JQA File No. : KL80170117
Issue Date : July 7, 2017

TEST REPORT

Applicant	:	NIKON CORPORATION
Address	:	Shinagawa Intercity Tower C, 2-15-3, Konan, Minato-ku, Tokyo 108-6290 Japan
Products	:	Remote Control
Model No.	:	N16F1
Serial No.	:	16, 5
FCC ID	:	CGJ1153EB
Test Standard	:	CFR 47 FCC Rules and Regulations Part 15
Test Results	:	Passed
Date of Test	:	May 23 ~ 30, 2017

VLAC Lab Accreditation VLAC-001-2

Kousei Shibata
Manager
Japan Quality Assurance Organization
KITA-KANSAI Testing Center
SAITO EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

- The test results in this test report was made by using the measuring instruments which are traceable to national standards of measurement in accordance with ISO/IEC 17025.
- The applicable standard, testing condition and testing method which were used for the tests are based on the request of the applicant.
- The test results presented in this report relate only to the offered test sample.
- The contents of this test report cannot be used for the purposes, such as advertisement for consumers.
- This test report shall not be reproduced except in full without the written approval of JQA.
- VLAC does not approve, certify or warrant the product by this test report.

TABLE OF CONTENTS

DEFINITIONS FOR ABBREVIATION AND SYMBOLS USED IN THIS TEST REPORT

EUT : Equipment Under Test
AE : Associated Equipment
N/A : Not Applicable
N/T : Not Tested

EMC : Electromagnetic Compatibility
EMI : Electromagnetic Interference
EMS : Electromagnetic Susceptibility

R - indicates that the listed condition, standard or equipment is applicable for this report.
£ - indicates that the listed condition, standard or equipment is not applicable for this report.

1 Description of the Equipment Under Test

1.	Manufacturer	:	NIKON CORPORATION Shinagawa Intercity Tower C, 2-15-3, Konan, Minato-ku, Tokyo 108-6290 Japan
2.	Products	:	Remote Control
3.	Model No.	:	N16F1
4.	Serial No.	:	16, 5
5.	Product Type	:	Pre-production
6.	Date of Manufacture	:	--
7.	Power Rating	:	3.0VDC (Lithium Coin Cell Battery CR2032)
8.	Grounding	:	None
9.	Operating Frequency	:	2402 MHz (00CH) – 2480 MHz (39CH)
10.	Max. RF Output Power	:	0.26 dBm (Measured Value)
11.	Antenna Type	:	1/4λ Inverted-F Antenna (Integral)
12.	Antenna Gain	:	0.28 dBi
13.	Category	:	DTS
14.	EUT Authorization	:	Certification
15.	Received Date of EUT	:	May 22, 2017

16. Channel Plan

The carrier spacing is 2 MHz.
The carrier frequency is designated by the absolute frequency channel number (ARFCN).
The carrier frequency is expressed in the equation shown as follows:

Transmitting Frequency (in MHz) = 2402.0 + 2 × n
Receiving Frequency (in MHz) = 2402.0 + 2 × n
where, n : channel number ($0 \leq n \leq 39$)

2 Summary of Test Results

Applied Standard : CFR 47 FCC Rules and Regulations Part 15
Subpart C - Intentional Radiators

The EUT described in clause 1 was tested according to the applied standard shown above.
Details of the test configuration is shown in clause 6.
The conclusion for the test items of which are required by the applied standard is indicated under the test result.

R - The test result was passed for the test requirements of the applied standard.

£ - The test result was failed for the test requirements of the applied standard.

£ - The test result was not judged the test requirements of the applied standard.

In the approval of test results,
- Determining compliance with the limits in this report was based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- No deviations were employed from the applied standard.
- No modifications were conducted by JQA to achieve compliance to the limitations.

Reviewed by:

Shigeru Osawa
Deputy Manager
JQA KITA-KANSAI Testing Center
SAITO EMC Branch

Tested by:

Yasuhisa Sakai
Manager
JQA KITA-KANSAI Testing Center
SAITO EMC Branch

3 Test Procedure

Test Requirements : §15.247, §15.207 and §15.209

Test Procedure : ANSI C63.10–2013
Testing unlicensed wireless devices.

KDB 558074 D01
DTS Meas Guidance v04: April 5, 2017

KDB 414788 D01
Radiated Test Site v01: April 18, 2017

4 Test Location

Japan Quality Assurance Organization (JQA)
KITA-KANSAI Testing Center
7-7, Ishimaru, 1-chome, Minoh-shi, Osaka, 562-0027, Japan
SAITO EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

5 Recognition of Test Laboratory

JQA KITA-KANSAI Testing Center SAITO EMC Branch is accredited under ISO/IEC 17025 by following accreditation bodies and the test facility is registered by the following bodies.

VLAC Accreditation No. : VLAC-001-2 (Expiry date : March 30, 2018)
VCCI Registration No. : A-0002 (Expiry date : March 30, 2018)
BSMI Registration No. : SL2-IS-E-6006, SL2-IN-E-6006, SL2-R1/R2-E-6006, SL2-A1-E-6006 (Expiry date : September 14, 2019)
IC Registration No. : 2079E-3, 2079E-4 (Expiry date : July 16, 2017)

Accredited as conformity assessment body for Japan electrical appliances and material law by METI. (Expiry date : February 22, 2019)

6 Description of Test Setup

6.1 Test Configuration

The equipment under test (EUT) consists of :

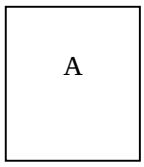
	Item	Manufacturer	Model No.	Serial No.	FCC ID
A	Remote Control	NIKON	N16F1	16 *1, 5 *2	CGJ1153EB

*1) Used for AC Powerline Conducted Emission and Field Strength of Spurious Emission
*2) Used for Antenna Conducted Emission

The auxiliary equipment used for testing :
None

Type of Cable:
None

6.2 Test Arrangement (Drawings)



3.0VDC (Lithium Coin Cell Battery CR2032 ×1)

6.3 Operating Condition

Power Supply Voltage : 3.0VDC (Lithium Coin Cell Battery CR2032)

Operation Mode
The EUT is set with the test mode, the specification of the test mode is as followings.

Bluetooth Low Energy Mode (Bluetooth 4.1 +LE):
Transmitting frequency : 2402 MHz (00CH) – 2480 MHz (39CH)
Receiver frequency : 2402 MHz (00CH) – 2480 MHz (39CH)

Modulation Type
LE Packet (GFSK)

Other Clock Frequency
32.768 kHz, 16 MHz

The EUT was rotated through three orthogonal axis (X, Y and Z axis) in radiated measurement.
The EUT with temporary antenna port was used in conducted measurement.

The tests were performed using the following test program supplied by applicant;
- Software Name : nRFgo Studio
- Software Version : Version 1.21.2.10
- Storage Location : Controller PC

7 Test Requirements

7.0 Summary of the Test Results

Test Item	FCC Specification	Reference of the Test Report	Results	Remarks
Antenna Requirement	Section 15.203	Section 1.12	Passed	-
Channel Separation	Section 15.247(a)(1)	-		-
Minimum Hopping Channel	Section 15.247(a)(1)(iii)	-	-	-
Occupied Bandwidth	Section 15.247(a)(2)	Section 7.3	Passed	-
Dwell Time	Section 15.247(a)(1)(iii)	-	-	-
Peak Output Power (Conduction)	Section 15.247(b)(3)	Section 7.5	Passed	-
Peak Power Density (Conduction)	Section 15.247(e)	Section 7.6	Passed	-
Spurious Emissions (Conduction)	Section 15.247(d)	Section 7.7	Passed	-
AC Powerline Conducted Emission	Section 15.207	Section 7.8	N/A	-
Radiated Emission	Section 15.205 Section 15.209	Section 7.9	Passed	-
RF Exposure	Section 15.247(i)	Section 7.10	Passed	

7.1 Channel Separation

For the requirements, £ - Applicable [£ - Tested. £ - Not tested by applicant request.]
R - Not Applicable

7.2 Minimum Hopping Channel

For the requirements, £ - Applicable [£ - Tested. £ - Not tested by applicant request.]
R - Not Applicable

7.3 Occupied Bandwidth

For the requirements, **R** - Applicable [**R** - Tested. £ - Not tested by applicant request.]
£ - Not Applicable

7.3.1 Test Results

For the standard, **R** - Passed £ - Failed £ - Not judged

99% Bandwidth	1047.9	kHz	at	2440.0 MHz
6dB Bandwidth	669.7	kHz	at	2440.0 MHz
Uncertainty of Measurement Results				± 0.9 %(2σ)

Remarks : _____

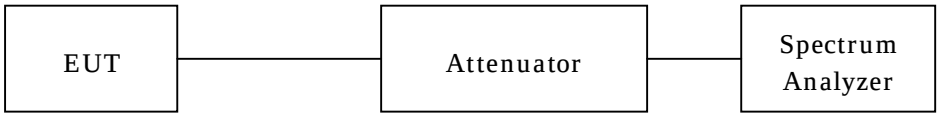
7.3.2 Test Instruments

Shielded Room S4				
Type	**Model**	**Serial No. (ID)**	**Manufacturer**	**Cal. Due**
Spectrum Analyzer	E4446A	US44300388 (A-39)	Agilent	2018/03/30
Attenuator	54A-10	W5675 (D-28)	Weinschel	2017/08/02
RF Cable	SUCOFLEX102	14253/2 (C-52)	HUBER+SUHNER	2017/08/02

NOTE : The calibration interval of the above test instruments is 12 months.

7.3.3 Test Method and Test Setup (Diagrammatic illustration)

The test system is shown as follows:



The setting of the spectrum analyzer are shown as follows:

	WLAN	Bluetooth LE
Res. Bandwidth	100 kHz	100 kHz
Video Bandwidth	300 kHz	300 kHz
Span	30 MHz (for 20 MHz BW) 60 MHz (for 40 MHz BW)	3 MHz
Sweep Time	AUTO	AUTO
Trace	Maxhold	Maxhold

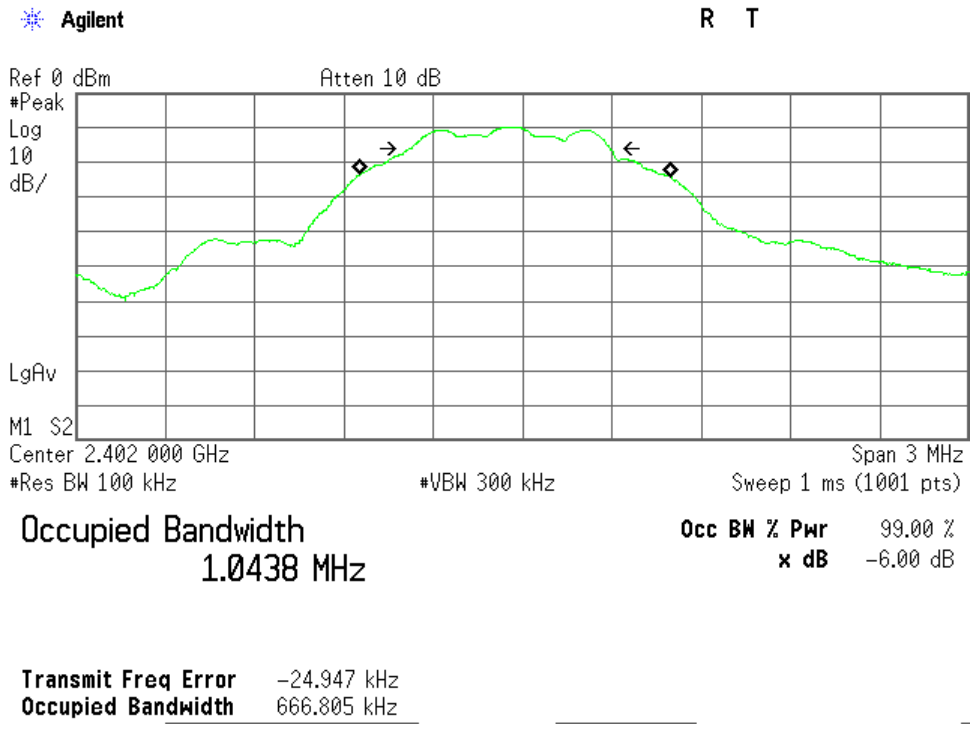
7.3.4 Test Data

The resolution bandwidth was set to 100 kHz, -6dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

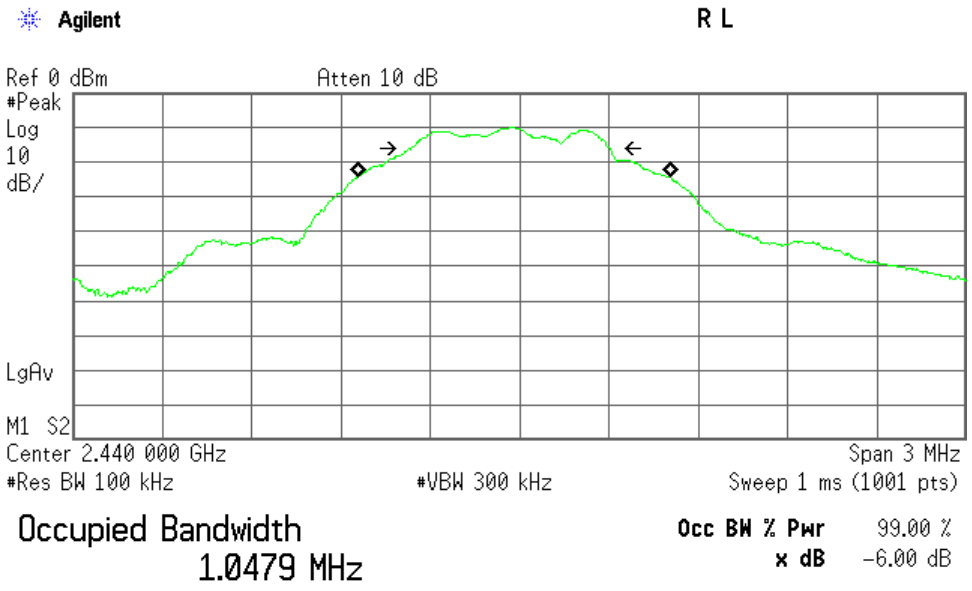
Test Date: May 23, 2017
Temp.: 26 °C, Humi: 43 %

Channel	Frequency (MHz)	99% Bandwidth (kHz)	-6dBc Bandwidth (kHz)	Minimum -6dBc Bandwidth Limit (kHz)
00	2402.0	1043.8	666.8	500
19	2440.0	1047.9	669.7	500
39	2480.0	1045.9	659.0	500

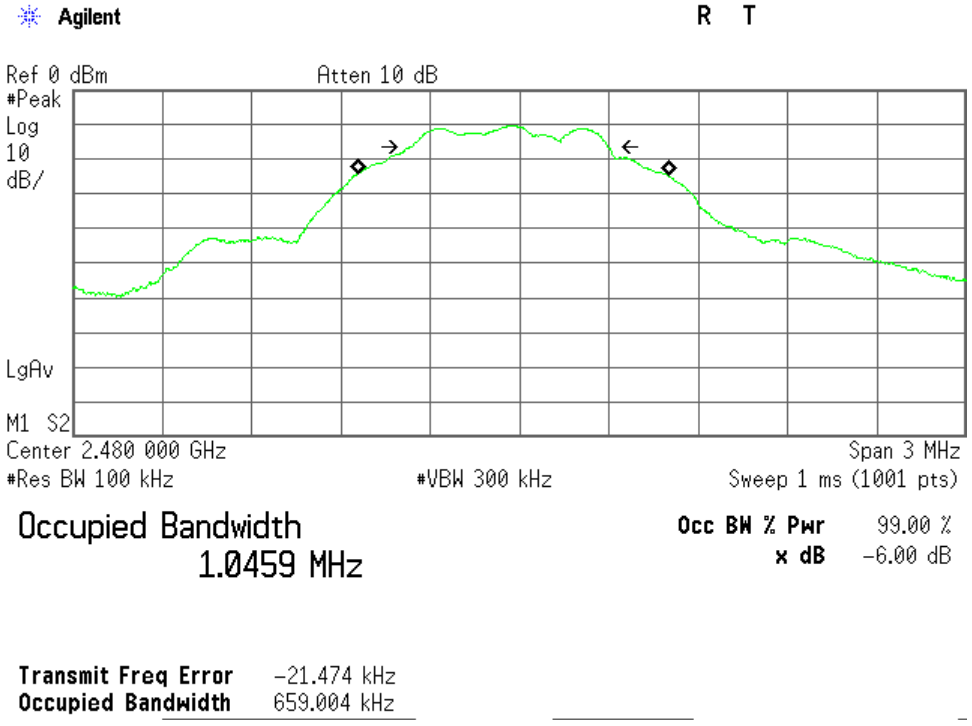
Low Channel



Middle Channel



High Channel



7.4 Dwell Time

For the requirements, £ - Applicable [£ - Tested. £ - Not tested by applicant request.]
R - Not Applicable

7.5 Peak Output Power (Conduction)

For the requirements, R - Applicable [R - Tested. £ - Not tested by applicant request.]
£ - Not Applicable

7.5.1 Test Results

For the standard, R - Passed £ - Failed £ - Not judged

Peak Output Power 0.26 dBm at 2402.0 MHz

Uncertainty of Measurement Results ± 0.9 dB(2σ)

Remarks : _____

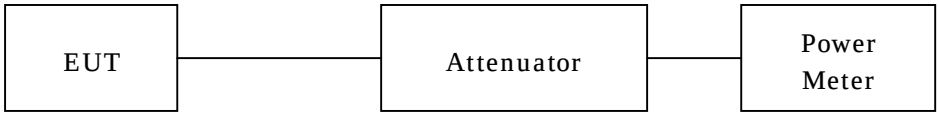
7.5.2 Test Instruments

Shielded Room S4				
Type	**Model**	**Serial No. (ID)**	**Manufacturer**	**Cal. Due**
Power Meter	ML2495A	1423001 (B-16)	Anritsu	2017/07/10
Power Sensor	MA2411B	1339136 (B-18)	Anritsu	2017/07/10
Attenuator	54A-10	W5675 (D-28)	Weinschel	2017/08/02
RF Cable	SUCOFLEX102	14253/2 (C-52)	HUBER+SUHNER	2017/08/02

NOTE : The calibration interval of the above test instruments is 12 months.

7.5.3 Test Method and Test Setup (Diagrammatic illustration)

The Conducted RF Power Output was measured with a power meter, one attenuator and a short, low loss cable.



7.5.4 Test Data

Test Date: May 30, 2017
Temp.: 26 °C, Humi: 56 %

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Output Power		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
00	2402	10.19	- 9.93	0.26	1.06	30.00	+29.74
19	2440	10.19	-10.14	0.05	1.01	30.00	+29.95
39	2480	10.20	-10.43	-0.23	0.95	30.00	+30.23

Calculated result at 2402.000 MHz, as the worst point shown on underline:

	Correction Factor	=	10.19 dB
+)	Meter Reading	=	-9.93 dBm
	Result	=	0.26 dBm = 1.06 mW

Minimum Margin: 30.00 - 0.26 = 29.74 (dB)

NOTES
1. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
2. Setting of measuring instrument(s) :

Detector Function	Video B.W.
Peak	Off

7.6 Peak Power Density (Conduction)

For the requirements, **R** - Applicable [**R** - Tested. **£** - Not tested by applicant request.]
£ - Not Applicable

7.6.1 Test Results

For the standard, **R** - Passed **£** - Failed **£** - Not judged

Peak Power Density -0.50 dBm at 2440.0 MHz

Uncertainty of Measurement Results ± 1.7 dB(2σ)

Remarks : _____

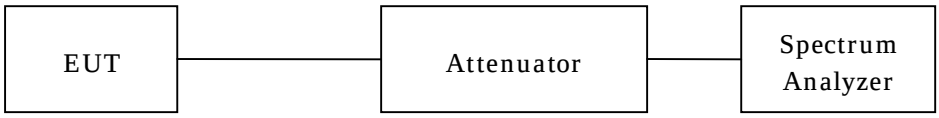
7.6.2 Test Instruments

Shielded Room S4				
Type	**Model**	**Serial No. (ID)**	**Manufacturer**	**Cal. Due**
Spectrum Analyzer	E4446A	US44300388 (A-39)	Agilent	2018/03/30
Attenuator	54A-10	W5675 (D-28)	Weinschel	2017/08/02
RF Cable	SUCOFLEX102	14253/2 (C-52)	HUBER+SUHNER	2017/08/02

NOTE : The calibration interval of the above test instruments is 12 months.

7.6.3 Test Method and Test Setup (Diagrammatic illustration)

The test system is shown as follows:



7.6.4 Test Data

Test Date: May 23, 2017
Temp.: 26 °C, Humi: 43 %

Transmitting Frequency		Correction Factor	Meter Reading	Conducted Peak Power Density		Limits	Margin
CH	[MHz]	[dB]	[dBm]	[dBm]	[mW]	[dBm]	[dB]
00	2402	10.19	-11.07	-0.88	0.82	8.00	+ 8.88
19	2440	10.19	-10.69	-0.50	0.89	8.00	+ 8.50
39	2480	10.20	-10.80	-0.60	0.87	8.00	+ 8.60

Calculated result at 2440.000 MHz, as the worst point shown on underline:

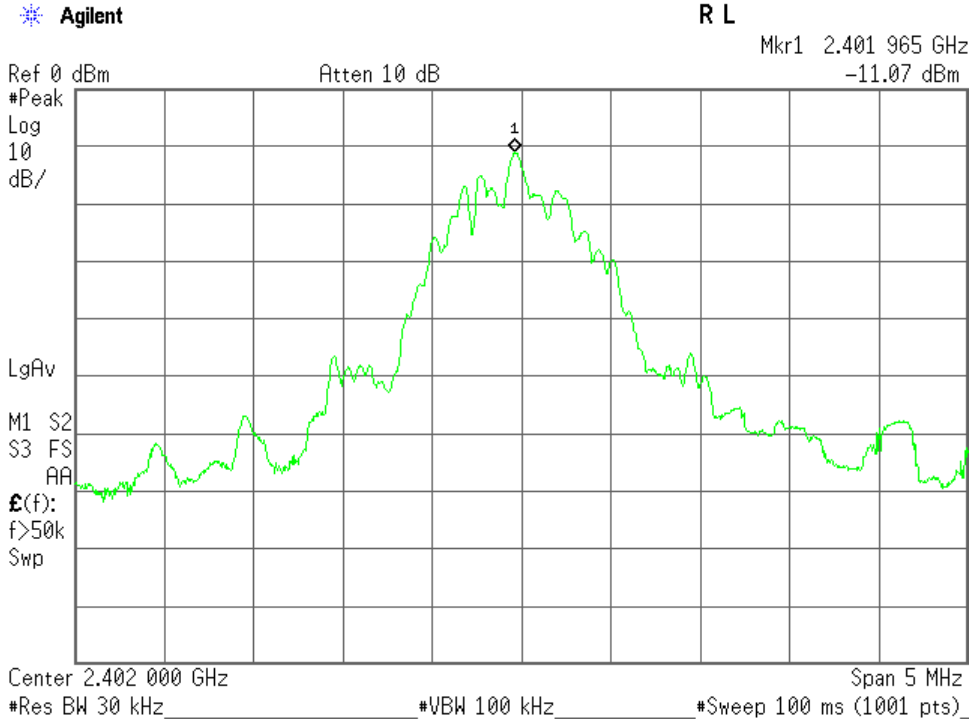
	Correction Factor	=	10.19 dB
+)	Meter Reading	=	-10.69 dBm
	Result	=	-0.50 dBm = 0.89 mW

Minimum Margin: 8.00 - (-0.50) = 8.50 (dB)

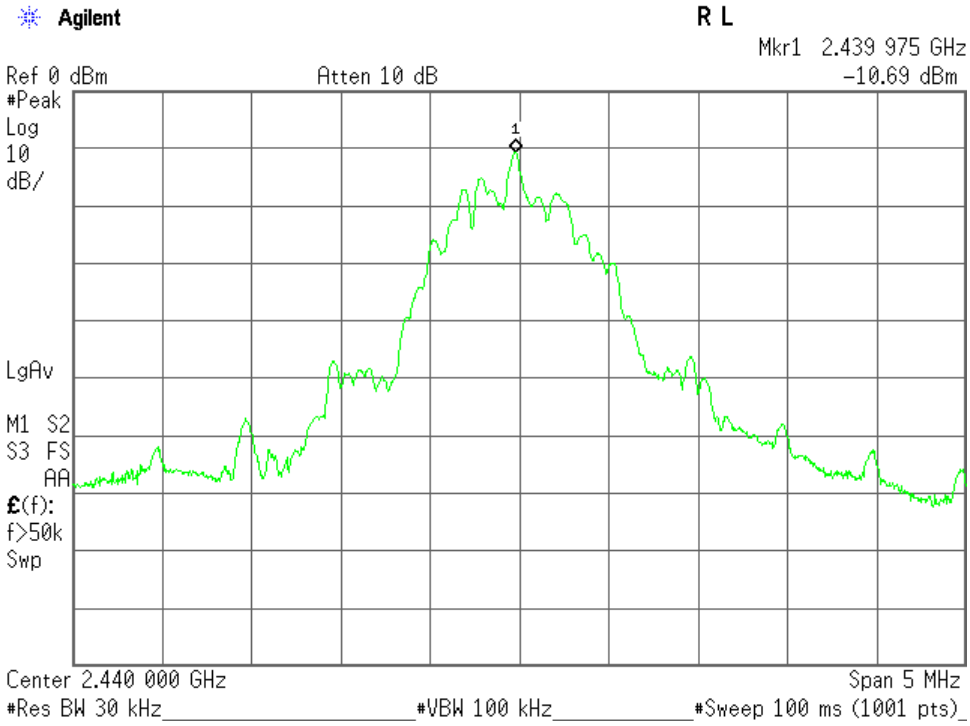
NOTES
1. The peak power density complied with the limit using 30 kHz resolution bandwidth of Spectrum Analyzer.
2. The correction factor shows the attenuation pad loss including the short, low loss cable or adapter.
3. Setting of measuring instrument(s) :

Detector Function	RES B.W.	Video B.W.
Peak	30kHz	100kHz

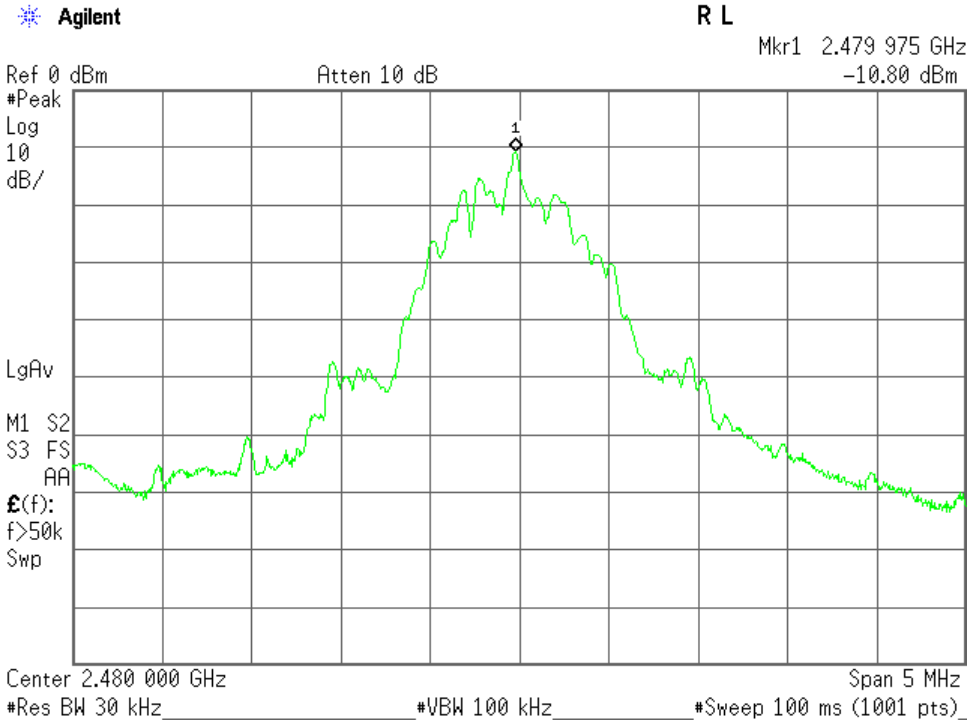
Low Channel



Middle Channel



High Channel



7.7 Spurious Emissions (Conduction)

For the requirements, **R** - Applicable [**R** - Tested. **£** - Not tested by applicant request.]
£ - Not Applicable

7.7.1 Test Results

For the standard, **R** - Passed **£** - Failed **£** - Not judged

Uncertainty of Measurement Results

9 kHz – 1 GHz	± 1.4	dB(2σ)
1 GHz – 18 GHz	± 1.7	dB(2σ)
18 GHz – 40 GHz	± 2.3	dB(2σ)

Remarks : _____

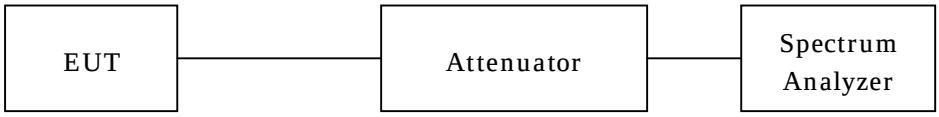
7.7.2 Test Instruments

Shielded Room S4				
Type	**Model**	**Serial No. (ID)**	**Manufacturer**	**Cal. Due**
Spectrum Analyzer	E4446A	US44300388 (A-39)	Agilent	2018/03/30
Attenuator	54A-10	W5675 (D-28)	Weinschel	2017/08/02
RF Cable	SUCOFLEX102	14253/2 (C-52)	HUBER+SUHNER	2017/08/02

NOTE : The calibration interval of the above test instruments is 12 months.

7.7.3 Test Method and Test Setup (Diagrammatic illustration)

The test system is shown as follows:



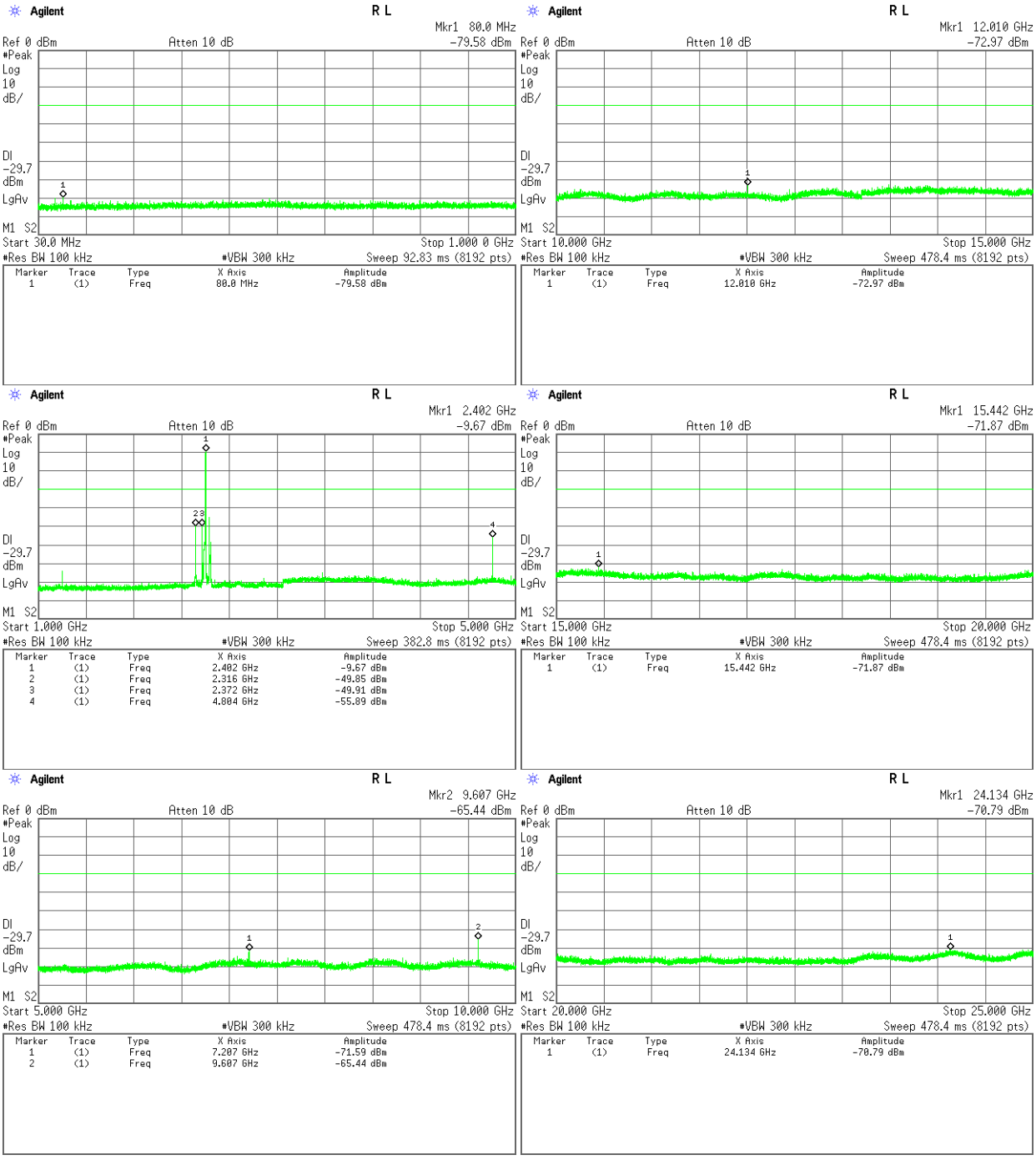
The setting of the spectrum analyzer are shown as follows:

Frequency Range	30 MHz - 25 GHz	Band-Edge
Res. Bandwidth	100 kHz	100 kHz
Video Bandwidth	300 kHz	300 kHz
Sweep Time	AUTO	AUTO
Trace	Maxhold	Maxhold

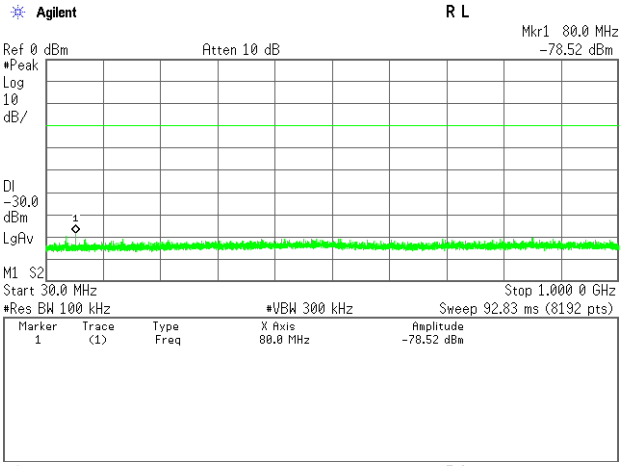
7.7.4 Test Data

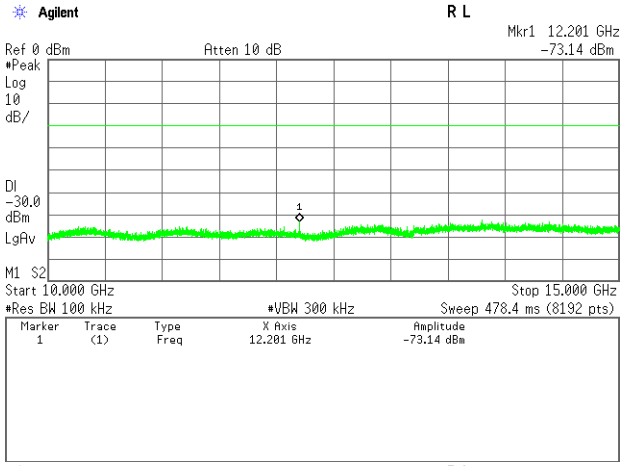
Test Date: May 23, 2017
Temp.: 26 °C, Humi: 43 %

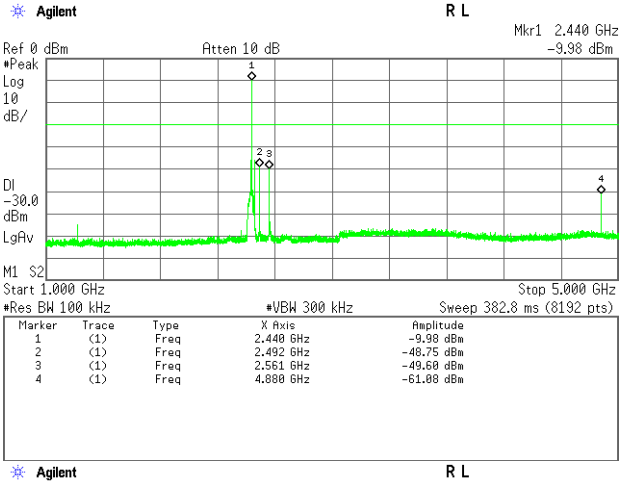
Low Channel

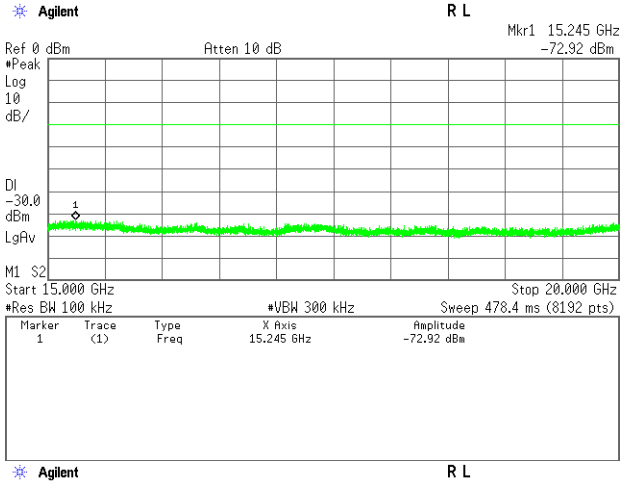


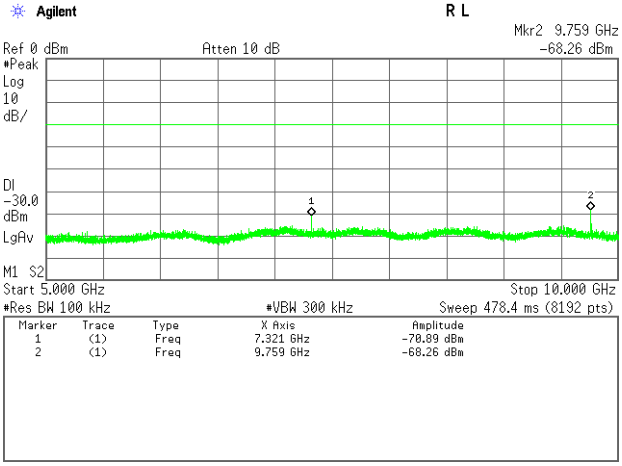
Middle Channel

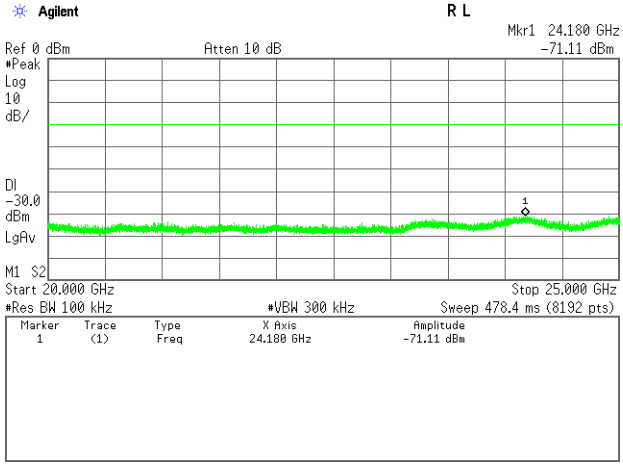




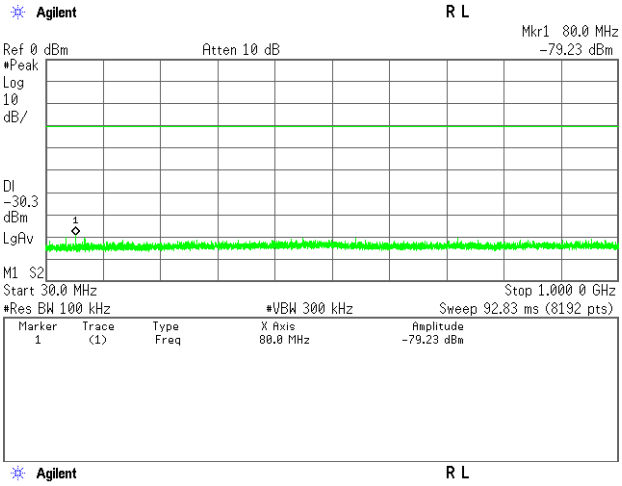


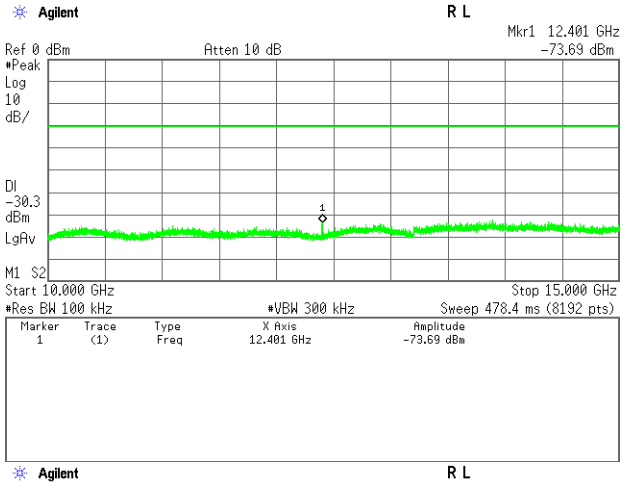


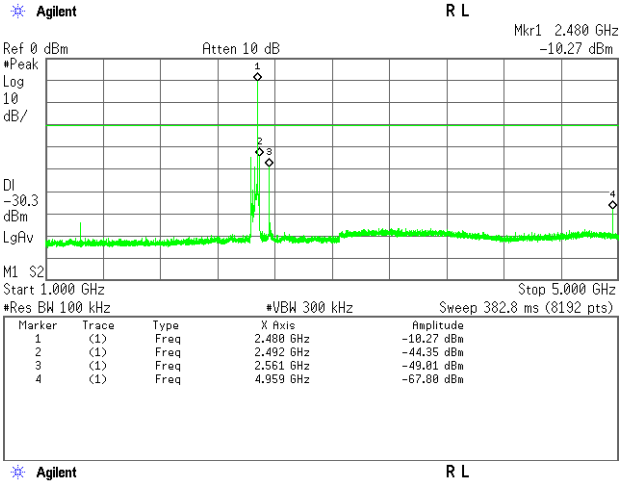


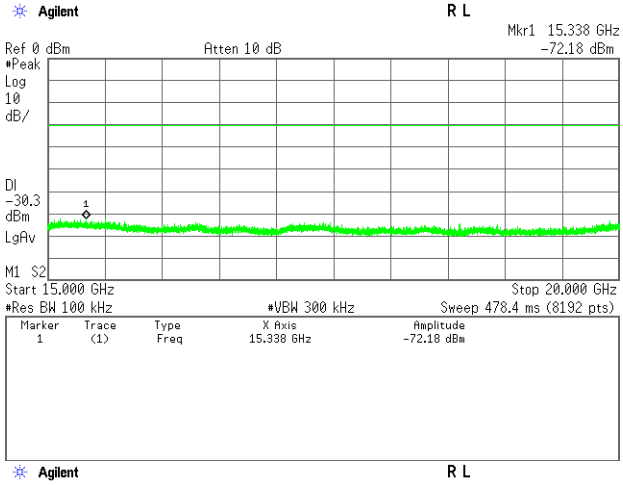


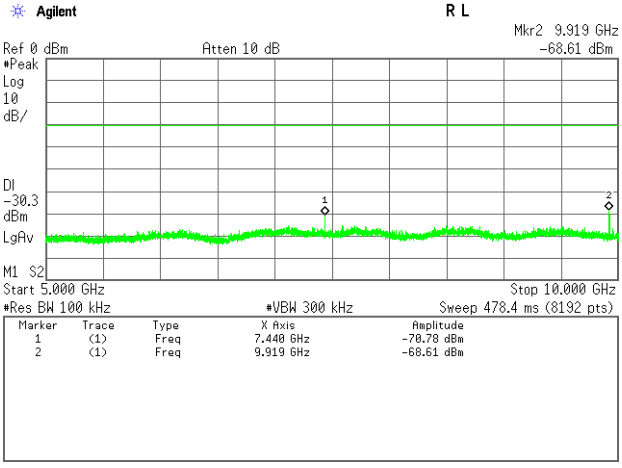
High Channel

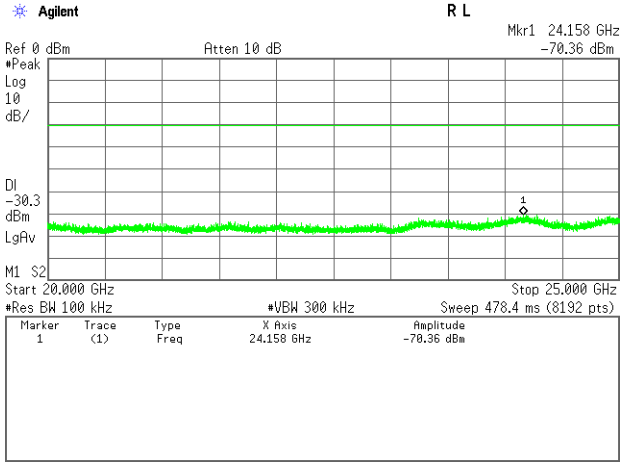








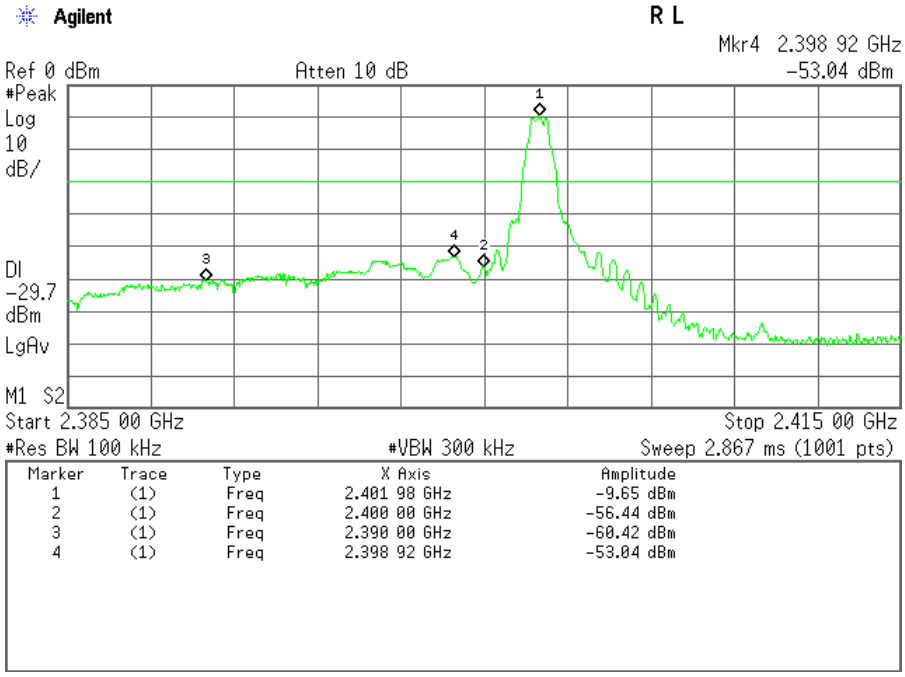




Band-Edge Emission

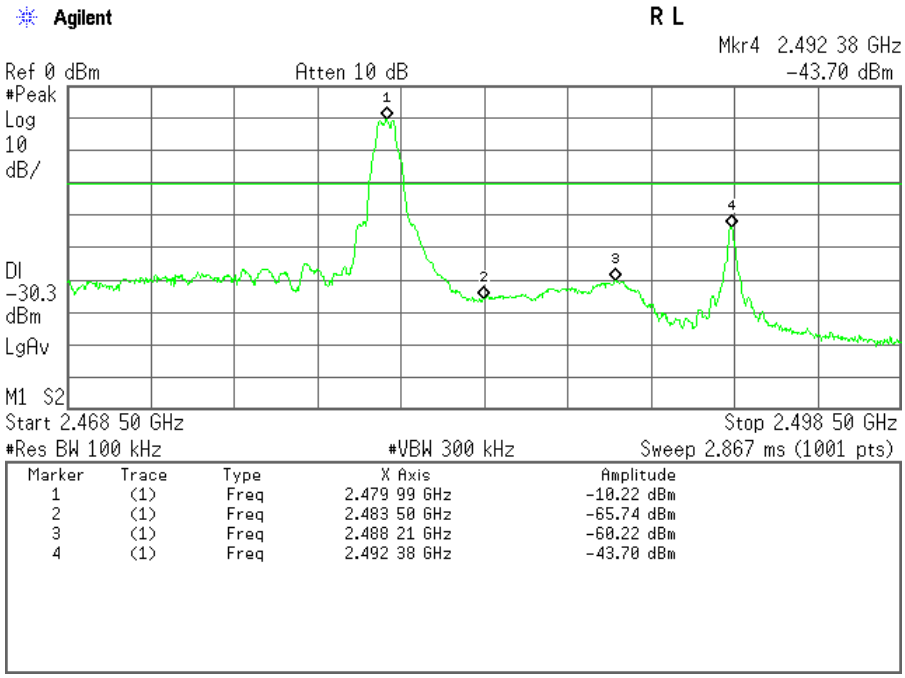
Test Date: May 23, 2017
Temp.: 26 °C, Humi: 43 %

Low Channel



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.401 98 GHz	-9.65 dBm
2	(1)	Freq	2.400 00 GHz	-56.44 dBm
3	(1)	Freq	2.390 00 GHz	-60.42 dBm
4	(1)	Freq	2.398 92 GHz	-53.04 dBm

High Channel



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.479 99 GHz	-10.22 dBm
2	(1)	Freq	2.483 50 GHz	-65.74 dBm
3	(1)	Freq	2.488 21 GHz	-60.22 dBm
4	(1)	Freq	2.492 38 GHz	-43.70 dBm

7.8 AC Powerline Conducted Emission

For the requirements, £ - Applicable [£ - Tested. £ - Not tested by applicant request.]
R - Not Applicable

7.9 Radiated Emission

For the requirements, R - Applicable [R - Tested. £ - Not tested by applicant request.]
£ - Not Applicable

7.9.1 Test Results

For the standard, R - Passed £ - Failed £ - Not judged

Min. Limit Margin (Average) 3.6 dB at 2502.72 MHz

Uncertainty of Measurement Results		
9 kHz – 30 MHz	± 3.0	dB(2σ)
30 MHz – 300 MHz	± 3.8	dB(2σ)
300 MHz – 1000 MHz	± 4.8	dB(2σ)
1 GHz – 6 GHz	± 4.7	dB(2σ)
6 GHz – 18 GHz	± 4.6	dB(2σ)
18 GHz – 40 GHz	± 5.5	dB(2σ)

Remarks : Worst case : 39ch (X-axis position)
The measurement result is within the range of measurement uncertainty.

7.9.2 Test Instruments

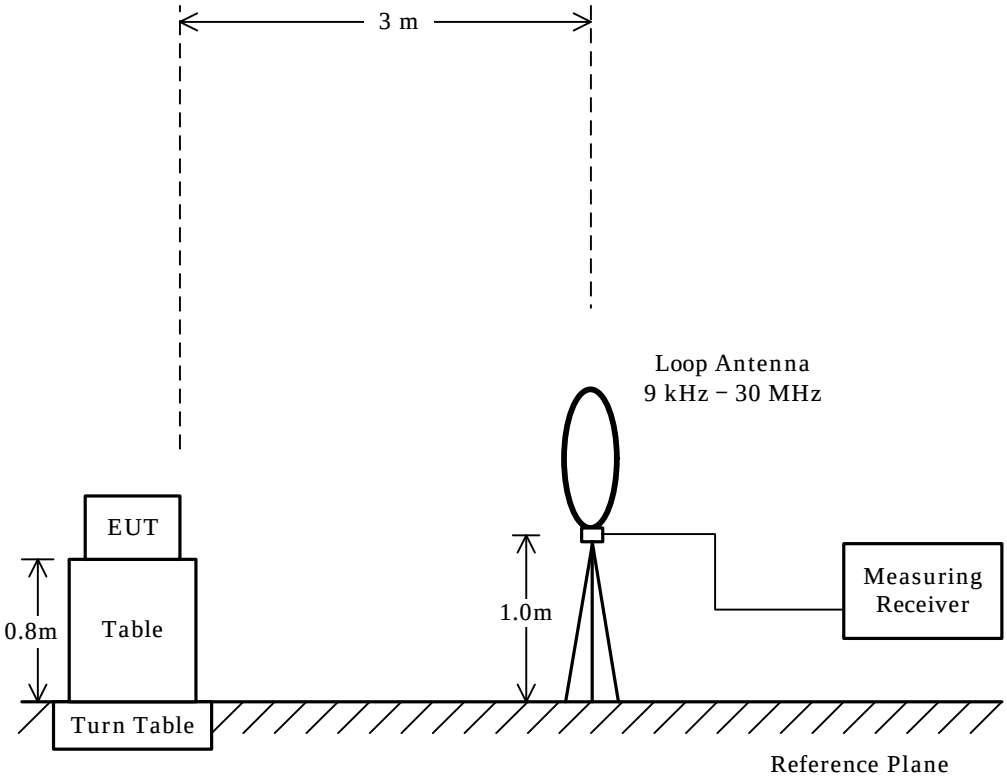
Anechoic Chamber A2				
Type	**Model**	**Serial No. (ID)**	**Manufacturer**	**Cal. Due**
Test Receiver	ESU 26	100170 (A-6)	Rohde & Schwarz	2018/02/28
Loop Antenna	HFH2-Z2	860605/030 (C-3)	Rohde & Schwarz	2017/08/01
Biconical Antenna	VHA9103/BBA9106	2355 (C-30)	Schwarzbeck	2018/05/23
Log-periodic Antenna	UHALP9108-A1	0694 (C-31)	Schwarzbeck	2018/05/23
Horn Antenna	91888-2	560 (C-40-1)	EATON	2017/06/12
Horn Antenna	91889-2	560 (C-40-2)	EATON	2017/06/12
Horn Antenna	3160-04	9903-1053 (C-55)	EMCO	2017/06/13
Horn Antenna	3160-05	9902-1061 (C-56)	EMCO	2017/06/13
Horn Antenna	3160-06	9712-1045 (C-57)	EMCO	2017/06/13
Horn Antenna	3160-07	9902-1113 (C-58)	EMCO	2017/06/13
Horn Antenna	3160-08	9904-1099 (C-59)	EMCO	2017/06/13
Horn Antenna	3160-09	9808-1117 (C-48)	EMCO	2017/06/15
Pre-Amplifier	310N	304573 (A-17)	SONOMA	2018/04/02
Pre-Amplifier	TPA0118-36	1010 (A-37)	TOYO	2018/05/14
Pre-Amplifier	RP1826G-45H	RP140121-11 (A-53)	EMCS	2017/06/15
Attenuator	54A-10	W5713 (D-29)	Weinschel	2017/08/02
Attenuator	2-10	BA6214 (D-79)	Weinschel	2017/11/21
Band Rejection Filter	BRM50701	029 (D-93)	MICRO-TRONICS	2018/02/14
RF Cable	RG213/U	--- (H-29)	HUBER+SUHNER	2017/08/01
RF Cable	S 10162 B-11 etc.	--- (H-4)	HUBER+SUHNER	2018/04/02
RF Cable	SUCOFLEX104	267479/4 (C-66)	HUBER+SUHNER	2018/01/10
RF Cable	SUCOFLEX104	267414/4 (C-67)	HUBER+SUHNER	2018/01/10
RF Cable	SUCOFLEX102EA	3041/2EA (C-69)	HUBER+SUHNER	2018/01/10

NOTE : The calibration interval of the above test instruments is 12 months.

7.9.3 Test Method and Test Setup (Diagrammatic illustration)

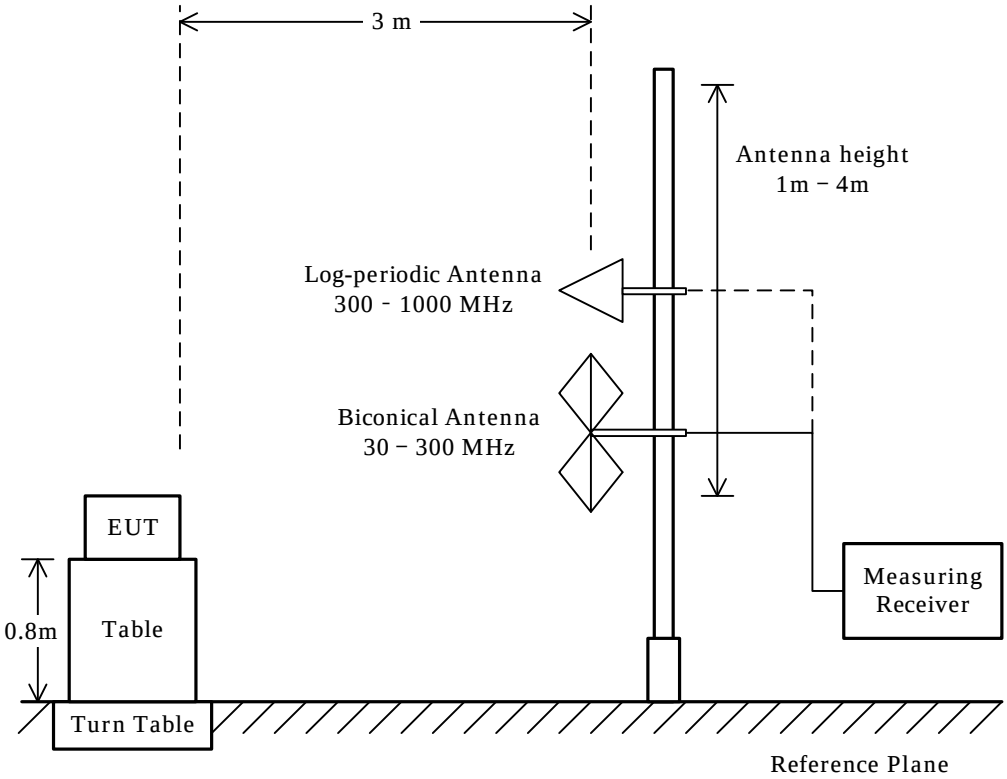
7.9.3.1 Radiated Emission 9 kHz – 30 MHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration (in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
The measurement were performed about three antenna orientations (parallel, perpendicular, and ground-parallel).
According to KDB 414788, a used anechoic chamber were equivalent to those on an open fields site based on comparison measurements.
This configurations was used for the final tests.



7.9.3.2 Radiated Emission 30 MHz – 1000 MHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration (in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.



7.9.3.3 Radiated Emission above 1 GHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration (in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

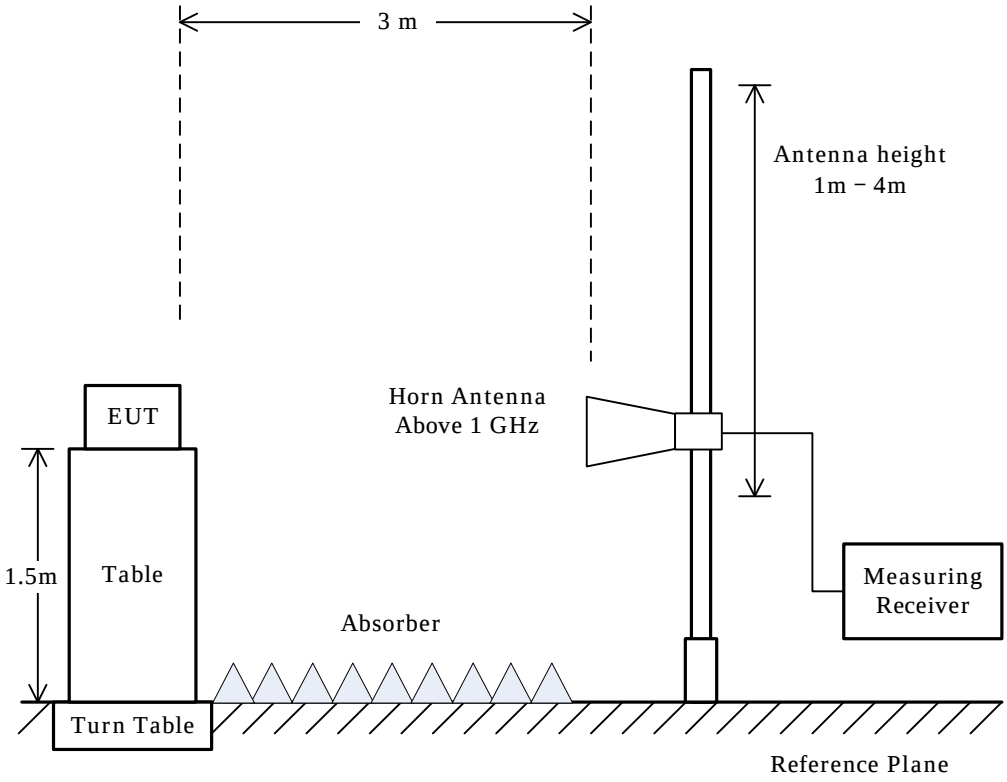
The setting of the measuring instruments are shown as follows:

Type	Peak	Average
Detector Function	Peak	Peak
Res. Bandwidth	1 MHz	1 MHz
Video Bandwidth	3 MHz	≥ 1/T *)
Video Filtering	Linear Voltage	Linear Voltage
Sweep Time	AUTO	AUTO
Trace	Max Hold	Max Hold

*) T: Minimum transmission duration

Average (VBW) Setting:

Mode	Interval (msec)	Cycle (msec)	Duty cycle (%)	Burst on period(T) (msec)	Min. VBW(1/T) (kHz)	VBW Setting (kHz)
LE	0.48	0.63	22.9%	0.14	6.99	10.00



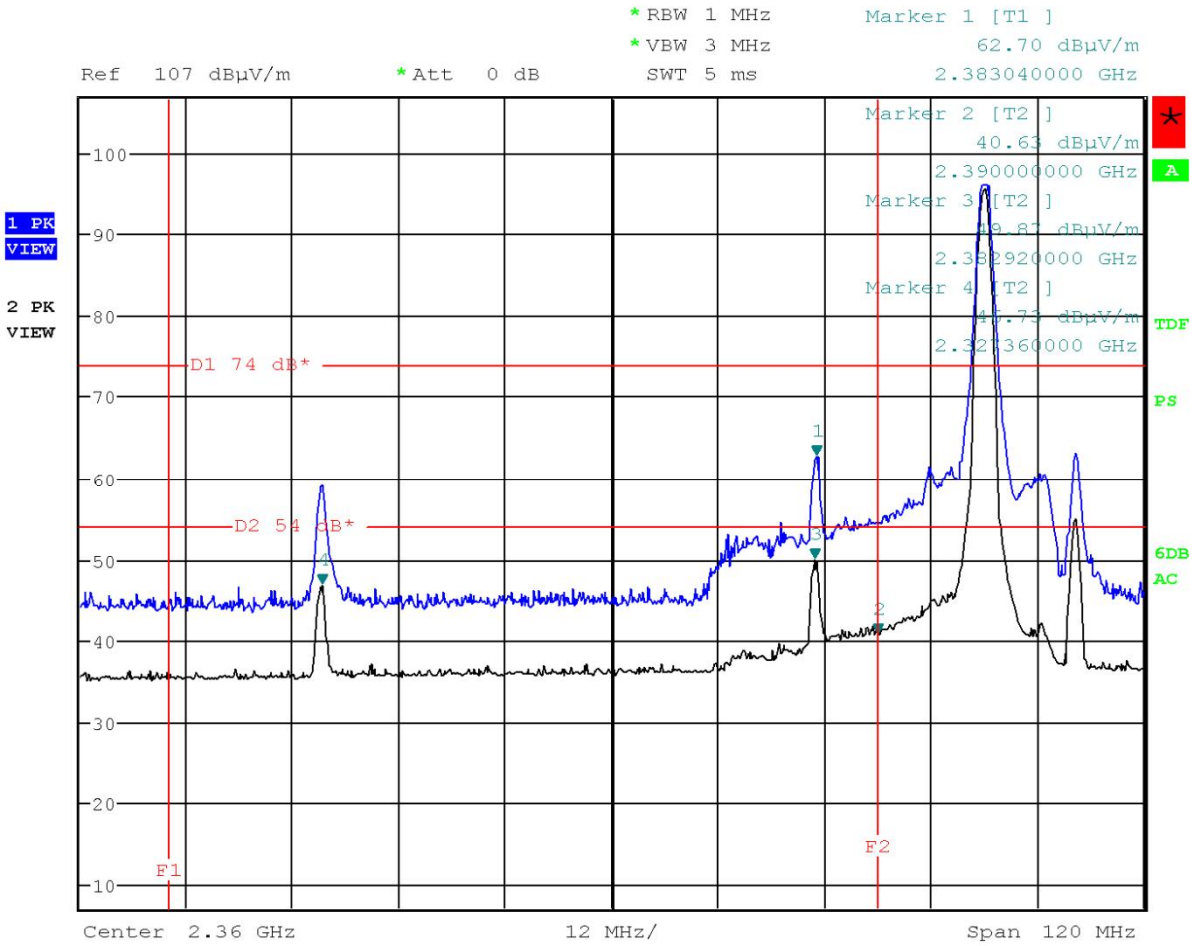
NOTE
When the EUT is manipulated through three different orientations, the scan height upper range for the measurement antenna is limited to 2.5 m or 0.5 m above the top of the EUT.

7.9.4 Test Data

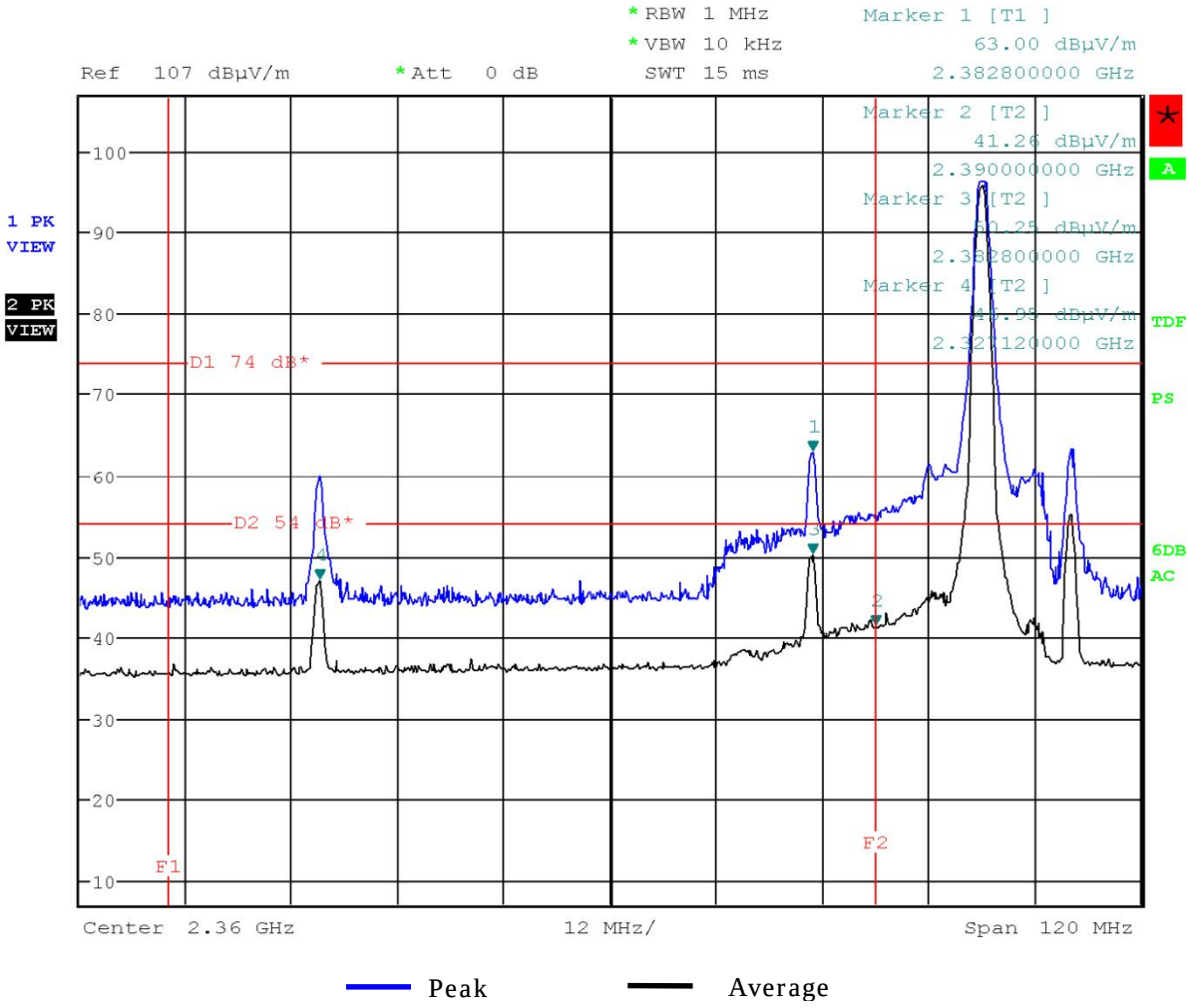
7.9.4.1 Band-edge Compliance

Test Date: May 24, 2017
Temp.: 24 °C, Humi: 66 %

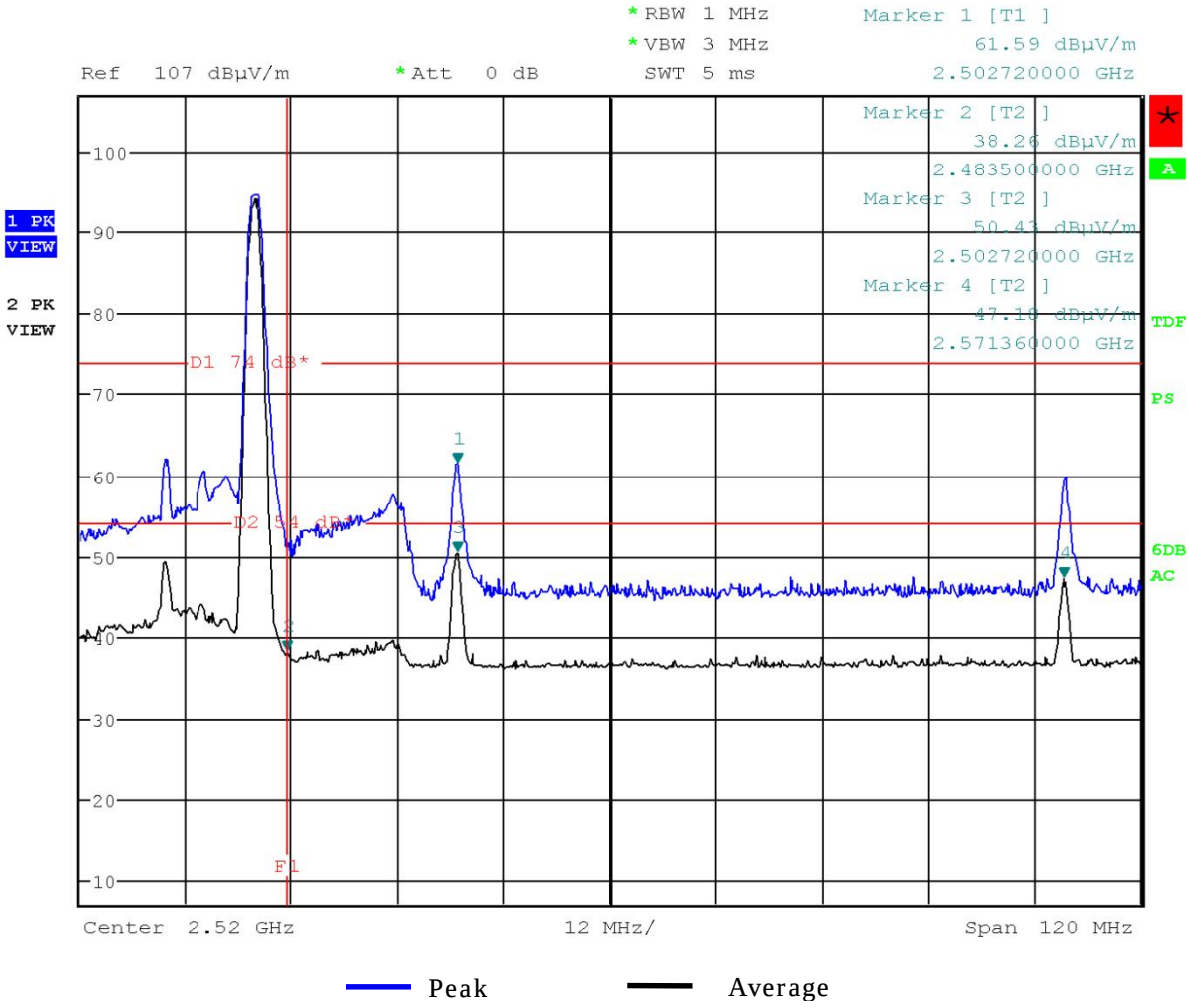
Mode of EUT : 0ch: 2402 MHz
Antenna Polarization : Horizontal



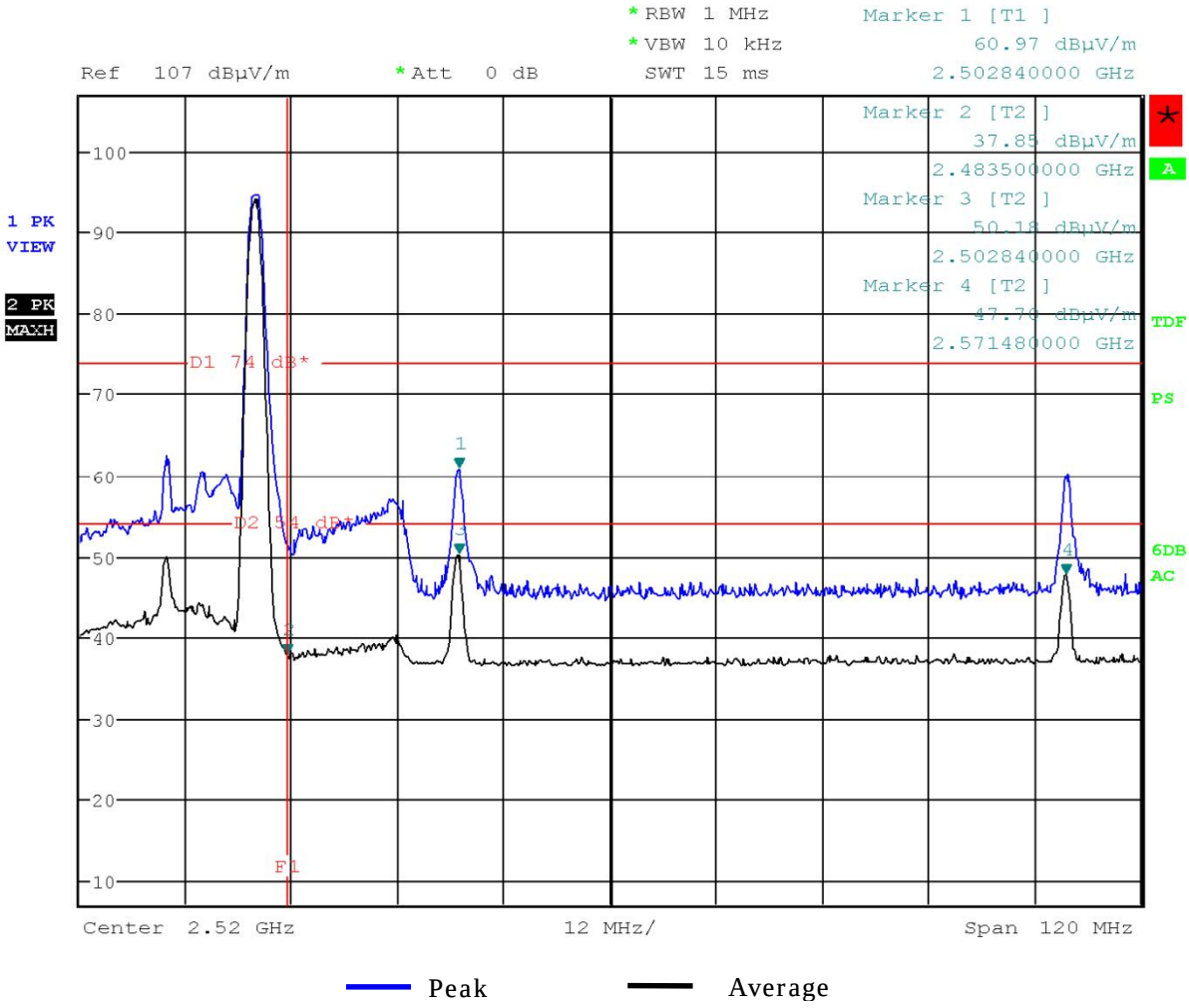
Mode of EUT : 0ch: 2402 MHz
Antenna Polarization : Vertical



Mode of EUT : 39ch: 2480 MHz
Antenna Polarization : Horizontal



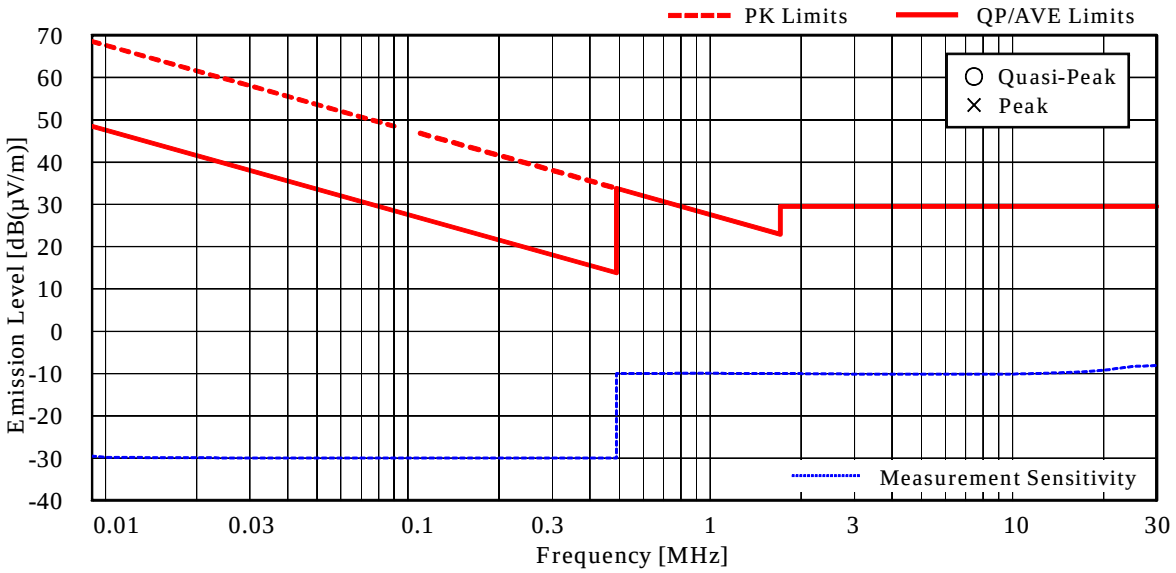
Mode of EUT : 39ch: 2480 MHz
Antenna Polarization : Vertical



7.9.4.2 Other Spurious Emission (9kHz – 30MHz)

Test Date: May 26, 2017
Temp.: 23 °C, Humi: 62 %

Mode of EUT : All modes have been investigated and the worst case mode has been listed.
Results : No spurious emissions in the range 20dB below the limit.

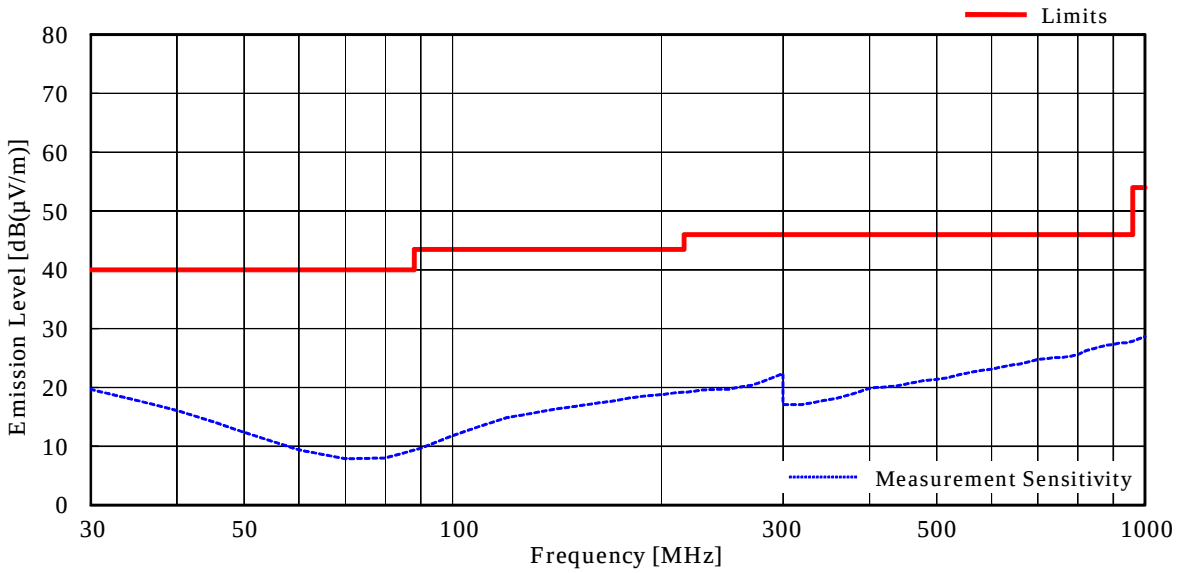


NOTES
1. Test Distance : 3 m (Specified Distance D [m] = 300 m (9 kHz - 490 kHz) / 30 m (490 kHz - 30 MHz))
2. The spectrum was checked from 9 kHz to 30 MHz.
3. The distance conversion factor (40dB/decade) is applied for the test result calculation.
4. PK : Peak Detector / QP : Quasi-Peak Detector / AVE : Average Detector
5. Test receiver setting(s) :
   PK/AVE 200 Hz (9 kHz - 90 kHz, 110 kHz - 150 kHz) / PK/AVE 9 kHz (150 kHz - 490 kHz)
   CISPR QP 200 Hz (90 kHz - 110 kHz) / CISPR QP 9 kHz (490 kHz - 30 MHz)
6. Since the average limit is met when using a peak detector , the results are deemed to meet both limits.

7.9.4.3 Other Spurious Emission (30MHz – 1000MHz)

Test Date: May 26, 2017
Temp.: 23 °C, Humi: 62 %

Mode of EUT : All modes have been investigated and the worst case mode has been listed.
Results : No spurious emissions in the range 20dB below the limit.



NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 30 MHz to 1000 MHz.
3. The correction factor is composed of cable loss, pad attenuation and/or amplifier gain.
4. The symbol of “<” means “or less”.
5. The symbol of “>” means “more than”.
6. Test receiver setting(s) : CISPR QP 120 kHz [QP : Quasi-Peak]

7.9.4.4 Other Spurious Emission (above 1 GHz)

Test Date: May 24, 2017
Temp.: 24 °C, Humi: 66 %

Frequency	Antenna Factor	Corr. Factor	Meter Readings [dB(μV)] Horizontal		Vertical		Limits [dB(μV/m)]		Results [dB(μV/m)]		Margin [dB]	Remarks
[MHz]	[dB(1/m)]	[dB]	PK	AVE	PK	AVE	PK	AVE	PK	AVE		
Test condition : Tx Low Ch												
4804.0	27.1	-15.8	< 40.0	30.4	< 40.0	29.9	74.0	54.0	< 51.3	41.7	+12.3	-
12010.0	33.5	-25.3	< 40.0	< 28.0	< 40.0	< 28.0	74.0	54.0	< 48.2	< 36.2	> +17.8	-
19216.0	40.5	-43.1	< 50.0	< 40.0	< 50.0	< 40.0	74.0	54.0	< 47.4	< 37.4	> +16.6	-
Test condition : TX Middle Ch												
4880.0	27.0	-15.8	< 40.0	30.6	< 40.0	30.2	74.0	54.0	< 51.2	41.8	+12.2	-
7320.0	29.9	-16.3	< 40.0	< 28.0	< 40.0	< 28.0	74.0	54.0	< 53.6	< 41.6	> +12.4	-
12200.0	33.3	-25.8	< 40.0	28.5	< 40.0	28.3	74.0	54.0	< 47.5	36.0	+18.0	-
19520.0	40.4	-43.0	< 50.0	< 40.0	< 50.0	< 40.0	74.0	54.0	< 47.4	< 37.4	> +16.6	-
Test condition : TX High Ch												
4960.0	27.0	-15.7	< 40.0	31.2	< 40.0	31.6	74.0	54.0	< 51.3	42.9	+11.1	-
7440.0	29.8	-16.3	< 40.0	< 28.0	< 40.0	< 28.0	74.0	54.0	< 53.5	< 41.5	> +12.5	-
12400.0	33.3	-26.1	< 40.0	32.1	< 40.0	31.6	74.0	54.0	< 47.2	39.3	+14.7	-
19840.0	40.4	-43.0	< 50.0	< 40.0	< 50.0	< 40.0	74.0	54.0	< 47.4	< 37.4	> +16.6	-
22320.0	40.6	-43.5	< 50.0	< 40.0	< 50.0	< 40.0	74.0	54.0	< 47.1	< 37.1	> +16.9	-

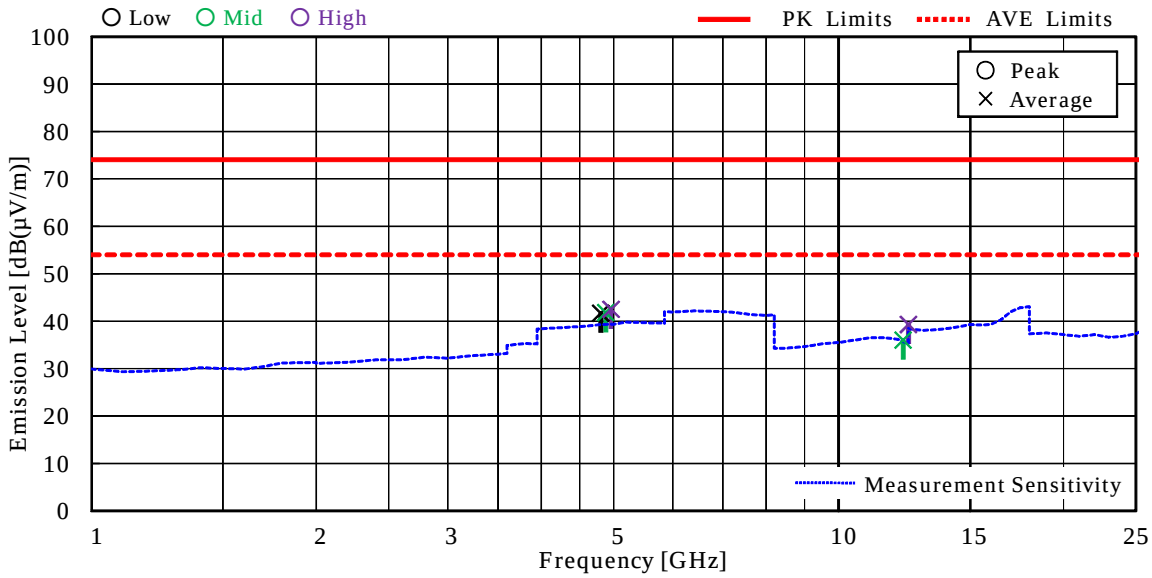
Calculated result at 4960.0 MHz, as the worst point shown on underline:

	Antenna Factor	=	27.0 dB(1/m)
	Corr. Factor	=	-15.7 dB
+)	Meter Reading	=	31.6 dB(μV)
	Result	=	42.9 dB(μV/m)

Minimum Margin: 54.0 - 42.9 = 11.1 (dB)

NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 1 GHz to 25 GHz (10th harmonic of the highest fundamental frequency).
3. The correction factor is shown as follows:
   Corr. Factor [dB] = Cable Loss + 20dB Pad Att. - Pre-Amp. Gain [dB] (1.0 - 8.2 GHz)
   Corr. Factor [dB] = Cable Loss + 10dB Pad Att. - Pre-Amp. Gain [dB] (8.2 - 18.0 GHz)
   Corr. Factor [dB] = Cable Loss - Pre-Amp. Gain [dB] (over 18 GHz)
4. The symbol of "<" means "or less".
5. The symbol of ">" means "more than".
6. PK : Peak / AVE : Average

Antenna Pole : Horizontal



Antenna Pole : Vertical