

# Test Report

## FCC Part15 Subpart C (Class II Permissive Change)

Product Name : Virtual Reality Controller

Model No. : B0-S8A526053-BZ

FCC ID : 2AI3GS8A526053

Applicant : Pico Technology Inc.

Address : 20th Floor, Shining Tower, No.35 Xueyuan Road,  
HaiDian District, Beijing, The People ' s Republic  
of China

Date of Receipt : Jul. 18, 2016

Test Date : Aug. 02, 2016~Aug. 17, 2016

Issued Date : Sep. 18, 2016

Report No. : 1672084R-RF-US-P06V03

Report Version : V1.1

Note : This report is based on ADT No. RF140808E04, it changes the MIMO Antenna to SISO Antenna, we re-evaluate the items are bandedge, radiated emission, and output power.

The test results relate only to the samples tested.

pThe test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by CNAS,TAF or any agency of the government.


The test report shall not be reproduced without the written approval of QuieTek Corporation.


## Test Report Certification

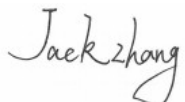
Issued Date : Sep. 18, 2016


Report No. : 1672084R-RF-US-P06V01



Product Name : Virtual Reality Controller  
Applicant : Pico Technology Inc.  
Address : 20th Floor, Shining Tower, No.35 Xueyuan Road, HaiDian District, Beijing, The People ' s Republic of China  
Manufacturer : Pico Technology Inc.  
Address : 20th Floor, Shining Tower, No.35 Xueyuan Road, HaiDian District, Beijing, The People ' s Republic of China  
Model No. : B0-S8A526053-BZ  
FCC ID : 2AI3GS8A526053  
EUT Voltage : DC 5V or 9V  
Brand Name :   
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2015  
ANSI C63.4:2014; ANSI C63.10:2013;  
KDB 558074 D01v03r05  
Test Result : Complied  
Performed Location : Quietek Corporation - Suzhou EMC Laboratory  
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FCC Registration Number: 800392; IC Lab Code: 4075B

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## Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>BSMI, NCC, TAF</b>
<b>USA</b>	<b>:</b>	<b>FCC</b>
<b>Japan</b>	<b>:</b>	<b>VCCI</b>
<b>China</b>	<b>:</b>	<b>CNAS</b>

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/english/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/index\\_en.aspx](http://www.quietek.com/index_en.aspx)

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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## History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1672084R-RF-US-P06V03	V1.0	Initial Issued Report	Aug. 23, 2016
1672084R-RF-US-P06V03	V1.1	Comfirm the power and modified the power.	Sep. 18, 2016

## 1. General Information

### 1.1. EUT Description

Product Name	Virtual Reality Controller
Brand Name	 Pico
Model No.	B0-S8A526053-BZ
Working Voltage	DC 5V or 9V
Bluetooth Specification	V4.0
Frequency Range	2402- 2480 MHz
Channel Number	V4.0: 40
Channel Separation	V4.0: 2MHz
Type of Modulation	V4.0: GFSK
Data Rate	V4.0: 1Mbps(GFSK)
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List

## 1.2. Working Frequency of Each Channel:

Bluetooth Working Frequency of Each Channel: (For BLE)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

## 1.3. Antenna information

Model No.	AA077				
Antenna manufacturer	Unictron				
Antenna Delivery	<input checked="" type="checkbox"/> 1*TX+1*RX	<input type="checkbox"/> 2*TX+2*RX	<input type="checkbox"/> 3*TX+3*RX		
Antenna technology	<input checked="" type="checkbox"/> SISO				
	<input type="checkbox"/> MIMO	<input type="checkbox"/> Basic			
		<input type="checkbox"/> CDD			
		<input type="checkbox"/> Beam-forming			
Antenna Type	<input type="checkbox"/> External	<input type="checkbox"/> Dipole			
	<input checked="" type="checkbox"/> Internal	<input type="checkbox"/> PIFA			
		<input type="checkbox"/> PCB			
		<input checked="" type="checkbox"/> Ceramic Chip Antenna			
		<input type="checkbox"/> Metal plate type F antenna			
Antenna Gain	1.4dBi				

#### 1.4. Mode of Operation

Test Mode
Mode 1: Transmit-1Mbps(GFSK_BLE)

#### 1.5. Tested System Details

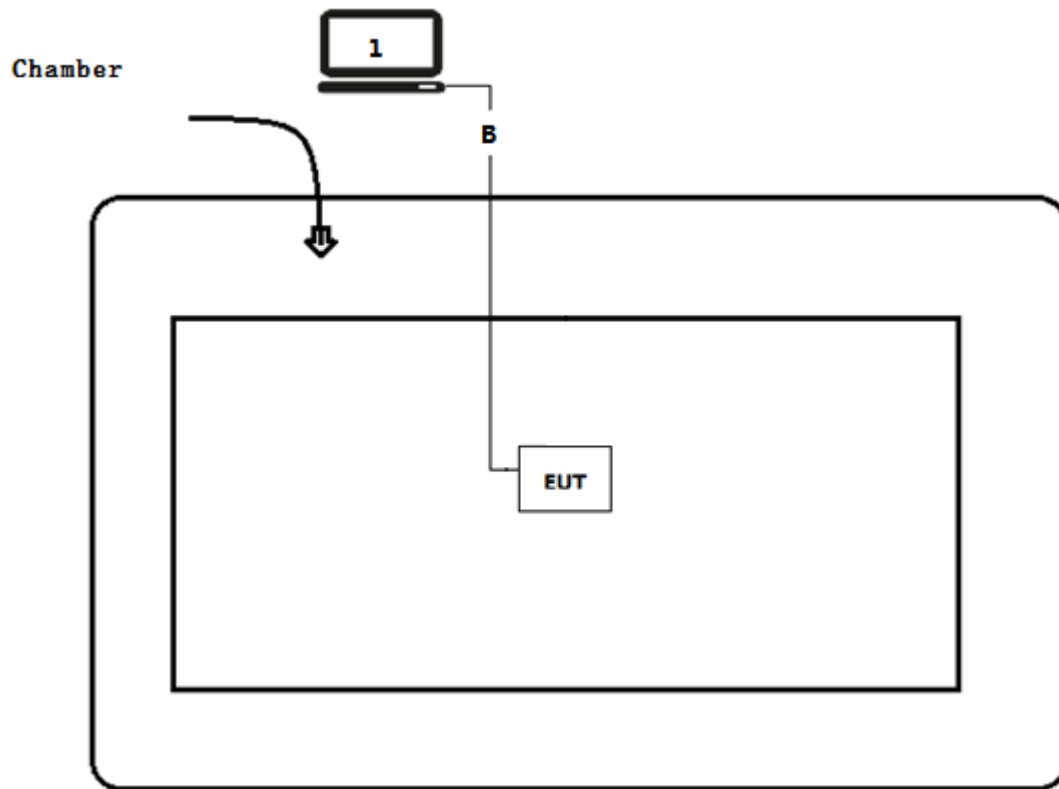
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	2526	LV-A3285	Power by adapter



## 1.6. Configuration of Tested System

Test setup Diagram- Radiated Emission



B: LAN Cable, Non-shield, 10m

### 1.7. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Run the RF test software, and set the test mode and channel, then press OK to start continue receive.

## 2. Technical Test

### 2.1. Summary of Test Result

Performed Test Item	Normative References	Limit	Result
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	FCC 15.209	PASS
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	FCC 15.209	PASS
Fundamental emission output power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(3)	30dBm	PASS

## 2.2. Test Frequency configuration:

Bluetooth Working Frequency of Each Channel: (For BLE)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2404 MHz	02	2406 MHz	03	2408 MHz
04	2410 MHz	05	2412 MHz	06	2414 MHz	07	2416 MHz
08	2418 MHz	09	2420 MHz	10	2422 MHz	11	2424 MHz
12	2426 MHz	13	2428 MHz	14	2430 MHz	15	2432 MHz
16	2434 MHz	17	2436 MHz	18	2438 MHz	19	2440 MHz
20	2442 MHz	21	2444 MHz	22	2446 MHz	23	2448 MHz
24	2450 MHz	25	2452 MHz	26	2454 MHz	27	2456 MHz
28	2458 MHz	29	2460 MHz	30	2462 MHz	31	2464 MHz
32	2466 MHz	33	2468 MHz	34	2470 MHz	35	2472 MHz
36	2474 MHz	37	2476 MHz	38	2478 MHz	39	2480 MHz

### 2.3. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	21
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

### 2.4. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	$\pm 2.02\text{dB}$
Radiated Emission	Below 1GHz $\pm 3.8\text{ dB}$
	Above 1GHz $\pm 3.9\text{ dB}$
RF Antenna Port Conducted Emission	$\pm 1.27\text{dB}$
Radiated Emission Band Edge	$\pm 3.9\text{dB}$
Occupied Bandwidth	$\pm 1\text{kHz}$
Power Spectral Density	$\pm 1.27\text{dB}$

### 3. Emissions in restricted frequency bands

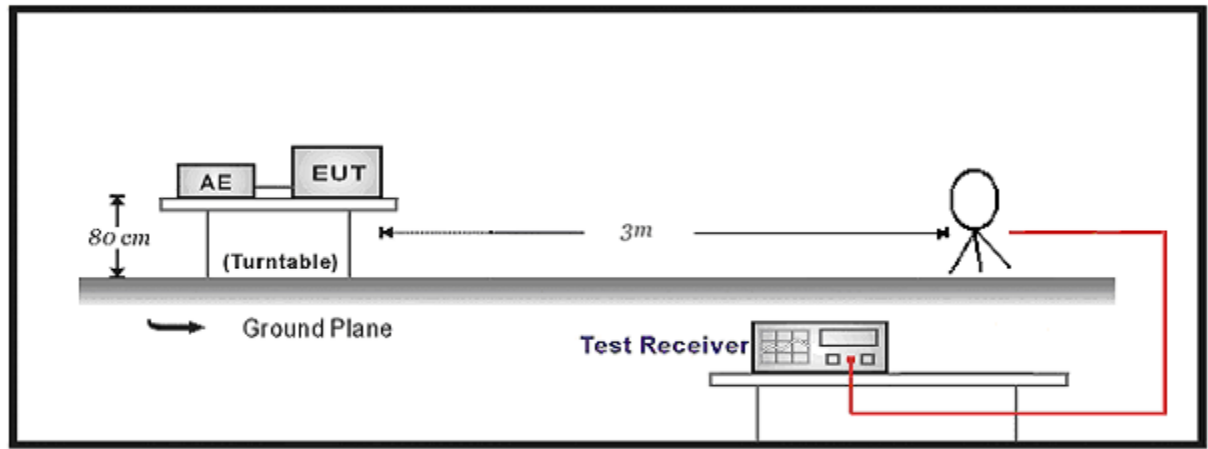
#### 3.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2016.03.05	2017.03.05
Loop Antenna	R&S	HFH2-Z2	833799/003	2015.11.07	2016.11.07
Bilog Chainenna	Teseq GmbH	CBL6112D	27611	2015.09.25	2016.09.25
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2017.02.28	2017.02.28
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2016.01.05	2017.01.05
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

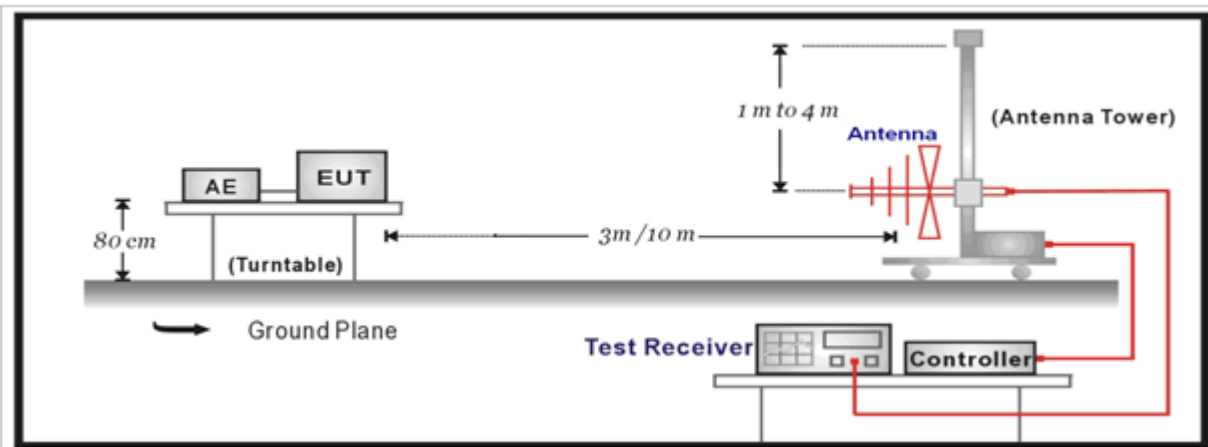
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.04
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.03	2017.05.03
DRG Horn	ETS-Lindgren	3117	00167055	2016.07.23	2017.07.23
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	1126450	2014.09.18	2016.09.18
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.02.28	2017.02.28
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2017.02.28
EMI Receiver	Agilent	N9038A	MY51210196	2016.07.16	2017.07.16
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.05	2017.01.05
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

### 3.2. Test Setup

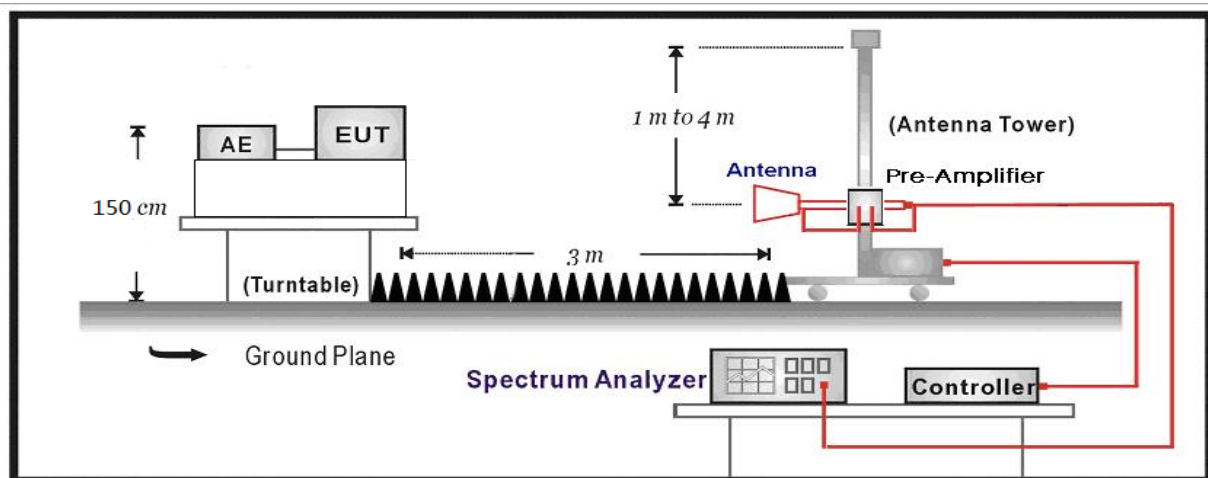
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



### 3.3. Limit

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
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 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	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	
13.36 – 13.41			

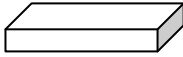
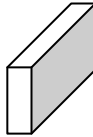
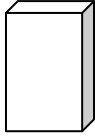
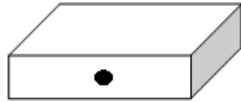




Restricted Band Emissions Limit			
Frequency (MHz)	Field strength ( $\mu$ V/m)	Field strength (dB $\mu$ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 <sub>(Note 1)</sub>
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 <sub>(Note 1)</sub>
1.705 - 30	30	29.5	30 <sub>(Note 1)</sub>
30 - 88	100	40	3 <sub>(Note 2)</sub>
88 - 216	150	43.5	3 <sub>(Note 2)</sub>
216 - 960	200	46	3 <sub>(Note 2)</sub>
Above 960	500	54	3 <sub>(Note 2)</sub>
<p>Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).</p> <p>Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).</p>			

### 3.4. Test Procedure

Test Method						
	References Rule			Chapter	Description	
	ANSI C63.10			11.11	Emissions in non-restricted frequency bands	
		ANSI C63.10		11.11.2	Reference level measurement	
		ANSI C63.10		11.11.3	Emission level measurement	
	ANSI C63.10			11.12	Emissions in restricted frequency bands	
		ANSI C63.10		11.12.1	Radiated emission measurements	
		ANSI C63.10		11.12.2.7	Radiated spurious emission test	
			ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz	
			ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz	
			ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
		ANSI C63.10		11.12.2	Antenna-port conducted measurements	
			ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure	
			ANSI C63.10	11.12.2.4	Peak power measurement procedure	
			ANSI C63.10	11.12.2.5	Average power measurement procedures	
				ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
				ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
				ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

### 3.5. EUT test Axis definition

Item	Emissions in non-restricted frequency bands			
Device Category	<input type="checkbox"/>	Fixed position use		
	<input checked="" type="checkbox"/>	Mobile position use		
Test mode	Mode 1			
Test method	<input checked="" type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input type="checkbox"/>	Conducted		
	<input type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

### 3.6. Test Result

Product Name	:	Virtual Reality Controller	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	AC-5

Chain	CH	Antenna	Frequency (MHz)	Measure Level (dB $\mu$ V/m)	Reading Level (dBV/m)	Over Limit (dB)	Limit (dB $\mu$ V/m)	Factor (dB)	Detector
Ant 0	0	H	4804.00	44.12	38.55	-9.88	54(Note3)	5.57	PK
		H	7206.00	44.34	34.72	-9.66	54(Note3)	9.62	PK
		H	9608.00	45.53	32.73	-8.47	54(Note3)	12.80	PK
		V	4804.00	43.31	37.74	-10.69	54(Note3)	5.57	PK
		V	7206.00	44.45	34.83	-9.55	54(Note3)	9.62	PK
		V	9608.00	45.66	32.85	-8.34	54(Note3)	12.81	PK
	19	H	4880.00	42.19	36.60	-11.81	54(Note3)	5.59	PK
		H	7320.00	44.50	34.80	-9.50	54(Note3)	9.70	PK
		H	9760.00	46.21	33.16	-7.79	54(Note3)	13.05	PK
		V	4880.00	42.06	36.47	-11.94	54(Note3)	5.59	PK
		V	7320.00	44.32	34.62	-9.68	54(Note3)	9.70	PK
		V	9760.00	45.22	32.17	-8.78	54(Note3)	13.05	PK
	39	H	4960.00	42.30	36.51	-11.70	54(Note3)	5.79	PK
		H	7440.00	44.55	34.38	-9.45	54(Note3)	10.17	PK
		H	9920.00	44.39	31.43	-9.61	54(Note3)	12.96	PK
		V	4960.00	41.85	36.06	-12.15	54(Note3)	5.79	PK
		V	7440.00	44.89	34.73	-9.11	54(Note3)	10.16	PK
		V	9920.00	44.25	31.29	-9.75	54(Note3)	12.96	PK

Note: 1. Measure Level = Reading Level + Factor.

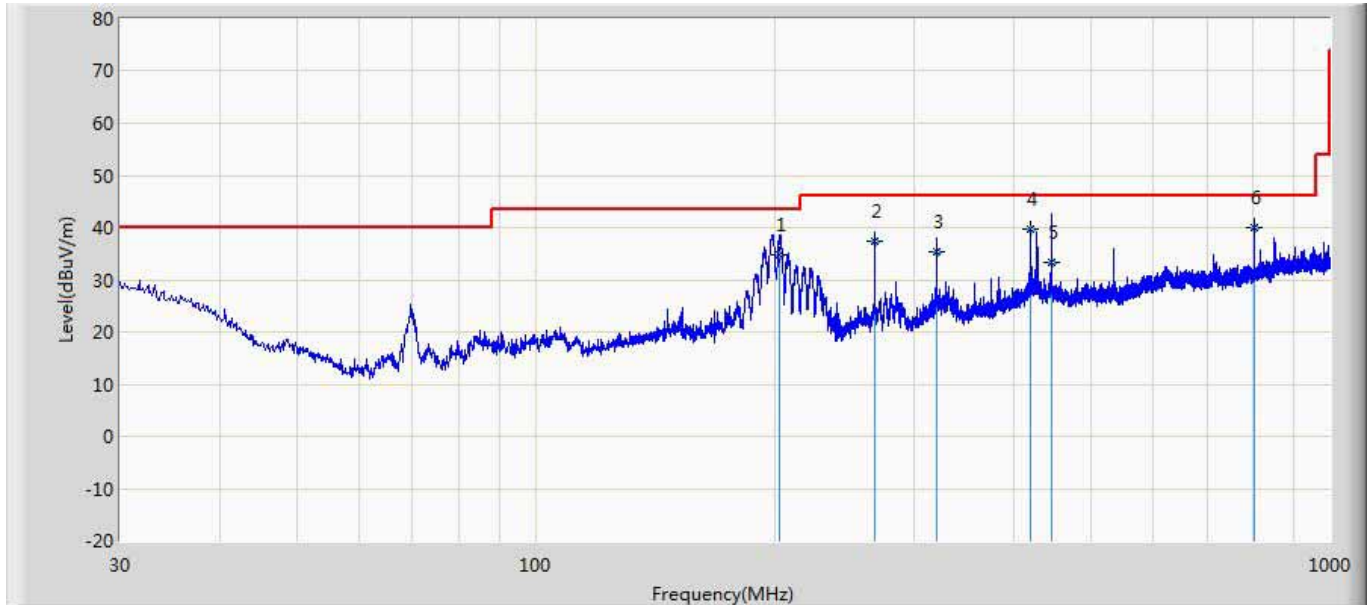
Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note: 4. The RBW set up, see Clause 6.6.

The worst case of Radiated Emission below 1GHz:

Site: AC2	Time: 2016/08/18
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CB7_CBL6112_0726	Polarity: Horizontal
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1	

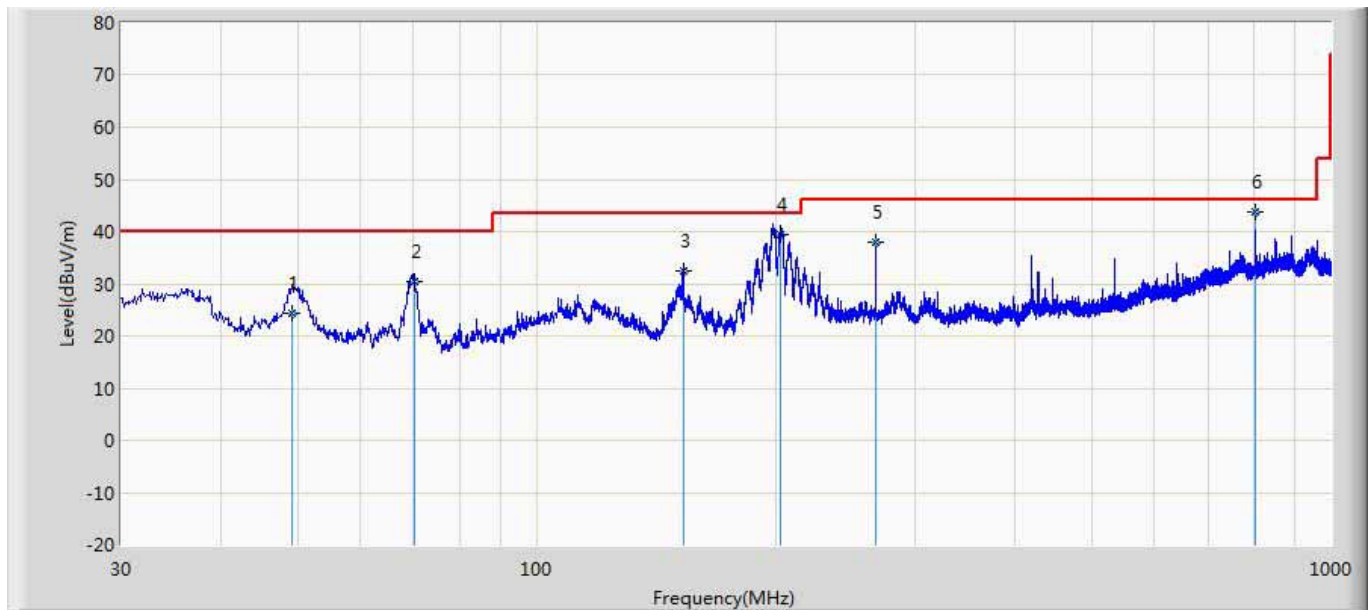


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		203.197	34.728	46.964	-8.772	43.500	9.404	1.550	23.190	100	360	QP
2		267.610	37.463	45.794	-8.537	46.000	13.110	1.760	23.200	100	50	QP
3		319.497	35.222	42.339	-10.778	46.000	13.907	1.930	22.955	100	278	QP
4		420.532	39.635	43.894	-6.365	46.000	16.411	2.260	22.930	100	355	QP
5		445.988	33.476	37.046	-12.524	46.000	16.920	2.310	22.800	100	145	QP
6	*	802.790	39.935	39.109	-6.065	46.000	20.023	3.120	22.317	200	250	QP

Note:

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: AC2	Time: 2016/08/18
Limit: FCC_Part15.109_RE(3m)_ClassB	Margin: 0
Probe: CB7_CBL6112_0726	Polarity: Vertical
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		49.184	24.372	38.165	-15.628	40.000	8.526	0.768	23.087	100	44	QP
2		70.064	30.322	46.173	-9.678	40.000	6.319	0.900	23.070	200	316	QP
3		152.937	32.373	43.716	-11.127	43.500	10.324	1.340	23.007	100	337	QP
4		203.025	39.335	51.566	-4.165	43.500	9.409	1.550	23.190	100	154	QP
5		267.599	37.952	46.281	-8.048	46.000	13.112	1.759	23.201	100	59	QP
6	*	802.793	43.629	42.803	-2.371	46.000	20.023	3.120	22.317	100	27	QP

Note:

1. " \* ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

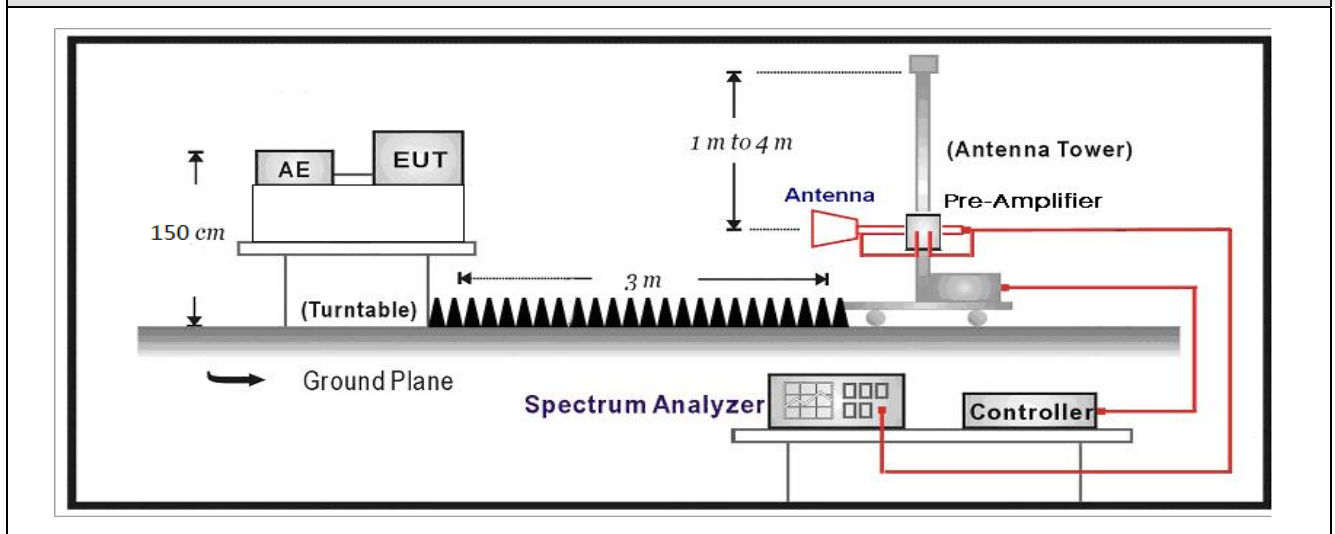
## 4. Radiated Emission Band Edge

### 4.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.04
Preamplifier	Miteq	NSP1800-25	1364185	2016.05.03	2017.05.03
DRG Horn	ETS-Lindgren	3117	00167055	2016.07.23	2017.07.23
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	1126450	2015.09.18	2016.09.18
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2016.02.28	2017.02.28
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2016.02.28	2017.02.28
EMI Receiver	Agilent	N9038A	MY51210196	2016.07.16	2017.07.16
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2016.01.05	2017.01.05

## 4.2. Test Setup

Above 1GHz Test Setup:



## 4.3. Limit

Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB $\mu$ V/m)	RBW (MHz)	Distance (m)
2310-2390	PK	74	1	3
2483.5-2500	AV	54	1	3

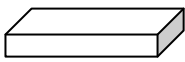
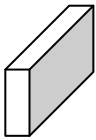
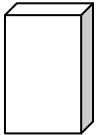

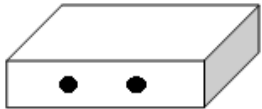

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.



#### 4.4. Test Procedure

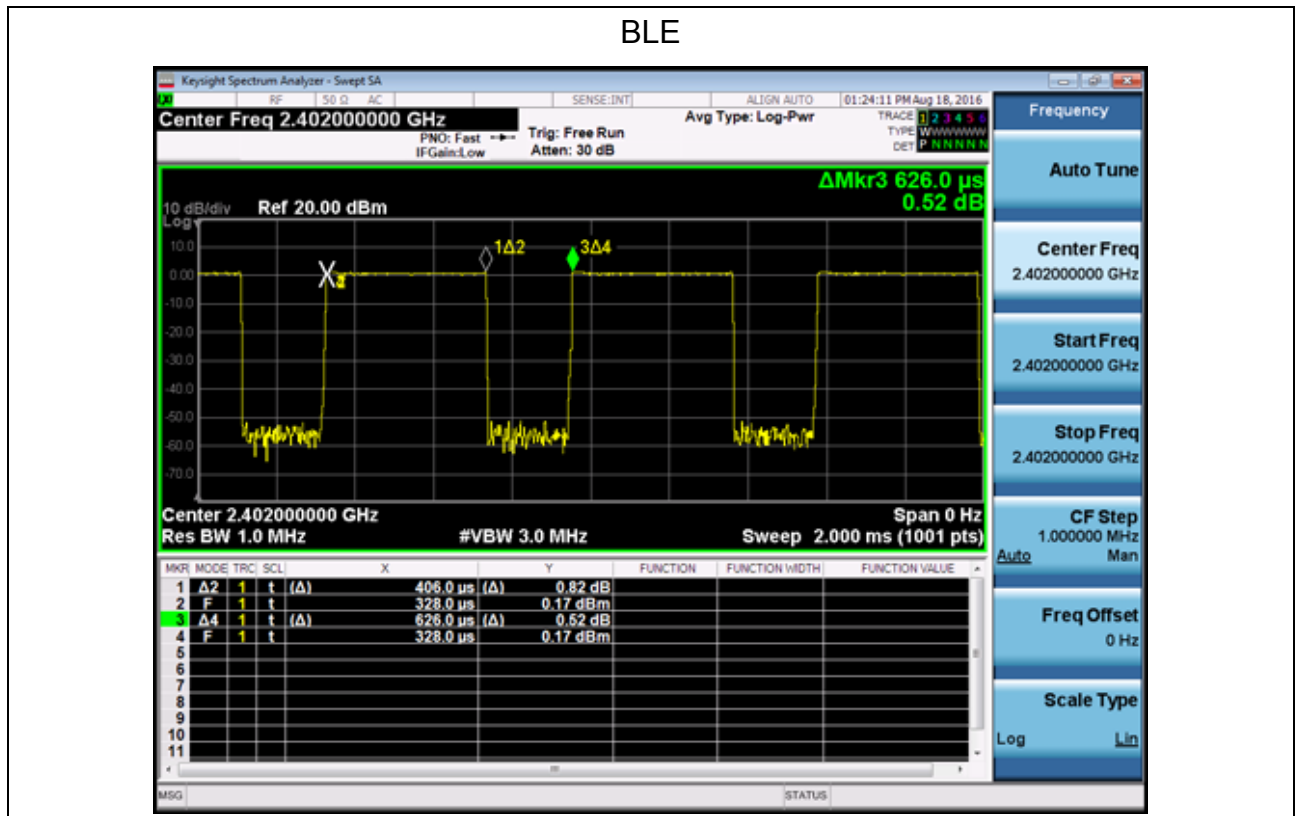
Test Method					
	References Rule		Chapter	Description	
<input checked="" type="checkbox"/>	ANSI C63.10		6.10	Band-edge testing	
	<input checked="" type="checkbox"/>	ANSI C63.10	6.10.5	Restricted-band band-edge measurements	
	<input type="checkbox"/>	ANSI C63.10	6.10.6	Marker-delta method	
<input checked="" type="checkbox"/>	ANSI C63.10		11.12	Emissions in restricted frequency bands	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.1	Radiated emission measurements	
	<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.7	Radiated spurious emission test	
<input type="checkbox"/>	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz	
<input type="checkbox"/>	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz	
<input checked="" type="checkbox"/>	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
	<input type="checkbox"/>	ANSI C63.10		11.12.2	Antenna-port conducted measurements
		<input type="checkbox"/>	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.4	Peak power measurement procedure
		<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.5	Average power measurement procedures
		<input type="checkbox"/>	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		<input type="checkbox"/>	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

#### 4.5. EUT test definition

Item	Emissions in non-restricted frequency bands			
Device Category	<input type="checkbox"/>	Fixed position use		
	<input checked="" type="checkbox"/>	Mobile position use		
Test mode	Mode 1			
Test method	<input checked="" type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input checked="" type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input type="checkbox"/>	Conducted		
	<input type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

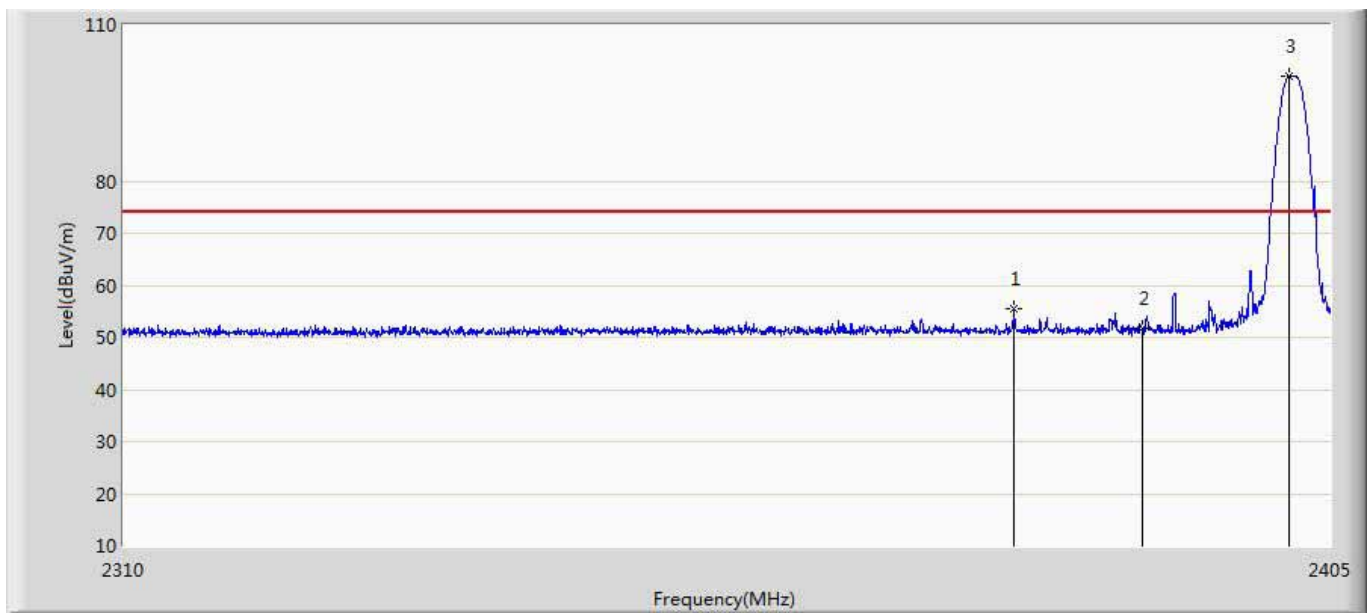
#### 4.6. Duty Cycle

Test Mode	Tx On (ms)	Tx Off (ms)	Reduced VBW (Hz)	Tx On + Tx Off (ms)	Duty Cycle
BLE	0.406	0.220	3000	0.626	64.86%



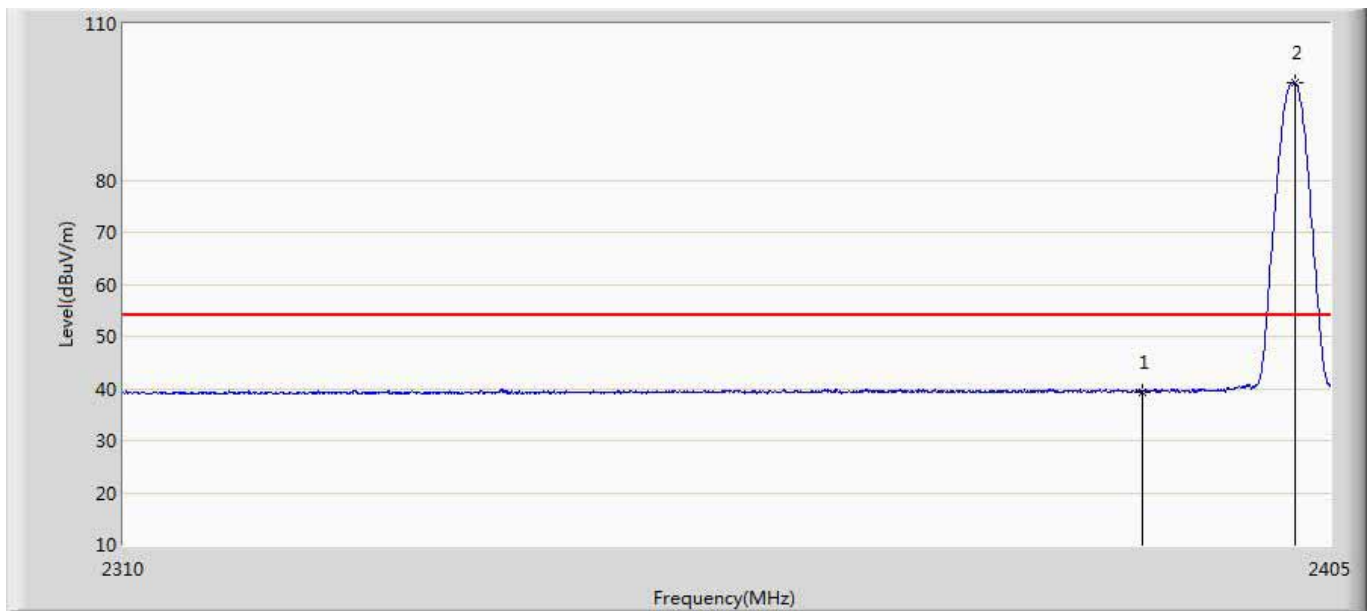
#### 4.7. Test Result

Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 17:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402 by BLE	



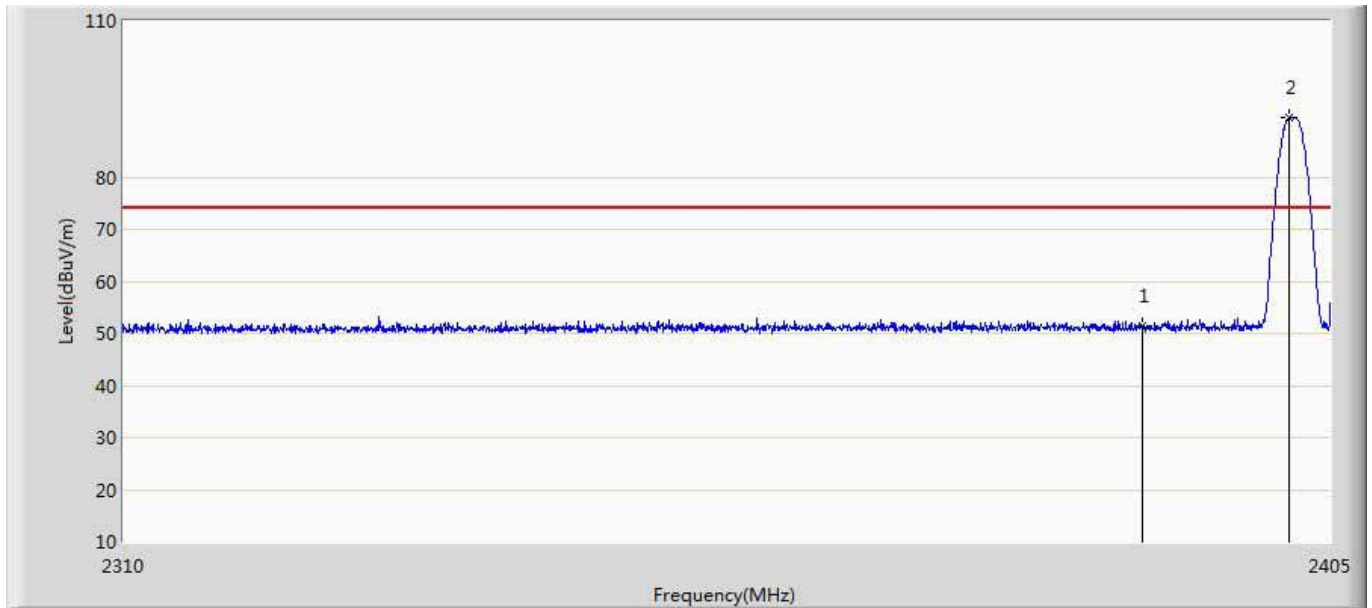
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2379.778	55.577	19.511	-18.423	74.000	36.066	PK
2		2390.000	51.607	15.521	-22.393	74.000	36.086	PK
3	*	2401.770	100.246	64.122	26.246	74.000	36.124	PK

Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 17:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402 by BLE	



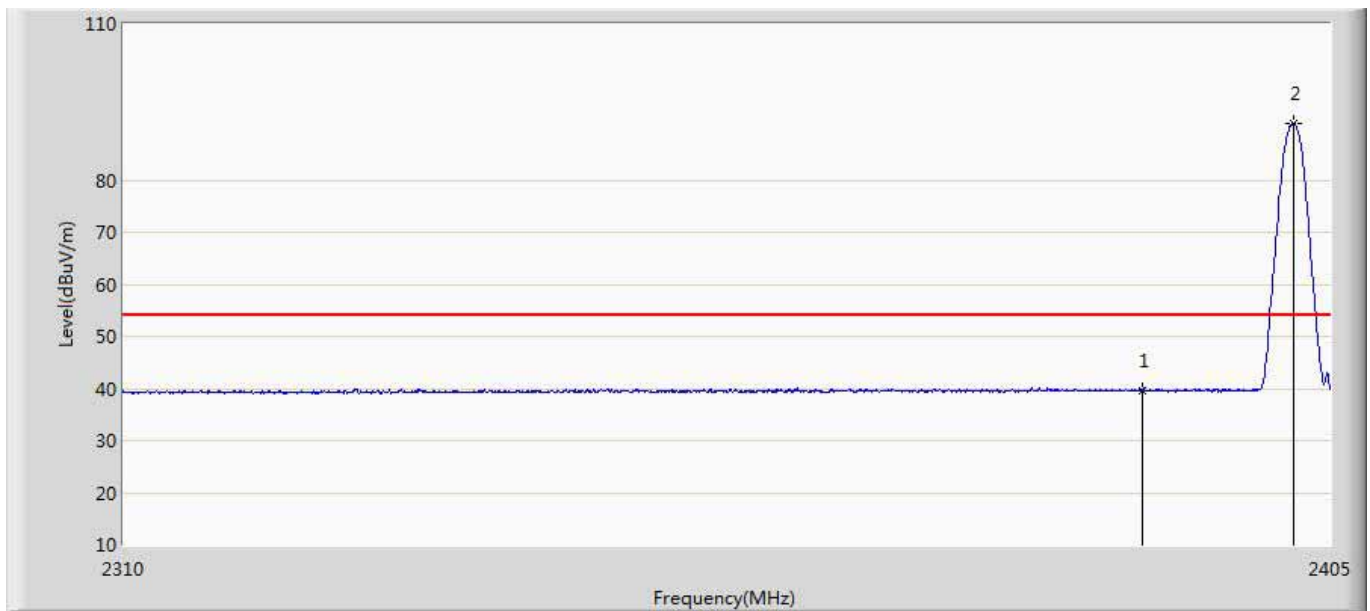
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.319	3.233	-14.681	54.000	36.086	AV
2	*	2402.245	98.696	62.570	44.696	54.000	36.126	AV

Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 17:59
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402 by BLE	



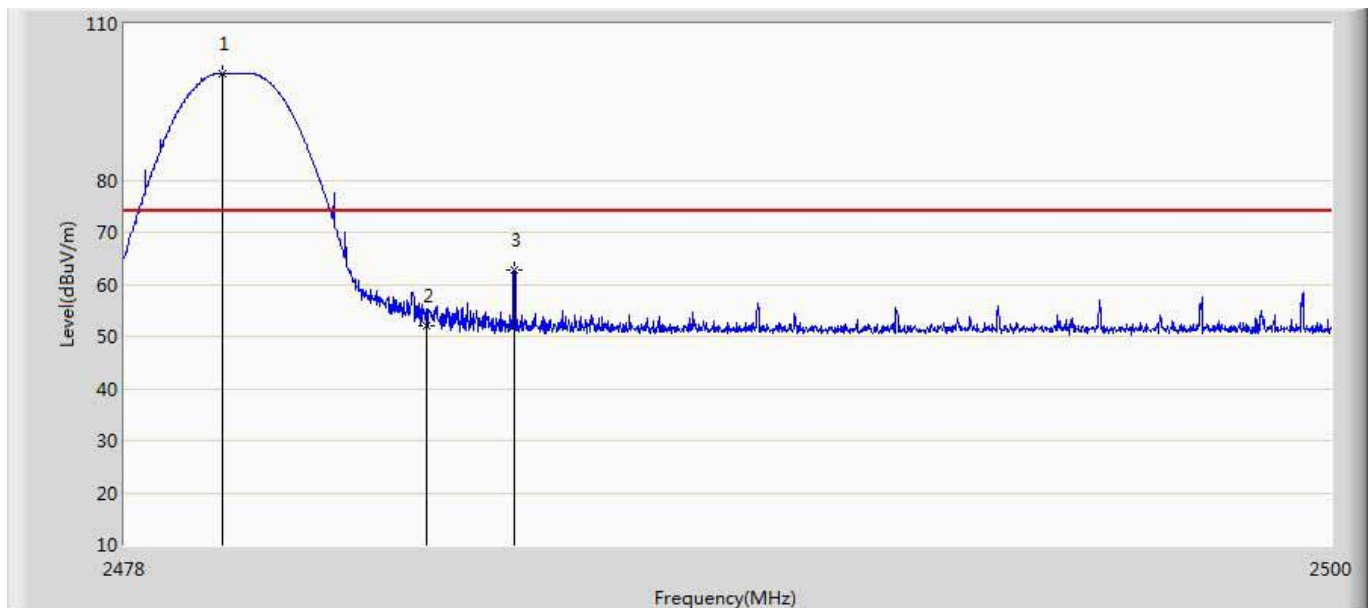
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	51.321	15.235	-22.679	74.000	36.086	PK
2	*	2401.770	91.468	55.344	17.468	74.000	36.124	PK

Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 18:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2402 by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	39.625	3.539	-14.375	54.000	36.086	AV
2	*	2402.055	90.952	54.827	36.952	54.000	36.124	AV

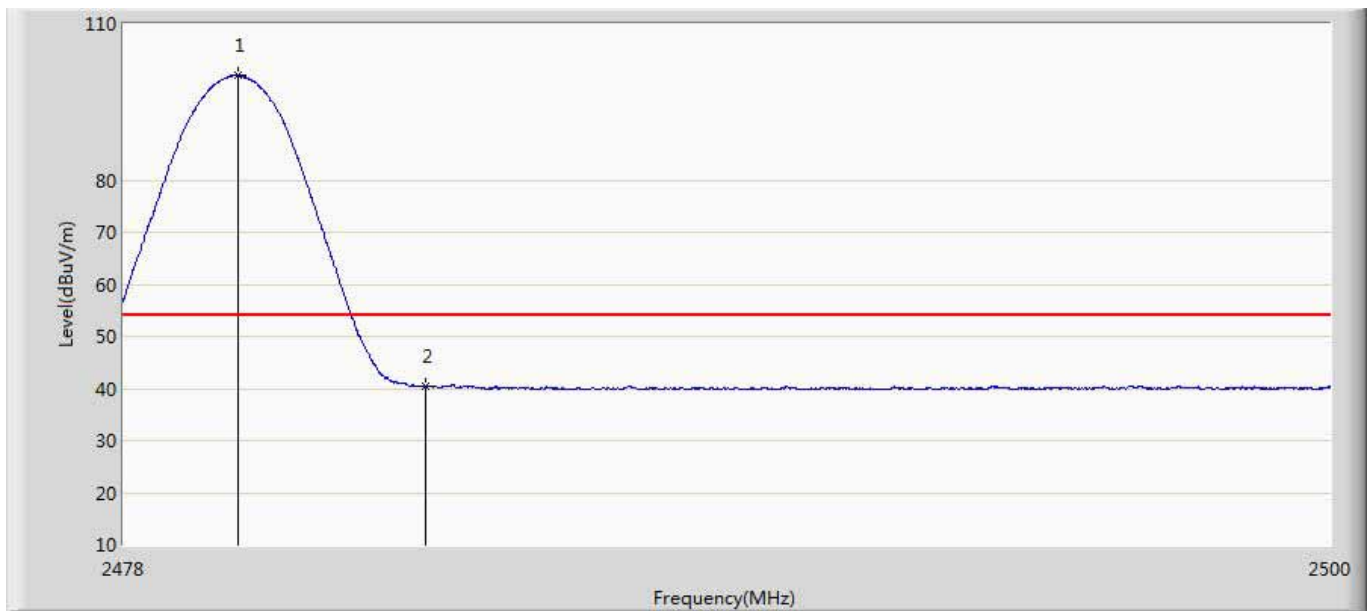
Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 18:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2480 by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.793	100.531	64.281	26.531	74.000	36.250	PK
2		2483.500	52.020	15.759	-21.980	74.000	36.261	PK
3		2485.095	62.635	26.369	-11.365	74.000	36.266	PK

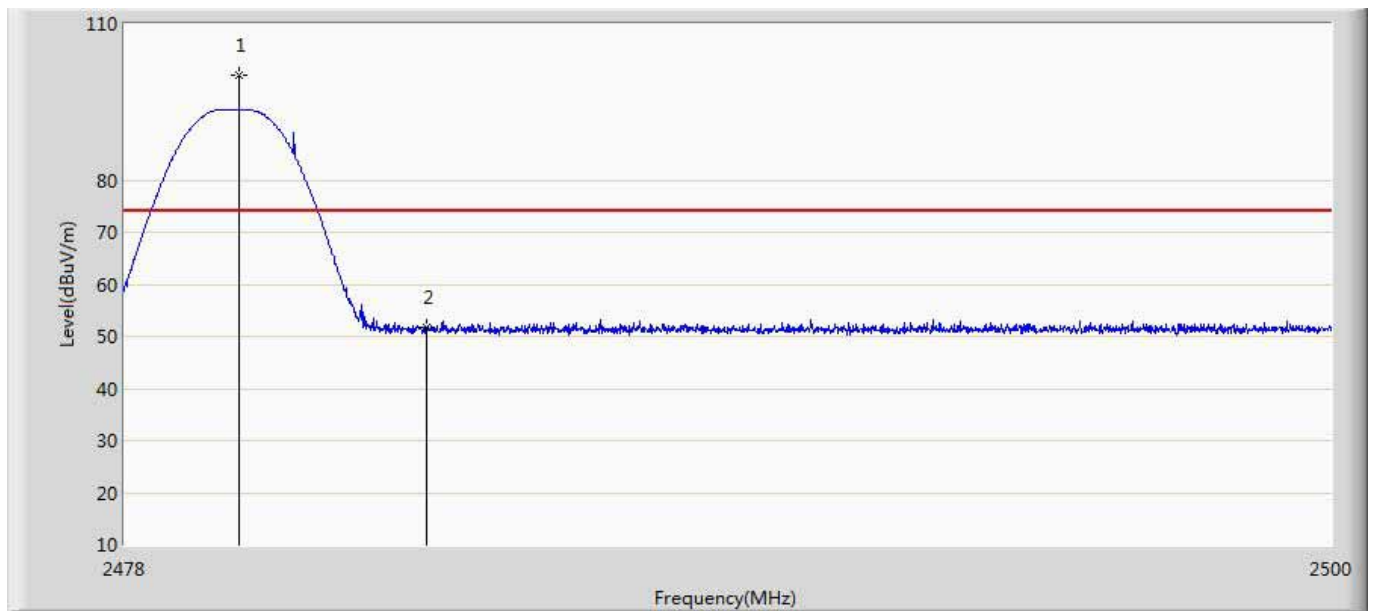


Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 18:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2480 by BLE	



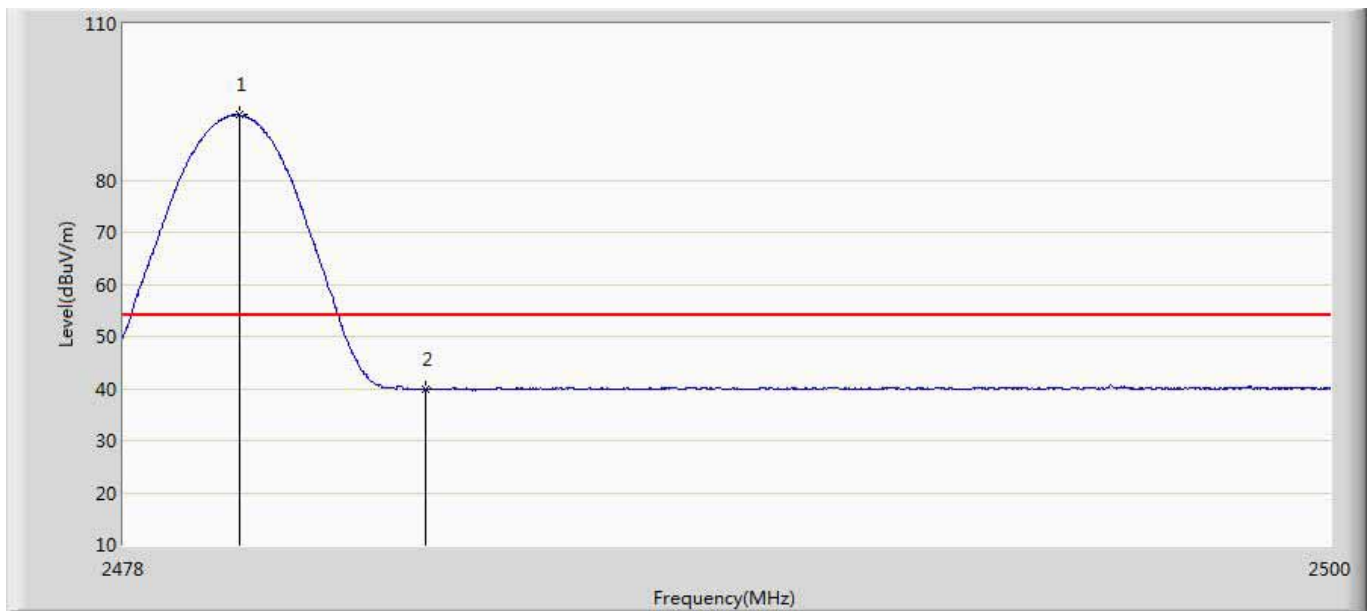
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.079	100.058	63.807	46.058	54.000	36.251	AV
2		2483.500	40.448	4.187	-13.552	54.000	36.261	AV

Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 18:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2480 by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.079	100.058	63.807	26.058	74.000	36.251	PK
2		2483.500	51.683	15.422	-22.317	74.000	36.261	PK

Engineer: Simon	
Site: AC5	Time: 2016/07/30 - 18:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality Controller	Power: AC 120V/60Hz
Note: Mode 1: Transmit at channel 2480 by BLE	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.112	92.490	56.239	38.490	54.000	36.251	AV
2		2483.500	39.899	3.638	-14.101	54.000	36.261	AV

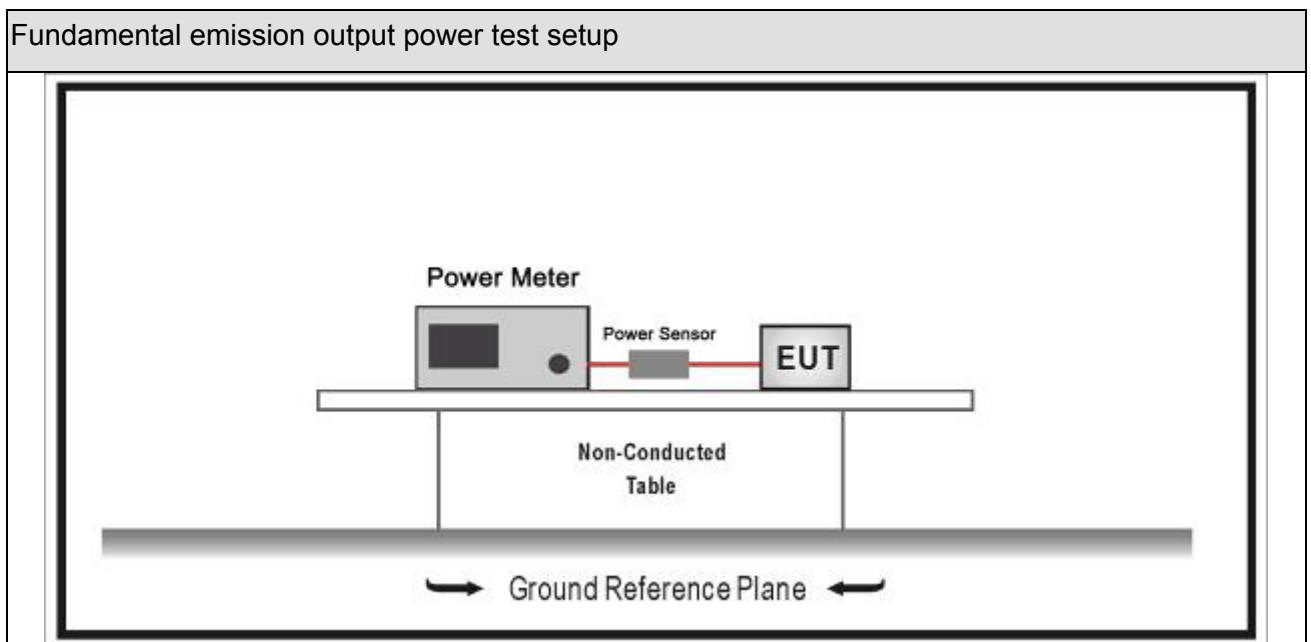
## 5. Fundamental emission output power

### 5.1. Test Equipment

Fundamental emission output power/ TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2016.01.04	2017.01.04
Spectrum Analyzer	Agilent	N9010A	MY48030494	2016.02.04	2017.02.04
Wideband Peak Power Meter	Anritsu	ML2495A	0905006	2015.10.14	2016.10.14
Power Sensor	Anritsu	MA2411B	0846014	2015.10.14	2016.10.14
Temperature/Humidity Meter	zhicheng	ZC1-2	TR8-TH	2016.04.10	2017.04.10

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

### 5.2. Test Setup



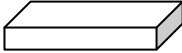
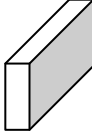
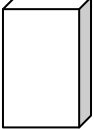
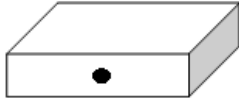


### 5.3. Limit

Fundamental emission output power Limit			
<input checked="" type="checkbox"/>	$G_{TX} < 6\text{dBi}$		$P_{out} \leq 30\text{dBm}$
<input type="checkbox"/>	$G_{TX} > 6\text{dBi}$		
	<input type="checkbox"/>	Non-Fix point-point	$P_{out} \leq 30 - (G_{TX} - 6)$
	<input type="checkbox"/>	Fix point-point	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
	<input type="checkbox"/>	Point-to-multipoint	$P_{out} \leq 30 - (G_{TX} - 6)$
	<input type="checkbox"/>	Overlap Beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
	<input type="checkbox"/>	Aggregate power transmitted simultaneously on all beams	$P_{out} \leq 30 - [(G_{TX} - 6)]/3$
	<input type="checkbox"/>	single directional beam	$P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$
Note 1 : $G_{TX}$ directional gain of transmitting antennas. Note 2 : $P_{out}$ is maximum peak conducted output power .			

## 5.4. Test Procedure

Fundamental emission output power Test Method						
	References Rule			Chapter	Description	
<input checked="" type="checkbox"/>	ANSI C63.10			11.9	Fundamental emission output power	
	<input checked="" type="checkbox"/>	ANSI C63.10		11.9.1	Maximum peak conducted output power	
		<input type="checkbox"/>	ANSI C63.10	11.9.1.1	RBW ≥ DTS bandwidth	
		<input type="checkbox"/>	ANSI C63.10	11.9.1.2	Integrated band power method	
		<input checked="" type="checkbox"/>	ANSI C63.10	11.9.1.3	PKPM1 Peak power meter method	
	<input type="checkbox"/>	ANSI C63.10		11.9.2	Maximum conducted (average) output power	
		<input type="checkbox"/>	ANSI C63.10		11.9.2.2	Measurement using a spectrum analyzer (SA)
			<input type="checkbox"/>	ANSI C63.10	11.9.2.2.2	Method AVGSA-1(Duty cycle 98%)
			<input type="checkbox"/>	ANSI C63.10	11.9.2.2.3	Method AVGSA-1A(Duty cycle 98%)
			<input type="checkbox"/>	ANSI C63.10	11.9.2.2.4	Method AVGSA-2(Duty cycle 98%)
			<input type="checkbox"/>	ANSI C63.10	11.9.2.2.5	Method AVGSA-2A(Duty cycle 98%)
			<input type="checkbox"/>	ANSI C63.10	11.9.2.2.4	Method AVGSA-3
			<input type="checkbox"/>	ANSI C63.10	11.9.2.2.5	Method AVGSA-3A
		<input type="checkbox"/>	ANSI C63.10		11.9.2.3	Measurement using a power meter (PM)
			<input type="checkbox"/>	ANSI C63.10	11.9.2.3.1	Method AVGPM
			<input type="checkbox"/>	ANSI C63.10	11.9.2.3.2	Method AVGPM-G

## 5.5. EUT test definition

Item	Fundamental emission output power			
Device Category	<input type="checkbox"/>	Fixed position use		
	<input checked="" type="checkbox"/>	Mobile position use		
Test mode	Mode 1			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 0		
				
	<input type="checkbox"/>	Chain 0	Chain 1	
				
	<input type="checkbox"/>	Chain 0	Chain 1	Chain 2
				

## 5.6. Test Result

Product Name	:	Virtual Reality Controller	Test Power	:	AC 120V/60Hz
Test Site	:	TR8			

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1	00	2402	2.18	30	Pass
1	19	2440	2.87	30	Pass
1	39	2480	2.92	30	Pass

\_\_\_\_\_ The End \_\_\_\_\_