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Dates of Tests: April 06 ~ 20, 2018  
 Test Report S/N: LR500111804C  
 Test Site : LTA CO., LTD.

## CERTIFICATION OF COMPLIANCE

FCC ID.

**2APM6T20**

APPLICANT

**HODU**

<b>Equipment Class</b>	:	Digital Transmission System (DTS)
<b>Manufacturing Description</b>	:	Pet Products
<b>Manufacturer</b>	:	HODU
<b>Model name</b>	:	T20
<b>Test Device Serial No.:</b>	:	Identical prototype
<b>Rule Part(s)</b>	:	FCC Part 15.247 Subpart C ; ANSI C-63.4-2014 ANSI C-63.10-2013
<b>Frequency Range</b>	:	2412 MHz ~ 2462 MHz(802.11 b/g/n)
<b>Max. Output Power</b>	:	Max 19.20 dBm – Conducted(802.11 b) Max 18.91 dBm – Conducted(802.11 g) Max 19.07 dBm – Conducted(802.11 n)
<b>Data of issue</b>	:	April 20, 2018

This test report is issued under the authority of:

Yong-Cheol, Wang / Manager

The test was supervised by:

Jae-hum, Yeon / Test Engineer

This test result only responds to the tested sample. It is not allowed to copy this report even partly without the allowance of the test laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

NVLAP LAB Code.: 200723-0

## **TABLE OF CONTENTS**

1. GENERAL INFORMATION	-----	3
2. INFORMATION ABOUT TEST ITEM	-----	4
3. TEST REPORT	-----	5
3.1 SUMMARY OF TESTS	-----	5
3.2 TECHNICAL CHARACTERISTICS TEST	-----	6
3.2.1 6 dB BANDWIDTH	-----	6
3.2.2 PEAK OUTPUT POWER	-----	13
3.2.3 POWER SPECTRAL DENSITY	-----	20
3.2.4 BAND EDGE	-----	27
3.2.5 CONDUCTED SPURIOUS EMISSIONS	-----	34
3.2.6 RADIATED SPURIOUS EMISSIONS	-----	40
3.2.7 AC CONDUCTED EMISSIONS	-----	70
APPENDIX	-----	
APPENDIX TEST EQUIPMENT USED FOR TESTS	-----	89

## 1. General information

### **1-1 Test Performed**

Company name : LTA Co., Ltd.  
 Address : 243, Jubug-ri, Yangji-Myeon, Youngin-Si, Kyunggi-Do, Korea. 449-822  
 Web site : <http://www.ltalab.com>  
 E-mail : [chahn@ltalab.com](mailto:chahn@ltalab.com)  
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 Facsimile : +82-31-323-6010

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competents of calibration and testing laboratory”.

### **1-2 Accredited agencies**

LTA Co., Ltd. is approved to perform EMC testing by the following agencies:

Agency	Country	Accreditation No.	Validity	Reference
NVLAP	U.S.A	200723-0	2020-03-15	ECT accredited Lab.
RRA	KOREA	KR0049	-	EMC accredited Lab.
FCC	U.S.A	649054	2019-04-13	FCC CAB
VCCI	JAPAN	C-4948	2020-09-10	VCCI registration
VCCI	JAPAN	T-2416	2020-09-10	VCCI registration
VCCI	JAPAN	R-4483(10m)	2020-10-15	VCCI registration
VCCI	JAPAN	G-847	2018-12-13	VCCI registration
IC	CANADA	5799A-1	2019-11-07	IC filing
KOLAS	KOREA	NO.551	2021-08-20	KOLAS accredited Lab.

## 2. Information about test item

### 2-1 Client & Manufacturer

Company name : HODU  
 Address : B118, A-dong, 140, Tongil-ro, Deogyang-gu, Goyang-si, Gyeonggi-do, Korea  
 Tel / Fax : TEL No : +82-10-4186-9175 / FAX No : 070-4027-6868

### 2-2 Secondary Manufacturer

Company name : HODU  
 Address : B118, A-dong, 140, Tongil-ro, Deogyang-gu, Goyang-si, Gyeonggi-do, Korea

### 2-3 Equipment Under Test (EUT)

Model name : T20  
 Serial number : Identical prototype  
 Date of receipt : April 06, 2018  
 EUT condition : Pre-production, not damaged  
 Antenna type : Whip antenna - Max Gain 2.77 dBi  
 Frequency Range : 2412 MHz ~ 2462 MHz (802.11 b/g/n)  
 RF output power : Max 19.20 dBm – Conducted (802.11 b)  
                           Max 18.91 dBm – Conducted (802.11 g)  
                           Max 19.07 dBm – Conducted (802.11 n)  
 Number of channels : 11 (802.11 b/g/n)  
 Type of Modulation : QPSK, Direct Sequence Spread Spectrum(DSSS)  
 Power Source : DC 12 V  
 Firmware Version : V1.0.0

### 2-4 Tested frequency

802.11 b/g/n	LOW	MID	HIGH
Frequency (MHz)	2412	2442	2462

### 2-5 Ancillary Equipment

Equipment	Model No.	Serial No.	Manufacturer
Notebook	CR720	MS-1736	MSI

### 3. Test Report

#### 3.1 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
15.247(a)	6 dB Bandwidth	> 500 kHz	Conducted	C
15.247(b)	Transmitter Peak Output Power	< 1 Watt		C
15.247(d)	Transmitter Power Spectral Density	< 8 dBm @ 3 kHz		C
15.247(d)	Band Edge	> 20 dBc		C
15.209	Field Strength of Harmonics	Emission	Radiated	C
15.207	AC Conducted Emissions	Emissions	Conducted	C
15.203	Antenna requirement	-	-	C

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

Note 2: The data in this test report are traceable to the national or international standards.

#### → Antenna Requirement

The HODU. FCC ID: 2APM6T20 unit complies with the requirement of §15.203.  
The antenna type is Whip Antenna

The sample was tested according to the following specification:

\*FCC Parts 15.247; ANSI C-63.4-2014

\*FCC KDB Publication No. 558074 D01 v03r05

\*FCC TCB Workshop 2012, April

## 3.2 Technical Characteristics Test

### 3.2.1 6 dB Bandwidth

#### Procedure:

The bandwidth at 6 dB below the highest in-band spectral density was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 6 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is ( as close as possible to ) even with the reference marker level. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

#### The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz

Span = 5 MHz, 30 MHz

VBW = 100 kHz (VBW  $\geq$  RBW)

Sweep = auto

Trace = max hold

Detector function = peak

#### Measurement Data : **Complies**

(802.11 b)

Frequency (MHz)	Test Results	
	Measured Bandwidth (MHz)	Result
2412	11.245	Complies
2442	11.418	Complies
2462	10.724	Complies

(802.11 g)

Frequency (MHz)	Test Results	
	Measured Bandwidth (MHz)	Result
2412	17.192	Complies
2442	17.236	Complies
2462	17.323	Complies

(802.11 n)

Frequency (MHz)	Test Results	
	Measured Bandwidth (MHz)	Result
2412	18.365	Complies
2442	18.321	Complies
2462	18.365	Complies

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- See next pages for actual measured spectrum plots.

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### Minimum Standard:

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6 dB Bandwidth > 500 kHz

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### Measurement Setup

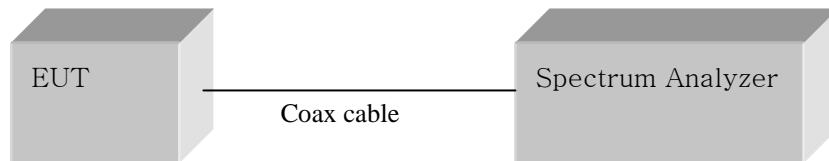
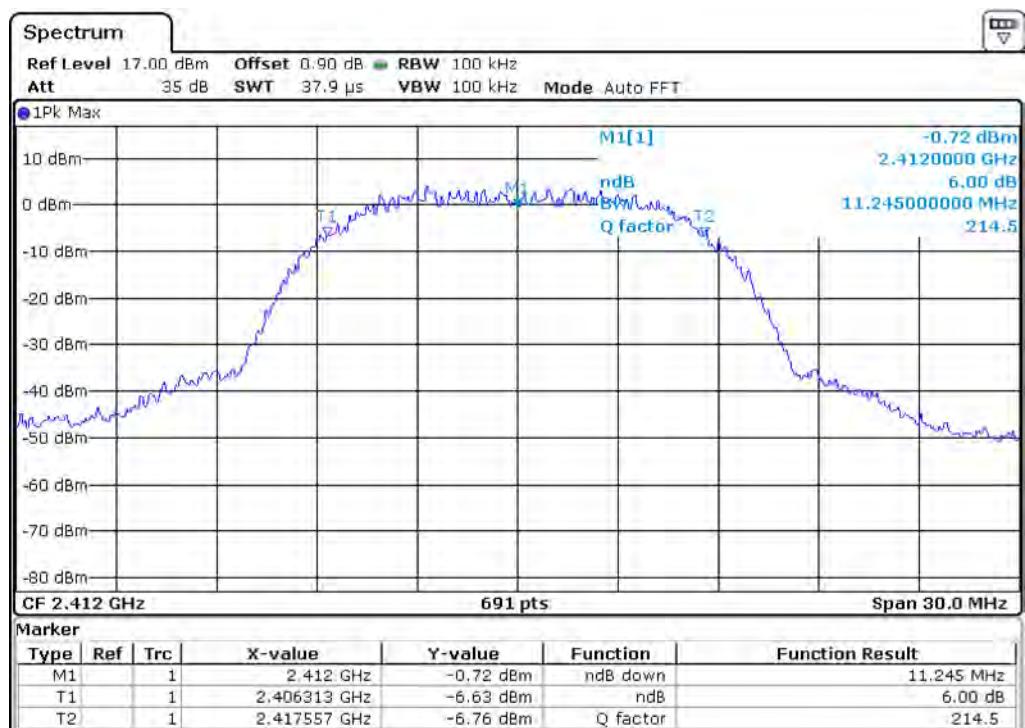
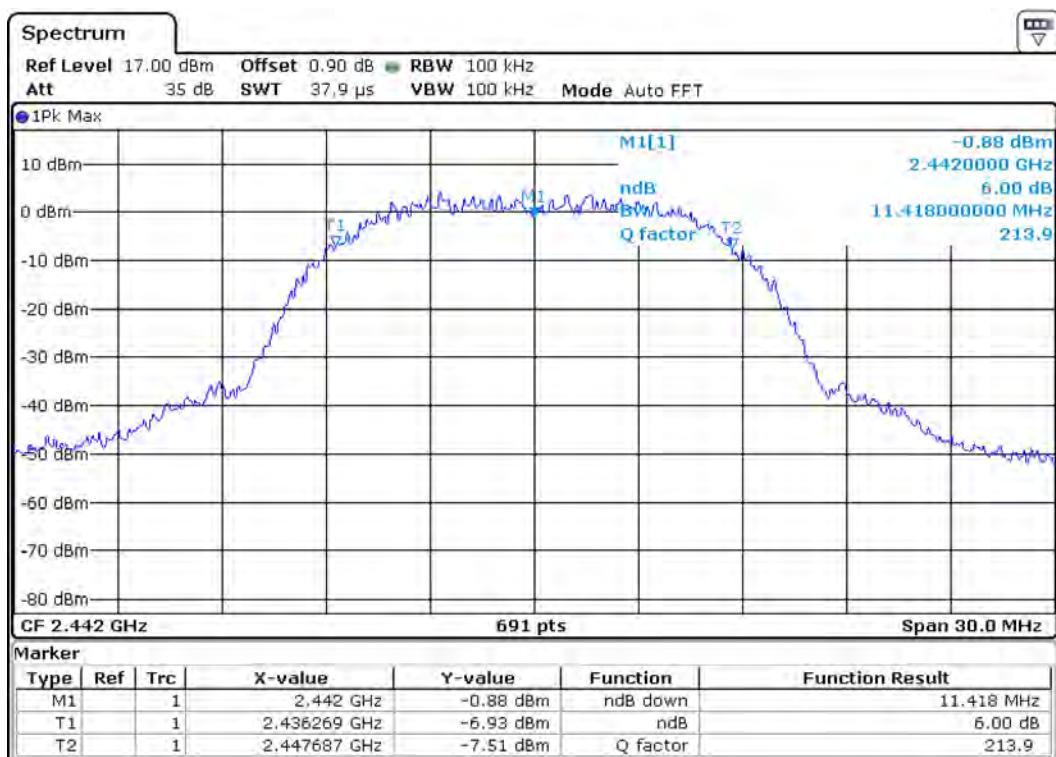


Figure 1: Measurement setup for the carrier frequency separation

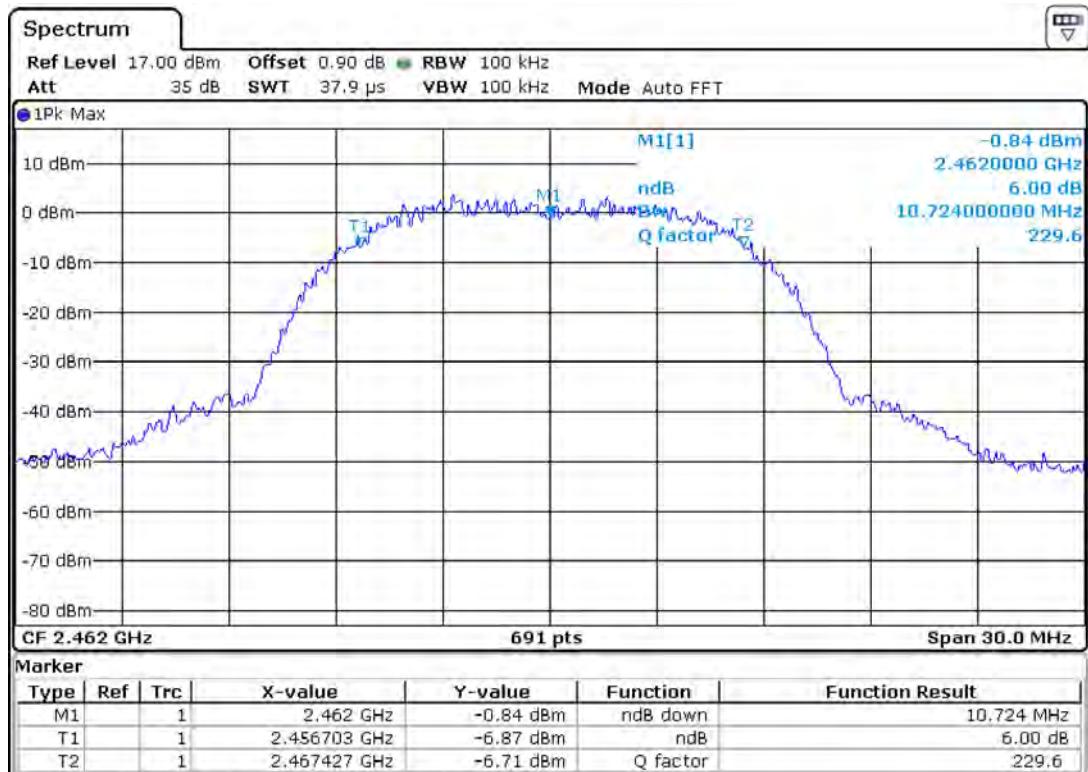
## Low Channel – 802.11 b



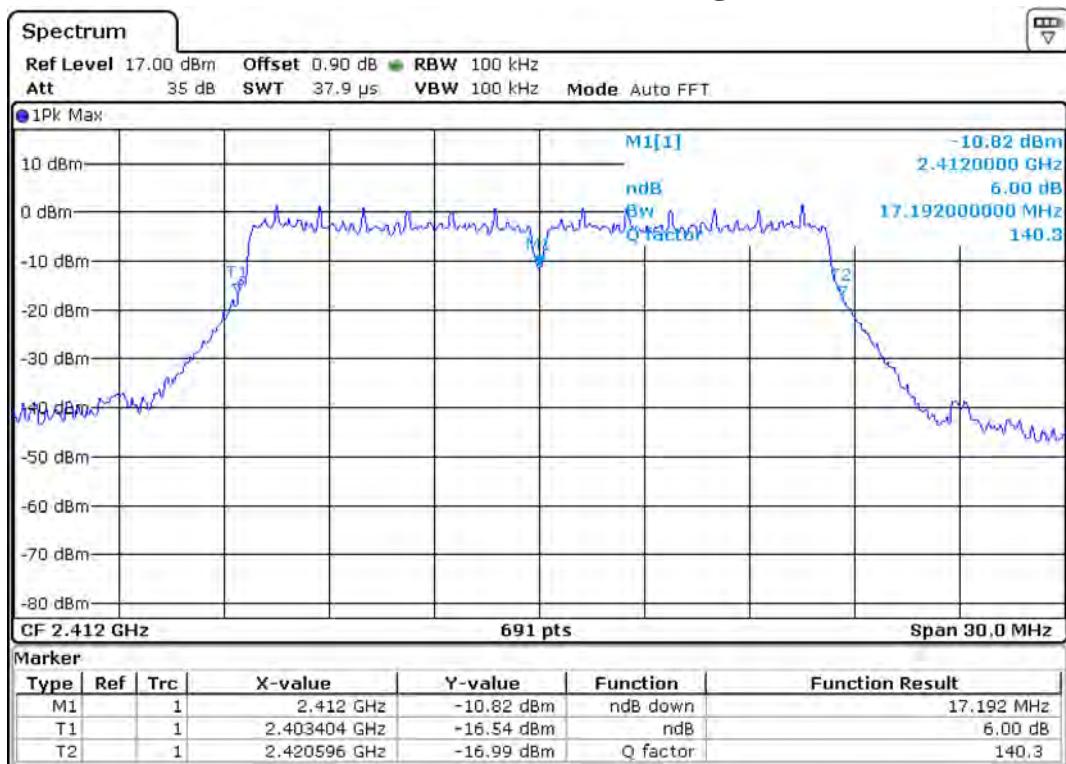
## Middle Channel – 802.11 b



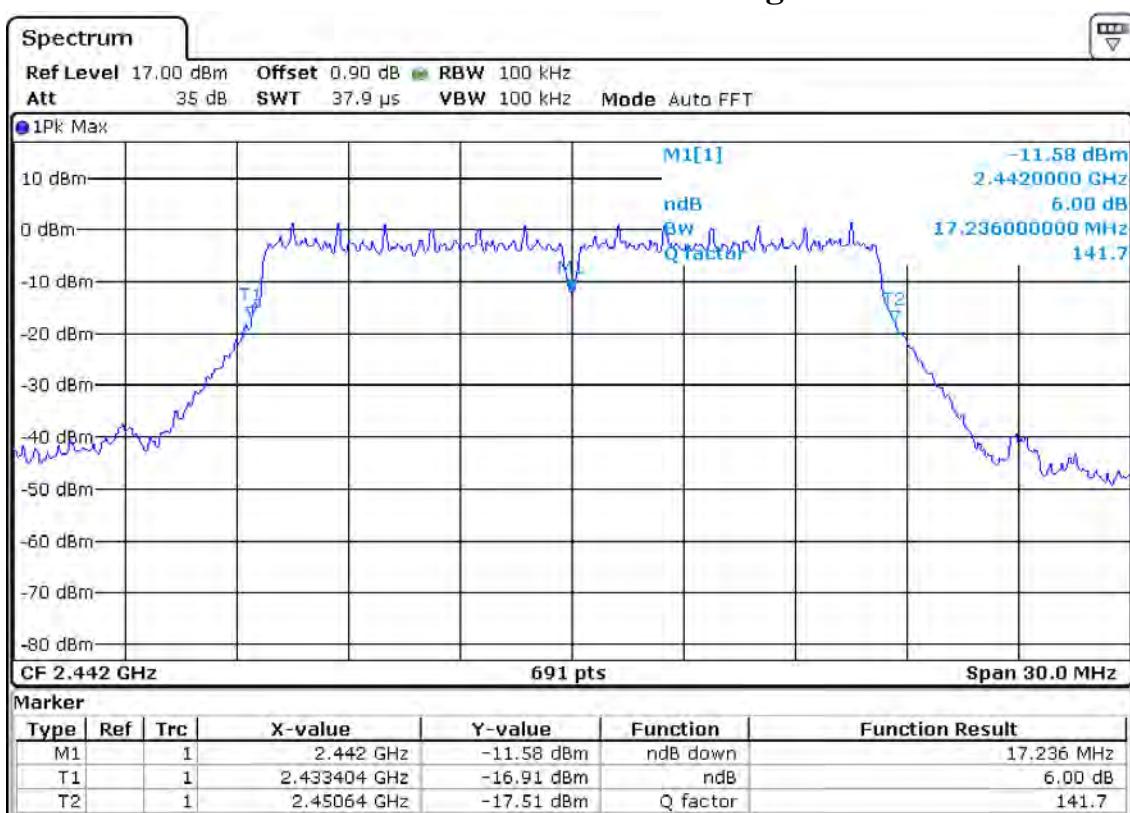
## High Channel – 802.11 b



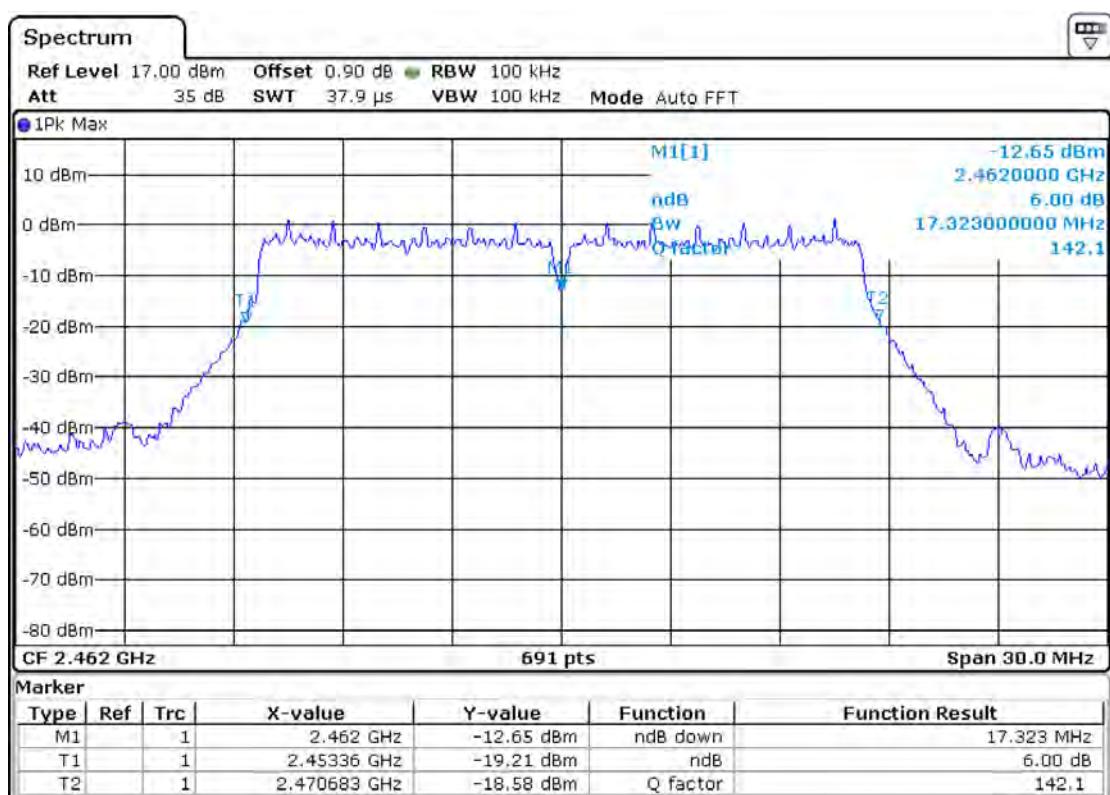
## Low Channel – 802.11 g



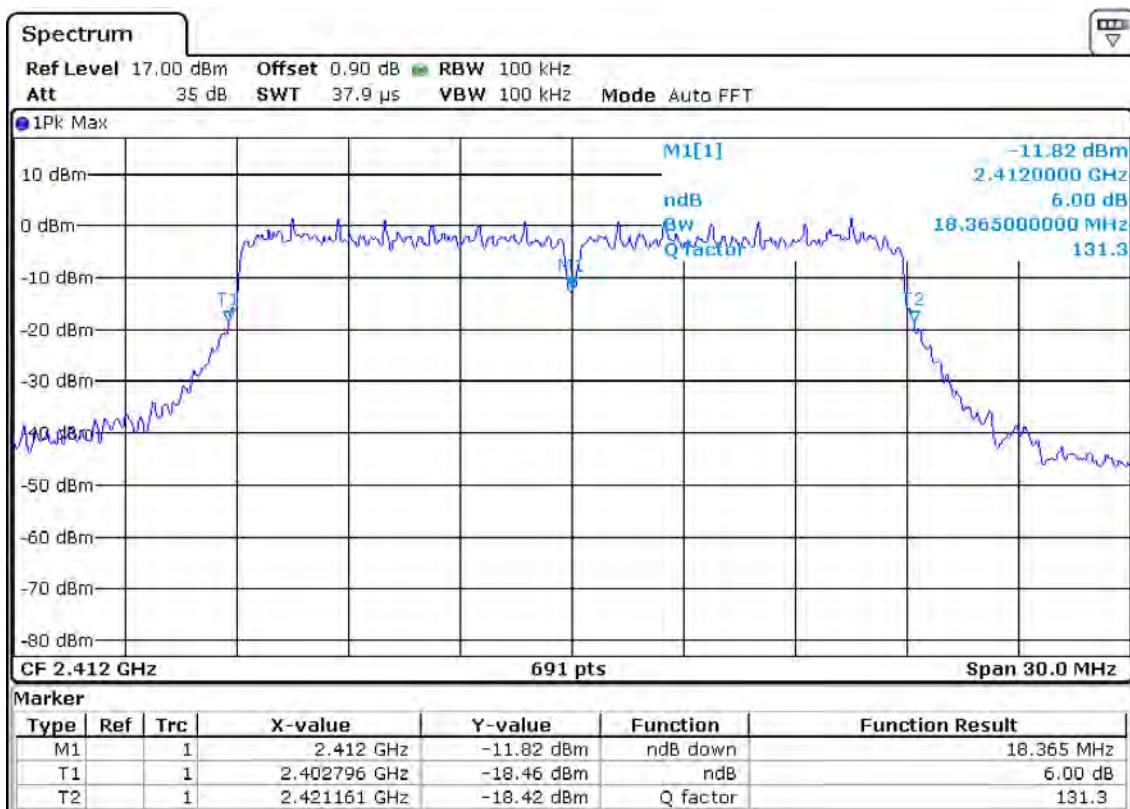
## Middle Channel – 802.11 g



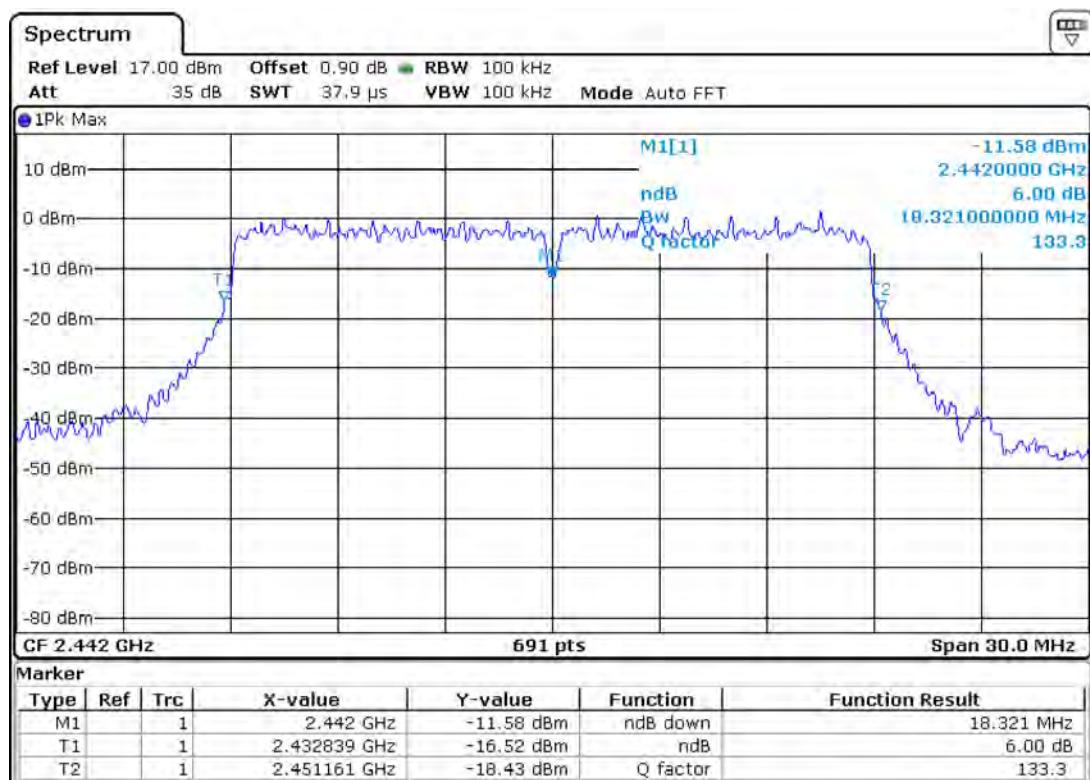
## High Channel – 802.11 g



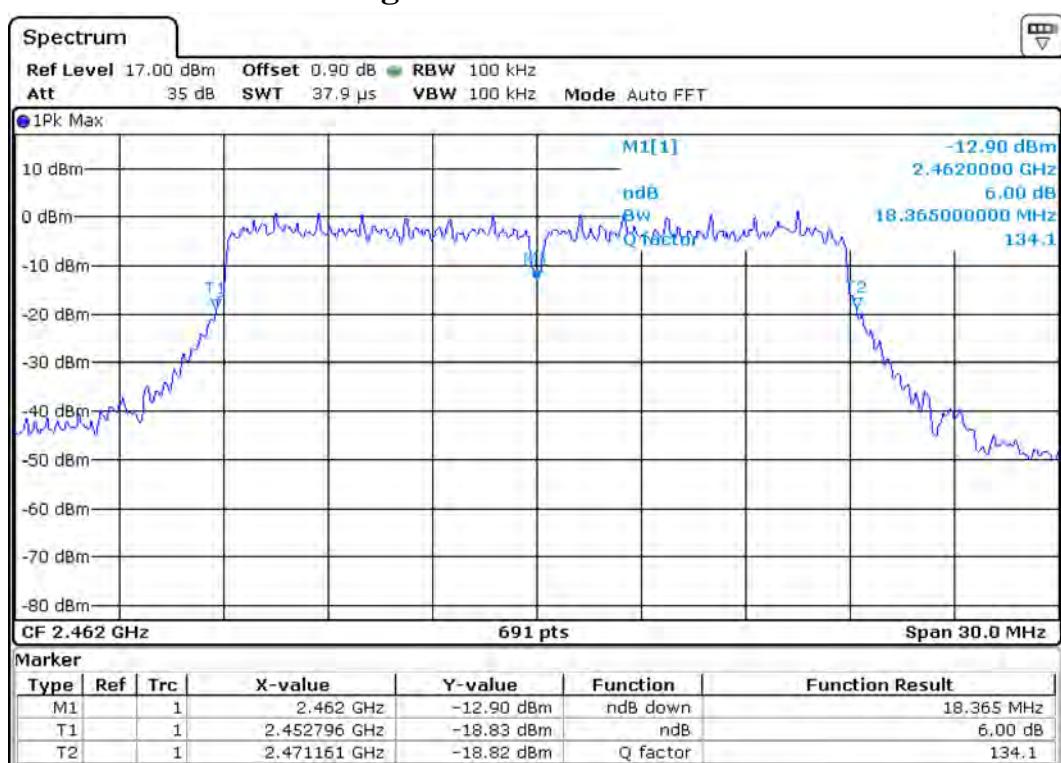
## Low Channel – 802.11 n



## Middle Channel – 802.11 n



## High Channel – 802.11 n



### 3.2.2 Peak Output Power Measurement

#### Procedure:

The maximum peak output power was measured with the spectrum analyzer connected to the antenna output of the EUT. The spectrum analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth. The EUT was operating in transmit mode at the appropriate center frequency.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 1MHz

Span = auto

VBW = 1MHz (VBW  $\geq$  RBW)

Sweep = auto

Detector function = peak

#### Measurement Data : **Complies**

(802.11 b)

Frequency (MHz)	Test Results		
	dBm	W	Result
2412	19.20	0.0831	Complies
2442	19.14	0.0820	Complies
2462	18.85	0.0767	Complies

(802.11 g)

Frequency (MHz)	Test Results		
	dBm	W	Result
2412	18.73	0.0746	Complies
2442	18.91	0.0778	Complies
2462	18.50	0.0708	Complies

(802.11 n)

Frequency (MHz)	Test Results		
	dBm	W	Result
2412	18.99	0.0793	Complies
2442	19.07	0.0807	Complies
2462	18.66	0.0735	Complies

- See next pages for actual measured spectrum plots.

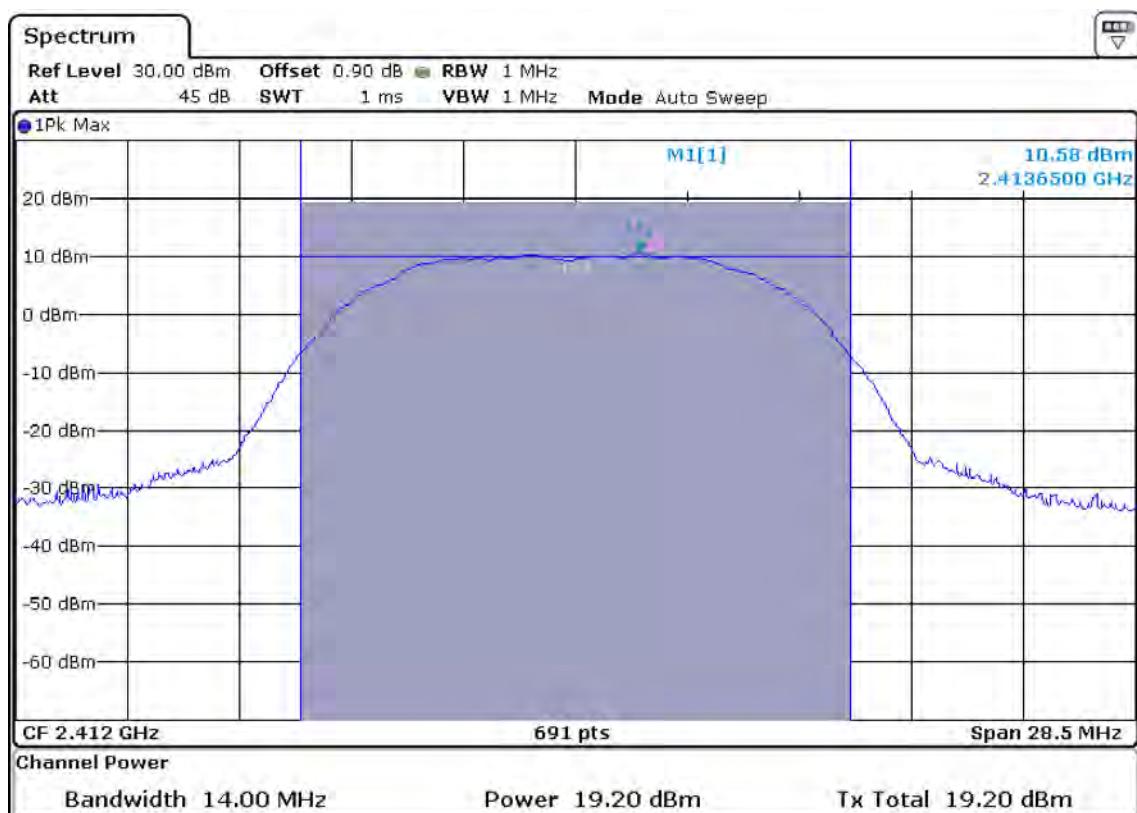
**Minimum Standard:**

Peak output power	< 1 W
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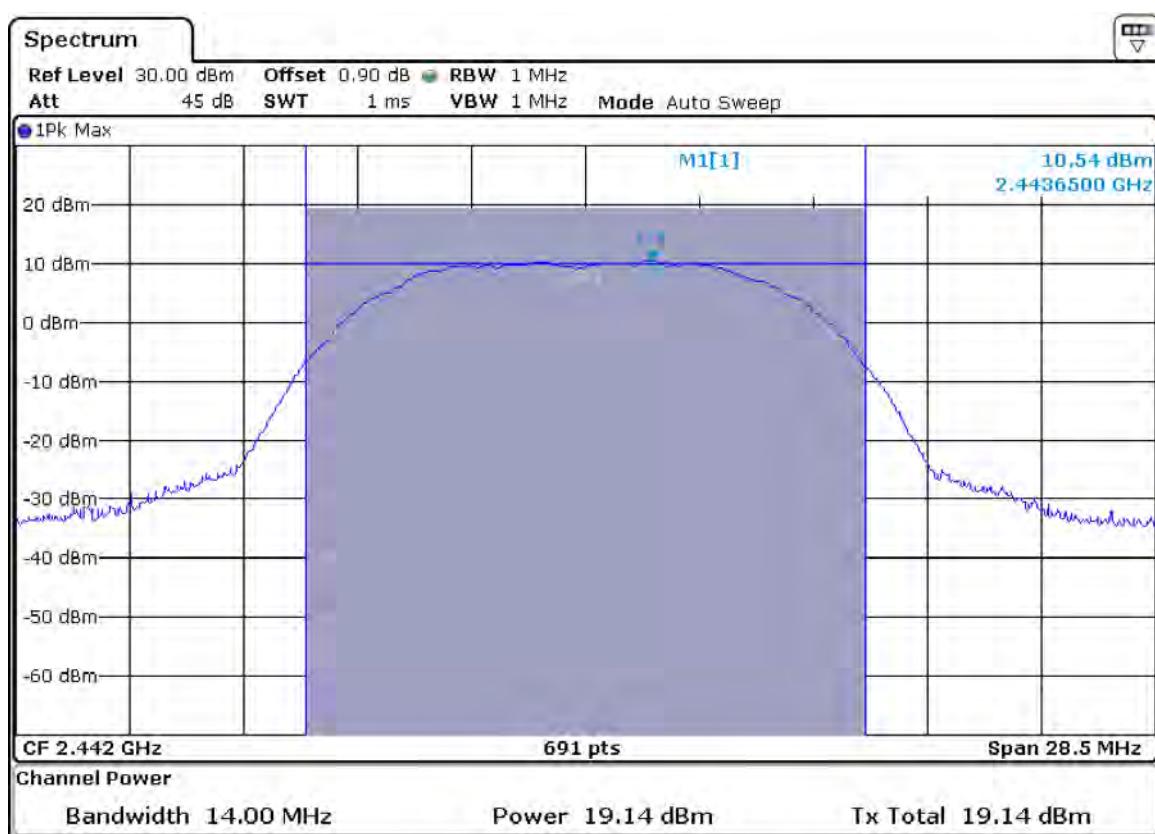
**Measurement Setup**

Same as the Chapter 3.2.1 (Figure 1)

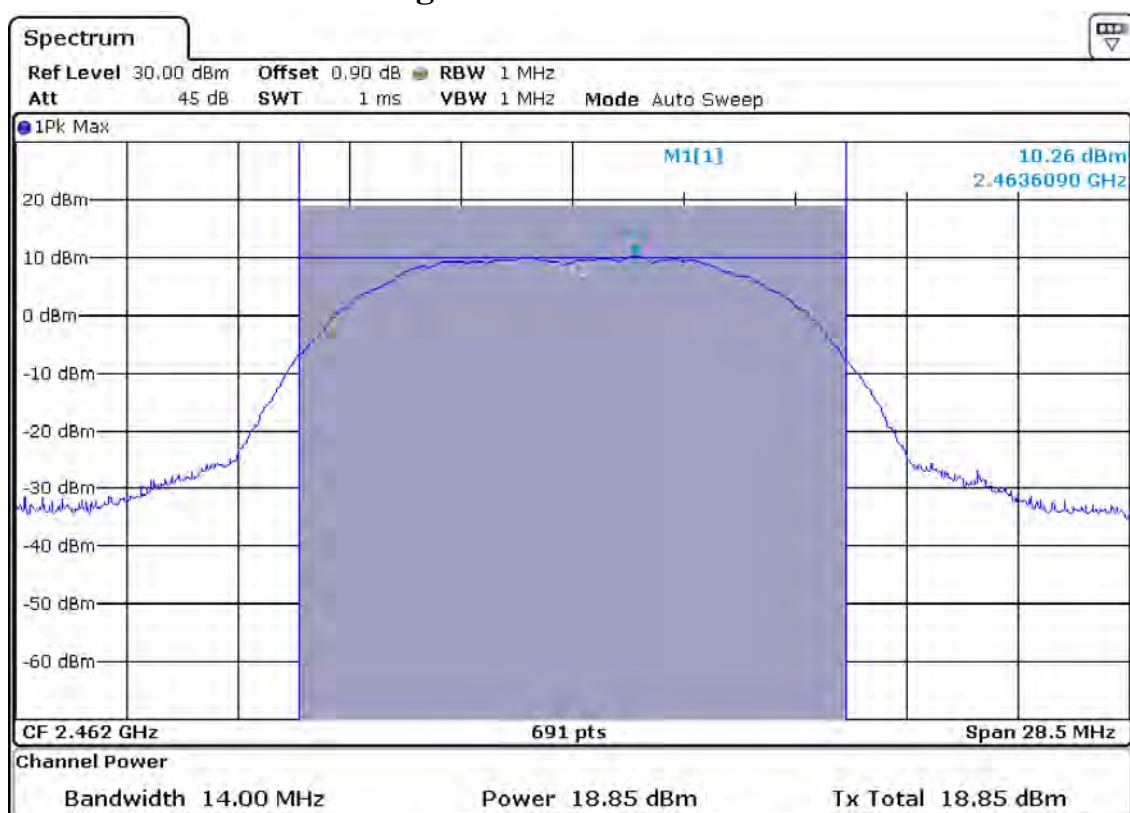
## Low Channel – 802.11 b



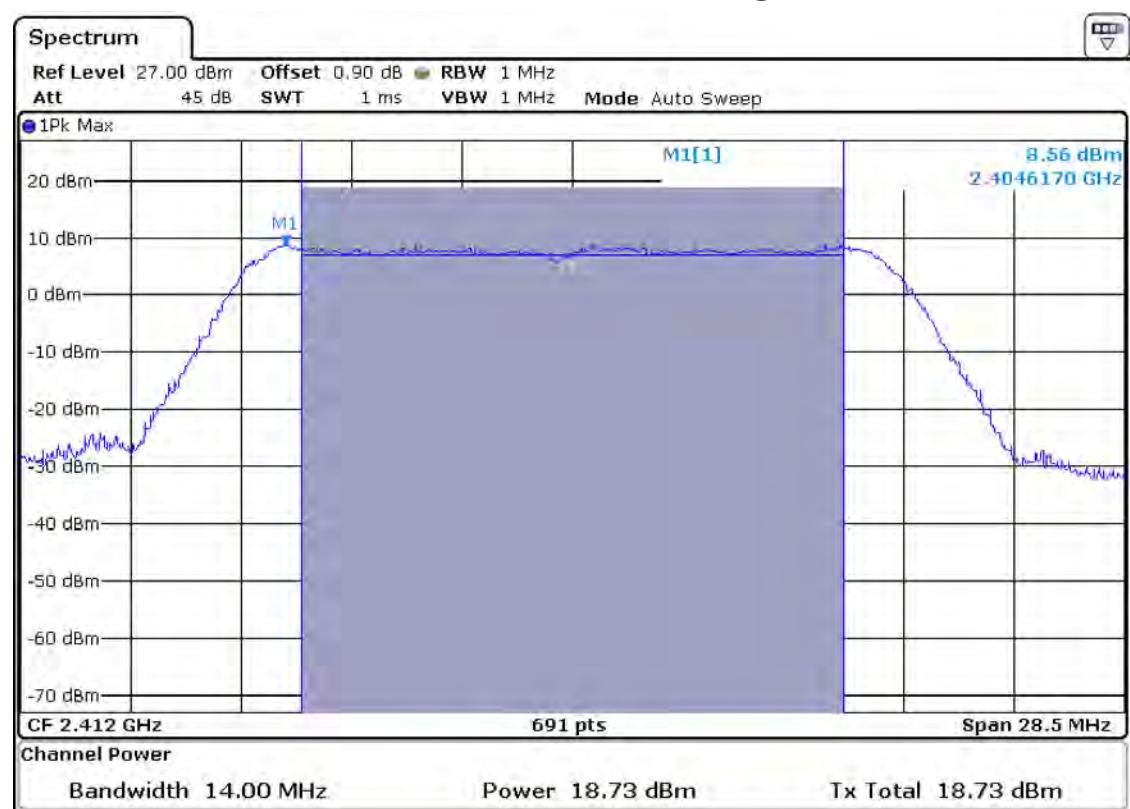
## Middle Channel – 802.11 b



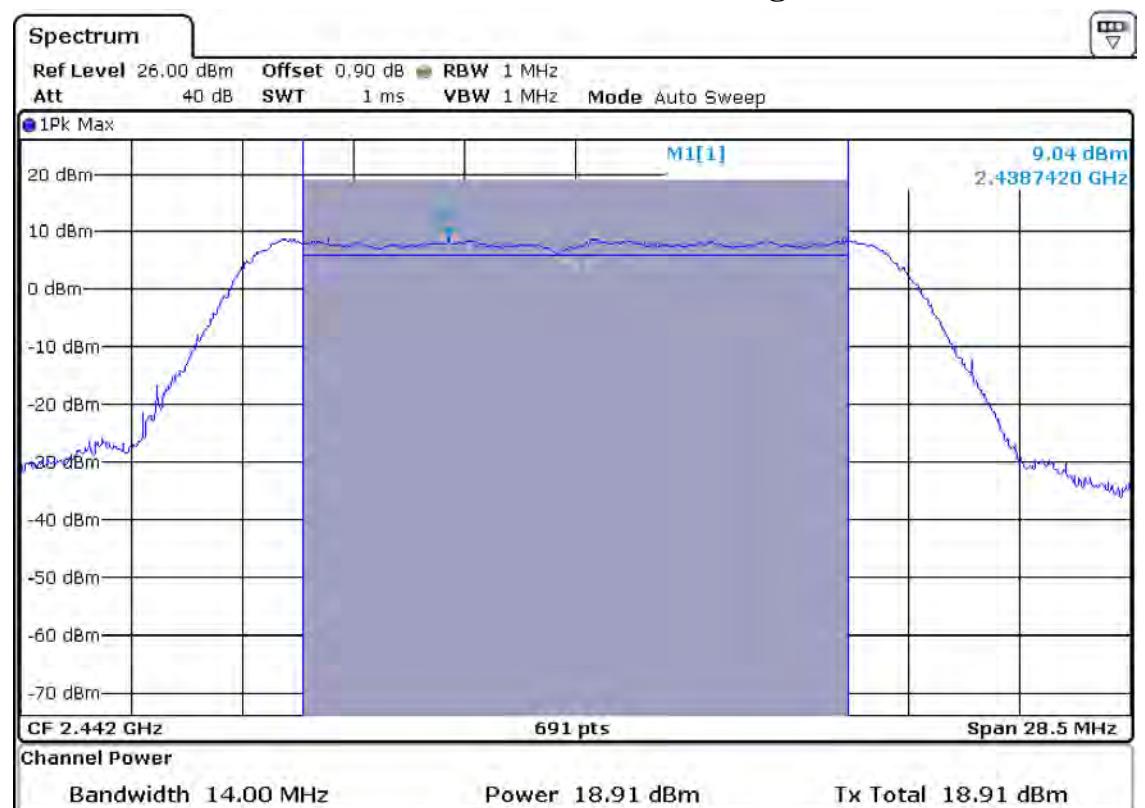
## High Channel – 802.11 b



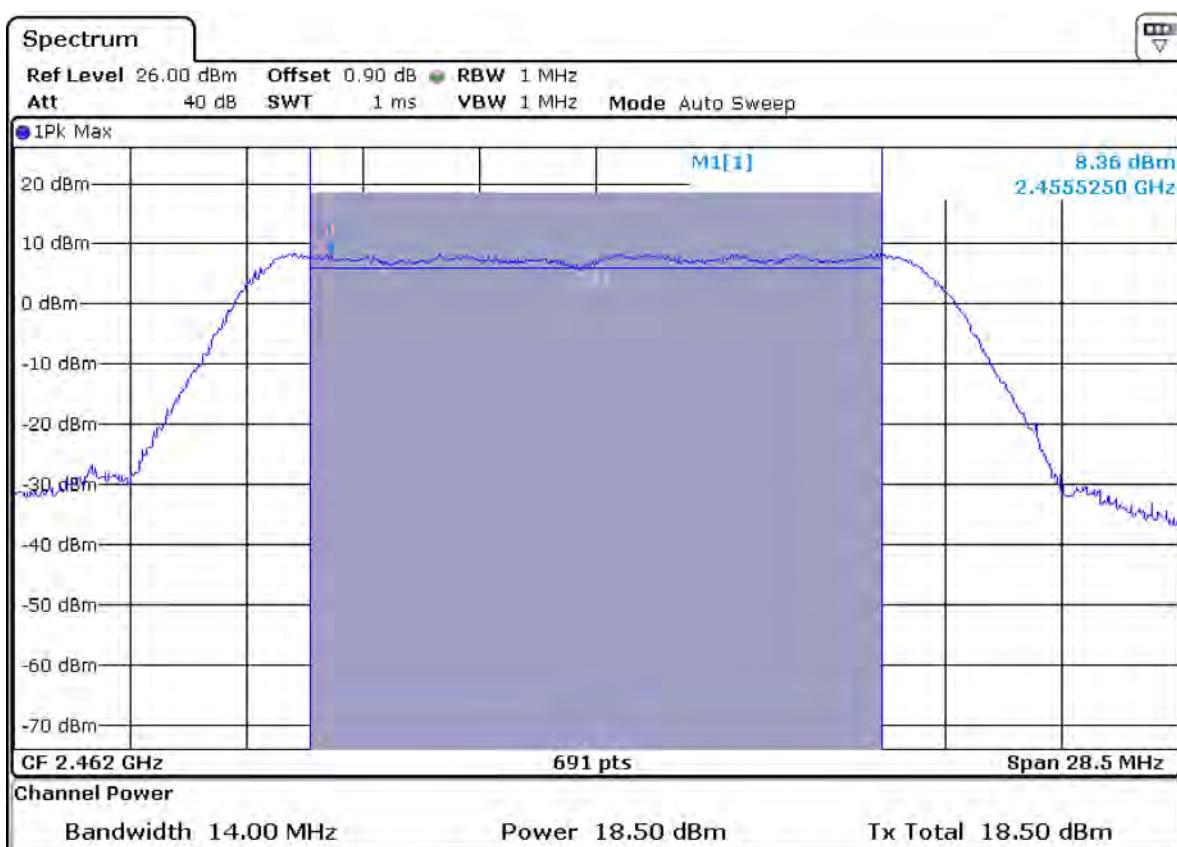
## Low Channel – 802.11 g



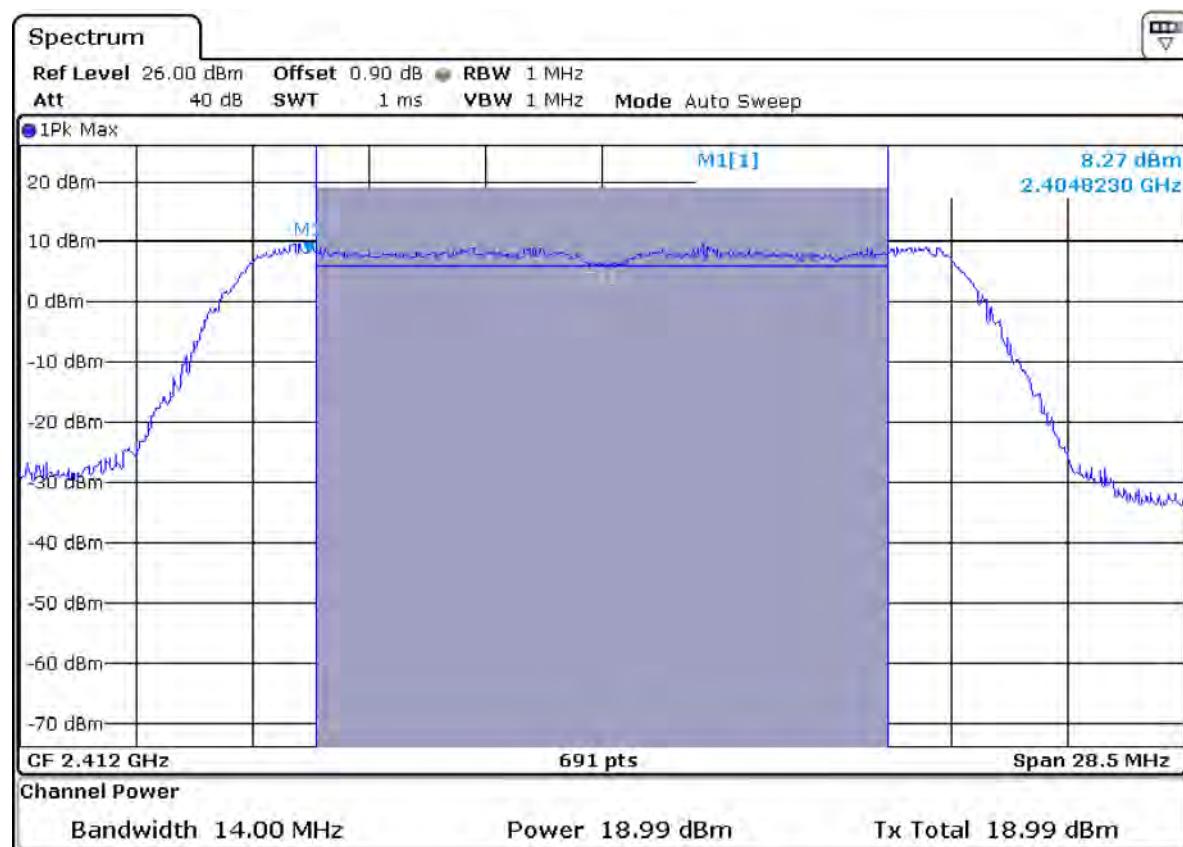
## Middle Channel – 802.11 g



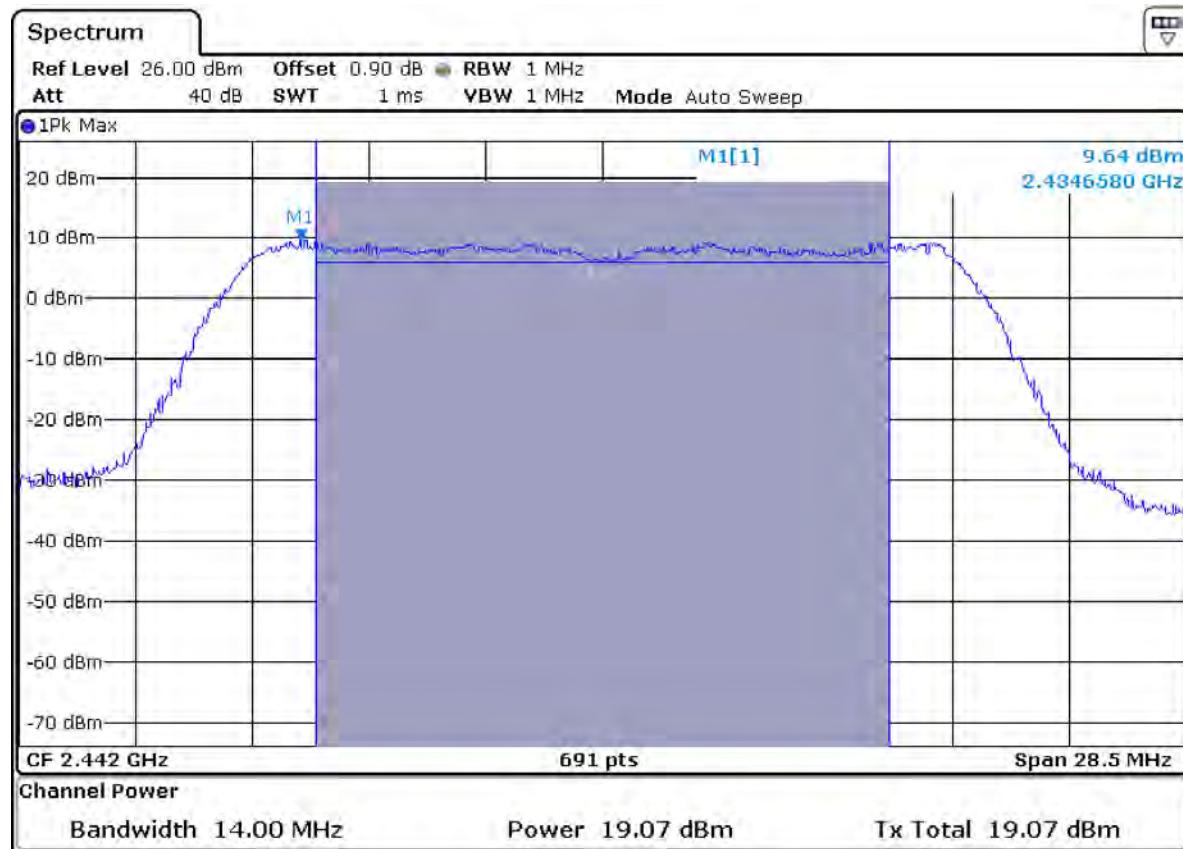
## High Channel – 802.11 g



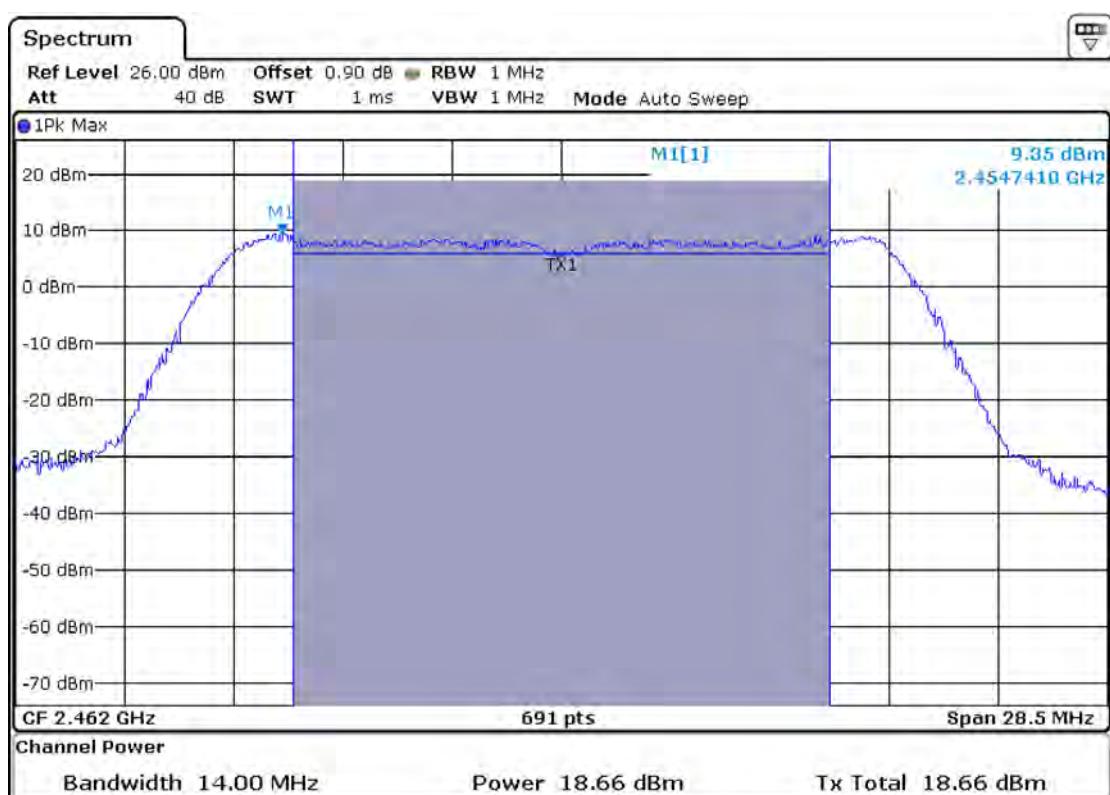
## Low Channel – 802.11 n



## Middle Channel – 802.11 n



## High Channel – 802.11 n



### 3.2.3 Power Spectral Density

#### Procedure:

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

#### The spectrum analyzer is set to:

RBW = 3 kHz	Span = 300 kHz
VBW = 3 kHz	Sweep = auto
Detector function = peak	Trace = max hold

#### Measurement Data : Complies

(802.11 b)

Frequency (MHz)	Test Results	
	dBm	Result
2412	-13.73	Complies
2442	-13.79	Complies
2462	-14.10	Complies

(802.11 g)

Frequency (MHz)	Test Results	
	dBm	Result
2412	-22.28	Complies
2442	-22.48	Complies
2462	-23.36	Complies

(802.11 n)

Frequency (MHz)	Test Results	
	dBm	Result
2412	-22.25	Complies
2442	-22.62	Complies
2462	-22.66	Complies

- See next pages for actual measured spectrum plots.

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**Minimum Standard:**

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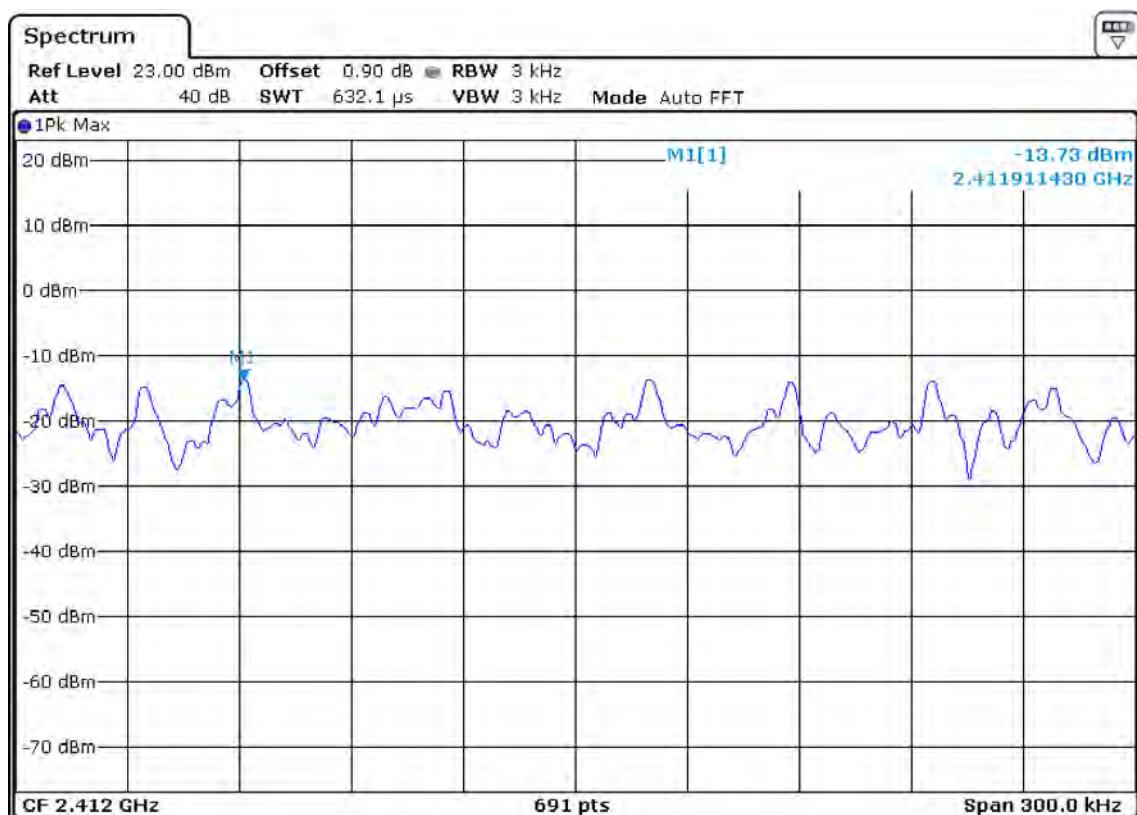
Power Spectral Density	< 8 dBm @ 3 kHz BW
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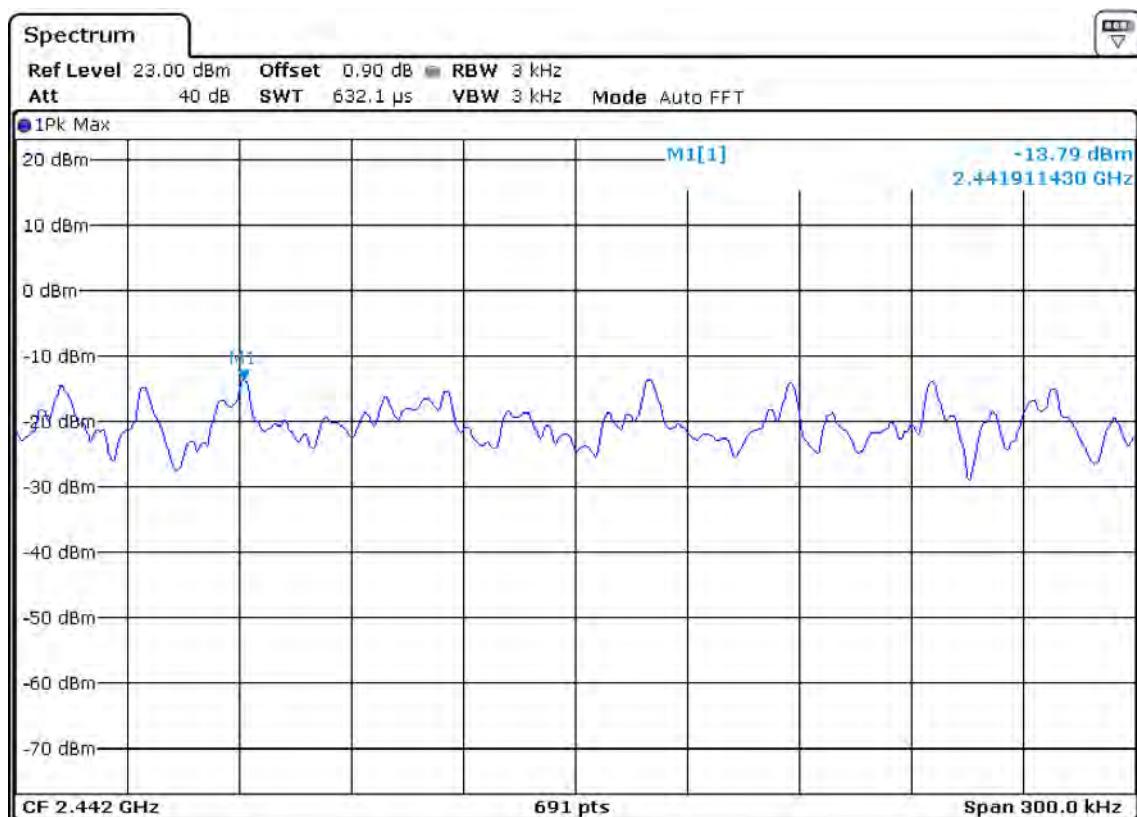
**Measurement Setup**

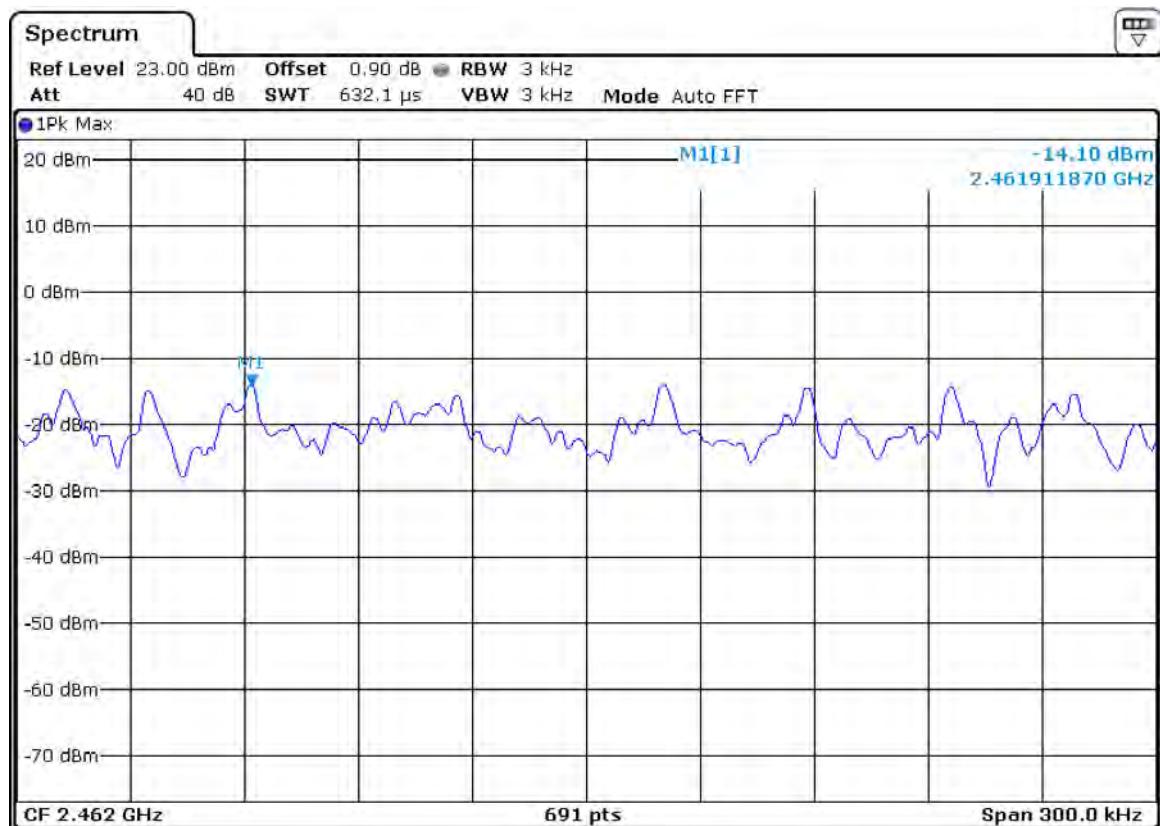
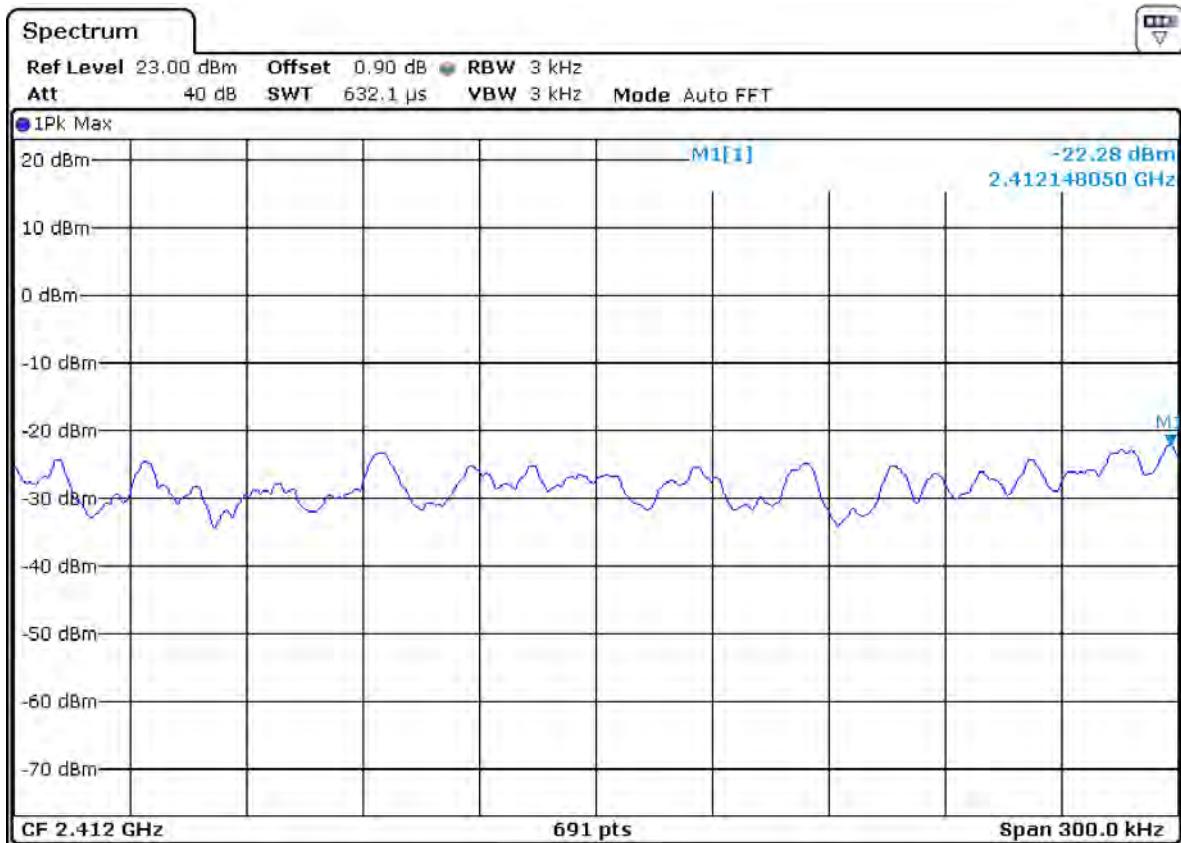
Same as the Chapter 3.2.1 (Figure 1)

## Low Channel – 802.11 b

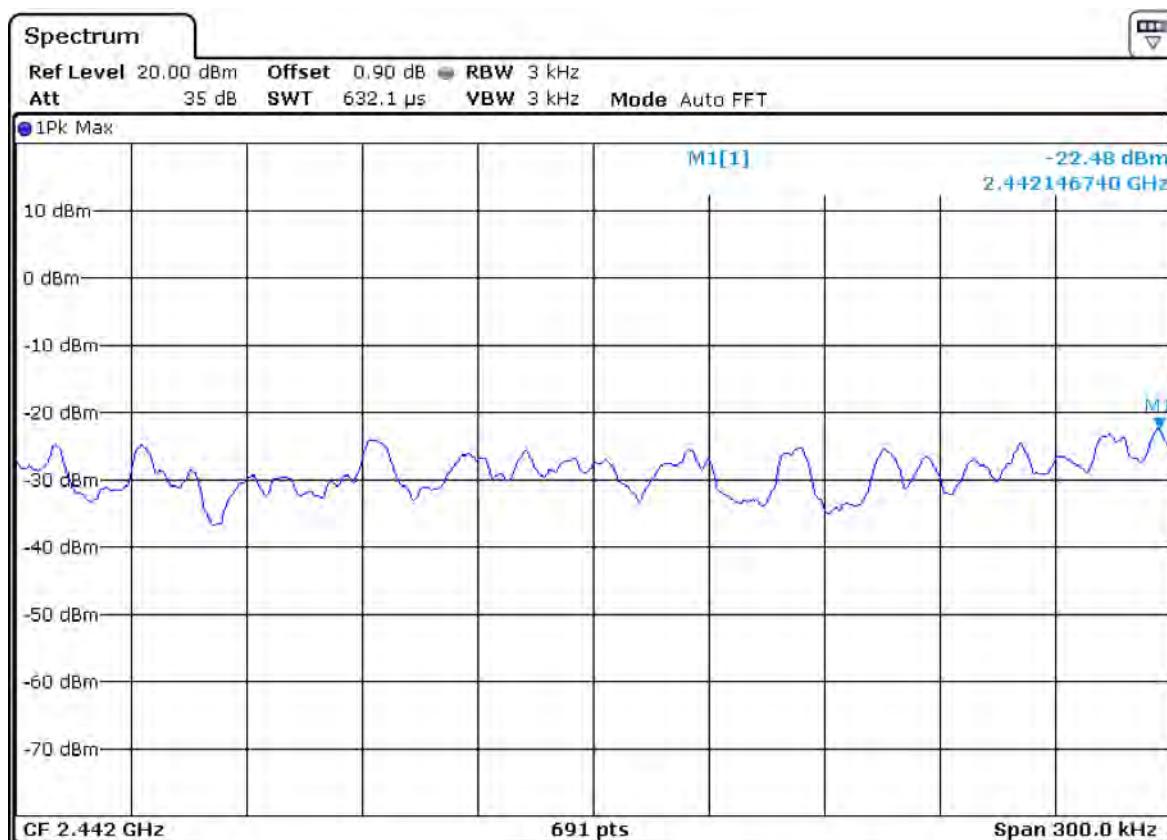


## Middle Channel – 802.11 b

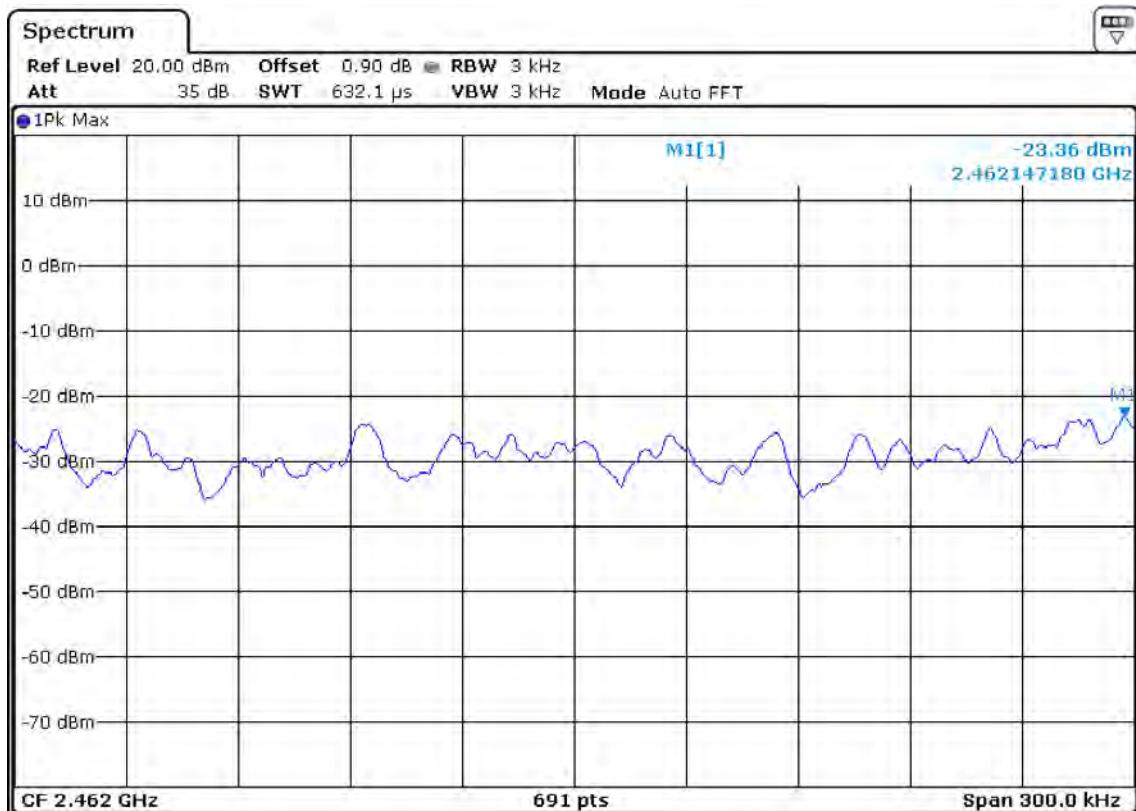


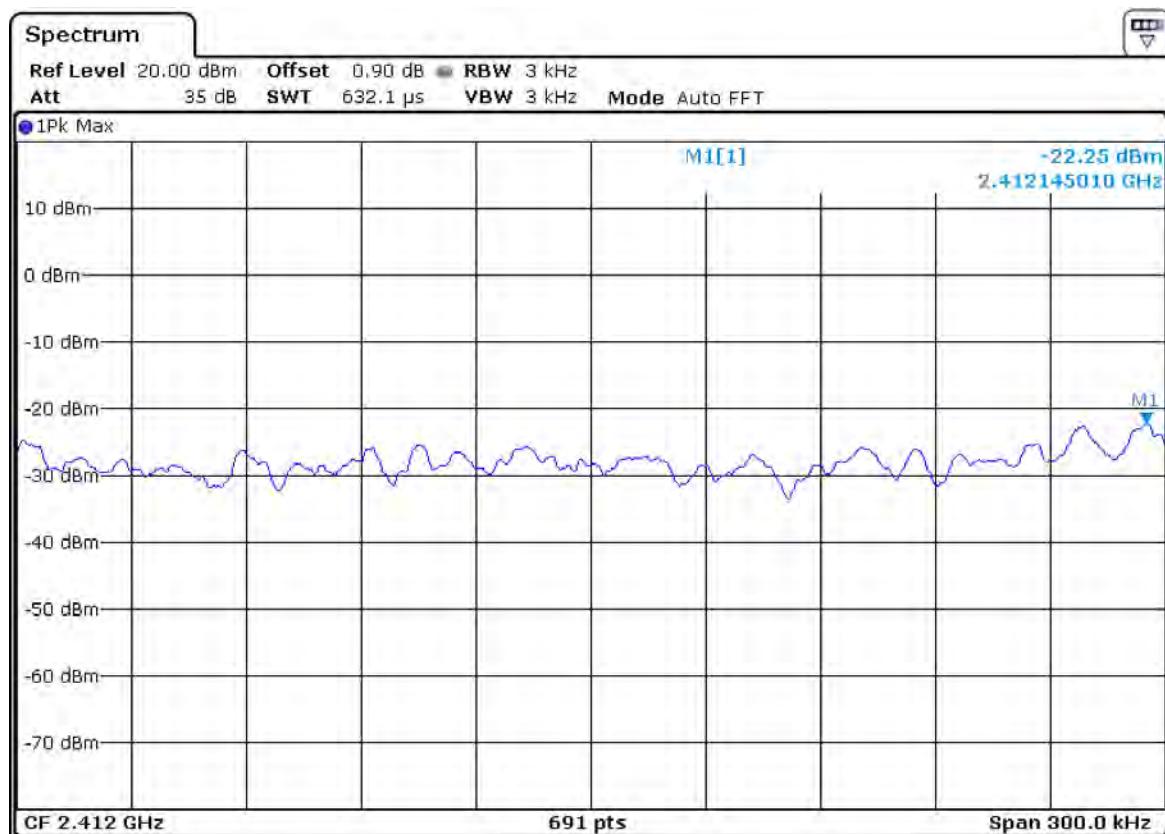
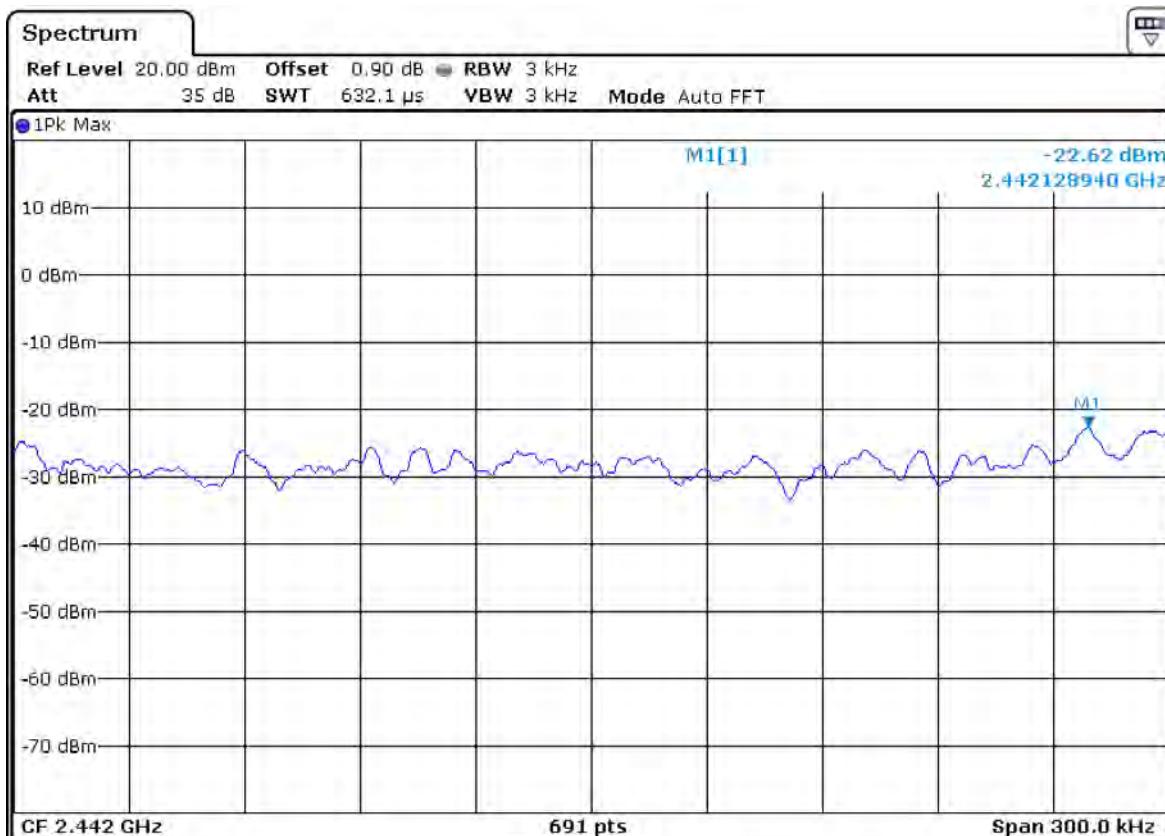
**High Channel – 802.11 b****Low Channel – 802.11 g**

## Middle Channel – 802.11 g

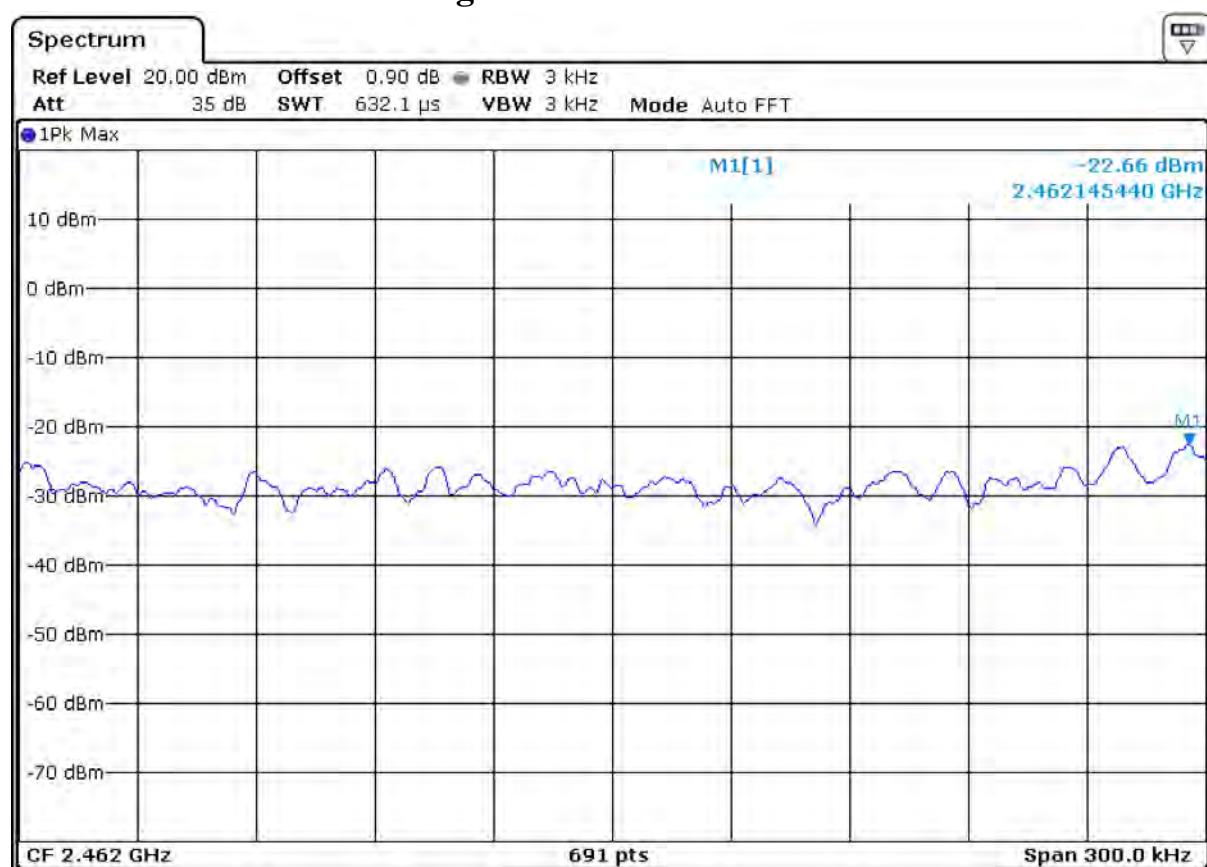


## High Channel – 802.11 g



**Low Channel – 802.11 n****Middle Channel – 802.11 n**

## High Channel – 802.11 n



### 3.2.4 Band - edge

## Procedure:

The bandwidth at 20 dB down from the highest inband spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate frequencies.

After the trace being stable, Use the marker-to-peak function to measure 20 dB down both sides of the intentional emission.

The spectrum analyzer is set to:

Center frequency = the highest, middle and the lowest channels

RBW = 100 kHz VBW = 100 kHz

Span = 40 MHz, 80 MHz      Detector function = peak

Radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a)

The spectrum analyzer is set to:

Center frequency = the highest, the lowest channels

PEAK: RBW = VBW = 1 MHz. Sweep = Auto

Average: RBW = 1 MHz, VBW=10 Hz, Sweep=Auto

Measurement Distance: 3 m

Polarization: Horizontal / Vertical

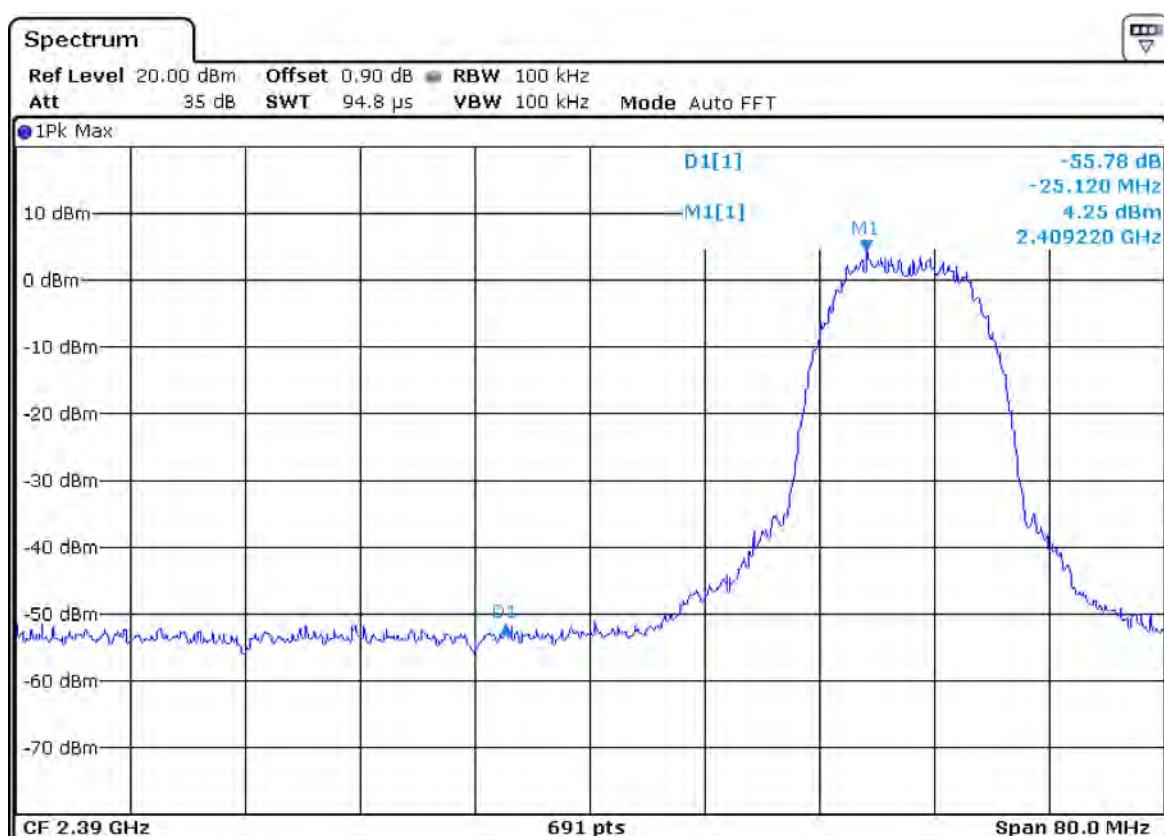
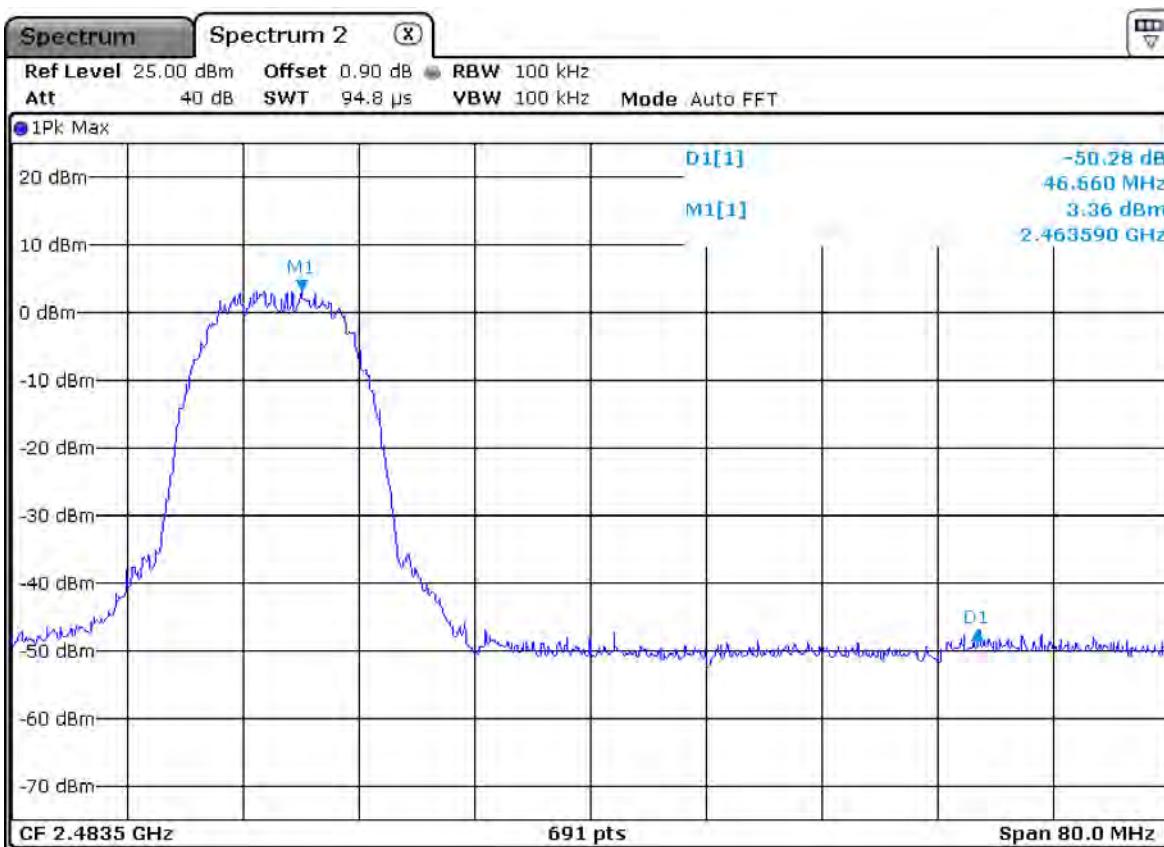
**Measurement Data: Complies**

- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 20 dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.
- See next pages for actual measured spectrum plots.

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<b>Minimum Standard:</b>	> 20 dBc
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**Band edge – 802.11b****Lower edge****Upper edge**

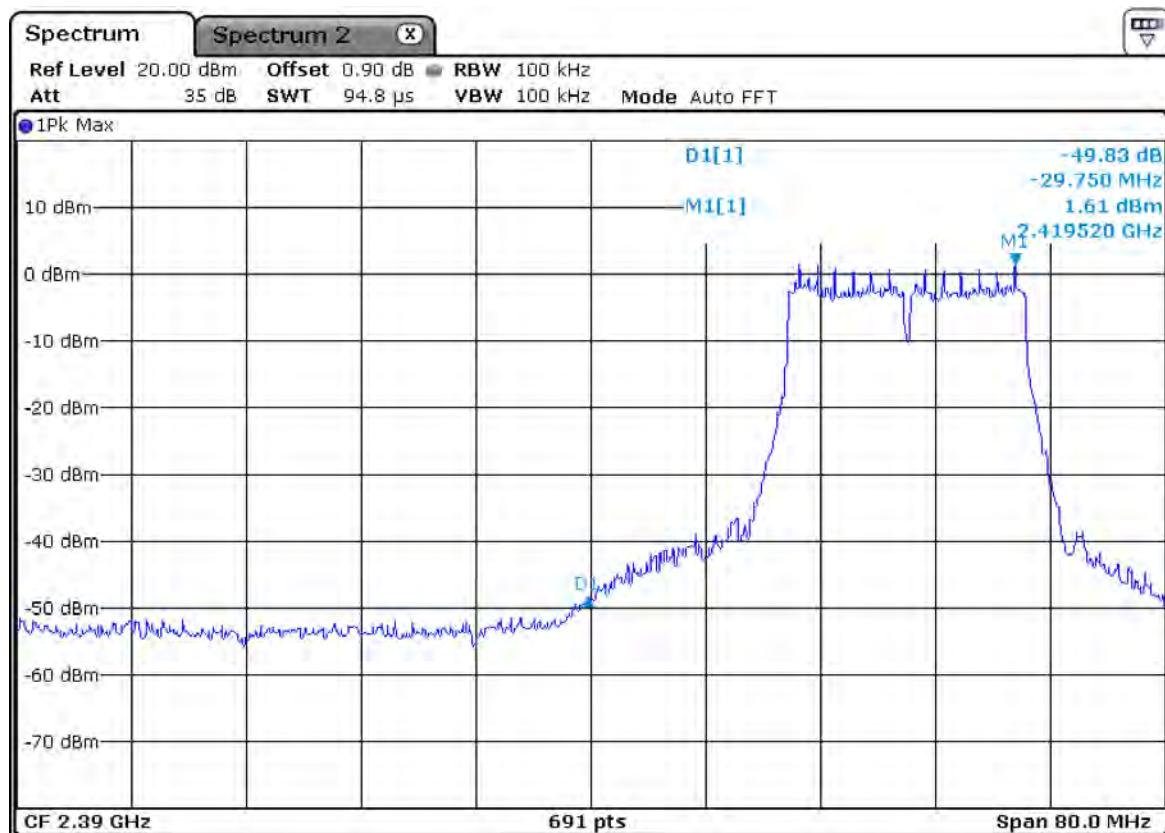
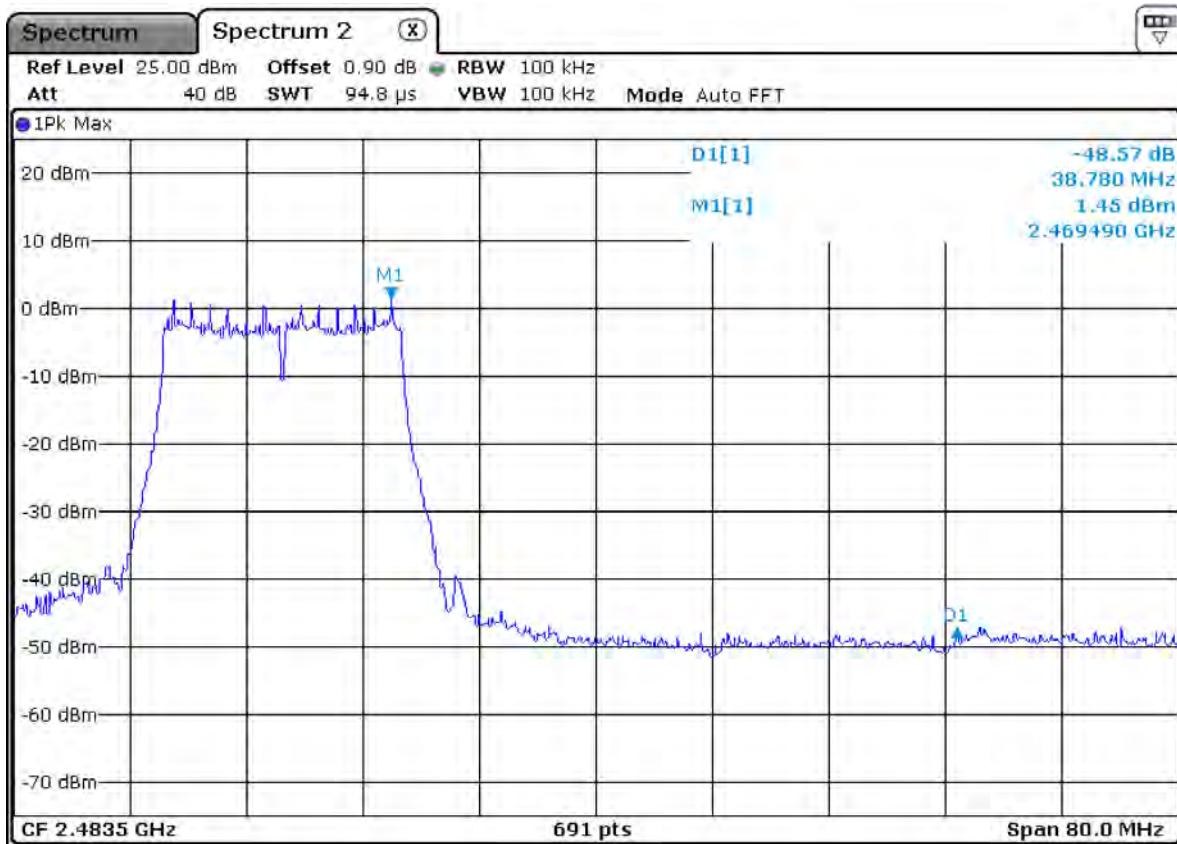
## Radiated Band-edges in the restricted band 2310-2390 MHz measurement

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
			Antenna	Amp. Gain + Cable Loss	AV / Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak
2383.7	15.1   35.6	V	27.86	22.92	54.0	74.0	33.96	33.46	33.96	33.46

## Radiated Band-edges in the restricted band 2483.5-2500 MHz measurement

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
			Antenna	Amp. Gain + Cable Loss	AV / Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak
2483.5	31.2   59.8	V	27.86	22.92	54.0	74.0	17.86	9.26	17.86	9.26

Note : This EUT was tested in 3 orthogonal positions and the worst-case data was presented

Band edge – 802.11gLower edgeUpper edge

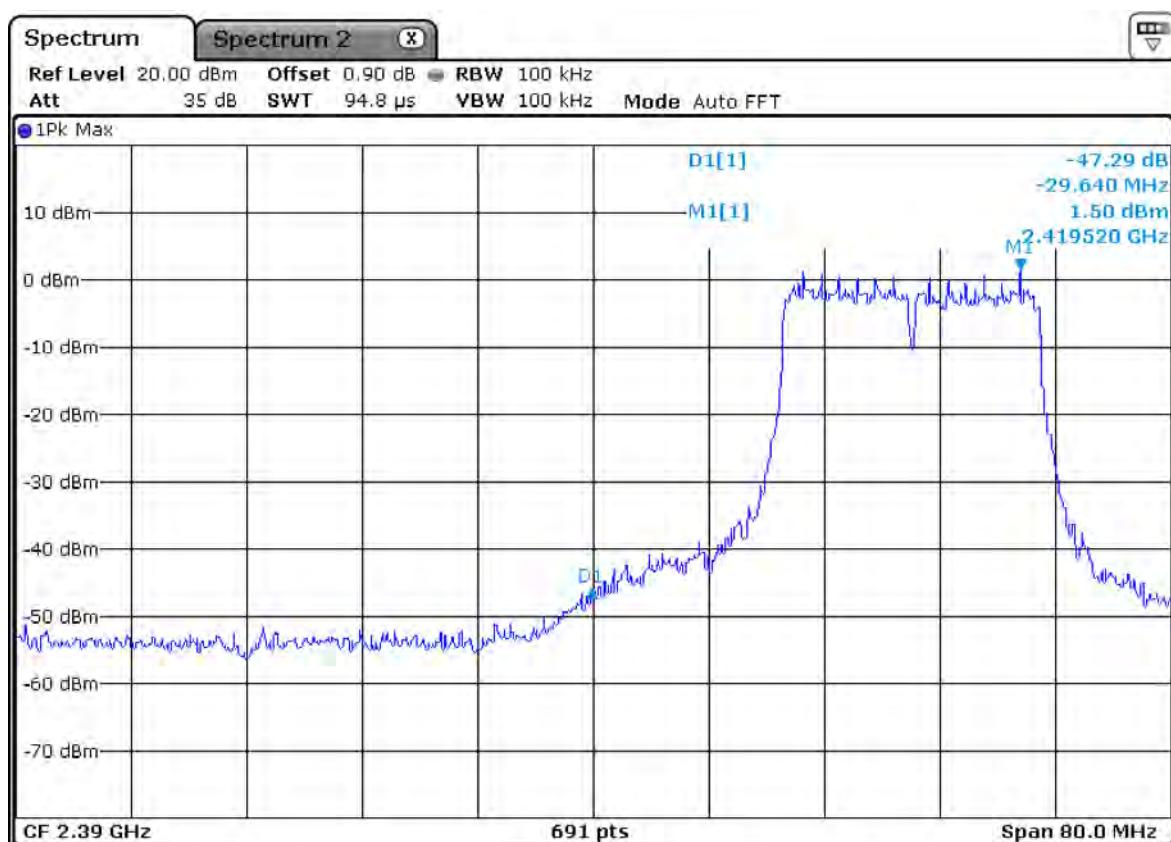
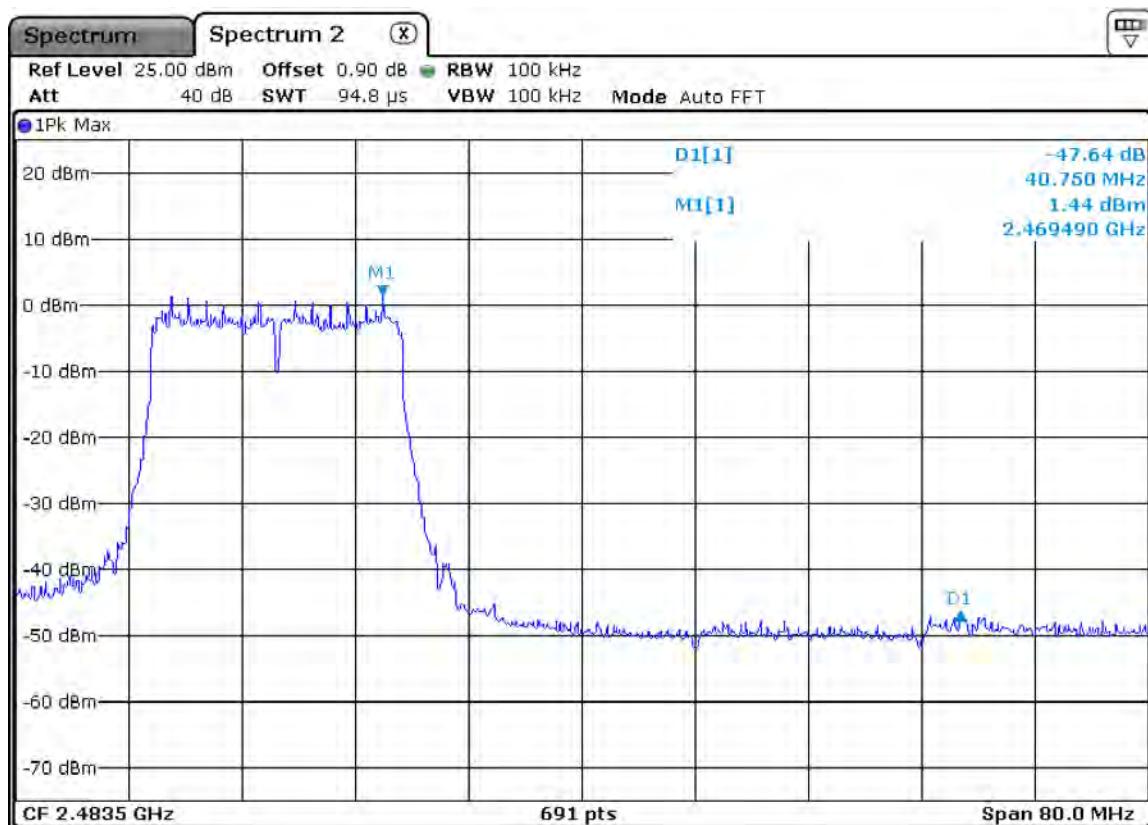
**Radiated Band-edges in the restricted band 2310-2390 MHz measurement**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
				Antenna	Amp. Gain + Cable Loss			AV / Peak	AV / Peak		
2389.7	29.8	44.5	V	27.86	22.92	54.0	74.0	34.74	49.44	19.26	24.56

**Radiated Band-edges in the restricted band 2483.5-2500 MHz measurement**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
				Antenna	Amp. Gain + Cable Loss			AV / Peak	AV / Peak		
2483.5	41.5	60.3	V	27.86	22.92	54.0	74.0	46.44	65.24	7.56	8.76

Note : This EUT was tested in 3 orthogonal positions and the worst-case data was presented

Band edge – 802.11nLower edgeUpper edge

**Radiated Band-edges in the restricted band 2310-2390 MHz measurement**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
				Antenna	Amp. Gain + Cable Loss			AV / Peak	AV / Peak		
2389.7	25.8	42.1	V	27.86	22.92	54.0	74.0	30.74	47.04	23.26	26.96

**Radiated Band-edges in the restricted band 2483.5-2500 MHz measurement**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
				Antenna	Amp. Gain + Cable Loss			AV / Peak	AV / Peak		
2484.9	28.6	46.4	V	27.86	22.92	54.0	74.0	33.54	51.34	20.46	22.66

Note : This EUT was tested in 3 orthogonal positions and the worst-case data was presented

### 3.2.5 Conducted Spurious Emissions

## Procedure:

The test follows KDB558074. The conducted spurious emissions were measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function disabled at the highest, middle and the lowest available channels..

After the trace being stable, set the marker on the peak of any spurious emission recorded.

The spectrum analyzer is set to:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions

RBW = 100 kHz Sweep = auto

VBW = 100 kHz      Detector function = peak

Trace = max hold

### Measurement Data: Complies

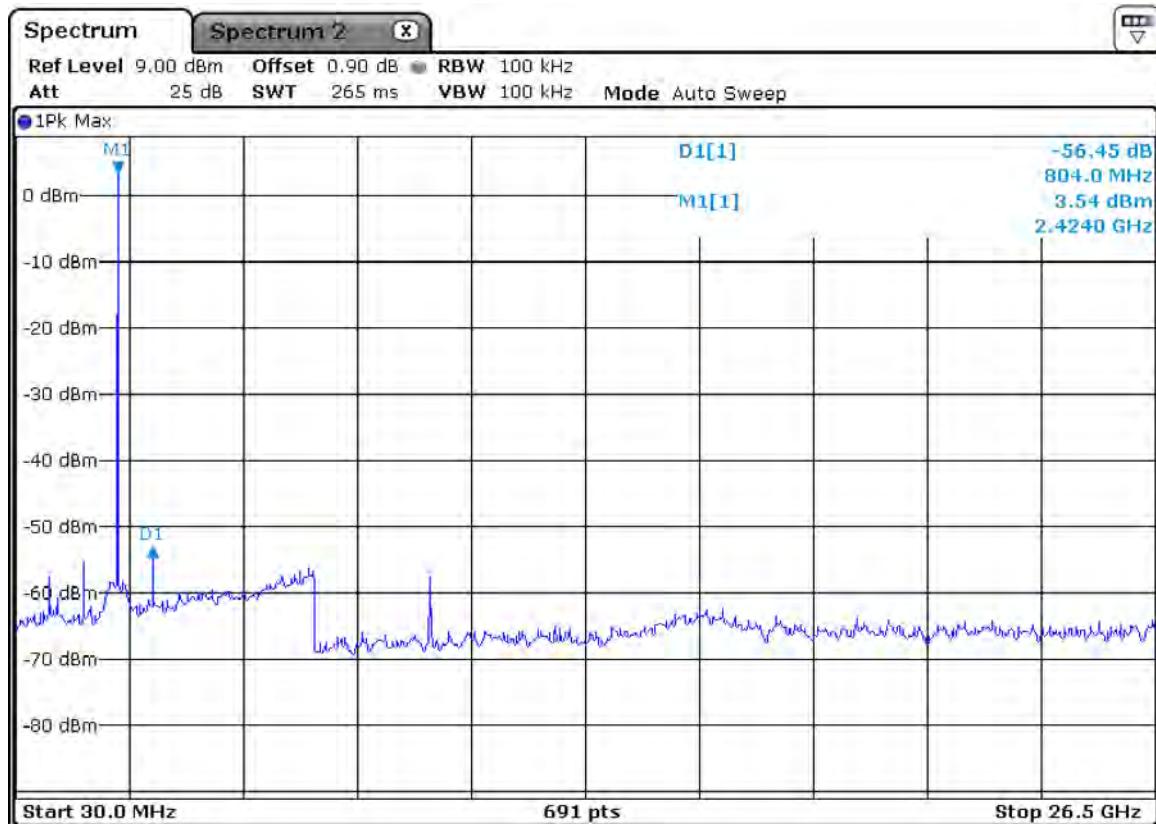
- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 20 dB lower than the highest inband spectral density. Therefore the applying equipment meets the requirement.
- See next pages for actual measured spectrum plots.

<b>Minimum Standard:</b>	> 20 dBc
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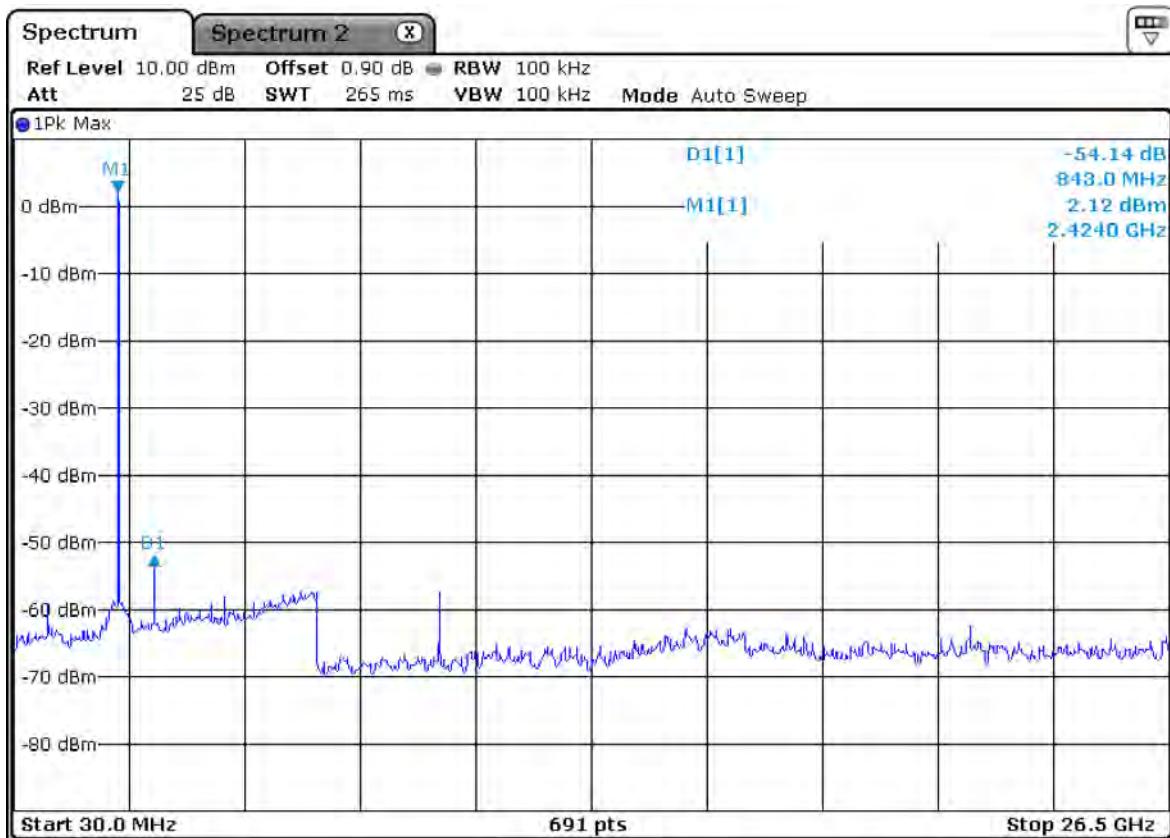
## Measurement Setup

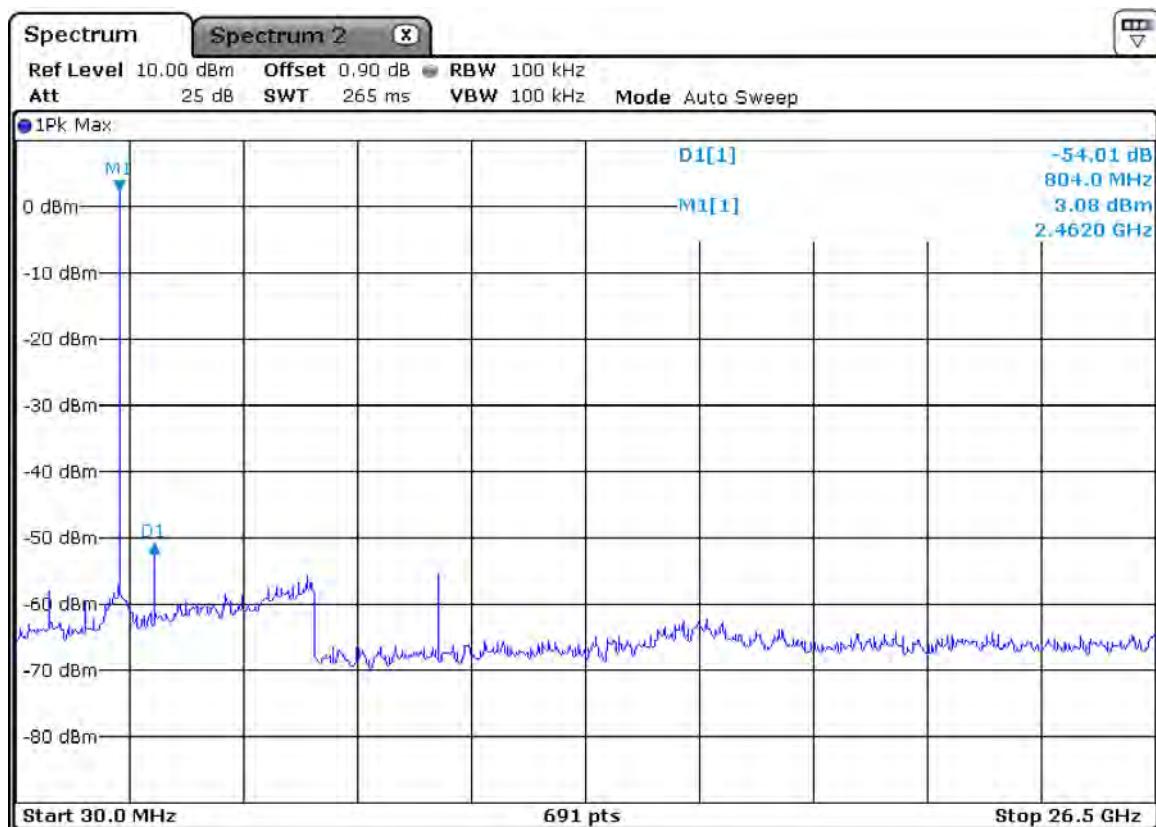
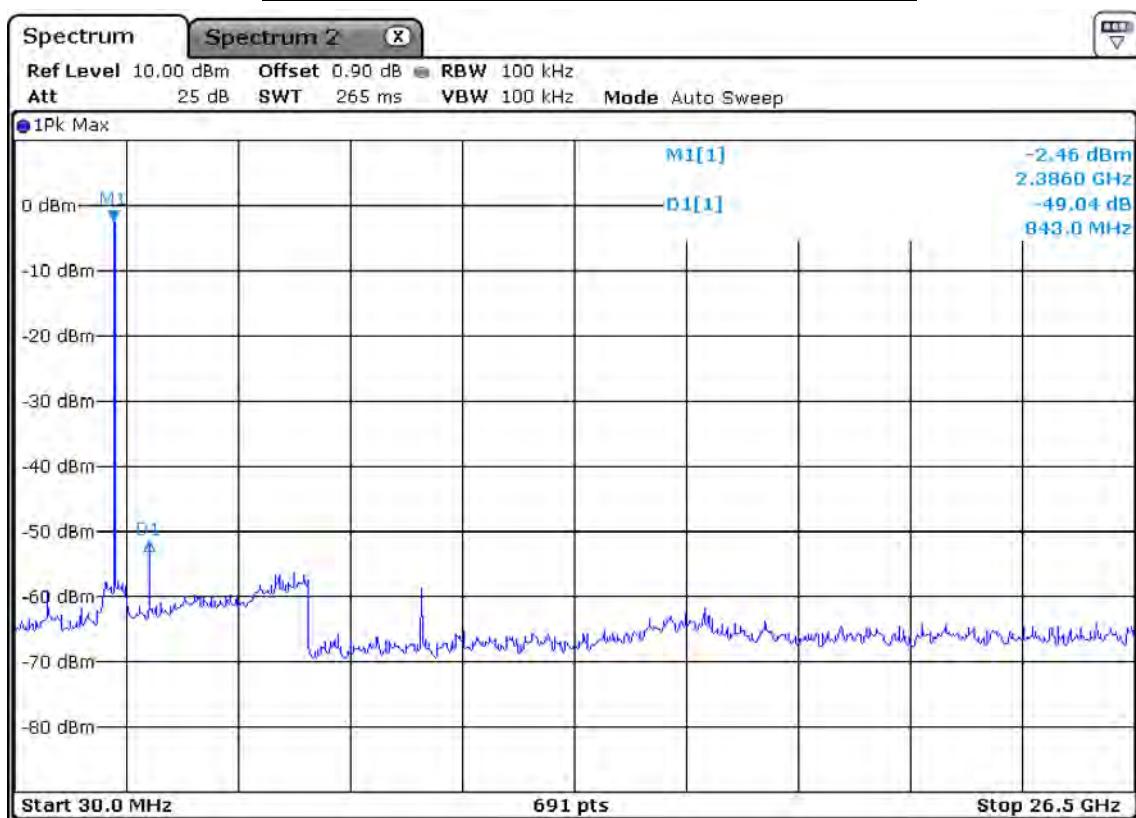
Same as the Chapter 3.2.1 (Figure 1)

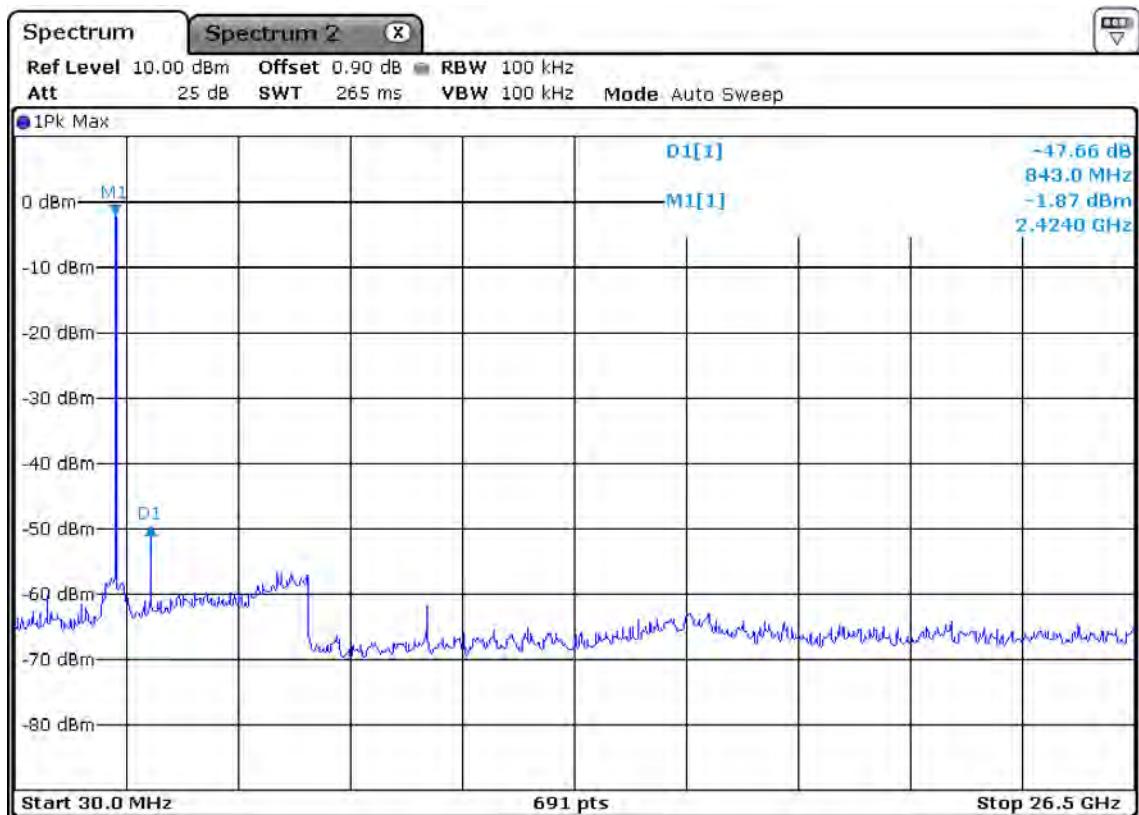
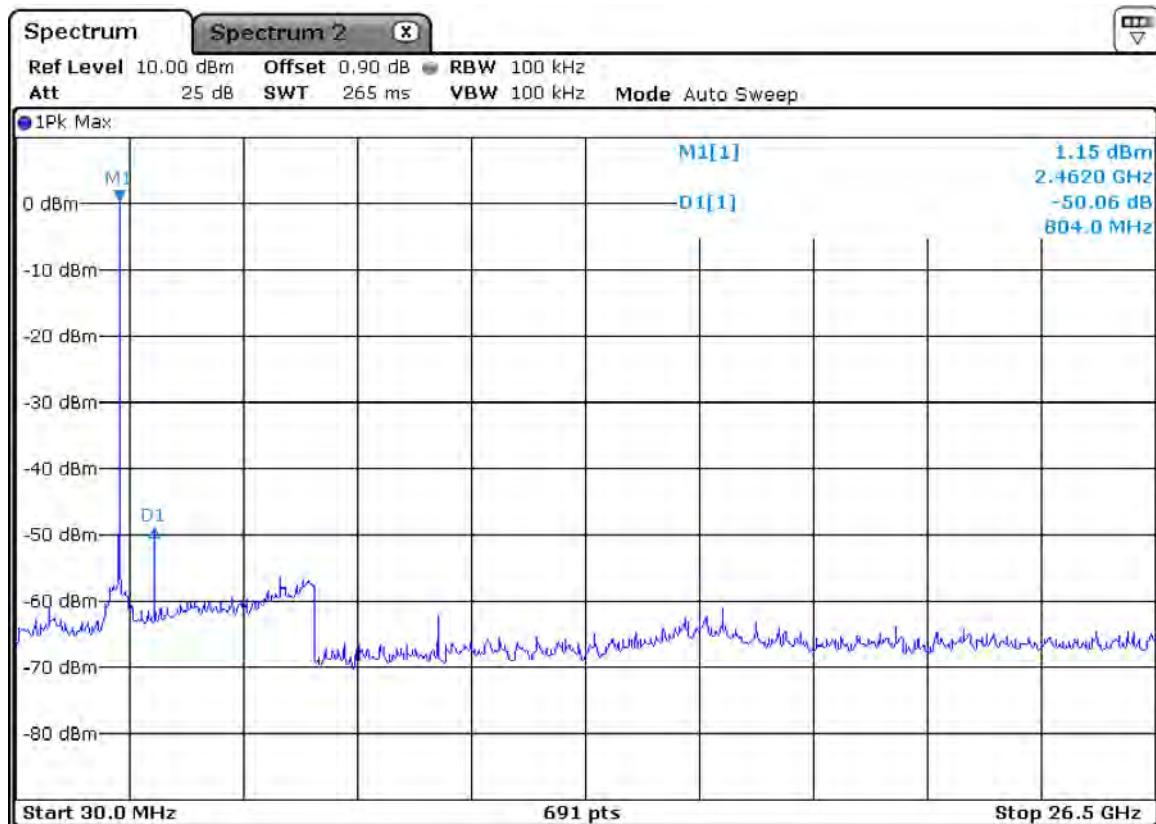
**Frequency Range = 30 MHz ~ 26.5 GHz**  
**Unwanted Emission – Low Channel – 802.11 b**



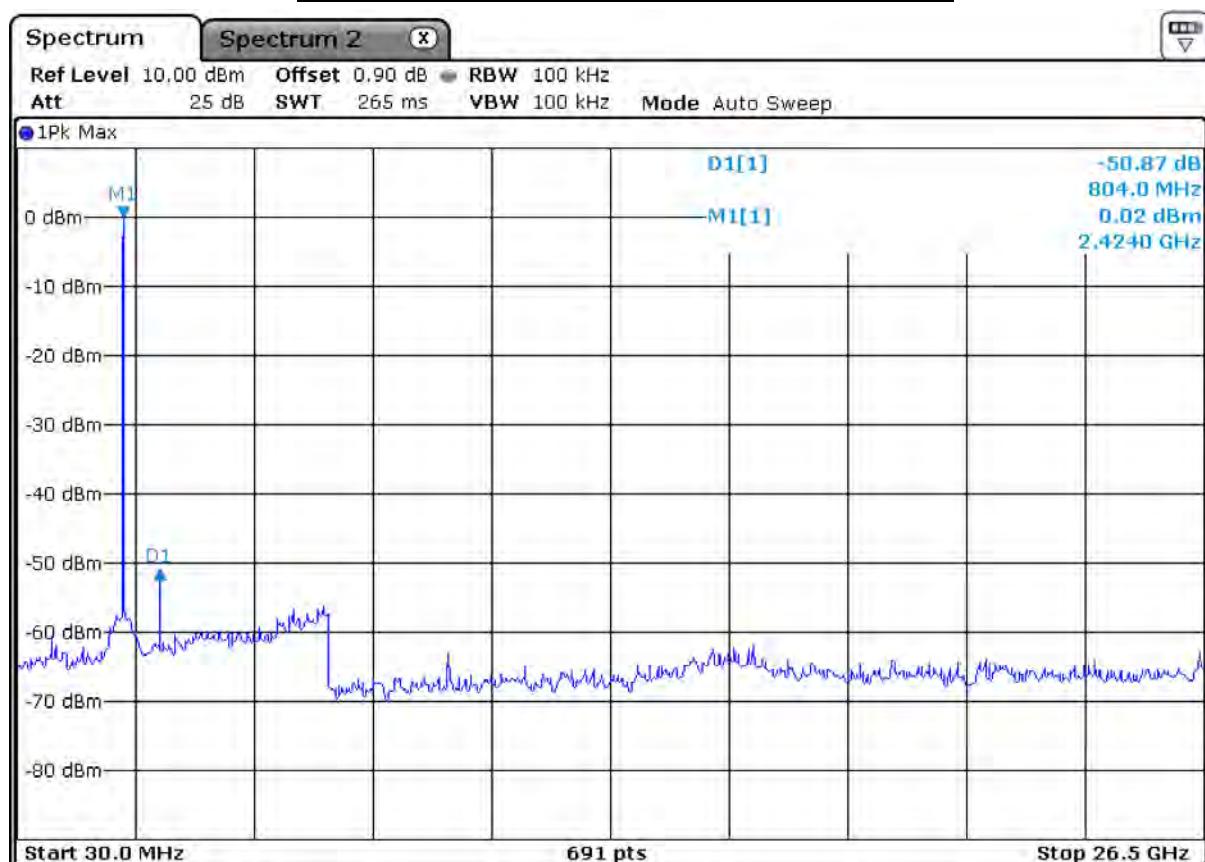
**Middle Channel – 802.11 b**



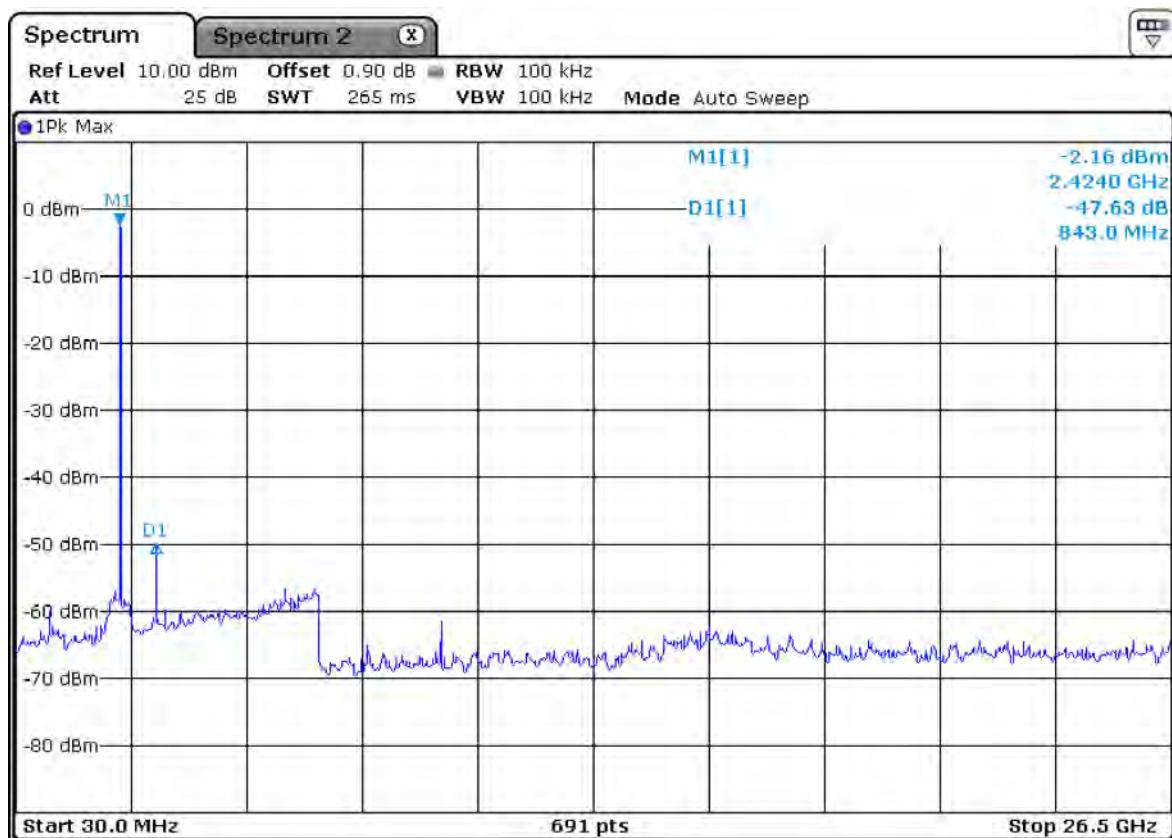
High Channel – 802.11 bFrequency Range = 30 MHz ~ 26.5 GHzUnwanted Emission – Low Channel – 802.11 g

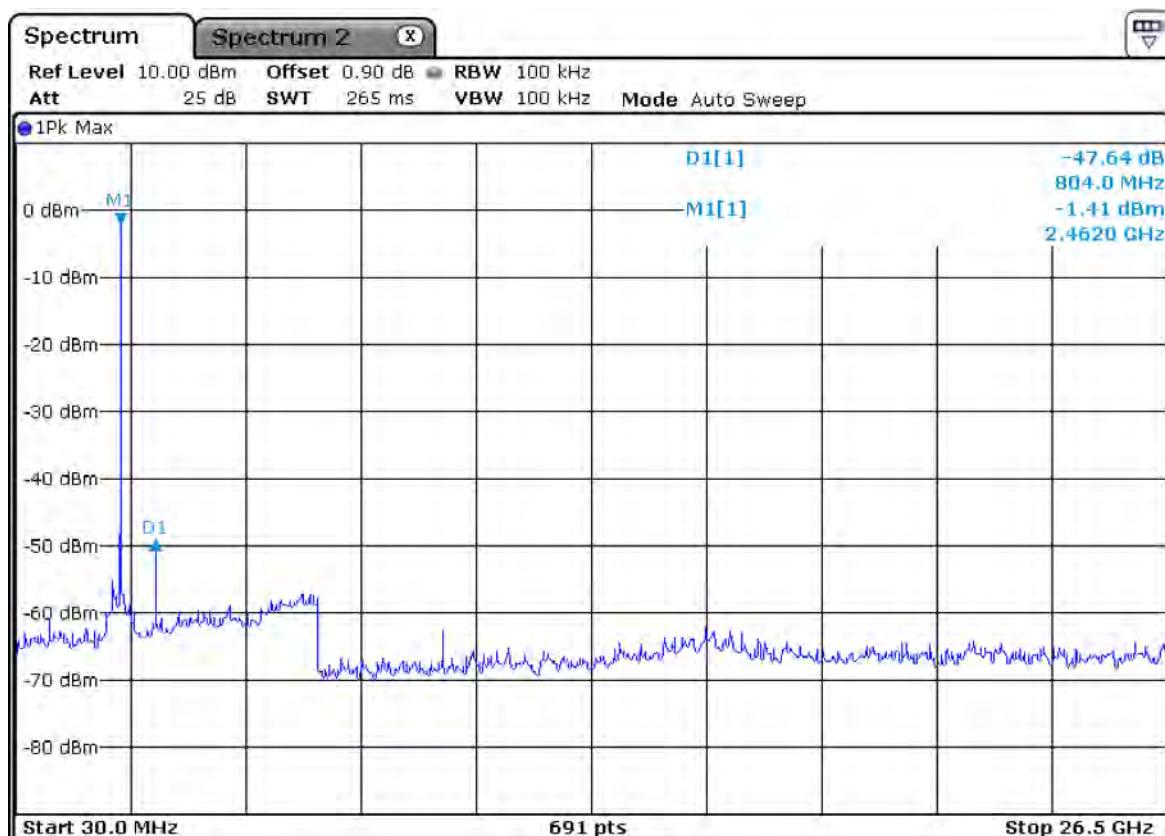
Middle Channel – 802.11 gHigh Channel – 802.11 g

**Frequency Range = 30 MHz ~ 26.5 GHz**  
**Unwanted Emission – Low Channel – 802.11 n**



**Middle Channel – 802.11 n**



High Channel – 802.11 n

### 3.2.6 Radiated Spurious Emissions

## Procedure:

The EUT was placed on a 0.8 m high wooden table inside a shielded enclosure. An antenna was placed near the EUT and measurements of frequencies and amplitudes of field strengths were recorded for reference during final measurements. For final radiated testing, measurements were performed in OATS. Measurements were performed with the EUT oriented in 3 orthogonal axis and rotated 360 degrees to determine worst-case orientation for maximum emissions.

The spectrum analyzer is set to:

Center frequency = the worst channel

Frequency Range = 9 kHz ~ 10<sup>th</sup> harmonic.

RBW = 100 kHz ( 30 MHz ~ 1 GHz)

$$\text{VBW} \geq \text{RBW}$$

$\equiv 1 \text{ MHz}$  (1 GHz  $\sim 10^{\text{th}}$  harmonic)

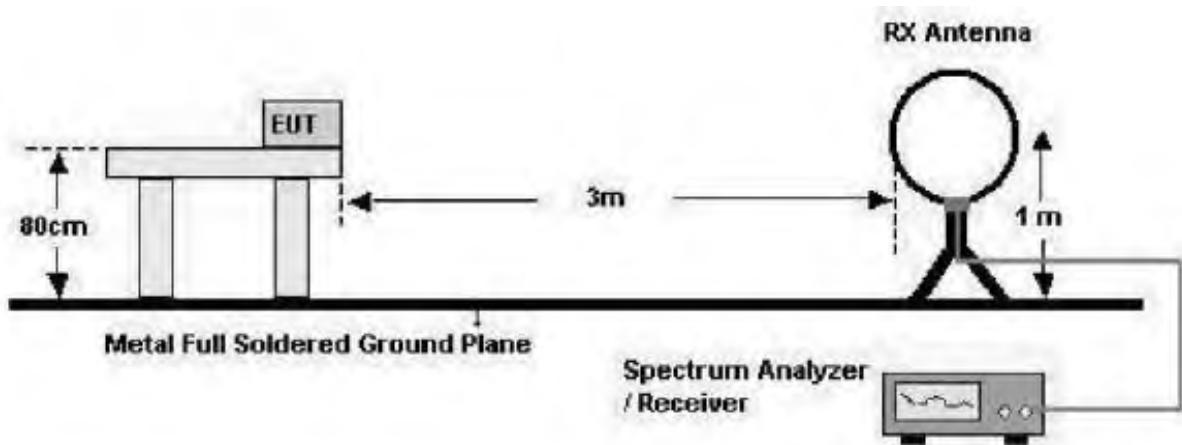
Span = 100 MHz

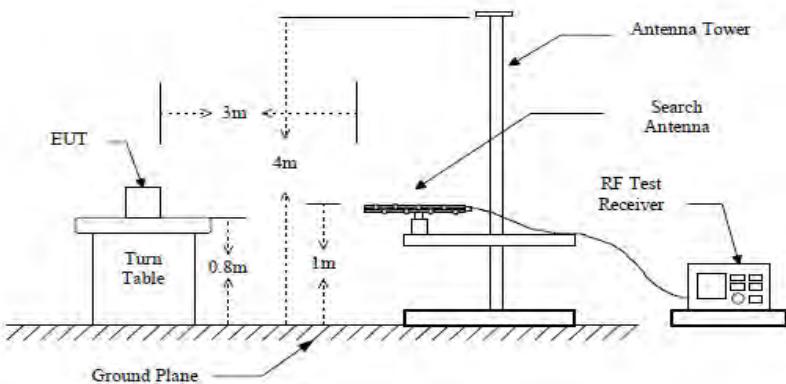
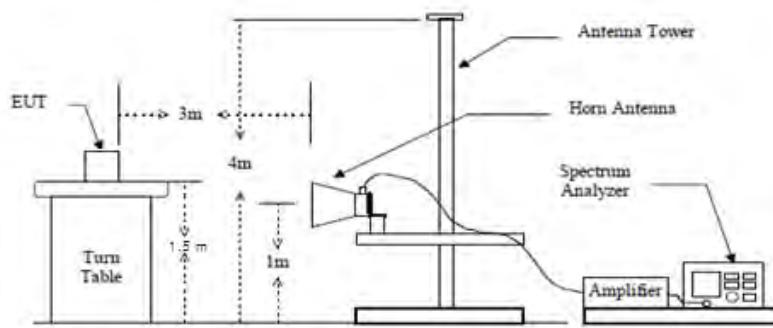
Detector function = peak

Trace = max hold

Sweep = auto

below 30 MHz



**below 1 GHz (30 MHz to 1 GHz)****above 1 GHz****Measurement Data: Complies**

- See next pages for actual measured data.
- No other emissions were detected at a level greater than 20 dB below limit include from 9 kHz to 30 MHz.

**Minimum Standard: FCC Part 15.209(a)**

Frequency (MHz)	Limit (uV/m) @ 3 m
0.009 ~ 0.490	2400/F(kHz) (@ 300 m)
0.490 ~ 1.705	24000/F(kHz) (@ 30 m)
1.705 ~ 30	30(@ 30 m)
30 ~ 88	100 **
88 ~ 216	150 **
216 ~ 960	200 **
Above 960	500

\*\* 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, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

**Measurement Data: (9 kHz – 30 MHz)**

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
			Antenna	Amp.Gain+Cable	AV / Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
*No emissions were detected at a level greater than 20 dB below limit.										
-	-	-	-	-	-	-	-	-	-	-

\*No emissions were detected at a level greater than 20 dB below limit.

**Measurement Data : 802.11 b (Above 1 GHz)**

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]		
			Antenna	Amp.Gain+Cable	AV/Peak	AV/Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak	
9352.58	17.64	22.1	V	35.19	23.81	54	74	29.02	33.48	24.98	40.52
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

- No other emissions were detected at a level greater than 20 dB below limit.

**Measurement Data : 802.11 g (Above 1 GHz)**

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]		
			Antenna	Amp.Gain+Cable	AV/Peak	AV/Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak	
4884.91	20.31	25.43	H	32.85	22.42	54	74	30.74	35.86	23.26	38.14
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

- No other emissions were detected at a level greater than 20 dB below limit.

**Measurement Data : 802.11 n (Above 1 GHz)**

Frequency [MHz]	Reading [dBuV/m] AV / Peak	Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]		
			Antenna	Amp.Gain+Cable	AV/Peak	AV/Peak	AV / Peak	AV / Peak	AV / Peak	AV / Peak	
8516.37	12.67	17.21	V	34.81	23.99	54	74	23.49	28.03	30.51	45.97
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

- No other emissions were detected at a level greater than 20 dB below limit.

**Measurement Data : 802.11 b (Below 1 GHz)**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
	AV	Peak		Antenna	Amp.Gain+Cable	AV/Peak	AV/Peak	AV/Peak	AV / Peak	AV / Peak	AV / Peak
38.73	51.37	55.26	V	12.16	26.52	54	74	37.01	40.9	16.99	33.1
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

- No other emissions were detected at a level greater than 20 dB below limit.

**Measurement Data : 802.11 g (Below 1 GHz)**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
	AV	Peak		Antenna	Amp.Gain+Cable	AV/Peak	AV/Peak	AV/Peak	AV / Peak	AV / Peak	AV / Peak
38.73	50.62	54.97	V	12.16	26.52	54	74	36.26	40.61	17.74	33.39
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

- No other emissions were detected at a level greater than 20 dB below limit.

**Measurement Data : 802.11 n (Below 1 GHz)**

Frequency [MHz]	Reading [dBuV/m]		Pol.	Correction Factor		Limits [dBuV/m]		Result [dBuV/m]		Margin [dB]	
	AV	Peak		Antenna	Amp.Gain+Cable	AV/Peak	AV/Peak	AV/Peak	AV / Peak	AV / Peak	AV / Peak
38.73	50.86	55.14	V	12.16	26.52	54	74	36.5	40.78	17.5	33.22
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

- No other emissions were detected at a level greater than 20 dB below limit.

Radiated Emissions (Below 1 GHz) – 802.11 b(LOW) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

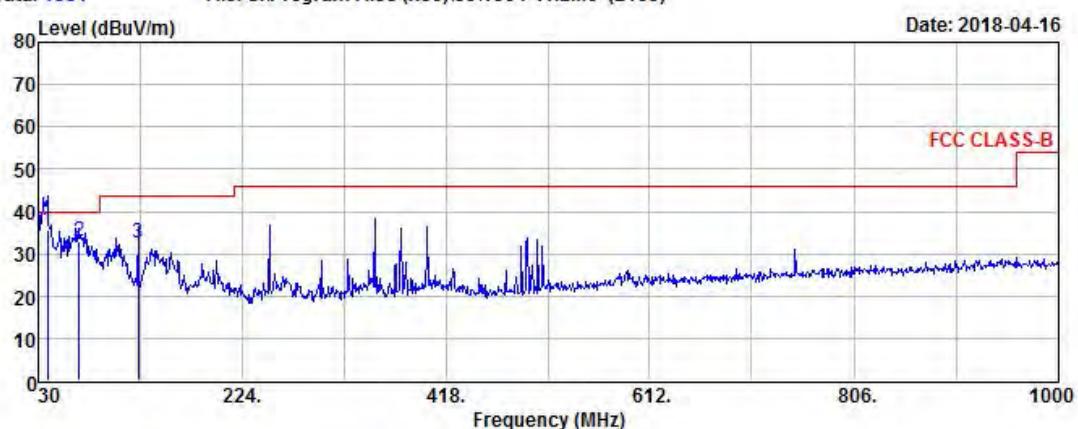
Test Mode : 802.11 b (LOW)

Tested by: YEON J H

Data: 1581

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
38.73	49.90	-14.36	35.54	40.00	4.46	284	121	VERTICAL
68.80	48.75	-15.67	33.08	40.00	6.92	263	30	VERTICAL
125.06	45.68	-13.33	32.35	43.50	11.15	167	281	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 b(LOW) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

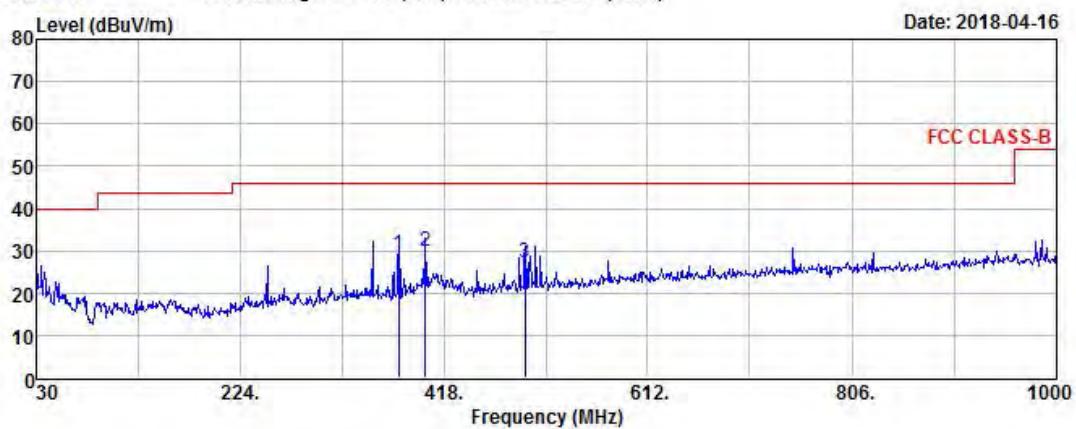
Test Mode : 802.11 b (LOW)

Tested by: YEON J H

Data: 1580

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
375.32	38.21	-8.95	29.26	46.00	16.74	136	244	HORIZONTAL
400.54	38.35	-8.50	29.85	46.00	16.15	118	260	HORIZONTAL
495.60	33.85	-6.72	27.13	46.00	18.87	262	201	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 b(MID) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

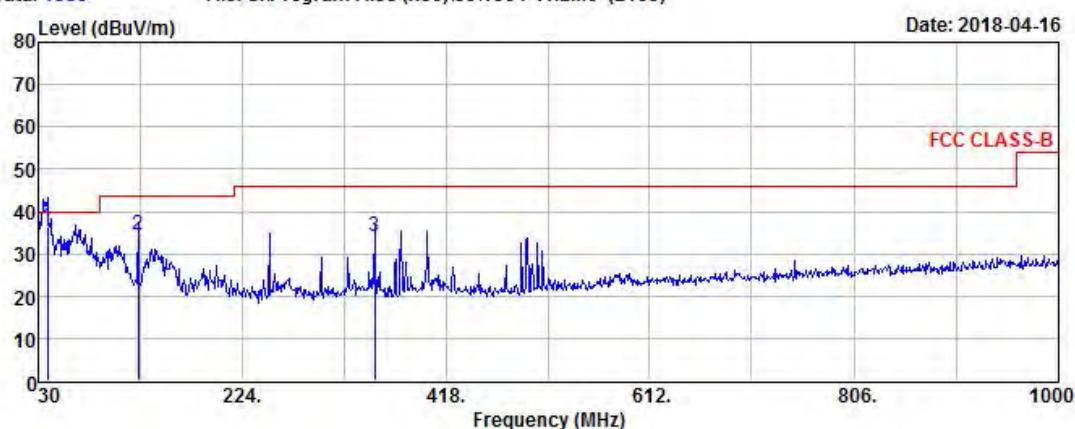
Test Mode : 802.11 b (MID)

Tested by: YEON J H

Data: 1583

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
38.73	50.78	-14.36	36.42	40.00	3.58	184	311	VERTICAL
125.06	47.85	-13.33	34.52	43.50	8.98	103	318	VERTICAL
350.10	43.50	-9.60	33.90	46.00	12.10	127	11	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 b(MID) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

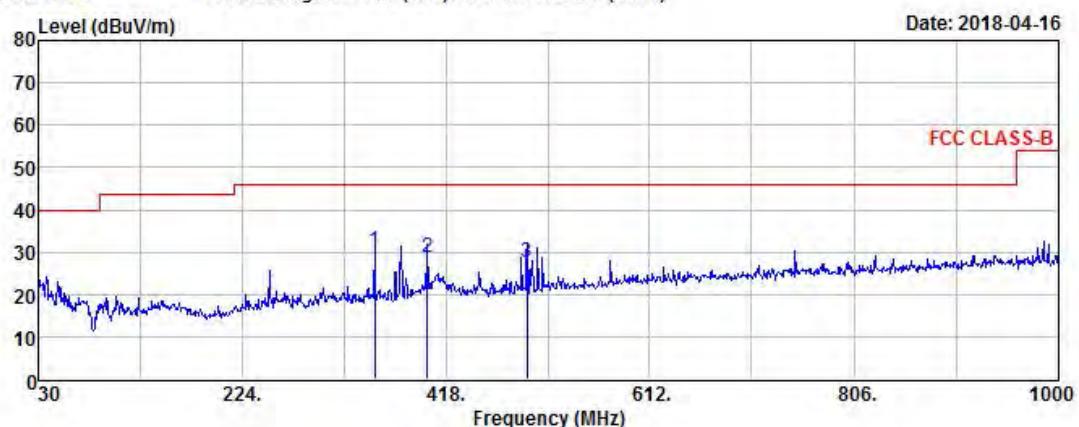
Test Mode : 802.11 b (MID)

Tested by: YEON J H

Data: 1582

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



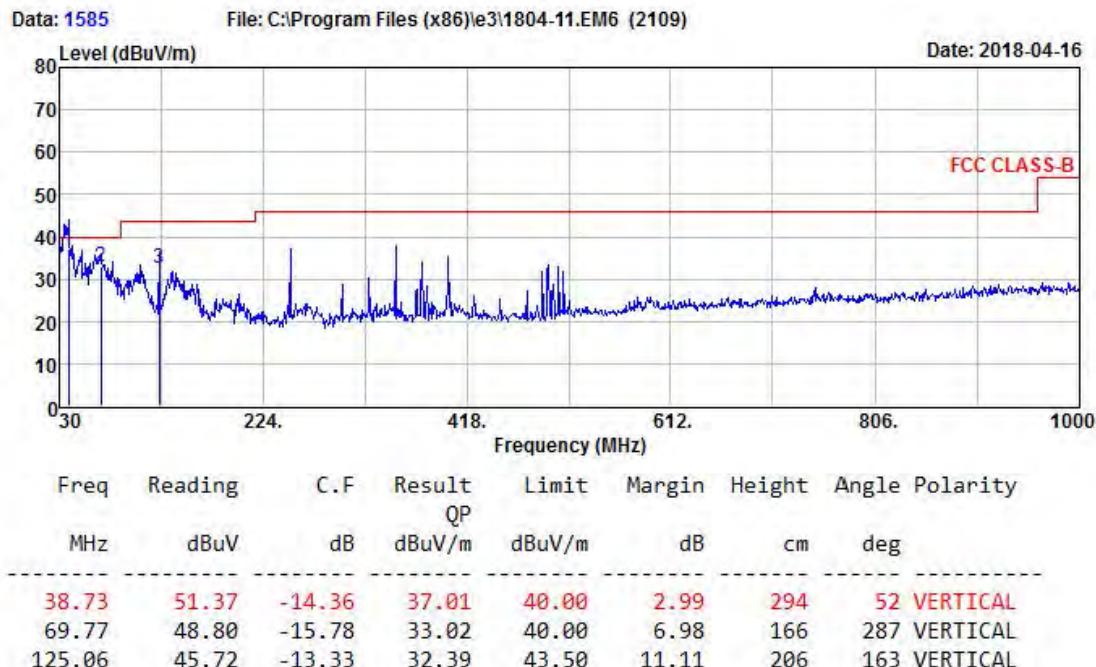
Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	40.03	-9.60	30.43	46.00	15.57	107	244	HORIZONTAL
400.54	37.08	-8.50	28.58	46.00	17.42	292	23	HORIZONTAL
495.60	34.39	-6.72	27.67	46.00	18.33	170	277	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 b(HIGH) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20 Temp/Humi: 23 / 59  
Test Mode : 802.11 b (HIGH) Tested by: YEON J H



Radiated Emissions (Below 1 GHz) – 802.11 b(HIGH) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

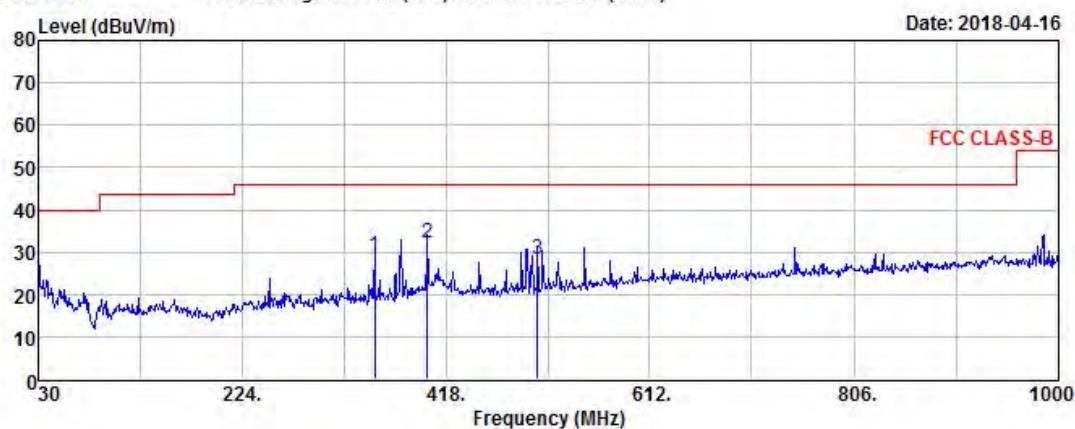
Test Mode : 802.11 b (HIGH)

Tested by: YEON J H

Data: 1584

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	38.83	-9.60	29.23	46.00	16.77	205	163	HORIZONTAL
400.54	40.76	-8.50	32.26	46.00	13.74	139	82	HORIZONTAL
505.30	34.83	-6.53	28.30	46.00	17.70	117	244	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

**Radiated Emissions (Below 1 GHz) – 802.11 g(LOW) mode, Vertical**

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

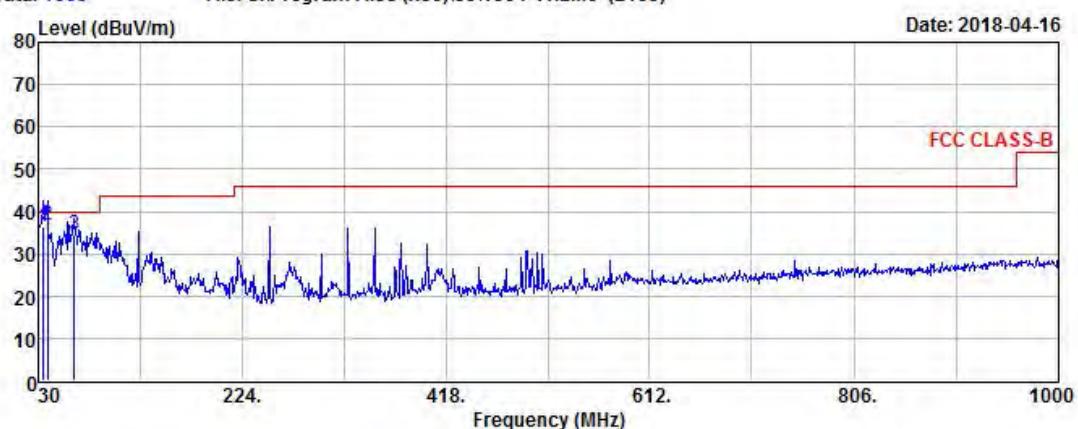
Test Mode : 802.11 g (LOW)

Tested by: YEON J H

Data: 1603

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
34.85	51.25	-14.77	36.48	40.00	3.52	218	63	VERTICAL
38.73	50.94	-14.36	36.58	40.00	3.42	163	38	VERTICAL
63.95	49.36	-15.07	34.29	40.00	5.71	204	147	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 g(LOW) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

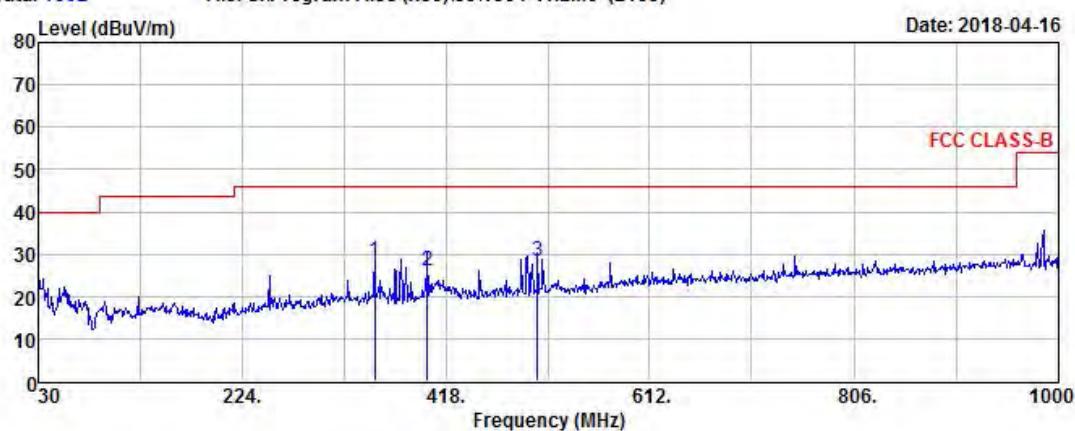
Test Mode : 802.11 g (LOW)

Tested by: YEON J H

Data: 1602

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	38.02	-9.60	28.42	46.00	17.58	260	274	HORIZONTAL
400.54	34.57	-8.50	26.07	46.00	19.93	116	108	HORIZONTAL
505.30	34.85	-6.53	28.32	46.00	17.68	265	58	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 g(MID) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

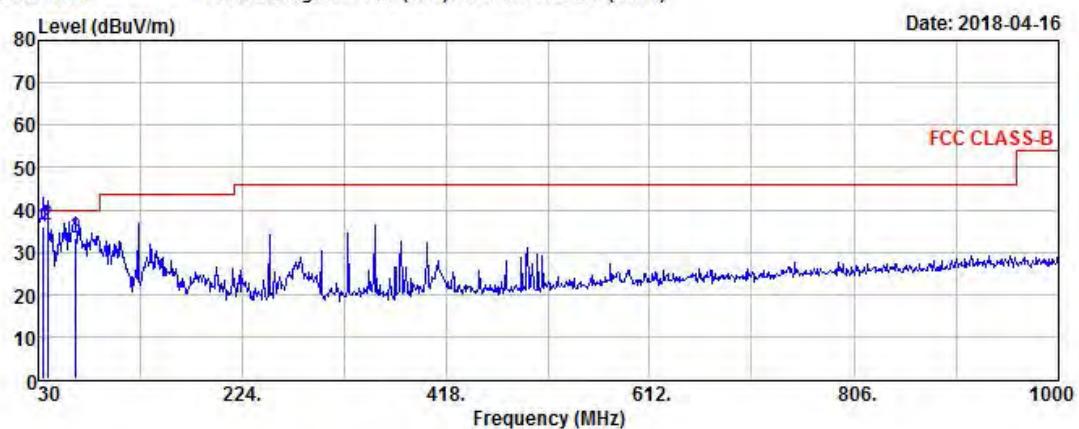
Test Mode : 802.11 g (MID)

Tested by: YEON J H

Data: 1605

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
34.85	50.65	-14.77	35.88	40.00	4.12	204	47	VERTICAL
38.73	50.62	-14.36	36.26	40.00	3.74	131	276	VERTICAL
65.89	48.61	-15.35	33.26	40.00	6.74	238	144	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 g(MID) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

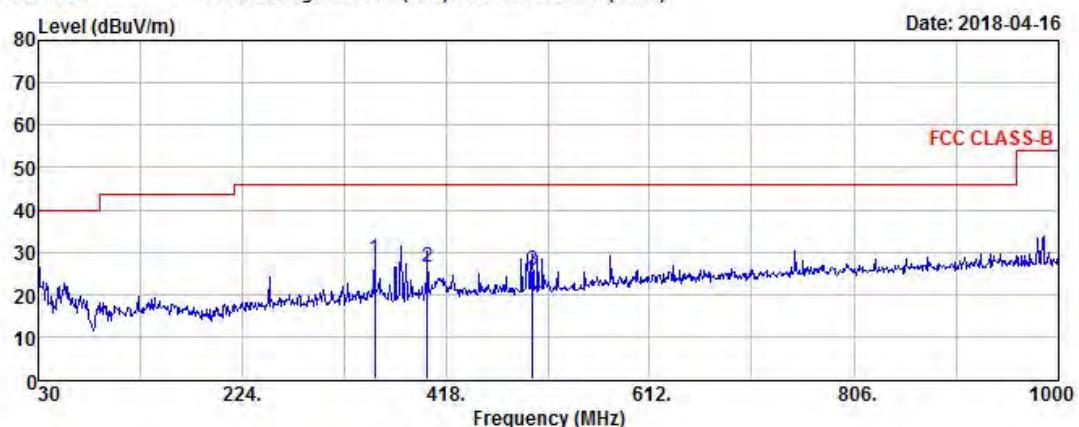
Test Mode : 802.11 g (MID)

Tested by: YEON J H

Data: 1604

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	38.02	-9.60	28.42	46.00	17.58	170	55	HORIZONTAL
400.54	34.91	-8.50	26.41	46.00	19.59	166	289	HORIZONTAL
500.45	32.14	-6.63	25.51	46.00	20.49	104	53	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 g(HIGH) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

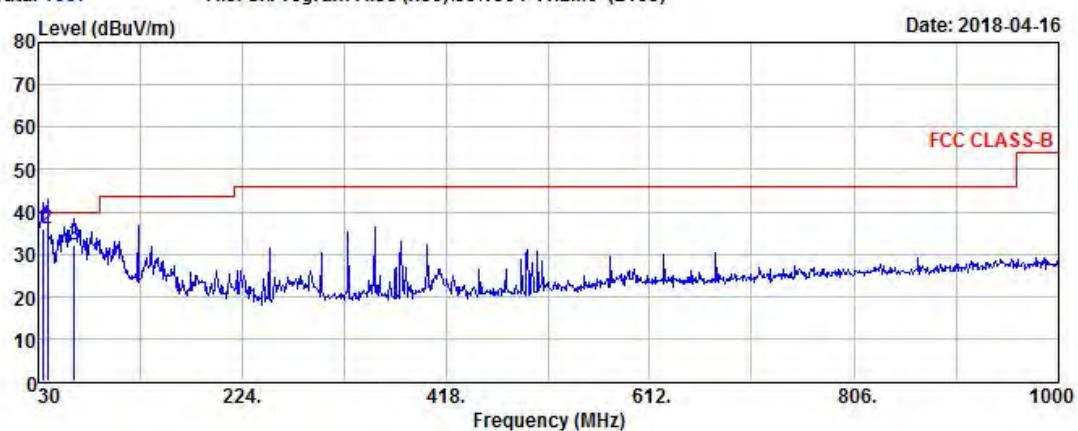
Test Mode : 802.11 g (HIGH)

Tested by: YEON J H

Data: 1607

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
33.88	50.98	-14.86	36.12	40.00	3.88	162	238	VERTICAL
38.73	50.21	-14.36	35.85	40.00	4.15	290	58	VERTICAL
63.95	47.31	-15.07	32.24	40.00	7.76	229	270	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 g(HIGH) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

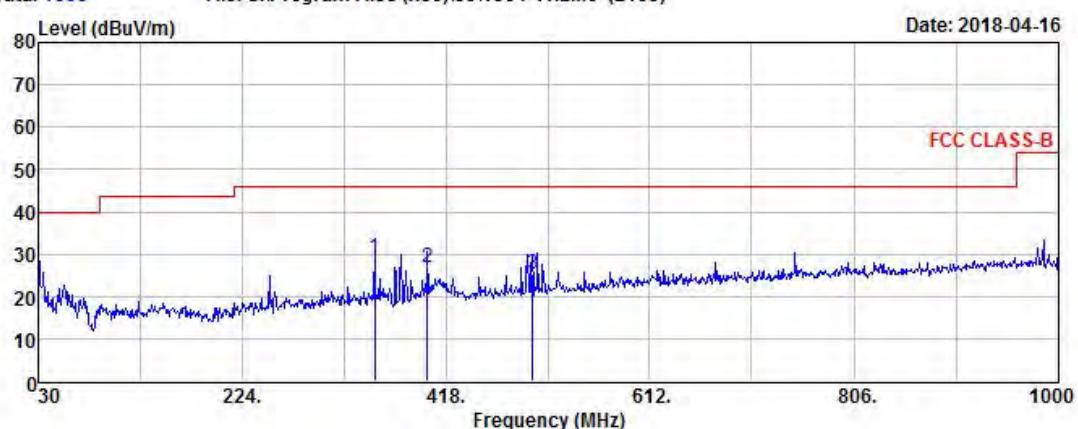
Test Mode : 802.11 g (HIGH)

Tested by: YEON J H

Data: 1606

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	38.61	-9.60	29.01	46.00	16.99	201	163	HORIZONTAL
400.54	35.23	-8.50	26.73	46.00	19.27	294	44	HORIZONTAL
500.45	31.95	-6.63	25.32	46.00	20.68	116	209	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 n(LOW) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

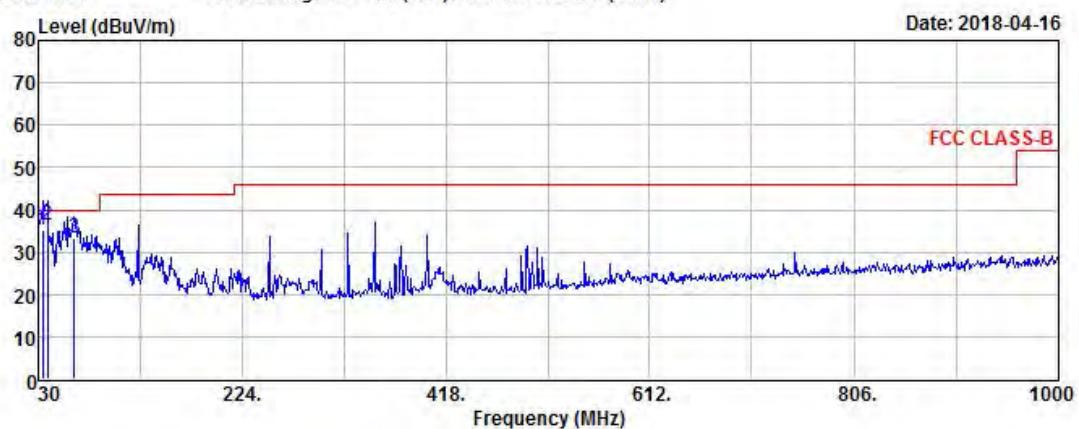
Test Mode : 802.11 n (LOW)

Tested by: YEON J H

Data: 1609

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
33.88	50.11	-14.86	35.25	40.00	4.75	109	63	VERTICAL
<b>38.73</b>	<b>50.58</b>	<b>-14.36</b>	<b>36.22</b>	<b>40.00</b>	<b>3.78</b>	<b>344</b>	<b>122</b>	<b>VERTICAL</b>
63.95	48.35	-15.07	33.28	40.00	6.72	263	22	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 n(LOW) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

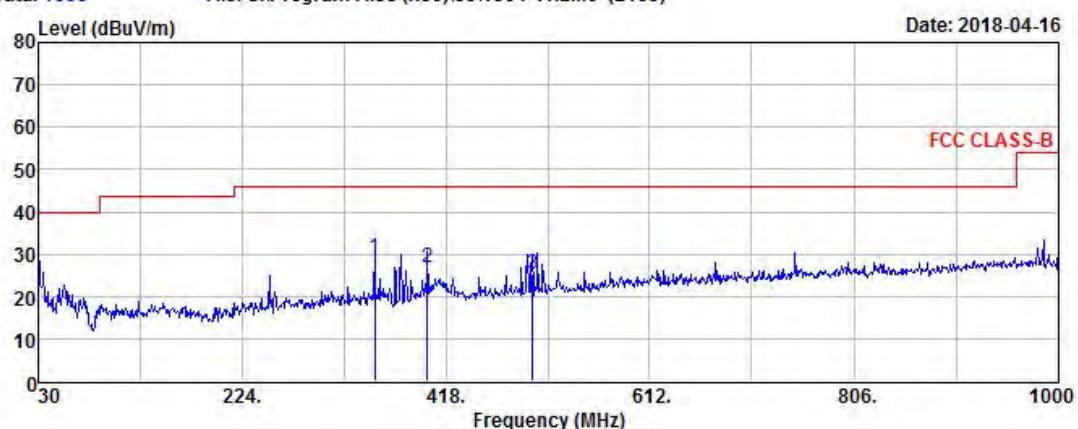
Test Mode : 802.11 g (HIGH)

Tested by: YEON J H

Data: 1606

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	38.61	-9.60	29.01	46.00	16.99	201	163	HORIZONTAL
400.54	35.23	-8.50	26.73	46.00	19.27	294	44	HORIZONTAL
500.45	31.95	-6.63	25.32	46.00	20.68	116	209	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 n(MID) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

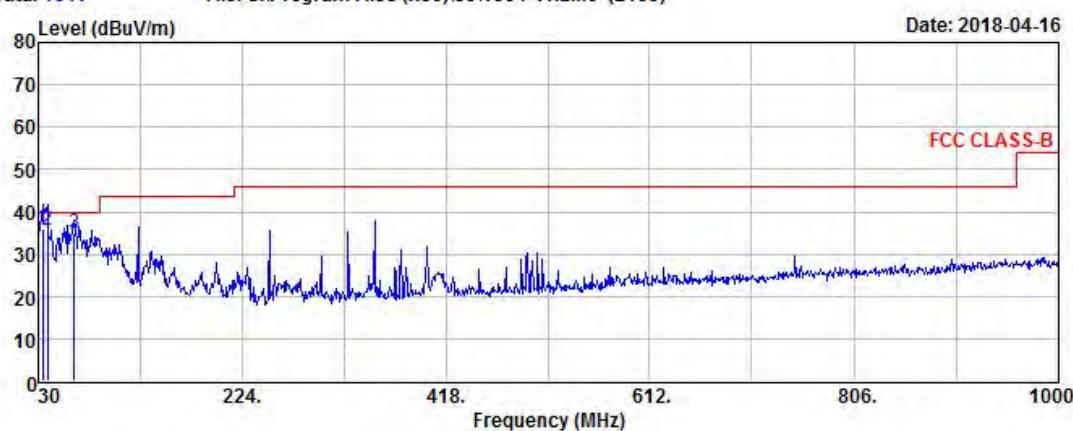
Test Mode : 802.11 n (MID)

Tested by: YEON J H

Data: 1611

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
33.88	50.73	-14.86	35.87	40.00	4.13	214	299	VERTICAL
38.73	50.10	-14.36	35.74	40.00	4.26	322	175	VERTICAL
63.95	49.83	-15.07	34.76	40.00	5.24	127	88	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 n(MID) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

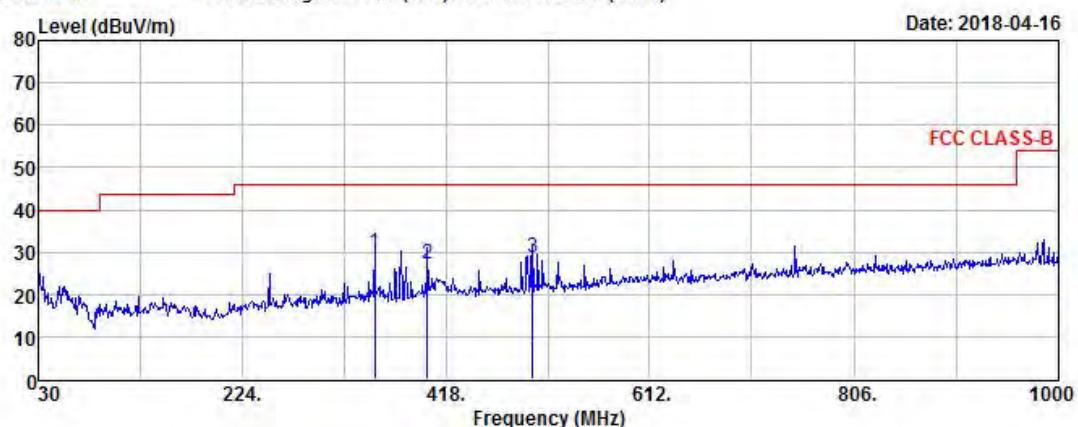
Test Mode : 802.11 n (MID)

Tested by: YEON J H

Data: 1610

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



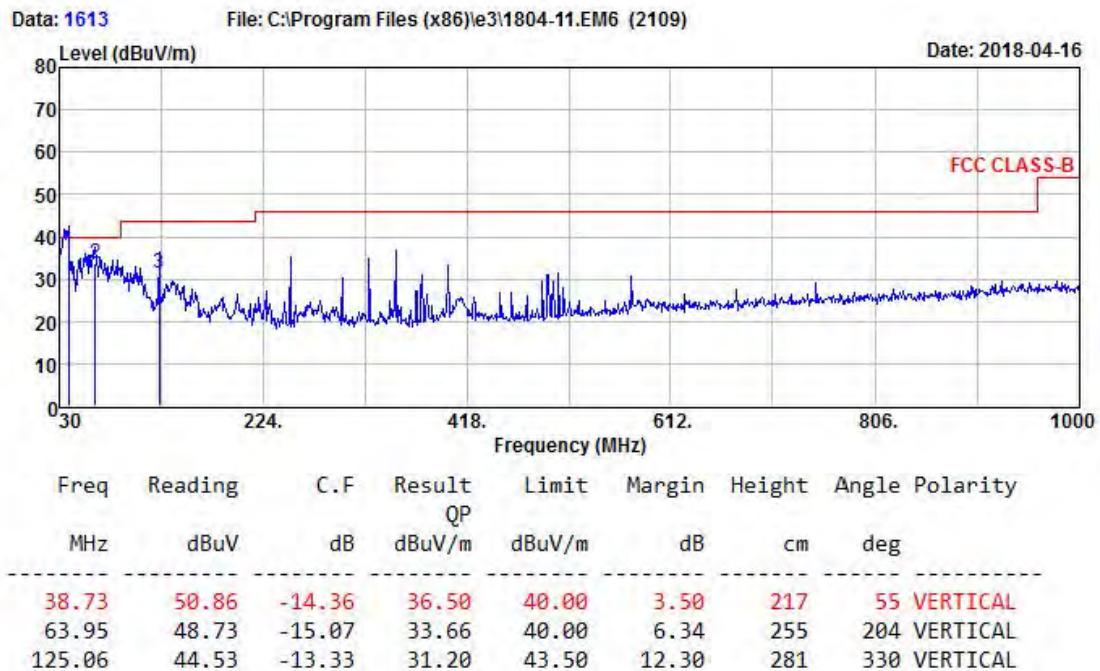
Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	39.53	-9.60	29.93	46.00	16.07	112	207	HORIZONTAL
400.54	35.49	-8.50	26.99	46.00	19.01	267	153	HORIZONTAL
500.45	35.41	-6.63	28.78	46.00	17.22	143	308	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 n(HIGH) mode, Vertical

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20 Temp/Humi: 23 / 59  
Test Mode : 802.11 n (HIGH) Tested by: YEON J H



Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Below 1 GHz) – 802.11 n(HIGH) mode, Horizontal

4, Songjuro 236Beon-gil, yanggi-myeon,  
Yongin-si, Gyeonggi-do, Korea  
Tel : +82-31-3236008,9  
Fax : +82-31-3236010  
www.ltalab.com

EUT/Model No.: T20

Temp/Humi: 23 / 59

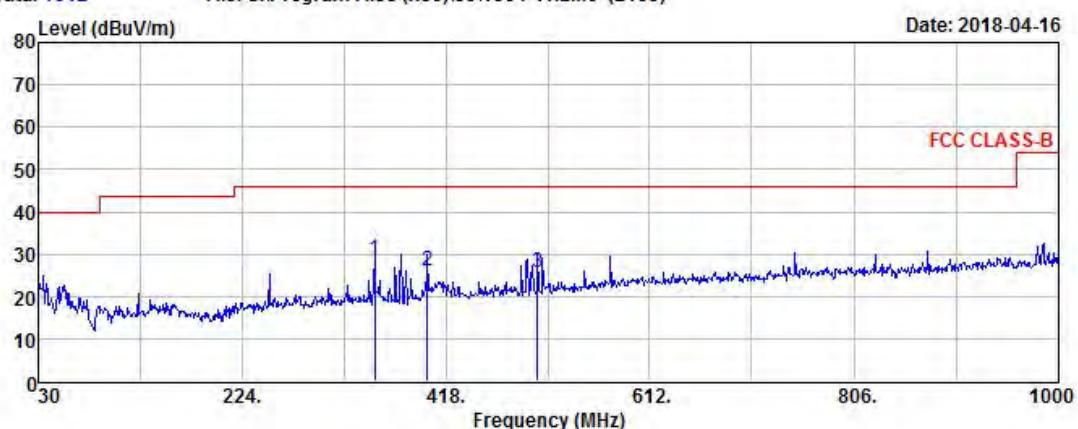
Test Mode : 802.11 n (HIGH)

Tested by: YEON J H

Data: 1612

File: C:\Program Files (x86)\e3\1804-11.EM6 (2109)

Date: 2018-04-16



Freq	Reading	C.F	Result	Limit	Margin	Height	Angle	Polarity
MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	deg	
350.10	38.39	-9.60	28.79	46.00	17.21	318	205	HORIZONTAL
400.54	34.55	-8.50	26.05	46.00	19.95	288	56	HORIZONTAL
505.30	32.34	-6.53	25.81	46.00	20.19	211	195	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain

Radiated Emissions (Above 1 GHz) – 802.11 b(LOW) mode

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Yongin-si, Gyeonggi-do, Korea Autho. by NVLAP  
Tel: +82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

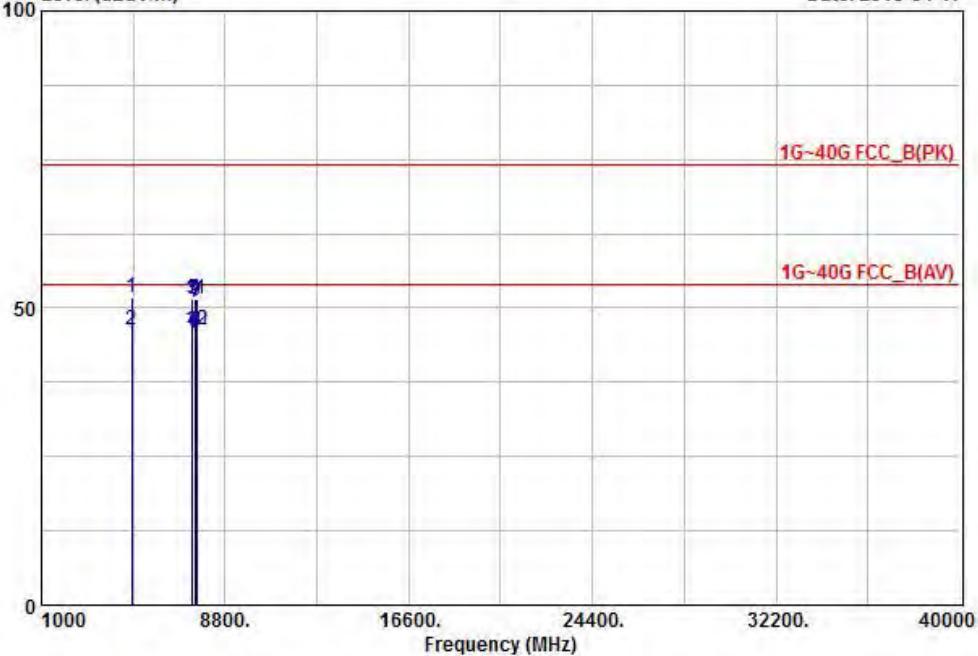
EUT/Model No.: T20

Test Mode: 802.11 b(low)

Tested by : YEON J H

Temp/Humi: 22 / 62

Data: 12 File: D:\LTA\_e3\le3\_backup\1GHz 이상\2018\CH1\_ABOVE 1GHz\_1803-1.EMI (15)  
Level (dBuV/m) Date: 2018-04-17



Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						PK
1 4826.25	33.81	17.86	51.67	74.00	22.33	HORIZONTAL
2 4826.25	28.42	17.86	46.28	54.00	7.72	HORIZONTAL
3 7426.49	20.46	31.02	51.48	74.00	22.52	VERTICAL
4 7426.49	15.03	31.02	46.05	54.00	7.95	VERTICAL
5 7532.64	19.90	31.48	51.38	74.00	22.62	VERTICAL
6 7532.64	14.40	31.48	45.88	54.00	8.12	VERTICAL
7 7572.71	19.95	31.10	51.05	74.00	22.95	VERTICAL
8 7572.71	15.01	31.10	46.11	54.00	7.89	VERTICAL
9 7586.44	20.32	30.97	51.29	74.00	22.71	HORIZONTAL
10 7586.44	15.38	30.97	46.35	54.00	7.65	HORIZONTAL
11 7596.68	20.57	30.88	51.45	74.00	22.55	HORIZONTAL
12 7596.68	15.36	30.88	46.24	54.00	7.76	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical      Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 b(MID) mode

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Yongin-si, Gyeonggi-do, Korea Autho. by NVLAP  
Tel: +82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

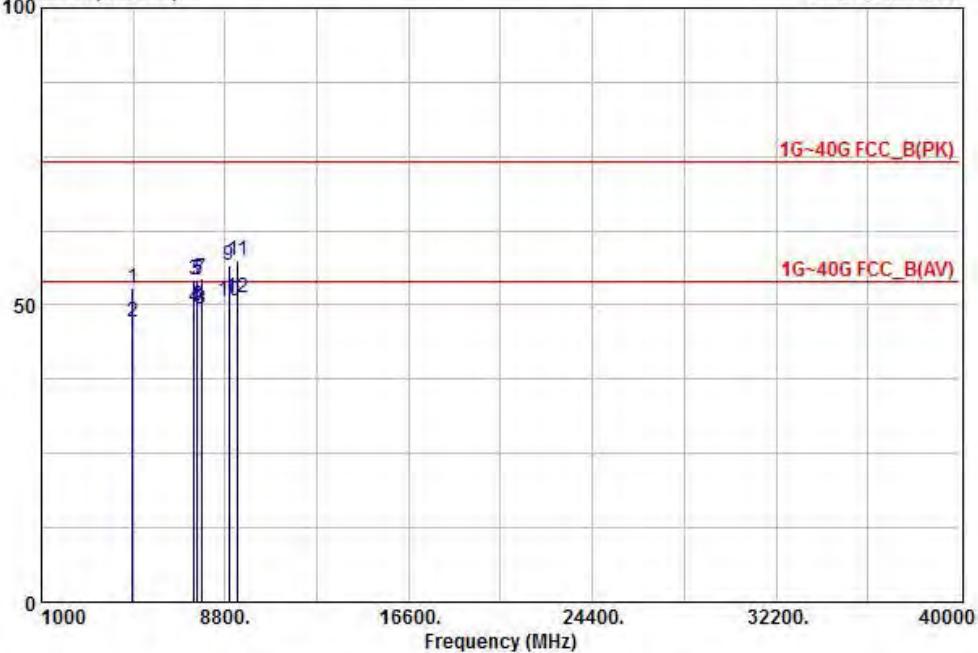
EUT/Model No.: T20

Test Mode: 802.11 b(mid)

Tested by : YEON J H

Temp/Humi: 22 / 62

Data: 13 File: D:\LTA\_e3\le3\_backup\1GHz 이상\2018\CH1\_ABOVE 1GHz\_1803-1.EMI (15)  
Level (dBuV/m) Date: 2018-04-17

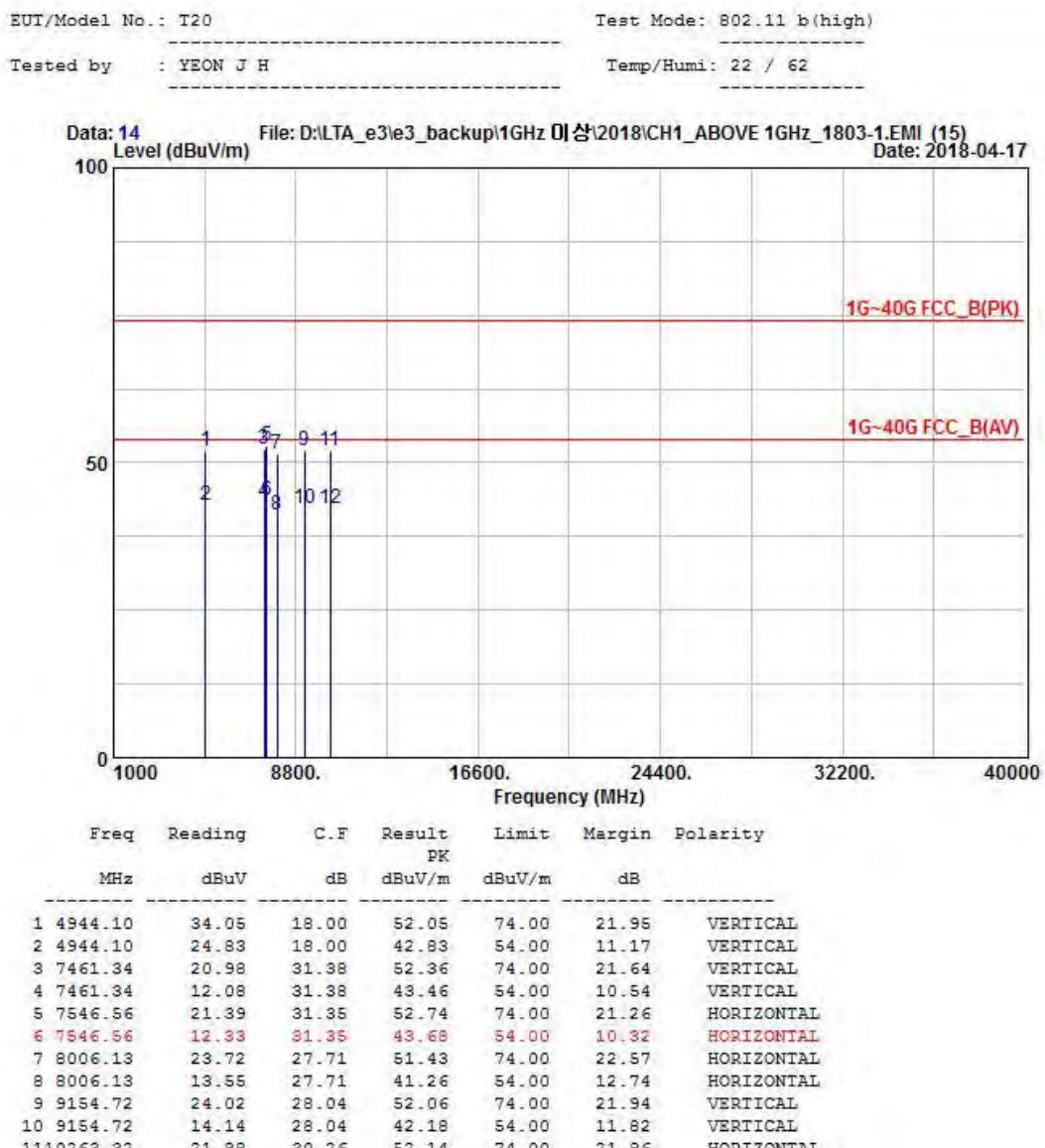


Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						PK
1 4884.67	34.88	18.04	52.92	74.00	21.08	HORIZONTAL
2 4884.67	29.13	18.04	47.17	54.00	6.83	HORIZONTAL
3 7499.14	22.50	31.77	54.27	74.00	19.73	HORIZONTAL
4 7499.14	17.85	31.77	49.62	54.00	4.38	HORIZONTAL
5 7615.34	23.65	30.70	54.35	74.00	19.65	VERTICAL
6 7615.34	19.05	30.70	49.75	54.00	4.25	VERTICAL
7 7781.27	25.03	29.48	54.51	74.00	19.49	HORIZONTAL
8 7781.27	19.76	29.48	49.24	54.00	4.76	HORIZONTAL
9 8956.34	28.74	27.98	56.72	74.00	17.28	HORIZONTAL
10 8956.34	22.63	27.98	50.61	54.00	3.39	HORIZONTAL
11 9352.58	28.40	29.01	57.41	74.00	16.59	VERTICAL
12 9352.58	22.10	29.01	51.11	54.00	2.89	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical      Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 b(HIGH) mode

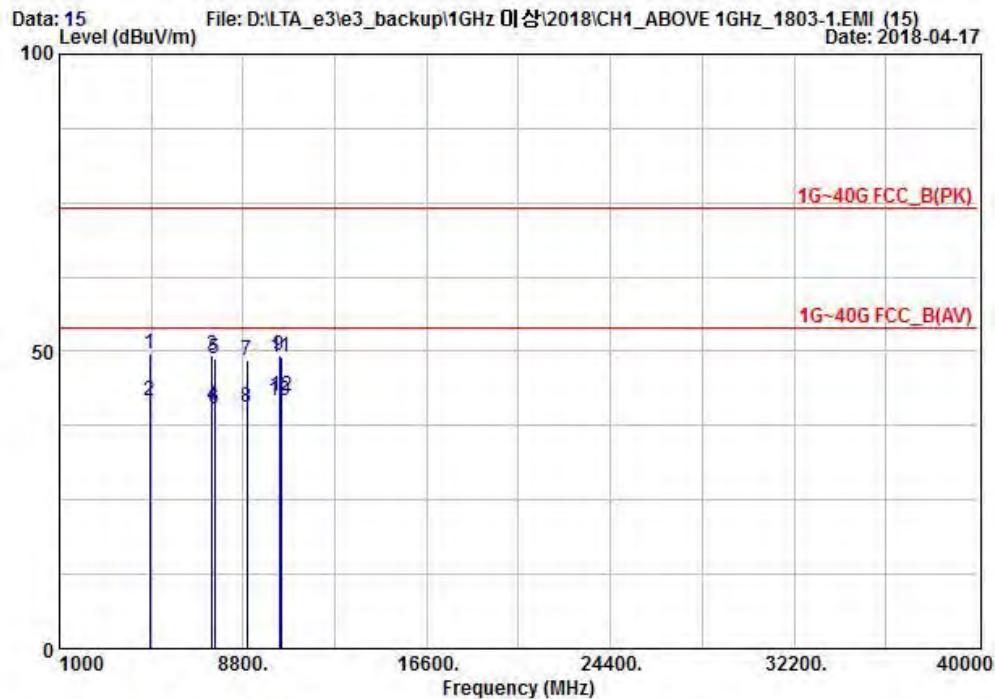
EMI I Chamber of LTA CO.,LTD.  
4, Songjuro236Beon-gil, Yangji-myeon,  
Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010



Radiated Emissions (Above 1 GHz) – 802.11 g(LOW) mode

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Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

EUT/Model No.: T20 Test Mode: 802.11 g (low)  
Tested by : YEON J H Temp/Humi: 22 / 62



Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						PK
1 4825.19	31.78	17.85	49.63	74.00	24.37	HORIZONTAL
2 4825.19	23.78	17.85	41.63	54.00	12.37	HORIZONTAL
3 7486.64	17.63	31.64	49.27	74.00	24.73	HORIZONTAL
4 7486.64	9.23	31.64	40.87	54.00	13.13	HORIZONTAL
5 7583.86	17.79	31.00	48.79	74.00	25.21	VERTICAL
6 7583.86	9.44	31.00	40.44	54.00	13.56	VERTICAL
7 8964.42	20.61	27.96	48.57	74.00	25.43	HORIZONTAL
8 8964.42	12.57	27.96	40.53	54.00	13.47	HORIZONTAL
910337.46	18.80	30.52	49.32	74.00	24.68	VERTICAL
1010337.46	11.21	30.52	41.73	54.00	12.27	VERTICAL
1110418.51	18.08	30.86	48.94	74.00	25.06	VERTICAL
1210418.51	11.75	30.86	42.61	54.00	11.39	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 g(MID) mode

EMI I Chamber of LTA CO.,LTD.  
4, Songjuro236Beon-gil, Yangji-myeon,  
Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

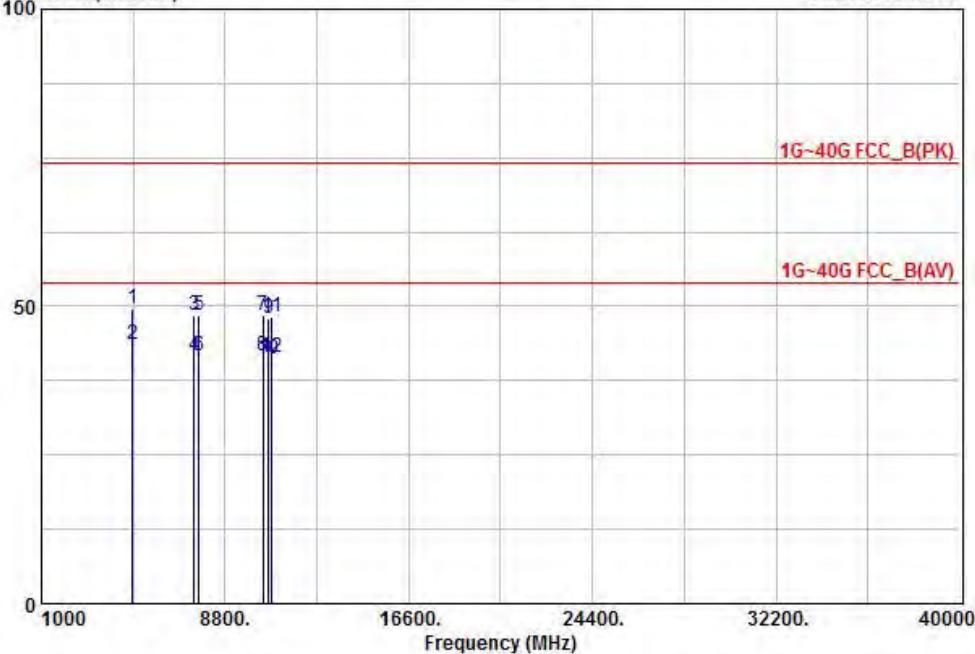
EUT/Model No.: T20

Test Mode: 802.11 g(mid)

Tested by : YEON J H

Temp/Humi: 22 / 62

Data: 16 File: D:\LTA\_e3\Backup\1GHz 이상\2018\CH1\_ABOVE 1GHz\_1803-1.EMI (16)  
Level (dBuV/m) Date: 2018-04-17



Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						Horizontal
1 4884.91	31.49	18.04	49.53	74.00	24.47	HORIZONTAL
2 4884.91	25.43	18.04	43.47	54.00	10.53	HORIZONTAL
3 7495.27	16.65	31.73	48.38	74.00	25.62	VERTICAL
4 7495.27	10.04	31.73	41.77	54.00	12.23	VERTICAL
5 7681.42	18.48	30.15	48.63	74.00	25.37	HORIZONTAL
6 7681.42	11.45	30.15	41.60	54.00	12.40	HORIZONTAL
7 10399.07	17.74	30.78	48.52	74.00	25.48	VERTICAL
8 10399.07	10.98	30.78	41.76	54.00	12.24	VERTICAL
9 10637.38	16.07	31.78	47.85	74.00	26.15	HORIZONTAL
10 10637.38	9.25	31.78	41.03	54.00	12.97	HORIZONTAL
11 10778.43	15.97	32.14	48.11	74.00	25.89	HORIZONTAL
12 10778.43	9.16	32.14	41.30	54.00	12.70	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical      Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 g(HIGH) mode

EMI I Chamber of LTA CO.,LTD.  
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Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

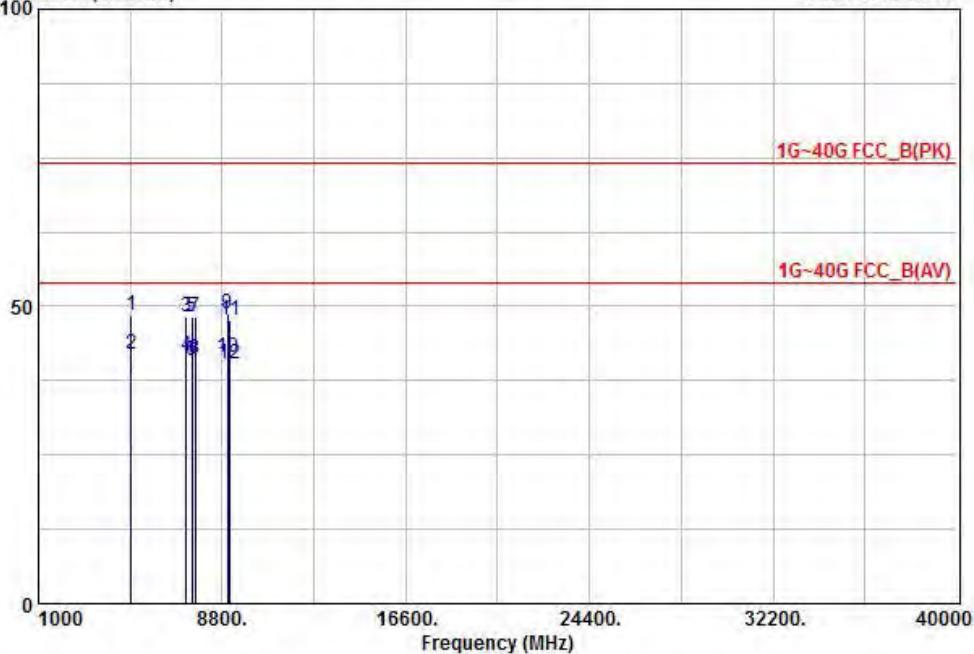
EUT/Model No.: T20

Test Mode: 802.11 g (high)

Tested by : YEON J H

Temp/Humi: 22 / 62

Data: 17 File: D:\LTA\_e3\Backup\1GHz 이상\2018\CH1\_ABOVE 1GHz\_1803-1.EMI (17)  
Level (dBuV/m) Date: 2018-04-17



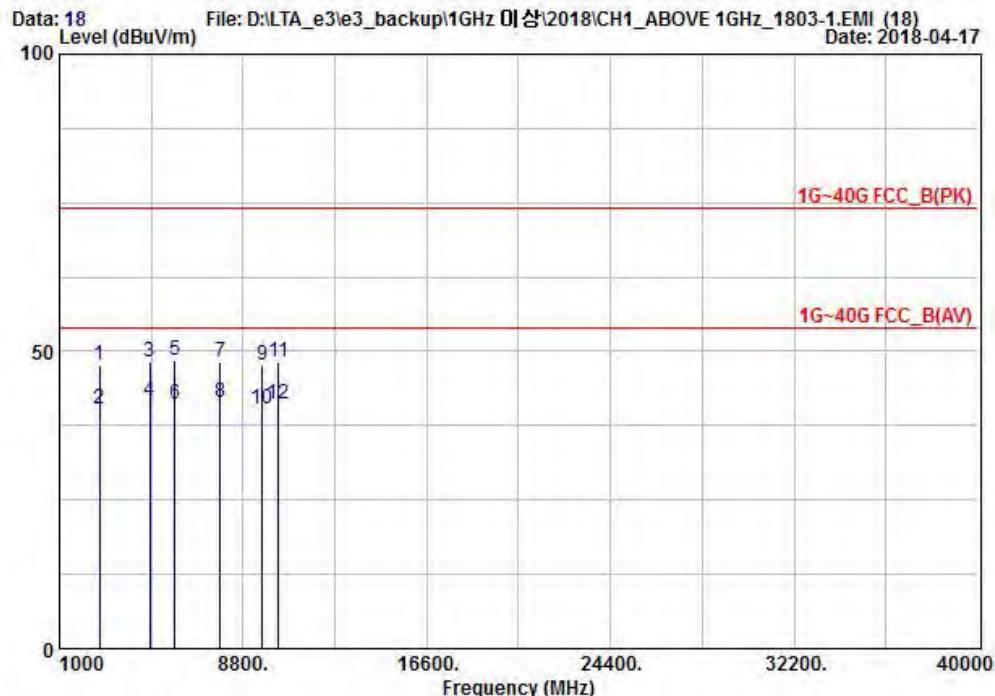
Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						PK
1 4944.37	30.46	18.00	48.46	74.00	25.54	HORIZONTAL
2 4944.37	23.83	18.00	41.83	54.00	12.17	HORIZONTAL
3 7271.01	19.28	29.04	48.32	74.00	25.68	VERTICAL
4 7271.01	12.66	29.04	41.70	54.00	12.30	VERTICAL
5 7530.64	16.73	31.49	48.22	74.00	25.78	VERTICAL
6 7530.64	9.49	31.49	40.98	54.00	13.02	VERTICAL
7 7659.16	17.98	30.31	48.29	74.00	25.71	HORIZONTAL
8 7659.16	10.74	30.31	41.05	54.00	12.95	HORIZONTAL
9 9044.37	20.89	27.92	48.81	74.00	25.19	HORIZONTAL
10 9044.37	13.60	27.92	41.52	54.00	12.48	HORIZONTAL
11 9117.54	19.64	28.05	47.69	74.00	26.31	HORIZONTAL
12 9117.54	12.36	28.05	40.41	54.00	13.59	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical      Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 n(LOW) mode

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Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

EUT/Model No.: T20 Test Mode: 802.11 n(LOW)  
Tested by : YEON J H Temp/Humi: 22 / 62



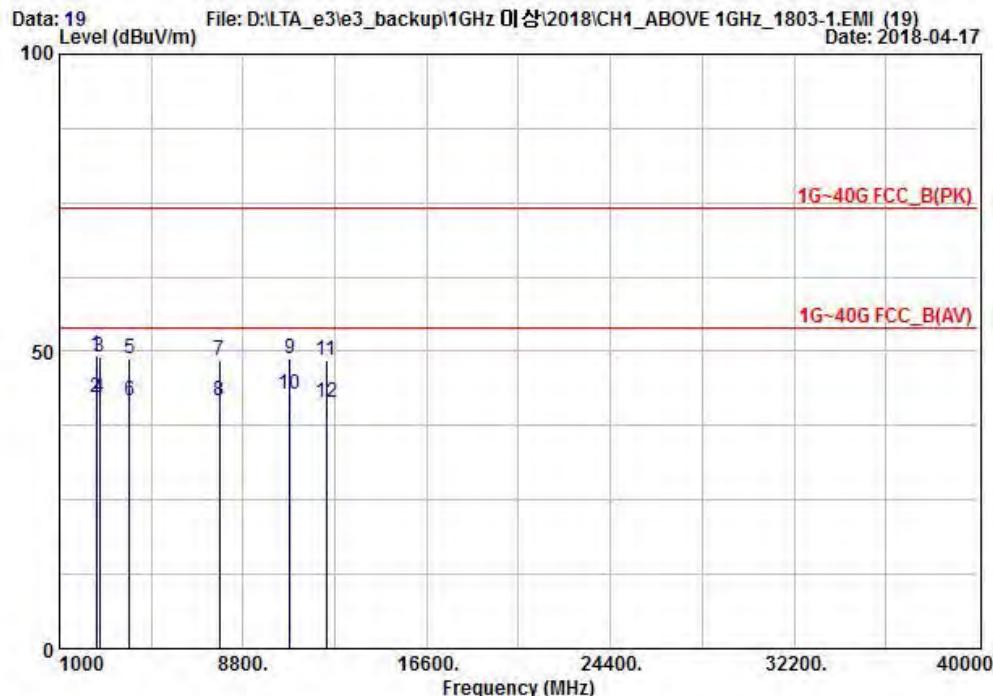
Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						PK
1 2711.26	42.25	5.40	47.65	74.00	26.35	VERTICAL
2 2711.26	34.88	5.40	40.28	54.00	13.72	VERTICAL
3 4824.82	30.51	17.85	48.36	74.00	25.64	HORIZONTAL
4 4824.82	23.74	17.85	41.59	54.00	12.41	HORIZONTAL
5 5903.61	27.40	21.22	48.62	74.00	25.38	HORIZONTAL
6 5903.61	19.92	21.22	41.14	54.00	12.86	HORIZONTAL
7 7827.63	19.19	29.12	48.31	74.00	25.69	VERTICAL
8 7827.63	12.26	29.12	41.38	54.00	12.62	VERTICAL
9 9618.32	18.40	29.19	47.59	74.00	26.41	VERTICAL
10 9618.32	11.09	29.19	40.28	54.00	13.72	VERTICAL
11 10287.65	17.77	30.37	48.14	74.00	25.86	HORIZONTAL
12 10287.65	10.91	30.37	41.28	54.00	12.72	HORIZONTAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical      Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 n(MID) mode

EMI I Chamber of LTA CO.,LTD.  
4, Songjuro236Beon-gil, Yangji-myeon,  
Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010

EUT/Model No.: T20 Test Mode: 802.11 n(mid)  
Tested by : YEON J H Temp/Humi: 22 / 62

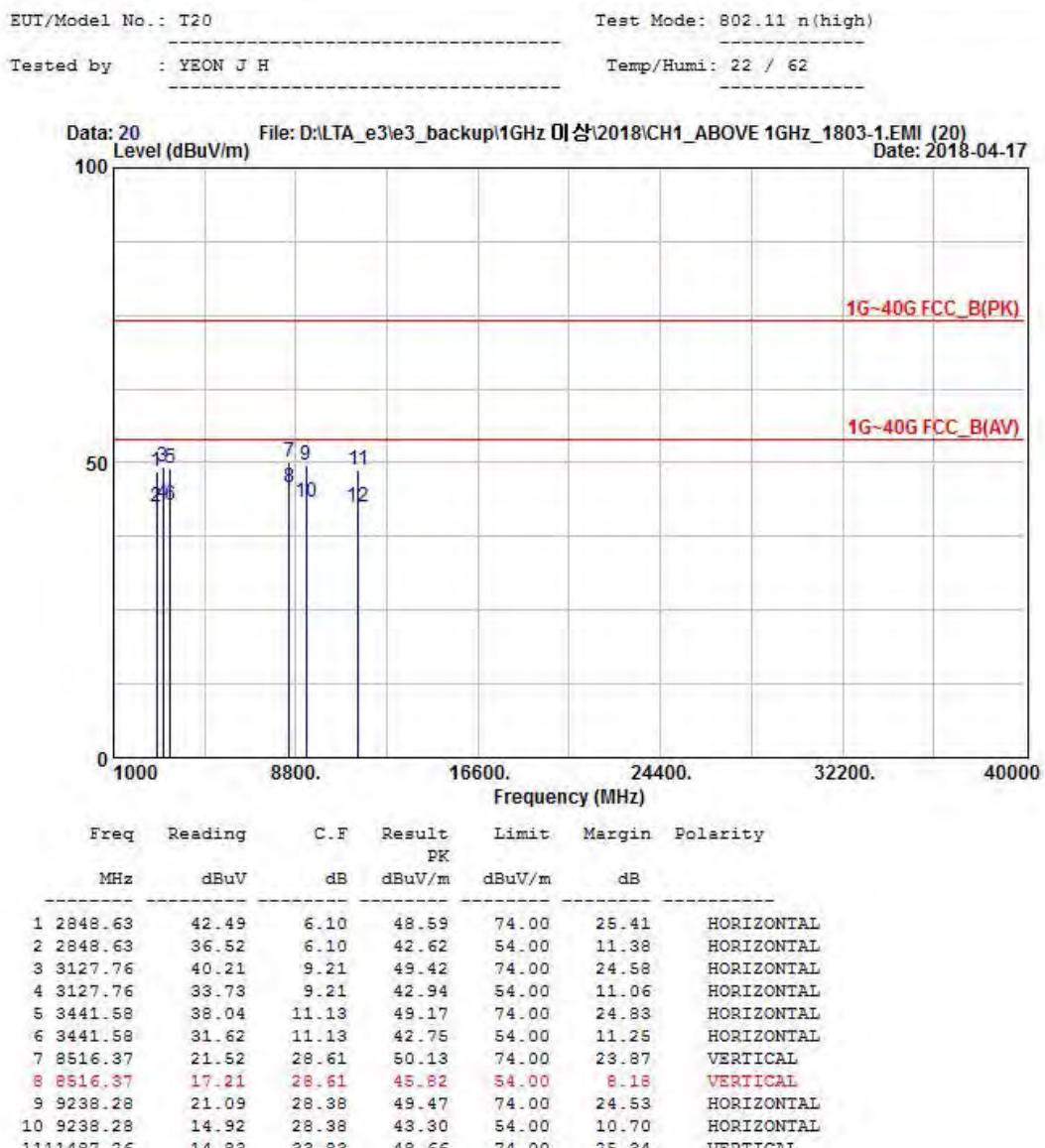


Freq MHz	Reading dBuV	C.F dB	Result PK dBuV/m	Limit dBuV/m	Margin dB	Polarity
						PK
1 2581.36	44.69	4.64	49.33	74.00	24.67	VERTICAL
2 2581.36	37.55	4.64	42.19	54.00	11.81	VERTICAL
3 2715.12	43.64	5.41	49.05	74.00	24.95	VERTICAL
4 2715.12	36.70	5.41	42.11	54.00	11.89	VERTICAL
5 3958.52	34.21	14.54	48.75	74.00	25.25	HORIZONTAL
6 3958.52	27.22	14.54	41.76	54.00	12.24	HORIZONTAL
7 7783.72	19.13	29.46	48.59	74.00	25.41	VERTICAL
8 7783.72	12.12	29.46	41.58	54.00	12.42	VERTICAL
910796.45	16.60	32.18	48.78	74.00	25.22	HORIZONTAL
1010796.45	10.49	32.18	42.67	54.00	11.33	HORIZONTAL
1112335.21	8.37	40.09	48.46	74.00	25.54	VERTICAL
1212335.21	1.30	40.09	41.39	54.00	12.61	VERTICAL

Remarks: C.F (Correction Factor) = Antenna factor + Cable loss - Preamp gain  
Blue : Vertical      Black : Horizontal

Radiated Emissions (Above 1 GHz) – 802.11 n(HIGH) mode

EMI I Chamber of LTA CO.,LTD.  
4, Songjuro236Beon-gil, Yangji-myeon,  
Yongin-si, Gyeonggi-do, Korea Autho by NVLAP  
Tel :+82-31-3236008,9 www.ltalab.com  
Fax:+82-31-3236010



### 3.2.6 AC Conducted Emissions

#### Procedure:

The conducted emissions are measured in the shielded room with a spectrum analyzer in peak hold. While the measurement, EUT had its hopping function disabled at the middle channels in line with Section 15.31(m). Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation and Exerciser operation. The highest emissions relative to the limit are listed.

#### Measurement Data: Complies

- See next pages for actual measured spectrum plots.
- No emissions were detected at a level greater than 20 dB below limit.

#### Minimum Standard: FCC Part 15.207(a) / EN 55022

Class B

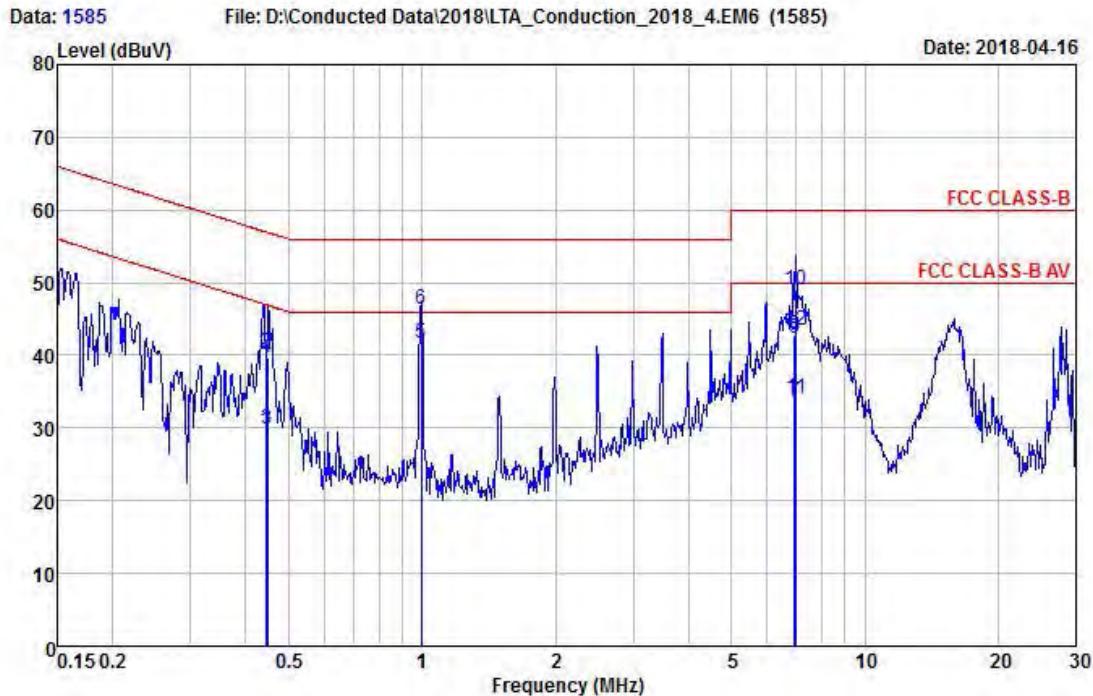
Frequency Range	quasi-peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

\* Decreases with the logarithm of the frequency

Conducted Emissions - 802.11 b(LOW) mode + LINE

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449-822 Korea  
Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 b(LOW) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



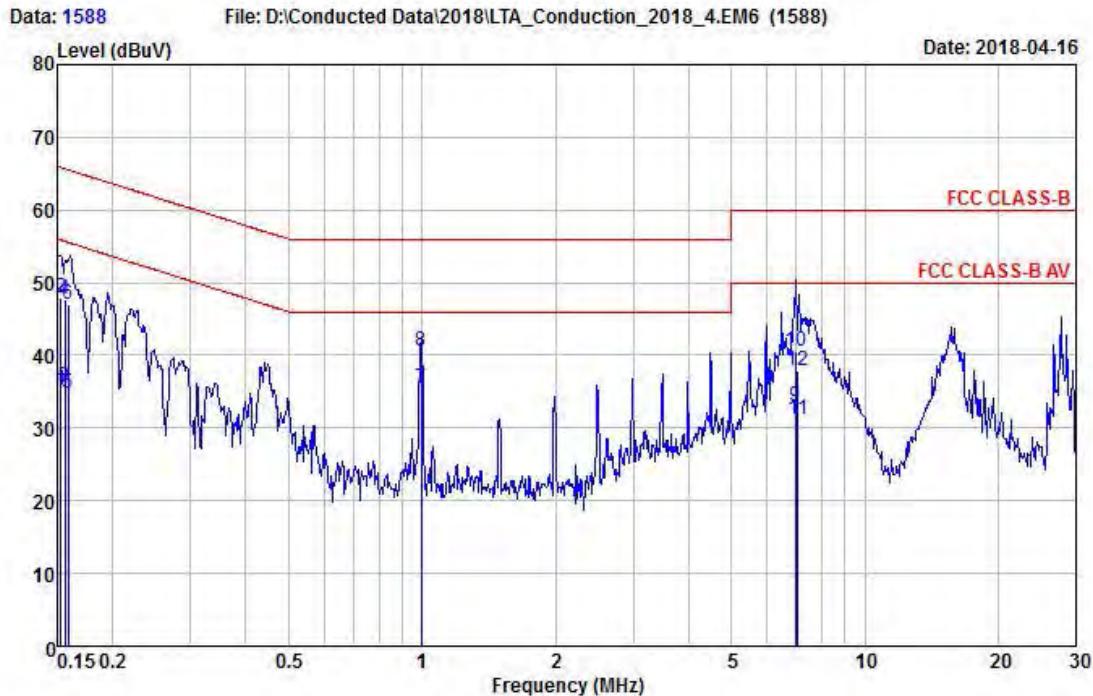
Freq MHz	RD QP		RD AV		C.F dB	Result QP		Result AV		Limit QP		Limit AV		Margin dB	
	dBuV	dBuV	dBuV	dBuV		dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dB	dB
0.443	20.82	10.19	19.50	19.50	40.32	29.69	57.01	47.01	47.01	16.69	17.32	16.69	17.32		
0.448	20.05	10.29	19.51	19.51	39.56	29.80	56.92	46.92	46.92	17.36	17.12	17.36	17.12		
0.995	26.92	22.15	19.53	19.53	46.45	41.68	56.00	46.00	46.00	9.55	4.32	9.55	4.32		
6.946	22.96	13.91	19.73	19.73	42.69	33.64	60.00	50.00	50.00	17.31	16.36	17.31	16.36		
6.971	29.27	22.50	19.73	19.73	49.00	42.23	60.00	50.00	50.00	11.00	7.77	11.00	7.77		
7.003	23.62	14.46	19.74	19.74	43.36	34.20	60.00	50.00	50.00	16.64	15.80	16.64	15.80		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - b(LOW) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
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449-822 Korea  
Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 b(LOW) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



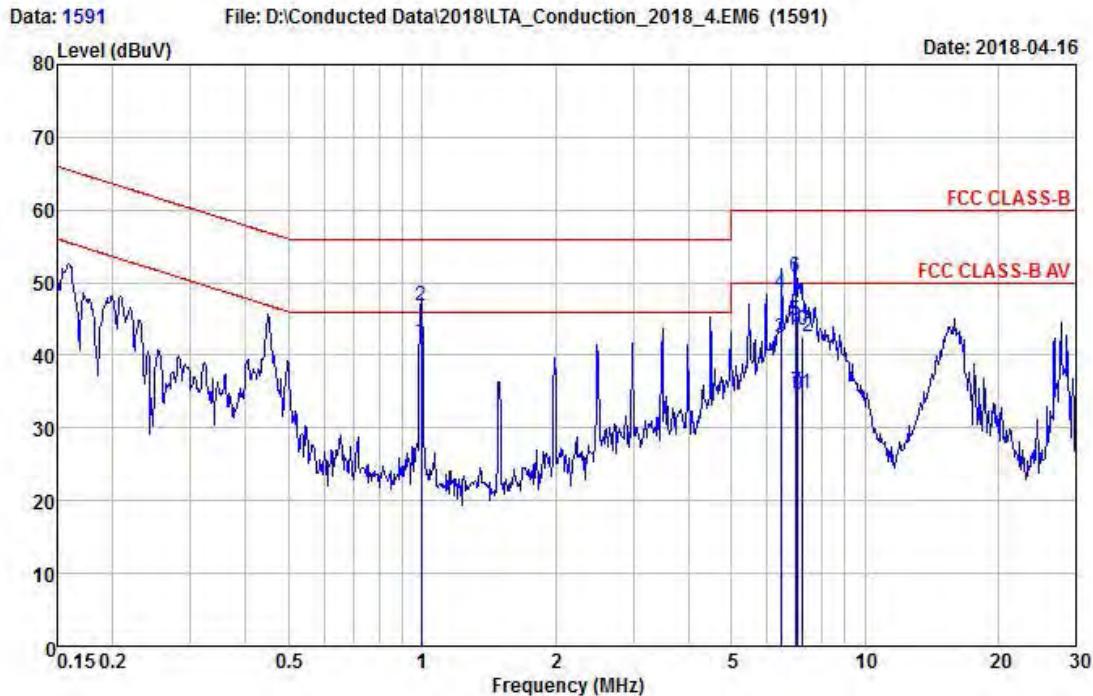
Freq MHz	RD QP dBuV	RD AV dBuV	C.F dB	Result QP dBuV	Result AV dBuV	Limit QP dBuV	Limit AV dBuV	Margin QP dB	Margin AV dB
0.153	28.44	15.68	19.49	47.93	35.17	65.83	55.83	17.90	20.66
0.156	28.27	16.26	19.49	47.76	35.75	65.67	55.67	17.91	19.92
0.159	27.61	15.33	19.49	47.10	34.82	65.51	55.51	18.41	20.69
0.995	21.14	15.90	19.52	40.66	35.42	56.00	46.00	15.34	10.58
6.974	20.87	13.24	19.72	40.59	32.96	60.00	50.00	19.41	17.04
7.064	18.24	11.44	19.73	37.97	31.17	60.00	50.00	22.03	18.83

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 b(MID) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
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Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 b(MID) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



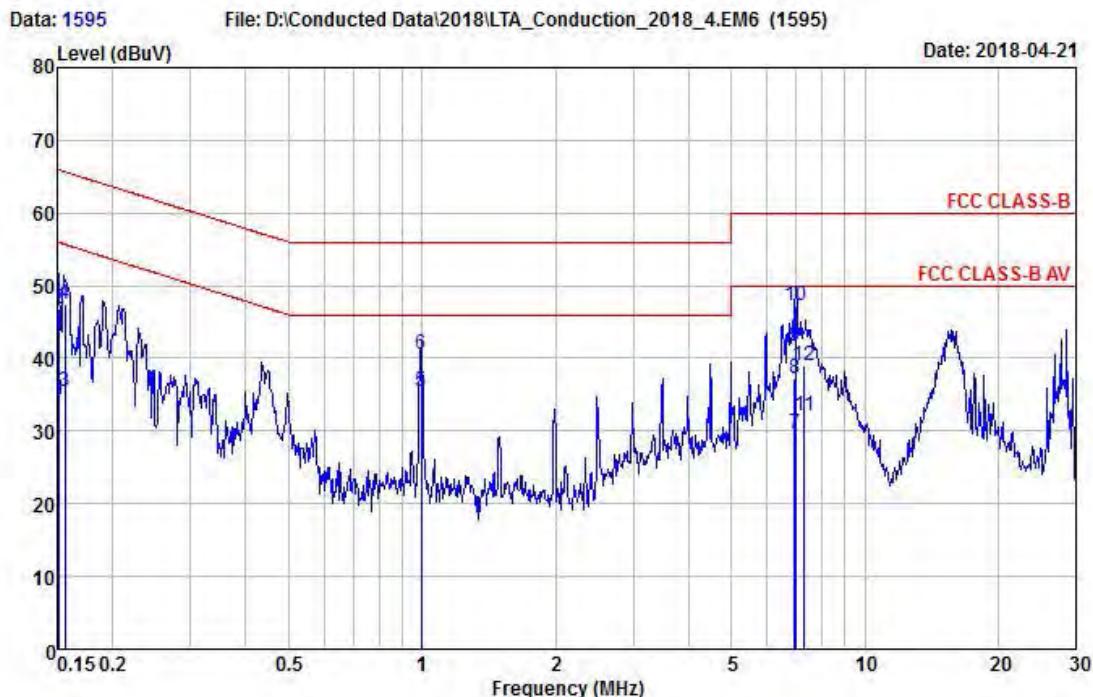
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit QP		Limit AV		Margin dB	Margin dB
	dBuV	dBuV	dBuV	dB	dBuV	dBuV			dBuV	dBuV	dBuV	dBuV		
0.996	27.34	22.47	19.53		46.87	42.00	56.00	46.00	9.13	4.00				
6.474	28.88	22.73	19.71		48.59	42.44	60.00	50.00	11.41	7.56				
6.971	31.15	25.06	19.73		50.88	44.79	60.00	50.00	9.12	5.21				
7.001	24.24	15.28	19.74		43.98	35.02	60.00	50.00	16.02	14.98				
7.066	23.76	14.85	19.74		43.50	34.59	60.00	50.00	16.50	15.41				
7.205	22.74	14.96	19.75		42.49	34.71	60.00	50.00	17.51	15.29				

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 b(MID) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 b(MID) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



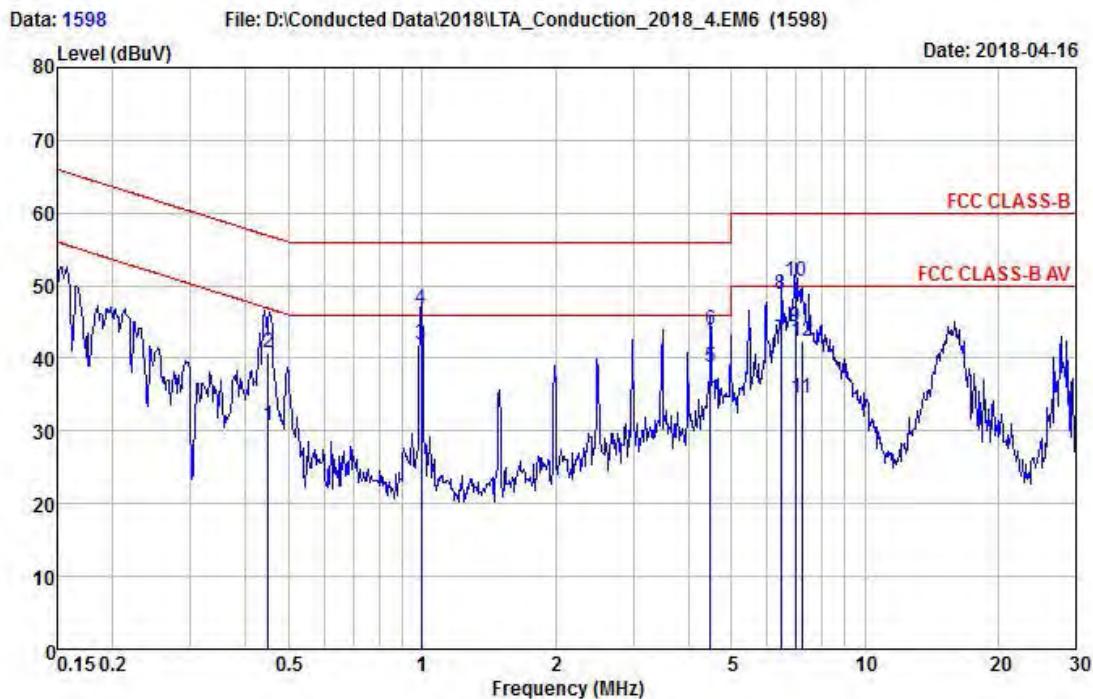
Freq MHz	RD QP		RD AV		C.F dB	Result QP dBuV	Result AV dBuV	Limit QP dBuV	Limit AV dBuV	Margin QP dB	Margin AV dB
	dBuV	dBuV	dBuV	dBuV							
0.152	27.20	14.83	19.49	19.49	46.69	34.32	65.91	55.91	19.22	21.59	
0.156	27.88	16.05	19.49	19.49	47.37	35.54	65.68	55.68	18.31	20.14	
0.995	21.15	15.93	19.52	19.52	40.67	35.45	56.00	46.00	15.33	10.55	
6.946	17.46	9.96	19.72	19.72	37.18	29.68	60.00	50.00	22.82	20.32	
6.968	27.49	21.90	19.72	19.72	47.21	41.62	60.00	50.00	12.79	8.38	
7.315	19.24	12.41	19.75	19.75	38.99	32.16	60.00	50.00	21.01	17.84	

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 b(HIGH) mode + LINE

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449-822 Korea  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 b(HIGH) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



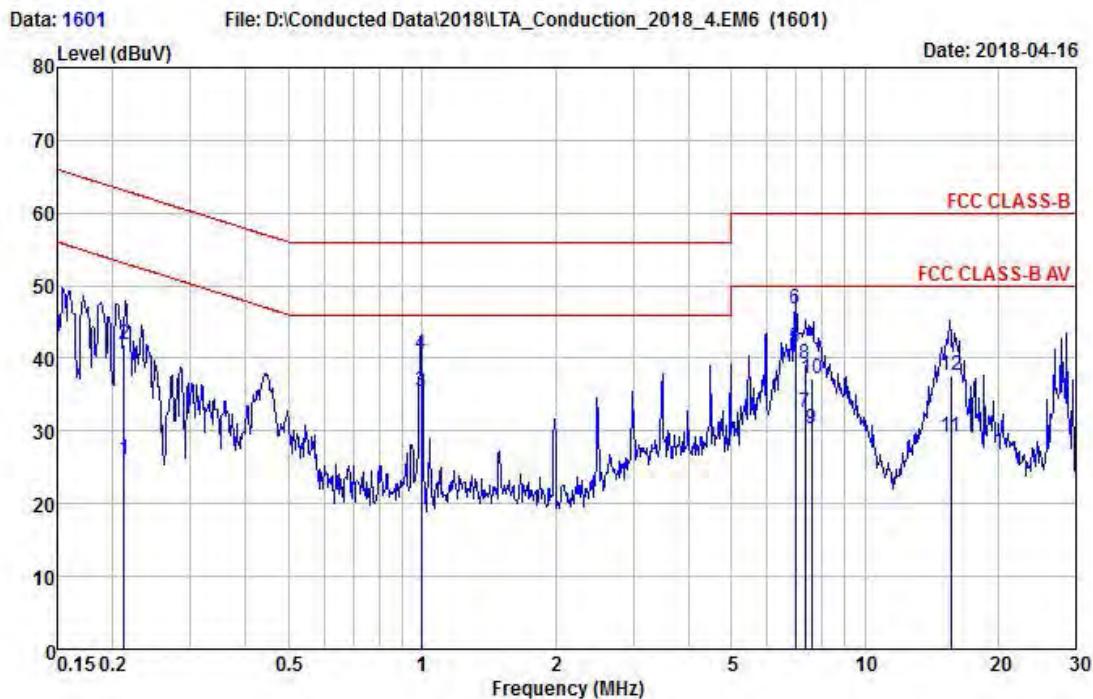
Freq MHz	RD QP dBuV		RD AV dBuV		C.F dB		Result QP dBuV	Result AV dBuV	Limit QP dBuV		Limit AV dBuV		Margin QP dB	Margin AV dB
	RD QP dBuV	RD AV dBuV	RD QP dBuV	RD AV dBuV	Result QP dB	Result AV dB			Limit QP dBuV	Limit AV dBuV	Limit QP dBuV	Limit AV dBuV		
0.449	21.30	11.34	19.51	19.51	40.81	30.85	56.89	46.89	16.08	16.04	46.00	46.00	9.15	4.02
0.996	27.32	22.45	19.53	19.53	46.85	41.98	56.00	46.00	16.08	16.04	50.00	50.00	9.15	4.02
4.482	24.35	19.11	19.61	19.61	43.96	38.72	56.00	46.00	12.04	7.28	50.00	50.00	12.04	7.28
6.473	29.10	22.85	19.71	19.71	48.81	42.56	60.00	50.00	11.19	7.44	50.00	50.00	11.19	7.44
6.972	30.79	24.72	19.73	19.73	50.52	44.45	60.00	50.00	9.48	5.55	50.00	50.00	9.48	5.55
7.196	22.65	14.89	19.75	19.75	42.40	34.64	60.00	50.00	17.60	15.36	50.00	50.00	17.60	15.36

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 b(HIGH) mode + NEUTAL

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EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 b(HIGH) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



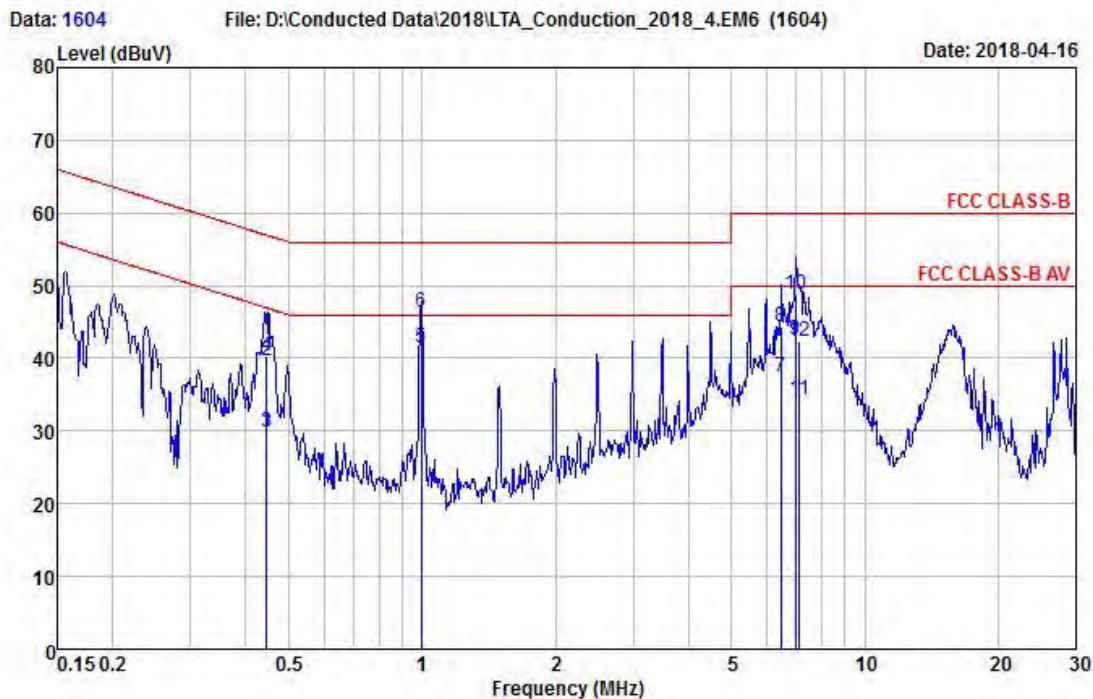
Freq MHz	RD QP		RD AV		C.F dB	Result QP		Result AV		Limit QP		Limit AV		Margin dB	
	dBuV	dBuV	dBuV	dBuV		dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dB	dB
0.212	22.48	6.56	19.49	41.97	26.05	63.13	53.13	21.16	27.08						
0.995	21.09	15.98	19.52	40.61	35.50	56.00	46.00	15.39	10.50						
6.967	27.12	21.65	19.72	46.84	41.37	60.00	50.00	13.16	8.63						
7.320	19.49	12.77	19.75	39.24	32.52	60.00	50.00	20.76	17.48						
7.576	17.42	10.54	19.76	37.18	30.30	60.00	50.00	22.82	19.70						
15.640	17.41	9.11	20.16	37.57	29.27	60.00	50.00	22.43	20.73						

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 g(LOW) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
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449-822 Korea  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 g(LOW) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



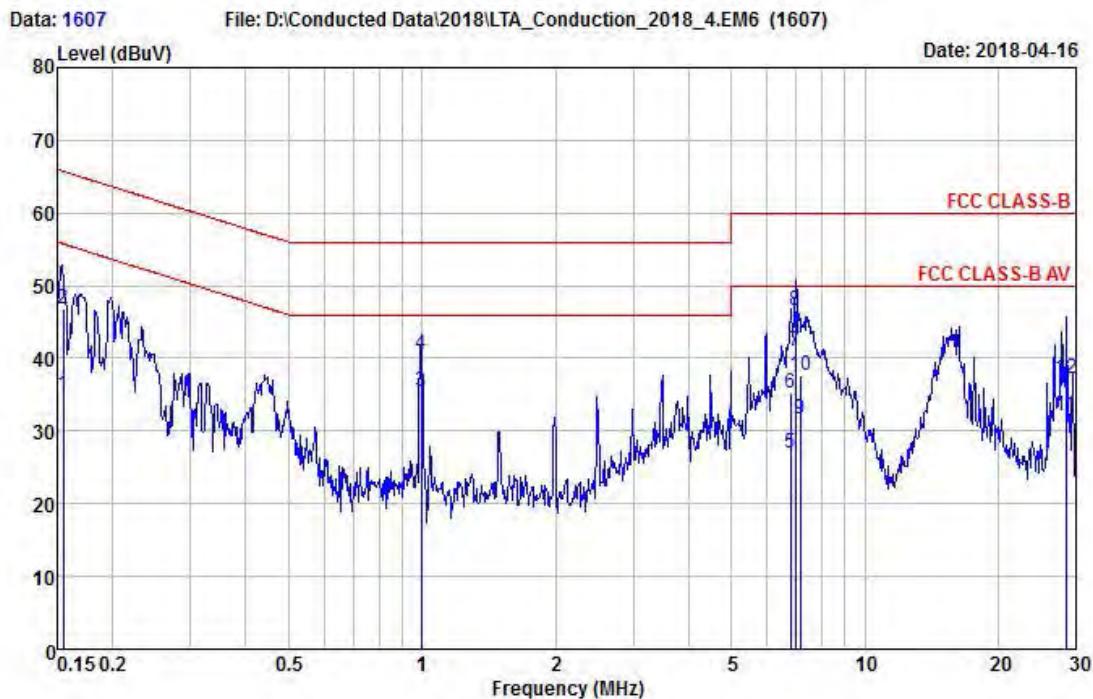
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit QP		Limit AV		Margin dB	Margin dB
	dBuV	dBuV	dBuV	dB	QP	AV			dBuV	dBuV	QP	AV		
0.445	20.09	10.31	19.50	19.50	39.59	29.81	56.97	46.97	17.38	17.38	17.16	17.16		
0.446	20.84	10.37	19.50	19.50	40.34	29.87	56.95	46.95	16.61	16.61	17.08	17.08		
0.996	26.80	22.01	19.53	19.53	46.33	41.54	56.00	46.00	9.67	9.67	4.46	4.46		
6.472	24.68	17.81	19.71	19.71	44.39	37.52	60.00	50.00	15.61	15.61	12.48	12.48		
6.971	29.12	22.86	19.73	19.73	48.85	42.59	60.00	50.00	11.15	11.15	7.41	7.41		
7.111	22.69	14.61	19.75	19.75	42.44	34.36	60.00	50.00	17.56	17.56	15.64	15.64		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 g(LOW) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
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Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 g(LOW) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



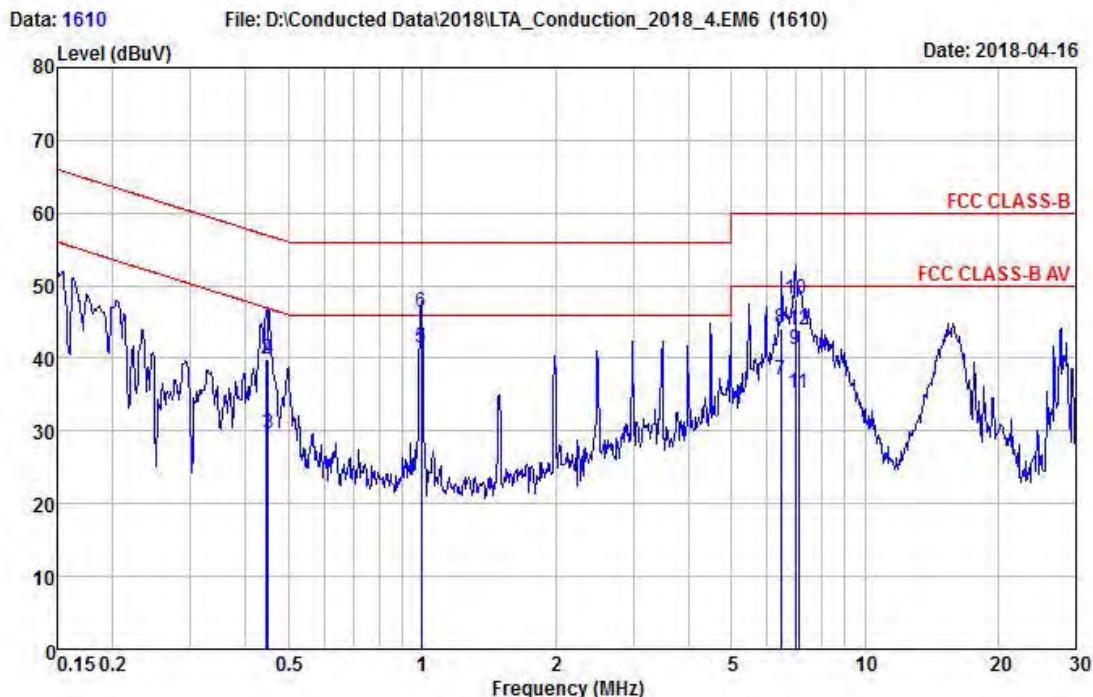
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit QP		Limit AV		Margin dB	Margin dB
	dBuV	dBuV	dBuV	dB	dBuV	dBuV			dBuV	dBuV	dB	dB		
0.155	27.20	15.49	19.49		46.69	34.98	65.74	55.74	19.05	20.76				
0.995	21.09	15.97	19.52		40.61	35.49	56.00	46.00	15.39	10.51				
6.807	15.48	7.15	19.71		35.19	26.86	60.00	50.00	24.81	23.14				
6.969	26.84	21.29	19.72		46.56	41.01	60.00	50.00	13.44	8.99				
7.162	17.82	11.83	19.74		37.56	31.57	60.00	50.00	22.44	18.43				
28.517	16.73	11.54	20.59		37.32	32.13	60.00	50.00	22.68	17.87				

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 g(MID) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
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449-822 Korea  
Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 g(MID) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



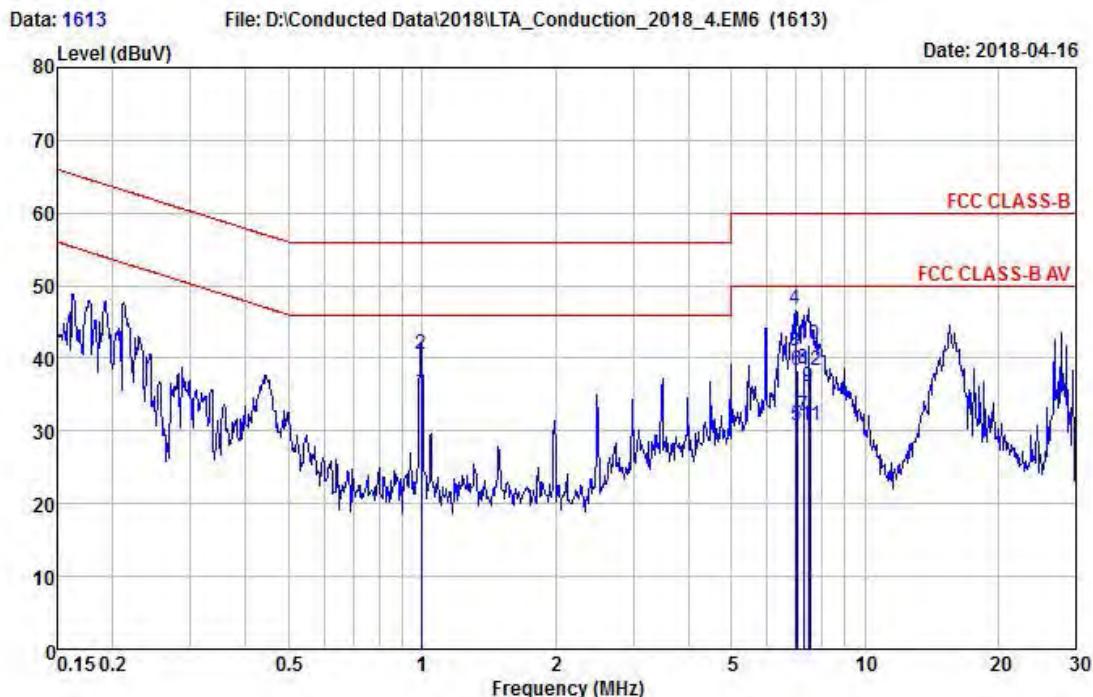
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit		Margin	
	dBuV	dBuV	dBuV	dB	QP	AV			QP	AV	dB	QP
0.446	20.32	10.36	19.50		39.82	29.86	56.95	46.95	17.13	17.09		
0.449	20.42	10.19	19.51		39.93	29.70	56.89	46.89	16.96	17.19		
0.996	26.77	21.98	19.53		46.30	41.51	56.00	46.00	9.70	4.49		
6.473	24.33	17.27	19.71		44.04	36.98	60.00	50.00	15.96	13.02		
6.971	28.37	21.39	19.73		48.10	41.12	60.00	50.00	11.90	8.88		
7.105	24.11	15.48	19.75		43.86	35.23	60.00	50.00	16.14	14.77		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 g(MID) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
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Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
 Test Mode : 802.11 g(MID) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



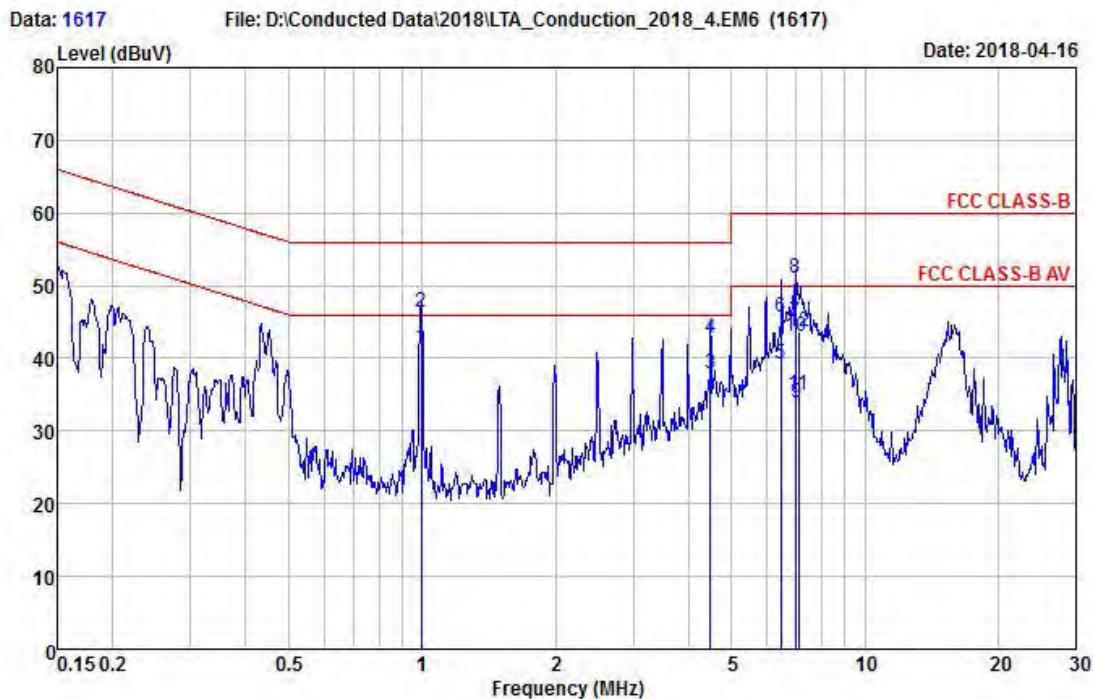
Freq MHz	RD QP dBuV		RD AV dBuV		C.F dB	Result QP dBuV	Result AV dBuV	Limit QP dBuV		Limit AV dBuV		Margin QP dB	Margin AV dB
	RD QP dBuV	RD AV dBuV	RD QP dBuV	RD AV dBuV				Limit QP dBuV	Limit AV dBuV	Limit QP dBuV	Limit AV dBuV		
0.995	21.10	16.01	19.52	40.62	35.53	56.00	46.00	15.38	10.47				
6.569	26.98	21.32	19.72	46.70	41.04	60.00	50.00	13.30	8.96				
7.024	18.66	11.03	19.73	38.39	30.76	60.00	50.00	21.61	19.24				
7.261	18.90	12.26	19.74	38.64	32.00	60.00	50.00	21.36	18.00				
7.466	22.10	16.41	19.76	41.86	36.17	60.00	50.00	18.14	13.83				
7.561	18.46	11.04	19.76	38.22	30.80	60.00	50.00	21.78	19.20				

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 g(HIGH) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
449-822 Korea  
Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 g(HIGH) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



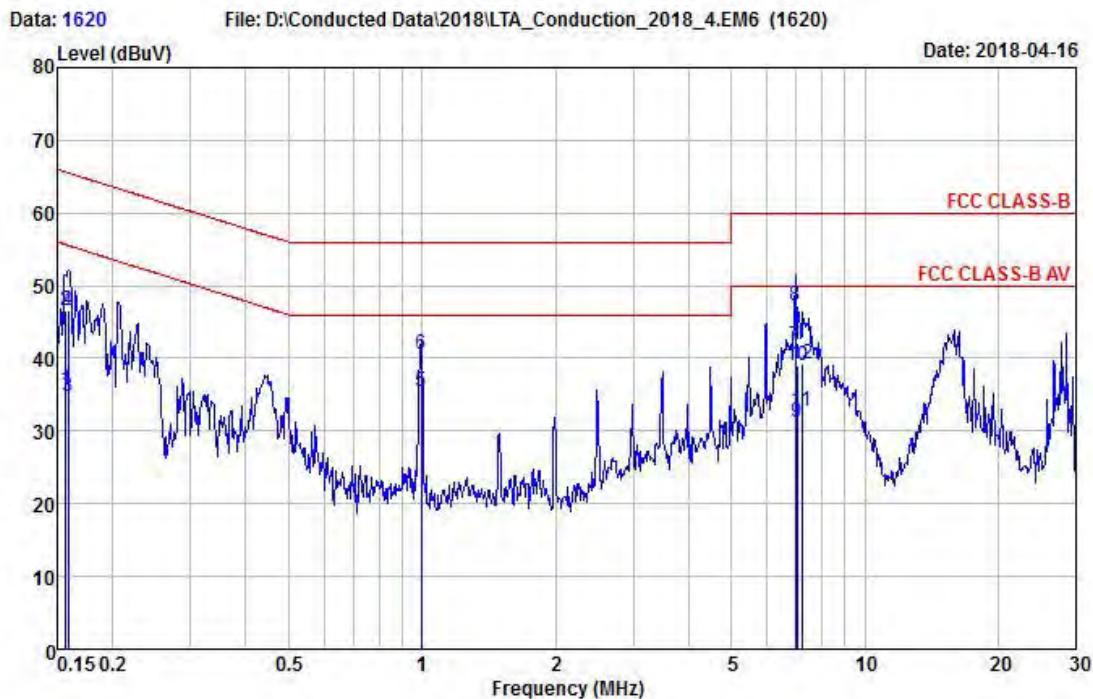
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit		Margin	
	dBuV	dBuV	dBuV	dB	QP	AV			QP	AV	QP	AV
0.995	26.82	22.03	19.53	19.53	46.35	41.56	56.00	56.00	46.00	46.00	9.65	4.44
4.480	23.16	18.32	19.61	19.61	42.77	37.93	56.00	56.00	46.00	46.00	13.23	8.07
6.469	26.03	19.47	19.71	19.71	45.74	39.18	60.00	60.00	50.00	50.00	14.26	10.82
6.968	31.36	25.33	19.73	19.73	51.09	45.06	60.00	60.00	50.00	50.00	8.91	4.94
6.996	23.19	14.14	19.73	19.73	42.92	33.87	60.00	60.00	50.00	50.00	17.08	16.13
7.105	23.89	15.22	19.75	19.75	43.64	34.97	60.00	60.00	50.00	50.00	16.36	15.03

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 g(HIGH) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
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Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 g(HIGH) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



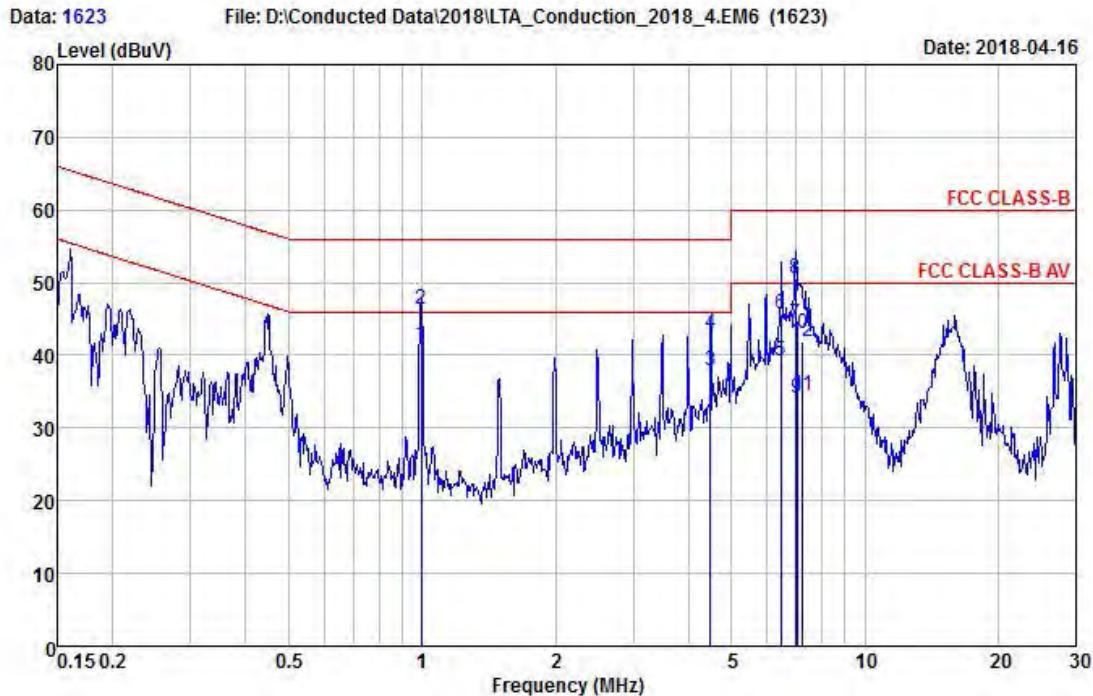
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit QP		Limit AV		Margin dB	Margin dB
	dBuV	dBuV	dBuV	dB	dBuV	dBuV			dBuV	dBuV	dBuV	dBuV		
0.157	27.16	16.22	19.49		46.65	35.71	65.63	55.63	18.98	19.92				
0.159	27.06	15.35	19.49		46.55	34.84	65.51	55.51	18.96	20.67				
0.995	21.06	16.01	19.52		40.58	35.53	56.00	46.00	15.42	10.47				
6.968	27.50	21.90	19.72		47.22	41.62	60.00	50.00	12.78	8.38				
7.033	19.34	11.57	19.73		39.07	31.30	60.00	50.00	20.93	18.70				
7.219	19.39	12.95	19.74		39.13	32.69	60.00	50.00	20.87	17.31				

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 n(LOW) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 n(LOW) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



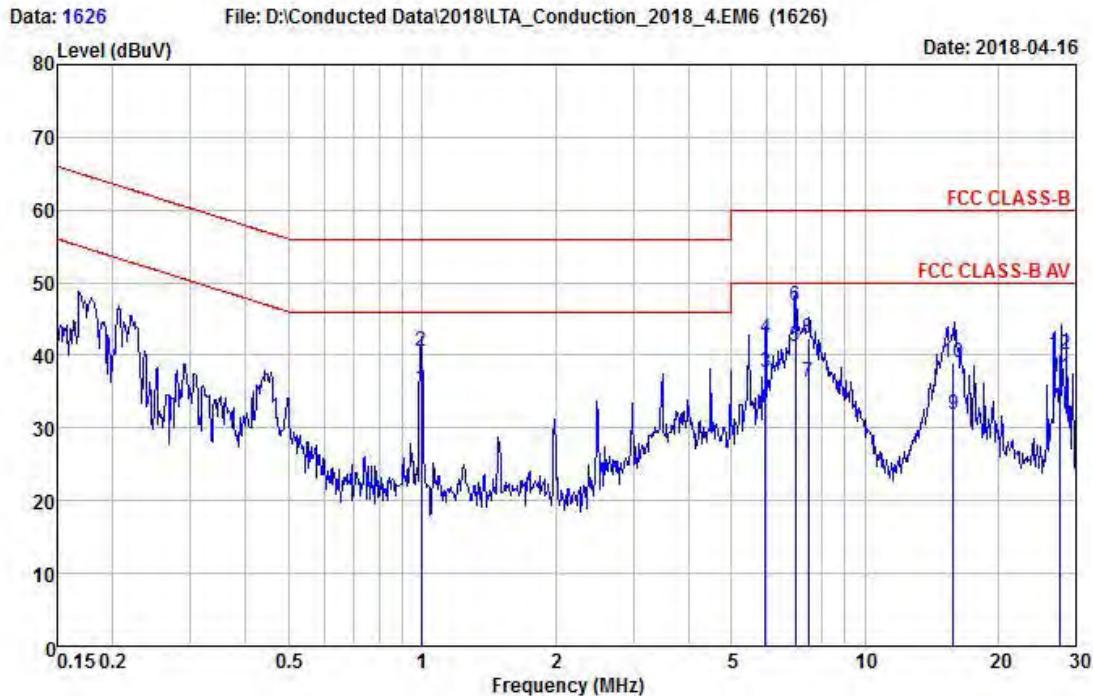
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit		Margin	
	dBuV	dBuV	dBuV	dB	QP	AV			QP	dBuV	AV	dB
0.996	26.75	21.95	19.53	19.53	46.28	41.48	56.00	56.00	46.00	46.00	9.72	4.52
4.479	23.32	18.26	19.61	19.61	42.93	37.87	56.00	56.00	46.00	46.00	13.07	8.13
6.470	26.08	19.51	19.71	19.71	45.79	39.22	60.00	60.00	50.00	50.00	14.21	10.78
6.969	30.83	24.52	19.73	19.73	50.56	44.25	60.00	60.00	50.00	50.00	9.44	5.75
7.039	23.24	14.42	19.74	19.74	42.98	34.16	60.00	60.00	50.00	50.00	17.02	15.84
7.238	22.07	14.69	19.75	19.75	41.82	34.44	60.00	60.00	50.00	50.00	18.18	15.56

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 n(LOW) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
449-822 Korea  
Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 n(LOW) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



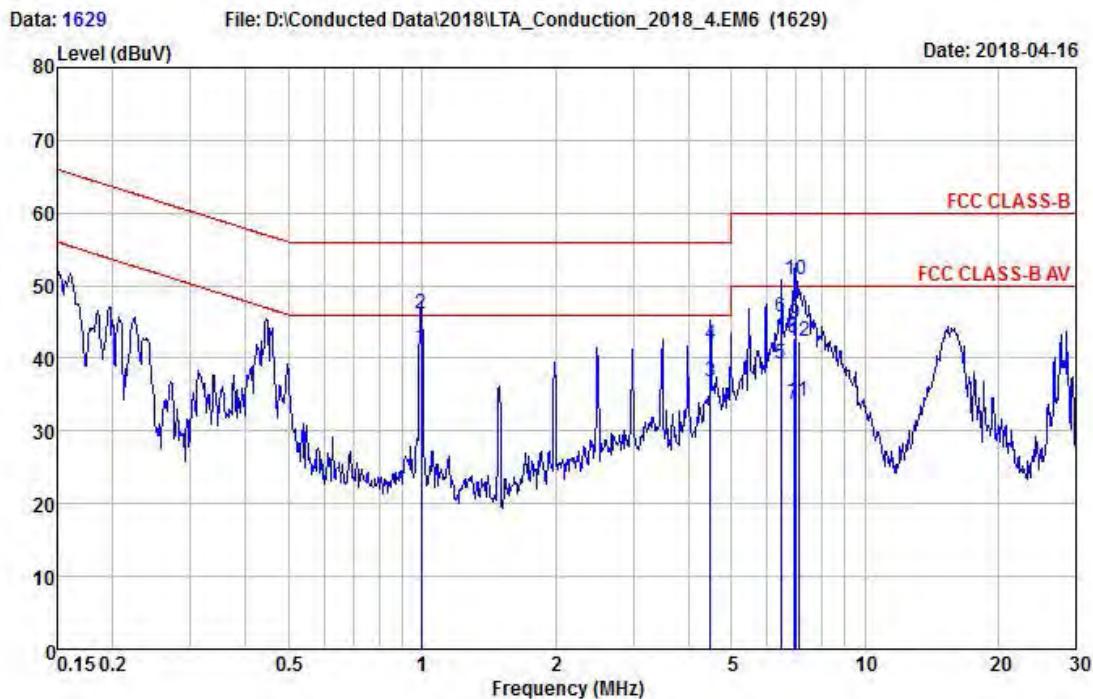
Freq MHz	RD QP		RD AV		C.F dB	Result dBuV	Result dBuV	Limit dBuV		Margin dB	
	QP	dBuV	AV	dBuV				QP	AV	QP	AV
0.995	21.07	16.02	19.52	40.59	35.54	56.00	46.00	15.41	10.46		
5.972	22.73	17.99	19.68	42.41	37.67	60.00	50.00	17.59	12.33		
6.966	27.13	21.51	19.72	46.85	41.23	60.00	50.00	13.15	8.77		
7.465	22.54	16.48	19.76	42.30	36.24	60.00	50.00	17.70	13.76		
15.837	18.90	11.64	20.17	39.07	31.81	60.00	50.00	20.93	18.19		
27.601	19.44	16.34	20.56	40.00	36.90	60.00	50.00	20.00	13.10		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 n(MID) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
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449-822 Korea  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 n(MID) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



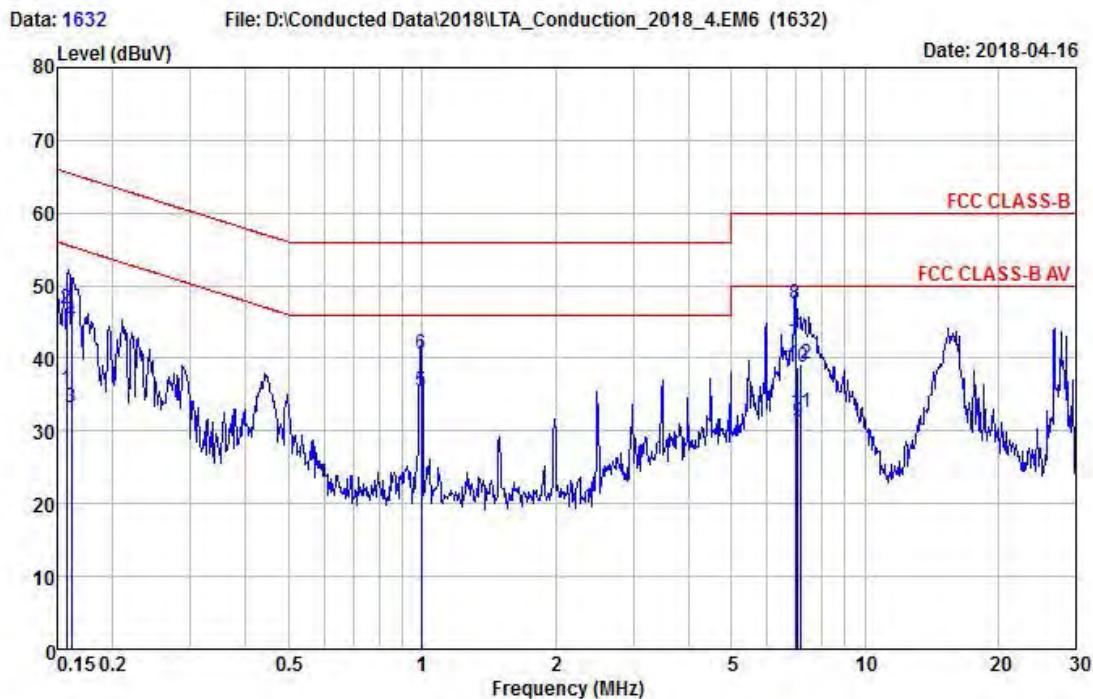
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit		Margin	
	dBuV	dBuV	dBuV	dB	QP	AV			QP	AV	QP	AV
0.996	26.68	21.89	19.53		46.21	41.42	56.00	46.00	9.79	4.58		
4.481	22.35	17.14	19.61		41.96	36.75	56.00	46.00	14.04	9.25		
6.471	25.93	19.49	19.71		45.64	39.20	60.00	50.00	14.36	10.80		
6.906	23.03	13.93	19.73		42.76	33.66	60.00	50.00	17.24	16.34		
6.969	31.00	25.00	19.73		50.73	44.73	60.00	50.00	9.27	5.27		
7.081	22.64	14.27	19.74		42.38	34.01	60.00	50.00	17.62	15.99		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 n(MID) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
449-822 Korea  
Tel: +82-31-3236008, 9  
Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 n(MID) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



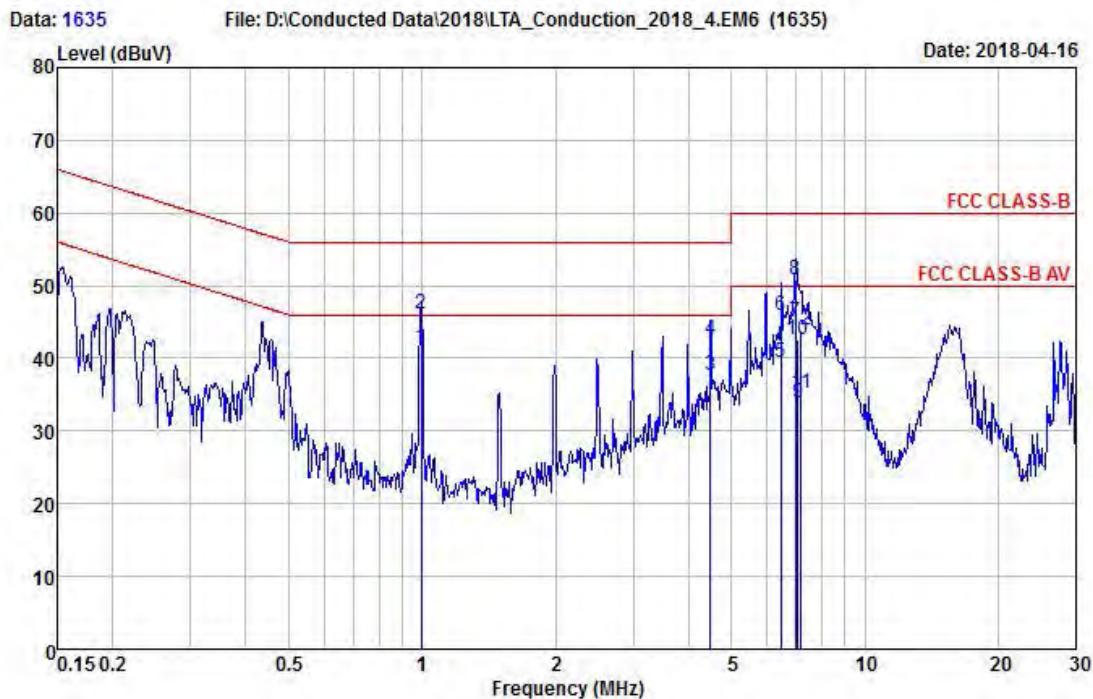
Freq MHz	RD QP		RD AV		C.F dB	Result QP		Result AV		Limit QP		Limit AV		Margin dB	
	dBuV	dBuV	dBuV	dBuV		dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dBuV	dB	dB
0.157	27.31	16.10	19.49	46.80	35.59	65.60	55.60	18.80	20.01						
0.162	25.55	13.72	19.49	45.04	33.21	65.38	55.38	20.34	22.17						
0.995	21.03	15.99	19.52	40.55	35.51	56.00	46.00	15.45	10.49						
6.968	27.83	22.21	19.72	47.55	41.93	60.00	50.00	12.45	8.07						
7.070	18.96	11.43	19.73	38.69	31.16	60.00	50.00	21.31	18.84						
7.187	19.45	12.90	19.74	39.19	32.64	60.00	50.00	20.81	17.36						

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 n(HIGH) mode + LINE

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : LINE  
 Test Mode : 802.11 n(HIGH) Test Power : 110 / 60  
 Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



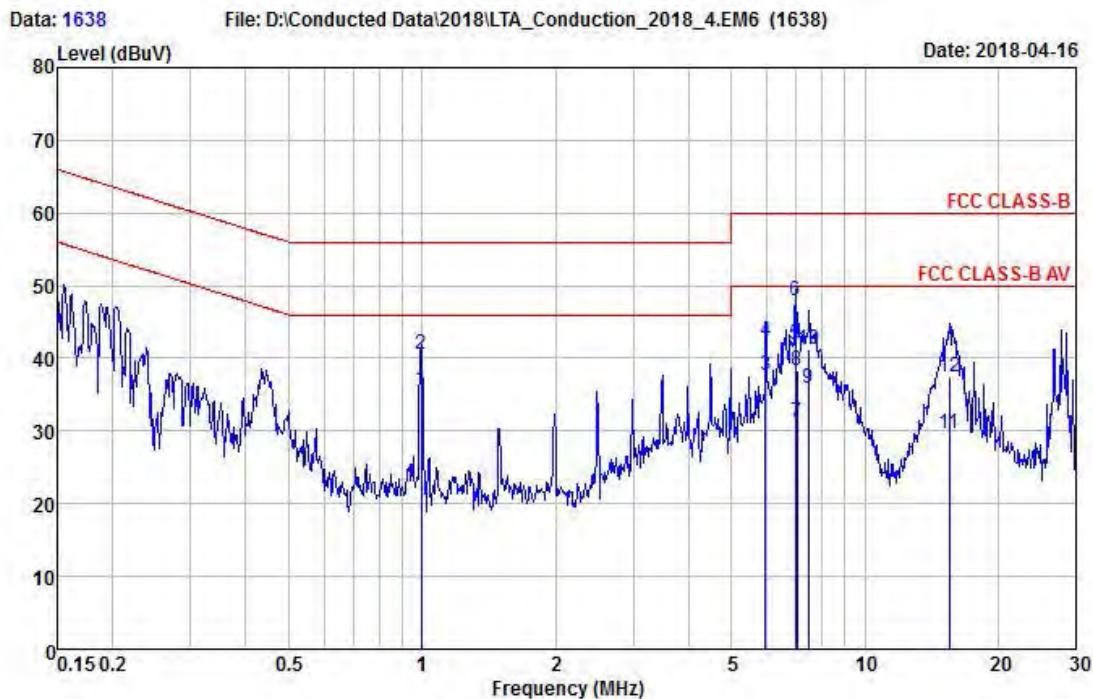
Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit		Margin	
	dBuV	dBuV	dBuV	dB	QP	AV			QP	dBuV	AV	dB
0.996	26.69	21.90	19.53		46.22	41.43	56.00	46.00	46.00	46.00	9.78	4.57
4.480	23.00	18.04	19.61		42.61	37.65	56.00	46.00	46.00	46.00	13.39	8.35
6.470	26.12	19.69	19.71		45.83	39.40	60.00	50.00	50.00	50.00	14.17	10.60
6.968	31.15	25.35	19.73		50.88	45.08	60.00	50.00	50.00	50.00	9.12	4.92
7.060	22.75	14.03	19.74		42.49	33.77	60.00	50.00	50.00	50.00	17.51	16.23
7.169	24.06	15.50	19.75		43.81	35.25	60.00	50.00	50.00	50.00	16.19	14.75

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

Conducted Emissions - 802.11 n(HIGH) mode + NEUTAL

4, Songjuro 236 Beon-gil, Yangji-myeon  
Cheoin-gu, Youngin-si, Gyeonggi-do  
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Fax: +82-31-3236010

EUT / Model No. : T20 Phase : NEUTRAL  
Test Mode : 802.11 n(HIGH) Test Power : 110 / 60  
Temp. / Humi. : 22 / 36 Test Engineer : YEON J H



Freq MHz	RD QP		RD AV		C.F		Result dBuV	Result dBuV	Limit		Margin	
	dBuV	dBuV	dBuV	dB	QP	AV			QP	AV	QP	AV
0.995	21.09	16.05	19.52		40.61	35.57	56.00	46.00	15.39	10.43		
5.971	22.76	17.96	19.68		42.44	37.64	60.00	50.00	17.56	12.36		
6.968	28.21	22.24	19.72		47.93	41.96	60.00	50.00	12.07	8.04		
7.045	18.65	11.40	19.73		38.38	31.13	60.00	50.00	21.62	18.87		
7.464	21.47	16.06	19.76		41.23	35.82	60.00	50.00	18.77	14.18		
15.506	17.35	9.45	20.15		37.50	29.60	60.00	50.00	22.50	20.40		

Remarks: C.F (Correction Factor) = Insertion loss + Cable loss + Pulse Limiter

**APPENDIX**  
**TEST EQUIPMENT USED FOR TESTS**

	<b>Use</b>	<b>Description</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Manufacturer</b>	<b>Interval</b>	<b>Last Cal. Date</b>
1	■	Signal Analyzer (9 kHz ~ 30 GHz)	FSV30	100757	R&S	1 year	2017-09-07
2		SYNTHESIZED CW GENERATOR	83711B	US34490456	HP	1 year	2018-03-19
3		Attenuator (3 dB)	8491A	37822	HP	1 year	2017-09-07
4		Attenuator (10 dB)	8491A	63196	HP	1 year	2017-09-07
5	■	EMI Test Receiver (~7 GHz)	ESCI7	100722	R&S	1 year	2017-09-07
6	■	RF Amplifier (~1.3 GHz)	8447D OPT 010	2944A07684	HP	1 year	2017-09-07
7	■	RF Amplifier (1~26.5 GHz)	8449B	3008A02126	HP	1 year	2018-03-21
8	■	Horn Antenna (1~18 GHz)	3115	00114105	ETS	2 year	2016-08-04
9		DRG Horn (Small)	3116B	81109	ETS-Lindgren	2 year	2016-05-03
10	■	DRG Horn (Small)	3116B	133350	ETS-Lindgren	2 year	2016-05-03
11	■	TRILOG Antenna	VULB 9160	9160-3237	SCHWARZBECK	2 year	2017-04-17
12		Temp.Humidity Data Logger	SK-L200TH II A	00801	SATO	1 year	2017-11-23
13		DC Power Supply	6674A	3637A01657	Agilent	-	-
14	■	Power Meter	EPM-441A	GB32481702	HP	1 year	2018-03-20
15	■	Power Sensor	8481A	3318A94972	HP	1 year	2017-12-30
16		Audio Analyzer	8903B	3729A18901	HP	1 year	2017-09-07
17		Modulation Analyzer	8901B	3749A05878	HP	1 year	2017-09-07
18		TEMP & HUMIDITY Chamber	YJ-500	LTAS06041	JinYoung Tech	1 year	2017-09-07
19		Stop Watch	HS-3	812Q08R	CASIO	2 year	2018-03-21
20		LISN	KNW-407	8-1430-1	Kyoritsu	1 year	2017-09-07
21		Two-Lime V-Network	ESH3-Z5	893045/017	R&S	1 year	2018-03-20
22		Highpass Filter	WHKX1.5/15G-10SS	74	Wainwright Instruments	1 year	2018-03-20
23		Highpass Filter	WHKX3.0/18G-10SS	118	Wainwright Instruments	1 year	2018-03-20
24		OSP120 BASE UNIT	OSP120	101230	R&S	1 year	2018-03-21
25	■	Signal Generator(100 kHz ~ 40 GHz)	SMB100A	177621	R&S	1 year	2018-03-20
26		Vector Signal Generator(9kHz ~ 6 GHz)	SMBV100A	255081	R&S	1 year	2018-03-20
27		Signal Analyzer (10 Hz ~ 40 GHz)	FSV40	101367	R&S	1 year	2018-03-21