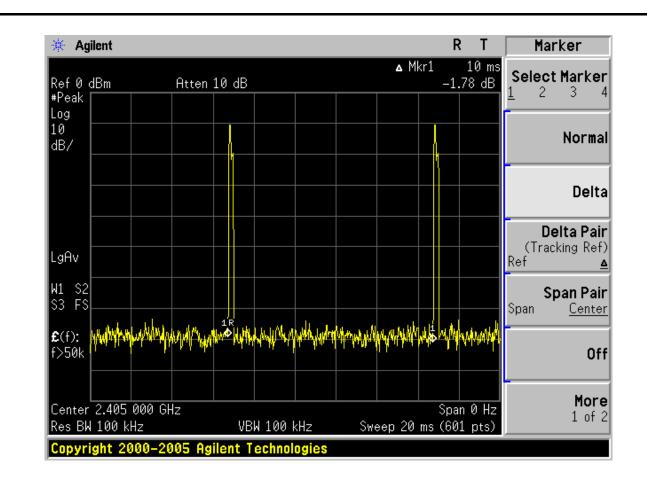
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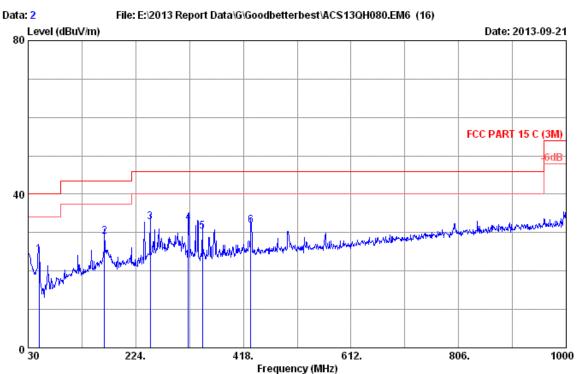
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Frequency: 30MHz~1GHz



Site no. : 3m Chamber Data no. : 2

Dis. / Ant. : 3m 2013 CBL6112D 35375 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 C (3M)

Env. / Ins. : 24*C/65% Engineer : Kevin
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power rating : DC 5V From PC Input AC 120V/60Hz

Test Mode : Tx Mode

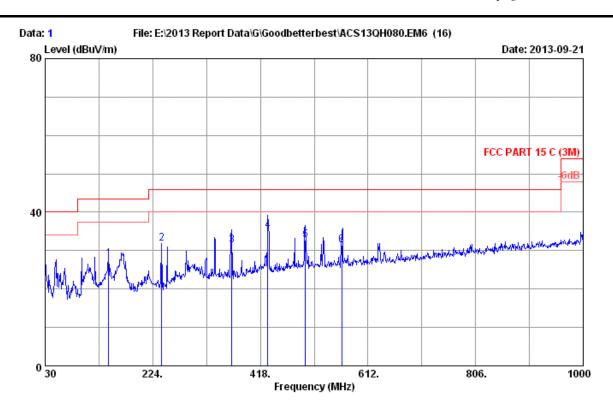
M/N: EX6UNI-21

	۷o.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1	49.400	9.34	1.18	13.79	24.31	40.00	15.69	QP
2	2	167.740	10.41	1.67	16.79	28.87	43.50	14.63	QP
3	3	250.190	13.11	1.98	17.61	32.70	46.00	13.30	QP
4	1	319.060	14.38	2.23	15.94	32.55	46.00	13.45	QP
5	5	344.280	15.09	2.30	12.86	30.25	46.00	15.75	QP
6	5	431.580	17.07	2.55	12.35	31.97	46.00	14.03	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

The emission levels that are 20dB below the official limit are not reported.

page



: 3m Chamber Site no.

Data no. : 1 Ant. pol. : VERTICAL Dis. / Ant. : 3m 2013 CBL6112D 35375

: FCC PART 15 C (3M) Limit

Env. / Ins. : 24*C/65% Engineer : Kevin : EX-06 Wireless Gaming Foldable Headset 2.4G

Power rating : DC 5V From PC Input AC 120V/60Hz

Test Mode : Tx Mode

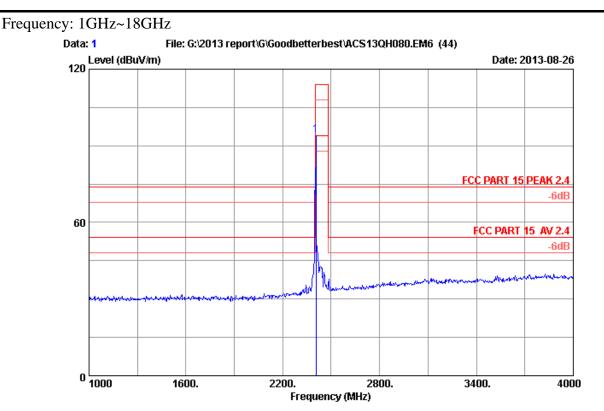
M/N: EX6UNI-21

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	_	Emission Level (dBuV/m)		Margin (dB)	Remark
1	144.460	11.65	1.58	14.68	27.91	43.50	15.59	QP
2	240.490	12.25	1.94	17.71	31.90	46.00	14.10	QP
3	366.590	15.70	2.36	13.28	31.34	46.00	14.66	QP
4	431.580	17.07	2.55	15.65	35.27	46.00	10.73	QP
5	499.480	17.99	2.75	11.91	32.65	46.00	13.35	QP
6	564.470	18.80	2.93	9.80	31.53	46.00	14.47	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

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Site no. : 3m Chamber Data no. : 1

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

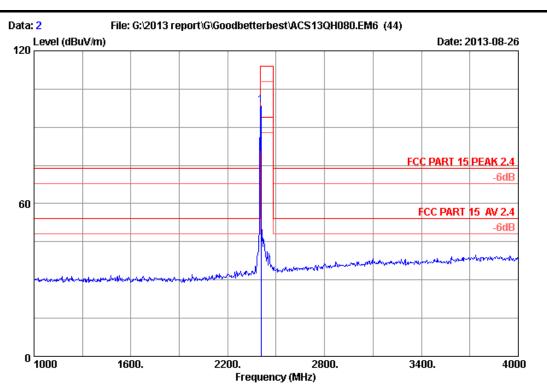
Test mode : 2405MHz Tx EX6UNI-21

		Ant.	Cable	Amp.		Emission			
	Freq. (MHz)	Factor (dB/m)			_		Limits (dBuV/m)	_	Remark
1	2405.000	26.79	5.80	35.70	97.34	94.23	114.00	19.77	Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

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Site no. : 3m Chamber Data no. : 2

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx

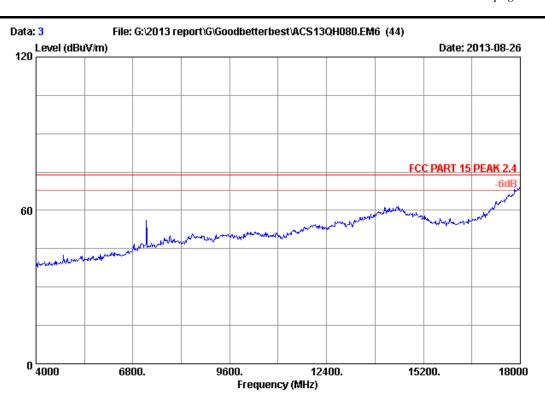
EX6UNI-21

		Ant.	Cable	Amp.		Emission			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2405.000	26.79	5.80	35.70	101.85	98.74	114.00	15.26	Peak

Remarks

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

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Site no. : 3m Chamber Data no. : 3

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

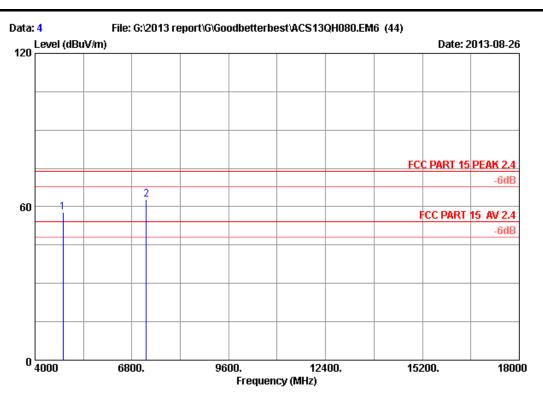
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx



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Site no. : 3m Chamber Data no. : 4

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx EX6UNI-21

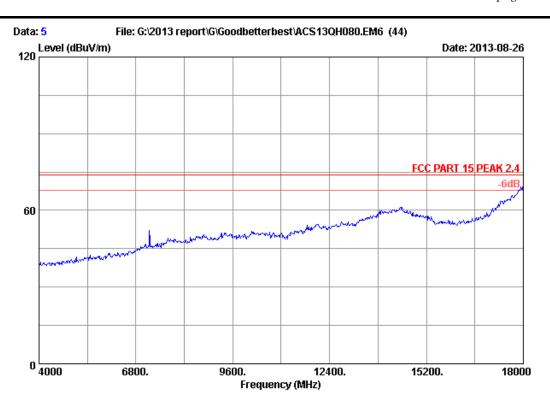
	Freq.	Ant. Factor (dB/m)		Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
_	4810.000 7215.000		8.57 10.97		52.35 51.87	57.70 62.84	74.00 74.00	16.30 11.16	Peak Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
4810.000	57.70	51.53	6.17	54	Pass
7215.000	62.84	51.53	11.31	54	Pass

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Site no. : 3m Chamber Data no. : 5

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

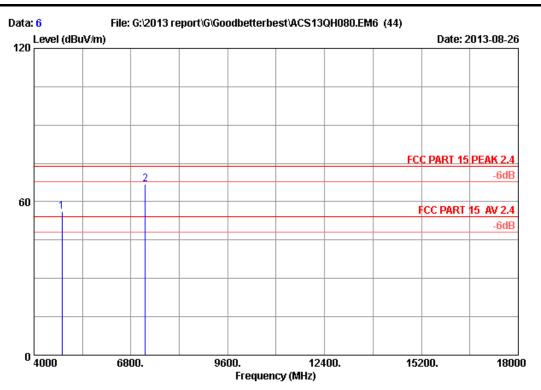
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx



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Site no. : 3m Chamber Data no. : 6

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx EX6UNI-21

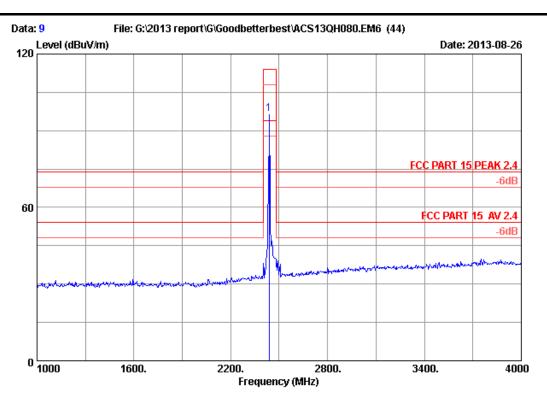
	Freq.	Ant. Factor (dB/m)		Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
_	4810.000 7215.000		8.57 10.97		50.74 56.02	56.09 66.99	74.00 74.00	17.91 7.01	Peak Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
4810.000	56.09	51.53	4.56	54	Pass
7215.000	66.99	51.53	15.46	54	Pass

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Site no. : 3m Chamber Data no. : 9

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2438MHz Tx EX6UNI-21

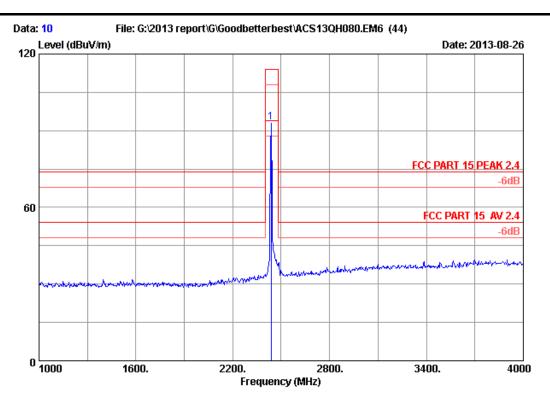
	Ant.	Cable	Amp.		Emission	L		
Freq. (MHz)	Factor (dB/m)	loss (dB)	Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
2438.000	27.00	5.85	35.70	99.38	96.53	114.00	17.47	Peak

Remarks

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

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: 3m Chamber Data no. : 10

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

: FCC PART 15 PEAK 2.4 Limit

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

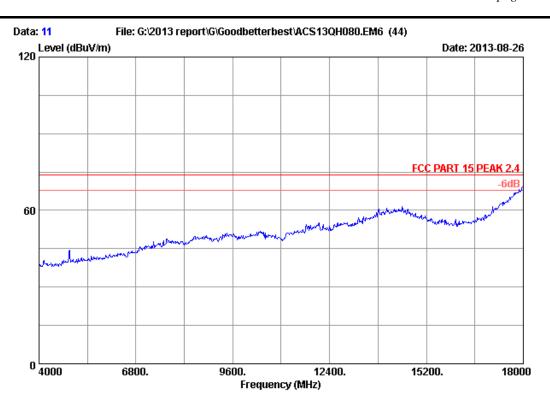
Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2438MHz

	Freq. (MHz)	Ant. Factor (dB/m)	loss	Factor	_		Limits (dBuV/m)	_	Remark
1	2438.000	27.00	5.85	35.70	96.21	93.36	114.00	20.64	Peak

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

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Site no. : 3m Chamber Data no. : 11

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

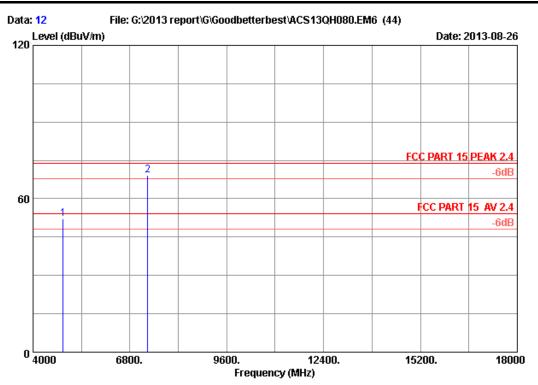
Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2438MHz Tx

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Site no. : 3m Chamber Data no. : 12

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2438MHz Tx EX6UNI-21

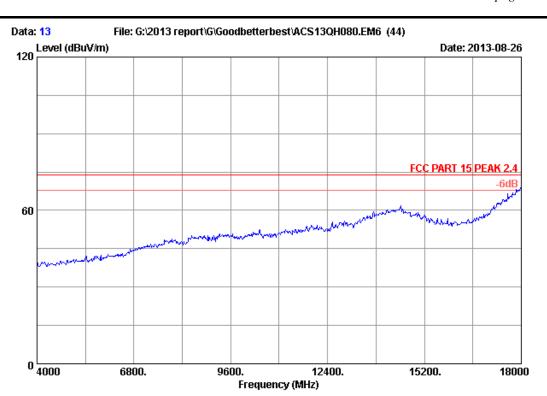
	Freq. (MHz)		Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark	
_	4876.000 7314.000	 8.64 11.02		46.49 57.75		74.00 74.00	21.94 4.95	Peak Peak	

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
7314.000	69.05	51.53	17.52	54	Pass

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Site no. : 3m Chamber Data no. : 13

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

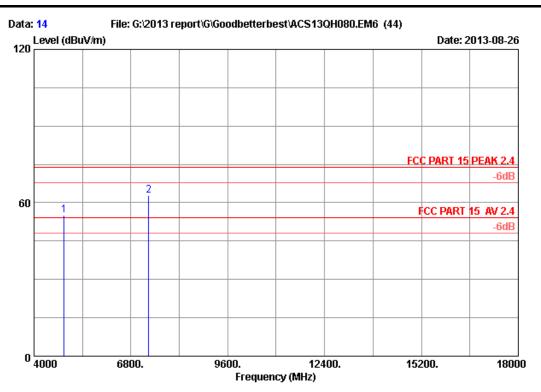
Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2438MHz Tx

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Site no. : 3m Chamber Data no. : 14

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2438MHz Tx EX6UNI-21

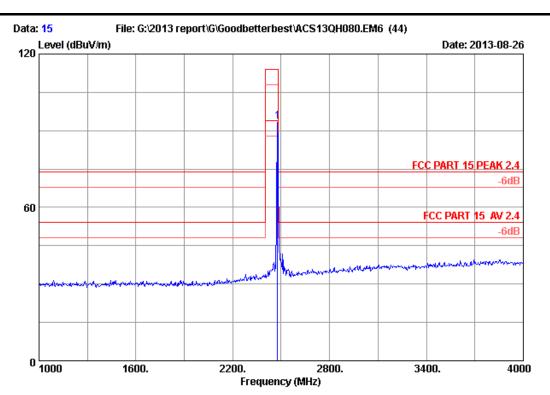
	Freq. (MHz)	Factor	Cable loss (dB)	Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
1 2	4876.000 7314.000			35.70 35.44		55.03 62.97	74.00 74.00	18.97 11.03	Peak Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
4876.000	55.03	51.53	3.5	54	Pass
7314.000	62.97	51.53	11.44	54	Pass

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Site no. : 3m Chamber Data no. : 15

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx EX6UNI-21

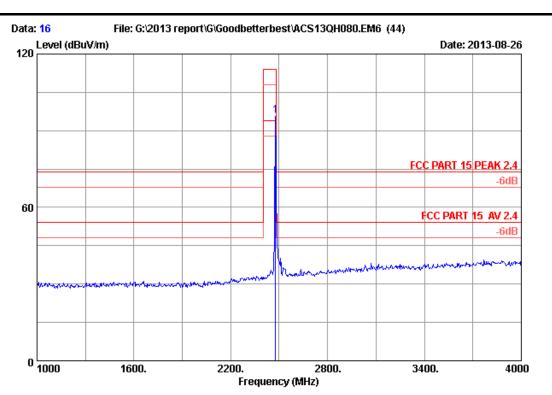
Freq. (MHz)	Ant. Factor (dB/m)	loss	Factor	_		Limits (dBuV/m)	_	Remark
2478.000	27.26	5.91	35.70	96.08	93.55	 114.00	20.45	Peak

Remarks

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

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Site no. : 3m Chamber Data no. : 16

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx EX6UNI-21

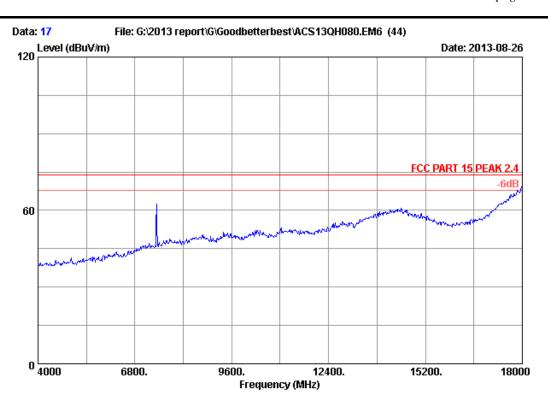
	Ant.	Cable	Amp.		Emission	ı		
Freq. (MHz)	Factor (dB/m)		Factor (dB)	_		Limits (dBuV/m)	_	Remark
2478.000	27.26	5.91	35.70	98.61	96.08	114.00	17.92	Peak

Remarks

1

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

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Site no. : 3m Chamber Data no. : 17

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

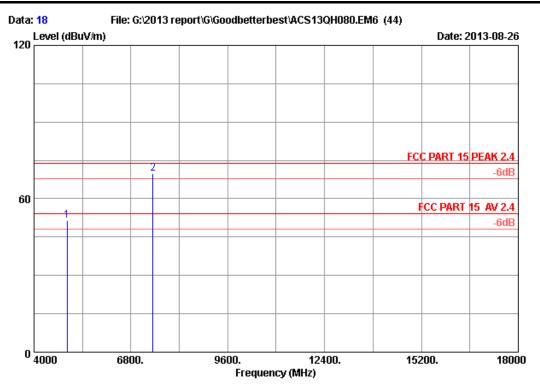
Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx

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Site no. : 3m Chamber Data no. : 18

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx EX6UNI-21

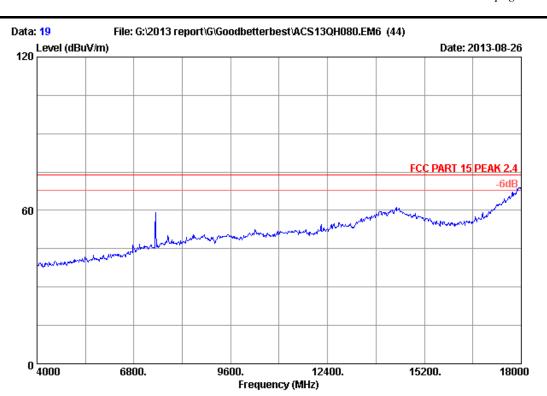
	Freq.	Ant. Factor (dB/m)		Factor	_	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
_	4956.000 7434.000		8.72 11.09		45.72 58.18	51.54 69.89	74.00 74.00	22.46 4.11	Peak Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
7434.000	69.89	51.53	18.36	54	Pass

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Site no. : 3m Chamber Data no. : 19

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

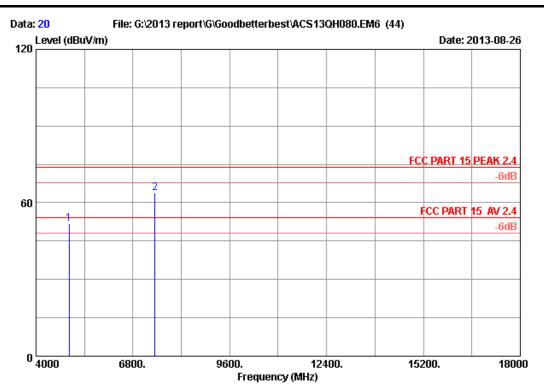
Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx

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Site no. : 3m Chamber Data no. : 20

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx EX6UNI-21

	Freq.	Ant. Factor		Factor	_	Emission Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB) 	(ub) 	(ubuv) 	(dBuV/m)	(ubuv/m)	(ub) 	
1	4956.000	32.80	8.72	35.70	45.96	51.78	74.00	22.22	Peak
2	7434.000	36.03	11.09	35.41	52.11	63.82	74.00	10.18	Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
7434.000	63.82	51.53	12.29	54	Pass



5. 20 DB BANDWIDTH TEST

5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4446A	US44300459	May.08, 13	1 Year

5.2.Limit

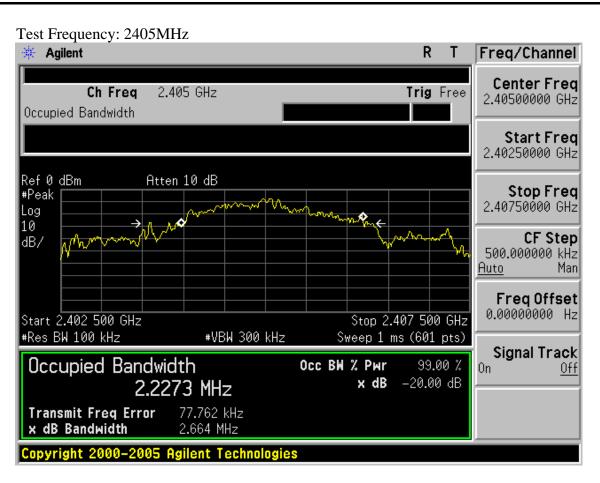
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

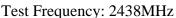
5.3. Test Results

EUT: EX-06 Wireless Gaming Foldable Headset 2.4G								
M/N:EX6UNI-21								
Test date: 2013-09-10	Pressure: 101.4±1.0 kpa	Humidity: 53.4±3.0%						
Tested by: Leo-Li Test site: RF Site Temperature: 23.4±0.6°C								

Cable loss: 1 dB	Attenuator loss: 10 dB				
Frequency	20dB bandwidth (KHz)	Limit (KHz)			
2405	2664	N/A			
2438	2965	N/A			
2478	2611	N/A			
Conclusion: PASS					



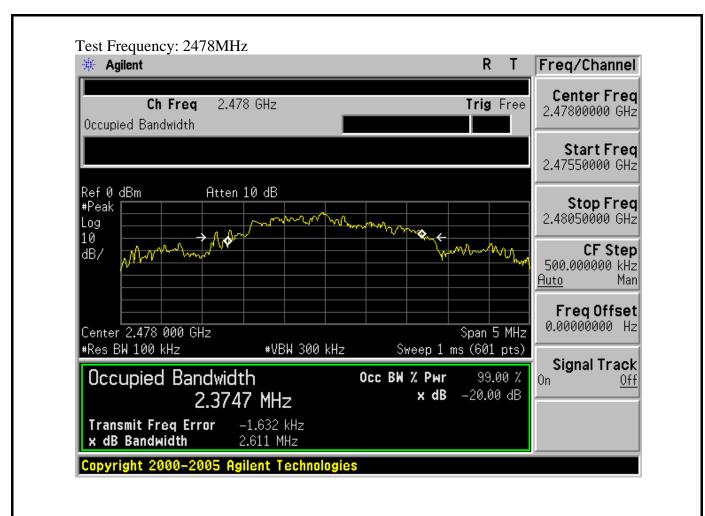






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6. BAND EDGE COMPLIANCE TEST

6.1. Test Equipment

Item	m Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Cal. Interval
1.	1. Spectrum Agilent		E4446A	US44300459	May.08, 13	1 Year
2.	Amp	HP	8449B	3008A08495	May.08, 13	1 Year
3.	Antenna	EMCO	3115	9510-4580	May.08, 13	1Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May.08, 13	1 Year

6.2. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3. Test Produce

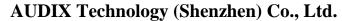
- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
 - (a) PEAK: RBW=1MHz; VBW=3MHz, PK detector, Sweep=AUTO
 - (b) This device is pulse modulated, a duty cycle factor was used to calculate average level based measured peak level

6.4. Test Results

Pass (The testing data was attached in the next pages.)

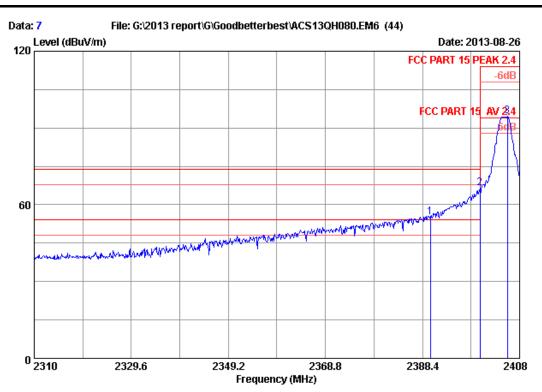
Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

Note: The duty cycle factor for calculate average level is 51.53dB, and average limit is 20dB below peak limit, so if peak measured level comply with peak limit, the average level was deemed to comply with average limit.





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Site no. : 3m Chamber Data no. : 7

Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx EX6UNI-21

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	-	Reading (dBuV)		Limits	Margin (dB)	Remark
2	2390.000 2400.000 2405.550	23.79	5.80	35.70 35.70 35.70	61.28 72.59 100.53	55.16 66.48 94.43	74.00 74.00 114.00	18.84 7.52 19.57	Peak Peak Peak Peak

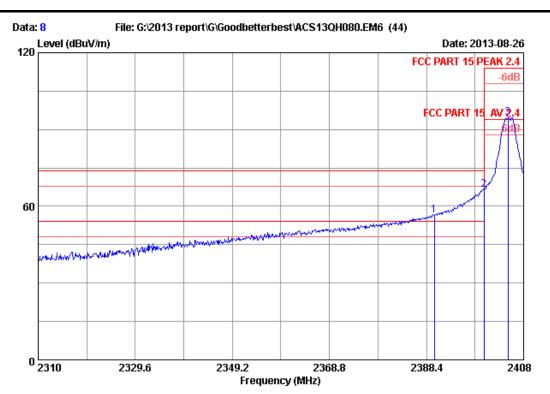
Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
2390.000	2390.000 55.16 51.53		3.63	54	Pass
2400.000 66.48		51.53	14.95	54	Pass

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Site no. : 3m Chamber Data no. : 8

Dis. / Ant. : 3m 2012 3115 (4877) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2405MHz Tx EX6UNI-21

Freq. (MHz)		Cable loss (dB)	-	_	Emission Level (dBuV/m)		Margin (dB)	Remark	
1 2390.000 2 2400.000 3 2404.864	23.79	5.80	35.70 35.70 35.70	62.63 72.79 100.73	56.51 66.68 94.62	74.00 74.00 114.00	17.49 7.32 19.38	Peak Peak Peak	

Remarks

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

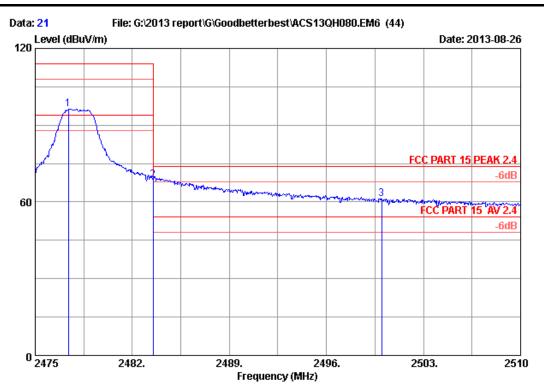
Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)			Conclusion
2390.000 56.51 51.53		51.53	4.98	54	Pass
2400.000	66.68	51.53	15.15	54	Pass



FCC ID:VS9-EXUNI

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Site no. : 3m Chamber Data no. : 21

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23*C/54% Engineer : Leo-Li
EUT : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply: DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Tx EX6UNI-21

		Ant.	Cable	Amp.		Emission	n			
	Freq.	Factor	loss		Reading			Margin	Remark	
	(MHz)	(dB/m)	(dB)	(dB) 	(dBuV) 	(aBuv/m)	(dBuV/m)	(aB)		
1	2477.380	27.26	5.91	35.70	98.80	96.27	114.00	17.73	Peak	
2	2483.500	27.29	5.92	35.70	71.07	68.58	74.00	5.42	Peak	
3	2500.000	27.40	5.94	35.70	63.40	61.04	74.00	12.96	Peak	

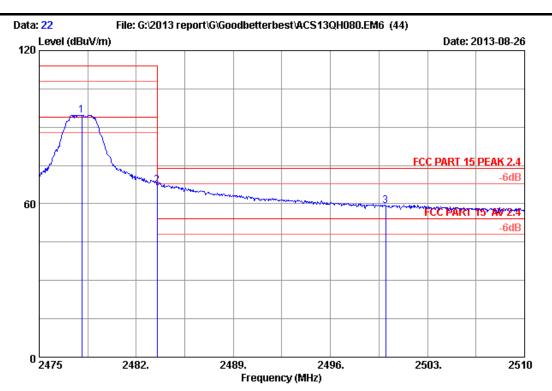
Remarks

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
2383.000	68.58	68.58 51.53		54	Pass
2500.000	61.04	51.53	9.51	54	Pass

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Site no. : 3m Chamber Data no. : 22

Dis. / Ant. : 3m 2012 3115 (4580) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4 Env. / Ins. : 23*C/54% Engineer : Leo-Li : EX-06 Wireless Gaming Foldable Headset 2.4G

Power supply : DC 5V From PC Input AC 120V/60Hz

Test mode : 2478MHz Τx EX6UNI-21

	Freq. (MHz)	Factor (dB/m)	loss (dB)		Reading (dBuV)		Limits (dBuV/m)	5	Remark
2	2478.080 2483.500	27.29		35.70 35.70	97.23 69.68	94.70 67.19	114.00 74.00	19.30 6.81	Peak Peak
3	2500.000	27.40	5.94	35.70 	61.61	59.25 	74.00	14.75	Peak

Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	Peak level (dBuv/m)	Duty cycle factor (dB)	AV level (dBuv/m)	Limit(dBuv/m)	Conclusion
2383.000	67.19	51.53	15.66	54	Pass
2500.000	59.25	51.53	7.72	54	Pass



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7. ANTENNA REQUIREMENT

RESULT: PASS

Test Date : Aug.26~Sep.21, 2013

Test standard : FCC Part 15.203

Limit : the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply the provision.

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8. RADIO FRREQUENCY EXPOSURE COMPLIANCE

RESULT: PASS

Test standard : FCC KDB Publication 447498 D01 V05

Since maximum peak output power of the transmitter is<10mW, i.e.0.009346mW<10mW, hence the EUT is exclueded from SAR evaluation according to FCC KDB Publication 447498 D01:General RF Exposure Guidance V05.

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9.	DEVIATION TO TEST SPECIFICATIONS [NONE]