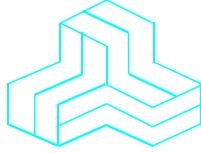


ENGINEERING TEST REPORT



Hive Module
Model(s): Z00718
FCC ID: 2AS9OZ00718

Applicant:

DANBY PRODUCTS LTD.
5070 Whitelaw Road
Guelph, ON N1H 6Z9
Canada

In Accordance With

Federal Communications Commission (FCC)
Part 15, Subpart C, Section 15.247
Digital Modulation Systems (DTS) Operating in 2400 – 2483.5 MHz Band

UltraTech's File No.: 19DANBY001_FCC15C247

This Test report is Issued under the Authority of
Tri M. Luu
Vice President of Engineering
UltraTech Group of Labs

Date: September 23, 2019

Report Prepared by: Dan Huynh

Tested by: Hung Trinh

Issued Date: September 23, 2019

Test Dates:
August 2 -29, 2019
September 5, 6, 9, 2019

- *The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.*
- *This report must not be used by the client to claim product endorsement by any agency of the US Government.*
- *This test report shall not be reproduced, except in full, without a written approval from UltraTech*

UltraTech

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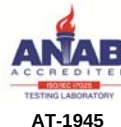


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EXHIBIT 1. INTRODUCTION

1.1. SCOPE

Reference:	FCC Part 15, Subpart C, Section 15.247
Title:	Code of Federal Regulations (CFR), Title 47 – Telecommunication, Part 15 – Radio Frequency Devices
Purpose of Test:	Equipment Certification for Digital Modulation Systems (DTS) Operating Under §15.247
Test Procedures:	▪ ANSI C63.4 ▪ ANSI C63.10 ▪ FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
Environmental Classification:	☒ Commercial, industrial or business environment ☐ Residential environment

1.2. RELATED SUBMITTAL(S)/GRANT(S)

None.

1.3. NORMATIVE REFERENCES

Publication	Year	Title
47 CFR Parts 0-19	2018	Code of Federal Regulations (CFR), Title 47 – Telecommunication
ANSI C63.4	2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 KHz to 40 GHz
ANSI C63.10	2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
FCC, KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02	2019	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES

EXHIBIT 2. PERFORMANCE ASSESSMENT

2.1. CLIENT INFORMATION

Applicant	
Name:	DANBY PRODUCTS LTD.
Address:	5070 Whitelaw Road Guelph, ON N1H 6Z9 Canada
Contact Person:	Muhammed A. Sayyed Phone #: +1(519) 8410686 Fax #: 519-837-9320 Email Address: msayyed@danby.com

Manufacturer	
Name:	DANBY PRODUCTS LTD.
Address:	5070 Whitelaw Road Guelph, ON N1H 6Z9 Canada
Contact Person:	Muhammed A. Sayyed Phone #: +1(519) 8410686 Fax #: 519-837-9320 Email Address: msayyed@danby.com

2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information (with the exception of the Date of Receipt) has been supplied by the applicant.

Brand Name:	DANBY PRODUCTS LTD.
Product Name:	Hive Module
Model(s):	Z00718
Serial Number:	Test Sample
Type of Equipment:	Digital Transmission System (DTS)
Input Power Supply Type:	12 VDC
Primary User Functions of EUT:	Data Transmission over 2.4GHz Wi-Fi

2.3. EUT'S TECHNICAL SPECIFICATIONS

Transmitter	
Equipment Type:	Mobile Base station (fixed use)
Intended Operating Environment:	Commercial, industrial or business environment
Power Supply Requirement:	12 VDC
RF Output Power Rating:	802.11b: 18.29 dBm Peak 802.11g: 21.81 dBm Peak 802.11n HT20: 21.82 dBm Peak 802.11n HT40: 20.47 dBm Peak
Operating Frequency Range:	802.11b: 2412 - 2462 MHz 802.11g: 2412 - 2462 MHz 802.11n HT20: 2412 - 2462 MHz 802.11n HT40: 2432 - 2442 MHz
RF Output Impedance:	50 Ω
Duty Cycle:	Continuous
Modulation Type:	802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16-QAM / 64-QAM)
Antenna Connector Types:	*SMA

*Antenna will be permanently attached by using epoxy with module.

2.4. ASSOCIATED ANTENNA DESCRIPTIONS

Antenna Type	Manufacturer	Model	Maximum Gain (dBi)
Directional	TP-LINK	TL-ANT2409A	9

2.5. LIST OF EUT'S PORTS

Port Number	EUT's Port Description	Number of Identical Ports	Connector Type	Cable Type (Shielded/Non-shielded)
1	Antenna	1	SMA Jack with adapter of SMA PLUG-RP SMA JACK	Shielded
2	DC & I/O	1	100 Pin Terminal Block	Non-shielded

2.6. ANCILLARY EQUIPMENT

The EUT was tested while connected to the following representative configuration of ancillary equipment necessary to exercise the ports during tests:

Ancillary Equipment # 1	
Description:	Laptop
Brand name:	Lenovo
Model Name or Number:	ThinkPad Edge 0578
Serial Number:	IS057882 ULRBXKBG
Connected to EUT's Port:	Connected to USB test jig cable for programming purposes

EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

3.1. CLIMATE TEST CONDITIONS

The climate conditions of the test environment are as follows:

Temperature:	21 to 23 °C
Humidity:	45 to 58%
Pressure:	102 kPa
Power Input Source:	12 VDC

3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TESTS

Operating Modes:	The transmitter was operated in a continuous transmission mode with the carrier modulated as specified in the Test Data.
Special Test Software:	Test software provided by the Applicant to operate the EUT at each channel frequency continuously and in the range of typical modes of operation.
Special Hardware Used:	N/A
Transmitter Test Antenna:	The EUT is tested with the antenna fitted in a manner typical of normal intended use as described with the test results.

Transmitter Test Signals	
Frequency Band(s):	802.11b/g, 802.11n HT20: 2412 - 2462 MHz 802.11n HT40: 2432 - 2442 MHz
Frequency(ies) Tested:	802.11b: 2412 MHz, 2437 MHz, 2462 MHz 802.11g: 2412 MHz, 2417 MHz, 2437 MHz, 2457 MHz, 2462 MHz 802.11n HT20: 2412 MHz, 2417 MHz, 2437 MHz, 2447 MHz, 2452 MHz, 2457 MHz, 2462 MHz 802.11n HT40: 2432 MHz, 2437 MHz, 2442 MHz
RF Power Output: (measured maximum output power at antenna terminals)	802.11b: 18.29 dBm Peak 802.11g: 21.81 dBm Peak 802.11n HT20: 21.82 dBm Peak 802.11n HT40: 20.47 dBm Peak
Normal Test Modulation:	DSSS / OFDM
Modulating Signal Source:	Internal

EXHIBIT 4. SUMMARY OF TEST RESULTS

4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

- AC Power Line Conducted Emissions were performed in UltraTech's shielded room, 24'(L) by 16'(W) by 8'(H).
- Radiated Emissions were performed at the Ultratech's 3-10 TDK Semi-Anechoic Chamber situated in the Town of Oakville, province of Ontario. This test site been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville 3-10 TDK Semi-Anechoic Chamber has been filed with ANAB File No.: AT-1945.

4.2. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

FCC Section(s)	Test Requirements	Compliance (Yes/No)
15.203	Antenna requirements	Yes*
15.207(a)	AC Power Line Conducted Emissions	Yes
15.247(a)(2)	6 dB Bandwidth	Yes
15.247(b)(3)	Peak Conducted Output Power	Yes
15.247(d)	Band-Edge and RF Conducted Spurious Emissions at the Transmitter Antenna Terminal	Yes
15.247(d), 15.209 & 15.205	Transmitter Spurious Radiated Emissions	Yes
15.247(e)	Power Spectral Density	Yes
15.247(i), 1.1307, 1.1310, 2.1091	RF Exposure	Yes

* The EUT complies with the requirement; antenna will be permanently attached by using epoxy with module.

4.3. MODIFICATIONS INCORPORATED IN THE EUT FOR COMPLIANCE PURPOSES

None.

EXHIBIT 5. TEST DATA

5.1. POWER LINE CONDUCTED EMISSIONS [§15.207(a)]

5.1.1. Limit(s)

The equipment shall meet the limits of the following table:

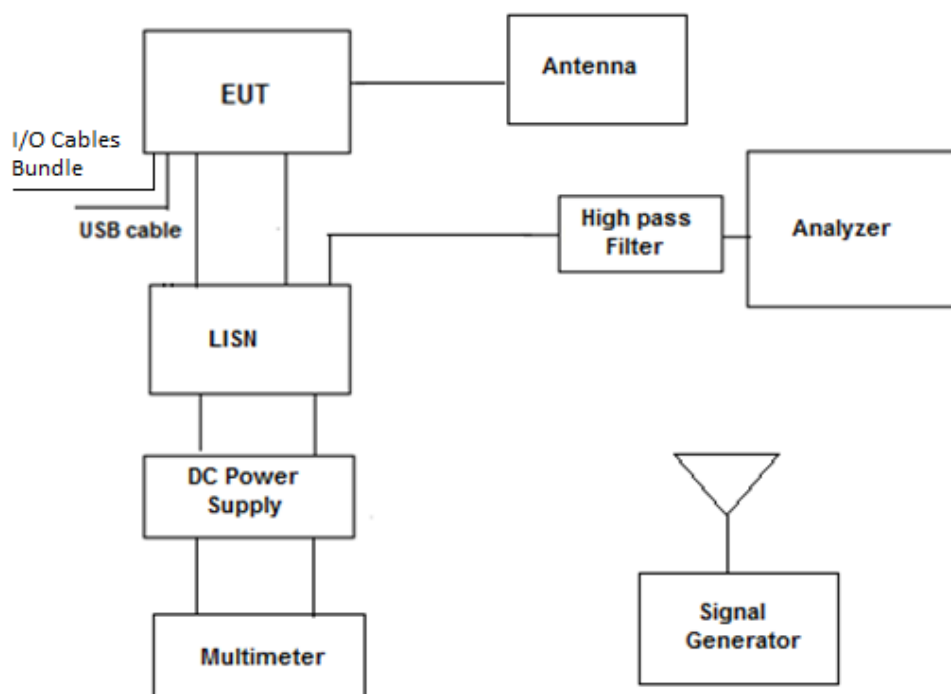
Frequency of emission (MHz)	Conducted Limits (dB μ V)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases linearly with the logarithm of the frequency

5.1.2. Method of Measurements

ANSI C63.4

5.1.3. Test Arrangement

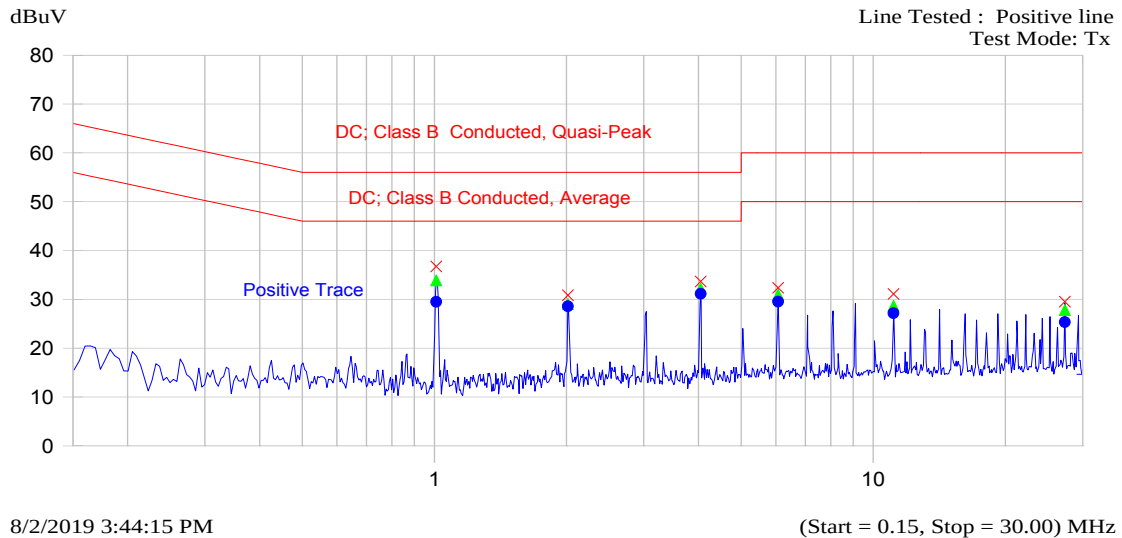


5.1.4. Test Data

Plot 5.1.4.1. Power Line Conducted Emissions (Tx Mode)

Line Voltage: 12 VDC; Line Tested: Positive Line

Current Graph

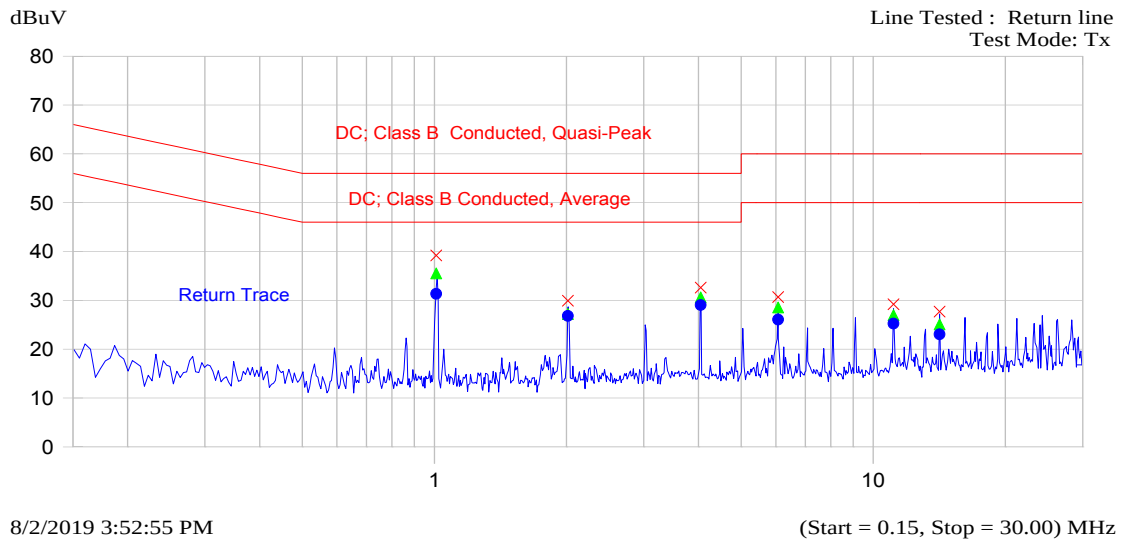


Current List

Frequency MHz	Peak dBuV	QP dBuV	Qp-Qp Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
1.010	36.7	33.9	-22.1	29.5	-16.5	Positive Trace
2.014	30.8	29.0	-27.0	28.6	-17.4	Positive Trace
4.046	33.7	32.2	-23.8	31.1	-14.9	Positive Trace
6.071	32.4	30.9	-29.1	29.5	-20.5	Positive Trace
11.129	31.1	28.7	-31.3	27.2	-22.8	Positive Trace
27.319	29.5	27.8	-32.2	25.3	-24.7	Positive Trace

Plot 5.1.4.2. Power Line Conducted Emissions (Tx Mode)
Line Voltage: 12 VDC Line Tested: Return Line

Current Graph

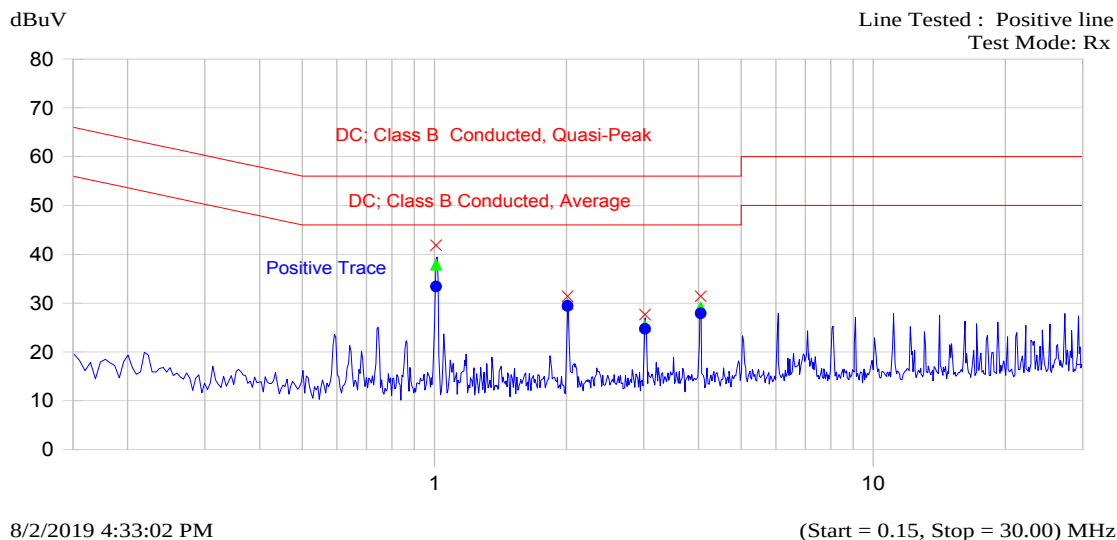


Current List

Frequency MHz	Peak dBuV	QP dBuV	Qp-Qp Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
1.010	39.2	35.5	-20.5	31.3	-14.7	Return Trace
2.014	29.9	27.2	-28.8	26.8	-19.2	Return Trace
4.047	32.6	30.6	-25.4	29.0	-17.0	Return Trace
6.072	30.7	28.6	-31.4	26.0	-24.0	Return Trace
11.129	29.2	27.0	-33.0	25.2	-24.8	Return Trace
14.164	27.7	25.0	-35.0	23.0	-27.0	Return Trace

Plot 5.1.4.3. Power Line Conducted Emissions (Rx Mode)
Line Voltage: 12 VDC; Line Tested: Positive Line

Current Graph

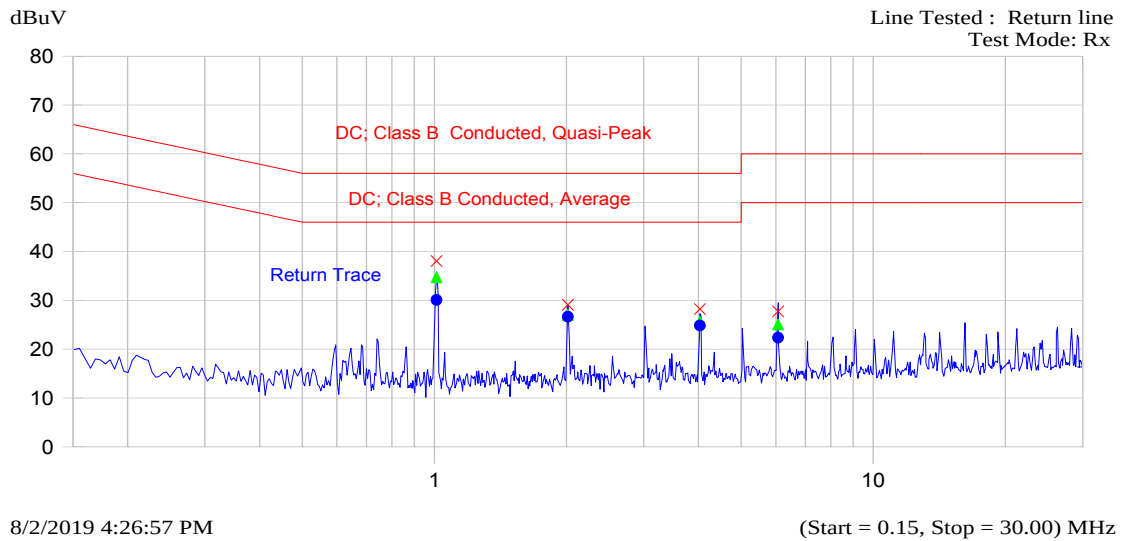


Current List

Frequency MHz	Peak dBuV	QP dBuV	Qp-Qp Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
1.009	41.8	37.9	-18.1	33.4	-12.6	Positive Trace
2.012	31.4	29.8	-26.2	29.4	-16.6	Positive Trace
3.018	27.7	25.3	-30.7	24.7	-21.3	Positive Trace
4.047	31.4	29.1	-26.9	27.9	-18.1	Positive Trace

Plot 5.1.4.4. Power Line Conducted Emissions (Rx Mode)
Line Voltage: 12 VDC Line Tested: Return Line

Current Graph



Current List

Frequency MHz	Peak dBuV	QP dBuV	Qp-Qp Limit dB	Avg dBuV	Avg-Avg Limit dB	Trace Name
1.011	38.0	34.7	-21.3	30.1	-15.9	Return Trace
2.013	29.1	27.0	-29.0	26.7	-19.3	Return Trace
4.024	28.2	25.6	-30.4	24.8	-21.2	Return Trace
6.071	27.7	25.1	-34.9	22.3	-27.7	Return Trace

5.2. OCCUPIED BANDWIDTH [§ 15.247(a)(2)]

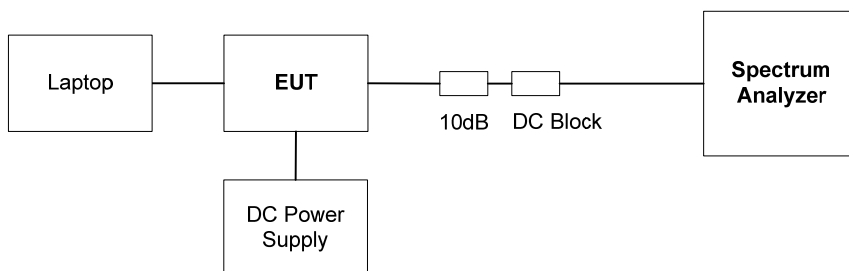
5.2.1. Limit(s)

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

5.2.2. Method of Measurements

KDB 558074 D01 15.247 Meas Guidance v05r02, Section 8.2 DTS Bandwidth (Subclause 11.8.1 Option 1 of ANSI C63.10-2013)

5.2.3. Test Arrangement



5.2.4. Test Data

Operating Mode		Power Setting	Frequency (MHz)	6dB Bandwidth (MHz)	Min. Limit (kHz)
802.11b	DBPSK 1 Mbps	24	2412	9.095	500
		24	2437	9.095	500
		24	2462	9.095	500
	DQPSK 2 Mbps	24	2412	8.974	500
		24	2437	8.814	500
		24	2462	9.095	500
	CCK 11 Mbps	24	2412	9.014	500
		24	2437	9.014	500
		24	2462	8.413	500

Operating Mode		Power Setting	Frequency (MHz)	6dB Bandwidth (MHz)	Min. Limit (kHz)
802.11g	BPSK 9 Mbps	21	2412	15.873	500
		24	2437	15.833	500
		19	2462	16.466	500
	QPSK 18 Mbps	21	2412	15.873	500
		24	2437	15.889	500
		19	2462	16.466	500
	16-QAM 36 Mbps	21	2412	15.929	500
		24	2437	16.506	500
		19	2462	16.522	500
	64-QAM 54 Mbps	21	2412	16.154	500
		24	2437	16.506	500
		19	2462	16.579	500
802.11n HT20 400 ns	MCS 0 7.2 Mbps	20	2412	16.546	500
		24	2437	16.450	500
		18	2462	17.364	500
	MCS 2 21.7 Mbps	20	2412	16.490	500
		24	2437	16.450	500
		18	2462	17.532	500
	MCS 4 43.3 Mbps	20	2412	16.546	500
		24	2437	17.011	500
		18	2462	17.813	500
	MCS 7 72.2 Mbps	20	2412	16.546	500
		24	2437	17.067	500
		18	2462	17.756	500

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September 23, 2019

All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

Operating Mode		Power Setting	Frequency (MHz)	6dB Bandwidth (MHz)	Min. Limit (kHz)
802.11n HT20 800 ns	MCS 0 6.5 Mbps	19	2412	16.434	500
		24	2437	16.394	500
		18	2462	17.420	500
	MCS 2 19.5 Mbps	19	2412	15.490	500
		24	2437	16.450	500
		18	2462	17.420	500
	MCS 4 39 Mbps	19	2412	16.546	500
		24	2437	16.899	500
		18	2462	17.756	500
	MCS 7 65 Mbps	19	2412	17.163	500
		24	2437	17.404	500
		18	2462	17.756	500
802.11n HT40 400 ns	MCS 0 15 Mbps	20	2432	35.216	500
		19	2437	35.216	500
		18	2442	35.216	500
	MCS 2 45 Mbps	20	2432	35.216	500
		19	2437	35.216	500
		18	2442	35.096	500
	MCS 4 90 Mbps	20	2432	35.216	500
		19	2437	35.216	500
		18	2442	35.096	500
	MCS 7 150 Mbps	20	2432	35.216	500
		19	2437	35.216	500
		18	2442	35.096	500

ULTRATECH GROUP OF LABS

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File #: 19DANBY001_FCC15C247

September 23, 2019

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Operating Mode		Power Setting	Frequency (MHz)	6dB Bandwidth (MHz)	Min. Limit (kHz)
802.11n HT40 800 ns	MCS 0 13.5 Mbps	20	2432	35.048	500
		20	2437	35.096	500
		18	2442	35.096	500
	MCS 2 40.5 Mbps	20	2432	35.048	500
		20	2437	35.096	500
		18	2442	35.096	500
	MCS 4 81 Mbps	20	2432	35.048	500
		20	2437	35.096	500
		18	2442	35.096	500
	MCS 7 135 Mbps	20	2432	35.048	500
		20	2437	35.096	500
		18	2442	35.096	500

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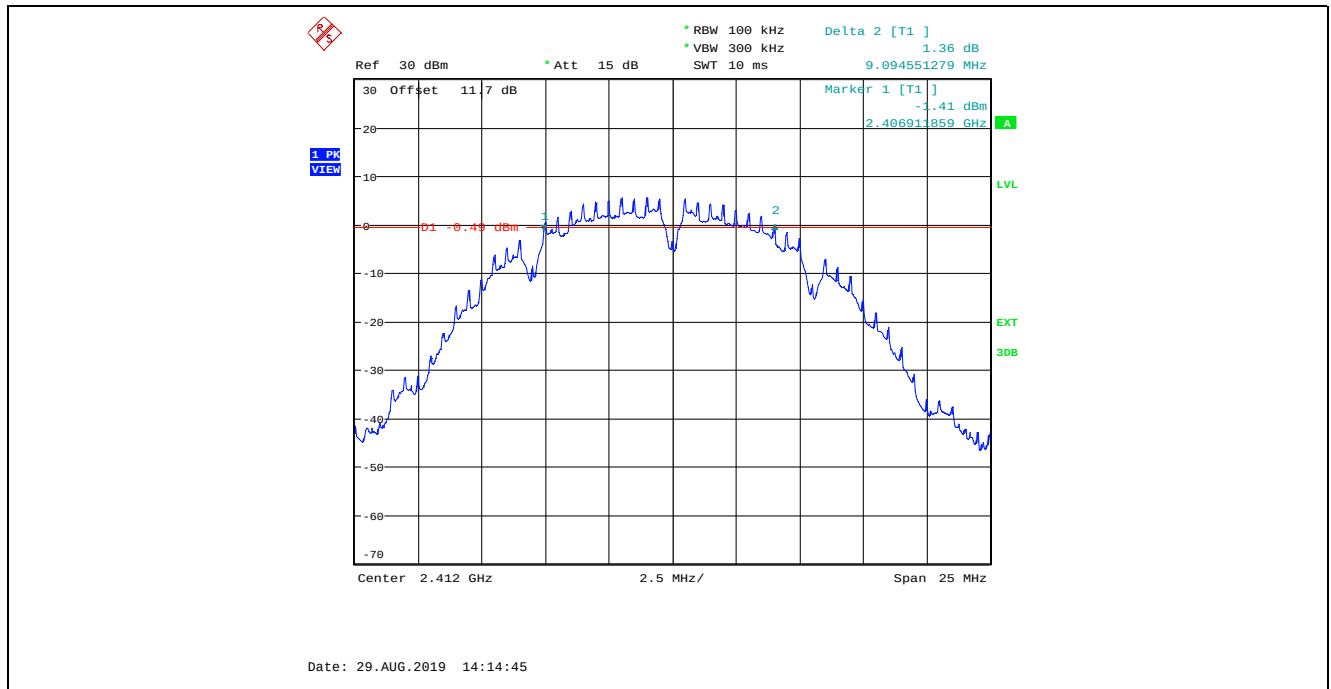
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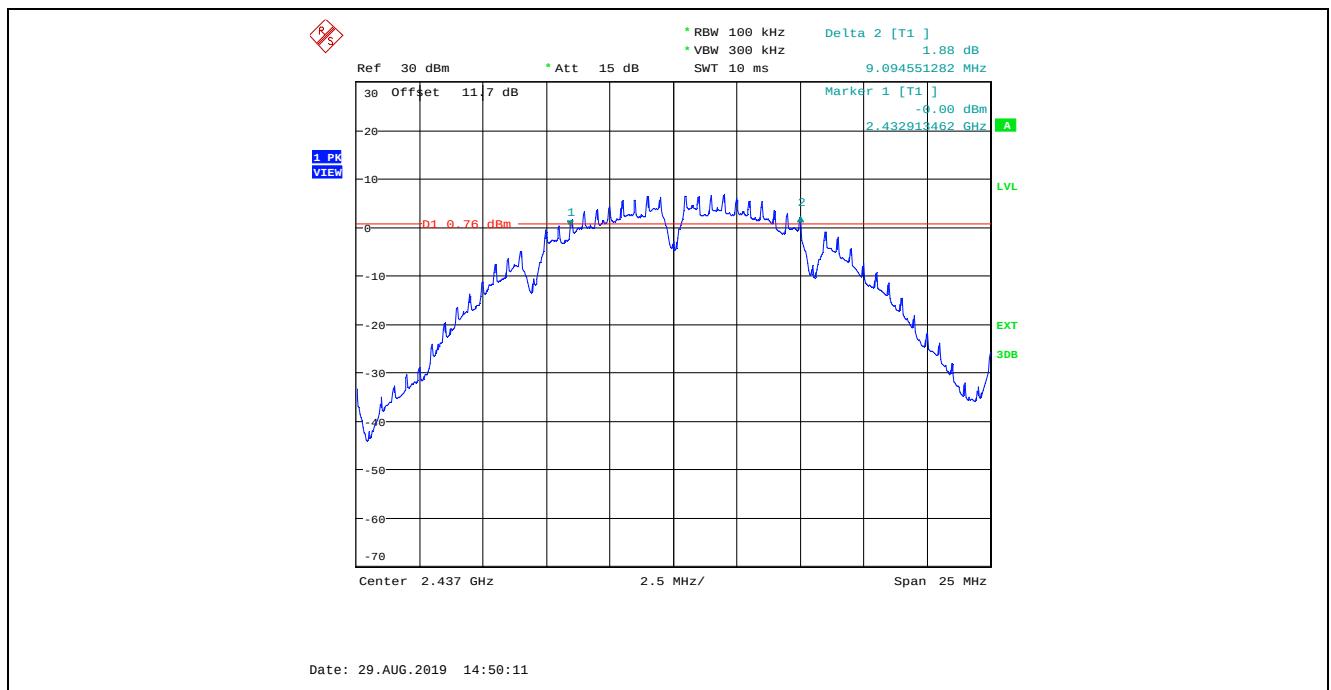
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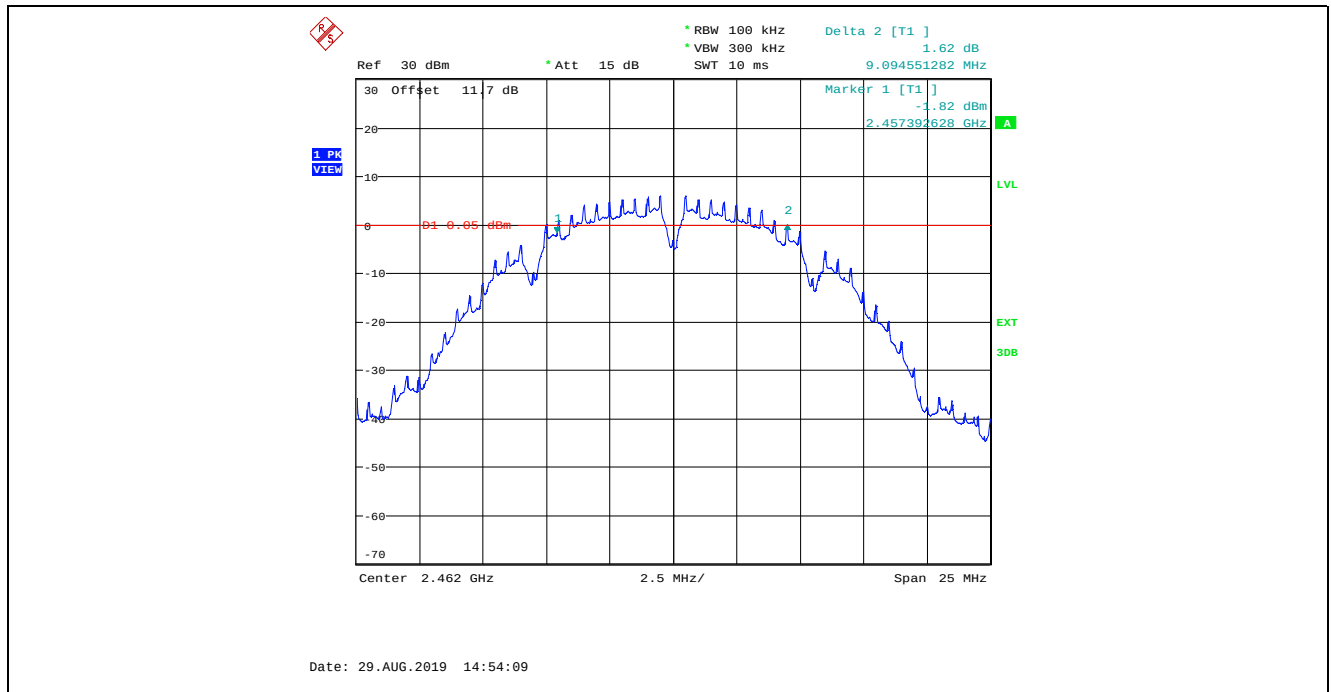
Plot 5.2.4.1. 6 dB Bandwidth
802.11b, DBPSK 1 Mbps, Power Setting 24, Channel 1, 2412 MHz



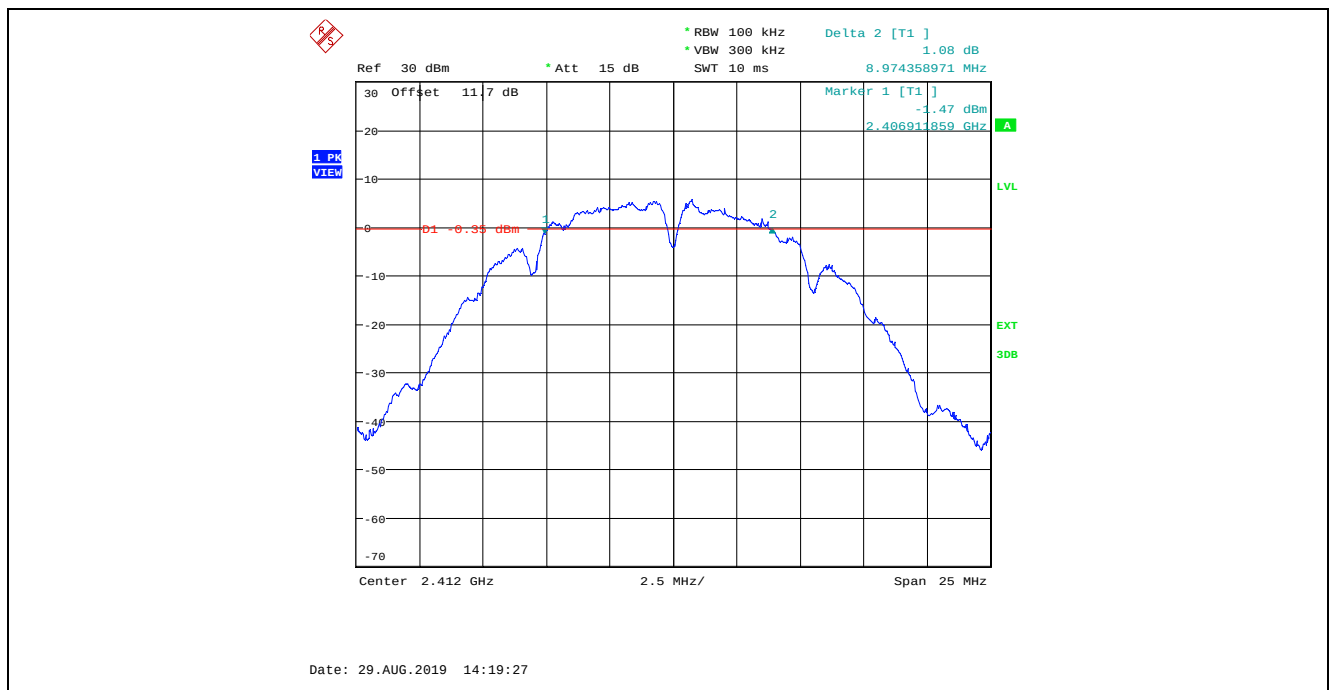
Plot 5.2.4.2. 6 dB Bandwidth
802.11b, DBPSK 1 Mbps, Power Setting 24, Channel 6, 2437 MHz



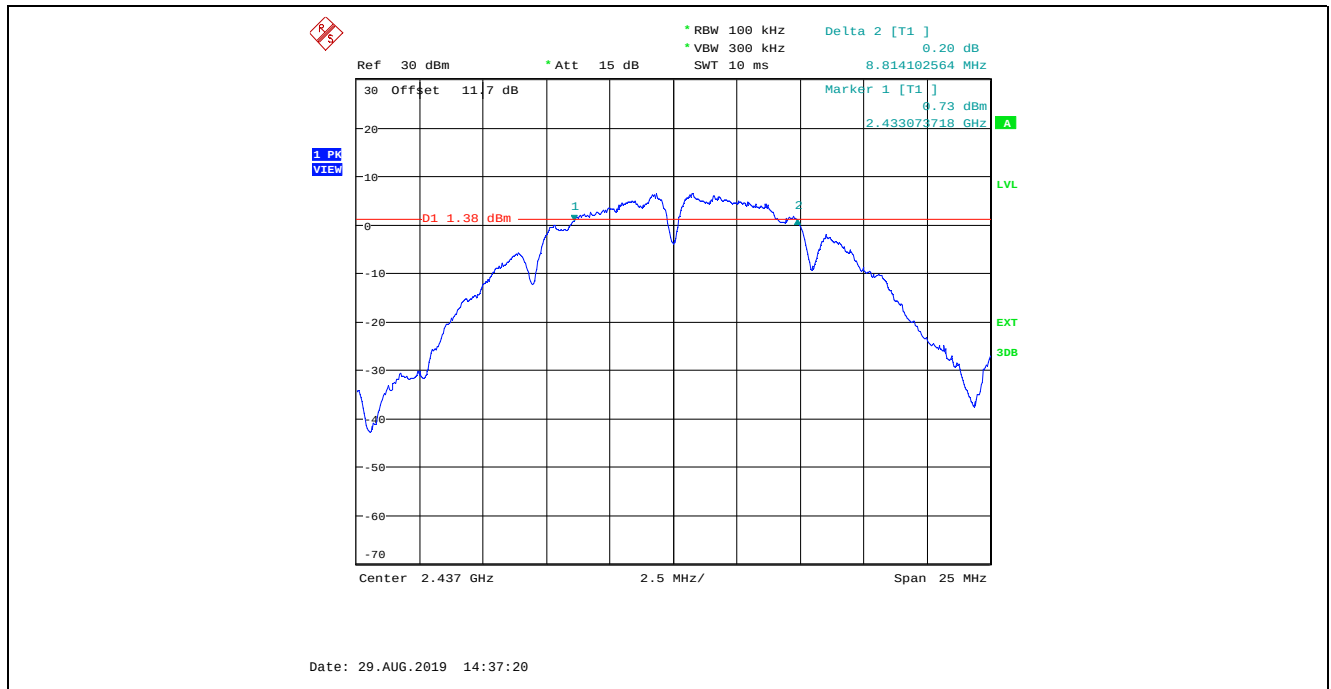
Plot 5.2.4.3. 6 dB Bandwidth
802.11b, DBPSK 1 Mbps, Power Setting 24, Channel 11, 2462 MHz



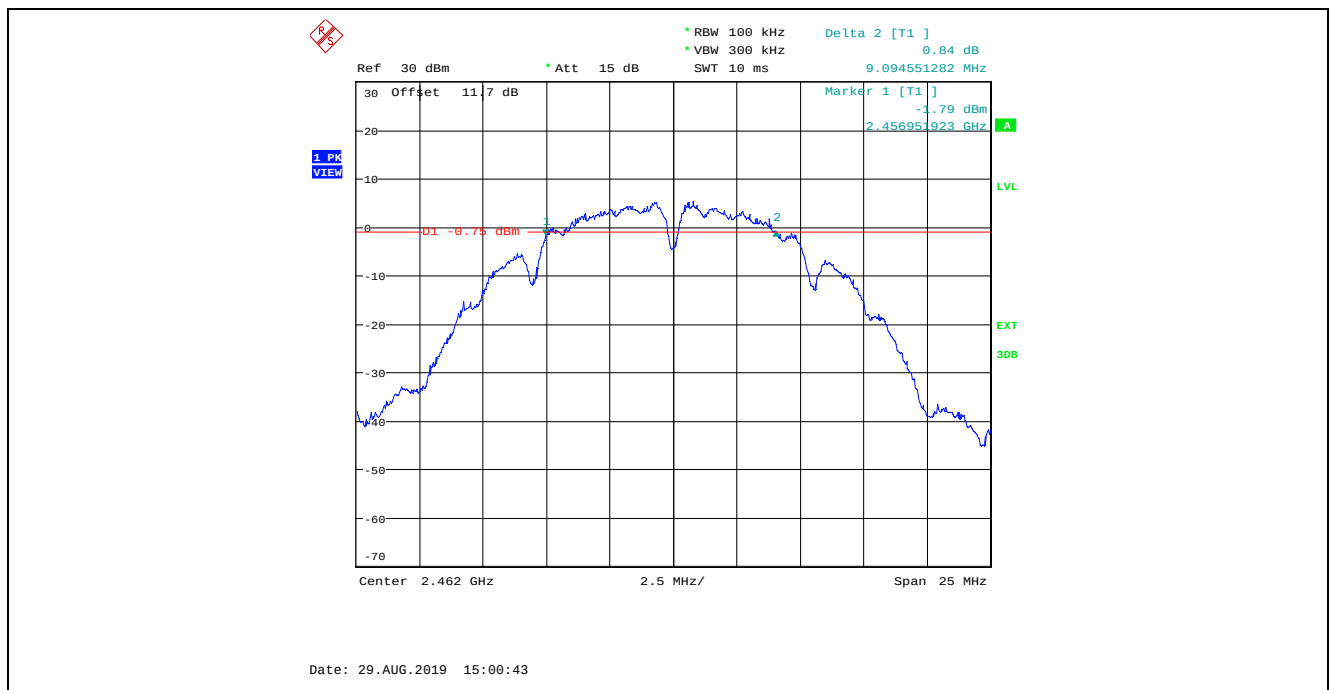
Plot 5.2.4.4. 6 dB Bandwidth
802.11b, DQPSK 2 Mbps, Power Setting 24, Channel 1, 2412 MHz,



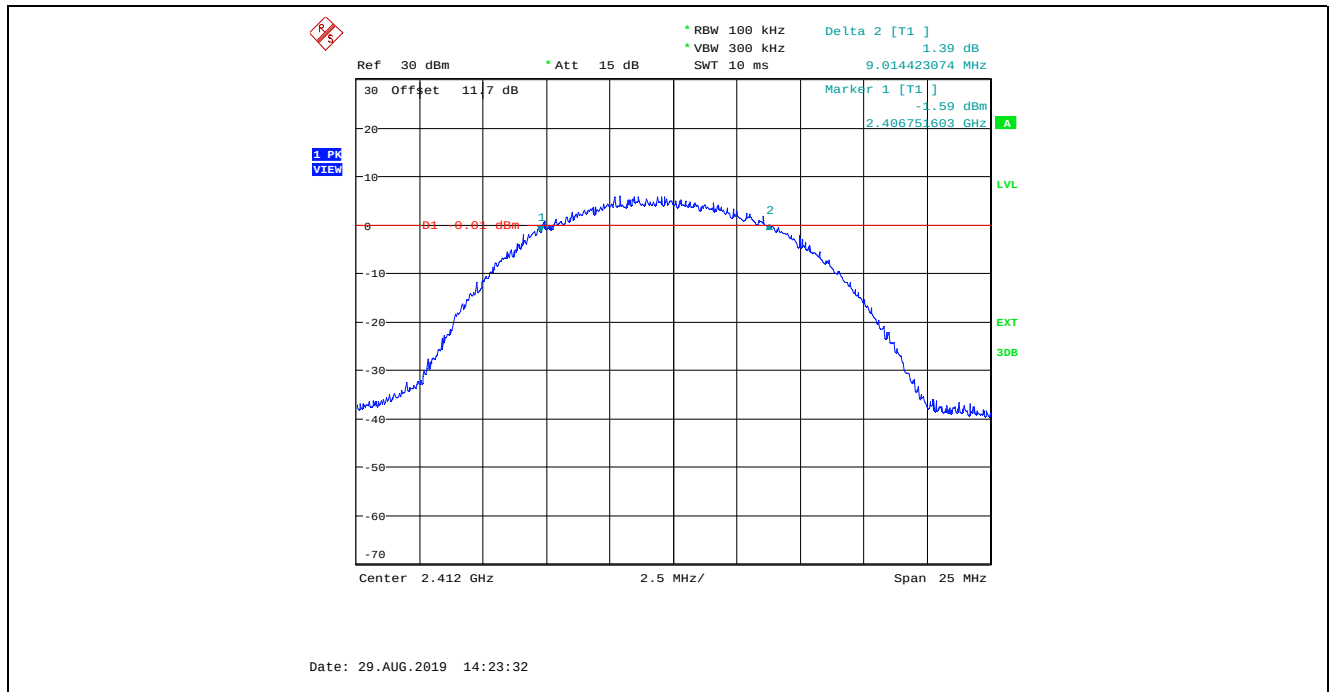
Plot 5.2.4.5. 6 dB Bandwidth
802.11b, DQPSK 2 Mbps, Power Setting 24, Channel 6, 2437 MHz,



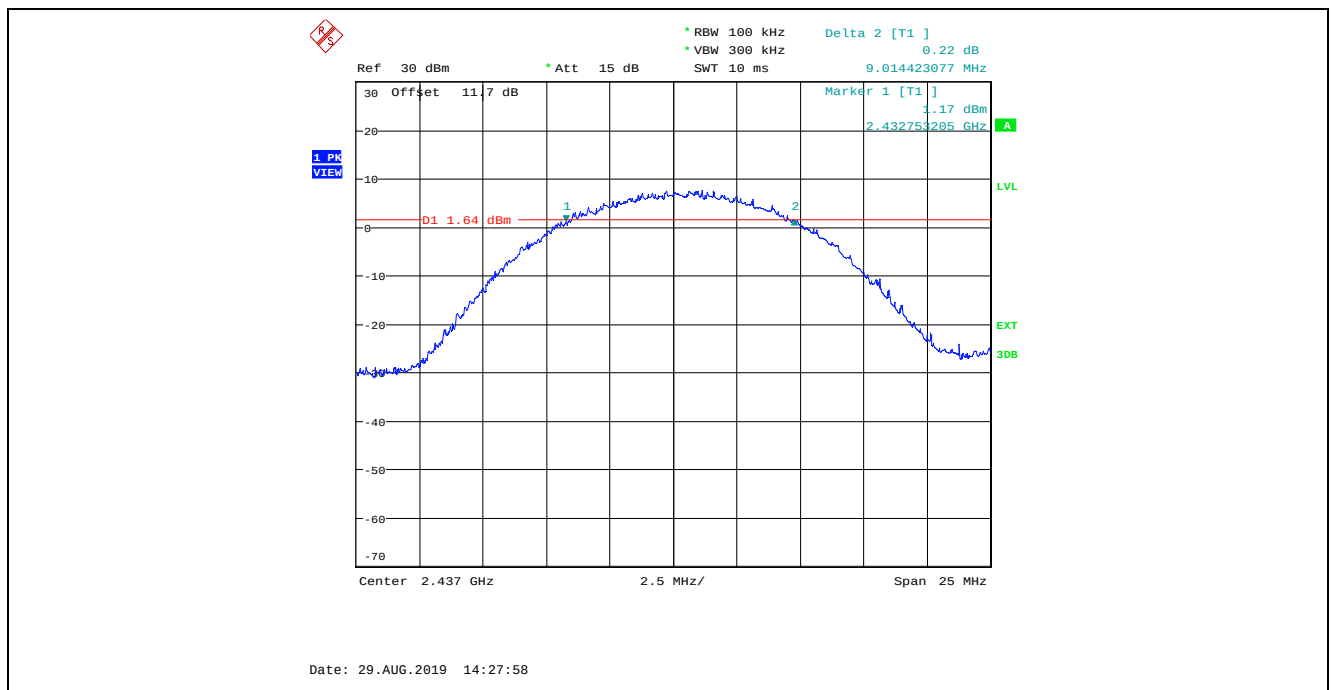
Plot 5.2.4.6. 6 dB Bandwidth
802.11b, DQPSK 2 Mbps, Power Setting 24, Channel 11, 2462 MHz,



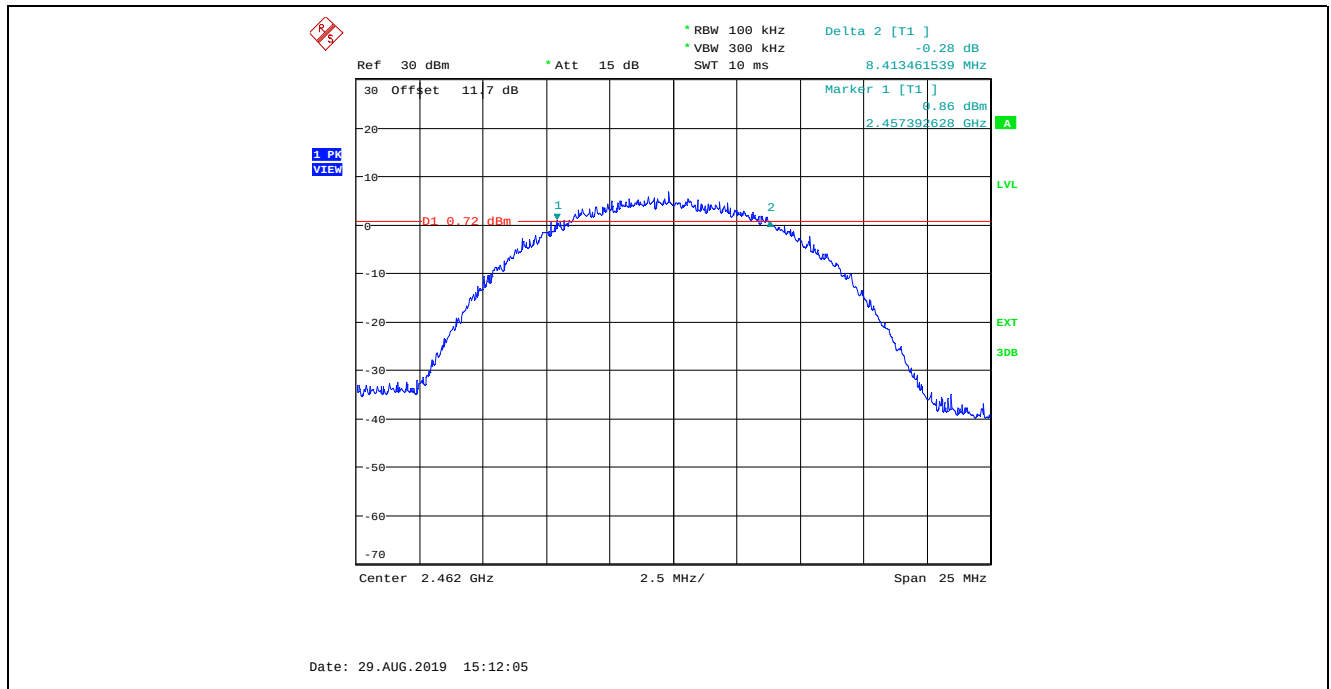
Plot 5.2.4.7. 6 dB Bandwidth
802.11b, CCK 11 Mbps, Power Setting 24, Channel 1, 2412 MHz



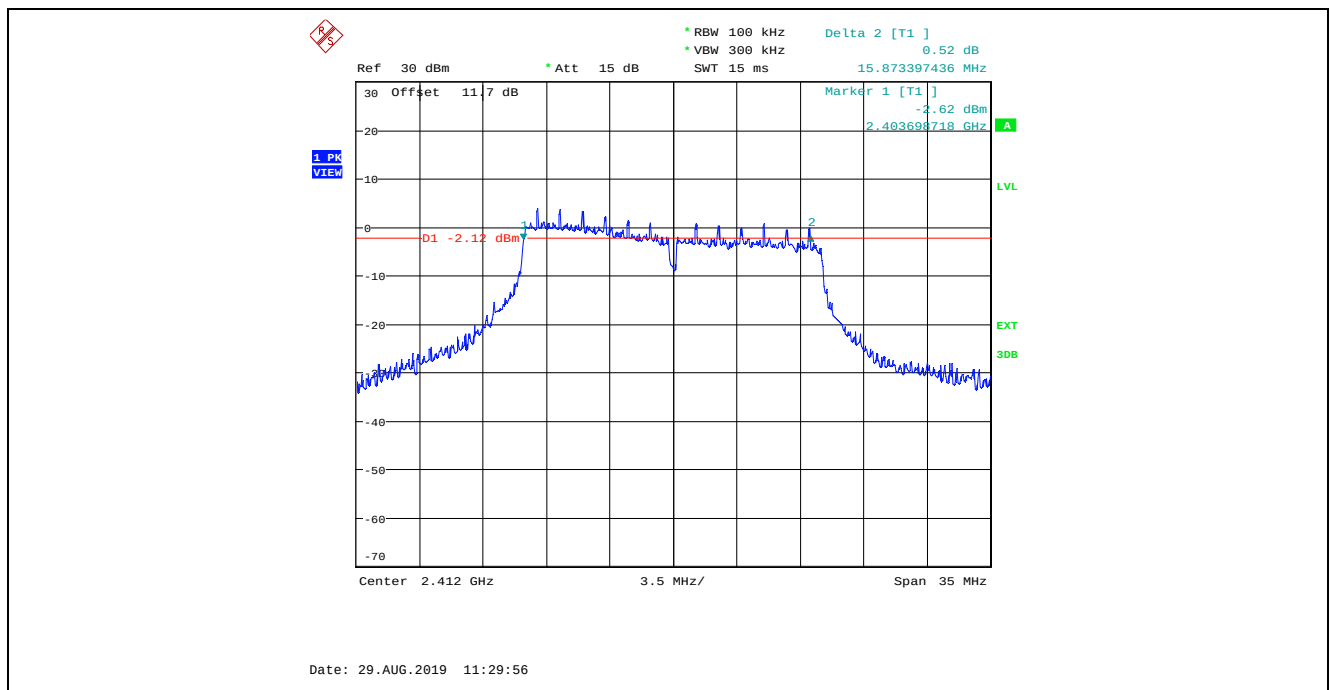
Plot 5.2.4.8. 6 dB Bandwidth
802.11b, CCK 11 Mbps, Power Setting 24, Channel 6, 2437 MHz



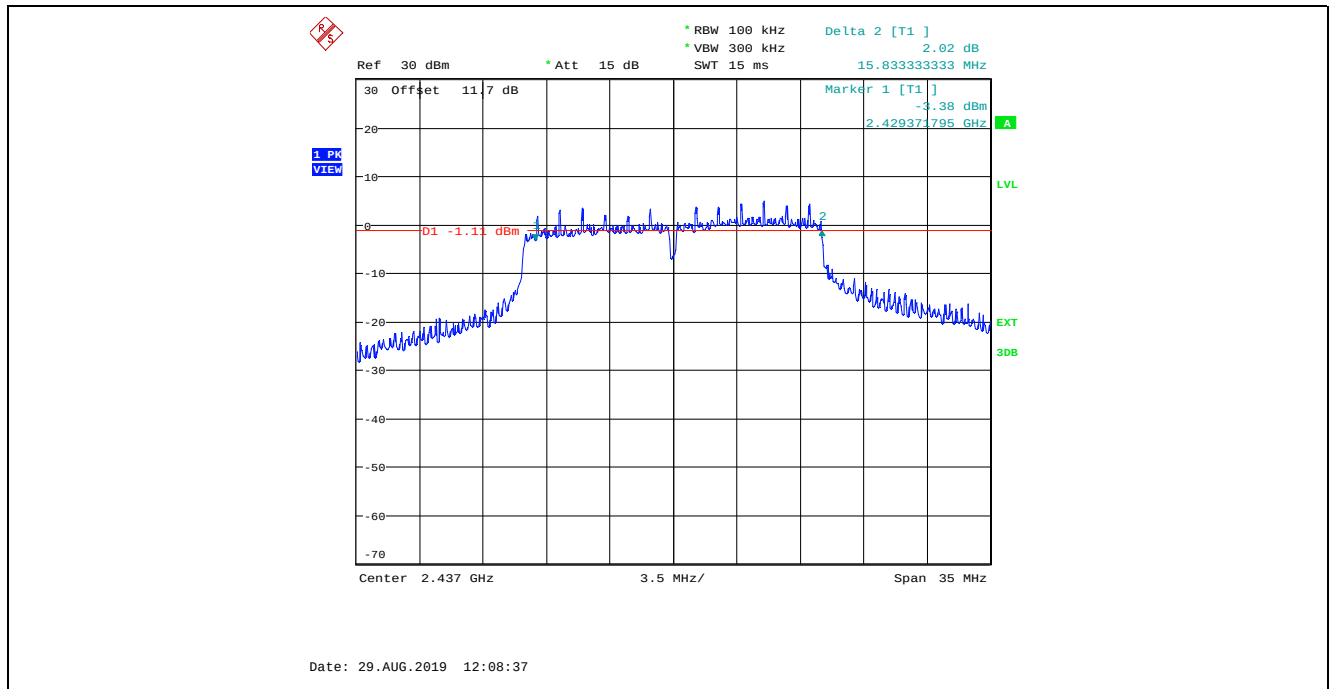
Plot 5.2.4.9. 6 dB Bandwidth
802.11b, CCK 11 Mbps, Power Setting 24, Channel 11, 2462 MHz



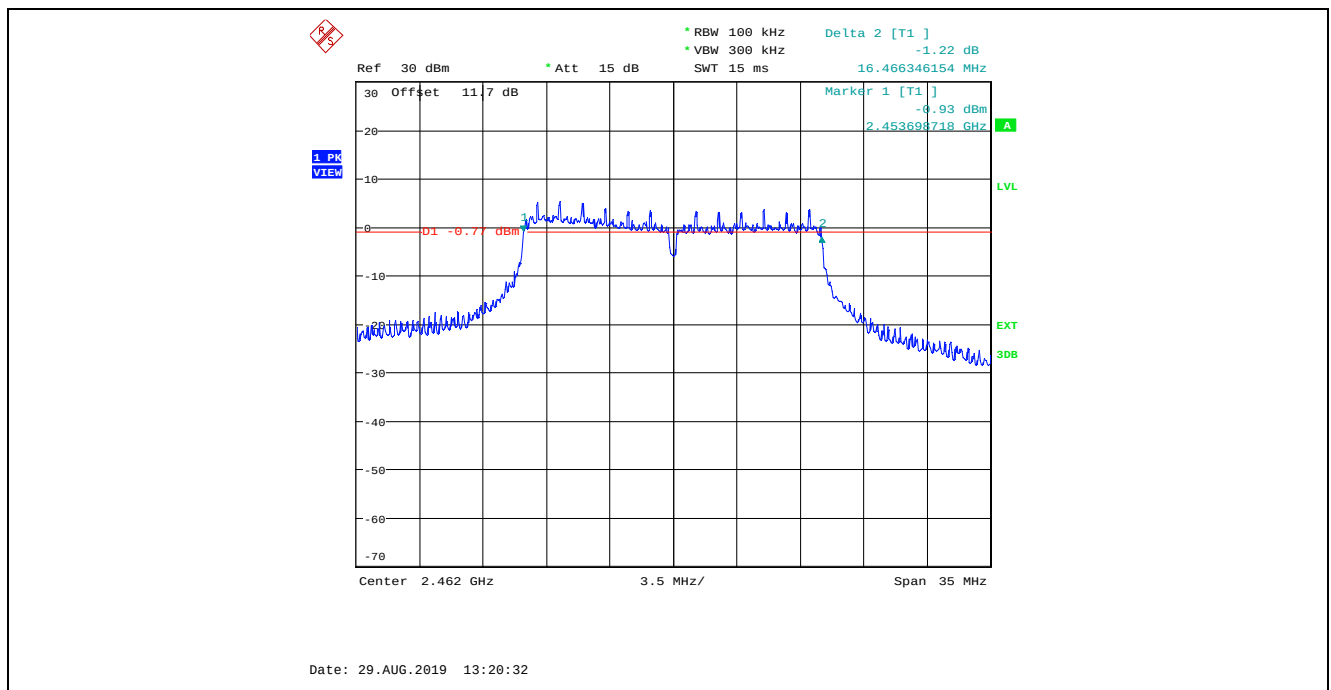
Plot 5.2.4.10. 6 dB Bandwidth
802.11g, BPSK 9 Mbps, Power Setting 21, Channel 1, 2412 MHz



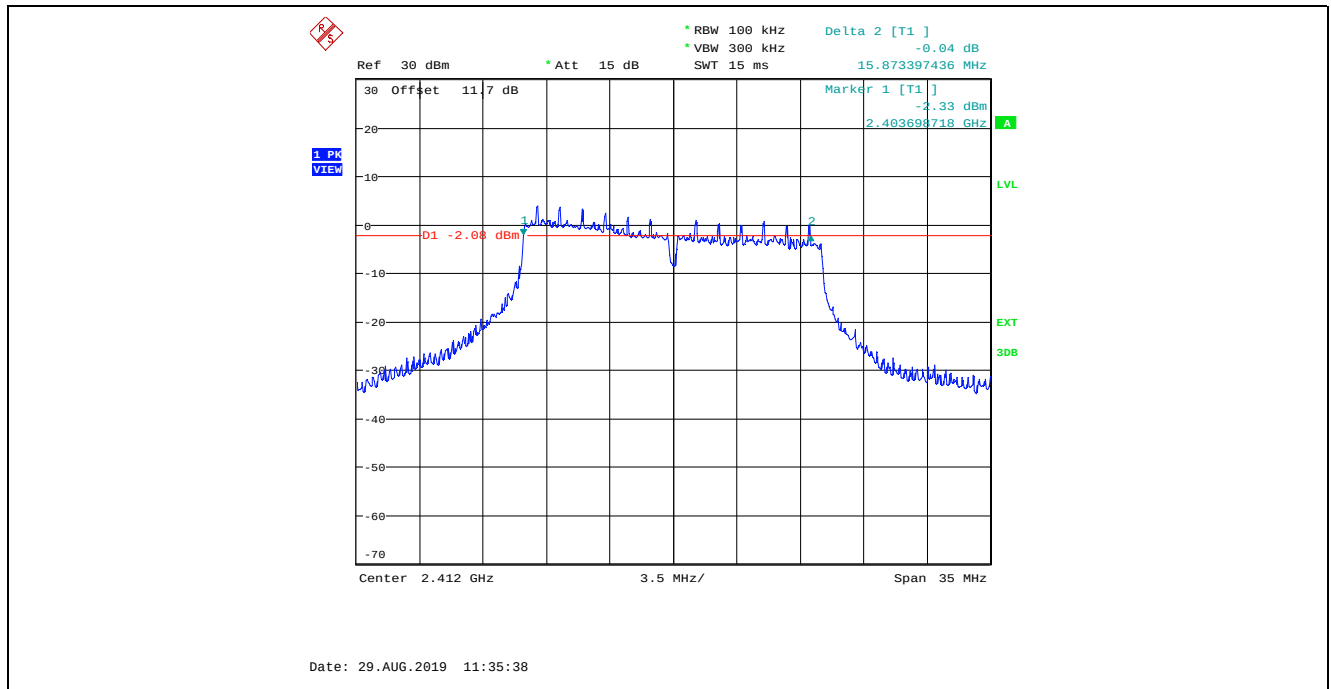
Plot 5.2.4.11. 6 dB Bandwidth
802.11g, BPSK 9 Mbps, Power Setting 24, Channel 6, 2437 MHz



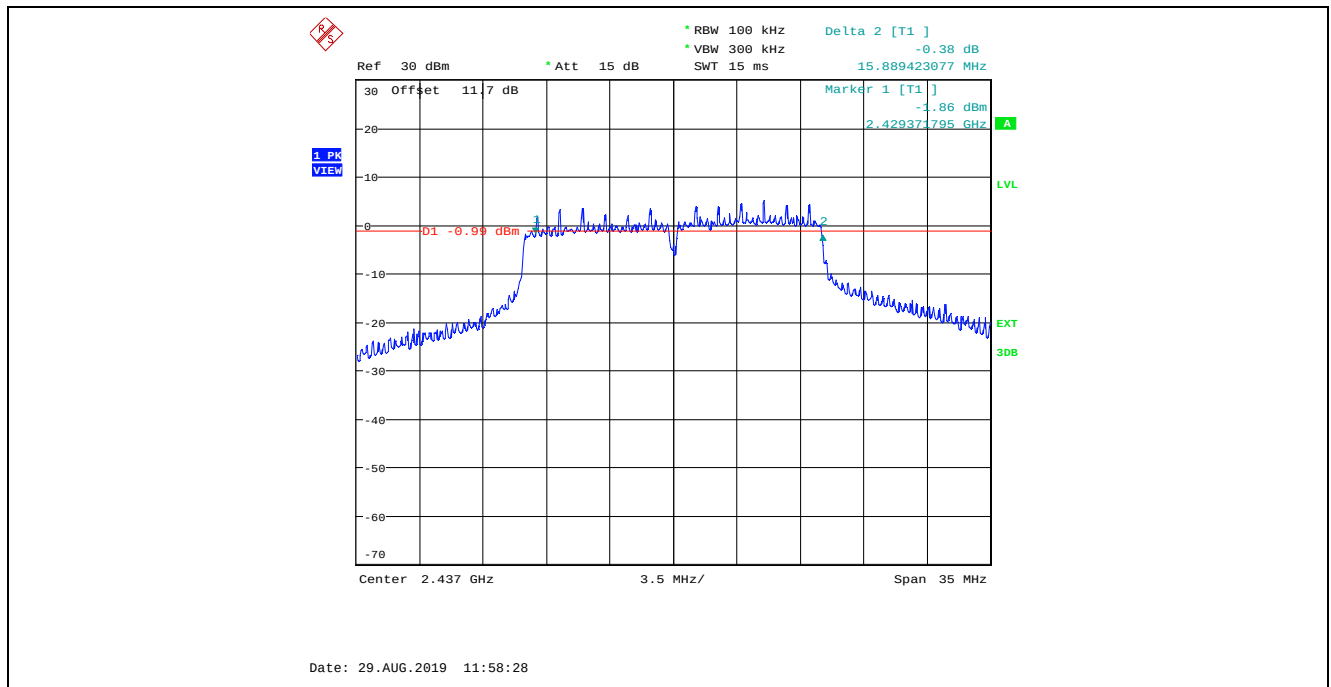
Plot 5.2.4.12. 6 dB Bandwidth
802.11g, BPSK 9 Mbps, Power Setting 19, Channel 11, 2462 MHz



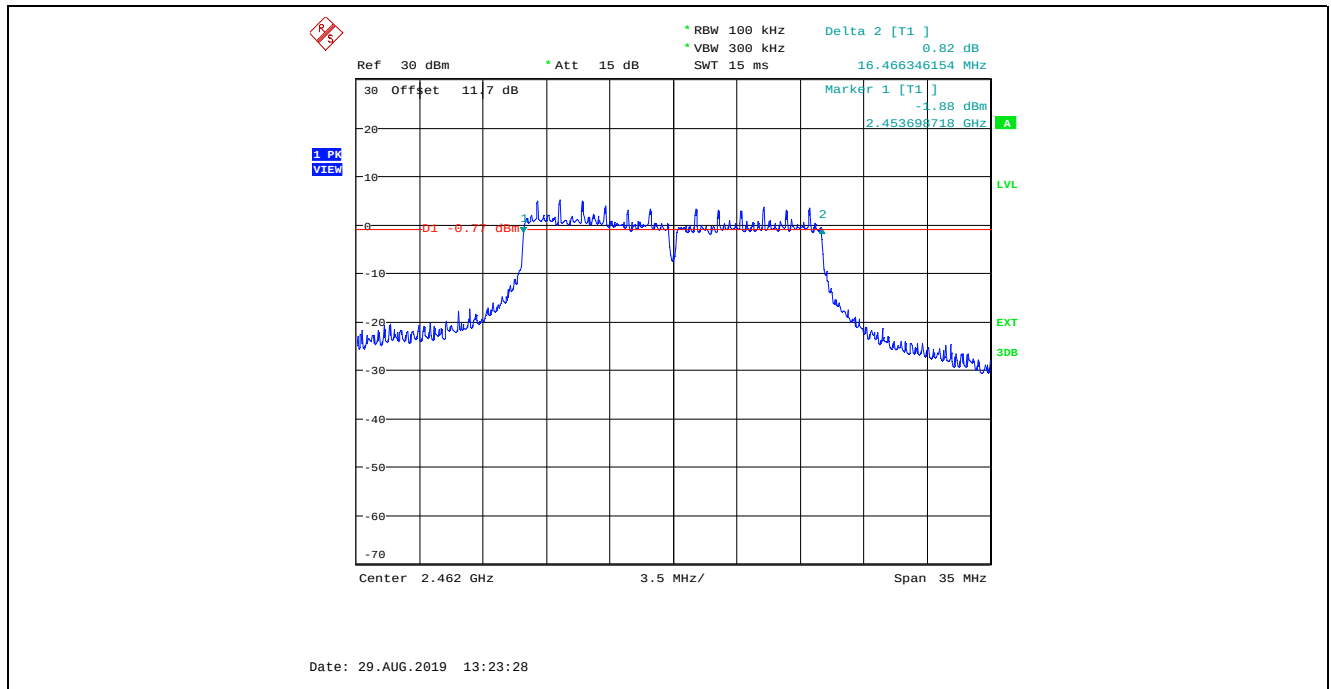
Plot 5.2.4.13. 6 dB Bandwidth
802.11g, QPSK 18 Mbps, Power Setting 21, Channel 1, 2412 MHz



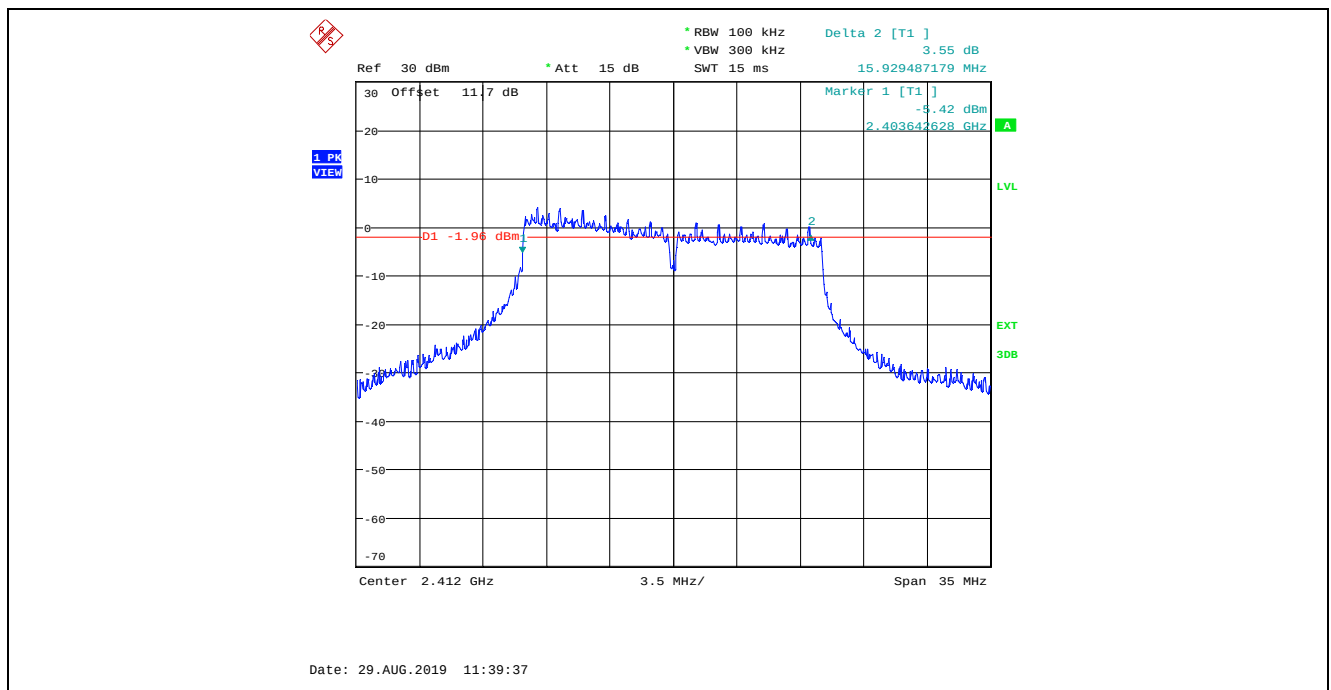
Plot 5.2.4.14. 6 dB Bandwidth
802.11g, QPSK 18 Mbps, Power Setting 24, Channel 6, 2437 MHz



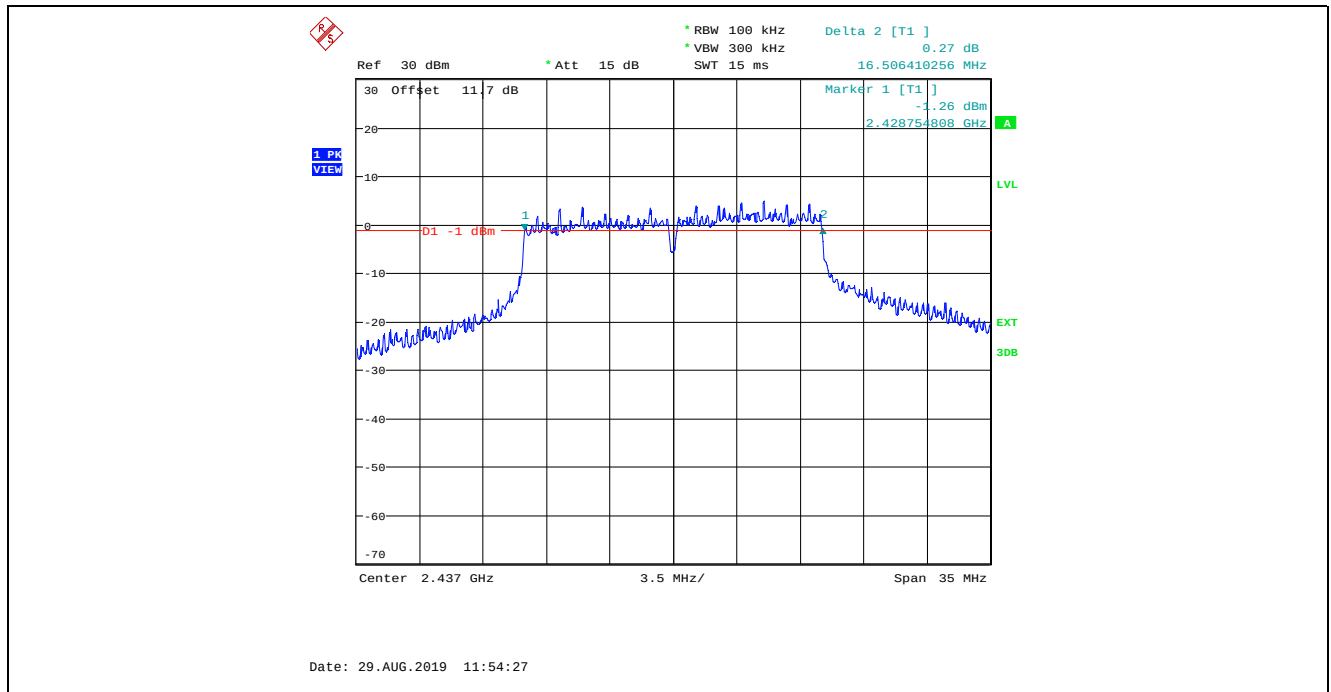
Plot 5.2.4.15. 6 dB Bandwidth
802.11g, QPSK 18 Mbps, Power Setting 19, Channel 11, 2462 MHz



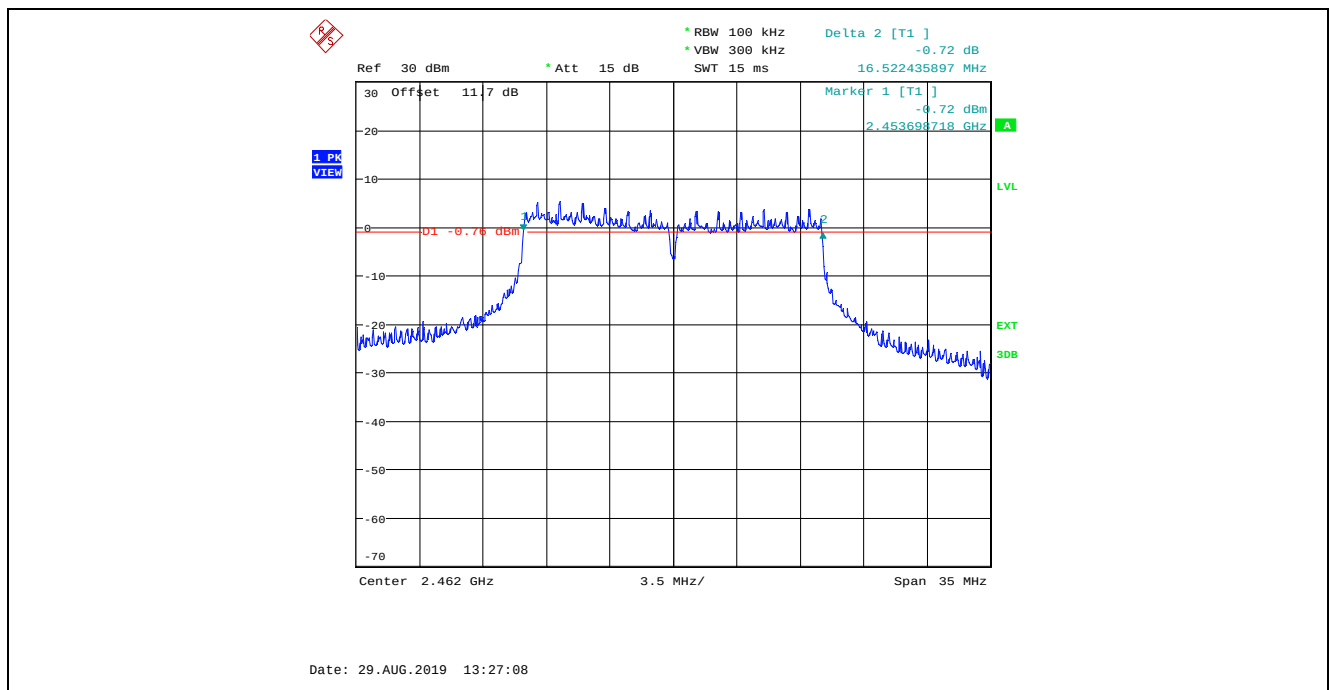
Plot 5.2.4.16. 6 dB Bandwidth
802.11g, 16-QAM 36 Mbps, Power Setting 21, Channel 1, 2412 MHz



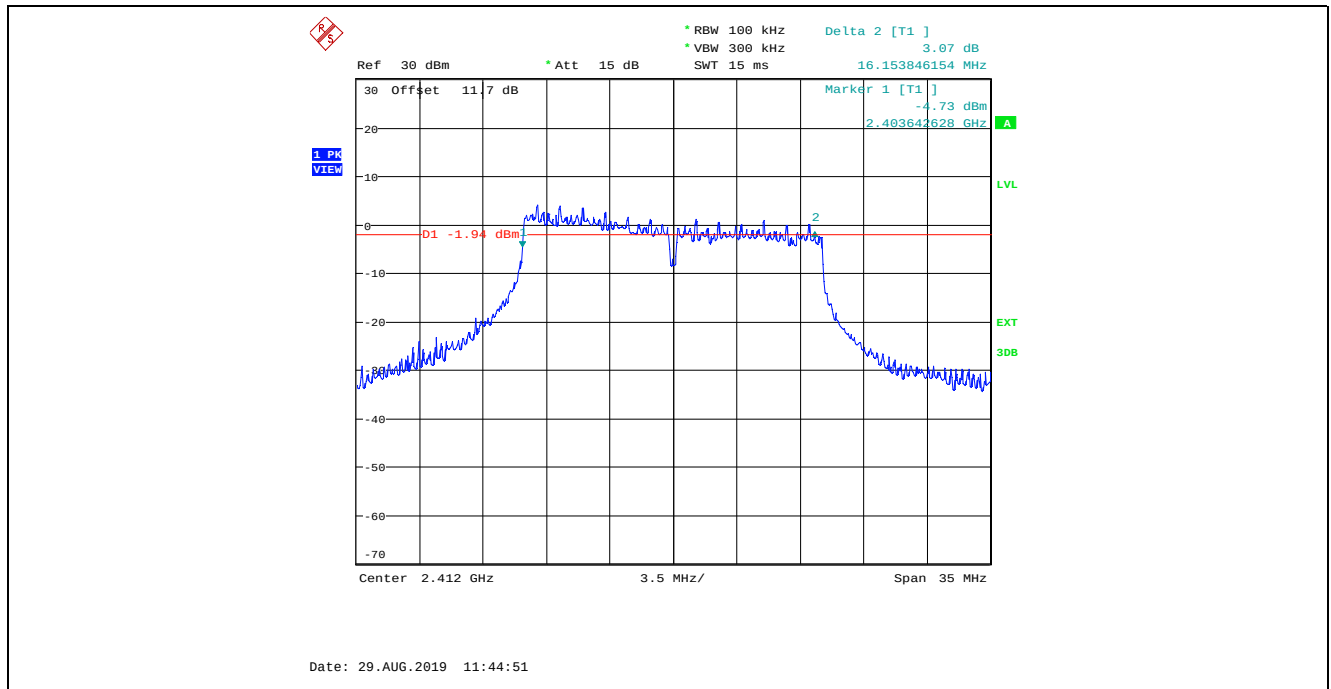
Plot 5.2.4.17. 6 dB Bandwidth
802.11g, 16-QAM 36 Mbps, Power Setting 24, Channel 6, 2437 MHz



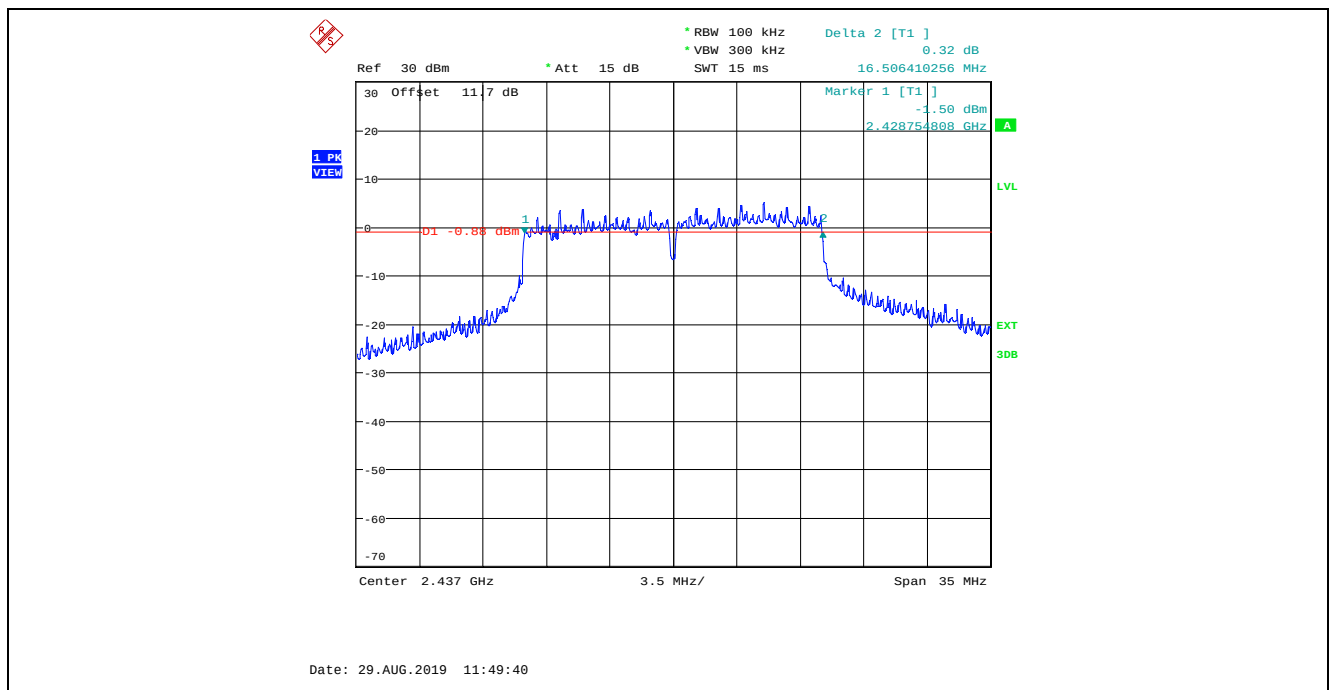
Plot 5.2.4.18. 6 dB Bandwidth
802.11g, 16-QAM 36 Mbps, Power Setting 19, Channel 11, 2462 MHz



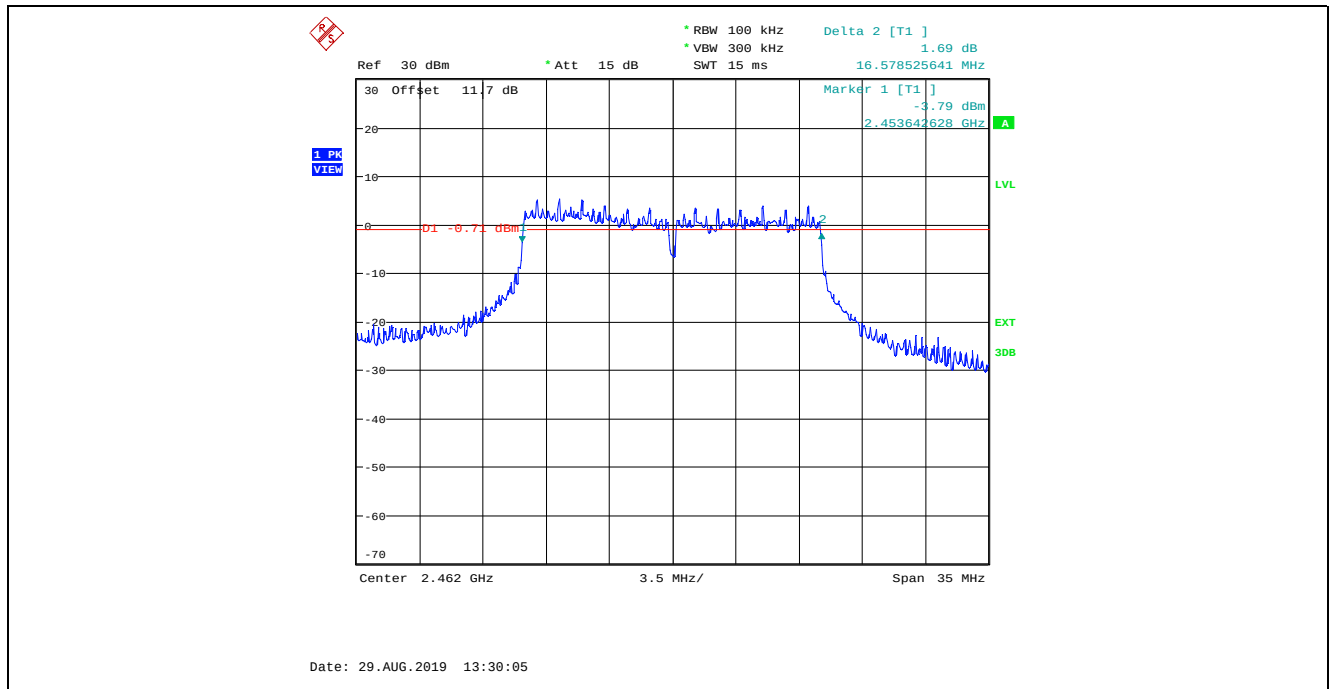
Plot 5.2.4.19. 6 dB Bandwidth
802.11g, 64-QAM 54 Mbps, Power Setting 21, Channel 1, 2412 MHz



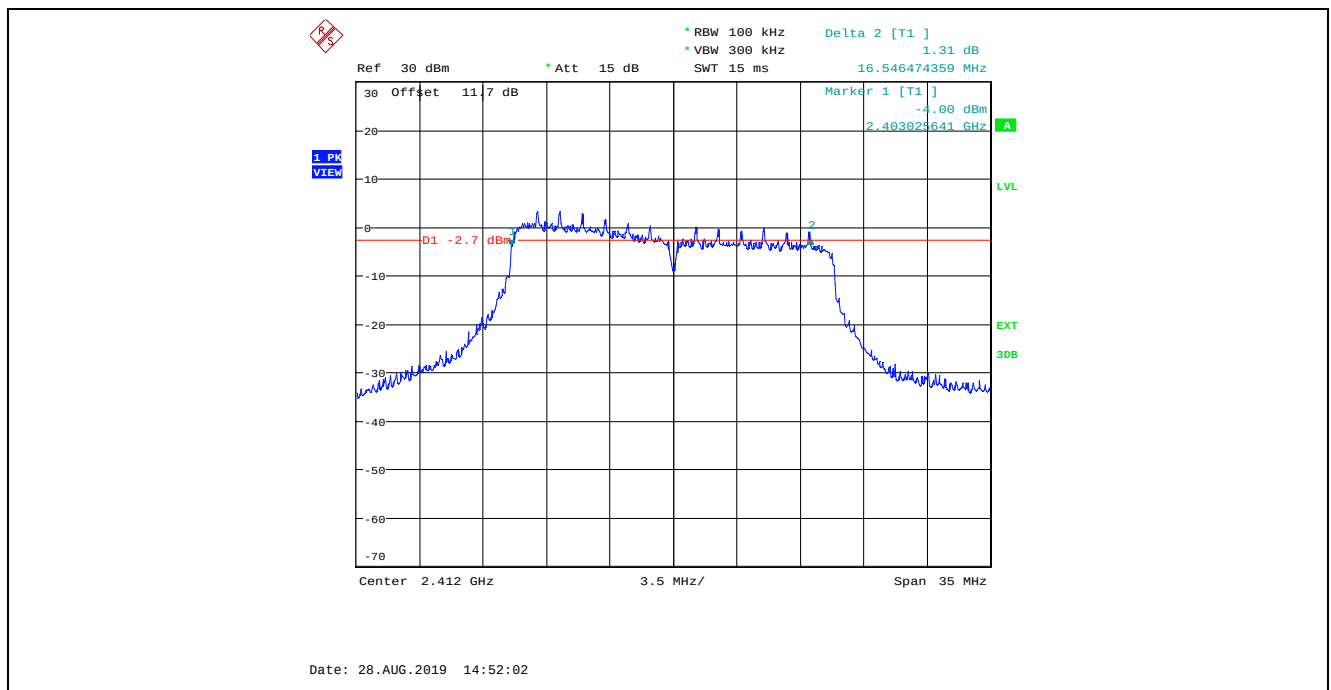
Plot 5.2.4.20. 6 dB Bandwidth
802.11g, 64-QAM 54 Mbps, Power Setting 24, Channel 6, 2437 MHz



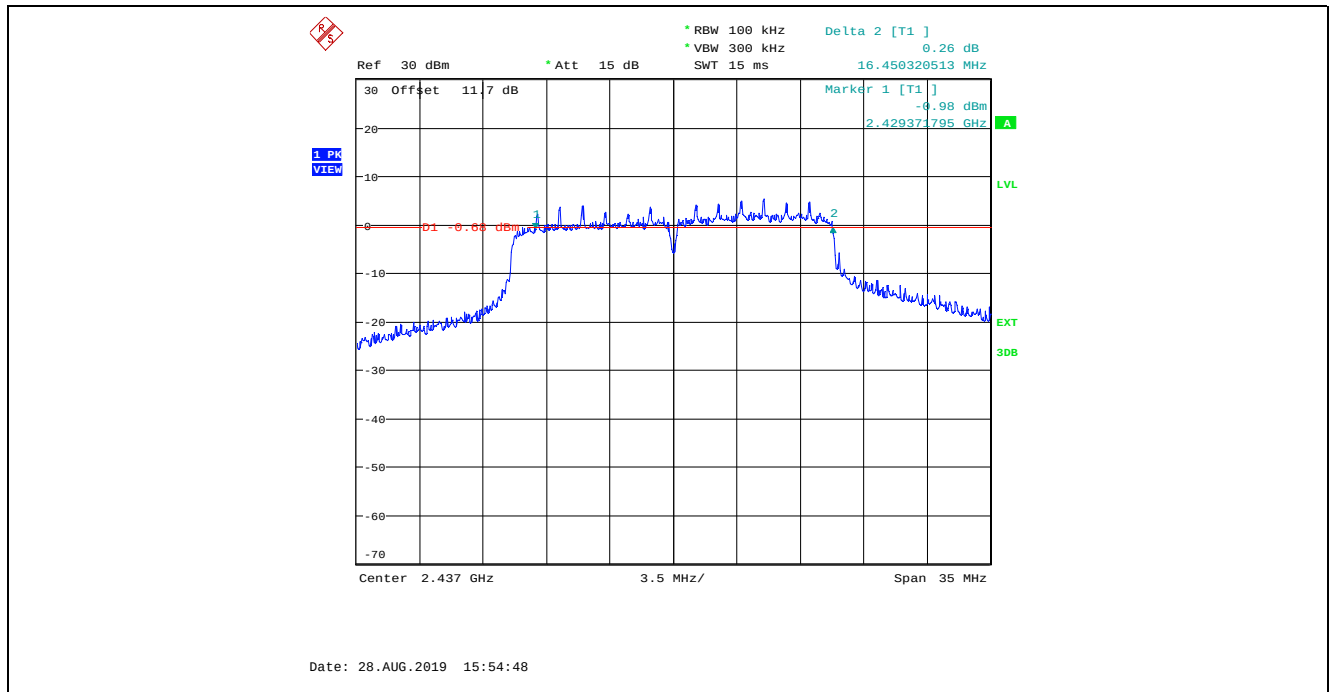
Plot 5.2.4.21. 6 dB Bandwidth
802.11g, 64-QAM 54 Mbps, Power Setting 19, Channel 11, 2462 MHz



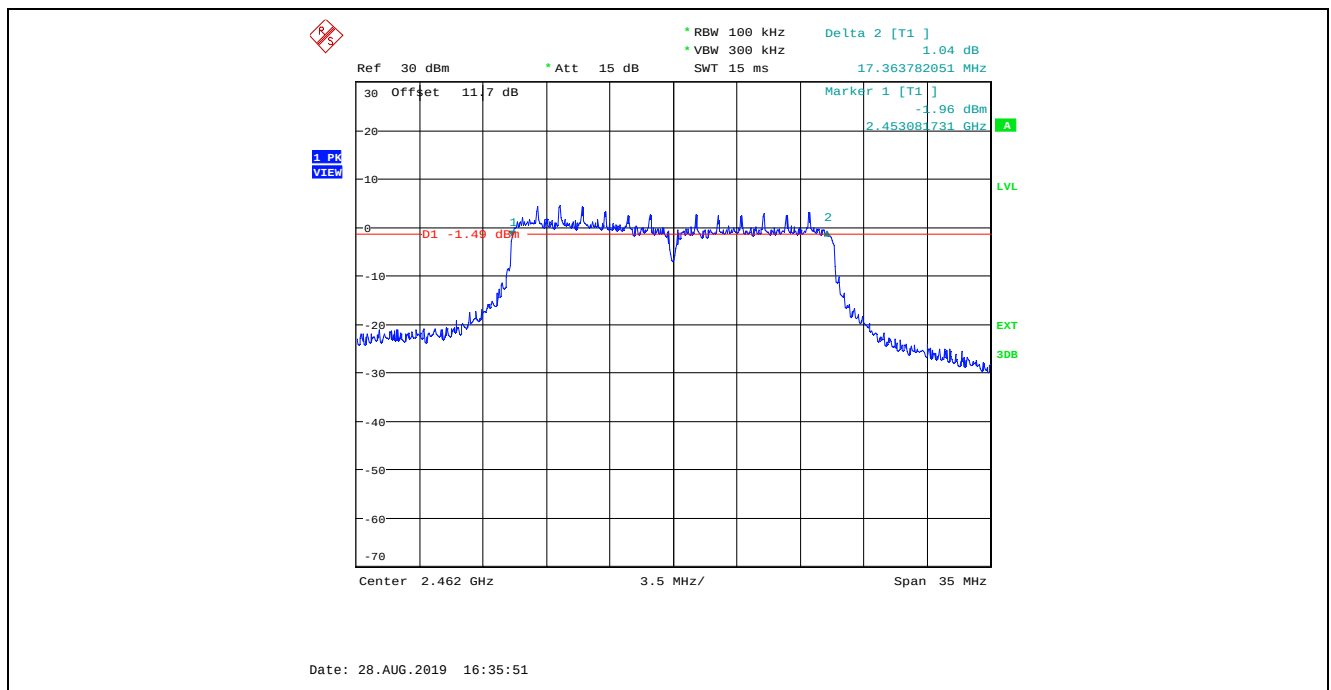
Plot 5.2.4.22. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 0, BPSK 1/2 7.2 Mbps, Power Setting 20, Channel 1, 2412 MHz



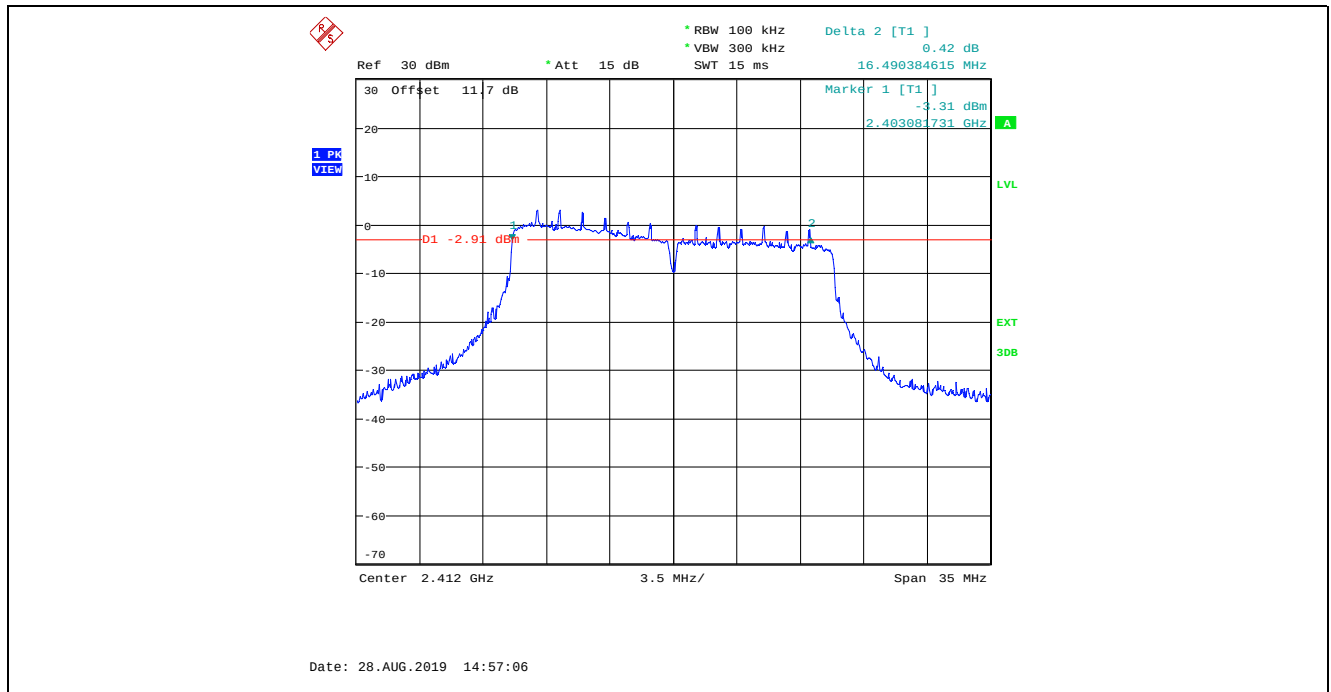
Plot 5.2.4.23. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2 Mbps, Power Setting 24, Channel 6, 2437 MHz



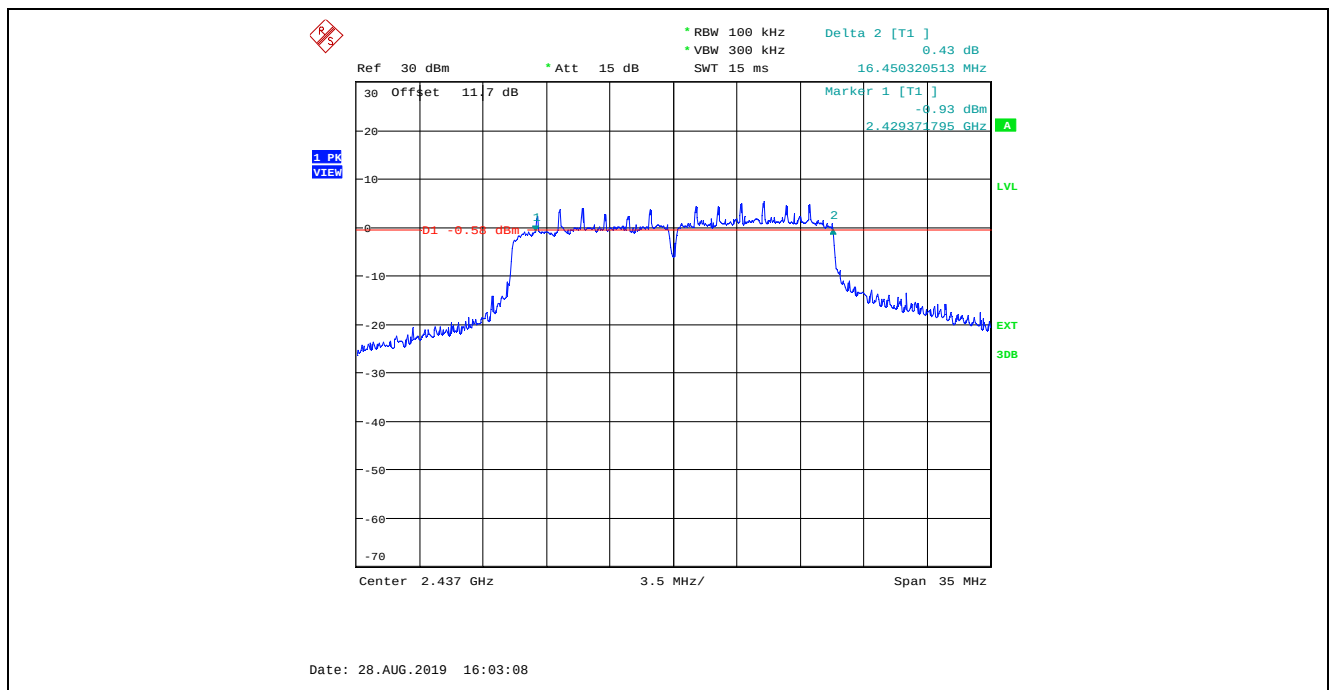
Plot 5.2.4.24. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2 Mbps, Power Setting 18, Channel 11, 2462 MHz



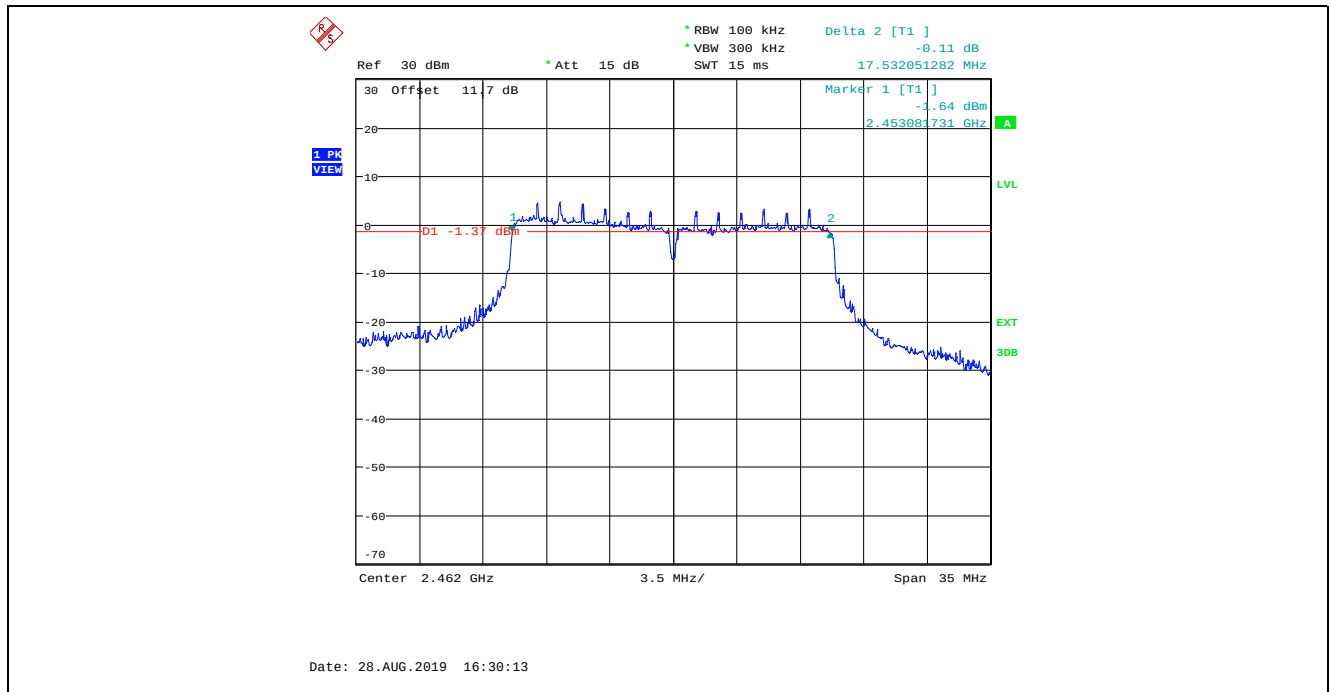
Plot 5.2.4.25. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7 Mbps, Power Setting 20, Channel 1, 2412 MHz



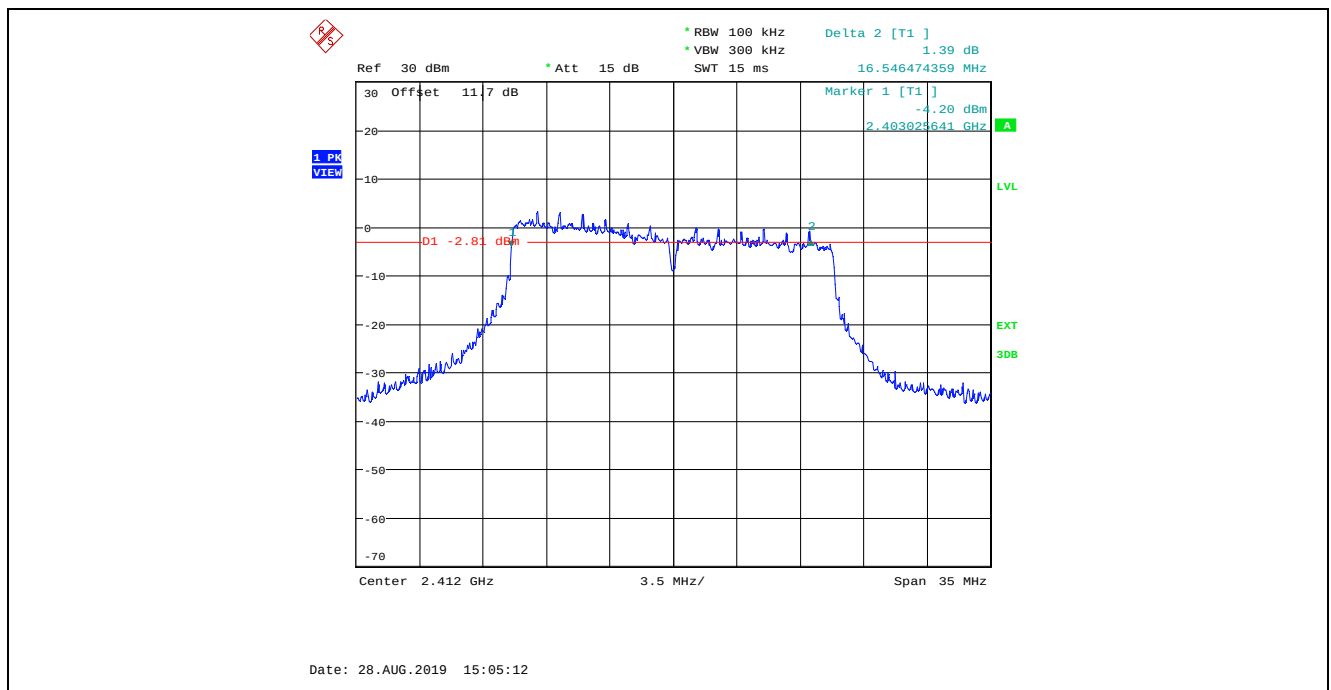
Plot 5.2.4.26. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7 Mbps, Power Setting 24, Channel 6, 2437 MHz



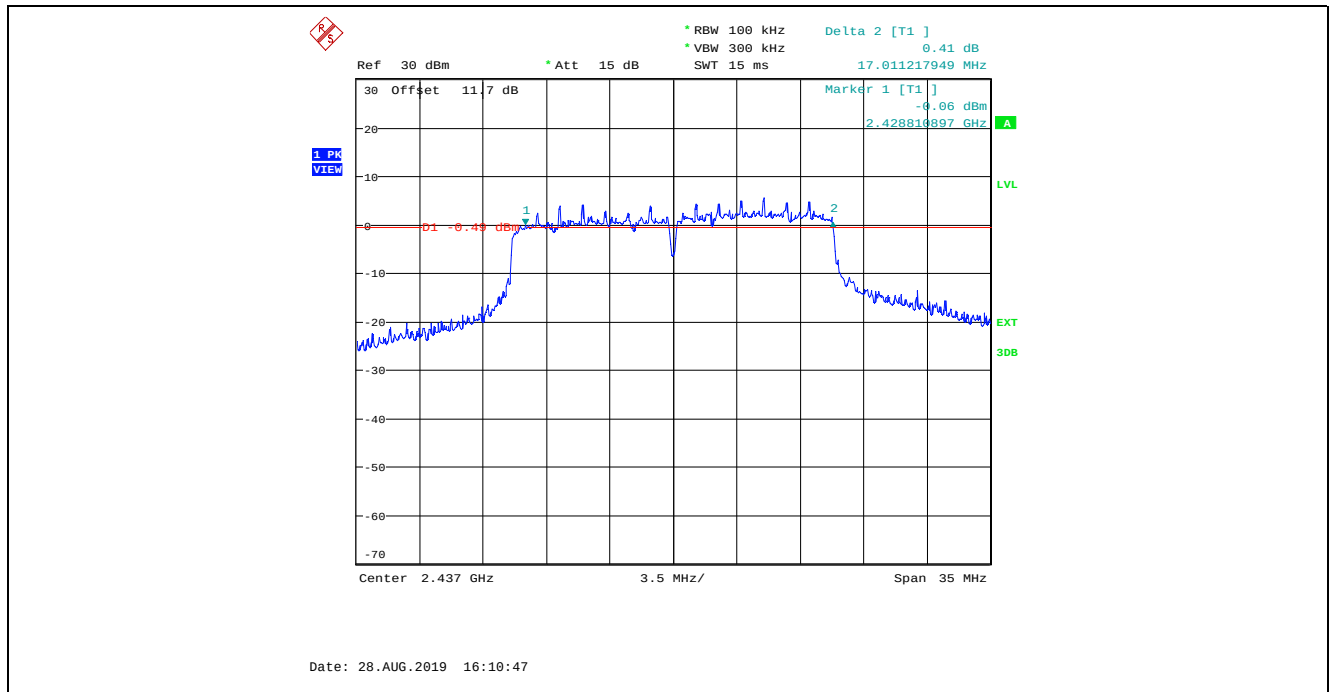
Plot 5.2.4.27. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 2, QPSK ¾ 21.7 Mbps, Power Setting 18, Channel 11, 2462 MHz



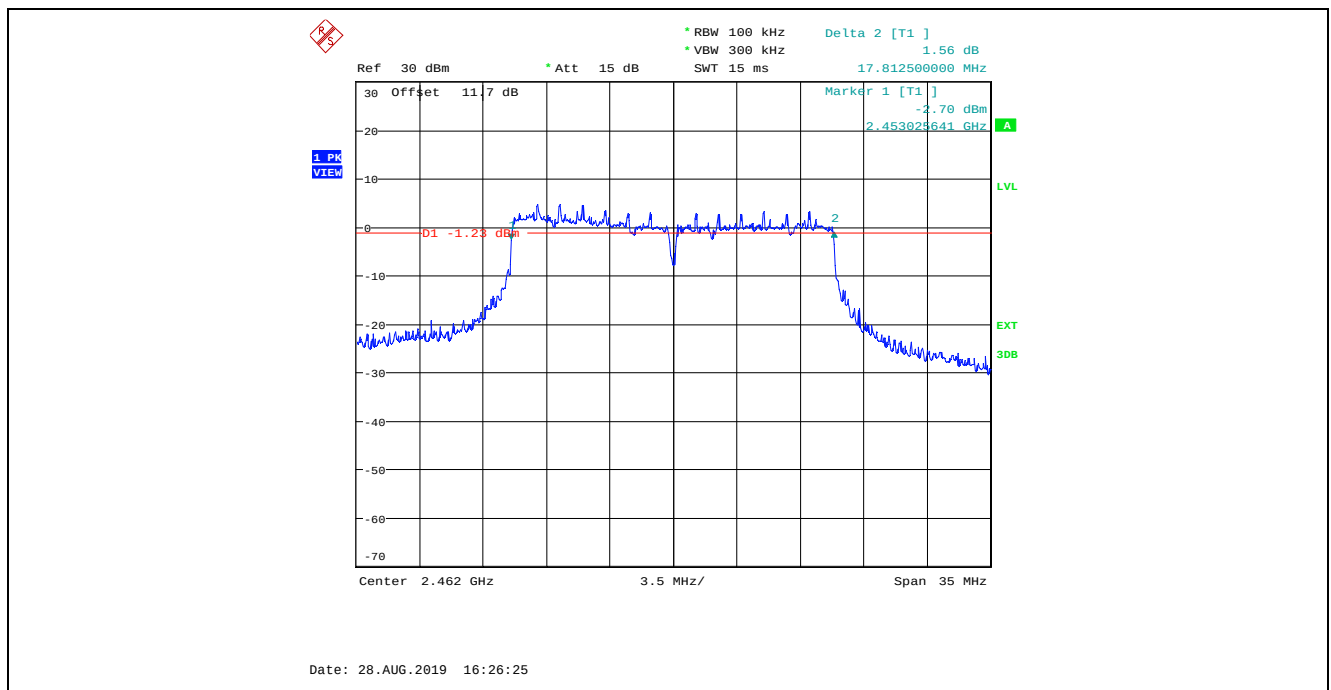
Plot 5.2.4.28. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 4, 16-QAM ¾ 43.3 Mbps, Power Setting 20, Channel 1, 2412 MHz



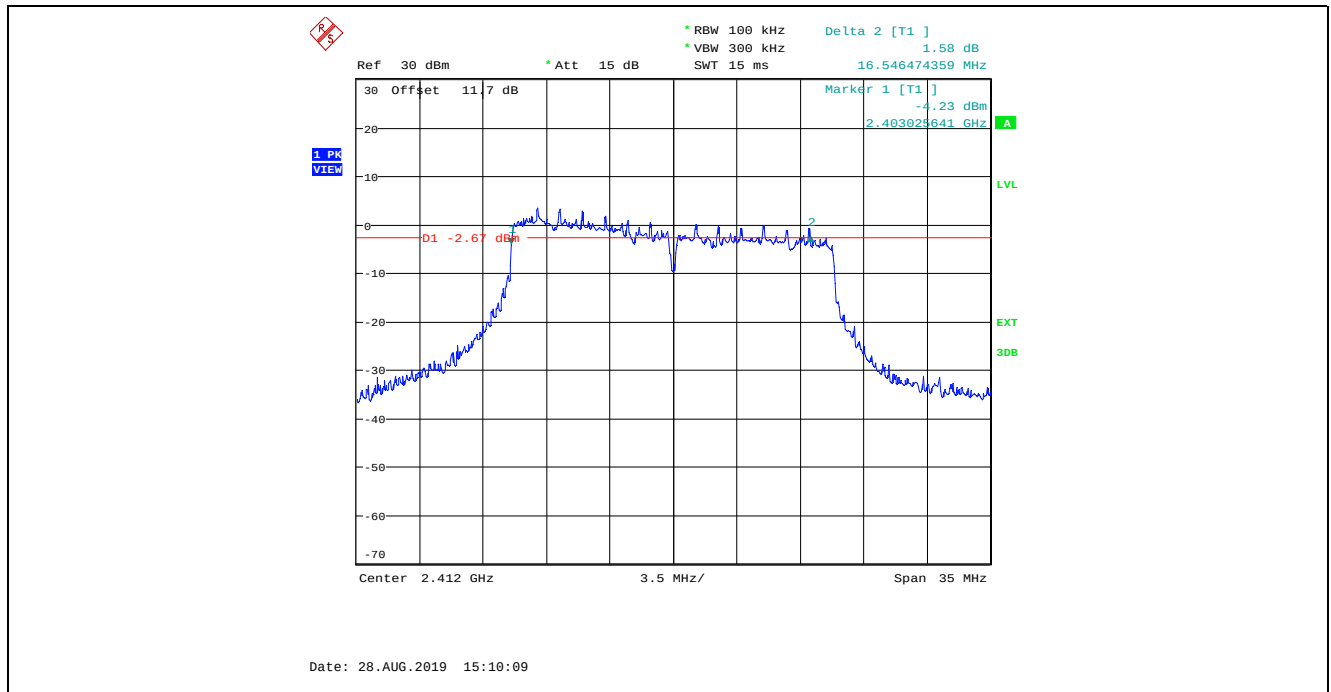
Plot 5.2.4.29. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3 Mbps, Power Setting 24, Channel 6, 2437 MHz



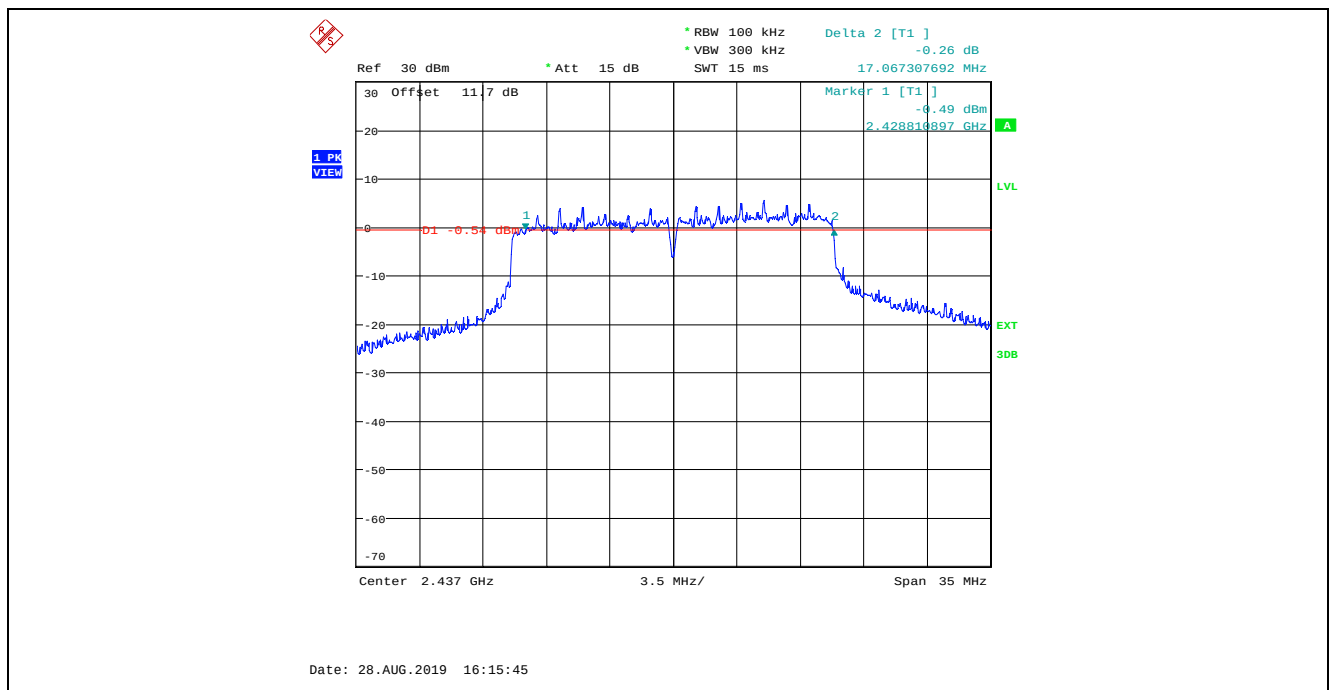
Plot 5.2.4.30. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3 Mbps, Power Setting 18, Channel 11, 2462 MHz



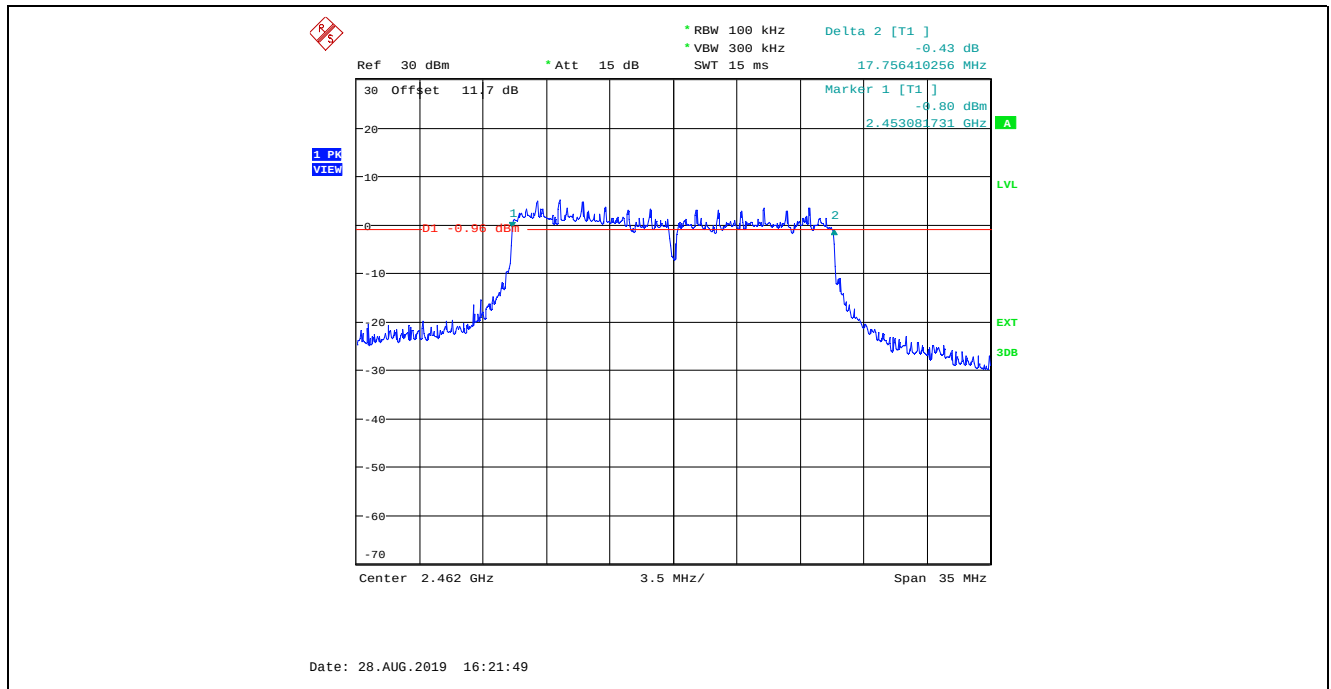
Plot 5.2.4.31. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2 Mbps, Power Setting 20, Channel 1, 2412 MHz



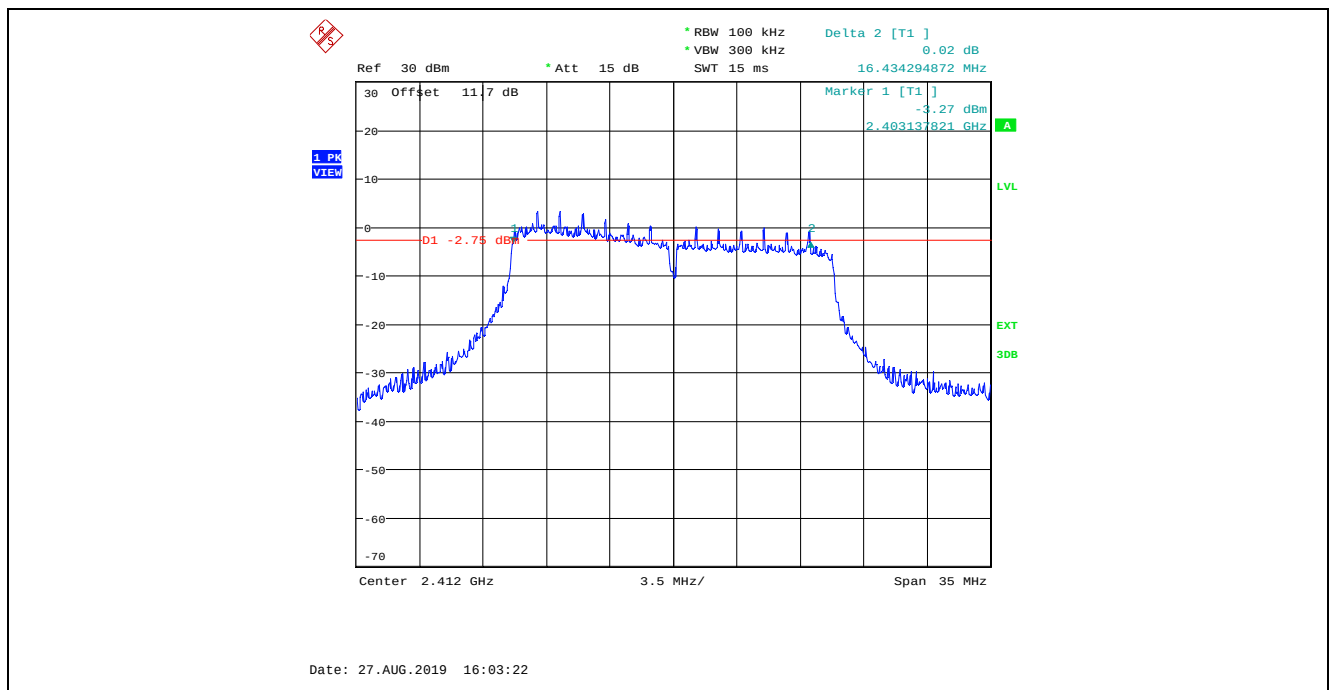
Plot 5.2.4.32. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2 Mbps, Power Setting 24, Channel 6, 2437 MHz



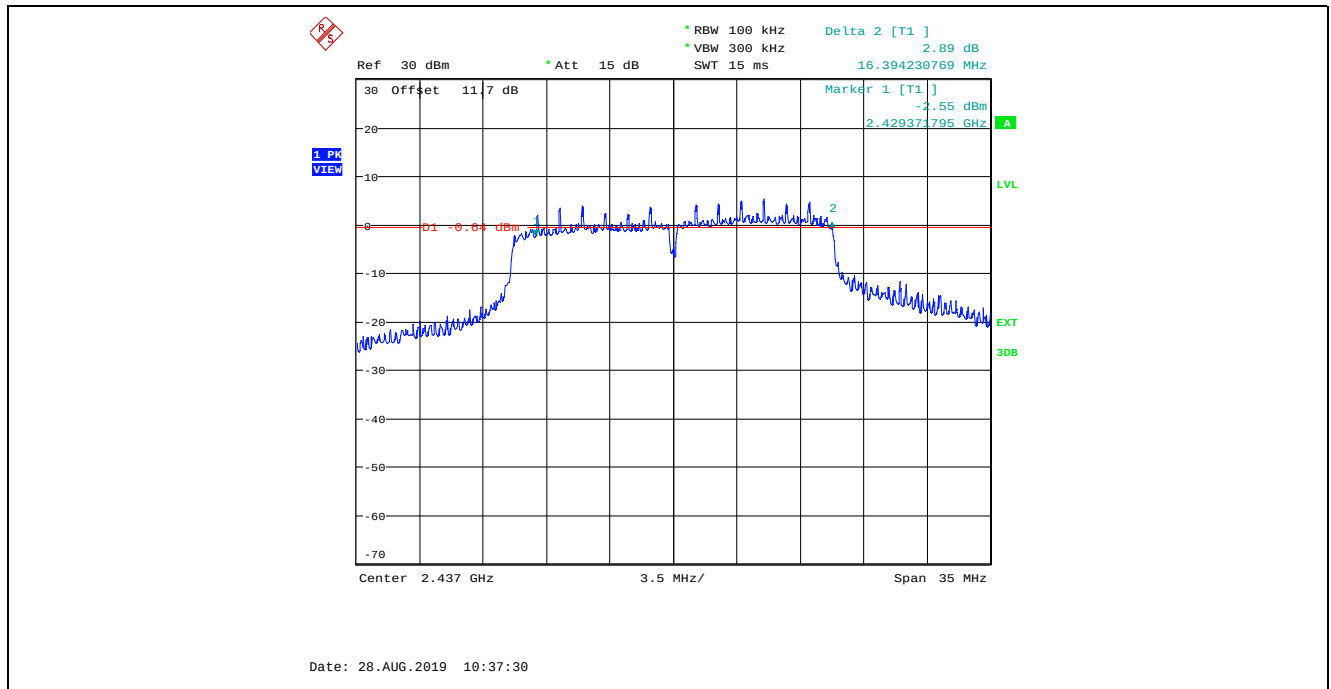
Plot 5.2.4.33. 6 dB Bandwidth
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2 Mbps, Power Setting 18, Channel 11, 2462 MHz



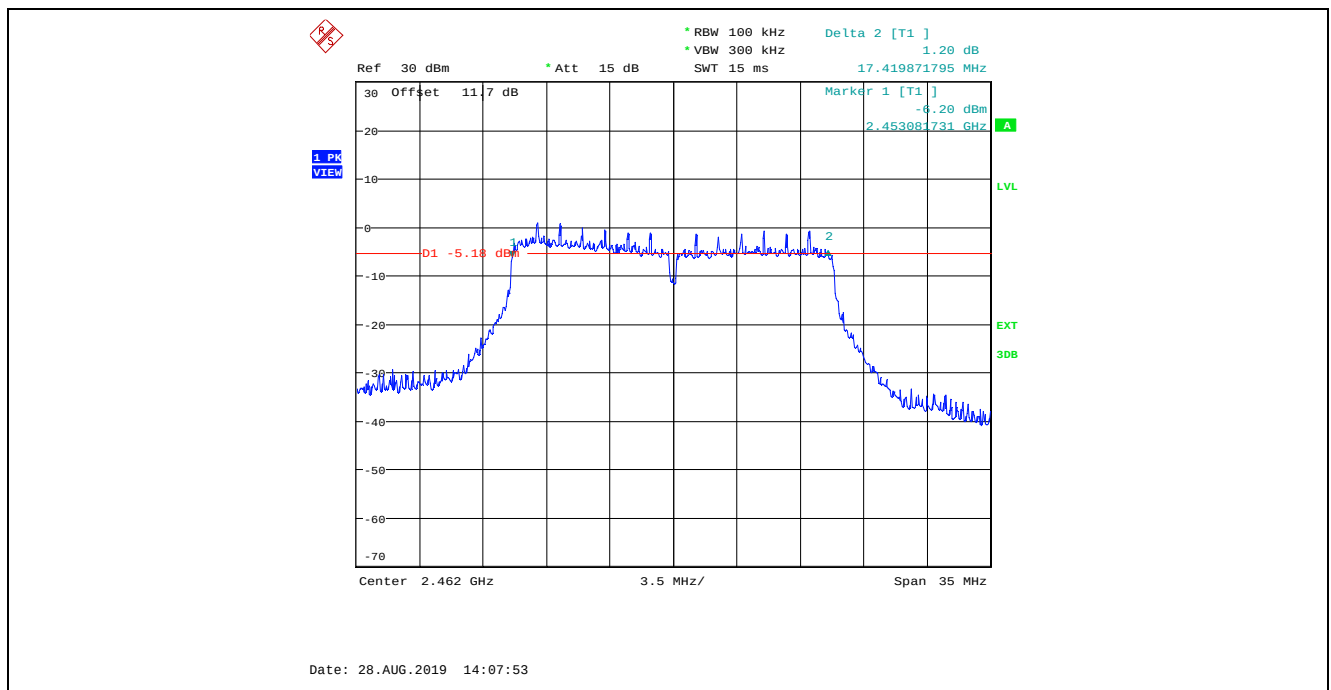
Plot 5.2.4.34. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 0, BPSK 1/2 6.5 Mbps, Power Setting 19, Channel 1, 2412 MHz



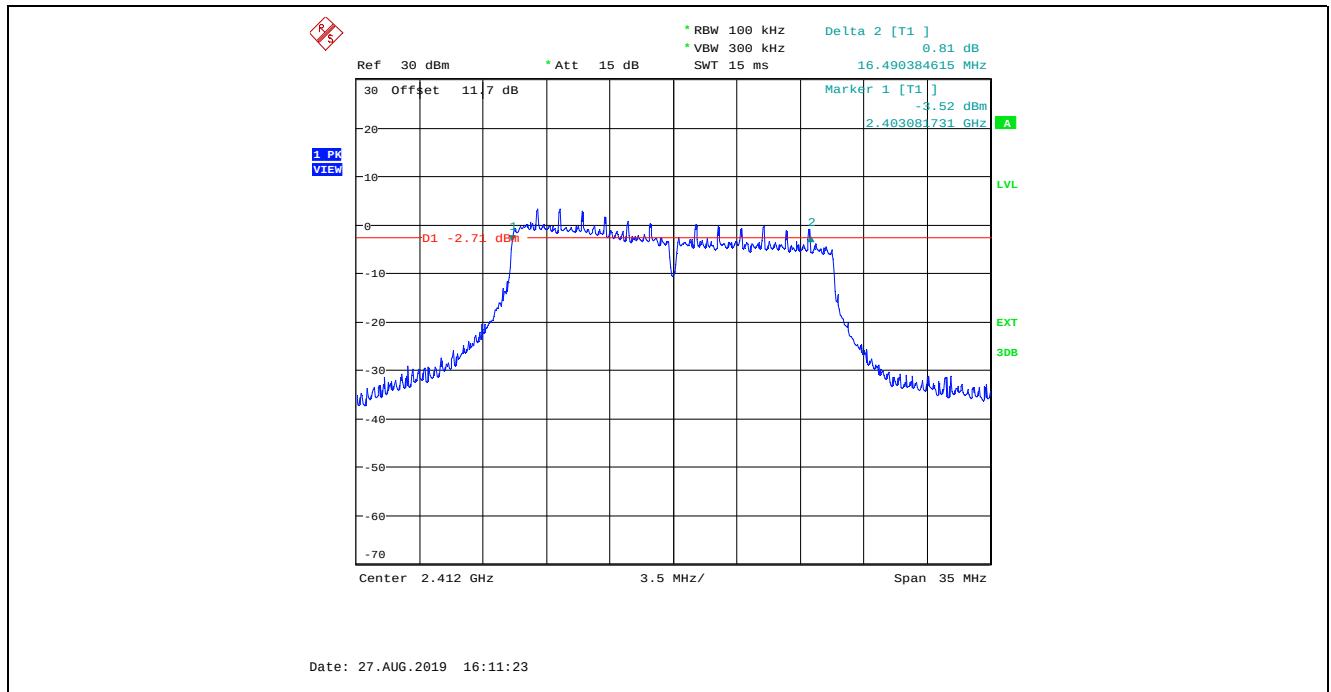
Plot 5.2.4.35. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 0, BPSK ½ 6.5 Mbps, Power Setting 24, Channel 6, 2437 MHz



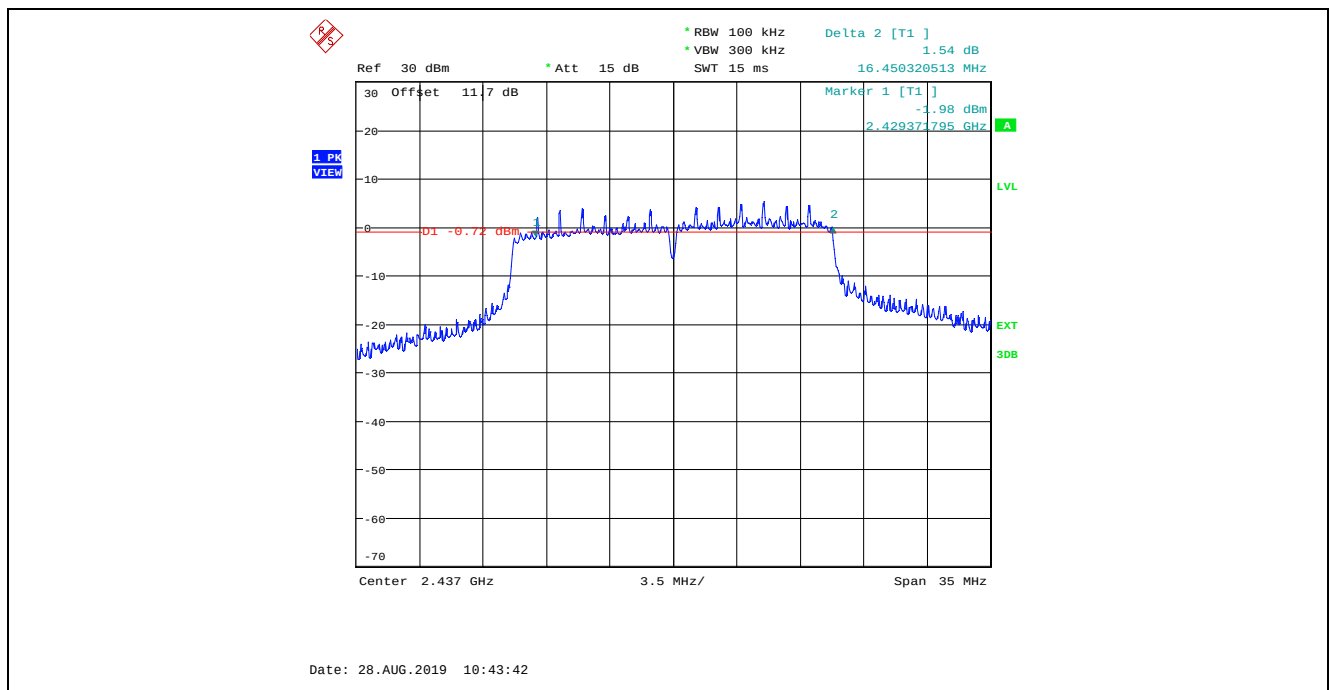
Plot 5.2.4.36. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 0, BPSK ½ 6.5 Mbps, Power Setting 18, Channel 11, 2462 MHz



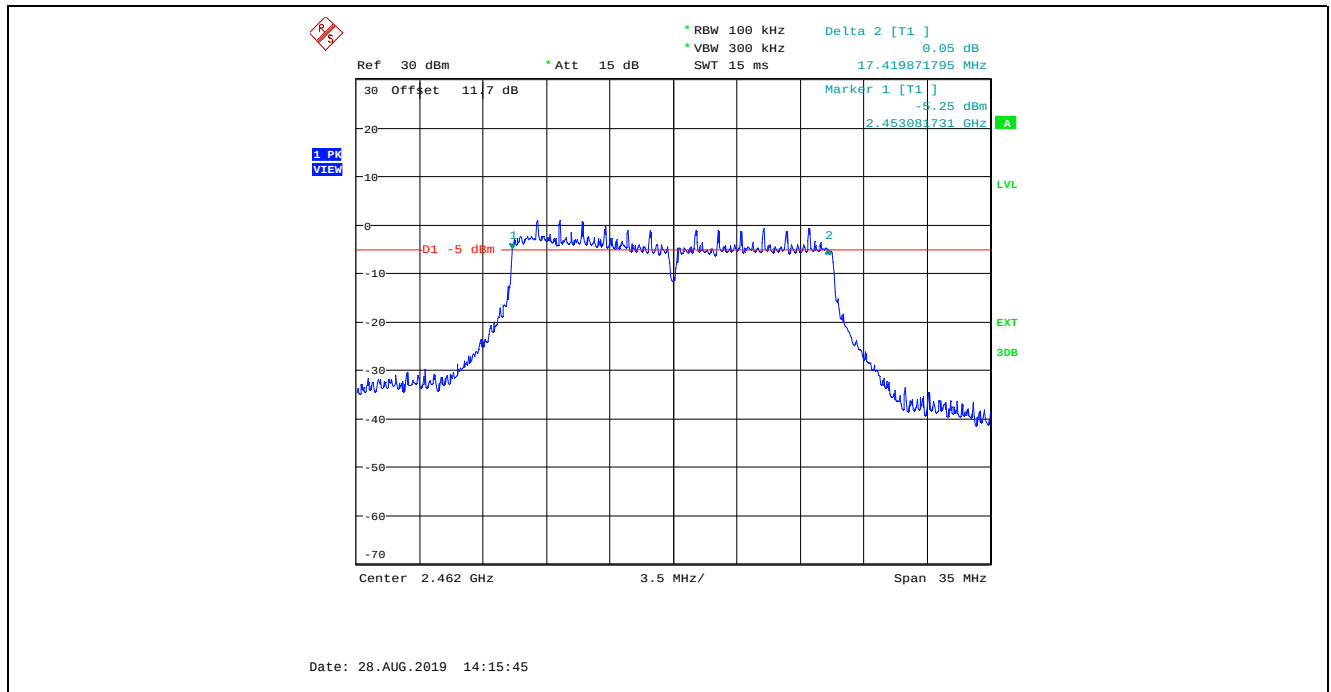
Plot 5.2.4.37. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 2, QPSK $\frac{3}{4}$ 19.5 Mbps, Power Setting 19, Channel 1, 2412 MHz



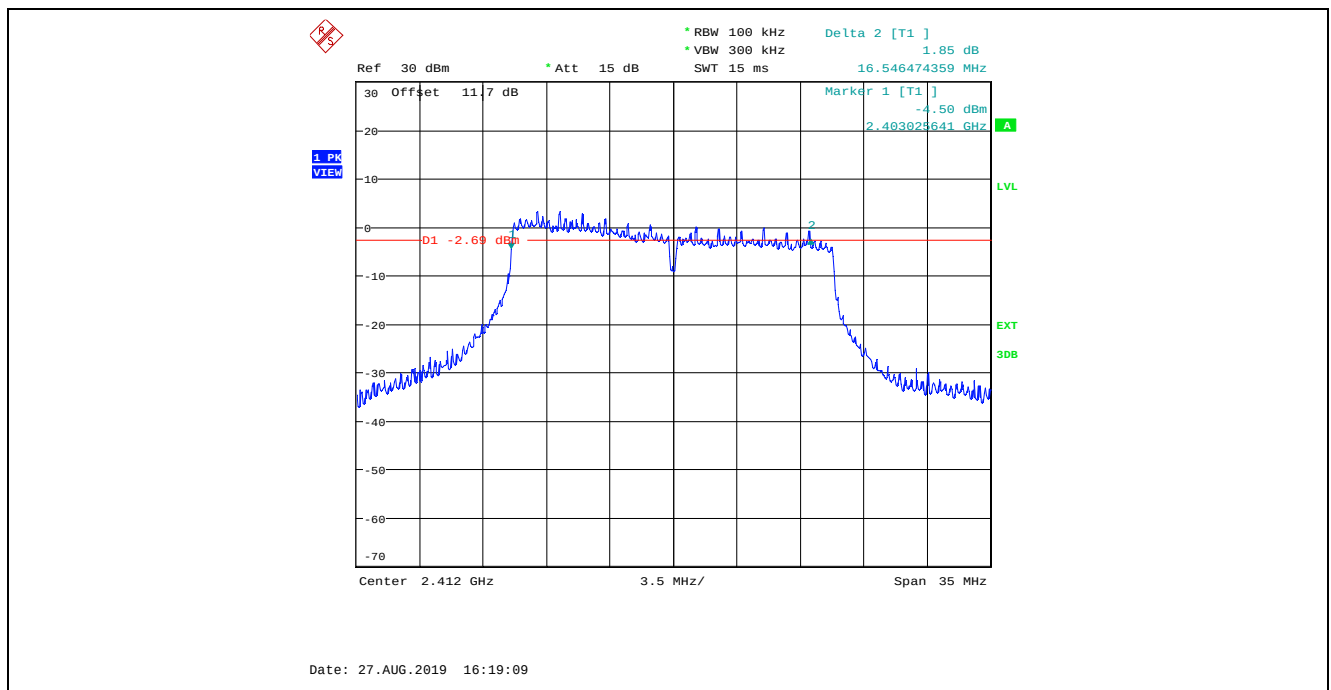
Plot 5.2.4.38. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 2, QPSK $\frac{3}{4}$ 19.5 Mbps, Power Setting 24, Channel 6, 2437 MHz



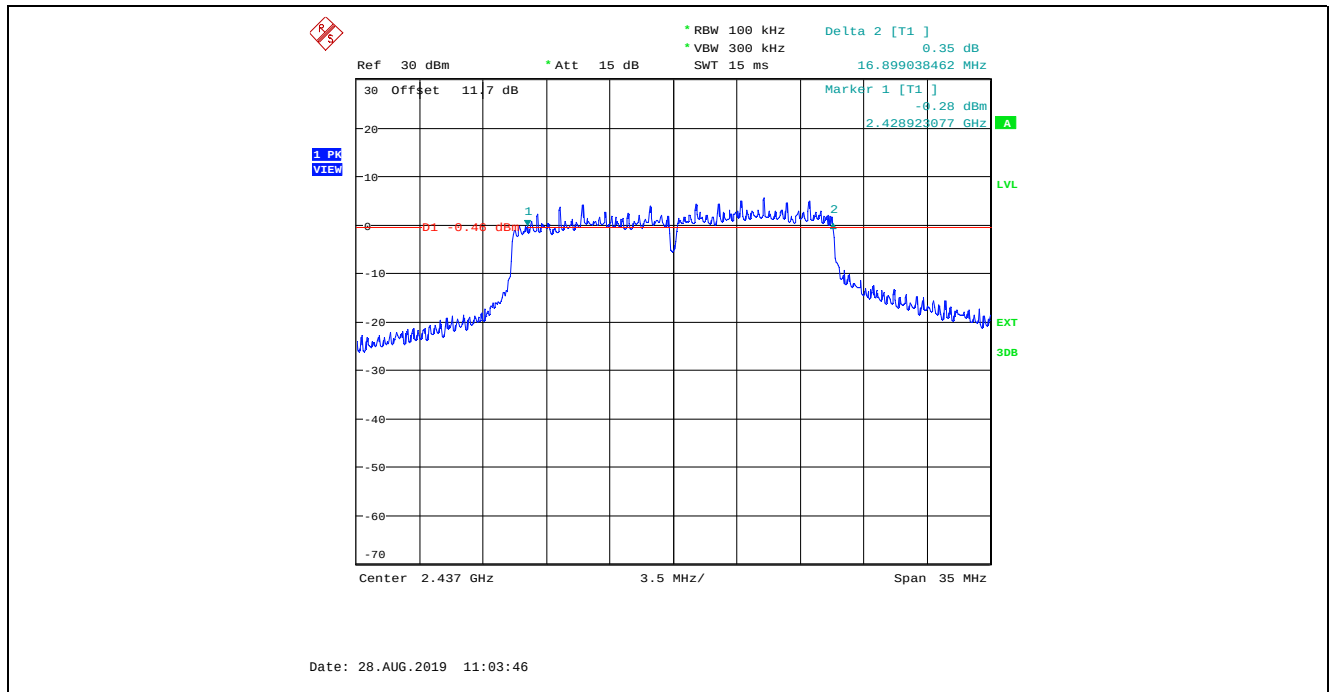
Plot 5.2.4.39. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 2, QPSK $\frac{3}{4}$ 19.5 Mbps, Power Setting 18, Channel 11, 2462 MHz



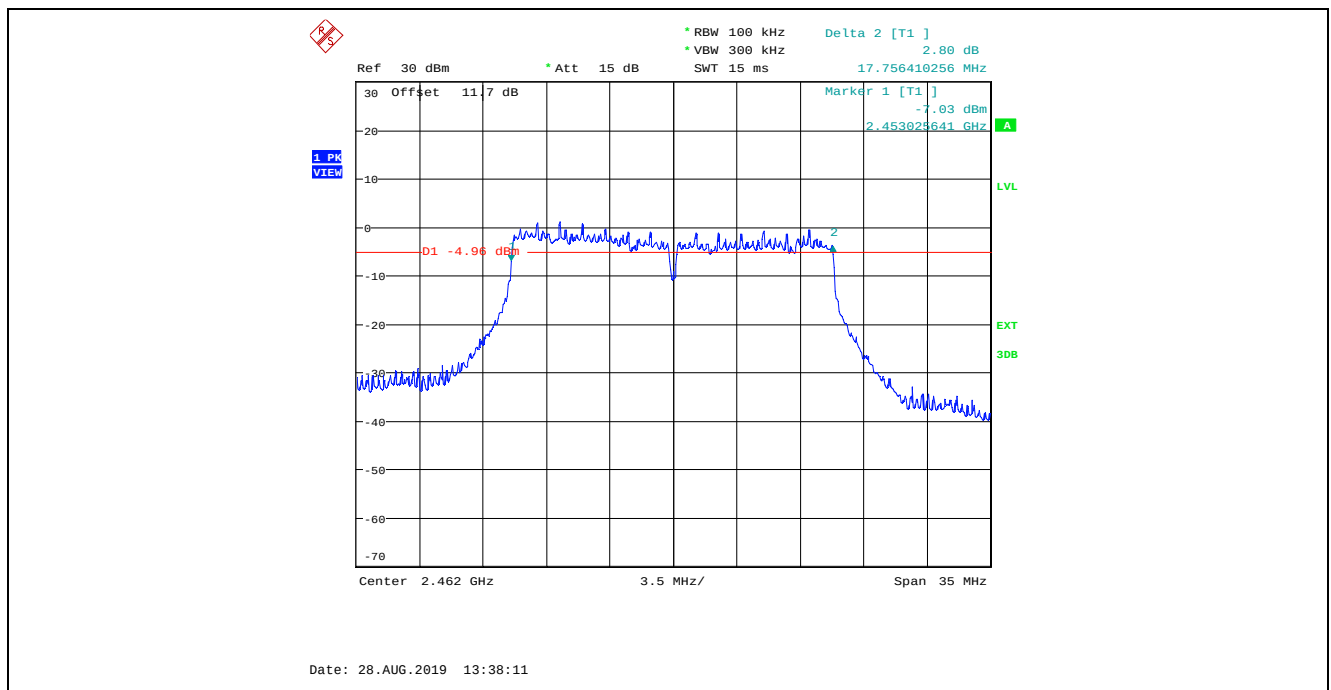
Plot 5.2.4.40. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 4, 16-QAM $\frac{3}{4}$ 39 Mbps, Power Setting 19, Channel 1, 2412 MHz



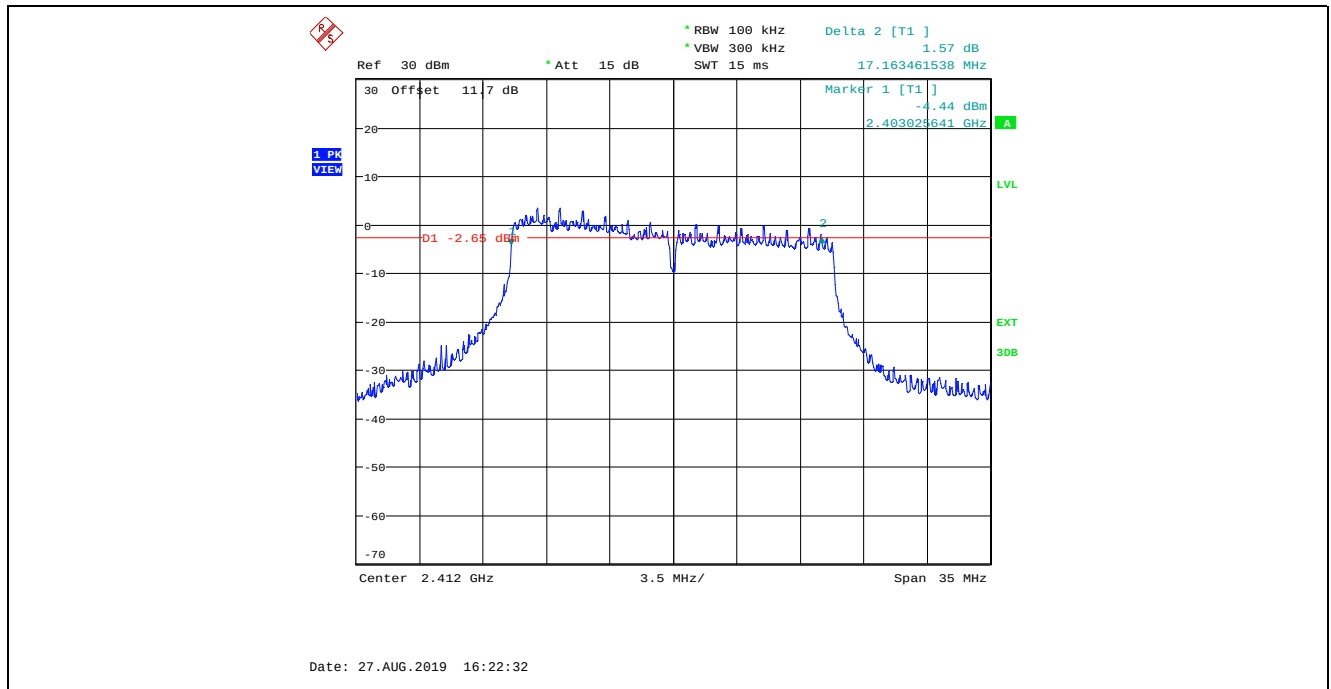
Plot 5.2.4.41. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 4, 16-QAM $\frac{3}{4}$ 39 Mbps, Power Setting 24, Channel 6, 2437 MHz



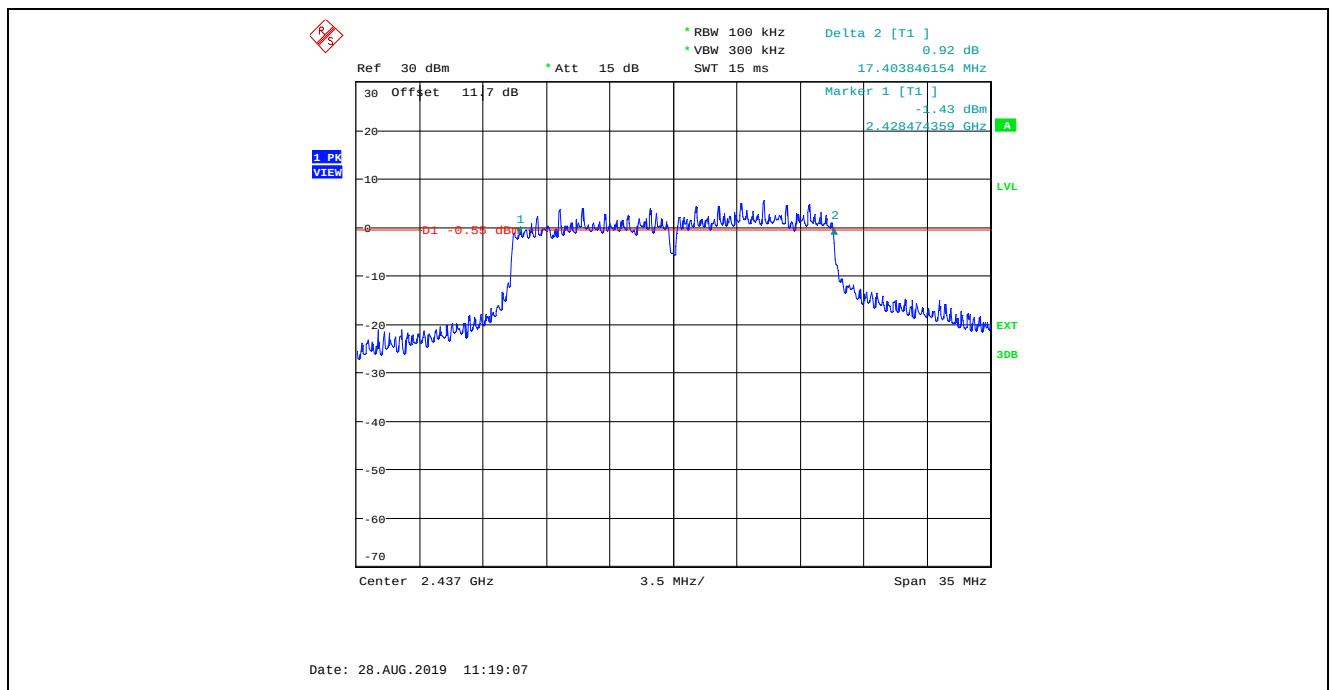
Plot 5.2.4.42. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 4, 16-QAM $\frac{3}{4}$ 39 Mbps, Power Setting 18, Channel 11, 2462 MHz



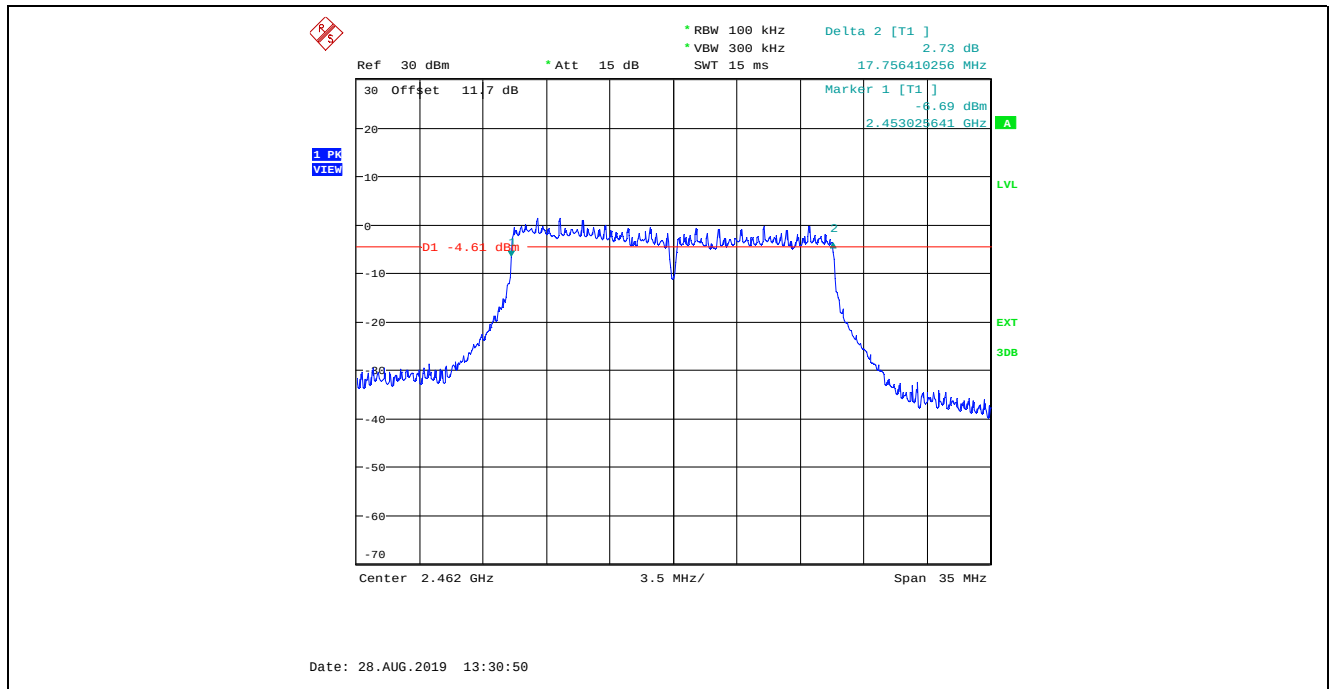
Plot 5.2.4.43. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 7, 64-QAM 5/6 65 Mbps, Power Setting 19, Channel 1, 2412 MHz



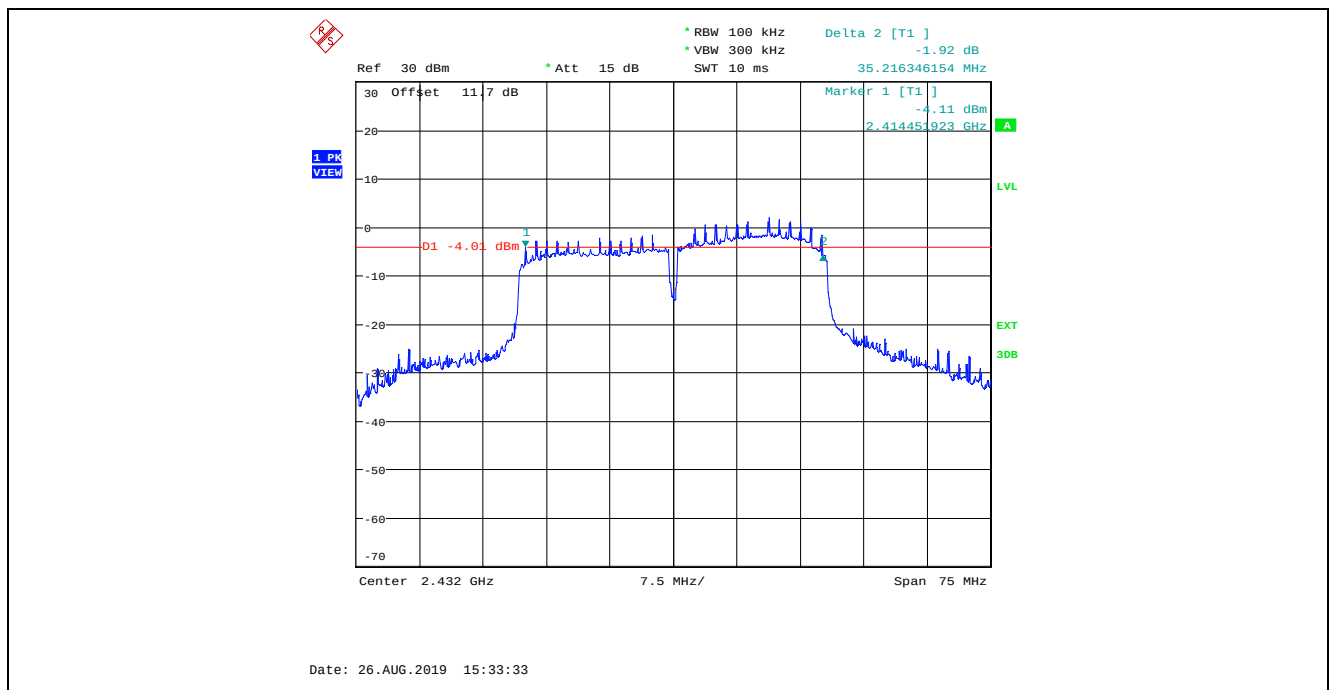
Plot 5.2.4.44. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 7, 64-QAM 5/6 65 Mbps, Power Setting 24, Channel 6, 2437 MHz



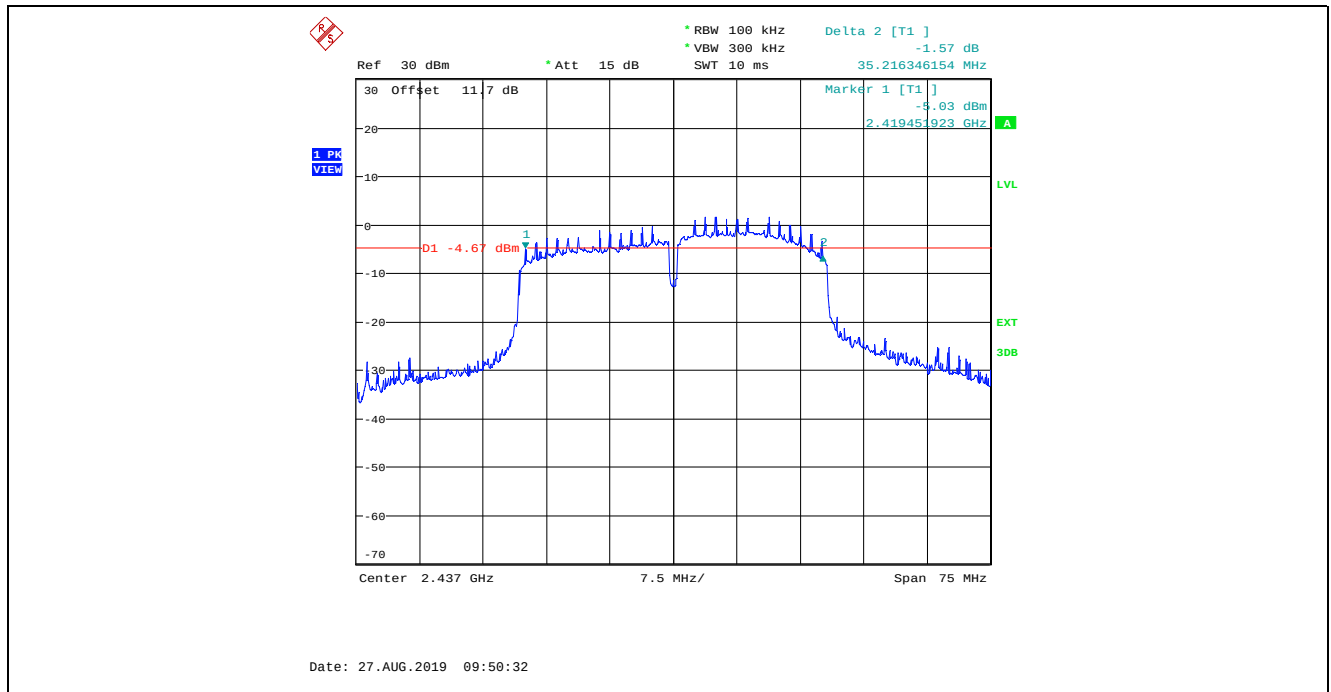
Plot 5.2.4.45. 6 dB Bandwidth
802.11n HT20, 800 ns, MCS 7, 64-QAM 5/6 65 Mbps, Power Setting 18, Channel 11, 2462 MHz



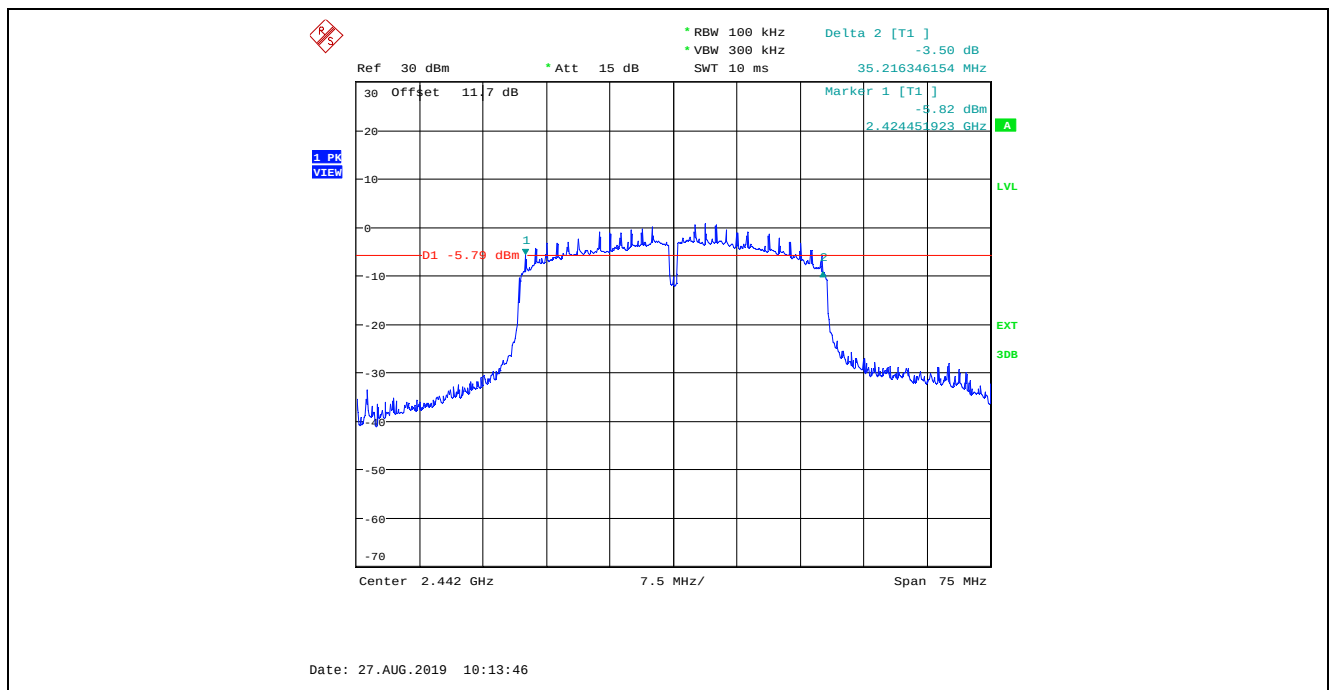
Plot 5.2.4.46. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 0, BPSK 1/2 15 Mbps, Power Setting 20, Channel 5, 2432 MHz



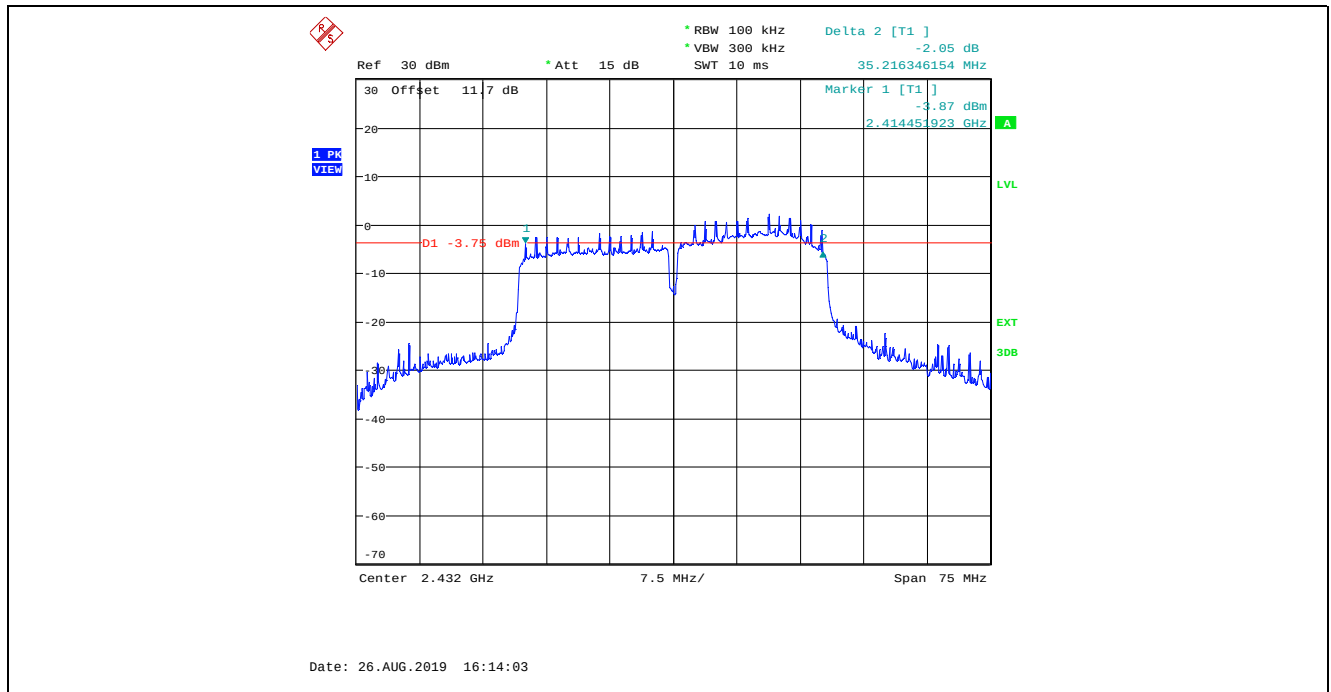
Plot 5.2.4.47. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 0, BPSK ½ 15 Mbps, Power Setting 19, Channel 6, 2437 MHz



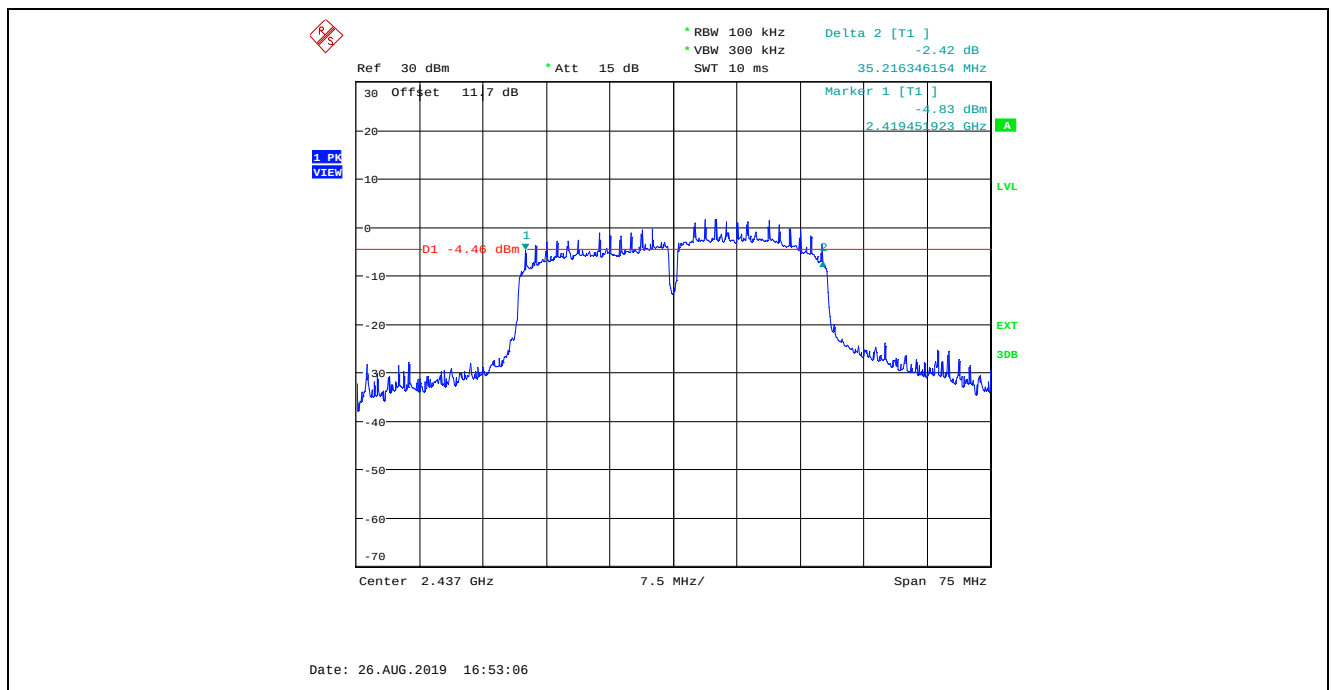
Plot 5.2.4.48. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 0, BPSK ½ 15 Mbps, Power Setting 18, Channel 7, 2442 MHz



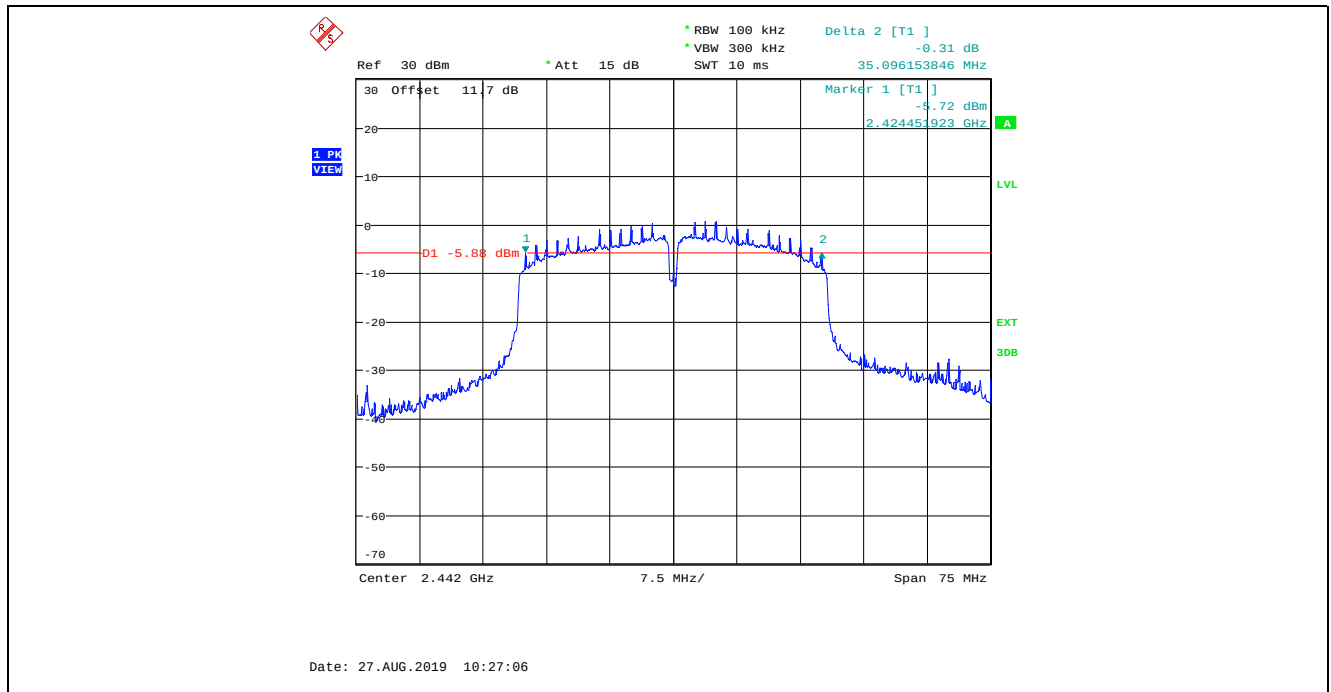
Plot 5.2.4.49. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 45 Mbps, Power Setting 20, Channel 5, 2432 MHz



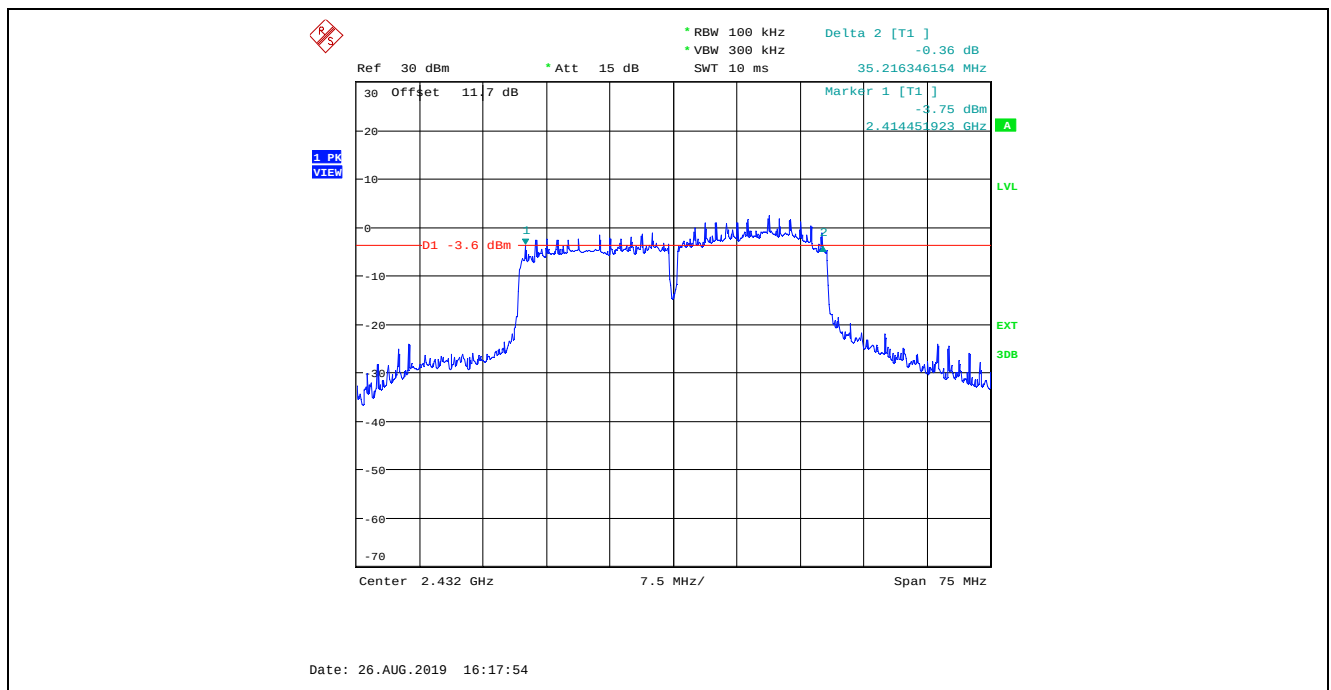
Plot 5.2.4.50. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 45 Mbps, Power Setting 19, Channel 6, 2437 MHz



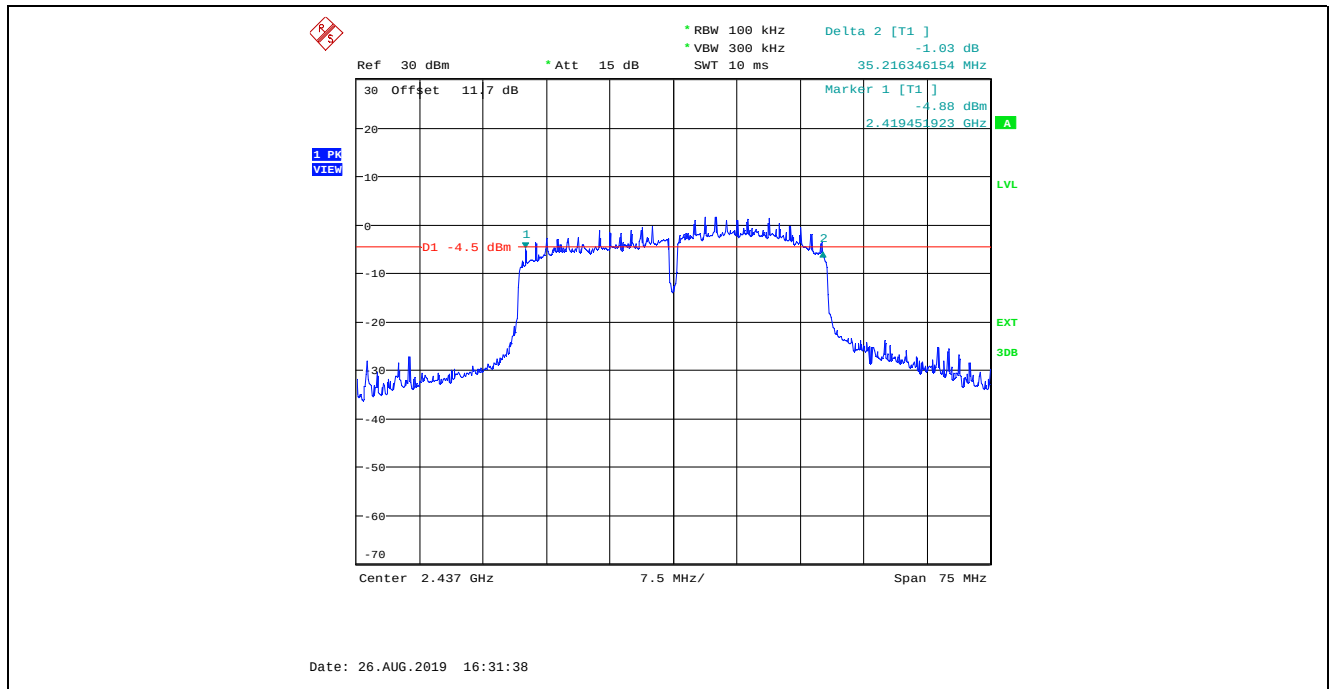
Plot 5.2.4.51. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 2, QPSK 3/4 45 Mbps, Power Setting 18, Channel 7, 2442 MHz



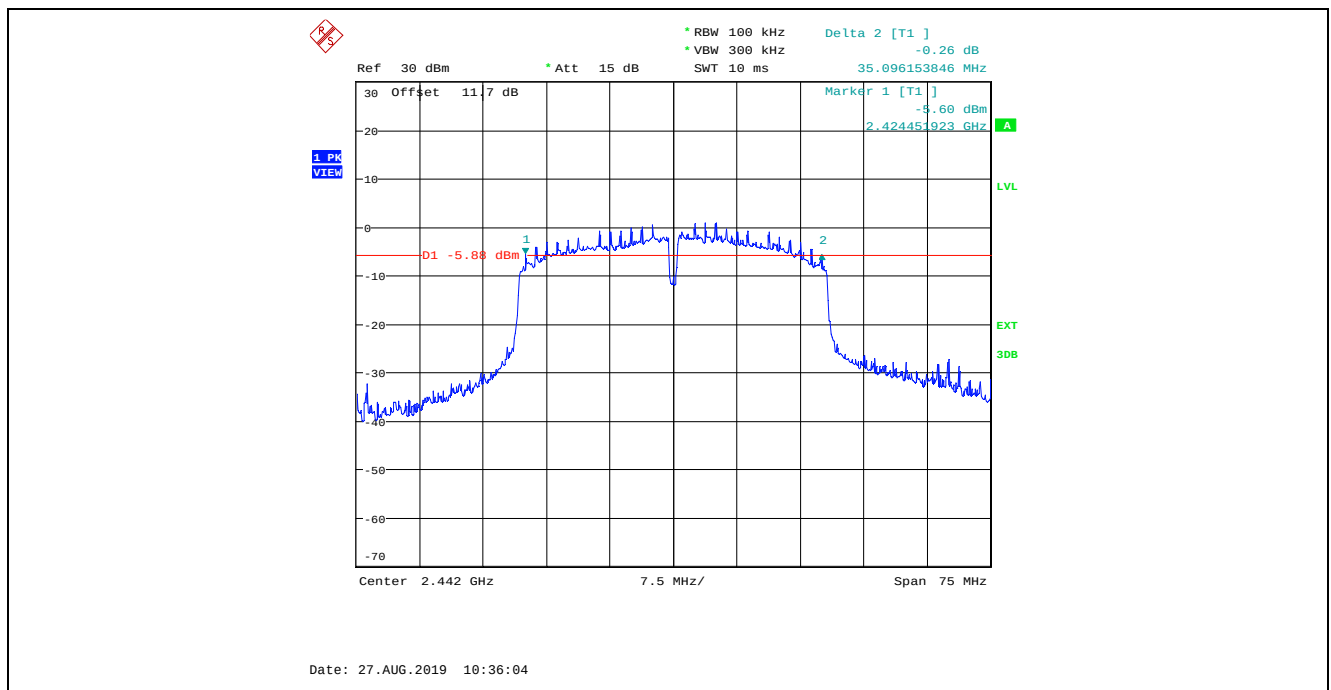
Plot 5.2.4.52. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 4, 16-QAM 3/4 90 Mbps, Power Setting 20, Channel 5, 2432 MHz



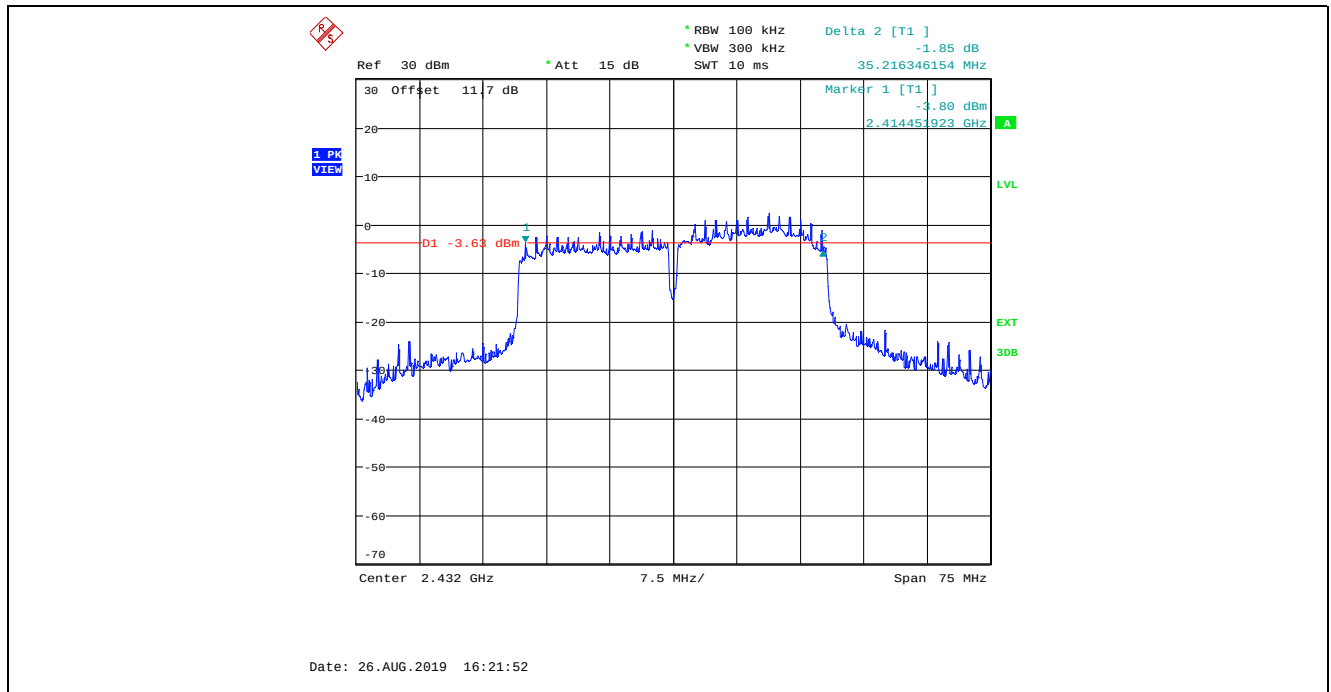
Plot 5.2.4.53. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 4, 16-QAM 3/4 90 Mbps, Power Setting 19, Channel 6, 2437 MHz



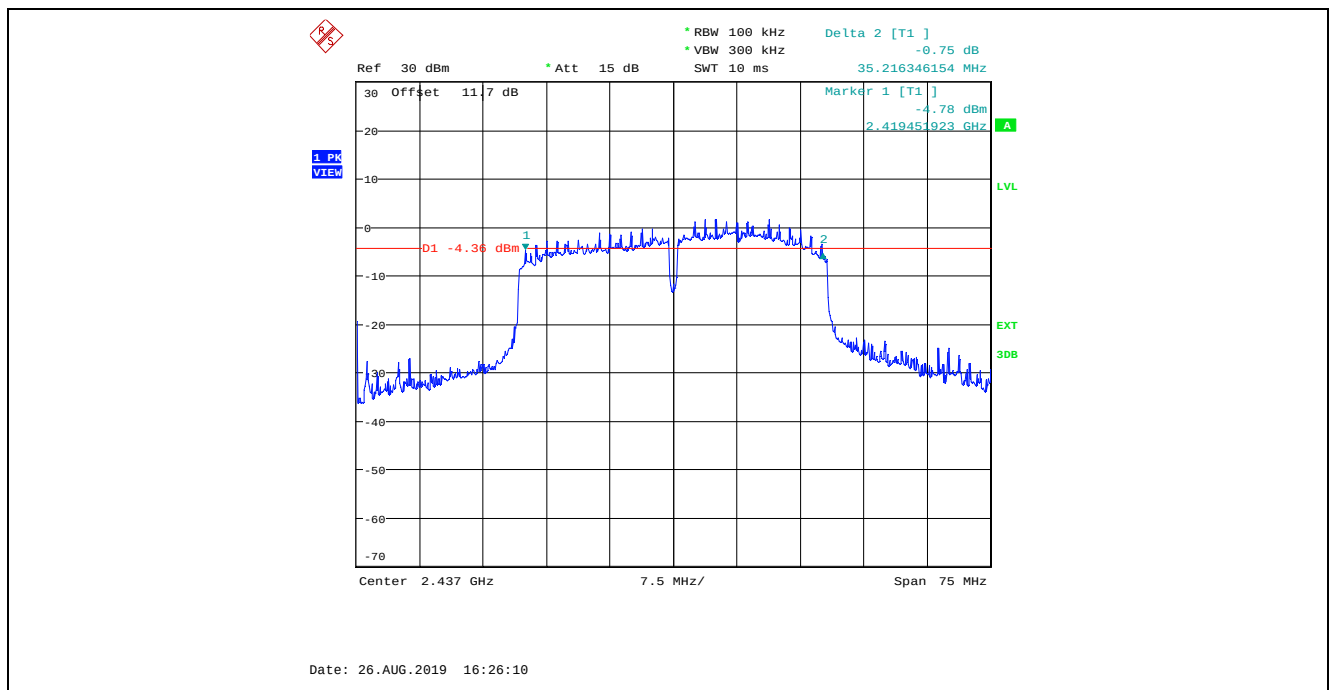
Plot 5.2.4.54. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 4, 16-QAM 3/4 90 Mbps, Power Setting 18, Channel 7, 2442 MHz



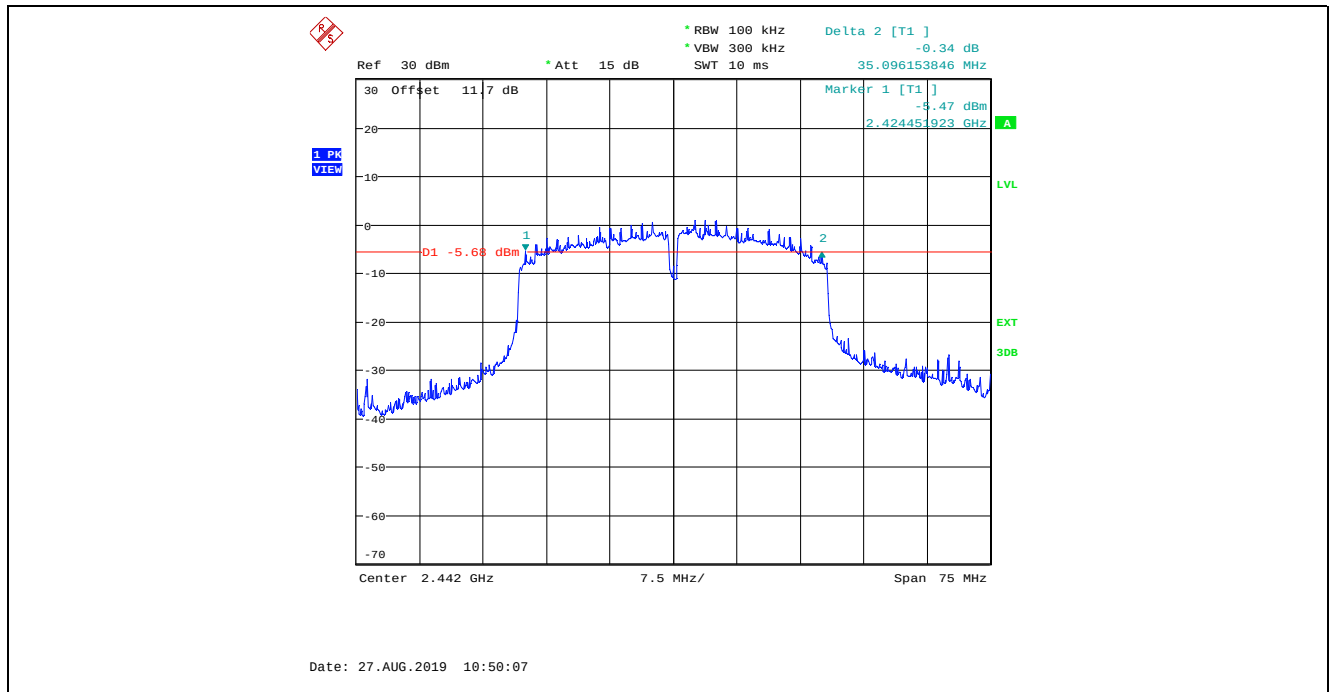
Plot 5.2.4.55. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 7, 64-QAM 5/6 150 Mbps, Power Setting 20, Channel 5, 2432 MHz



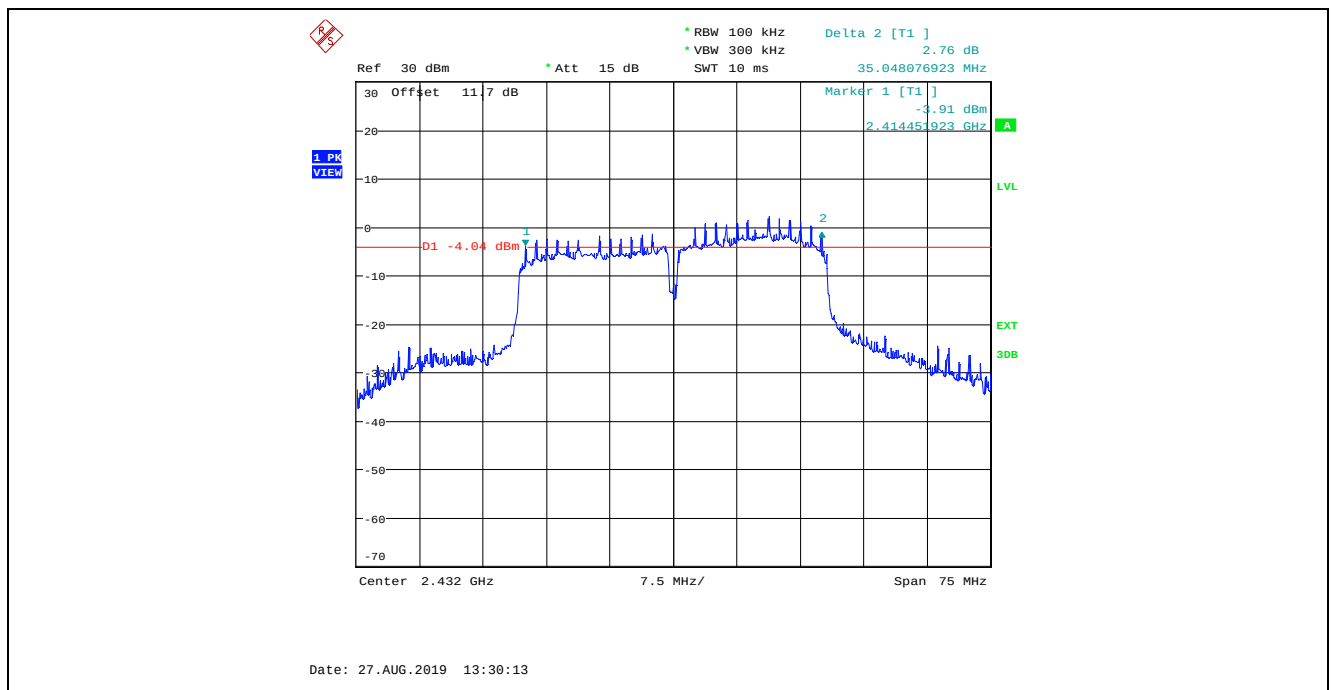
Plot 5.2.4.56. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 7, 64-QAM 5/6 150 Mbps, Power Setting 19, Channel 6, 2437 MHz



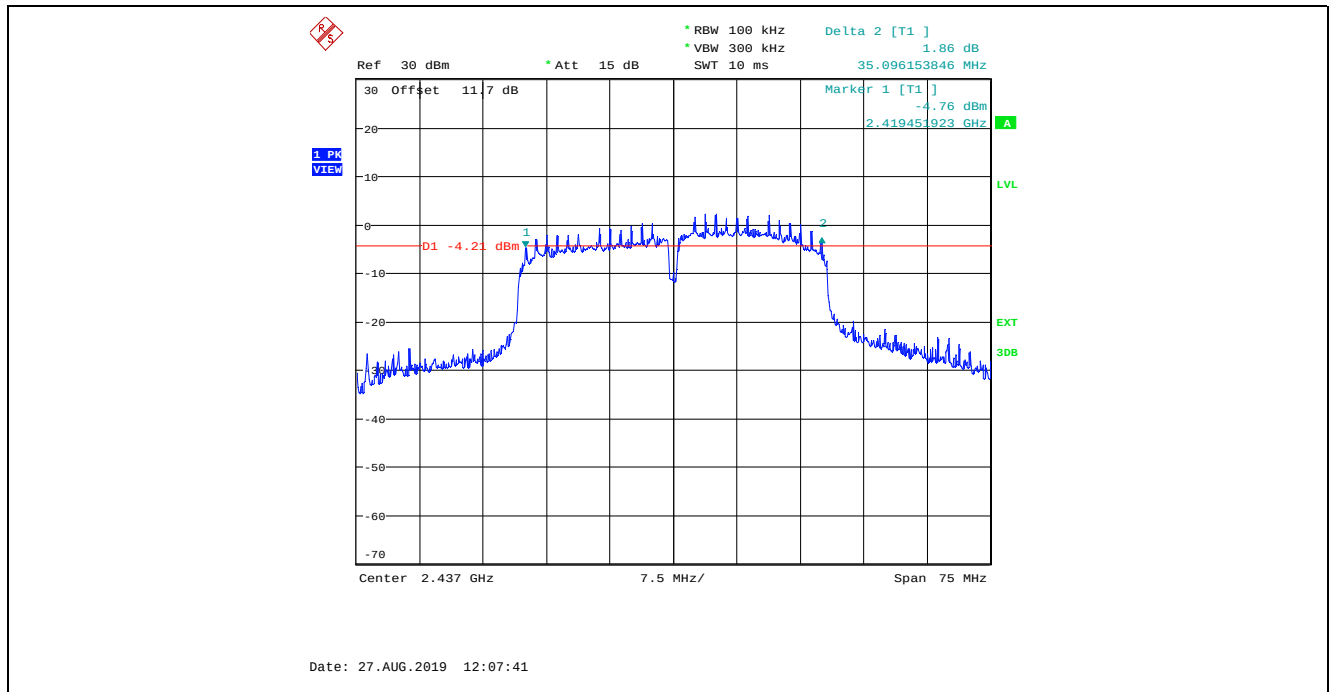
Plot 5.2.4.57. 6 dB Bandwidth
802.11n HT40, 400 ns, MCS 7, 64-QAM 5/6 150 Mbps, Power Setting 18, Channel 7, 2442 MHz



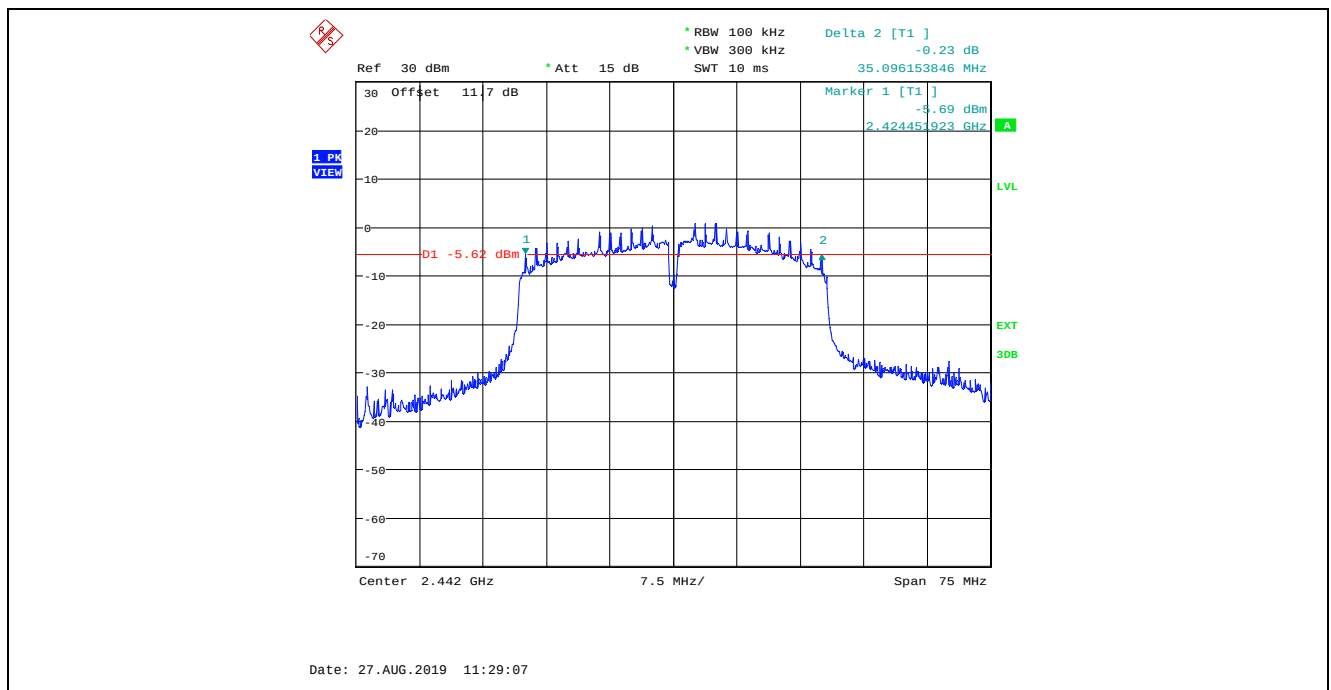
Plot 5.2.4.58. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 0, BPSK 1/2 13.5 Mbps, Power Setting 20, Channel 5, 2432 MHz



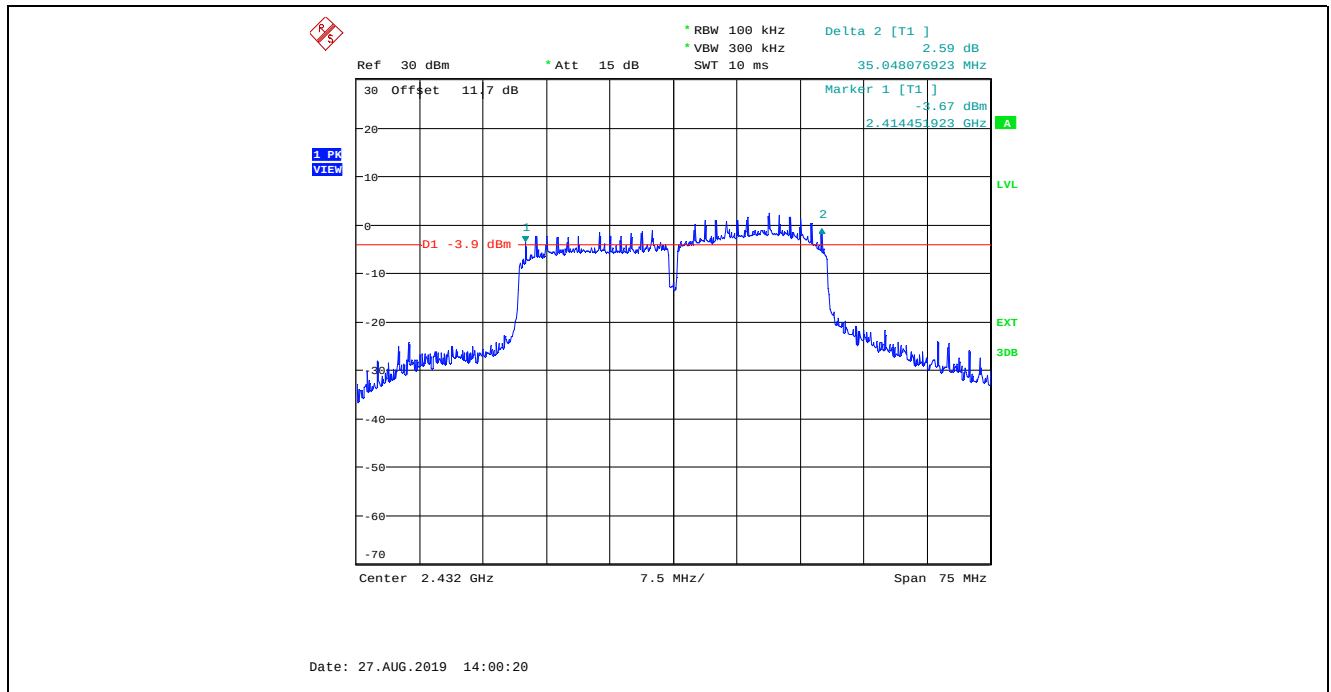
Plot 5.2.4.59. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 0, BPSK ½ 13.5 Mbps, Power Setting 20, Channel 6, 2437 MHz



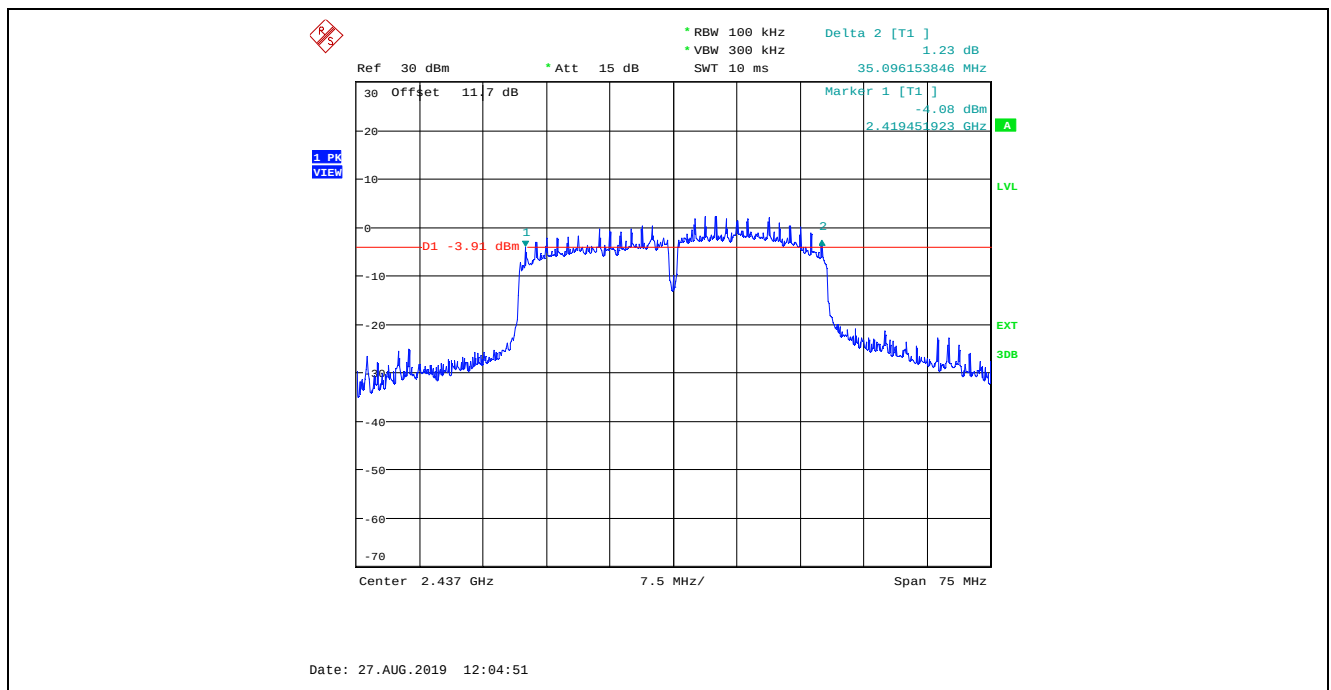
Plot 5.2.4.60. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 0, BPSK ½ 13.5 Mbps, Power Setting 18, Channel 7, 2442 MHz



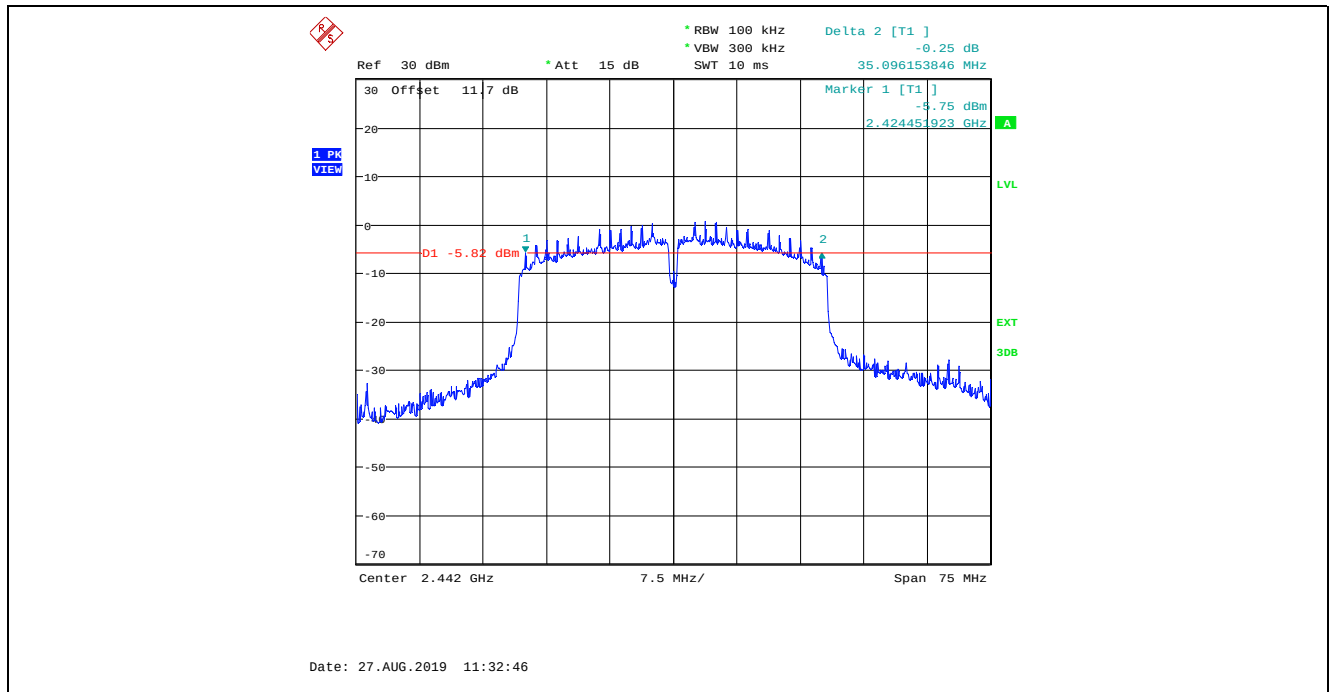
Plot 5.2.4.61. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 2, QPSK $\frac{3}{4}$ 40.5 Mbps, Power Setting 20, Channel 5, 2432 MHz



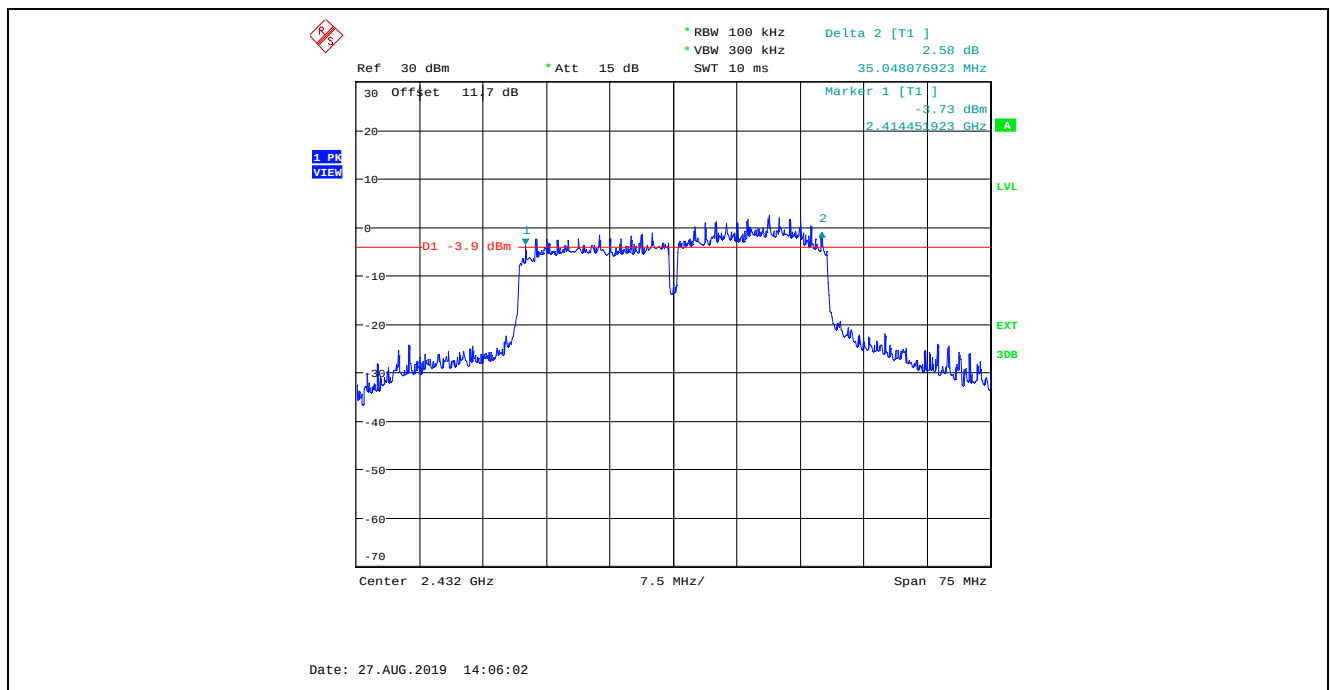
Plot 5.2.4.62. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 2, QPSK $\frac{3}{4}$ 40.5 Mbps, Power Setting 20, Channel 6, 2437 MHz



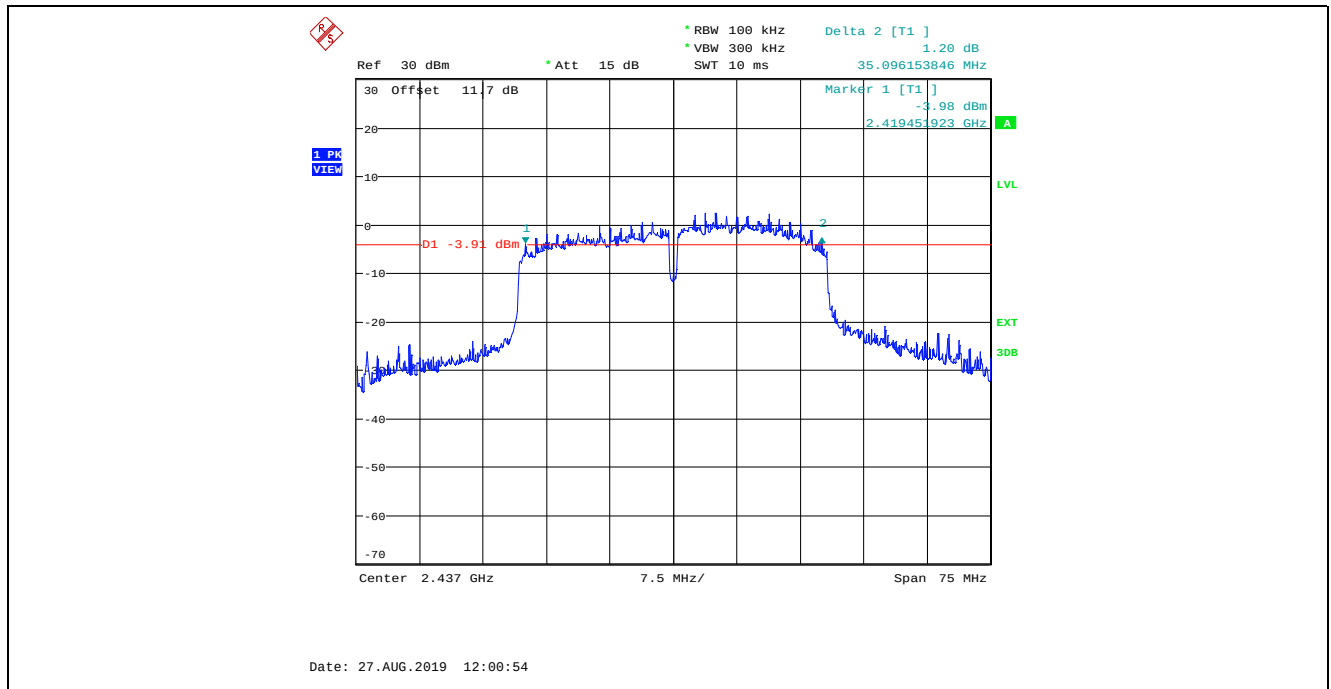
Plot 5.2.4.63. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 2, QPSK 3/4 40.5 Mbps, Power Setting 18, Channel 7, 2442 MHz



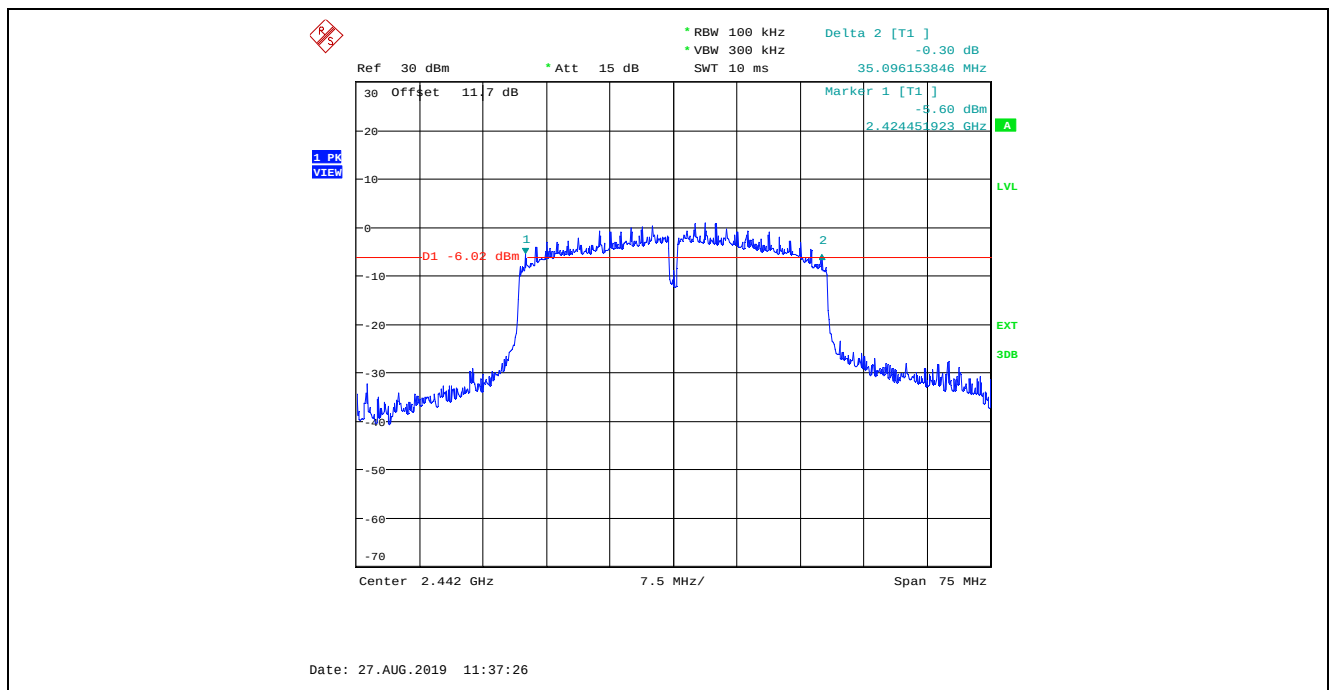
Plot 5.2.4.64. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 4, 16-QAM 3/4 81 Mbps, Power Setting 20, Channel 5, 2432 MHz



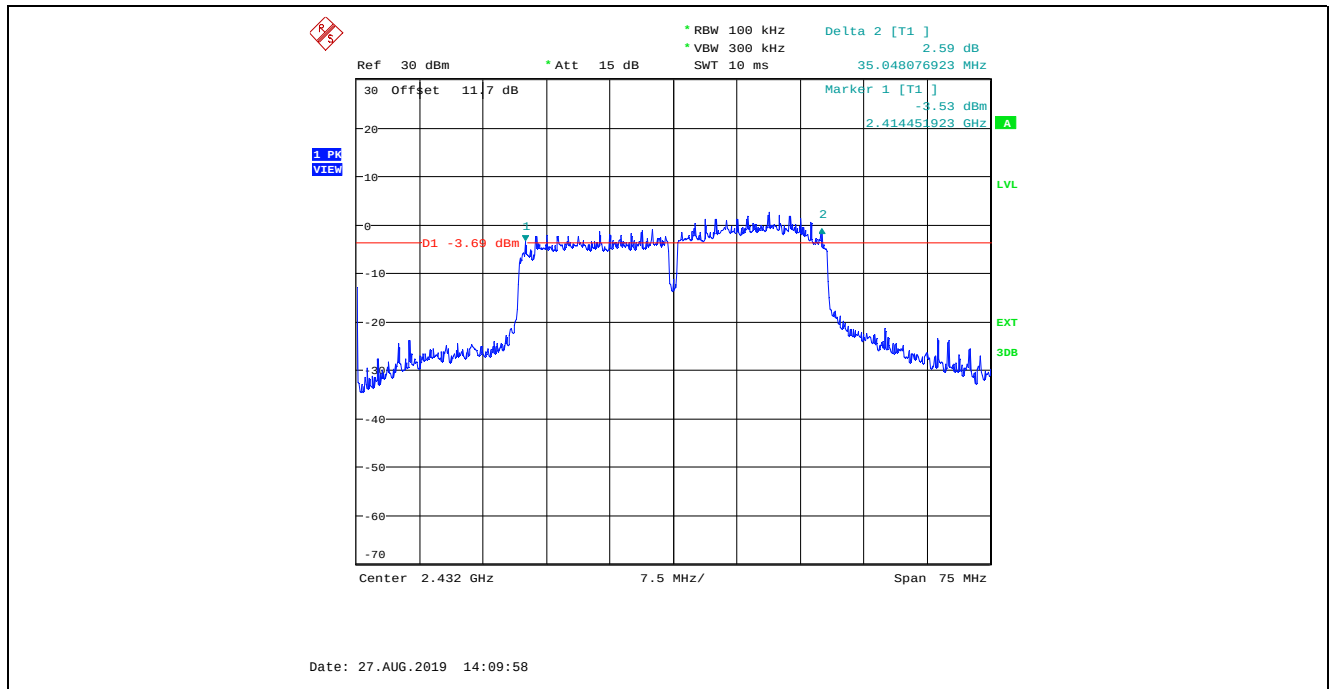
Plot 5.2.4.65. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 4, 16-QAM 3/4 81 Mbps, Power Setting 20, Channel 6, 2437 MHz



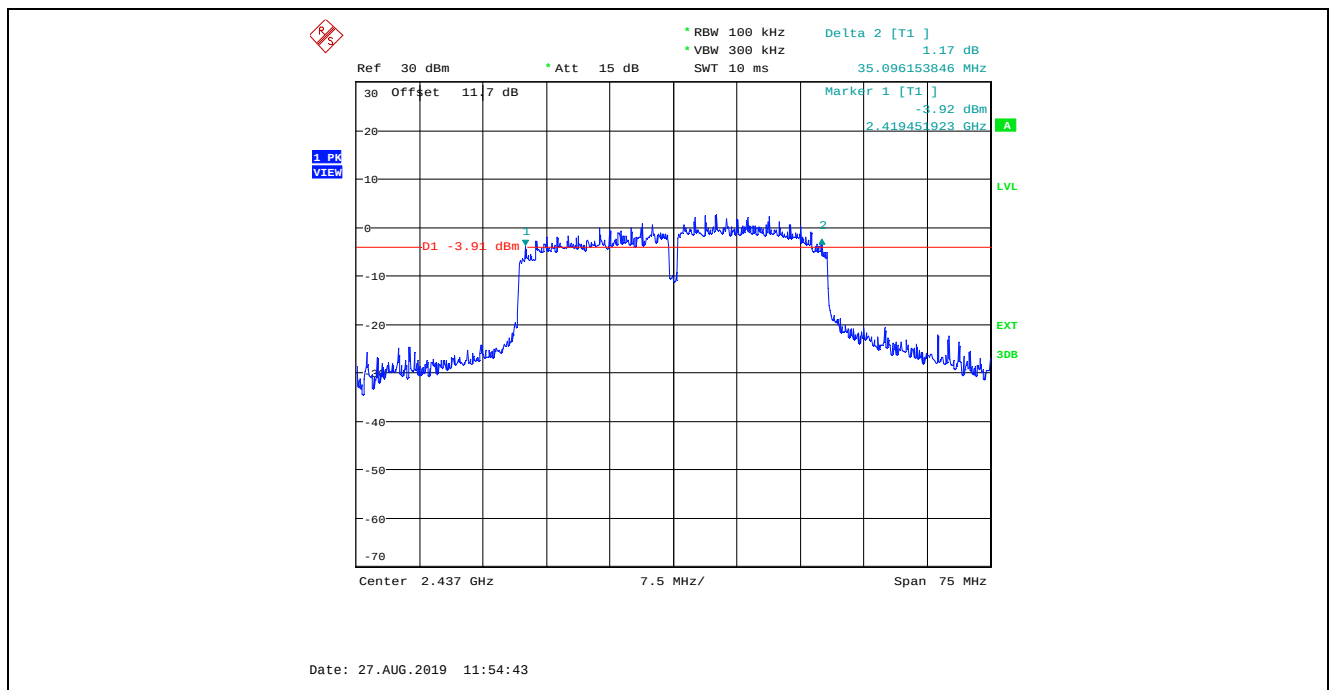
Plot 5.2.4.66. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 4, 16-QAM 3/4 81 Mbps, Power Setting 18, Channel 7, 2442 MHz



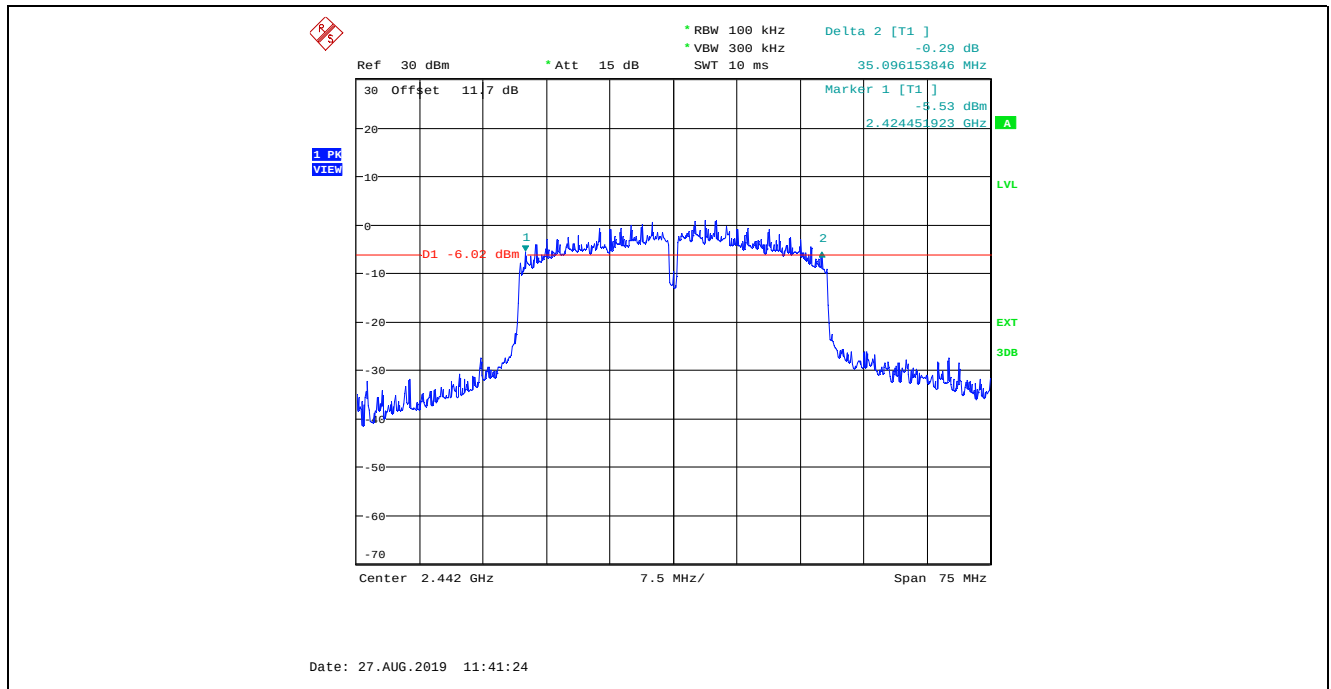
Plot 5.2.4.67. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 7, 64-QAM 5/6 135 Mbps, Power Setting 20, Channel 5, 2432 MHz



Plot 5.2.4.68. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 7, 64-QAM 5/6 135 Mbps, Power Setting 20, Channel 6, 2437 MHz



Plot 5.2.4.69. 6 dB Bandwidth
802.11n HT40, 800 ns, MCS 7, 64-QAM 5/6 135 Mbps, Power Setting 18, Channel 7, 2442 MHz



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File #: 19DANBY001_FCC15C247

September 23, 2019

All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

5.3. PEAK CONDUCTED OUTPUT POWER - DTS [§ 15.247(b)(3)]

5.3.1. Limit(s)

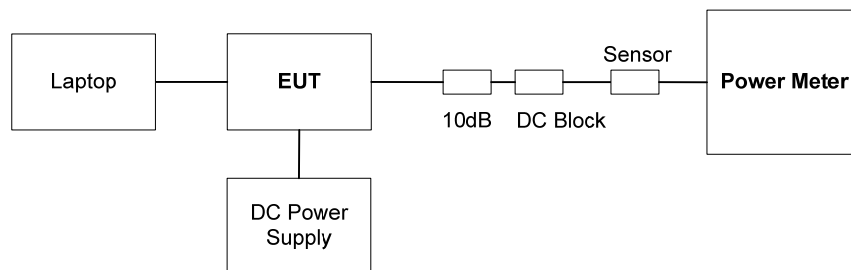
§ 15.247(b)(3): For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the *maximum conducted output power* is the highest total transmit power occurring in any mode.

§ 15.247(b)(4): The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.3.2. Method of Measurements

FCC KDB 558074 D01 15.247 Meas Guidance v05r02, Section 8.3.1.3 PKPM1 Peak-reading power meter method / Subclause 11.9.1.3 of ANSI C63.10

5.3.3. Test Arrangement



5.3.4. Test Data

Peak Power and Power Setting for EUT with 9 dBi TP-Link Directional Antenna							
Operating Mode		Power Setting	Channel	Frequency (MHz)	Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)
802.11b	DBPSK 1 Mbps	24	1	2412	17.19	9	26.19
		24	6	2437	18.27	9	27.27
		24	11	2462	18.12	9	27.12
	DQPSK 2 Mbps	24	1	2412	17.62	9	26.62
		24	6	2437	18.29	9	27.29
		24	11	2462	18.29	9	27.29
	CCK 11 Mbps	24	1	2412	17.62	9	26.62
		24	6	2437	18.29	9	27.29
		24	11	2462	18.29	9	27.29
802.11g	BPSK 9 Mbps	21	1	2412	20.79	9	29.79
		24	2	2417	20.97	9	29.97
		24	6	2437	19.97	9	28.97
		24	10	2457	21.79	9	30.79
		19	11	2462	20.51	9	29.51
	QPSK 18 Mbps	21	1	2412	20.81	9	29.81
		24	2	2417	20.97	9	29.97
		24	6	2437	19.97	9	28.97
		24	10	2457	21.78	9	30.78
		19	11	2462	20.06	9	29.06
	16-QAM 36 Mbps	21	1	2412	20.65	9	29.65
		24	2	2417	21.04	9	30.04
		24	6	2437	20.00	9	29.00
		24	10	2457	21.81	9	30.81
		19	11	2462	20.34	9	29.34
	64-QAM 54 Mbps	21	1	2412	20.84	9	29.84
		24	2	2417	21.29	9	30.29
		24	6	2437	20.12	9	29.12
		24	10	2457	21.76	9	30.76
		19	11	2462	20.05	9	29.05

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Peak Power and Power Setting for EUT with 9 dBi TP-Link Directional Antenna							
Operating Mode		Power Setting	Channel	Frequency (MHz)	Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)
802.11n HT20 400 ns	MCS 0 BPSK $\frac{1}{2}$ 7.2 Mbps	20	1	2412	20.32	9	29.32
		24	2	2417	21.33	9	30.33
		24	6	2437	20.14	9	29.14
		24	8	2447	21.00	9	30.00
		21	9	2452	21.23	9	30.23
		21	10	2457	21.64	9	30.64
		18	11	2462	19.76	9	28.76
	MCS 2 QPSK $\frac{3}{4}$ 21.7 Mbps	20	1	2412	20.25	9	29.25
		24	2	2417	21.22	9	30.22
		24	6	2437	20.19	9	29.19
		24	8	2447	20.91	9	29.91
		21	9	2452	21.17	9	30.17
		21	10	2457	21.44	9	30.44
		18	11	2462	19.16	9	28.16
	MCS 4 16-QAM $\frac{3}{4}$ 43.3 Mbps	20	1	2412	20.01	9	29.01
		24	2	2417	21.39	9	30.39
		24	6	2437	20.11	9	29.11
		24	8	2447	21.25	9	30.25
		21	9	2452	21.19	9	30.19
		21	10	2457	21.46	9	30.46
		18	11	2462	19.75	9	28.75
	MCS 7 64-QAM $\frac{5}{6}$ 72.2 Mbps	20	1	2412	20.41	9	29.41
		24	2	2417	21.08	9	30.08
		24	6	2437	20.19	9	29.19
		24	8	2447	21.27	9	30.27
		21	9	2452	21.38	9	30.38
		21	10	2457	21.78	9	30.78
		18	11	2462	20.14	9	29.14

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Peak Power and Power Setting for EUT with 9 dBi TP-Link Directional Antenna							
Operating Mode		Power Setting	Channel	Frequency (MHz)	Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)
802.11n HT20 800 ns	MCS 0 BPSK $\frac{1}{2}$ 6.5 Mbps	19	1	2412	19.35	9	28.35
		24	2	2417	21.02	9	30.02
		24	6	2437	20.18	9	29.18
		24	8	2447	21.36	9	30.36
		21	9	2452	21.41	9	30.41
		21	10	2457	21.62	9	30.62
		18	11	2462	19.76	9	28.76
	MCS 2 QPSK $\frac{3}{4}$ 19.5 Mbps	19	1	2412	19.64	9	28.64
		24	2	2417	20.77	9	29.77
		24	6	2437	20.09	9	29.09
		24	8	2447	21.22	9	30.22
		21	9	2452	21.25	9	30.25
		21	10	2457	21.82	9	30.82
		18	11	2462	19.58	9	28.58
	MCS 4 16-QAM $\frac{3}{4}$ 39.0 Mbps	19	1	2412	19.29	9	28.29
		24	2	2417	21.34	9	30.34
		24	6	2437	20.32	9	29.32
		24	8	2447	21.23	9	30.23
		21	9	2452	21.36	9	30.36
		21	10	2457	21.75	9	30.75
		18	11	2462	19.50	9	28.50
	MCS 7 64-QAM $\frac{5}{6}$ 65.0 Mbps	19	1	2412	19.27	9	28.27
		24	2	2417	21.05	9	30.05
		24	6	2437	20.18	9	29.18
		24	8	2447	21.27	9	30.27
		21	9	2452	21.32	9	30.32
		21	10	2457	21.47	9	30.47
		18	11	2462	19.83	9	28.83

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Peak Power and Power Setting for EUT with 9 dBi TP-Link Directional Antenna							
Operating Mode		Power Setting (8 – 24)	Channel	Frequency (MHz)	Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)
802.11n HT40 400 ns	MCS 0 BPSK 1/2 15.0 Mbps	20	5	2432	20.04	9	29.04
		19	6	2437	19.83	9	28.83
		18	7	2442	19.21	9	28.21
	MCS 2 QPSK 3/4 45.0 Mbps	20	5	2432	20.34	9	29.34
		19	6	2437	20.29	9	29.29
		18	7	2442	19.96	9	28.96
	MCS 4 16-QAM 3/4 90.0 Mbps	20	5	2432	20.21	9	29.21
		19	6	2437	20.47	9	29.47
		18	7	2442	19.64	9	28.64
	MCS 7 64-QAM 5/6 150.0 Mbps	20	5	2432	20.38	9	29.38
		19	6	2437	20.15	9	29.15
		18	7	2442	19.63	9	28.63
802.11n HT40 800 ns	MCS 0 BPSK 1/2 13.5 Mbps	20	5	2432	20.26	9	29.26
		20	6	2437	20.32	9	29.32
		18	7	2442	18.99	9	27.99
	MCS 2 QPSK 3/4 40.5 Mbps	20	5	2432	20.32	9	29.32
		20	6	2437	20.29	9	29.29
		18	7	2442	19.96	9	28.96
	MCS 4 16-QAM 3/4 81.0 Mbps	20	5	2432	20.19	9	29.19
		20	6	2437	20.31	9	29.31
		18	7	2442	19.79	9	28.79
	MCS 7 64-QAM 5/6 135.0 Mbps	20	5	2432	20.24	9	29.24
		20	6	2437	20.15	9	29.15
		18	7	2442	19.76	9	28.76

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5.4. TRANSMITTER SPURIOUS RADIATED EMISSIONS AT 3 METERS [§§ 15.247(d), 15.209 & 15.205]

5.4.1. Limit(s)

§ 15.247 (d): 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 Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Section 15.205(a) - Restricted Bands of Operation

MHz	MHz	MHz	GHz
0.090–0.110	16.42–16.423	399.9–410	4.5–5.15
¹ 0.495–0.505	16.69475–16.69525	608–614	5.35–5.46
2.1735–2.1905	16.80425–16.80475	960–1240	7.25–7.75
4.125–4.128	25.5–25.67	1300–1427	8.025–8.5
4.17725–4.17775	37.5–38.25	1435–1626.5	9.0–9.2
4.20725–4.20775	73–74.6	1645.5–1646.5	9.3–9.5
6.215–6.218	74.8–75.2	1660–1710	10.6–12.7
6.26775–6.26825	108–121.94	1718.8–1722.2	13.25–13.4
6.31175–6.31225	123–138	2200–2300	14.47–14.5
8.291–8.294	149.9–150.05	2310–2390	15.35–16.2
8.362–8.366	156.52475–156.52525	2483.5–2500	17.7–21.4
8.37625–8.38675	156.7–156.9	2655–2900	22.01–23.12
8.41425–8.41475	162.0125–167.17	3260–3267	23.6–24.0
12.29–12.293	167.72–173.2	3332–3339	31.2–31.8
12.51975–12.52025	240–285	3345.8–3358	36.43–36.5
12.57675–12.57725	322–335.4	3600–4400	(²)
13.36–13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490–0.510 MHz.

² Above 38.6

Section 15.209(a) - Field Strength Limits within Restricted Frequency Bands

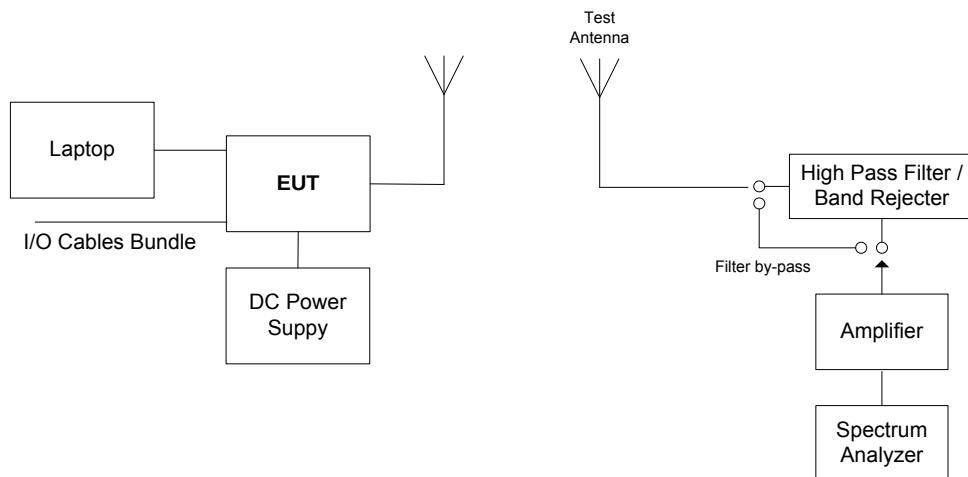
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2,400 / F (kHz)	300
0.490 - 1.705	24,000 / F (kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.4.2. Method of Measurements

KDB 558074 D01 15.247 Meas Guidance v05r02, Sections 8.5, 8.6 and 8.7 / Subclauses 11.11, 11.12 and 11.13 of ANSI C63.10.

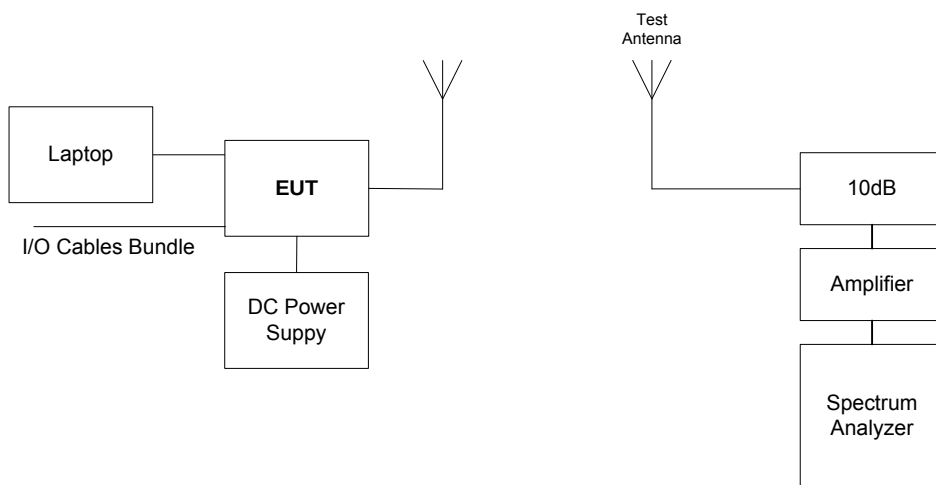
5.4.3. Test Arrangement

Radiated Emissions



Laptop removed after setup.

Band-Edge Radiated Emissions



Laptop removed after setup.

5.4.4. Test Data

Remark(s):

- All spurious emissions that are in excess of 20 dB below the specified limit shall be recorded.
- EUT shall be tested in three orthogonal positions.
- Exploratory tests performed to determined worst-case test configurations, the following test results at high power setting represent the worst-case.

5.4.4.1. Spurious Radiated Emissions

5.4.4.1.1. 802.11b, DBPSK 1 Mbps

Operating Mode: 802.11b, DBPSK 1 Mbps, Power Setting 24							
Fundamental Frequency: 2412 MHz							
Frequency Test Range: 30 MHz – 25 GHz							
Frequency (MHz)	RF Peak Level (dBμV/m)	RF Avg Level (dBμV/m)	Antenna Plane (H/V)	Limit 15.209 (dBμV/m)	Limit 15.247 (dBμV/m)	Margin (dB)	Pass/Fail
2412	111.22	--	V	--	--	--	--
2412	101.88	--	H	--	--	--	--
4824	51.69	41.91	V	54.0	91.2	-12.1	Pass*
4824	51.25	40.84	H	54.0	91.2	-13.2	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode: 802.11b, DBPSK 1 Mbps, Power Setting 24							
Fundamental Frequency: 2437 MHz							
Frequency Test Range: 30 MHz – 25 GHz							
Frequency (MHz)	RF Peak Level (dBμV/m)	RF Avg Level (dBμV/m)	Antenna Plane (H/V)	Limit 15.209 (dBμV/m)	Limit 15.247 (dBμV/m)	Margin (dB)	Pass/Fail
2437	111.84	--	V	--	--	--	--
2437	103.56	--	H	--	--	--	--
4874	55.21	50.15	V	54.0	91.8	-3.9	Pass*
4874	53.18	45.25	H	54.0	91.8	-8.8	Pass*
7311	56.09	43.31	V	54.0	91.8	-10.7	Pass*
7311	54.28	39.91	H	54.0	91.8	-14.1	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

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Operating Mode: 802.11b, DBPSK 1 Mbps, Power Setting 24							
Fundamental Frequency: 2462 MHz							
Frequency Test Range: 30 MHz – 25 GHz							
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2462	112.34	--	V	--	--	--	--
2462	104.42	--	H	--	--	--	--
4924	55.43	50.91	V	54.0	92.3	-3.1	Pass*
4924	52.72	44.77	H	54.0	92.3	-9.2	Pass*
7386	54.46	41.36	V	54.0	92.3	-12.6	Pass*
7386	54.29	39.73	H	54.0	92.3	-14.3	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

5.4.4.1.2. 802.11g, BPSK 9 Mbps

Operating Mode:		802.11g, BPSK 9 Mbps, Power Setting 24					
Fundamental Frequency:		2412 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBμV/m)	RF Avg Level (dBμV/m)	Antenna Plane (H/V)	Limit 15.209 (dBμV/m)	Limit 15.247 (dBμV/m)	Margin (dB)	Pass/Fail
2412	110.30	--	V	--	--	--	--
2412	102.73	--	H	--	--	--	--
4824	49.91	35.69	V	54.0	90.3	-18.3	Pass*
4824	49.33	34.98	H	54.0	90.3	-19.0	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode:		802.11g, BPSK 9 Mbps, Power Setting 24					
Fundamental Frequency:		2437 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBμV/m)	RF Avg Level (dBμV/m)	Antenna Plane (H/V)	Limit 15.209 (dBμV/m)	Limit 15.247 (dBμV/m)	Margin (dB)	Pass/Fail
2437	111.35	--	V	--	--	--	--
2437	104.47	--	H	--	--	--	--
4874	53.77	39.23	V	54.0	91.4	-14.8	Pass*
4874	51.00	36.96	H	54.0	91.4	-17.0	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode:		802.11g, BPSK 9 Mbps, Power Setting 24					
Fundamental Frequency:		2462 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBμV/m)	RF Avg Level (dBμV/m)	Antenna Plane (H/V)	Limit 15.209 (dBμV/m)	Limit 15.247 (dBμV/m)	Margin (dB)	Pass/Fail
2462	112.81	--	V	--	--	--	--
2462	105.64	--	H	--	--	--	--
4924	53.37	38.37	V	54.0	92.8	-15.6	Pass*
4924	50.20	36.53	H	54.0	92.8	-17.5	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

5.4.4.1.3. 802.11n HT20, MCS 0 BPSK ½ 6.5 Mbps

Operating Mode:		802.11n HT20, MCS 0 BPSK ½ 6.5 Mbps, Power Setting 24					
Fundamental Frequency:		2412 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2412	110.01	--	V	--	--	--	--
2412	98.92	--	H	--	--	--	--
4824	50.13	36.01	V	54.0	90.0	-18.0	Pass*
4824	48.74	35.78	H	54.0	90.0	-18.2	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode:		802.11n HT20, MCS 0 BPSK ½ 6.5 Mbps, Power Setting 24					
Fundamental Frequency:		2437 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2437	114.56	--	V	--	--	--	--
2437	103.89	--	H	--	--	--	--
4874	53.10	38.82	V	54.0	94.6	-15.2	Pass*
4874	49.15	36.46	H	54.0	94.6	-17.5	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode:		802.11n HT20, MCS 0 BPSK ½ 6.5 Mbps, Power Setting 24					
Fundamental Frequency:		2462 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2462	109.63	--	V	--	--	--	--
2462	102.34	--	H	--	--	--	--
4924	48.95	37.88	V	54.0	89.6	-16.1	Pass*
4924	48.94	36.05	H	54.0	89.6	-18.0	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

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5.4.4.1.4. 802.11n HT40, MCS 0 BPSK ½ 13.5 Mbps

Operating Mode:		802.11n HT40, MCS 0 BPSK ½ 13.5 Mbps, Power Setting 20					
Fundamental Frequency:		2432 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2432	111.49	--	V	--	--	--	--
2432	103.01	--	H	--	--	--	--
4864	50.86	37.32	V	54.0	91.5	-16.7	Pass*
4864	49.08	35.08	H	54.0	91.5	-18.9	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode:		802.11n HT40, MCS 0 BPSK ½ 13.5 Mbps, Power Setting 20					
Fundamental Frequency:		2437 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2437	111.94	--	V	--	--	--	--
2437	102.18	--	H	--	--	--	--
4874	51.22	37.96	V	54.0	91.9	-16.0	Pass*
4874	49.10	35.82	H	54.0	91.9	-18.2	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

Operating Mode:		802.11n HT40, MCS 0 BPSK ½ 13.5 Mbps, Power Setting 20					
Fundamental Frequency:		2442 MHz					
Frequency Test Range:		30 MHz – 25 GHz					
Frequency (MHz)	RF Peak Level (dBµV/m)	RF Avg Level (dBµV/m)	Antenna Plane (H/V)	Limit 15.209 (dBµV/m)	Limit 15.247 (dBµV/m)	Margin (dB)	Pass/Fail
2442	108.98	--	V	--	--	--	--
2442	100.95	--	H	--	--	--	--
4884	51.26	38.32	V	54.0	89.0	-15.7	Pass*
4884	50.41	36.75	H	54.0	89.0	-17.3	Pass*

*Field strength of emissions appearing within restricted frequency bands shall not exceed the limits in § 15.209.

ULTRATECH GROUP OF LABS

3000 Bristol Circle, Oakville, Ontario, Canada L6H 6G4

Tel. #: 905-829-1570, Fax. #: 905-829-8050, Email: vic@ultratech-labs.com, Website: <http://www.ultratech-labs.com>

File #: 19DANBY001_FCC15C247

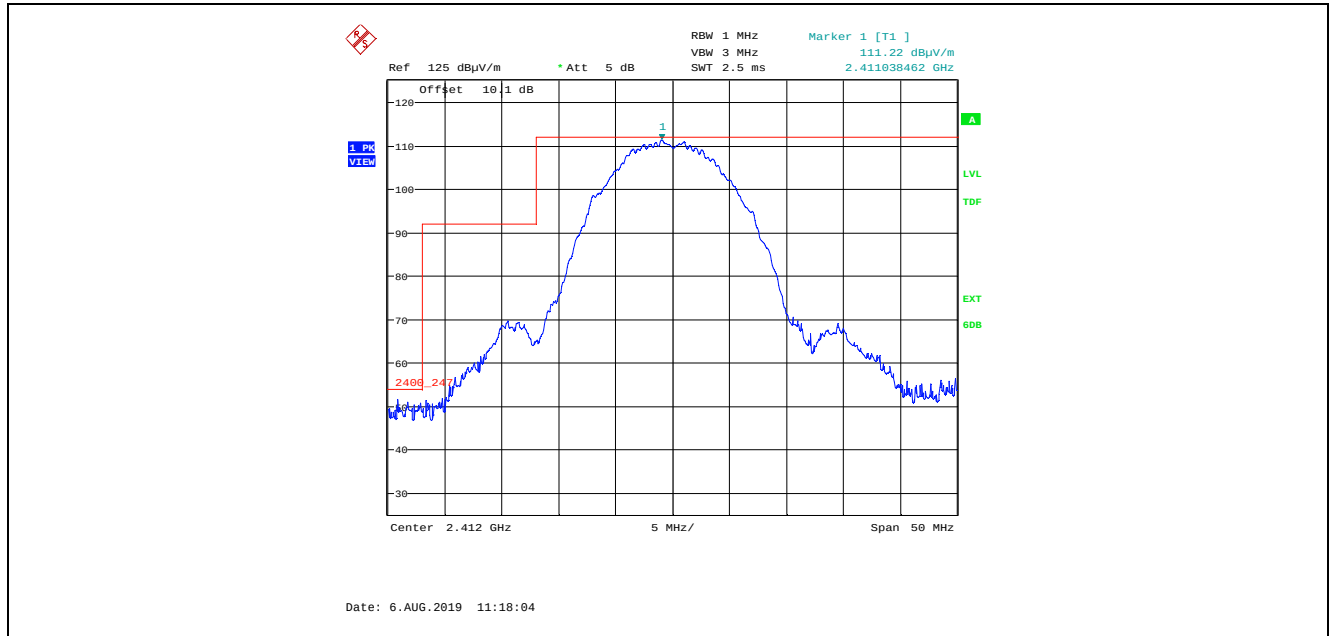
September 23, 2019

All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

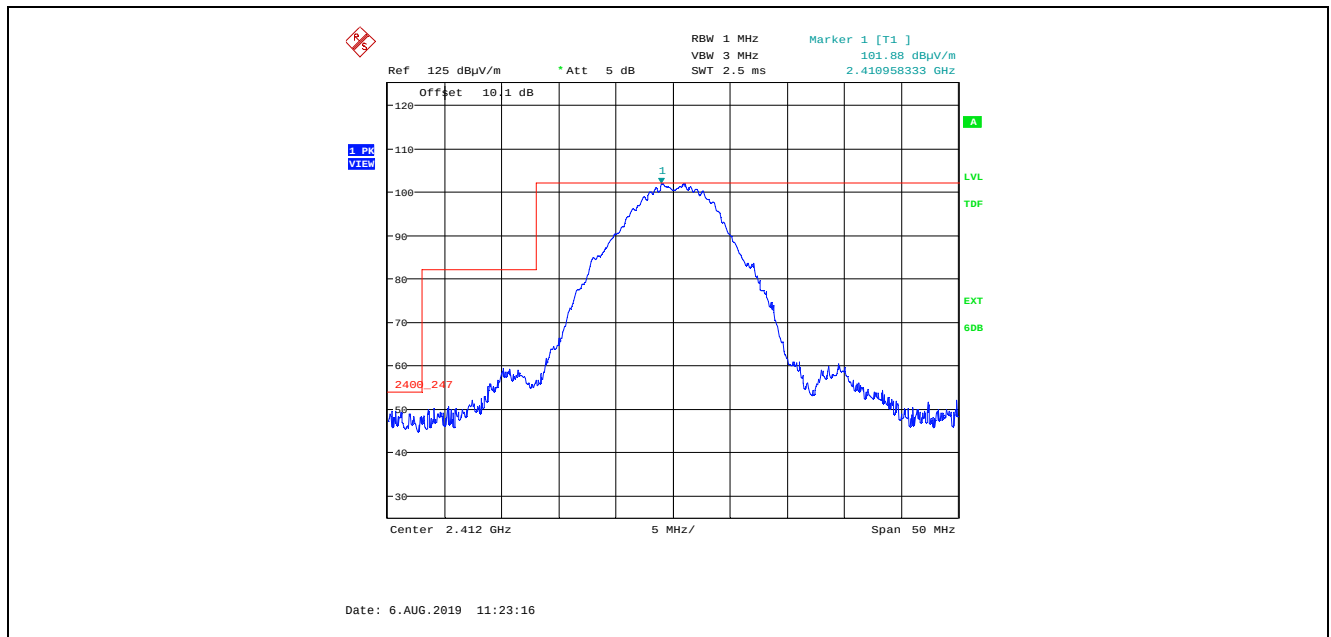
5.4.4.2. Band-Edge RF Radiated Emissions

5.4.4.2.1. Band-Edge RF Radiated Emissions for 802.11b

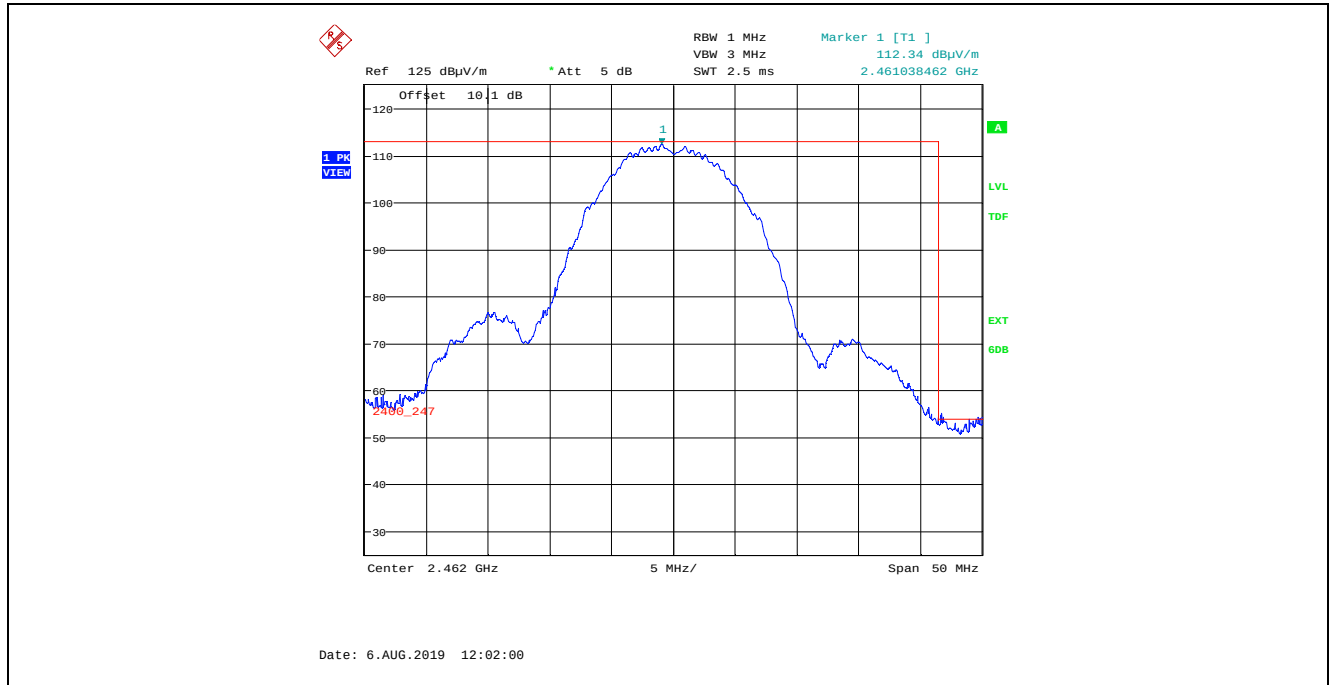
Plot 5.4.4.2.1.1. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11b, DBPSK 1Mbps, Power Setting 24, Channel 1, 2412 MHz



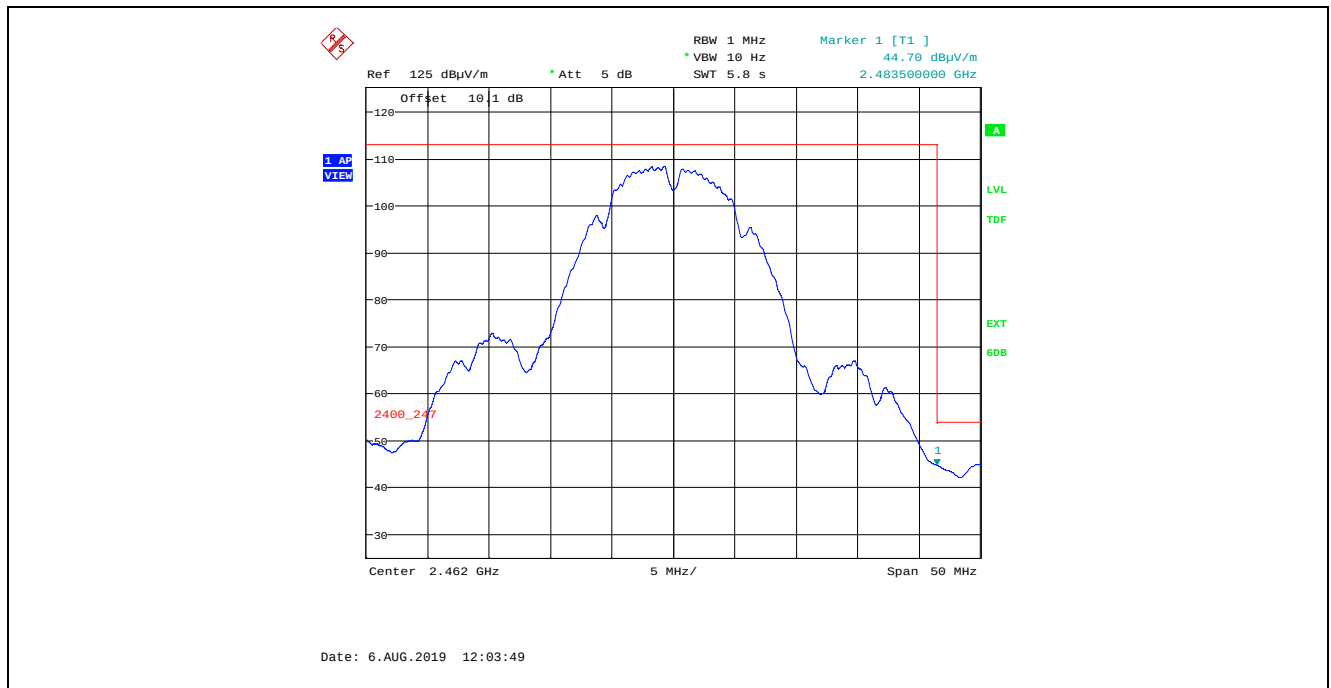
Plot 5.4.4.2.1.2. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11b, DBPSK 1Mbps, Power Setting 24, Channel 1, 2412 MHz



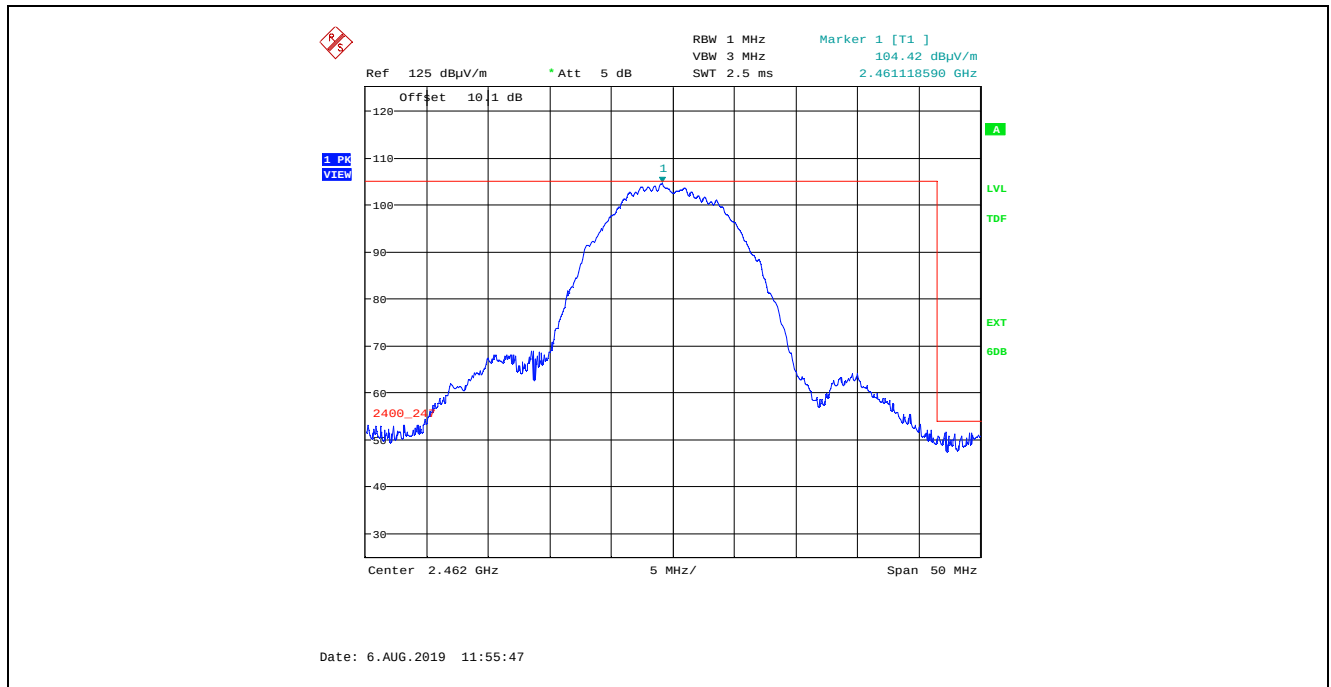
Plot 5.4.4.2.1.3. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11b, DBPSK 1Mbps, Power Setting 24, Channel 11, 2462 MHz



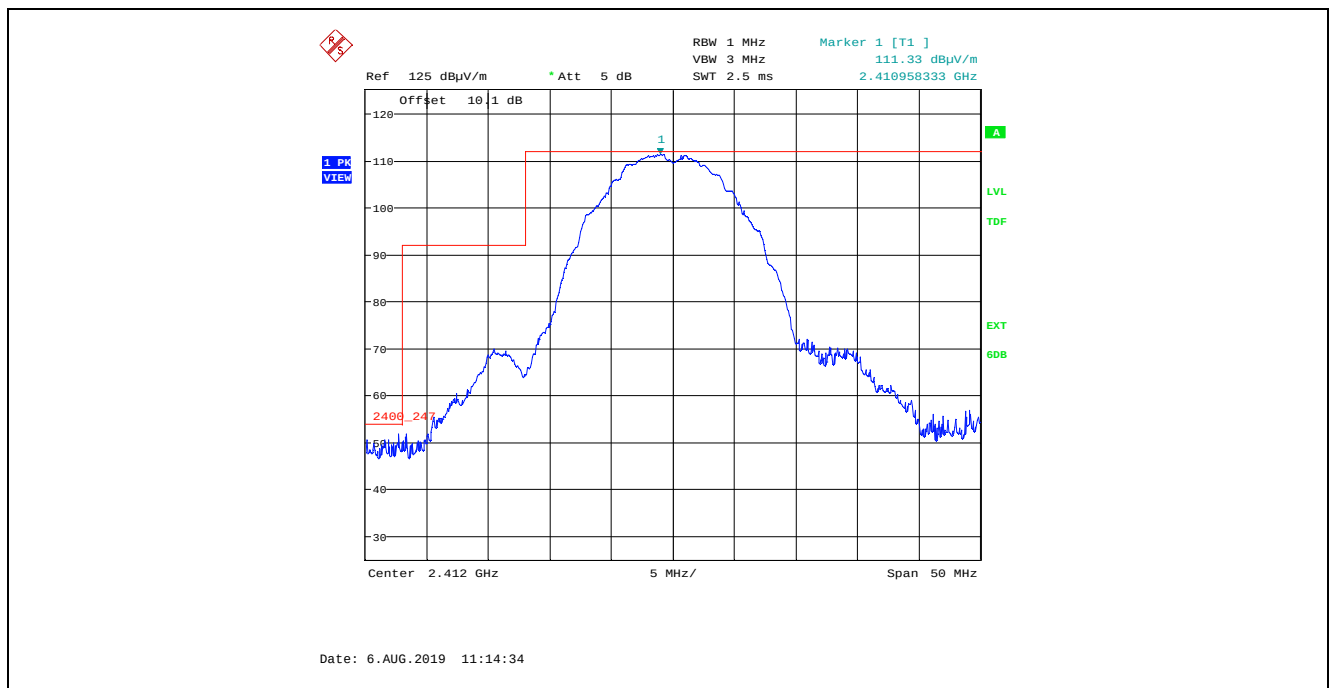
Plot 5.4.4.2.1.4. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11b, DBPSK 1Mbps, Power Setting 24, Channel 11, 2462 MHz



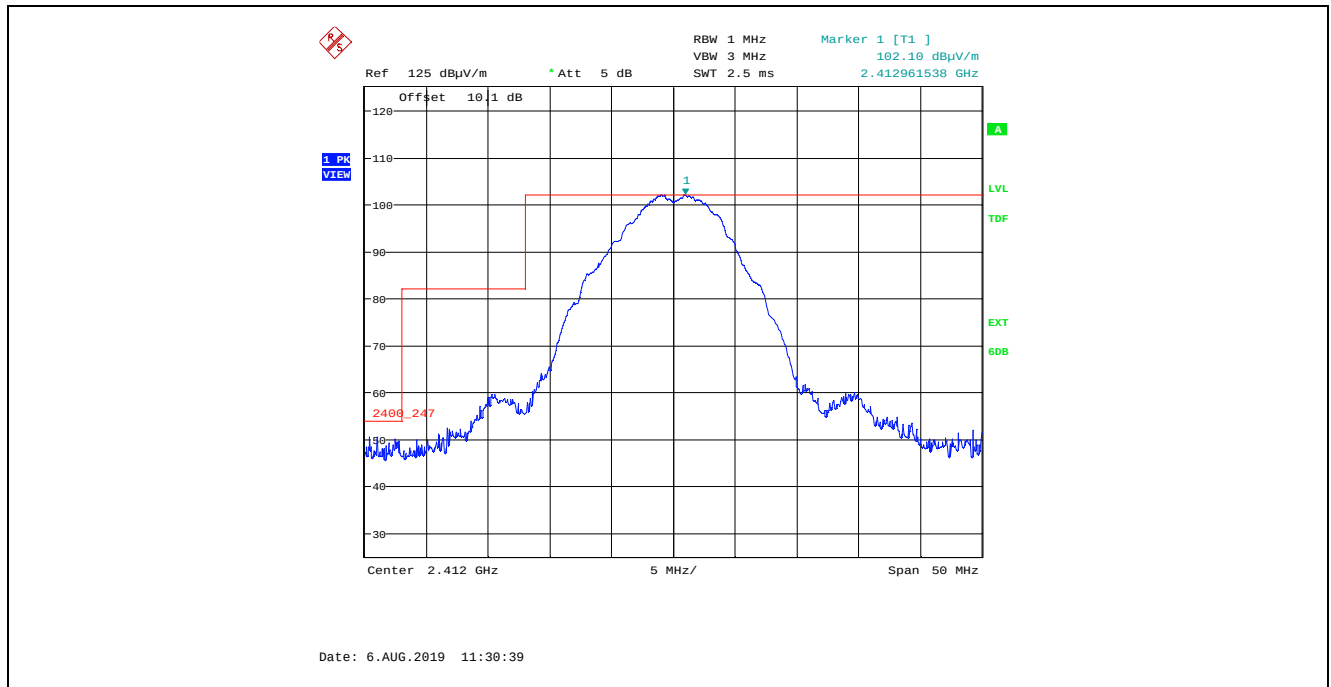
Plot 5.4.4.2.1.5. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak 802.11b, DBPSK 1Mbps, Power Setting 24, Channel 11, 2462 MHz



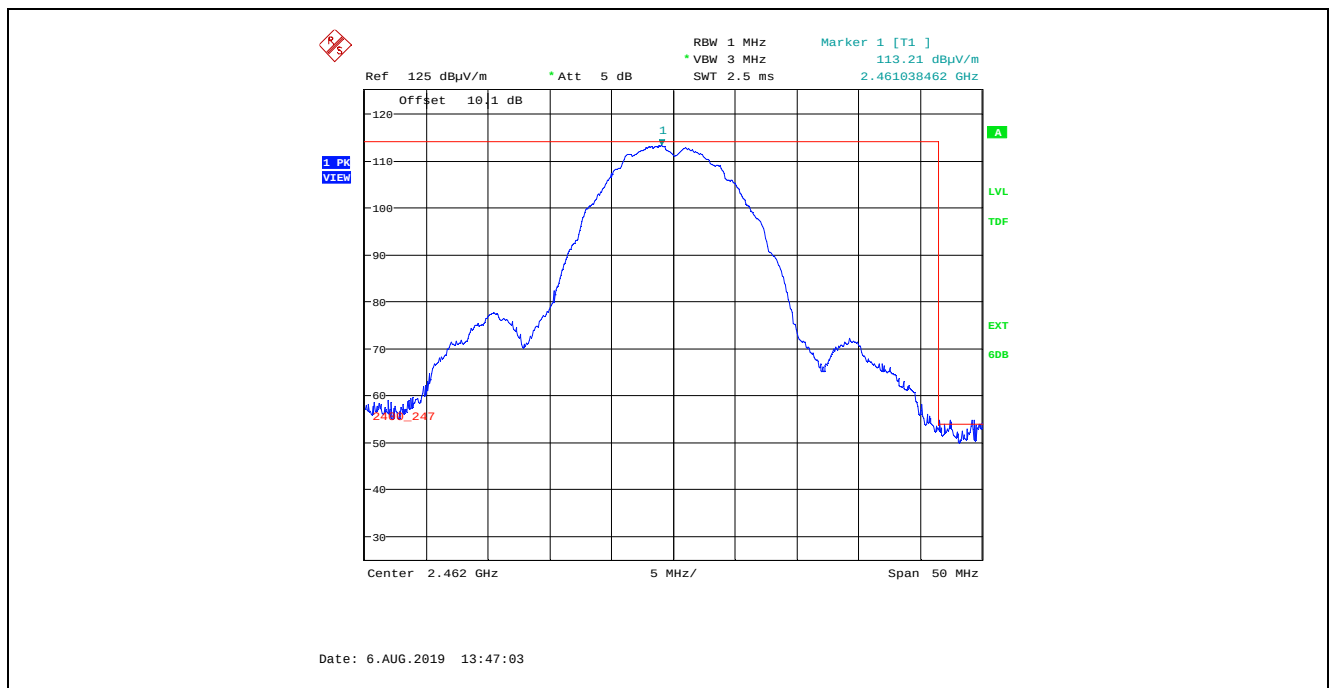
Plot 5.4.4.2.1.6. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak 802.11b, DQPSK 2Mbps, Power Setting 24, Channel 1, 2412 MHz



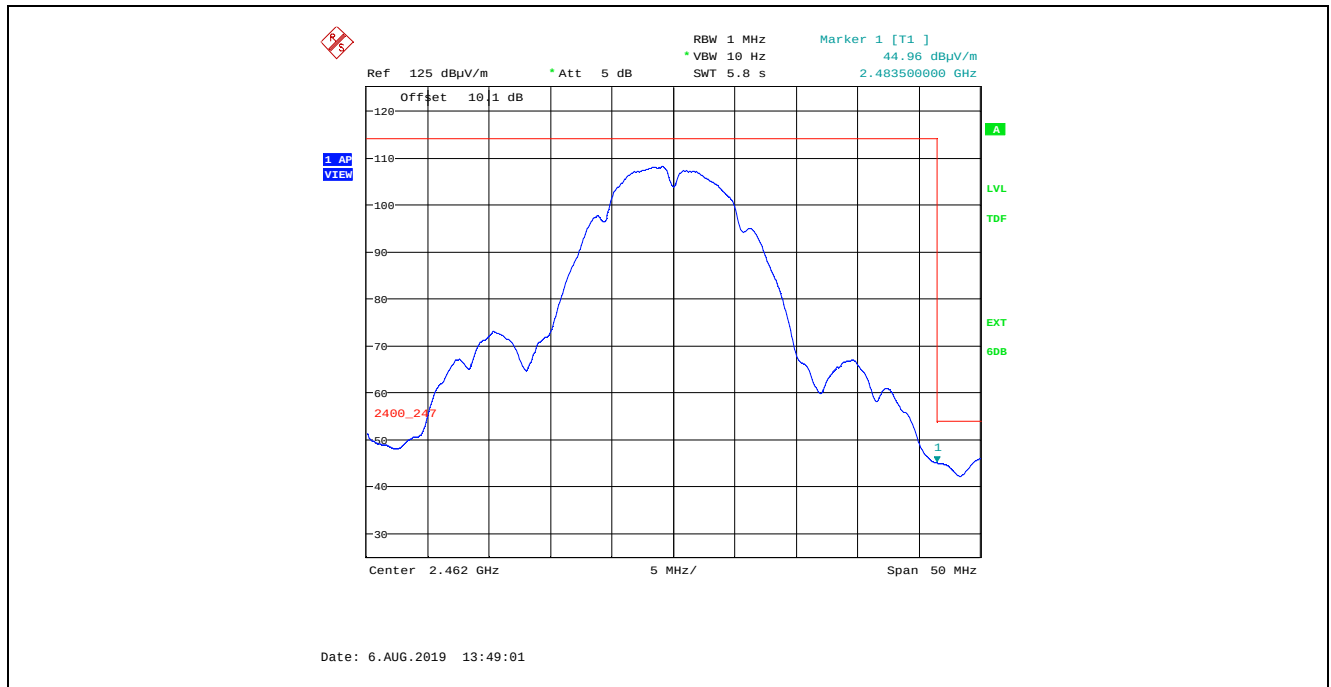
Plot 5.4.4.2.1.7. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11b, DQPSK 2Mbps, Power Setting 24, Channel 1, 2412 MHz



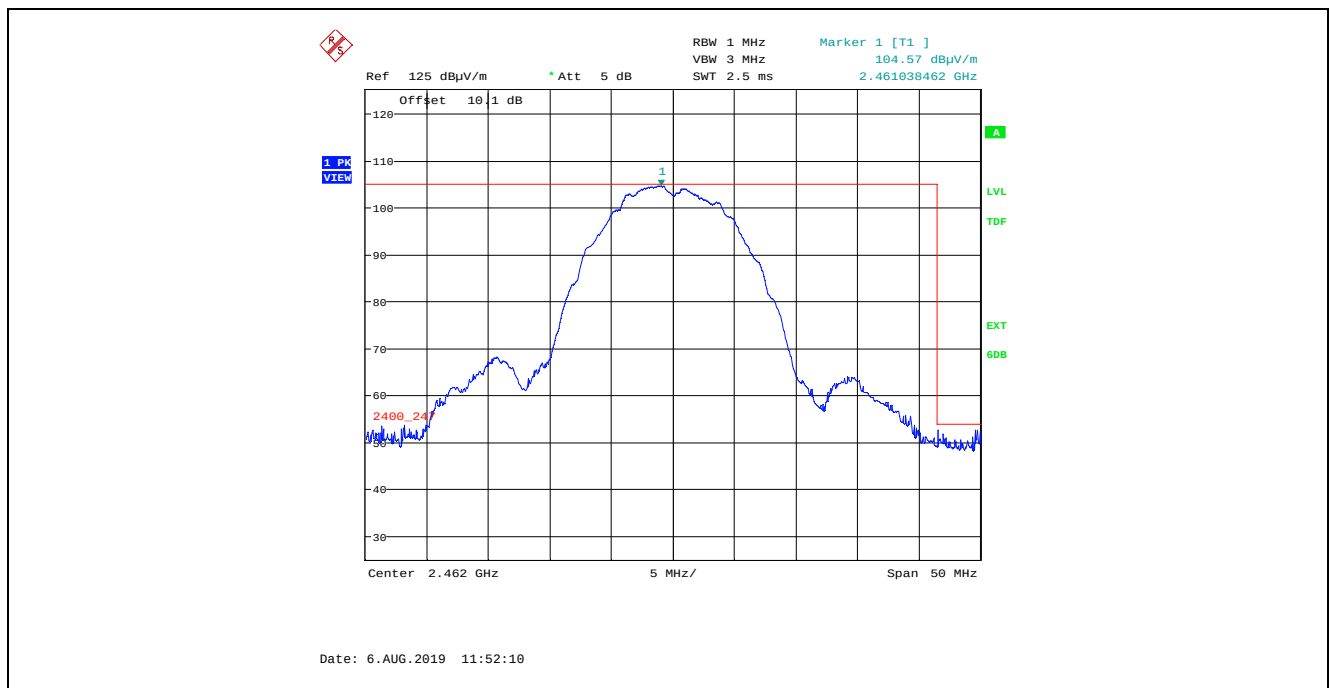
Plot 5.4.4.2.1.8. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11b, DQPSK 2Mbps, Power Setting 24, Channel 11, 2462 MHz



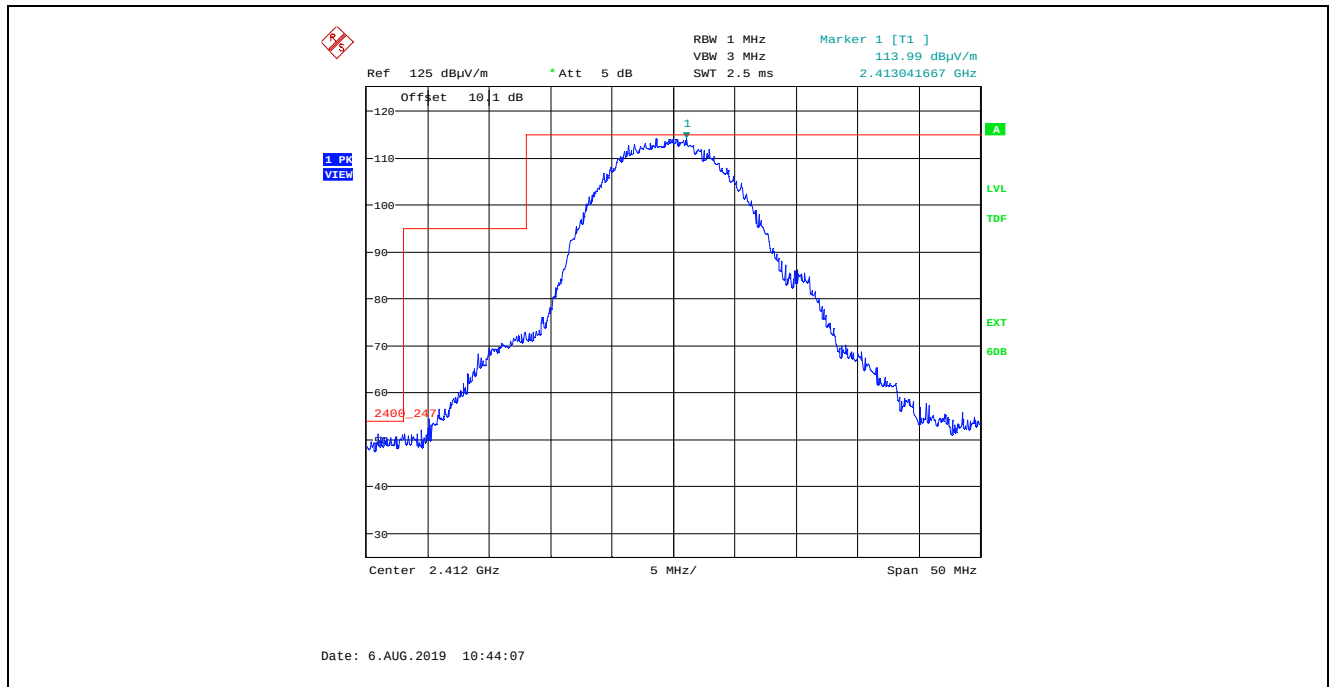
Plot 5.4.4.2.1.9. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11b, DQPSK 2Mbps, Power Setting 24, Channel 11, 2462 MHz



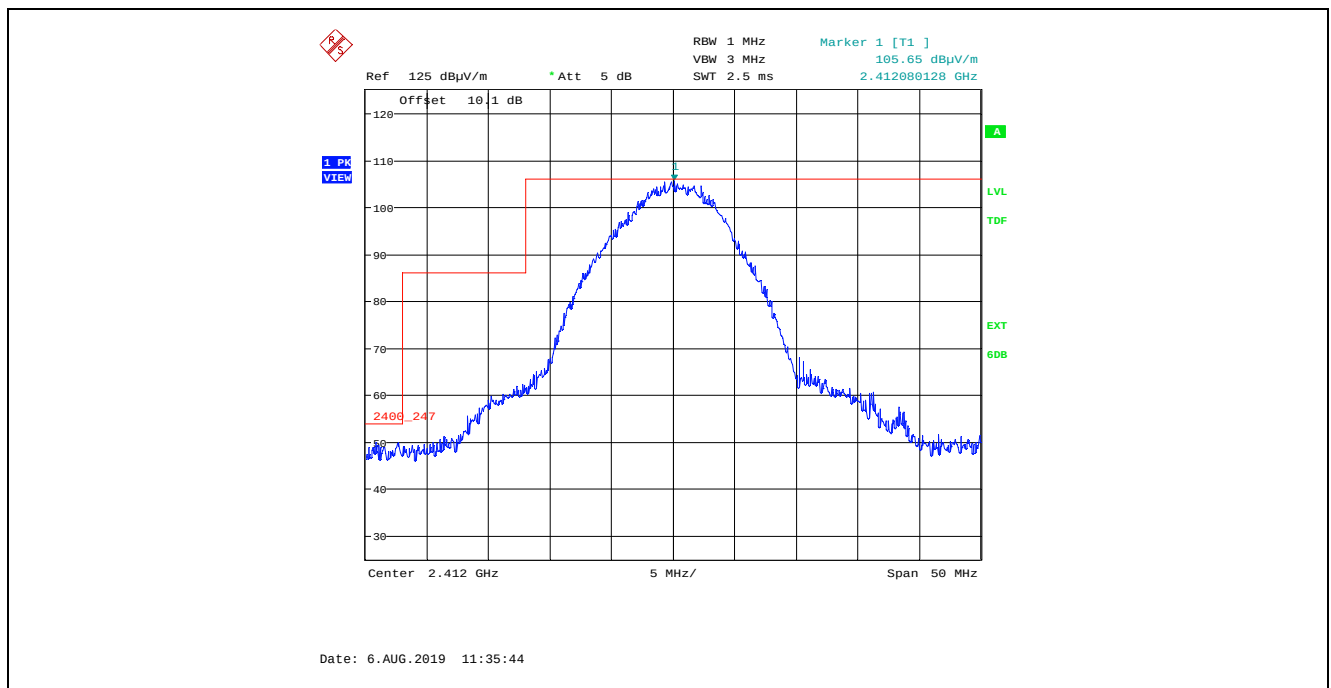
Plot 5.4.4.2.1.10. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11b, DQPSK 2Mbps, Power Setting 24, Channel 11, 2462 MHz



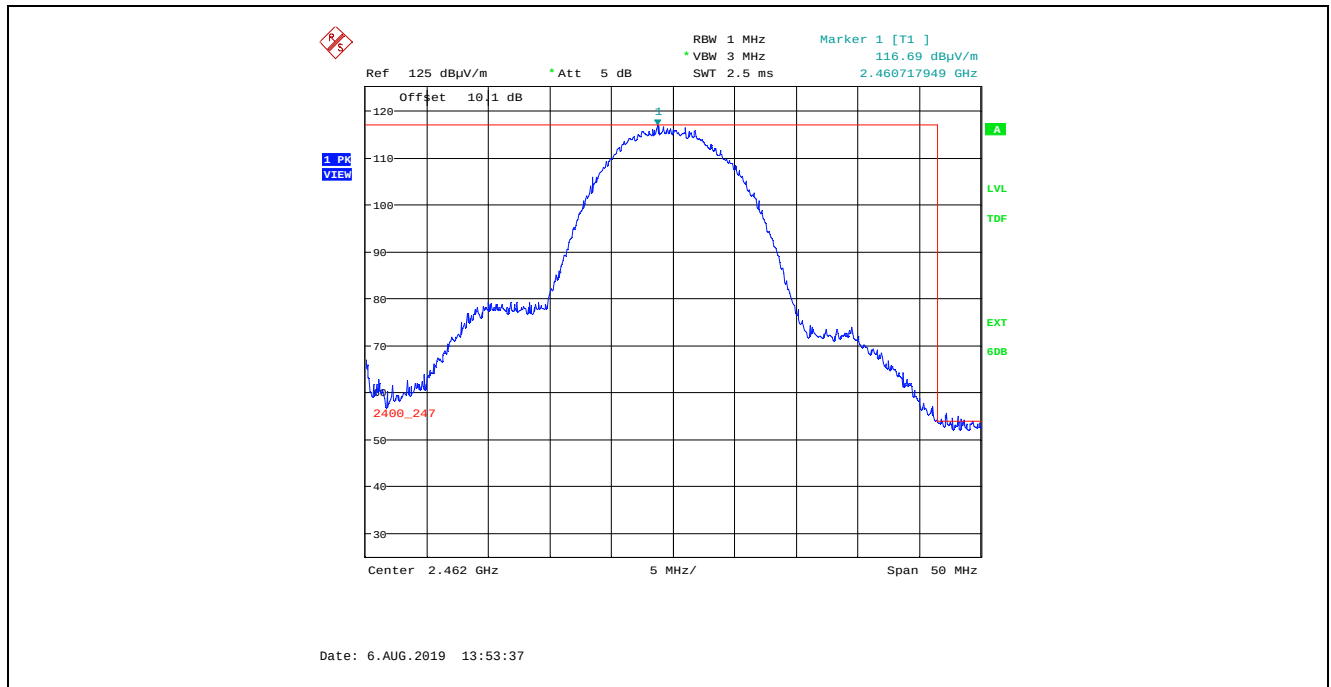
Plot 5.4.4.2.1.11. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak 802.11b, CCK 11Mbps, Power Setting 24, Channel 1, 2412 MHz



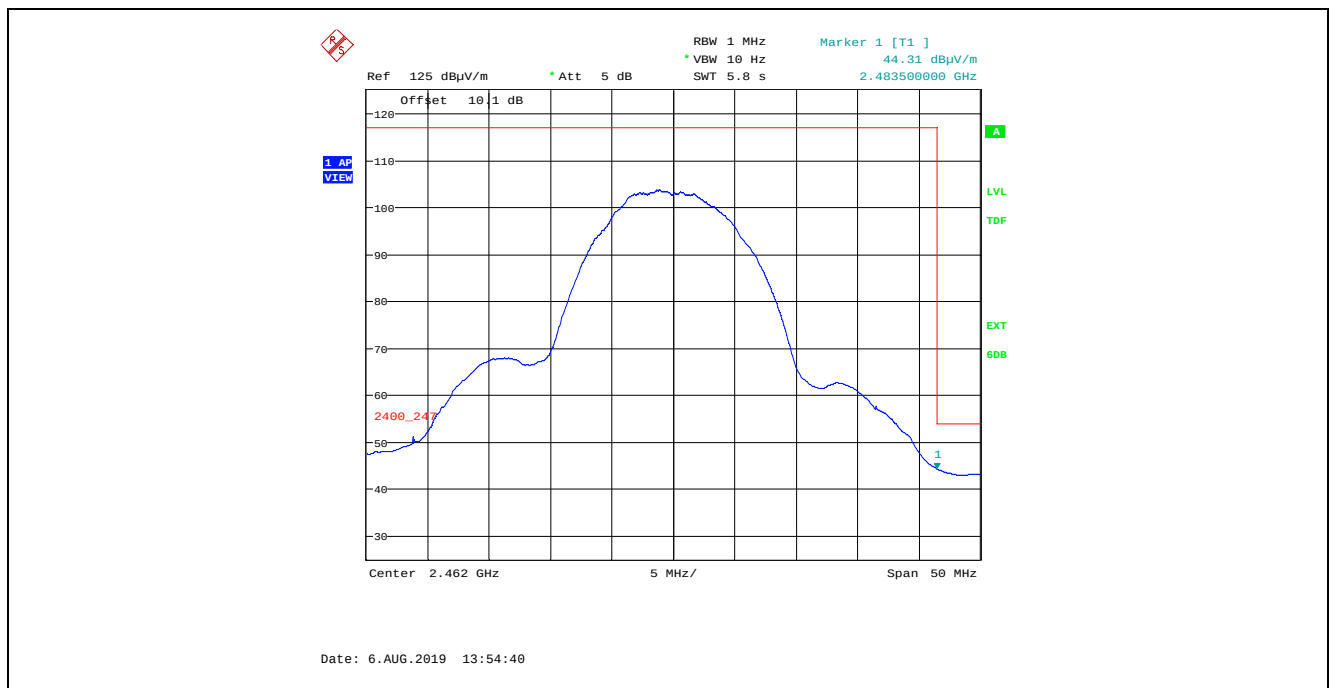
Plot 5.4.4.2.1.12. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak 802.11b, CCK 11Mbps, Power Setting 24, Channel 1, 2412 MHz



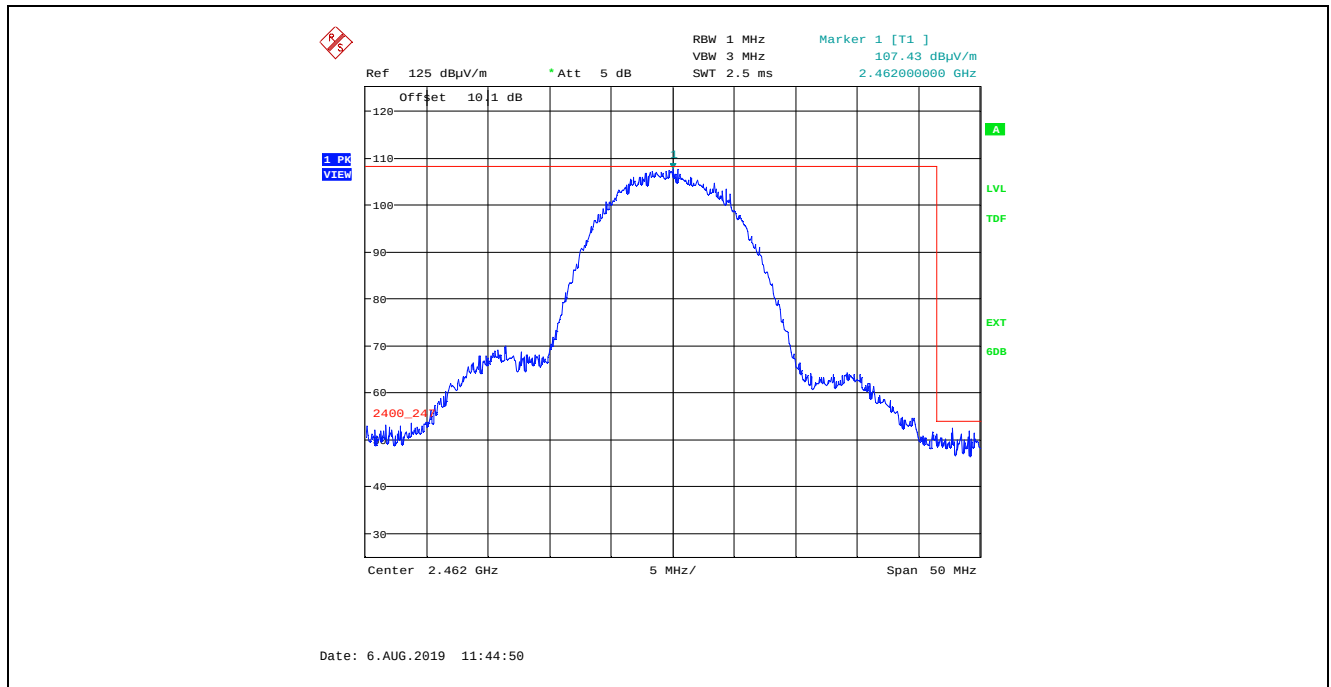
Plot 5.4.4.2.1.13. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11b, CCK 11Mbps, Power Setting 24, Channel 11, 2462 MHz



Plot 5.4.4.2.1.14. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11b, CCK 11Mbps, Power Setting 24, Channel 11, 2462 MHz

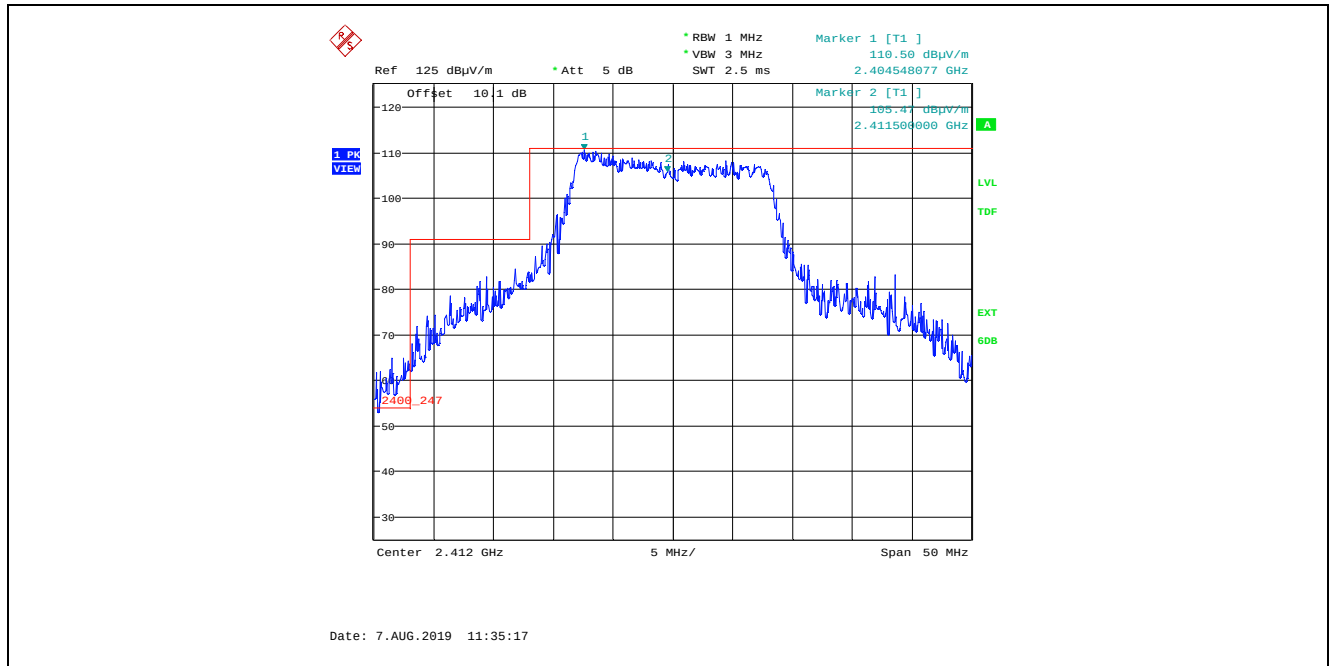


Plot 5.4.4.2.1.15. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11b, CCK 11Mbps, Power Setting 24, Channel 11, 2462 MHz

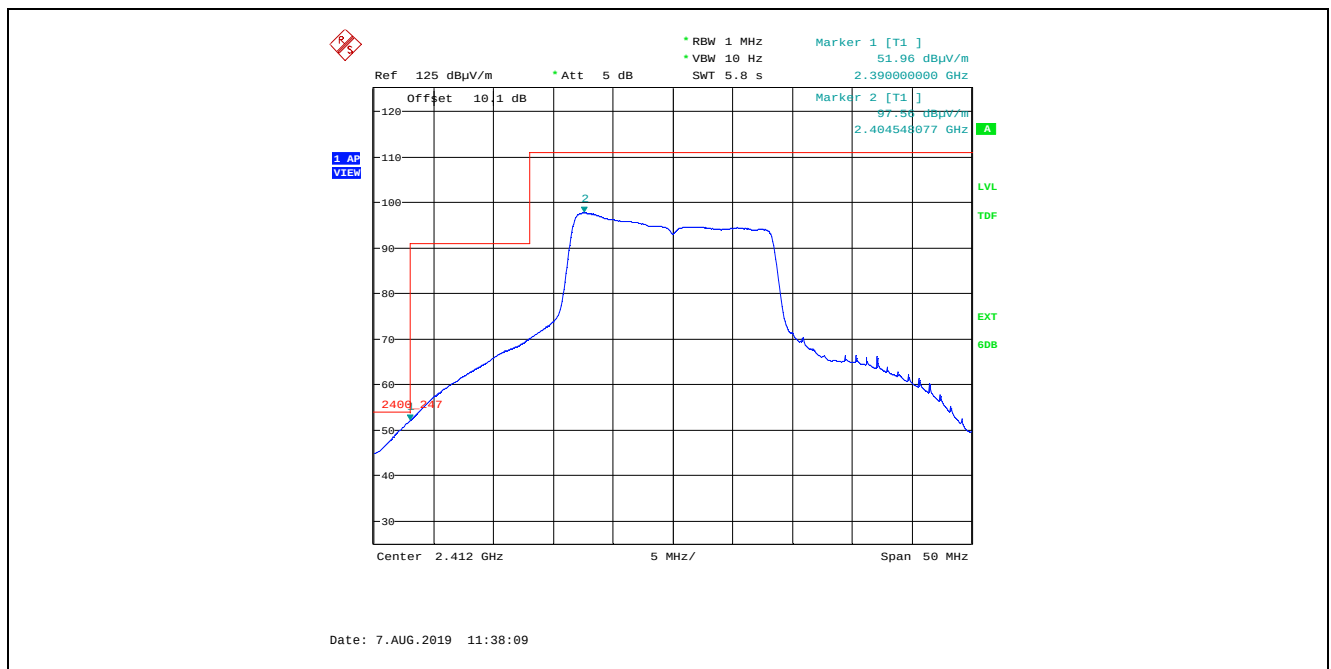


5.4.4.2.2. Band-Edge RF Radiated Emissions for 802.11g

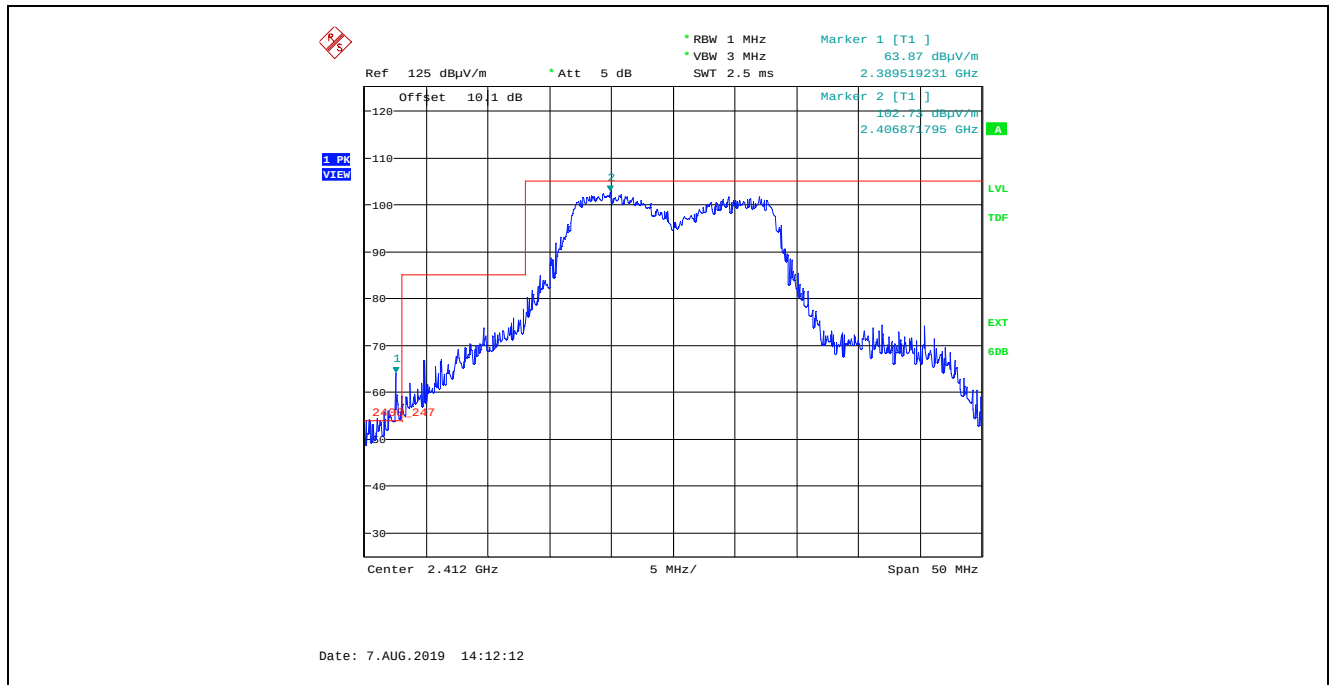
Plot 5.4.4.2.2.1. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, BPSK 9Mbps, Power Setting 21, Channel 1, 2412 MHz



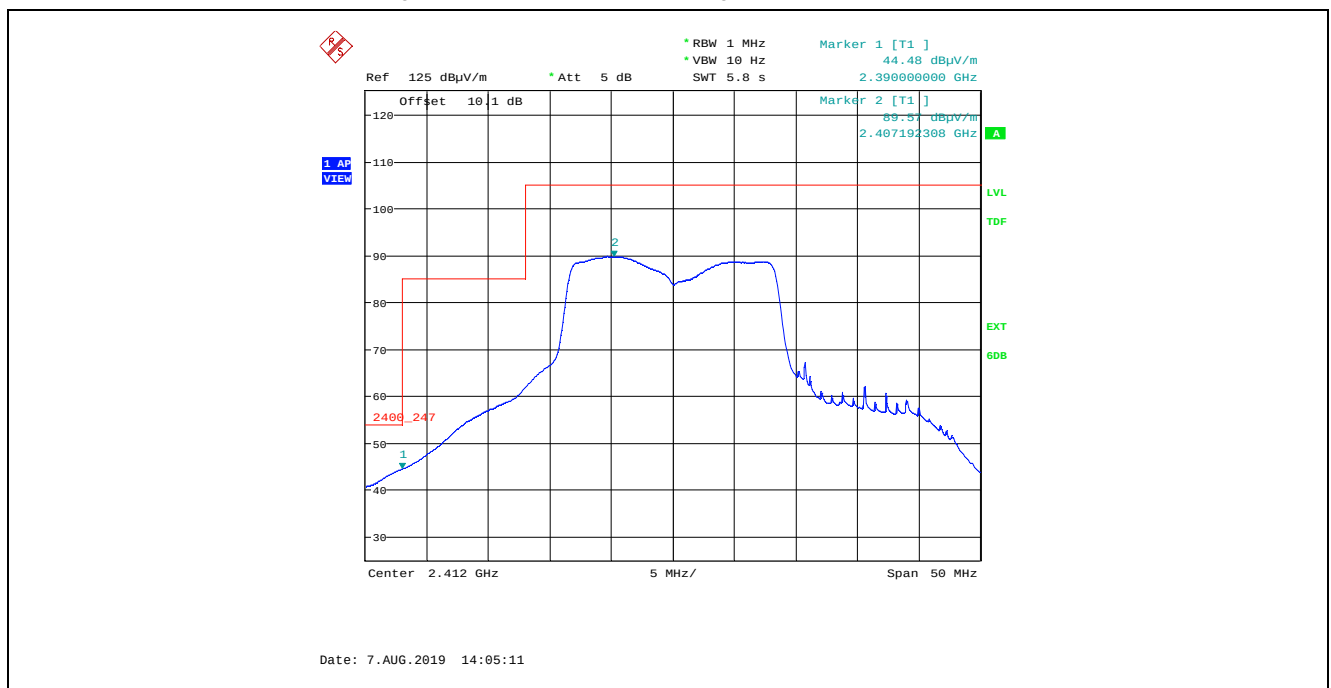
Plot 5.4.4.2.2.2. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, BPSK 9Mbps, Power Setting 21, Channel 1, 2412 MHz



Plot 5.4.4.2.3. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, BPSK 9Mbps, Power Setting 21, Channel 1, 2412 MHz



Plot 5.4.4.2.4. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, BPSK 9Mbps, Power Setting 21, Channel 1, 2412 MHz



[illegible]

Ref 125 dBμV/m * Att 5 dB * RBW 1 MHz * VBW 10 Hz * SWT 8 s

Marker 1 [T1] 45.43 dBμV/m 2.390000000 GHz

Marker 2 [T1] 97.13 dBμV/m 2.428333333 GHz

Offset 10.1 dB

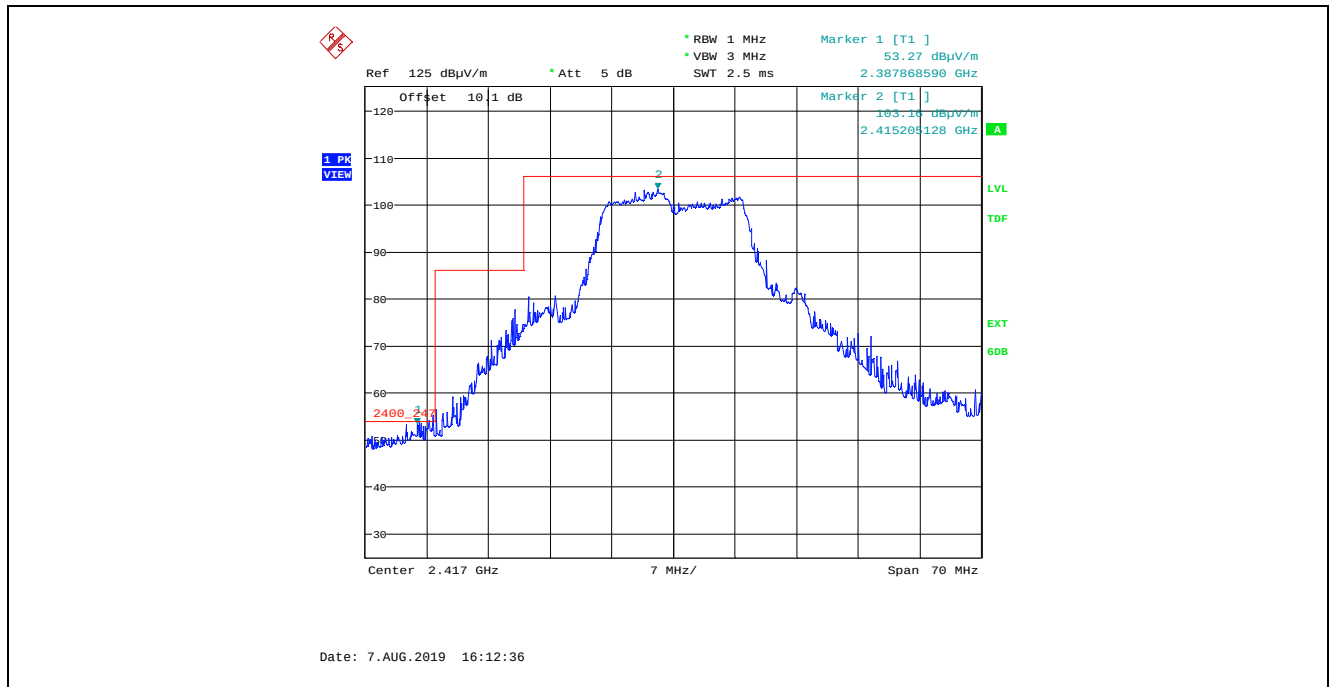
2400.247

Center 2.417 GHz 7 MHz/ Span 70 MHz

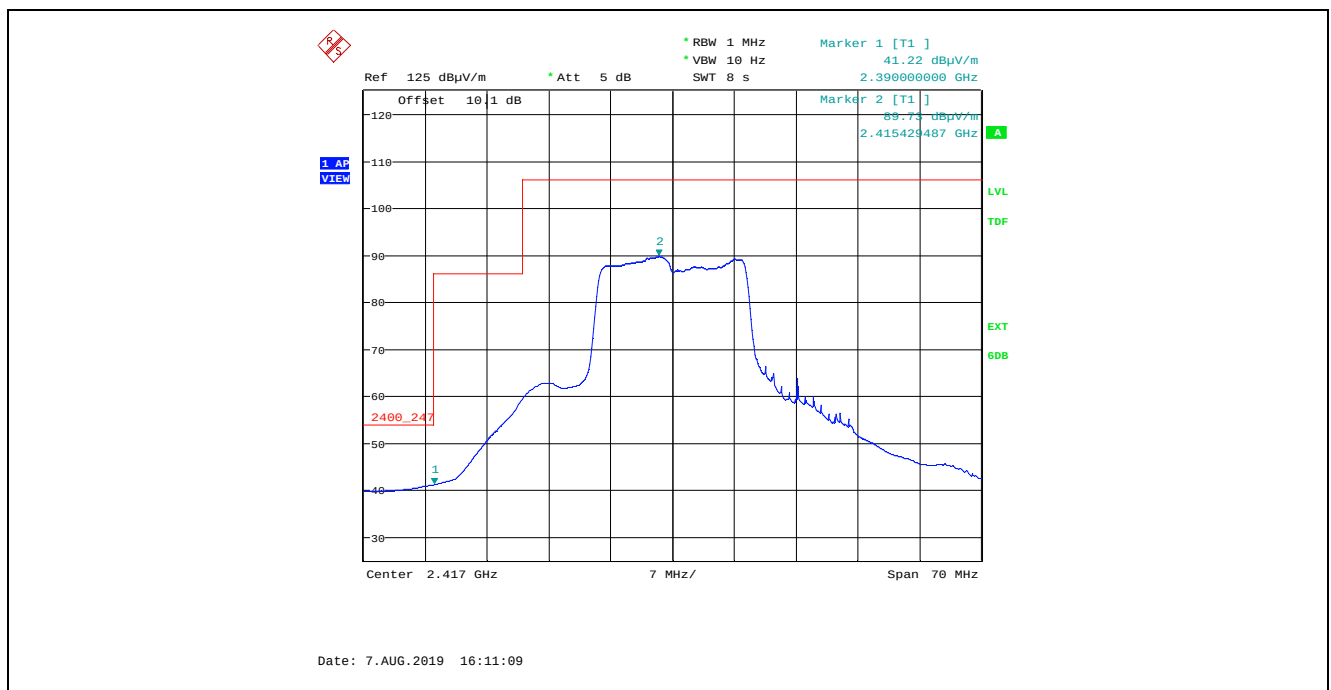
LVL
TDF
EXT
6DB

Date: 7.AUG.2019 14:56:38

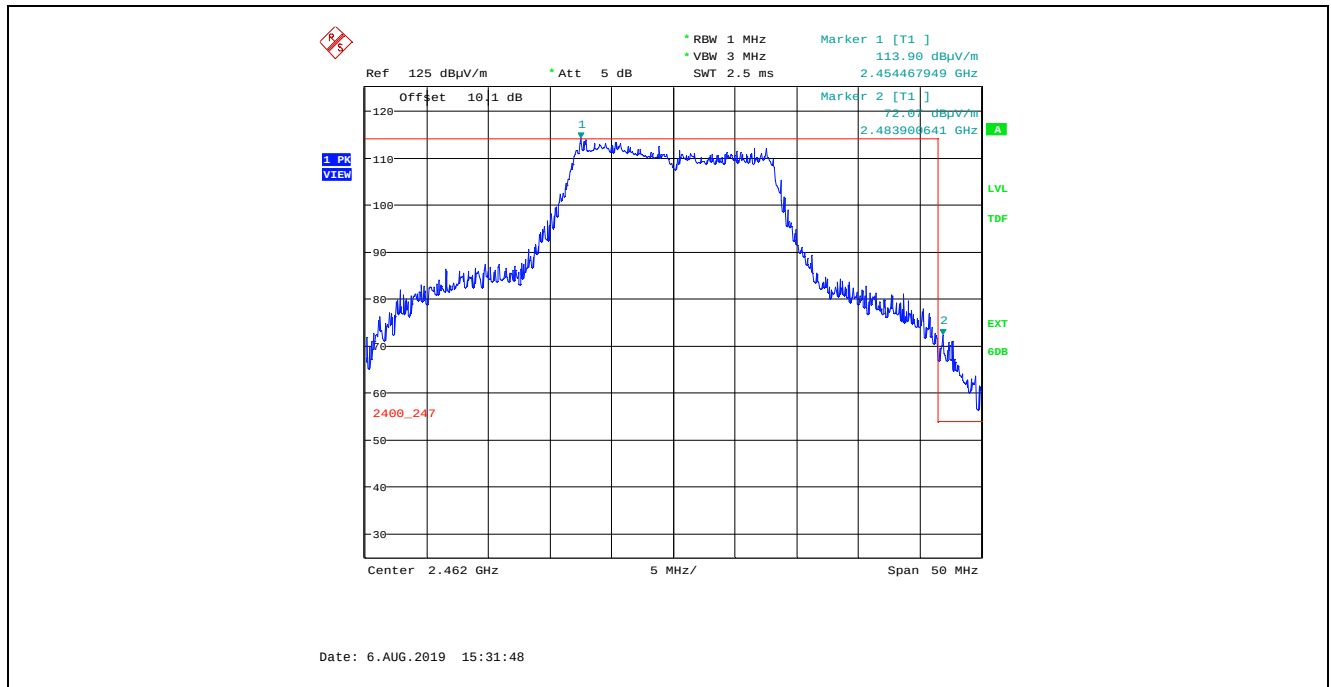
Plot 5.4.4.2.7. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, BPSK 9Mbps, Power Setting 24, Channel 2, 2417 MHz



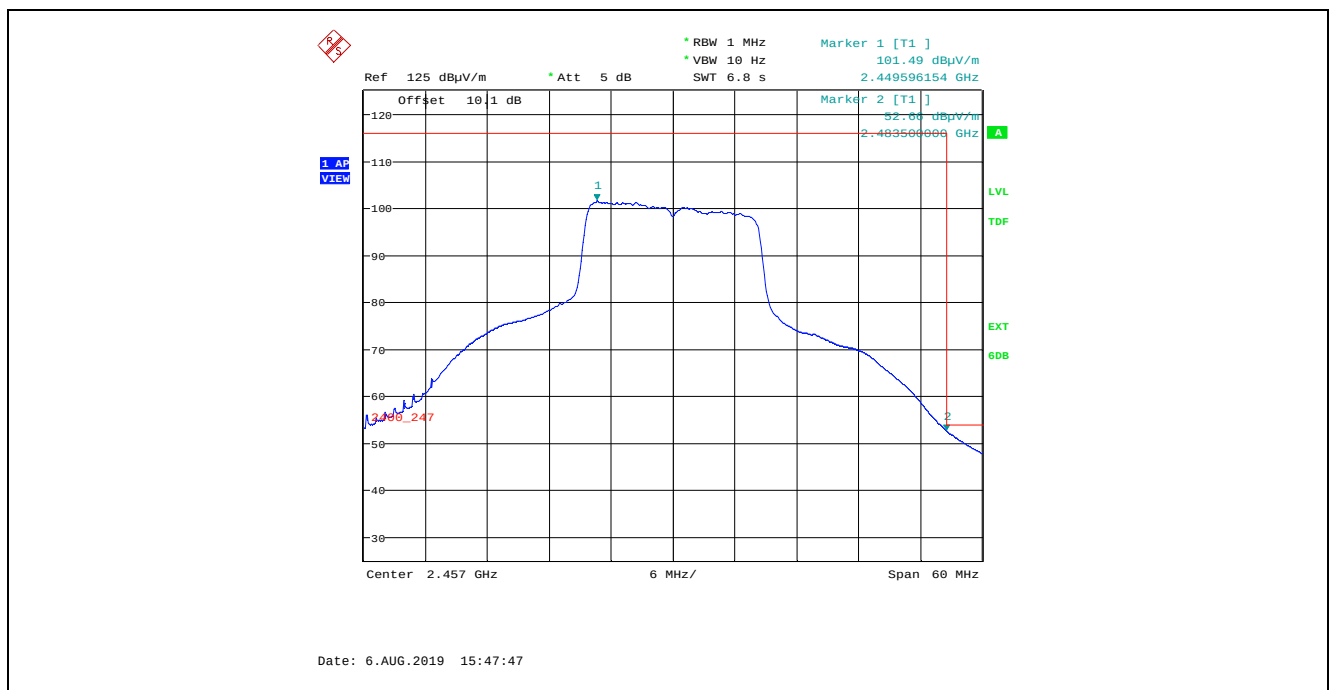
Plot 5.4.4.2.8. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, BPSK 9Mbps, Power Setting 24, Channel 2, 2417 MHz



Plot 5.4.4.2.9. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, BPSK 9Mbps, Power Setting 24, Channel 10, 2457 MHz



Plot 5.4.4.2.10. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, BPSK 9Mbps, Power Setting 24, Channel 10, 2457 MHz



Ref 125 dBμV/m * Att 5 dB SWT 2.5 ms

RBW 1 MHz VBW 3 MHz Marker 1 [T1] 107.95 dBμV/m 2.449403846 GHz

Offset 10 dB

1 PK VIEW

2400_247

Center 2.457 GHz 6 MHz/ Span 60 MHz

120
110
100
90
80
70
60
50
40
30

1

A

LVL

TDF

EXT

60B

Date: 6.AUG.2019 16:58:01

Ref 125 dBμV/m * Att 5 dB RBW 1 MHz VBW 10 Hz SWT 6.8 s Marker 1 [T1] 94.60 dBμV/m 2.449692388 GHz

Offset 10 1 dB Marker 2 [T1] 40.90 dBμV/m 2.483500000 GHz

1 AP VIEW

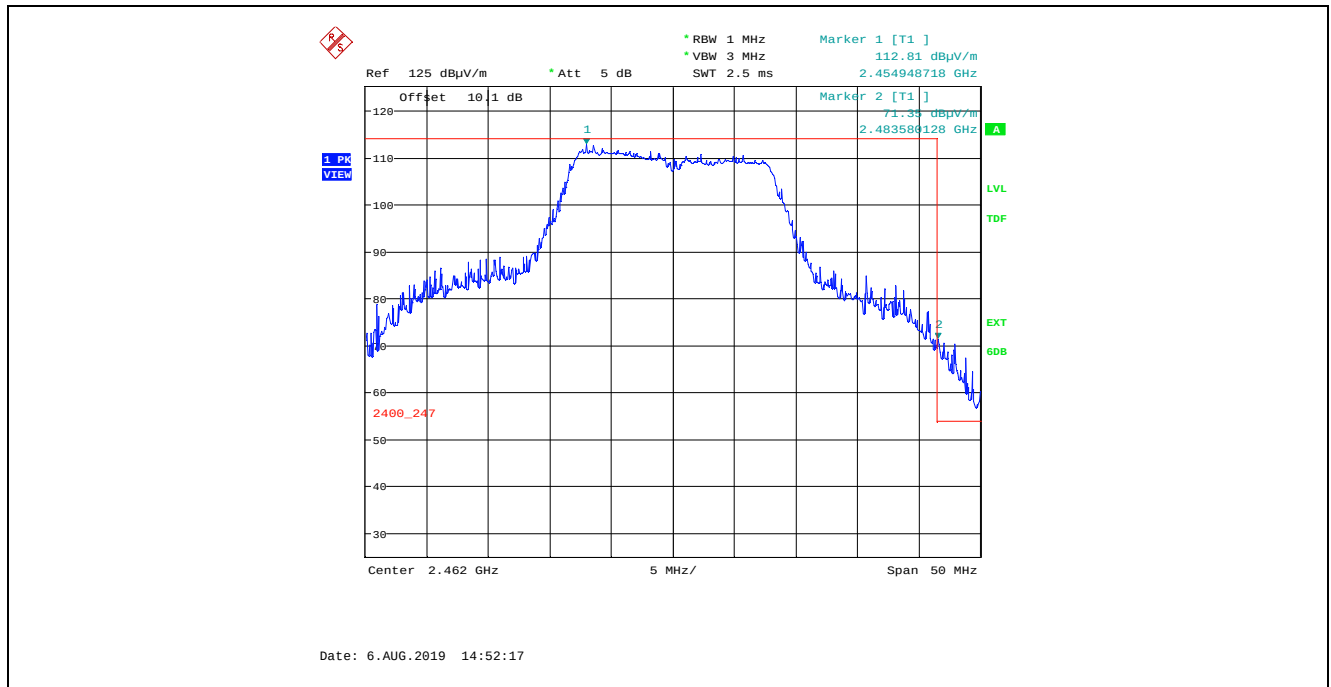
2400 2.457

Center 2.457 GHz 6 MHz/ Span 60 MHz

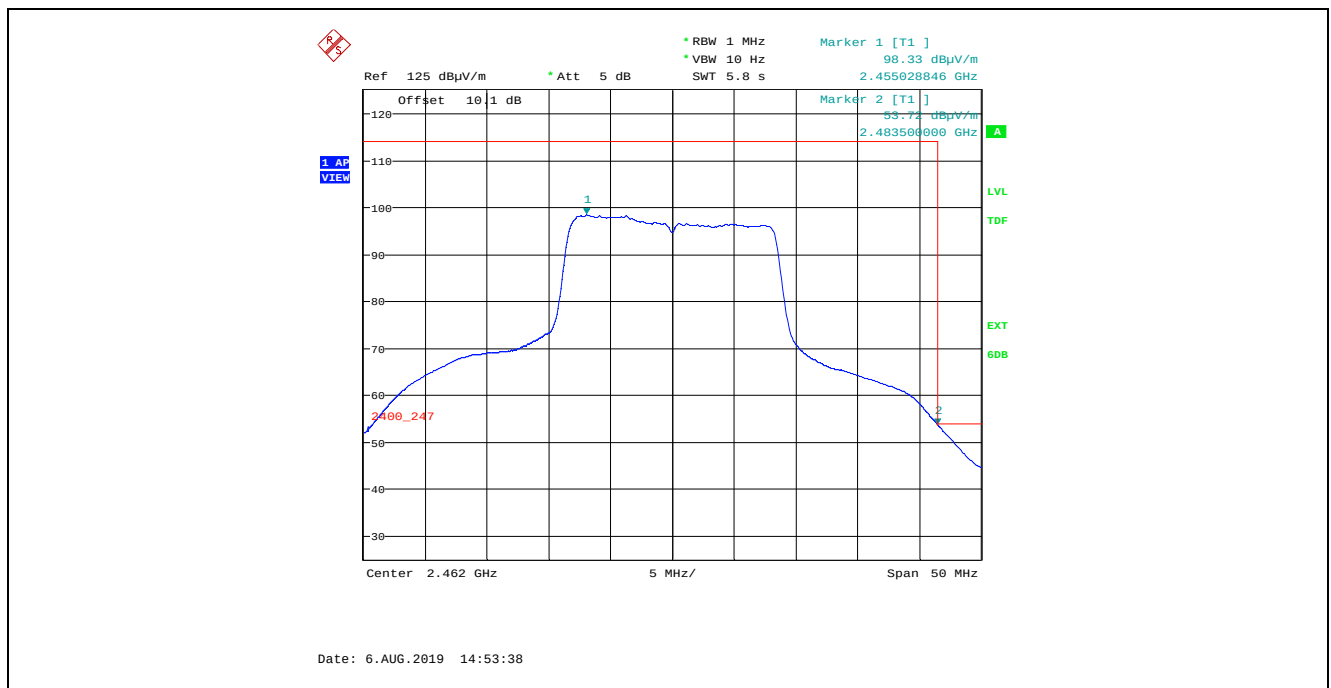
LVL TDF EXT 60B

Date: 6.AUG.2019 16:57:01

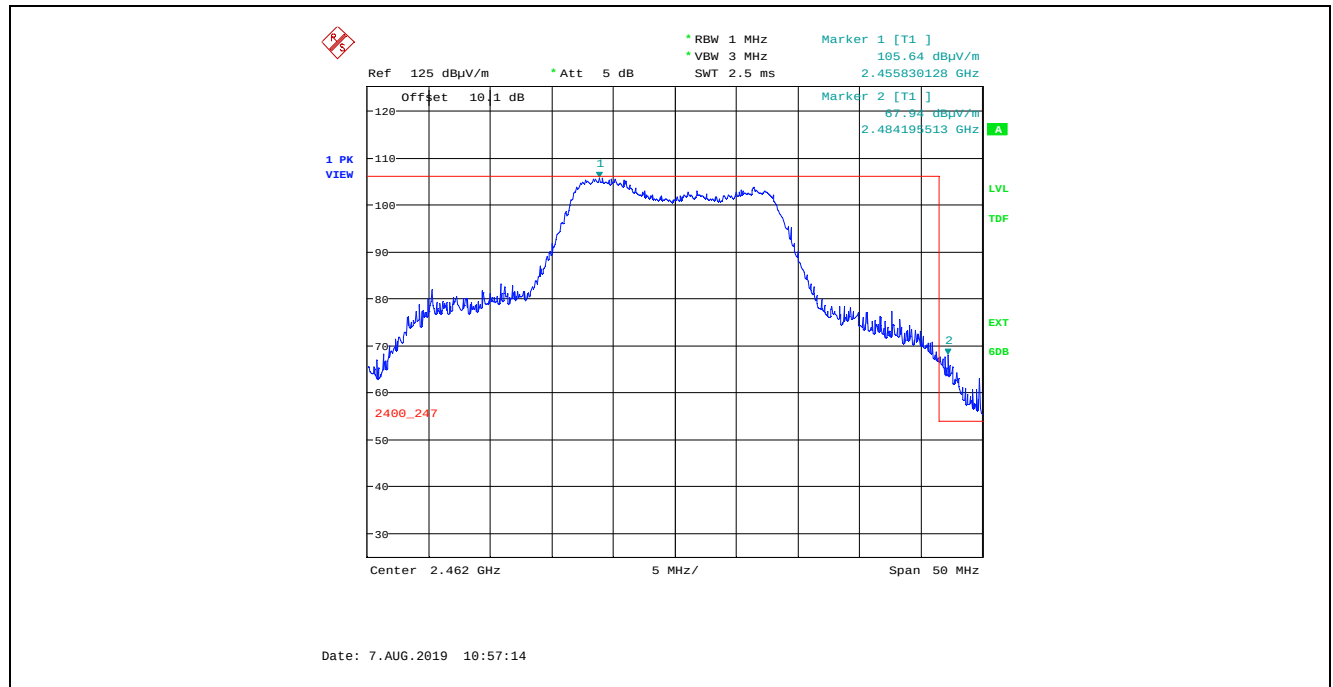
Plot 5.4.4.2.2.13. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, BPSK 9Mbps, Power Setting 19, Channel 11, 2462 MHz



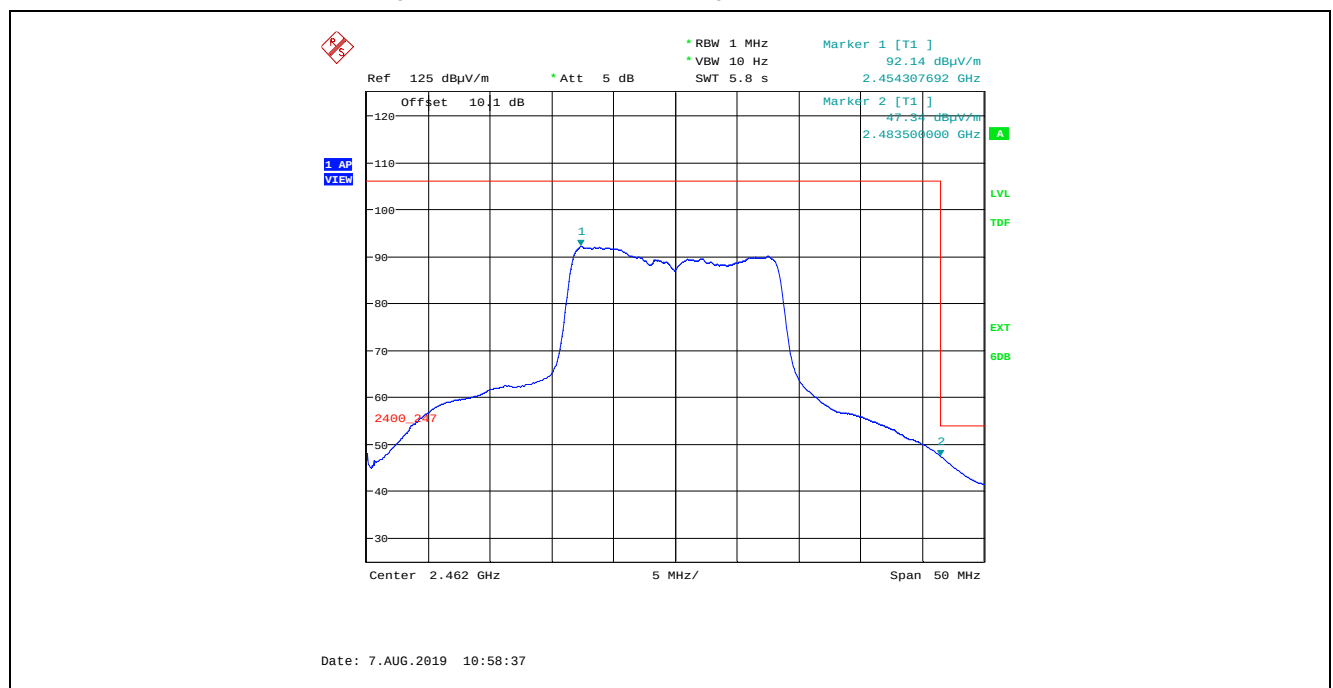
Plot 5.4.4.2.2.14. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, BPSK 9Mbps, Power Setting 19, Channel 11, 2462 MHz



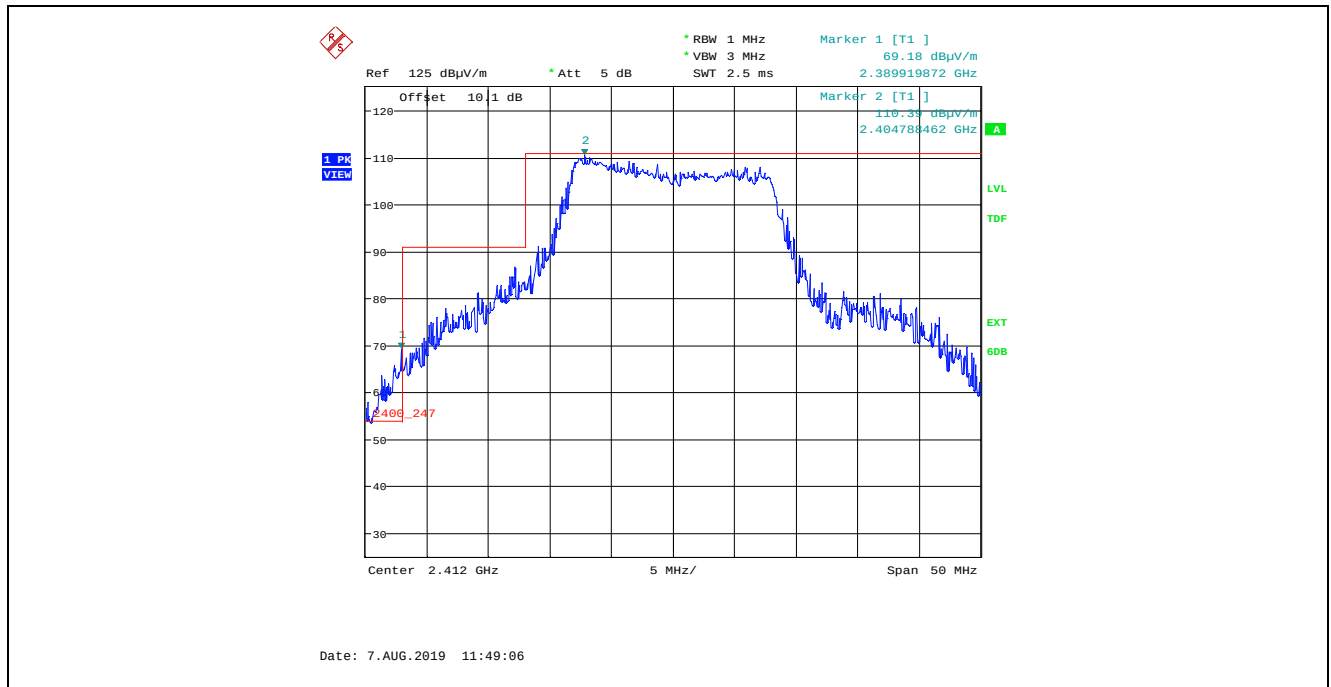
Plot 5.4.4.2.2.15. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak 802.11g, BPSK 9Mbps, Power Setting 19, Channel 11, 2462 MHz



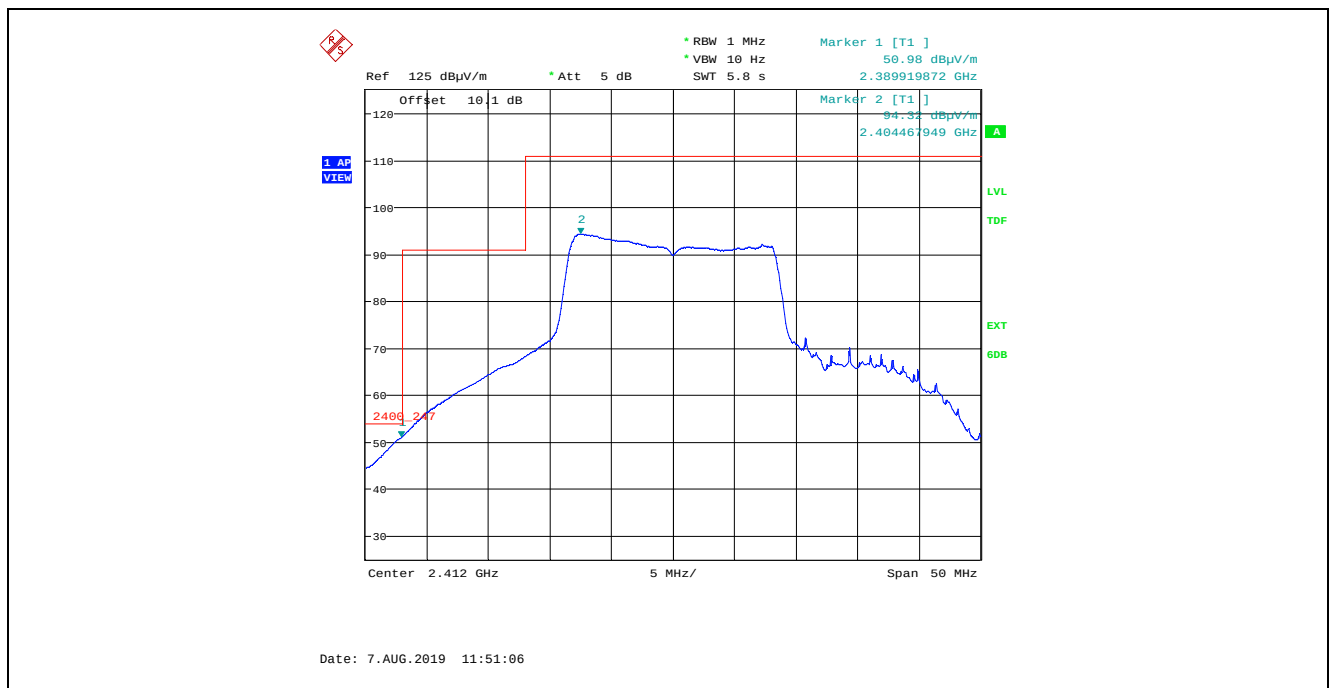
Plot 5.4.4.2.2.16. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average 802.11g, BPSK 9Mbps, Power Setting 19, Channel 11, 2462 MHz



Plot 5.4.4.2.2.17. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 21, Channel 1, 2412 MHz



Plot 5.4.4.2.2.18. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 21, Channel 1, 2412 MHz



Ref 125 dBuV/m * Att 5 dB

* RBW 1 MHz Marker 1 [T1]
 * VBW 3 MHz 59.59 dBuV/m
 SWT 2.5 ms 2.390000000 GHz

Offset 10 dB

Marker 2 [T1]
 102.47 dBuV/m
 2.407192308 GHz

1 PK VIEW

24 dB

LVL
 TDF
 EXT
 60B

Center 2.412 GHz 5 MHz/ Span 50 MHz

Date: 7.AUG.2019 13:49:30

Ref 125 dBμV/m * Att 5 dB

* RBW 1 MHz Marker 1 [T1]
 * VBW 10 Hz 44.22 dBμV/m
 SWT 5.8 s 2.39000000 GHz

Offset 10 1 dB Marker 2 [T1]
 86.90 dBμV/m
 2.407192308 GHz

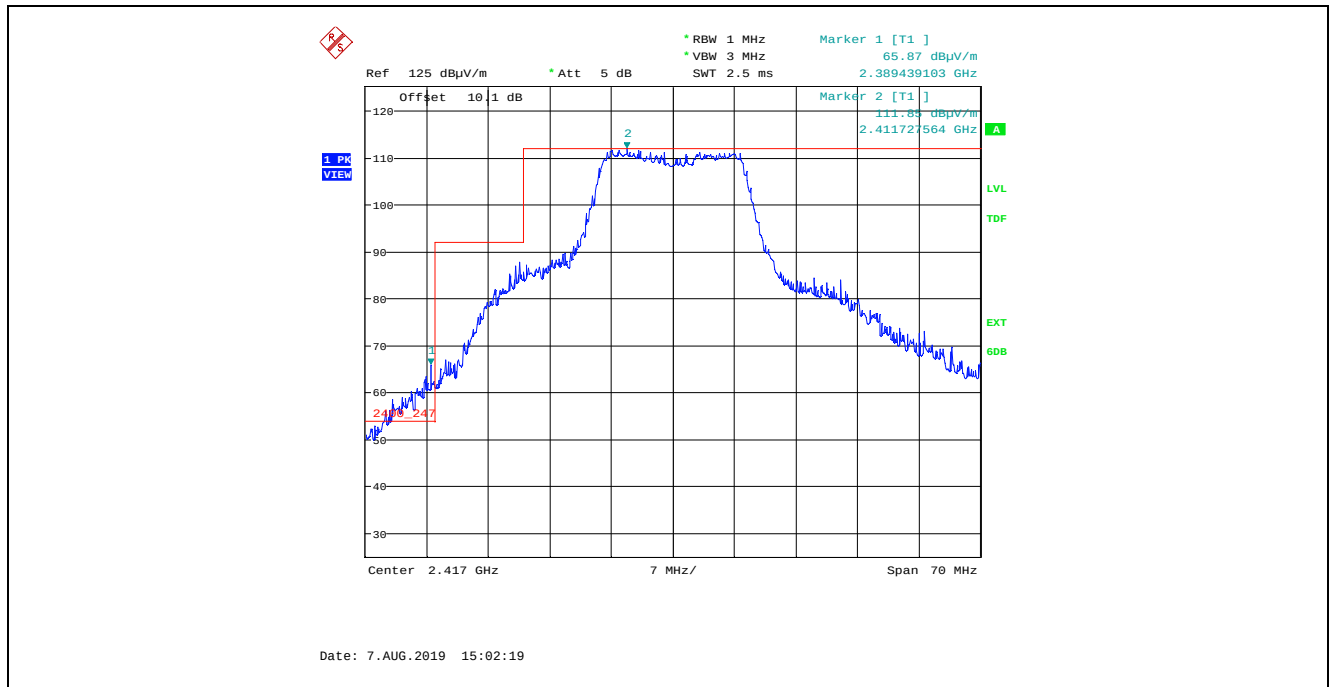
LVL
 TDF
 EXT
 6DB

2.406_247
 2.407192308 GHz

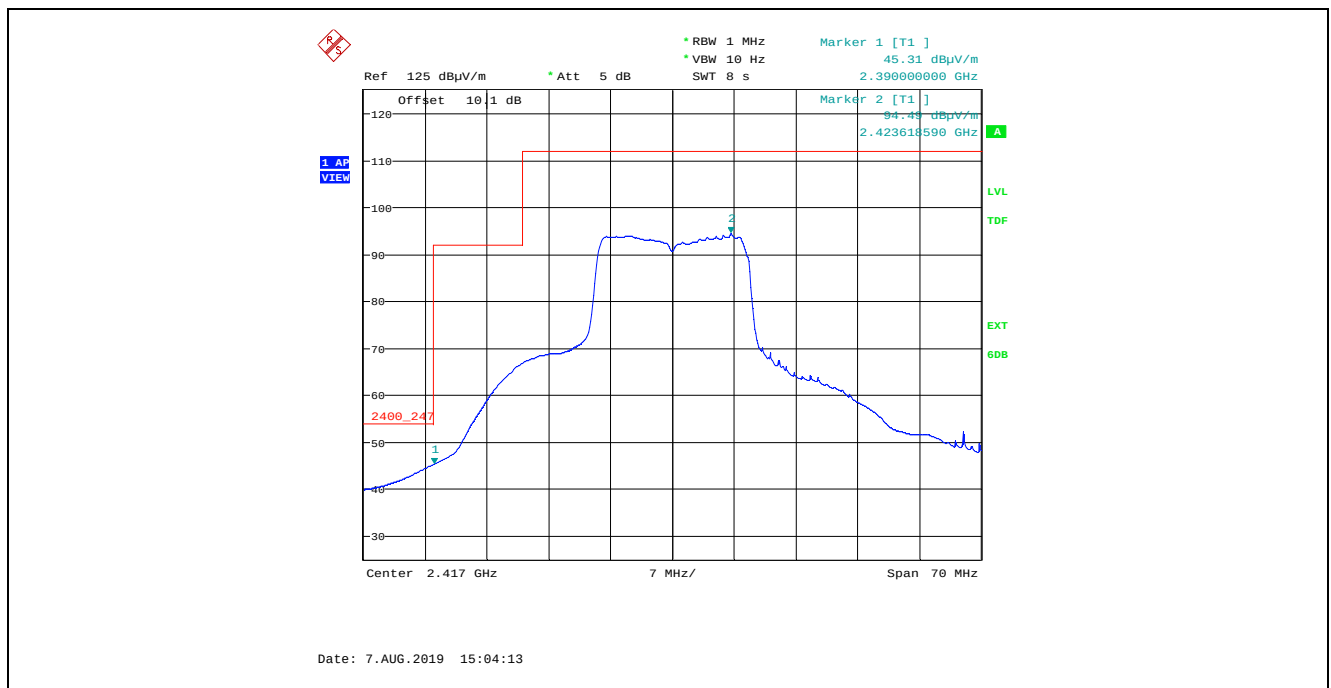
Center 2.412 GHz 5 MHz/ Span 50 MHz

Date: 7.AUG.2019 13:59:01

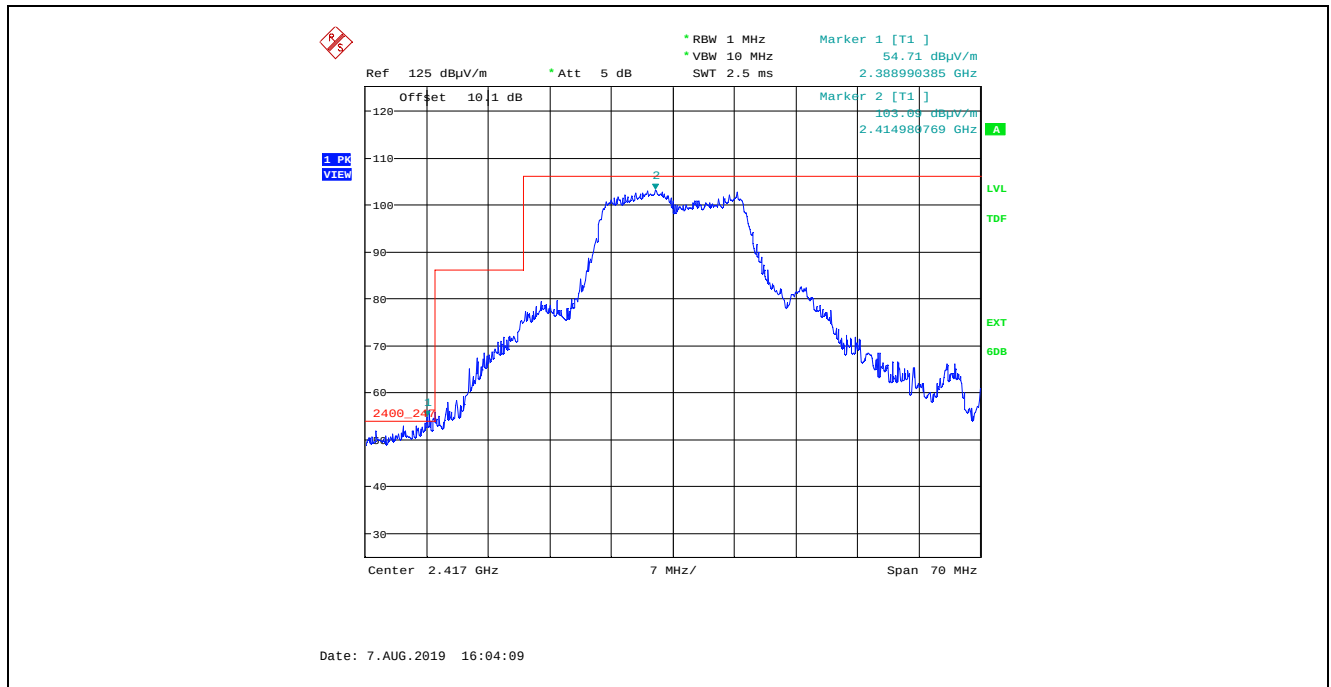
Plot 5.4.4.2.2.21. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 24, Channel 2, 2417 MHz



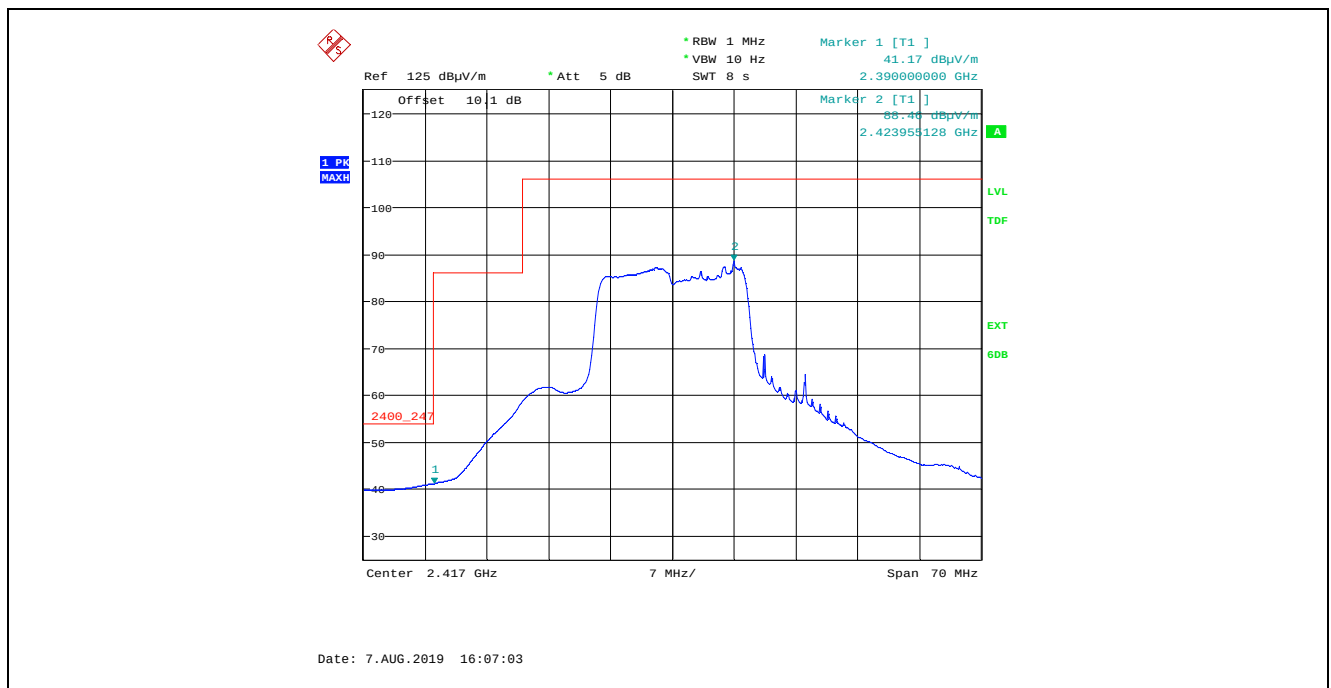
Plot 5.4.4.2.2.22. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 24, Channel 2, 2417 MHz



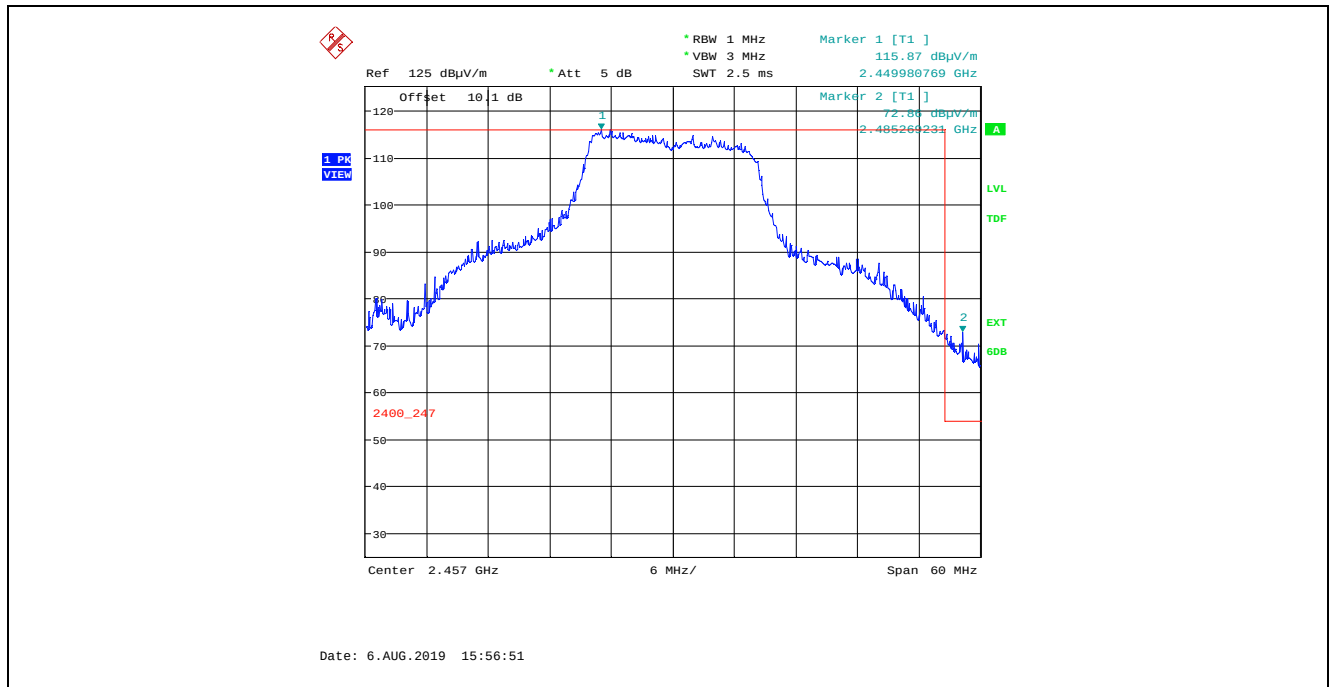
Plot 5.4.4.2.2.23. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 24, Channel 2, 2417 MHz



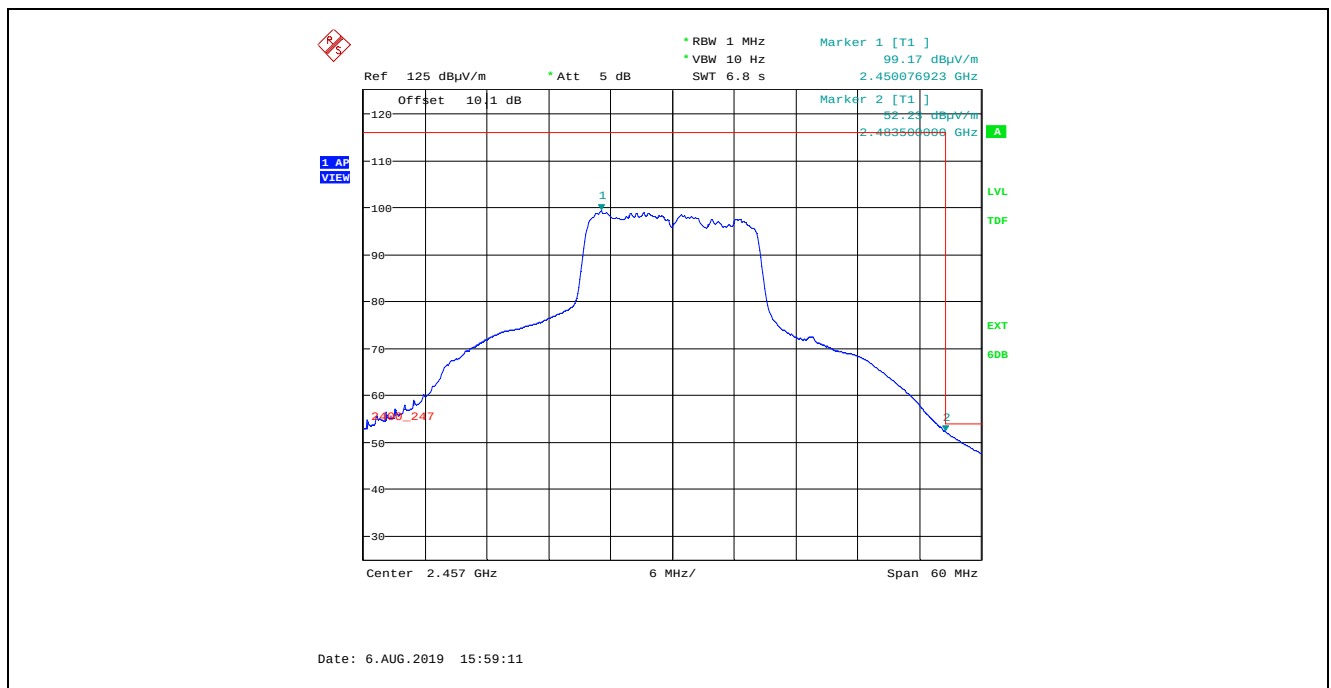
Plot 5.4.4.2.2.24. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 24, Channel 2, 2417 MHz



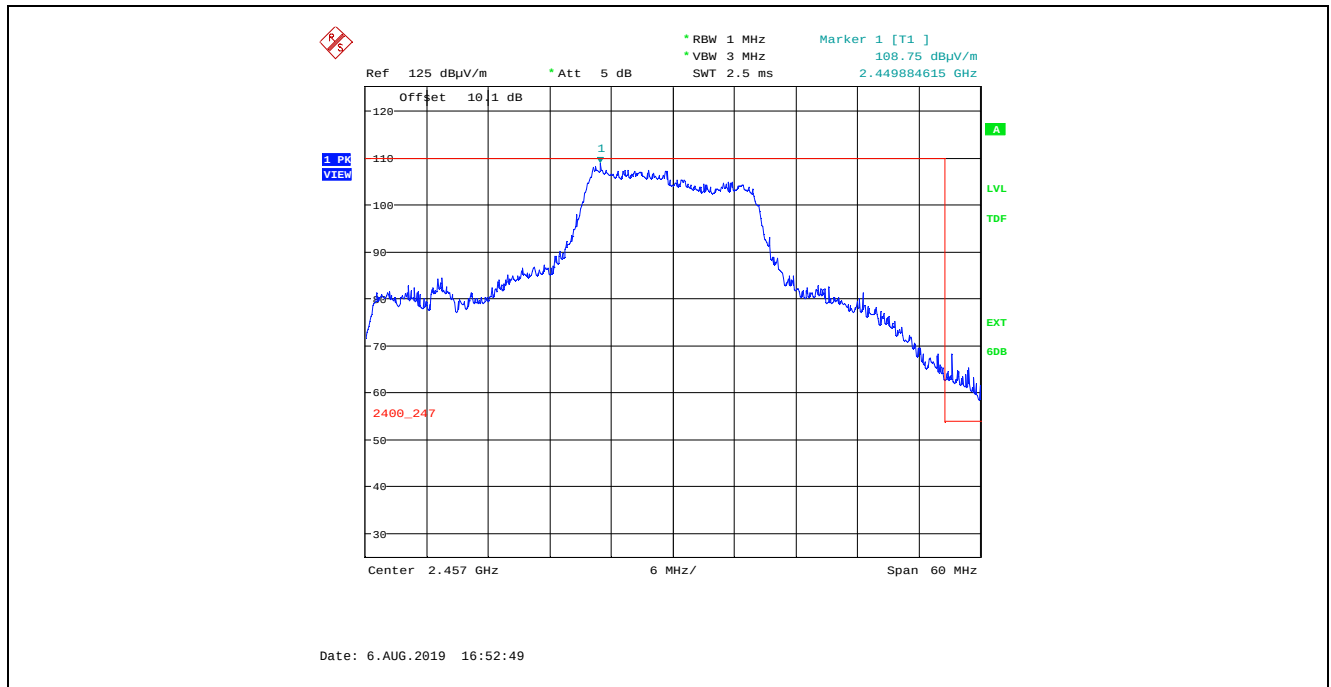
Plot 5.4.4.2.2.25. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 24, Channel 10, 2457 MHz



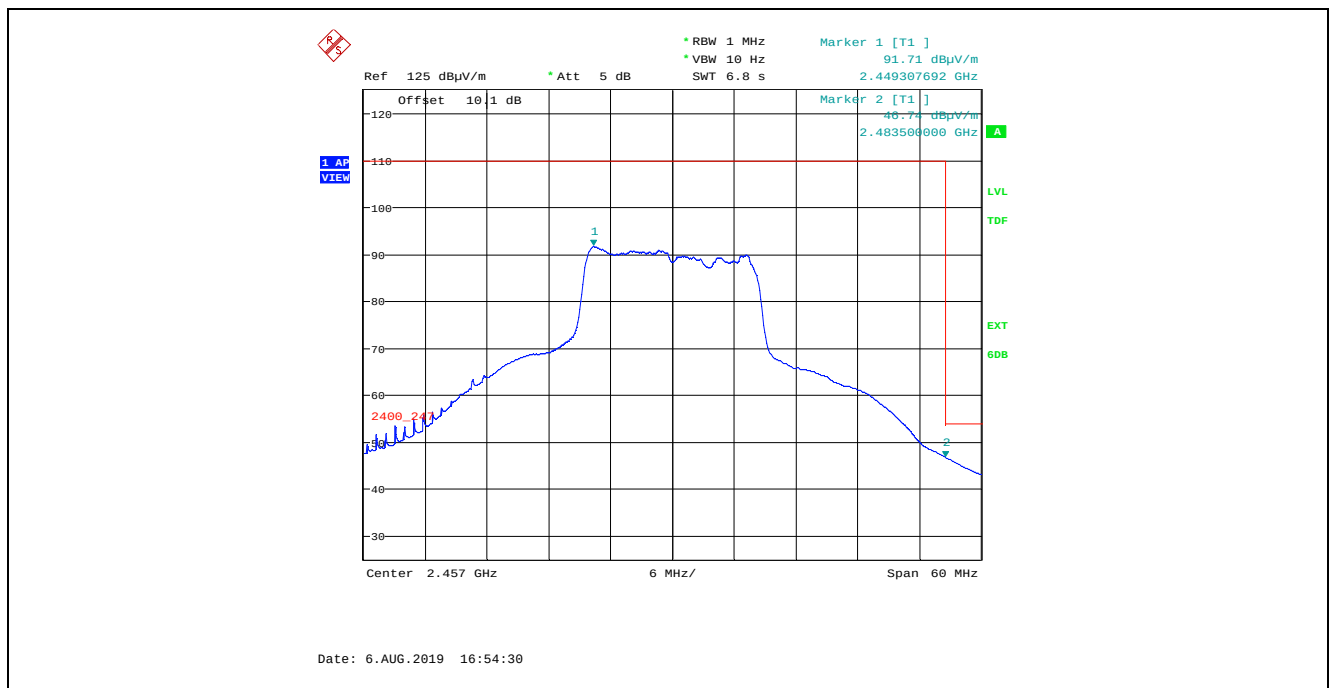
Plot 5.4.4.2.2.26. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 24, Channel 10, 2457 MHz



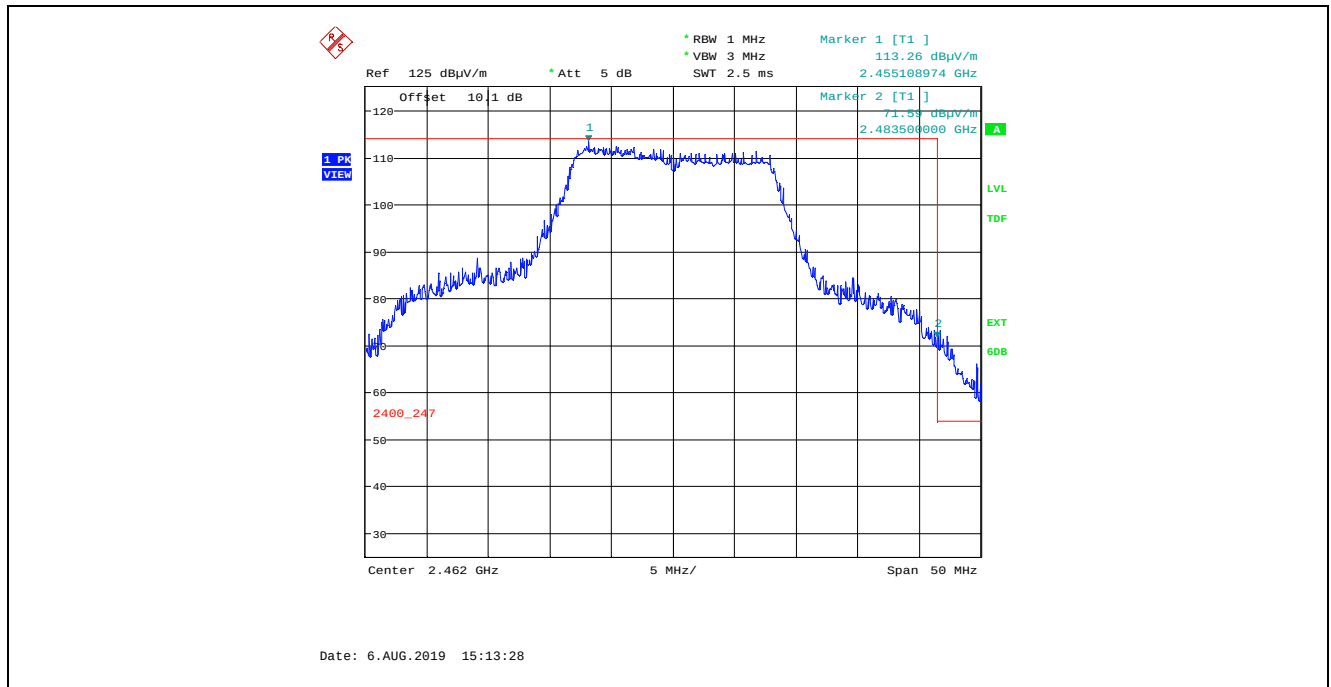
Plot 5.4.4.2.2.27. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 24, Channel 10, 2457 MHz



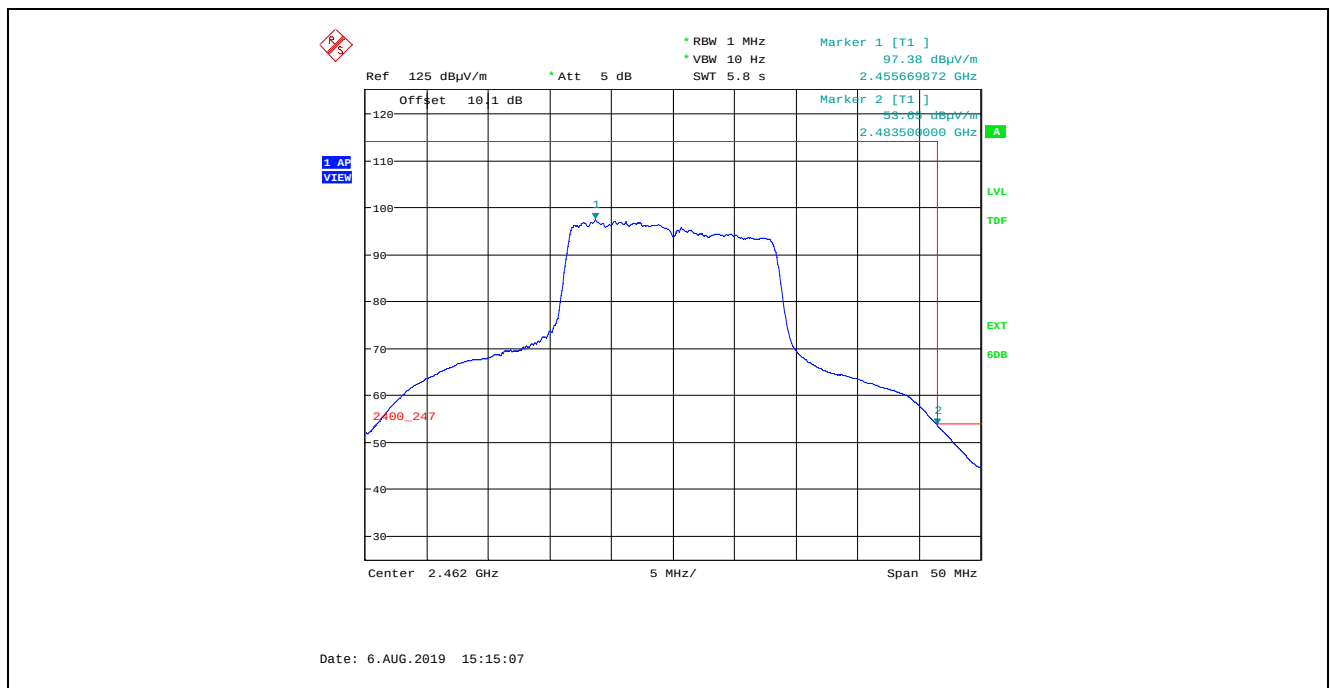
Plot 5.4.4.2.2.28. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 24, Channel 10, 2457 MHz



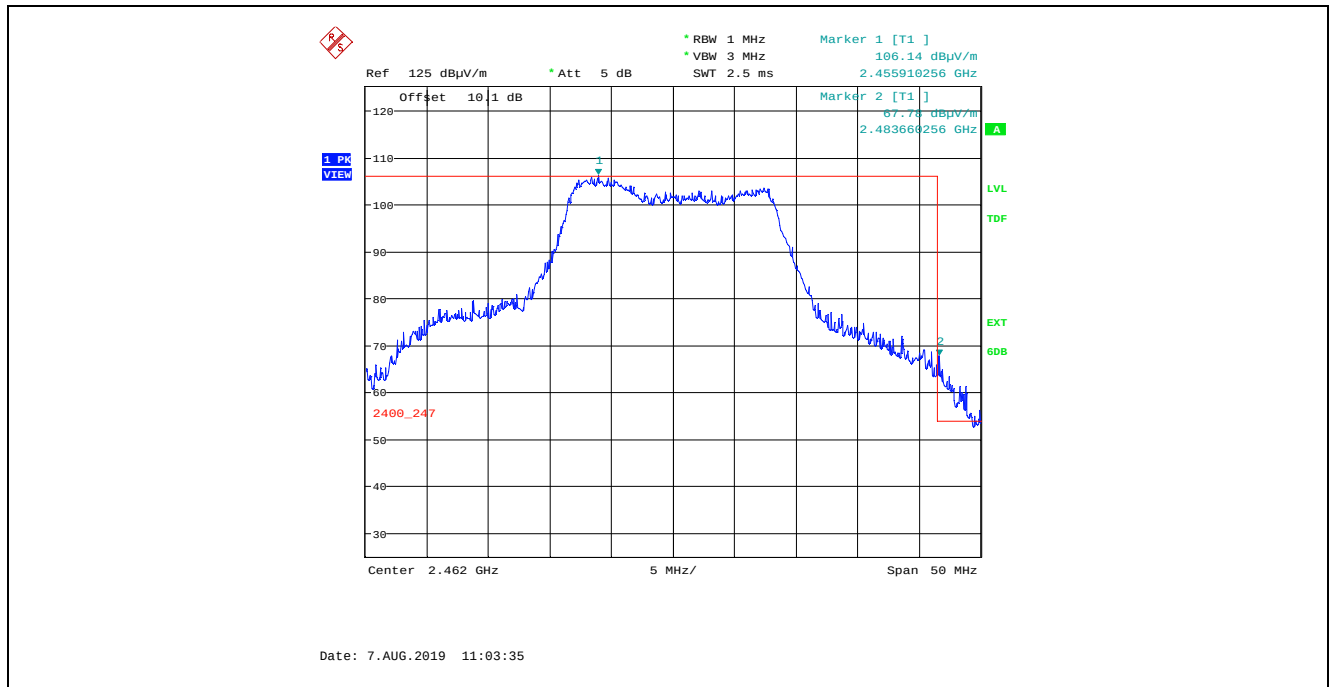
Plot 5.4.4.2.2.29. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 19, Channel 11, 2462 MHz



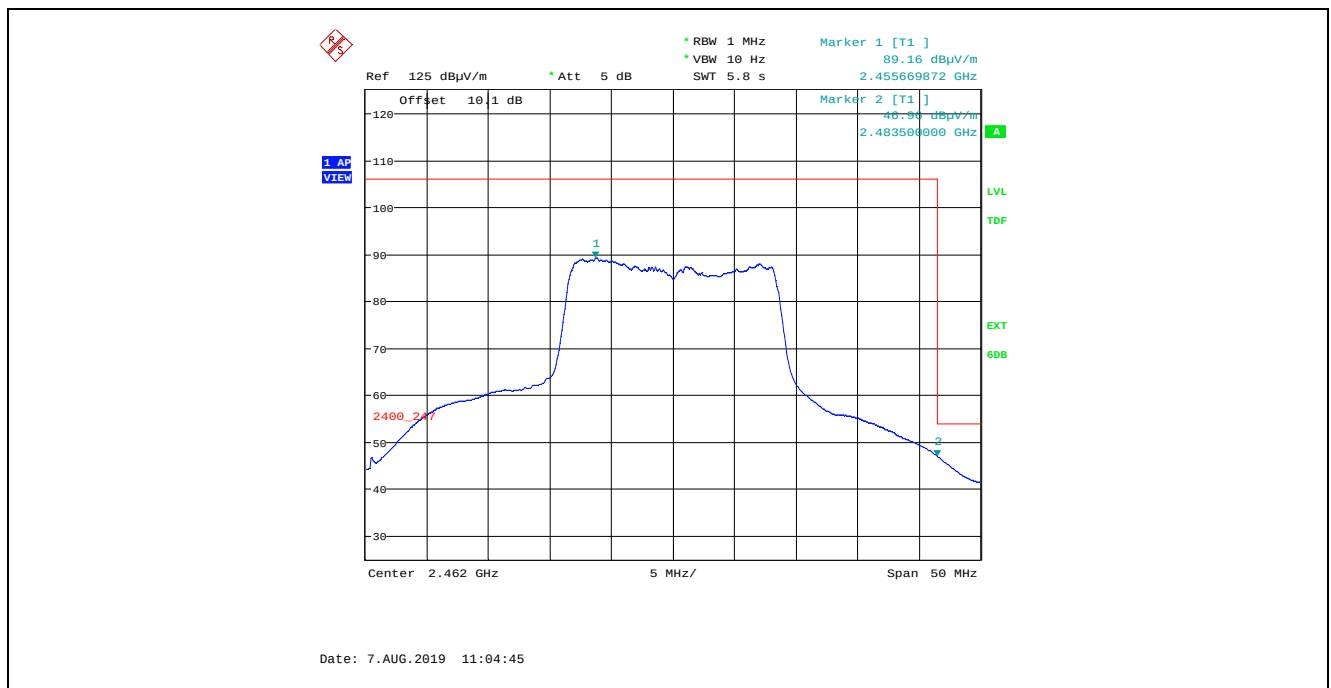
Plot 5.4.4.2.2.30. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 19, Channel 11, 2462 MHz



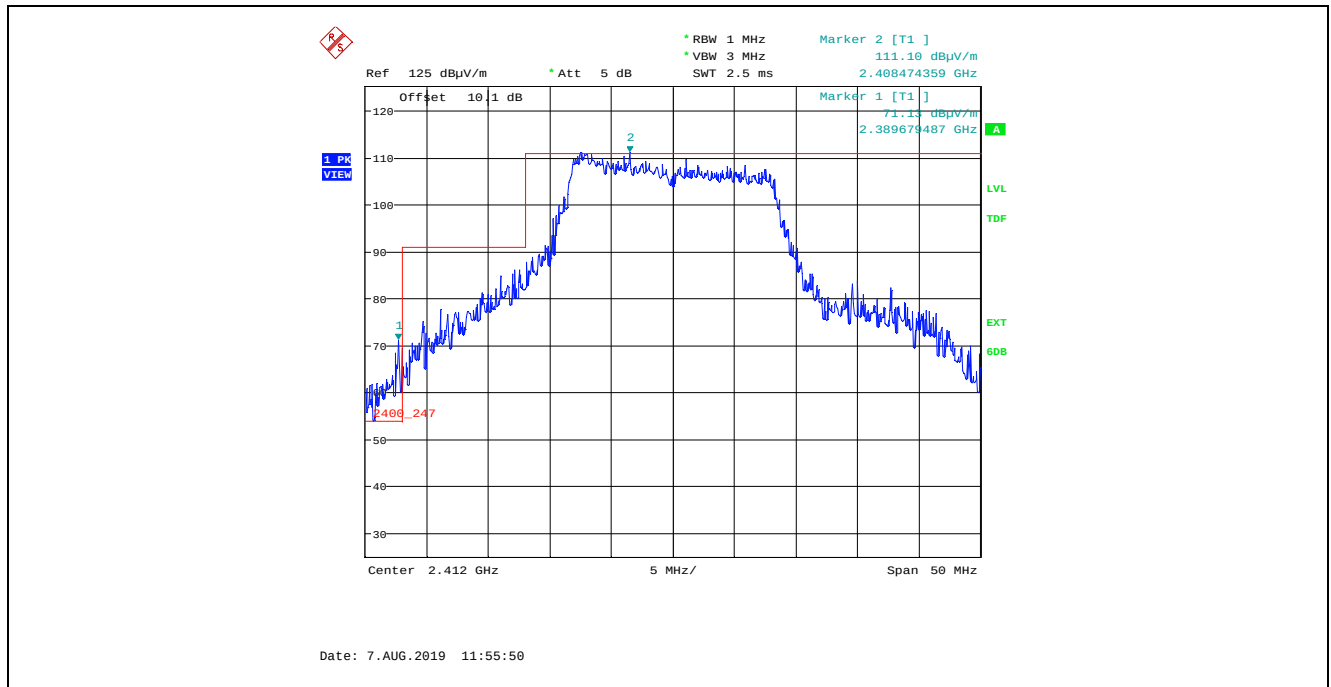
Plot 5.4.4.2.2.31. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, QPSK 18Mbps, Power Setting 19, Channel 11, 2462 MHz



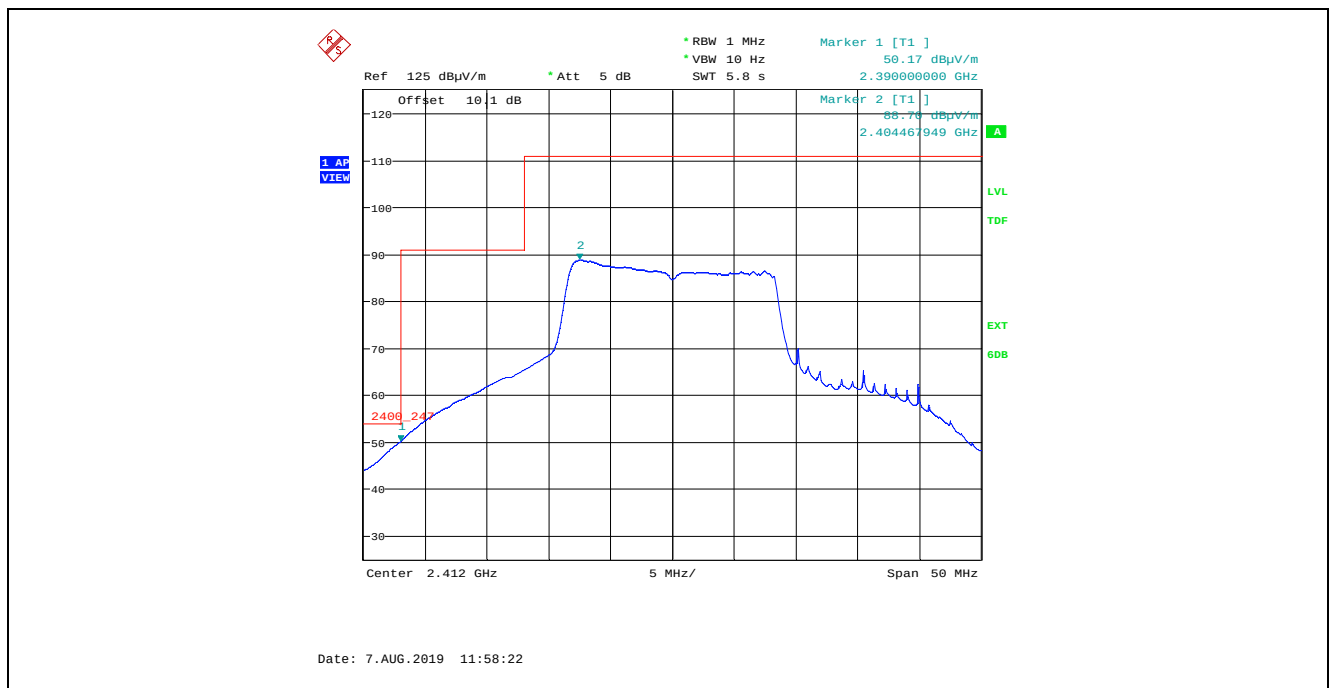
Plot 5.4.4.2.2.32. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, QPSK 18Mbps, Power Setting 19, Channel 11, 2462 MHz



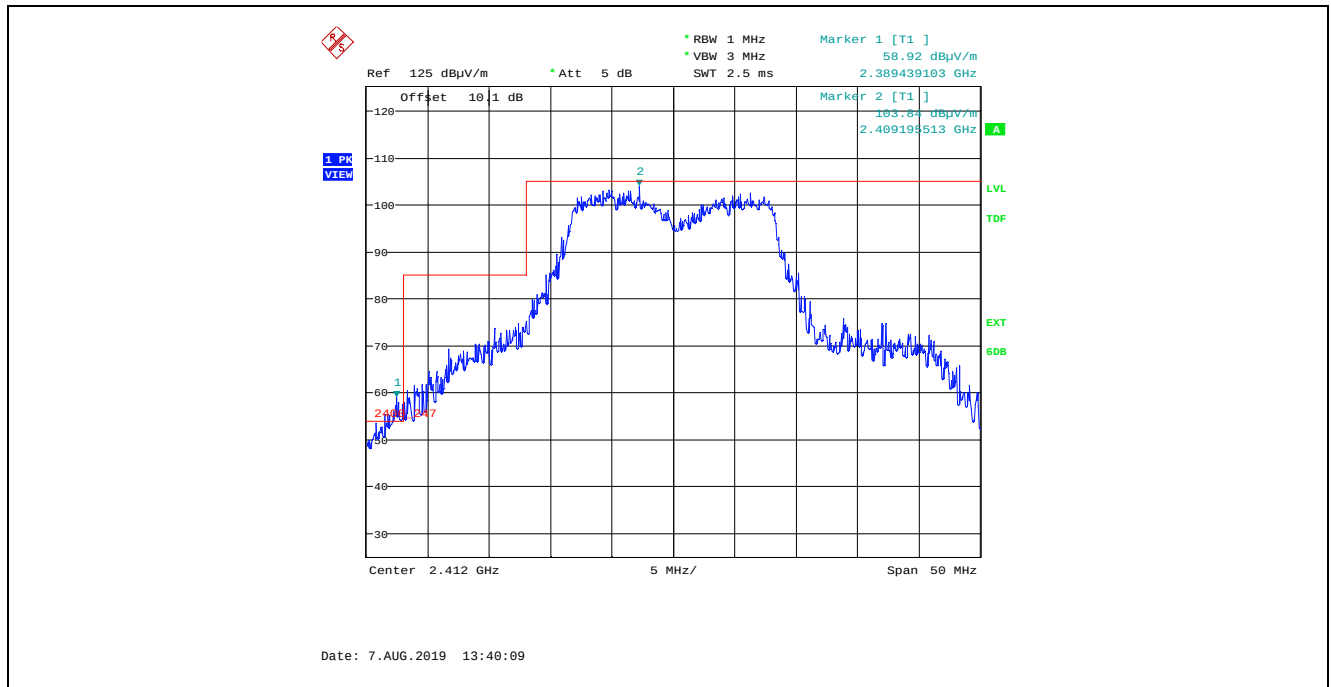
Plot 5.4.4.2.2.33. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 21, Channel 1, 2412 MHz



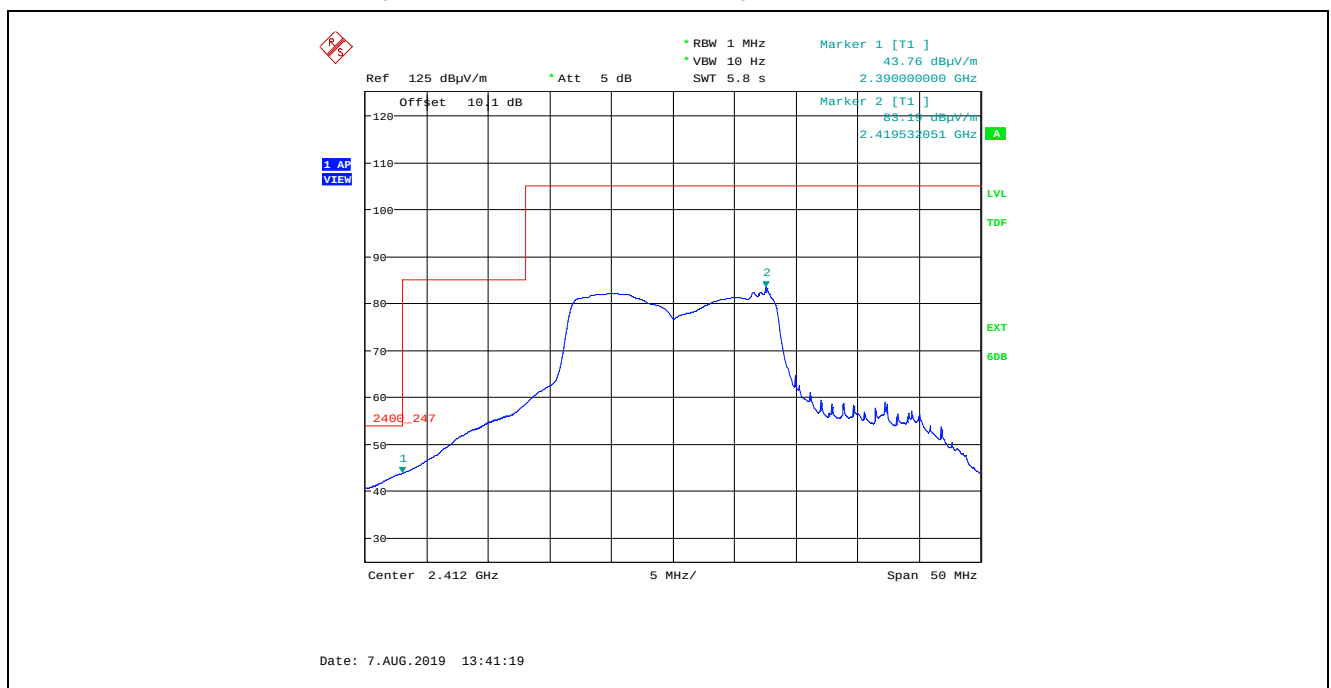
Plot 5.4.4.2.2.34. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 21, Channel 1, 2412 MHz



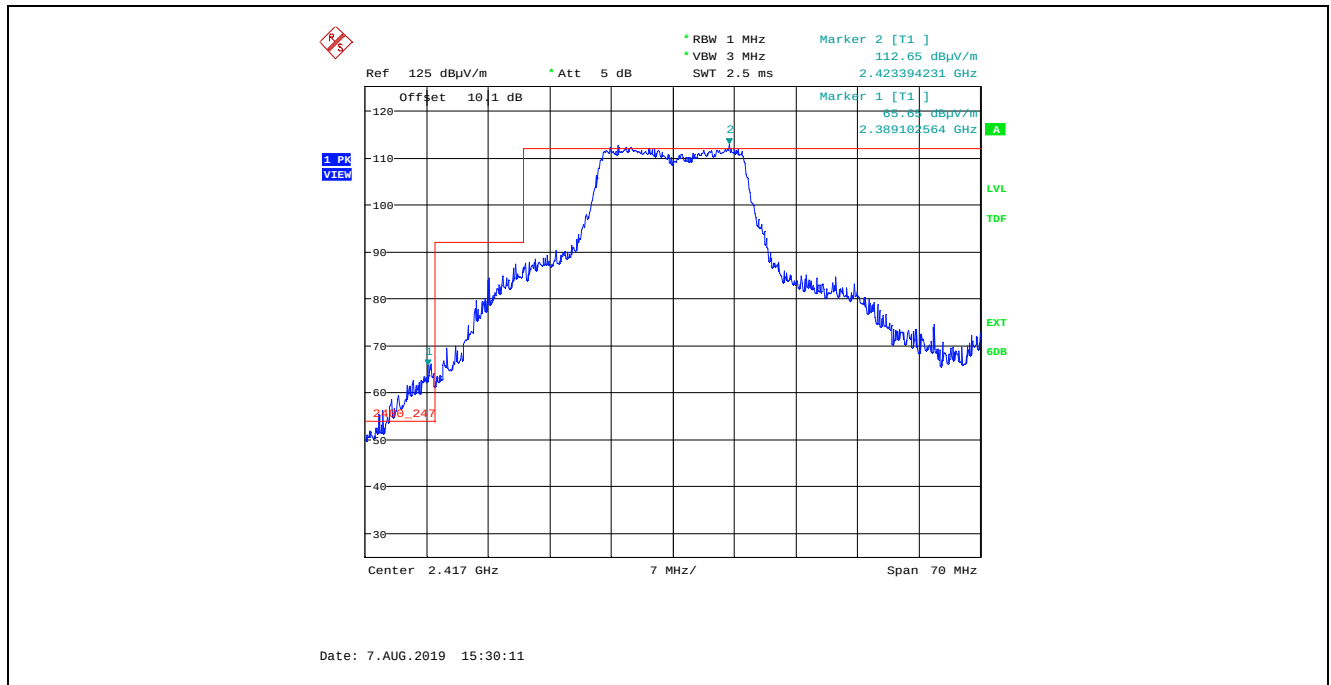
Plot 5.4.4.2.2.35. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 21, Channel 1, 2412 MHz



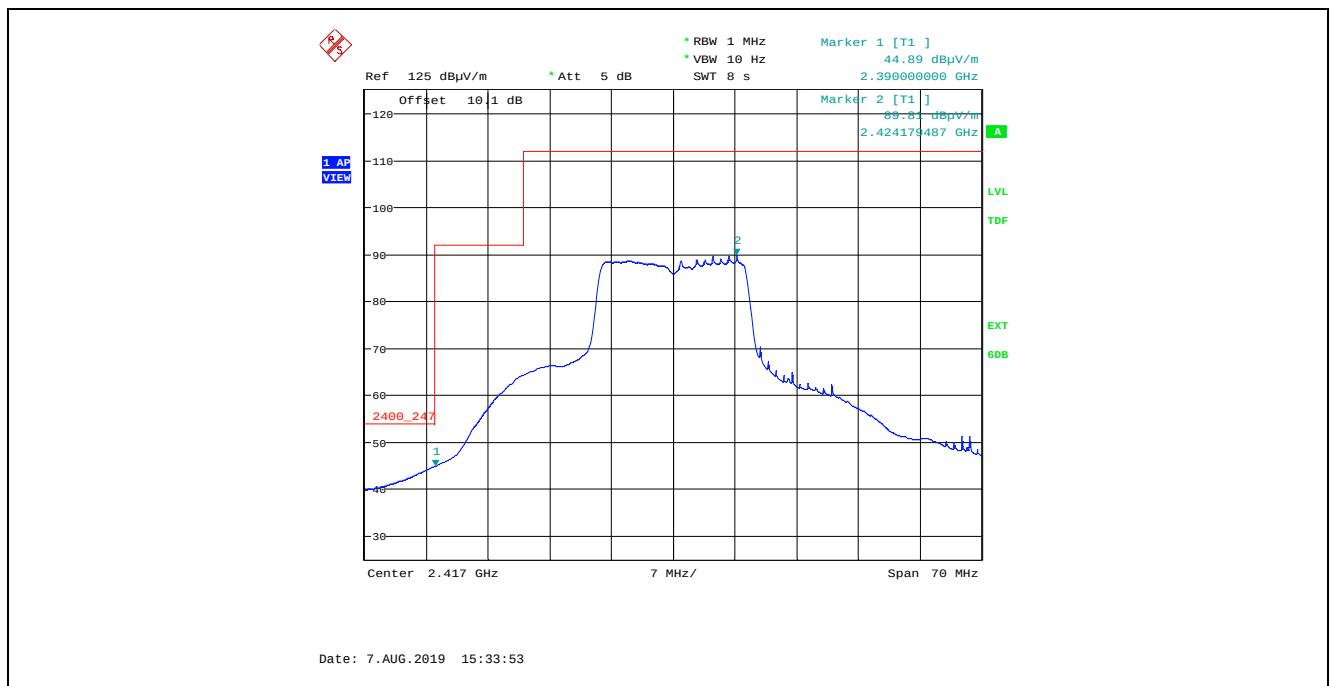
Plot 5.4.4.2.2.36. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 21, Channel 1, 2412 MHz



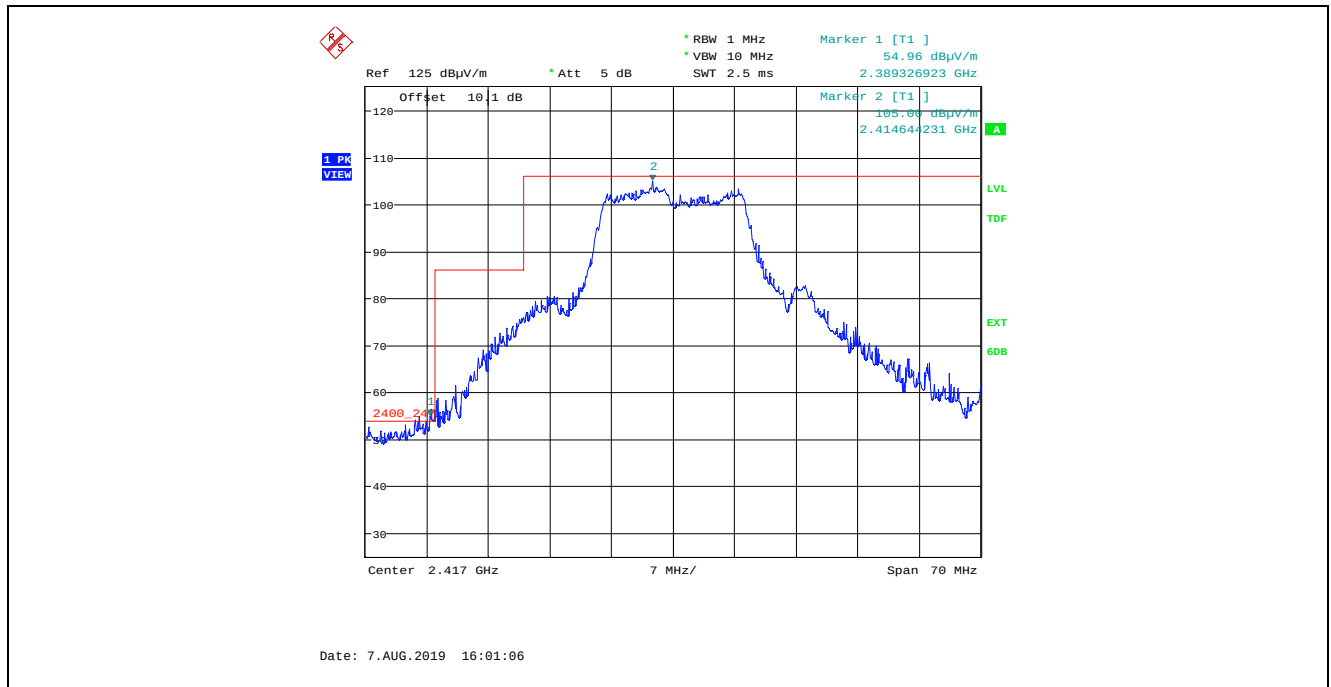
Plot 5.4.4.2.2.37. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 24, Channel 2, 2417 MHz



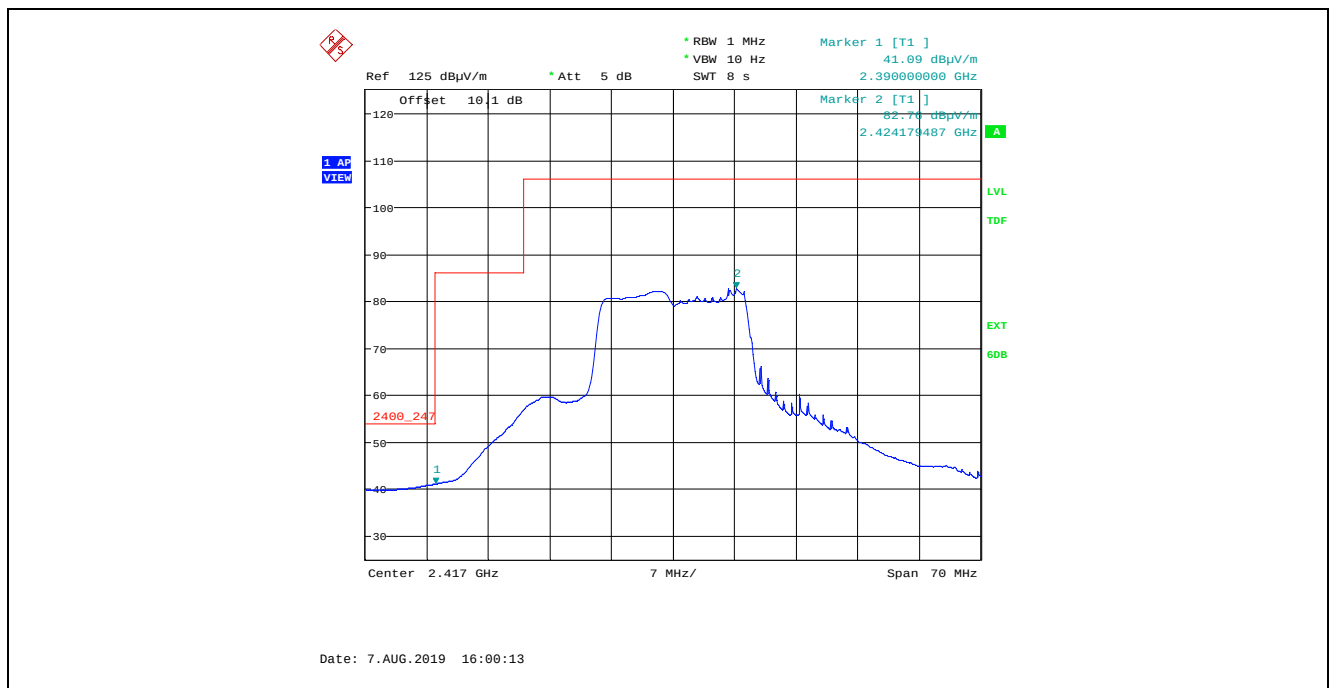
Plot 5.4.4.2.2.38. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 24, Channel 2, 2417 MHz



Plot 5.4.4.2.2.39. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 24, Channel 2, 2417 MHz



Plot 5.4.4.2.2.40. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 24, Channel 2, 2417 MHz



Ref 125 dBμV/m * Att 5 dB RBW 1 MHz VBW 3 MHz SWT 2.5 ms

Offset 10.1 dB

Marker 1 [T1] 116.50 dBμV/m 2.45171538 GHz

Marker 2 [T1] 72.35 dBμV/m 2.45514291 GHz

2400_247

1 PK VIEW

Center 2.457 GHz 6 MHz/ Span 60 MHz

LVL TDF EXT 60B

Date: 6.AUG.2019 16:12:13

Ref 125 dBμV/m * Att 5 dB RBW 1 MHz VBW 10 Hz SWT 6.8 s Marker 1 [T1] 93.65 dBμV/m 2.469461538 GHz

Offset 10.1 dB Marker 2 [T1] 51.07 dBμV/m 2.469500000 GHz

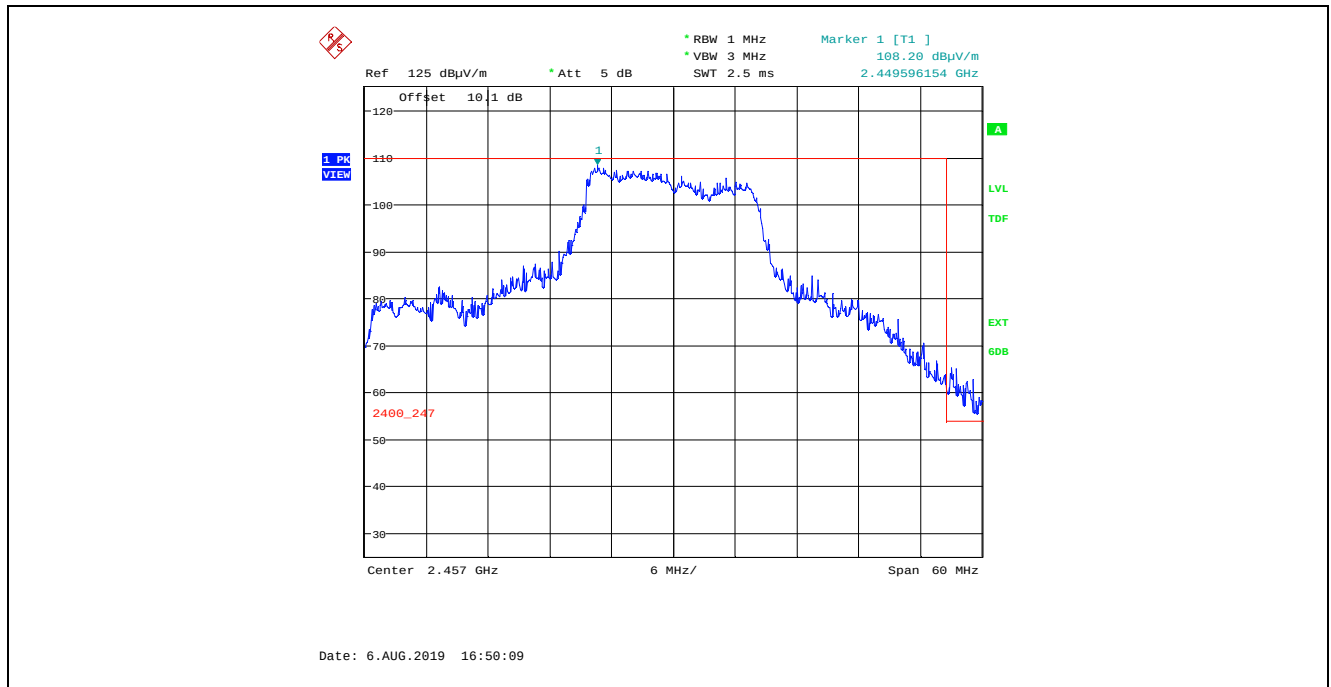
1 AP VIEW

LVL TDF EXT 6DB

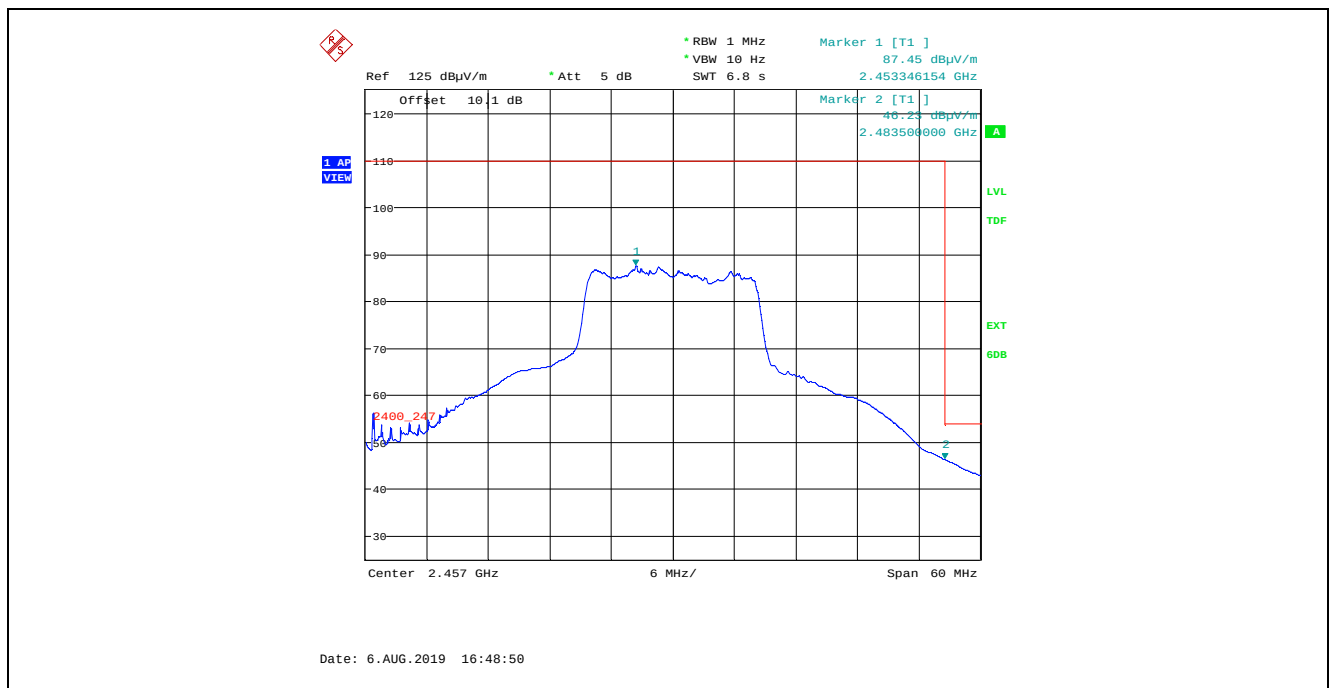
Center 2.457 GHz 6 MHz/ Span 60 MHz

Date: 6.AUG.2019 16:15:27

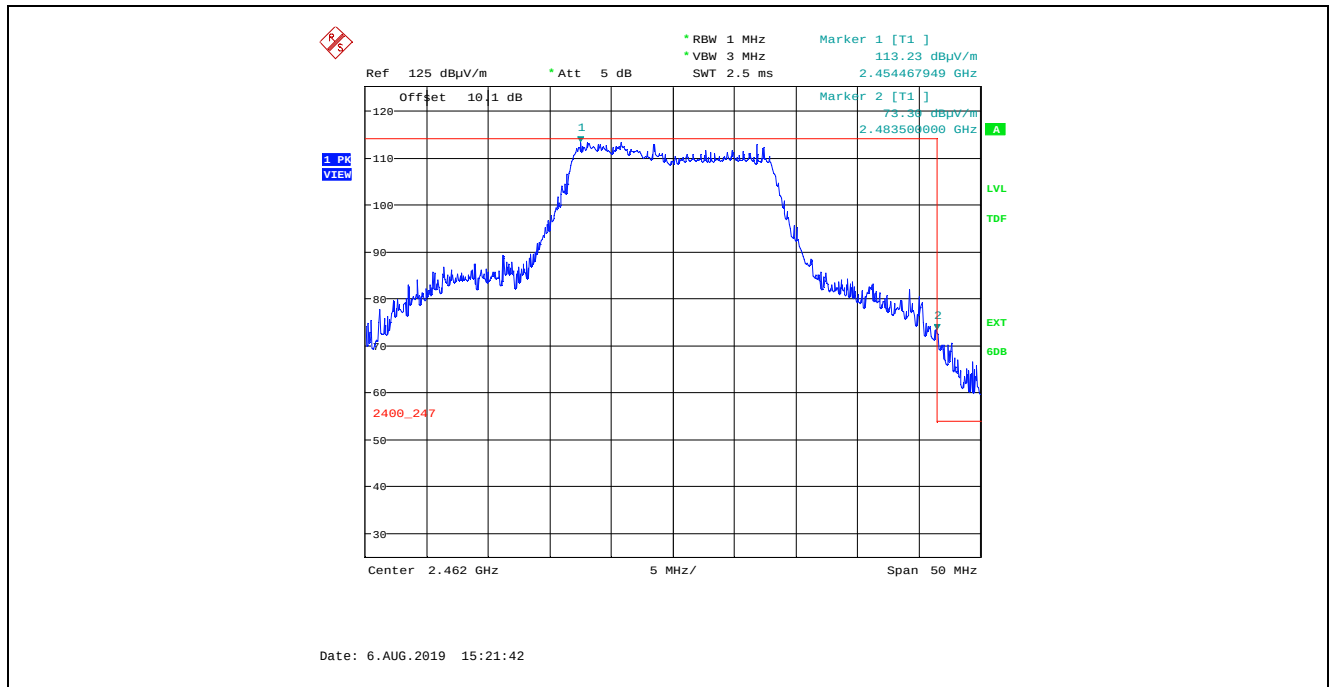
Plot 5.4.4.2.2.43. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 24, Channel 10, 2457 MHz



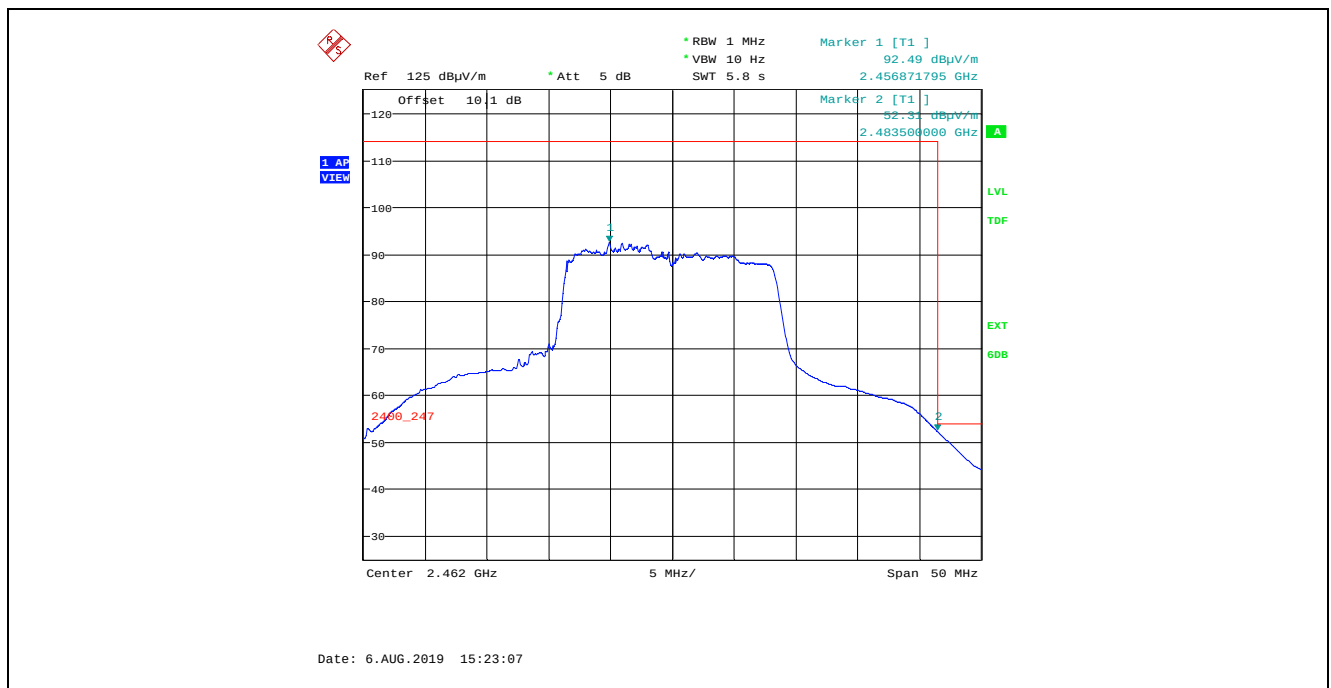
Plot 5.4.4.2.2.44. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 24, Channel 10, 2457 MHz



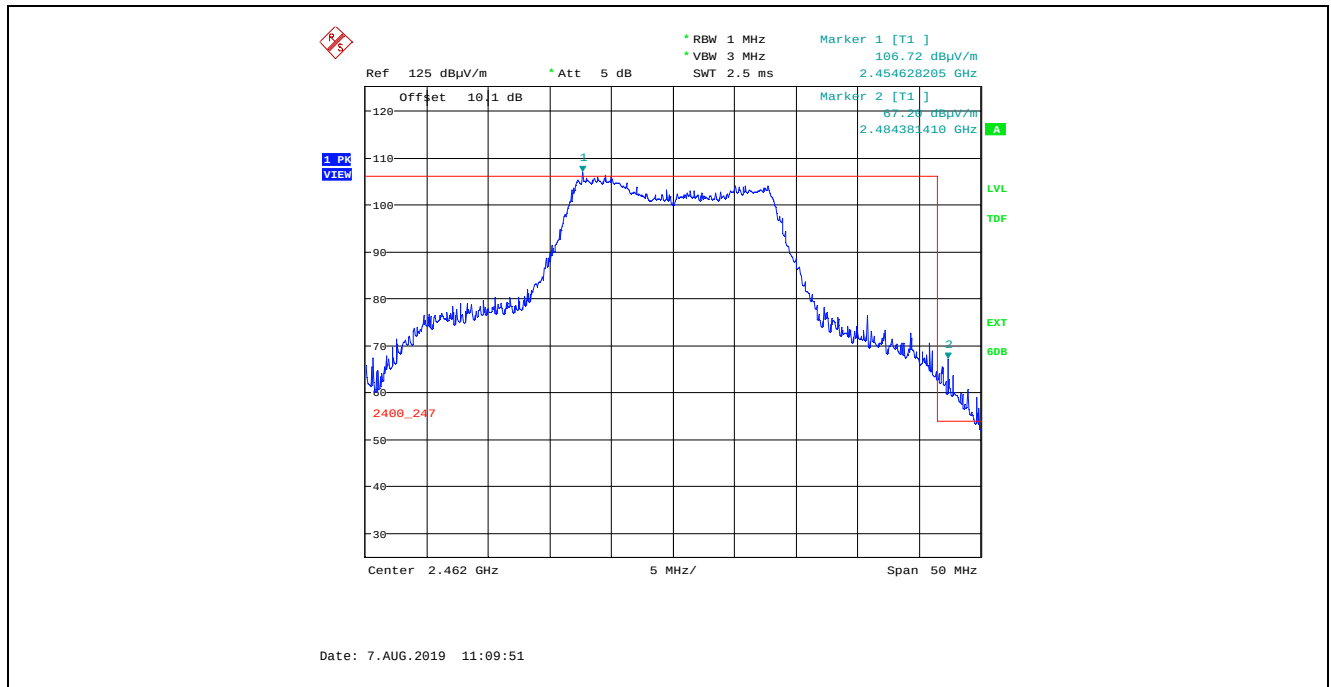
Plot 5.4.4.2.2.45. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 19, Channel 11, 2462 MHz



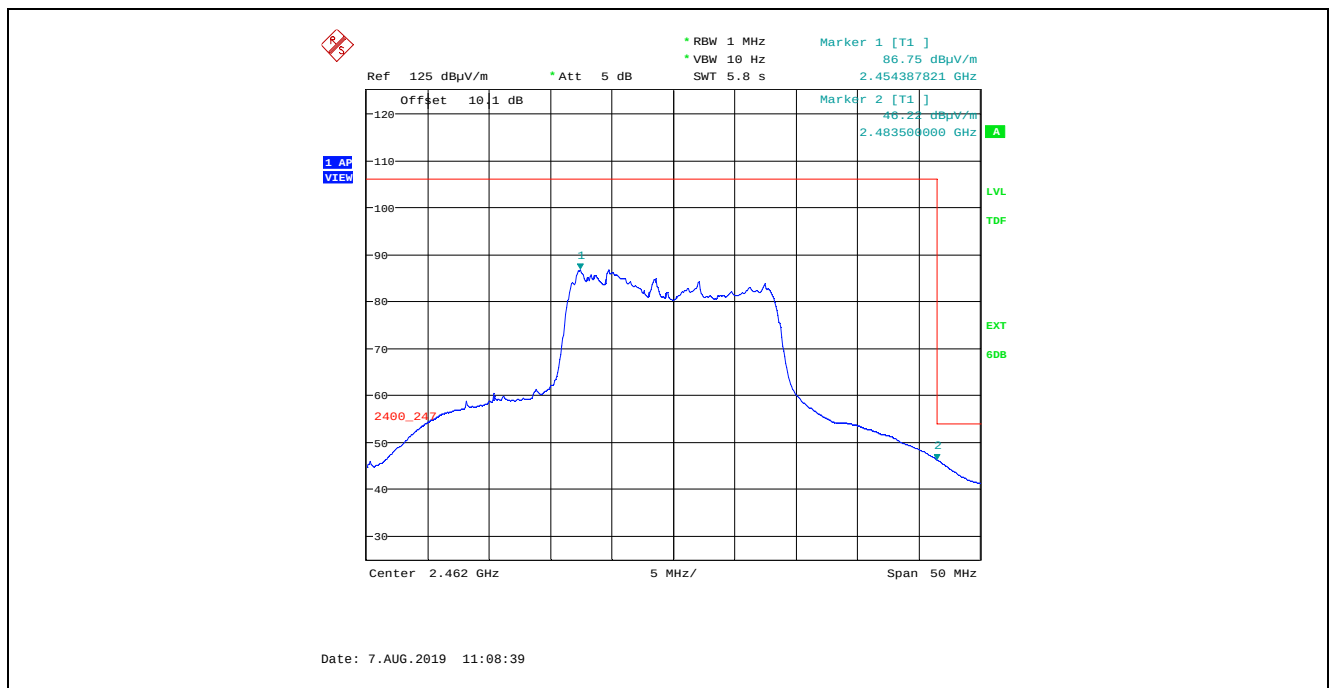
Plot 5.4.4.2.2.46. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 19, Channel 11, 2462 MHz



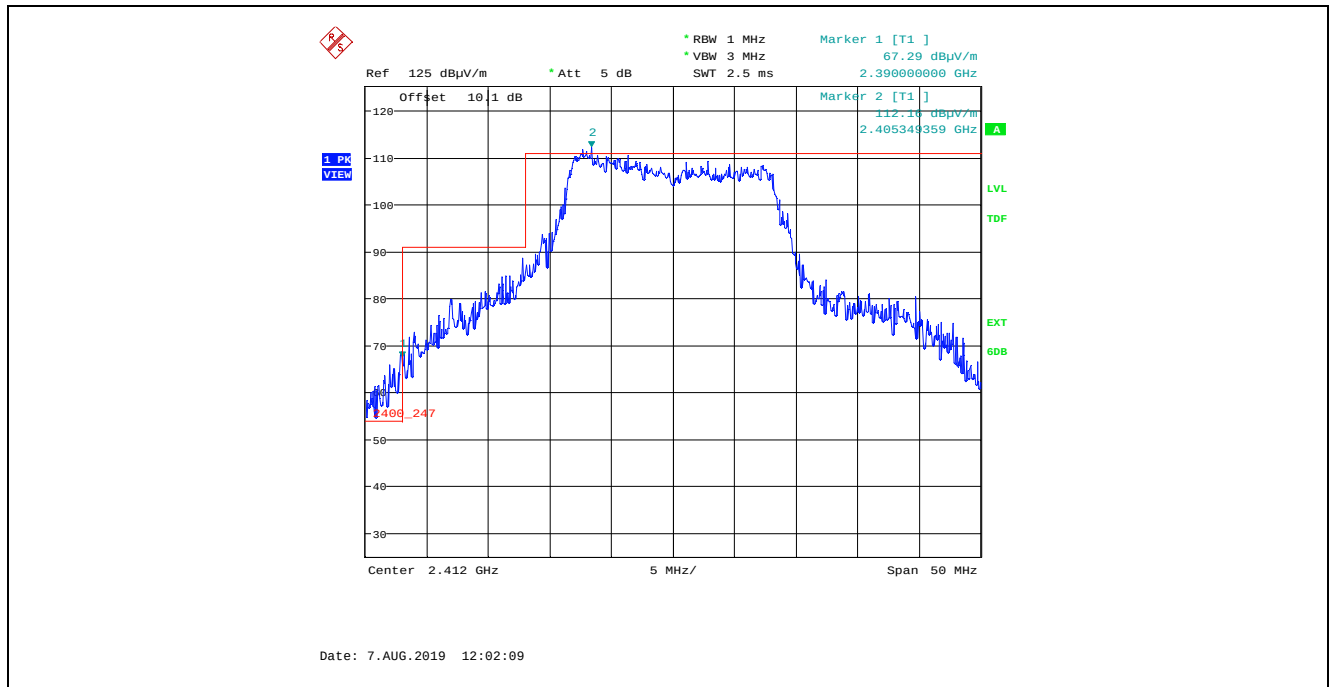
Plot 5.4.4.2.2.47. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 16-QAM 36Mbps, Power Setting 19, Channel 11, 2462 MHz



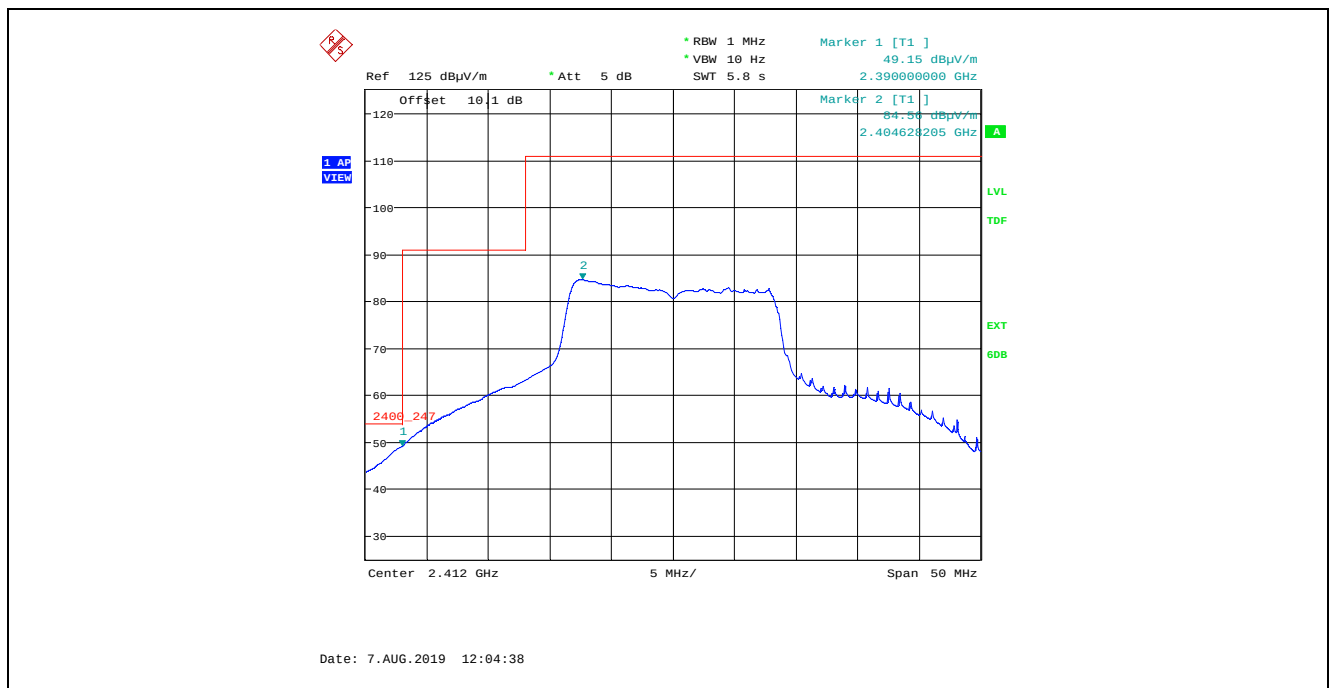
Plot 5.4.4.2.2.48. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 16-QAM 36Mbps, Power Setting 19, Channel 11, 2462 MHz



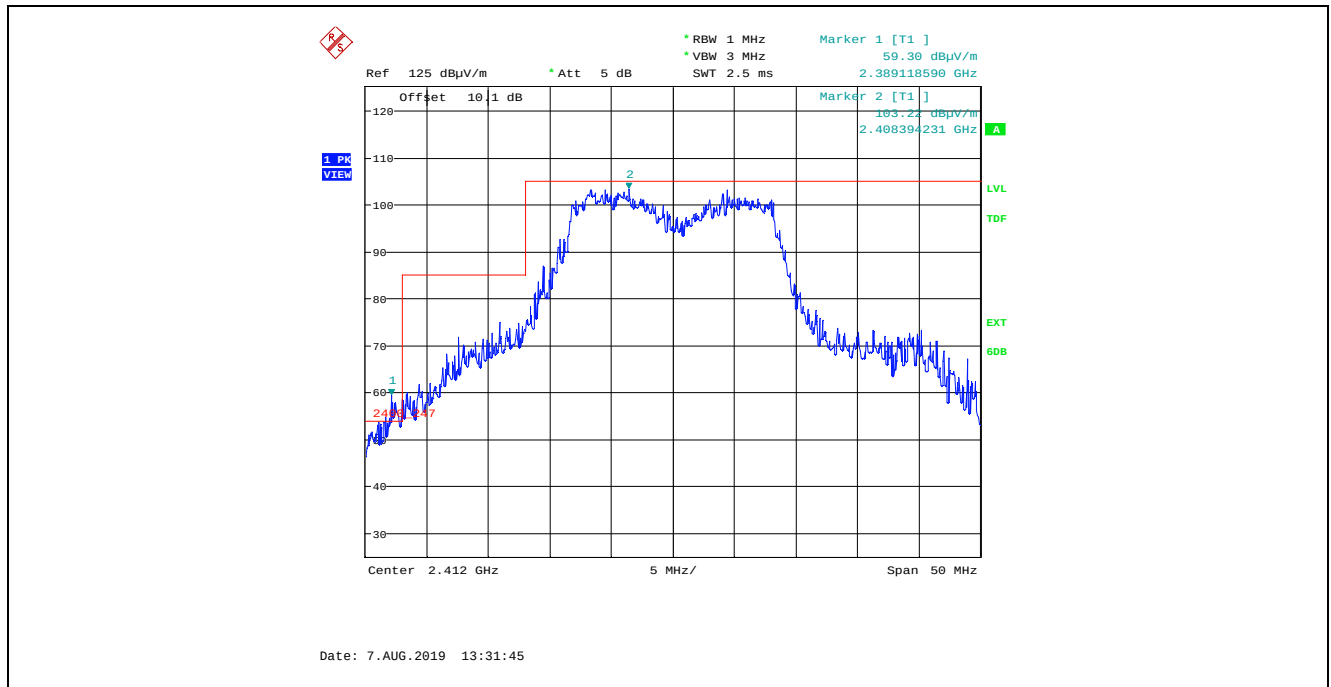
Plot 5.4.4.2.2.49. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 21, Channel 1, 2412 MHz



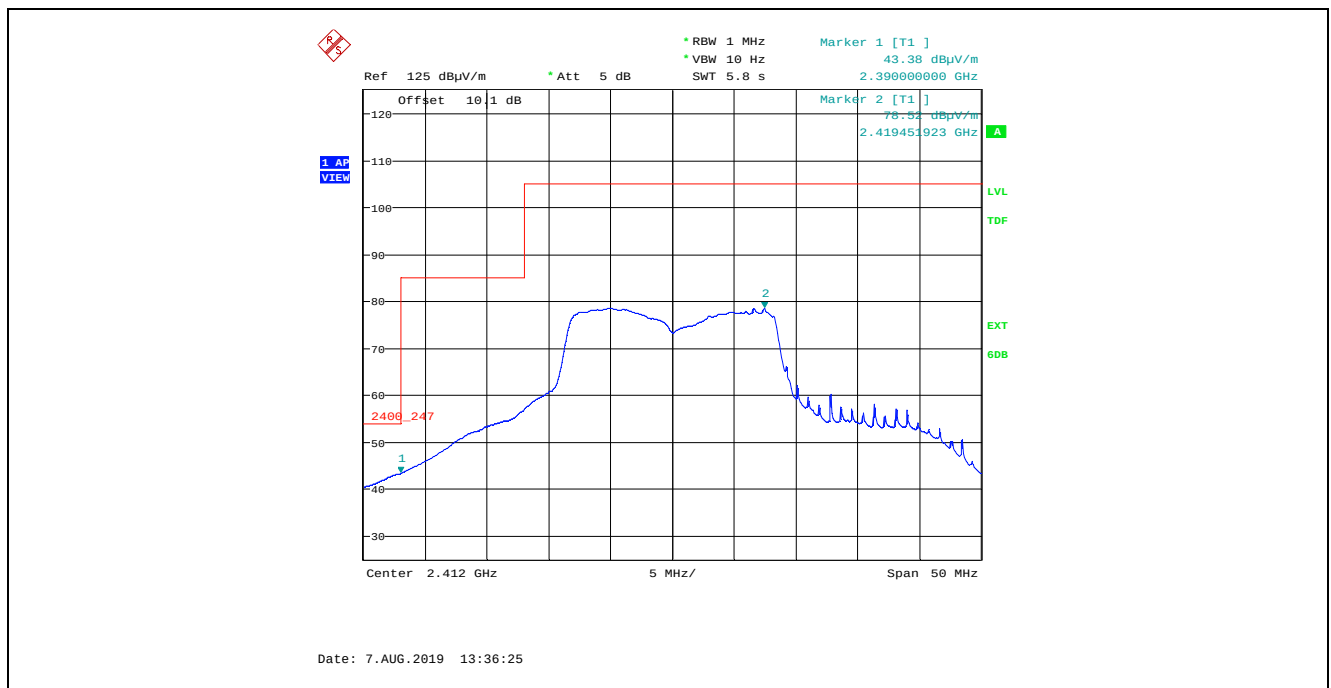
Plot 5.4.4.2.2.50. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 21, Channel 1, 2412 MHz



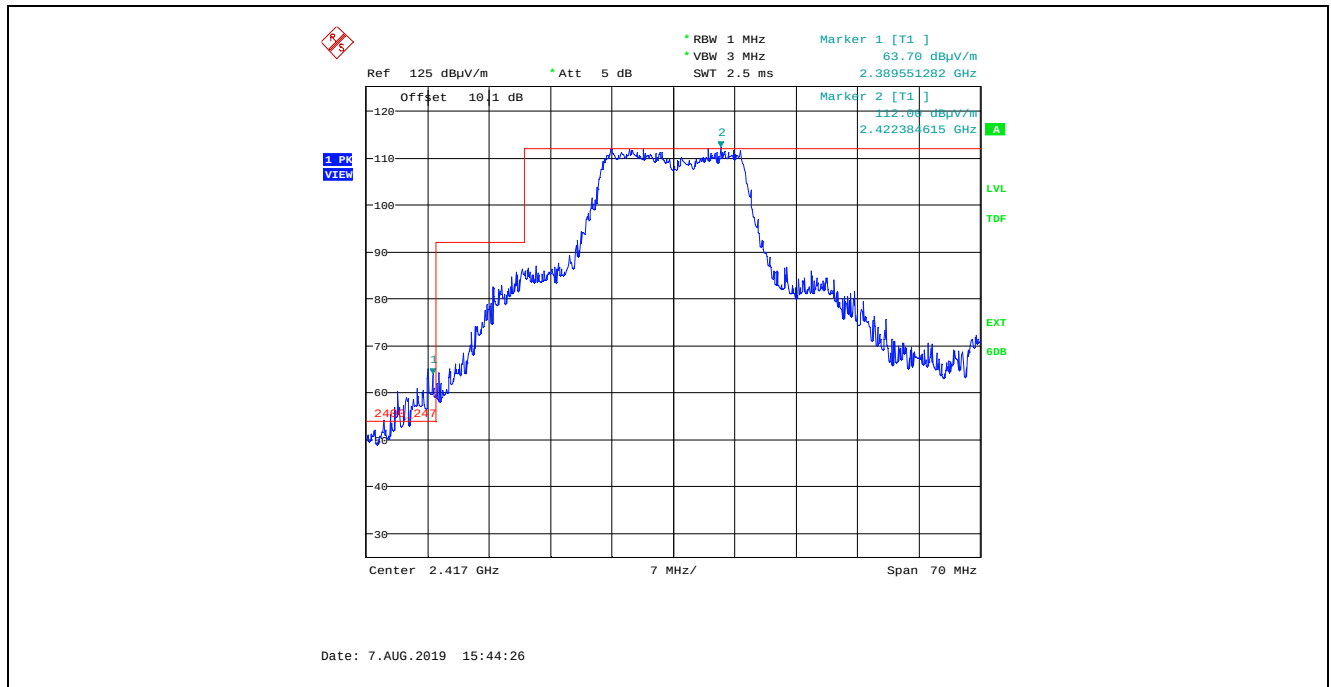
Plot 5.4.4.2.2.51. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 21, Channel 1, 2412 MHz



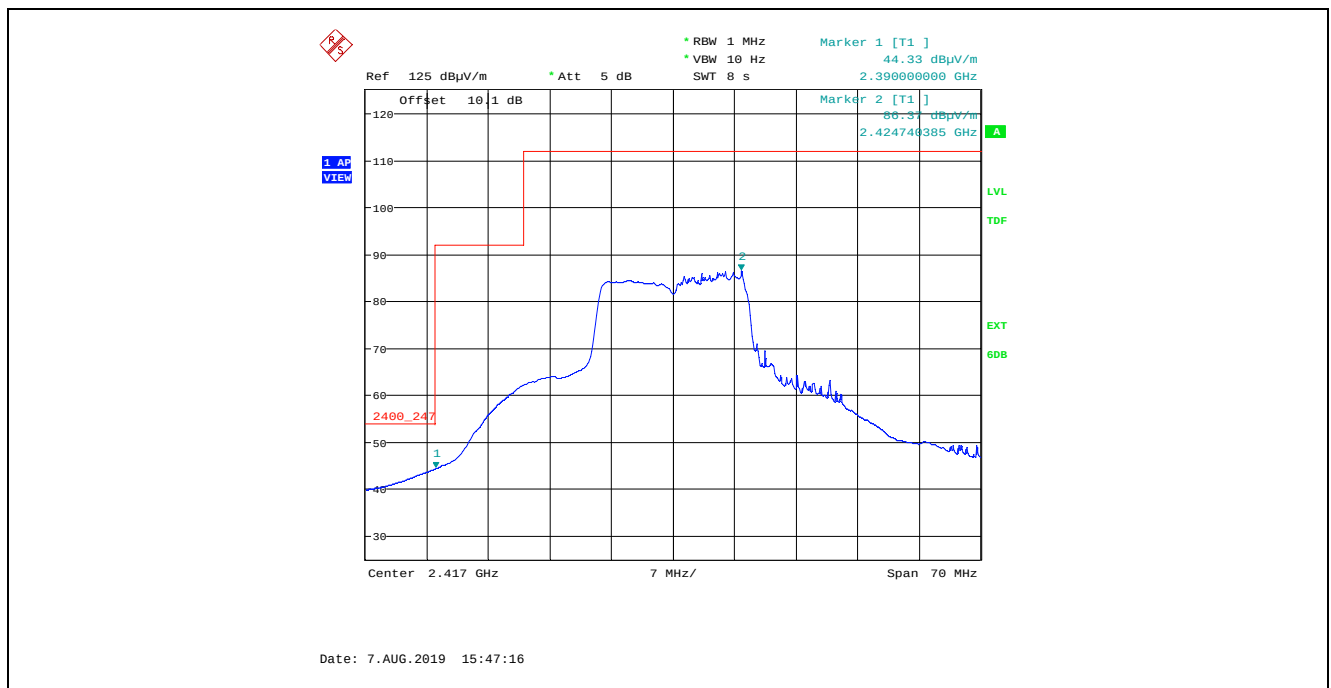
Plot 5.4.4.2.2.52. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 21, Channel 1, 2412 MHz



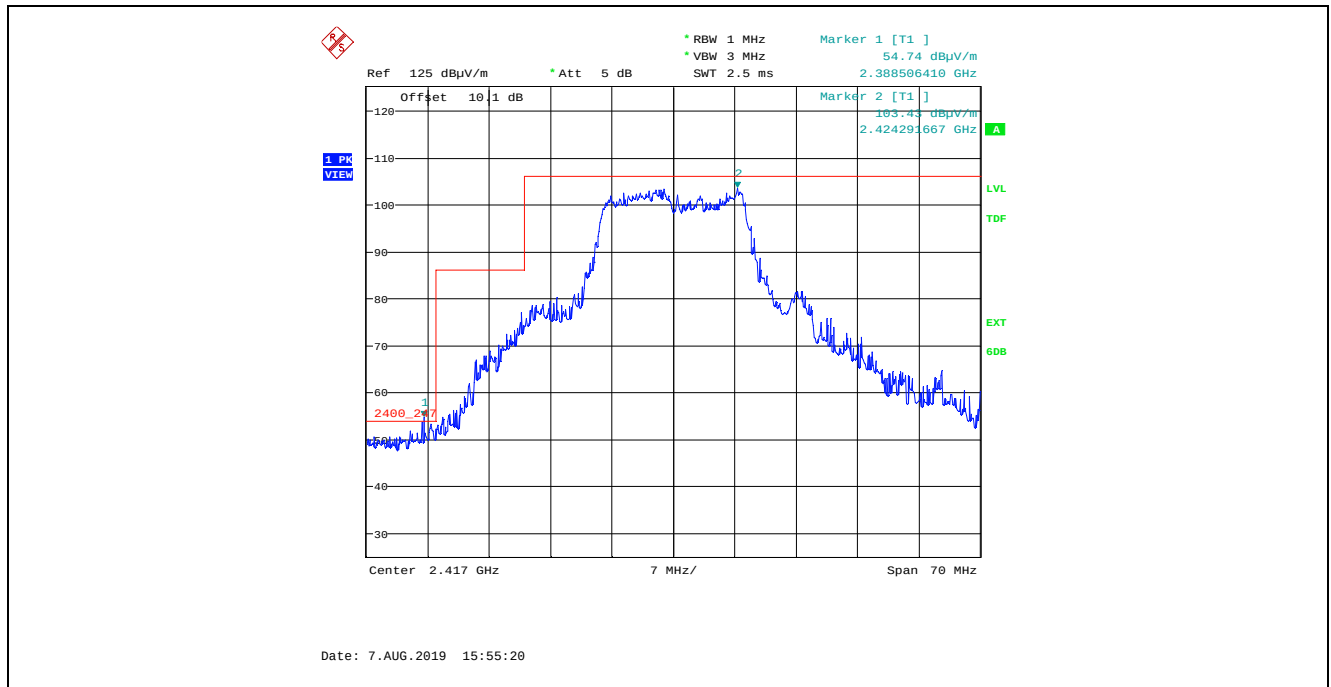
Plot 5.4.4.2.2.53. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 2, 2417 MHz



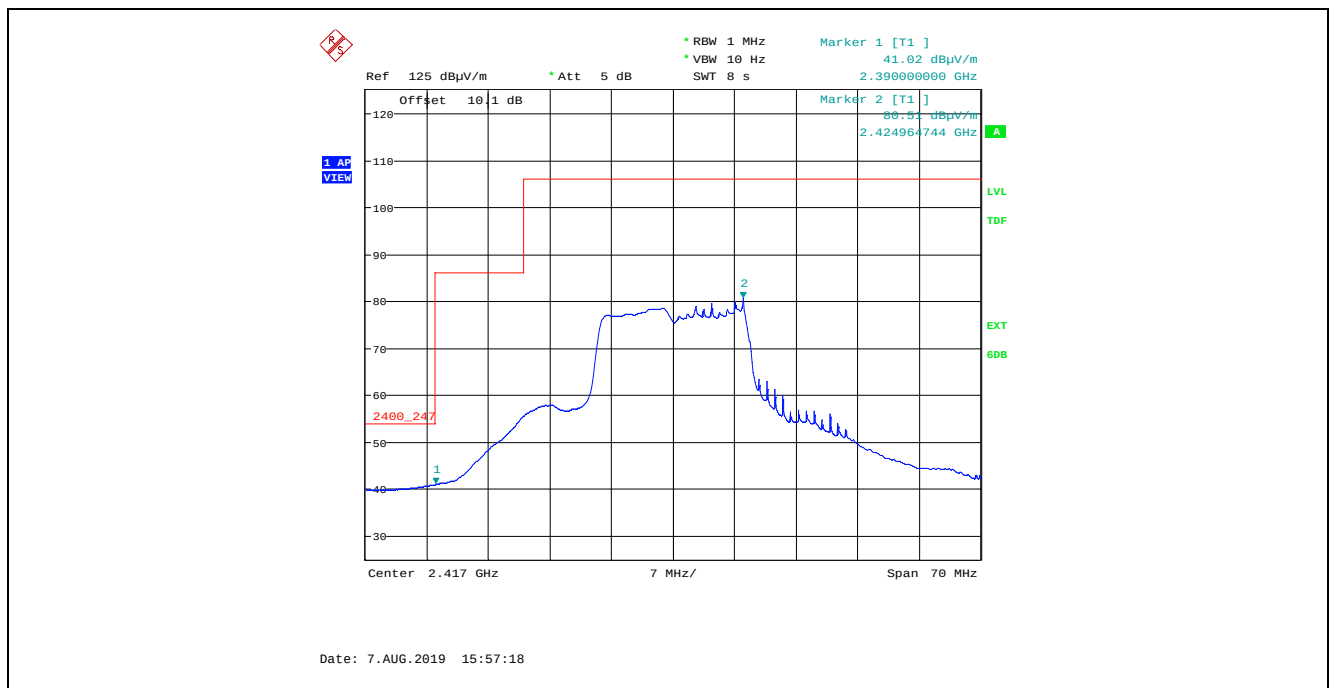
Plot 5.4.4.2.2.54. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 2, 2417 MHz



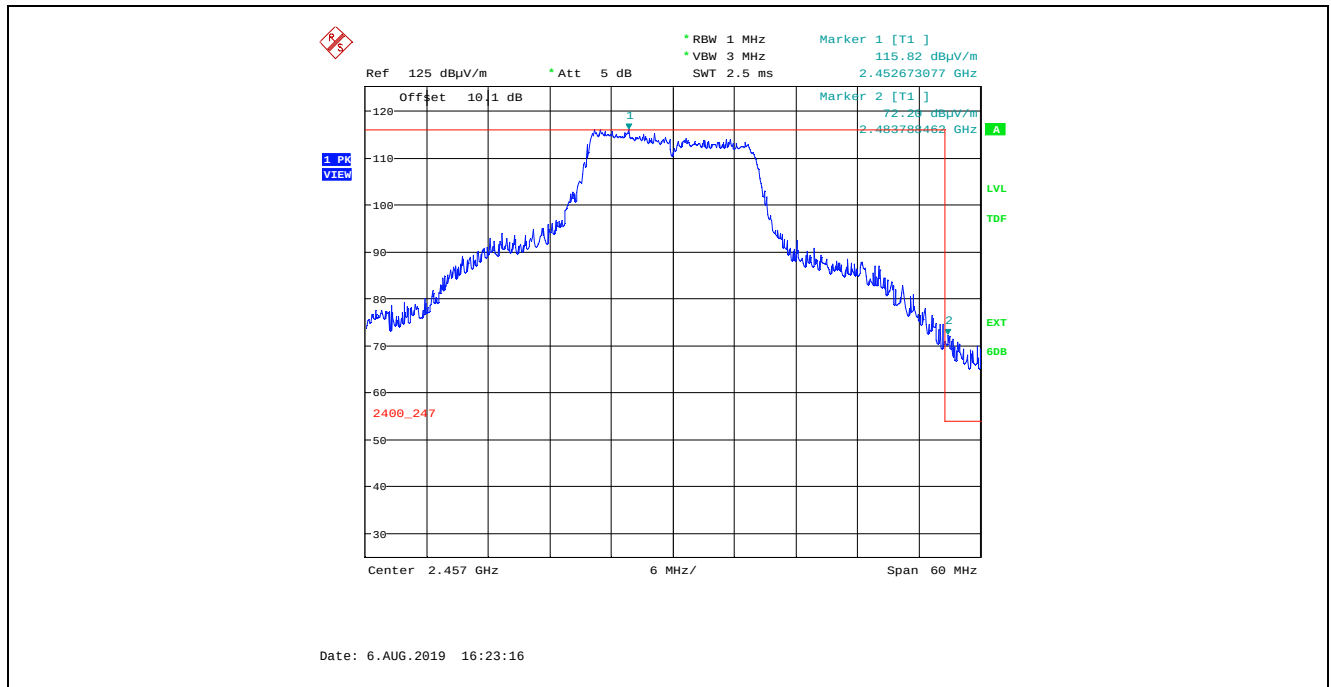
Plot 5.4.4.2.2.55. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 2, 2417 MHz



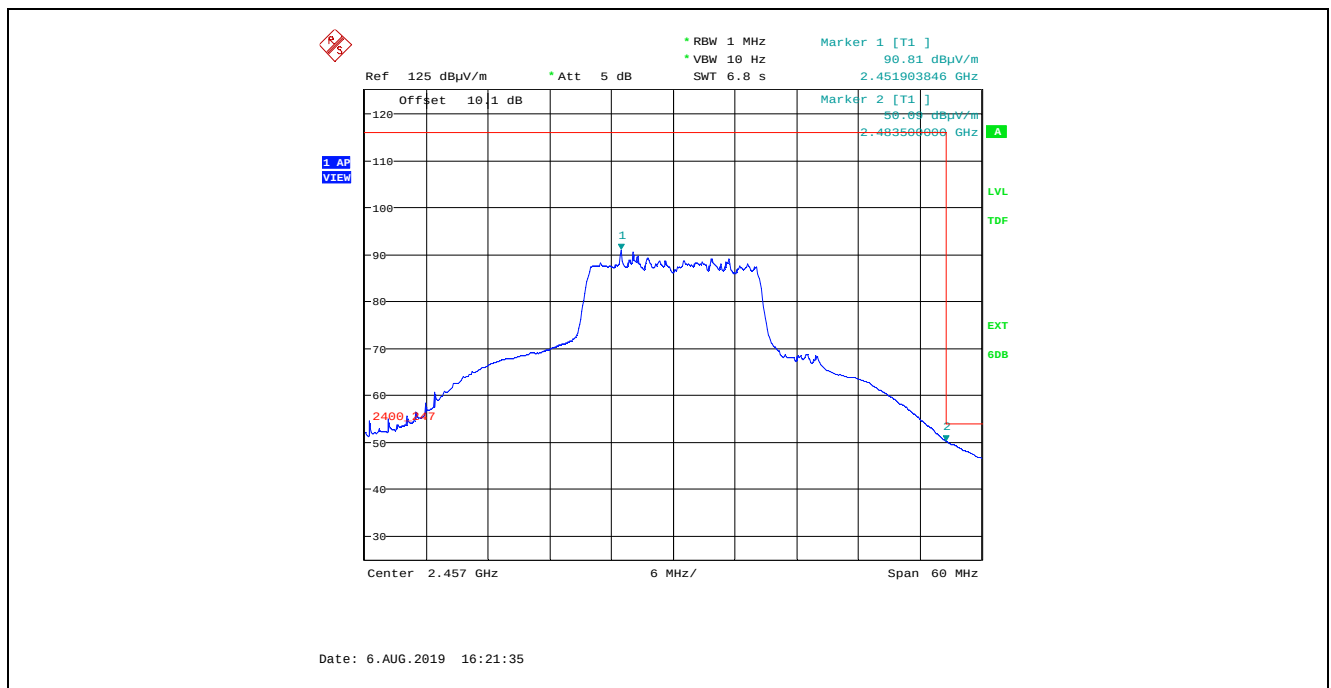
Plot 5.4.4.2.2.56. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 2, 2417 MHz



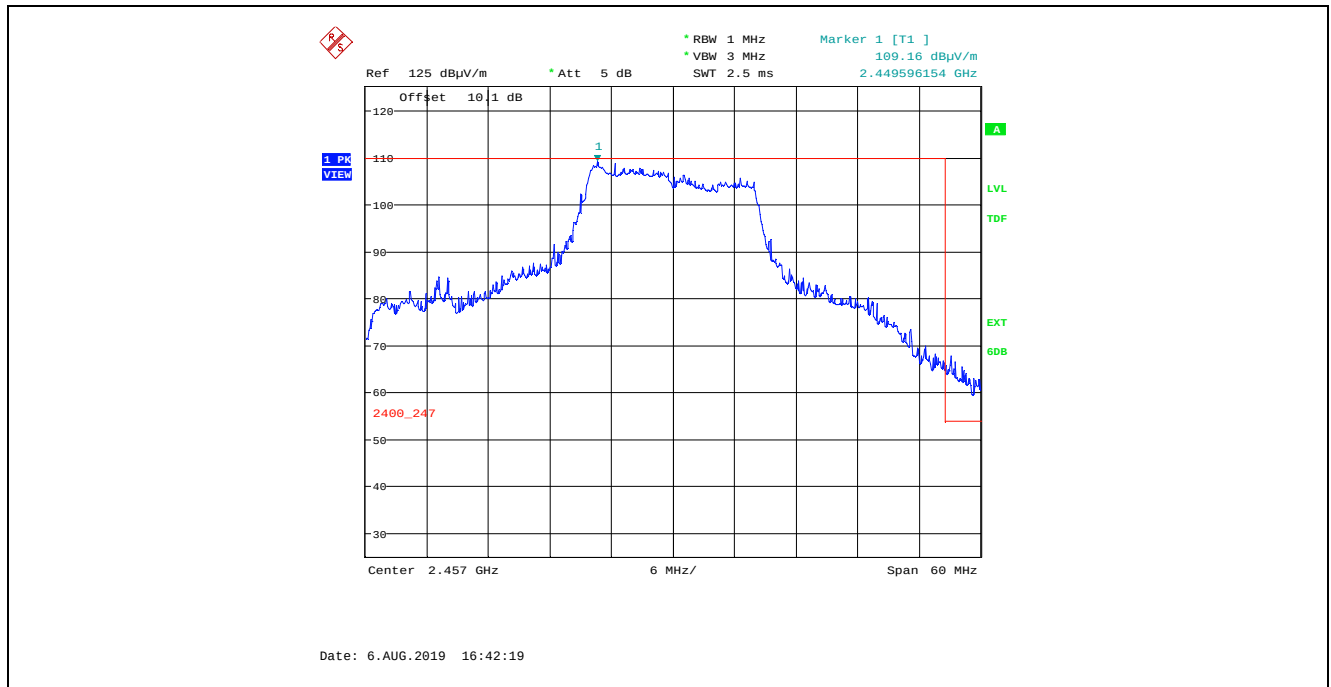
Plot 5.4.4.2.2.57. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 10, 2457 MHz



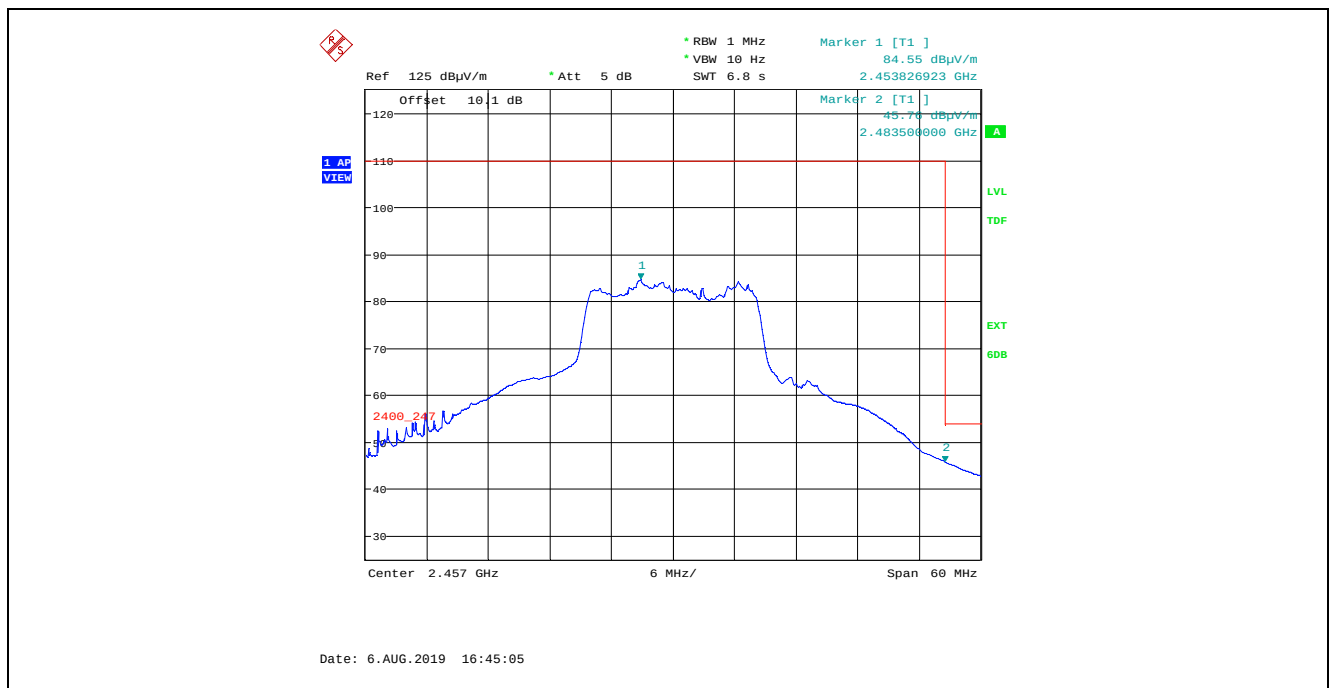
Plot 5.4.4.2.2.58. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 10, 2457 MHz



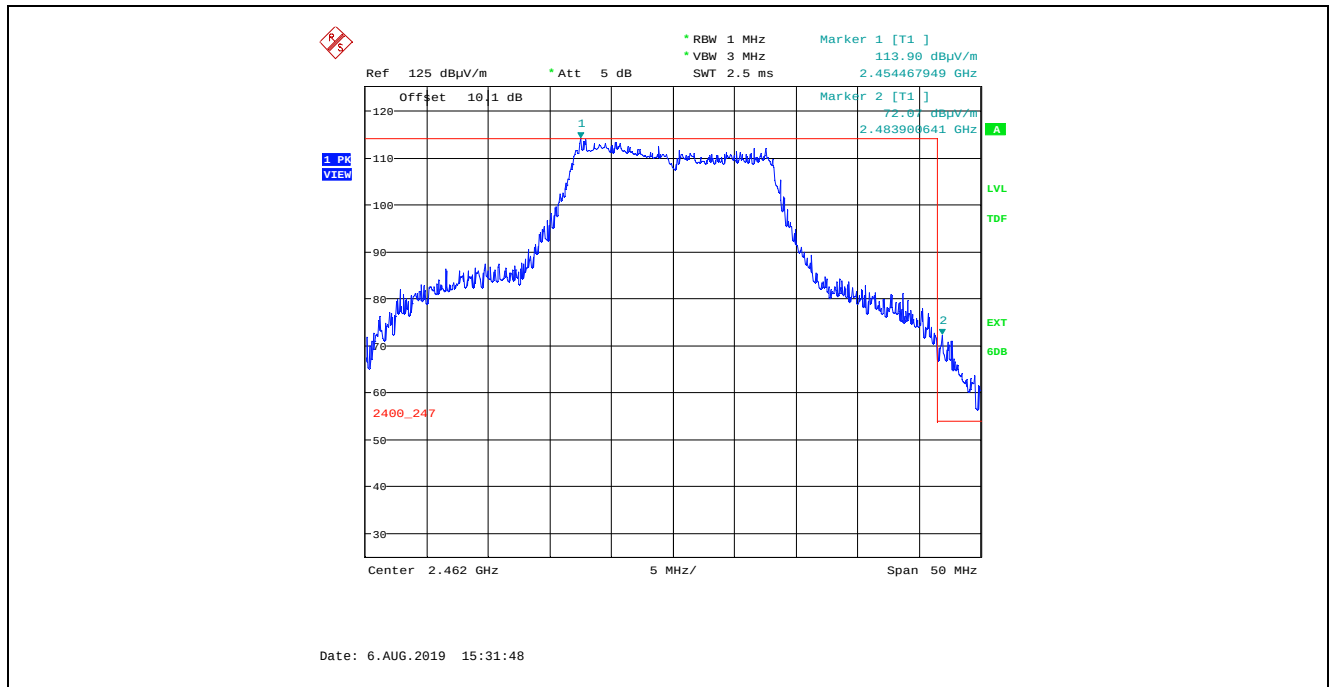
Plot 5.4.4.2.2.59. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 10, 2457 MHz



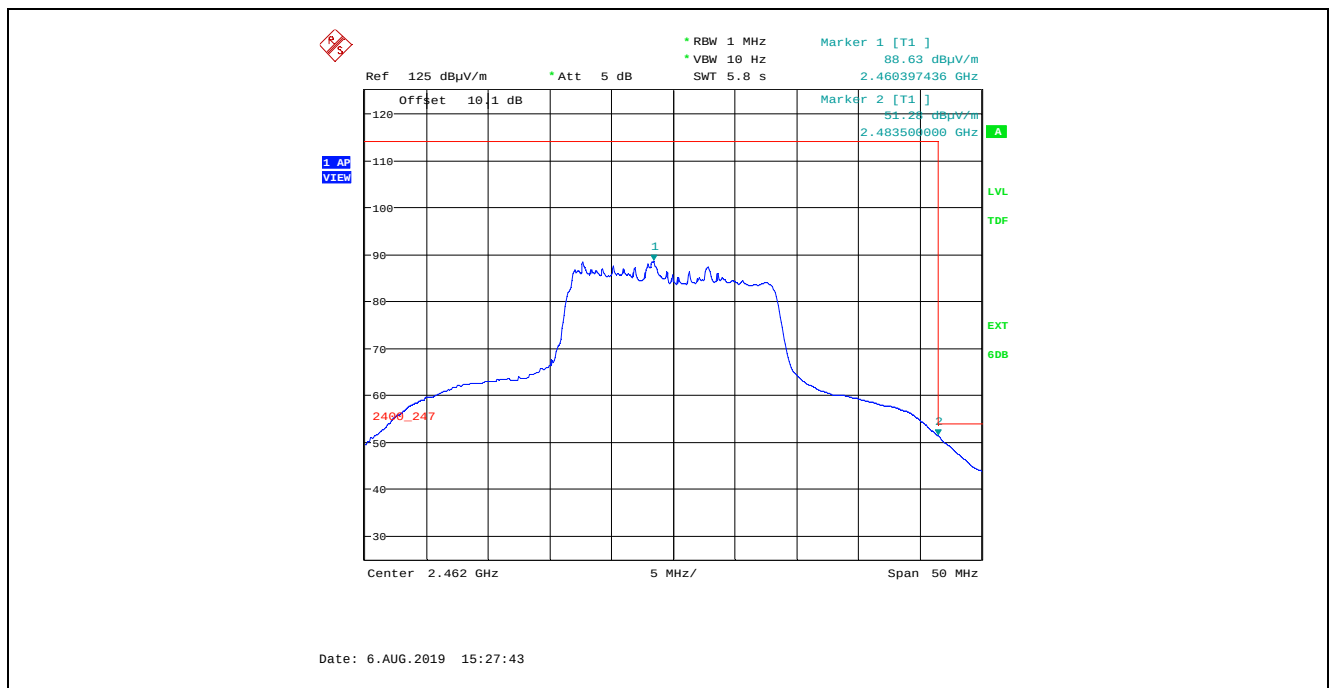
Plot 5.4.4.2.2.60. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 24, Channel 10, 2457 MHz



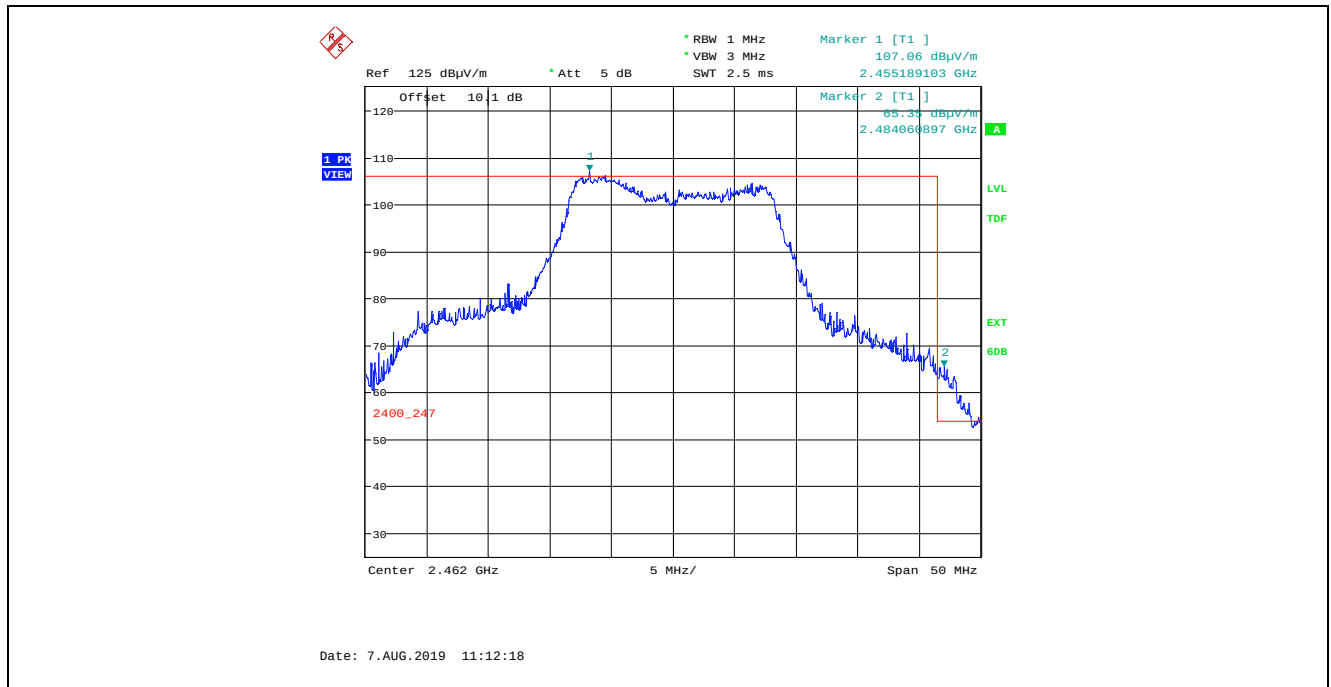
Plot 5.4.4.2.2.61. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 19, Channel 11, 2462 MHz



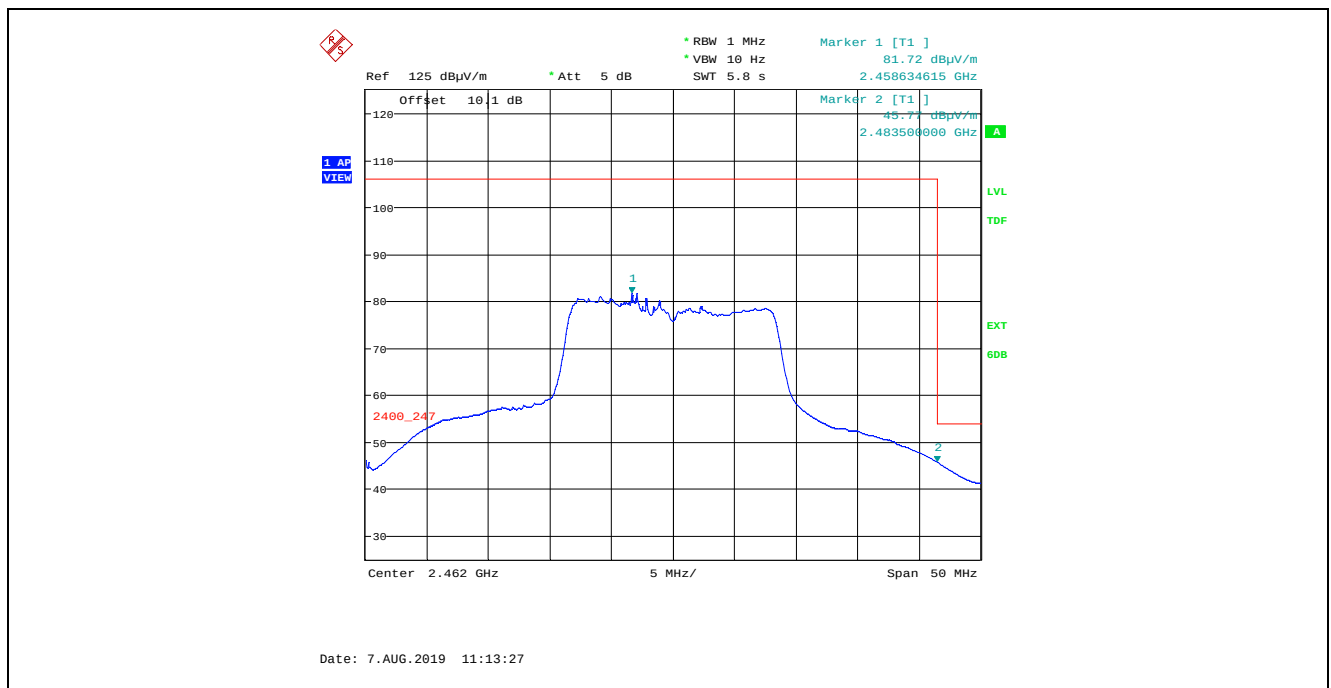
Plot 5.4.4.2.2.62. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 19, Channel 11, 2462 MHz



Plot 5.4.4.2.2.63. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11g, 64-QAM 54Mbps, Power Setting 19, Channel 11, 2462 MHz

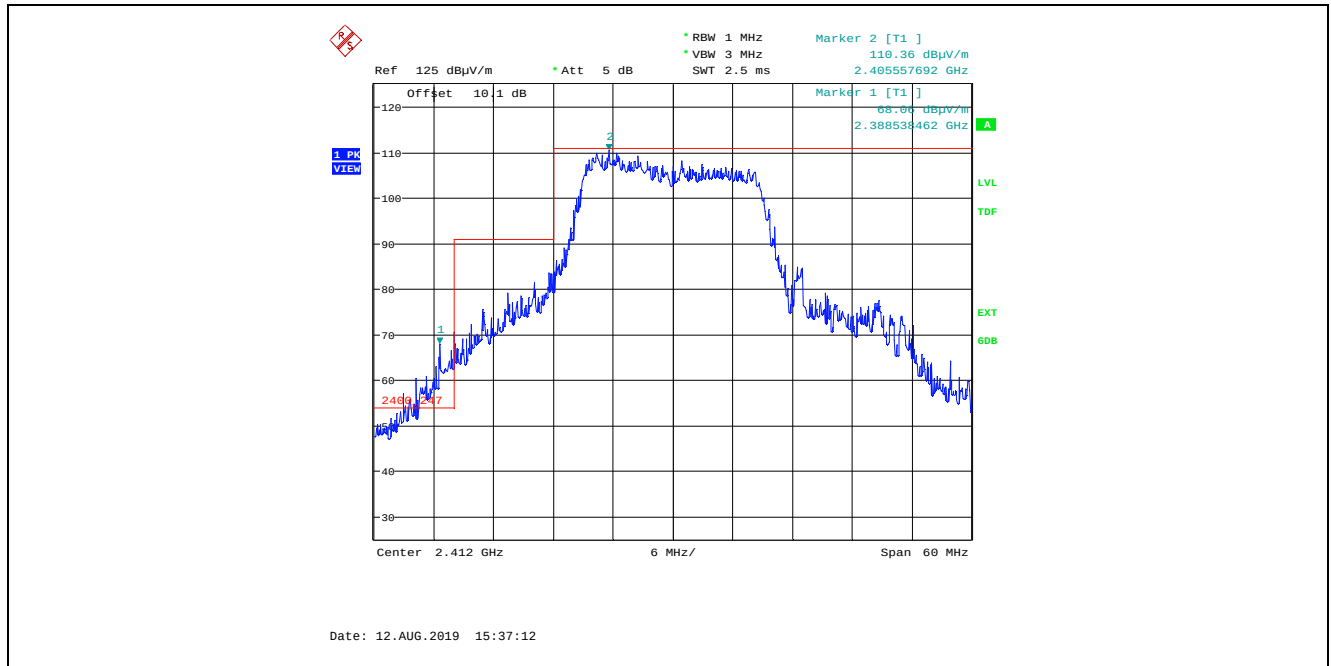


Plot 5.4.4.2.2.64. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11g, 64-QAM 54Mbps, Power Setting 19, Channel 11, 2462 MHz

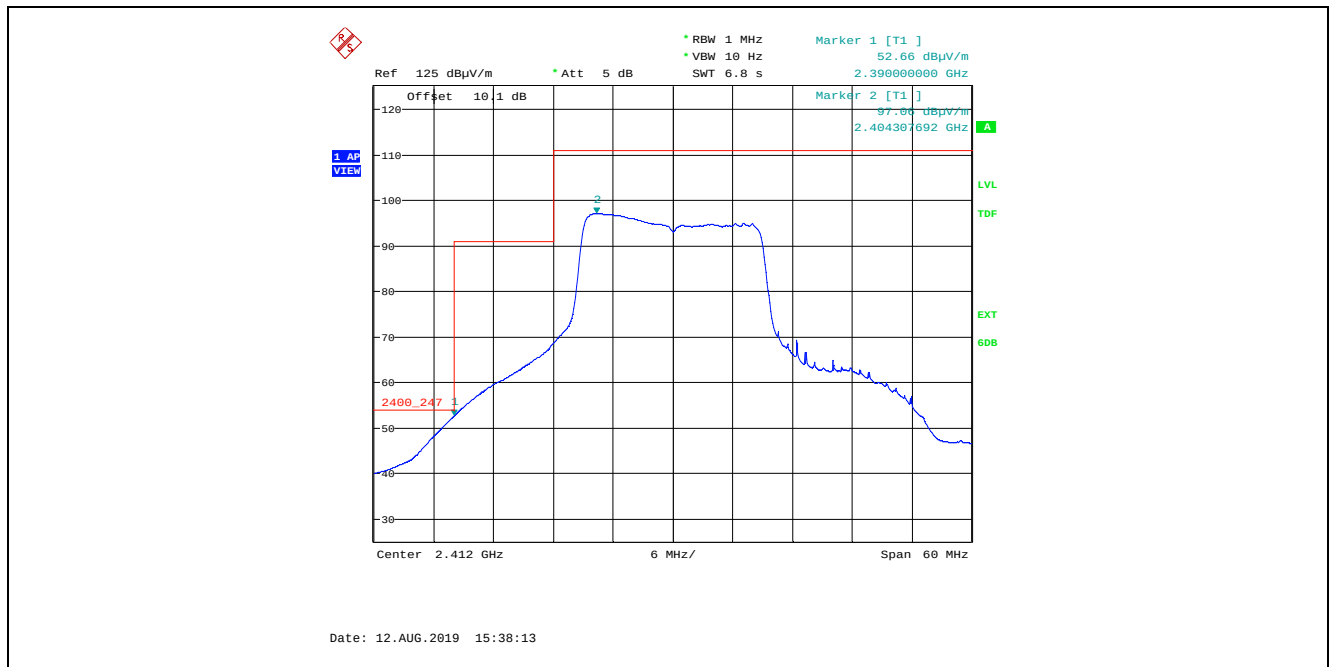


5.4.4.2.3. Band-Edge RF Radiated Emissions for 802.11n HT20, 400 ns

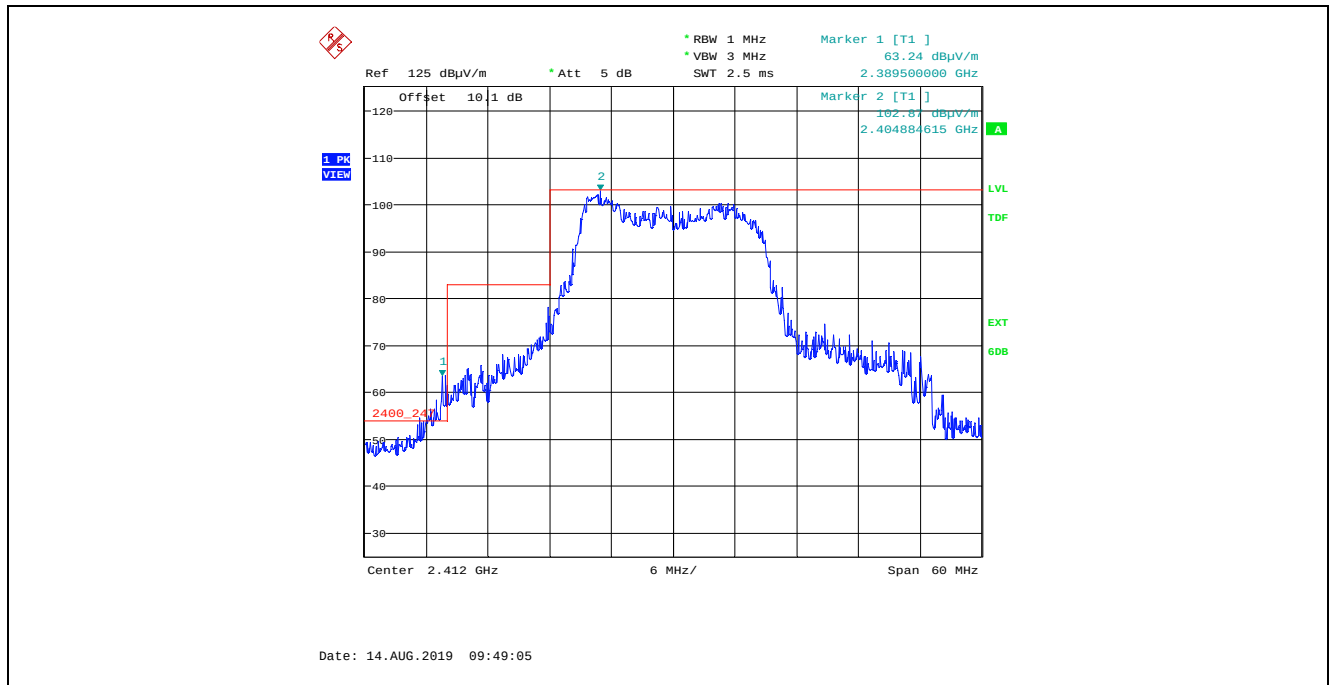
Plot 5.4.4.2.3.1. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK 1/2 7.2Mbps, Power Setting 20, Channel 1, 2412 MHz



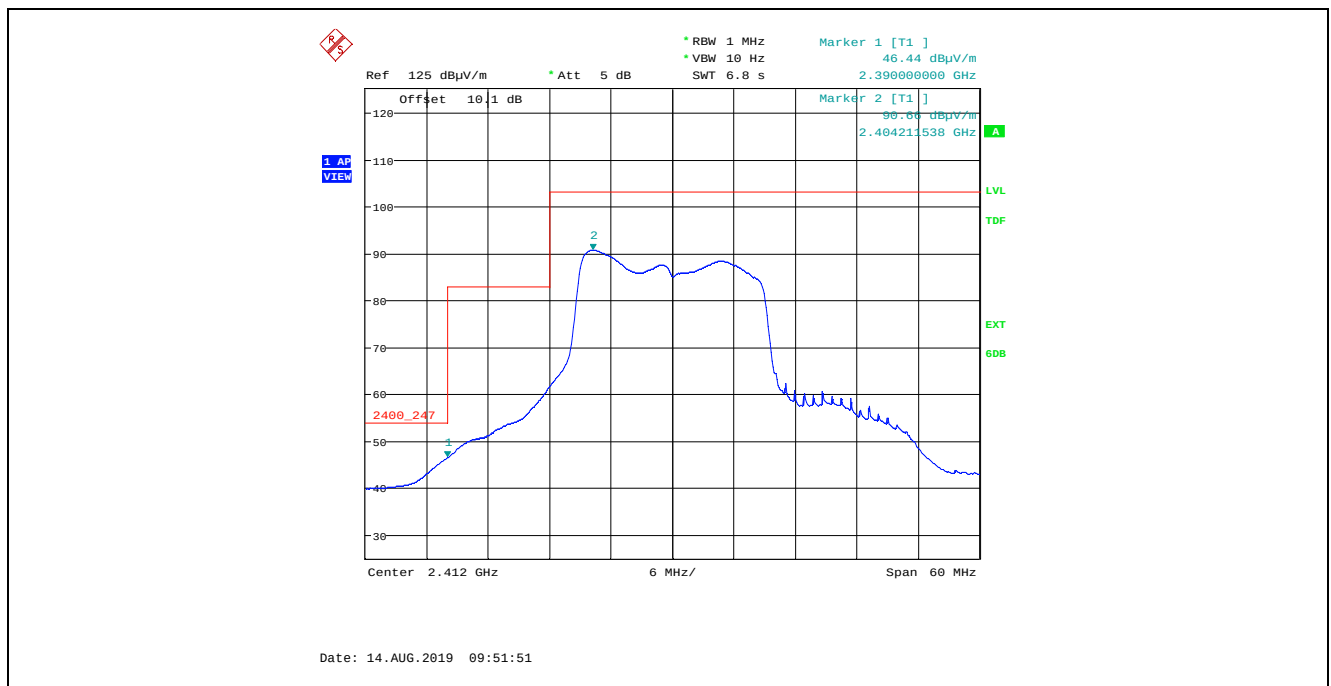
Plot 5.4.4.2.3.2. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11N HT20, 400 ns, MCS 0, BPSK 1/2 7.2Mbps, Power Setting 20, Channel 1, 2412 MHz



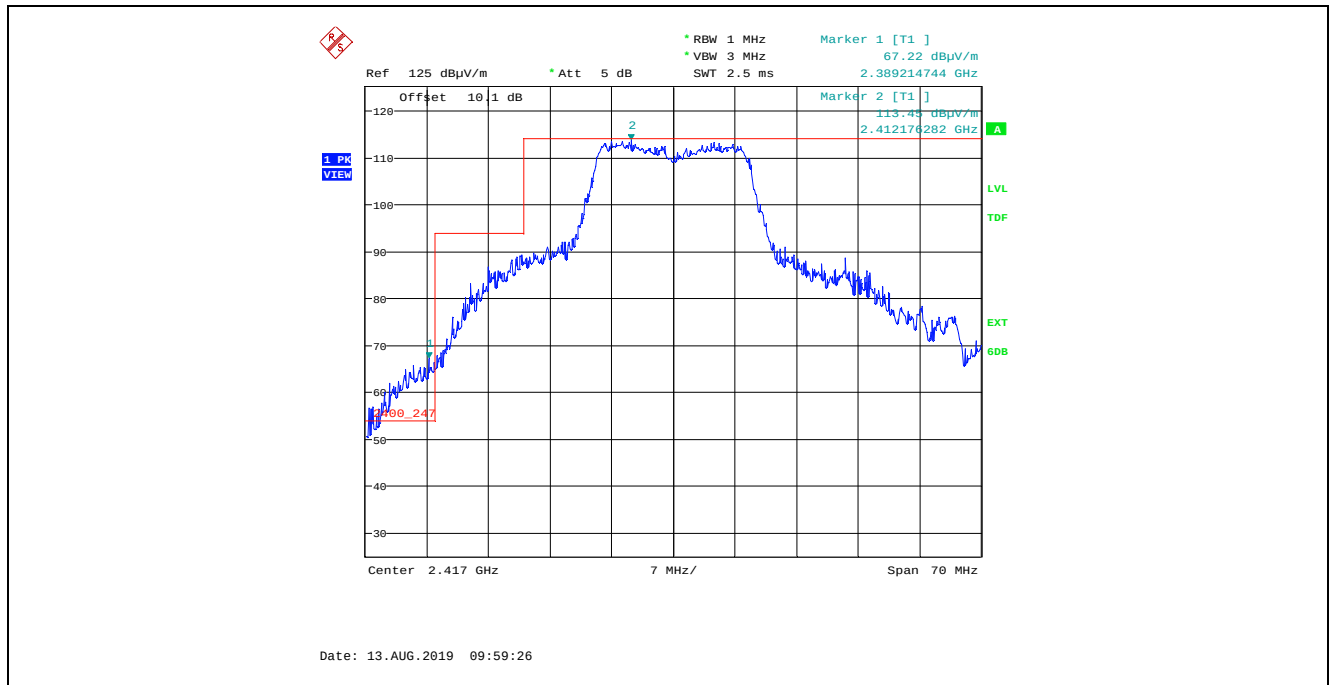
Plot 5.4.4.2.3.3. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 20, Channel 1, 2412 MHz



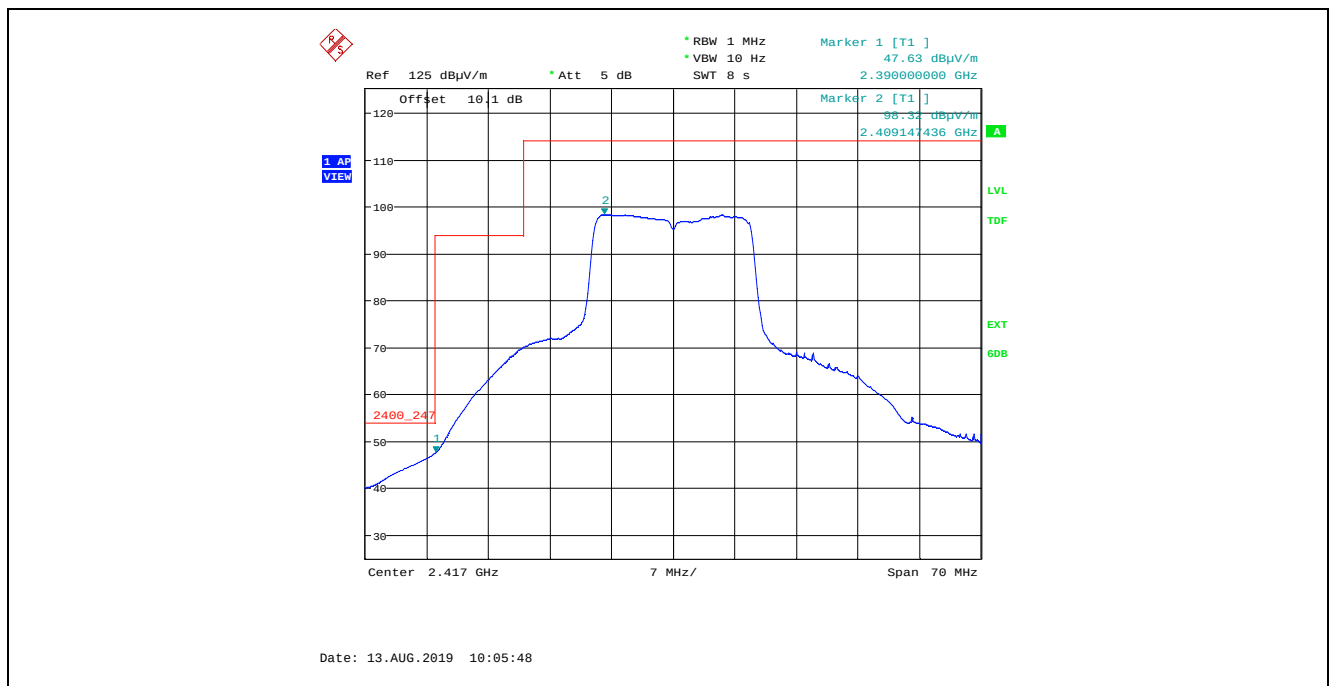
Plot 5.4.4.2.3.4. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 20, Channel 1, 2412 MHz



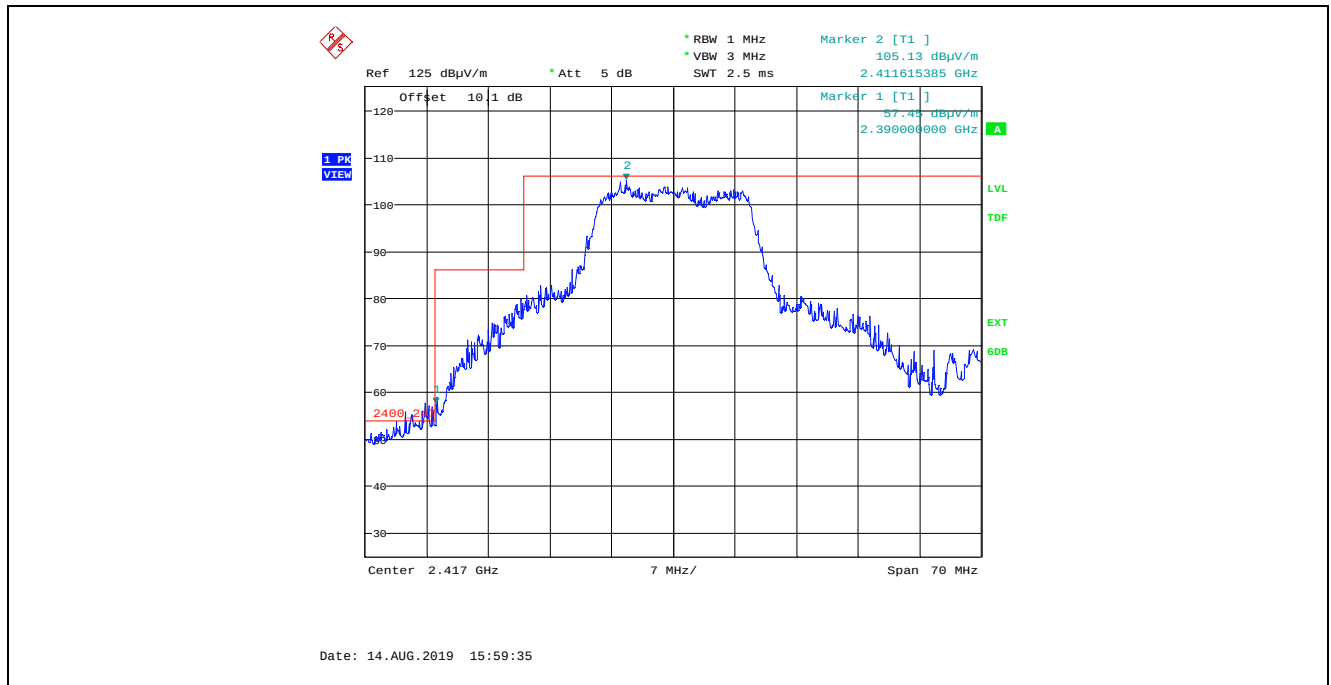
Plot 5.4.4.2.3.5. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 24 Channel 2, 2417 MHz



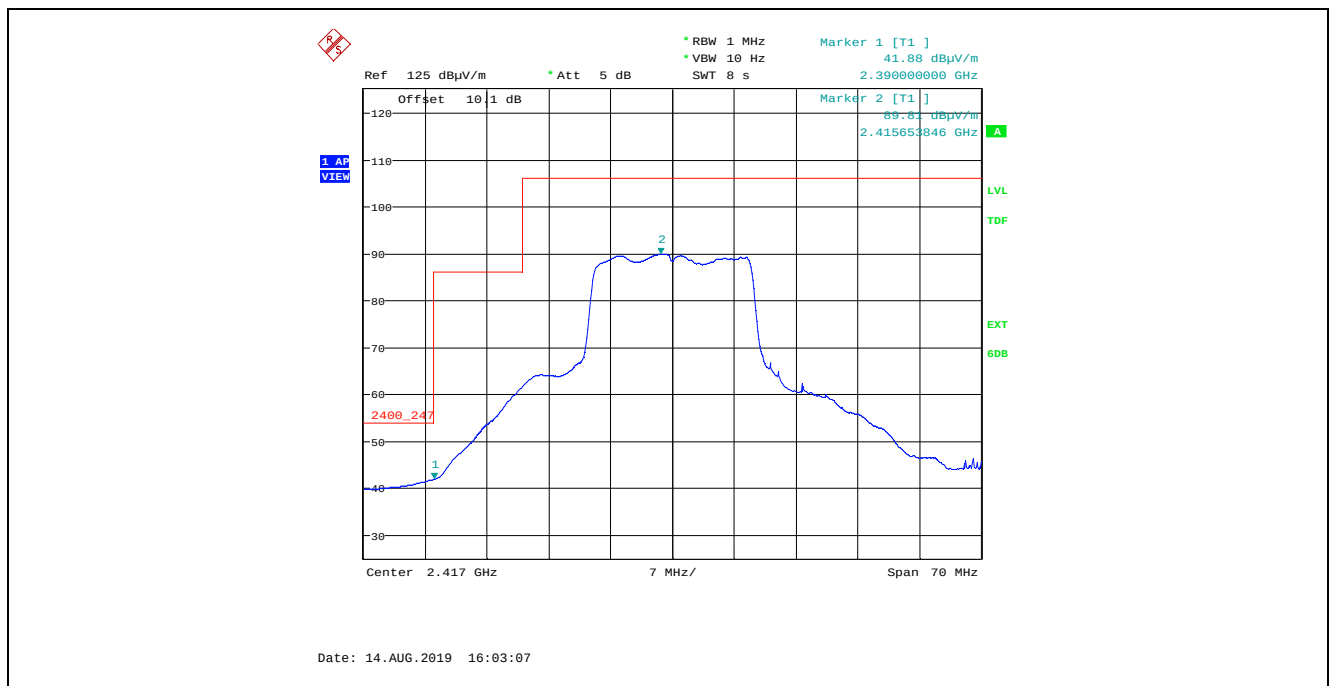
Plot 5.4.4.2.3.6. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 24 Channel 2, 2417 MHz



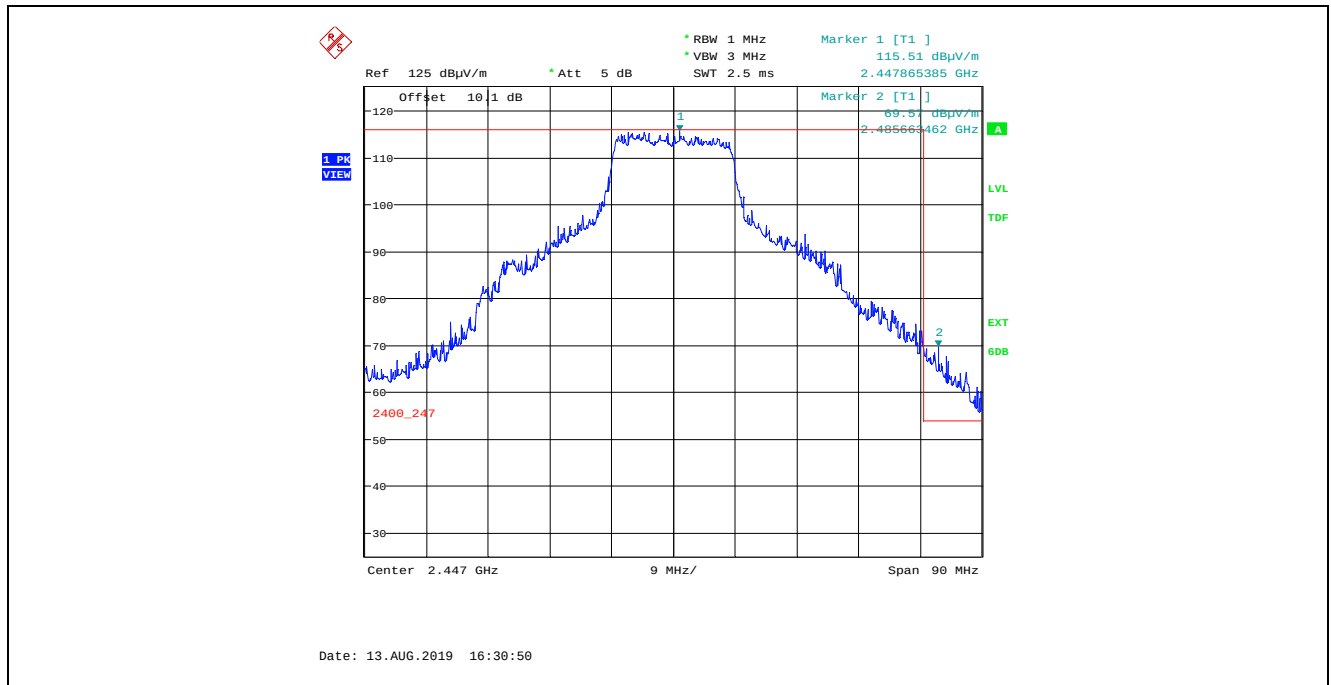
Plot 5.4.4.2.3.7. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 24 Channel 2, 2417 MHz



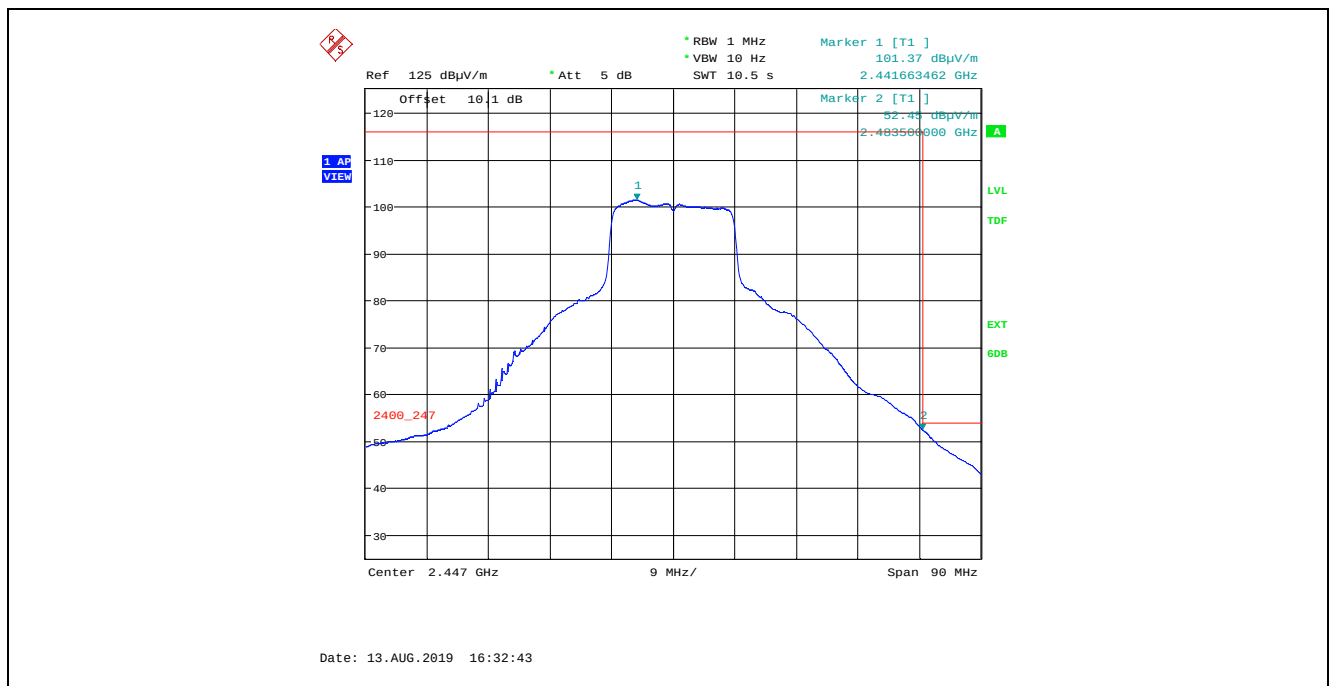
Plot 5.4.4.2.3.8. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 24 Channel 2, 2417 MHz



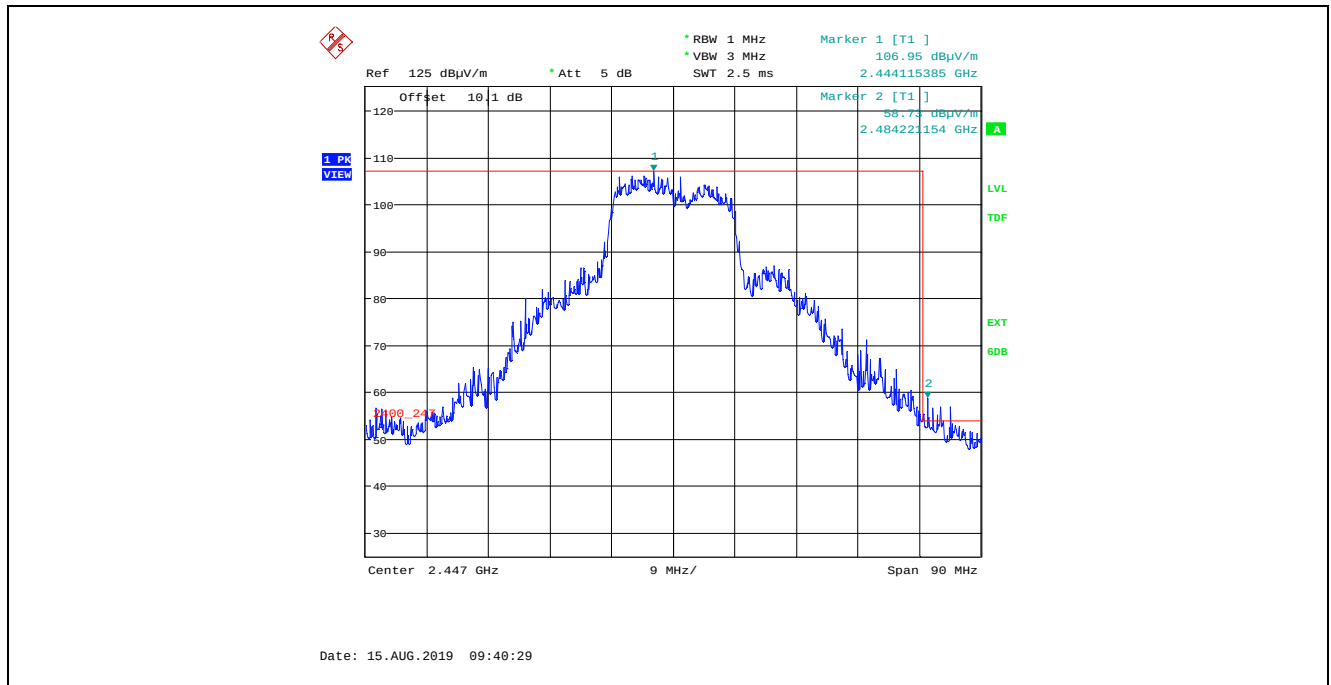
Plot 5.4.4.2.3.9. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak 802.11n HT20, 400 ns, MCS 0, BPSK $\frac{1}{2}$ 7.2Mbps, Power Setting 24, Channel 8, 2447 MHz



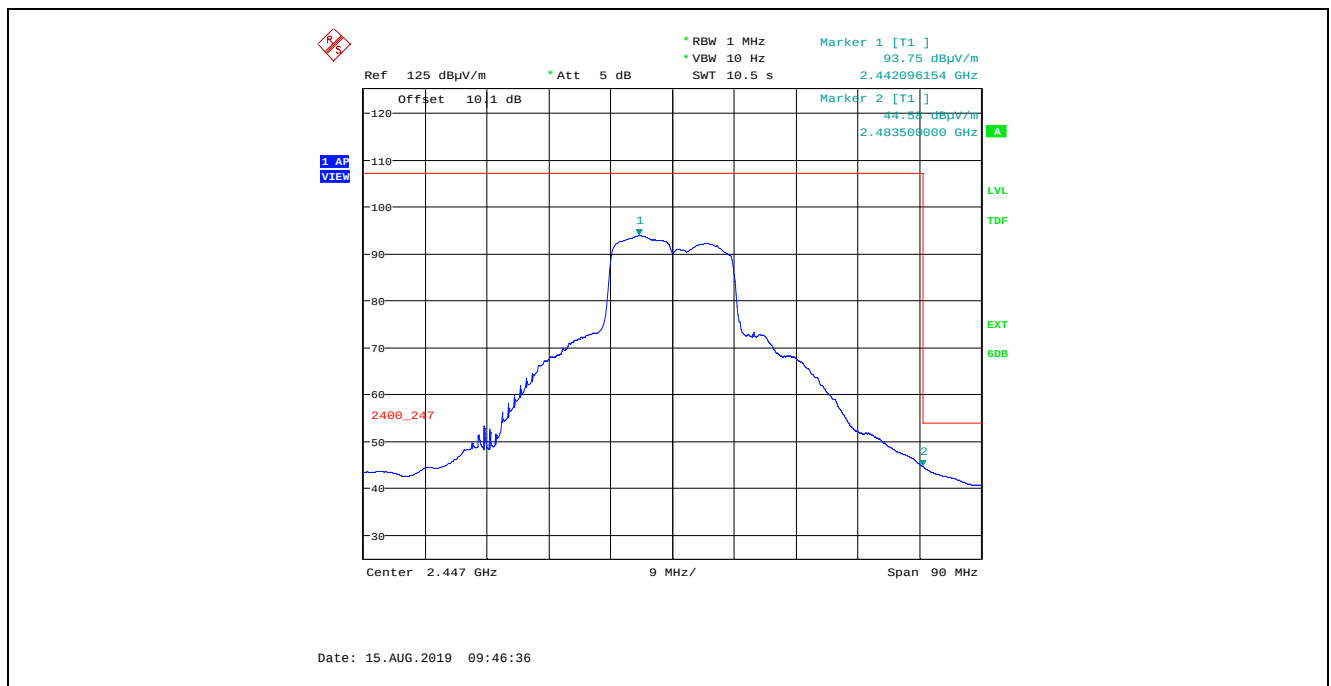
Plot 5.4.4.2.3.10. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average 802.11n HT20, 400 ns, MCS 0, BPSK $\frac{1}{2}$ 7.2Mbps, Power Setting 24, Channel 8, 2447 MHz



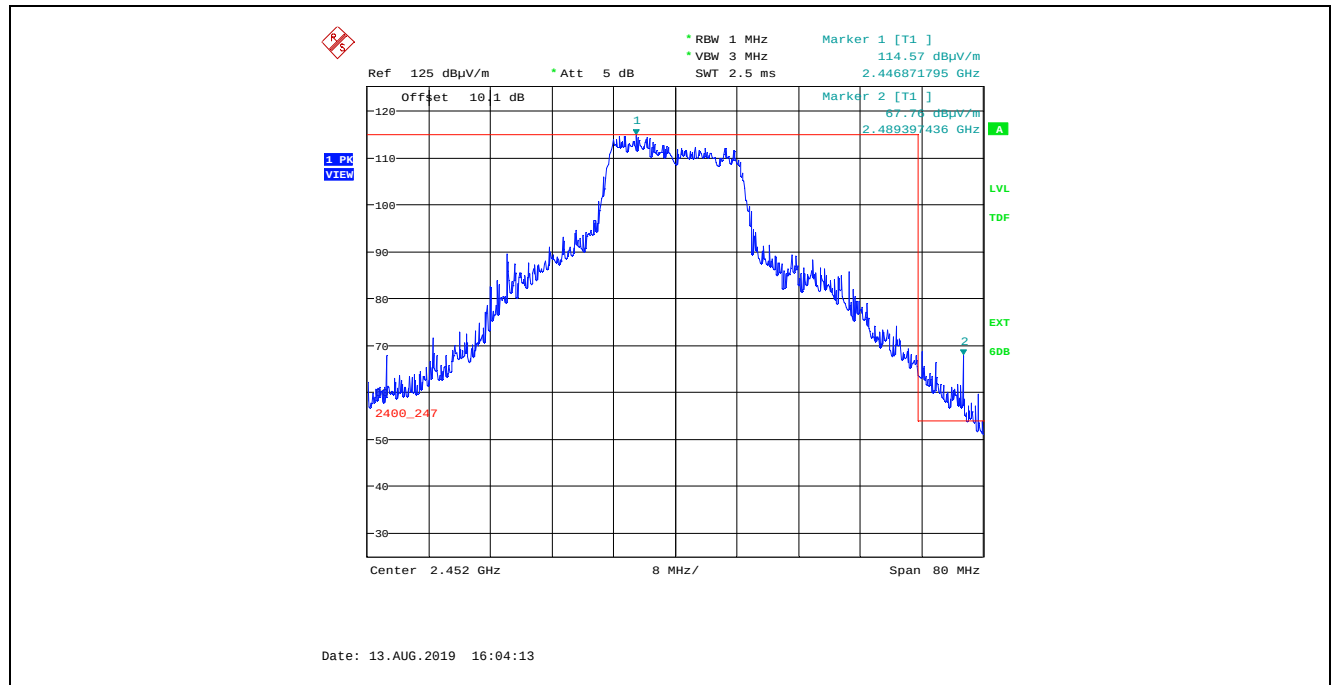
Plot 5.4.4.2.3.11. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK 1/2 7.2Mbps, Power Setting 24, Channel 8, 2447 MHz



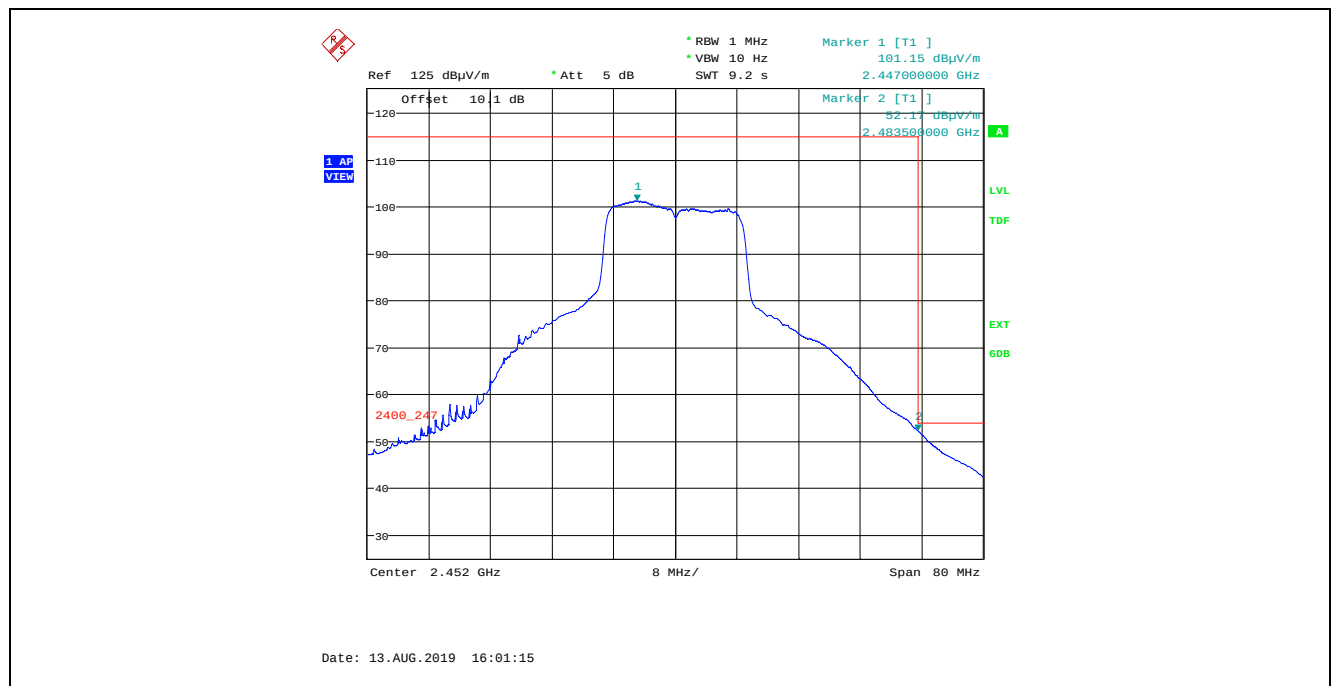
Plot 5.4.4.2.3.12. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK 1/2 7.2Mbps, Power Setting 24, Channel 8, 2447 MHz



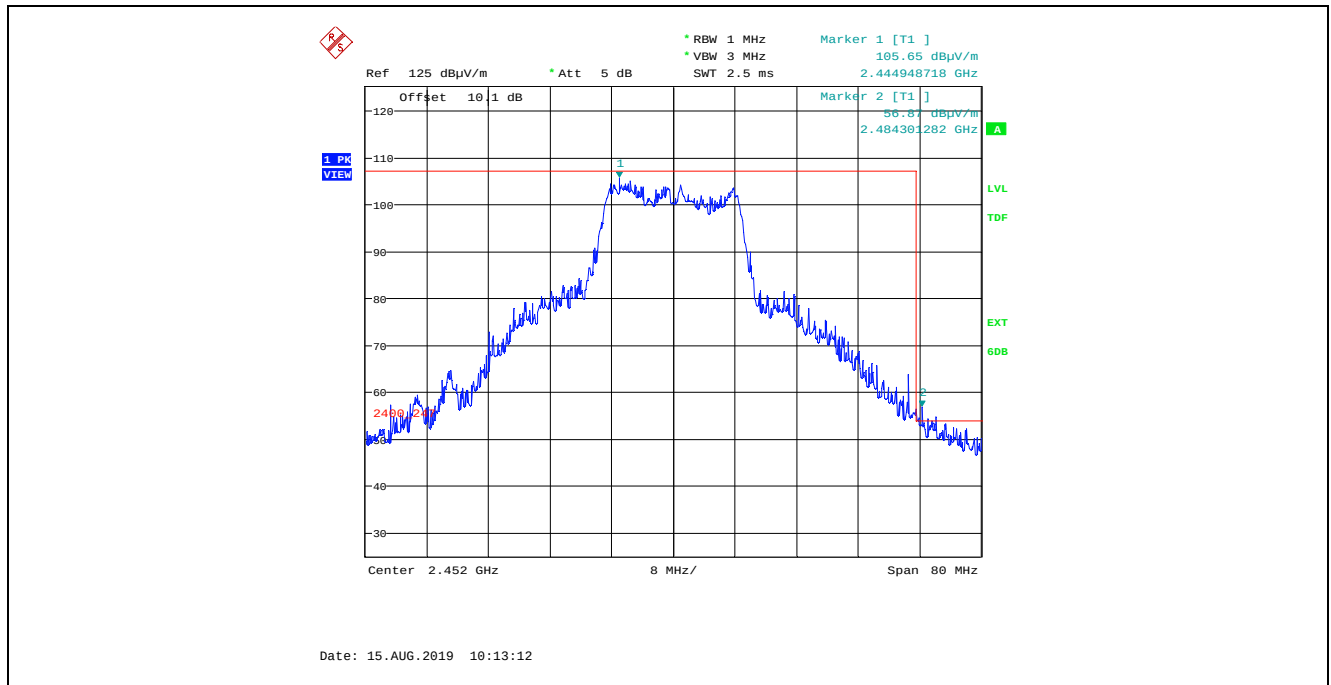
Plot 5.4.4.2.3.13. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 9, 2452 MHz



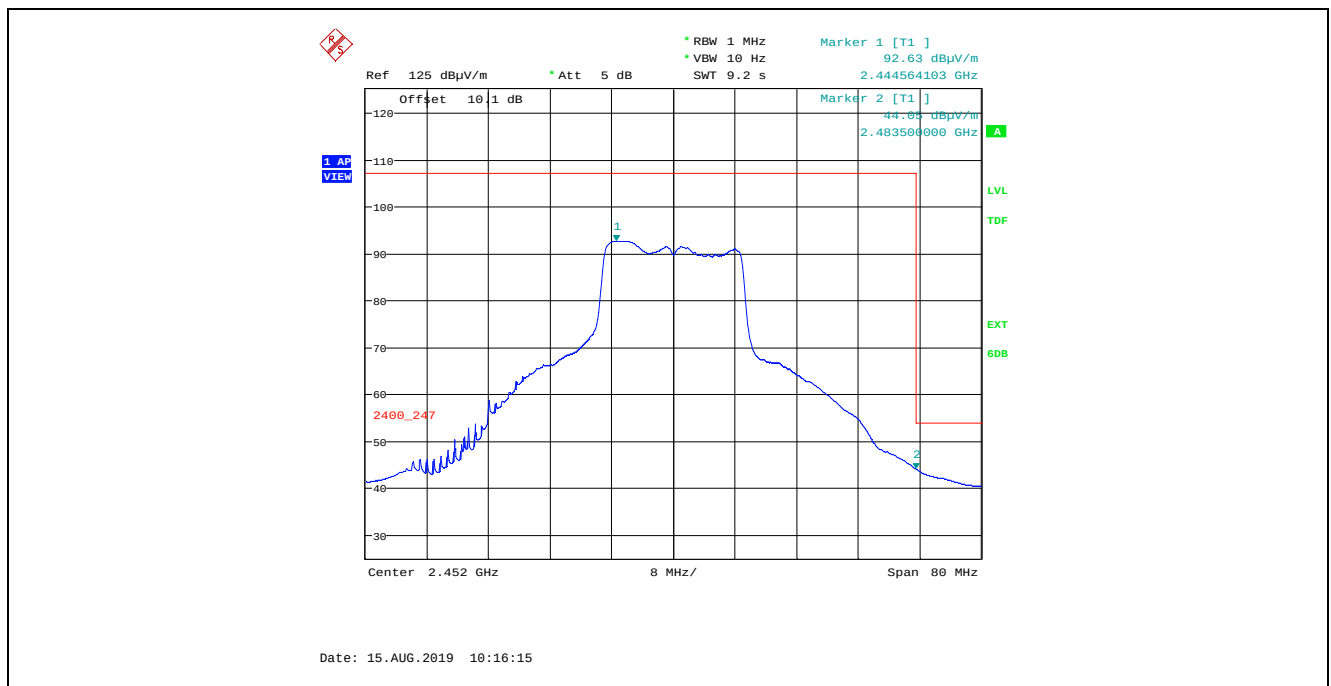
Plot 5.4.4.2.3.14. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 9, 2452 MHz



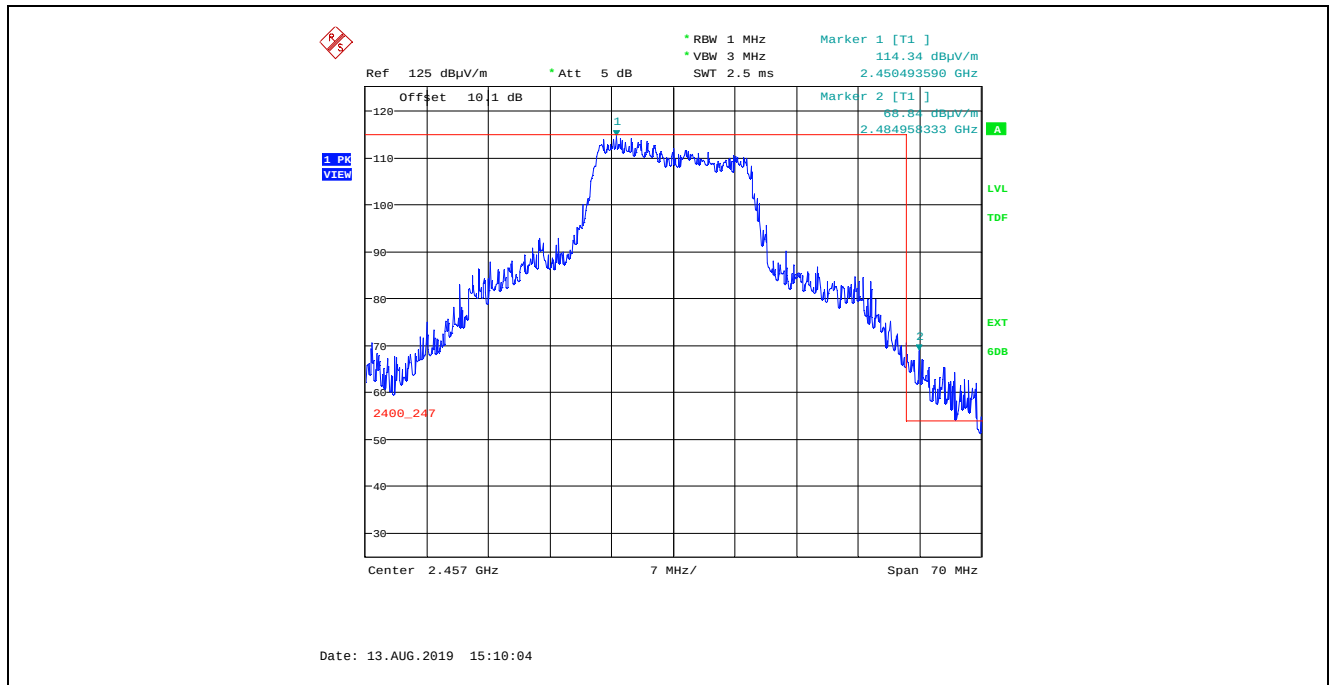
Plot 5.4.4.2.3.15. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 9, 2452 MHz



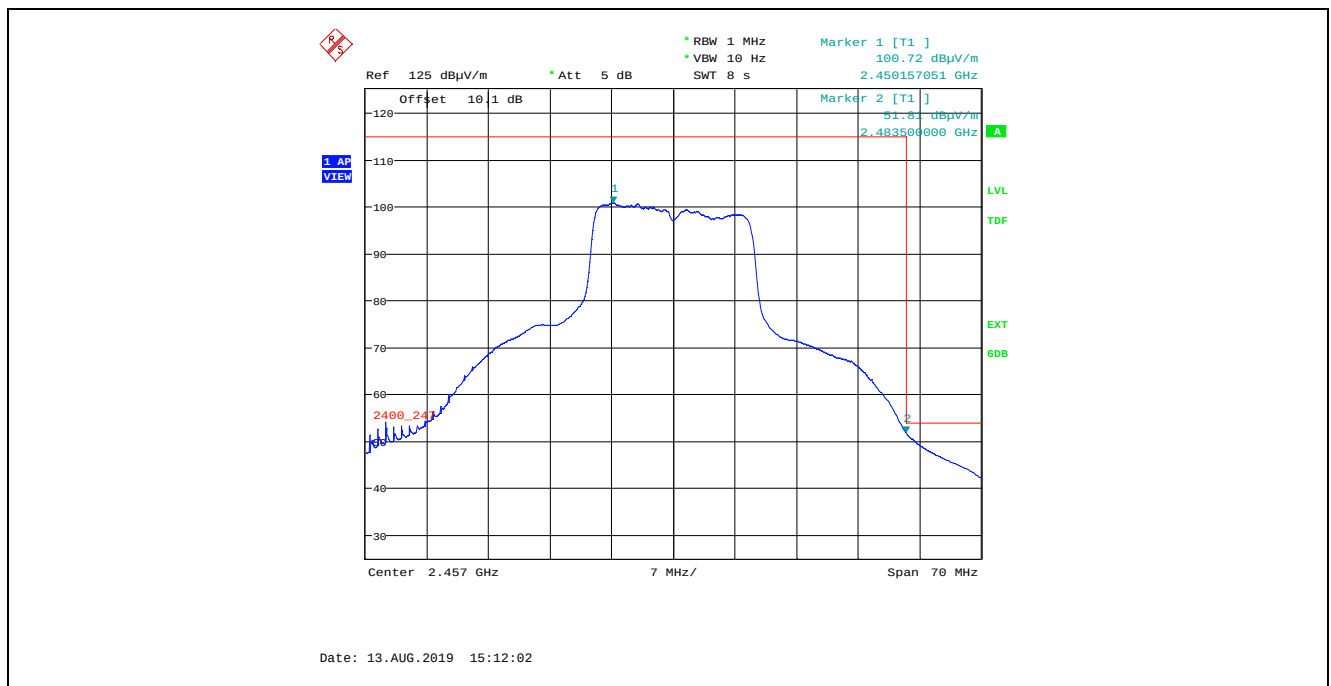
Plot 5.4.4.2.3.16. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 9, 2452 MHz



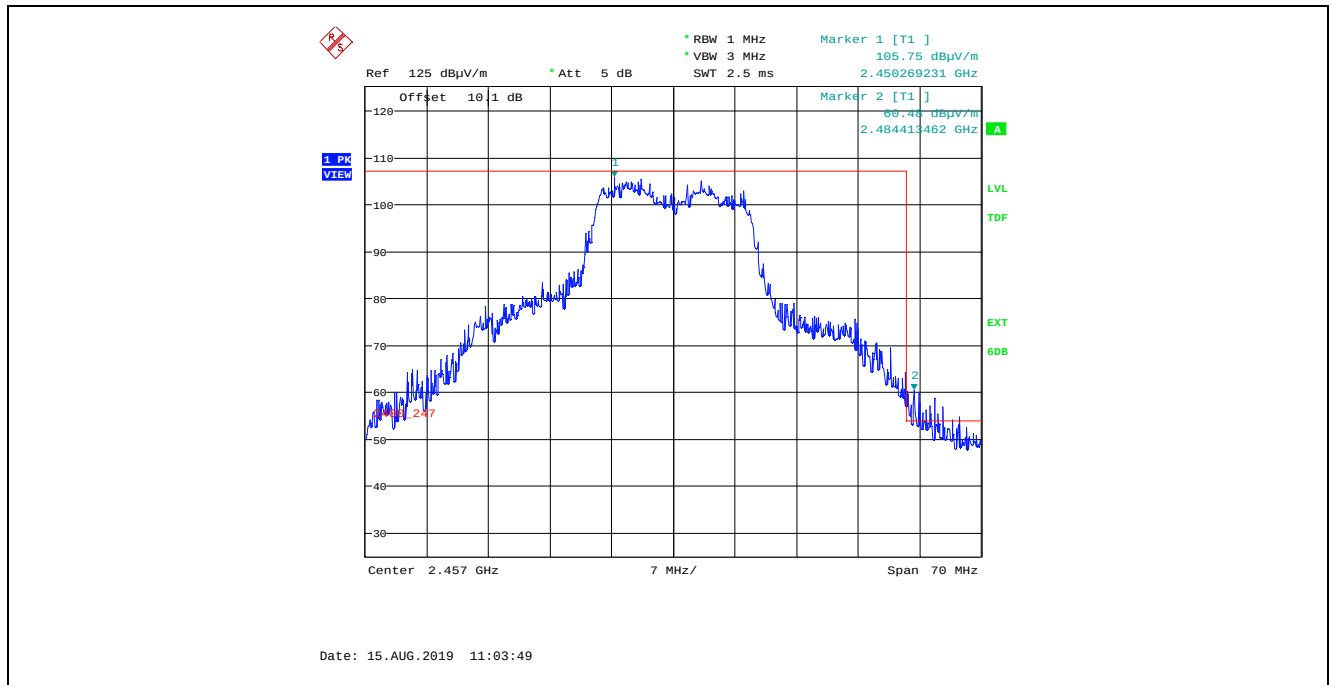
Plot 5.4.4.2.3.17. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 10, 2457 MHz



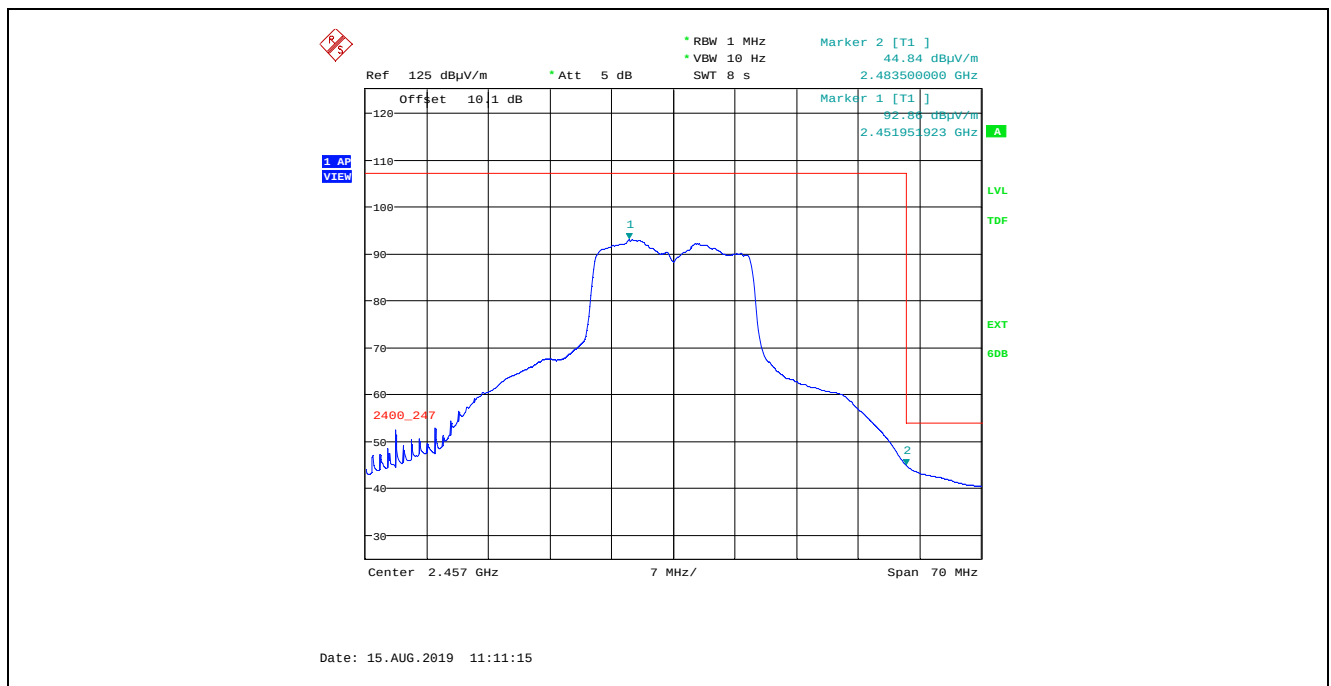
Plot 5.4.4.2.3.18. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 10, 2457 MHz



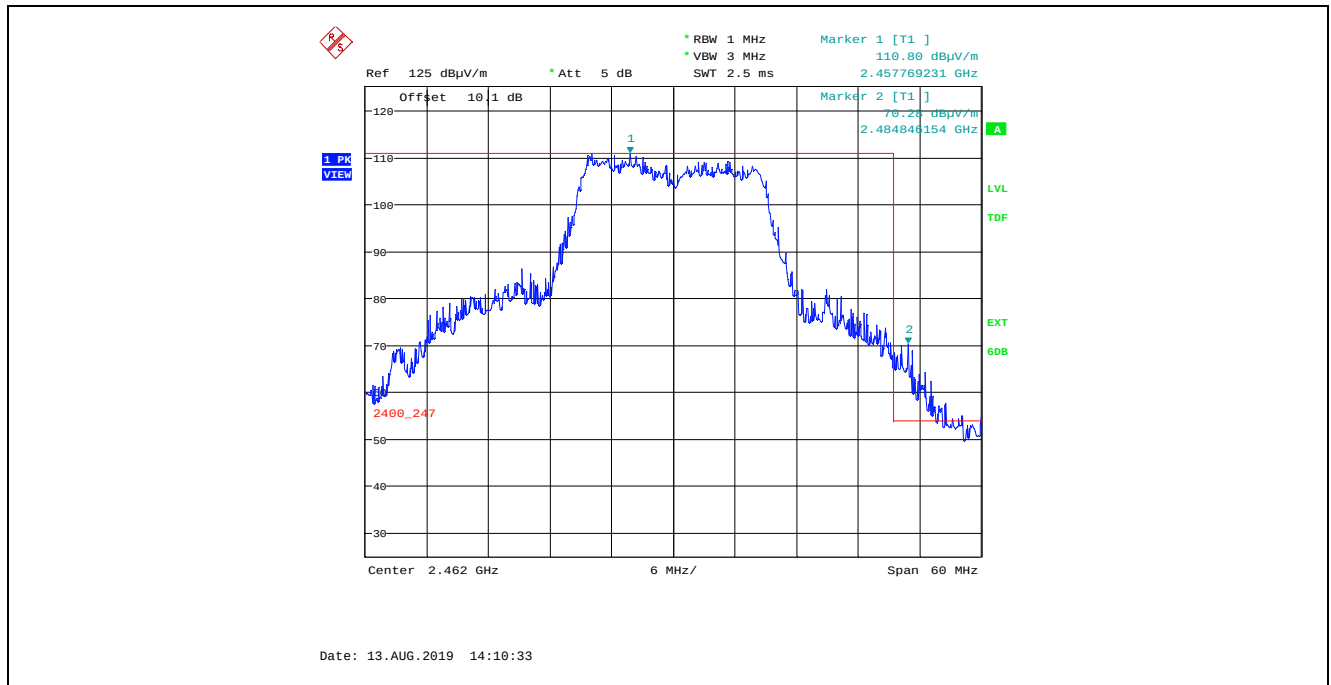
Plot 5.4.4.2.3.19. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 10, 2457 MHz



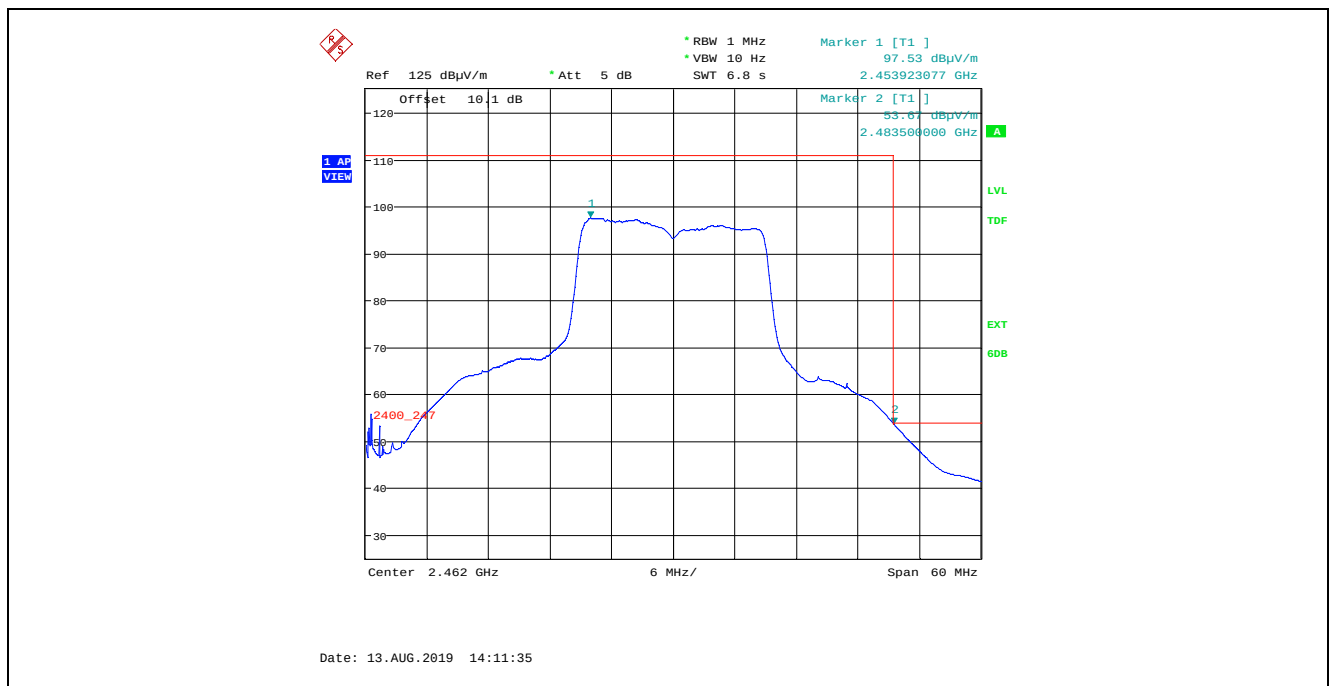
Plot 5.4.4.2.3.20. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 21, Channel 10, 2457 MHz



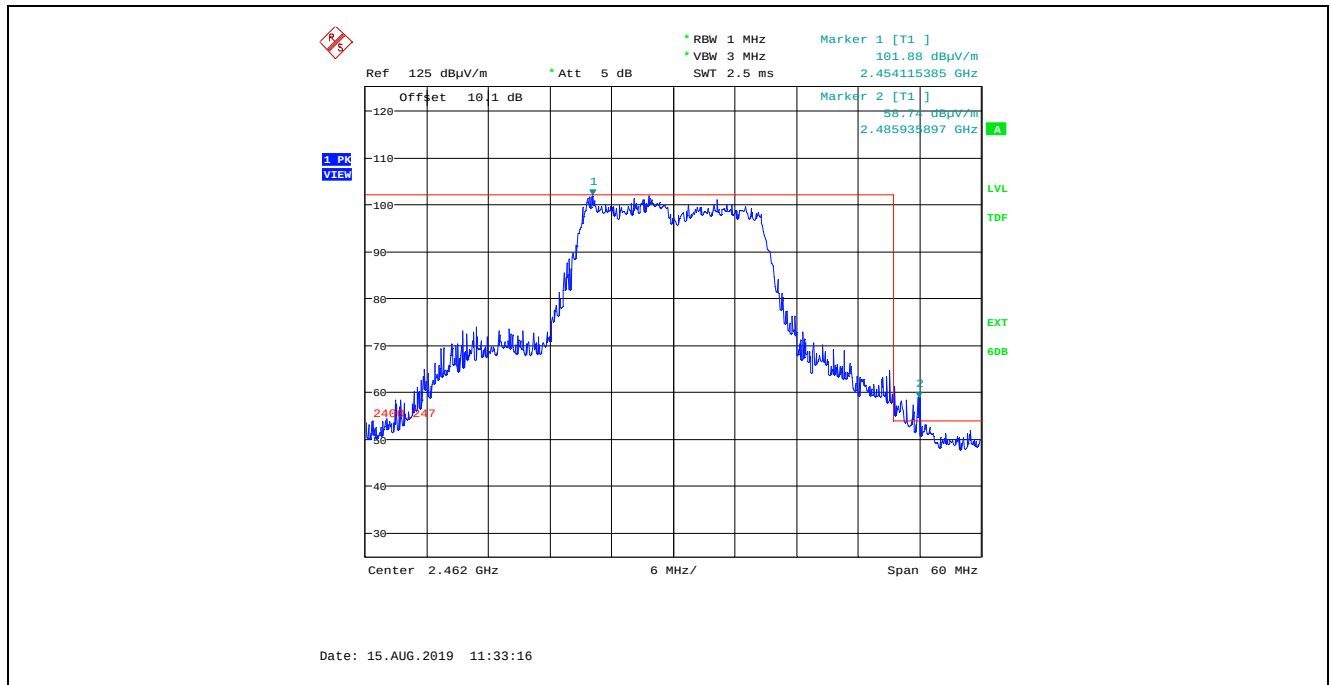
Plot 5.4.4.2.3.21. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 18, Channel 11, 2462 MHz



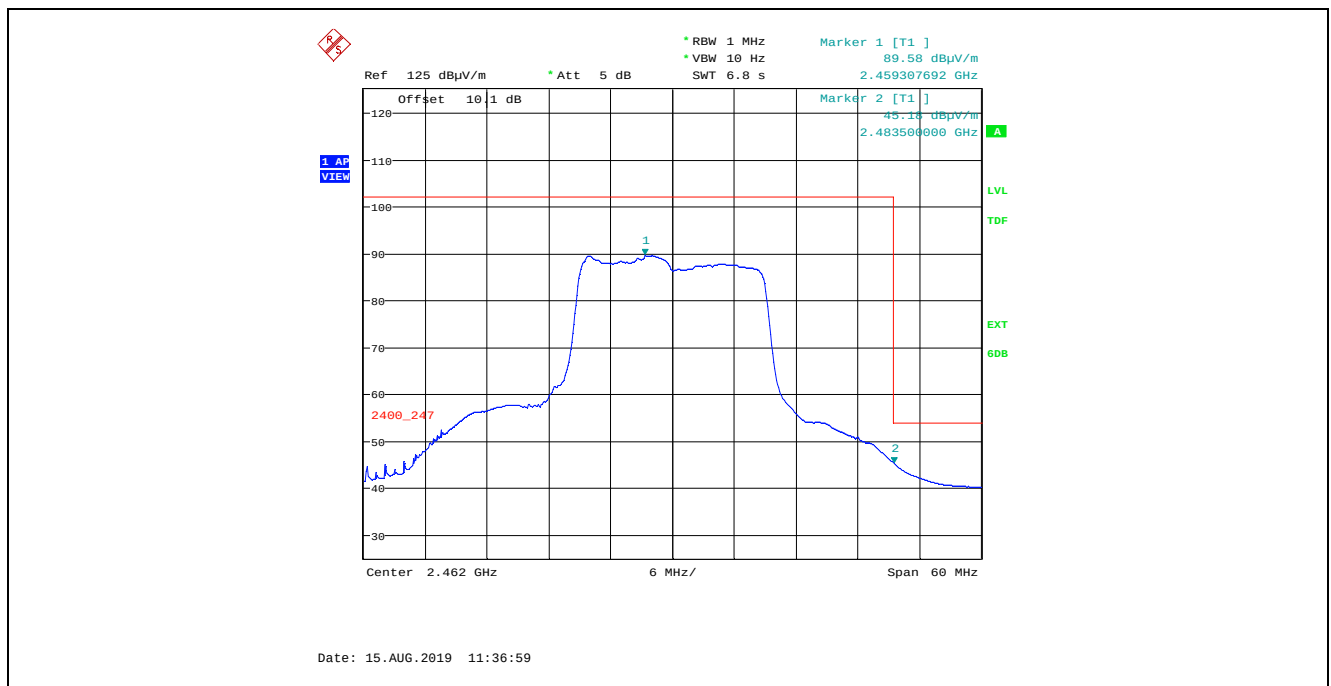
Plot 5.4.4.2.3.22. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 18, Channel 11, 2462 MHz



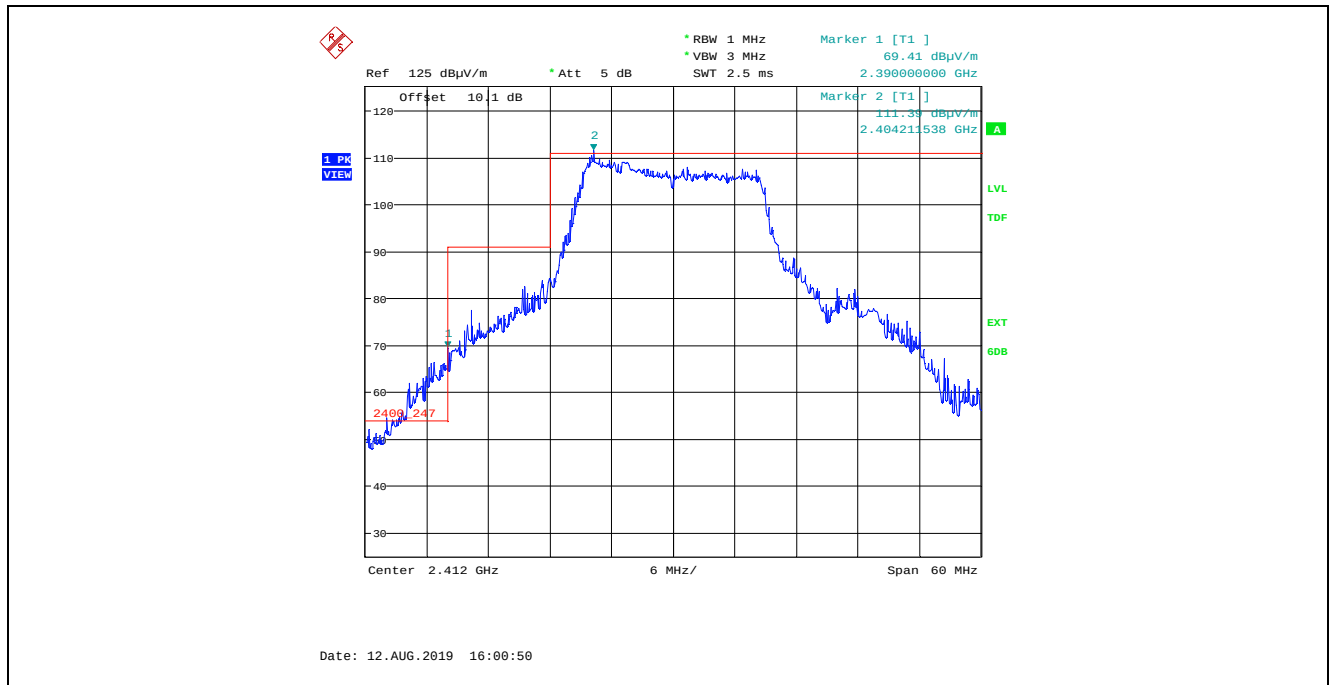
Plot 5.4.4.2.3.23. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 18, Channel 11, 2462 MHz



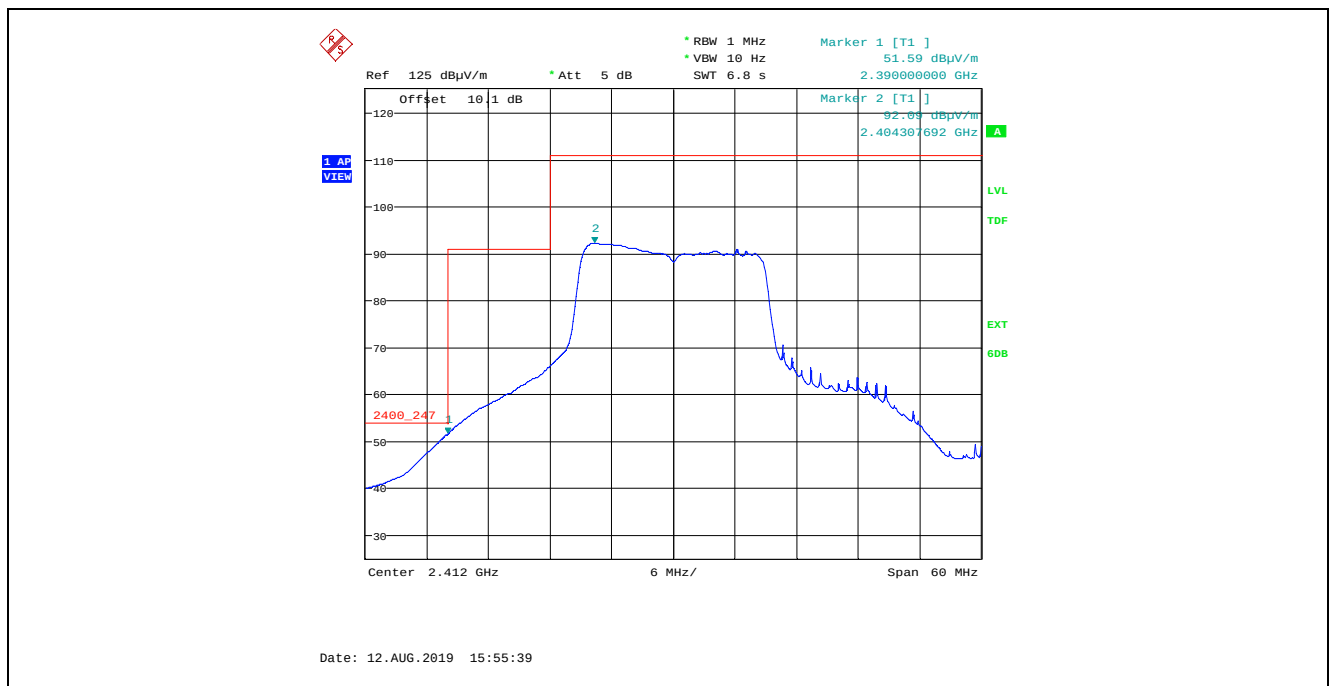
Plot 5.4.4.2.3.24. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 0, BPSK ½ 7.2Mbps, Power Setting 18, Channel 11, 2462 MHz



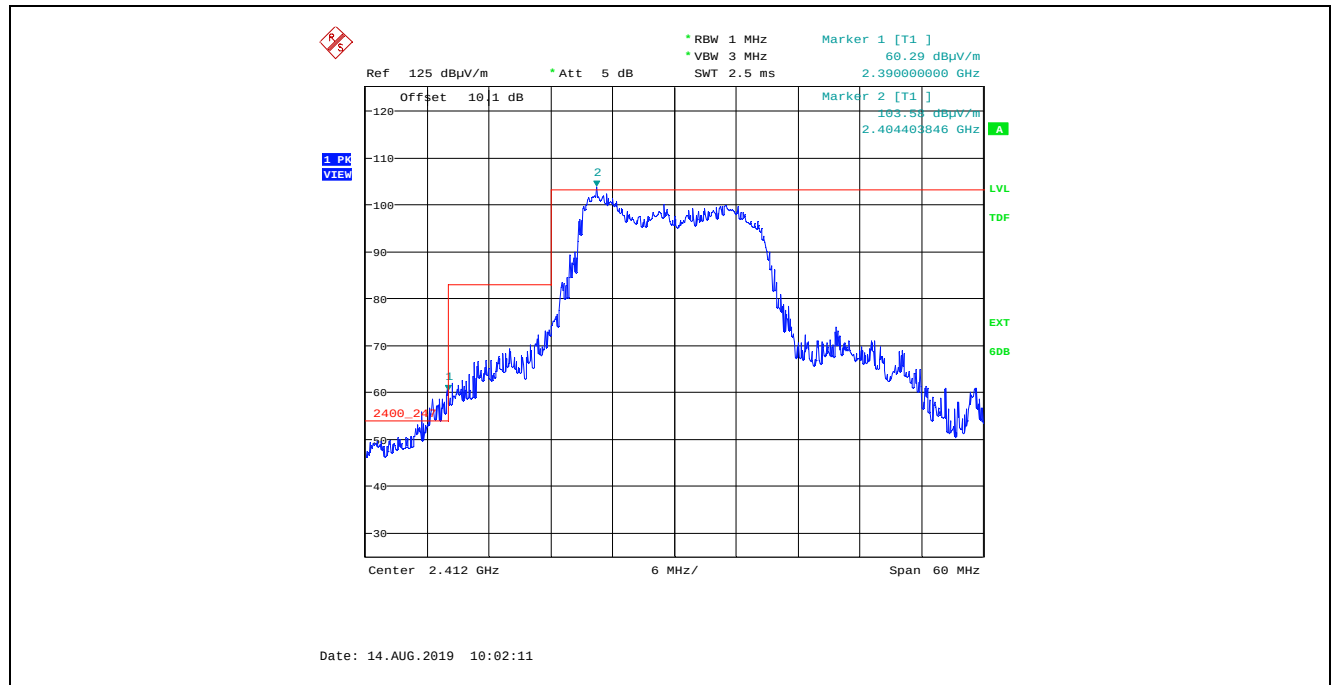
Plot 5.4.4.2.3.25. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 20, Channel 1, 2412 MHz



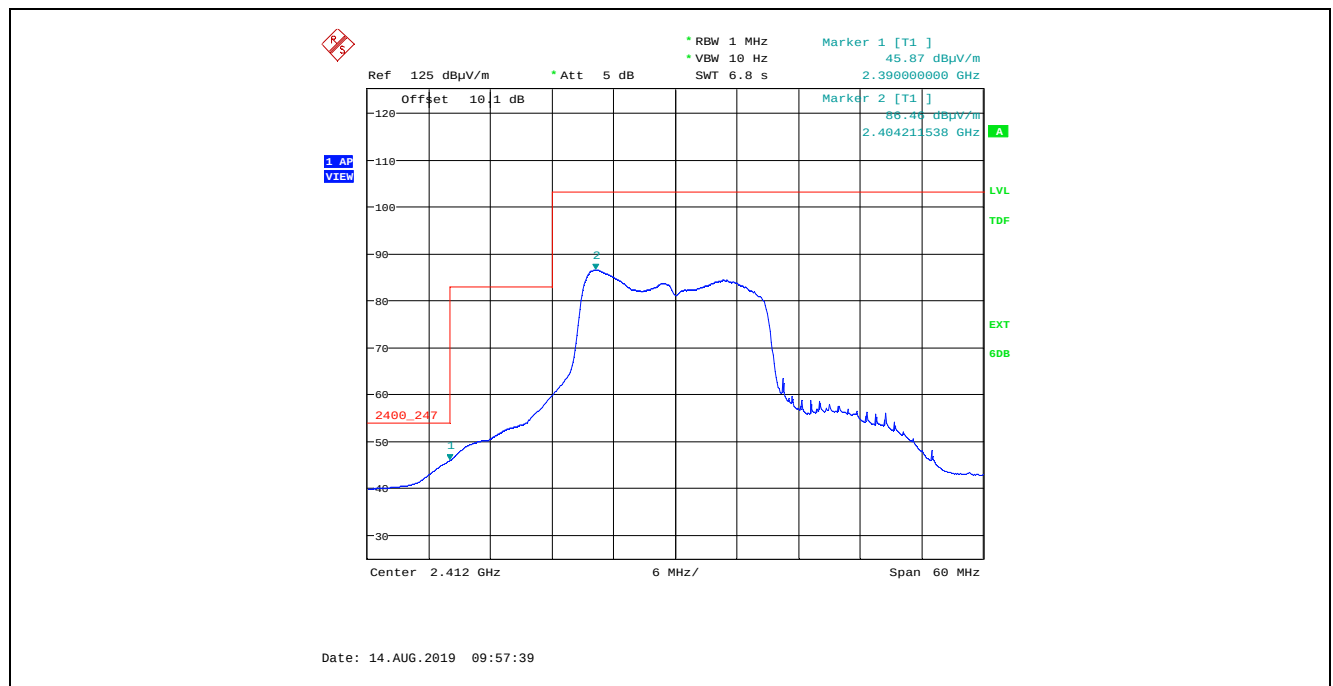
Plot 5.4.4.2.3.26. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 20, Channel 1, 2412 MHz



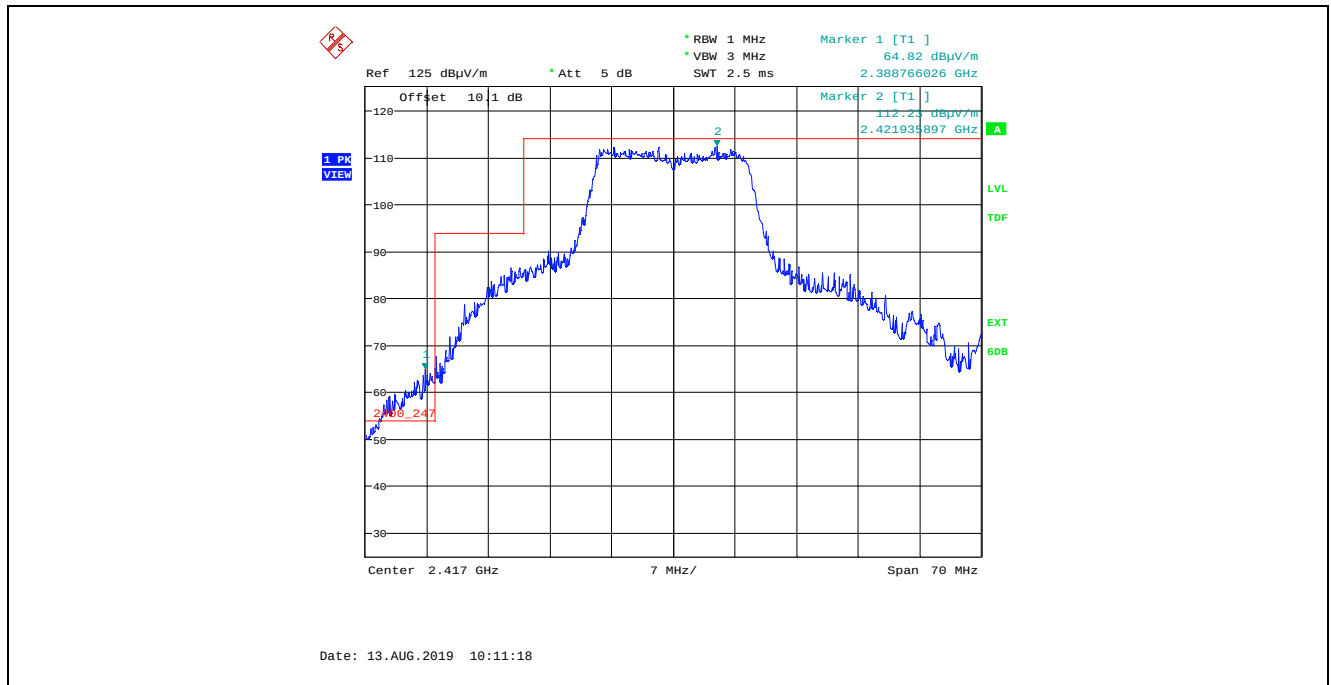
Plot 5.4.4.2.3.27. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¾ 21.7Mbps, Power Setting 20, Channel 1, 2412 MHz



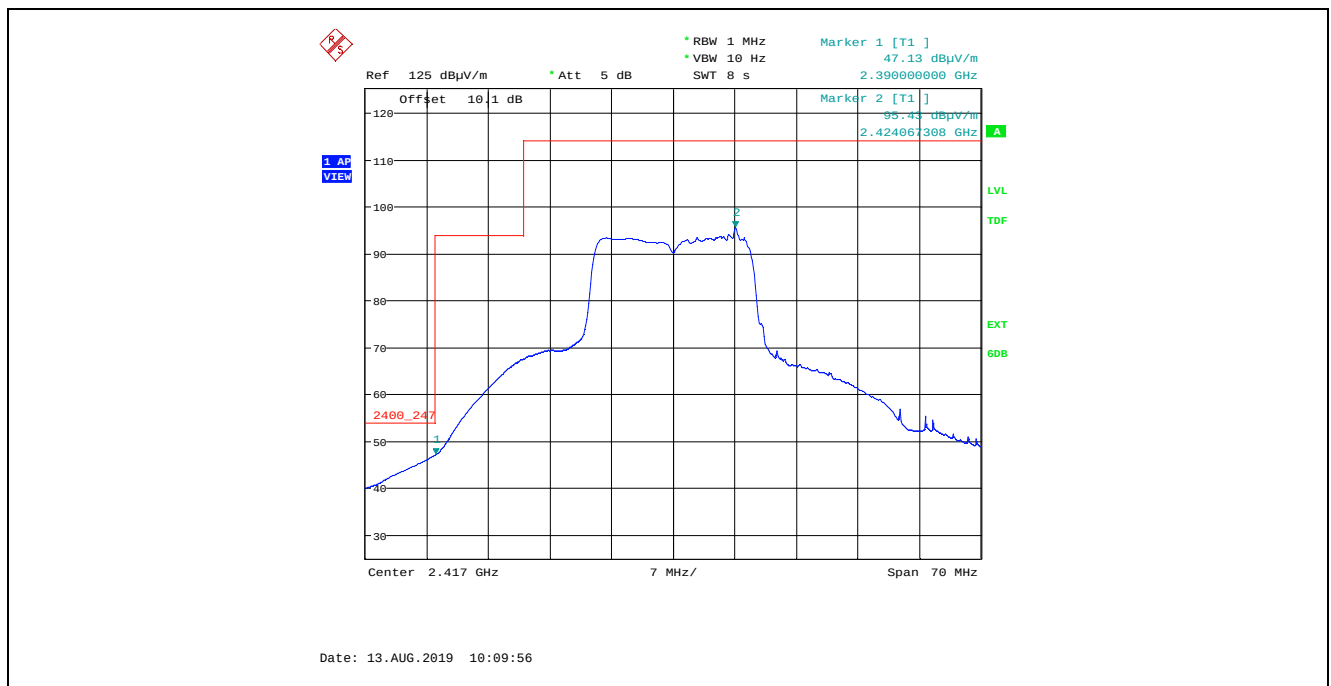
Plot 5.4.4.2.3.28. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¾ 21.7Mbps, Power Setting 20, Channel 1, 2412 MHz



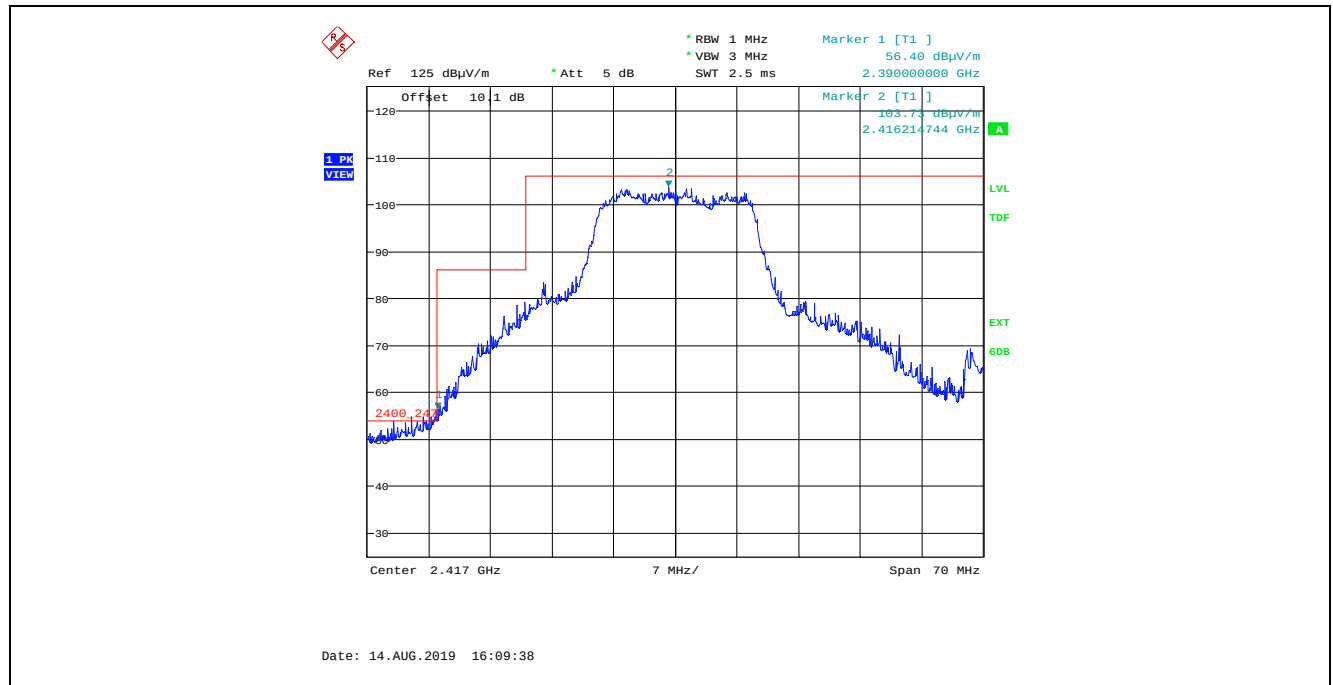
Plot 5.4.4.2.3.29. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 2, 2417 MHz



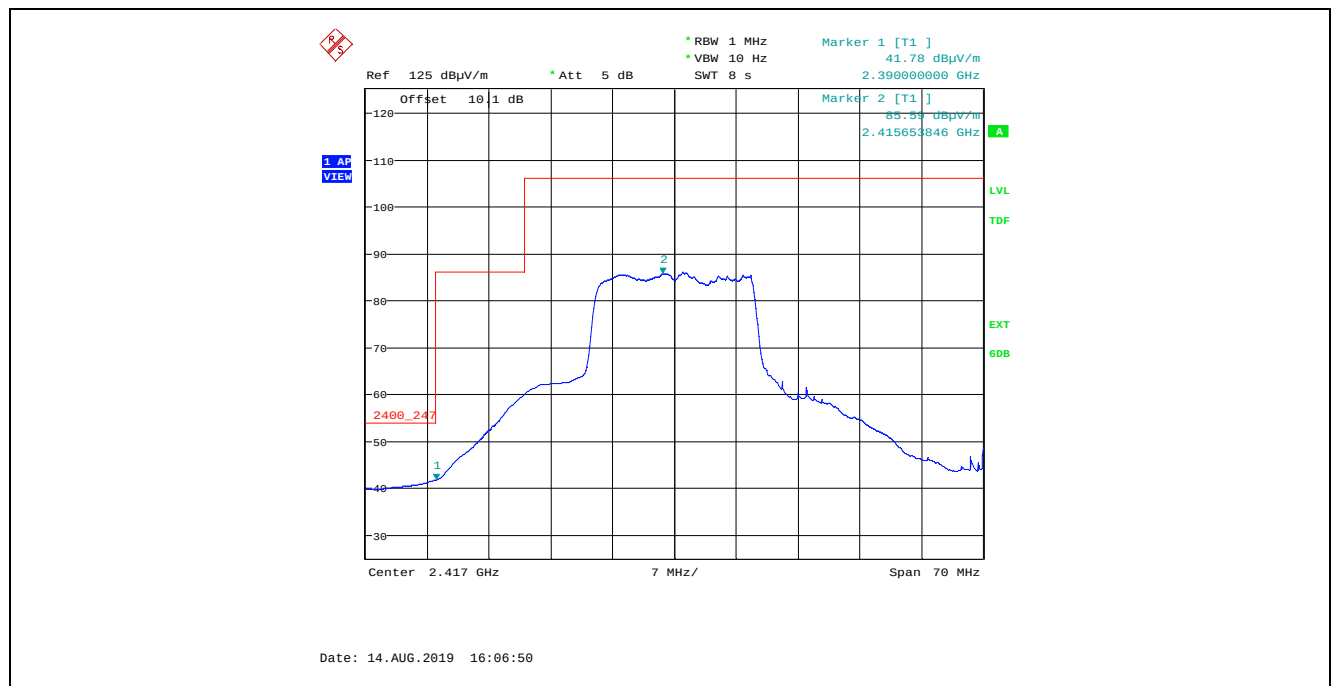
Plot 5.4.4.2.3.30. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 2, 2417 MHz



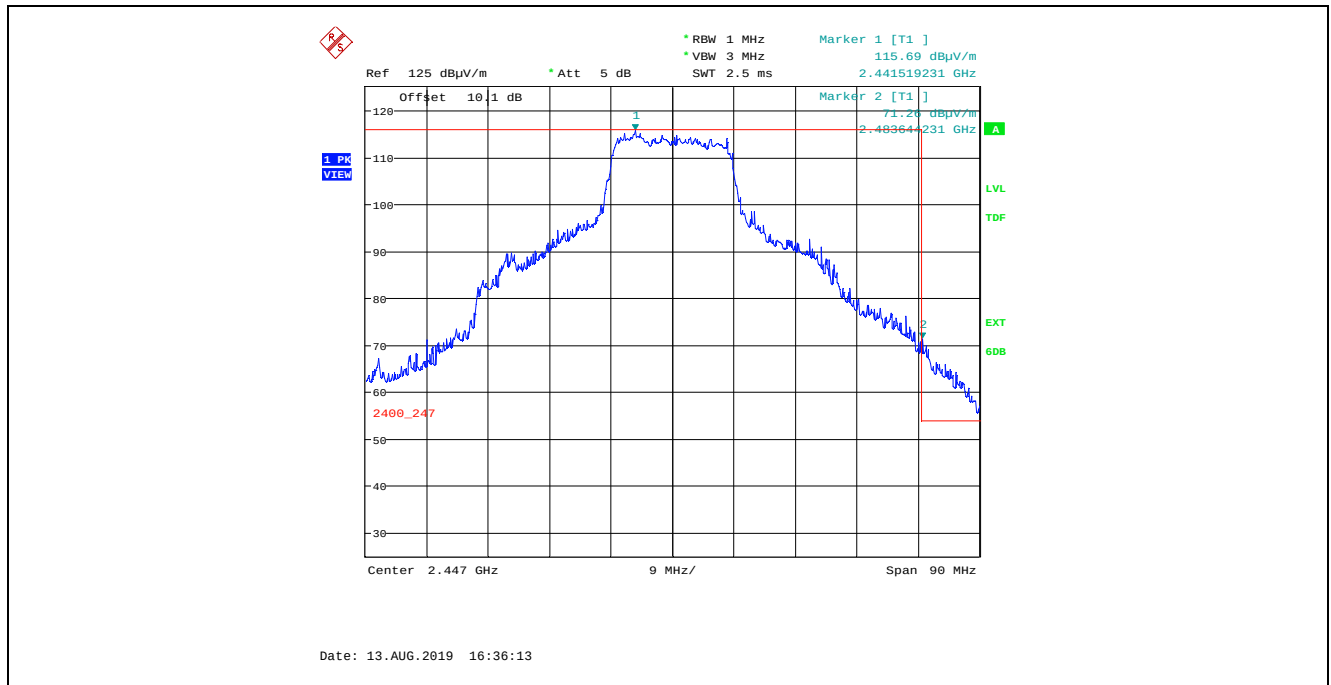
Plot 5.4.4.2.3.31. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 2, 2417 MHz



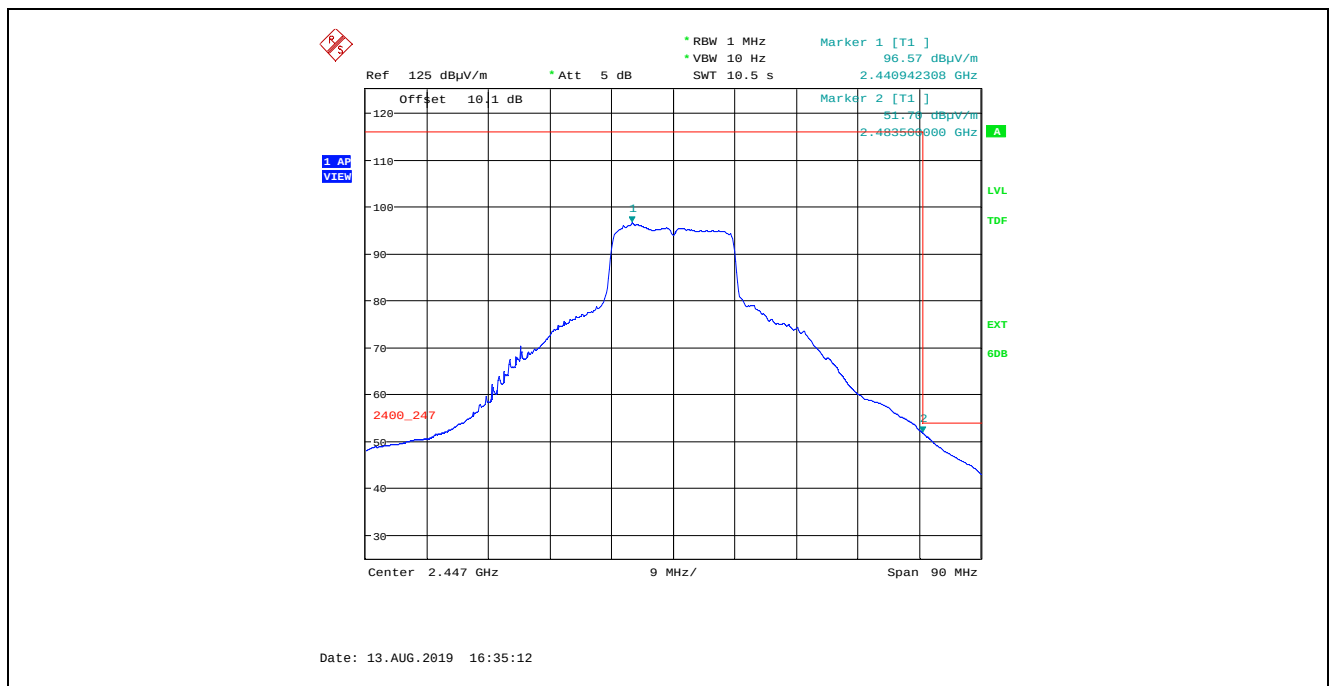
Plot 5.4.4.2.3.32. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 2, 2417 MHz



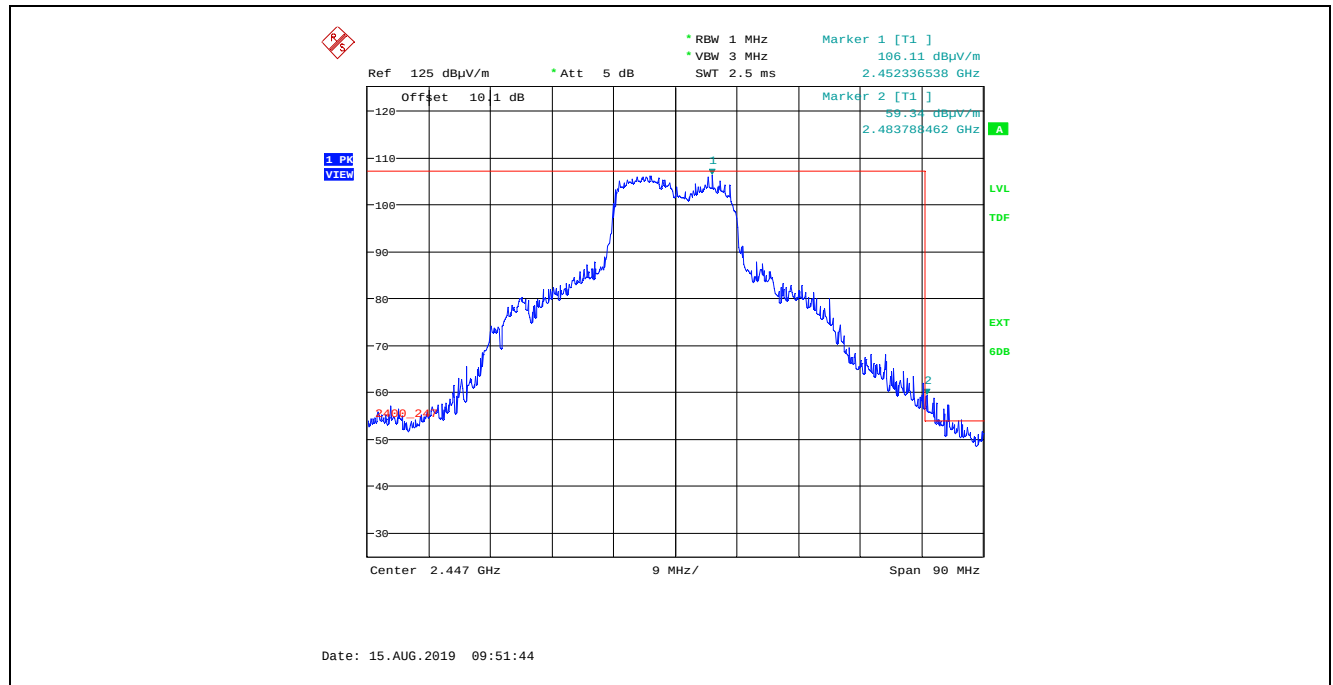
Plot 5.4.4.2.3.33. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 8, 2447 MHz



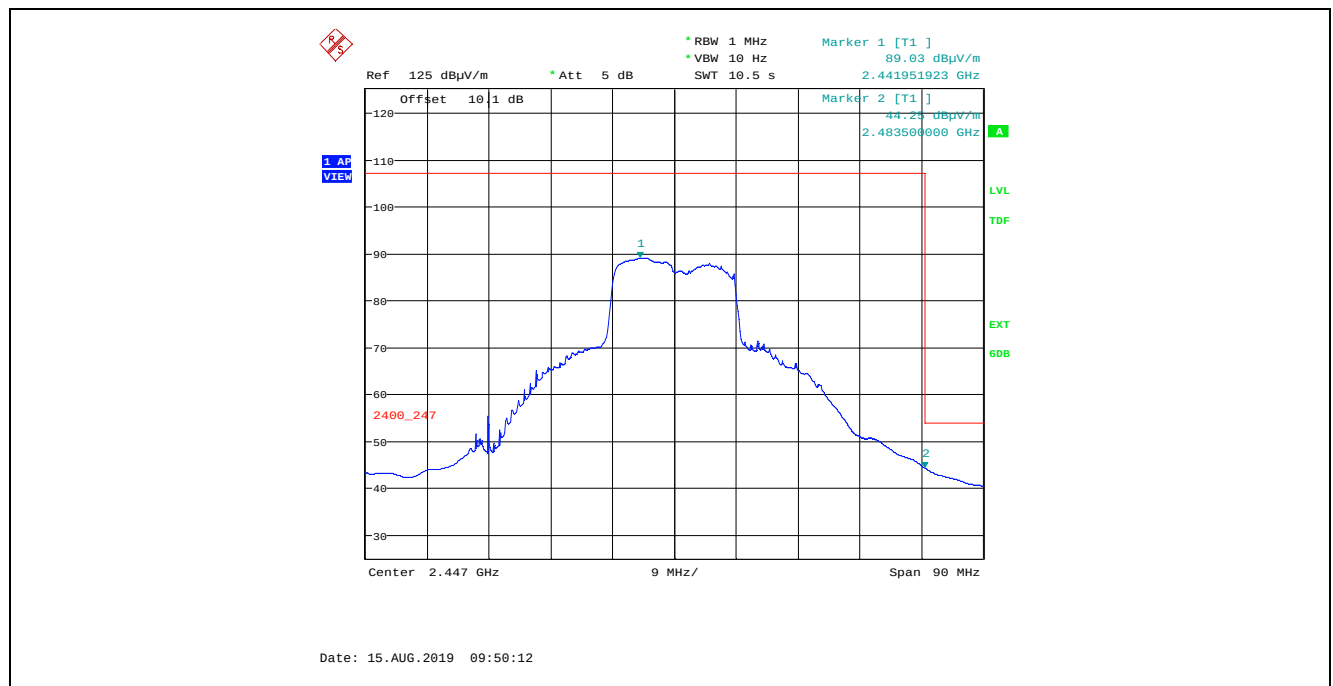
Plot 5.4.4.2.3.34. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 8, 2447 MHz



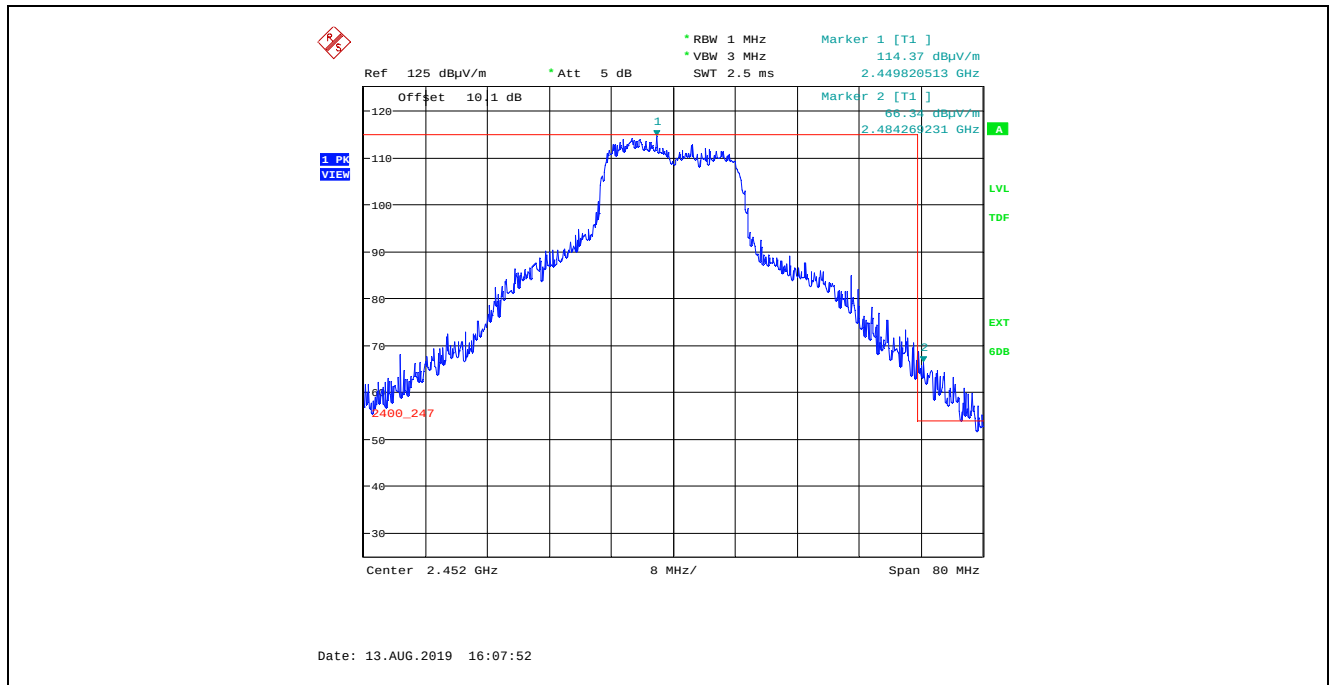
Plot 5.4.4.2.3.35. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 8, 2447 MHz



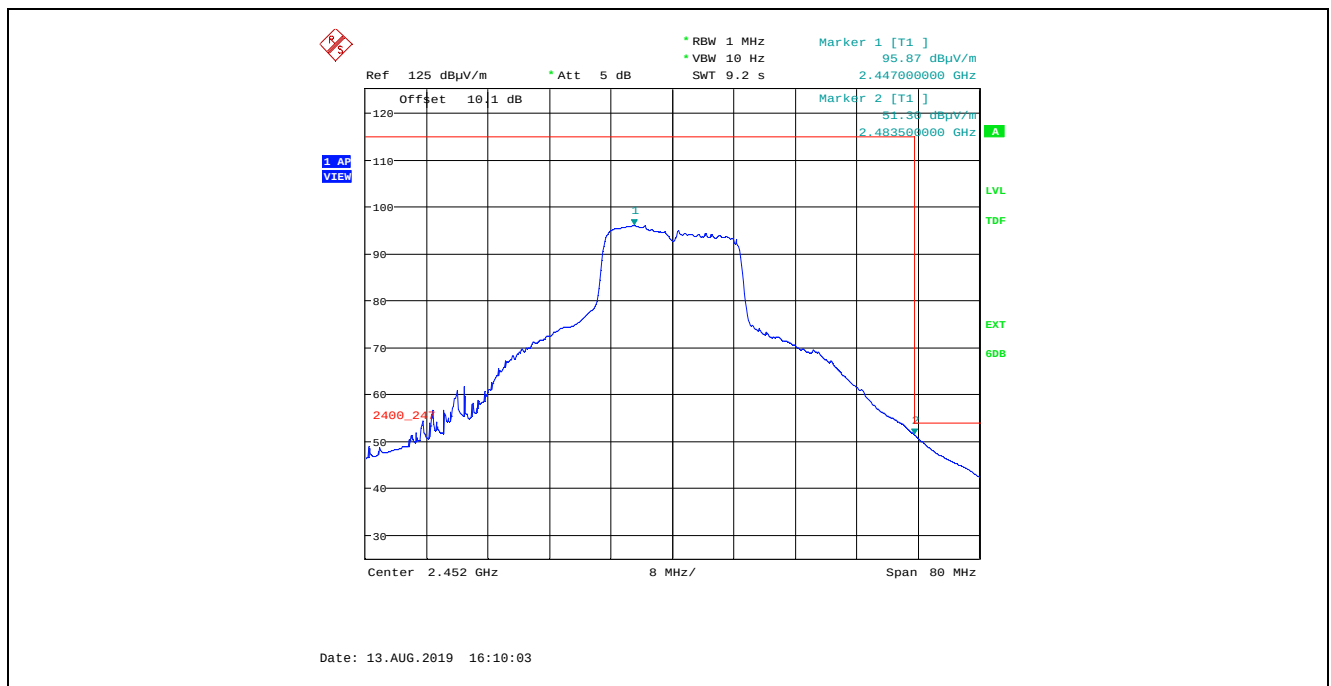
Plot 5.4.4.2.3.36. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 24, Channel 8, 2447 MHz



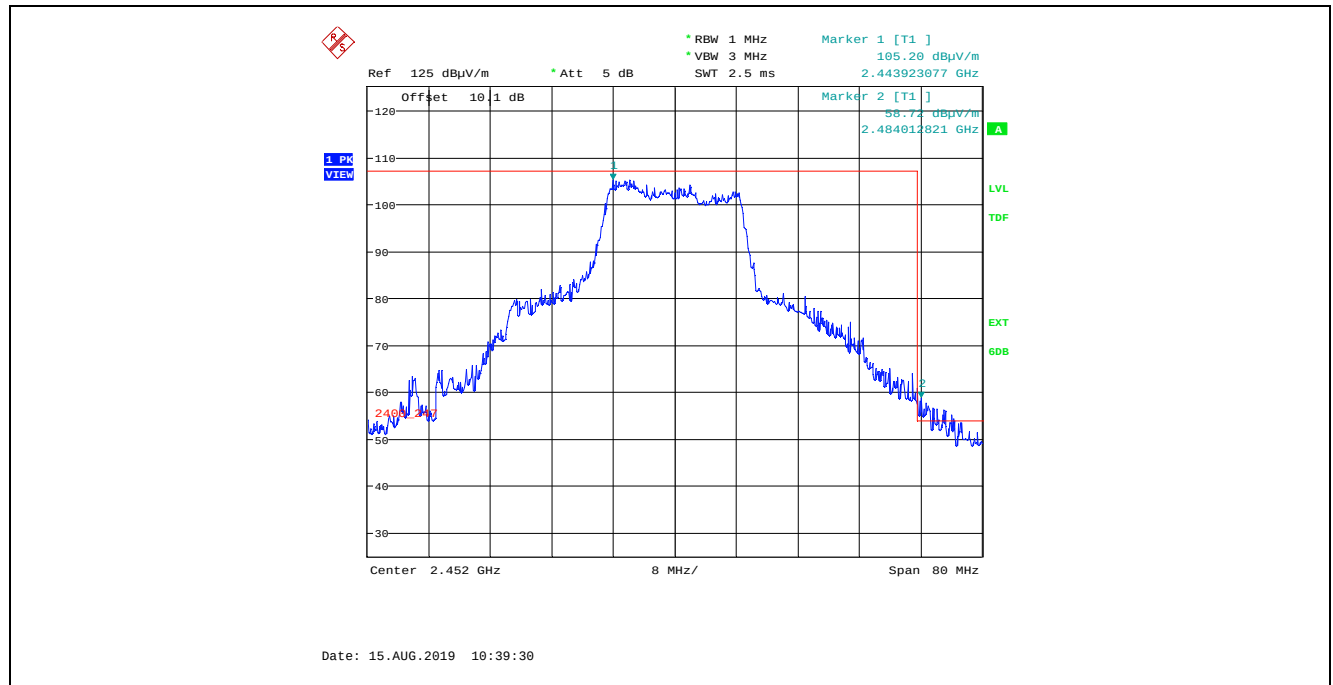
Plot 5.4.4.2.3.37. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 21, Channel 9, 2452 MHz



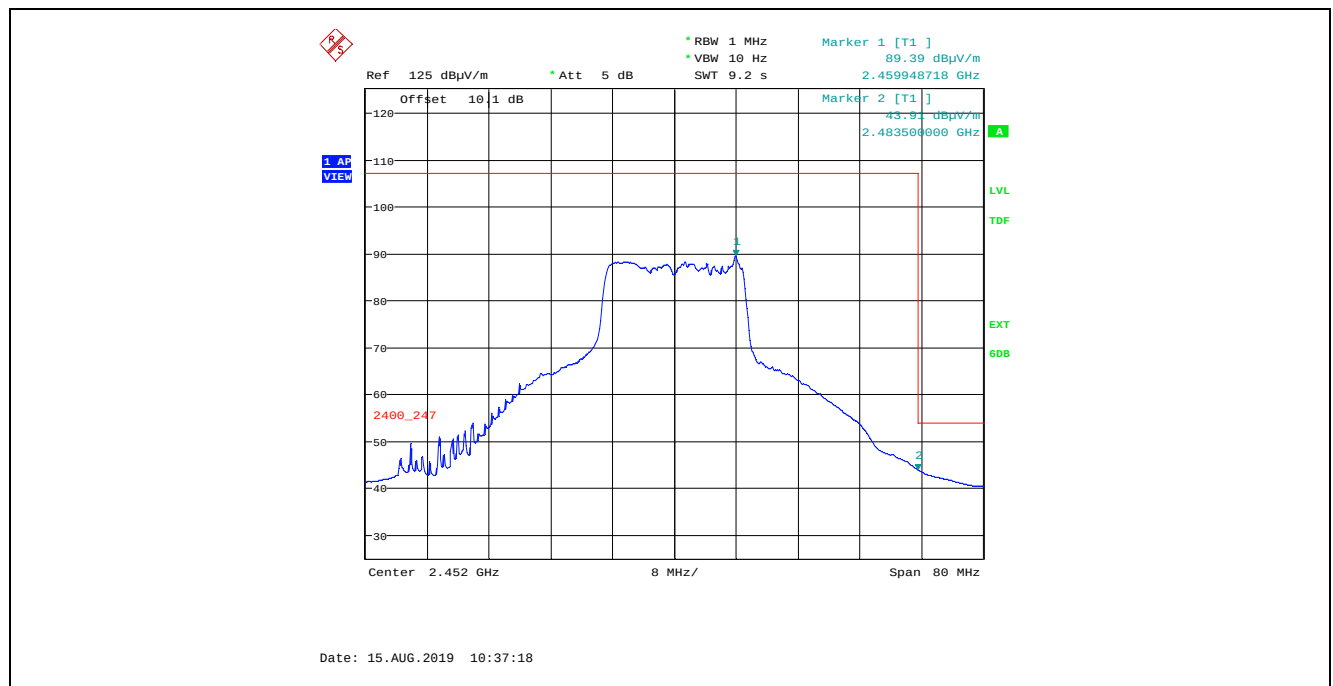
Plot 5.4.4.2.3.38. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 21, Channel 9, 2452 MHz



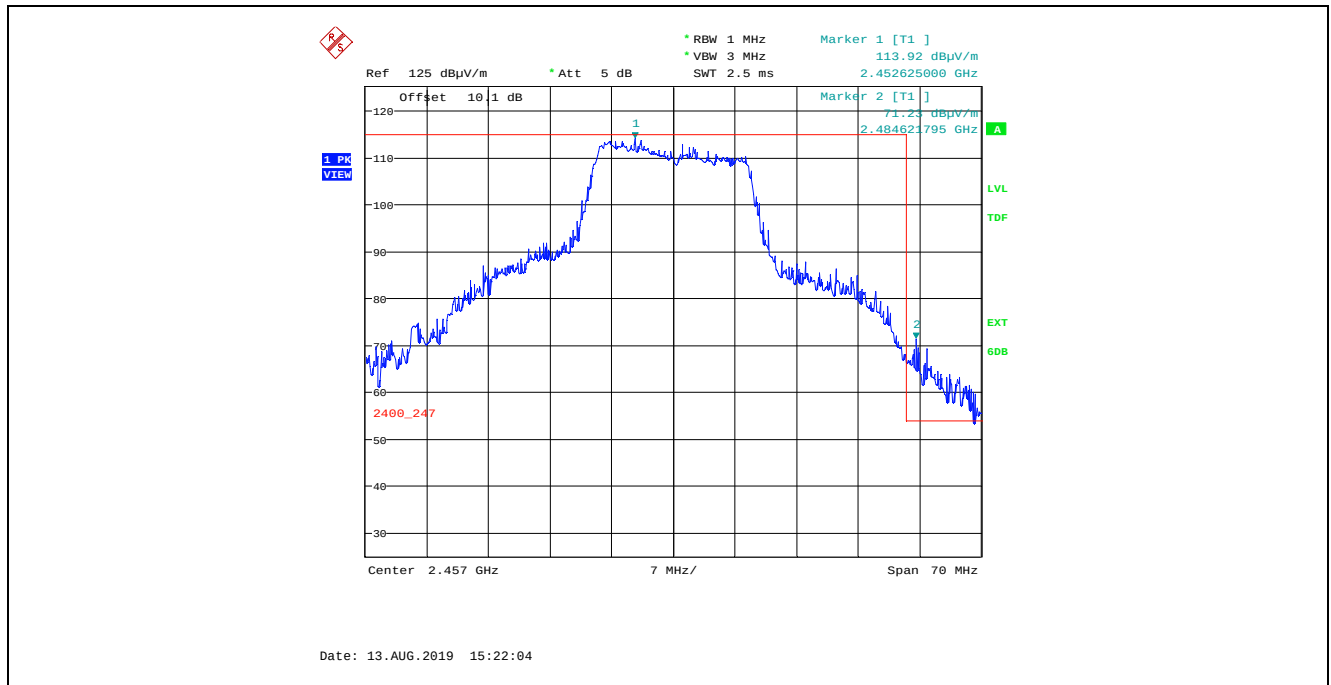
Plot 5.4.4.2.3.39. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 21, Channel 9, 2452 MHz



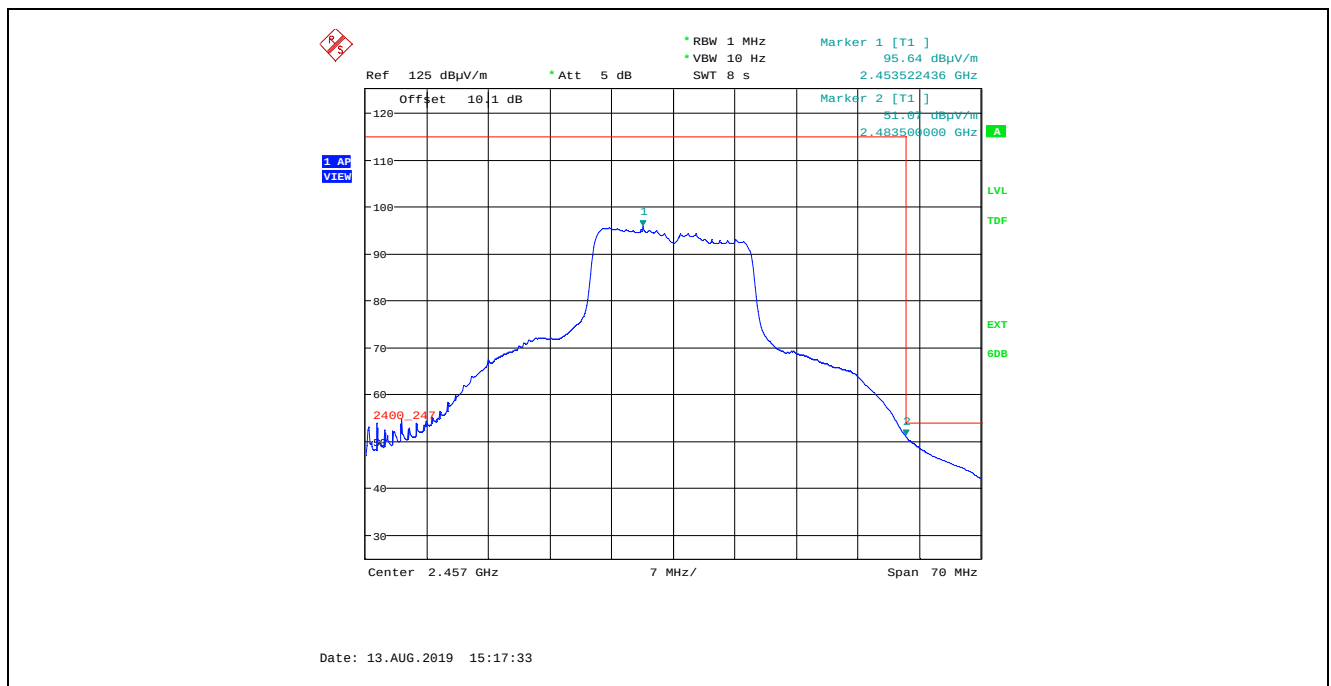
Plot 5.4.4.2.3.40. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK ¼ 21.7Mbps, Power Setting 21, Channel 9, 2452 MHz



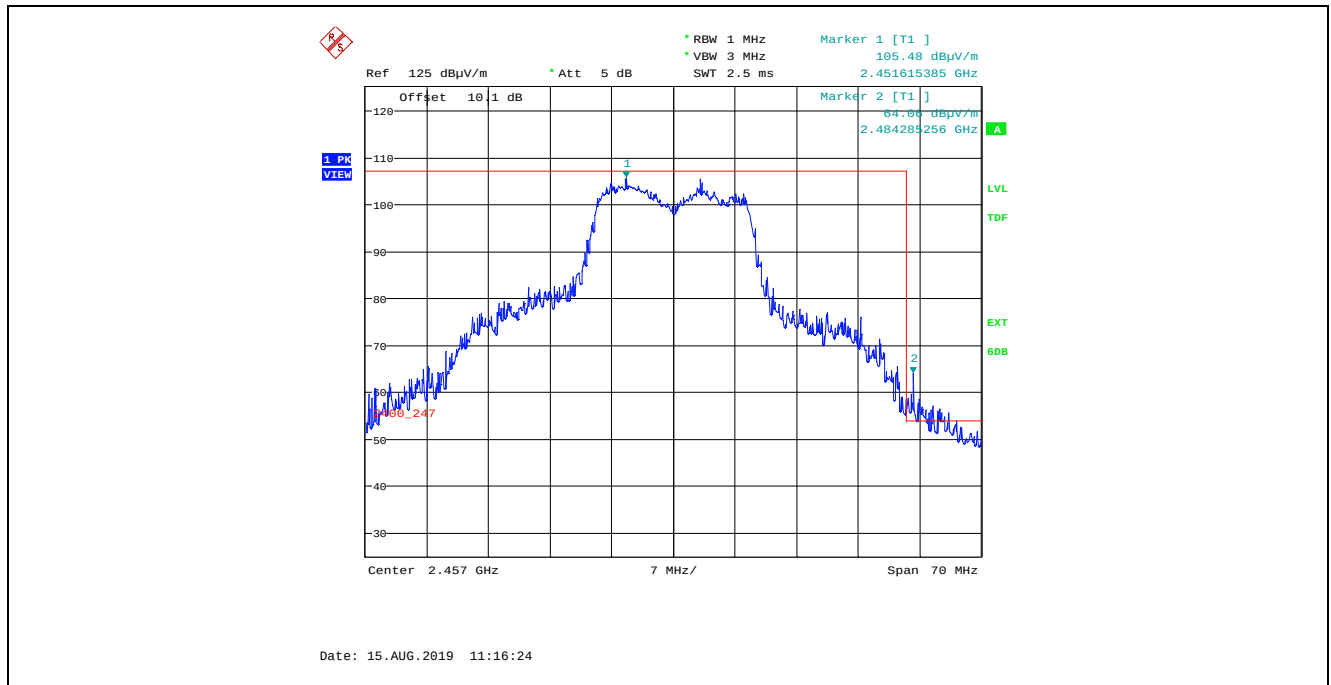
Plot 5.4.4.2.3.41. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 21, Channel 10, 2457 MHz



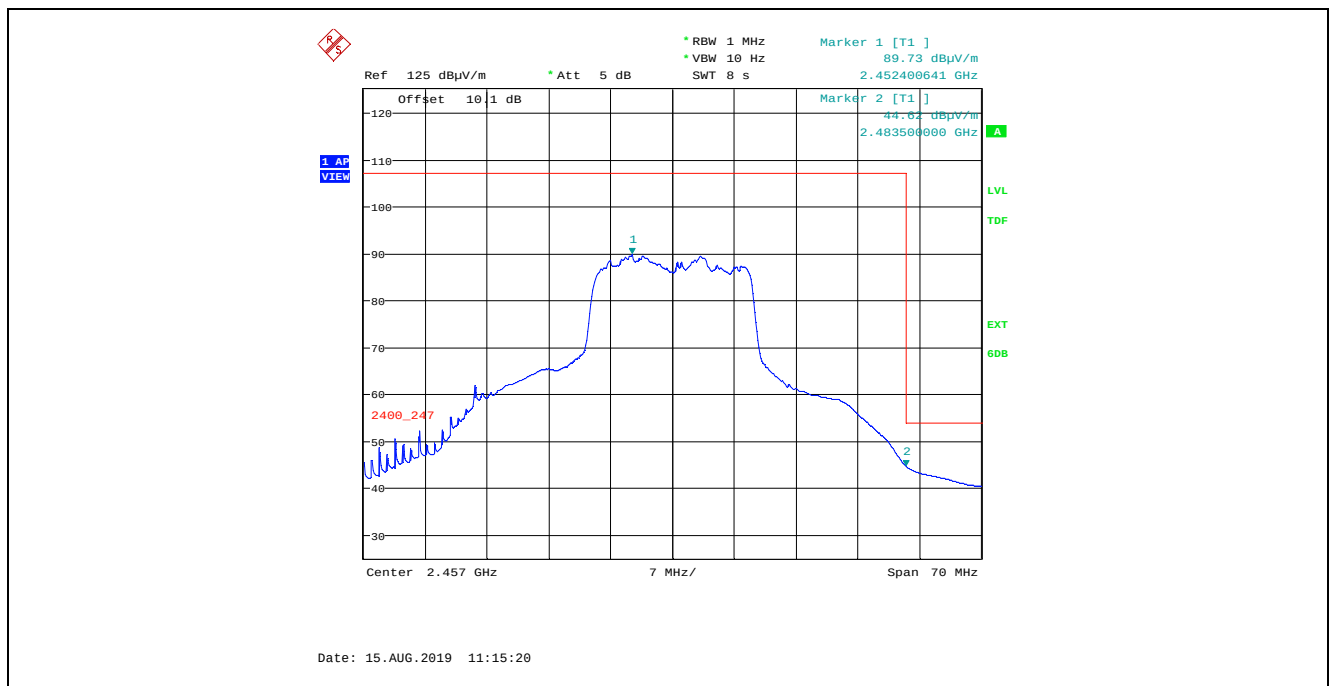
Plot 5.4.4.2.3.42. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 21, Channel 10, 2457 MHz



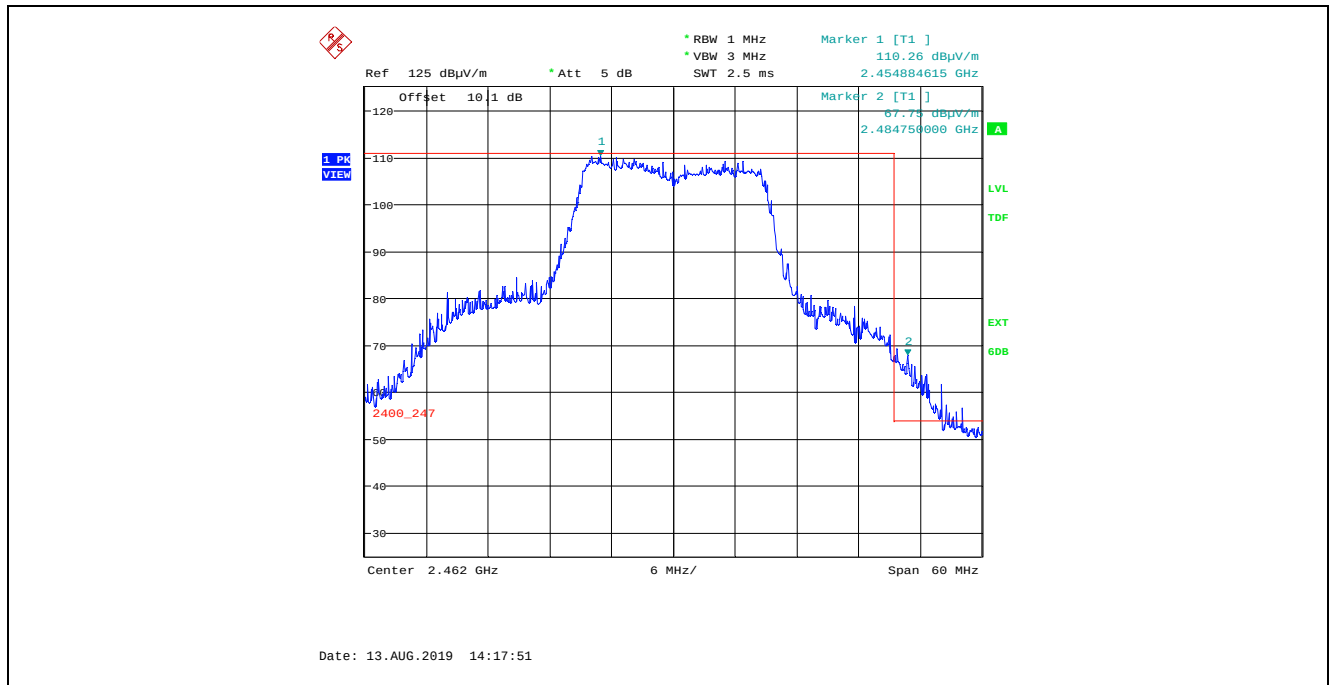
Plot 5.4.4.2.3.43. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 21, Channel 10, 2457 MHz



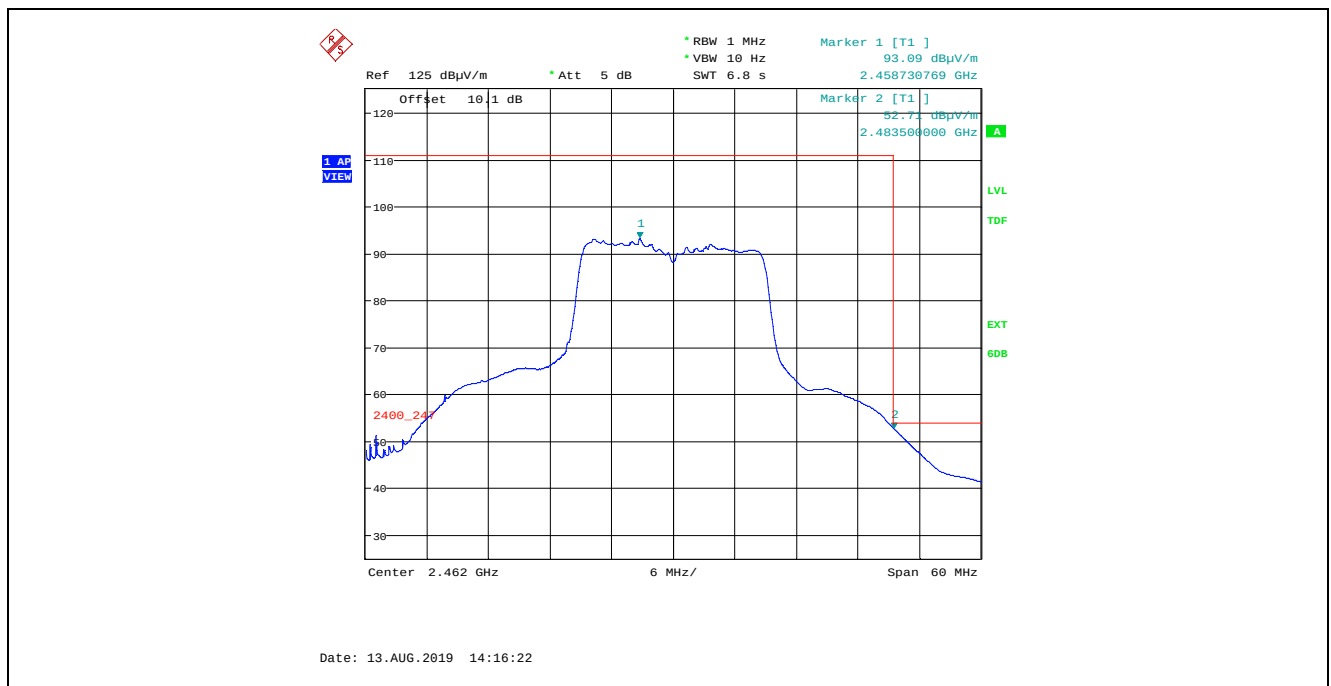
Plot 5.4.4.2.3.44. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 21, Channel 10, 2457 MHz



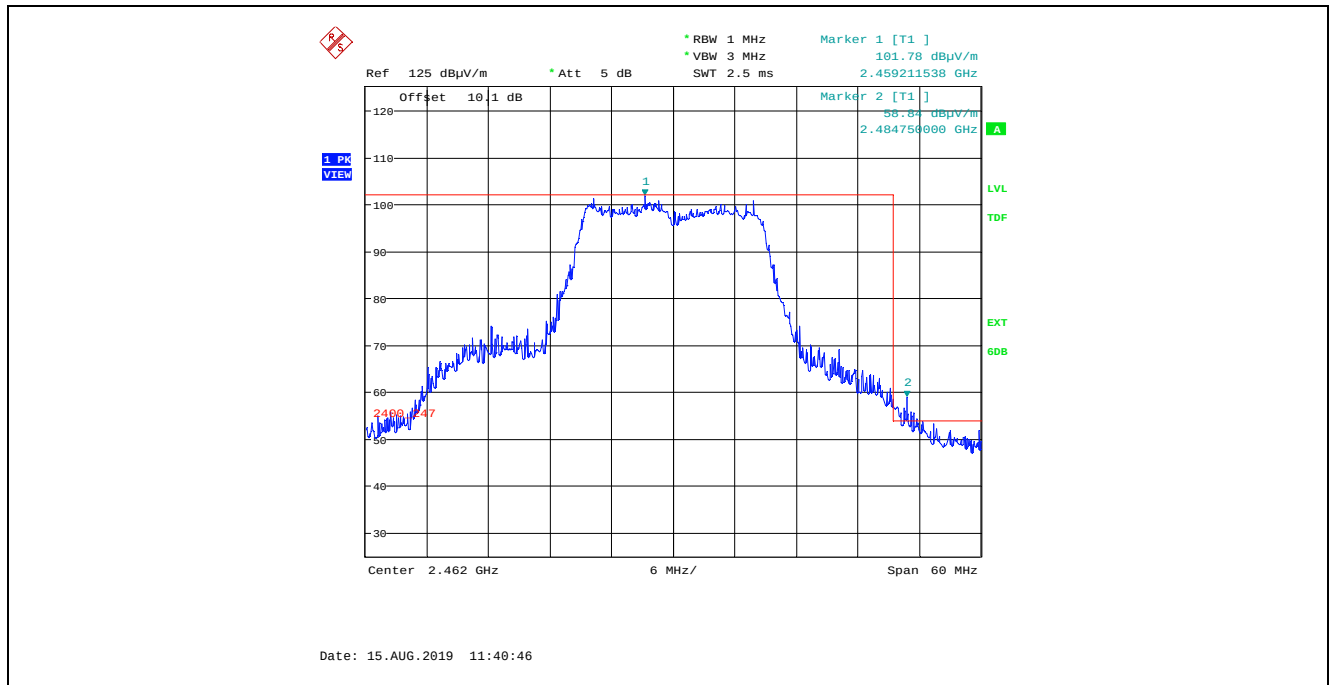
Plot 5.4.4.2.3.45. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 18, Channel 11, 2462 MHz



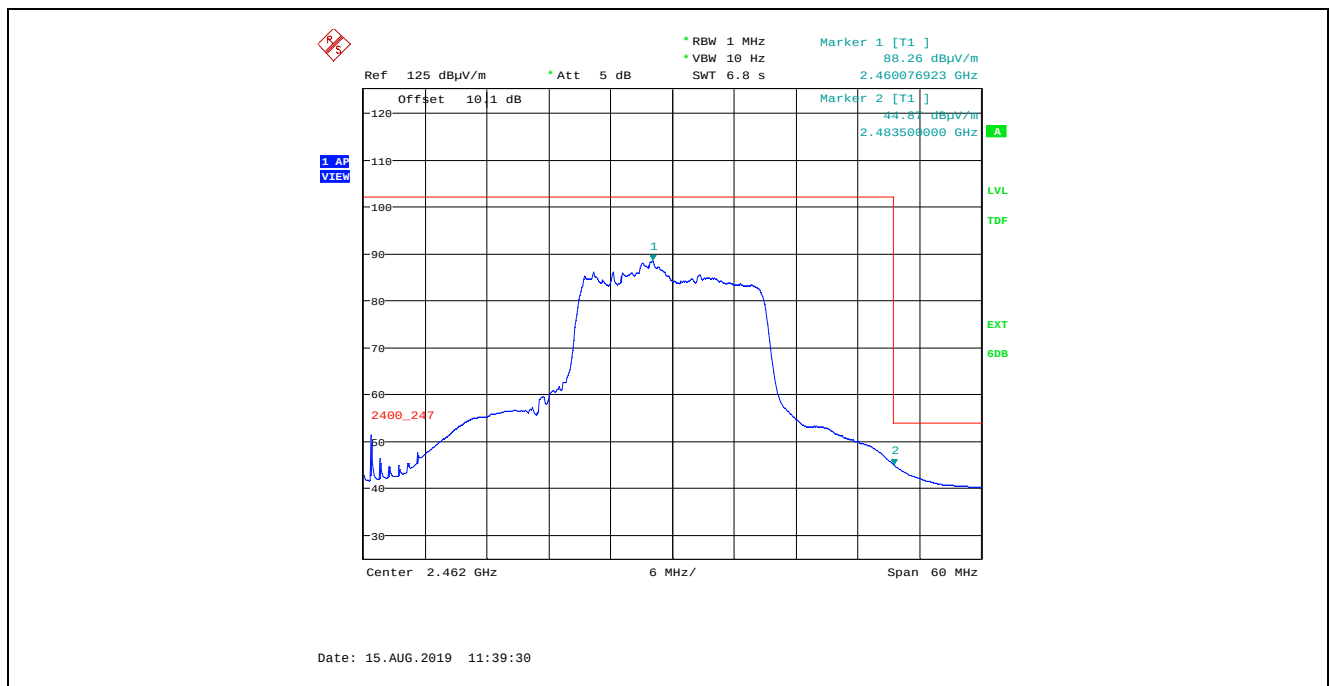
Plot 5.4.4.2.3.46. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 18, Channel 11, 2462 MHz



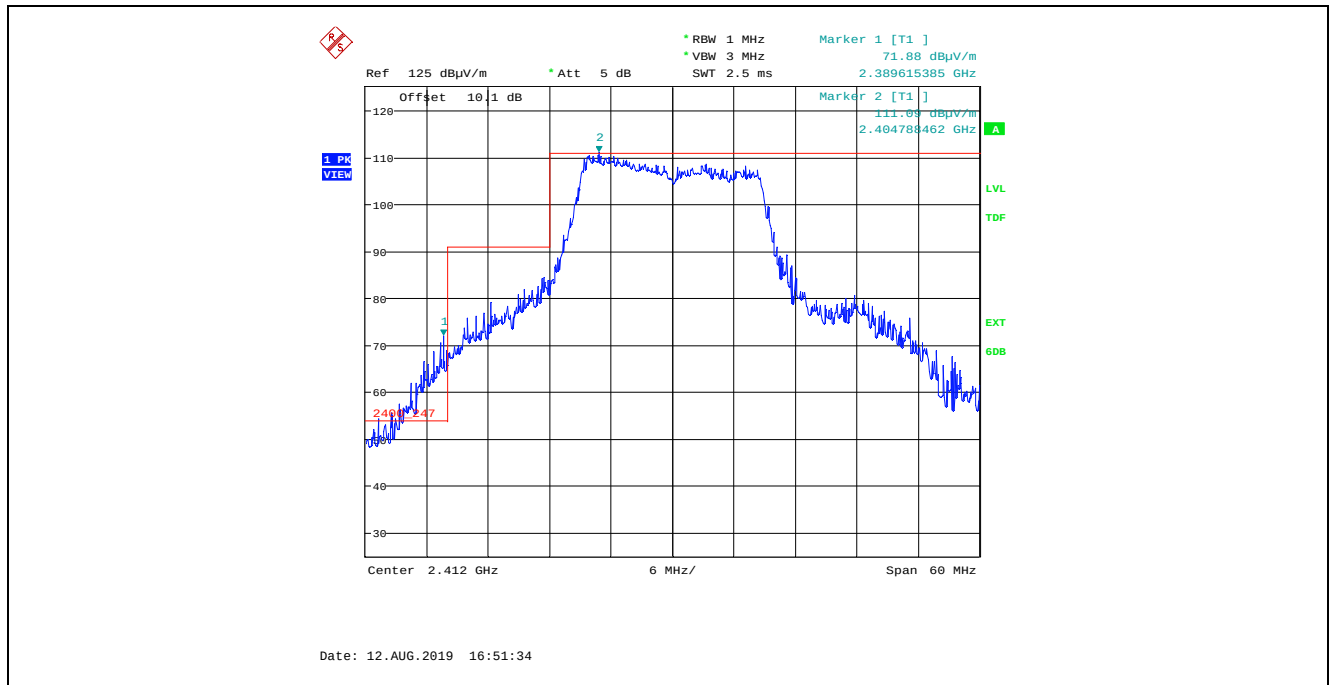
Plot 5.4.4.2.3.47. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 18, Channel 11, 2462 MHz



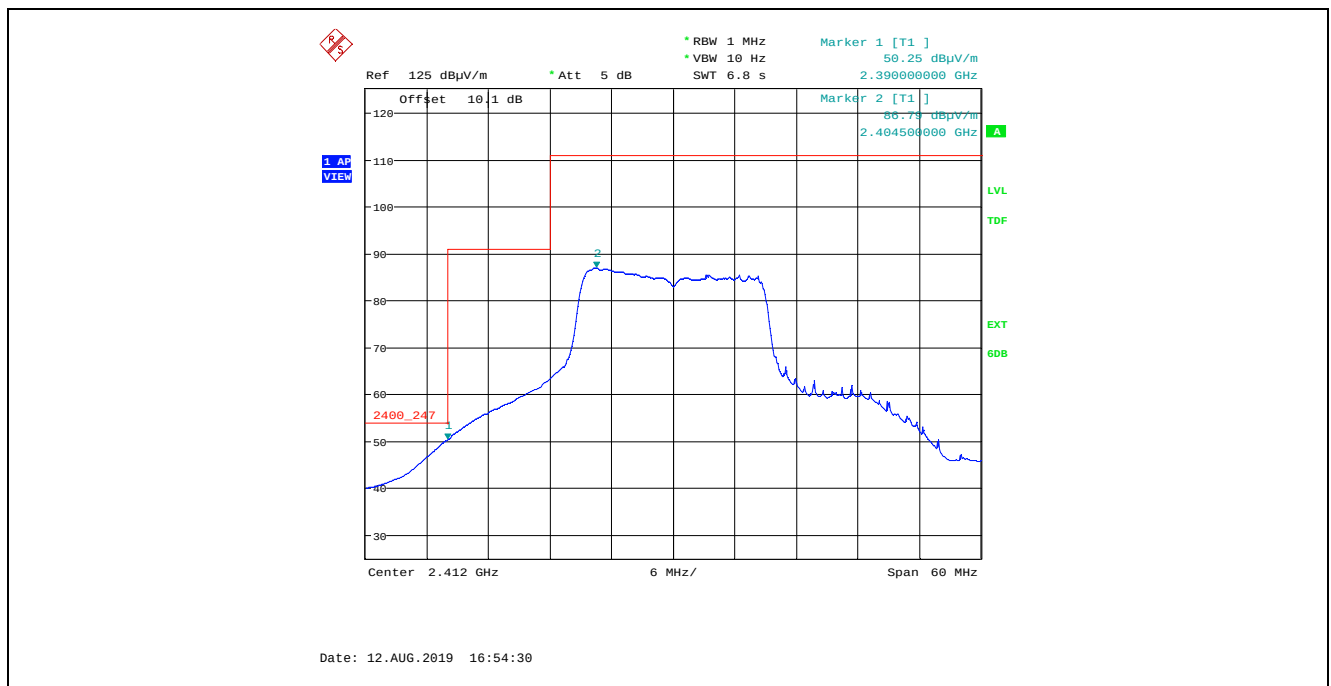
Plot 5.4.4.2.3.48. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 2, QPSK $\frac{3}{4}$ 21.7Mbps, Power Setting 18, Channel 11, 2462 MHz



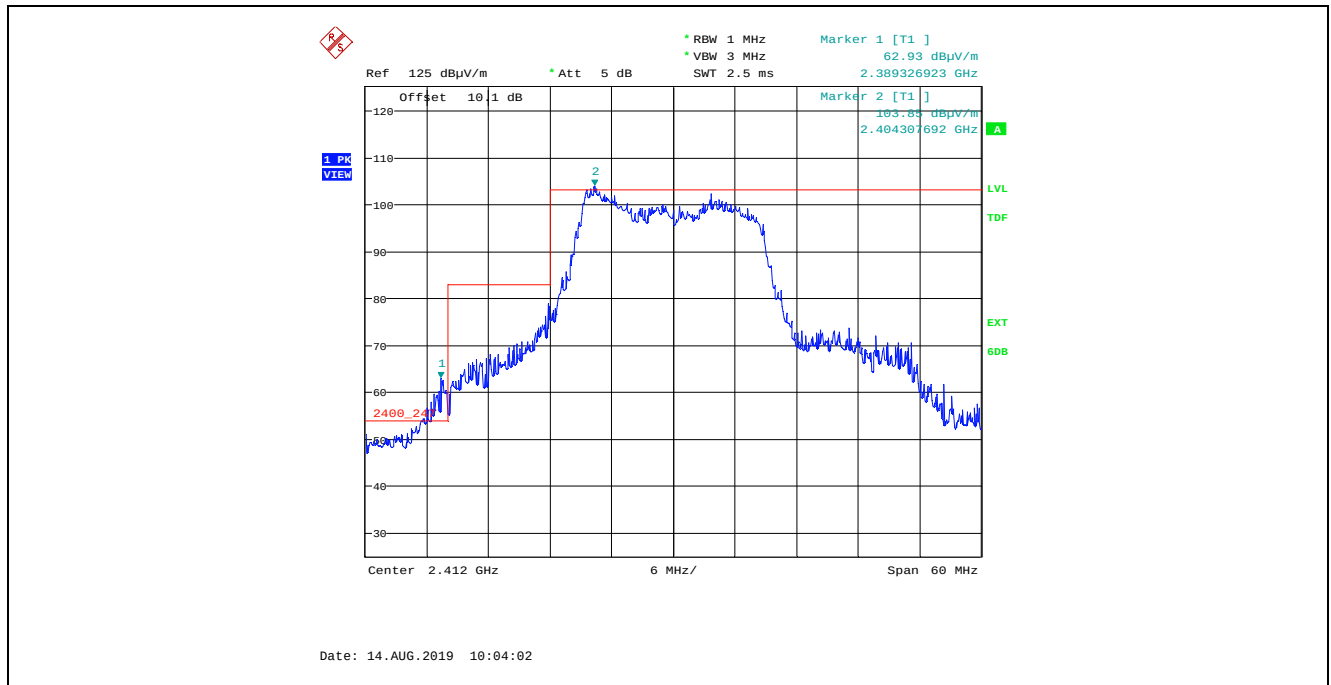
Plot 5.4.4.2.3.49. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 20, Channel 1, 2412 MHz



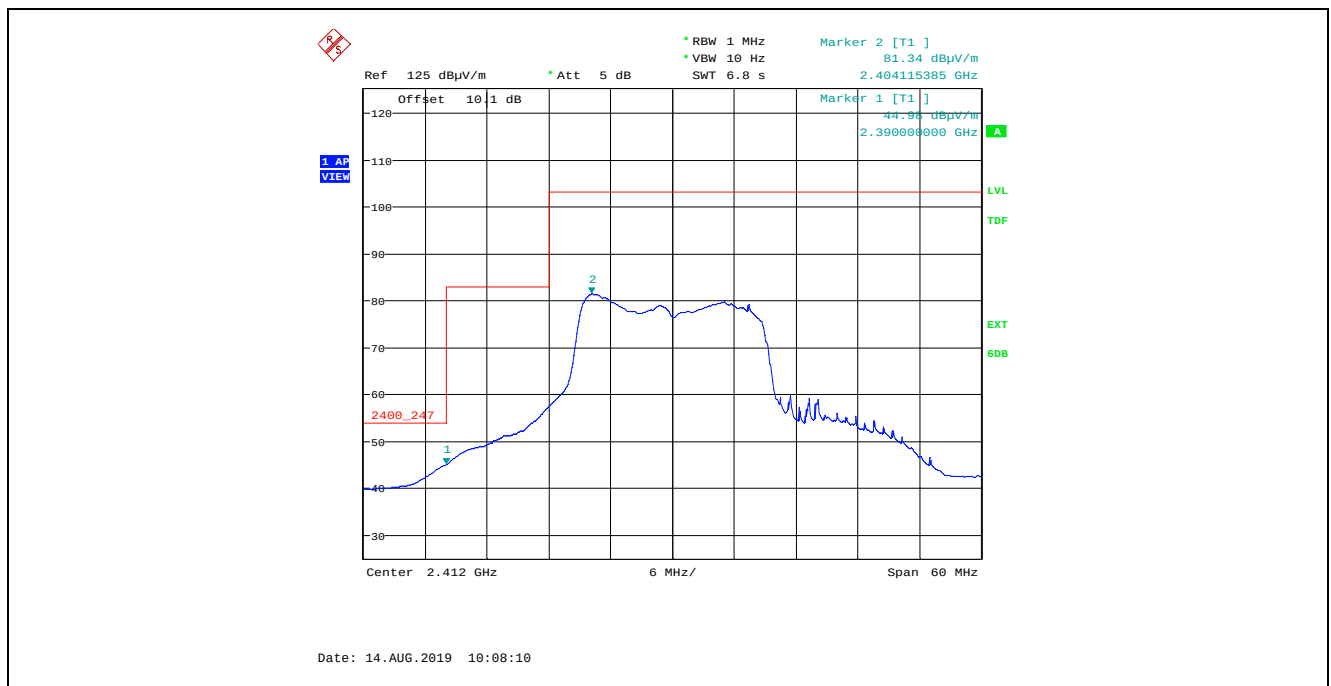
Plot 5.4.4.2.3.50. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 20, Channel 1, 2412 MHz



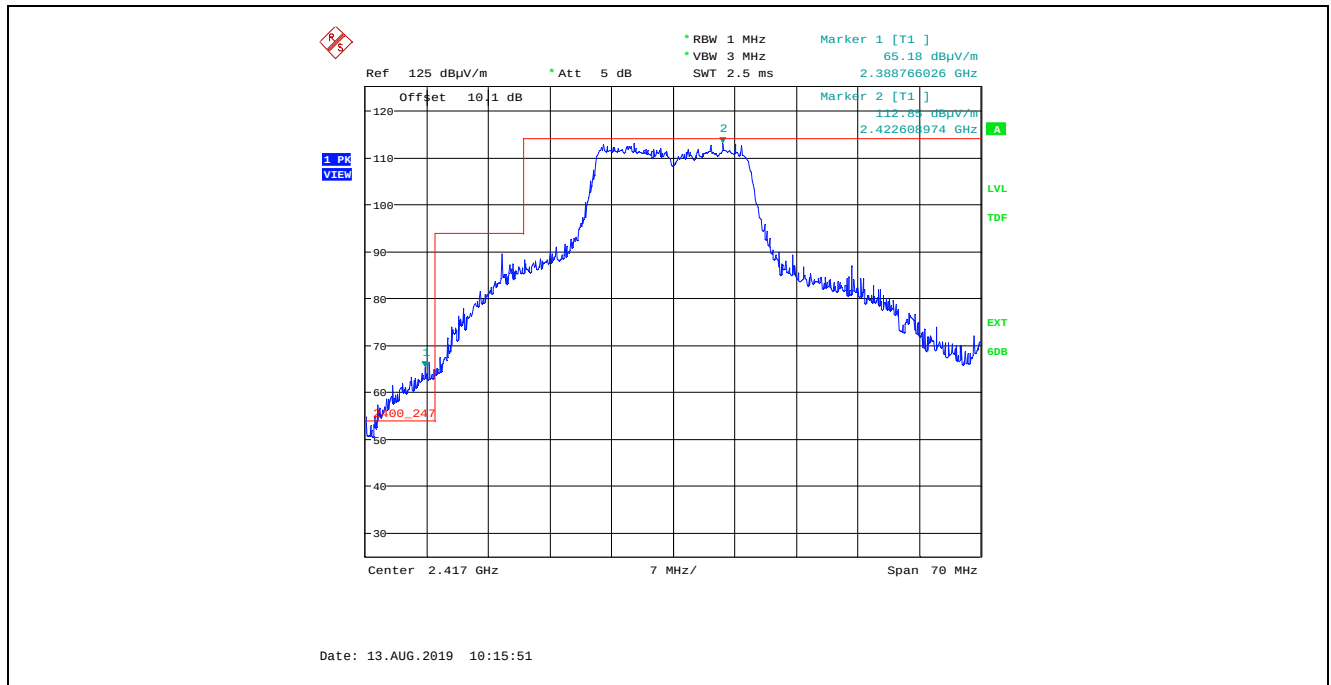
Plot 5.4.4.2.3.51. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 20, Channel 1, 2412 MHz



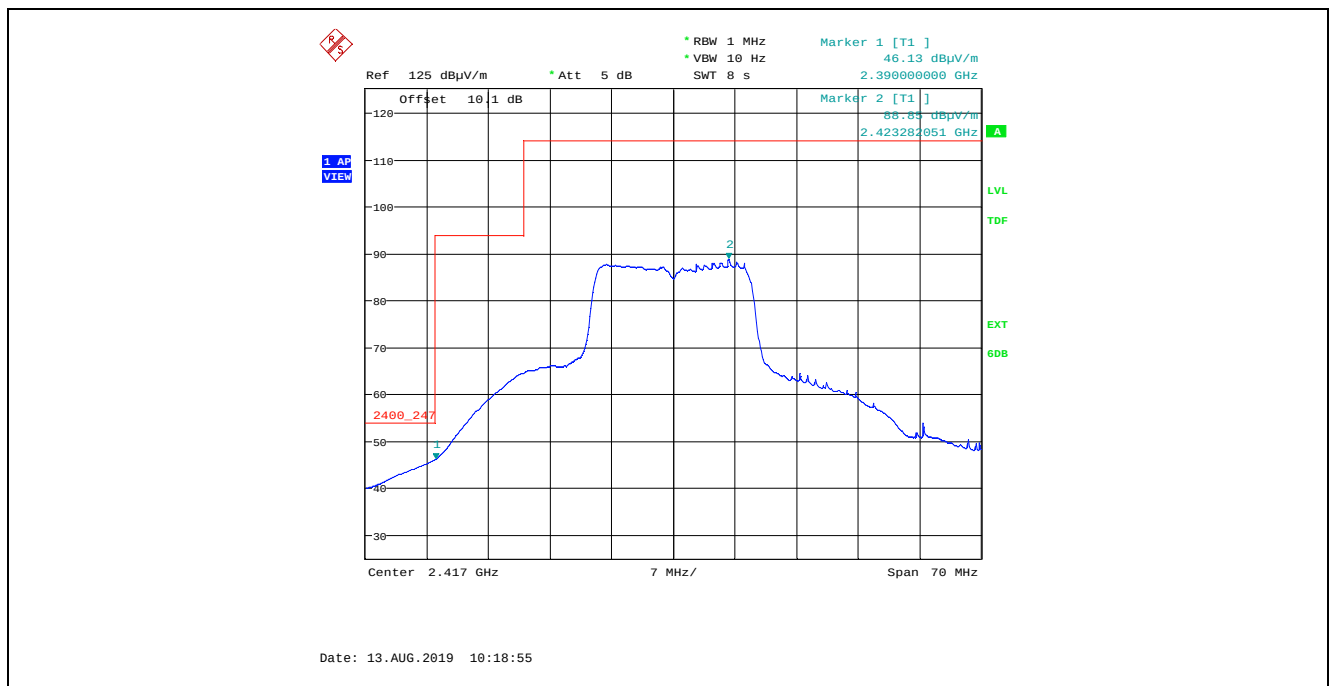
Plot 5.4.4.2.3.52. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 20, Channel 1, 2412 MHz



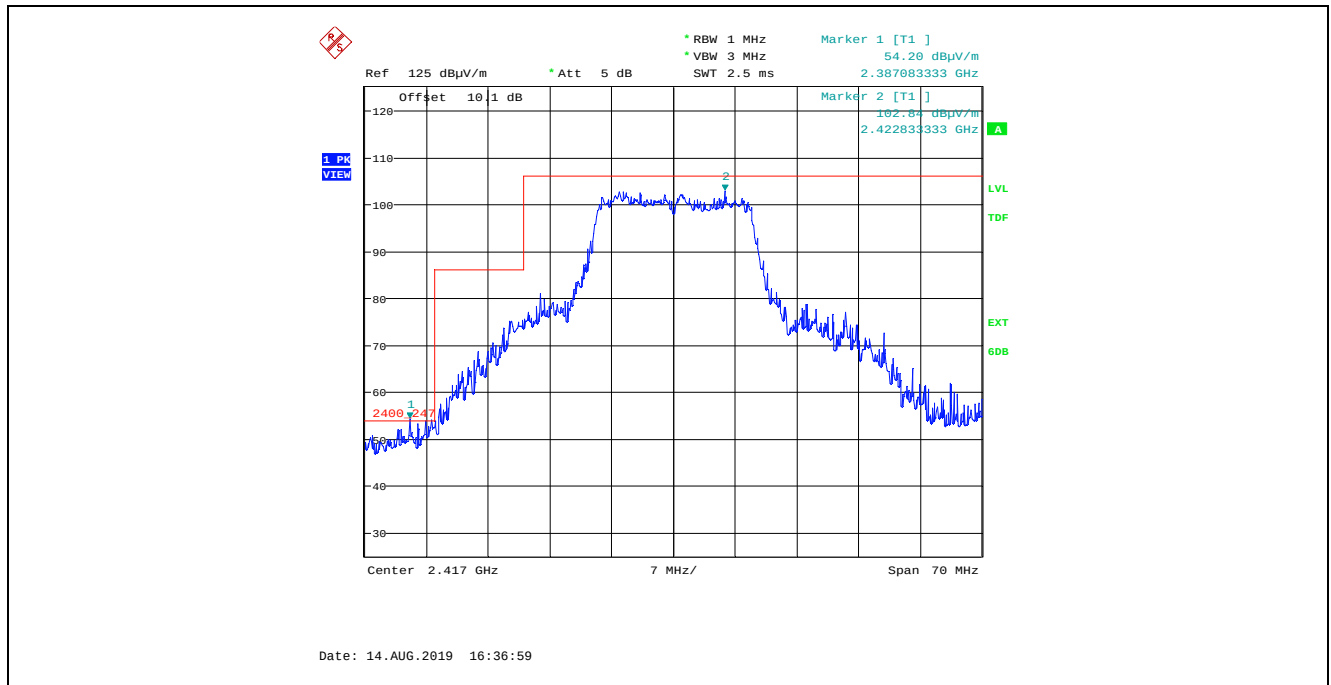
Plot 5.4.4.2.3.53. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 2, 2417 MHz



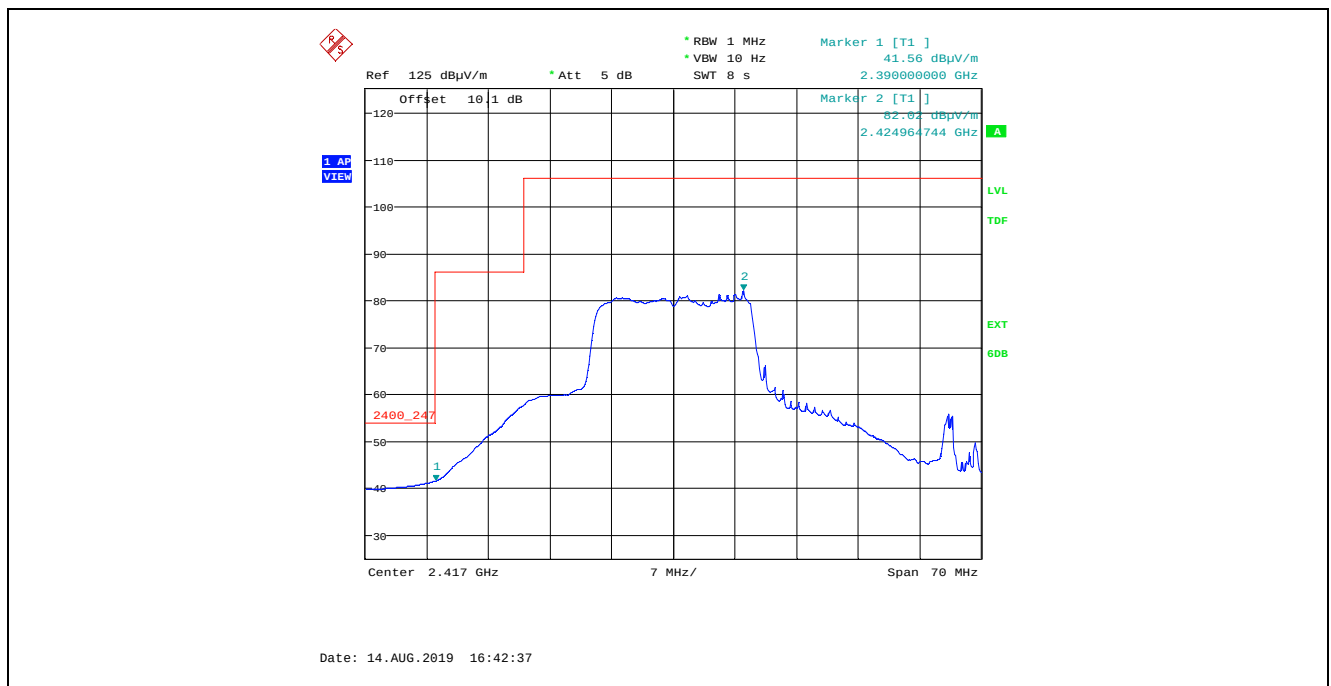
Plot 5.4.4.2.3.54. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 2, 2417 MHz



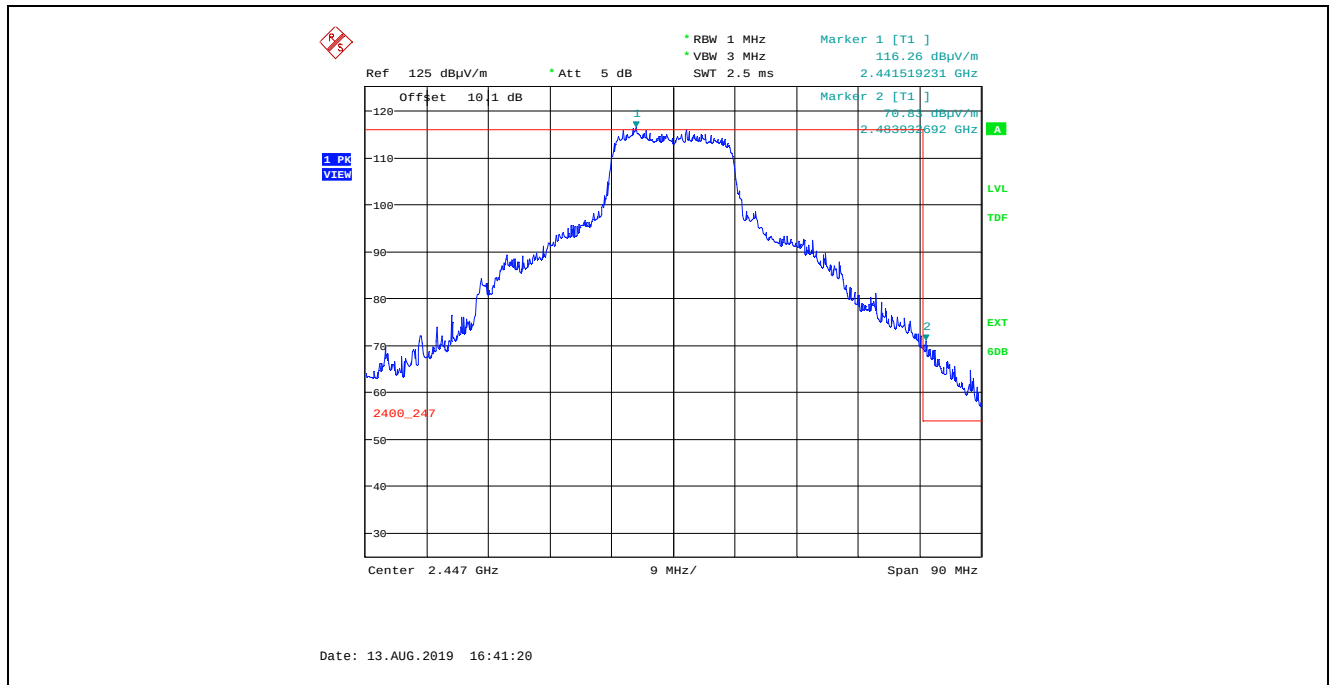
Plot 5.4.4.2.3.55. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 2, 2417 MHz



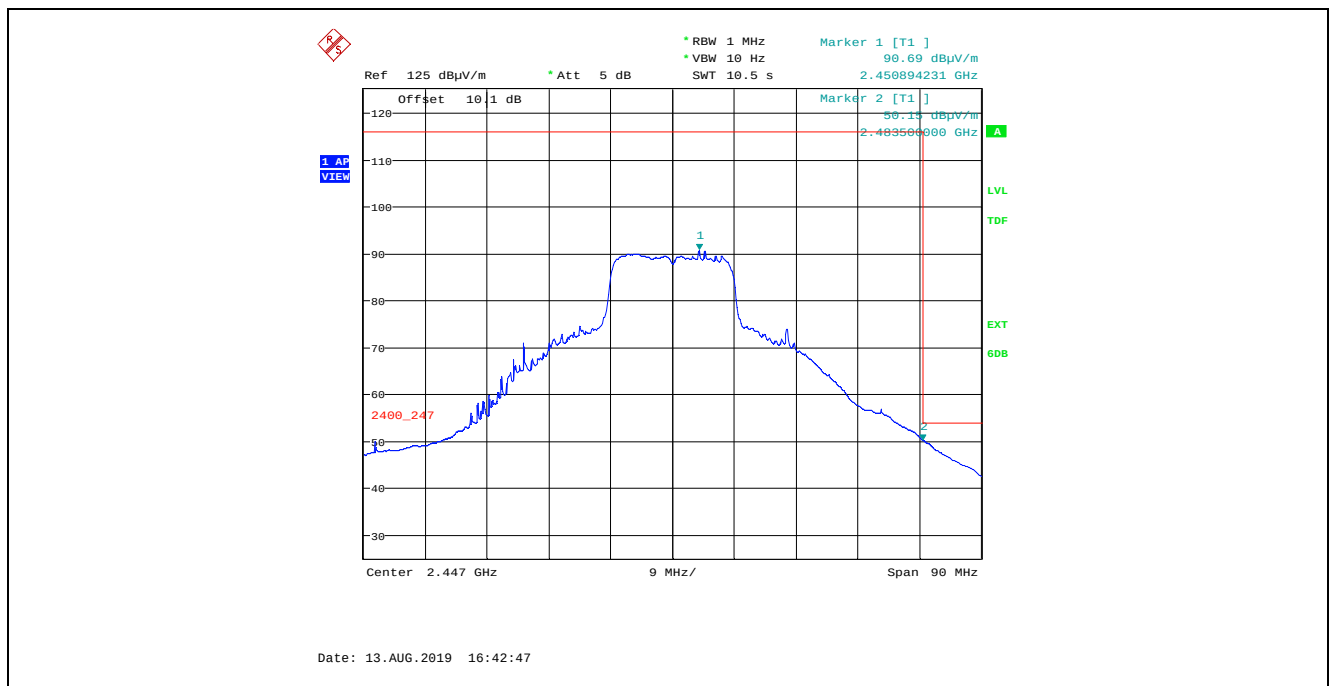
Plot 5.4.4.2.3.56. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 2, 2417 MHz



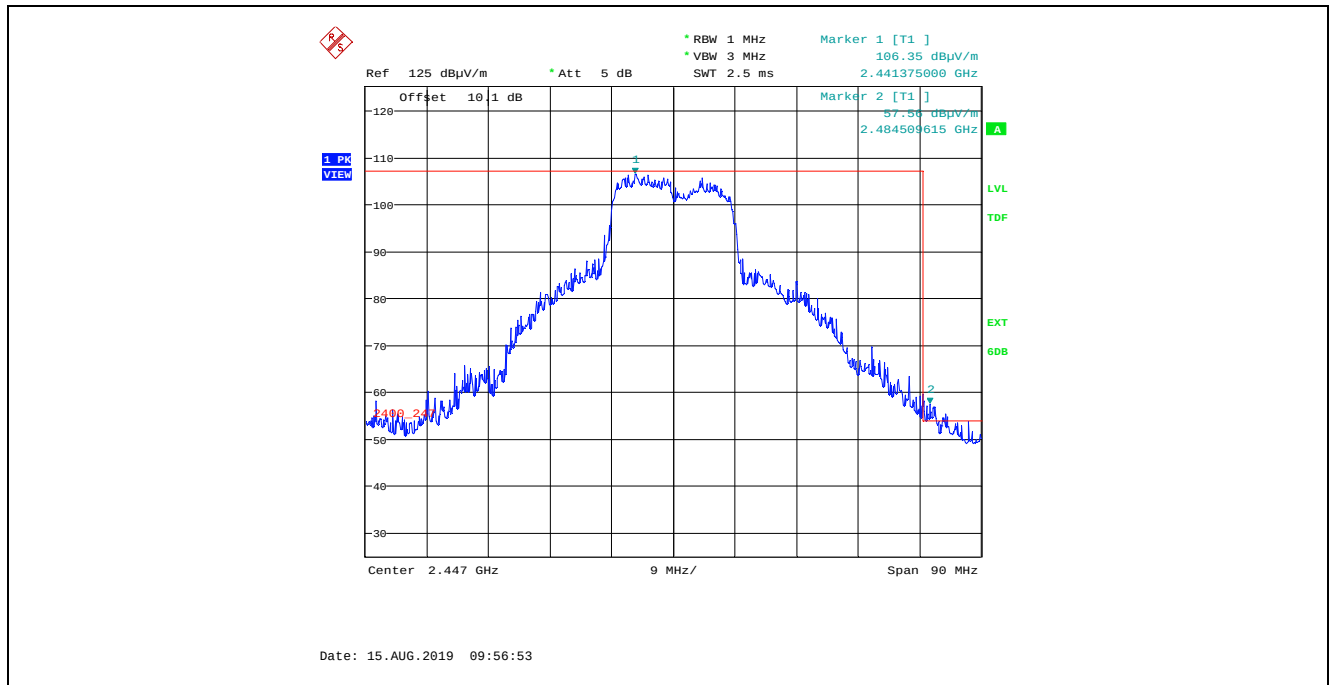
Plot 5.4.4.2.3.57. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 8, 2447 MHz



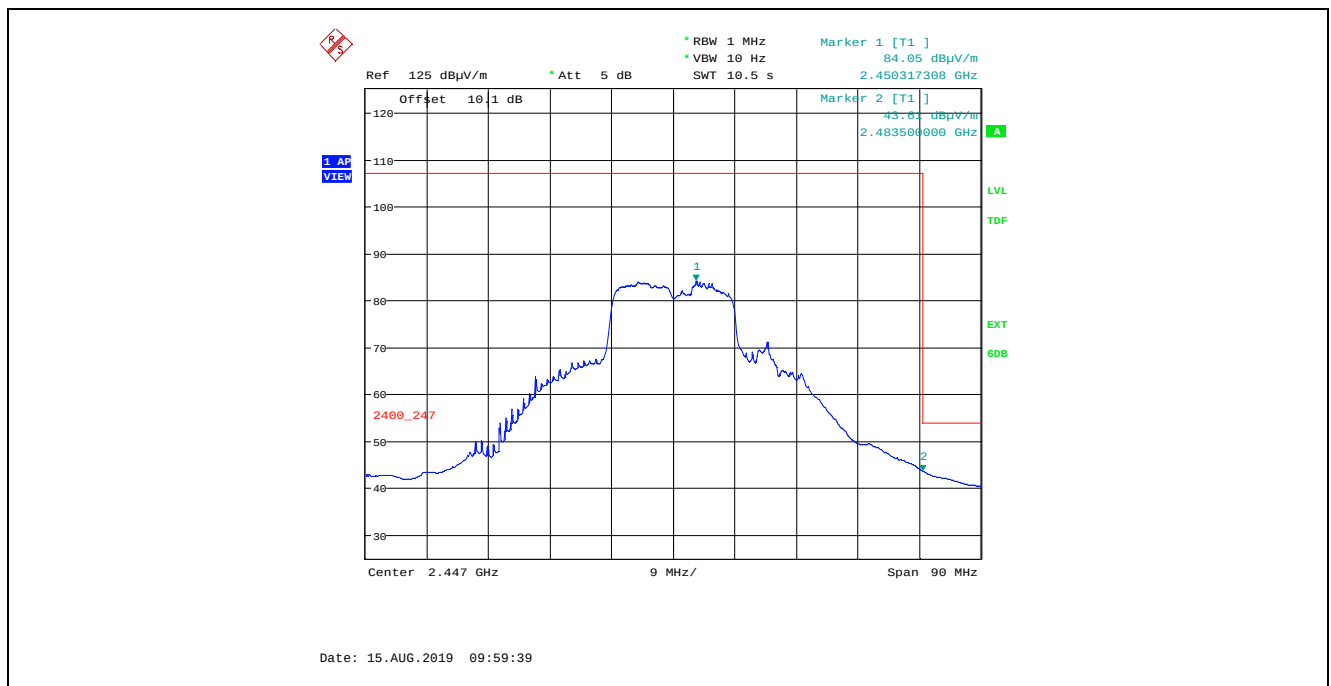
Plot 5.4.4.2.3.58. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 8, 2447 MHz



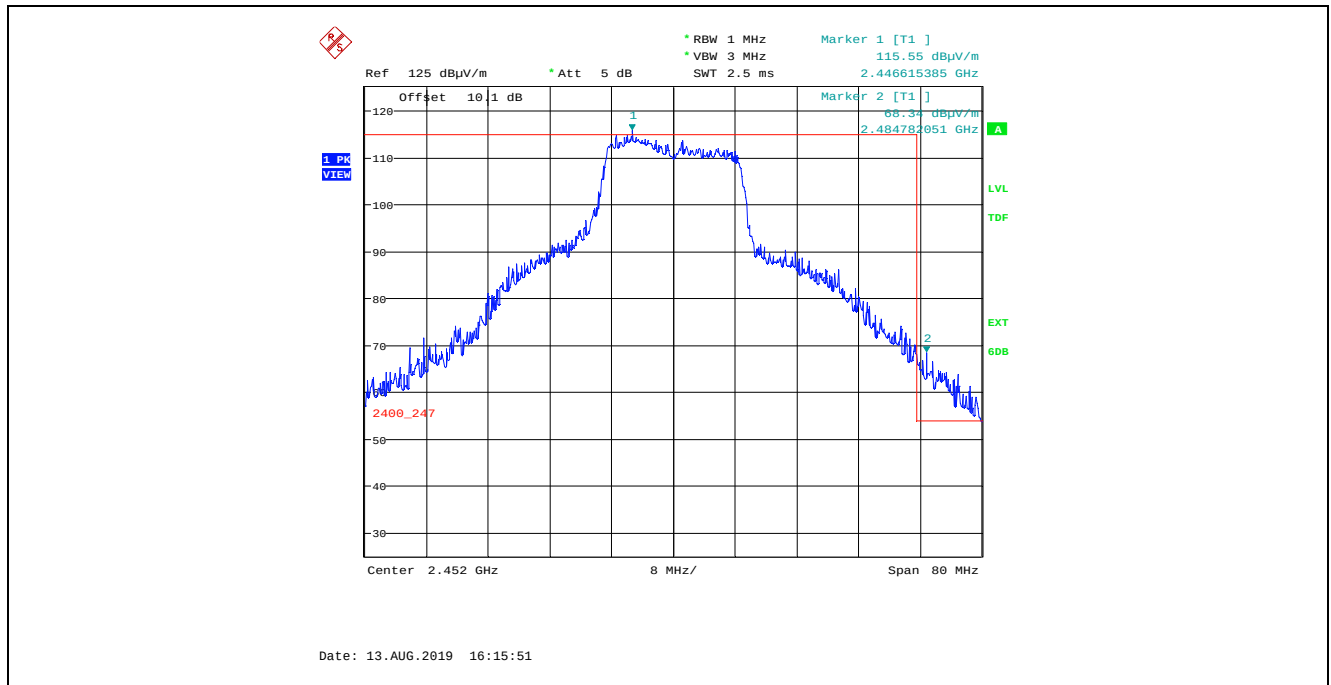
Plot 5.4.4.2.3.59. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 8, 2447 MHz



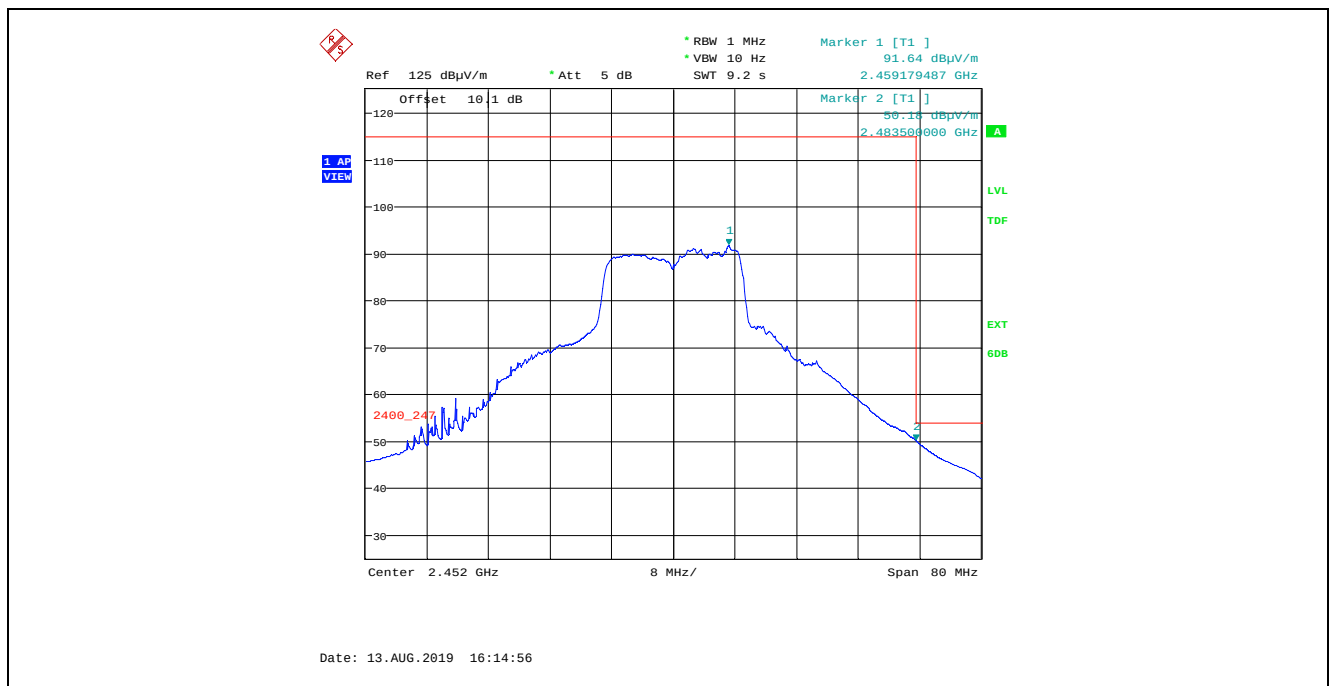
Plot 5.4.4.2.3.60. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 24, Channel 8, 2447 MHz



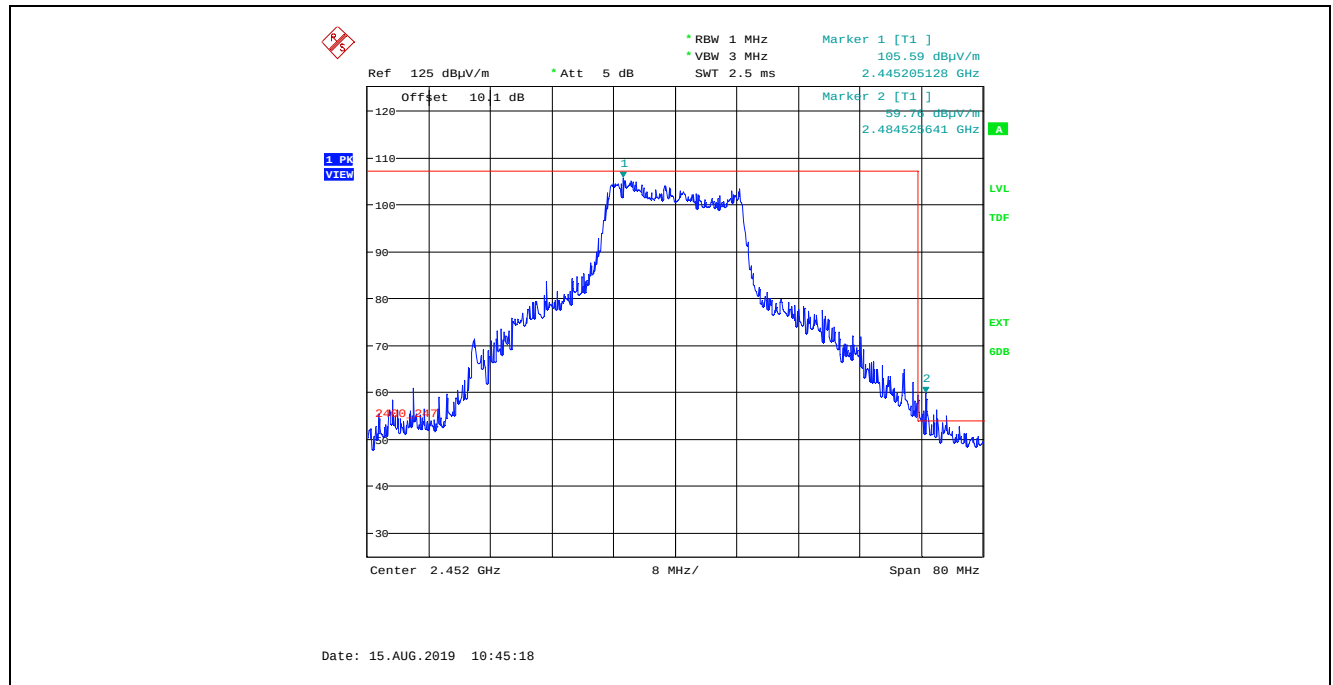
Plot 5.4.4.2.3.61. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 21, Channel 9, 2452 MHz



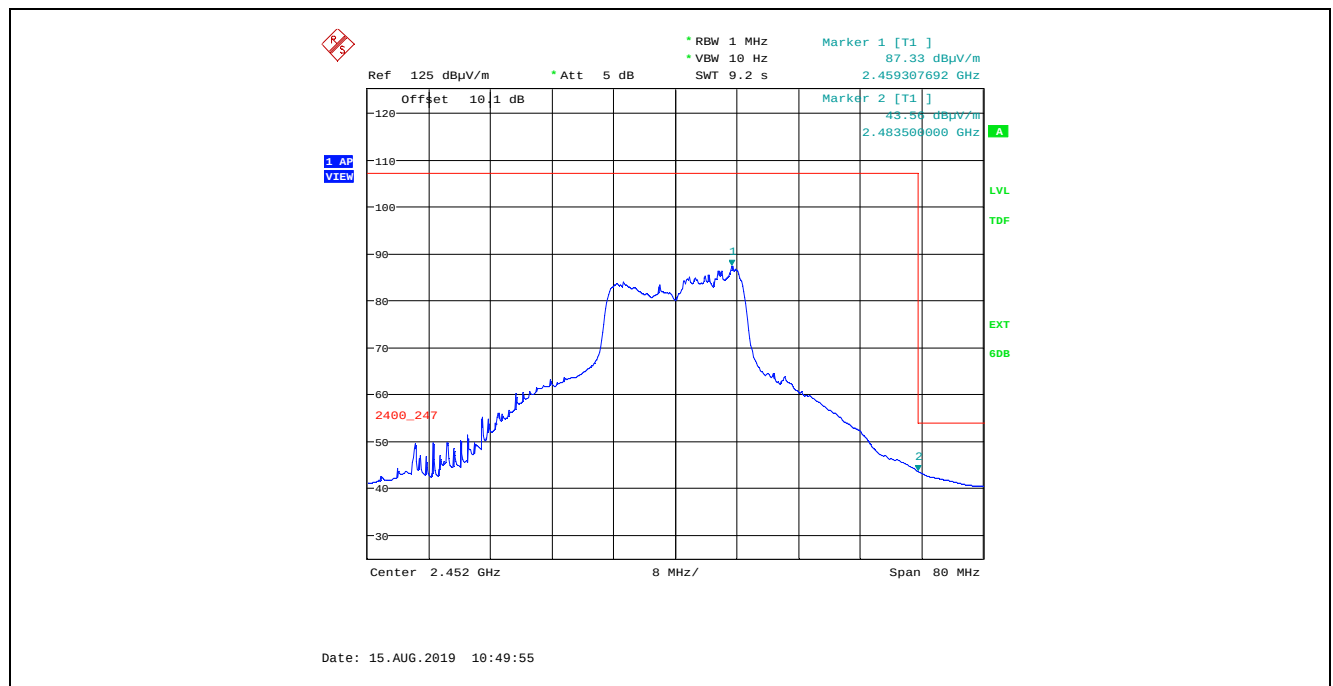
Plot 5.4.4.2.3.62. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 21, Channel 9, 2452 MHz



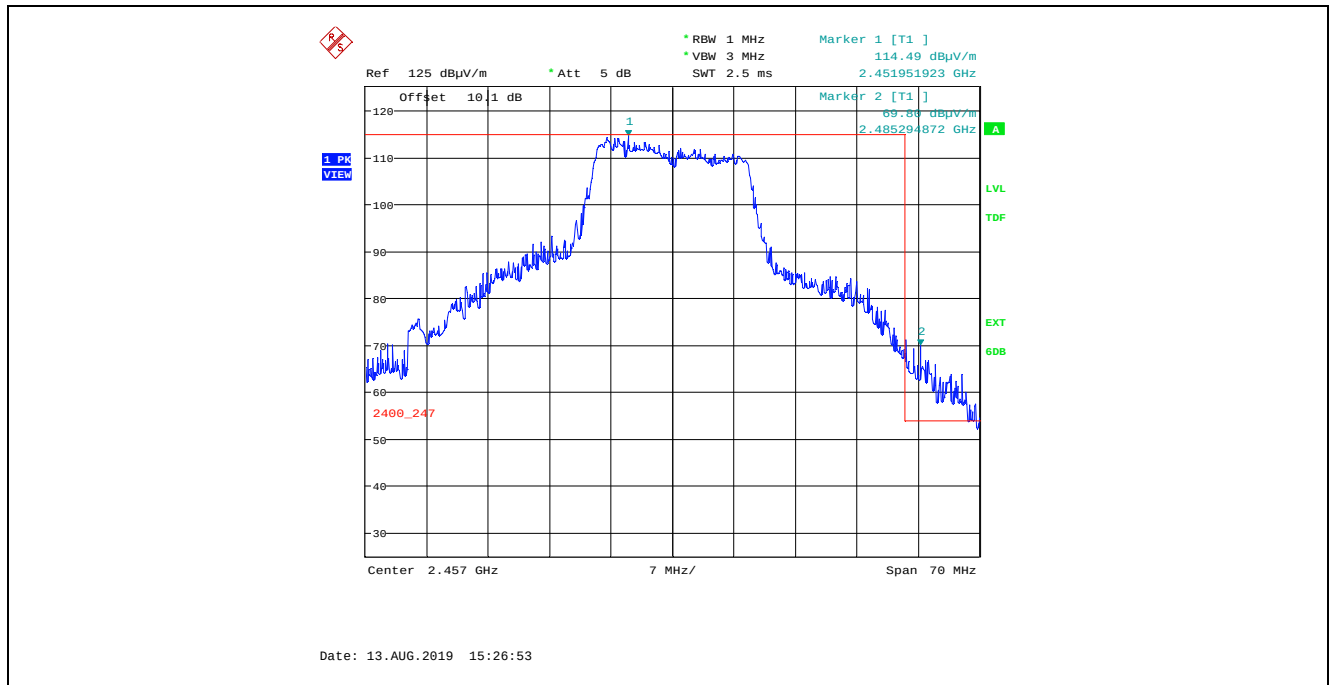
Plot 5.4.4.2.3.63. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 21, Channel 9, 2452 MHz



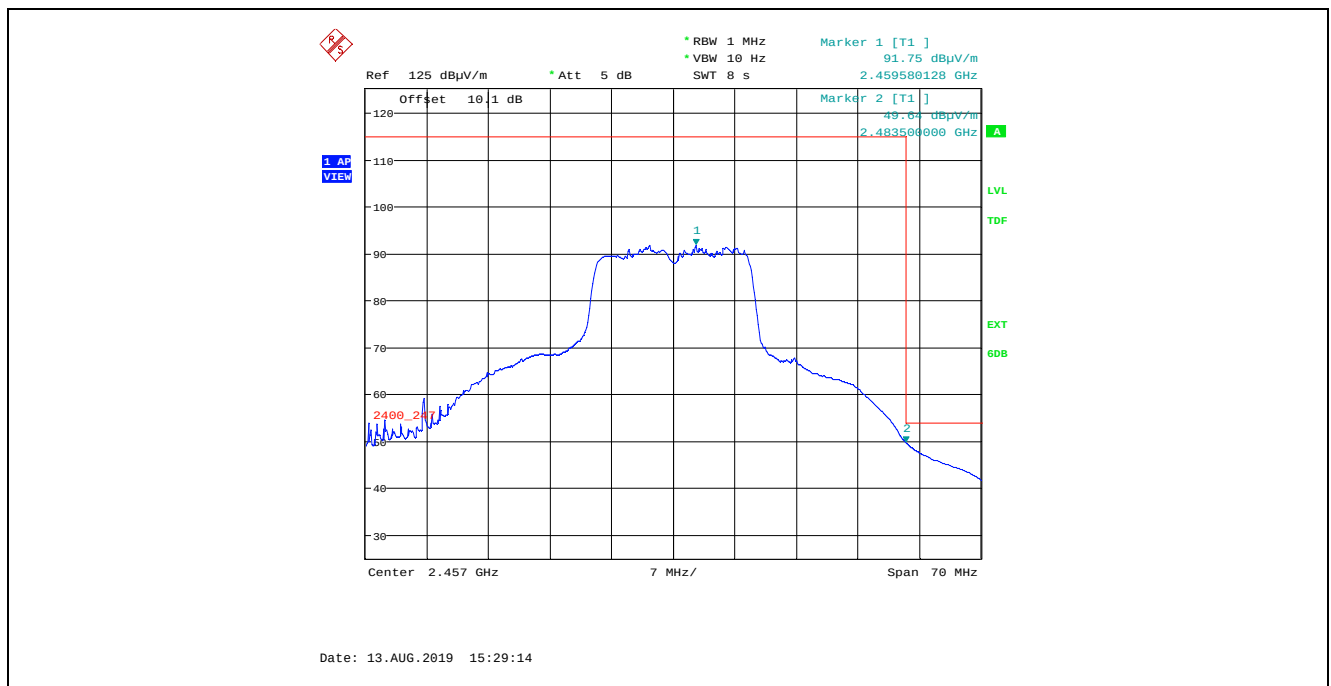
Plot 5.4.4.2.3.64. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 21, Channel 9, 2452 MHz



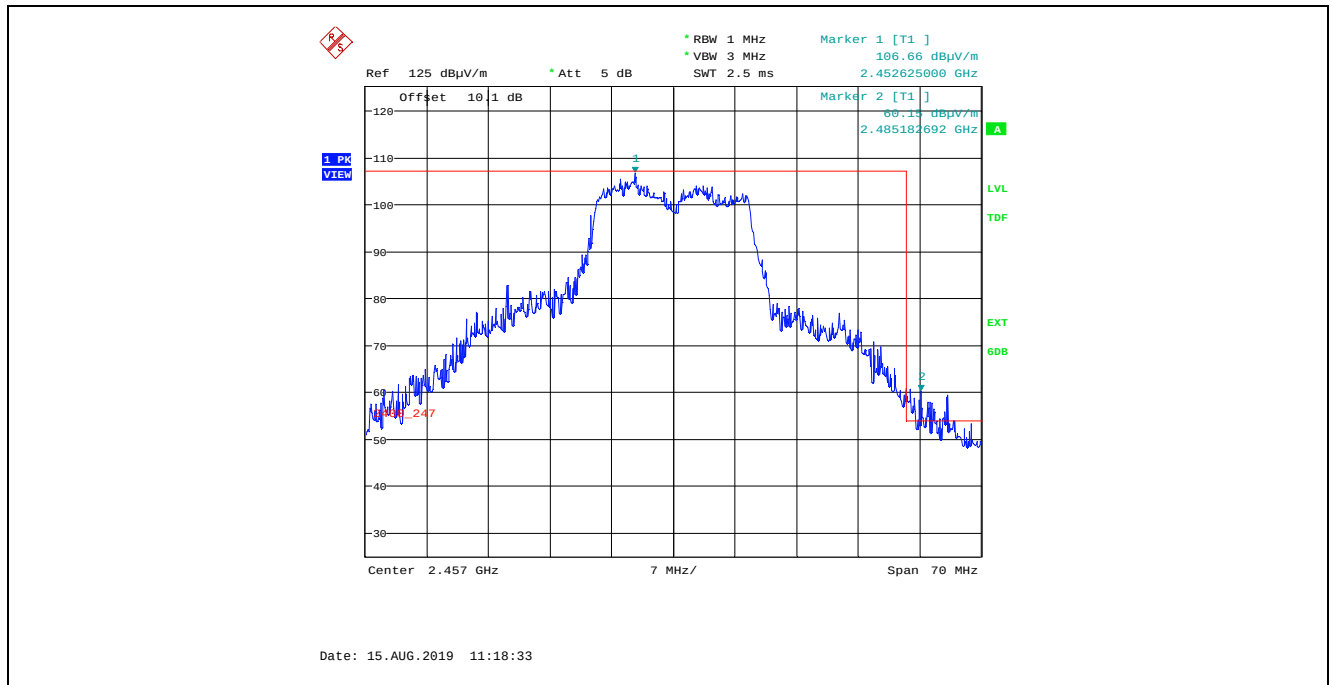
Plot 5.4.4.2.3.65. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM ¾ 43.3Mbps, Power Setting 21, Channel 10, 2457 MHz



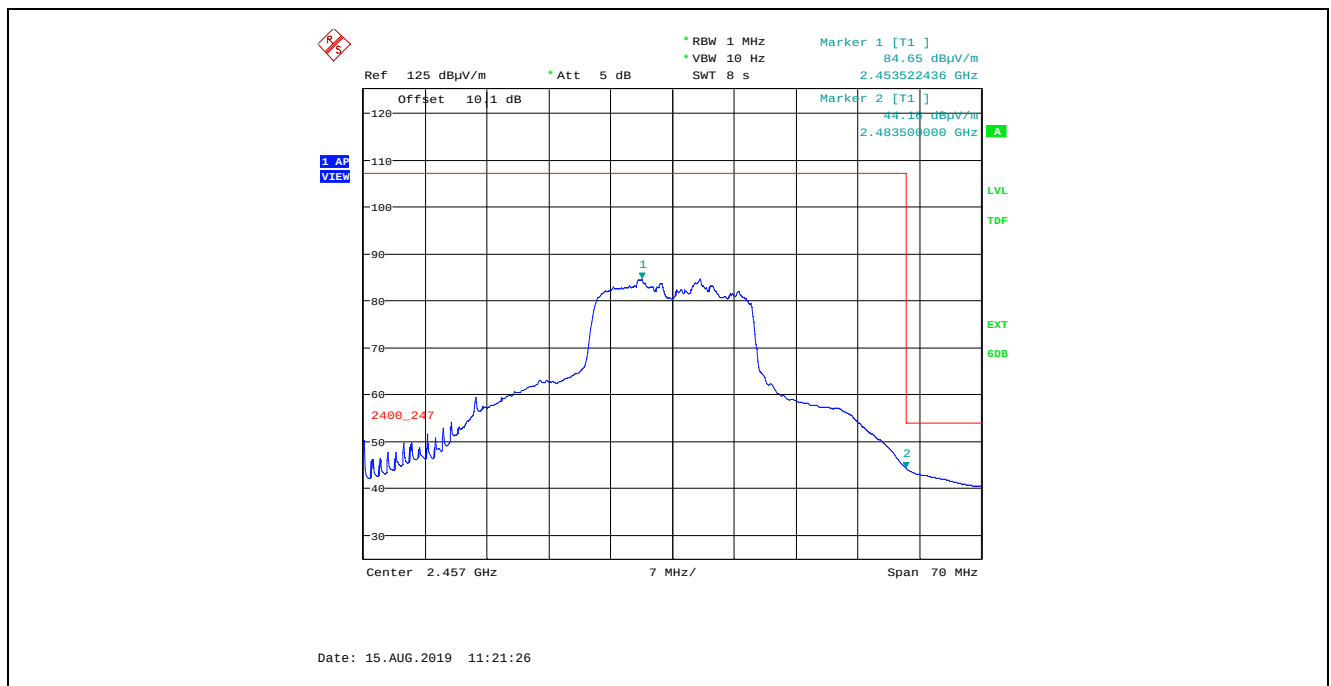
Plot 5.4.4.2.3.66. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM ¾ 43.3Mbps, Power Setting 21, Channel 10, 2457 MHz



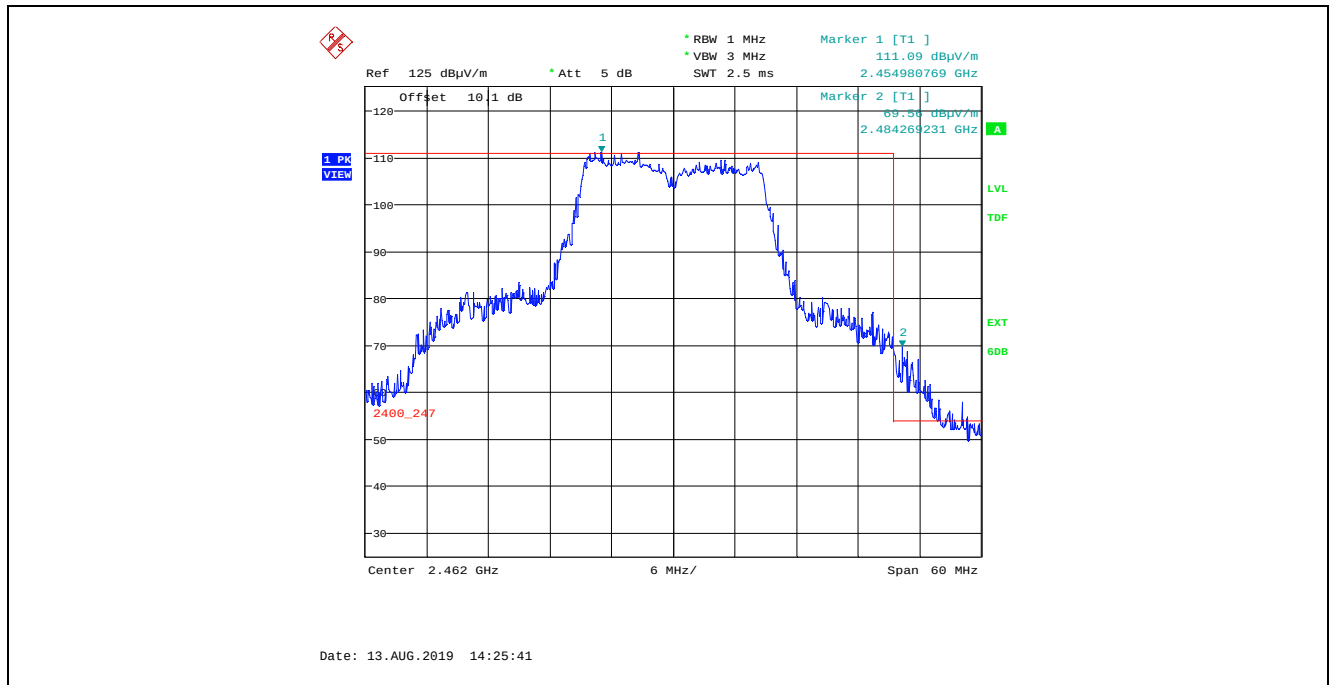
Plot 5.4.4.2.3.67. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 21, Channel 10, 2457 MHz



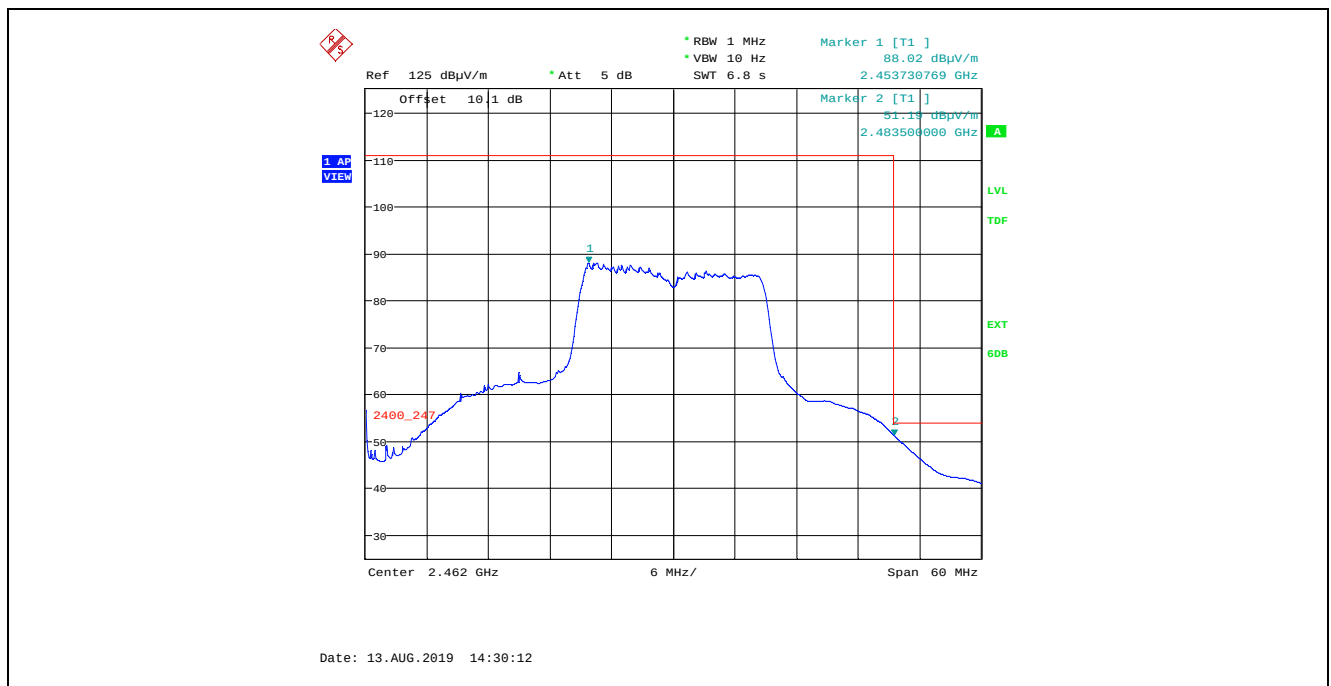
Plot 5.4.4.2.3.68. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 21, Channel 10, 2457 MHz



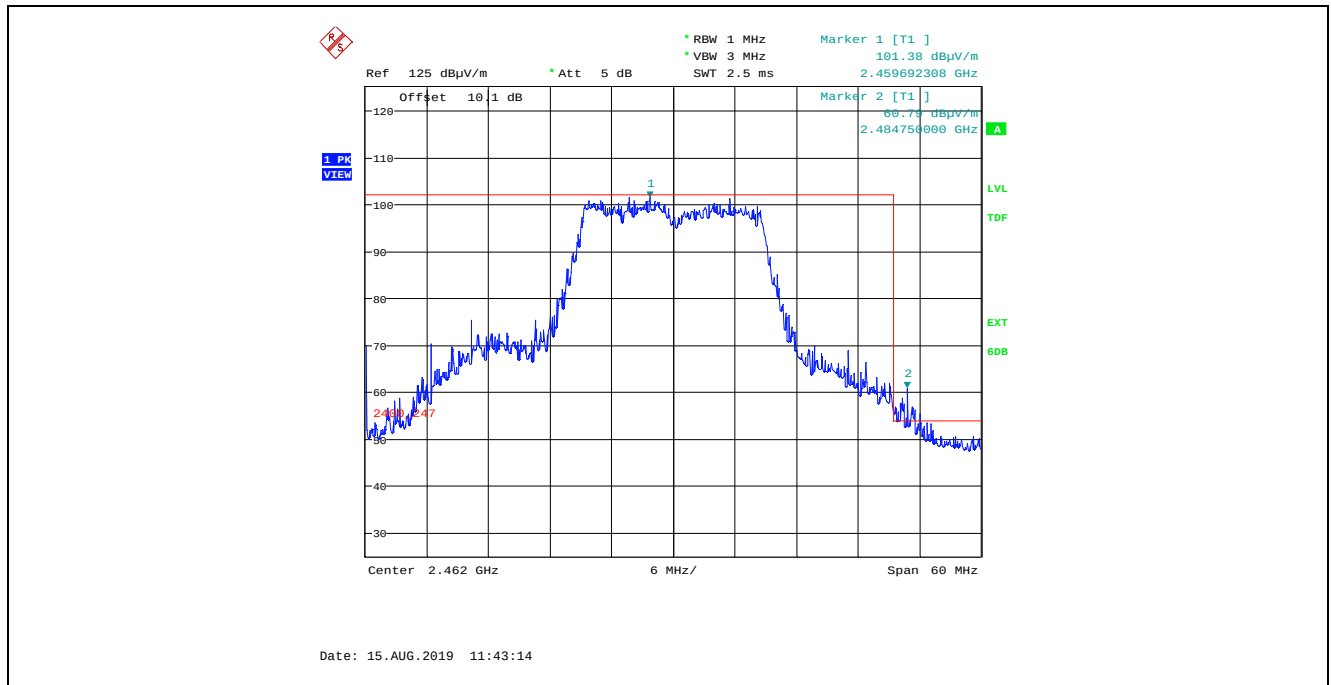
Plot 5.4.4.2.3.69. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 18, Channel 11, 2462 MHz



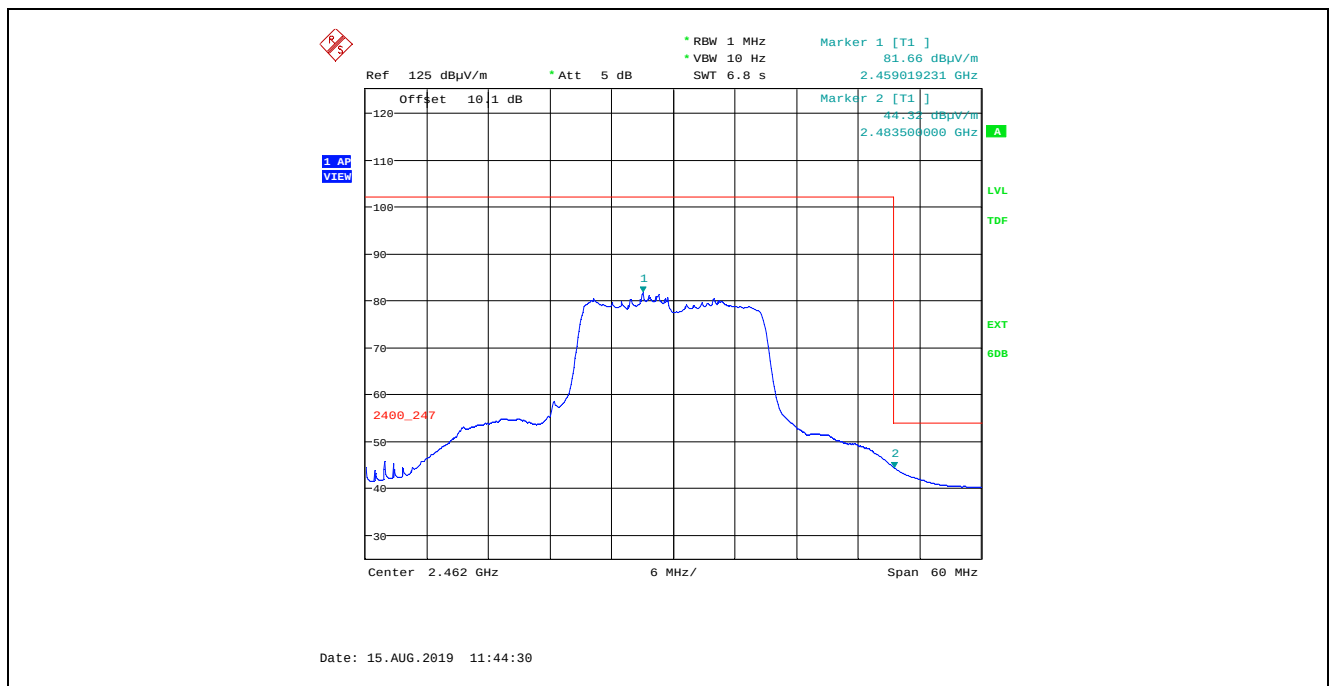
Plot 5.4.4.2.3.70. Band-Edge RF Radiated Emissions at 3 m, Vertical Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM $\frac{3}{4}$ 43.3Mbps, Power Setting 18, Channel 11, 2462 MHz



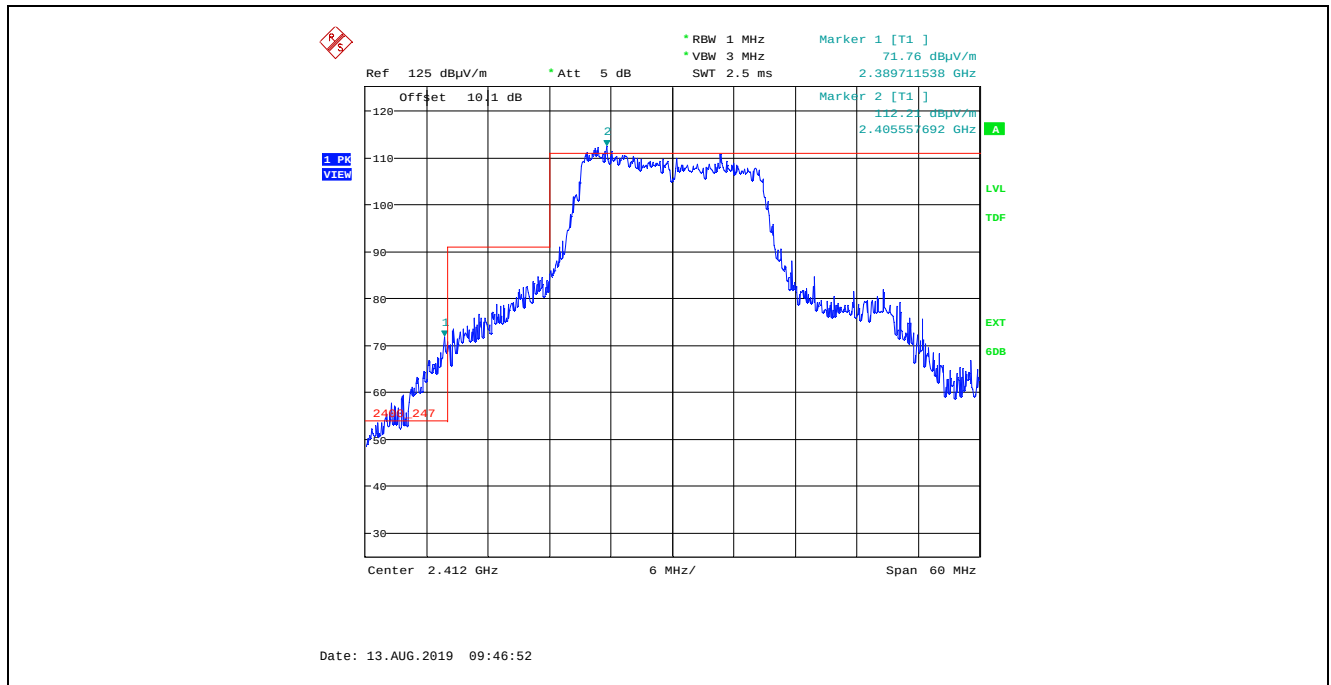
Plot 5.4.4.2.3.71. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 4, 16-QAM ¼ 43.3Mbps, Power Setting 18, Channel 11, 2462 MHz



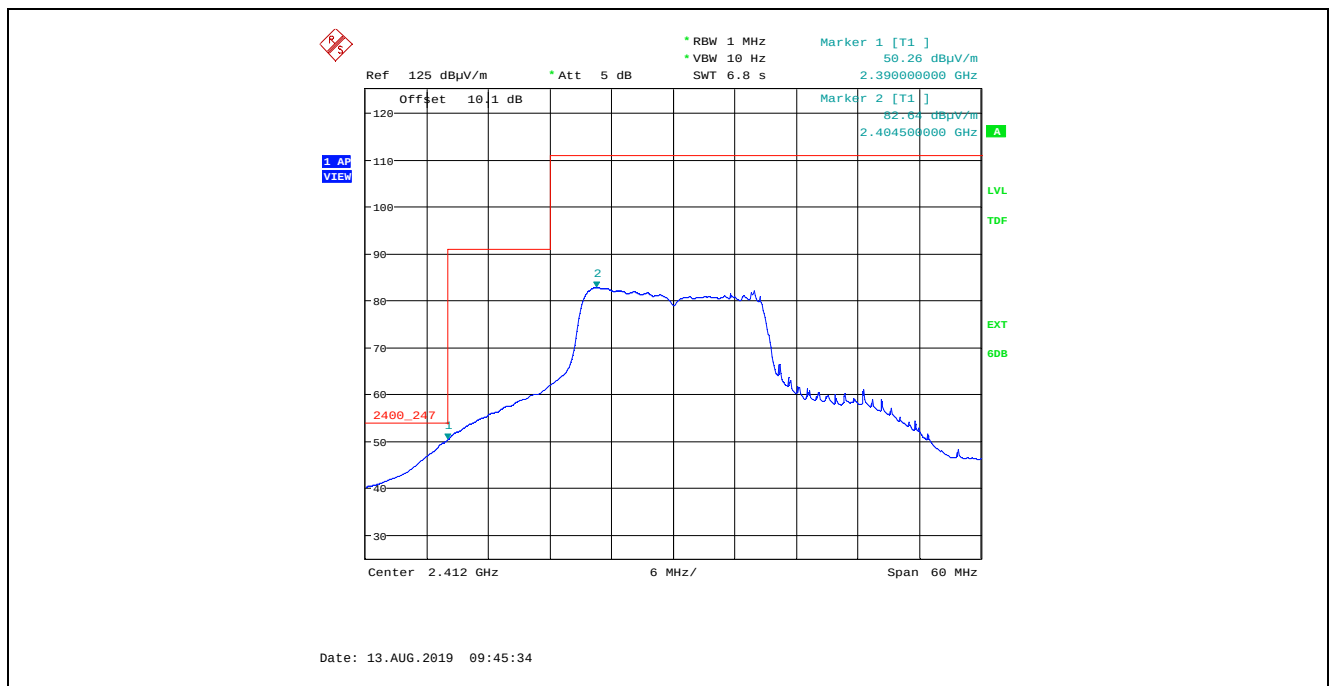
Plot 5.4.4.2.3.72. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 4, 16-QAM ¼ 43.3Mbps, Power Setting 18, Channel 11, 2462 MHz



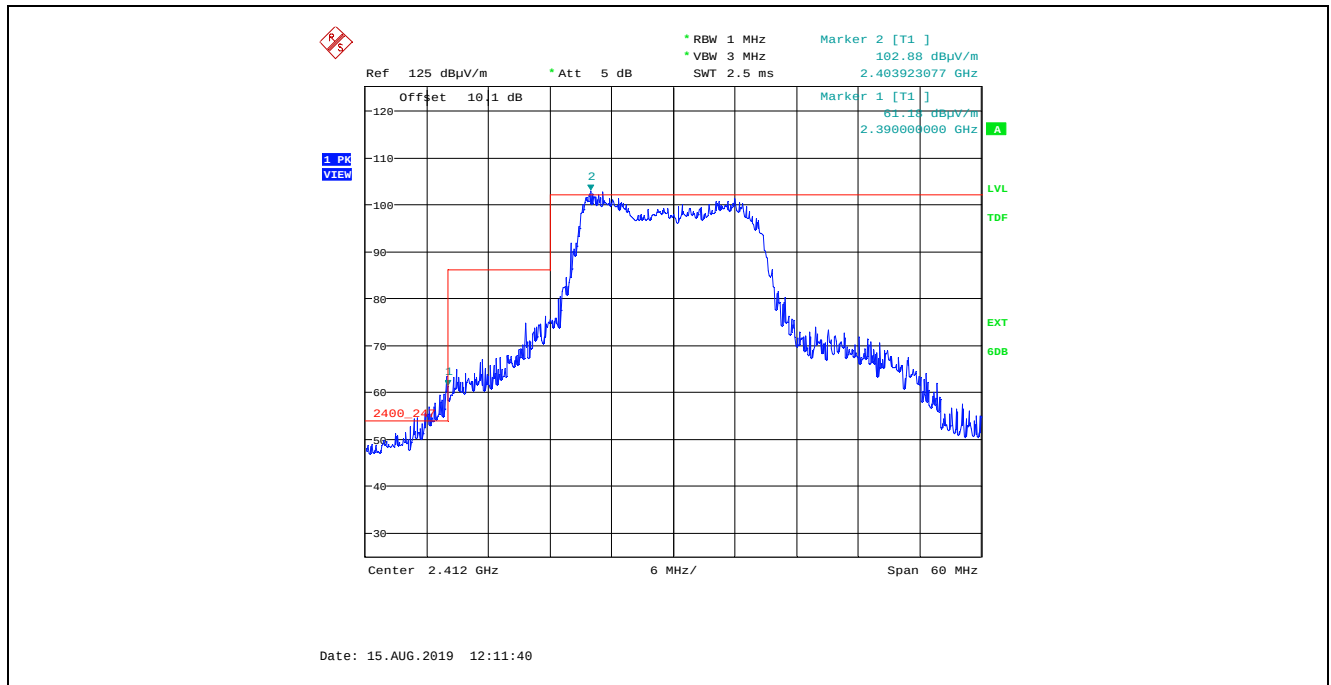
Plot 5.4.4.2.3.73. Band-Edge RF Radiated Emissions at 3 m, Vertical, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 20, Channel 1, 2412 MHz



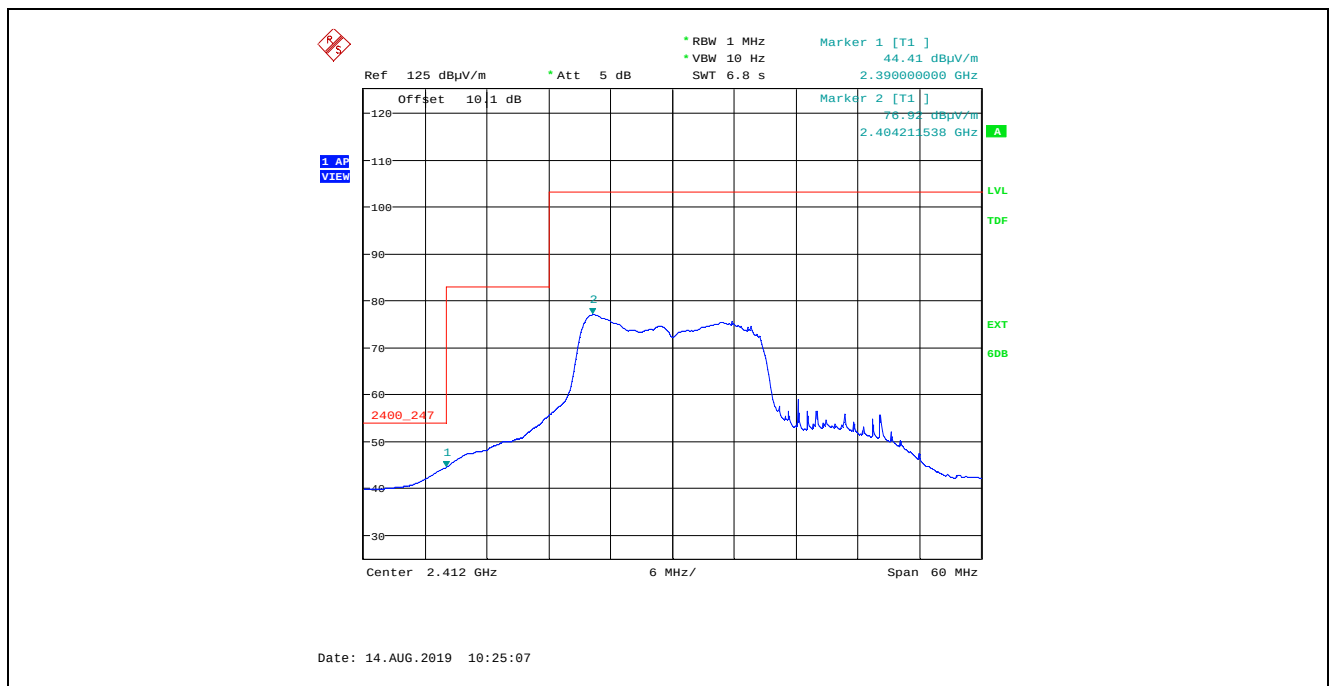
Plot 5.4.4.2.3.74. Band-Edge RF Radiated Emissions at 3 m, Vertical, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 20, Channel 1, 2412 MHz



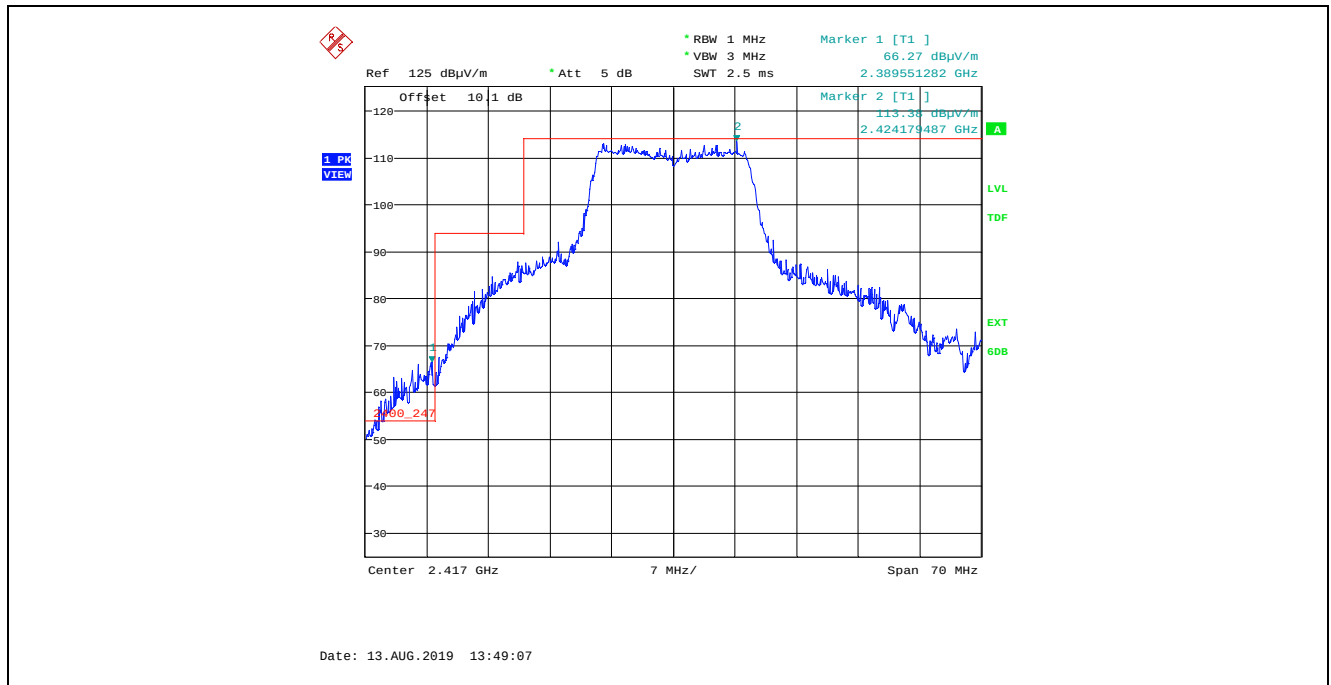
Plot 5.4.4.2.3.75. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 20, Channel 1, 2412 MHz



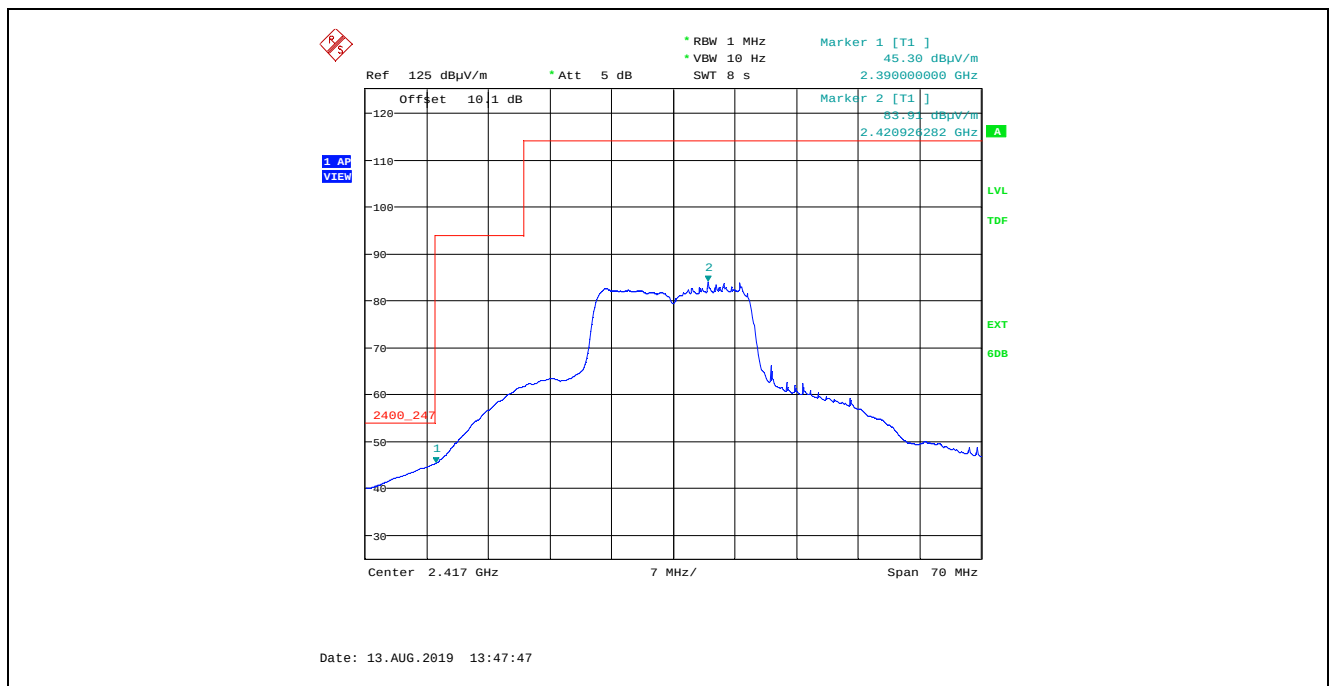
Plot 5.4.4.2.3.76. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 20, Channel 1, 2412 MHz



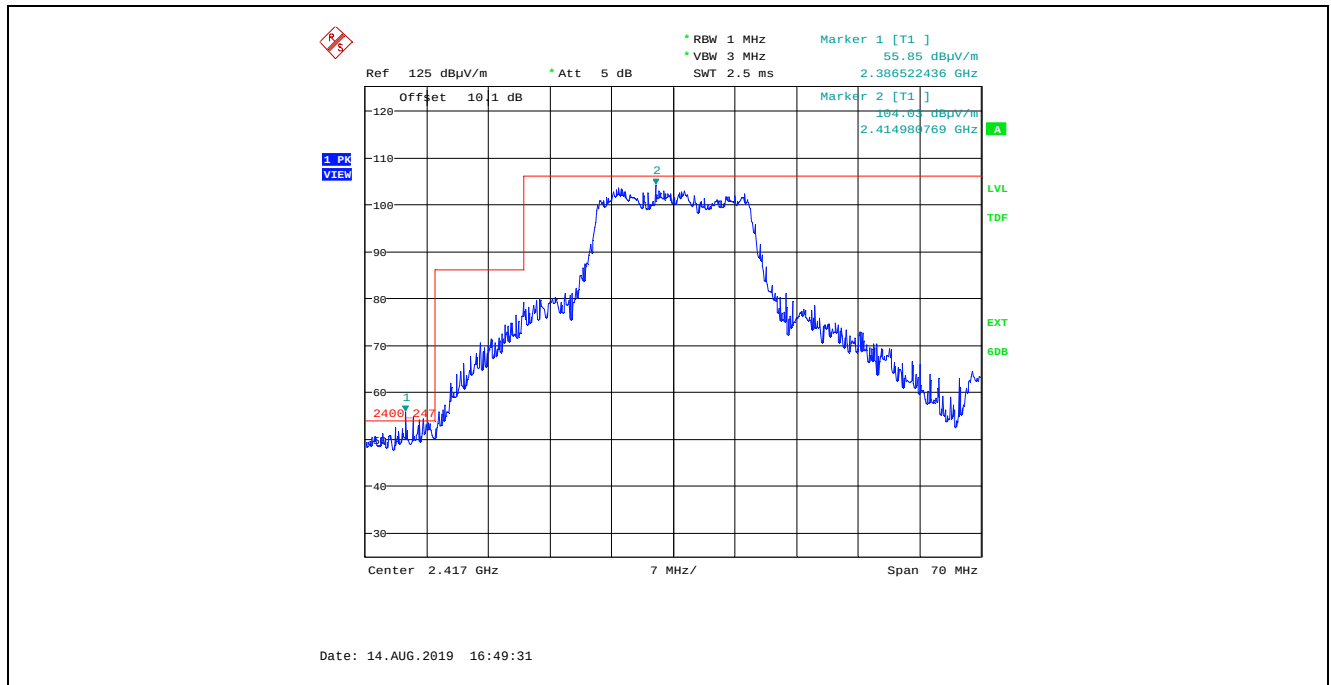
Plot 5.4.4.2.3.77. Band-Edge RF Radiated Emissions at 3 m, Vertical, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 2, 2417 MHz



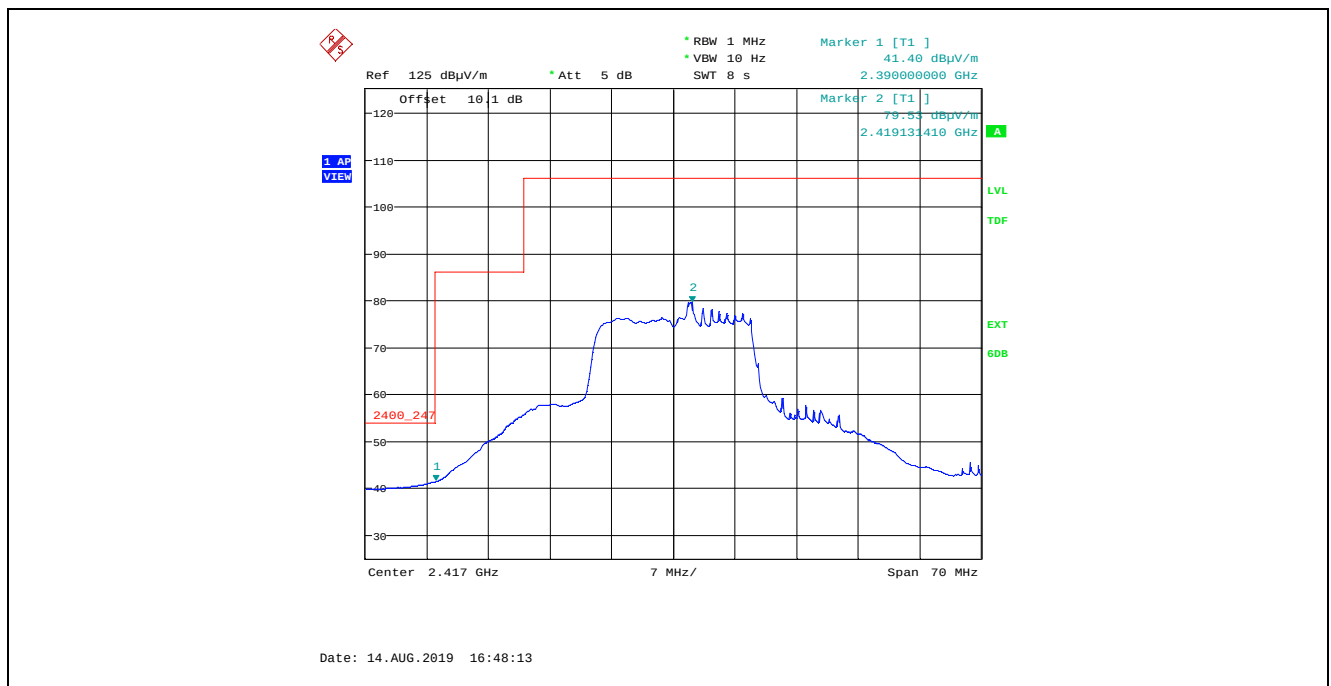
Plot 5.4.4.2.3.78. Band-Edge RF Radiated Emissions at 3 m, Vertical, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 2, 2417 MHz



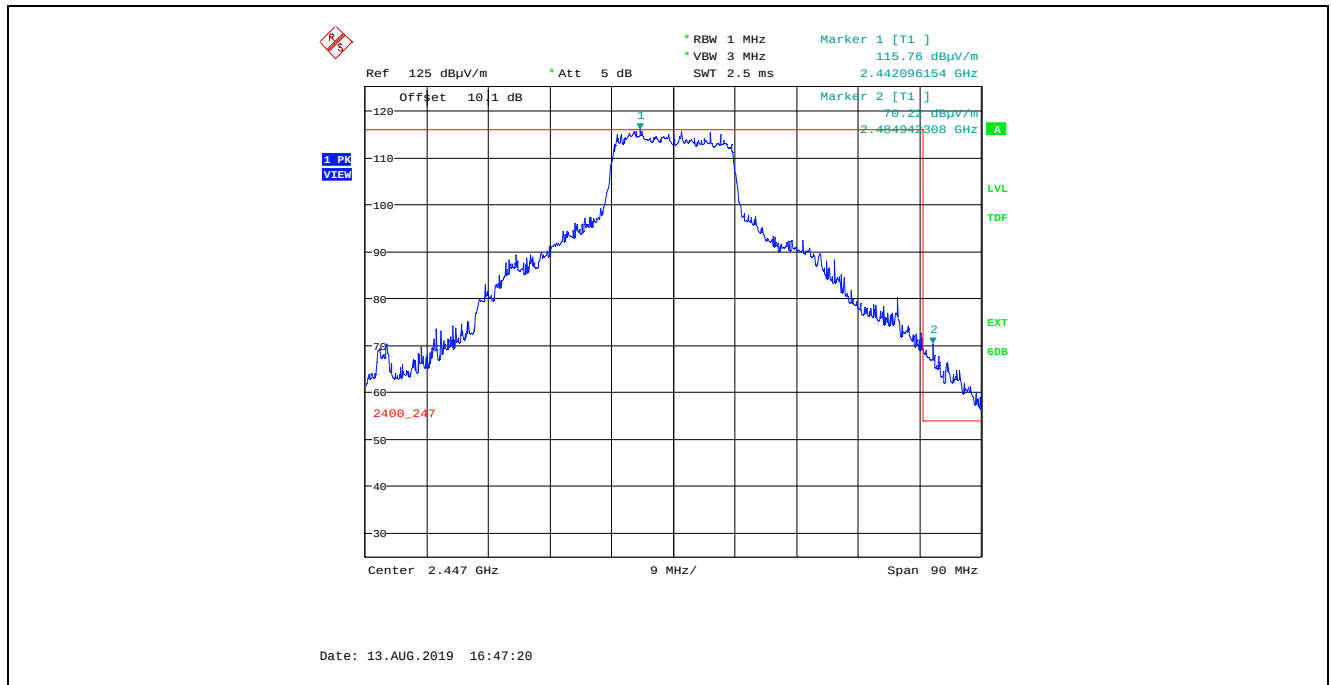
Plot 5.4.4.2.3.79. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 2, 2417 MHz



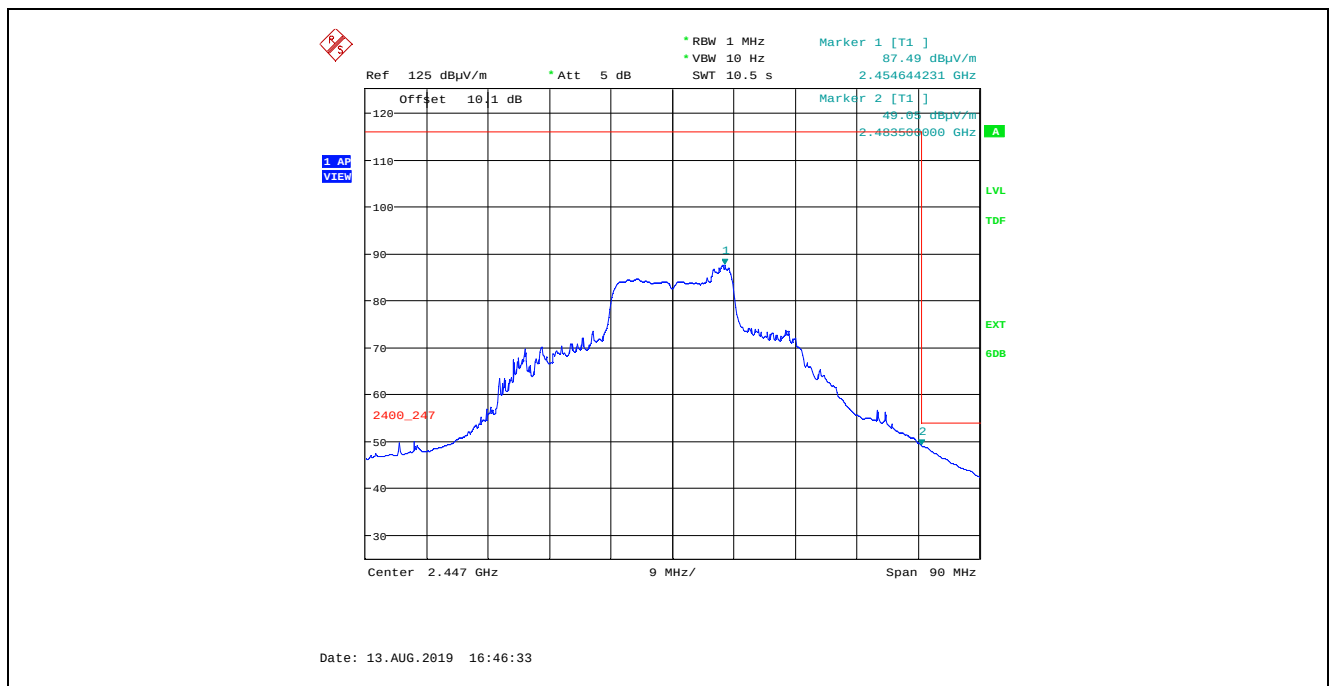
Plot 5.4.4.2.3.80. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 2, 2417 MHz



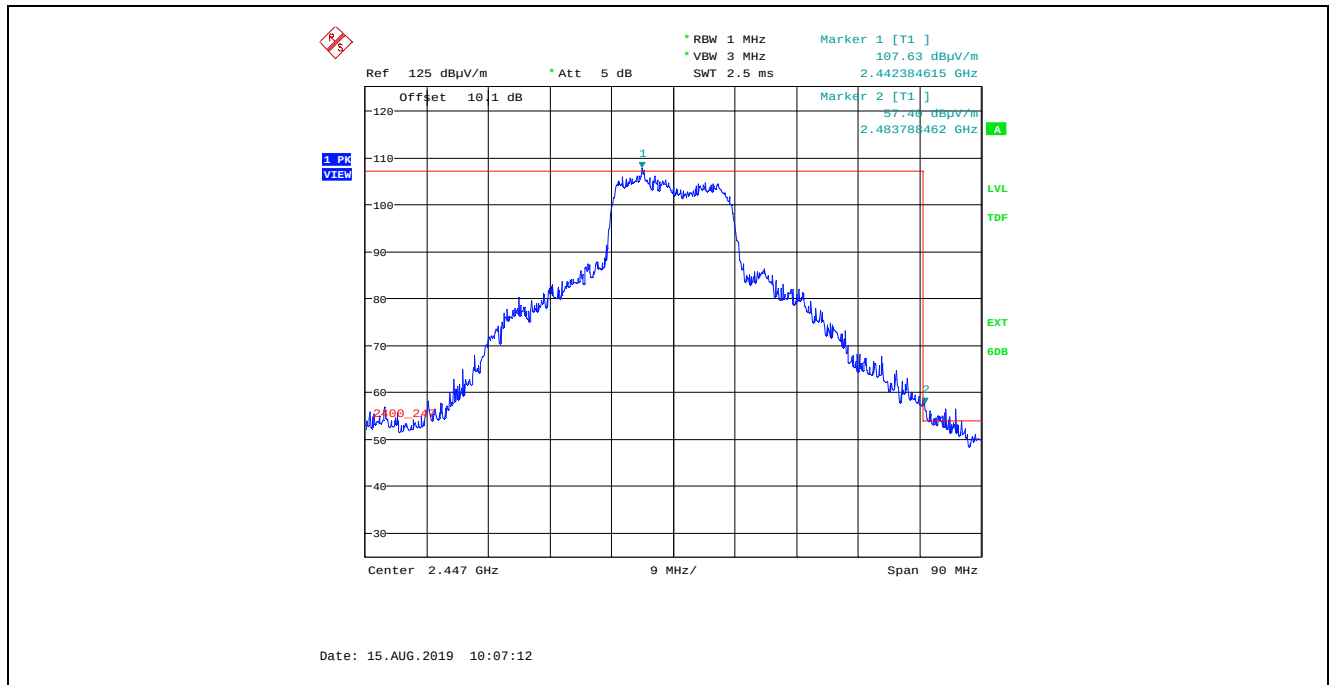
Plot 5.4.4.2.3.81. Band-Edge RF Radiated Emissions at 3 m, Vertical, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 8, 2447 MHz



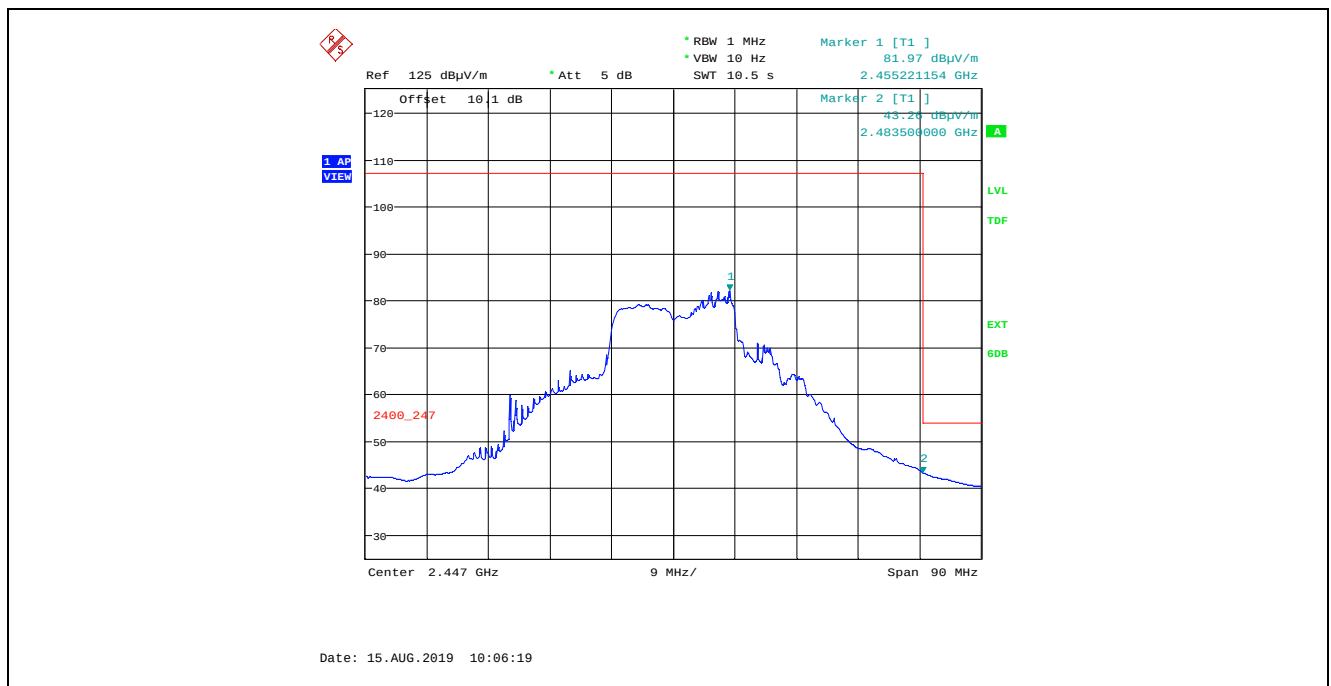
Plot 5.4.4.2.3.82. Band-Edge RF Radiated Emissions at 3 m, Vertical, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 8, 2447 MHz



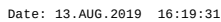
Plot 5.4.4.2.3.83. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 8, 2447 MHz



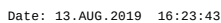
Plot 5.4.4.2.3.84. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 24, Channel 8, 2447 MHz



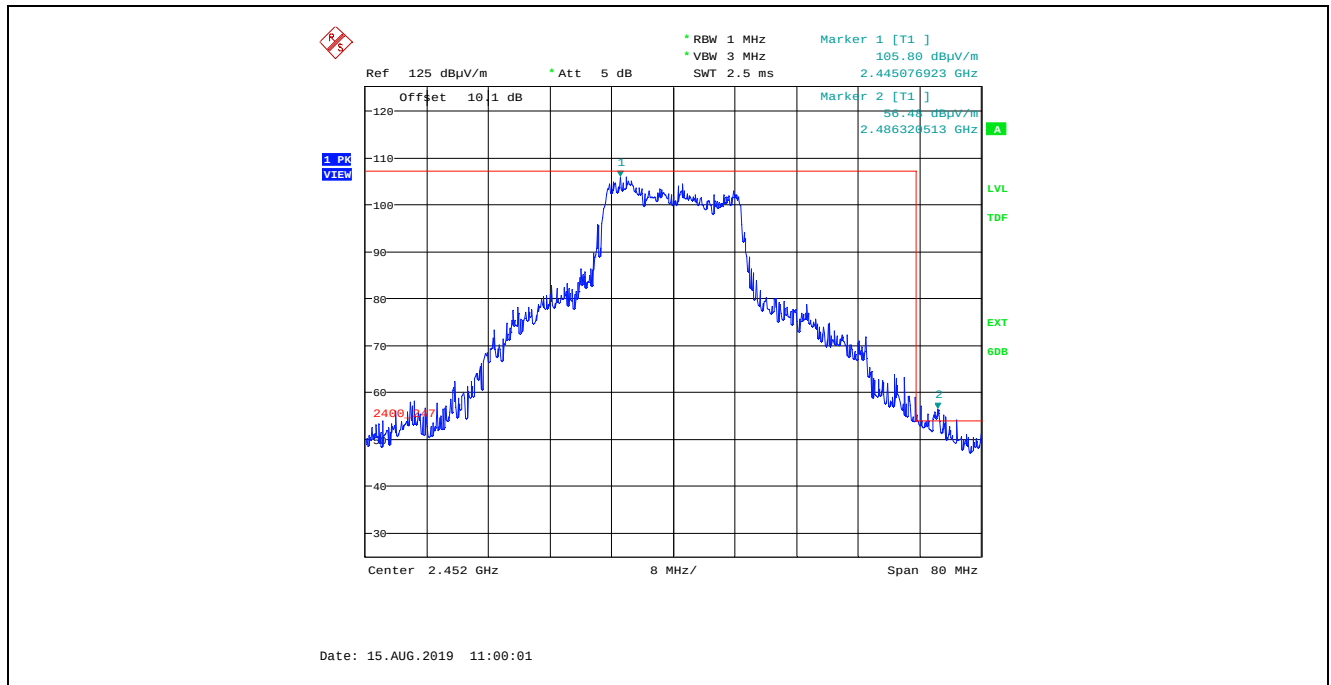
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 9, 2452 MHz



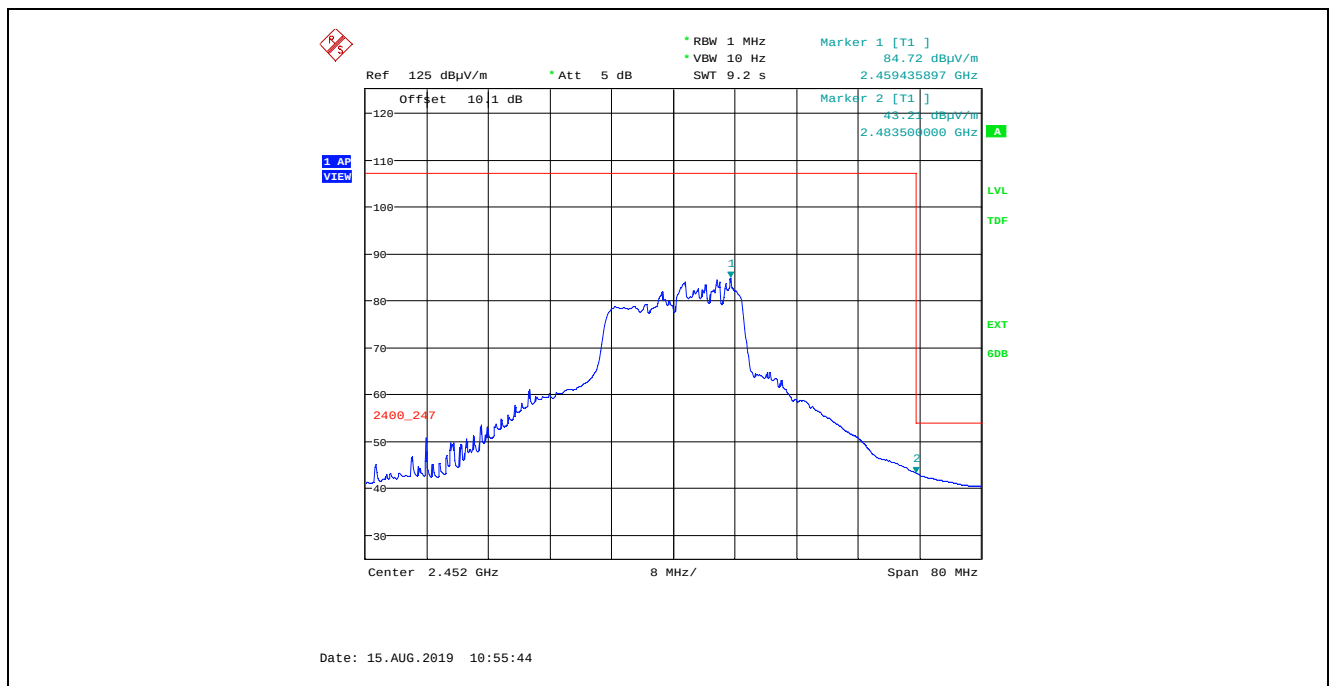
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 9, 2452 MHz



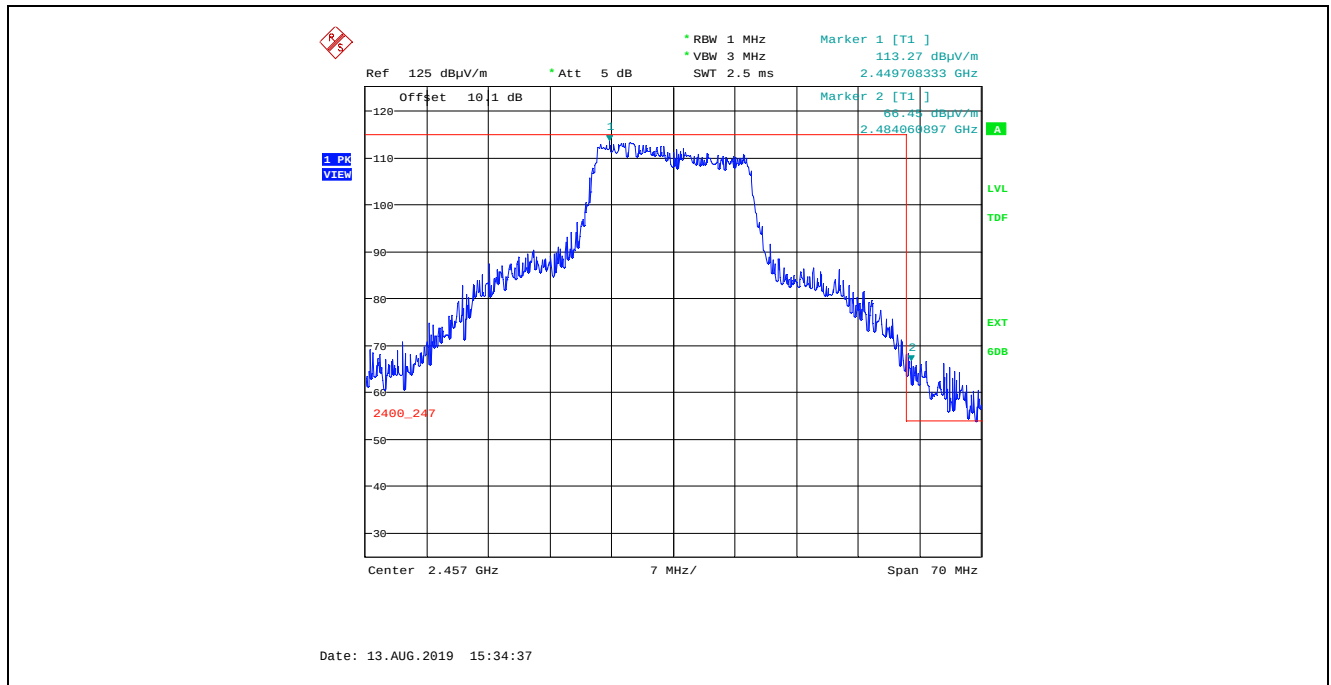
Plot 5.4.4.2.3.87. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 9, 2452 MHz



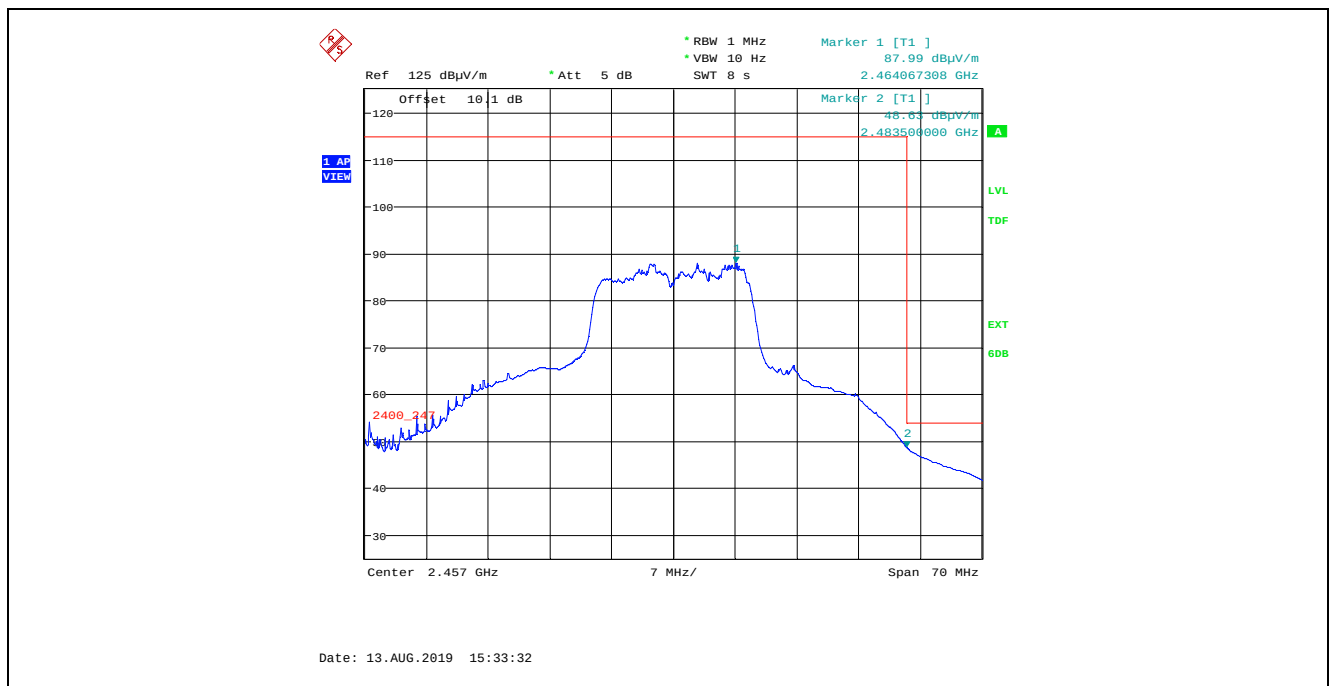
Plot 5.4.4.2.3.88. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 9, 2452 MHz



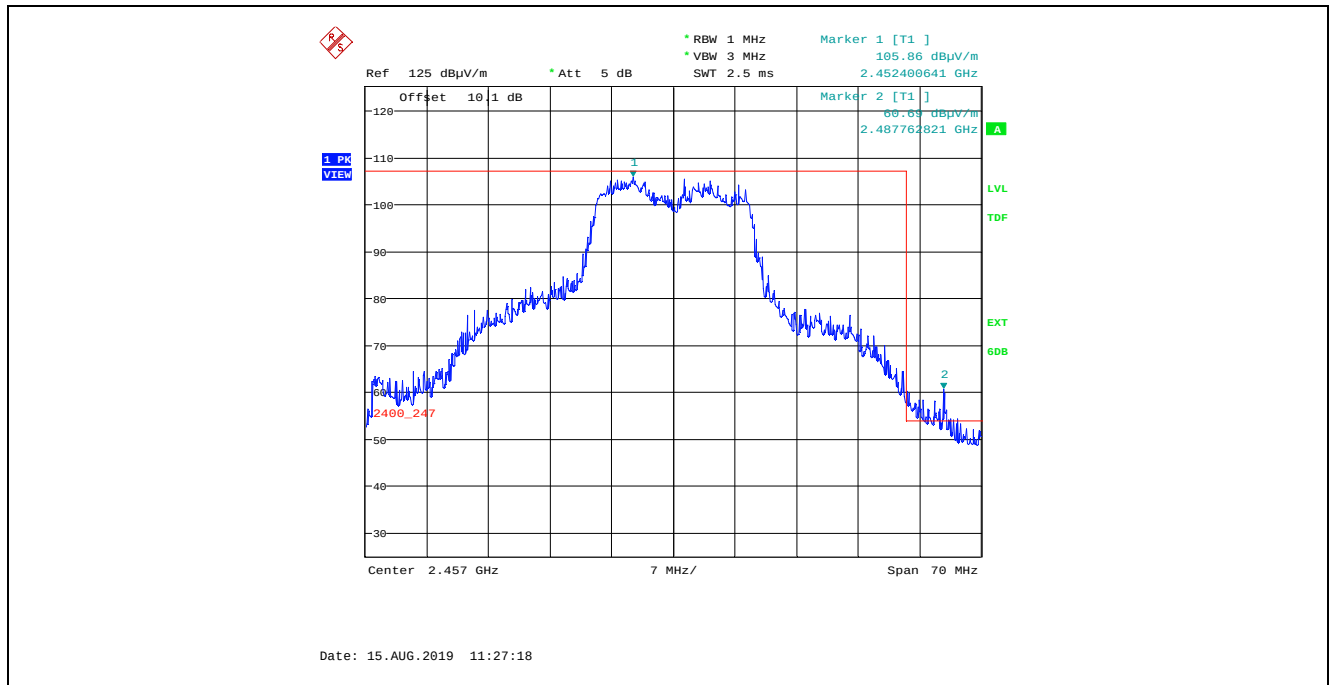
Plot 5.4.4.2.3.89. Band-Edge RF Radiated Emissions at 3 m, Vertical, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 10, 2457 MHz



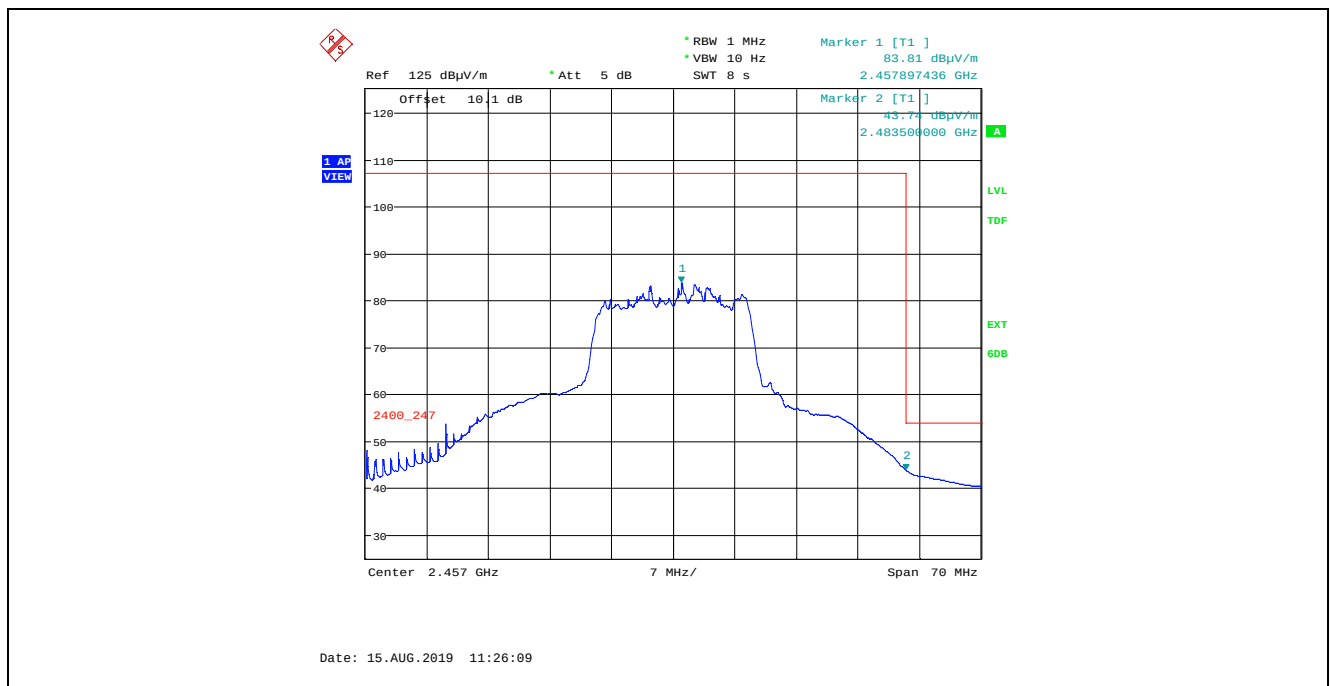
Plot 5.4.4.2.3.90. Band-Edge RF Radiated Emissions at 3 m, Vertical, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 10, 2457 MHz



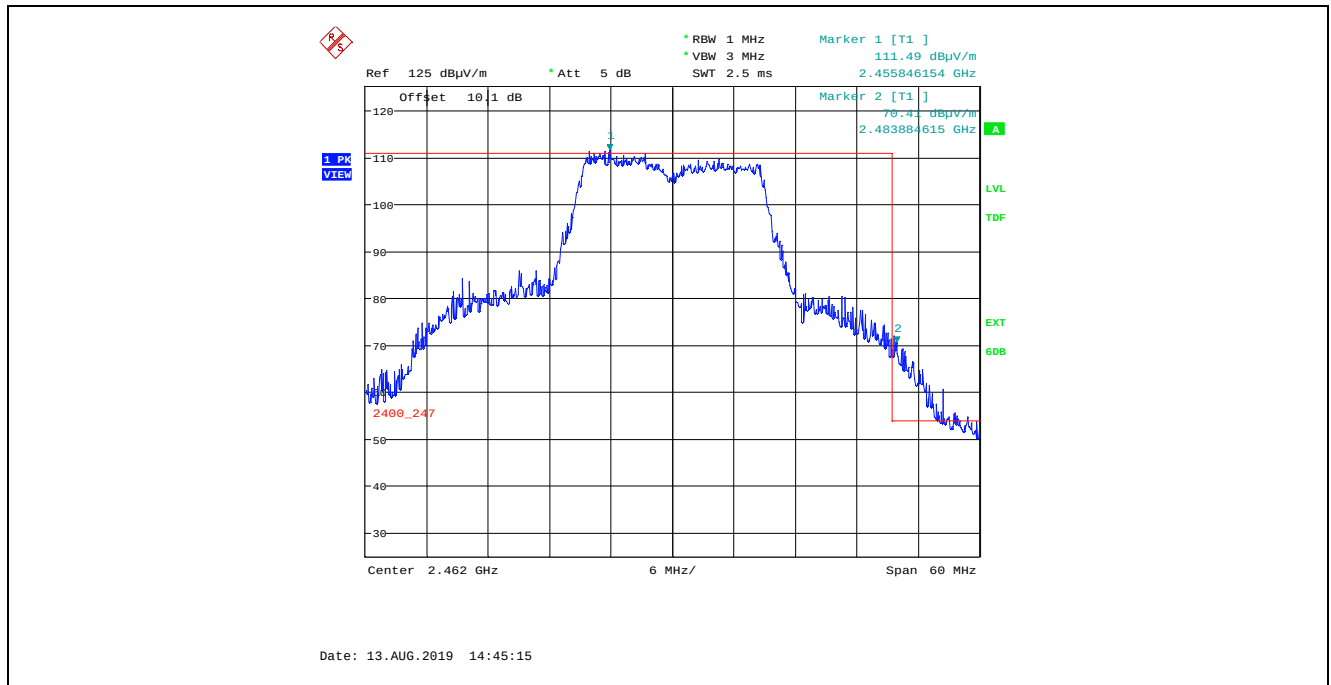
Plot 5.4.4.2.3.91. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 10, 2457 MHz



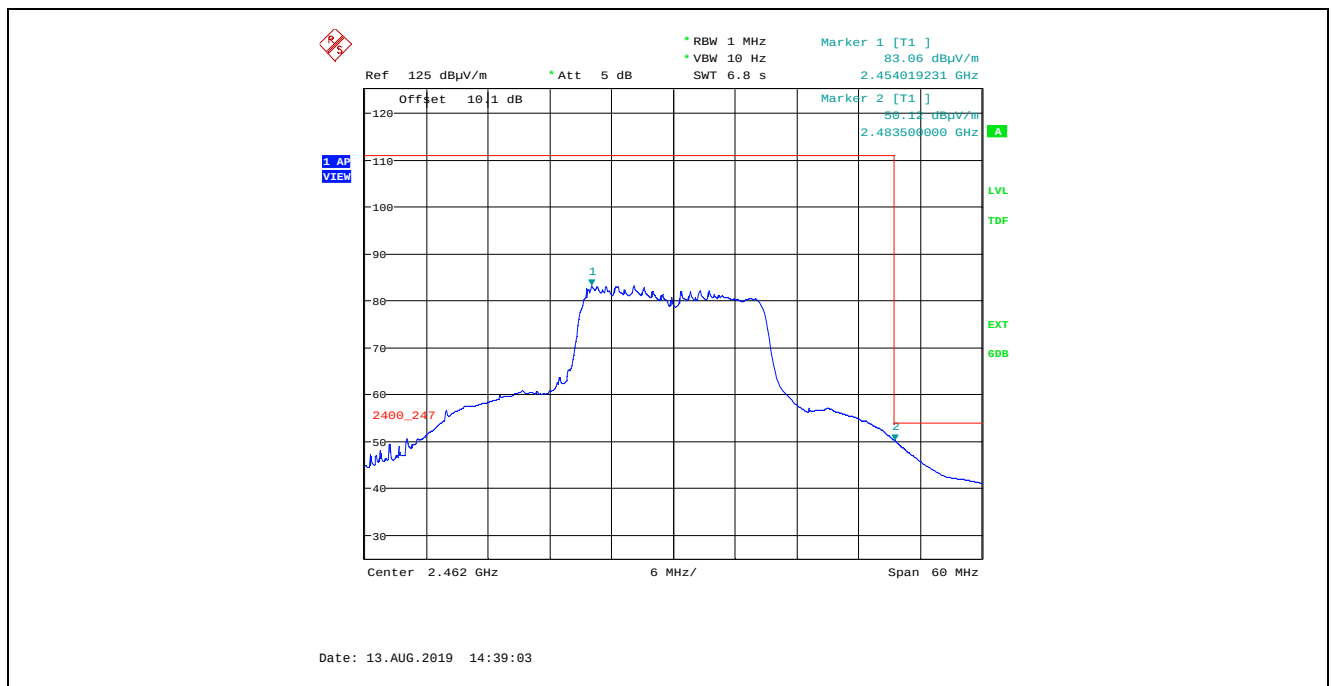
Plot 5.4.4.2.3.92. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 21, Channel 10, 2457 MHz



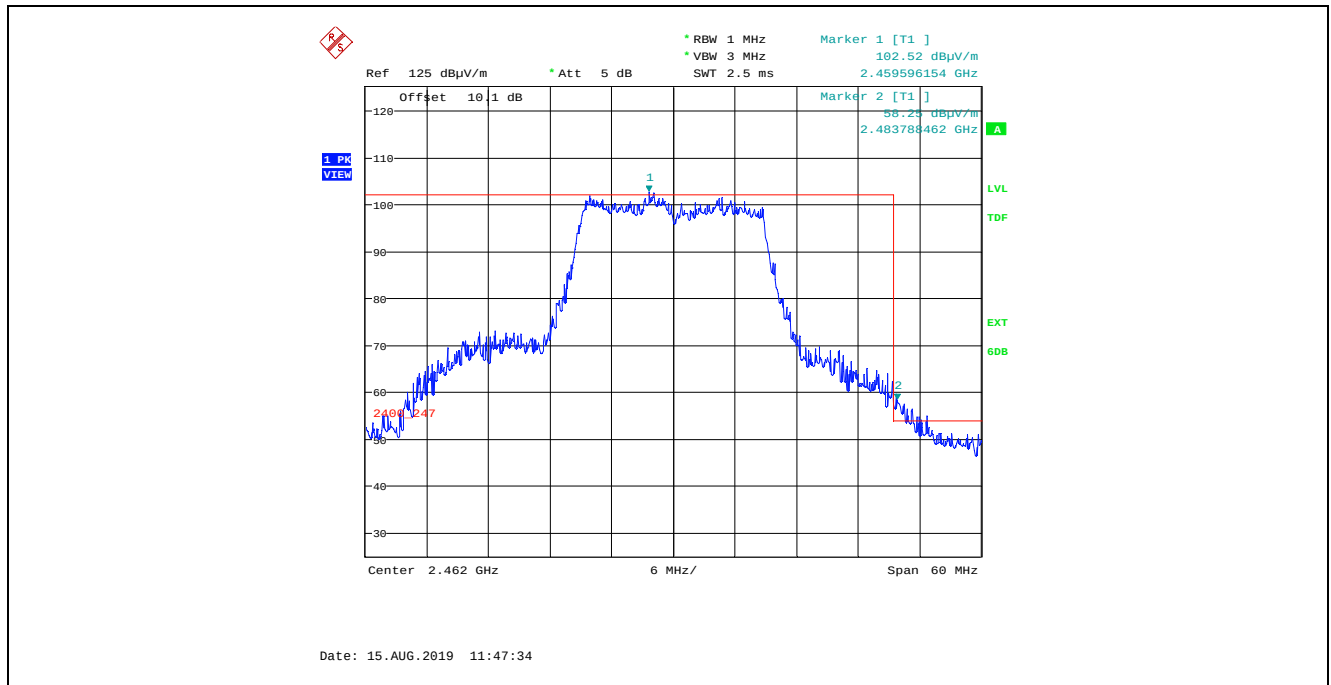
Plot 5.4.4.2.3.93. Band-Edge RF Radiated Emissions at 3 m, Vertical, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 18, Channel 11, 2462 MHz



Plot 5.4.4.2.3.94. Band-Edge RF Radiated Emissions at 3 m, Vertical, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 18, Channel 11, 2462 MHz



Plot 5.4.4.2.3.95. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Peak
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 18, Channel 11, 2462 MHz



Plot 5.4.4.2.3.96. Band-Edge RF Radiated Emissions at 3 m, Horizontal Polarization, Average
802.11n HT20, 400 ns, MCS 7, 64-QAM 5/6 72.2Mbps, Power Setting 18, Channel 11, 2462 MHz

