

Produkte
Products

Prüfbericht - Nr.: 19660234 001		Seite 1 von 127	
<i>Test Report No.:</i>		<i>Page 1 of 127</i>	
Auftraggeber: <i>Client:</i>	GE Healthcare Phase V Plot No #122, Phase II EPIP Whitefield Road, Bangalore 560066, India		
Gegenstand der Prüfung: <i>Test item:</i>	Ultrasound Scanner		
Bezeichnung: <i>Identification:</i>	Vscan Extend	Serien-Nr.: <i>Serial No.</i>	VH150103AI
Wareneingangs-Nr.: <i>Receipt No.:</i>	1803150937	Eingangsdatum: <i>Date of receipt:</i>	29.06.2016
Prüfart: <i>Testing location:</i>	Refer Page 4 of 127 for test facilities		
Prüfgrundlage: <i>Test specification:</i>	FCC Part 15: Subpart C ANSI C63.10-2013		
Prüfresultat: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test items passed the test specification(s).</i>		
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland (India) Pvt. Ltd. 82/A, 3rd Main, West Wing, Electronic City Phase 1 Hosur Road, Bangalore – 560 100, India FCC Registration No.: 176555		
geprüft / tested by:		kontrolliert / reviewed by:	
23.08.2016 Vinay N <i>(Signature: Vinay N)</i> Sr.Engineer		26.08.2016 Raghavendra Kulkarni <i>(Signature: Raghavendra Kulkarni)</i> Sr.Manager	
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>
Sonstiges / Other Aspects: FCC ID: YOMVSCANEXTEND			
Abkürzungen:		Abbreviations:	
P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet		P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested	
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i>			

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Test Result Summary

Clause	Test Item	Result
FCC 15.247(b) (3)	Maximum conducted (average) output power	Pass
FCC 15.247(a) (2)	DTS Bandwidth	Pass
FCC 15.247(e)	Maximum Power Spectral Density	Pass
FCC 15.247(d)	Emissions in non-restricted frequency bands	Pass
FCC 15.209 / FCC 15.205	Spurious Radiated Emissions and Restricted Bands of Operation	Pass
FCC 15.207	Conducted Emissions on a.c Power Lines	Pass

Note: Conducted measurements are done according to the procedure given in KDB No558074 D01 DTS Meas Guidance v03r05 & 662911 D01

This product has Both Single probe and Dual probe options. Product is been tested for both options and worst case results are reported in this test report.

Legal Manufacturer Details

GE Vingmed Ultrasound, A/S
Strandpomenaden 45,
3191 Horten,
Norway

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List of Test and Measurement Instruments

Equipment	Manufacturer	Model Name	Serial Number	Calibration Due Date	Periodicity	Used for Test Items
EMI Test Receiver	Rohde & Schwarz	ESU 40	100288	23.11.2016	Yearly	Spurious Radiated Emissions
Broadband Antenna	Frankonia	ALX-4000	ALX-4000-806	20.01.2017	Yearly	
Active Loop Antenna	Frankonia	LAX-10	LAX-10-800	22.12.2016	Yearly	
Broadband Horn Antenna	Frankonia	HAX-18	HAX18-802	14.03.2017	Yearly	
Emission Horn Antenna	ETS Lindgren	116706	00107323	02.11.2016	Yearly	
Anechoic Chamber	Frankonia	-	-	-	-	Antenna - Port Conducted Tests
Spectrum Analyser	Agilent Technologies	E4407B	US41192772	23.04.2017	Yearly	
Signal Analyzer	Rohde & Schwarz	FSV7	101644	07.12.1016	Yearly	

Testing Facilities:

- 1) TUV Rheinland (India) Private Limited
No. 108, West Wing
Electronic city Phase I
Bangalore – 560100

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General Product Information

Product Function and Intended Use

Vscan Extend is a general purpose handheld diagnostic ultrasound imaging system for use by qualified and trained health care professionals enabling visualization and measurement of anatomical structures and fluid.

Ratings and System Details

Frequency Range	2400MHz – 2480MHz	
No. of channel	Refer page 5 of 127	
Channel Spacing	5MHz	
Transmitted Power	802.11b	14.67 dBm
	802.11g	12.11 dBm
	802.11nHT20	11.79 dBm
	802.11nHT40	10.68 dBm
Data Rate	802.11b: 1,2, 5.5,11 Mbps 802.11g: 6, 9, 12, 18, 24, 36,48, 54 Mbps 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11nHT20: 6.5, 13, 19.5, 26, 39, 52, 58.5,65Mbps 802.11nHT40: 13.5, 27, 40.5, 54, 81, 108, 121.5, 135 Mbps	
Modulation	802.11b: DSSS with CCK 802.11g: OFDM with BPSK, QPSK, 16-QAM, 64-QAM 802.11n: OFDM with BPSK, QPSK, 16-QAM, 64-QAM	
Number of antenna	One	
Antenna Gain	0dBi	
Supply Voltage	7.4 VDC Battery	
Dimensions	168 x 76 x 22 mm	
Environmental Condition	Operating temperature is 0°C to 40°C	

Test Conditions:

Supply Voltage: 110V AC to the Power adaptor

Environmental conditions:

Temperature: +25 °C RH: 62%

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Test Set-up and Operation Mode

Principle of Configuration Selection

Transmission was enabled with continuous transmission on low, mid and high channel.

Test Operation and Test Software

Test software was used to enable the continuous transmission, changing channels (low/mid/high) and data rates on the EUT for the tests in this report.

Special Accessories and Auxiliary Equipment

- None

Countermeasures to achieve EMC Compliance

- None

Test Modes – Data Rates and Modulations

For Radiated spurious emissions, the tests were performed for all data rates and only worst case results are reported in this report.

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List of Centre Frequencies: Table 1

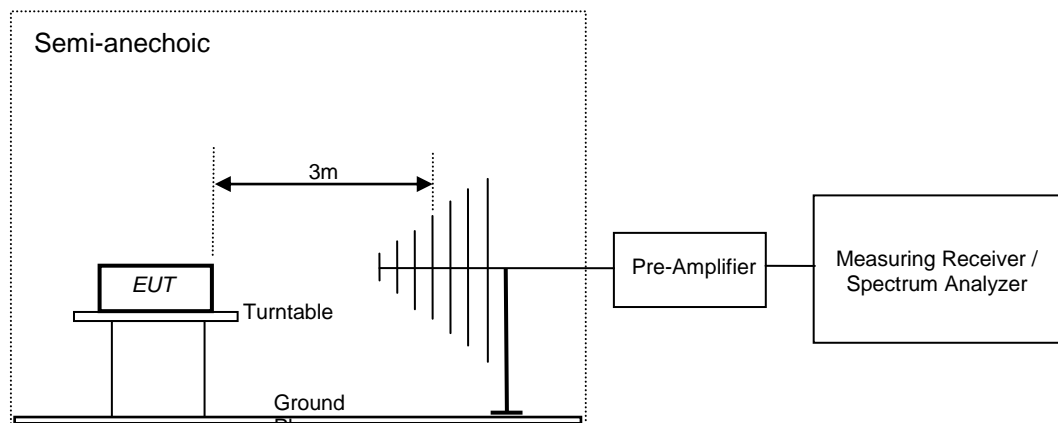
Frequency Band (MHz)	Channel No.	Channel Frequency (MHz)
2400 – 2483.5 (20MHz Bandwidth)_ Wi-Fi	1	2412
	2	2417
	3	2422
	4	2427
	5	2432
	6	2437
	7	2437
	8	2447
	9	2452
	10	2457
	11	2462
	12	2467
	13	2472
2400 – 2483.5 (40MHz Bandwidth)_Wi-Fi	3	2422
	4	2427
	5	2432
	6	2437
	7	2437
	8	2447
	9	2452
	10	2457
	11	2462

Test Methodology

Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2013. The equipment under test (EUT) was placed at the middle of the 80 cm high turntable for below 1GHz & 1.5m height for above 1GHz measurement, and the EUT is 3 meters far from the measuring antenna. The turntable was rotated 360° for obtaining the maximum emission. The height of the measuring antennas was scanned between 1m and 4m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1000MHz was performed by horn antenna. The measurement below 30MHz was performed by loop antenna.

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded.



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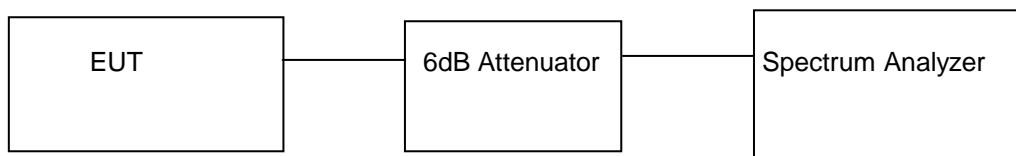
Test Results

**Maximum Average Conducted Output Power
Result**

**Section 15.247(b) (3)
Pass**

Test Specification	FCC Part 15 Subpart C
Measurement Bandwidth (RBW)	1MHz
Detector Function	Average
Requirement	≤1 watt (30dBm).

Test Method:



Note: For measurement of Maximum Average conducted output power method AVGSA-1 was used

Test Result: Wi-Fi

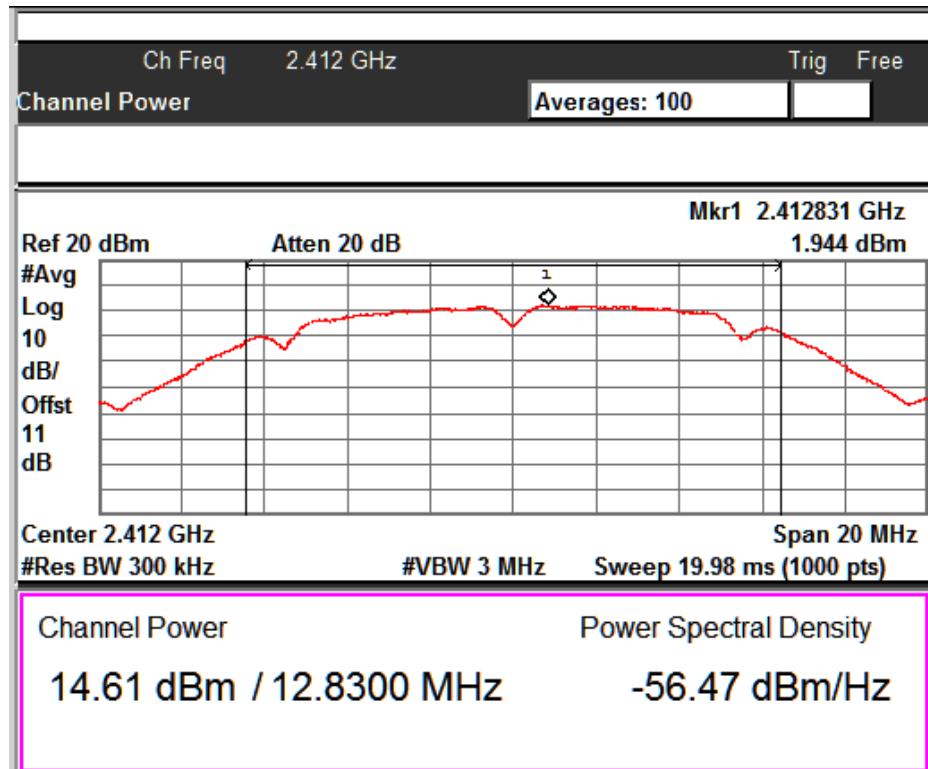
Test Results for Path A

Attenuator (10dB) + cable loss (1dB) = 11dB Considered in the test result

IEEE 802.11b

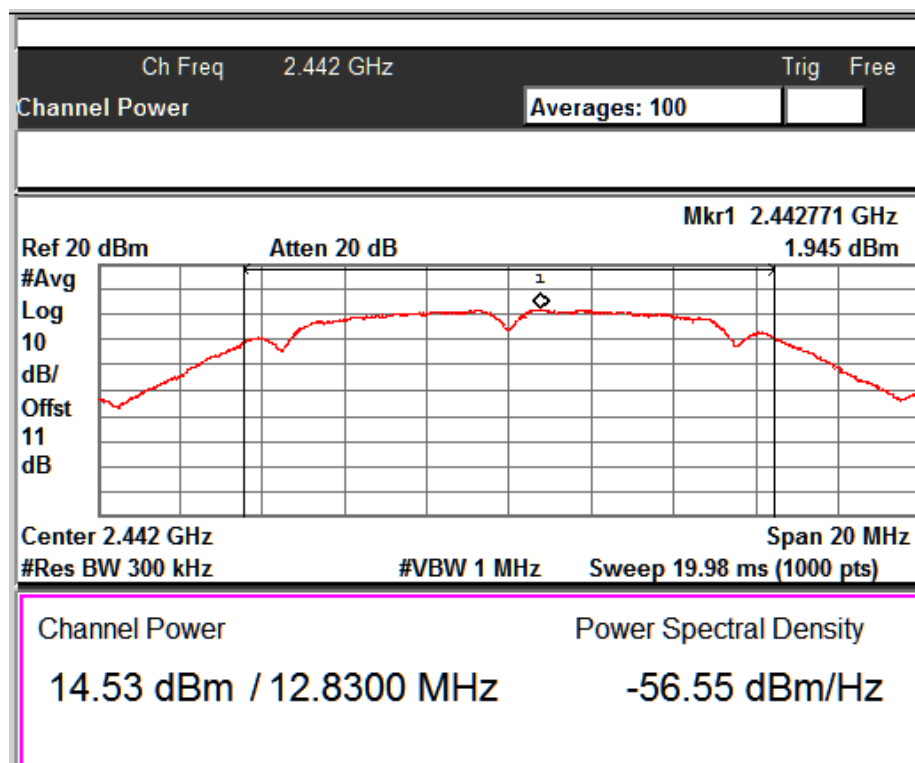
Data Rate (Mbps)	Channel Frequency (MHz)	Average Power (dBm)
1	2412	14.61
	2442	14.53
	2472	13.12
11	2412	14.67
	2442	14.63
	2472	13.12

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Data rate: 1 Mbps

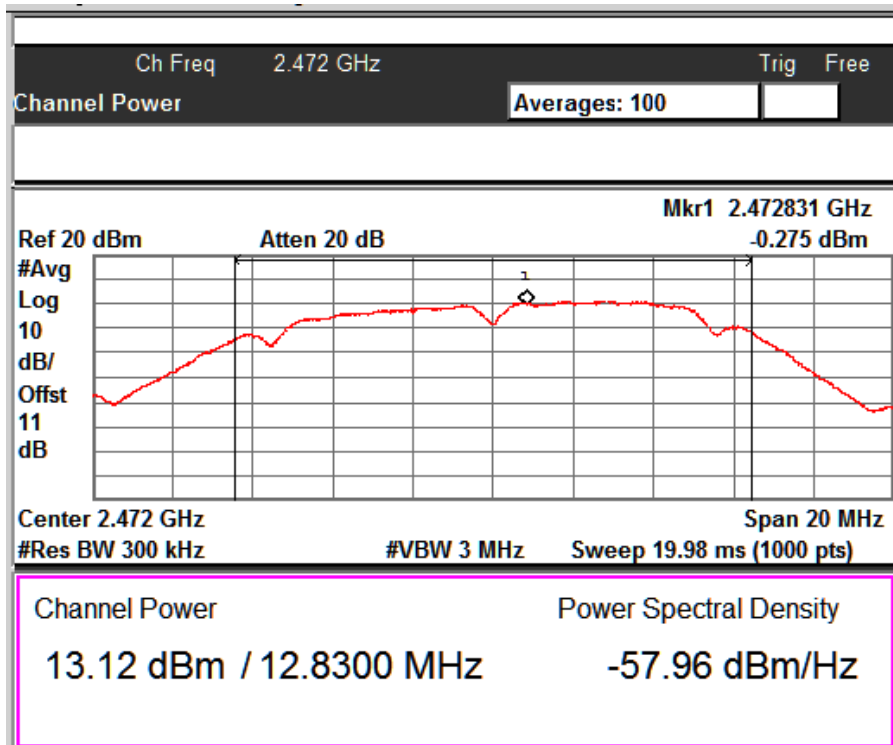
Channel Frequency: 2412MHz



Data rate: 1 Mbps

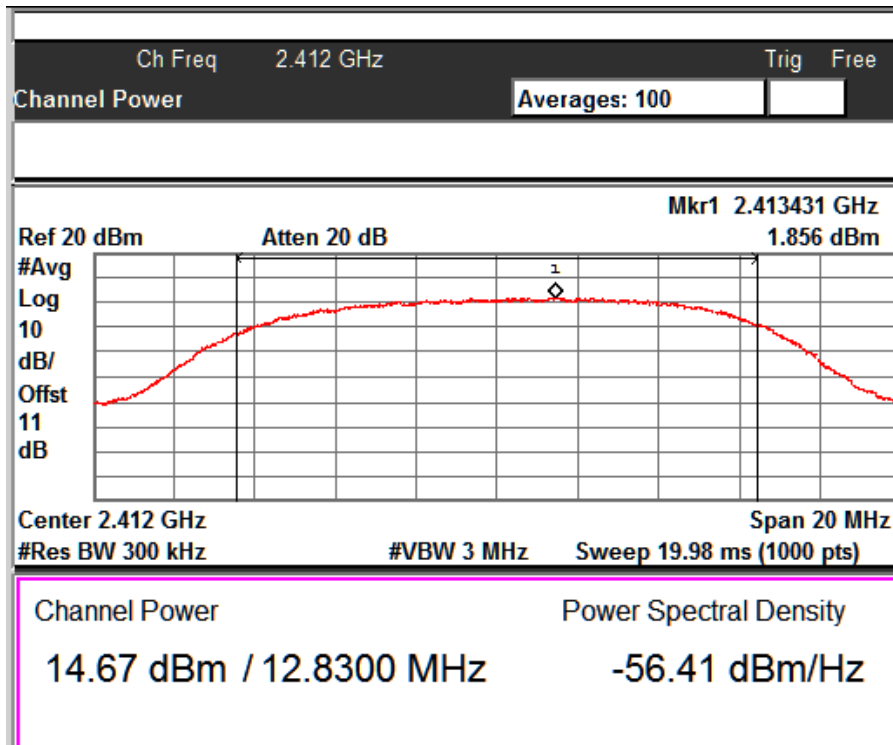
Channel Frequency: 2442 MHz

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Data rate: 1 Mbps

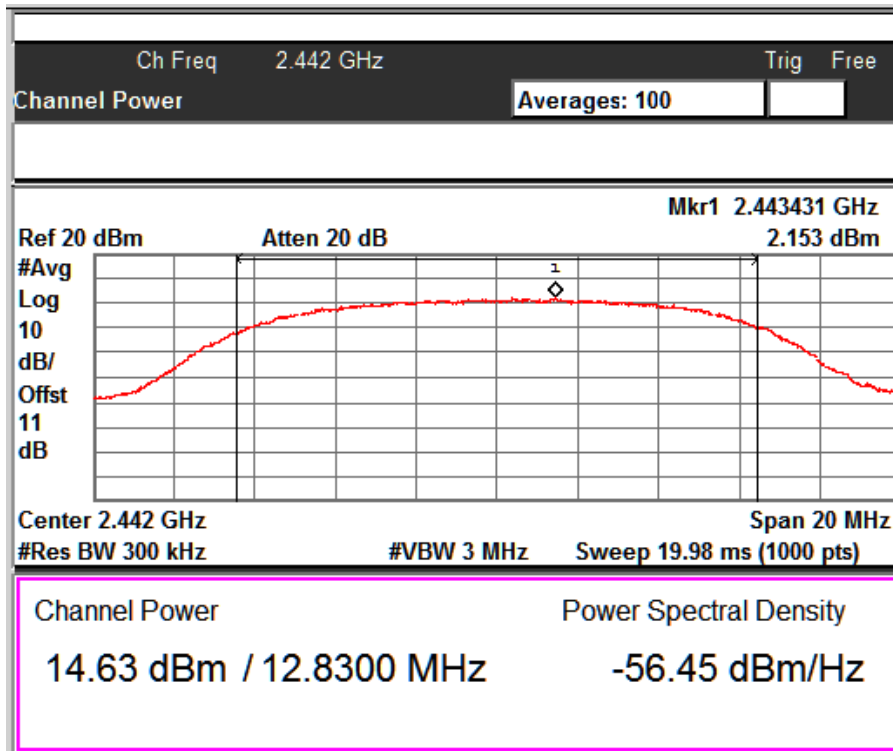
Channel Frequency: 2472 MHz



Data rate: 11 Mbps

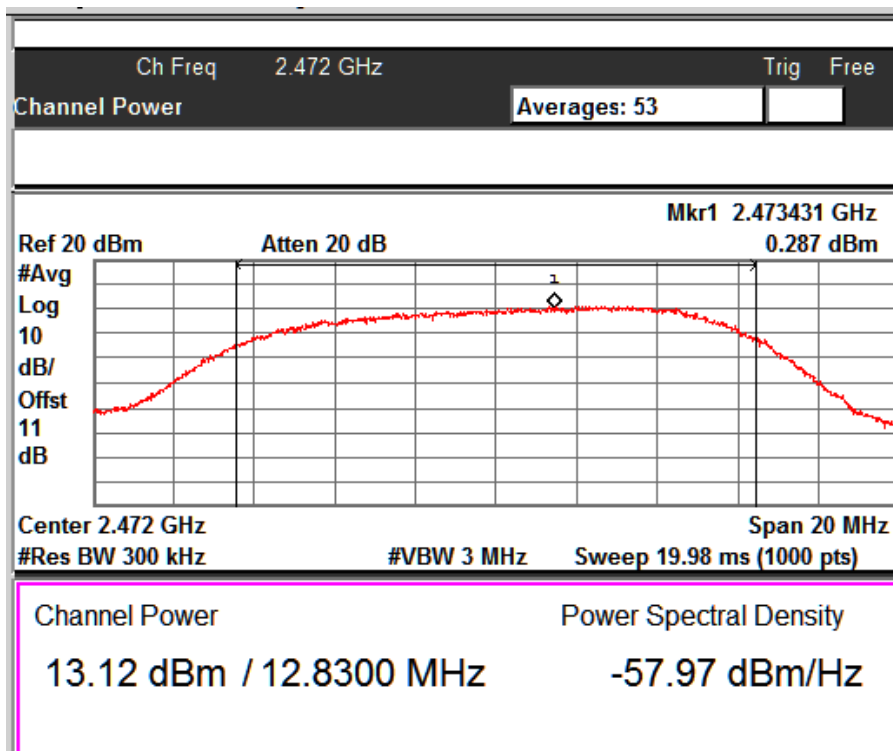
Channel Frequency: 2412 MHz

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Data rate: 11 Mbps

Channel Frequency: 2442 MHz

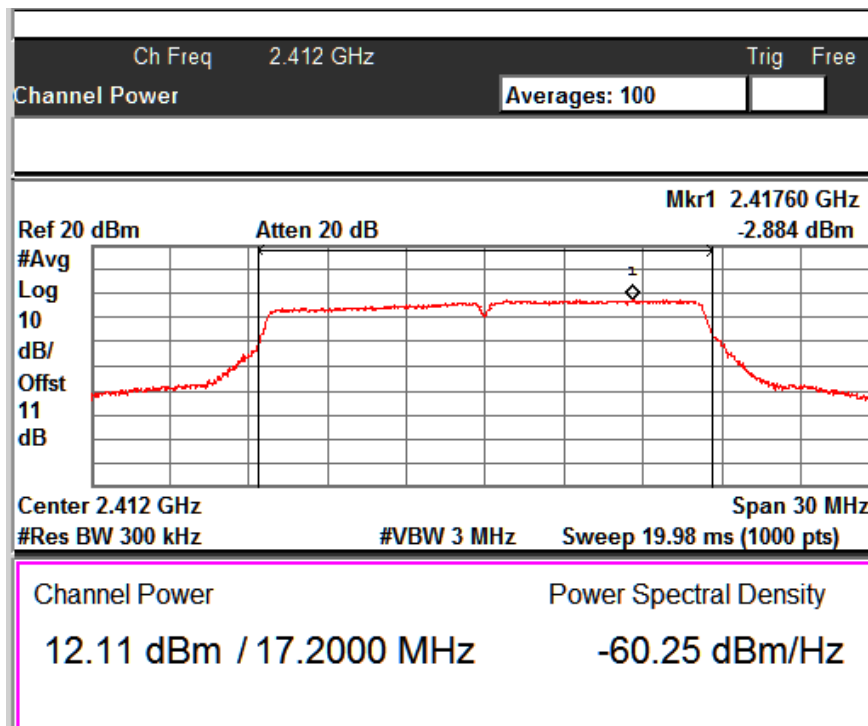


Data rate: 11 Mbps

Channel Frequency: 2472 MHz

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IEEE 802.11g

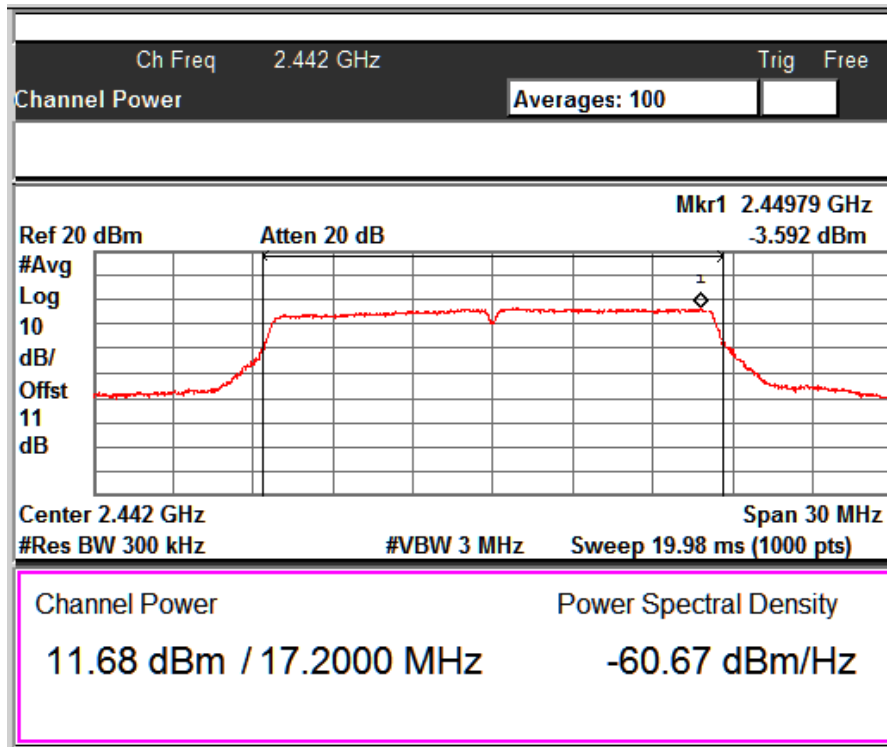
Data Rate (Mbps)	Channel Frequency (MHz)	Average Power (dBm)
6	2412	12.11
	2442	11.68
	2472	10.23
24	2412	11.90
	2442	11.89
	2472	10.21
54	2412	11.68
	2442	11.94
	2472	10.50



Data rate: 6 Mbps

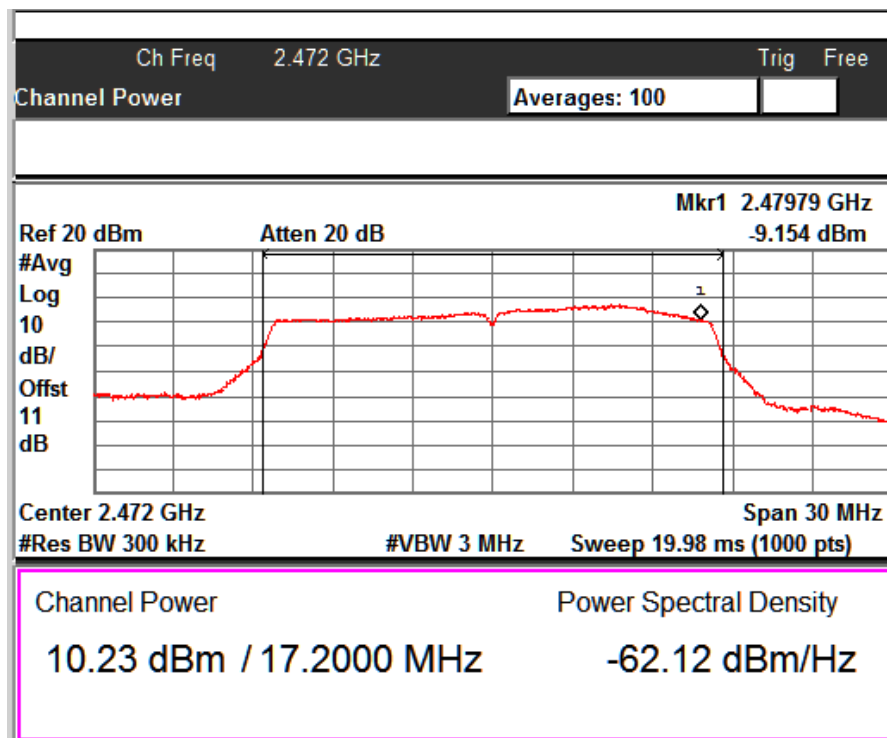
Channel Frequency: 2412 MHz

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Data rate: 6 Mbps

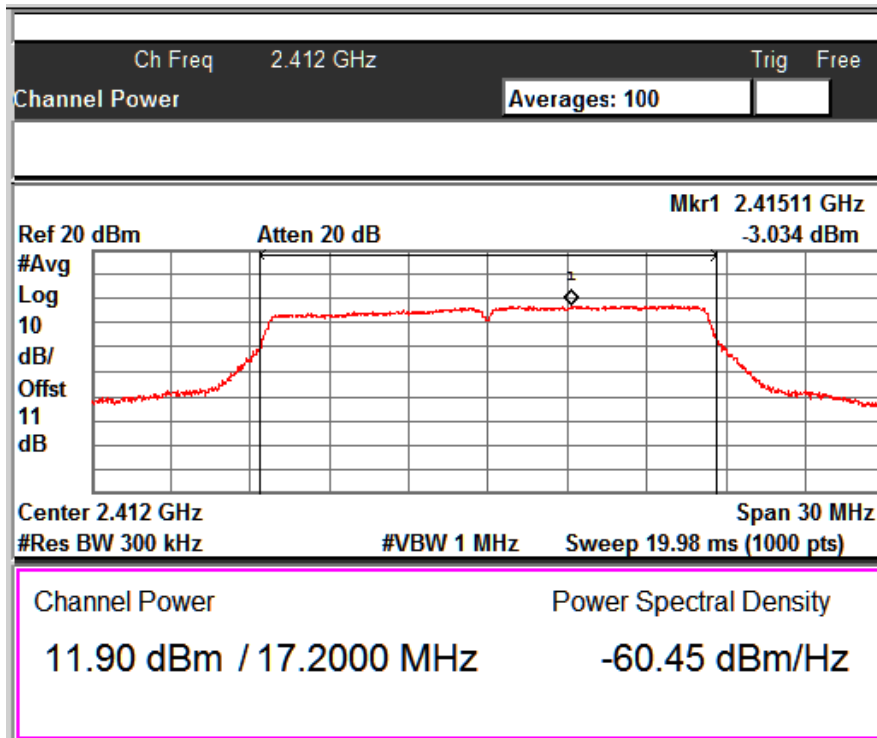
Channel Frequency: 2442 MHz



Data rate: 6 Mbps

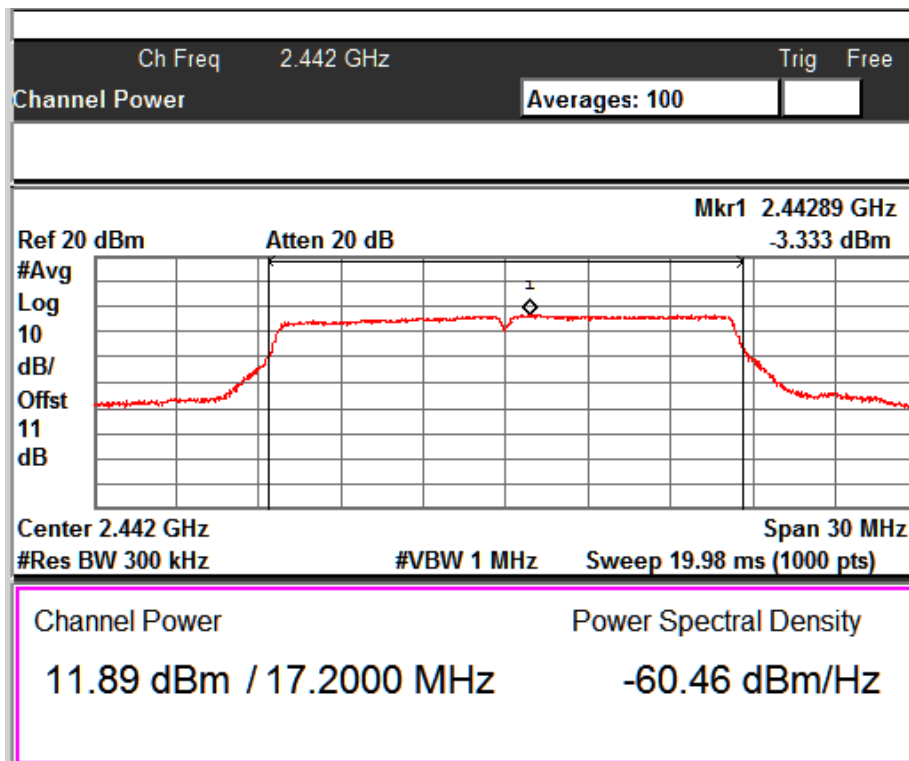
Channel Frequency: 2472 MHz

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Data rate: 24 Mbps

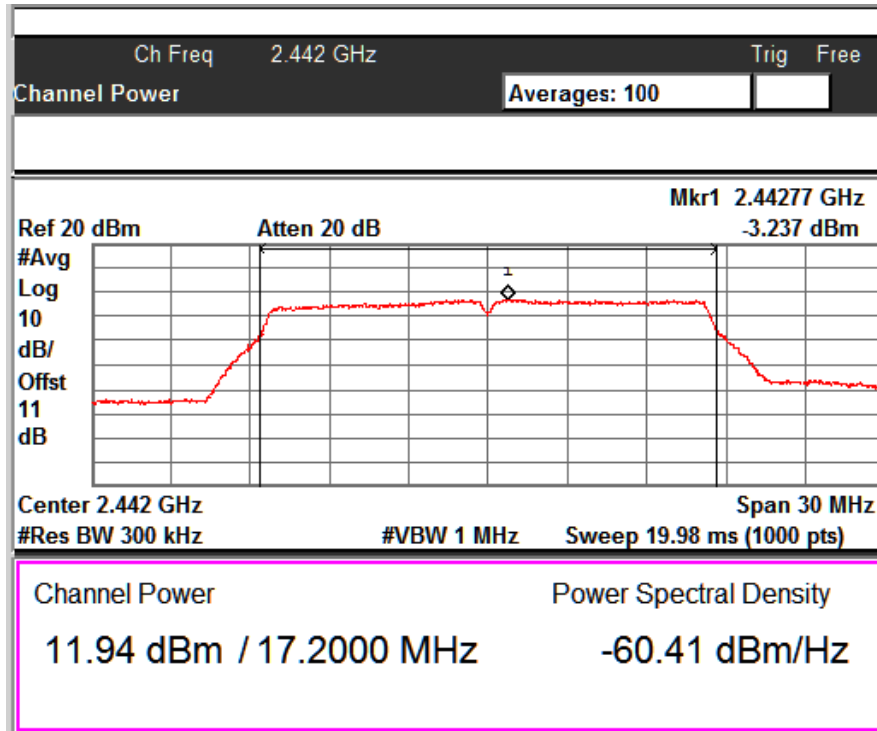
Channel Frequency: 2412 MHz



Data rate: 24 Mbps

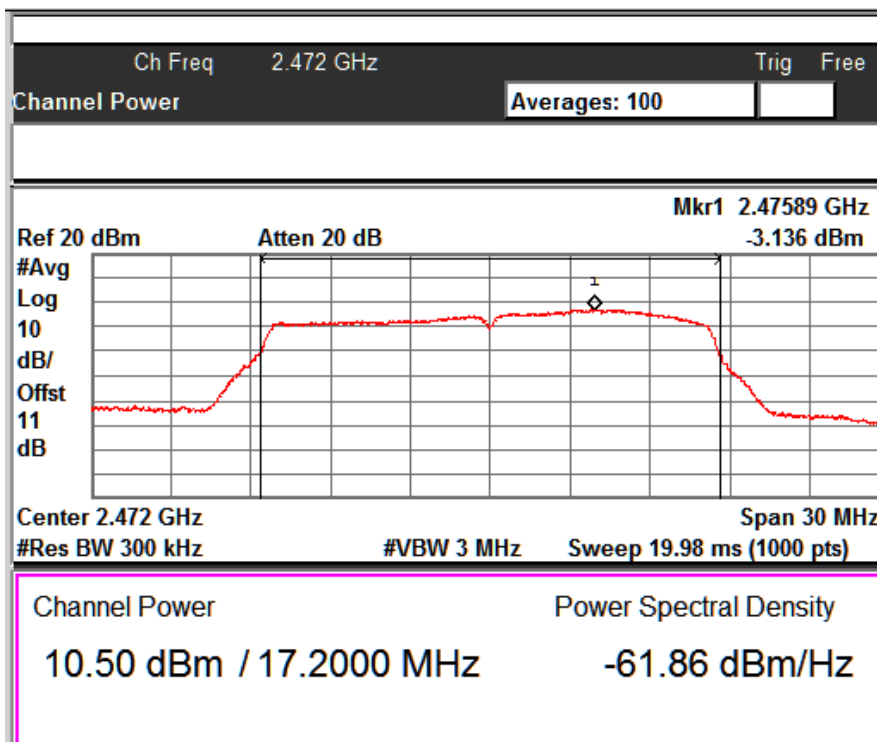
Channel Frequency: 2442 MHz

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Data rate: 54 Mbps

Channel Frequency: 2442 MHz



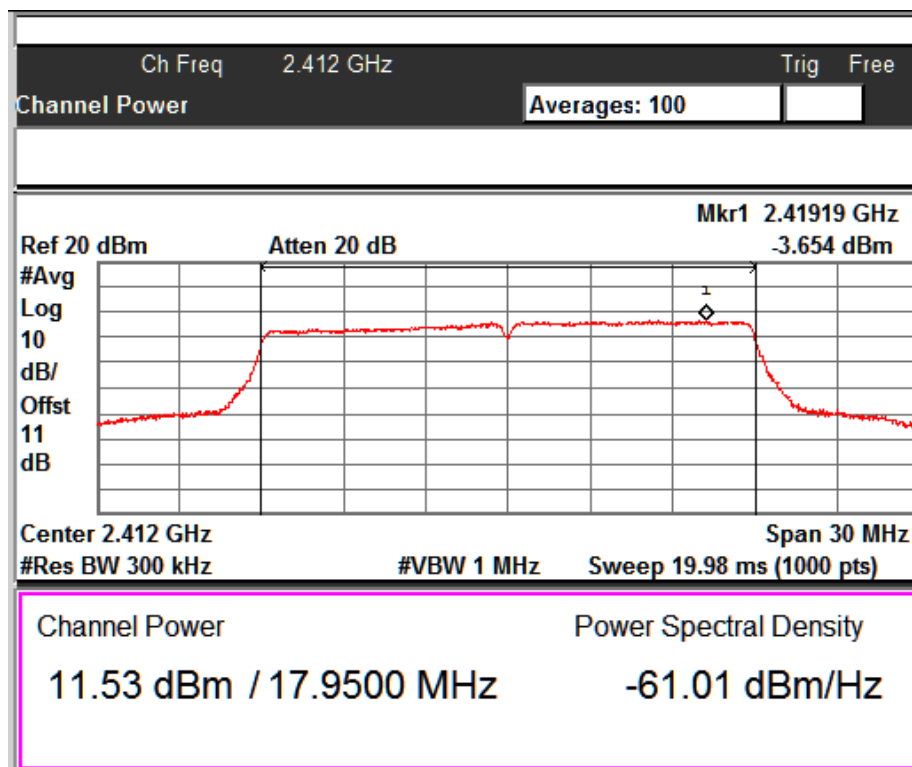
Data rate: 54 Mbps

Channel Frequency: 2472 MHz

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IEEE802.11nHT20

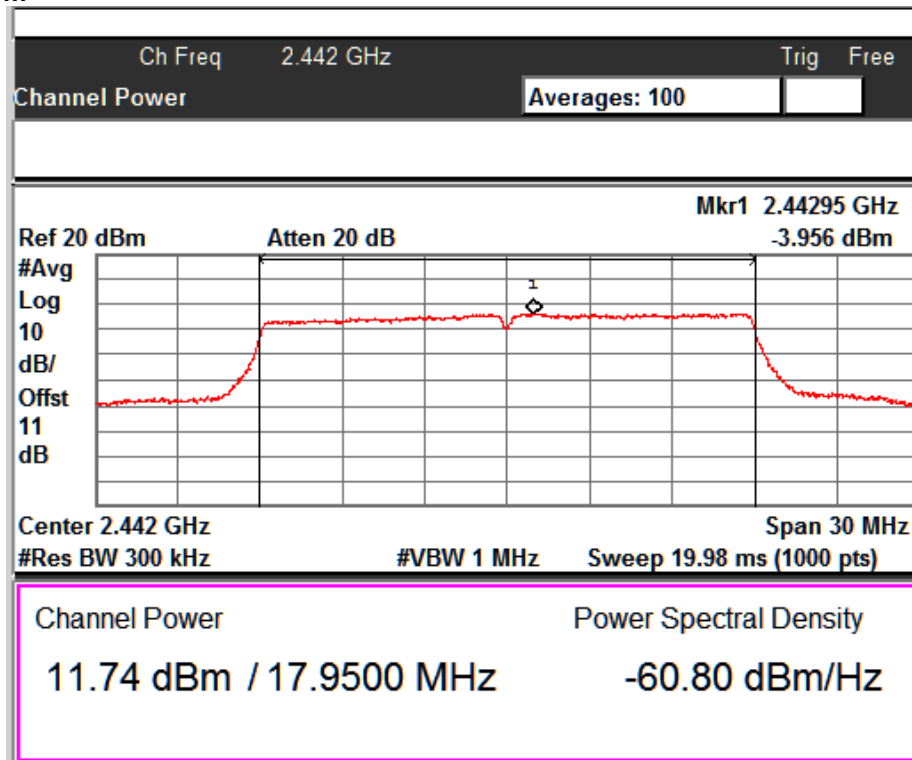
Data Rate (Mbps)	Channel Frequency (MHz)	Average Power (dBm)
MCS0	2412	11.53
	2442	11.74
	2472	9.33
MCS4	2412	11.52
	2442	11.59
	2472	9.39
MCS7	2412	11.58
	2442	11.79
	2472	9.68



Data Rate: MCS0

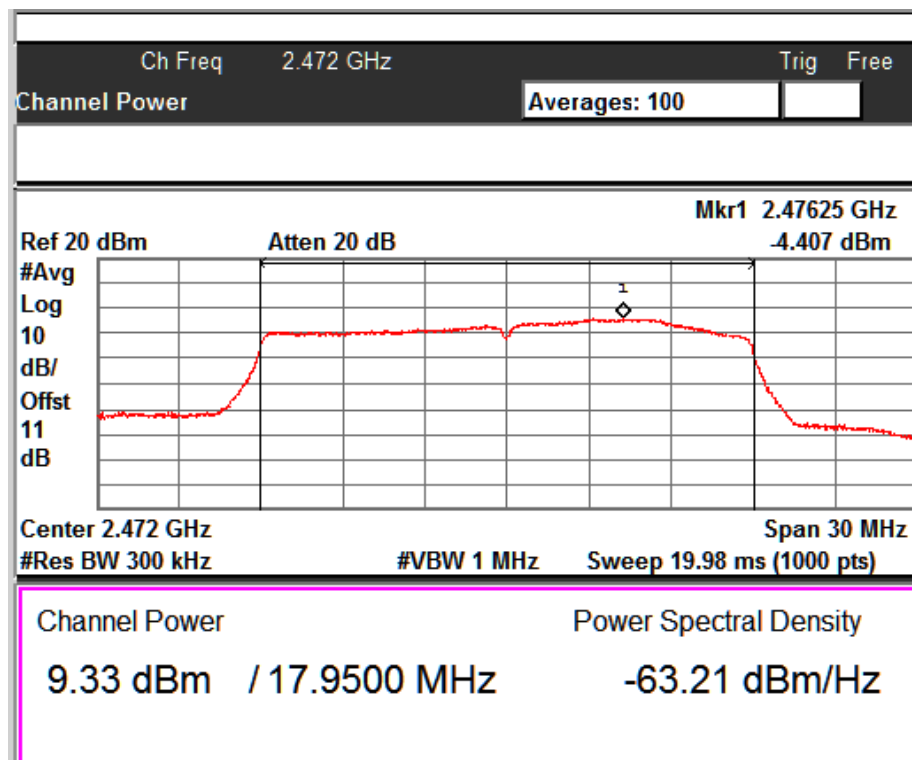
Channel Frequency: 2412 MHz

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Data Rate: MCS0

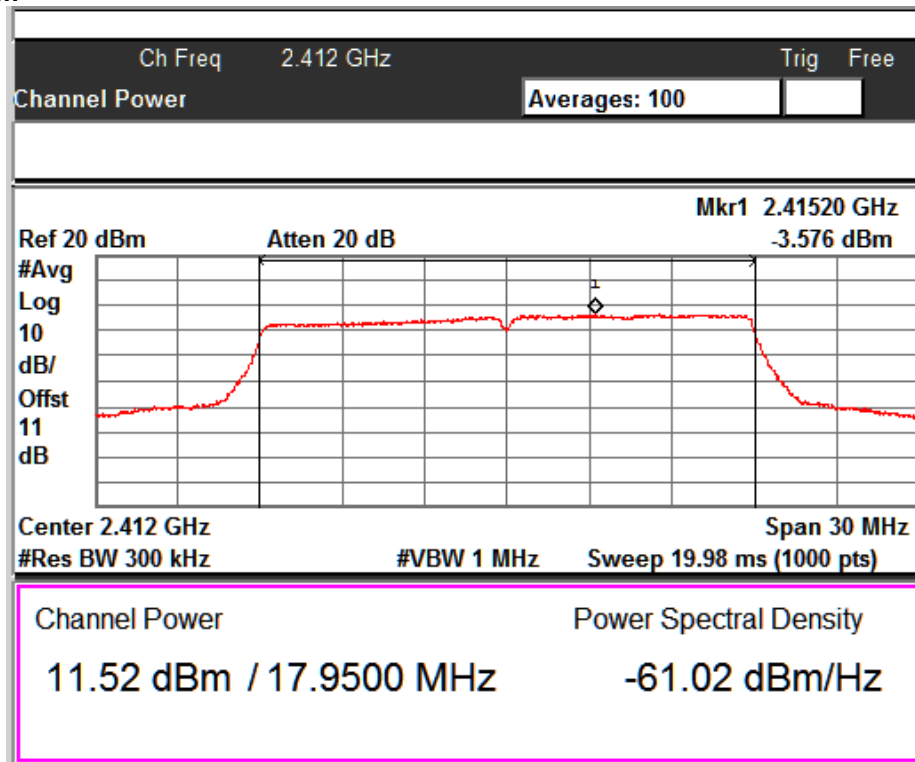
Channel Frequency: 2442 MHz



Data Rate: MCS0

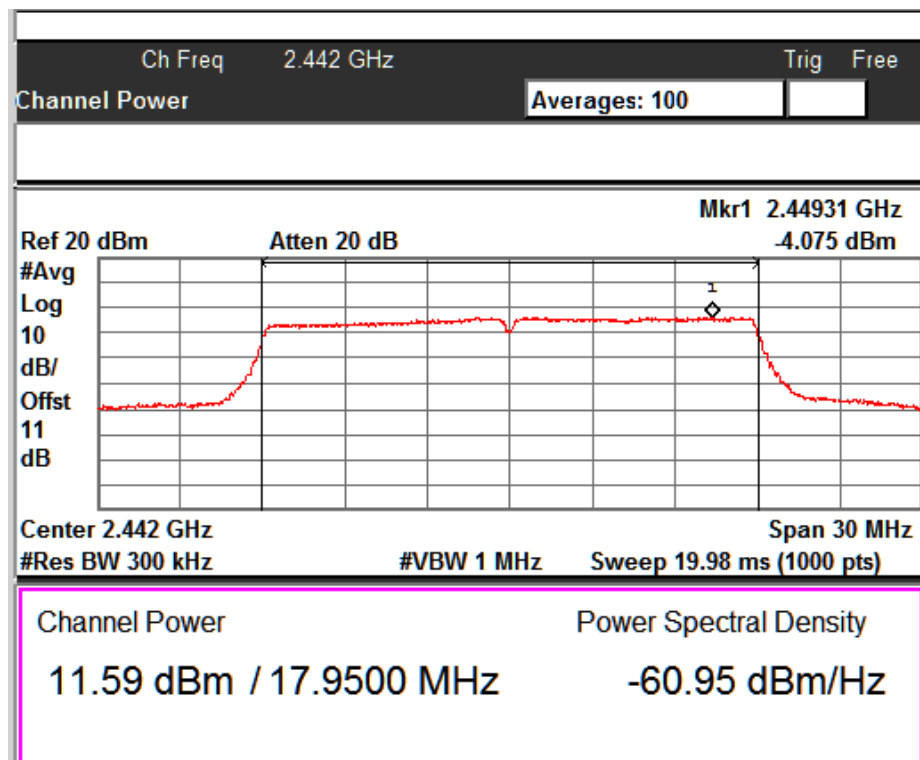
Channel Frequency: 2472 MHz

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Data Rate: MCS4

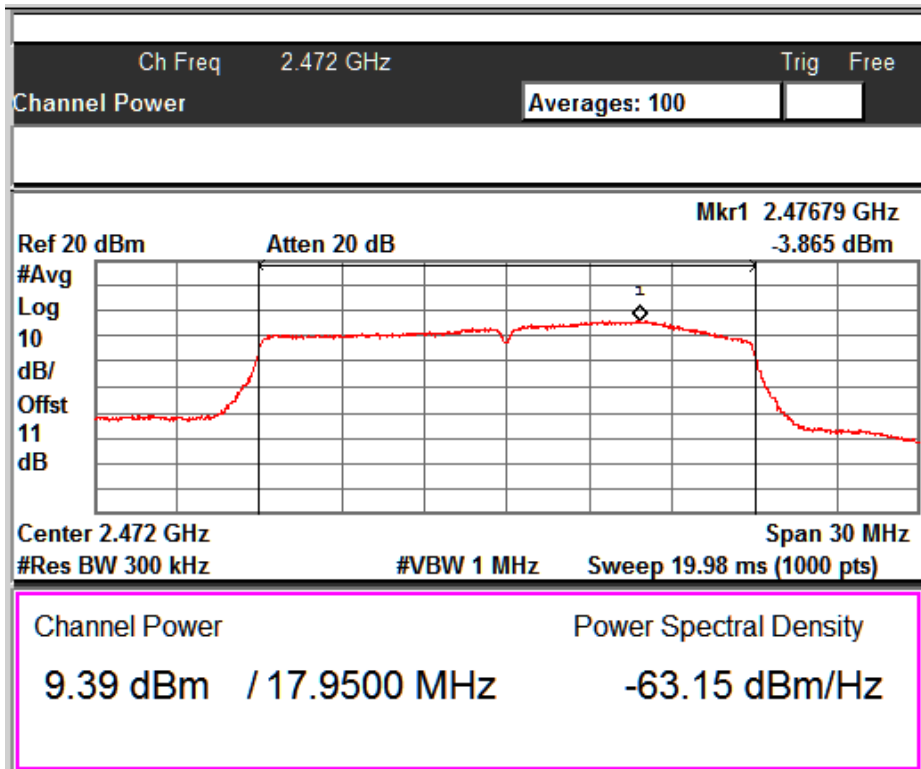
Channel Frequency: 2412 MHz



Data Rate: MCS4

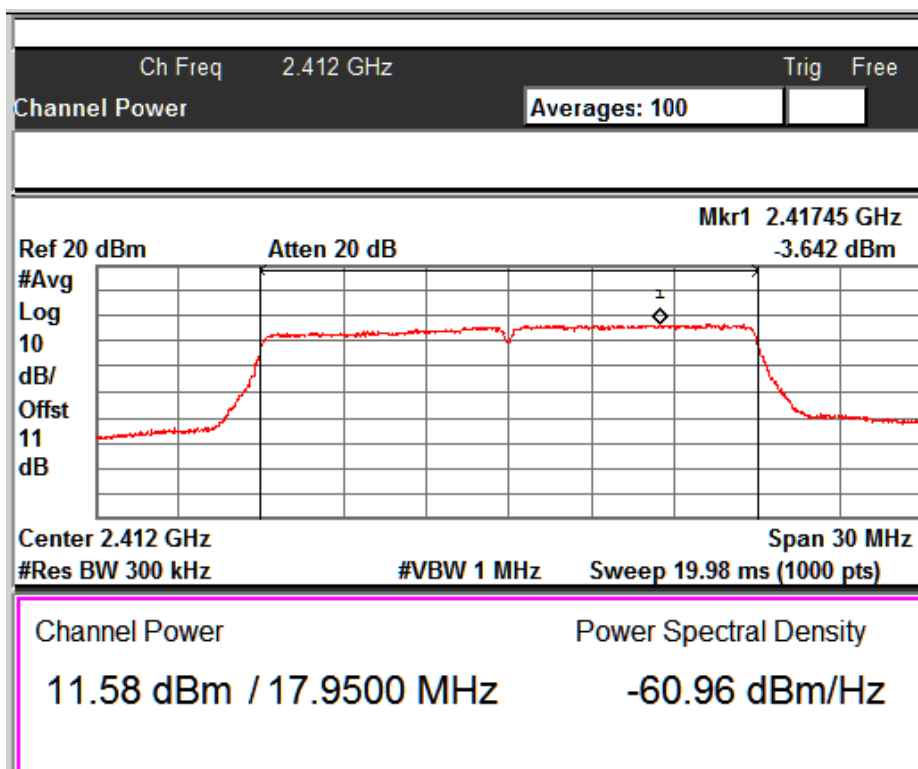
Channel Frequency: 2442 MHz

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Data Rate: MCS4

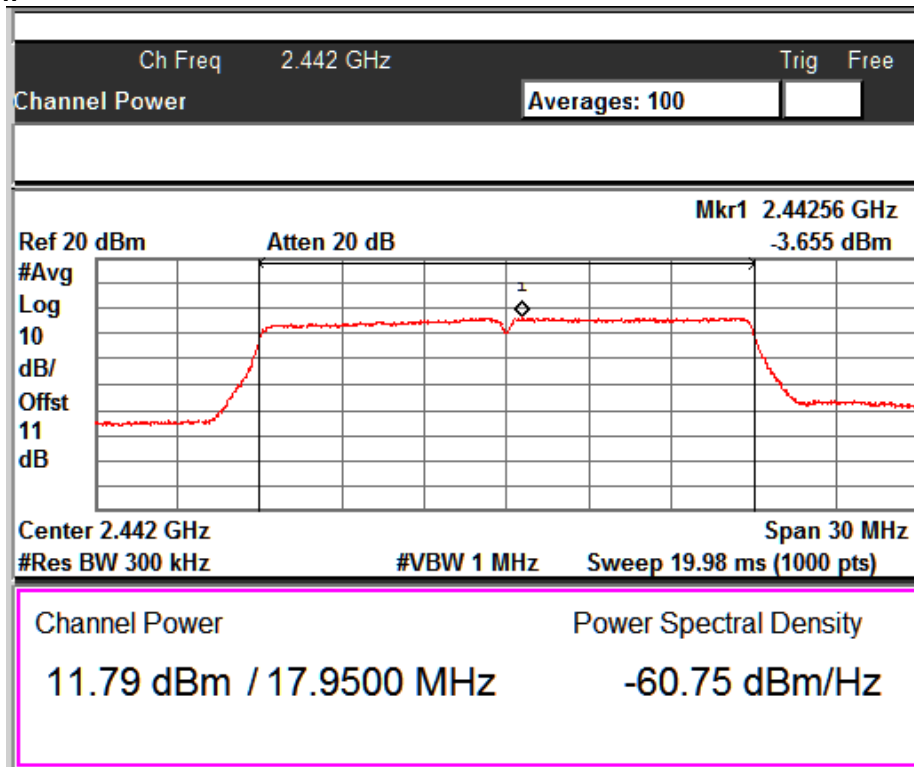
Channel Frequency: 2472 MHz



Data Rate: MCS7

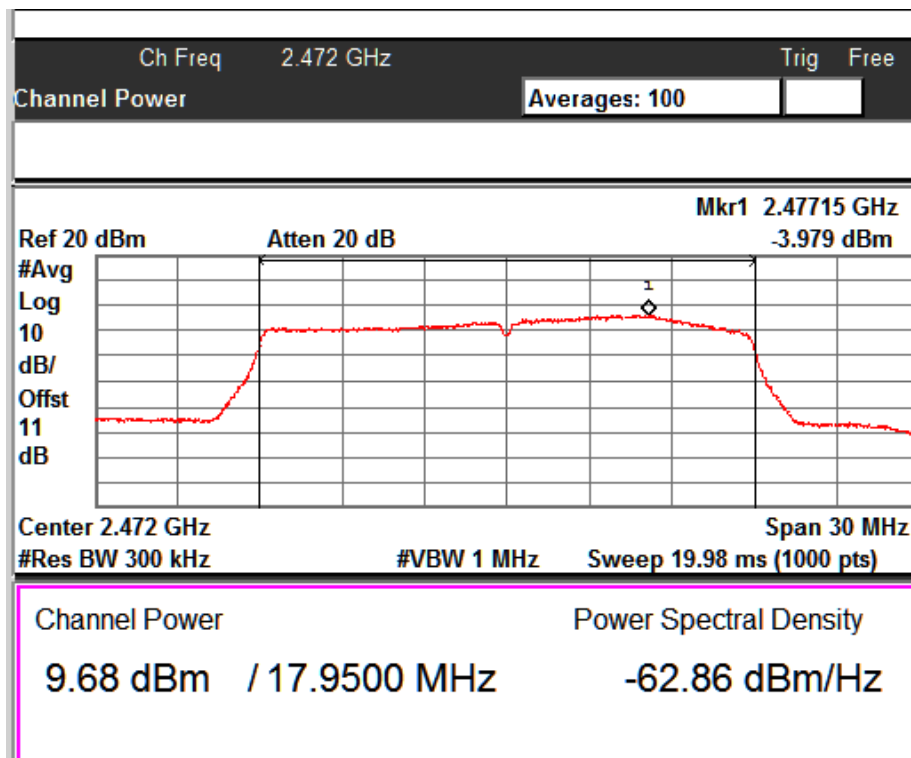
Channel Frequency: 2412 MHz

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Data Rate: MCS7

Channel Frequency: 2442 MHz

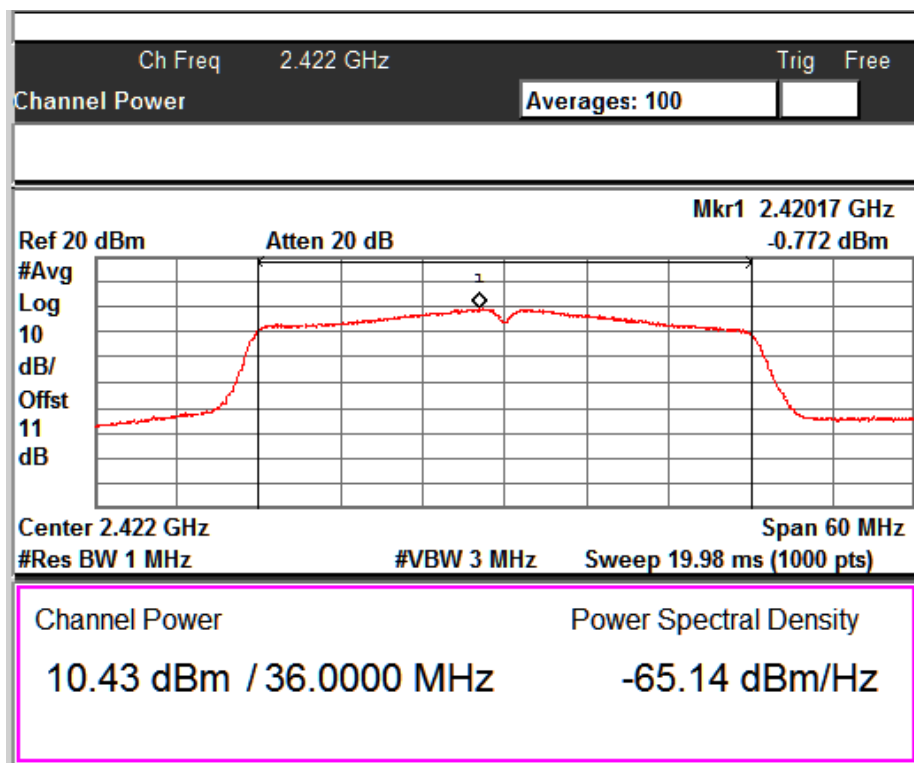


Data Rate: MCS7

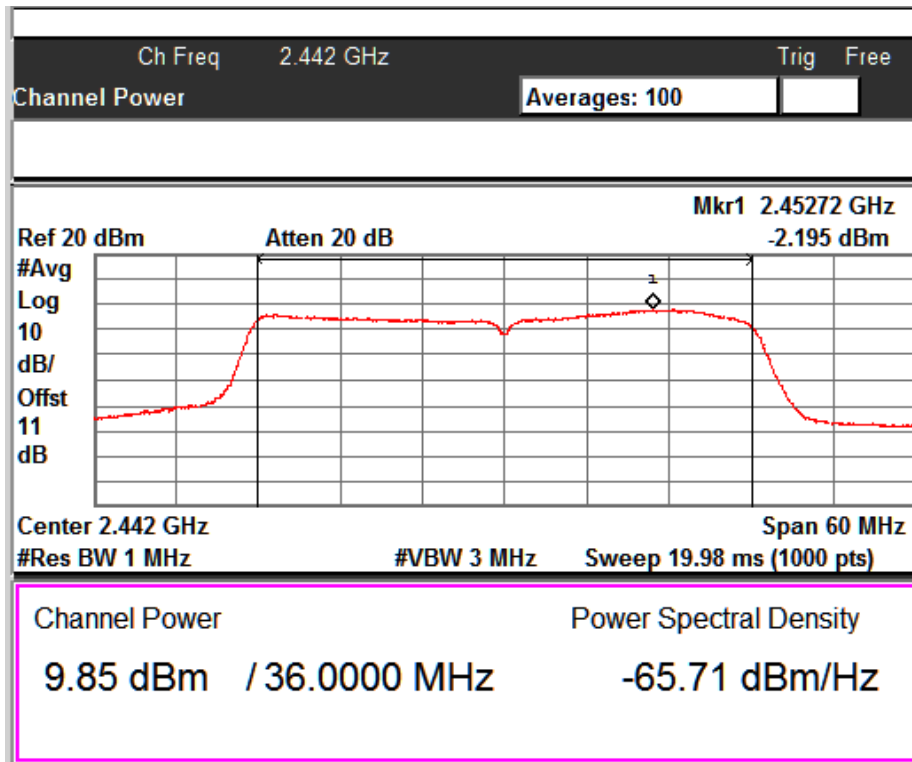
Channel Frequency: 2472 MHz

IEEE802.11n HT40

Data Rate (Mbps)	Channel Frequency (MHz)	Average Power (dBm)
MCS0	2422	10.43
	2442	9.85
	2462	9.25
MCS4	2422	10.18
	2442	9.89
	2462	9.23
MCS7	2422	10.68
	2442	9.90
	2462	9.48

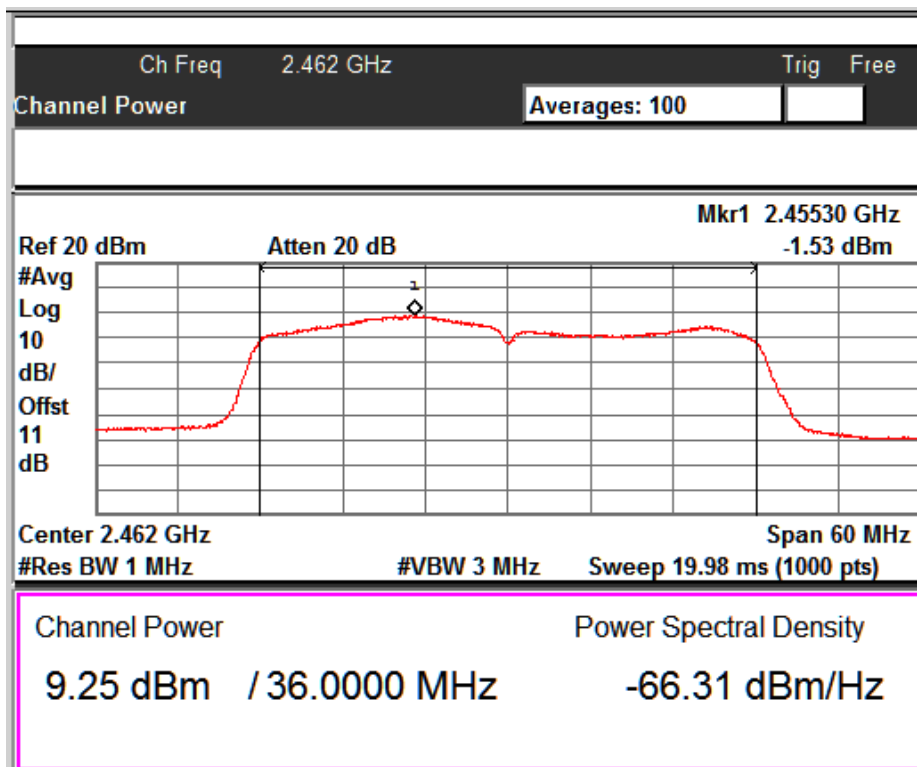

Data Rate: MCS0
Channel Frequency: 2422 MHz

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Data Rate: MCS0

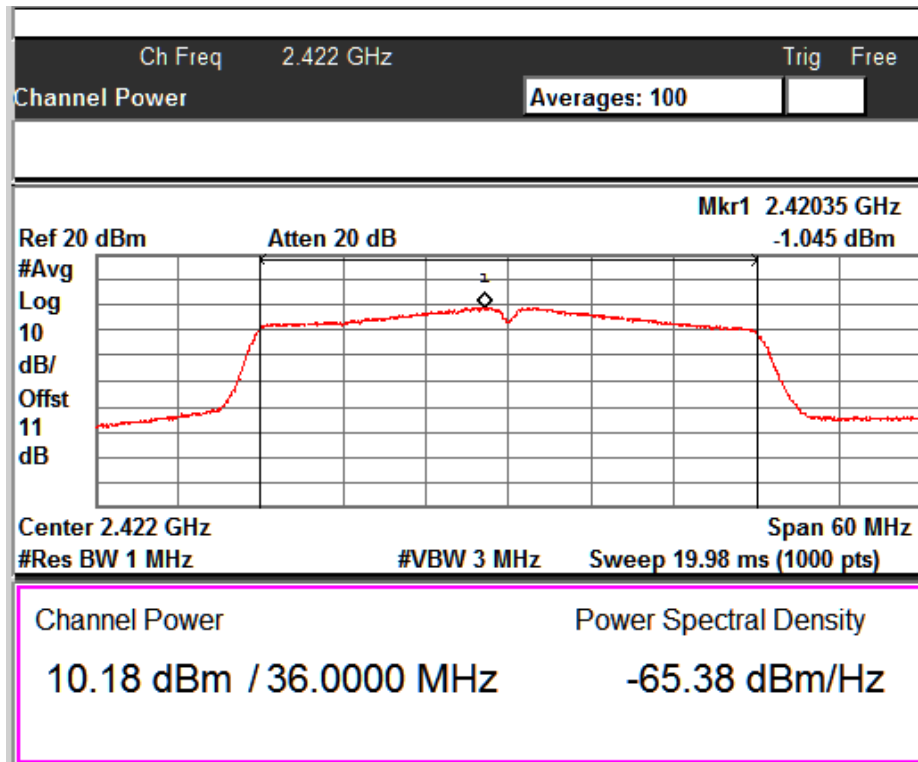
Channel Frequency: 2442 MHz



Data Rate: MCS0

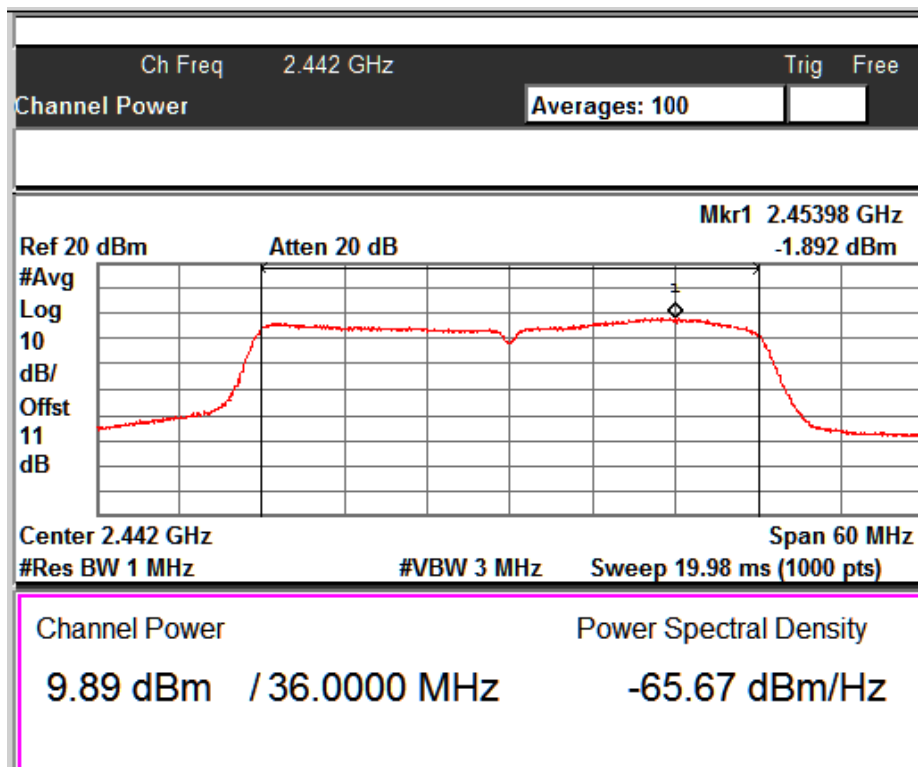
Channel Frequency: 2462 MHz

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Data Rate: MCS4

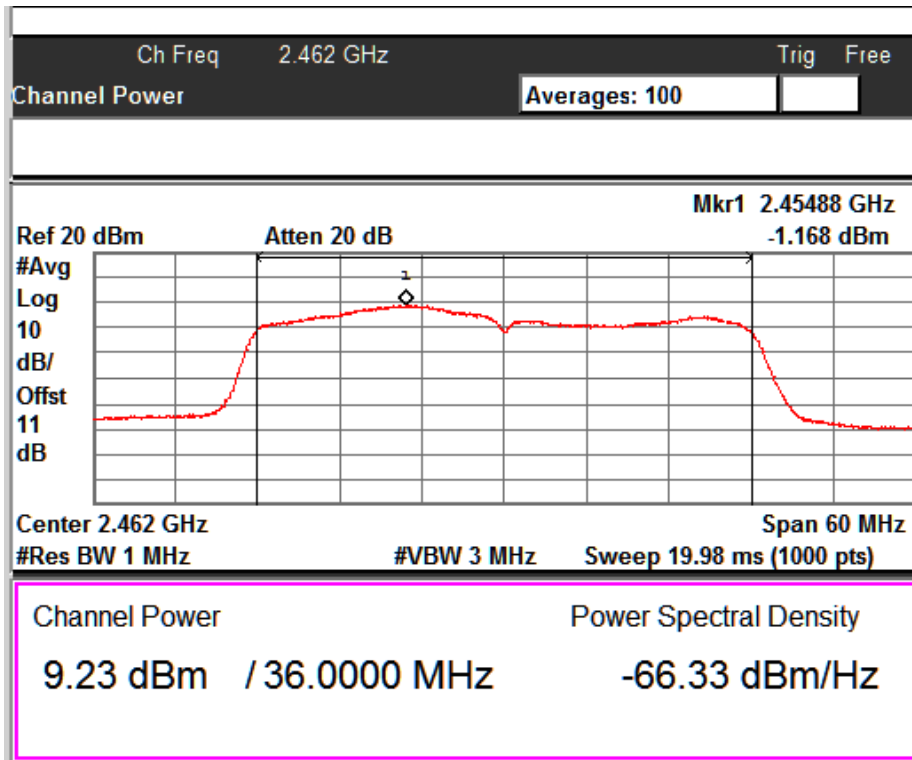
Channel Frequency: 2422 MHz



Data Rate: MCS4

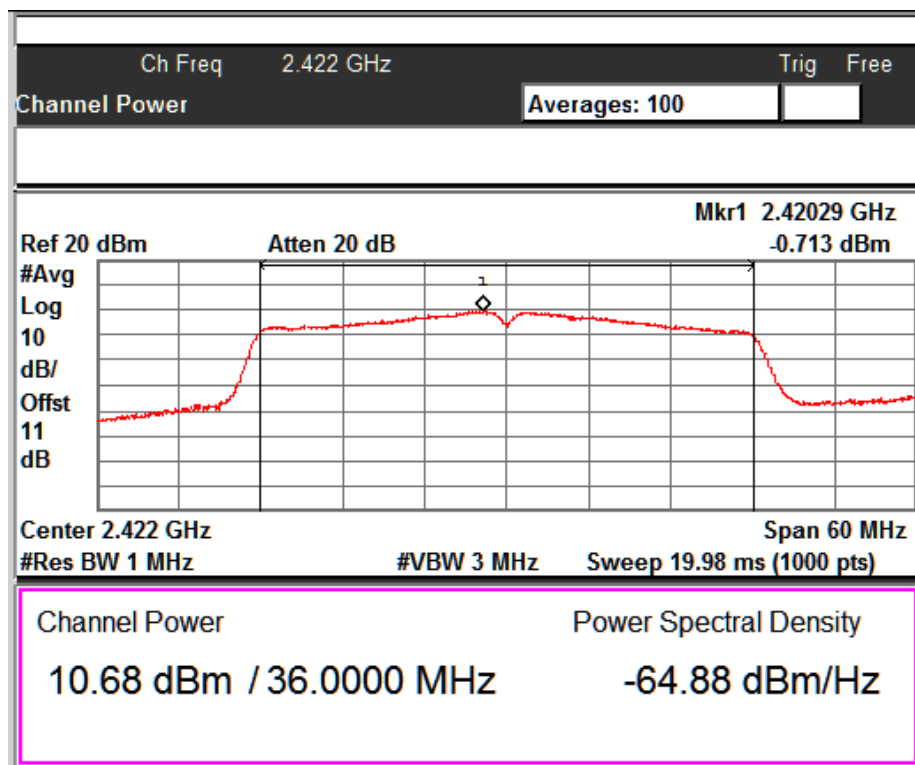
Channel Frequency: 2442 MHz

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Data Rate: MCS4

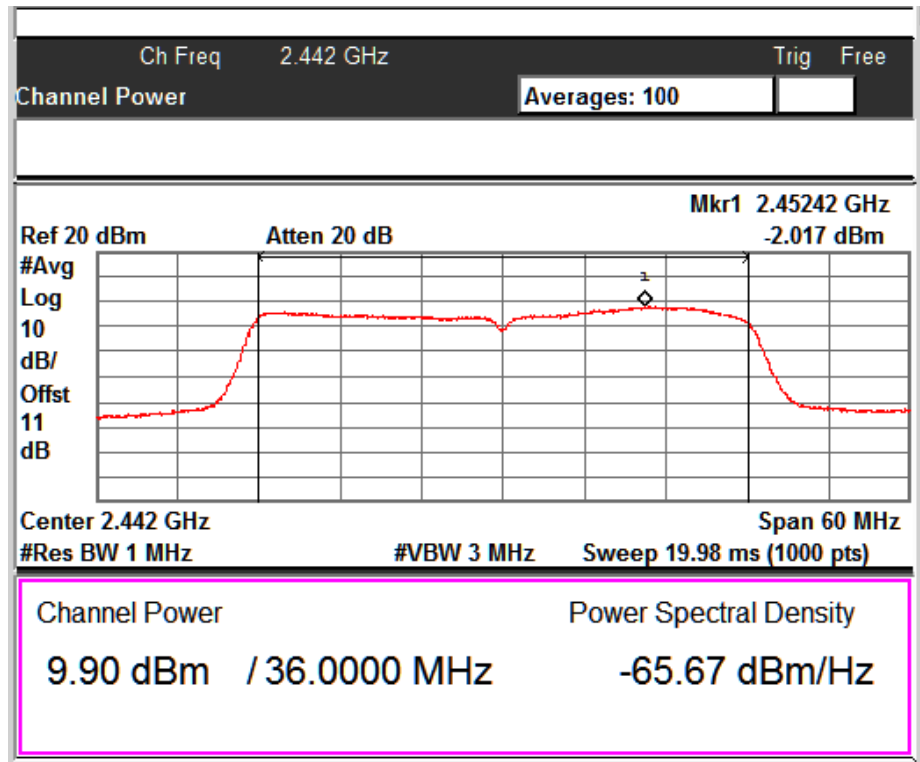
Channel Frequency: 2462 MHz



Data Rate: MCS7

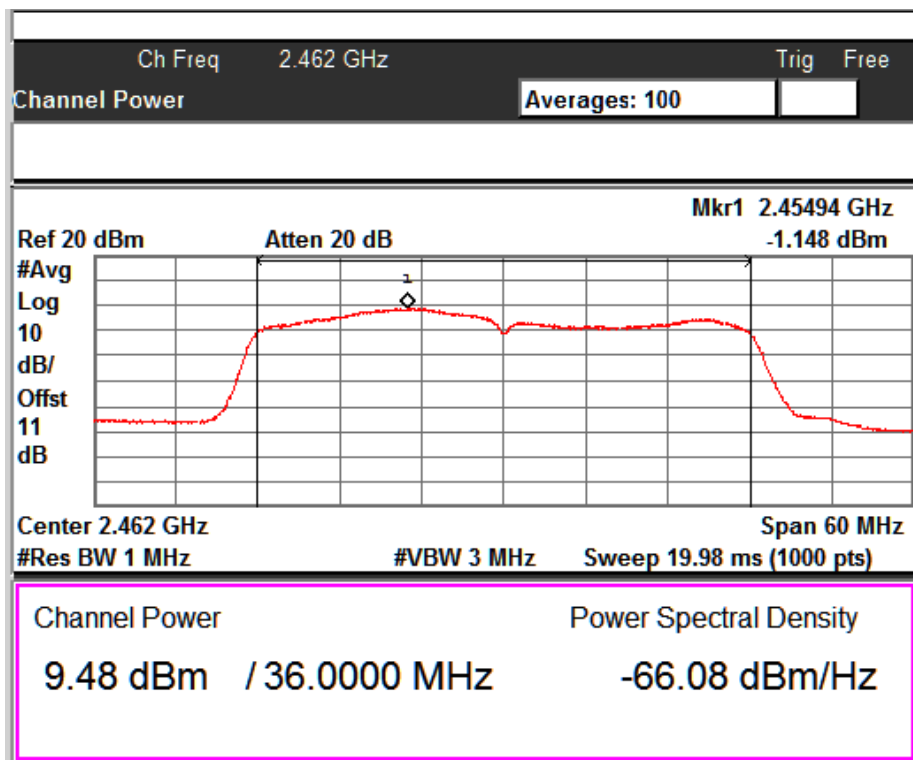
Channel Frequency: 2422 MHz

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Data Rate: MCS7

Channel Frequency: 2442 MHz



Data Rate: MCS7

Channel Frequency: 2462 MHz

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**Maximum Power Spectral Density
Result**

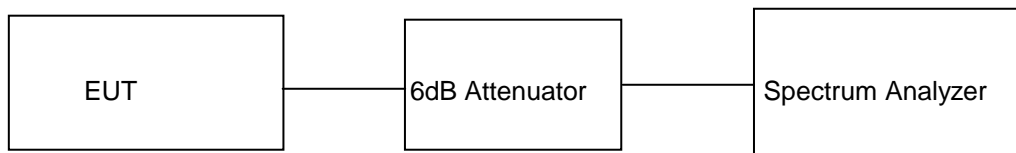
**Section 15.247(e)
Pass**

Test Specification FCC Part 15 Section 15.247 (e)
Detector Function Average
Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm.

Note: For measurement of Maximum power spectral density option 1 was used as mentioned in KDB.

Test Method:

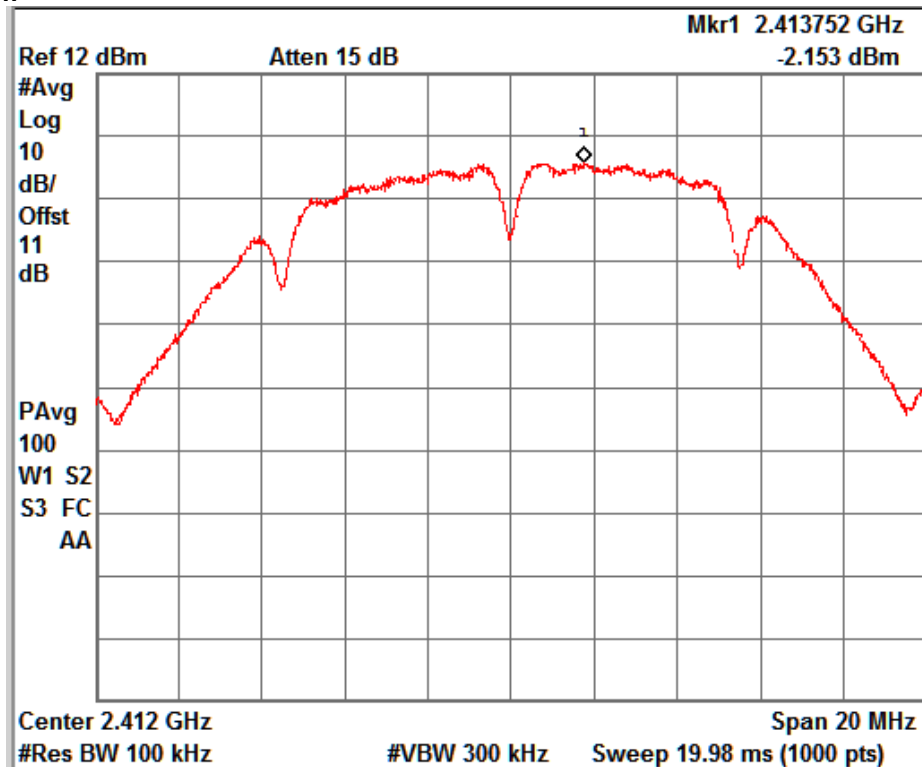


Test Result:

Attenuator (10dB) + cable loss (1dB) = 11dB Considered in the test result

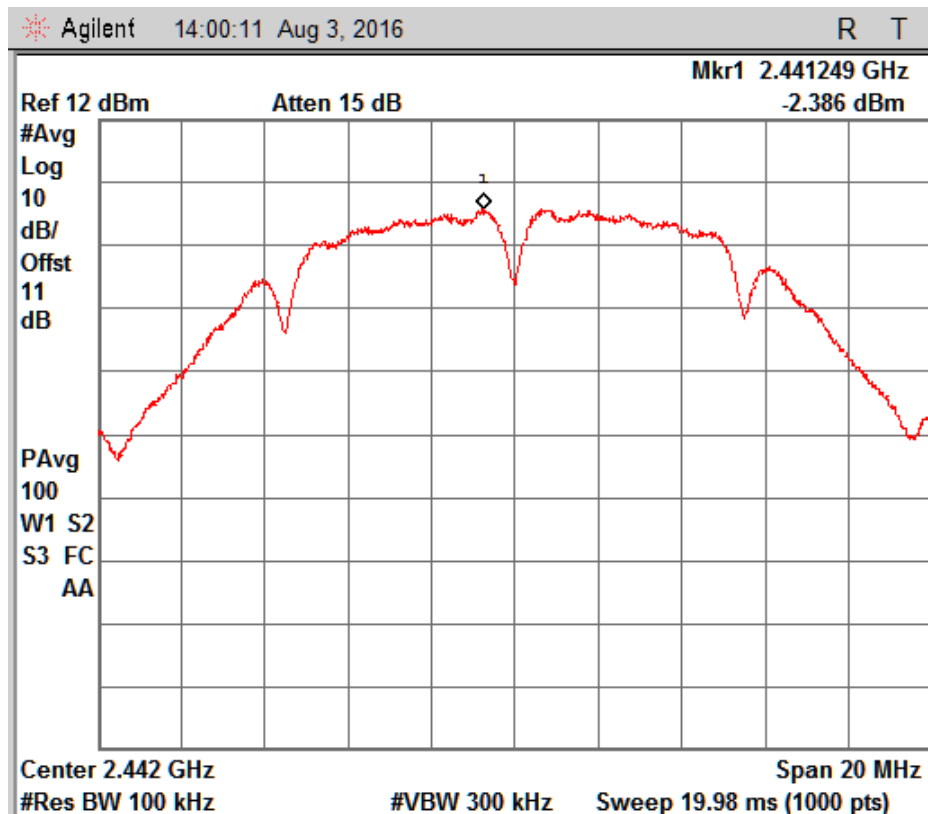
IEEE802.11b			
Data Rate (Mbps)	Channel Frequency (MHz)	Total PSD (dBm)	Limit (dBm)
1	2412	-2.153	8
	2442	-2.386	8
	2472	-3.402	8
11	2412	-3.398	8
	2442	-1.765	8
	2472	-2.802	8

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Data rate: 1 Mbps

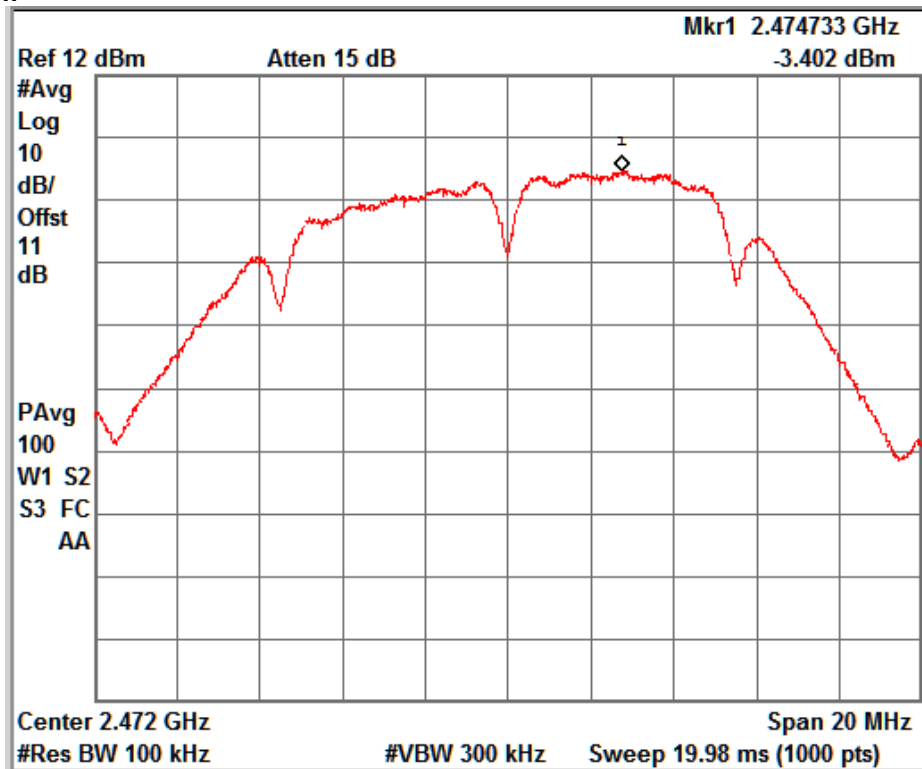
Channel Frequency: 2412 MHz



Data rate: 1 Mbps

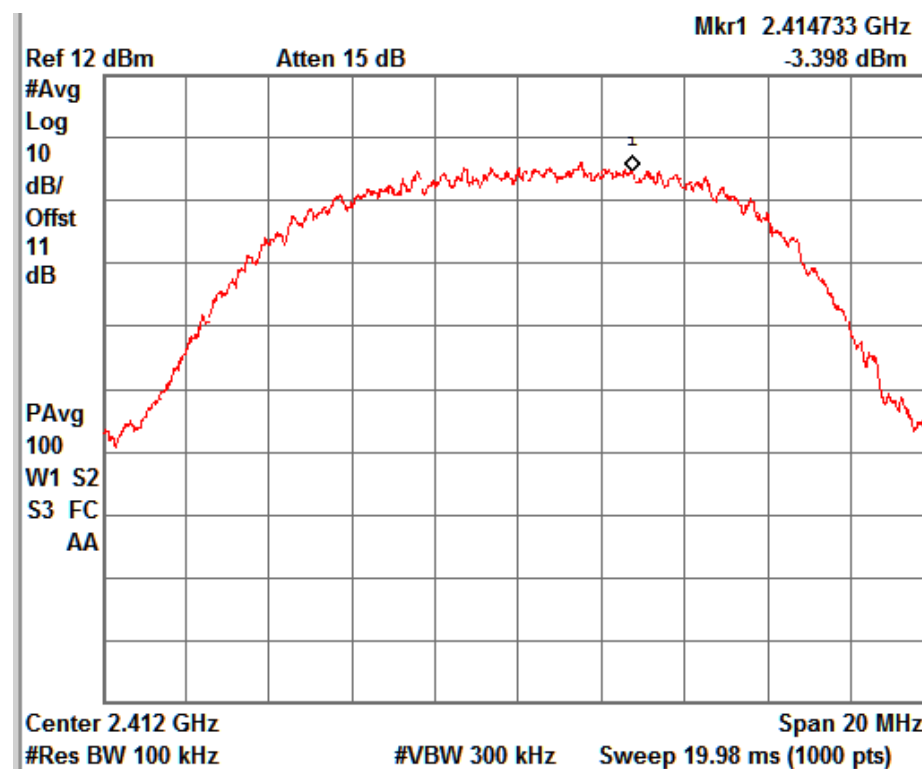
Channel Frequency: 2442 MHz

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Data rate: 1 Mbps

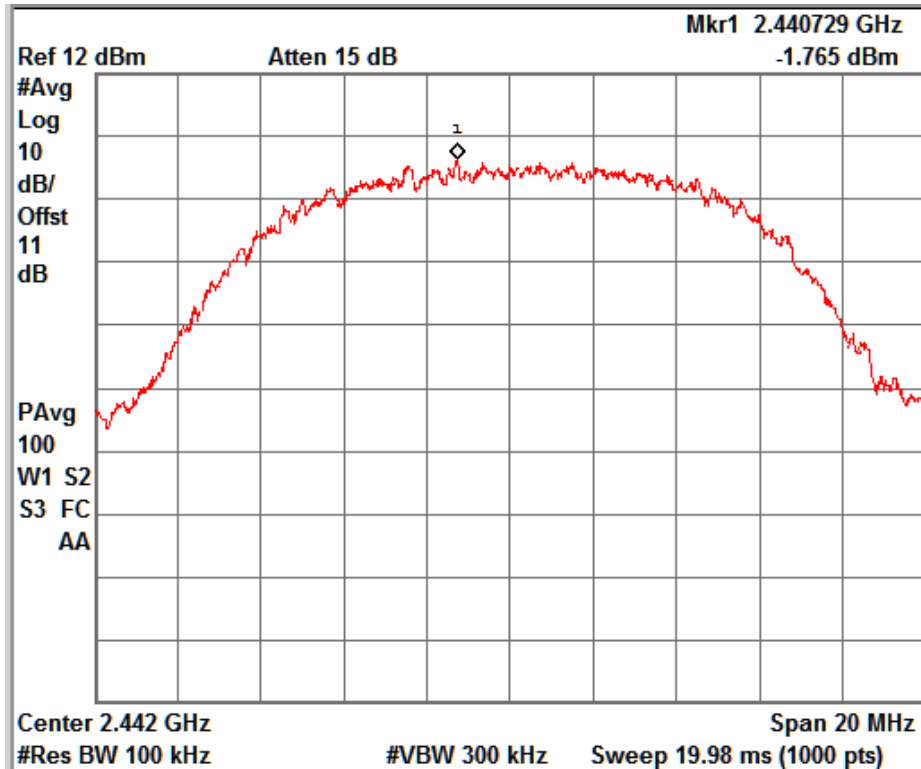
Channel Frequency: 2472 MHz



Data rate: 11 Mbps

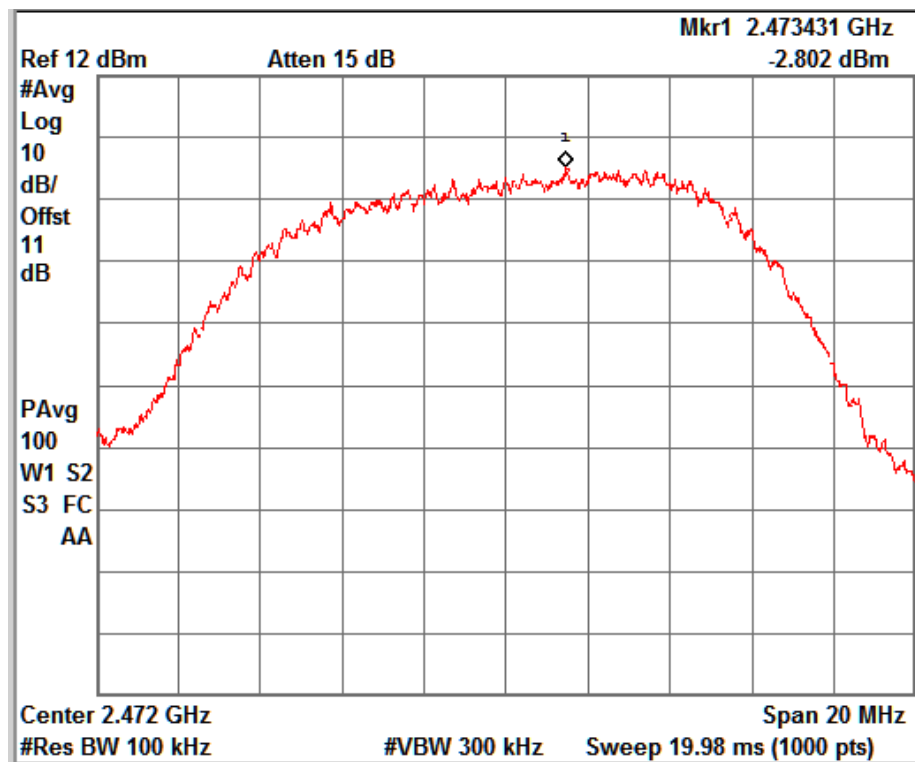
Channel Frequency: 2412 MHz

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Data rate: 11 Mbps

Channel Frequency: 2442 MHz

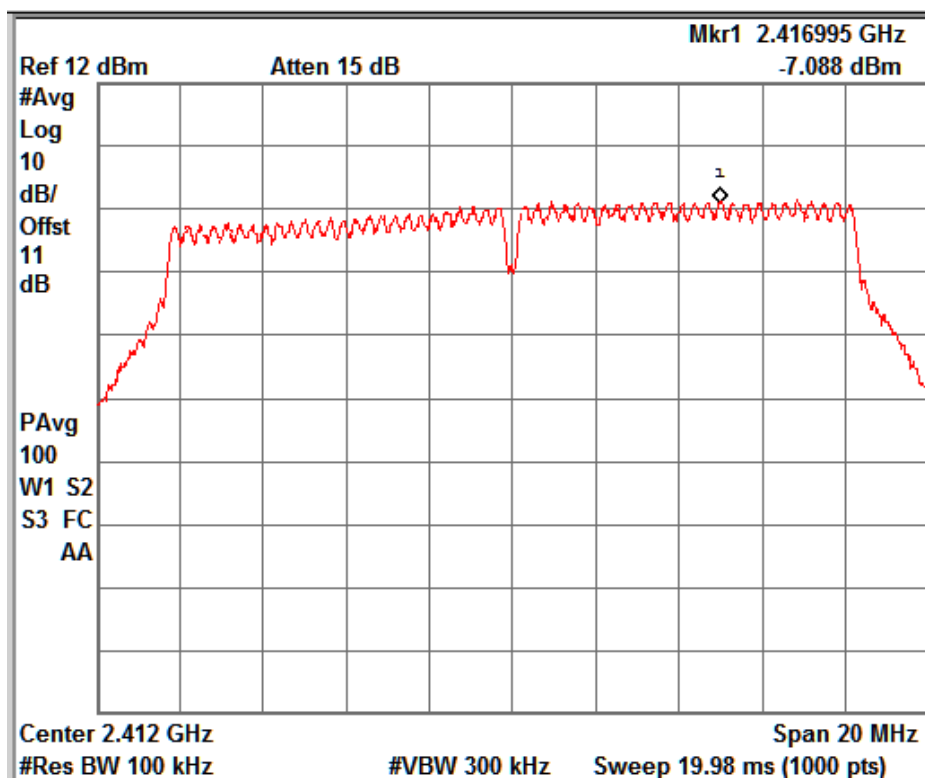


Data rate: 11 Mbps

Channel Frequency: 2472 MHz

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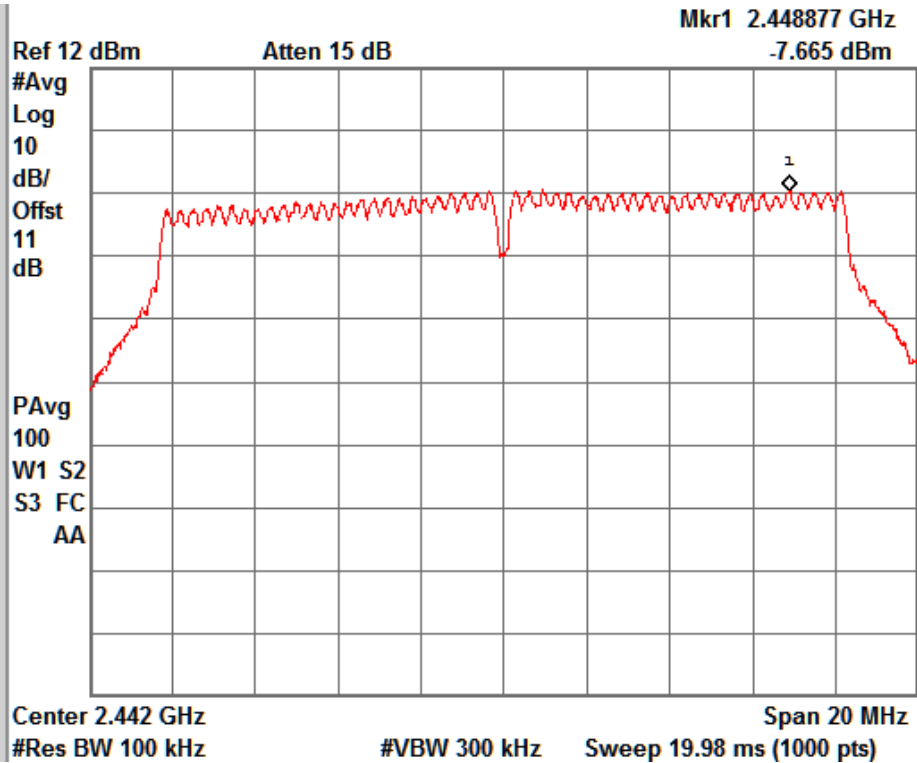
IEEE802.11g			
Data Rate (Mbps)	Channel Frequency (MHz)	Total PSD (dBm)	Limit (dBm)
6	2412	-7.088	8
	2442	-7.665	8
	2472	-7.17	8
24	2412	-8.895	8
	2442	-8.872	8
	2472	-8.52	8
54	2412	-6.663	8
	2442	-6.783	8
	2472	-6.976	8



Data rate: 6 Mbps

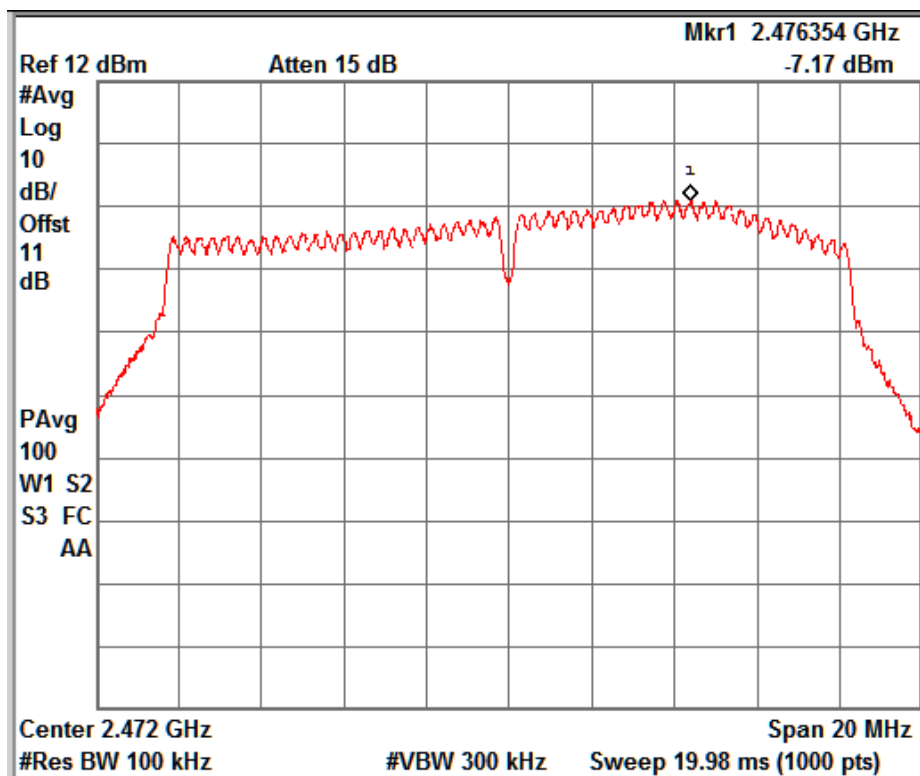
Channel Frequency: 2412 MHz

www.tuv.com



Data rate: 6 Mbps

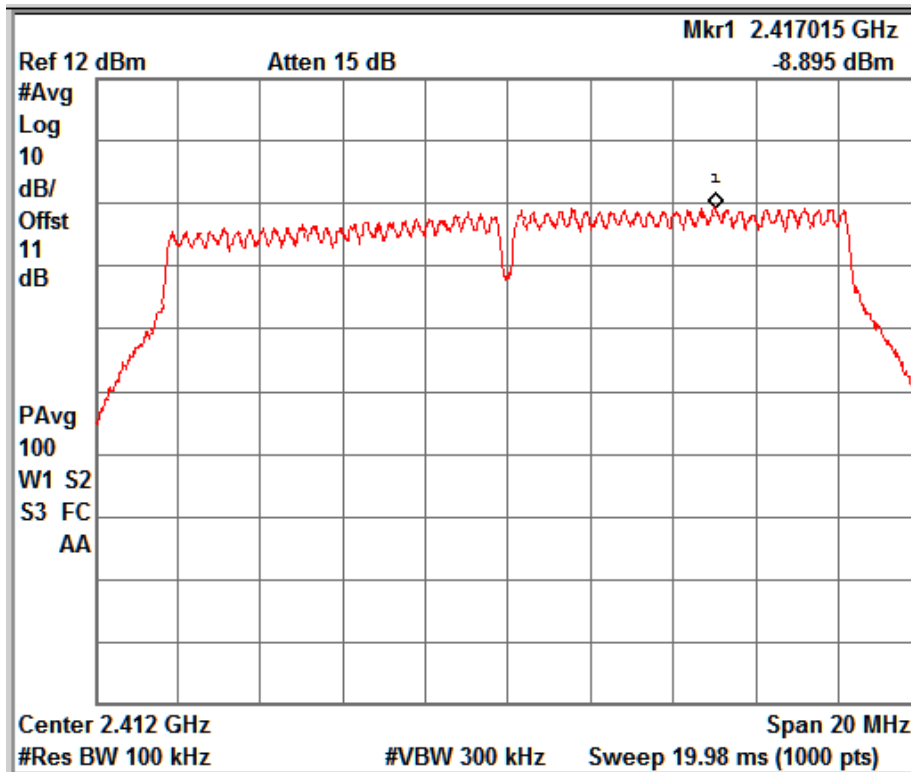
Channel Frequency: 2442 MHz



Data rate: 6 Mbps

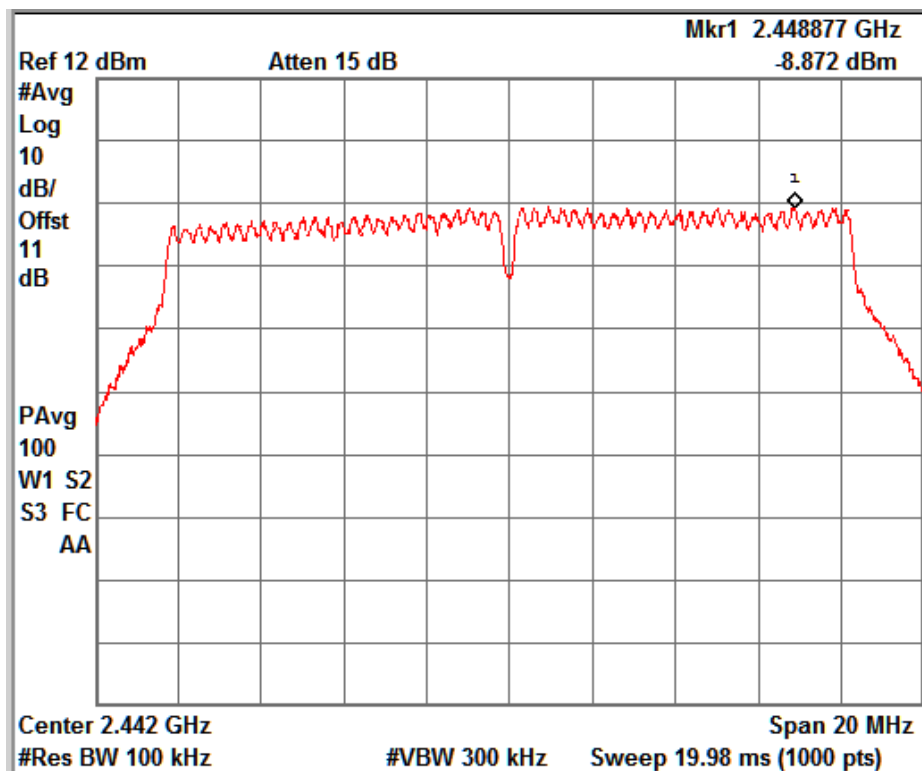
Channel Frequency: 2472 MHz

www.tuv.com



Data rate: 24 Mbps

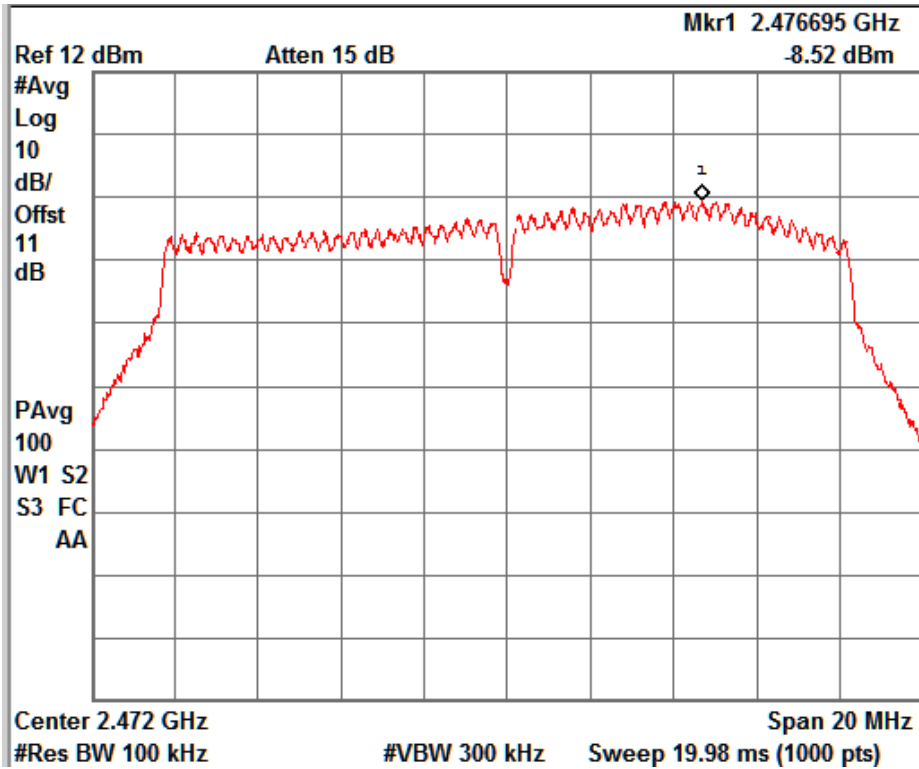
Channel Frequency: 2412 MHz



Data rate: 24 Mbps

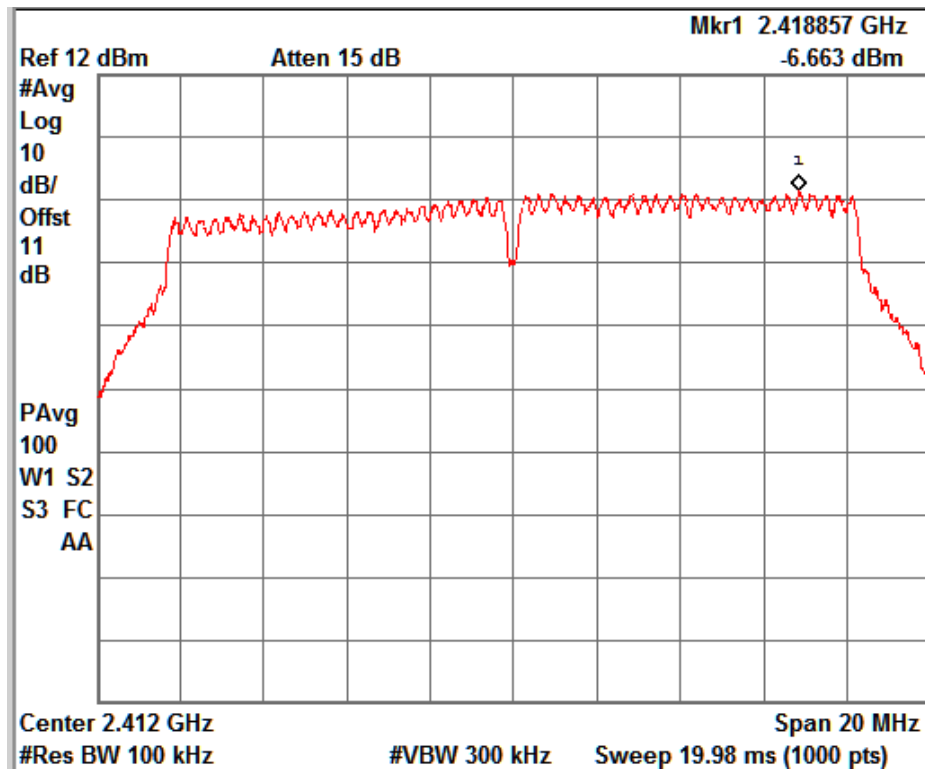
Channel Frequency: 2442 MHz

www.tuv.com



Data rate: 24 Mbps

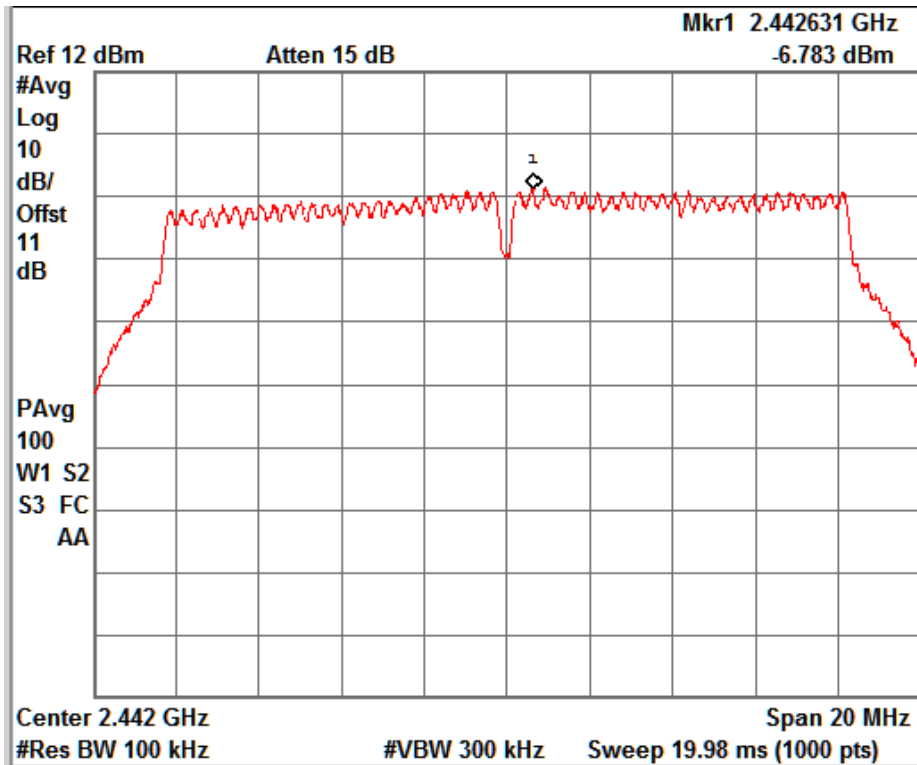
Channel Frequency: 2472 MHz



Data rate: 54 Mbps

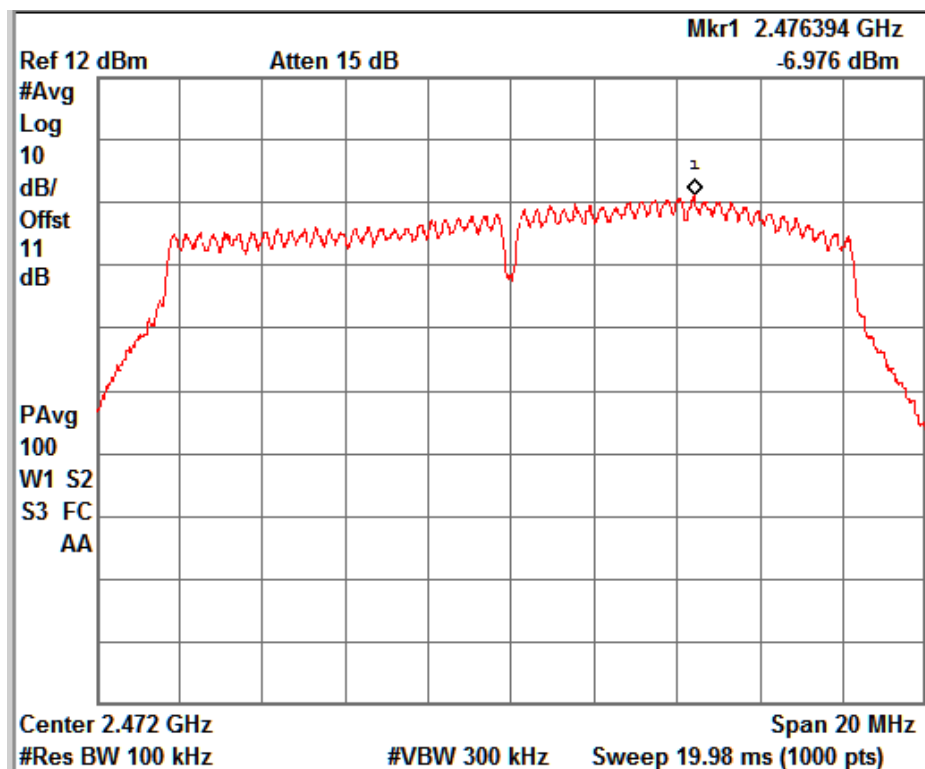
Channel Frequency: 2412 MHz

www.tuv.com



Data rate: 54 Mbps

Channel Frequency: 2442 MHz



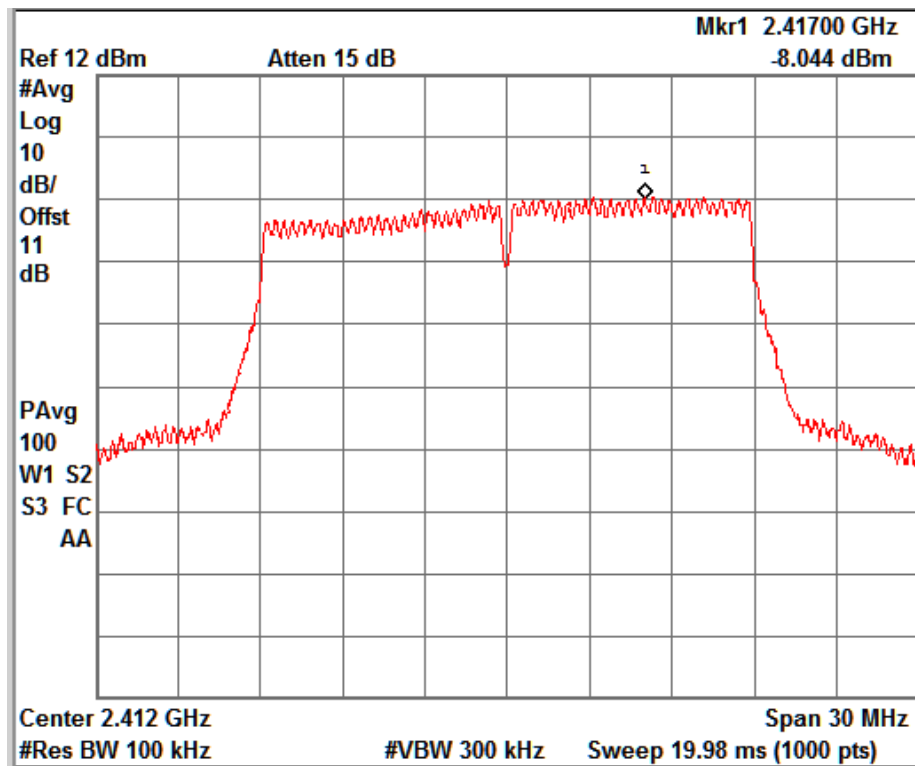
Data rate: 54 Mbps

Channel Frequency: 2472 MHz

www.tuv.com

IEEE802.11nHT20

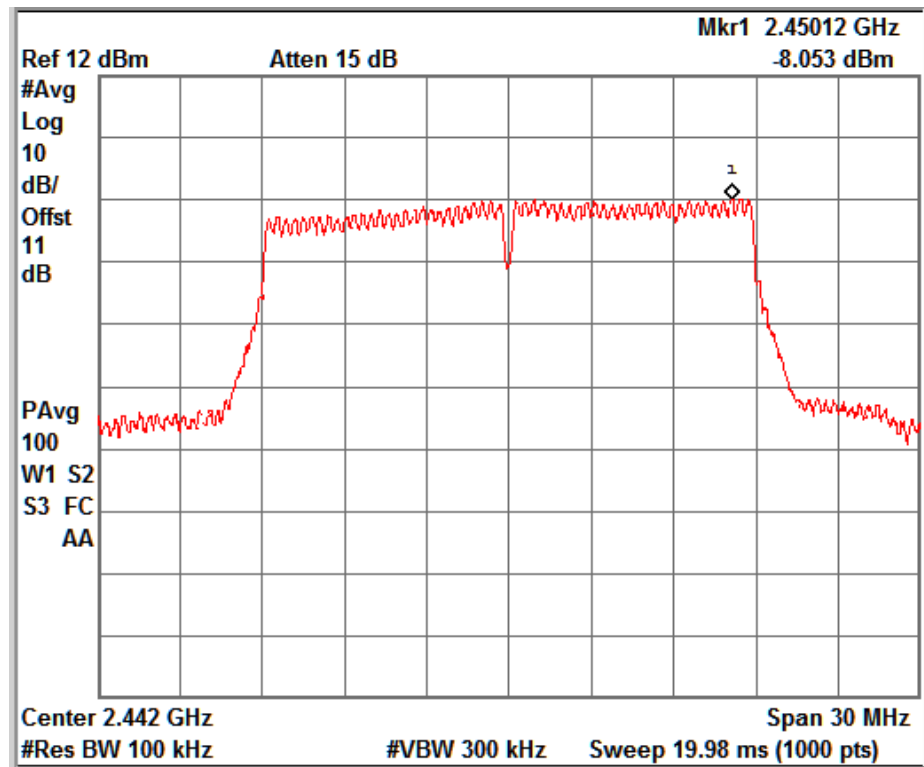
Data Rate (Mbps)	Channel Frequency (MHz)	Total PSD (dBm)	Limit (dBm)
MCS0	2412	-8.044	8
	2442	-8.053	8
	2472	-8.503	8
MCS4	2412	-7.765	8
	2442	-7.83	8
	2472	-8.747	8
MCS7	2412	-7.732	8
	2442	-7.645	8
	2472	-8.206	8



Data rate: MCS0

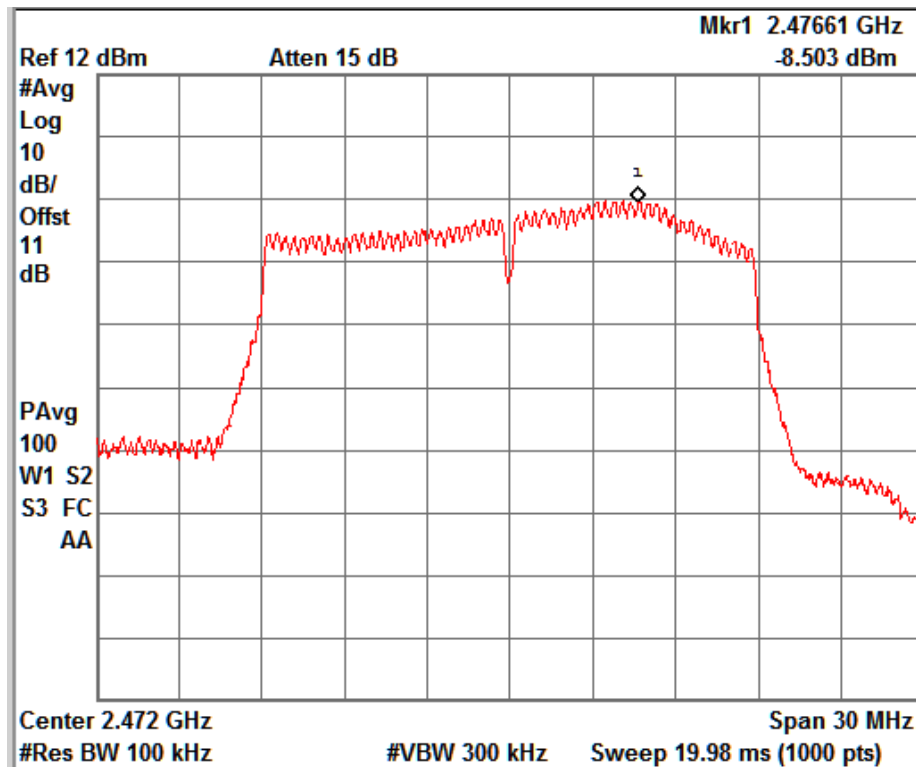
Channel Frequency: 2412 MHz

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Data rate: MCS0

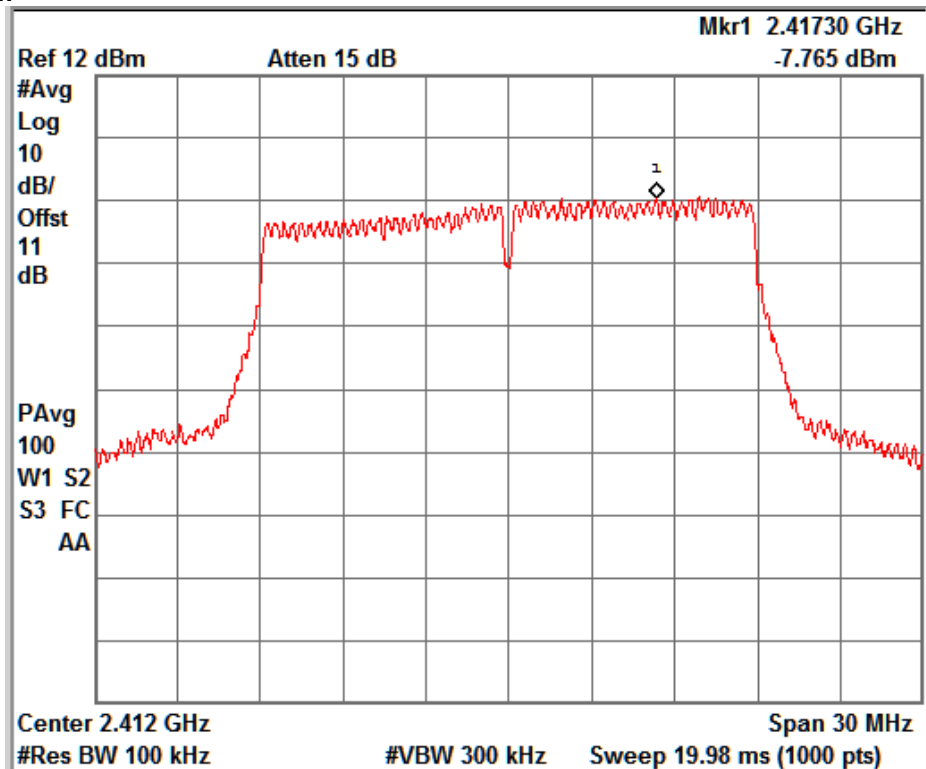
Channel Frequency: 2442 MHz



Data rate: MCS0

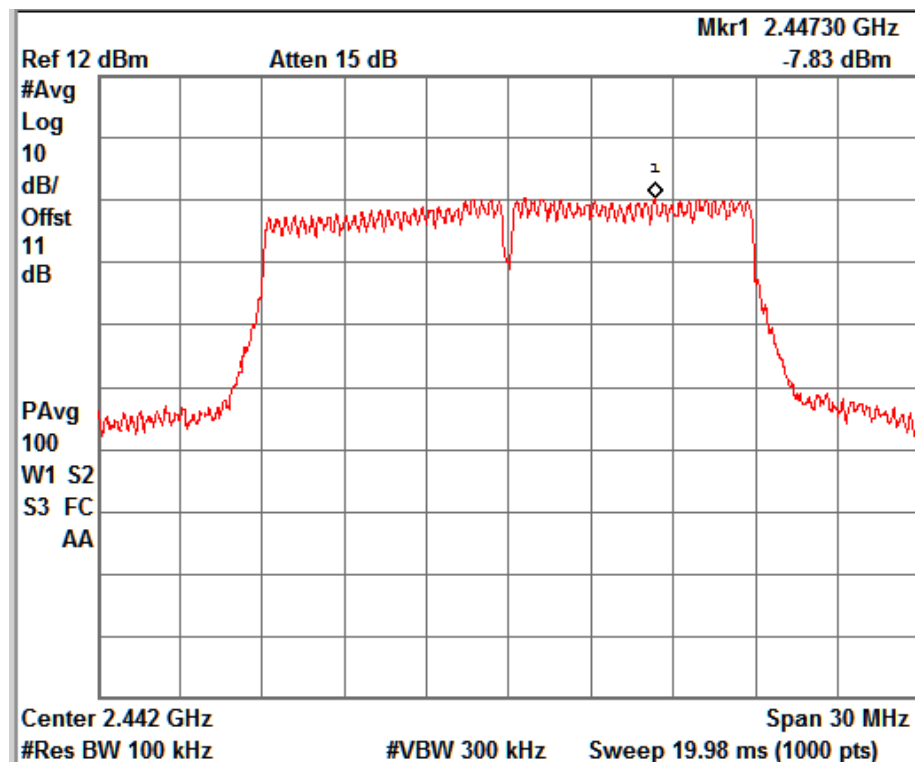
Channel Frequency: 2472 MHz

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Data rate: MCS4

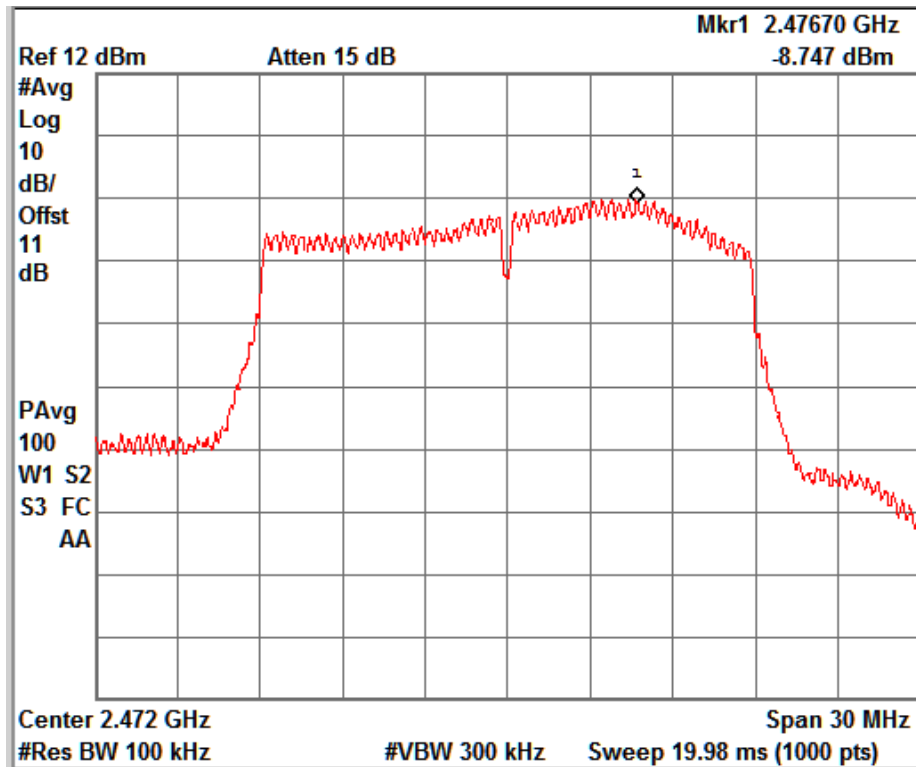
Channel Frequency: 2412 MHz



Data rate: MCS4

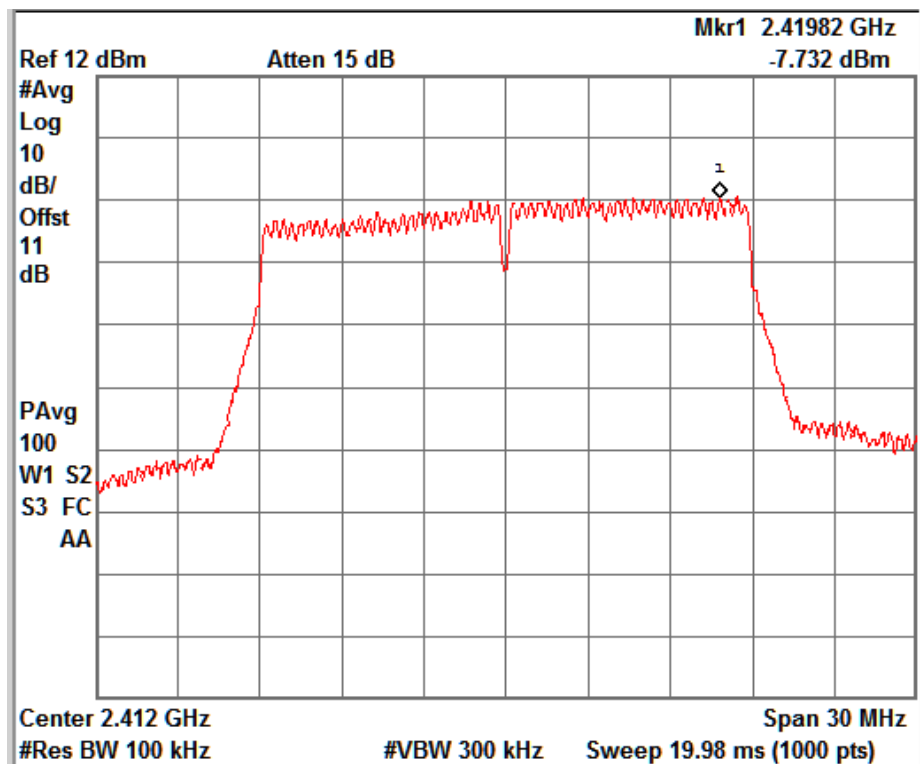
Channel Frequency: 2442 MHz

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Data rate: MCS4

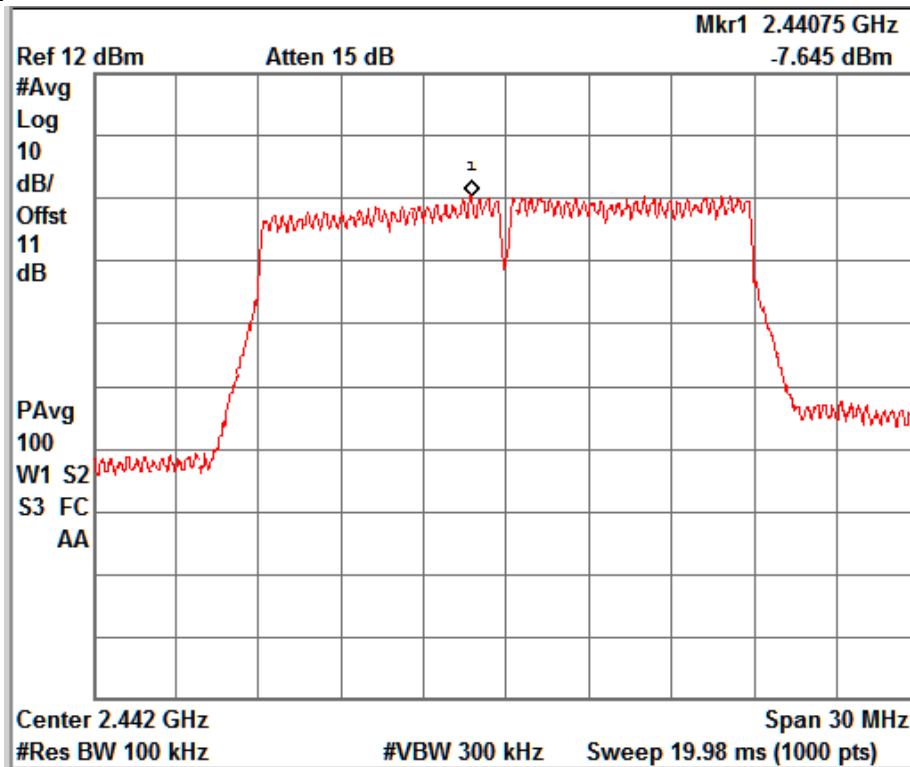
Channel Frequency: 2472 MHz



Data rate: MCS7

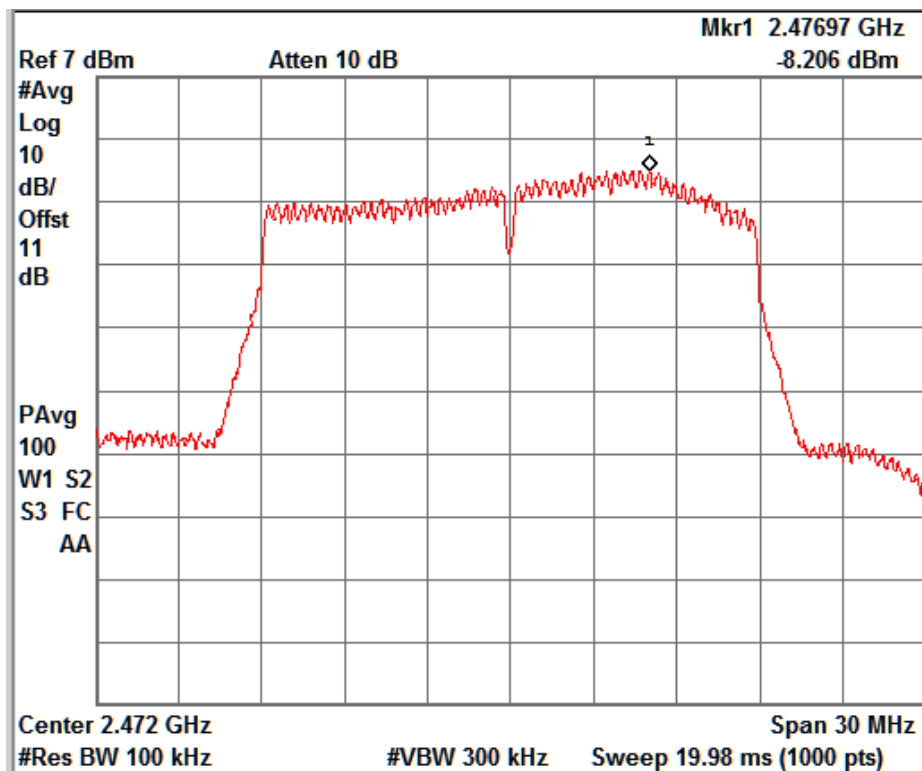
Channel Frequency: 2412 MHz

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Data rate: MCS7

Channel Frequency: 2442 MHz



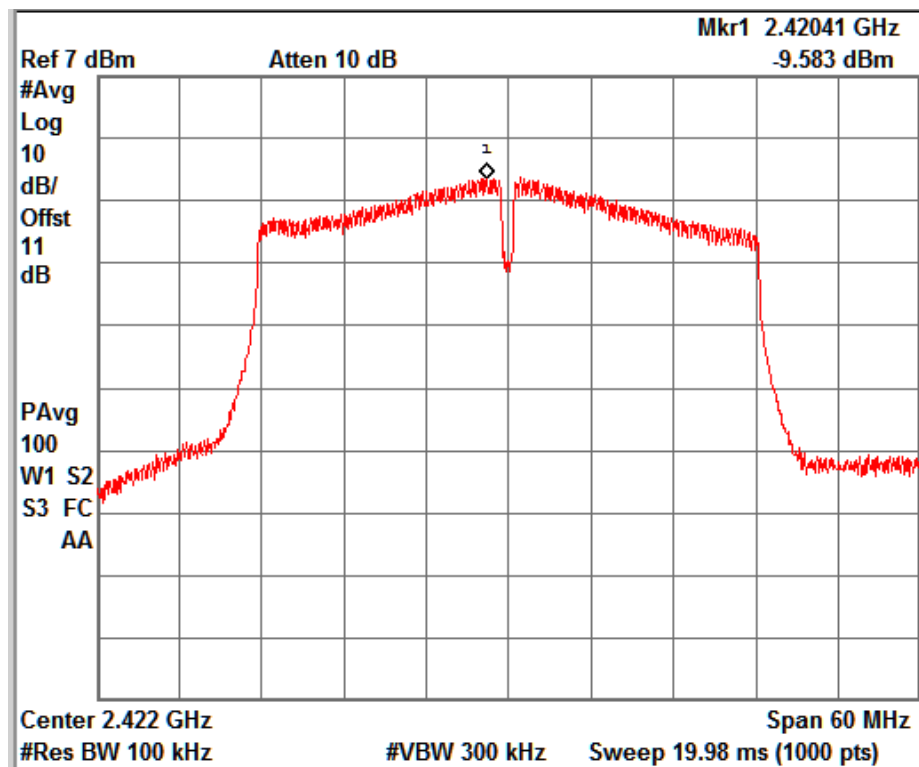
Data rate: MCS7

Channel Frequency: 2472 MHz

www.tuv.com

IEEE802.11nHT40

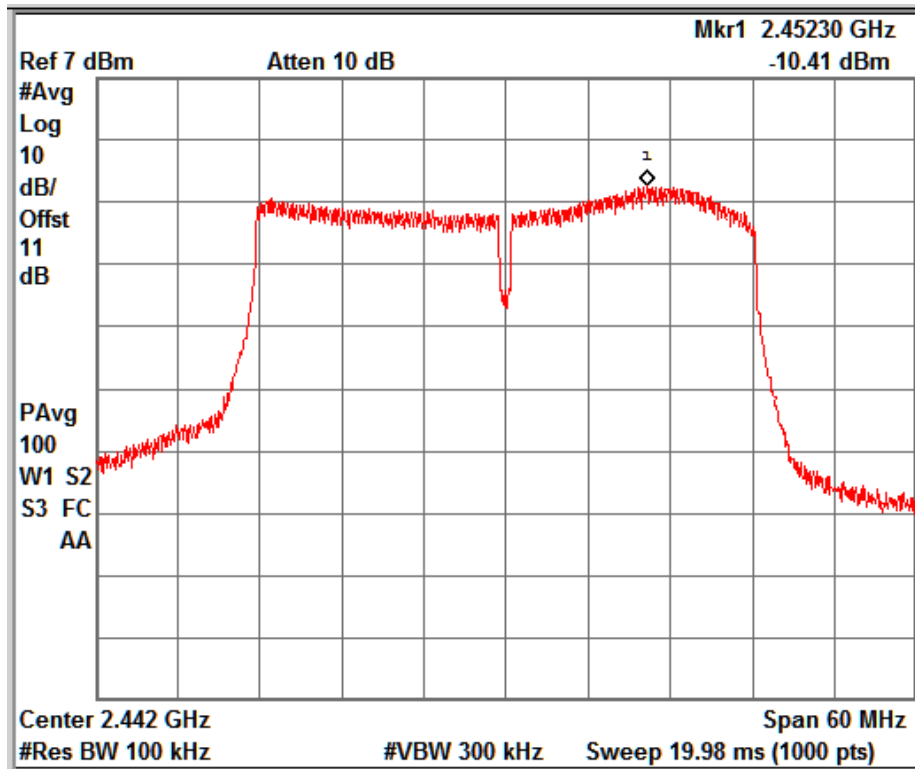
Data Rate (Mbps)	Channel Frequency (MHz)	Total PSD (dBm)	Limit (dBm)
MCS0	2422	-9.583	8
	2442	-10.41	8
	2462	-9.693	8
MCS4	2422	-9.527	8
	2442	-10.77	8
	2462	-9.852	8
MCS7	2422	-8.619	8
	2442	-10.54	8
	2462	-8.988	8



Data rate: MCS0

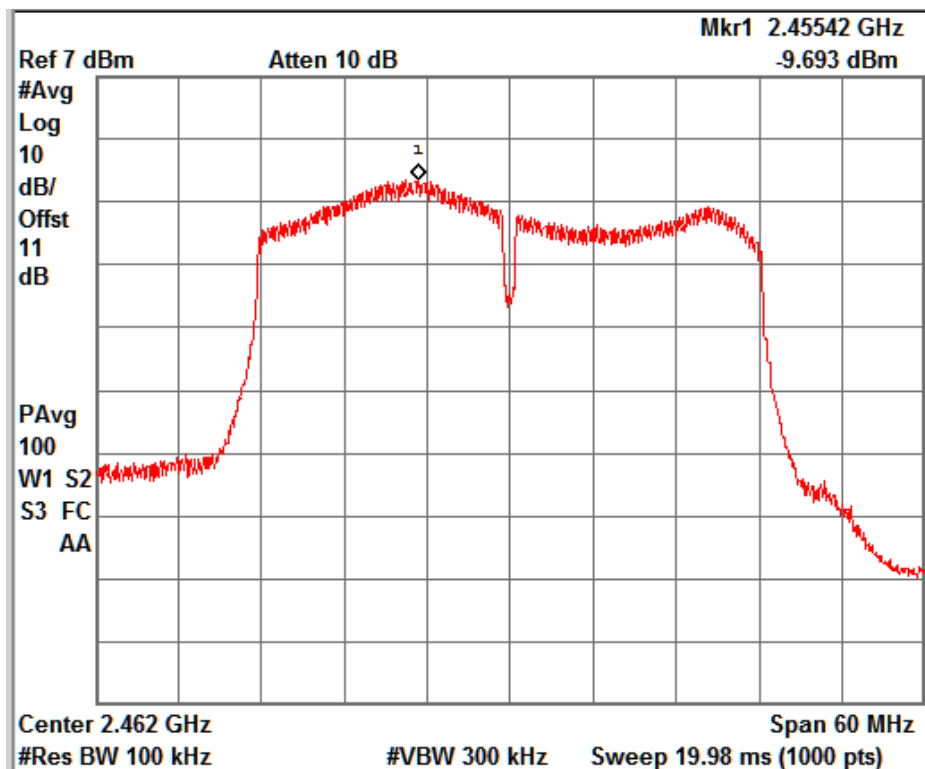
Channel Frequency: 2422 MHz

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Data rate: MCS0

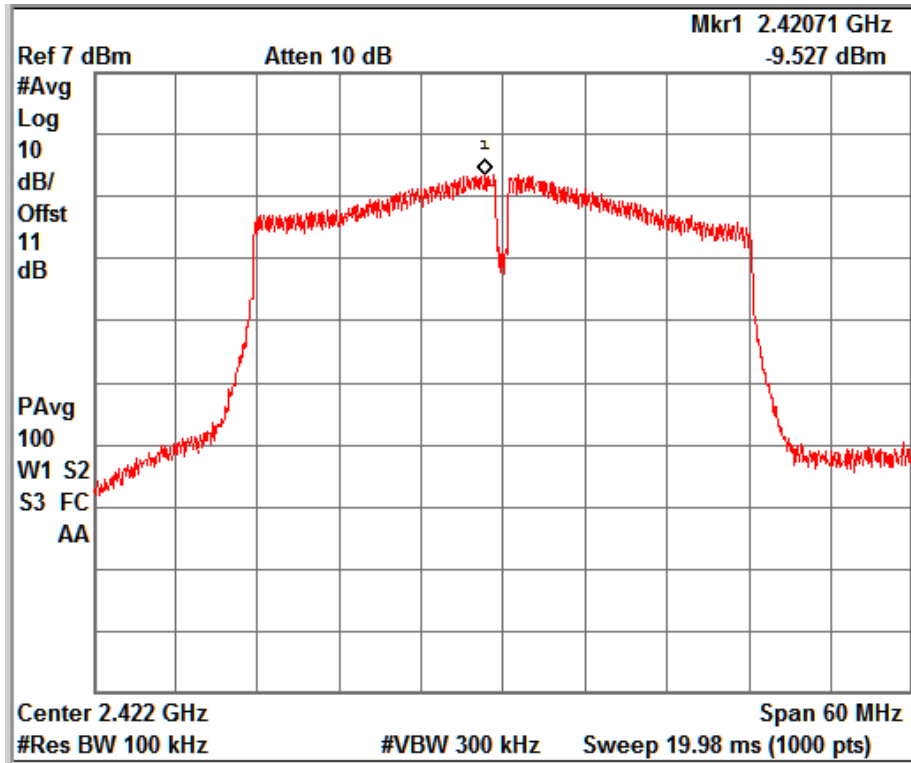
Channel Frequency: 2442 MHz



Data rate: MCS0

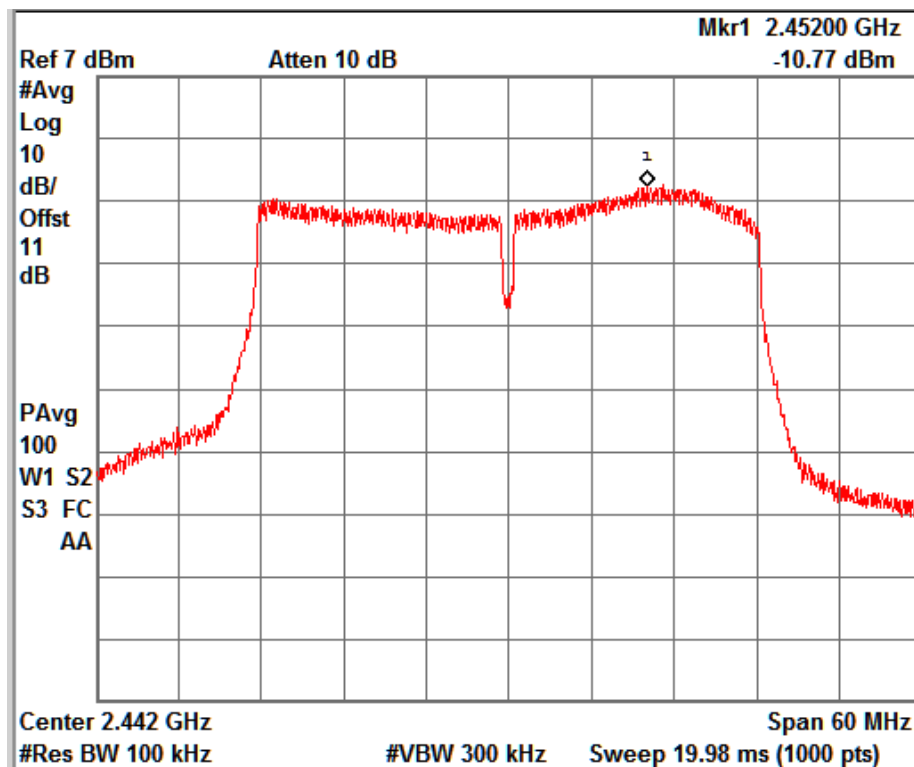
Channel Frequency: 2462 MHz

www.tuv.com



Data rate: MCS4

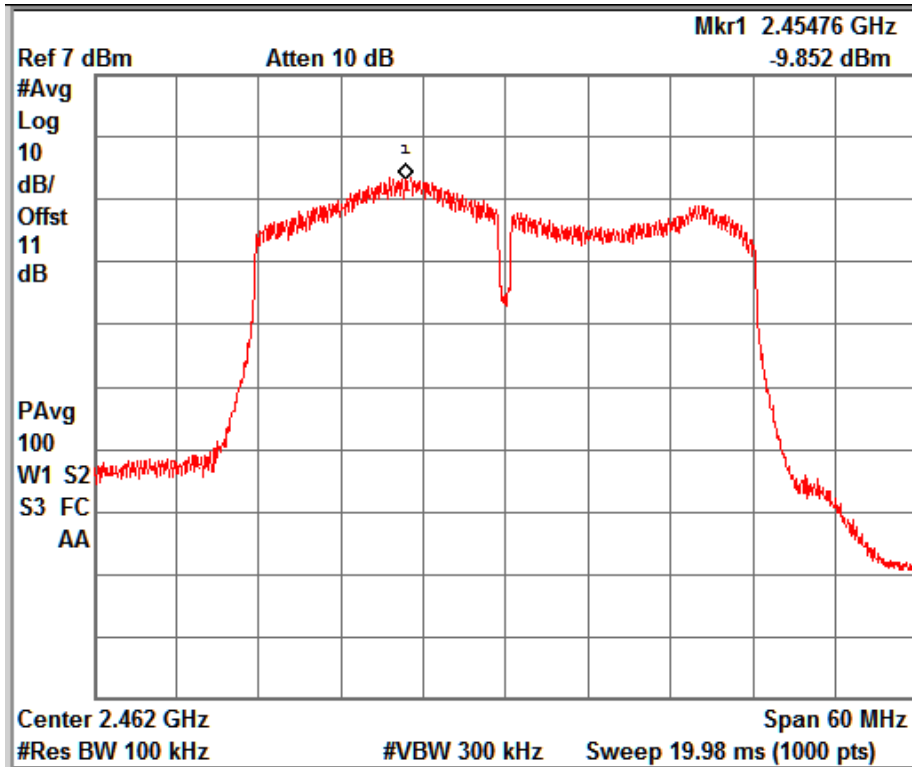
Channel Frequency: 2422 MHz



Data rate: MCS4

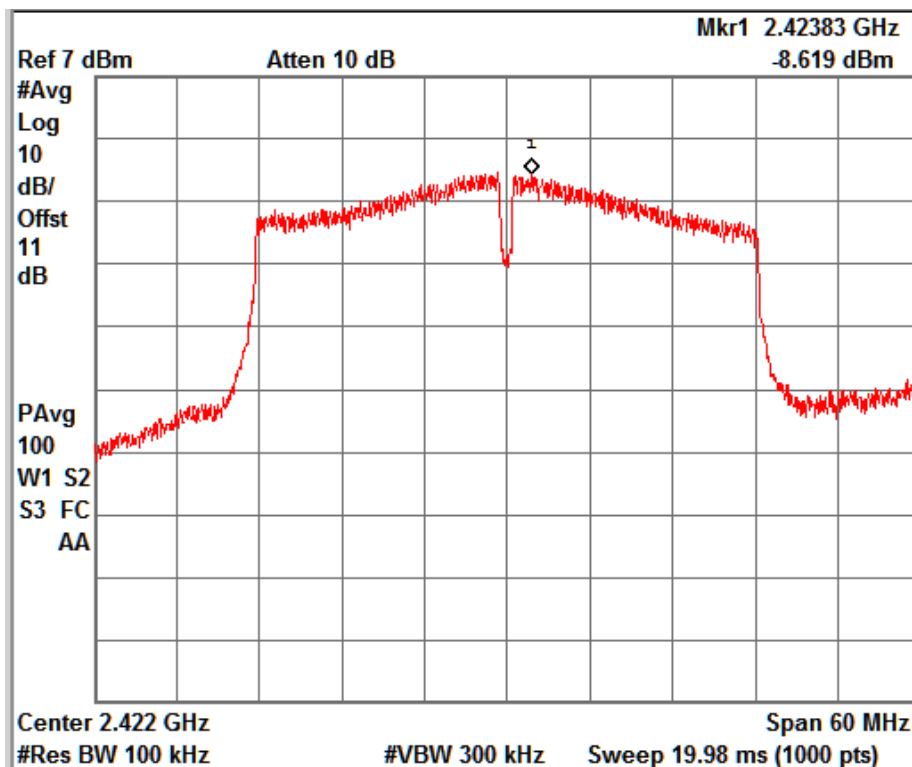
Channel Frequency: 2442 MHz

www.tuv.com



Data rate: MCS4

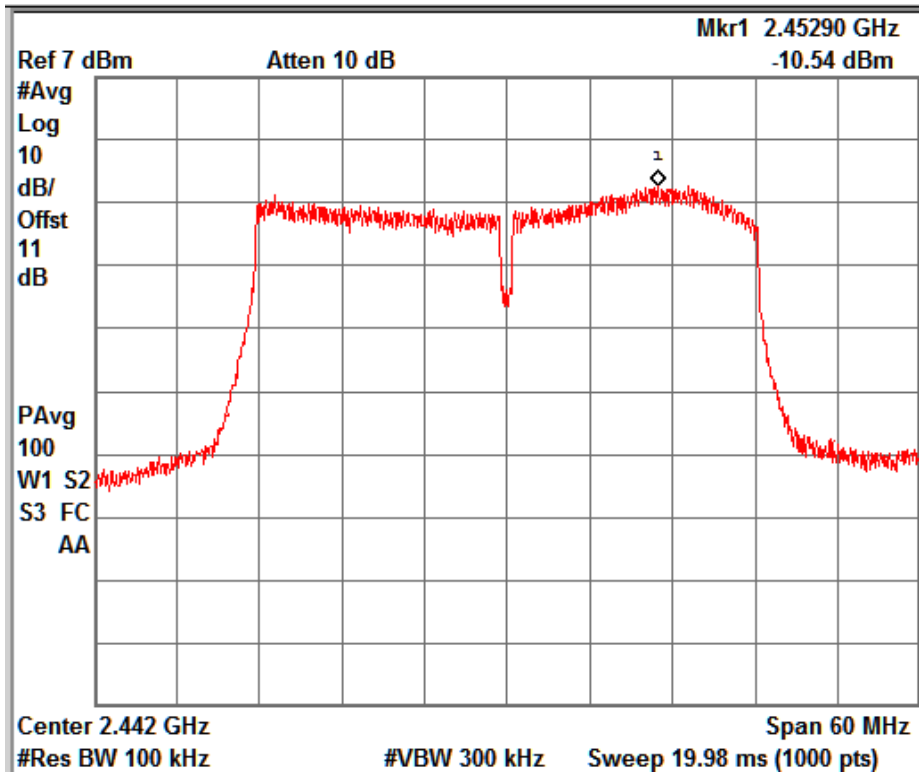
Channel Frequency: 2462 MHz



Data rate: MCS7

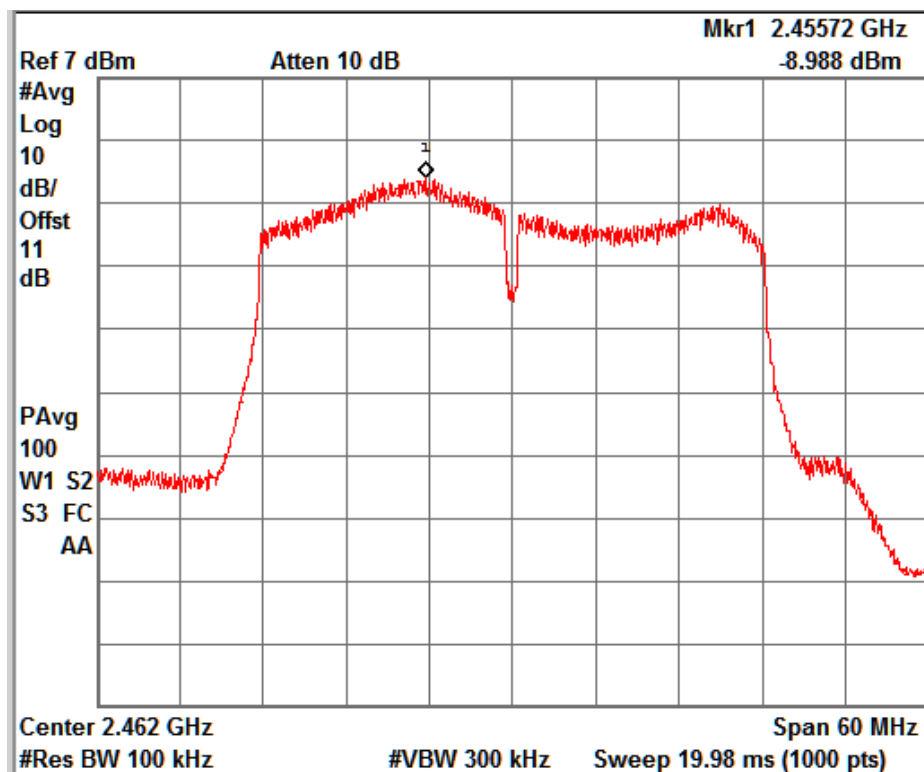
Channel Frequency: 2422 MHz

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Data rate: MCS7

Channel Frequency: 2442 MHz



Data rate: MCS7

Channel Frequency: 2462 MHz

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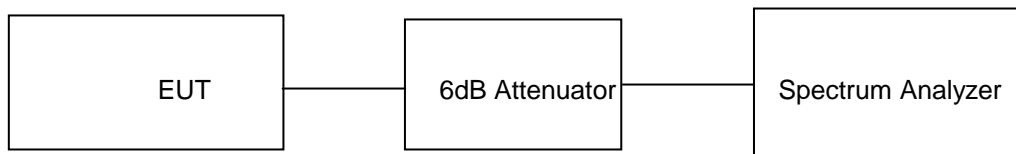
**DTS Bandwidth
Result**

**Section 15.247(a) (2)
Pass**

Test Specification
Detector Function
Requirement

FCC Part 15 Section 15.247 (a) (2)
Peak
The minimum 6 dB bandwidth shall be at least 500 kHz/0.5MHz.

Test Method:



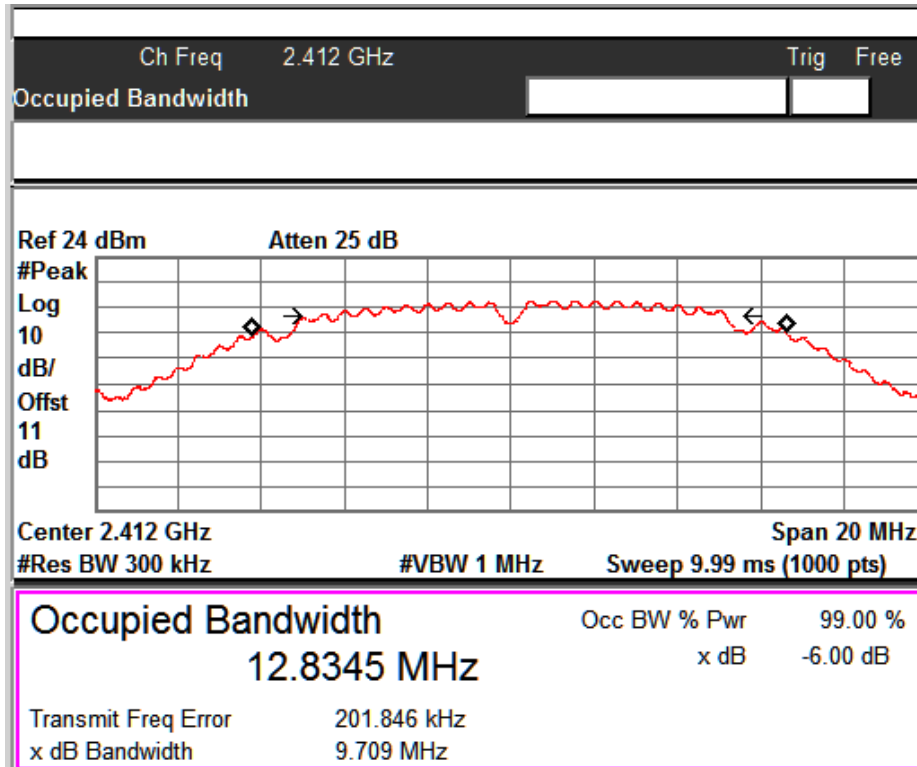
Test Result:

Attenuator (10dB) + cable loss (1dB) =11dB Considered in the test result

IEEE802.11b			
Data Rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)
1	2412	9.12	12.83
	2442	9.60	13.00
	2472	8.64	12.43
11	2412	10.60	12.74
	2442	9.76	12.82
	2472	9.46	12.30

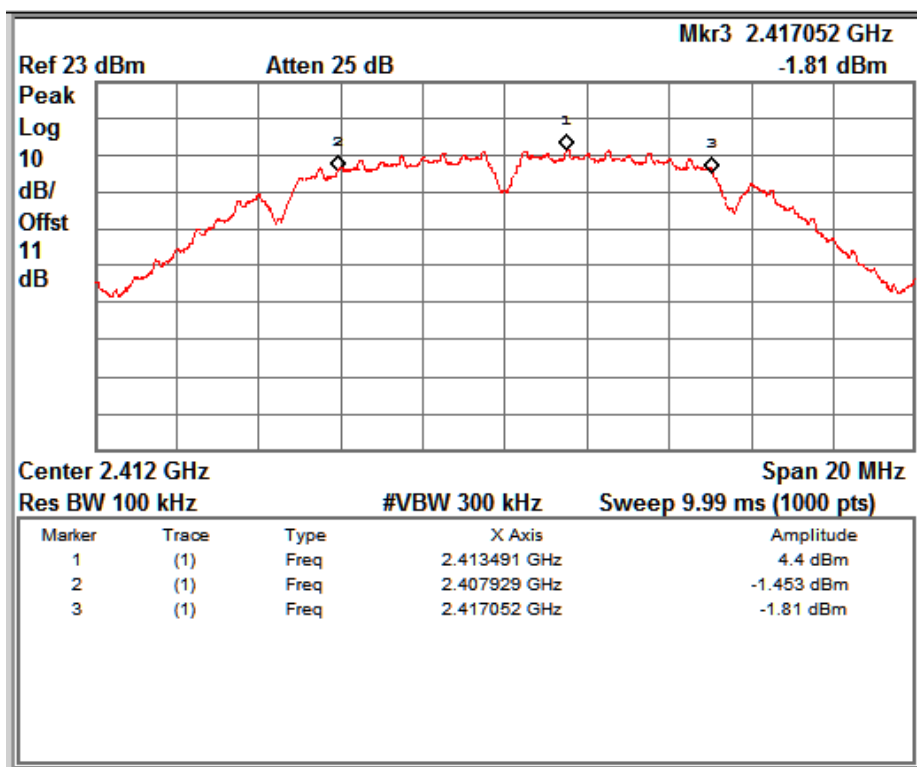
Note: Worst case results are reported

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Data Rate: 1 Mbps

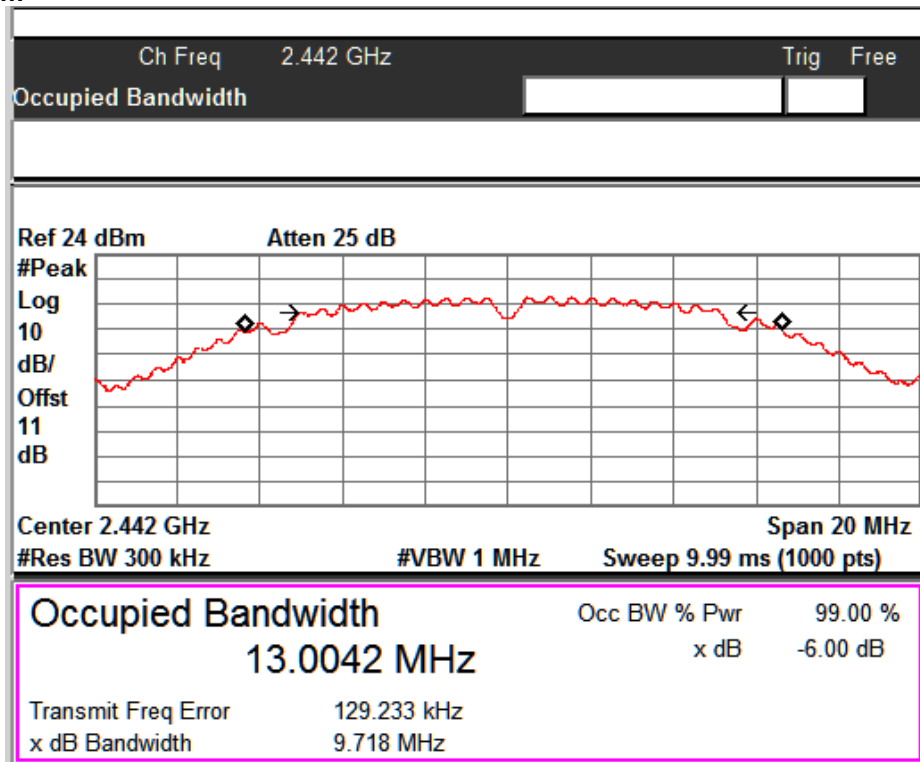
Channel frequency: 2412 MHz



Data Rate: 1 Mbps

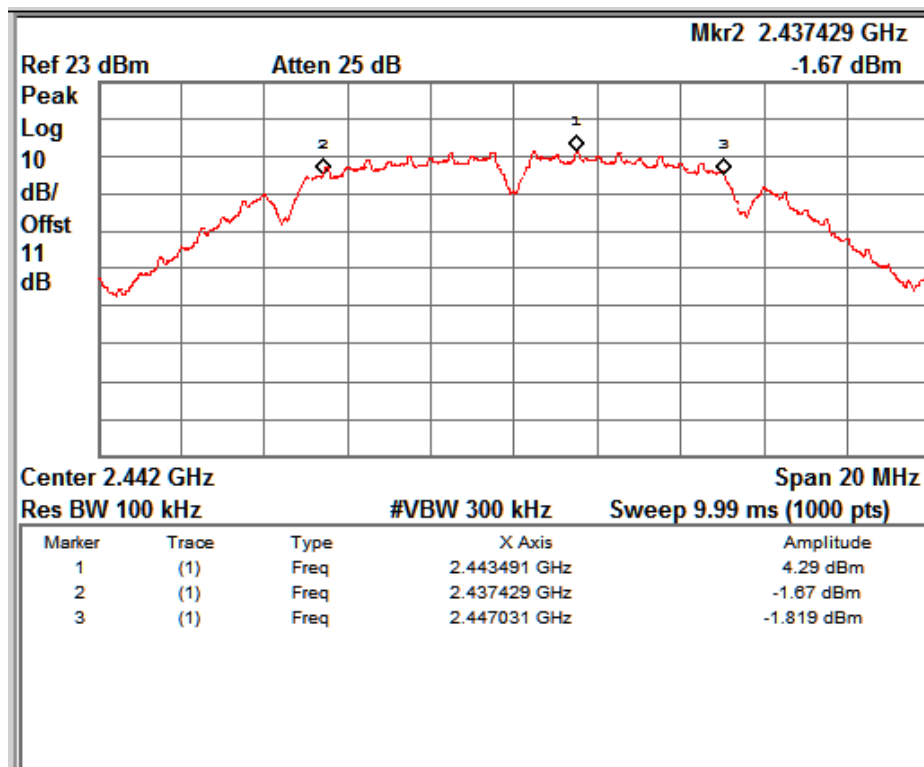
Channel frequency: 2412 MHz 6dB BW

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Data Rate: 1 Mbps

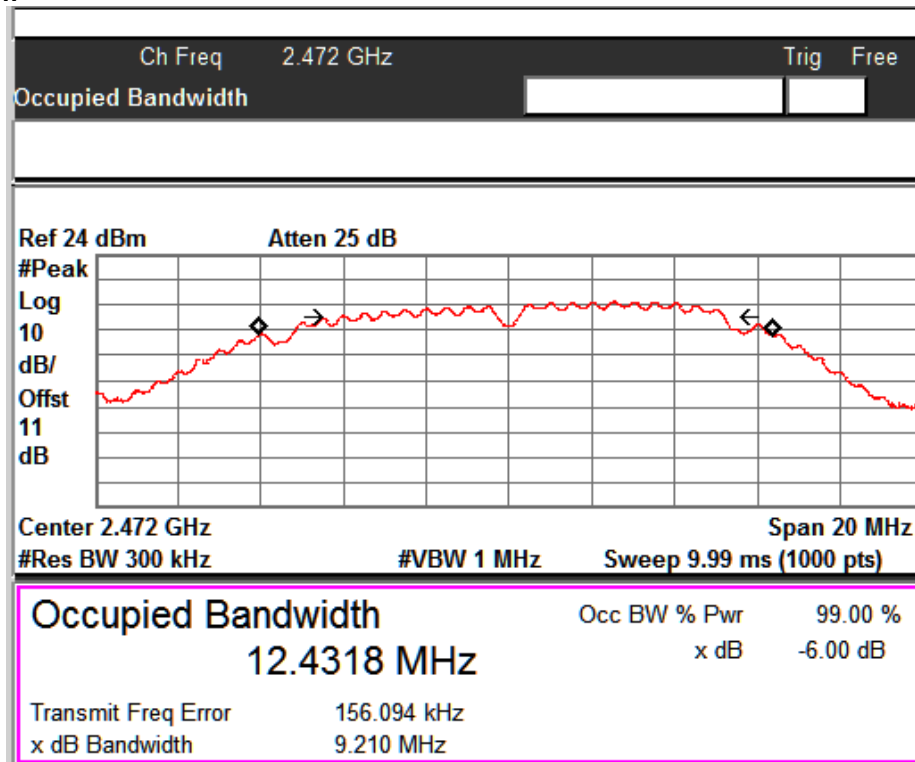
Channel frequency: 2442 MHz



Data Rate: 1 Mbps

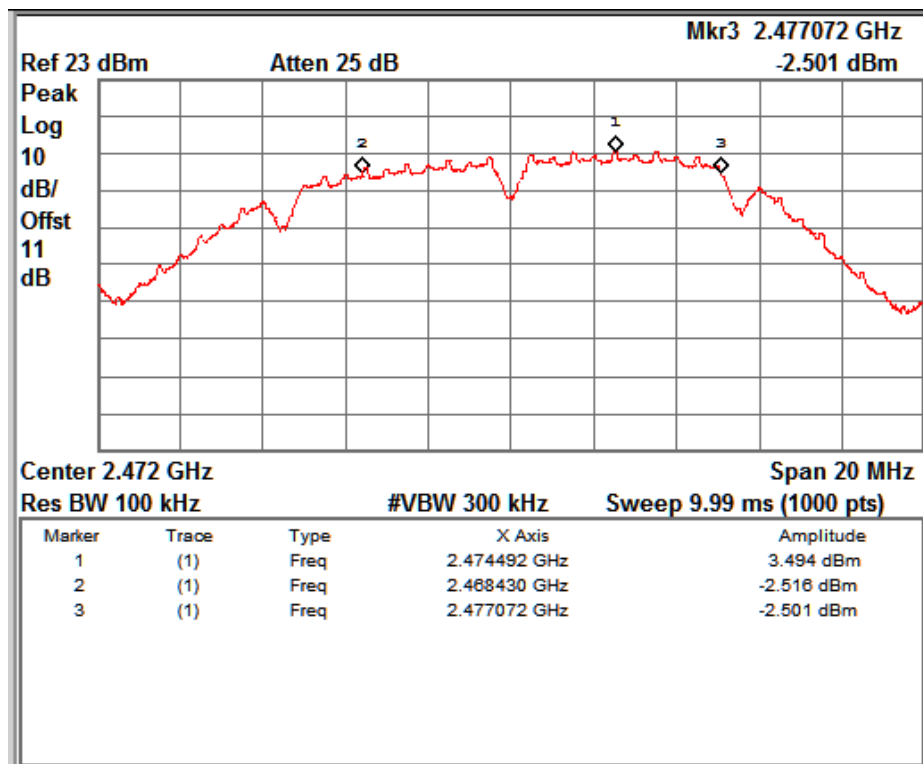
Channel frequency: 2442 MHz 6d BW

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Data Rate: 1 Mbps

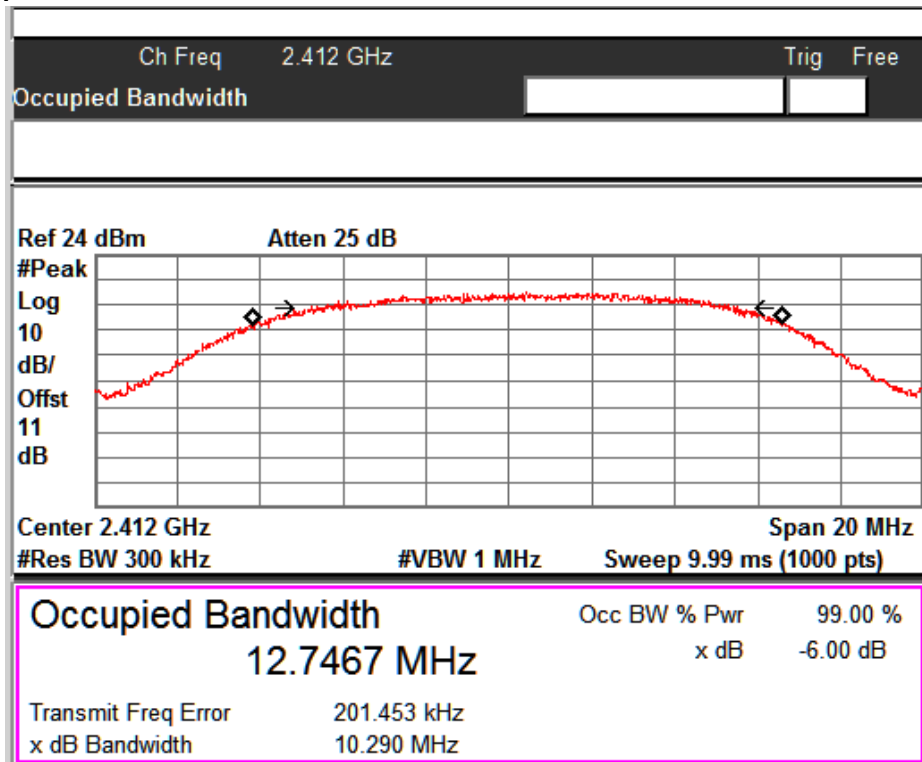
Channel frequency: 2472 MHz



Data Rate: 1 Mbps

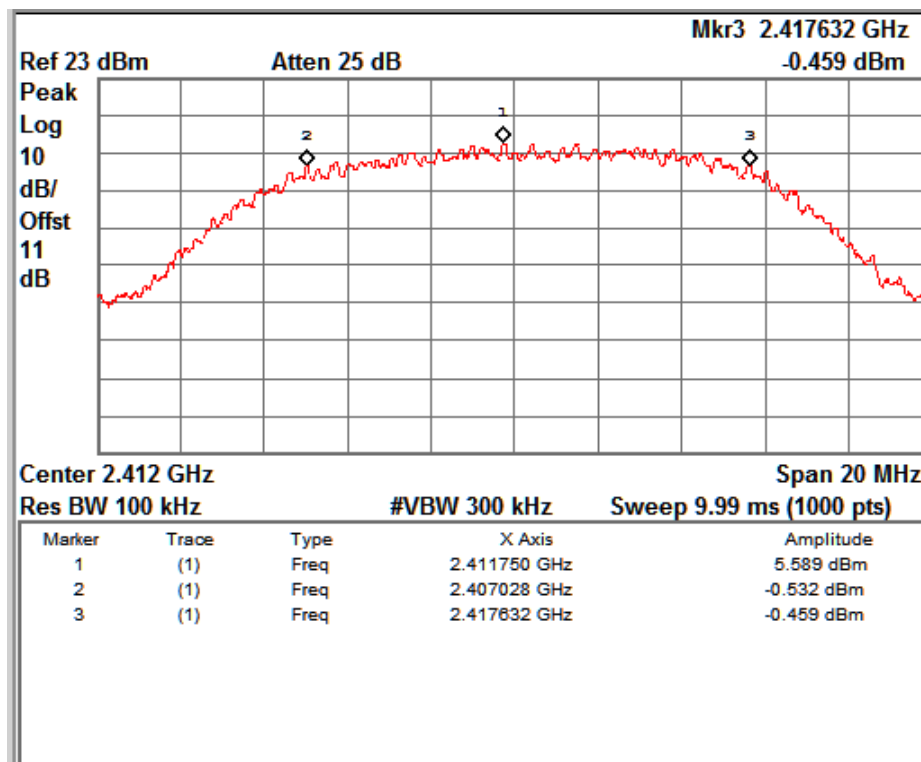
Channel frequency: 2472 MHz 6dB BW

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Data Rate: 11 Mbps

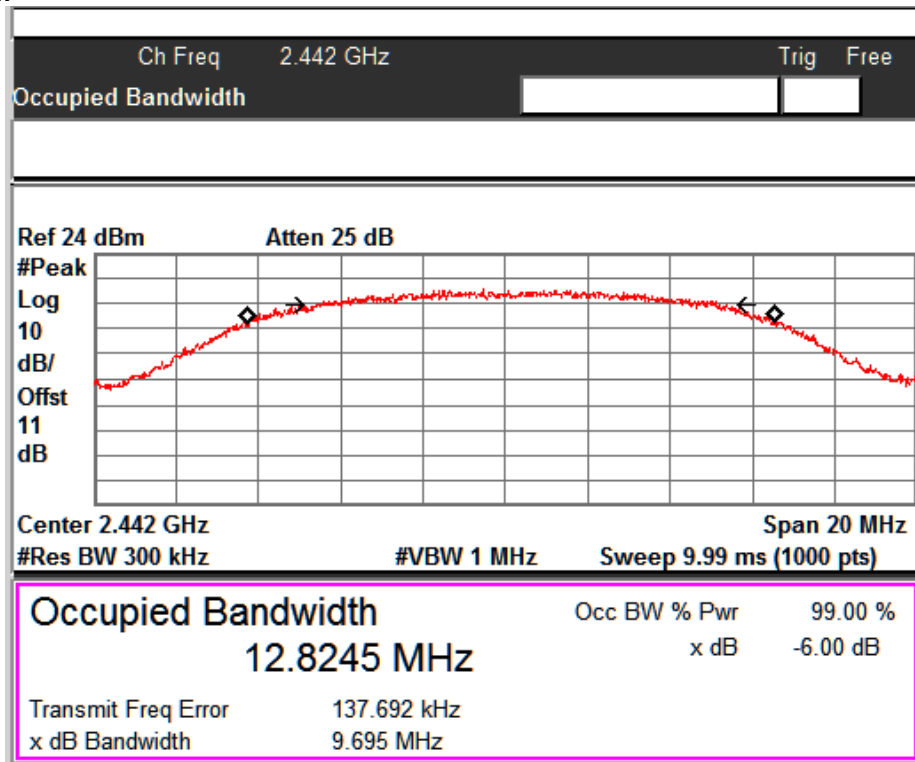
Channel frequencies: 2412 MHz



Data Rate: 11 Mbps

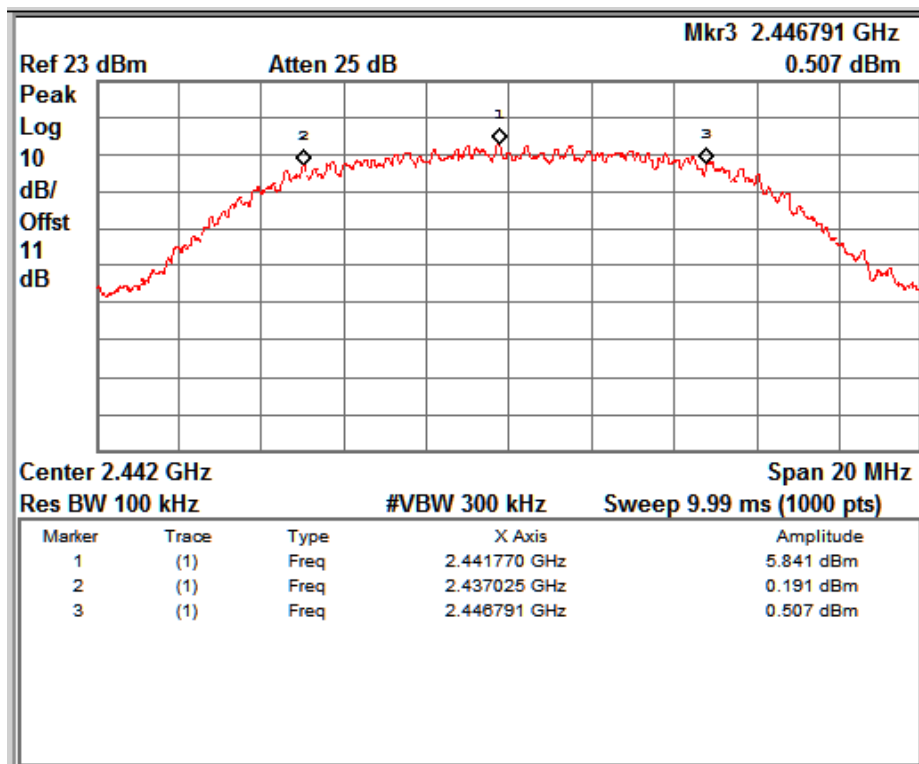
Channel frequencies: 2412 MHz 6db BW

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Data Rate: 11 Mbps

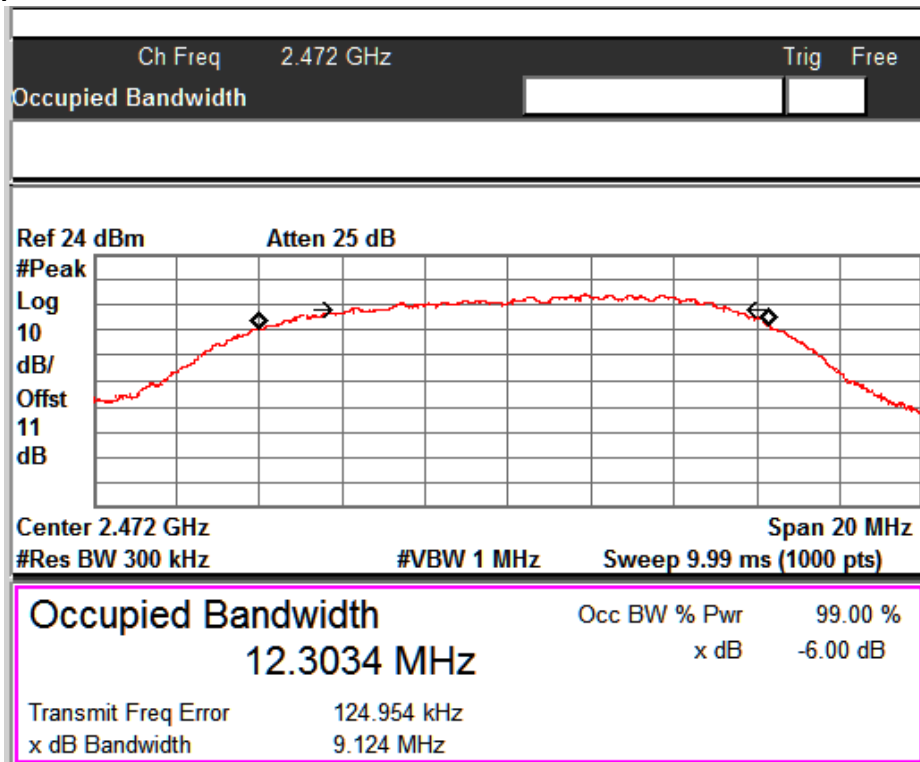
Channel frequency: 2442 MHz



Data Rate: 11 Mbps

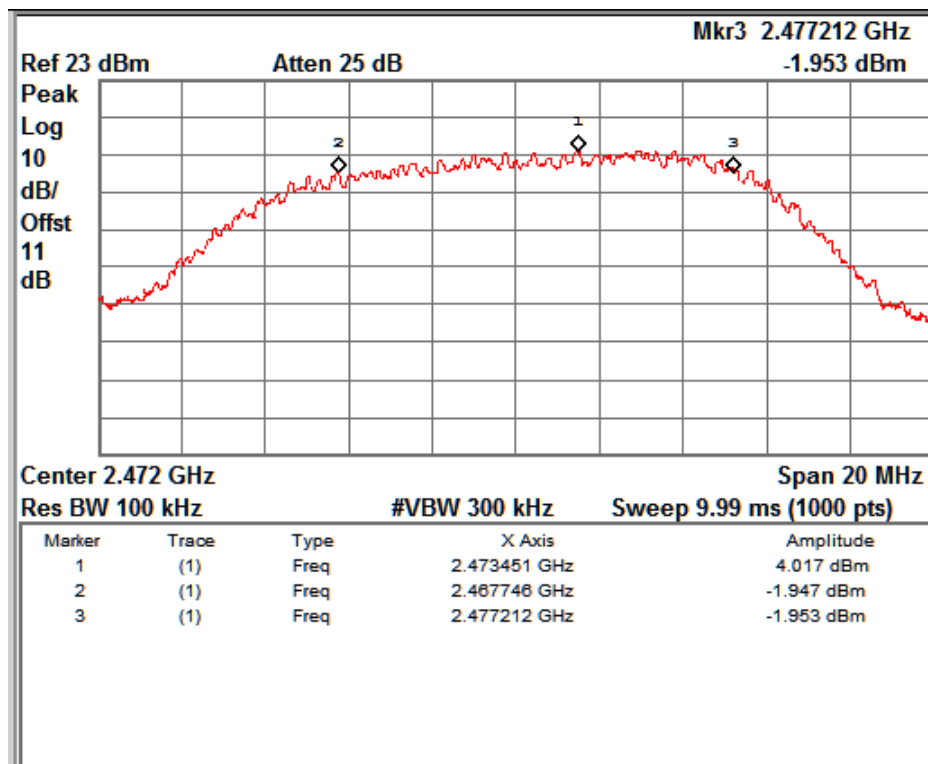
Channel frequency: 2442 MHz 6dB BW

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Data Rate: 11 Mbps

Channel frequency: 2472 MHz

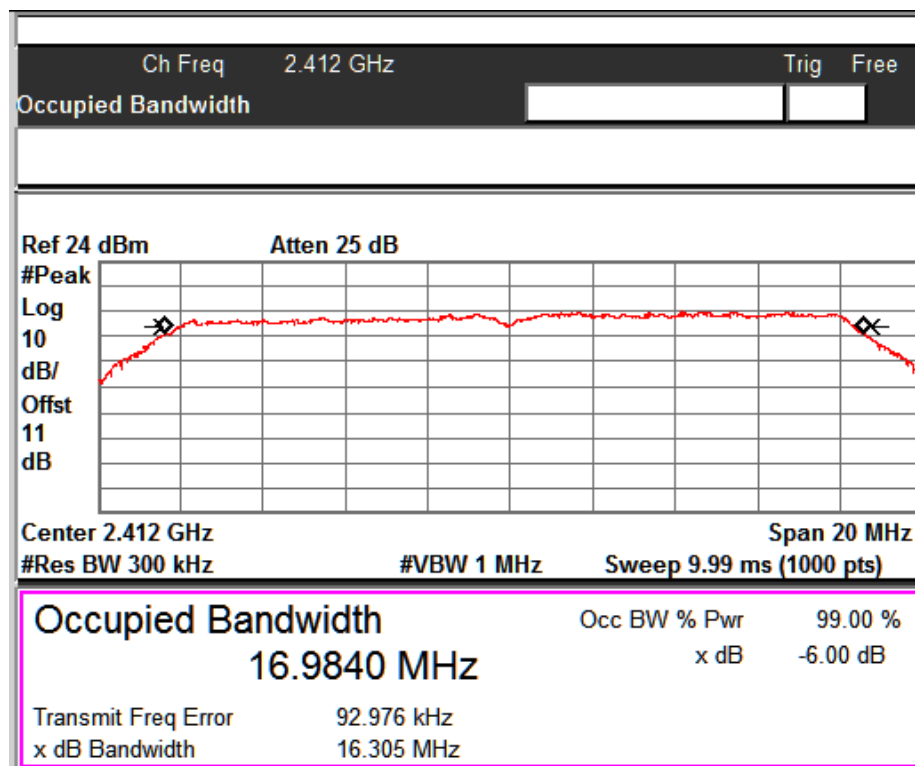


Data Rate: 11 Mbps

Channel frequency: 2472 MHz 6dB BW

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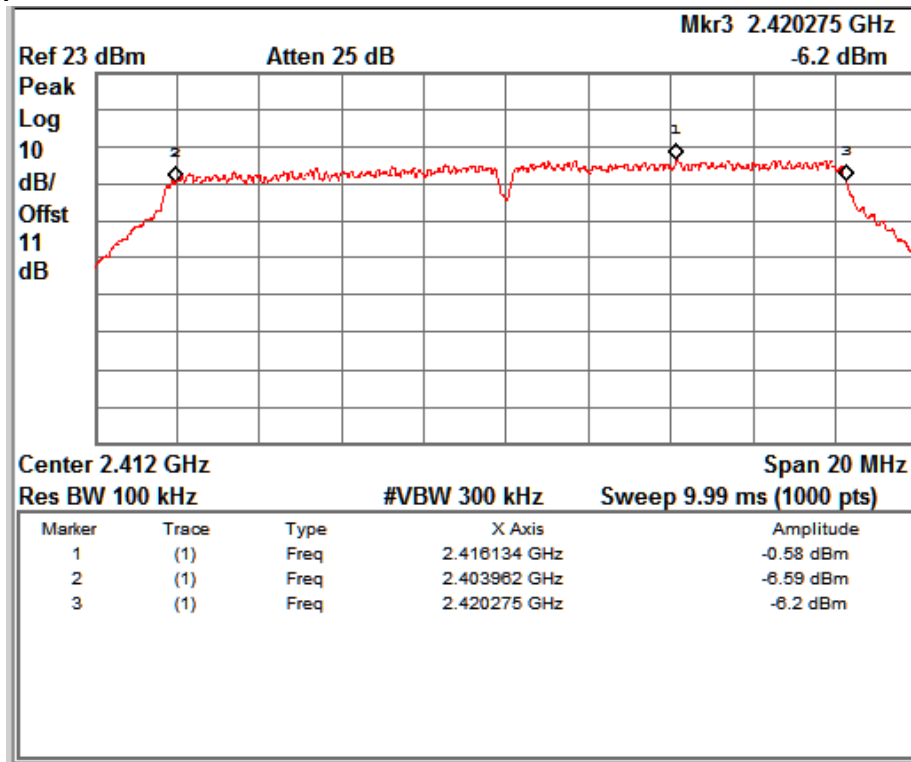
IEEE802.11g			
Data Rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)
6	2412	16.31	16.98
	2442	16.55	17.17
	2472	15.45	16.45
24	2412	15.99	16.64
	2442	15.97	16.68
	2472	15.71	16.42
54	2412	16.29	16.77
	2442	16.53	16.82
	2472	16.29	16.44



Data Rate: 6 Mbps

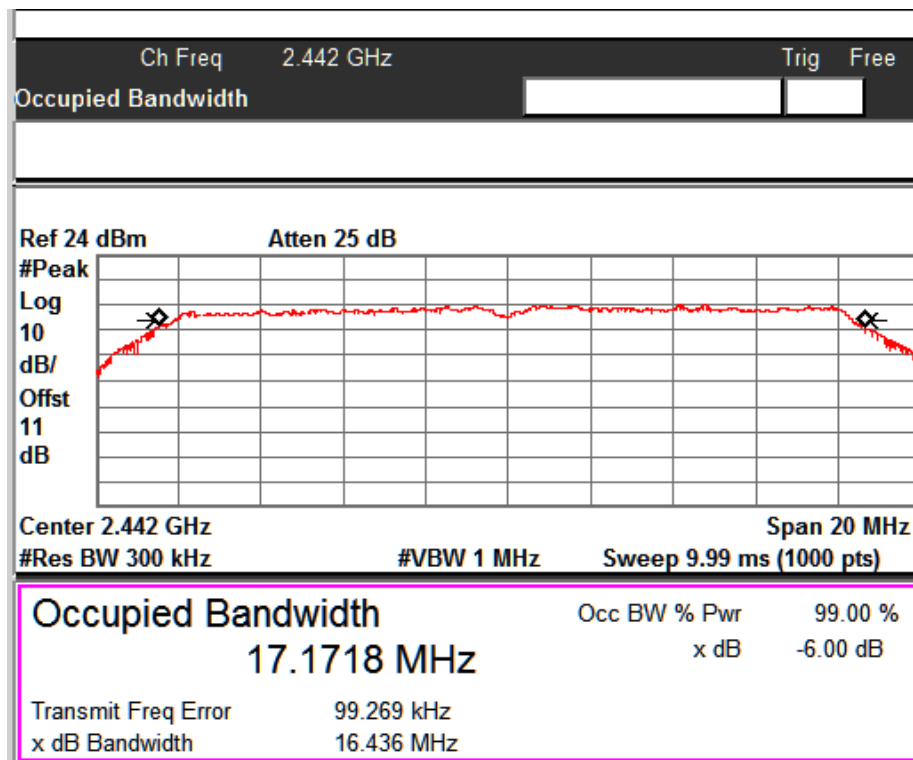
Channel frequencies: 2412 MHz

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Data Rate: 6 Mbps

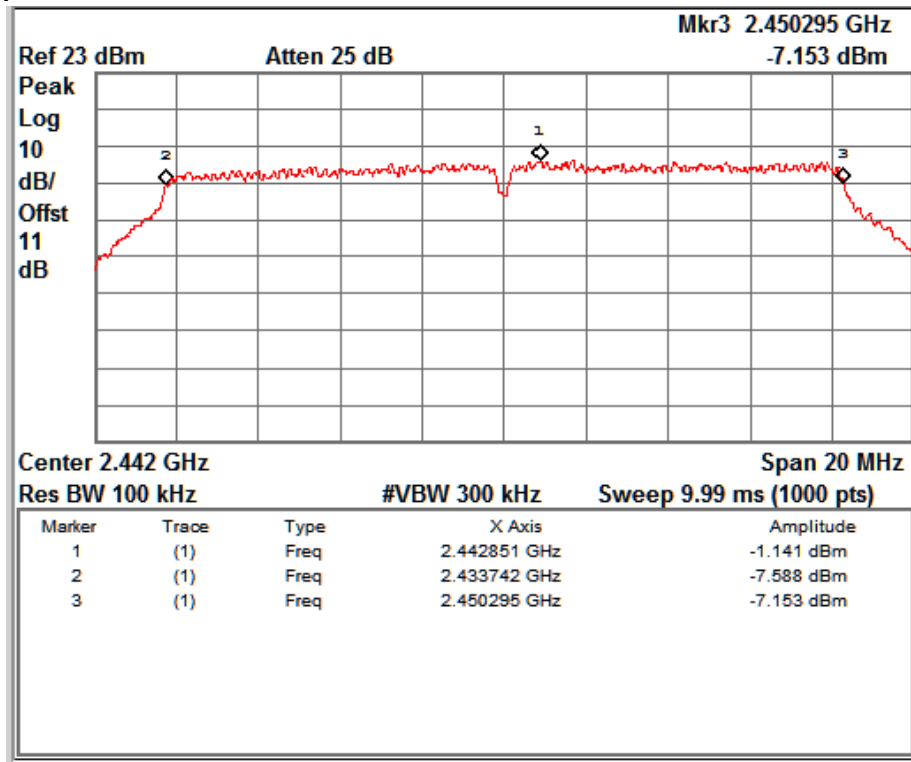
Channel frequencies: 2412 MHz 6dB BW



Data Rate: 6 Mbps

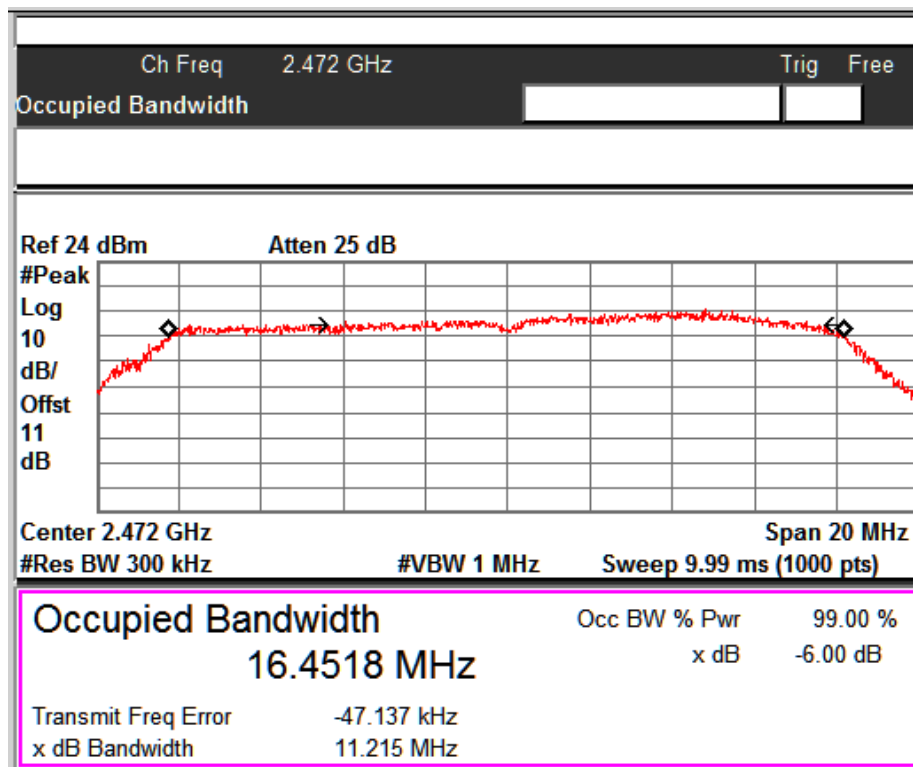
Channel frequencies: 2442 MHz

www.tuv.com



Data Rate: 6 Mbps

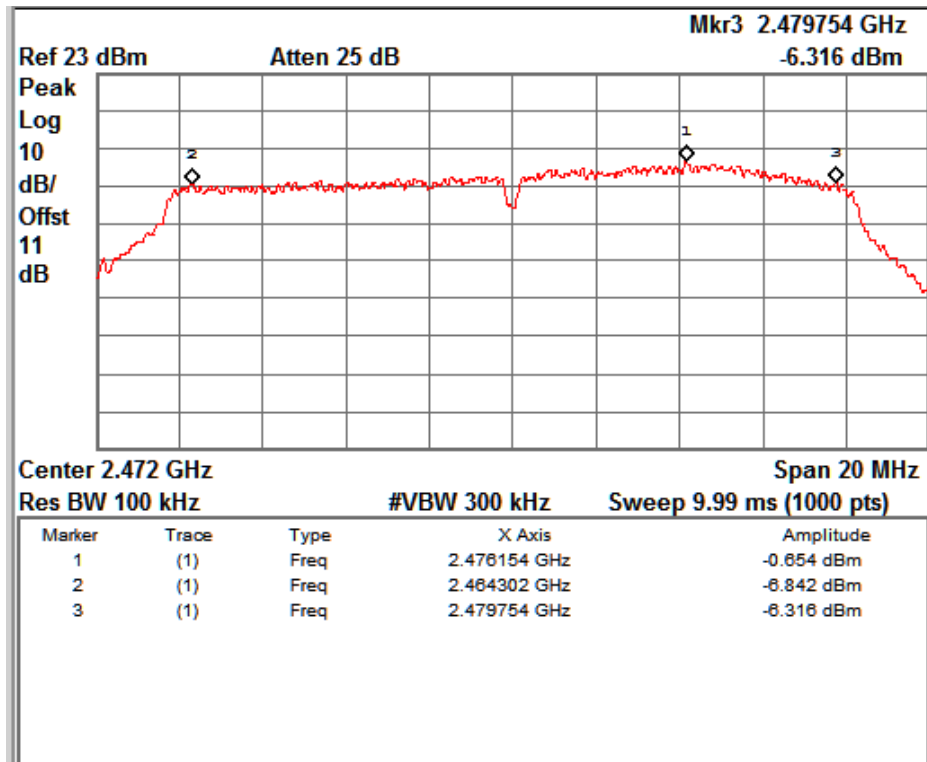
Channel frequencies: 2442 MHz 6dB BW



Data Rate: 6 Mbps

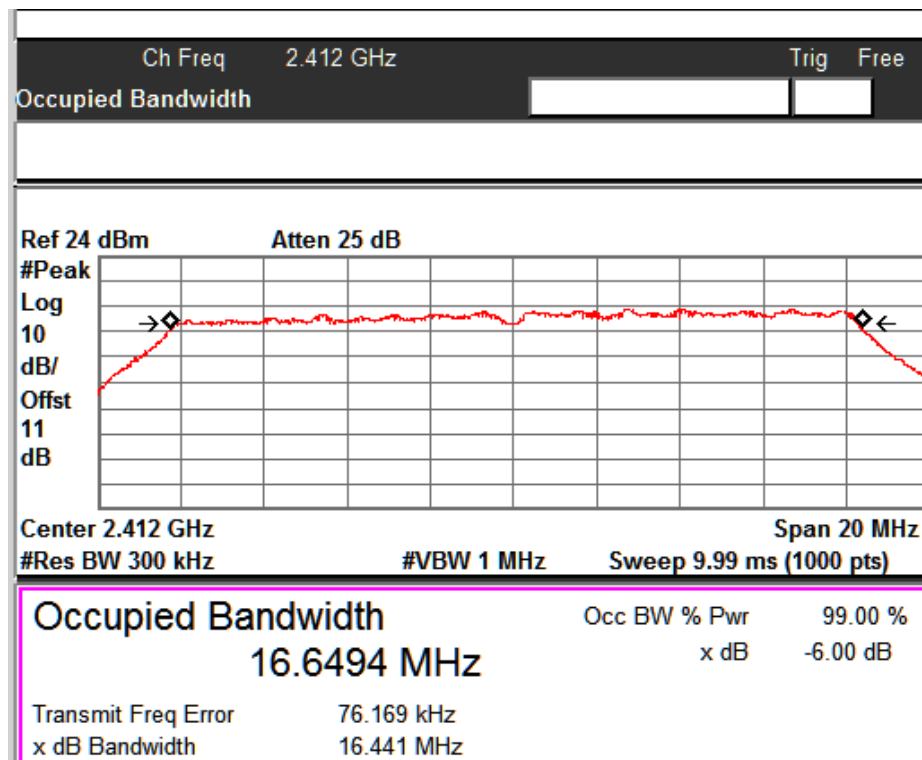
Channel frequencies: 2472 MHz

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Data Rate: 6 Mbps

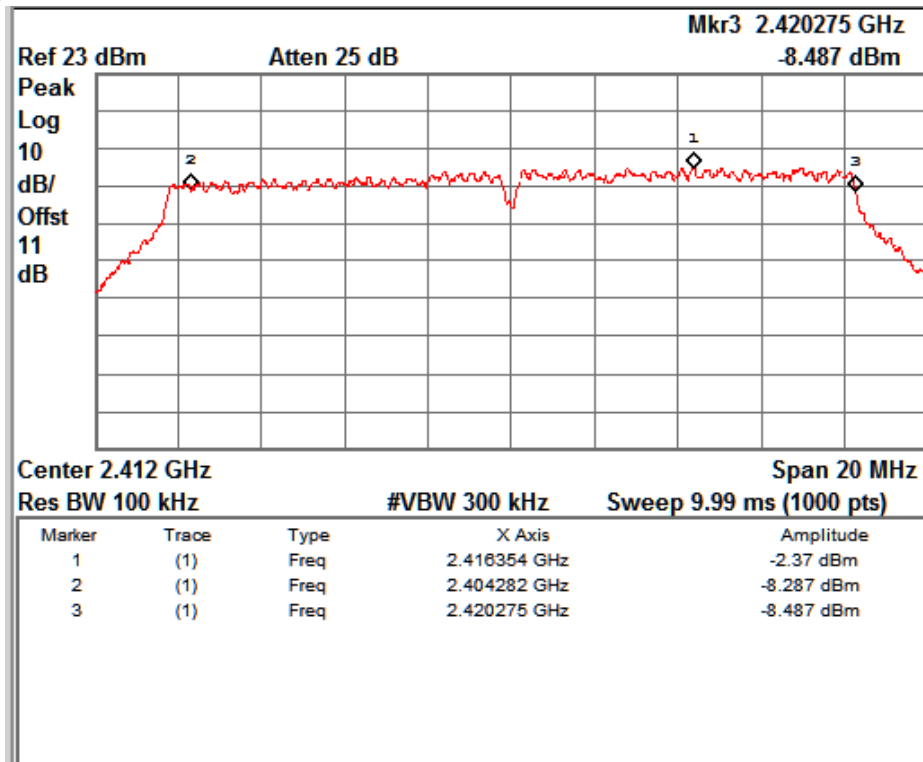
Channel frequencies: 2472 MHz 6dB BW



Data Rate: 24 Mbps

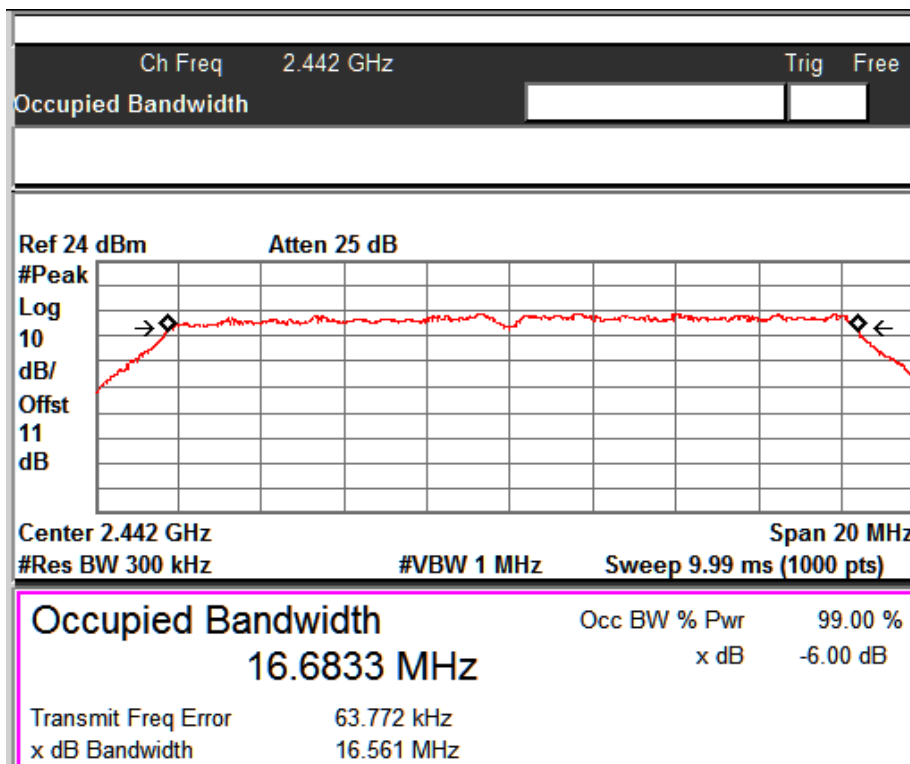
Channel frequencies: 2412 MHz

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Data Rate: 24 Mbps

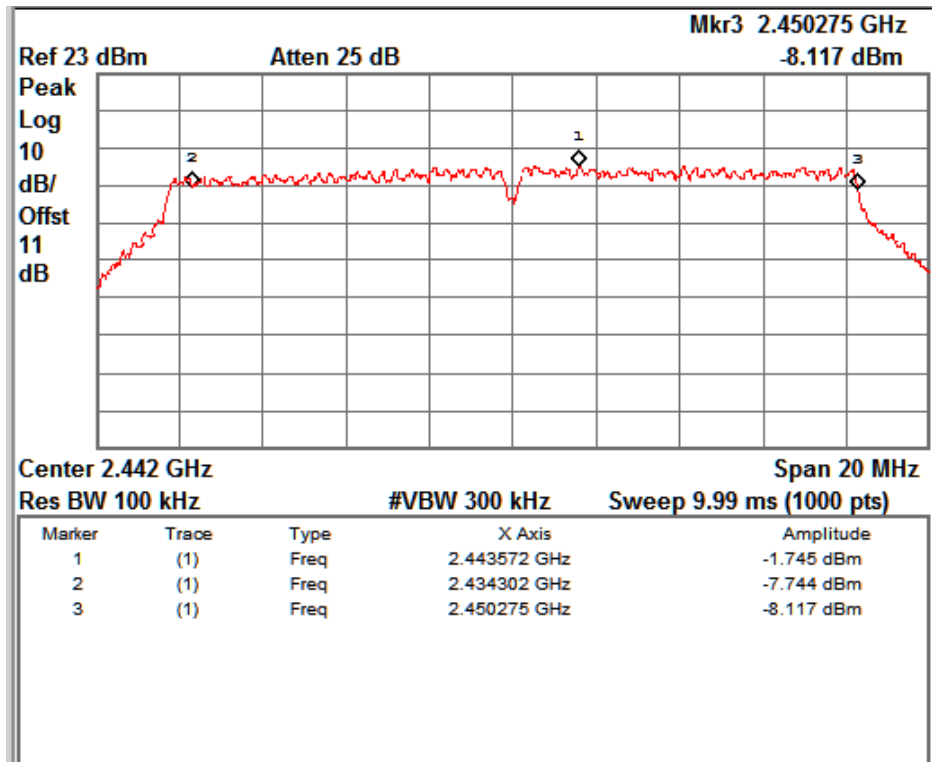
Channel frequencies: 2412 MHz 6dB BW



Data Rate: 24 Mbps

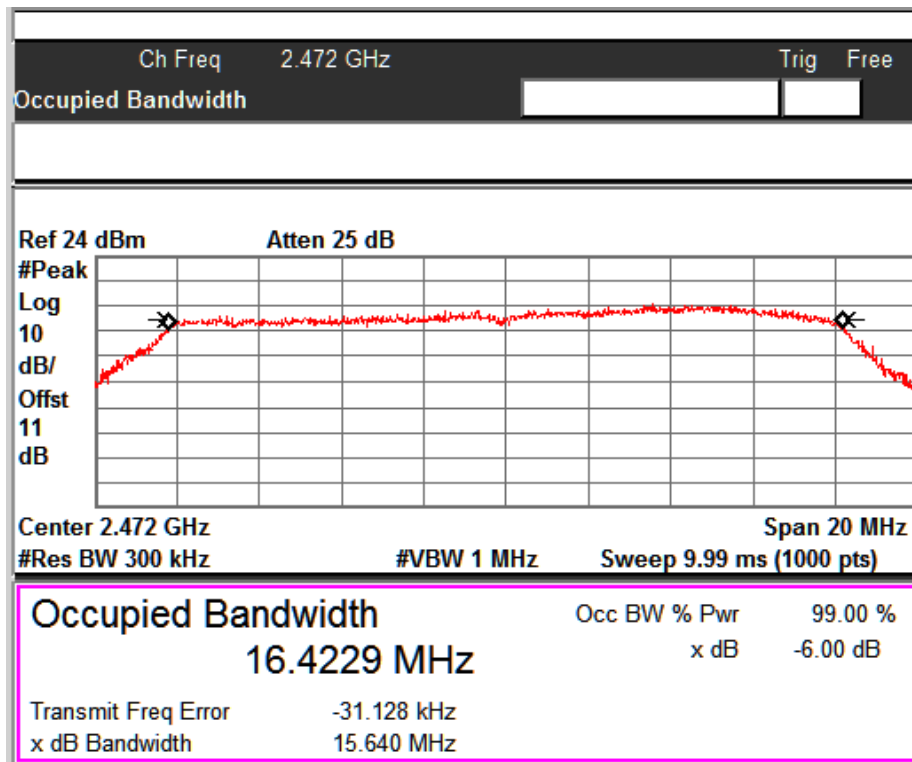
Channel frequencies: 2442 MHz

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Data Rate: 24 Mbps

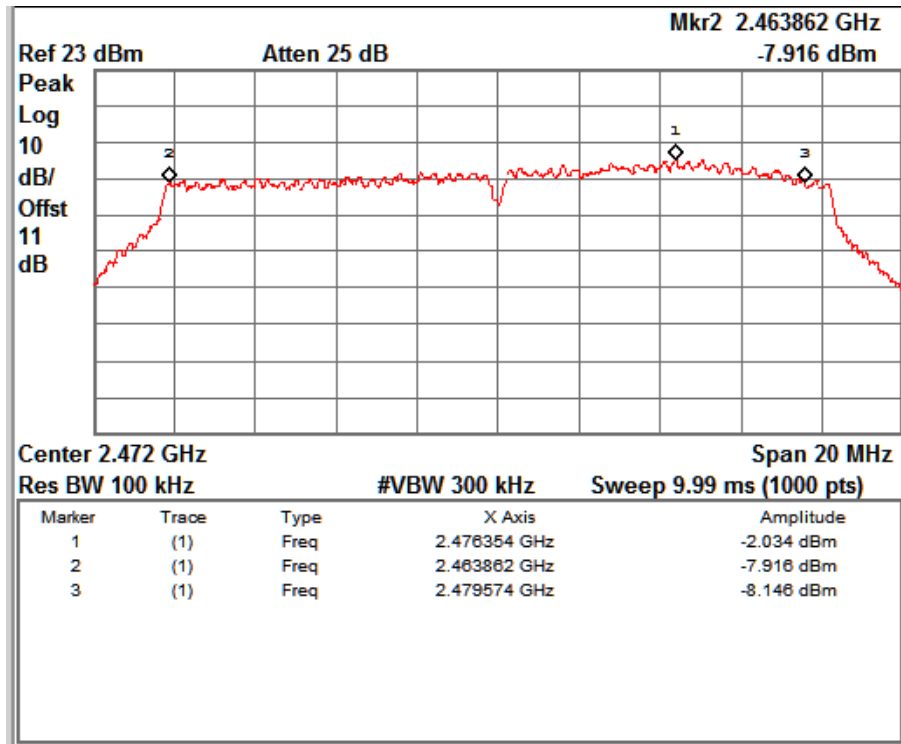
Channel frequencies: 2442 MHz 6dB BW



Data Rate: 24 Mbps

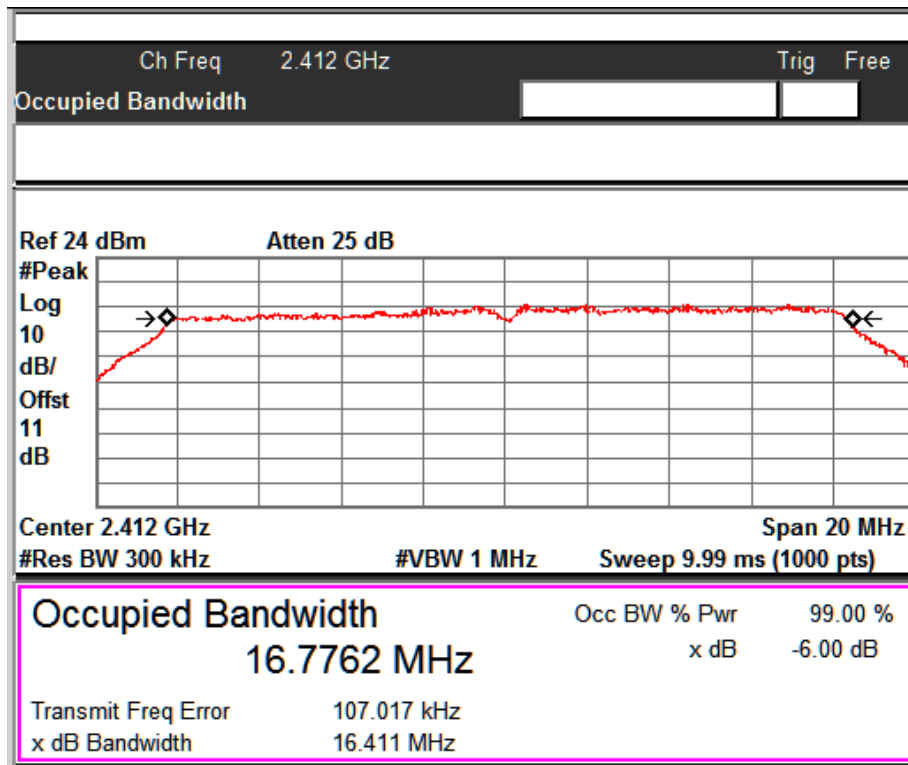
Channel frequencies: 2472 MHz

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Data Rate: 24 Mbps

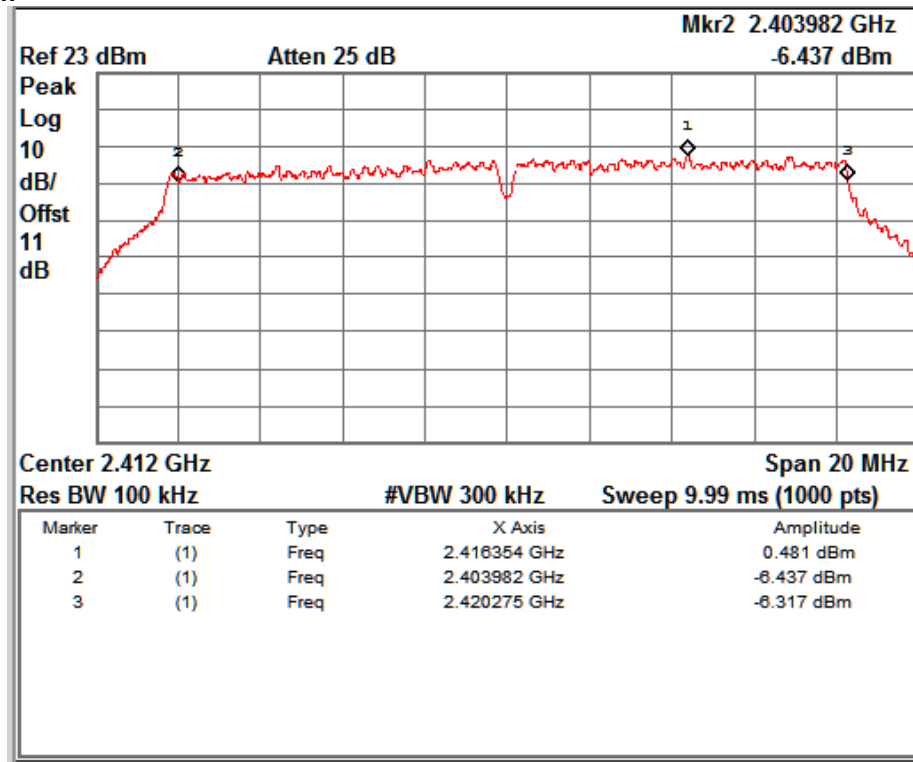
Channel frequencies: 2472 MHz 6dB BW



Data Rate: 54 Mbps

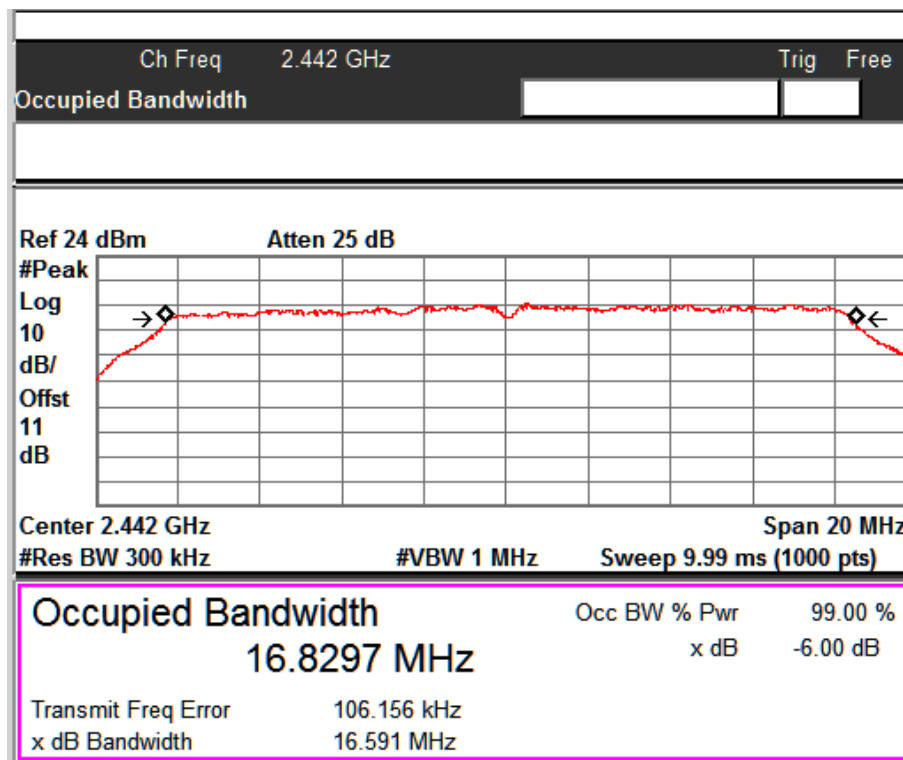
Channel frequencies: 2412 MHz

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Data Rate: 54 Mbps

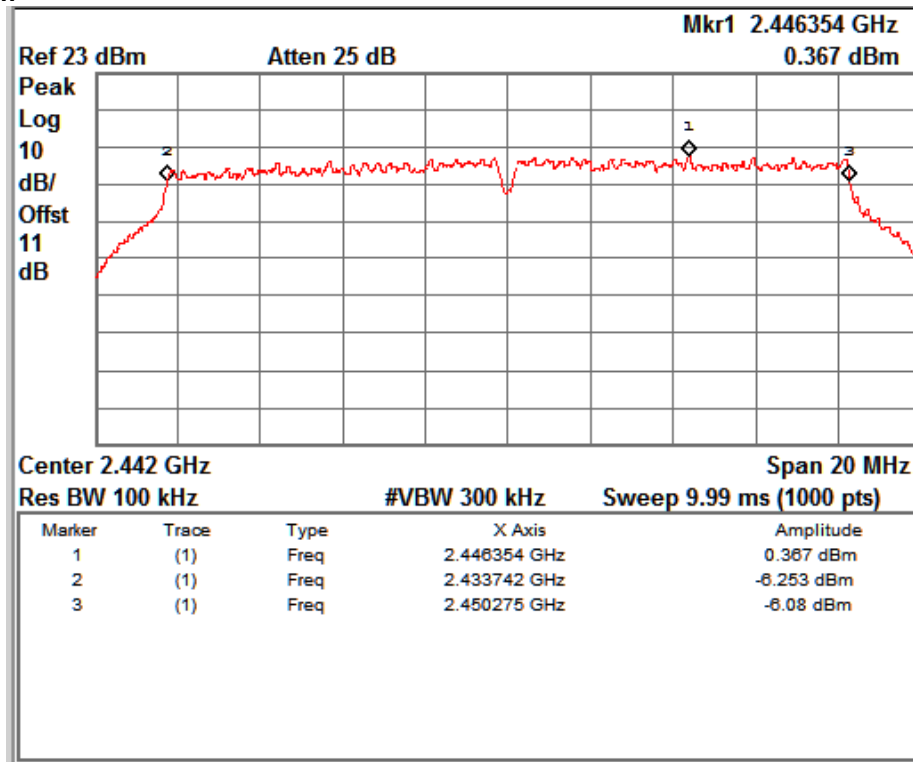
Channel frequencies: 2412 MHz 6dB BW



Data Rate: 54 Mbps

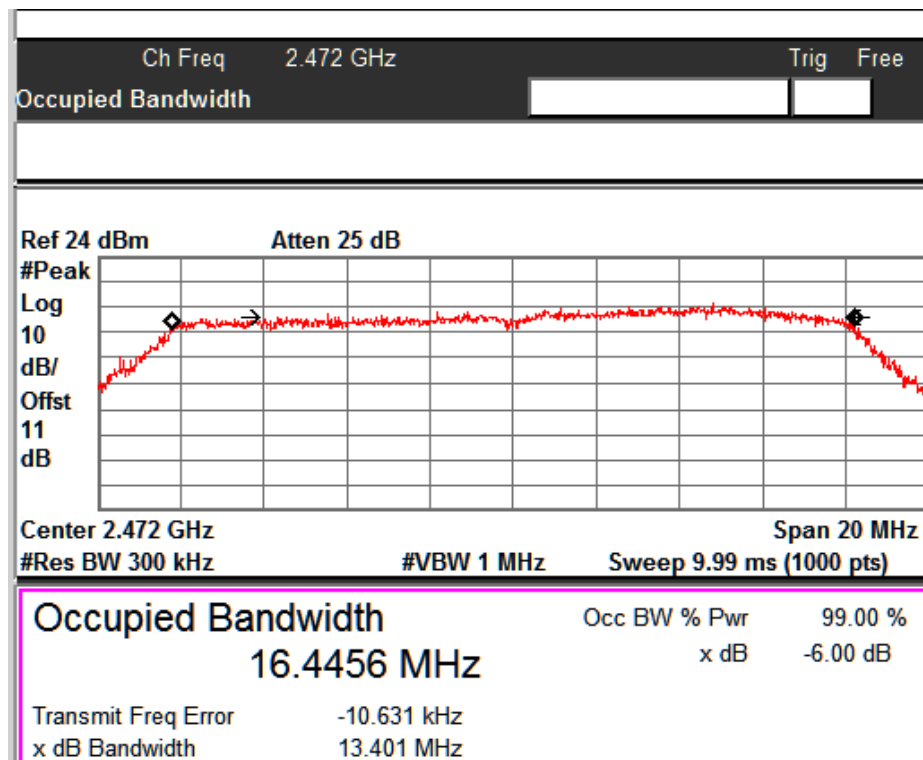
Channel frequencies: 2442MHz

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Data Rate: 54 Mbps

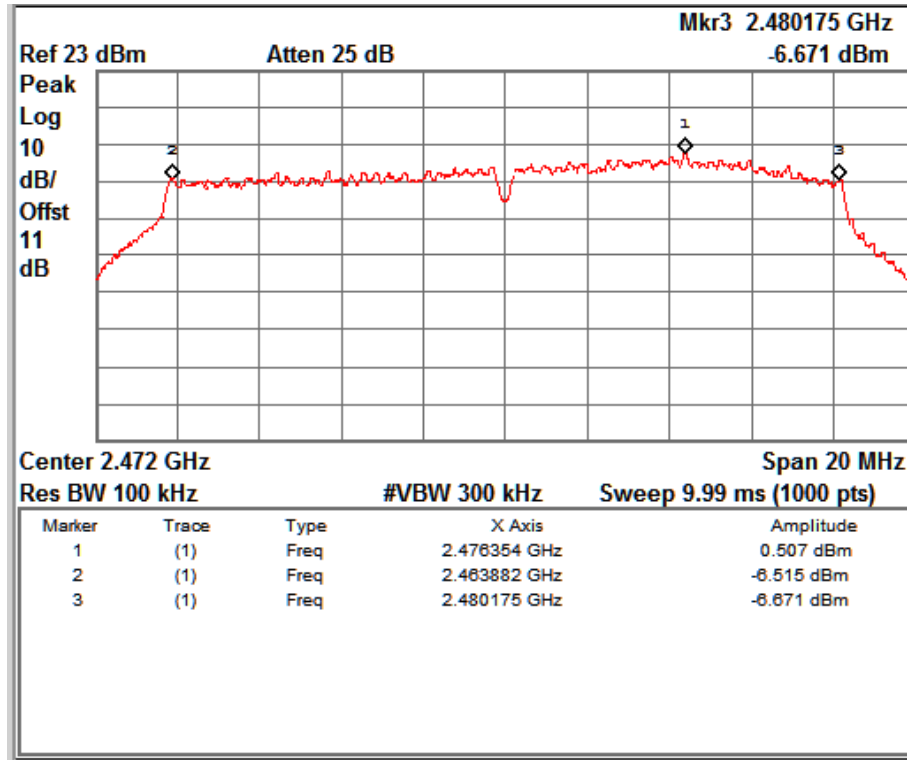
Channel frequencies: 2442 MHz 6dB BW



Data Rate: 54 Mbps

Channel frequencies: 2472 MHz

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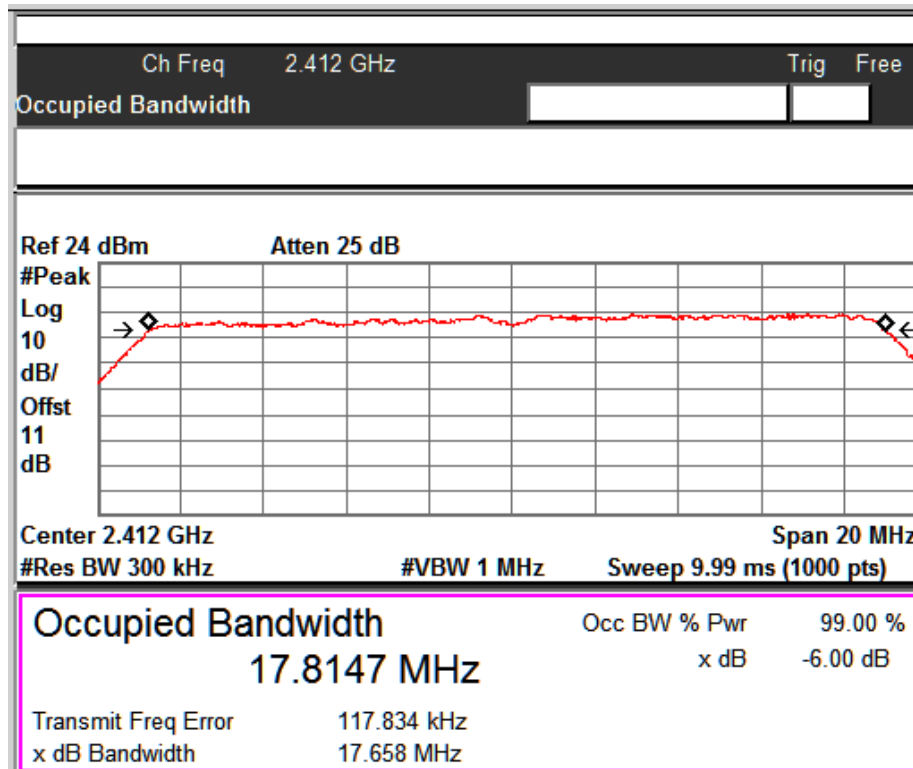


Data Rate: 54 Mbps

Channel frequencies: 2472 MHz 6dB BW

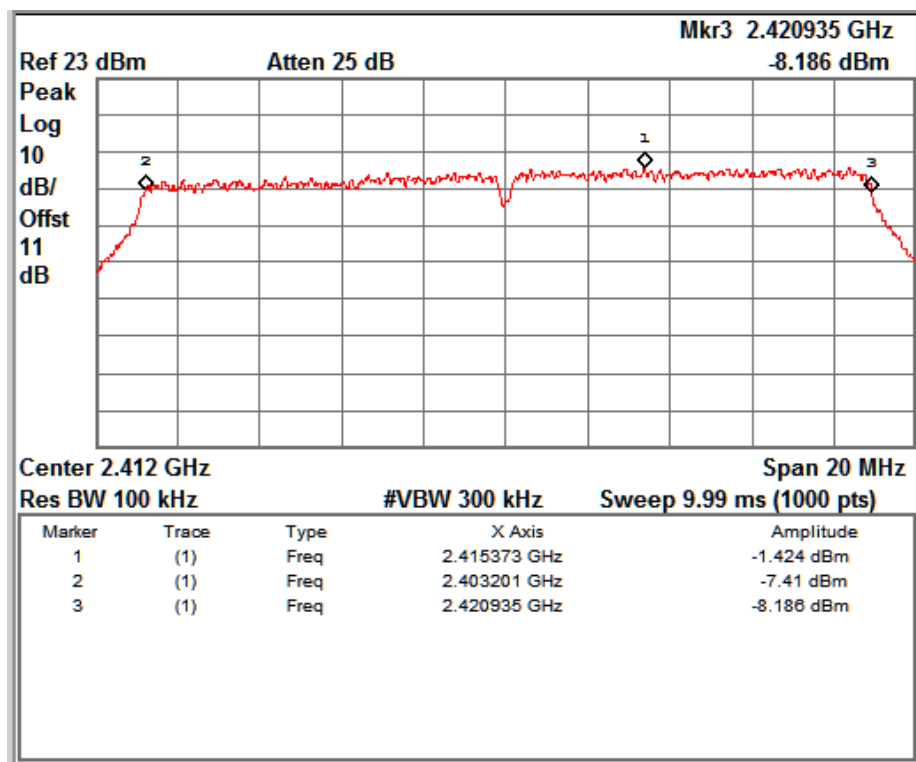
IEEE802.11nHT20			
Data Rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)
MCS0	2412	17.73	17.81
	2442	17.59	17.83
	2472	17.09	17.52
MCS4	2412	17.73	17.88
	2442	17.77	17.93
	2472	16.33	17.56
MCS7	2412	17.68	17.74
	2442	17.71	17.80
	2472	16.27	17.54

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Data Rate: MCS0

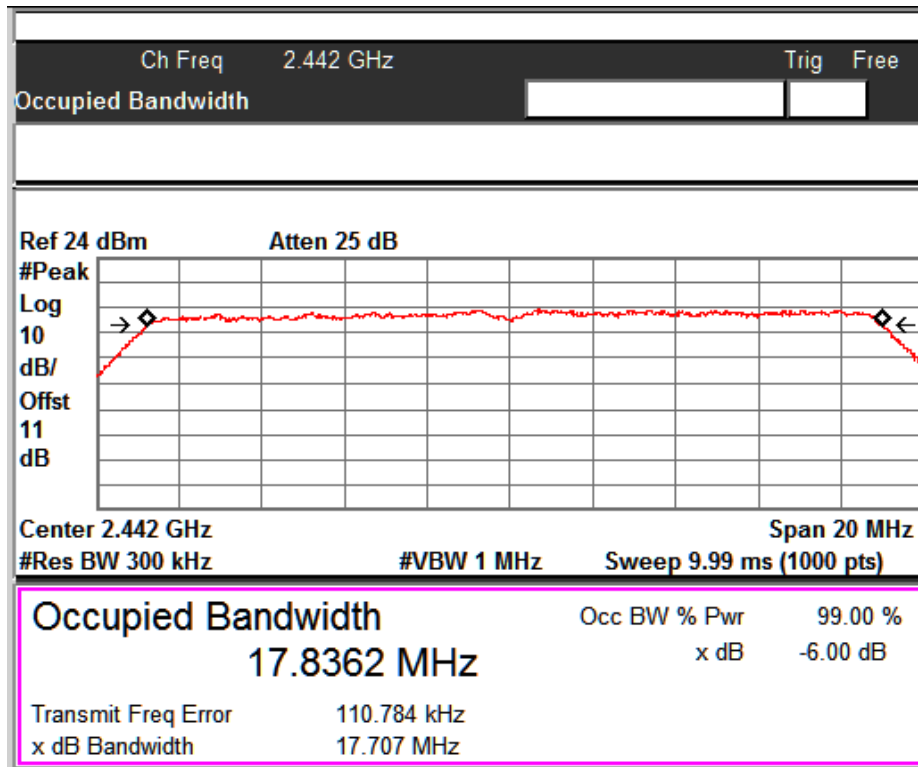
Channel: 2412 MHz



Data Rate: MCS0

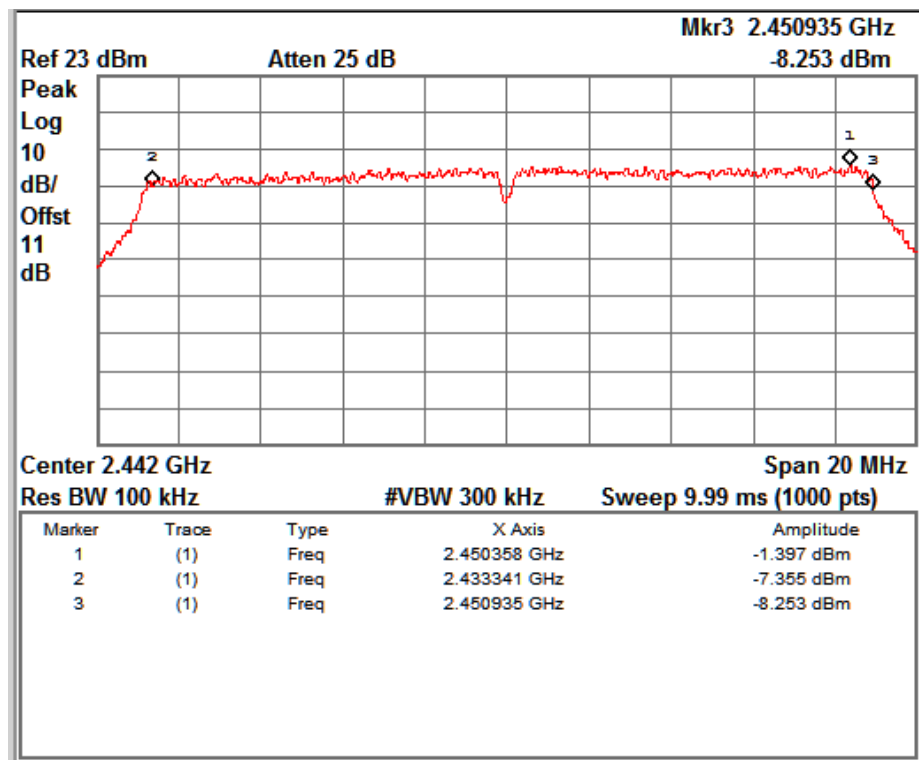
Channel: 2412 MHz 6dB BW

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Data Rate: MCS0

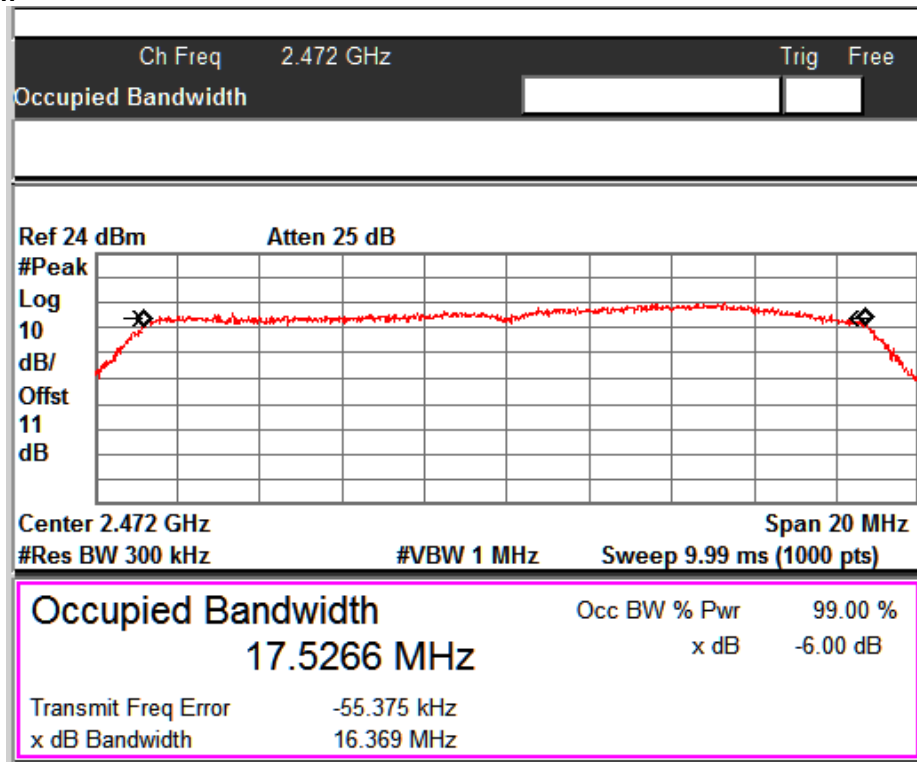
Channel: 2442 MHz



Data Rate: MCS0

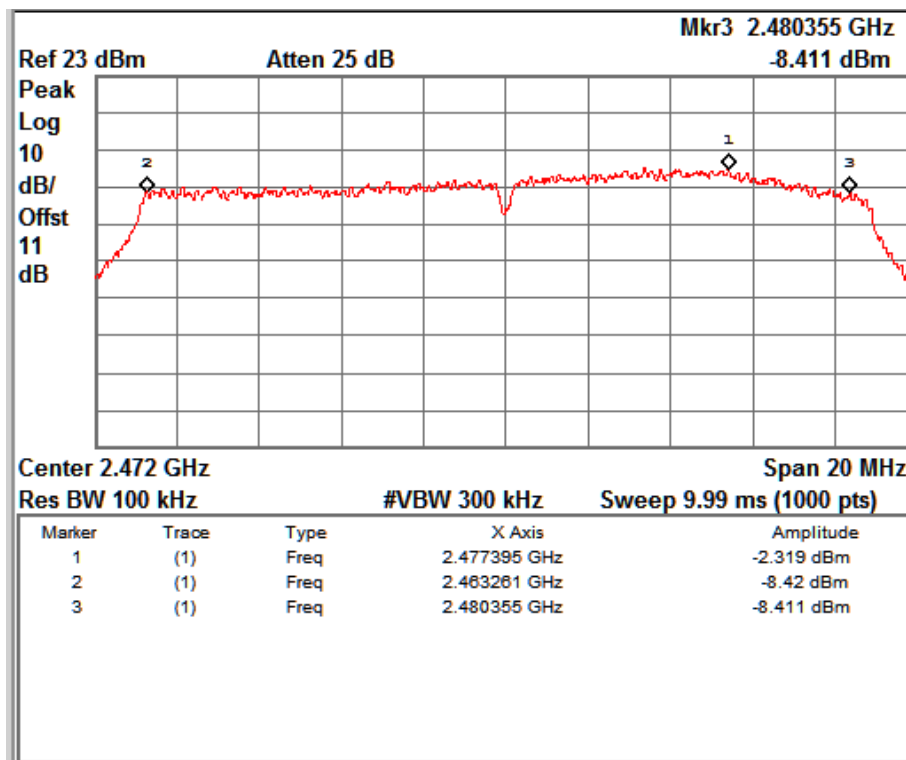
Channel: 2442 MHz 6dB BW

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Data Rate: MCS0

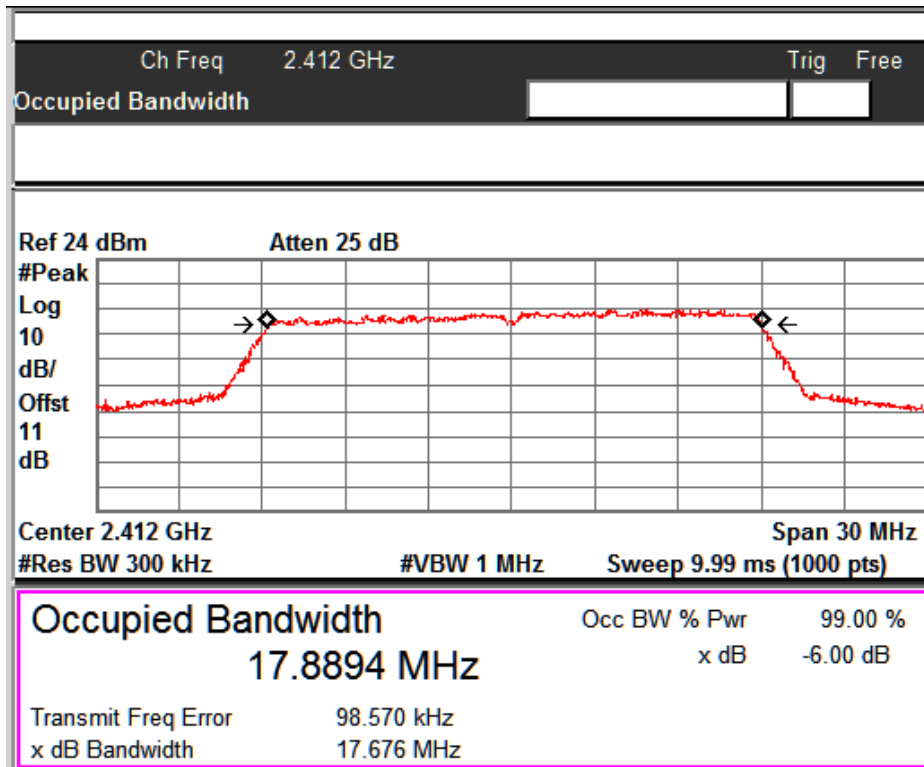
Channel: 2472 MHz



Data Rate: MCS0

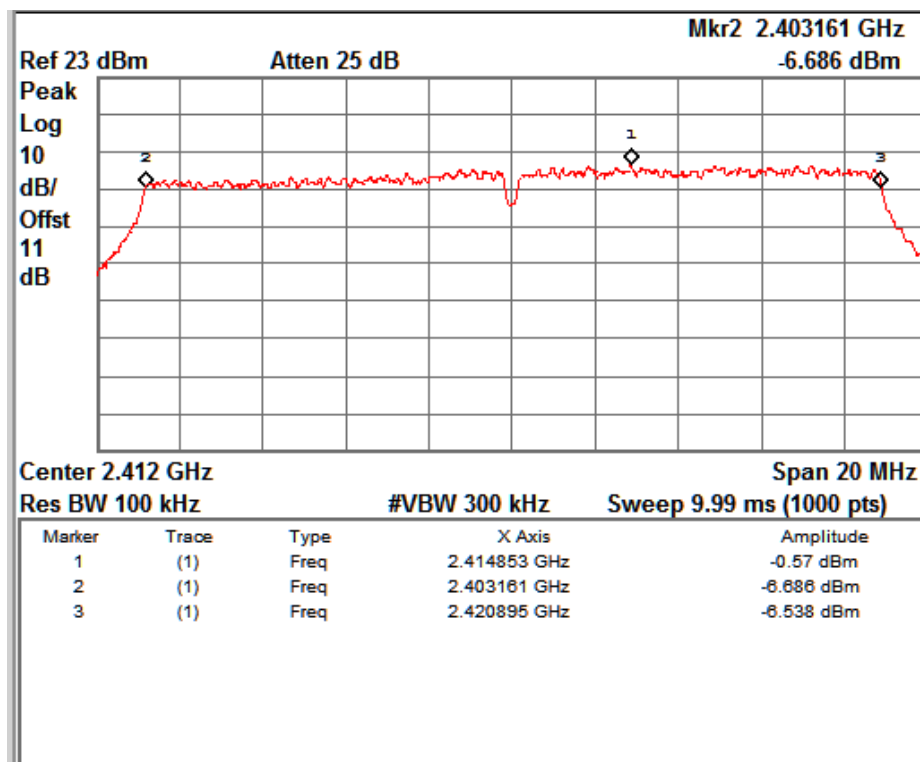
Channel: 2472 MHz 6dB BW

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Data Rate: MCS4

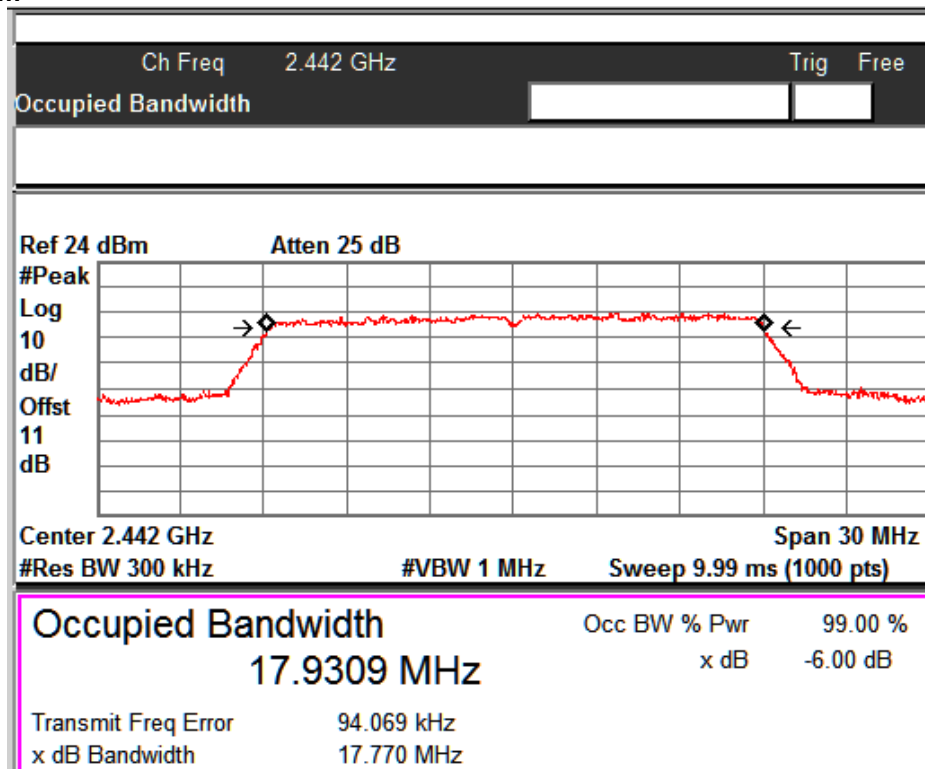
Channel: 2412 MHz



Data Rate: MCS4

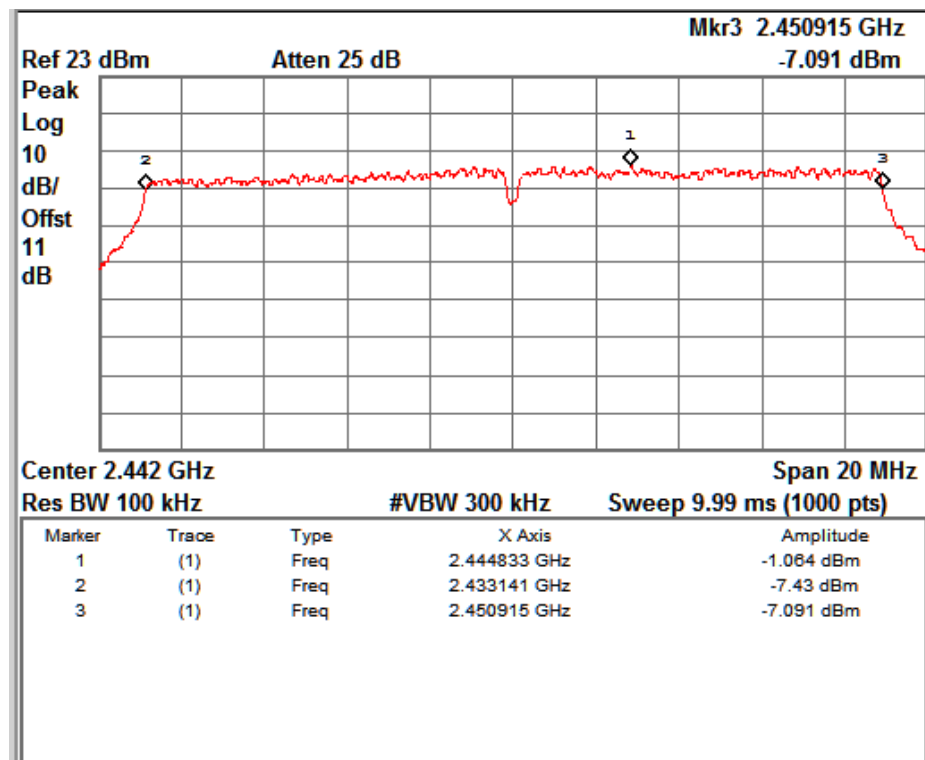
Channel: 2412 MHz 6dB BW

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Data Rate: MCS4

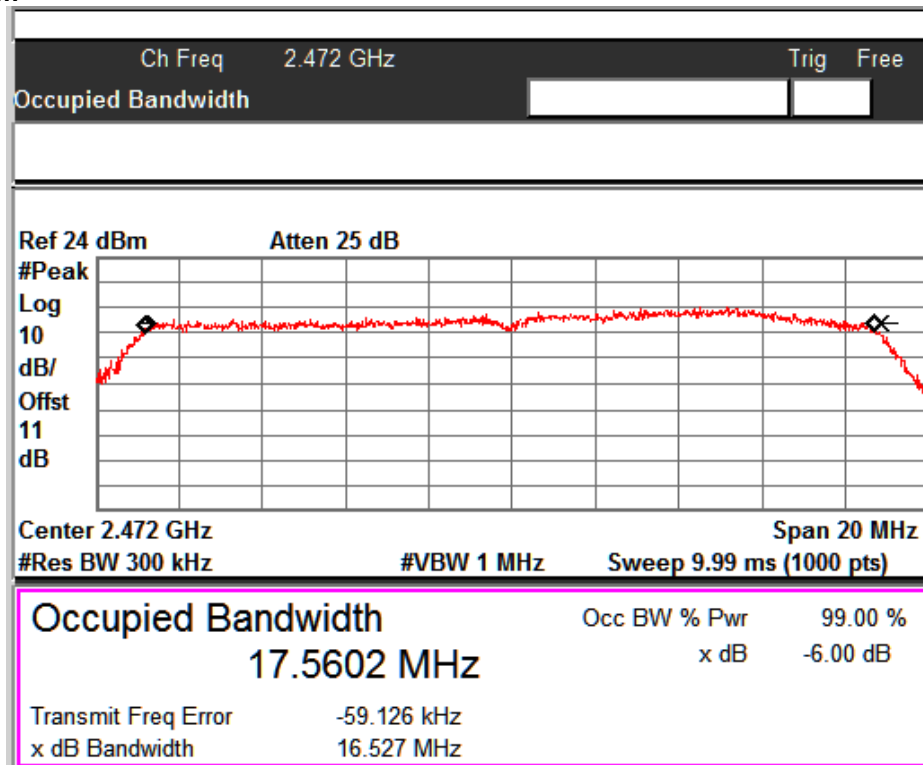
Channel: 2442 MHz



Data Rate: MCS4

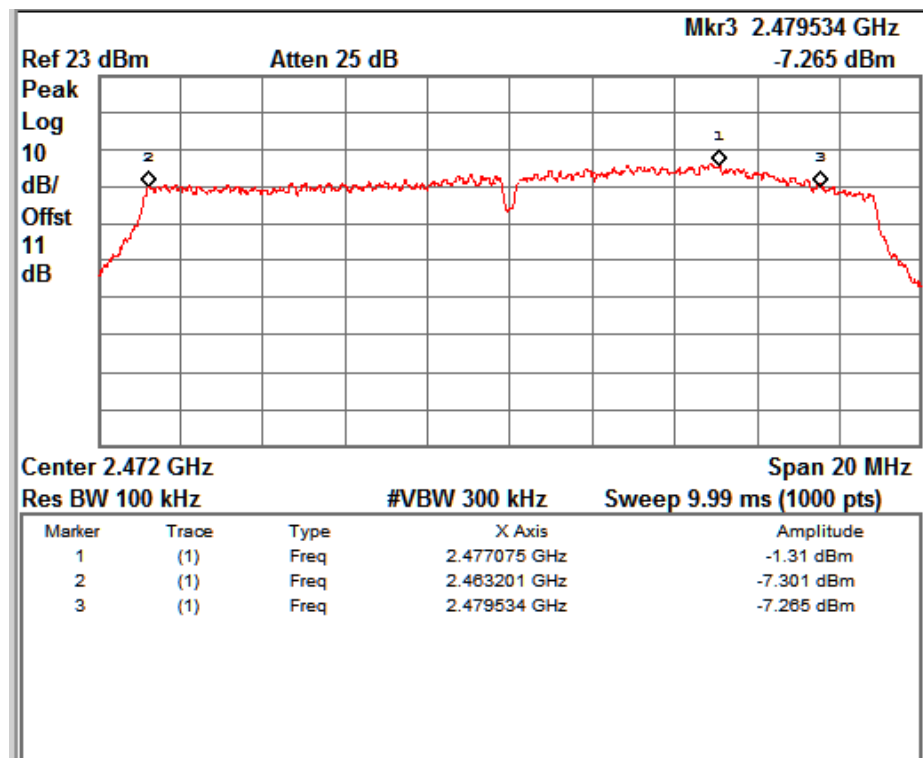
Channel: 2442 MHz 6dB BW

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Data Rate: MCS4

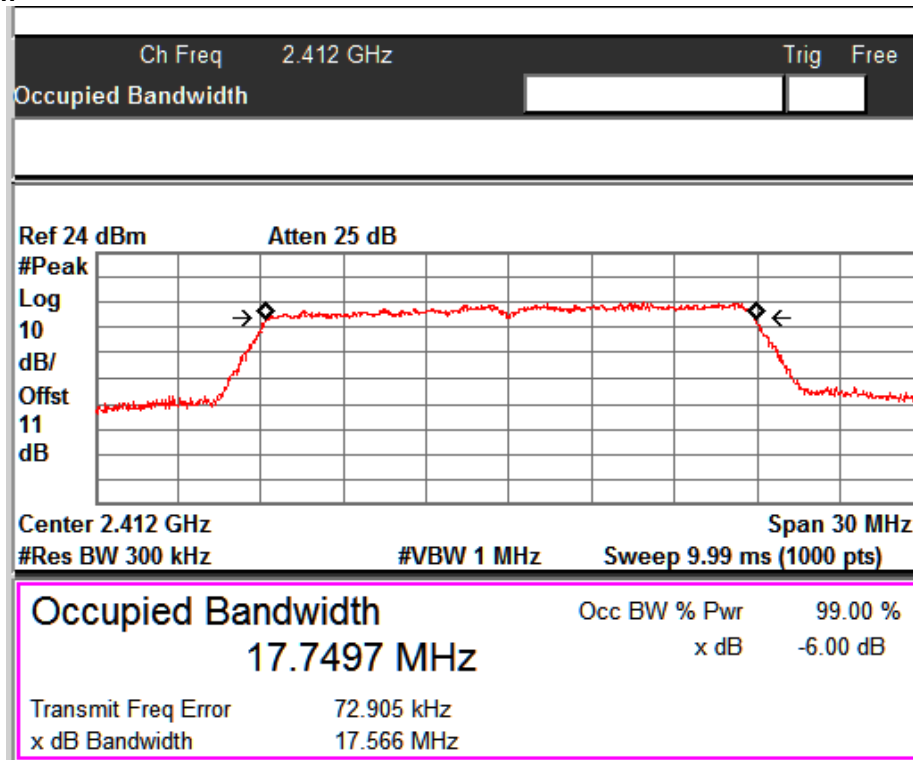
Channel: 2472 MHz



Data Rate: MCS4

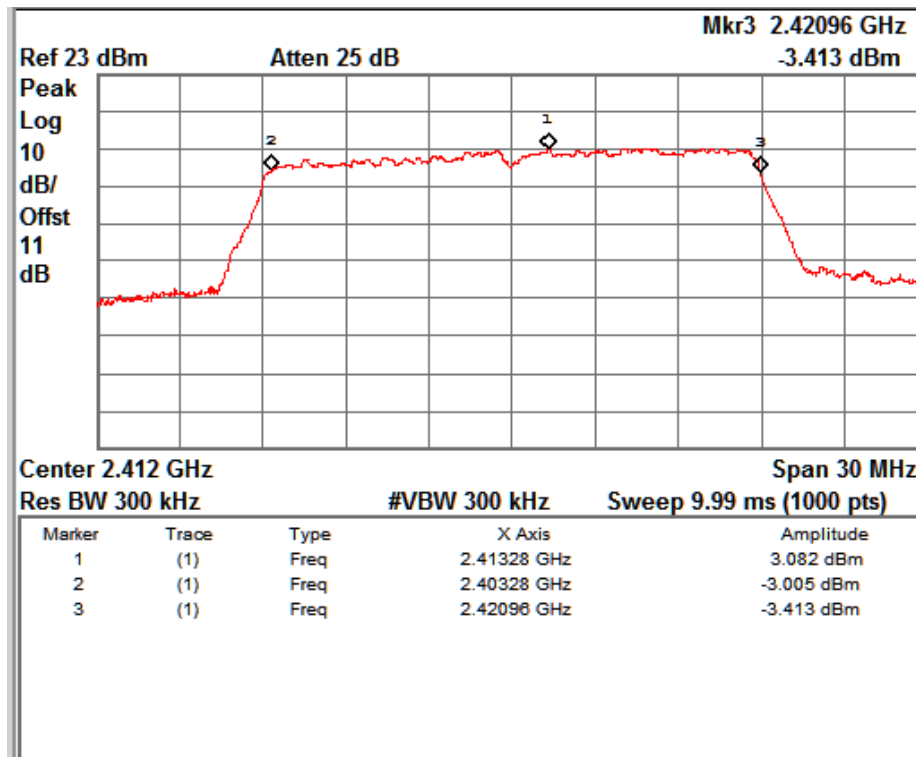
Channel: 2472 MHz 6dB BW

www.tuv.com



Data Rate: MCS7

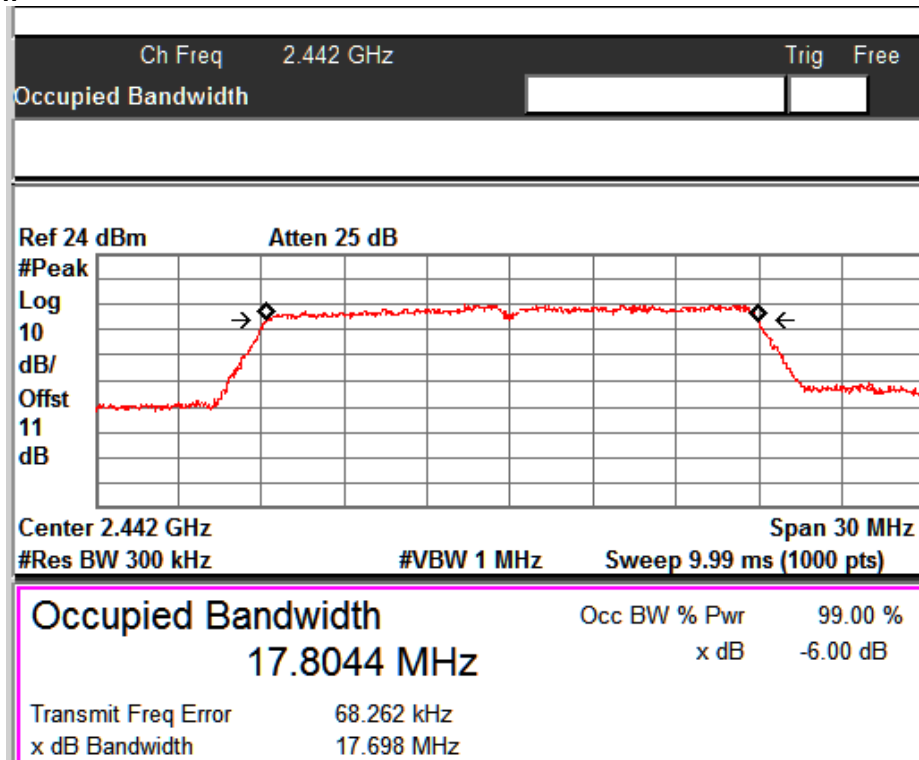
Channel: 2412 MHz



Data Rate: MCS7

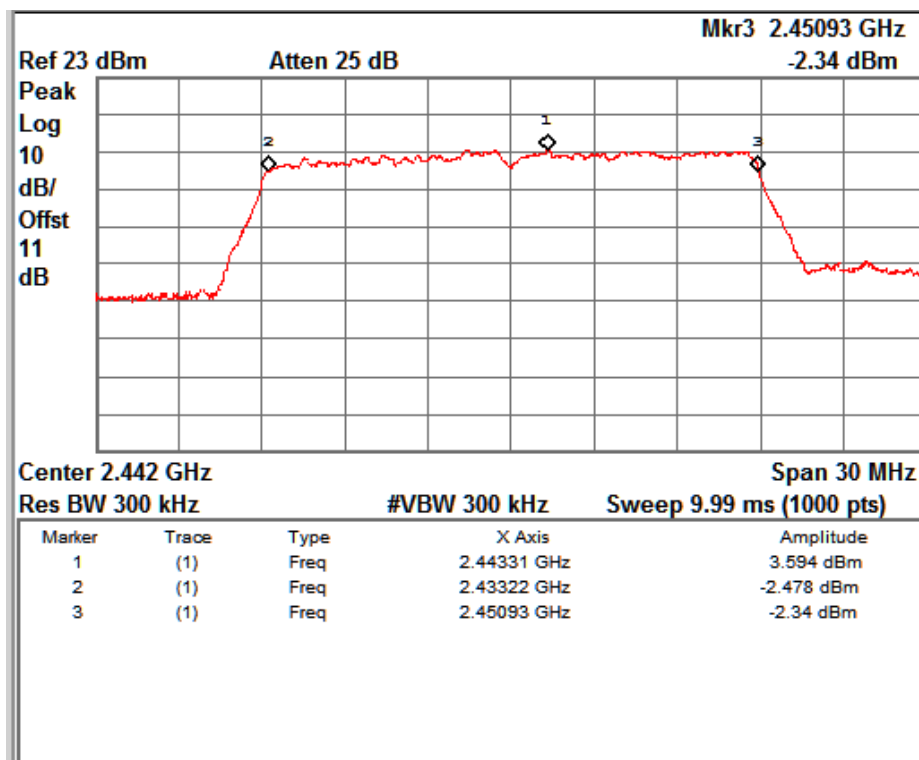
Channel: 2412 MHz 6dB BW

www.tuv.com



Data Rate: MCS7

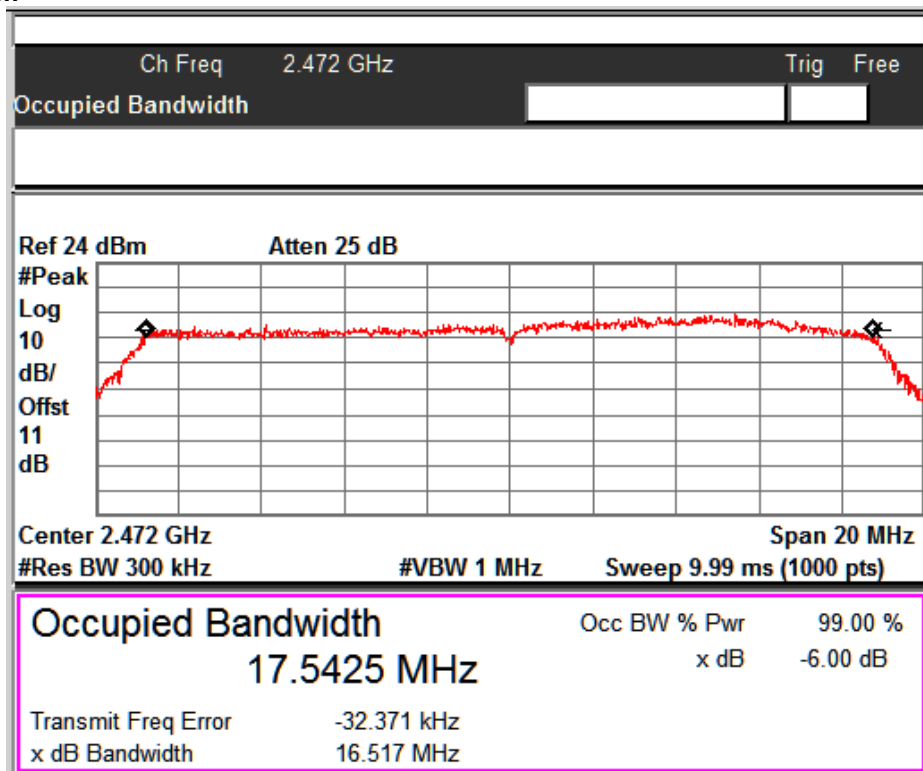
Channel: 2442MHz



Data Rate: MCS7

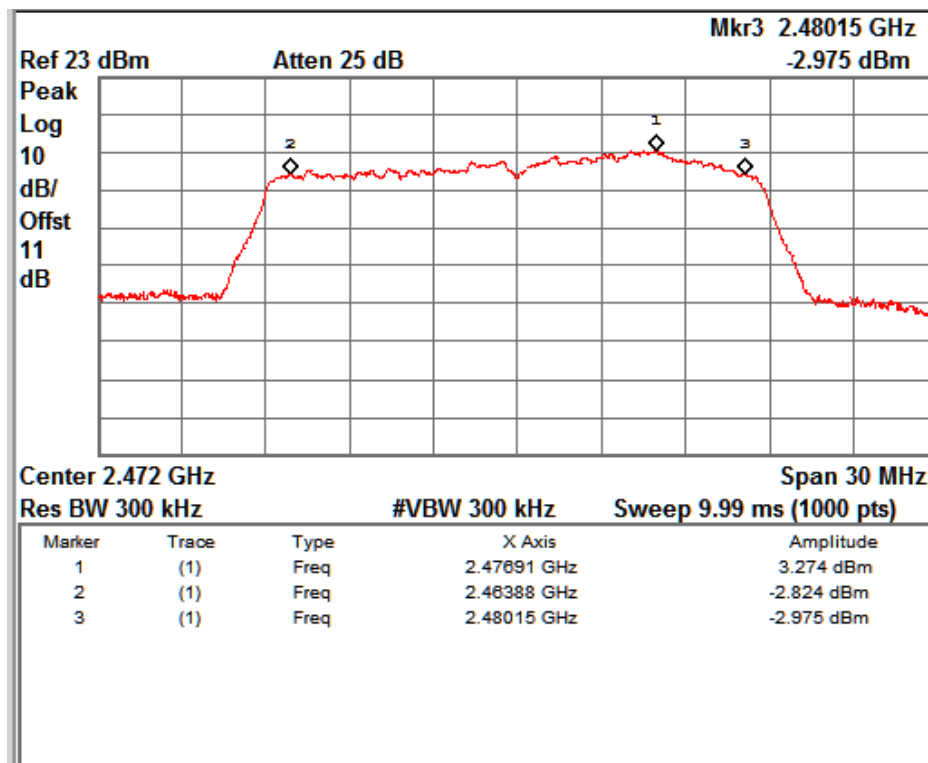
Channel: 2442 MHz 6dB BW

www.tuv.com



Data Rate: MCS7

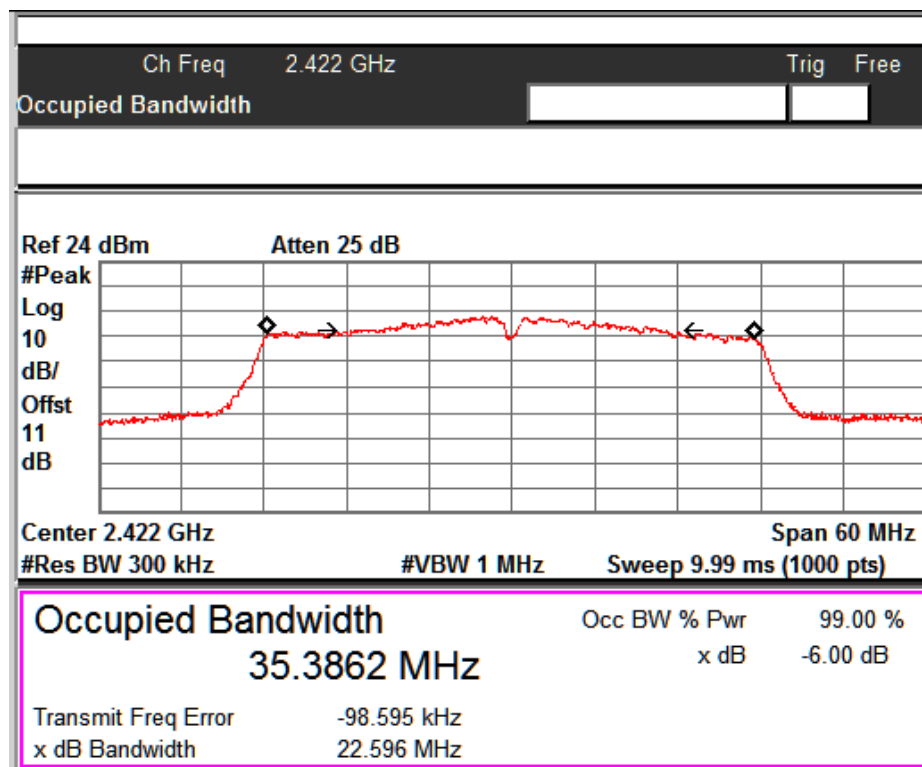
Channel: 2472 MHz



Data Rate: MCS7

Channel: 2472 MHz 6dB BW

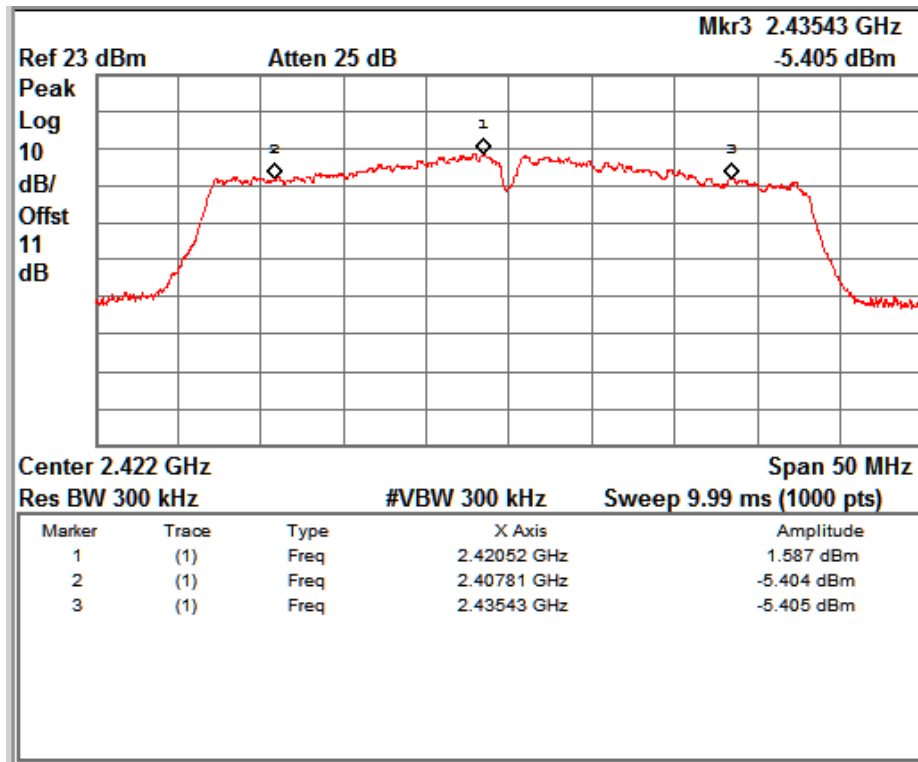
IEEE802.11nHT40			
Data Rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)
MCS0	2422	27.62	35.38
	2442	35.67	35.97
	2462	29.27	35.29
MCS4	2422	25.12	35.47
	2442	35.57	35.96
	2462	29.12	35.37
MCS7	2422	24.97	35.61
	2442	35.72	36.07
	2462	34.52	35.49



Data Rate: MCS0

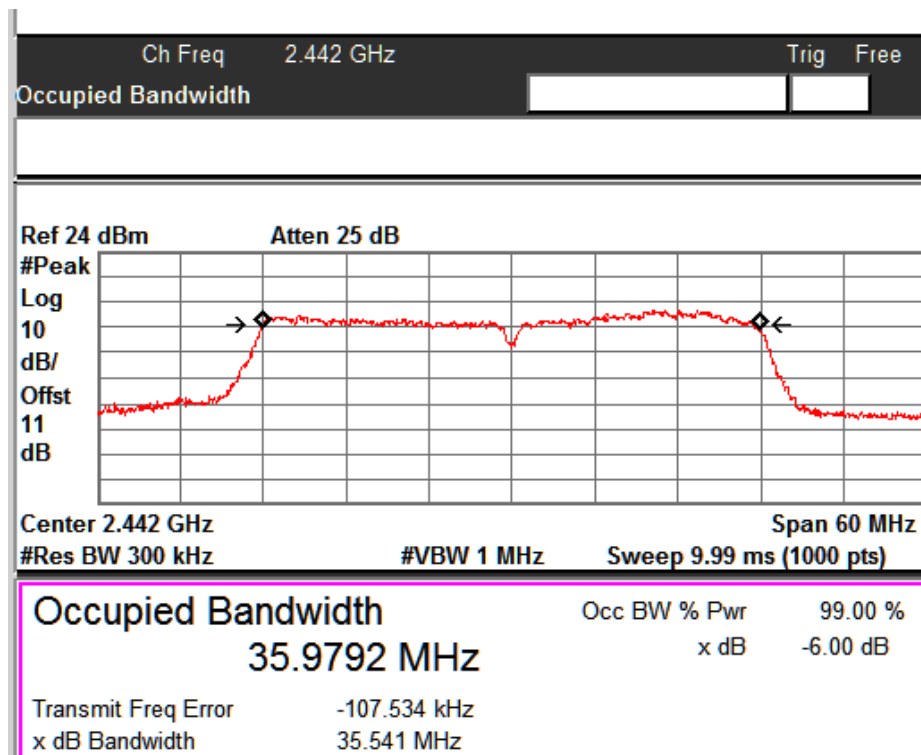
Channel: 2422 MHz

www.tuv.com



Data Rate: MCS0

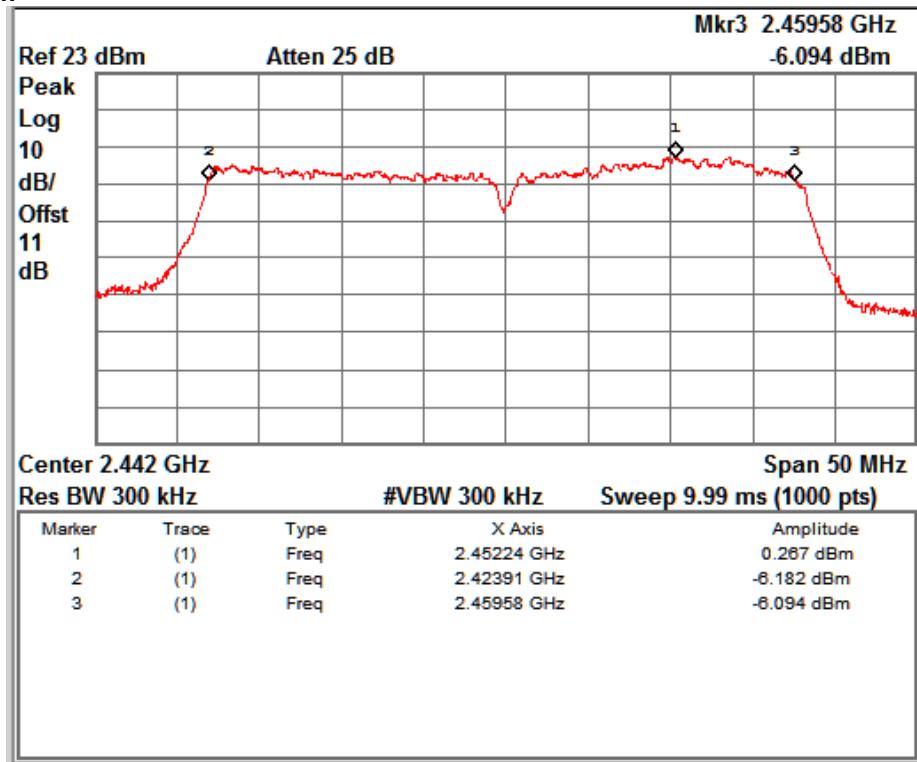
Channel: 2422 MHz 6dB BW



Data Rate: MCS0

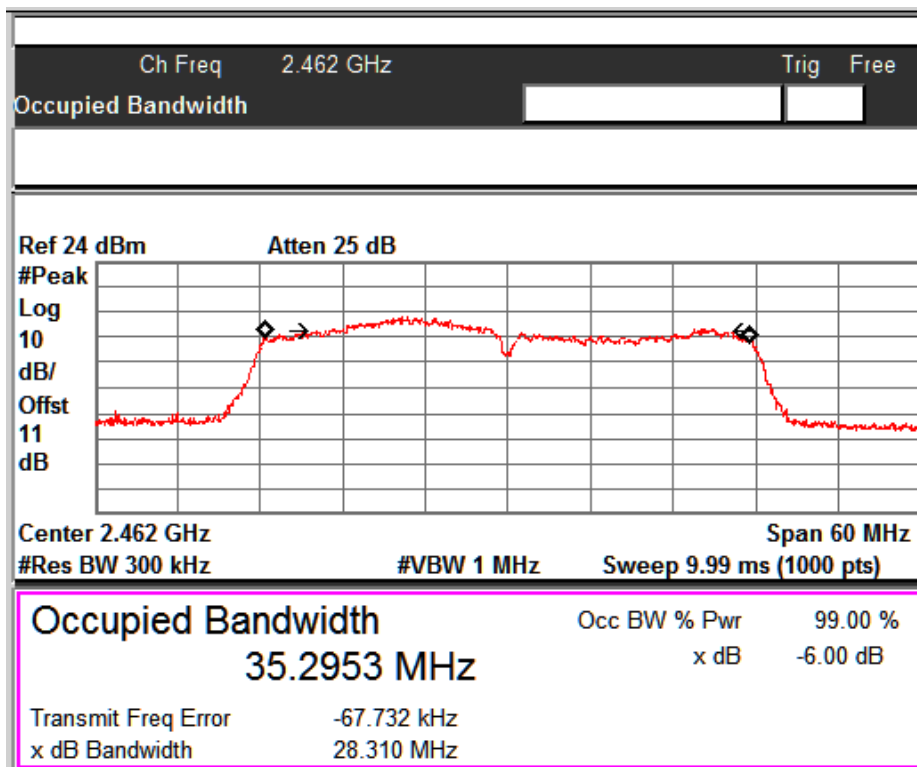
Channel: 2442 MHz

www.tuv.com



Data Rate: MCS0

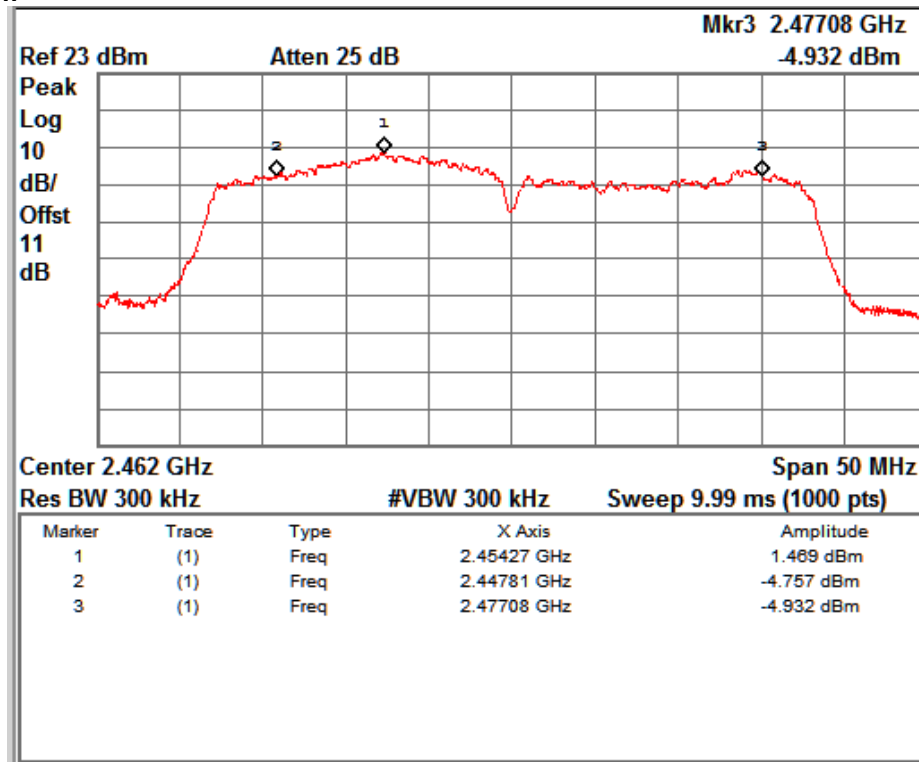
Channel: 2442 MHz 6dB BW



Data Rate: MCS0

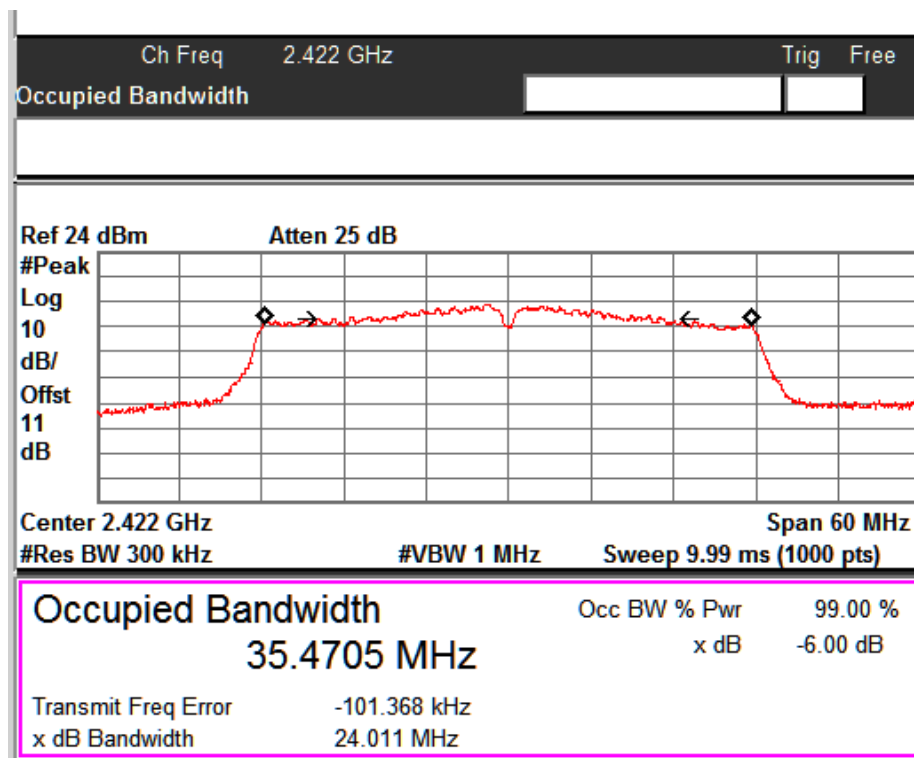
Channel: 2462 MHz

www.tuv.com



Data Rate: MCS0

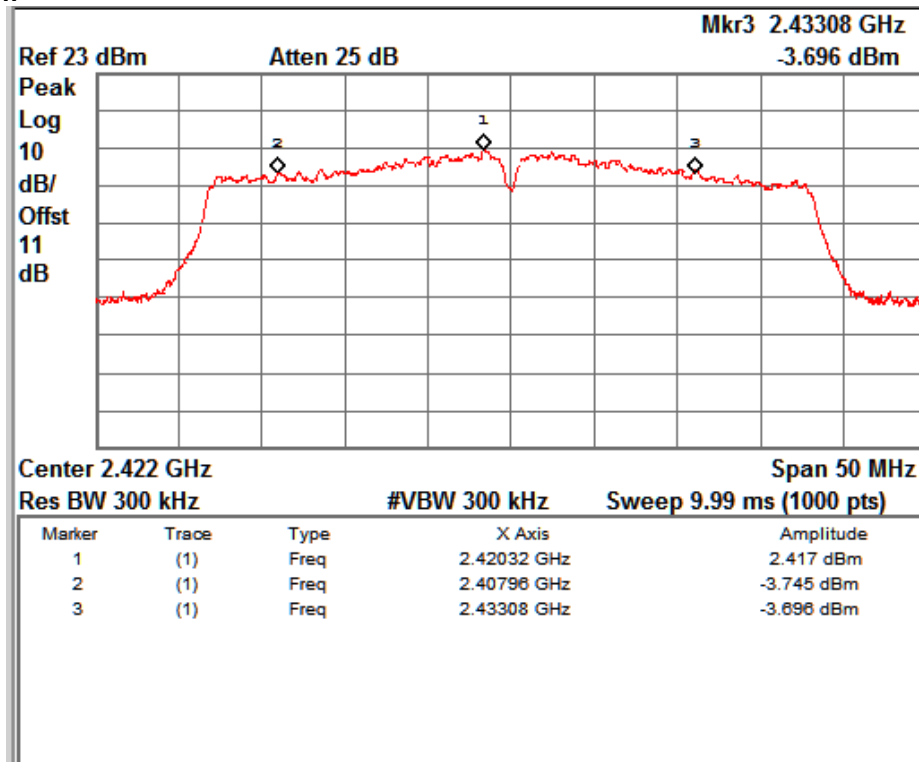
Channel: 2462 MHz 6dB BW



Data Rate: MCS4

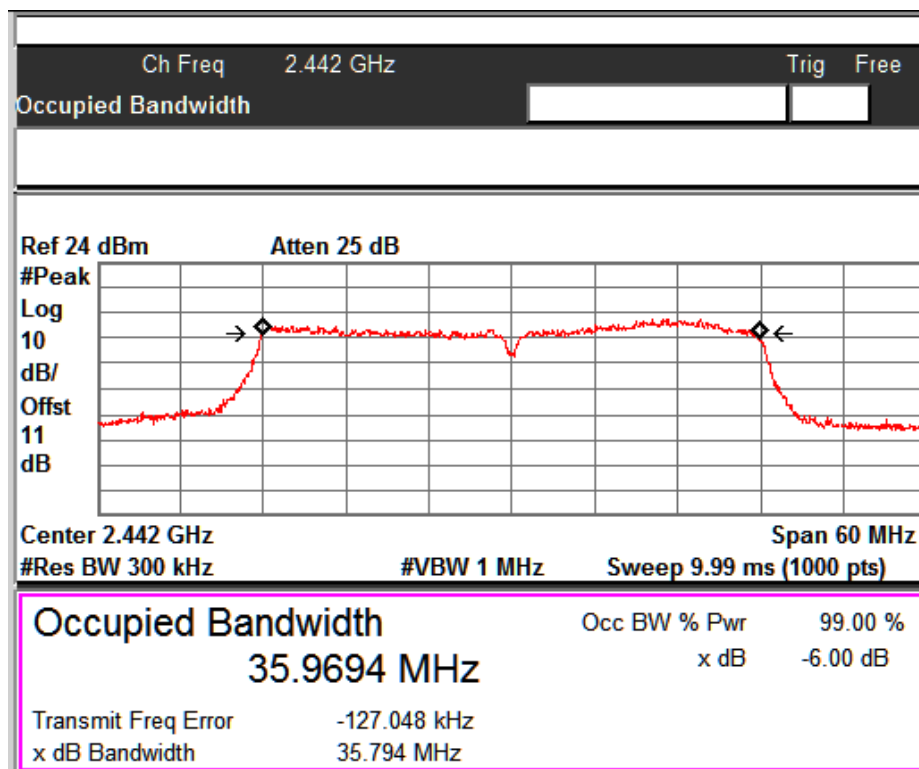
Channel: 2422 MHz

www.tuv.com



Data Rate: MCS4

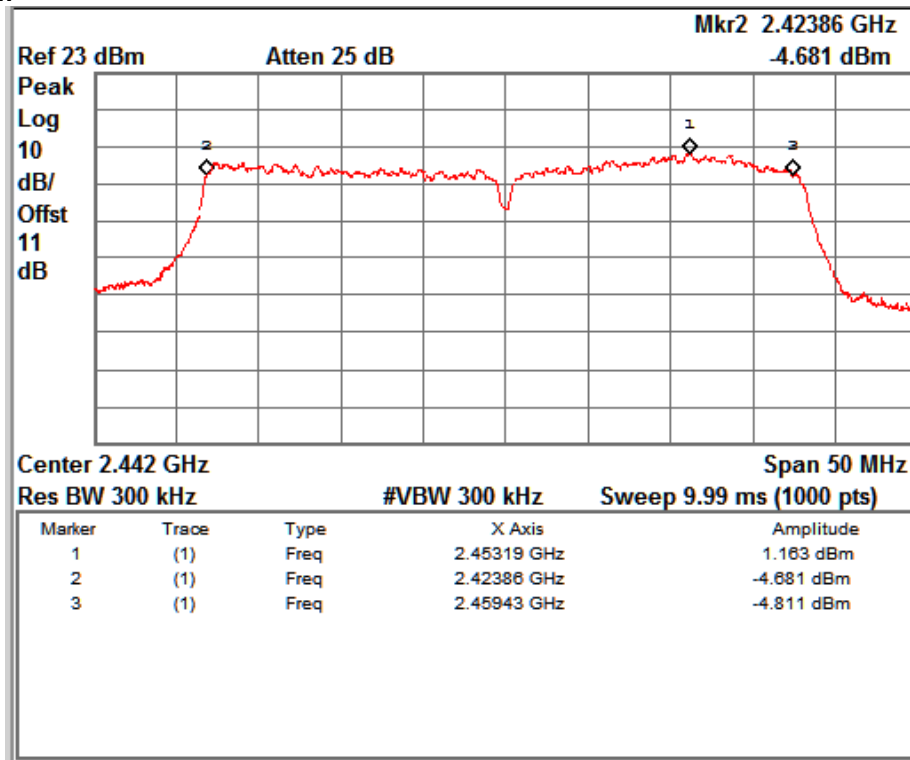
Channel: 2422 MHz 6dB BW



Data Rate: MCS4

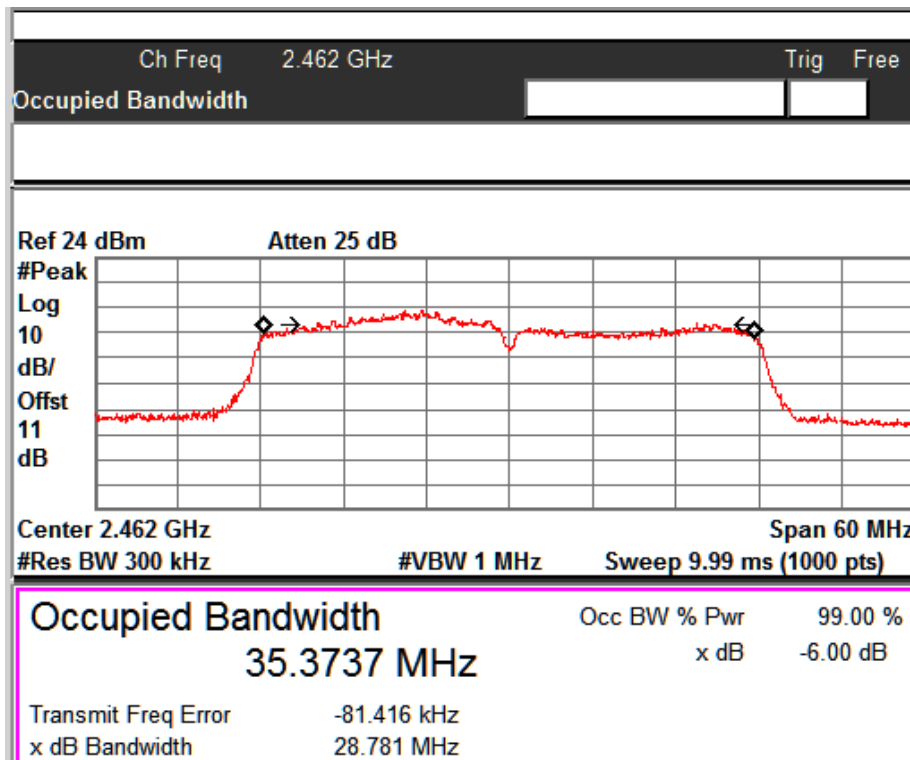
Channel: 2442 MHz

www.tuv.com



Data Rate: MCS4

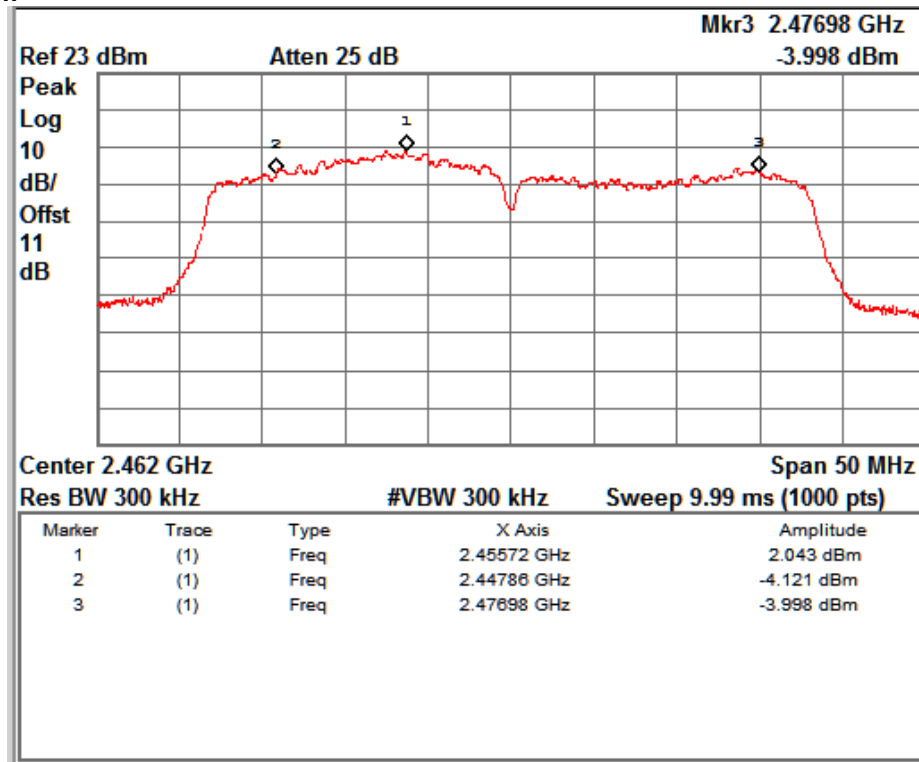
Channel: 2442 MHz 6dB BW



Data Rate: MCS4

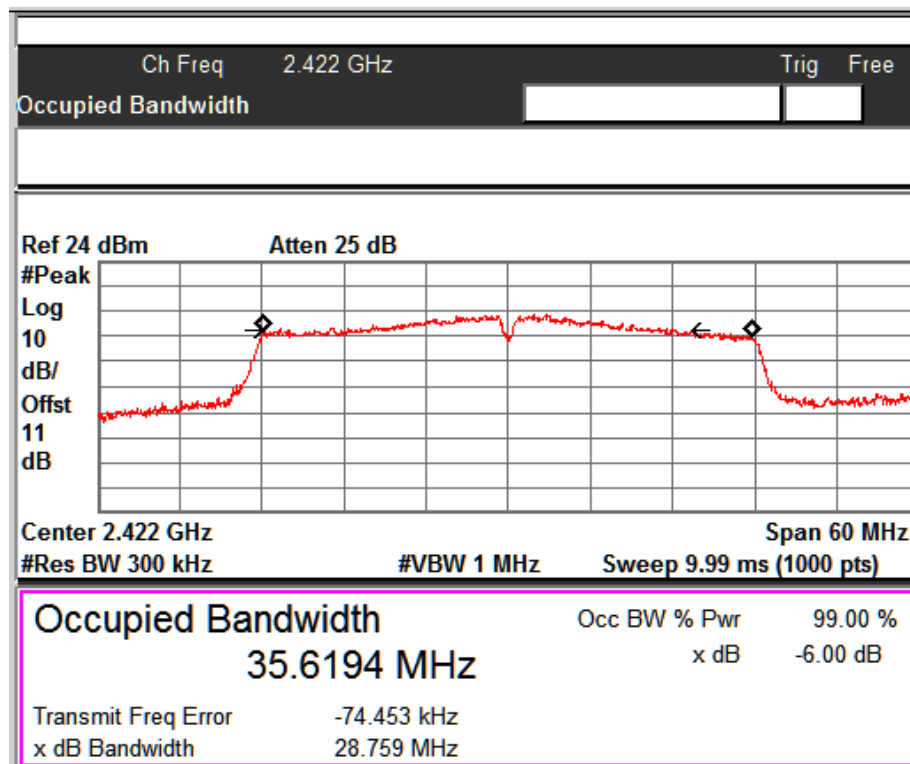
Channel: 2462 MHz

www.tuv.com



Data Rate: MCS4

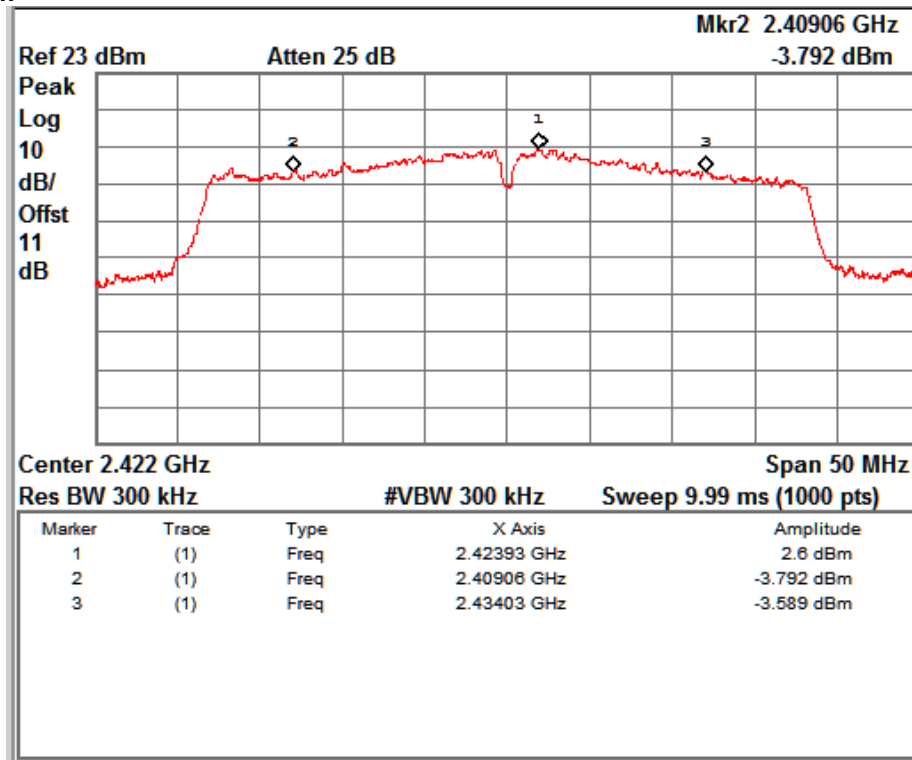
Channel: 2462 MHz 6dB BW



Data Rate: MCS7

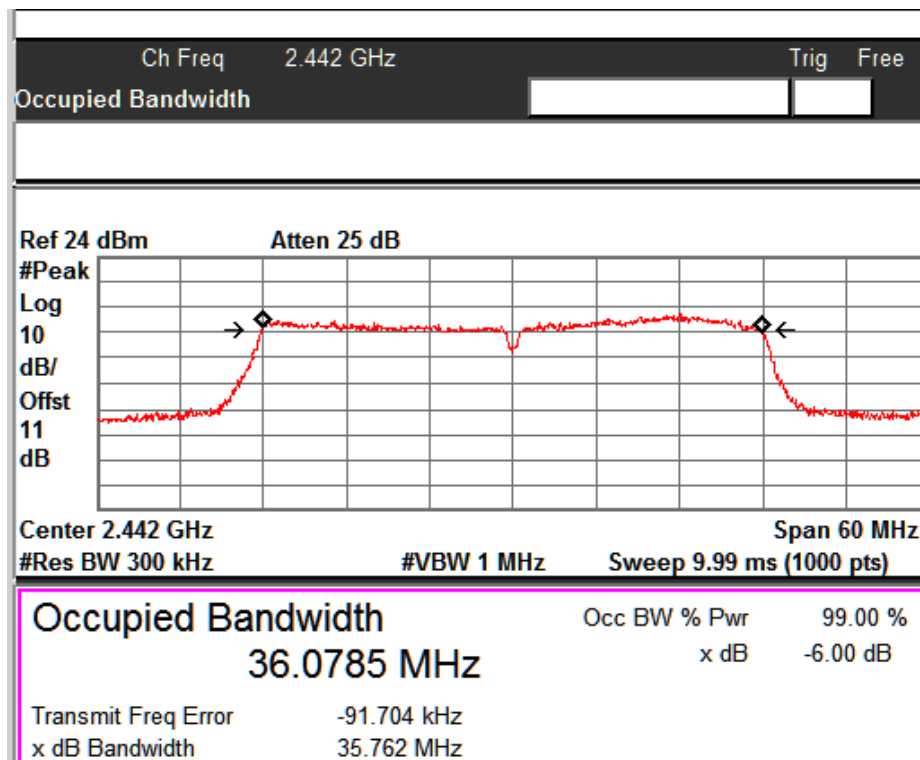
Channel: 2422 MHz

www.tuv.com



Data Rate: MCS7

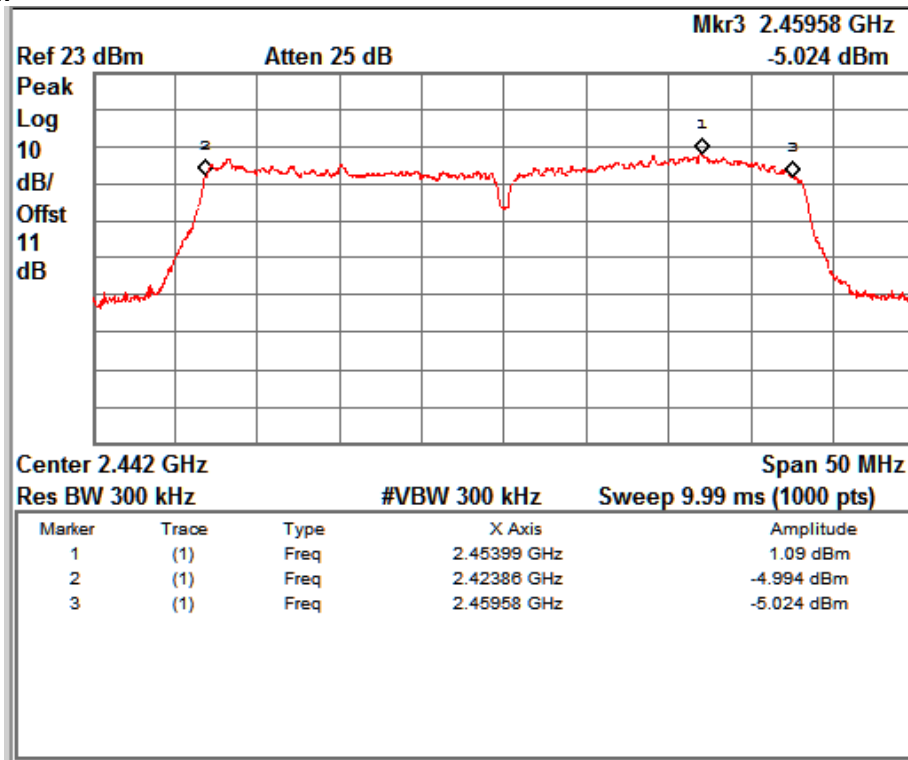
Channel: 2422 MHz 6dB BW



Data Rate: MCS7

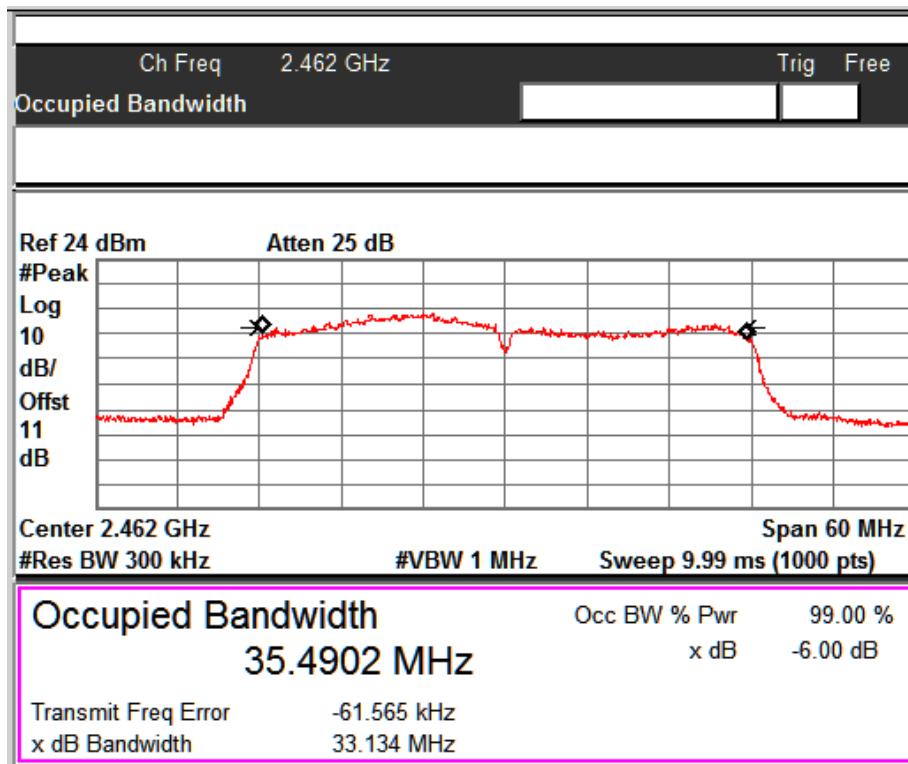
Channel: 2442MHz

www.tuv.com



Data Rate: MCS7

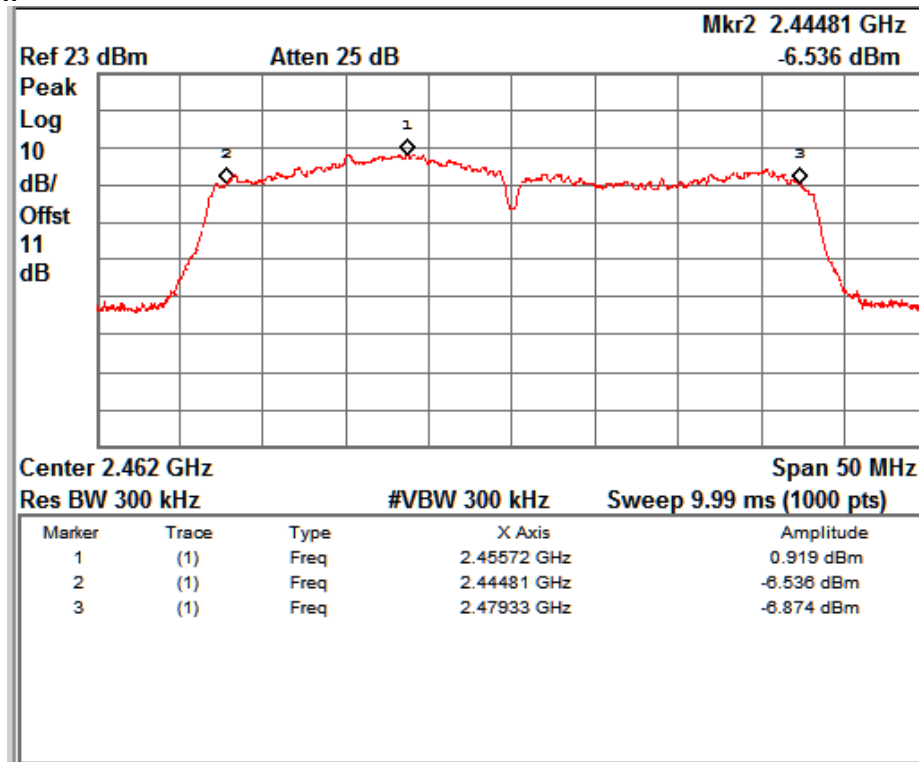
Channel: 2442 MHz 6dB BW



Data Rate: MCS7

Channel: 2462 MHz

www.tuv.com



Data Rate: MCS7

Channel: 2462 MHz 6dB BW

www.tuv.com

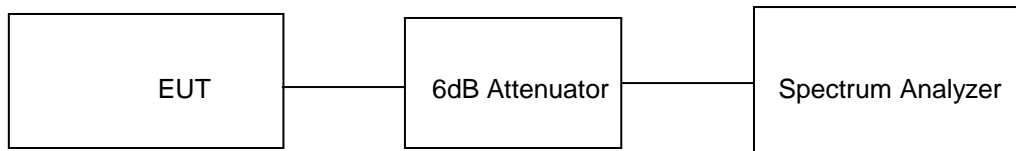
Emissions in non-restricted frequency bands
Result

Section 15.247(d)
Pass

Test Specification
 Detector Function
 Requirement

FCC Part 15 Section 15.247(d)
 Peak
 In any 100kHz 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 20dB below that in the 100kHz 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.

Test Method:

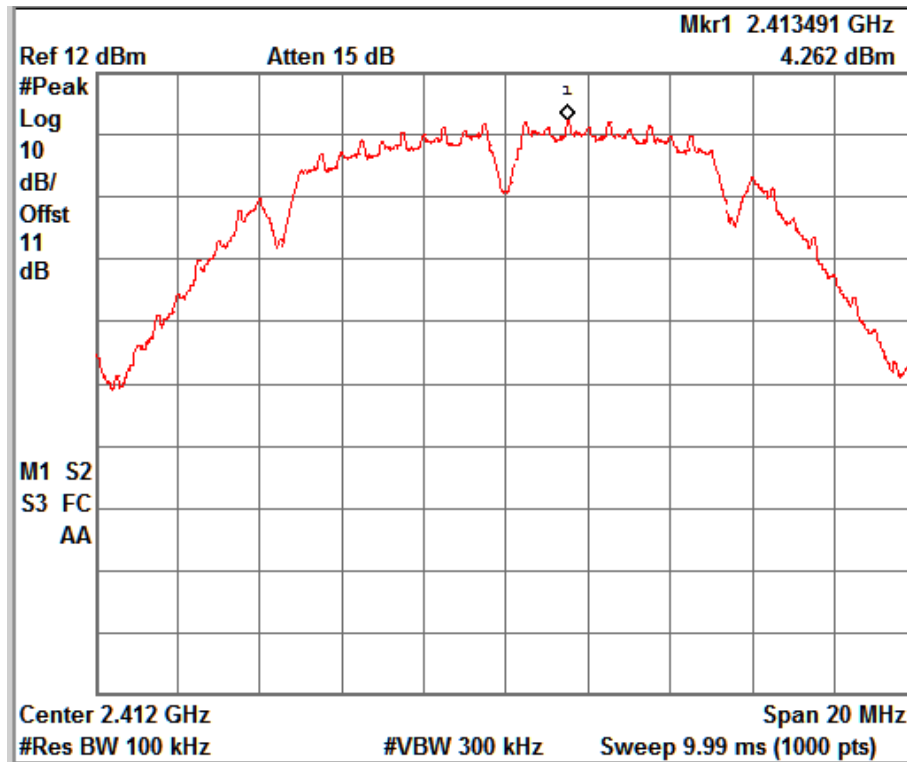


Test Result: Wi-Fi

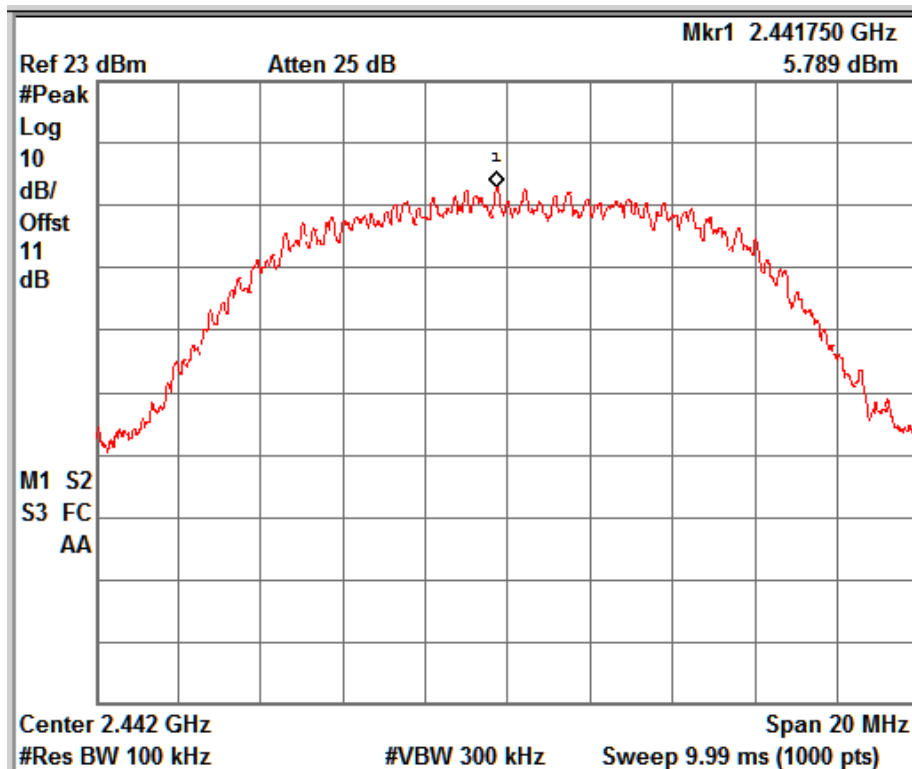
Attenuator (10dB) + cable loss (1dB) = 11dB Considered in the test result

IEEE802.11b						
Data Rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference Value B (dBm)	Band Edge Value A~B (dBc)	Limit (dBc)
		Frequency (MHz)	Value A (dBm)			
1	2412	2400	-39.08	4.262	43.342	30
	2472	2483.5	-43.9	4.262	48.162	30
11	2412	2400	-42.04	5.789	47.829	30
	2472	2483.5	-47.61	5.789	53.399	30

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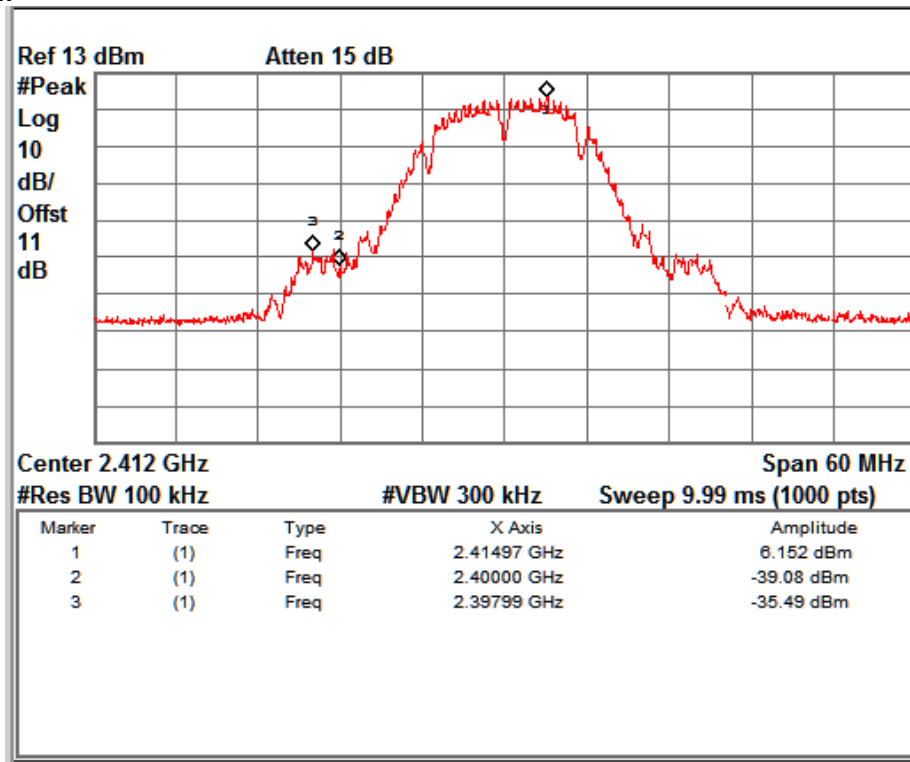


Reference Level Plot: 1Mbps



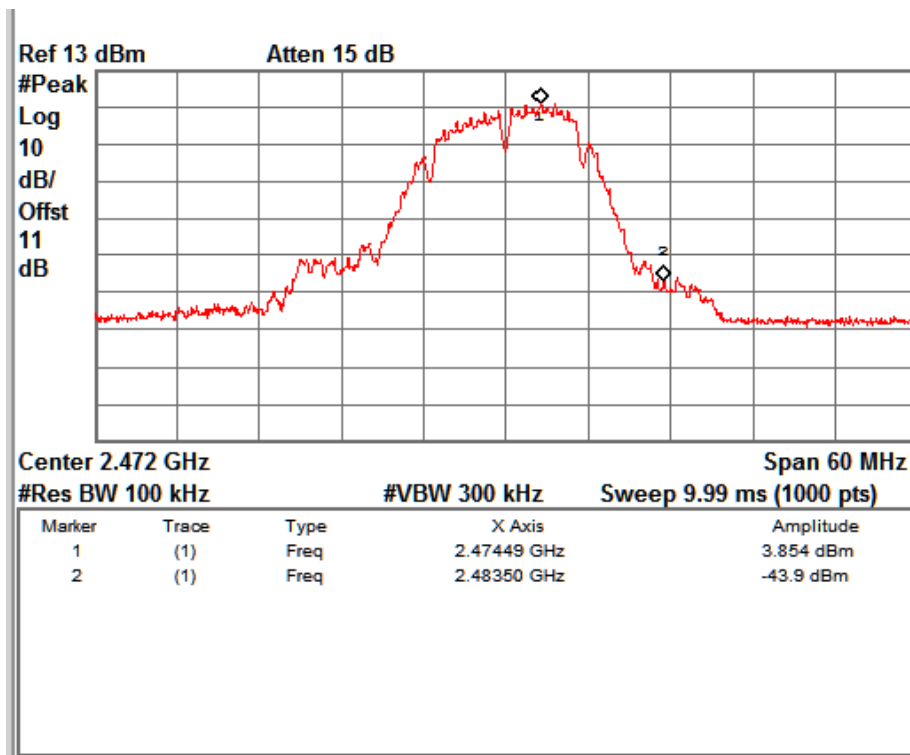
Reference Level Plot: 11Mbps

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Data Rate: 1 Mbps

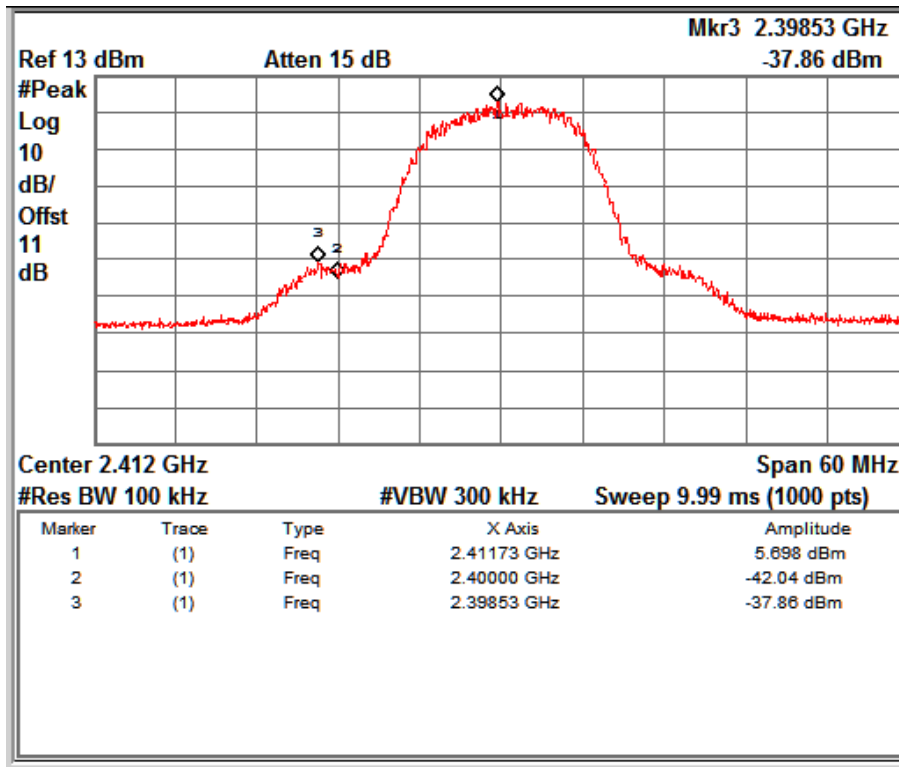
Channel frequency: 2412 MHz



Data Rate: 1 Mbps

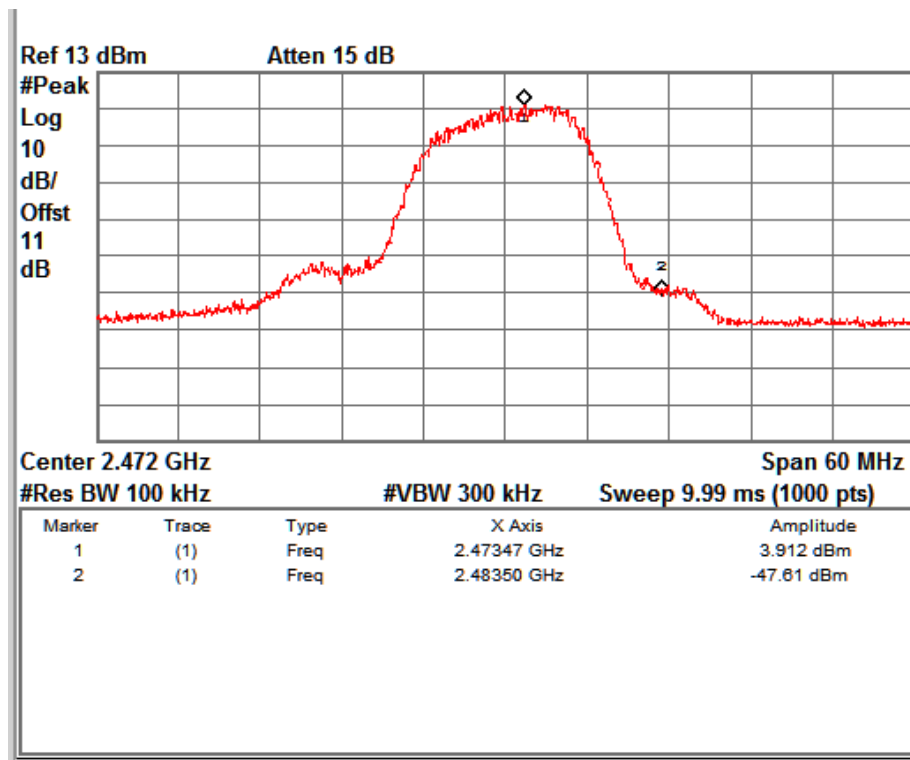
Channel frequency: 2472 MHz

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Data Rate: 11 Mbps

Channel frequency: 2412 MHz

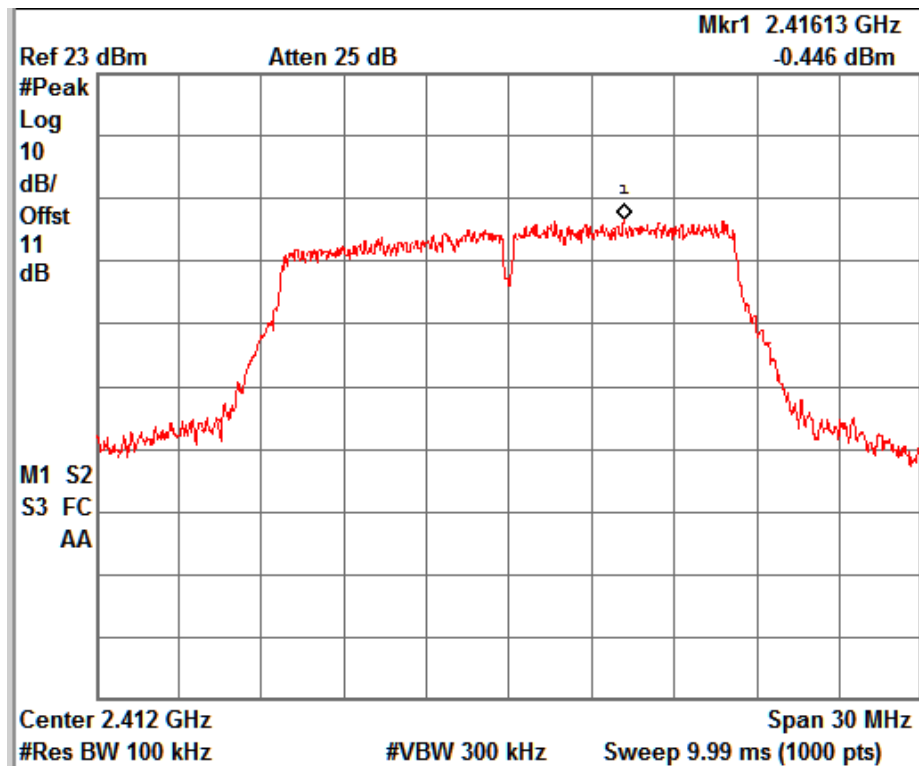


Data Rate: 11 Mbps

Channel frequency: 2472 MHz

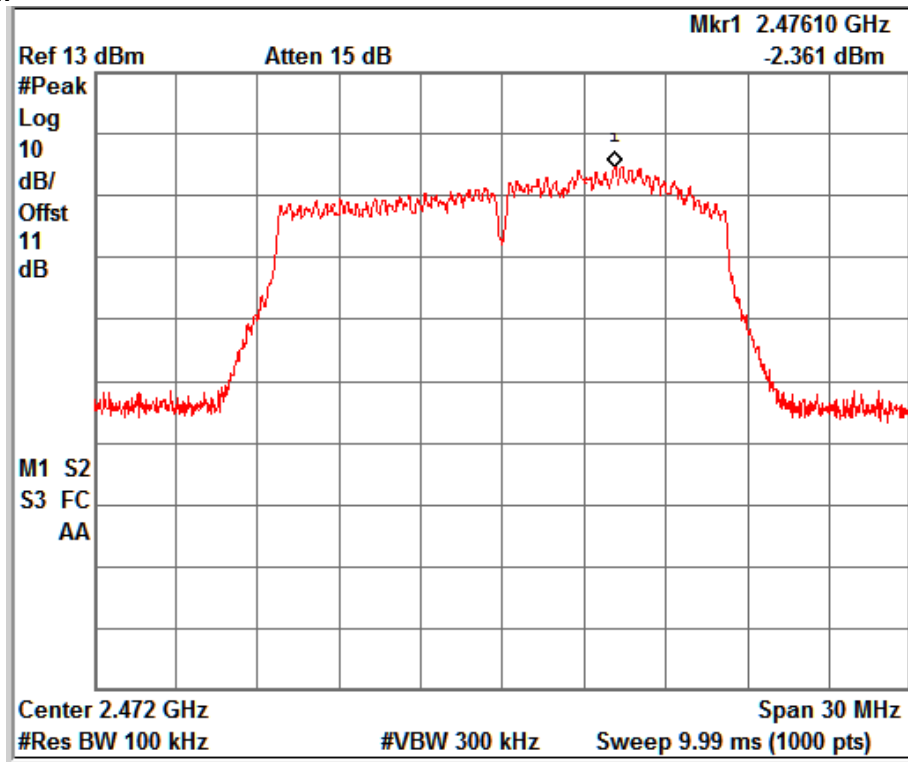
www.tuv.com

IEEE802.11g						
Data Rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference Value B (dBm)	Band Edge Value A~B (dBc)	Limit (dBc)
		Frequency (MHz)	Value A (dBm)			
6	2412	2400	-35.95	-0.446	36.396	30
	2472	2483.5	-42.1	-0.446	42.546	30
24	2412	2400	-44.71	-2.361	47.071	30
	2472	2483.5	-45.39	-2.361	47.751	30
54	2412	2400	-43.36	-0.159	43.519	30
	2472	2483.5	-41.31	-0.159	41.469	30

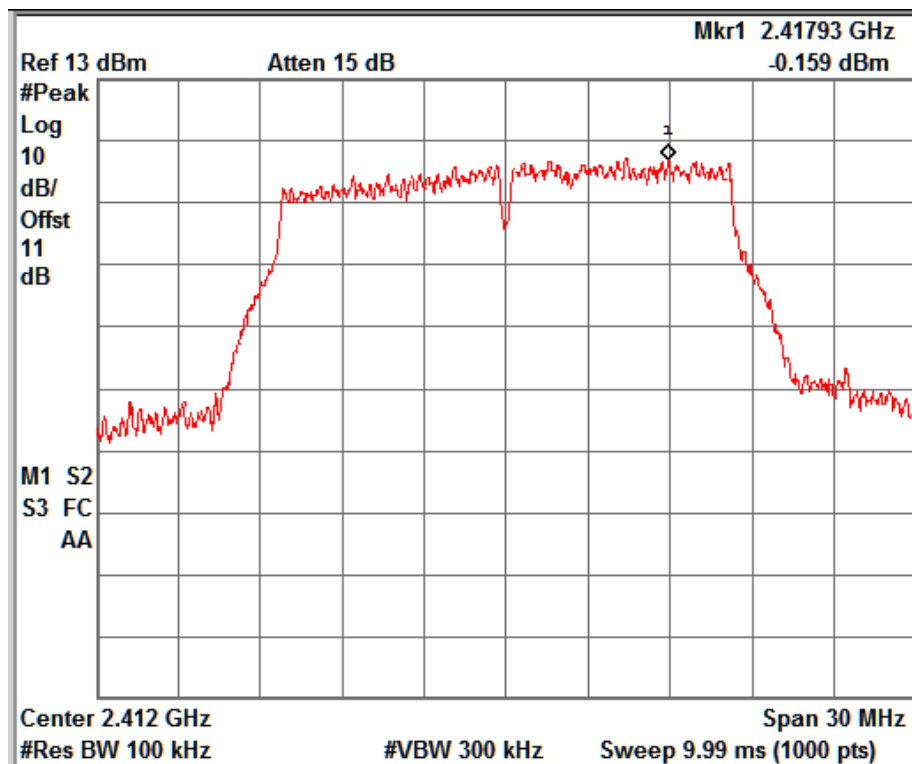


Reference Level Plot: 6 Mbps

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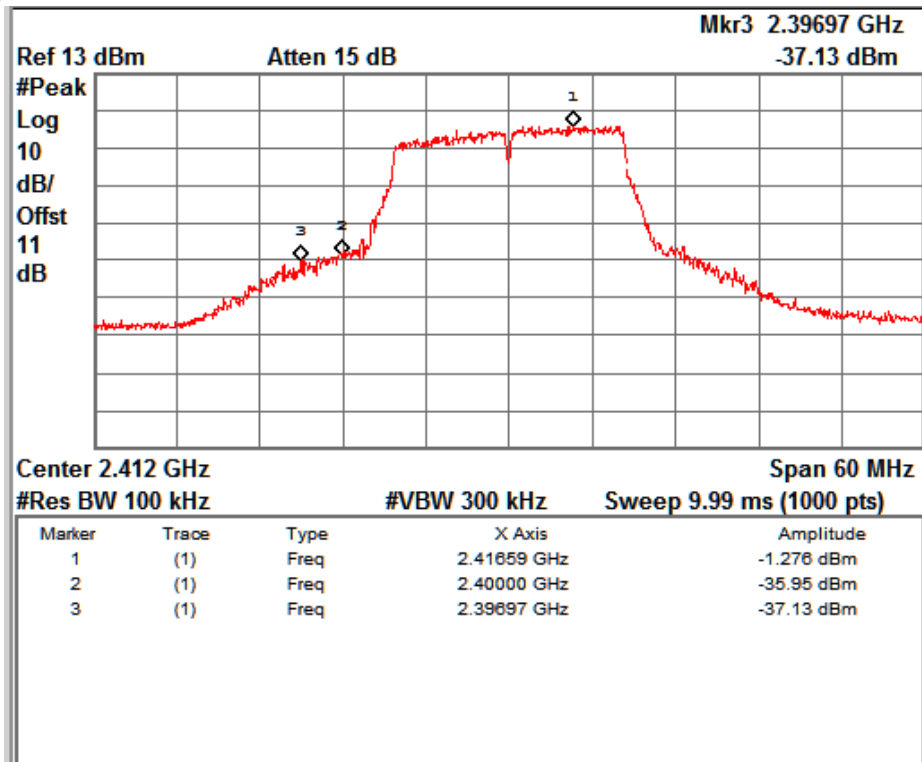


Reference Level Plot: 24 Mbps



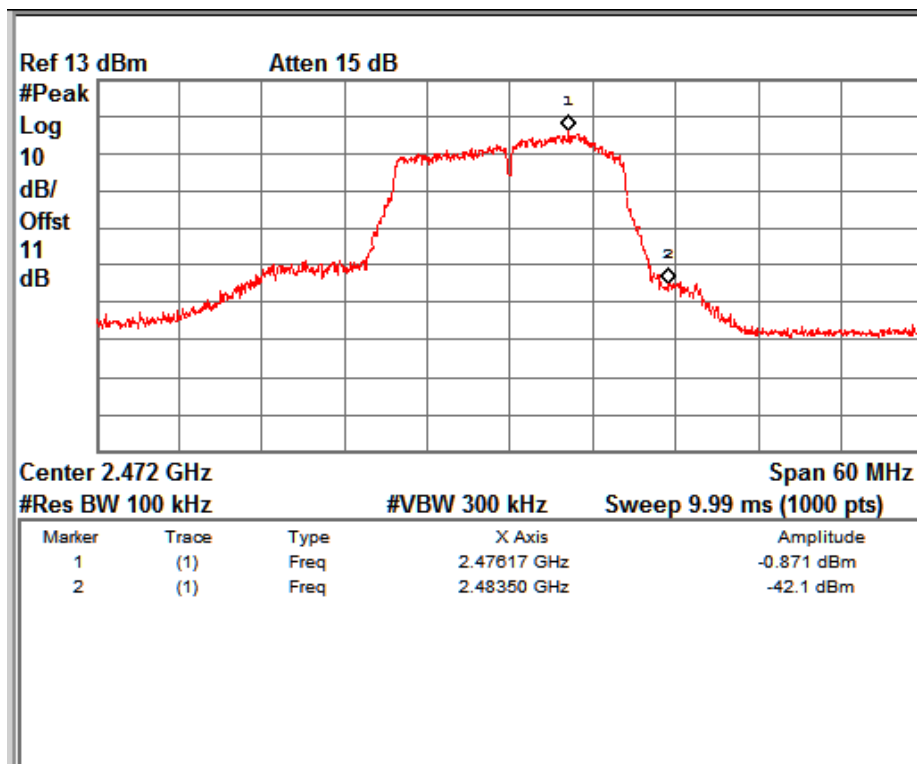
Reference Level Plot: 54 Mbps

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Data Rate: 6 Mbps

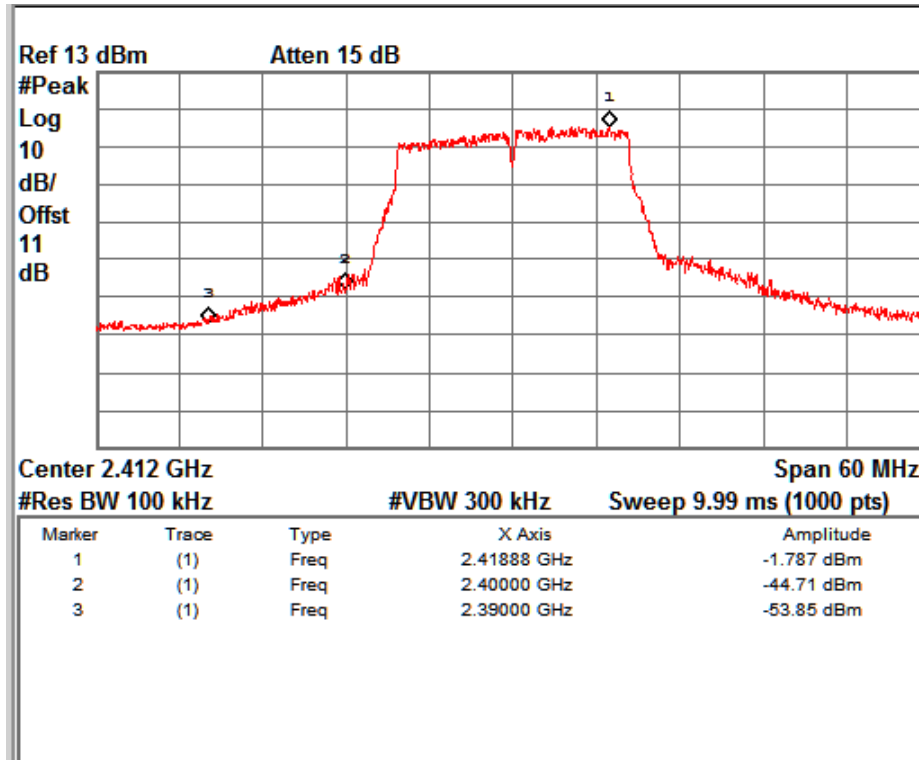
Channel frequency: 2412 MHz



Data Rate: 6 Mbps

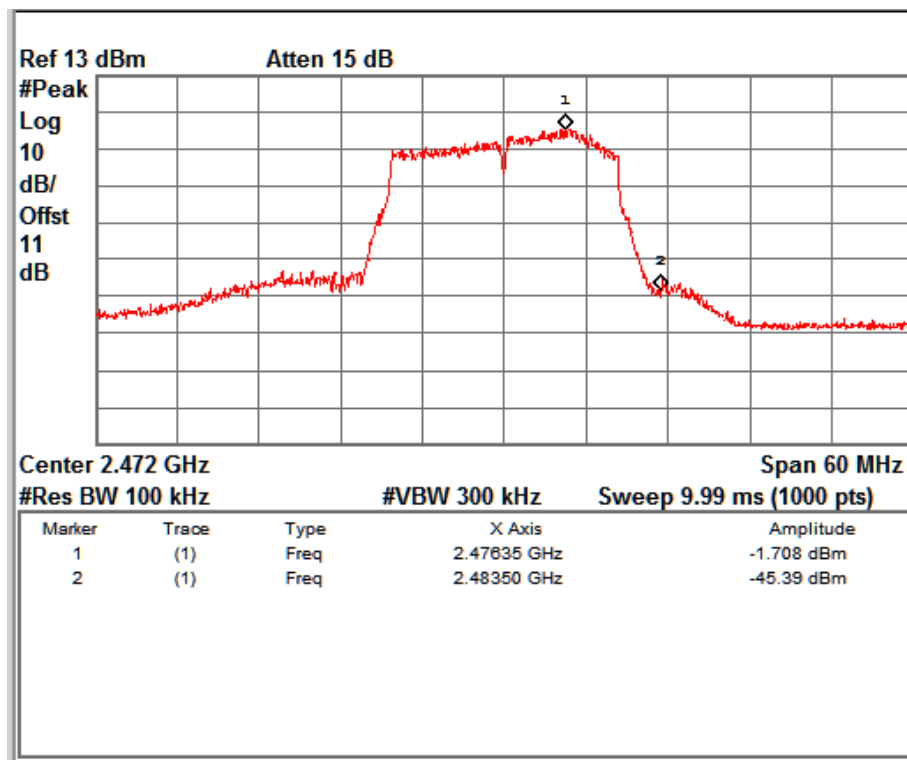
Channel frequency: 2472 MHz

www.tuv.com



Data Rate: 24 Mbps

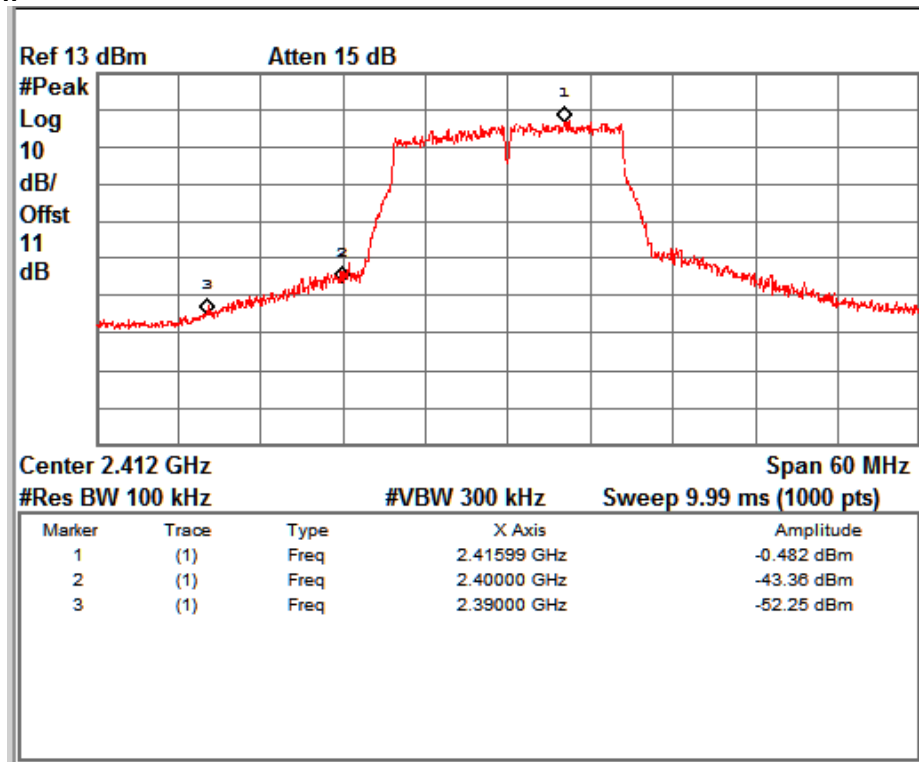
Channel frequency: 2412 MHz



Data Rate: 24 Mbps

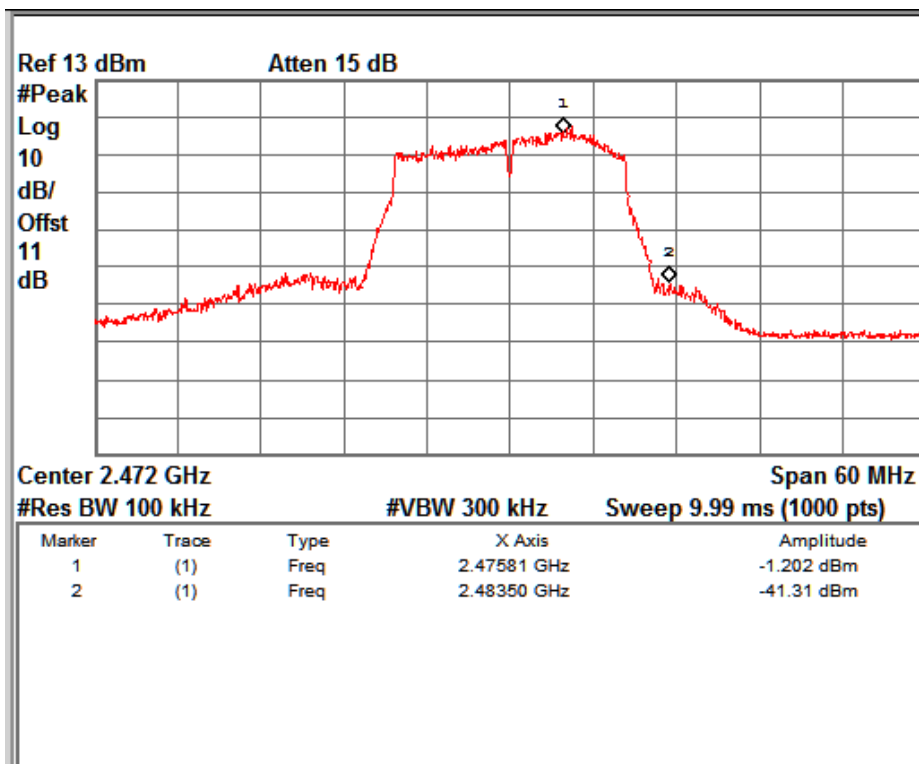
Channel frequency: 2472 MHz

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Data Rate: 54 Mbps

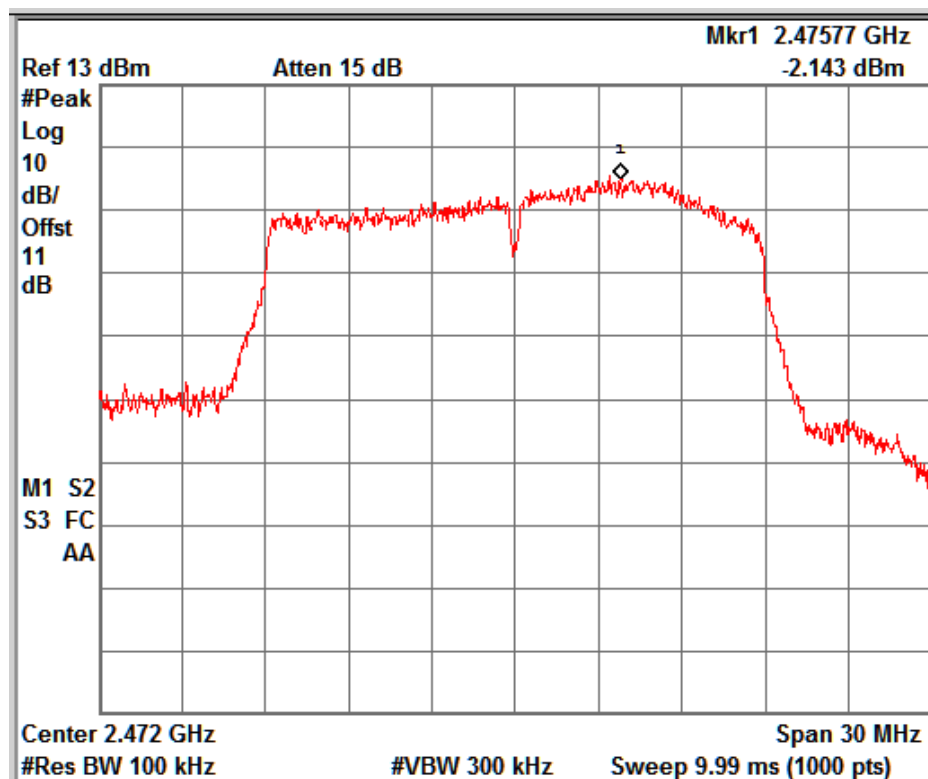
Channel frequency: 2412 MHz



Data Rate: 54 Mbps

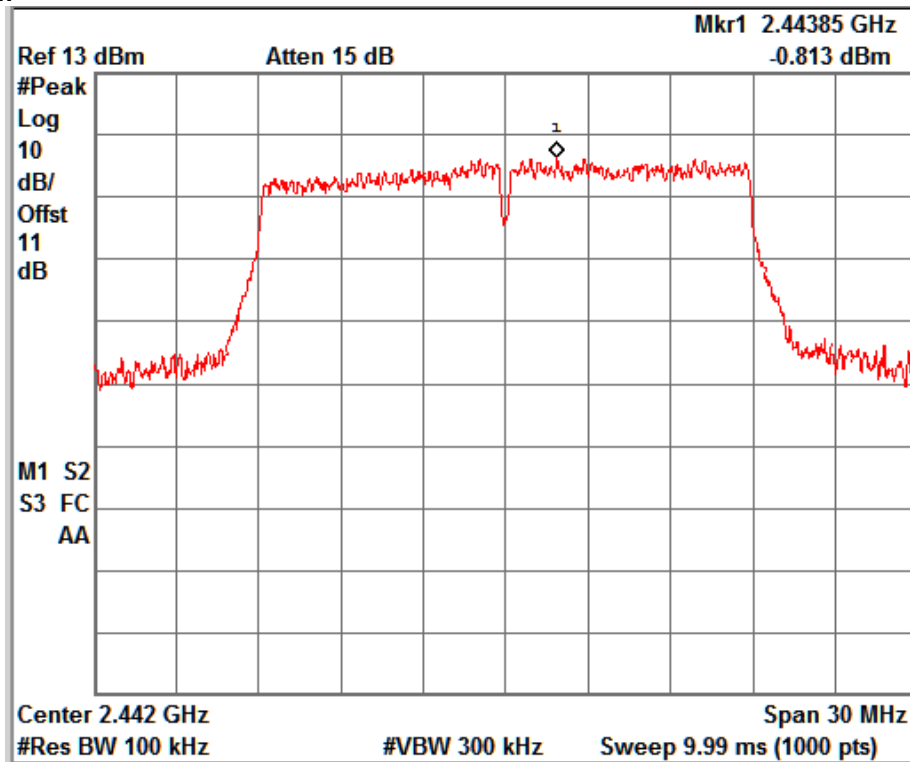
Channel frequency: 2472 MHz

IEEE802.11nHT20						
Data Rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference Value B (dBm)	Band Edge Value A~B (dBc)	Limit (dBc)
		Frequency (MHz)	Value A (dBm)			
MCS0	2412	2400	-37.36	-2.143	39.503	30
	2472	2483.5	-42.45	-2.143	44.593	30
MCS4	2412	2400	-36.09	-0.813	36.903	30
	2472	2483.5	-43.04	-0.813	43.853	30
MCS7	2412	2400	-39.46	-0.687	40.147	30
	2472	2483.5	-43.08	-0.687	43.767	30

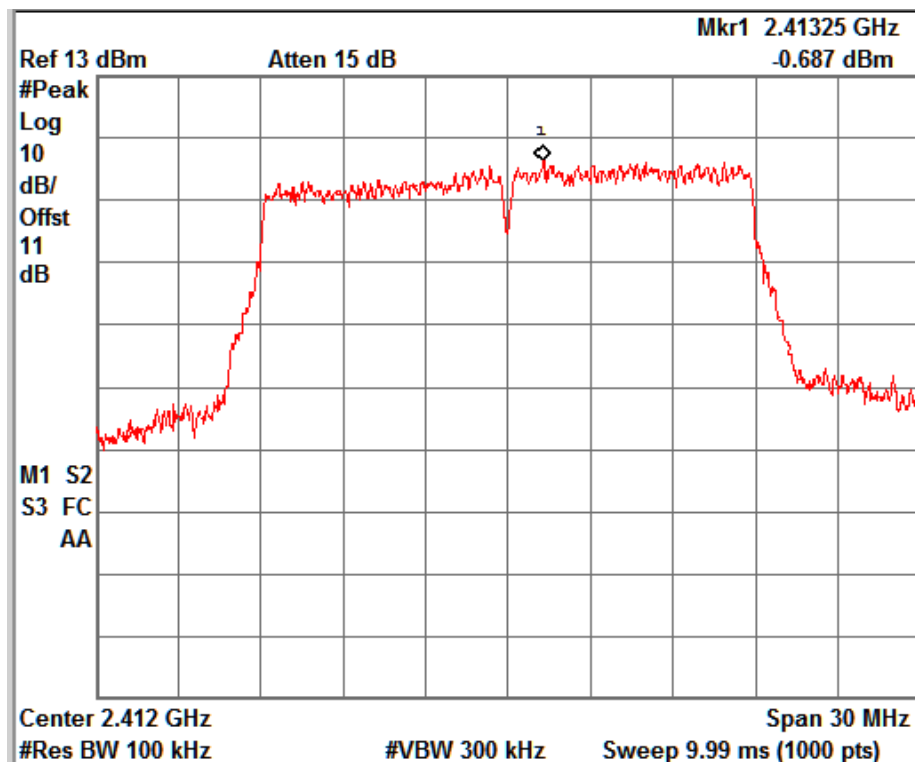


Reference Level Plot: MCS0

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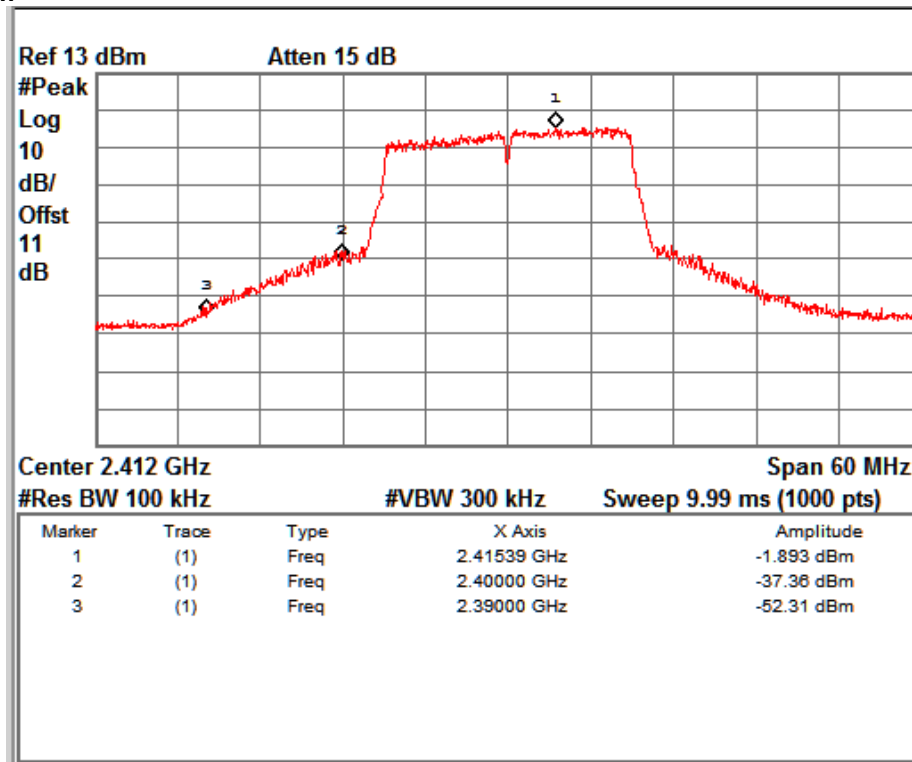


Reference Level Plot: MCS4



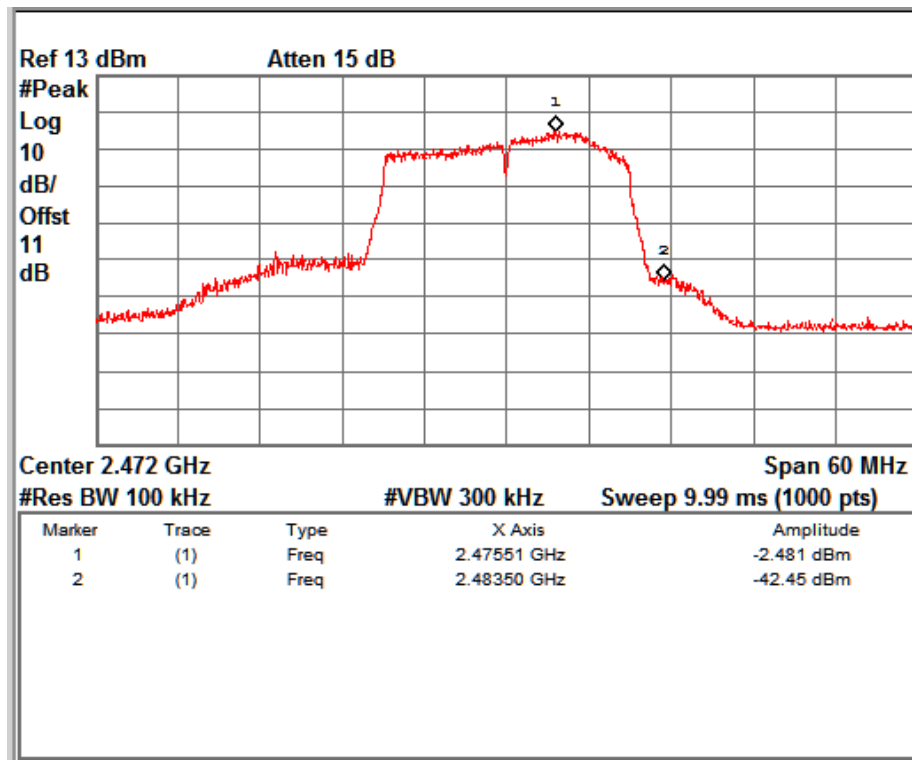
Reference Level Plot: MCS7

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Data Rate: MCS0

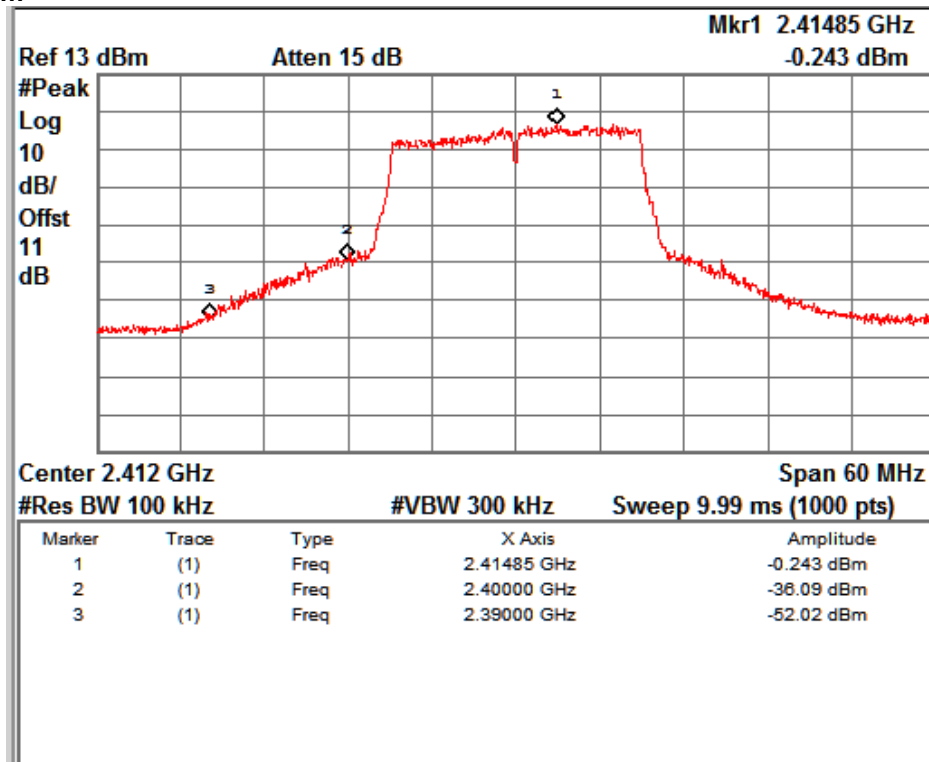
Channel frequency: 2412 MHz



Data Rate: MCS0

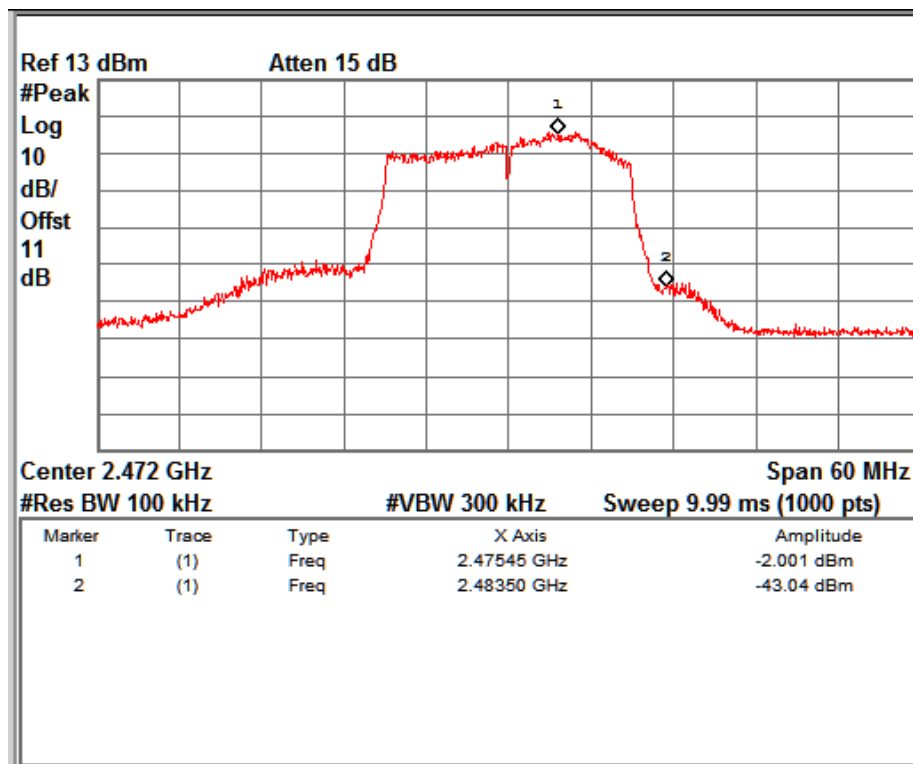
Channel frequency: 2472 MHz

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Data Rate: MCS4

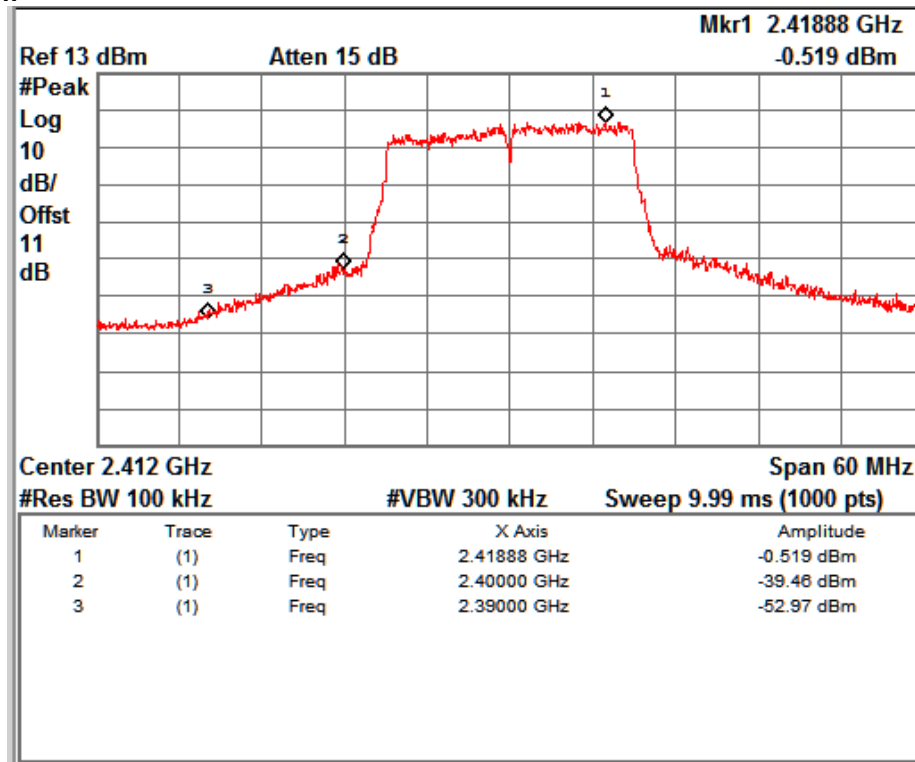
Channel frequency: 2412 MHz



Data Rate: MCS4

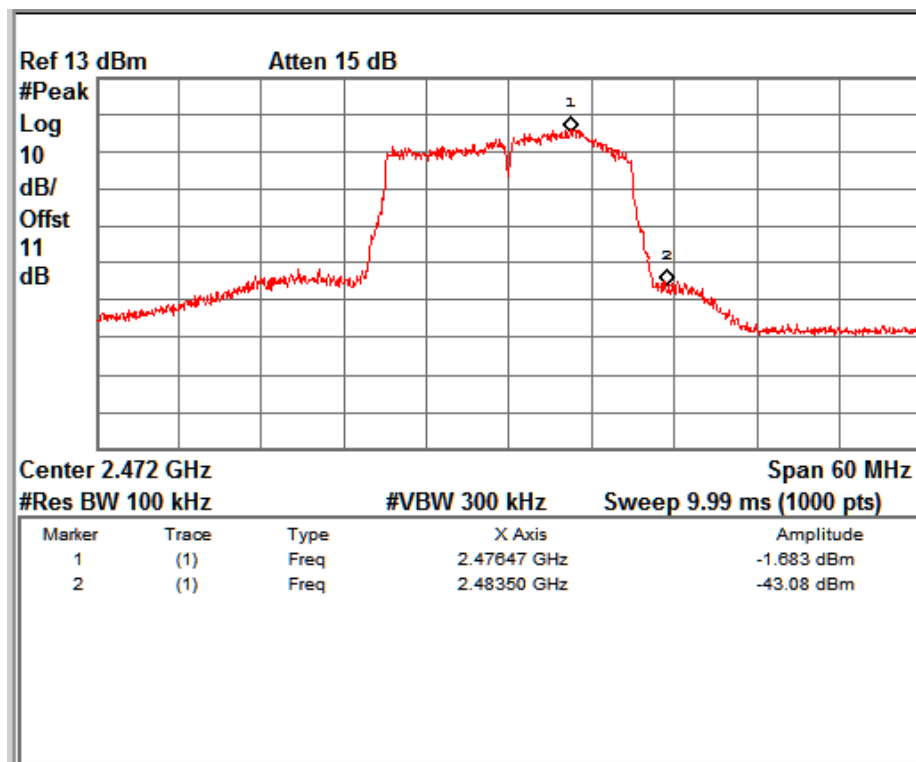
Channel frequency: 2472 MHz

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Data Rate: MCS7

Channel frequency: 2412 MHz

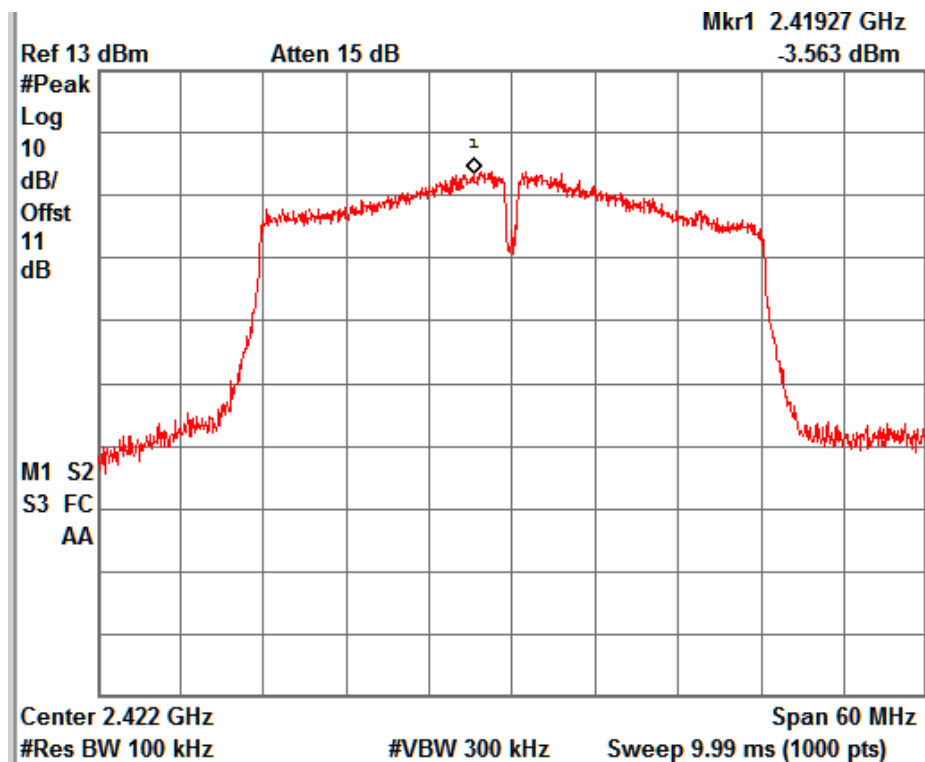


Data Rate: MCS7

Channel frequency: 2472 MHz

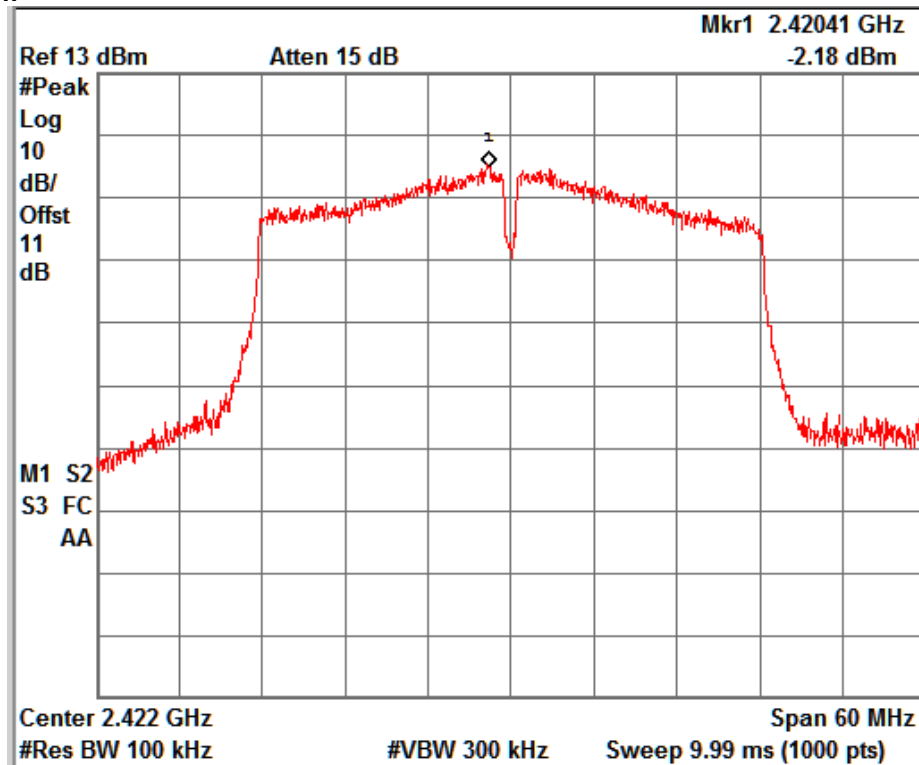
www.tuv.com

IEEE802.11nHT40						
Data Rate (Mbps)	Channel Frequency (MHz)	Value at Band Edge		Reference Value B (dBm)	Band Edge Value A~B (dBc)	Limit (dBc)
		Frequency (MHz)	Value A (dBm)			
MCS0	2422	2400	-43.77	-3.563	47.333	30
	2462	2483.5	-48.53	-3.563	52.093	30
MCS4	2422	2400	-43.93	-2.18	46.11	30
	2462	2483.5	-49.78	-2.18	51.96	30
MCS7	2422	2400	-37.85	-2.181	40.031	30
	2462	2483.5	-46.16	-2.181	48.341	30

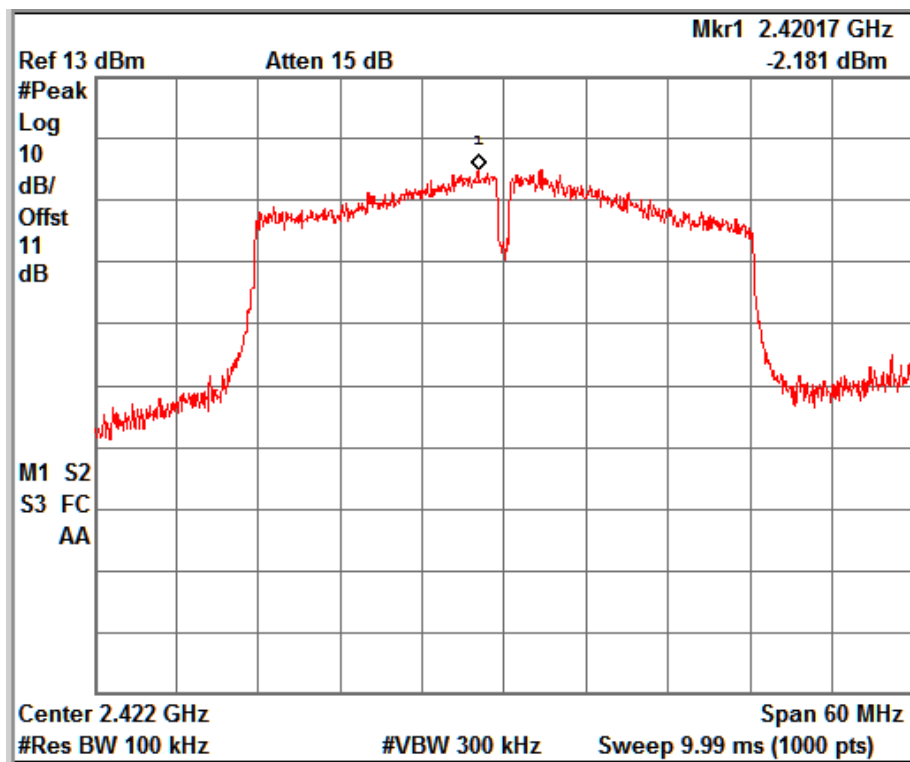


Reference Level Plot: MCS0

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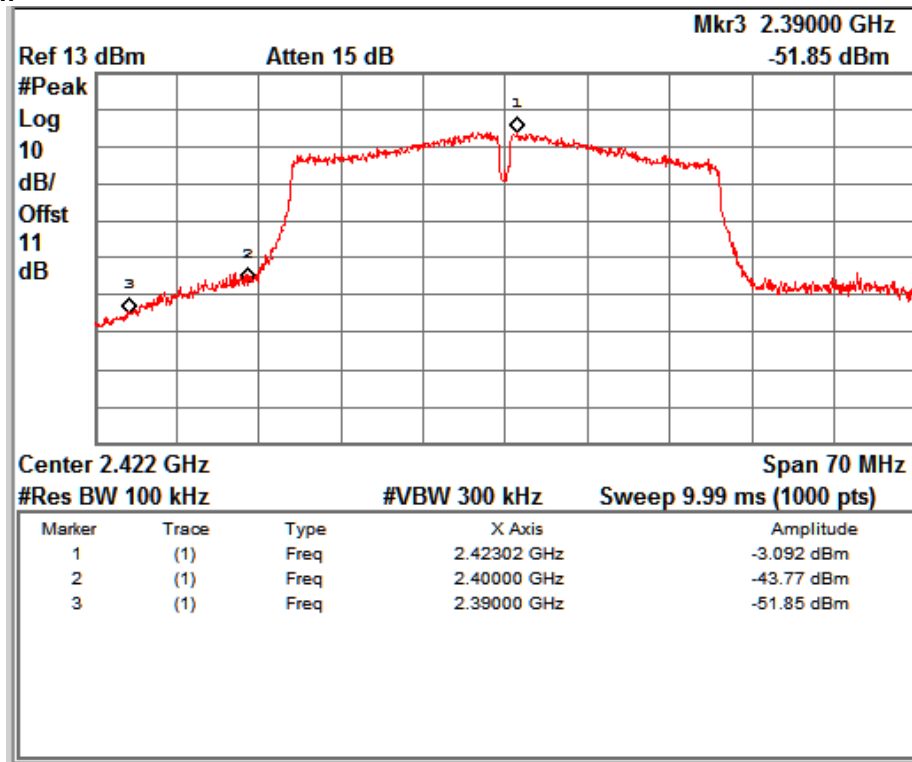


Reference Level Plot: MCS4



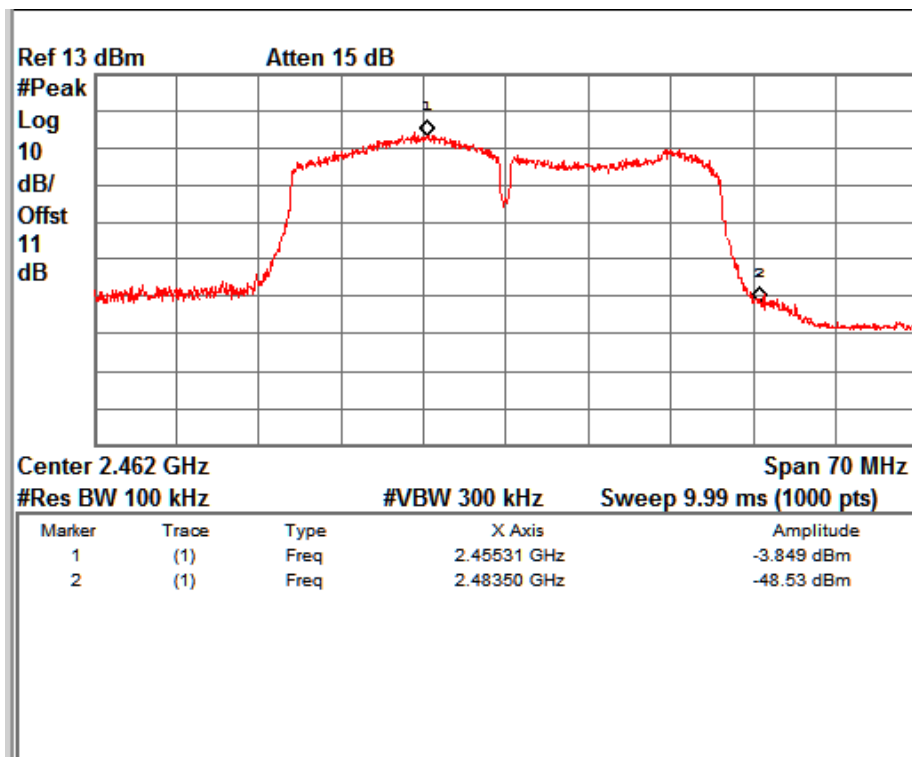
Reference Level Plot: MCS7

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Data Rate: MCS0

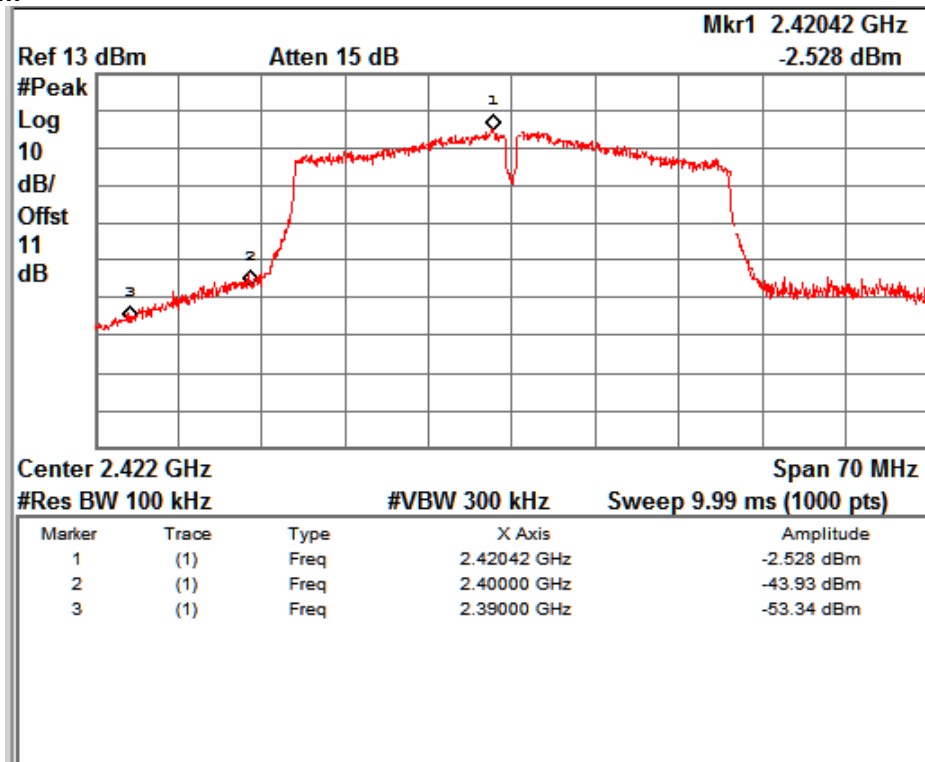
Channel frequency: 2422 MHz



Data Rate: MCS0

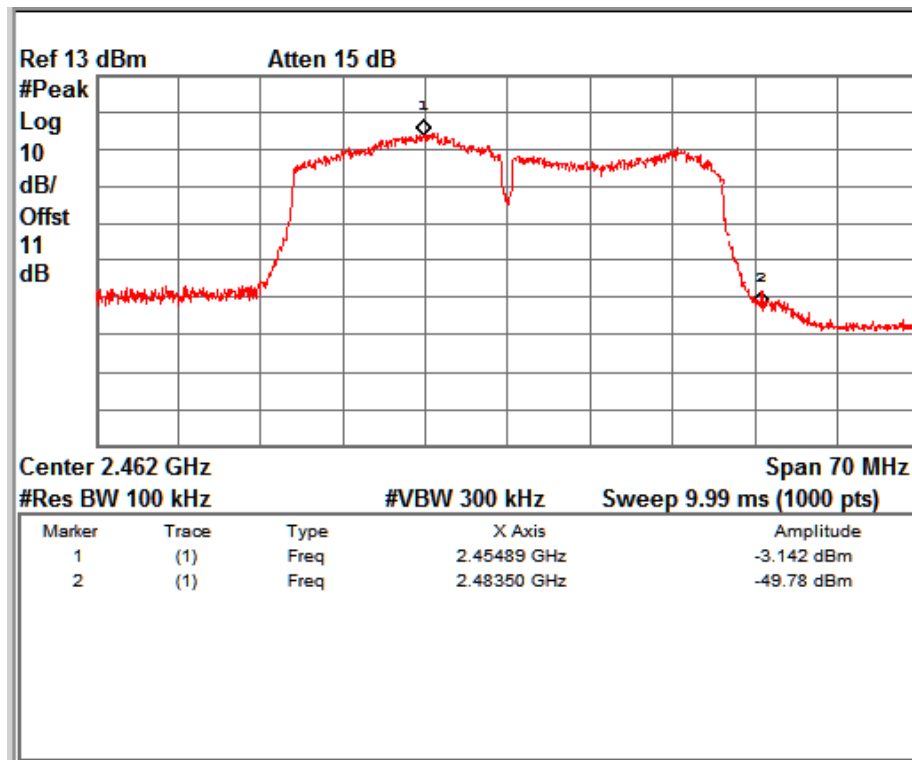
Channel frequency: 2462 MHz

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Data Rate: MCS4

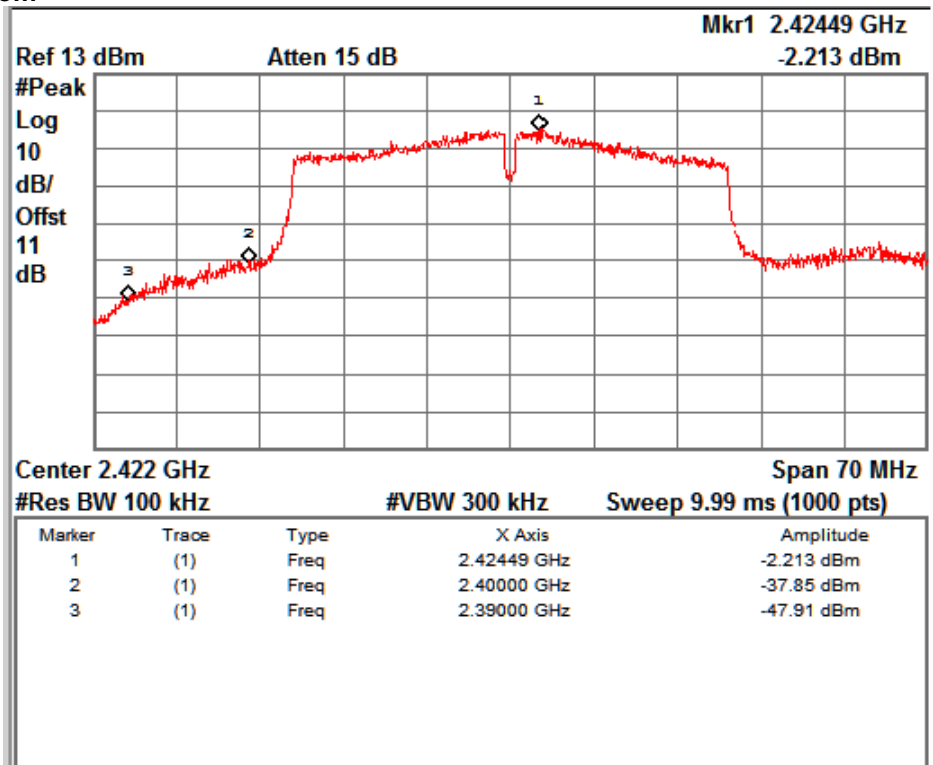
Channel frequency: 2422 MHz



Data Rate: MCS4

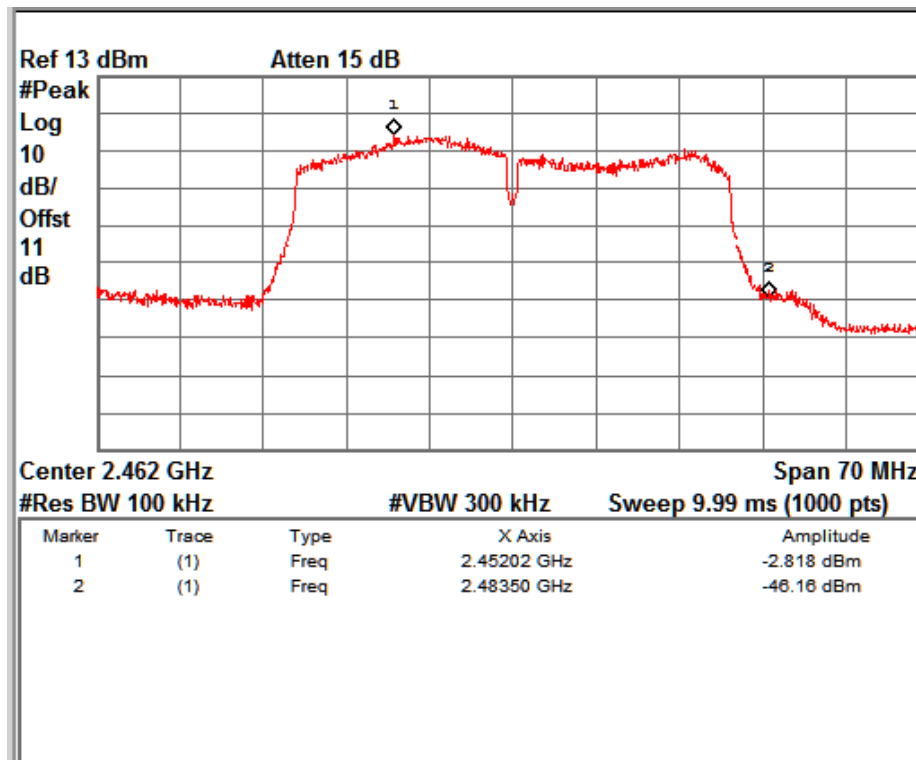
Channel frequency: 2462 MHz

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Data Rate: MCS7

Channel frequency: 2422 MHz

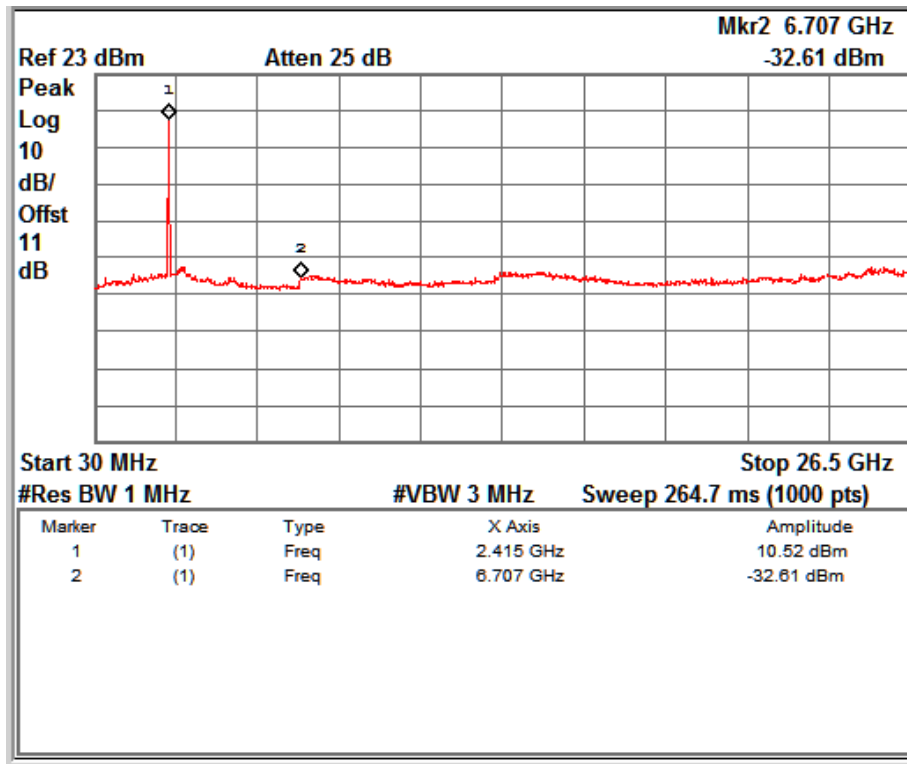


Data Rate: MCS7

Channel frequency: 2462 MHz

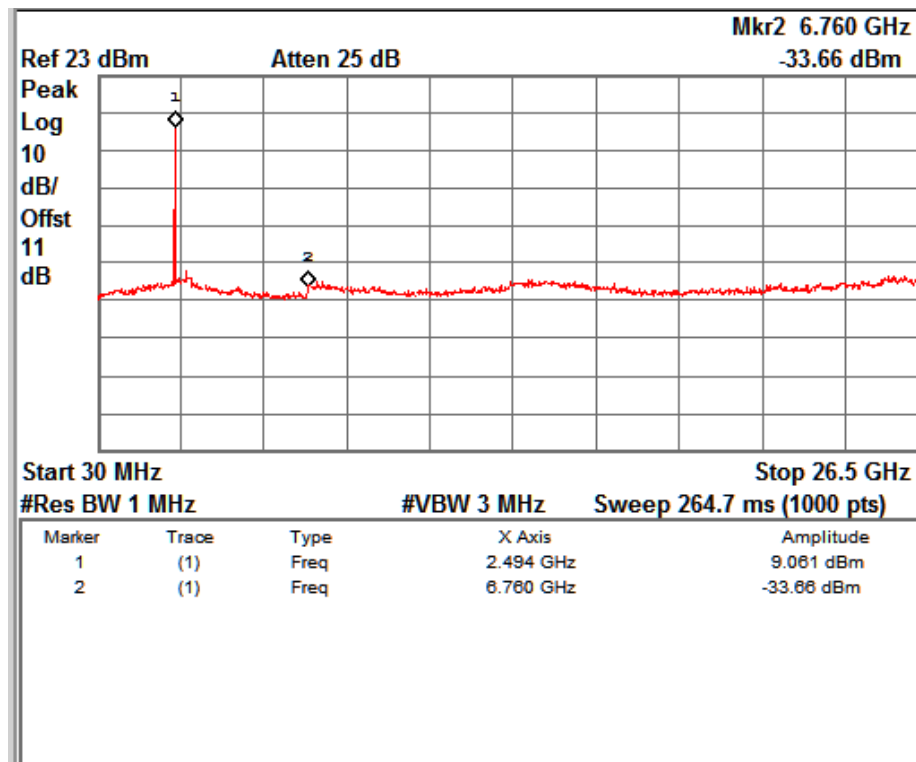
www.tuv.com
Conducted Spurious Emission

WiFi B Mode



Data Rate: 1Mbps

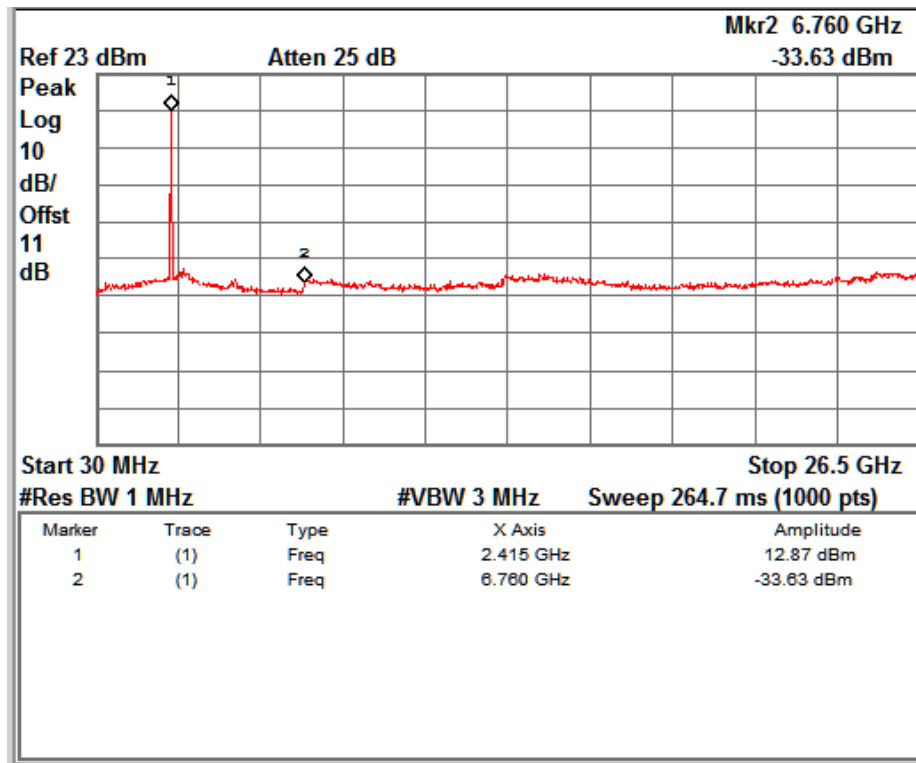
Channel frequency: 2412 MHz



Data Rate: 1Mbps

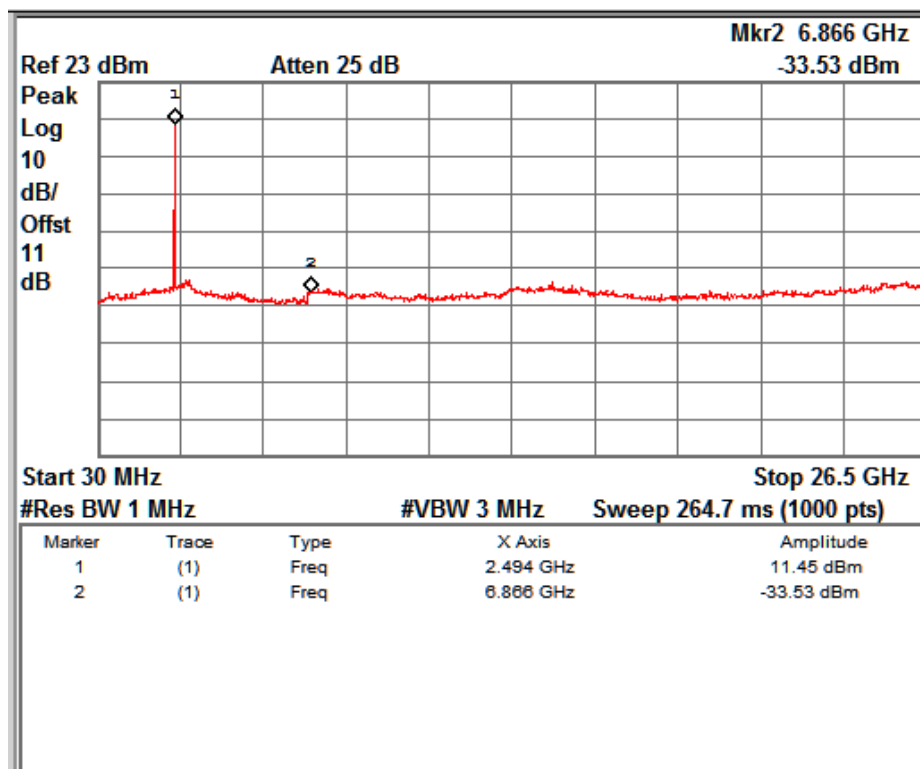
Channel frequency: 2462 MHz

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Data Rate: 11Mbps

Channel frequency: 2412 MHz

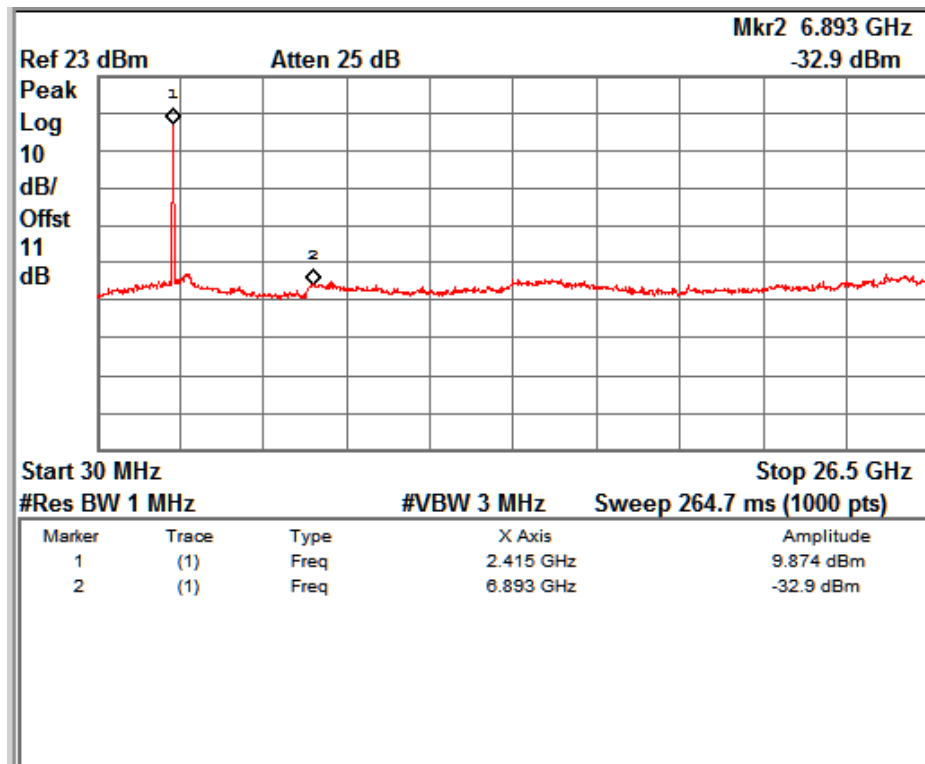


Data Rate: 11Mbps

Channel frequency: 2472 MHz

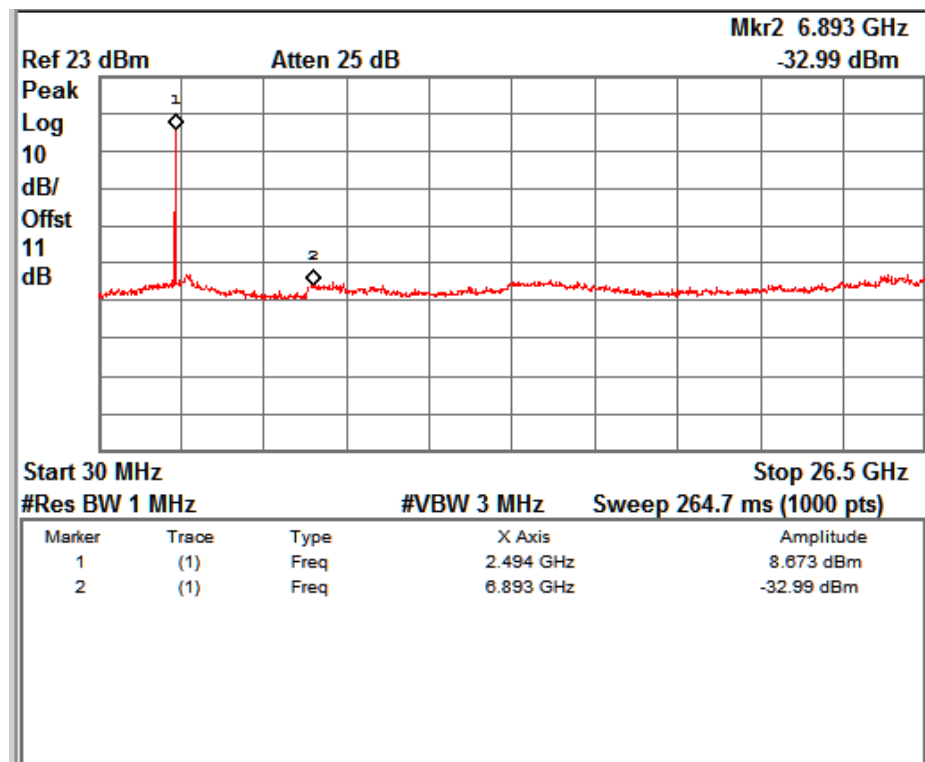
www.tuv.com

G Mode



Data Rate: 6Mbps

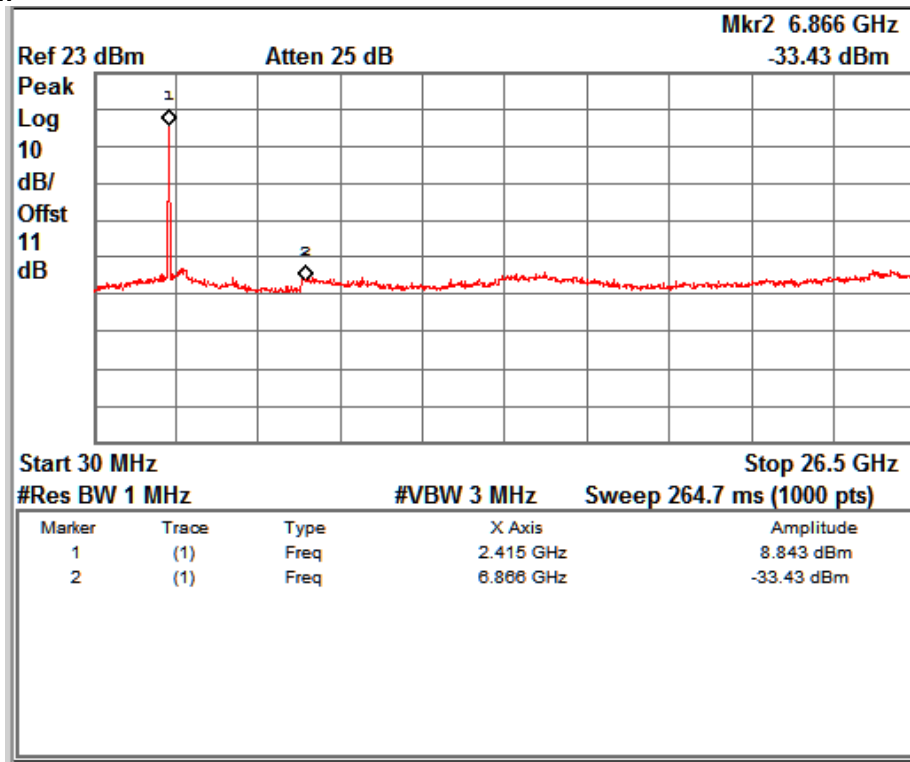
Channel frequency: 2412 MHz



Data Rate: 6Mbps

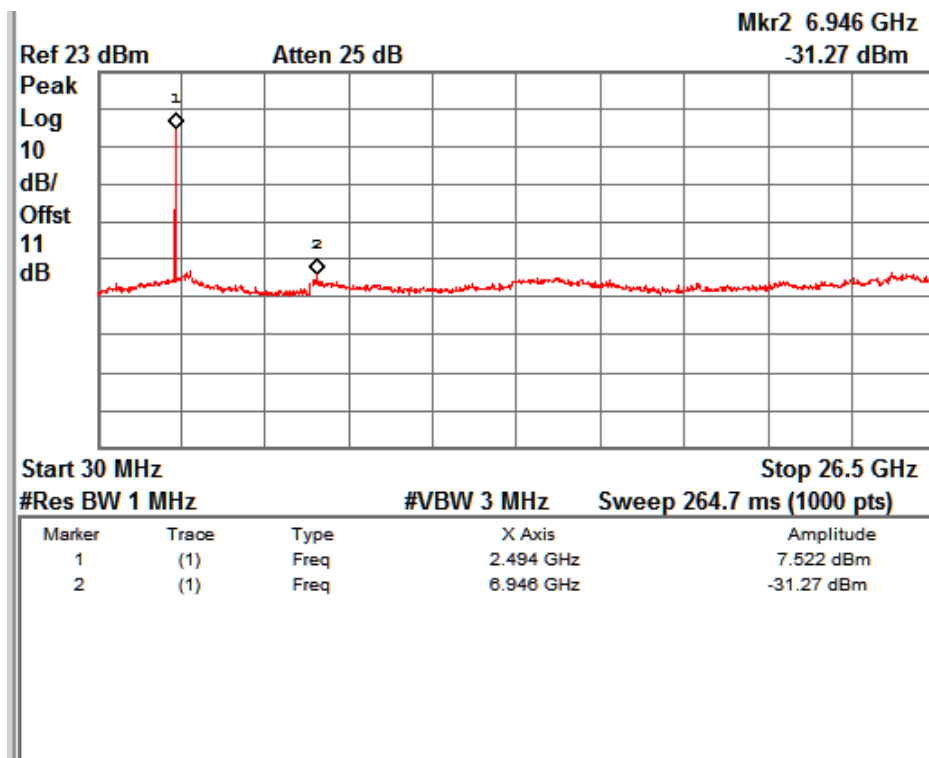
Channel frequency: 2472 MHz

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Data Rate: 24Mbps

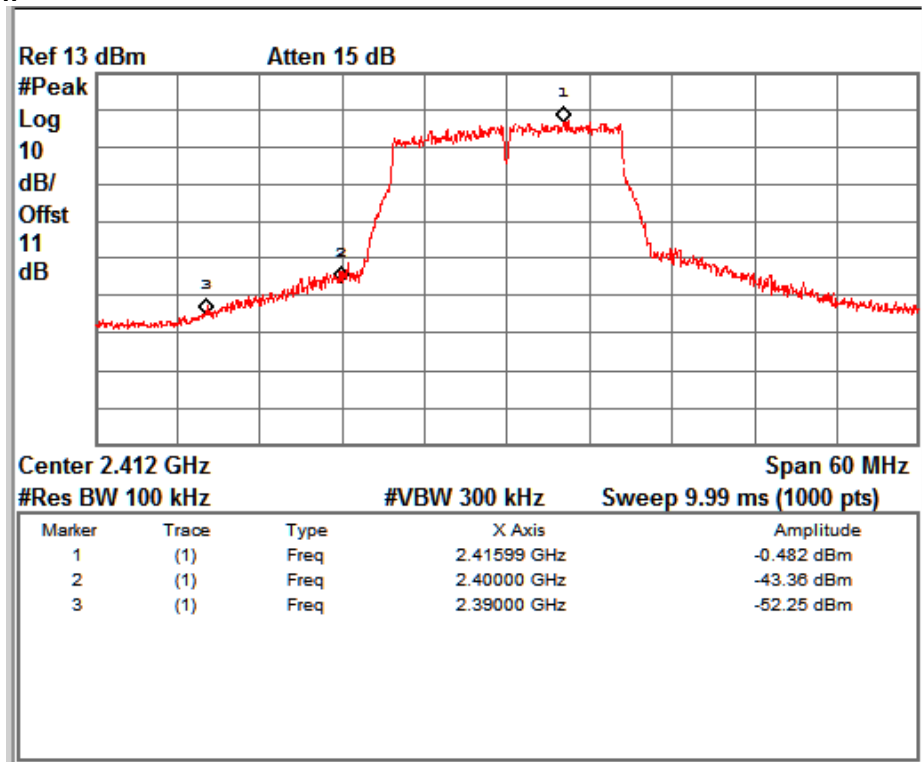
Channel frequency: 2412 MHz



Data Rate: 24Mbps

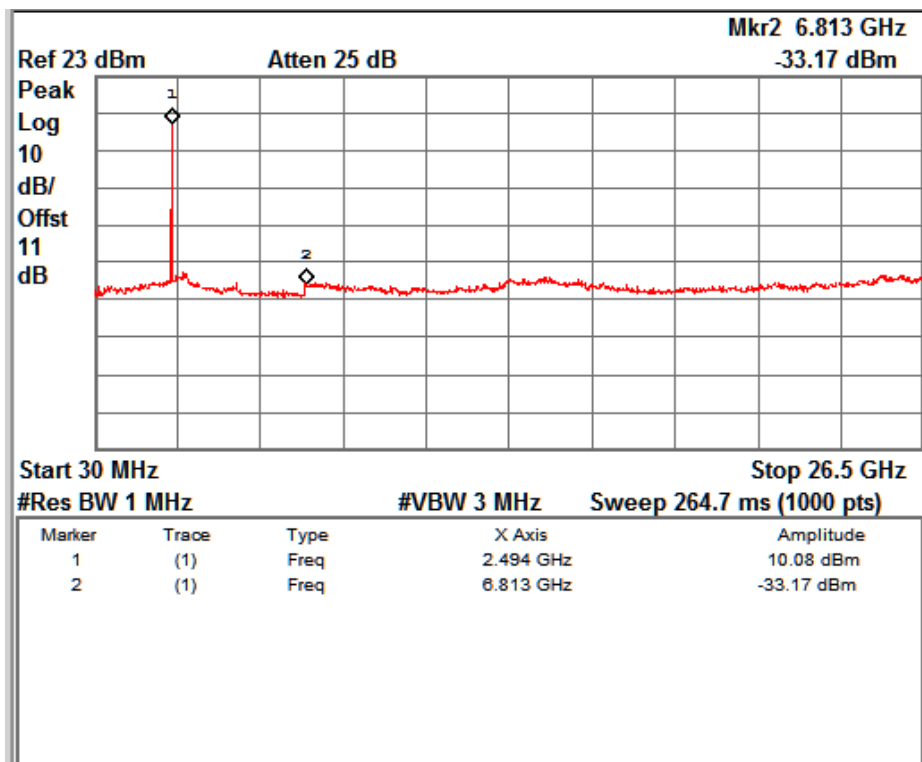
Channel frequency: 2472 MHz

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Data Rate: 54Mbps

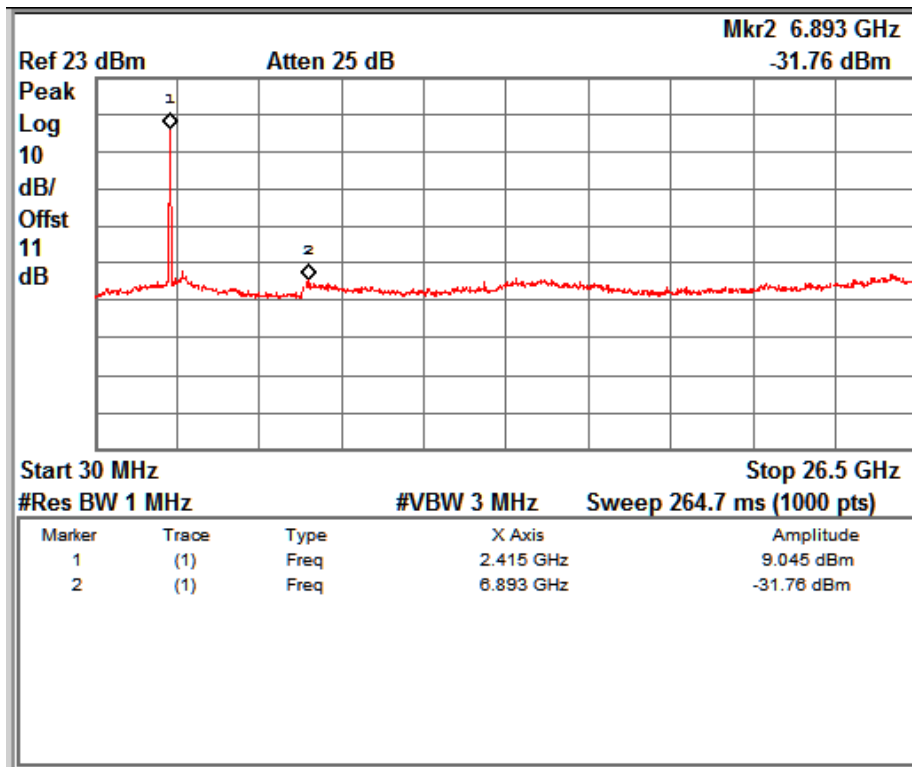
Channel frequency: 2412 MHz



Data Rate: 54Mbps

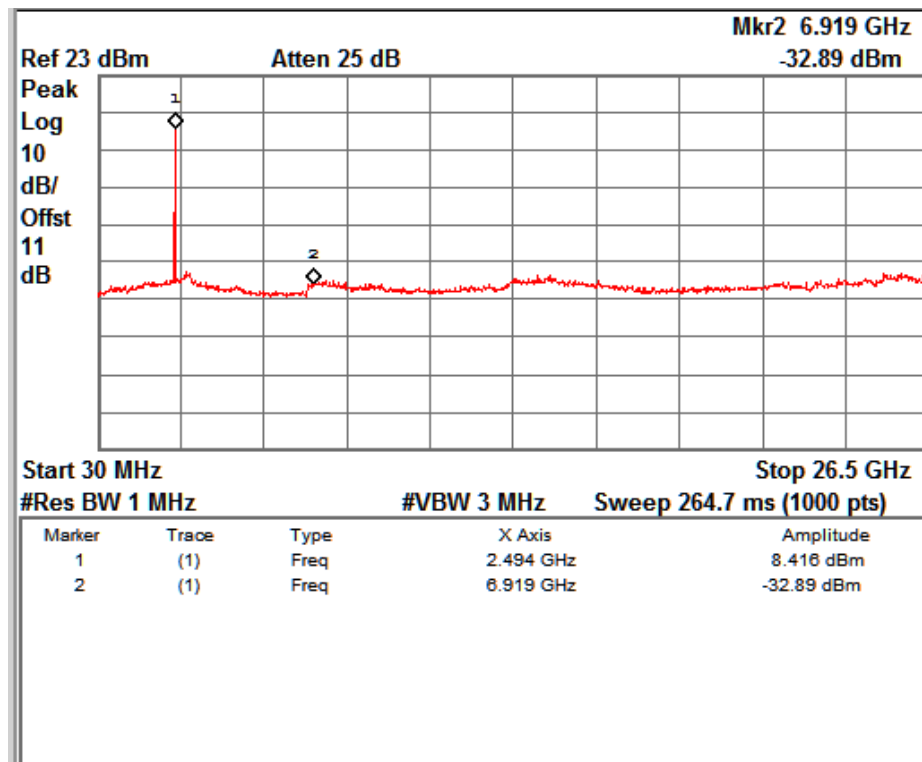
Channel frequency: 2472 MHz

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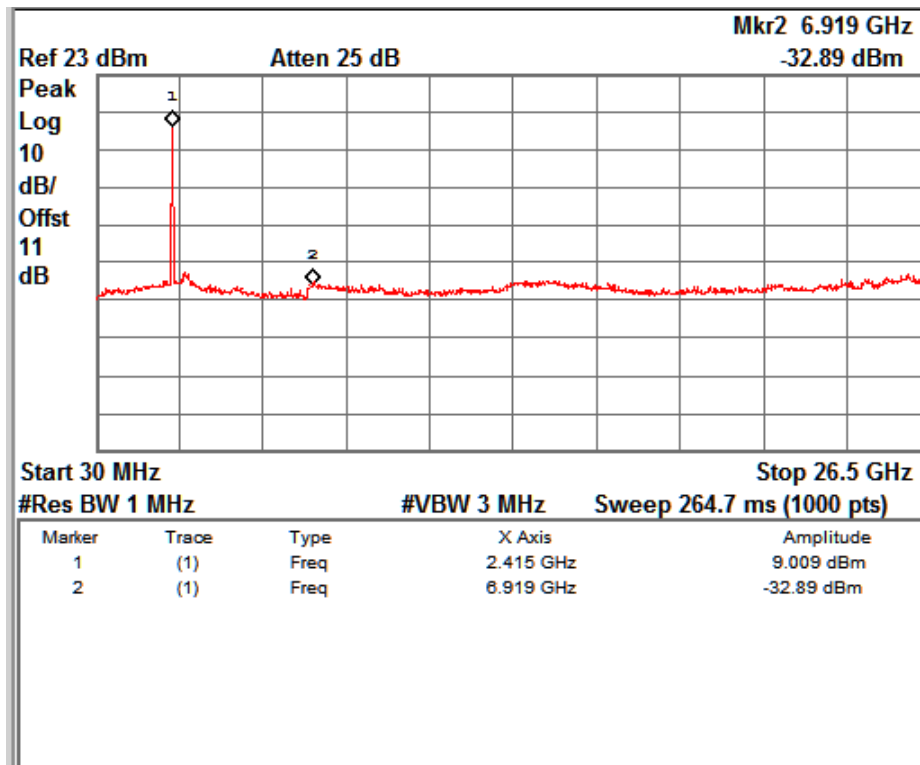
Data Rate: MCS0

Channel frequency: 2412 MHz



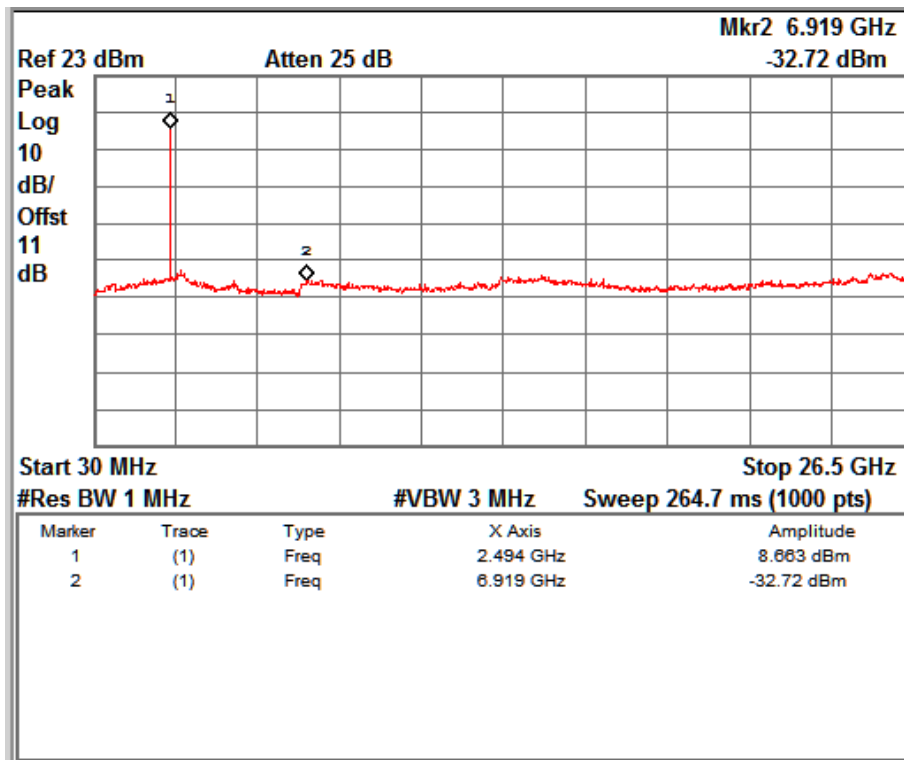
Data Rate: MCS0

Channel frequency: 2472 MHz



Data Rate: MCS4

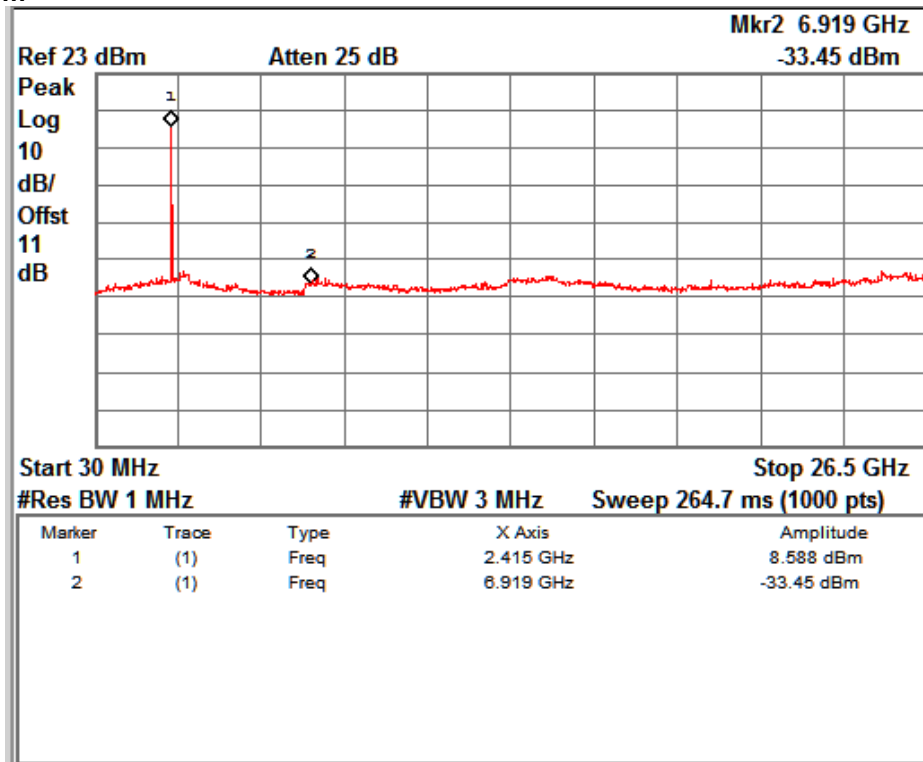
Channel frequency: 2412 MHz



Data Rate: MCS4

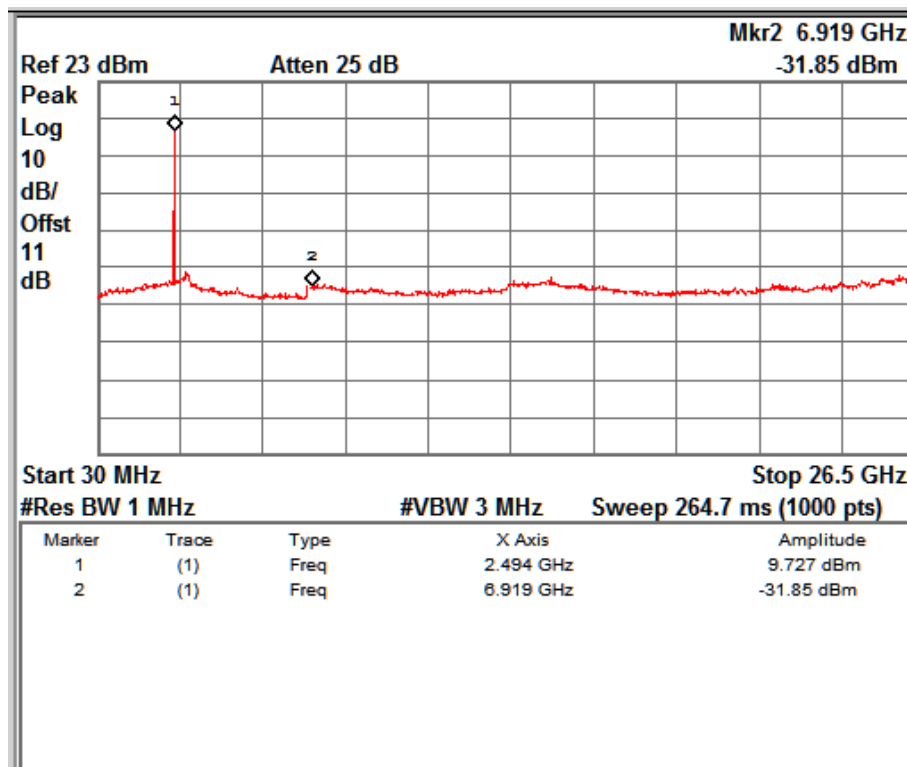
Channel frequency: 2472 MHz

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Data Rate: MCS7

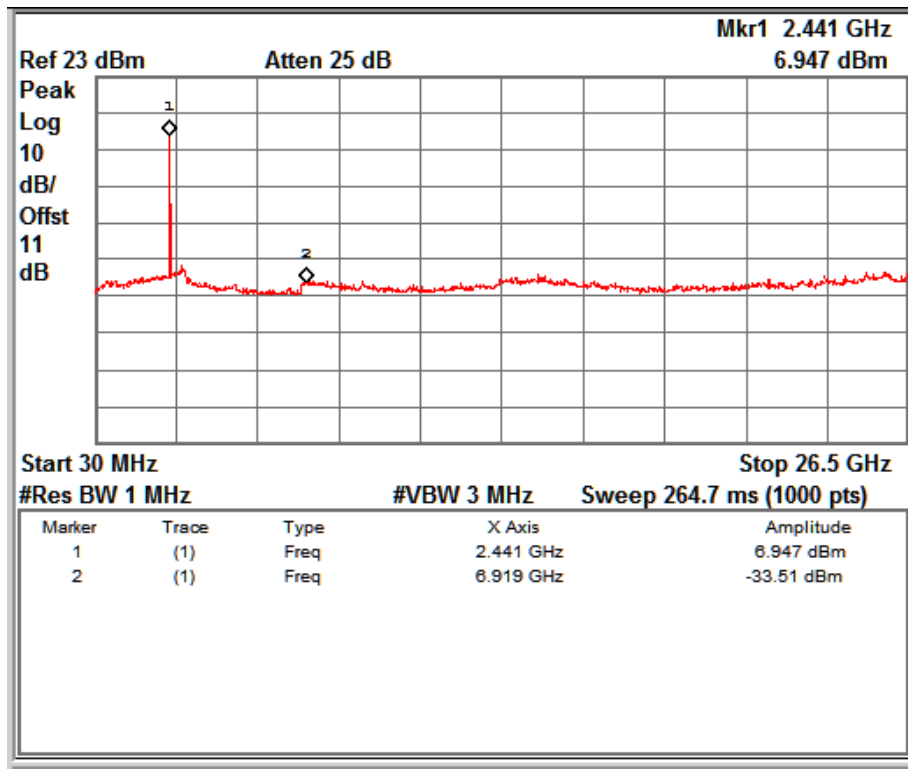
Channel frequency: 2412 MHz



Data Rate: MCS7

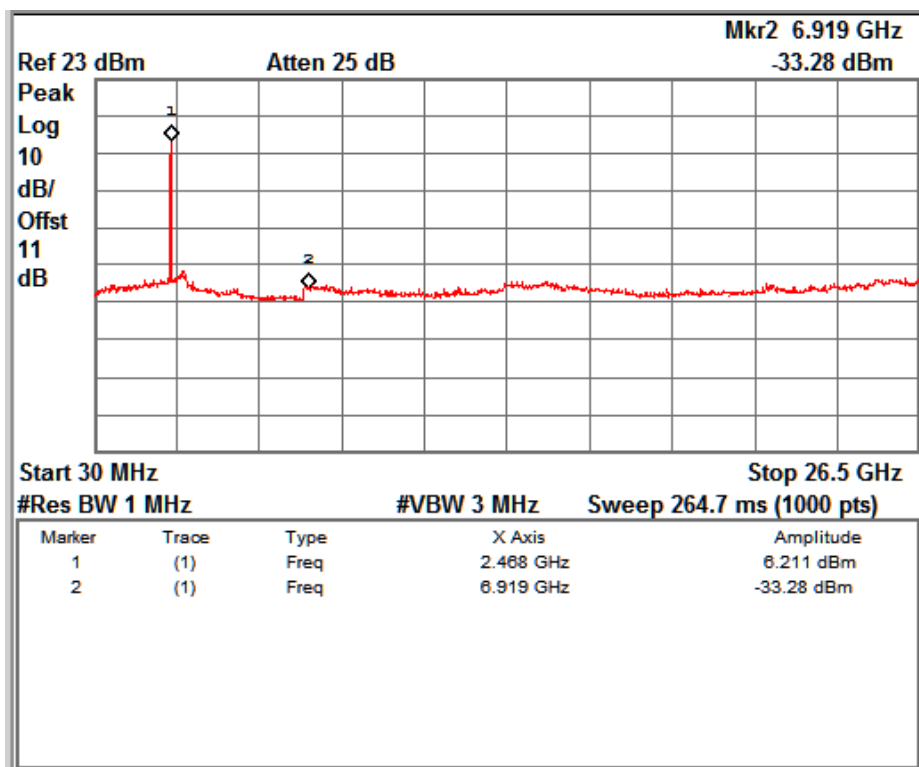
Channel frequency: 2472 MHz

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Data Rate: MCS0

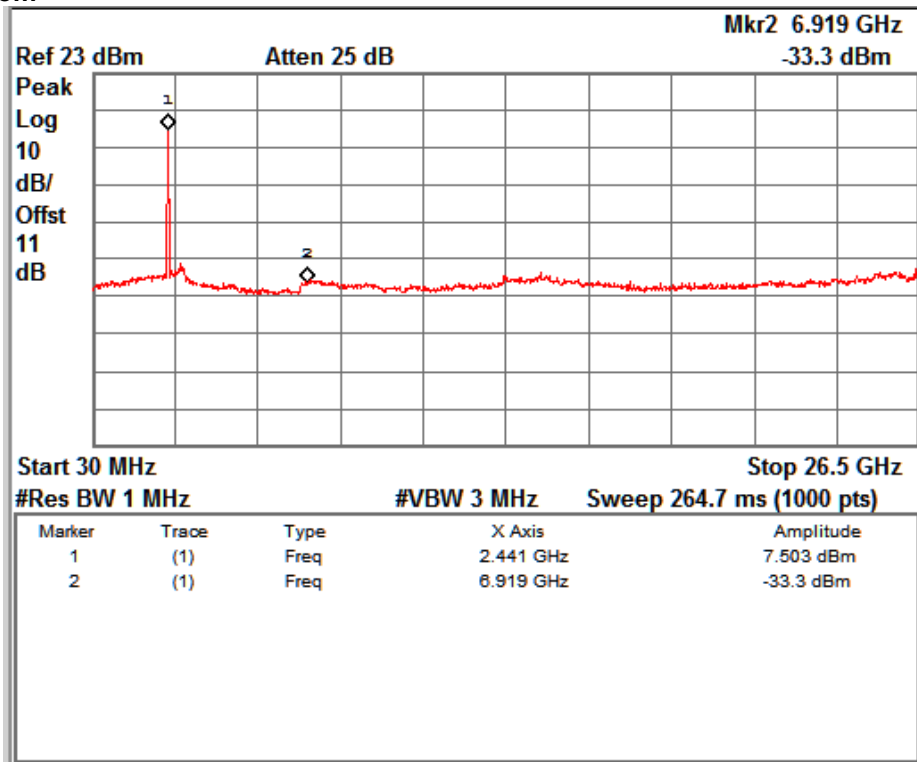
Channel frequency: 2412 MHz



Data Rate: MCS0

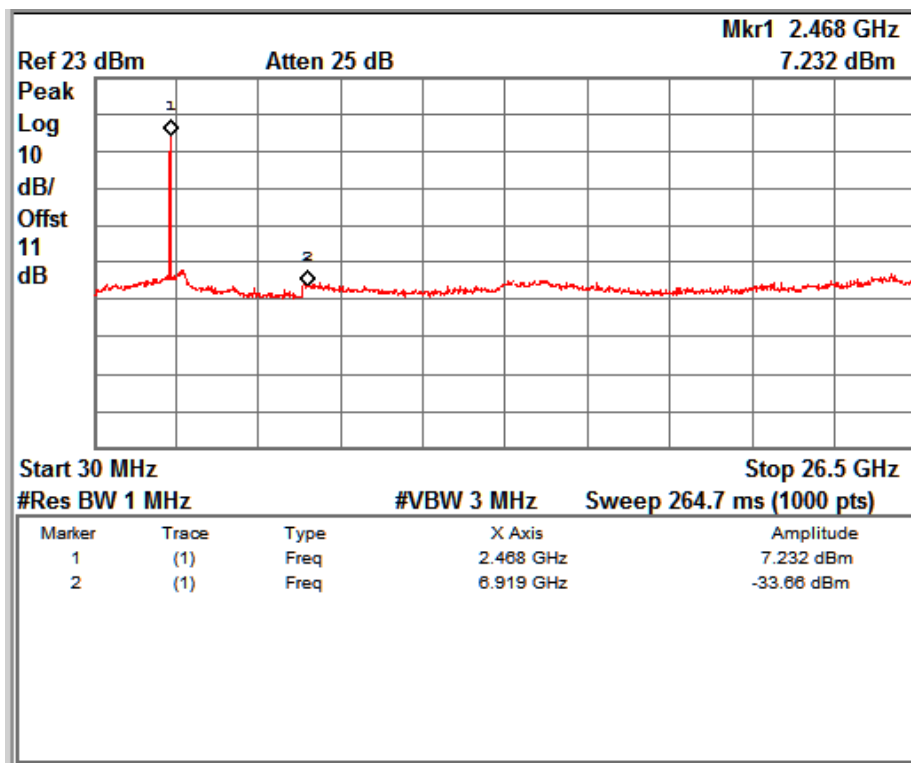
Channel frequency: 2472 MHz

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Data Rate: MCS4

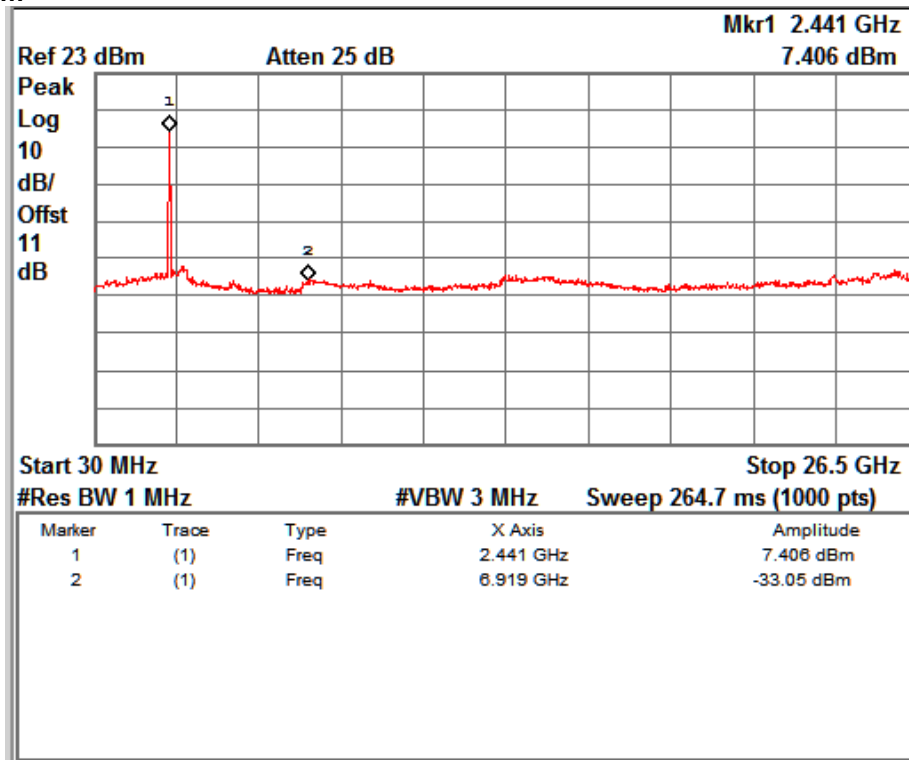
Channel frequency: 2412 MHz



Data Rate: MCS4

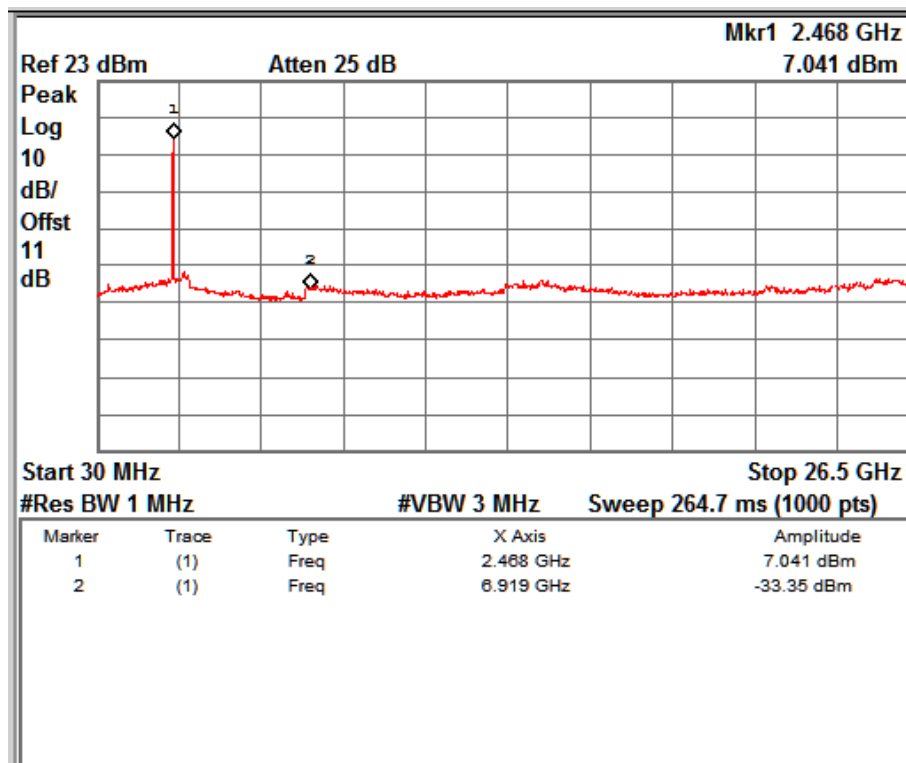
Channel frequency: 2462 MHz

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Data Rate: MCS7

Channel frequency: 2412 MHz



Data Rate: MCS7

Channel frequency: 2462 MHz

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**Radiated Spurious Emissions and
Restricted Bands of Operation
Result**

**Section 15.209 and 15.205
Pass**

Test Specification	FCC Part 15 Section 15.209 & 15.205
Test Method	ANSI C63.10-2013
Measurement Location	Semi Anechoic Chamber
Measuring Distance	3m
Detection	QP for frequency below 1GHz, Average for frequency above 1GHz
Requirement	As per the limits mentioned in the below table

Limit for Radiated Emission of Section 15.209:

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength (dB $\mu\text{V/m}$)	Distance of Measurement (m)
0.009 – 0.490	2400/F(kHz)	48.50 – 13.80	300*
0.490 – 1.705	24000/F(kHz)	33.80 – 23.00	30*
1.705 -30	30	29.54	30*
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Remark: * The limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300 meter, 30 meter and 3 meter range respectively, which corresponds to 88.50 – 53.80, 53.80 – 43.00 and 49.5dB $\mu\text{V/m}$ at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

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Test results:

For frequency Range 9kHz – 30MHz

No emissions found in this frequency range.

For the Frequency range 30MHz -1GHz

Worst case test results are reported.

Battery Mode

Polarization	Frequency (MHz)	Spurious Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)
V	31.55	32.93	40	-7.07
	67.53	24.37	40	-15.63
	939.18	28.91	43.5	-14.59
H	31.35	33.55	40	-6.45
	810.07	39.40	46	-6.60

Charging Mode

Polarization	Frequency (MHz)	Spurious Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)
V	36.01	29.56	40	-10.44
	68.12	26.12	40	-13.88
	180.05	28.91	43.5	-14.59
H	31.13	32.46	40	-7.54
	156.00	26.62	43.5	-16.88

Worst case test results for the frequencies in the range 1 GHz 26.5 GHz are reported in below table.

B Mode: 1Mbps					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	41.08	74.00	-32.92
		2390 (Av)	29.93	54.00	-24.07
		2412 (Pk)	94.10	-	*
		2412 (Av)	91.70	-	*
		4824 (Pv)	50.27	74.00	-23.73
		4824 (Av)	37.41	54.00	-16.59
	H	2390 (Pk)	40.45	74.00	-33.55
		2390 (Av)	27.82	54.00	-26.18
		2412 (Pk)	90.24	-	*
		2412 (Av)	88.05	-	*
		4824 (Pk)	51.13	74.00	-22.87
		4824 (Av)	42.05	54.00	-11.95
Mid	V	2442(Pk)	93.32	-	*
		2442(Av)	91.01	-	*
		4884 (Pk)	48.98	74.00	-25.02
		4884 (Av)	37.50	54.00	-16.50
	H	2442(Pk)	93.21	-	*
		2442(Av)	90.79	-	*
		4884 (Pk)	51.88	74.00	-22.12
		4884 (Av)	42.36	54.00	-11.64
High	V	2472 (Pk)	90.64	-	*
		2472 (Av)	88.15	-	*
		2483.5 (Pk)	48.19	74.00	-25.81
		2483.5 (Av)	42.56	54.00	-11.44
		4924 (Pk)	51.06	74.00	-22.94
		4924 (Av)	37.79	54.00	-16.21
	H	2472 (Pk)	93.16	-	*
		2472 (Av)	90.24	-	*
		2483.5 (Pk)	50.71	74.00	-23.29
		2483.5 (Av)	45.50	54.00	-8.50
		4924 (Pk)	50.41	74.00	-23.59
		4924 (Av)	40.04	54.00	-13.96

B Mode: 11Mbps					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	39.95	74.00	-34.05
		2390 (Av)	27.73	54.00	-26.27
		2412 (Pk)	94.35	-	*
		2412 (Av)	86.36	-	*
		4824 (Pv)	50.59	74.00	-23.41
		4824 (Av)	36.71	54.00	-17.29
	H	2390 (Pk)	40.85	74.00	-33.15
		2390 (Av)	28.67	54.00	-25.33
		2412 (Pk)	98.54	-	*
		2412 (Av)	90.41	-	*
		4824 (Pk)	50.63	74.00	-23.37
		4824 (Av)	37.37	54.00	-16.63
Mid	V	2442(Pk)	94.81	-	*
		2442(Av)	87.27	-	*
		4884 (Pk)	50.54	74.00	-23.46
		4884 (Av)	36.93	54.00	-17.07
	H	2442(Pk)	99.19	-	*
		2442(Av)	91.14	-	*
		4884 (Pk)	50.87	74.00	-23.13
		4884 (Av)	37.04	54.00	-16.96
High	V	2472 (Pk)	96.09	-	*
		2472 (Av)	88.05	-	*
		2483.5 (Pk)	51.42	74.00	-22.58
		2483.5 (Av)	43.46	54.00	-10.54
		4924 (Pk)	51.06	74.00	-22.94
		4924 (Av)	37.13	54.00	-16.87
	H	2472 (Pk)	99.15	-	*
		2472 (Av)	91.03	-	*
		2483.5 (Pk)	53.48	74.00	-20.52
		2483.5 (Av)	46.29	54.00	-7.71
		4924 (Pk)	50.41	74.00	-23.59
		4924 (Av)	39.79	54.00	-14.21

G Mode: 6Mbps					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	45.29	74.00	-28.71
		2390 (Av)	30.35	54.00	-23.65
		2412 (Pk)	88.62	-	*
		2412 (Av)	80.61	-	*
		4824 (Pv)	49.29	74.00	-24.71
		4824 (Av)	36.73	54.00	-17.27
	H	2390 (Pk)	48.51	74.00	-25.49
		2390 (Av)	33.02	54.00	-20.98
		2412 (Pk)	92.26	-	*
		2412 (Av)	84.52	-	*
		4824 (Pk)	49.73	74.00	-24.27
		4824 (Av)	36.93	54.00	-17.07
MID	V	2442(Pk)	90.31	-	*
		2442(Av)	82.30	-	*
		4884 (Pk)	49.65	74.00	-24.35
		4884 (Av)	37.15	54.00	-16.85
	H	2442(Pk)	93.55	-	*
		2442(Av)	85.65	-	*
		4884 (Pk)	50.38	74.00	-23.62
		4884 (Av)	36.93	54.00	-17.07
High	V	2472 (Pk)	90.62	-	*
		2472 (Av)	85.80	-	*
		2483.5 (Pk)	58.10	74.00	-15.90
		2483.5 (Av)	45.70	54.00	-8.30
		4924 (Pk)	51.25	74.00	-22.75
		4924 (Av)	37.12	54.00	-16.88
	H	2472 (Pk)	95.50	-	*
		2472 (Av)	87.41	-	*
		2483.5 (Pk)	59.85	74.00	-14.15
		2483.5 (Av)	47.36	54.00	-6.64
		4924 (Pk)	49.98	74.00	-24.02
		4924 (Av)	37.23	54.00	-16.77

G Mode:24Mbps					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	39.16	74.00	-34.84
		2390 (Av)	28.28	54.00	-25.72
		2412 (Pk)	88.28	-	*
		2412 (Av)	78.54	-	*
		4824 (Pv)	50.33	74.00	-23.67
		4824 (Av)	37.12	54.00	-16.88
	H	2390 (Pk)	40.70	74.00	-33.30
		2390 (Av)	30.00	54.00	-24.00
		2412 (Pk)	91.82	-	*
		2412 (Av)	82.51	-	*
		4824 (Pk)	50.47	74.00	-23.53
		4824 (Av)	37.12	54.00	-16.88
Mid	V	2442(Pk)	91.18	-	*
		2442(Av)	81.65	-	*
		4884 (Pk)	50.63	74.00	-23.37
		4884 (Av)	37.02	54.00	-16.98
	H	2442(Pk)	94.47	-	*
		2442(Av)	84.87	-	*
		4884 (Pk)	51.18	74.00	-22.82
		4884 (Av)	37.42	54.00	-16.58
High	V	2472 (Pk)	94.09	-	*
		2472 (Av)	84.15	-	*
		2483.5 (Pk)	59.13	74.00	-14.87
		2483.5 (Av)	42.41	54.00	-11.59
		4924 (Pk)	50.49	74.00	-23.51
		4924 (Av)	37.17	54.00	-16.83
	H	2472 (Pk)	96.23	-	*
		2472 (Av)	86.28	-	*
		2483.5 (Pk)	60.74	74.00	-13.26
		2483.5 (Av)	43.95	54.00	-10.05
		4924 (Pk)	51.04	74.00	-22.96
		4924 (Av)	37.20	54.00	-16.80

G Mode: 54Mbps					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	41.46	74.00	-32.54
		2390 (Av)	29.36	54.00	-24.64
		2412 (Pk)	90.43	-	*
		2412 (Av)	80.74	-	*
		4824 (Pv)	50.15	74.00	-23.85
		4824 (Av)	36.57	54.00	-17.43
	H	2390 (Pk)	44.44	74.00	-29.56
		2390 (Av)	31.82	54.00	-22.18
		2412 (Pk)	93.59	-	*
		2412 (Av)	84.19	-	*
		4824 (Pk)	50.02	74.00	-23.98
		4824 (Av)	36.80	54.00	-17.20
Mid	V	2442(Pk)	92.76	-	*
		2442(Av)	83.00	-	*
		4884 (Pk)	50.55	74.00	-23.45
		4884 (Av)	37.05	54.00	-16.95
	H	2442(Pk)	95.27	-	*
		2442(Av)	85.54	-	*
		4884 (Pk)	51.08	74.00	-22.92
		4884 (Av)	37.47	54.00	-16.53
High	V	2472 (Pk)	97.35	-	*
		2472 (Av)	88.24	-	*
		2483.5 (Pk)	65.80	74.00	-8.20
		2483.5 (Av)	45.77	54.00	-8.23
		4924 (Pk)	50.84	74.00	-23.16
		4924 (Av)	37.16	54.00	-16.84
	H	2472 (Pk)	95.95	-	*
		2472 (Av)	86.90	-	*
		2483.5 (Pk)	64.25	74.00	-9.75
		2483.5 (Av)	44.93	54.00	-9.07
		4924 (Pk)	51.05	74.00	-22.95
		4924 (Av)	37.47	54.00	-16.53

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N Mode: MCS0					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	47.45	74.00	-26.55
		2390 (Av)	30.28	54.00	-23.72
		2412 (Pk)	88.78	-	*
		2412 (Av)	81.03	-	*
		4824 (Pk)	49.99	74.00	-24.01
		4824 (Av)	36.74	54.00	-17.26
	H	2390 (Pk)	50.82	74.00	-23.18
		2390 (Av)	33.91	54.00	-20.09
		2412 (Pk)	92.05	-	*
		2412 (Av)	84.07	-	*
		4824 (Pk)	51.06	74.00	-22.94
		4824 (Av)	36.77	54.00	-17.23
Mid	V	2442(Pk)	90.91	-	*
		2442(Av)	82.79	-	*
		4884 (Pk)	50.42	74.00	-23.58
		4884 (Av)	37.09	54.00	-16.91
	H	2442(Pk)	92.39	-	*
		2442(Av)	84.31	-	*
		4884 (Pk)	50.91	74.00	-23.09
		4884 (Av)	37.27	54.00	-16.73
High	V	2472 (Pk)	93.73	-	*
		2472 (Av)	85.89	-	*
		2483.5 (Pk)	58.70	74.00	-15.30
		2483.5 (Av)	44.81	54.00	-9.19
		4924 (Pk)	51.25	74.00	-22.75
		4924 (Av)	37.15	54.00	-16.85
	H	2472 (Pk)	93.96	-	*
		2472 (Av)	85.75	-	*
		2483.5 (Pk)	58.85	74.00	-15.15
		2483.5 (Av)	45.04	54.00	-8.96
		4924 (Pk)	50.43	74.00	-23.57
		4924 (Av)	37.11	54.00	-16.89

N Mode: MCS4					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	41.76	74.00	-32.24
		2390 (Av)	29.51	54.00	-24.49
		2412 (Pk)	89.73	-	*
		2412 (Av)	80.40	-	*
		4824 (Pv)	50.33	74.00	-23.67
		4824 (Av)	37.11	54.00	-16.89
	H	2390 (Pk)	45.53	74.00	-28.47
		2390 (Av)	32.48	54.00	-21.52
		2412 (Pk)	93.07	-	*
		2412 (Av)	83.90	-	*
		4824 (Pk)	50.47	74.00	-23.53
		4824 (Av)	37.13	54.00	-16.87
Mid	V	2442(Pk)	95.13	-	*
		2442(Av)	86.54	-	*
		4884 (Pk)	50.63	74.00	-23.37
		4884 (Av)	37.03	54.00	-16.97
	H	2442(Pk)	97.36	-	*
		2442(Av)	89.00	-	*
		4884 (Pk)	51.18	74.00	-22.82
		4884 (Av)	37.52	54.00	-16.48
High	V	2472 (Pk)	93.94	-	*
		2472 (Av)	85.04	-	*
		2483.5 (Pk)	55.79	74.00	-18.21
		2483.5 (Av)	41.98	54.00	-12.02
		4924 (Pk)	50.96	74.00	-23.04
		4924 (Av)	37.17	54.00	-16.83
	H	2472 (Pk)	94.15	-	*
		2472 (Av)	82.92	-	*
		2483.5 (Pk)	56.05	74.00	-17.95
		2483.5 (Av)	42.04	54.00	-11.96
		4924 (Pk)	51.04	74.00	-23.04
		4924 (Av)	37.38	54.00	-16.83

N Mode:MCS7					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	40.88	74.00	-33.12
		2390 (Av)	28.94	54.00	-25.06
		2412 (Pk)	90.48	-	*
		2412 (Av)	80.35	-	*
		4824 (Pv)	49.41	74.00	-24.59
		4824 (Av)	36.72	54.00	-17.28
	H	2390 (Pk)	43.63	74.00	19.79
		2390 (Av)	31.96	54.00	30.03
		2412 (Pk)	93.79	-	*
		2412 (Av)	84.03	-	*
		4824 (Pk)	49.75	74.00	-24.25
		4824 (Av)	36.82	54.00	-17.18
Mid	V	2442(Pk)	91.48	-	*
		2442(Av)	81.62	-	*
		4884 (Pk)	50.26	74.00	-23.74
		4884 (Av)	37.03	54.00	-16.97
	H	2442(Pk)	91.52	-	*
		2442(Av)	82.88	-	*
		4884 (Pk)	51.08	74.00	-22.92
		4884 (Av)	37.43	54.00	-16.57
High	V	2472 (Pk)	94.63	-	*
		2472 (Av)	85.71	-	*
		2483.5 (Pk)	60.38	74.00	-13.62
		2483.5 (Av)	43.18	54.00	-10.82
		4924 (Pk)	50.51	74.00	-23.49
		4924 (Av)	37.03	54.00	-16.97
	H	2472 (Pk)	94.91	-	*
		2472 (Av)	85.89	-	*
		2483.5 (Pk)	60.38	74.00	-13.62
		2483.5 (Av)	43.01	54.00	-10.99
		4924 (Pk)	50.83	74.00	-23.17
		4924 (Av)	37.47	54.00	-16.53

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N Mode: MCS0					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	35.32	74.00	-38.68
		2390 (Av)	23.73	54.00	-30.27
		2422 (Pk)	78.30	-	*
		2422 (Av)	69.59	-	*
	H	2390 (Pk)	35.52	74.00	-38.48
		2390 (Av)	24.28	54.00	-29.72
		2412 (Pk)	83.87	-	*
		2412 (Av)	75.09	-	*
High	V	2462 (Pk)	80.10	-	*
		2462 (Av)	71.65	-	*
		2483.5 (Pk)	48.21	74.00	-25.79
		2483.5 (Av)	36.75	54.00	-17.25
	H	2462 (Pk)	87.06	-	*
		2462 (Av)	78.76	-	*
		2483.5 (Pk)	53.65	74.00	-20.35
		2483.5 (Av)	42.92	54.00	-11.08

N Mode: MCS4					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	35.14	74.00	-38.86
		2390 (Av)	23.92	54.00	-30.08
		2422 (Pk)	81.05	-	*
		2422 (Av)	70.62	-	*
	H	2390 (Pk)	39.55	74.00	-34.45
		2390 (Av)	25.47	54.00	-28.53
		2412 (Pk)	85.98	-	*
		2412 (Av)	75.59	-	*
High	V	2472 (Pk)	79.00	-	*
		2472 (Av)	70.00	-	*
		2483.5 (Pk)	46.75	74.00	-27.25
		2483.5 (Av)	31.83	54.00	-22.17
	H	2472 (Pk)	85.71	-	*
		2472 (Av)	76.81	-	*
		2483.5 (Pk)	52.26	74.00	-21.74
		2483.5 (Av)	36.48	54.00	-17.52

N Mode:MCS7					
Channel	Polarization	Frequency (MHz)	Emission level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
Low	V	2390 (Pk)	36.24	74.00	-37.76
		2390 (Av)	24.00	54.00	-30.00
		2422 (Pk)	80.31	-	*
		2422 (Av)	69.43	-	*
	H	2390 (Pk)	36.48	74.00	-37.52
		2390 (Av)	25.19	54.00	-28.81
		2422 (Pk)	84.27	-	*
		2422 (Av)	74.52	-	*
High	V	2472 (Pk)	78.86	-	*
		2472 (Av)	69.26	-	*
		2483.5 (Pk)	50.51	74.00	-23.49
		2483.5 (Av)	37.78	54.00	-16.22
	H	2472 (Pk)	85.79	-	*
		2472 (Av)	76.20	-	*
		2483.5 (Pk)	56.40	74.00	-17.60
		2483.5 (Av)	44.41	54.00	-9.59

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Conducted Emission Test on a.c. Power Line

Section 15.207

Result

Pass

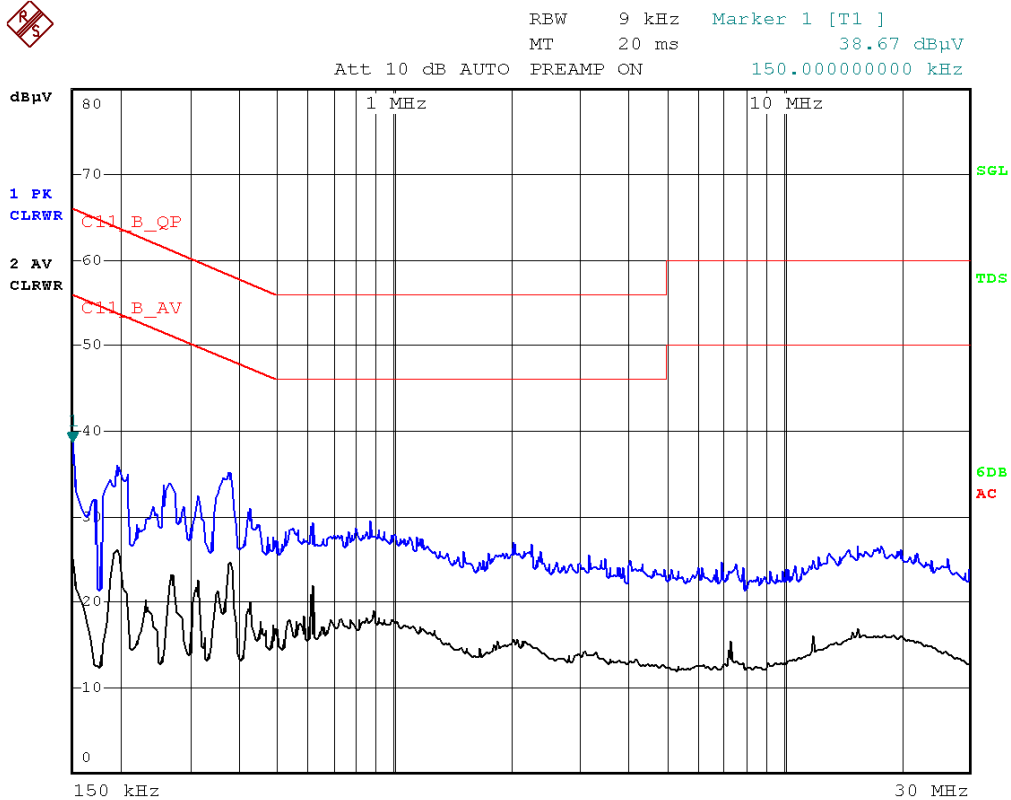
Test Specification : FCC Part 15 Section 15.207
Test Method : ANSI C63.4-2003
Testing Location : Screened room
Measurement Bandwidth : 9kHz
Frequency Range : 150kHz – 30MHz
Supply Voltage : 110V AC

Limit of section 15.207

Frequency of emission (MHz)	QP Limit (dB μ V)	AV Limit (dB μ V/m)
0.15 – 0.5	66 – 56*	56 – 46*
0.5 – 5	56	46
5 – 30	60	50

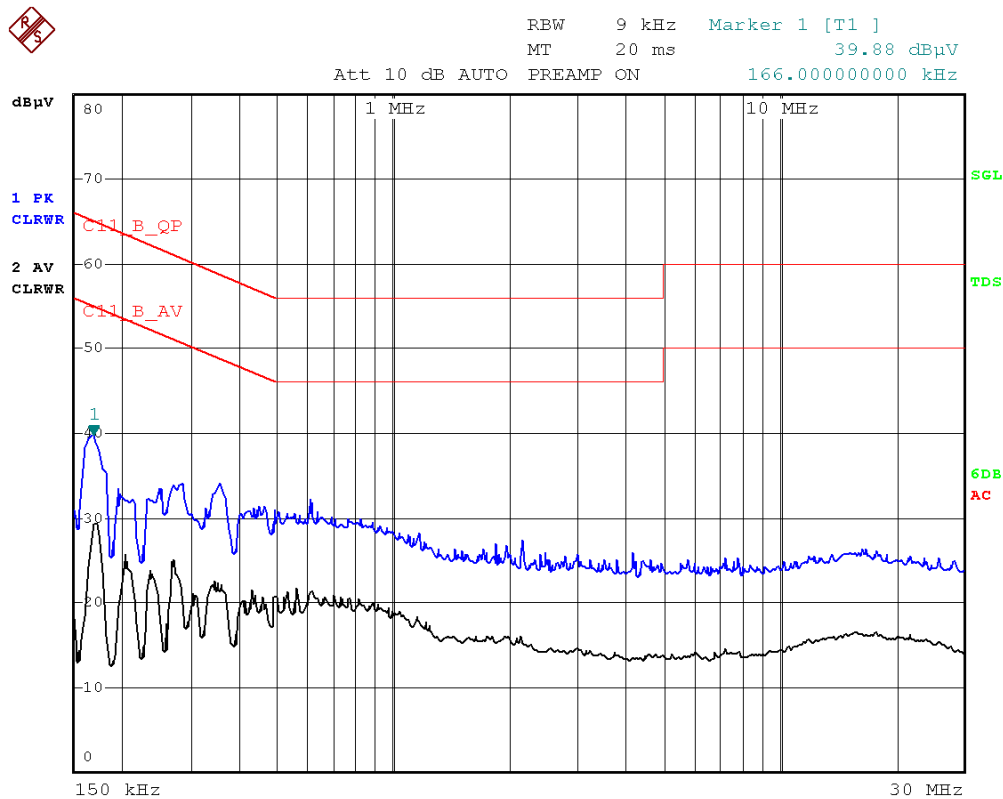
* Decreases with the logarithm of the frequency

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Test Results – Line



EDIT PEAK LIST (Final Measurement Results)				
Trace1:	C11_B_QP			
Trace2:	C11_B_AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV		DELTA LIMIT dB
2 Average	614 kHz	20.71	L1	-25.28
1 Quasi Peak	374 kHz	32.25	L1	-26.15
2 Average	374 kHz	21.43	L1	-26.98
1 Quasi Peak	614 kHz	25.68	L1	-30.31
2 Average	310 kHz	19.10	L1	-30.86
2 Average	426 kHz	16.21	L1	-31.11
1 Quasi Peak	266 kHz	29.90	L1	-31.33
2 Average	2.122 MHz	14.00	L1	-31.99
1 Quasi Peak	314 kHz	27.33	L1	-32.52
1 Quasi Peak	206 kHz	30.70	L1	-32.66
1 Quasi Peak	866 kHz	23.06	L1	-32.93
1 Quasi Peak	310 kHz	26.57	L1	-33.39
1 Quasi Peak	262 kHz	27.91	L1	-33.45
2 Average	266 kHz	17.22	L1	-34.01
1 Quasi Peak	426 kHz	23.26	L1	-34.06
1 Quasi Peak	150 kHz	31.86	L1	-34.14
2 Average	15.47 MHz	15.73	L1	-34.26
1 Quasi Peak	2.038 MHz	20.05	L1	-35.94
2 Average	7.31 MHz	11.85	L1	-38.14
2 Average	230 kHz	14.00	L1	-38.44

Test Results – Neutral



EDIT PEAK LIST (Final Measurement Results)				
Trace1:	C11_B_QP			
Trace2:	C11_B_AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBµV		DELTA LIMIT dB
2 Average	778 kHz	16.97	L1	-29.02
2 Average	558 kHz	16.73	L1	-29.26
1 Quasi Peak	610 kHz	26.51	L1	-29.48
2 Average	430 kHz	17.05	L1	-30.19
1 Quasi Peak	194 kHz	33.20	L1	-30.65
1 Quasi Peak	166 kHz	33.85	L1	-31.30
2 Average	1.218 MHz	14.47	L1	-31.52
1 Quasi Peak	462 kHz	24.42	L1	-32.23
2 Average	234 kHz	19.89	L1	-32.41
2 Average	2.11 MHz	13.49	L1	-32.50
2 Average	342 kHz	16.27	L1	-32.88
2 Average	202 kHz	20.43	L1	-33.09
1 Quasi Peak	282 kHz	27.29	L1	-33.46
2 Average	270 kHz	17.12	L1	-33.99
2 Average	18.27 MHz	15.05	L1	-34.94
1 Quasi Peak	2.162 MHz	19.22	L1	-36.77
1 Quasi Peak	270 kHz	23.95	L1	-37.16
1 Quasi Peak	1.846 MHz	18.67	L1	-37.32
1 Quasi Peak	354 kHz	20.99	L1	-37.87
1 Quasi Peak	4.186 MHz	17.74	L1	-38.25

END OF TEST REPORT