



Test report No. : 4788387996A-US-R1-V0
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Issued date : May 25, 2018
FCC ID : 2AO4FM020-1

RADIO TEST REPORT

Product : **Payment Terminal**

Model Name : **M020**

FCC ID : **2AO4FM020-1**

Test Regulation : **FCC 47 CFR Part 15 Subpart C (Section 15.247)**

Received Date : **Apr. 10, 2018**

Test Date : **Apr. 20, 2018 ~ May 18, 2018**

Issued Date : **May 25, 2018**

Applicant : **Miura Systems Ltd.**
Unit 3, Cliveden Office Village, Lancaster Road,
Cressex Industrial Estate, High Wycombe HP12 3YZ

Issued By : **Underwriters Laboratories Taiwan Co., Ltd.**
Building B and Building E, No. 372-7, Sec. 4,
Zhongxing Rd., Zhudong Township, Hsinchu County,
Taiwan



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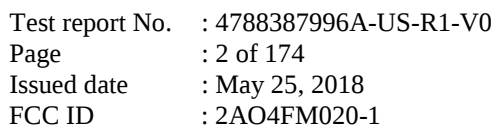
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Doc No: 17-EM-F0876 / 1.0



Original Test Report No.: 4788387996A-US-R1-V0

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1. Attestation of Test Results

APPLICANT: Miura Systems Ltd.
Unit 3, Cliveden Office Village, Lancaster Road,
Cressex Industrial Estate, High Wycombe HP12 3YZ

MANUFACTURER Jabil
Miłosna 32, 82-500 Kwidzyn, Poland

EUT DESCRIPTION: Payment Terminal

BRAND: Miura

MODEL: M020

SAMPLE STAGE: Production Unit

DATE of TESTED: Apr. 20, 2018 ~ May 18, 2018

APPLICABLE STANDARDS	
STANDARD	Test Results
FCC 47 CFR PART 15 Subpart C (Section 15.247)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:

Evelyn Lee
Project Handler

Date : May 25, 2018

Approve By:

John Cheng
Project Engineer

Date : May 25, 2018

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2. Summary of Test Results

Summary of Test Results		
Test Items	FCC Rules	Test Result
6dB Bandwidth and 99% Bandwidth	FCC 15.247 (a) (2)	PASS
Peak Conducted Output Power	FCC 15.247 (b) (3) KDB 558074 D01 DTS Meas Guidance v04	PASS
Power Spectral Density	FCC 15.247 (e) KDB 558074 D01 DTS Meas Guidance v04	PASS
Conducted Bandedge and Spurious Emission	FCC 15.247 (d) KDB 558074 D01 DTS Meas Guidance v04	PASS
Radiated Bandedge and Spurious Emission	FCC 15.247 (d) FCC 15.209 FCC 15.205 KDB 558074 D01 DTS Meas Guidance v04	PASS
Conducted Emission Test For AC Power Port	FCC 15.207	PASS

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3. Test Methodology

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB558074 D01 DTS Meas Guidance v04, KDB414788 D01 Radiated Test Site v01, ANSI C63.10-2013 and KDB 662911 D01 Multiple Transmitter Output v02r01.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398. The full scope of accreditation can be viewed at http://accreditation.taftw.org.tw/taf/public/basic/viewApplyItems.action?unitNo=3398

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5. Measurement Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor $k=2$.

Test Item	Measurement Frequency Range	K	U(dB)
Conducted disturbance at mains terminals ports	0.15MHz ~ 30MHz	2	2.6
RF Conducted	9 kHz - 40GHz	2	1.0
Radiated disturbance below 30MHz	9 kHz - 30 MHz	2	2.4
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	2	5.5
Radiated disturbance above 1GHz	1GHz ~ 40GHz	2	5.0

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6. Equipment under Test

6.1. Description of EUT

Product	Payment Terminal
Brand Name	Miura
Model Name	M020
Radio Technology and Operating Frequency	IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz IEEE 802.11n HT40: 2422MHz-2452MHz
Modulation	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Normal Voltage	5Vdc (adapter or host equipment) 3.8Vdc for battery
Hardware Version	M021-PRODxx-Vx-x
Software Version	M000-TESTOS-V8-0c OS

6.2. Maximum Output Power

Frequency Range (MHz)	Number of Transmit ANT's (NTX)	IEE Std. 802.11	Channel Number	Max Output Power (dBm)
2412-2462	1	b	1-11[11]	13.38
2412-2462	1	g	1-11[11]	19.13
2412-2462	1	n HT20	1-11[11]	18.68
2422-2452	1	n HT40	1-9[11]	18.33

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6.3. Channel List

Channel List for 802.11b/g/n (20 MHz)					
Channel	Frequency (MHz)	Channel	Frequency(MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	-	-

Channel List for 802.11n (40 MHz)							
Ch.	Freq.(MHz)	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)	Ch.	Freq.(MHz)
3	2422	7	2442	-	-	-	-
4	2427	8	2447	-	-	-	-
5	2432	9	2452	-	-	-	-
6	2437	-	-	-	-	-	-

6.4. Test Condition

Test Item	Test Site No.	Relative Humidity	Temperature	Voltage	Test Engineer
Antenna Port Conducted Measurement	SR4	55%	22°C	120 Vac/ 60 Hz	WaterNil Guan
Radiated Spurious Emission	966-2	52%	25°C	120 Vac/ 60 Hz	WaterNil Guan
AC power Line Conducted Emission	SR1	54%	26°C	120 Vac/ 60 Hz	WaterNil Guan

FCC Test Firm Registration Number: 498077

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6.5. Description Of Available Antennas

Antenna	Brand Name	Model Name	Antenna Type	Antenna Gain(dBi)
Chain(0)	Amotech	ALA621C4	Chip	3.5

6.6. Operating Mode and Worst Case of EUT

Test item	Mode	Modulation Technology	Modulation Type	Available Channel	Test Channel	Data Rate
Radiated Emissions (Above 1GHz)	802.11b	DSSS	DBPSK	1 to 11	1,6,11	1.0
	802.11g	OFDM	BPSK	1 to 11	1,6,11	6.0
	802.11n(HT20)	OFDM	BPSK	1 to 11	1,6,11	MCS0
	802.11n(HT40)	OFDM	BPSK	3 to 9	3,6,9	MCS0
Radiated Emissions (Below 1GHz)	802.11b	DSSS	DBPSK	1 to 11	11	1.0
Power Line Conducted Emission	802.11b	DSSS	DBPSK	1 to 11	11	1.0
Bandedge Measurement	802.11b	DSSS	DBPSK	1 to 11	1,11	1.0
	802.11g	OFDM	BPSK	1 to 11	1,11	6.0
	802.11n(HT20)	OFDM	BPSK	1 to 11	1,11	MCS0
	802.11n(HT40)	OFDM	BPSK	3 to 9	3,9	MCS0
Antenna Port Conducted Measurement	802.11b	DSSS	DBPSK	1 to 11	1,6,11	1.0
	802.11g	OFDM	BPSK	1 to 11	1,6,11	6.0
	802.11n(HT20)	OFDM	BPSK	1 to 11	1,6,11	MCS0
	802.11n(HT40)	OFDM	BPSK	3 to 9	3,6,9	MCS0

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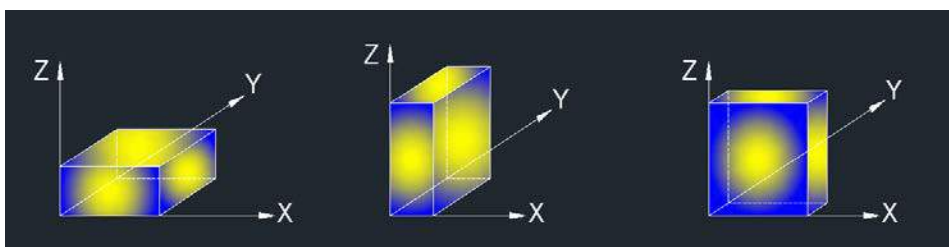
Co-location

Test item	Mode	Modulation Technology	Test Channel
Radiated Emissions (Above 1GHz)	802.11b+NFC	DSSS+ASK	802.11b : 11 NFC : 1
Radiated Emissions (Below 1GHz)	802.11b+NFC	DSSS+ASK	802.11b : 11 NFC : 1
Power Line Conducted Emission	802.11b+NFC	DSSS+ASK	802.11b : 11 NFC : 1

Note:

1. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
2. For below 1 GHz radiated emission, 1 GHz to 18GHz radiated emission, above 18GHz radiated emissions and AC power line conducted emission and were performed with the EUT set to transmit at the channel with highest output power as worst-case.

X axis, Y axis, Z axis positions:



The fundamental of the EUT was investigated in three orthogonal axes X/Y/Z, it was determined that X axis was worst-case . Therefore, all final radiated testing was performed with the EUT in X axis.

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7. Test Equipment

Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070821	Nov. 28, 2017	1 year
Loop Antenna	ETS lindgren	6502	00213440	Dec. 7, 2017	1 year
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	VULB 9168-773 & AT-N0539	Feb. 12, 2018	1 year
Horn Antenna (1-18 GHz)	Schwarzbeck	BBHA 9120 D	BBHA 9120D-01686	Jan. 23, 2018	1 year
Horn Antenna(18-40 GHz)	Schwarzbeck	BBHA 9170	BBHA9170750	Jan.12, 2018	1 year
Preamplifier (30-1000 MHz)	EMCI	RMC330E	980404	Jan. 9, 2018	1 year
Preamplifier (1-18 GHz)	EMCI	EMC051835B E	980407	Jan. 10, 2018	1 year
Preamplifier (18-40GHz)	EMCI	EMC184040S EE	980408	Mar. 13, 2018	1 year
RF Cable (9 KHZ~18 GHz)	UltraPhase & EMC Instrument	A1K50-UP0358-A1K50-1500&EMC106-NM-SM-2500/8000	170111-3&170104/170223	Feb. 1, 2018	1 year
RF Cable (18 GHz~40 GHz)	UltraPhase	K1K50-UP0264-K1K50-500/2500/4000	170214-3/170214-3/170214-1	Feb. 1, 2018	1 year

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Test Equipment List					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
Antenna Port Conducted Measurement					
Spectrum Analyzer	Keysight	N9010A	MY56070834	Nov. 20, 2017	1 year
Power meter	Anrisu	MA2411B	1531202	Dec. 14, 2017	1 year
Power sensor	Anrisu	ML2495A	1645002	Dec. 14, 2017	1 year
AC power Line Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	Nov. 28, 2017	1 year
Two-Line V-Network	Rohde & Schwarz	ENV216	102136	Aug. 2, 2017	1 year
Impuls-Begrenzer Pulse Limiter	Rohde & Schwarz	ESH3-Z2	102219-Qt	July 31, 2017	1 year
Cables	Huber+Suhner	RG 214/U	FCC-BCICF-4_RF	Feb. 1, 2018	1 year
UL Software					
Description			Name		Version
Radiated measurement			EMC-RI		1.0.0.0
Conducted measurement			Keysight.TestSystem		1.0.0.0
AC power Line Conducted Emission			EZ_EMC		1.1.4.2

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8. Description of Test Setup

Support Equipment

Item	Equipment	Brand Name	Model Name	P/N
1	Adapter	ANKER	A2021	N/A

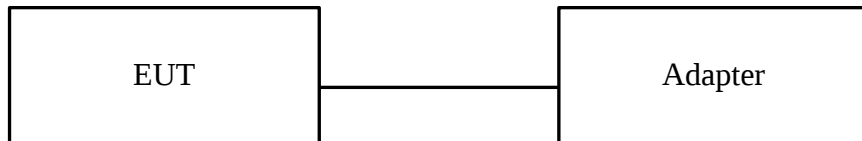
Accessory

Item	Accessory	Brand Name	Model Name	Description
1	USB Cable	N/A	N/A	Micro USB shielding 1 meter *1

Test Setup

The EUT was worked in engineering mode to transmit signal.

Setup Diagram for Test



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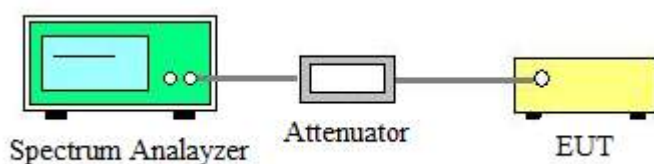
9. Test Result

9.1. Duty Cycle

Requirements

N/A

Test Setup



Test Data

Mode	On Time (ms)	Period (ms)	Duty cycle (%)	Duty cycle Correction Factor (dB)	1/B Min VBW (KHz)
802.11b	100.000	100.000	100.00	0.00	0.010
802.11g	100.000	100.000	100.00	0.00	0.010
802.11n HT20	100.000	100.000	100.00	0.00	0.010
802.11n HT40	100.000	100.000	100.00	0.00	0.010

Note: Duty Cycle Correction Factor=10log(1/x).

Where: x is Duty Cycle (Linear) Where: B is On Time

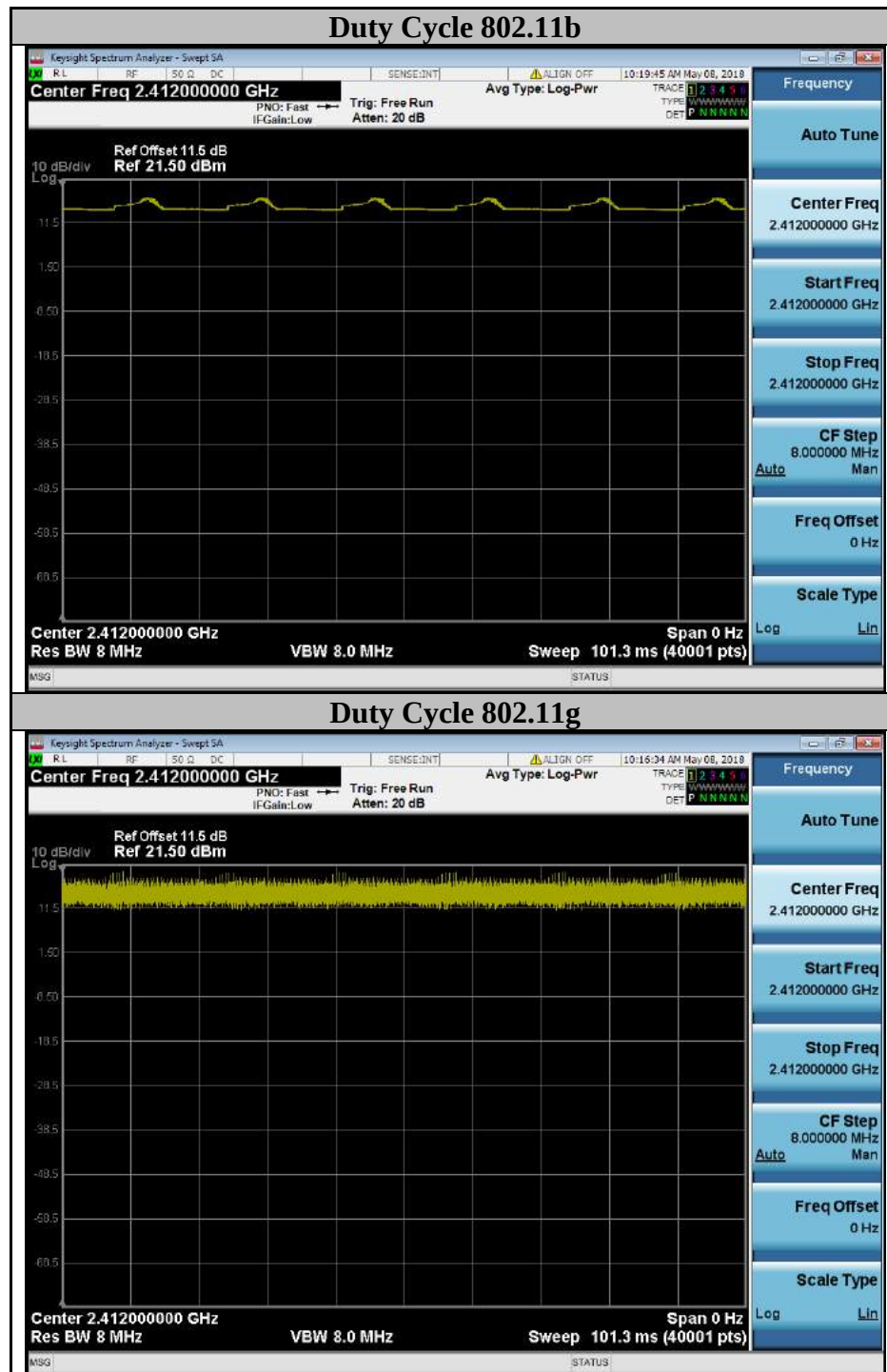
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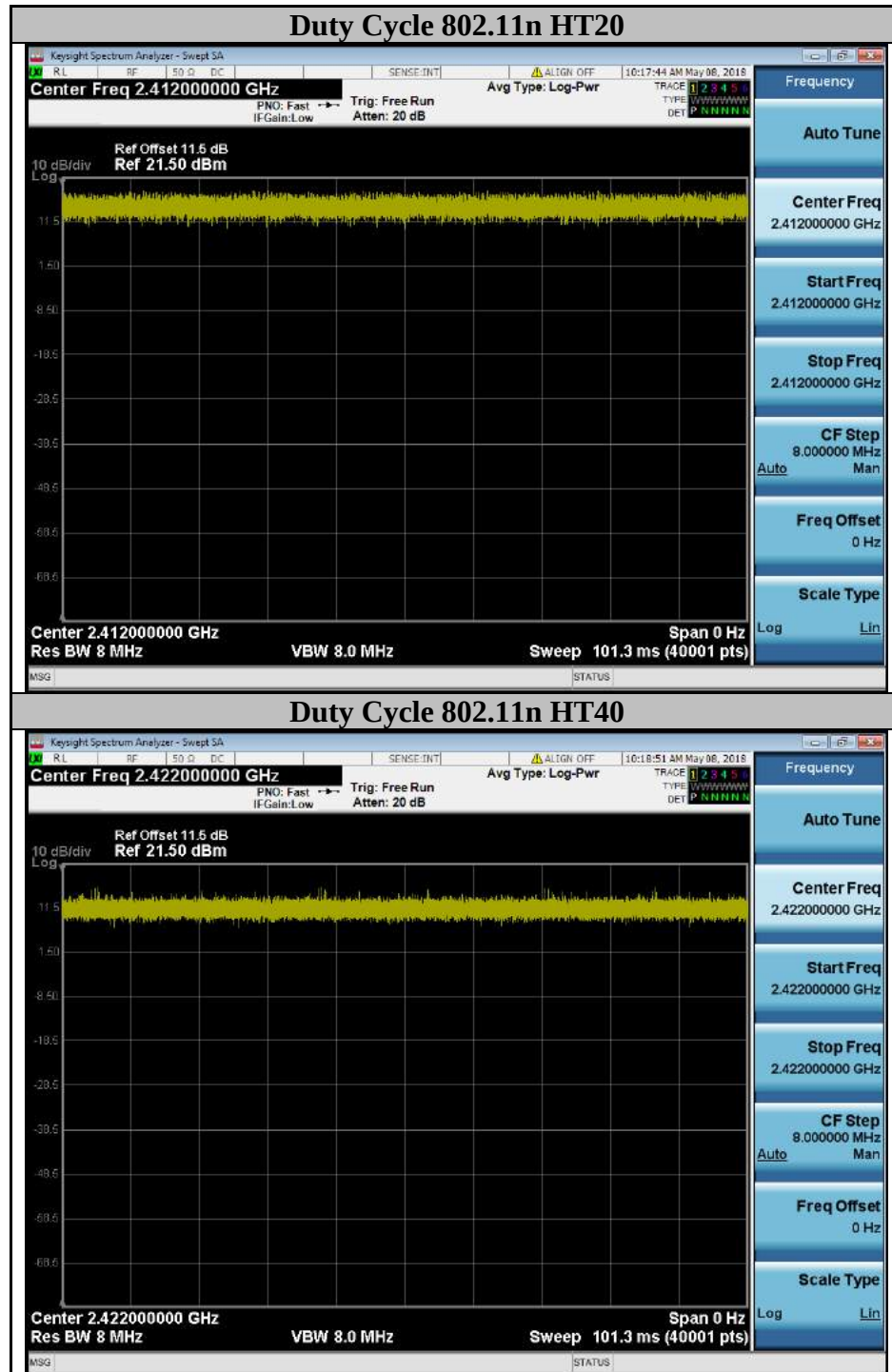
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9.2. 6 dB Bandwidth

Requirements

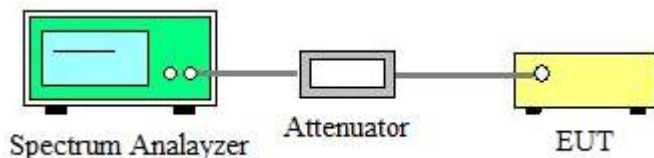
The minimum 6 dB bandwidth shall be at least 500 kHz.

Test procedure

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6dB Bandwidth :100K For 99% Bandwidth :1% to 5% of the occupied bandwidth
VBW	For 6dB Bandwidth : $\geq 3 \times \text{RBW}$ For 99% Bandwidth : approximately $3 \times \text{RBW}$
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB and 99% relative to the maximum level measured in the fundamental emission.

Test Setup



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Test Data

Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Pass/Fail
802.11b	1	2412	10.050	≥ 0.5	Pass
	6	2437	10.053	≥ 0.5	Pass
	11	2462	10.044	≥ 0.5	Pass
802.11g	1	2412	16.521	≥ 0.5	Pass
	6	2437	16.517	≥ 0.5	Pass
	11	2462	16.512	≥ 0.5	Pass
802.11n HT20	1	2412	17.643	≥ 0.5	Pass
	6	2437	17.685	≥ 0.5	Pass
	11	2462	17.652	≥ 0.5	Pass
802.11n HT40	3	2422	36.350	≥ 0.5	Pass
	6	2437	36.345	≥ 0.5	Pass
	9	2452	36.350	≥ 0.5	Pass

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)	Pass/Fail
802.11b	1	2412	14.853	N/A	Pass
	6	2437	14.902	N/A	Pass
	11	2462	14.874	N/A	Pass
802.11g	1	2412	16.530	N/A	Pass
	6	2437	16.520	N/A	Pass
	11	2462	16.504	N/A	Pass
802.11n HT20	1	2412	17.714	N/A	Pass
	6	2437	17.728	N/A	Pass
	11	2462	17.707	N/A	Pass
802.11n HT40	3	2422	35.792	N/A	Pass
	6	2437	35.826	N/A	Pass
	9	2452	35.823	N/A	Pass

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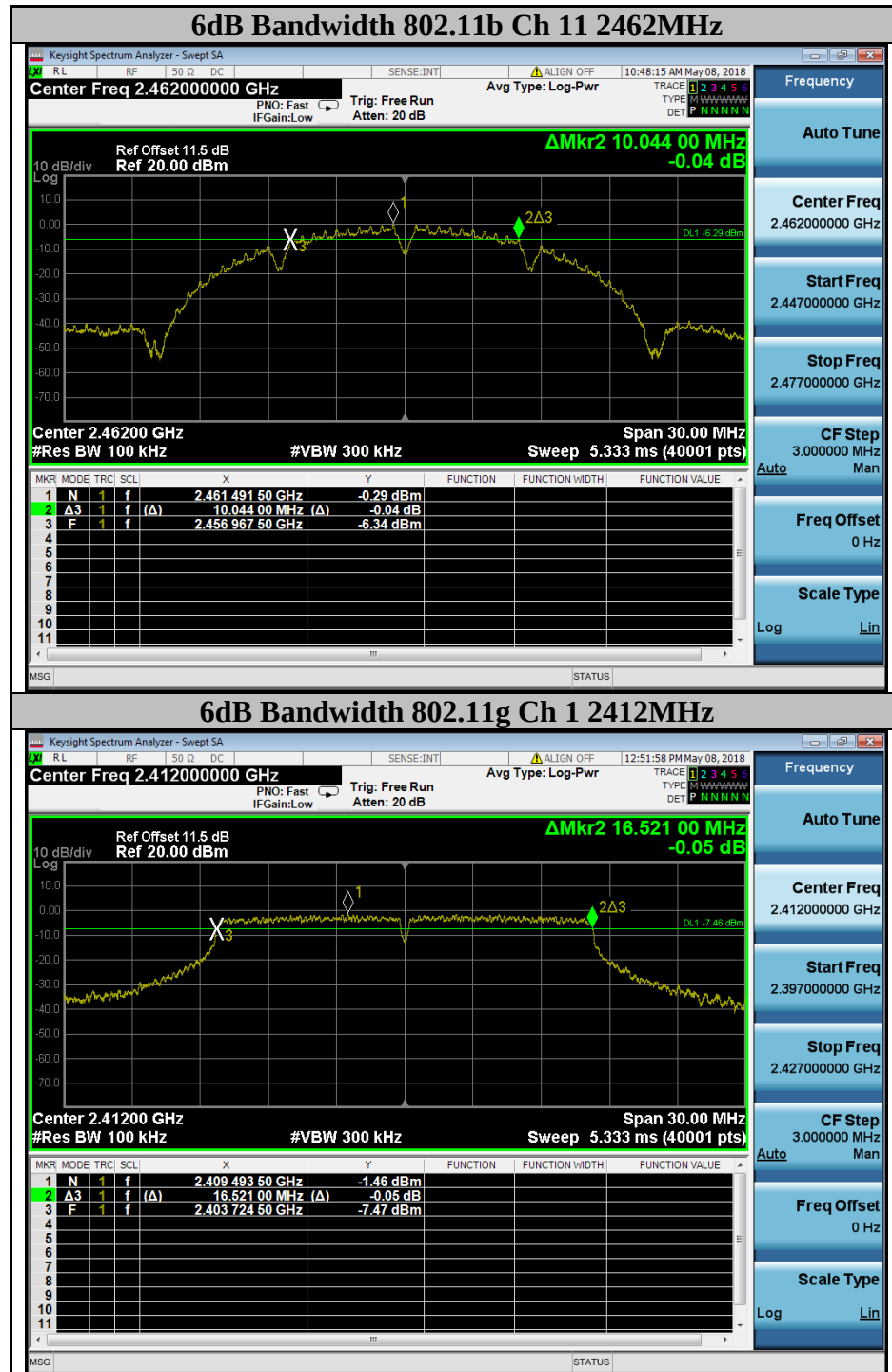
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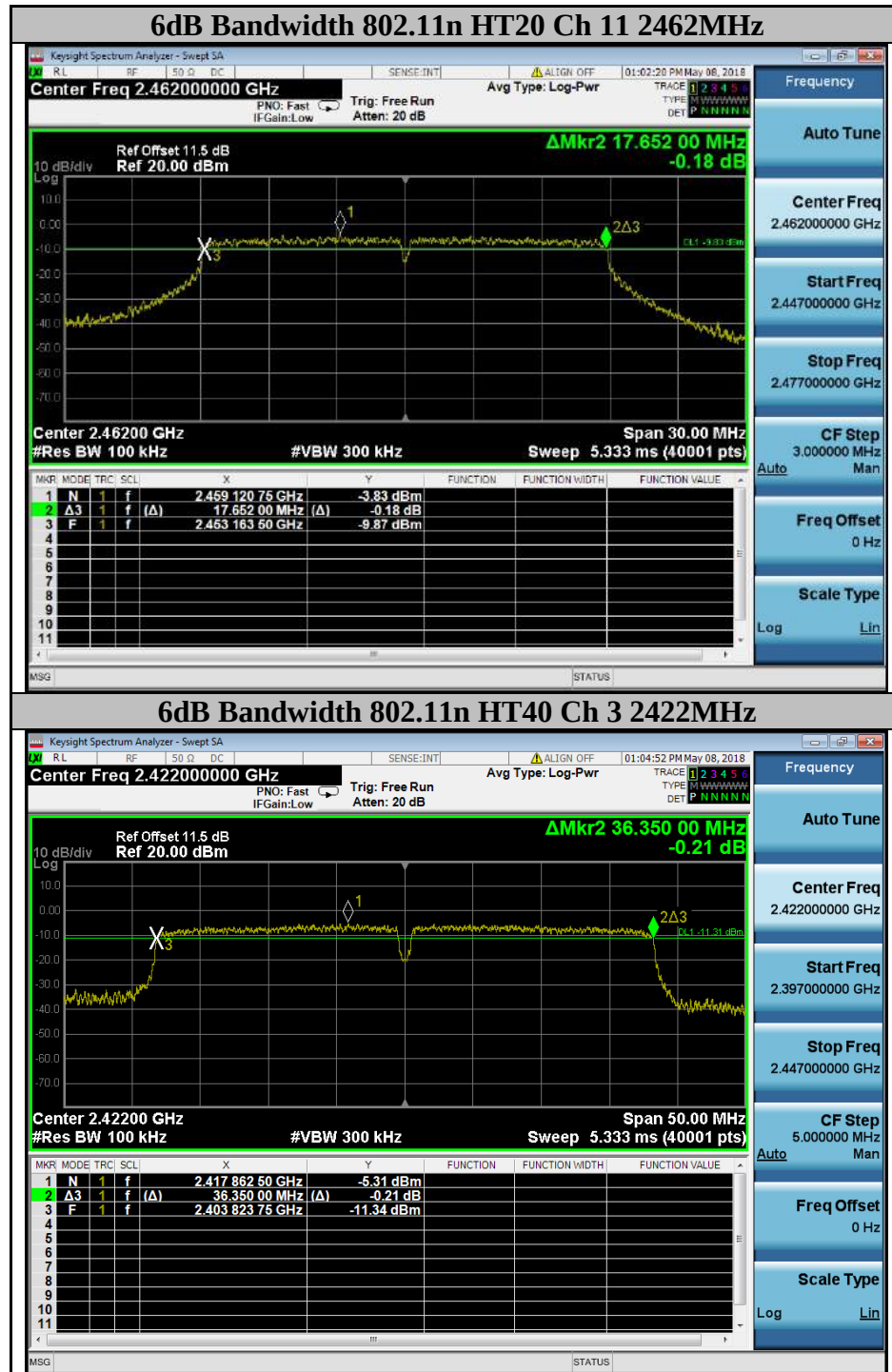
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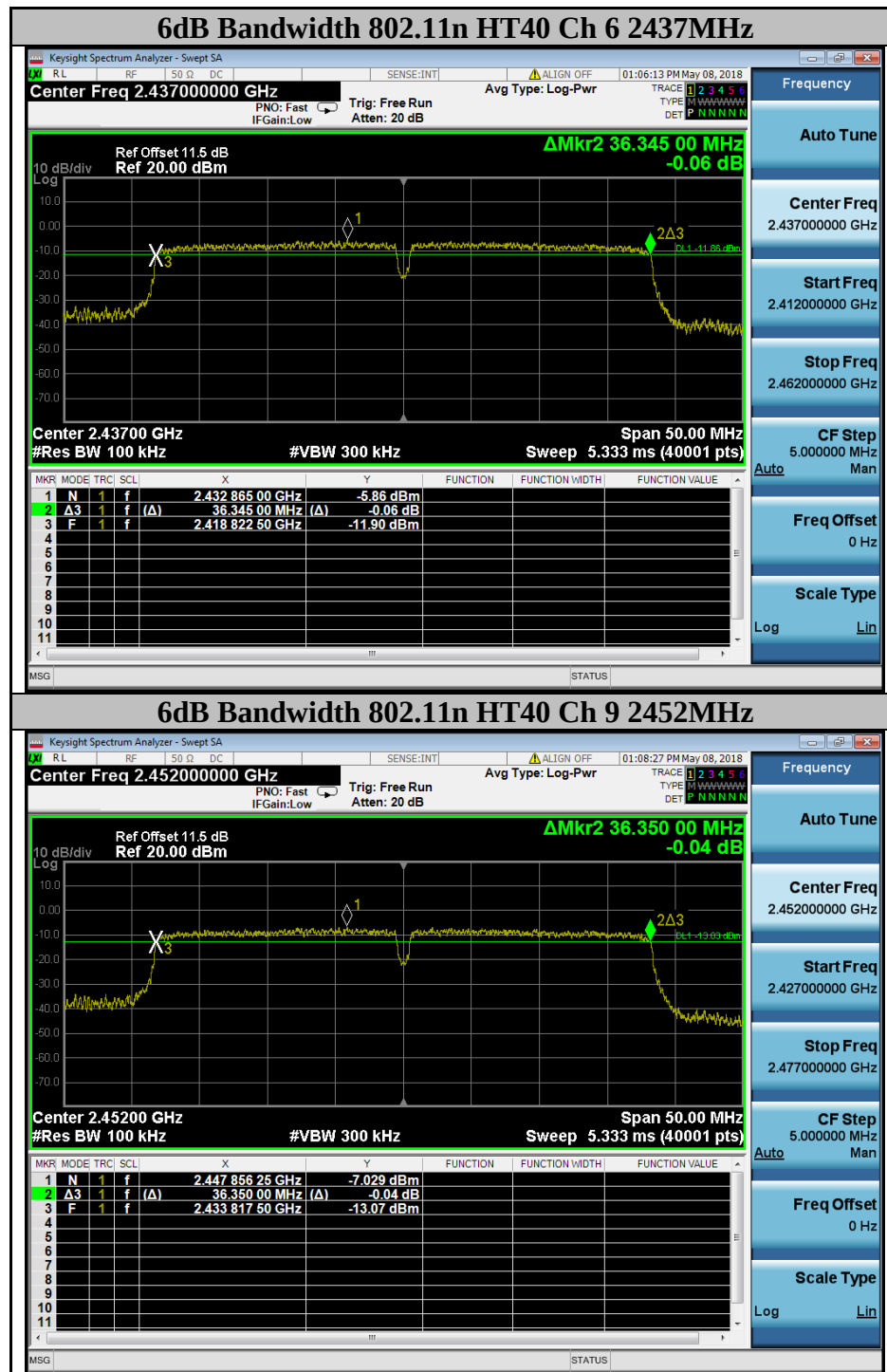
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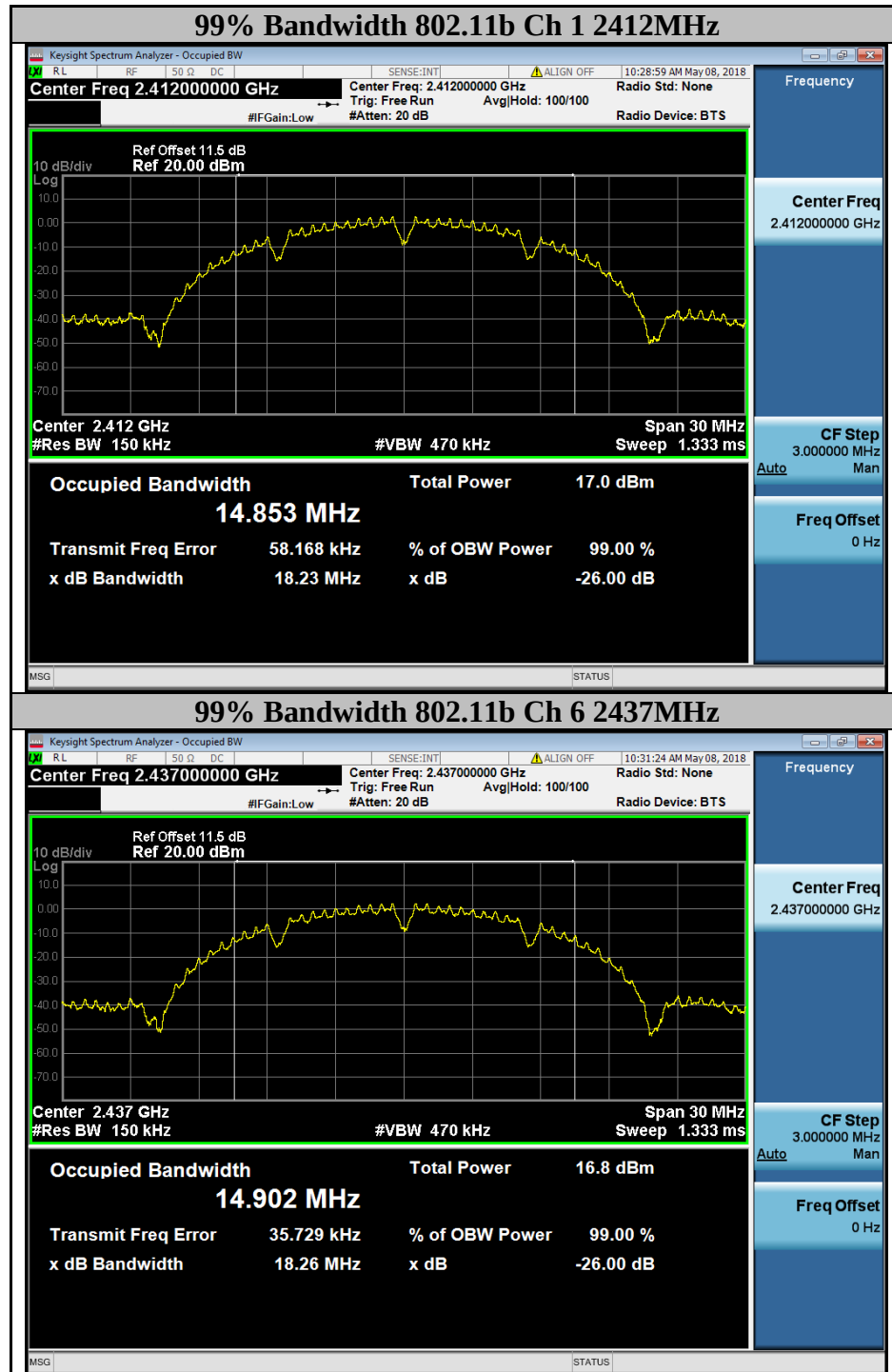
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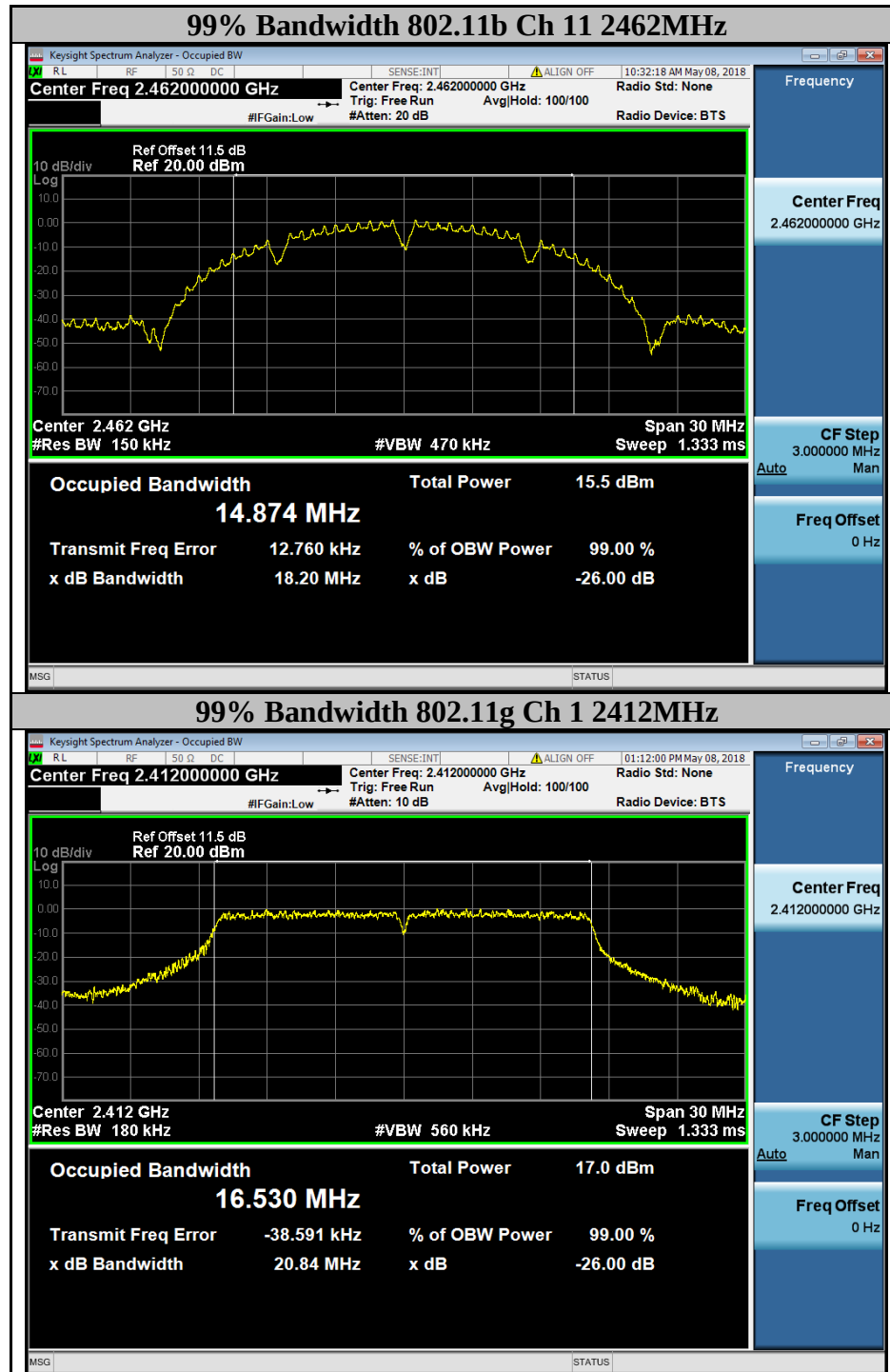
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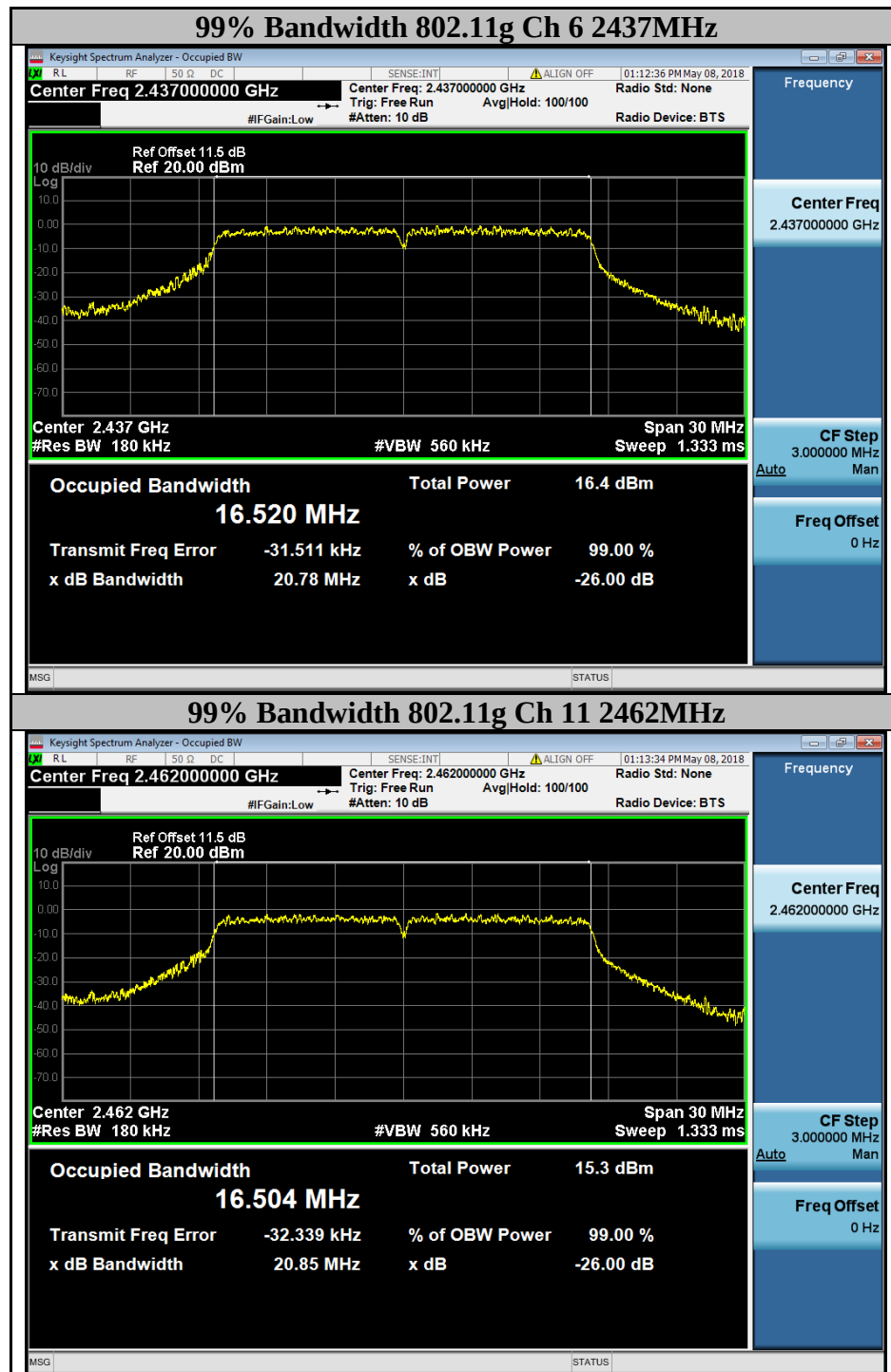
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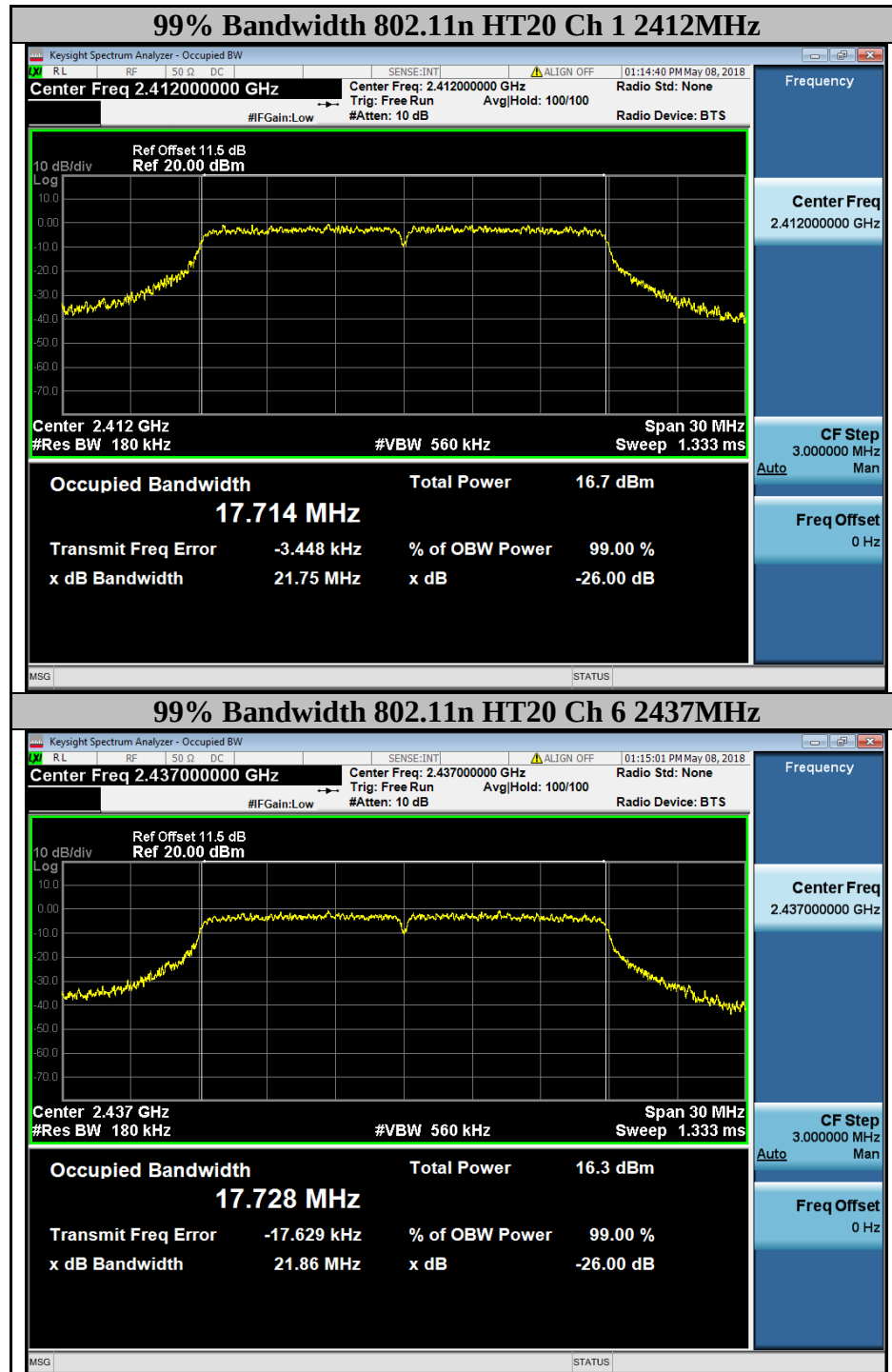
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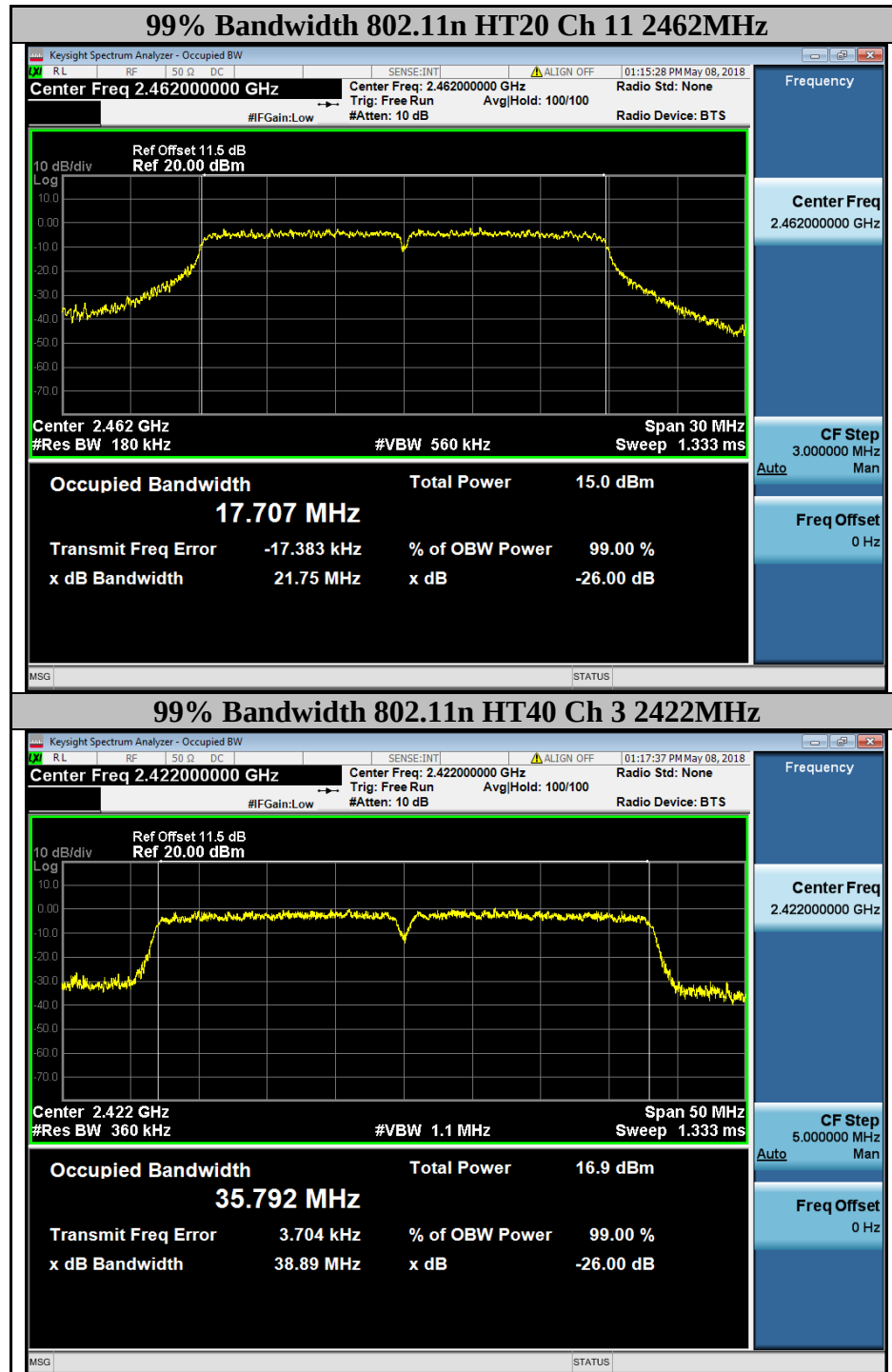
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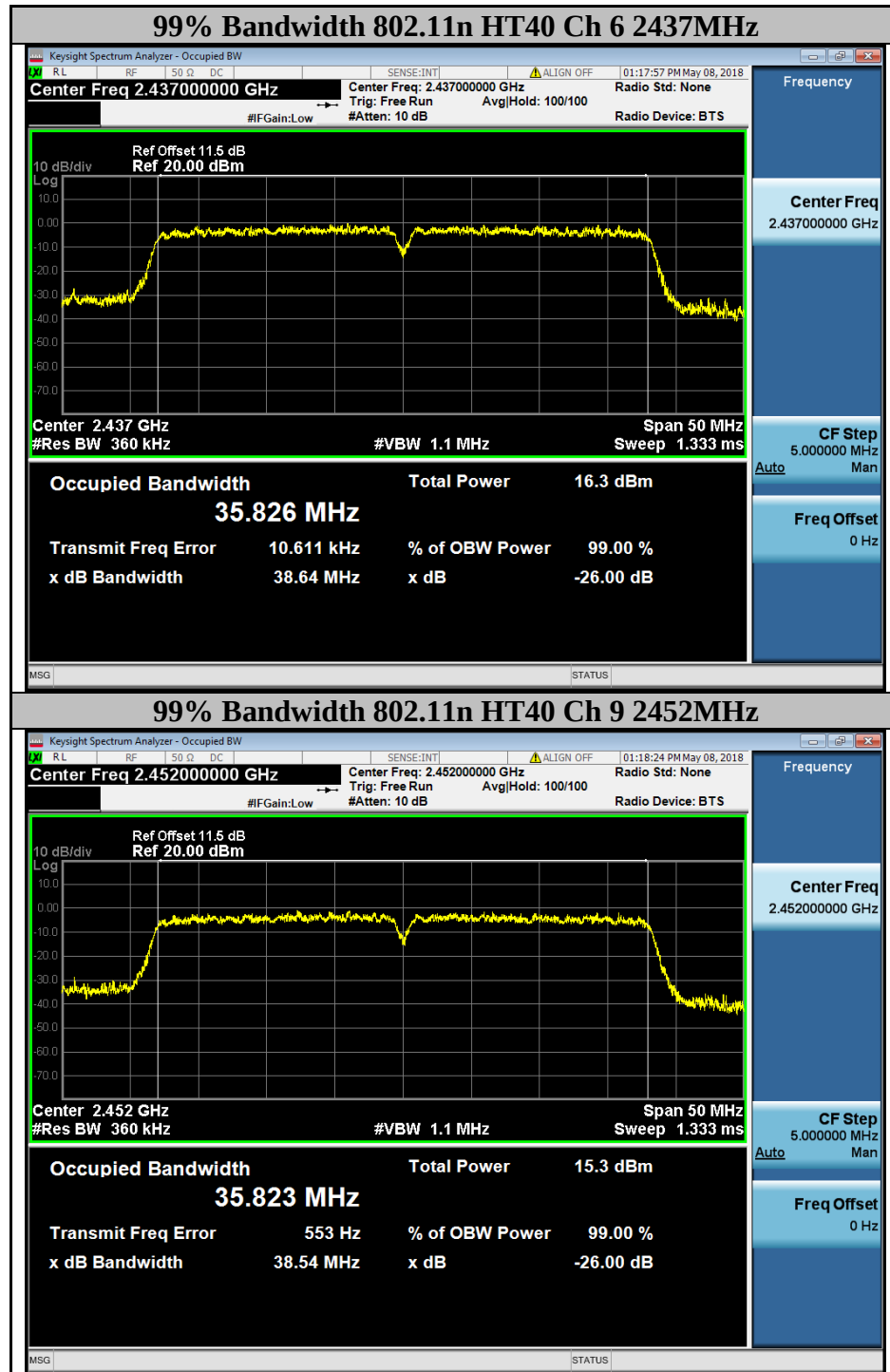
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9.3. Maximum conducted output power

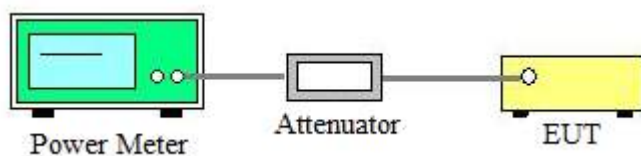
Requirements

For systems using digital modulation in the 2400-2483.5 MHz bands: 1 Watt.

Test Procedure

- To place the EUT on the table and set it in the transmitting mode.
- To remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.
- To measure peak power for each channel

Test Setup



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Test Data

Mode	Channel	Frequency (MHz)	Output Power (PK) (dBm)	Total Power (PK) (dBm)	Limit (dBm)	Margin (dB)
802.11b	1	2412	13.38	13.38	30	-16.62
	6	2437	13.25	13.25	30	-16.75
	11	2462	12.25	12.25	30	-17.75
802.11g	1	2412	19.13	19.13	30	-10.87
	6	2437	18.76	18.76	30	-11.24
	11	2462	18.26	18.26	30	-11.74
802.11n HT20	1	2412	18.68	18.68	30	-11.32
	6	2437	18.43	18.43	30	-11.57
	11	2462	17.85	17.85	30	-12.15
802.11n HT40	3	2422	18.33	18.33	30	-11.67
	6	2437	18.03	18.03	30	-11.97
	9	2452	17.43	17.43	30	-12.57

Note: Margin (dB) = Total Power (PK) (dBm) - Limit (dBm)

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9.4. Power Spectral Density

Requirements

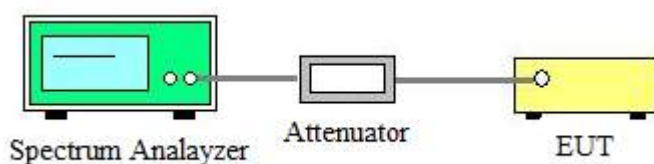
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Test procedure

Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep Time	Auto couple

Test Setup



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Test Data

Mode	Channel	Frequency (MHz)	Total PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Margin (dB)
802.11b	1	2412	-18.652	8	-26.652
	6	2437	-18.966	8	-26.966
	11	2462	-20.171	8	-28.171
802.11g	1	2412	-16.757	8	-24.757
	6	2437	-17.393	8	-25.393
	11	2462	-18.612	8	-26.612
802.11n HT20	1	2412	-16.730	8	-24.730
	6	2437	-17.188	8	-25.188
	11	2462	-18.314	8	-26.314
802.11n HT40	3	2422	-16.789	8	-24.789
	6	2437	-17.220	8	-25.220
	9	2452	-17.845	8	-25.845

Note: Margin (dB) = Total PSD (dBm/3 kHz) - Limit (dBm/3 kHz)

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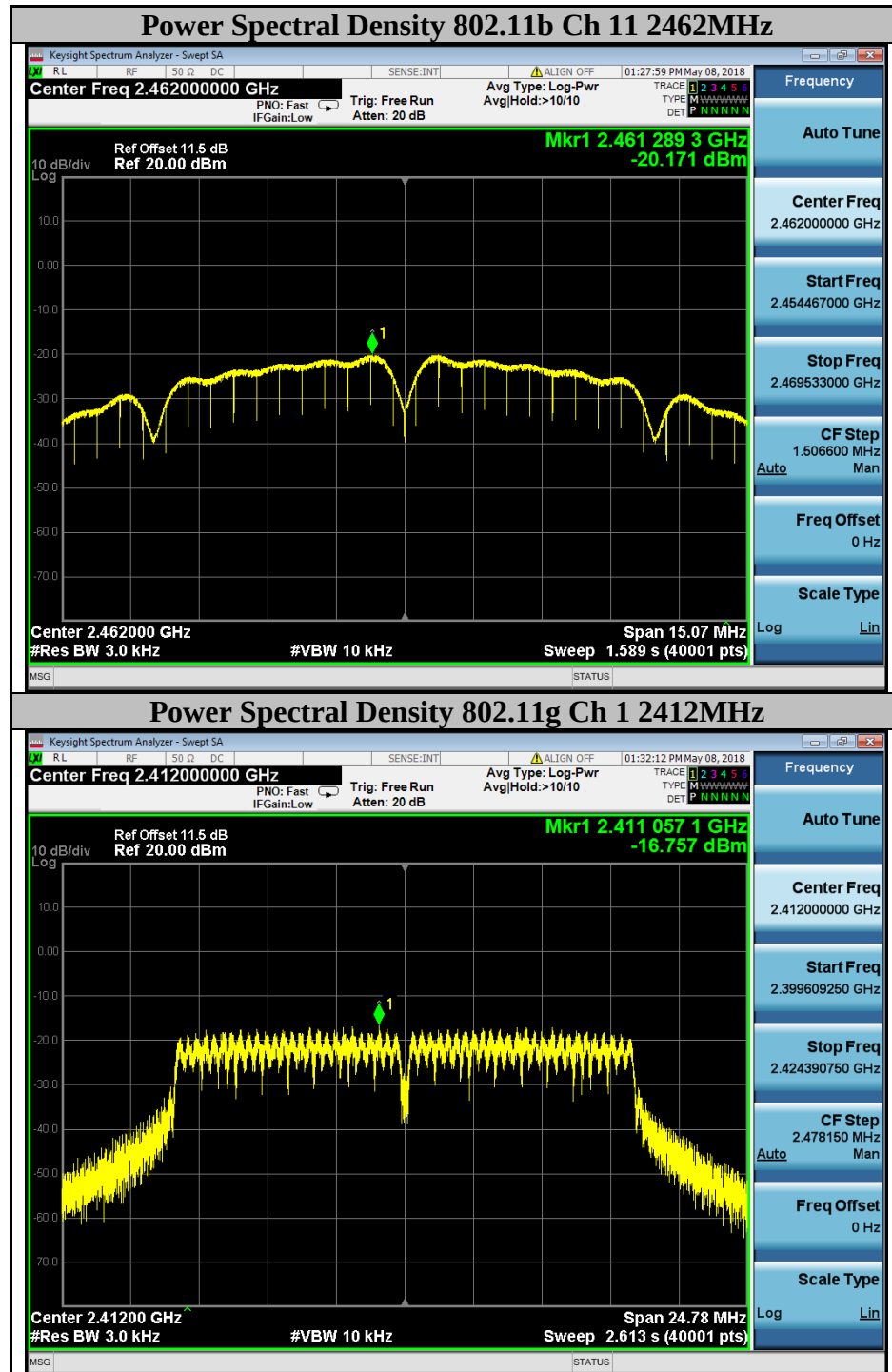
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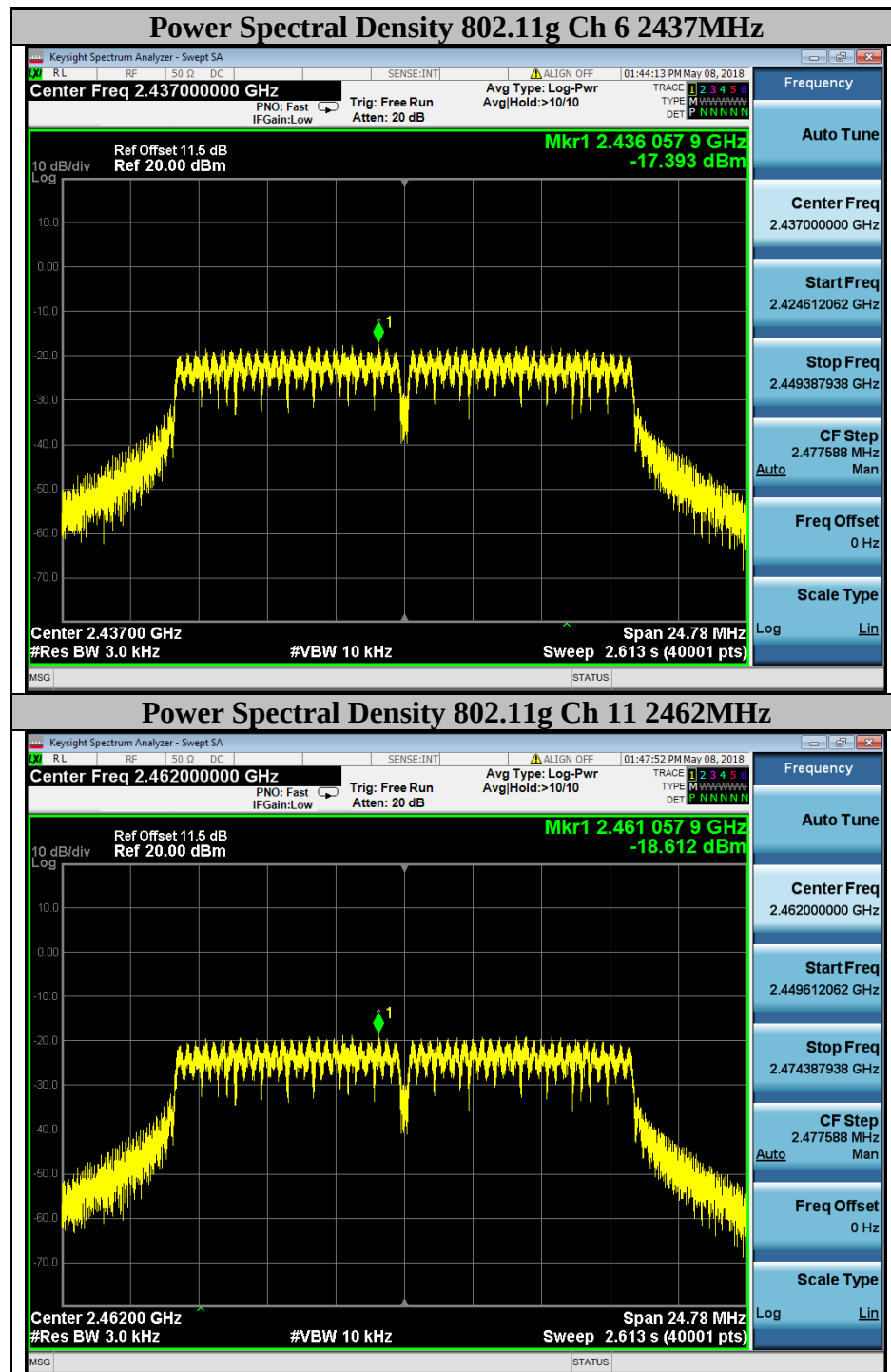
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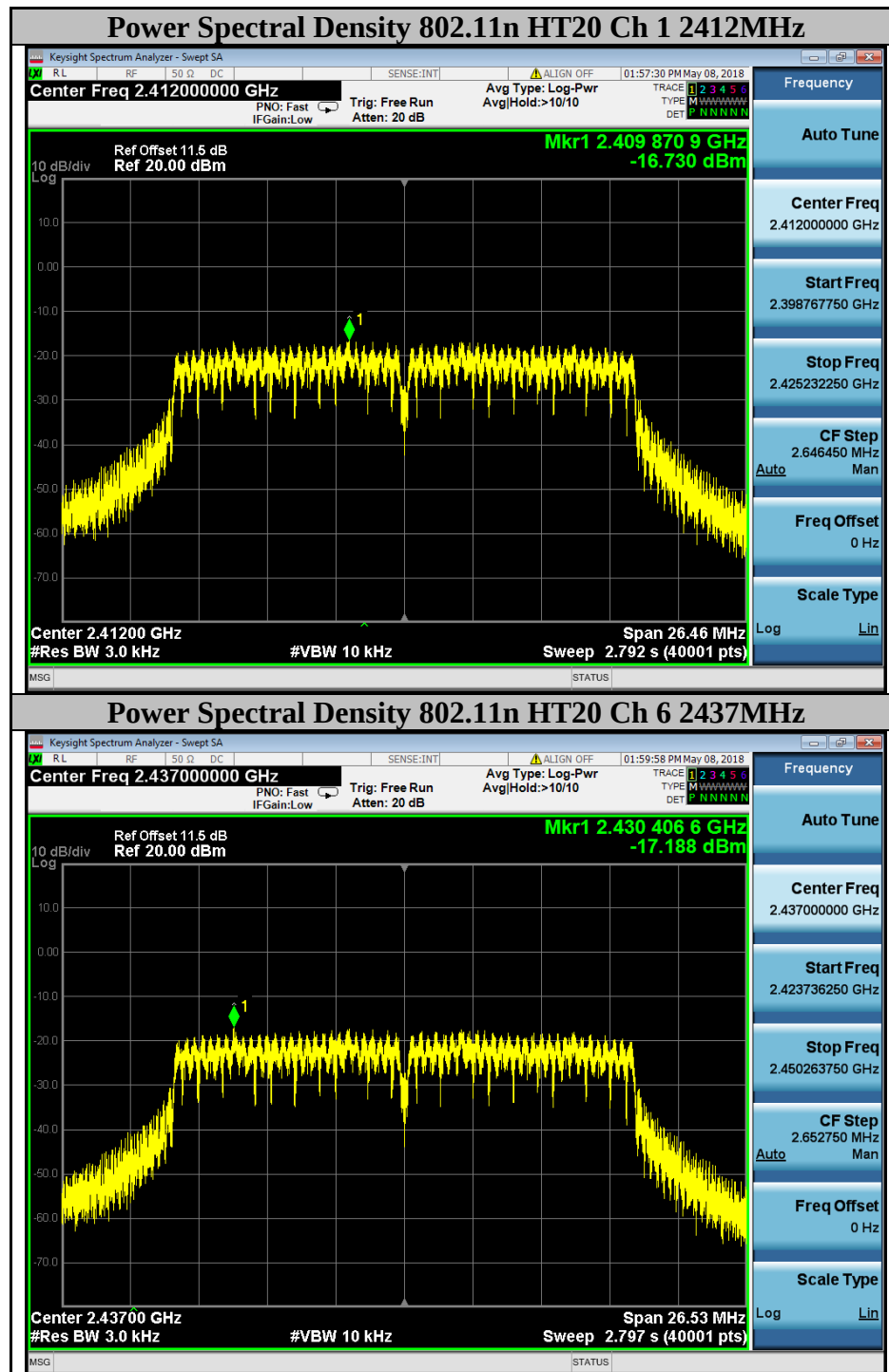
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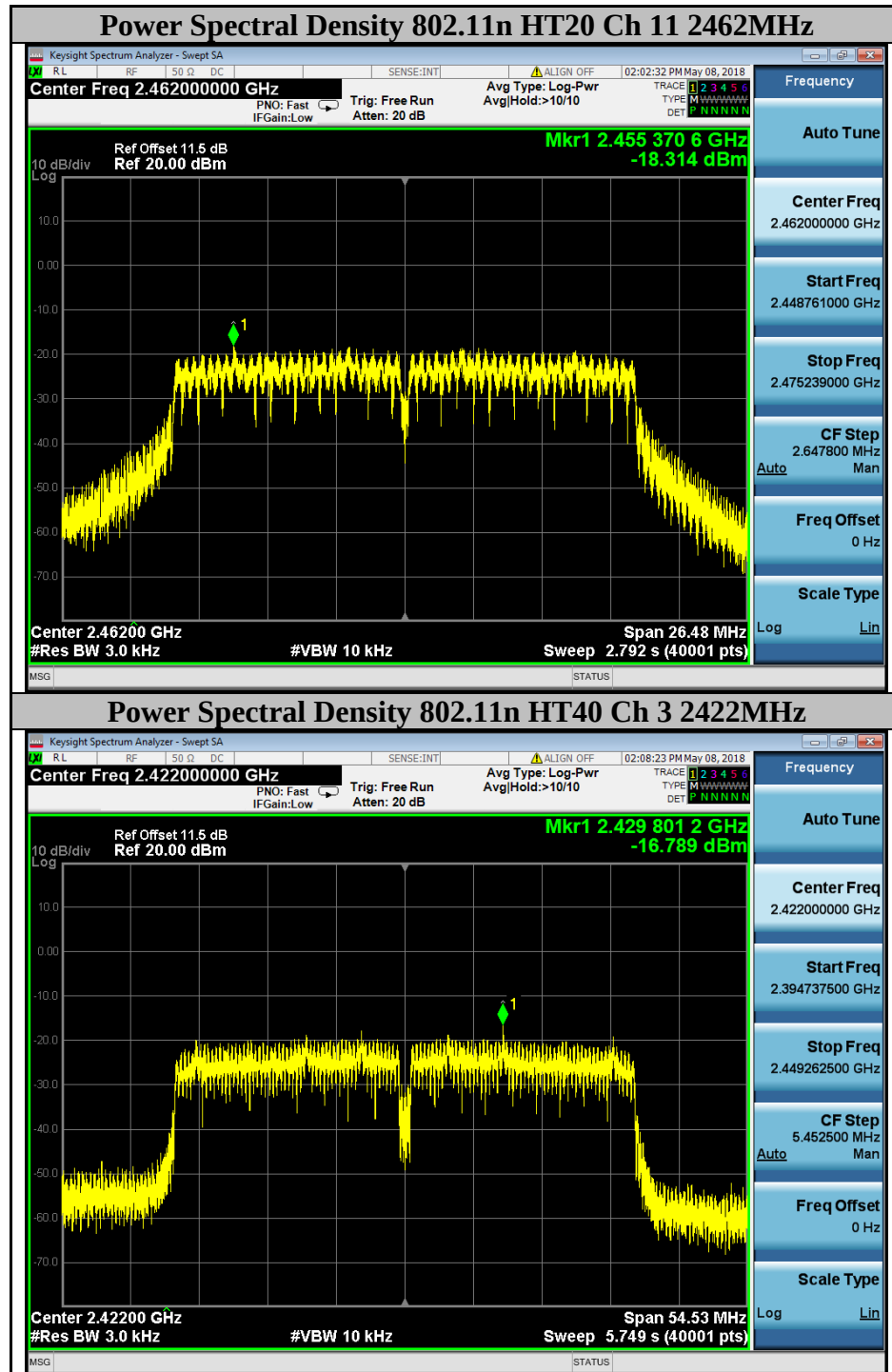
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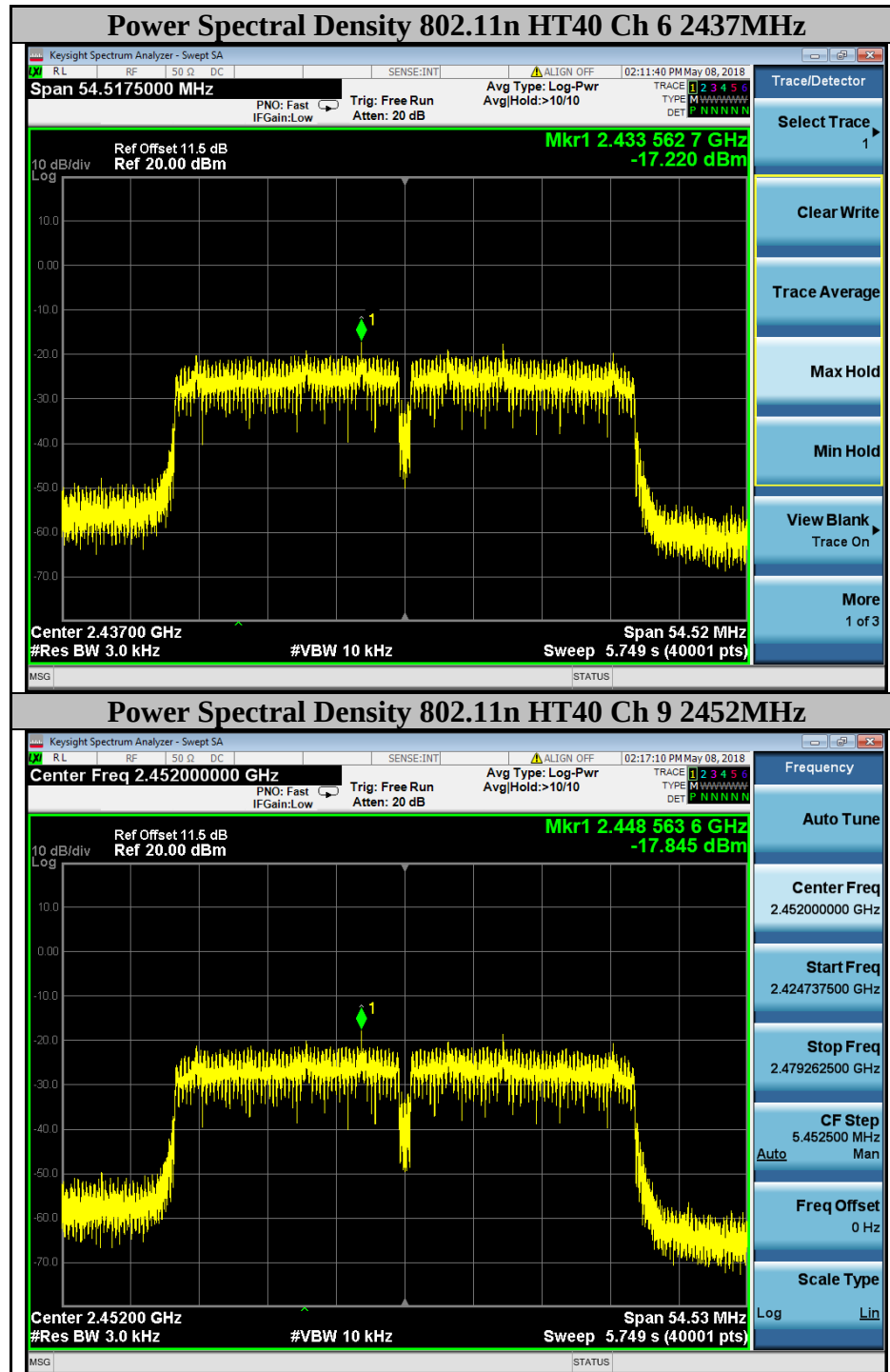
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9.5. Out of Band Emission

Requirements

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b) (3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209 (a) is not required.

Test procedure

Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep Time	Auto couple

Use the peak marker function to determine the maximum PSD level.

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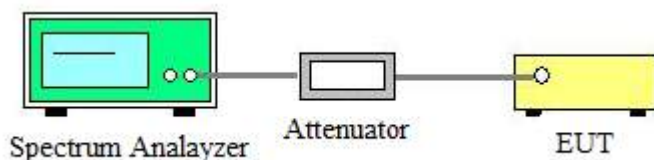
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Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep Time	Auto couple

Use the peak marker function to determine the maximum amplitude level

Test Setup



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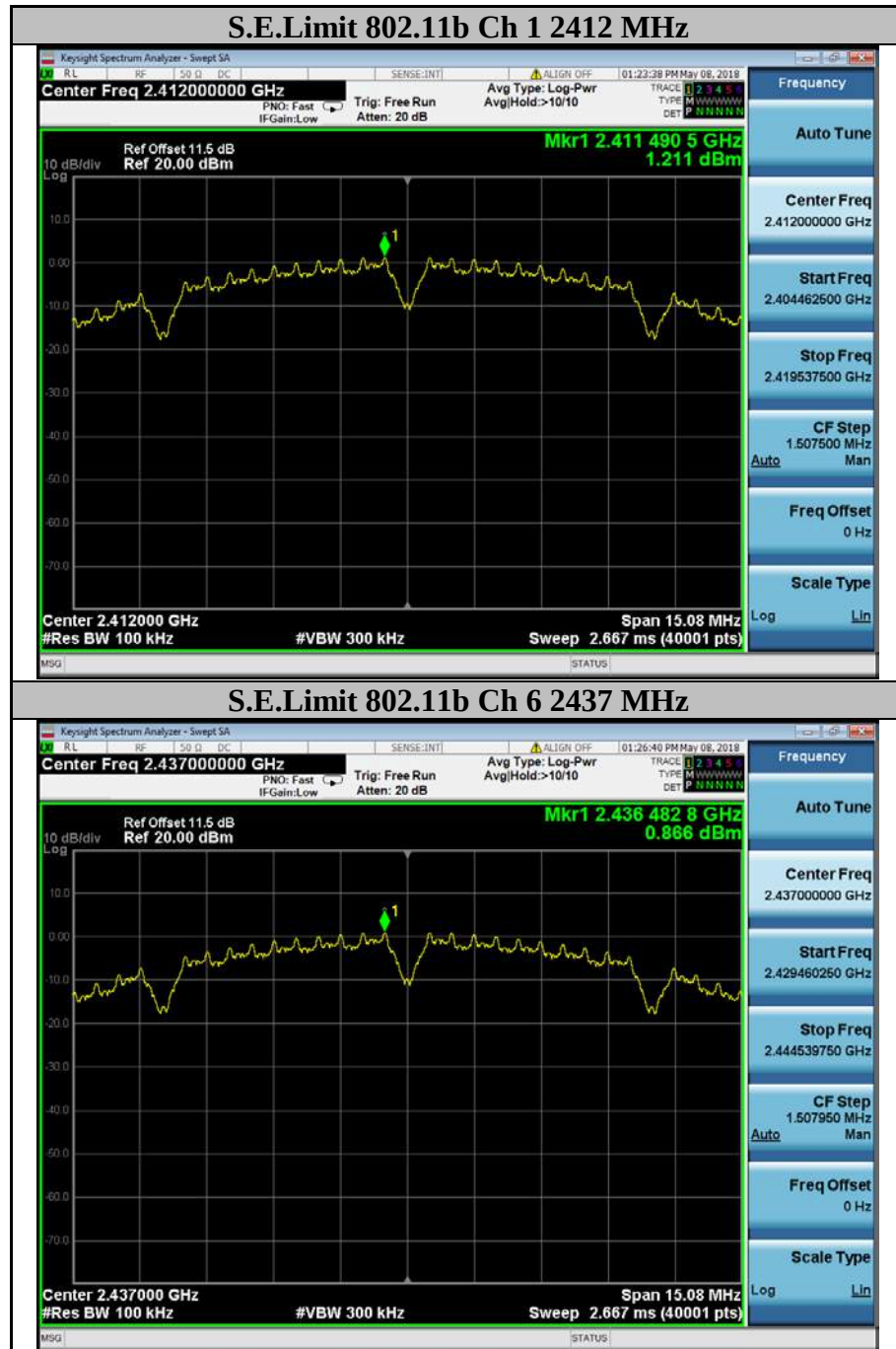
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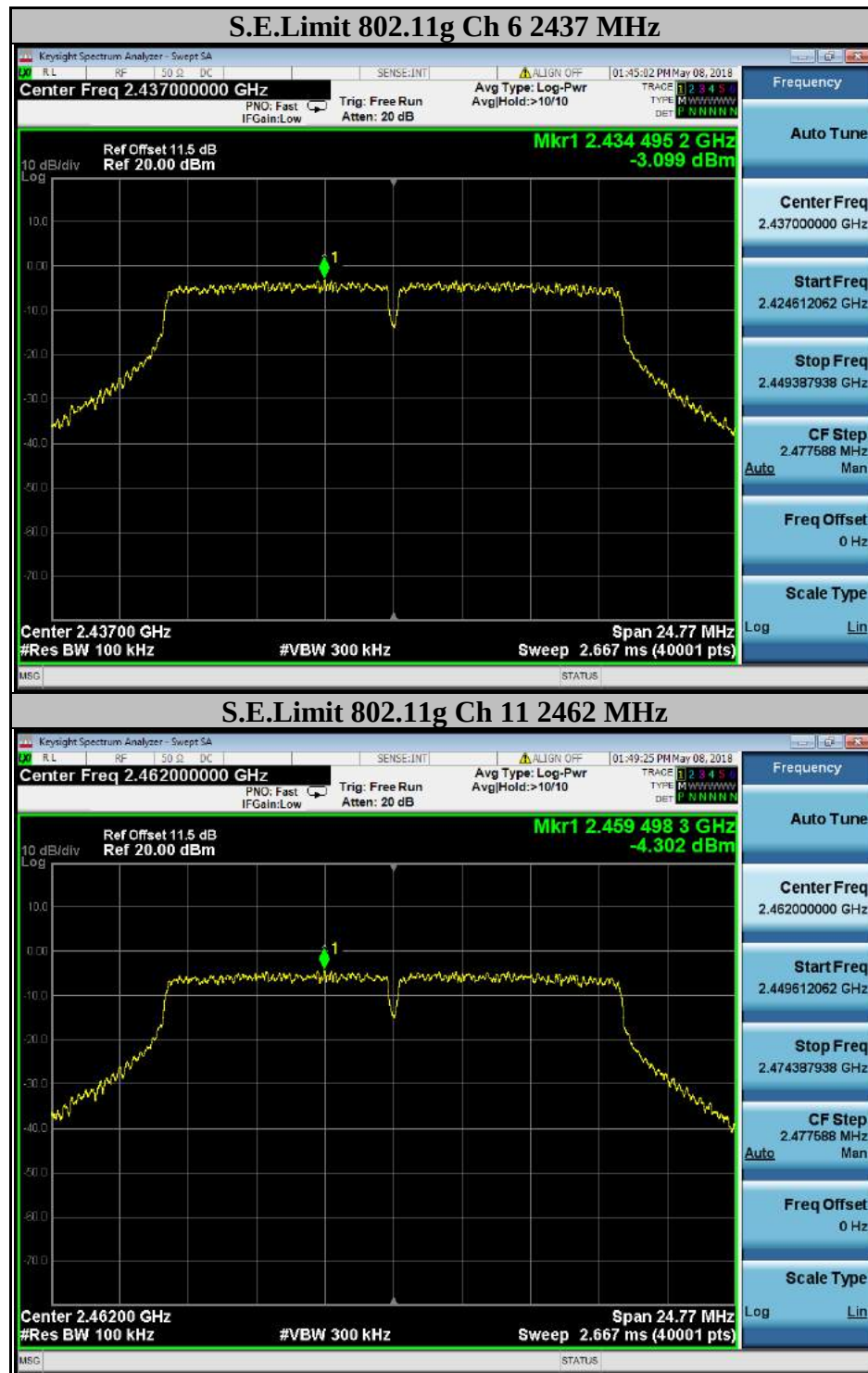
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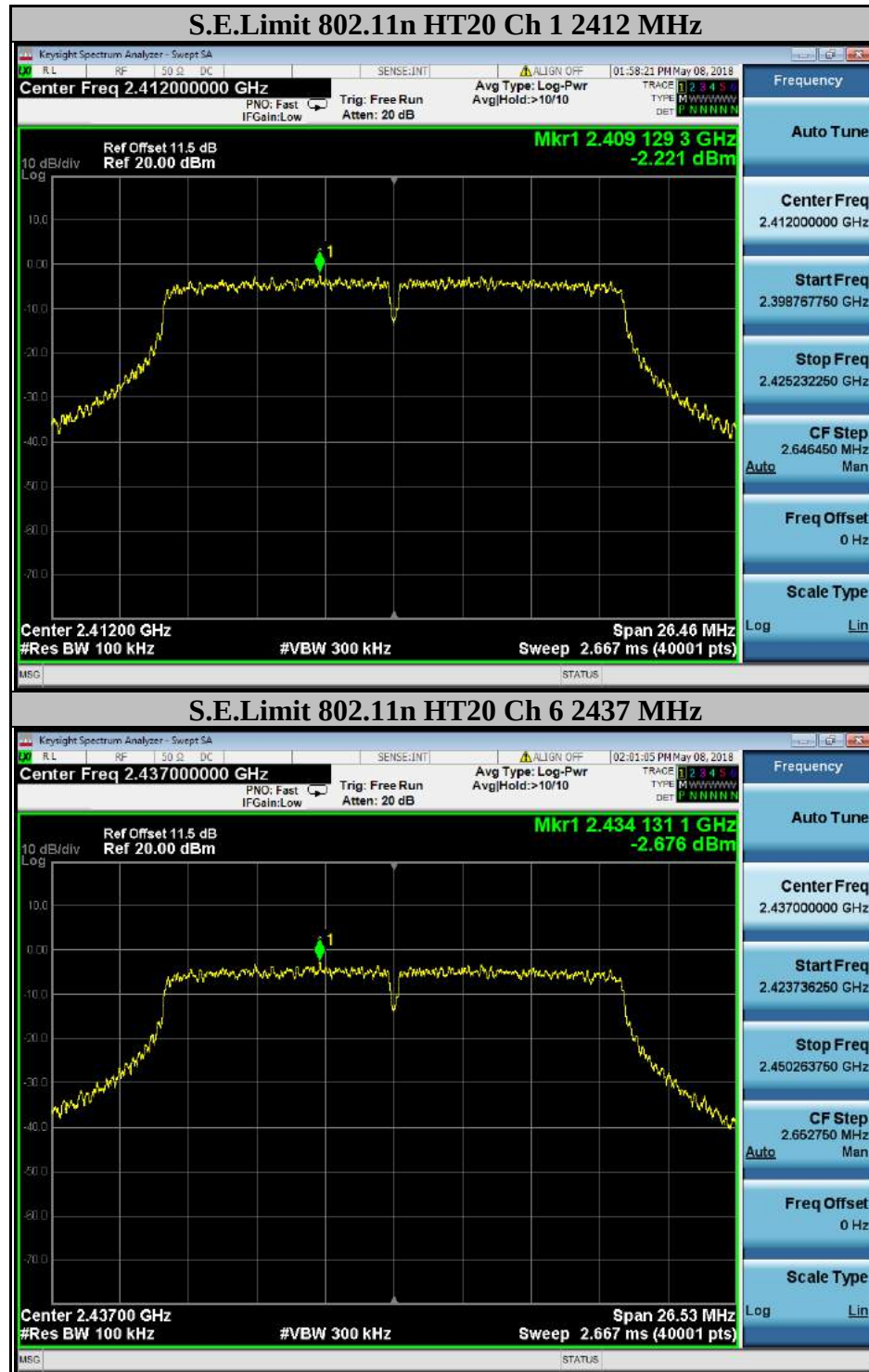
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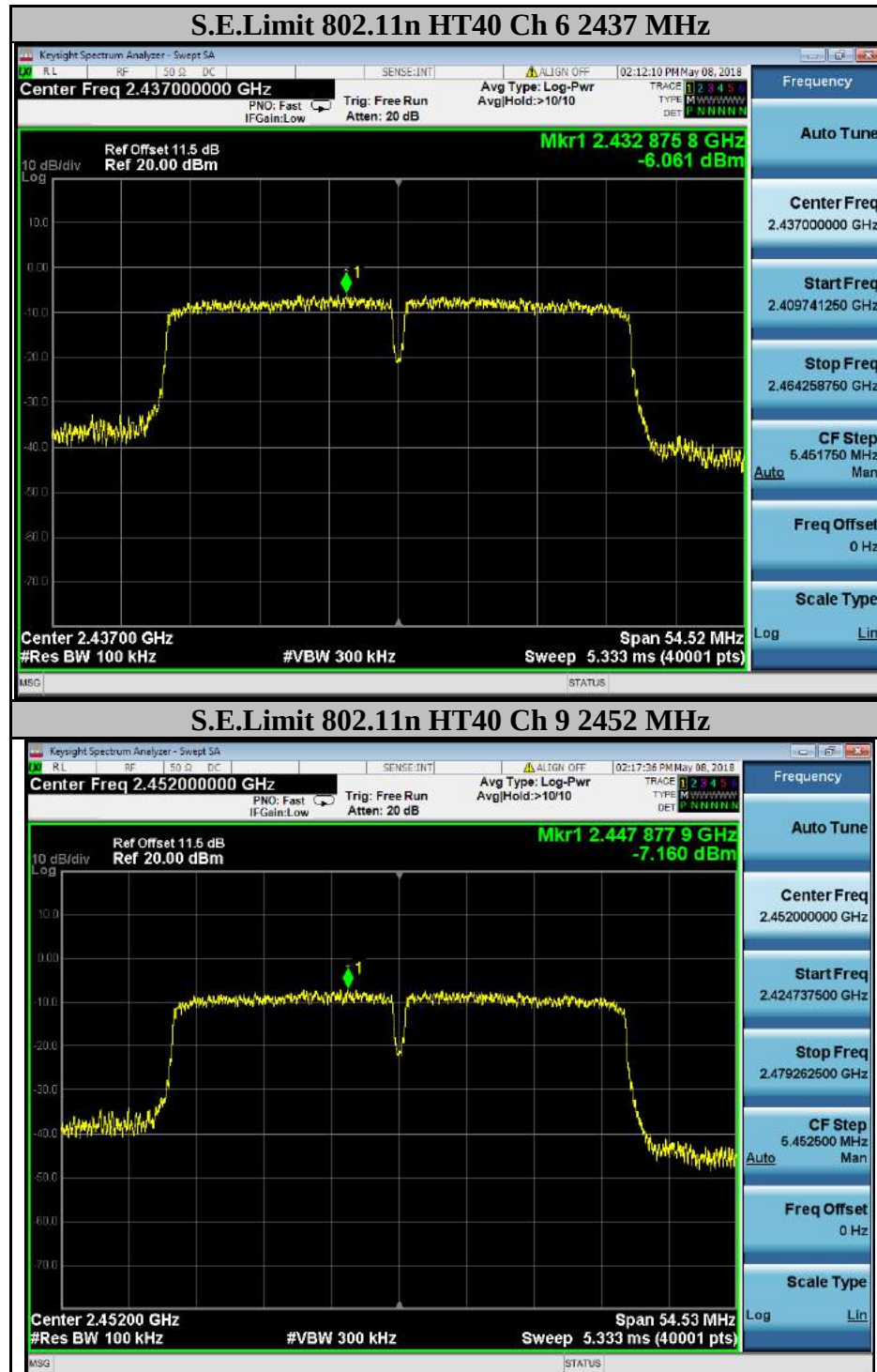
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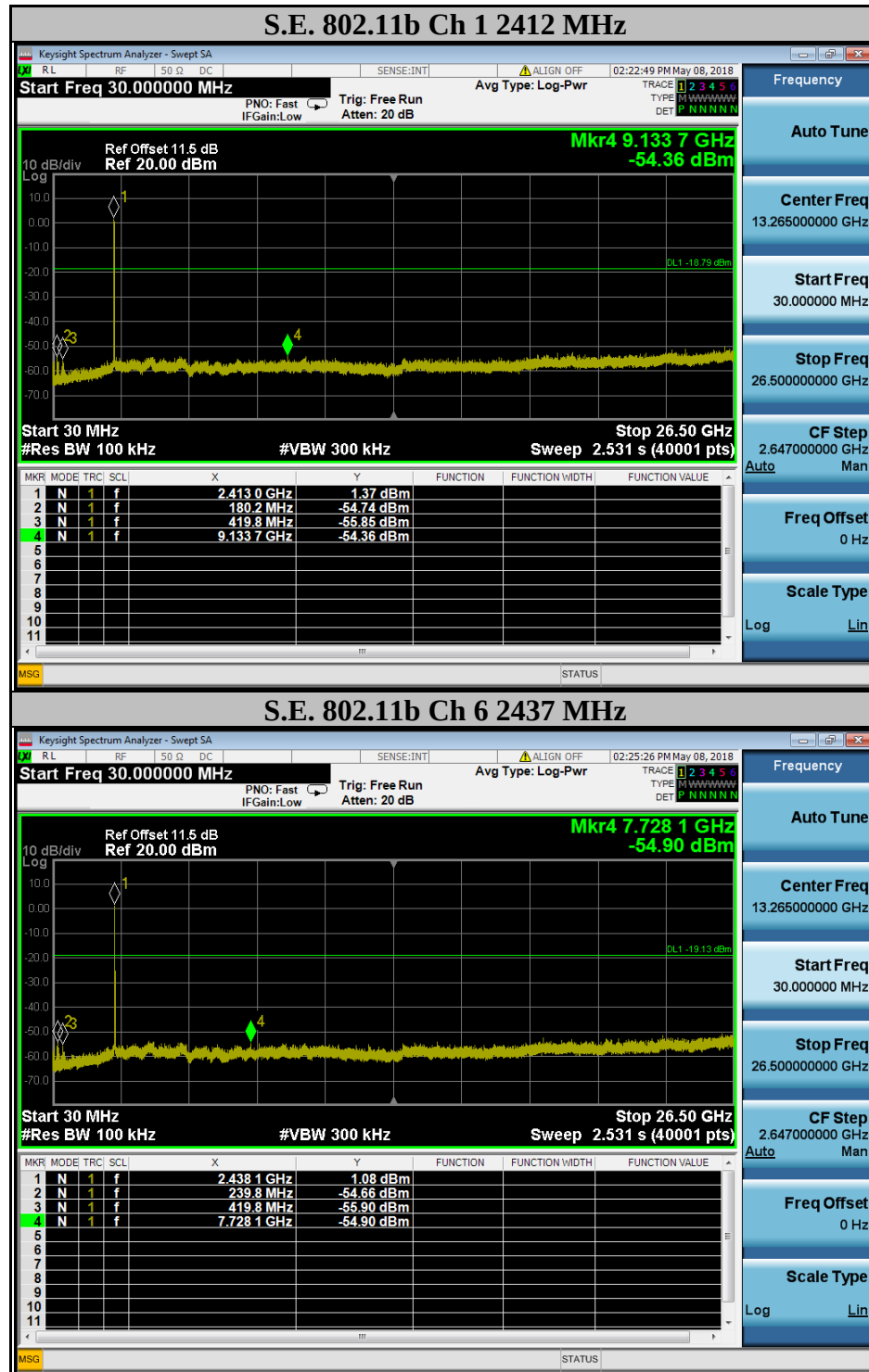
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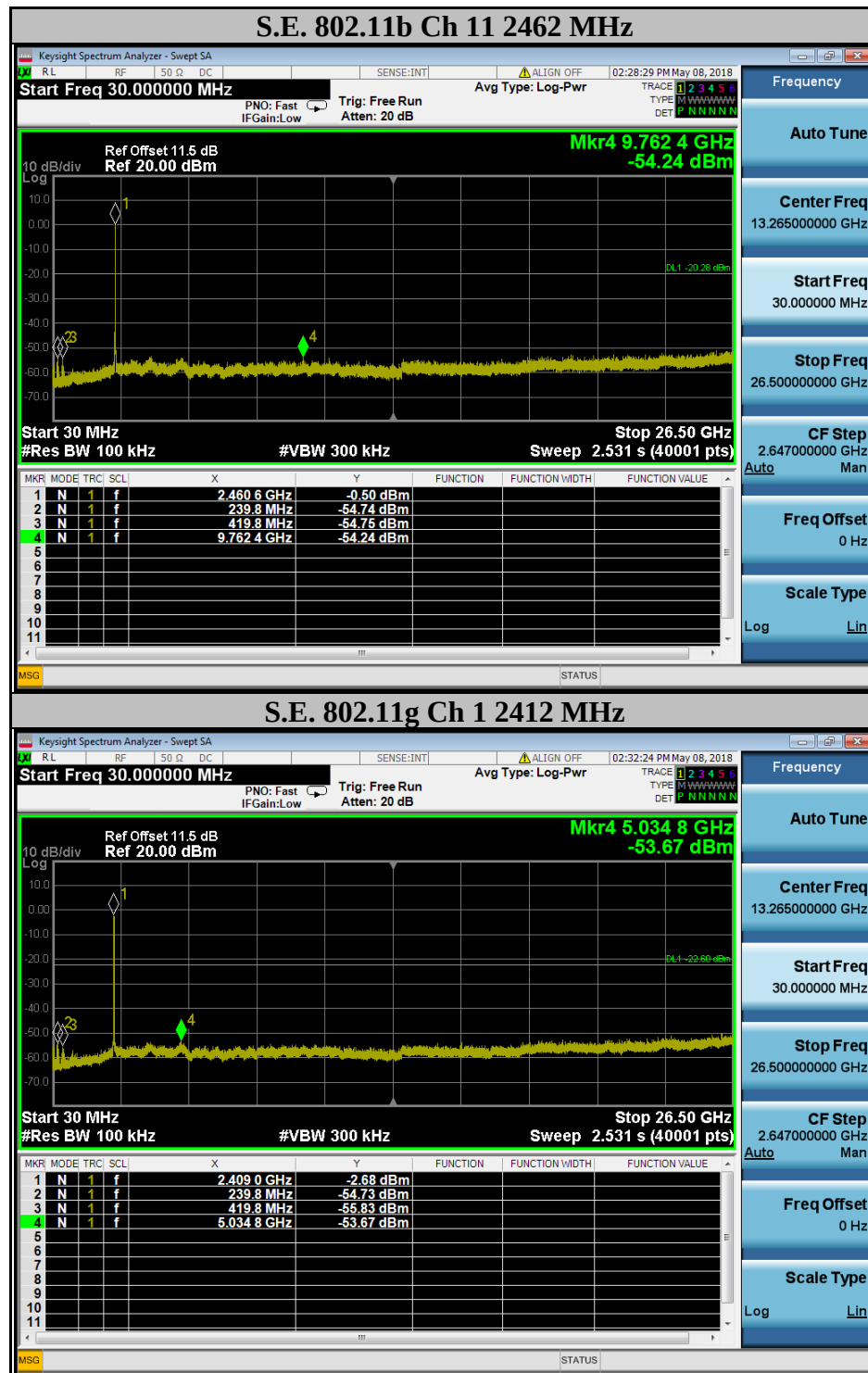
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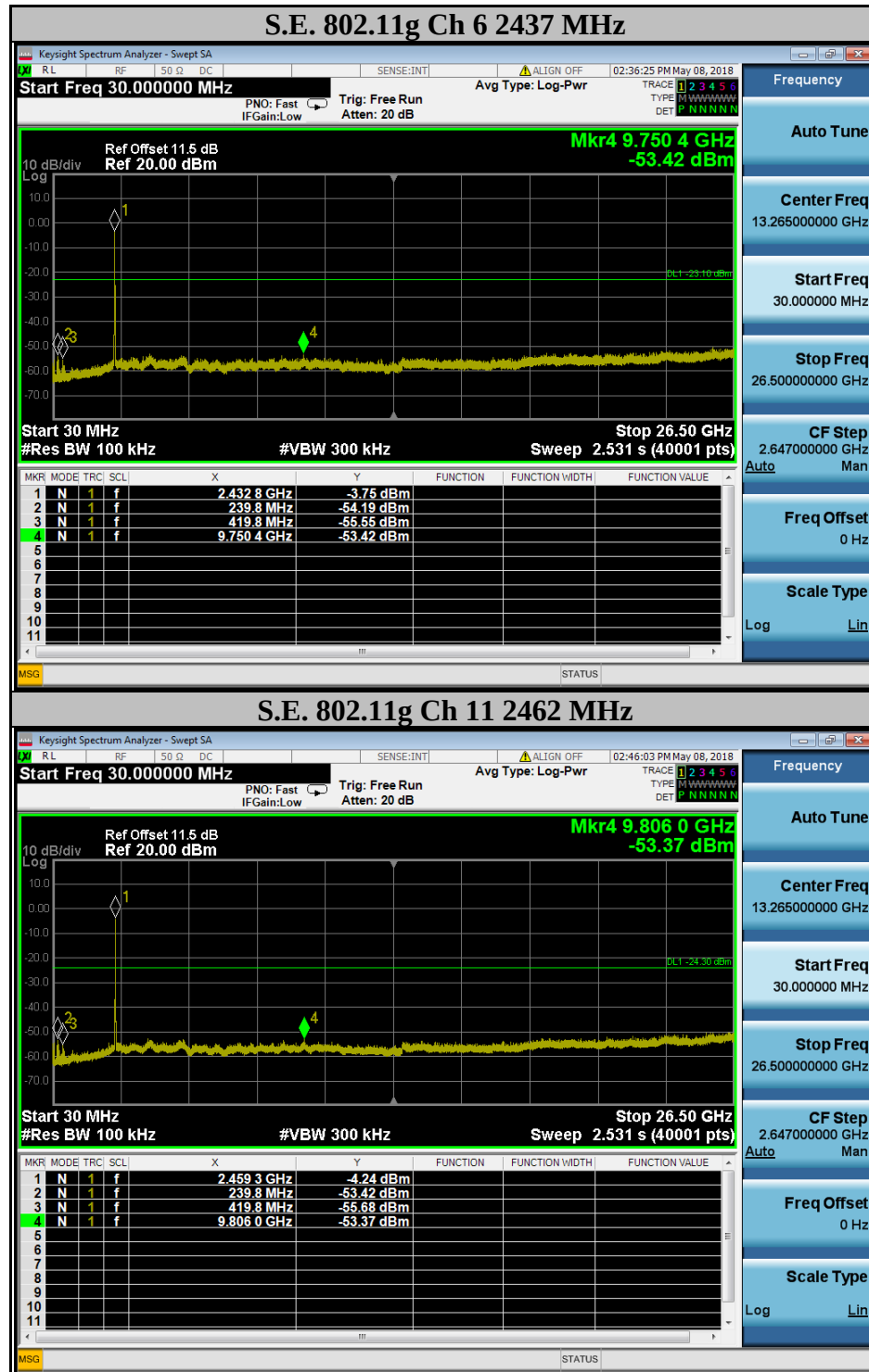
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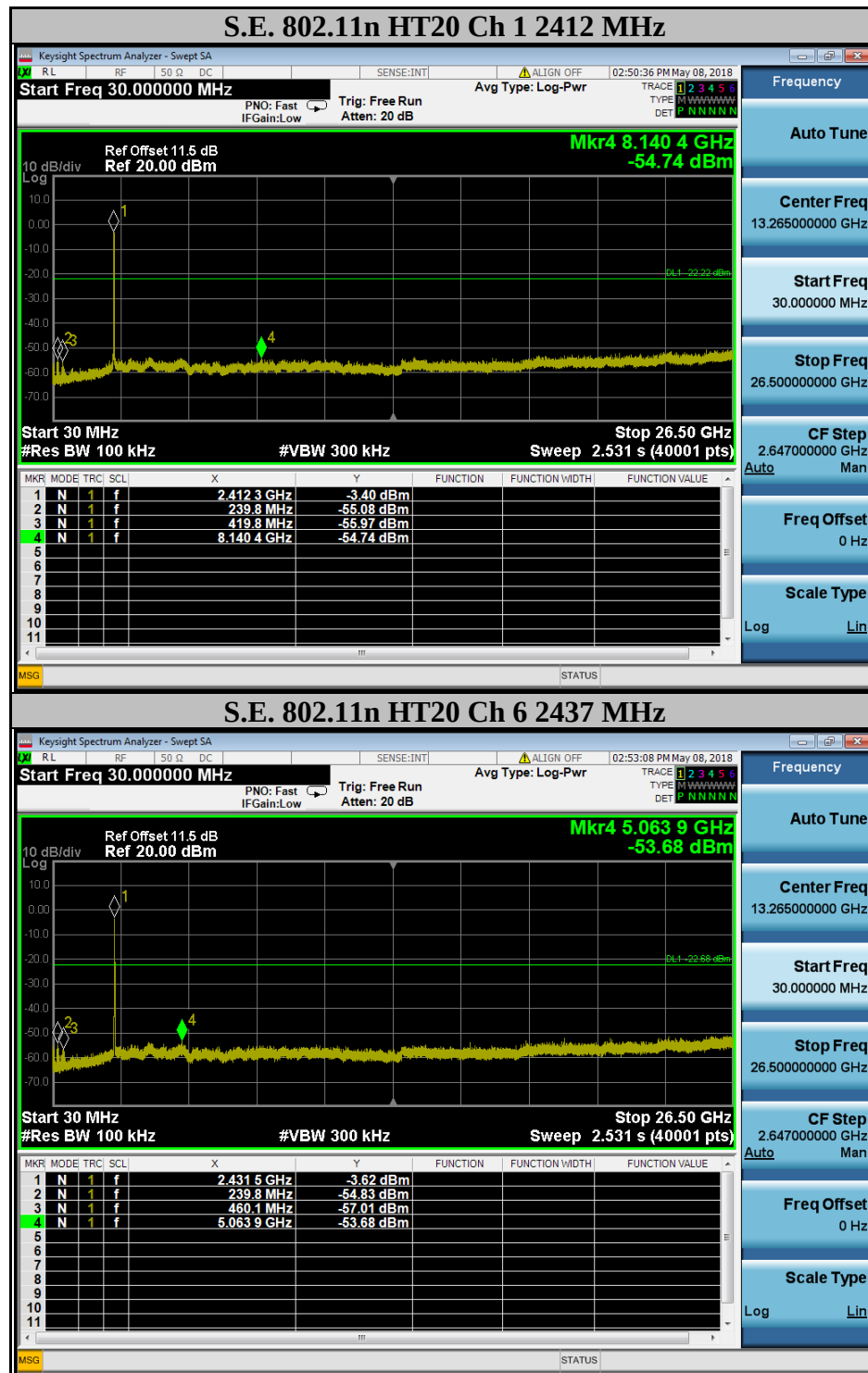
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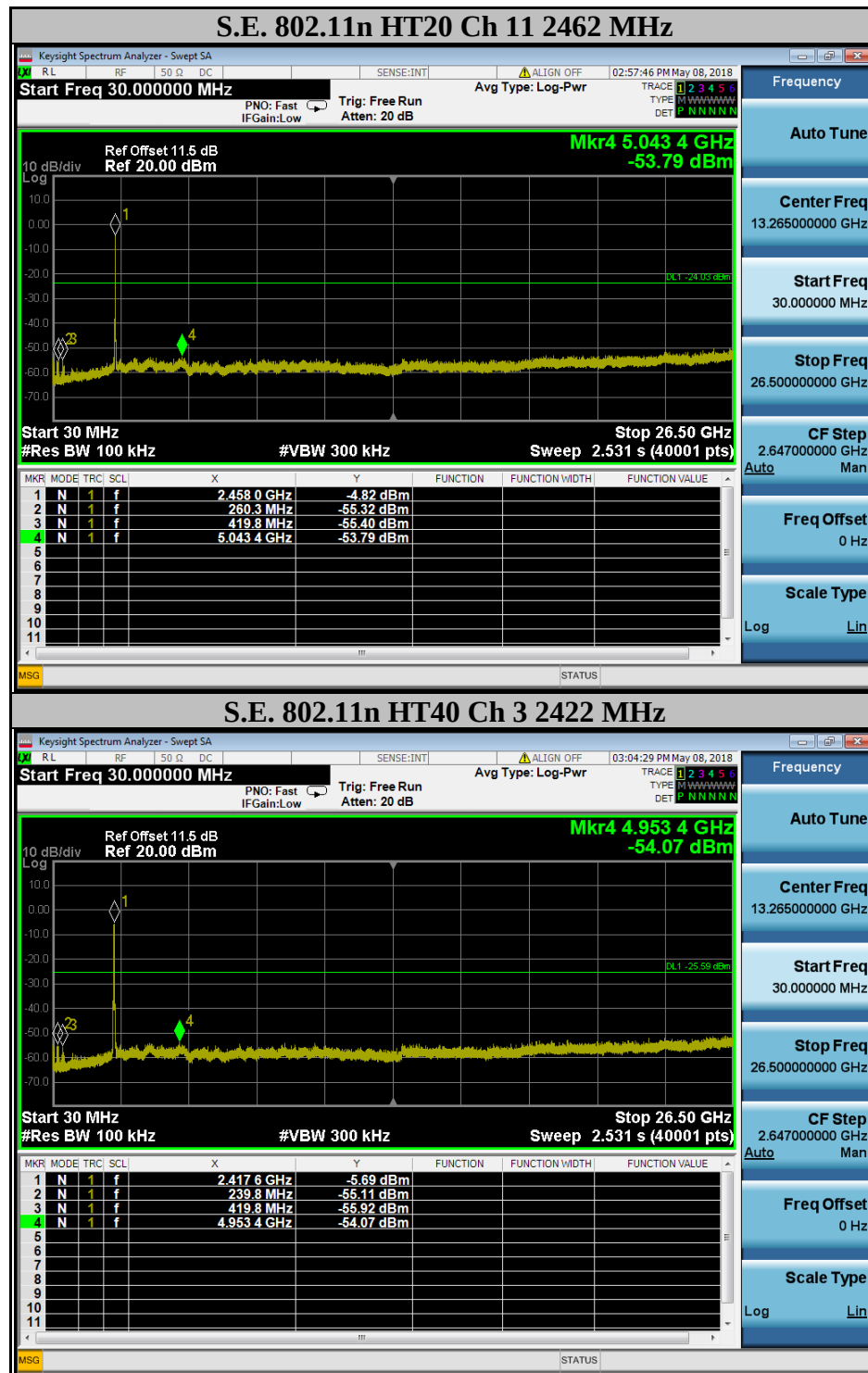
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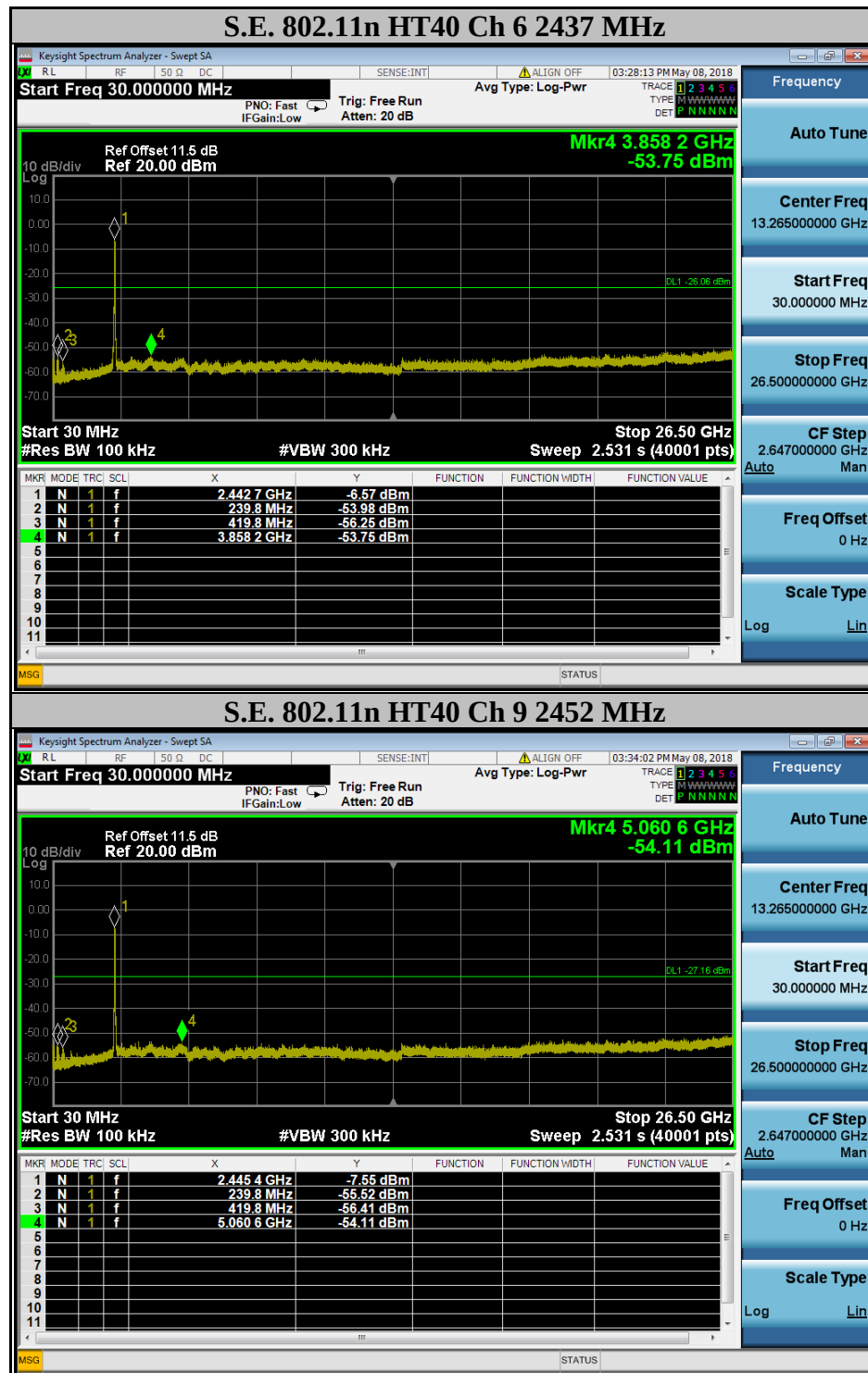
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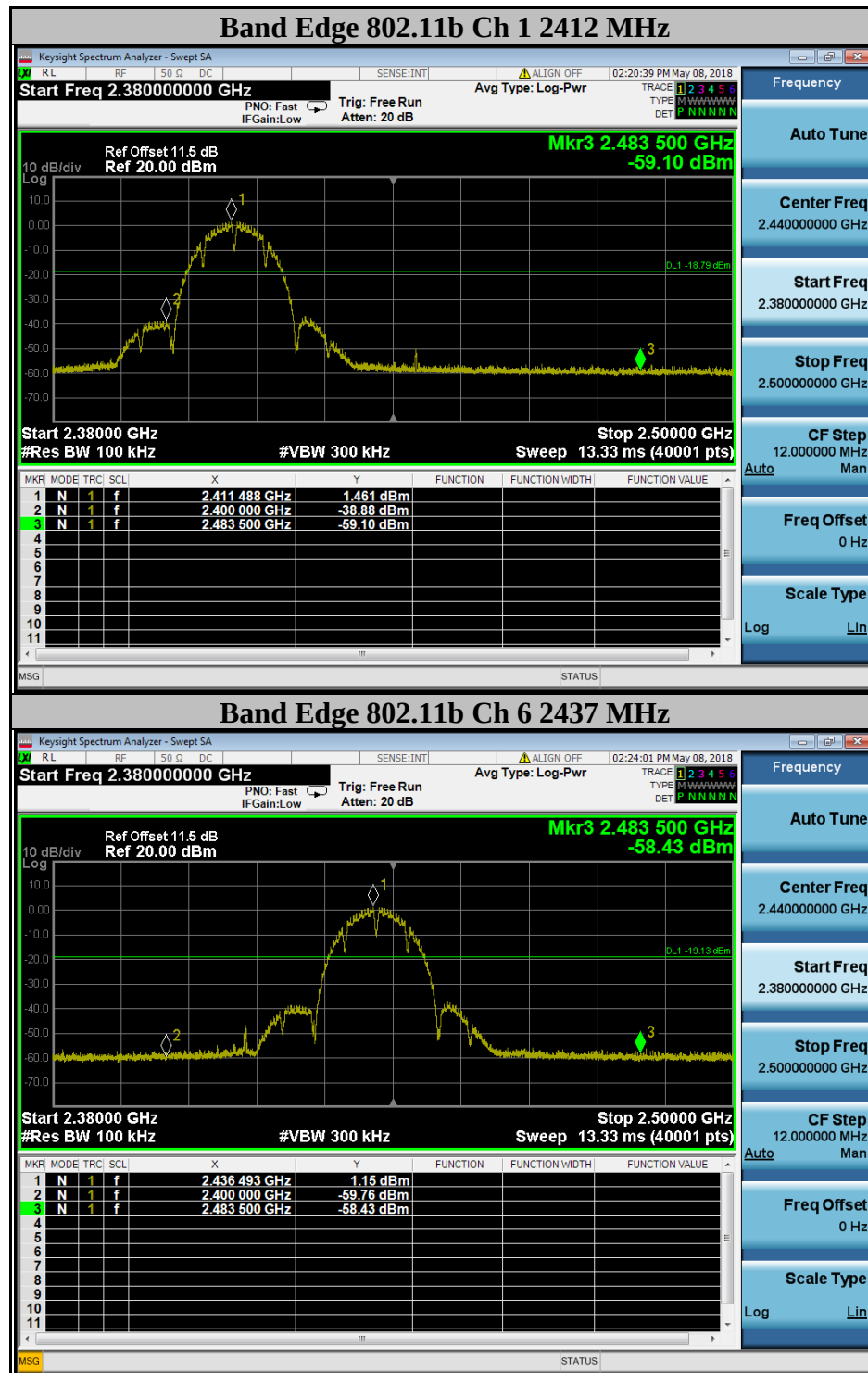
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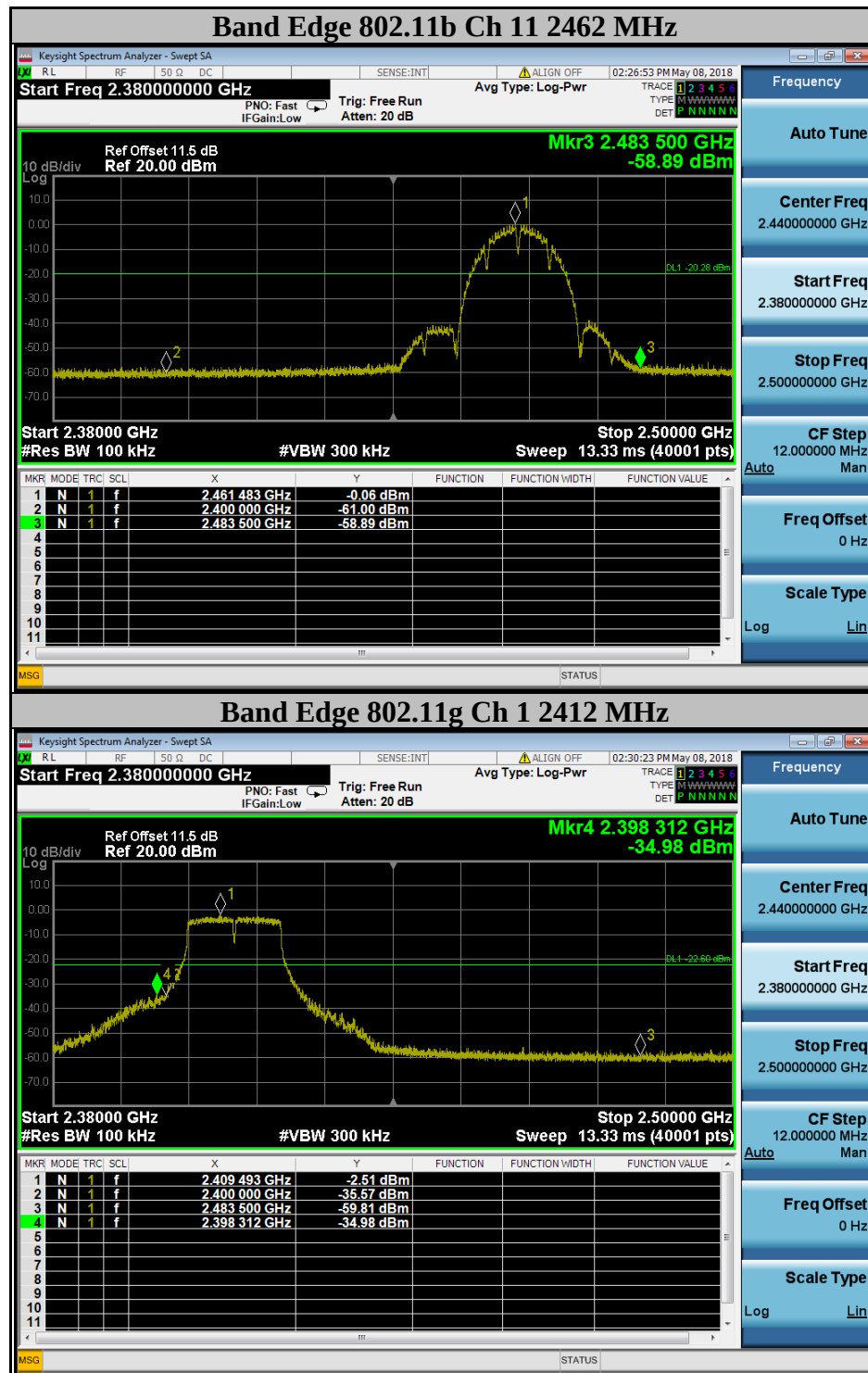
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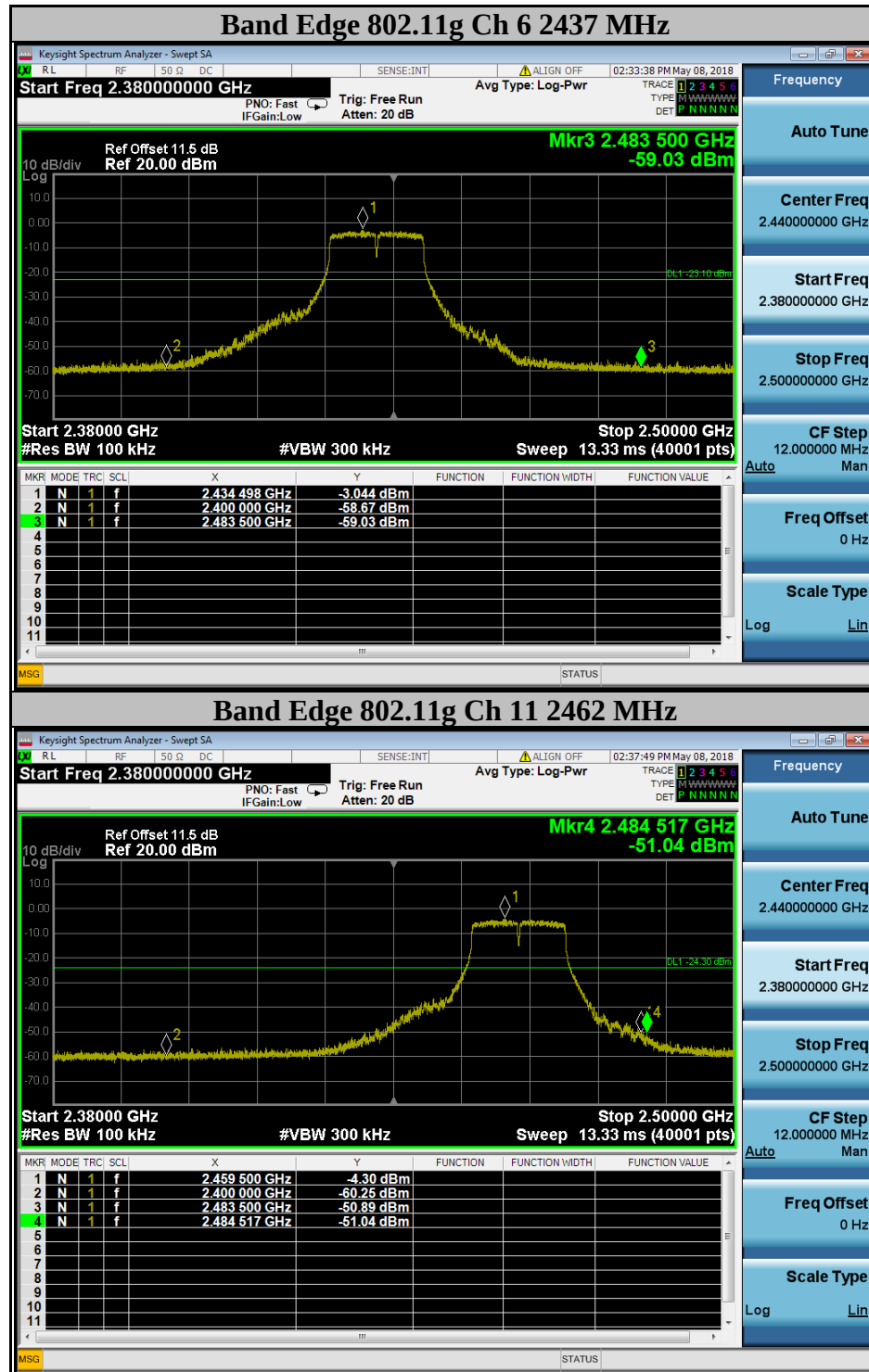
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FCC ID : 2AO4FM020-1



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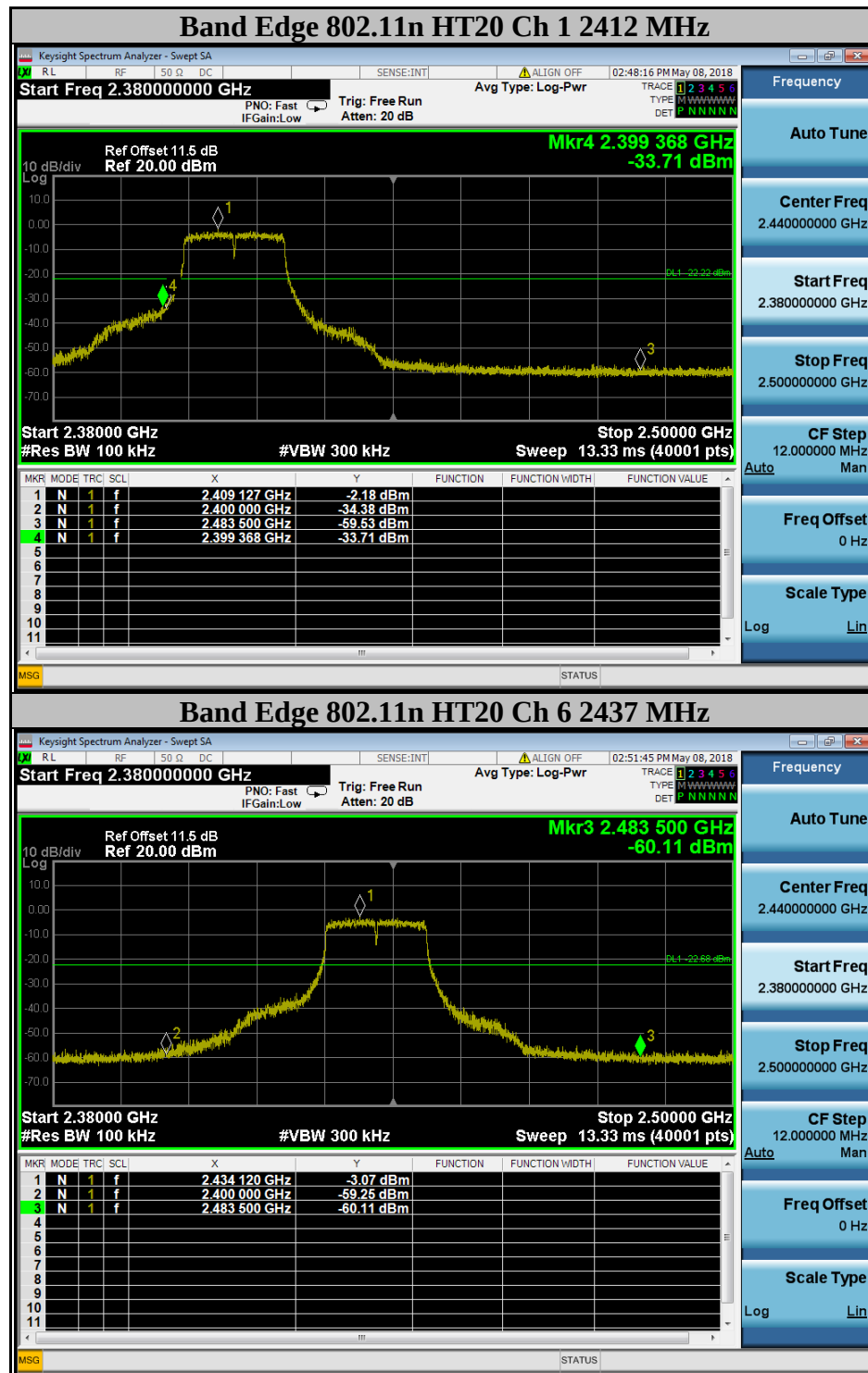
Telephone : +886-2-7737-3000

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Doc No: 17-EM-F0876 / 1.0



Test report No. : 4788387996A-US-R1-V0
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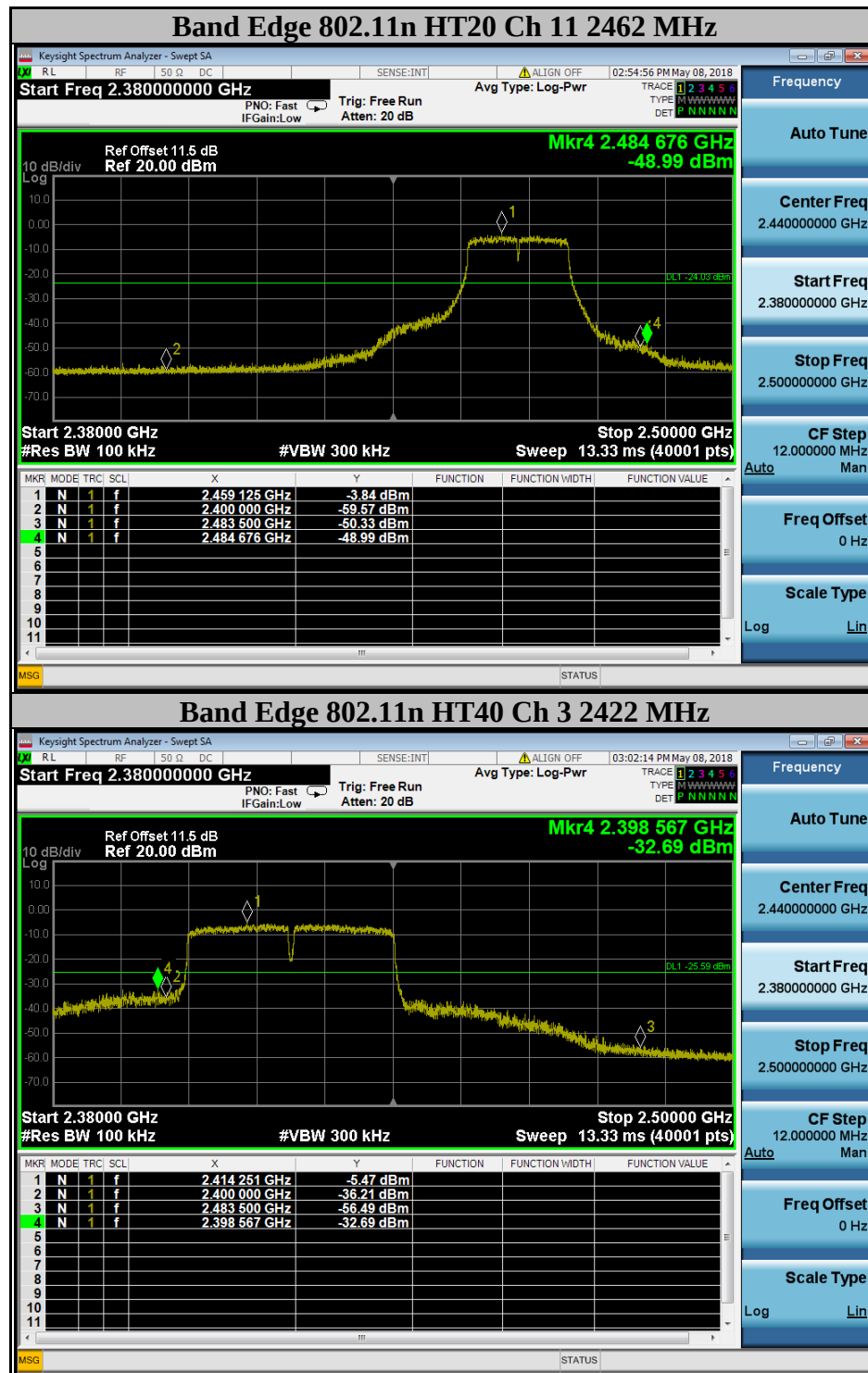
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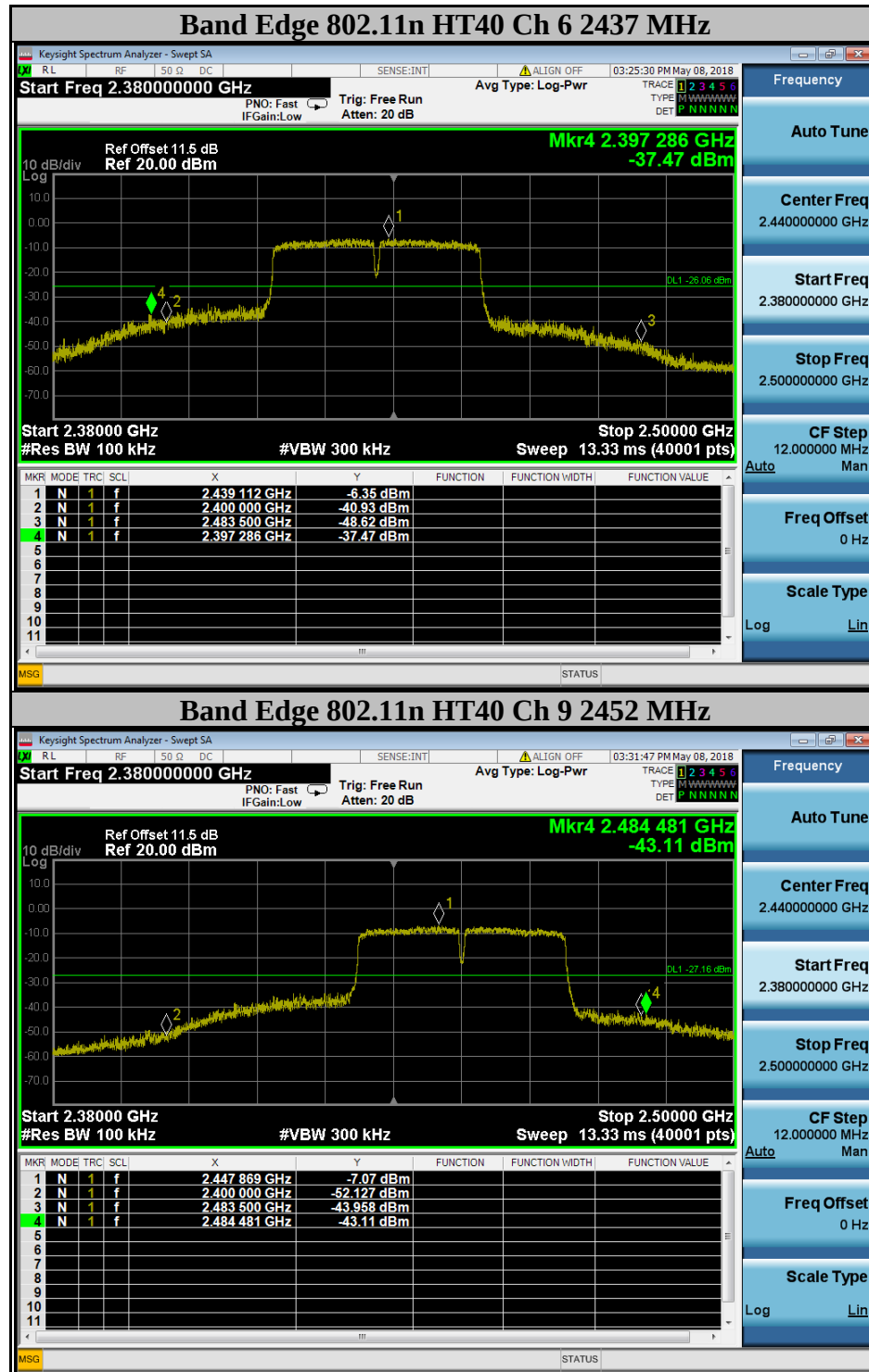
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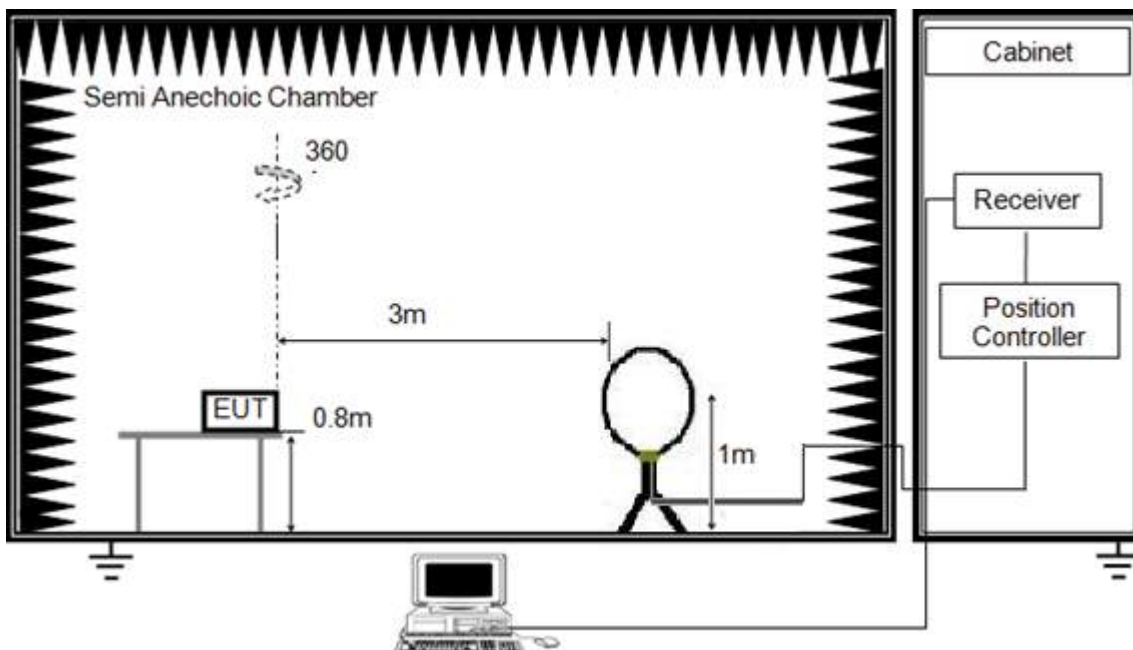
9.6. Radiated Spurious Emission

Requirements

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Procedures

[For below 30MHz]



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The setting of the spectrum analyzer

RBW	9 KHz
VBW	9 KHz
Sweep	Auto
Detector	Peak/QP/Average
Trace	Max hold

Note:

- The testing follows the guidelines in ANSI C63.10-2013
- The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The EUT was placed on a turntable with 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)
- If peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

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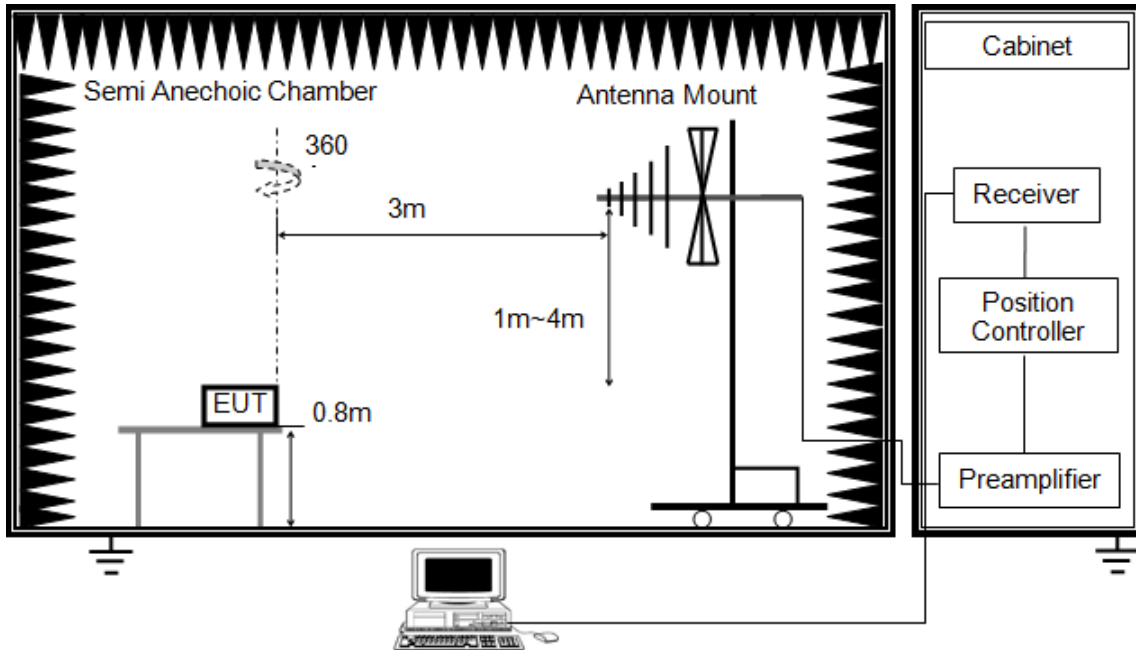
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Test Procedures

[For below 1 GHz]



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The setting of the spectrum analyser:

RBW	120K
VBW	300K
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

Note:

- The testing follows the guidelines in ANSI C63.10-2013.
- The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The EUT was placed on a turntable with 0.8 meter above ground.
- The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

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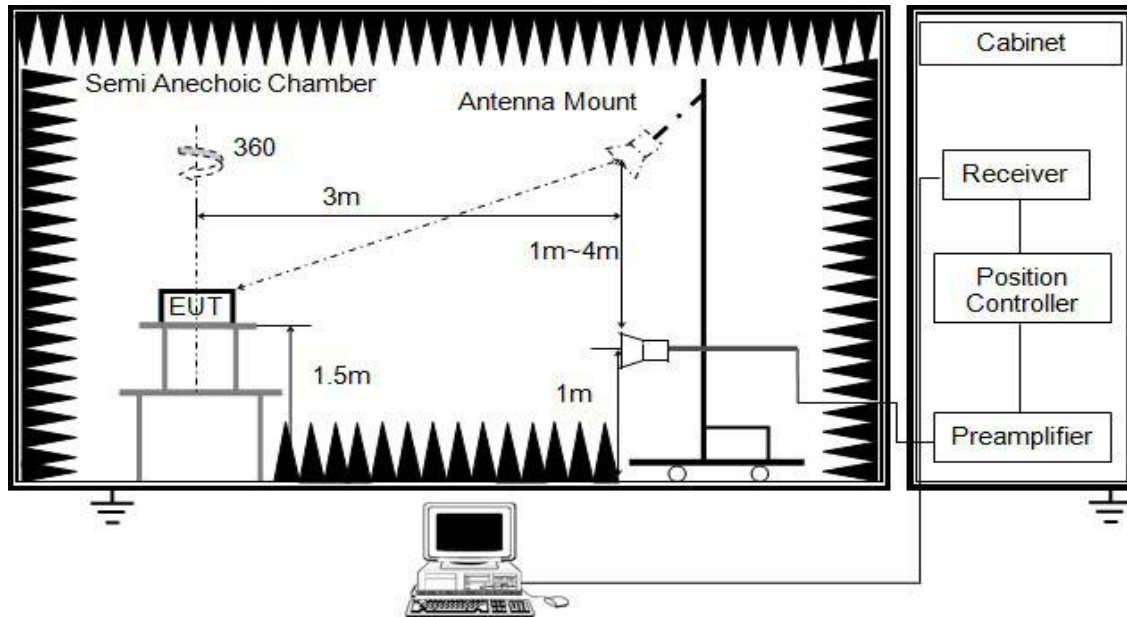
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[For above 1 GHz]



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The setting of the spectrum analyser:

RBW	1M
VBW	PEAK: 3M AVG: see note f
Sweep	Auto
Detector	Peak
Trace	Max hold

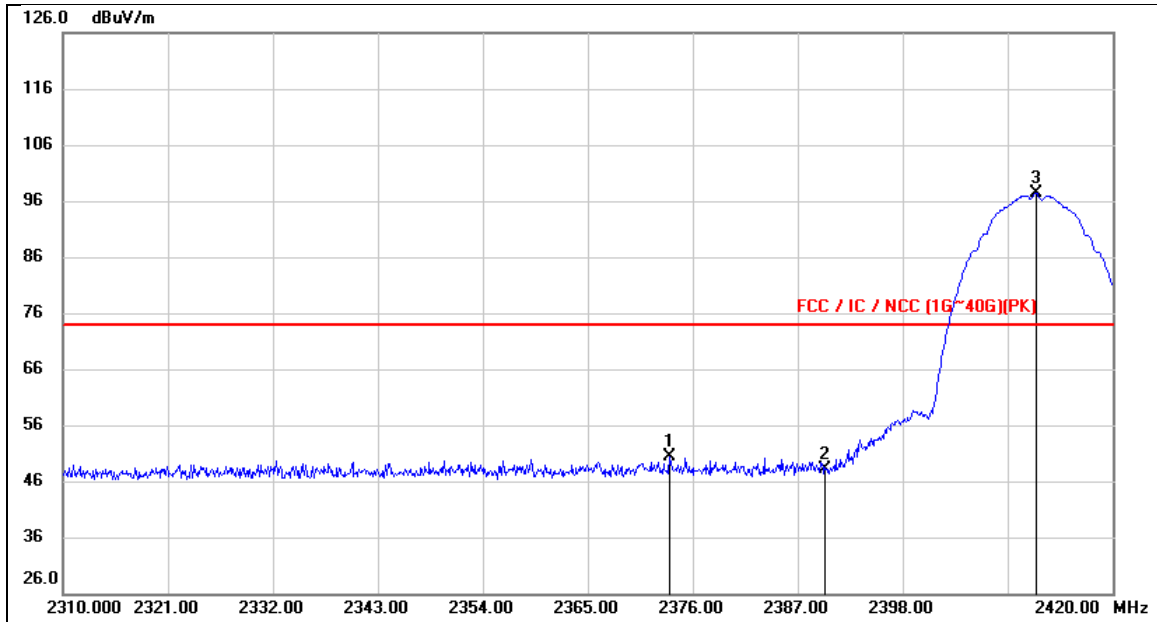
Note:

- The testing follows the guidelines in ANSI C63.10-2013.
- The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The EUT was placed on a turntable with 1.5m above ground.
- The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
- For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector. For the Duty Cycle and Correction Factor please refer to clause 7.1.ON TIME AND DUTY CYCLE. The EUT is configured to transmit with $D \geq 98\%$, then set $VBW \leq RBW / 100$, but not less than 10 Hz.
- For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)
- If peak Result complies with AV limit, AV Result is deemed to comply with AV limit.



Test Data

Restricted Band Edge 802.11b Ch 1 2412MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2373.598	58.78	-8.45	50.33	74.00	-23.67	peak
2	2390.000	56.51	-8.47	48.04	74.00	-25.96	peak
3*	2411.974	105.86	-8.49	97.37	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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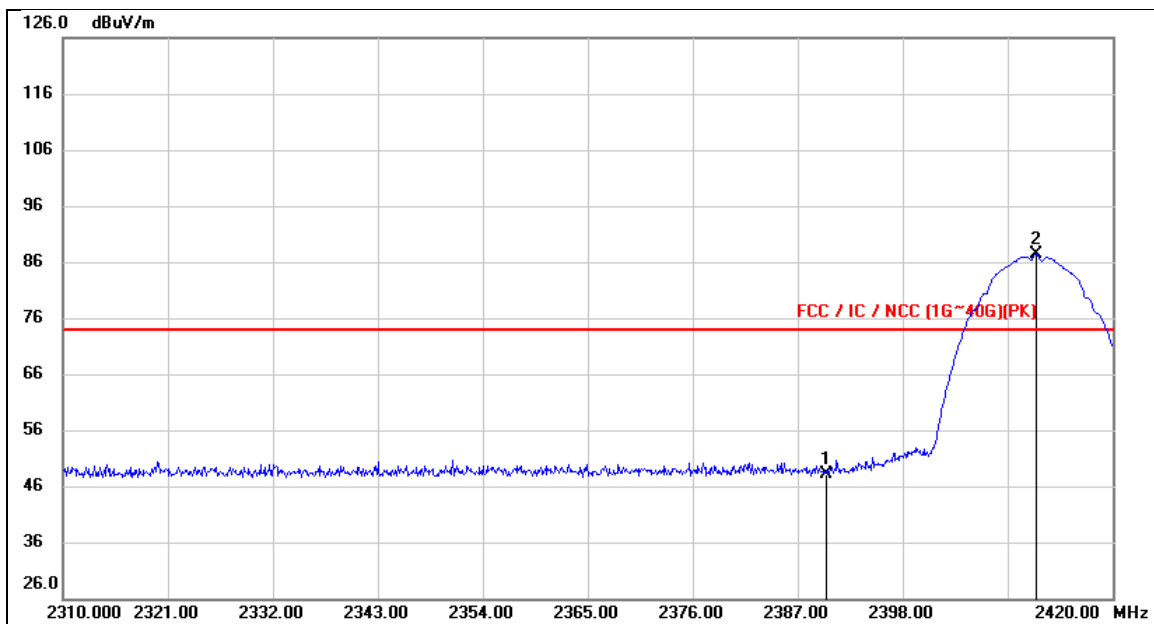
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Restricted Band Edge 802.11b Ch 1 2412MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	56.50	-8.47	48.03	74.00	-25.97	peak
2*	2411.996	95.86	-8.49	87.37	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11b Ch 1 2412 MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	46.56	-8.47	38.09	54.00	-15.91	AVG
2*	2411.215	102.97	-8.49	94.48	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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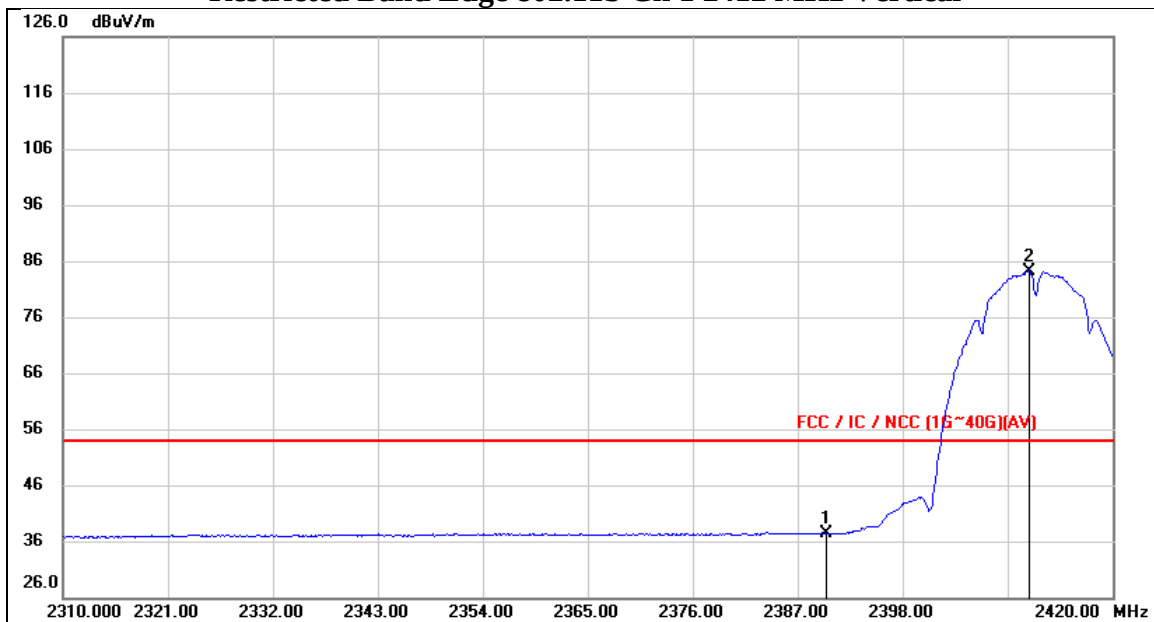
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Restricted Band Edge 802.11b Ch 1 2412 MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	45.80	-8.47	37.33	54.00	-16.67	AVG
2*	2411.240	92.74	-8.49	84.25	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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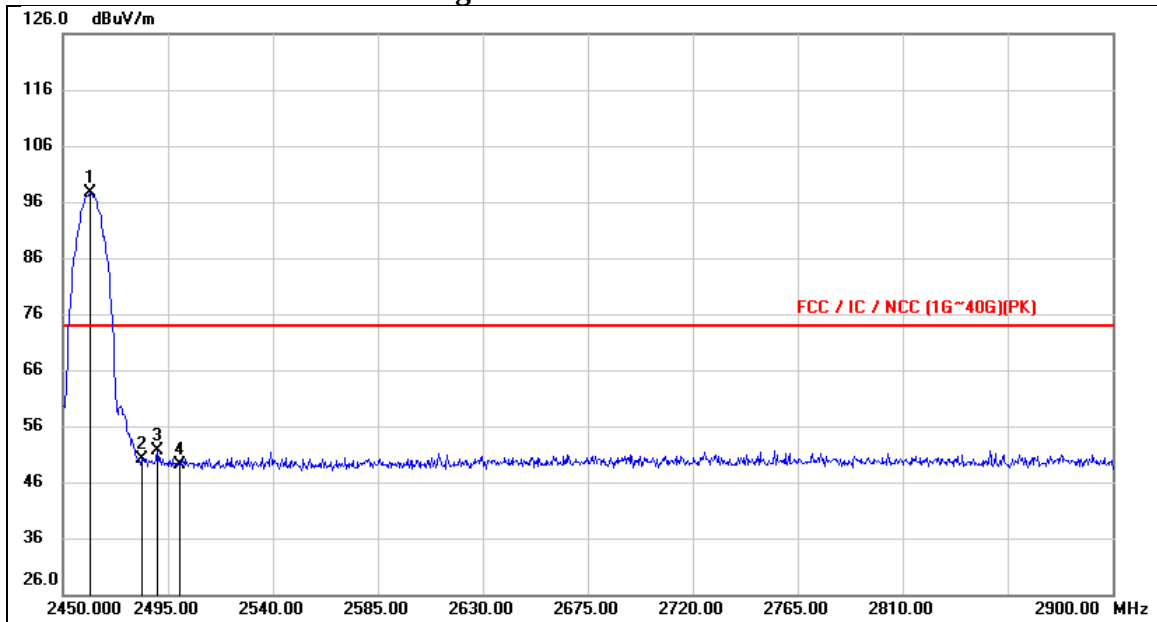
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Restricted Band Edge 802.11b Ch 11 2462MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2462.060	106.15	-8.53	97.62	-	-	peak
2	2483.500	58.78	-8.55	50.23	74.00	-23.77	peak
3	2490.635	60.08	-8.55	51.53	74.00	-22.47	peak
4	2500.000	57.66	-8.55	49.11	74.00	-24.89	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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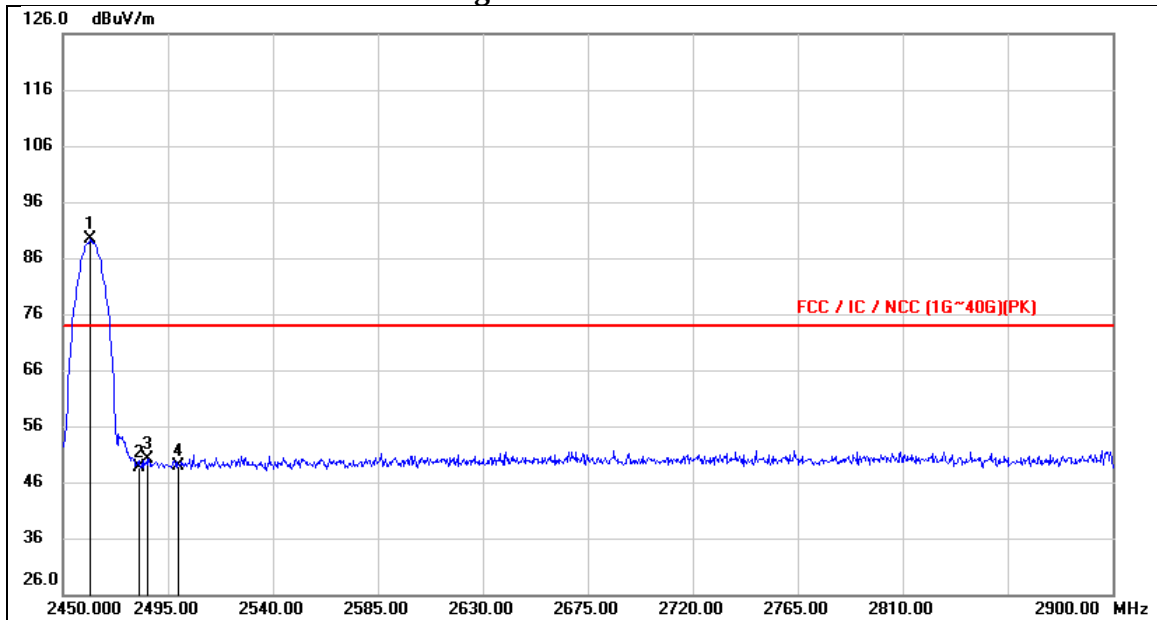
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11b Ch 11 2462MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2462.075	97.83	-8.53	89.30	-	-	peak
2	2483.500	57.16	-8.55	48.61	74.00	-25.39	peak
3	2486.120	58.78	-8.54	50.24	74.00	-23.76	peak
4	2500.000	57.32	-8.55	48.77	74.00	-25.23	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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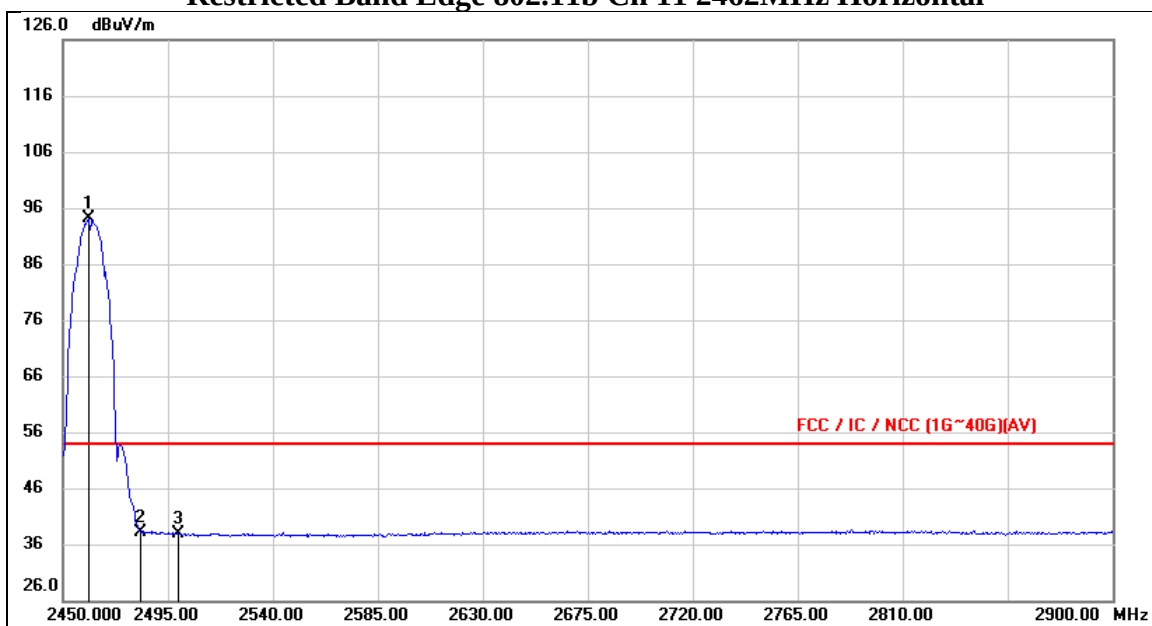
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11b Ch 11 2462MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2461.235	102.65	-8.52	94.13	-	-	AVG
2	2483.500	46.69	-8.55	38.14	54.00	-15.86	AVG
3	2500.000	46.40	-8.55	37.85	54.00	-16.15	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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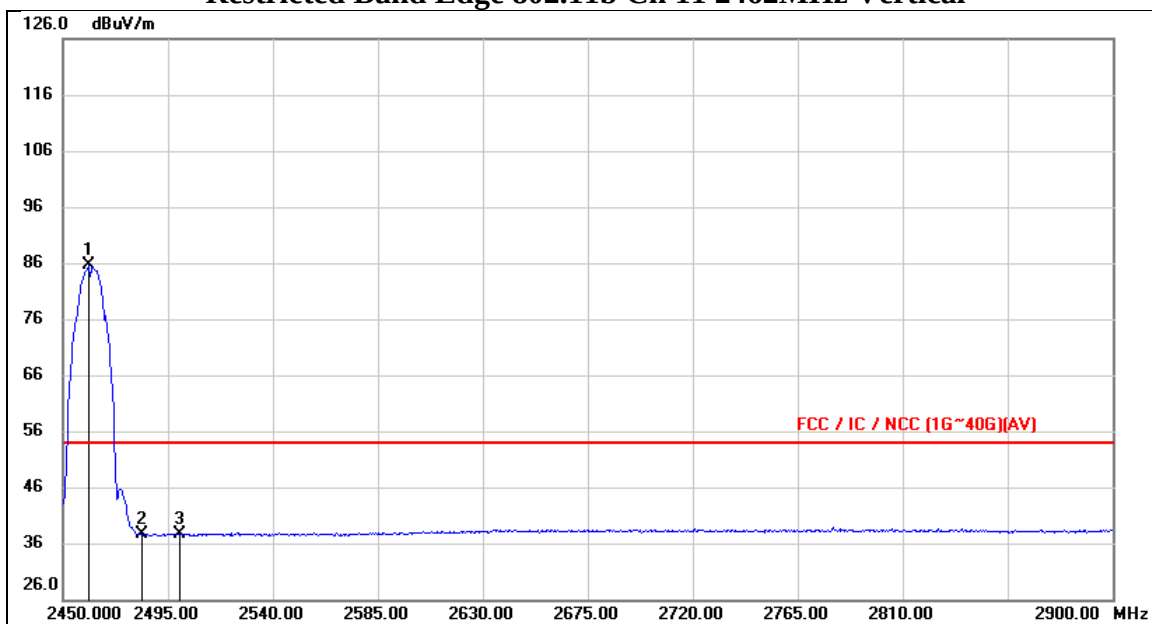
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Restricted Band Edge 802.11b Ch 11 2462MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2461.250	94.10	-8.52	85.58	-	-	AVG
2	2483.500	46.18	-8.55	37.63	54.00	-16.37	AVG
3	2500.000	46.18	-8.55	37.63	54.00	-16.37	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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Restricted Band Edge 802.11g Ch 1 2412MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	63.37	-8.47	54.90	74.00	-19.10	peak
2*	2409.330	105.84	-8.47	97.37	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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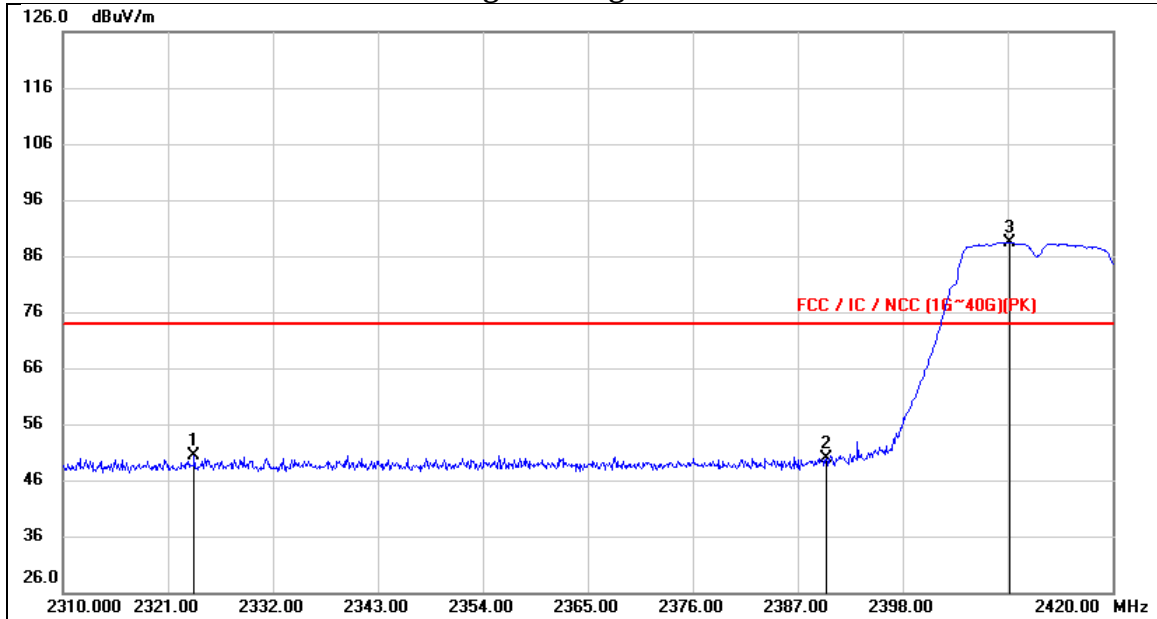
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Restricted Band Edge 802.11g Ch 1 2412MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2323.779	58.84	-8.41	50.43	74.00	-23.57	peak
2	2390.000	58.46	-8.47	49.99	74.00	-24.01	peak
3*	2409.271	96.92	-8.47	88.45	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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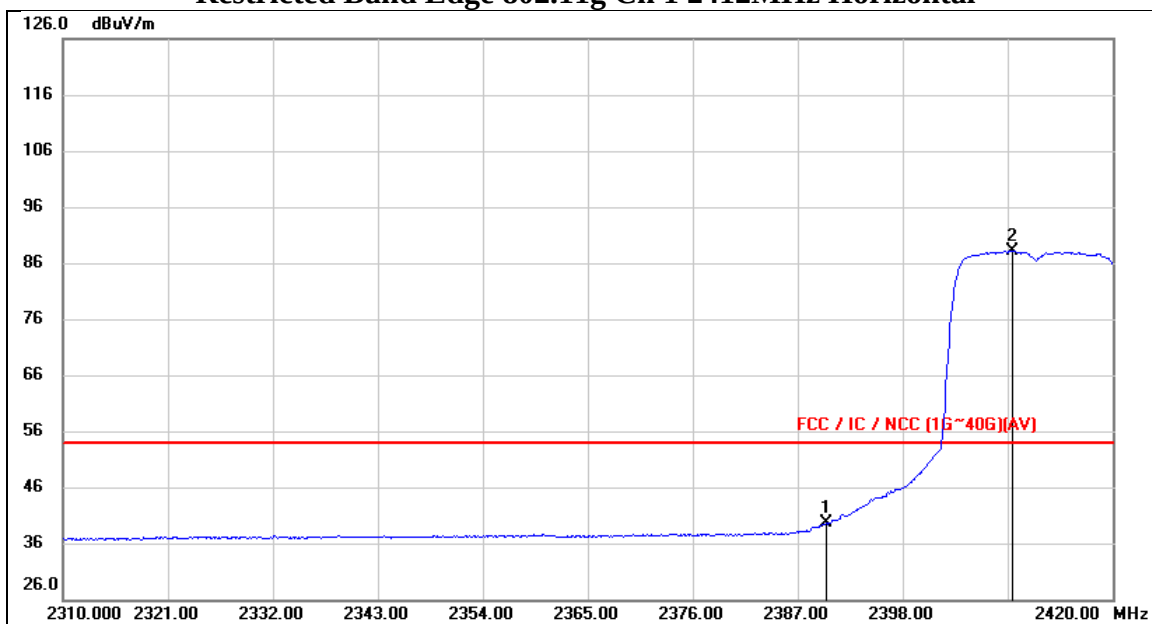
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Restricted Band Edge 802.11g Ch 1 2412MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	48.00	-8.47	39.53	54.00	-14.47	AVG
2*	2409.561	96.58	-8.47	88.11	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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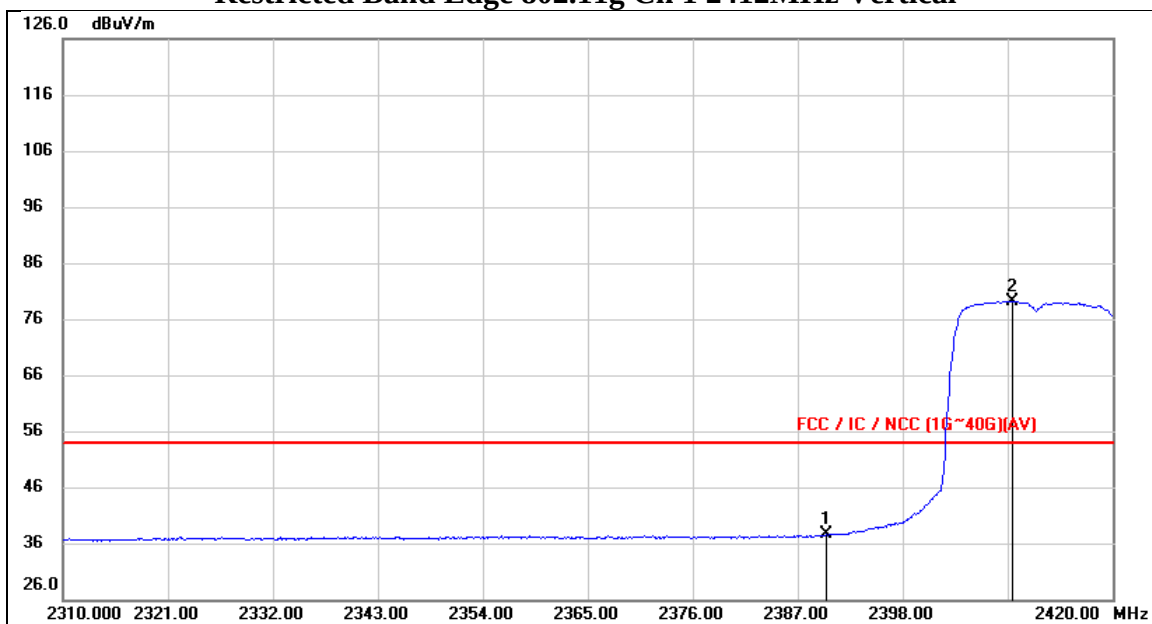
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11g Ch 1 2412MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	46.01	-8.47	37.54	54.00	-16.46	AVG
2*	2409.539	87.68	-8.47	79.21	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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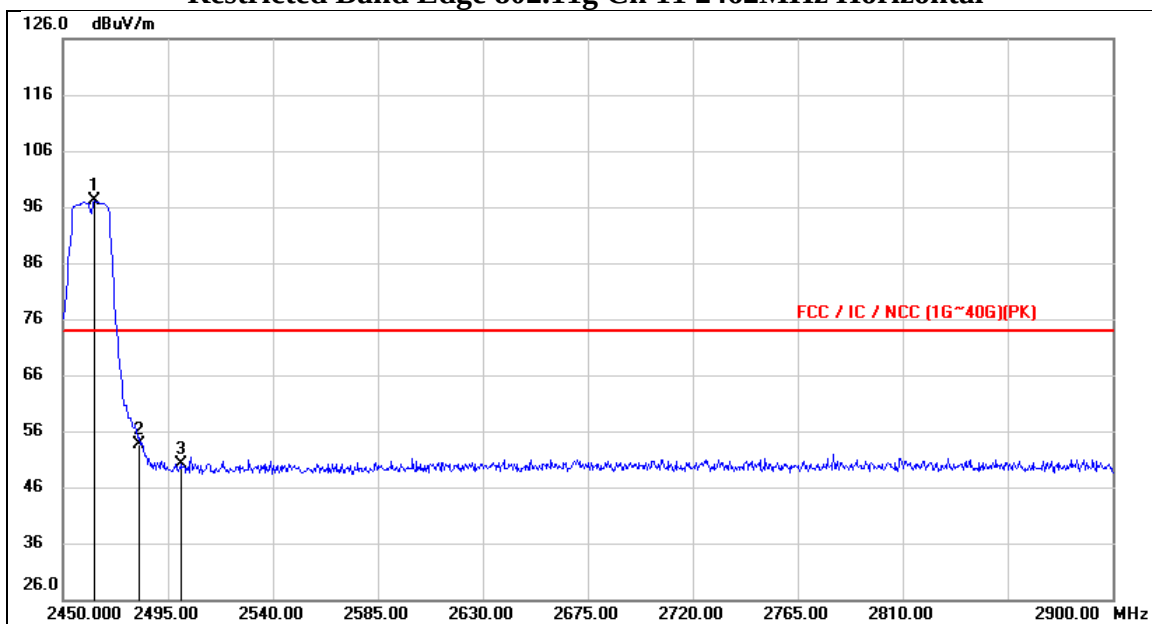
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11g Ch 11 2462MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2463.770	105.53	-8.52	97.01	-	-	peak
2	2483.500	62.06	-8.55	53.51	74.00	-20.49	peak
3	2500.000	58.73	-8.55	50.18	74.00	-23.82	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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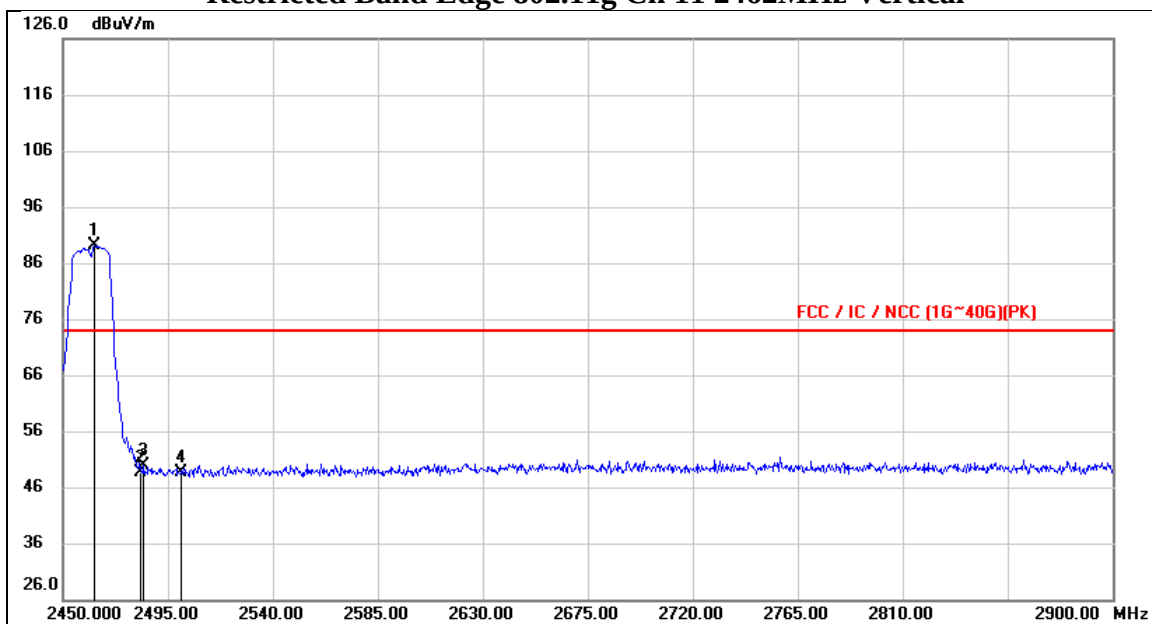
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Restricted Band Edge 802.11g Ch 11 2462MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2463.530	97.57	-8.52	89.05	-	-	peak
2	2483.500	57.26	-8.55	48.71	74.00	-25.29	peak
3	2484.815	58.38	-8.54	49.84	74.00	-24.16	peak
4	2500.000	57.17	-8.55	48.62	74.00	-25.38	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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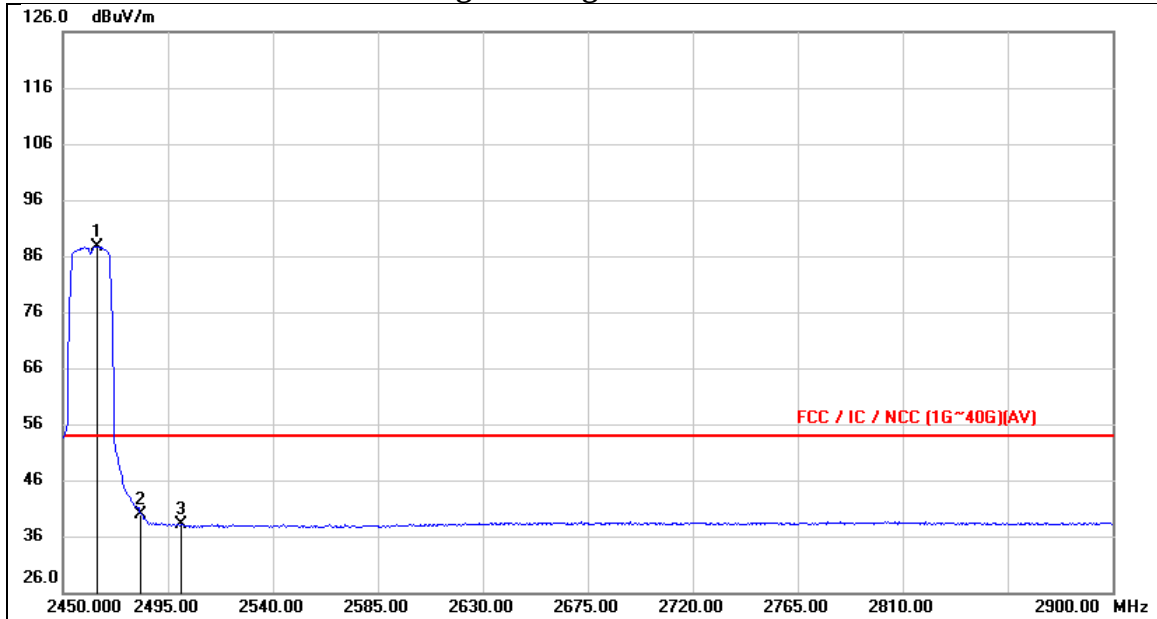
Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11g Ch 11 2462MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2465.255	96.21	-8.53	87.68	-	-	AVG
2	2483.500	48.48	-8.55	39.93	54.00	-14.07	AVG
3	2500.000	46.65	-8.55	38.10	54.00	-15.90	AVG

* **Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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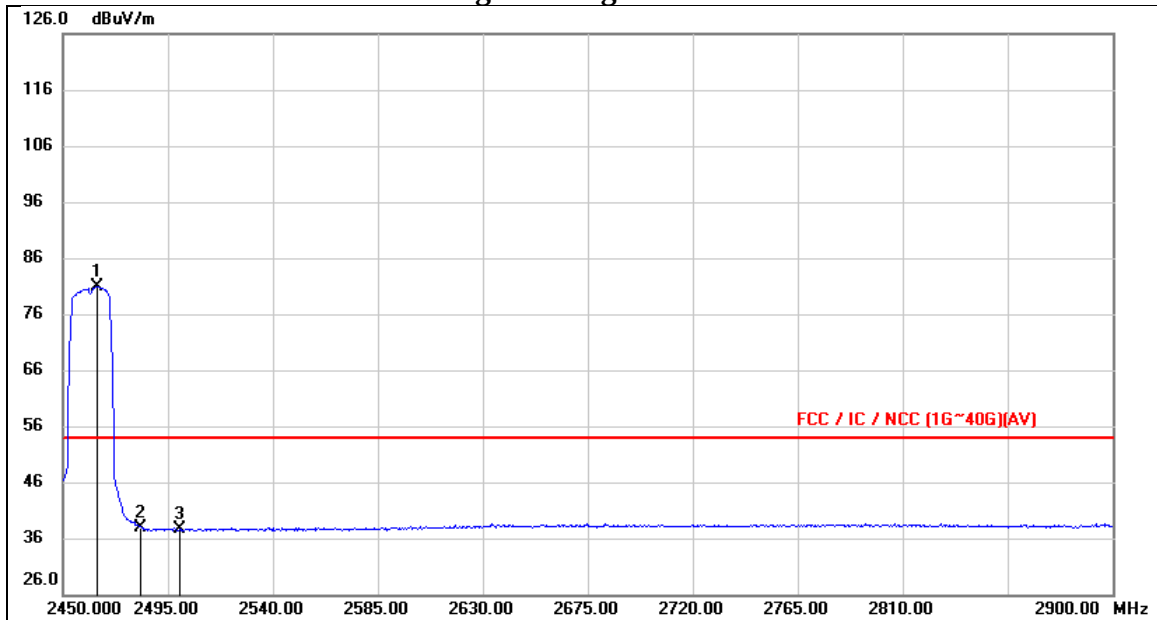
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Restricted Band Edge 802.11g Ch 11 2462MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2465.225	89.41	-8.53	80.88	-	-	AVG
2	2483.500	46.48	-8.55	37.93	54.00	-16.07	AVG
3	2500.000	46.14	-8.55	37.59	54.00	-16.41	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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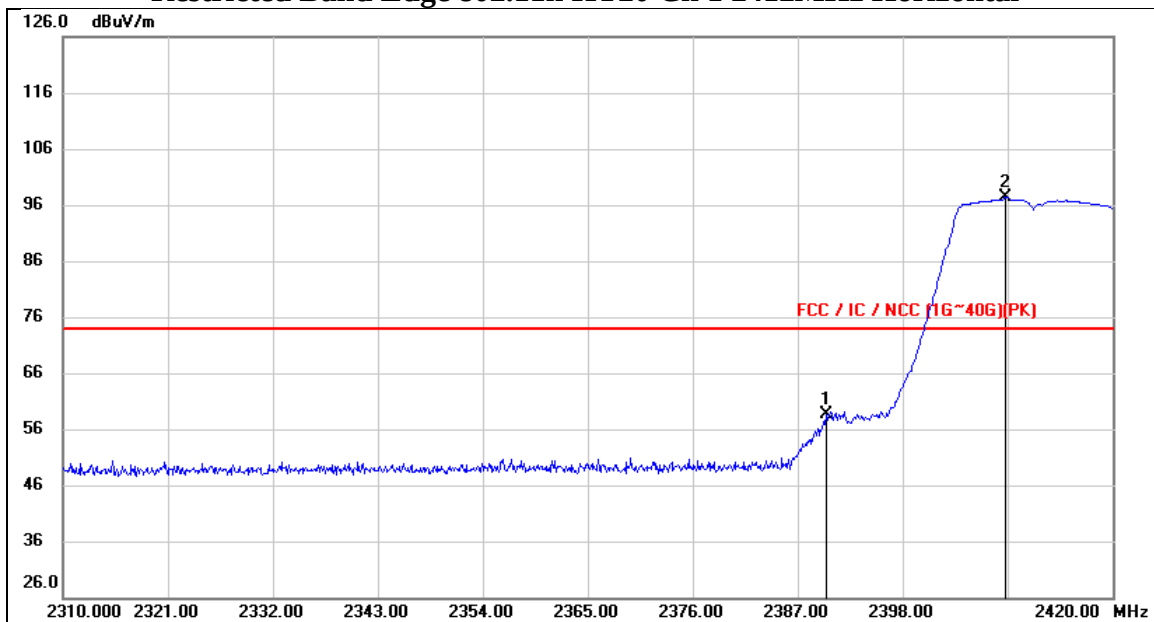
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT20 Ch 1 2412MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	67.02	-8.47	58.55	74.00	-15.45	peak
2*	2408.850	105.94	-8.48	97.46	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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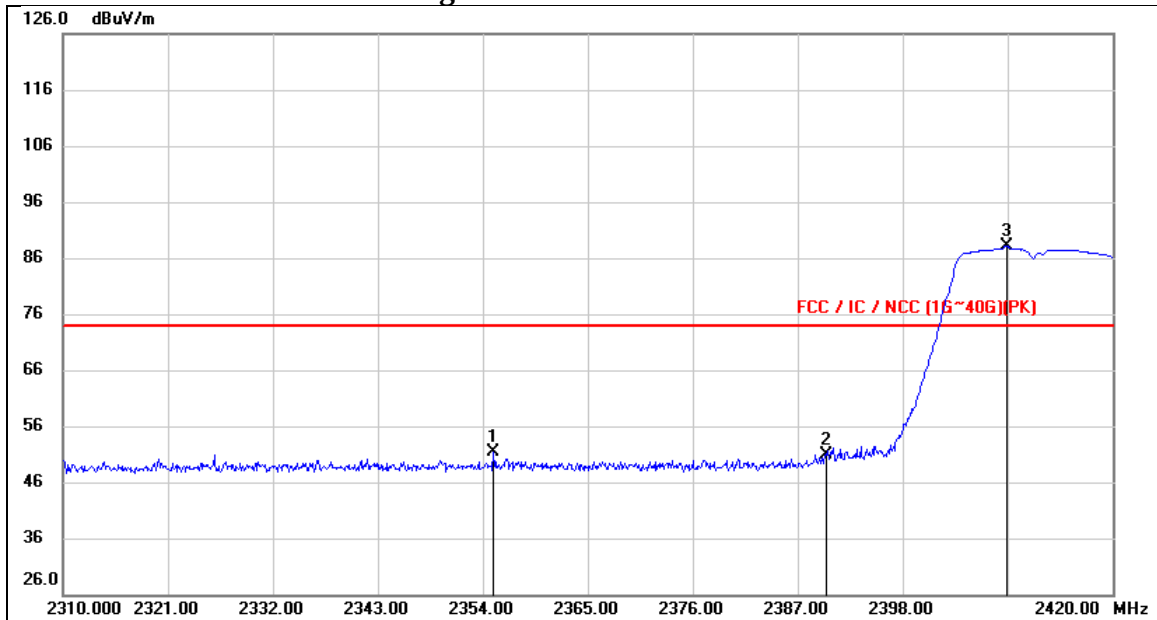
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT20 Ch 1 2412MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2355.162	59.72	-8.44	51.28	74.00	-22.72	peak
2	2390.000	59.32	-8.47	50.85	74.00	-23.15	peak
3*	2408.930	96.66	-8.48	88.18	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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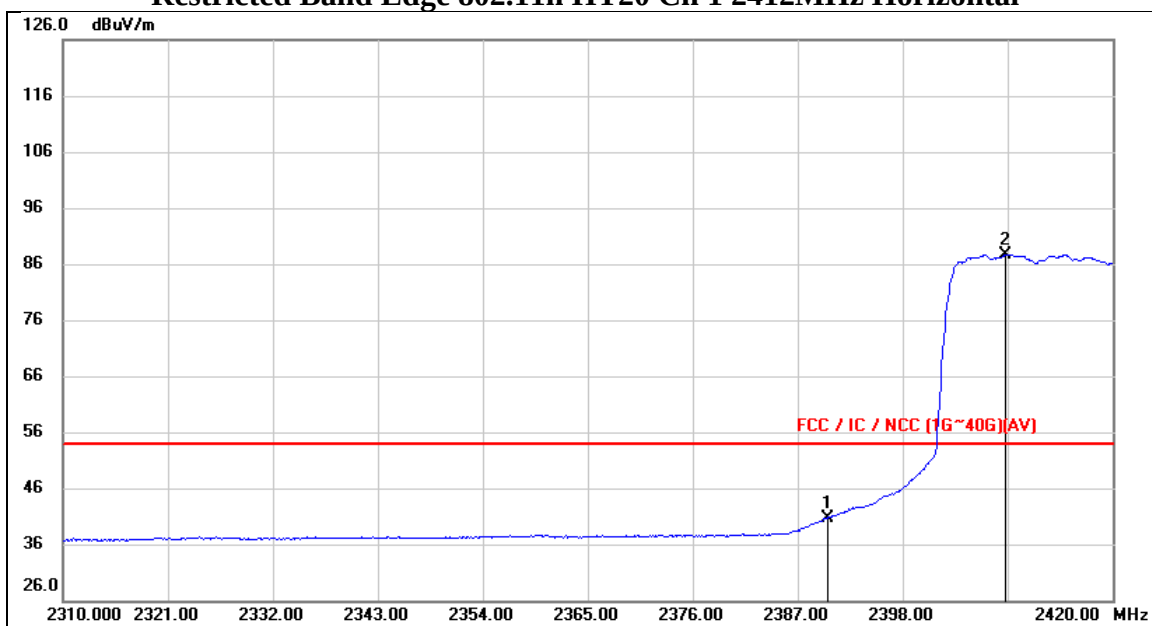
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Restricted Band Edge 802.11n HT20 Ch 1 2412MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	49.09	-8.47	40.62	54.00	-13.38	AVG
2*	2408.875	96.15	-8.48	87.67	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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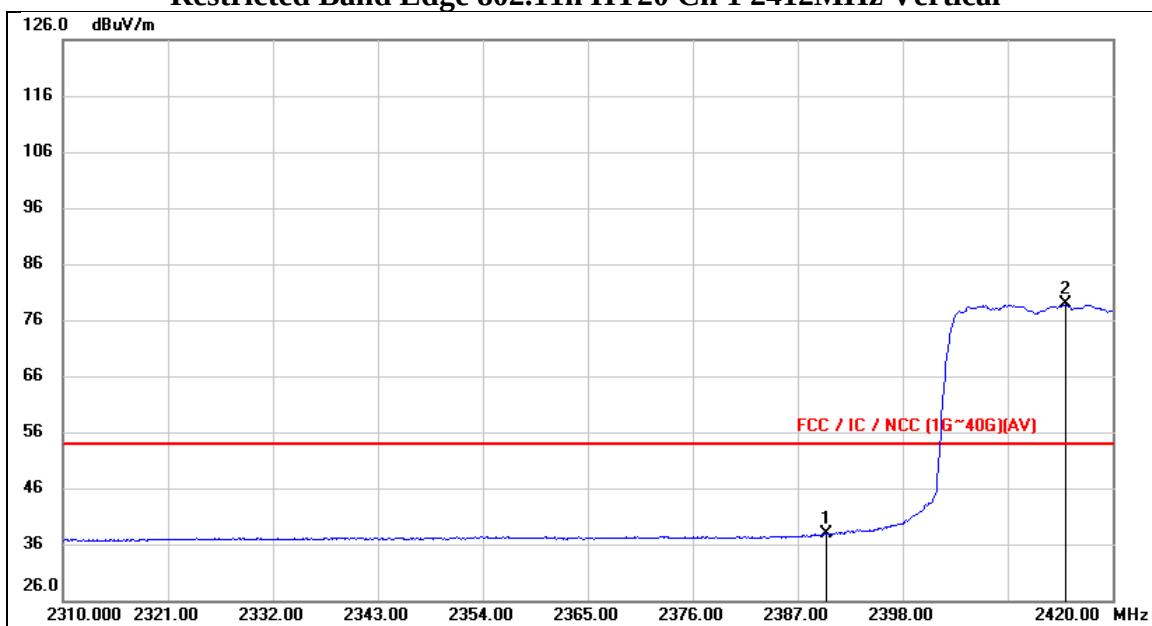
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Restricted Band Edge 802.11n HT20 Ch 1 2412MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	46.25	-8.47	37.78	54.00	-16.22	AVG
2*	2415.065	87.27	-8.49	78.78	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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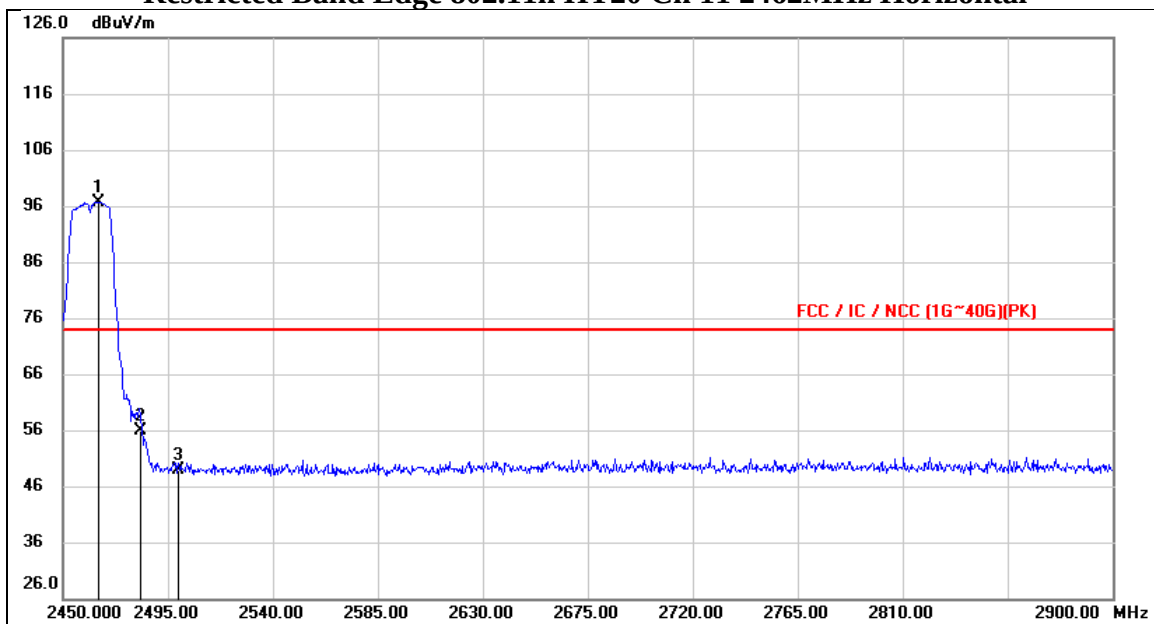
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Restricted Band Edge 802.11n HT20 Ch 11 2462MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2465.675	105.24	-8.53	96.71	-	-	peak
2	2483.500	64.44	-8.55	55.89	74.00	-18.11	peak
3	2500.000	57.38	-8.55	48.83	74.00	-25.17	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
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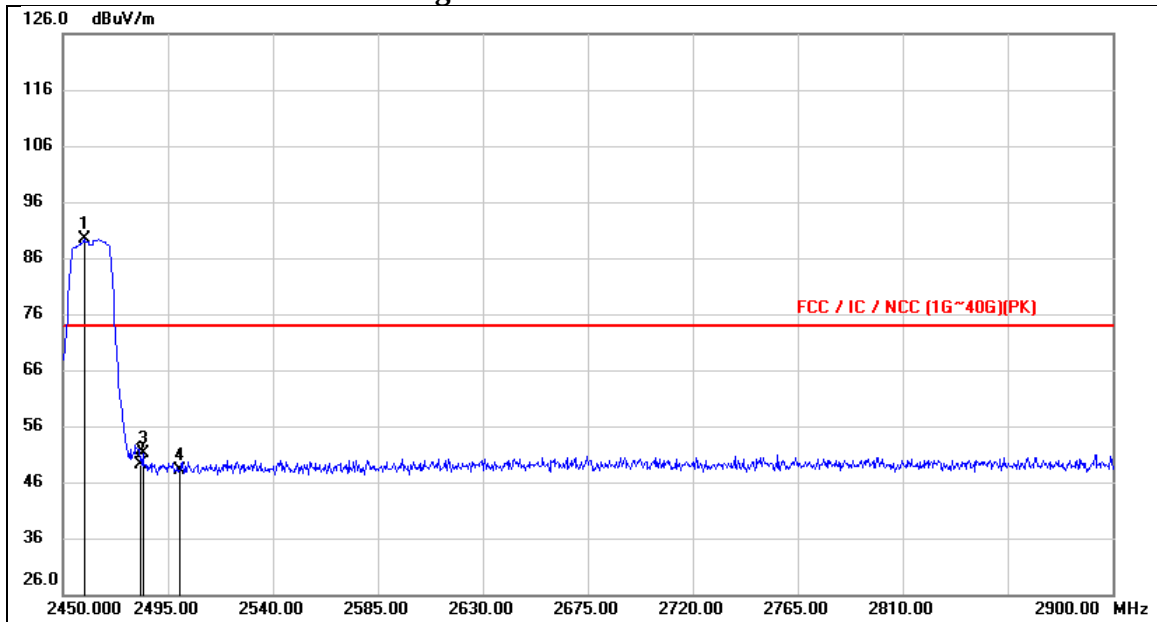
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Restricted Band Edge 802.11n HT20 Ch 11 2462MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2459.030	97.89	-8.52	89.37	-	-	peak
2	2483.500	57.74	-8.55	49.19	74.00	-24.81	peak
3	2484.440	59.71	-8.54	51.17	74.00	-22.83	peak
4	2500.000	56.61	-8.55	48.06	74.00	-25.94	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
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3. Margin = Result - Limit

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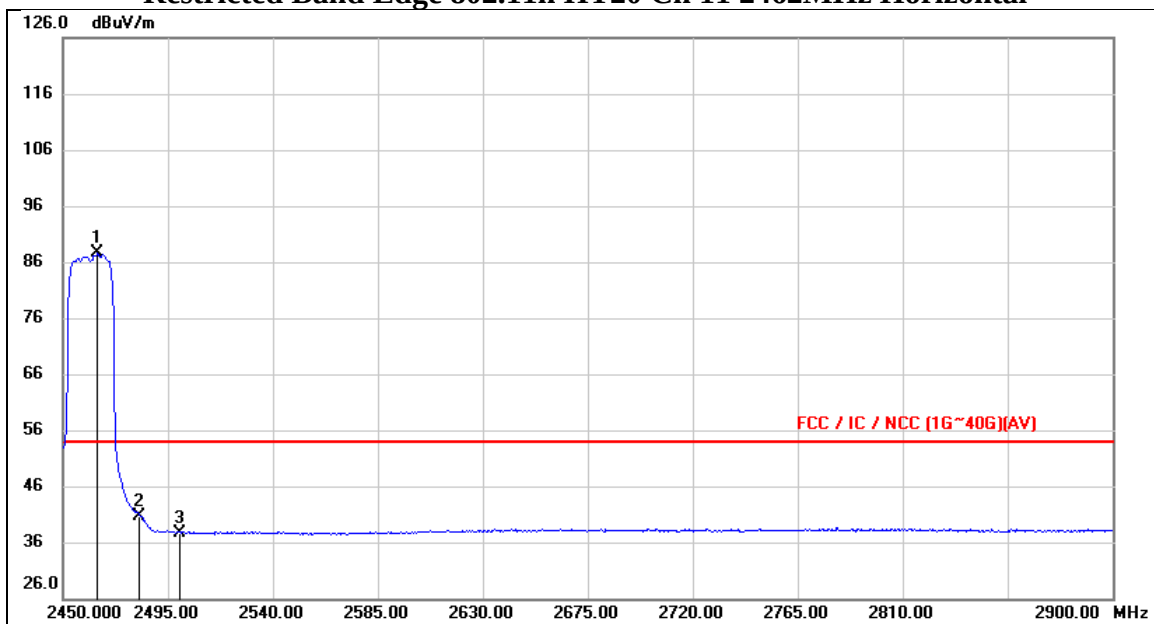
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Restricted Band Edge 802.11n HT20 Ch 11 2462MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2465.090	96.14	-8.53	87.61	-	-	AVG
2	2483.500	49.26	-8.55	40.71	54.00	-13.29	AVG
3	2500.000	46.24	-8.55	37.69	54.00	-16.31	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
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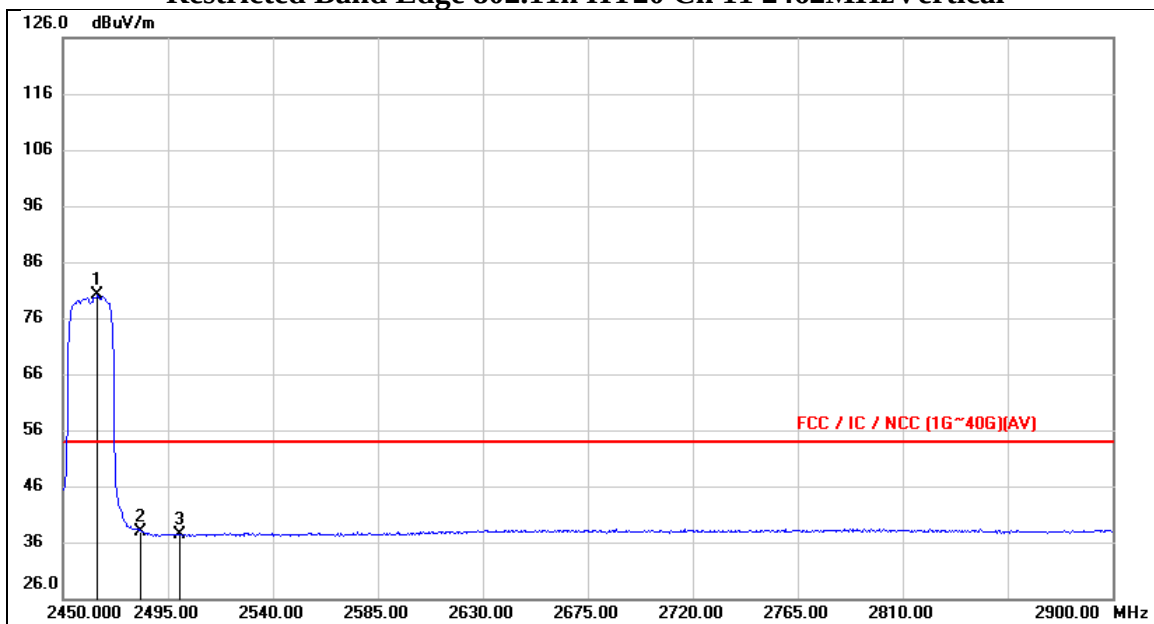
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Restricted Band Edge 802.11n HT20 Ch 11 2462MHzVertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2465.135	88.63	-8.53	80.10	-	-	AVG
2	2483.500	46.49	-8.55	37.94	54.00	-16.06	AVG
3	2500.000	45.82	-8.55	37.27	54.00	-16.73	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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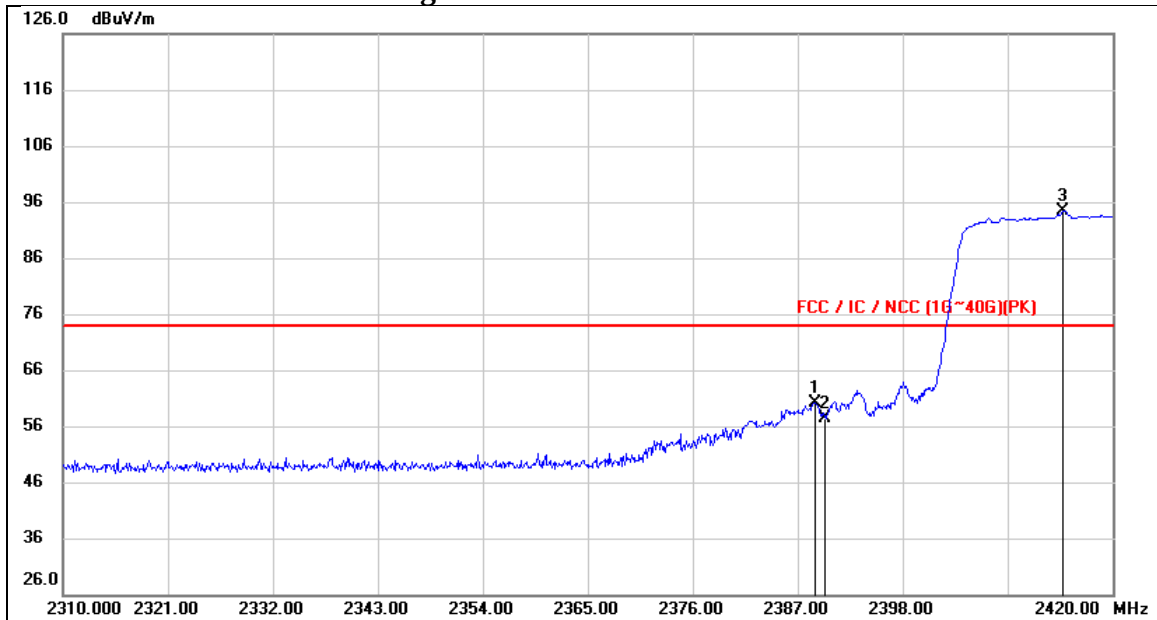
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Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT40 Ch 3 2422MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.771	68.67	-8.47	60.20	74.00	-13.80	peak
2	2390.000	65.76	-8.47	57.29	74.00	-16.71	peak
3*	2414.918	102.90	-8.49	94.41	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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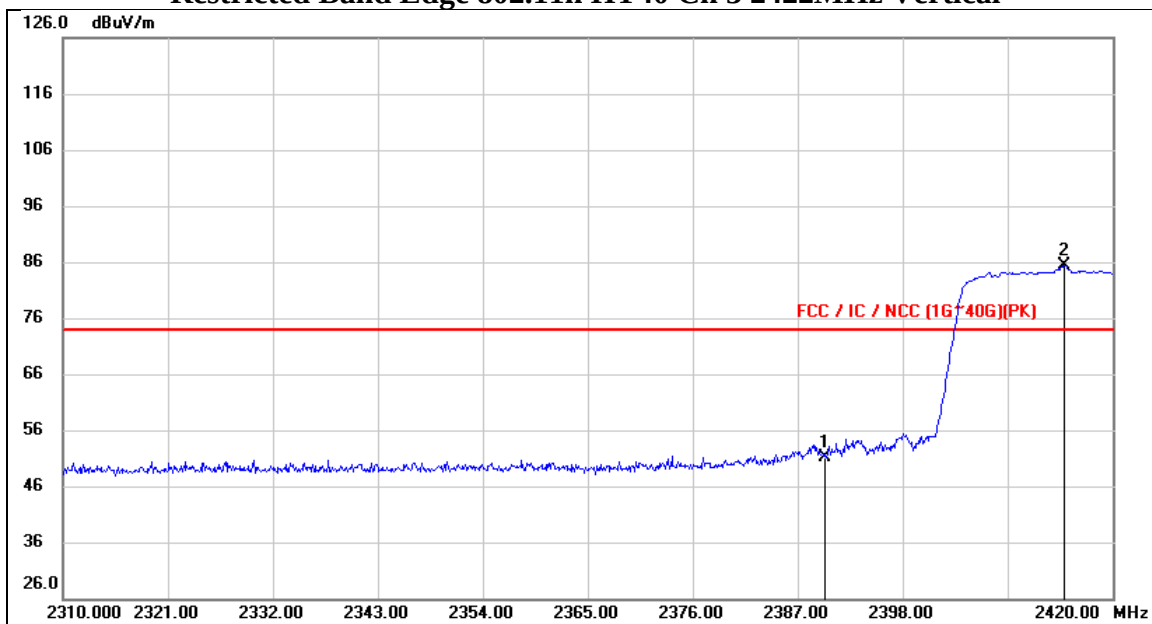
Telephone : +886-2-7737-3000

Facsimile (FAX) : +886-3-583-7948

Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT40 Ch 3 2422MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	59.67	-8.47	51.20	74.00	-22.80	peak
2*	2414.984	93.88	-8.49	85.39	-	-	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT40 Ch 3 2422MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	54.01	-8.47	45.54	54.00	-8.46	AVG
2*	2418.328	93.21	-8.49	84.72	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
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Restricted Band Edge 802.11n HT40 Ch 3 2422MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	47.60	-8.47	39.13	54.00	-14.87	AVG
2*	2418.343	83.75	-8.49	75.26	-	-	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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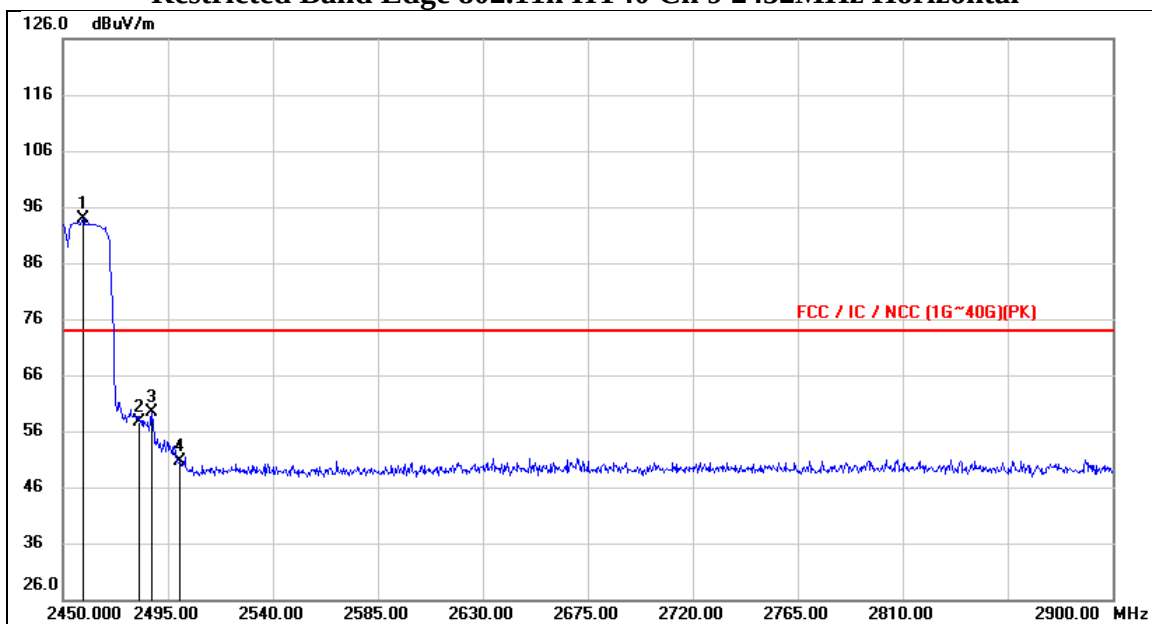
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Restricted Band Edge 802.11n HT40 Ch 9 2452MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2458.985	102.39	-8.52	93.87	-	-	peak
2	2483.500	66.12	-8.55	57.57	74.00	-16.43	peak
3	2488.100	68.02	-8.54	59.48	74.00	-14.52	peak
4	2500.000	59.12	-8.55	50.57	74.00	-23.43	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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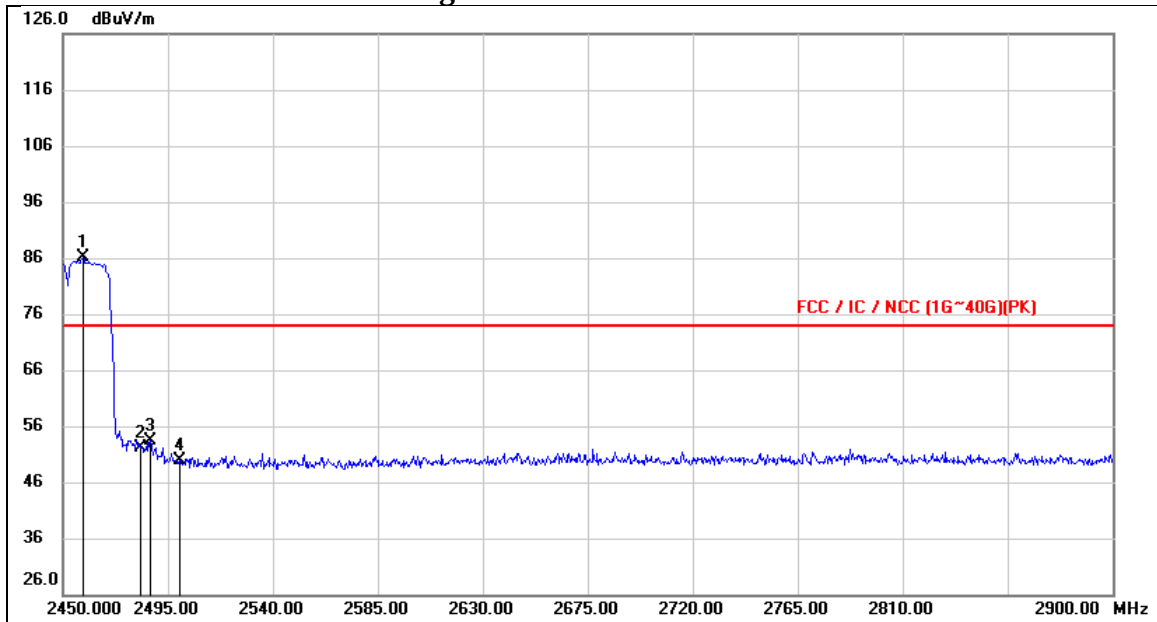
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT40 Ch 9 2452MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2458.610	94.54	-8.52	86.02	-	-	peak
2	2483.500	60.58	-8.55	52.03	74.00	-21.97	peak
3	2487.680	61.94	-8.54	53.40	74.00	-20.60	peak
4	2500.000	58.44	-8.55	49.89	74.00	-24.11	peak

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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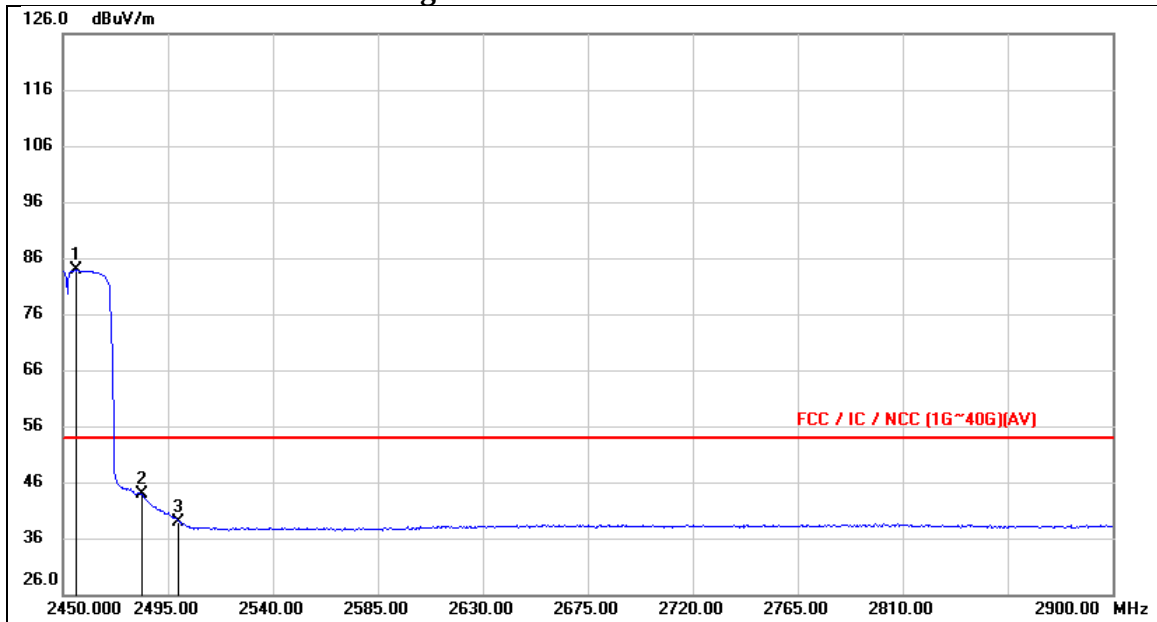
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT40 Ch 9 2452MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2455.565	92.32	-8.51	83.81	-	-	AVG
2	2483.500	52.37	-8.55	43.82	54.00	-10.18	AVG
3	2500.000	47.44	-8.55	38.89	54.00	-15.11	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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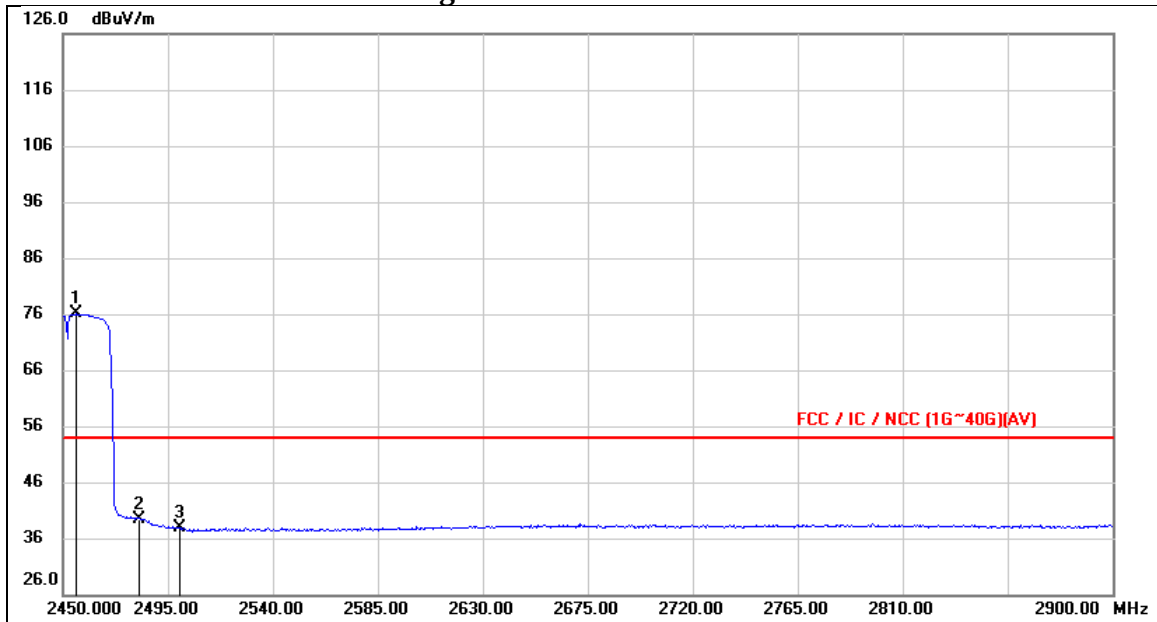
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Doc No: 17-EM-F0876 / 1.0



Restricted Band Edge 802.11n HT40 Ch 9 2452MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1*	2455.655	84.56	-8.51	76.05	-	-	AVG
2	2483.500	47.99	-8.55	39.44	54.00	-14.56	AVG
3	2500.000	46.38	-8.55	37.83	54.00	-16.17	AVG

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
---	--

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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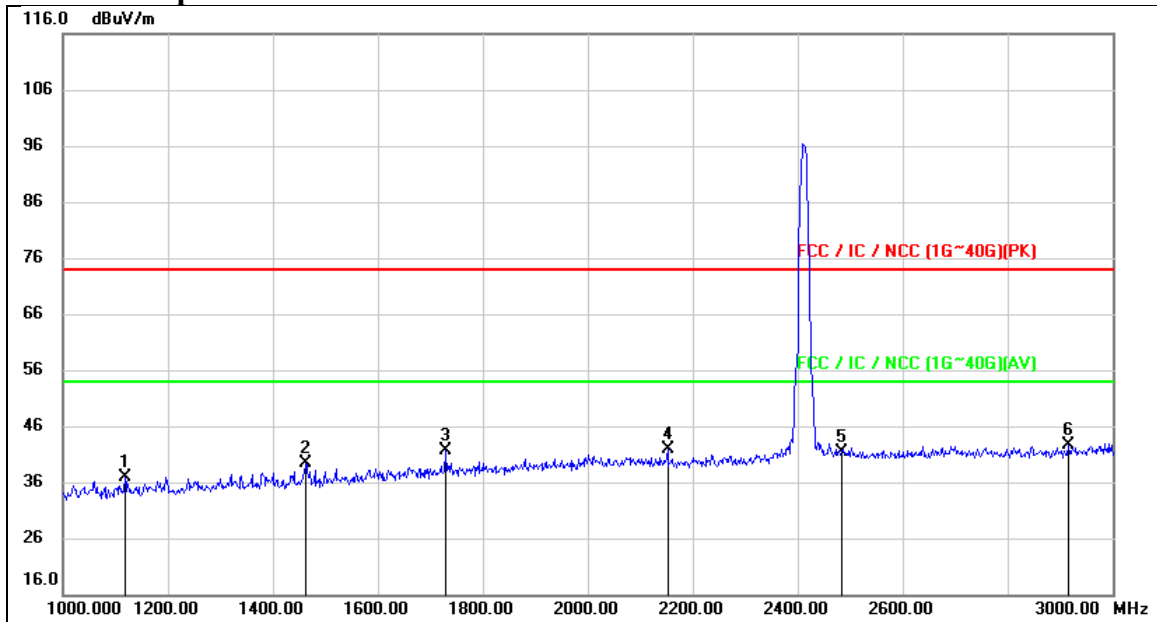
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 1 2412MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1119.400	49.59	-12.72	36.87	74.00	-37.13	peak
2	1463.867	50.85	-11.38	39.47	74.00	-34.53	peak
3	1729.800	51.56	-9.83	41.73	74.00	-32.27	peak
4	2153.067	50.20	-8.28	41.92	74.00	-32.08	peak
5	2483.500	49.89	-8.55	41.34	74.00	-32.66	peak
6	2916.200	50.18	-7.60	42.58	74.00	-31.42	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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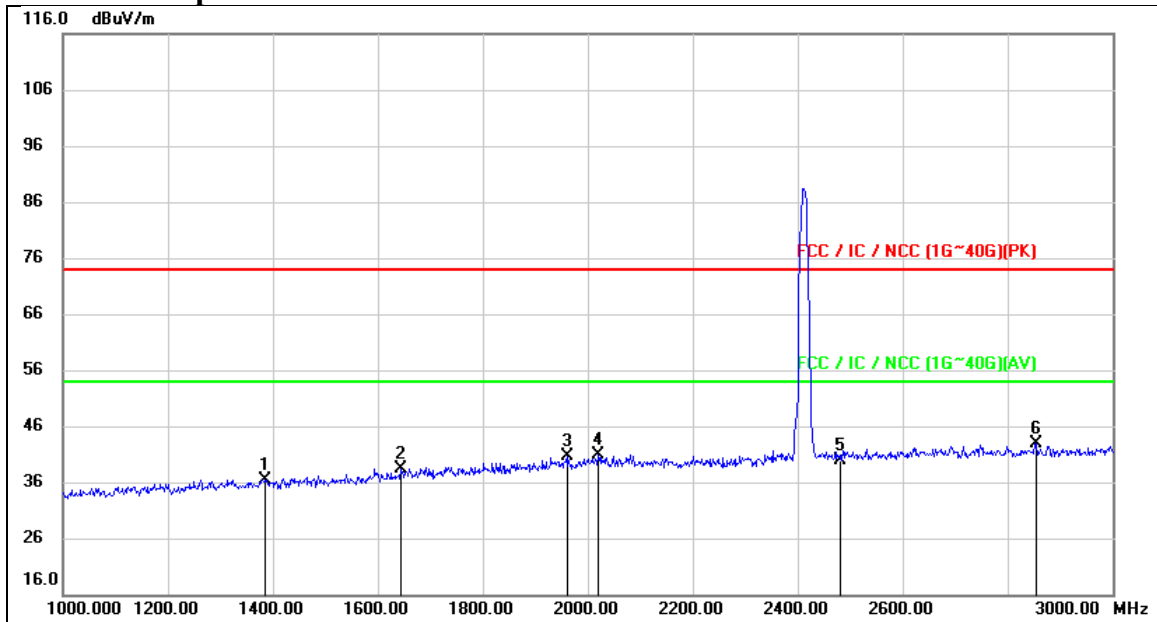
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 1 2412MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1384.333	48.19	-11.69	36.50	74.00	-37.50	peak
2	1645.800	48.72	-10.35	38.37	74.00	-35.63	peak
3	1961.067	49.02	-8.41	40.61	74.00	-33.39	peak
4	2021.533	49.13	-8.19	40.94	74.00	-33.06	peak
5	2483.500	48.48	-8.55	39.93	74.00	-34.07	peak
6	2854.000	50.66	-7.73	42.93	74.00	-31.07	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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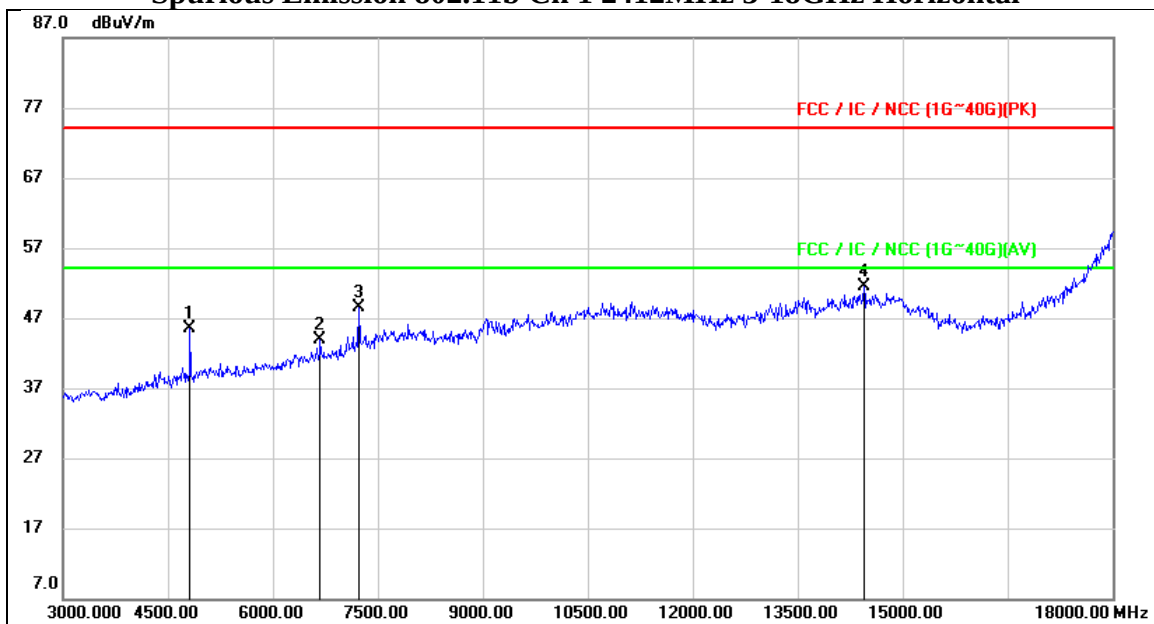
Telephone :+886-2-7737-3000

Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 1 2412MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.500	49.79	-4.35	45.44	74.00	-28.56	peak
2	6681.500	44.16	-0.21	43.95	74.00	-30.05	peak
3	7236.500	47.17	1.34	48.51	74.00	-25.49	peak
4	14454.500	39.42	12.15	51.57	74.00	-22.43	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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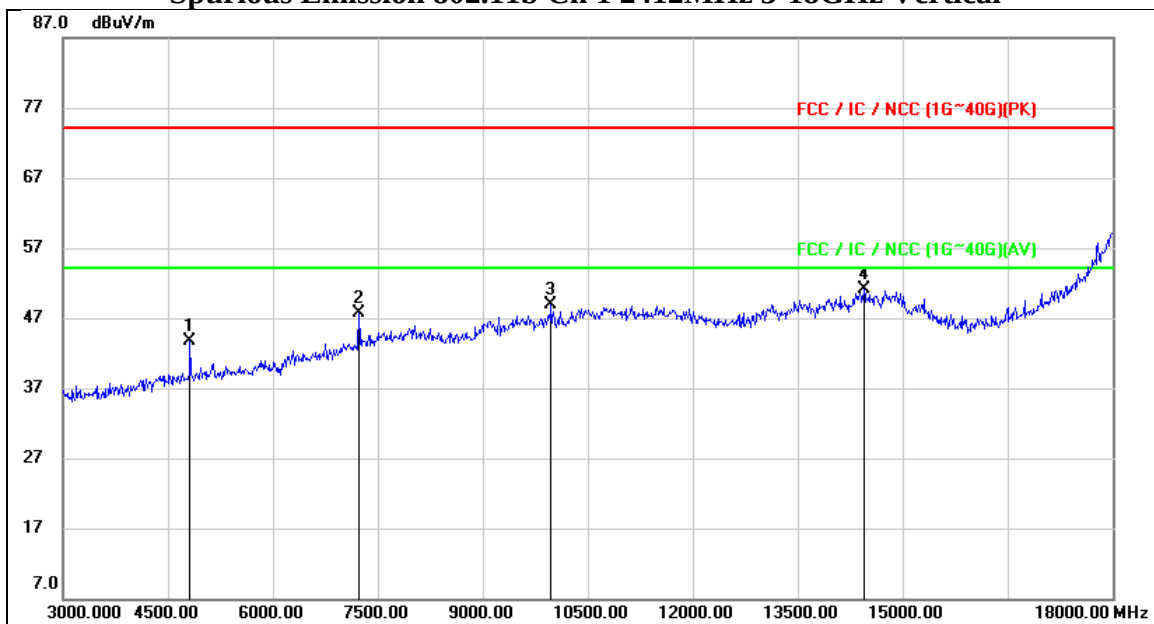
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Spurious Emission 802.11b Ch 1 2412MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	48.00	-4.35	43.65	74.00	-30.35	peak
2	7238.000	46.27	1.34	47.61	74.00	-26.39	peak
3	9982.500	42.70	6.11	48.81	74.00	-25.19	peak
4	14457.000	38.89	12.15	51.04	74.00	-22.96	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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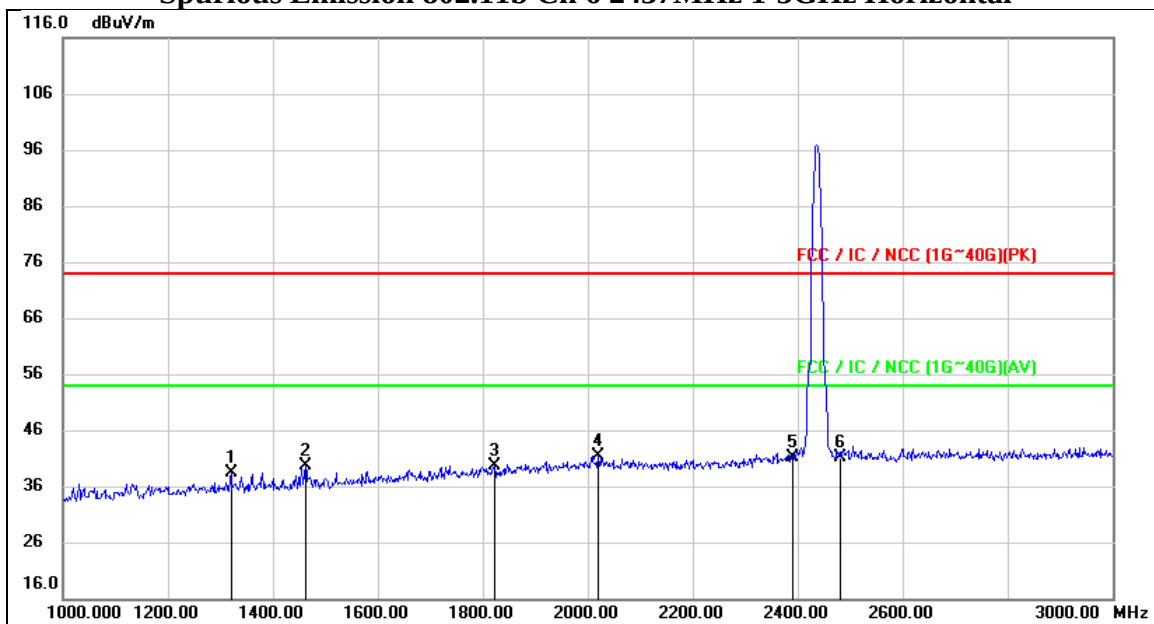
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 6 2437MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1320.200	50.25	-11.95	38.30	74.00	-35.70	peak
2	1463.200	51.05	-11.39	39.66	74.00	-34.34	peak
3	1823.067	48.90	-9.26	39.64	74.00	-34.36	peak
4	2020.867	49.58	-8.19	41.39	74.00	-32.61	peak
5	2390.000	49.66	-8.47	41.19	74.00	-32.81	peak
6	2483.500	49.77	-8.55	41.22	74.00	-32.78	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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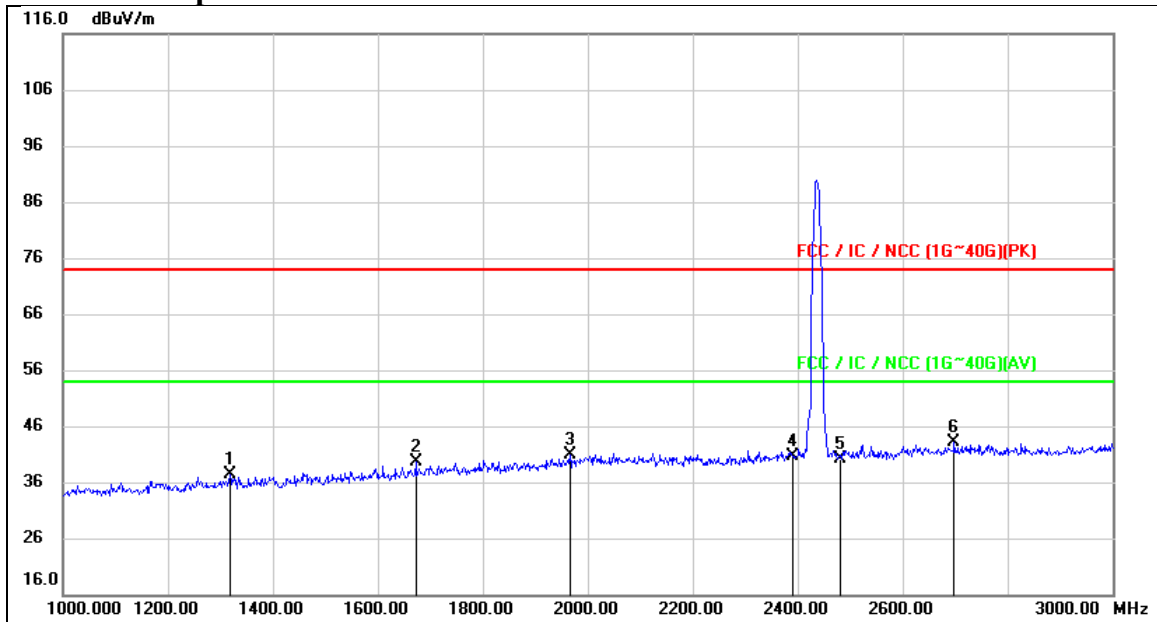
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 6 2437MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1319.400	49.41	-11.95	37.46	74.00	-36.54	peak
2	1673.000	49.70	-10.19	39.51	74.00	-34.49	peak
3	1966.333	49.21	-8.37	40.84	74.00	-33.16	peak
4	2390.000	49.04	-8.47	40.57	74.00	-33.43	peak
5	2483.500	48.70	-8.55	40.15	74.00	-33.85	peak
6	2698.933	51.16	-8.09	43.07	74.00	-30.93	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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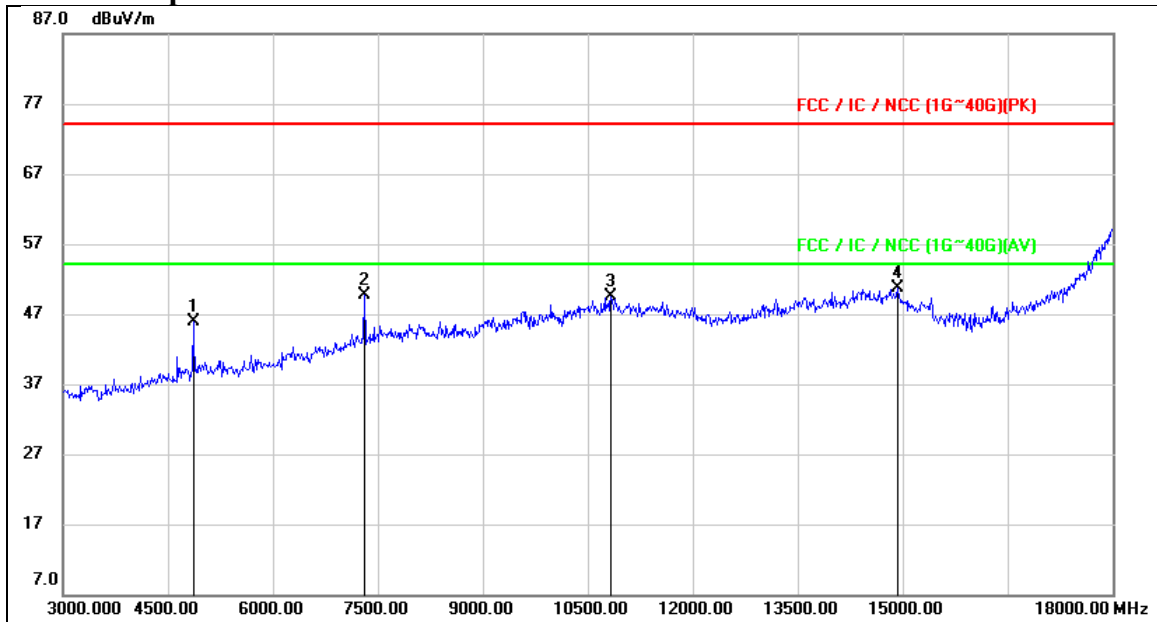
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Spurious Emission 802.11b Ch 6 2437MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	50.17	-4.24	45.93	74.00	-28.07	peak
2	7311.500	48.19	1.57	49.76	74.00	-24.24	peak
3	10843.500	41.45	8.04	49.49	74.00	-24.51	peak
4	14926.500	38.69	11.93	50.62	74.00	-23.38	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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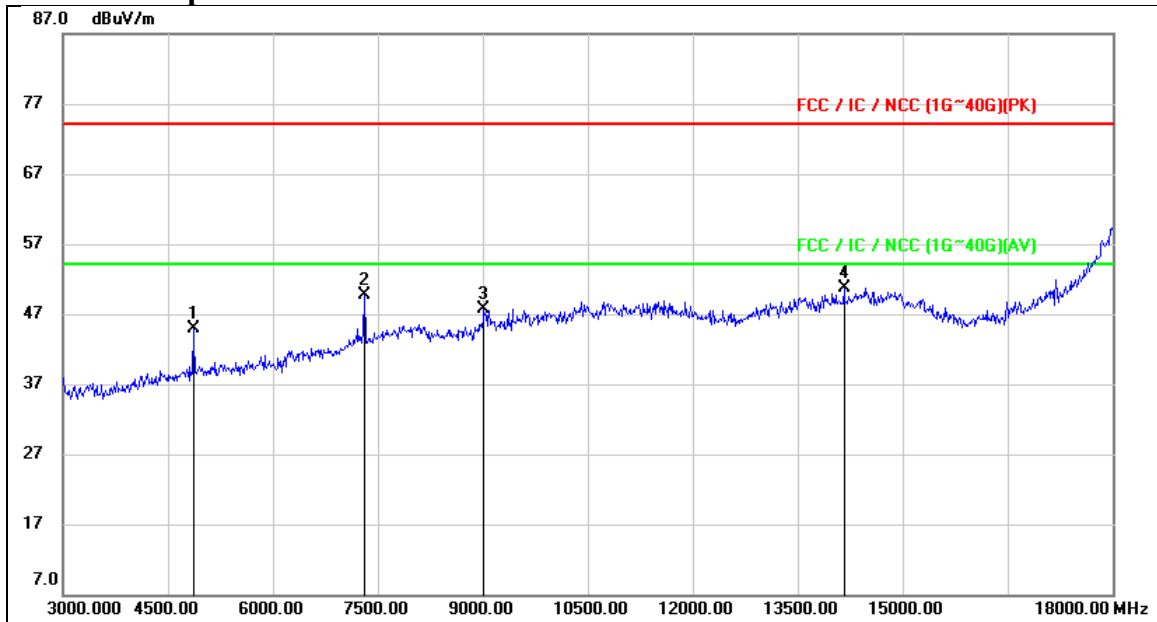
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Spurious Emission 802.11b Ch 6 2437MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.500	49.05	-4.24	44.81	74.00	-29.19	peak
2	7311.000	48.05	1.56	49.61	74.00	-24.39	peak
3	9019.500	43.15	4.47	47.62	74.00	-26.38	peak
4	14174.000	39.10	11.62	50.72	74.00	-23.28	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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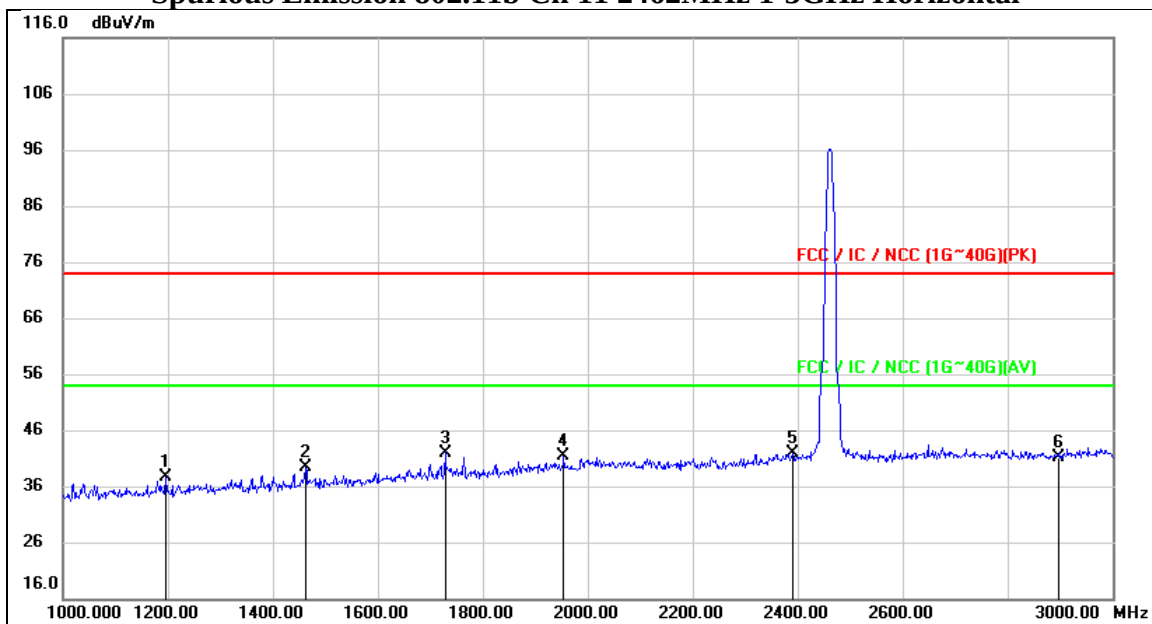
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Spurious Emission 802.11b Ch 11 2462MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1197.667	50.10	-12.42	37.68	74.00	-36.32	peak
2	1463.800	50.66	-11.38	39.28	74.00	-34.72	peak
3	1729.667	51.83	-9.83	42.00	74.00	-32.00	peak
4	1955.467	49.92	-8.44	41.48	74.00	-32.52	peak
5	2390.000	50.35	-8.47	41.88	74.00	-32.12	peak
6	2900.000	48.67	-7.63	41.04	74.00	-32.96	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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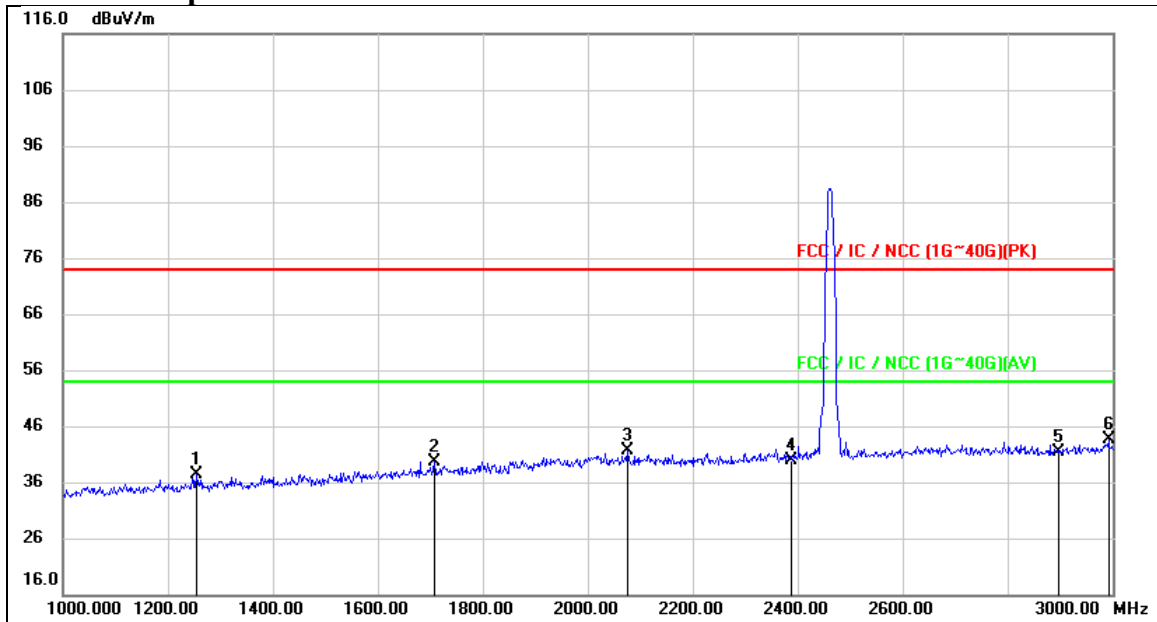
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 11 2462MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1255.133	49.50	-12.20	37.30	74.00	-36.70	peak
2	1708.267	49.54	-9.97	39.57	74.00	-34.43	peak
3	2077.400	49.73	-8.22	41.51	74.00	-32.49	peak
4	2390.000	48.43	-8.47	39.96	74.00	-34.04	peak
5	2900.000	49.12	-7.63	41.49	74.00	-32.51	peak
6	2993.067	51.06	-7.41	43.65	74.00	-30.35	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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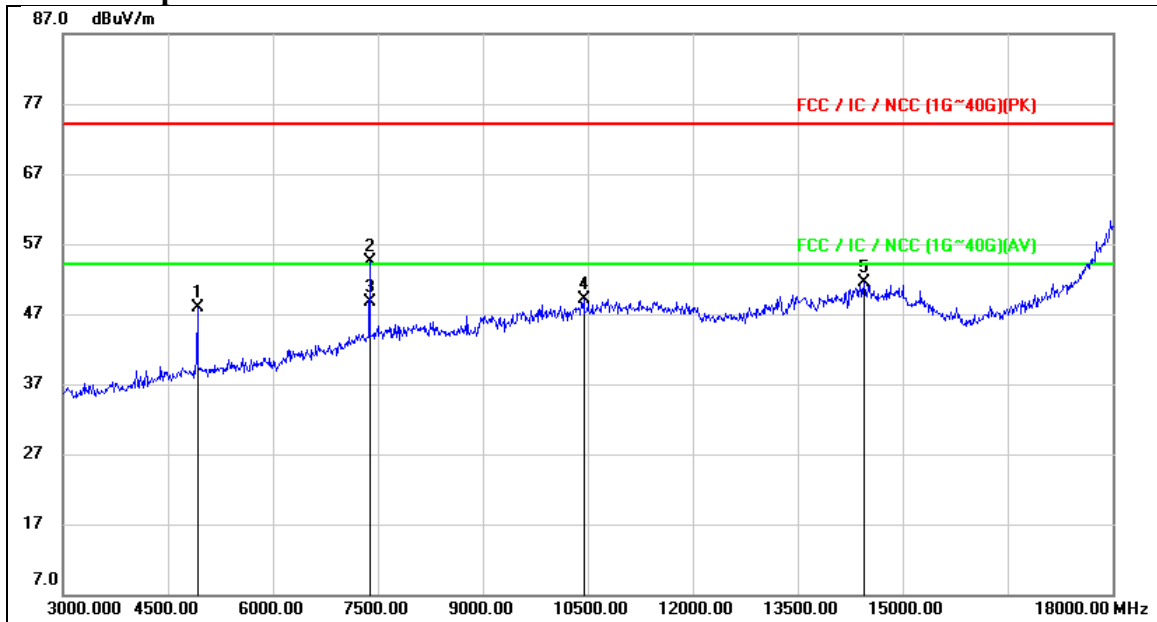
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 11 2462MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	52.03	-4.13	47.90	74.00	-26.10	peak
2	7386.000	52.72	1.78	54.50	74.00	-19.50	peak
3	7386.000	46.93	1.78	48.71	54.00	-5.29	AVG
4	10443.000	41.98	7.18	49.16	74.00	-24.84	peak
5	14446.500	39.36	12.13	51.49	74.00	-22.51	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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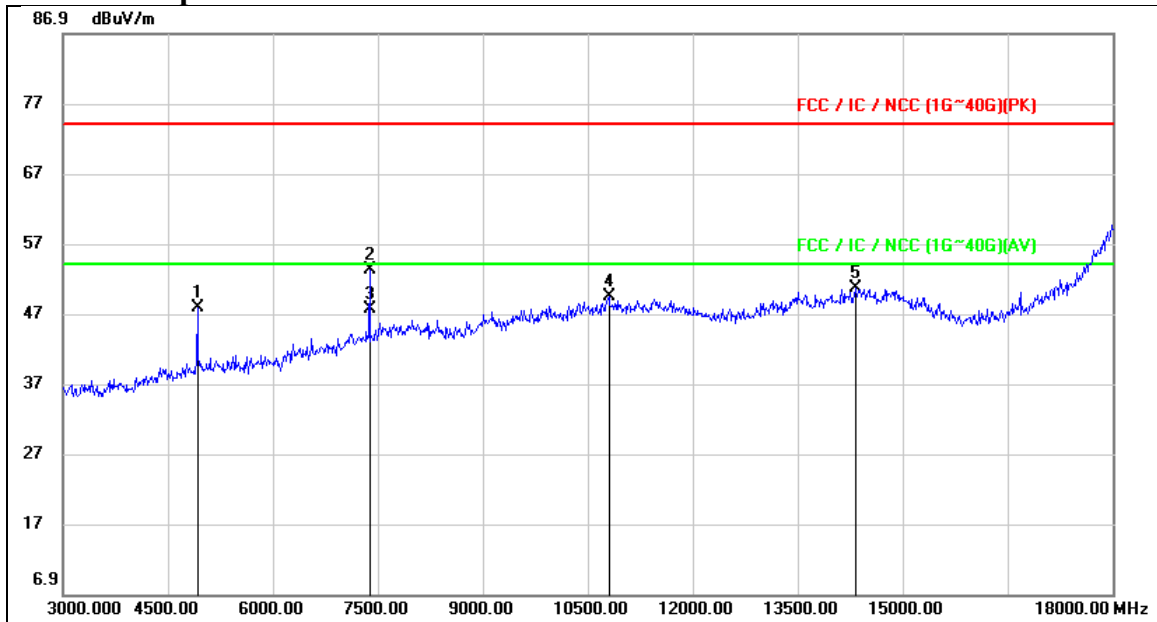
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11b Ch 11 2462MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	51.95	-4.13	47.82	74.00	-26.18	peak
2	7385.500	51.42	1.78	53.20	74.00	-20.80	peak
3	7385.500	45.73	1.78	47.51	54.00	-6.49	AVG
4	10812.000	41.38	7.98	49.36	74.00	-24.64	peak
5	14325.500	38.72	11.91	50.63	74.00	-23.37	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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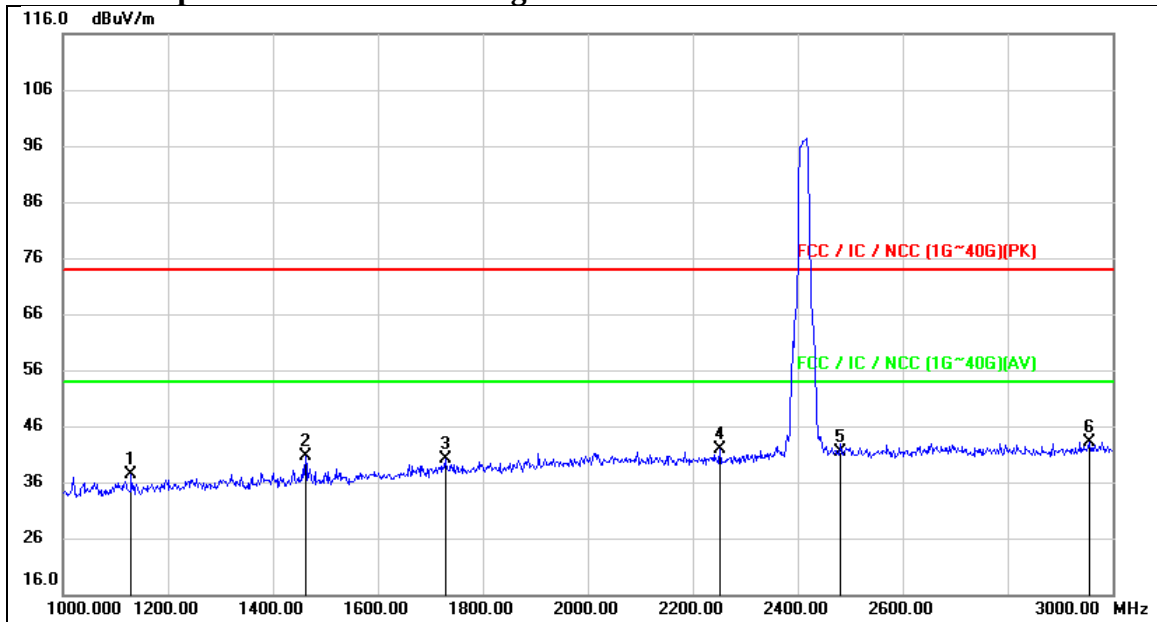
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11g Ch 1 2412MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1130.333	50.06	-12.68	37.38	74.00	-36.62	peak
2	1463.733	51.89	-11.38	40.51	74.00	-33.49	peak
3	1729.733	50.07	-9.83	40.24	74.00	-33.76	peak
4	2253.267	50.26	-8.36	41.90	74.00	-32.10	peak
5	2483.500	49.82	-8.55	41.27	74.00	-32.73	peak
6	2956.733	50.70	-7.50	43.20	74.00	-30.80	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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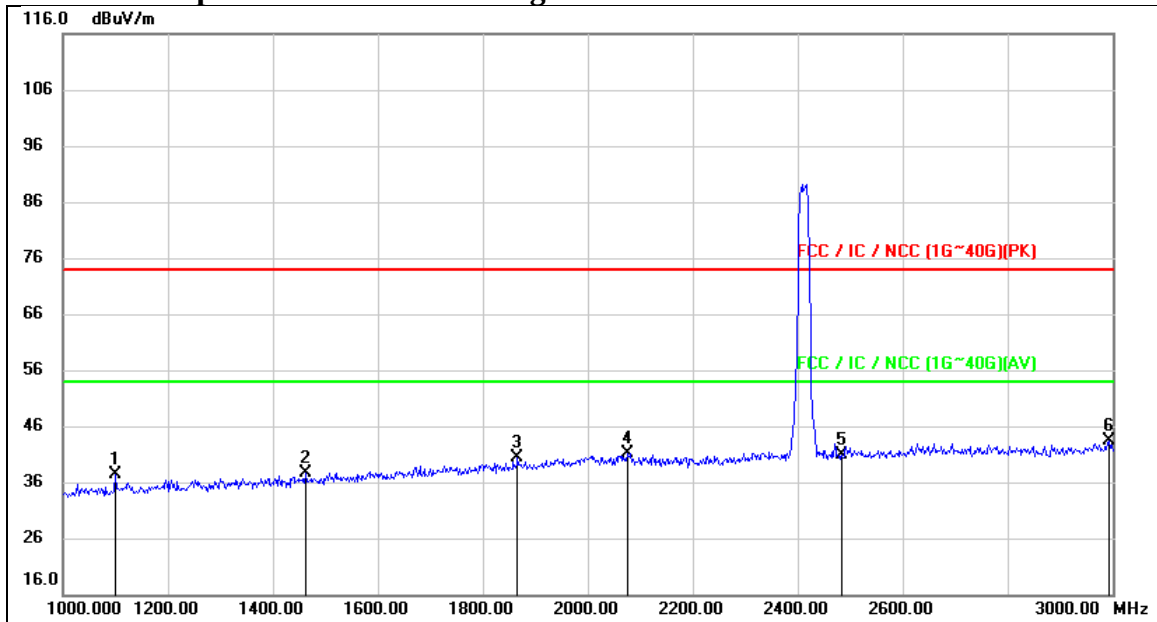
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11g Ch 1 2412MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1101.667	50.08	-12.79	37.29	74.00	-36.71	peak
2	1463.733	49.08	-11.38	37.70	74.00	-36.30	peak
3	1866.867	49.39	-8.99	40.40	74.00	-33.60	peak
4	2077.800	49.44	-8.23	41.21	74.00	-32.79	peak
5	2483.500	49.35	-8.55	40.80	74.00	-33.20	peak
6	2994.067	50.81	-7.41	43.40	74.00	-30.60	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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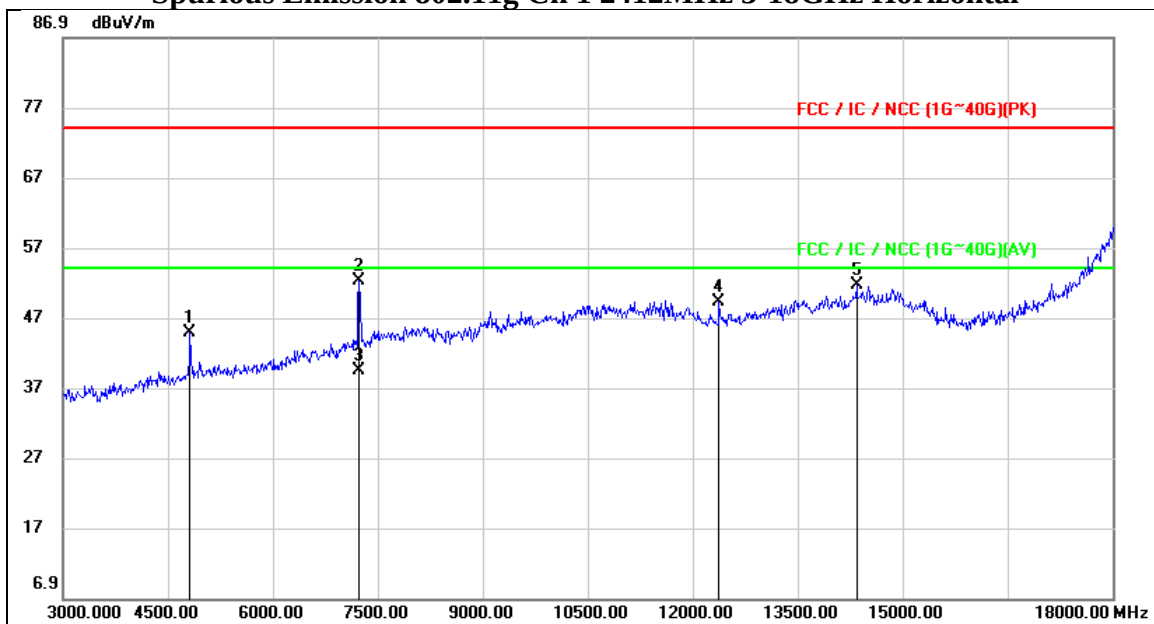
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Spurious Emission 802.11g Ch 1 2412MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	49.09	-4.35	44.74	74.00	-29.26	peak
2	7233.500	50.91	1.32	52.23	74.00	-21.77	peak
3	7233.500	38.00	1.32	39.32	54.00	-14.68	AVG
4	12383.000	41.32	7.81	49.13	74.00	-24.87	peak
5	14342.000	39.67	11.94	51.61	74.00	-22.39	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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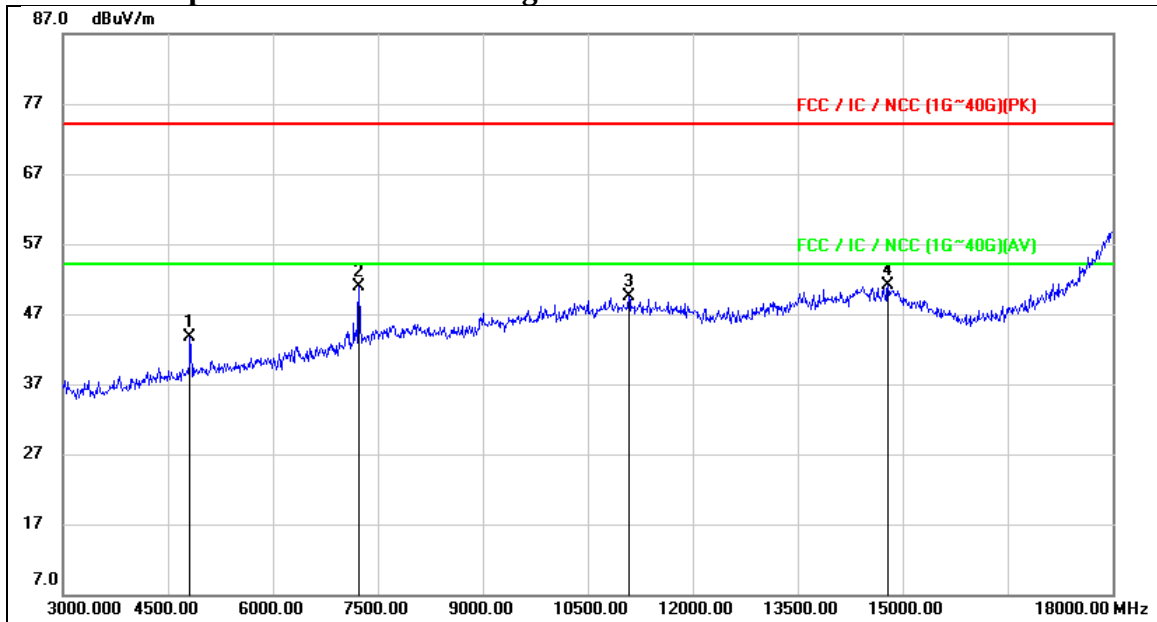
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Spurious Emission 802.11g Ch 1 2412MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.500	48.05	-4.35	43.70	74.00	-30.30	peak
2	7242.000	49.50	1.35	50.85	74.00	-23.15	peak
3	11099.000	41.07	8.41	49.48	74.00	-24.52	peak
4	14792.500	39.16	12.02	51.18	74.00	-22.82	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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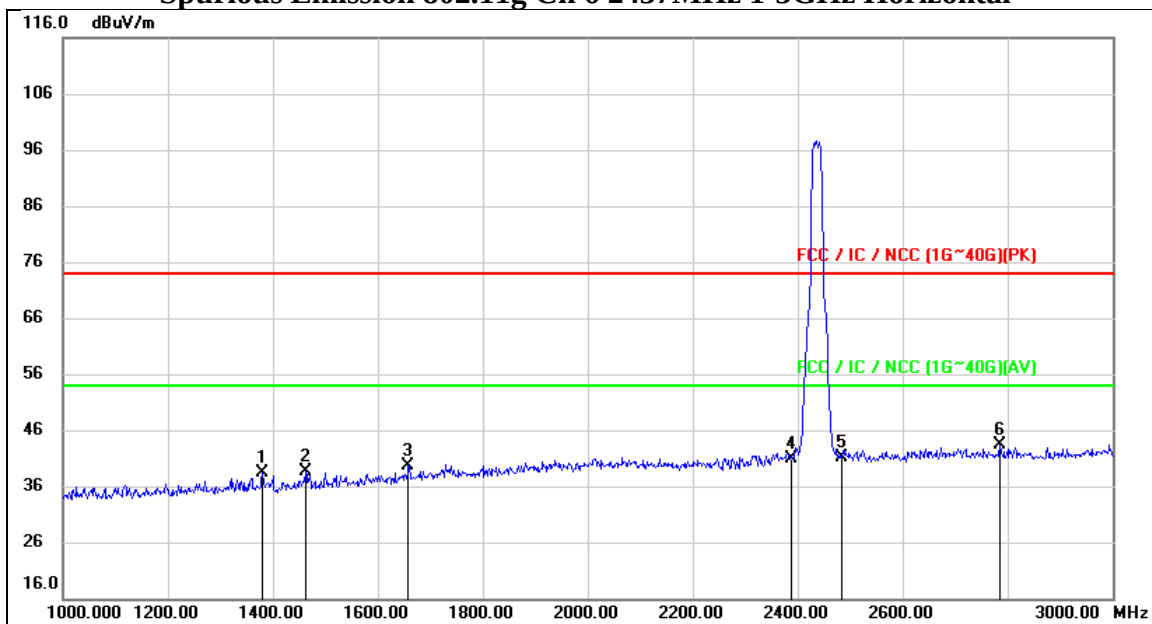
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Spurious Emission 802.11g Ch 6 2437MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1380.533	50.10	-11.71	38.39	74.00	-35.61	peak
2	1463.067	49.97	-11.39	38.58	74.00	-35.42	peak
3	1659.933	49.87	-10.26	39.61	74.00	-34.39	peak
4	2390.000	49.30	-8.47	40.83	74.00	-33.17	peak
5	2483.500	49.69	-8.55	41.14	74.00	-32.86	peak
6	2785.933	51.24	-7.90	43.34	74.00	-30.66	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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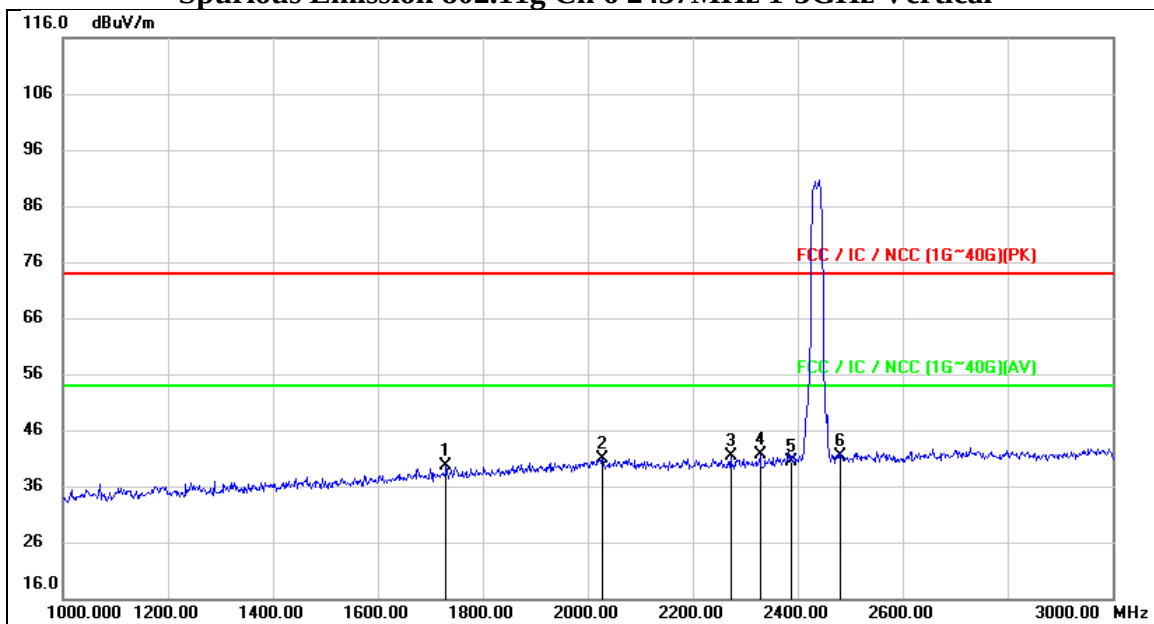
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Spurious Emission 802.11g Ch 6 2437MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1731.867	49.46	-9.82	39.64	74.00	-34.36	peak
2	2029.000	49.18	-8.20	40.98	74.00	-33.02	peak
3	2273.000	49.75	-8.39	41.36	74.00	-32.64	peak
4	2329.400	49.95	-8.42	41.53	74.00	-32.47	peak
5	2390.000	48.91	-8.47	40.44	74.00	-33.56	peak
6	2483.500	49.85	-8.55	41.30	74.00	-32.70	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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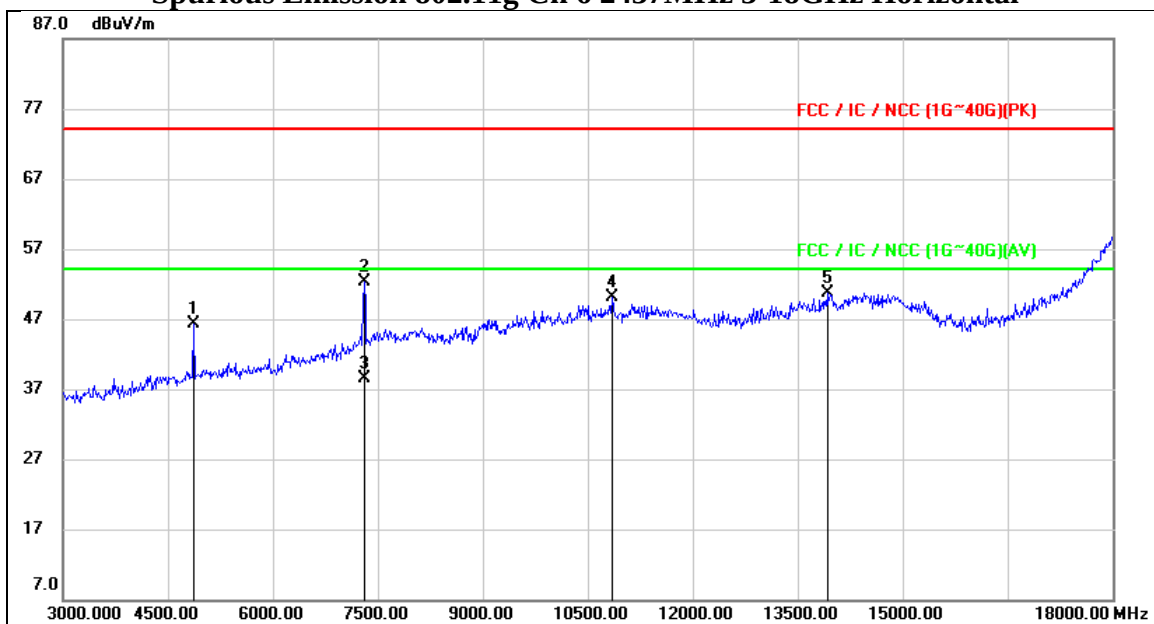
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Spurious Emission 802.11g Ch 6 2437MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.500	50.57	-4.24	46.33	74.00	-27.67	peak
2	7308.000	50.82	1.56	52.38	74.00	-21.62	peak
3	7308.000	37.00	1.56	38.56	54.00	-15.44	AVG
4	10845.000	41.96	8.04	50.00	74.00	-24.00	peak
5	13921.500	39.56	11.21	50.77	74.00	-23.23	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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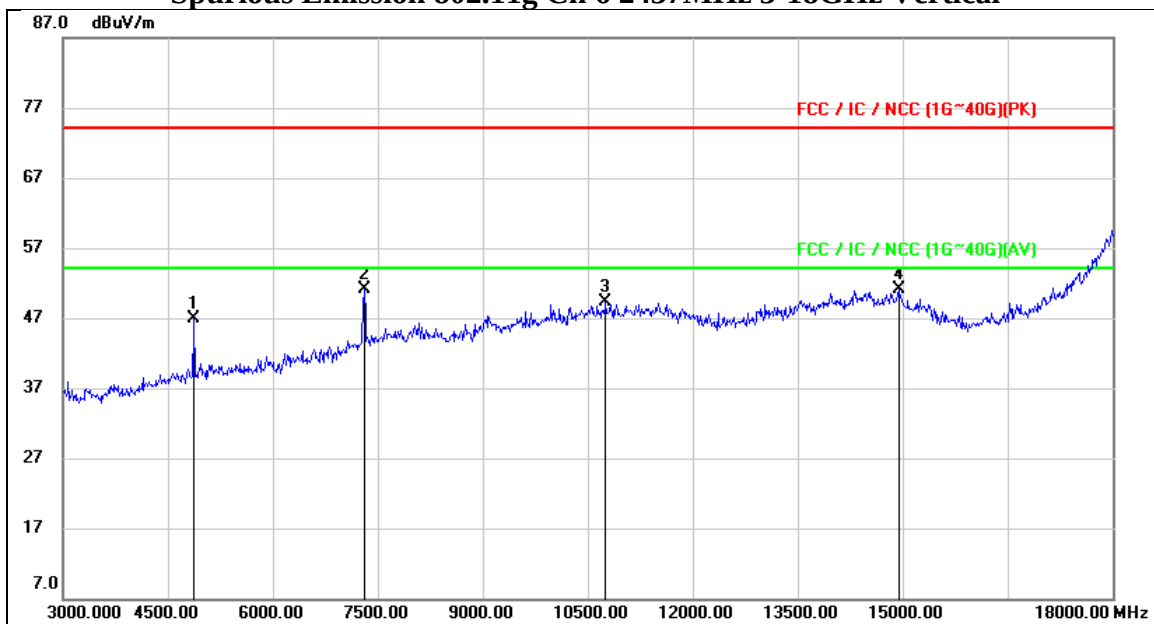
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Spurious Emission 802.11g Ch 6 2437MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4875.000	51.09	-4.23	46.86	74.00	-27.14	peak
2	7313.500	49.42	1.57	50.99	74.00	-23.01	peak
3	10769.000	41.33	7.89	49.22	74.00	-24.78	peak
4	14942.000	39.24	11.92	51.16	74.00	-22.84	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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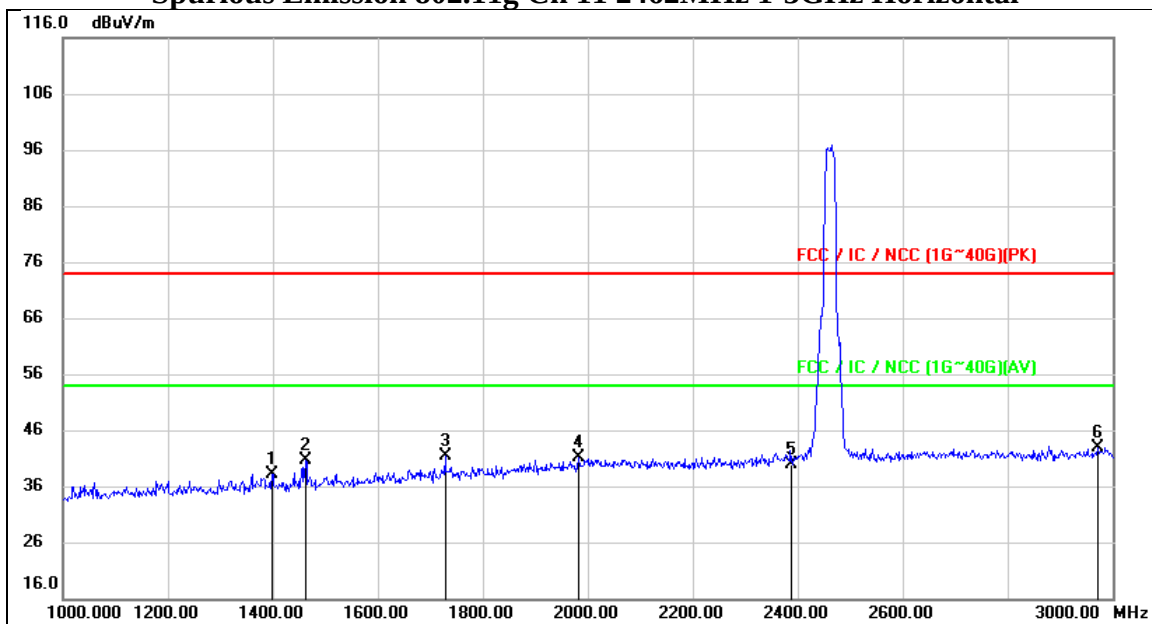
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11g Ch 11 2462MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1399.800	49.80	-11.64	38.16	74.00	-35.84	peak
2	1463.933	51.95	-11.38	40.57	74.00	-33.43	peak
3	1729.600	51.19	-9.83	41.36	74.00	-32.64	peak
4	1983.333	49.45	-8.27	41.18	74.00	-32.82	peak
5	2390.000	48.35	-8.47	39.88	74.00	-34.12	peak
6	2972.467	50.38	-7.47	42.91	74.00	-31.09	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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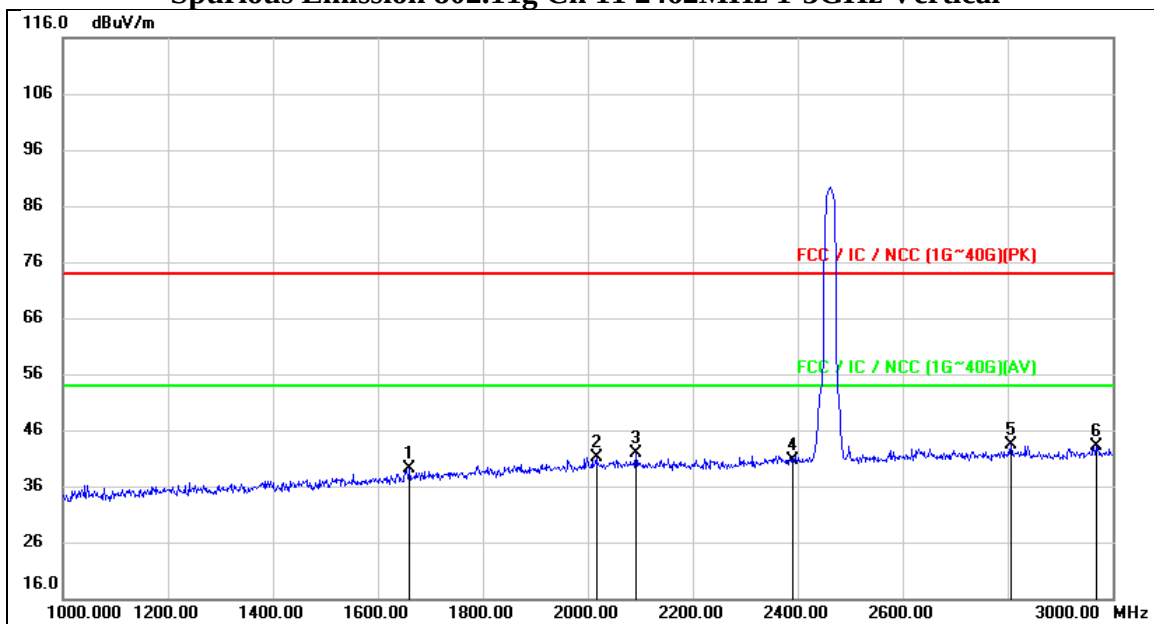
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11g Ch 11 2462MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1661.267	49.34	-10.26	39.08	74.00	-34.92	peak
2	2016.867	49.31	-8.18	41.13	74.00	-32.87	peak
3	2092.400	50.00	-8.24	41.76	74.00	-32.24	peak
4	2390.000	49.17	-8.47	40.70	74.00	-33.30	peak
5	2807.400	51.24	-7.85	43.39	74.00	-30.61	peak
6	2969.533	50.60	-7.47	43.13	74.00	-30.87	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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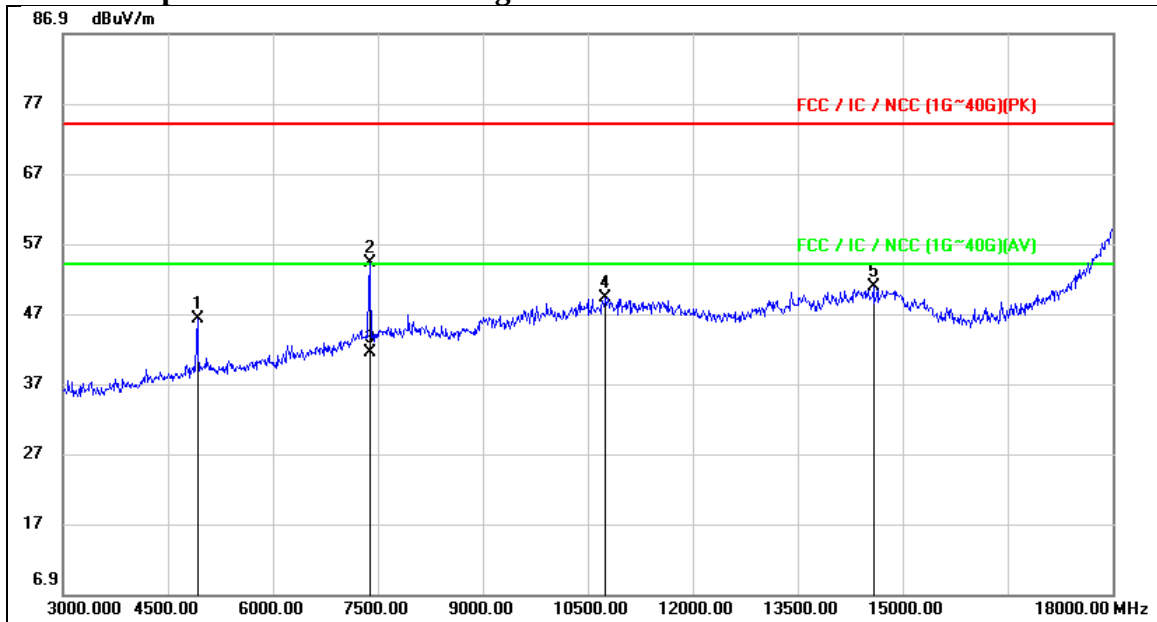
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11g Ch 11 2462MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4927.000	50.27	-4.11	46.16	74.00	-27.84	peak
2	7383.000	52.45	1.77	54.22	74.00	-19.78	peak
3	7383.000	39.69	1.77	41.46	54.00	-12.54	AVG
4	10769.500	41.39	7.89	49.28	74.00	-24.72	peak
5	14582.500	38.61	12.17	50.78	74.00	-23.22	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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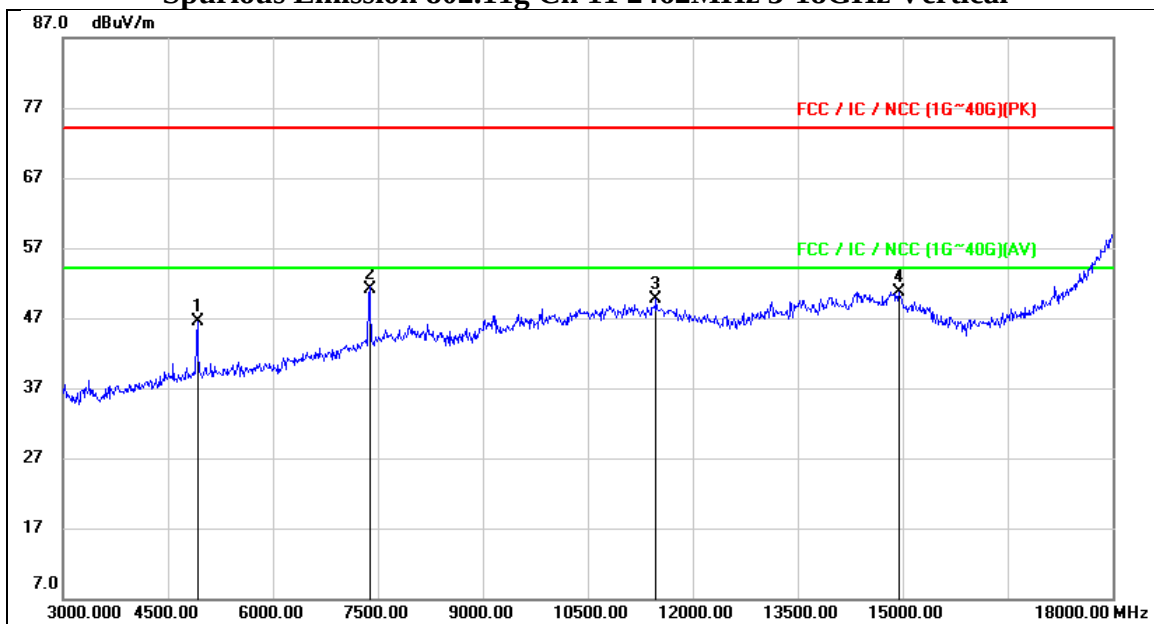
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11g Ch 11 2462MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.500	50.67	-4.13	46.54	74.00	-27.46	peak
2	7384.500	49.25	1.78	51.03	74.00	-22.97	peak
3	11484.000	41.19	8.56	49.75	74.00	-24.25	peak
4	14943.500	38.85	11.92	50.77	74.00	-23.23	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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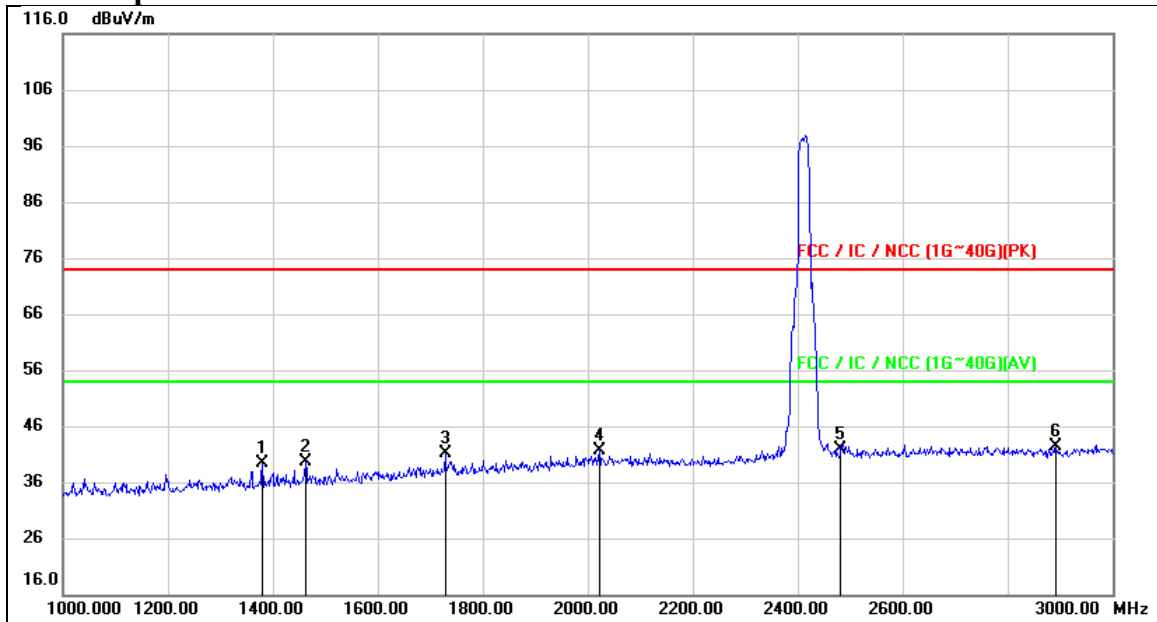
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT20 Ch 1 2412MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1380.600	51.07	-11.71	39.36	74.00	-34.64	peak
2	1463.400	51.03	-11.39	39.64	74.00	-34.36	peak
3	1729.800	50.95	-9.83	41.12	74.00	-32.88	peak
4	2022.667	49.94	-8.19	41.75	74.00	-32.25	peak
5	2483.500	50.42	-8.55	41.87	74.00	-32.13	peak
6	2893.667	49.94	-7.64	42.30	74.00	-31.70	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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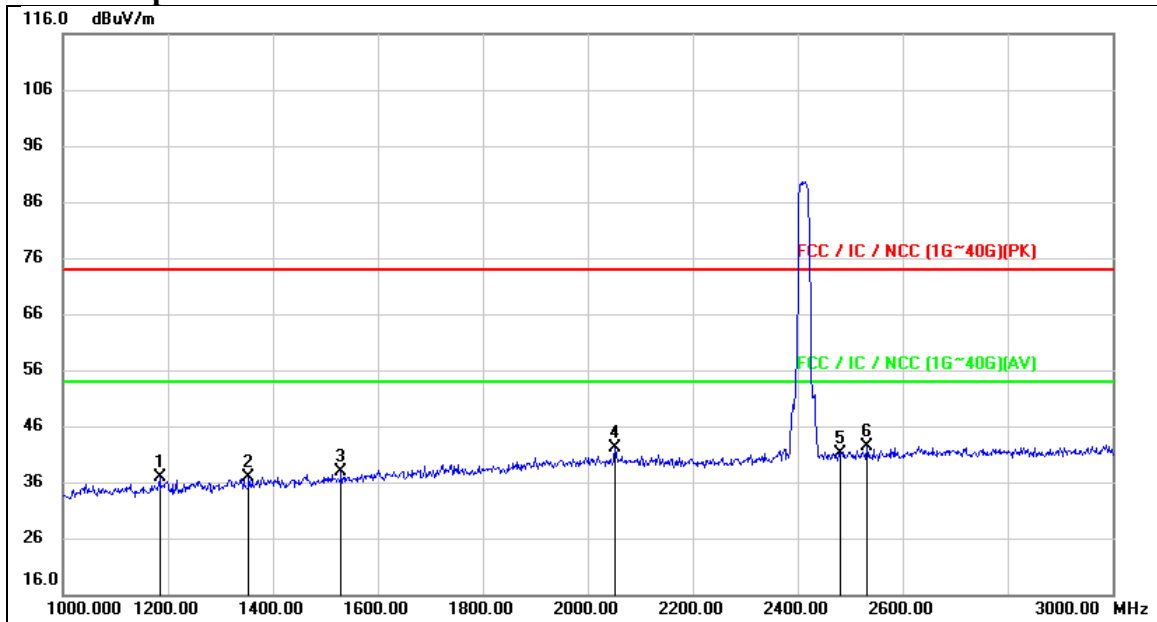
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Spurious Emission 802.11n HT20 Ch 1 2412MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1184.133	49.26	-12.47	36.79	74.00	-37.21	peak
2	1355.400	48.68	-11.81	36.87	74.00	-37.13	peak
3	1530.733	48.90	-11.06	37.84	74.00	-36.16	peak
4	2053.800	50.25	-8.22	42.03	74.00	-31.97	peak
5	2483.500	49.62	-8.55	41.07	74.00	-32.93	peak
6	2532.533	50.91	-8.47	42.44	74.00	-31.56	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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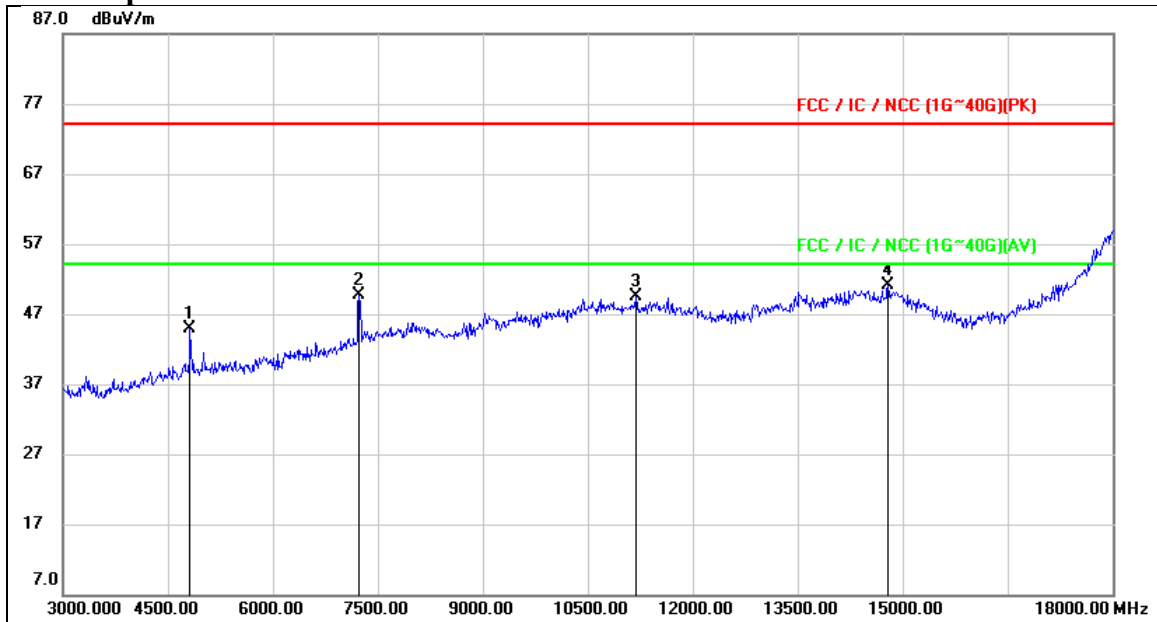
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT20 Ch 1 2412MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	49.26	-4.35	44.91	74.00	-29.09	peak
2	7238.000	48.44	1.34	49.78	74.00	-24.22	peak
3	11191.500	40.98	8.43	49.41	74.00	-24.59	peak
4	14792.000	38.99	12.02	51.01	74.00	-22.99	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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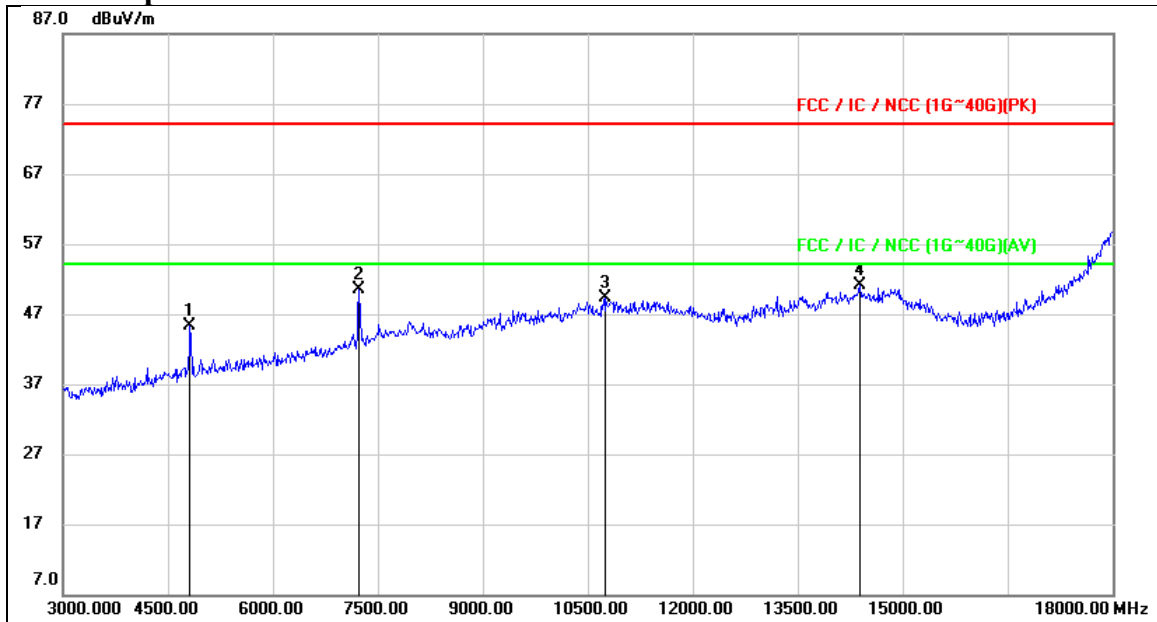
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT20 Ch 1 2412MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4827.500	49.63	-4.34	45.29	74.00	-28.71	peak
2	7234.500	49.07	1.33	50.40	74.00	-23.60	peak
3	10756.000	41.42	7.86	49.28	74.00	-24.72	peak
4	14389.000	39.02	12.03	51.05	74.00	-22.95	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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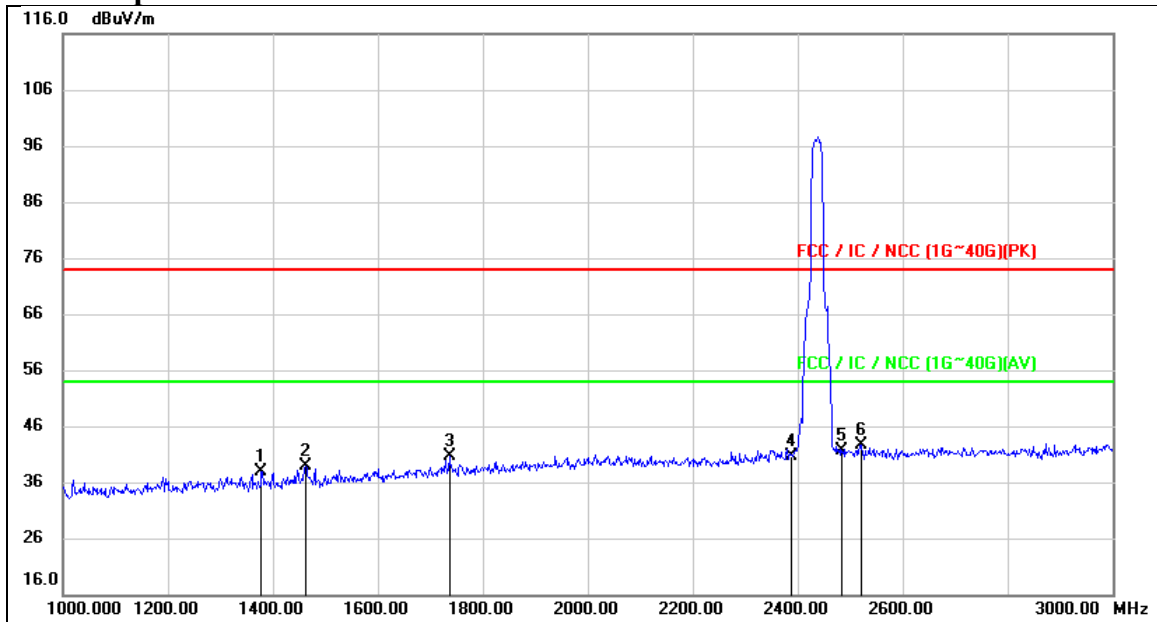
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Spurious Emission 802.11n HT20 Ch 6 2437MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1379.133	49.58	-11.71	37.87	74.00	-36.13	peak
2	1463.667	50.34	-11.38	38.96	74.00	-35.04	peak
3	1736.333	50.52	-9.79	40.73	74.00	-33.27	peak
4	2390.000	49.14	-8.47	40.67	74.00	-33.33	peak
5	2483.500	50.22	-8.55	41.67	74.00	-32.33	peak
6	2520.000	51.13	-8.51	42.62	74.00	-31.38	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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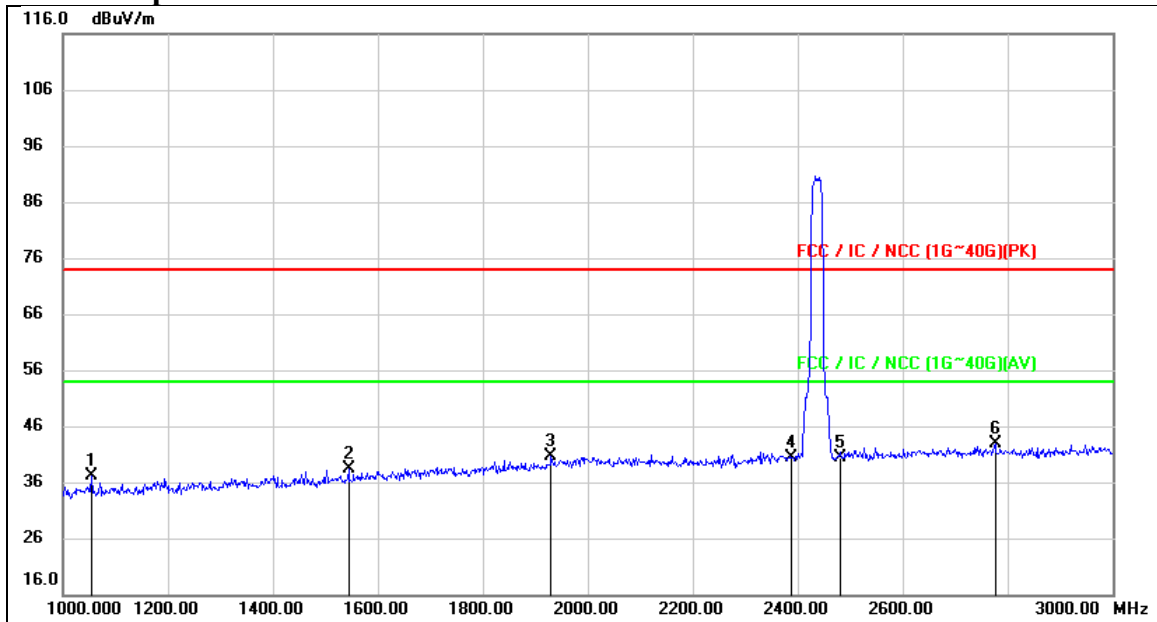
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Spurious Emission 802.11n HT20 Ch 6 2437MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1055.333	50.16	-12.97	37.19	74.00	-36.81	peak
2	1545.733	49.30	-10.96	38.34	74.00	-35.66	peak
3	1931.800	49.13	-8.59	40.54	74.00	-33.46	peak
4	2390.000	48.90	-8.47	40.43	74.00	-33.57	peak
5	2483.500	48.99	-8.55	40.44	74.00	-33.56	peak
6	2776.000	50.71	-7.91	42.80	74.00	-31.20	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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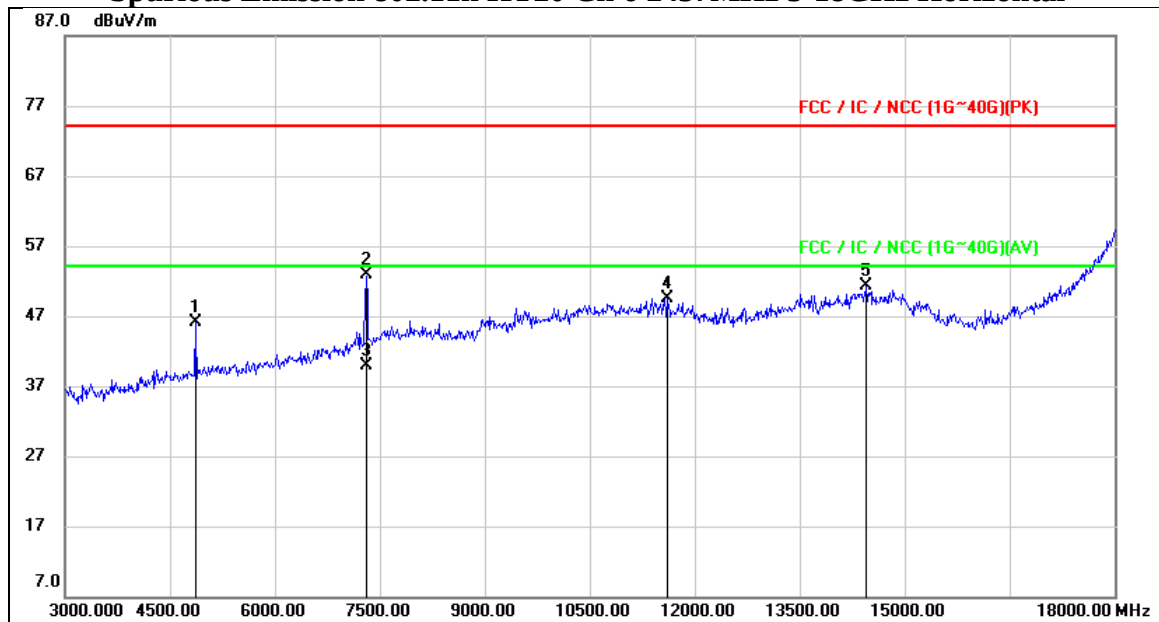
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT20 Ch 6 2437MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.500	50.33	-4.24	46.09	74.00	-27.91	peak
2	7315.500	51.22	1.57	52.79	74.00	-21.21	peak
3	7315.500	38.29	1.57	39.86	54.00	-14.14	AVG
4	11615.000	41.03	8.52	49.55	74.00	-24.45	peak
5	14449.000	39.15	12.14	51.29	74.00	-22.71	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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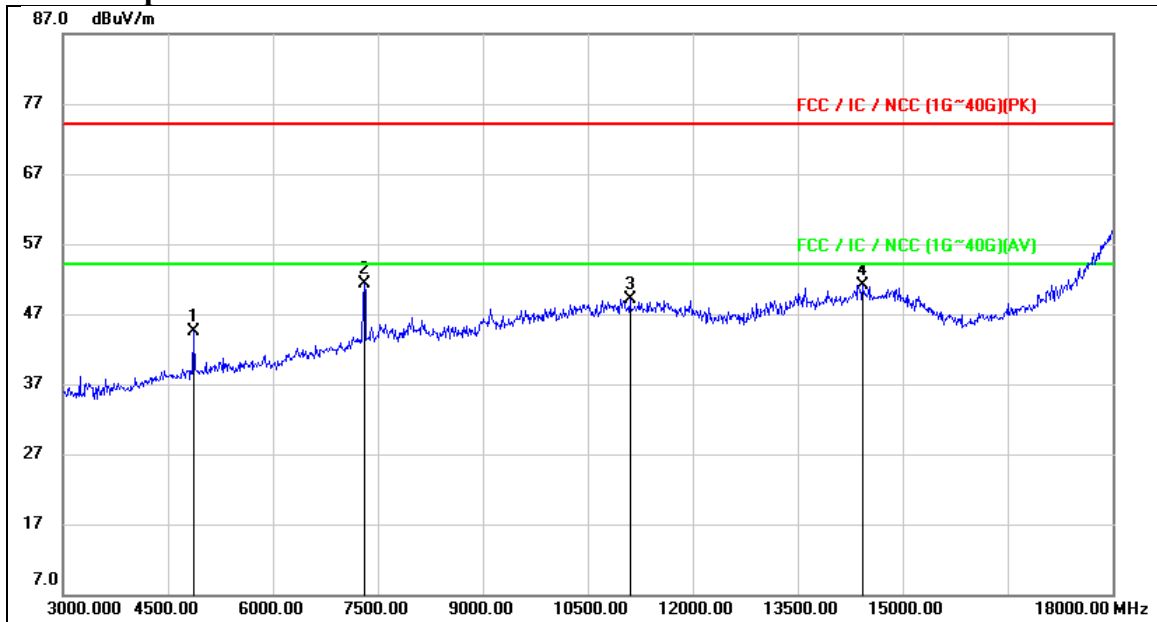
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT20 Ch 6 2437MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.500	48.73	-4.24	44.49	74.00	-29.51	peak
2	7310.000	49.76	1.56	51.32	74.00	-22.68	peak
3	11114.500	40.77	8.41	49.18	74.00	-24.82	peak
4	14438.000	38.98	12.12	51.10	74.00	-22.90	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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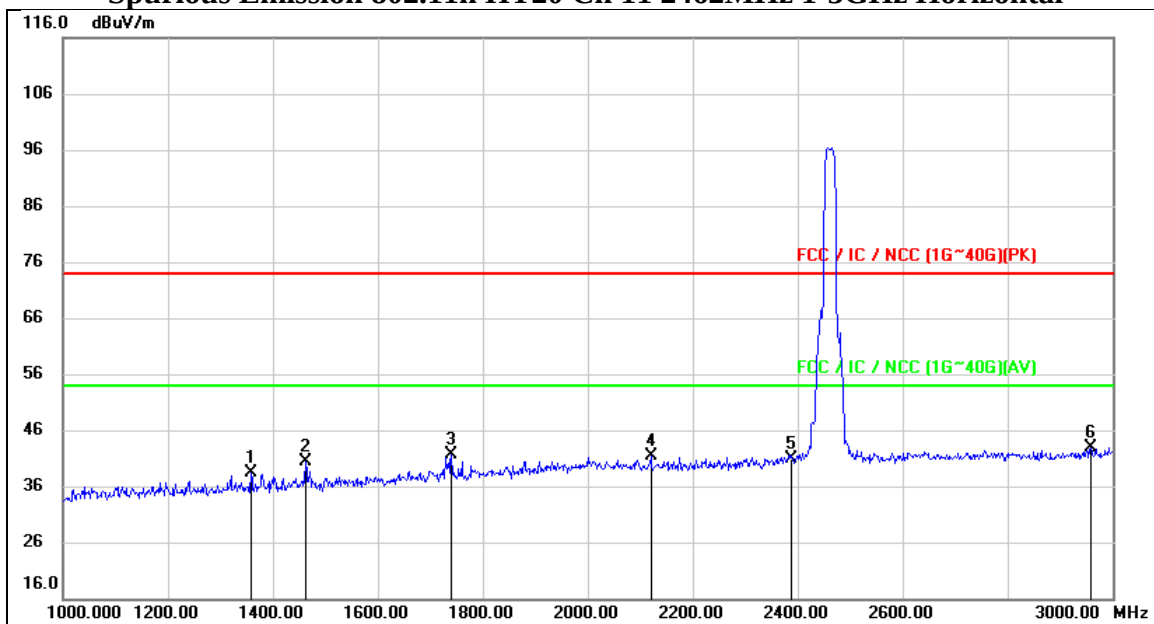
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Spurious Emission 802.11n HT20 Ch 11 2462MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1359.467	50.14	-11.80	38.34	74.00	-35.66	peak
2	1463.267	51.75	-11.39	40.36	74.00	-33.64	peak
3	1740.600	51.36	-9.77	41.59	74.00	-32.41	peak
4	2121.200	49.63	-8.26	41.37	74.00	-32.63	peak
5	2390.000	49.47	-8.47	41.00	74.00	-33.00	peak
6	2958.067	50.45	-7.49	42.96	74.00	-31.04	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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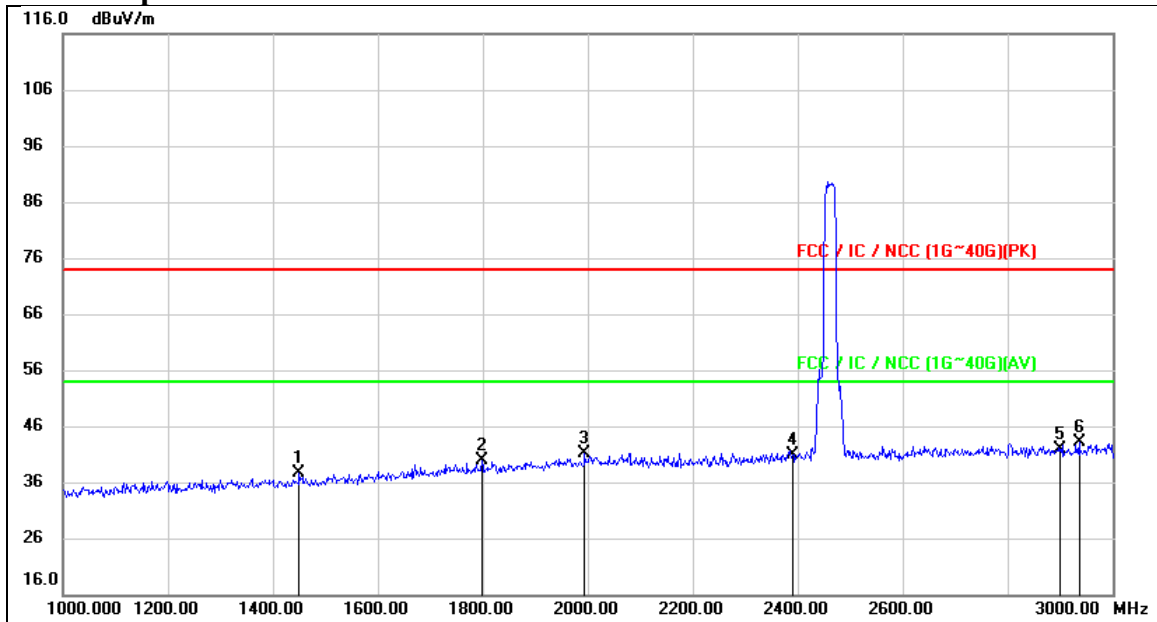
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Spurious Emission 802.11n HT20 Ch 11 2462 MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1450.400	49.13	-11.44	37.69	74.00	-36.31	peak
2	1799.800	49.19	-9.41	39.78	74.00	-34.22	peak
3	1994.867	49.27	-8.21	41.06	74.00	-32.94	peak
4	2390.000	49.41	-8.47	40.94	74.00	-33.06	peak
5	2900.000	49.60	-7.63	41.97	74.00	-32.03	peak
6	2936.600	50.68	-7.55	43.13	74.00	-30.87	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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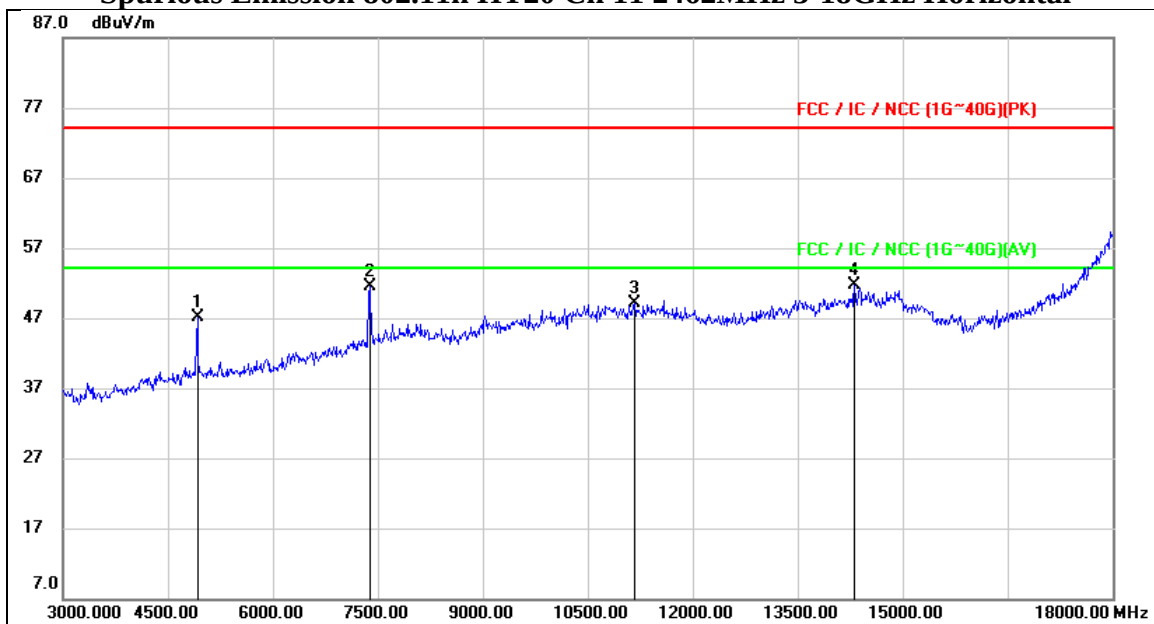
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Spurious Emission 802.11n HT20 Ch 11 2462MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.500	51.19	-4.13	47.06	74.00	-26.94	peak
2	7387.000	49.64	1.78	51.42	74.00	-22.58	peak
3	11179.000	40.72	8.44	49.16	74.00	-24.84	peak
4	14321.500	39.84	11.89	51.73	74.00	-22.27	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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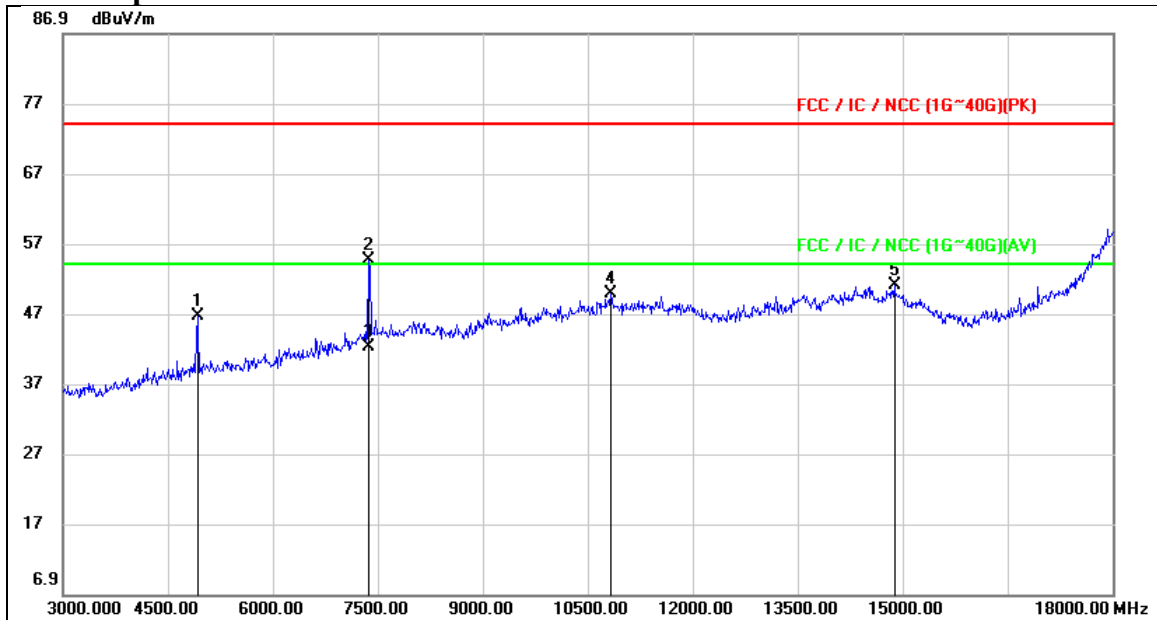
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Spurious Emission 802.11n HT20 Ch 11 2462 MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.500	50.79	-4.13	46.66	74.00	-27.34	peak
2	7375.000	52.83	1.74	54.57	74.00	-19.43	peak
3	7375.000	40.52	1.74	42.26	54.00	-11.74	AVG
4	10842.500	41.73	8.04	49.77	74.00	-24.23	peak
5	14881.000	38.97	11.96	50.93	74.00	-23.07	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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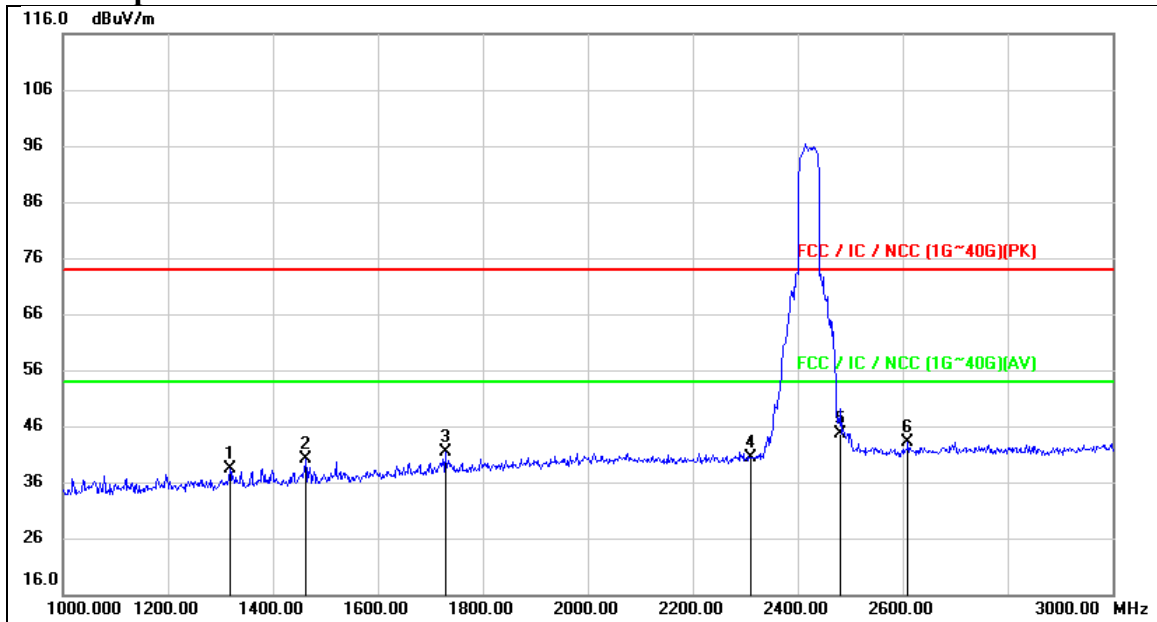
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Spurious Emission 802.11n HT40 Ch 3 2422MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1319.933	50.31	-11.95	38.36	74.00	-35.64	peak
2	1463.067	51.45	-11.39	40.06	74.00	-33.94	peak
3	1729.000	51.21	-9.84	41.37	74.00	-32.63	peak
4	2310.000	48.78	-8.41	40.37	74.00	-33.63	peak
5	2483.500	53.18	-8.55	44.63	74.00	-29.37	peak
6	2611.000	51.42	-8.29	43.13	74.00	-30.87	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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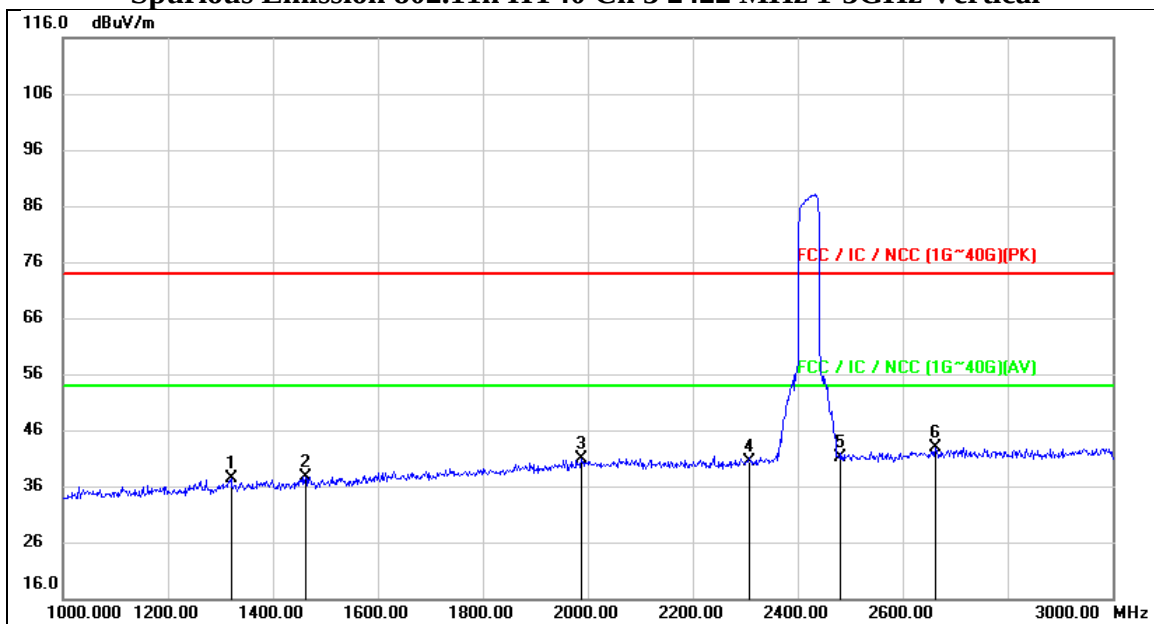
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT40 Ch 3 2422 MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1320.467	49.42	-11.95	37.47	74.00	-36.53	peak
2	1462.667	49.15	-11.40	37.75	74.00	-36.25	peak
3	1989.000	49.07	-8.24	40.83	74.00	-33.17	peak
4	2310.000	48.87	-8.41	40.46	74.00	-33.54	peak
5	2483.500	49.65	-8.55	41.10	74.00	-32.90	peak
6	2663.600	51.11	-8.17	42.94	74.00	-31.06	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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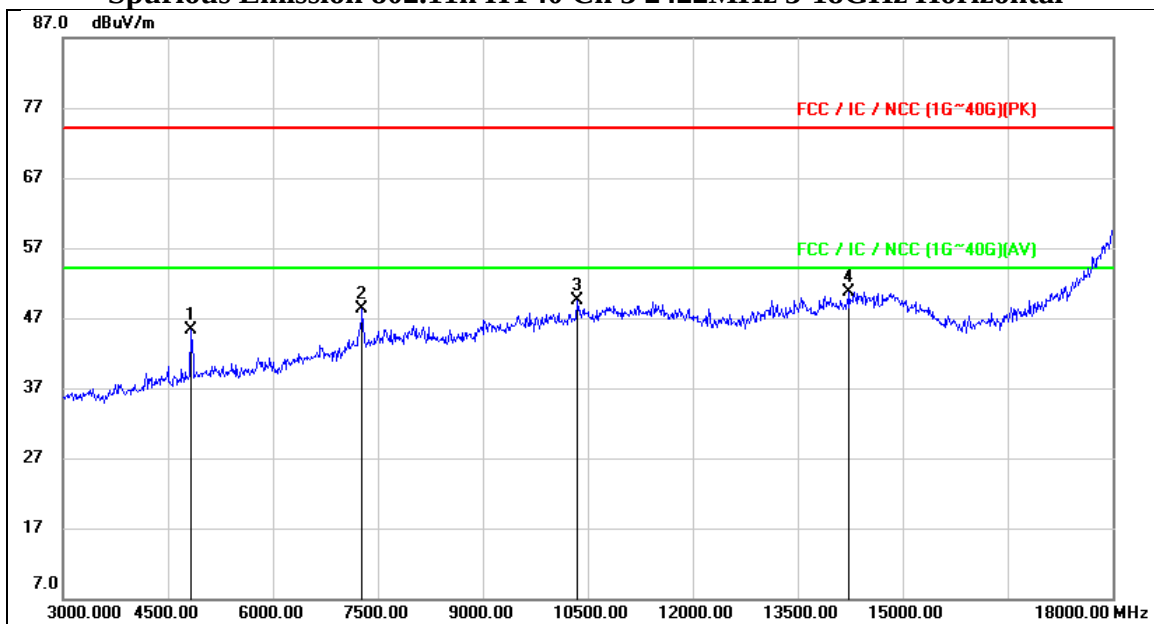
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT40 Ch 3 2422MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.000	49.54	-4.30	45.24	74.00	-28.76	peak
2	7280.000	46.75	1.48	48.23	74.00	-25.77	peak
3	10363.000	42.39	7.00	49.39	74.00	-24.61	peak
4	14247.500	38.98	11.77	50.75	74.00	-23.25	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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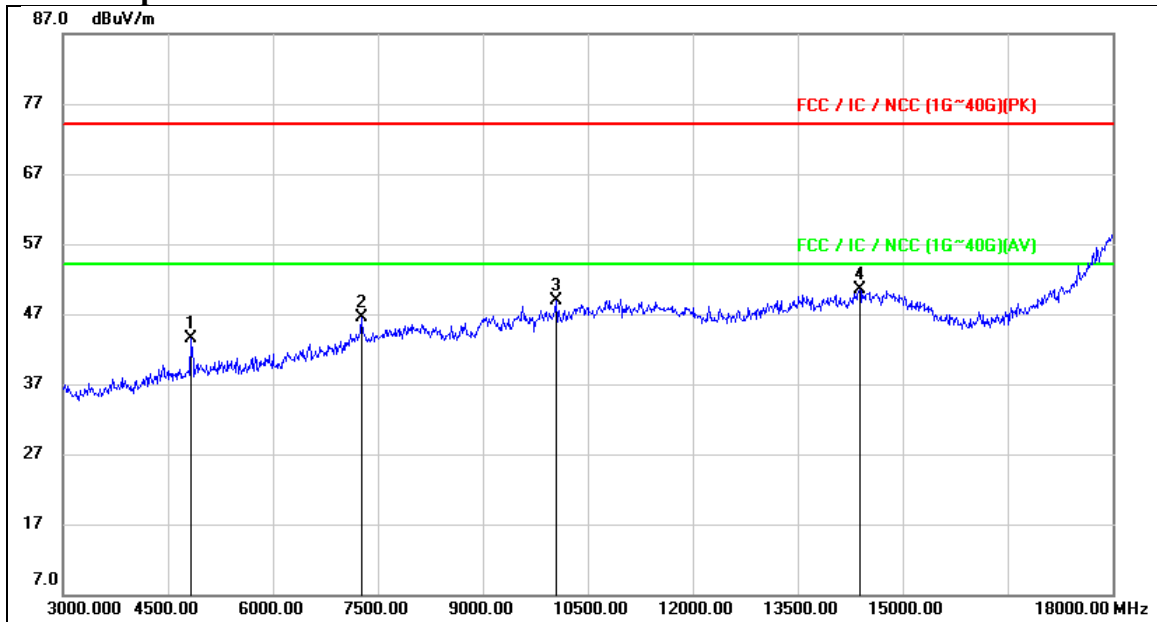
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Spurious Emission 802.11n HT40 Ch 3 2422 MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4844.000	47.75	-4.30	43.45	74.00	-30.55	peak
2	7269.500	45.05	1.44	46.49	74.00	-27.51	peak
3	10051.000	42.66	6.25	48.91	74.00	-25.09	peak
4	14397.500	38.42	12.04	50.46	74.00	-23.54	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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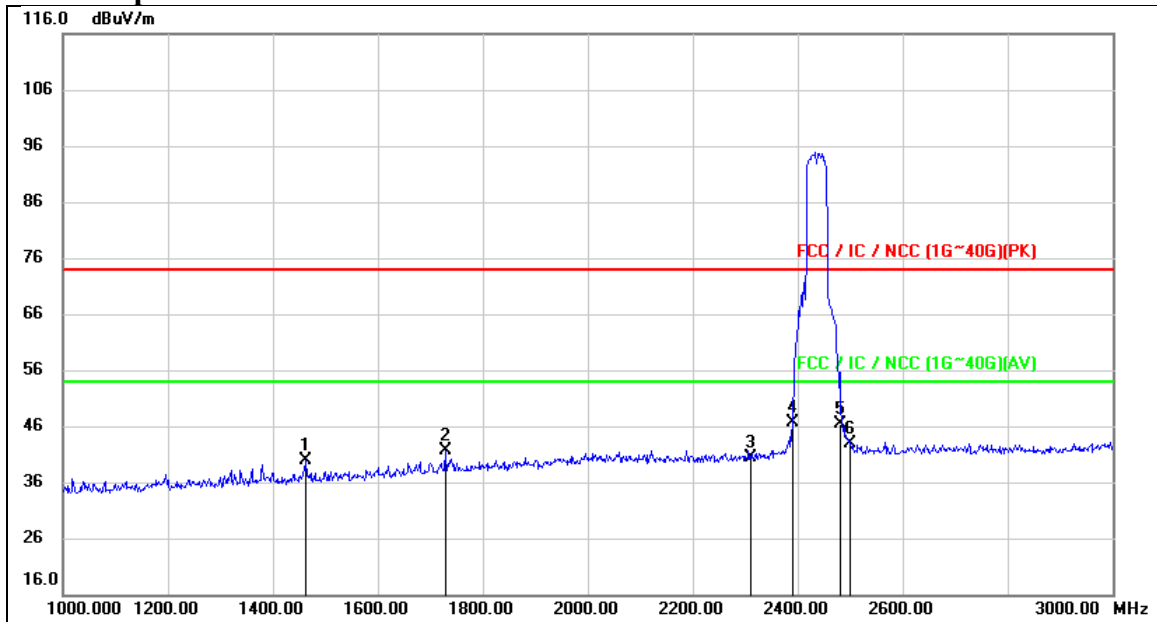
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT40 Ch 6 2437MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1463.667	51.38	-11.38	40.00	74.00	-34.00	peak
2	1729.867	51.43	-9.83	41.60	74.00	-32.40	peak
3	2310.000	48.85	-8.41	40.44	74.00	-33.56	peak
4	2390.000	55.04	-8.47	46.57	74.00	-27.43	peak
5	2483.500	54.90	-8.55	46.35	74.00	-27.65	peak
6	2500.000	51.46	-8.55	42.91	74.00	-31.09	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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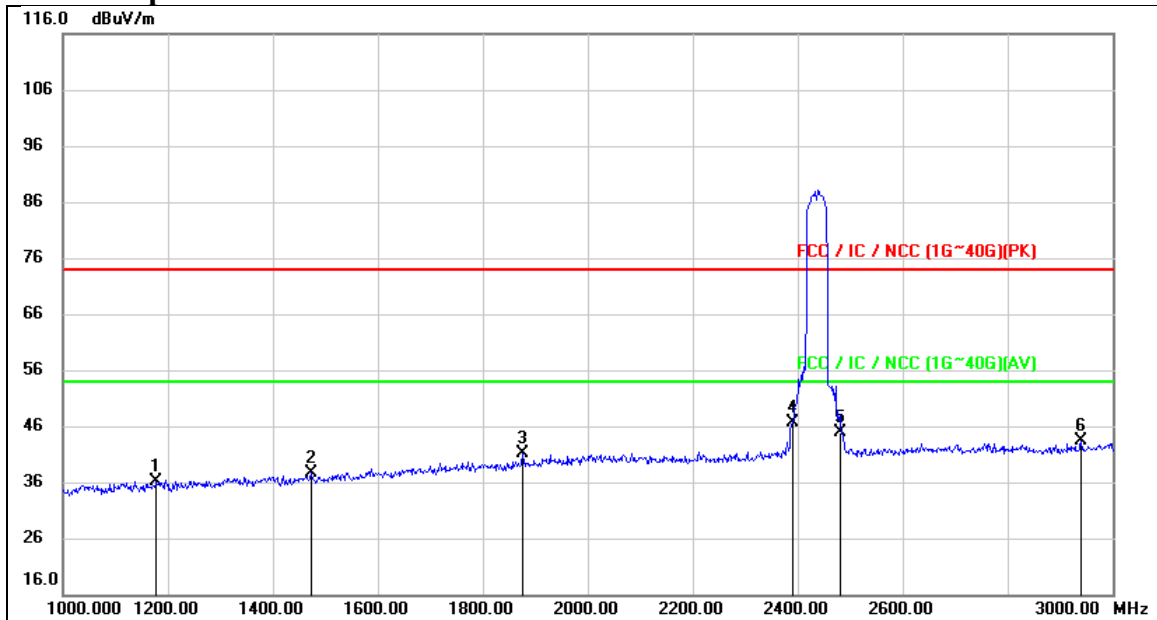
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Spurious Emission 802.11n HT40 Ch 6 2437 MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1179.733	48.56	-12.48	36.08	74.00	-37.92	peak
2	1472.600	48.95	-11.35	37.60	74.00	-36.40	peak
3	1876.800	50.02	-8.93	41.09	74.00	-32.91	peak
4	2390.000	55.09	-8.47	46.62	74.00	-27.38	peak
5	2483.500	53.49	-8.55	44.94	74.00	-29.06	peak
6	2940.667	50.84	-7.54	43.30	74.00	-30.70	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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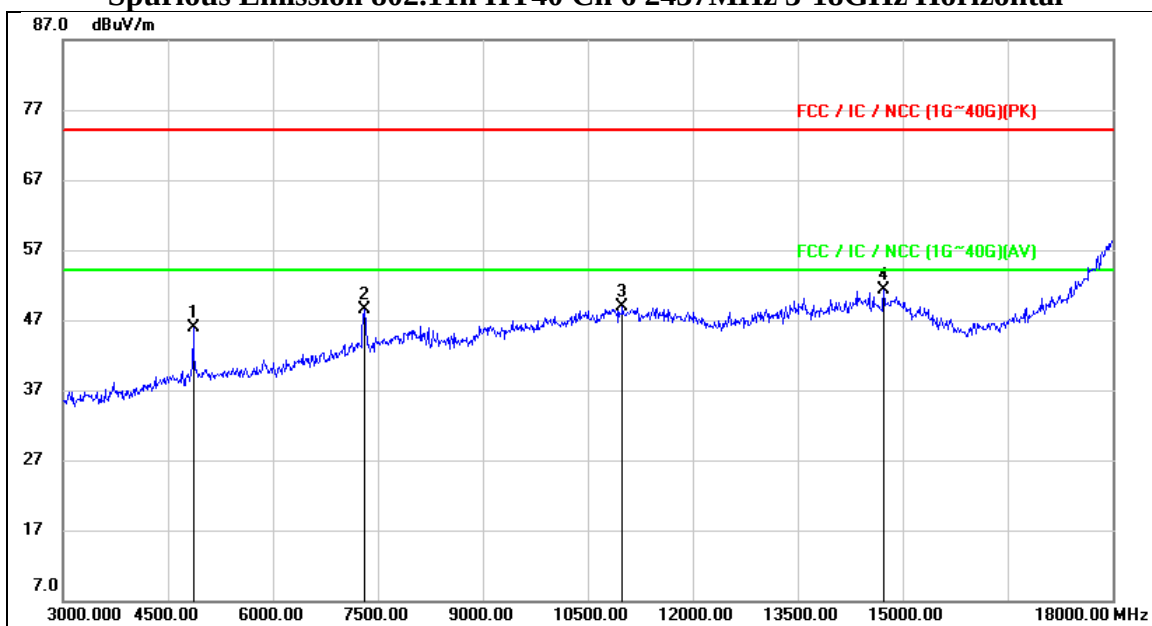
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Spurious Emission 802.11n HT40 Ch 6 2437MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4873.500	50.22	-4.24	45.98	74.00	-28.02	peak
2	7312.500	46.88	1.57	48.45	74.00	-25.55	peak
3	11002.500	40.54	8.37	48.91	74.00	-25.09	peak
4	14733.000	39.16	12.07	51.23	74.00	-22.77	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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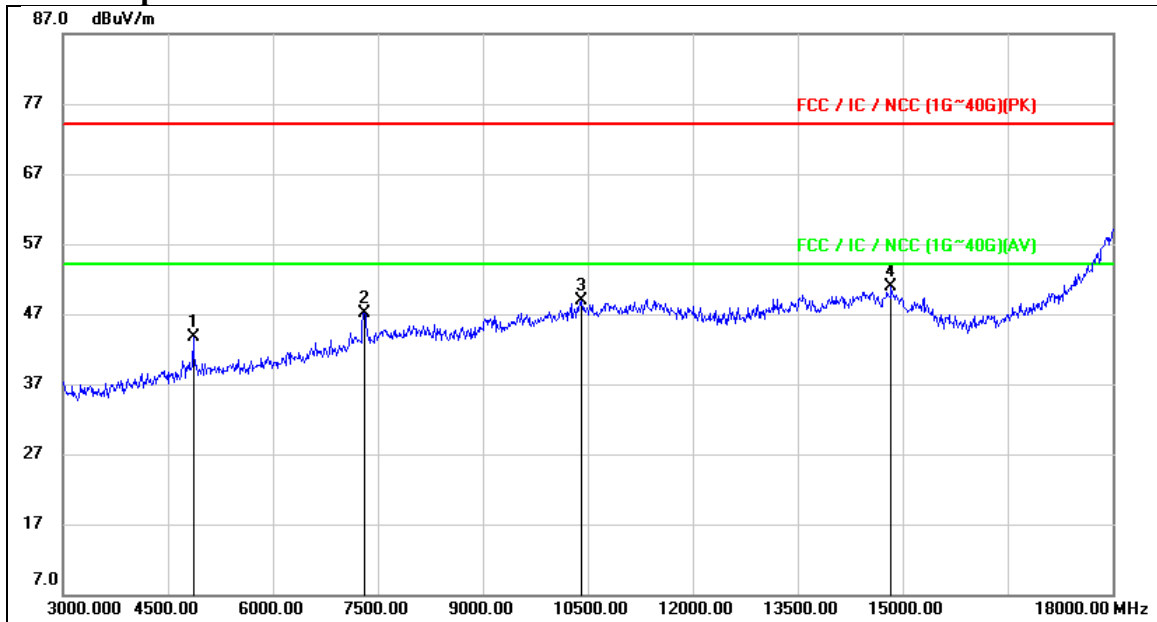
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Spurious Emission 802.11n HT40 Ch 6 2437 MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.500	47.83	-4.24	43.59	74.00	-30.41	peak
2	7305.500	45.52	1.54	47.06	74.00	-26.94	peak
3	10416.500	41.79	7.12	48.91	74.00	-25.09	peak
4	14845.000	38.89	11.99	50.88	74.00	-23.12	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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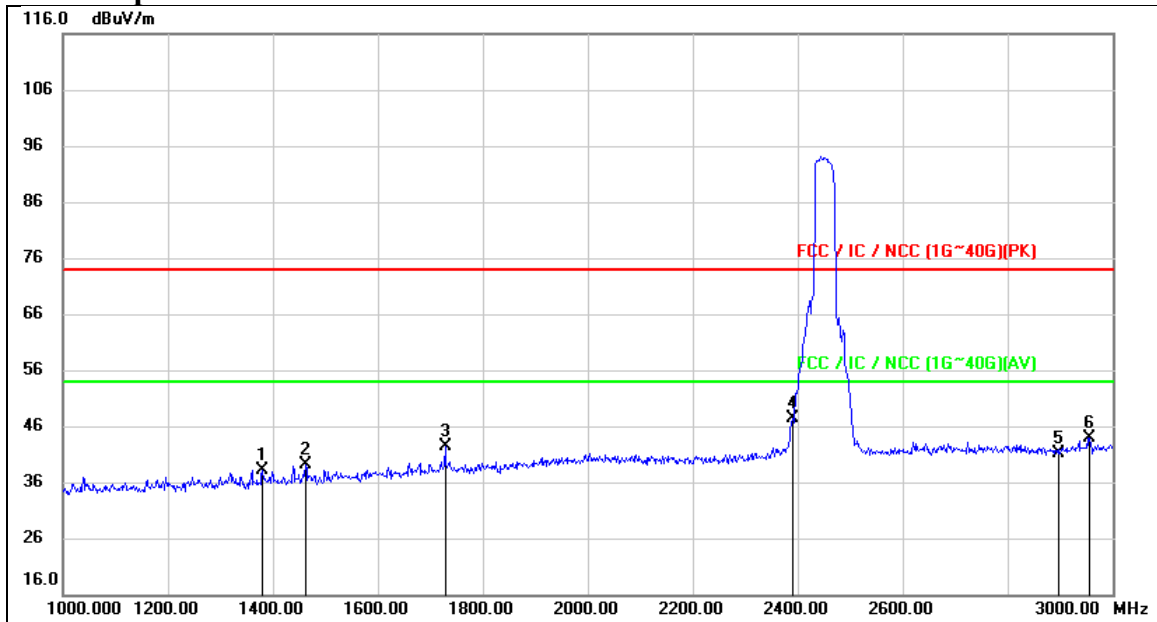
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Spurious Emission 802.11n HT40 Ch 9 2452MHz 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1380.200	49.94	-11.71	38.23	74.00	-35.77	peak
2	1462.933	50.40	-11.39	39.01	74.00	-34.99	peak
3	1729.400	52.19	-9.83	42.36	74.00	-31.64	peak
4	2390.000	55.76	-8.47	47.29	74.00	-26.71	peak
5	2900.000	48.70	-7.63	41.07	74.00	-32.93	peak
6	2956.733	51.32	-7.50	43.82	74.00	-30.18	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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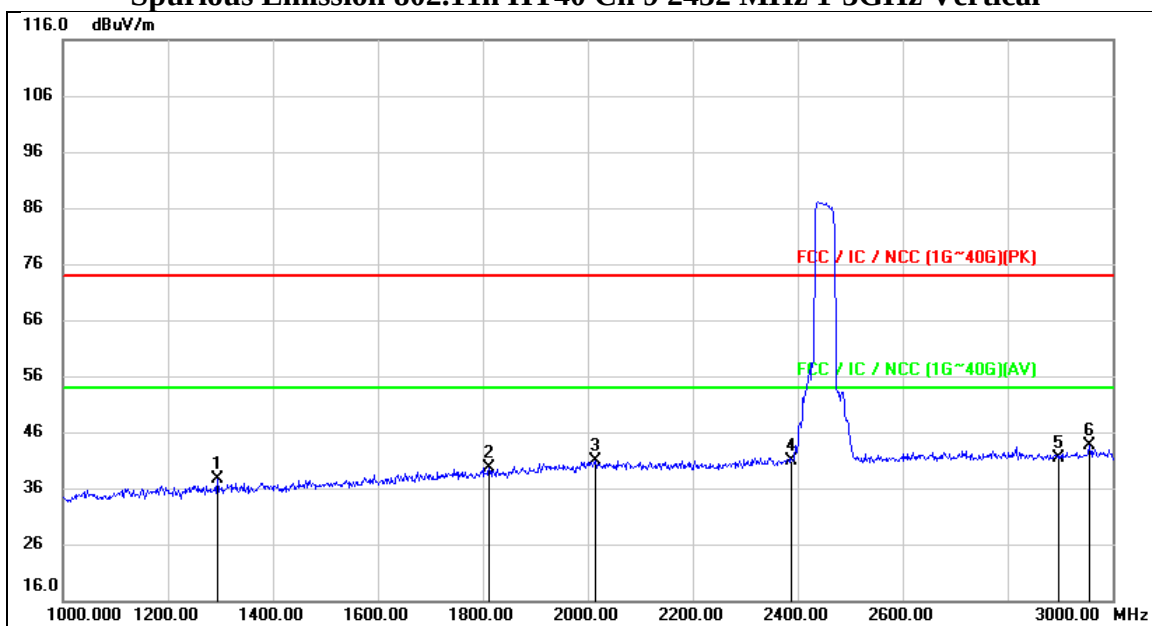
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 802.11n HT40 Ch 9 2452 MHz 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1294.867	49.72	-12.03	37.69	74.00	-36.31	peak
2	1812.333	49.07	-9.33	39.74	74.00	-34.26	peak
3	2014.533	48.96	-8.18	40.78	74.00	-33.22	peak
4	2390.000	49.42	-8.47	40.95	74.00	-33.05	peak
5	2900.000	48.91	-7.63	41.28	74.00	-32.72	peak
6	2956.600	51.01	-7.50	43.51	74.00	-30.49	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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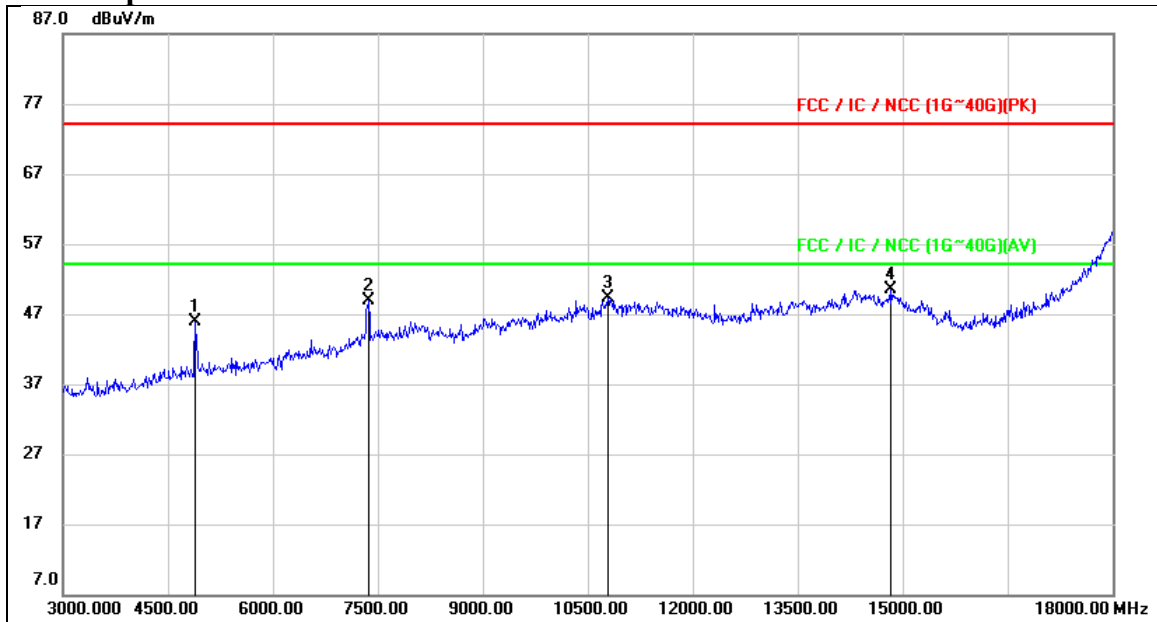
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Spurious Emission 802.11n HT40 Ch 9 2452MHz 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.500	49.98	-4.16	45.82	74.00	-28.18	peak
2	7368.000	47.23	1.73	48.96	74.00	-25.04	peak
3	10790.000	41.35	7.93	49.28	74.00	-24.72	peak
4	14844.000	38.41	11.99	50.40	74.00	-23.60	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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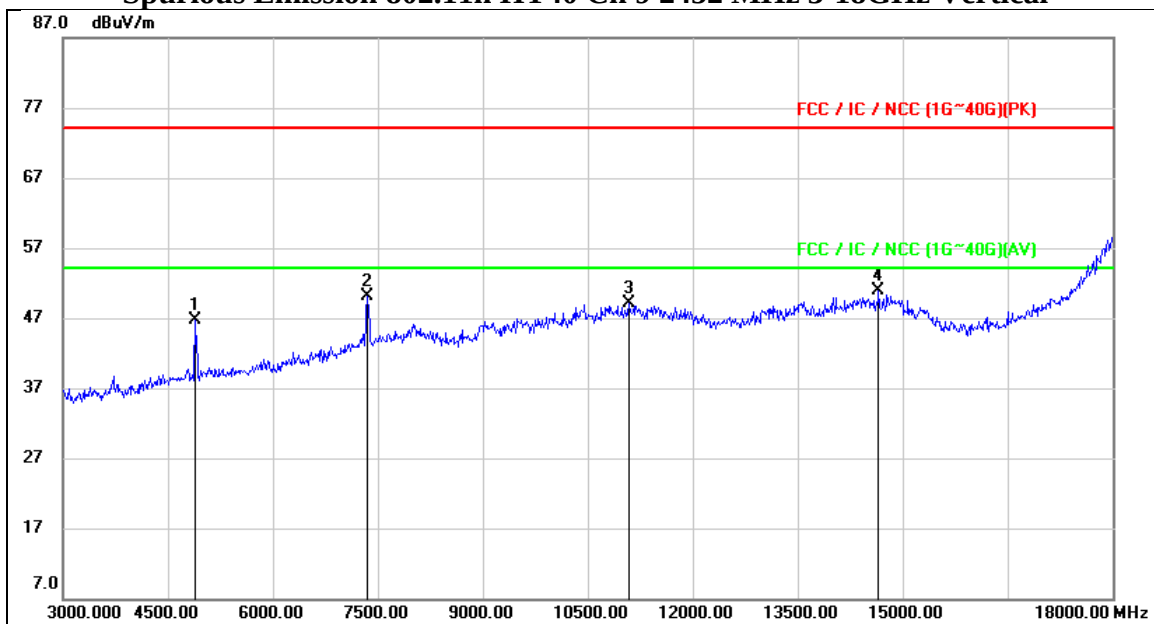
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Spurious Emission 802.11n HT40 Ch 9 2452 MHz 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4904.500	50.91	-4.16	46.75	74.00	-27.25	peak
2	7352.500	48.31	1.69	50.00	74.00	-24.00	peak
3	11094.500	40.73	8.41	49.14	74.00	-24.86	peak
4	14655.000	38.68	12.12	50.80	74.00	-23.20	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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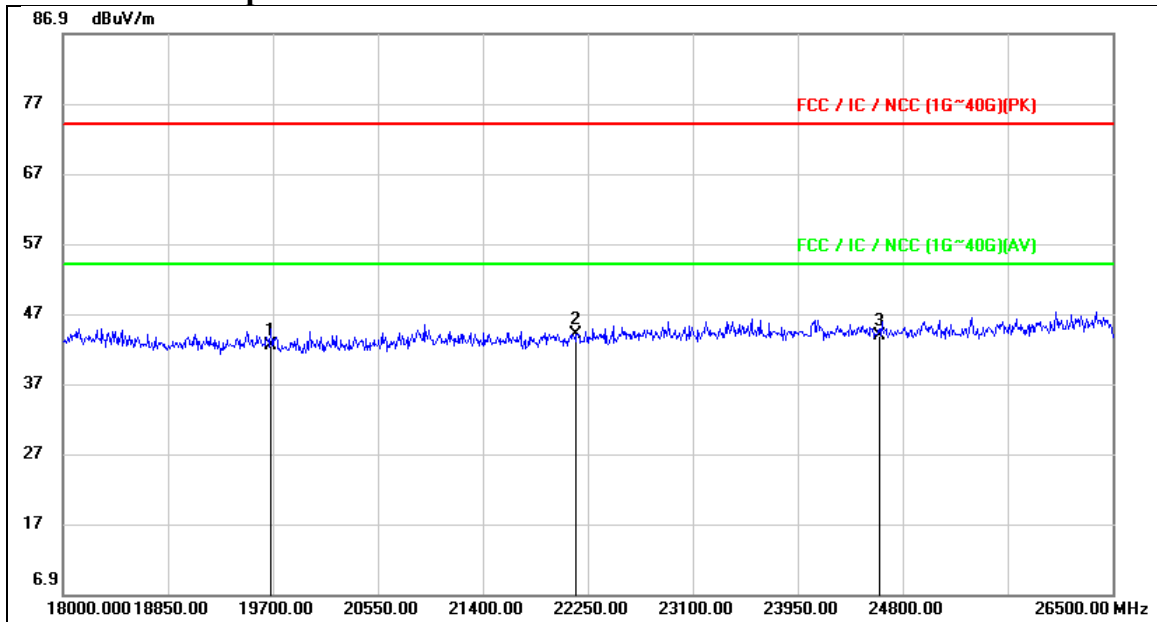
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Spurious Emission Worst case 18-25GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19696.000	41.36	1.07	42.43	74.00	-31.57	peak
2	22158.000	40.83	3.08	43.91	74.00	-30.09	peak
3	24620.000	39.15	4.72	43.87	74.00	-30.13	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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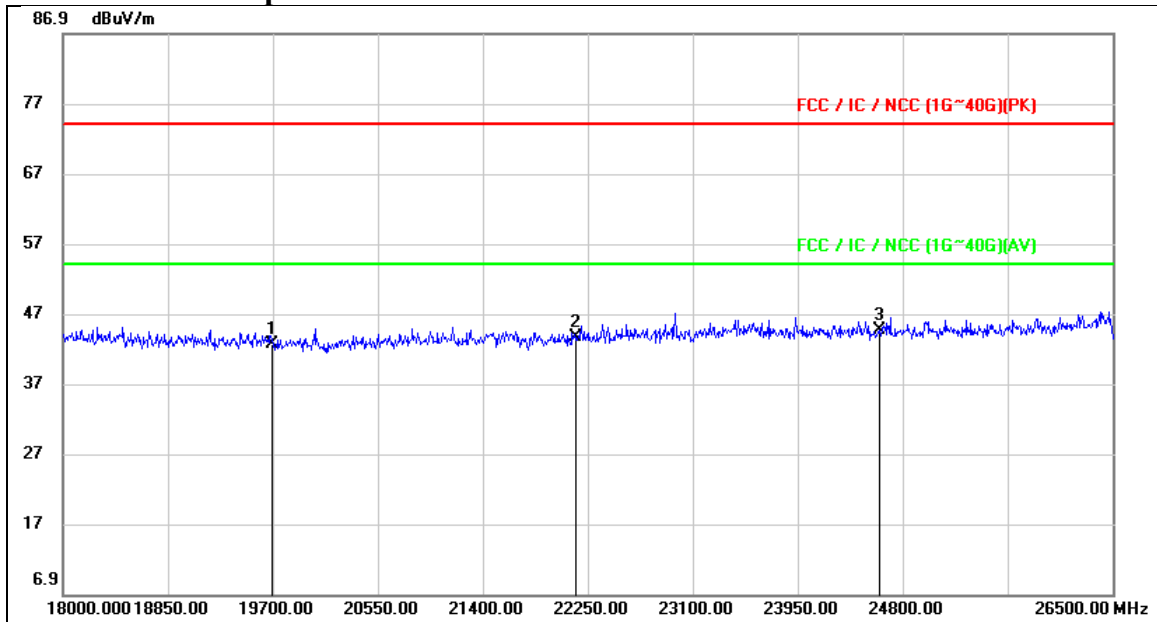
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Spurious Emission Worst case 18-25GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19696.000	41.58	1.07	42.65	74.00	-31.35	peak
2	22158.000	40.59	3.08	43.67	74.00	-30.33	peak
3	24620.000	39.89	4.72	44.61	74.00	-29.39	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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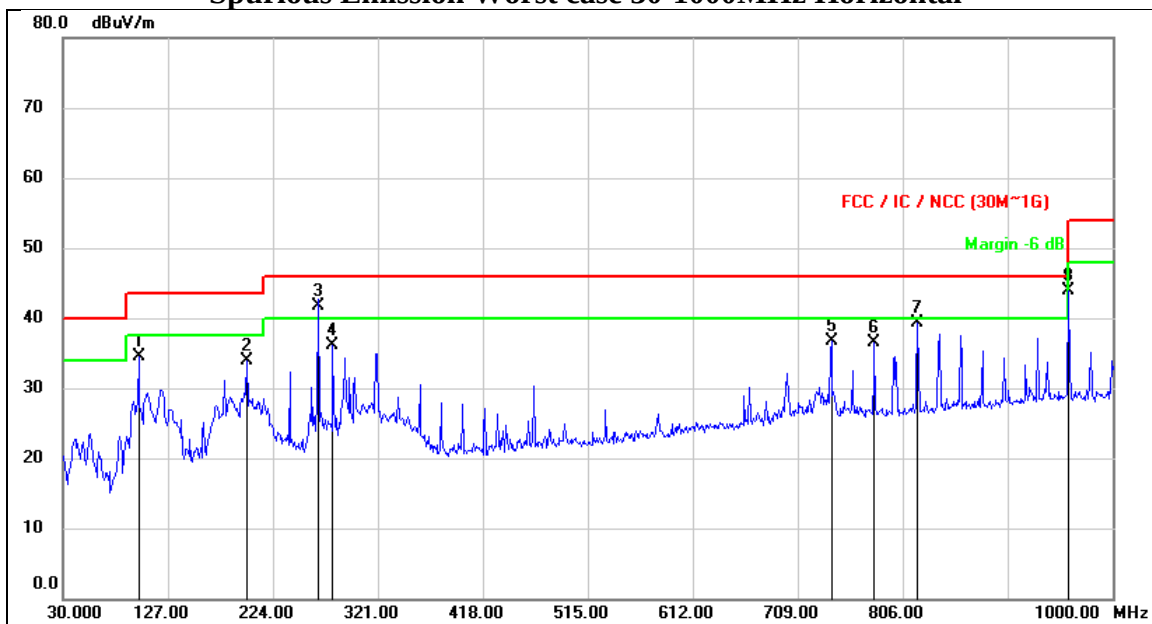
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Spurious Emission Worst case 30-1000MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	100.0017	55.04	-20.56	34.48	43.50	-9.02	peak
2	200.0087	51.83	-18.01	33.82	43.50	-9.68	peak
3	266.0010	57.47	-15.78	41.69	46.00	-4.31	QP
4	280.0337	51.16	-15.05	36.11	46.00	-9.89	peak
5	740.0722	41.74	-5.13	36.61	46.00	-9.39	peak
6	780.0687	41.13	-4.70	36.43	46.00	-9.57	peak
7	820.0650	43.57	-4.27	39.30	46.00	-6.70	peak
8	960.1007	45.88	-2.03	43.85	54.00	-10.15	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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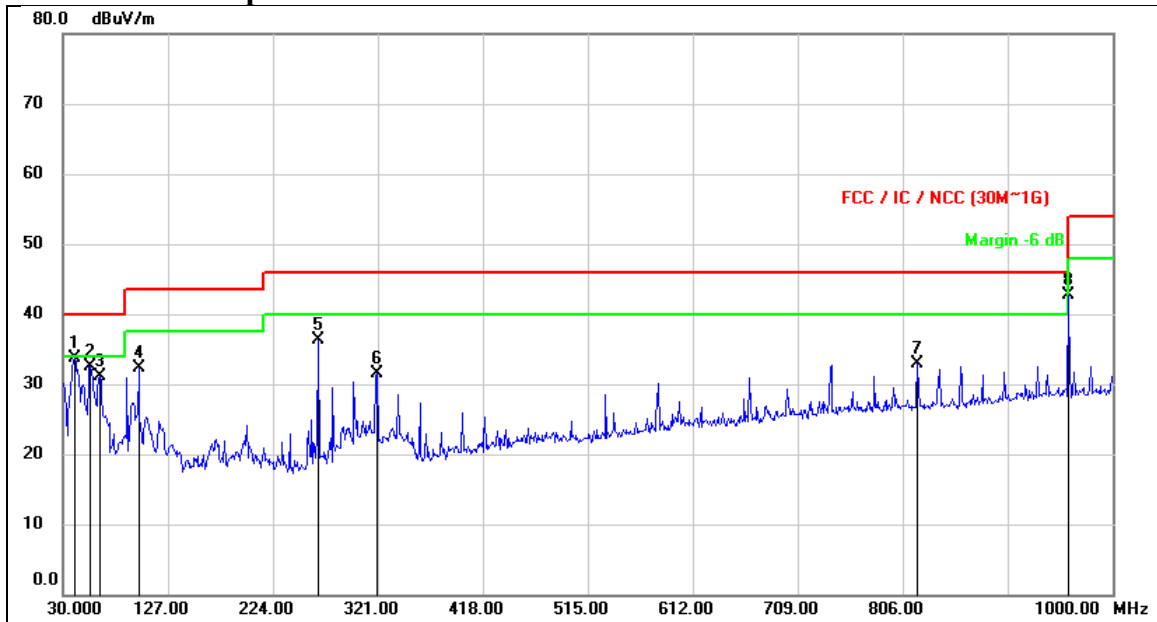
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Spurious Emission Worst case 30-1000MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	41.1550	49.36	-15.67	33.69	40.00	-6.31	peak
2	55.9960	48.06	-15.62	32.44	40.00	-7.56	peak
3	64.3057	47.80	-16.70	31.10	40.00	-8.90	peak
4	100.0017	52.80	-20.56	32.24	43.50	-11.26	peak
5	266.0333	52.11	-15.78	36.33	46.00	-9.67	peak
6	320.0300	45.48	-14.03	31.45	46.00	-14.55	peak
7	820.0973	37.25	-4.27	32.98	46.00	-13.02	peak
8	960.1007	44.81	-2.03	42.78	54.00	-11.22	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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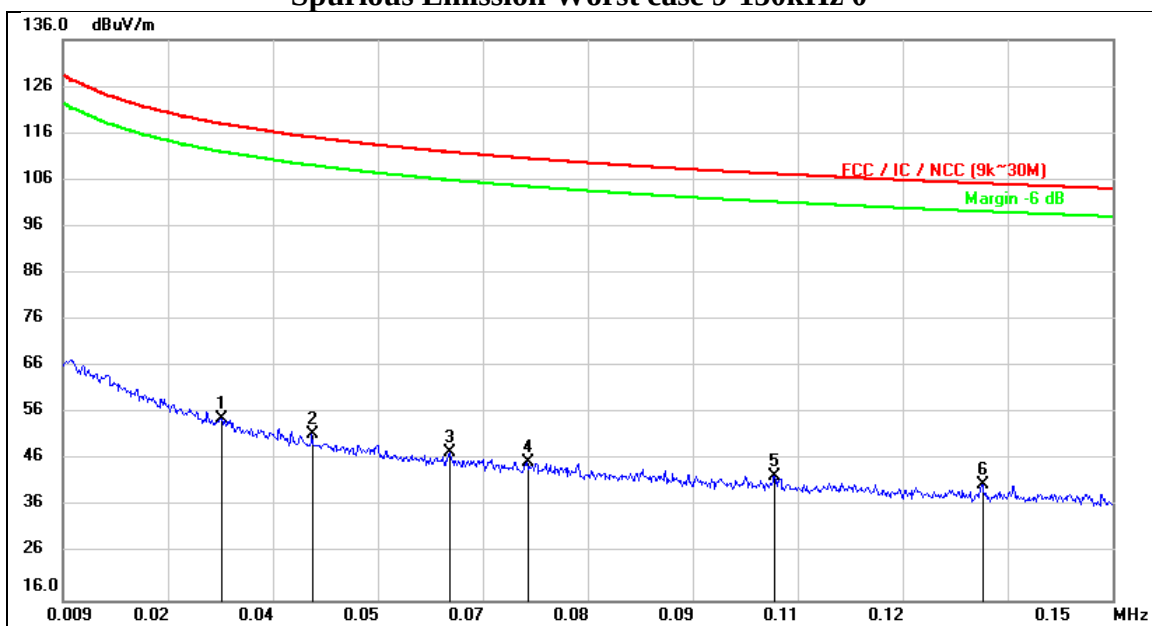
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Spurious Emission Worst case 9-150kHz 0°



No.	Frequency (KHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0303	40.67	14.23	54.90	117.98	-63.08	peak
2	0.0425	38.42	13.23	51.65	115.08	-63.43	peak
3	0.0610	35.29	12.49	47.78	111.91	-64.13	peak
4	0.0714	33.33	12.35	45.68	110.54	-64.86	peak
5	0.1046	30.72	11.96	42.68	107.24	-64.56	peak
6	0.1324	28.90	11.96	40.86	105.20	-64.34	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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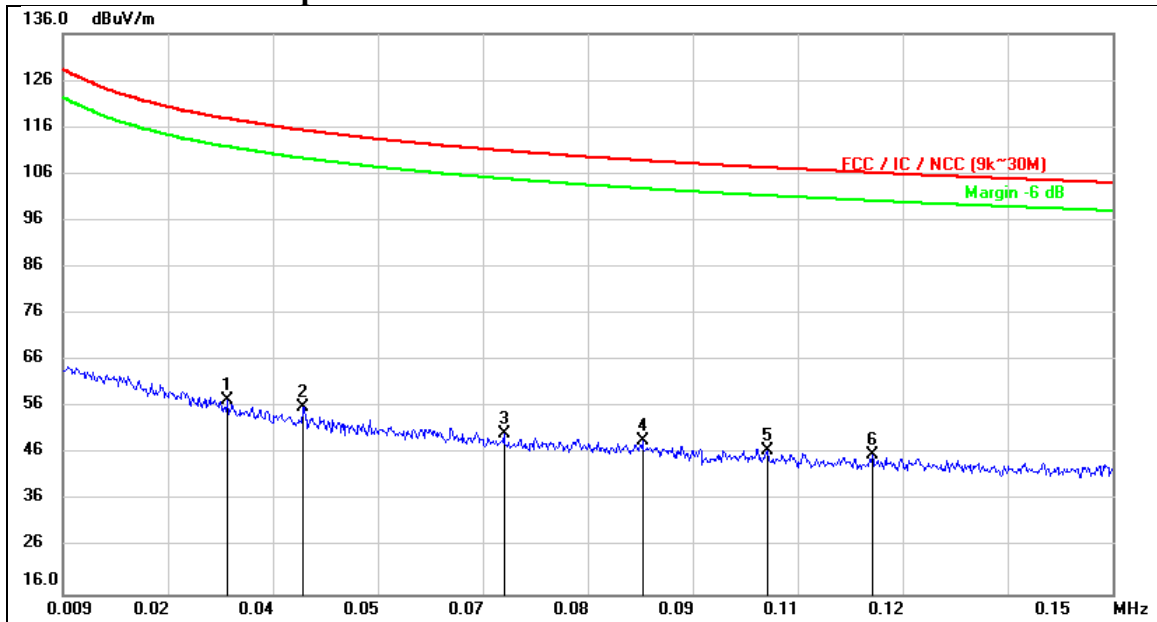
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission Worst case 9-150kHz 90°



No.	Frequency (KHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0311	43.40	14.17	57.57	117.78	-60.21	peak
2	0.0413	42.77	13.34	56.11	115.31	-59.20	peak
3	0.0683	37.94	12.40	50.34	110.93	-60.59	peak
4	0.0868	36.57	12.14	48.71	108.85	-60.14	peak
5	0.1036	34.78	11.96	46.74	107.32	-60.58	peak
6	0.1178	33.97	11.83	45.80	106.23	-60.43	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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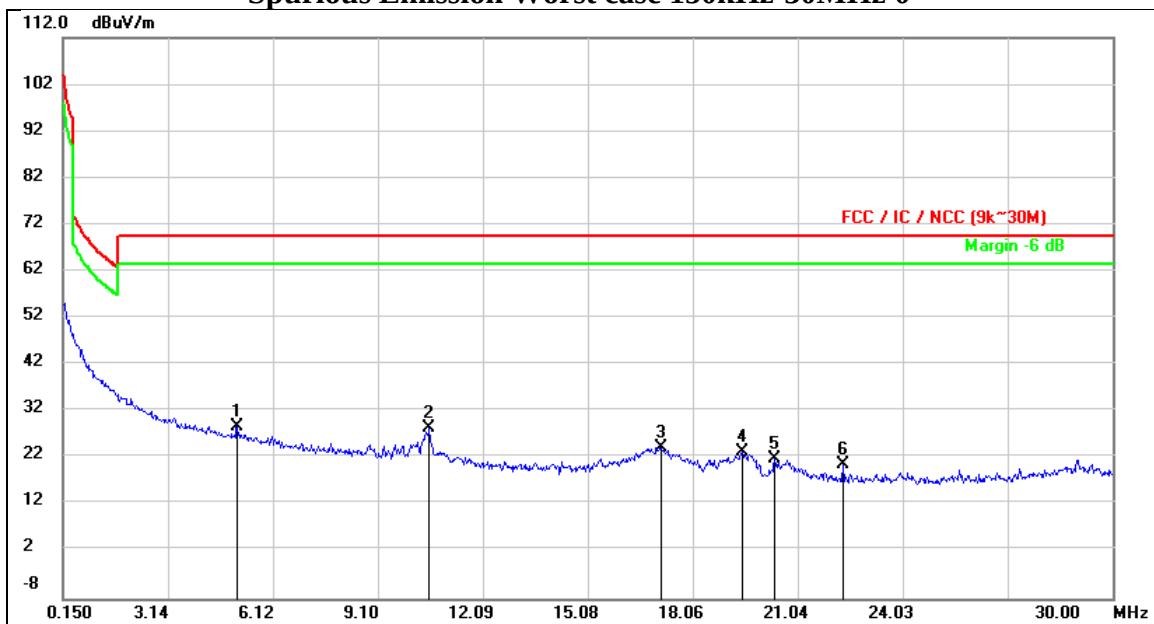
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission Worst case 150kHz-30MHz 0°



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5.1051	17.15	11.53	28.68	69.54	-40.86	peak
2	10.5866	16.84	11.53	28.37	69.54	-41.17	peak
3	17.1645	12.95	11.35	24.30	69.54	-45.24	peak
4	19.4759	11.94	11.29	23.23	69.54	-46.31	peak
5	20.4152	10.60	11.19	21.79	69.54	-47.75	peak
6	22.3524	9.90	10.82	20.72	69.54	-48.82	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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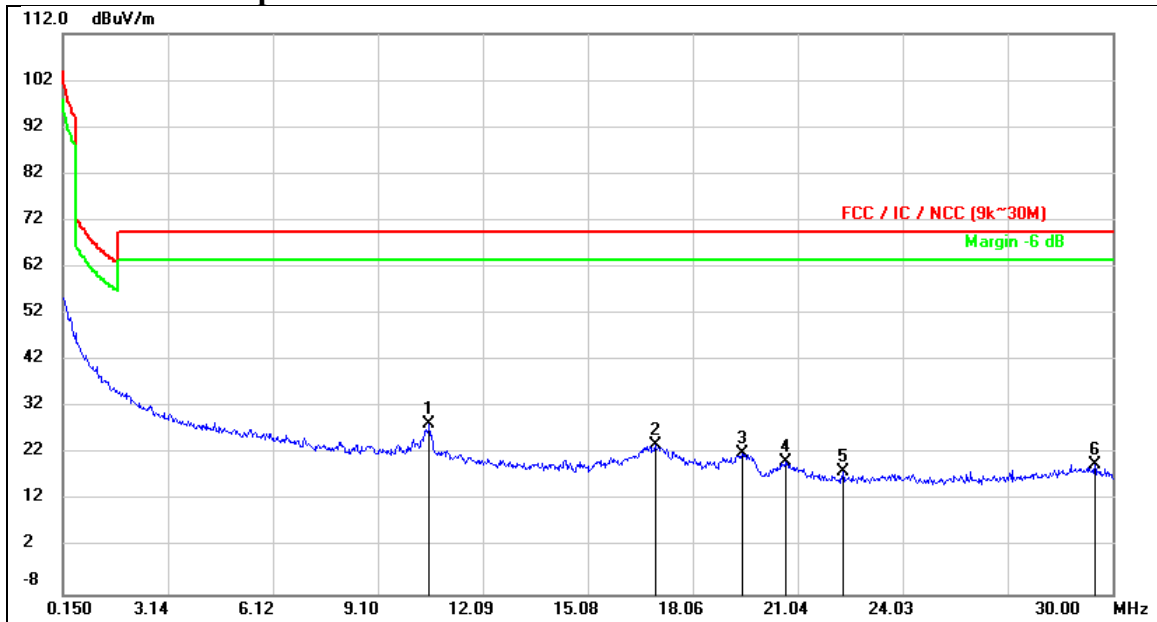
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission Worst case 150kHz-30MHz 90°



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10.5876	16.93	11.53	28.46	69.54	-41.08	peak
2	17.0083	12.58	11.35	23.93	69.54	-45.61	peak
3	19.4837	11.00	11.29	22.29	69.54	-47.25	peak
4	20.7107	9.19	11.13	20.32	69.54	-49.22	peak
5	22.3514	7.55	10.82	18.37	69.54	-51.17	peak
6	29.4965	10.43	9.47	19.90	69.54	-49.64	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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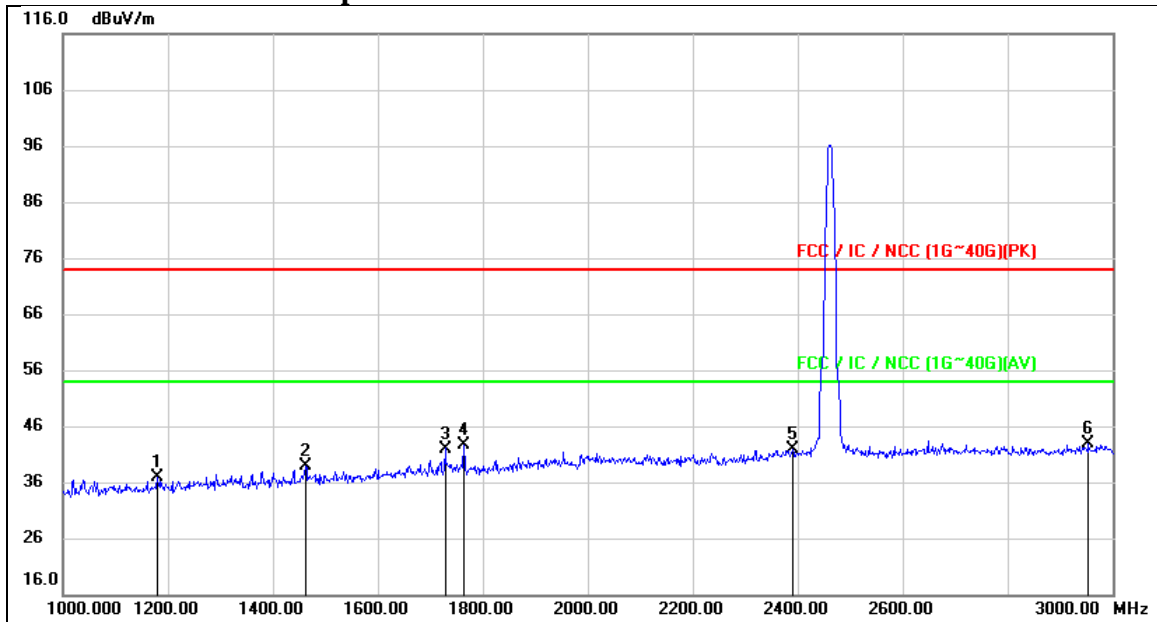
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Co-location (WIFI+NFC)

Spurious Emission 1-3GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1180.667	49.42	-12.48	36.94	74.00	-37.06	peak
2	1463.800	50.16	-11.38	38.78	74.00	-35.22	peak
3	1729.667	51.80	-9.83	41.97	74.00	-32.03	peak
4	1764.333	52.19	-9.62	42.57	74.00	-31.43	peak
5	2390.000	50.30	-8.47	41.83	74.00	-32.17	peak
6	2954.467	50.37	-7.50	42.87	74.00	-31.13	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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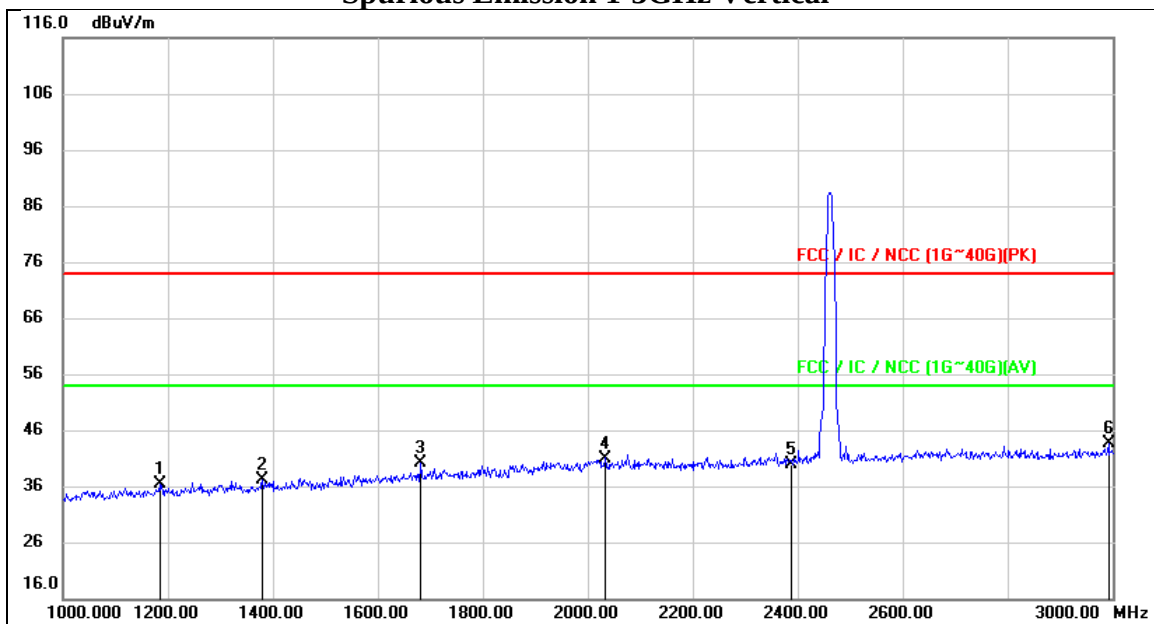
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Spurious Emission 1-3GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1185.800	48.73	-12.47	36.26	74.00	-37.74	peak
2	1380.600	48.81	-11.71	37.10	74.00	-36.90	peak
3	1682.067	50.38	-10.13	40.25	74.00	-33.75	peak
4	2034.933	49.19	-8.19	41.00	74.00	-33.00	peak
5	2390.000	48.40	-8.47	39.93	74.00	-34.07	peak
6	2993.067	51.10	-7.41	43.69	74.00	-30.31	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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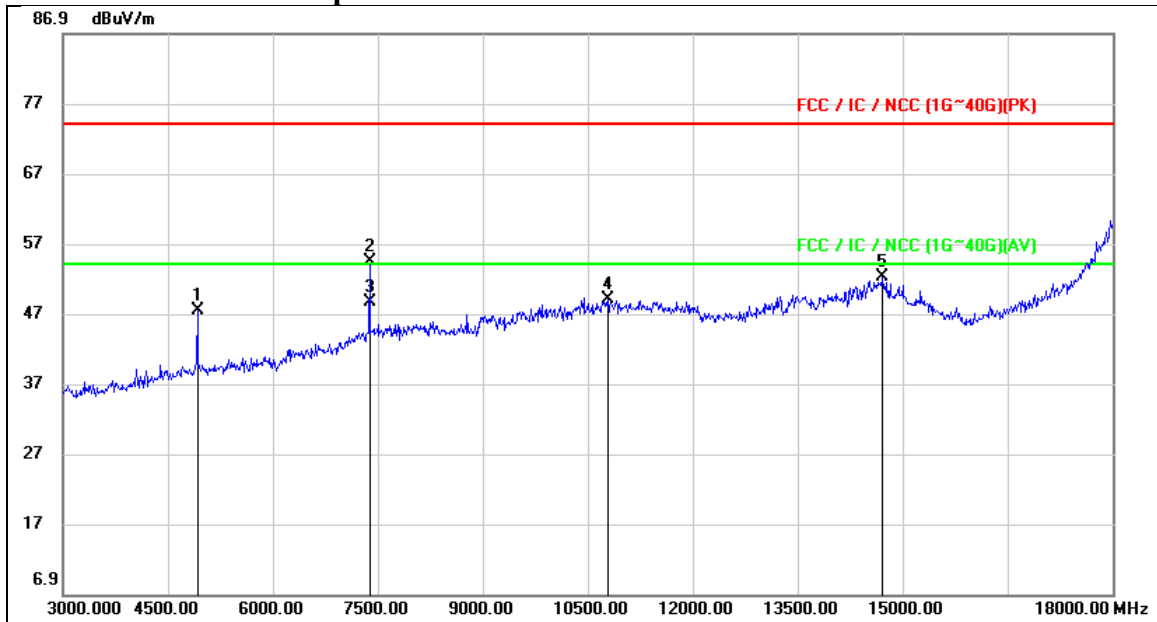
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Spurious Emission 3-18GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	51.62	-4.13	47.49	74.00	-26.51	peak
2	7386.000	52.53	1.78	54.31	74.00	-19.69	peak
3	7386.000	46.84	1.78	48.62	54.00	-5.38	AVG
4	10799.500	41.11	7.95	49.06	74.00	-24.94	peak
5	14721.500	40.04	12.08	52.12	74.00	-21.88	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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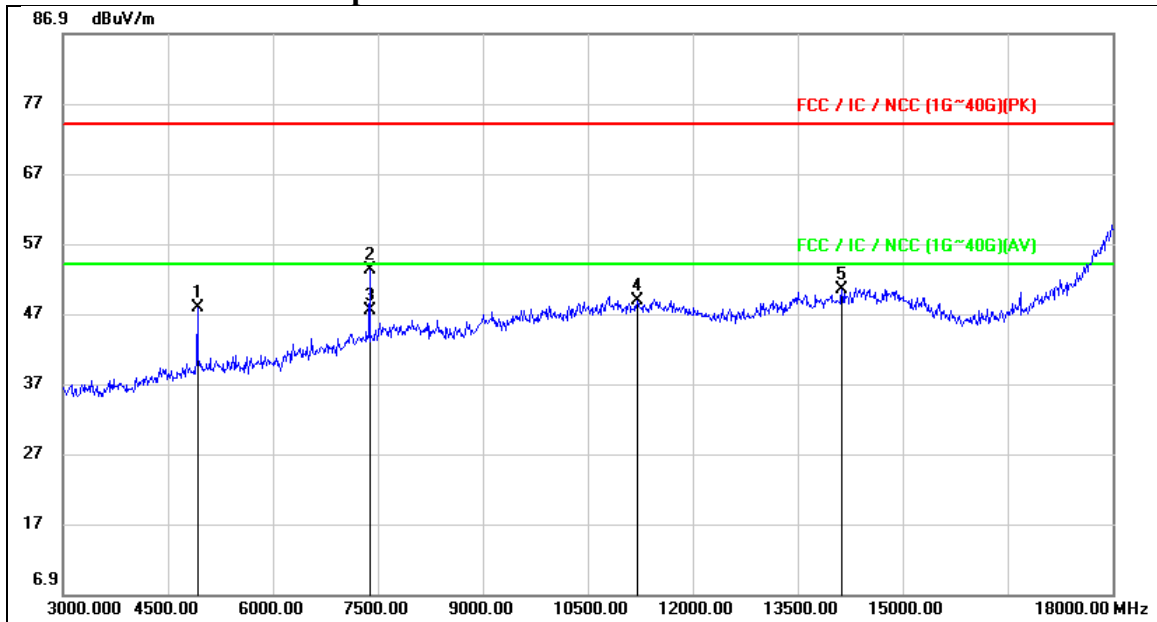
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Spurious Emission 3-18GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	51.86	-4.13	47.73	74.00	-26.27	peak
2	7385.500	51.40	1.78	53.18	74.00	-20.82	peak
3	7385.500	45.72	1.78	47.50	54.00	-6.50	AVG
4	11216.500	40.40	8.45	48.85	74.00	-25.15	peak
5	14131.000	38.87	11.55	50.42	74.00	-23.58	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. The signal trace which over average limit is background noise.

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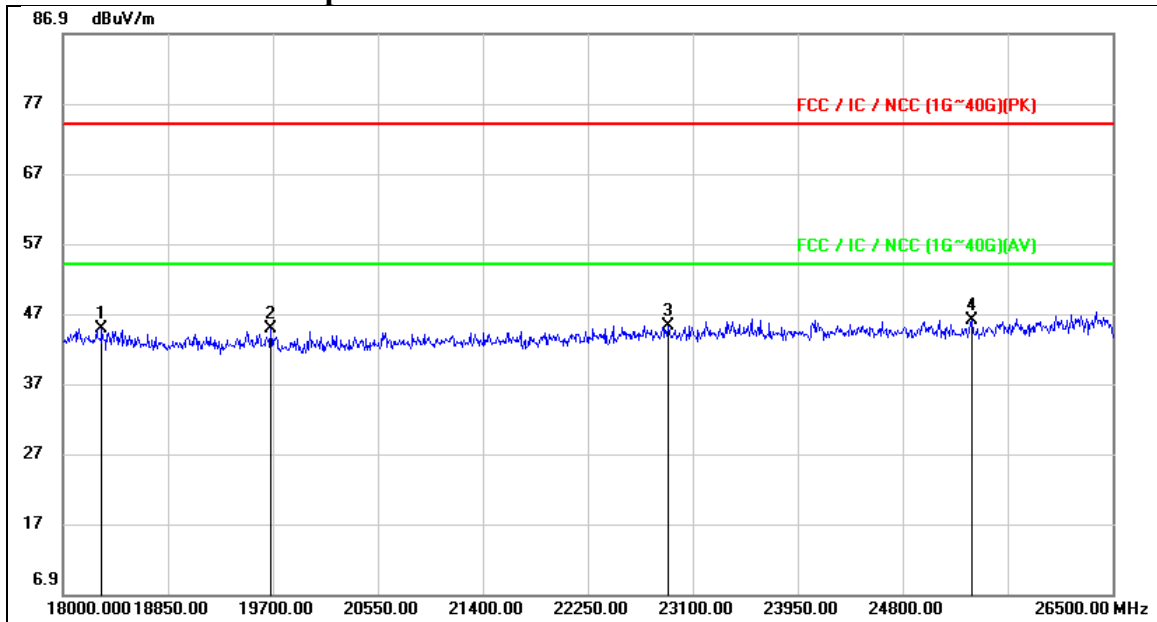
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Spurious Emission 18-25GHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18315.633	43.75	1.03	44.78	74.00	-29.22	peak
2	19685.550	43.80	1.08	44.88	74.00	-29.12	peak
3	22906.483	41.58	3.72	45.30	74.00	-28.70	peak
4	25364.683	41.01	4.96	45.97	74.00	-28.03	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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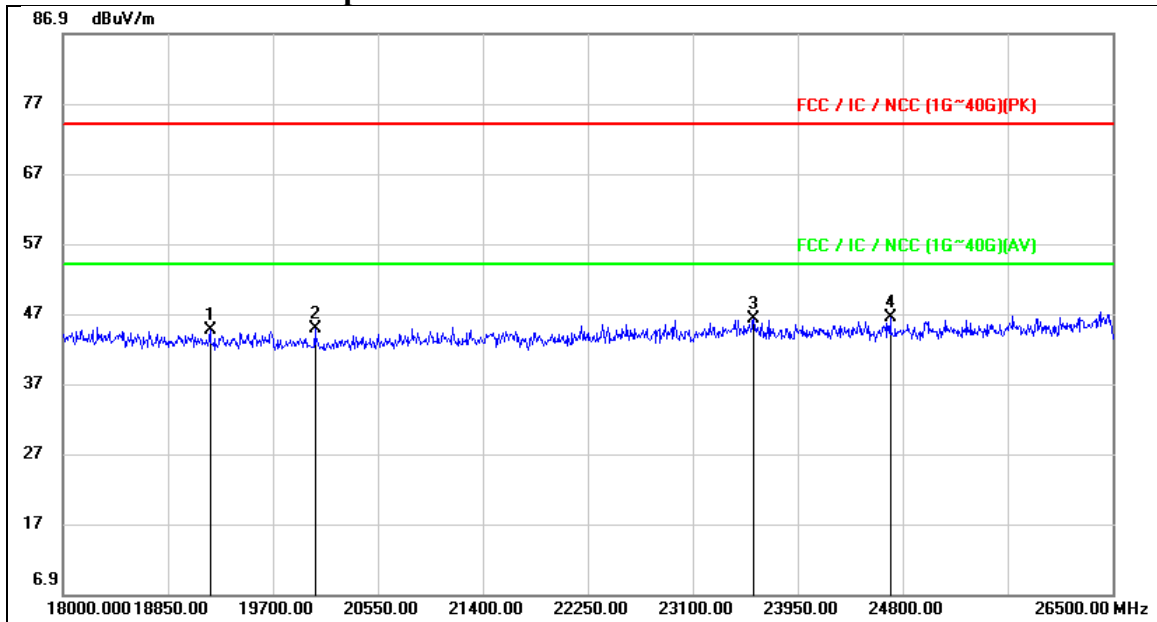
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Spurious Emission 18-25GHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19191.417	43.54	0.99	44.53	74.00	-29.47	peak
2	20041.983	43.79	1.09	44.88	74.00	-29.12	peak
3	23596.400	41.73	4.40	46.13	74.00	-27.87	peak
4	24704.517	41.59	4.75	46.34	74.00	-27.66	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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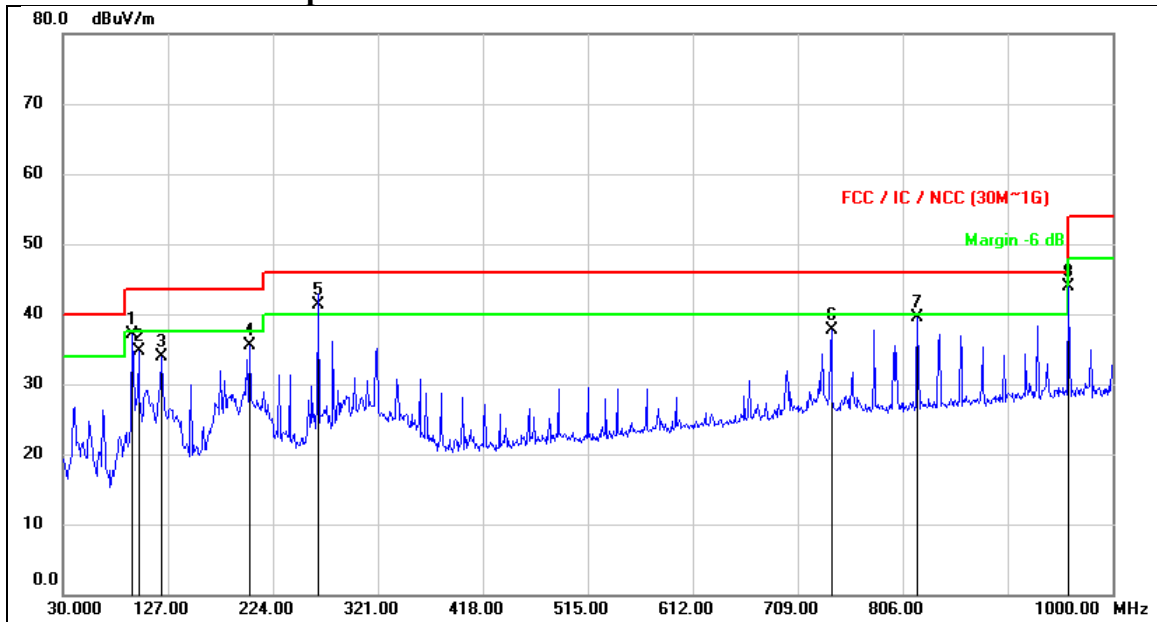
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Facsimile (FAX) :+886-3-583-7948

Doc No: 17-EM-F0876 / 1.0



Spurious Emission 30-1000MHz Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	94.8930	58.17	-21.09	37.08	43.50	-6.42	peak
2	100.0017	55.35	-20.56	34.79	43.50	-8.71	peak
3	122.0207	51.84	-17.88	33.96	43.50	-9.54	peak
4	203.4037	53.50	-18.00	35.50	43.50	-8.00	peak
5	266.0333	57.18	-15.78	41.40	46.00	-4.60	QP
6	740.0722	42.81	-5.13	37.68	46.00	-8.32	peak
7	820.0973	43.85	-4.27	39.58	46.00	-6.42	peak
8	960.1007	45.84	-2.03	43.81	54.00	-10.19	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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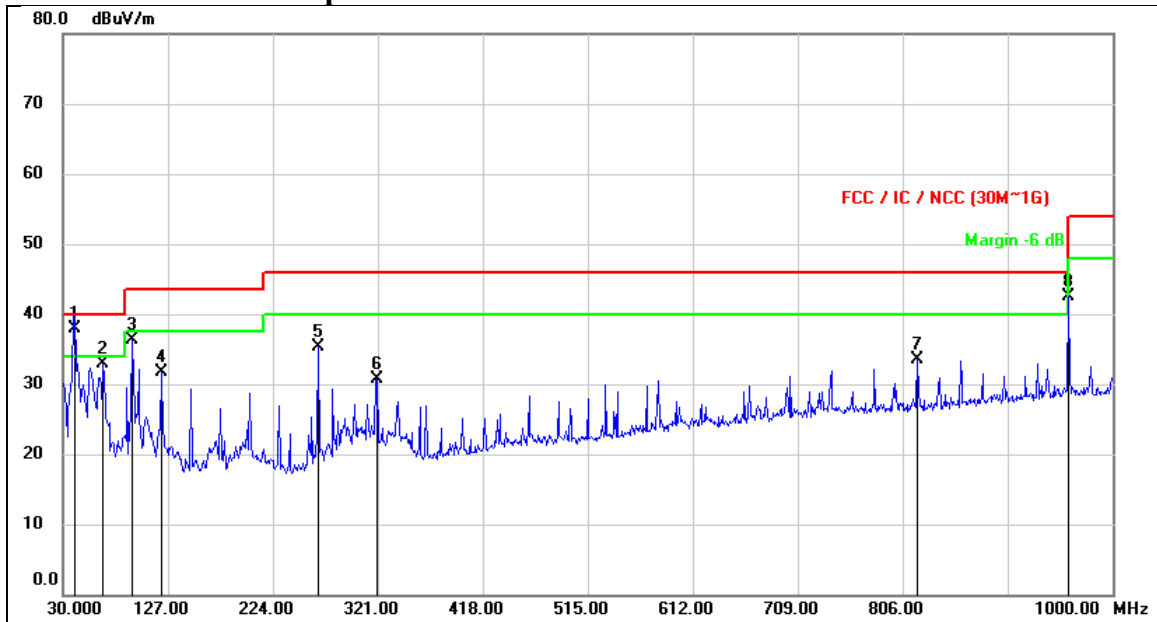
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission 30-1000MHz Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	40.6699	53.67	-15.72	37.95	40.00	-2.05	QP
2	67.7977	50.35	-17.38	32.97	40.00	-7.03	peak
3	94.8930	57.33	-21.09	36.24	43.50	-7.26	peak
4	122.0207	49.62	-17.88	31.74	43.50	-11.76	peak
5	266.0333	51.01	-15.78	35.23	46.00	-10.77	peak
6	320.0300	44.79	-14.03	30.76	46.00	-15.24	peak
7	820.0973	37.72	-4.27	33.45	46.00	-12.55	peak
8	960.1007	44.48	-2.03	42.45	54.00	-11.55	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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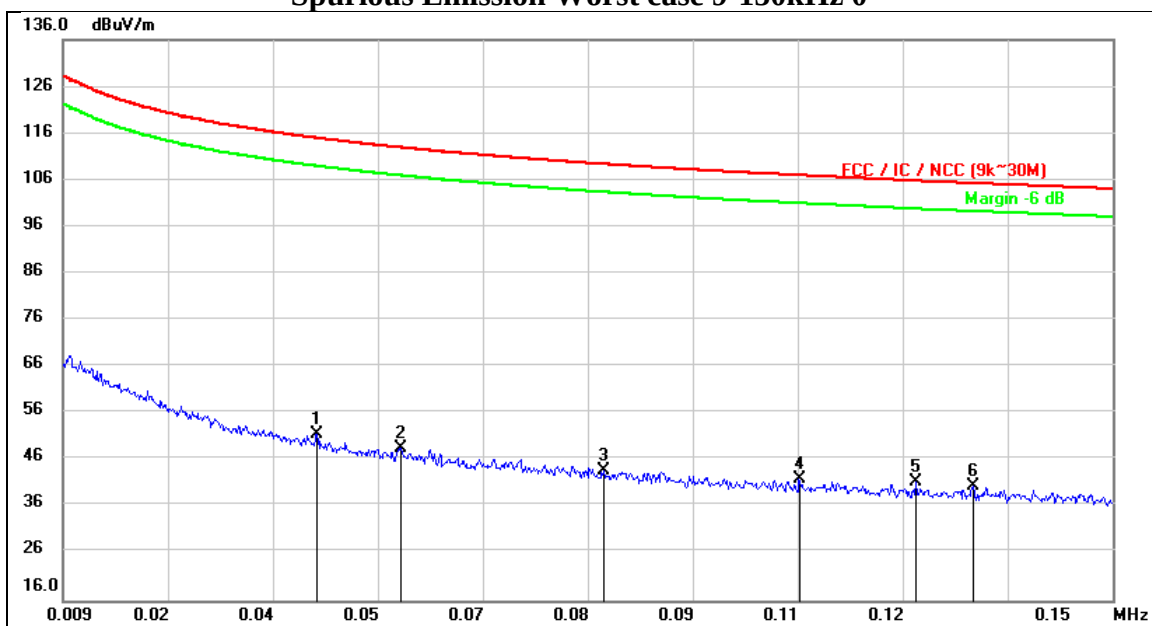
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission Worst case 9-150kHz 0°



No.	Frequency (KHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0431	38.28	13.19	51.47	114.96	-63.49	peak
2	0.0544	35.96	12.58	48.54	112.92	-64.38	peak
3	0.0817	31.45	12.21	43.66	109.37	-65.71	peak
4	0.1080	30.03	11.97	42.00	106.98	-64.98	peak
5	0.1236	29.44	11.88	41.32	105.78	-64.46	peak
6	0.1313	28.40	11.96	40.36	105.27	-64.91	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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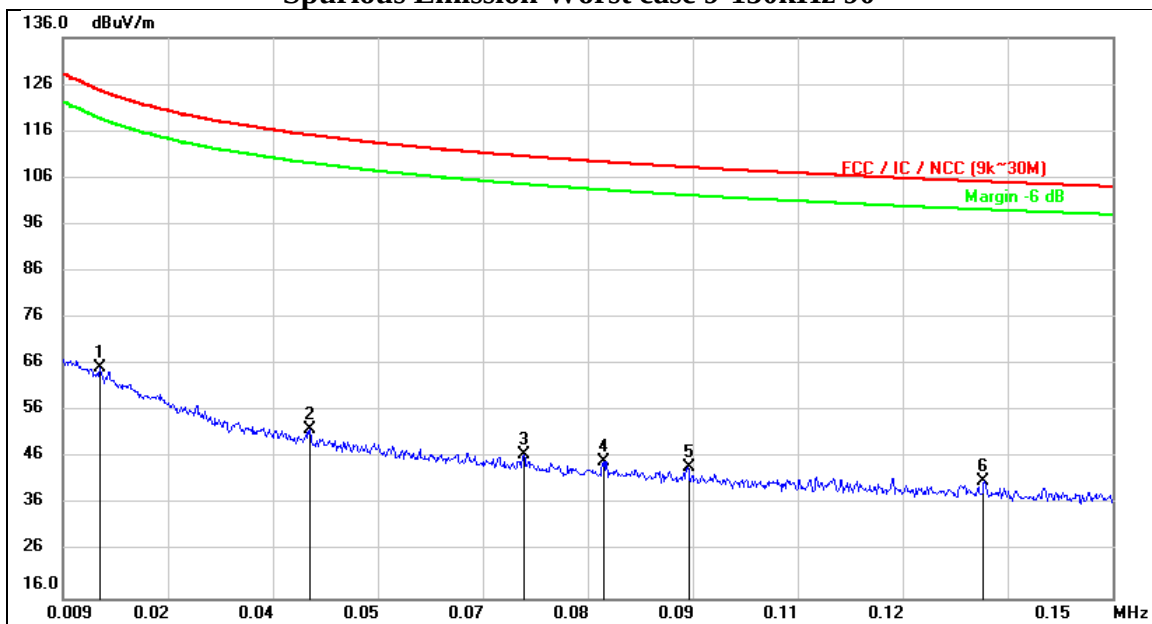
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission Worst case 9-150kHz 90°



No.	Frequency (KHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0140	46.67	18.54	65.21	124.73	-59.52	peak
2	0.0421	38.95	13.26	52.21	115.15	-62.94	peak
3	0.0709	34.43	12.36	46.79	110.60	-63.81	peak
4	0.0816	33.05	12.21	45.26	109.38	-64.12	peak
5	0.0929	31.89	12.06	43.95	108.25	-64.30	peak
6	0.1327	28.99	11.96	40.95	105.18	-64.23	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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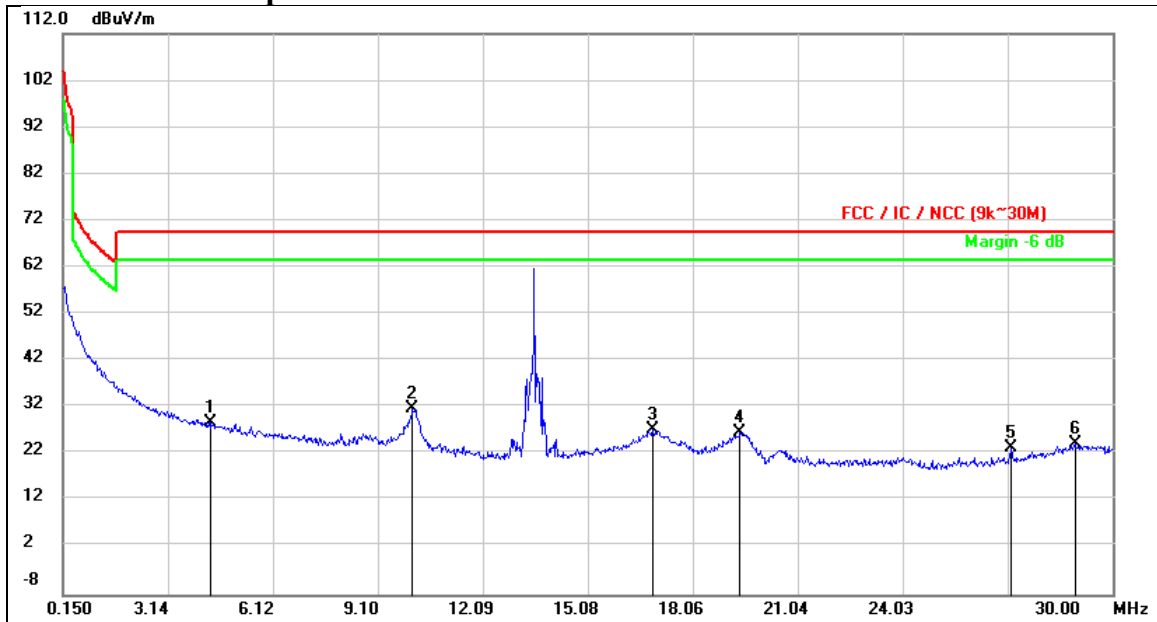
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Spurious Emission Worst case 150kHz-30MHz 0°



No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4.3687	17.29	11.39	28.68	69.54	-40.86	peak
2	10.1119	20.18	11.55	31.73	69.54	-37.81	peak
3	16.9277	15.75	11.35	27.10	69.54	-42.44	peak
4	19.4212	15.39	11.29	26.68	69.54	-42.86	peak
5	27.1215	13.31	9.92	23.23	69.54	-46.31	peak
6	28.9473	14.66	9.57	24.23	69.54	-45.31	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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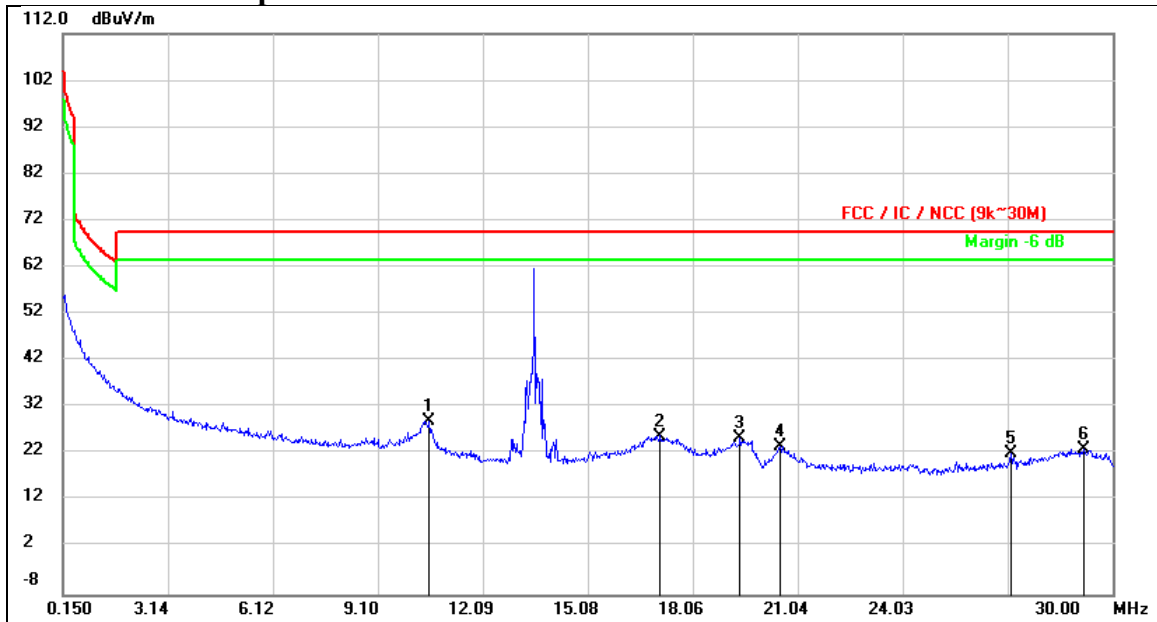
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Doc No: 17-EM-F0876 / 1.0



Spurious Emission Worst case 150kHz-30MHz 90°



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10.5866	17.54	11.53	29.07	69.54	-40.47	peak
2	17.1605	14.55	11.35	25.90	69.54	-43.64	peak
3	19.4241	14.01	11.29	25.30	69.54	-44.24	peak
4	20.5405	12.51	11.17	23.68	69.54	-45.86	peak
5	27.1195	12.18	9.92	22.10	69.54	-47.44	peak
6	29.1861	13.59	9.52	23.11	69.54	-46.43	peak

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

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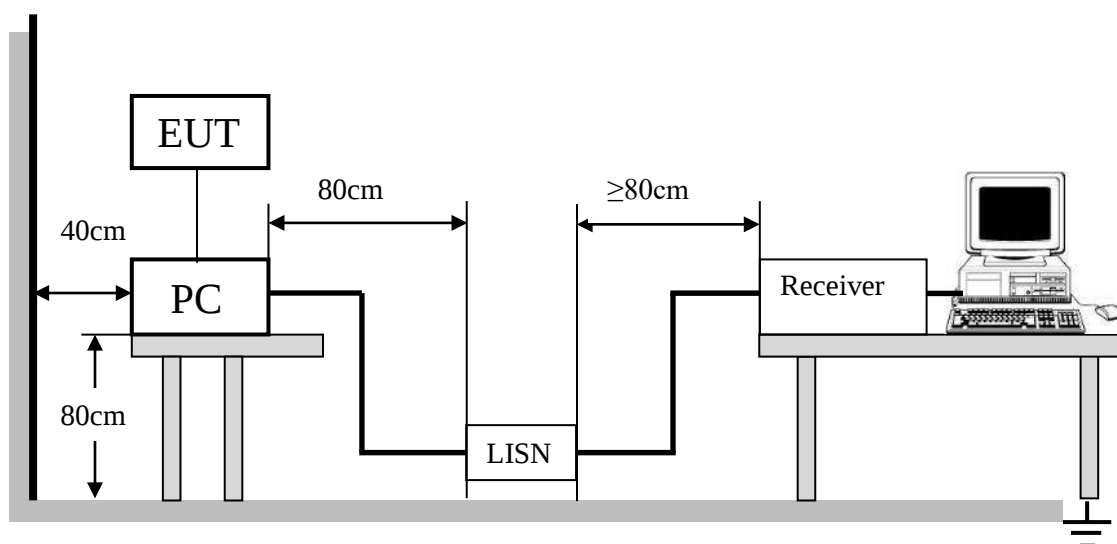


9.7. AC Power Line Conducted Emission

Requirements

Frequency of Emission(MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test Procedures



The EUT was put on a table of non-conducting material that was 80cm high. The vertical conducting wall of shielding was located 40cm to the rear of the EUT. The power line of the EUT was connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) was used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10 - 2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver was set at 9kHz.

The arrangement of the equipment was installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

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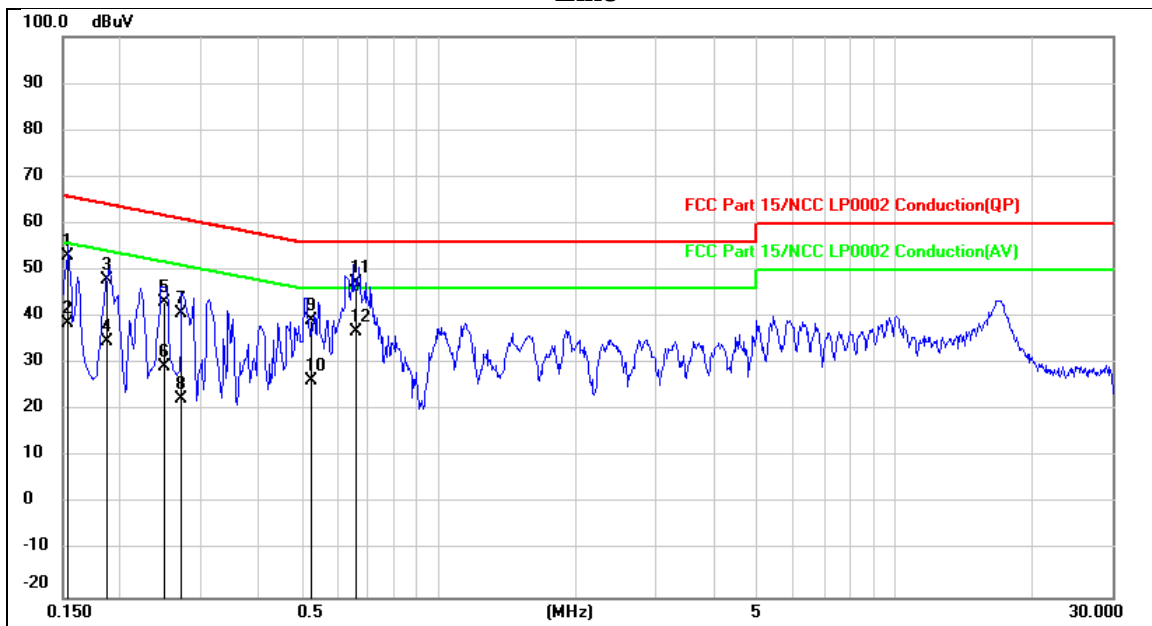
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Test Data

802.11b CH11 Line



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1543	33.45	19.57	53.02	65.77	-12.75	QP
2	0.1543	19.02	19.57	38.59	55.77	-17.18	AVG
3	0.1867	28.43	19.58	48.01	64.18	-16.17	QP
4	0.1867	15.09	19.58	34.67	54.18	-19.51	AVG
5	0.2488	23.63	19.59	43.22	61.80	-18.58	QP
6	0.2488	9.74	19.59	29.33	51.80	-22.47	AVG
7	0.2740	21.17	19.60	40.77	61.00	-20.23	QP
8	0.2740	2.80	19.60	22.40	51.00	-28.60	AVG
9	0.5228	19.80	19.59	39.39	56.00	-16.61	QP
10	0.5228	6.85	19.59	26.44	46.00	-19.56	AVG
11	0.6600	27.83	19.58	47.41	56.00	-8.59	QP
12	0.6600	17.40	19.58	36.98	46.00	-9.02	AVG

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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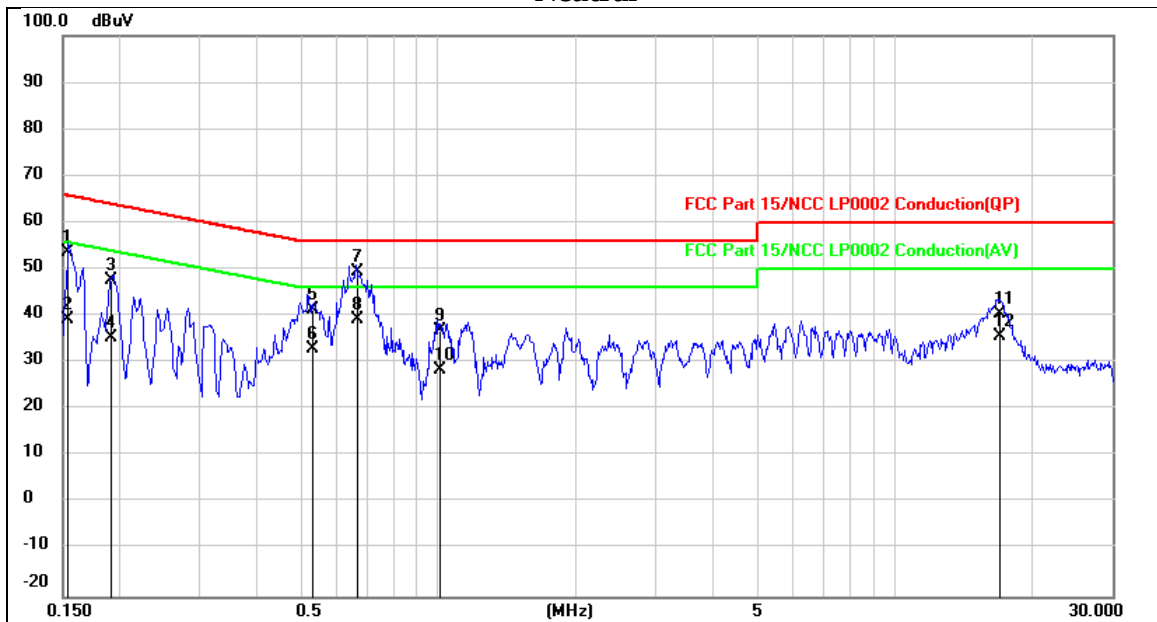
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Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1533	34.02	19.59	53.61	65.82	-12.21	QP
2	0.1533	19.75	19.59	39.34	55.82	-16.48	AVG
3	0.1910	28.14	19.59	47.73	63.99	-16.26	QP
4	0.1910	15.85	19.59	35.44	53.99	-18.55	AVG
5	0.5274	21.85	19.61	41.46	56.00	-14.54	QP
6	0.5274	13.28	19.61	32.89	46.00	-13.11	AVG
7	0.6651	29.84	19.60	49.44	56.00	-6.56	QP
8	0.6651	19.67	19.60	39.27	46.00	-6.73	AVG
9	1.0110	17.10	19.63	36.73	56.00	-19.27	QP
10	1.0110	8.90	19.63	28.53	46.00	-17.47	AVG
11	17.0481	20.38	20.09	40.47	60.00	-19.53	QP
12	17.0481	15.65	20.09	35.74	50.00	-14.26	AVG

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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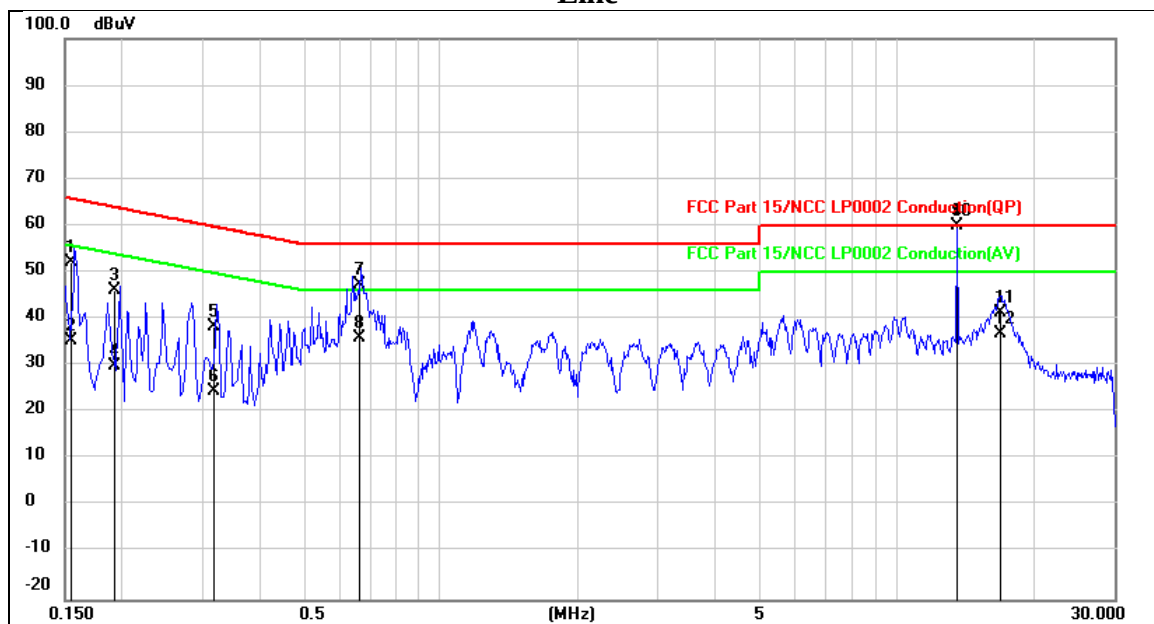
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Co-location (WiFi + NFC)

Perform the AC power-line conducted tests with the NFC antenna connected to determine compliance.

Line



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1545	32.52	19.57	52.09	65.75	-13.66	QP
2	0.1545	15.85	19.57	35.42	55.75	-20.33	AVG
3	0.1939	26.46	19.58	46.04	63.87	-17.83	QP
4	0.1939	10.35	19.58	29.93	53.87	-23.94	AVG
5	0.3181	18.73	19.60	38.33	59.76	-21.43	QP
6	0.3181	4.86	19.60	24.46	49.76	-25.30	AVG
7	0.6631	27.90	19.58	47.48	56.00	-8.52	QP
8	0.6631	16.52	19.58	36.10	46.00	-9.90	AVG
9*	13.5602	39.96	20.03	59.99	-	-	QP
10*	13.5602	39.96	20.03	59.99	-	-	AVG
11	16.8914	21.48	20.00	41.48	60.00	-18.52	QP
12	16.8914	16.80	20.00	36.80	50.00	-13.20	AVG

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. "*" means Fundamental Frequency.

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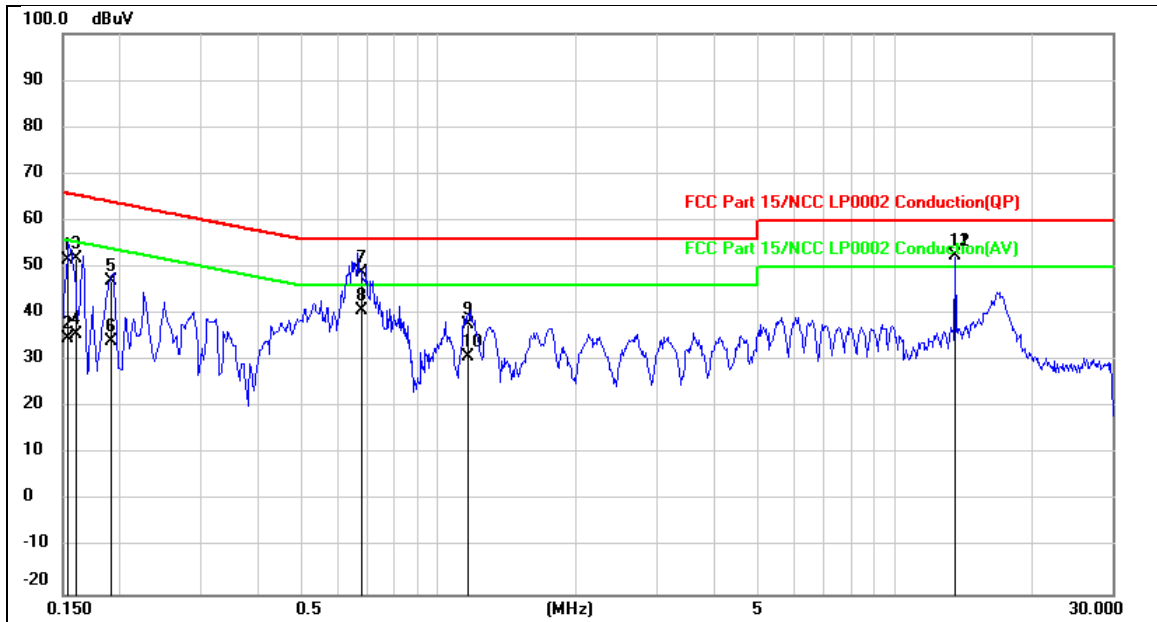
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Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1535	31.91	19.59	51.50	65.81	-14.31	QP
2	0.1535	15.27	19.59	34.86	55.81	-20.95	AVG
3	0.1614	32.39	19.59	51.98	65.39	-13.41	QP
4	0.1614	16.09	19.59	35.68	55.39	-19.71	AVG
5	0.1905	27.32	19.59	46.91	64.01	-17.10	QP
6	0.1905	14.42	19.59	34.01	54.01	-20.00	AVG
7	0.6768	29.39	19.60	48.99	56.00	-7.01	QP
8	0.6768	21.12	19.60	40.72	46.00	-5.28	AVG
9	1.1658	18.19	19.64	37.83	56.00	-18.17	QP
10	1.1658	11.36	19.64	31.00	46.00	-15.00	AVG
11*	13.5603	32.46	20.09	52.55	-	-	QP
12*	13.5603	32.40	20.09	52.49	-	-	AVG

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit
4. "*" means Fundamental Frequency.

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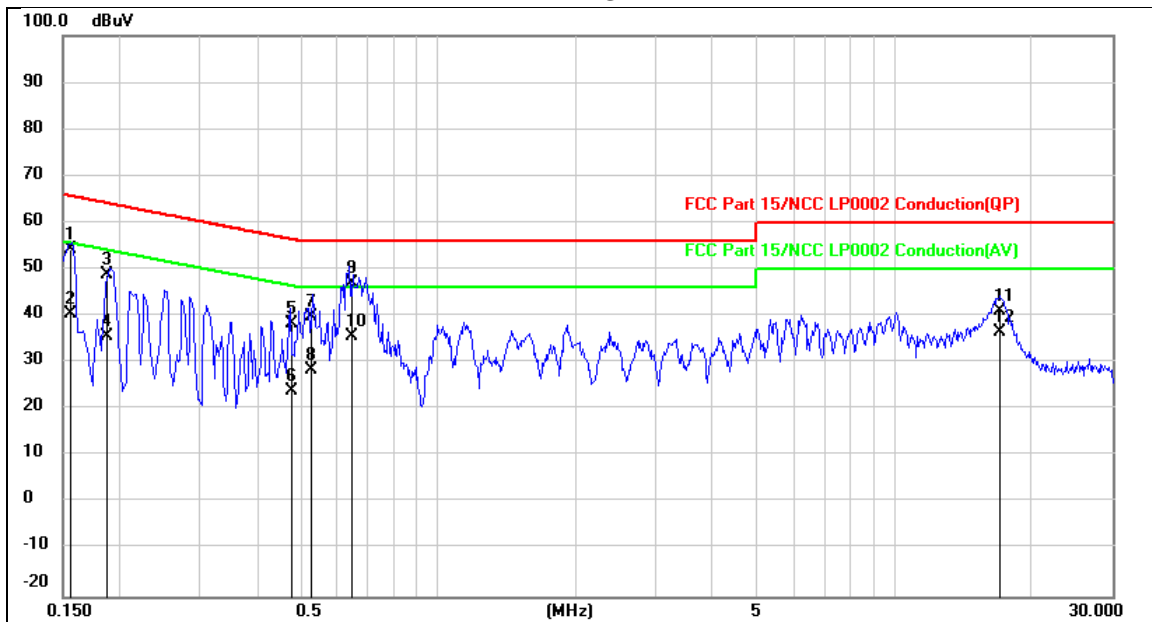
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Retest with a dummy load in lieu of the NFC antenna to determine compliance.

Line



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1556	34.58	19.57	54.15	65.70	-11.55	QP
2	0.1556	20.79	19.57	40.36	55.70	-15.34	AVG
3	0.1867	29.23	19.58	48.81	64.18	-15.37	QP
4	0.1867	15.99	19.58	35.57	54.18	-18.61	AVG
5	0.4781	18.67	19.59	38.26	56.37	-18.11	QP
6	0.4781	4.26	19.59	23.85	46.37	-22.52	AVG
7	0.5237	20.38	19.59	39.97	56.00	-16.03	QP
8	0.5237	8.91	19.59	28.50	46.00	-17.50	AVG
9	0.6435	27.40	19.58	46.98	56.00	-9.02	QP
10	0.6435	16.04	19.58	35.62	46.00	-10.38	AVG
11	17.0155	21.16	20.01	41.17	60.00	-18.83	QP
12	17.0155	16.55	20.01	36.56	50.00	-13.44	AVG

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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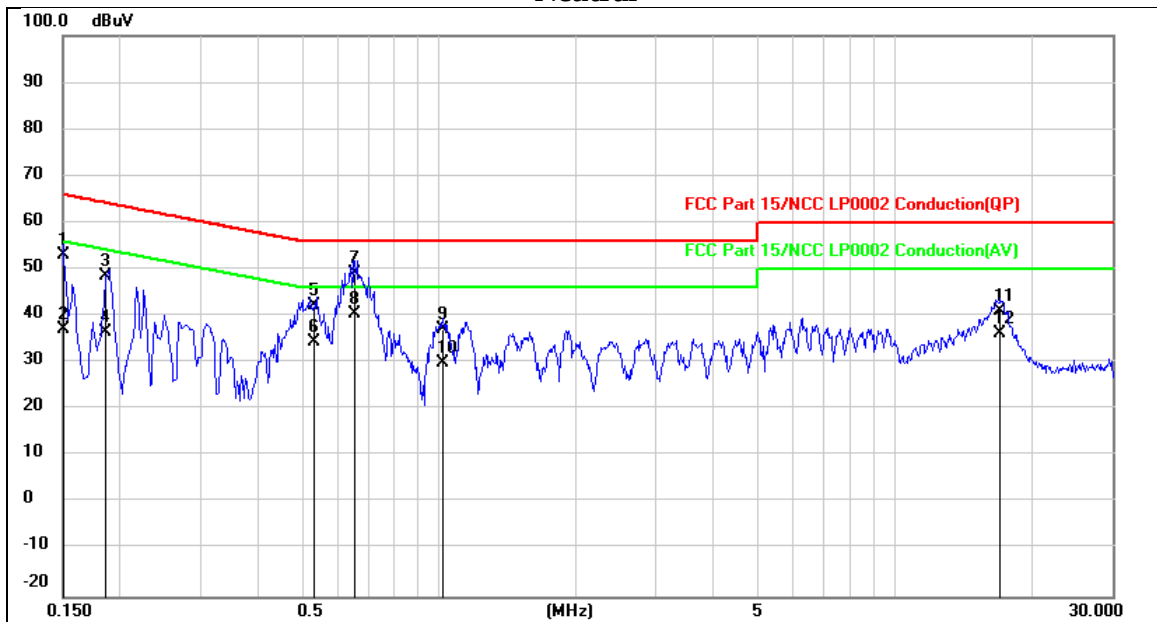
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Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1513	33.41	19.59	53.00	65.93	-12.93	QP
2	0.1513	17.46	19.59	37.05	55.93	-18.88	AVG
3	0.1863	28.92	19.59	48.51	64.20	-15.69	QP
4	0.1863	16.88	19.59	36.47	54.20	-17.73	AVG
5	0.5302	22.63	19.61	42.24	56.00	-13.76	QP
6	0.5302	14.78	19.61	34.39	46.00	-11.61	AVG
7	0.6544	29.46	19.60	49.06	56.00	-6.94	QP
8	0.6544	20.73	19.60	40.33	46.00	-5.67	AVG
9	1.0245	17.42	19.63	37.05	56.00	-18.95	QP
10	1.0245	10.22	19.63	29.85	46.00	-16.15	AVG
11	17.0614	20.85	20.09	40.94	60.00	-19.06	QP
12	17.0614	16.09	20.09	36.18	50.00	-13.82	AVG

1. Correct = Antenna factor + Cable loss - Amplifier Factor
2. Result = Reading + Correct
3. Margin = Result - Limit

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