



Test Report

FCC Part15 Subpart C& RSS-247 Issue 2

Product Name : Virtual Reality System

Model No. : MH-A32, MH-A64

FCC ID : 2AG0ZMH-A

IC : 20849-MHA

Applicant : Oculus VR LLC

Address : 1 Hacker Way, Bldg 18 Menlo Park CA 94025-1456

Date of Receipt : Sep. 12, 2017

Test Date : Sep. 12, 2017~ Oct. 26, 2017

Issued Date : Nov. 27, 2017

Report No. : 1792053R-RF-US-P06V03

Report Version : V 1.0

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 of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by A2LA, TAF or any agency of the government.

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Test Report Certification

Issued Date : Nov. 27, 2017

Report No. : 1792053R-RF-US-P06V03



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Applicant : Oculus VR LLC

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Manufacturer : Oculus VR LLC

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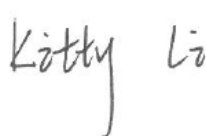
EUT Voltage : 5 V dc, 2 A

Test Voltage : AC120V/60Hz

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C
KDB DA 00-705 Released March 30, 2000
ANSI C63.10: 2013
RSS-Gen Issue 4/RSS-247 Issue 2

Test Result : Complied

Performed Location : DEKRA Testing & Certification (Suzhou) Co., Ltd.
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FCC Designation Number: CN1199; ISED Lab Code: 4075B

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
1792053R-RF-US-P06V03	V1.0	Initial Issued Report	Nov. 27, 2017

1. General Information

1.1. EUT Description

Product Name	Virtual Reality System
Model No.	MH-A32, MH-A64
Working Voltage	5 V dc, 2 A
Test Voltage	AC120V/60Hz
Bluetooth Specification	V3.0
Frequency Range	2402- 2480 MHz
Channel Number	V3.0: 79
Channel Separation	V3.0: 1MHz
Type of Modulation	V3.0: GFSK, Pi/4 DQPSK, 8DPSK
Data Rate	V3.0: 1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps(8DPSK)
Antenna Type	Reference to Antenna List
Peak Antenna Gain	Reference to Antenna List

Note:

1. The RF specifications of two models are identical. The difference is below:

Their memory is different.

	MH-A32	MH-A64
memory	32G	64G

There is not any change in design, circuitry or construction for this device, including RF parameters (antenna, software, firmware and hardware versions, power, frequency ranges, etc.).

We used MH-A32 for all the test items.

Bluetooth Working Frequency of Each Channel: (For V3.0)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz	N/A	N/A

1.2 Antenna information

Model No.	N/A					
Antenna manufacturer	SPEED					
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	CDD		
			☐	Sectorized		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
			☐	Sectorized		
	☒	Internal	☒	PIFA		
			☐	PCB		
			☐	Ceramic Chip Antenna		
			☐	Monopole Antenna		
Antenna Technology	Ant Gain (dBi)					
☒ SISO	Ant1:2					

1.3 Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: Transmitter-1Mbps(GFSK_DH5)
Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH5)
Mode 3: Transmitter-3Mbps(8DPSK_DH5)
Mode 4: Transmitter-Hopping

Note:

1. For portable device, radiated spurious emission was verified over X, Y, Z Axis, and shown the worst case on this report.
2. Regards to the frequency band operation for systems using FHSS modulation: normal operation (hopping) was selected to test for conducted spurious test.
3. The extreme test condition for voltage and temperature were declared by the manufacturer.
4. The reading values of all the test items contain cable loss.

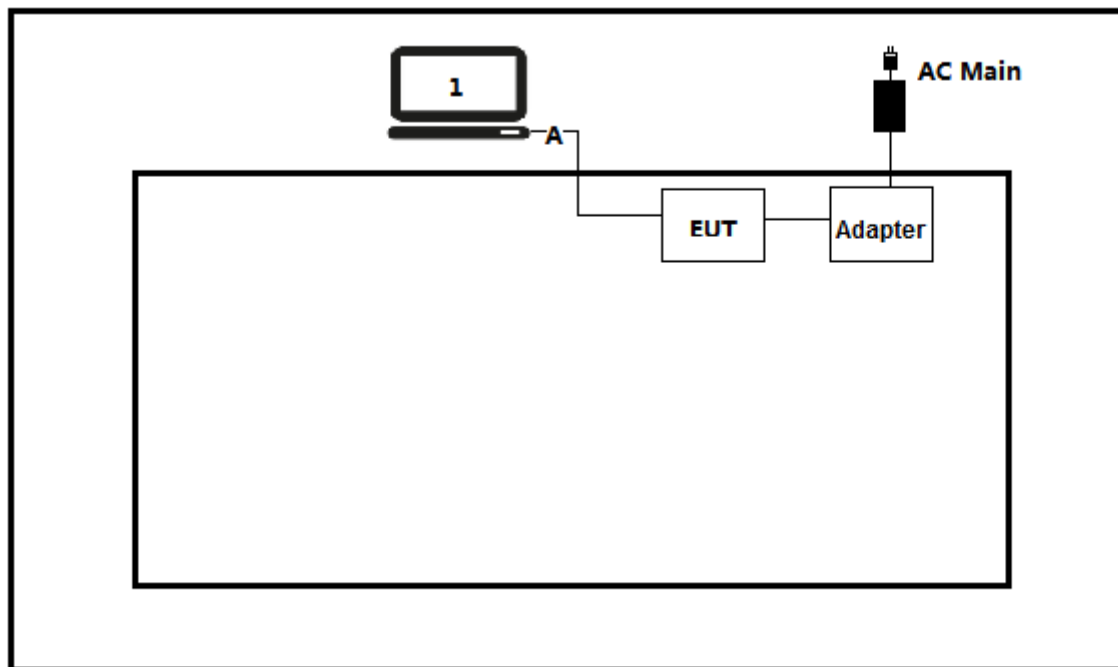
1.4 Tested System Details

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

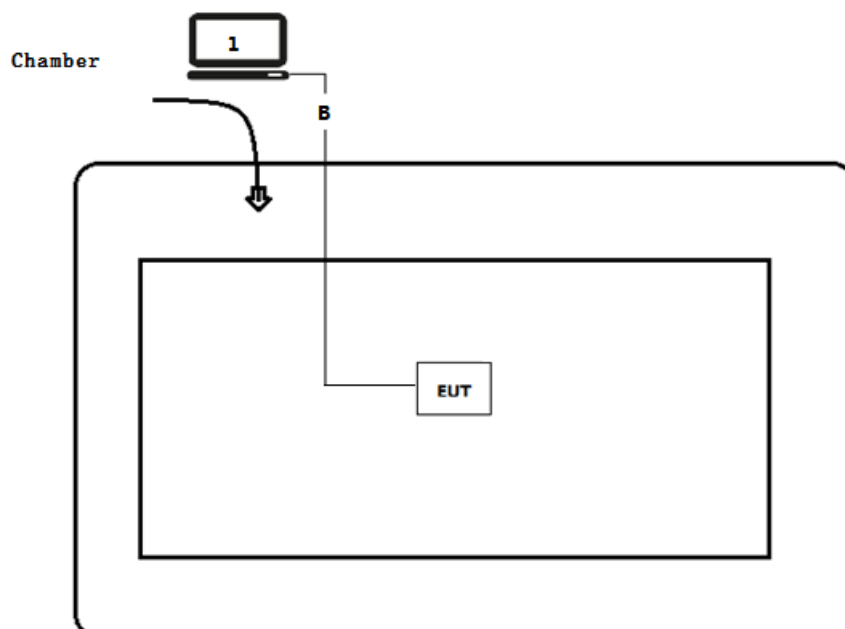
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	2526	LV-A3285	Power by adapter
A	USB Cable	N/A	N/A	N/A	Shield, 0.75m
B	USB Cable	N/A	N/A	N/A	Shield, 10m

1.5 Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



1.6 EUT Exercise Software

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

2. Technical Test

2.1. Summary of Test Result

- ☒ No deviations from the test standards
- ☐ Deviations from the test standards as below description:

For FCC

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.207	Yes	No
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.209	Yes	No
20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)	Yes	No
Carrier Frequency Separation	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)	Yes	No
Number of Hopping Frequencies	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)(iii)	Yes	No
Time of Occupancy (Dwell Time)	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(a)(1)(iii)	Yes	No
Peak Output Power	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.247(b)(1)	Yes	No
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.215(c), 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C: 2015 15.247(d)	Yes	No
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C: 2015 Section 15.203	Yes	No

For ISED

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	RSS-Gen Issue 4 Section 8.8	Yes	No
Radiated Emission	RSS-Gen Issue 4 Section 8.9	Yes	No
20dB Bandwidth	RSS-247 Issue 2 Section 5.1	Yes	No
Carrier Frequency Separation	RSS-247 Issue 2 Section 5.1	Yes	No
Number of Hopping Frequencies	RSS-247 Issue 2 Section 5.1	Yes	No
Time of Occupancy (Dwell Time)	RSS-247 Issue 2 Section 5.1	Yes	No
Peak Output Power	RSS-247 Issue 2 Section 5.4	Yes	No
Emissions in non-restricted frequency bands	RSS-247 Issue 2 Section 5.5	Yes	No
Radiated Emission Band Edge	RSS-Gen Issue 4 Section 8.10	Yes	No
Antenna Requirement	RSS-Gen Issue 4 Section 8.3	Yes	No

2.2. 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

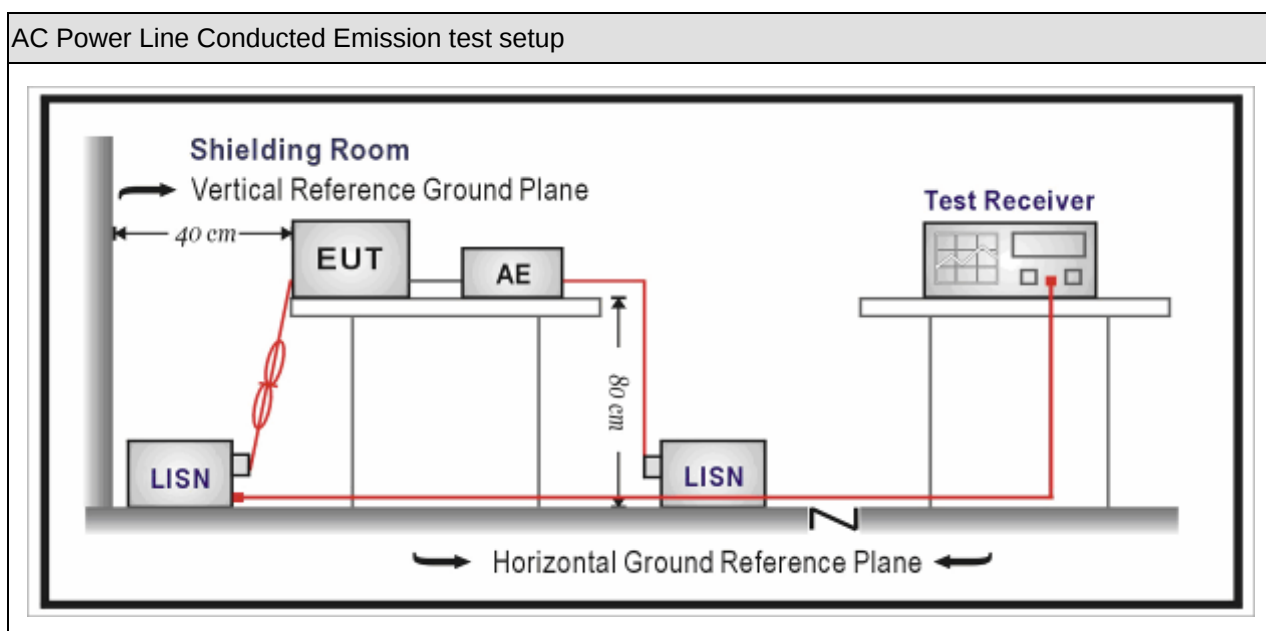
3. Conducted Emission

3.1. Test Equipment

AC Power Line Conducted Emission / TR-1					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100906	2017.03.05	2018.03.04
Two-Line V-Network	R&S	ENV 216	101189	2017.07.16	2018.07.15
Two-Line V-Network	R&S	ENV 216	101044	2017.09.15	2018.09.15
50ohm Coaxial Switch	Anritsu	MP59B	6200464462	N/A	N/A
50ohm Termination	SHX	TF2	07081402	2017.09.15	2018.09.15
Temperature/Humidity Meter	Zhichen	ZC1-2	TR1-TH	2017.01.05	2018.01.04

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

3.2. Test Setup



3.3. Limit

Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average (dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: The lower limit shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

3.4. Test Procedure

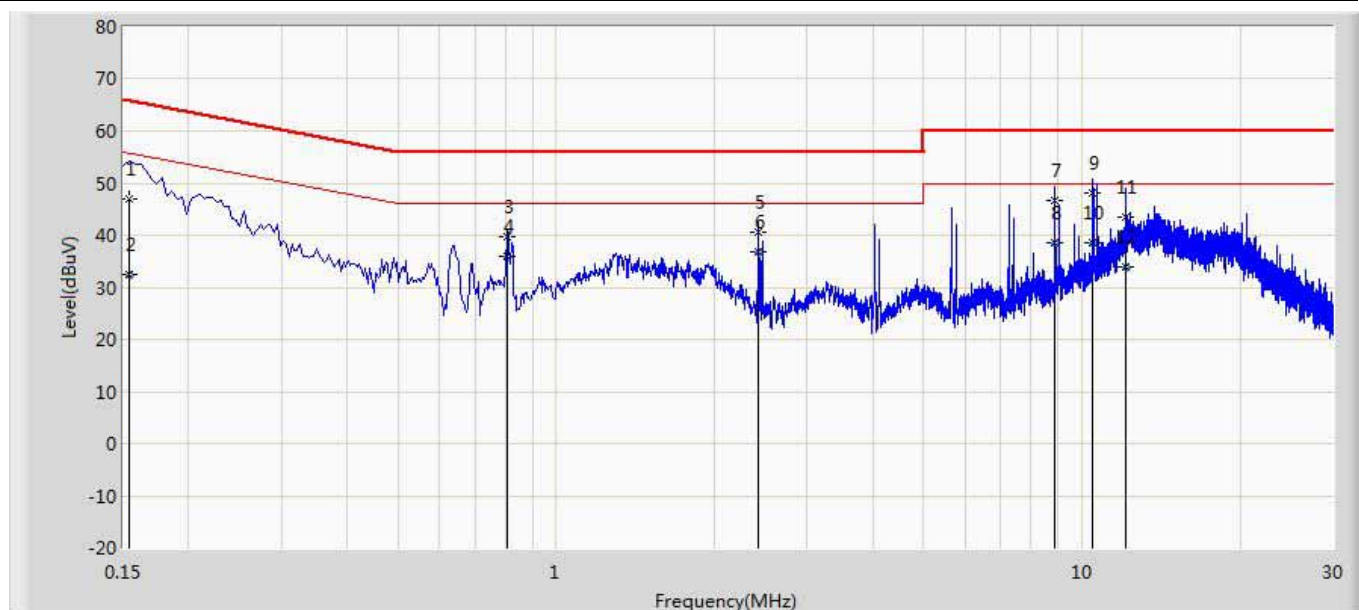
Test Method			
	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

3.5. Uncertainty

The measurement uncertainty is defined as ± 2.02 dB

3.6. Test Result

Engineer: Glory	
Site: TR1	Time: 2017/11/07
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Line
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2402MHz by DH5	

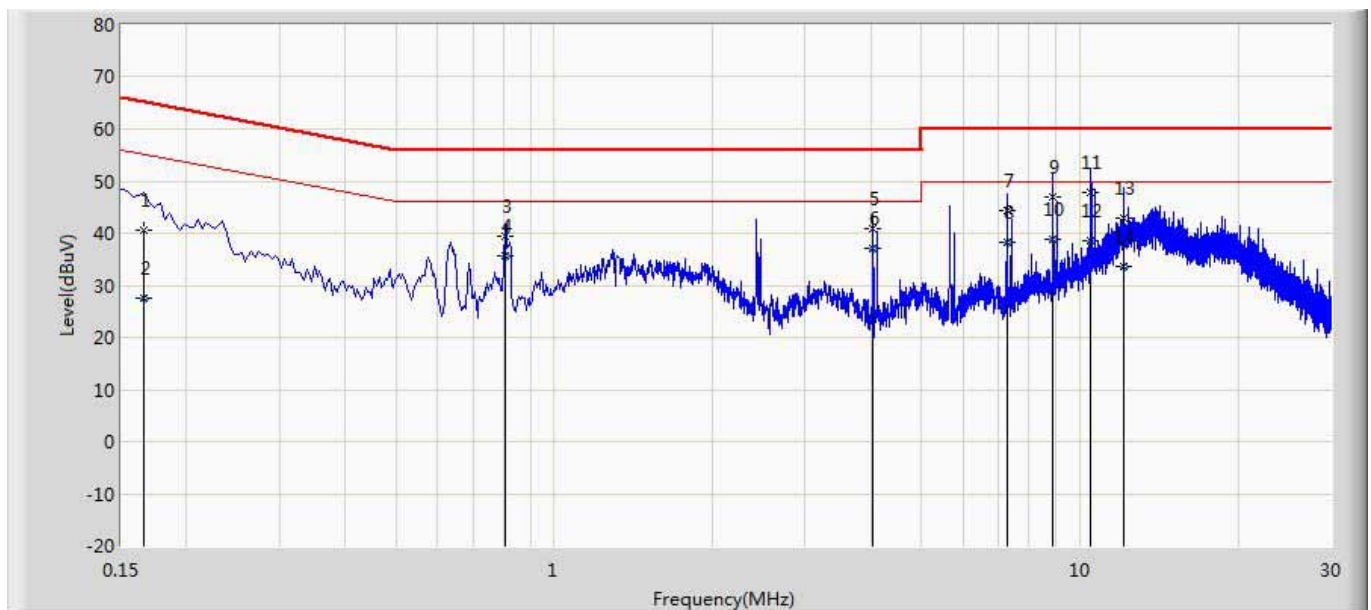


No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.154	46.938	37.304	-18.843	65.781	9.609	0.025	0.000	QP
2		0.154	32.402	22.767	-23.380	55.781	9.609	0.025	0.000	AV
3		0.806	39.598	29.941	-16.402	56.000	9.604	0.053	0.000	QP
4		0.806	35.879	26.222	-10.121	46.000	9.604	0.053	0.000	AV
5		2.422	40.475	30.761	-15.525	56.000	9.617	0.097	0.000	QP
6	*	2.422	36.827	27.113	-9.173	46.000	9.617	0.097	0.000	AV
7		8.882	46.734	36.800	-13.266	60.000	9.744	0.190	0.000	QP
8		8.882	38.553	28.620	-11.447	50.000	9.744	0.190	0.000	AV
9		10.494	48.071	38.083	-11.929	60.000	9.783	0.206	0.000	QP
10		10.494	38.525	28.536	-11.475	50.000	9.783	0.206	0.000	AV
11		12.110	43.334	33.287	-16.666	60.000	9.824	0.222	0.000	QP
12		12.110	33.924	23.878	-16.076	50.000	9.824	0.222	0.000	AV

Note:

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

Engineer: Glory	
Site: TR1	Time: 2017/11/07
Limit: FCC_Part15.207_CE_AC Power	Margin: 0
Probe: ENV216_101190(0.009-30MHz)	Polarity: Neutral
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Probe (dB)	Cable (dB)	Amp (dB)	Type
1		0.166	40.547	30.927	-24.611	65.158	9.593	0.027	0.000	QP
2		0.166	27.594	17.974	-27.564	55.158	9.593	0.027	0.000	AV
3		0.806	39.484	29.842	-16.516	56.000	9.590	0.053	0.000	QP
4		0.806	35.719	26.076	-10.281	46.000	9.590	0.053	0.000	AV
5		4.038	40.870	31.105	-15.130	56.000	9.637	0.128	0.000	QP
6	*	4.038	36.974	27.209	-9.026	46.000	9.637	0.128	0.000	AV
7		7.266	44.307	34.428	-15.693	60.000	9.708	0.171	0.000	QP
8		7.266	38.140	28.261	-11.860	50.000	9.708	0.171	0.000	AV
9		8.882	46.987	37.041	-13.013	60.000	9.757	0.190	0.000	QP
10		8.882	38.868	28.921	-11.132	50.000	9.757	0.190	0.000	AV
11		10.498	47.963	37.950	-12.037	60.000	9.807	0.206	0.000	QP
12		10.498	38.518	28.506	-11.482	50.000	9.807	0.206	0.000	AV
13		12.114	42.964	32.881	-17.036	60.000	9.862	0.222	0.000	QP
14		12.114	33.711	23.627	-16.289	50.000	9.862	0.222	0.000	AV

Note:

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

4. Emissions in restricted frequency bands

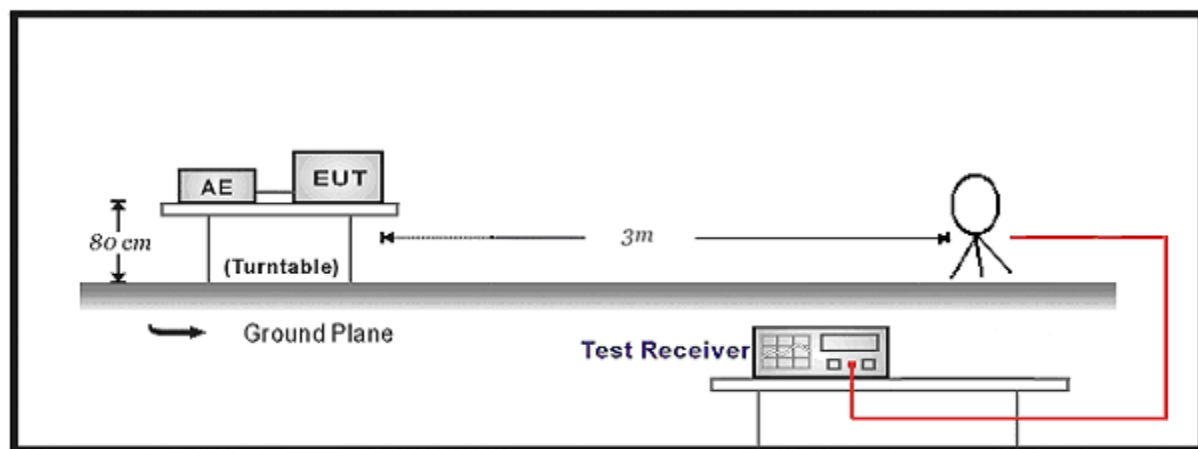
4.1. Test Equipment

Radiated Emission(Below 1GHz) / AC-2					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Test Receiver	R&S	ESCI	100573	2017.03.29	2018.03.28
Loop Antenna	R&S	HFH2-Z2	833799/003	2016.11.16	2017.11.15
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2017.10.16	2018.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2017.03.02	2018.03.01
Temperature/Humidity Meter	Zhichen	ZC1-2	AC2-TH	2017.01.04	2018.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

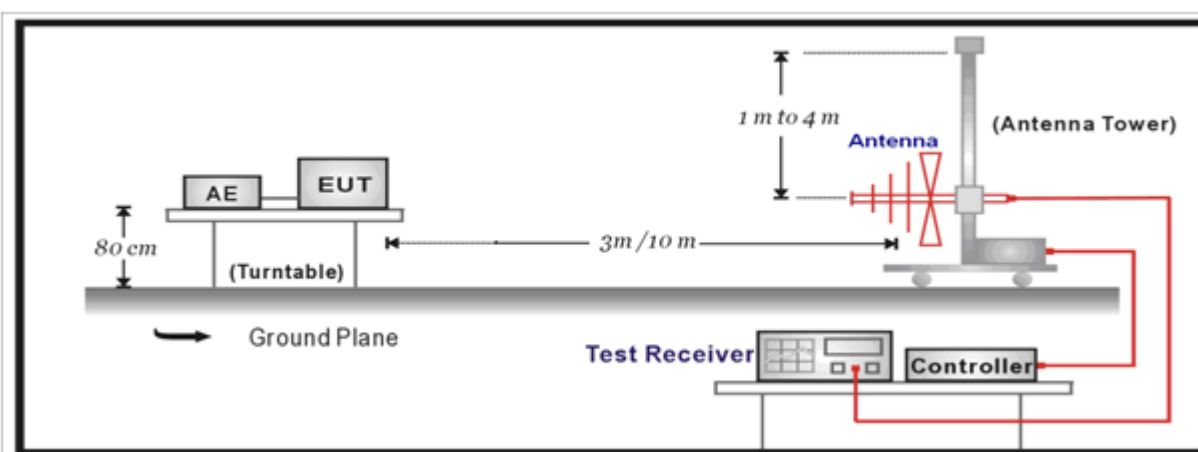
Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2017.01.04	2018.01.03
Preamplifier	Miteq	NSP1800-25	1364185	2017.05.06	2018.05.05
Preamplifier	QuieTek	AP-040G	CHM-0906001	2017.05.06	2018.05.05
DRG Horn	ETS-Lindgren	3117	00123988	2017.01.22	2018.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2016.11.25	2017.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.03.02	2018.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2017.03.02	2018.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2017.06.10	2018.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.04	2018.01.03
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

4.2. Test Setup

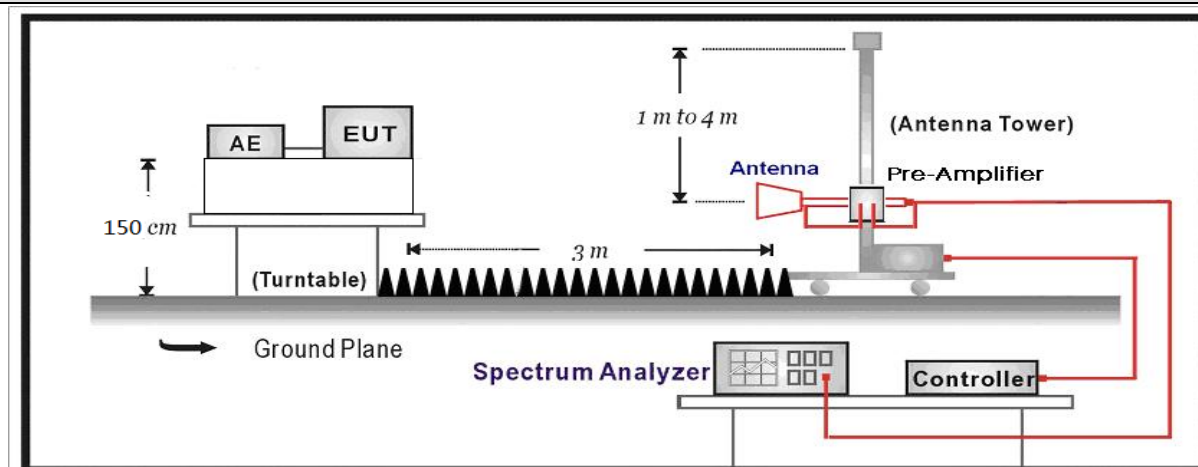
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

For FCC:

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			

For ISED:

Restricted Bands of operation

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	1645.5-1646.5	13.25-13.4
2.1735-2.1905	16.42-16.423	1660-1710	14.47-14.5
3.020-3.026	16.69475-16.69525	1718.8-1722.2	15.35-16.2
4.125-4.128	16.80425-16.80475	2200-2300	17.7-21.4
4.17725-4.17775	25.5-25.67	2310-2390	22.01-23.12
4.20725-4.20775	37.5-38.25	2655-2900	23.6-24.0
5.677-5.683	73-74.6	3260-3267	31.2-31.8
6.215-6.218	74.8-75.2	3332-3339	36.43-36.5
6.26775-6.26825	108-138	3345.8-3358	Above 38.6
6.31175-6.31225	156.52475-156.52525	3500-4400	
8.291-8.294	156.7-156.9	4500-5150	
8.362-8.366	240-285	5350-5460	
8.37625-8.38675	322-335.4	7250-7750	
8.41425-8.41475	399.9-410	8025-8500	
12.29-12.293	608-614	9.0-9.2	
12.51975-12.52025	960-1427	9.3-9.5	
12.57675-12.57725	1435-1626.5	10.6-12.7	

Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

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).

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).

4.4. Test Procedure

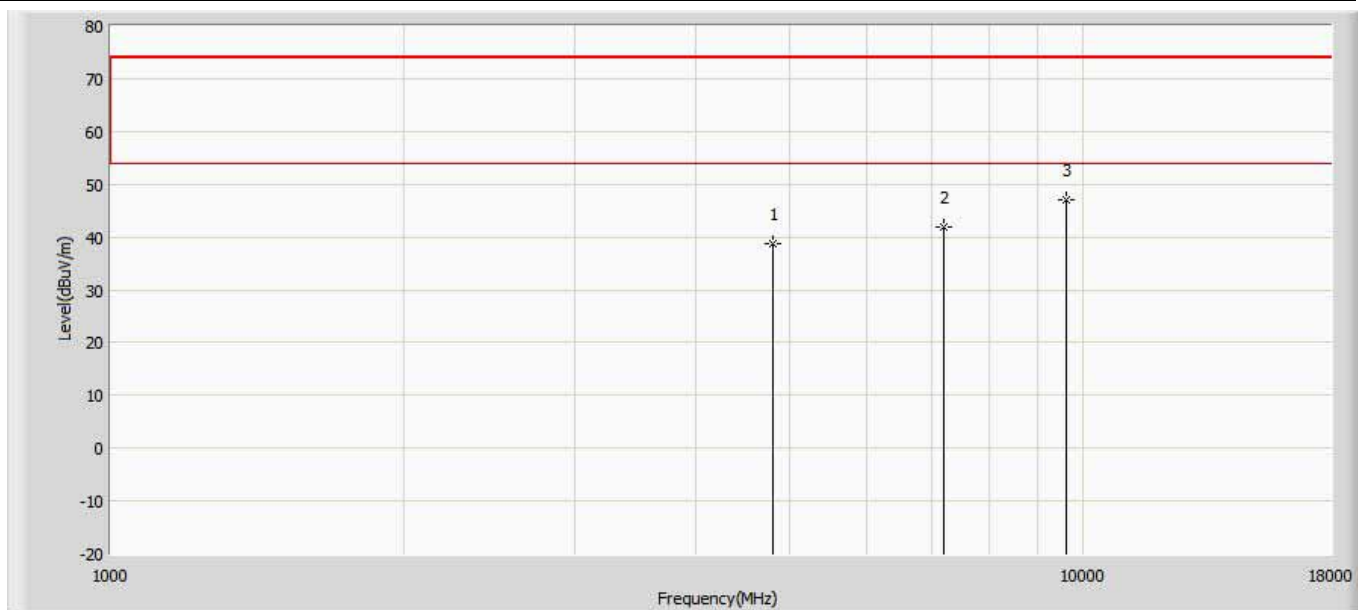
Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
below 1G is defined as ± 3.8 dB

4.6. Test Result

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



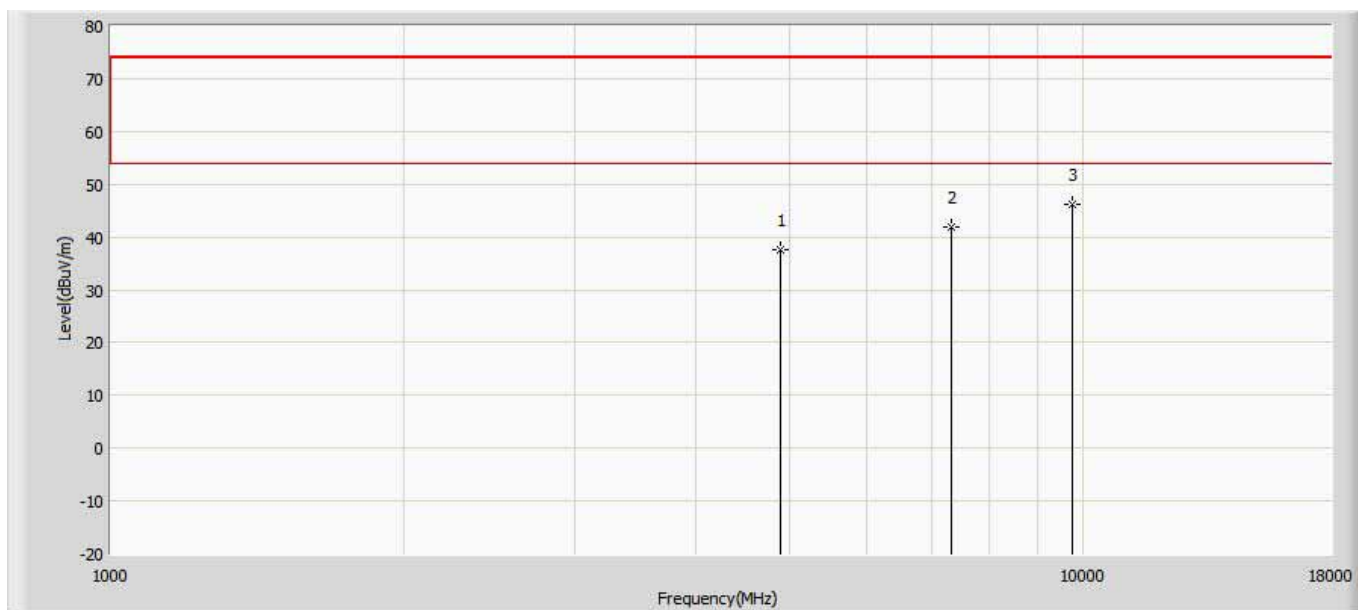
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	38.875	51.885	-35.125	74.000	-13.010	PK
2		7206.000	42.020	49.730	-31.980	74.000	-7.710	PK
3	*	9608.000	46.992	48.582	-27.008	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



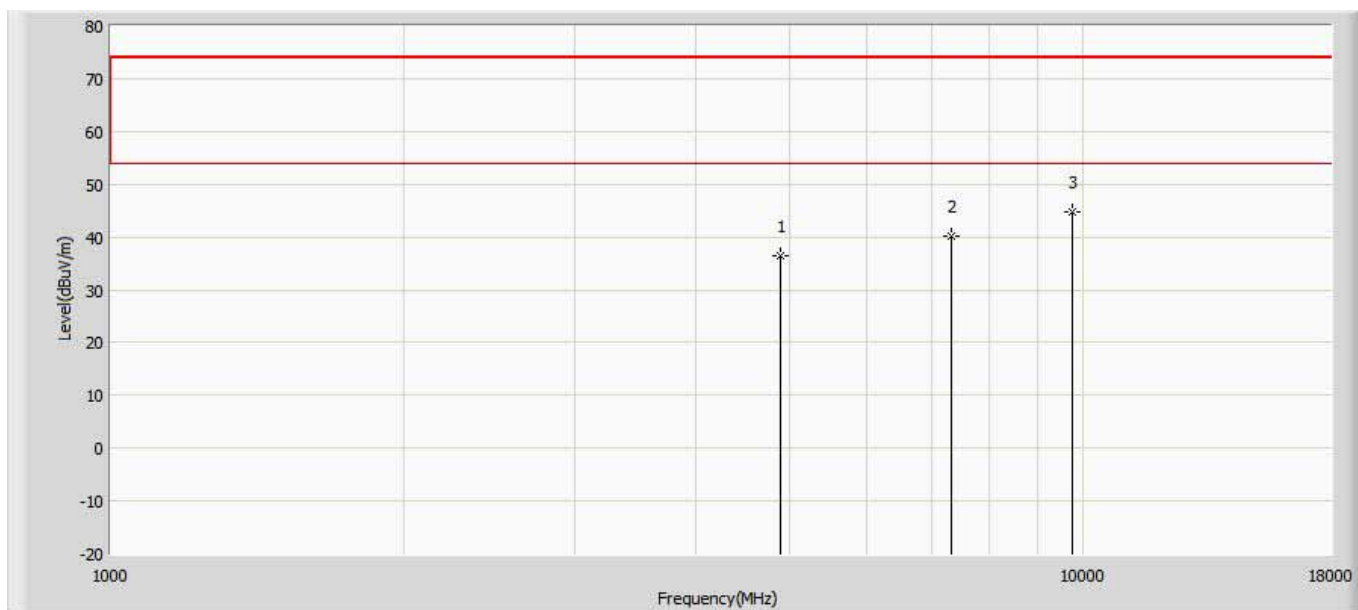
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	38.515	51.525	-35.485	74.000	-13.010	PK
2		7206.000	42.352	50.062	-31.648	74.000	-7.710	PK
3	*	9608.000	46.468	48.058	-27.532	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



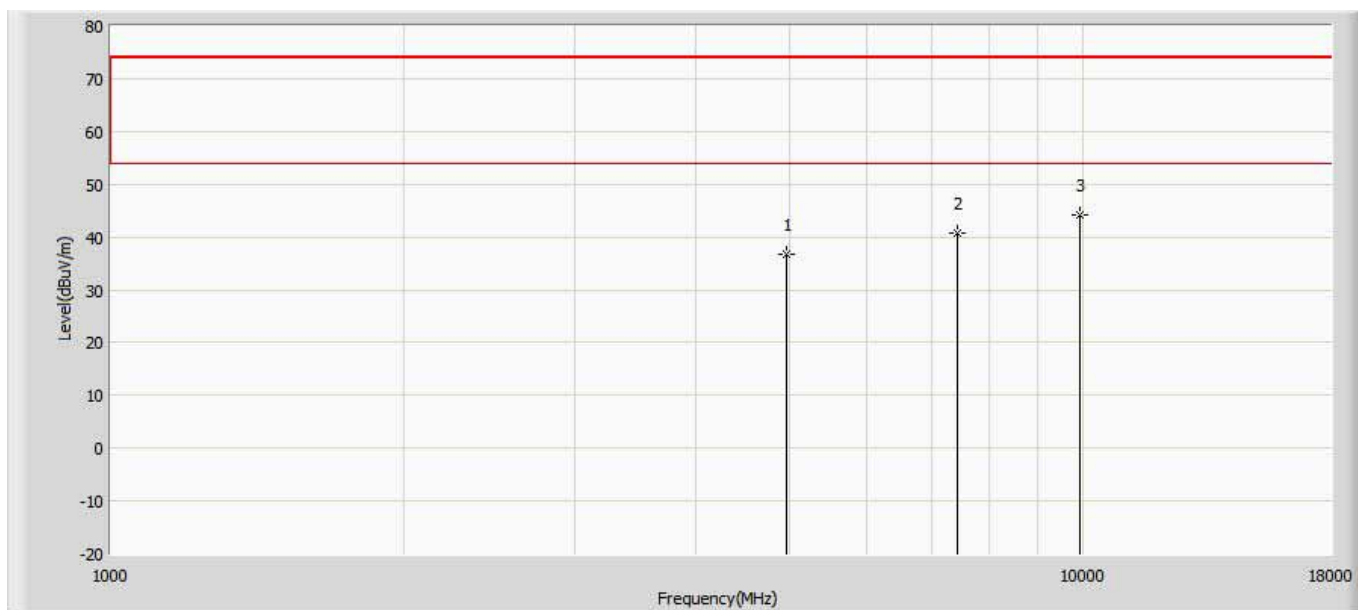
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	37.521	50.531	-36.479	74.000	-13.010	PK
2		7323.000	41.999	49.709	-32.001	74.000	-7.710	PK
3	*	9764.000	46.130	47.720	-27.870	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2441MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	36.404	49.414	-37.596	74.000	-13.010	PK
2		7323.000	40.105	47.815	-33.895	74.000	-7.710	PK
3	*	9764.000	44.717	46.307	-29.283	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



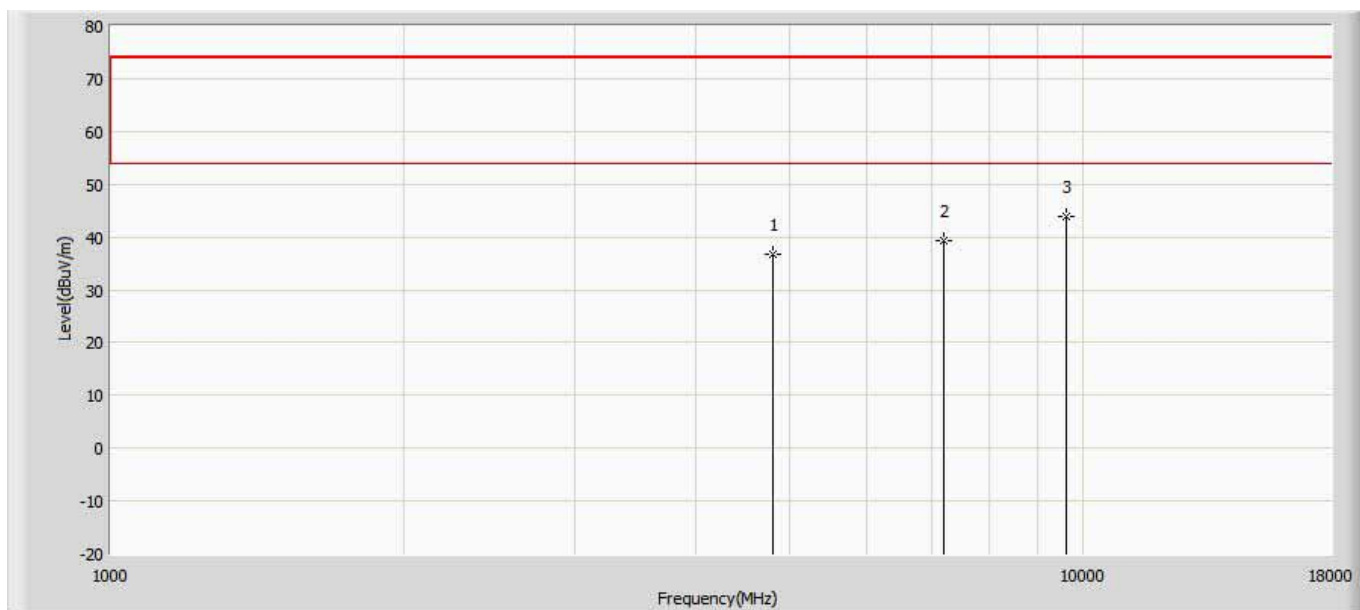
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	36.592	48.822	-37.408	74.000	-12.230	PK
2		7440.000	40.833	47.493	-33.167	74.000	-6.660	PK
3	*	9920.000	44.282	46.242	-29.718	74.000	-1.960	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



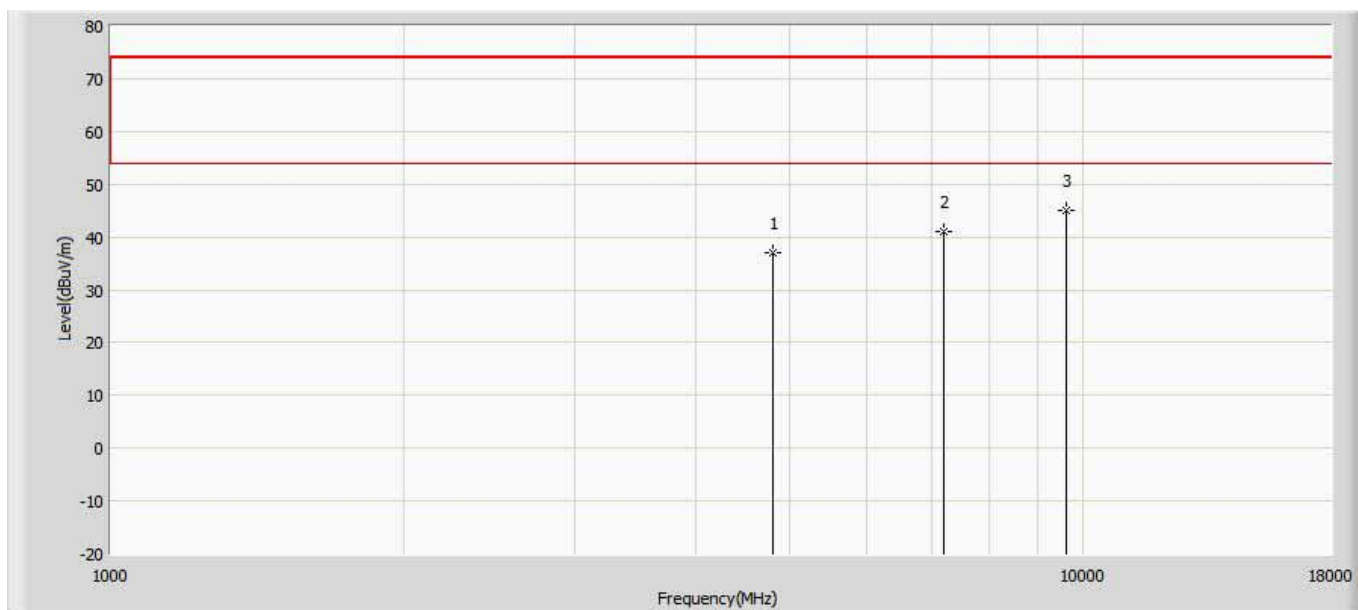
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	37.470	49.700	-36.530	74.000	-12.230	PK
2		7440.000	41.531	48.191	-32.469	74.000	-6.660	PK
3	*	9920.000	44.257	46.217	-29.743	74.000	-1.960	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2;Transmit at 2402MHz by 2DH5	



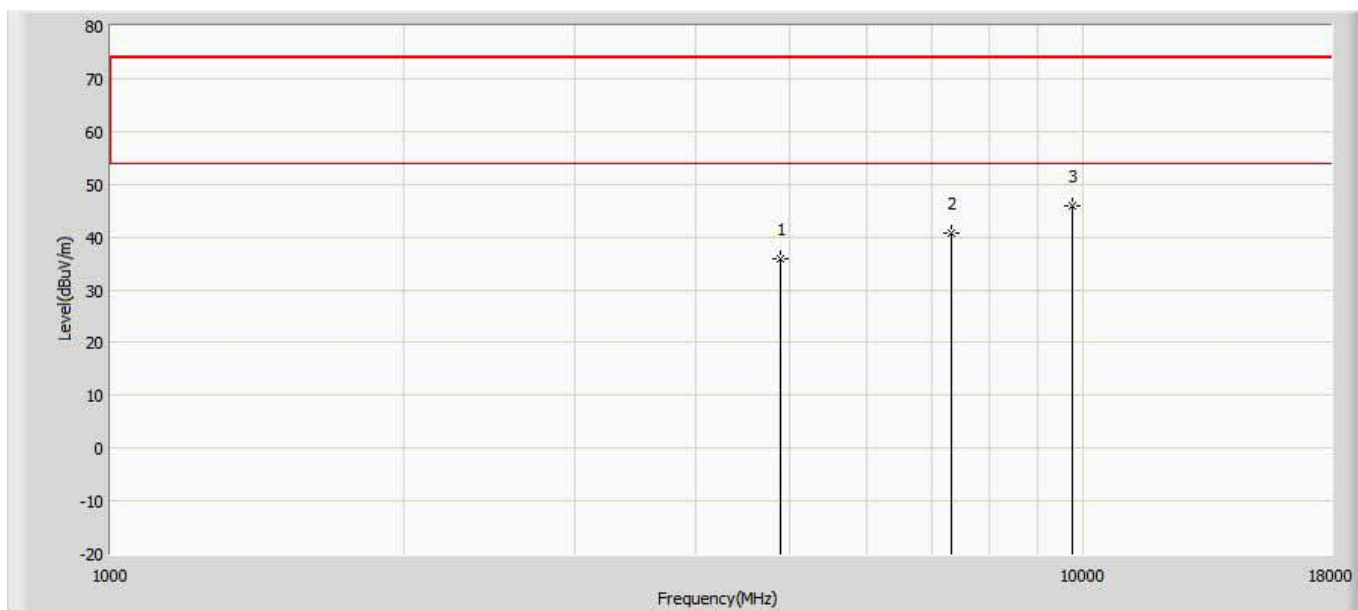
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	36.771	49.781	-37.229	74.000	-13.010	PK
2		7206.000	39.429	47.139	-34.571	74.000	-7.710	PK
3	*	9608.000	43.991	45.581	-30.009	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2;Transmit at 2402MHz by 2DH5	



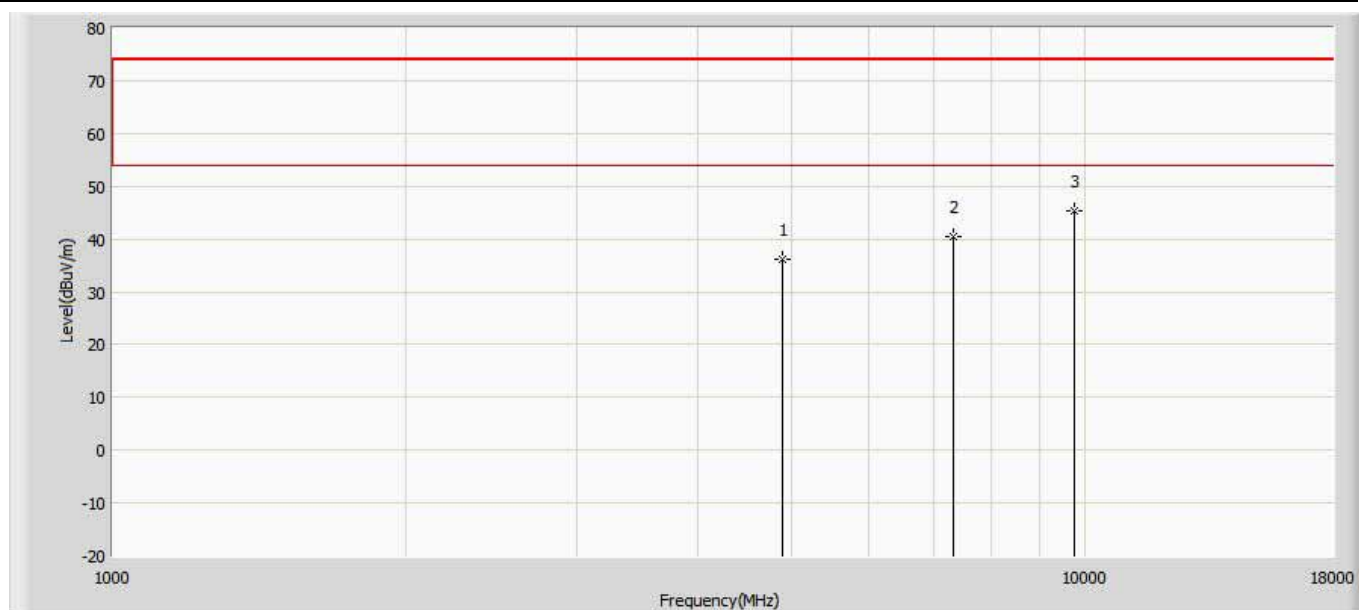
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	37.030	50.040	-36.970	74.000	-13.010	PK
2		7206.000	41.007	48.717	-32.993	74.000	-7.710	PK
3	*	9608.000	45.110	46.700	-28.890	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2;Transmit at 2441MHz by 2DH5	



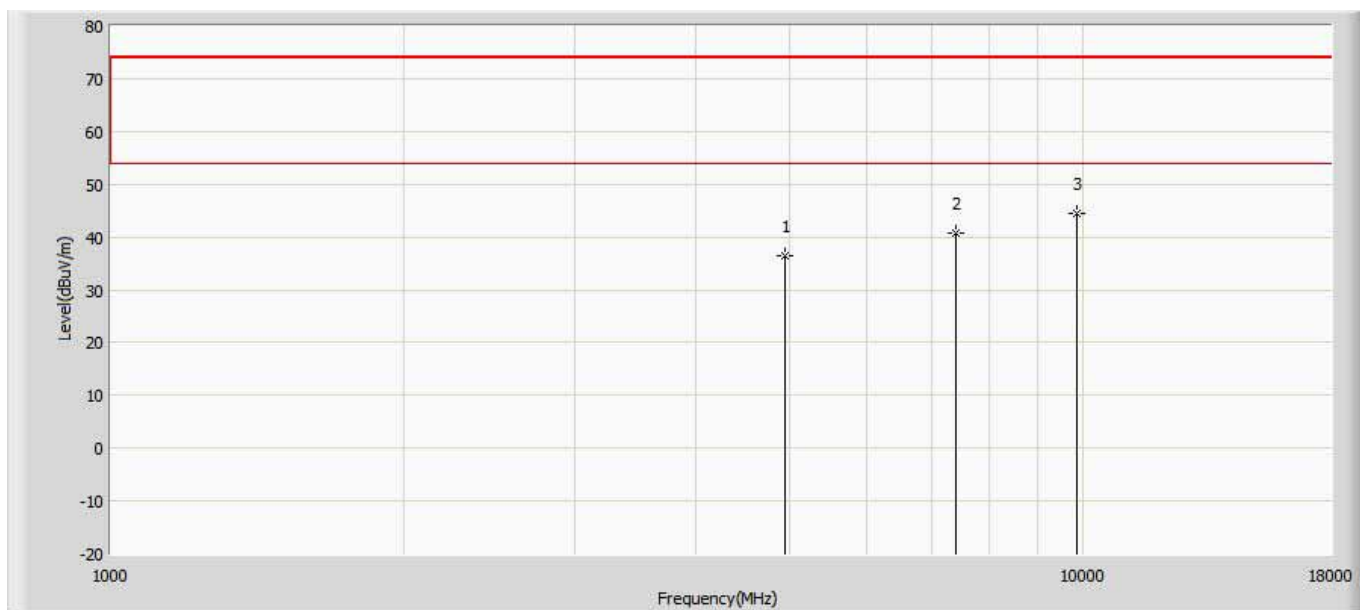
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	35.866	48.876	-38.134	74.000	-13.010	PK
2		7323.000	40.618	48.328	-33.382	74.000	-7.710	PK
3	*	9764.000	45.903	47.493	-28.097	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2;Transmit at 2441MHz by 2DH5	



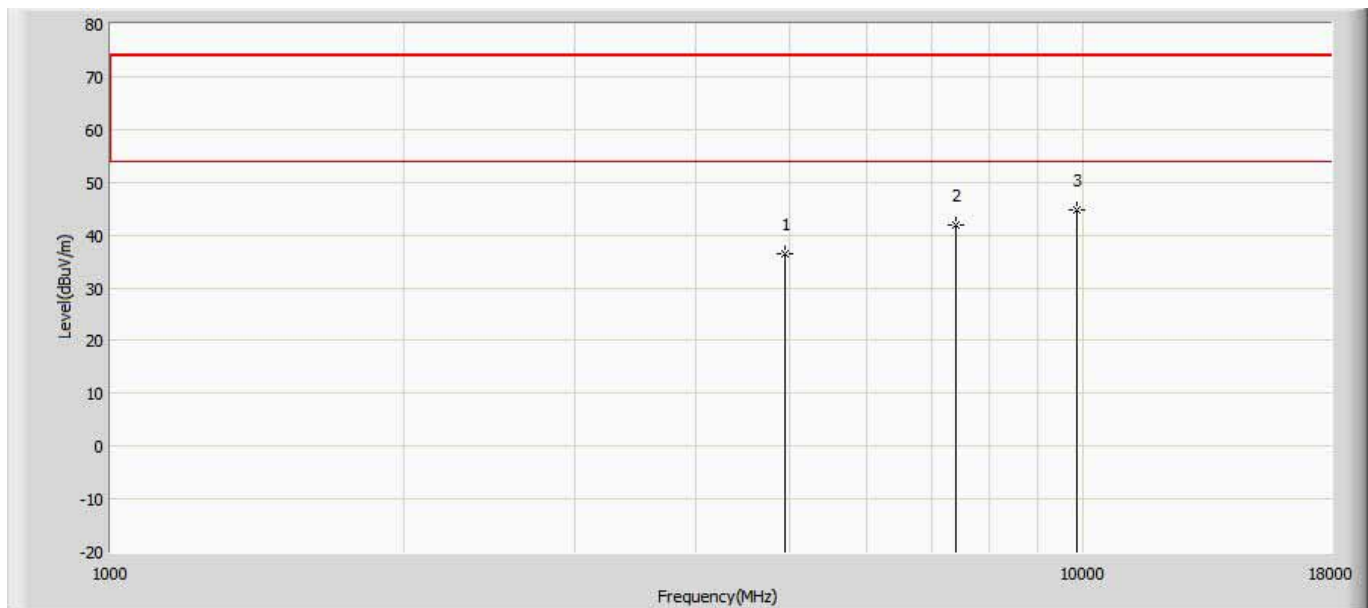
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	36.261	49.271	-37.739	74.000	-13.010	PK
2		7323.000	40.595	48.305	-33.405	74.000	-7.710	PK
3	*	9764.000	45.314	46.904	-28.686	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2;Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4936.000	36.505	49.102	-37.495	74.000	-12.597	PK
2		7404.000	40.705	47.674	-33.295	74.000	-6.969	PK
3	*	9872.000	44.405	46.321	-29.595	74.000	-1.916	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2;Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4936.000	36.584	49.181	-37.416	74.000	-12.597	PK
2		7404.000	42.000	48.969	-32.000	74.000	-6.969	PK
3	*	9872.000	44.727	46.643	-29.273	74.000	-1.916	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3;Transmit at 2402MHz by 3DH5	



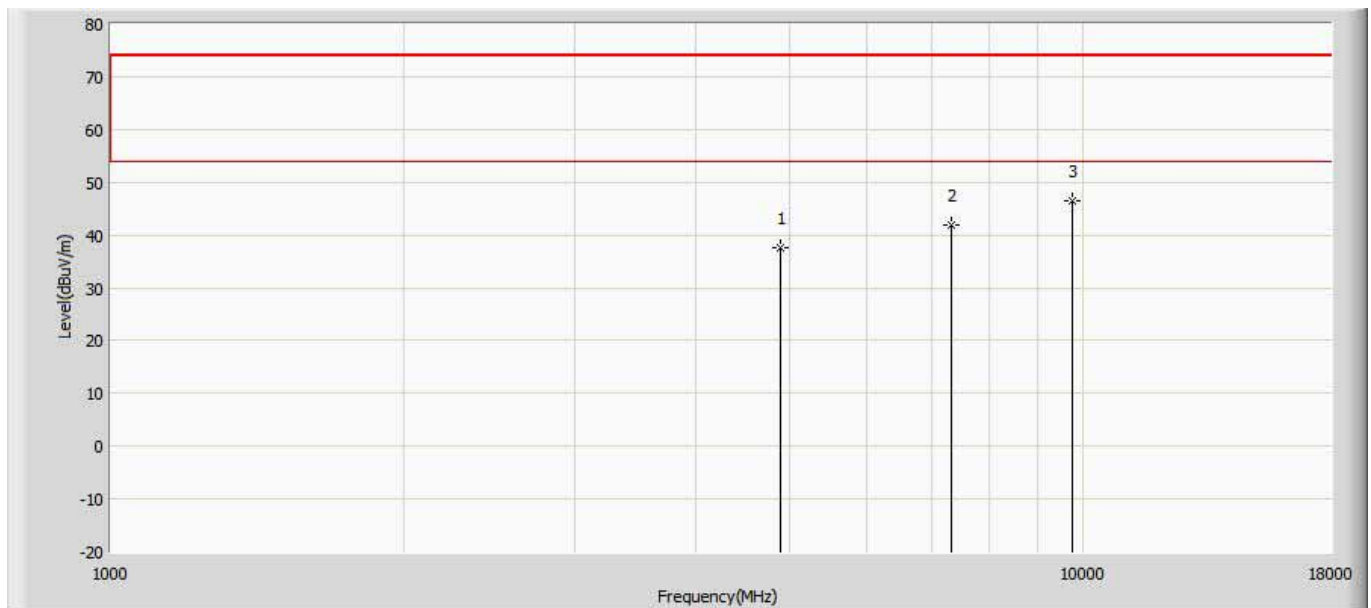
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	37.330	50.340	-36.670	74.000	-13.010	PK
2		7206.000	40.667	48.377	-33.333	74.000	-7.710	PK
3	*	9608.000	45.386	46.976	-28.614	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3;Transmit at 2402MHz by 3DH5	



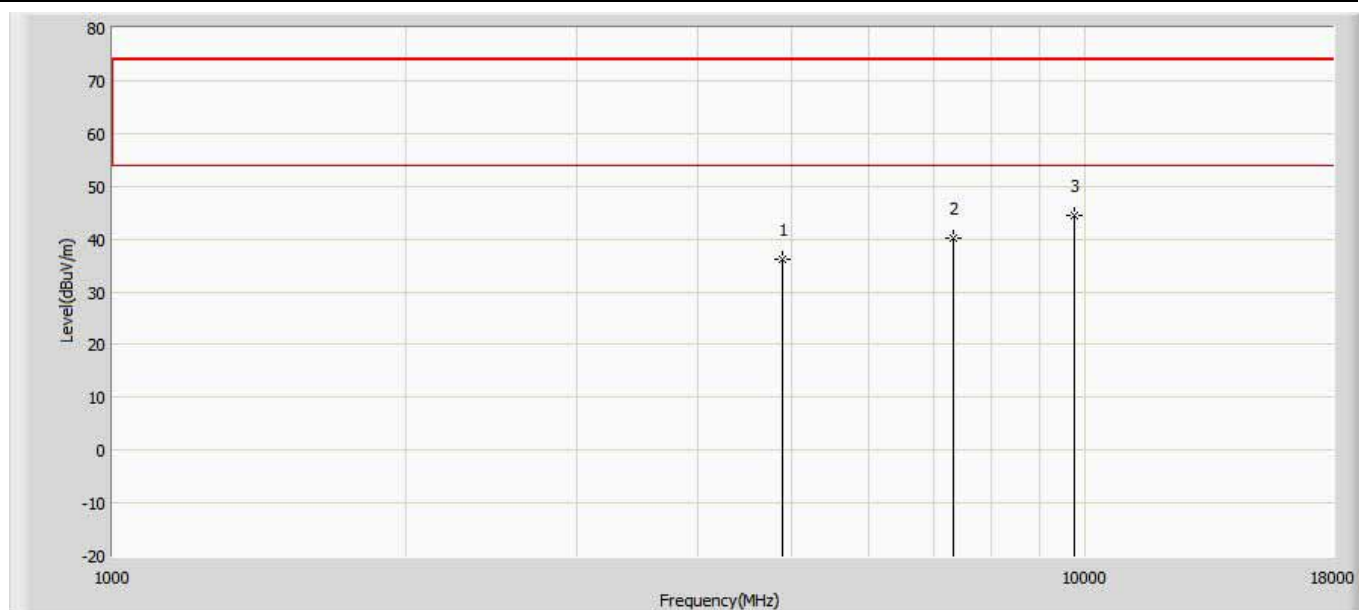
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	35.909	48.919	-38.091	74.000	-13.010	PK
2		7206.000	40.971	48.681	-33.029	74.000	-7.710	PK
3	*	9608.000	45.479	47.069	-28.521	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3;Transmit at 2441MHz by 3DH5	



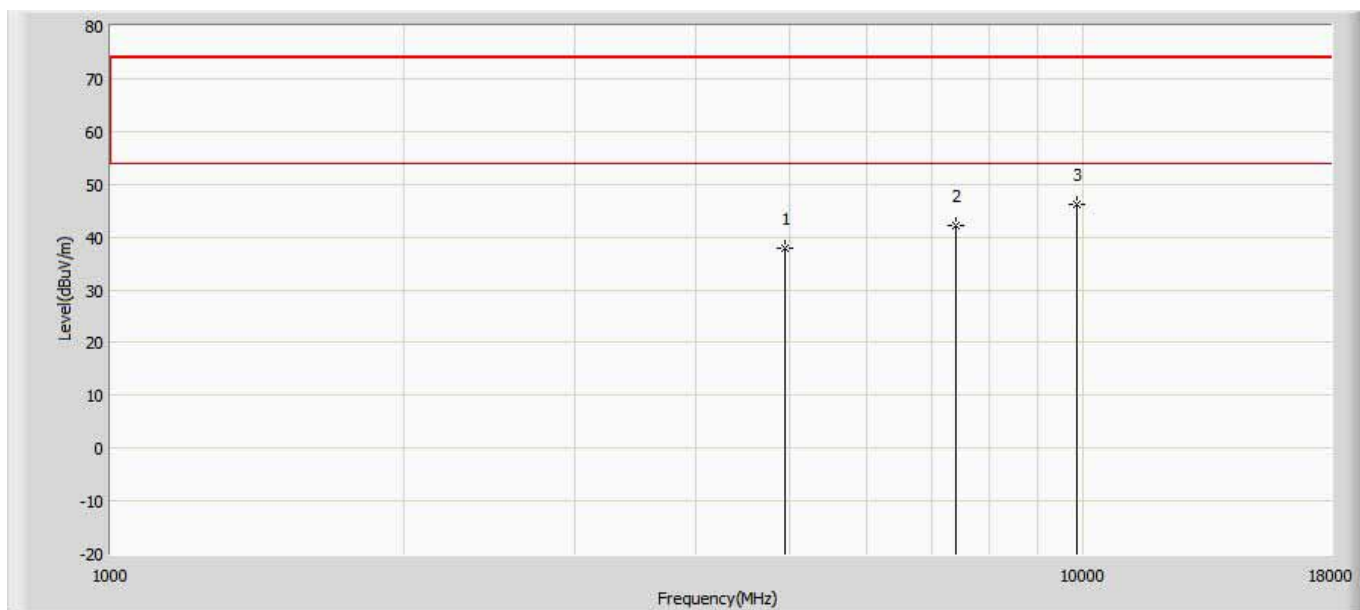
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	37.489	50.499	-36.511	74.000	-13.010	PK
2		7323.000	41.887	49.597	-32.113	74.000	-7.710	PK
3	*	9764.000	46.350	47.940	-27.650	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3;Transmit at 2441MHz by 3DH5	



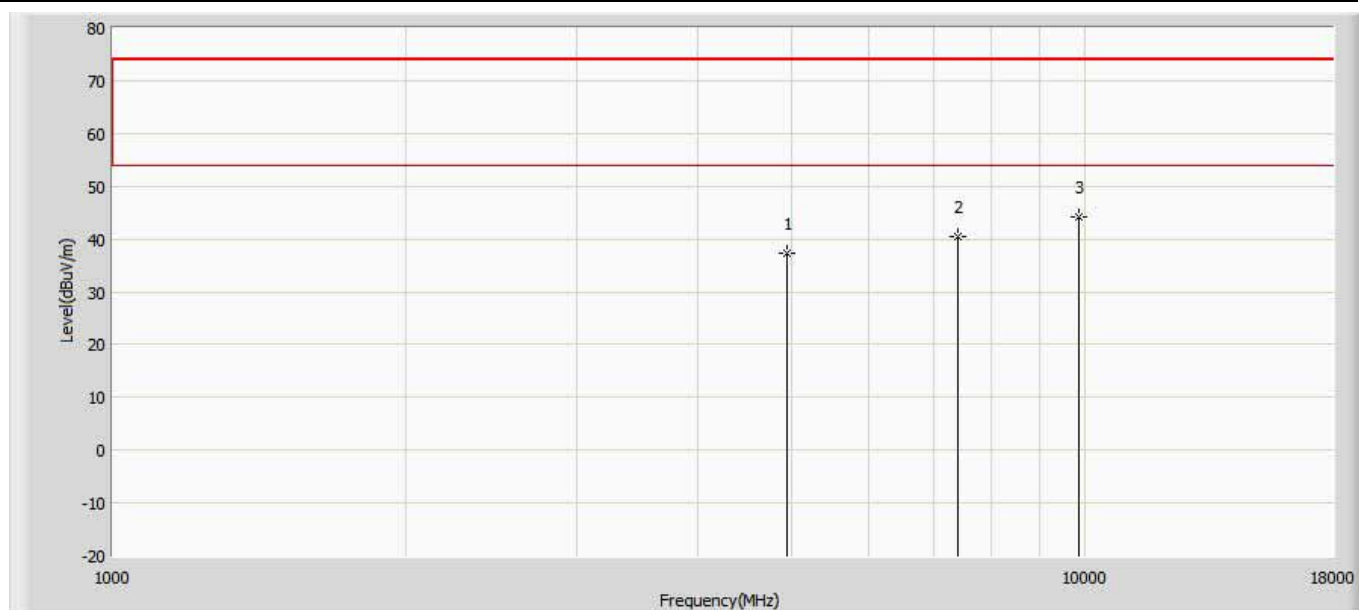
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4882.000	36.211	49.221	-37.789	74.000	-13.010	PK
2		7323.000	40.191	47.901	-33.809	74.000	-7.710	PK
3	*	9764.000	44.458	46.048	-29.542	74.000	-1.590	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3;Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4936.000	38.017	50.614	-35.983	74.000	-12.597	PK
2		7404.000	42.041	49.010	-31.959	74.000	-6.969	PK
3	*	9872.000	46.253	48.169	-27.747	74.000	-1.916	PK

Engineer: Slark	
Site: AC5	Time: 2017/09/21 - 13:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe:Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3;Transmit at 2480MHz by 3DH5	



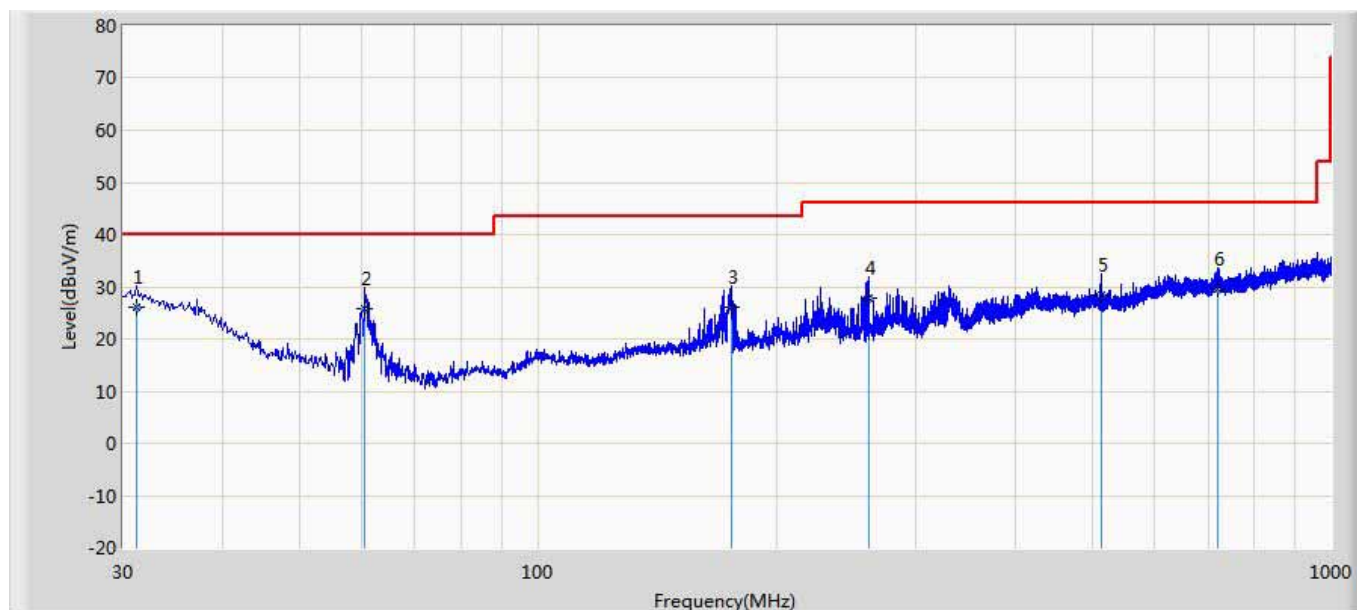
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4936.000	37.403	50.000	-36.597	74.000	-12.597	PK
2		7404.000	40.425	47.394	-33.575	74.000	-6.969	PK
3	*	9872.000	44.106	46.022	-29.894	74.000	-1.916	PK

Note:

1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~26GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
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.
4. As the radiated emission was performed, so conducted emission was not tested.

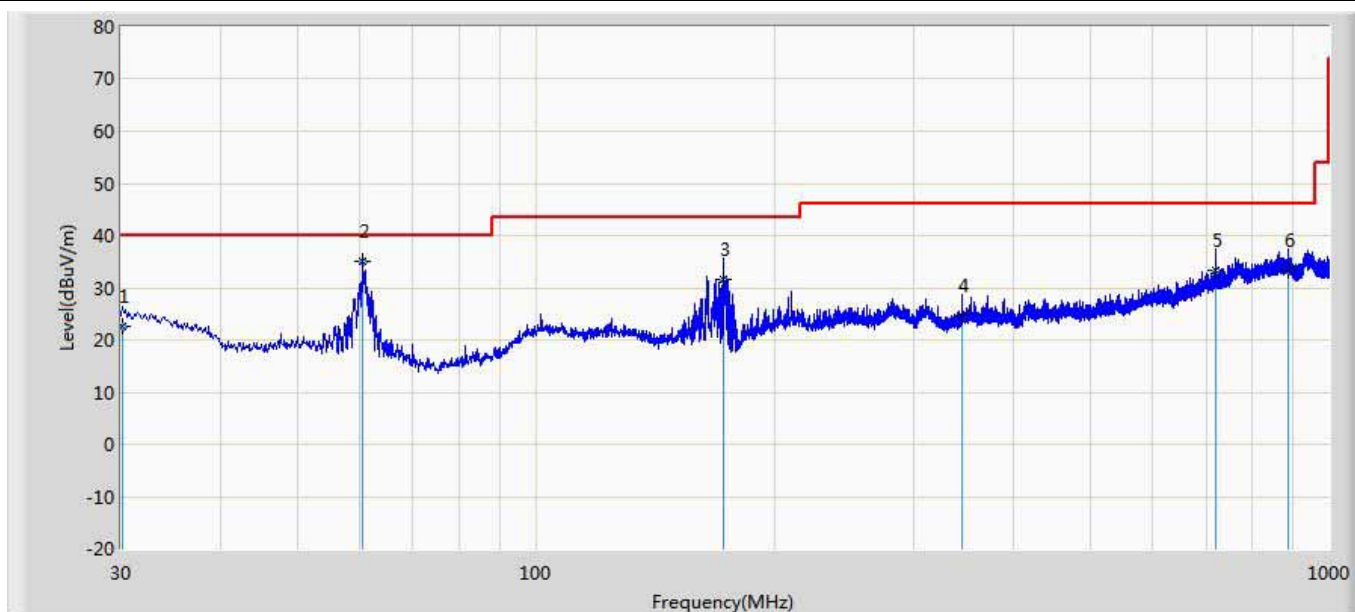
The worst case of Radiated Emission below 1GHz:

Engineer: Samuel	
Site: AC3	Time: 2017/10/31 - 16:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11b	



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	*	31.212	26.055	-1.200	-13.945	40.000	20.794	6.461	0.000	100	306	QP
2		60.555	25.853	16.500	-14.147	40.000	2.702	6.651	0.000	100	97	QP
3		175.500	26.018	8.500	-17.482	43.500	10.335	7.183	0.000	200	110	QP
4		260.981	27.684	8.800	-18.316	46.000	11.392	7.492	0.000	100	193	QP
5		513.181	28.337	1.600	-17.663	46.000	18.538	8.198	0.000	200	229	QP
6		720.034	29.643	0.100	-16.357	46.000	20.834	8.709	0.000	100	360	QP

Engineer: Samuel	
Site: AC3	Time: 2017/10/31 - 16:15
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: AC3_3m (30-1000MHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1: Transmit at 2412MHz by 802.11b	



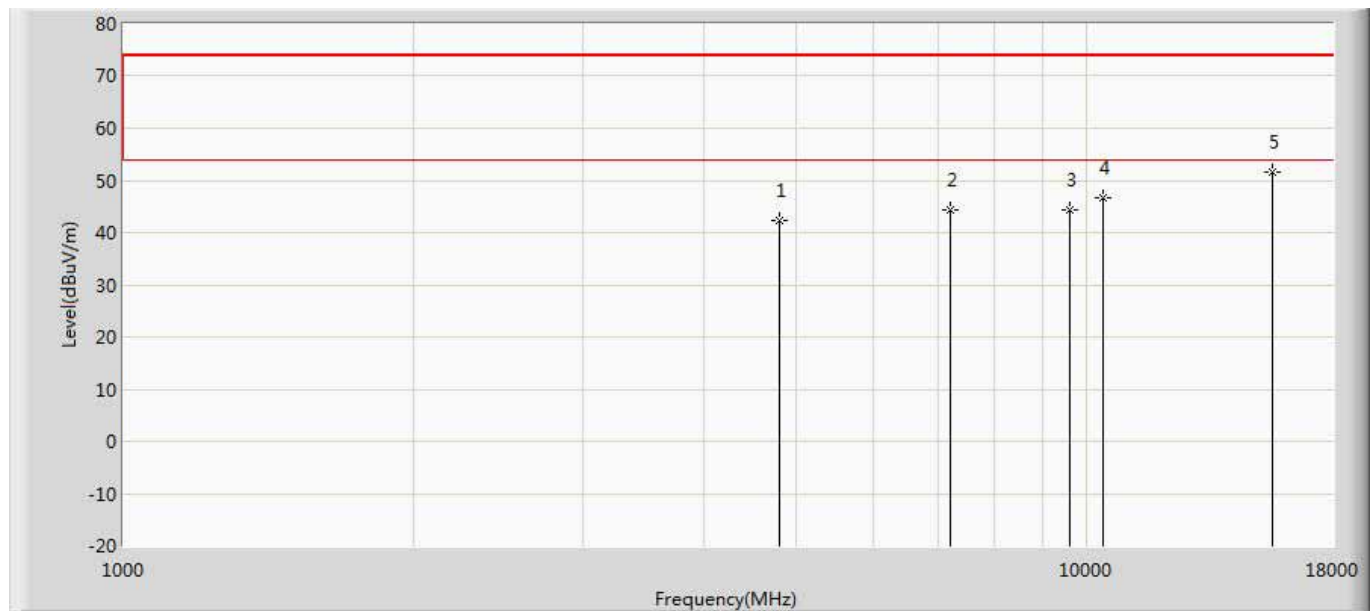
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		30.121	22.466	-1.600	-17.534	40.000	17.612	6.454	0.000	100	360	QP
2	*	60.540	34.940	19.000	-5.060	40.000	9.289	6.651	0.000	100	293	QP
3		172.711	31.623	13.800	-11.877	43.500	10.649	7.175	0.000	100	223	QP
4		345.008	24.558	0.700	-21.442	46.000	16.107	7.751	0.000	200	113	QP
5		720.034	33.293	3.100	-12.707	46.000	21.484	8.709	0.000	100	318	QP
6		889.420	33.451	0.100	-12.549	46.000	24.272	9.079	0.000	100	348	QP

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

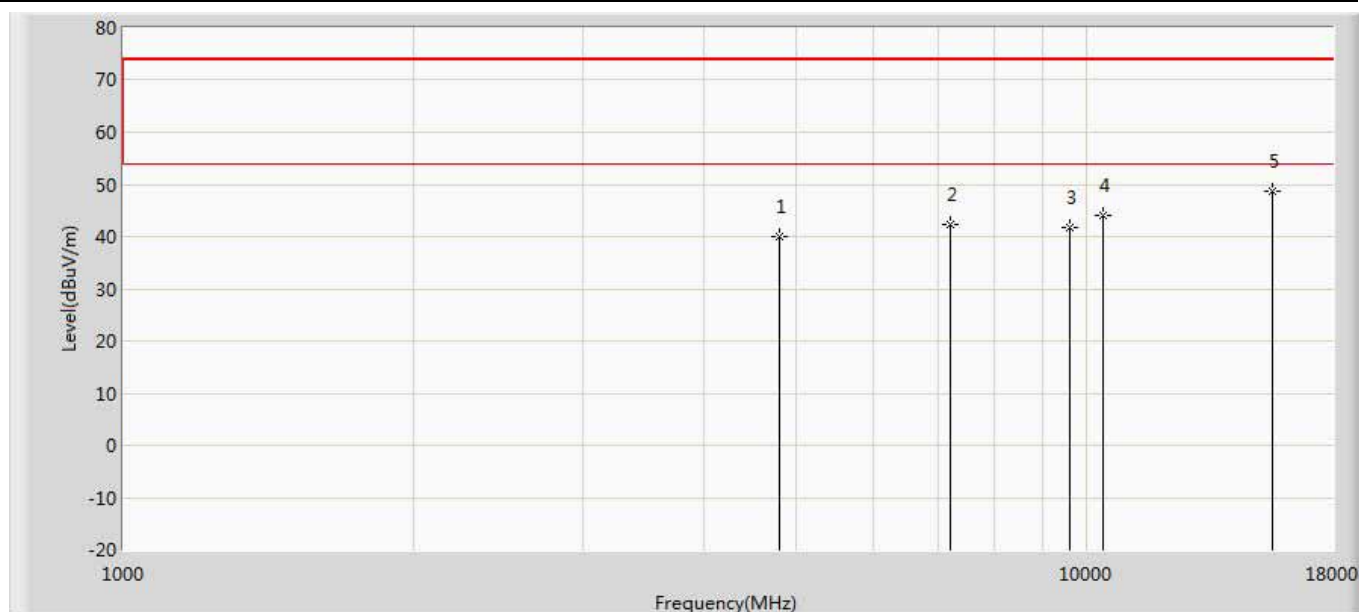
The worst case of Simultaneous Radiated Emission:

Engineer: Slark	
Site: AC5	Time: 2017/11/22 - 10:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Transmit at 5190MHz by 802.11n(40MHz) + BT	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	42.265	42.784	-31.735	74.000	-0.519	PK
2		7206.000	44.213	40.197	-29.787	74.000	4.016	PK
3		9608.000	44.370	38.552	-29.630	74.000	5.817	PK
4		10380.000	46.643	39.448	-27.357	74.000	7.195	PK
5	*	15570.000	51.612	35.656	-22.388	74.000	15.956	PK

Engineer: Slark	
Site: AC5	Time: 2017/11/22 - 10:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Transmit at 5190MHz by 802.11n(40MHz) + BT	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	39.998	40.517	-34.002	74.000	-0.519	PK
2		7206.000	42.212	38.196	-31.788	74.000	4.016	PK
3		9608.000	41.856	36.038	-32.144	74.000	5.817	PK
4		10380.000	44.180	36.985	-29.820	74.000	7.195	PK
5	*	15570.000	48.823	32.867	-25.177	74.000	15.956	PK

Note:

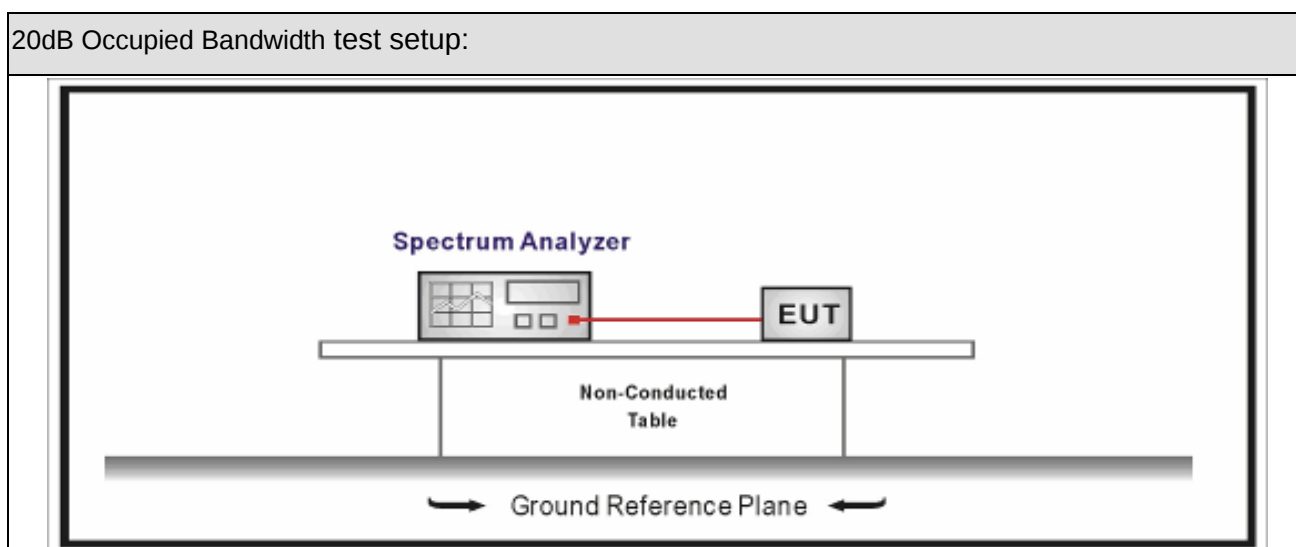
1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, 18GHz~40GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report.
3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.
4. As the radiated emission was performed, so conducted emission was not tested.

5. 20dB Bandwidth

5.1 Test Equipment

20dB Occupied Bandwidth / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

5.2 Test Setup



5.3 Limit

Carrier Frequency Separation	
☒	For frequency hopping systems operating in 2400-2483.5 MHz band, within frequency range.
☐	For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
☐	For frequency hopping systems operating in 5725-5850 MHz band, the maximum 20 dB bandwidth of the hopping channel is 1 MHz.

5.4 Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	DA 00-705	N/A	20 dB Bandwidth

5.5 Uncertainty

The measurement uncertainty is defined as ± 1 kHz

5.6 Test Result

Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.10.22	Test Engineer	: Tommy

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	924.1	880.83
39	2441	922.4	880.25
78	2480	921.0	893.64

Channel 00 (2402MHz)



Channel 39 (2441MHz)



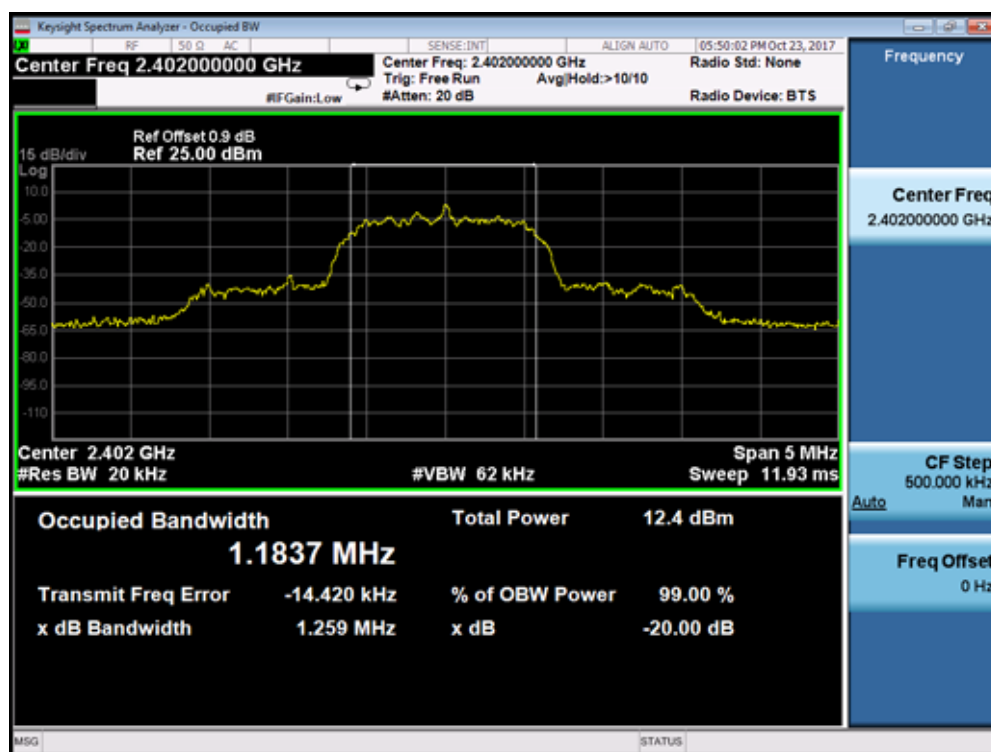
Channel 78 (2480MHz)



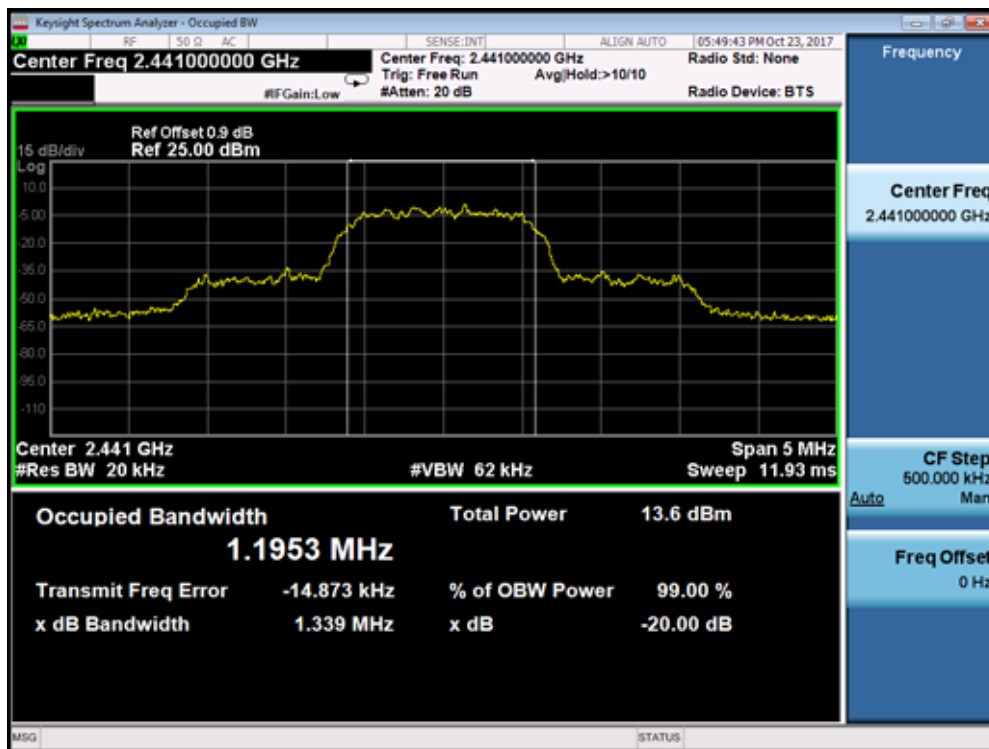
Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1259	1183.7
39	2441	1339	1195.3
78	2480	1265	1179.7

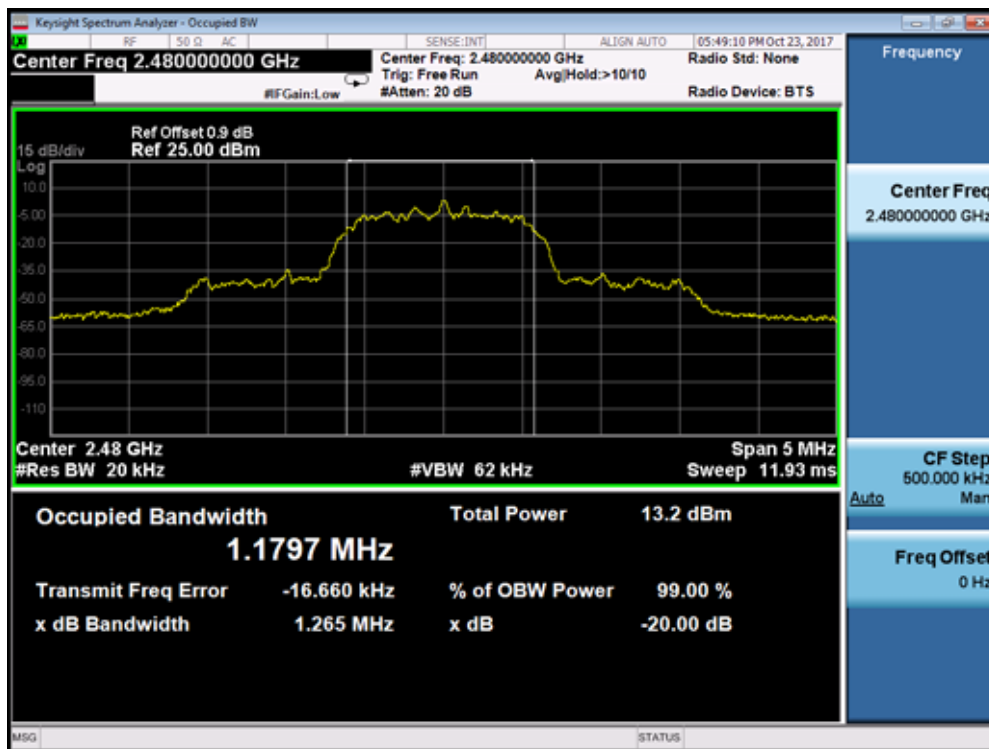
Channel 00 (2402MHz)



Channel 39 (2441MHz)



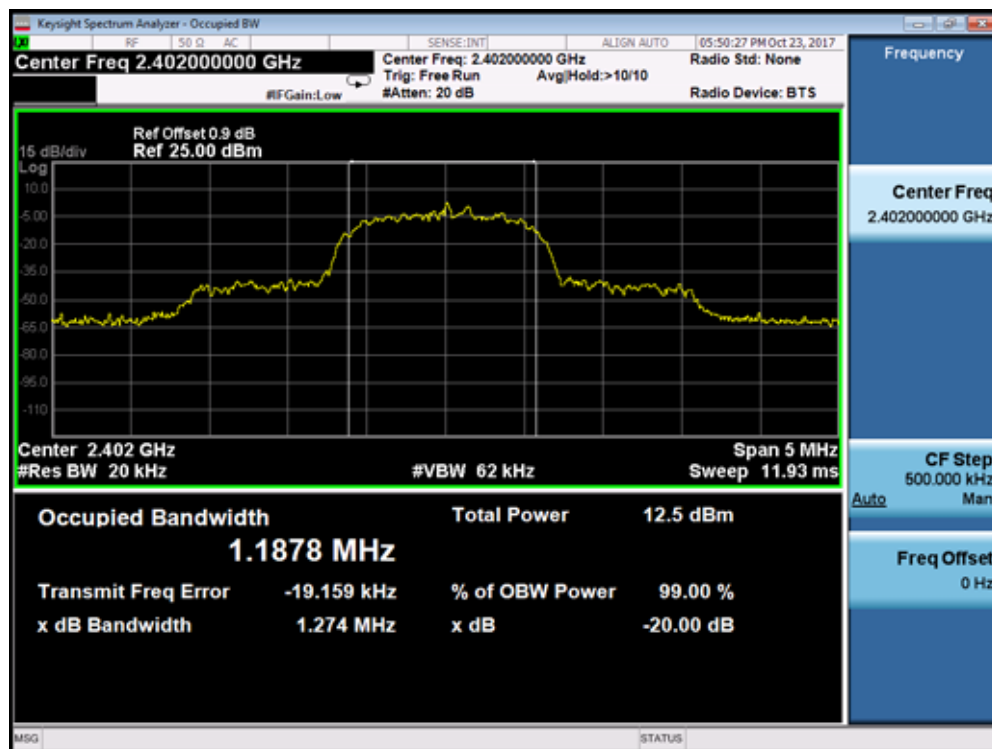
Channel 78 (2480MHz)



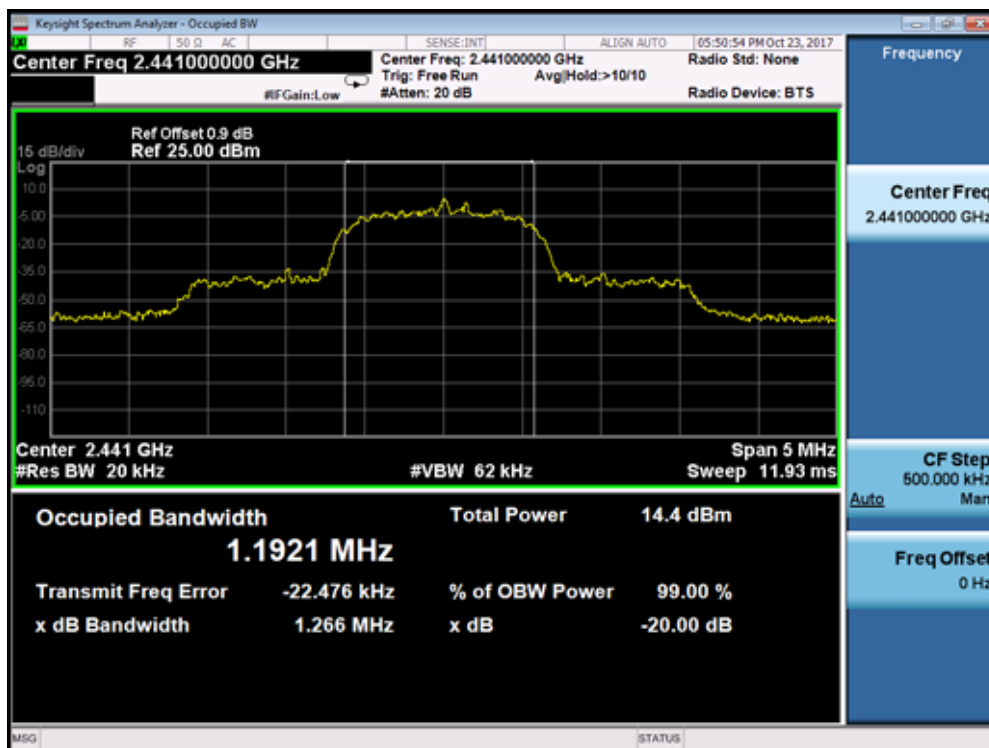
Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
00	2402	1274	1187.8
39	2441	1266	1192.1
78	2480	1275	1191.5

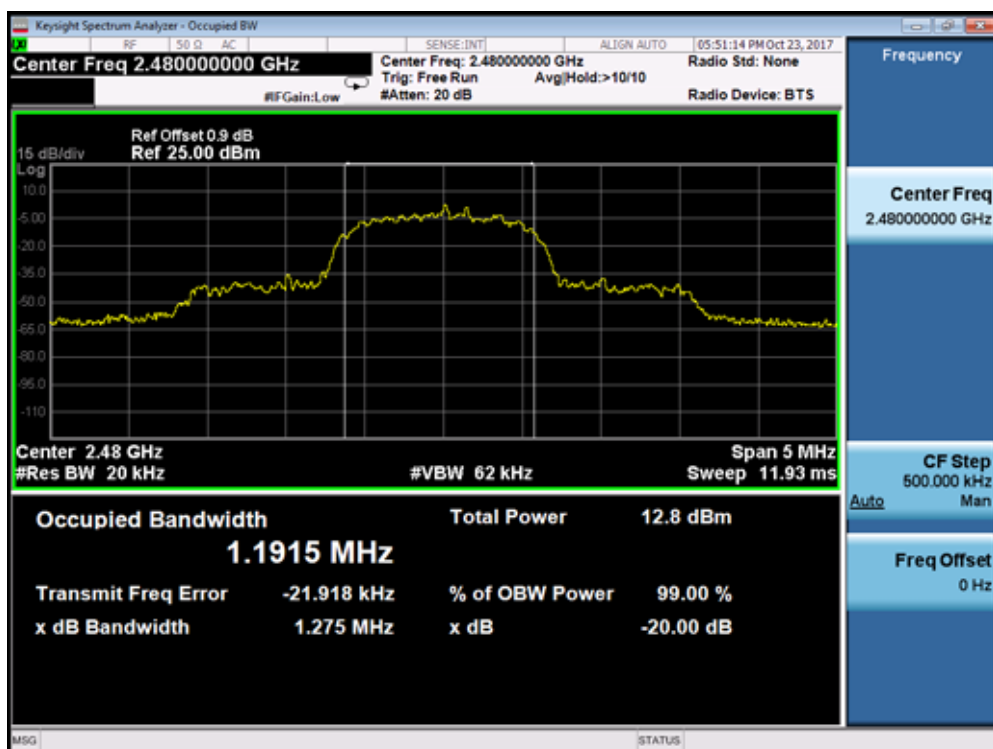
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



6. Carrier Frequency Separation

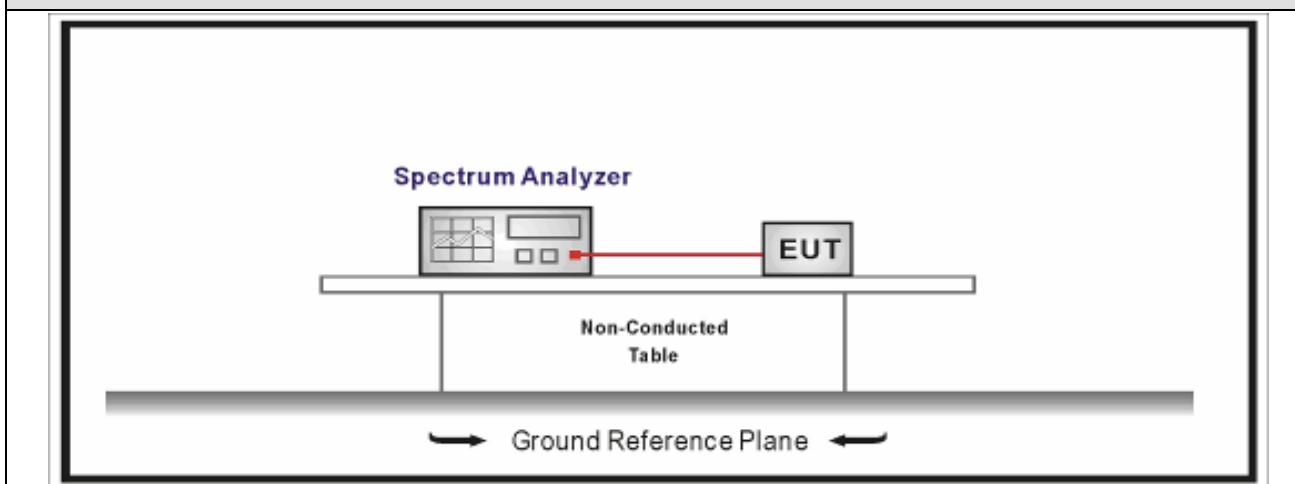
6.1. Test Equipment

Carrier Frequency Separation / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09

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

6.2. Test Setup

Carrier Frequency Separation test setup:



6.3. Limit

Carrier Frequency Separation	
☒	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel.
☐	The 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period;
☐	The 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
☐	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz.

6.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.2	Carrier frequency separation

6.5. Uncertainty

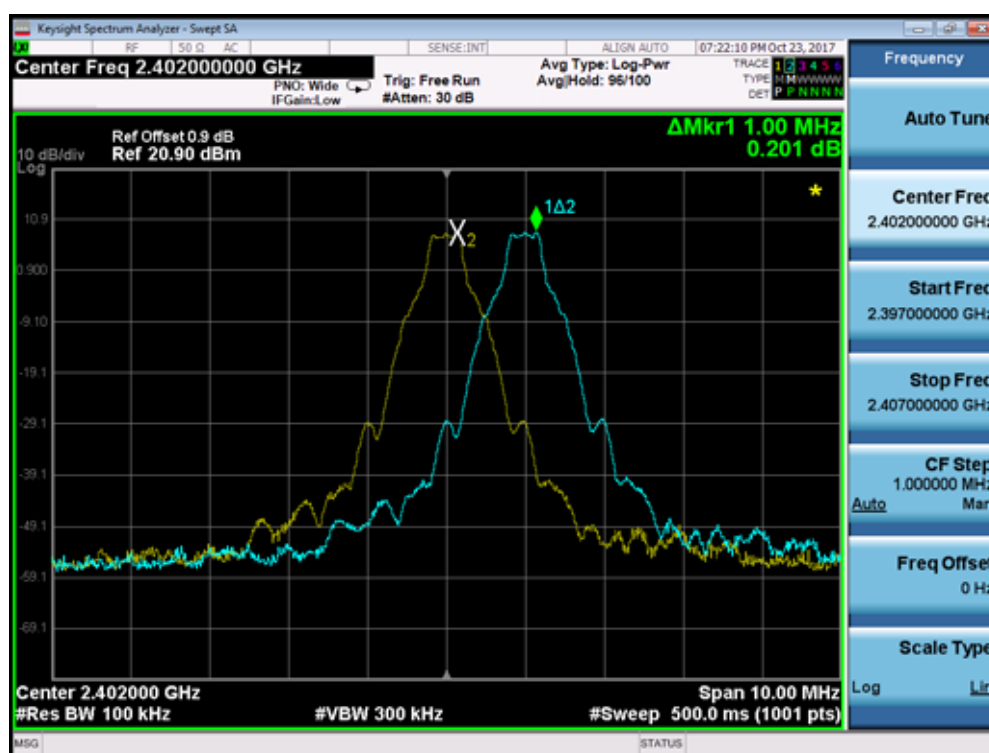
The measurement uncertainty is defined as ± 1 kHz

6.6. Test Result

Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 1	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	924.1	Pass
39	2441	1000	922.4	Pass
78	2480	1000	921.0	Pass

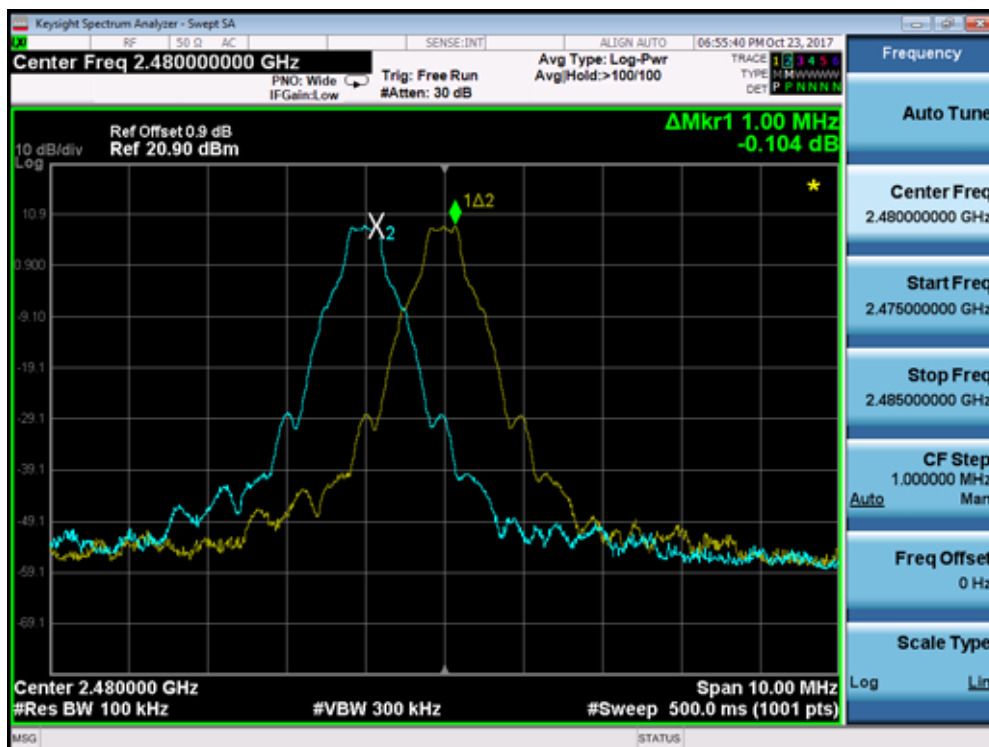
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	839.3	Pass
39	2441	1000	892.7	Pass
78	2480	1000	843.3	Pass

Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
00	2402	1000	849.3	Pass
39	2441	1000	844.0	Pass
78	2480	1000	850.0	Pass

Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)

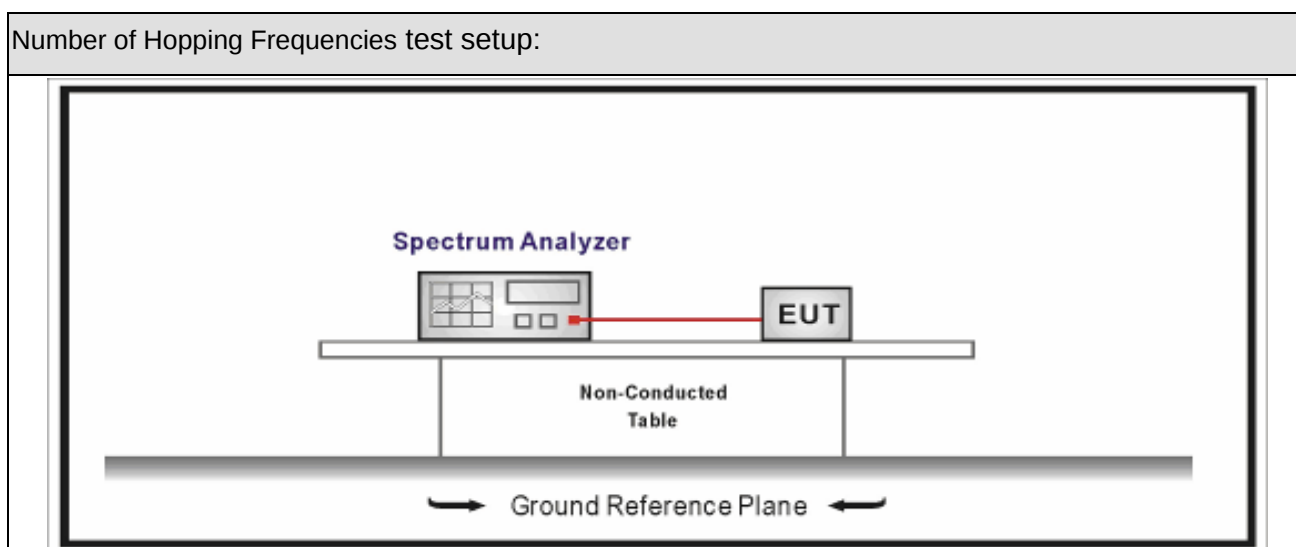


7. Number of Hopping Frequencies

7.1. Test Equipment

Number of Hopping Frequencies / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

7.2. Test Setup



7.3. Limit

Carrier Frequency Separation	
☒	For frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies.
☐	For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is less than 250 kHz, shall use at least 50 hopping frequencies.
☐	For frequency hopping systems operating in 902-928 MHz band, if the 20 dB bandwidth of the hopping channel is higher than 250 kHz, shall use at least 25 hopping frequencies.
☐	For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.

7.4. Test Procedure

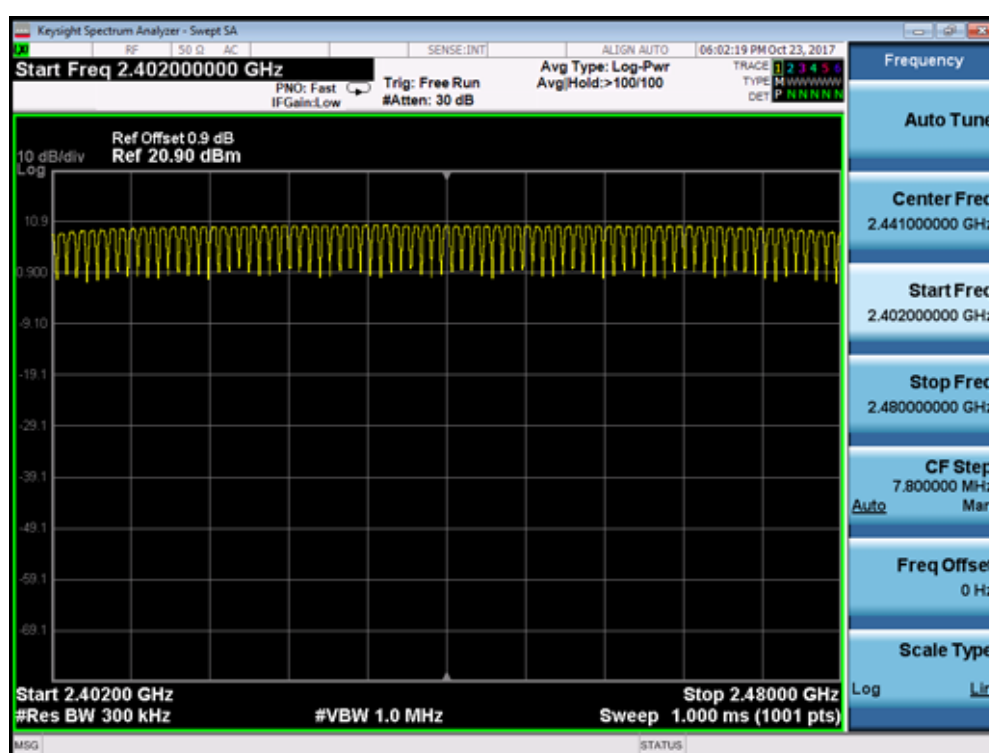
Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.3	Number of Hopping Frequencies

7.5. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

Product Name	:	Virtual Reality System	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	TR-8
Test Date	:	2017.10.23	Test Engineer	:	Tommy

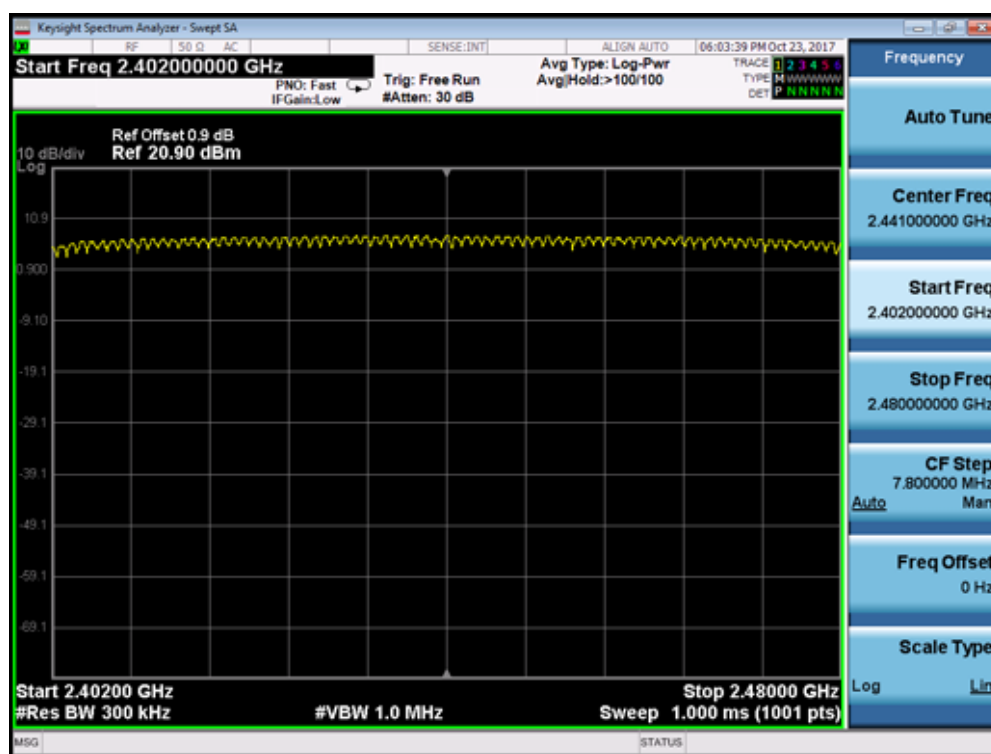
Frequency Band (MHz)	Number of Hopping Frequencies	Limit	Result
2400 - 2483.5	79	>15	Pass



Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 2	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Frequency Band (MHz)	Number of Hopping Frequencies	Limit	Result
2400 - 2483.5	79	>15	Pass

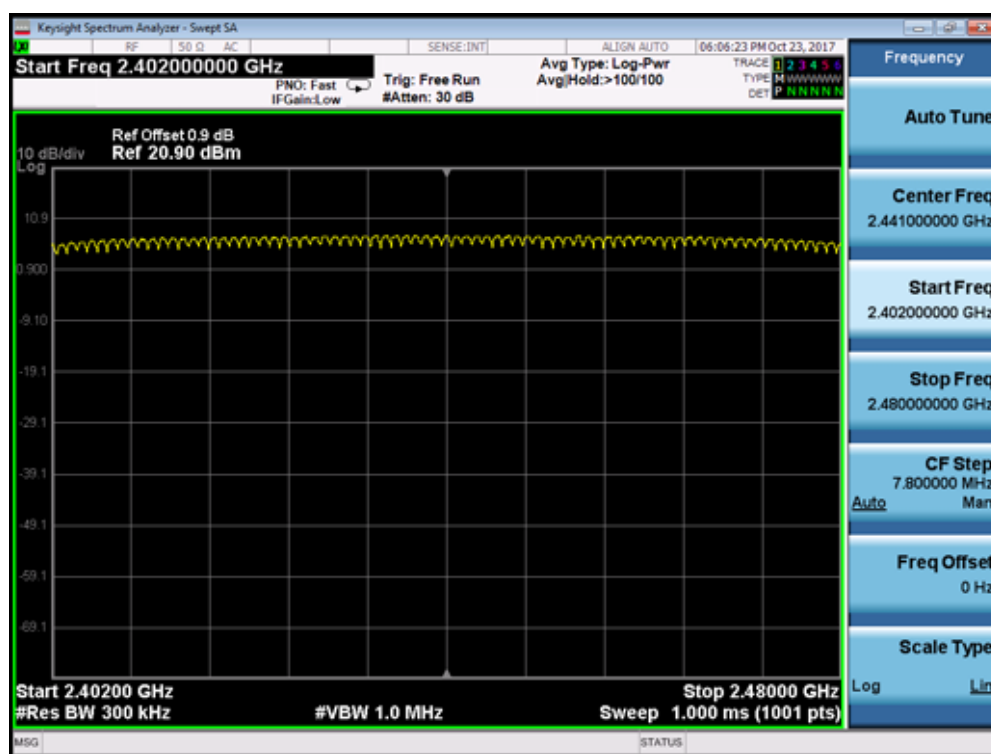
2402 - 2480 MHz



Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 3	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Frequency Band (MHz)	Number of Hopping Frequencies	Limit	Result
2400 - 2483.5	79	>15	Pass

2402 - 2480 MHz

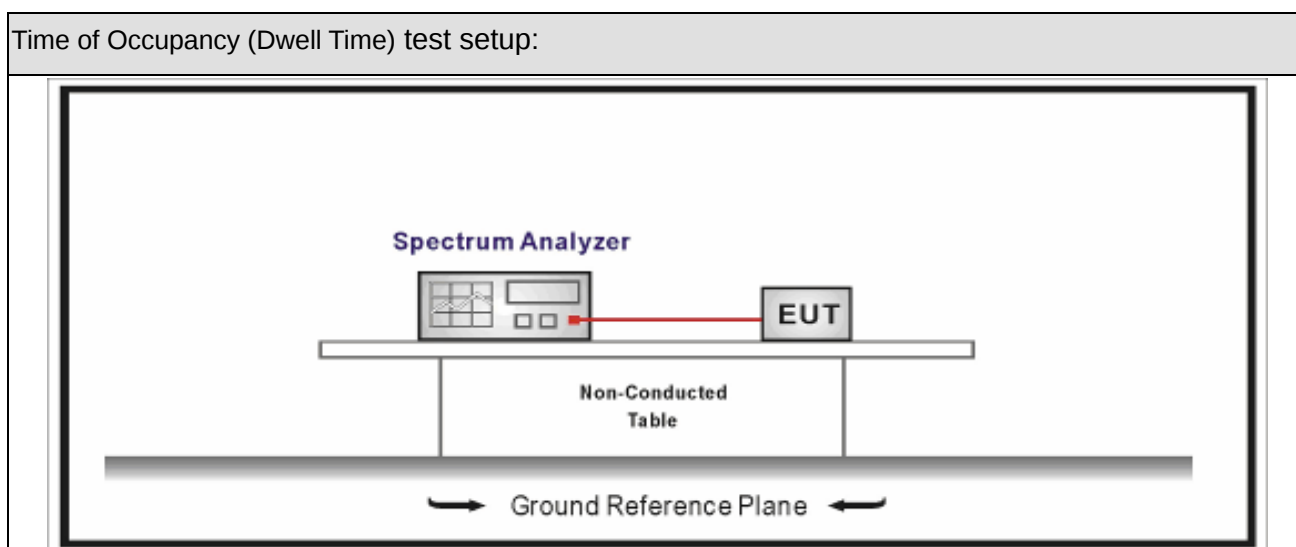


8. Time of Occupancy (Dwell Time)

8.1. Test Equipment

Time of Occupancy (Dwell Time) / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

8.2. Test Setup



8.3. Limit

Time of Occupancy (Dwell Time)	
☒	Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.
☐	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period
☐	For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping

	frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.
☐	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

8.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.4	Time of Occupancy (Dwell Time)

8.5. Uncertainty

The measurement uncertainty is defined as $\pm 0.1 \text{ us}$

8.6. Test Result

Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 1(GFSK_DH5)	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

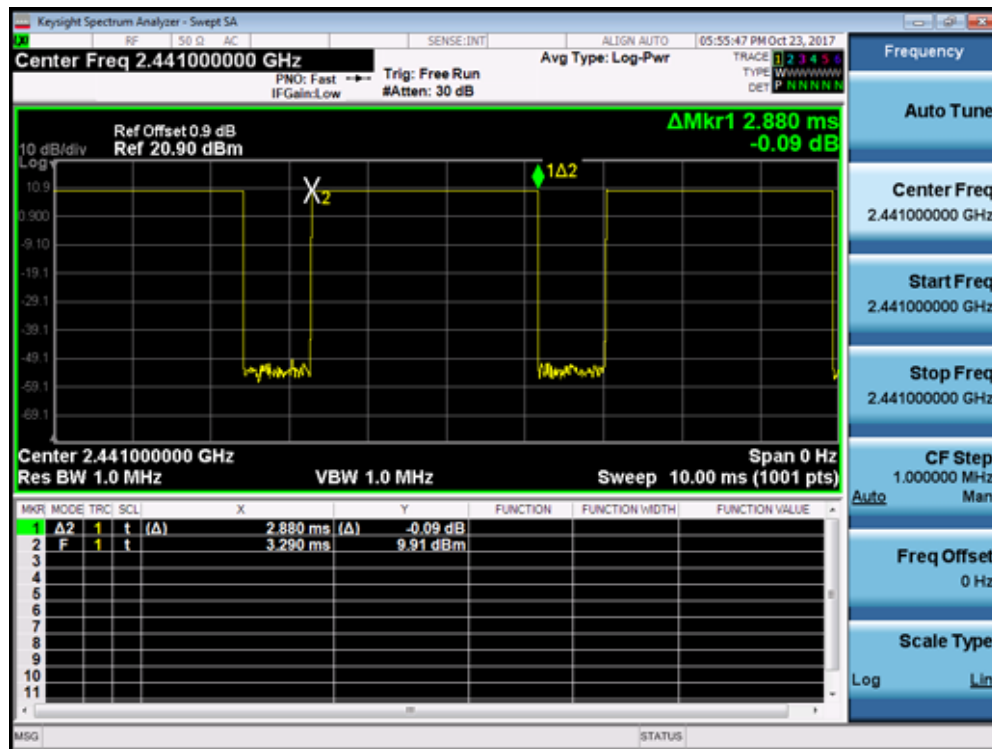
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	307.2	< 400	Pass

Note1: Test Time Period: $0.4 \times 79 = 31.6 \text{ sec}$

Note2: Time of Occupancy= pulse time $\times (1600 / (6 \times 79)) \times 31.6$

Note3: We have evaluated different packet type, shown in the report is the worst data.

Channel 39 (2441MHz)-(DH5)



Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 2(Pi/4 DQPSK_DH5)	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

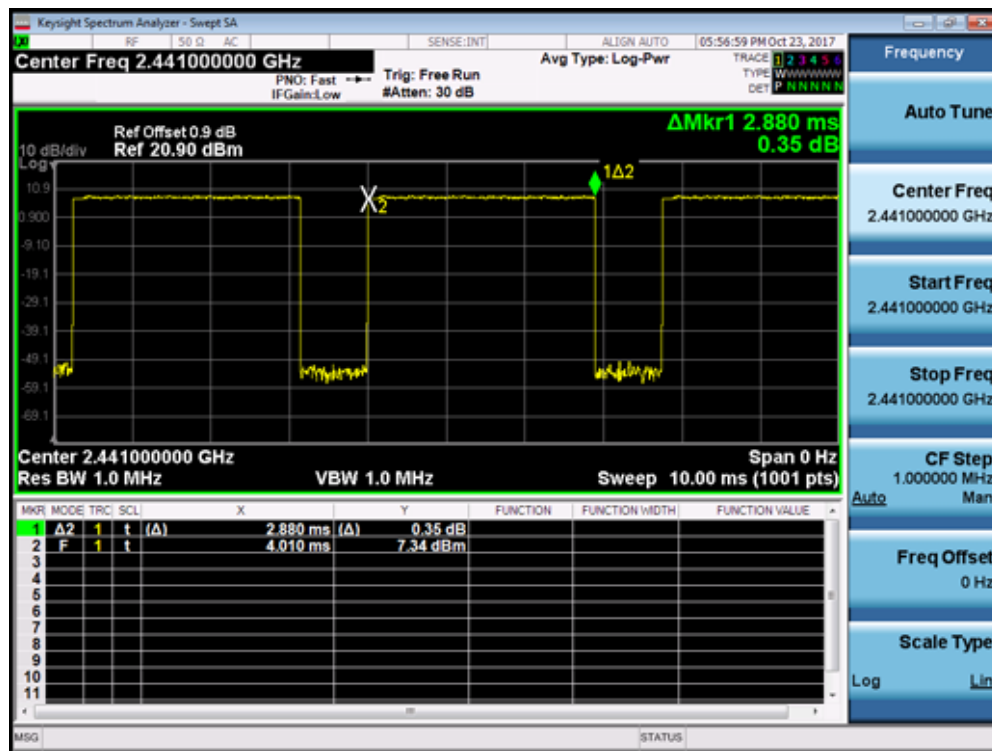
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	307.2	< 400	Pass

Note1: Test Time Period: $0.4 \times 79 = 31.6$ sec

Note2: Time of Occupancy= pulse time*(1600/(6*79))*31.6

Note3: We have evaluated different packet type, shown in the report is the worst data.

Channel 39 (2441MHz) - (2DH5)



Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 3(8DPSK_DH5)	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

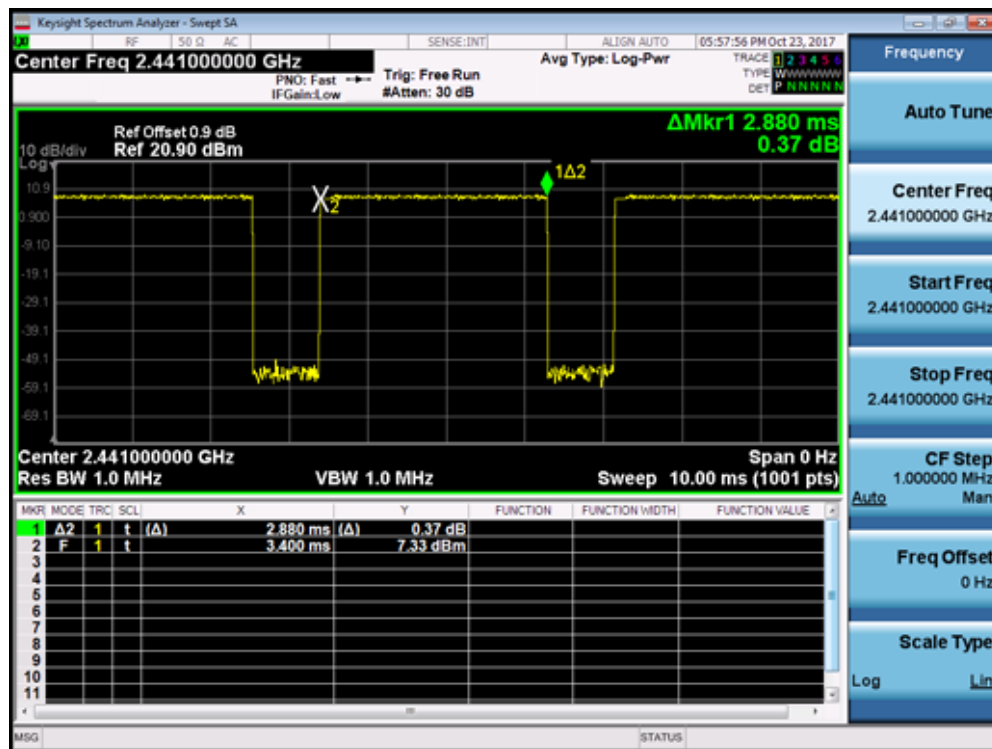
Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
39	2441	307.2	< 400	Pass

Note1: Test Time Period: $0.4 \times 79 = 31.6 \text{ sec}$

Note2: Time of Occupancy= pulse time*(1600/(6*79))*31.6

Note3: We have evaluated different packet type, shown in the report is the worst data.

Channel 39 (2441MHz) - (3DH5)

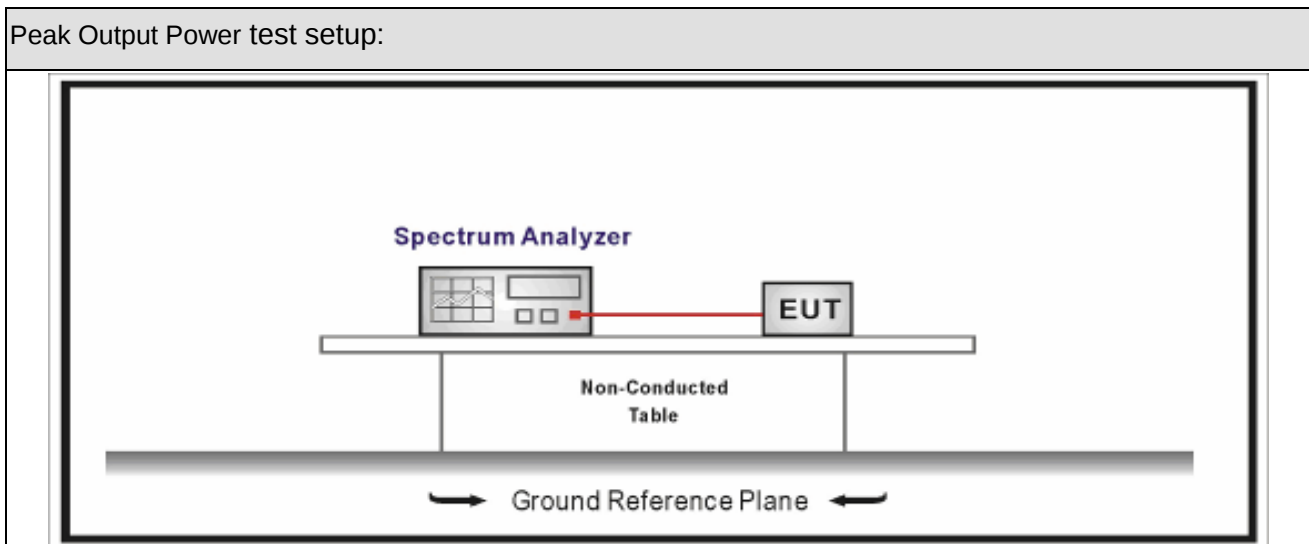


9. Peak Output Power

9.1. Test Equipment

Peak Output Power / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

9.2. Test Setup



9.3. Limit

Peak Output Power	
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
☐	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels

9.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

9.5. Uncertainty

The measurement uncertainty is defined as ± 1.0 dB

9.6. Test Result

Product Name	:	Virtual Reality System	Power	:	AC 120V/60Hz
Test Mode	:	Mode 1	Test Site	:	TR-8
Test Date	:	2017.10.23	Test Engineer	:	Tommy

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	8.26	30.00	Pass
39	2441	9.95	30.00	Pass
78	2480	8.52	30.00	Pass

Product Name	:	Virtual Reality System	Power	:	AC 120V/60Hz
Test Mode	:	Mode 2	Test Site	:	TR-8
Test Date	:	2017.10.23	Test Engineer	:	Tommy

Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	7.44	21.00	Pass
39	2441	9.18	21.00	Pass
78	2480	7.72	21.00	Pass

Product Name	:	Virtual Reality System	Power	:	AC 120V/60Hz
Test Mode	:	Mode 3	Test Site	:	TR-8
Test Date	:	2017.10.23	Test Engineer	:	Tommy

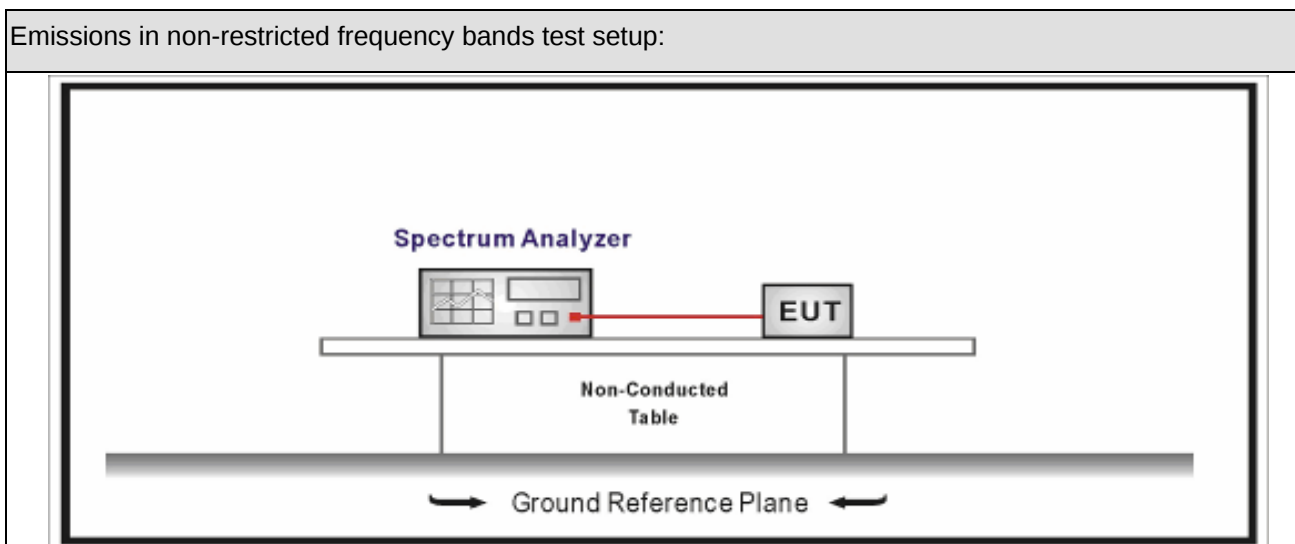
Channel No.	Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
00	2402	7.76	21.00	Pass
39	2441	9.52	21.00	Pass
78	2480	8.06	21.00	Pass

10. Emissions in non-restricted frequency bands

10.1. Test Equipment

Emissions in non-restricted frequency bands / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2017.02.04	2018.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2017.04.09	2018.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2017.04.09	2018.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2017.04.10	2018.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

10.2. Test Setup



10.3. Limit

Un-Restricted Band Emissions Limit	
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30c(Note1)
RF Output power(PK detector)	20c(Note2)
Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc). Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).	

10.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.6	Band-edge Compliance of RF Conducted Emissions

10.5. Uncertainty

The measurement uncertainty is defined as ± 1.0 dB

10.6. Test Result

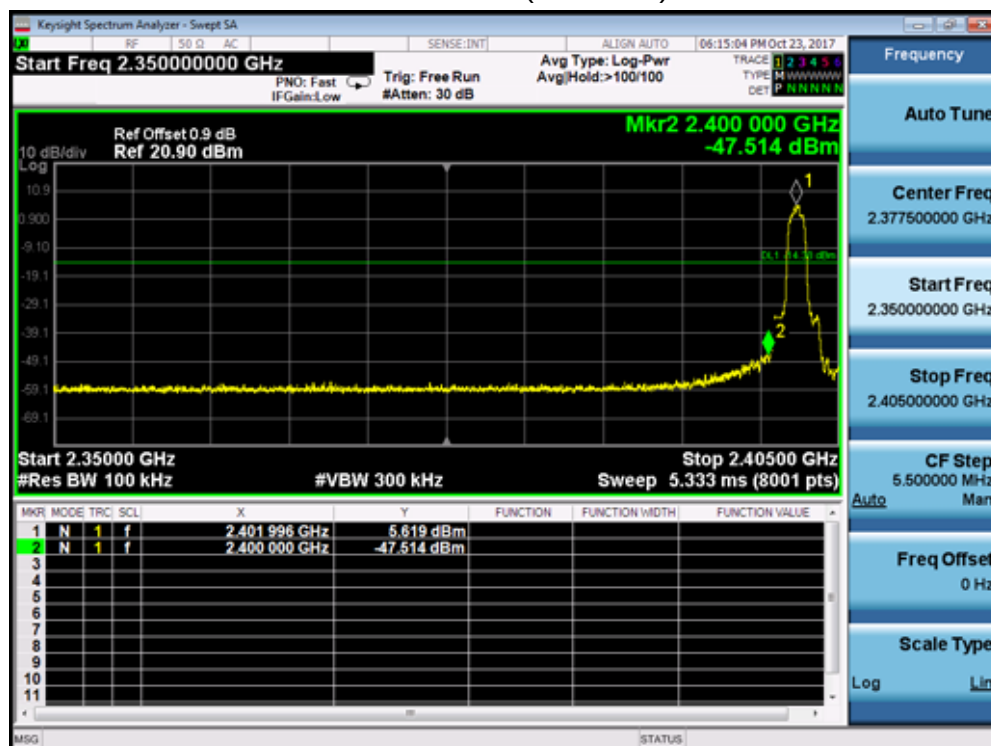
Product Name	: Virtual Reality System	Power	: AC 120V/60Hz
Test Mode	: Mode 1~4	Test Site	: TR-8
Test Date	: 2017.10.23	Test Engineer	: Tommy

Mode	Channel	Test Frequency (MHz)	In-Band PSD[a] (dBm/100kHz)	Frequency (MHz)	Out-Band PSD[b] (dBm/100kHz)	[a]-[b] (dB)	Limit (dB)	Result
1	00	2402	8.281	2400.00	-48.704	56.985	>20	Pass
1	78	2480	8.693	2500.00	-58.589	67.282	>20	Pass
2	00	2402	5.615	2400.00	-49.199	54.814	>20	Pass
2	78	2480	5.989	2500.00	-58.641	64.630	>20	Pass
3	00	2402	5.619	2400.00	-47.514	53.133	>20	Pass
3	78	2480	6.006	2500.00	-56.936	62.942	>20	Pass
4	00~78	00~78	6.043	2400.00	-47.642	53.685	>20	Pass

Note1: The worst case of Emissions in non-restricted frequency bands as below:

2: Mode 1-3, The In-Band PSD is the highest PSD of All channels.

Mode 3 CH00(2402MHz)

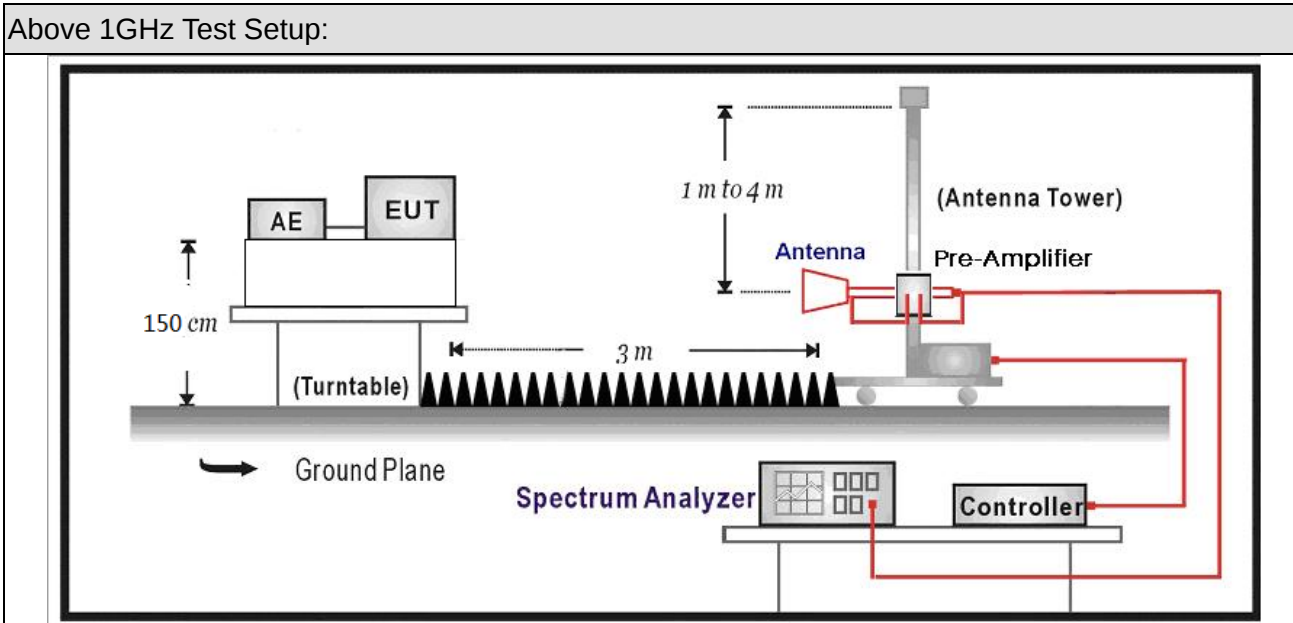


11. Radiated Emission Band Edge

11.1. Test Equipment

Radiated Emission(Above 1GHz) / AC-5					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
EMI Receiver	Agilent	N9038A	MY51210196	2017.07.16	2018.07.15
Pre-Amplifier	Miteq	NSP1800-25	1364185	2017.05.03	2018.05.02
DRG Horn Antenna	ETS-Lindgren	3117	00167055	2017.07.12	2018.07.11
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2017.09.18	2018.09.17
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2017.02.28	2018.02.27
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2017.02.28	2018.02.27
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2017.01.05	2018.01.04

11.2. Test Setup



11.3. Limit

Band edge Limit				
Frequency bands (MHz)	Detector	Limit (dB μ 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.

11.4. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	DA 00-705	N/A	duty cycle correction factor
☒	ANSI C63.10	6.10	Band-edge testing
☒	ANSI C63.10	6.10.5	Restricted-band band-edge measurements
☐	ANSI C63.10	6.10.6	Marker-delta method
☐	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

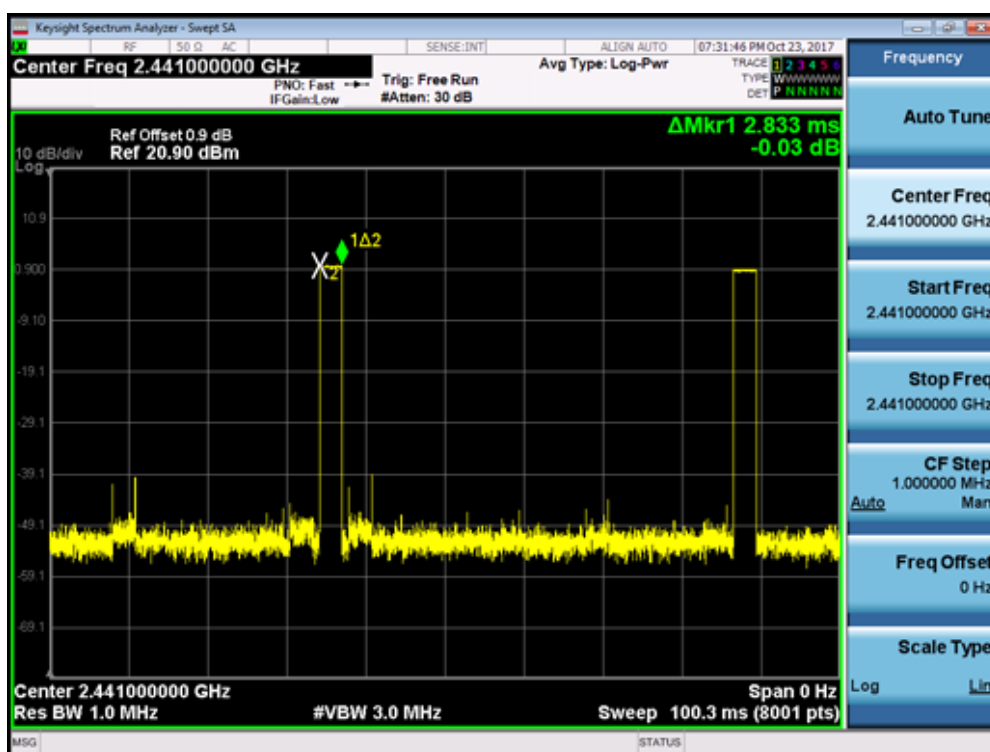
11.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
below 1G is defined as ± 3.8 dB

11.6. Duty Factor

Test Mode	Pulse Time (ms)	Pulse Number	Accumulated Transmit Time (ms)	Duty Factor (dB)
Mode 4	2.8	2	5.6	-24.036

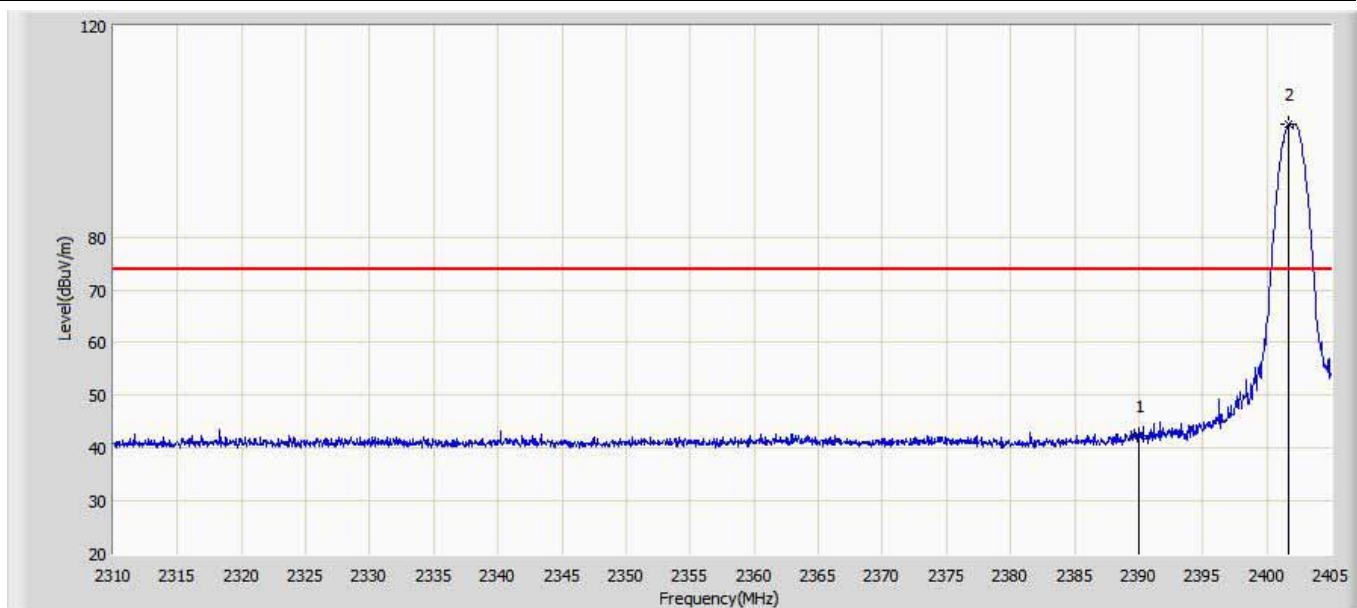
Pulse Number



Note: Duty Factor = $20\log(\text{Accumulated Transmit Time} / 100\text{ms})$

11.7. Test Result

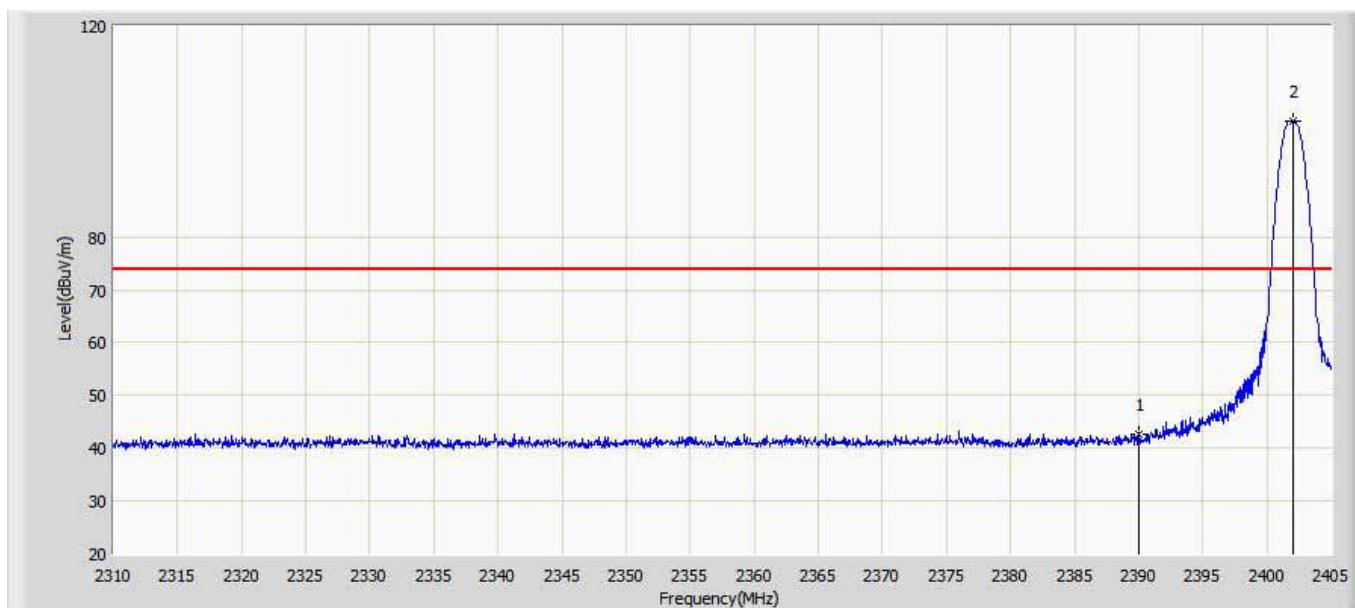
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 18:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.470	13.422	-31.530	74.000	29.048	PK
2	*	2401.675	101.288	72.324	N/A	N/A	28.964	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	42.470	18.434	-35.566	54.000	-24.036	AV
2	*	2401.675	101.288	77.252	N/A	N/A	-24.036	AV

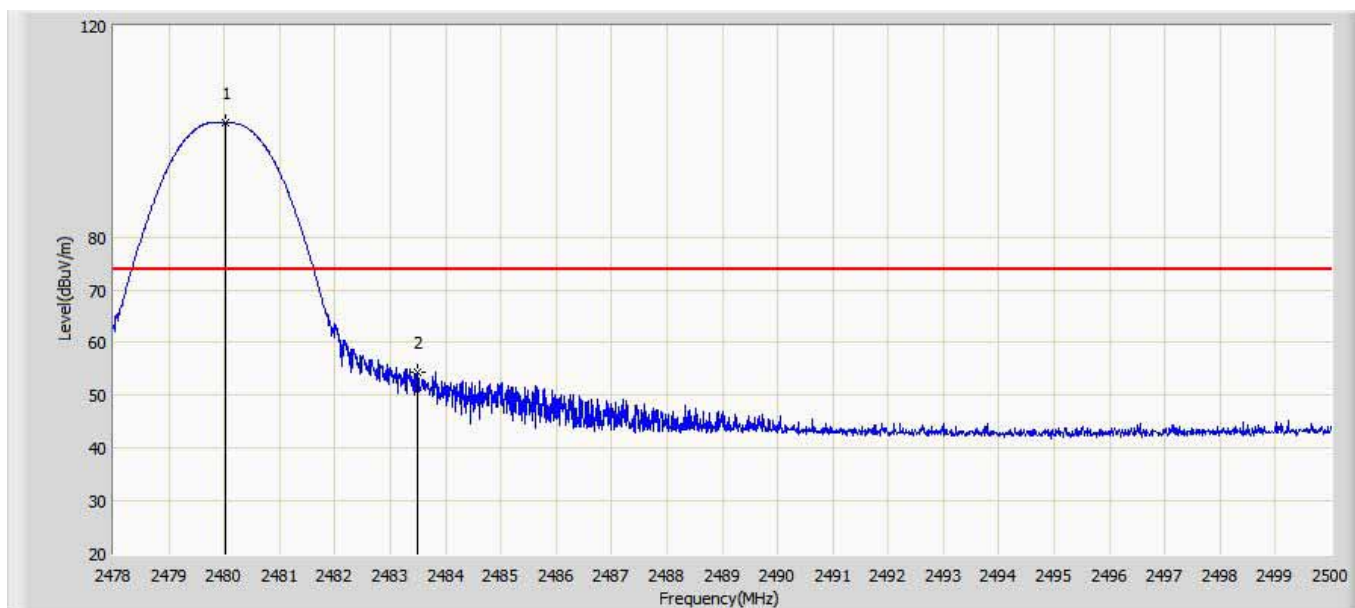
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 19:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.500	13.452	-31.500	74.000	29.048	PK
2	*	2402.103	102.064	73.105	N/A	N/A	28.959	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	42.500	18.464	-35.536	54.000	-24.036	AV
2	*	2402.103	102.064	78.028	N/A	N/A	-24.036	AV

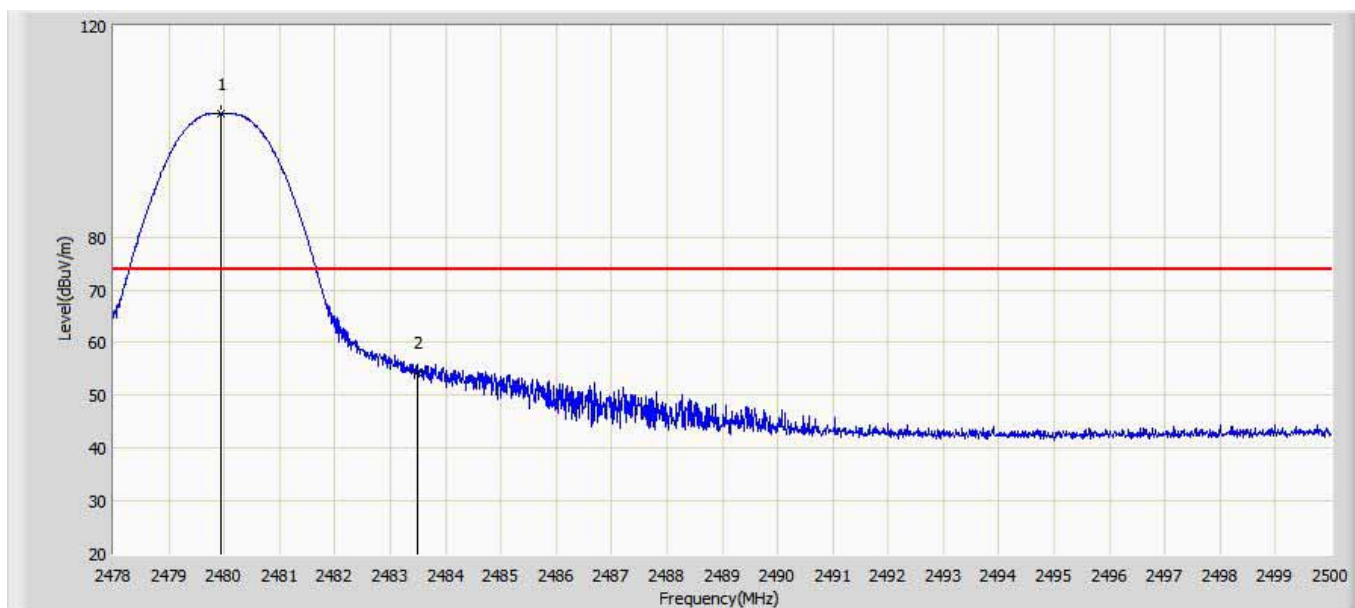
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 19:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.024	101.609	71.093	N/A	N/A	30.516	PK
2		2483.500	54.456	23.971	-19.544	74.000	30.484	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1	*	2480.024	101.609	77.573	N/A	N/A	-24.036	AV
2		2483.500	54.456	30.420	-23.580	54.000	-24.036	AV

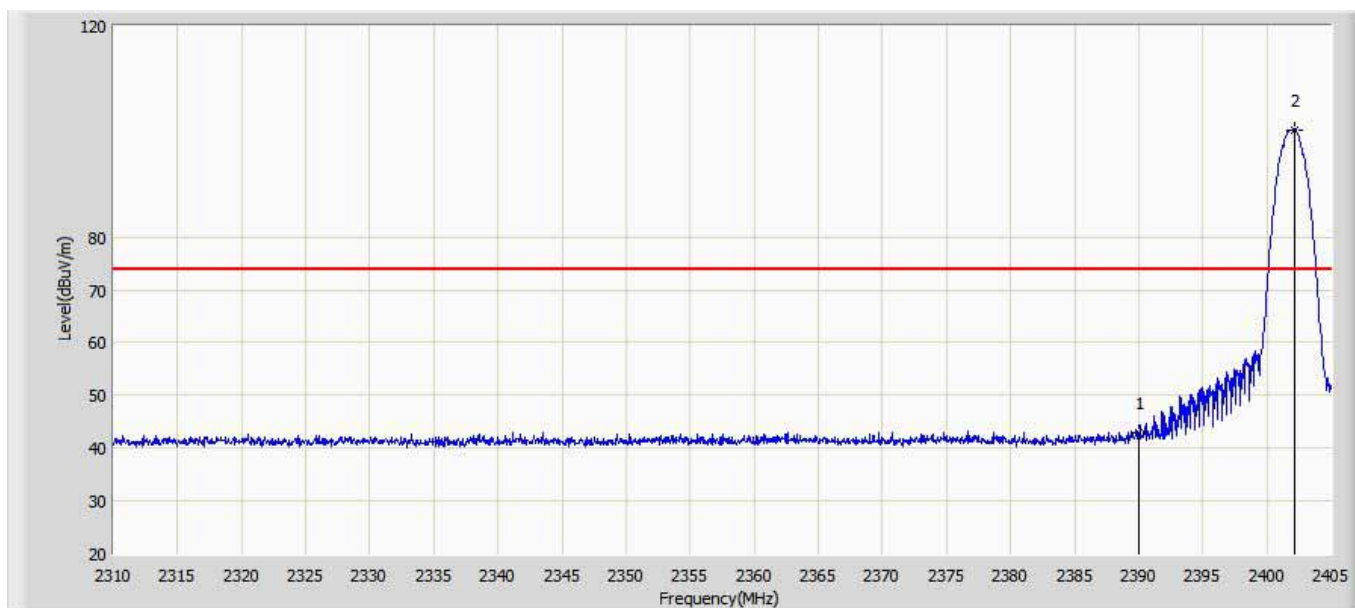
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 19:19
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 1:Transmit at 2480MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.947	103.426	72.910	N/A	N/A	30.516	PK
2		2483.500	54.465	23.980	-19.535	74.000	30.484	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1	*	2479.947	103.426	79.390	N/A	N/A	-24.036	AV
2		2483.500	54.465	30.429	-23.571	54.000	-24.036	AV

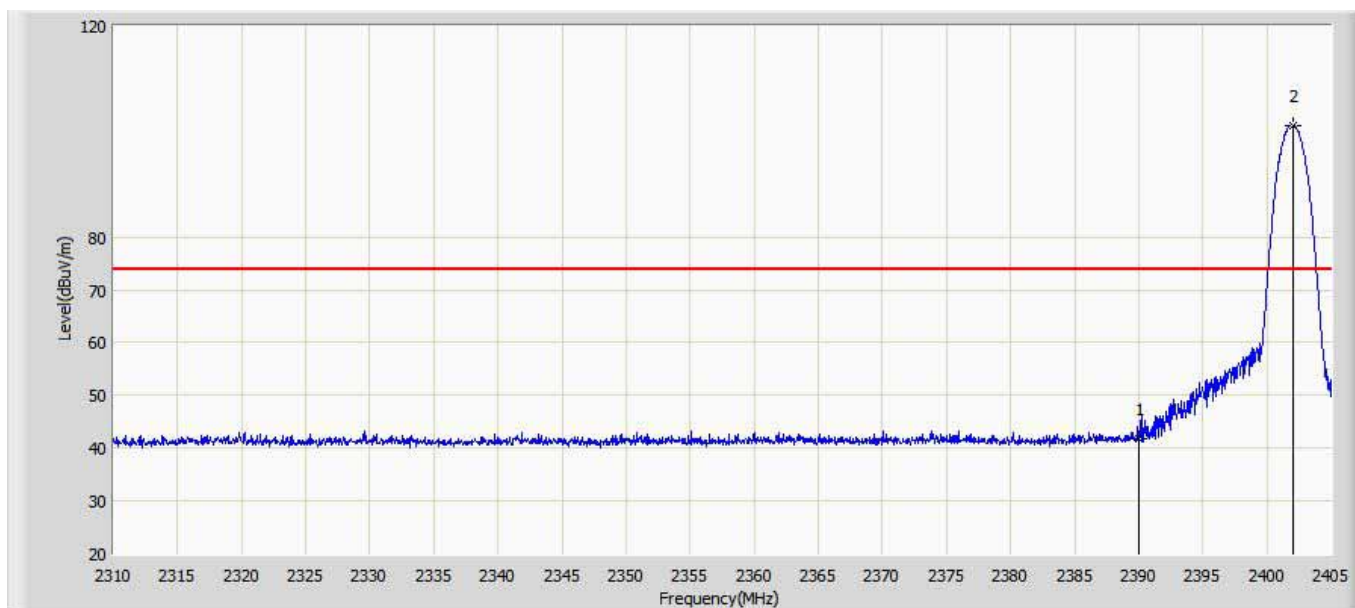
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 19:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.997	13.949	-31.003	74.000	29.048	PK
2	*	2402.150	100.330	71.371	N/A	N/A	28.959	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	42.997	18.961	-35.039	54.000	-24.036	AV
2	*	2402.150	100.330	76.294	N/A	N/A	-24.036	AV

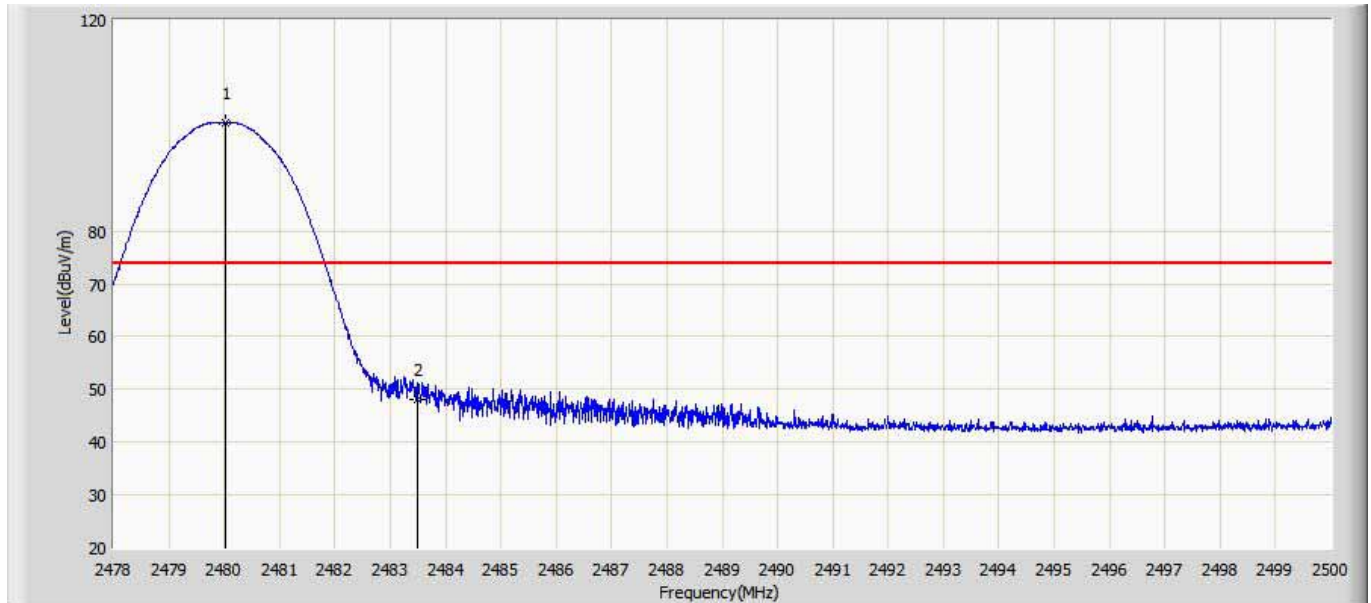
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 19:31
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2402MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	41.719	12.671	-32.281	74.000	29.048	PK
2	*	2402.103	101.110	72.151	N/A	N/A	28.959	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	42.997	18.961	-35.039	54.000	-24.036	AV
2	*	2402.150	100.330	76.294	N/A	N/A	-24.036	AV

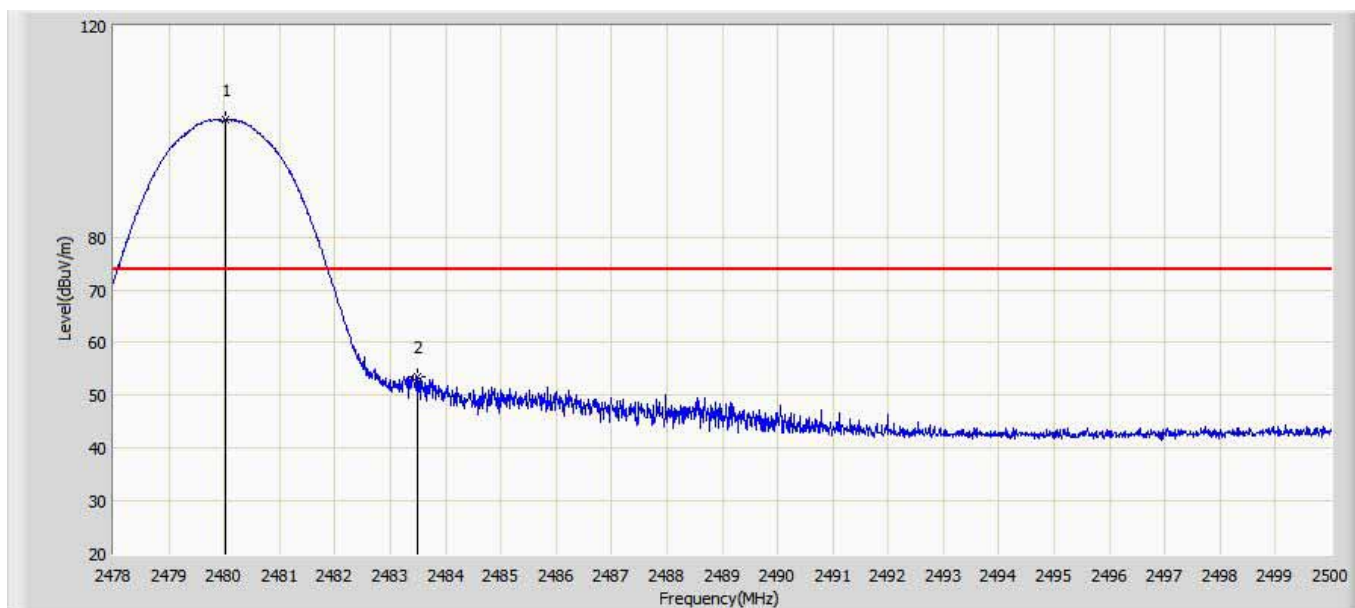
Site: AC5	Time: 2017/09/14 - 19:46
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.035	100.638	70.122	N/A	N/A	30.516	PK
2		2483.500	47.998	17.514	-26.002	74.000	30.484	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1	*	2480.035	100.638	76.602	N/A	N/A	-24.036	AV
2		2483.500	47.998	23.962	-30.038	54.000	-24.036	AV

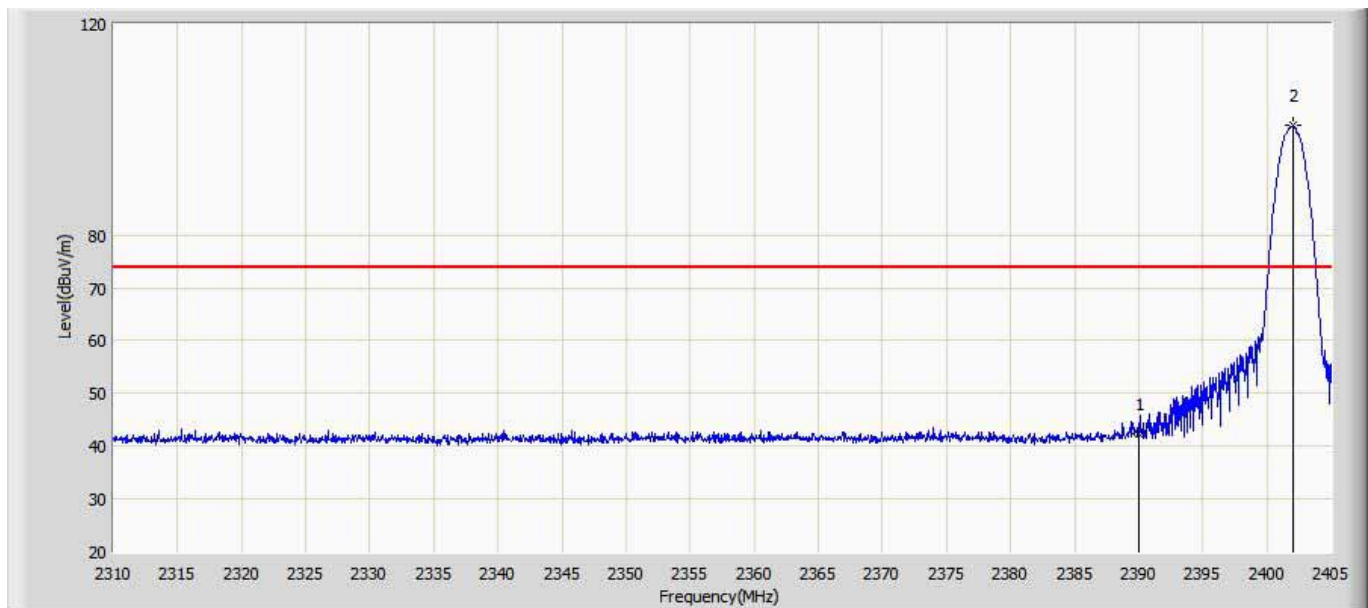
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 19:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 2:Transmit at 2480MHz by 2DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.024	102.164	71.648	N/A	N/A	30.516	PK
2		2483.500	53.555	23.071	-20.445	74.000	30.484	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1	*	2480.024	102.164	78.128	N/A	N/A	-24.036	AV
2		2483.500	53.555	29.519	-24.481	54.000	-24.036	AV

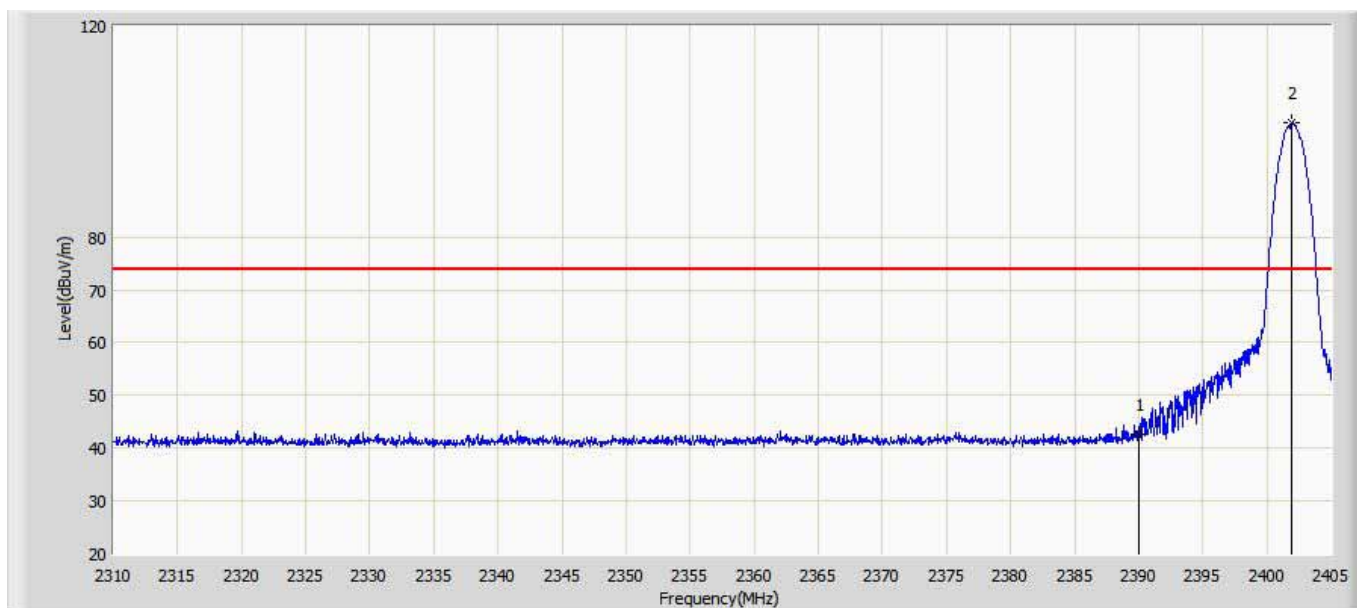
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 20:00
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.241	13.193	-31.759	74.000	29.048	PK
2	*	2402.008	100.664	71.704	N/A	N/A	28.960	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	42.241	18.205	-35.795	54.000	-24.036	AV
2	*	2402.008	100.664	76.628	N/A	N/A	-24.036	AV

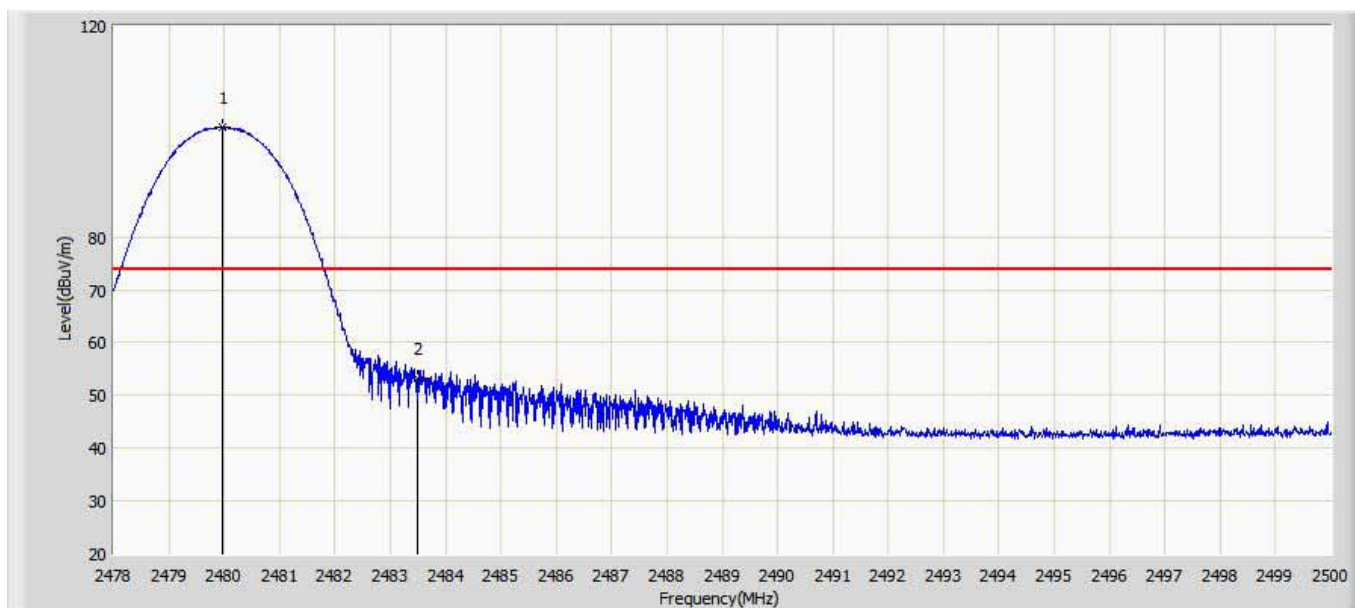
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 20:04
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2402MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	42.499	13.451	-31.501	74.000	29.048	PK
2	*	2401.913	101.530	72.569	N/A	N/A	28.961	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1		2390.000	42.499	18.463	-35.537	54.000	-24.036	AV
2	*	2401.913	101.530	77.494	N/A	N/A	-24.036	AV

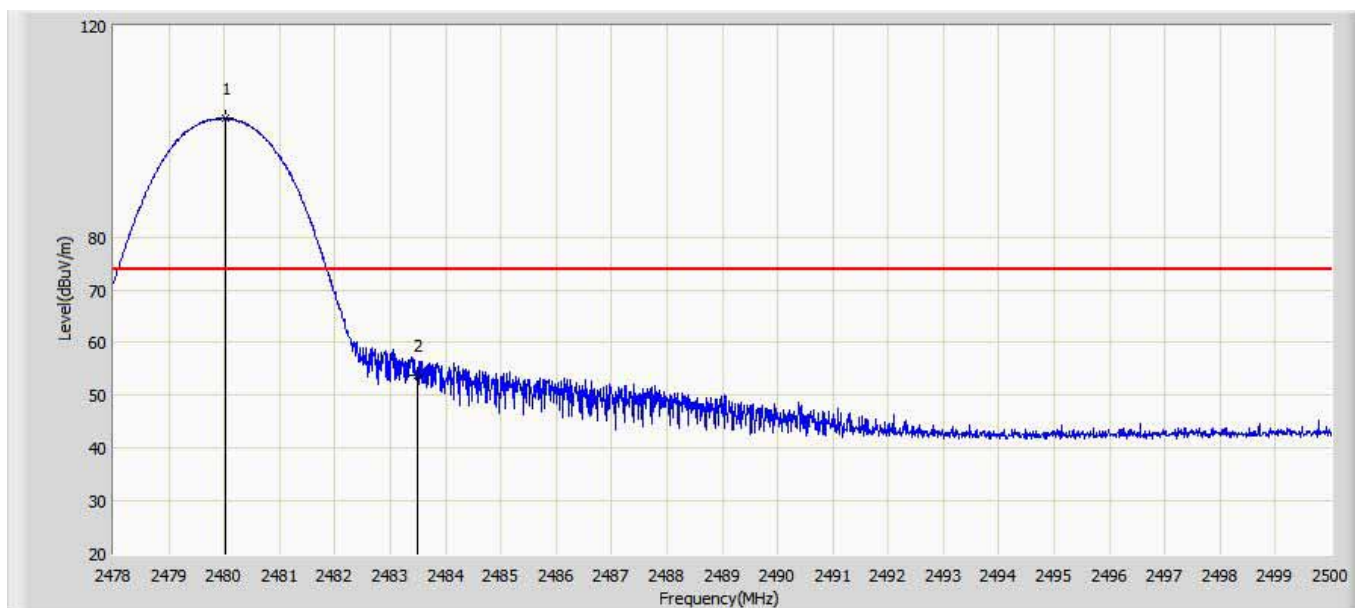
Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 20:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2479.969	100.903	70.387	N/A	N/A	30.516	PK
2		2483.500	53.120	22.636	-20.880	74.000	30.484	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1	*	2479.969	100.903	76.867	N/A	N/A	-24.036	AV
2		2483.500	53.120	29.084	-24.916	54.000	-24.036	AV

Engineer: Slark	
Site: AC5	Time: 2017/09/14 - 20:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: Virtual Reality System	Power: AC 120V/60Hz
Note: Mode 3:Transmit at 2480MHz by 3DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.024	102.496	71.980	N/A	N/A	30.516	PK
2		2483.500	53.767	23.283	-20.233	74.000	30.484	PK

No	Mark	Frequency (MHz)	PK Level (dBuV/m)	AV Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Duty Factor (dB)	Type
1	*	2480.024	102.496	78.460	N/A	N/A	-24.036	AV
2		2483.500	53.767	29.731	-24.269	54.000	-24.036	AV

12. Antenna Requirement

12.1. Limit

Antenna Requirement Limit	
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.	

12.2. Antenna Connector Construction

Antenna Connector Construction	
☐	The use of a permanently attached antenna
☐	The antenna use of a unique coupling to the intentional radiator
☒	The use of a nonstandard antenna jack or electrical connector
Please refer to the attached document "Internal Photograph" to show the antenna connector.	

_____ The End _____