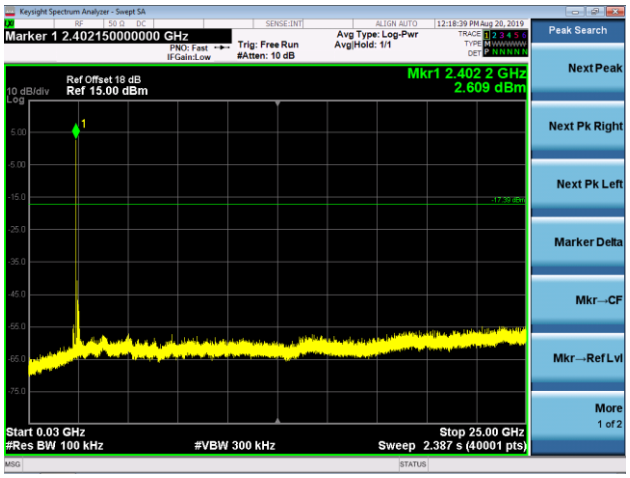
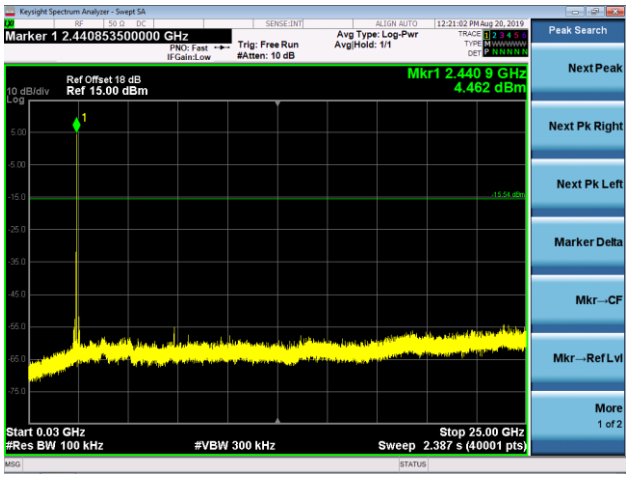
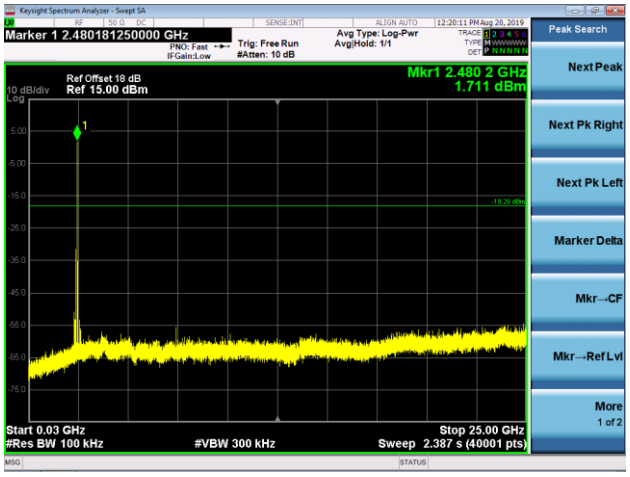
7.8.5.Test Result

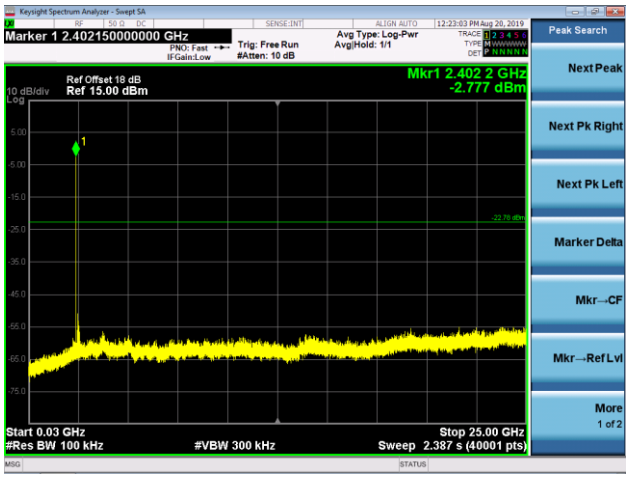
Product	Color Radio	Temperature	25°C
Test Engineer	David Lv	Relative Humidity	52%
Test Site	TR3	Test Date	2019/08/20

Test Mode	Channel No.	Frequency (MHz)	Limit (MHz)	Result
DH5	00	2402	20dBc	Pass
DH5	39	2441	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	39	2441	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	39	2441	20dBc	Pass
3DH5	78	2480	20dBc	Pass

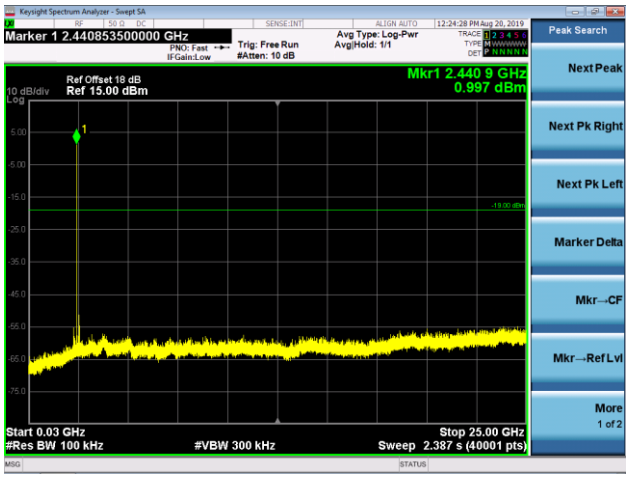
DH5 Conducted Spurious Emissions	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

2DH5 Conducted Spurious Emissions

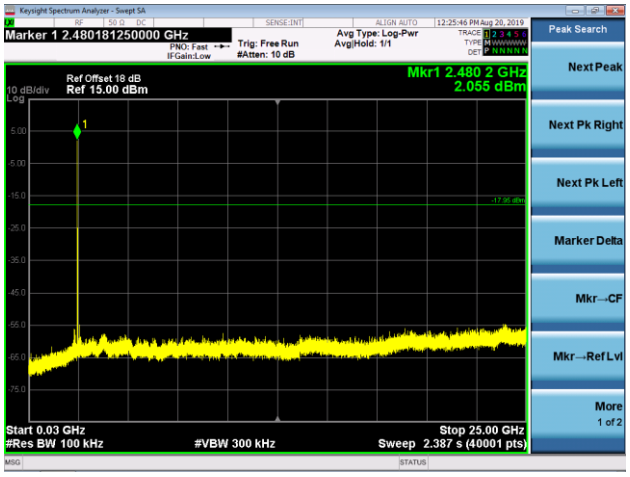
Channel 00 (2402MHz)

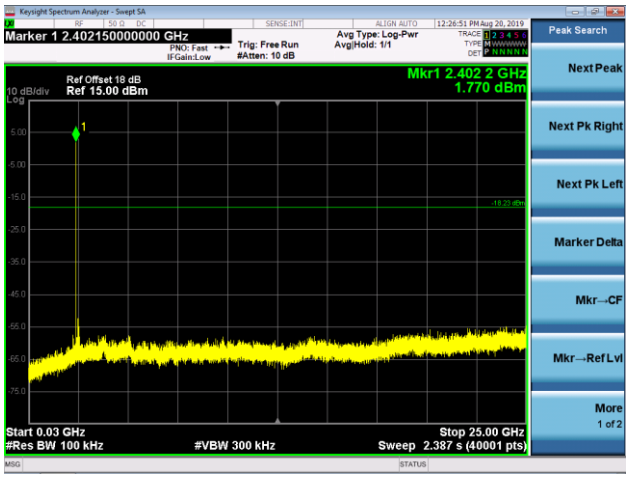
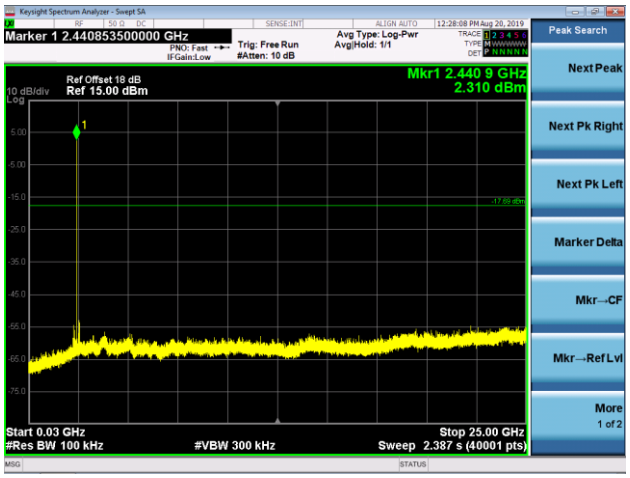
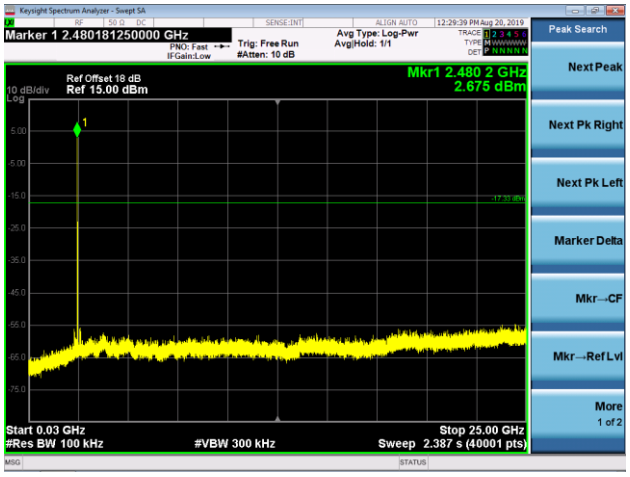


Channel 39 (2441MHz)



Channel 78 (2480MHz)



3DH5 Conducted Spurious Emissions	
Channel 00 (2402MHz)	**Channel 39 (2441MHz)**
	
Channel 78 (2480MHz)	
	

7.9. Radiated Spurious Emission Measurement

7.9.1.Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.9.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.9.3.Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

2. Span was set greater than 1MHz

3. RBW = as specified in Table 1

4. Detector = CISPR quasi-peak

5. Sweep time = auto couple

6. Trace was allowed to stabilize

Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

2. RBW = 1MHz

3. VBW = 3MHz

4. Detector = peak

5. Sweep time = auto couple

6. Trace mode = max hold

7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

2. RBW = 1MHz

3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.

   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.

4. Detector = Peak

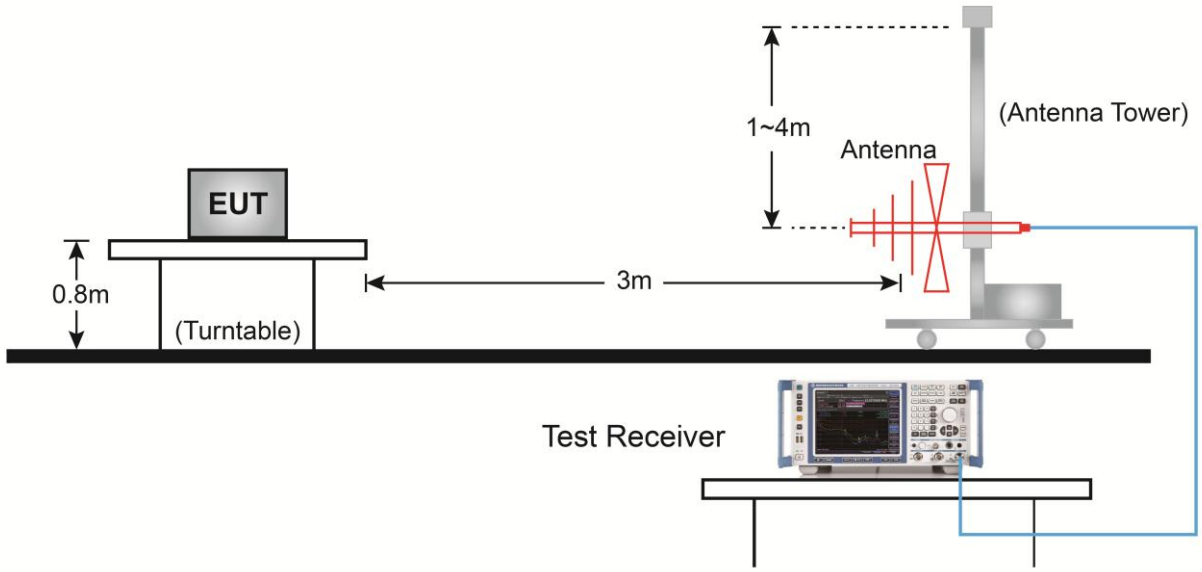
5. Sweep time = auto

6. Trace mode = max hold

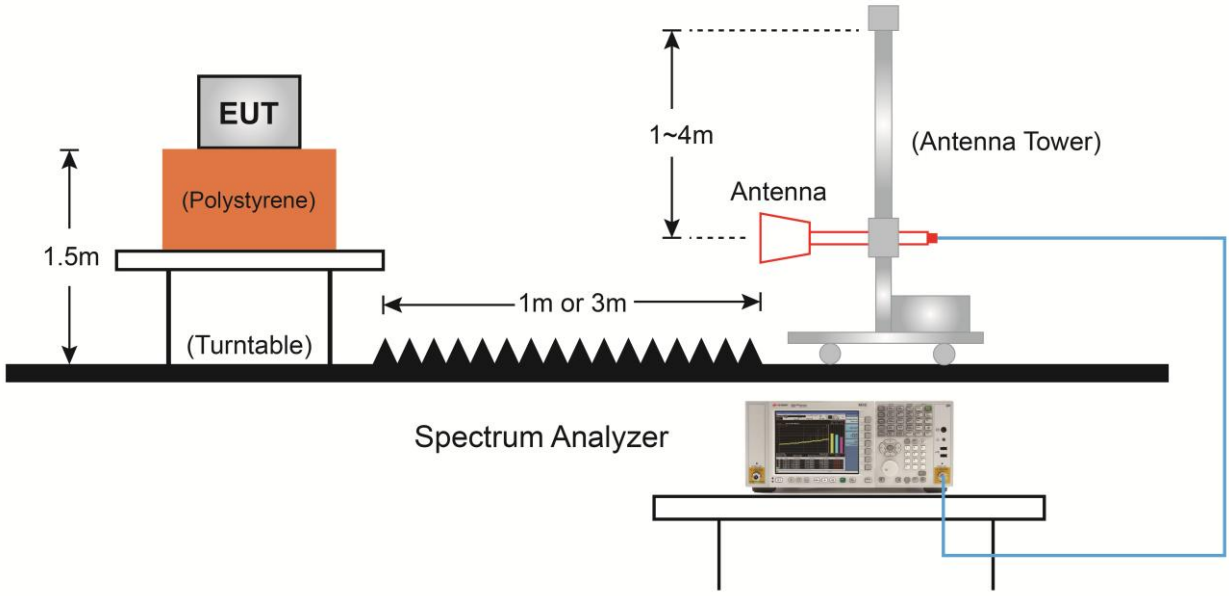
7. Trace was allowed to stabilize

7.9.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



7.9.5.Test Result

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	DH5	Test Channel:	00
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4221.5	11.6	30.3	41.9	74.0	-32.1	Peak	Horizontal
	5097.0	10.5	32.1	42.6	74.0	-31.4	Peak	Horizontal
*	6627.0	10.7	34.5	45.2	74.0	-28.8	Peak	Horizontal
*	9797.5	11.5	38.6	50.1	74.0	-23.9	Peak	Horizontal
	3694.5	11.6	29.3	40.9	74.0	-33.1	Peak	Vertical
	5088.5	9.6	32.1	41.7	74.0	-32.3	Peak	Vertical
*	6533.5	10.3	34.5	44.8	74.0	-29.2	Peak	Vertical
*	9534.0	12.0	38.0	50.0	74.0	-24.0	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (89.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	DH5	Test Channel:	39
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4221.5	12.0	30.3	42.3	74.0	-31.7	Peak	Horizontal
	4740.0	9.9	31.4	41.3	74.0	-32.7	Peak	Horizontal
*	6601.5	11.3	34.6	45.9	74.0	-28.1	Peak	Horizontal
*	9729.5	11.6	38.3	49.9	74.0	-24.1	Peak	Horizontal
	4230.0	9.9	30.3	40.2	74.0	-33.8	Peak	Vertical
	4876.0	9.9	31.6	41.5	74.0	-32.5	Peak	Vertical
*	6151.0	11.3	33.0	44.3	74.0	-29.7	Peak	Vertical
*	8845.5	11.4	36.9	48.3	74.0	-25.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (93.0dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	DH5	Test Channel:	78
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4230.0	11.7	30.3	42.0	74.0	-32.0	Peak	Horizontal
	4978.0	10.7	31.7	42.4	74.0	-31.6	Peak	Horizontal
*	6295.5	10.4	33.5	43.9	75.2	-31.3	Peak	Horizontal
*	10282.0	11.5	39.1	50.6	75.2	-24.6	Peak	Horizontal
	3694.5	11.7	29.3	41.0	74.0	-33.0	Peak	Vertical
	4621.0	10.5	31.1	41.6	74.0	-32.4	Peak	Vertical
*	6567.5	10.3	34.6	44.9	75.2	-30.3	Peak	Vertical
*	10282.0	11.9	39.1	51.0	75.2	-24.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (95.2dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	2DH5	Test Channel:	00
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4221.5	12.1	30.3	42.4	74.0	-31.6	Peak	Horizontal
	5088.5	10.7	32.1	42.8	74.0	-31.2	Peak	Horizontal
*	6703.5	11.5	34.4	45.9	74.0	-28.1	Peak	Horizontal
*	10282.0	11.9	39.1	51.0	74.0	-23.0	Peak	Horizontal
	3694.5	12.6	29.3	41.9	74.0	-32.1	Peak	Vertical
	5012.0	10.5	31.8	42.3	74.0	-31.7	Peak	Vertical
*	6907.5	10.7	35.1	45.8	74.0	-28.2	Peak	Vertical
*	10273.5	12.1	39.1	51.2	74.0	-22.8	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (87.3dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	2DH5	Test Channel:	39
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4221.5	11.4	30.3	41.7	74.0	-32.3	Peak	Horizontal
	4612.5	11.0	31.1	42.1	74.0	-31.9	Peak	Horizontal
*	6601.5	11.4	34.6	46.0	74.0	-28.0	Peak	Horizontal
*	10027.0	12.5	38.6	51.1	74.0	-22.9	Peak	Horizontal
	3694.5	12.4	29.3	41.7	74.0	-32.3	Peak	Vertical
	5131.0	10.4	32.1	42.5	74.0	-31.5	Peak	Vertical
*	6839.5	11.2	34.7	45.9	74.0	-28.1	Peak	Vertical
*	10341.5	11.7	39.2	50.9	74.0	-23.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (92.5dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	2DH5	Test Channel:	78
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4068.5	10.8	30.0	40.8	74.0	-33.2	Peak	Horizontal
	5063.0	10.0	32.0	42.0	74.0	-32.0	Peak	Horizontal
*	6720.5	11.1	34.4	45.5	74.9	-29.4	Peak	Horizontal
*	9789.0	11.8	38.6	50.4	74.9	-24.5	Peak	Horizontal
	3694.5	12.1	29.3	41.4	74.0	-32.6	Peak	Vertical
	5029.0	10.7	31.9	42.6	74.0	-31.4	Peak	Vertical
*	6746.0	11.2	34.4	45.6	74.9	-29.3	Peak	Vertical
*	10256.5	11.6	39.0	50.6	74.9	-24.3	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (94.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	3DH5	Test Channel:	00
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4221.5	12.8	30.3	43.1	74.0	-30.9	Peak	Horizontal
	4825.0	10.5	31.5	42.0	74.0	-32.0	Peak	Horizontal
*	6389.0	10.6	33.9	44.5	74.0	-29.5	Peak	Horizontal
*	10239.5	12.4	39.0	51.4	74.0	-22.6	Peak	Horizontal
	3694.5	13.6	29.3	42.9	74.0	-31.1	Peak	Vertical
	4986.5	11.0	31.8	42.8	74.0	-31.2	Peak	Vertical
*	6610.0	11.2	34.6	45.8	74.0	-28.2	Peak	Vertical
*	9746.5	11.5	38.4	49.9	74.0	-24.1	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (87.6dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	3DH5	Test Channel:	39
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4221.5	10.9	30.3	41.2	74.0	-32.8	Peak	Horizontal
	5029.0	11.3	31.9	43.2	74.0	-30.8	Peak	Horizontal
*	7035.0	11.7	35.7	47.4	74.0	-26.6	Peak	Horizontal
*	10341.5	12.1	39.2	51.3	74.0	-22.7	Peak	Horizontal
	3694.5	12.7	29.3	42.0	74.0	-32.0	Peak	Vertical
	5029.0	10.2	31.9	42.1	74.0	-31.9	Peak	Vertical
*	6567.5	10.2	34.6	44.8	74.0	-29.2	Peak	Vertical
*	9908.0	11.8	38.7	50.5	74.0	-23.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (94.0dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	Color Radio	Temperature	26°C
Test Engineer	Dandy Li	Relative Humidity	57 %
Test Site	AC1	Test Date	2019/08/18
Test Mode:	3DH5	Test Channel:	78
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	4221.5	11.8	30.3	42.1	76.9	-34.8	Peak	Horizontal
*	4918.5	11.0	31.6	42.6	76.9	-34.3	Peak	Horizontal
	6525.0	10.4	34.5	44.9	74.0	-29.1	Peak	Horizontal
	10358.5	12.2	39.3	51.5	74.0	-22.5	Peak	Horizontal
	4060.0	10.7	30.0	40.7	74.0	-33.3	Peak	Vertical
	5097.0	10.6	32.1	42.7	74.0	-31.3	Peak	Vertical
*	6431.5	11.2	34.1	45.3	76.9	-31.6	Peak	Vertical
*	9729.5	11.8	38.3	50.1	76.9	-26.8	Peak	Vertical

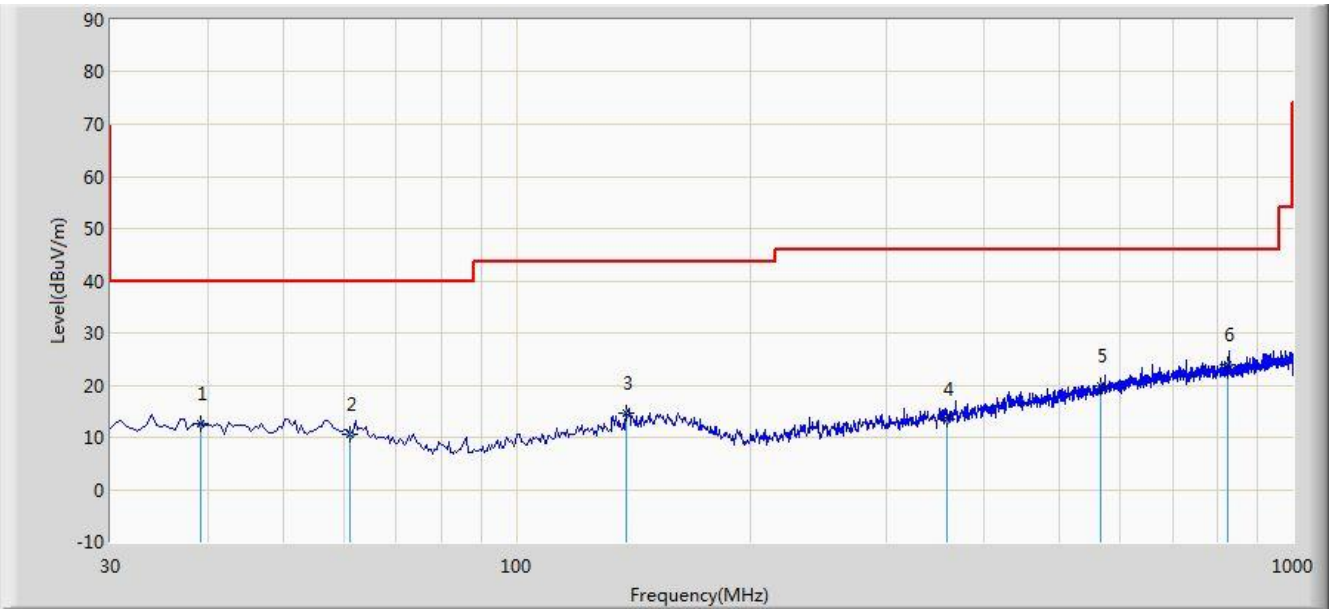
Note 1: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (96.9dBμV/m) or 15.209 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/08/16 - 19:23
Limit: FCC_Part15.209_RE(3m)	Engineer: David Lv
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Worst Case Mode: Transmit at Channel 2402MHz by DH5	



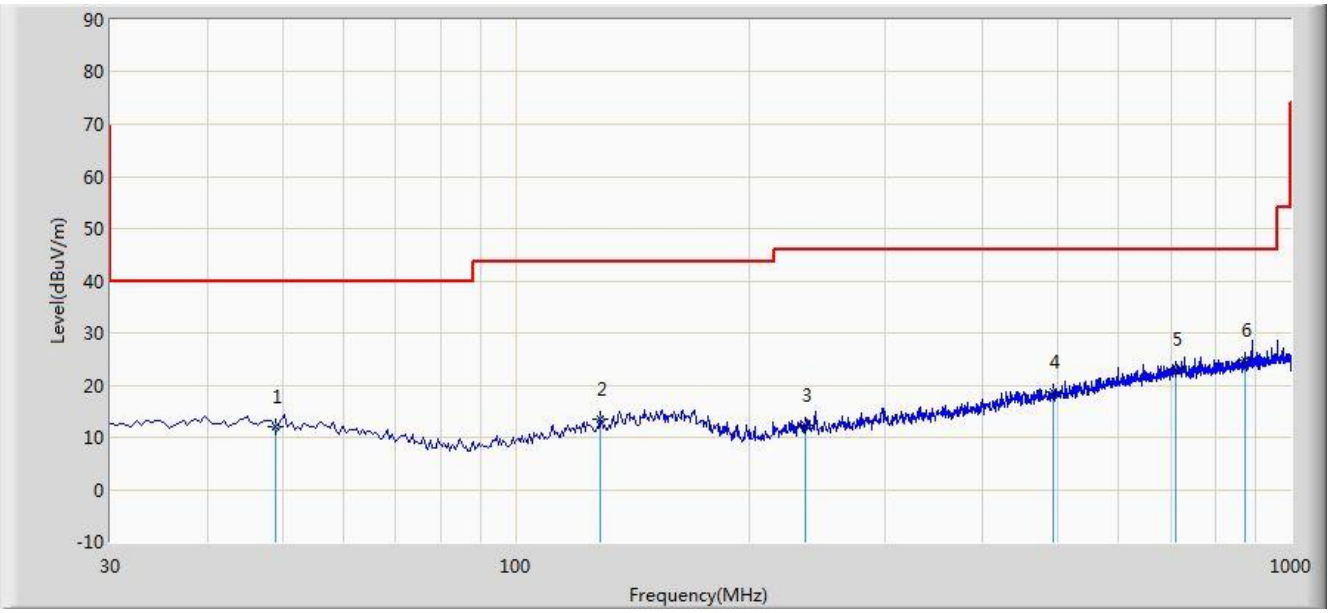
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		39.215	12.485	-2.116	-27.515	40.000	14.601	QP
2		61.040	10.719	-2.608	-29.281	40.000	13.327	QP
3		138.640	14.641	0.044	-28.859	43.500	14.597	QP
4		359.315	13.454	-2.459	-32.546	46.000	15.913	QP
5		565.440	19.912	-0.250	-26.088	46.000	20.162	QP
6	*	826.370	23.863	-0.023	-22.137	46.000	23.886	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2019/08/16 - 19:29
Limit: FCC_Part15.209_RE(3m)	Engineer: David Lv
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Worst Case Mode: Transmit at Channel 2402MHz by DH5	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		48.915	12.064	-2.210	-27.936	40.000	14.274	QP
2		128.455	13.490	-0.355	-30.010	43.500	13.846	QP
3		236.125	12.237	-0.664	-33.763	46.000	12.900	QP
4		493.660	18.784	0.143	-27.216	46.000	18.641	QP
5		709.485	23.123	0.568	-22.877	46.000	22.555	QP
6	*	872.445	24.919	0.573	-21.081	46.000	24.347	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.10. Radiated Restricted Band Edge Measurement

7.10.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.10.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

7.10.3.Test Setting

Peak Field Strength Measurements

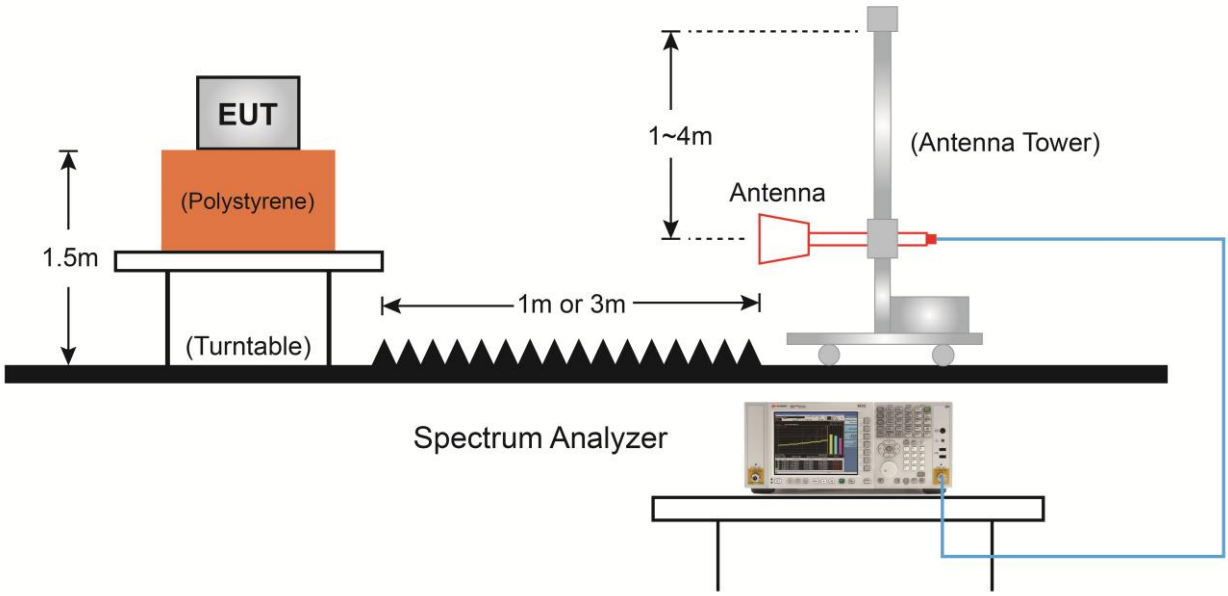
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

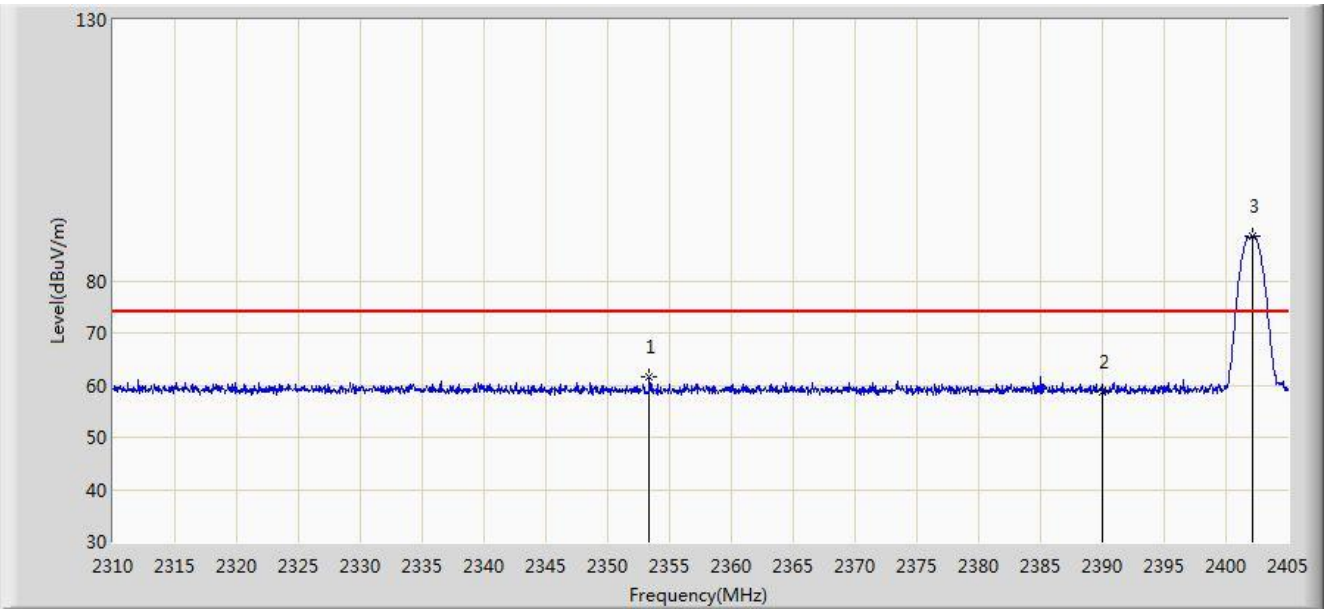
7.10.4.Test Setup

Above 1GHz Test Setup:



7.10.5.Test Result

Site: AC1	Time: 2019/08/18 - 15:56
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2402MHz	

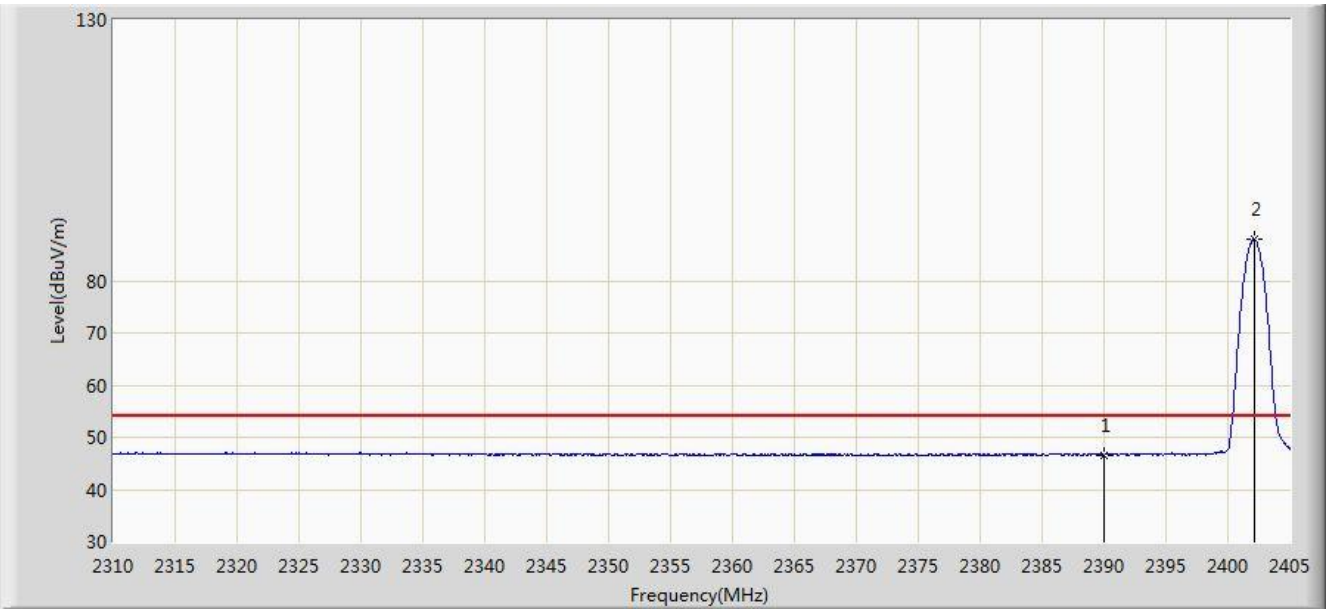


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2353.367	61.490	28.992	-12.510	74.000	32.498	PK
2			2390.000	58.760	26.347	-15.240	74.000	32.413	PK
3		*	2402.198	88.544	56.148	N/A	N/A	32.396	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 15:57
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2402MHz	

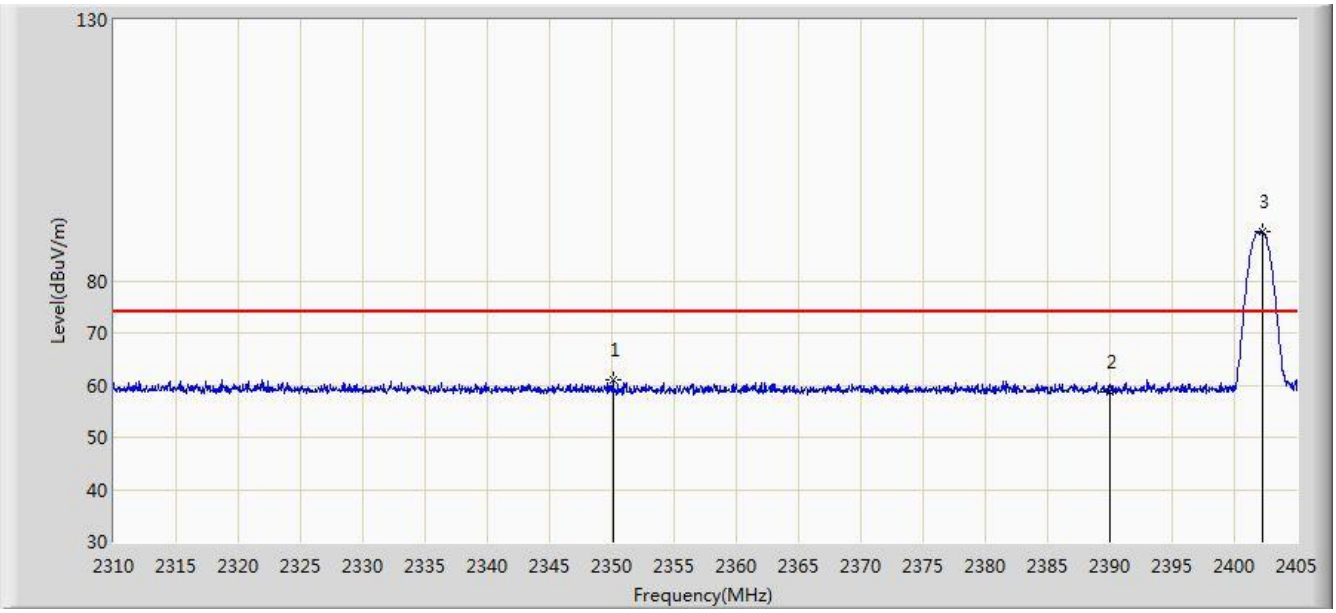


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.629	14.216	-7.371	54.000	32.413	AV
2		*	2402.150	87.840	55.444	N/A	N/A	32.396	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 15:58
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2402MHz	

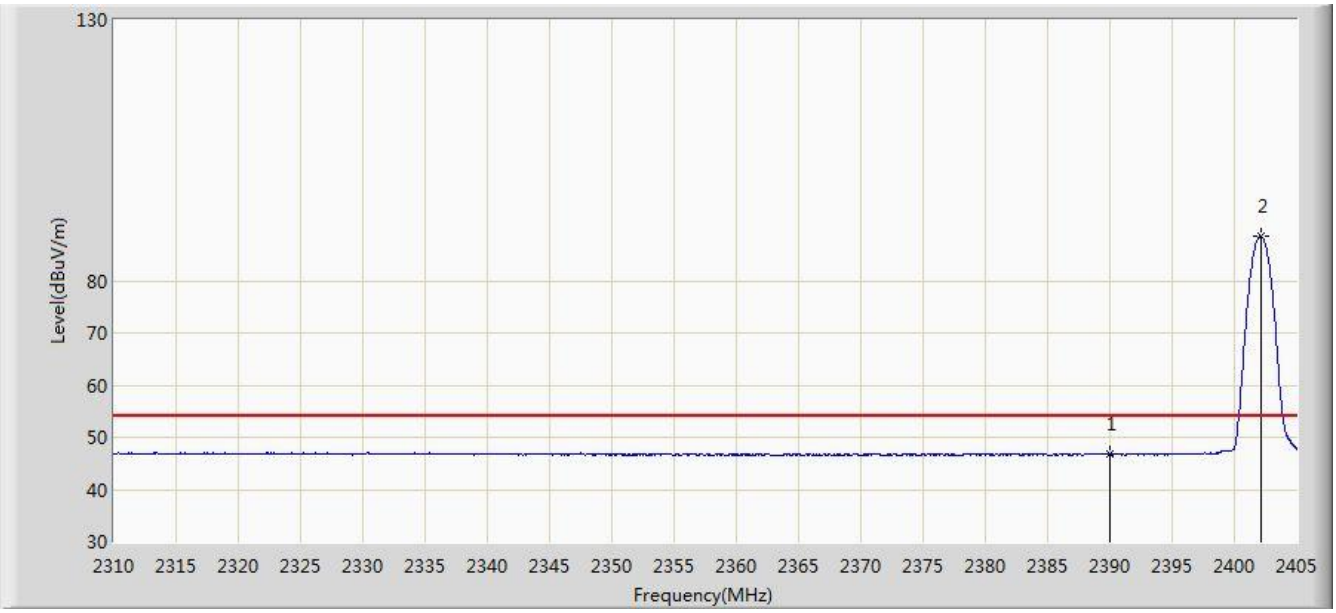


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2350.090	61.040	28.528	-12.960	74.000	32.512	PK
2			2390.000	58.707	26.294	-15.293	74.000	32.413	PK
3		*	2402.245	89.347	56.951	N/A	N/A	32.396	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:00
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2402MHz	

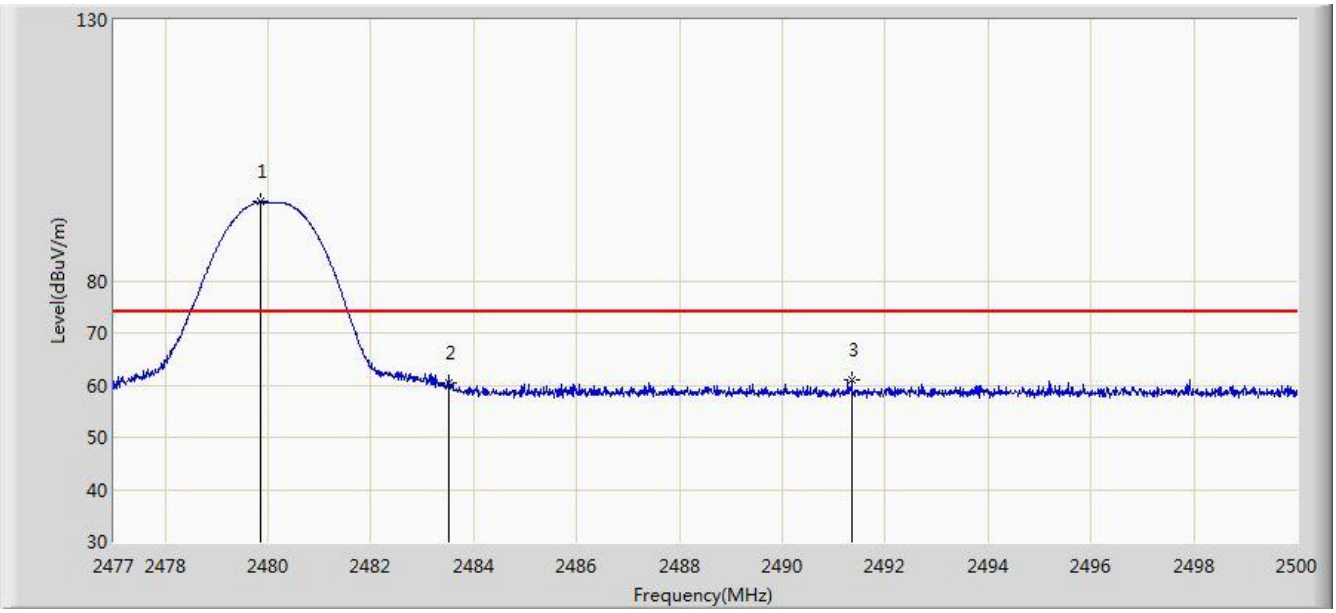


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.712	14.299	-7.288	54.000	32.413	AV
2		*	2402.102	88.547	56.151	N/A	N/A	32.395	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:00
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2480MHz	

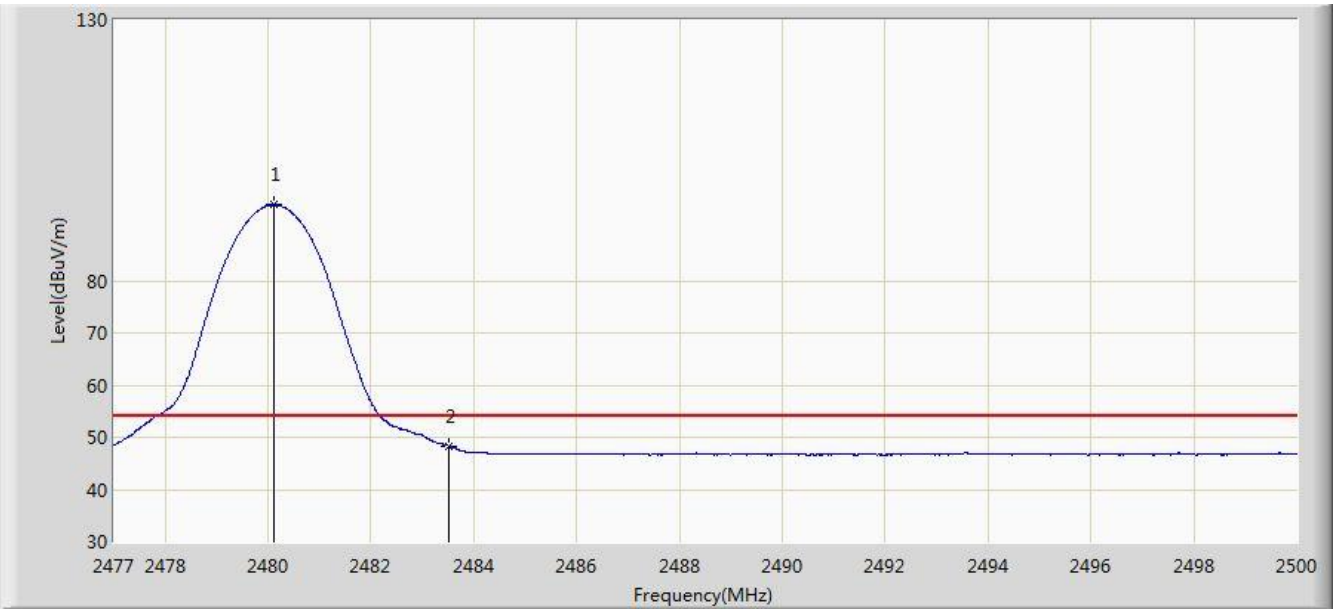


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.852	95.089	62.681	N/A	N/A	32.408	PK
2			2483.500	60.507	28.092	-13.493	74.000	32.416	PK
3			2491.352	61.008	28.577	-12.992	74.000	32.431	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:02
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2480MHz	

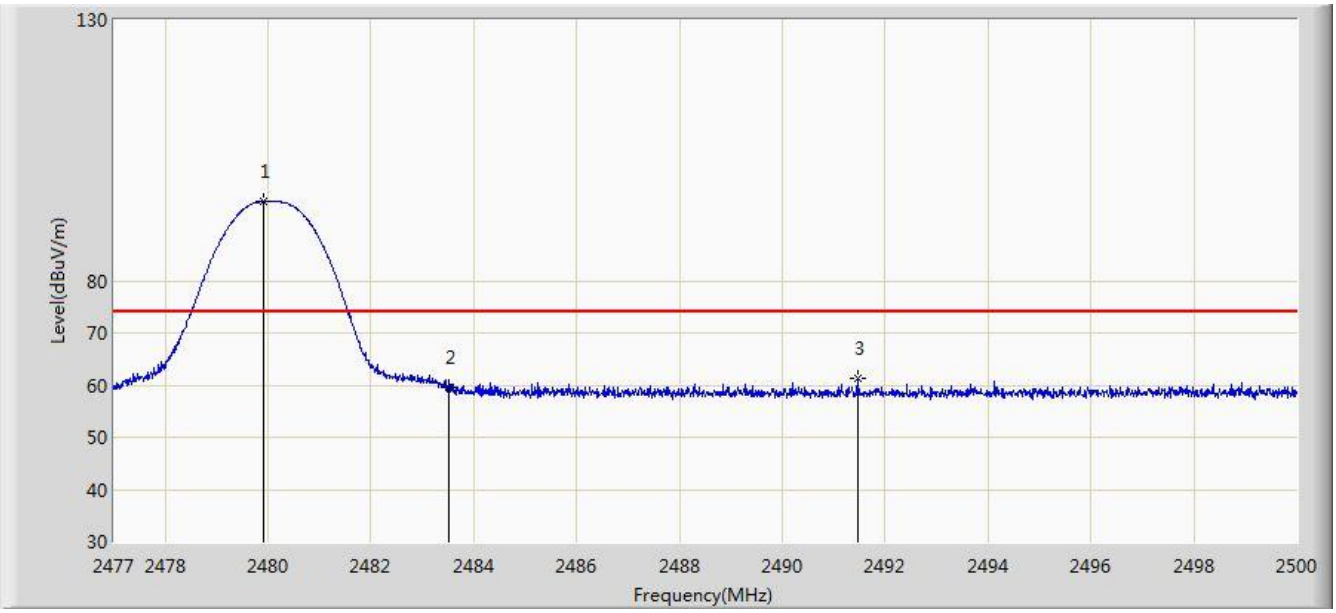


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.105	94.529	62.120	N/A	N/A	32.408	AV
2			2483.500	48.386	15.971	-5.614	54.000	32.416	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:02
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2480MHz	

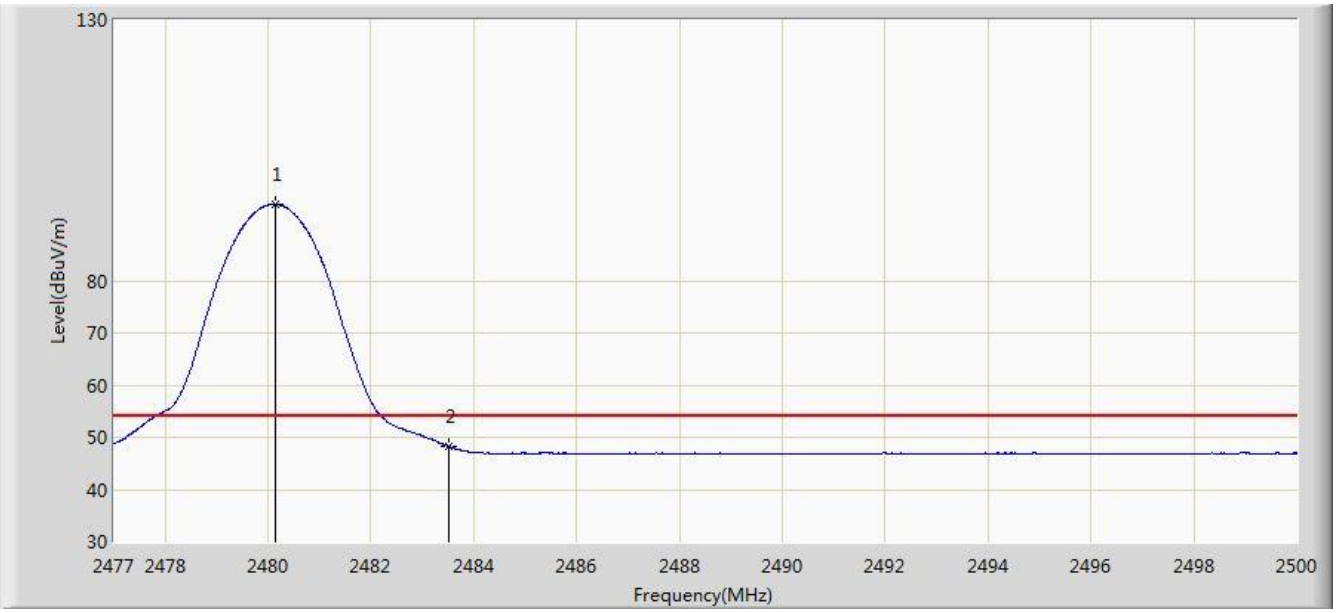


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.921	95.210	62.802	N/A	N/A	32.408	PK
2			2483.500	59.654	27.239	-14.346	74.000	32.416	PK
3			2491.456	61.301	28.870	-12.699	74.000	32.431	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:05
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by DH5 at channel 2480MHz	

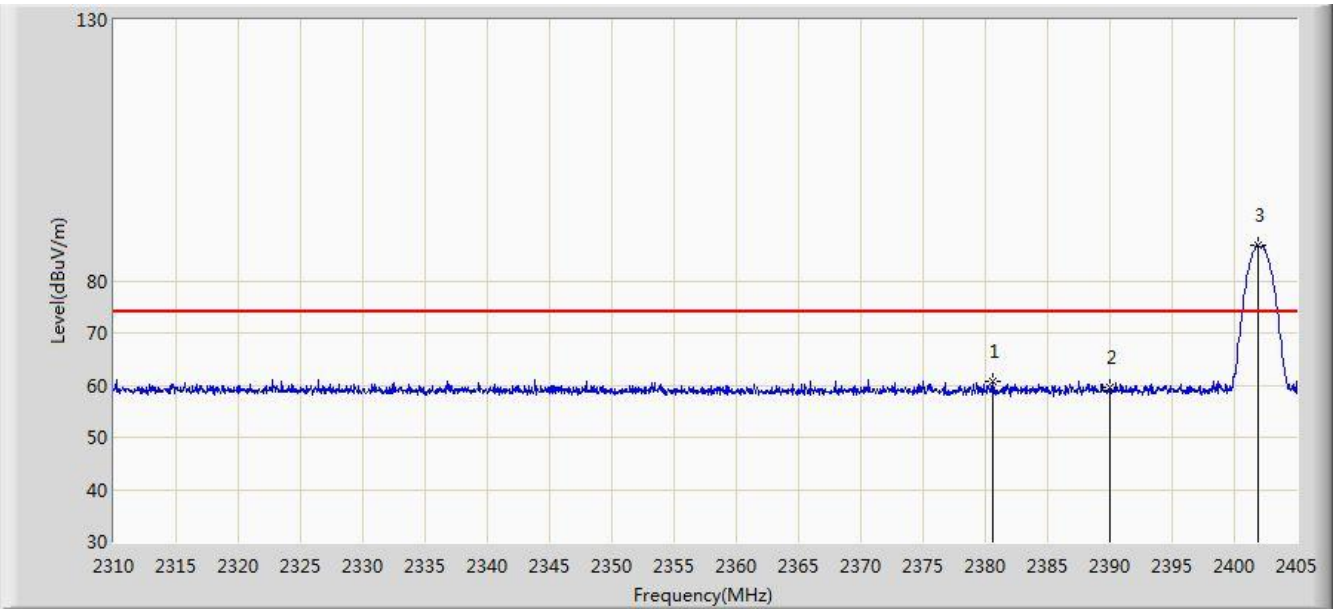


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.128	94.629	62.220	N/A	N/A	32.409	AV
2			2483.500	48.311	15.896	-5.689	54.000	32.416	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:05
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2402MHz	

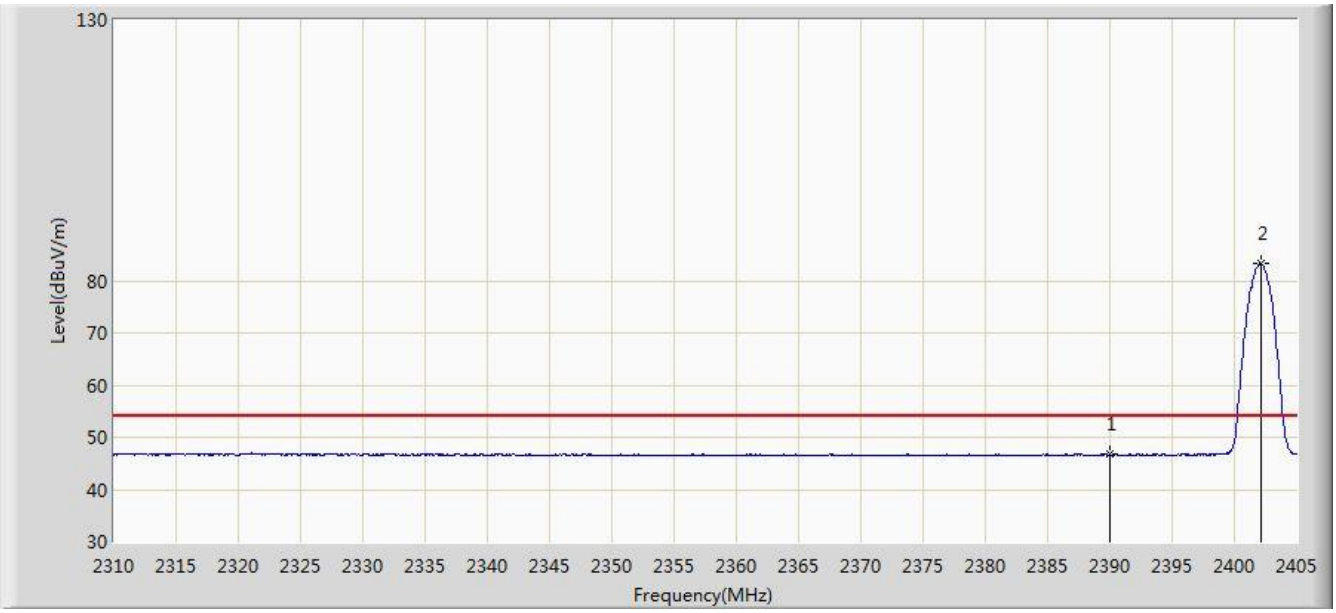


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2380.538	60.647	28.217	-13.353	74.000	32.430	PK
2			2390.000	59.466	27.053	-14.534	74.000	32.413	PK
3		*	2401.912	86.868	54.472	N/A	N/A	32.396	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:07
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2402MHz	

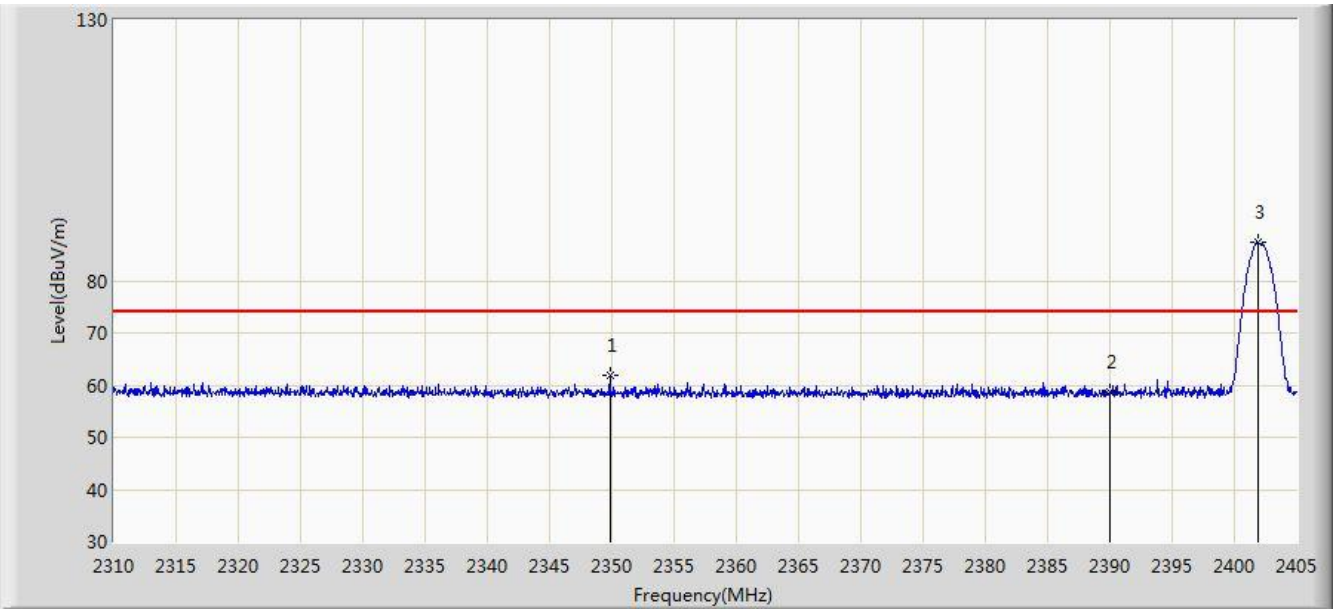


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.690	14.277	-7.310	54.000	32.413	AV
2		*	2402.102	83.294	50.898	N/A	N/A	32.395	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:08
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2402MHz	

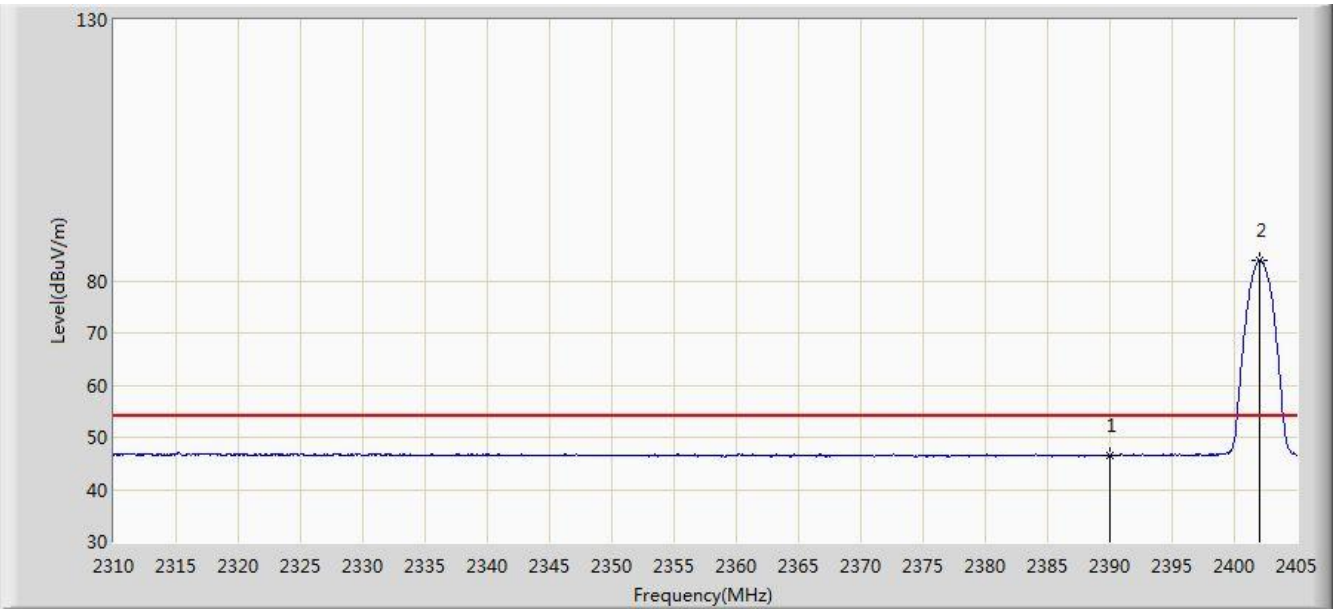


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2349.853	61.780	29.267	-12.220	74.000	32.513	PK
2			2390.000	58.583	26.170	-15.417	74.000	32.413	PK
3		*	2401.960	87.259	54.863	N/A	N/A	32.396	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:09
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2402MHz	

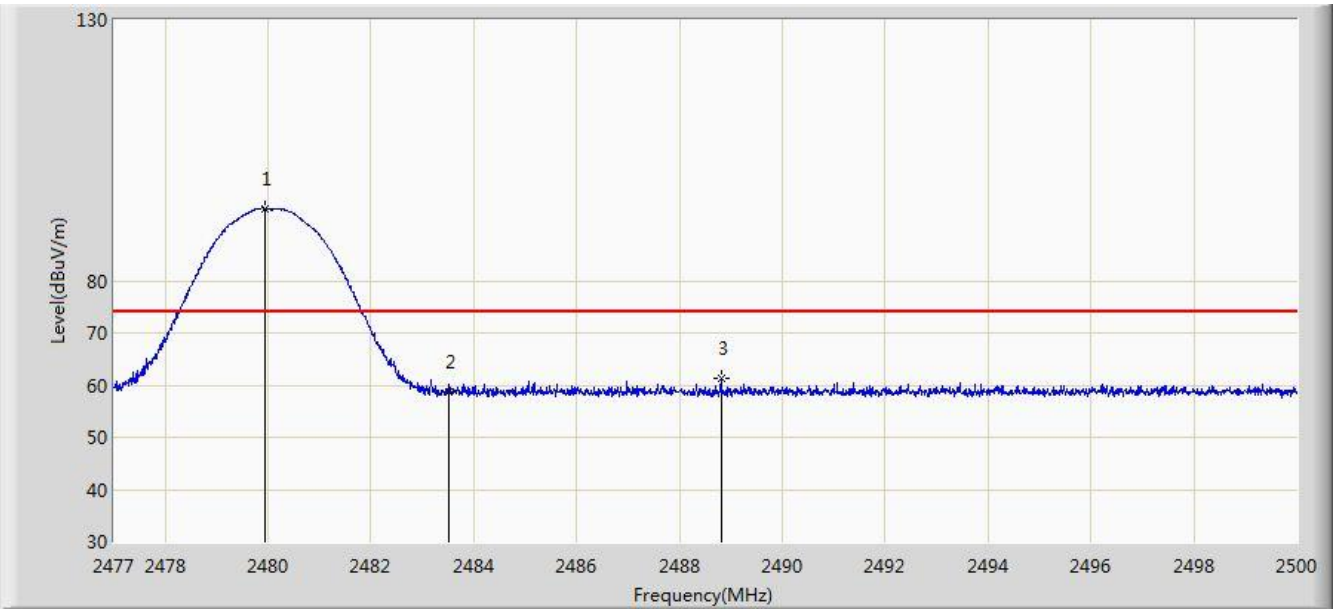


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.583	14.170	-7.417	54.000	32.413	AV
2		*	2402.055	83.933	51.537	N/A	N/A	32.395	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:09
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2480MHz	

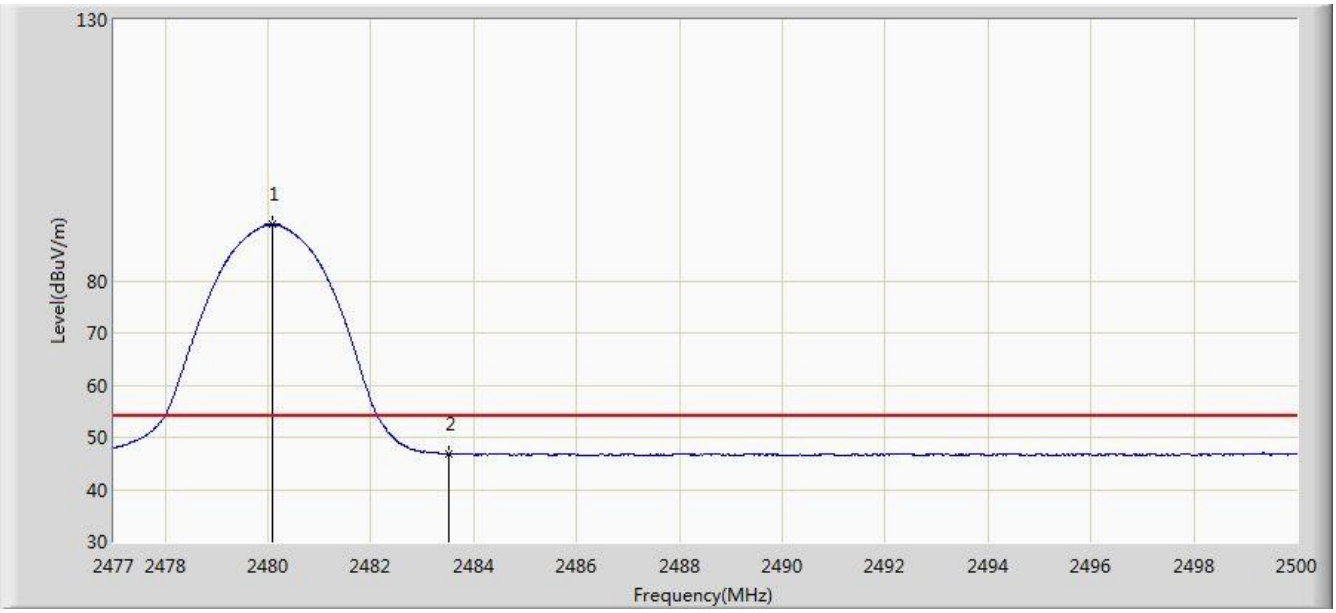


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.933	93.896	61.488	N/A	N/A	32.408	PK
2			2483.500	58.815	26.400	-15.185	74.000	32.416	PK
3			2488.811	61.253	28.827	-12.747	74.000	32.426	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:10
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2480MHz	

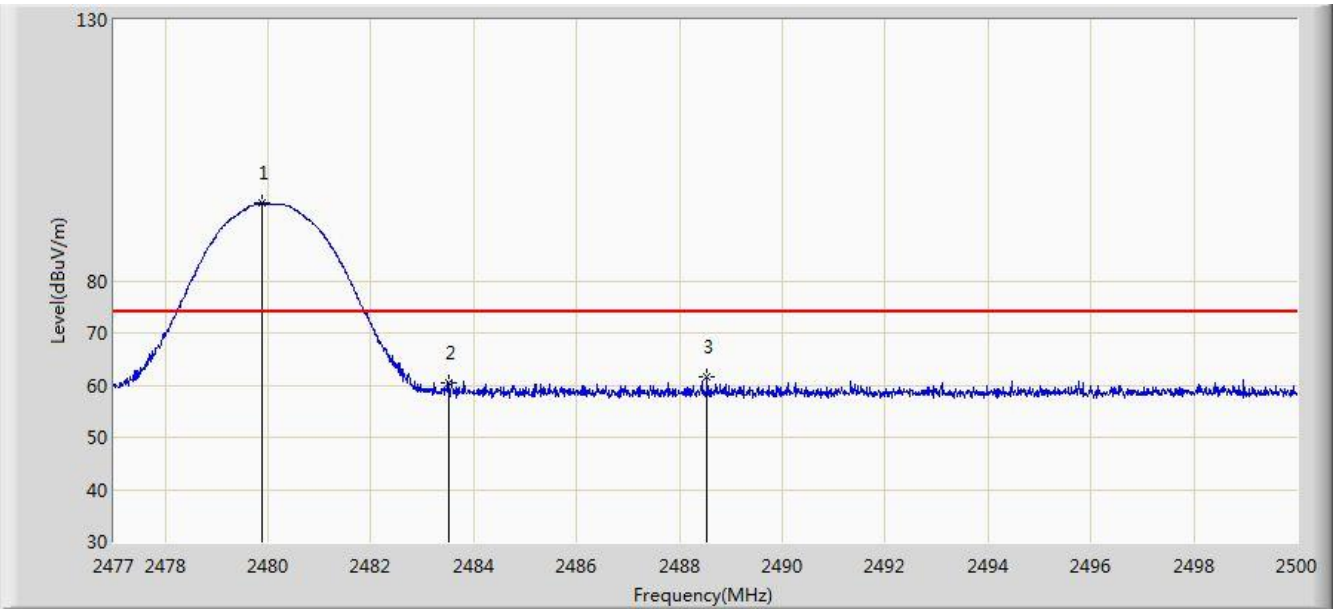


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.082	90.763	58.354	N/A	N/A	32.408	AV
2			2483.500	46.763	14.348	-7.237	54.000	32.416	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:11
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2480MHz	

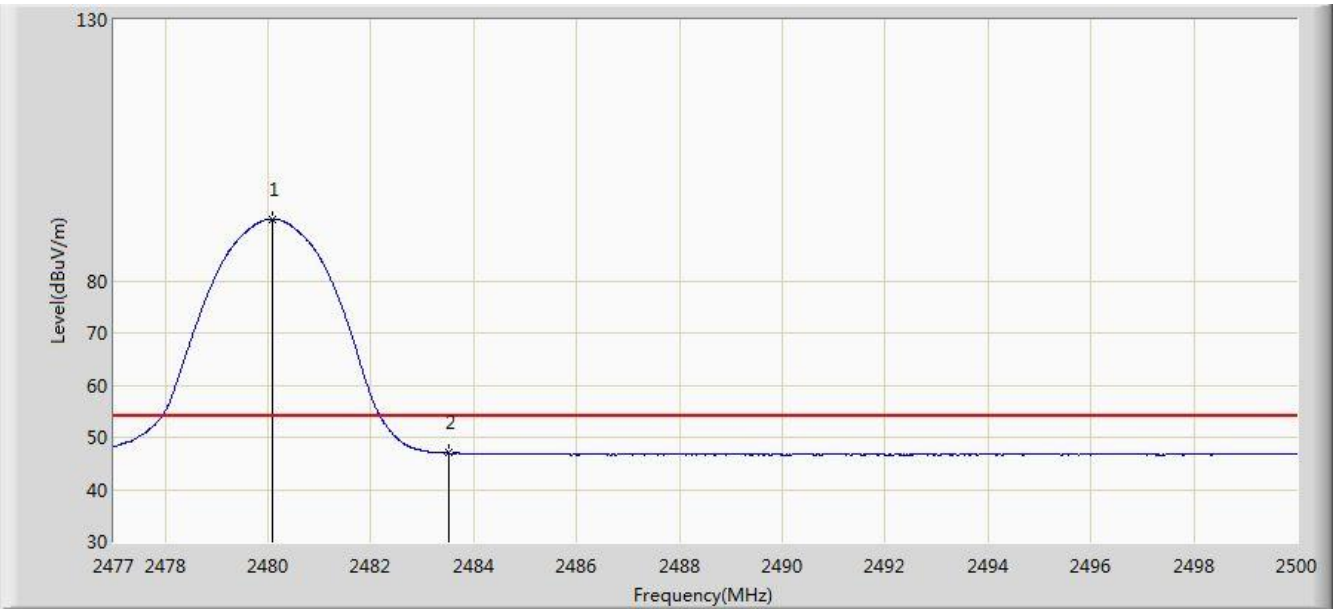


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.887	94.891	62.483	N/A	N/A	32.408	PK
2			2483.500	60.475	28.060	-13.525	74.000	32.416	PK
3			2488.534	61.626	29.201	-12.374	74.000	32.426	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:12
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 2DH5 at channel 2480MHz	

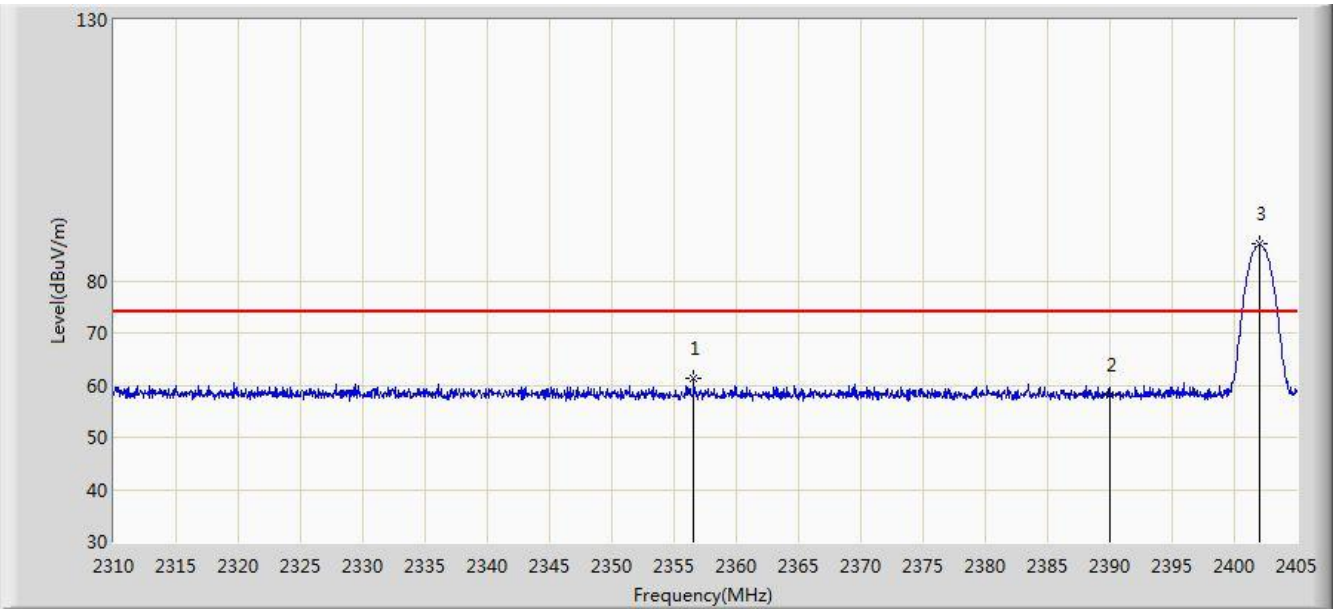


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.082	91.855	59.446	N/A	N/A	32.408	AV
2			2483.500	46.983	14.568	-7.017	54.000	32.416	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:12
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2402MHz	

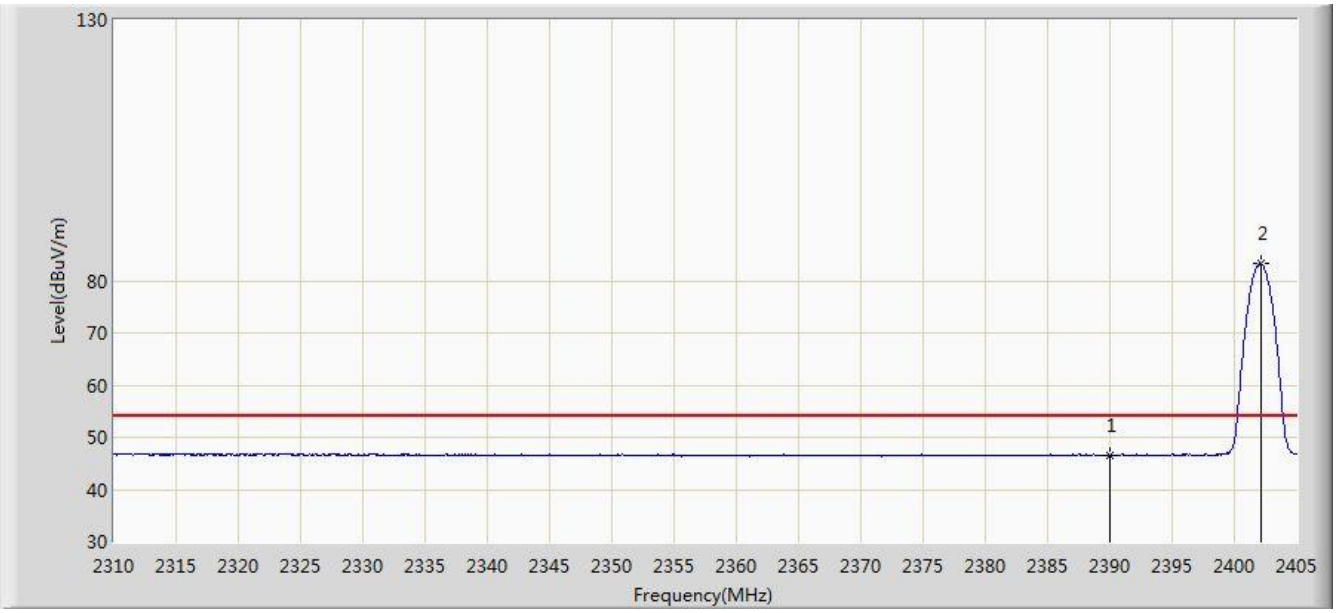


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2356.597	61.207	28.722	-12.793	74.000	32.485	PK
2			2390.000	58.218	25.805	-15.782	74.000	32.413	PK
3		*	2402.055	87.063	54.667	N/A	N/A	32.395	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:13
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2402MHz	

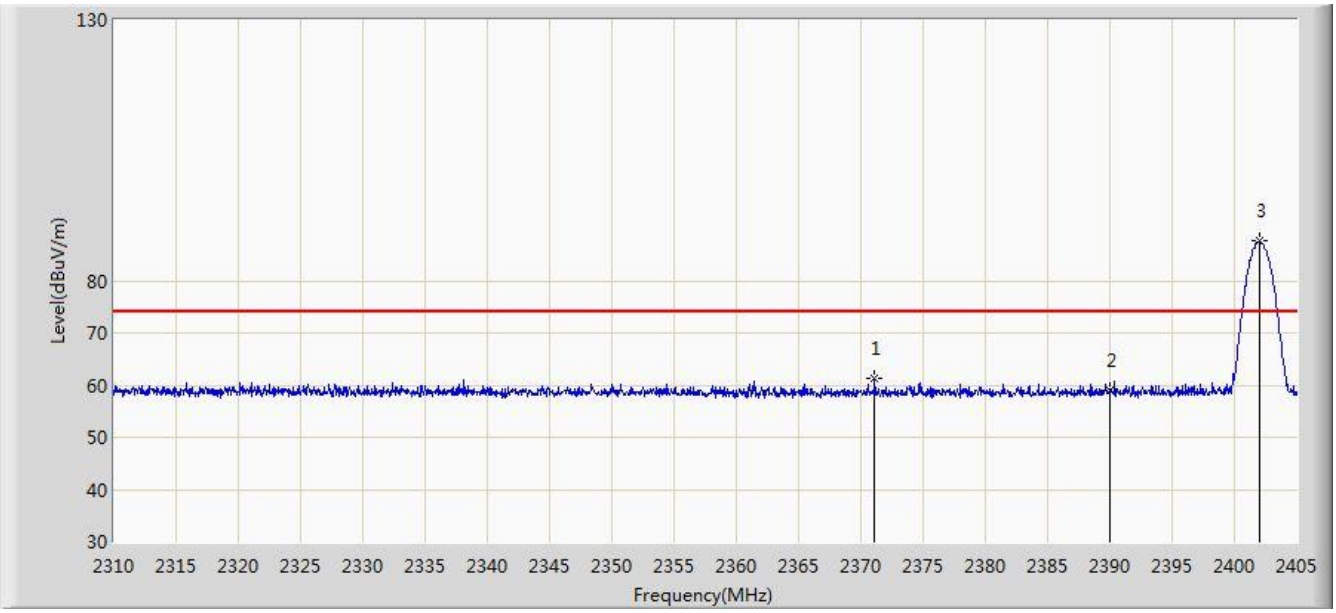


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.511	14.098	-7.489	54.000	32.413	AV
2		*	2402.102	83.204	50.808	N/A	N/A	32.395	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:14
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2402MHz	

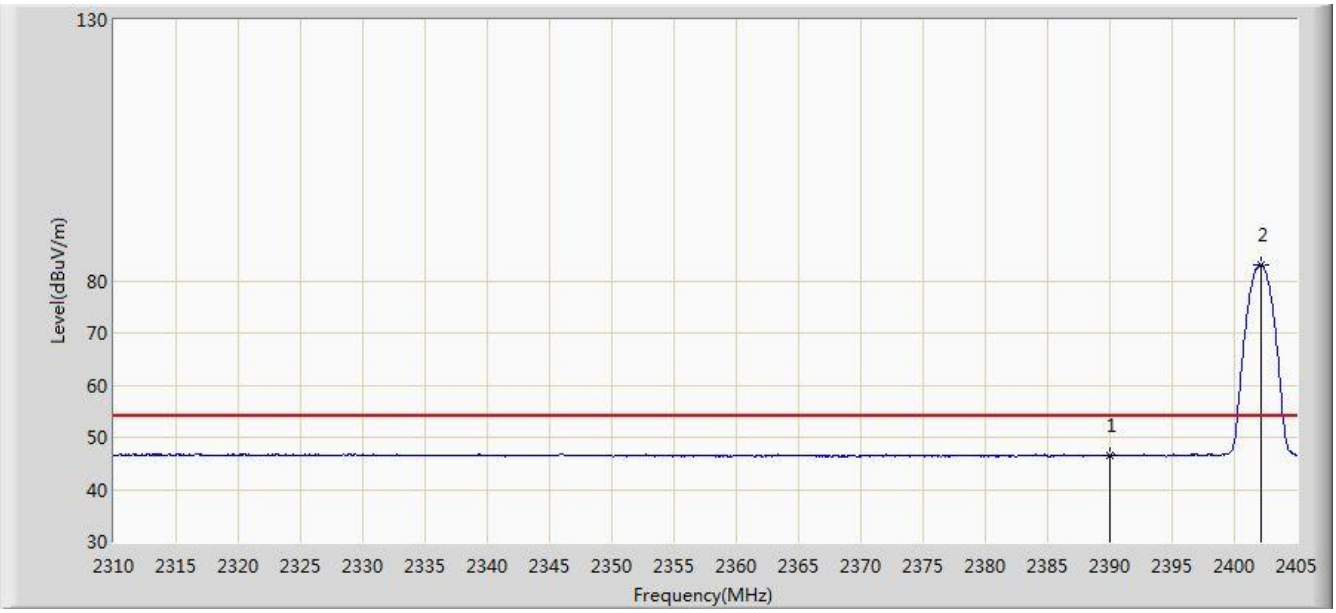


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2371.085	61.352	28.902	-12.648	74.000	32.450	PK
2			2390.000	58.959	26.546	-15.041	74.000	32.413	PK
3		*	2402.055	87.575	55.179	N/A	N/A	32.395	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:15
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2402MHz	

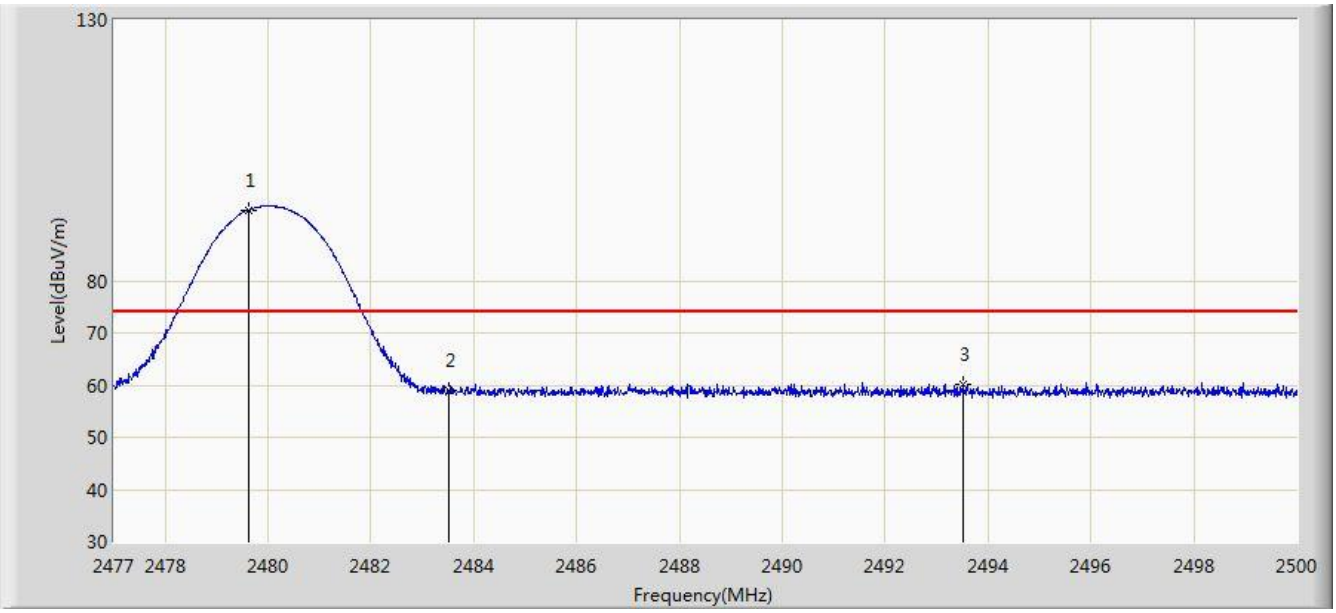


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.512	14.099	-7.488	54.000	32.413	AV
2		*	2402.102	83.119	50.723	N/A	N/A	32.395	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:15
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2480MHz	

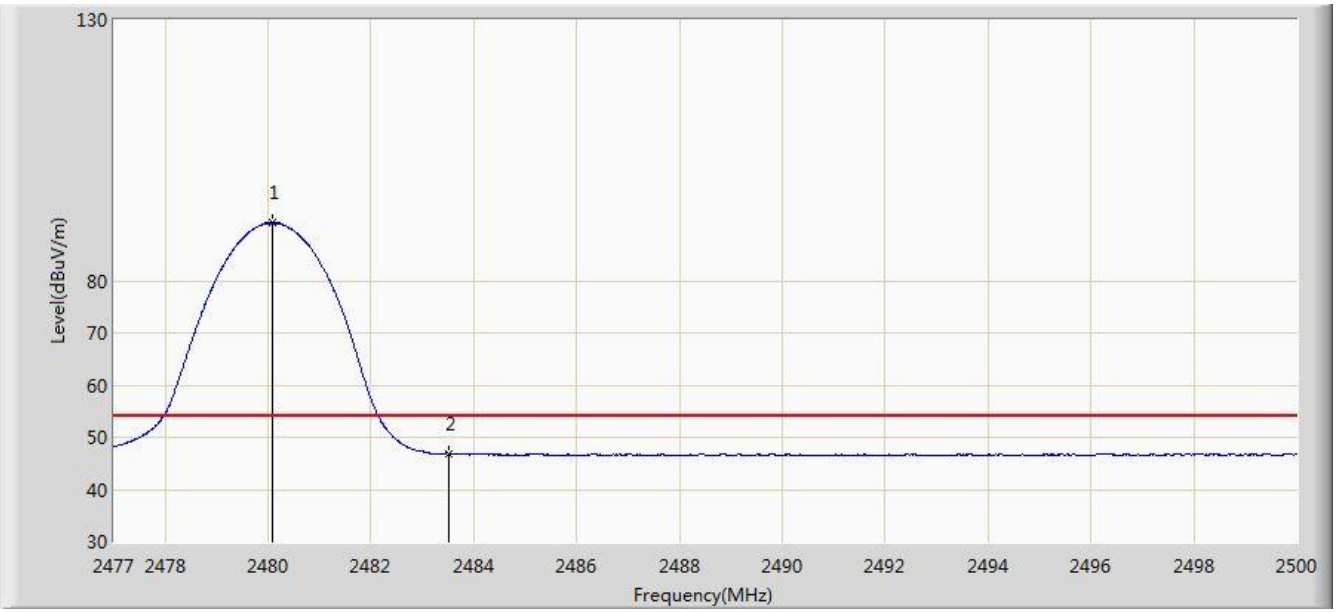


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2479.622	93.539	61.131	N/A	N/A	32.408	PK
2			2483.500	58.928	26.513	-15.072	74.000	32.416	PK
3			2493.502	60.084	27.649	-13.916	74.000	32.436	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:17
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2480MHz	

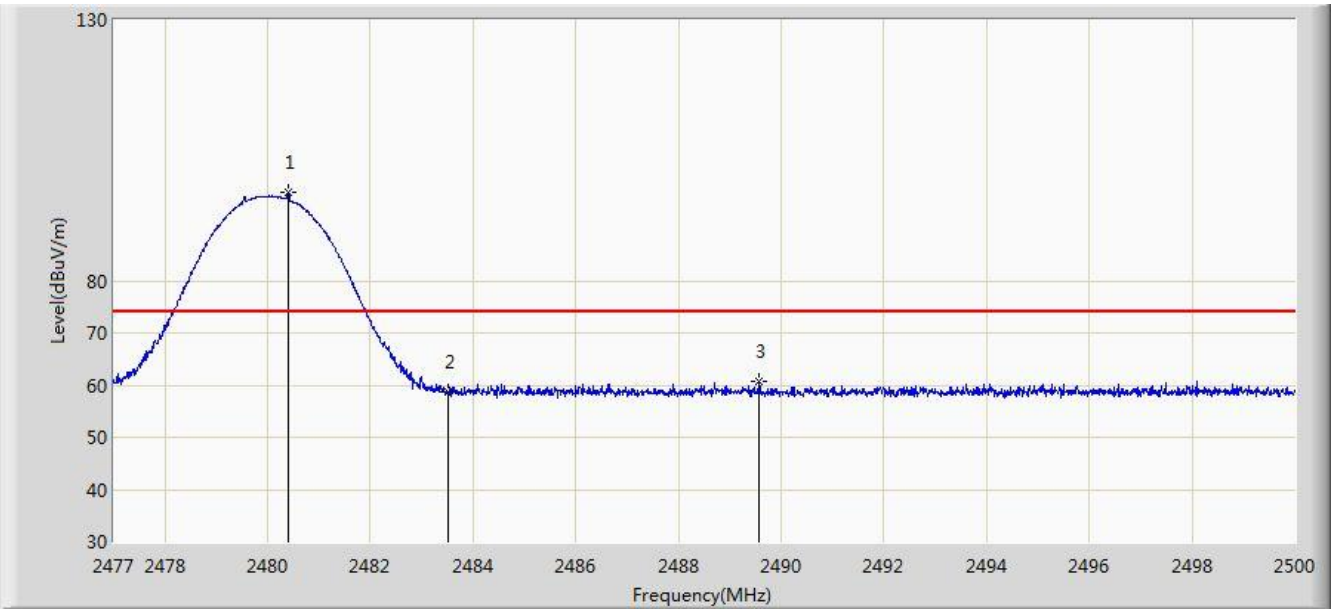


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.094	91.064	58.655	N/A	N/A	32.408	AV
2			2483.500	46.954	14.539	-7.046	54.000	32.416	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:17
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2480MHz	

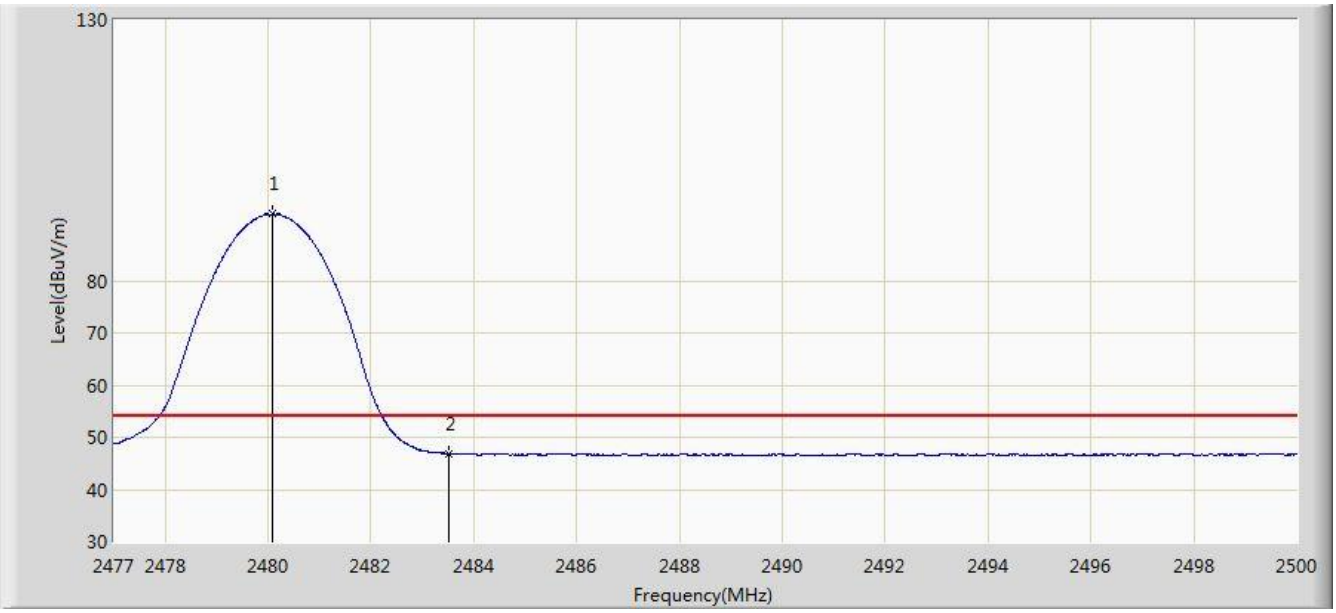


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.393	96.875	64.466	N/A	N/A	32.409	PK
2			2483.500	58.592	26.177	-15.408	74.000	32.416	PK
3			2489.570	60.823	28.396	-13.177	74.000	32.428	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/08/18 - 16:18
Limit: FCC_Part15.209 RSE(3m)	Engineer: Dandy Li
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Color Radio	Power: DC 12V
Note: Transmit by 3DH5 at channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.082	92.779	60.370	N/A	N/A	32.408	AV
2			2483.500	46.871	14.456	-7.129	54.000	32.416	AV

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.11. AC Conducted Emissions Measurement

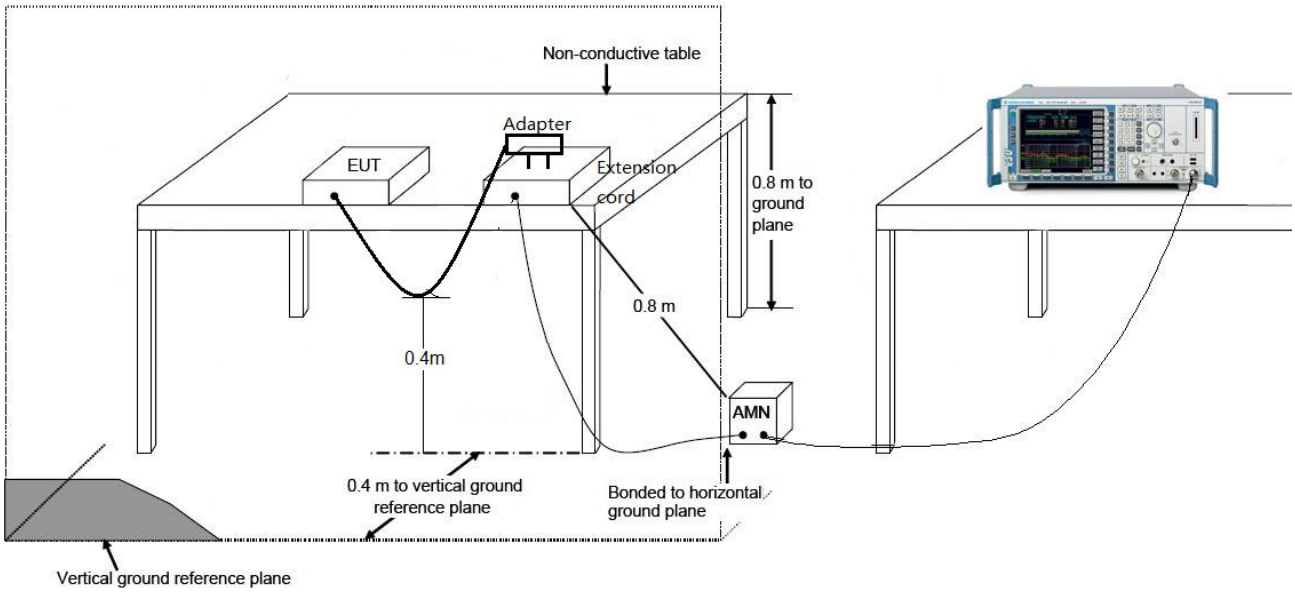
7.11.1.Test Limit

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

Note 1: The lower limit shall apply at the transition frequencies.

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

7.11.2.Test Setup



7.11.3.Test Result

Device is powered by battery, so this item is not applied.

8. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15C of the FCC Rules.

The End

Appendix A - Test Setup Photograph

Refer to “1907WSU008-UT” file.

Appendix B - EUT Photograph

Refer to “1907WSU008-UE” file.