Prüfbericht-Nr.: *Test Report No.:*	**50086251 002**	**Auftrags-Nr.:** *Order No.:*	164094535	**Seite 1 von 26** *Page 1 of 26*
Kunden-Referenz-Nr.: *Client Reference No.:*	N/A	**Auftragsdatum:** *Order date:*	24.05.2017	
Auftraggeber: *Client:*	**Sanford, L.P. dba Dymo** 3 Glenlake Parkway, NE Atlanta GA 30328, USA			
Prüfgegenstand: *Test item:*	Label maker			
Bezeichnung / Typ-Nr.: *Identification / Type No.:*	LabelWriter Wireless			
Auftrags-Inhalt: *Order content:*	FCC & IC			
Prüfgrundlage: *Test specification:*	CFR47 FCC Part15: Subpart C Section 15.247 CFR47 FCC Part15: Subpart C Section 15.207 CFR47 FCC Part15: Subpart C Section 15.209 CFR47 FCC Part2: Section 2.1091		RSS-247 Issue 2 February 2017 RSS-GEN Issue 4 November 2014 RSS-102 Issue 5 March 2015	

Wareneingangsdatum: *Date of receipt:*	24.05.2017
Prüfmuster-Nr.: *Test sample No.:*	A000537002-0001 A000537002-0002
Prüfzeitraum: *Testing period:*	24.05.2017 - 10.07.2017
Ort der Prüfung: *Place of testing:*	EMTEK (Shenzhen) Co., Ltd.
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result*:*	PASS

Refer to Photo Document

geprüft von / *tested by:*			**kontrolliert von** / *reviewed by:*		
12.07.2017	Lin Lin / Project Manager		12.07.2017	Owen Tian / Technical Certifier	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other:*
FCC ID: RGDLWW
IC ID: 11034A-LWW

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: *Pass*

5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER
RESULT: *Pass*

5.1.3 POWER SPECTRAL DENSITY
RESULT: *Pass*

5.1.4 6DB BANDWIDTH
RESULT: *Pass*

5.1.5 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH
RESULT: *Pass*

5.1.6 RADIATED SPURIOUS EMISSION
RESULT: *Pass*

5.1.7 CONDUCTED EMISSION ON AC MAINS
RESULT: *Pass*

Table of Contents

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendixes:
Appendix A: Test data of 2.4GHz band WiFi

2. Test Sites

2.1 Test Facilities

EMTEK (Shenzhen) Co., Ltd.
Address: Bldg. 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China.

FCC Registration No.: 406365
IC Registration No.: 4480A-2

Note: The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Radio Test and Measurement Equipment

Radio Spectrum						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal Analyzer	Agilent	N9010A	My53470879	May.27, 2017	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	FSV40	132.1-3008K39-100967-AP	May.27, 2017	1 Year
3.	Power Analyzer	Agilent	PS-X10-200	N/A	May.27, 2017	1 Year
4.	Test Accessories	Agilent	PS-X10-100	N/A	May.27, 2017	1 Year
5.	Cable	Agilent	N/A	3#	May.27, 2017	1 Year
6.	Cable	Agilent	N/A	5#	May.27, 2017	1 Year
Spurious Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	101414	May.27, 2017	1 Year
2.	Loop Antenna	Schwarzbeck	FMZB 1519	1519-012	May.27, 2017	1 Year
3.	Pre-Amplifier	LUNAR-EM	LNA30M3G-25	J10100000071	May.27, 2017	1 Year
4.	Bilog Antenna	Schwarzbeck	VULB9163	660	May 28, 2017	1 Year
5.	Cable	H+B	NmSm-05-C15052		May 28, 2017	1 Year
6.	Cable	H+B	NmSm-2-C15201		May 28, 2017	1 Year
7.	Cable	H+B	NmNm-7-C15702		May 28, 2017	1 Year
8.	EMI Test Receiver	Rohde & Schwarz	FSV40	132.1-3008K39-100967-AP	May.27, 2017	1 Year
9.	Pre-Amplifier	Lunar EM	LNA1G18-48	J101113101000 1	May.27, 2017	1 Year
10.	Pre-Amplifier	Lunar EM	LNA18G26-40	J101213101000 1	May.27, 2017	1 Year
11.	Horn Antenna	Schwarzbeck	BBHA 9120	1178	May 28, 2017	1 Year
12.	Horn Antenna	Schwarzbeck	BBHA 9170	RS1307229170547	May 28, 2017	1 Year
13.	Horn Antenna	AHS/USA	SAS-573	184	May 28, 2017	1 Year
14.	Cable	H+B	SAC-40G-1	414	May 28, 2017	1 Year
15.	Cable	H+B	SUCOFLEX104	MY14871/4	May 28, 2017	1 Year

16.	Cable	H+B	BLU18A-NmSm-6500	D8501	May 28, 2017	1 Year
17.	Cable	A.H	SAC-40G-1	413	May 28, 2017	1 Year
Conducted Emissions						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	26115-010-0027	May 27, 2017	1 Year
2.	L.I.S.N.	Rohde & Schwarz	ENV216	101161	May 27, 2017	1 Year

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Uncertainty of Measurement

The value of the measurement uncertainty of each parameter is listed as below:

Table 2: Measurement Uncertainty

Test Item	**Uncertainty**
RF Output Power	±1.5 dB
Power Spectral Density	±3.0 dB
Frequency Error	±3.3%
Occupied Channel Bandwidth	±5%
Conducted Spurious Emissions	±3.0 dB
Radiated Spurious Emissions	±3.7dB (below 30MHz) ±3.78dB (30MHz~1GHz) ±4.46dB (1~6GHz) ±4.96dB (6~18GHz)
Conducted Emissions	±2.9dB
Temperature	±3.2%
Humidity	±2.5%

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The EMTEK (Shenzhen) Co., Ltd. Test facility located at Bldg. 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a Wireless Label printer which that support IEEE 802.11 a/b/g/n protocols.

Note: This report is for 2.4GHz Band only.

For details refer to user manual and circuit diagram.

3.2 Ratings and System Details

Table 3: Technical Specification

Technical Specification	Value
Frequency Bands	2400-2483.5MHz 5150-5350MHz 5470-5725MHz for FCC 5470-5600MHz and 5650-5725MHz for IC 5725-5850MHz
Operating Frequency/Channels/Protocol	2412-2462MHz/11CH/802.11b/g/n-HT20 5180-5320MHz/8CH/802.11a/n-HT20 5500-5700MHz/11CH/802.11a/n-HT20 for FCC 5500-5580MHz/5CH/802.11a/n-HT20 for IC 5660-5700MHz/3CH/802.11a/n-HT20 for IC 5745-5825MHz/5CH/802.11a/n-HT20
Channel Spacing	5 MHz
Extreme Temperature Range	0~+40 ℃
Type of Product	Client Device without Radar Detection
TX Power Control (TPC)	Not Supported
Modulation	CCK, DSSS, OFDM
Antenna Number	1
Antenna Type	Internal antenna
Antenna Gain	2.4GHz band: 2.27dBi 5GHz bands: 5.18dBi
Operation Voltage	AC/DC Adapter operated Model: DYS602-240250W Input: 100-240Vac, 50/60Hz; Output: 24Vdc, 2.5A

Table 4: 2.4GHz Band channel and frequency

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

3.3 Independent Operation Modes

The basic operation modes are:

A. Tx, (2.4GHz Band, 802.11b/g/n)
   1. Lowest channel

2. Middle channel
3. Highest channel

B. Print, (WiFi operated)
C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Application Form
- Circuit Diagram
- Instruction Manual
- Photo Documents
- Technical Description
- Bill of Material
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emissions: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10:2013.

Table 5: 2.4GHz band Test channels

Test channels	CH1-2412/CH6-2437/CH11-2462

Table 6: Worst case test modes

Operating Mode	Worst Test Mode	
	Mode	Duty Cycle
802.11b	1 Mbit/s	>98%
802.11g	6 Mbit/s	>98%
802.11n-HT20	MCS0	>98%

4.3 Special Accessories and Auxiliary Equipment

Table 7: List of Accessories and Auxiliary Equipment

Description	**Manufacturer**	**Model**	**S/N**
Notebook	LENOVO	WB0205140E	WB06355728
USB Cable	Dymo	Shielded, Length: 100cm	--
Wireless Access Point	Cisco	AIR-CAP3702E-A-K9	FTX182276QD FCC ID: LDK102087 IC ID: 2461B-102087

4.4 Countermeasures to Achieve ERM Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF). No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

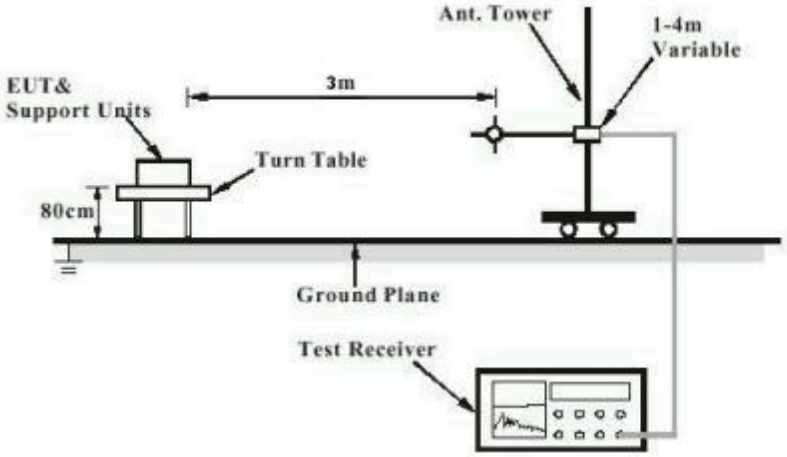


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

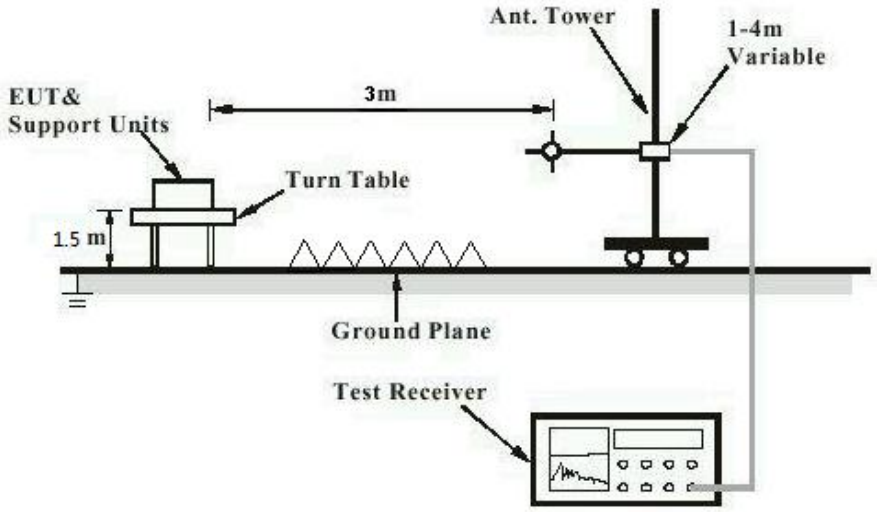


Diagram of Measurement Configuration for Mains Conduction Measurement

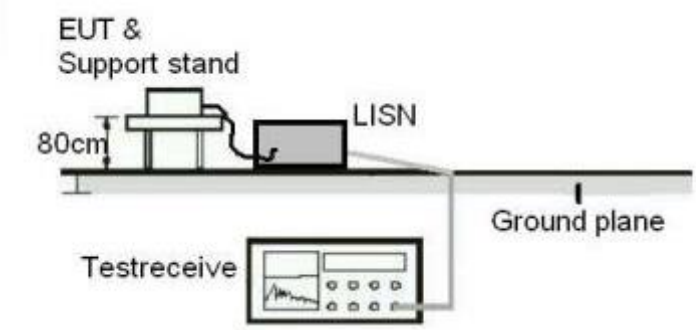
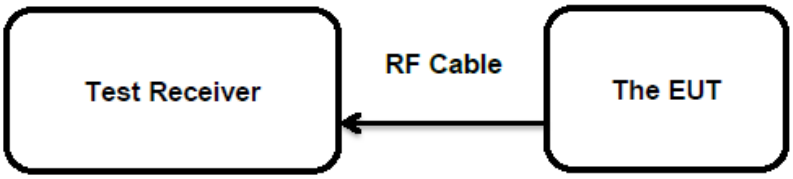


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Radio Test Requirement & Test Suites (2.4GHz Band)

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification
Test standard : FCC Part 15.203
RSS-GEN Clause8.3

The EUT has an Onboard Omni-directional antenna, the directional gain of antenna is 2.27dBi for 2.4GHz band, 5.18dBi for 5GHz band, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum peak conducted output power

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(b)(3) RSS-247 clause 5.4 (d)
Basic standard	:	ANSI C63.10:2013
Limits	:	< 1 Watt (30dBm) (Maximum peak conducted output power) *< 4 Watt (36dBm) (e.i.r.p.)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2017-06-16
Input voltage	:	120Vac, 60Hz
Operation mode	:	A
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

*Note: The maximum gain of antenna is less than 6dBi.

Refer to attached Appendix A for details of test data.

5.1.3 Power Spectral Density

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(e) RSS-247 clause 5.2 (b)
Basic standard	:	ANSI C63.10:2013
Limits	:	< 8dBm/3kHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2017-06-16
Input voltage	:	120Vac, 60Hz
Operation mode	:	A
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Refer to attached Appendix A for details of test data.

5.1.4 6dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(2) RSS-247 clause 5.2 (a)
Basic standard	:	ANSI C63.10:2013
Limits	:	> 500KHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2017-06-16
Input voltage	:	120Vac, 60Hz
Operation mode	:	A
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Refer to attached Appendix A for details of test data.

5.1.5 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) RSS-247 clause 5.5
Basic standard	:	ANSI C63.10:2013
Limits	:	20dBc (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2017-06-16 to 2017-06-19
Input voltage	:	120Vac, 60Hz
Operation mode	:	A
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Refer to attached Appendix A for details of test data.

5.1.6 Radiated Spurious Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) & FCC Part 15.205 & FCC Part 15.209 RSS-247 clause 3.3
Basic standard	:	ANSI C63.10:2013
Limits	:	FCC Part 15.209 RSS-GEN clause 8.9 and 8.10
Kind of test site	:	3m Semi-Anechoic Chamber (below 1GHz) 3m Anechoic Chamber (above 1GHz)

Test Setup

Date of testing	:	2017-06-16 to 2017-06-19
Input voltage	:	120Vac, 60Hz
Operation mode	:	A
Ambient temperature	:	23 ℃
Relative humidity	:	48 %
Atmospheric pressure	:	101 kPa

Refer to attached Appendix A for details of test data.

5.1.7 Conducted Emission on AC Mains

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.207 RSS-GEN clause 8.8
Basic standard	:	ANSI C63.10:2013
Frequency range	:	0.15 - 30MHz
Limits	:	FCC Part 15.207
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2017-06-07
Input voltage	:	120Vac, 60Hz
Operation mode	:	B
Earthing	:	Not connected
Ambient temperature	:	25 ℃
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Refer to attached Appendix A for details of test data.

Table of Contents

1. Maximum peak conducted output power

Channel (mode)	Channel Frequency (MHz)	RF Output Power		Limit (mW)	Result
		dBm	mW		
1 (802.11b)	2412	14.92	31.05	1000	Pass
6 (802.11b)	2437	14.67	29.31	1000	Pass
11 (802.11b)	2462	15.30	33.88	1000	Pass
1 (802.11g)	2412	16.75	47.32	1000	Pass
6 (802.11g)	2437	16.90	48.98	1000	Pass
11 (802.11g)	2462	17.53	56.62	1000	Pass
1 (802.11n-HT20)	2412	14.74	29.79	1000	Pass
6 (802.11n-HT20)	2437	15.65	36.73	1000	Pass
11 (802.11n-HT20)	2462	16.39	43.55	1000	Pass

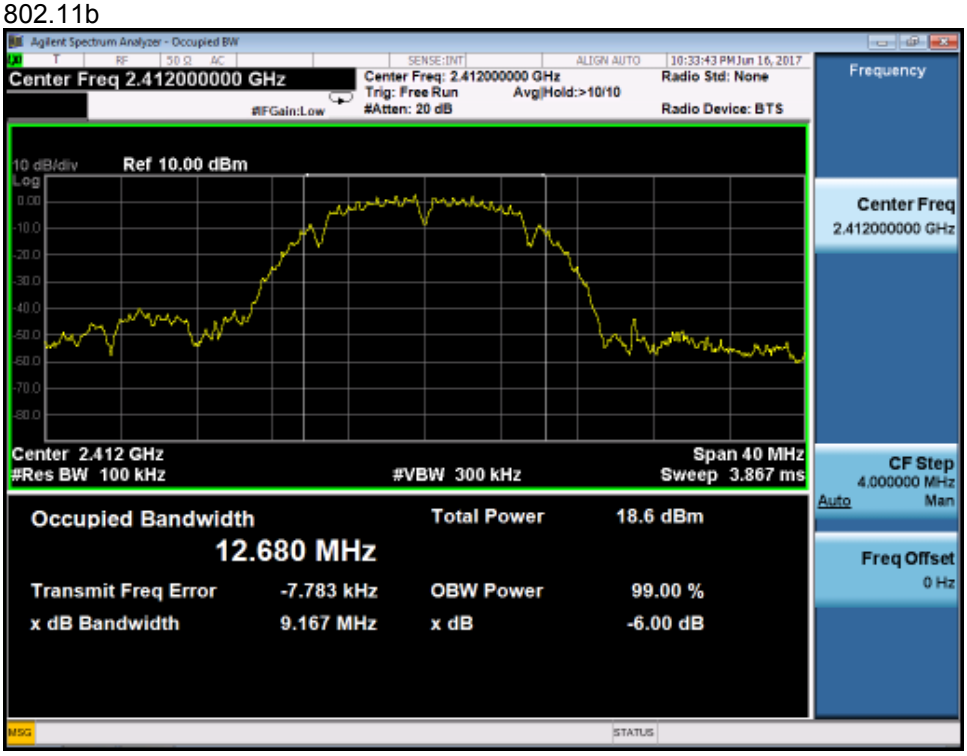
2. 6dB Bandwidth

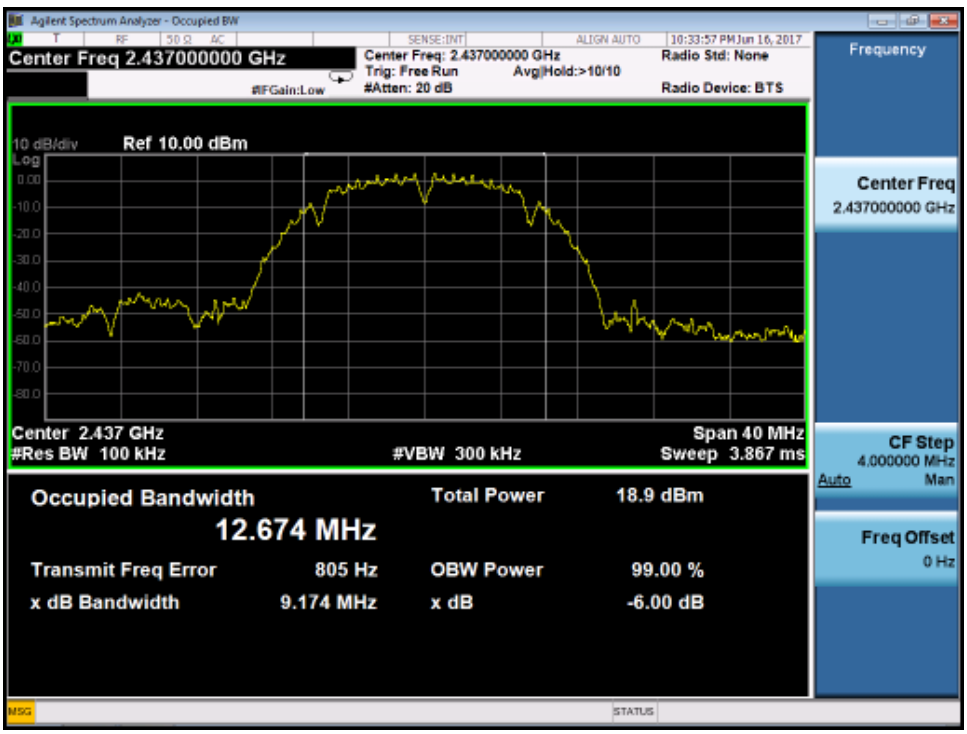
2.1 Test Datas of 6dB Bandwidth

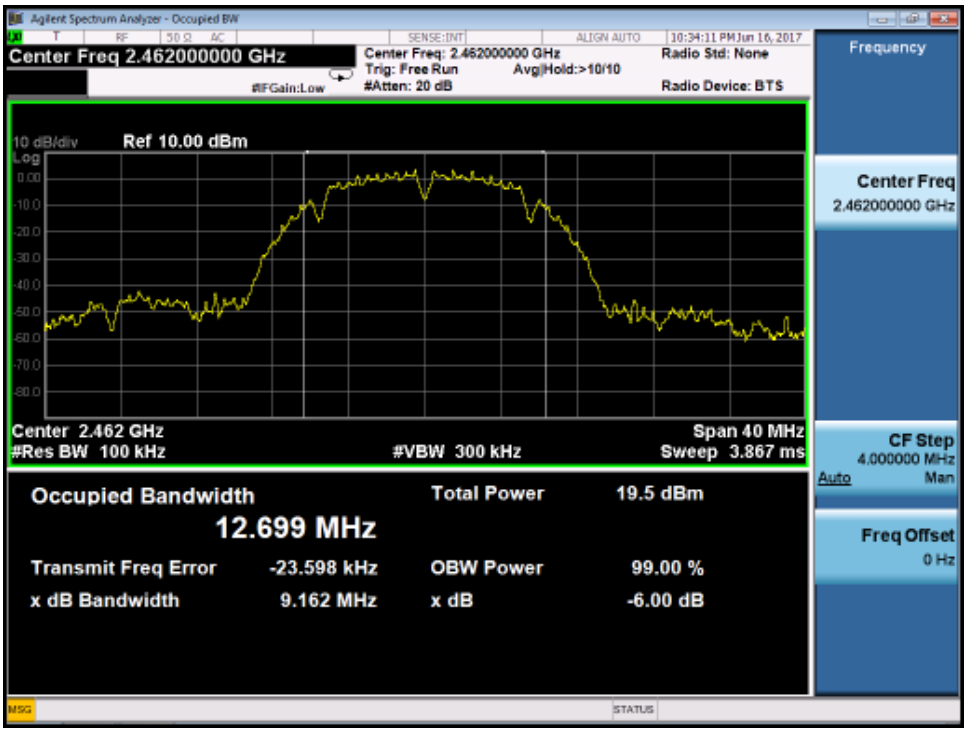
Channel (mode)	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
1 (802.11b)	2412	9.167	>0.5	Pass
6 (802.11b)	2437	9.174	>0.5	Pass
11 (802.11b)	2462	9.162	>0.5	Pass
1 (802.11g)	2412	15.170	>0.5	Pass
6 (802.11g)	2437	15.150	>0.5	Pass
11 (802.11g)	2462	15.160	>0.5	Pass
1 (802.11n-HT20)	2412	15.170	>0.5	Pass
6 (802.11n-HT20)	2437	15.130	>0.5	Pass
11 (802.11n-HT20)	2462	15.470	>0.5	Pass

2.2 Test Graphs of 6dB Bandwidth

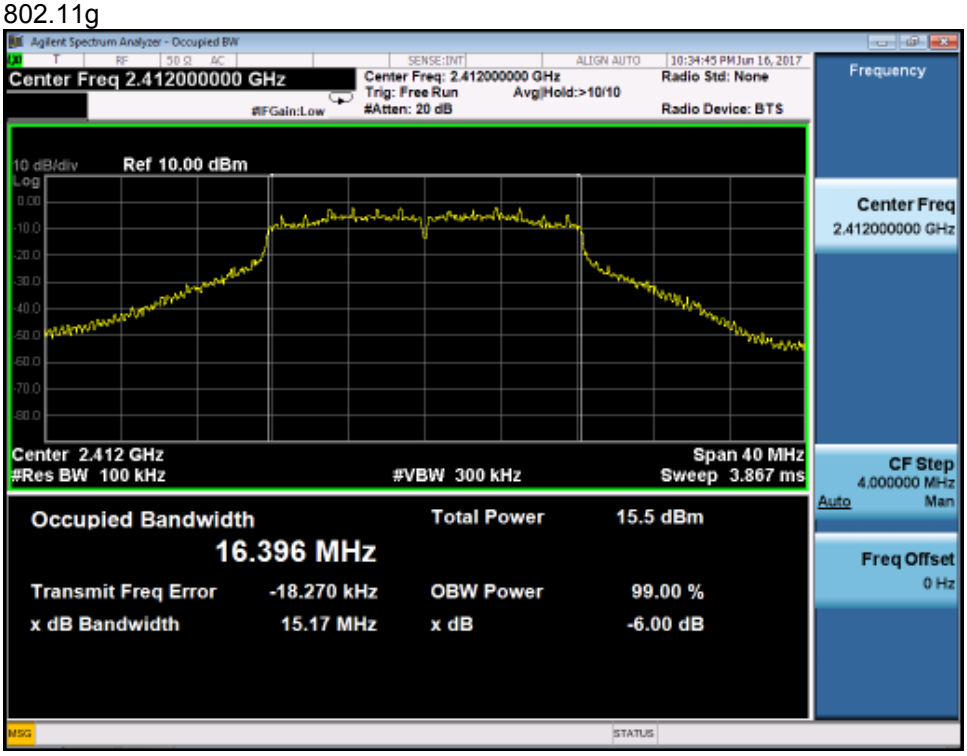
802.11b

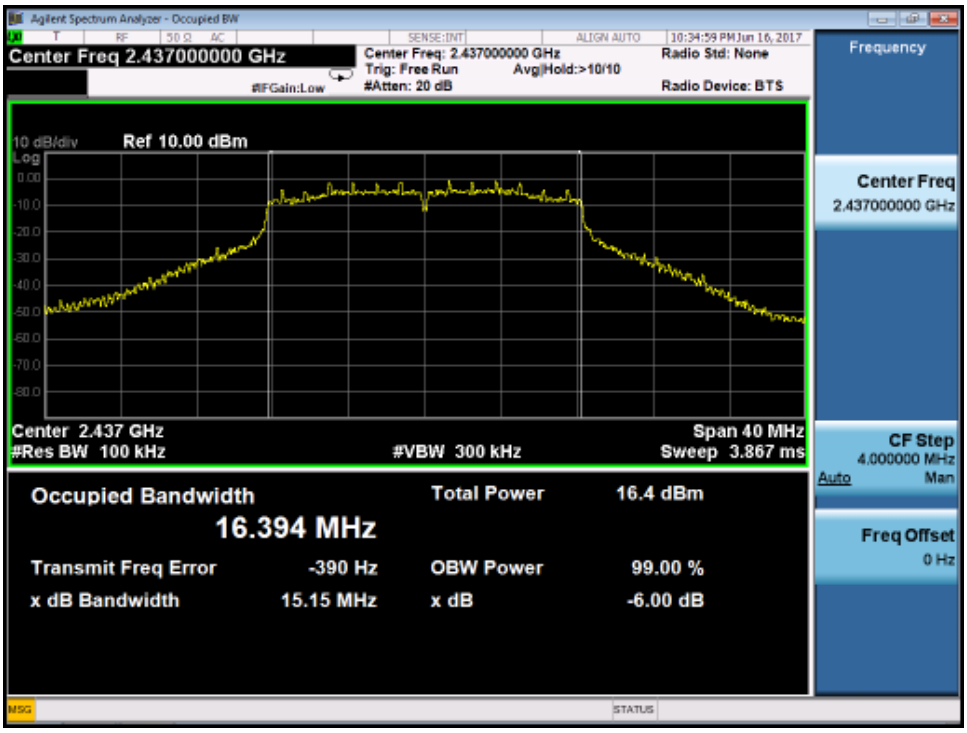


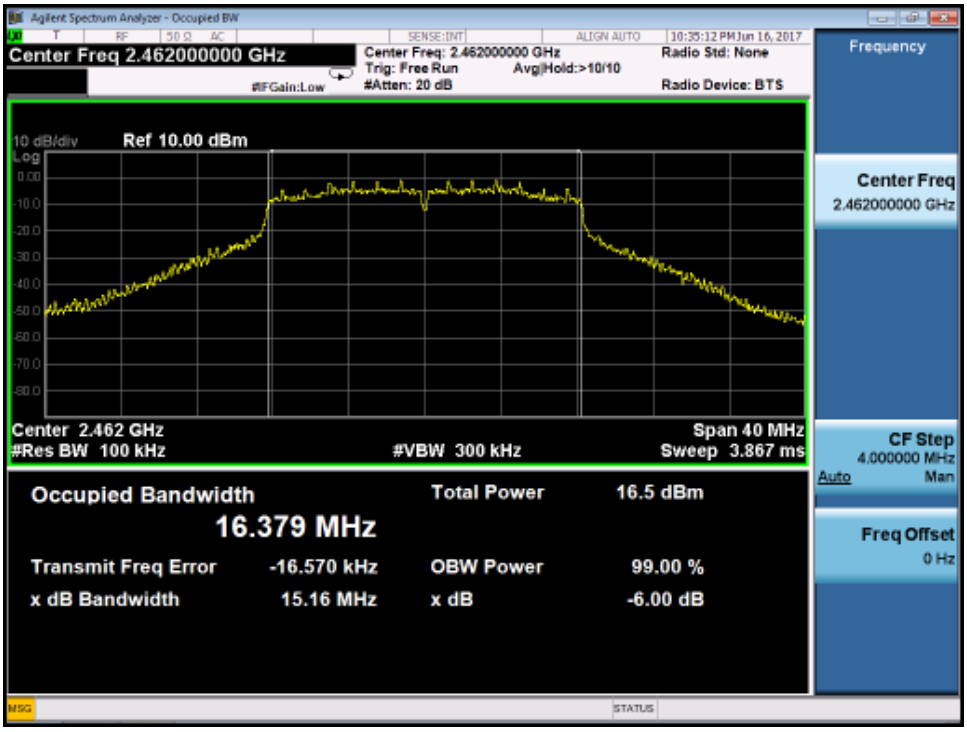



Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
10:34:11 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
12.699 MHz
Total Power
19.5 dBm
Transmit Freq Error
-23.598 kHz
OBW Power
99.00 %
x dB Bandwidth
9.162 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

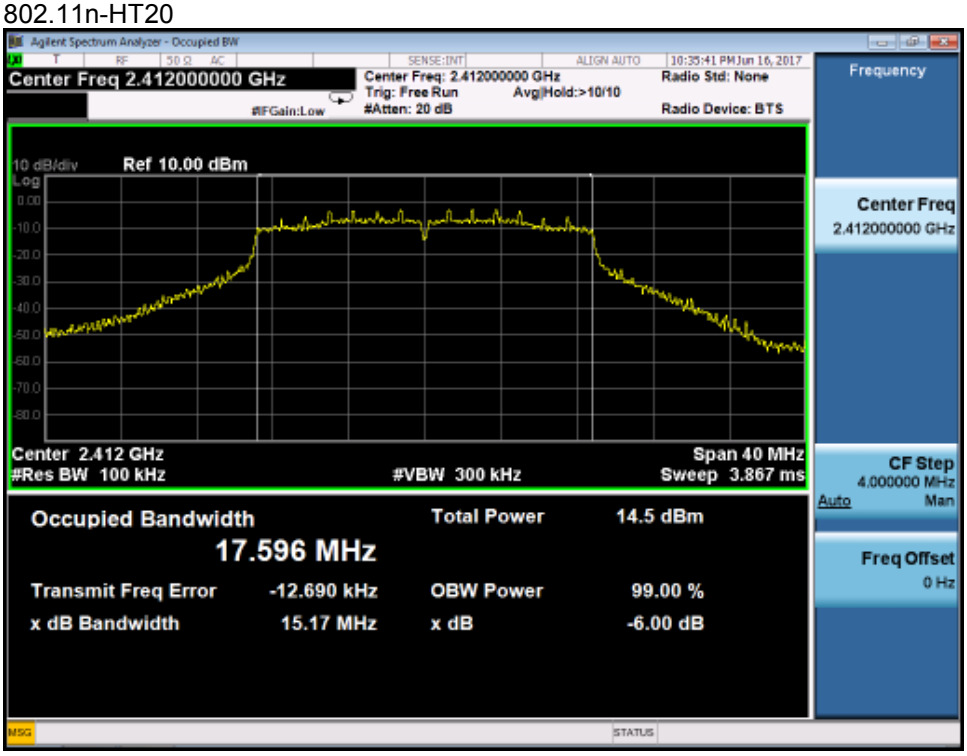
802.11g

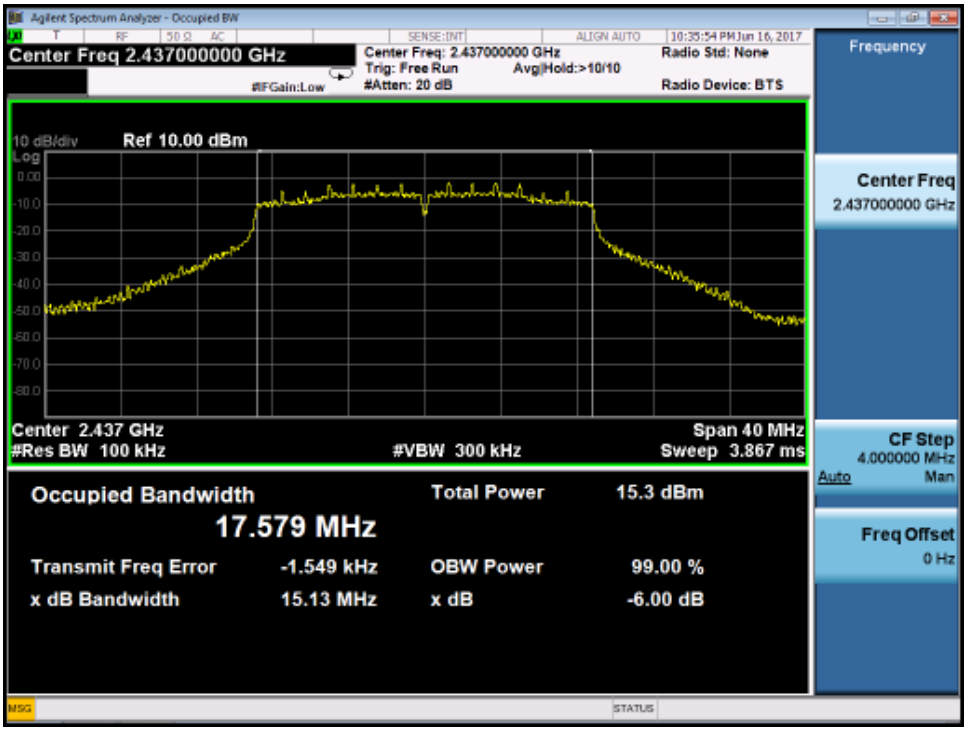

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.412000000 GHz
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
10:34:45 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.412000000 GHz
Center 2.412 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
16.396 MHz
Total Power
15.5 dBm
Transmit Freq Error
-18.270 kHz
OBW Power
99.00 %
x dB Bandwidth
15.17 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

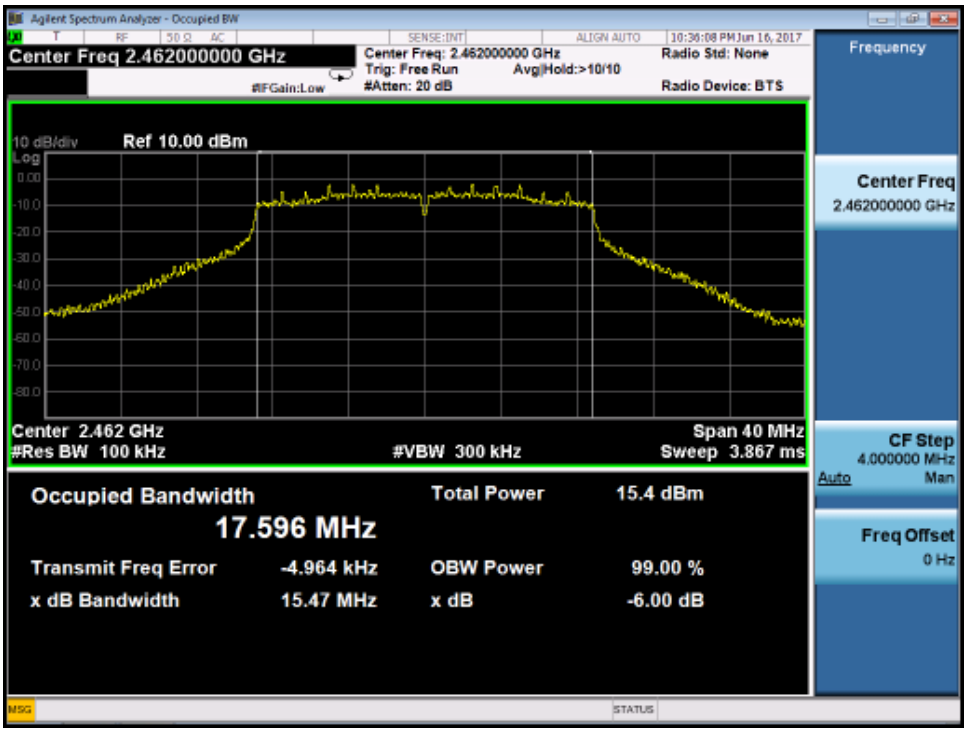

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
10:34:59 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
16.394 MHz
Total Power
16.4 dBm
Transmit Freq Error
-390 Hz
OBW Power
99.00 %
x dB Bandwidth
15.15 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
10:35:12 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
16.379 MHz
Total Power
16.5 dBm
Transmit Freq Error
-16.570 kHz
OBW Power
99.00 %
x dB Bandwidth
15.16 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

802.11n-HT20


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.412000000 GHz
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
10:35:41 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.412000000 GHz
Center 2.412 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
17.596 MHz
Total Power
14.5 dBm
Transmit Freq Error
-12.690 kHz
OBW Power
99.00 %
x dB Bandwidth
15.17 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
10:35:54 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.437000000 GHz
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
17.579 MHz
Total Power
15.3 dBm
Transmit Freq Error
-1.549 kHz
OBW Power
99.00 %
x dB Bandwidth
15.13 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
10:36:08 PM Jun 16, 2017
Frequency
10 dB/div
Ref 10.00 dBm
Log
Center Freq
2.462000000 GHz
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms
CF Step
4.000000 MHz
Auto
Man
Occupied Bandwidth
17.596 MHz
Total Power
15.4 dBm
Transmit Freq Error
-4.964 kHz
OBW Power
99.00 %
x dB Bandwidth
15.47 MHz
x dB
-6.00 dB
Freq Offset
0 Hz
MSG
STATUS

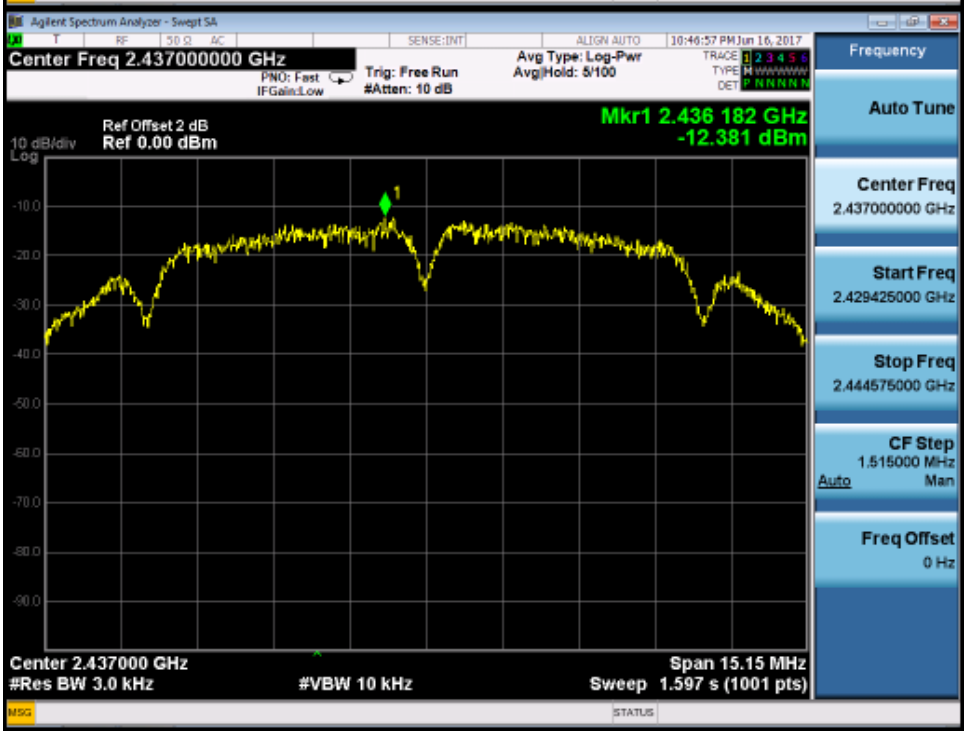
3. Power Spectral Density

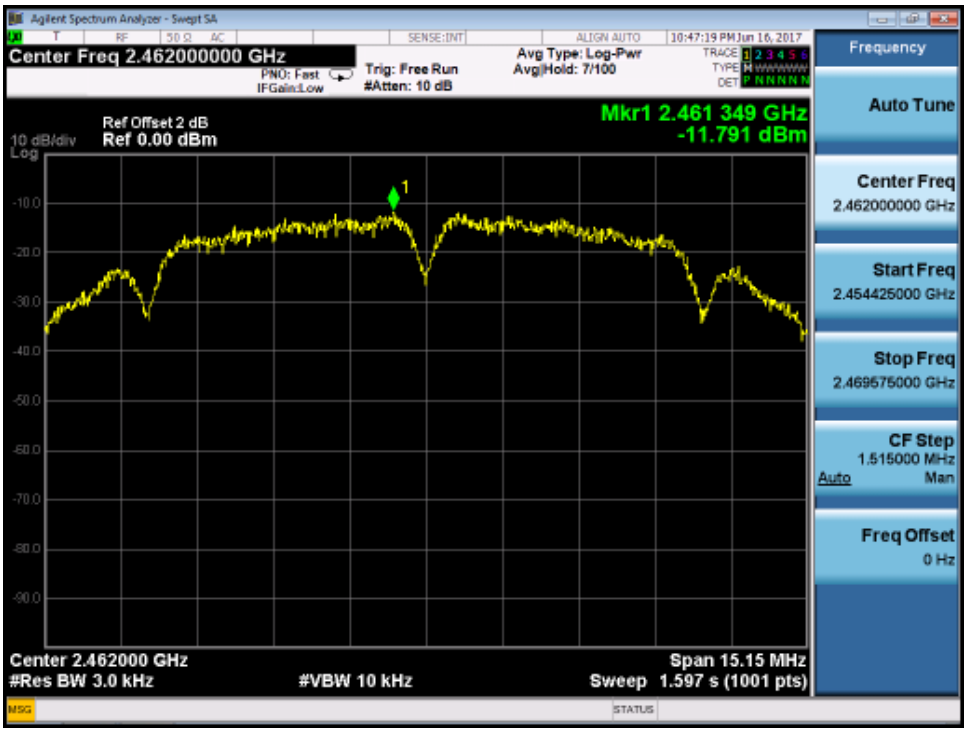
3.1 Test Datas

Channel (mode)	Channel Frequency (MHz)	Power Spectral Density (dBm/3KHz)	Limit	Result
1 (802.11b)	2412	-12.612	8dBm/3KHz	Pass
6 (802.11b)	2437	-12.381	8dBm/3KHz	Pass
11 (802.11b)	2462	-11.791	8dBm/3KHz	Pass
1 (802.11g)	2412	-16.699	8dBm/3KHz	Pass
6 (802.11g)	2437	-16.065	8dBm/3KHz	Pass
11 (802.11g)	2462	-16.025	8dBm/3KHz	Pass
1 (802.11n-HT20)	2412	-17.512	8dBm/3KHz	Pass
6 (802.11n-HT20)	2437	-17.110	8dBm/3KHz	Pass
11 (802.11n-HT20)	2462	-15.975	8dBm/3KHz	Pass

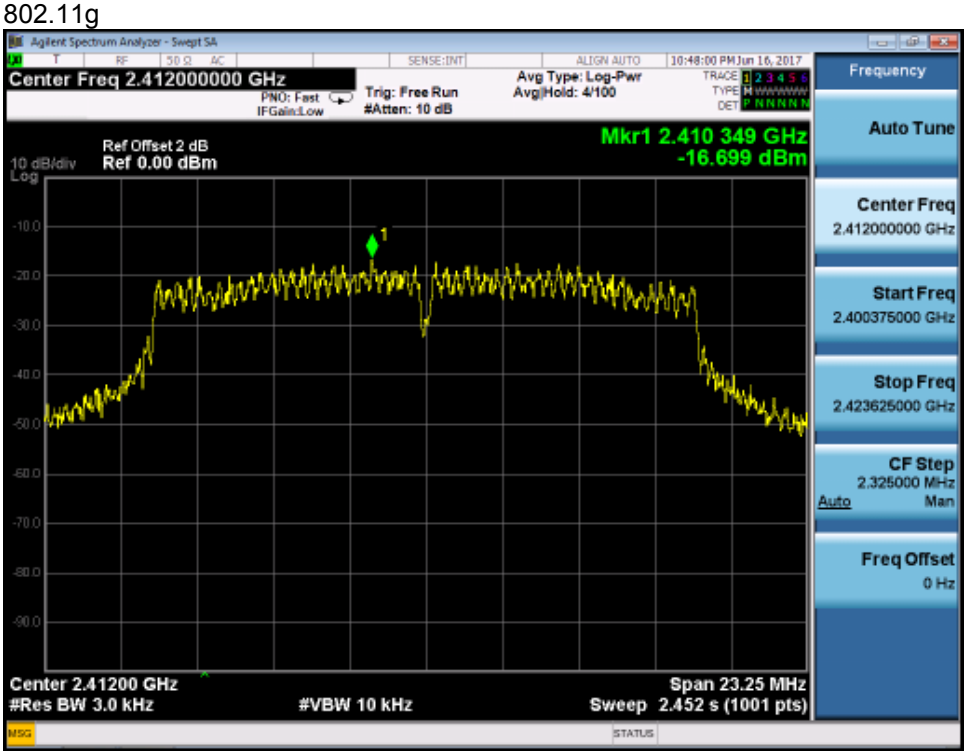
3.2 Test Graphs

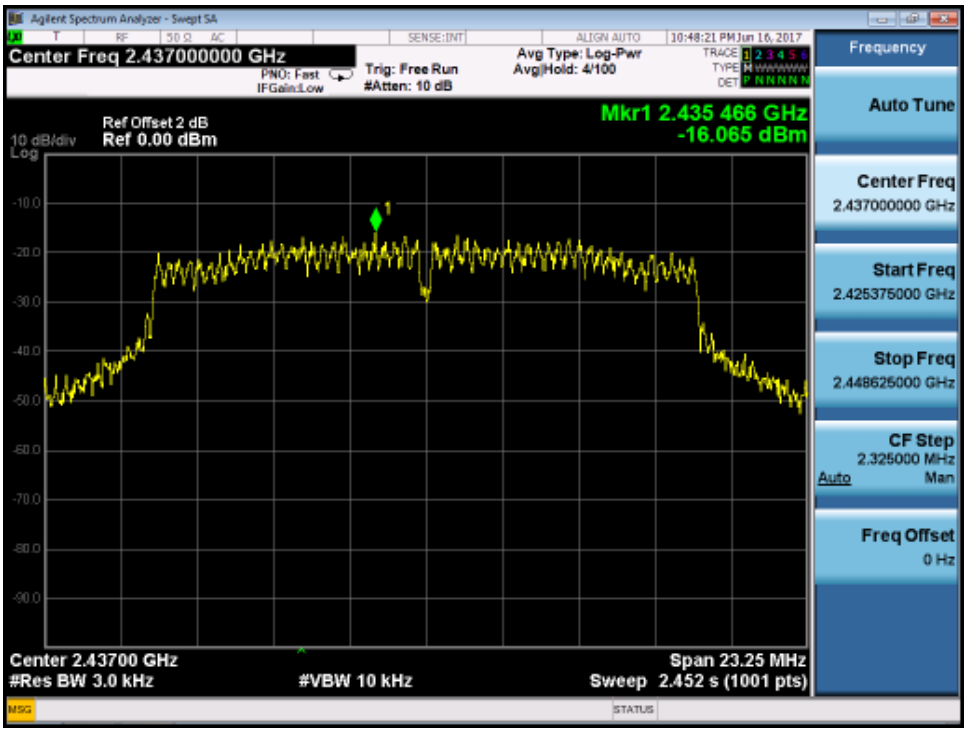
802.11b

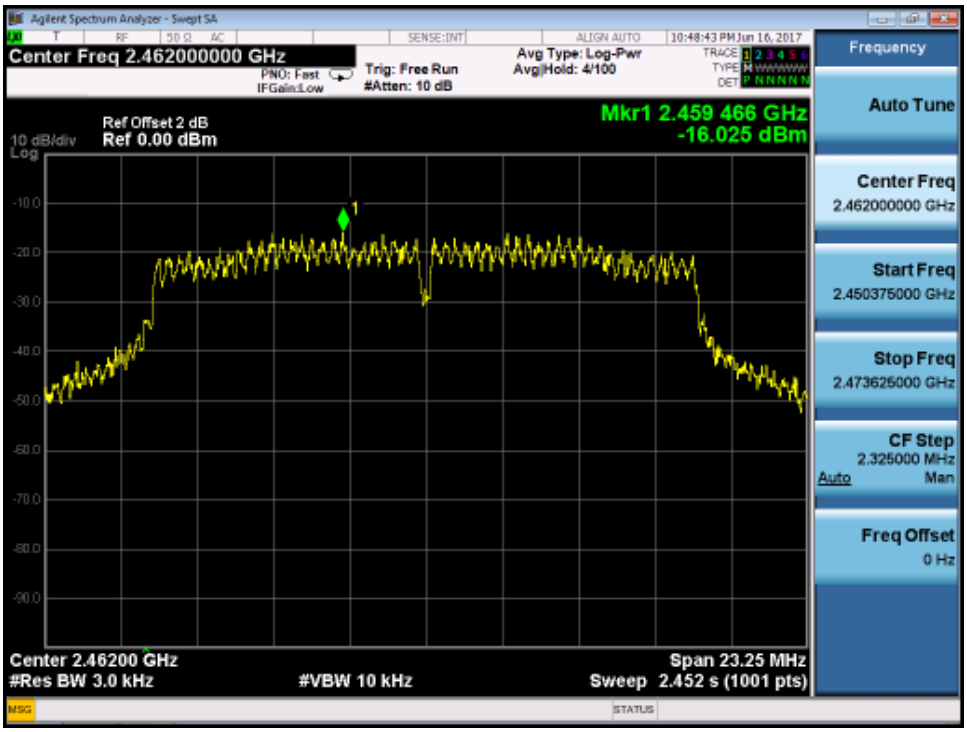



Agilent Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 7/100
10:47:19 PM Jun 16, 2017
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.461 349 GHz
-11.791 dBm
Center 2.462000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 15.15 MHz
Sweep 1.597 s (1001 pts)
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.454425000 GHz
Stop Freq
2.469575000 GHz
CF Step
1.515000 MHz
Auto
Man
Freq Offset
0 Hz

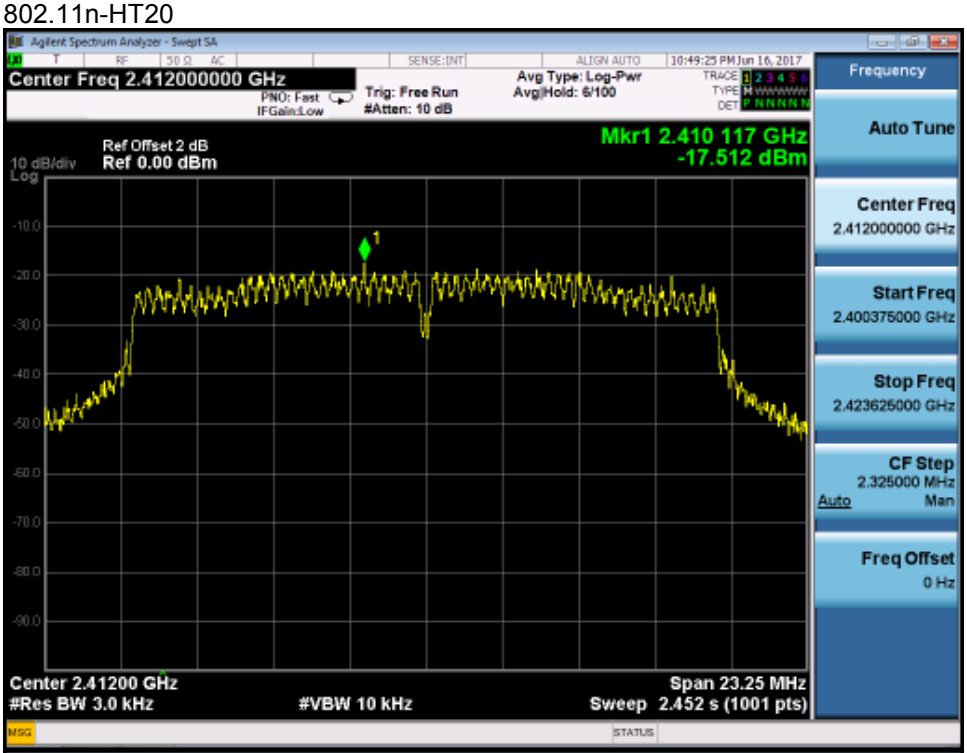
802.11g

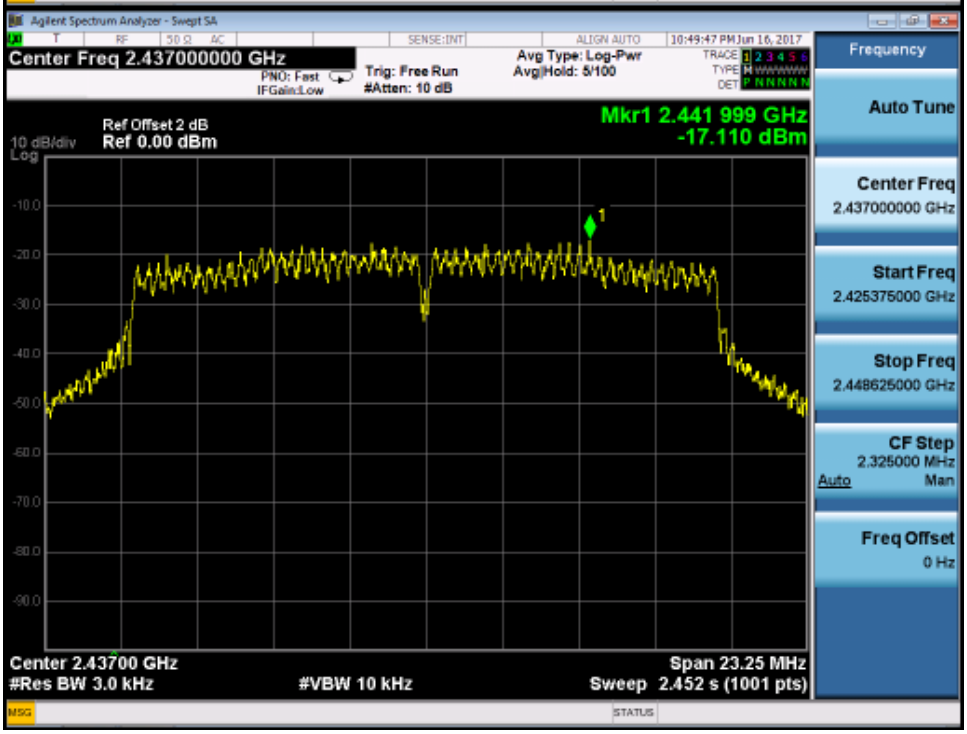

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.412000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 4/100
10:48:00 PM Jun 16, 2017
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.410 349 GHz
-16.699 dBm
Center 2.41200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 23.25 MHz
Sweep 2.452 s (1001 pts)
Frequency
Auto Tune
Center Freq
2.412000000 GHz
Start Freq
2.400375000 GHz
Stop Freq
2.423625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz

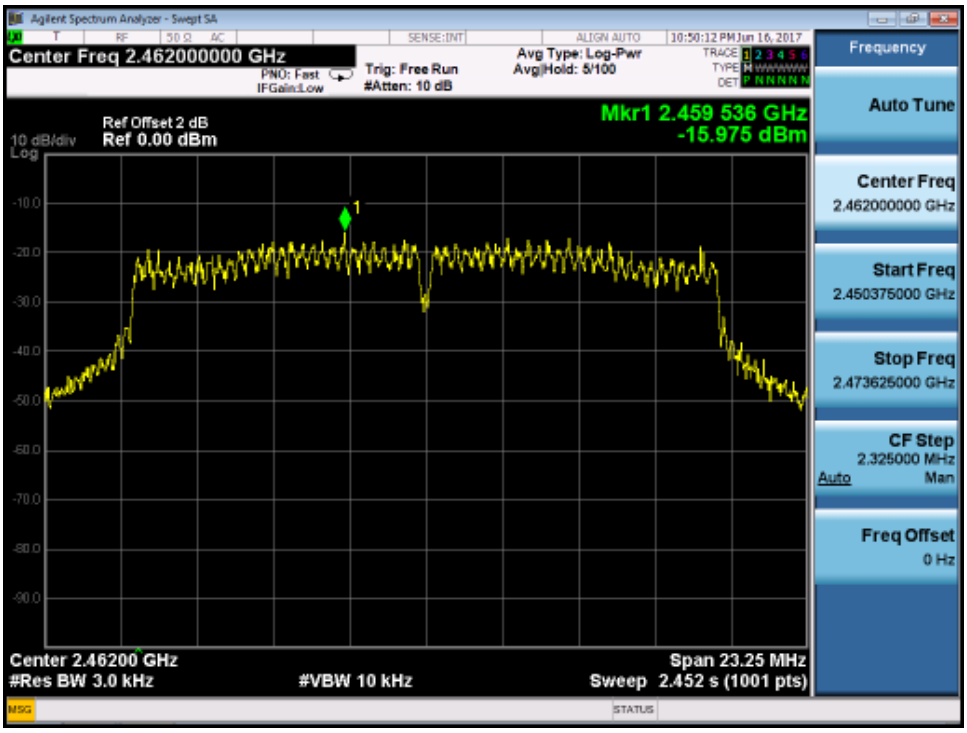

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 4/100
10:48:21 PM Jun 16, 2017
Frequency
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.435 466 GHz
-16.065 dBm
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.425375000 GHz
Stop Freq
2.448625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.43700 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 23.25 MHz
Sweep 2.452 s (1001 pts)
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 4/100
10:48:43 PM Jun 16, 2017
Frequency
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.459 466 GHz
-16.025 dBm
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.450375000 GHz
Stop Freq
2.473625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.46200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 23.25 MHz
Sweep 2.452 s (1001 pts)
MSG
STATUS

802.11n-HT20


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.412000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 6/100
10:49:25 PM Jun 16, 2017
Frequency
Auto Tune
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.410 117 GHz
-17.512 dBm
Center Freq
2.412000000 GHz
Start Freq
2.400375000 GHz
Stop Freq
2.423625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.41200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 23.25 MHz
Sweep 2.452 s (1001 pts)
MSG
STATUS

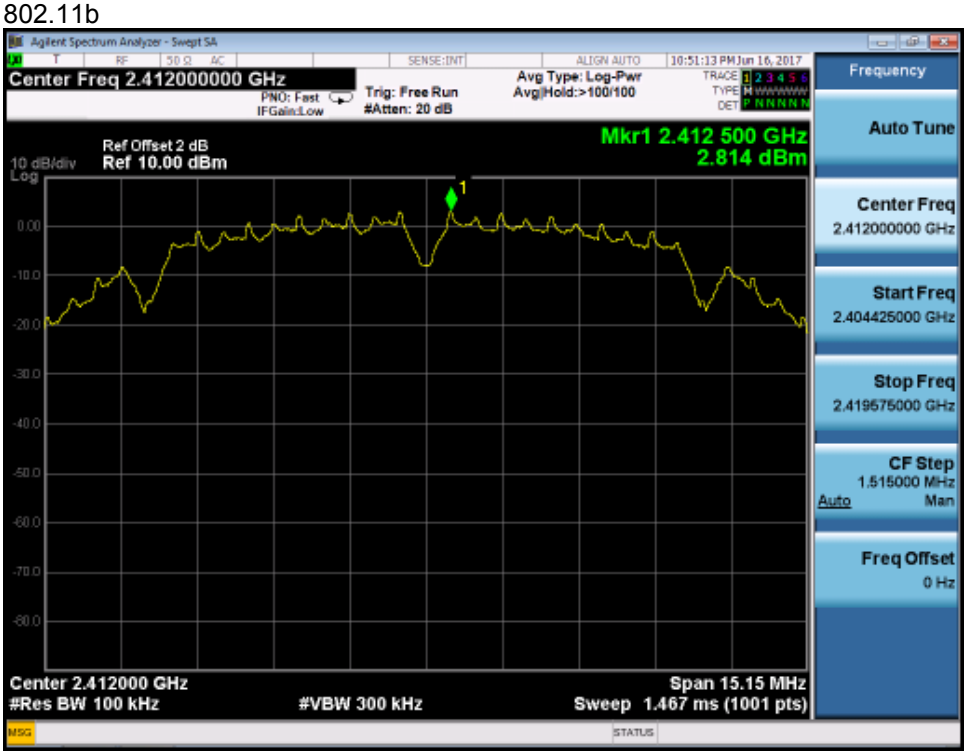

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 5/100
10:49:47 PM Jun 16, 2017
Frequency
Auto Tune
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.441 999 GHz
-17.110 dBm
Center Freq
2.437000000 GHz
Start Freq
2.425375000 GHz
Stop Freq
2.448625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.43700 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 23.25 MHz
Sweep 2.452 s (1001 pts)
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 5/100
10:50:12 PM Jun 16, 2017
Ref Offset 2 dB
10 dB/div
Ref 0.00 dBm
Log
Mkr1 2.459 536 GHz
-15.975 dBm
Center 2.46200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 23.25 MHz
Sweep 2.452 s (1001 pts)
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.450375000 GHz
Stop Freq
2.473625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz

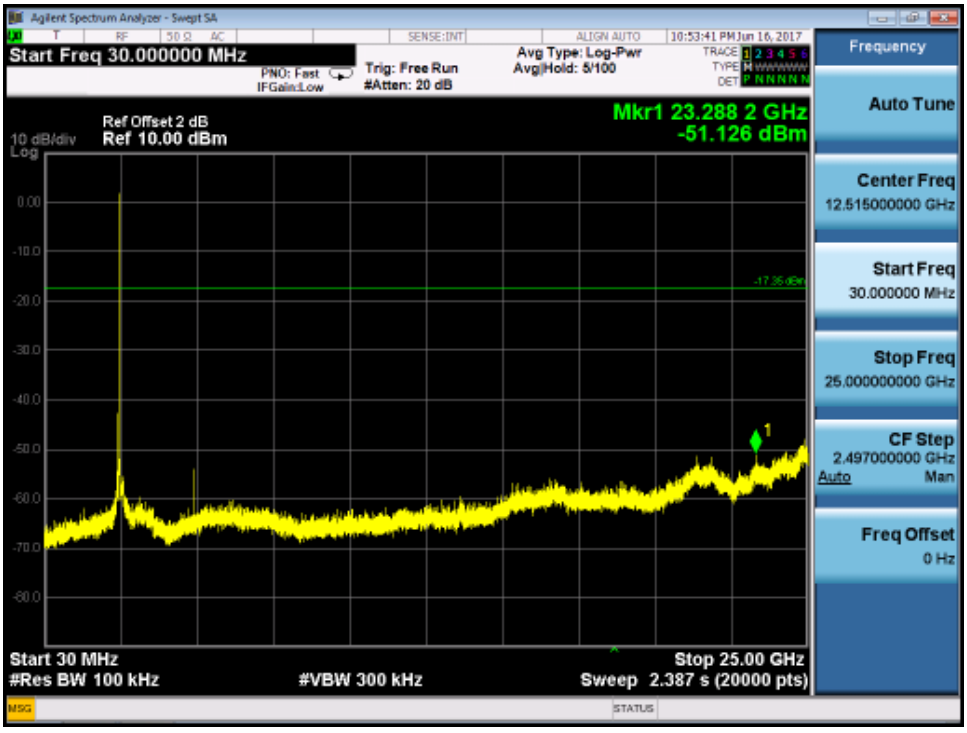
4. Conducted Spurious Emissions

4.1 Test Graphs of Conducted Spurious Emissions

802.11b



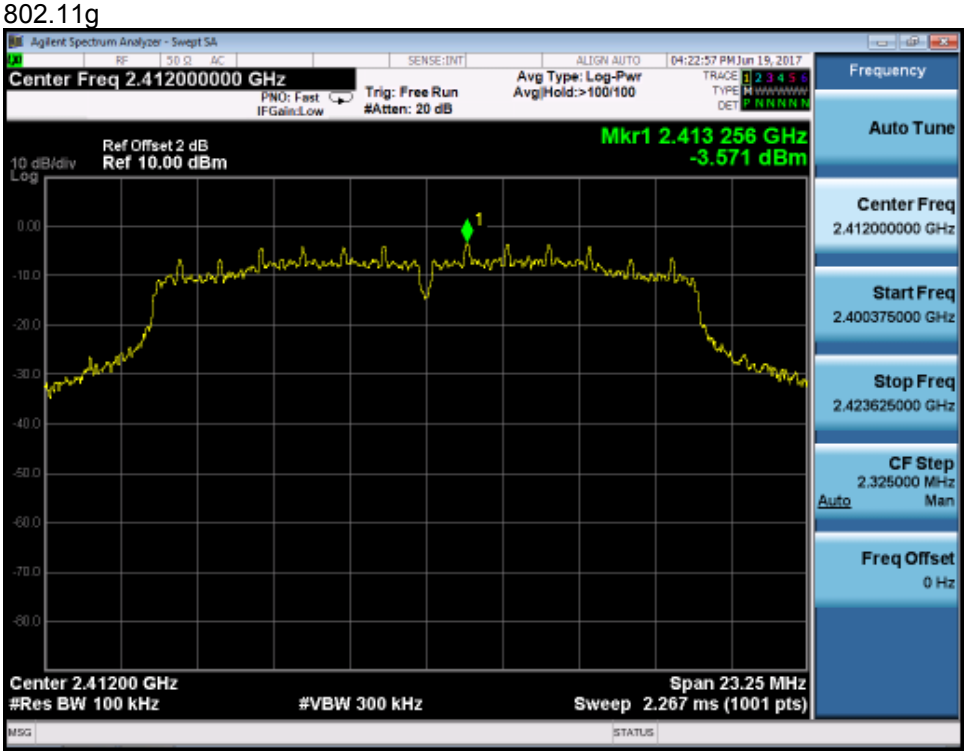

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
10:51:39 PM Jun 16, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.437 485 GHz
2.651 dBm
Center 2.437000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 15.15 MHz
Sweep 1.467 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.429425000 GHz
Stop Freq
2.444575000 GHz
CF Step
1.515000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 5/100
10:53:41 PM Jun 16, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 23.288 2 GHz
-51.126 dBm
-17.36 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

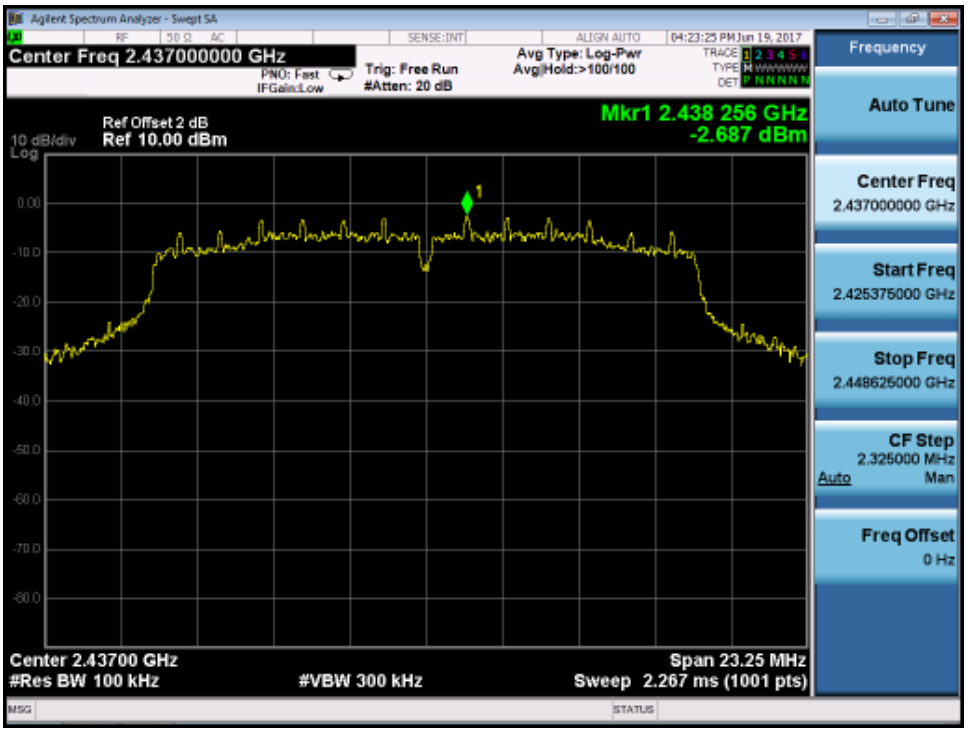

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
10:52:00 PM Jun 16, 2017
Frequency
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.462 485 GHz
3.246 dBm
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.454425000 GHz
Stop Freq
2.469575000 GHz
CF Step
1.515000 MHz
Auto
Man
Freq Offset
0 Hz
Center 2.462000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 15.15 MHz
Sweep 1.467 ms (1001 pts)
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 7/100
10:54:01 PM Jun 16, 2017
Frequency
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 21.476 6 GHz
-51.785 dBm
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
MSG
STATUS

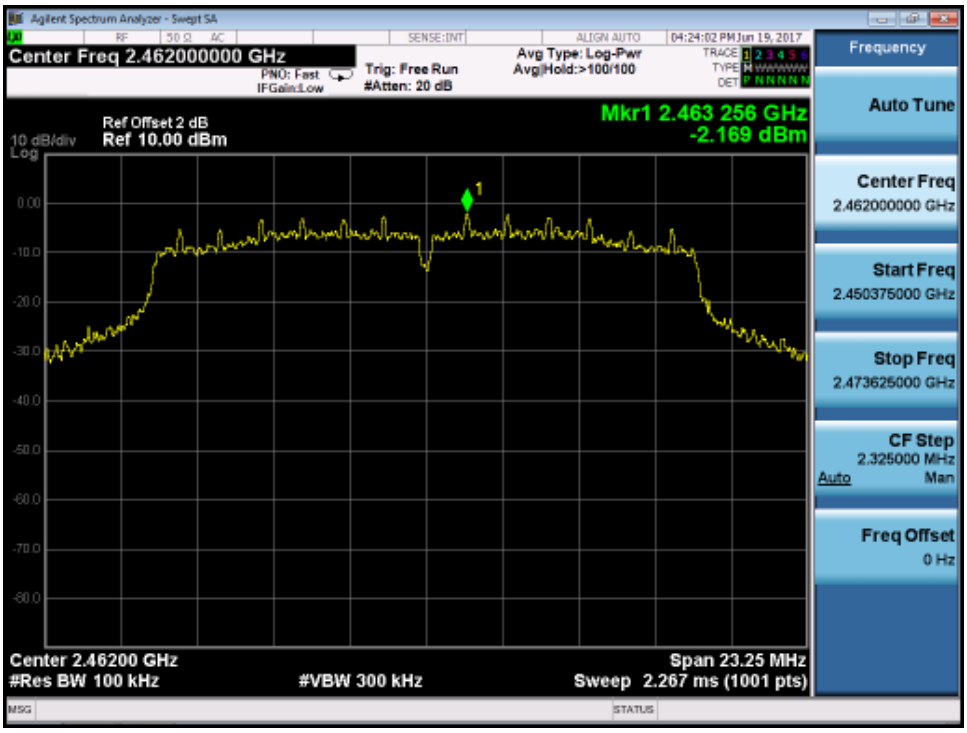
802.11g


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.412000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:22:57 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Mkr1 2.413 256 GHz
-3.571 dBm
Center 2.41200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 23.25 MHz
Sweep 2.267 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.412000000 GHz
Start Freq
2.400375000 GHz
Stop Freq
2.423625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 18/100
04:27:24 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Mkr1 21.924 8 GHz
-51.934 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

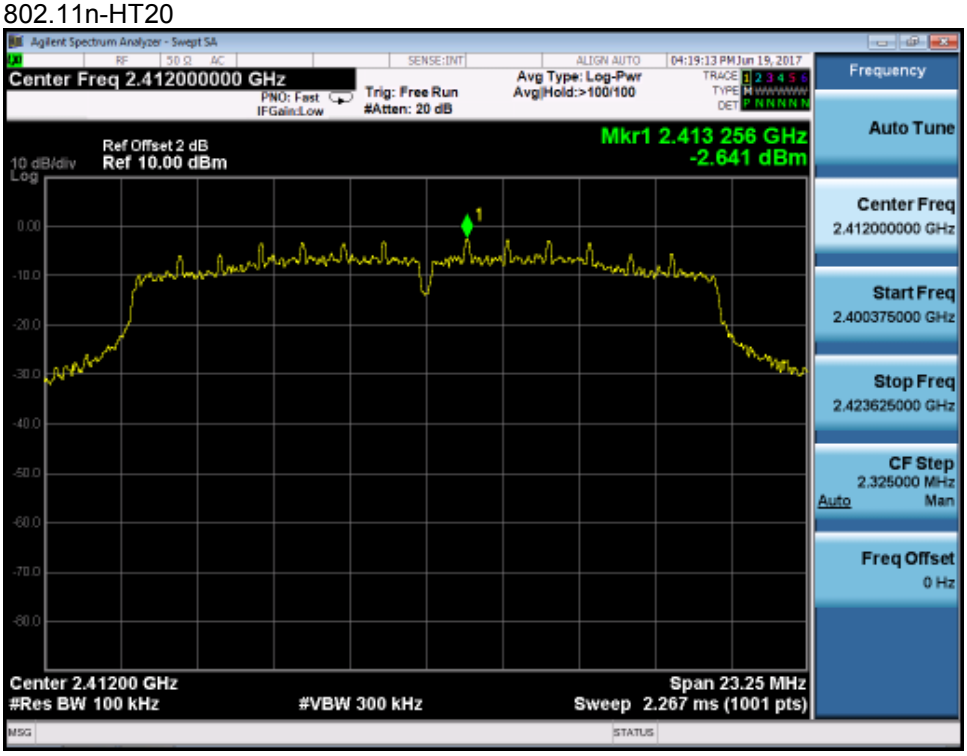

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:23:25 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.438 256 GHz
-2.687 dBm
Center 2.43700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 23.25 MHz
Sweep 2.267 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.425375000 GHz
Stop Freq
2.448625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 9/100
04:27:56 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 21.376 7 GHz
-51.949 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

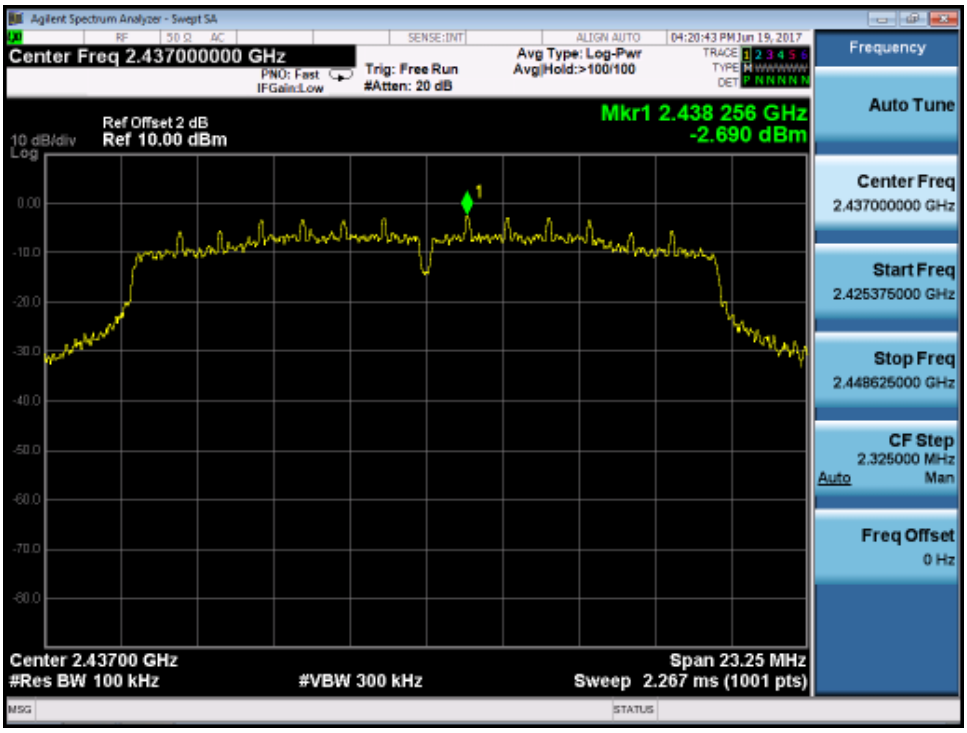

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:24:02 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.463 256 GHz
-2.169 dBm
Center 2.46200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 23.25 MHz
Sweep 2.267 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.450375000 GHz
Stop Freq
2.473625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 8/100
04:28:43 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 24.081 1 GHz
-49.582 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

802.11n-HT20


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.412000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:19:13 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Mkr1 2.413 256 GHz
-2.641 dBm
Center 2.41200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 23.25 MHz
Sweep 2.267 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.412000000 GHz
Start Freq
2.400375000 GHz
Stop Freq
2.423625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 7/100
04:29:29 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Mkr1 24.238 4 GHz
-49.354 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.437000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:20:43 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.438 256 GHz
-2.690 dBm
Center 2.43700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 23.25 MHz
Sweep 2.267 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.425375000 GHz
Stop Freq
2.448625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 7/100
04:29:50 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 21.693 8 GHz
-52.252 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

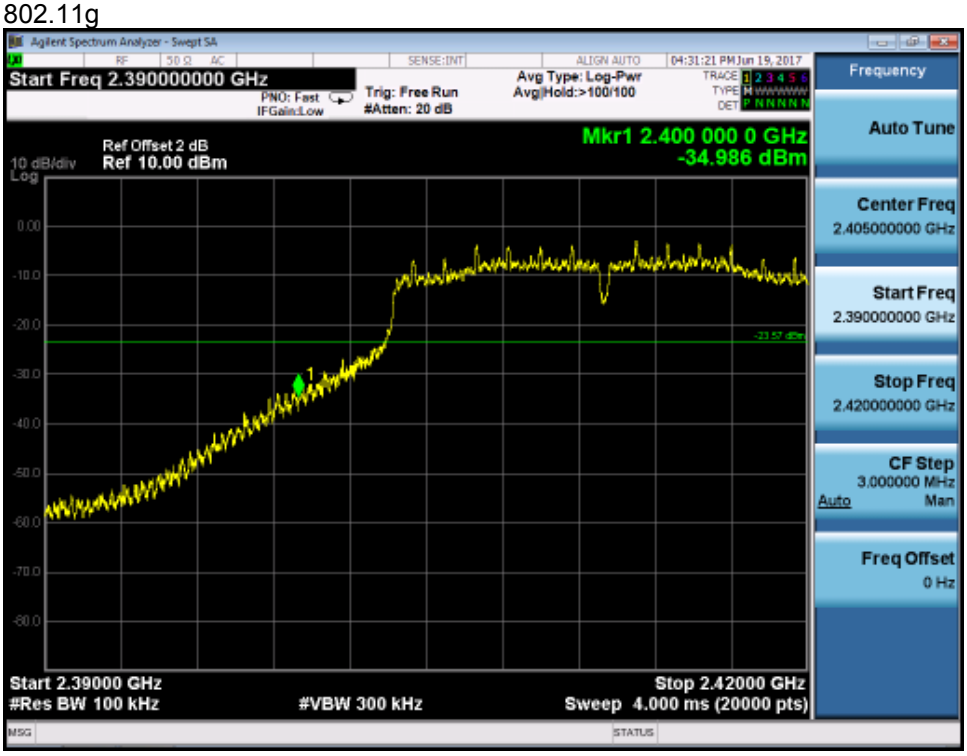

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:21:23 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.463 279 GHz
-2.615 dBm
Center 2.46200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 23.25 MHz
Sweep 2.267 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.462000000 GHz
Start Freq
2.450375000 GHz
Stop Freq
2.473625000 GHz
CF Step
2.325000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

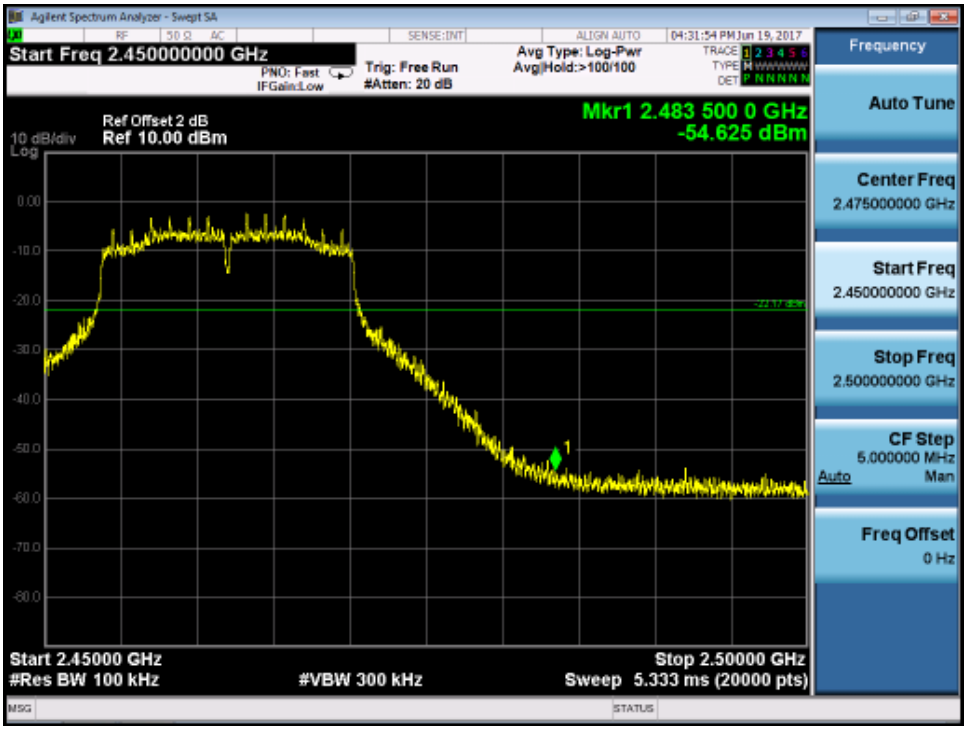

Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 8/100
04:30:19 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 21.919 8 GHz
-52.224 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (20000 pts)
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

4.2 Test Graphs of Bandedge

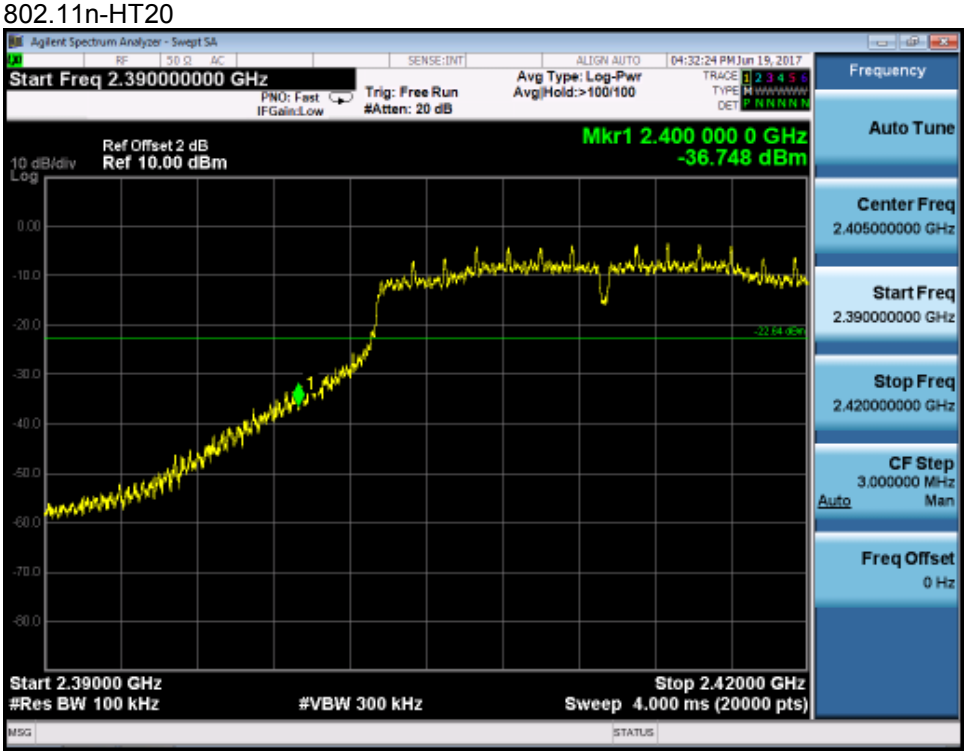
802.11b

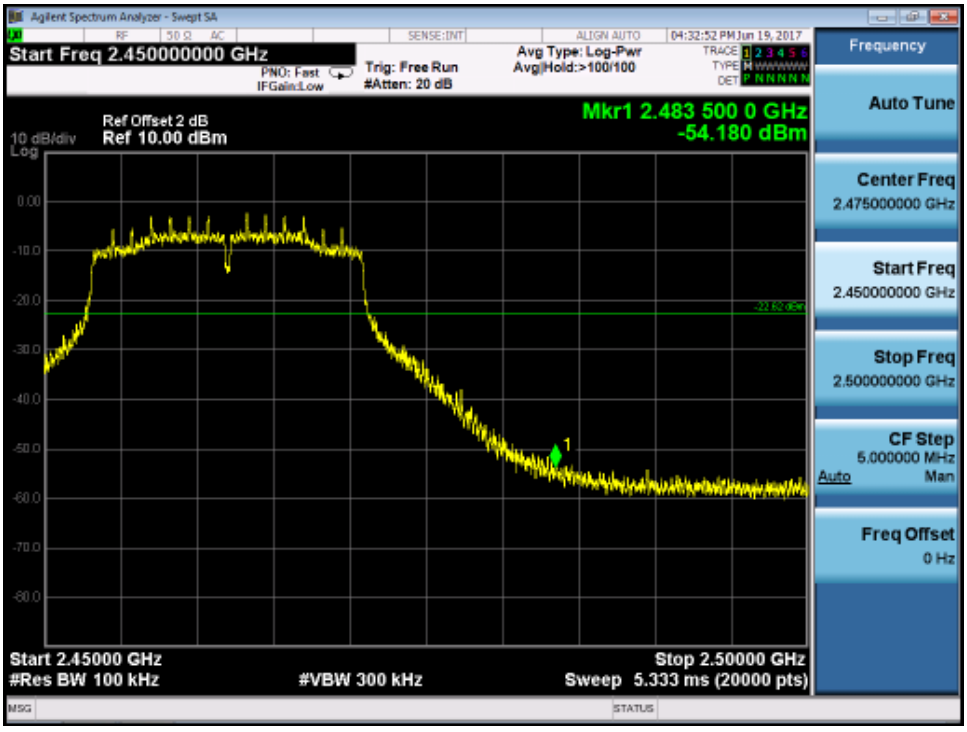
802.11g


Agilent Spectrum Analyzer - Swept SA
Start Freq 2.390000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:31:21 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.400 000 0 GHz
-34.986 dBm
Start 2.39000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.42000 GHz
Sweep 4.000 ms (20000 pts)
Frequency
Auto Tune
Center Freq
2.405000000 GHz
Start Freq
2.390000000 GHz
Stop Freq
2.420000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Start Freq 2.450000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:31:54 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.483 500 0 GHz
-54.625 dBm
Start 2.45000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.50000 GHz
Sweep 5.333 ms (20000 pts)
Frequency
Auto Tune
Center Freq
2.475000000 GHz
Start Freq
2.450000000 GHz
Stop Freq
2.500000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

802.11n-HT20


Agilent Spectrum Analyzer - Swept SA
Start Freq 2.390000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:32:24 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.400 000 0 GHz
-36.748 dBm
Start 2.39000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.42000 GHz
Sweep 4.000 ms (20000 pts)
Frequency
Auto Tune
Center Freq
2.405000000 GHz
Start Freq
2.390000000 GHz
Stop Freq
2.420000000 GHz
CF Step
3.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Start Freq 2.450000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
04:32:52 PM Jun 19, 2017
Ref Offset 2 dB
10 dB/div
Ref 10.00 dBm
Log
Mkr1 2.483 500 0 GHz
-54.180 dBm
Start 2.45000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.50000 GHz
Sweep 5.333 ms (20000 pts)
Frequency
Auto Tune
Center Freq
2.475000000 GHz
Start Freq
2.450000000 GHz
Stop Freq
2.500000000 GHz
CF Step
5.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

5. Transmitter Spurious Emissions

Note:1, Testing is carried out with frequency rang 9kHz to the tenth harmonics.
2, The margin is greater than 20 dB are not shown in this Appendix.

5.1 Transmitter Spurious Emissions, Below 1GHz

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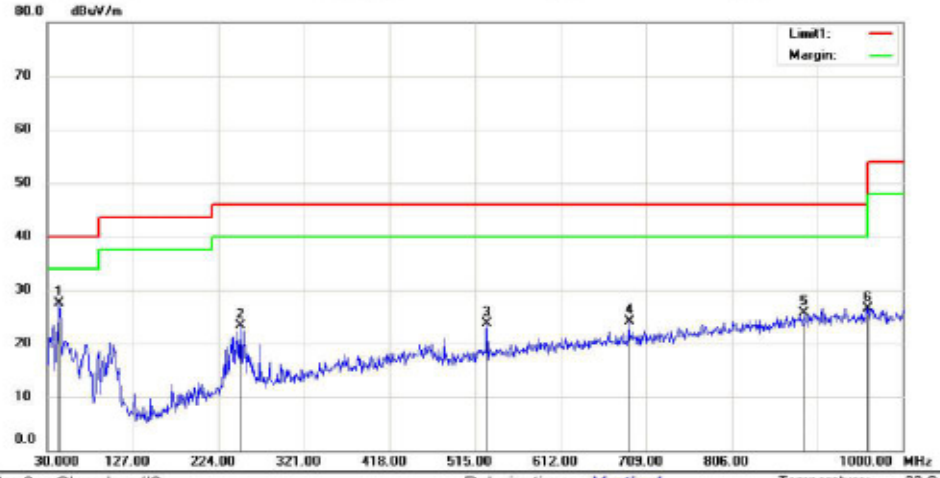
Radiated Emission Measurement

File :TUV 2017 Data :#769 Date: Time:



Site 3m Chamber #2
Limit: (RE)FCC PART 15C
EUT: Label maker
M/N: Label Writer Wireless
Mode:11b 2412
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	43.5800	41.30	-13.86	27.44	40.00	-12.56	QP			
2		249.2200	36.58	-13.27	23.31	46.00	-22.69	QP			
3		528.5800	29.89	-6.09	23.80	46.00	-22.20	QP			
4		689.6000	27.07	-3.06	24.01	46.00	-21.99	QP			
5		888.4500	25.76	0.00	25.76	46.00	-20.24	QP			
6		960.2300	25.78	0.80	26.58	54.00	-27.42	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#769 *Page: 1*

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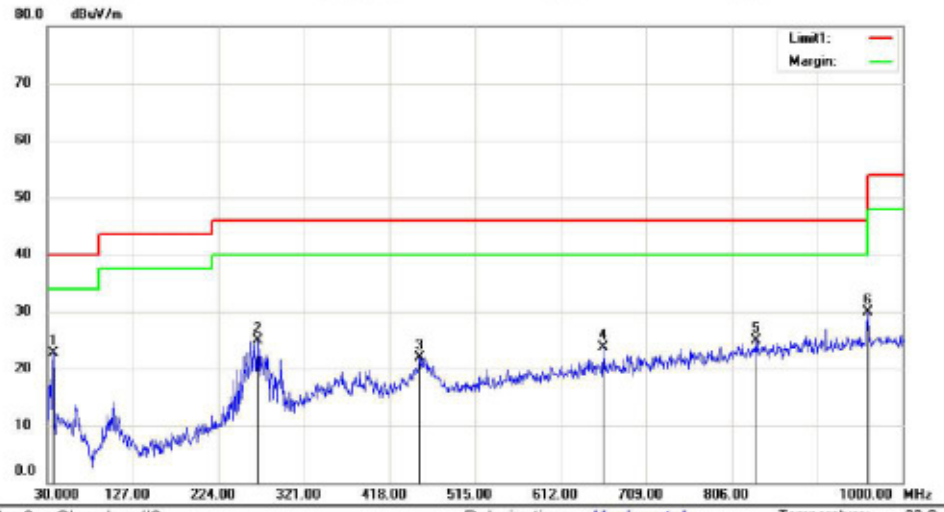
Radiated Emission Measurement

File :TUV 2017 Data :#770 Date: Time:



Site 3m Chamber #2 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11b 2412
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	36.7900	38.41	-15.72	22.69	40.00	-17.31	QP			
2		268.6200	36.67	-11.82	24.85	46.00	-21.15	QP			
3		451.9500	29.85	-7.89	21.96	46.00	-24.04	QP			
4		660.5000	27.13	-3.51	23.62	46.00	-22.38	QP			
5		833.1600	25.56	-0.67	24.89	46.00	-21.11	QP			
6		960.2300	29.12	0.80	29.92	54.00	-24.08	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#770 *Page: 1*

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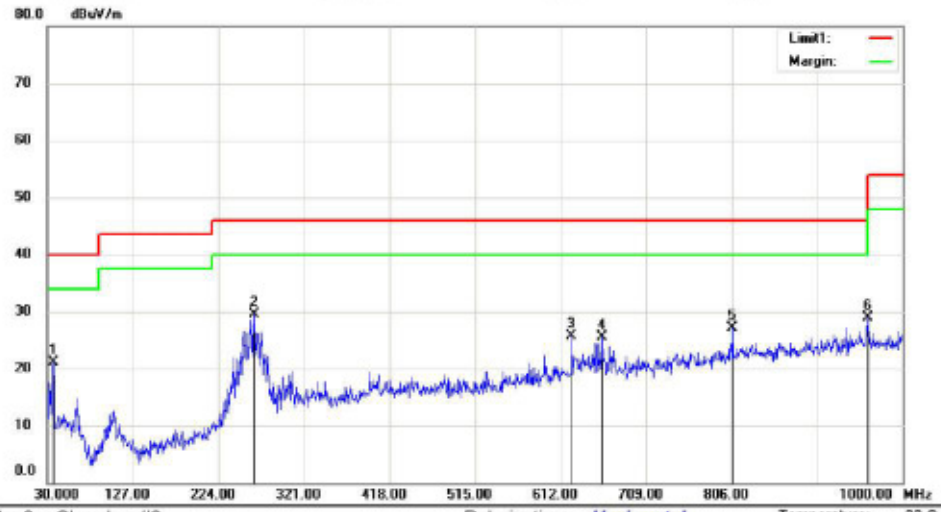
Radiated Emission Measurement

File :TUV 2017 Data :#771 Date: Time:



Site 3m Chamber #2 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11b 2437
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		36.7900	36.88	-15.72	21.16	40.00	-18.84	QP			
2	*	264.7400	41.52	-12.03	29.49	46.00	-16.51	QP			
3		624.6100	29.83	-4.06	25.77	46.00	-20.23	QP			
4		659.5300	28.97	-3.52	25.45	46.00	-20.55	QP			
5		806.9700	28.01	-1.00	27.01	46.00	-18.99	QP			
6		960.2300	28.02	0.80	28.82	54.00	-25.18	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#771 *Page: 1*

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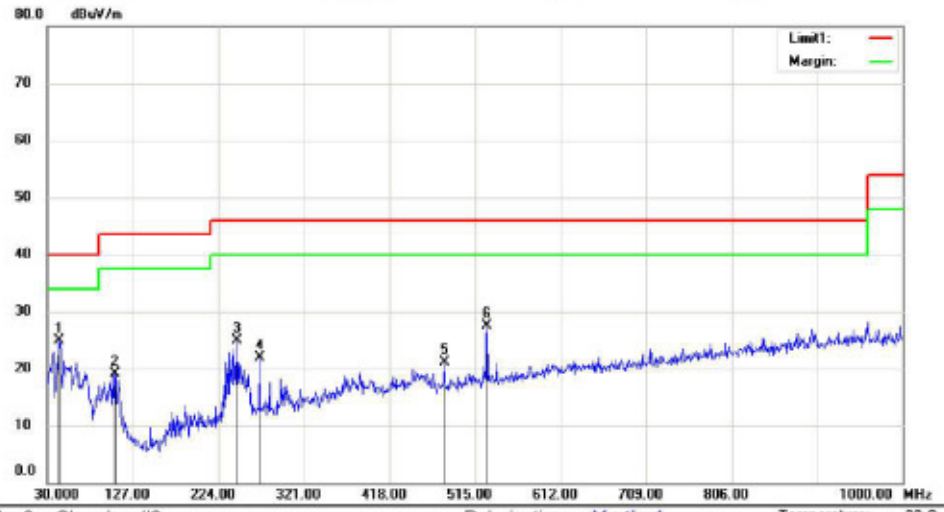
Radiated Emission Measurement

File :TUV 2017 Data :#772 Date: Time:



Site 3m Chamber #2 Polarization: *Vertical* Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11b 2437
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	43.5800	38.72	-13.86	24.86	40.00	-15.14	QP			
2		106.6300	33.83	-14.82	19.01	43.50	-24.49	QP			
3		245.3400	38.18	-13.29	24.89	46.00	-21.11	QP			
4		270.5600	33.73	-11.73	22.00	46.00	-24.00	QP			
5		480.0800	28.37	-7.22	21.15	46.00	-24.85	QP			
6		528.5800	33.52	-6.09	27.43	46.00	-18.57	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#772 *Page: 1*

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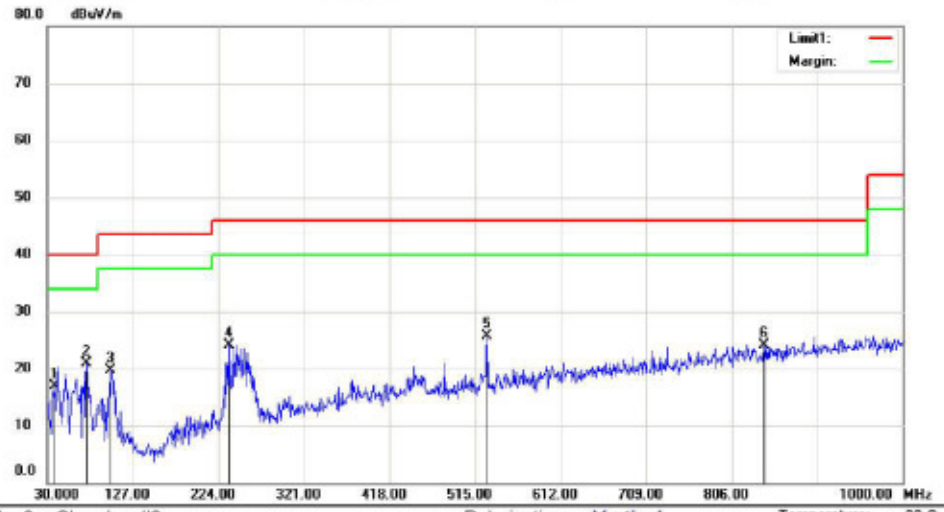
Radiated Emission Measurement

File :TUV 2017 Data :#773 Date: Time:



Site 3m Chamber #2
Limit: (RE)FCC PART 15C
EUT: Label maker
M/N: Label Writer Wireless
Mode:11b 2462
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		37.7600	31.71	-14.87	16.84	40.00	-23.16	QP			
2	*	74.6200	39.18	-18.20	20.98	40.00	-19.02	QP			
3		101.7800	34.13	-14.47	19.66	43.50	-23.84	QP			
4		235.6400	37.58	-13.39	24.19	46.00	-21.81	QP			
5		528.5800	31.86	-6.09	25.77	46.00	-20.23	QP			
6		842.8600	24.62	-0.55	24.07	46.00	-21.93	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#773 *Page: 1*

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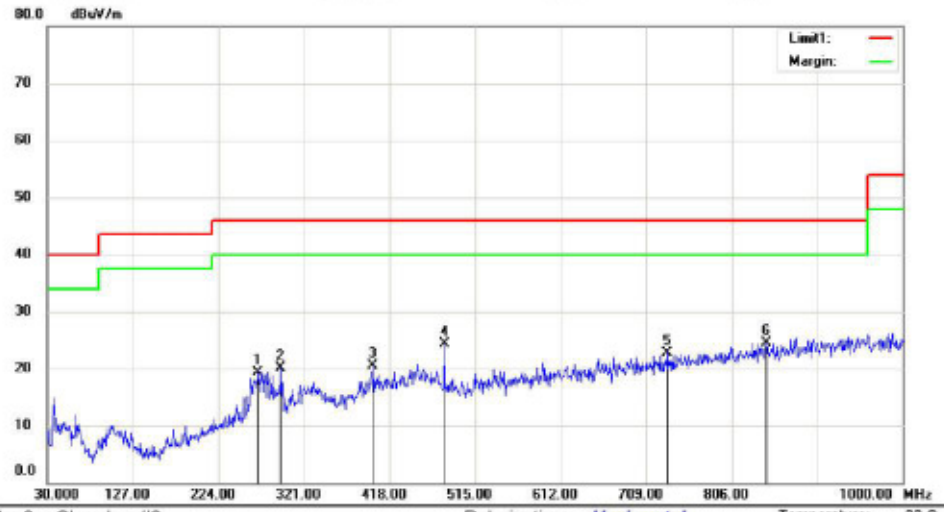
Radiated Emission Measurement

File :TUV 2017 Data :#774 Date: Time:



Site 3m Chamber #2 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11b 2462
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		268.6200	31.19	-11.82	19.37	46.00	-26.63	QP			
2		294.8100	31.41	-11.40	20.01	46.00	-25.99	QP			
3		399.5700	29.06	-8.46	20.60	46.00	-25.40	QP			
4		480.0800	31.52	-7.22	24.30	46.00	-21.70	QP			
5		732.2800	24.98	-2.32	22.66	46.00	-23.34	QP			
6	*	845.7700	25.10	-0.53	24.57	46.00	-21.43	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#774 *Page: 1*

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Radiated Emission Measurement

File :TUV 2017 Data :#775 Date: Time:

Site 3m Chamber #2 Polarization: **Horizontal** Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11g 2412
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		260.8600	39.01	-12.26	26.75	46.00	-19.25	QP			
2		395.6900	33.30	-8.53	24.77	46.00	-21.23	QP			
3		660.5000	34.76	-3.51	31.25	46.00	-14.75	QP			
4	*	675.0500	37.02	-3.29	33.73	46.00	-12.27	QP			
5		704.1500	31.69	-2.84	28.85	46.00	-17.15	QP			
6		960.2300	30.37	0.80	31.17	54.00	-22.83	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#775 *Page: 1*

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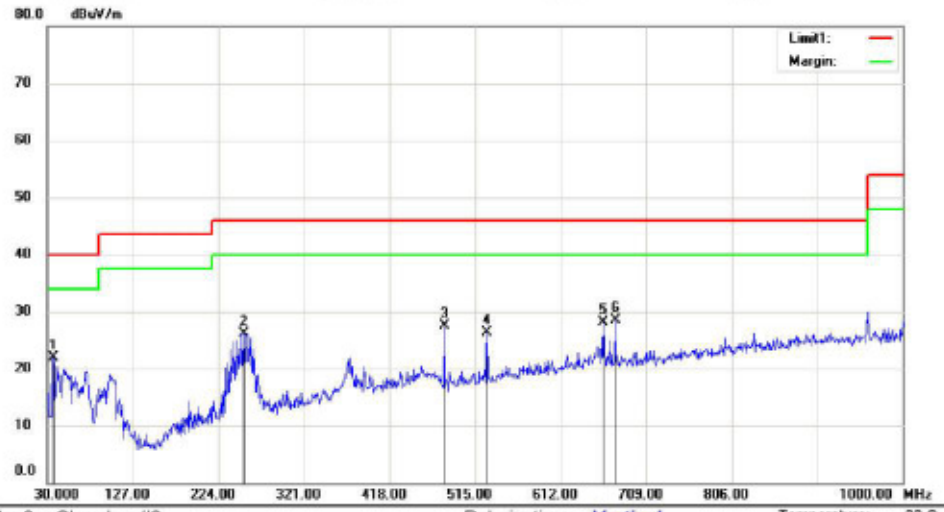
Radiated Emission Measurement

File :TUV 2017 Data :#776 Date: Time:



Site 3m Chamber #2
Limit: (RE)FCC PART 15C
EUT: Label maker
M/N: Label Writer Wireless
Mode:11g 2412
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		36.7900	37.56	-15.72	21.84	40.00	-18.16	QP			
2		253.1000	39.06	-12.96	26.10	46.00	-19.90	QP			
3		480.0800	34.68	-7.22	27.46	46.00	-18.54	QP			
4		528.5800	32.47	-6.09	26.38	46.00	-19.62	QP			
5		660.5000	31.65	-3.51	28.14	46.00	-17.86	QP			
6	*	674.0800	31.85	-3.31	28.54	46.00	-17.46	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#776 *Page: 1*

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Radiated Emission Measurement

File :TUV 2017 Data :#777 Date: Time:

Site 3m Chamber #2 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11g 2437
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		256.9800	41.18	-12.59	28.59	46.00	-17.41	QP			
2		395.6900	32.28	-8.53	23.75	46.00	-22.25	QP			
3		480.0800	32.60	-7.22	25.38	46.00	-20.62	QP			
4	*	675.0500	34.86	-3.29	31.57	46.00	-14.43	QP			
5		704.1500	33.32	-2.84	30.48	46.00	-15.52	QP			
6		960.2300	29.95	0.80	30.75	54.00	-23.25	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

File :TUV 2017\Data :#777 *Page: 1*

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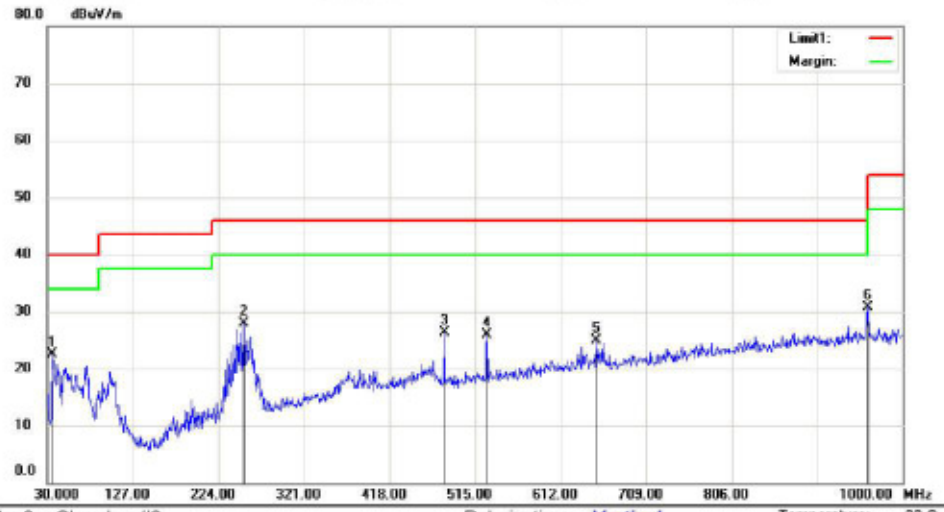
Radiated Emission Measurement

File :TUV 2017 Data :#778 Date: Time:



Site 3m Chamber #2
Limit: (RE)FCC PART 15C
EUT: Label maker
M/N: Label Writer Wireless
Mode:11g 2437
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	35.8200	38.95	-16.45	22.50	40.00	-17.50	QP			
2		253.1000	40.82	-12.96	27.86	46.00	-18.14	QP			
3		480.0800	33.57	-7.22	26.35	46.00	-19.65	QP			
4		528.5800	32.08	-6.09	25.99	46.00	-20.01	QP			
5		652.7400	28.47	-3.63	24.84	46.00	-21.16	QP			
6		960.2300	30.00	0.80	30.80	54.00	-23.20	QP			

*:Maximum data x:Over limit !:over margin

Operator: KK

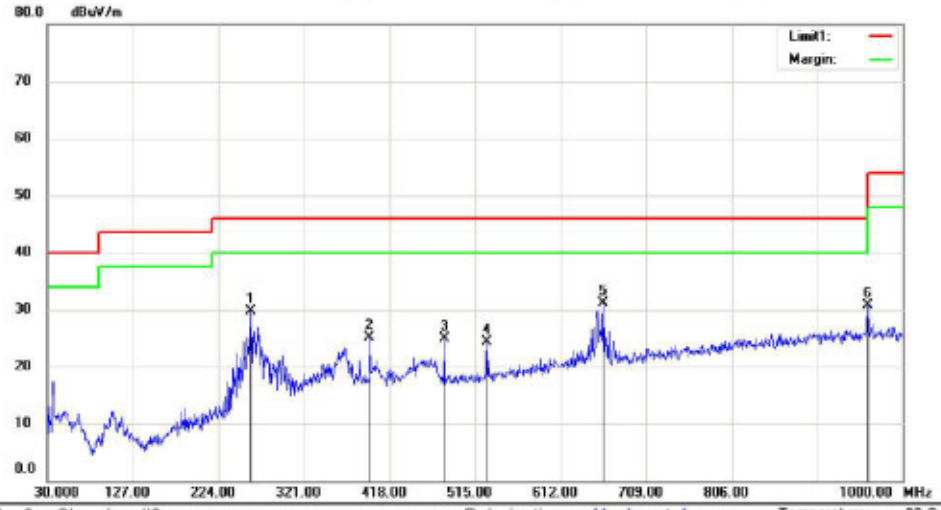
File :TUV 2017\Data :#778 *Page: 1*

Shenzhen EMTEK Co., Ltd.
Bldg. 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, 518052 P.R. China
www.emtek.com.cn Tel:+86-755-2695 4280 Fax:+86-755-2695 4282

EMTEK
Access to the World

Radiated Emission Measurement

File :TUV 2017 Data :#779 Date: Time:



Site 3m Chamber #2 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15C Power: AC 120V/60Hz Humidity: 55 %
EUT: Label maker
M/N: Label Writer Wireless
Mode:11g 2462
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		260.8600	41.94	-12.26	29.68	46.00	-16.32	QP			
2		395.6900	33.71	-8.53	25.18	46.00	-20.82	QP			
3		480.0800	32.20	-7.22	24.98	46.00	-21.02	QP			
4		528.5800	30.46	-6.09	24.37	46.00	-21.63	QP			
5	*	660.5000	34.64	-3.51	31.13	46.00	-14.87	QP			
6		960.2300	29.97	0.80	30.77	54.00	-23.23	QP			

*:Maximum data x:Over limit !:over margin Operator: KK

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