

7.6. Time of Occupancy Measurement

7.6.1. Test Limit

The maximum permissible time of occupancy is 400ms within a period of 400ms multiplied by the number of hopping channels employed.

7.6.2. Test Procedure Used

ANSI C63.10-2009 - Section 7.7.4

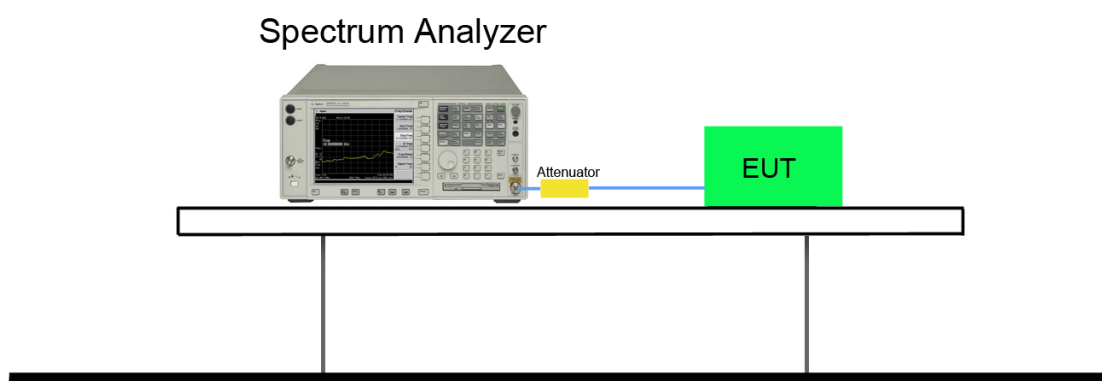
7.6.3. Test Settling

1. Span = zero span, centered on a hopping channel.
2. RBW = 1MHz
3. VBW $\geq$ RBW
4. Sweep time = as necessary to capture the entire dwell time per hopping channel
5. Detector = Peak
6. Trace mode = max hold

If possible, use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (data rate, modulation format, etc.), repeat this test for each variation.

An oscilloscope may be used instead of a spectrum analyzer. The EUT shall show compliance with the appropriate regulatory limit for the number of hopping channels. A plot of the data shall be included in the test report.

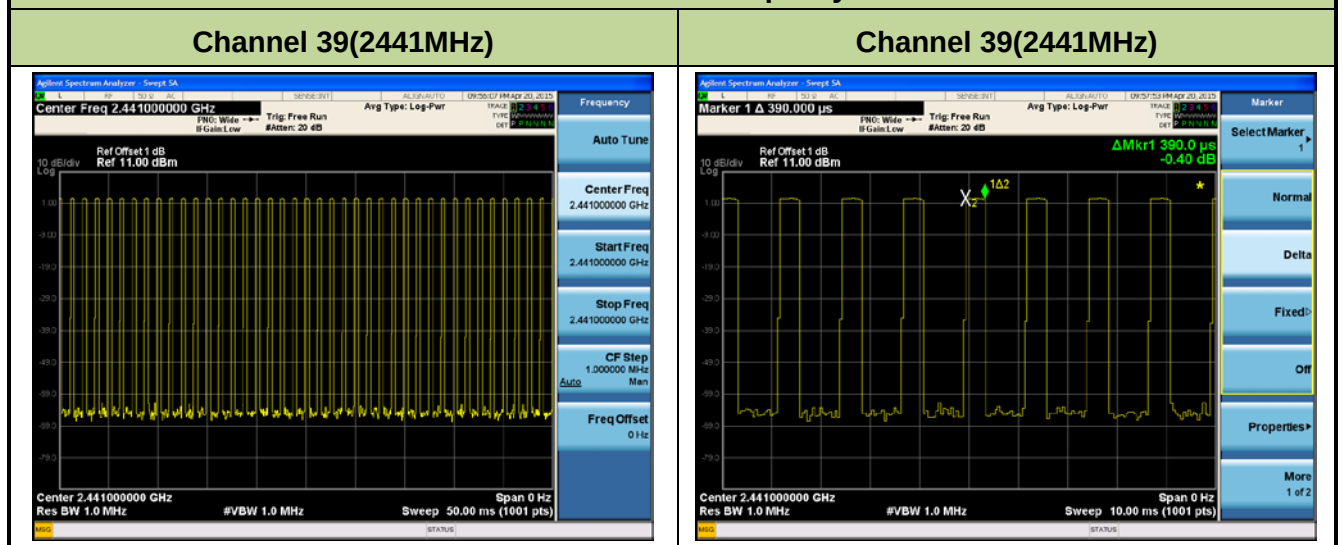
7.6.4. Test Setup



7.6.5. Test Result

Test Mode	Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
3DH1	39	2441	124.80	< 400	Pass
3DH3	39	2441	268.80	< 400	Pass
3DH5	39	2441	298.48	< 400	Pass

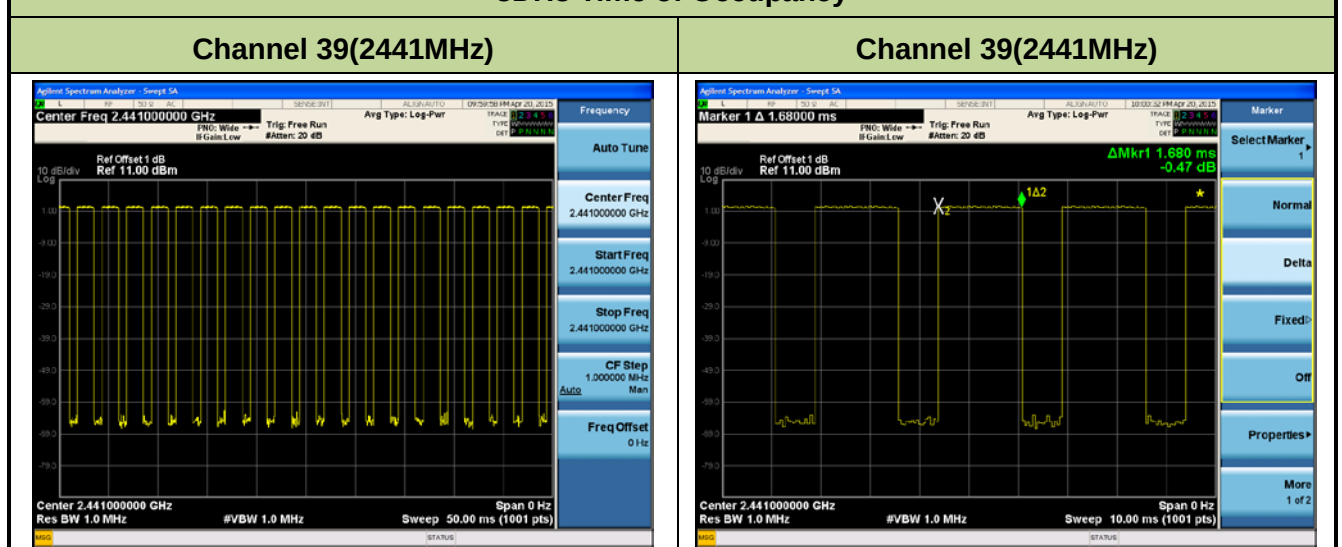
3DH1 Time of Occupancy



Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1sec: 40/50msec=800 hops/sec.

The Maximum Occupancy Time within 31.6sec: $[(0.390\text{ms} \times 800) / 79] \times 31.6 = 124.80$

3DH3 Time of Occupancy

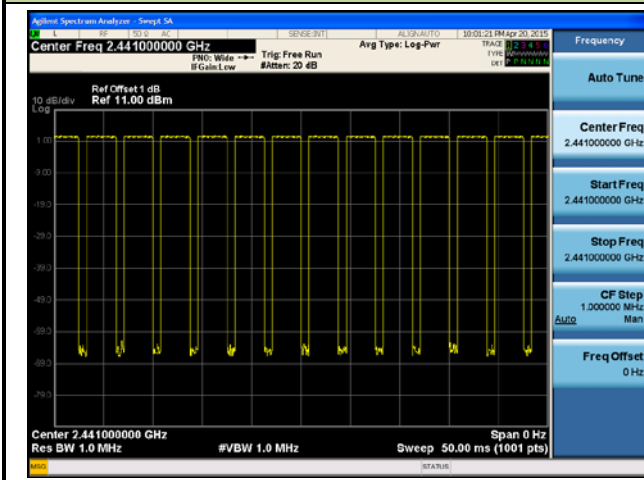


Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1sec: 20/50msec=400hops/sec.

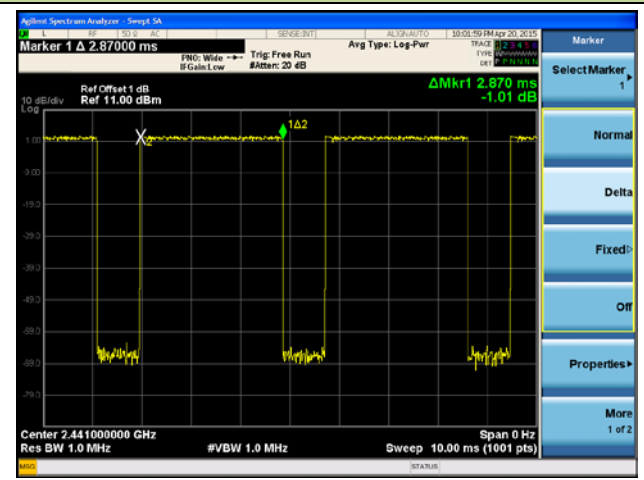
The Maximum Occupancy Time within 31.6sec: $[(1.680\text{ms} \times 400) / 79] \times 31.6 = 268.80$

3DH5 Time of Occupancy

Channel 39(2441MHz)



Channel 39(2441MHz)



Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1sec: $13/50$ msec=260 hops/sec.

The Maximum Occupancy Time within 31.6sec: $[(2.870\text{ms} \times 260)/79] \times 31.6 = 298.48$

7.7. Band-edge Compliance Measurement

7.7.1. Test Limit

The maximum permissible emission level is 20dBc. Any emissions were lying outside of the emission bandwidth and in authorized band edges to a field strength limit specified in Section 15.209 of the Title 47 CFR.

7.7.2. Test Procedure Used

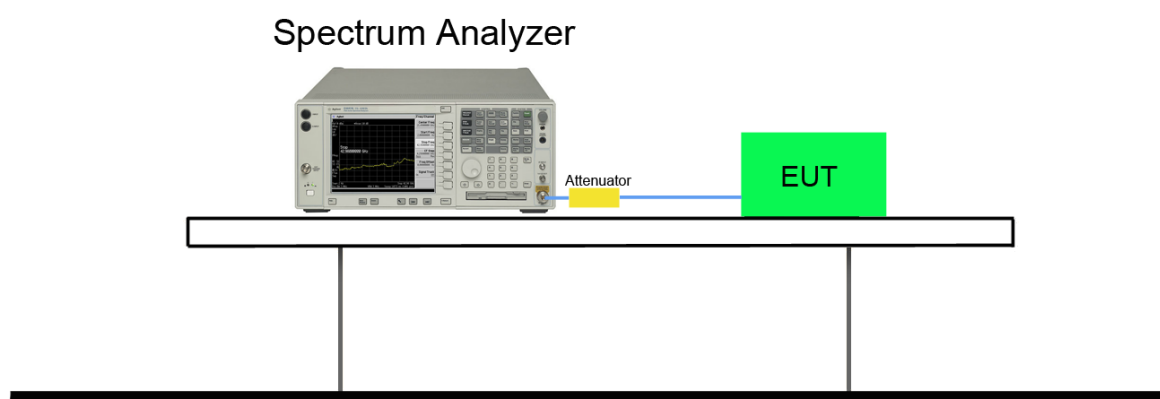
ANSI C63.10-2009 - Section 7.7.9

7.7.3. Test Setting

1. Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2. RBW $\geq$ 1% of spectrum analyzer display span
3. VBW $\geq$ RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission.

7.7.4. Test Setup



7.7.5. Test Result

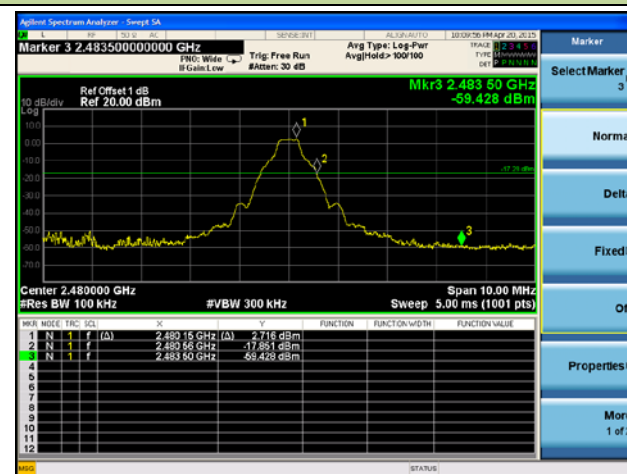
Test Mode	Channel No.	Frequency (MHz)	Limit	Result
DH5	00	2402	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	78	2480	20dBc	Pass

DH5 Band-edge Compliance

Channel 00 (2402MHz)



Channel 78 (2480MHz)

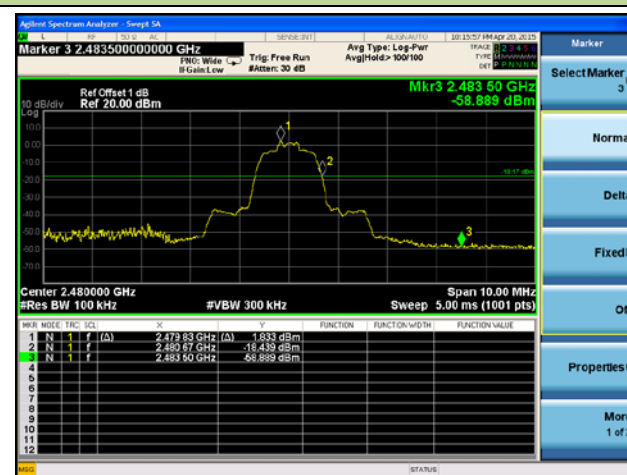


2DH5 Band-edge Compliance

Channel 00 (2402MHz)

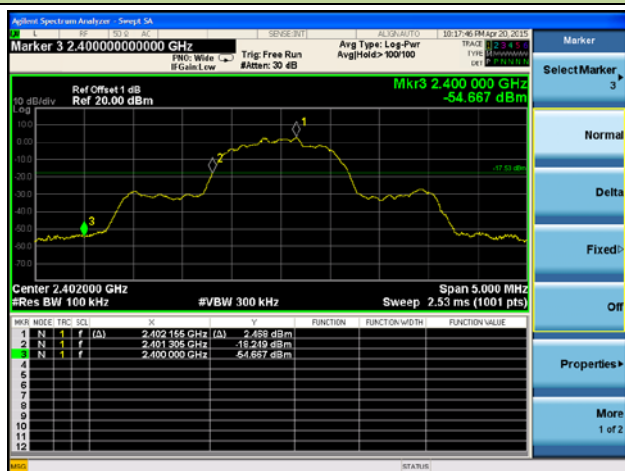


Channel 78 (2480MHz)

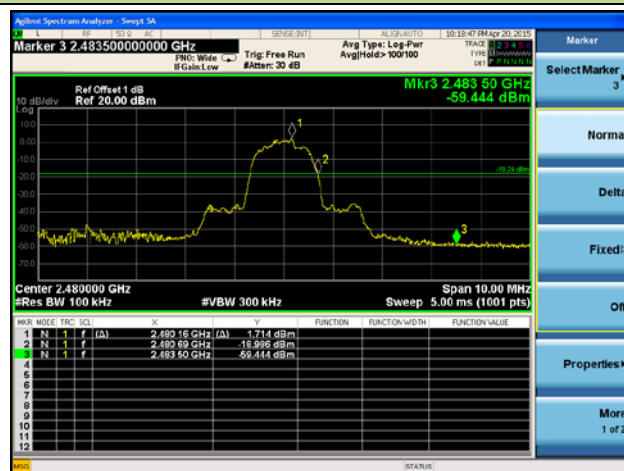


3DH5 Band-edge Compliance

Channel 00 (2402MHz)

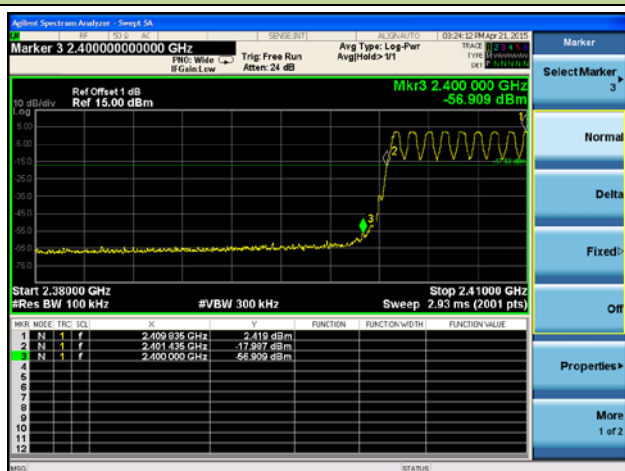


Channel 78 (2480MHz)

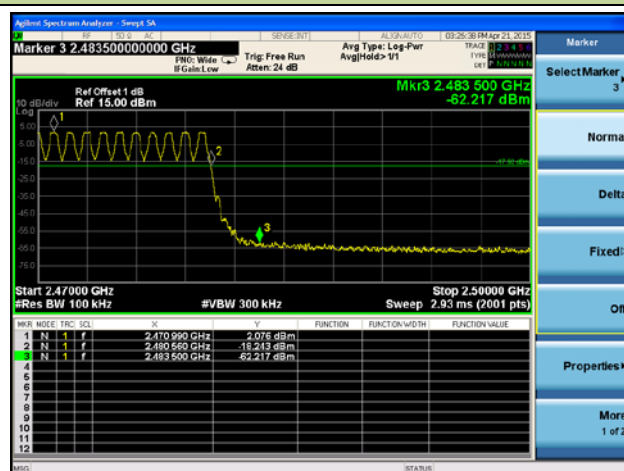


DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)

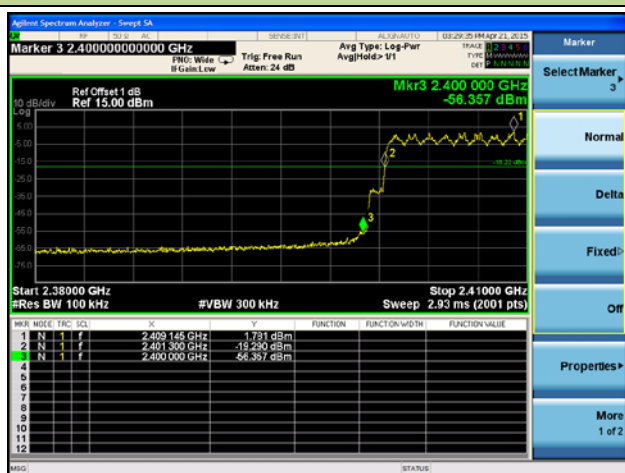


Channel 78 (2480MHz)

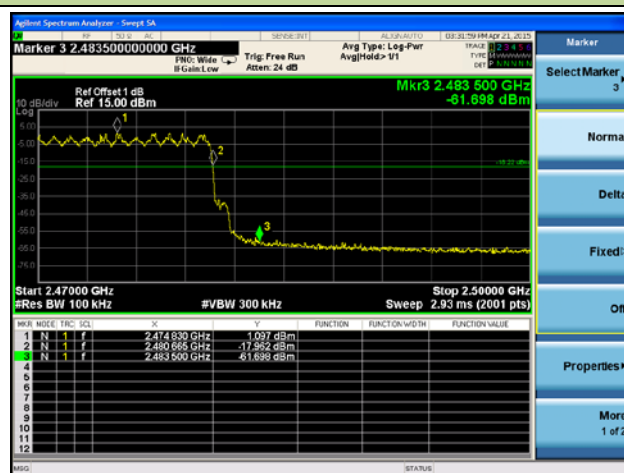


2DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)

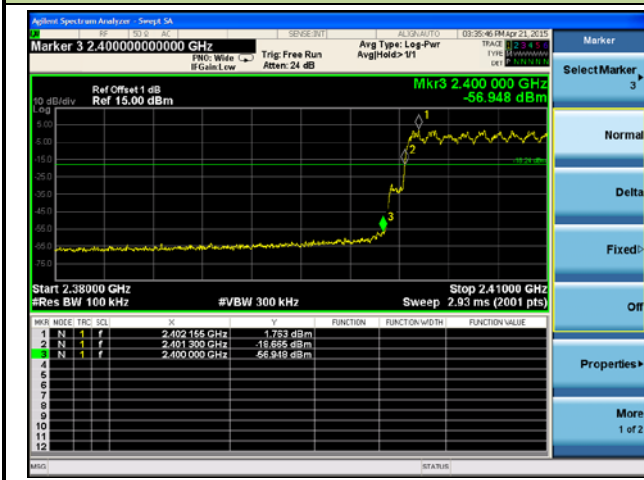


Channel 78 (2480MHz)

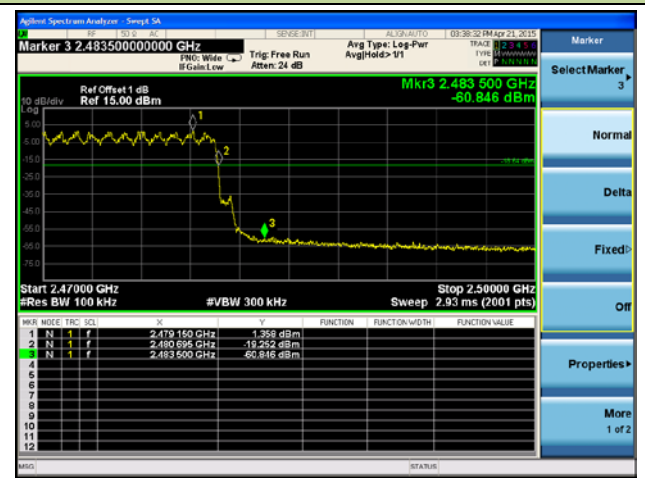


3DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)



Channel 78 (2480MHz)



7.8. Conducted Spurious Emissions Measurement

7.8.1. Test Limit

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

7.8.2. Test Procedure Used

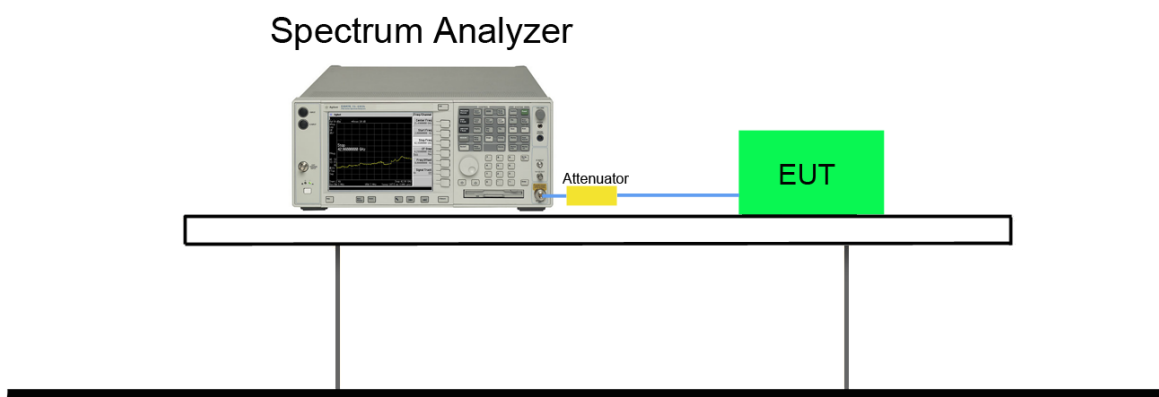
ANSI C63.10-2009 - Section 7.7.10

7.8.3. Test Setting

1. Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
2. RBW = 100 KHz
3. VBW $\geq$ RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

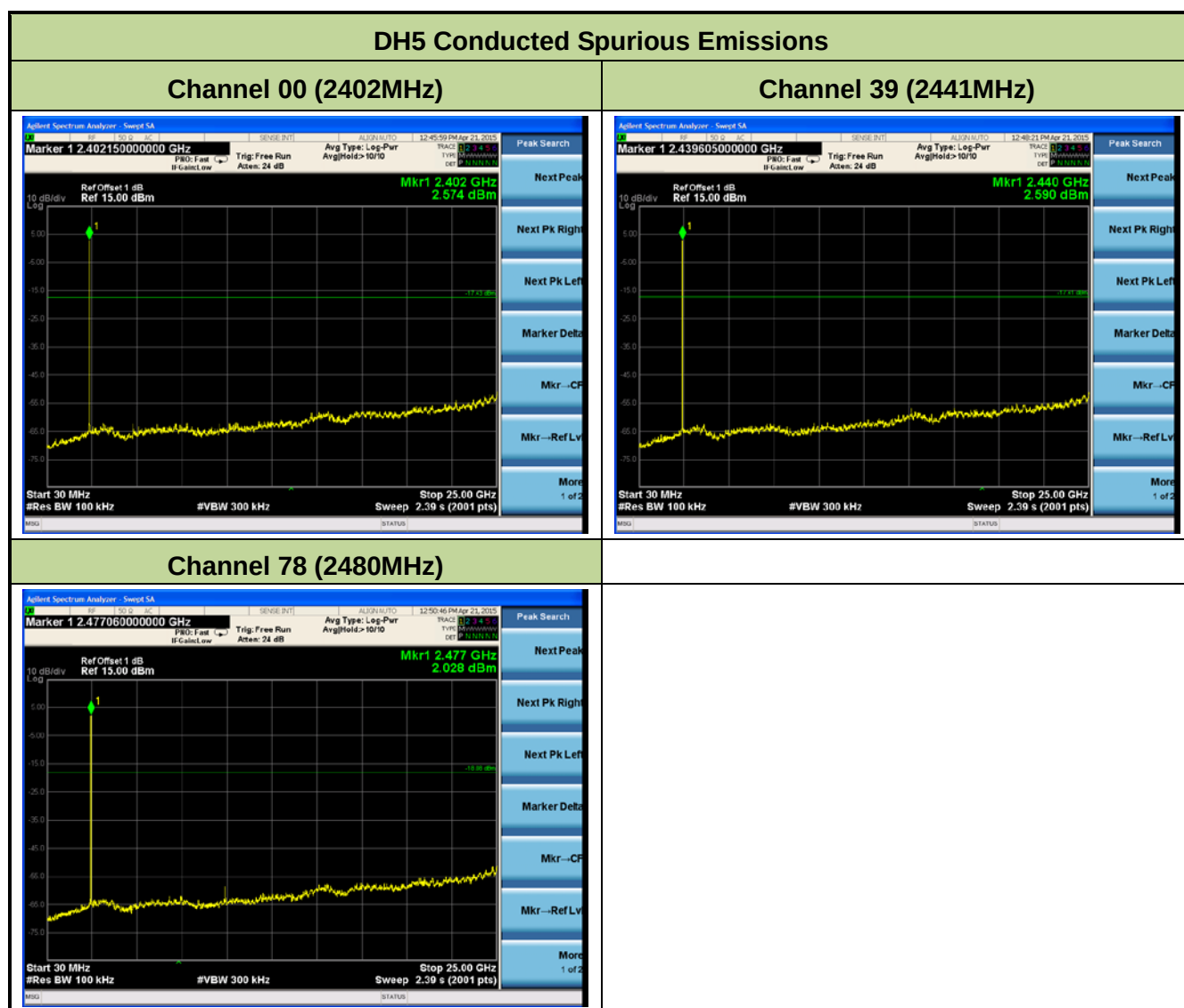
Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this section.

7.8.4. Test Setup



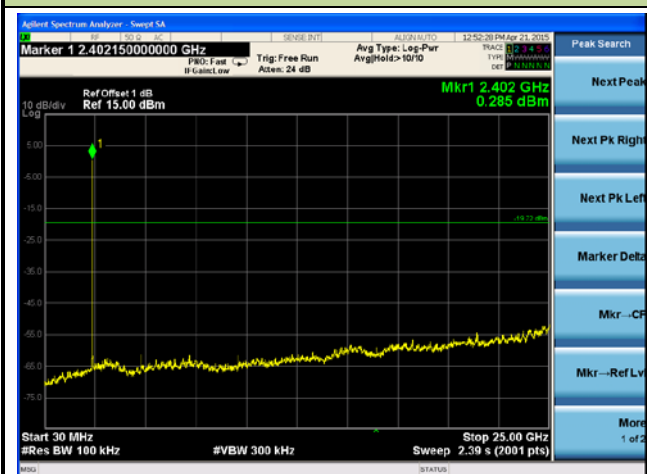
7.8.5. Test Result

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

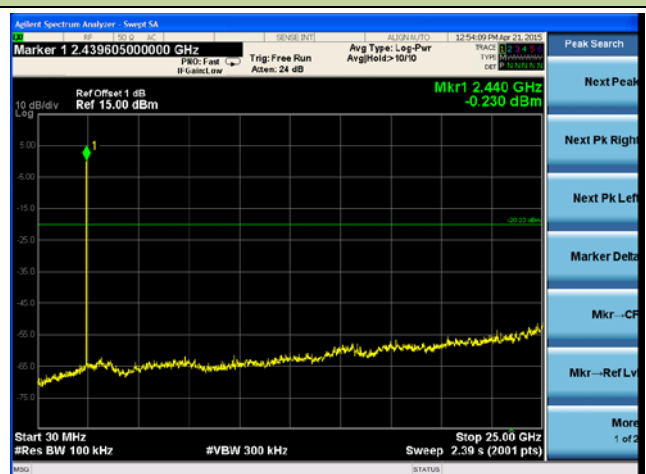


2DH5 Conducted Spurious Emissions

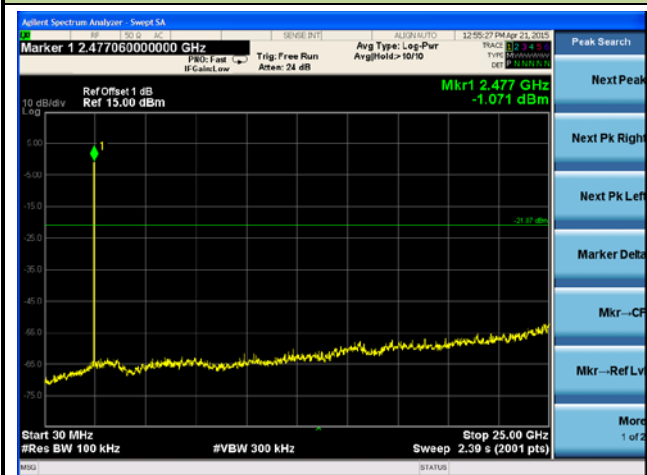
Channel 00 (2402MHz)



Channel 39 (2441MHz)

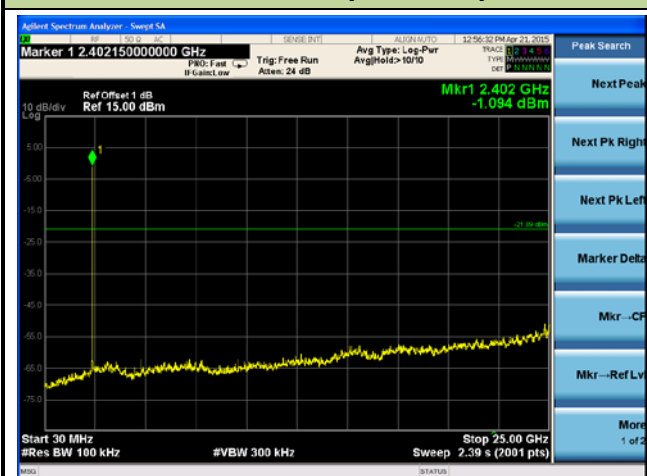


Channel 78 (2480MHz)

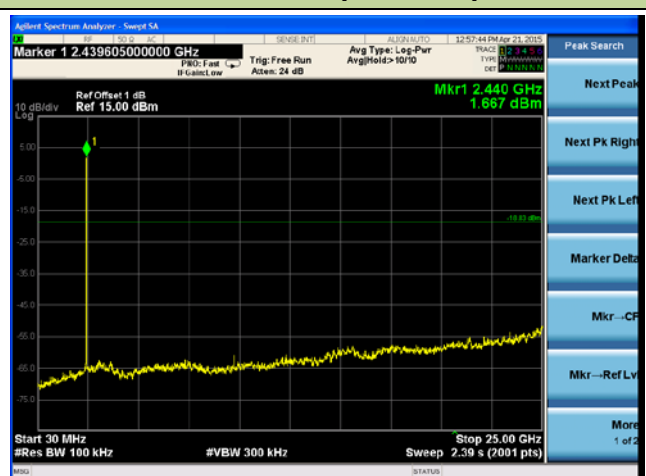


3DH5 Conducted Spurious Emissions

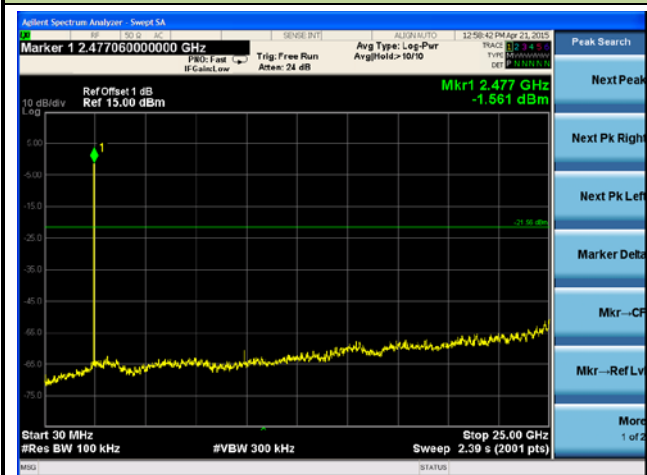
Channel 00 (2402MHz)



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 [V/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 C63.10-2009 - Section 7.10.1 & Section 7.10.2

7.9.3. Test Setting

Peak Field Strength Measurements

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

Table 1 - RBW as a function of frequency

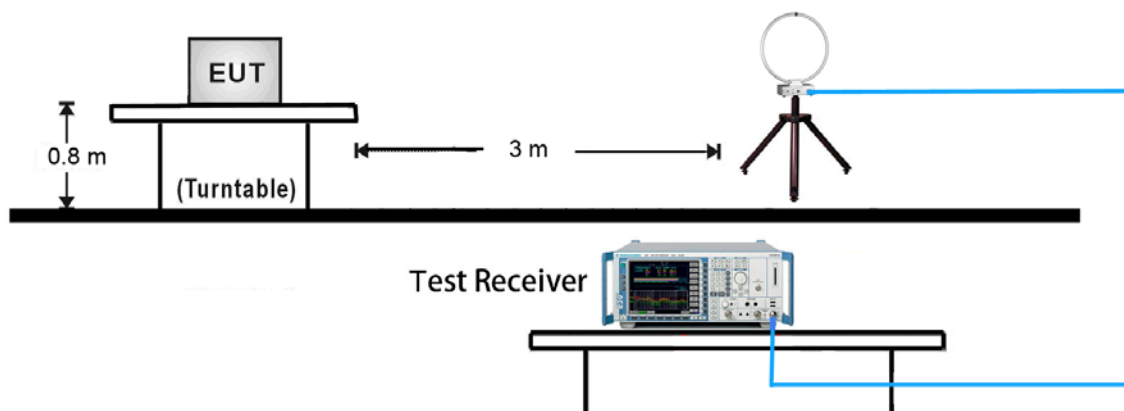
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

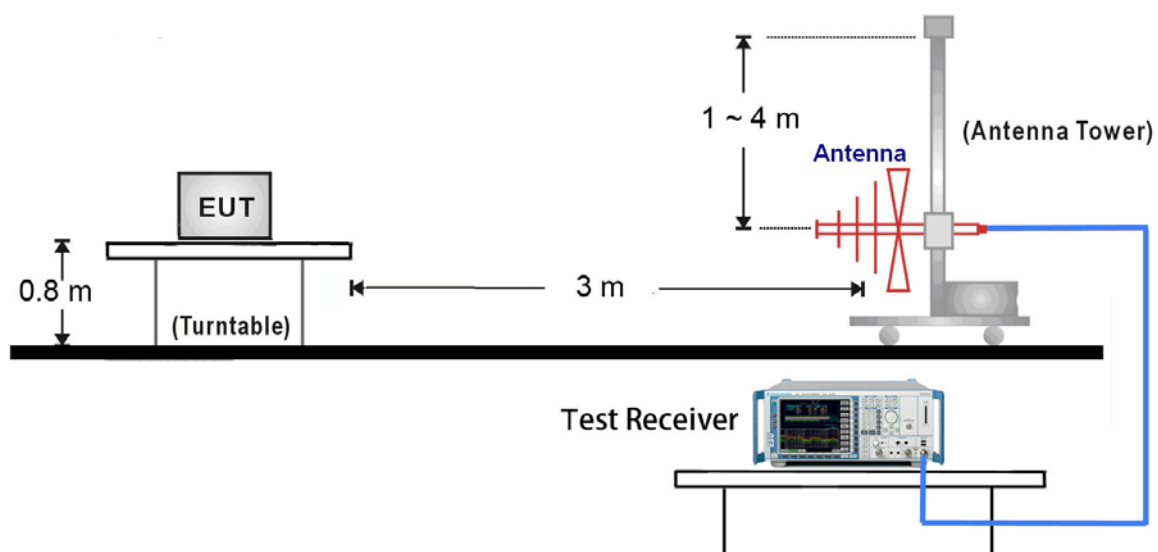
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

7.9.4. Test Setup

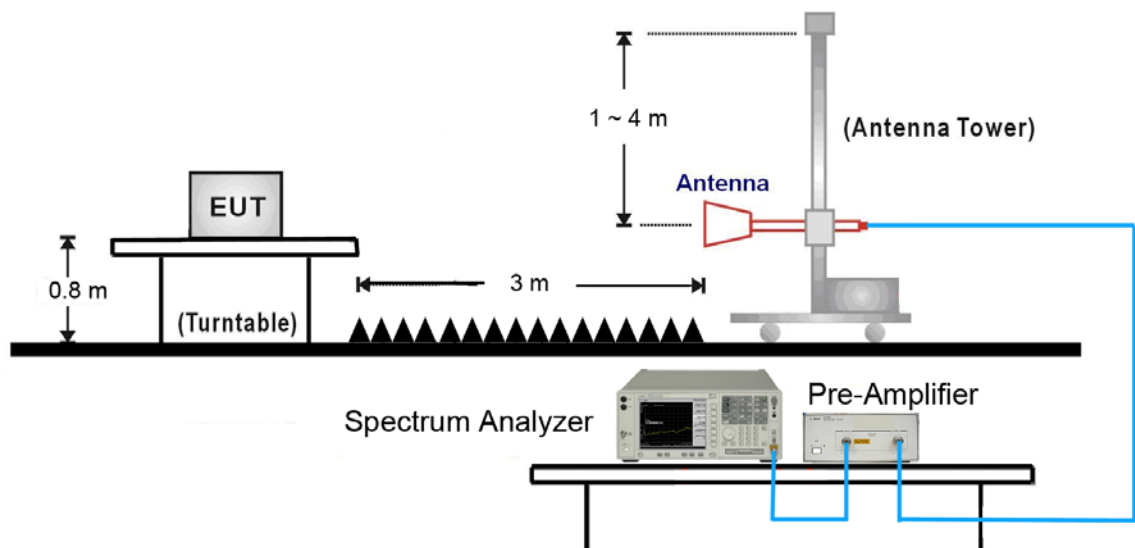
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 25GHz Test Setup:



7.9.5. Test Result

Test Mode:	3DH5	Test Site:	AC1
Test Channel:	78	Test Engineer:	Line Chen
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. The worst case of Radiated Spurious Emission. 3. 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
*	3017.0	38.6	-2.1	36.5	77.2	-40.7	Peak	Horizontal
*	3594.5	36.9	-0.7	36.2	77.2	-41.0	Peak	Horizontal
	4960.0	35.4	2.9	38.3	74.0	-35.7	Peak	Horizontal
	7440.0	34.9	8.0	42.9	74.0	-31.1	Peak	Horizontal
*	3168.0	39.1	-1.5	37.5	77.2	-39.7	Peak	Vertical
*	3583.0	37.1	-0.8	36.4	77.2	-40.8	Peak	Vertical
	4960.0	35.3	2.9	38.2	74.0	-35.8	Peak	Vertical
	7440.0	35.4	8.0	43.4	74.0	-30.6	Peak	Vertical

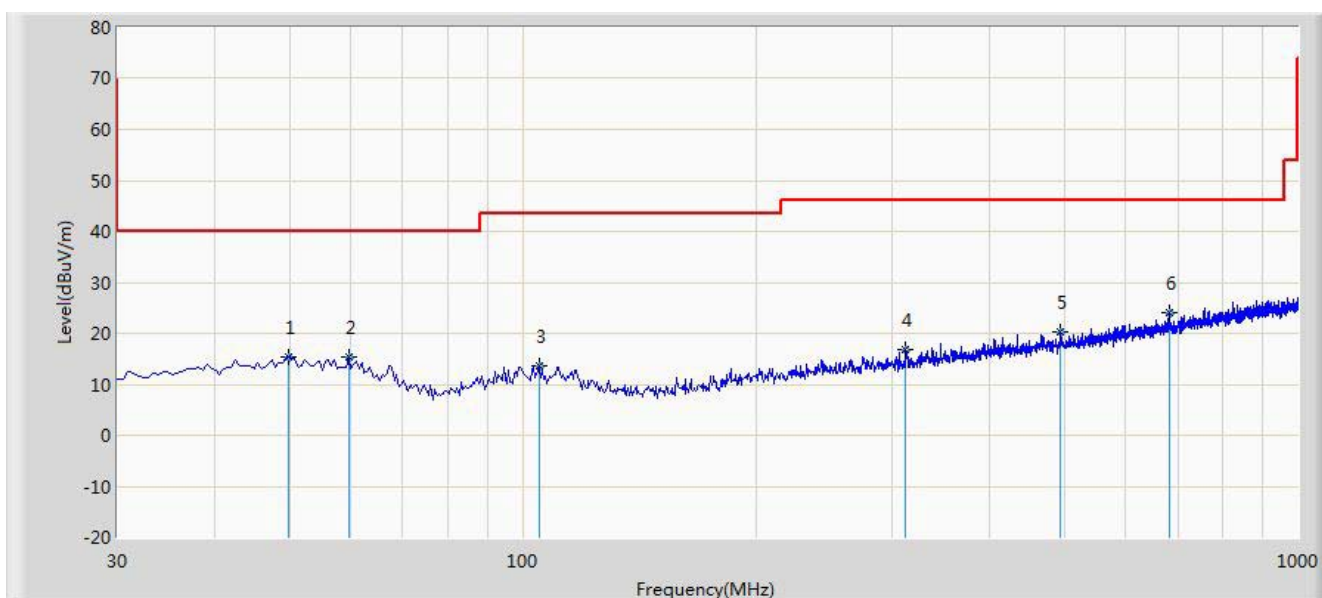
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (97.2dBμV/m).

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 9KHz ~ 1GHz and 18GHz ~ 25GHz:

Site: AC1	Time: 2015/04/15 - 20:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worse Case Mode: 3DH5 at Channel 2480MHz	

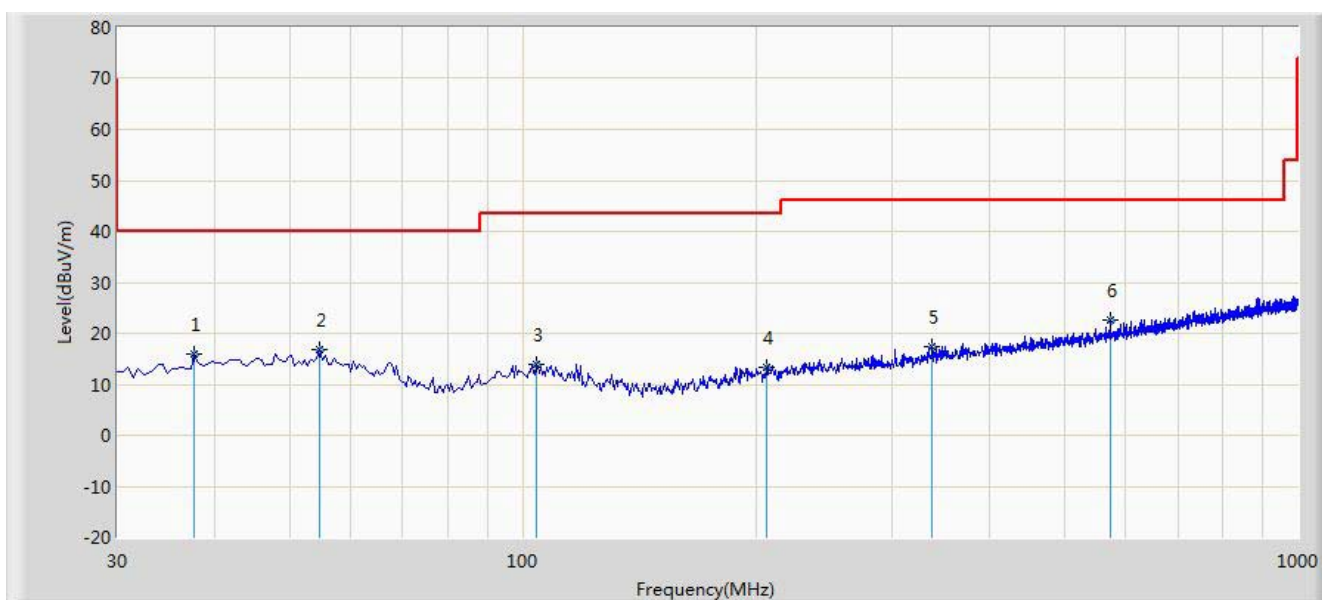


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		49.885	15.432	0.524	-24.568	40.000	14.908	QP
2		59.585	15.417	1.495	-24.583	40.000	13.922	QP
3		105.175	13.562	0.495	-29.938	43.500	13.067	QP
4		312.270	16.923	2.108	-29.077	46.000	14.815	QP
5		494.630	20.414	2.263	-25.586	46.000	18.151	QP
6	*	682.325	24.060	2.900	-21.940	46.000	21.160	QP

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

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

Site: AC1	Time: 2015/04/15 - 20:55
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worse Case Mode: 3DH5 at Channel 2480MHz	

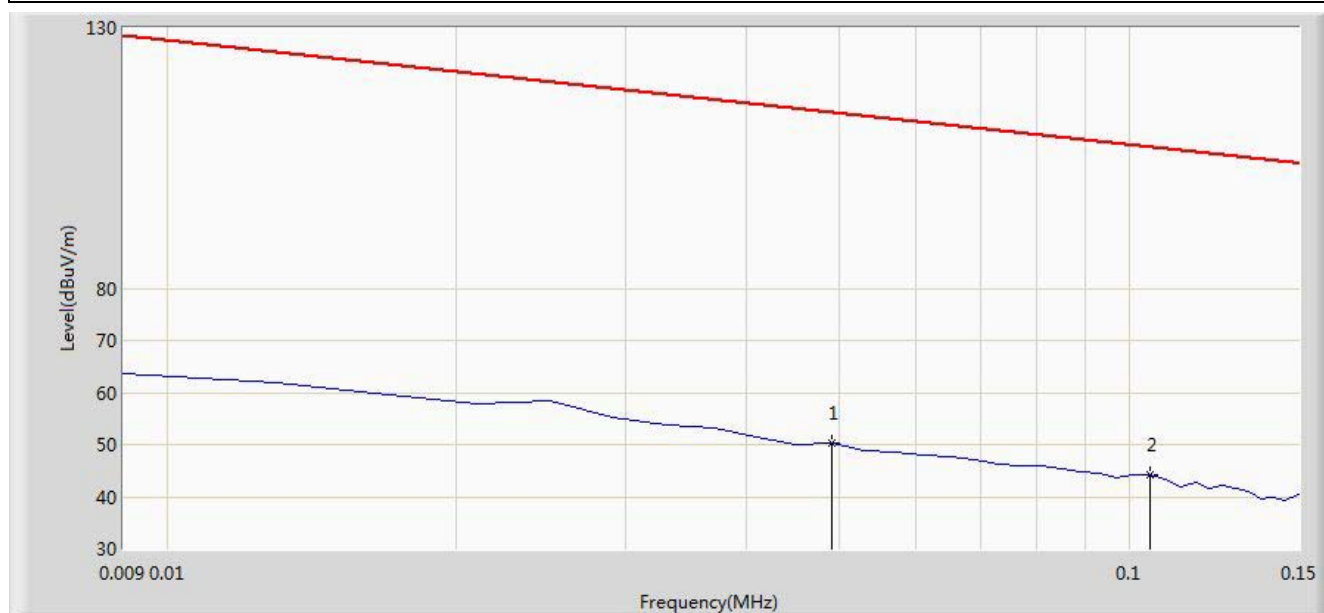


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		37.760	15.870	2.452	-24.130	40.000	13.418	QP
2	*	54.735	16.913	2.205	-23.087	40.000	14.708	QP
3		104.205	13.823	0.726	-29.677	43.500	13.097	QP
4		206.055	13.427	1.093	-30.073	43.500	12.334	QP
5		337.490	17.473	1.937	-28.527	46.000	15.536	QP
6		573.200	22.484	2.963	-23.516	46.000	19.521	QP

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

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

Site: AC1	Time: 2015/04/15 - 15:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: FMZB1519_0.009-30MHz	Polarity: Face On
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

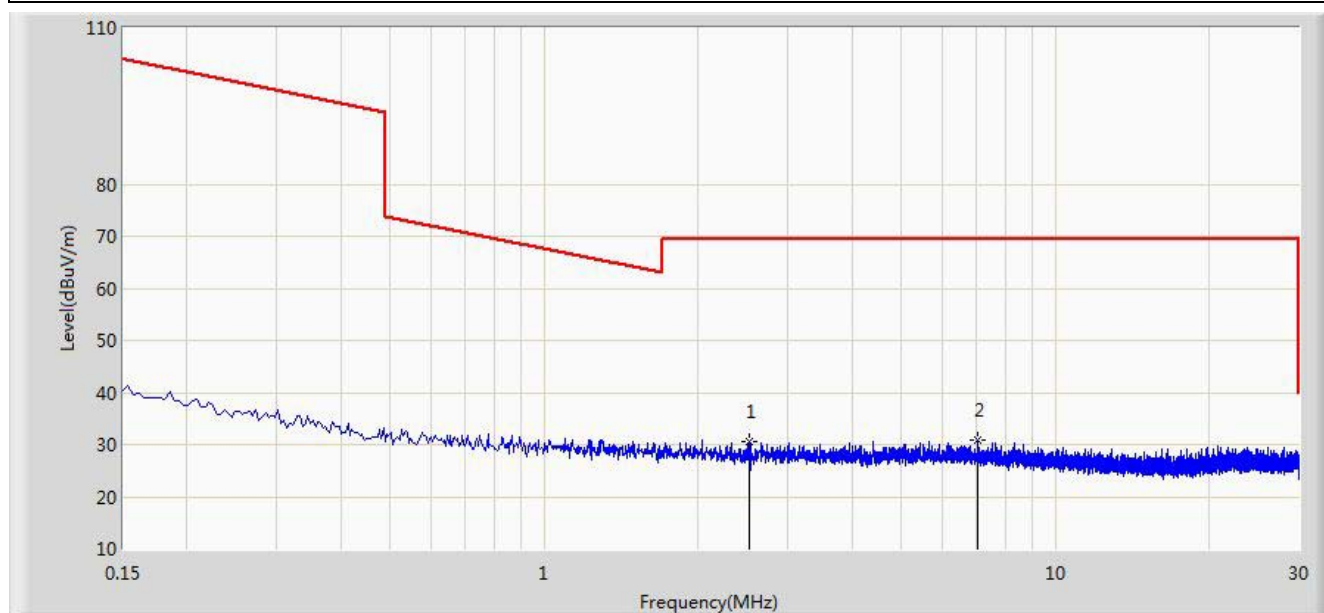


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.049	50.367	29.861	-63.422	113.789	20.505	QP
2		*	0.105	44.143	23.996	-63.029	107.173	20.147	QP

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

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

Site: AC1	Time: 2015/04/15 - 15:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: FMZB1519_0.009-30MHz	Polarity: Face On
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

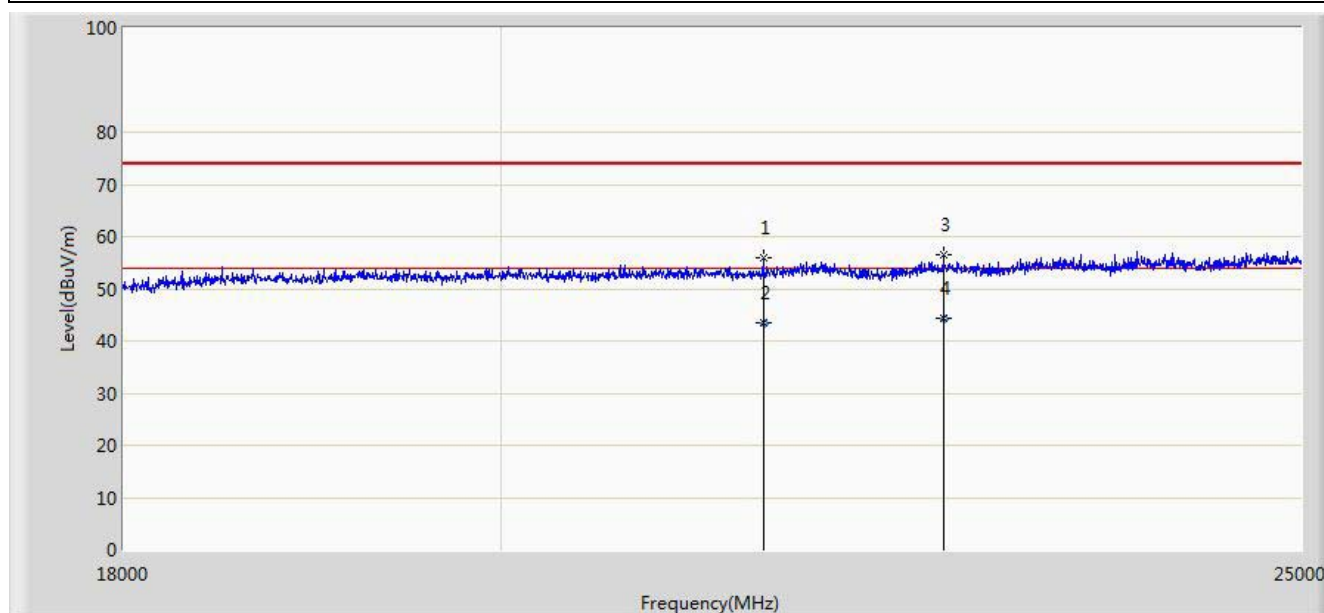


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2.513	30.495	10.336	-39.005	69.500	20.159	QP
2		*	7.041	30.974	10.579	-38.526	69.500	20.395	QP

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

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

Site: AC1	Time: 2015/04/15 - 15:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	

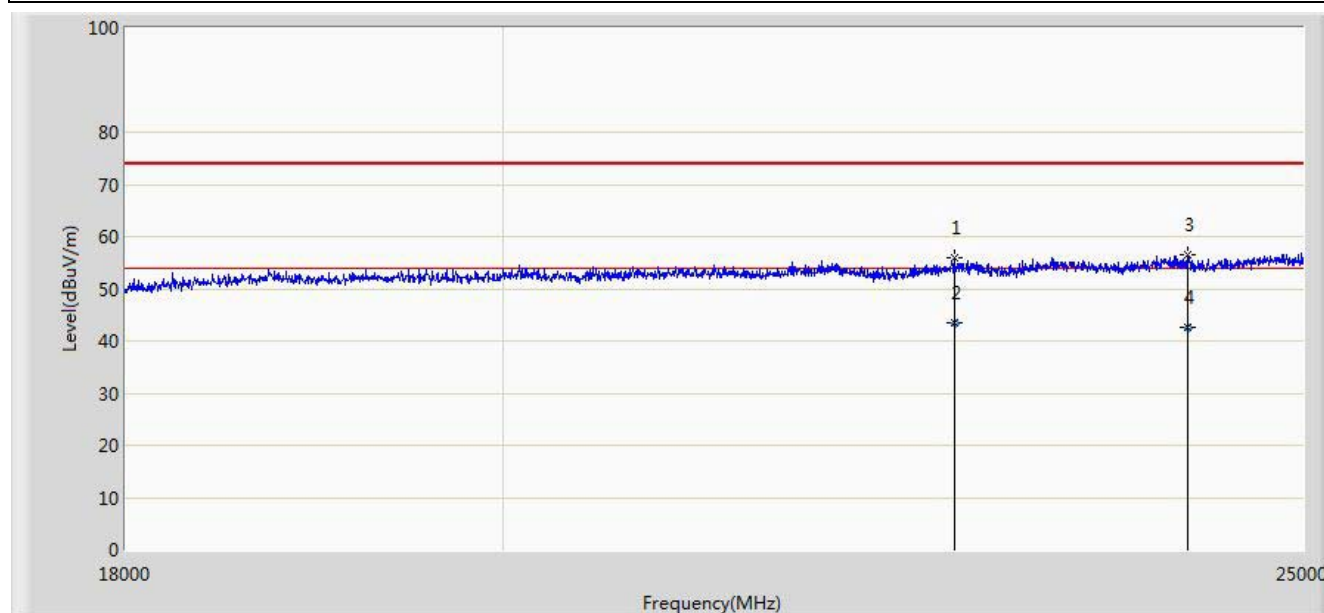


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			21517.500	55.869	17.883	-18.131	74.000	37.986	PK
2			21517.650	43.351	5.365	-10.649	54.000	37.986	AV
3			22630.500	56.509	18.223	-17.491	74.000	38.286	PK
4		*	22630.540	44.310	6.024	-9.690	54.000	38.286	AV

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

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

Site: AC1	Time: 2015/04/15 - 16:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			22686.500	55.811	17.457	-18.189	74.000	38.354	PK
2			22686.540	43.598	5.244	-10.402	54.000	38.354	AV
3			24205.500	56.430	17.607	-17.570	74.000	38.823	PK
4		*	24205.658	42.518	3.695	-11.482	54.000	38.823	AV

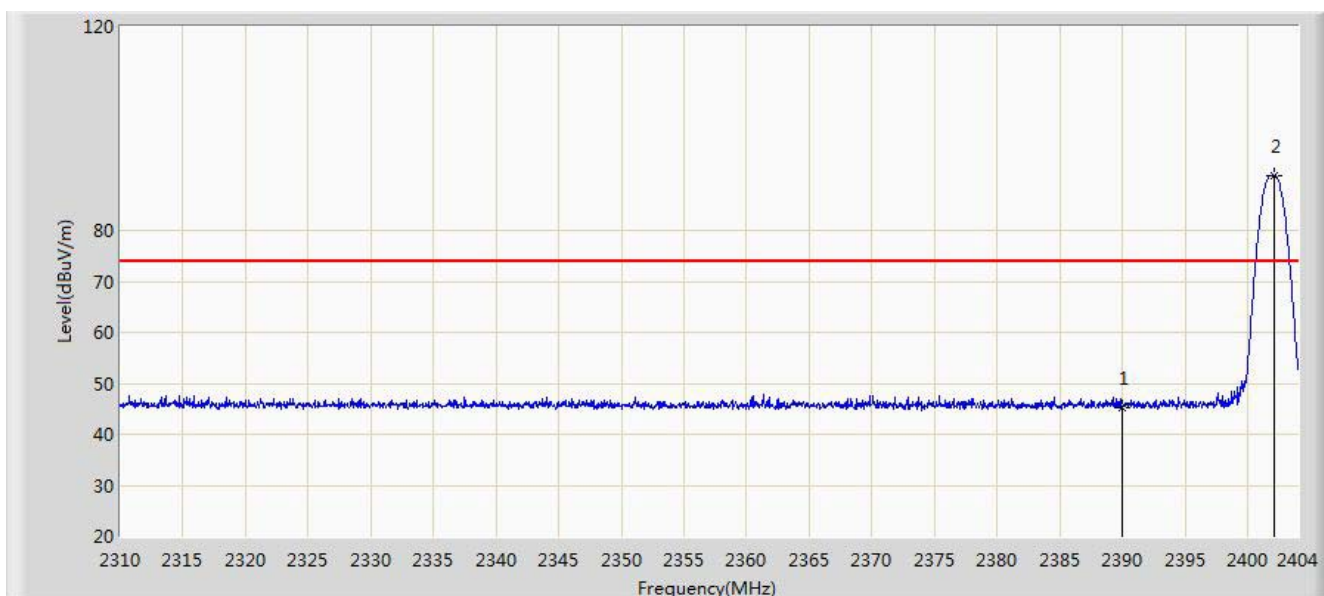
Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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

7.10. Radiated Restricted Band Edge Measurement

7.10.1. Test Result

Site: AC1	Time: 2015/04/15 - 20:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: DH5 at Channel 2402MHz	

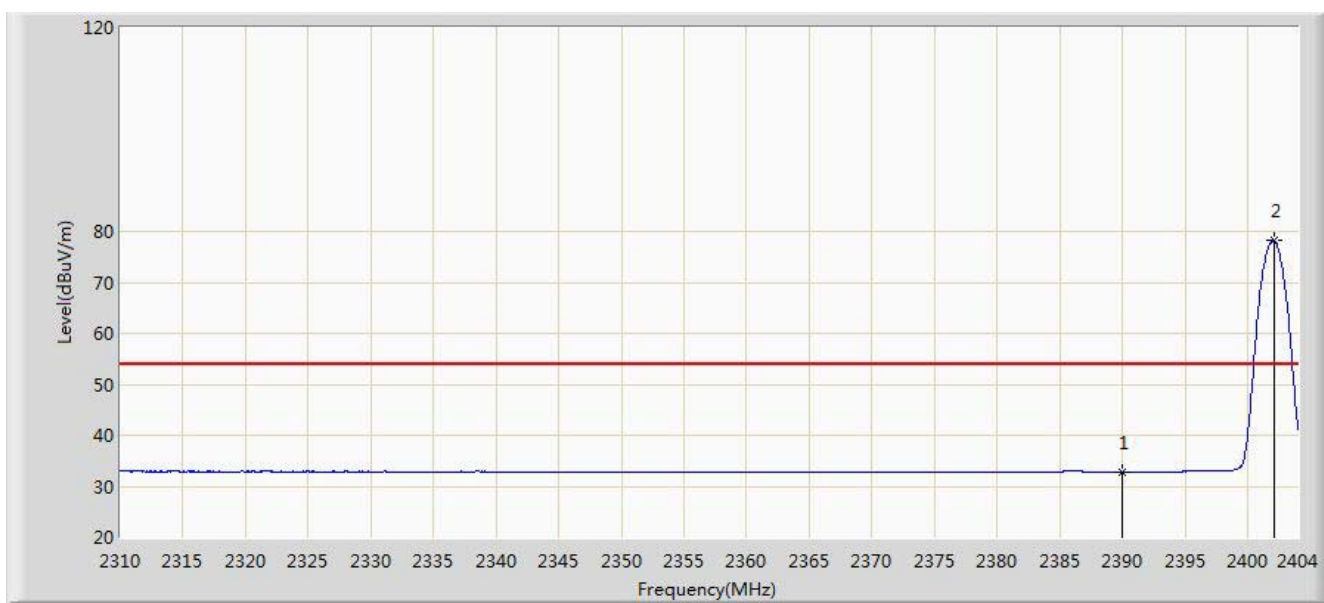


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.324	14.121	-28.676	74.000	31.203	PK
2	*	2402.073	90.825	59.641	N/A	N/A	31.184	PK

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

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

Site: AC1	Time: 2015/04/15 - 20:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: DH5 at Channel 2402MHz	

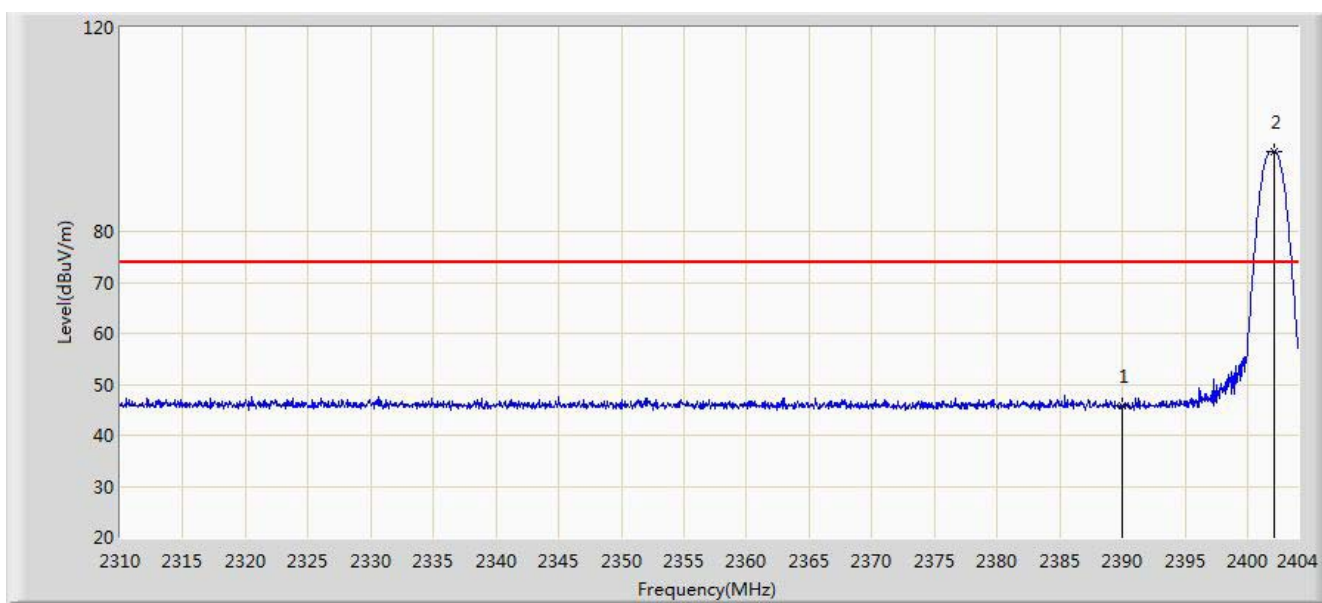


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	32.785	1.582	-21.215	54.000	31.203	AV
2	*	2402.073	78.258	47.074	N/A	N/A	31.184	AV

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

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

Site: AC1	Time: 2015/04/15 - 20:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: DH5 at Channel 2402MHz	

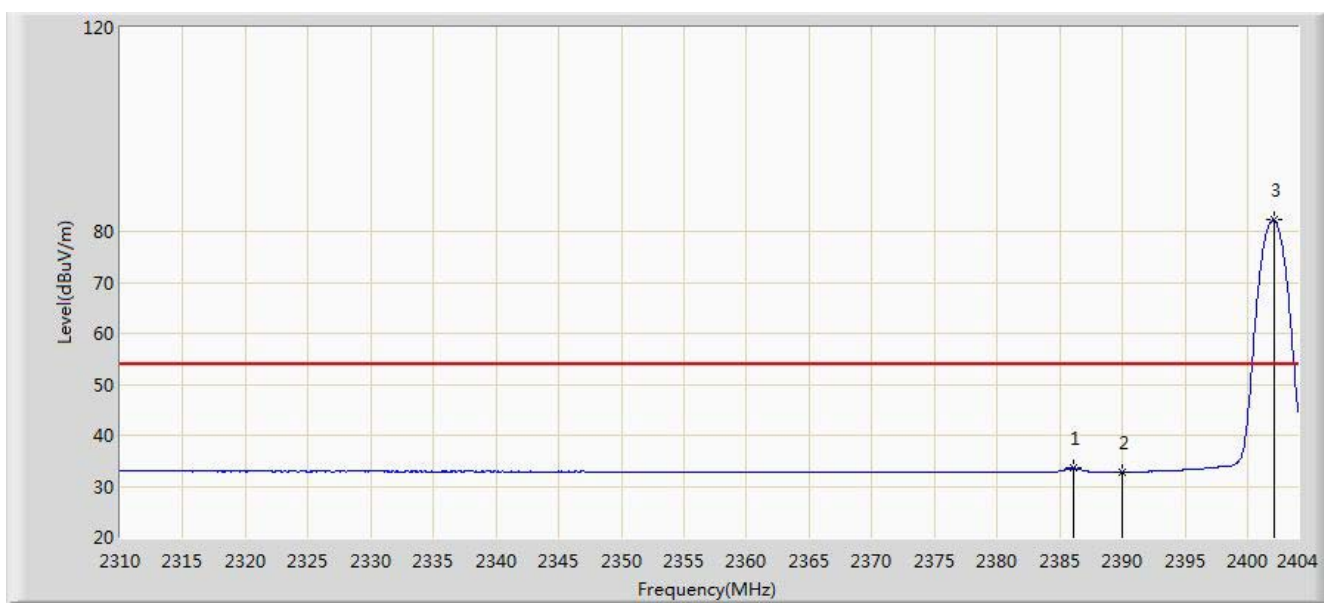


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2390.000	45.765	14.562	-28.235	74.000	31.203	PK
2	*	2402.073	95.715	64.531	N/A	N/A	31.184	PK

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

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

Site: AC1	Time: 2015/04/15 - 20:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: DH5 at Channel 2402MHz	

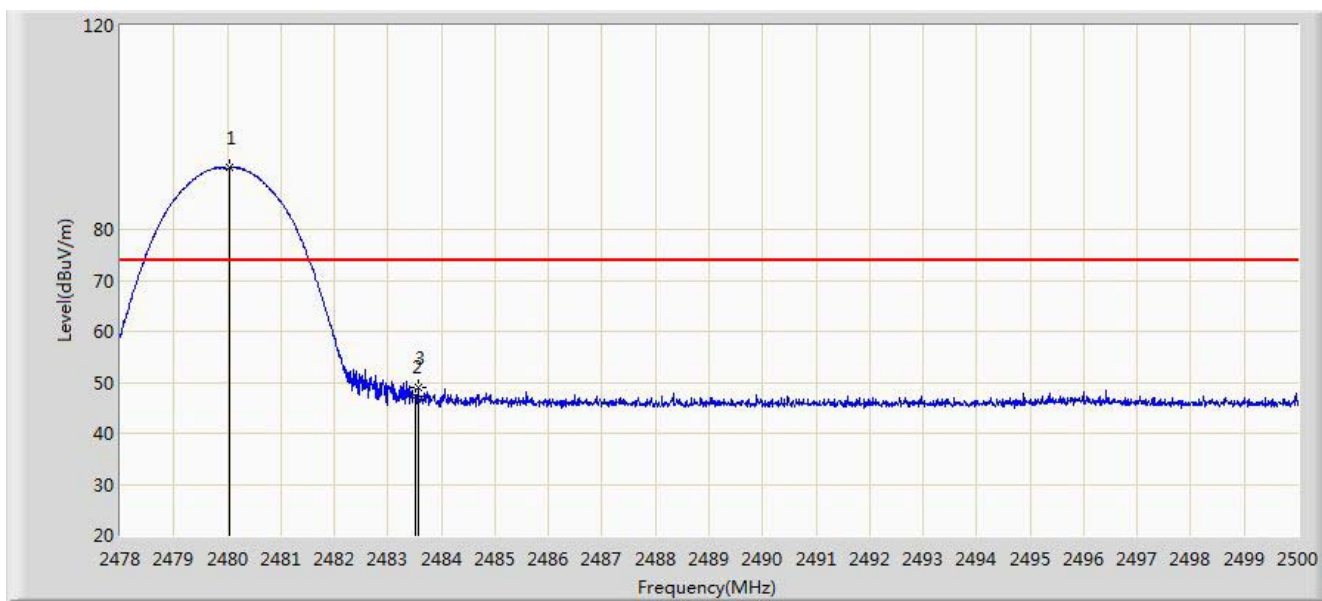


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		2386.093	33.544	2.334	-20.456	54.000	31.210	AV
2		2390.000	32.811	1.608	-21.189	54.000	31.203	AV
3	*	2402.073	82.197	51.013	N/A	N/A	31.184	AV

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

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

Site: AC1	Time: 2015/04/15 - 20:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: 3DH5 at Channel 2480MHz	

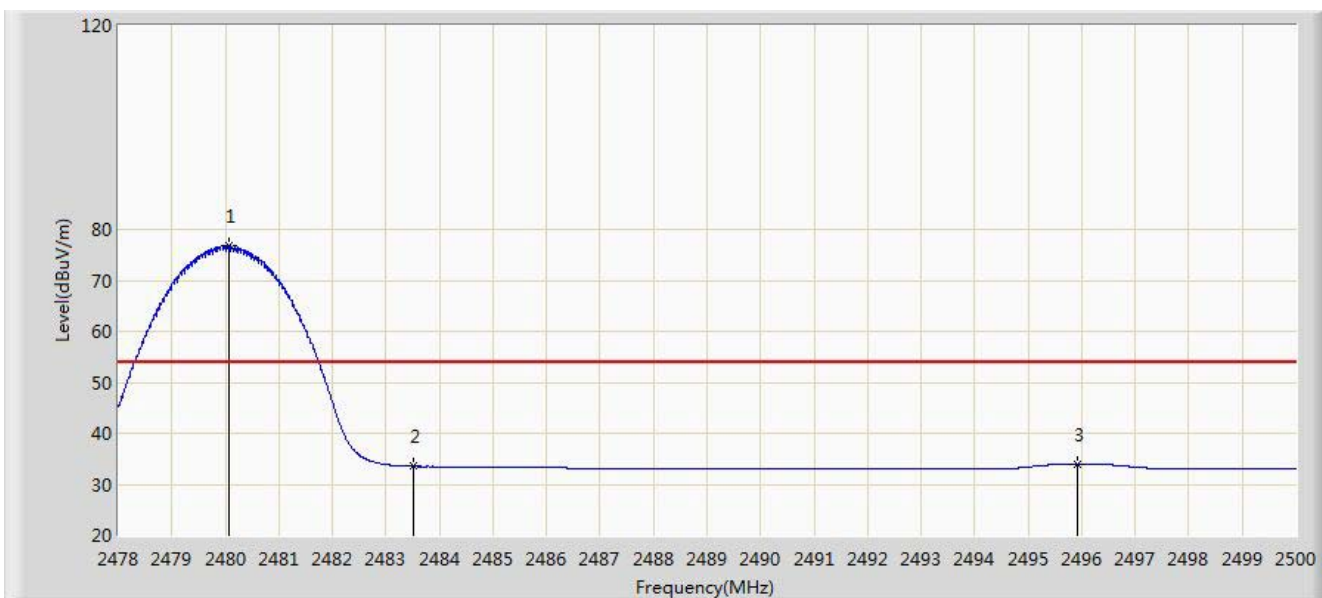


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.046	92.131	60.947	N/A	N/A	31.184	PK
2		2483.500	47.115	15.922	-26.885	74.000	31.194	PK
3		2483.566	49.096	17.903	-24.904	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/04/15 - 20:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: 3DH5 at Channel 2480MHz	

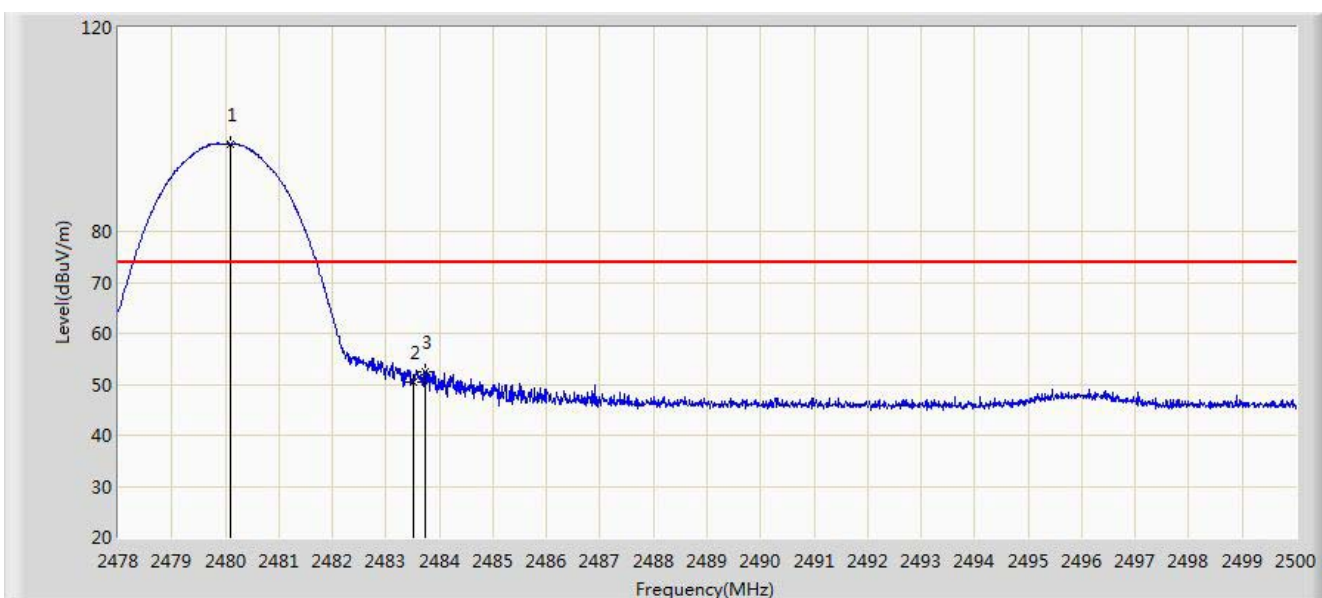


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.068	76.712	45.528	N/A	N/A	31.184	AV
2		2483.500	33.508	2.315	-20.492	54.000	31.194	AV
3		2495.919	34.017	2.791	-19.983	54.000	31.226	AV

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

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

Site: AC1	Time: 2015/04/15 - 20:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: 3DH5 at Channel 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.090	97.208	66.024	N/A	N/A	31.184	PK
2		2483.500	50.569	19.376	-23.431	74.000	31.194	PK
3		2483.742	52.467	21.273	-21.533	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/04/15 - 20:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Line Chen
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Worst Case Mode: 3DH5 at Channel 2480MHz	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	*	2480.079	80.731	49.547	N/A	N/A	31.184	AV
2		2483.500	34.493	3.300	-19.507	54.000	31.194	AV
3		2495.886	35.197	3.971	-18.803	54.000	31.226	AV

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

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

7.11. AC Conducted Emissions Measurement

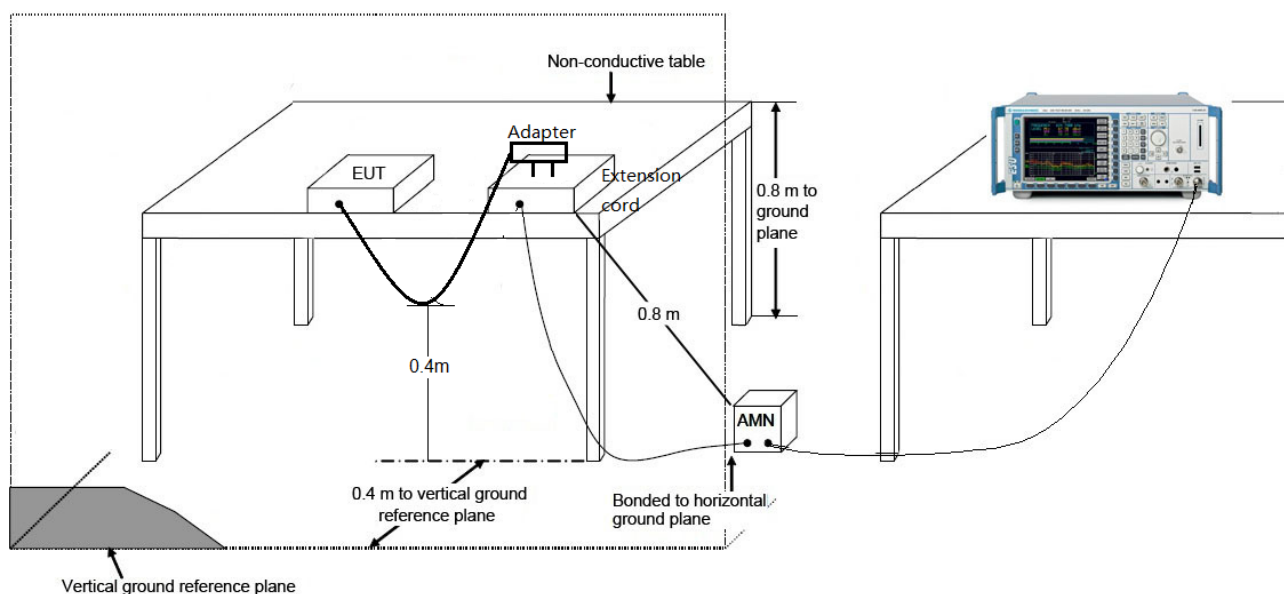
7.11.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	Average (dB μ V)
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.

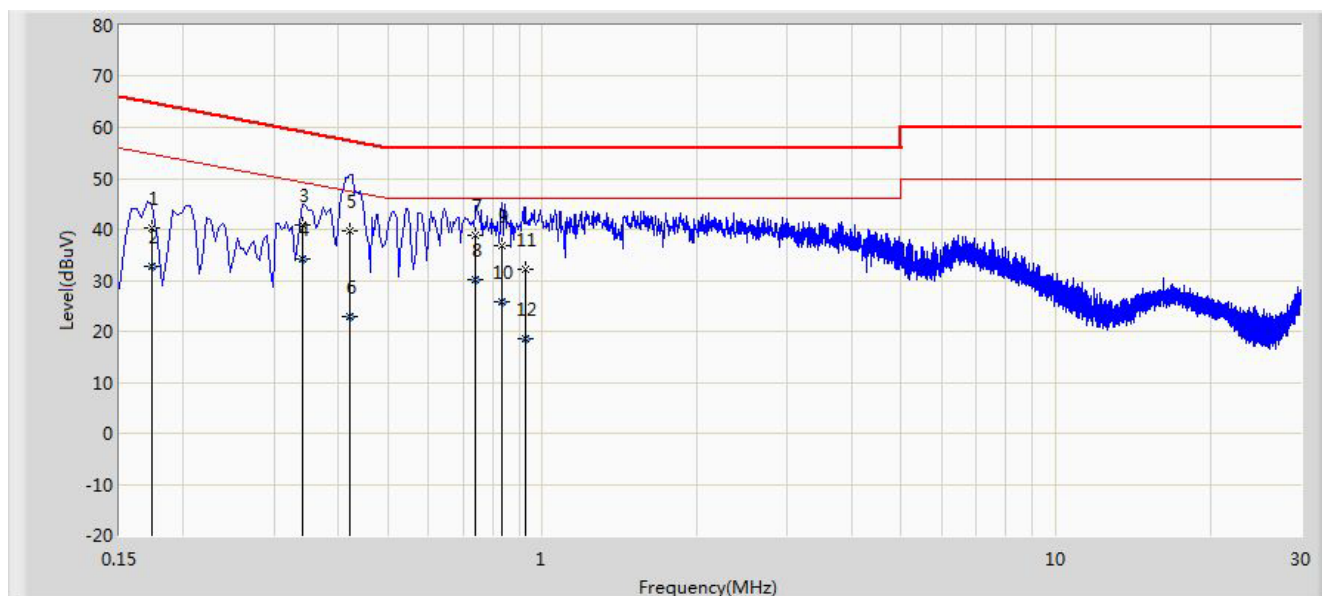
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.11.2. Test Setup



7.11.3. Test Result

Site: SR2	Time: 2015/04/21 - 10:23
Limit: FCC_Part15.207_CE_AC Power	Engineer: Line Chen
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Note: Mode 1	

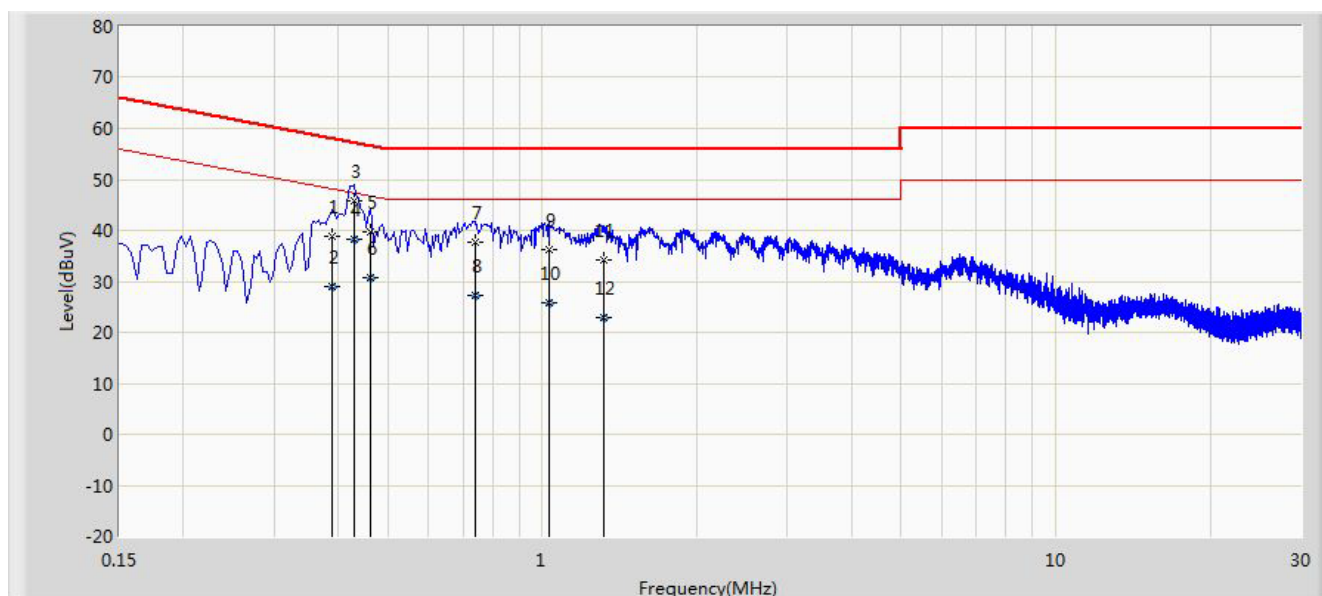


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.174	40.320	30.252	-24.447	64.767	10.068	QP
2			0.174	32.786	22.718	-21.982	54.767	10.068	AV
3			0.342	40.833	30.795	-18.322	59.155	10.038	QP
4		*	0.342	34.267	24.229	-14.887	49.155	10.038	AV
5			0.422	39.763	29.660	-17.645	57.409	10.104	QP
6			0.422	22.833	12.730	-24.575	47.409	10.104	AV
7			0.742	38.904	28.863	-17.096	56.000	10.041	QP
8			0.742	30.213	20.171	-15.787	46.000	10.041	AV
9			0.834	36.882	26.888	-19.118	56.000	9.994	QP
10			0.834	25.712	15.718	-20.288	46.000	9.994	AV
11			0.926	32.213	22.267	-23.787	56.000	9.946	QP
12			0.926	18.593	8.647	-27.407	46.000	9.946	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SR2	Time: 2015/04/21 - 10:34
Limit: FCC_Part15.207_CE_AC Power	Engineer: Line Chen
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: IBO Bluetooth speaker	Power: AC 120V/60Hz
Note: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.390	38.973	28.868	-19.091	58.064	10.105	QP
2			0.390	28.890	18.785	-19.174	48.064	10.105	AV
3			0.430	45.804	35.669	-11.449	57.253	10.135	QP
4		*	0.430	38.392	28.257	-8.861	47.253	10.135	AV
5			0.462	39.849	29.691	-16.807	56.657	10.159	QP
6			0.462	30.865	20.707	-15.791	46.657	10.159	AV
7			0.738	37.678	27.625	-18.322	56.000	10.054	QP
8			0.738	27.230	17.177	-18.770	46.000	10.054	AV
9			1.034	36.242	26.334	-19.758	56.000	9.908	QP
10			1.034	25.756	15.848	-20.244	46.000	9.908	AV
11			1.314	34.289	24.391	-21.711	56.000	9.898	QP
12			1.314	22.854	12.957	-23.146	46.000	9.898	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **IBO Bluetooth speaker FCC ID: Y4N-IBO** is in compliance with Part 15C of the FCC Rules.

The End