TEST REPORT

1. Applicant

Name	: Polk Audio Inc
Address	: 5601 Metro Drive Baltimore, MD 21215 USA

2. Products

Name	: Wireless Subwoofer
Model/Type	: SurroundBar SDA Instant Home Theater
Manufacturer	: ESTec VINA Corp.

3. Test Standard	: FCC CFR 47 Part 15, Subpart C section 15.247 & IC RSS 210 Annex 8 - 2007
4. Test Method	: ANSI C63.4-2003
5. Test Result	: Positive
6. Date of Application	: Nov. 11, 2008
7. Date of Issue	: Nov. 24, 2008

Tested by

Sung-kyu Cho

Telecommunication Team Engineer

Approved by

Seok-Jin Kim

Telecommunication Team Manager

Korea Testing Laboratory

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1. GENERAL INFORMATIONS

1.1. Applicant (Client)

Name	Polk Audio Inc
Address	5601 Metro Drive Baltimore, MD 21215 USA
Contact Person	Tim Richardson
Telephone No.	410-764-5471
Facsimile No.	410-733-5668
E-mail address	richardson@polkaudio.com
Manufacturer Name	ESTec VINA Corp.
Manufacturer Address	No.6, Road 6, Vietnam Singapore Industrial Park(VSIP), Thuan An Ward, Binh Duong Province, Vietnam

1.2. Equipment (EUT)

FCC Classification	DSS – Part 15 Spread Spectrum Transmitter
Model Name	SurroundBar SDA Instant Home Theater
FCC ID	WLQSBSDAIHTRX
IC Number	7956A-SBSDAIHTRX
Frequency Band	2404 ~ 2478 MHz
Method / System	Frequency Hopping Spread Spectrum
Max RF Output Power	14.39 dBm
Type of Modulation	FHSS
Number of Channels	29
Antenna Gain	Max 0.46 dBi
Function Type	Transceiver

1.3. Testing Laboratory

Testing Place	Korea Testing Labortory (KTL) 1271-12, Sa-Dong Sangnok-Gu, Ansan-si Gyunggi-Do , Korea
FCC registration number	408324
Industry Canada filing number	6298
Test Engineer	Sung-kyu Cho
Telephone number	+82 31 5000 132
Facsimile number	+82 31 5000 159
E-mail address	skcho@ktl.re.kr
Other Comments	-

2. SUMMARY OF TEST RESULTS

Testing performed for : Polk Audio Inc.

Equipment Under Test : Wireless Subwoofer

Receipt of Test Sample : 2008. 11. 11

Test Start Date : 2008. 11. 14

Test End Date : 2008. 11. 19

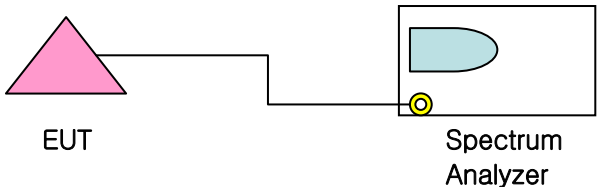
The following table represents the list of measurements required under the FCC CFR47 Part 15.207, 15.247, and 15.209.

FCC Rules	IC Rules	Test Requirements	Result	Comments
15.247 (a)(1)	Annex 8.1(1)	20dB Bandwidth	Pass	See Data sheets
15.247 (b)(1)	Annex 8.4(2)	Maximum Peak Power	Pass	See Data sheets
15.247(d)	Annex 8.5	100 KHz Bandwidth of Frequency Band Edges	Pass	See Data sheets
15.247 (a)(1)	Annex 8.1(2)	Hopping channel separation	Pass	See Data sheets
15.247 (a)(1)(iii)	Annex 8.1(4)	Number of hopping channels	Pass	See Data sheets
15.247 (a)(1)(iii)	Annex 8.1(4)	Dwell time	Pass	See Data sheets
15.247(d)	Annex 8.5	Conducted Spurious Emission	Pass	See Data sheets
15.209	Annex 8.5	Radiated Spurious Emissions	Pass	See Data sheets
15.207	7.2.2	AC line Conducted Emissions	Pass	See Data sheets

3. Measurement & Results

3.1. 20 dB Bandwidth

3.1.1. Test Setup Layout

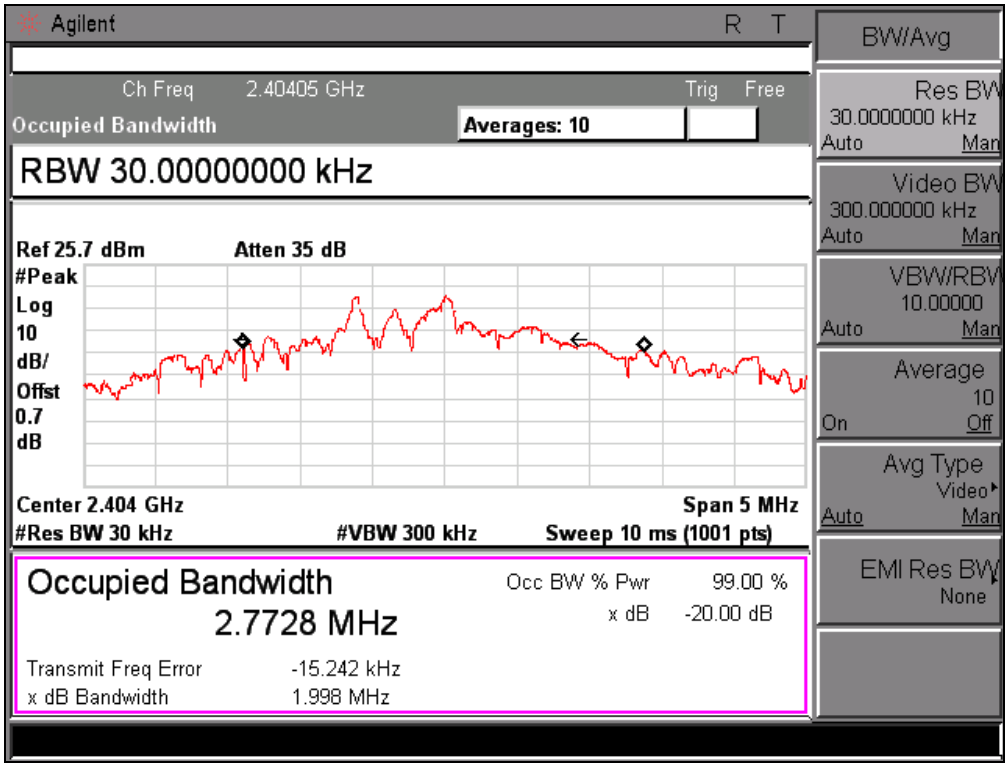


3.1.2. Test Condition

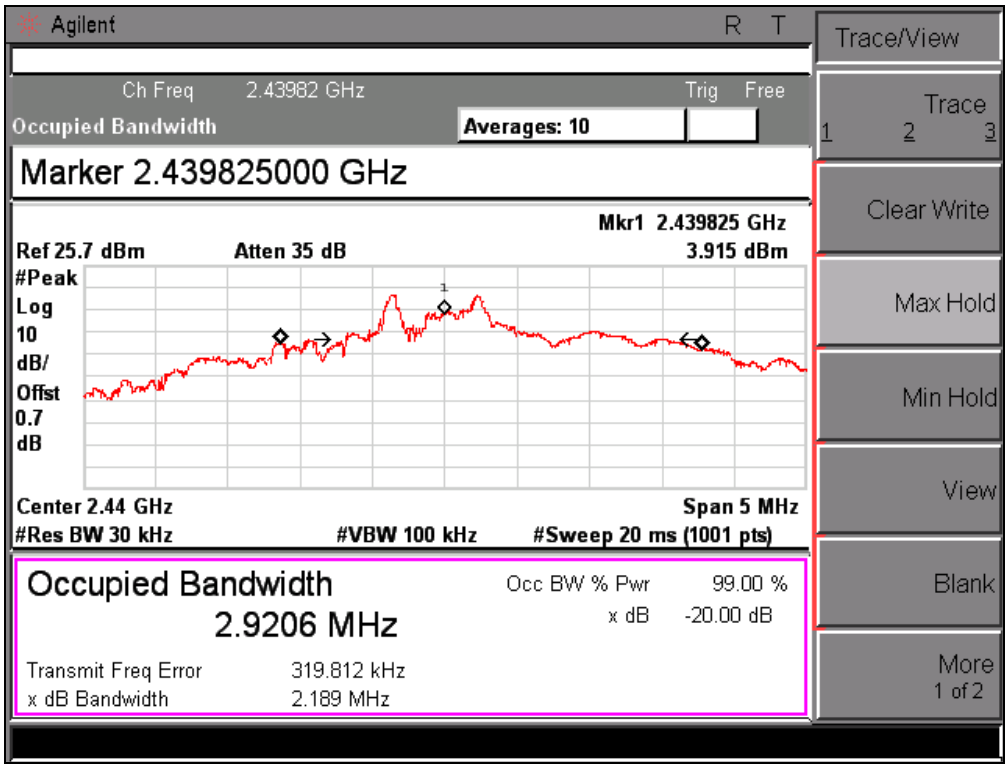
- Set RBW of Spectrum analyzer to 30 kHz
- The 20dB bandwidth is defined as the frequency range where the power is higher than the peak power minus 20dB . Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater

3.1.3. Test result

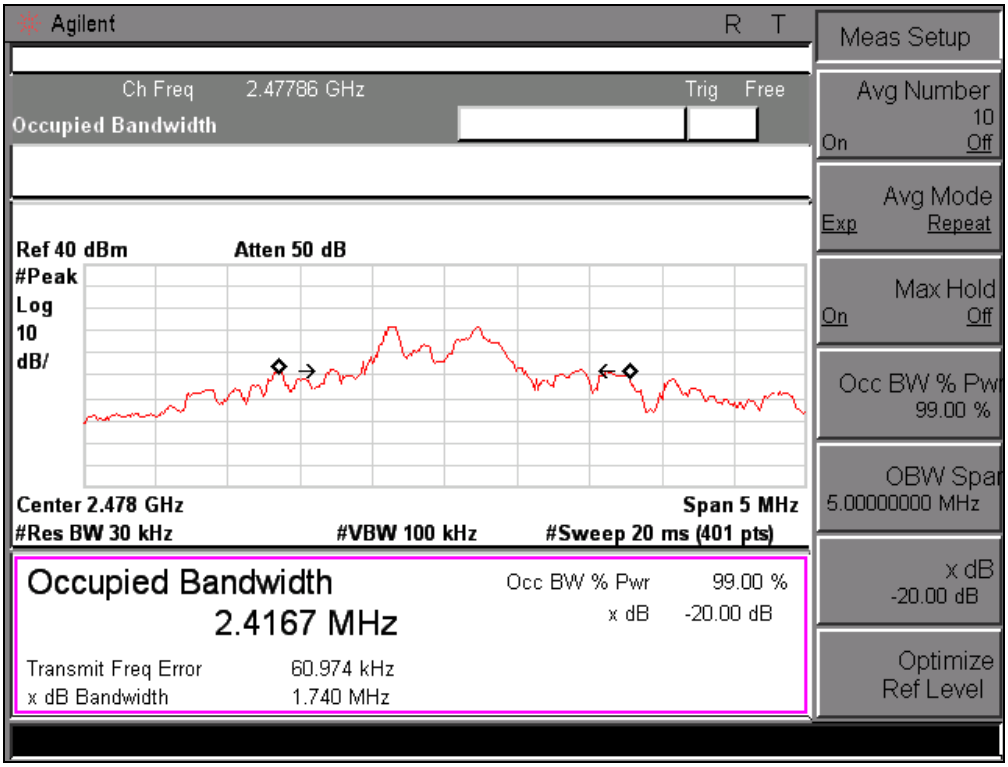
Frequency (MHz)	Result (MHz)	Verdict
2,404	1.998	Pass
2,440	2.189	Pass
2,478	1.740	Pass



- Occupied Bandwidth 2,404 MHz -



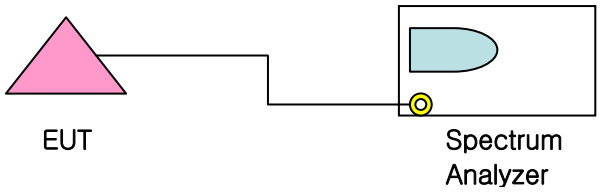
- Occupied Bandwidth 2,441 MHz -



- Occupied Bandwidth 2,478 MHz -

3.2. Maximum Peak Power

3.2.1. Test Setup Layout

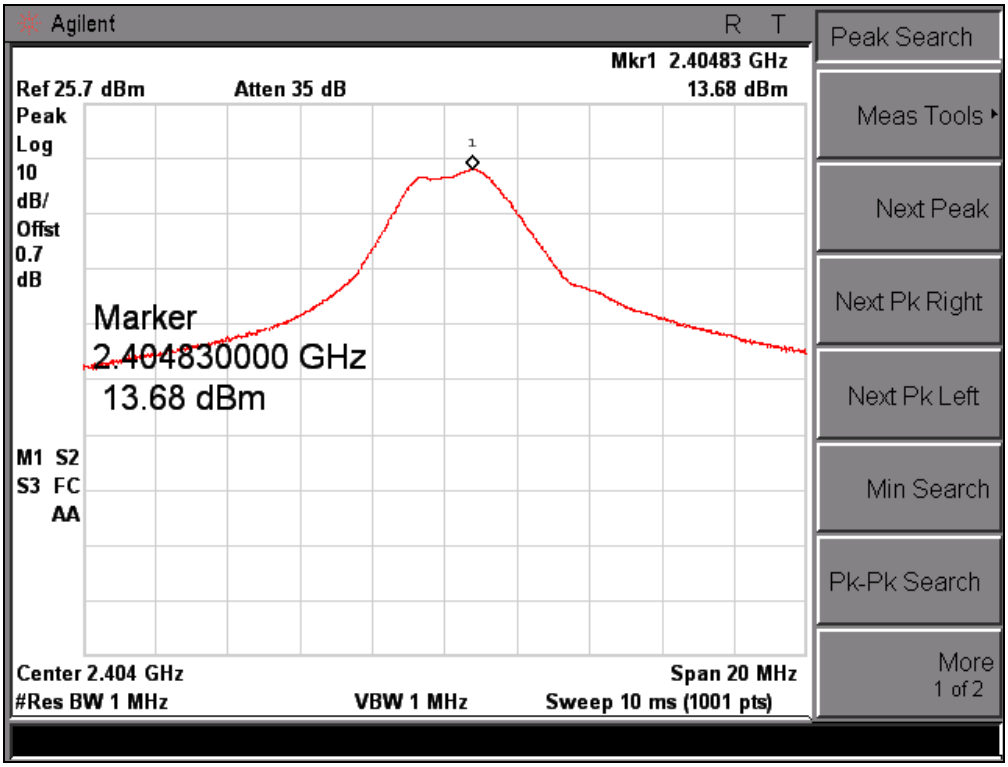


3.2.2. Test Condition

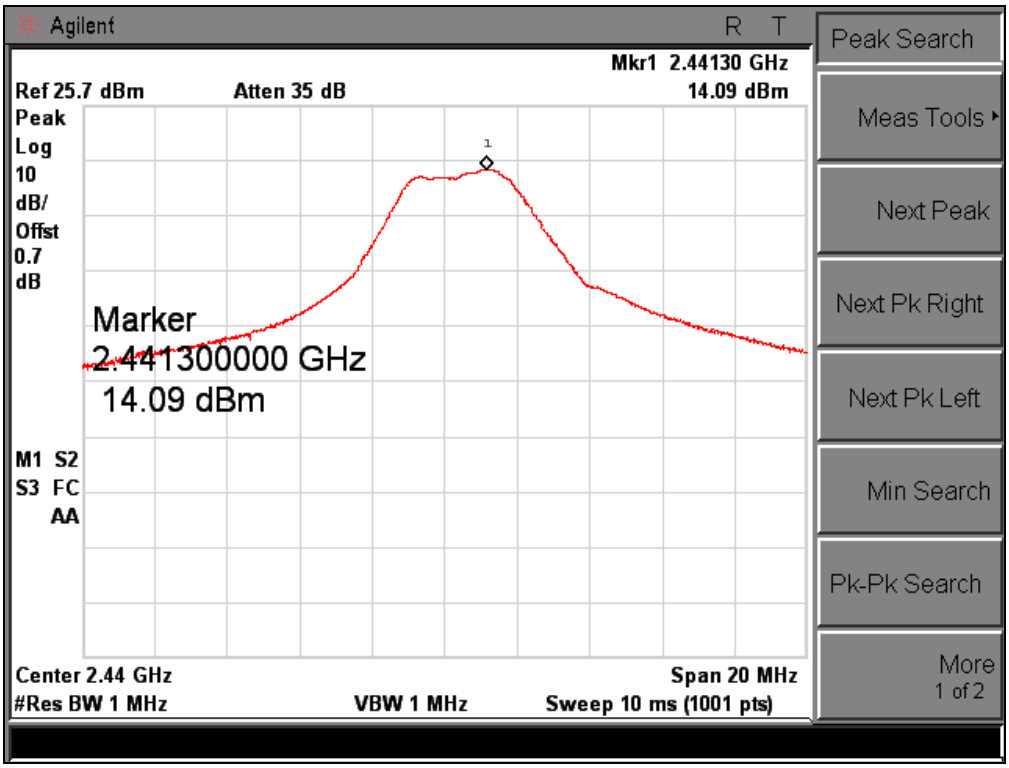
- Set RBW of Spectrum analyzer to 1 MHz
- The Maximum Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Alternatively, frequency hopping systems operating in the 2400 – 2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

3.2.3. Test result

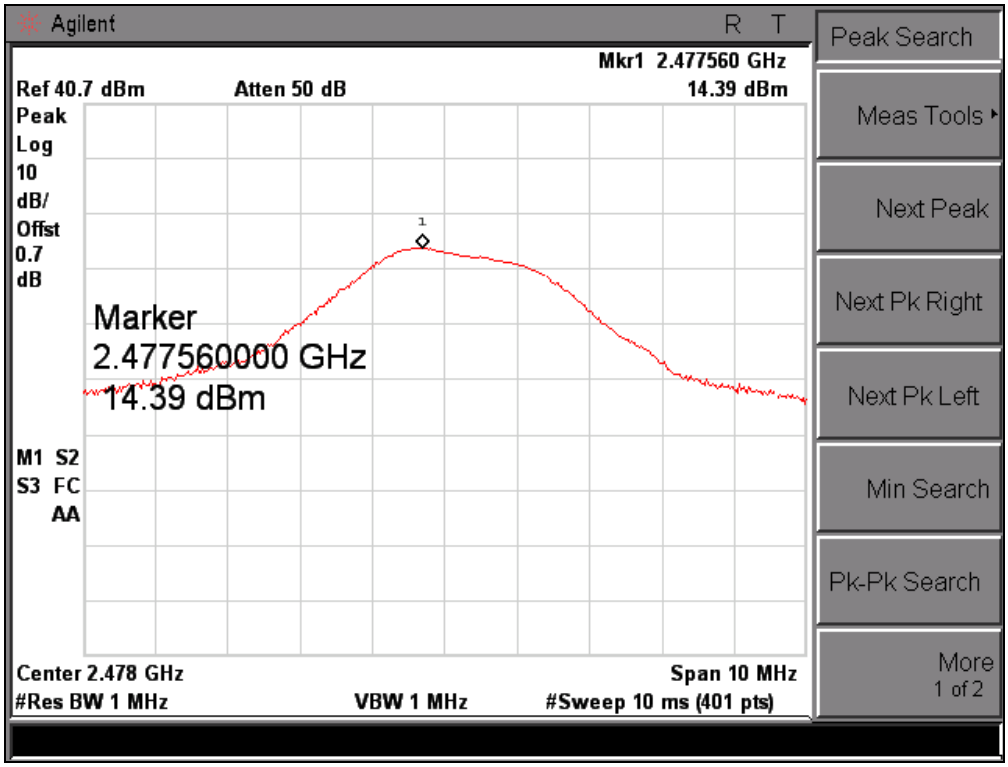
Frequency (MHz)	Result (dBm)	Limit (dBm)	Verdict
2,404	13.68	20.97	Pass
2,440	14.09	20.97	Pass
2,478	14.39	20.97	Pass



- Output Power 2,404 MHz -



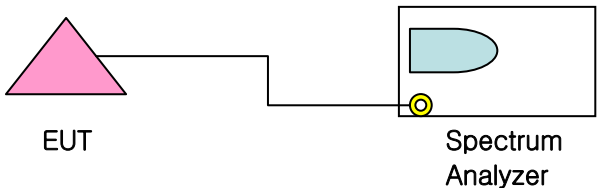
- Output Power 2,441 MHz -



- Output Power 2,478 MHz –

3.3. 100 KHz Bandwidth of Frequency Band Edges

3.3.1. Test Setup Layout

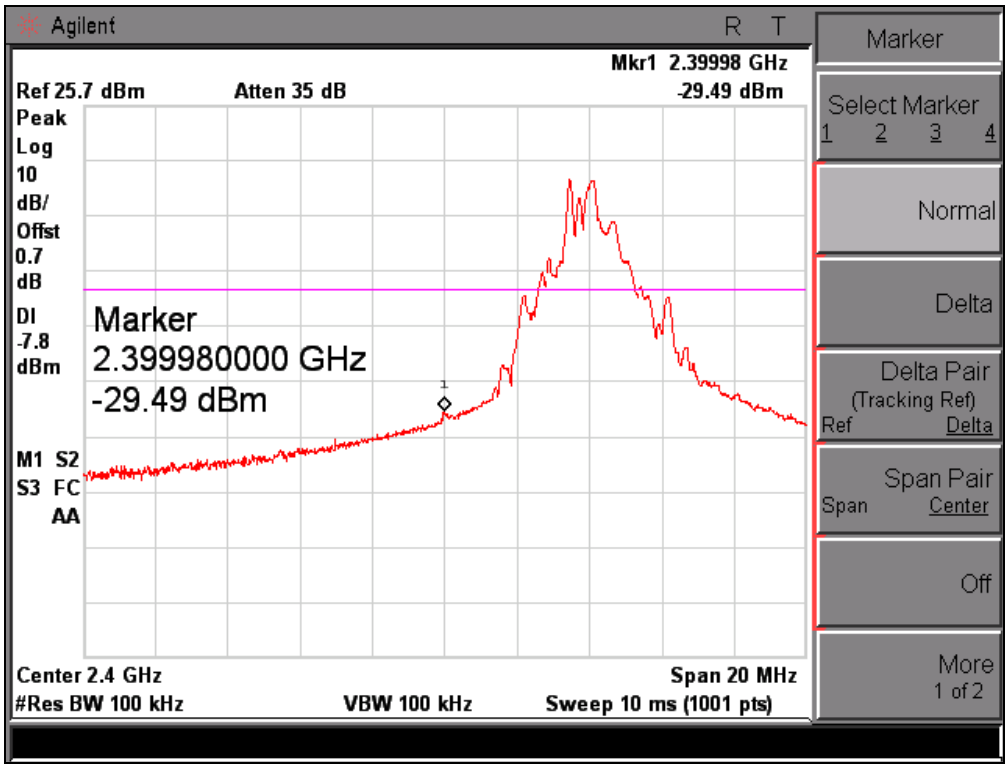


3.3.2. Test Condition

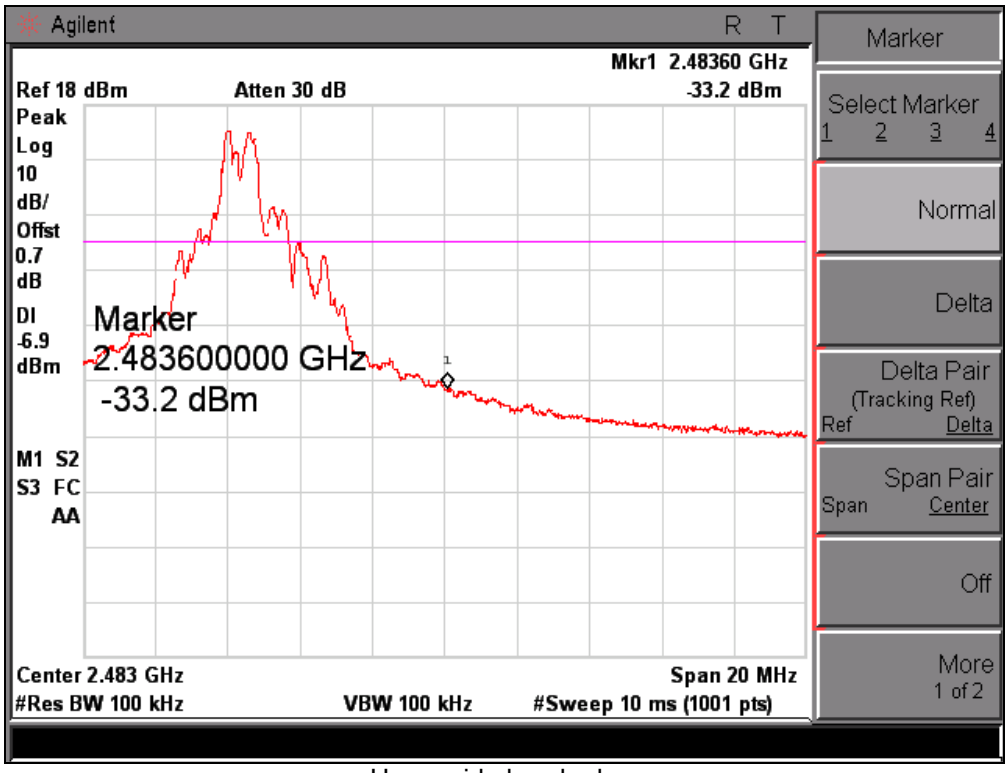
- Set RBW of Spectrum analyzer to 100 kHz
- The radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.
- The maximum frequency range measuring with the spectrum from 30 MHz to 25 GHz is investigated with the transmitter

3.3.3. Test result

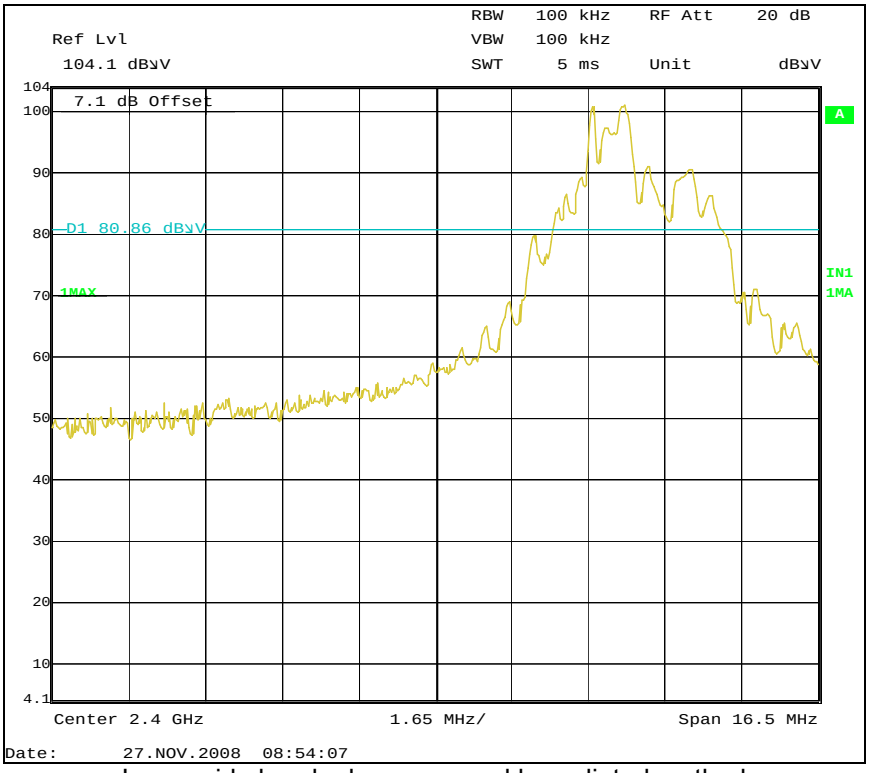
Frequency (MHz)	Result (dBc)	Limit (dBc)	Verdict
2,404	40 >	20	Pass
2,478	40 >	20	Pass



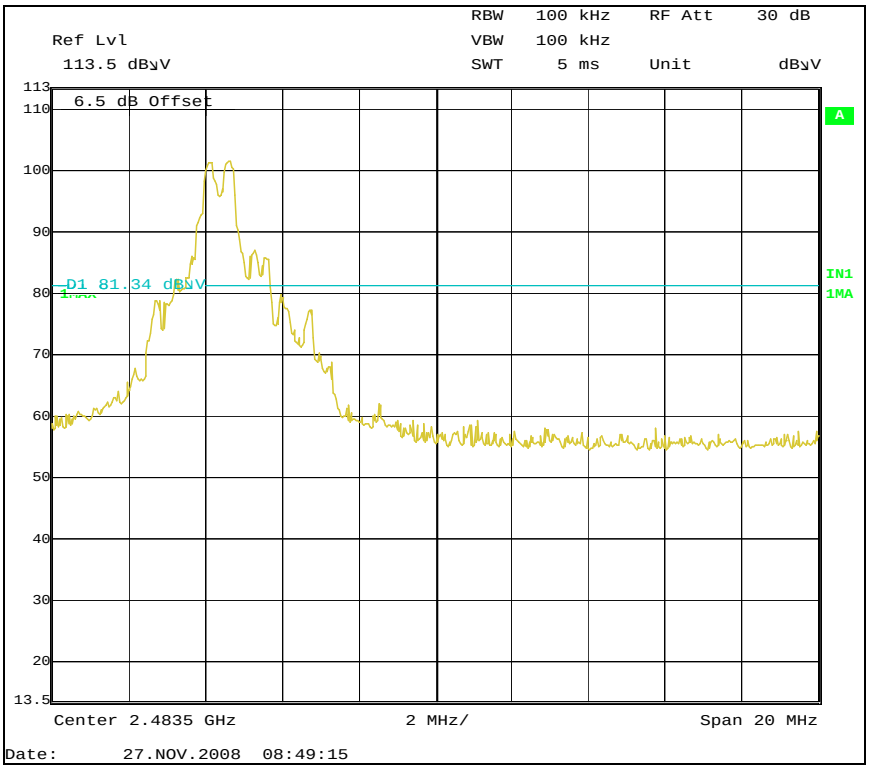
- Lower side band edge -



- Upper side band edge –



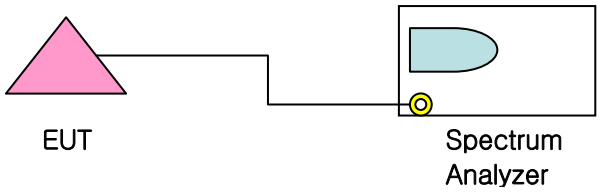
- Lower side band edge measured by radiated method -



- Upper side band edge measured by radiated method -

3.4. Hopping Channel Separation

3.4.1. Test Setup Layout



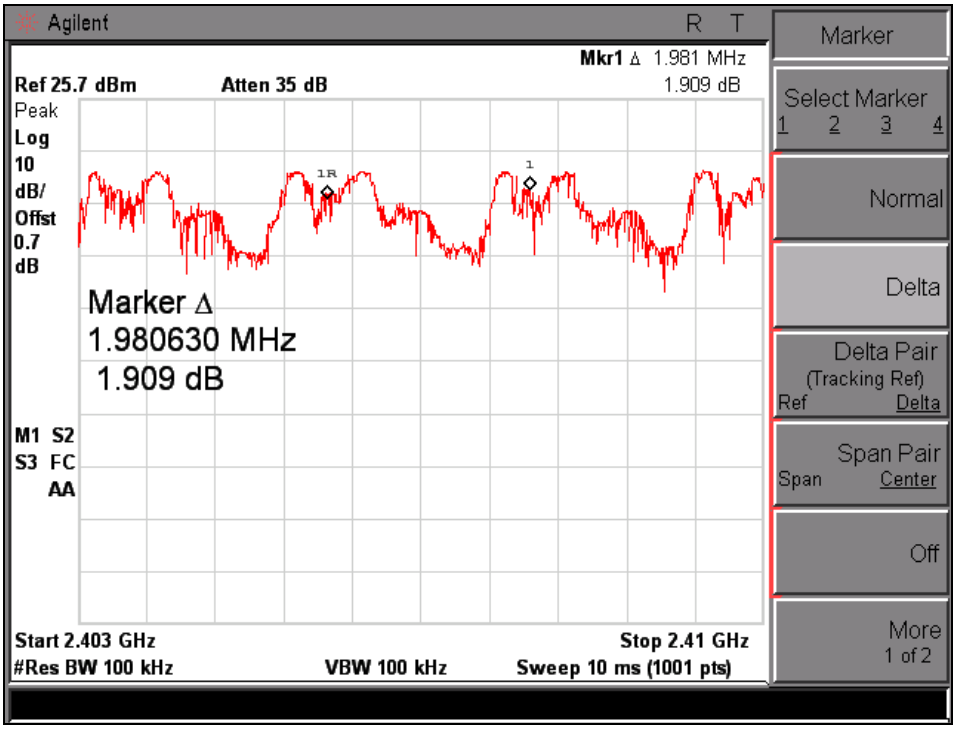
3.4.2. Test Condition

- Set RBW of Spectrum analyzer to 100 kHz
- Alternatively, frequency hopping systems operating in the 2400 – 2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

3.4.3. Test result

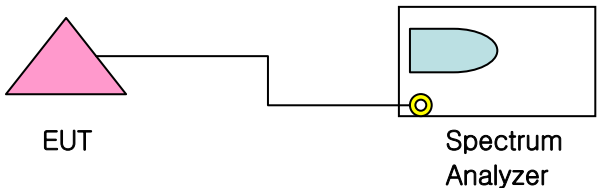
Mode	Result (MHz)	Limit (MHz)	Verdict
Hopping mode	1.98	1.460	Pass

※Remark : 20dB bandwidth is 2.189 MHz



3.5. Number of Hopping Channels

3.5.1. Test Setup Layout

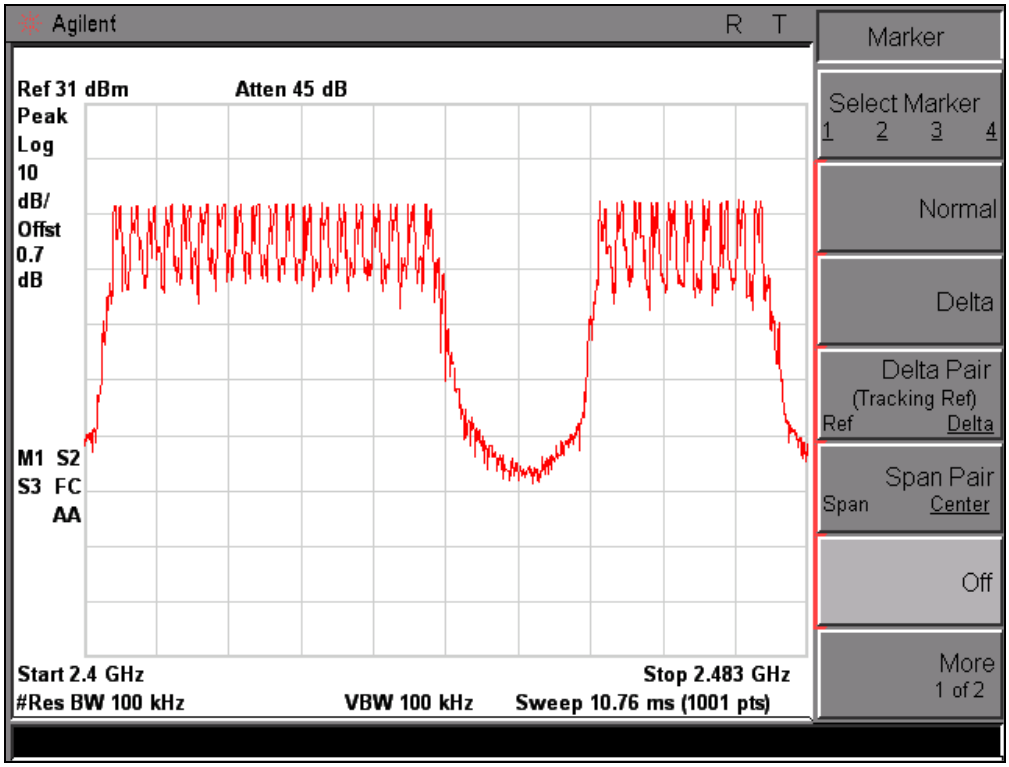


3.5.2. Test Condition

- Set RBW of Spectrum analyzer to 100 kHz
- Frequency hopping system shall have hopping channel carrier frequencies separated by minimum of 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

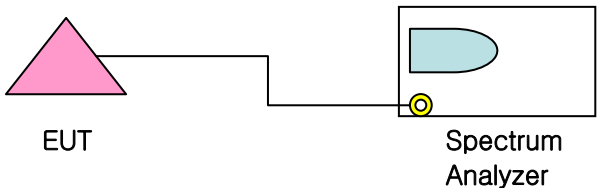
3.5.3. Test result

Mode	Frequency (MHz)	Result (channel)	Limit (channel)	Verdict
Hopping mode	--	29	15	Pass



3.6. Dwell Time

3.6.1. Test Setup Layout



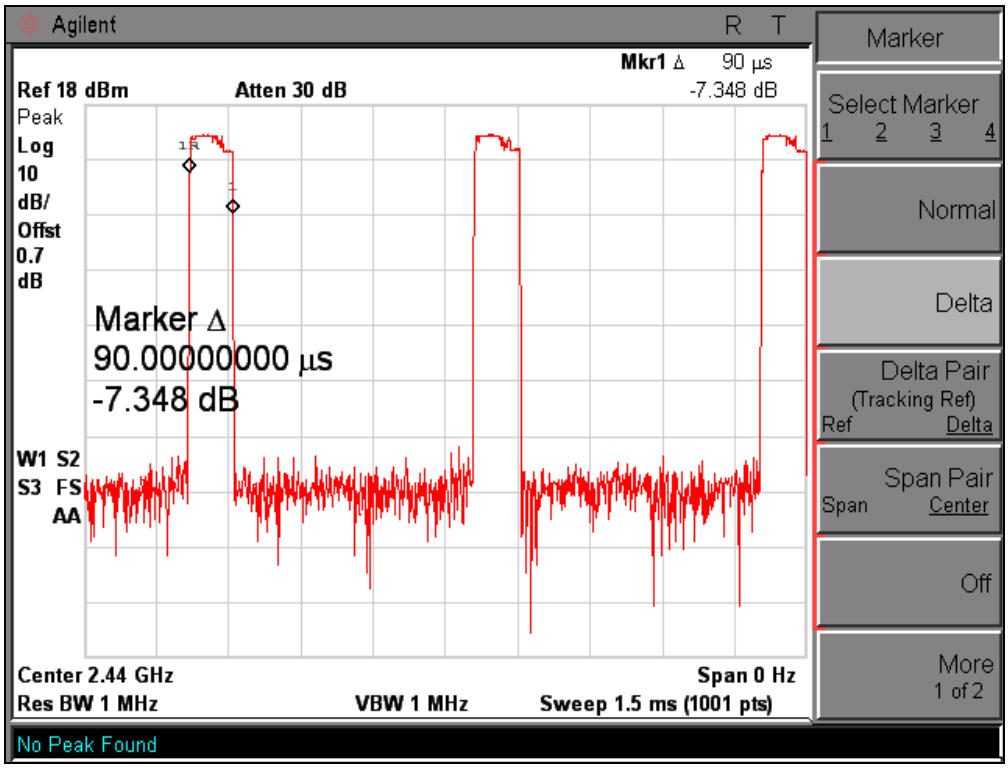
3.6.2. Test Condition

- Set RBW of Spectrum analyzer to 100 kHz
- Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Since the Bluetooth technology uses 29 channels this period is calculated to be 11.6 seconds.

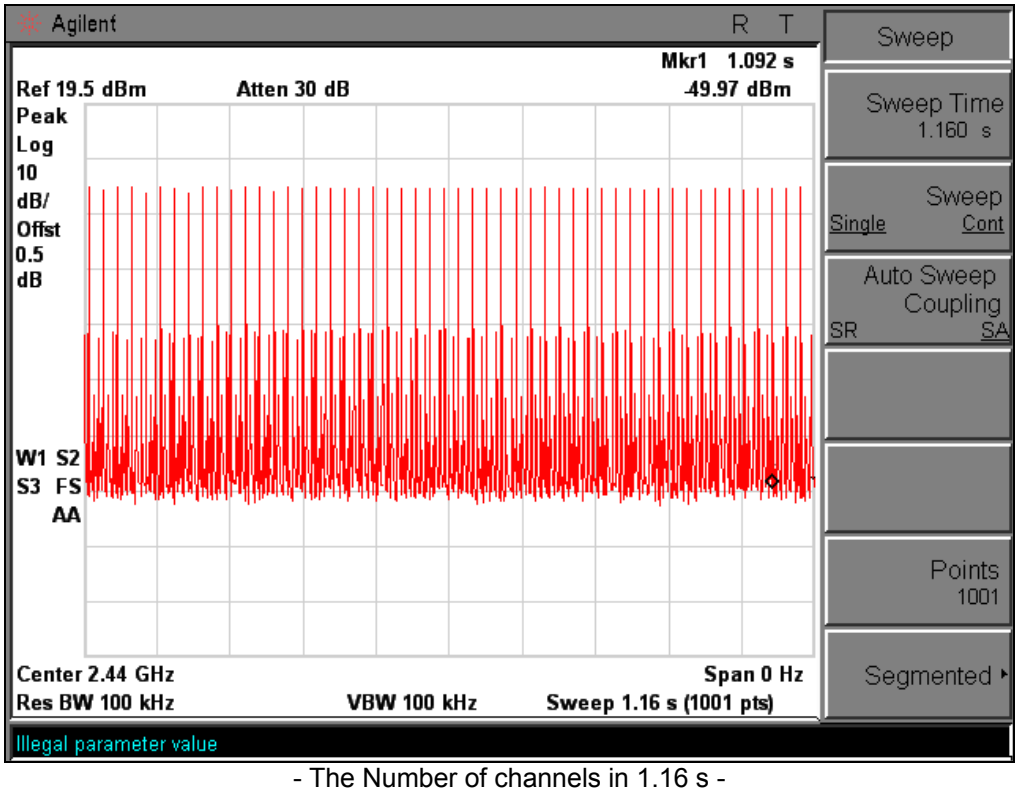
The dwell time is calculated by:
Dewll Time : Time slot length * The number of hopping channels in 1.16 s * 10
Time period for calculating the dwell time : 0.4 * 29 Channels employed = 11.6 seconds
Time slot length = 90 us
The number of hopping channels in 1.16 s = 17
Therfore:
Dwell Time = 0.09 ms X 51 X 10 = 45.9 ms

3.6.3. Test result

Frequency (MHz)	Type slot length(ms)	Dwell time (ms)	Limits (msec)	Verdict
2,441	0.09	45.9	≤ 400	Pass



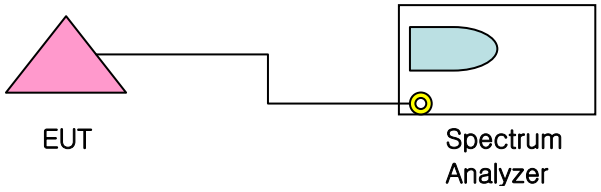
- Type slot length -



- The Number of channels in 1.16 s -

3.7. Conducted Spurious Emission

3.7.1. Test Setup Layout

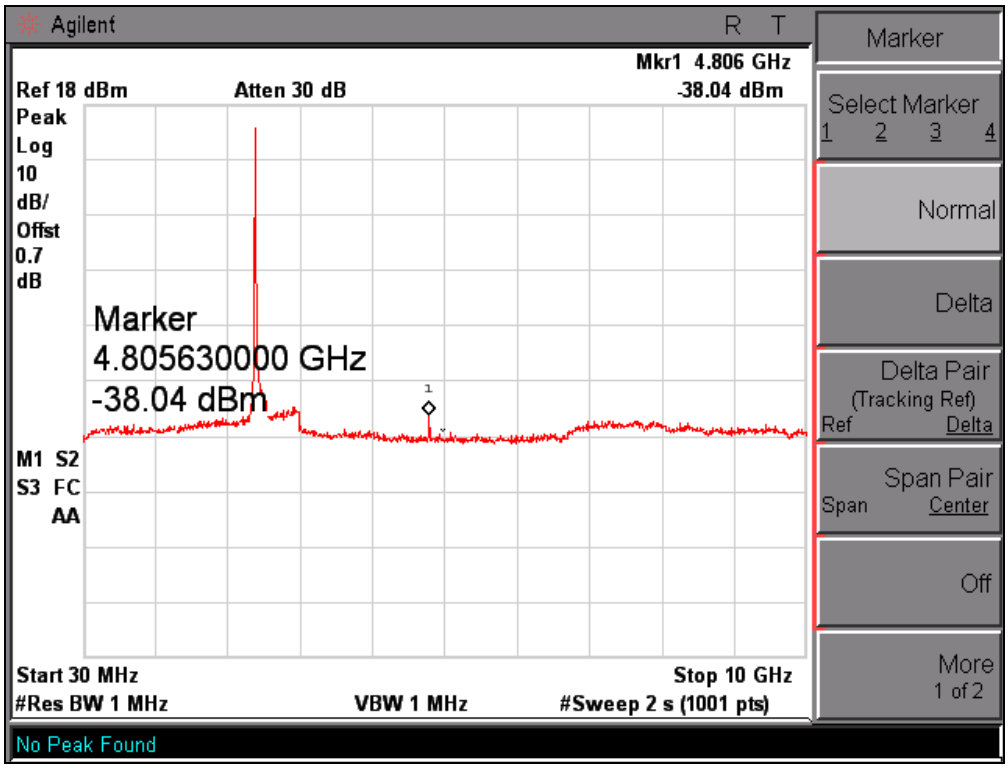


3.7.2. Test Condition

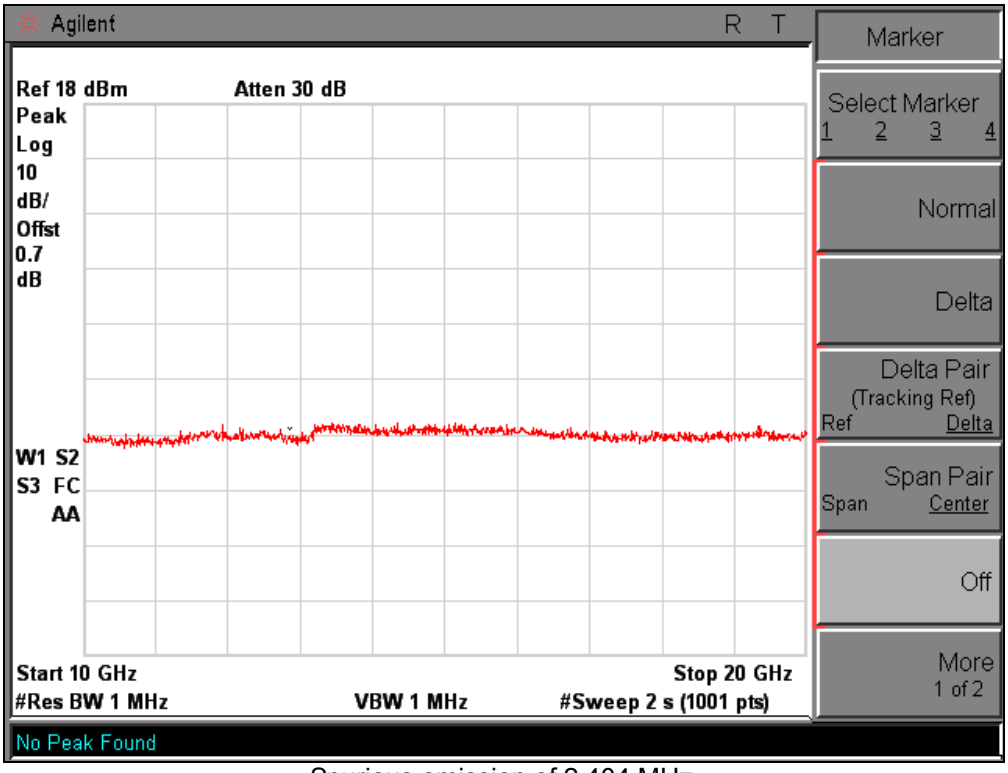
- The Equipment Under Test (EUT) was set up in a shielded room to perform the spurious emissions measurements.
- The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss.
- The reference value for the measurement of the spurious RF conducted emissions is determined during the test “band edge compliance” (cf. chapter 4.5). This value is used to calculate the 20 dBc limit.

3.7.3. Test result

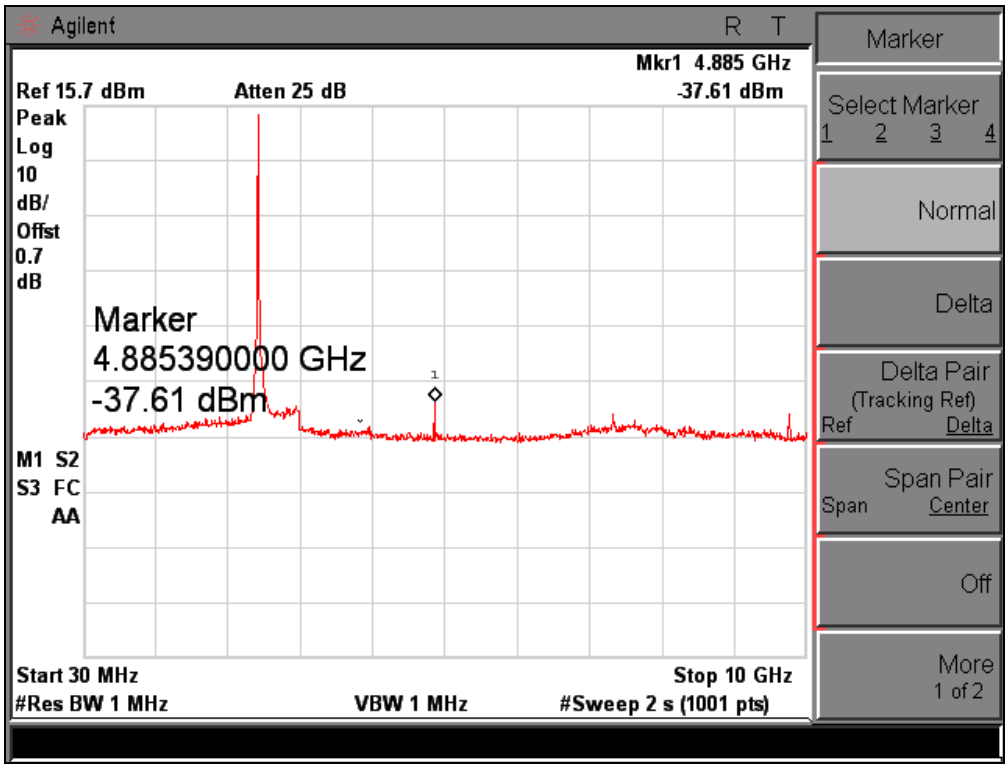
Frequency (MHz)	Result (dBc)	Limit (dBc)	Verdict
2,404	40 >	20	Pass
2,440	40 >	20	Pass
2,478	40 >	20	Pass



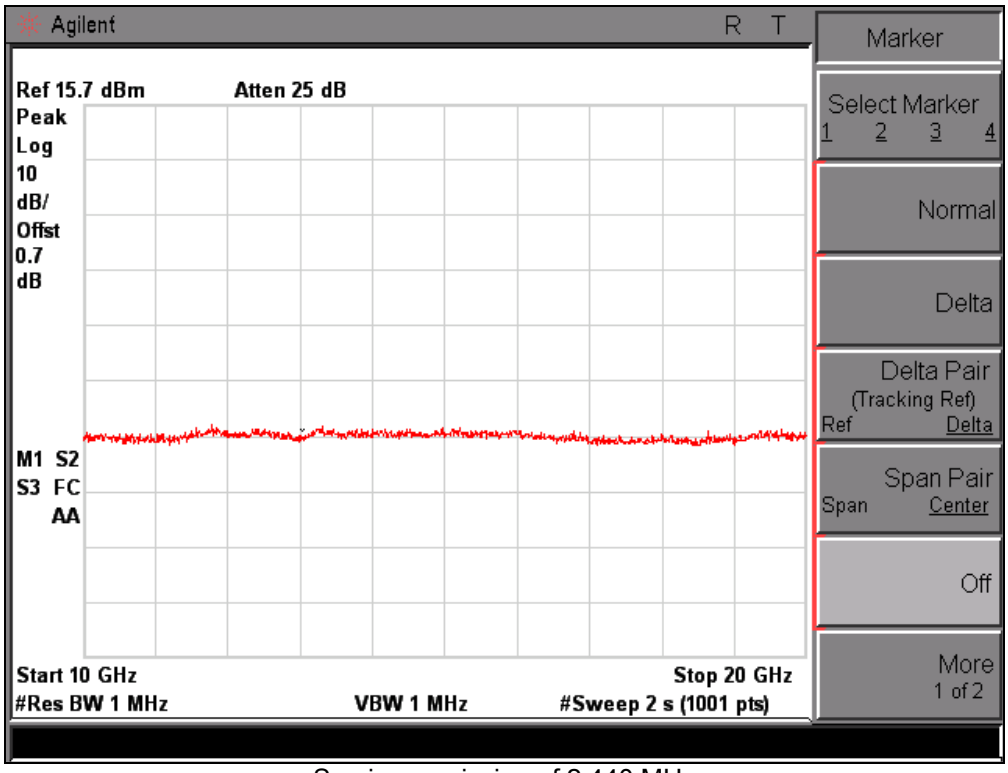
- Spurious emission of 2,404 MHz –



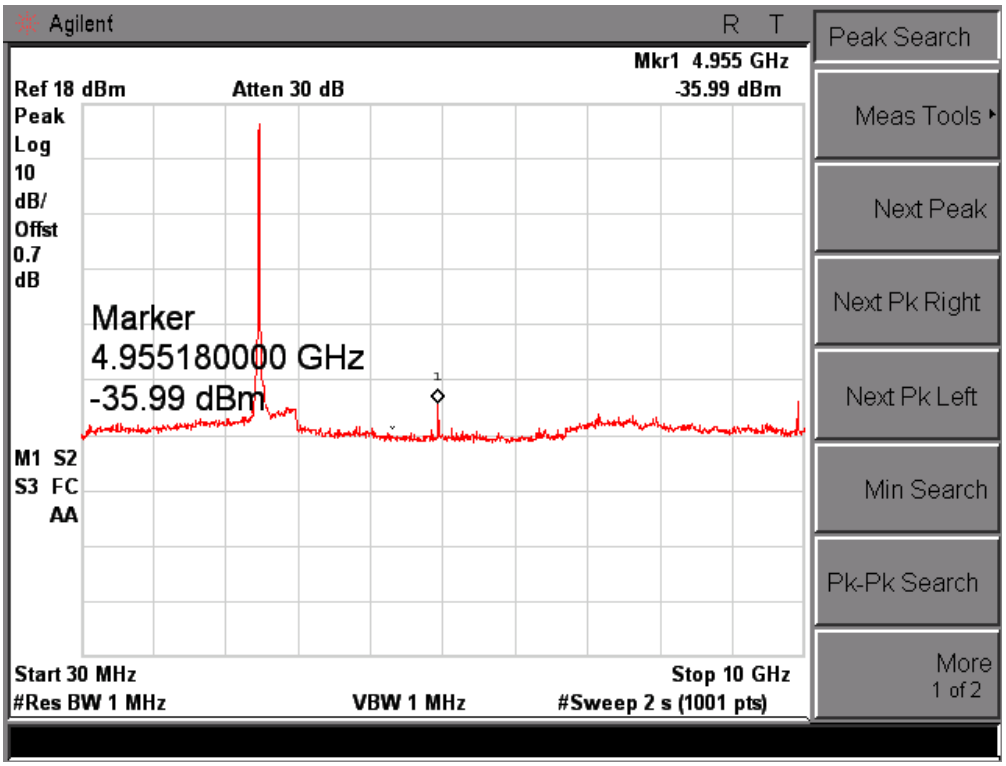
- Spurious emission of 2,404 MHz –



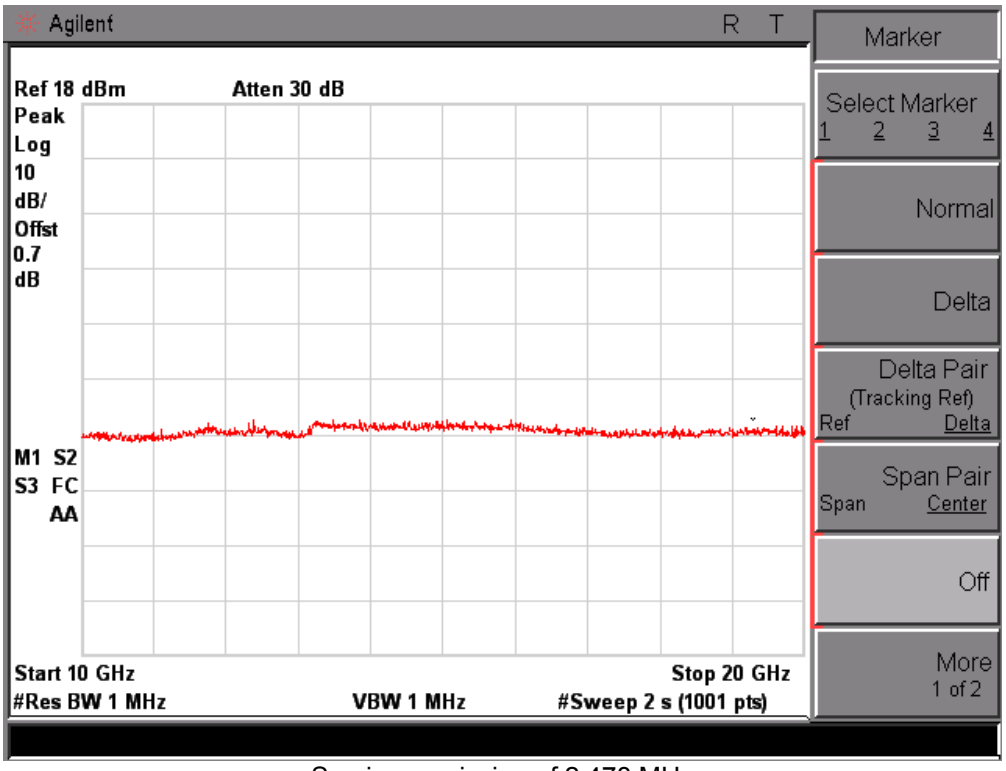
– Spurious emission of 2,440 MHz –



– Spurious emission of 2,440 MHz –



– Spurious emission of 2,478 MHz –



– Spurious emission of 2,478 MHz –

3.8. Radiated Spurious Emissions

3.8.1. Test Procedure

3.8.1.1 Preliminary Testing for Reference

Preliminary testing was performed in a KTL absorber-lined room to determine the emission characteristics of the EUT. The EUT was placed on the wooden table which has dimensions of 0.8 meters in height, 1 meter in length and 1.5 meters in width. Receiving antenna (Biconi-Log antenna : 30 to 1000 MHz or Horn Antenna : 1 to 40 GHz) was placed at the distance of 3 meter from the EUT.

An attempt was made to maximize the emission level with the various configurations of the EUT. Emission levels from the EUT with various configurations were examined on a spectrum analyzer connected with a RF amplifier and graphed.
The emission was within the illumination area of the 3 dB beam width of the antenna so that the maximum emission from the EUT is measured.

3.8.1.2 Final Radiated Emission Test at an Absorber-Lined Room

The final measurement of radiated field strength was carried out in a KTL Absorber-Lined Room that was listed up at FCC according to the "Radiated Emissions Testing" procedure specified by ANSI C63.4.

Based on the test results in preliminary test, measurement was made in same test set up and configuration which produced maximum emission level. Receiving antenna was installed at 3-meter distance from the EUT, and was connected to an EMI receiver.

Turntable was rotated through 360 degrees and receiving antenna height was varied from 1 to 4 meters above the ground plane to read maximum emission level. Receiving antenna polarization was changed vertical and horizontal. The worst value was recorded.

If necessary, the radiated emission measurements could be performed at a closer distance than specified distance to ensure higher accuracy and their results were extrapolated to the specified distance using an inverse linear distance extrapolation factor (20 dB/decade) as per Section 15.31(f).

The maximum emission level from the EUT occurred in such configuration as shown in the following photograph.

Tested in x, y, z axis and worst case results are reported

The maximum frequency range measuring with the spectrum from 30 MHz to 25 GHz is investigated with the transmitter.

3.8.2. Limits

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz
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 - 156.52525	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			

[1] Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
[2] Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency	microvolts/meter	metets
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200**	3
above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

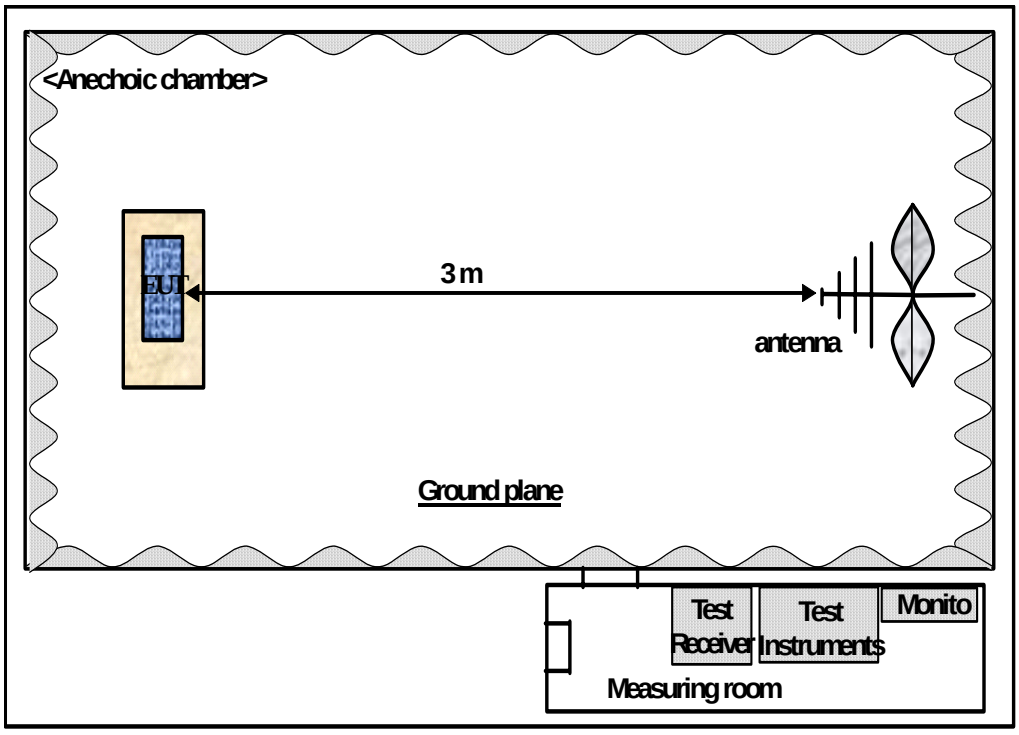
3.8.3. Sample Calculation

The emission level measured in decibels above one microvolt (dBμV) was following sample calculation.

For example ;

Measured Value at	4824 MHz	33.9 dBμV
Antenna Factor & Cable loss		45.0 dB
− Preamplifier		-30.0 dB
= Radiated Emission		48.9 dBμV/m

3.8.4. Photograph for the test configuration



3.8.5. Test Results

3.8.5.1 Spurious Radiated Emission (Section 15.209)

Model No. : SurroundBar SDA Instant Home Theater
Test distance : 3m
Test mode : Continuous TX
Dat : Nov 14, 2008

Frequncy MHz	Antenna Pol. H/V	Detector	Reading Level dBμV	Correction (AF+CL) dB/m	Emission Level dBμV/m	Limit dBμV/m	Margin +/-
122.80	H	Q	14.57	12.6	27.17	43.5	+16.33
125.82	V	Q	19.99	12.9	32.89	43.5	+10.61
368.64	V	Q	22.41	17.1	39.51	46.0	+6.49
368.70	H	Q	15.81	17.1	32.91	46.0	+13.09
393.18	V	Q	24.77	17.7	42.47	46.0	+3.53
393.24	H	Q	23.30	17.7	41.00	46.0	+5.00
393.24	V	Q	25.15	17.7	42.85	46.0	+3.15
417.78	H	Q	19.43	18.4	37.83	46.0	+8.17

Note : 1. Measurement was done over the frequency range from 30 MHz to 1000 MHz. The EUT was rotated and the antenna was changed to a range of height of from 1 m to 4 m above the ground plane for maximum response.
2. The observed EMI Receiver (ESIB26) noise floor level was 2.0 dBμV. And all other emissions not reported on data were more than 40 dB below the permitted level.

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain

Remark : Emission level (dBμV/m) = Reading level (dBμV) + Correction (dB/m) + Amplifier Gain (dB)
Margin (dB) = Limit (dBμV/m) – Emission level (dBμV/m)
The "+" sign of the margin means that emission level are within the limit and the "-" sign means over the limit.

3.8.5.2 Spurious Radiated Emission (Section 15.247(d))

Model No. : SurroundBar SDA Instant Home Theater
Test distance : 3m
Test mode : Continuous TX
Test Frequency : 2,404 MHz
Date : Nov 14, 2008

Frequncy MHz	Antenna Pol. H/V	Detector	Reading Level dBμV	Correction (AF+CL+AG) dB/m	Emission Level dBμV/m	Limit dBμV/m	Margin +/-
4,808	V	P	48.7	24.6	73.3	74.0	+0.7
4,808	V	A	28.6	24.6	53.2	54.0	+0.8

Note : 1. Measurement was done over the frequency range from 30 MHz to 10th hramonic. The EUT was rotated and the antenna was changed to a range of height of from 1 m to 4 m above the ground plane for maximum response.
2. The observed Spectrum Analyzer (E4448A) noise floor level was 2.0 dBμV. And all other emissions not reported on data were more than 40 dB below the permitted level.
3. For measurement the video bandwidth is set to 10 Hz for average measurements.

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain

Remark : Emission level (dBμV/m) = Reading level (dBμV) + Correction (dB/m) + Amplifier Gain (dB)
Margin (dB) = Limit (dBμV/m) – Emission level (dBμV/m)
The "+" sign of the margin means that emission level are within the limit and the "-" sign means over the limit.

3.8.5.3 Spurious Radiated Emission (Section 15.247(d))

Model No. : SurroundBar SDA Instant Home Theater
Test distance : 3m
Test mode : Continuous TX
Test Frequency : 2,440 MHz
Date : Nov 14, 2008

Frequncy MHz	Antenna Pol. H/V	Detector	Reading Level dBµV	Correction (AF+CL+AG) dB/m	Emission Level dBµV/m	Limit dBµV/m	Margin +/-
4,880	V	P	49.5	24.0	73.5	74.0	+0.5
4,880	V	A	29.6	24.0	53.6	54.0	+0.4

Note : 1. Measurement was done over the frequency range from 30 MHz to 10th hramonic. The EUT was rotated and the antenna was changed to a range of height of from 1 m to 4 m above the ground plane for maximum response.
2. The observed Spectrum Analyzer (E4448A) noise floor level was 2.0 dBµV. And all other emissions not reported on data were more than 40 dB below the permitted level.
3. For measurement the video bandwidth is set to 10 Hz for average measurements.

.

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain

Remark : Emission level (dBµV/m) = Reading level (dBµV) + Correction (dB/m) + Amplifier Gain (dB)
Margin (dB) = Limit (dBµV/m) – Emission level (dBµV/m)
The "+" sign of the margin means that emission level are within the limit and the "-" sign means over the limit.

3.8.5.4 Spurious Radiated Emission (Section 15.247(d))

Model No. : SurroundBar SDA Instant Home Theater
Test distance : 3m
Test mode : Continuous TX
Test Frequency : 2,478 MHz
Date : Nov 14, 2008

Frequncy MHz	Antenna Pol. H/V	Detector	Reading Level dBµV	Correction (AF+CL+AG) dB/m	Emission Level dBµV/m	Limit dBµV/m	Margin +/-
4,956	V	P	49.1	24.3	73.4	74.0	+0.6
4,956	V	A	29.3	24.3	53.6	54.0	+0.4

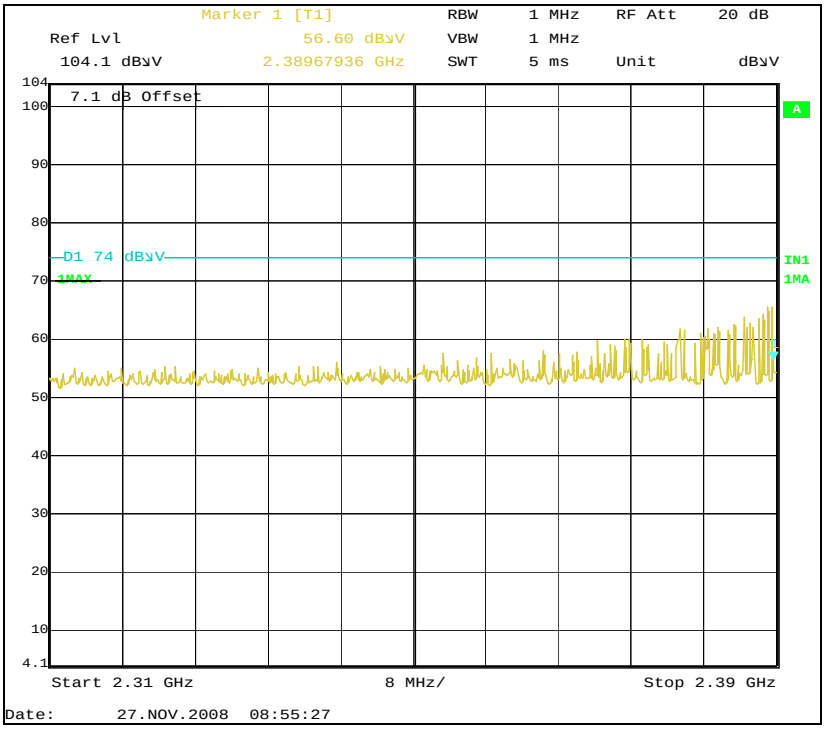
Note : 1. Measurement was done over the frequency range from 30 MHz to 10th hramonic. The EUT was rotated and the antenna was changed to a range of height of from 1 m to 4 m above the ground plane for maximum response.
2. The observed Spectrum Analyzer (E4448A) noise floor level was 2.0 dBµV. And all other emissions not reported on data were more than 40 dB below the permitted level.
3. For measurement the video bandwidth is set to 10 Hz for average measurements.

.

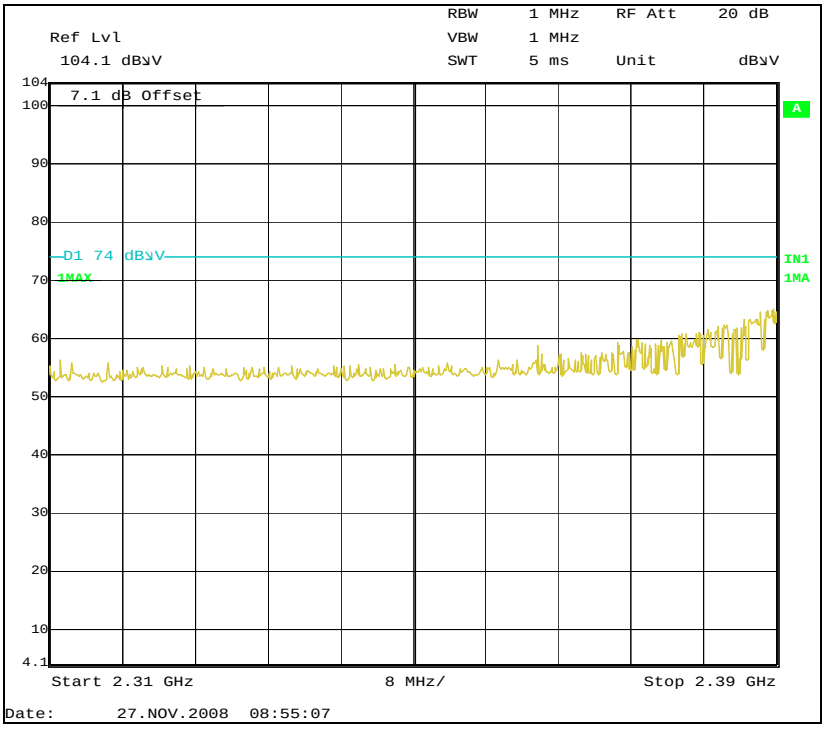
* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain

Remark : Emission level (dBµV/m) = Reading level (dBµV) + Correction (dB/m) + Amplifier Gain (dB)
Margin (dB) = Limit (dBµV/m) – Emission level (dBµV/m)
The "+" sign of the margin means that emission level are within the limit and the "-" sign means over the limit.

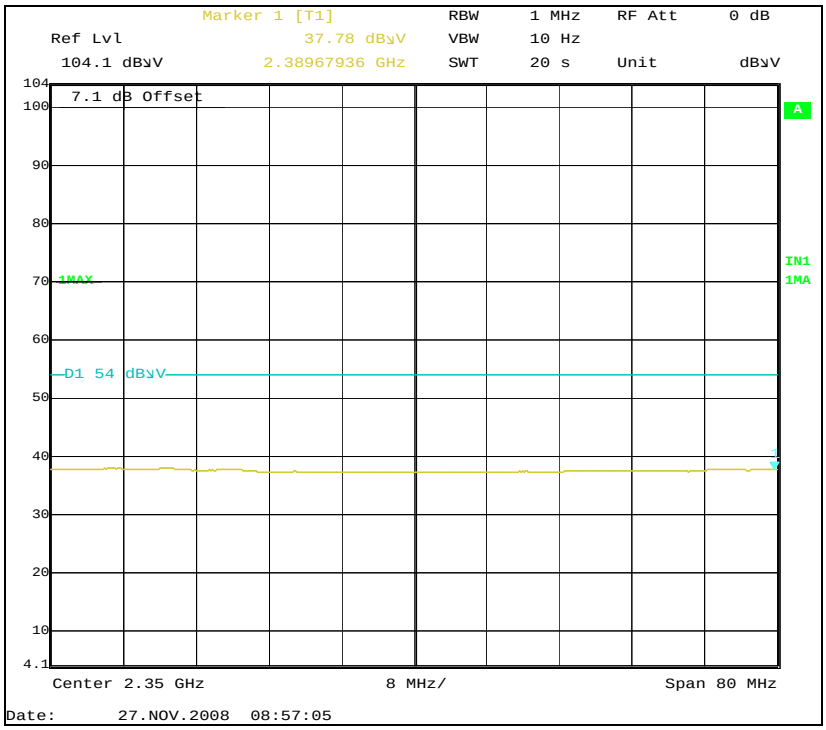
3.8.5.5 Restricted Bandedge



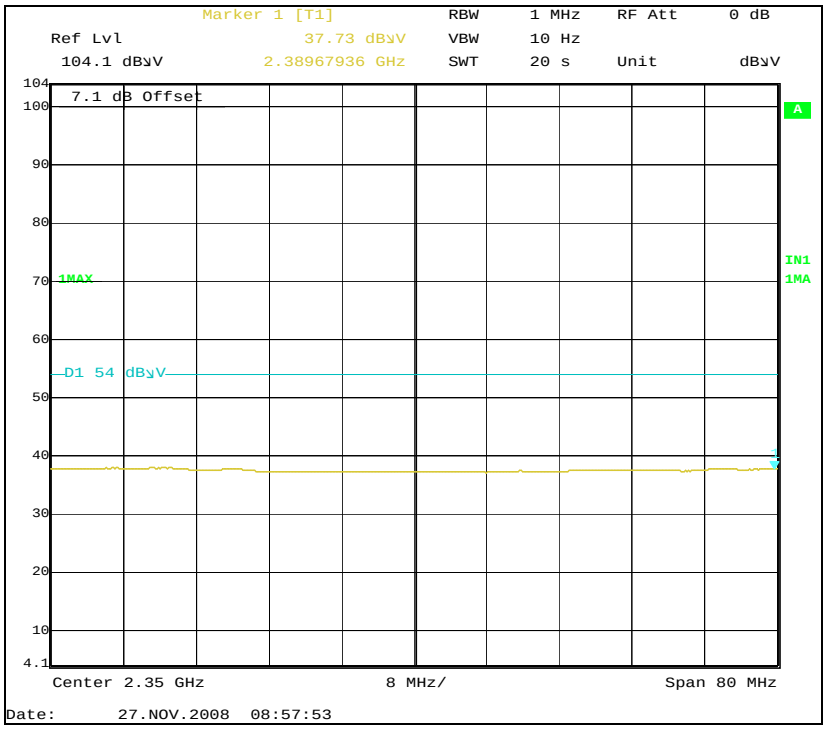
– Low channel restricted bandedge, Peak, Horizontal –



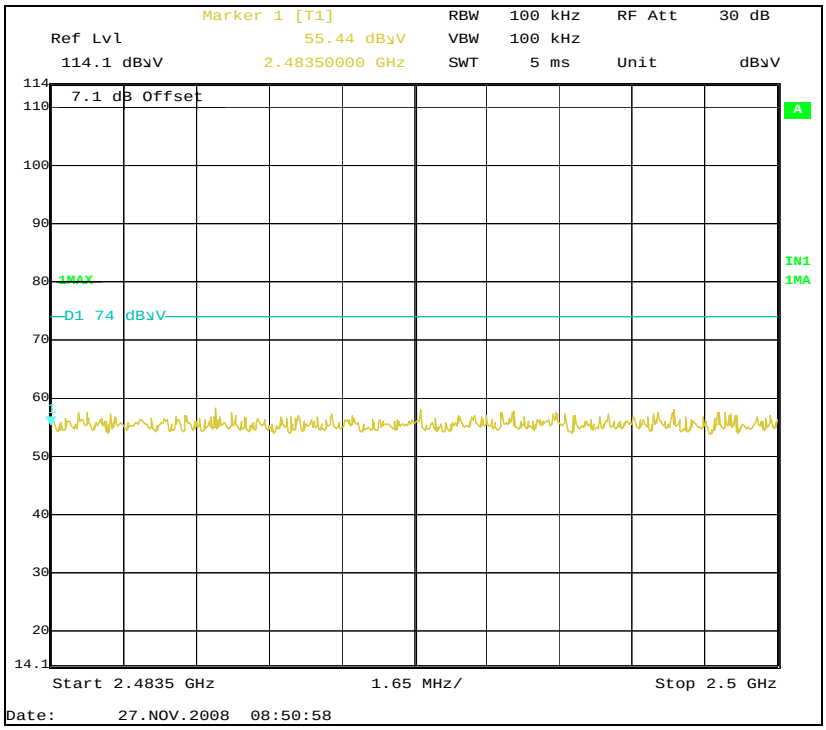
– Low channel restricted bandedge, Peak, Vertical –



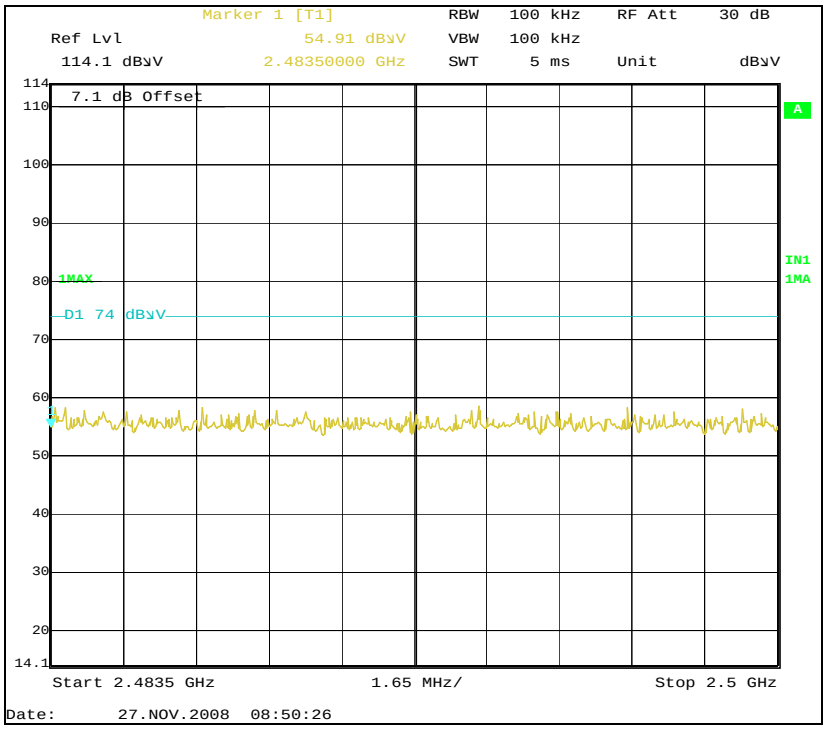
– Low channel restricted bandedge, Average, Horizontal –



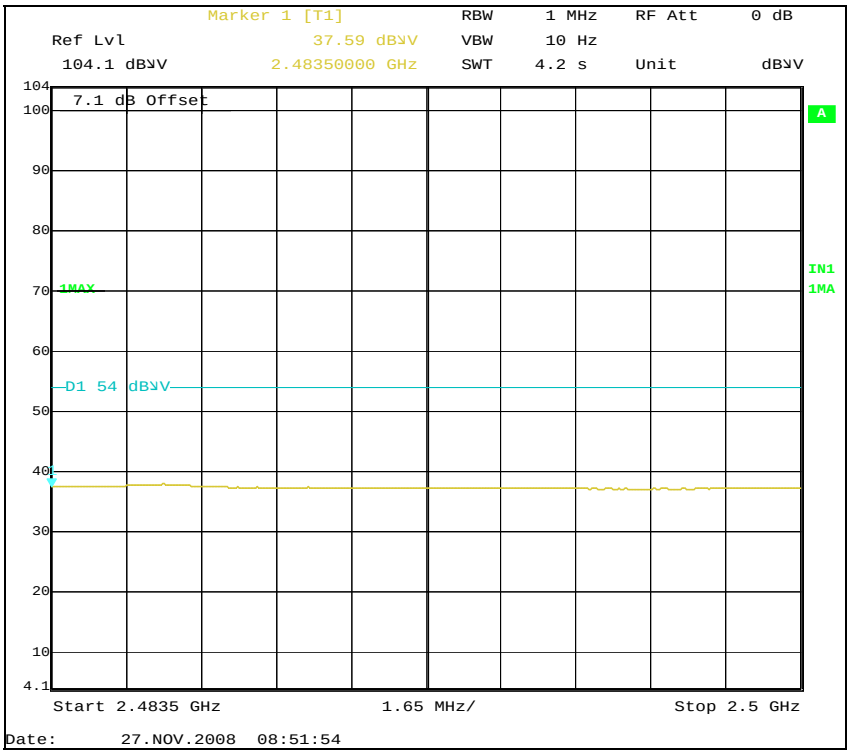
– Low channel restricted bandedge, Average, Vertical –



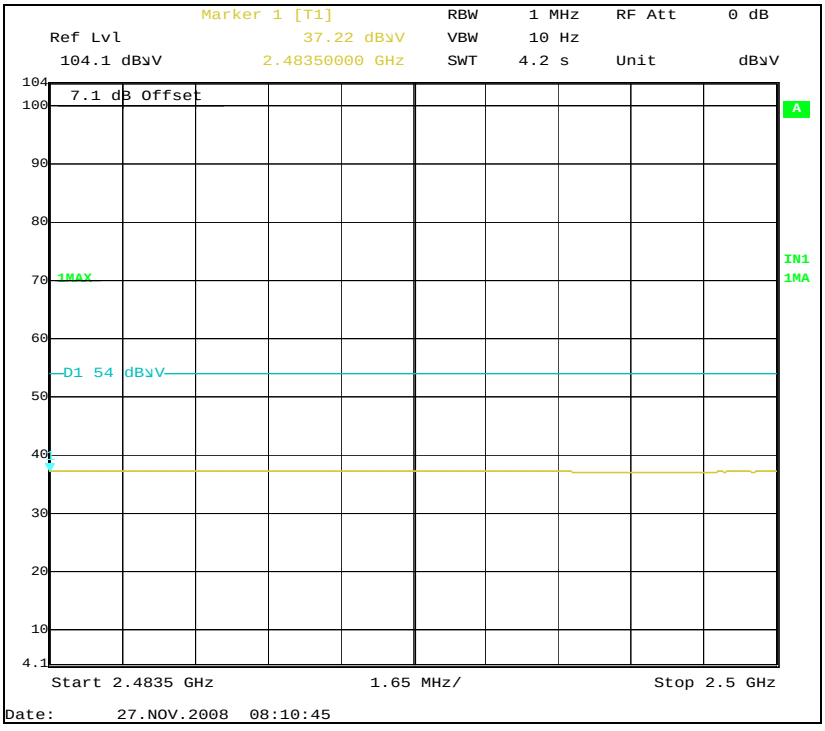
– High channel restricted bandedge, Peak, Horizontal –



– Low channel restricted bandedge, Peak, Vertical –



– High channel restricted bandedge, Average, Horizontal –



– Low channel restricted bandedge, Average, Vertical –

3.9. AC Conducted Emissions

3.9.1. Test Procedure

Conducted emission measurements on the EUT were performed by "AC Power Line Conducted Emissions Testing" procedure as per ANSI C63.4. The EUT was set up on a wooden table 0.8 meters height, 1.0 by 1.5 meters in size, placed in the shielded enclosed with a side of wall of which constituted a vertical conducting surface of 2.2 m x 3.1 m in size to maintain 40 cm from the rear of EUT

LISN(Line Impedance Stabilization Network, ROHDE & SCHWARZ, ESH3-Z5, 50 ohm / 50 μH) was installed and electrically boned to the conducting ground plane. The EUT was connected to the LISN using a typical power adapter.
One of two 50 ohm output terminals of the LISN was connected to the EMI Receiver (ROHDE & SCHWARZ, ESCI, 9 kHz to 3 GHz) and the other was terminated in 50 ohms. Measurements were again performed after interchanging such a connection oppositely.
The frequency range from 150 kHz to 30 MHz was examined and the remarkable frequencies were measured with Quasi-peak and Average values using the EMI receiver instrument (ROHDE & SCHWARZ, ESI, 9 kHz to 3 GHz ; Detector Function ; CISPR Quasi-Peak & Average). The 6 dB bandwidth of the Receiver was set to 9 kHz

The position of connecting cables of the EUT was changed to find the worst case configuration during measurements. The maximum emission level from the EUT occurred in such configuration as shown in the following photograph.

3.9.2. Limits

Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency (MHz)	Conducted Limits (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

- Decreases with the logarithm of the frequency.

3.9.3. Sample calculation

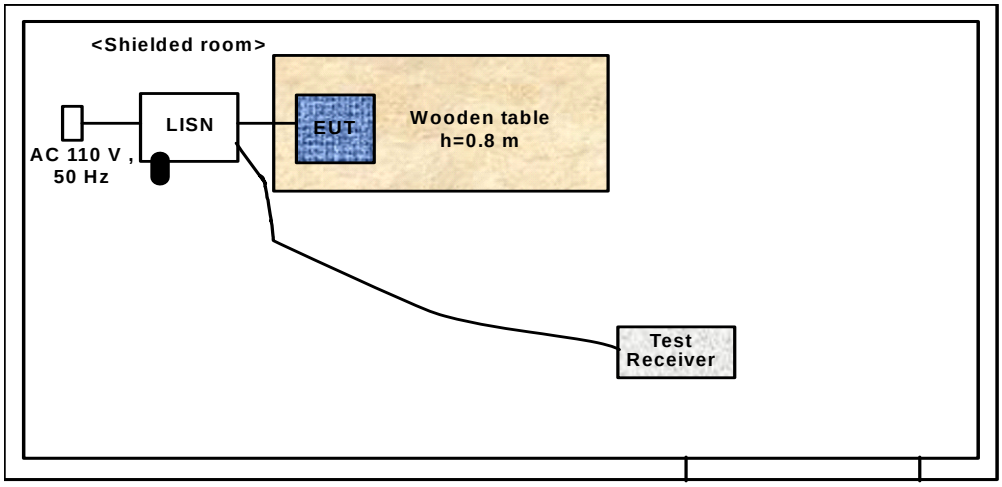
The emission level measured in decibels above one microvolt (dBμV) was converted into microvolt (μV) as shown in following sample calculation.

For example :

Measured Value at	0.438 MHz	44.2 dBμV	@ Q-Peak mode
+ Correct factor *		0.1 dB	
= Conducted Emission		44.3 dBμV	

* Correct factor is adding RF cable loss and Attenuation

3.9.4. Photograph for the test configuration



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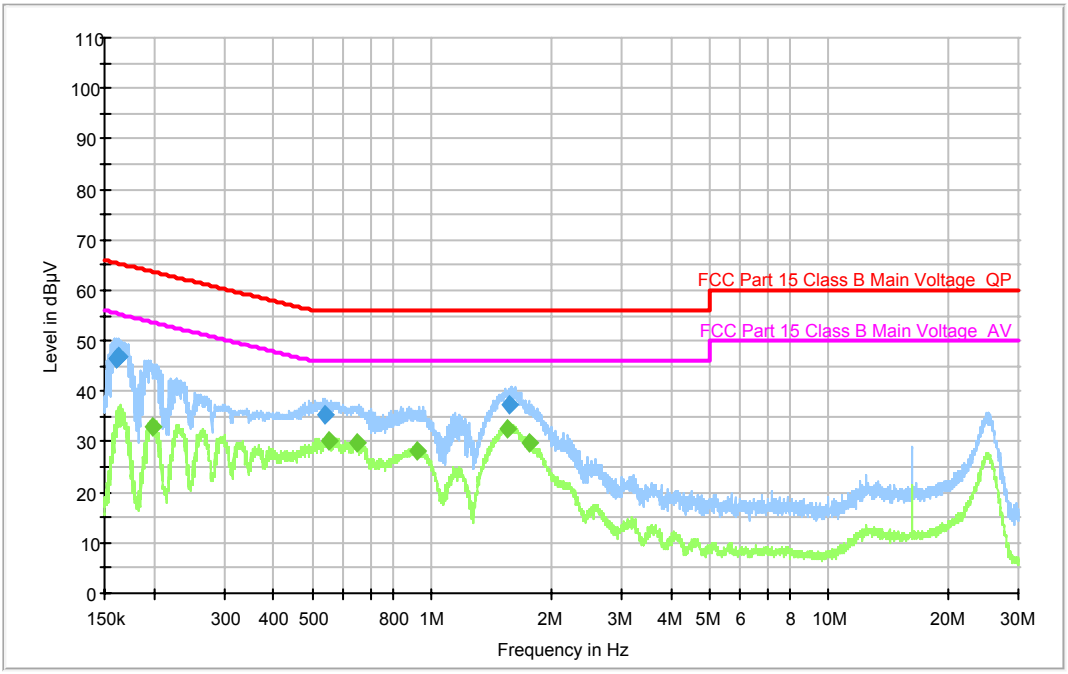
3.9.5. Test Results



Final Measurement Detector (Quasi Peak)

Frequency (MHz)	Average (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.197848	32.9	N	9.7	20.9	53.7
0.548258	30.2	N	9.8	15.8	46.0
0.645141	29.6	L1	9.8	16.4	46.0
0.919791	28.2	L1	9.8	17.8	46.0
1.554997	32.6	N	10.0	13.4	46.0
1.753803	29.6	L1	9.9	16.4	46.0

Final Measurement Detector (Average)

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.160389	46.6	N	9.7	18.8	65.4
0.160549	46.6	N	9.7	18.8	65.4
0.161838	46.8	N	9.7	18.6	65.4
0.161957	46.9	N	9.7	18.5	65.4
0.537742	35.3	N	9.8	20.7	56.0
1.566616	37.3	N	10.0	18.7	56.0

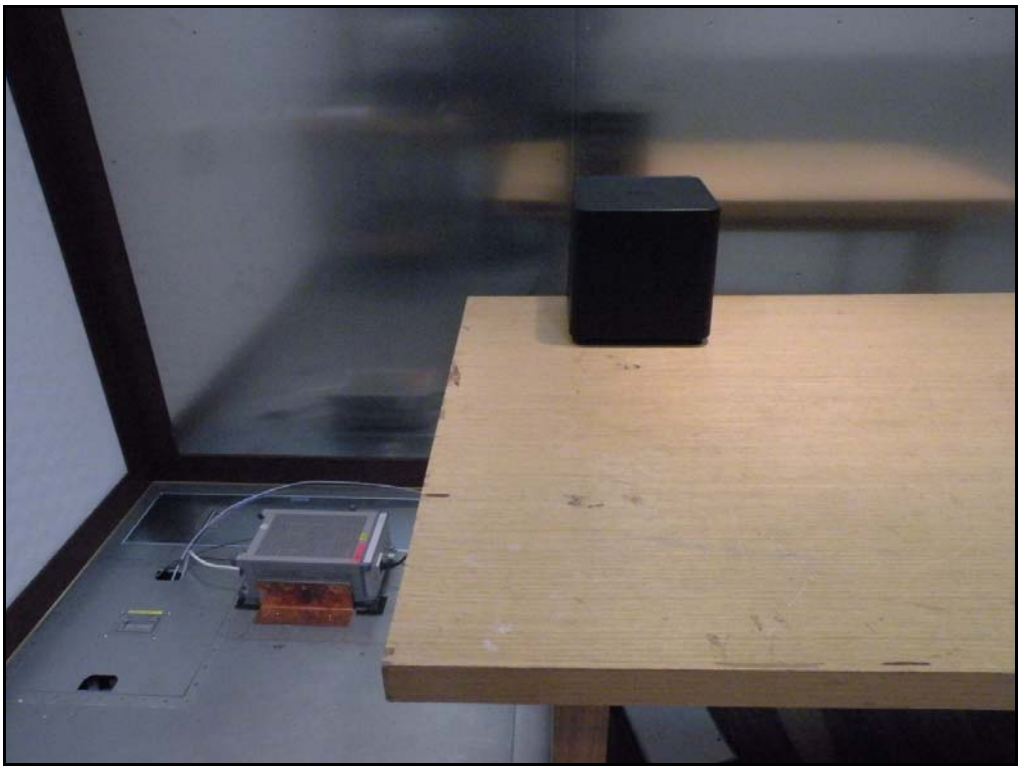
4. TEST EQUIPMENTS

No.	Equipment	Manufacturer	Model	S/N	Effective Cal.Duration
1	EMI Receiver (20 Hz ~ 26.5 GHz)	R&S	ESIB	100280	08/17/2008 ~ 08/17/2009
2	Spectrum Analyzer (100 Hz ~ 26.5 GHz)	Agilent	E4407B	US41443316	12/01/2007 ~ 12/01/2008
3	Spectrum Analyzer (3 Hz ~ 50 GHz)	Agilent	E4448A	MY43360322	08/30/2008 ~ 08/30/2009
4	Pre-Amplifier (100 kHz ~ 1 GHz)	SONOMA.	310N	186270	08/25/2008 ~ 08/25/2009
5	Pre-Amplifier (0.5 GHz ~ 26.5 GHz)	Agilent	83017A	MY39500982	04/02/2008 ~ 04/02/2009
6	LISN(50 Ω , 50 μH) (10 kHz ~ 100 MHz)	R&S	ESH3-Z5	826789009	07/05/2008 ~ 07/05/2009
7	Biconi-Log Ant. (30 MHz ~ 1000 MHz)	Schwarzbeck	VULB9168	9168-180	08/24/2008 ~ 08/24/2009
8	Horn Ant. (1 GHz ~ 18 GHz)	EMCO	3115	9012-3595	03/26/2007 ~ 03/26/2009
9	Horn Ant. (18 GHz ~ 40 GHz)	EMCO	3116	2664	03/26/2007 ~ 03/26/2009
10	Active Loop Ant. (9 kHz ~ 30 MHz)	EMCO	6502	2532	06/08/2008 ~ 06/08/2009
11	DC Power Supply	Agilent	E4356A	MY41000296	10/01/2008 ~ 10/01/2009
12	Power Meter	Agilent	E4417A	GB4129075	09/17/2008 ~ 09/17/2009
13	Bluetooth tester	anrisu	MT8852B	6K00006994	03/03/2008 ~ 03/03/2009

Appendix.1 EUT photo

Appendix.2 Test setup photo

<Radiated Emission>



<AC Conducted Emission>