

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 RSS-247 Issue 2 February 2017 CFR47 FCC Part15: Subpart C Section 15.207 RSS-GEN Issue 4 November 2014 CFR47 FCC Part15: Subpart C Section 15.209 RSS-102 Issue 5 March 2015 CFR47 FCC Part2: Section 2.1091			
Wareneingangsdatum: Date of receipt:	24.05.2017	Refer to Photo Document		
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			
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
Sonstiges / Other: FCC ID: RGD LWW IC ID: 11034A-LWW				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt 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				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

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.....	5
1.1	COMPLEMENTARY MATERIALS	5
2.	TEST SITES	6
2.1	TEST FACILITIES	6
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
2.3	TRACEABILITY	7
2.4	CALIBRATION	7
2.5	UNCERTAINTY OF MEASUREMENT	7
2.6	LOCATION OF ORIGINAL DATA	7
2.7	STATUS OF FACILITY USED FOR TESTING	7
3.	GENERAL PRODUCT INFORMATION	8
3.1	PRODUCT FUNCTION AND INTENDED USE.....	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	8
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	9
3.5	SUBMITTED DOCUMENTS.....	9
4.	TEST SET-UP AND OPERATION MODES	10
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	10
4.2	TEST OPERATION	10
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	10
4.4	COUNTERMEASURES TO ACHIEVE ERM COMPLIANCE	10
4.5	TEST SETUP DIAGRAM	11
5.	TEST RESULTS	13
5.1	RADIO TEST REQUIREMENT & TEST SUITES (2.4GHz BAND)	13
5.1.1	Antenna Requirement	13
5.1.2	Maximum peak conducted output power	14
5.1.3	Power Spectral Density	15
5.1.4	6dB Bandwidth	16
5.1.5	Conducted Spurious Emissions Measured in 100 kHz Bandwidth	17
5.1.6	Radiated Spurious Emission	18
5.1.7	Conducted Emission on AC Mains	19
6.	RADIO FREQUENCY EXPOSURE (FCC).....	20
6.1	PRODUCT CLASSIFICATION	20
6.2	RADIO FREQUENCY EXPOSURE LIMIT.....	20
6.3	RADIO FREQUENCY EXPOSURE CALCULATION FORMULA	20
6.4	CALCULATION RESULT	20
6.5	CONCLUSION	21

Prüfbericht - Nr.: 50086251 002
Test Report No.
Seite 4 von 26
Page 4 of 26

7.	RADIO FREQUENCY EXPOSURE (IC)	22
7.1	PRODUCT CLASSIFICATION.....	22
7.2	EXEMPTION LIMITS FOR ROUTINE EVALUATION – RF EXPOSURE EVALUATION	22
7.3	CALCULATION RESULT	22
7.4	CONCLUSION	22
8.	PHOTOGRAPHS OF THE TEST SET-UP	23
9.	LIST OF TABLES	26
10.	LIST OF PHOTOGRAPHS.....	26

Prüfbericht - Nr.: 50086251 002
*Test Report No.***Seite 5 von 26**
Page 5 of 26

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	J1011131010001	May.27, 2017	1 Year
10.	Pre-Amplifier	Lunar EM	LNA18G26-40	J1012131010001	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

Prüfbericht - Nr.: 50086251 002
Test Report No.
Seite 7 von 26
Page 7 of 26

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 °C
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)

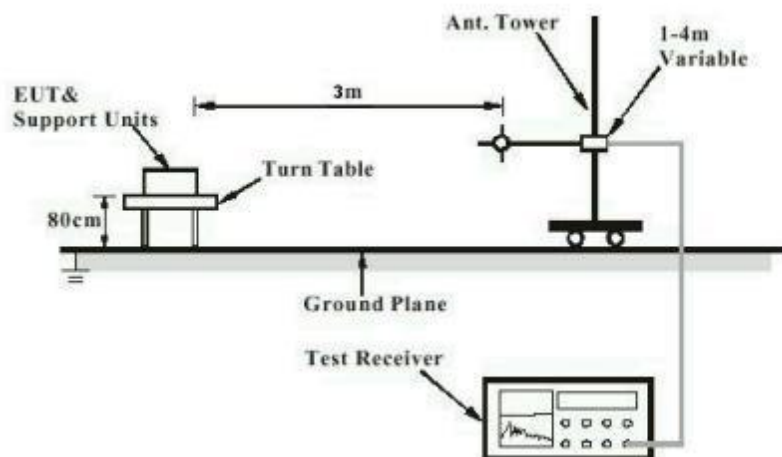


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

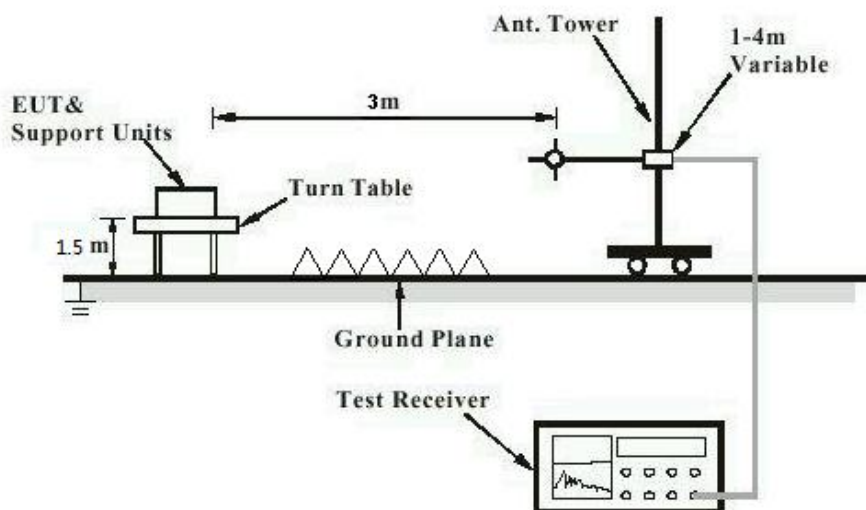


Diagram of Measurement Configuration for Mains Conduction Measurement

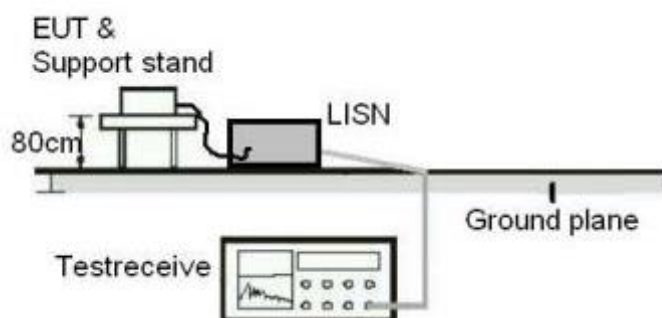
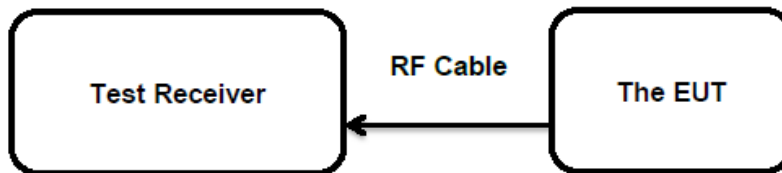


Diagram of Measurement Configuration for Conducted Transmitter Measurement



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 °C
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 °C
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 °C
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 °C
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
	:	FCC Part 15.209
Limits	:	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 °C
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 °C
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.....	2
2.	6dB BANDWIDTH	3
2.1	TEST DATAS OF 6dB BANDWIDTH	3
2.2	TEST GRAPHS OF 6dB BANDWIDTH	4
3.	POWER SPECTRAL DENSITY	9
3.1	TEST DATAS	9
3.2	TEST GRAPHS	10
4.	CONDUCTED SPURIOUS EMISSIONS.....	15
4.1	TEST GRAPHS OF CONDUCTED SPURIOUS EMISSIONS.....	15
4.2	TEST GRAPHS OF BANDEDGE.....	24
5.	TRANSMITTER SPURIOUS EMISSIONS.....	27
5.1	TRANSMITTER SPURIOUS EMISSIONS, BELOW 1GHZ	27
5.2	TRANSMITTER SPURIOUS EMISSIONS, 1GHZ-18GHZ	45
5.3	TRANSMITTER SPURIOUS EMISSIONS, 18GHZ-26.5GHZ	63
5.4	RESTRICTED BANDS	81
6.	CONDUCTED EMISSIONS	93

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

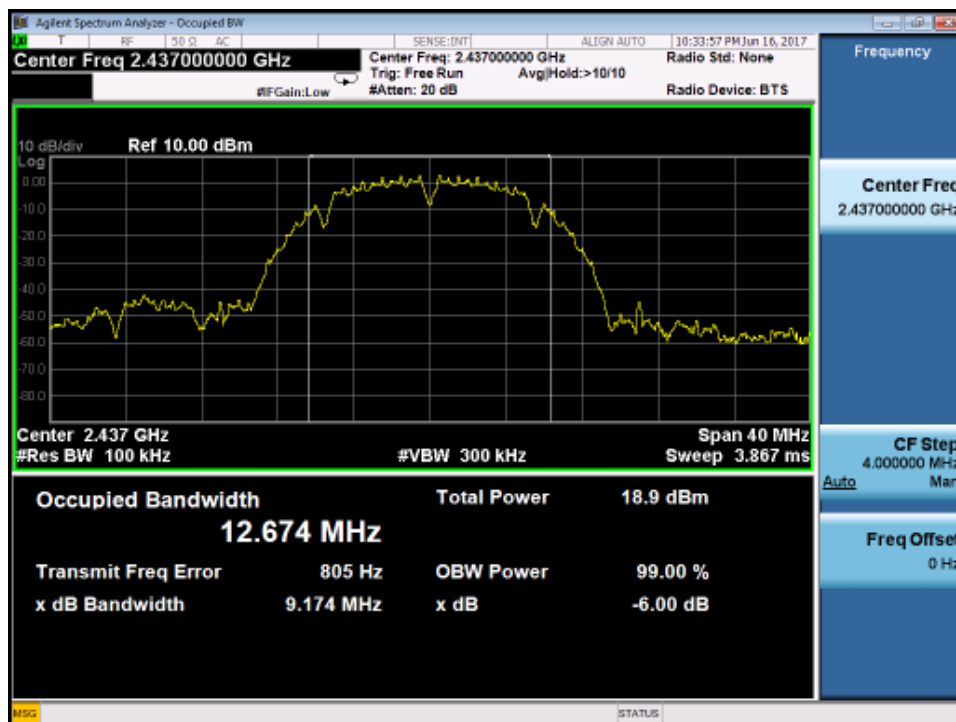
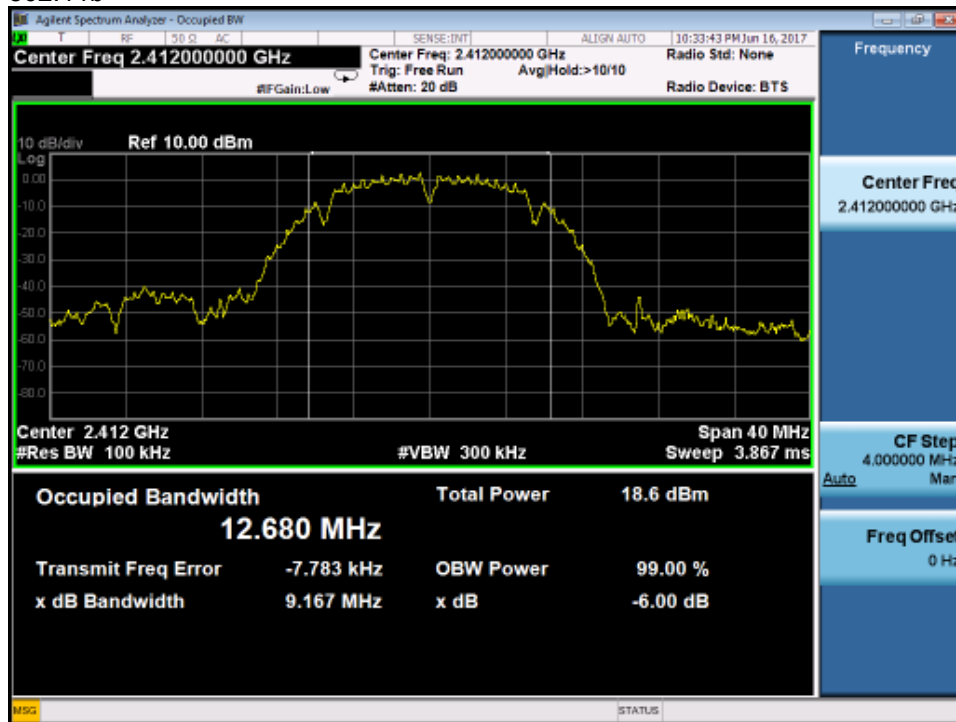
2. 6dB Bandwidth

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



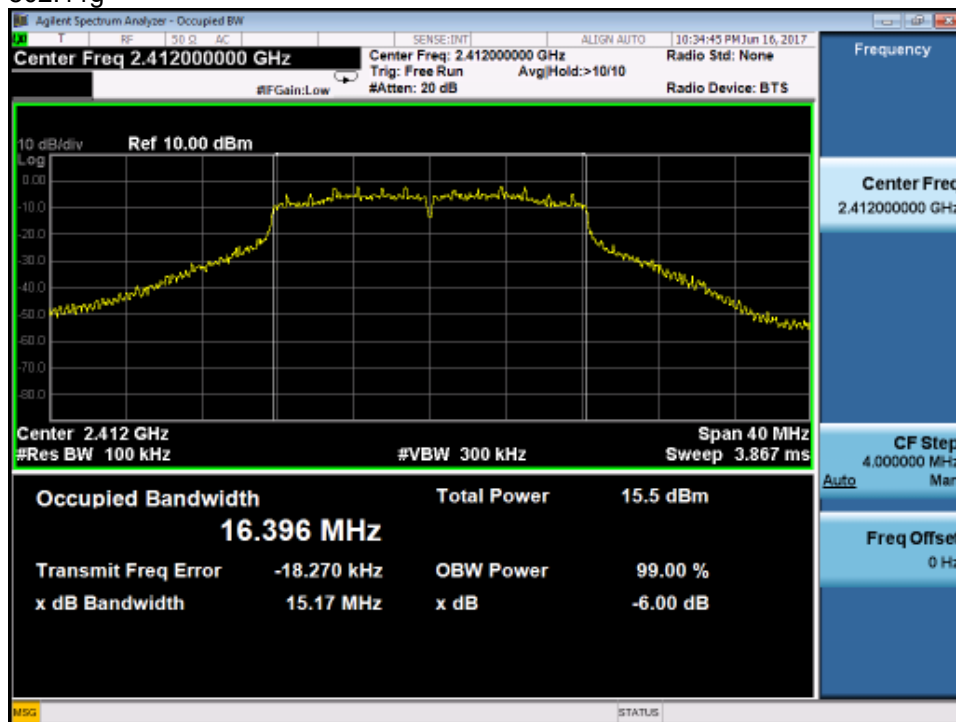
Appendix A
50086251 002
Page 5 of 94

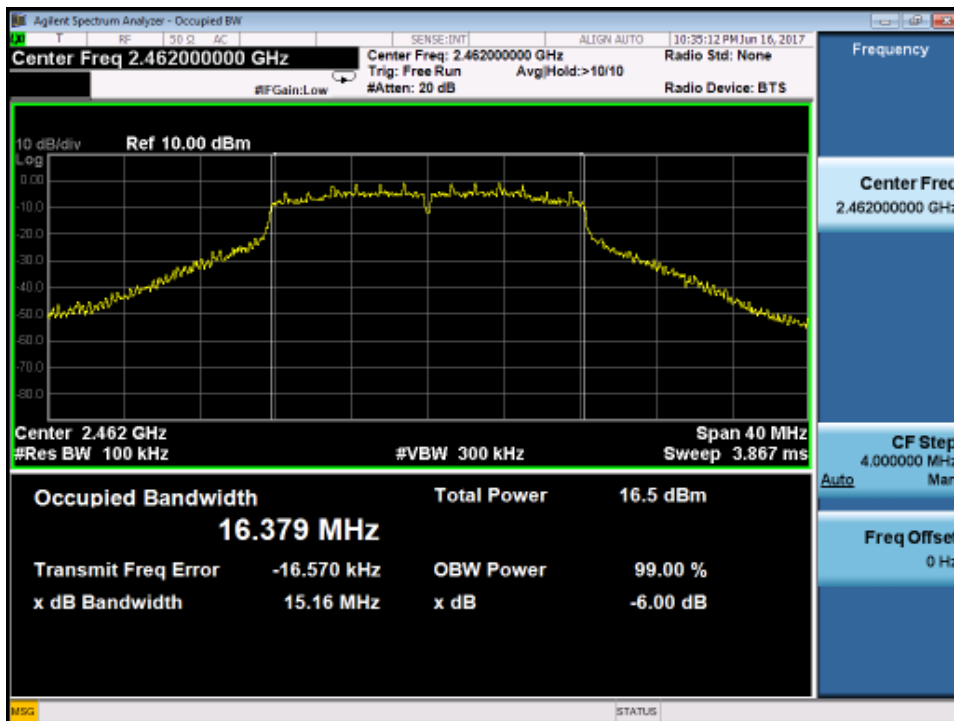
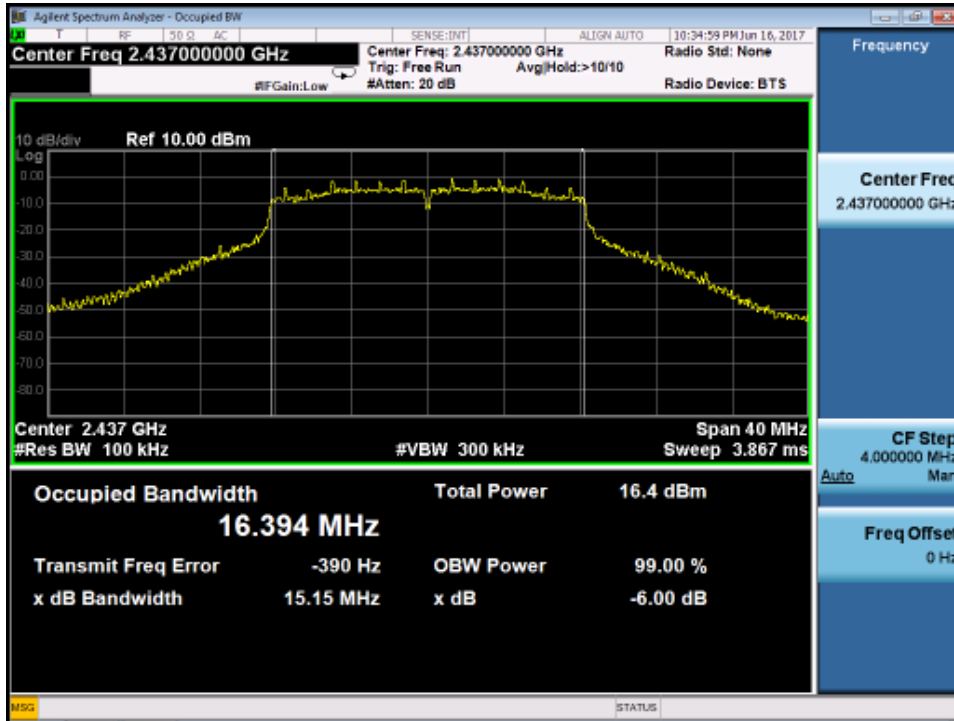


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Products

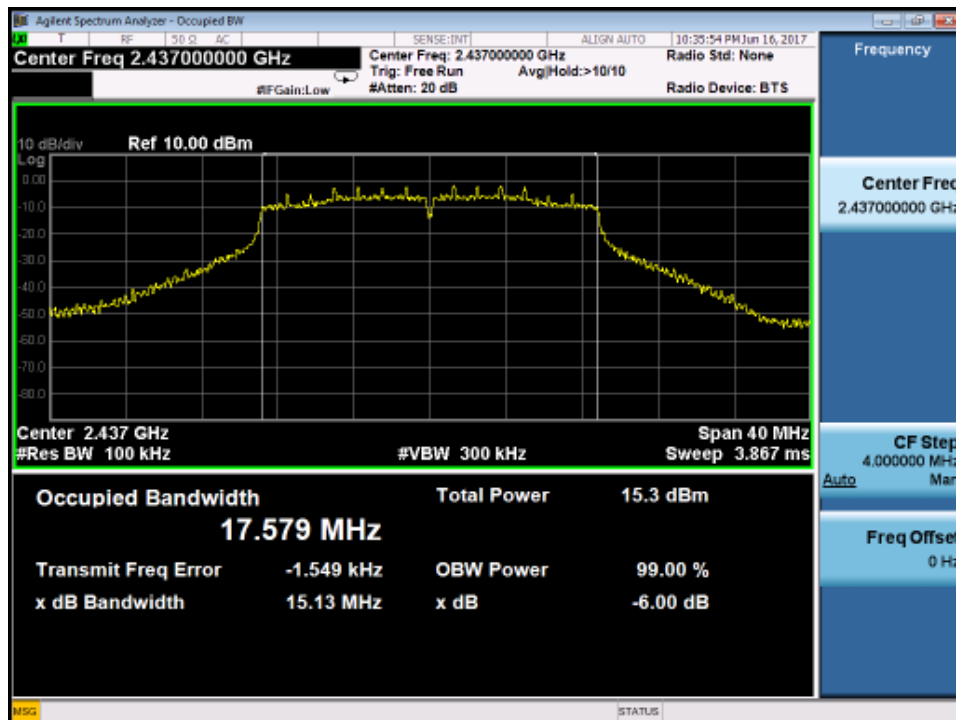
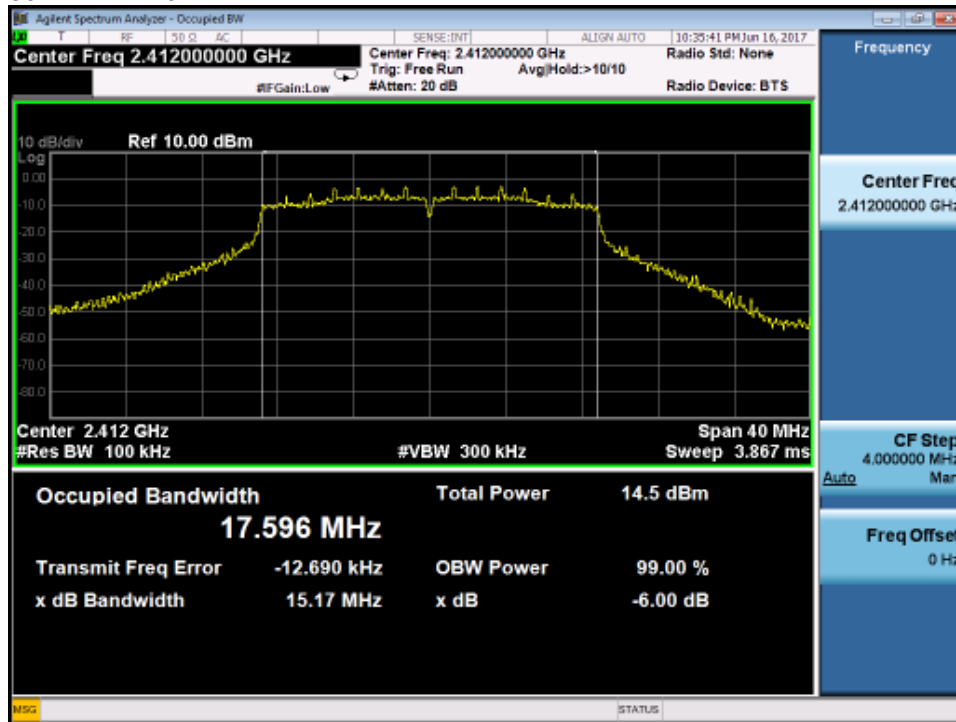


802.11g

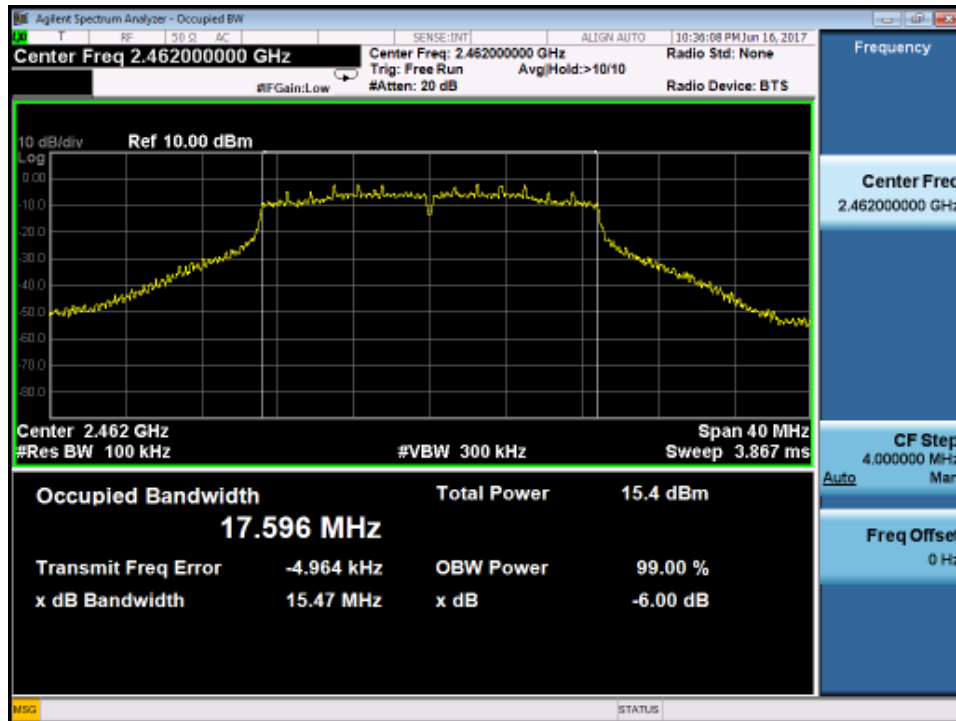




802.11n-HT20



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3. Power Spectral Density

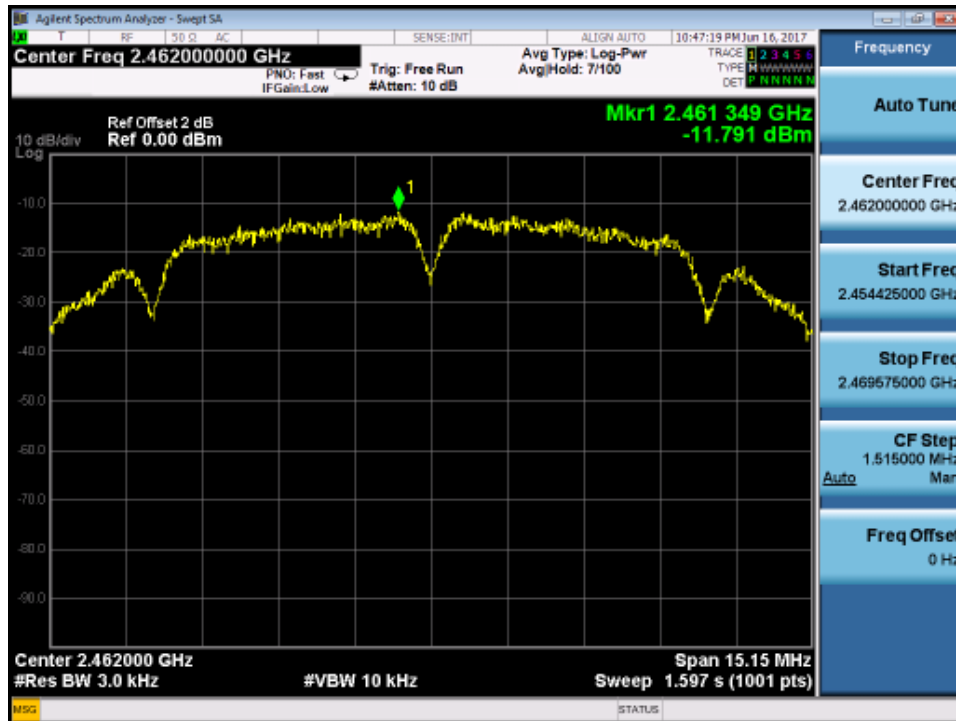
3.1 Test Datas

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

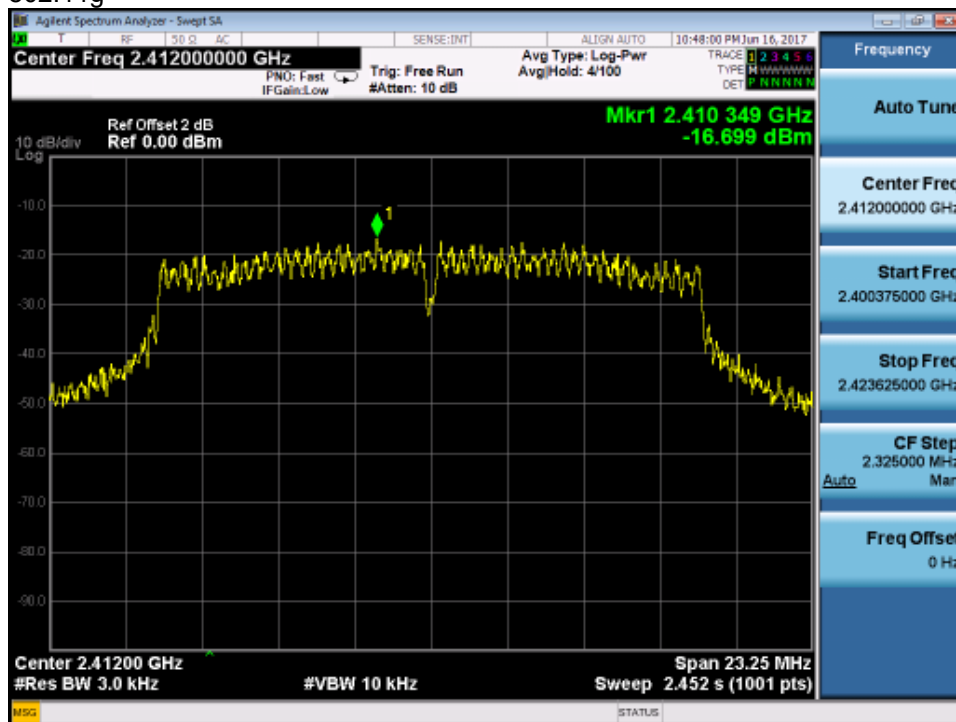
3.2 Test Graphs

802.11b



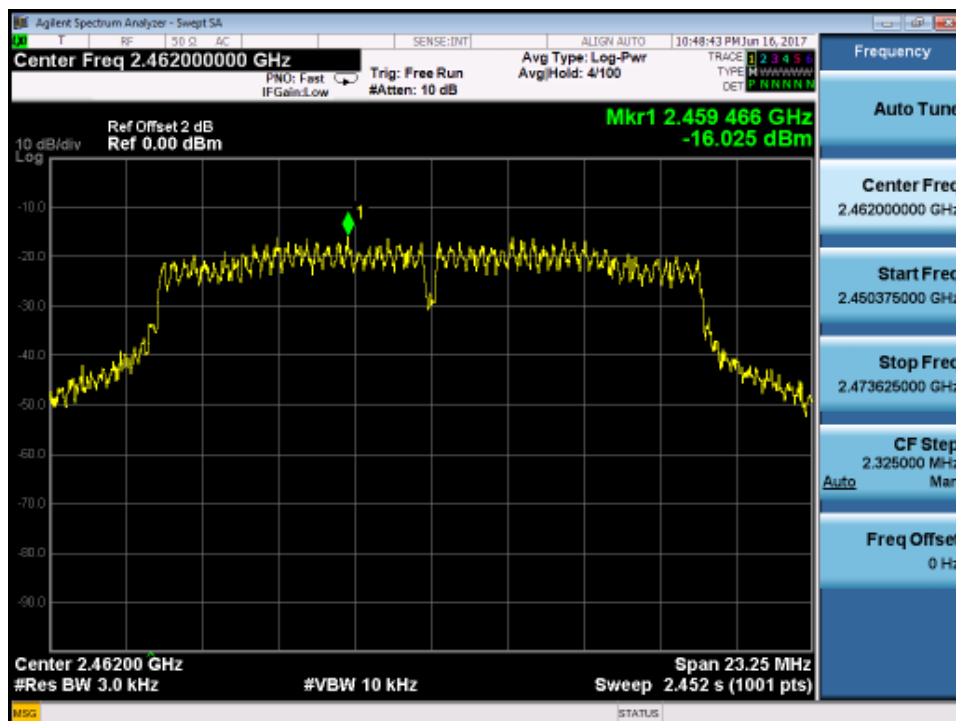
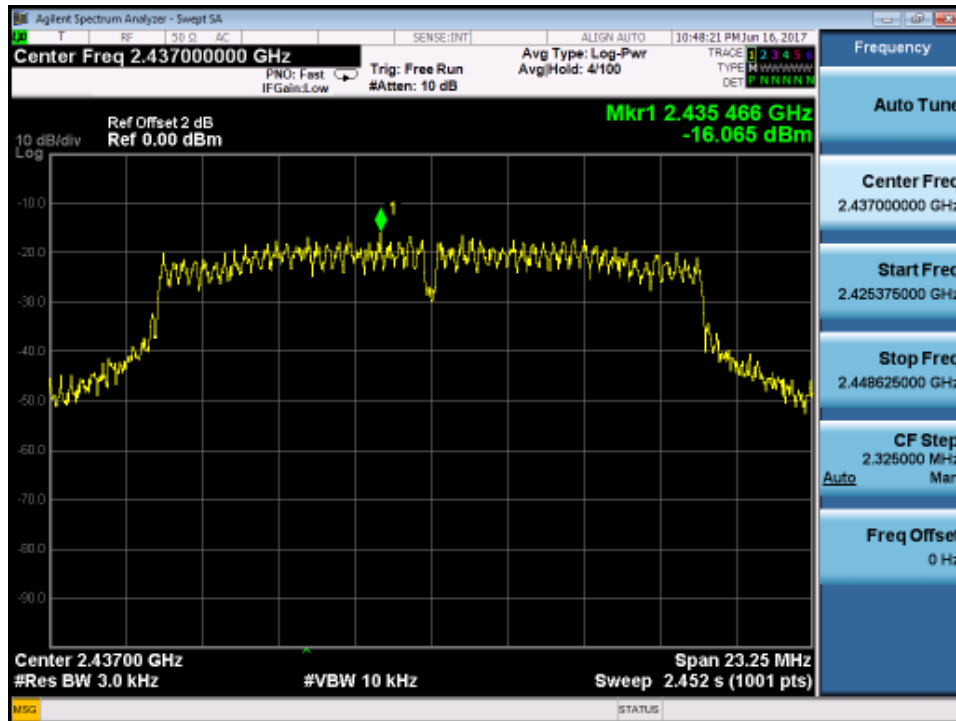


802.11g



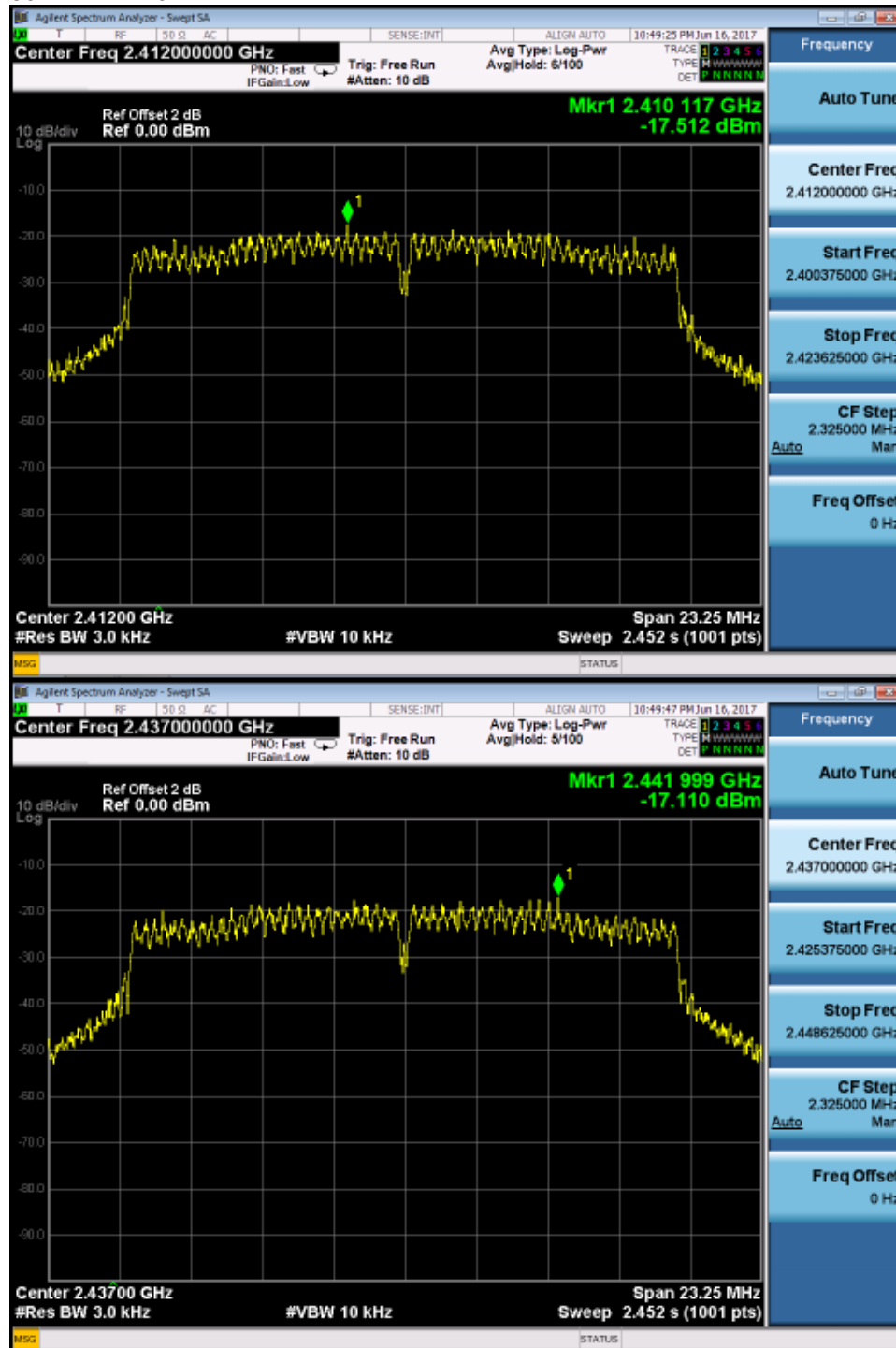
Appendix A
50086251 002
Page 12 of 94

Produkte
Products

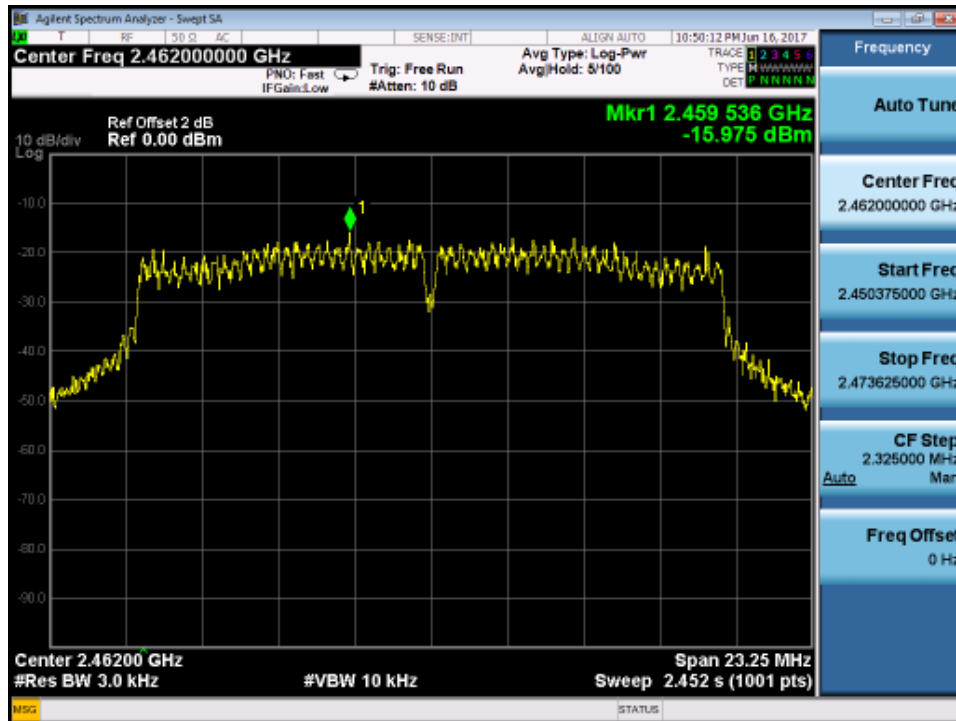


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802.11n-HT20



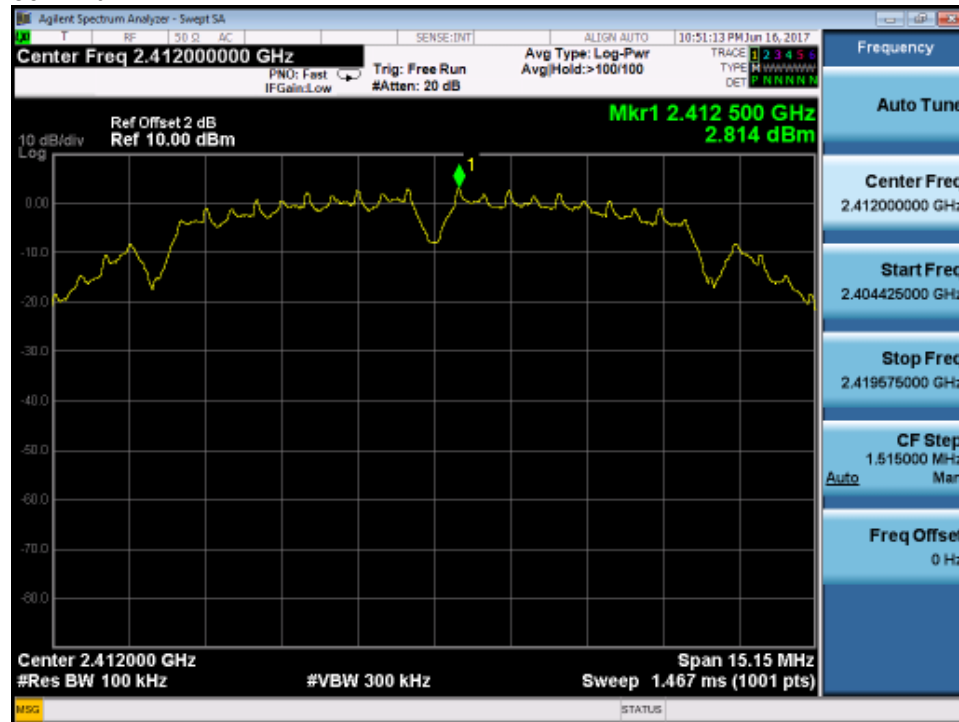
Produkte
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4. Conducted Spurious Emissions

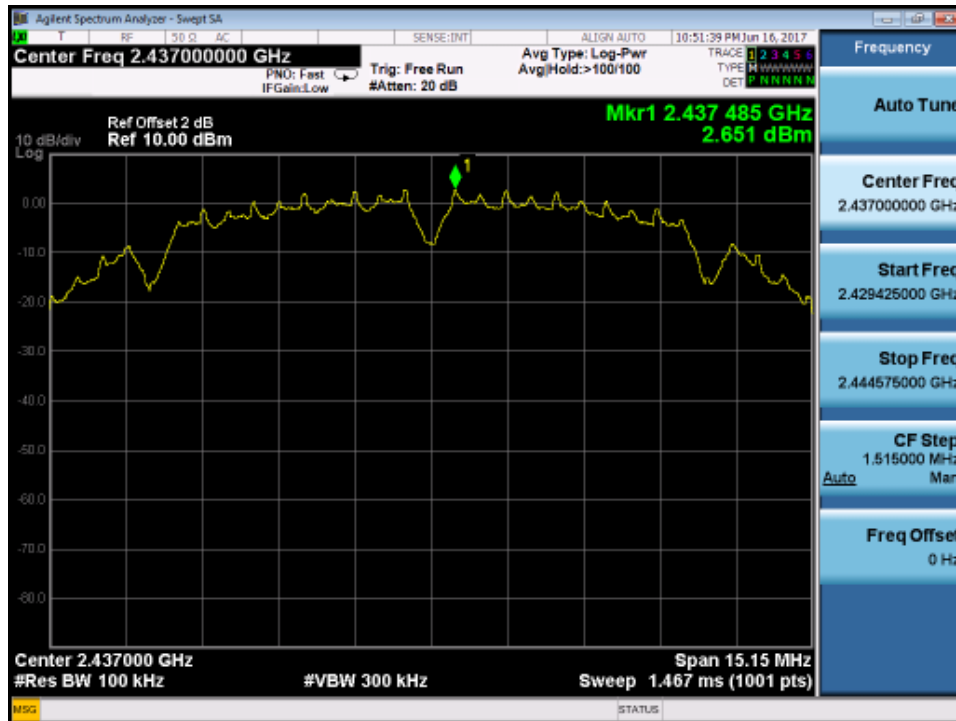
4.1 Test Graphs of Conducted Spurious Emissions

802.11b



Appendix A
50086251 002
Page 16 of 94

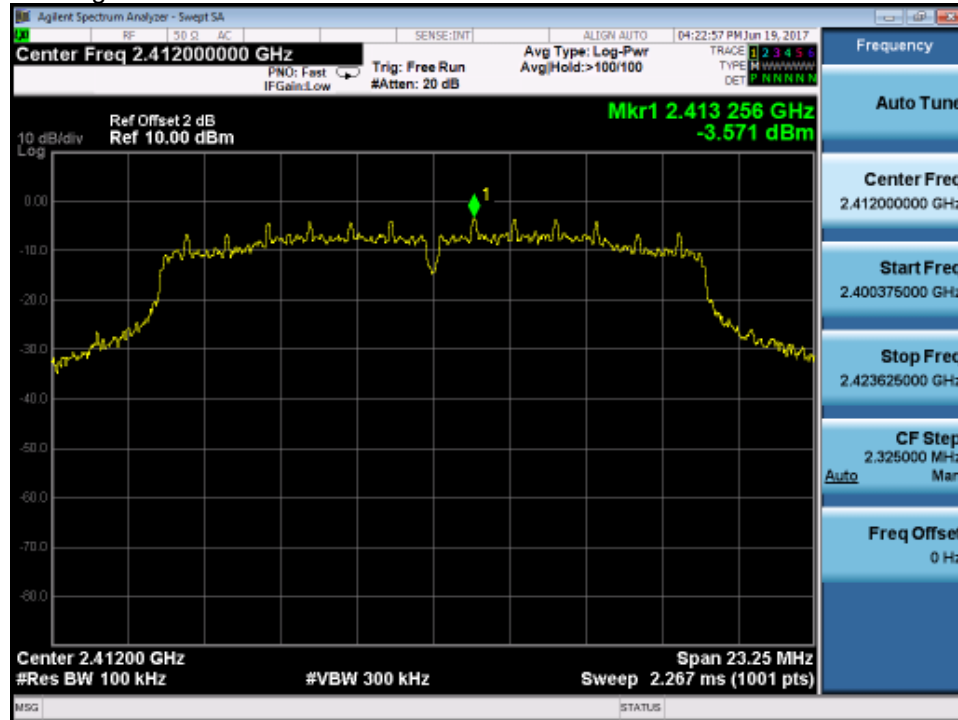
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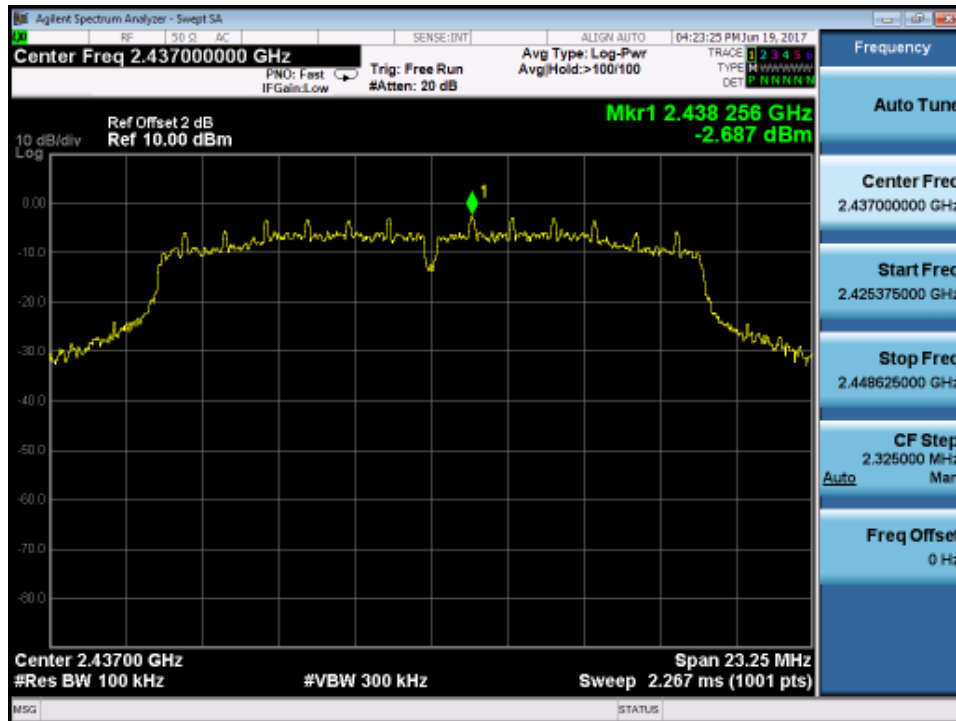


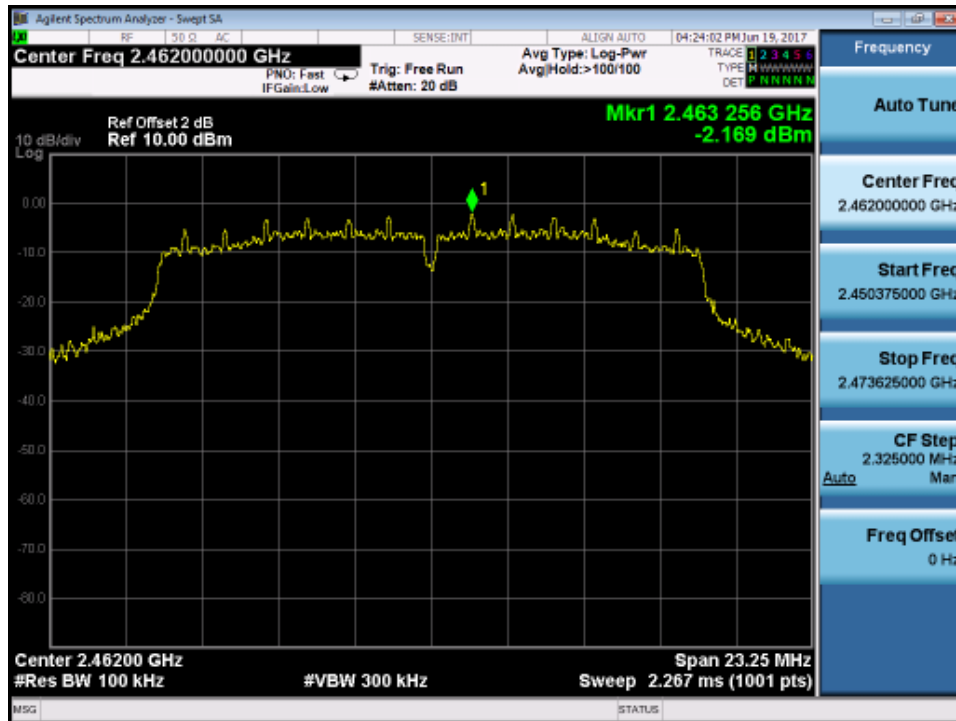


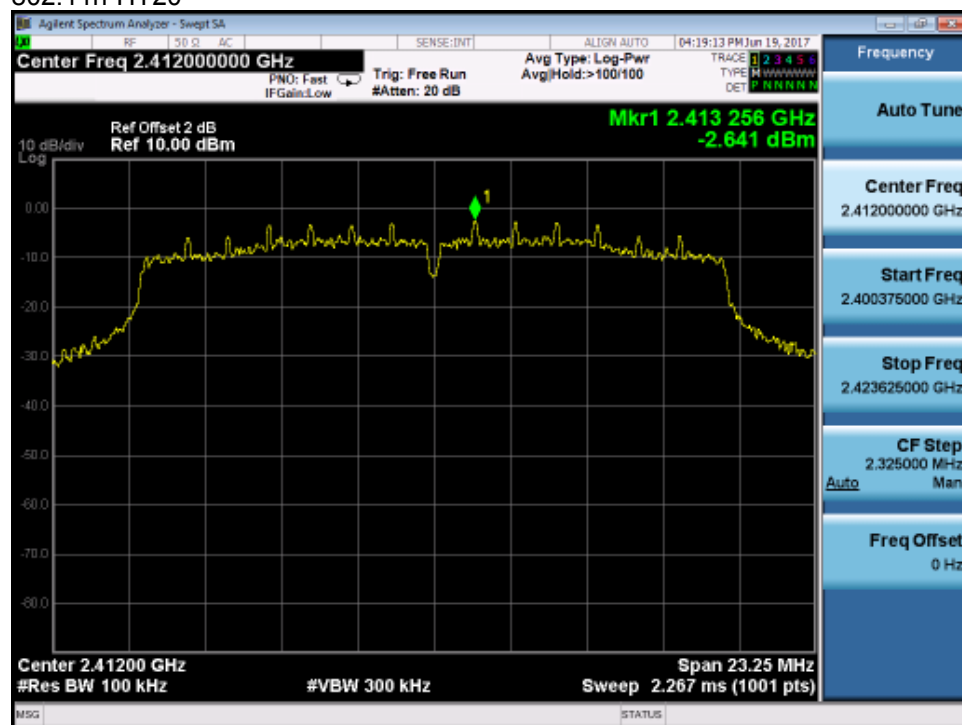
Produkte
Products

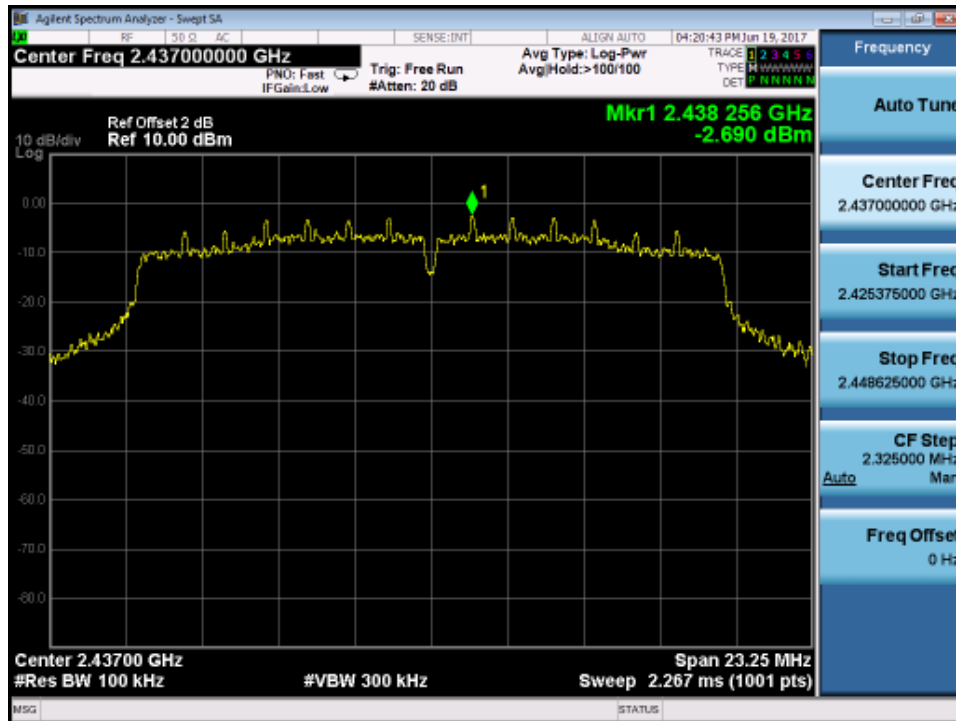
802.11g

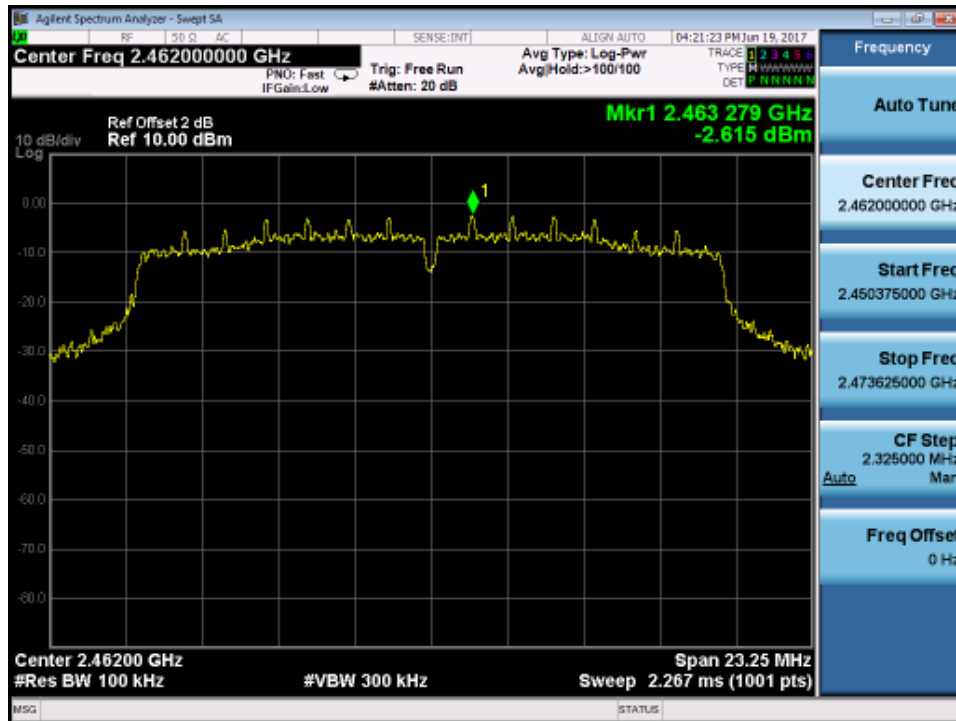






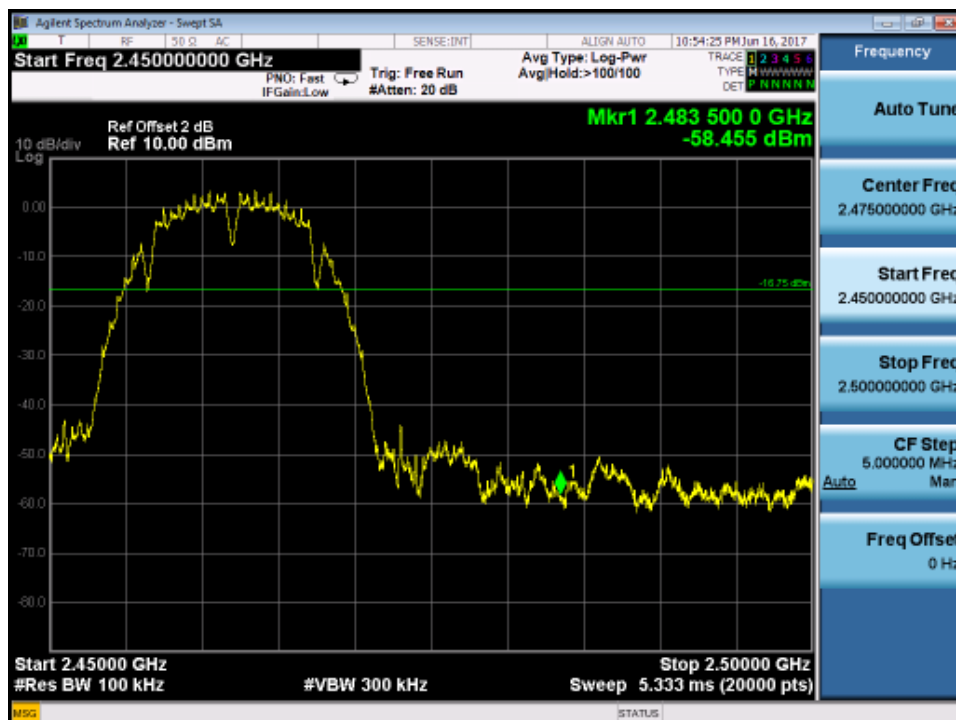






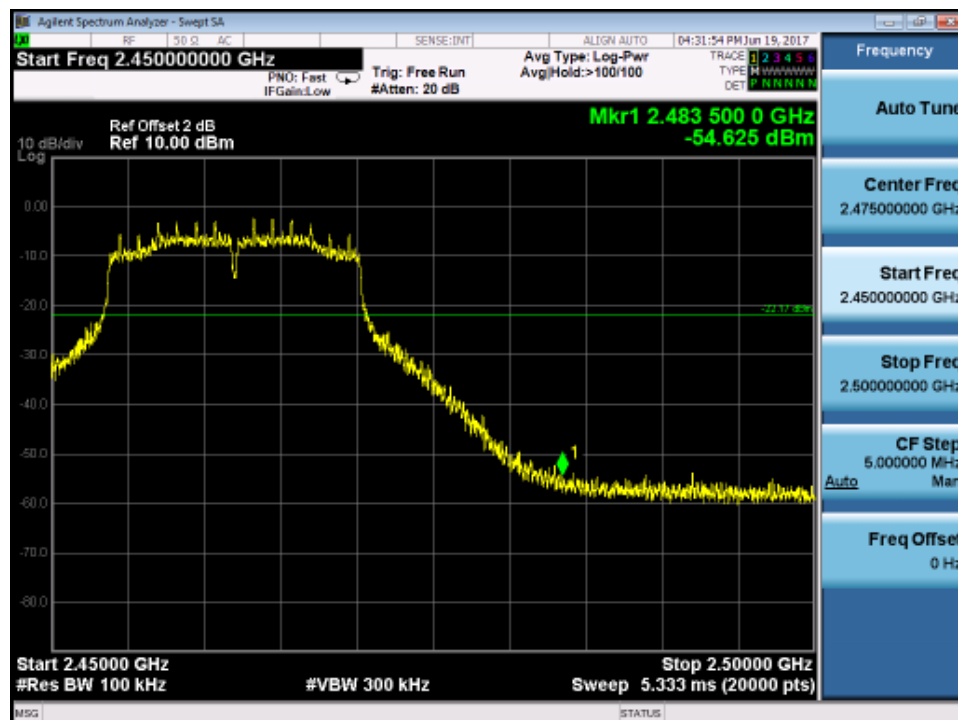
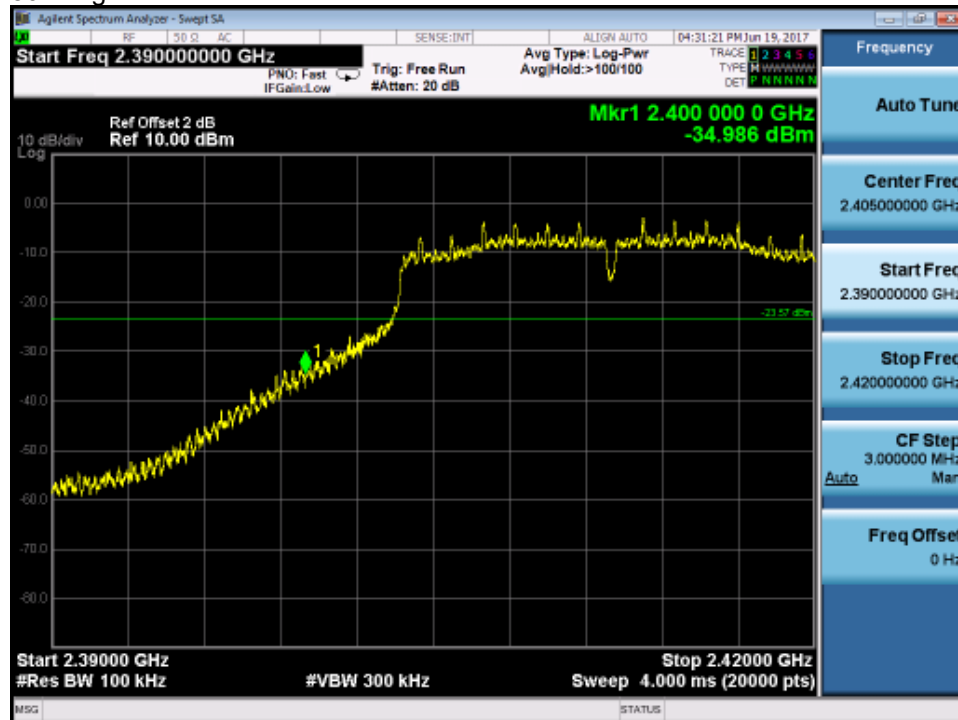
4.2 Test Graphs of Bandedge

802.11b

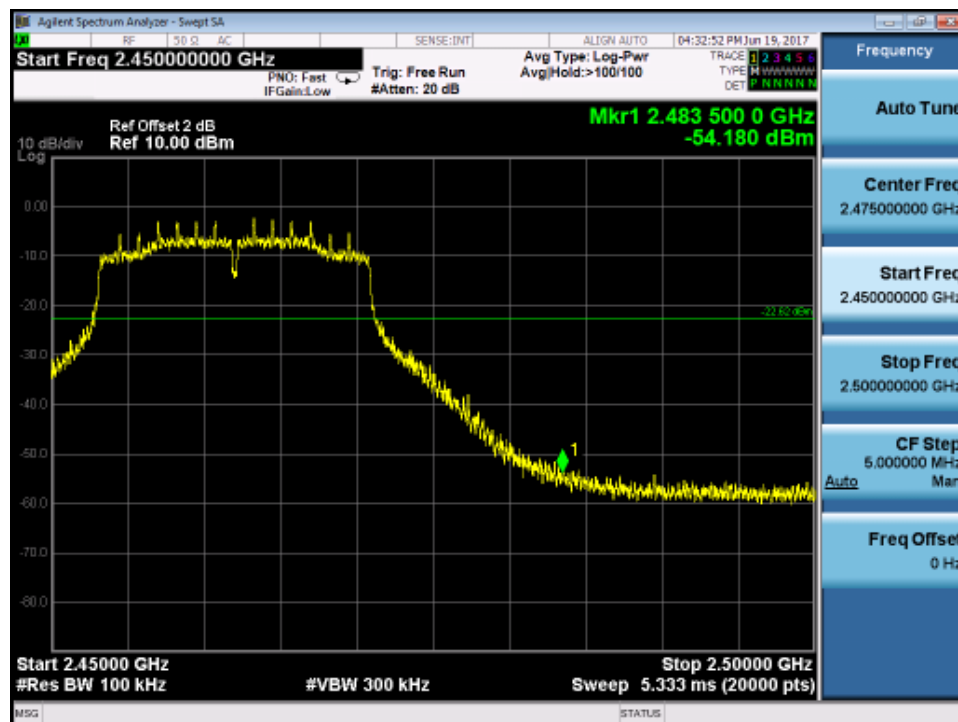
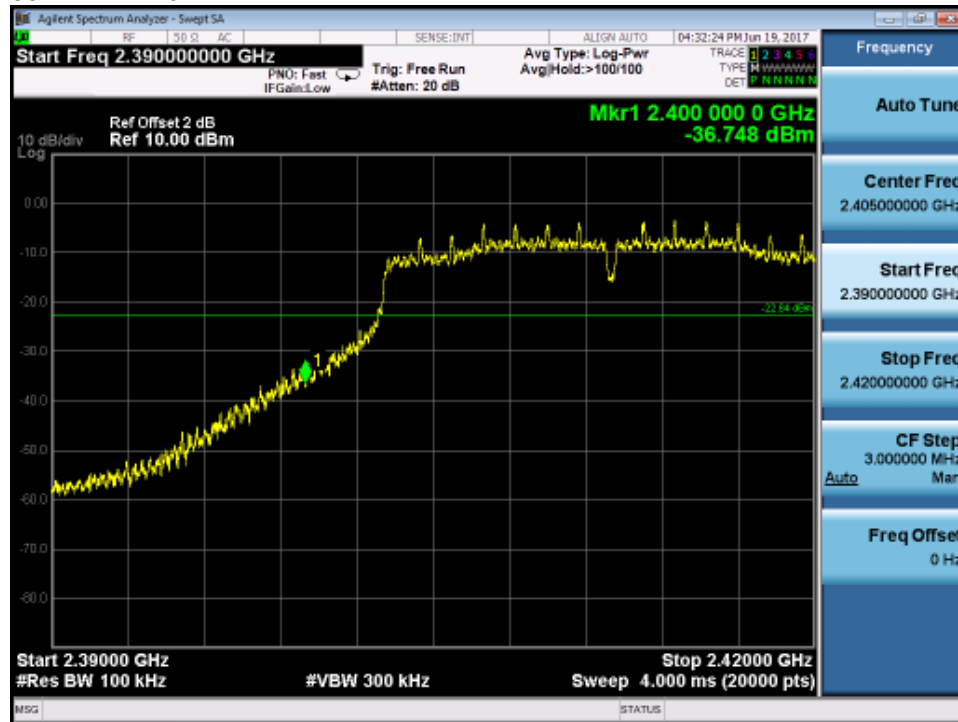


Produkte
Products

802.11g



802.11n-HT20

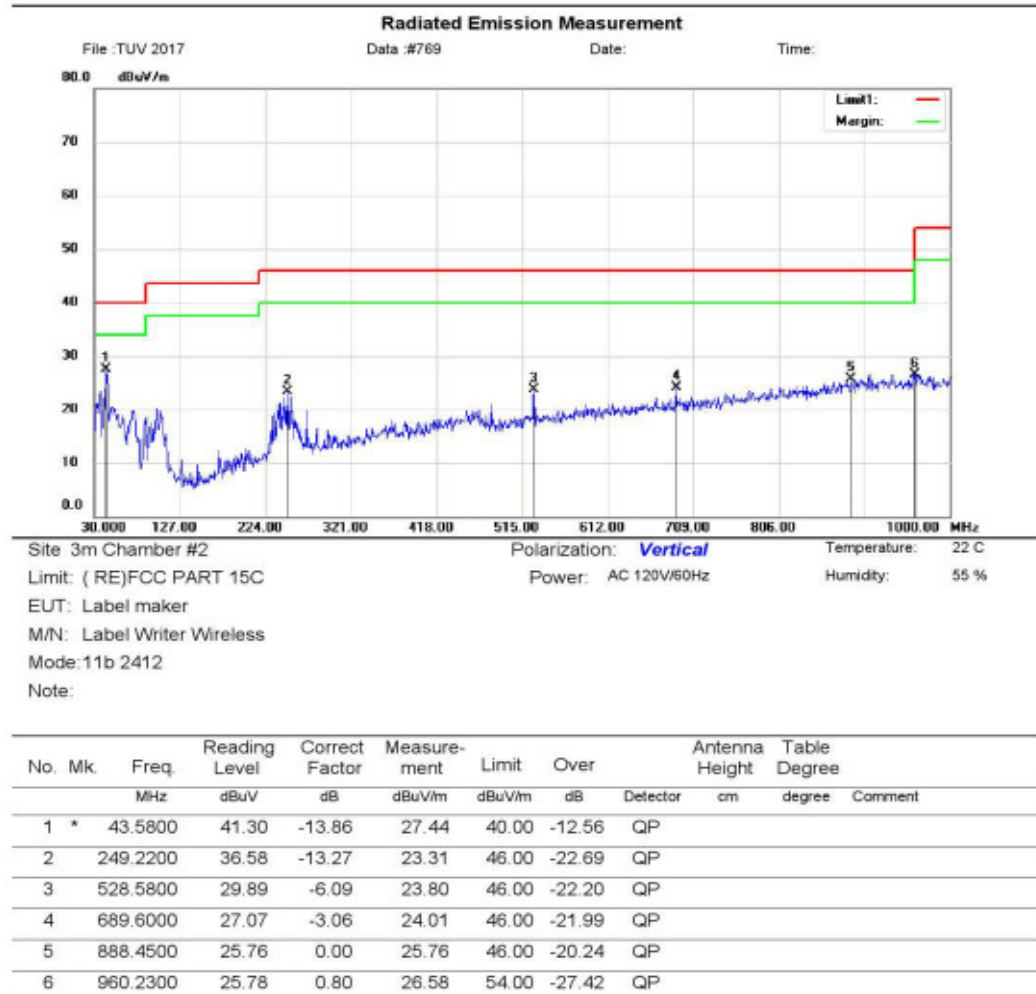


5. Transmitter Spurious Emissions

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

Operator: KK

File: TUV 2017Data: #769

Page: 1

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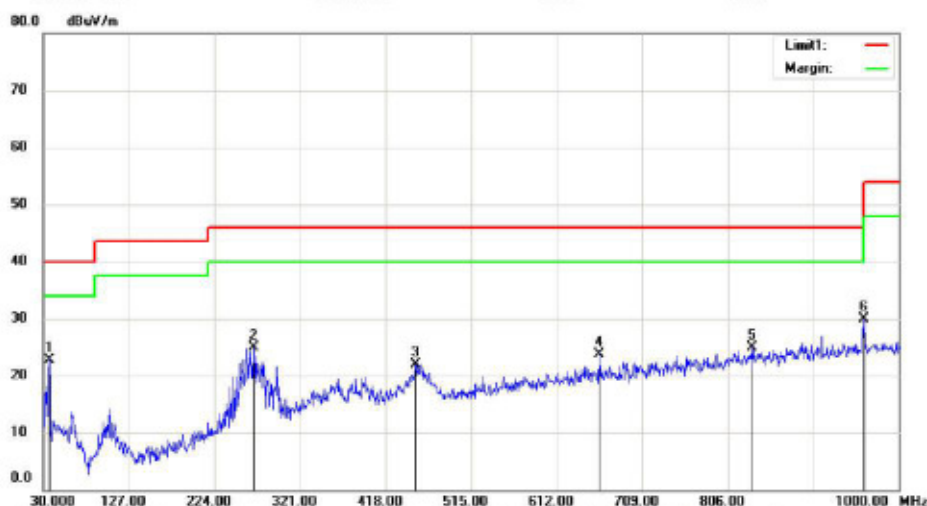
Radiated Emission Measurement

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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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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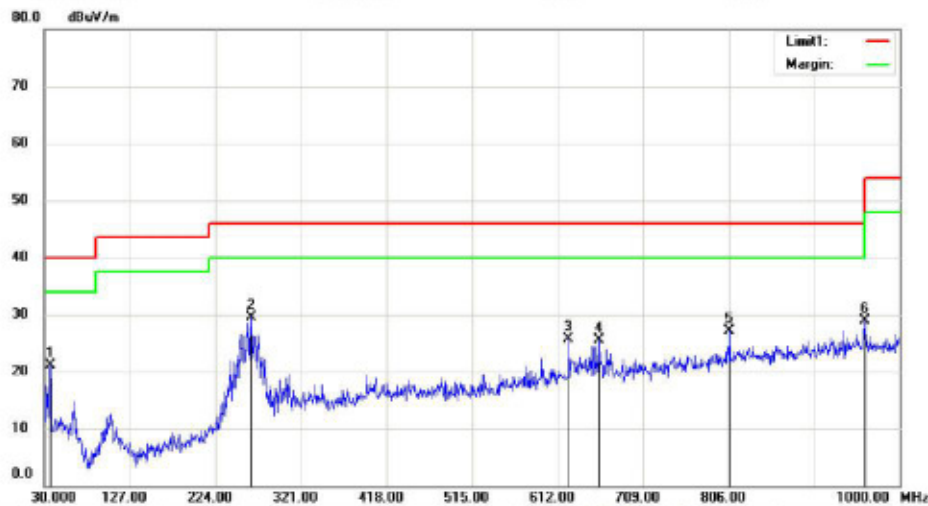
Radiated Emission Measurement

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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

Appendix A

50086251 002



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Page 30 of 94

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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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

Appendix A

50086251 002



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Page 31 of 94

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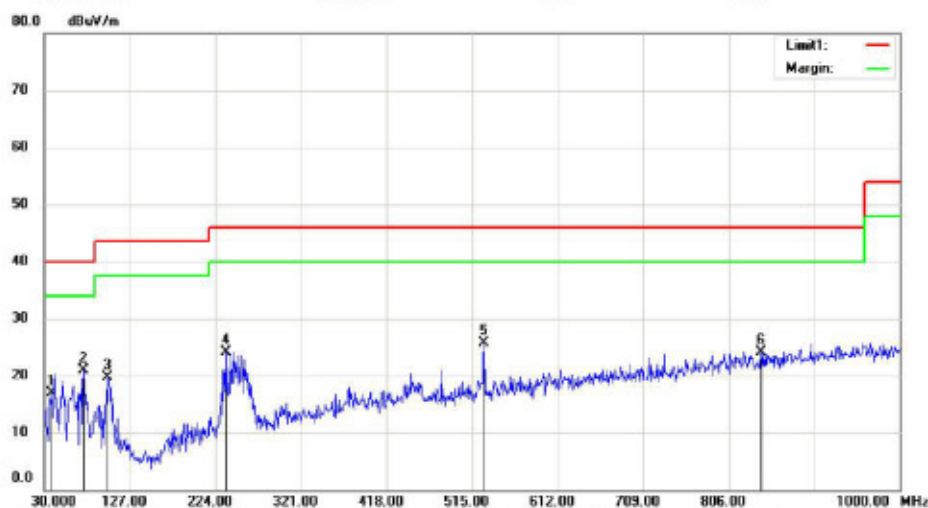
Radiated Emission Measurement

File: TUV 2017

Data: #773

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 2462

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

Appendix A

50086251 002



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Page 33 of 94

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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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

Appendix A

50086251 002



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Page 34 of 94

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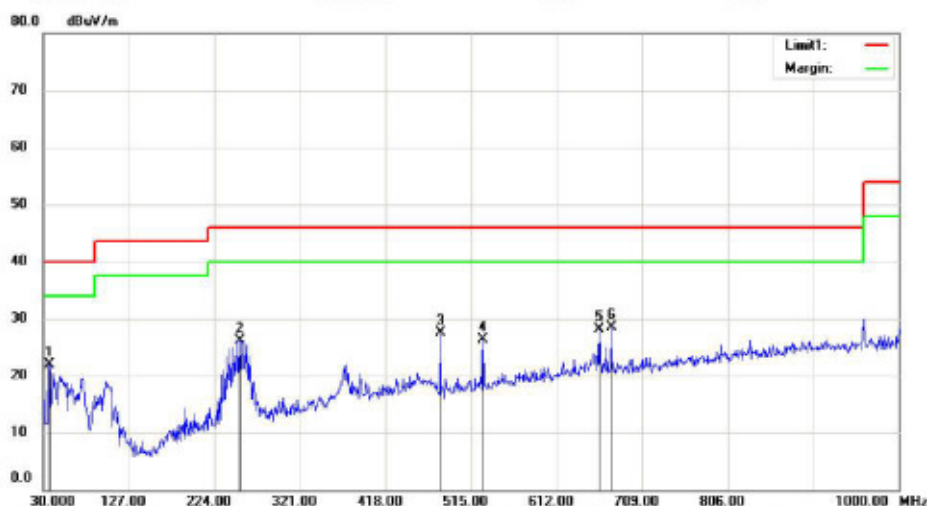
Radiated Emission Measurement

File: TUV 2017

Data: #776

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: 11g 2412

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

Appendix A

50086251 002



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Products

Page 35 of 94

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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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

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: 11g 2437

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

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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. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table 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

File: TUV 2017>Data: #779

Page: 1