

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

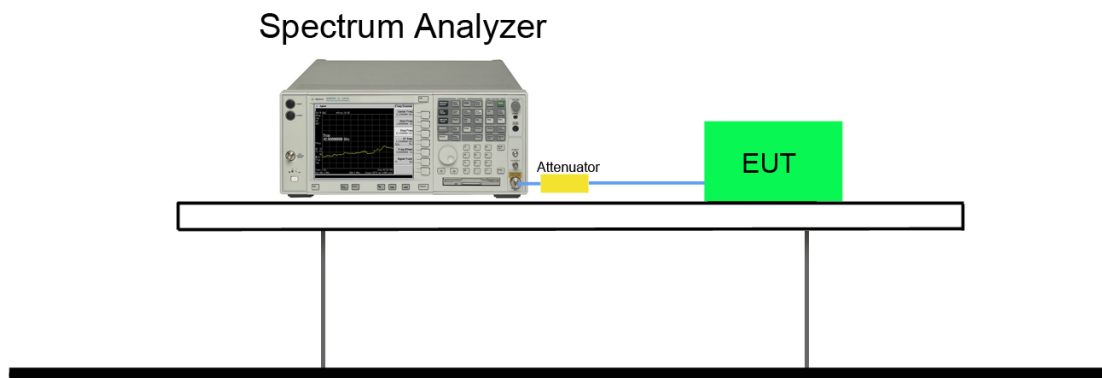
7.6.3. Test Settling

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.

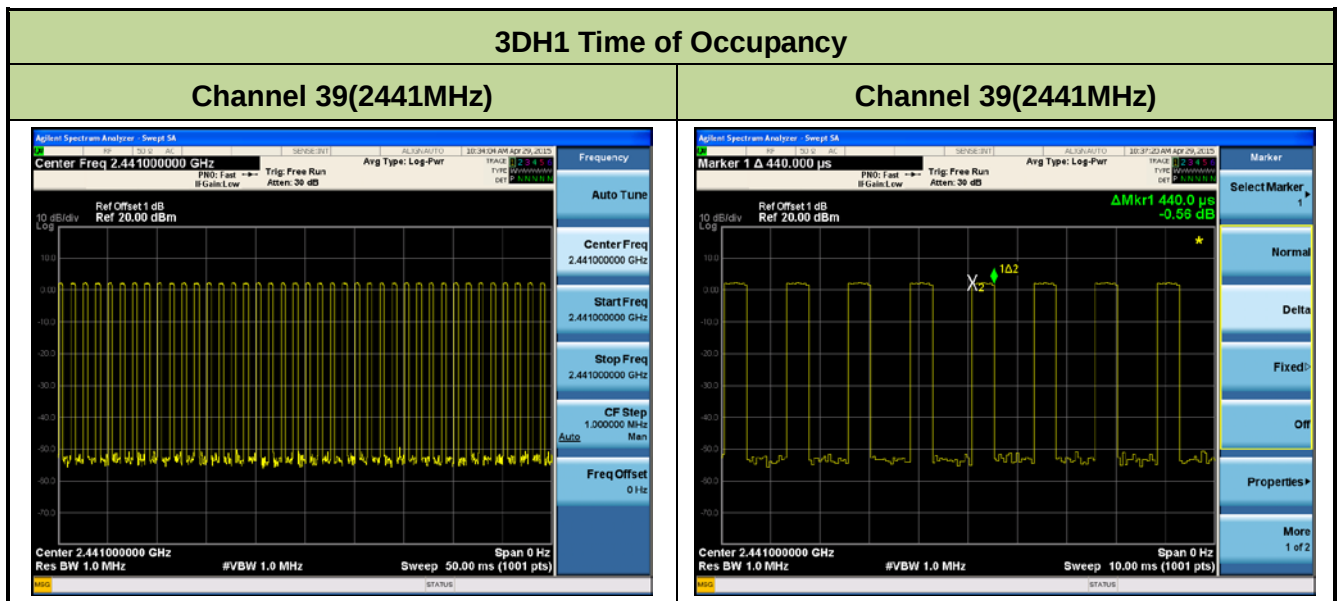
An oscilloscope may be used instead of a spectrum analyzer. The EUT shall show compliance with the appropriate regulatory limit for the number of hopping channels. A plot of the data shall be included in the test report.

7.6.4. Test Setup



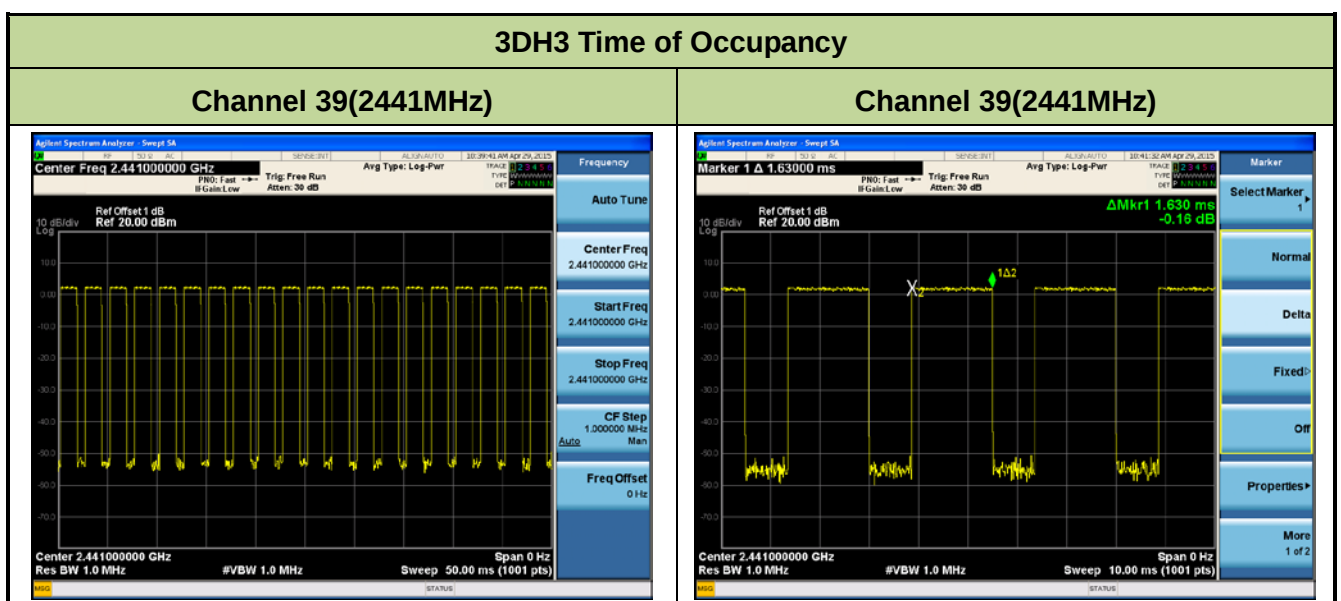
7.6.5. Test Result

Test Mode	Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
3DH1	39	2441	140.8	< 400	Pass
3DH3	39	2441	260.8	< 400	Pass
3DH5	39	2441	299.5	< 400	Pass



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

The Maximum Occupancy Time within 31.6sec: $[(0.440\text{ms} \times 800)/79] \times 31.6 = 140.8$ msec.

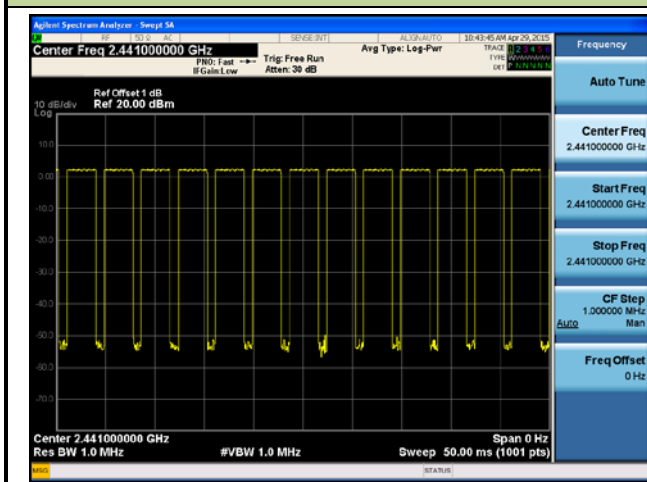


Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1sec: $20/50$ msec=400hops/sec.

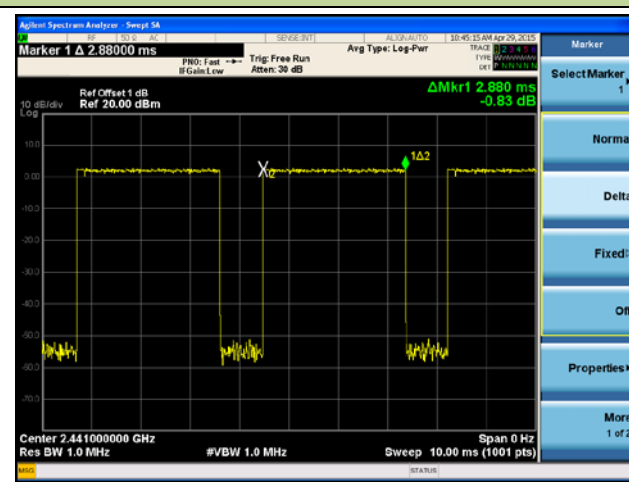
The Maximum Occupancy Time within 31.6sec: $[(1.630\text{ms} \times 400)/79] \times 31.6 = 260.80$ msec.

3DH5 Time of Occupancy

Channel 39(2441MHz)



Channel 39(2441MHz)



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

The Maximum Occupancy Time within 31.6 sec: $[(2.880 \text{ ms} \times 260) / 79] \times 31.6 = 299.52$ msec.

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

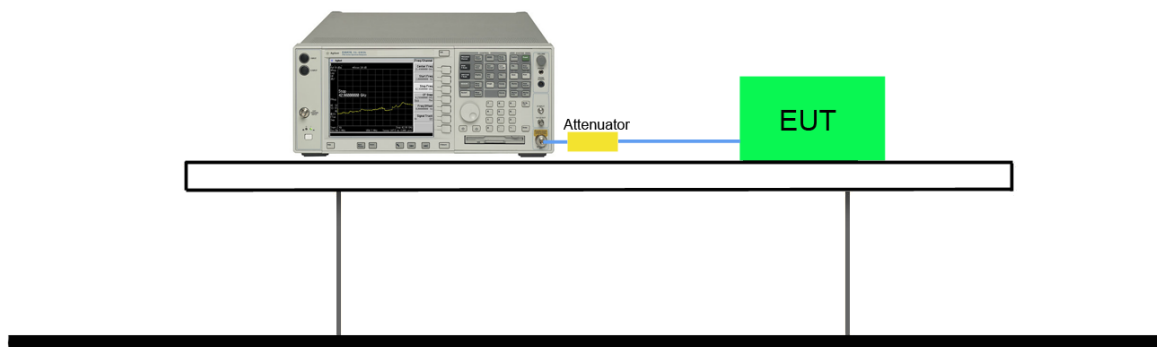
7.7.3. Test Setting

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

Spectrum Analyzer

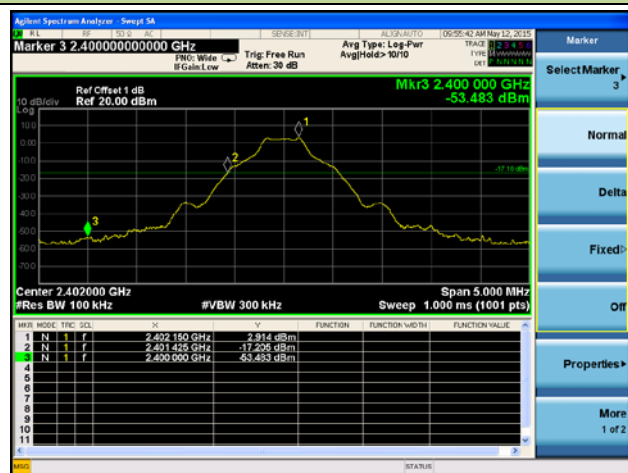


7.7.5. Test Result

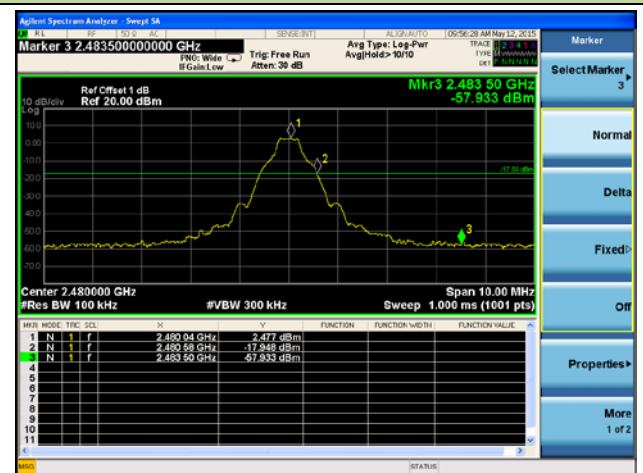
Test Mode	Channel No.	Frequency (MHz)	Limit	Result
DH5	00	2402	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	78	2480	20dBc	Pass

DH5 Band-edge Compliance

Channel 00 (2402MHz)

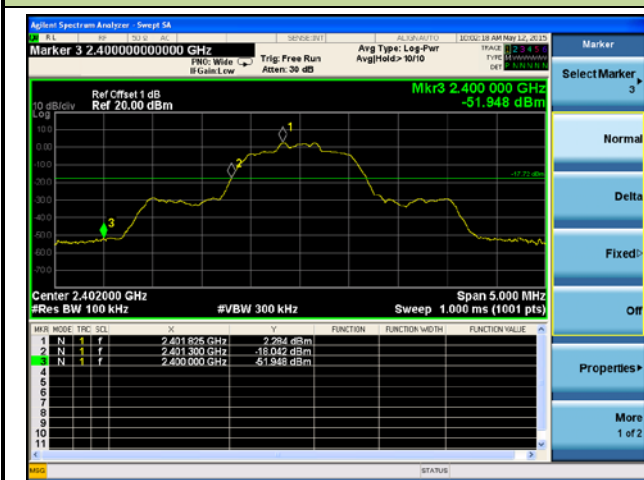


Channel 78 (2480MHz)

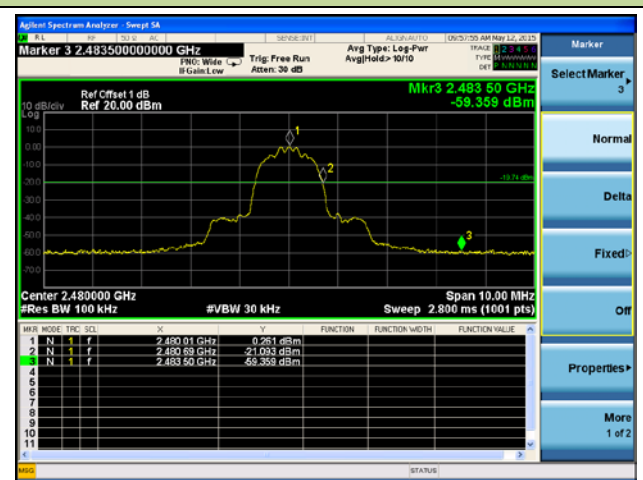


2DH5 Band-edge Compliance

Channel 00 (2402MHz)



Channel 78 (2480MHz)

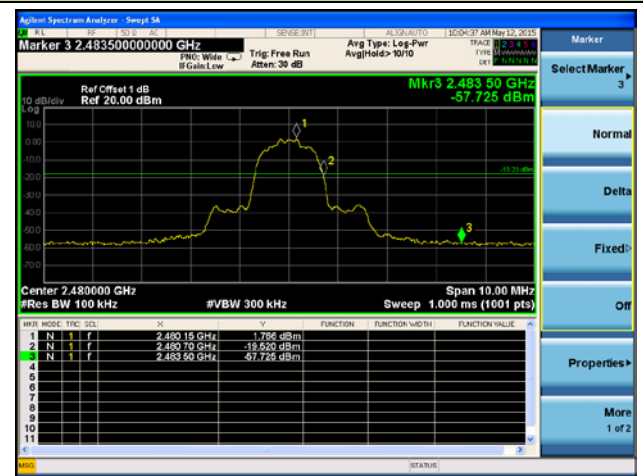


3DH5 Band-edge Compliance

Channel 00 (2402MHz)

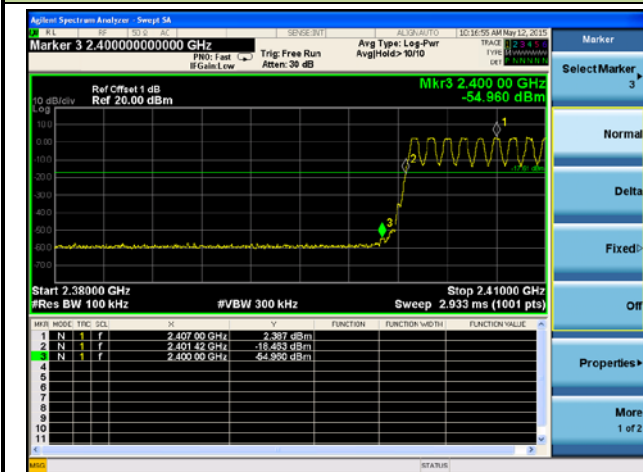


Channel 78 (2480MHz)

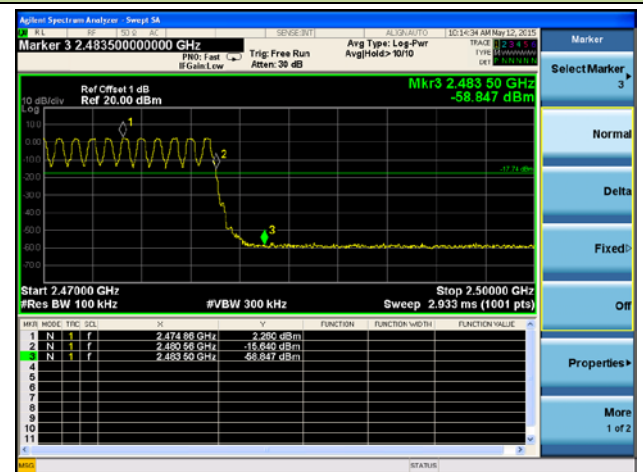


DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)

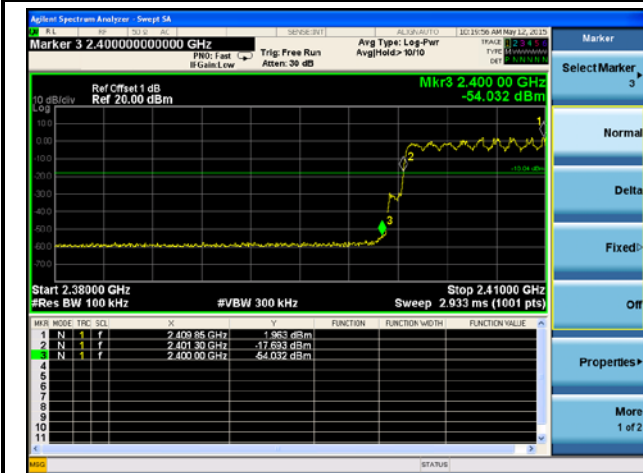


Channel 78 (2480MHz)

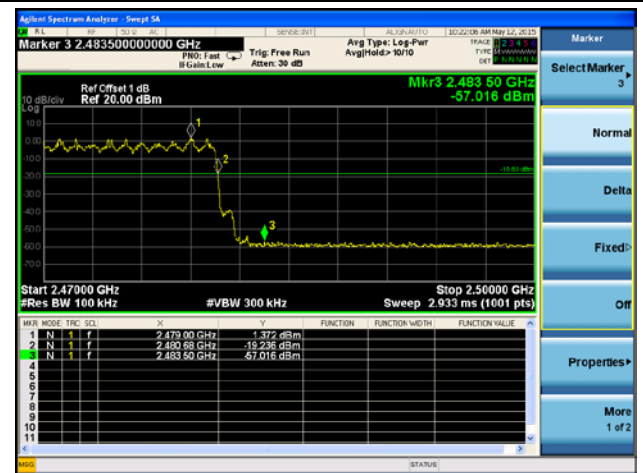


2DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)

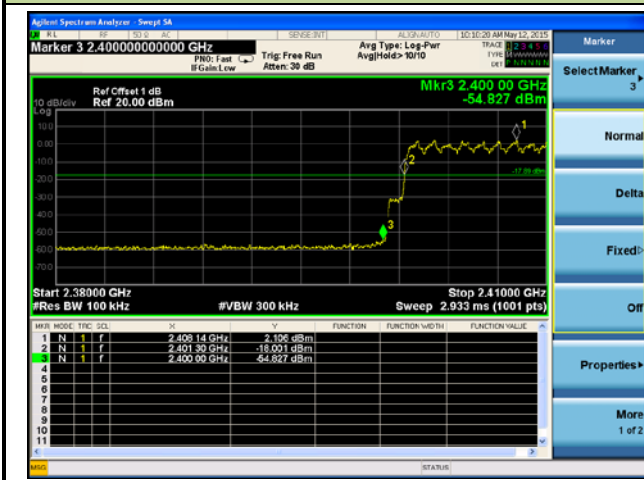


Channel 78 (2480MHz)

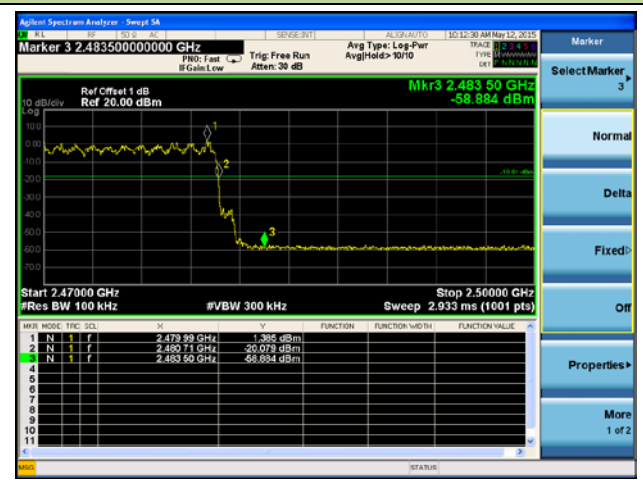


3DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

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

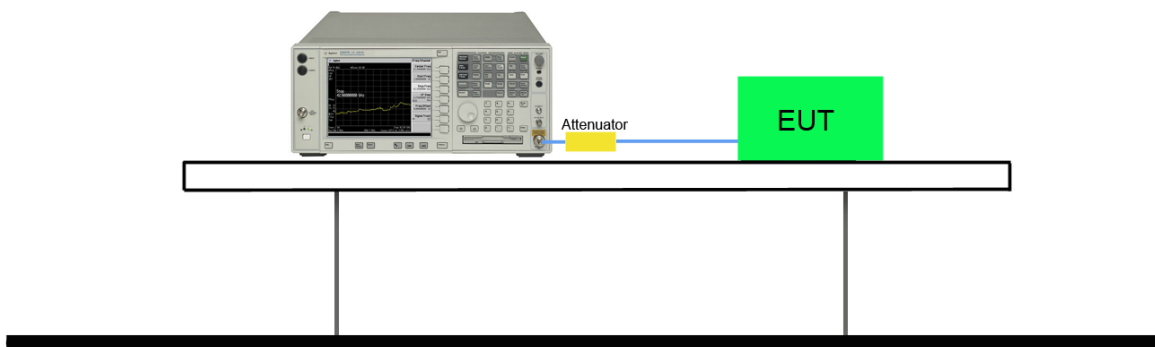
7.8.3. Test Setting

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

Spectrum Analyzer

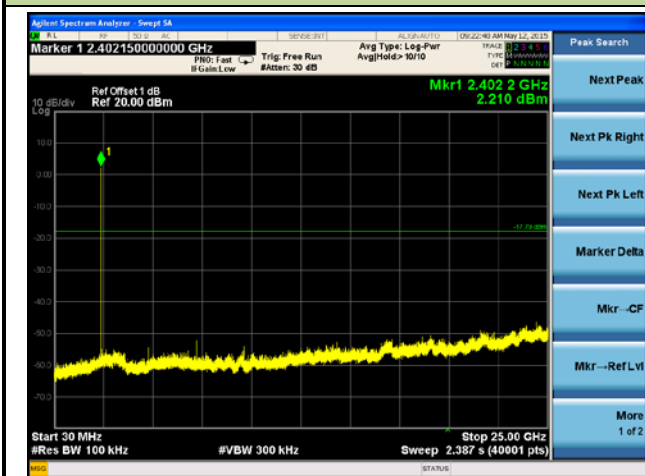


7.8.5. Test Result

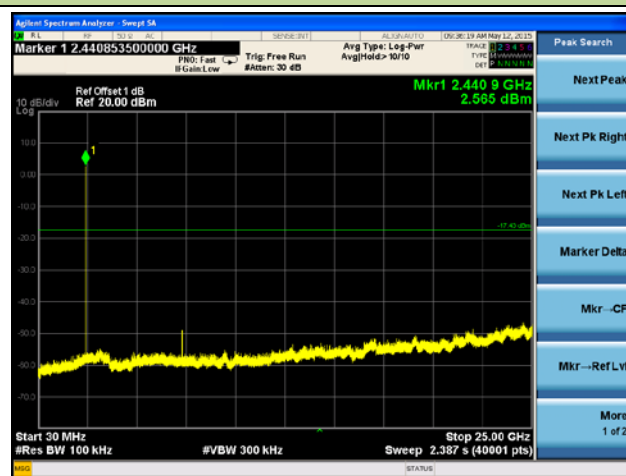
Test Mode	Channel No.	Frequency (MHz)	Limit (MHz)	Result
DH5	00	2402	20dBc	Pass
DH5	39	2441	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	39	2441	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	39	2441	20dBc	Pass
3DH5	78	2480	20dBc	Pass

DH5 Conducted Spurious Emissions

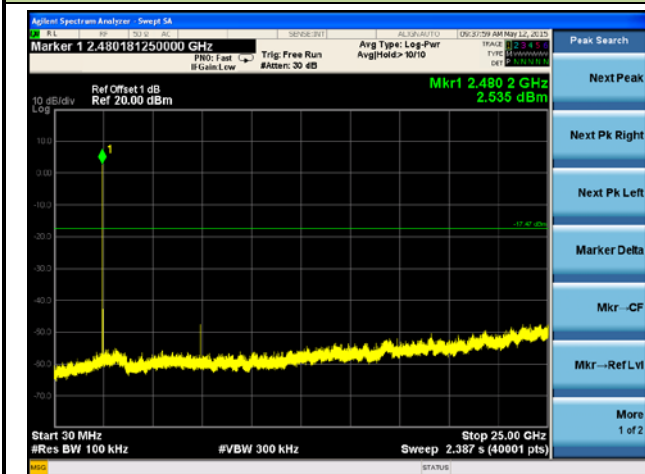
Channel 00 (2402MHz)



Channel 39 (2441MHz)

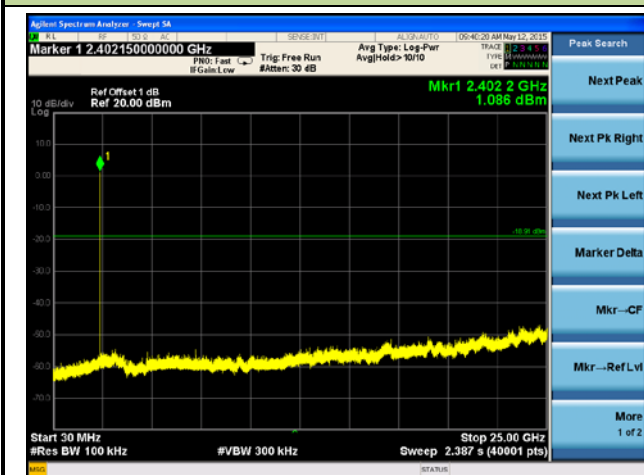


Channel 78 (2480MHz)

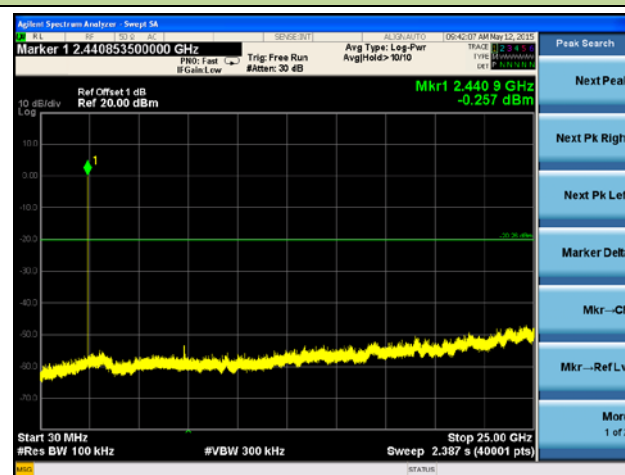


2DH5 Conducted Spurious Emissions

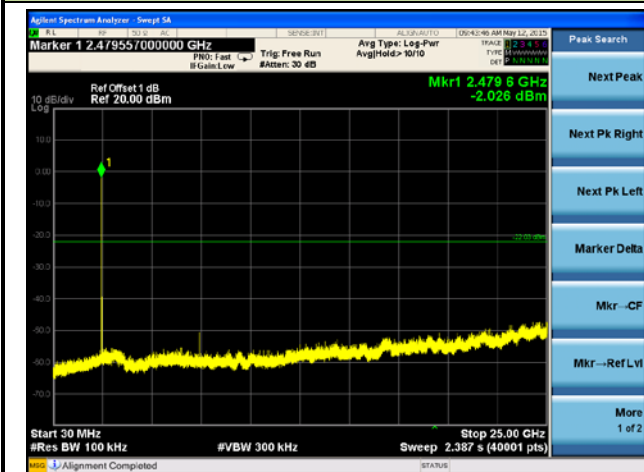
Channel 00 (2402MHz)



Channel 39 (2441MHz)

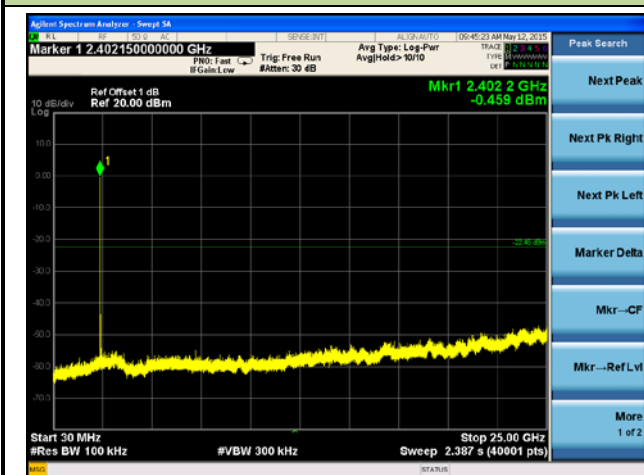


Channel 78 (2480MHz)

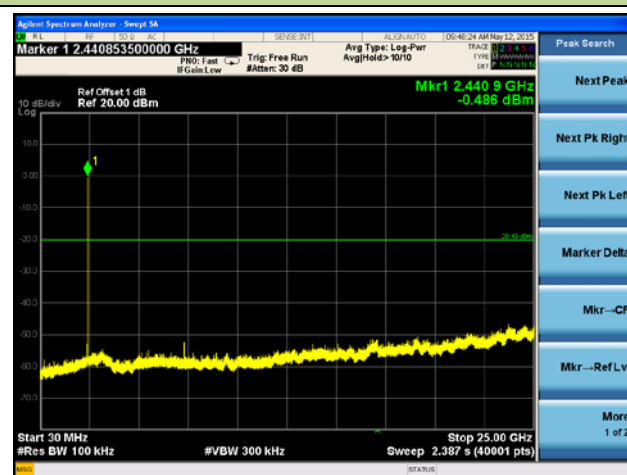


3DH5 Conducted Spurious Emissions

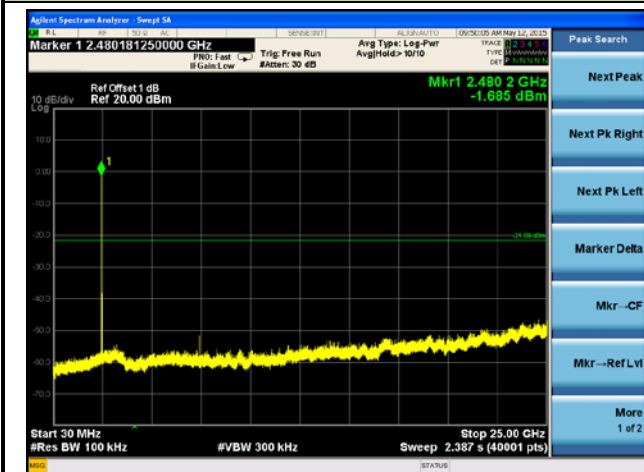
Channel 00 (2402MHz)



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 [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

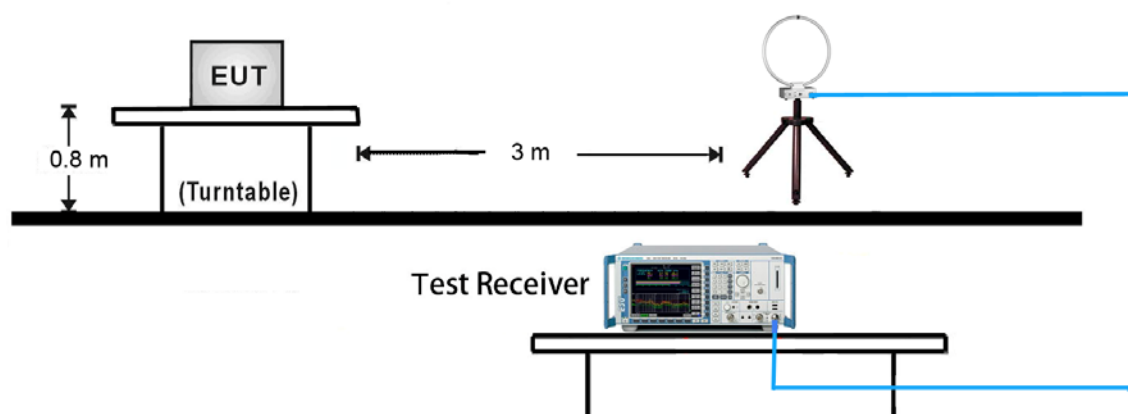
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

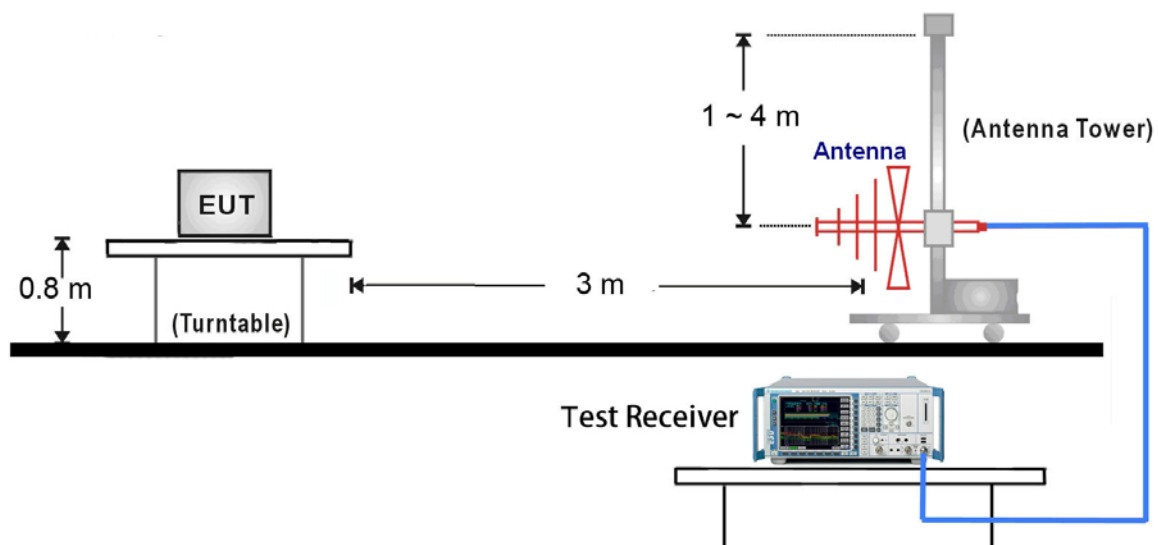
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain).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

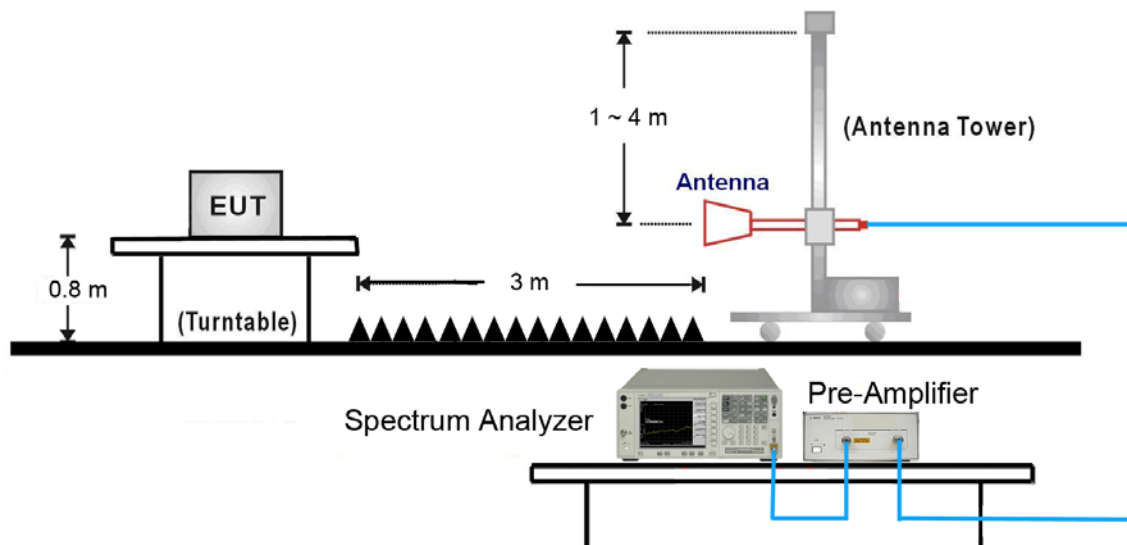
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 25GHz Test Setup:



7.9.5. Test Result

Test Mode:	DH5	Test Site:	AC1
Test Channel:	00	Test Engineer:	Roy Cheng
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
*	3536.0	39.7	-1.0	38.8	79.7	-40.9	Peak	Horizontal
*	5247.0	35.9	3.2	39.1	79.7	-40.6	Peak	Horizontal
	5379.0	35.8	3.0	38.8	74.0	-35.2	Peak	Horizontal
	7436.0	36.4	8.0	44.4	74.0	-29.6	Peak	Horizontal
*	3529.0	39.1	-1.0	38.1	79.7	-41.6	Peak	Vertical
*	5216.0	35.6	3.2	38.8	79.7	-40.9	Peak	Vertical
	5452.0	35.5	3.4	38.9	74.0	-35.1	Peak	Vertical
	7546.0	35.8	8.3	44.1	74.0	-29.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (99.7 dBμV/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 9KHz ~ 1GHz and 18GHz ~ 25GHz:

Site: AC1	Time: 2015/05/08 - 10:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

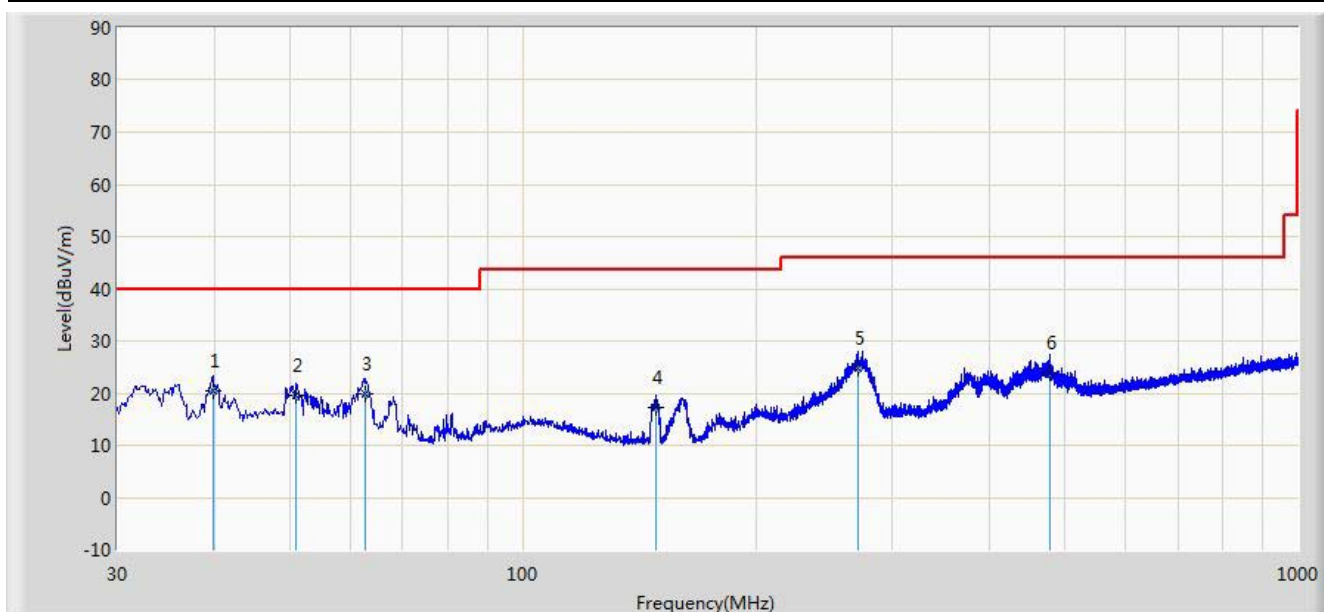


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			48.187	12.672	-2.263	-27.328	40.000	14.934	QP
2			88.927	14.296	3.347	-29.204	43.500	10.949	QP
3			186.655	15.999	4.526	-27.501	43.500	11.473	QP
4		*	270.075	29.531	15.524	-16.469	46.000	14.007	QP
5			364.408	22.629	6.628	-23.371	46.000	16.001	QP
6			452.435	23.522	6.147	-22.478	46.000	17.375	QP

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

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

Site: AC1	Time: 2015/05/08 - 10:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

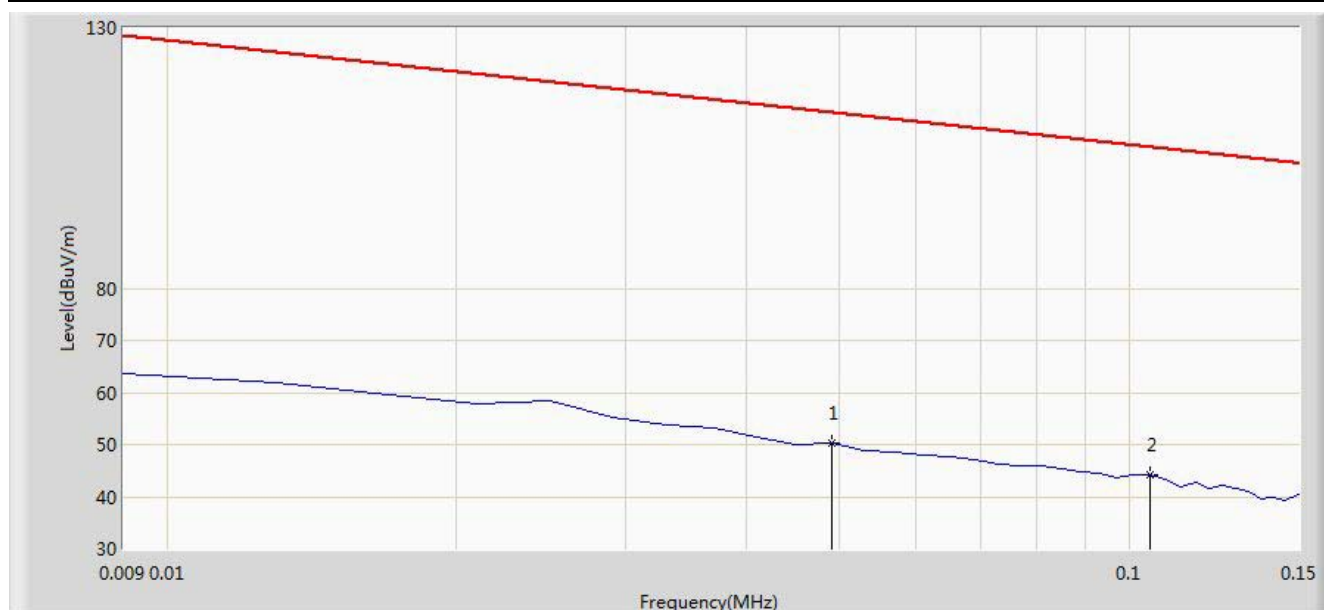


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	39.821	20.445	6.635	-19.555	40.000	13.811	QP
2			51.097	19.661	4.772	-20.339	40.000	14.888	QP
3			62.737	19.781	6.517	-20.219	40.000	13.265	QP
4			148.825	17.160	7.736	-26.340	43.500	9.424	QP
5			271.166	24.648	10.627	-21.352	46.000	14.021	QP
6			478.261	23.863	5.994	-22.137	46.000	17.868	QP

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

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

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

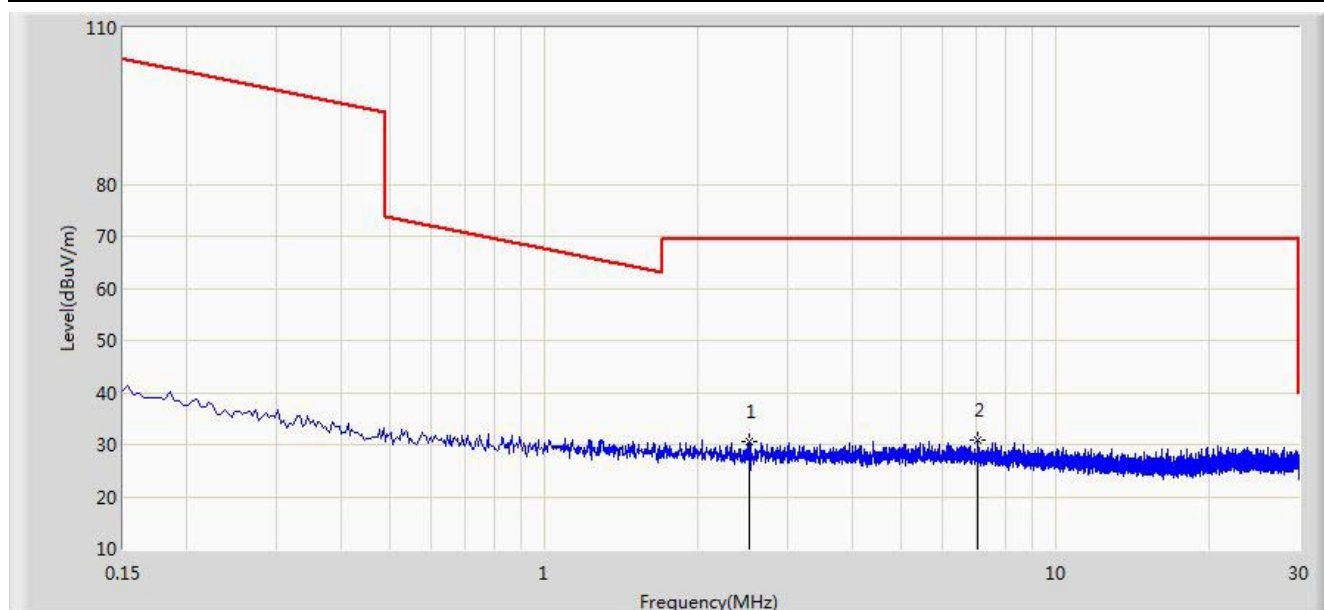


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.049	50.367	29.861	-63.422	113.789	20.505	QP
2		*	0.105	44.143	23.996	-63.029	107.173	20.147	QP

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

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

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

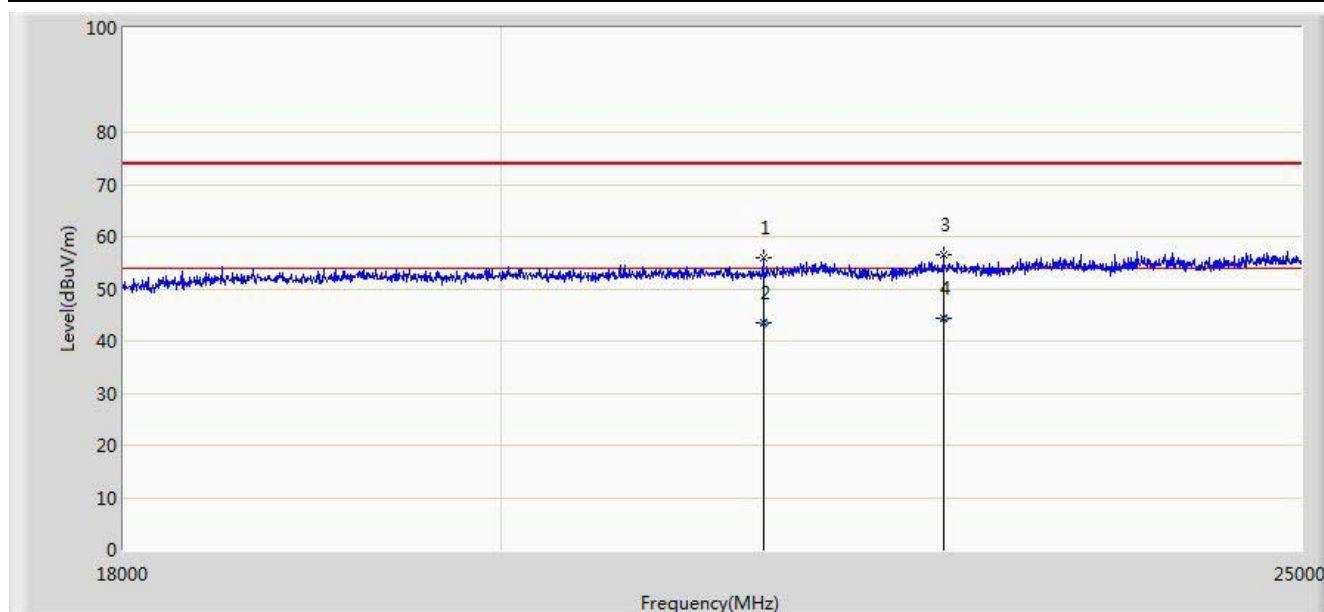


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2.513	30.495	10.336	-39.005	69.500	20.159	QP
2		*	7.041	30.974	10.579	-38.526	69.500	20.395	QP

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

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

Site: AC1	Time: 2015/04/30 - 15:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	

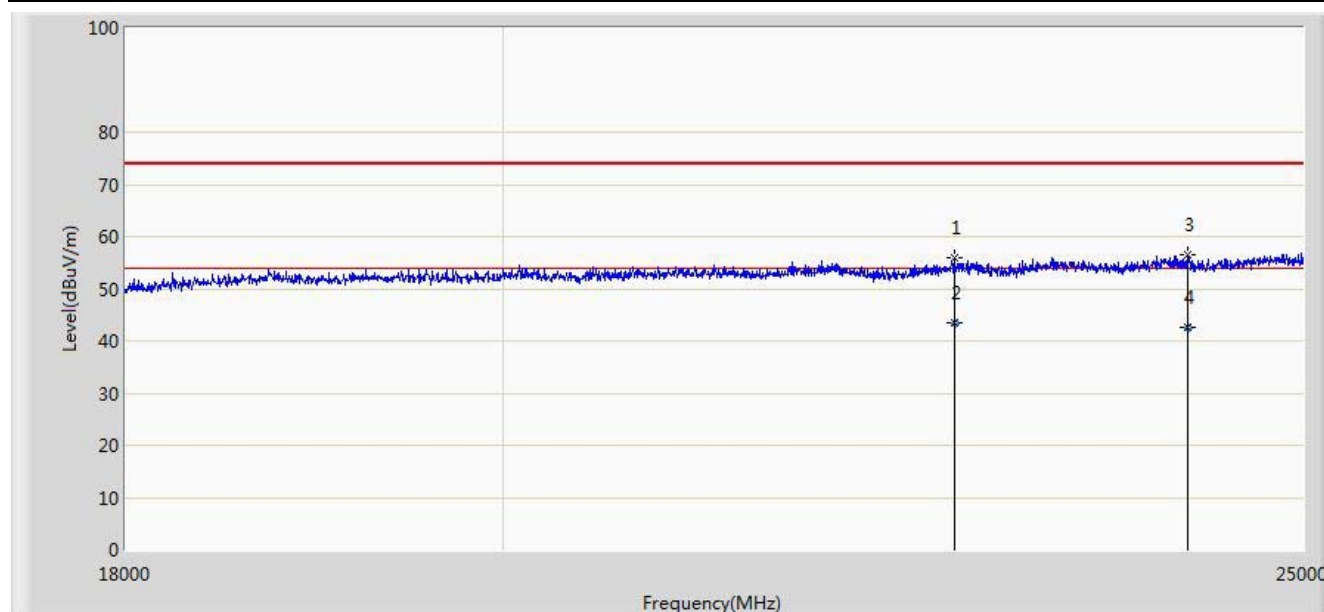


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			21517.500	55.869	17.883	-18.131	74.000	37.986	PK
2			21517.650	43.351	5.365	-10.649	54.000	37.986	AV
3			22630.500	56.509	18.223	-17.491	74.000	38.286	PK
4		*	22630.540	44.310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

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

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

Site: AC1	Time: 2015/04/30 - 16:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: SHARPER IMAGE BT 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

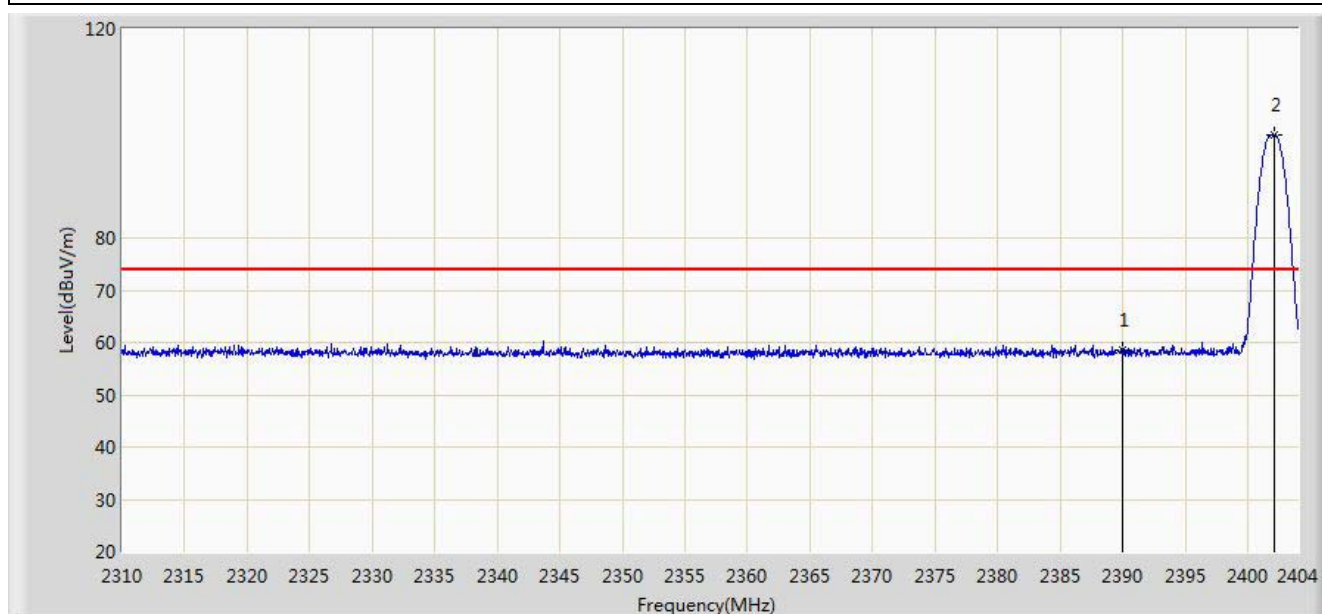
Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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

7.10. Radiated Restricted Band Edge Measurement

7.10.1. Test Result

Site: AC1	Time: 2015/05/04 - 13:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

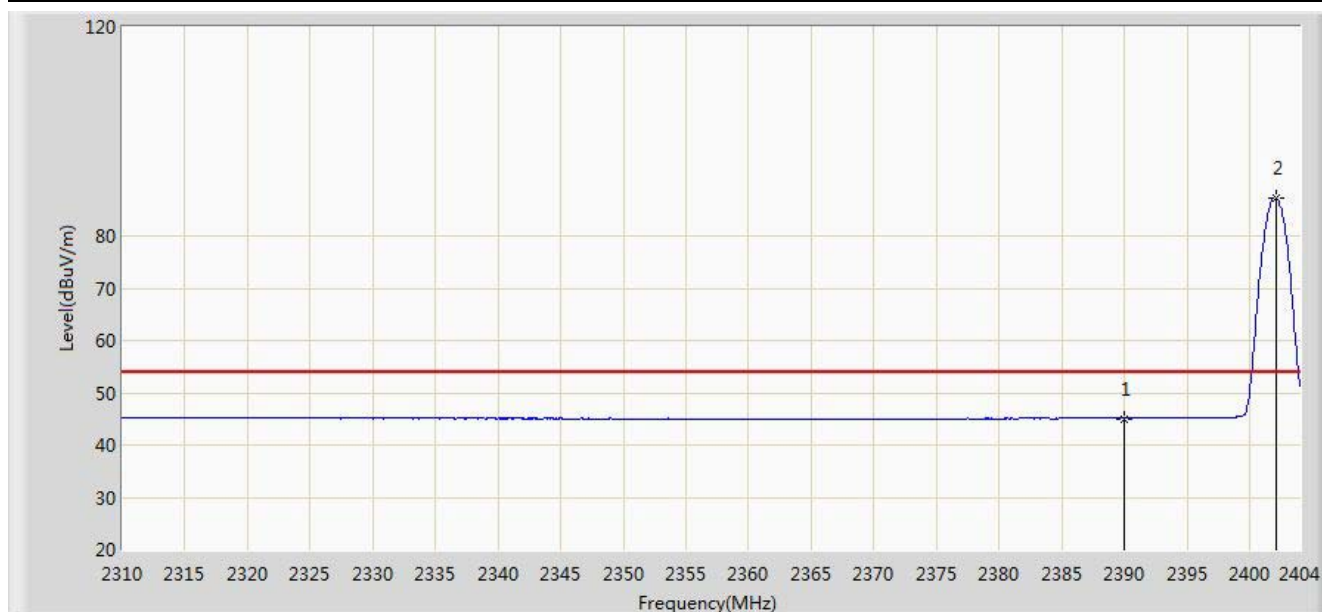


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	58.654	27.451	-15.346	74.000	31.203	PK
2		*	2402.073	99.680	68.496	N/A	N/A	31.184	PK

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

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

Site: AC1	Time: 2015/05/04 - 14:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

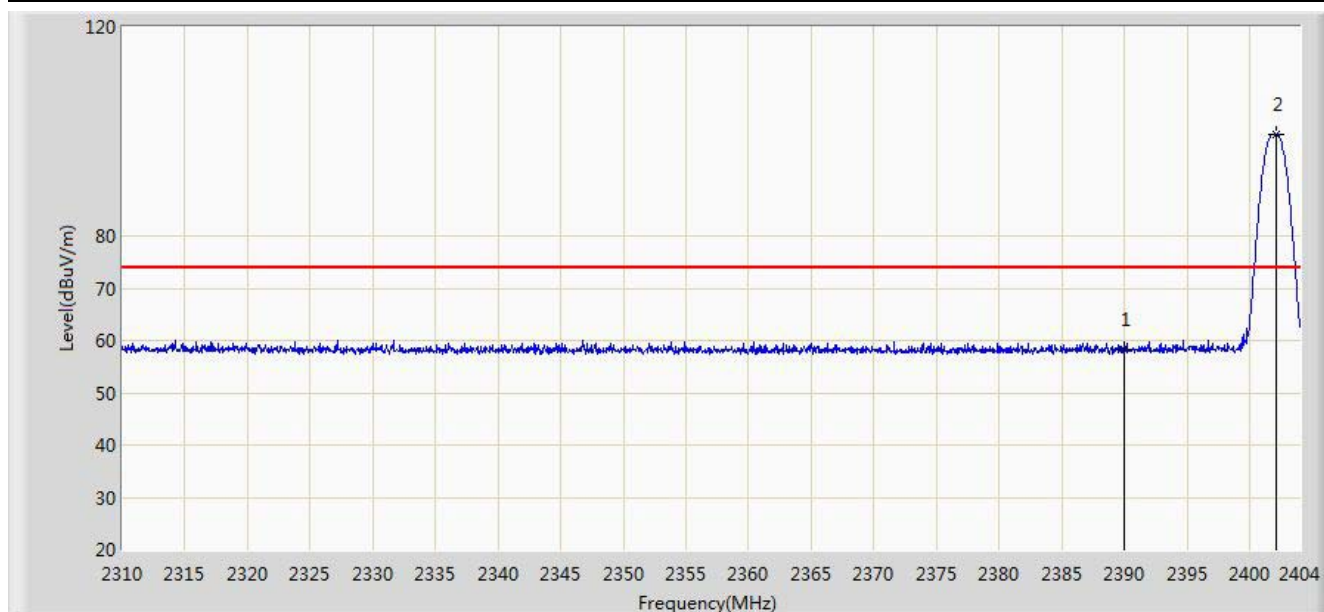


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.072	13.869	-8.928	54.000	31.203	AV
2		*	2402.073	87.373	56.189	N/A	N/A	31.184	AV

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

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

Site: AC1	Time: 2015/05/04 - 14:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

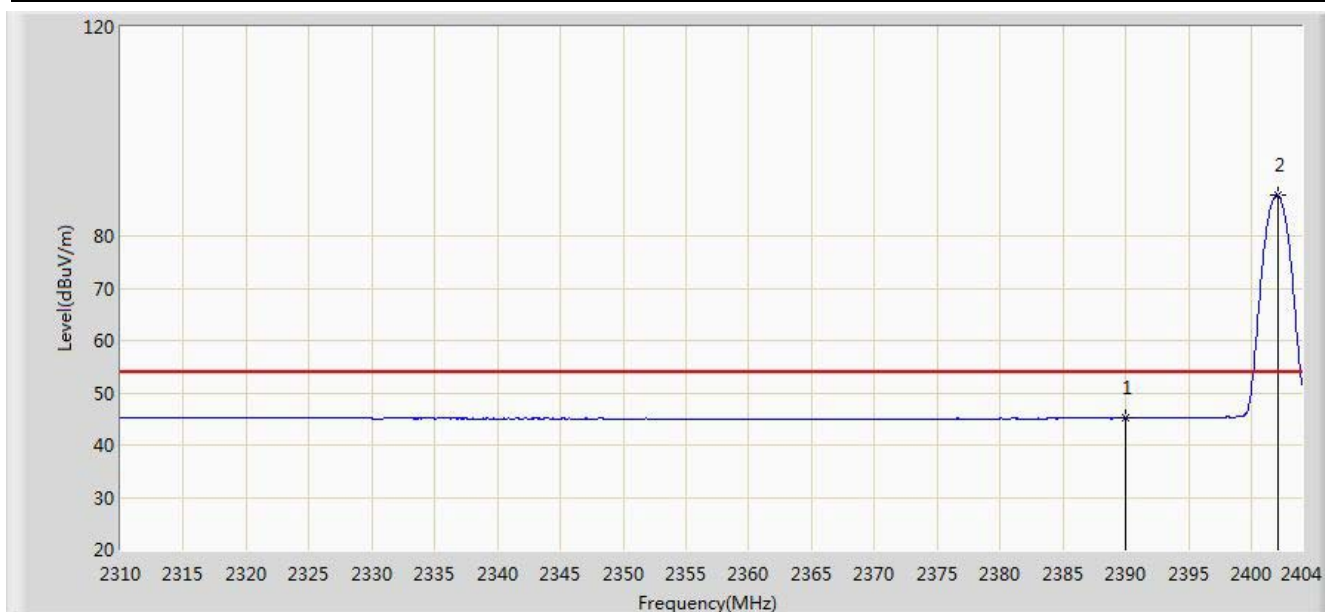


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	58.254	27.051	-15.746	74.000	31.203	PK
2		*	2402.073	99.541	68.357	N/A	N/A	31.184	PK

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

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

Site: AC1	Time: 2015/05/04 - 14:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

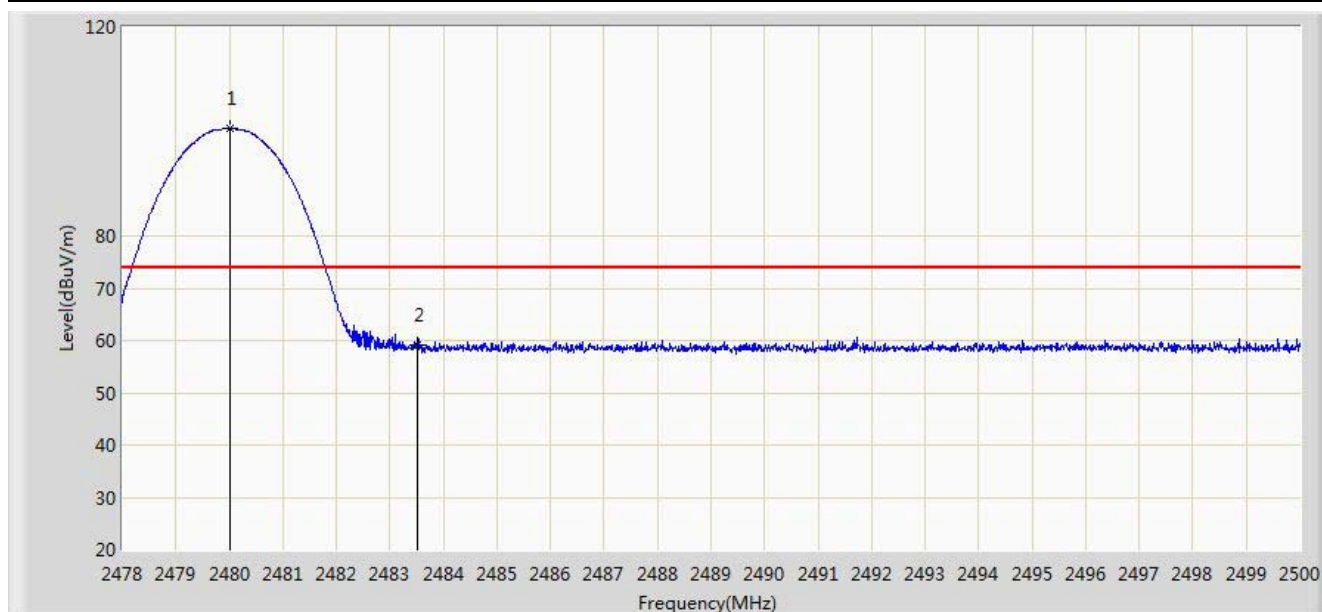


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.133	13.930	-8.867	54.000	31.203	AV
2		*	2402.073	87.749	56.565	N/A	N/A	31.184	AV

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

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

Site: AC1	Time: 2015/05/04 - 14:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: 3DH5 at Channel 2480MHz	

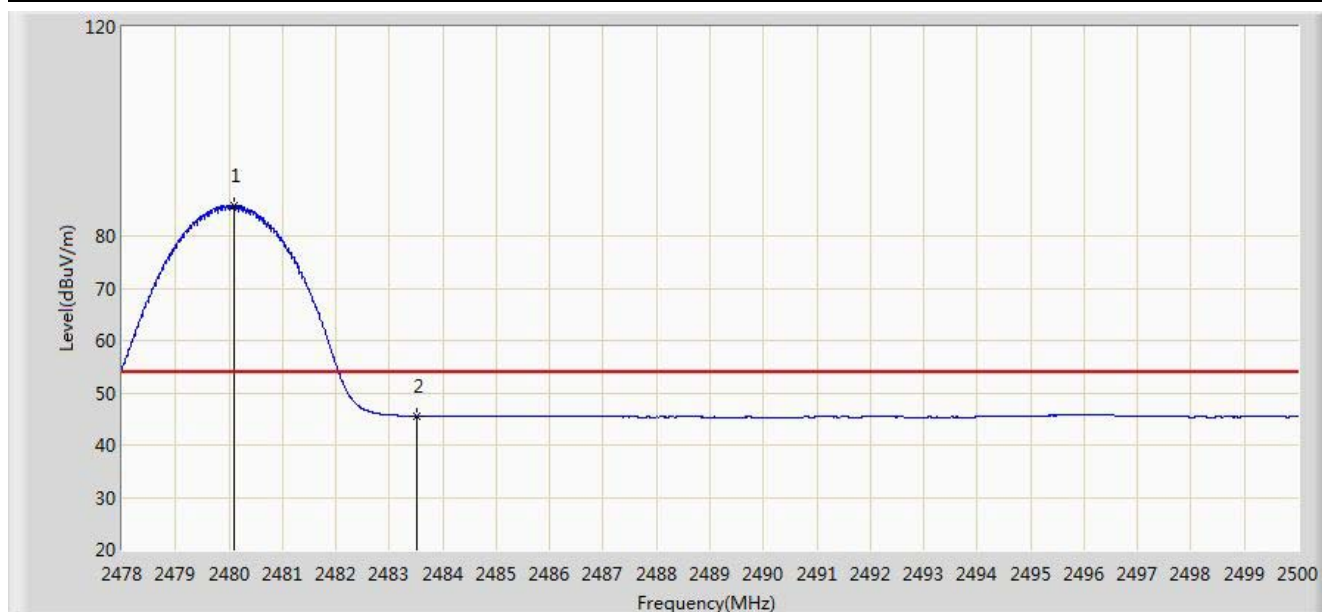


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.002	100.592	69.408	N/A	N/A	31.184	PK
2			2483.500	59.245	28.052	-14.755	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/05/04 - 14:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: 3DH5 at Channel 2480MHz	

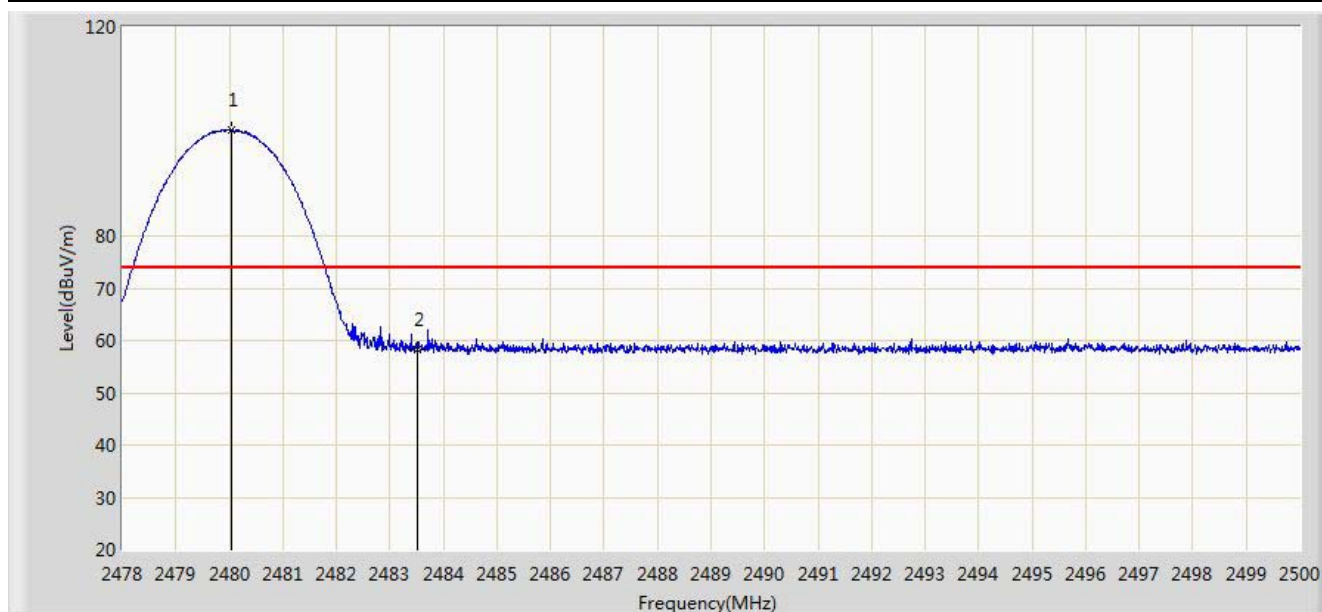


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.090	85.893	54.709	N/A	N/A	31.184	AV
2			2483.500	45.518	14.325	-8.482	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/05/04 - 14:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: 3DH5 at Channel 2480MHz	

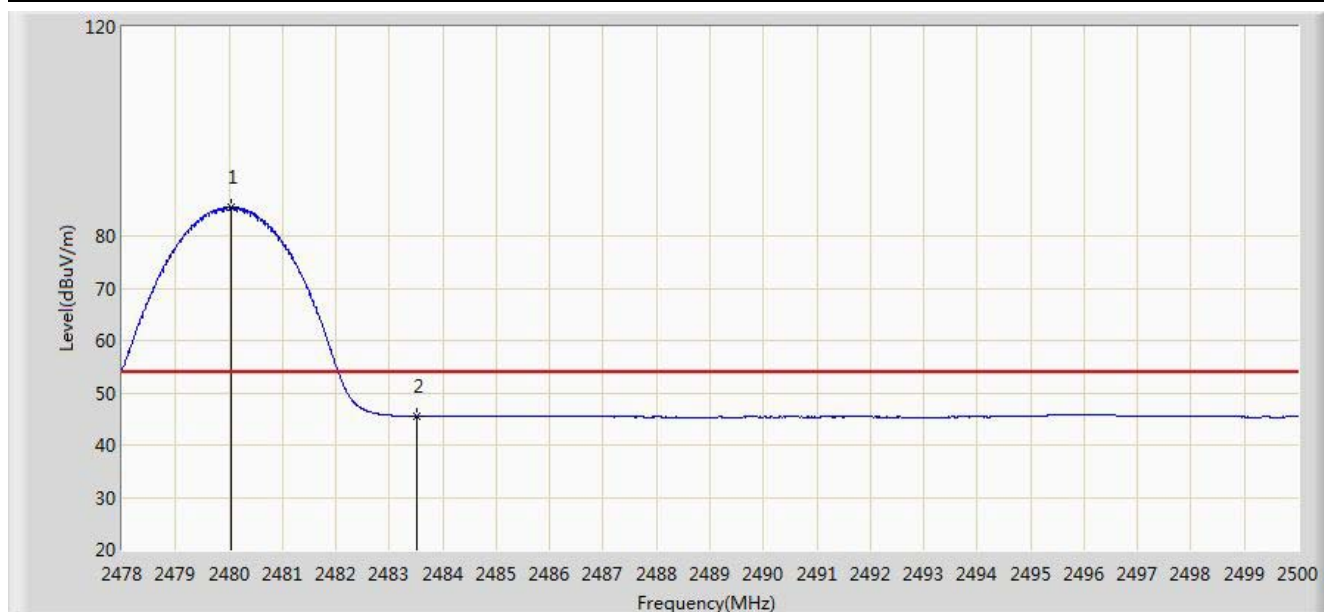


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.046	100.339	69.155	N/A	N/A	31.184	PK
2			2483.500	58.376	27.183	-15.624	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/05/04 - 14:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Worse Case Mode: 3DH5 at Channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.046	85.566	54.382	N/A	N/A	31.184	AV
2			2483.500	45.492	14.299	-8.508	54.000	31.194	AV

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

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

7.11. AC Conducted Emissions Measurement

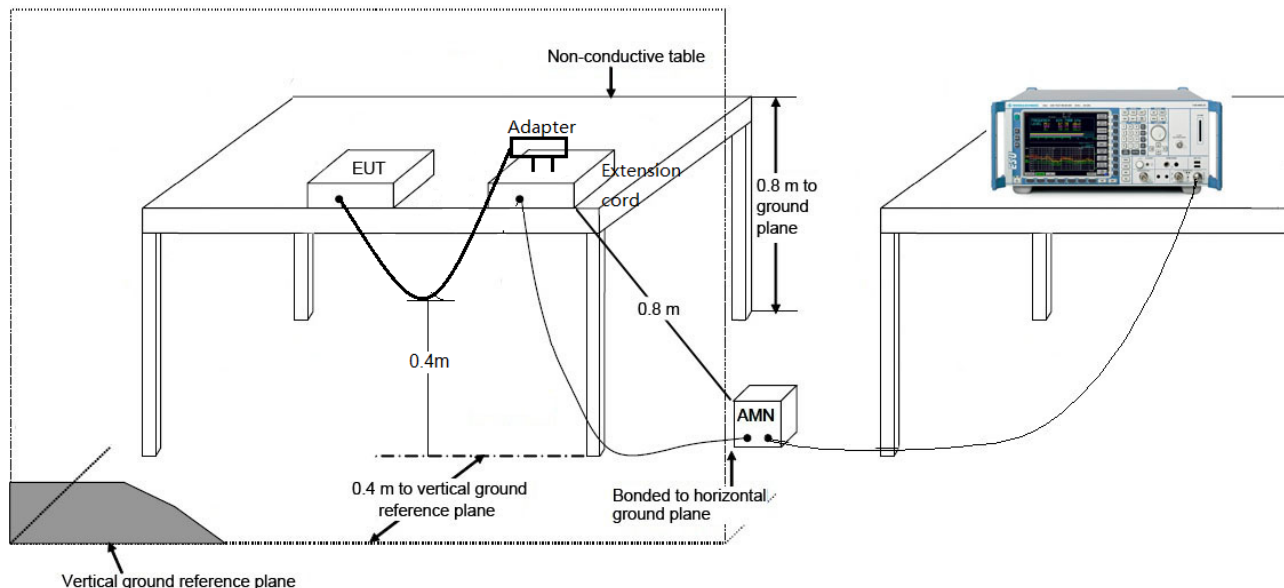
7.11.1. Test Limit

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.

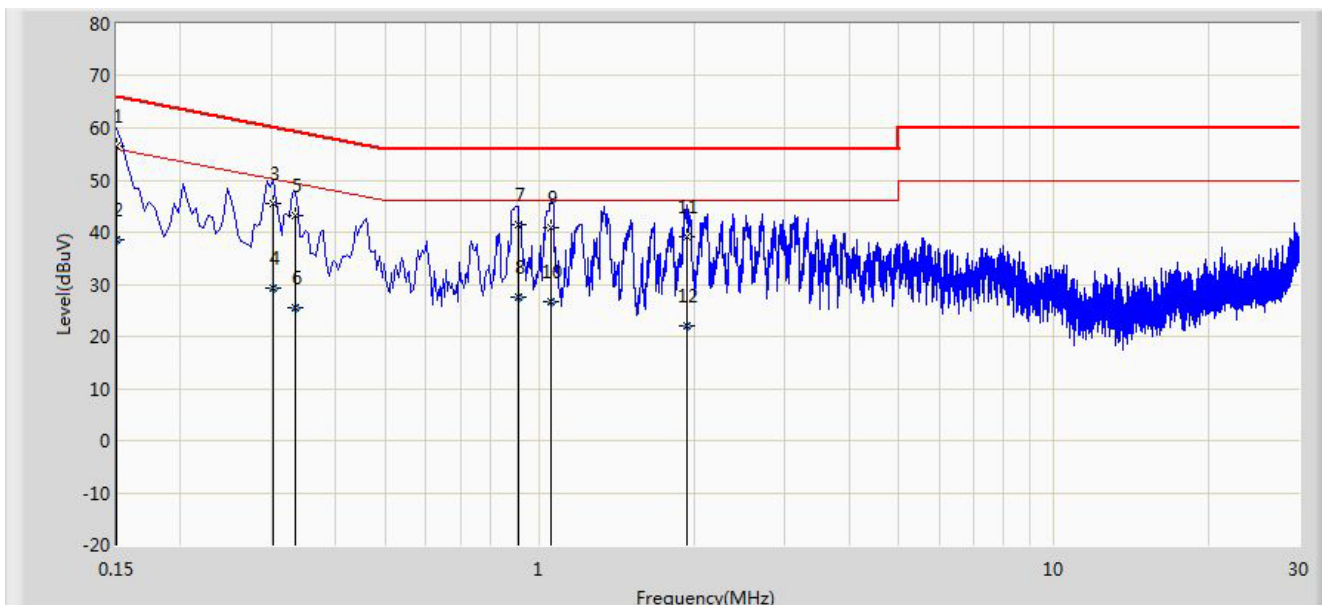
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.11.2. Test Setup



7.11.3. Test Result

Site: SR2	Time: 2015/05/04 - 10:55
Limit: FCC_Part15.207_CE_AC Power	Engineer: Roy Cheng
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Test Mode: 2DH5 at Channel 2480MHz	

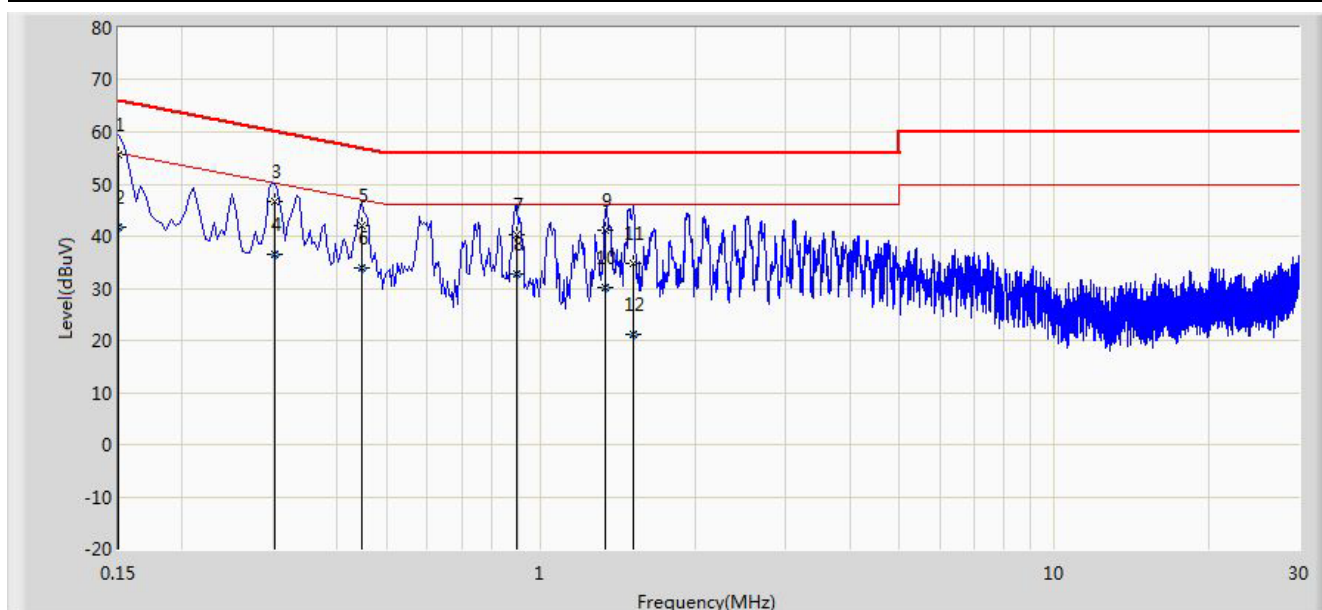


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	56.616	45.448	-9.384	66.000	11.168	QP
2			0.150	38.525	27.356	-17.475	56.000	11.168	AV
3			0.302	45.429	35.423	-14.759	60.188	10.006	QP
4			0.302	29.382	19.376	-20.806	50.188	10.006	AV
5			0.334	43.246	33.214	-16.105	59.351	10.031	QP
6			0.334	25.619	15.588	-23.732	49.351	10.031	AV
7			0.906	41.531	31.574	-14.469	56.000	9.957	QP
8			0.906	27.508	17.551	-18.492	46.000	9.957	AV
9			1.050	40.806	30.899	-15.194	56.000	9.907	QP
10			1.050	26.637	16.731	-19.363	46.000	9.907	AV
11			1.930	39.229	29.355	-16.771	56.000	9.874	QP
12			1.930	22.138	12.264	-23.862	46.000	9.874	AV

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

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

Site: SR2	Time: 2015/05/04 - 11:02
Limit: FCC_Part15.207_CE_AC Power	Engineer: Roy Cheng
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: SHARPER IMAGE BT SPEAKER	Power: AC 120V/60Hz
Test Mode: 2DH5 at Channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	55.743	44.601	-10.257	66.000	11.142	QP
2			0.150	41.613	30.471	-14.387	56.000	11.142	AV
3			0.302	46.761	36.721	-13.427	60.188	10.039	QP
4			0.302	36.580	26.541	-13.608	50.188	10.039	AV
5			0.446	41.999	31.852	-14.950	56.949	10.147	QP
6			0.446	33.798	23.651	-13.152	46.949	10.147	AV
7			0.898	40.185	30.219	-15.815	56.000	9.965	QP
8			0.898	32.779	22.813	-13.221	46.000	9.965	AV
9			1.338	41.077	31.180	-14.923	56.000	9.897	QP
10			1.338	30.122	20.226	-15.878	46.000	9.897	AV
11			1.518	34.883	24.993	-21.117	56.000	9.889	QP
12			1.518	21.059	11.170	-24.941	46.000	9.889	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 **SHARPER IMAGE BT SPEAKER FCC ID: PMI-SBT609** is in compliance with Part 15C of the FCC Rules.

The End