RF TEST REPORT

Test item	:	Wireless Microphone
Model No.	:	YK5000
Order No.	:	DTNC1409-03991
Date of receipt	:	2014-09-15
Test duration	:	2014-09-22 ~ 2014-09-29
Date of issue	:	2014-11-07
Use of report	:	FCC Original Grant

Applicant : YMG Co.,LTD.
707, A-Gangseo-Hangang Xi Tower, 401, Yangcheon-ro, Gangseo-gu, Seoul, Korea(Gayangdong52-7)

Test laboratory : DT&C Co., Ltd.
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 449-935

Test specification	:	FCC Part 15 Subpart C 247
Test environment	:	See appended test report
Test result	:	☒ Pass ☐ Fail

Tested by:
Engineer
SeokHwan Hong

Reviewed by:
Technical Manager
HongHee Lee

Test Report Version

Test Report No.	Date	Description
DRTFCC1411-1407	Nov. 07, 2014	Initial issue

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1. General Information

1.1 Testing Laboratory

DT&C Co., Ltd.
FCC test site number 678747
42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 449-935
www.dtnc.net
Telephone : + 82-31-321-2664
FAX : + 82-31-321-1664

1.2 Details of Applicant

Applicant : YMG Co.,LTD.
Address : 707, A-Gangseo-Hangang Xi Tower, 401, Yangcheon-ro, Gangseo-gu, Seoul, Korea(Gayangdong52-7)
Contact person : Lee Byung Taeg
Phone No. : 82-2-2661-1236

1.3 Description of EUT

Product	Wireless Microphone
Model Name	YK5000, YK5500 - 2 models are same electric and mechanical.
Serial Number	Identical prototype
Power Supply	DC 3V
Frequency Range	2406 ~ 2474 MHz
Modulation Technique	FHSS
Number of Channels	18 (Channel Spacing 4MHz)
Antenna Type	Internal Antenna
Antenna Gain	PK:3.30 dBi

1.4. Declaration by the manufacturer

- N/A

1.5. Test Equipment List

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent	N9030A	13/11/05	14/11/05	MY48011075
Vector Signal Generator	Rohde Schwarz	SMJ100A	14/01/07	15/01/07	100148
Signal Generator	Rohde Schwarz	SMF100A	14/07/01	15/07/01	102341
Digital Multimeter	H.P	34401A	14/02/27	15/02/27	3146A13475
System DC Power Supply	Agilent	6654A	13/10/21	14/10/21	MY40002935
Thermo hygrometer	BODYCOM	BJ5478	14/05/13	15/05/13	120612-1
Thermo hygrometer	BODYCOM	BJ5478	14/05/13	15/05/13	120612-2
High-pass filter	Wainwright	WHKX3.0	14/01/07	15/01/07	12
Amplifier (22dB)	H.P	8447E	14/01/07	15/01/07	2945A02865
Amplifier (30dB)	Agilent	8449B	14/02/27	15/02/27	3008A00370
LOOP Antenna	Schwarzbeck	FMZB1513	14/04/29	16/04/29	1513-128
BILOG ANTENNA	SCHAFFNER	VULB 9160	13/12/16	15/12/16	3358
Horn Antenna	ETS	3117	14/05/12	16/05/12	00140394
HORN ANT	A.H.Systems	SAS-574	13/03/20	15/03/20	154
EMI TEST RECEIVER	R&S	ESU	14/01/07	15/01/07	100014

1.6. Summary of Test Results

FCC Part Section(s)	Parameter	Limit (Using in 2400~ 2483.5MHz)	Test Condition	Status Note 1
15.247(a)	Carrier Frequency Separation	>= 20dB BW or >= Two-Thirds of the 20dB BW	Conducted	C
	Number of Hopping Frequencies	>= 15 hops		C
	20 dB Bandwidth	None		C
	Dwell Time	=< 0.4 seconds		C
15.247(b)	Transmitter Output Power	=< 1Watt , if CHs >= 75 Others =<0.125W		C
15.247(d)	Band-edge /Conducted	The radiated emission to any 100 kHz of out-band shall be at least 20dB below the highest in-band spectral density.		C
	Conducted Spurious Emissions			C
15.205, 15.209	Radiated Spurious Emissions	FCC 15.209 Limits	Radiated	C Note.3
15.207	AC Conducted Emissions	FCC 15.207 Limits	AC Line Conducted	NA Note.2
15.203	Antenna Requirements	FCC 15.203	-	C

Note 1: C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable

Note 2: This test is not applicable. Because the power of this device is supplied from only batteries.

Note 3: The sample was tested according to the following specification:
ANSI C63.10-2009

1.7 Conclusion of worst-case and operation mode

The field strength of spurious emission was measured in three orthogonal EUT positions (X-axis, Y-axis and Z-axis).

Tested frequency information,

- Hopping Function: Enable

	TX Frequency (MHz)	RX Frequency (MHz)
Hopping Band	2406 ~ 2474	2406 ~ 2474

- Hopping Function: Disable

	TX Frequency (MHz)	RX Frequency (MHz)
Lowest Channel	2406	2406
Middle Channel	2442	2442
Highest Channel	2474	2474

2. Radiated Spurious Emissions and Conducted Spurious Emission

2.1. Test Setup

Refer to the APPENDIX I

2.2. Limit

According to §15.247(d), in any 100 ㎑ 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 ㏈ below that in the 100 ㎑ 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 power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval , as permitted under paragraph(b)(3) of this section , the attenuation required under this paragraph shall be 30 ㏈ instead of 20 ㏈. Attenuation below the general limits specified in section §15.209(a) is not required. In addition, radiated emission which in the restricted band, as define in section §15.205(a), must also comply the radiated emission limits specified in section §15.209(a) (see section §15.205(c))

According to § 15.209(a), 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 (MHz)	Limit (uV/m)	Measurement Distance (meter)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 ~ 88	100 **	3
88 ~ 216	150 **	3
216 ~ 960	200 **	3
Above 960	500	3

** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88MHz, 174-216MHz or 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

According to § 15.205(a) and (b), only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.52525	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	156.7 ~ 156.9	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	162.0125 ~ 167.17	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	167.72 ~ 173.2	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	240 ~ 285	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	322 ~ 335.4	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	399.90 ~ 410	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	608 ~ 614	3345.8 ~ 3358		
		960 ~ 1240	3600 ~ 4400		

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

2.3. Test Procedures

Radiated emissions from the EUT were measured according to the ANSI C63.10:2009

2.3.1. Test Procedures for Radiated Spurious Emissions

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 ㎓, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 ㎓, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 ㏈lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 ㏈margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE ;
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 ㎑for Quasi-peak detection (QP) at frequency below 1 ㎓.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1㎒for Peak detection and frequency above 1 ㎓.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 ㎒and the video bandwidth is 1kHz for Average detection (AV) at frequency above 1 ㎓.

2.3.2. Test Procedures for Conducted Spurious Emissions

1.The transmitter output was connected to the spectrum analyzer.
2.The **reference level** of the fundamental frequency was measured with the spectrum analyzer using RBW=100 ㎑, VBW=300 ㎑.
3. The conducted spurious emission was tested each ranges were set as below.

Frequency range: 9 KHz ~ 30 MHz
RBW= 100kHz, VBW= 300kHz, SWEEP TIME = AUTO, DETECTOR = PEAK, TRACE = MAX HOLD, SWEEP POINT: 40001

Frequency range: 30 MHz ~ 10 GHz, 10 GHz~25 GHz
RBW= 1MHz, VBW= 3MHz, SWEEP TIME = AUTO, DETECTOR = PEAK, TRACE = MAX HOLD, SWEEP POINT: 40001

LIMIT LINE = 20 dB below of the reference level of above measurement procedure Step 2. (RBW = 100 KHz, VBW = 300 KHz)

If the emission level with above setting was close to the limit (ie, less than 3 dB margin) then zoom scan is required using RBW = 100 KHz, VBW = 300KHz, SAPN = 100 MHz and BINS = 2001 to get accurate emission level within 100 KHz BW.

Also the path loss for conducted measurement setup was used as described on the Appendix I of this test report.

2.4. Test Results

Ambient temperature : 23 °C
Relative humidity : 52 %

2.4.1. Radiated Emission

9kHz ~ 25GHz Data

▪ Lowest Channel

Frequency (MHz)	ANT Pol	The worst case EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	D.C.F. (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2385.680	H	Y	PK	59.61	2.51	0.00	62.12	74.00	11.88
2386.320	H	Y	AV	46.95	2.51	-25.10	24.36	54.00	29.64
4818.410	H	Y	PK	47.51	8.70	0.00	56.21	74.00	17.79
4818.180	H	Y	AV	41.83	8.70	-25.10	25.43	54.00	28.57

▪ Middle Channel

Frequency (MHz)	ANT Pol	The worst case EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	D.C.F. (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
4878.200	H	Y	PK	47.10	8.71	0.00	55.81	74.00	18.19
4878.160	H	Y	AV	40.43	8.71	-25.10	24.04	54.00	29.96

▪ Highest Channel

Frequency (MHz)	ANT Pol	The worst case EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	D.C.F. (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2483.500	H	Y	PK	64.01	3.46	0.00	67.47	74.00	6.53
2483.500	H	Y	AV	48.63	3.46	-25.10	26.99	54.00	27.01
4942.030	H	Y	PK	46.49	8.72	0.00	55.21	74.00	18.79
4942.170	H	Y	AV	38.64	8.72	-30.29	17.07	54.00	36.93

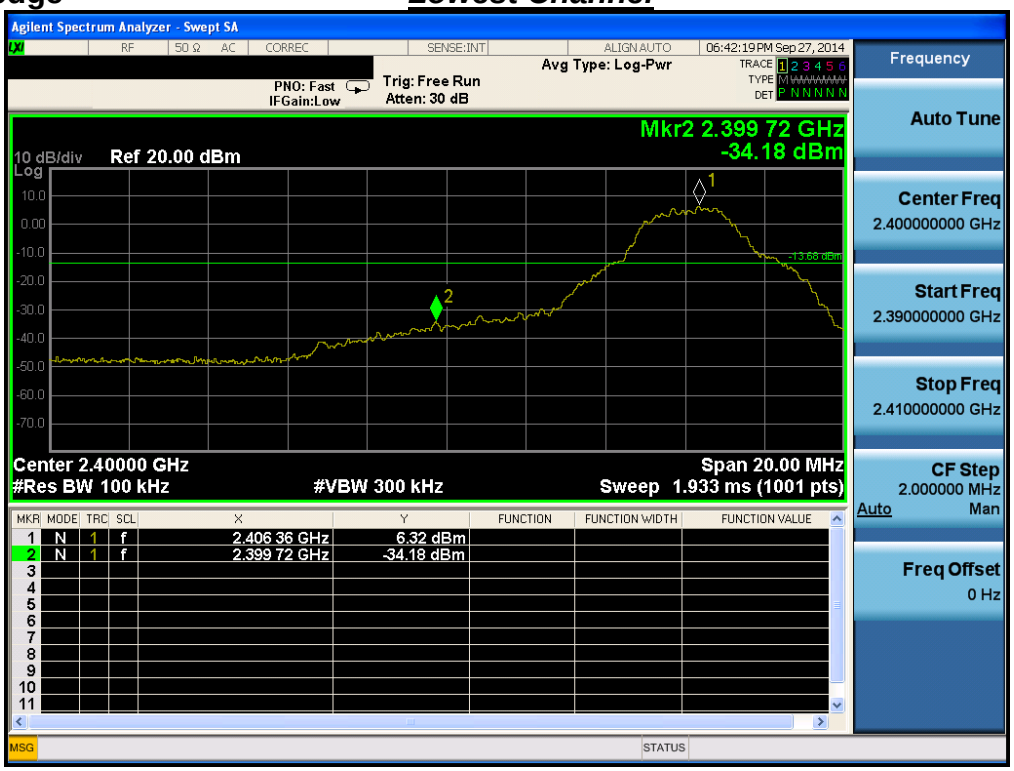
▪ Hopping Mode

Frequency (MHz)	ANT Pol	The worst case EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	D.C.F. (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2385.290	H	Y	PK	58.35	2.51	0.00	60.86	74.00	13.14
2385.130	H	Y	AV	46.23	2.51	-25.10	23.64	54.00	30.36
2483.500	H	Y	PK	63.78	3.46	0.00	67.24	74.00	6.76
2483.640	H	Y	AV	47.84	3.46	-25.10	26.20	54.00	27.80

1. No other spurious and harmonic emissions were found greater than listed emissions on above table.
2. Above listed point data is the worst case data.
3. Sample Calculation.
   Margin = Limit – Result/Result = Reading + T.F + D.C.F./ T.F = AF + CL – AG
   Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain,
4. D.C.F Calculation. (D.C.F. = Duty Cycle Correction Factor)
   - Time to cycle through all channels= $\Delta t = T_{[ms]}$ X 20 minimum hopping channels , where T = pulse width (**0.17ms**)
   - 100ms / $\Delta t_{[ms]}$ = H -> Round up to next highest integer, to account for worst case, H' (**100 / (0.17 X 18) = 32.68 ≒ 32.7**)
   - The Worst Case Dwell Time = $T_{[ms]}$ x H' = (0.17ms X 32.7 = 5.56ms)
   - D.C.F = 20 x Log(The Worst Case Dwell Time / 100ms)dB = **20 x Log(5.56/100) = -25.10 dB**

2.4.2. Conducted Spurious Emissions

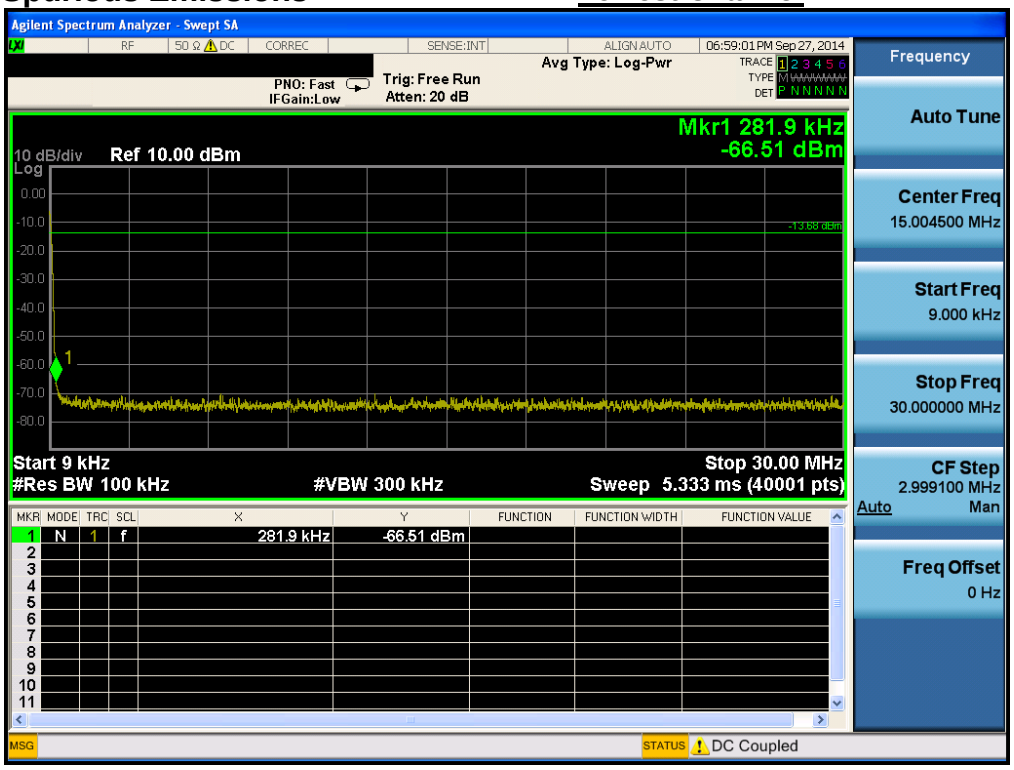
Low Band-edge ***Lowest Channel***

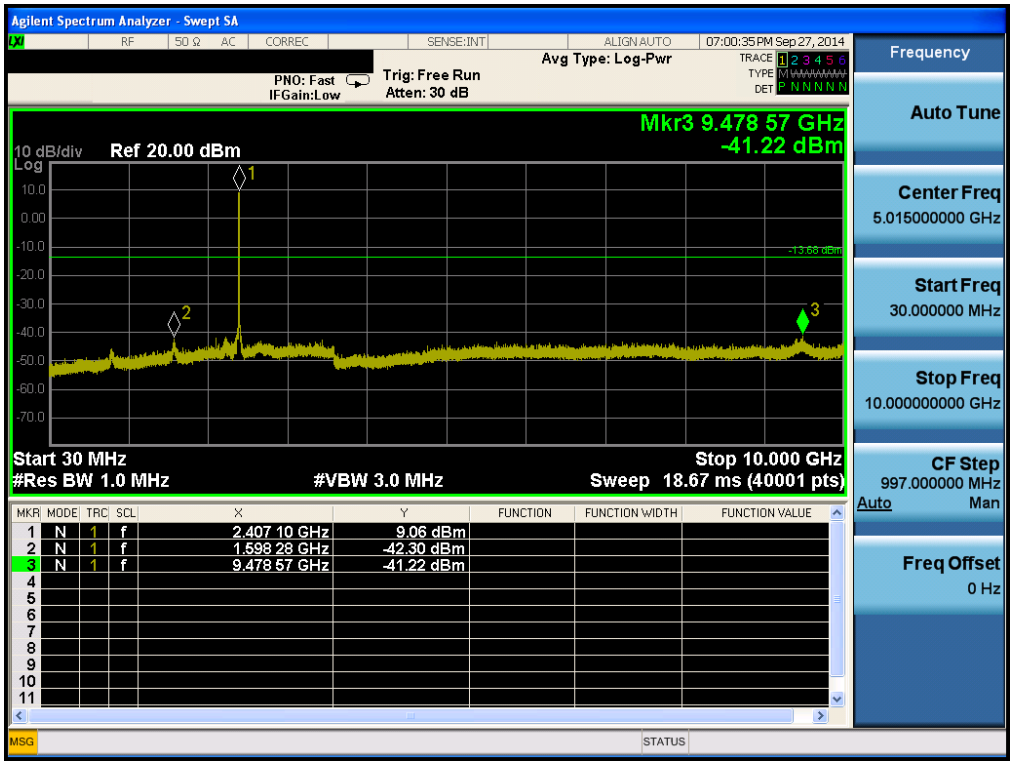


Low Band-edge ***Hopping mode***

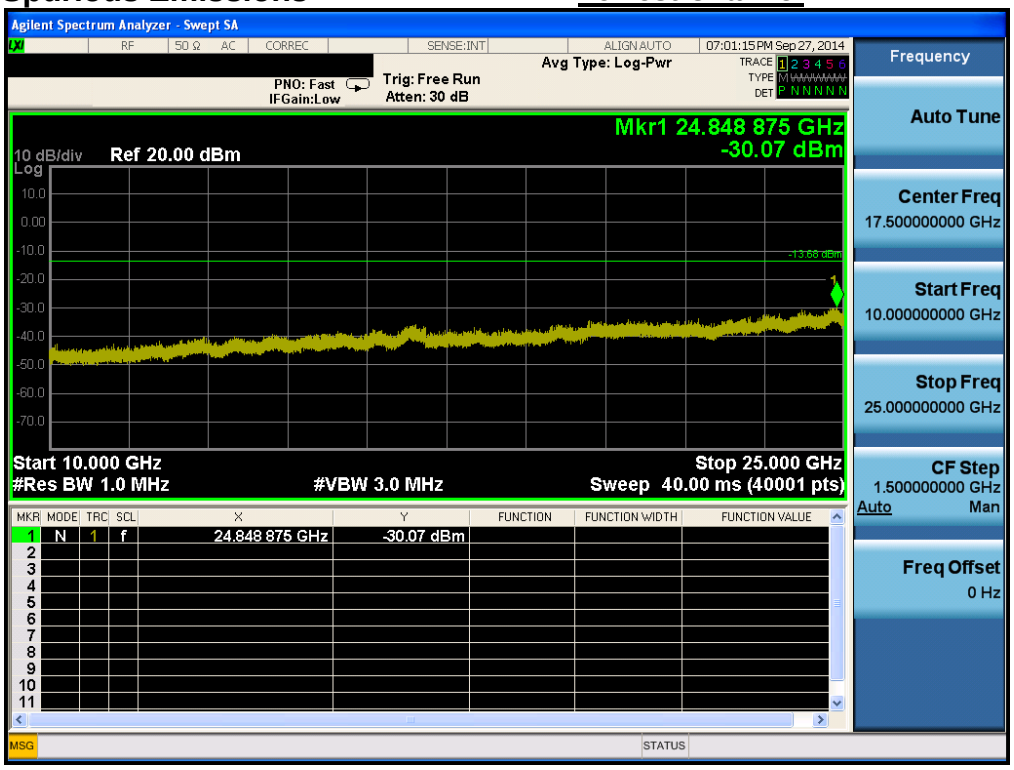
Conducted Spurious Emissions

Lowest Channel

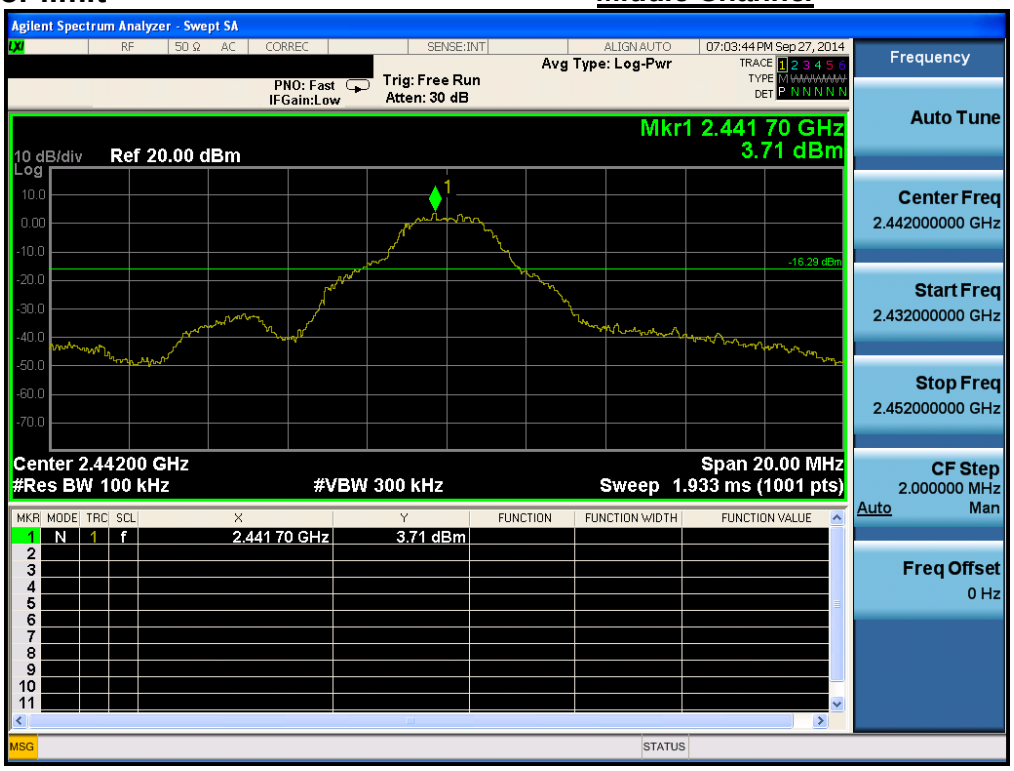




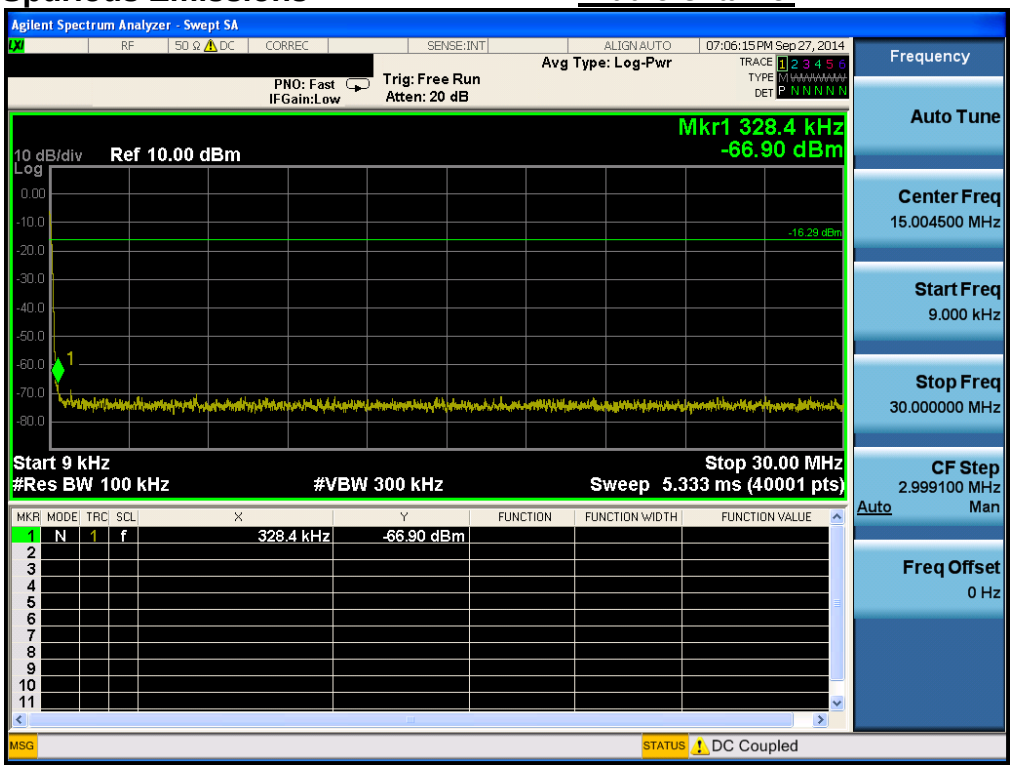
Conducted Spurious Emissions *Lowest Channel*

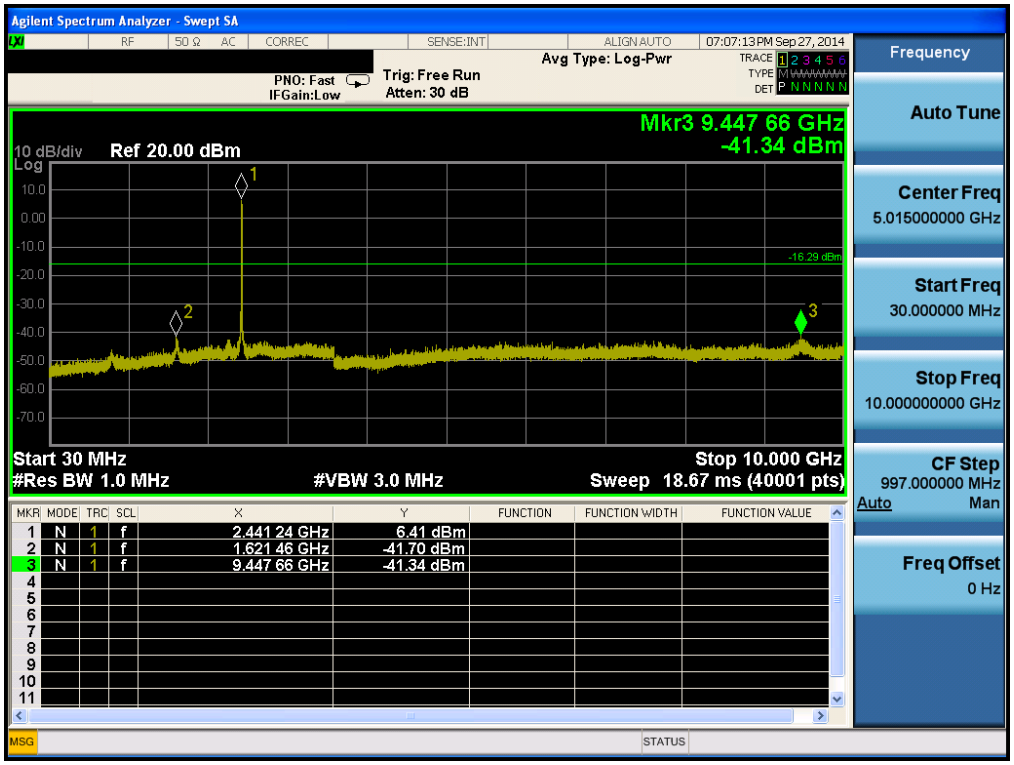


Reference for limit ***Middle Channel***

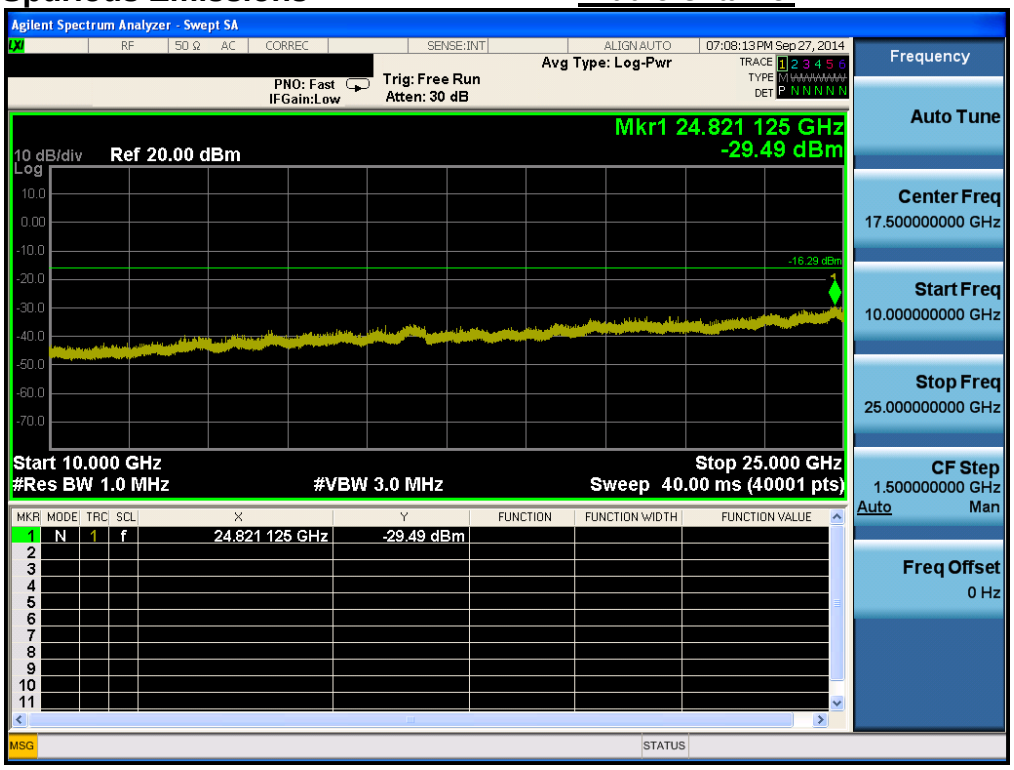


Conducted Spurious Emissions *Middle Channel*

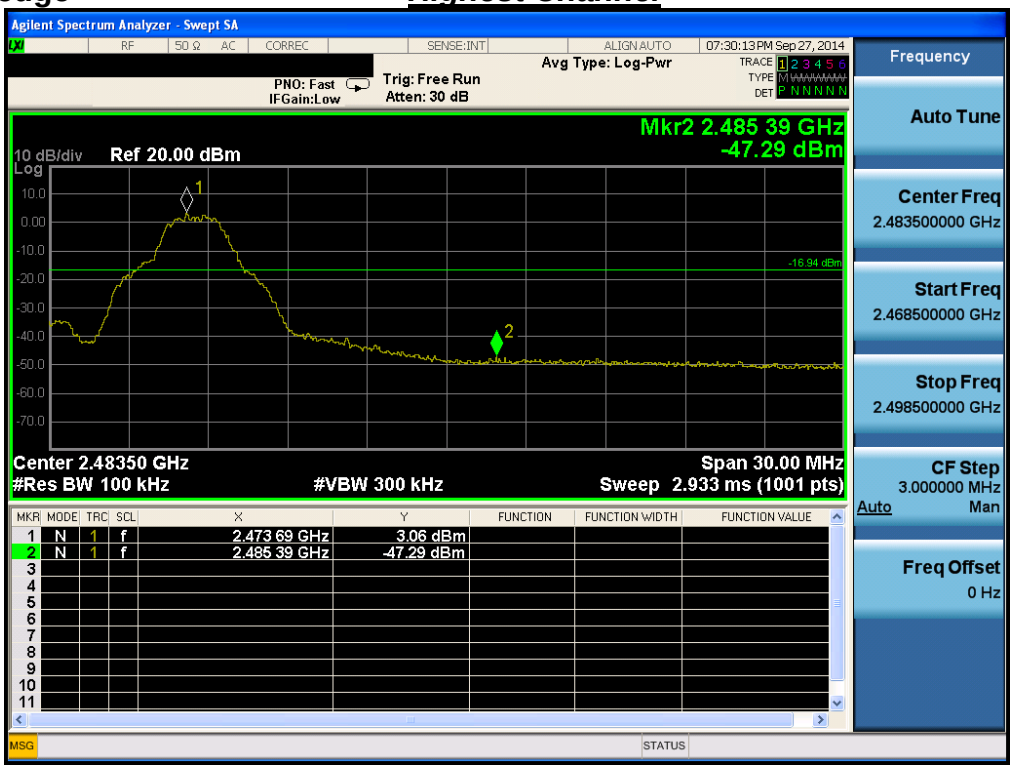




Conducted Spurious Emissions *Middle Channel*

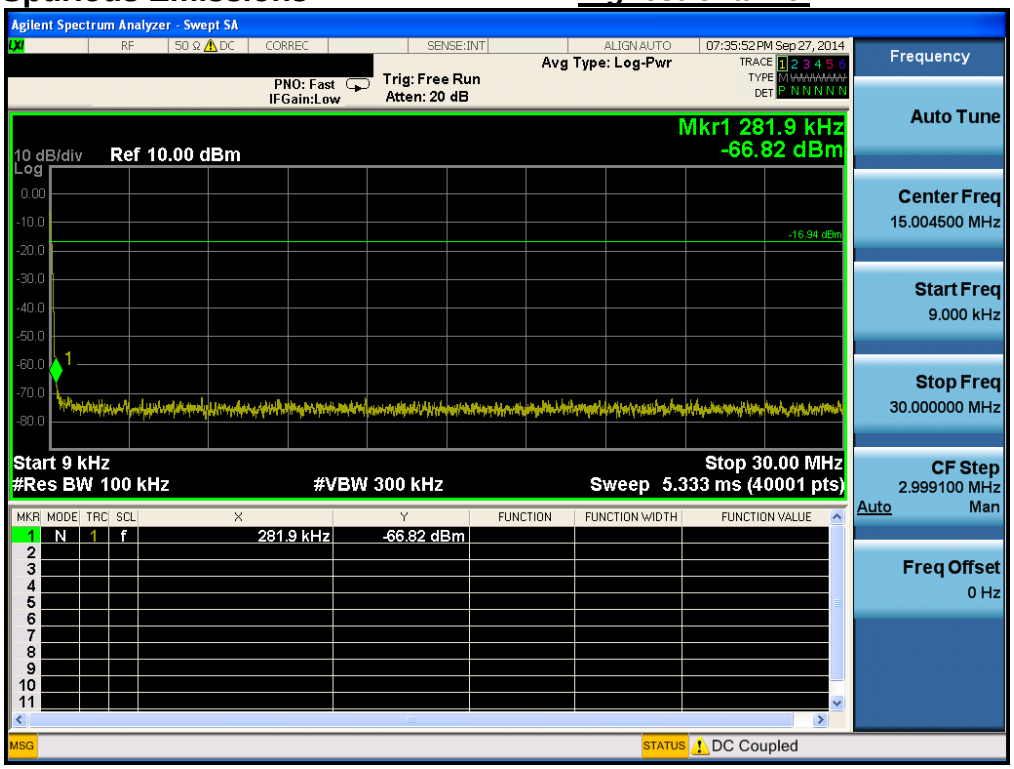


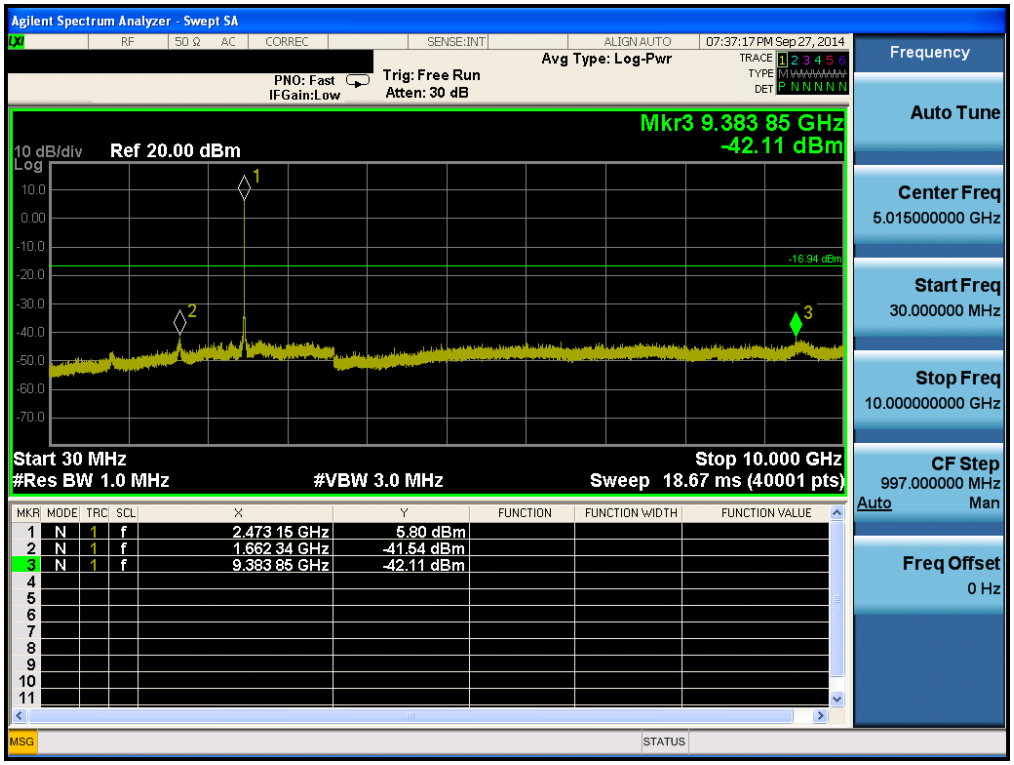
High Band-edge ***Highest Channel***



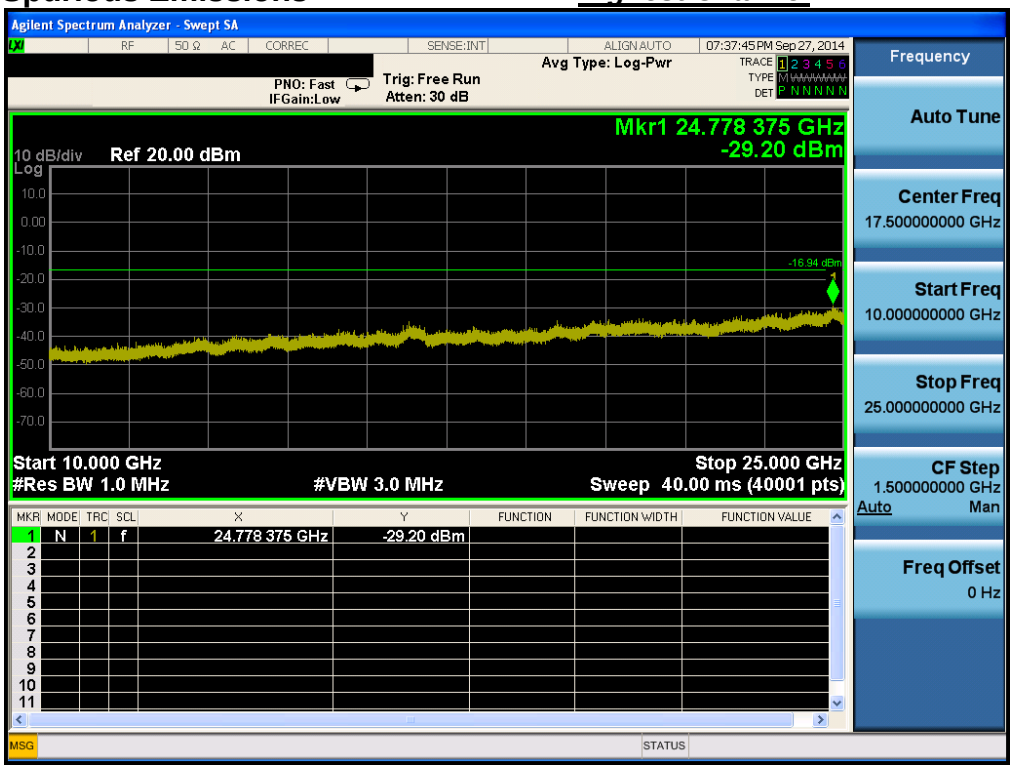
High Band-edge ***Hopping mode***

Conducted Spurious Emissions *Highest Channel*





Conducted Spurious Emissions *Highest Channel*



3. Carrier Frequency Separation

3.1. Test Setup

Refer to the APPENDIX I.

3.2. Limit

Limit: ≥ 20dB BW or ≥Two-Thirds of the 20dB BW

3.3 Test Procedure:

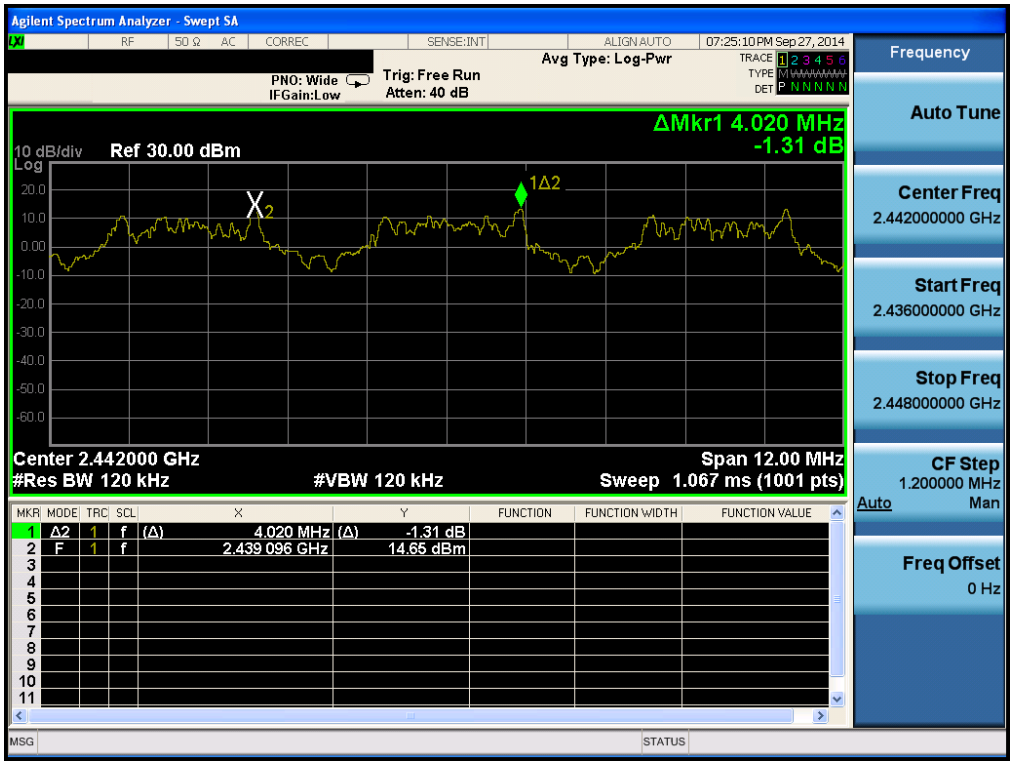
The carrier frequency separation was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.
After the trace being stable, the reading value between the peaks of the adjacent channels using the marker-delta function was recorded as the measurement results.

The spectrum analyzer is set to:

Span = wide enough to capture the peaks of two adjacent channels
RBW = 1% of the span
VBW = ≥ RBW
Trace = max hold
Sweep = auto
Detector function = peak

3.4 Test Results:

Hopping Mode	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	2439.096	2443.116	4.020



4. Number of Hopping Frequencies

4.1. Test Setup

Refer to the APPENDIX I.

4.2. Limit

Limit: >= 15 hops

4.3 Test Procedure:

The number of hopping frequencies was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

The spectrum analyzer is set to:

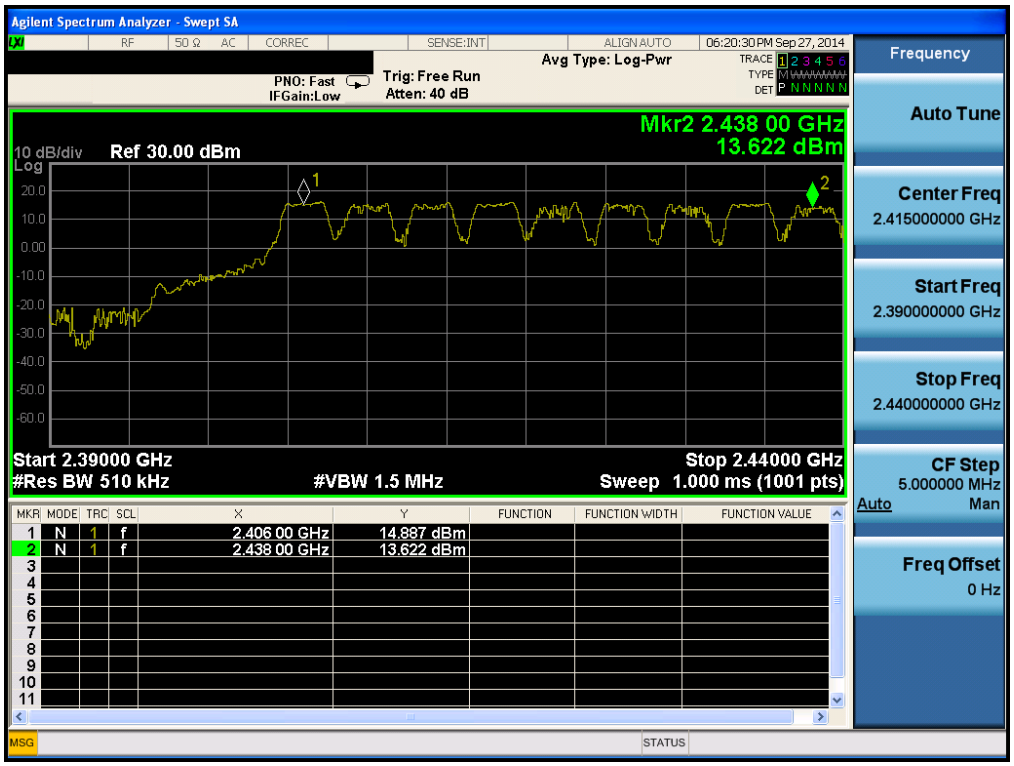
Span = 15 MHz(Start Frequency = 2390 MHz / Stop Frequency = 2490 MHz)
RBW = 1% of the span or more
Sweep = auto
VBW = ≥ RBW
Detector function = peak
Trace = max hold

4.4 Test Results:

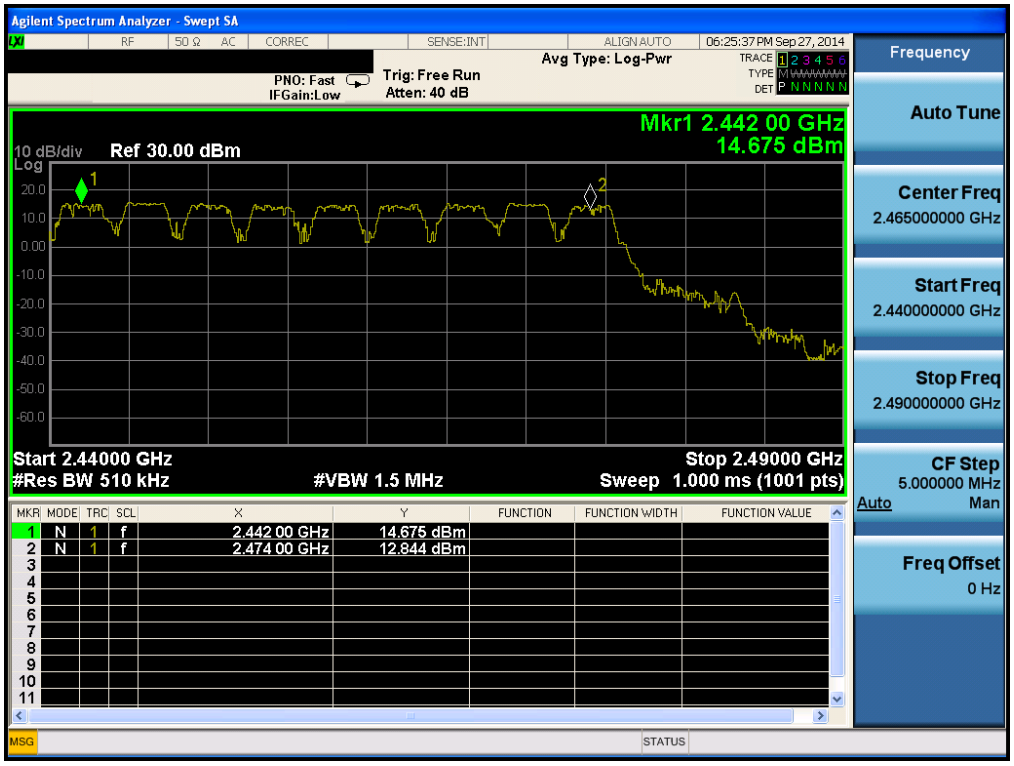
Hopping mode	Test Result (Total Hops)
Enable	18

Note 1: See next pages for actual measured spectrum plots.

Number of Hopping Frequencies 1



Number of Hopping Frequencies 2



5. 20dBc BW

5.1. Test Setup

Refer to the APPENDIX I.

5.2. Limit

Limit: Not Applicable

5.3. Test Procedure

1. The 20dBcbandwidthwere measured with a spectrum analyzer connected to RF antenna connector(conducted measurement) while EUT was operating in transmit mode. The analyzer center frequency was set to the EUT carrier frequency, using the analyzer.

2. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using RBW ≥ 1% of the 20 dB bandwidth, VBW ≥RBW, Span = 3㎒.

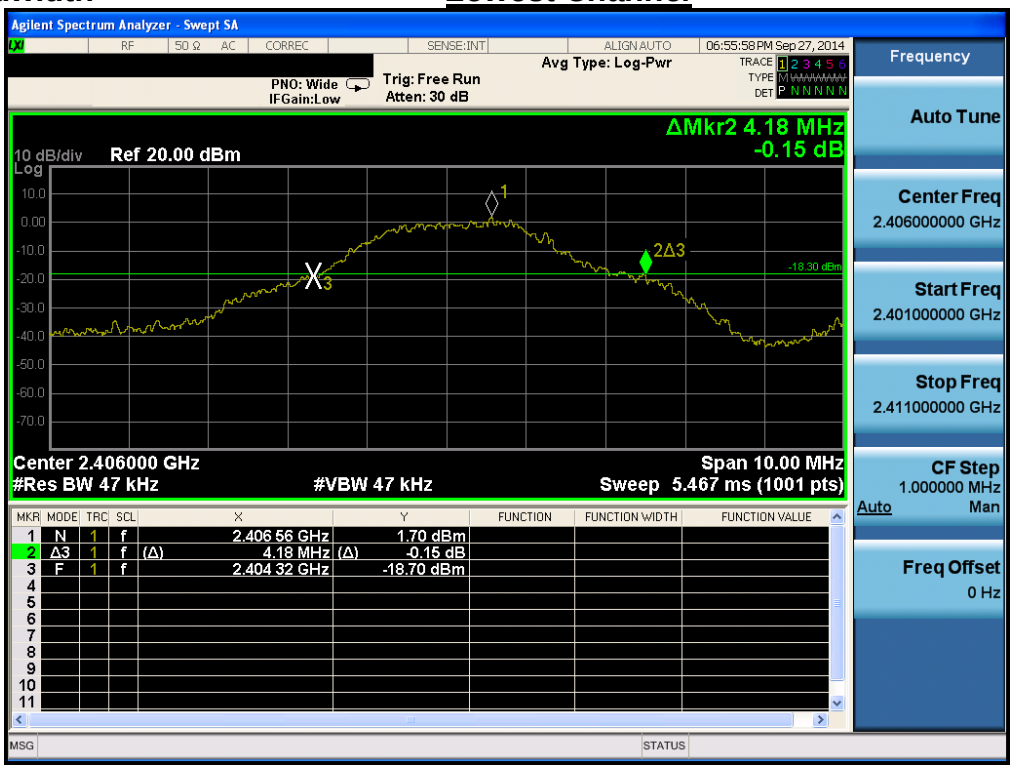
5.4. Test Results

Ambient temperature : 24 °C
Relative humidity : 42 %

Frequency (MHz)	Tested Channel	20dBc BW (MHz)
2406	Lowest	4.18
2442	Middle	4.10
2474	Highest	4.10

Note 1: See next pages for actual measured spectrum plots.

20dBc Bandwidth *Lowest Channel*



20dBc Bandwidth *Middle Channel*

20dBc Bandwidth *Highest Channel*

6. Time of Occupancy (Dwell Time)

6.1. Test Setup

Refer to the APPENDIX I

6.2. Limit

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

6.3. Test Procedure

The dwell time was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

The spectrum analyzer is set to:

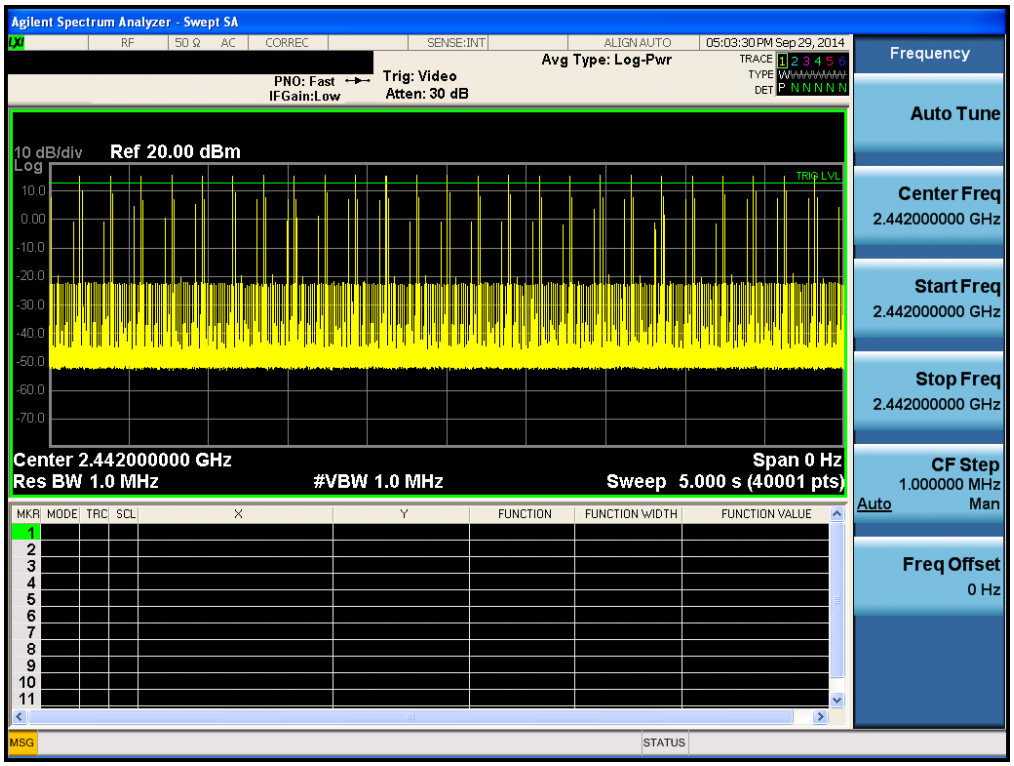
RBW = 1 MHz
VBW = ≥ RBW
Span = zero
Detector function = peak
Trace max hold

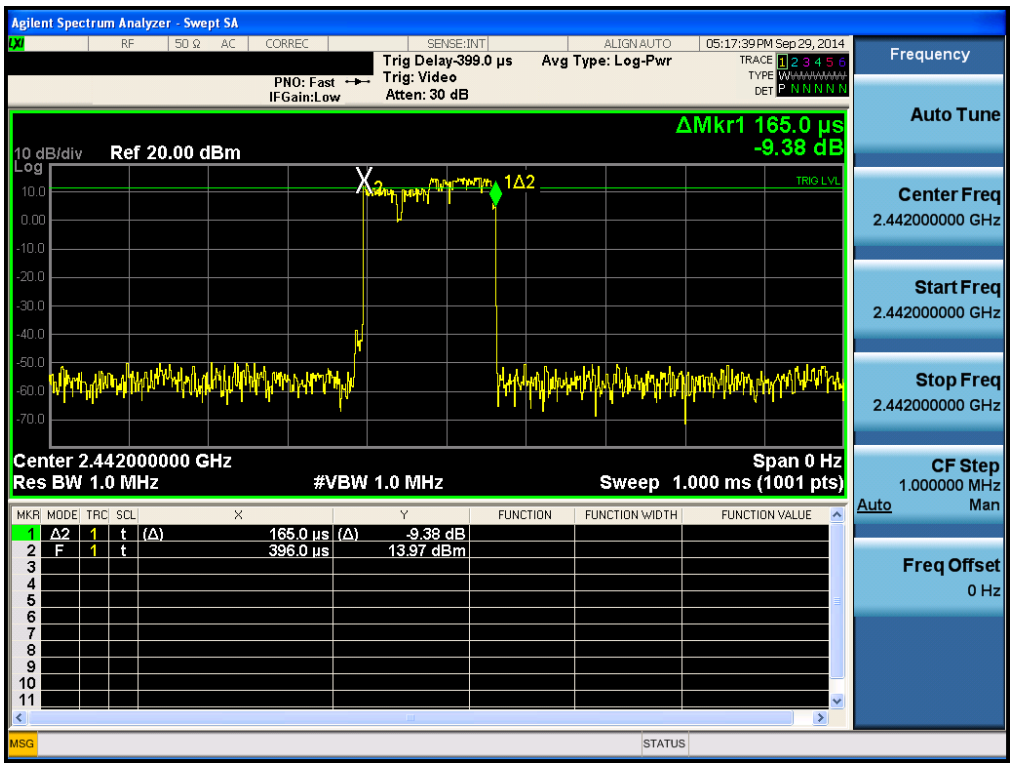
6.4. Test Results

Ambient temperature : 24 °C
Relative humidity : 51 %

Hopping channels	Burst ON Time (ms)	Dwell Time (ms)	Limit (s)
18	**0.17**	**6.12**	**0.4**

Note 1: 0.4 x 18 x0.17 x (25hop/5) = 6.12
Note 2: See next pages for actual measured spectrum plots.





7. Maximum Peak Output Power Measurement

7.1. Test Setup

Refer to the APPENDIX I

7.2. Limit

The maximum peak output power of the intentional radiator shall not exceed the following :

1. §15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 ㎑ or the 20 ㏈ bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 ㎽.

2. §15.247(b)(1), For frequency hopping systems operating in the 2 400 – 2 483.5 ㎒ employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5 725 – 5 805 ㎒ band: 1 Watt.

7.3. Test Procedure

1. The RF power output was measured with a Spectrum analyzer connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate center frequency, A spectrum analyzer was used to record the shape of the transmit signal.

2. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using ;
   RBW ≥ 20㏈BW
   VBW ≥ RBW
   Sweep = auto
   Detector function = peak
   Trace = max hold

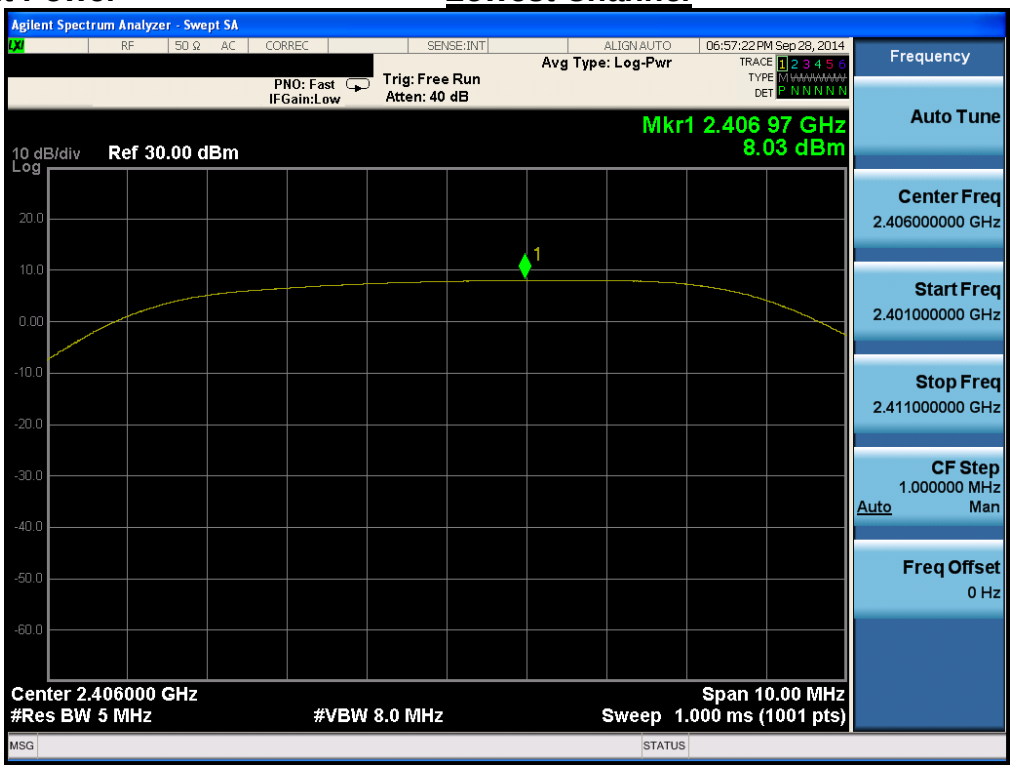
7.4. Test Results

Ambient temperature : 24 °C
Relative humidity : 51 %

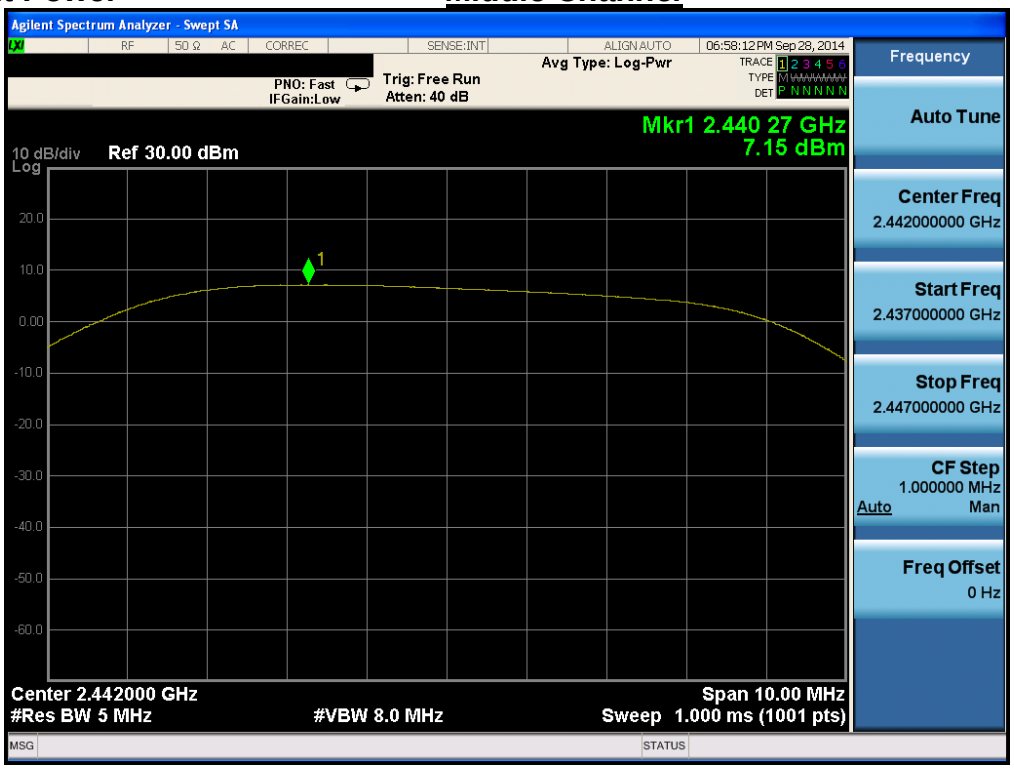
Tested Channel	Peak Output Power	
	dBm	mW
Lowest	8.030	6.353
Middle	7.150	5.188
Highest	5.370	3.443

Note 1: See next pages for actual measured spectrum plots.

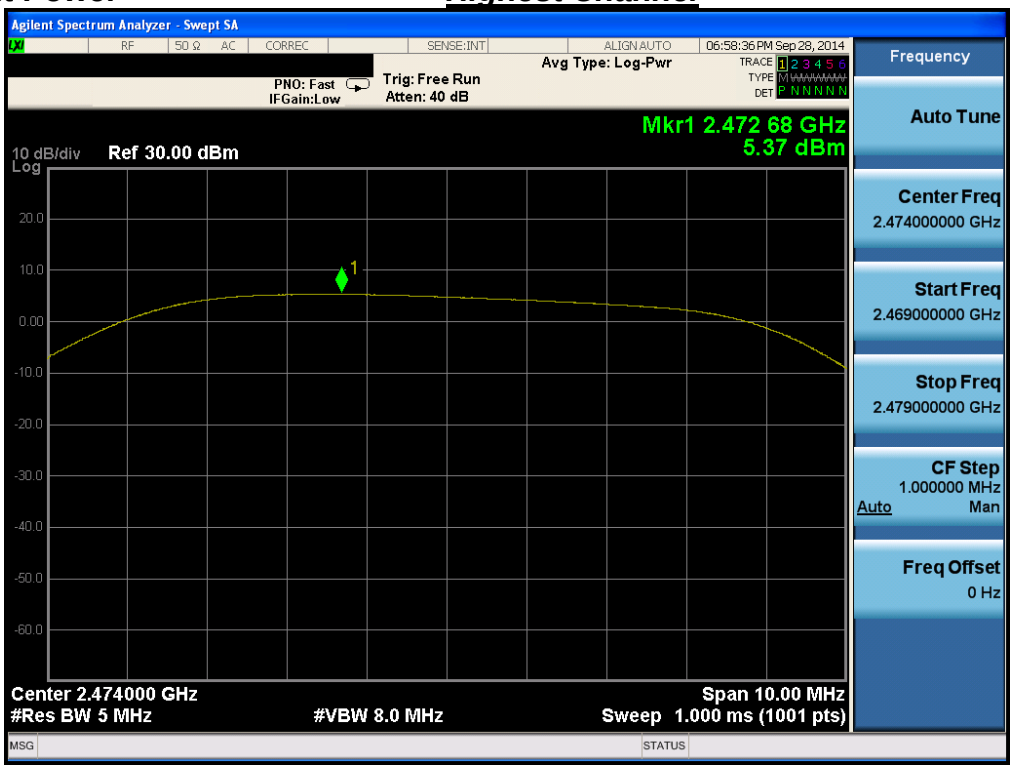
Peak Output Power ***Lowest Channel***



Peak Output Power ***Middle Channel***



Peak Output Power ***Highest Channel***



8. Transmitter AC Power Line Conducted Emission

8.1. Test Setup

NA

8.2. Limit

According to §15.207(a) 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 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50 uH/50 ohm line impedance stabilization network(LISN).
Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Conducted Limit (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

8.3. Test Procedures

Conducted emissions from the EUT were measured according to the dictates of ANSI C63.4:2003

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

8.4. Test Results: N/A

Note 1: This test is not applicable. Because the power of this device is supplied from only batteries.

9. Antenna Requirement

9.1 Procedure

Describe how the EUT complies with the requirement that either its antenna is permanently attached, or that it employs a unique antenna connector, for every antenna proposed for use with the EUT.

9.2 Conclusion: Comply

This device uses a pattern antenna.

Minimum Standard:

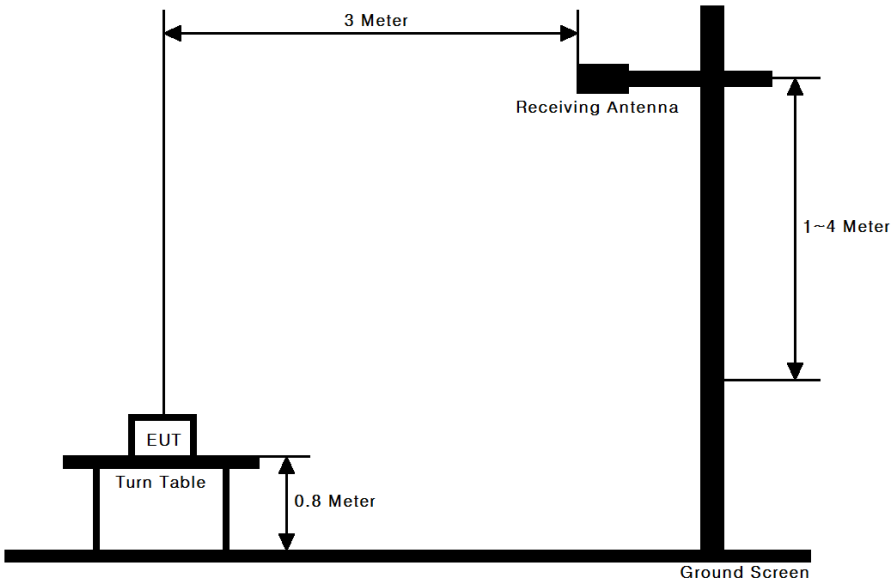
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions.

APPENDIX I

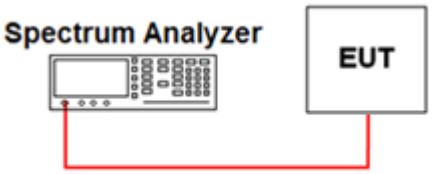
Test set up Diagrams

▪Radiated Measurement

The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 25 GHz Emissions.



▪Conducted Measurement



Path loss information

Frequency (GHz)	Path Loss (dB)	Frequency (GHz)	Path Loss (dB)
0.03	0.32	15	6.63
1	1.48	20	8.44
2.402 & 2.441 & 2.480	2.44	25	9.75
5	3.56	-	-
10	5.11	-	-

Note. 1: The path loss from EUT to Spectrum analyzer were measured and used for test.
Path loss = Cable A