

Prüfbericht – Produkte
Test Report - Products

Prüfbericht-Nr.: <i>Test report no.:</i>	IN23LG3K 001	Auftrags-Nr.: <i>Order no.:</i>	146815199 0010	Seite 1 von 143 Page 1 of 143
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	2324191	Auftragsdatum: <i>Order date:</i>	2023-07-28	
Auftraggeber: <i>Client:</i>	elInfochips Inc 181 Metro Drive, Suite 170, San Jose, CA 95110			
Prüfgegenstand: <i>Test item:</i>	Aikri-82X-50AS-8	Product Type	Wi-Fi BT Module	
Bezeichnung: <i>Identification .:</i>	EIC-QCS8250-200-001			
Auftrags-Inhalt: <i>Order content:</i>	Testing and issue of Test Report and Grant Certificate			
Prüfgrundlage: <i>Test specification:</i>	FCC Part 15 Subpart C 15.247, 15.207, 15.205 & 15.209			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2023-08-18			
Prüfmuster-Nr & Serien-Nr.: <i>Test sample no & serial no.:</i>	A003542986-001 A003542986-002			
Prüfzeitraum: <i>Testing period:</i>	2023-08-18 - 2023-08-24			
Ort der Prüfung: <i>Place of testing:</i>	Wireless laboratory, Bangalore			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (India) Pvt.Ltd., 27/B, 2nd Cross, Electronic City Phase1 Bangalore -560 100, India FCC Test site registration number: 496599			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>		genehmigt von: <i>authorized by:</i>		
Datum: <i>Date:</i>	2024-05-30	Ausstellatum: <i>Issue date:</i>	2024-05-31	
Stellung / Position:	Likhithesh M D Senior Engineer	Stellung / Position:	Madhu K.N Assistant Manager	
Sonstiges / Other:	FCC ID: 2ATUP-AIKRI-82X-50S			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not
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 only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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TEST SUMMARY

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

Product Category: Electronics Testing

Test Discipline: EMC Test Facility

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REVISION HISTORY OF THIS REPORT

Report Number	Version	Description	Issue date
IN23LG3K 001	01	Initial Issue of Test Report	2024-05-31

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1 GENERAL REMARKS

1.1 Attachments

All attachments are part of this test report and are issued in separate document

- 1. TEST SETUP PHOTOS
- 2: EUT EXTERNAL PHOTOS
- 3: EUT INTERNAL PHOTOS
- 4: FCC LABEL AND LABEL LOCATION
- 5: BLOCK DIAGRAM
- 6: SPECIFICATION OF EUT
- 7: SCHEMATIC DIAGRAM
- 8: BILL OF MATERIAL
- 9: USER MANUAL
- 10: MAXIMUM PERMISSIBLE EXPOSURE INFORMATION

2 TEST SITES

2.1 Testing Facilities

1. TÜV Rheinland (India) Pvt.Ltd.,
27/B, 2nd Cross,
ElectronicCityPhase1
Bangalore – 560 100,
India

2. TUV Rheinland (India) Pvt.Ltd.,
108 , Beside ISBR Business School,
Electronic city Phase I
Bangalore - 560 100.
India

Radiated Measurement site type :
Fully anechoic chamber (used for above 1 GHz
measurements)

Radiated Measurement site type :
Semi anechoic chamber (used for below 1 GHz
measurements)

2.2 List of Test and Measurement Instruments

Table 1: List of test and measurement instruments

Equipment	Manufacturer	Model Name	Serial Number	Firmware Versions	Calibration Due Date	Periodicity	Test Facility
EMI Receiver	Rohde & Schwarz	ESW 44	101732	4.73 SP5	30.07.2024	Yearly	Radiated Spurious Emission
Active loop antenna	Frankonia	LAX-10	LAX-10-800	-	02.03.2024	Yearly	
Baloon and Biconical Antenna	Schwarzbeck mess-elektronik	VHBB-9124 / BBA-9106	01028	-	16.02.2024	Yearly	
Log-Periodic Antenna	Schwarzbeck mess-elektronik	VUSLP-9111B	9111B-111	-	17.02.2024	Yearly	
Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-01944	-	18.10.2023	Yearly	
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-0904	-	13.10.2023		
EMI Test Receiver	Rohde & Schwarz	ESW44	101773	1.72.SP1	15.02.2024	Yearly	
Semi Anechoic Chamber	Frankonia	-	-	-	-	-	
Fully Anechoic Chamber	Albatross	-	-	-	-	-	
Spectrum Analyzer	Agilent	E4407B	US411927 72	A.14.07	27-12-2023	Yearly	Conducted Test Parameters
Signal Analyser	Rohde & Schwarz	FSV7	101644	FW 3.40	03-02-2024	Yearly	
EMI Receiver	Rohde & Schwarz	ESR7	101133	3.48 SP3	29.07.2024	Yearly	Conducted AC Power line Test
Line Impedance Stabilization Network	Rohde & Schwarz	ENV 216	101434	-	10.10.2023	Yearly	
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100811	-	12.07.2024	Yearly	

Table 2: Instrument application Software versions

SL. No.	Test Type	Application software	Version
1	Radiated spurious emission measurement in 10mtr-SAC	BAT EMC	3.20.0.17
2	Radiated spurious emission measurement in FAC	EMC 32	10.60.20
3	Conducted measurement: TS8997 system	WMS 32	10.11.00

3 GENERAL PRODUCT INFORMATION

3.1 Product Function and Intended Use

This is a system on module (SoM) device based on QCS8250 processor. This SoM further can be used in any type of end product as a core of the system which can control the operations of the end product as well as can also provide interfaces like DSI, CSI, PCIe, I2S, I2C, GPIOs which can be accessible through its board to board connector on the host board.

The SoM is designed to be used in various product segments and the end usecase will be dependent on the end product.

3.2 Ratings and System Details of Equipment under Test

Table 3: Ratings and System Details as declared by Client*

Radio Protocol		Wi-Fi	BLE
Operating Frequency Range		2412MHz to 2462MHz	2402MHz to 2480MHz
No. of Channels		11 (Refer Table 5)	40 (Refer Table 6)
Channel Spacing		5MHz	2MHz
Transmitting Power Level		Refer clause 11	
Maximum Measured Power		23.10 dBm at 2437MHz 11Mbps	7.10dBm at 2440MHz
Modulation		20MHz: 802.11b: DSSS (1Mbps,11Mbps) 802.11g: OFDM (6Mbps, 54Mbps) 802.11n: OFDM (20MHz: MCS0, MCS7) 802.11ac:OFDM (20MHz: MCS0, MCS8) 802.11ax:OFDM (20MHz: MCS0, MCS11) 40MHz: 802.11n: OFDM (40MHz: MCS0, MCS7) 802.11ac:OFDM (40MHz: MCS0, MCS8) 802.11ax:OFDM (40MHz: MCS0, MCS11)	GFSK
Number of antennas		2 (2X2) MIMO	1
Antenna type & gain		Patch Antenna FXP840.07.0055B	3.60dBi
Supply Voltage to Product		3.8V DC through AC/DC Adapter , < 2.0A	
Environmental conditions	Storage	-20°C to +50 °C Relative Humidity <95%	
	Operating		
EUT Dimension (LXW)		59.7 mm x 32.2 mm	

***Disclaimer:** The information/data is supplied by the client and the same is considered to arrive at the final value. Any changes made apart from the specified specification, can directly impact on the tests results. Refer the products user manual for more details.

3.3 Measurement Uncertainty:

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$

Table 4: Measurement Uncertainty

Parameter	Uncertainty
Occupied Channel Bandwidth	$\pm 5 \%$
RF output power, conducted	$\pm 1.5 \text{ dB}$
Power Spectral Density, conducted	$\pm 3 \text{ dB}$
Unwanted Emissions, conducted	$\pm 3 \text{ dB}$
All emissions, radiated	$\pm 6 \text{ dB}$
Temperature	$\pm 3 \text{ }^{\circ}\text{C}$
Supply Voltages	$\pm 3 \%$
Time	$\pm 5 \%$

4 TEST SET-UP AND OPERATION MODE

4.1 Principle of Configuration Selection

Transmission was enabled with highest possible duty cycle on low, mid and high channels

4.2 UUT Operation and Software

Hardware Version Identification number (HVIN) : QCS8250 SOM REV 2.0
Software version : QCS8250_AND.10.0.0_EI.2.2.0

4.3 Special Accessories and Auxiliary Equipment

Test laptop (QRCT Radio control tool V4.0 Software Version : 4.0.00192.0),
USB cable

4.4 Simultaneous Transmission

This product supports Simultaneous transmission

4.5 Countermeasures to achieve EMC Compliance

- None

4.6 List of frequencies

Frequency Band (MHz)	Channel No.	Channel Frequency (MHz)
2412 – 2462	1	2412
	2	2417
	3	2422
	4	2427
	5	2432
	6	2437
	7	2442
	8	2447
	9	2452
	10	2457
	11	2462

Table 5: List of Wi-Fi center Frequencies

Channel used for Wi-Fi 2.4GHz testing

Protocol: WLAN 802.11b

Channel Low : 2412 MHz
Channel Mid : 2437 MHz
Channel High : 2462 MHz

Protocol: WLAN 802.11g

Channel Low : 2412 MHz
Channel Mid : 2437 MHz
Channel High : 2462 MHz

Protocol: WLAN 802.11n_20MHz

Channel Low : 2412 MHz
Channel Mid : 2437 MHz
Channel High : 2462 MHz

Protocol: WLAN 802.11n_40MHz

Channel Low : 2422 MHz
Channel Mid : 2437 MHz
Channel High : 2452 MHz

Protocol: WLAN 802.11ac_20MHz

Channel Low : 2412 MHz
Channel Mid : 2437 MHz
Channel High : 2462 MHz

Protocol: WLAN 802.11ac_40MHz

Channel Low : 2422 MHz
Channel Mid : 2437 MHz
Channel High : 2452 MHz

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Protocol: WLAN 802.11ax_20MHz

Channel Low : 2412 MHz
Channel Mid : 2437 MHz
Channel High : 2462 MHz

Protocol: WLAN 802.11ax_40MHz

Channel Low : 2422 MHz
Channel Mid : 2437 MHz
Channel High : 2452 MHz

Frequency Band (GHz)	Channel No.	Frequency (MHz)
BLE (2.4-2.4835)	0	2402
	1	2404
	2	2406
	3	2408
	:	:
	:	:
	18	2438
	19	2440
	20	2437
	:	:
	:	:
	36	2474
	37	2476
	38	2478
	39	2480

Table 6: List of BLE Center frequencies

Channel used for BLE testing

Channel low : 2402MHz
Channel mid : 2440MHz
Channel High : 2480MHz

Note:

TUV Sample Identification number A003542986-001 Radiated test Sample
A003542986-002 Conducted test Sample

4.7 Report references

Note: Product **Aikri-82X-50AS-8** has multiple protocols. All the supported wireless protocols and their respective test results are issued in separate test reports, following table lists the report numbers.

Radio Protocol	Report Number
RF test report for Wi-Fi (2.4GHz) & BLE (2.4GHz) – (This report)	IN23LG3K 001
RF test report for Bluetooth (2.4GHz)	IN23I1L3 001
RF test report for Wi-Fi (5GHz)	IN23ULAF 001

5 Operational Description

QCS8250 SOM can be used in different types of end product as an main processing unit. Application can be used with a custom designed carrier board. SOM will be connected to Carrier board using its 4 Board to Board connector.

- Video Streaming over ethernet/USB with Audio.
- Video Streaming over Display with Audio
- In robotics application with motion and camera recording.
- Video Conferencing Devices (Camera and Display both are required).
- Camera related application ex.: drone, in robotics.
- Medical Devices which requires camera and display interfaces like endoscopy device etc... any medical related certification needs to be considered at end product level

Main parts on SOM and respective top level features are as below:

1. Processor QCS8250 Features:

- QCS8250 SoM is based on QCS8250 Qualcomm® processor.
- QCS8250 is the new generation Qualcomm® Snapdragon™ premium-tier processor with robotic application. It is designed with the 7 nm process, for superior performance and power efficiency.

2. Memory:

LPDDR5:

- The QCS8250 device PoP supports 64-bit (4 × 16) 4-channel stacked memory LPDDR5, thereby increasing operational bandwidth and simplifying routing—no pre-stacking is needed.

UFS:

- The UFS host controller support UFS 3.1, QCS8250 kit memory configuration is UFS 2.1

3. Multimedia Features:

- Supports 6x 4-lane CSIs (D-PHY V1.2), supporting 2.5Gbps per lane. Dedicated camera I2C ports for the camera control interface
- Supports 2x 4-Lane MIPI DSI D-PHY 1.2 supporting resolutions up to 4K@60 (after combined 2 MIPI ports)
- Support USB Display port 1.4 over Type C, can support two 4K@60 streams using MST HUB or one 4K@60 stream using SST adapter.
- Supports 2x PCIe Gen3 2-lane.
- Supports 1x USB 3.1 Type-C connector.
- Supports 1x USB 3.1 Type-A connector.
- Supports 1x Micro-SD card V3.0 interface.

4. Audio Features:

- Six Native DMIC support on carrier board
- SLIMBUS – BT Audio (with Wi-Fi/BT chipset on SoM)

5. Wireless Connectivity:

- Wi-Fi and BT combo chipset QCA6391 of Qualcomm on SOM
- QCA6391 chipset supports Wi-Fi 6 (802.11 b/g/n/a/ac/ax) and Bluetooth 5.1 (with BLE) with external power amplifier for 2.4G, 5G frequencies.
- QCA6391 Chipset supports simultaneous 2.4GHZ and 5GHZ (MIMO).
- Supports 2 Channel MIMO (2 x 2)
- To connect external antenna on SoM board, U.FL connector is provided.
- Throughput and performance have been measured using external antenna: PN# FXP840.07.0055B by eInfochips.

6. Power Management:

Six PMICs:

- PM8150B
- PM8250
- PM8150L
- PM8002
- PM8009
- PM3003
- Different PMIC supply provisions are available at B2B connector, if required.

Above listed are the features of SOM Board, it can be used in below mentioned applications with a custom designed carrier board. SOM will be connected to Carrier board using its 4 Board to Board connector.

- Video Streaming over ethernet/USB with Audio.
- Video Streaming over Display with Audio
- In robotics application with motion and camera recording.
- Video Conferencing Devices (Camera and Display both are required).
- Camera related application ex.: drone, in robotics.
- Medical Devices

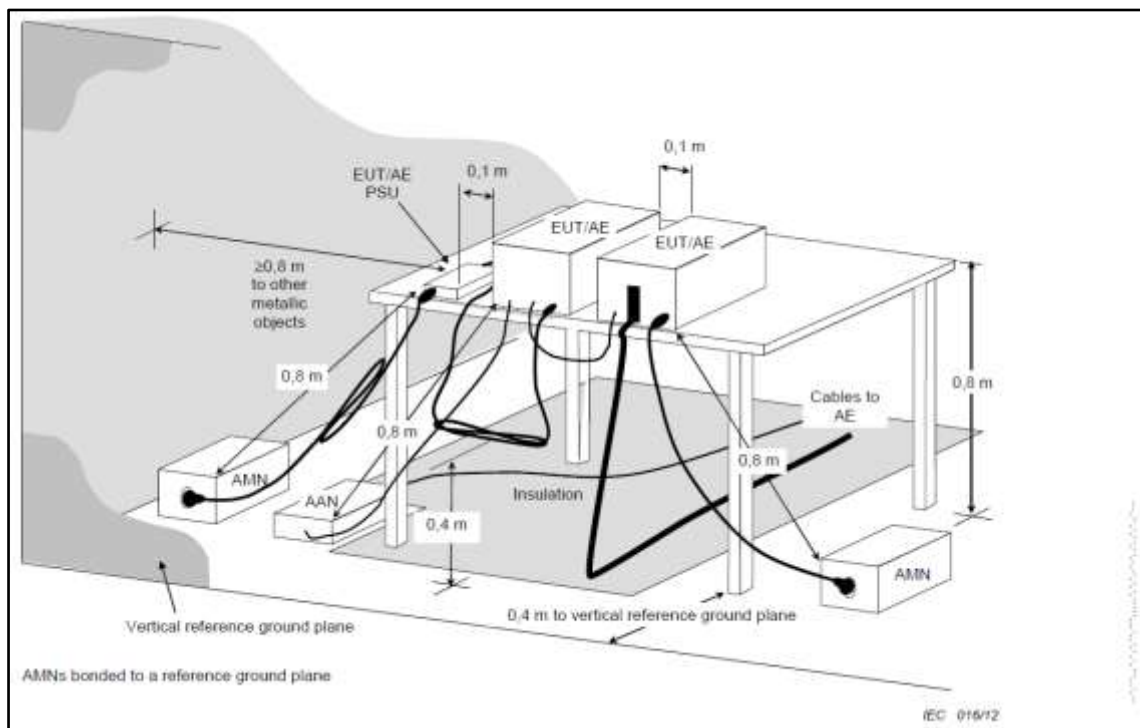
6 TEST METHODOLOGY

6.1 Conducted Spurious Emission Test on AC Power Line

Measured levels of ac power-line conducted emission across the 50Ω LISN port (to which the EUT is connected). All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer.

The device is placed on the test table, raised 80cm above the reference ground plane. The vertical conducting plane is located 40cm to the rear of the device. AC Conducted emission measurement is made over frequency range from 150kHz to 30MHz, this measurement was performed with EUT powered with an AC adaptor with 110V AC 60Hz supply.

6.1.1 Test Setup Configuration



6.2 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 1 GHz & 1.5 m height for above 1 GHz 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 1 m and 4 m, 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 1000 MHz was performed by horn antenna, The measurement below 30 MHz was performed by loop antenna, Measurement from 30 MHz to 200 MHz was performed by Baloon and Biconical Antenna, and measurement from 200 MHz to 1 GHz was performed by Log-Periodic Antenna.

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

6.2.1 Test Setup Configuration

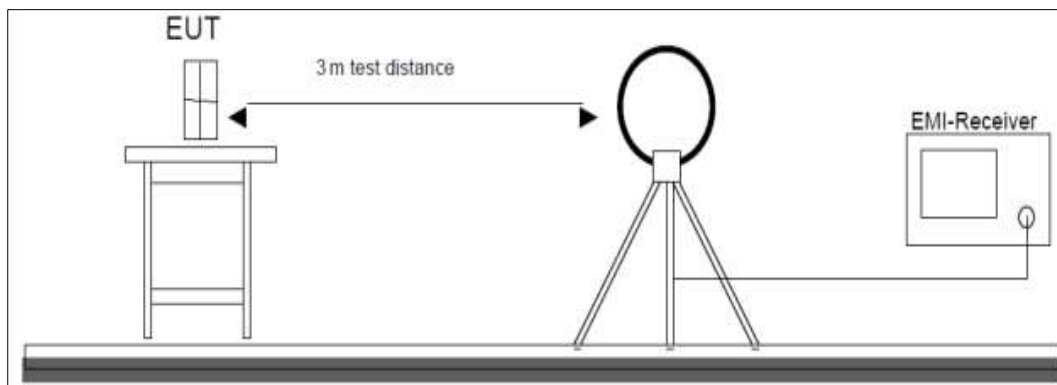


Figure 1: Frequency Range 9 kHz - 30 MHz

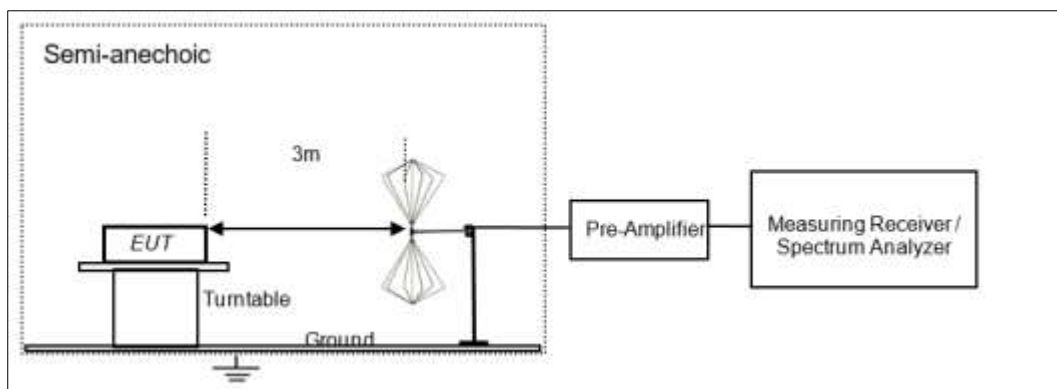


Figure 2: Frequency Range 30 MHz - 200 MHz

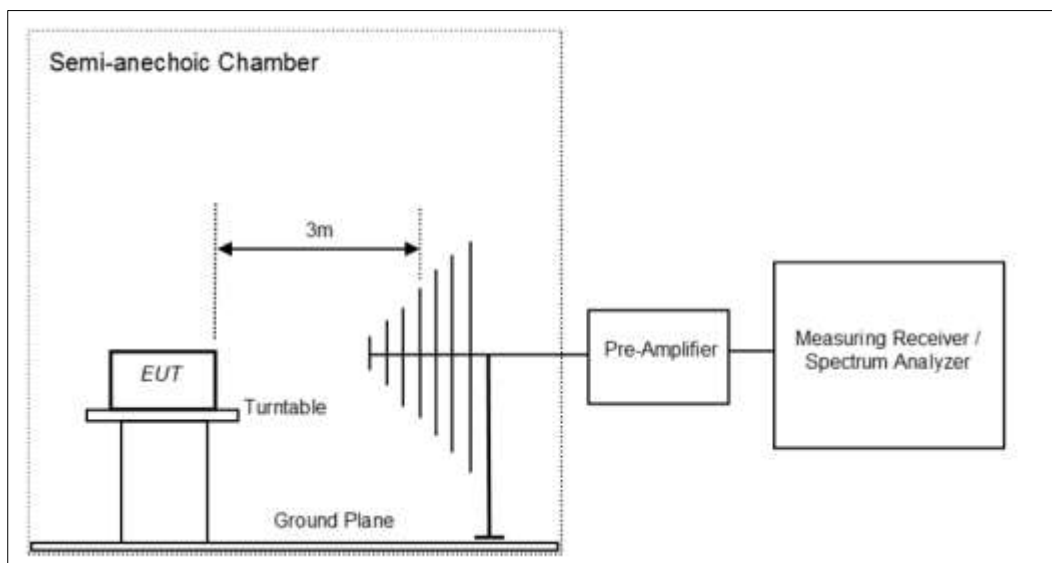


Figure 3: Frequency Range 200 MHz - 1GHz

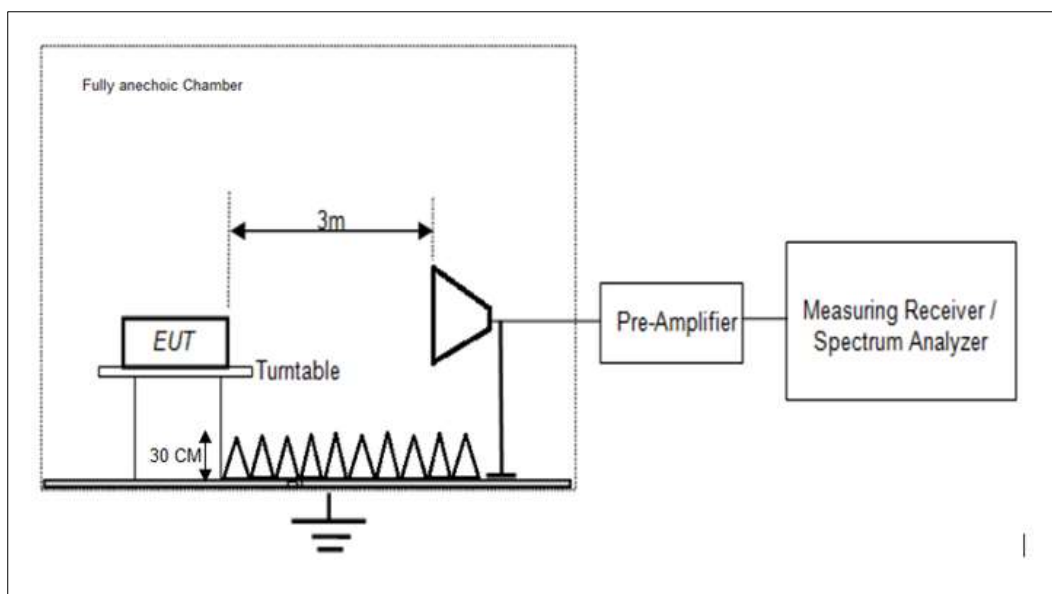


Figure 4: Frequency Range above 1 GHz

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7 TEST RESULTS FOR WI-FI 2.4GHz

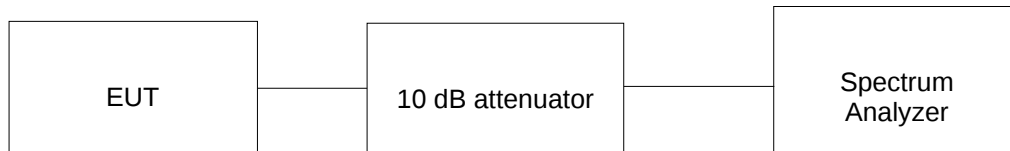
7.1 Maximum Average Conducted Output Power

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (b)(3)
Test Method	Subclause 11.9.2.3.2 of ANSI C63.10
Detector	Average (Gated RMS)
Port of testing	Antenna port
Requirement	Power $\leq$ 1 W (30 dBm)

Test Method



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.3.2.2 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

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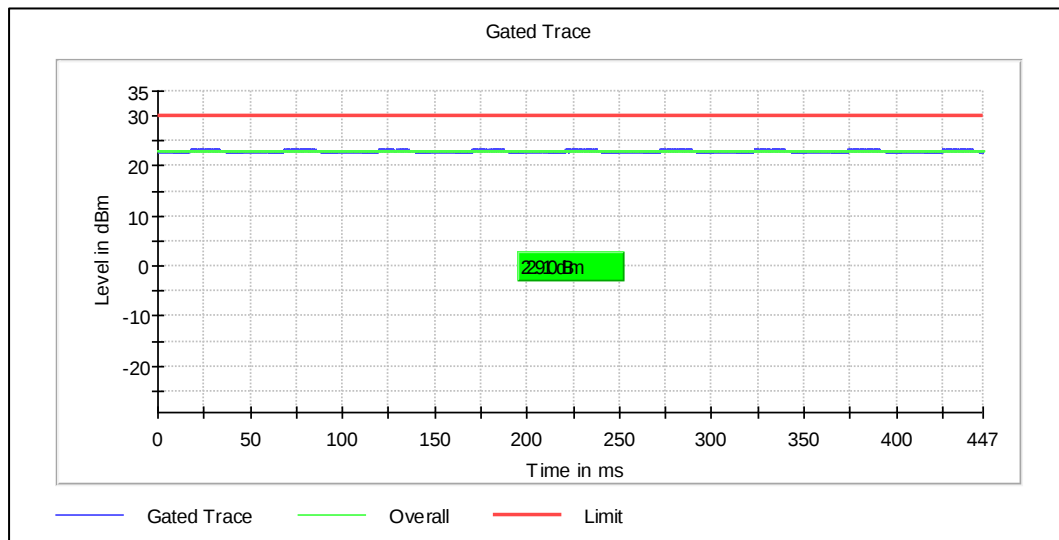
Test results:

Note:

1. All the losses are included during measurement and final values are mentioned in the test report.

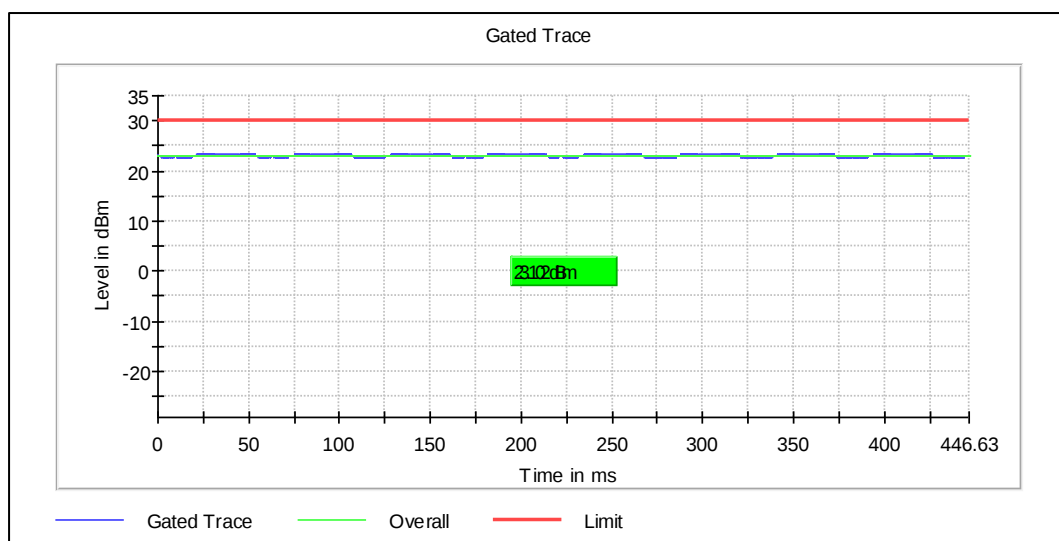
Modulation: 802.11b

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
1Mbps	2412	22.75	30
	2437	22.86	30
	2462	22.41	30
11Mbps	2412	22.91	30
	2437	23.10	30
	2462	22.58	30



Data Rate: 1 Mbps

Channel Frequency: 2412MHz



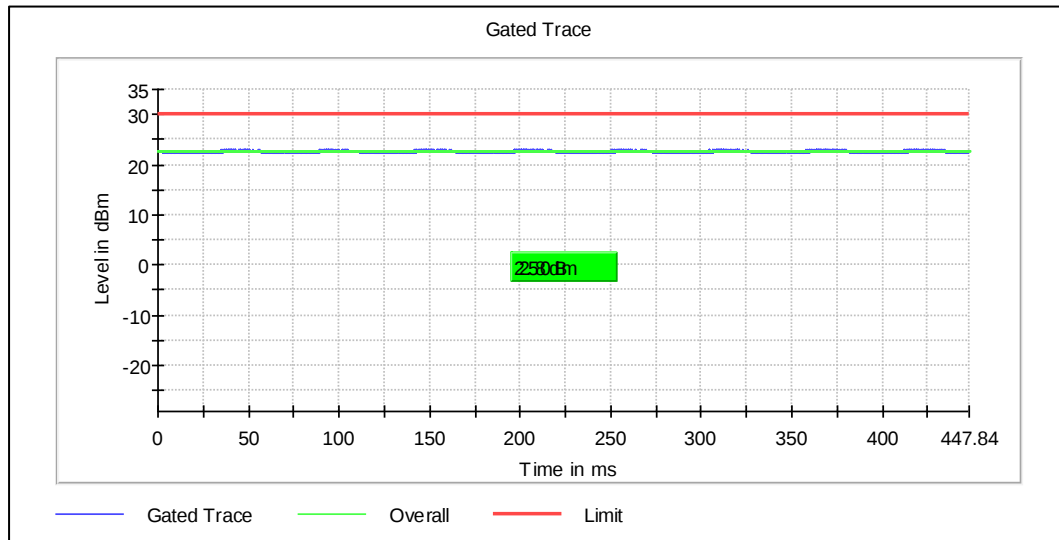
Data Rate: 1 Mbps

Channel Frequency: 2437MHz

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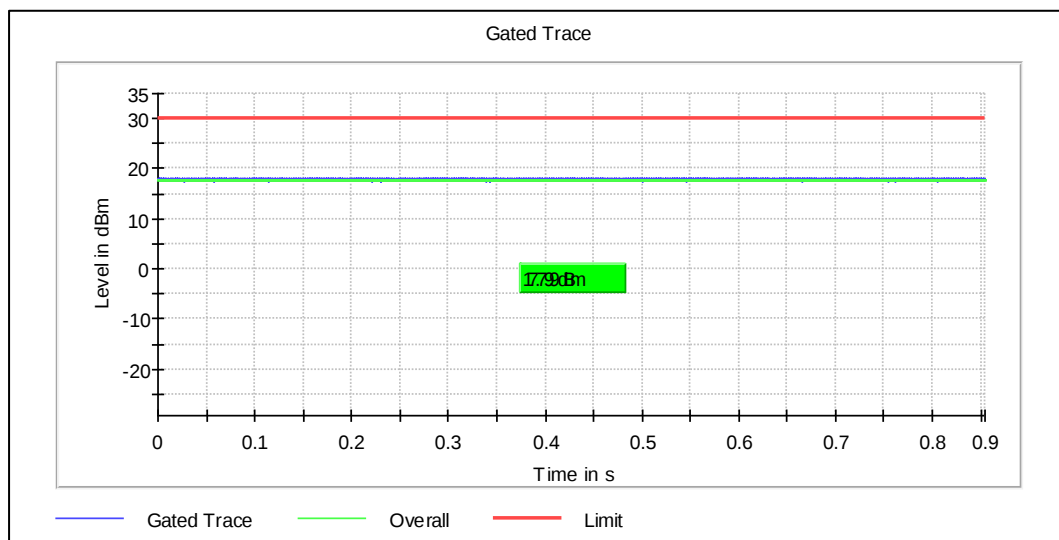


Data Rate: 1 Mbps

Channel Frequency: 2462MHz

Modulation: 802.11g

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
6Mbps	2412	17.59	30
	2437	17.83	30
	2462	17.32	30
54Mbps	2412	17.79	30
	2437	18.07	30
	2462	17.52	30



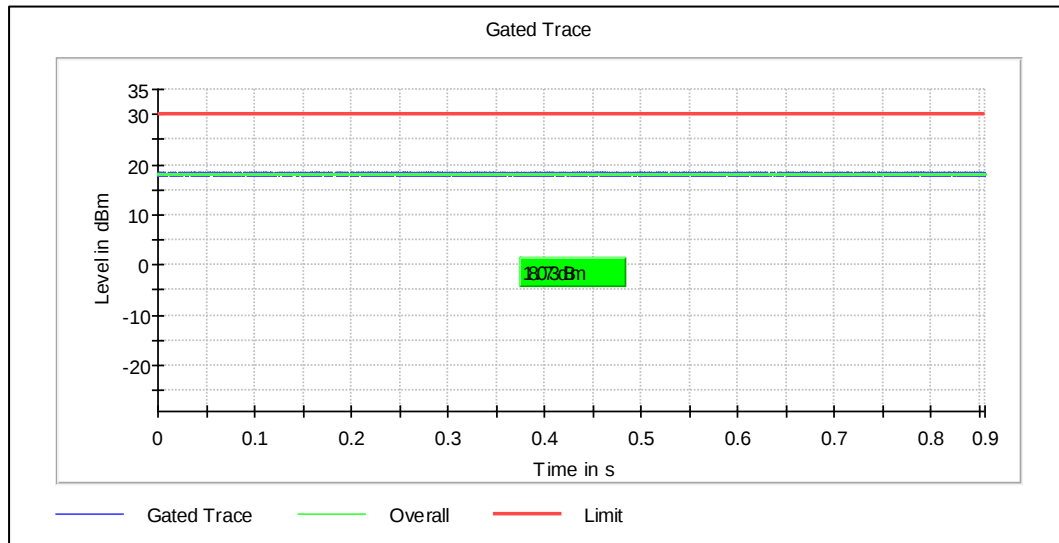
Data Rate: 54 Mbps

Channel Frequency: 2412MHz

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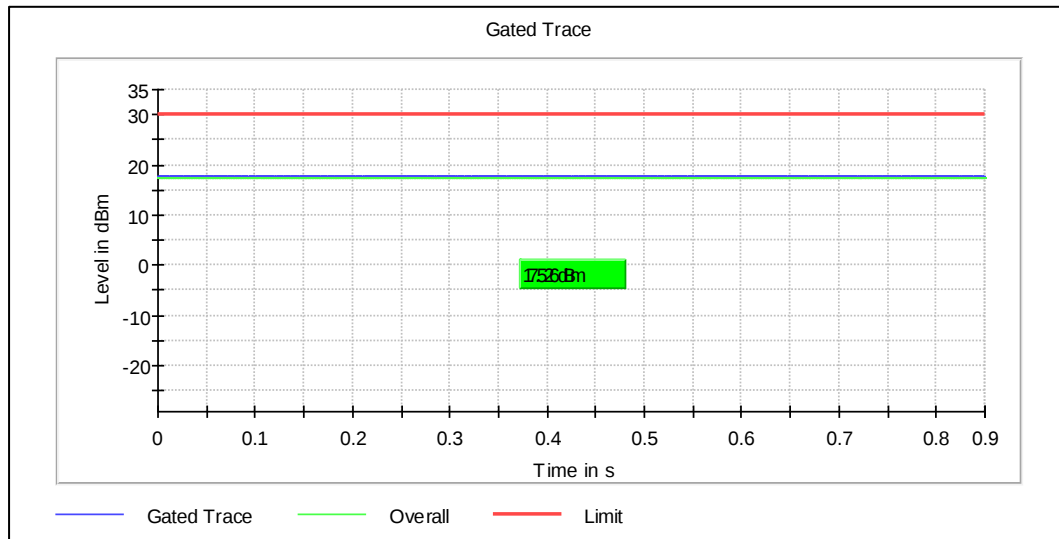
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Data Rate: 54 Mbps

Channel Frequency: 2437MHz



Data Rate: 54 Mbps

Channel Frequency: 2462MHz

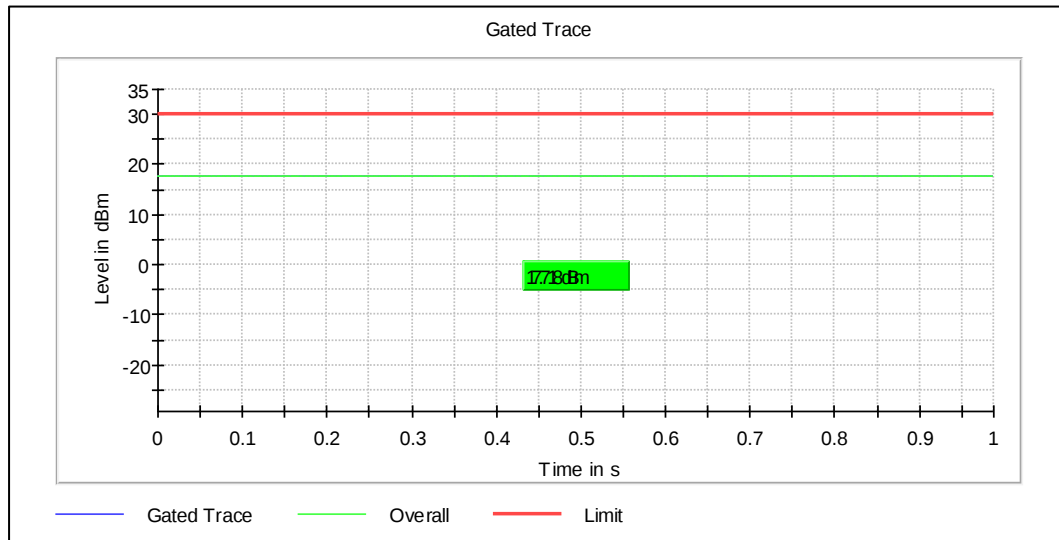
Modulation: 802.11n_HT20

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
MCS0	2412	17.37	30
	2437	17.55	30
	2462	17.08	30
MCS7	2412	17.71	30
	2437	17.98	30
	2462	17.46	30

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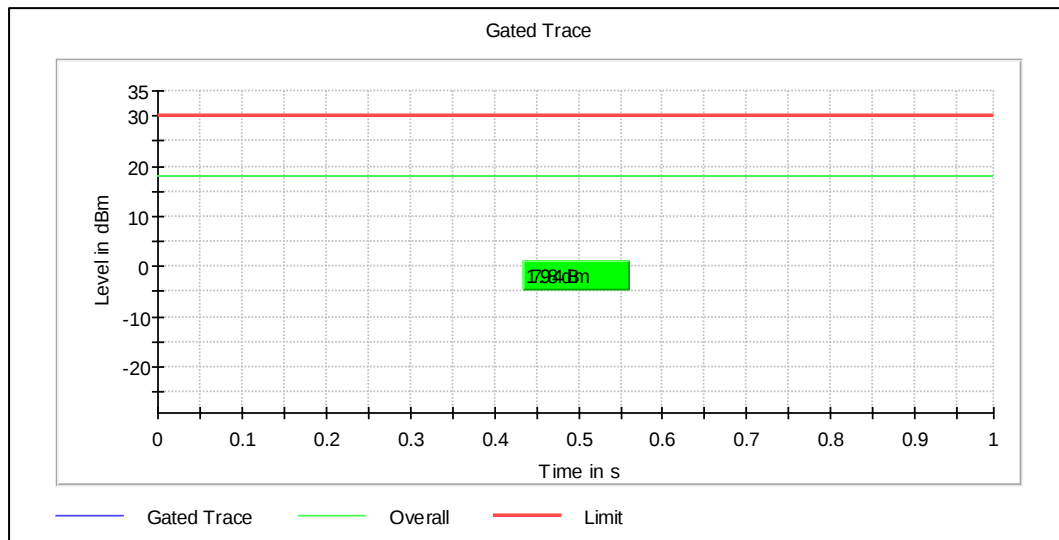
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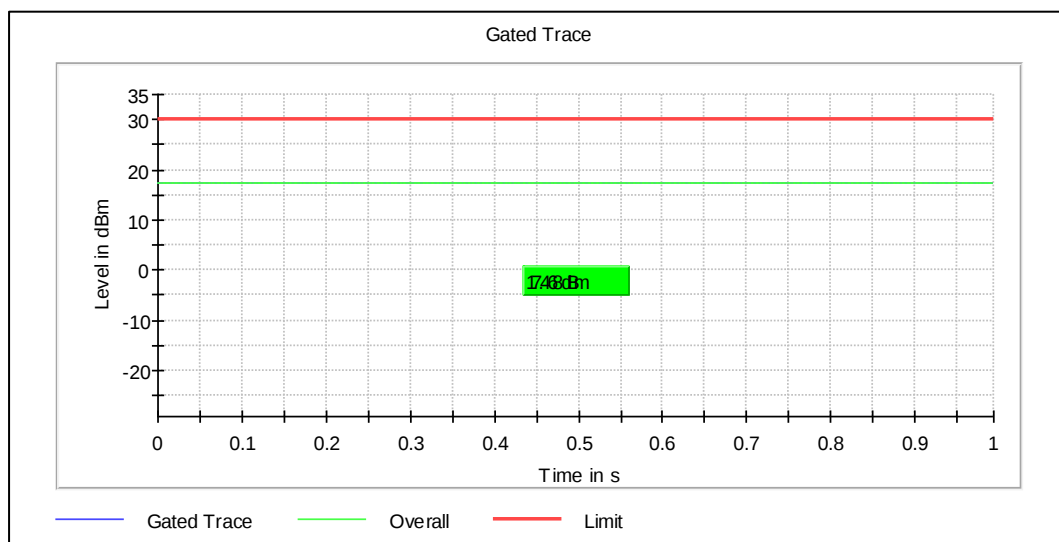
Data Rate: MCS7

Channel Frequency: 2412MHz



Data Rate: MCS7

Channel Frequency: 2437MHz



Data Rate: MCS7

Channel Frequency: 2462MHz

Prüfbericht - Nr.:

Test Report No.:

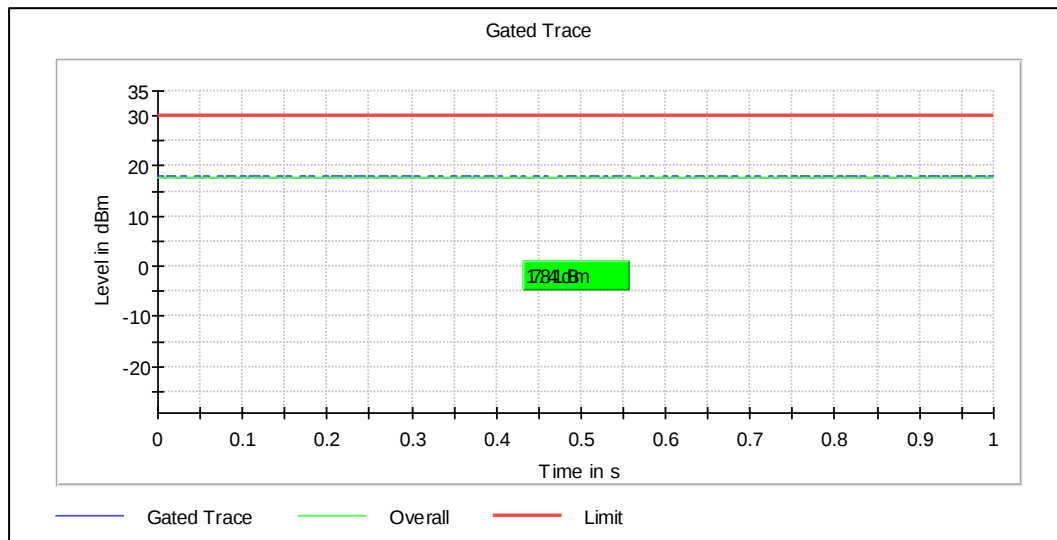
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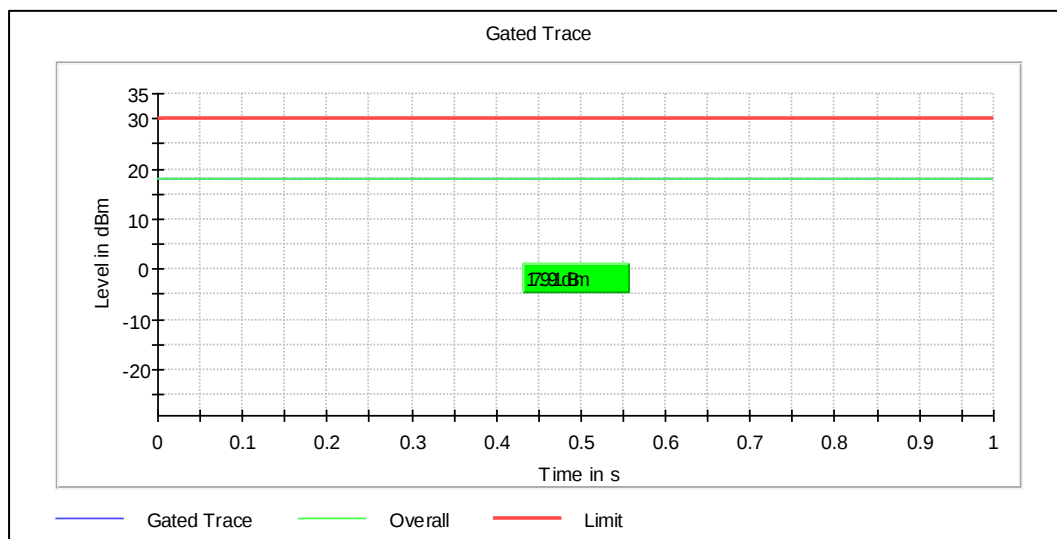
Modulation: 802.11ac_VHT20

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
MCS0	2412	17.35	30
	2437	17.51	30
	2462	17.05	30
MCS8	2412	17.84	30
	2437	17.99	30
	2462	17.47	30



Data Rate: MCS8

Channel Frequency: 2412MHz



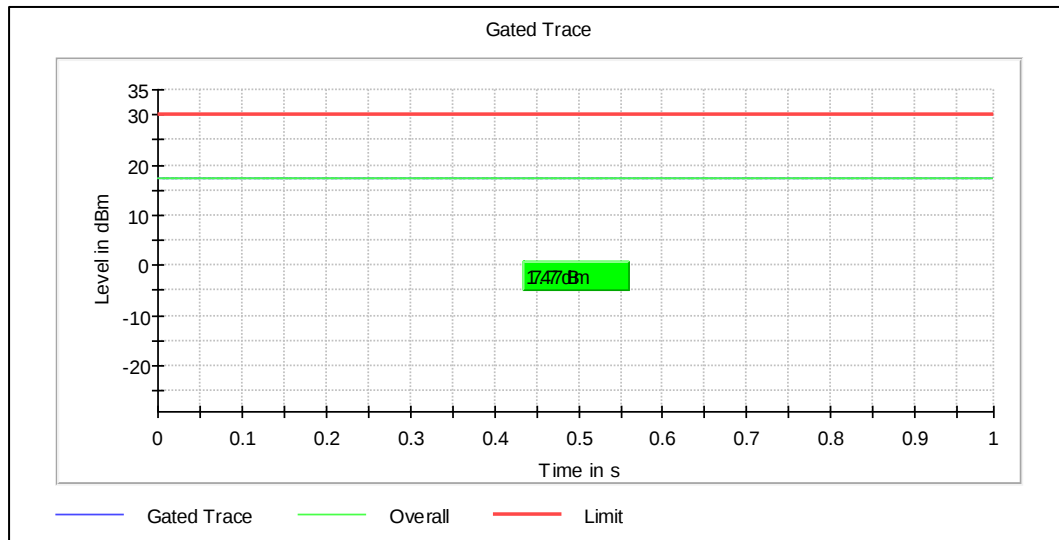
Data Rate: MCS8

Channel Frequency: 2437MHz

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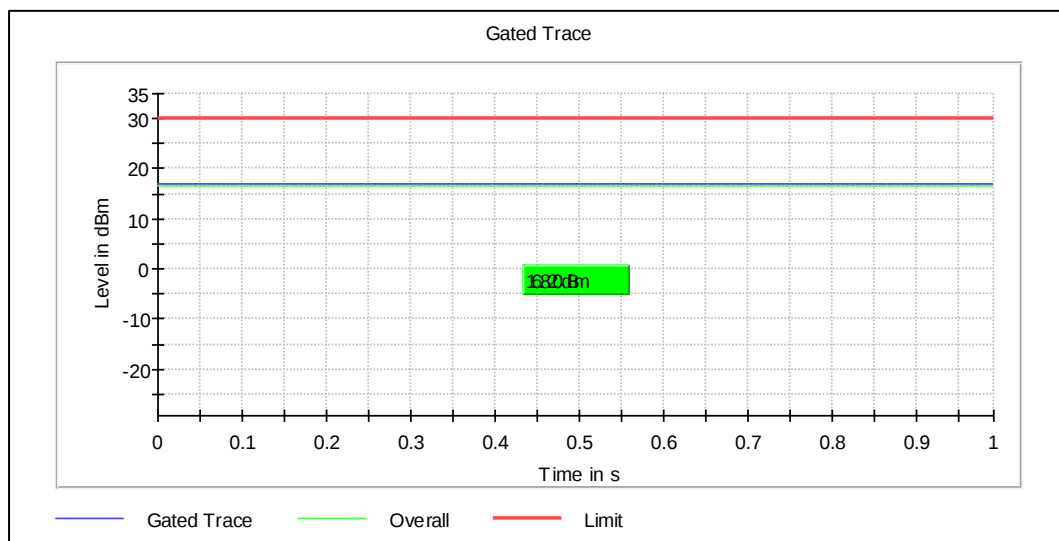


Data Rate: MCS8

Channel Frequency: 2462MHz

Modulation: 802.11ax_HE20

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
MCS0	2412	16.59	30
	2437	16.69	30
	2462	16.18	30
MCS11	2412	16.82	30
	2437	17.00	30
	2462	16.49	30



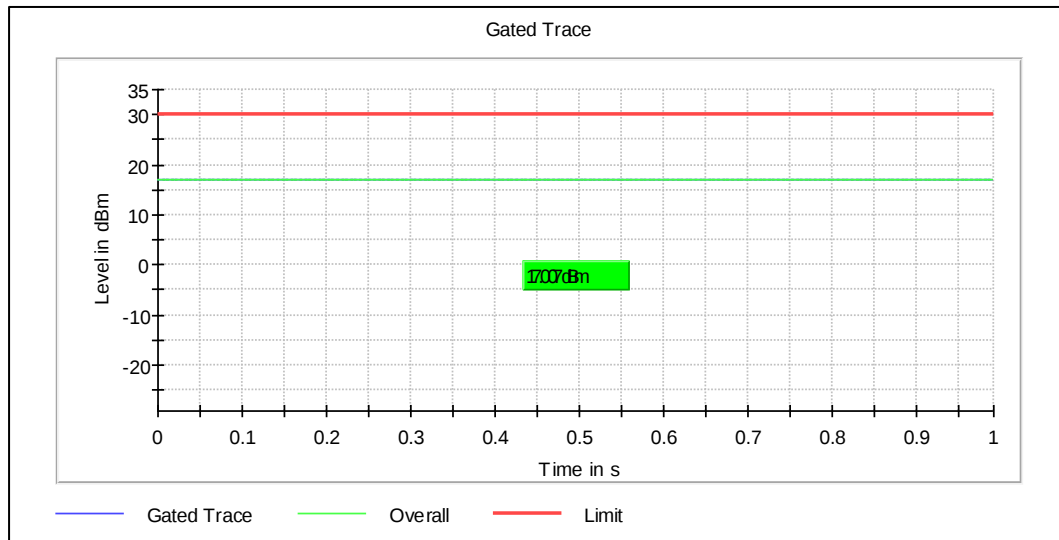
Data Rate: MCS11

Channel Frequency: 2412MHz

Prüfbericht - Nr.:
Test Report No.:

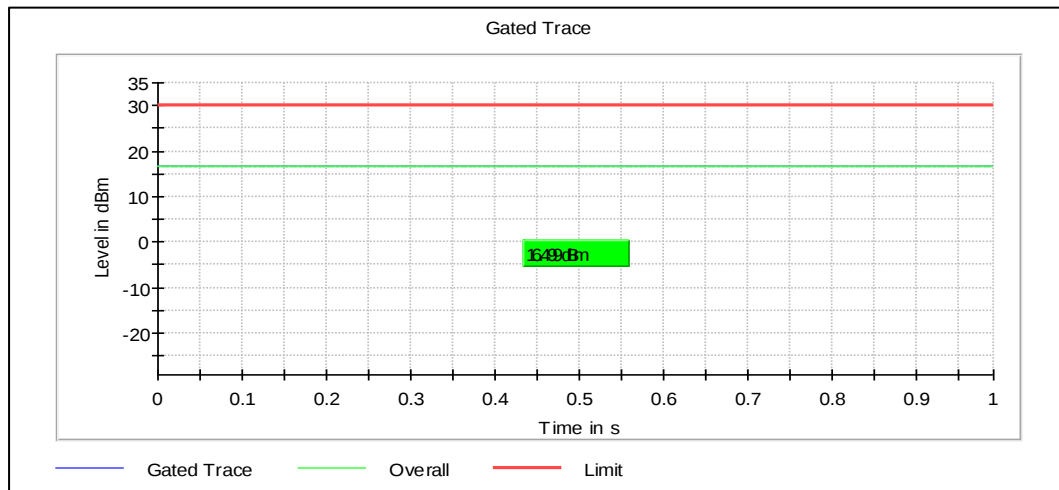
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Data Rate: MC11

Channel Frequency: 2437MHz



Data Rate: MCS11

Channel Frequency: 2462MHz

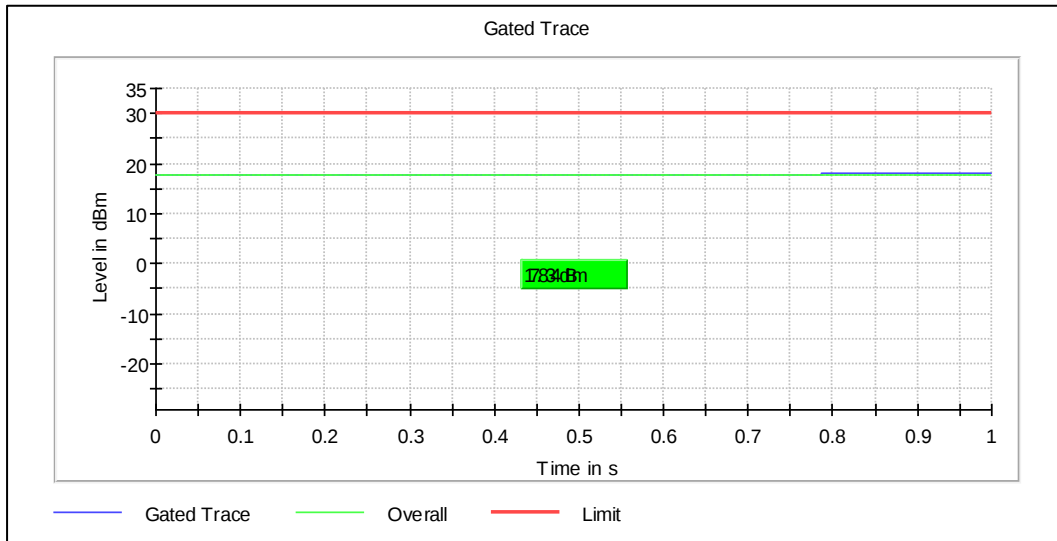
Modulation: 802.11n_HT40

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
MCS0	2422	17.83	30
	2437	18.10	30
	2452	17.90	30
MCS7	2422	17.83	30
	2437	18.16	30
	2452	17.95	30

Prüfbericht - Nr.:
Test Report No.:

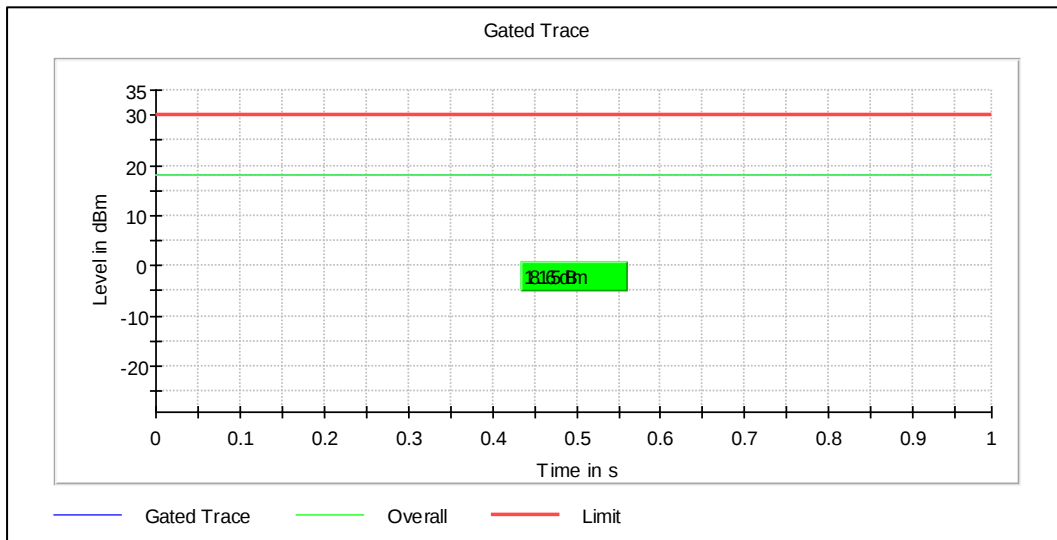
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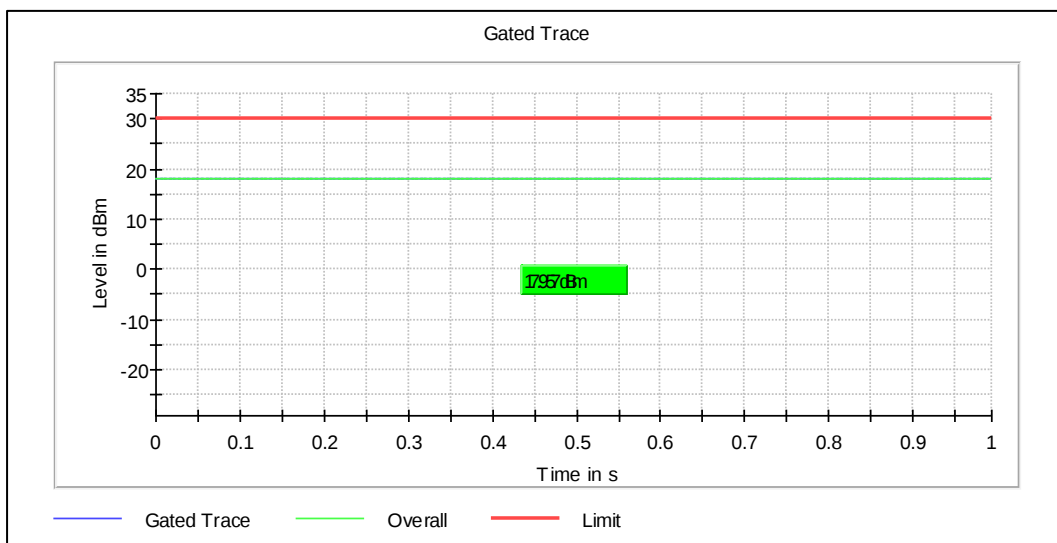
Data Rate: MCS7

Channel Frequency: 2422MHz



Data Rate: MCS7

Channel Frequency: 2437MHz



Data Rate: MCS7

Channel Frequency: 2452MHz

Prüfbericht - Nr.:

Test Report No.:

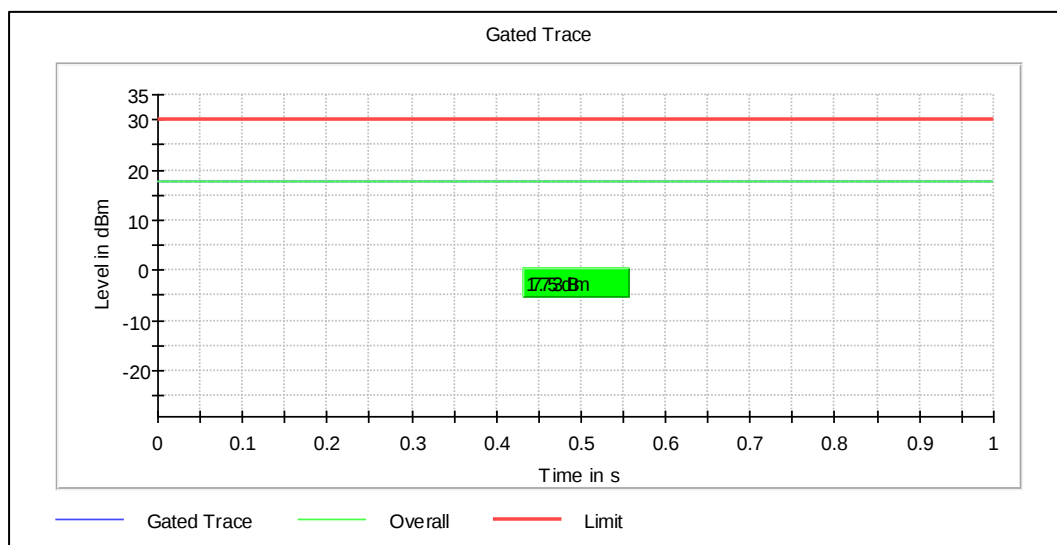
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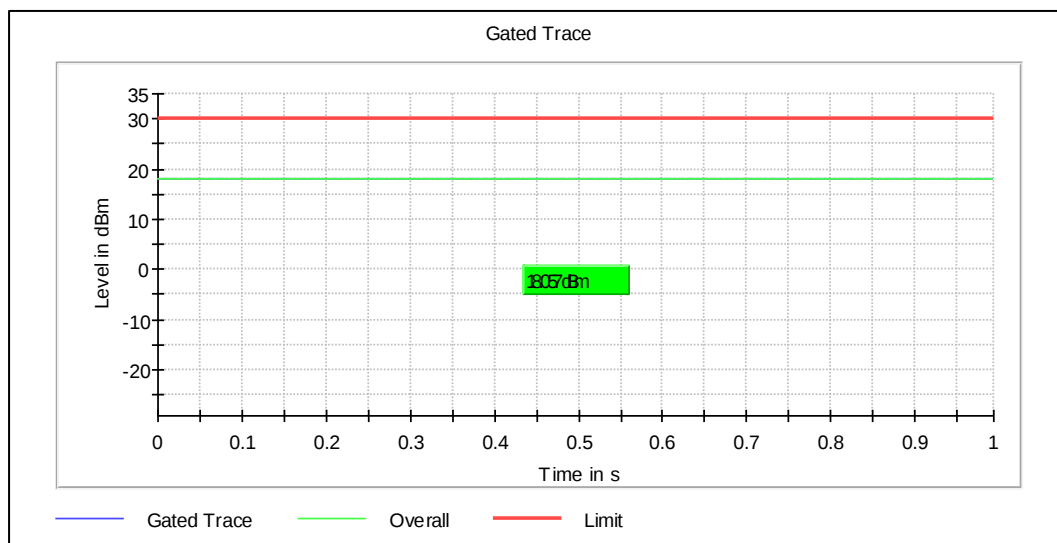
Modulation: 802.11ac_VHT40

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
MCS0	2422	17.75	30
	2437	18.05	30
	2452	17.84	30
MCS8	2422	17.73	30
	2437	18.04	30
	2452	17.89	30



Data Rate: MCS0

Channel Frequency: 2422MHz



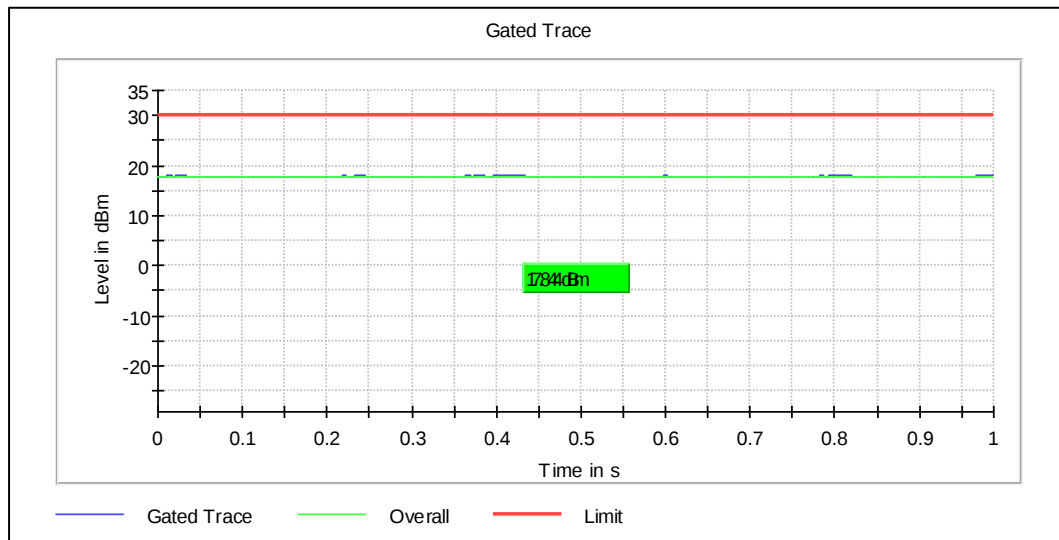
Data Rate: MCS0

Channel Frequency: 2437MHz

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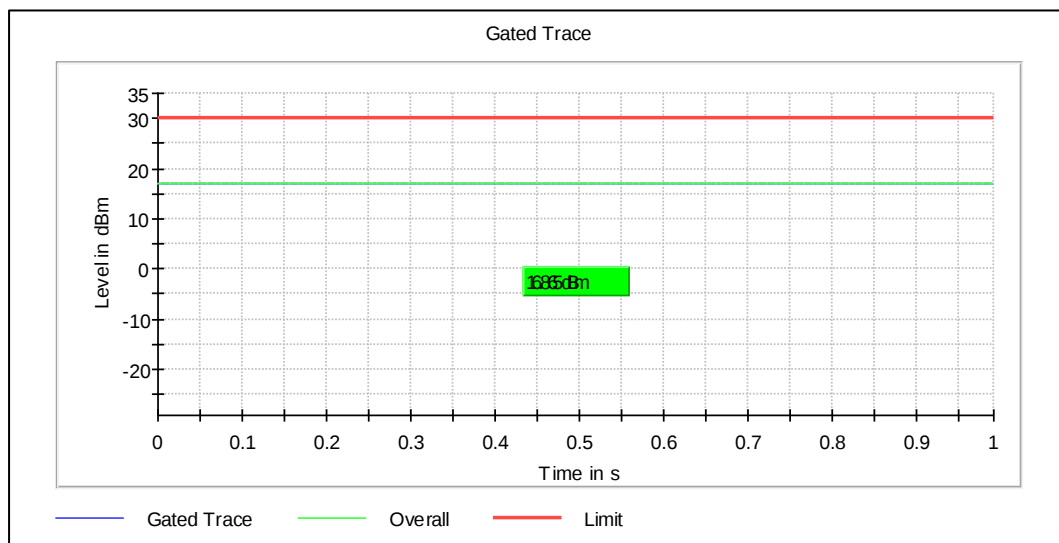


Data Rate: MCS0

Channel Frequency: 2452MHz

Modulation: 802.11ax_HE40

Data rate (Mbps)	Channel Frequency (MHz)	Maximum Average output power (dBm)	Power Limit (dBm)
MCS0	2422	16.78	30
	2437	17.01	30
	2452	16.86	30
MCS11	2422	16.86	30
	2437	17.15	30
	2452	17.00	30



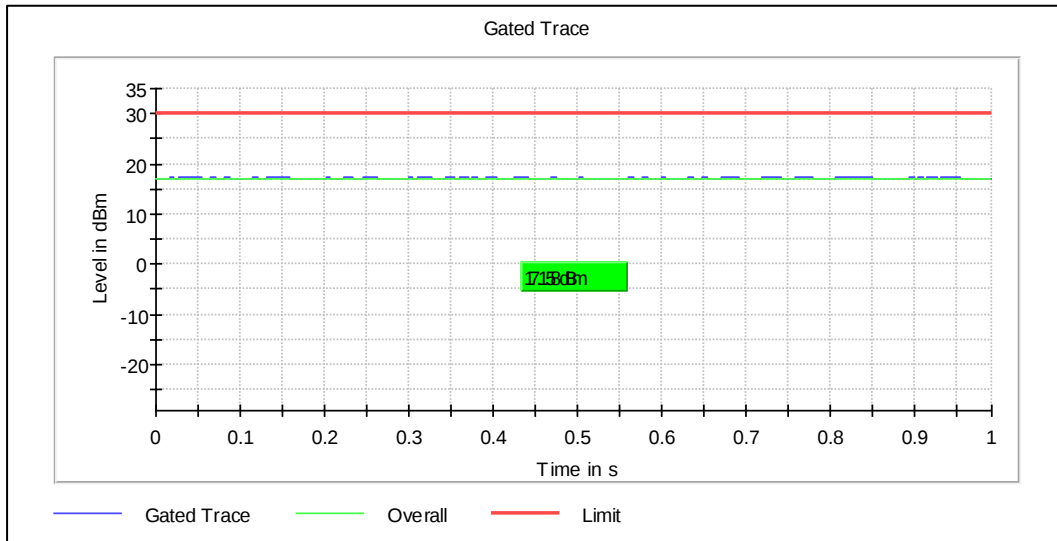
Data Rate: MCS11

Channel Frequency: 2422MHz

Prüfbericht - Nr.:
Test Report No.:

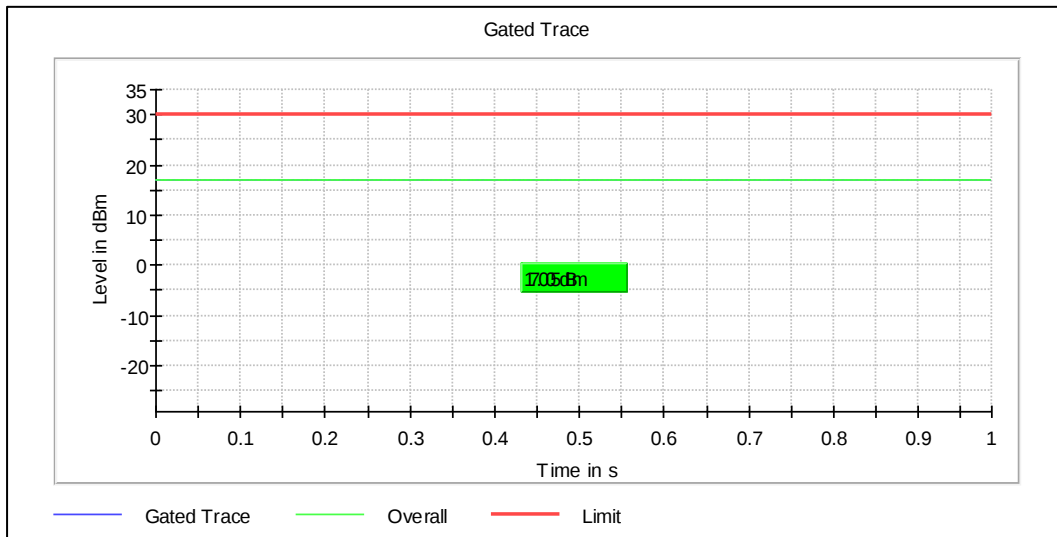
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Data Rate: MCS11

Channel Frequency: 2437MHz



Data Rate: MCS11

Channel Frequency: 2452MHz

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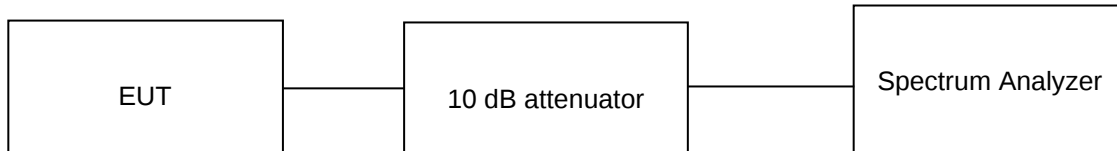
7.2 Maximum Power Spectral Density

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (e)
Test Method	Subclause 11.10.7 of ANSI C63.10
Measurement Bandwidth	100kHz
Detector	Average sample detector mode
Port of testing	Antenna port
Requirement	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm

Test Method:



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.4 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

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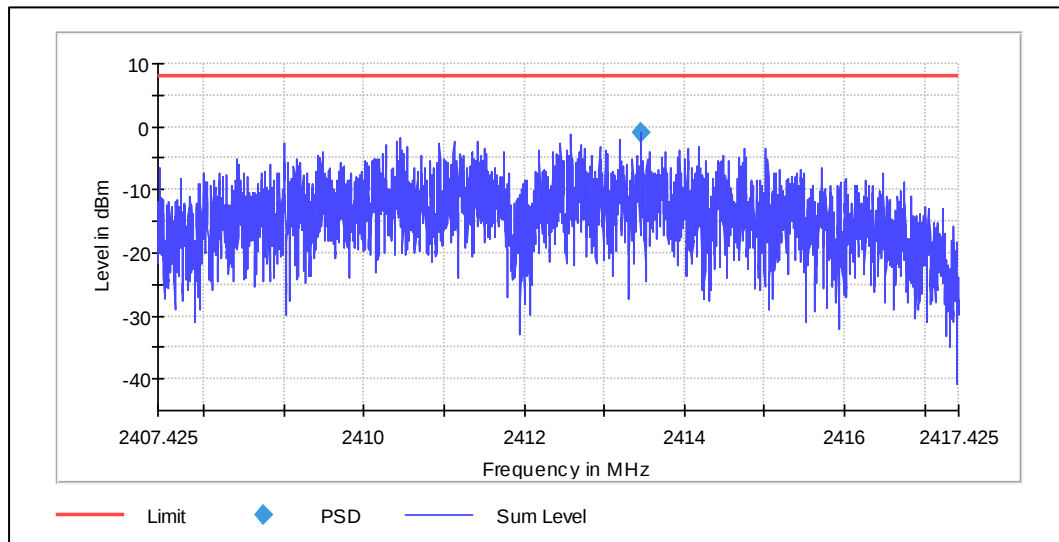
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Note:

1. All the losses are included during measurement and final values are mentioned in the test report.

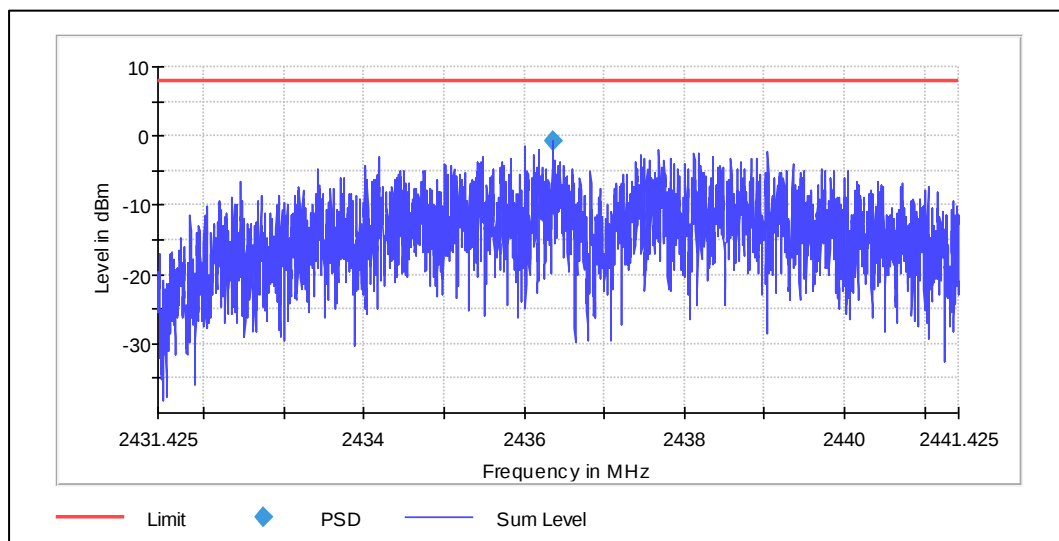
Modulation: 802.11b

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/kHz)	PSD Limit (dBm/kHz)
1Mbps	2412	-0.83	8.00
	2437	-2.09	8.00
	2462	-1.82	8.00
11Mbps	2412	-0.96	8.00
	2437	-0.73	8.00
	2462	-1.07	8.00



Data Rate: 11Mbps

Channel Frequency: 2412MHz



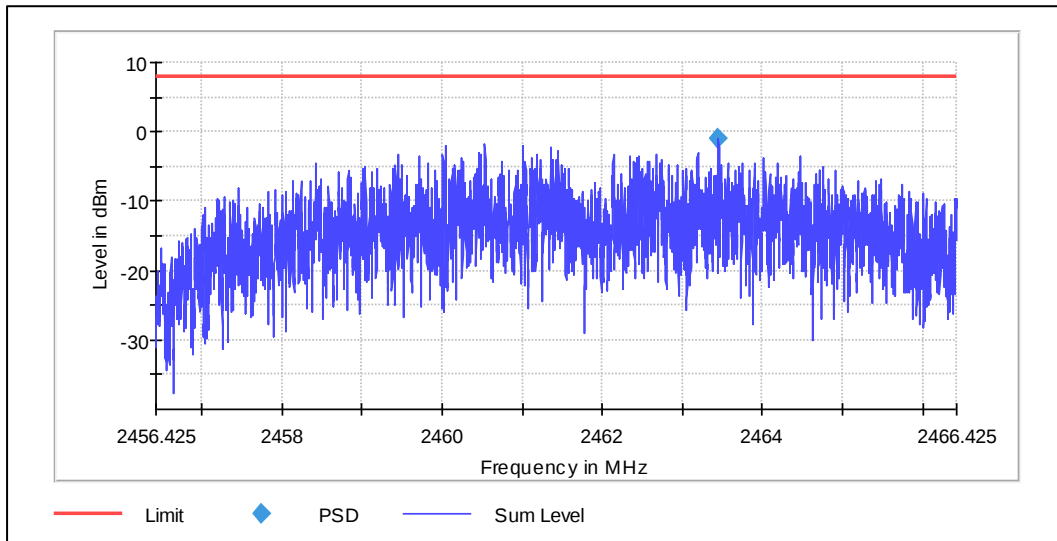
Data Rate: 11Mbps

Channel Frequency: 2437MHz

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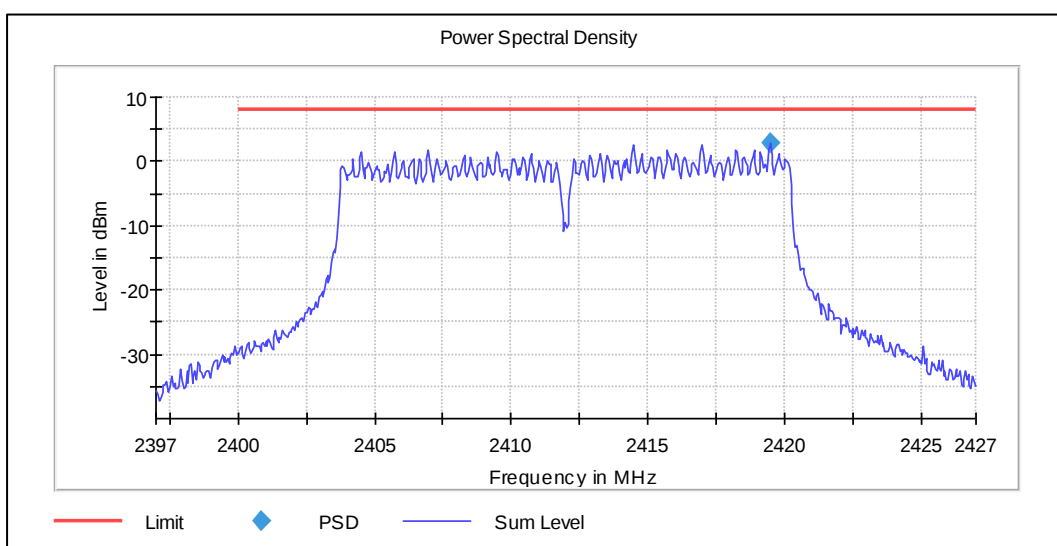


Data Rate: 11Mbps

Channel Frequency: 2462MHz

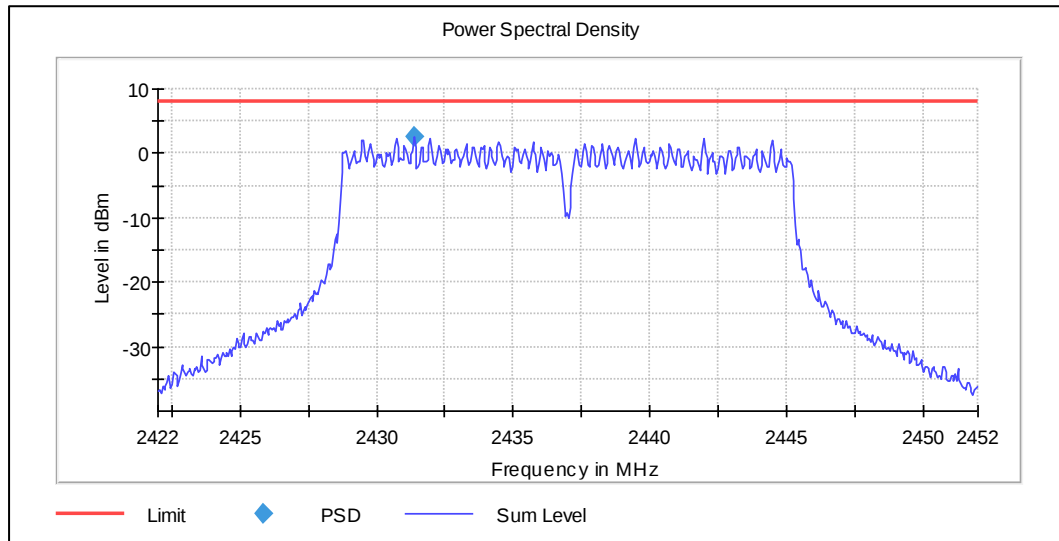
Modulation: 802.11g

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/ kHz)	PSD Limit (dBm/kHz)
6Mbps	2412	2.22	8.00
	2437	1.90	8.00
	2462	1.96	8.00
54Mbps	2412	2.87	8.00
	2437	2.57	8.00
	2462	2.54	8.00



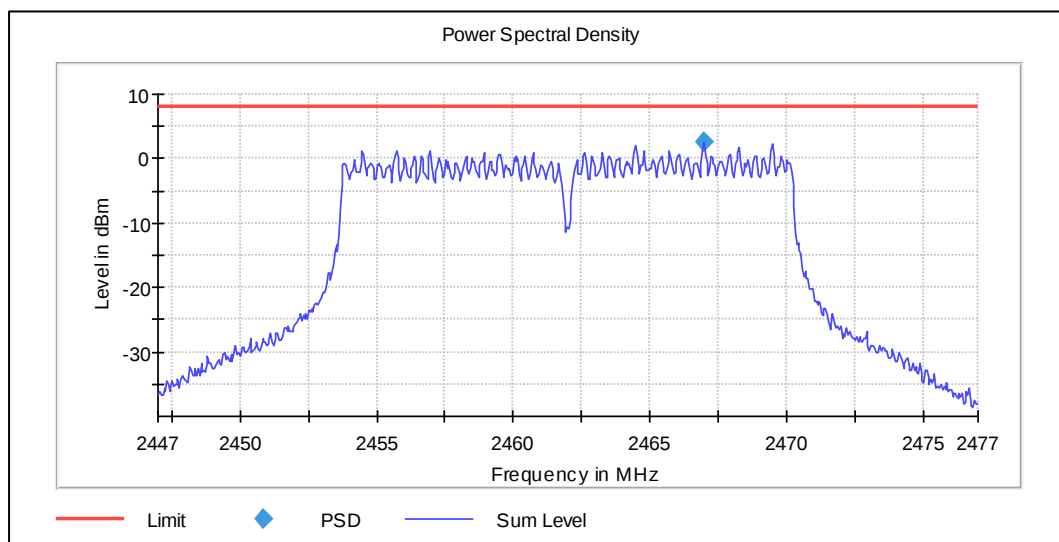
Data Rate: 54Mbps

Channel Frequency: 2412MHz



Data Rate: 54Mbps

Channel Frequency: 2437MHz



Data Rate: 54Mbps

Channel Frequency: 2462MHz

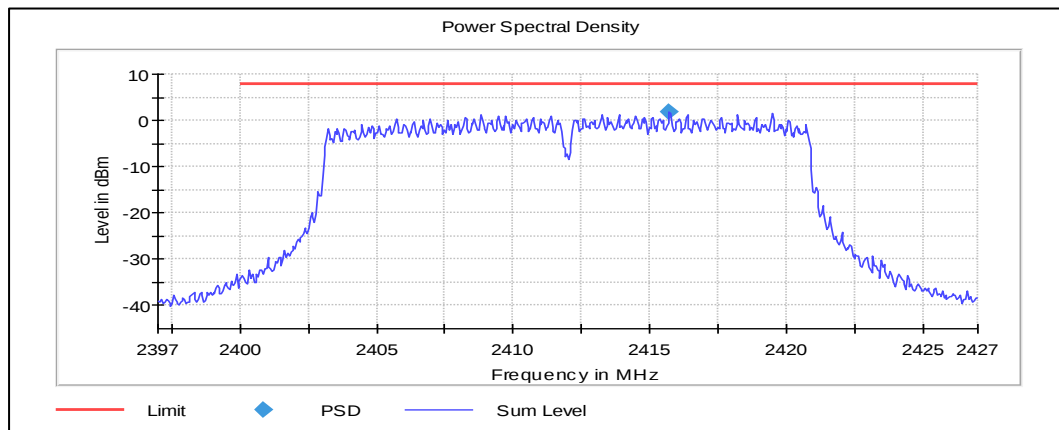
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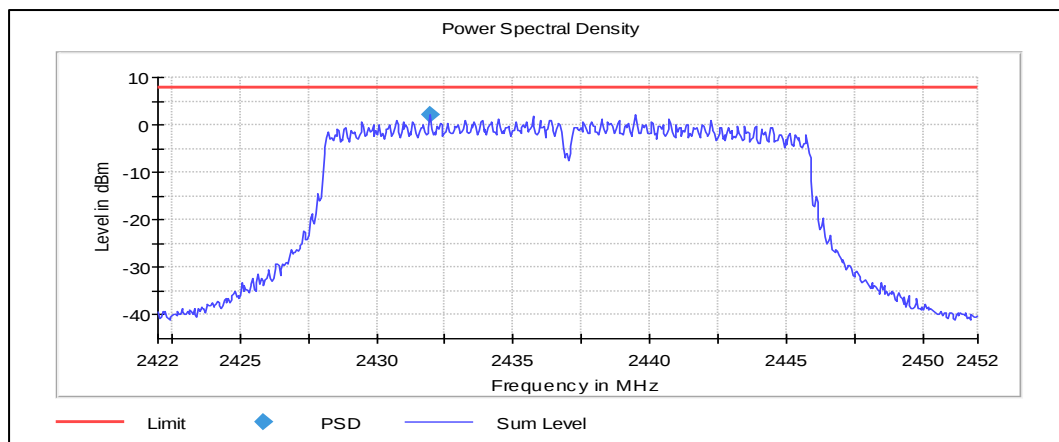
Modulation: 802.11n_HT20

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/kHz)	PSD Limit (dBm/kHz)
MCS0	2412	2.08	8.00
	2437	2.04	8.00
	2462	1.68	8.00
MCS7	2412	1.69	8.00
	2437	2.17	8.00
	2462	2.37	8.00



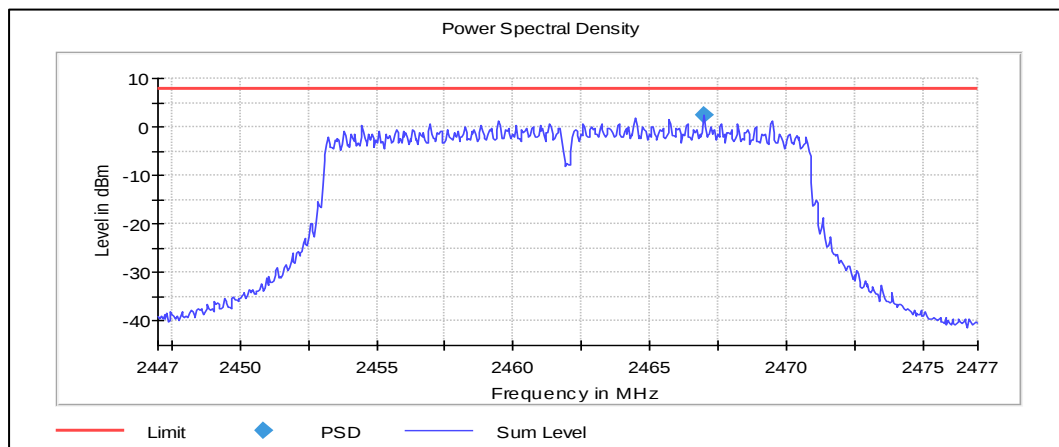
Data Rate: MCS7

Channel Frequency: 2412MHz



Data Rate: MCS7

Channel Frequency: 2437MHz



Data Rate: MCS7

Channel Frequency: 2462MHz

Prüfbericht - Nr.:

Test Report No.:

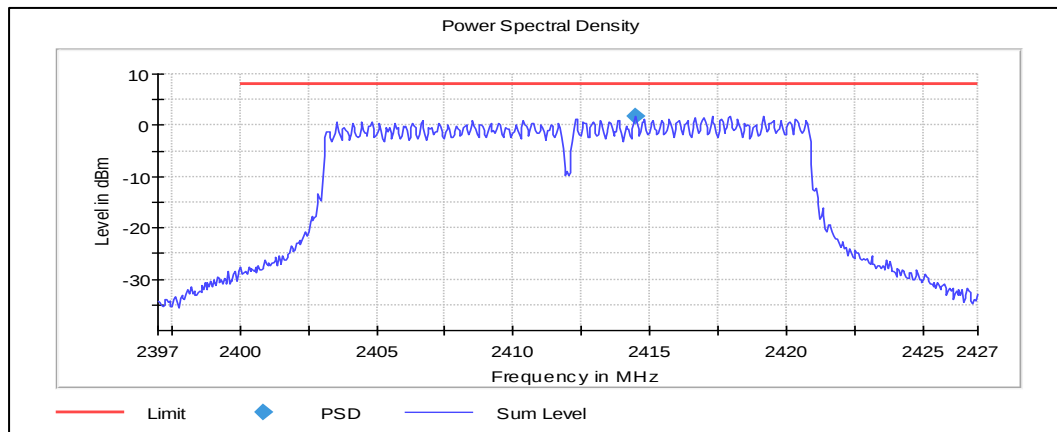
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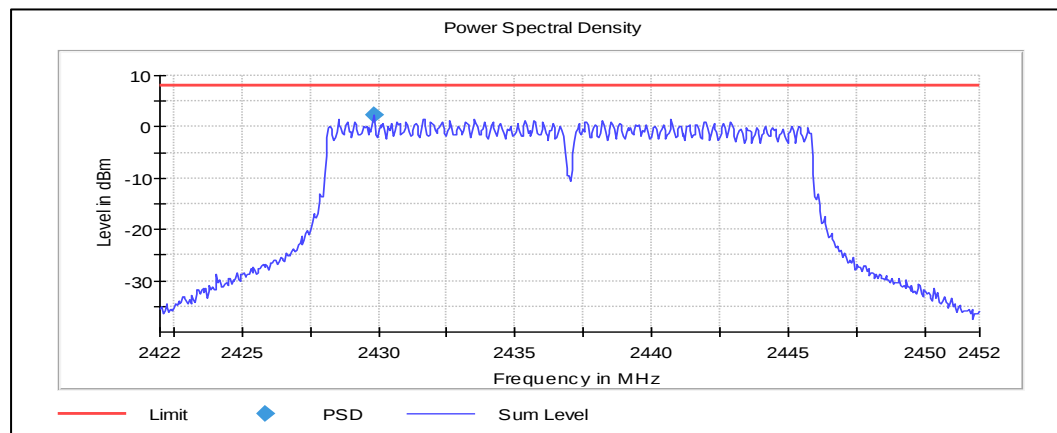
Modulation: 802.11ac_VHT20

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/ kHz)	PSD Limit (dBm/kHz)
MCS0	2412	1.83	8.00
	2437	1.90	8.00
	2462	1.66	8.00
MCS8	2412	1.80	8.00
	2437	2.24	8.00
	2462	1.11	8.00



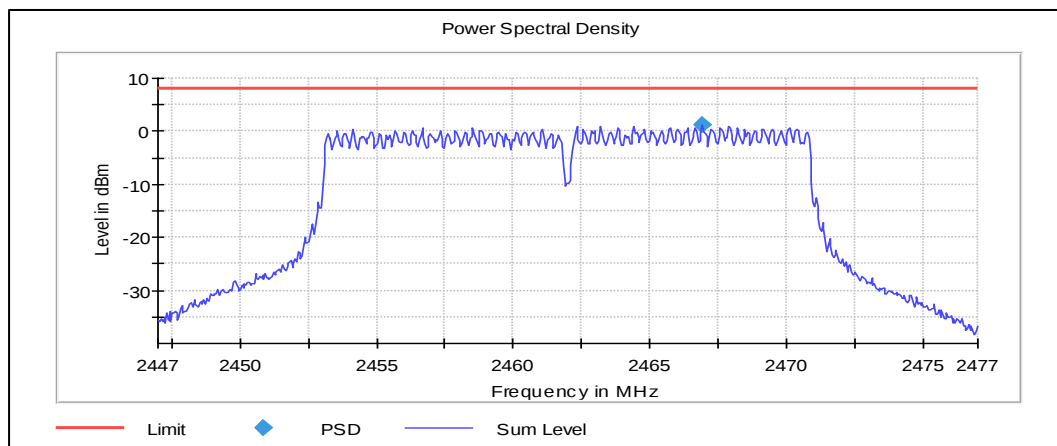
Data Rate: MCS8

Channel Frequency: 2412MHz



Data Rate: MCS8

Channel Frequency: 2437MHz

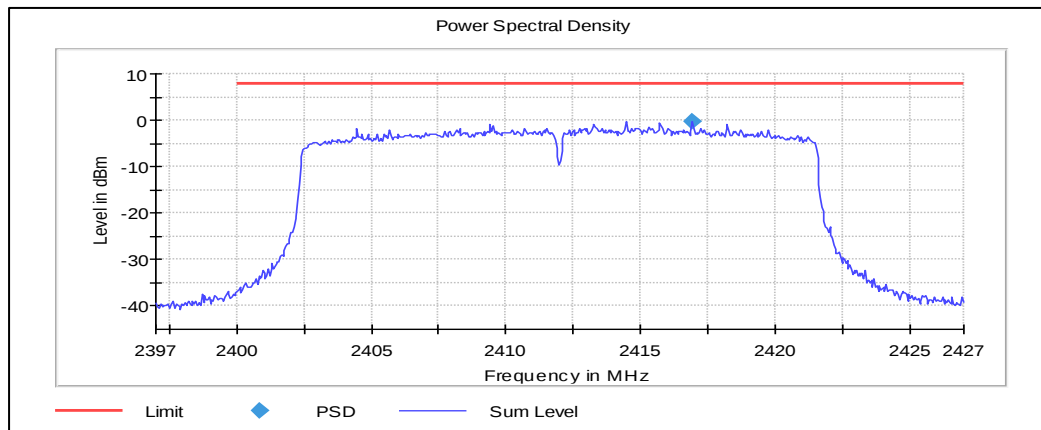


Data Rate: MCS8

Channel Frequency: 2462MHz

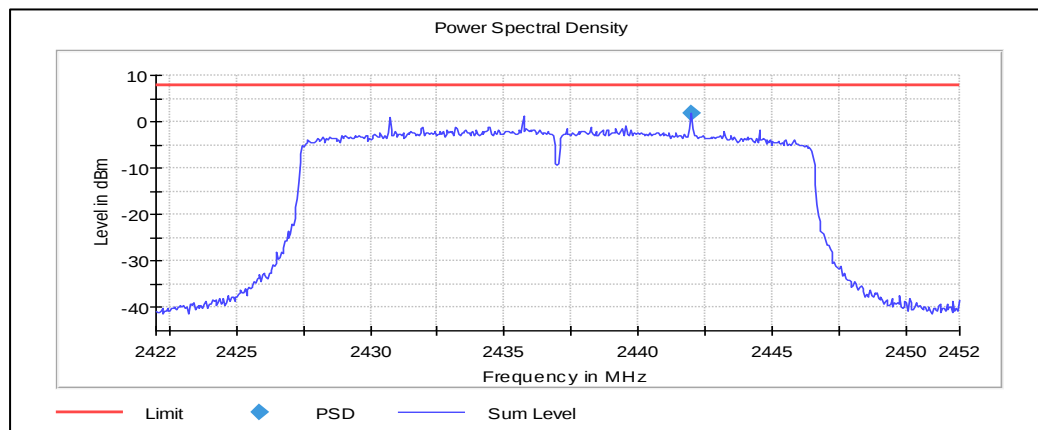
Modulation: 802.11ax_HE20

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/ kHz)	PSD Limit (dBm/kHz)
MCS0	2412	-0.14	8.00
	2437	1.88	8.00
	2462	0.22	8.00
MCS11	2412	0.89	8.00
	2437	1.50	8.00
	2462	0.27	8.00



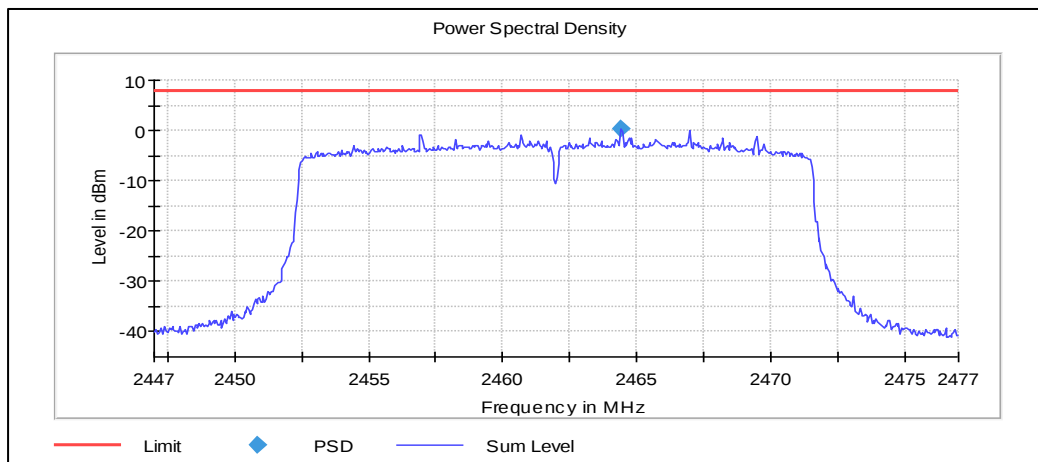
Data Rate: MCS0

Channel Frequency: 2412MHz



Data Rate: MCS0

Channel Frequency: 2437MHz



Data Rate: MCS0

Channel Frequency: 2462MHz

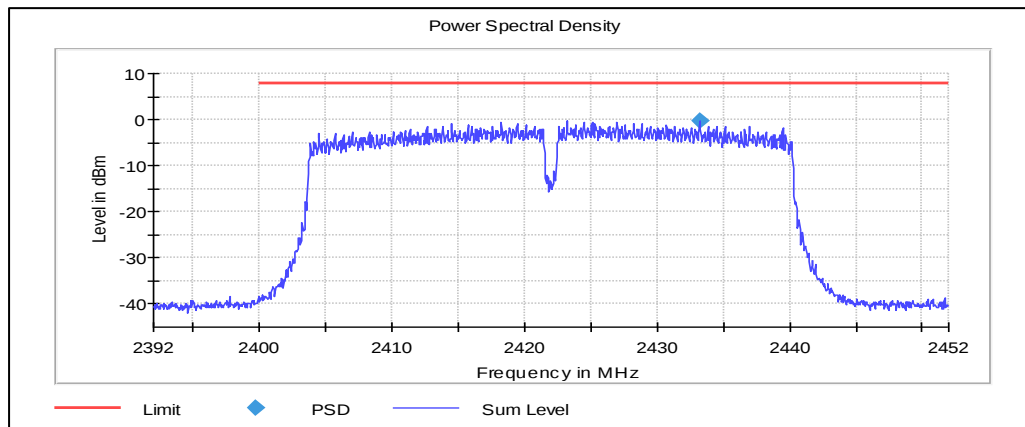
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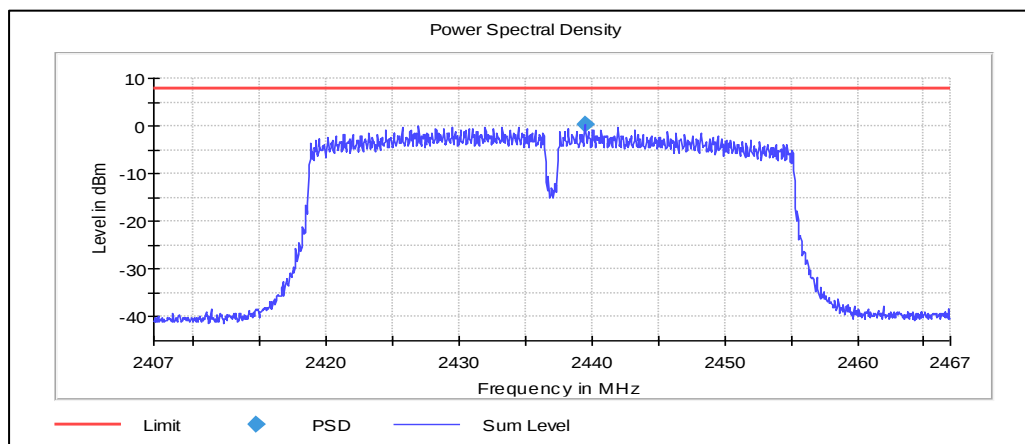
Modulation: 802.11n_HT40

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/kHz)	PSD Limit (dBm/kHz)
MCS0	2422	-0.16	8.00
	2437	0.18	8.00
	2452	-0.51	8.00
MCS7	2422	-0.67	8.00
	2437	0.06	8.00
	2452	0.07	8.00



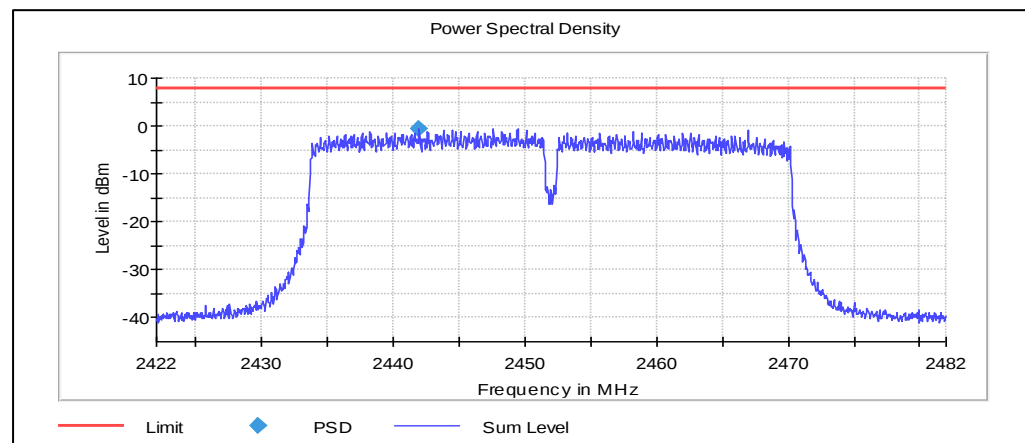
Data Rate: MCS0

Channel Frequency: 2422MHz



Data Rate: MCS0

Channel Frequency: 2437MHz



Data Rate: MCS0

Channel Frequency: 2452MHz

Prüfbericht - Nr.:

Test Report No.:

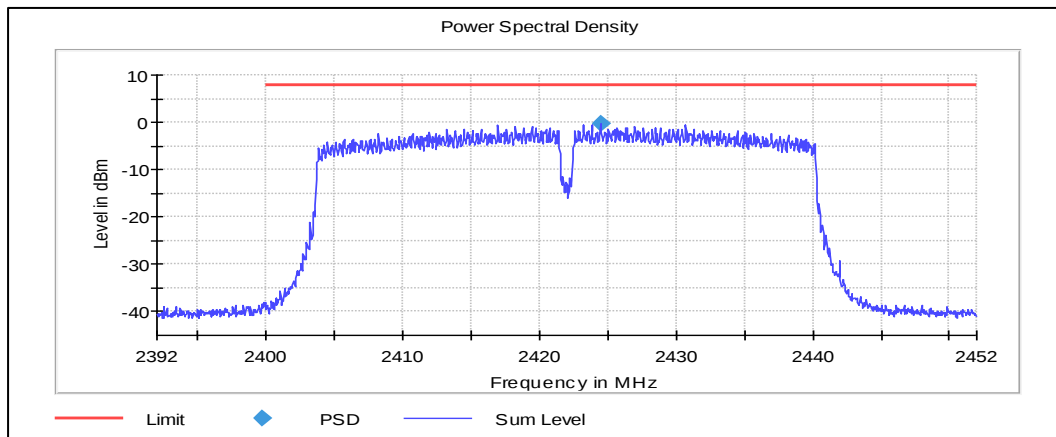
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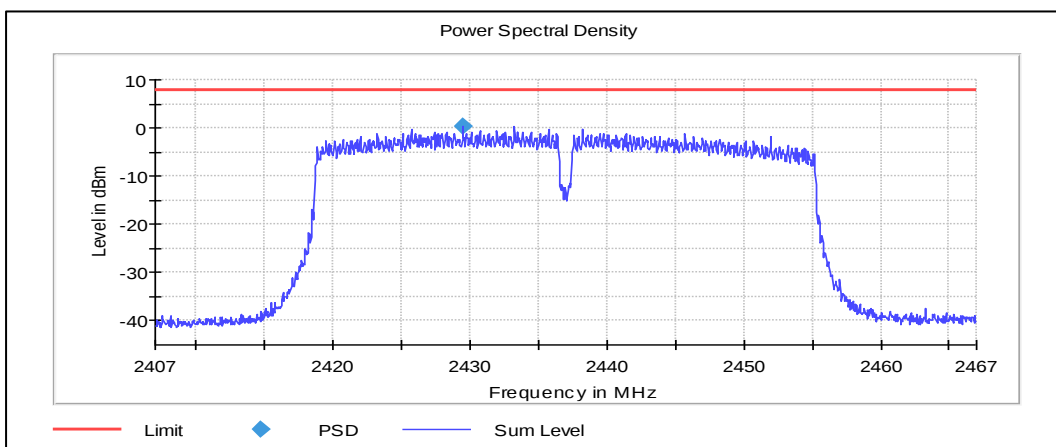
Modulation: 802.11ac_VHT40

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/kHz)	PSD Limit (dBm/kHz)
MCS0	2422	-0.28	8.00
	2437	0.35	8.00
	2452	0.01	8.00
MCS8	2422	-1.49	8.00
	2437	-0.79	8.00
	2452	-1.04	8.00



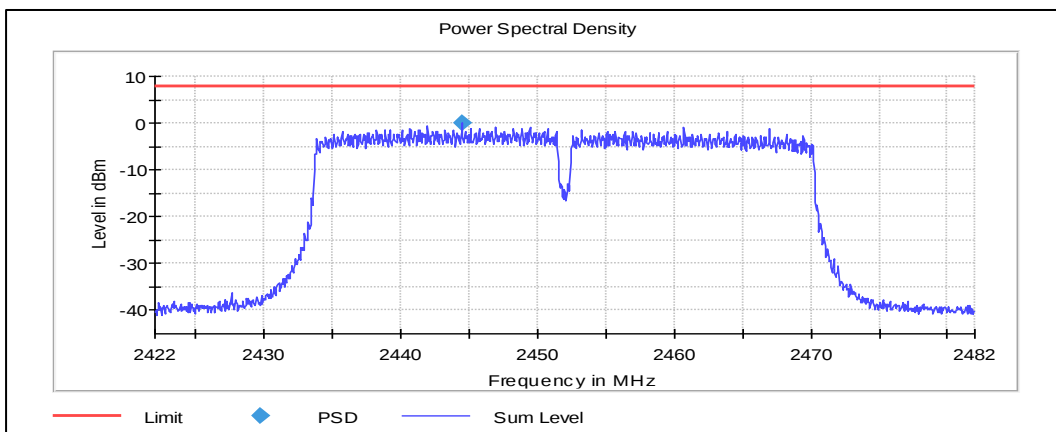
Data Rate: MCS0

Channel Frequency: 2422MHz



Data Rate: MCS0

Channel Frequency: 2437MHz



Data Rate: MCS0

Channel Frequency: 2452MHz

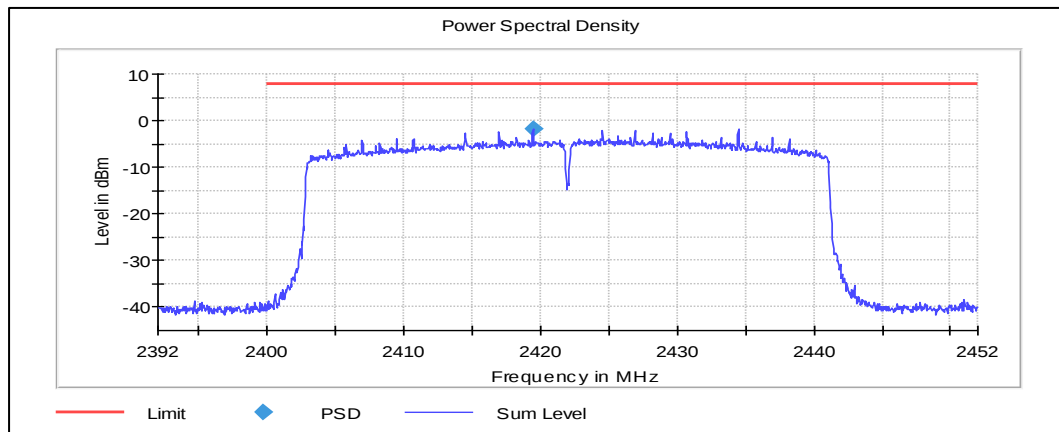
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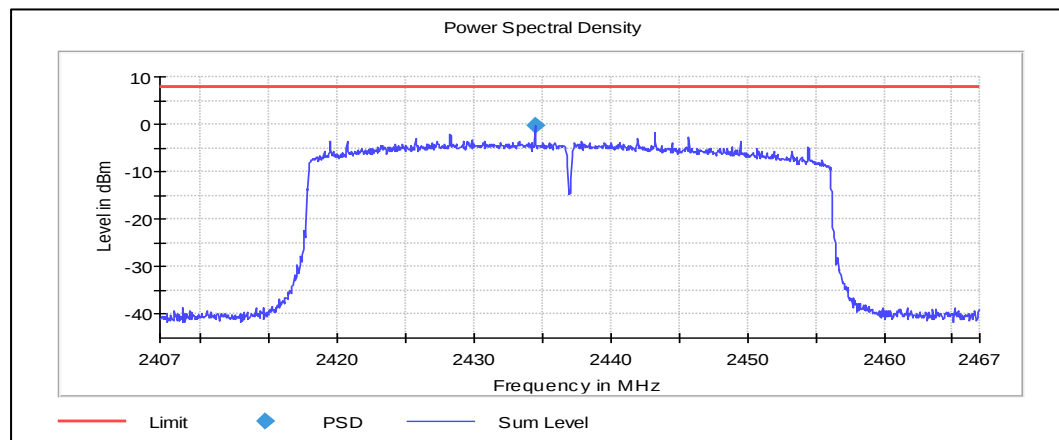
Modulation: 802.11ax_HE40

Data rate (Mbps)	Channel Frequency (MHz)	PSD (dBm/kHz)	PSD Limit (dBm/kHz)
MCS0	2422	-1.74	8.00
	2437	-0.28	8.00
	2452	-1.54	8.00
MCS11	2422	-2.32	8.00
	2437	-0.69	8.00
	2452	-0.88	8.00



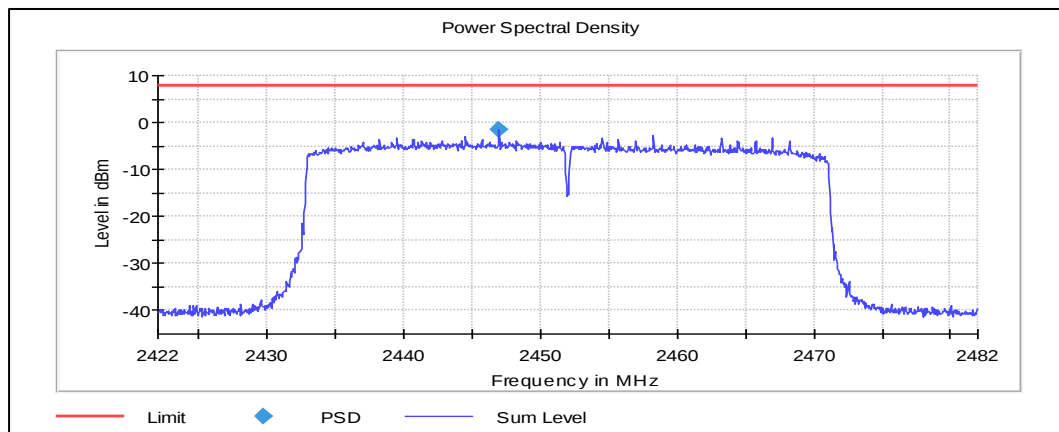
Data Rate: MCS0

Channel Frequency: 2422MHz



Data Rate: MCS0

Channel Frequency: 2437MHz



Data Rate: MCS0

Channel Frequency: 2452MHz

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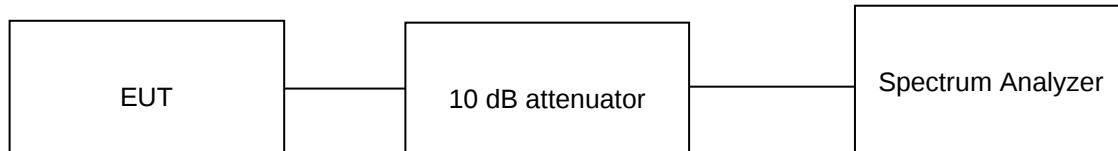
7.3 DTS Bandwidth & 99% Bandwidth

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (a) (2)
Test Method	Subclause 11.8.1 & 6.9.2 of ANSI C63.10
Measurement Bandwidth	100 kHz for x dB bandwidth 1 to 5% of OCB for 99% bandwidth
Detector	Peak
Port of testing	Antenna port
Requirement	The minimum 6 dB bandwidth shall be at least 500 kHz

Test Method:



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.2 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

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Test results:

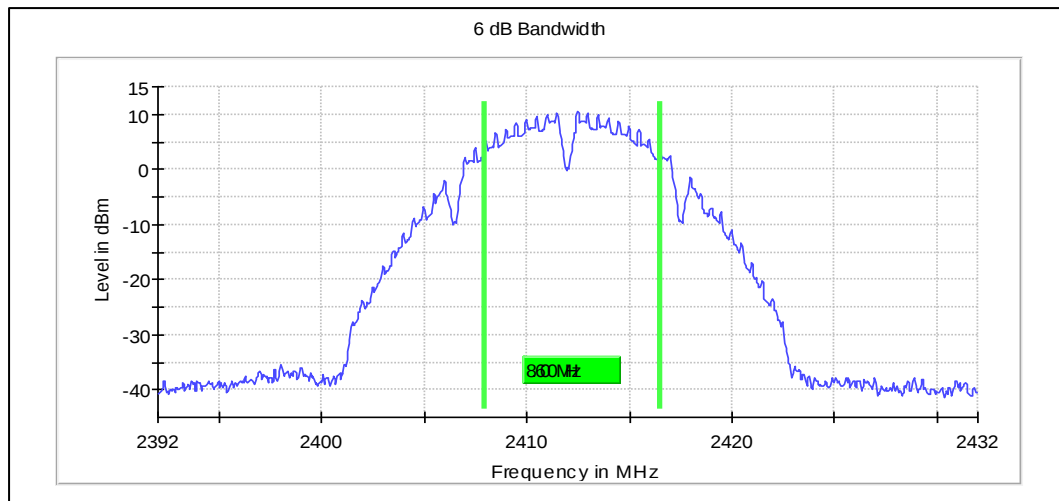
Note:

1. All the losses are included during measurement and final values are mentioned in the test report.
2. For 6 dB Bandwidth Measurements were made as per section 8.2 in KDB 558074 D01 15.247 Measurement Guidance v05r02.
3. For OCW 99 % Bandwidth measurements were made as per section 6.9.3 ANSI C63.10-2013

Modulation: 802.11b

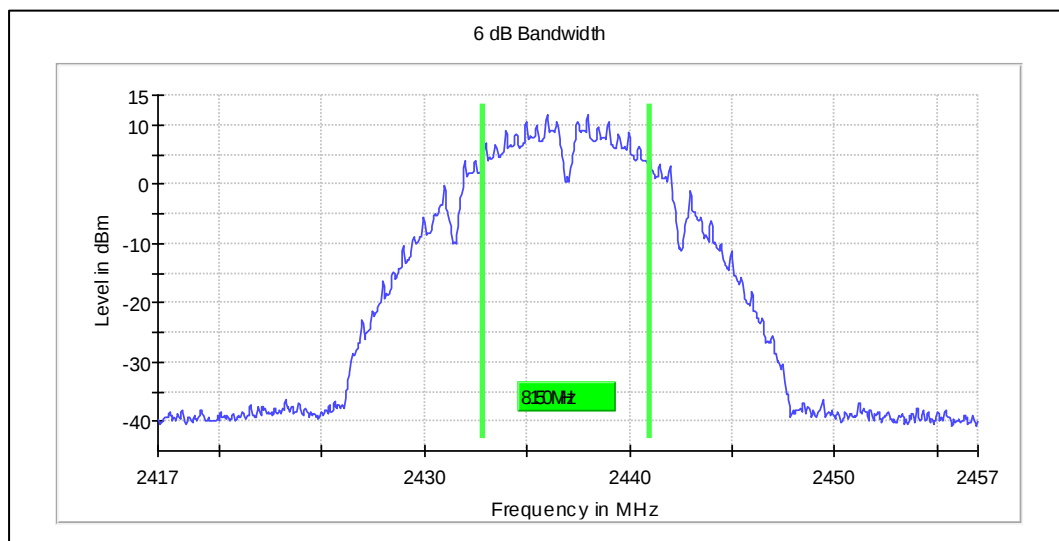
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
1Mbps	2412	8.60	13.10	0.5
	2437	8.15	12.80	0.5
	2462	8.20	13.10	0.5
11Mbps	2412	7.50	12.90	0.5
	2437	7.25	12.60	0.5
	2462	7.25	12.80	0.5

Graphs for 6 dB bandwidth measurement



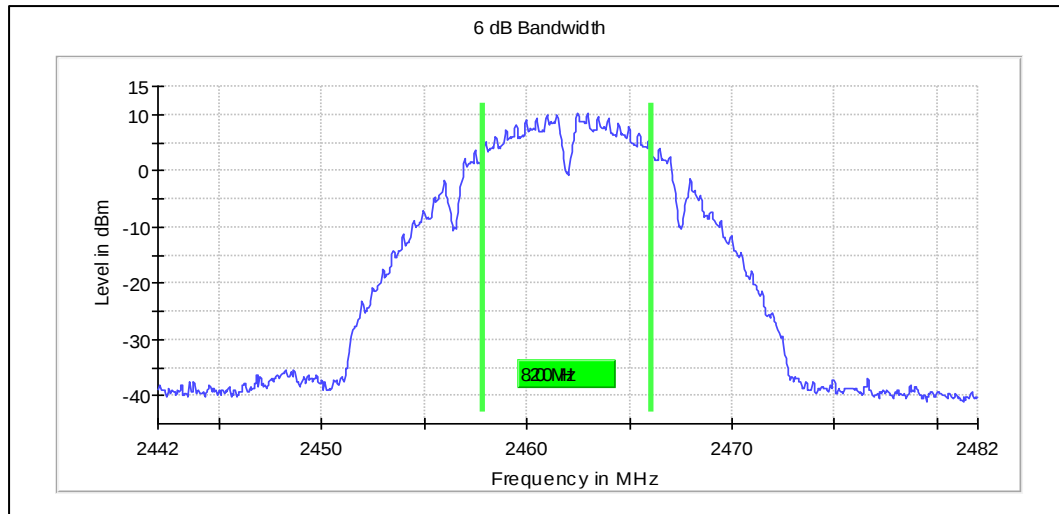
Data Rate: 1Mbps

Channel Frequency: 2412MHz



Data Rate: 1Mbps

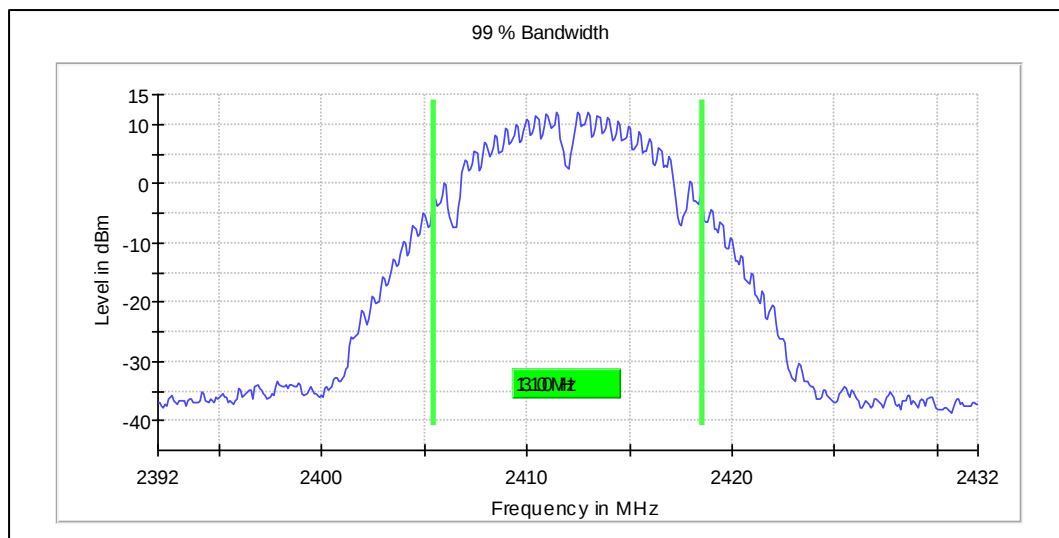
Channel Frequency: 2437MHz



Data Rate: 1Mbps

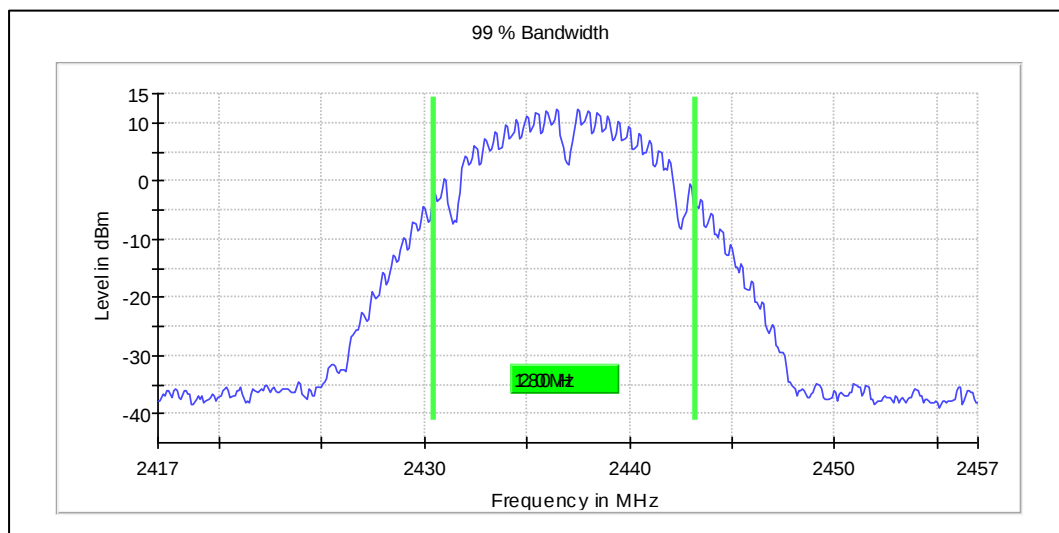
Channel Frequency: 2462MHz

Graphs for OCW 99 % bandwidth measurement



Data Rate: 1Mbps

Channel Frequency: 2412MHz



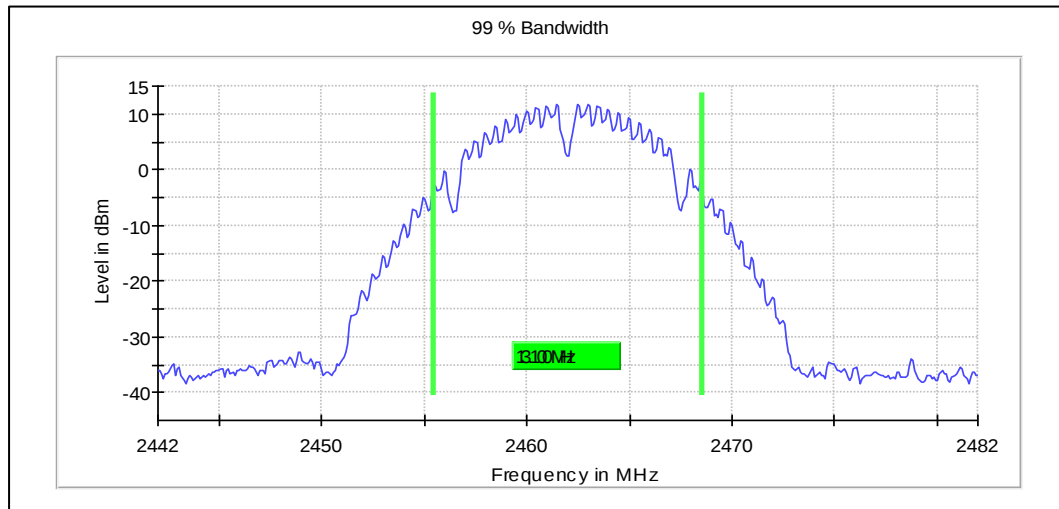
Data Rate: 1Mbps

Channel Frequency: 2437MHz

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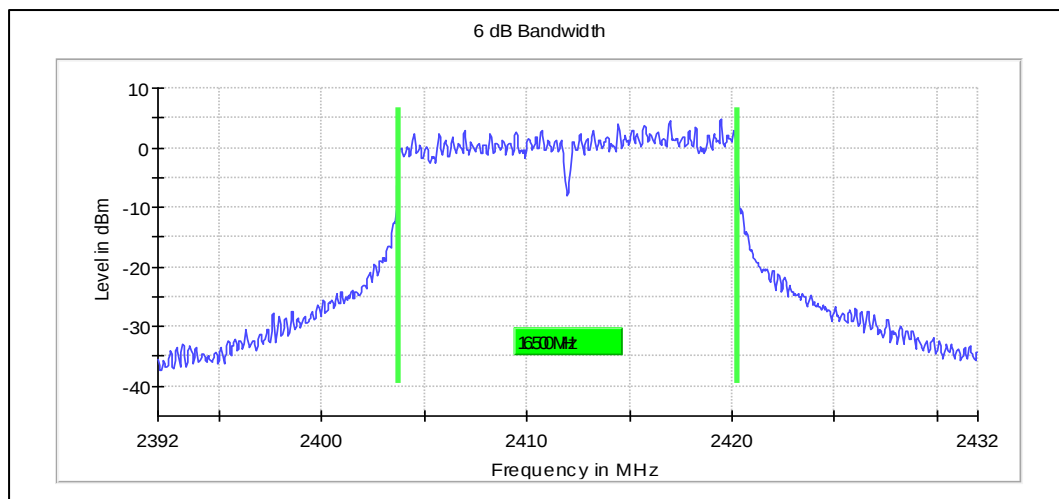
Data Rate: 1Mbps

Channel Frequency: 2462MHz

Modulation: 802.11g

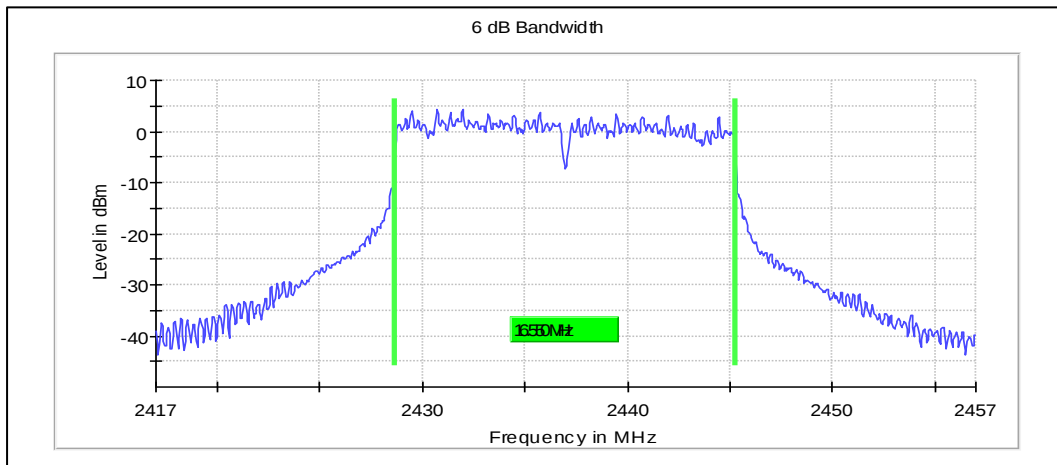
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
6Mbps	2412	15.80	16.40	0.5
	2437	15.80	16.40	0.5
	2462	15.80	16.30	0.5
54Mbps	2412	16.50	16.60	0.5
	2437	16.55	16.60	0.5
	2462	16.55	16.60	0.5

Graphs for 6 dB bandwidth measurement



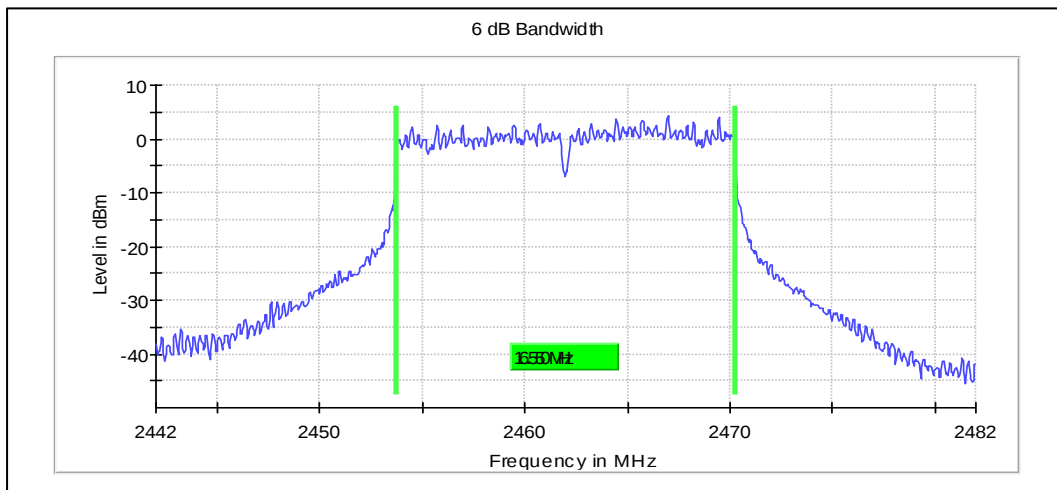
Data Rate: 54Mbps

Channel Frequency: 2412MHz



Data Rate: 54Mbps

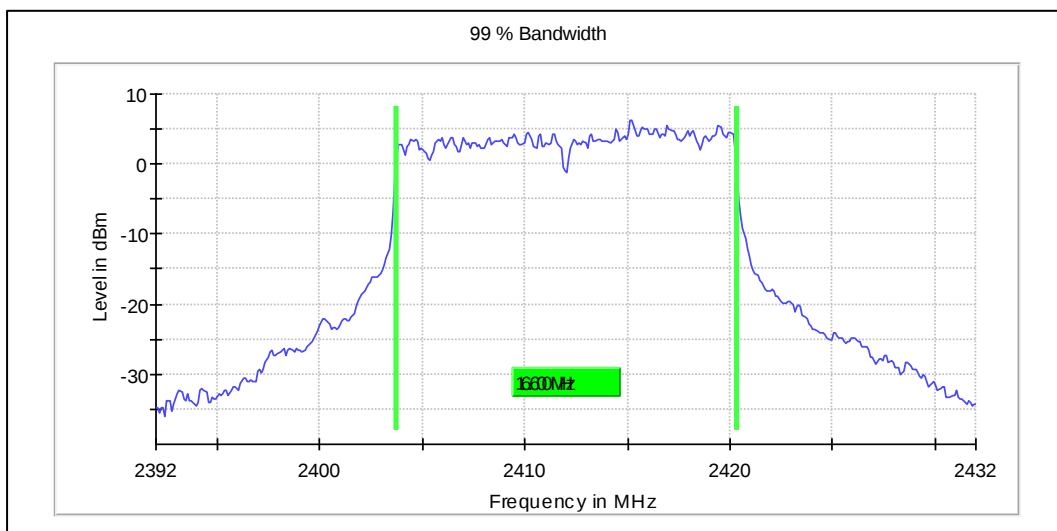
Channel Frequency: 2437MHz



Data Rate: 54Mbps

Channel Frequency: 2462MHz

Graphs for OCW 99 % bandwidth measurement



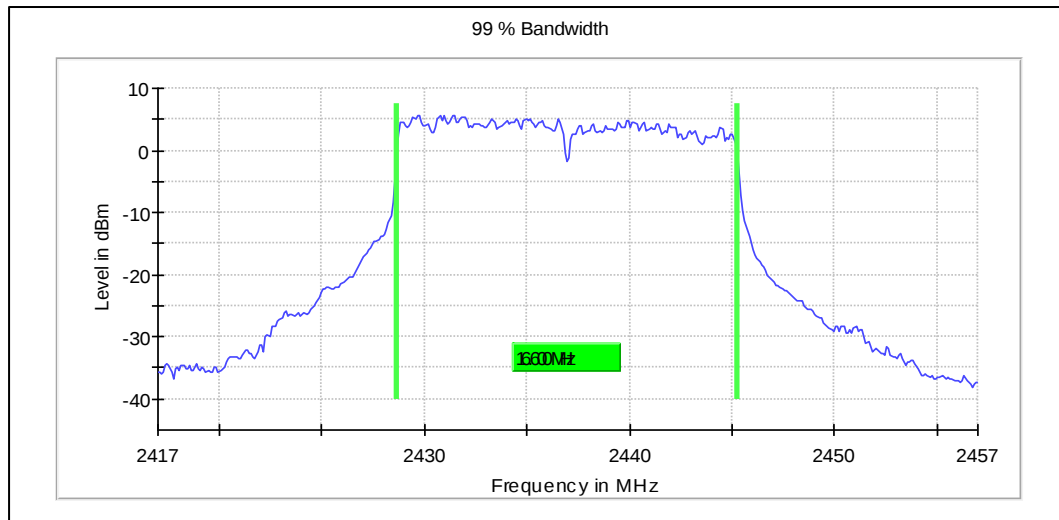
Data Rate: 54Mbps

Channel Frequency: 2412MHz

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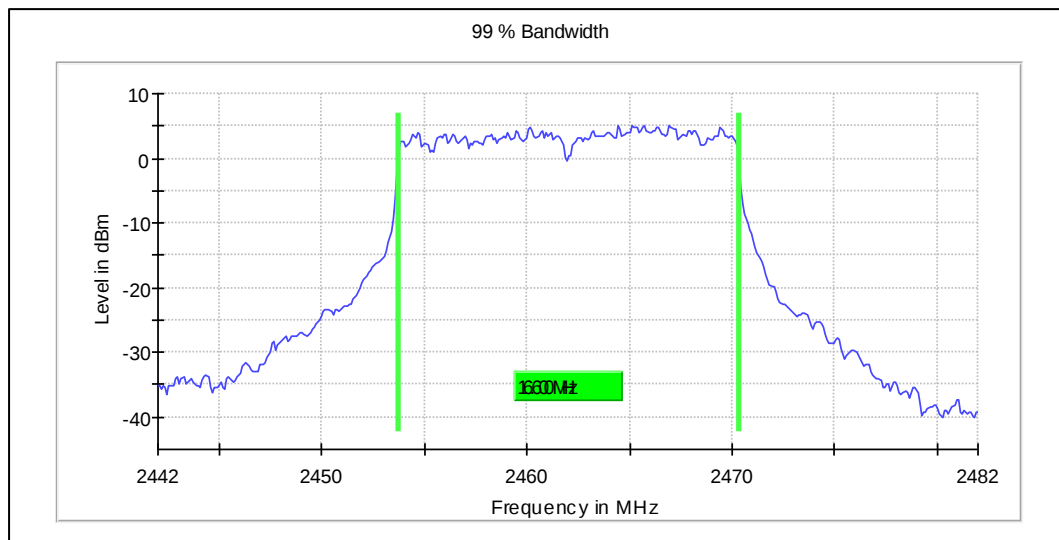
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Data Rate: 54Mbps

Channel Frequency: 2437MHz



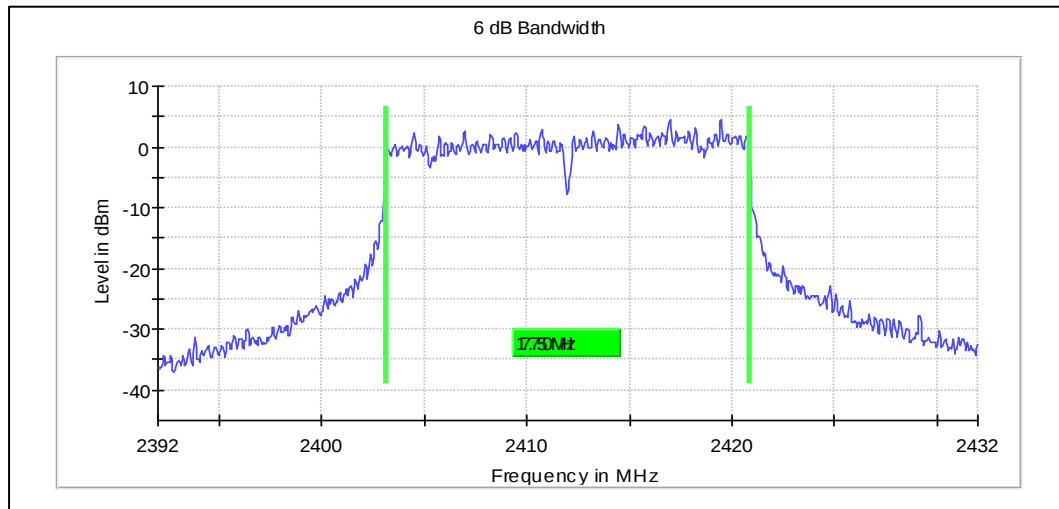
Data Rate: 54Mbps

Channel Frequency: 2462MHz

Modulation: 802.11n_HT20

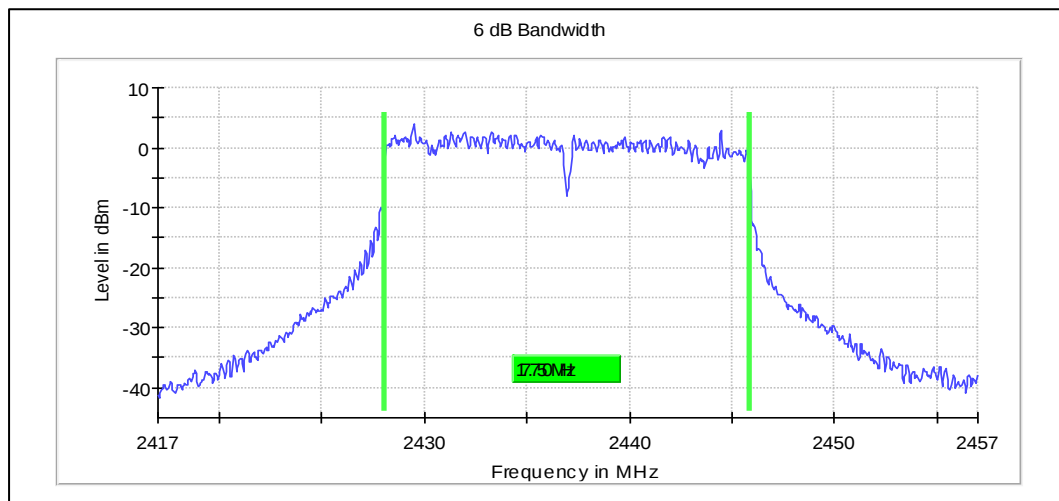
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
MCS0	2412	17.05	17.50	0.5
	2437	17.00	17.60	0.5
	2462	17.00	17.50	0.5
MCS7	2412	17.75	17.90	0.5
	2437	17.75	17.80	0.5
	2462	17.75	17.80	0.5

Graphs for 6 dB bandwidth measurement



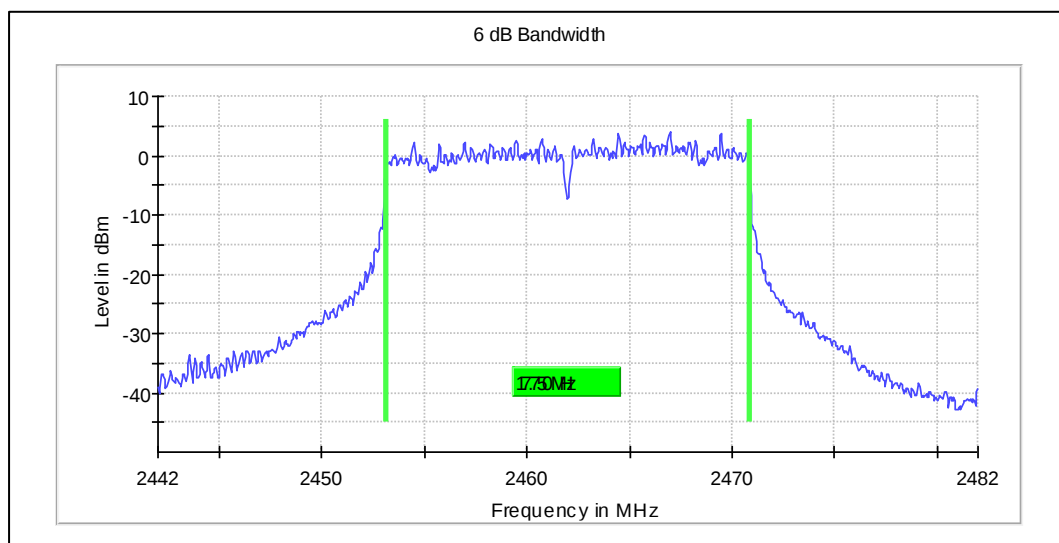
Data Rate: MCS7

Channel Frequency: 2412MHz



Data Rate: MCS7

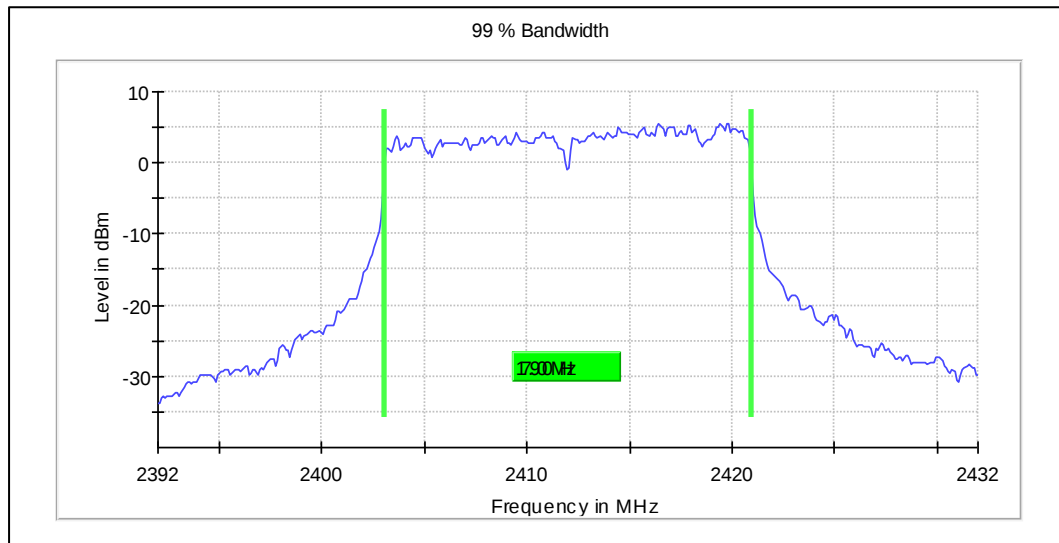
Channel Frequency: 2437MHz



Data Rate: MCS7

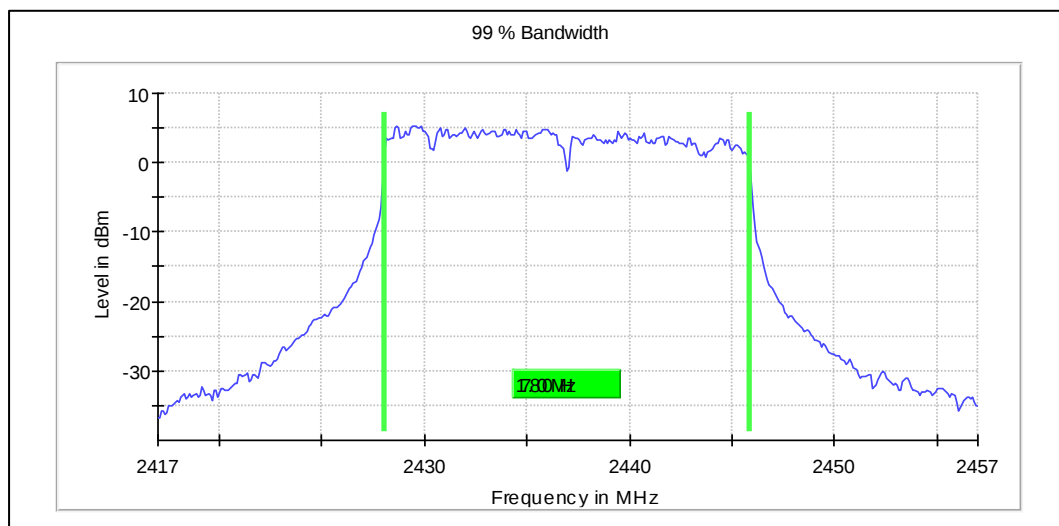
Channel Frequency: 2462MHz

Graphs for OCW 99 % bandwidth measurement



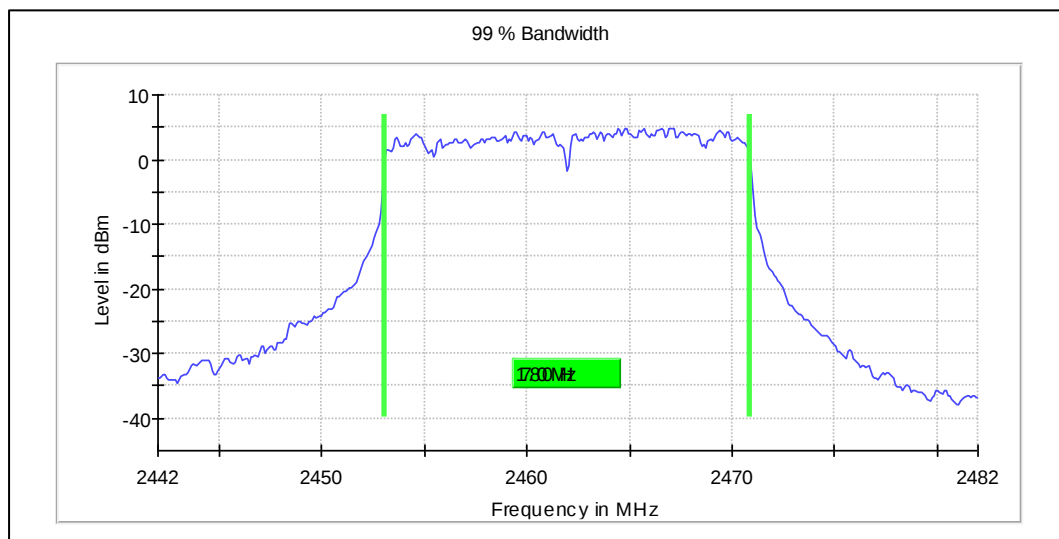
Data Rate: MCS7

Channel Frequency: 2412MHz



Data Rate: MCS7

Channel Frequency: 2437MHz



Data Rate: MCS7

Channel Frequency: 2462MHz

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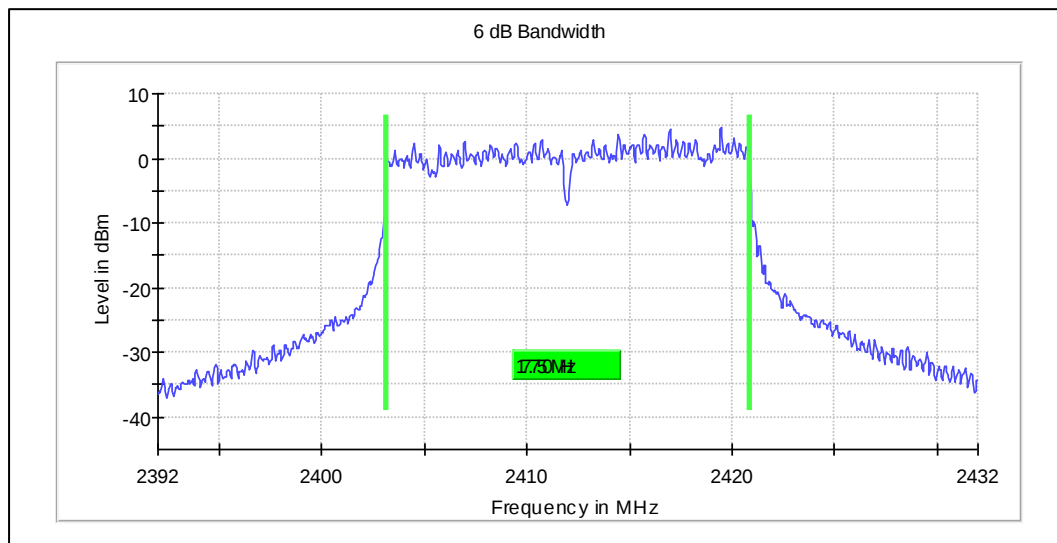
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Modulation: 802.11ac_VHT20

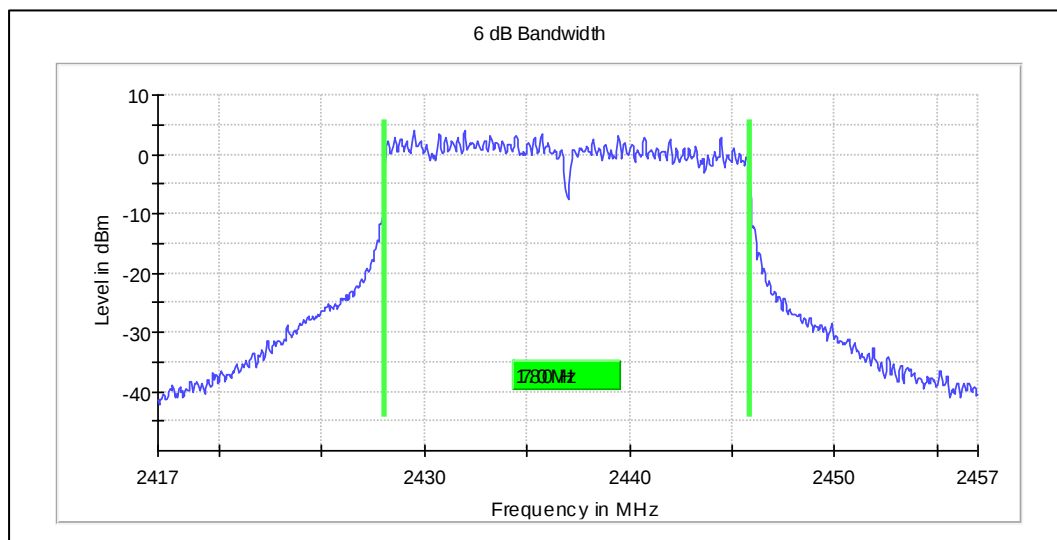
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
MCS0	2412	17.00	17.60	0.5
	2437	17.00	17.60	0.5
	2462	17.00	17.50	0.5
MCS8	2412	17.75	17.70	0.5
	2437	17.80	17.70	0.5
	2462	17.80	17.70	0.5

Graphs for 6 dB bandwidth measurement



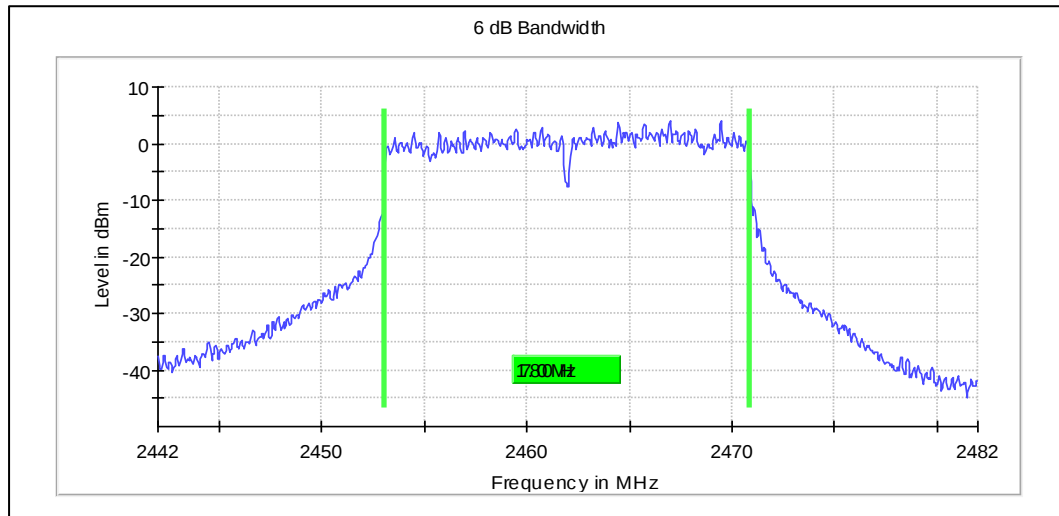
Data Rate: MCS8

Channel Frequency: 2412MHz



Data Rate: MCS8

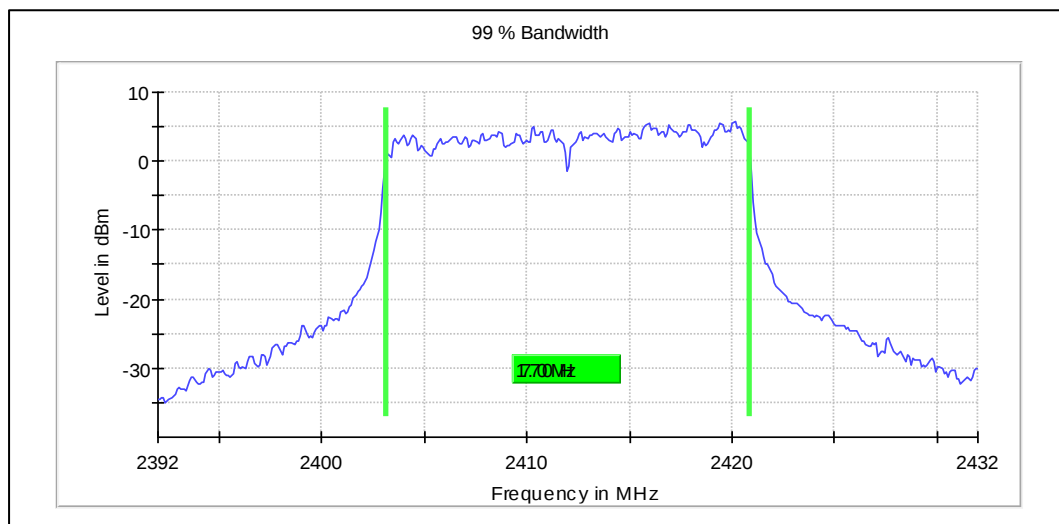
Channel Frequency: 2437MHz



Data Rate: MCS8

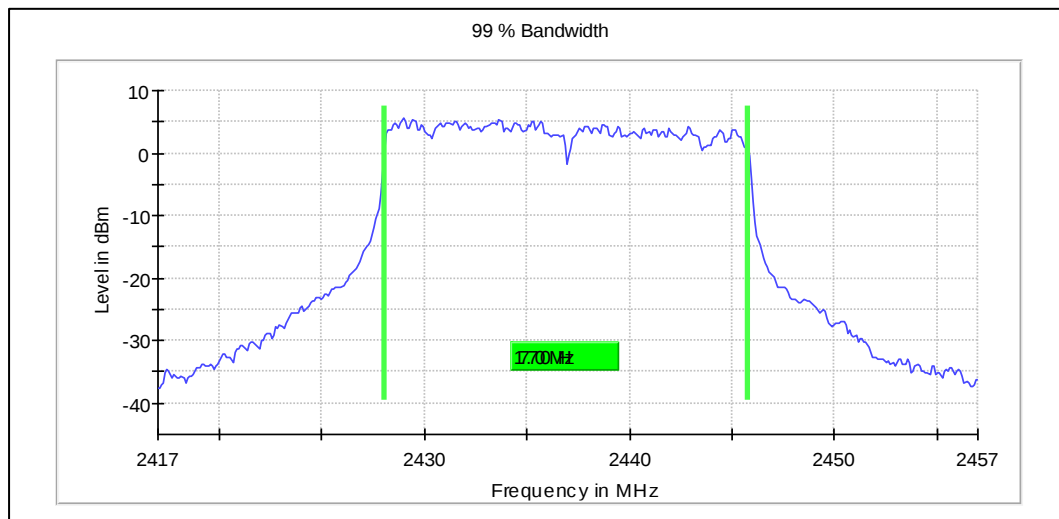
Channel Frequency: 2462MHz

Graphs for OCW 99 % bandwidth measurement



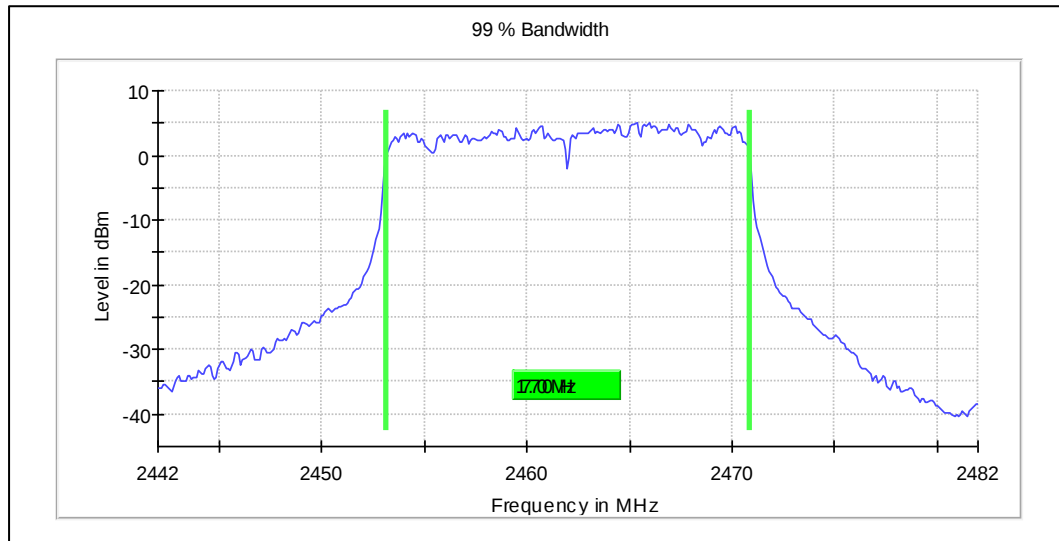
Data Rate: MCS8

Channel Frequency: 2412MHz



Data Rate: MCS8

Channel Frequency: 2437MHz



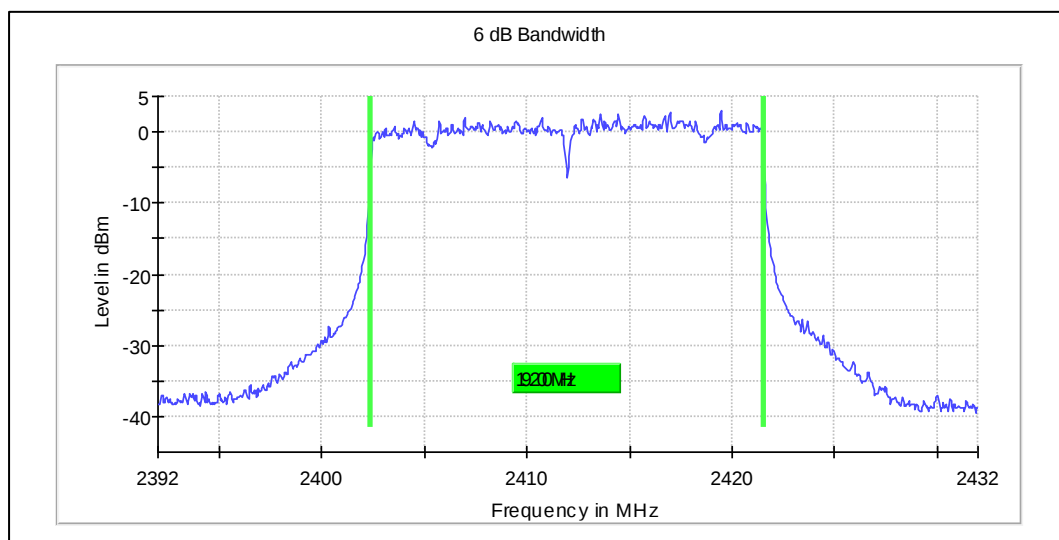
Data Rate: MCS8

Channel Frequency: 2462MHz

Modulation: 802.11ax_HE20

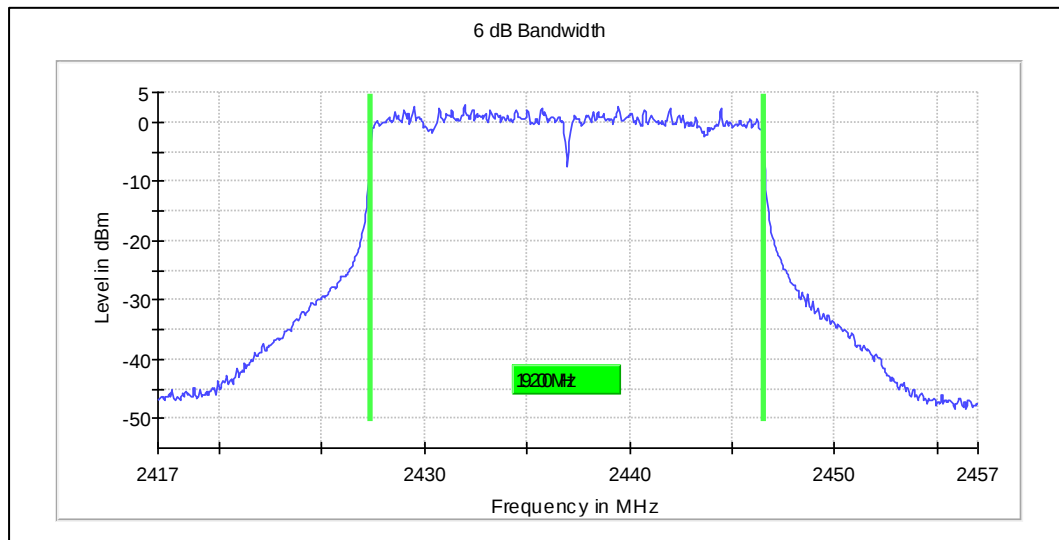
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
MCS0	2412	17.55	18.90	0.5
	2437	17.20	18.90	0.5
	2462	17.10	18.90	0.5
MCS11	2412	19.20	19.10	0.5
	2437	19.20	19.00	0.5
	2462	19.20	19.10	0.5

Graphs for 6 dB bandwidth measurement



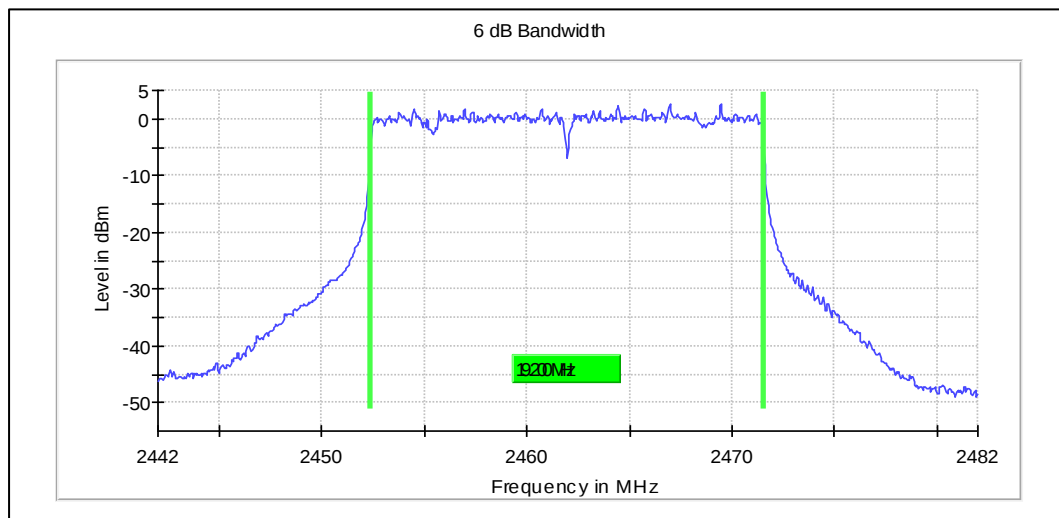
Data Rate: MCS11

Channel Frequency: 2412MHz



Data Rate: MCS11

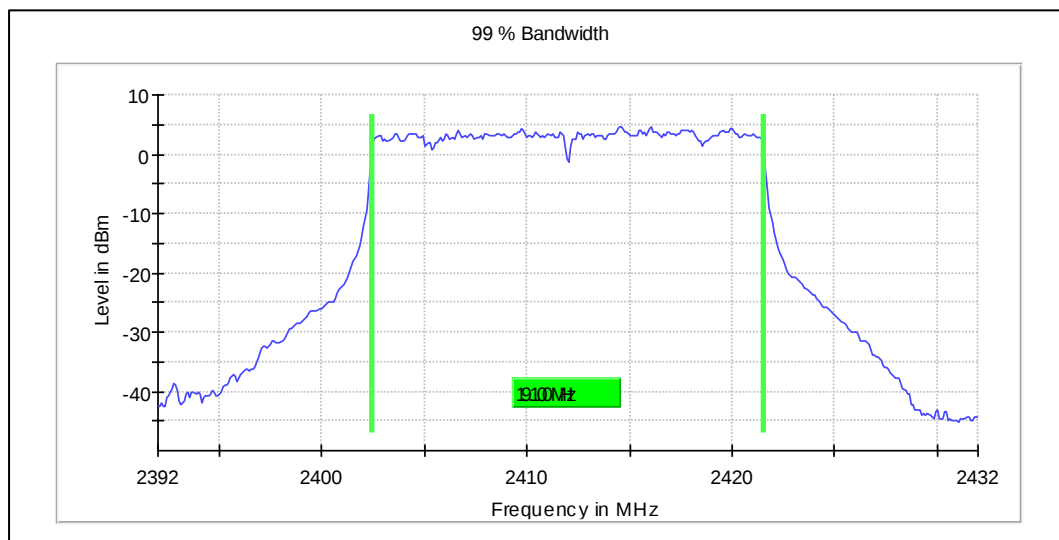
Channel Frequency: 2437MHz



Data Rate: MCS11

Channel Frequency: 2462MHz

Graphs for OCW 99 % bandwidth measurement



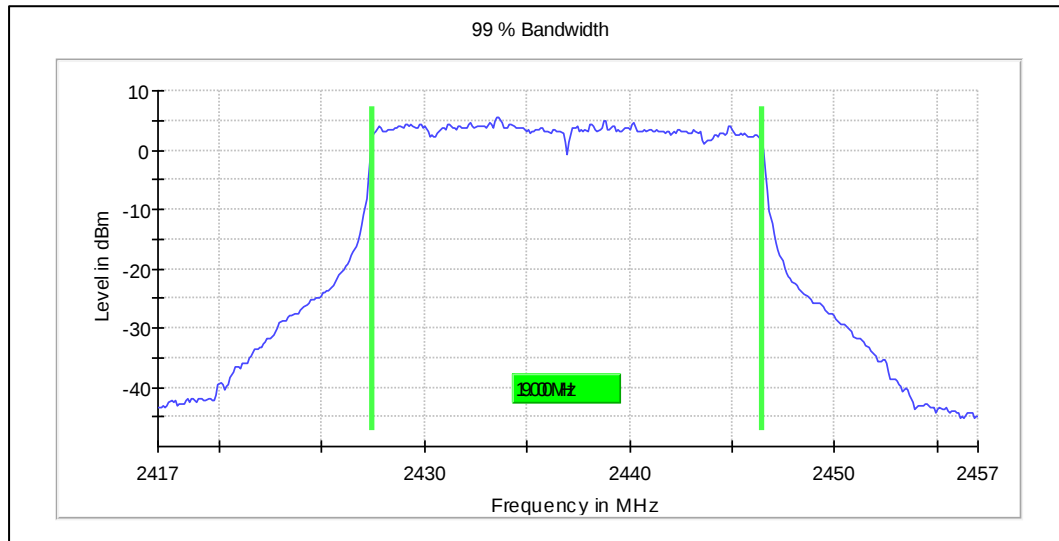
Data Rate: MCS11

Channel Frequency: 2412MHz

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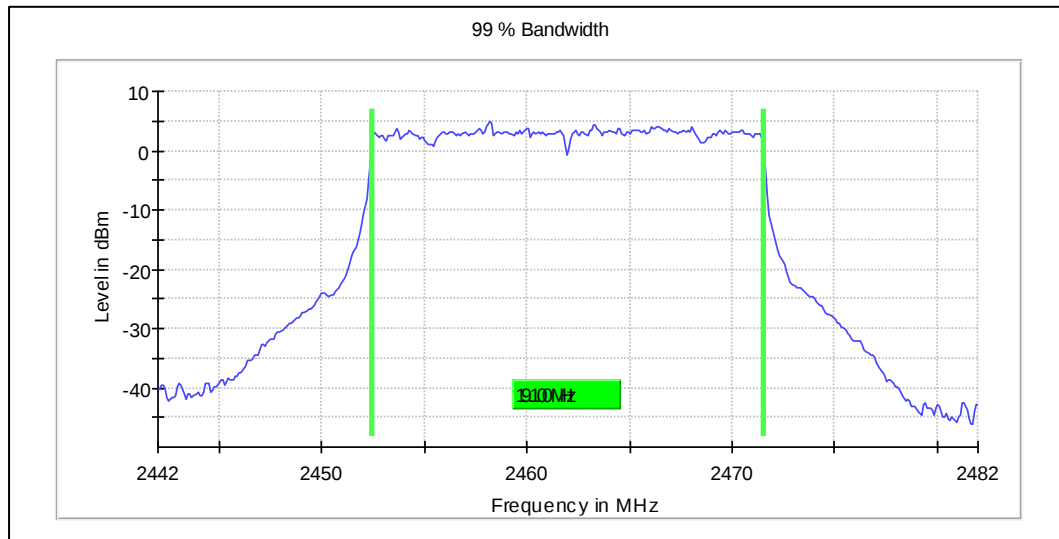
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Data Rate: MCS11

Channel Frequency: 2437MHz



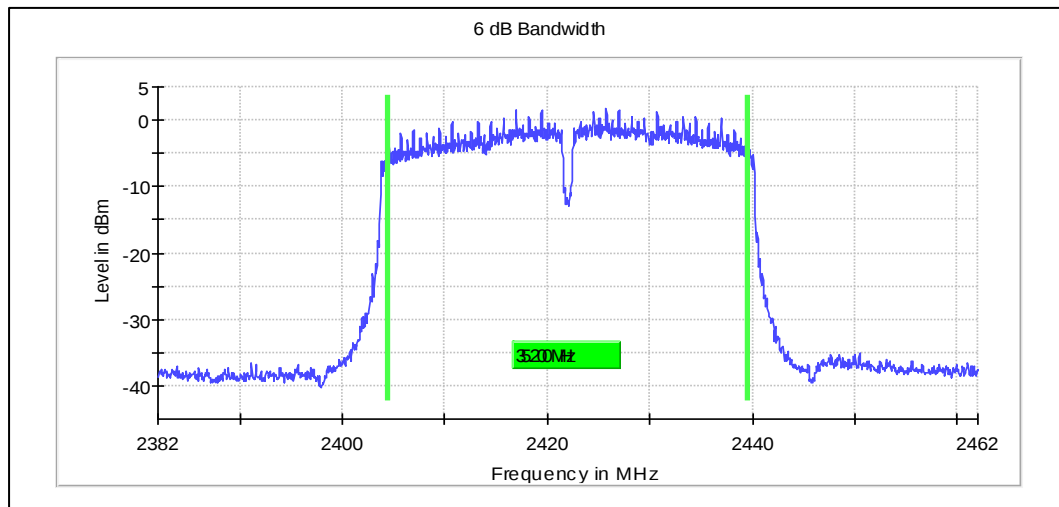
Data Rate: MCS11

Channel Frequency: 2462MHz

Modulation: 802.11n_HT40

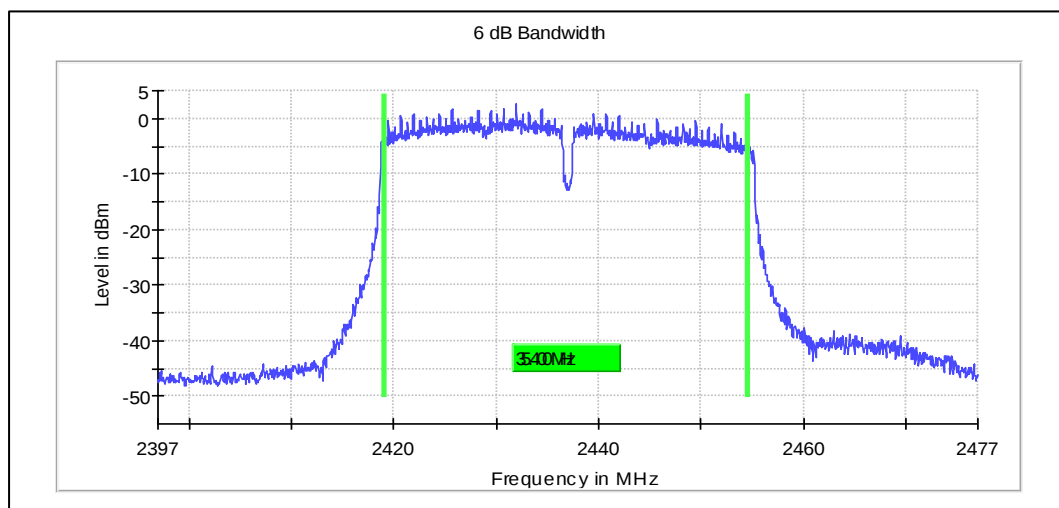
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
MCS0	2422	35.20	35.75	0.5
	2437	35.40	36.00	0.5
	2452	36.40	36.00	0.5
MCS7	2422	36.50	36.25	0.5
	2437	36.45	36.50	0.5
	2452	36.55	36.75	0.5

Graphs for 6 dB bandwidth measurement



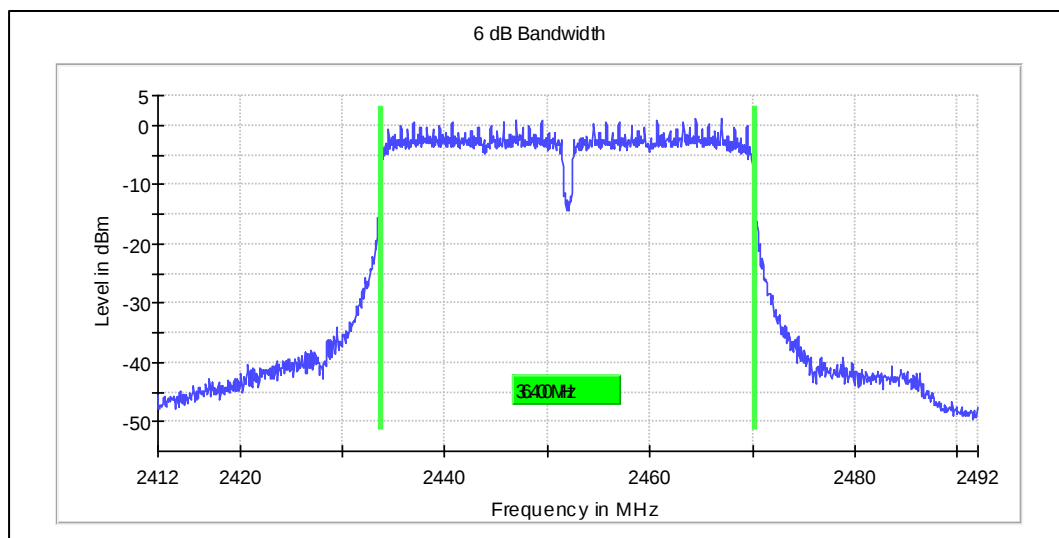
Data Rate: MCS7

Channel Frequency: 2422MHz



Data Rate: MCS7

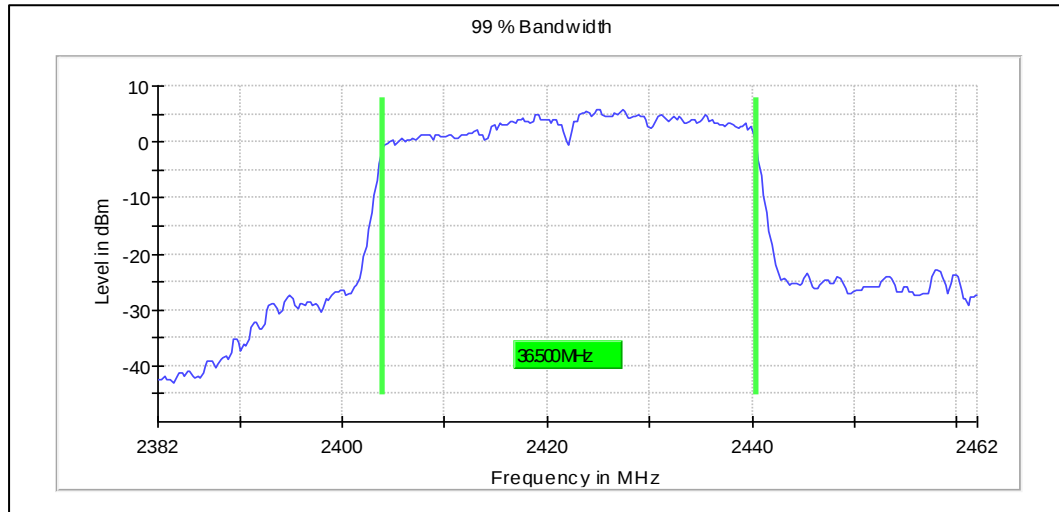
Channel Frequency: 2437MHz



Data Rate: MCS7

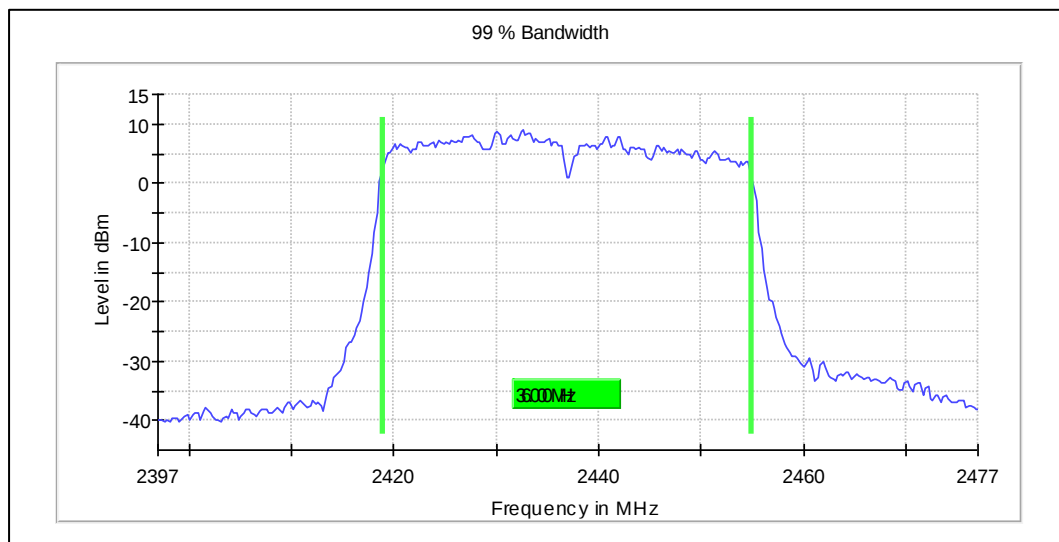
Channel Frequency: 2452MHz

Graphs for OCW 99 % bandwidth measurement



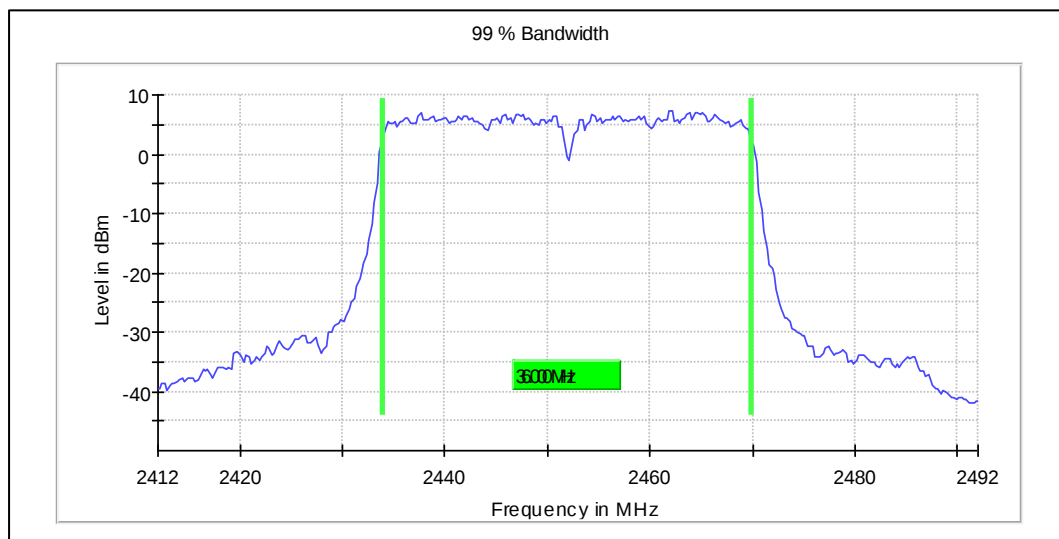
Data Rate: MCS7

Channel Frequency: 2422MHz



Data Rate: MCS7

Channel Frequency: 2437MHz



Data Rate: MCS7

Channel Frequency: 2452MHz

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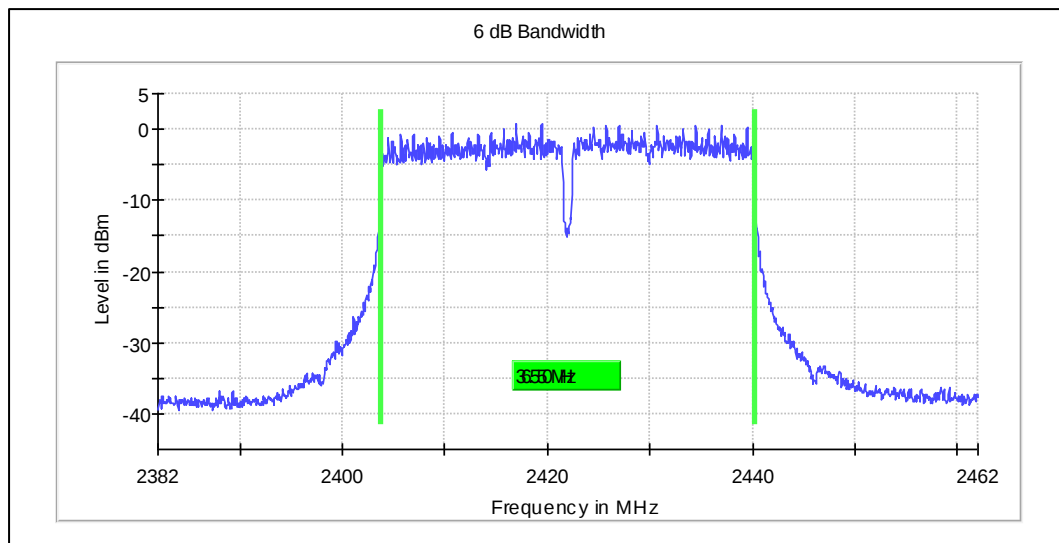
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Modulation: 802.11ac_VHT40

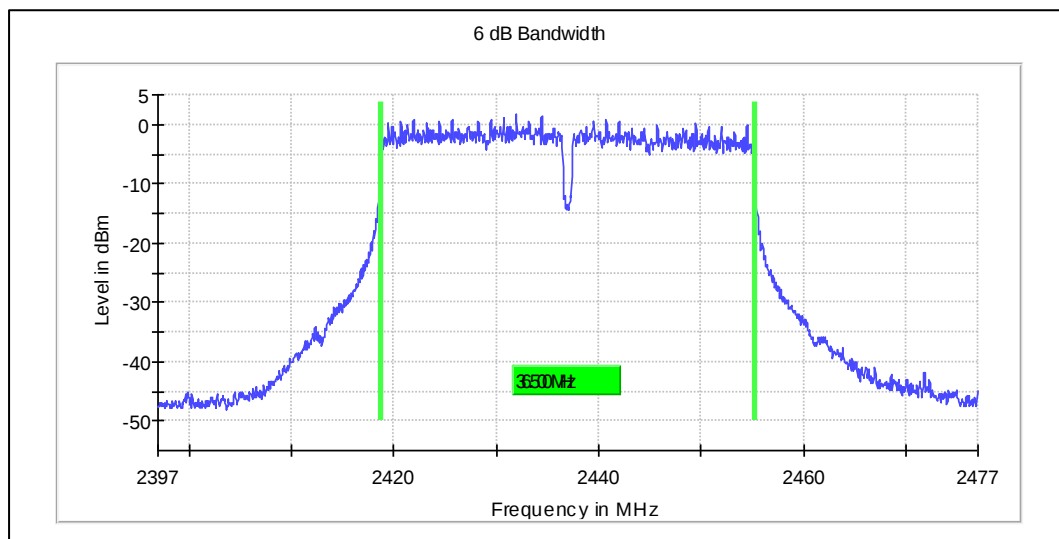
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
MCS0	2422	35.20	35.75	0.5
	2437	35.20	36.00	0.5
	2452	36.40	36.00	0.5
MCS8	2422	36.55	36.50	0.5
	2437	36.50	36.50	0.5
	2452	36.55	36.50	0.5

Graphs for 6 dB bandwidth measurement



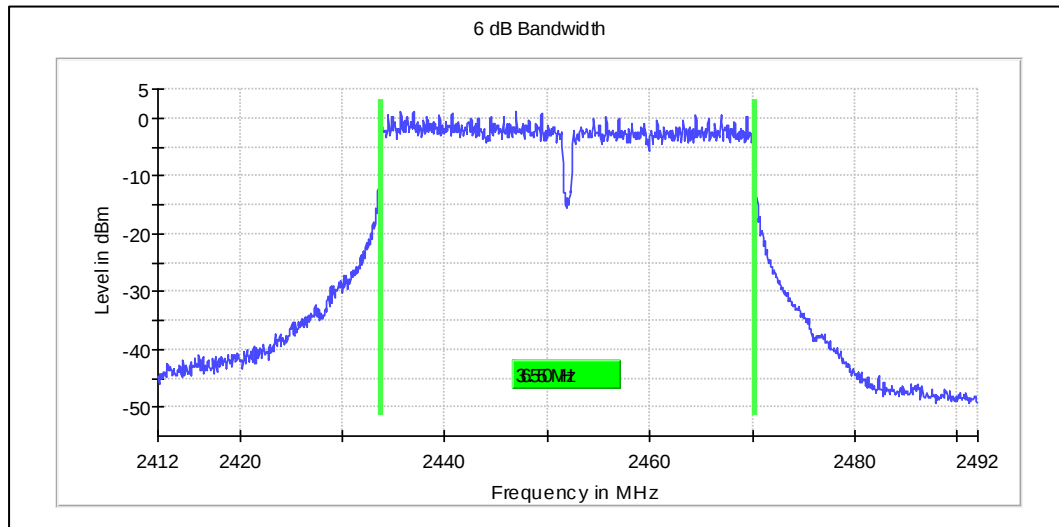
Data Rate: MCS8

Channel Frequency: 2422MHz



Data Rate: MCS8

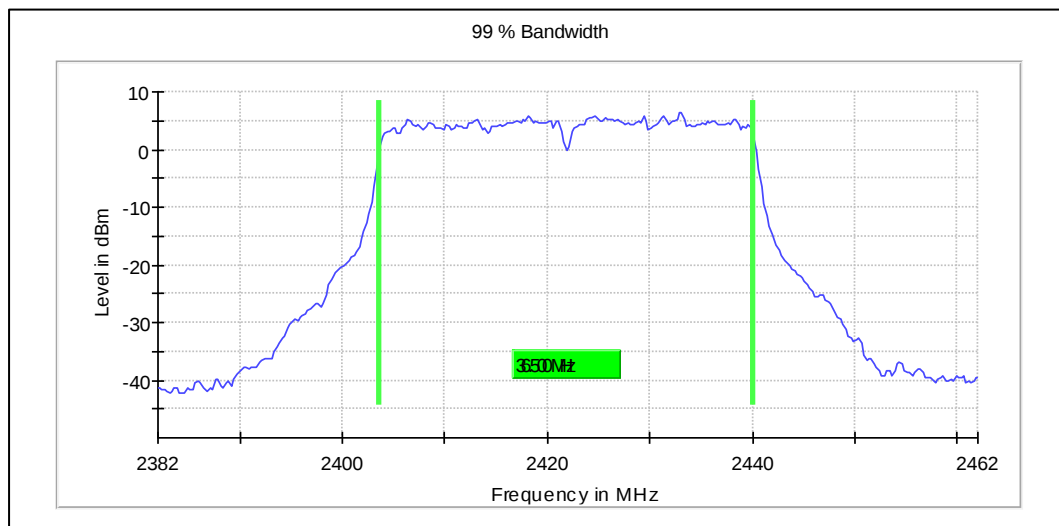
Channel Frequency: 2437MHz



Data Rate: MCS8

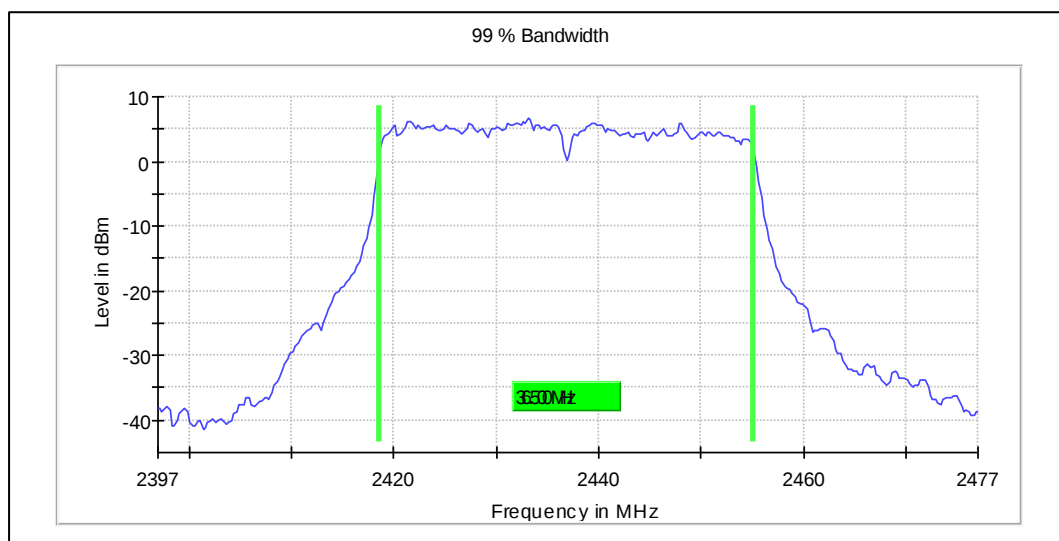
Channel Frequency: 2452MHz

Graphs for OCW 99 % bandwidth measurement



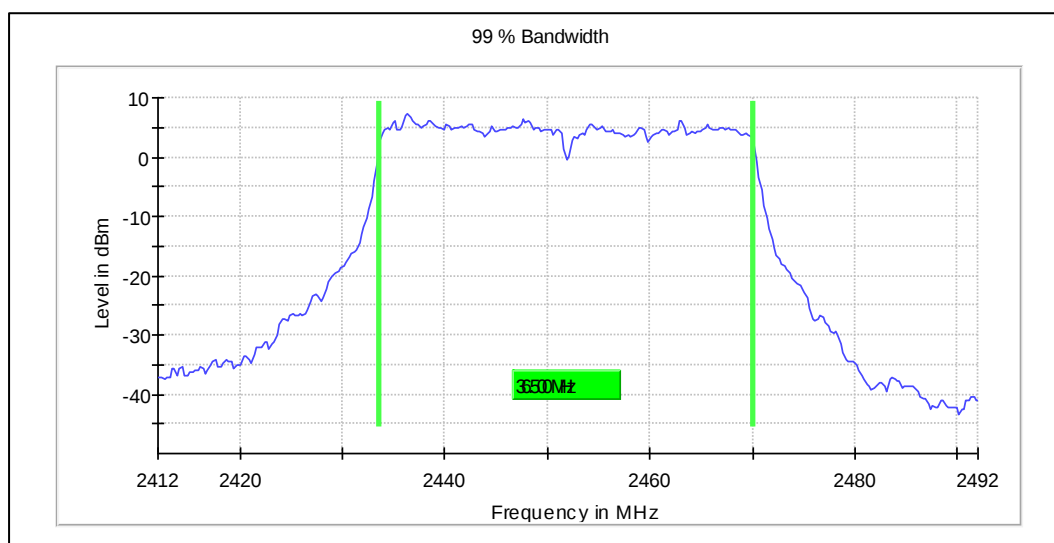
Data Rate: MCS8

Channel Frequency: 2422MHz



Data Rate: MCS8

Channel Frequency: 2437MHz



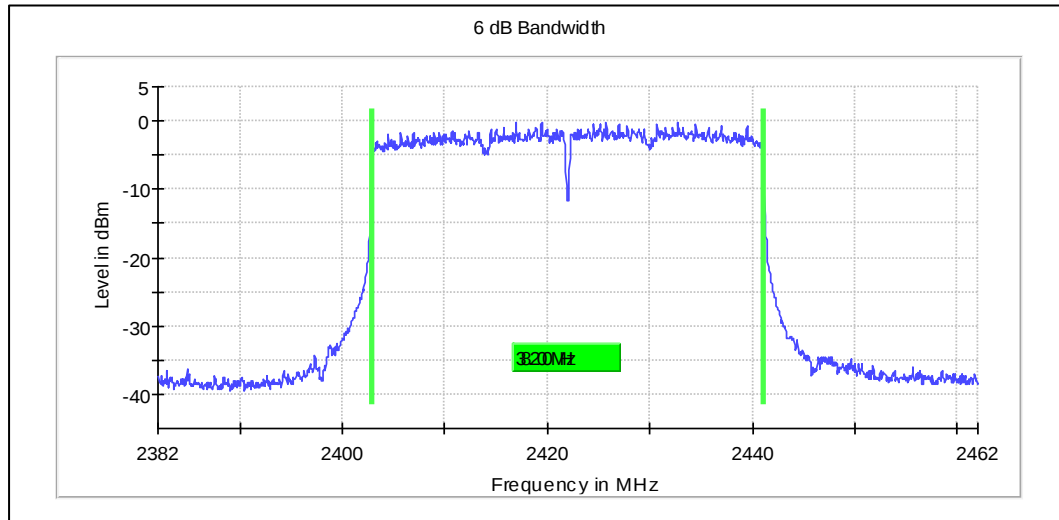
Data Rate: MCS8

Channel Frequency: 2452MHz

Modulation: 802.11ax_HE40

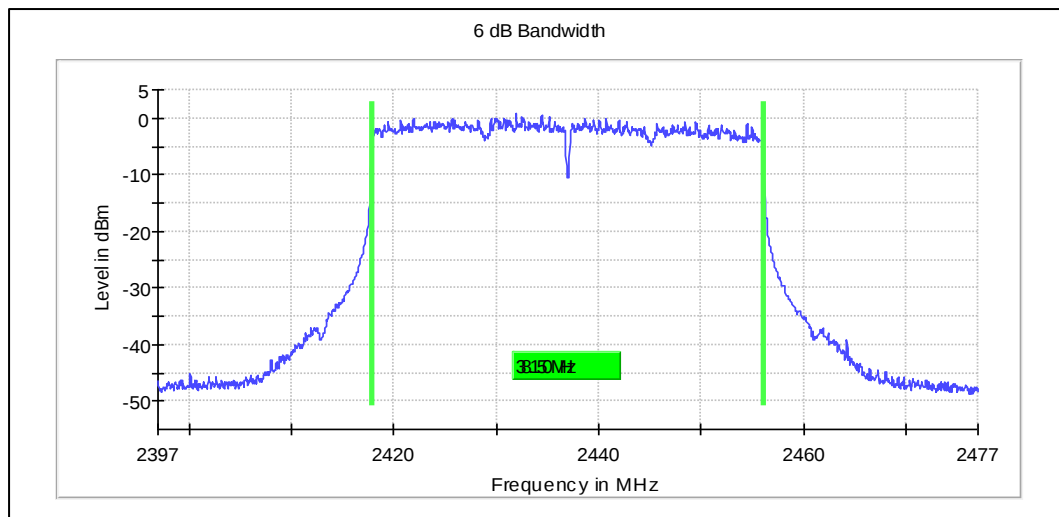
Data rate (Mbps)	Channel Frequency (MHz)	6 dB Bandwidth (MHz)	99% OBW (MHz)	Minimum Limit (MHz)
MCS0	2422	35.65	37.75	0.5
	2437	35.80	37.75	0.5
	2452	37.95	37.75	0.5
MCS11	2422	38.20	38.25	0.5
	2437	38.15	38.00	0.5
	2452	38.30	38.00	0.5

Graphs for 6 dB bandwidth measurement



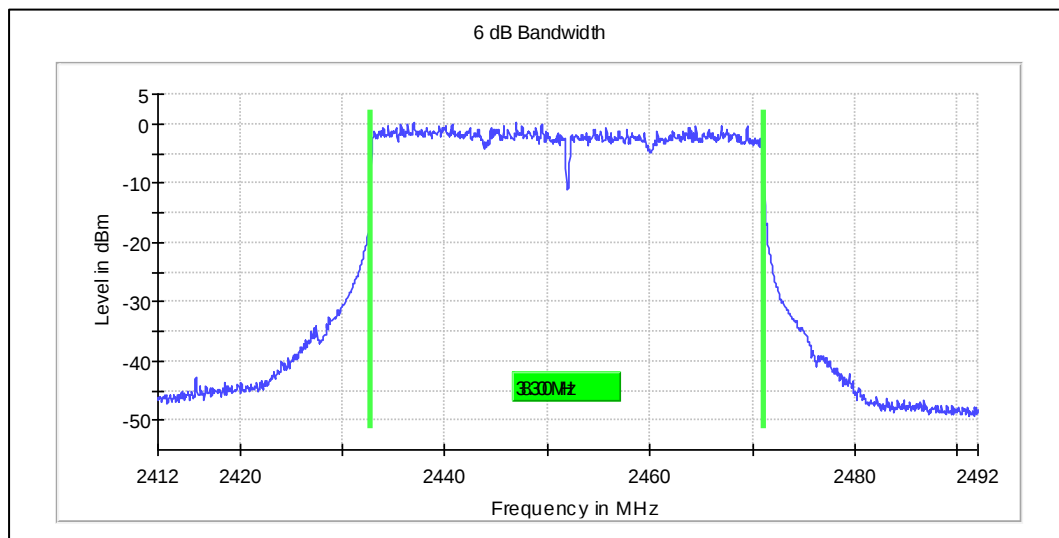
Data Rate: MCS11

Channel Frequency: 2422MHz



Data Rate: MCS11

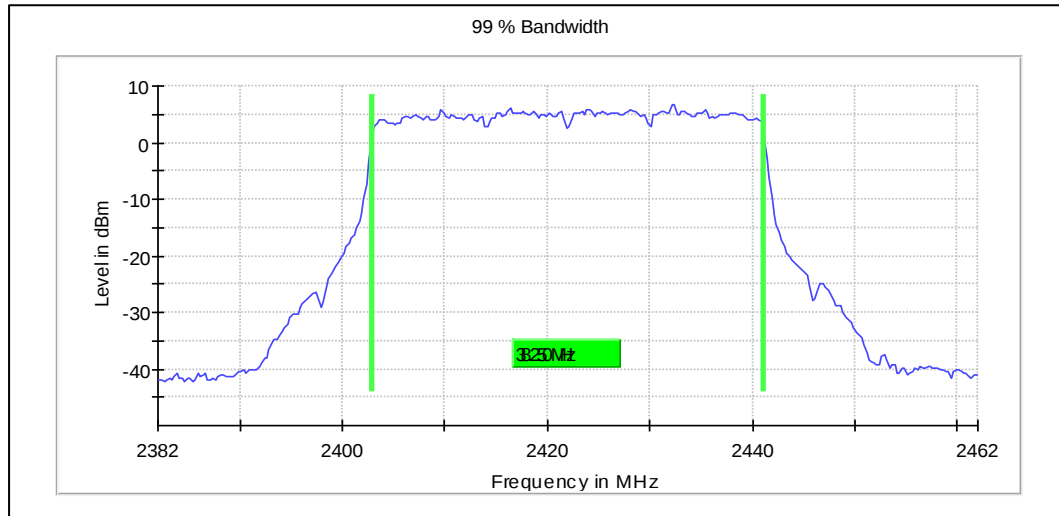
Channel Frequency: 2437MHz



Data Rate: MCS11

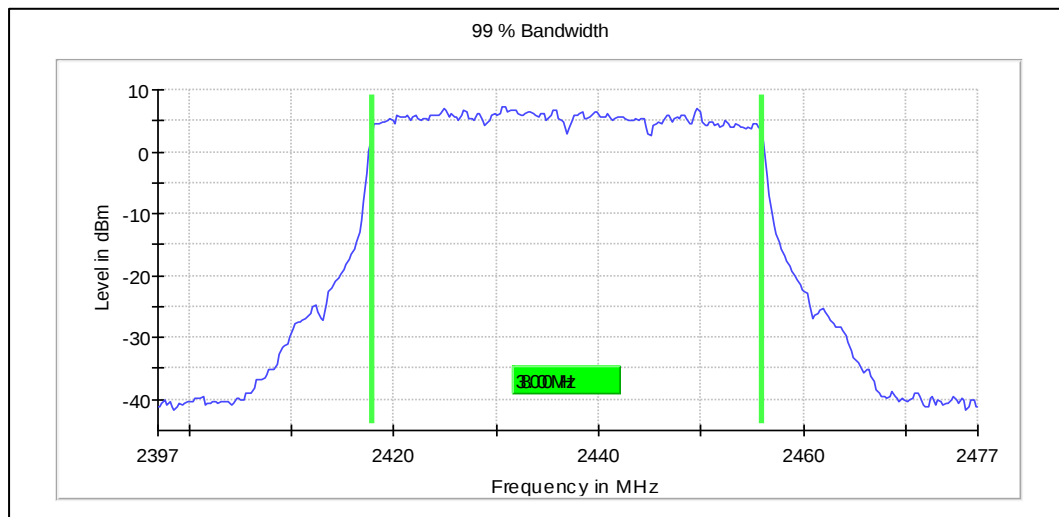
Channel Frequency: 2452MHz

Graphs for OCW 99 % bandwidth measurement



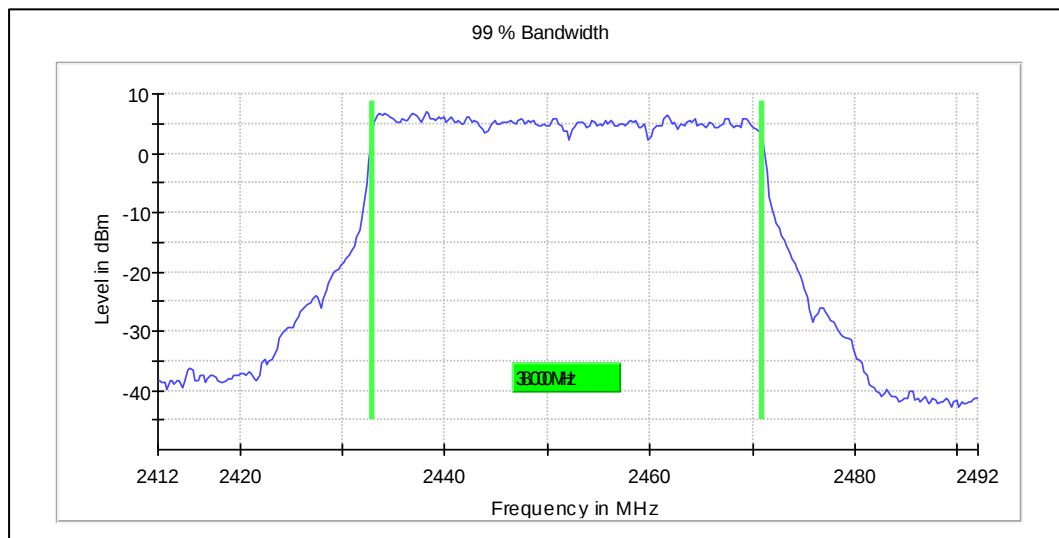
Data Rate: MCS11

Channel Frequency: 2422MHz



Data Rate: MCS11

Channel Frequency: 2437MHz



Data Rate: MCS11

Channel Frequency: 2452MHz

7.4 Emissions in non-restricted frequency bands and Conducted Spurious Emission

Result

Pass

Test Specification FCC part 15 Subpart C 15.247 (d)

Test Method Subclause 11.11 of ANSI C63.10

Measurement Bandwidth 100 kHz

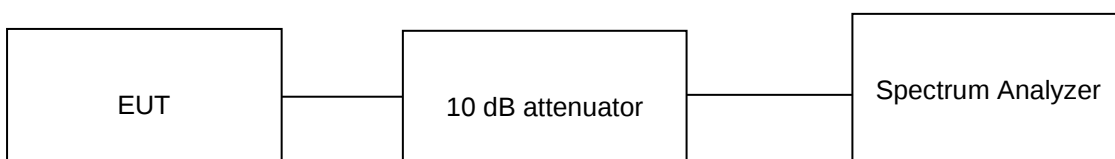
Detector Peak

Port of testing Antenna port

Requirement 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

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB

Test Method:



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.5 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

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Test results:

Note:

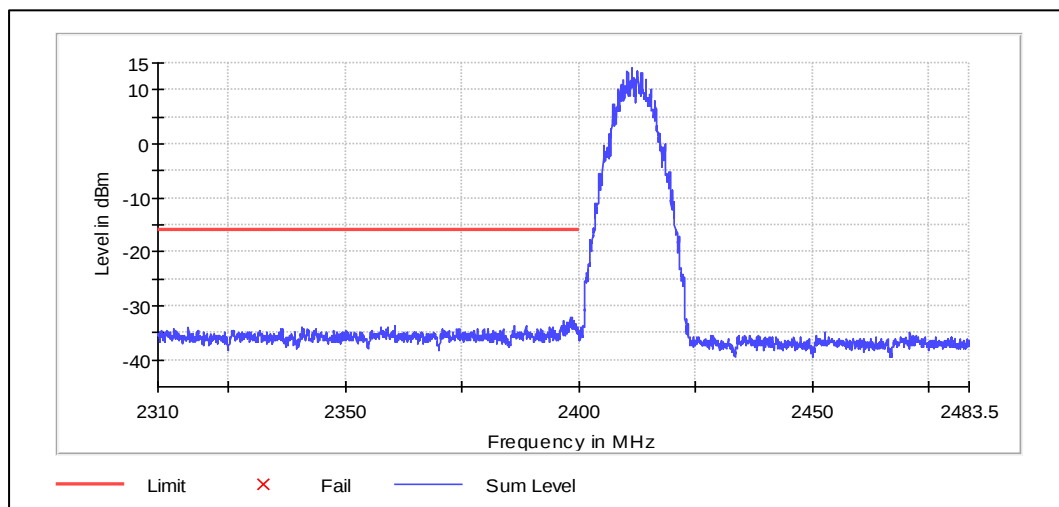
1. All the losses are included during measurement and final values are mentioned in the test report.

7.4.1 Out-Of-Band Emissions

Modulation: 802.11b

Data Rate 11Mbps

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2398.475000	-32.2	16.2	-16.0	PASS
2398.425000	-32.2	16.2	-16.0	PASS
2398.125000	-32.4	16.5	-16.0	PASS
2398.175000	-32.6	16.6	-16.0	PASS
2398.925000	-32.7	16.7	-16.0	PASS
2398.275000	-32.8	16.8	-16.0	PASS
2396.725000	-32.9	16.9	-16.0	PASS
2398.525000	-33.0	17.0	-16.0	PASS
2398.225000	-33.0	17.0	-16.0	PASS
2398.975000	-33.0	17.1	-16.0	PASS
2398.725000	-33.1	17.1	-16.0	PASS
2397.475000	-33.1	17.1	-16.0	PASS
2398.025000	-33.2	17.2	-16.0	PASS
2398.325000	-33.2	17.2	-16.0	PASS
2396.675000	-33.3	17.3	-16.0	PASS



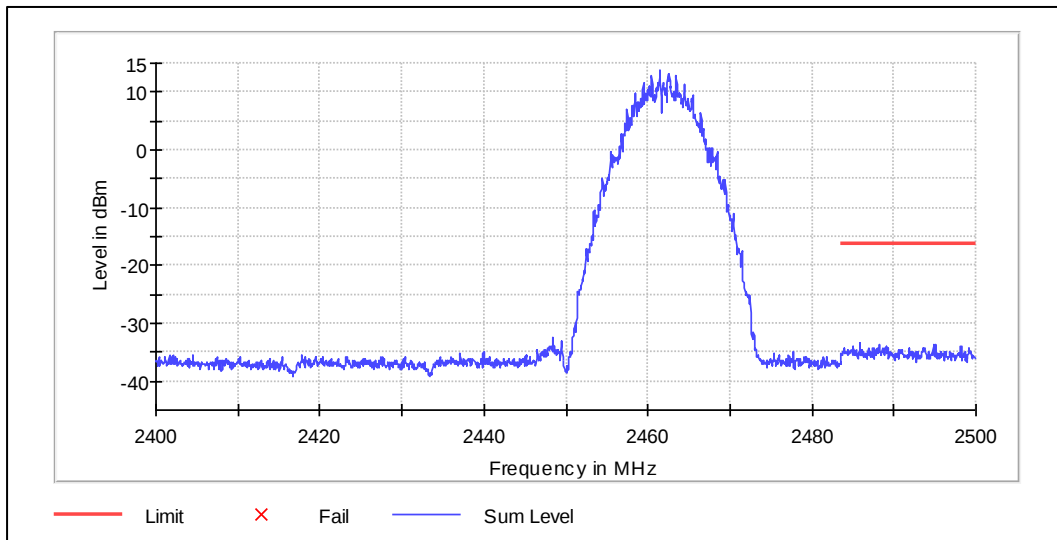
Channel Frequency 2412MHz

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2485.825000	-33.3	17.0	-16.3	PASS
2485.875000	-33.5	17.1	-16.3	PASS
2495.075000	-33.5	17.2	-16.3	PASS
2495.125000	-33.6	17.3	-16.3	PASS
2488.175000	-33.7	17.4	-16.3	PASS
2494.825000	-33.8	17.5	-16.3	PASS
2498.225000	-33.9	17.6	-16.3	PASS
2498.175000	-33.9	17.6	-16.3	PASS
2485.025000	-34.0	17.7	-16.3	PASS
2489.025000	-34.0	17.7	-16.3	PASS
2488.225000	-34.1	17.7	-16.3	PASS
2494.775000	-34.1	17.8	-16.3	PASS
2489.075000	-34.1	17.8	-16.3	PASS
2488.625000	-34.1	17.8	-16.3	PASS
2491.825000	-34.2	17.8	-16.3	PASS

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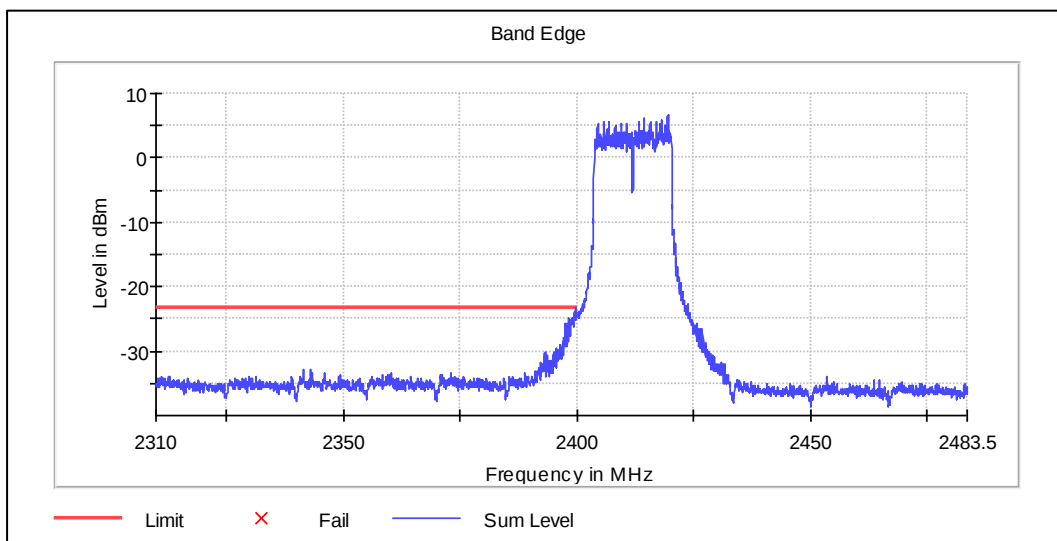


Channel Frequency 2462MHz

Modulation: 802.11g

Data Rate 54Mbps

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-23.4	0.1	-23.2	PASS
2399.775000	-23.4	0.2	-23.2	PASS
2399.675000	-23.7	0.5	-23.2	PASS
2399.725000	-23.8	0.6	-23.2	PASS
2399.575000	-23.9	0.7	-23.2	PASS
2399.875000	-24.0	0.8	-23.2	PASS
2399.525000	-24.1	0.9	-23.2	PASS
2399.975000	-24.2	1.0	-23.2	PASS
2399.925000	-24.5	1.3	-23.2	PASS
2399.475000	-24.5	1.3	-23.2	PASS
2399.175000	-24.9	1.7	-23.2	PASS
2398.225000	-24.9	1.7	-23.2	PASS
2399.425000	-24.9	1.7	-23.2	PASS
2399.125000	-24.9	1.7	-23.2	PASS
2399.325000	-25.0	1.8	-23.2	PASS



Channel Frequency 2412MHz

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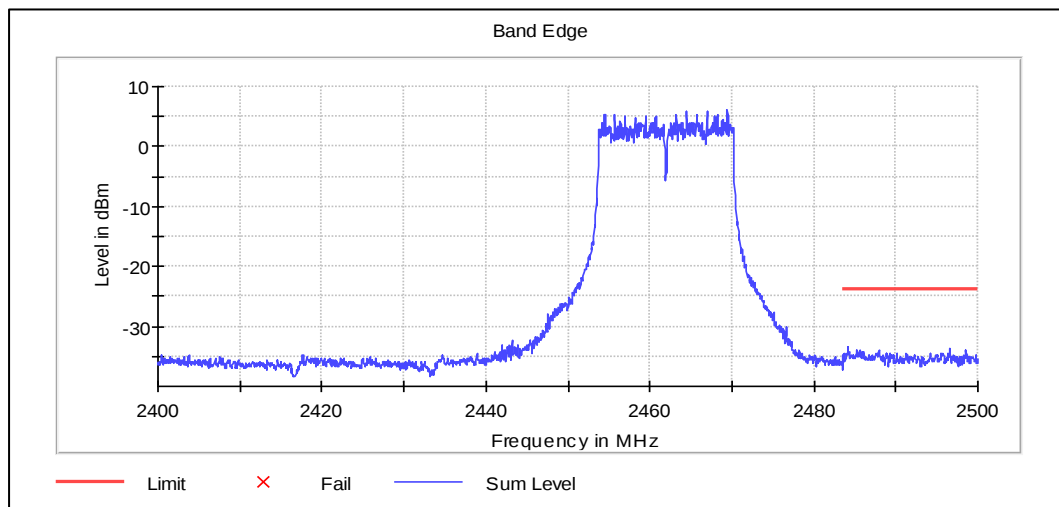
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Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.125000	-33.5	9.8	-23.8	PASS
2484.175000	-33.5	9.8	-23.8	PASS
2496.625000	-33.7	10.0	-23.8	PASS
2496.575000	-33.9	10.2	-23.8	PASS
2485.575000	-34.0	10.2	-23.8	PASS
2498.525000	-34.0	10.2	-23.8	PASS
2485.225000	-34.0	10.3	-23.8	PASS
2487.925000	-34.0	10.3	-23.8	PASS
2485.625000	-34.0	10.3	-23.8	PASS
2487.975000	-34.1	10.3	-23.8	PASS
2498.575000	-34.1	10.4	-23.8	PASS
2496.675000	-34.1	10.4	-23.8	PASS
2488.025000	-34.1	10.4	-23.8	PASS
2484.325000	-34.2	10.5	-23.8	PASS
2484.275000	-34.2	10.5	-23.8	PASS



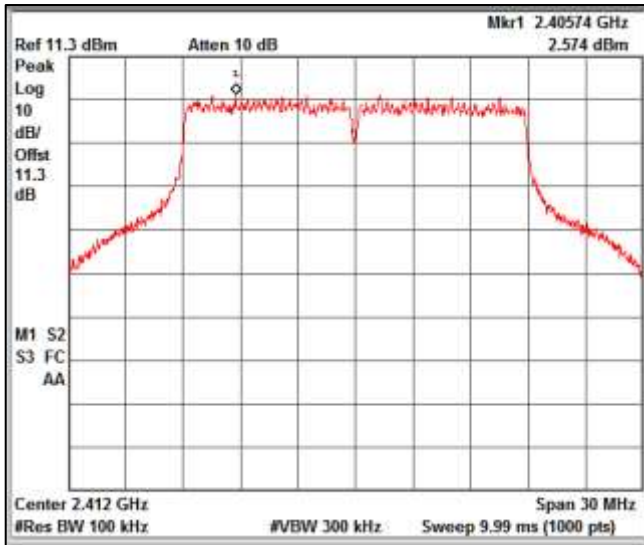
Channel Frequency 2462MHz

Modulation: 802.11n_HT20

Data Rate MCS7

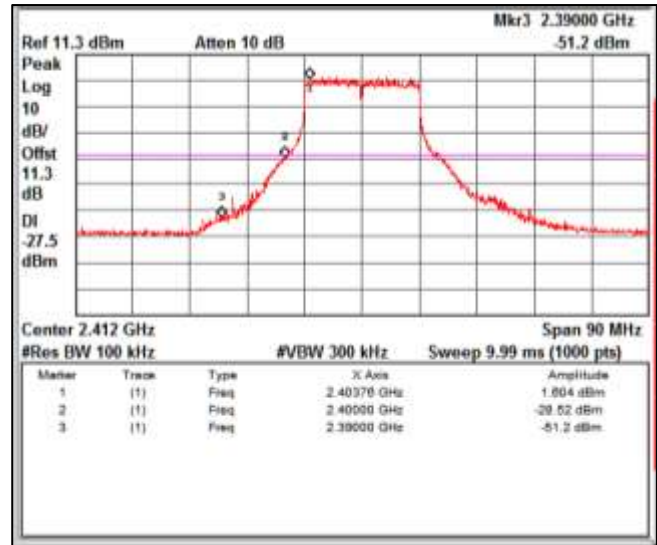
Channel Frequency (MHz)	Band edge frequency (MHz)	Value at band edge (A) (dBm)	Reference value (B) (dBm)	A-B (dBc)	Minimum Limit (dBc)
2412.00	2400.00	-28.52	2.57	-31.09	-30
2462.00	2483.50	-51.98	2.06	-54.04	-30

Refrence Plot

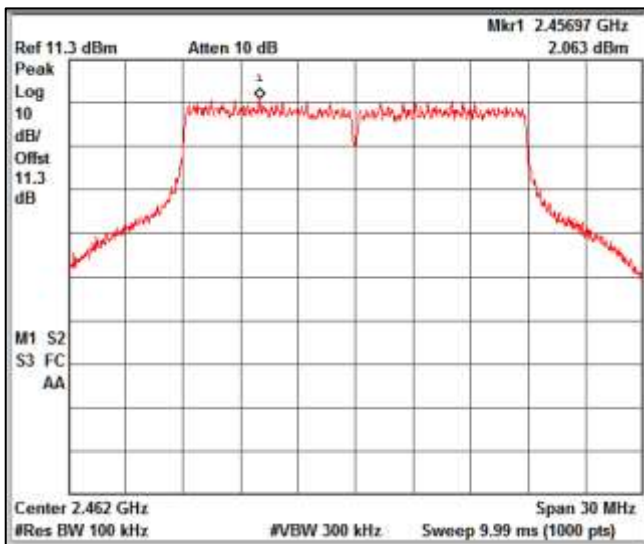


Channel Frequency 2412MHz

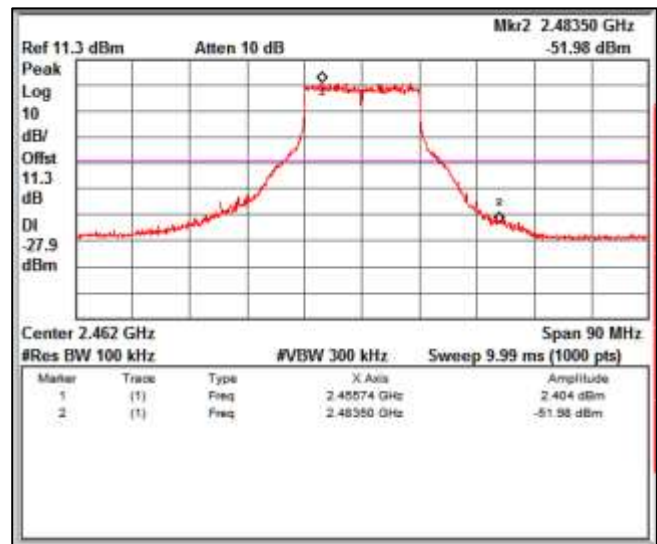
Band Edge Plot



Channel Frequency 2412MHz



Channel Frequency 2462MHz



Channel Frequency 2462MHz

Prüfbericht - Nr.:
Test Report No.:

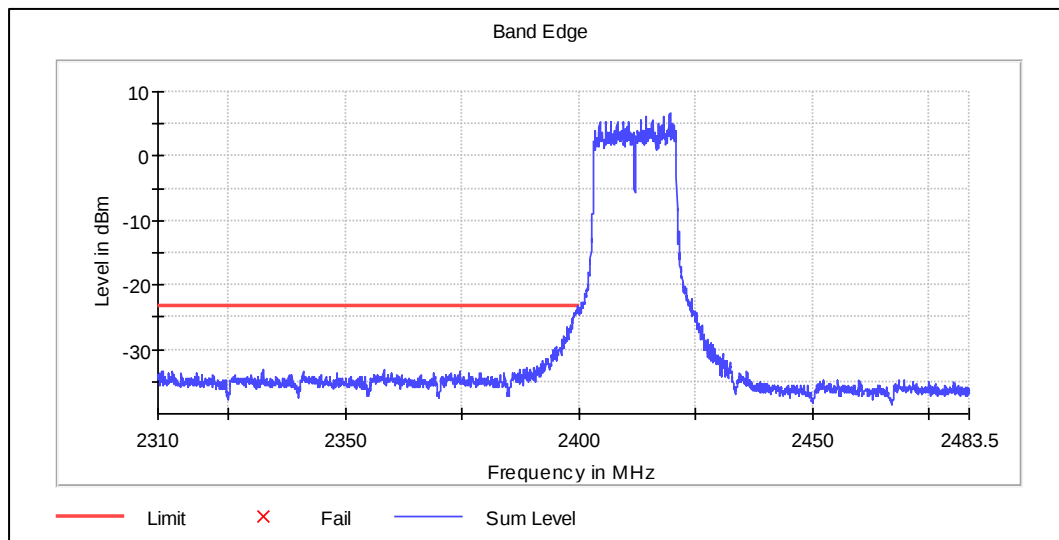
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Modulation: 802.11ac-VHT_20

Data Rate : MCS8

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-23.3	0.1	-23.2	PASS
2399.925000	-23.6	0.4	-23.2	PASS
2399.975000	-23.6	0.4	-23.2	PASS
2399.775000	-23.7	0.5	-23.2	PASS
2399.575000	-23.8	0.6	-23.2	PASS
2399.875000	-23.9	0.7	-23.2	PASS
2399.525000	-23.9	0.7	-23.2	PASS
2399.725000	-24.0	0.8	-23.2	PASS
2399.375000	-24.0	0.8	-23.2	PASS
2399.675000	-24.1	0.9	-23.2	PASS
2399.425000	-24.2	1.0	-23.2	PASS
2399.075000	-24.3	1.1	-23.2	PASS
2399.475000	-24.3	1.1	-23.2	PASS
2399.125000	-24.4	1.2	-23.2	PASS
2399.625000	-24.5	1.3	-23.2	PASS



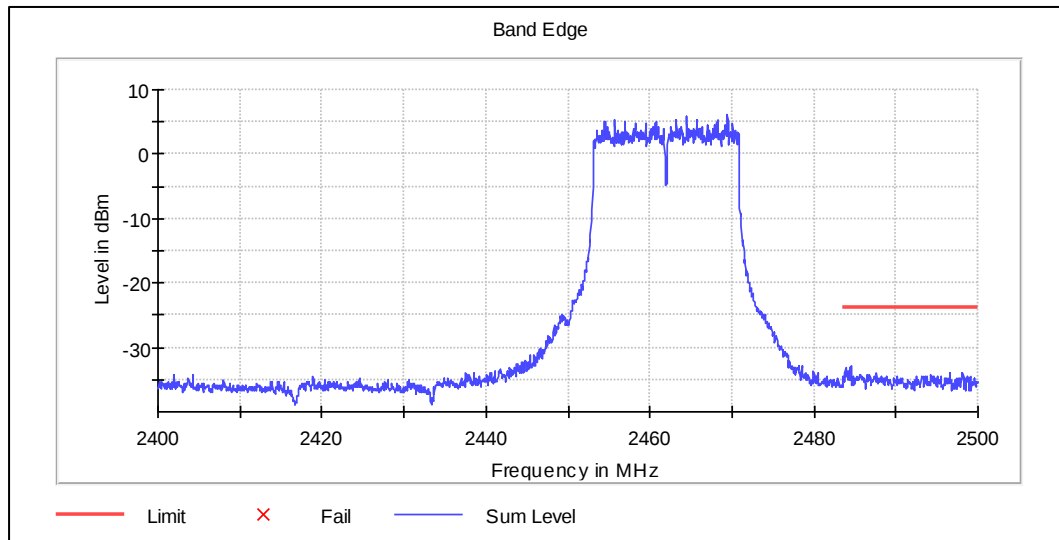
Channel Frequency 2412 MHz

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.525000	-32.9	9.1	-23.8	PASS
2484.475000	-33.0	9.3	-23.8	PASS
2483.875000	-33.2	9.4	-23.8	PASS
2483.925000	-33.5	9.7	-23.8	PASS
2484.575000	-33.6	9.8	-23.8	PASS
2484.175000	-33.7	9.9	-23.8	PASS
2484.125000	-33.8	10.0	-23.8	PASS
2498.025000	-33.9	10.1	-23.8	PASS
2484.425000	-33.9	10.1	-23.8	PASS
2487.625000	-33.9	10.2	-23.8	PASS
2483.825000	-34.0	10.2	-23.8	PASS
2484.025000	-34.0	10.2	-23.8	PASS
2496.575000	-34.1	10.3	-23.8	PASS
2498.175000	-34.1	10.3	-23.8	PASS
2487.675000	-34.1	10.3	-23.8	PASS

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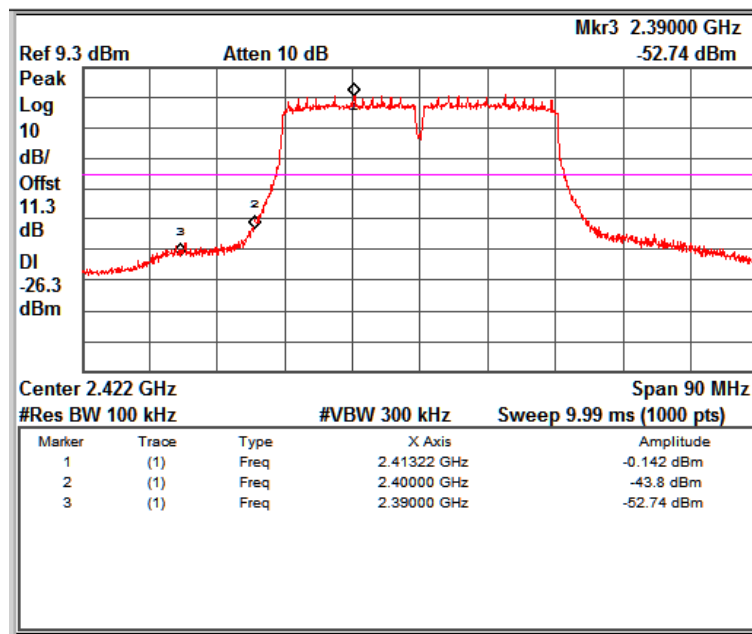
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Channel Frequency 2462MHz

Modulation: 802.11n_HT40

Data Rate MCS7



Channel Frequency 2422MHz

Prüfbericht - Nr.:

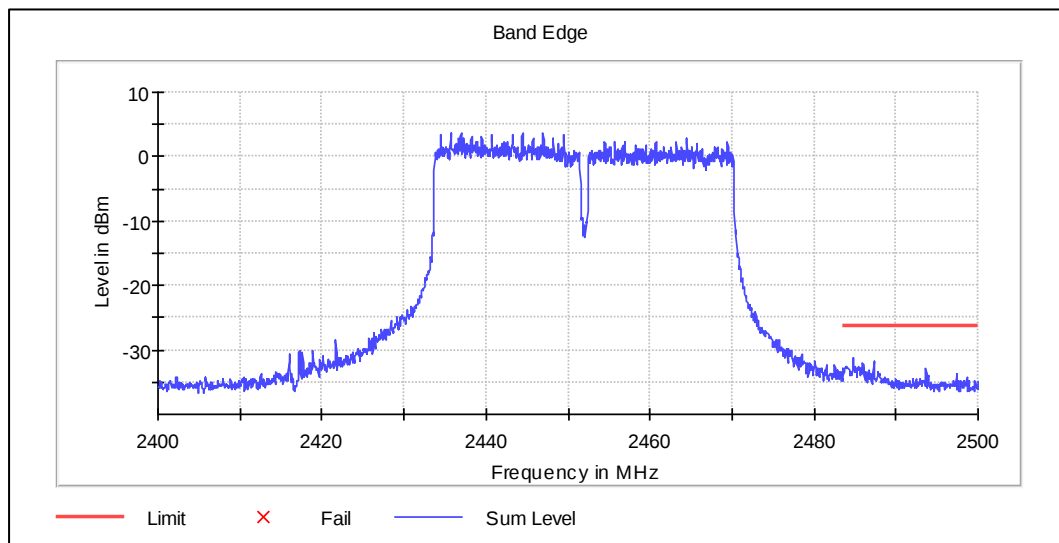
Test Report No.:

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Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.775000	-31.3	5.1	-26.2	PASS
2484.825000	-31.4	5.1	-26.2	PASS
2487.325000	-31.7	5.5	-26.2	PASS
2487.275000	-31.9	5.7	-26.2	PASS
2485.925000	-32.1	5.9	-26.2	PASS
2485.975000	-32.4	6.2	-26.2	PASS
2487.375000	-32.5	6.3	-26.2	PASS
2485.375000	-32.6	6.4	-26.2	PASS
2483.875000	-32.6	6.4	-26.2	PASS
2485.075000	-32.6	6.4	-26.2	PASS
2485.875000	-32.7	6.5	-26.2	PASS
2485.425000	-32.7	6.5	-26.2	PASS
2484.025000	-32.7	6.5	-26.2	PASS
2485.675000	-32.7	6.5	-26.2	PASS
2484.225000	-32.8	6.6	-26.2	PASS



Prüfbericht - Nr.:
Test Report No.:

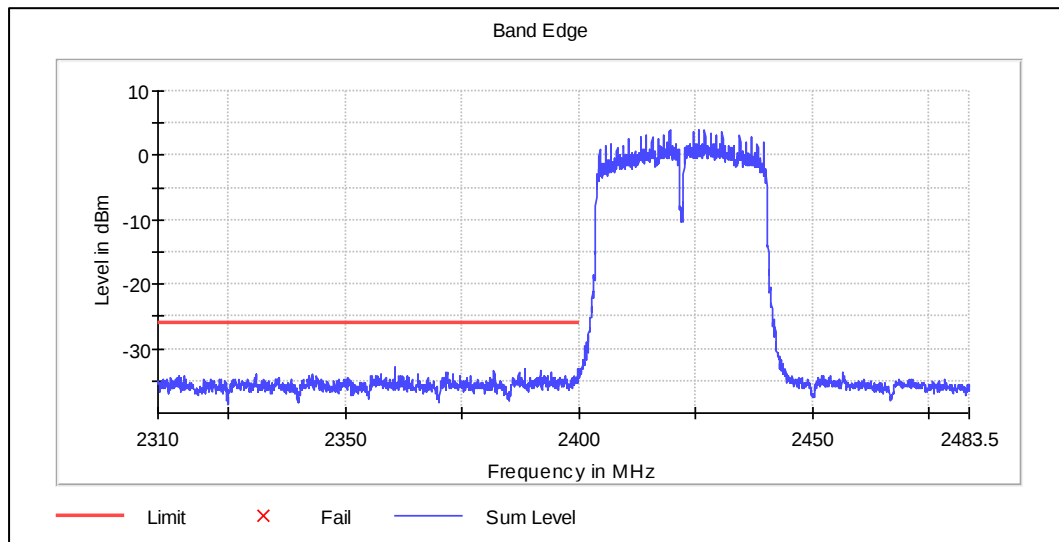
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Modulation: 802.11ac_VHT40

Data Rate : MCS0

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2360.625000	-32.8	6.8	-25.9	PASS
2399.975000	-33.2	7.2	-25.9	PASS
2360.675000	-33.2	7.2	-25.9	PASS
2399.925000	-33.2	7.3	-25.9	PASS
2388.425000	-33.3	7.3	-25.9	PASS
2399.875000	-33.3	7.4	-25.9	PASS
2391.875000	-33.4	7.5	-25.9	PASS
2381.875000	-33.4	7.5	-25.9	PASS
2388.475000	-33.5	7.5	-25.9	PASS
2360.575000	-33.5	7.6	-25.9	PASS
2391.775000	-33.7	7.8	-25.9	PASS
2387.175000	-33.7	7.8	-25.9	PASS
2394.175000	-33.8	7.8	-25.9	PASS
2371.625000	-33.8	7.8	-25.9	PASS
2387.225000	-33.8	7.8	-25.9	PASS



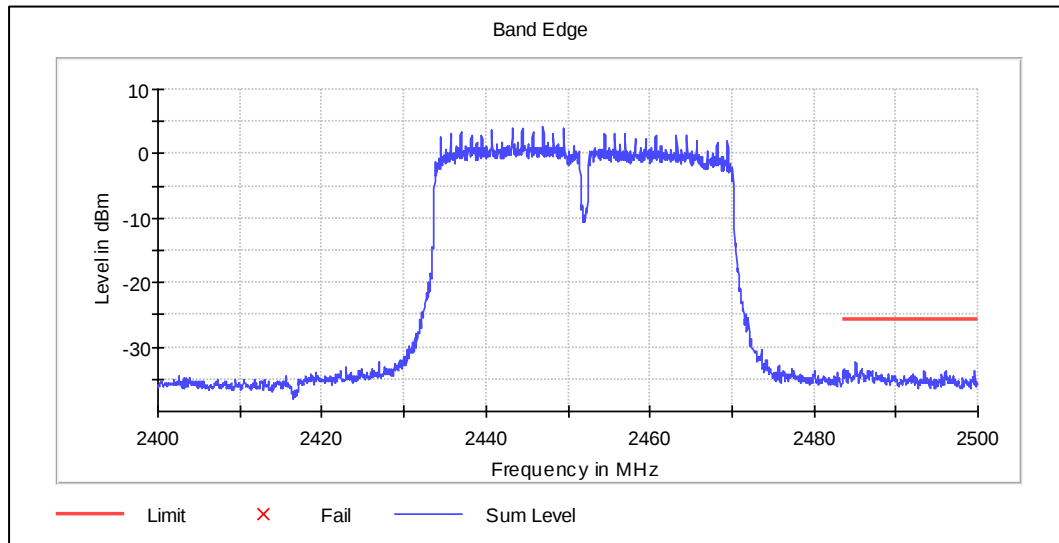
Channel Frequency 2422MHz

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2485.075000	-32.4	6.5	-25.8	PASS
2485.125000	-32.6	6.8	-25.8	PASS
2485.025000	-33.5	7.6	-25.8	PASS
2483.625000	-33.5	7.7	-25.8	PASS
2485.875000	-33.5	7.7	-25.8	PASS
2485.775000	-33.6	7.7	-25.8	PASS
2496.075000	-33.6	7.8	-25.8	PASS
2486.825000	-33.6	7.8	-25.8	PASS
2487.075000	-33.7	7.8	-25.8	PASS
2483.575000	-33.7	7.8	-25.8	PASS
2485.725000	-33.7	7.8	-25.8	PASS
2486.575000	-33.7	7.8	-25.8	PASS
2486.525000	-33.7	7.9	-25.8	PASS
2499.625000	-33.8	7.9	-25.8	PASS
2484.175000	-33.8	7.9	-25.8	PASS

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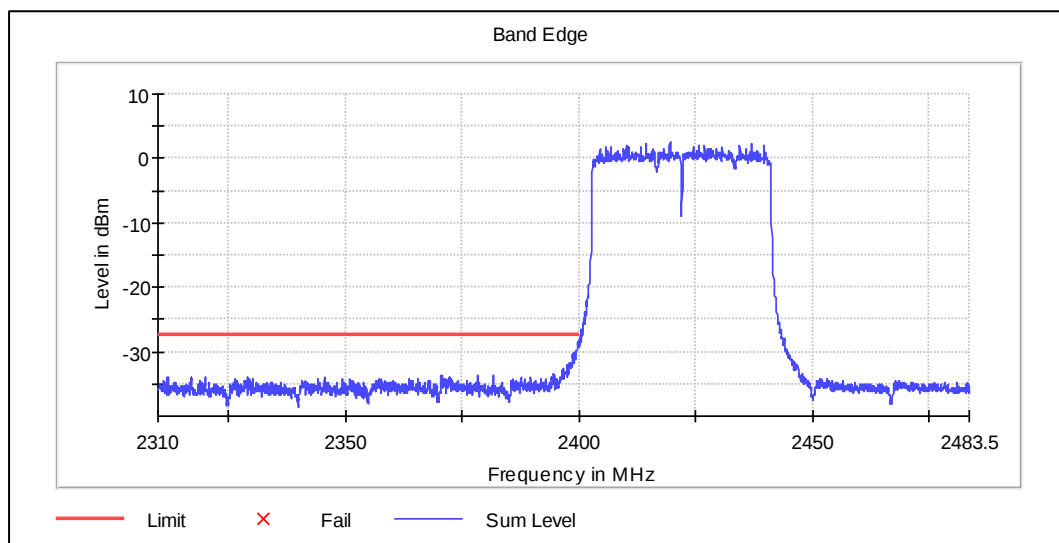


Channel Frequency 2452MHz

Modulation: 802.11ax_HE40

Data Rate : MCS11

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-28.5	1.1	-27.4	PASS
2399.875000	-28.6	1.2	-27.4	PASS
2399.775000	-28.8	1.4	-27.4	PASS
2399.925000	-29.0	1.6	-27.4	PASS
2399.675000	-29.0	1.6	-27.4	PASS
2399.725000	-29.1	1.7	-27.4	PASS
2399.625000	-29.1	1.7	-27.4	PASS
2399.975000	-29.3	1.9	-27.4	PASS
2399.575000	-29.5	2.2	-27.4	PASS
2399.425000	-29.9	2.5	-27.4	PASS
2399.075000	-30.2	2.8	-27.4	PASS
2399.525000	-30.2	2.8	-27.4	PASS
2399.475000	-30.2	2.9	-27.4	PASS
2399.125000	-30.3	2.9	-27.4	PASS
2398.625000	-30.3	3.0	-27.4	PASS



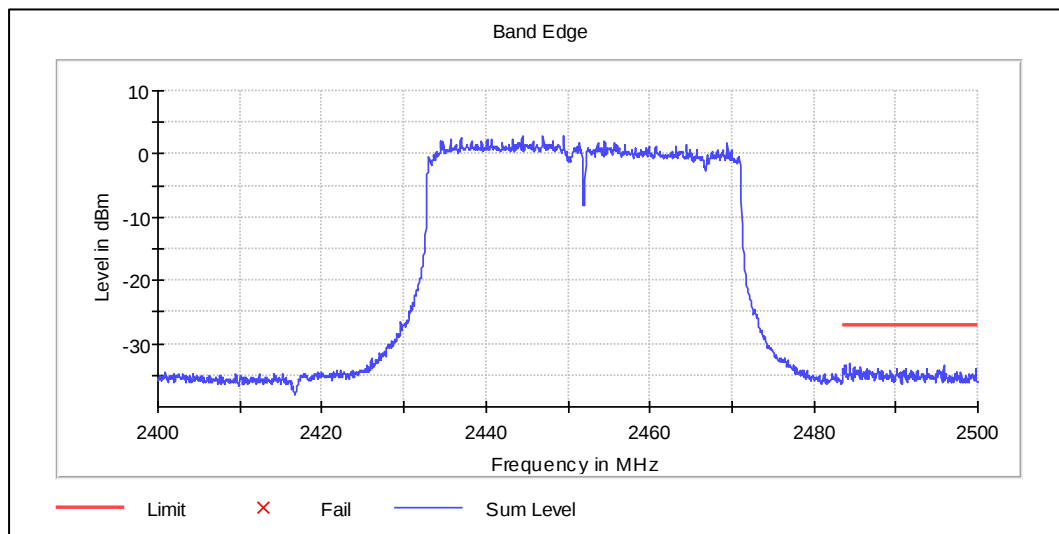
Channel Frequency 2422MHz

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Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.375000	-33.0	5.9	-27.1	PASS
2484.425000	-33.4	6.2	-27.1	PASS
2483.875000	-33.4	6.2	-27.1	PASS
2483.825000	-33.4	6.3	-27.1	PASS
2484.325000	-33.4	6.3	-27.1	PASS
2495.825000	-33.5	6.3	-27.1	PASS
2495.875000	-33.5	6.4	-27.1	PASS
2484.925000	-33.6	6.4	-27.1	PASS
2485.725000	-33.8	6.7	-27.1	PASS
2491.225000	-33.8	6.7	-27.1	PASS
2483.525000	-33.9	6.8	-27.1	PASS
2485.675000	-33.9	6.8	-27.1	PASS
2493.825000	-33.9	6.8	-27.1	PASS
2491.275000	-34.0	6.9	-27.1	PASS
2490.125000	-34.0	6.9	-27.1	PASS



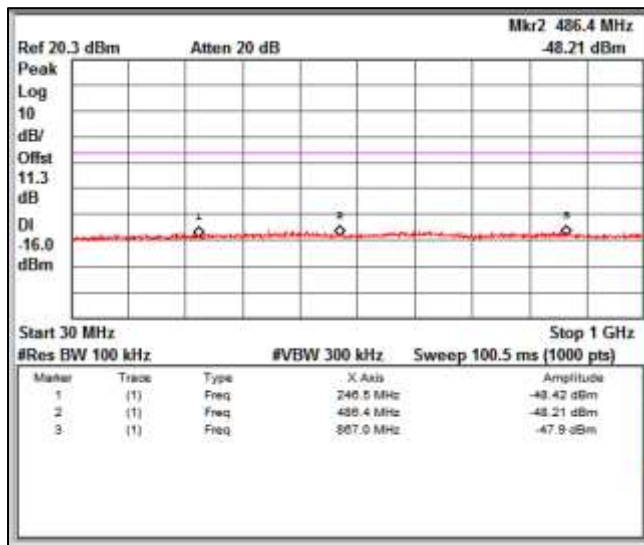
Channel Frequency 2452MHz

Prüfbericht - Nr.:
Test Report No.:

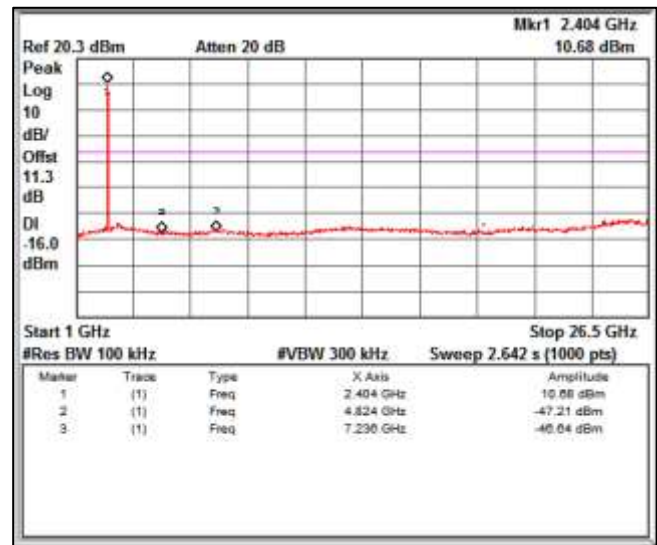
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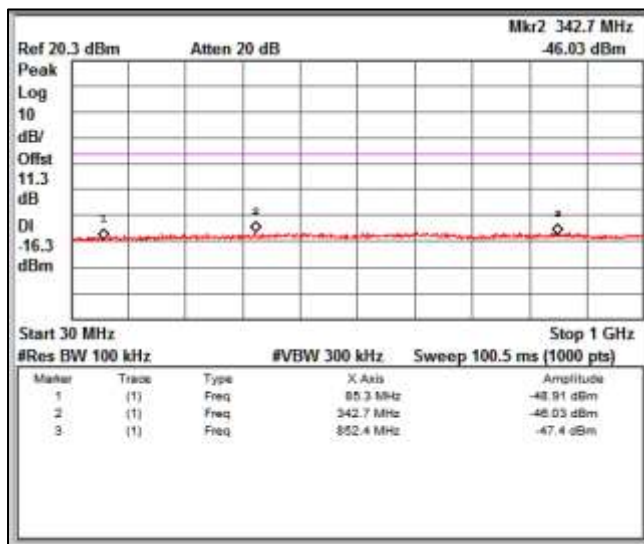
Modulation: 802.11b
Data Rate 11Mbps



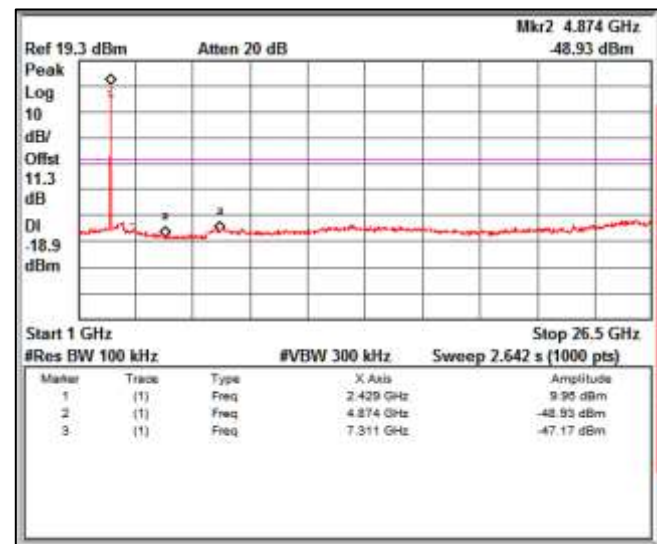
Channel Frequency 2412MHz Frequency Range 30MHz - 1GHz



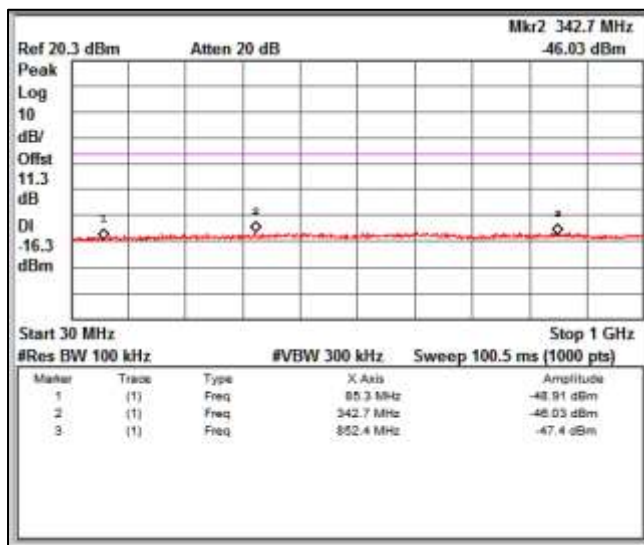
Channel Frequency 2412MHz Frequency Range 1GHz - 26.5GHz



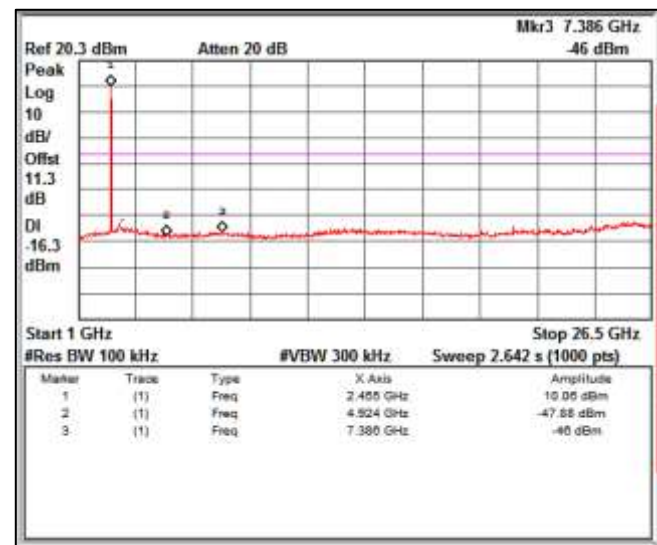
Channel Frequency 2437MHz Frequency Range 30MHz - 1GHz



Channel Frequency 2437MHz Frequency Range 1GHz - 26.5GHz



Channel Frequency 2462MHz Frequency Range 30MHz - 1GHz



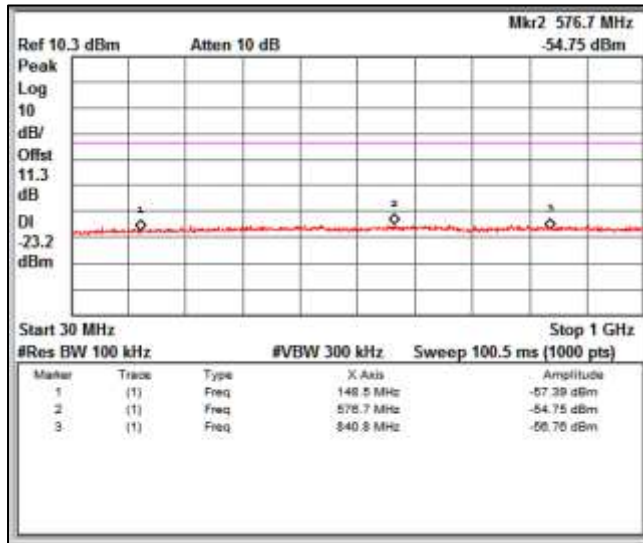
Channel Frequency 2462MHz Frequency Range 1GHz - 26.5GHz

Prüfbericht - Nr.:
Test Report No.:

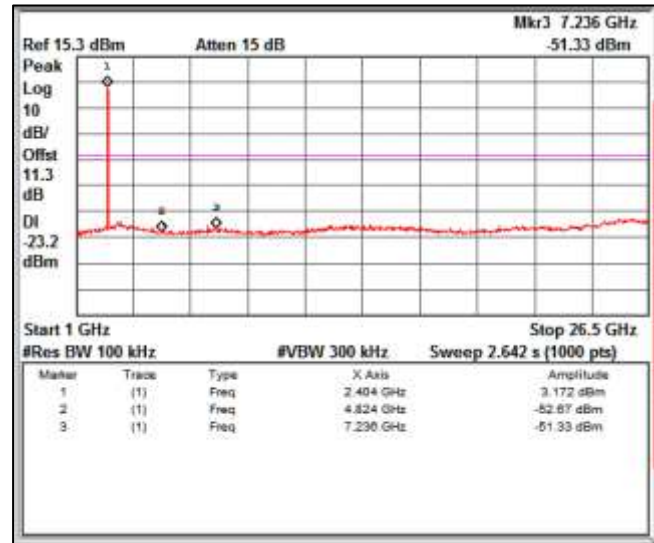
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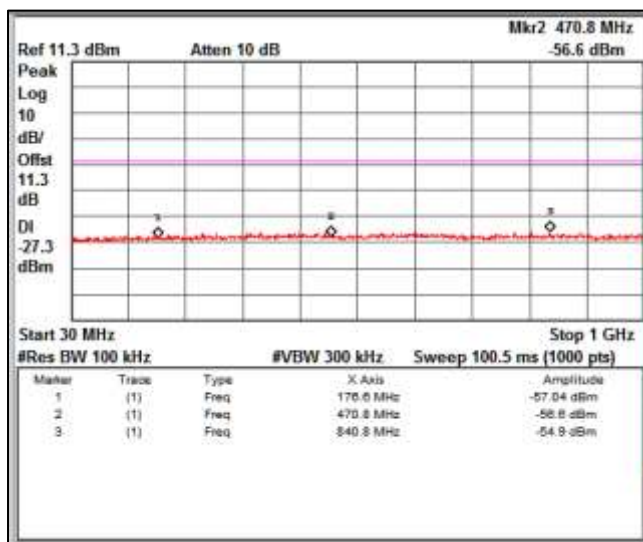
Modulation: 802.11g
Data Rate : 54Mbps



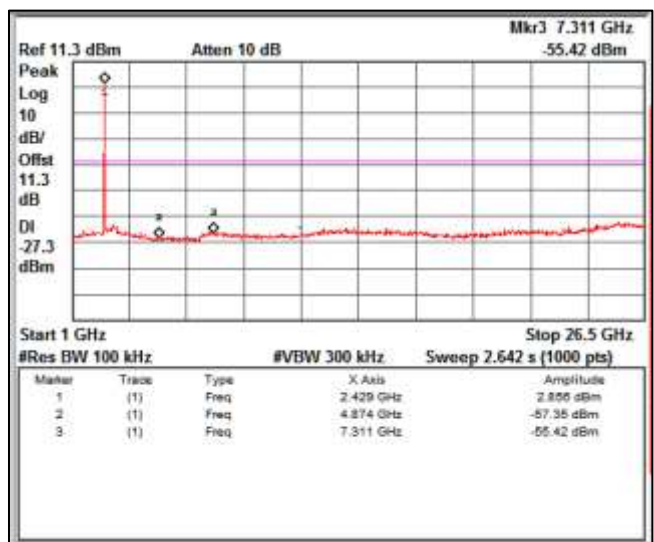
Channel Frequency 2412MHz Frequency Range 30MHz -1GHz



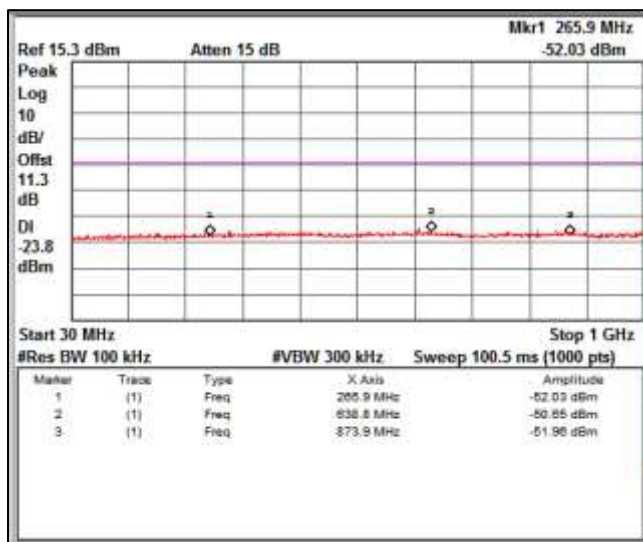
Channel Frequency 2412MHz Frequency Range 1GHz -26.5GHz



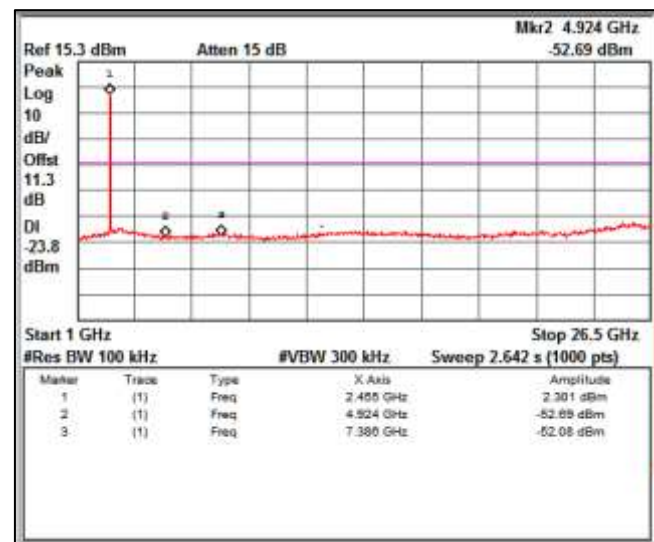
Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2462MHz Frequency Range 30MHz -1GHz



Channel Frequency 2462MHz Frequency Range 1GHz -26.5GHz

Prüfbericht - Nr.:

Test Report No.:

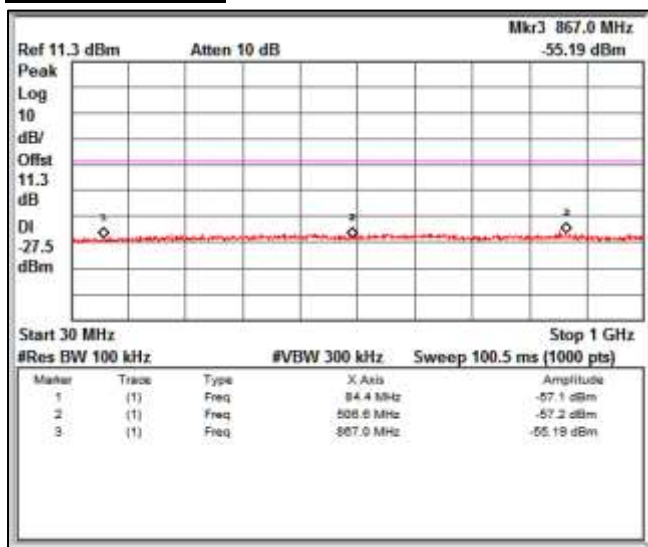
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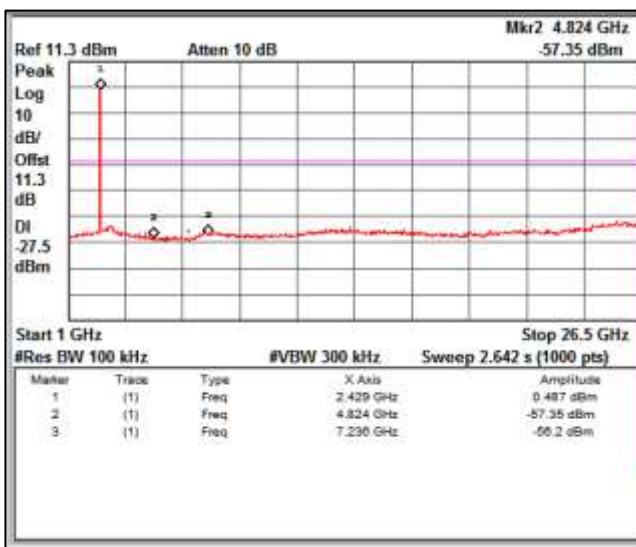
Modulation: 802.11n-HT_20

Data Rate : MCS7



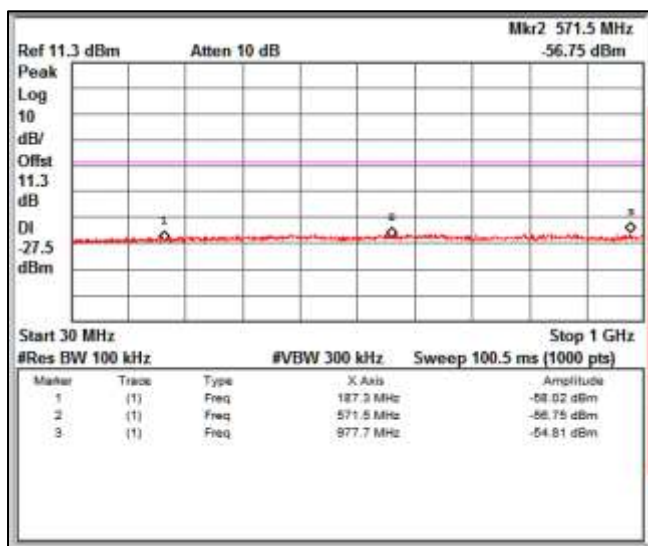
Channel Frequency 2412MHz

Frequency Range 30MHz -1GHz



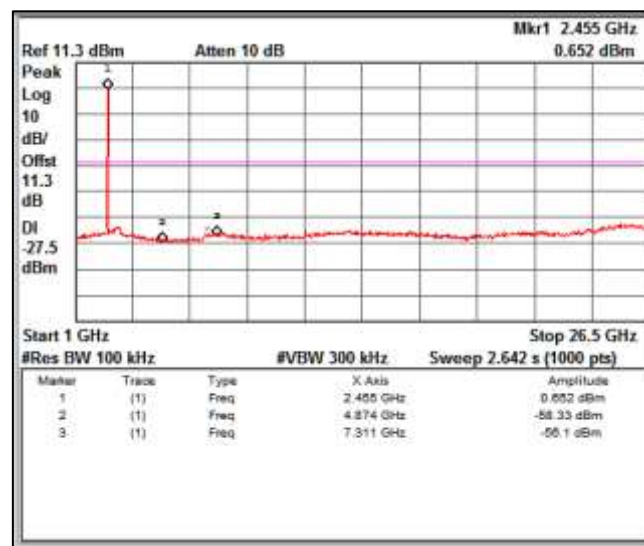
Channel Frequency 2412MHz

Frequency Range 1GHz -26.5GHz



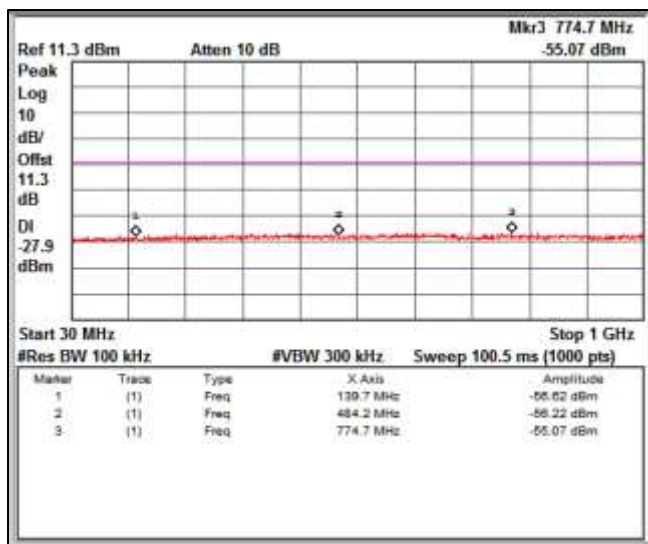
Channel Frequency 2437MHz

Frequency Range 30MHz -1GHz



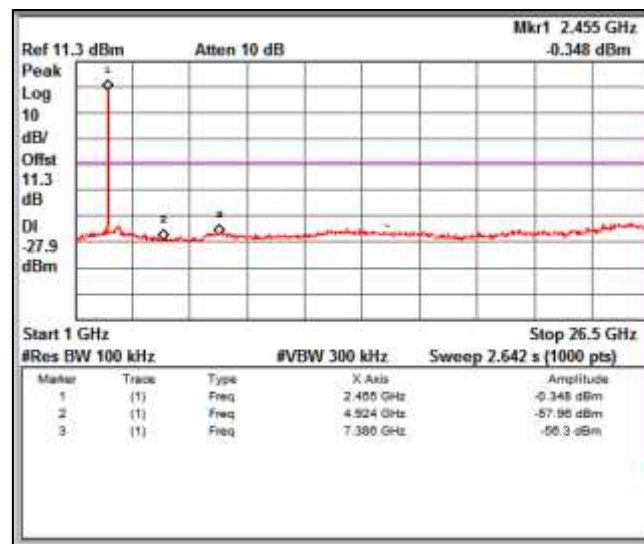
Channel Frequency 2437MHz

Frequency Range 1GHz -26.5GHz



Channel Frequency 2462MHz

Frequency Range 30MHz -1GHz



Channel Frequency 2462MHz

Frequency Range 1GHz -26.5GHz

Prüfbericht - Nr.:

Test Report No.:

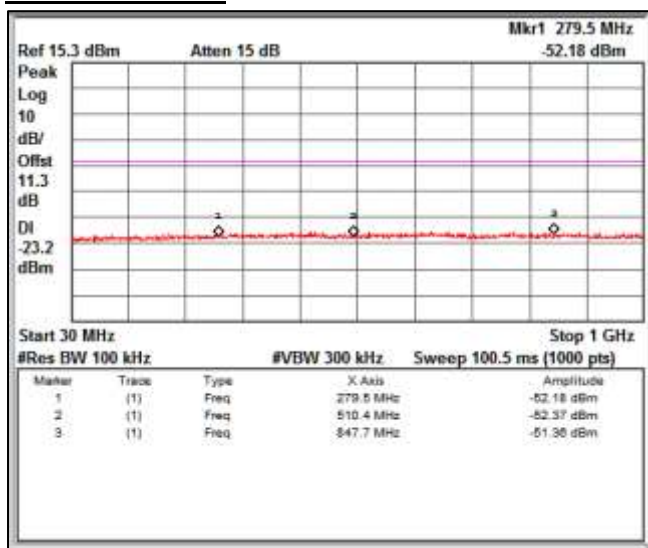
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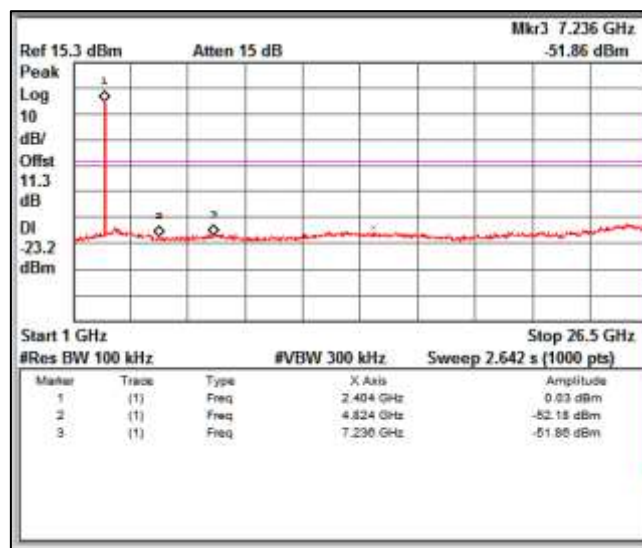
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Modulation: 802.11ac-VHT_20

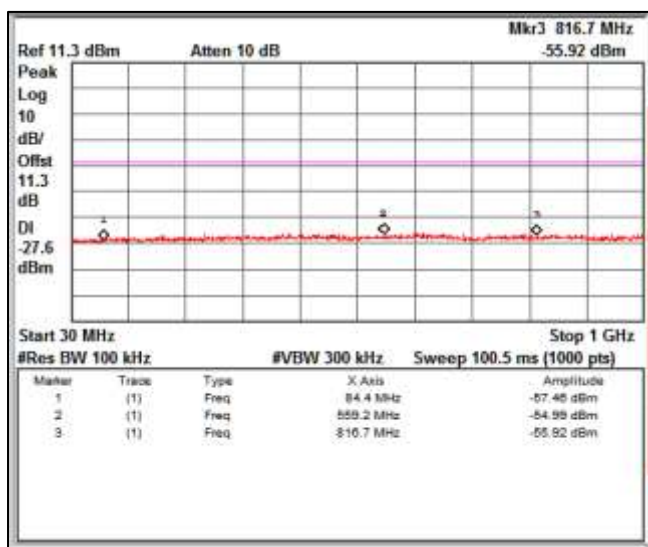
Data Rate : MCS8



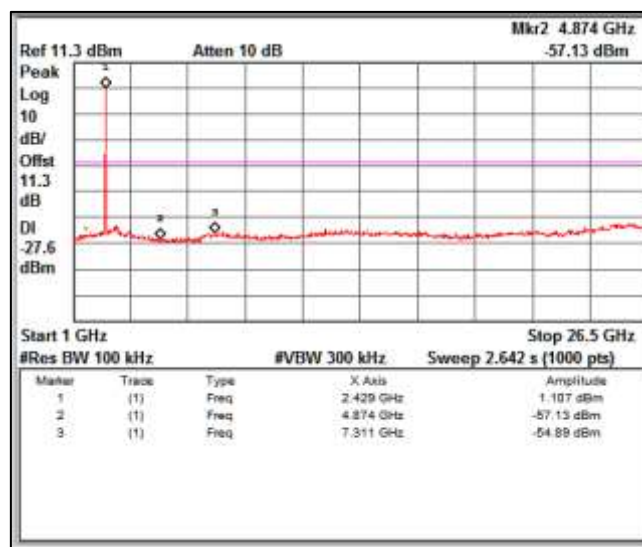
Channel Frequency 2412MHz Frequency Range 30MHz -1GHz



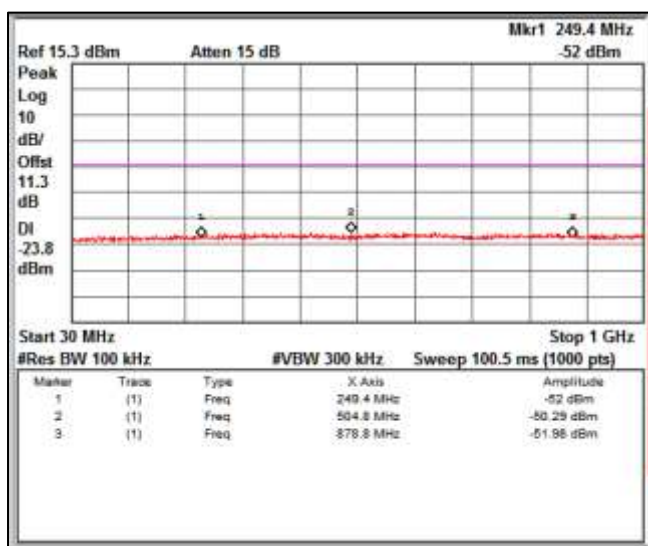
Channel Frequency 2412MHz Frequency Range 1GHz -26.5GHz



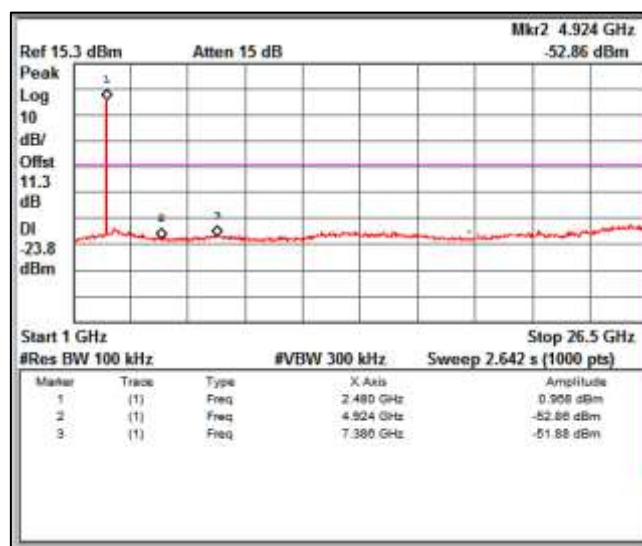
Channel Frequency 2437MHz Frequency Range 30MHz -1GHz



Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2462MHz Frequency Range 30MHz -1GHz



Channel Frequency 2462MHz Frequency Range 1GHz -26.5GHz

Prüfbericht - Nr.:

Test Report No.:

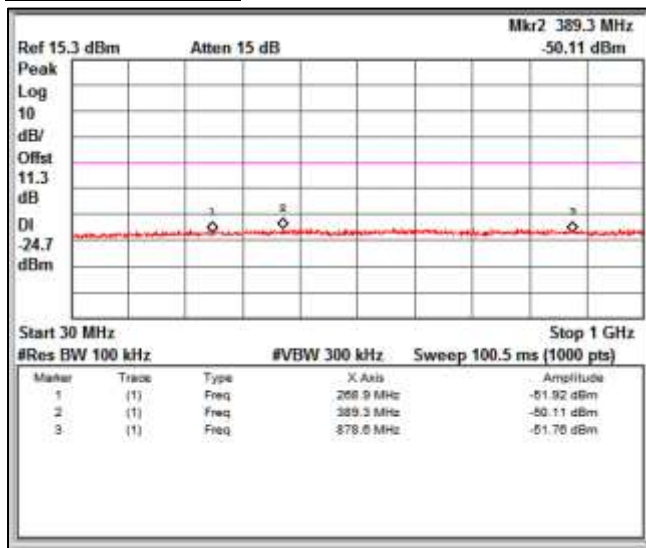
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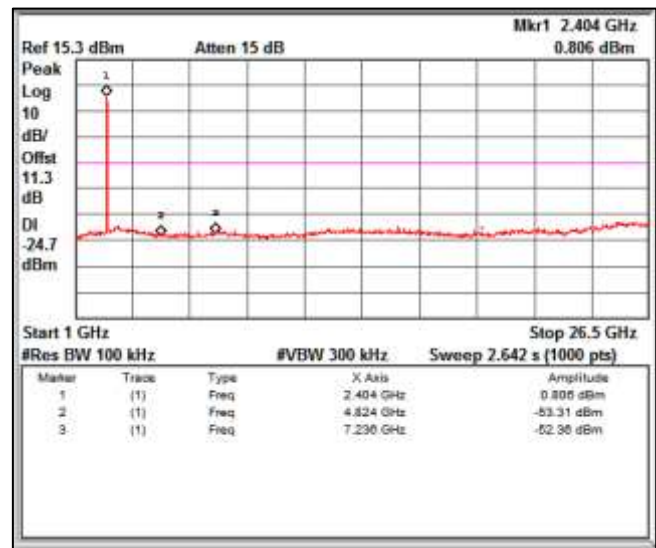
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Modulation: 802.11ax-HE_20

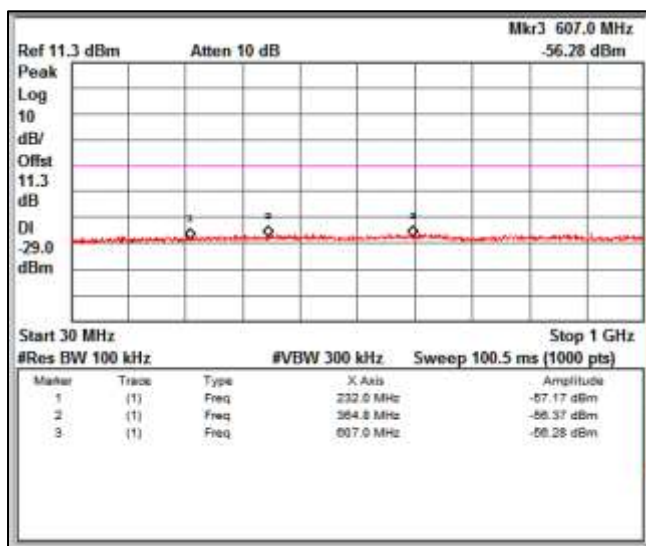
Data Rate : MCS11



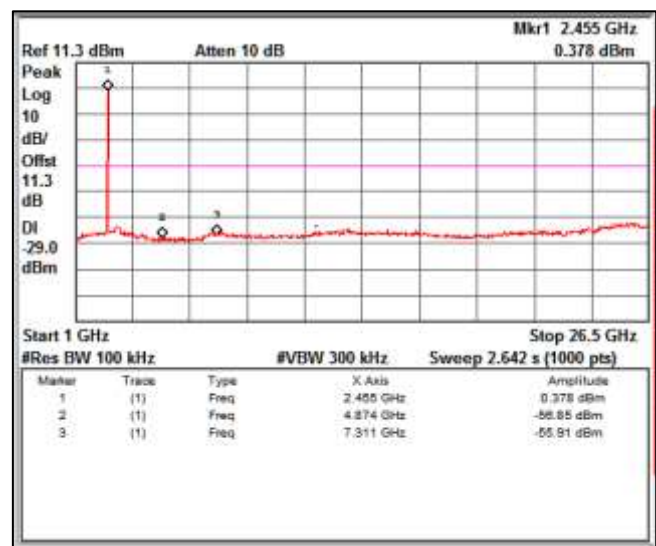
Channel Frequency 2412MHz Frequency Range 30MHz -1GHz



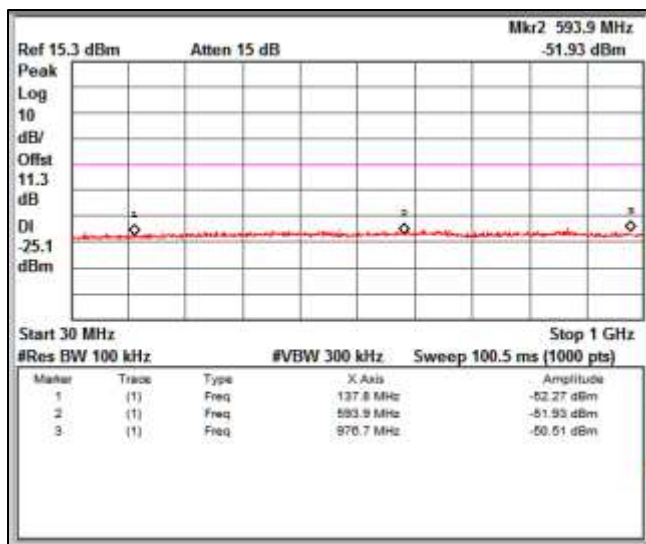
Channel Frequency 2412MHz Frequency Range 1GHz -26.5GHz



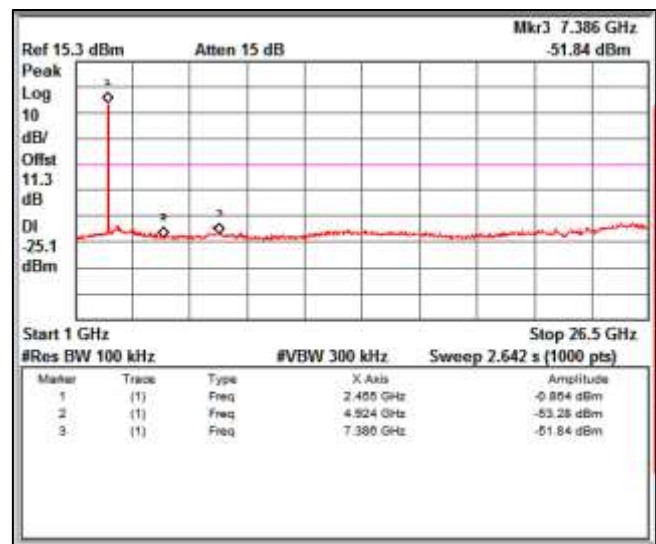
Channel Frequency 2437MHz Frequency Range 30MHz -1GHz



Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2462MHz Frequency Range 30MHz -1GHz



Channel Frequency 2462MHz Frequency Range 1GHz -26.5GHz

Prüfbericht - Nr.:

Test Report No.:

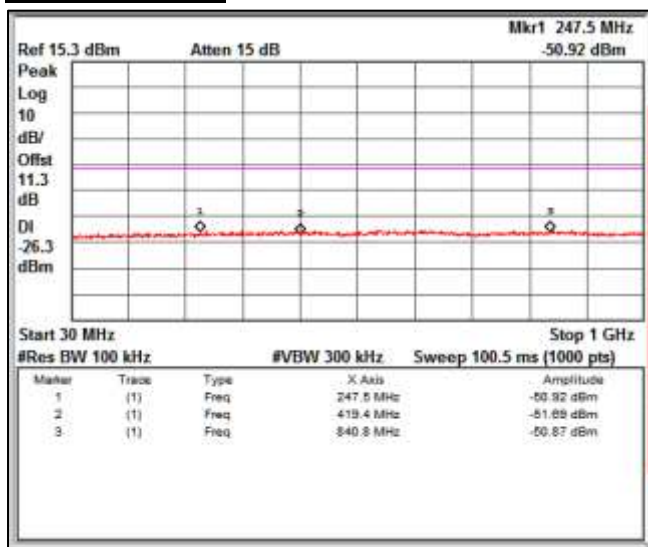
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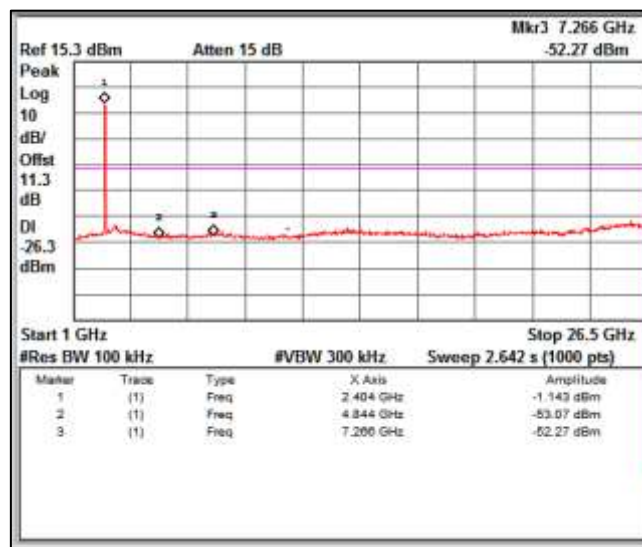
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Modulation: 802.11n-HT_40

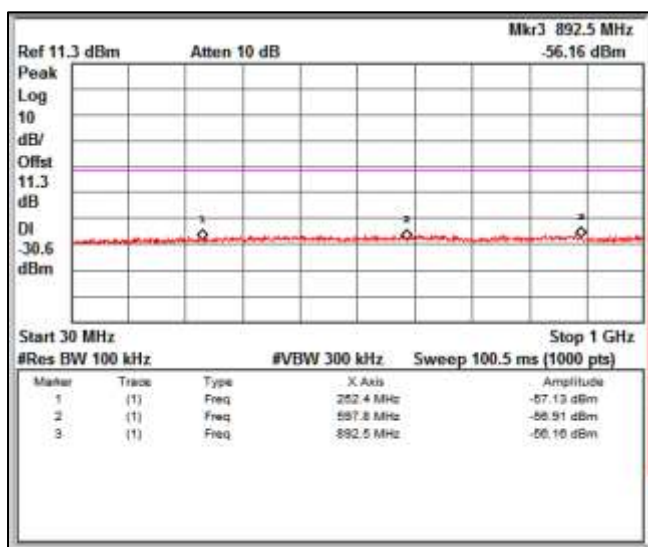
Data Rate : MCS7



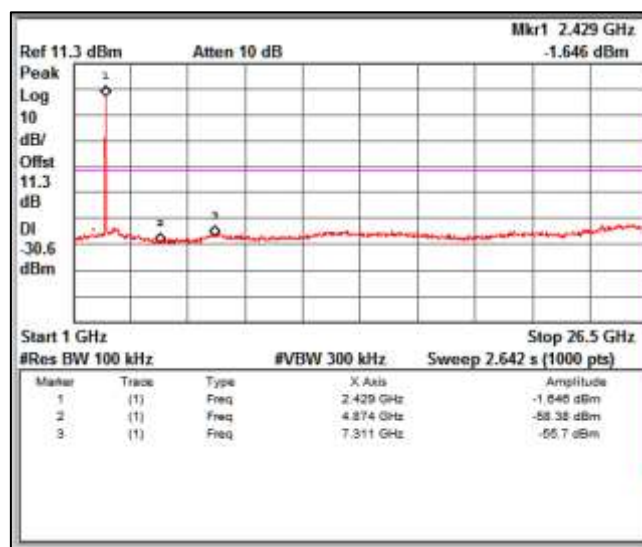
Channel Frequency 2422MHz Frequency Range 30MHz -1GHz



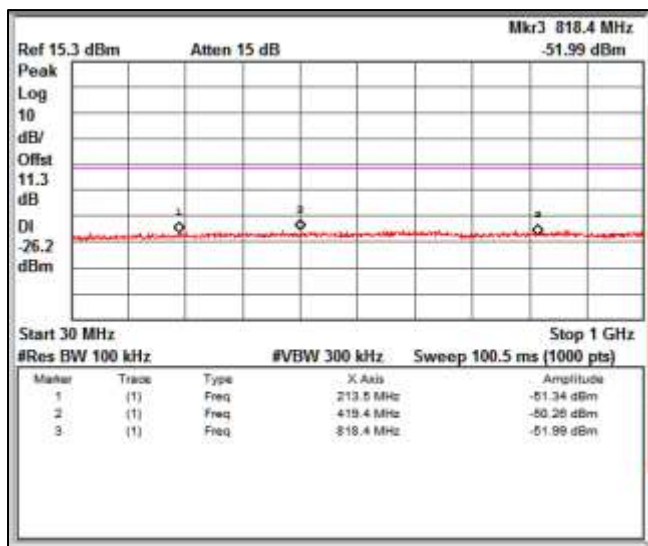
Channel Frequency 2422MHz Frequency Range 1GHz -26.5GHz



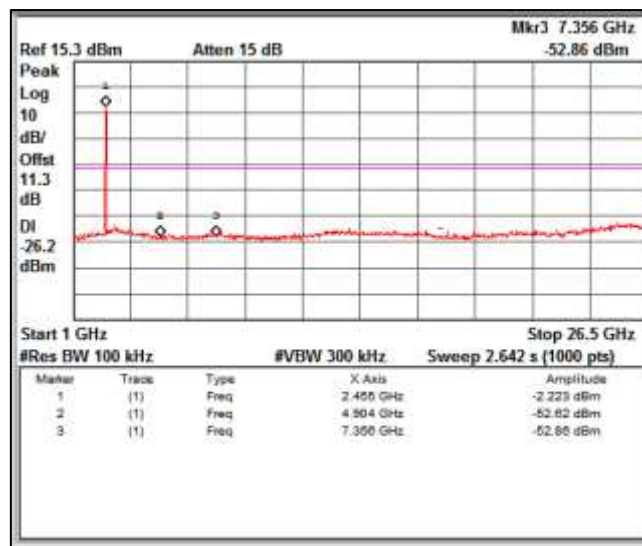
Channel Frequency 2437MHz Frequency Range 30MHz -1GHz



Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2452MHz Frequency Range 30MHz -1GHz



Channel Frequency 2452MHz Frequency Range 1GHz -26.5GHz

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Test Report No.:

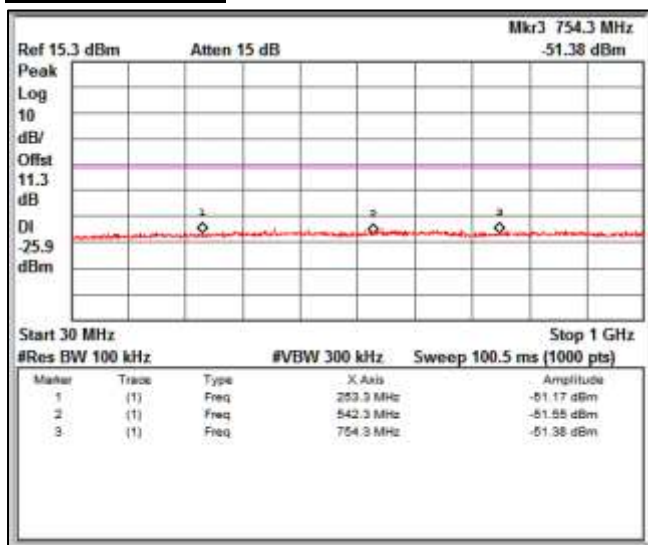
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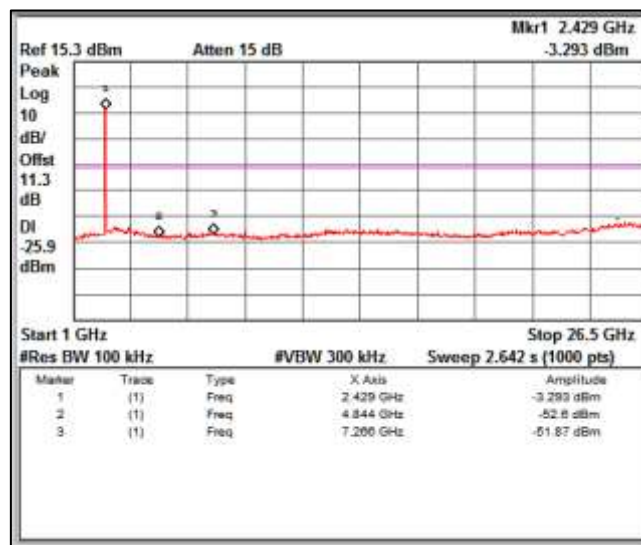
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Modulation: 802.11ac-VHT_40

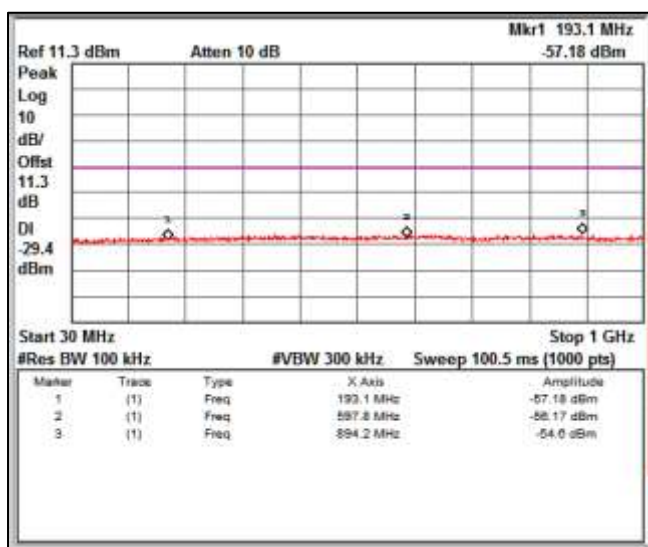
Data Rate : MCS0



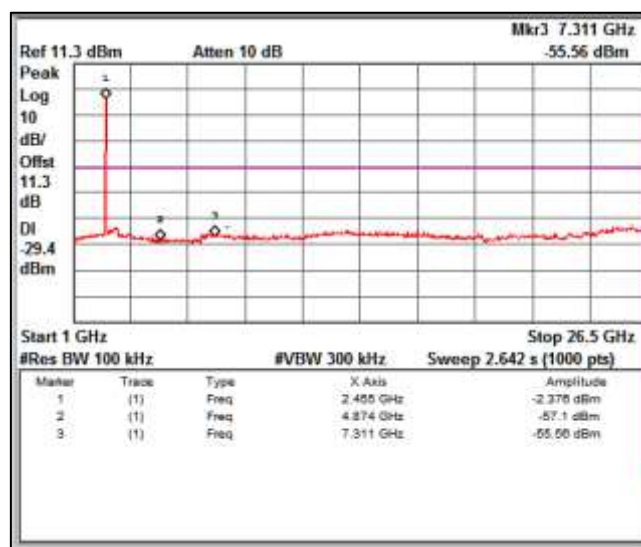
Channel Frequency 2422MHz Frequency Range 30MHz -1GHz



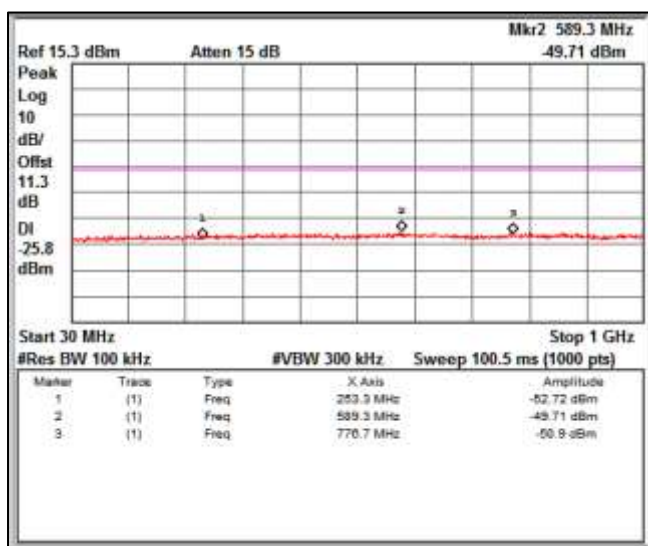
Channel Frequency 2422MHz Frequency Range 1GHz -26.5GHz



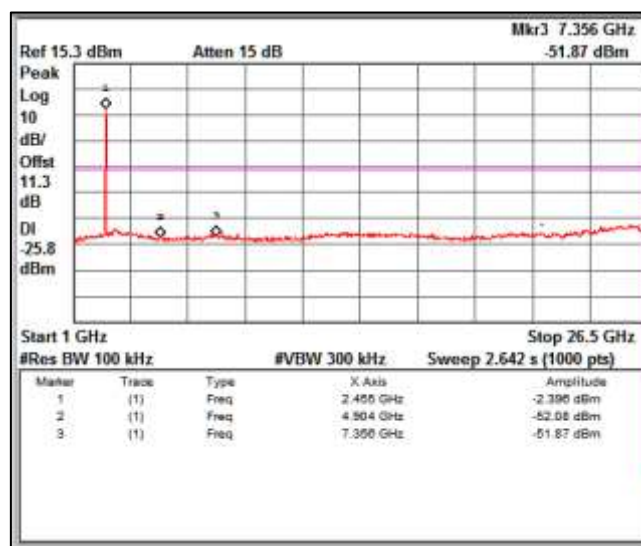
Channel Frequency 2437MHz Frequency Range 30MHz -1GHz



Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2452MHz Frequency Range 30MHz -1GHz



Channel Frequency 2452MHz Frequency Range 1GHz -26.5GHz

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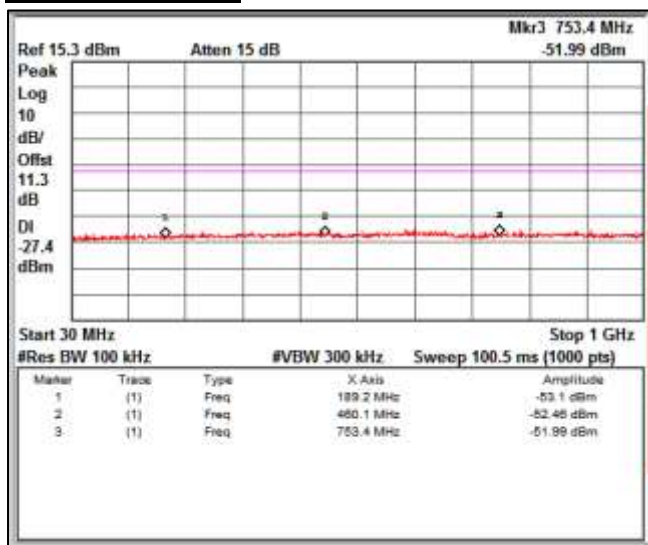
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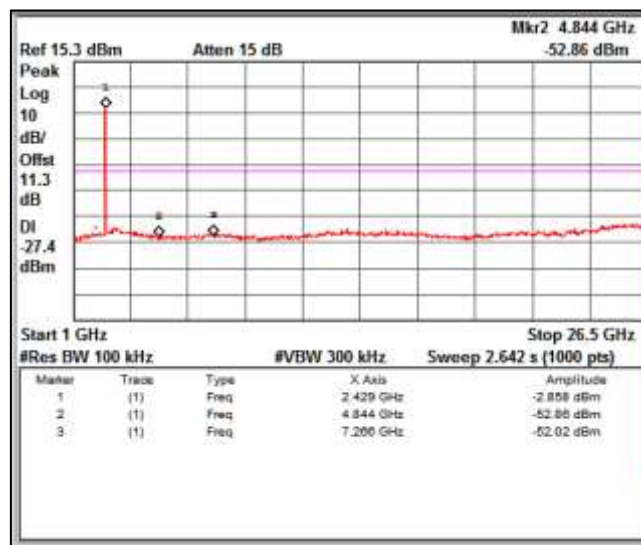
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Modulation: 802.11ax-HE_40

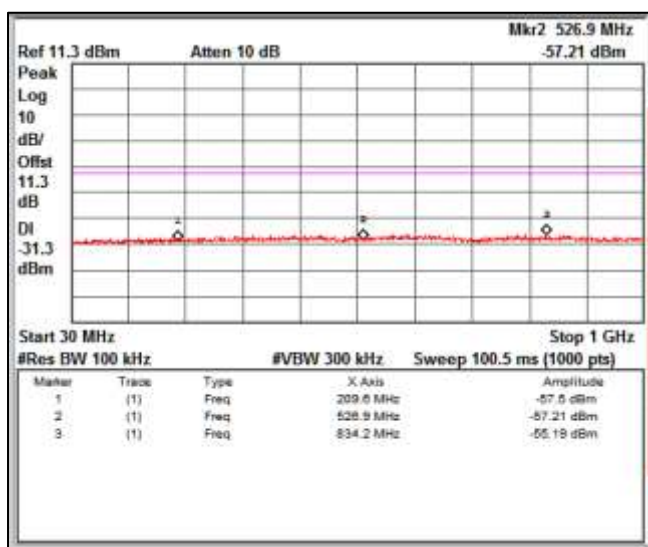
Data Rate : MCS11



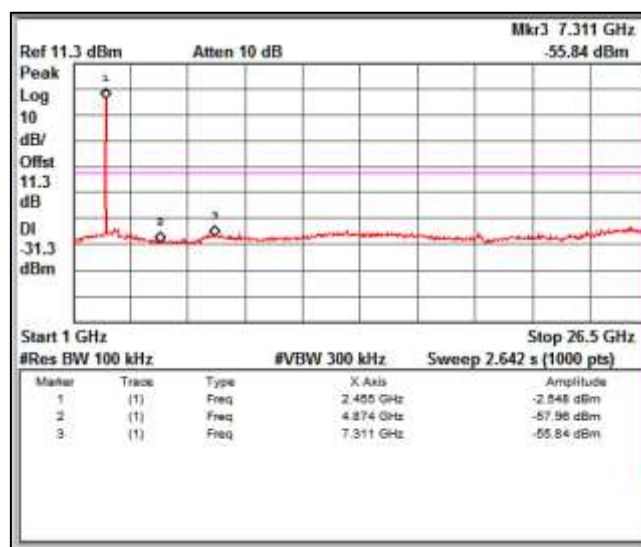
Channel Frequency 2422MHz Frequency Range 30MHz -1GHz



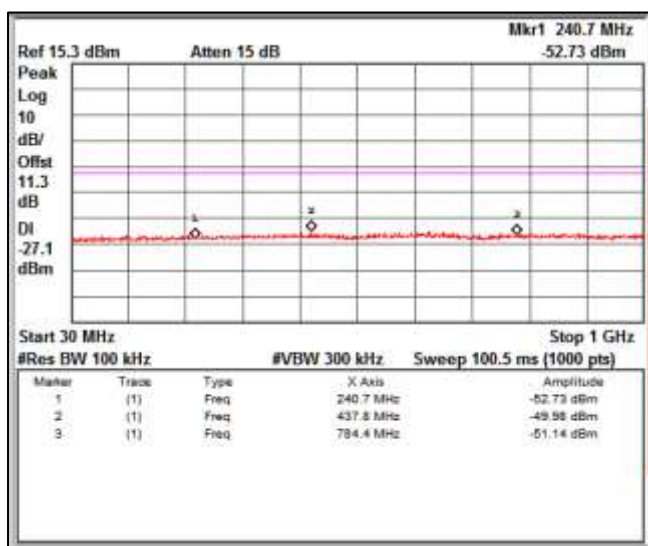
Channel Frequency 2422MHz Frequency Range 1GHz -26.5GHz



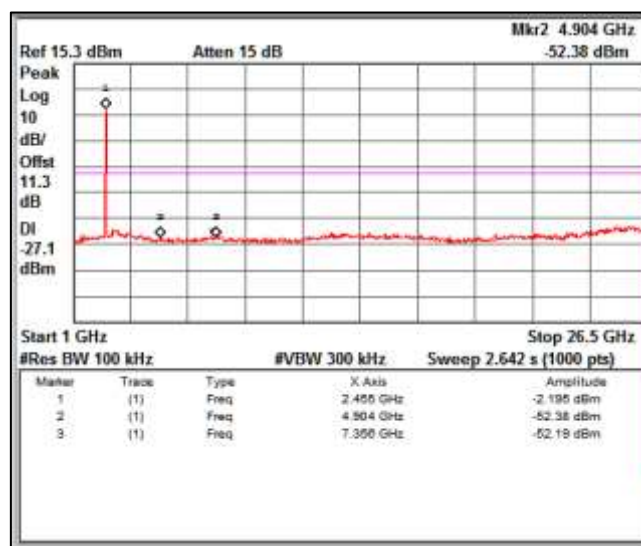
Channel Frequency 2437MHz Frequency Range 30MHz -1GHz



Channel Frequency 2437MHz Frequency Range 1GHz -26.5GHz



Channel Frequency 2452MHz Frequency Range 30MHz -1GHz



Channel Frequency 2452MHz Frequency Range 1GHz -26.5GHz

7.5 Spurious Radiated Emissions & Restricted Bands of Operation

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (d) / (15.209 & 15.205) / IC RSS-GEN, Section 8.9 and 8.10
Test Method	ANSI C63.10
Measurement Location	Semi Anechoic Chamber 30MHz - 1 GHz Fully Anechoic Chamber 1 GHz - 40GHz
Measurement Bandwidth	100 kHz for frequency range < 1GHz 1 MHz for Frequency range >1GHz
Detector	Refer remarks below
Measuring Distance	3 m
Requirement	As per the limits mentioned in the below table
Test setup	Refer Clause 7 TEST METHODOLOGY

Table 7: Transmitter limits for Radiated emission

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/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 30 meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54 dBμV/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.

Test Conditions:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

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Test results:

Note: All the losses are included during measurement and final values are mentioned in the test report. Refer TEST METHODOLOGY for more details

Test results for frequency range 9kHz – 30MHz

No emissions found in frequency range 9 kHz to 30 MHz, and measured levels are below 20dB from the limit line, hence not reported

Test results for frequency range 30MHz – 1GHz

Antenna Polarization	Measured Frequency (MHz)	Measured Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	41.13	31.30	40.00	-8.70
	47.76	30.00	40.00	-10.00
	62.28	29.60	40.00	-10.40
	92.16	20.40	43.50	-23.10
	122.25	17.10	43.50	-26.40
	245.18	24.00	46.00	-22.00
	305.24	22.20	46.00	-23.80
	342.38	21.00	46.00	-25.00
Horizontal	42.33	16.30	40.00	-23.70
	62.16	11.60	40.00	-28.40
	104.01	12.80	43.50	-30.70
	149.31	12.80	43.50	-30.70
	244.43	22.60	46.00	-23.40
	341.45	18.50	46.00	-27.50
	468.44	17.80	46.00	-28.20

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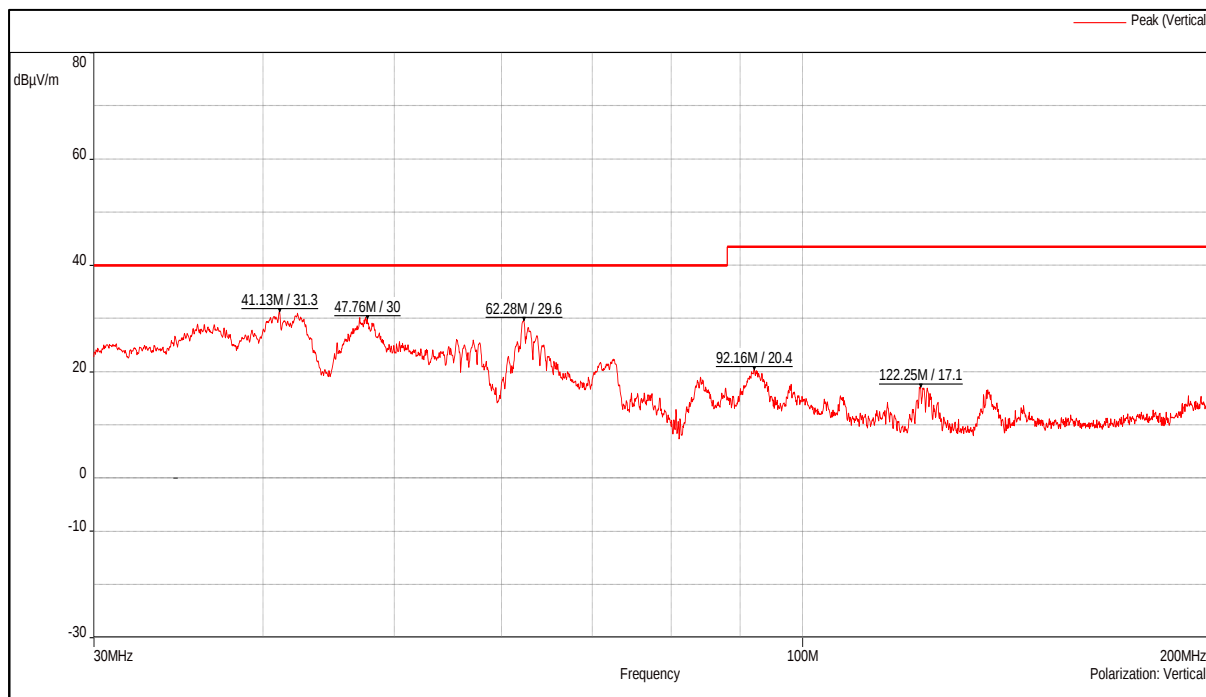
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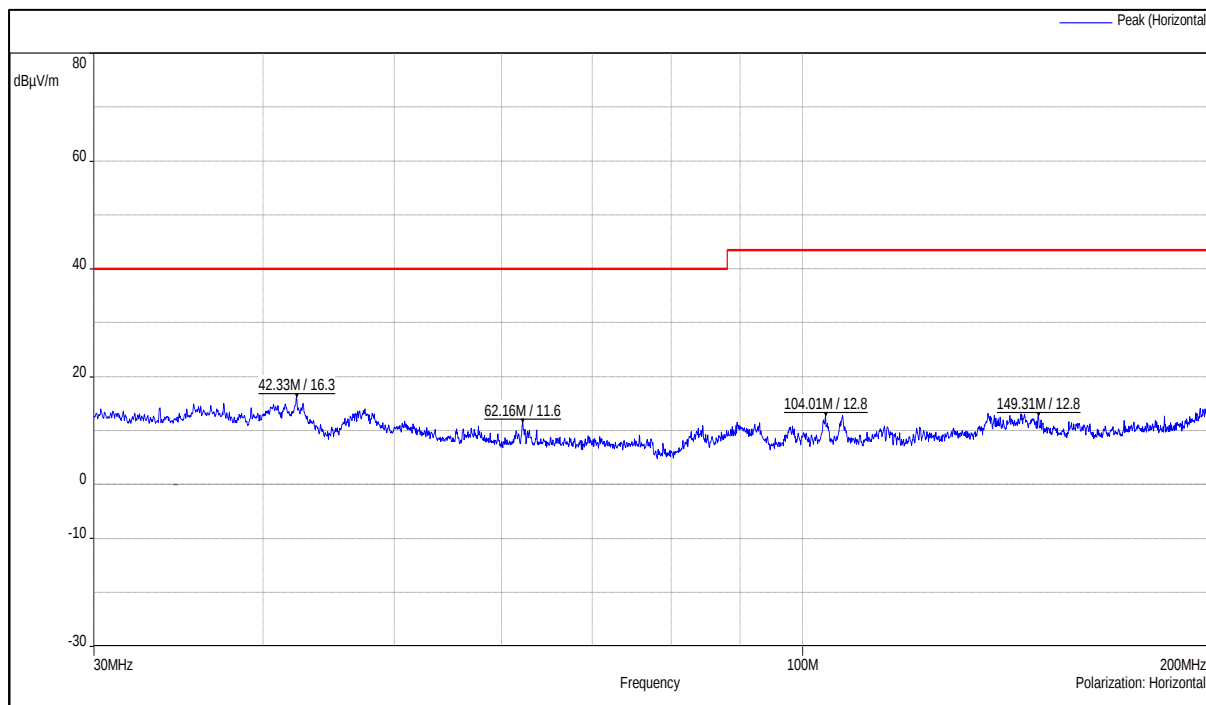
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Channel Frequency 30MHz – 200MHz_ Vertical Polarization



Channel Frequency 30MHz – 200MHz_ Horizontal Polarization

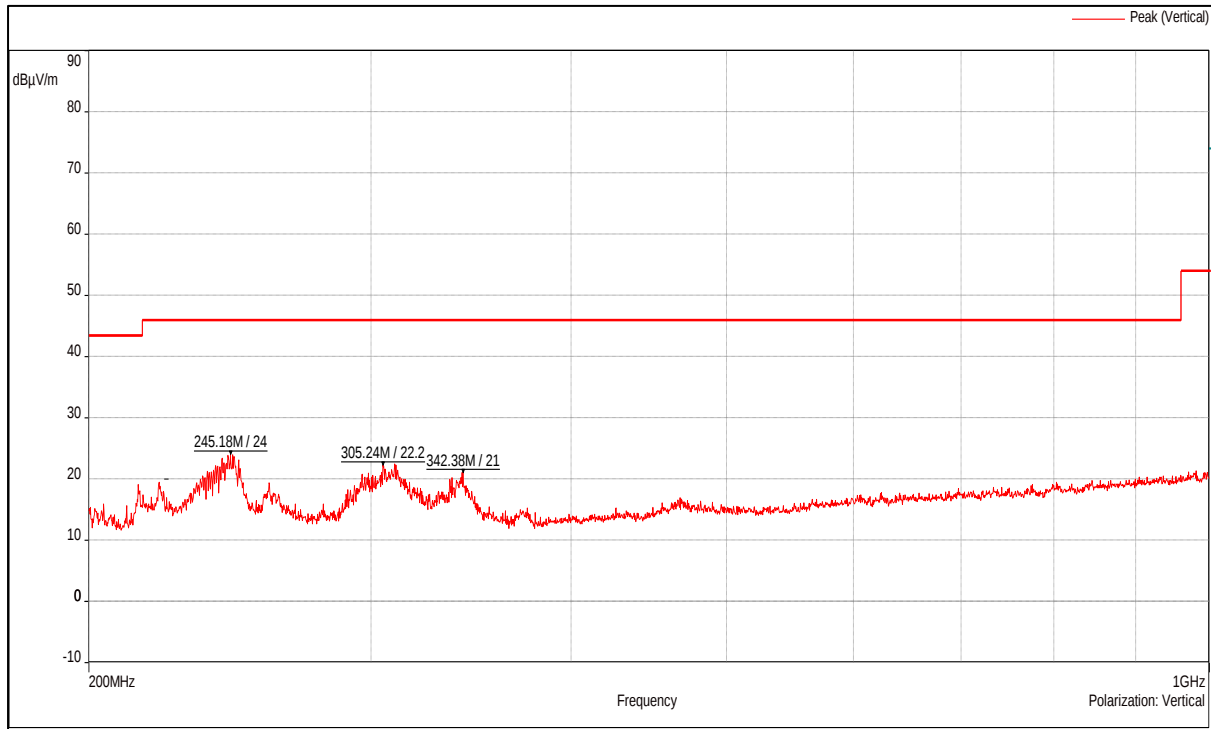


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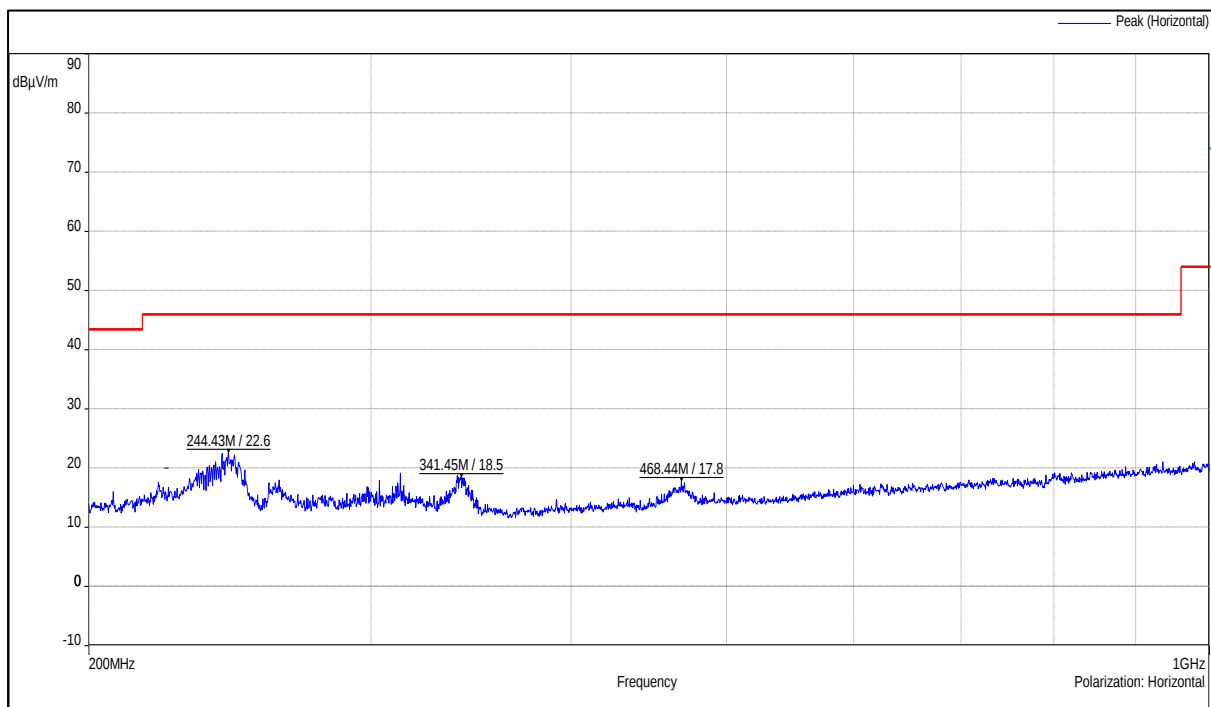
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Channel Frequency 200MHz – 1GHz_ Vertical Polarization



Channel Frequency 200MHz – 1GHz_ Horizontal Polarization



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Test results for the frequencies in the range 1 GHz to 26.5 GHz

Modulation: 802.11b

Data Rate: 1Mbps

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2412	Vertical	2412(Pk)	106.62	-	-
		2412(Av)	104.11	-	-
		2390(Pk)	47.99	74*	-26.01
		2390(Av)	34.75	54*	-19.25
		4824(Pk)	40.91	74	-33.09
		4824(Av)	31.60	54	-22.40
		7236(Pk)	45.27	74	-28.73
		7236(Av)	33.24	54	-20.76
	Horizontal	2412(Pk)	103.57	-	-
		2412(Av)	101.06	-	-
		2390(Pk)	44.98	74*	-29.02
		2390(Av)	30.34	54*	-23.66
		4824(Pk)	39.62	74	-34.38
		4824(Av)	27.72	54	-26.28
		7236(Pk)	46.10	74	-27.90
		7236(Av)	33.18	54	-20.82
2437	Vertical	2437(Pk)	106.88	-	-
		2437(Av)	104.47	-	-
		4874(Pk)	41.67	74	-32.33
		4874(Av)	33.04	54	-20.96
		7311(Pk)	45.33	74	-28.67
		7311(Av)	33.14	54	-20.86
	Horizontal	2437(Pk)	104.05	-	-
		2437(Av)	101.60	-	-
		4874(Pk)	38.75	74	-35.25
		4874(Av)	27.40	54	-26.60
2462	Vertical	2462(Pk)	104.22	-	-
		2462(Av)	106.74	-	-
		2483.5(Pk)	48.51	74*	-25.49
		2483.5(Av)	36.52	54*	-17.48
		4924(Pk)	42.86	74	-31.14
		4924(Av)	34.45	54	-19.55
		7386(Pk)	45.35	74	-28.65
		7386(Av)	33.26	54	-20.74
	Horizontal	2462(Pk)	105.21	-	-
		2462(Av)	102.72	-	-
		2483.5(Pk)	45.82	74*	-28.18
		2483.5(Av)	33.13	54*	-20.87
		4924(Pk)	39.92	74	-34.08
		4924(Av)	30.28	54	-23.72
		7386(Pk)	44.69	74	-29.31
		7386(Av)	33.16	54	-20.84

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11b

Data Rate: 11Mbps

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	2412(Pk)	110.94	-	-
		2412(Av)	96.85	-	-
		2390(Pk)	48.43	74*	-25.57
		2390(Av)	33.96	54*	-20.04
		4824(Pk)	42.02	74	-31.98
		4824(Av)	29.79	54	-24.21
		7236(Pk)	45.30	74	-28.70
		7236(Av)	33.12	54	-20.88
	Horizontal	2412(Pk)	107.72	-	-
		2412(Av)	94.21	-	-
		2390(Pk)	45.23	74*	-28.77
		2390(Av)	29.82	54*	-24.18
		4824(Pk)	39.12	74	-34.88
		4824(Av)	27.25	54	-26.75
		7236(Pk)	44.85	74	-29.15
		7236(Av)	33.14	54	-20.86
2437	Vertical	2437(Pk)	111.77	-	-
		2437(Av)	97.83	-	-
		4874(Pk)	41.25	74	-32.75
		4874(Av)	29.52	54	-24.48
		7311(Pk)	45.41	74	-28.59
		7311(Av)	33.08	54	-20.92
	Horizontal	2437(Pk)	109.02	-	-
		2437(Av)	95.02	-	-
		4874(Pk)	40.97	74	-33.03
		4874(Av)	28.16	54	-25.84
2462	Vertical	2462(Pk)	111.72	-	-
		2462(Av)	97.96	-	-
		2483.5(Pk)	51.84	74*	-22.16
		2483.5(Av)	35.41	54*	-18.59
		4924(Pk)	41.46	74	-32.54
		4924(Av)	28.85	54	-25.15
		7386(Pk)	45.41	74	-28.59
		7386(Av)	33.18	54	-20.82
	Horizontal	2462(Pk)	110.13	-	-
		2462(Av)	95.76	-	-
		2483.5(Pk)	47.65	74*	-26.35
		2483.5(Av)	30.90	54*	-23.10
		4924(Pk)	40.34	74	-33.66
		4924(Av)	28.58	54	-25.42
		7386(Pk)	45.46	74	-28.54
		7386(Av)	33.18	54	-20.82

*.: Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11g

Data Rate: 6Mbps

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2412	Vertical	2412(Pk)	102.76	-	-
		2412(Av)	93.85	-	-
		2390(Pk)	50.25	74*	-23.75
		2390(Av)	35.17	54*	-18.83
		4824(Pk)	39.91	74	-34.09
		4824(Av)	27.15	54	-26.85
		7236(Pk)	45.93	74	-28.07
		7236(Av)	33.27	54	-20.73
	Horizontal	2412(Pk)	99.75	-	-
		2412(Av)	90.77	-	-
		2390(Pk)	45.79	74*	-28.21
		2390(Av)	32.19	54*	-21.81
		4824(Pk)	38.71	74	-35.29
		4824(Av)	27.14	54	-26.86
		7236(Pk)	45.31	74	-28.69
		7236(Av)	33.18	54	-20.82
2437	Vertical	2437(Pk)	105.96	-	-
		2437(Av)	94.30	-	-
		4874(Pk)	39.69	74	-34.31
		4874(Av)	27.24	54	-26.76
		7311(Pk)	45.03	74	-28.97
		7311(Av)	33.08	54	-20.92
	Horizontal	2437(Pk)	100.91	-	-
		2437(Av)	91.96	-	-
		4874(Pk)	39.25	74	-34.75
		4874(Av)	27.20	54	-26.80
		7311(Pk)	45.41	74	-28.59
		7311(Av)	33.09	54	-20.91
2462	Vertical	2462(Pk)	103.51	-	-
		2462(Av)	94.65	-	-
		2483.5(Pk)	46.66	74*	-27.34
		2483.5(Av)	33.54	54*	-20.46
		4924(Pk)	40.28	74	-33.72
		4924(Av)	27.12	54	-26.88
		7386(Pk)	45.45	74	-28.55
		7386(Av)	33.21	54	-20.79
	Horizontal	2462(Pk)	101.49	-	-
		2462(Av)	92.34	-	-
		2483.5(Pk)	45.46	74*	-28.54
		2483.5(Av)	31.84	54*	-22.16
		4924(Pk)	38.94	74	-35.06
		4924(Av)	27.10	54	-26.90
		7386(Pk)	45.11	74	-28.89
		7386(Av)	33.24	54	-20.76

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11g

Data Rate: 54Mbps

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	2412(Pk)	105.63	-	-
		2412(Av)	93.18	-	-
		2390(Pk)	58.24	74*	-15.76
		2390(Av)	36.28	54*	-17.72
		4824(Pk)	39.14	74	-34.86
		4824(Av)	27.05	54	-26.95
		7236(Pk)	46.54	74	-27.46
		7236(Av)	33.18	54	-20.82
	Horizontal	2412(Pk)	100.95	-	-
		2412(Av)	89.86	-	-
		2390(Pk)	52.94	74*	-21.06
		2390(Av)	34.11	54*	-19.89
		4824(Pk)	39.49	74	-34.51
		4824(Av)	27.11	54	-26.89
		7236(Pk)	45.73	74	-28.27
		7236(Av)	33.18	54	-20.82
2437	Vertical	2437(Pk)	104.48	-	-
		2437(Av)	93.45	-	-
		4874(Pk)	39.50	74	-34.50
		4874(Av)	27.25	54	-26.75
		7311(Pk)	45.31	74	-28.69
		7311(Av)	33.06	54	-20.94
	Horizontal	2437(Pk)	101.66	-	-
		2437(Av)	90.76	-	-
		4874(Pk)	39.17	74	-34.83
		4874(Av)	27.11	54	-26.89
		7311(Pk)	45.18	74	-28.82
		7311(Av)	33.23	54	-20.77
2462	Vertical	2462(Pk)	108.23	-	-
		2462(Av)	93.84	-	-
		2483.5(Pk)	57.83	74*	-16.17
		2483.5(Av)	36.03	54*	-17.97
		4924(Pk)	39.70	74	-34.30
		4924(Av)	27.10	54	-26.90
		7386(Pk)	45.65	74	-28.35
		7386(Av)	33.21	54	-20.79
	Horizontal	2462(Pk)	102.70	-	-
		2462(Av)	92.18	-	-
		2483.5(Pk)	54.17	74*	-19.83
		2483.5(Av)	34.65	54*	-19.35
		4924(Pk)	38.77	74	-35.23
		4924(Av)	27.06	54	-26.94
		7386(Pk)	45.46	74	-28.54
		7386(Av)	33.19	54	-20.81

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11n_HT20

Data Rate: MCS0

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	2412(Pk)	102.75	-	-
		2412(Av)	90.86	-	-
		2390(Pk)	49.03	74*	-24.97
		2390(Av)	35.48	54*	-18.52
		4824(Pk)	40.07	74	-33.93
		4824(Av)	27.19	54	-26.81
		7236(Pk)	45.61	74	-28.39
		7236(Av)	33.17	54	-20.83
	Horizontal	2412(Pk)	100.44	-	-
		2412(Av)	88.01	-	-
		2390(Pk)	45.51	74*	-28.49
		2390(Av)	32.75	54*	-21.25
		4824(Pk)	39.55	74	-34.45
		4824(Av)	27.18	54	-26.82
		7236(Pk)	44.98	74	-29.02
		7236(Av)	33.15	54	-20.85
2437	Vertical	2437(Pk)	103.52	-	-
		2437(Av)	91.81	-	-
		4874(Pk)	39.81	74	-34.19
		4874(Av)	27.24	54	-26.76
		7311(Pk)	45.46	74	-28.54
		7311(Av)	33.07	54	-20.93
	Horizontal	2437(Pk)	104.09	-	-
		2437(Av)	89.32	-	-
		4874(Pk)	39.40	74	-34.60
		4874(Av)	27.24	54	-26.76
2462	Vertical	2462(Pk)	103.41	-	-
		2462(Av)	91.72	-	-
		2483.5(Pk)	47.96	74*	-26.04
		2483.5(Av)	33.85	54*	-20.15
		4924(Pk)	39.50	74	-34.50
		4924(Av)	27.15	54	-26.85
		7386(Pk)	45.28	74	-28.72
		7386(Av)	33.17	54	-20.83
	Horizontal	2462(Pk)	99.26	-	-
		2462(Av)	87.58	-	-
		2483.5(Pk)	44.11	74*	-29.89
		2483.5(Av)	30.50	54*	-23.50
		4924(Pk)	39.39	74	-34.61
		4924(Av)	27.10	54	-26.90
		7386(Pk)	45.73	74	-28.27
		7386(Av)	33.15	54	-20.85

* : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11n_HT20

Data Rate: MCS7

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2412	Vertical	2412(Pk)	101.16	-	-
		2412(Av)	90.16	-	-
		2390(Pk)	57.87	74*	-16.13
		2390(Av)	40.09	54*	-13.91
		4824(Pk)	38.89	74	-35.11
		4824(Av)	26.75	54	-27.25
		7236(Pk)	45.51	74	-28.49
		7236(Av)	32.80	54	-21.20
	Horizontal	2412(Pk)	102.99	-	-
		2412(Av)	87.79	-	-
		2390(Pk)	54.99	74*	-19.01
		2390(Av)	35.71	54*	-18.29
		4824(Pk)	38.89	74	-35.11
		4824(Av)	26.83	54	-27.17
		7236(Pk)	45.88	74	-28.12
		7236(Av)	32.93	54	-21.07
2437	Vertical	2437(Pk)	106.94	-	-
		2437(Av)	92.35	-	-
		4874(Pk)	39.87	74	-34.13
		4874(Av)	27.02	54	-26.98
		7311(Pk)	44.83	74	-29.17
		7311(Av)	32.90	54	-21.10
	Horizontal	2437(Pk)	99.53	-	-
		2437(Av)	88.67	-	-
		4874(Pk)	39.15	74	-34.85
		4874(Av)	26.99	54	-27.01
2462	Vertical	2462(Pk)	108.51	-	-
		2462(Av)	92.24	-	-
		2483.5(Pk)	60.37	74*	-13.63
		2483.5(Av)	40.47	54*	-13.53
		4924(Pk)	40.13	74	-33.87
		4924(Av)	26.96	54	-27.04
		7386(Pk)	45.07	74	-28.93
		7386(Av)	32.99	54	-21.01
	Horizontal	2462(Pk)	102.63	-	-
		2462(Av)	90.16	-	-
		2483.5(Pk)	58.56	74*	-15.44
		2483.5(Av)	37.49	54*	-16.51
		4924(Pk)	39.41	74	-34.59
		4924(Av)	27.02	54	-26.98
		7386(Pk)	44.97	74	-29.03
		7386(Av)	33.12	54	-20.88

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ac_VHT20

Data Rate: MCS0

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	2412(Pk)	106.39	-	-
		2412(Av)	91.43	-	-
		2390(Pk)	62.38	74*	-11.62
		2390(Av)	36.71	54*	-17.29
		4824(Pk)	39.45	74	-34.55
		4824(Av)	27.20	54	-26.80
		7236(Pk)	45.55	74	-28.45
		7236(Av)	33.34	54	-20.66
	Horizontal	2412(Pk)	100.00	-	-
		2412(Av)	89.04	-	-
		2390(Pk)	43.90	74*	-30.10
		2390(Av)	31.11	54*	-22.89
		4824(Pk)	39.23	74	-34.77
		4824(Av)	27.26	54	-26.74
		7236(Pk)	45.44	74	-28.56
		7236(Av)	33.43	54	-20.57
2437	Vertical	2437(Pk)	103.45	-	-
		2437(Av)	92.74	-	-
		4874(Pk)	39.31	74	-34.69
		4874(Av)	27.32	54	-26.68
		7311(Pk)	45.50	74	-28.50
		7311(Av)	33.22	54	-20.78
	Horizontal	2437(Pk)	101.23	-	-
		2437(Av)	90.39	-	-
		4874(Pk)	39.11	74	-34.89
		4874(Av)	27.33	54	-26.67
2462	Vertical	2462(Pk)	103.49	-	-
		2462(Av)	93.09	-	-
		2483.5(Pk)	48.94	74*	-25.06
		2483.5(Av)	33.87	54*	-20.13
		4924(Pk)	39.74	74	-34.26
		4924(Av)	27.26	54	-26.74
		7386(Pk)	46.30	74	-27.70
		7386(Av)	33.28	54	-20.72
	Horizontal	2462(Pk)	99.95	-	-
		2462(Av)	89.14	-	-
		2483.5(Pk)	44.87	74*	-29.13
		2483.5(Av)	31.11	54*	-22.89
		4924(Pk)	39.02	74	-34.98
		4924(Av)	27.24	54	-26.76
		7386(Pk)	45.53	74	-28.47
		7386(Av)	33.31	54	-20.69

* : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ac_VHT20

Data Rate: MCS8

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2412	Vertical	2412(Pk)	102.00	-	-
		2412(Av)	91.12	-	-
		2390(Pk)	52.14	74*	-21.86
		2390(Av)	35.94	54*	-18.06
		4824(Pk)	39.81	74	-34.19
		4824(Av)	27.16	54	-26.84
		7236(Pk)	45.62	74	-28.38
		7236(Av)	33.33	54	-20.67
	Horizontal	2412(Pk)	99.63	-	-
		2412(Av)	88.91	-	-
		2390(Pk)	49.49	74*	-24.51
		2390(Av)	31.70	54*	-22.30
		4824(Pk)	39.38	74	-34.62
		4824(Av)	27.24	54	-26.76
		7236(Pk)	45.59	74	-28.41
		7236(Av)	33.36	54	-20.64
2437	Vertical	2437(Pk)	107.38	-	-
		2437(Av)	92.76	-	-
		4874(Pk)	39.70	74	-34.30
		4874(Av)	27.29	54	-26.71
		7311(Pk)	45.10	74	-28.90
		7311(Av)	33.19	54	-20.81
	Horizontal	2437(Pk)	103.68	-	-
		2437(Av)	90.58	-	-
		4874(Pk)	39.80	74	-34.20
		4874(Av)	27.25	54	-26.75
		7311(Pk)	45.85	74	-28.15
		7311(Av)	33.20	54	-20.80
2462	Vertical	2462(Pk)	102.75	-	-
		2462(Av)	92.32	-	-
		2483.5(Pk)	52.52	74*	-21.48
		2483.5(Av)	35.33	54*	-18.67
		4924(Pk)	39.47	74	-34.53
		4924(Av)	27.18	54	-26.82
		7386(Pk)	45.61	74	-28.39
		7386(Av)	33.29	54	-20.71
	Horizontal	2462(Pk)	102.48	-	-
		2462(Av)	90.74	-	-
		2483.5(Pk)	50.12	74*	-23.88
		2483.5(Av)	32.65	54*	-21.35
		4924(Pk)	39.57	74	-34.43
		4924(Av)	27.11	54	-26.89
		7386(Pk)	46.18	74	-27.82
		7386(Av)	33.25	54	-20.75

* : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ax_HE20

Data Rate: MCS0

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	2412(Pk)	102.94	-	-
		2412(Av)	90.12	-	-
		2390(Pk)	46.80	74*	-27.20
		2390(Av)	34.03	54*	-19.97
		4824(Pk)	40.71	74	-33.29
		4824(Av)	29.03	54	-24.97
		7236(Pk)	47.31	74	-26.69
		7236(Av)	35.26	54	-18.74
	Horizontal	2412(Pk)	98.19	-	-
		2412(Av)	86.50	-	-
		2390(Pk)	42.79	74*	-31.21
		2390(Av)	31.53	54*	-22.47
		4824(Pk)	41.68	74	-32.32
		4824(Av)	29.04	54	-24.96
		7236(Pk)	47.30	74	-26.70
		7236(Av)	35.20	54	-18.80
2437	Vertical	2437(Pk)	103.13	-	-
		2437(Av)	90.49	-	-
		4874(Pk)	40.86	74	-33.14
		4874(Av)	29.09	54	-24.91
		7311(Pk)	47.72	74	-26.28
		7311(Av)	35.05	54	-18.95
	Horizontal	2437(Pk)	101.18	-	-
		2437(Av)	88.23	-	-
		4874(Pk)	41.56	74	-32.44
		4874(Av)	29.14	54	-24.86
2462	Vertical	2462(Pk)	103.56	-	-
		2462(Av)	90.73	-	-
		2483.5(Pk)	49.83	74*	-24.17
		2483.5(Av)	34.78	54*	-19.22
		4924(Pk)	40.82	74	-33.18
		4924(Av)	28.98	54	-25.02
		7386(Pk)	47.10	74	-26.90
		7386(Av)	35.22	54	-18.78
	Horizontal	2462(Pk)	101.30	-	-
		2462(Av)	88.25	-	-
		2483.5(Pk)	46.81	74*	-27.19
		2483.5(Av)	32.75	54*	-21.25
		4924(Pk)	41.11	74	-32.89
		4924(Av)	28.95	54	-25.05
		7386(Pk)	48.25	74	-25.75
		7386(Av)	35.22	54	-18.78

*: Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ax_HE20

Data Rate: MCS11

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	2412(Pk)	107.43	-	-
		2412(Av)	89.88	-	-
		2390(Pk)	53.78	74*	-20.22
		2390(Av)	32.44	54*	-21.56
		4824(Pk)	41.11	74	-32.89
		4824(Av)	28.85	54	-25.15
		7236(Pk)	47.07	74	-26.93
		7236(Av)	35.09	54	-18.91
	Horizontal	2412(Pk)	99.11	-	-
		2412(Av)	87.31	-	-
		2390(Pk)	49.83	74*	-24.17
		2390(Av)	30.36	54*	-23.64
		4824(Pk)	41.40	74	-32.60
		4824(Av)	28.92	54	-25.08
		7236(Pk)	46.80	74	-27.20
		7236(Av)	35.18	54	-18.82
2437	Vertical	2437(Pk)	103.17	-	-
		2437(Av)	90.33	-	-
		4874(Pk)	40.87	74	-33.13
		4874(Av)	28.89	54	-25.11
		7311(Pk)	46.56	74	-27.44
		7311(Av)	34.93	54	-19.07
	Horizontal	2437(Pk)	99.68	-	-
		2437(Av)	86.99	-	-
		4874(Pk)	41.29	74	-32.71
		4874(Av)	28.79	54	-25.21
		7311(Pk)	47.51	74	-26.49
		7311(Av)	34.85	54	-19.15
2462	Vertical	2462(Pk)	102.98	-	-
		2462(Av)	90.16	-	-
		2483.5(Pk)	53.24	74*	-20.76
		2483.5(Av)	35.23	54*	-18.77
		4924(Pk)	39.61	74	-34.39
		4924(Av)	26.86	54	-27.14
		7386(Pk)	44.43	74	-29.57
		7386(Av)	33.09	54	-20.91
	Horizontal	2462(Pk)	100.35	-	-
		2462(Av)	87.74	-	-
		2483.5(Pk)	49.02	74*	-24.98
		2483.5(Av)	31.50	54*	-22.50
		4924(Pk)	39.01	74	-34.99
		4924(Av)	26.93	54	-27.07
		7386(Pk)	45.25	74	-28.75
		7386(Av)	33.11	54	-20.89

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11n_HT40

Data Rate: MCS0

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2422	Vertical	2422(Pk)	100.43	-	-
		2422(Av)	88.69	-	-
		2390(Pk)	53.29	74*	-20.71
		2390(Av)	39.92	54*	-14.08
		4844(Pk)	41.31	74	-32.69
		4844(Av)	29.51	54	-24.49
		7266(Pk)	47.97	74	-26.03
		7266(Av)	35.30	54	-18.70
	Horizontal	2422(Pk)	96.93	-	-
		2422(Av)	85.89	-	-
		2390(Pk)	50.10	74*	-23.90
		2390(Av)	35.94	54*	-18.06
		4844(Pk)	41.66	74	-32.34
		4844(Av)	29.47	54	-24.53
		7266(Pk)	47.35	74	-26.65
		7266(Av)	35.33	54	-18.67
2437	Vertical	2437(Pk)	100.92	-	-
		2437(Av)	88.87	-	-
		4874(Pk)	41.46	74	-32.54
		4874(Av)	29.27	54	-24.73
		7311(Pk)	47.57	74	-26.43
		7311(Av)	35.19	54	-18.81
	Horizontal	2437(Pk)	97.88	-	-
		2437(Av)	86.55	-	-
		4874(Pk)	41.98	74	-32.02
		4874(Av)	29.31	54	-24.69
		7311(Pk)	47.38	74	-26.62
		7311(Av)	35.19	54	-18.81
2452	Vertical	2452(Pk)	101.46	-	-
		2452(Av)	90.07	-	-
		2483.5(Pk)	56.09	74*	-17.91
		2483.5(Av)	41.90	54*	-12.10
		4904(Pk)	41.11	74	-32.89
		4904(Av)	29.03	54	-24.97
		7356(Pk)	48.14	74	-25.86
		7356(Av)	35.29	54	-18.71
	Horizontal	2452(Pk)	98.97	-	-
		2452(Av)	87.57	-	-
		2483.5(Pk)	53.46	74*	-20.54
		2483.5(Av)	39.39	54*	-14.61
		4904(Pk)	40.86	74	-33.14
		4904(Av)	29.04	54	-24.96
		7356(Pk)	47.83	74	-26.17
		7356(Av)	35.31	54	-18.69

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11n_HT40

Data Rate: MCS7

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2422	Vertical	2422(Pk)	99.69	-	-
		2422(Av)	88.37	-	-
		2390(Pk)	60.91	74*	-13.09
		2390(Av)	43.28	54*	-10.72
		4844(Pk)	42.48	74	-31.52
		4844(Av)	29.47	54	-24.53
		7266(Pk)	47.30	74	-26.70
		7266(Av)	35.37	54	-18.63
	Horizontal	2422(Pk)	97.59	-	-
		2422(Av)	85.73	-	-
		2390(Pk)	57.26	74*	-16.74
		2390(Av)	39.89	54*	-14.11
		4844(Pk)	41.65	74	-32.35
		4844(Av)	29.47	54	-24.53
		7266(Pk)	47.48	74	-26.52
		7266(Av)	35.31	54	-18.69
2437	Vertical	2437(Pk)	96.86	-	-
		2437(Av)	86.39	-	-
		4874(Pk)	41.11	74	-32.89
		4874(Av)	29.24	54	-24.76
		7311(Pk)	48.33	74	-25.67
		7311(Av)	35.17	54	-18.83
	Horizontal	2437(Pk)	100.75	-	-
		2437(Av)	89.05	-	-
		4874(Pk)	41.90	74	-32.10
		4874(Av)	29.21	54	-24.79
		7311(Pk)	47.00	74	-27.00
		7311(Av)	35.12	54	-18.88
2452	Vertical	2452(Pk)	100.70	-	-
		2452(Av)	89.22	-	-
		2483.5(Pk)	63.01	74*	-10.99
		2483.5(Av)	46.69	54*	-7.31
		4904(Pk)	41.07	74	-32.93
		4904(Av)	28.97	54	-25.03
		7356(Pk)	47.54	74	-26.46
		7356(Av)	35.28	54	-18.72
	Horizontal	2452(Pk)	98.85	-	-
		2452(Av)	87.34	-	-
		2483.5(Pk)	61.07	74*	-12.93
		2483.5(Av)	43.97	54*	-10.03
		4904(Pk)	41.41	74	-32.59
		4904(Av)	29.00	54	-25.00
		7356(Pk)	48.69	74	-25.31
		7356(Av)	35.27	54	-18.73

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ac_VHT40

Data Rate: MCS0

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2422	Vertical	2422(Pk)	100.17	-	-
		2422(Av)	89.50	-	-
		2390(Pk)	54.53	74*	-19.47
		2390(Av)	40.11	54*	-13.89
		4844(Pk)	42.24	74	-31.76
		4844(Av)	29.45	54	-24.55
		7266(Pk)	47.99	74	-26.01
		7266(Av)	35.35	54	-18.65
	Horizontal	2422(Pk)	97.22	-	-
		2422(Av)	86.61	-	-
		2390(Pk)	50.42	74*	-23.58
		2390(Av)	36.30	54*	-17.70
		4844(Pk)	41.43	74	-32.57
		4844(Av)	29.34	54	-24.66
		7266(Pk)	47.31	74	-26.69
		7266(Av)	35.29	54	-18.71
2437	Vertical	2437(Pk)	97.43	-	-
		2437(Av)	86.68	-	-
		4874(Pk)	41.94	74	-32.06
		4874(Av)	29.29	54	-24.71
		7311(Pk)	47.46	74	-26.54
		7311(Av)	35.26	54	-18.74
	Horizontal	2437(Pk)	100.89	-	-
		2437(Av)	89.83	-	-
		4874(Pk)	41.24	74	-32.76
		4874(Av)	29.26	54	-24.74
		7311(Pk)	47.84	74	-26.16
		7311(Av)	35.24	54	-18.76
2452	Vertical	2452(Pk)	101.65	-	-
		2452(Av)	91.07	-	-
		2483.5(Pk)	56.46	74*	-17.54
		2483.5(Av)	42.77	54*	-11.23
		4904(Pk)	29.05	74	-44.95
		4904(Av)	41.59	54	-12.41
		7356(Pk)	47.59	74	-26.41
		7356(Av)	35.35	54	-18.65
	Horizontal	2452(Pk)	99.61	-	-
		2452(Av)	88.76	-	-
		2483.5(Pk)	53.74	74*	-20.26
		2483.5(Av)	39.26	54*	-14.74
		4904(Pk)	40.96	74	-33.04
		4904(Av)	29.02	54	-24.98
		7356(Pk)	47.54	74	-26.46
		7356(Av)	35.32	54	-18.68

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ac_VHT40

Data Rate: MCS8

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2422	Vertical	2422(Pk)	100.04	-	-
		2422(Av)	88.89	-	-
		2390(Pk)	50.85	74*	-23.15
		2390(Av)	38.36	54*	-15.64
		4844(Pk)	41.68	74	-32.32
		4844(Av)	29.48	54	-24.52
		7266(Pk)	47.60	74	-26.40
		7266(Av)	35.41	54	-18.59
	Horizontal	2422(Pk)	96.56	-	-
		2422(Av)	85.06	-	-
		2390(Pk)	47.30	74*	-26.70
		2390(Av)	33.77	54*	-20.23
		4844(Pk)	41.22	74	-32.78
		4844(Av)	29.50	54	-24.50
		7266(Pk)	47.29	74	-26.71
		7266(Av)	35.44	54	-18.56
2437	Vertical	2437(Pk)	100.21	-	-
		2437(Av)	89.78	-	-
		4874(Pk)	41.23	74	-32.77
		4874(Av)	29.36	54	-24.64
		7311(Pk)	47.46	74	-26.54
		7311(Av)	35.25	54	-18.75
	Horizontal	2437(Pk)	97.34	-	-
		2437(Av)	87.16	-	-
		4874(Pk)	41.13	74	-32.87
		4874(Av)	29.29	54	-24.71
		7311(Pk)	47.72	74	-26.28
		7311(Av)	35.26	54	-18.74
2452	Vertical	2452(Pk)	100.50	-	-
		2452(Av)	90.23	-	-
		2483.5(Pk)	56.92	74*	-17.08
		2483.5(Av)	40.55	54*	-13.45
		4904(Pk)	41.16	74	-32.84
		4904(Av)	29.07	54	-24.93
		7356(Pk)	47.40	74	-26.60
		7356(Av)	35.34	54	-18.66
	Horizontal	2452(Pk)	98.40	-	-
		2452(Av)	88.29	-	-
		2483.5(Pk)	55.27	74*	-18.73
		2483.5(Av)	37.47	54*	-16.53
		4904(Pk)	42.03	74	-31.97
		4904(Av)	29.07	54	-24.93
		7356(Pk)	47.83	74	-26.17
		7356(Av)	35.32	54	-18.68

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ax_HE40

Data Rate: MCS0

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2422	Vertical	2422(Pk)	99.59	-	-
		2422(Av)	88.04	-	-
		2390(Pk)	53.97	74*	-20.03
		2390(Av)	40.69	54*	-13.31
		4844(Pk)	41.01	74	-32.99
		4844(Av)	29.50	54	-24.50
		7266(Pk)	47.99	74	-26.01
		7266(Av)	35.41	54	-18.59
	Horizontal	2422(Pk)	97.53	-	-
		2422(Av)	85.30	-	-
		2390(Pk)	50.98	74*	-23.02
		2390(Av)	36.26	54*	-17.74
		4844(Pk)	41.05	74	-32.95
		4844(Av)	29.45	54	-24.55
		7266(Pk)	47.45	74	-26.55
		7266(Av)	35.38	54	-18.62
2437	Vertical	2437(Pk)	100.62	-	-
		2437(Av)	87.73	-	-
		4874(Pk)	41.09	74	-32.91
		4874(Av)	29.29	54	-24.71
		7311(Pk)	46.80	74	-27.20
		7311(Av)	35.26	54	-18.74
	Horizontal	2437(Pk)	98.21	-	-
		2437(Av)	84.96	-	-
		4874(Pk)	41.52	74	-32.48
		4874(Av)	29.32	54	-24.68
2452	Vertical	2452(Pk)	102.24	-	-
		2452(Av)	89.32	-	-
		2483.5(Pk)	55.83	74*	-18.17
		2483.5(Av)	40.02	54*	-13.98
		4904(Pk)	41.65	74	-32.35
		4904(Av)	29.04	54	-24.96
		7356(Pk)	47.52	74	-26.48
		7356(Av)	35.32	54	-18.68
	Horizontal	2452(Pk)	99.19	-	-
		2452(Av)	86.82	-	-
		2483.5(Pk)	51.72	74*	-22.28
		2483.5(Av)	36.77	54*	-17.23
		4904(Pk)	40.77	74	-33.23
		4904(Av)	29.06	54	-24.94
		7356(Pk)	47.16	74	-26.84
		7356(Av)	35.34	54	-18.66

*: Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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Modulation: 802.11ax_HE40

Data Rate: MCS7

Channel Frequency (MHz)	Antenna Polarization	Measured Frequency (MHz)	Emission (dBµV/m)	Limit (dBµV/m)	Margin (dB)
2422	Vertical	2422(Pk)	100.28	-	-
		2422(Av)	87.29	-	-
		2390(Pk)	49.98	74*	-24.02
		2390(Av)	35.59	54*	-18.41
		4844(Pk)	41.74	74	-32.26
		4844(Av)	29.50	54	-24.50
		7266(Pk)	48.23	74	-25.77
		7266(Av)	35.36	54	-18.64
	Horizontal	2422(Pk)	96.82	-	-
		2422(Av)	84.54	-	-
		2390(Pk)	44.05	74*	-29.95
		2390(Av)	31.07	54*	-22.93
		4844(Pk)	42.62	74	-31.38
		4844(Av)	29.43	54	-24.57
		7266(Pk)	47.91	74	-26.09
		7266(Av)	35.38	54	-18.62
2437	Vertical	2437(Pk)	100.48	-	-
		2437(Av)	87.72	-	-
		4874(Pk)	41.44	74	-32.56
		4874(Av)	29.33	54	-24.67
		7311(Pk)	47.46	74	-26.54
		7311(Av)	35.28	54	-18.72
	Horizontal	2437(Pk)	97.86	-	-
		2437(Av)	84.74	-	-
		4874(Pk)	41.59	74	-32.41
		4874(Av)	29.30	54	-24.70
		7311(Pk)	47.21	74	-26.79
		7311(Av)	35.28	54	-18.72
2452	Vertical	2452(Pk)	99.86	-	-
		2452(Av)	88.22	-	-
		2483.5(Pk)	54.74	74*	-19.26
		2483.5(Av)	38.46	54*	-15.54
		4904(Pk)	41.10	74	-32.90
		4904(Av)	29.03	54	-24.97
		7356(Pk)	47.75	74	-26.25
		7356(Av)	35.34	54	-18.66
	Horizontal	2452(Pk)	97.75	-	-
		2452(Av)	85.43	-	-
		2483.5(Pk)	54.07	74*	-19.93
		2483.5(Av)	36.07	54*	-17.93
		4904(Pk)	40.93	74	-33.07
		4904(Av)	29.07	54	-24.93
		7356(Pk)	47.23	74	-26.77
		7356(Av)	35.35	54	-18.65

*- : Indicate restricted band of operation §15.205

Pk: Peak Detector; Av: Average Detector

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7.5.1 Simultaneous Operation:

Combination of Wi-Fi 2.4GHz and Bluetooth 2.4GHz:

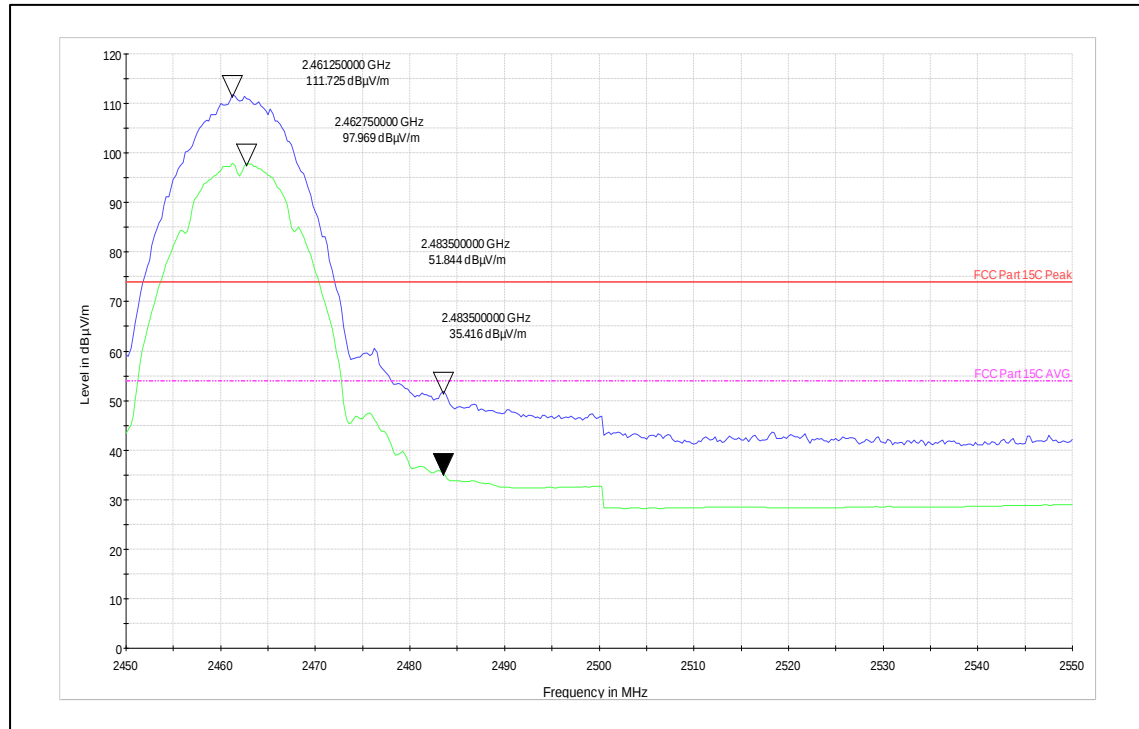
Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
2412	Vertical	4824(Pk)	46.15	74.00	-27.85
		4824(Av)	31.81	54.00	-22.19
		7236(Pk)	47.41	74.00	-26.59
		7236(Av)	34.79	54.00	-19.21
2402		4804(Pk)	41.86	74.00	-32.14
		4804(Av)	28.92	54.00	-25.08
		7206(Pk)	48.38	74.00	-25.62
		7206(Av)	34.80	54.00	-19.20
2412	Horizontal	4824(Pk)	43.39	74.00	-30.61
		4824(Av)	30.05	54.00	-23.95
		7236(Pk)	46.88	74.00	-27.12
		7236(Av)	34.70	54.00	-19.30
2402		4804(Pk)	42.09	74.00	-31.91
		4804(Av)	28.89	54.00	-25.11
		7206(Pk)	47.43	74.00	-26.57
		7206(Av)	34.74	54.00	-19.26

Worst Case Plots are Reported

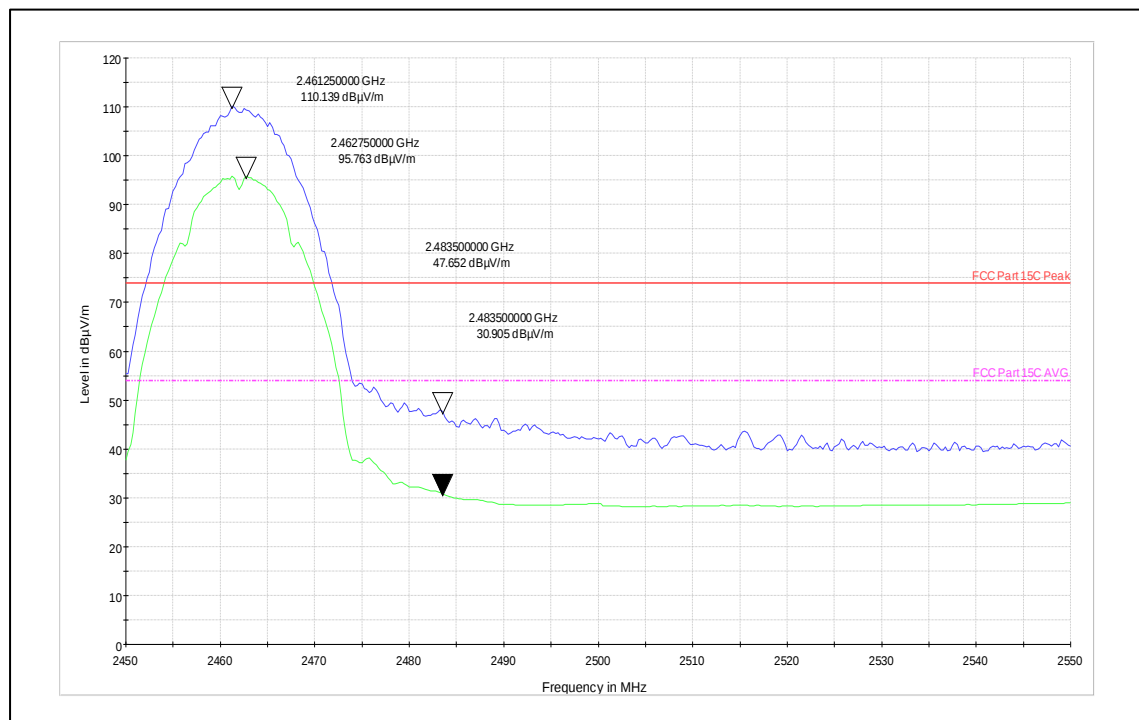
Modulation: 802.11b

Data Rate : 11Mbps

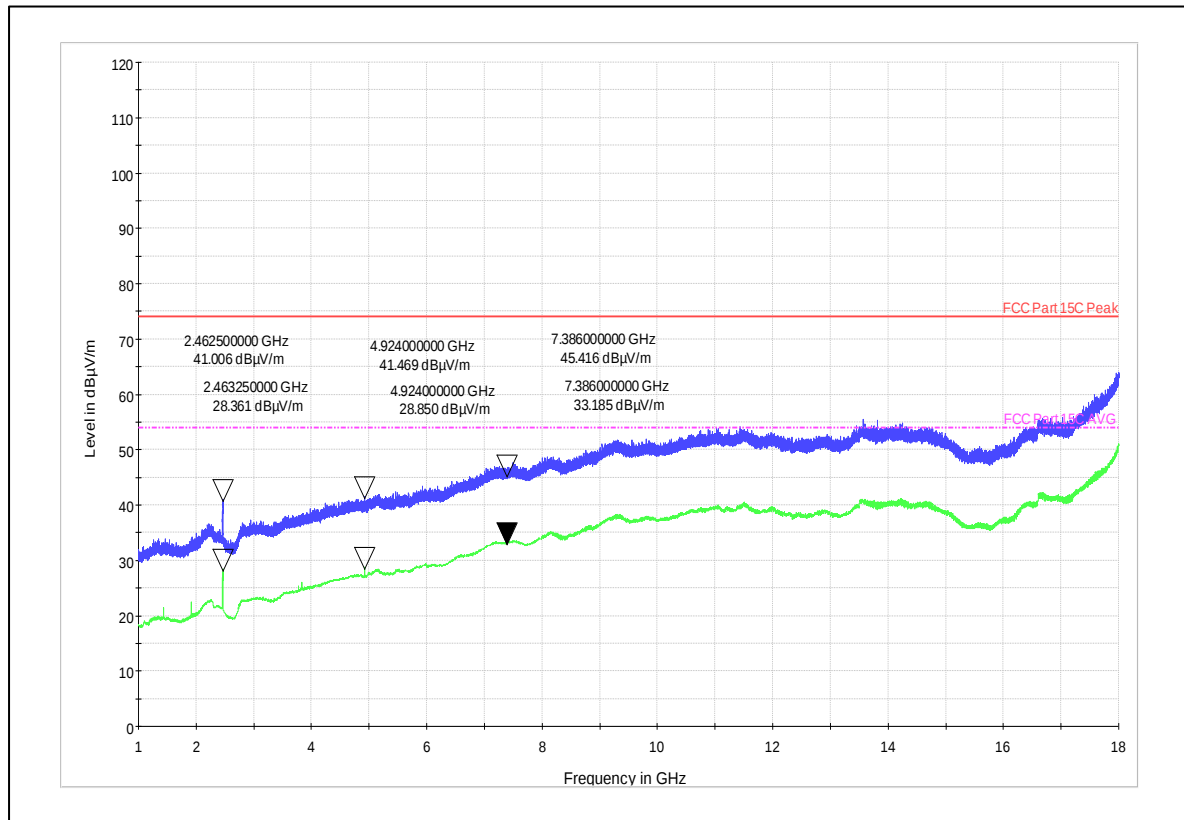
Channel frequency - 2462MHz_Vertical Polarization



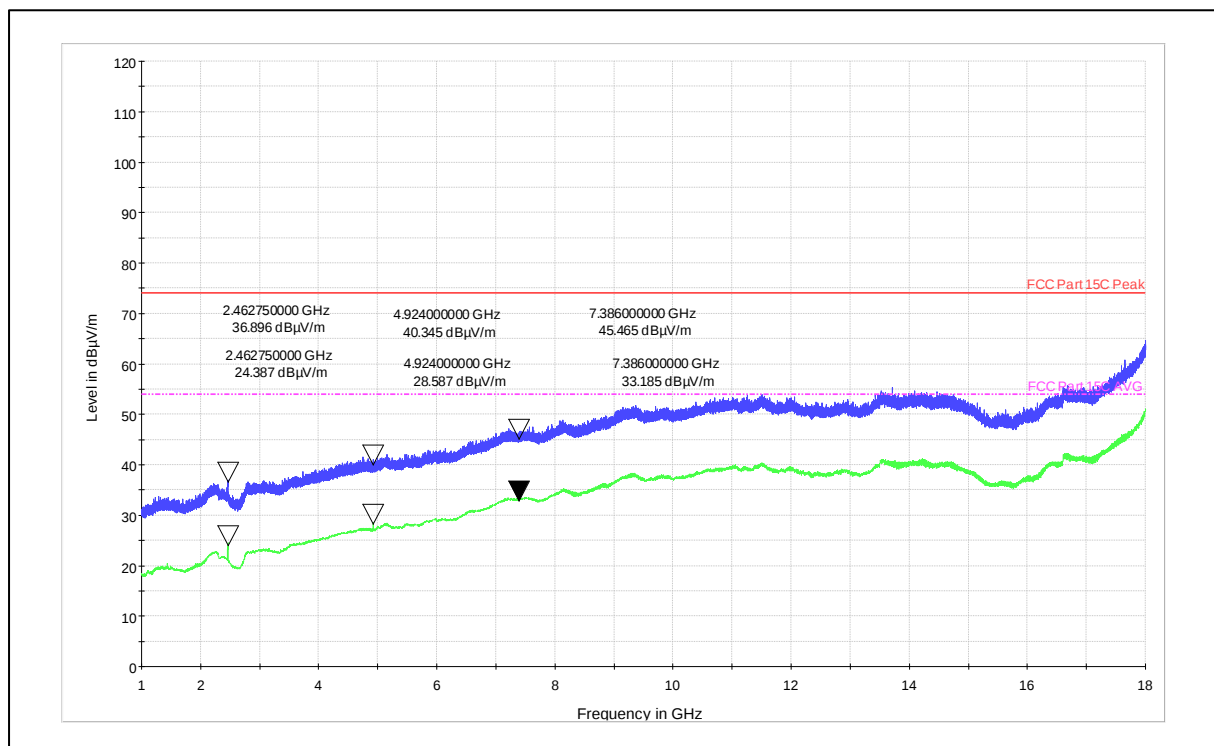
Channel frequency - 2462MHz_Horizontal Polarization



Channel frequency - 2462MHz_Vertical Polarization



Channel frequency - 2462MHz_Horizontal Polarization



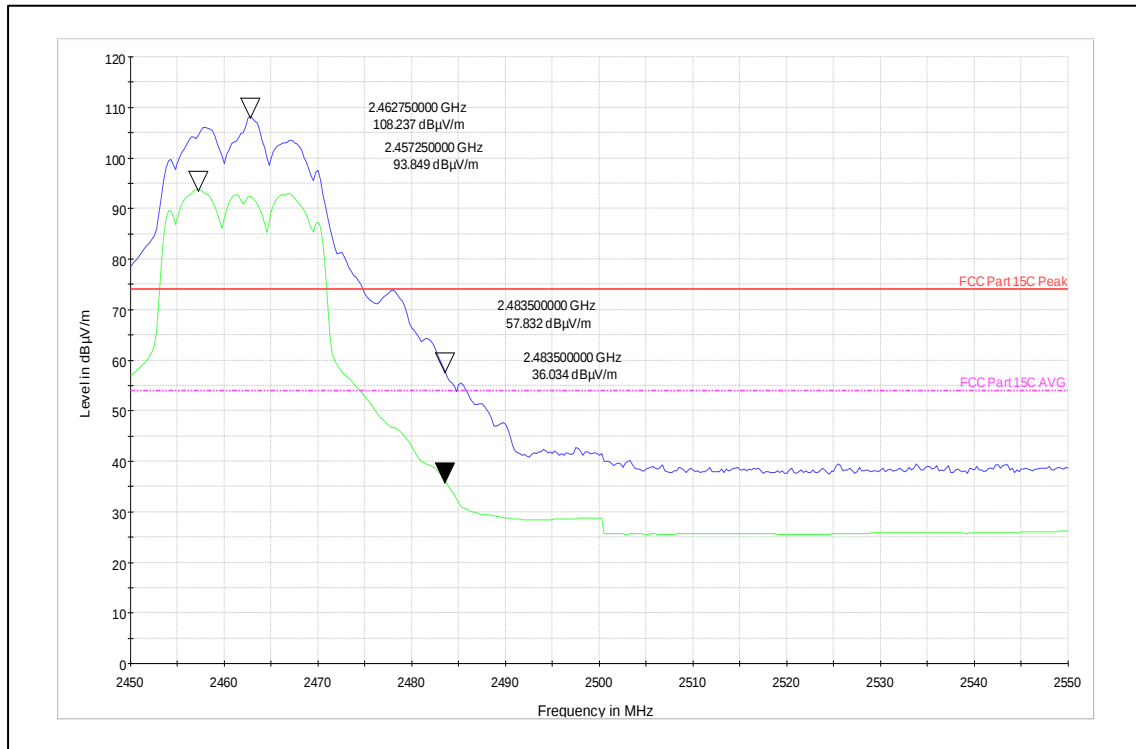
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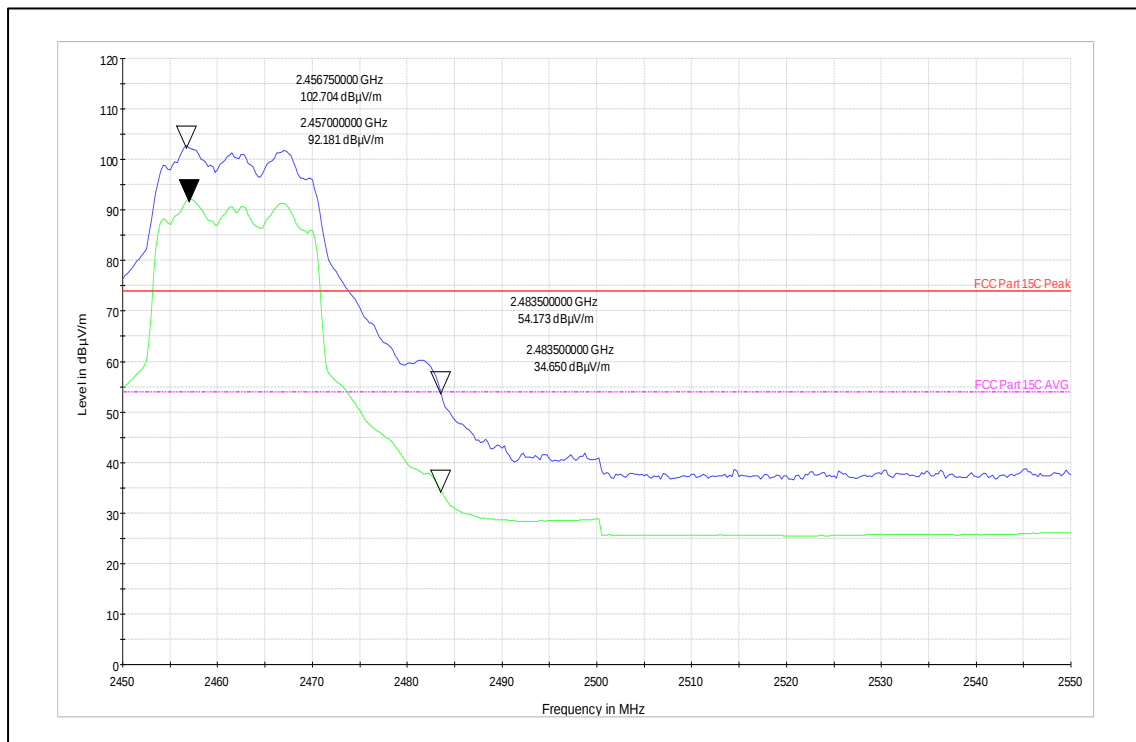
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Modulation: 802.11g
Data Rate : 54Mbps

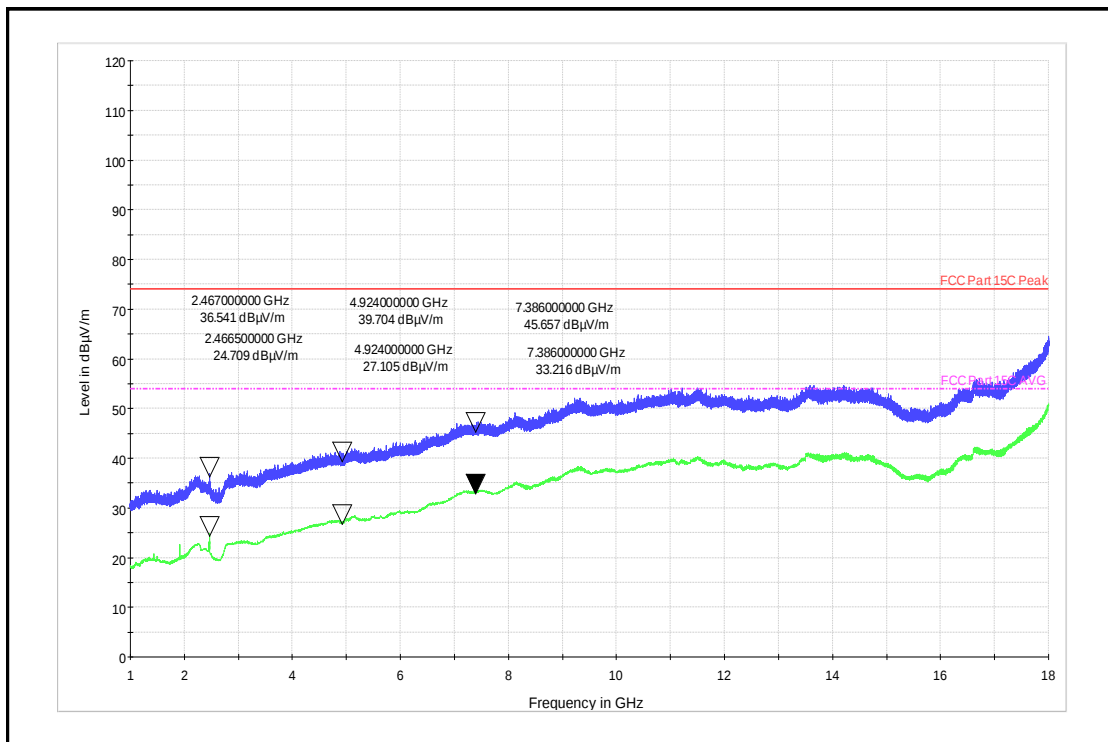
Channel Frequency - 2462MHz_Vertical Polarization



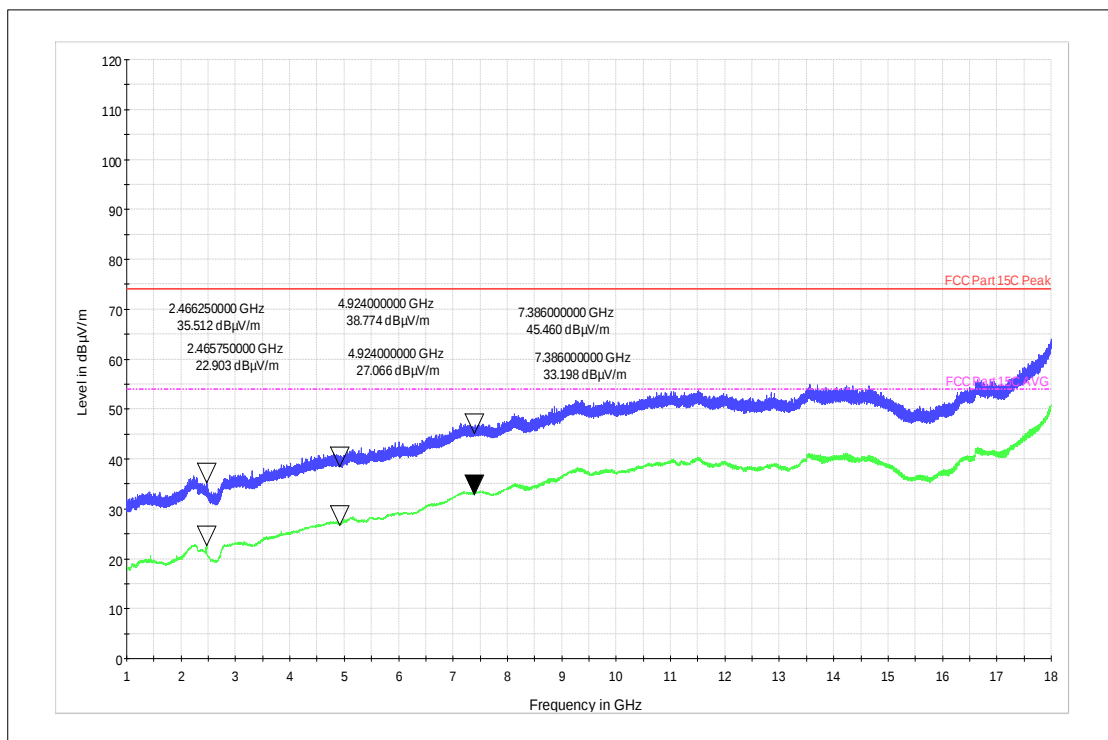
Channel Frequency - 2462MHz_Horizontal Polarization



Channel Frequency - 2462MHz_Vertical Polarization



Channel Frequency - 2462MHz_Horizontal Polarization



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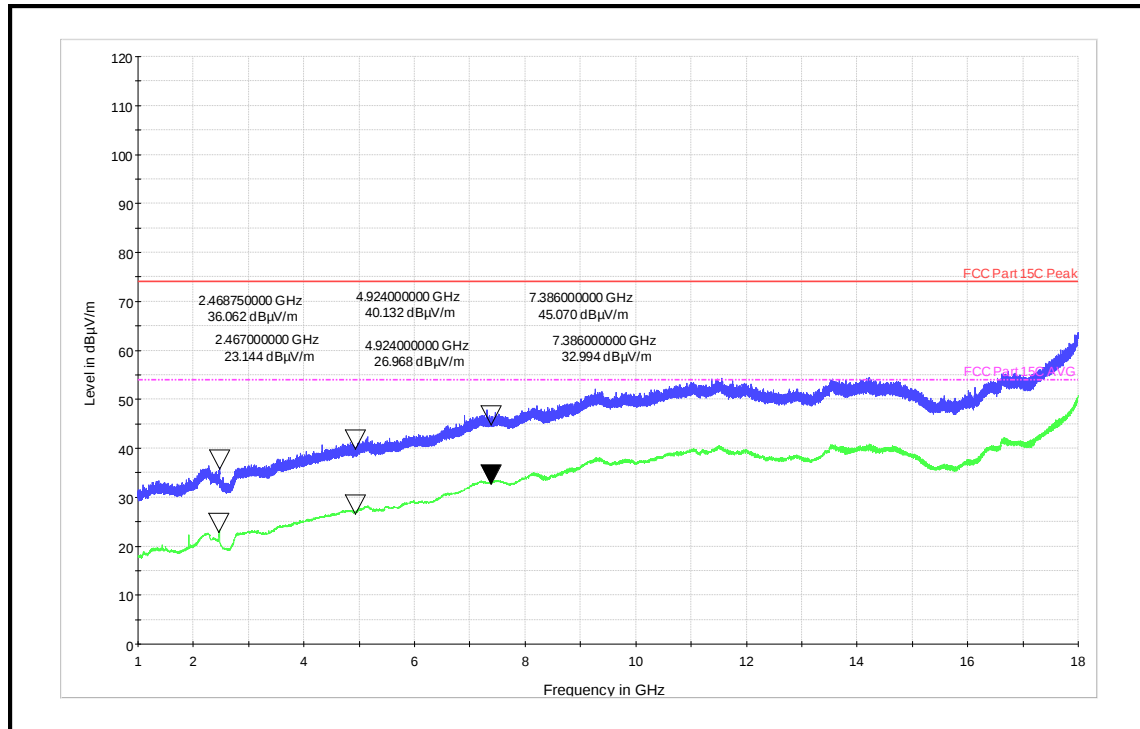
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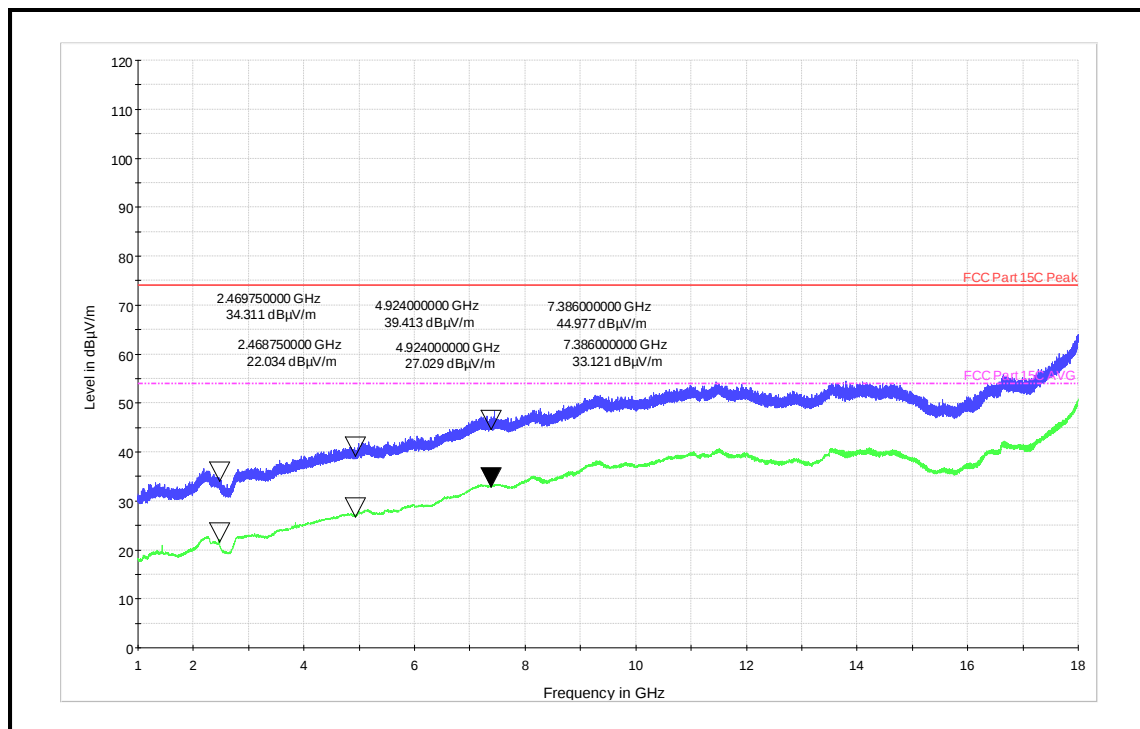
Modulation: 802.11n-HT_20

Data Rate : MCS 7

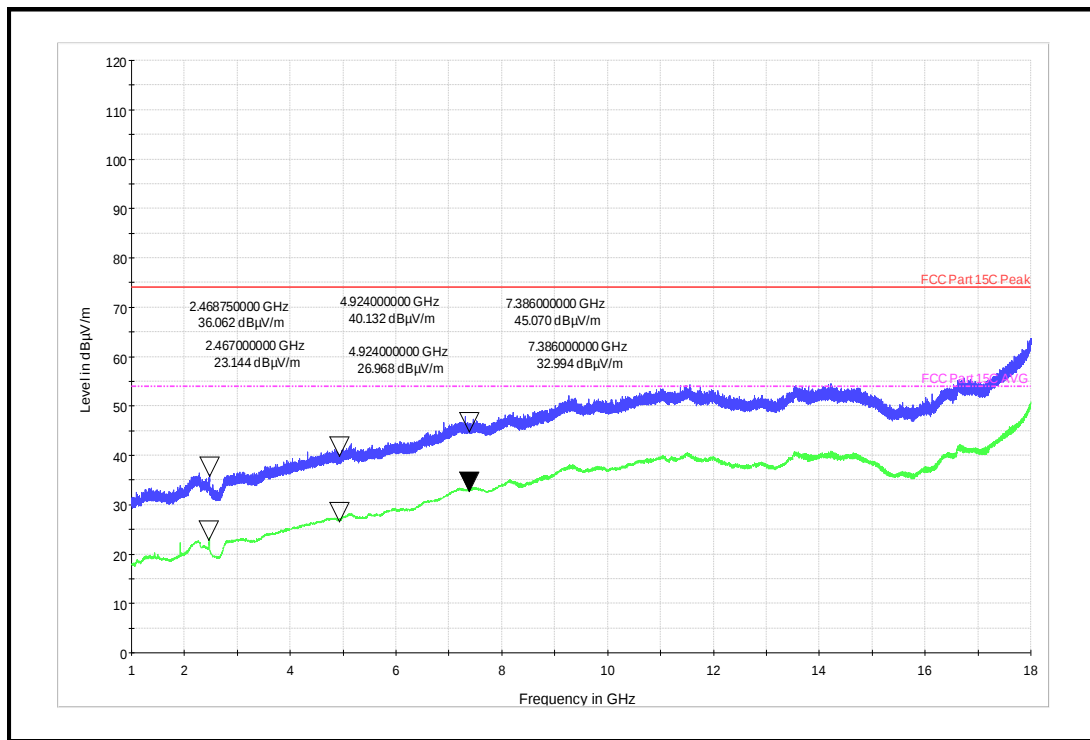
Channel Frequency - 2462MHz_Vertical Polarization



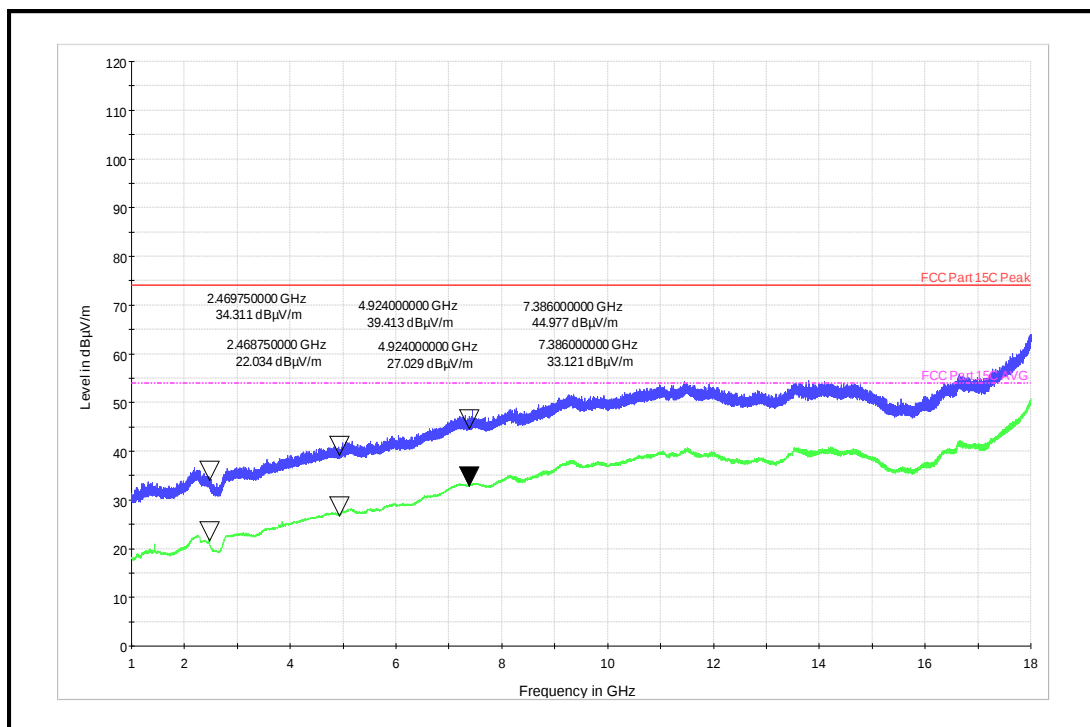
Channel Frequency - 2462MHz_Horizontal Polarization



Channel Frequency - 2462MHz_Vertical Polarization



Channel Frequency - 2462MHz_Horizontal Polarization



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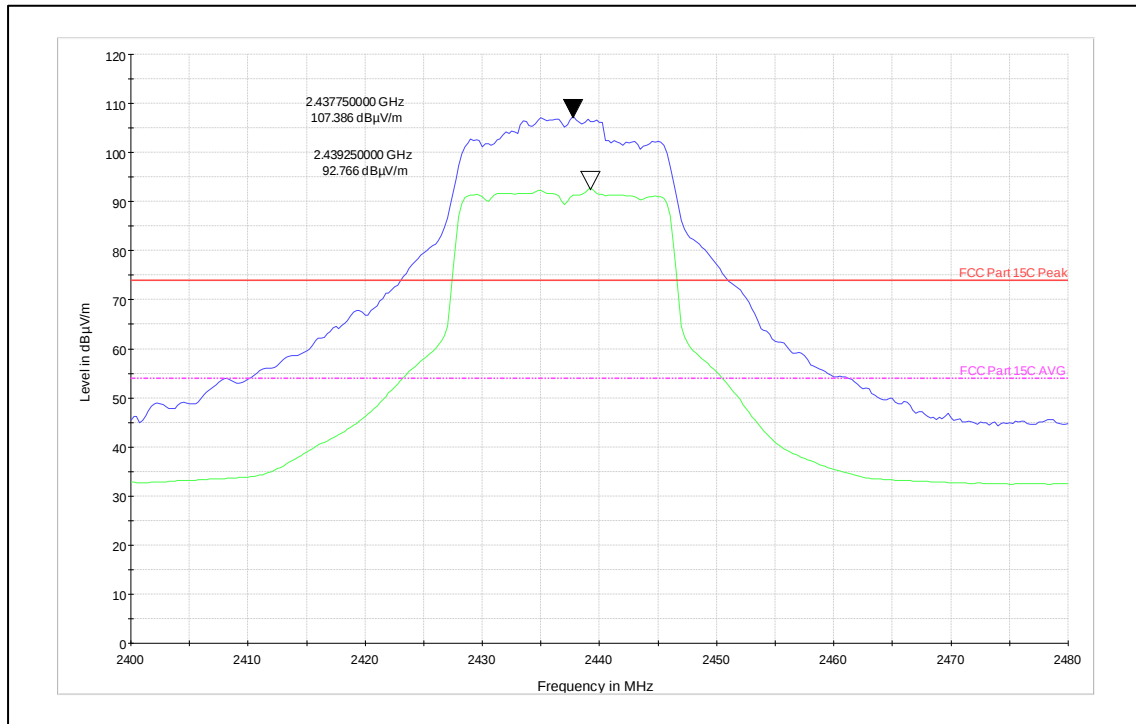
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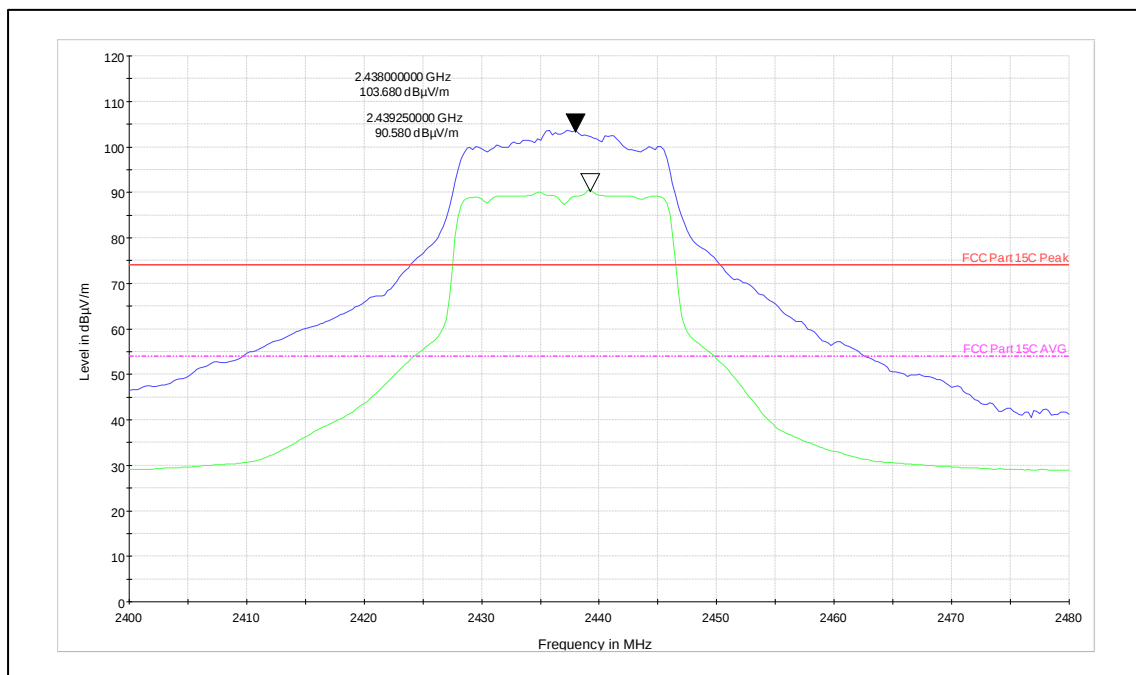
Modulation: 802.11ac-VHT_20

Data Rate : MCS 8

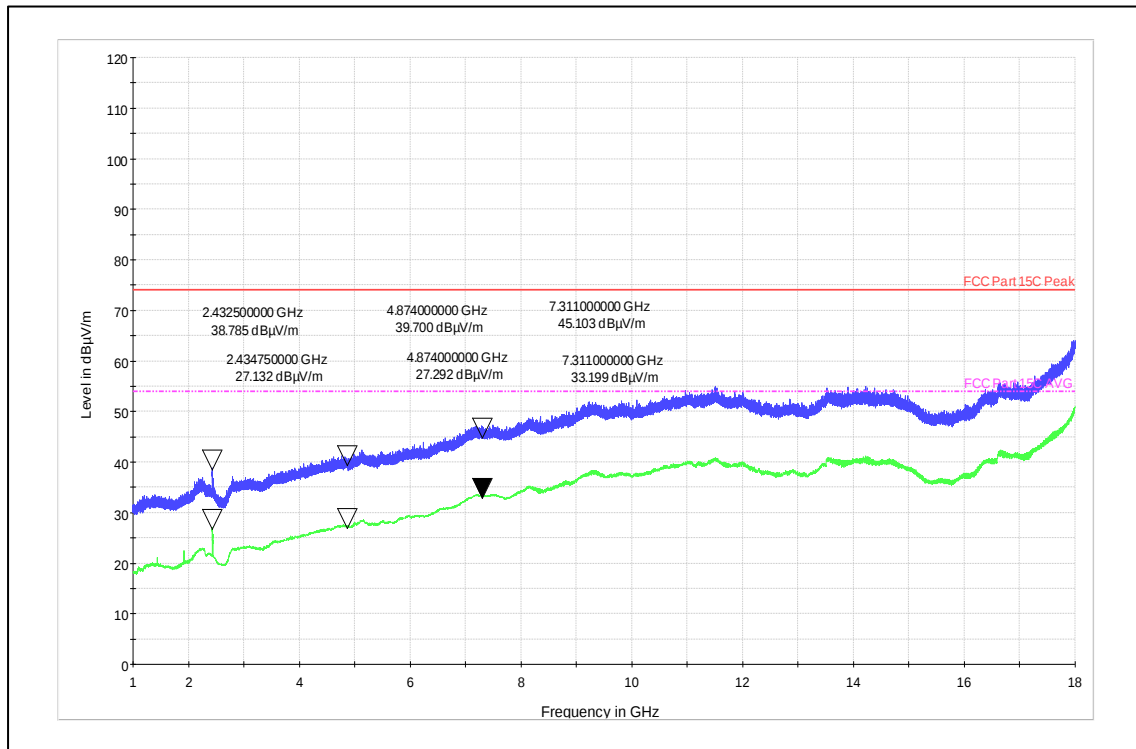
Channel Frequency - 2437MHz_Vertical Polarization



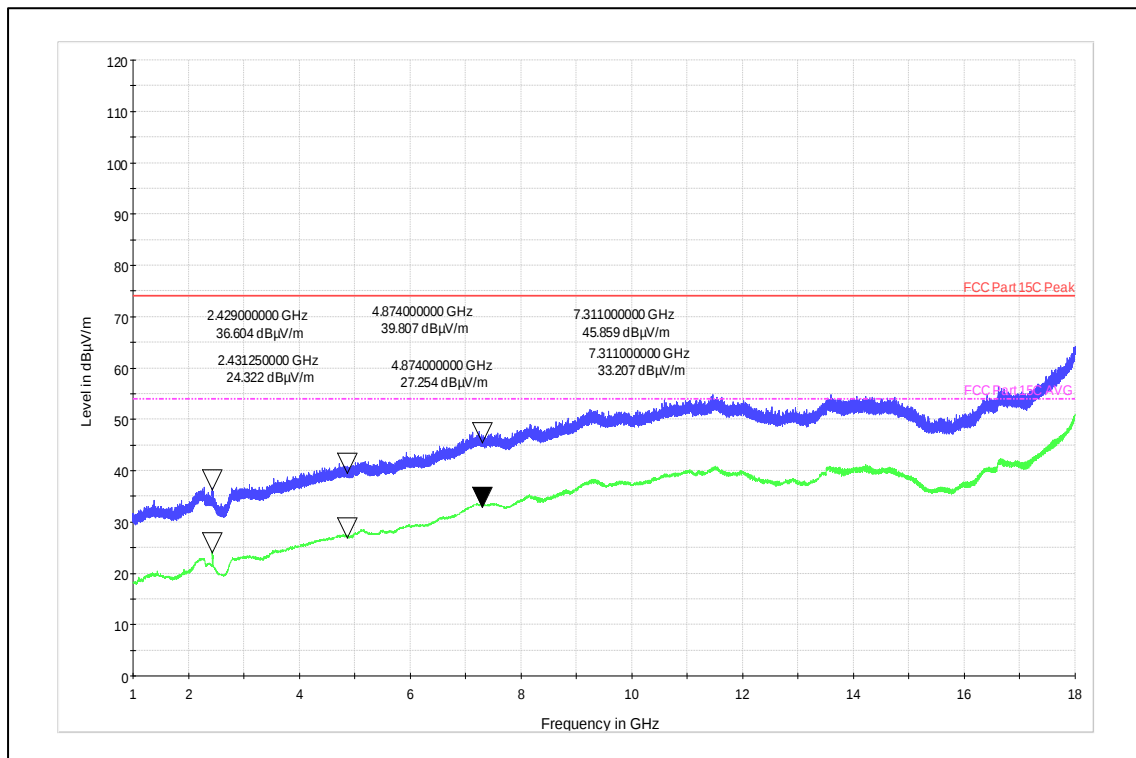
Channel Frequency - 2437MHz_Horizontal Polarization



Channel Frequency - 2437MHz_Vertical Polarization



Channel Frequency - 2437MHz_Horizontal Polarization



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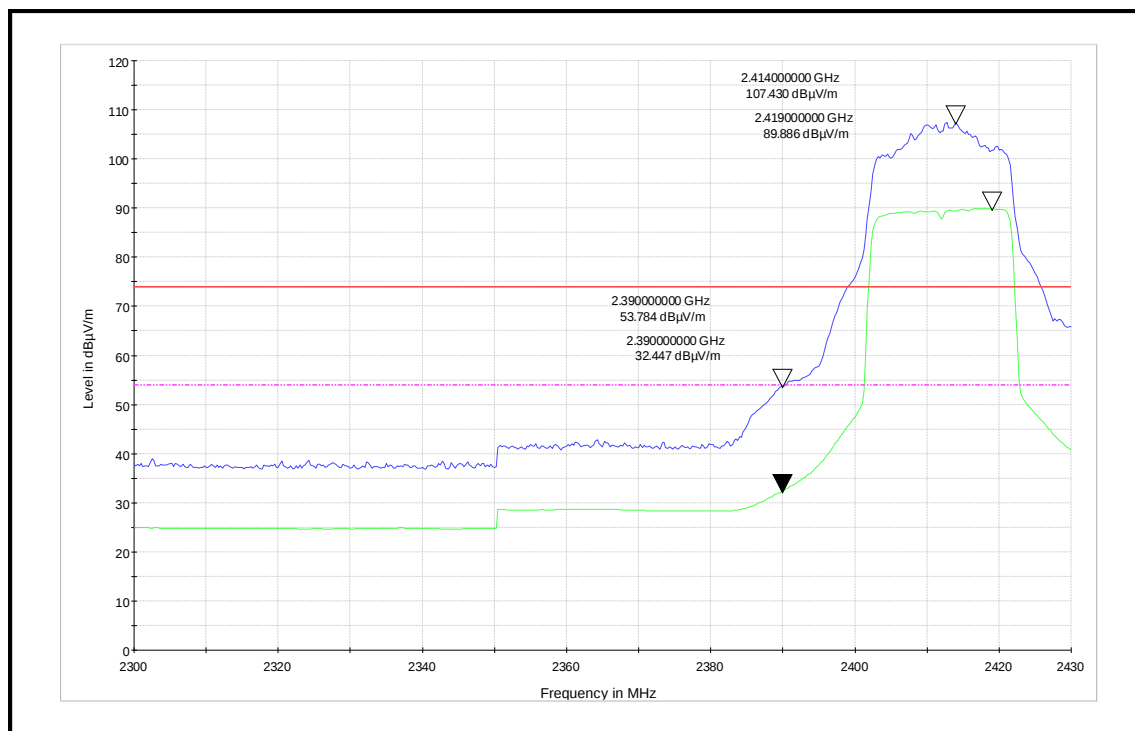
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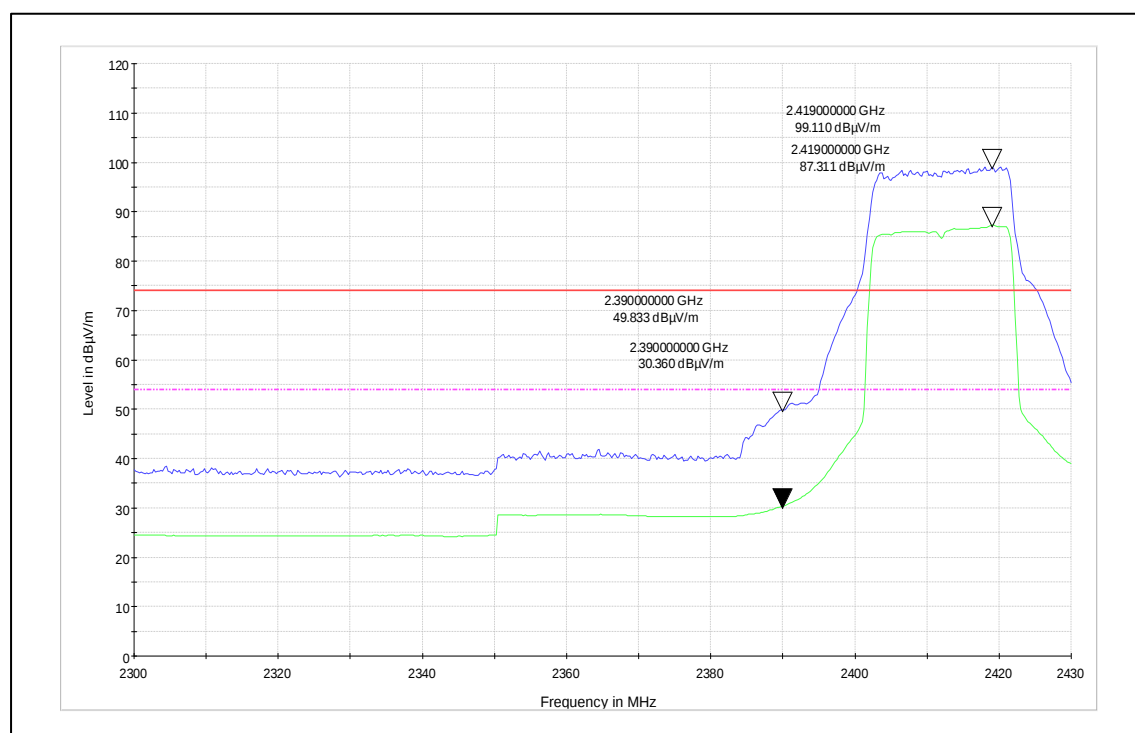
Modulation: 802.11ax-HE_20

Data Rate : MCS0

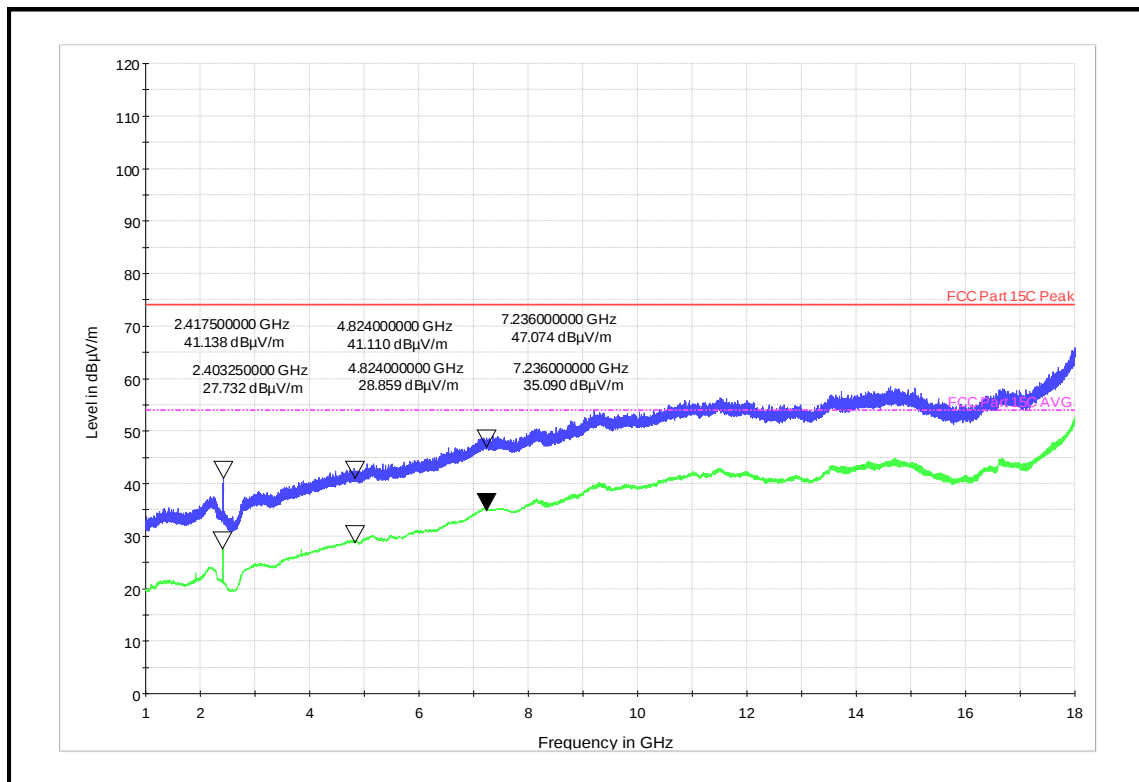
Channel Frequency - 2412MHz_Vertical Polarization



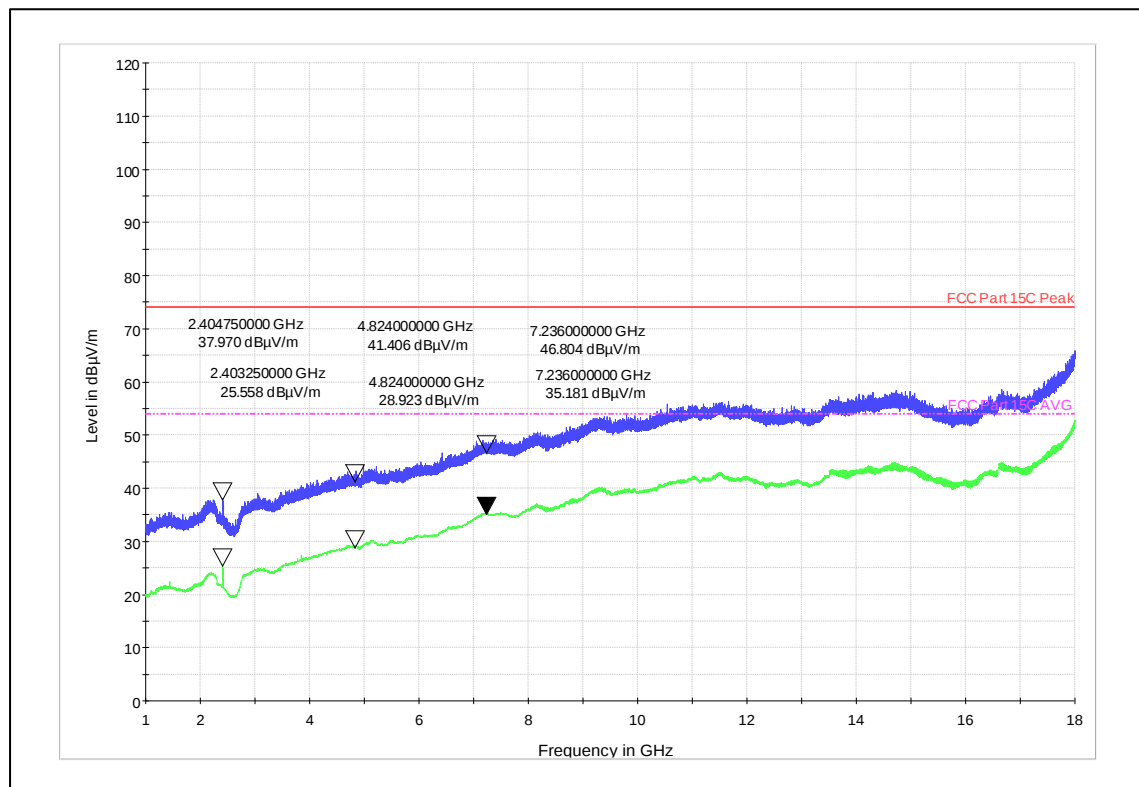
Channel Frequency - 2412MHz_Horizontal Polarization



Channel Frequency - 2412MHz_Vertical Polarization

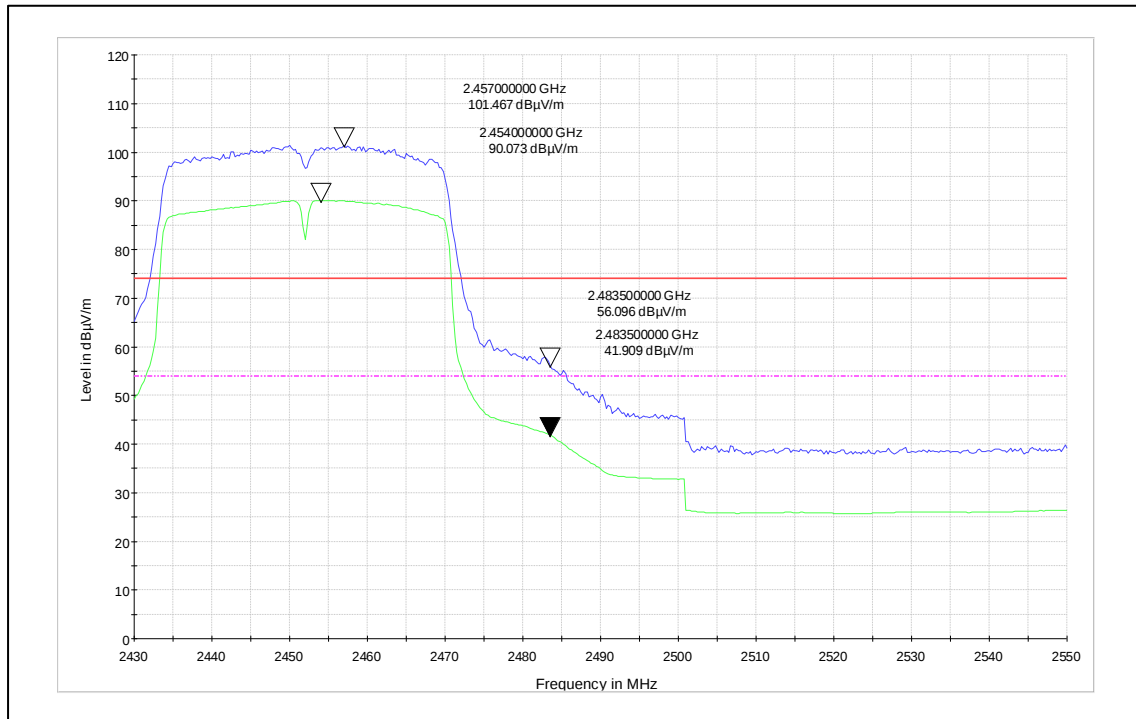


Channel Frequency - 2412MHz_Horizontal Polarization

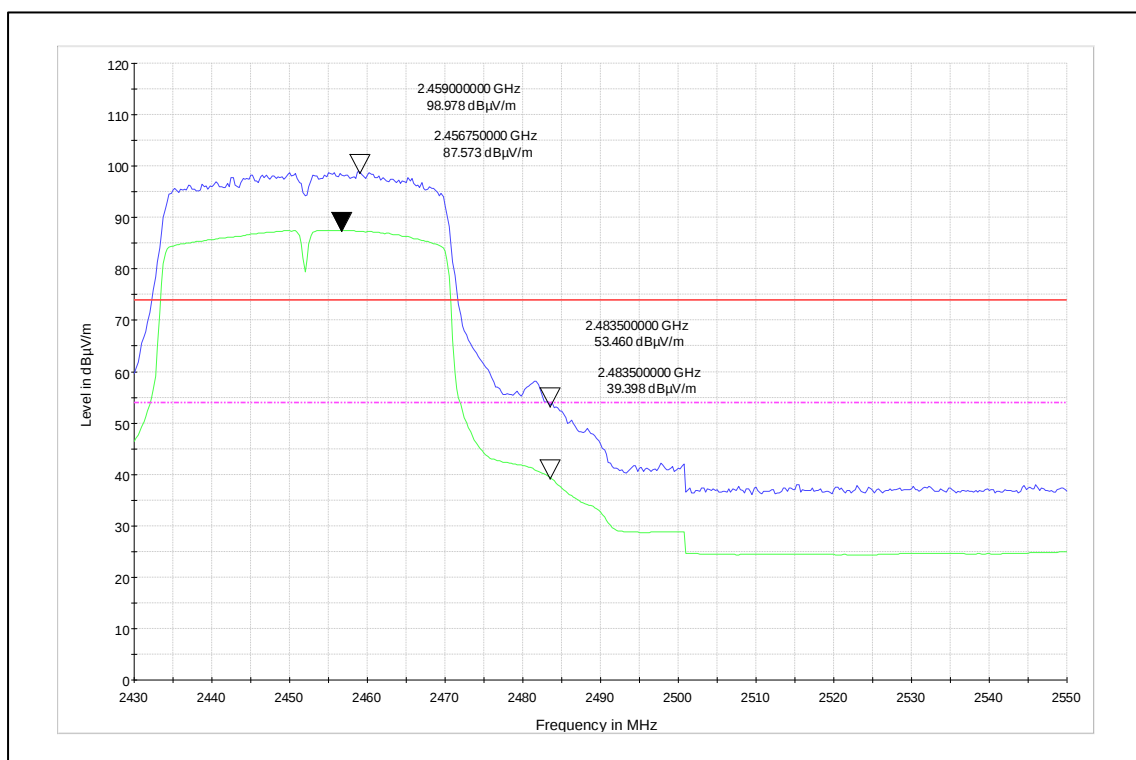


Modulation: 802.11n-HT_40
Data Rate : MCS 0

Channel Frequency - 2452MHz_Vertical Polarization



Channel Frequency - 2452MHz_Horizontal Polarization



Prüfbericht - Nr.:

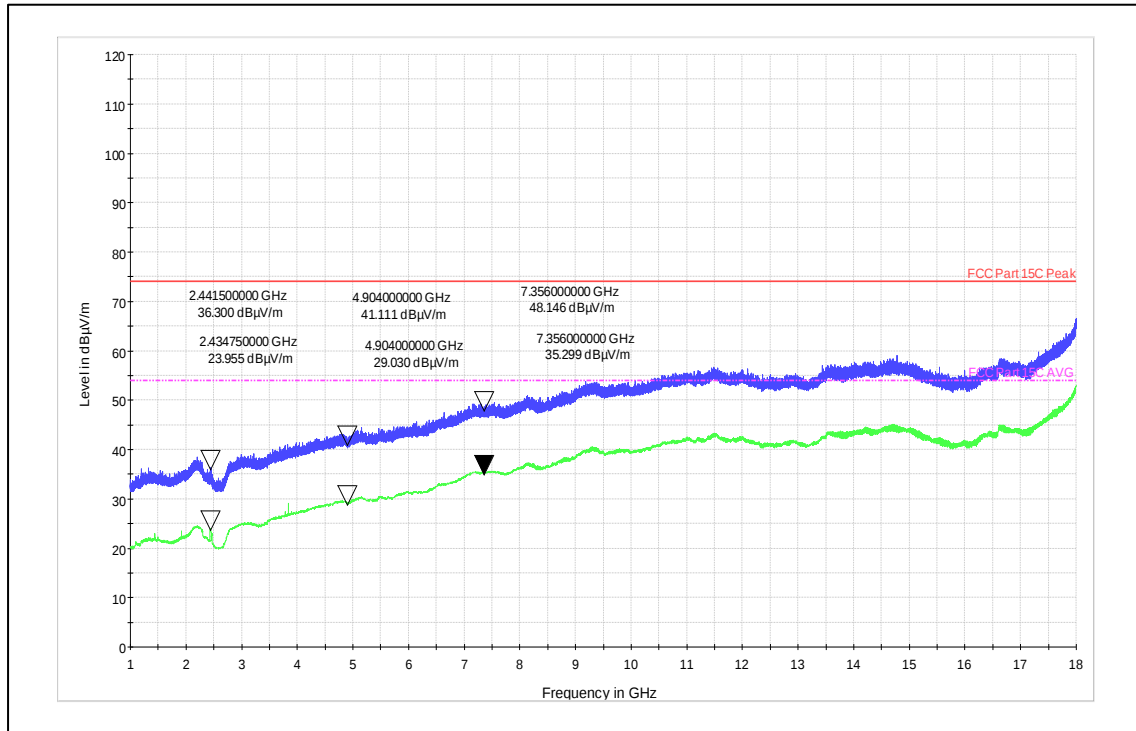
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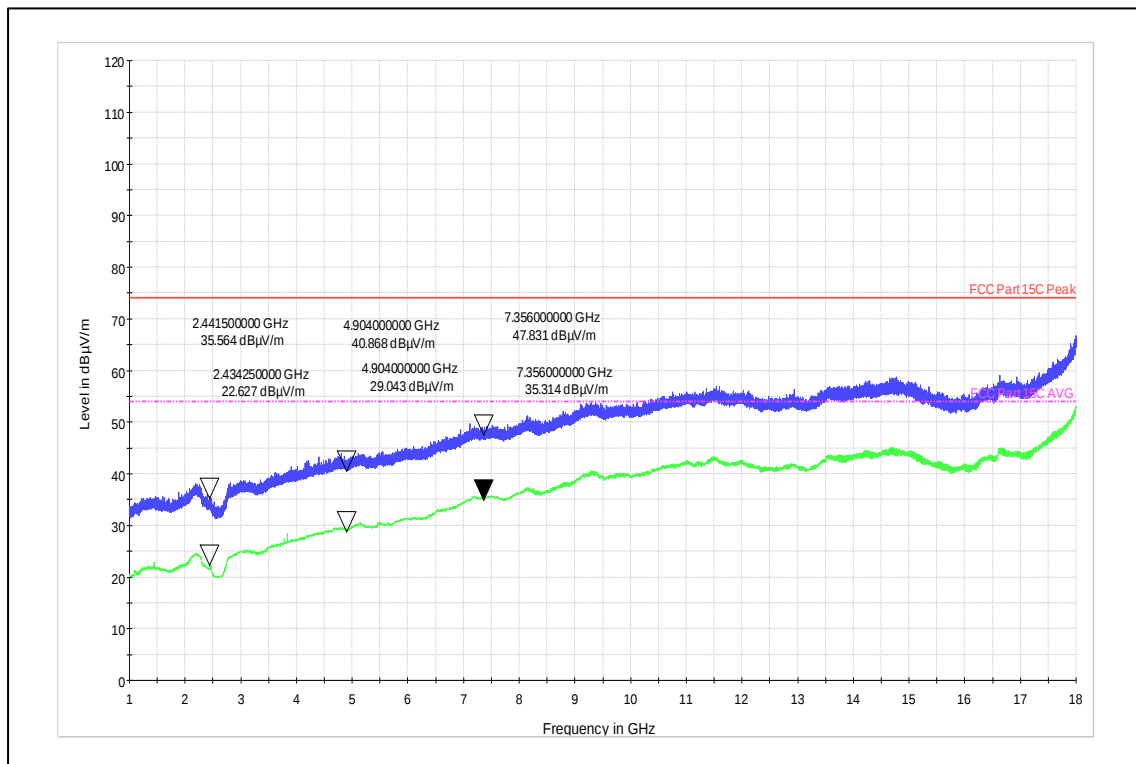
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Channel Frequency - 2452MHz_Vertical Polarization



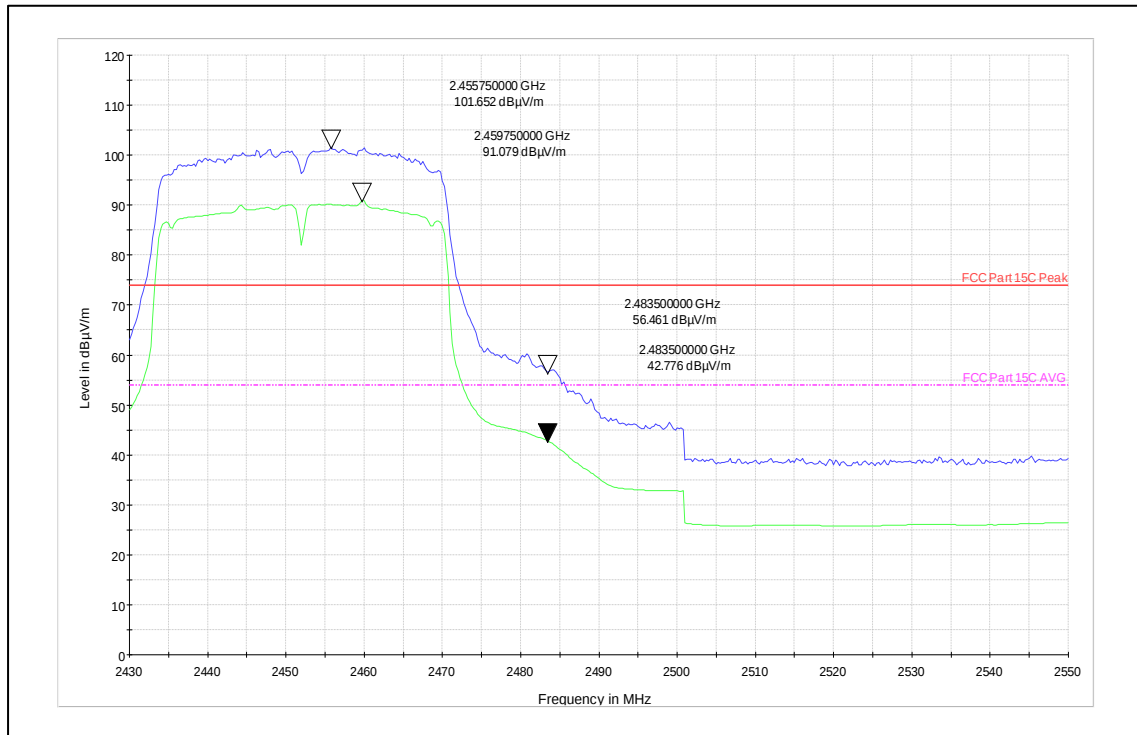
Channel Frequency - 2452MHz_Horizontal Polarization



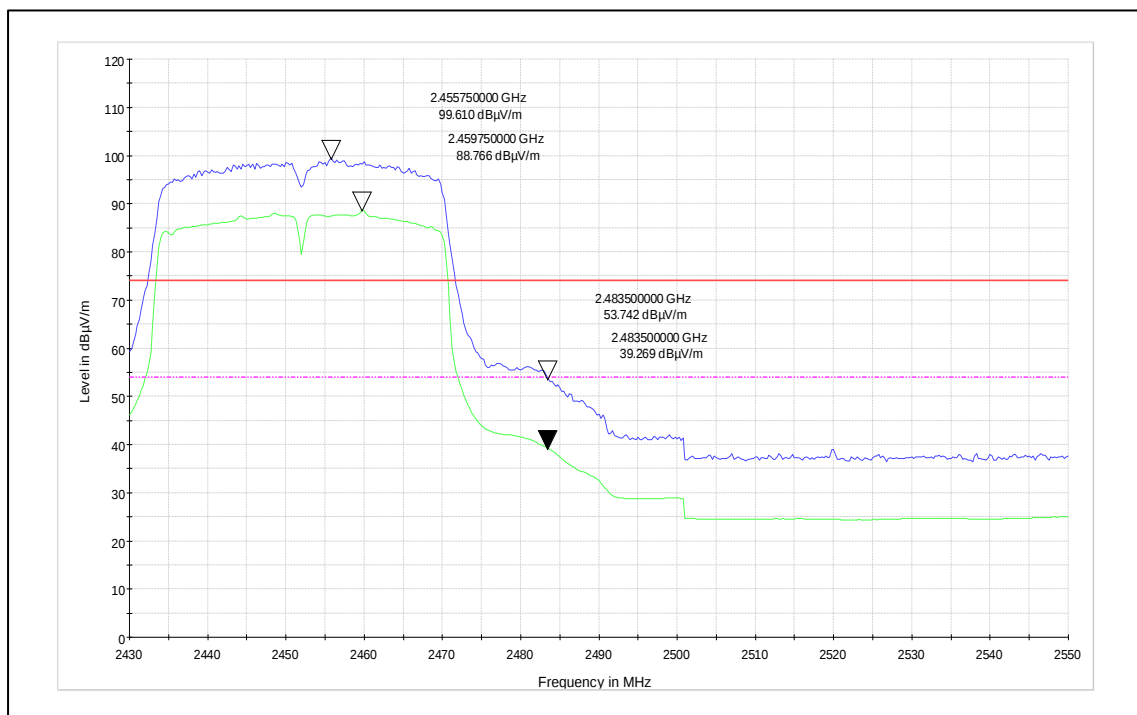
Modulation: 802.11ac-VHT_40

Data Rate : MCS 0

Channel Frequency - 2452MHz_Vertical Polarization



Channel Frequency - 2452MHz_Horizontal Polarization



Prüfbericht - Nr.:

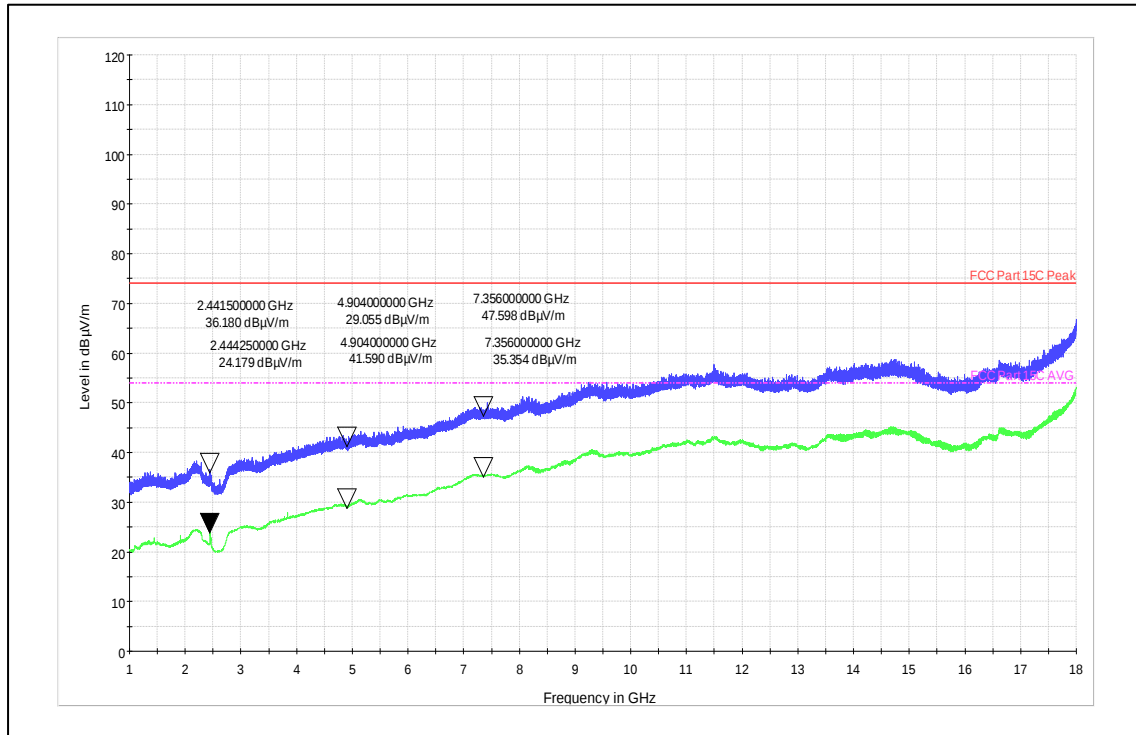
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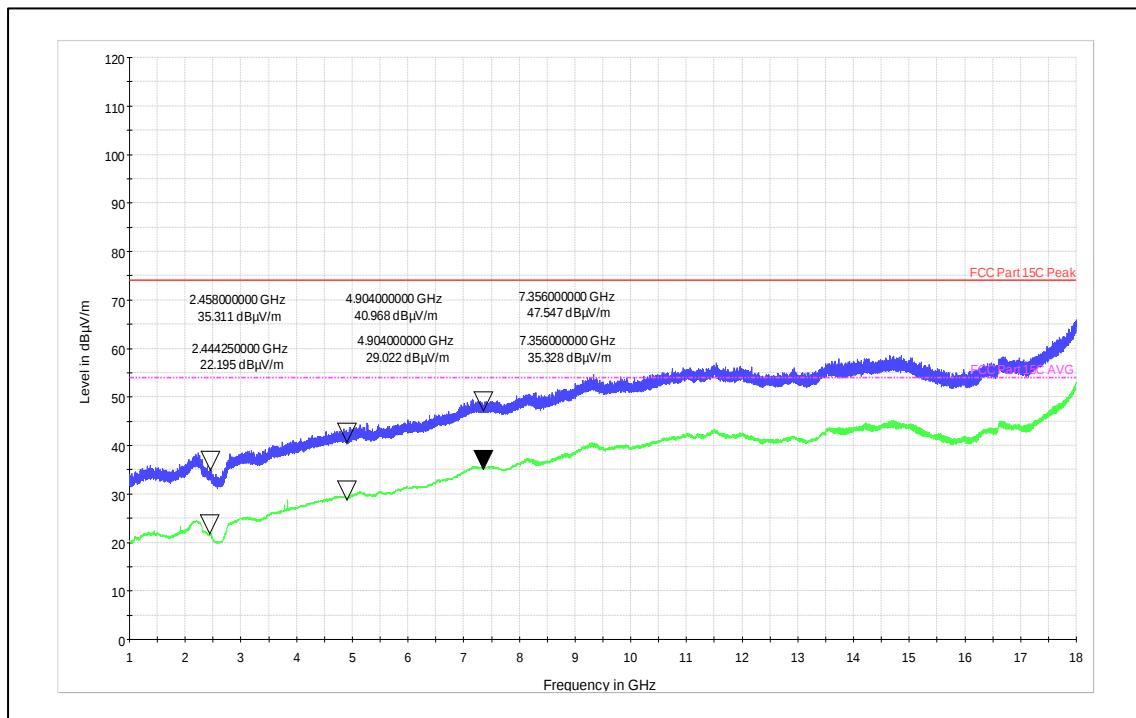
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Channel Frequency - 2452MHz_Vertical Polarization



Channel Frequency - 2452MHz_Horizontal Polarization



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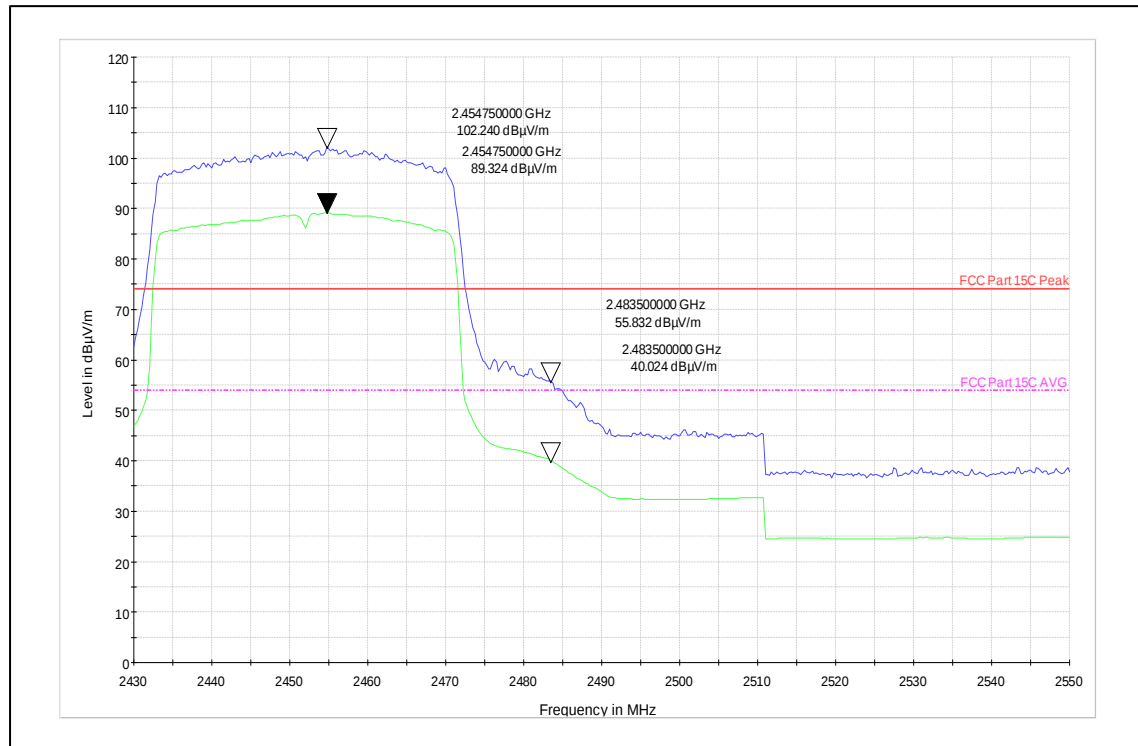
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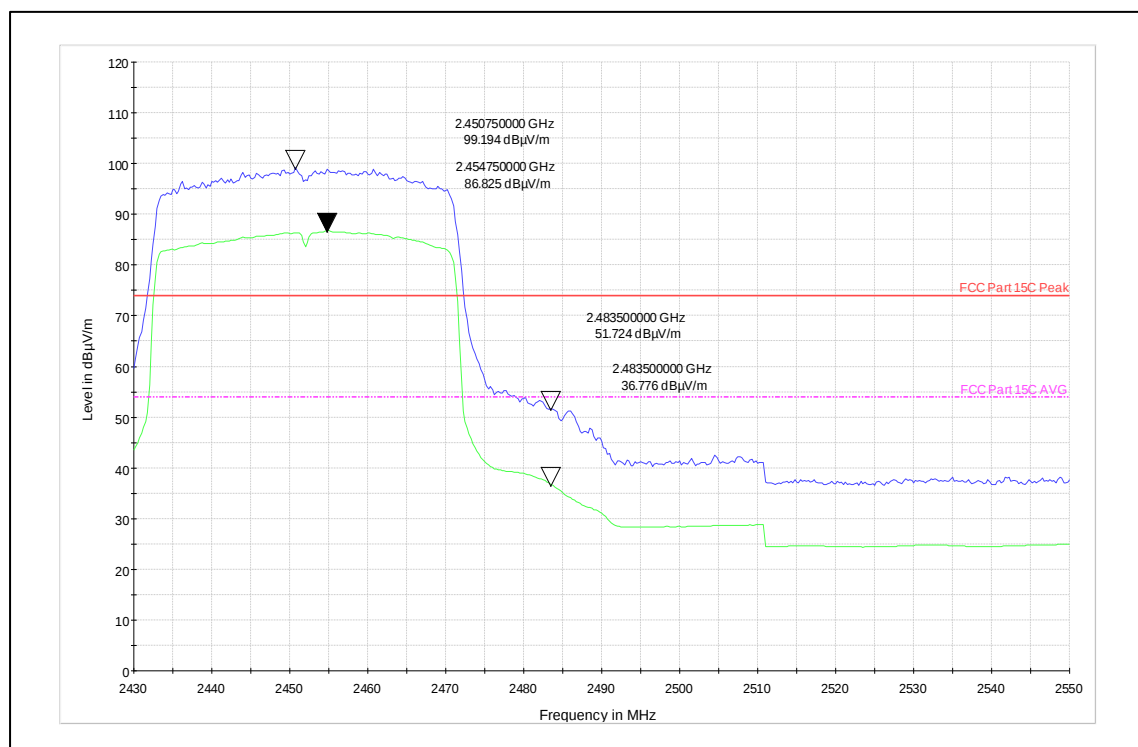
Modulation: 802.11ax-HE_40

Data Rate : MCS 0

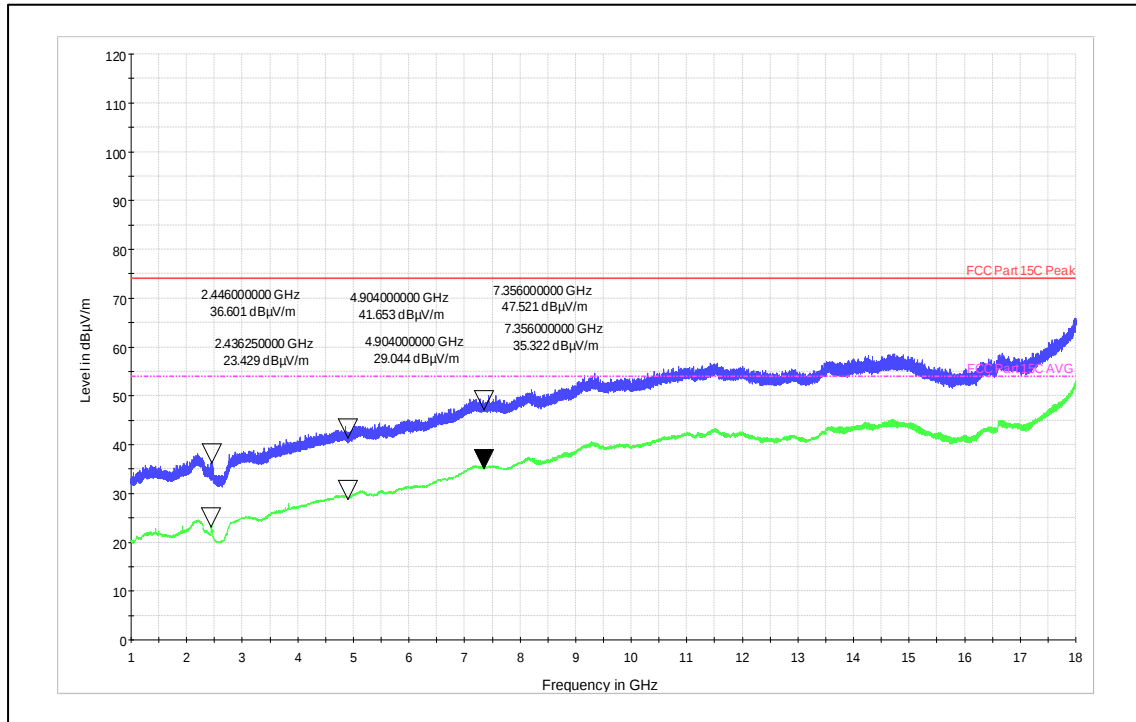
Channel Frequency - 2452MHz_Vertical Polarization



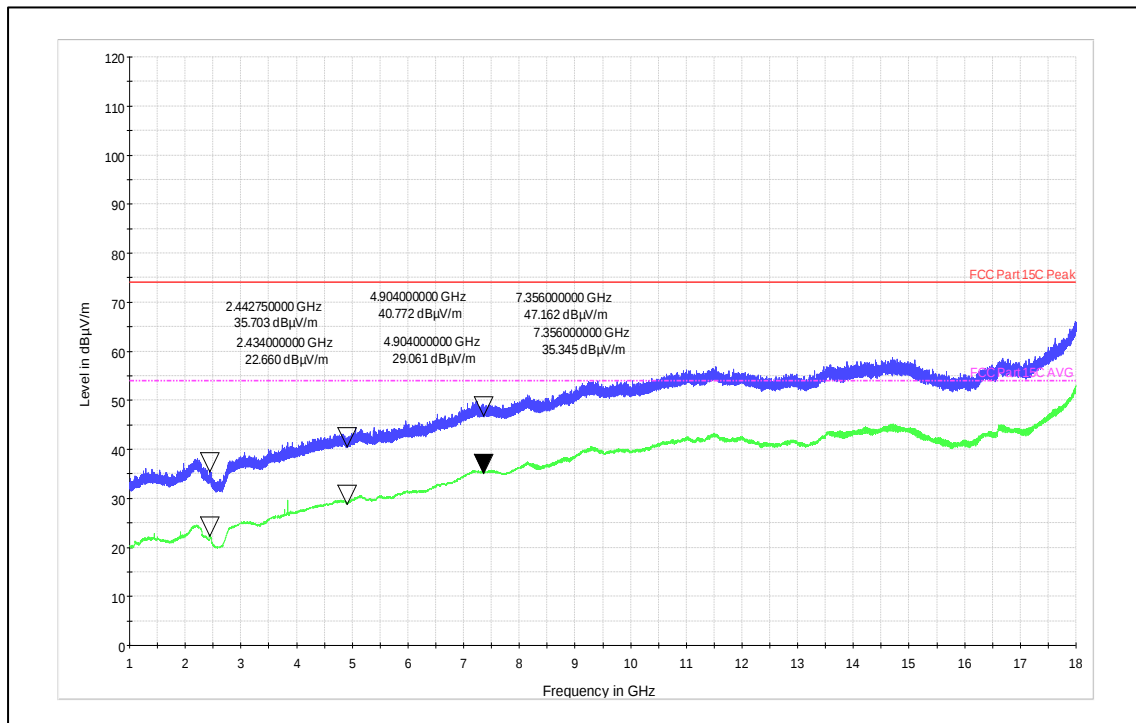
Channel Frequency - 2452MHz_Horizontal Polarization



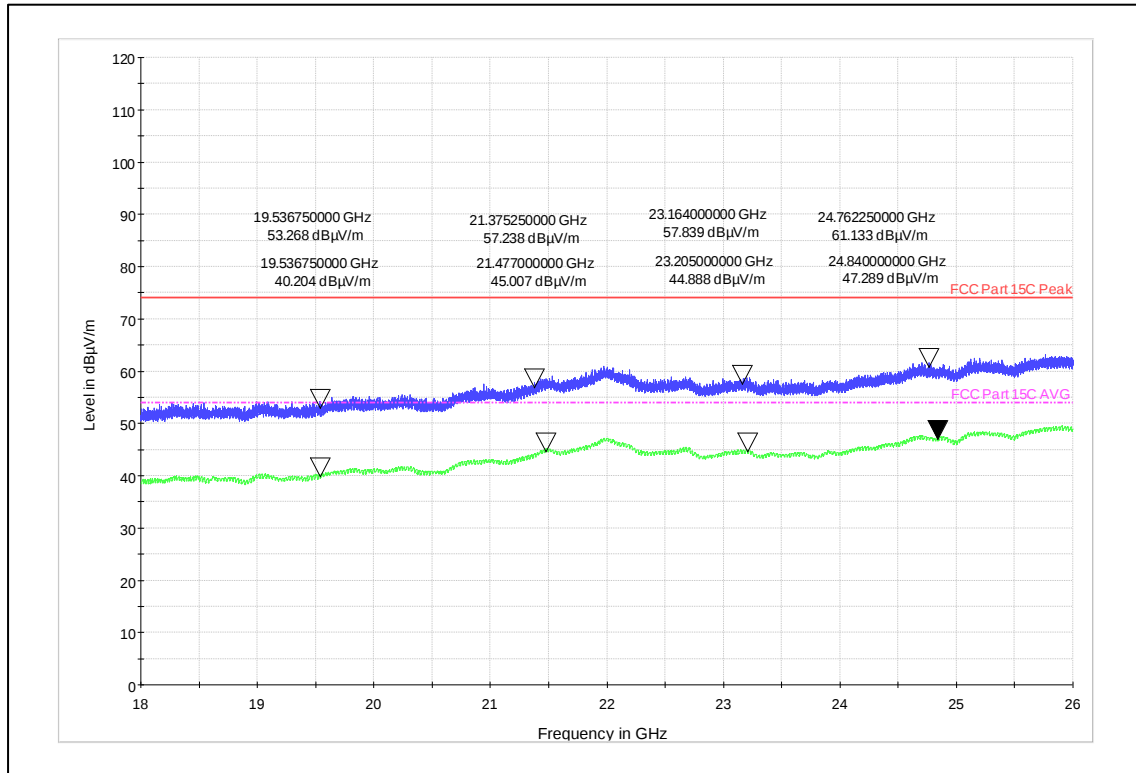
Channel Frequency - 2452MHz_Vertical Polarization



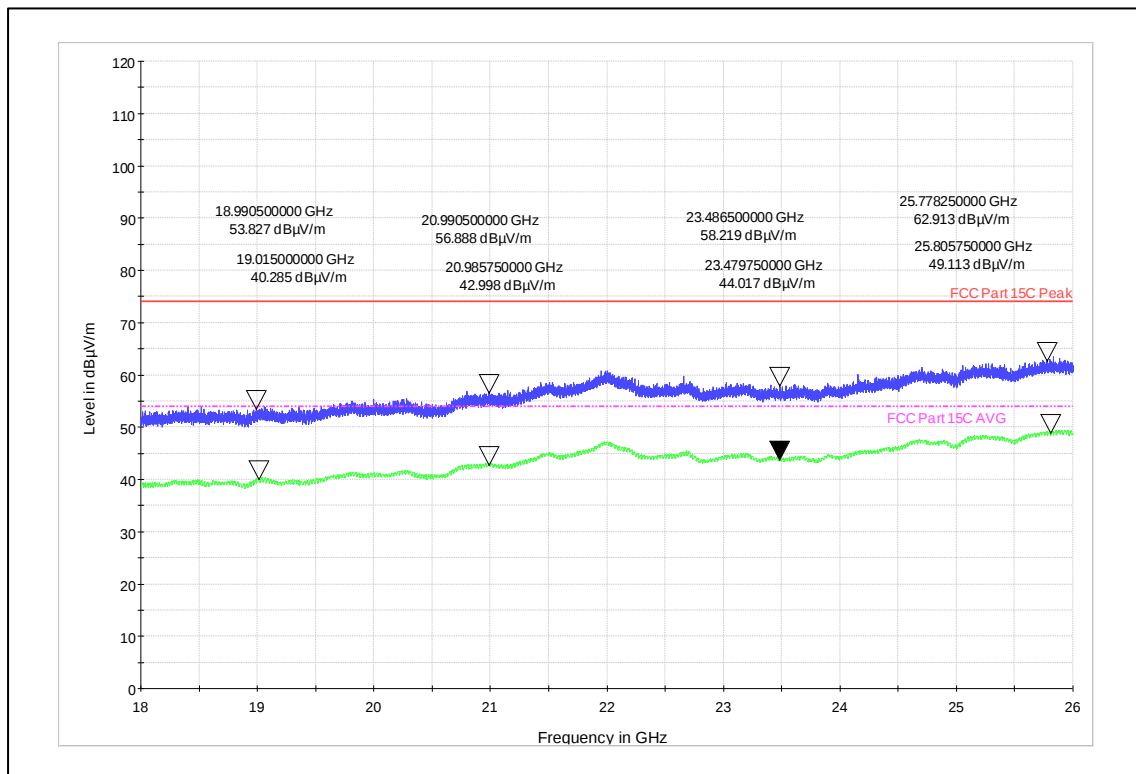
Channel Frequency - 2452MHz_Horizontal Polarization



Channel Frequency - 2452MHz_Vertical Polarization



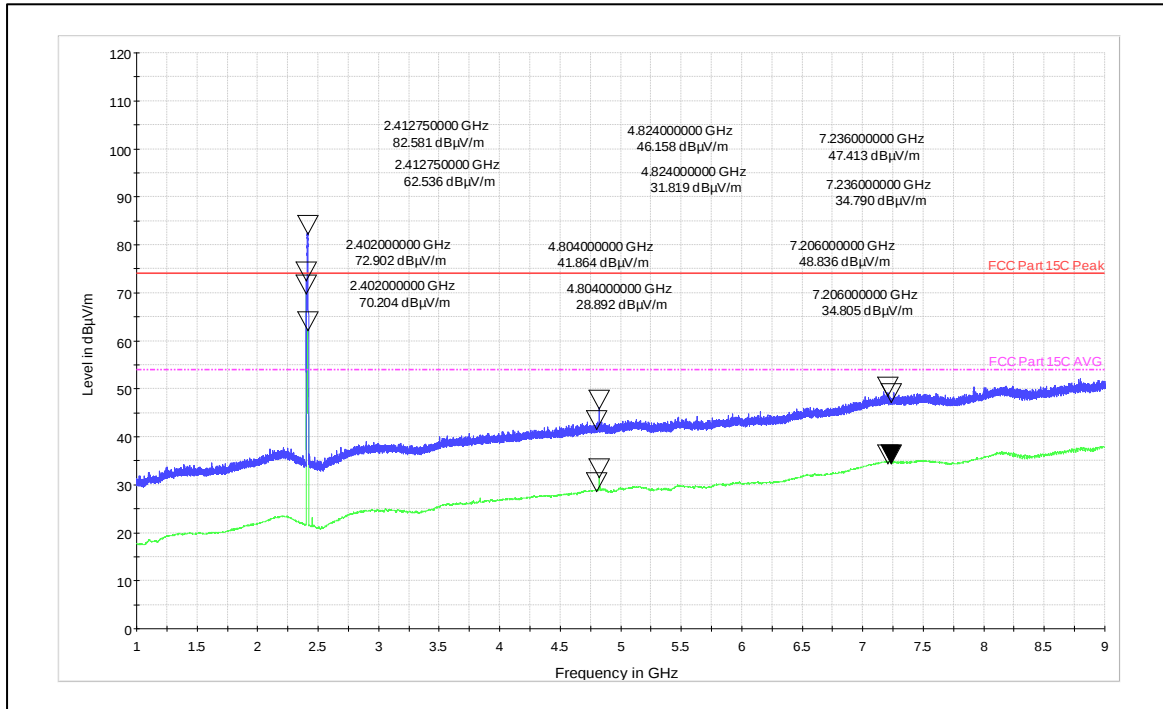
Channel Frequency - 2452MHz_Horizontal Polarization



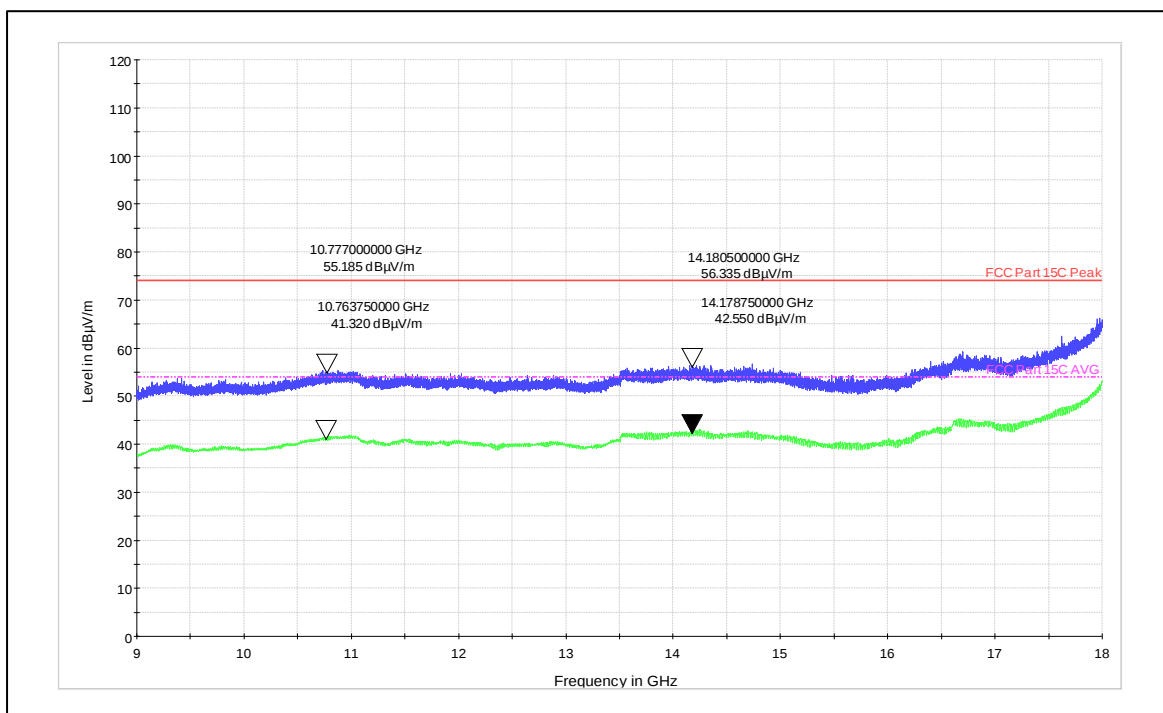
Simultaneous Operation:

Combination of Wi-Fi 2.4GHz and Bluetooth 2.4GHz:

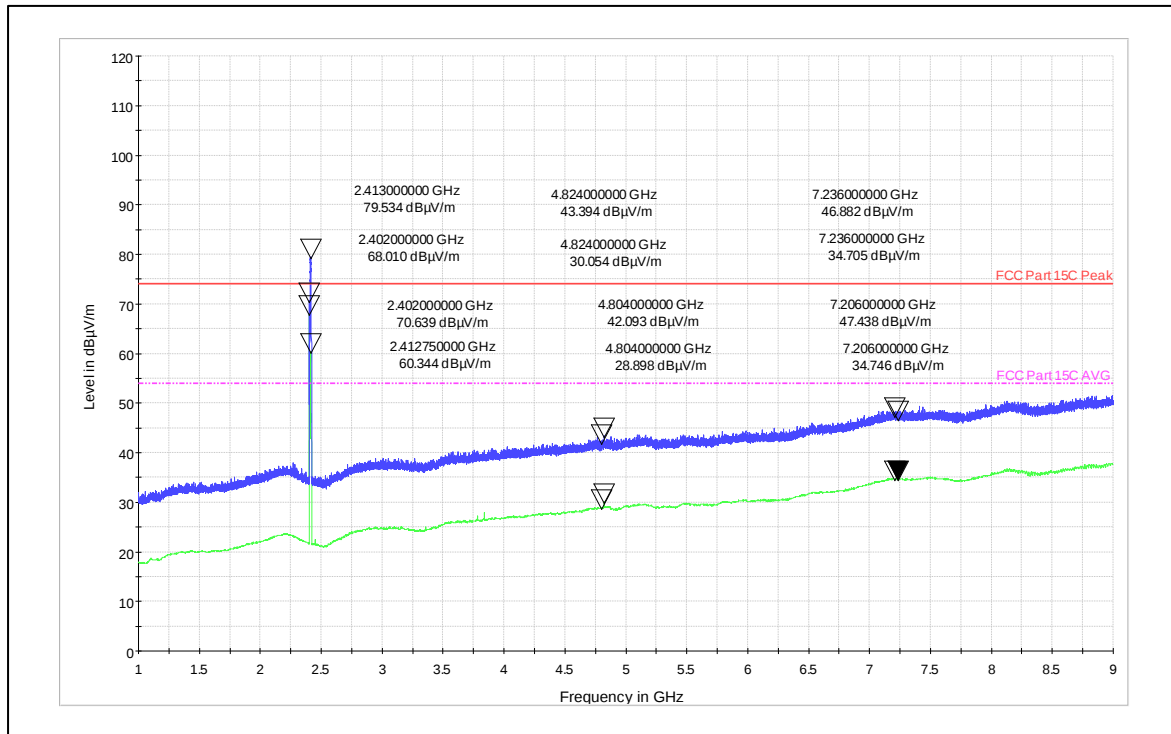
Channel Frequency -2412MHz and Channel Frequency 2402MHz_Vertical Polarization 1GHz-9GHz



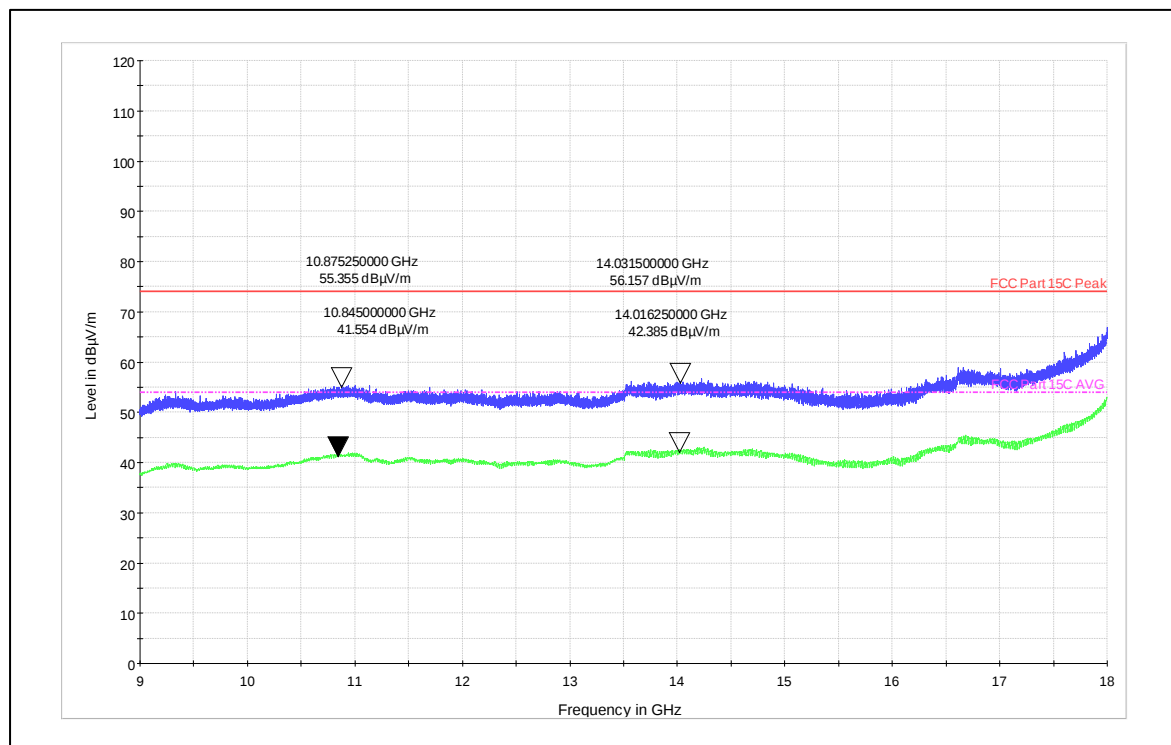
Channel Frequency -2412MHz and Channel Frequency 2402MHz_Vertical Polarization _9GHz-18GHz



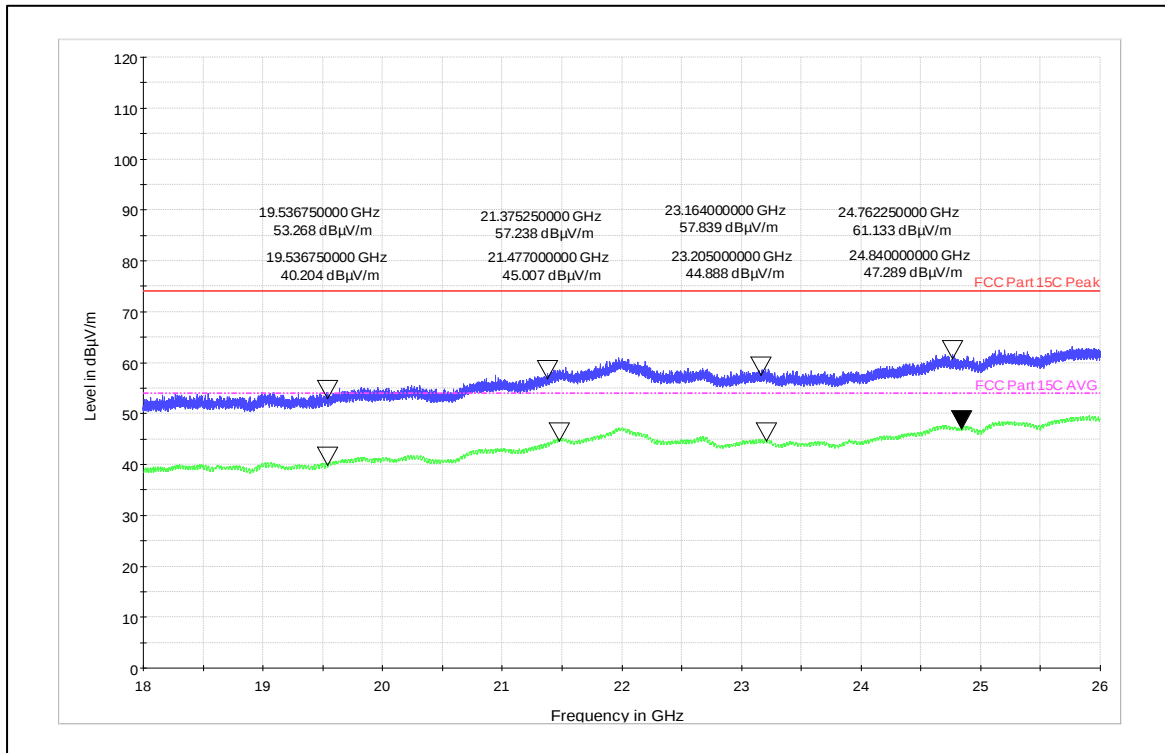
Channel Frequency -2412MHz and Channel Frequency 2402MHz_Horizontal Polarization _1GHz-9GHz



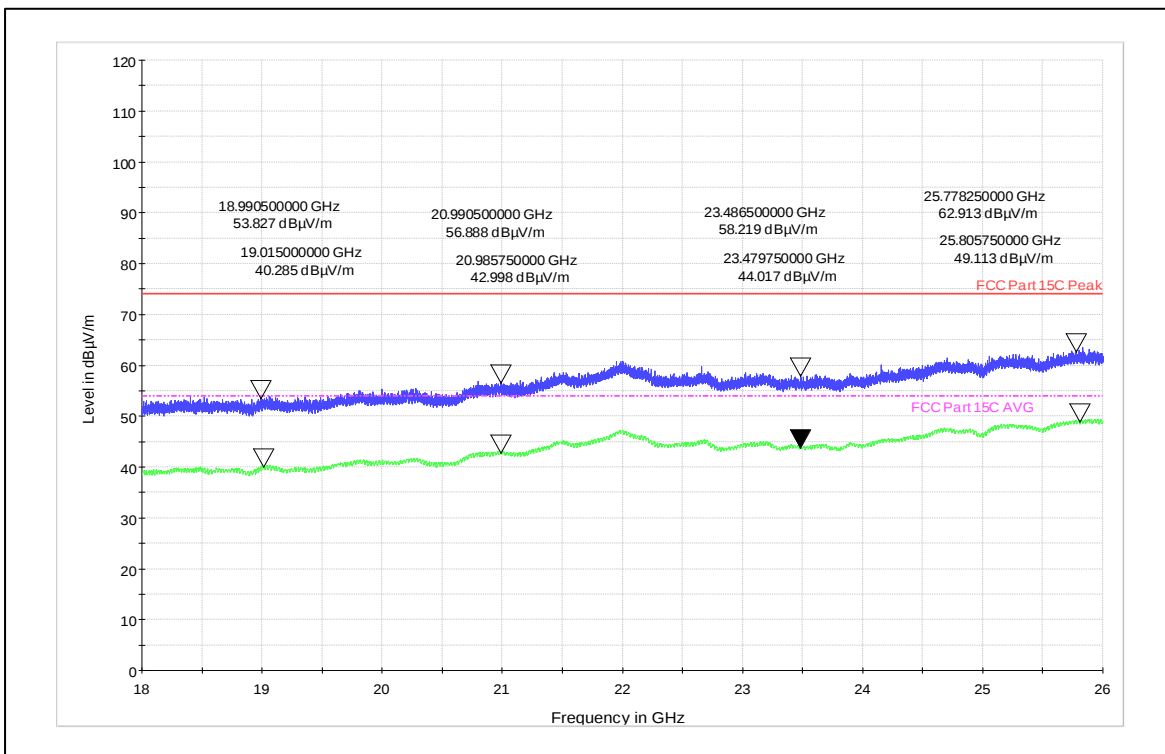
Channel Frequency -2412MHz and Channel Frequency 2402MHz_Horizontal Polarization _9GHz-18GHz



Frequency Range: 18GHz - 26GHz_Vertical Polarization



Frequency Range: 18GHz - 26GHz_Horizontal Polarization



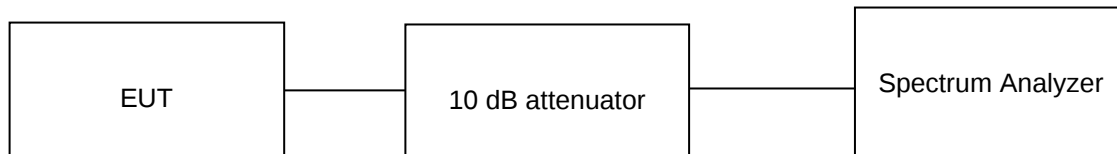
8 TEST RESULTS FOR BLUETOOTH LOW ENERGY

8.1 Maximum Peak Conducted Output Power

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (b)(3)
Test Method	Subclause 11.9.1.1 of ANSI C63.10
Measurement Bandwidth	1MHz
Detector	Average (Gated RMS)
Port of testing	Antenna port
Requirement	Power $\leq$ 1 W (30 dBm)



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.3.1 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

Test results:

Note:

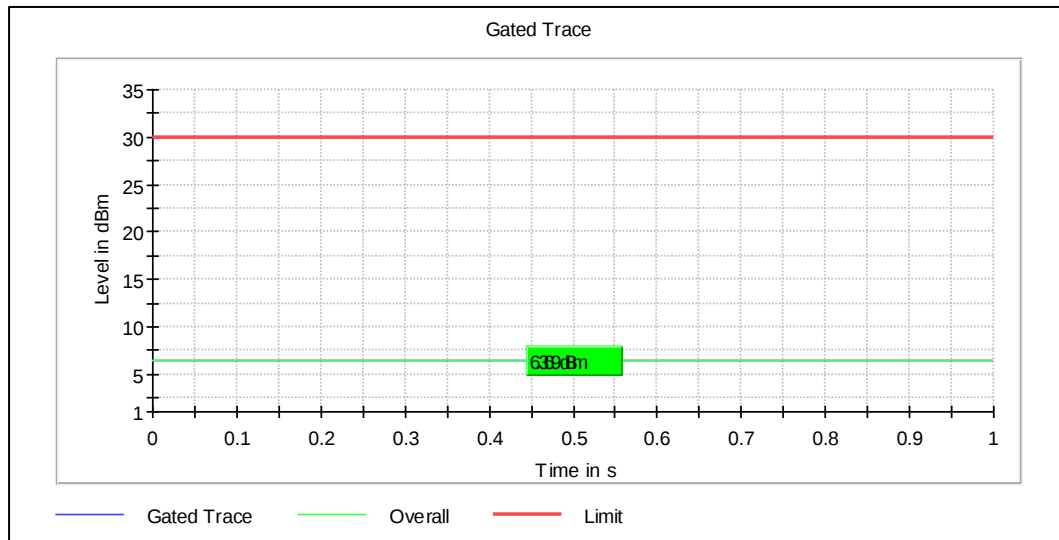
1. All the losses are included during measurement and final values are mentioned in the test report.

Data Rate (Mbps)	Channel Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)	Power Limit (dBm)
1	2402	6.40	30.00
	2440	7.10	30.00
	2480	6.20	30.00

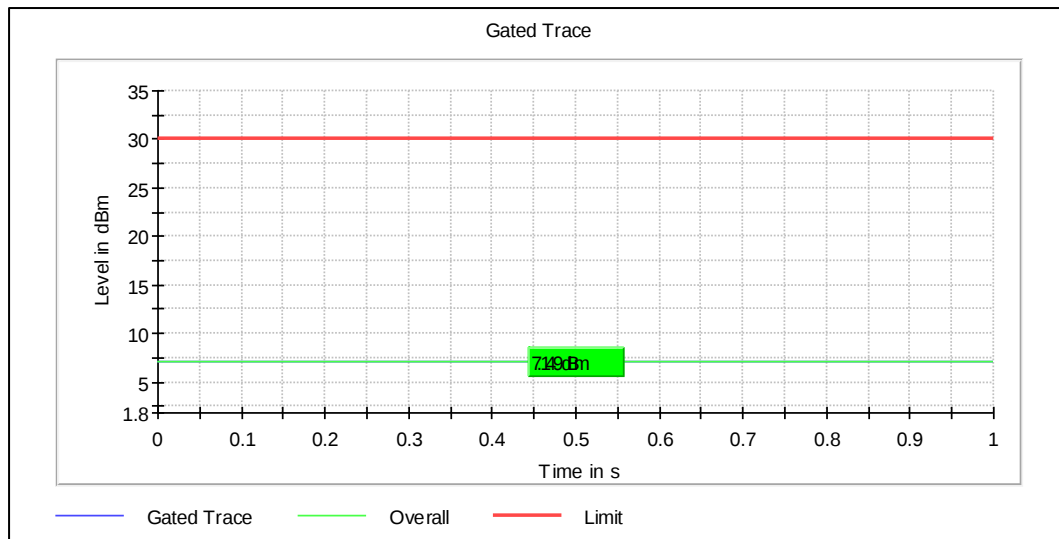
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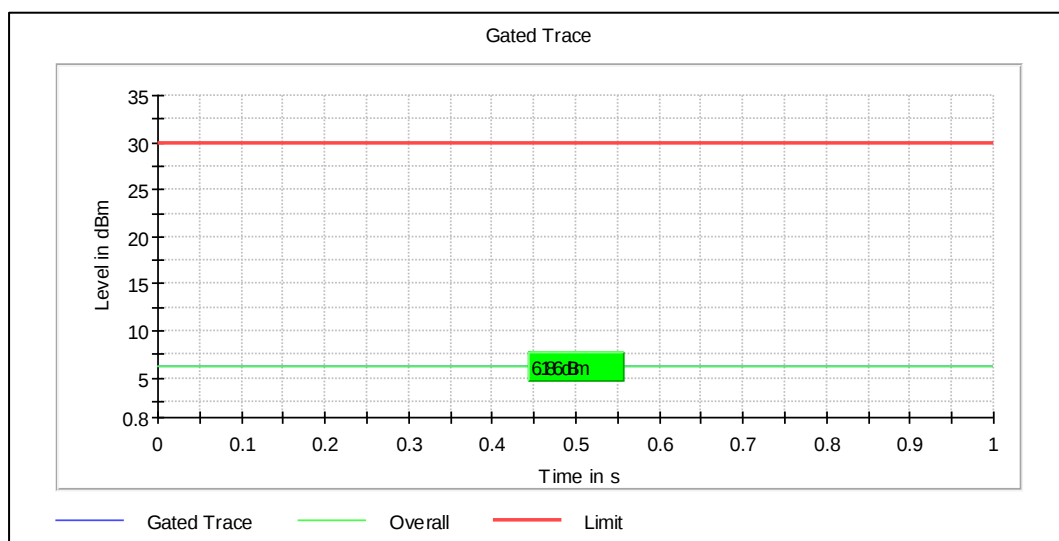
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Channel Frequency 2402MHz



Channel Frequency 2440MHz



Channel Frequency 2480MHz

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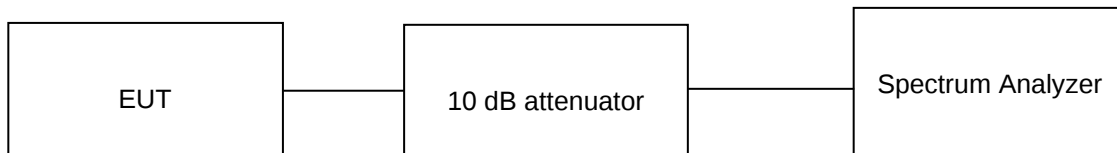
8.2 Maximum Power Spectral Density

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (e)
Test Method	Subclause 11.10.2 of ANSI C63.10
Measurement Bandwidth	100 kHz
Detector	Peak detector
Port of testing	Antenna port
Requirement	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm

Test Method:



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

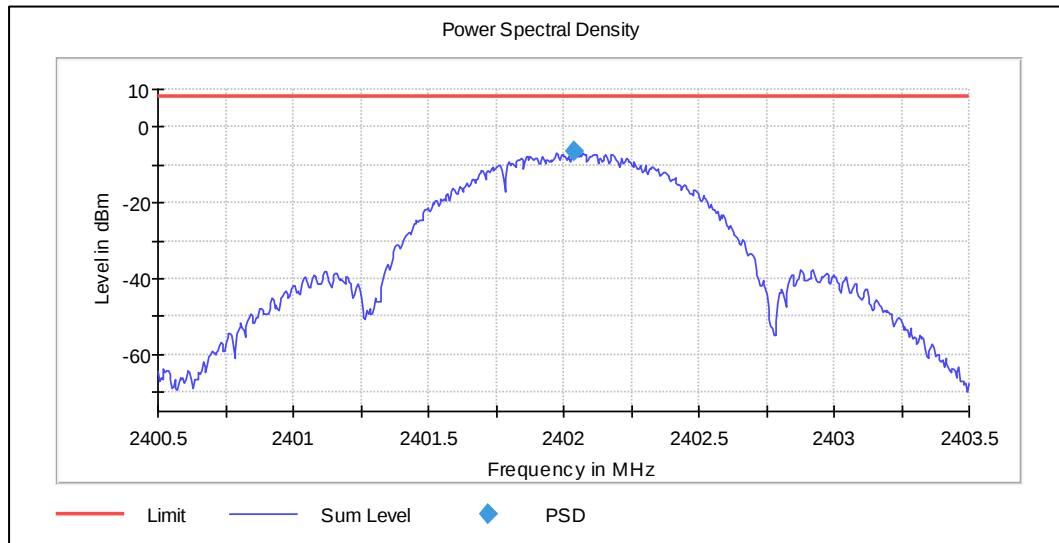
Measurements were made as per section 8.4 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

Test results:

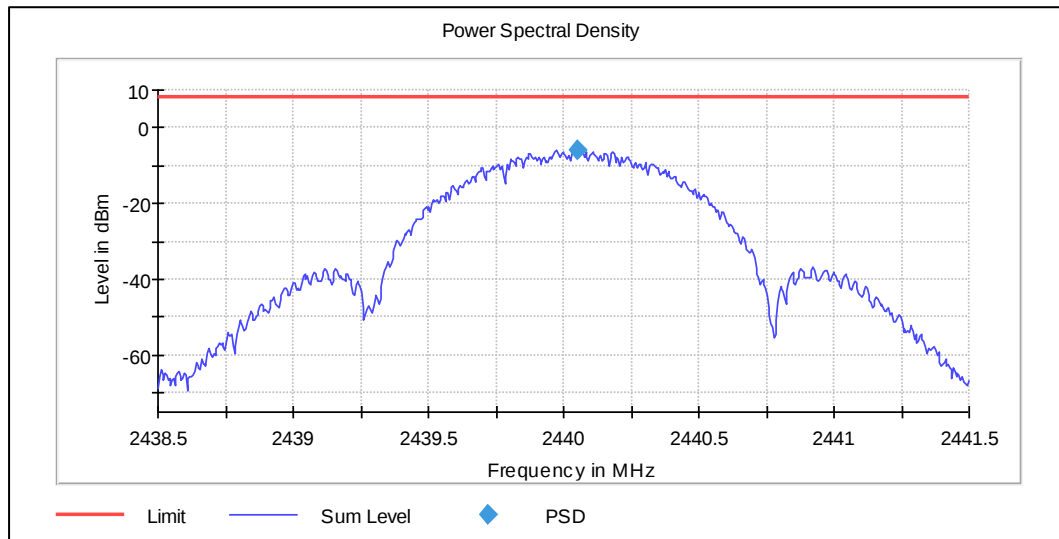
Note:

1. All the losses are included during measurement and final values are mentioned in the test report.

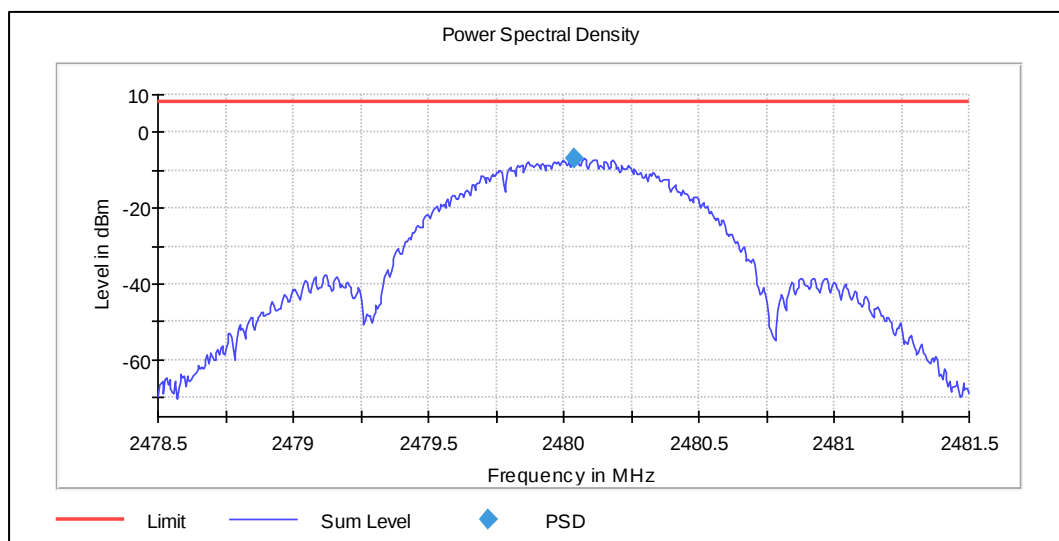
Data Rate (Mbps)	Channel Frequency (MHz)	Measured PSD (dBm/kHz)	PSD Limit (dBm/kHz)
1	2402	-6.32	8.00
	2440	-5.93	8.00
	2480	-6.71	8.00



Channel Frequency 2402MHz



Channel Frequency 2440MHz



Channel Frequency 2480MHz

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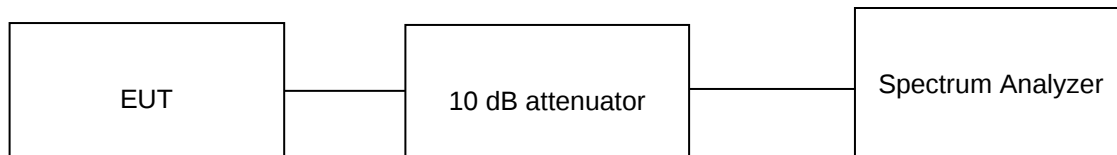
8.3 DTS Bandwidth & 99% Bandwidth

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (a) (2)
Test Method	Subclause 11.8.1 of ANSI C63.10
Measurement Bandwidth	100 kHz for x dB bandwidth 1 to 5% of OCB for 99% bandwidth
Detector	Peak
Port of testing	Antenna port
Requirement	The minimum 6 dB bandwidth shall be at least 500 kHz

Test Method:



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.2 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

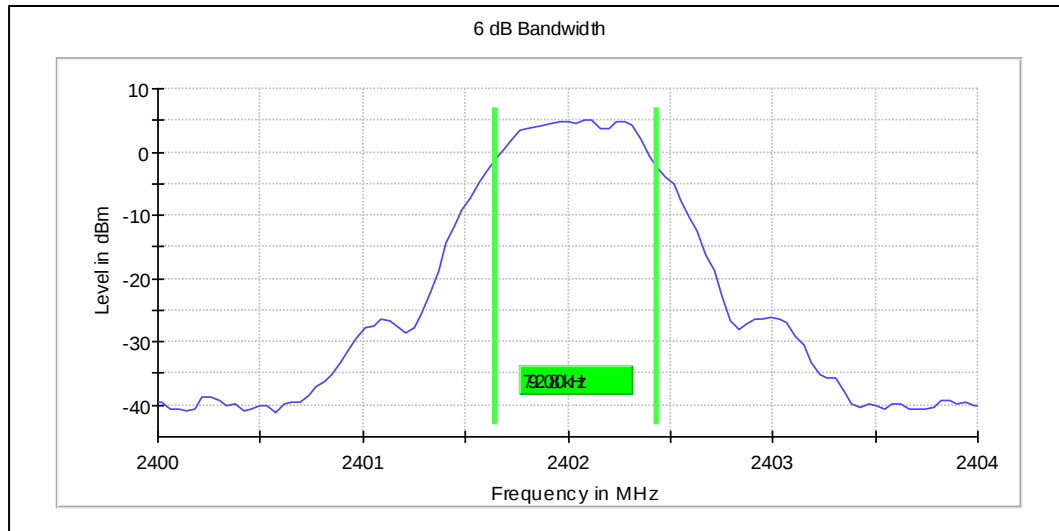
Test results:

Note:

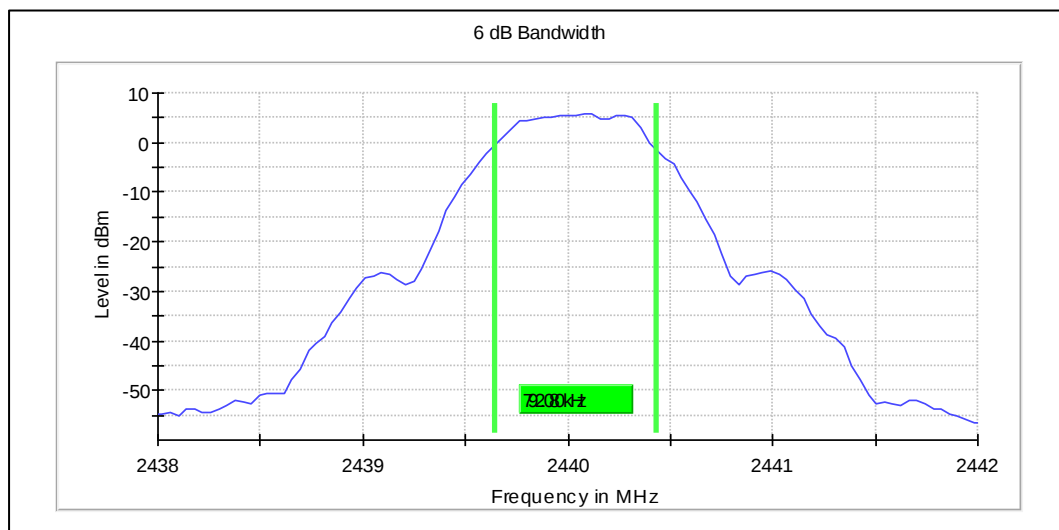
1. All the losses are included during measurement and final values are mentioned in the test report.

Data Rate (Mbps)	Channel Frequency (MHz)	Measured 99%Bandwidth (MHz)	Measured 6dB Bandwidth (MHz)	Limit (MHz)
1	2402	1.03	0.79	0.5
	2440	1.03	0.79	0.5
	2480	1.03	0.79	0.5

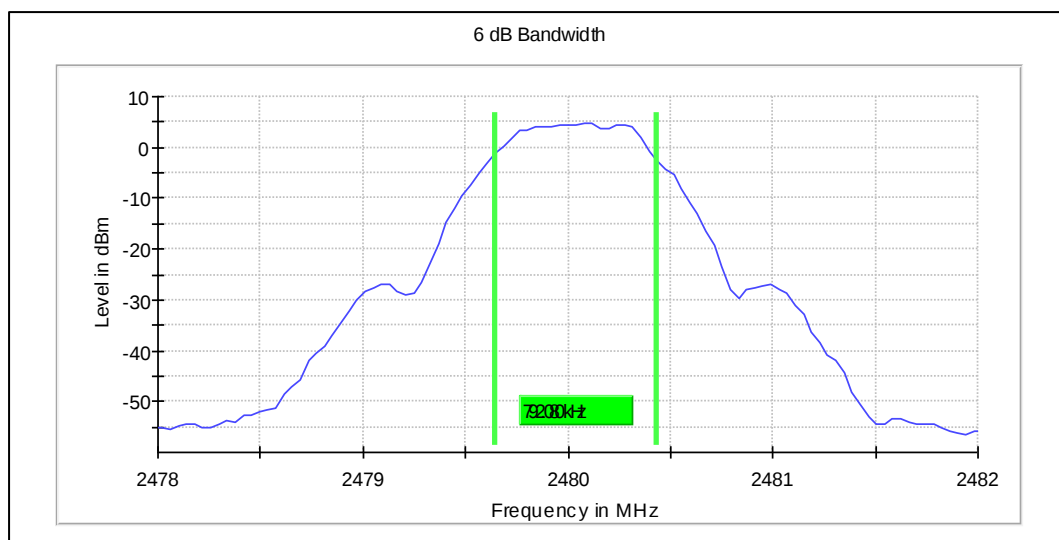
Graphs for 6 dB bandwidth measurement



ChannelFrequency 2402MHz

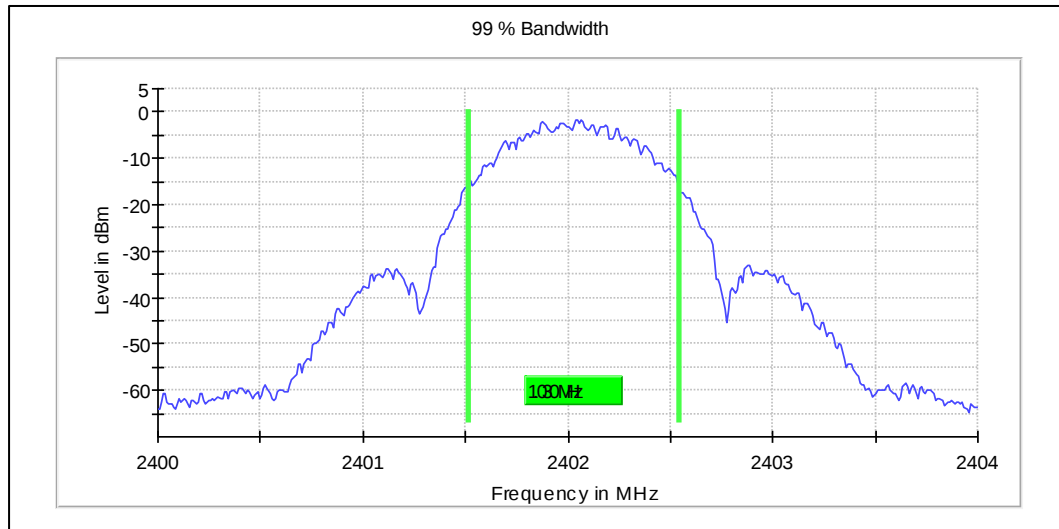


ChannelFrequency 2440MHz

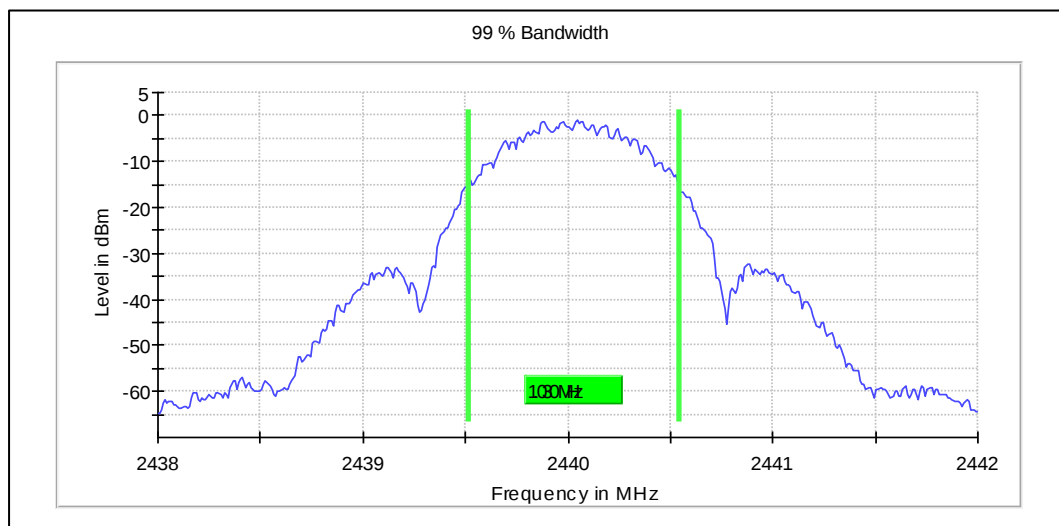


ChannelFrequency 2480MHz

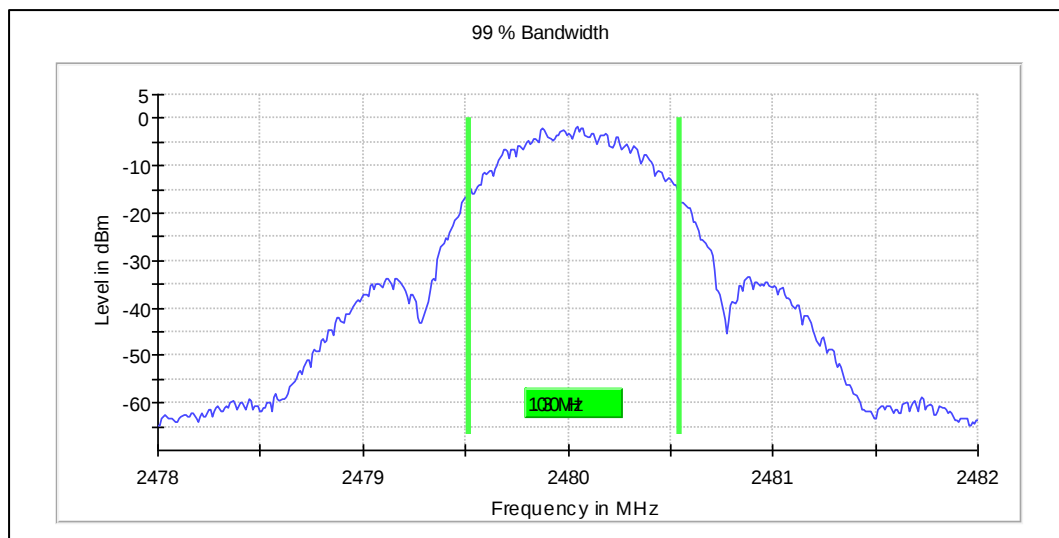
Graphs for 99% bandwidth measurement



ChannelFrequency 2402MHz



ChannelFrequency 2440MHz



ChannelFrequency 2440MHz

8.4 Emissions in non-restricted frequency bands and Conducted Spurious Emission

Result

Pass

Test Specification FCC part 15 Subpart C 15.247 (d)

Test Method Subclause 11.11 of ANSI C63.10

Measurement Bandwidth 100 kHz

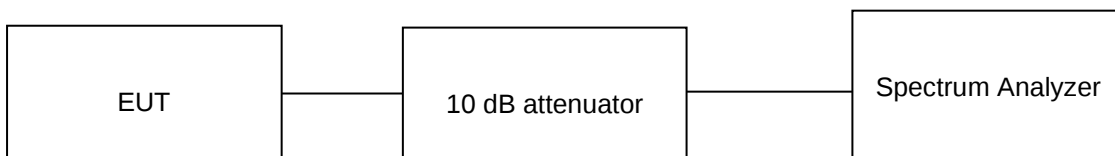
Detector Peak

Port of testing Antenna port

Requirement 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

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB

Test Method:



Test Condition

Normal Test Condition:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

KDB Guidelines applied:

Measurements were made as per section 8.5 in KDB 558074 D01 15.247 Measurement Guidance v05r02.

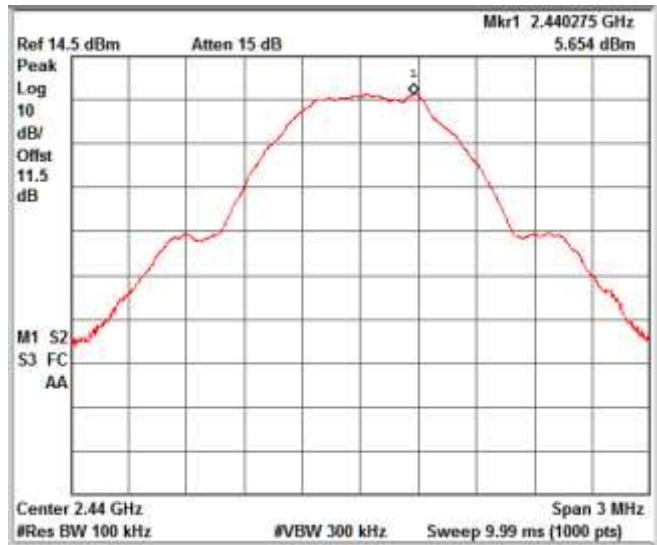
Channel Frequency (MHz)	Band edge frequency (MHz)	Value at band edge (A) (dBm)	Reference value (B) (dBm)	A-B (dBc)	Minimum Limit (dBc)
2402.00	2400.00	-52.47	4.77	-57.24	-20
2480.00	2483.50	-53.35	4.14	-57.49	-20

8.4.1 Band edge and reference plots

Data Rate: 1Mbps



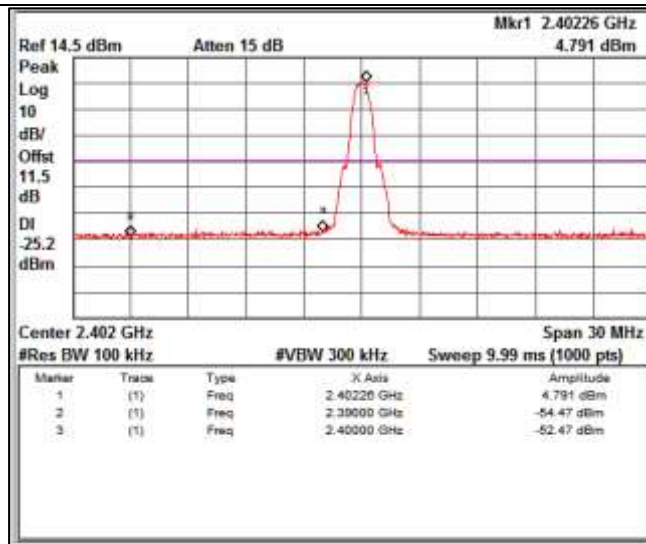
Channel Frequency 2402MHz



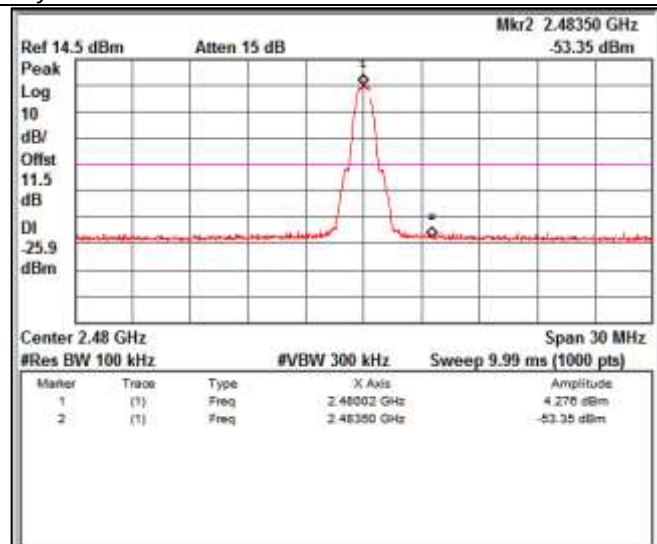
Channel Frequency 2440MHz



Channel Frequency 2480MHz



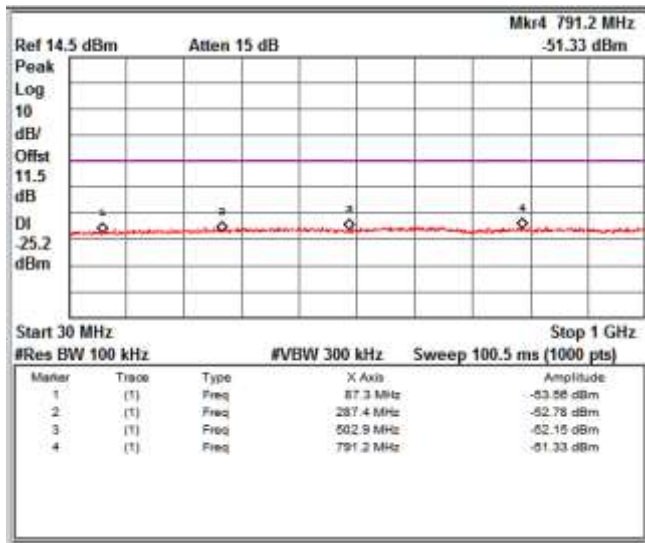
Channel Frequency 2402MHz



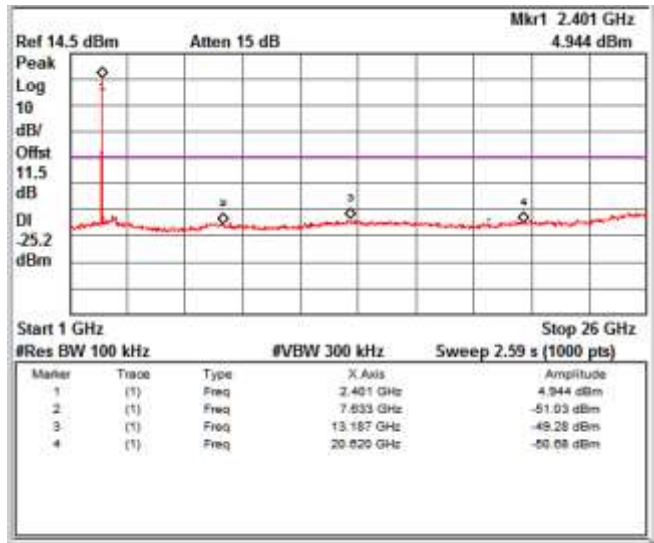
Channel Frequency 2480MHz

8.4.2 Out-Of-Band Emissions

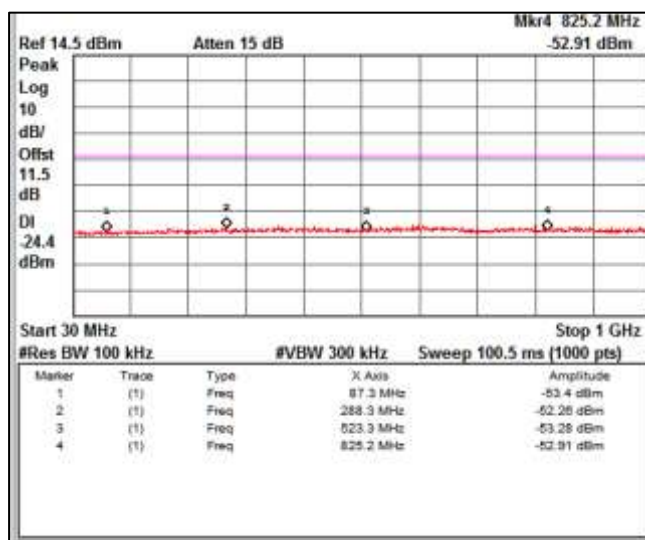
Data Rate: 1Mbps



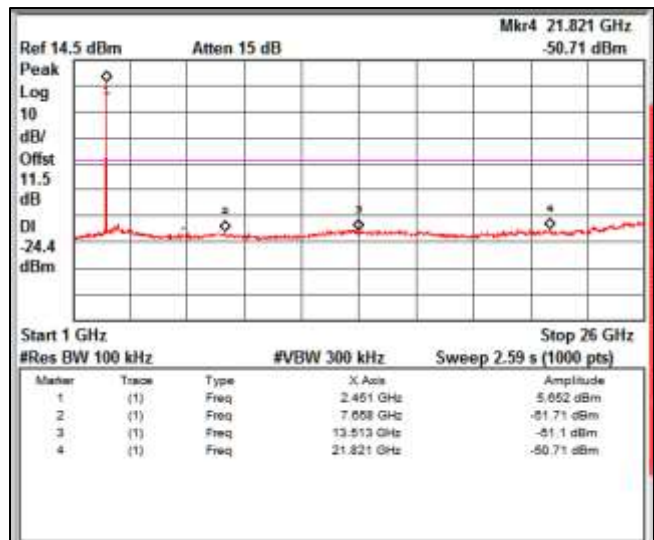
Channel Frequency 2402MHz Frequency Range 30 MHz – 1GHz



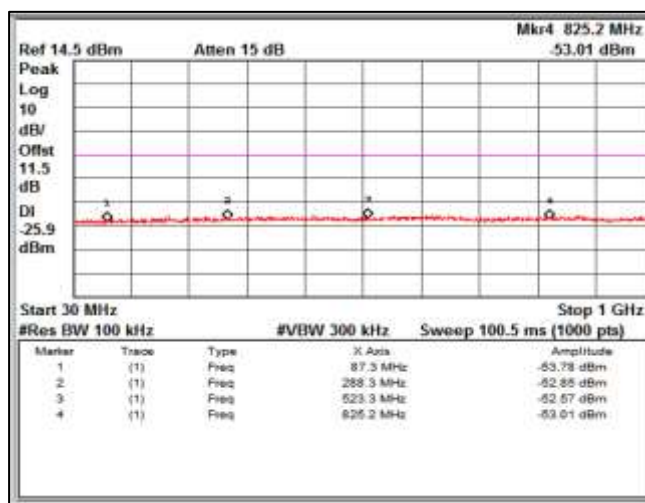
Channel Frequency 2402MHz FrequencyRange 1 GHz– 26.5GHz



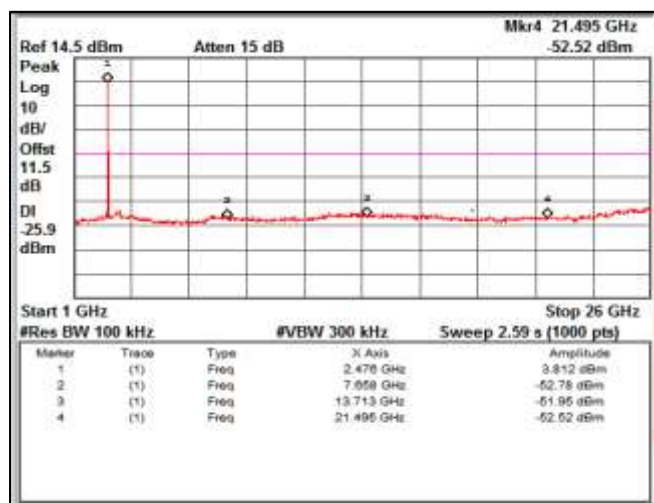
Channel Frequency 2440MHz Frequency Range 30 MHz – 1GHz



Channel Frequency 2440MHzFrequency Range 1 GHz –26.5GHz



Channel Frequency 2480MHz Frequency Range 30 MHz –1GHz



Channel frequency 2480MHz Frequency Range 1 GHz 26.5GHz

8.5 Spurious Radiated Emissions & Restricted Bands of Operation

Result

Pass

Test Specification	FCC part 15 Subpart C 15.247 (d) / (15.209 & 15.205)
Test Method	ANSI C63.10
Measurement Location	Semi Anechoic Chamber 30MHz - 1 GHz Fully Anechoic Chamber 1 GHz - 40GHz
Measurement Bandwidth	100 kHz for frequency range < 1GHz 1 MHz for Frequency range >1GHz
Detector	Refer remarks below
Measuring Distance	3 m
Requirement	As per the limits mentioned in the below table
Test setup	Refer TEST METHODOLOGY

Table 8: Transmitter limits for Radiated emission

Frequency (MHz)	Field strength (μV/m)	Field strength (dBμV/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 30 meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54 dBμV/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.

Test Conditions:

Temperature (Norm) = + 25 °C Voltage = 3.8V DC through AC to DC adaptor Relative humidity: 62%

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Test results:

Note: All the losses are included during measurement and final values are mentioned in the test report. Refer TEST METHODOLOGY for more details

Test results for frequency range 9kHz – 30MHz

No emissions found in frequency range 9 kHz to 30 MHz, and measured levels are below 20dB from the limit line, hence not reported

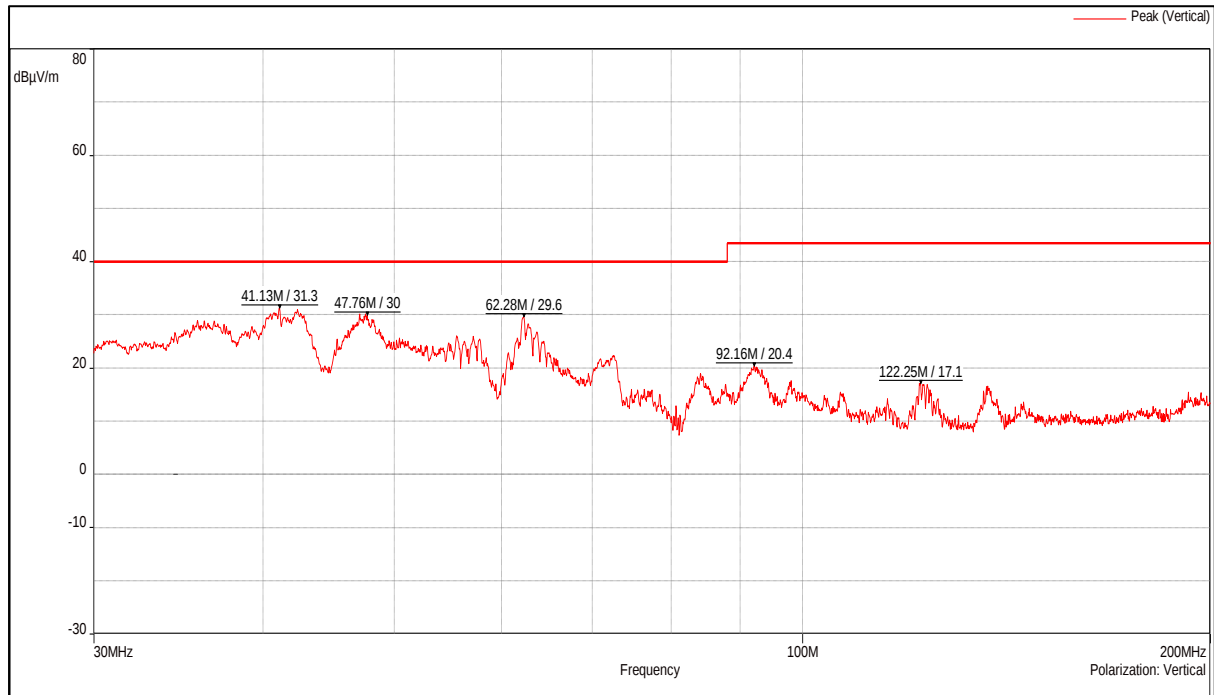
Test results for frequency range 30MHz – 1GHz

Antenna Polarization	Measured Frequency (MHz)	Measured Value (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	41.13	31.30	40.00	-8.70
	47.76	30.00	40.00	-10.00
	62.28	29.60	40.00	-10.40
	92.16	20.40	43.50	-23.10
	122.25	17.10	43.50	-26.40
	245.18	24.00	46.00	-22.00
	305.24	22.20	46.00	-23.80
	342.38	21.00	46.00	-25.00
Horizontal	42.33	16.30	40.00	-23.70
	62.16	11.60	40.00	-28.40
	104.01	12.80	43.50	-30.70
	149.31	12.80	43.50	-30.70
	244.43	22.60	46.00	-23.40
	341.45	18.50	46.00	-27.50
	468.44	17.80	46.00	-28.20

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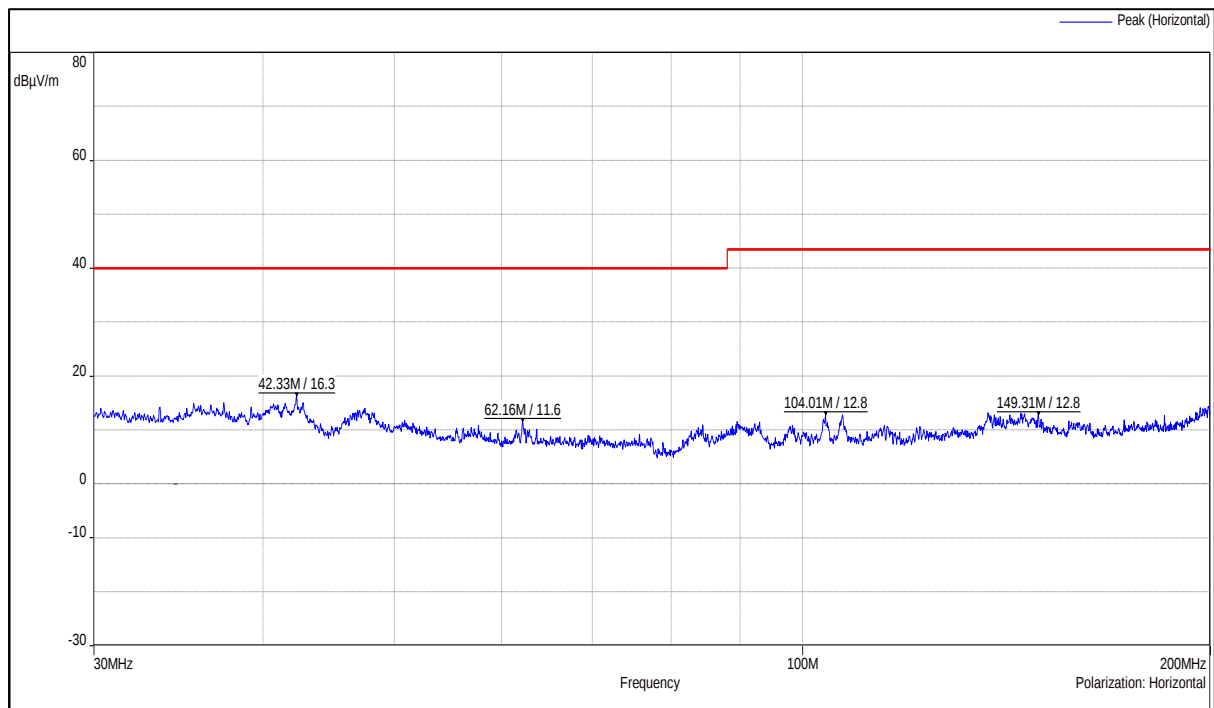
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Channel Frequency 30MHz – 200MHz

Polarization Vertical



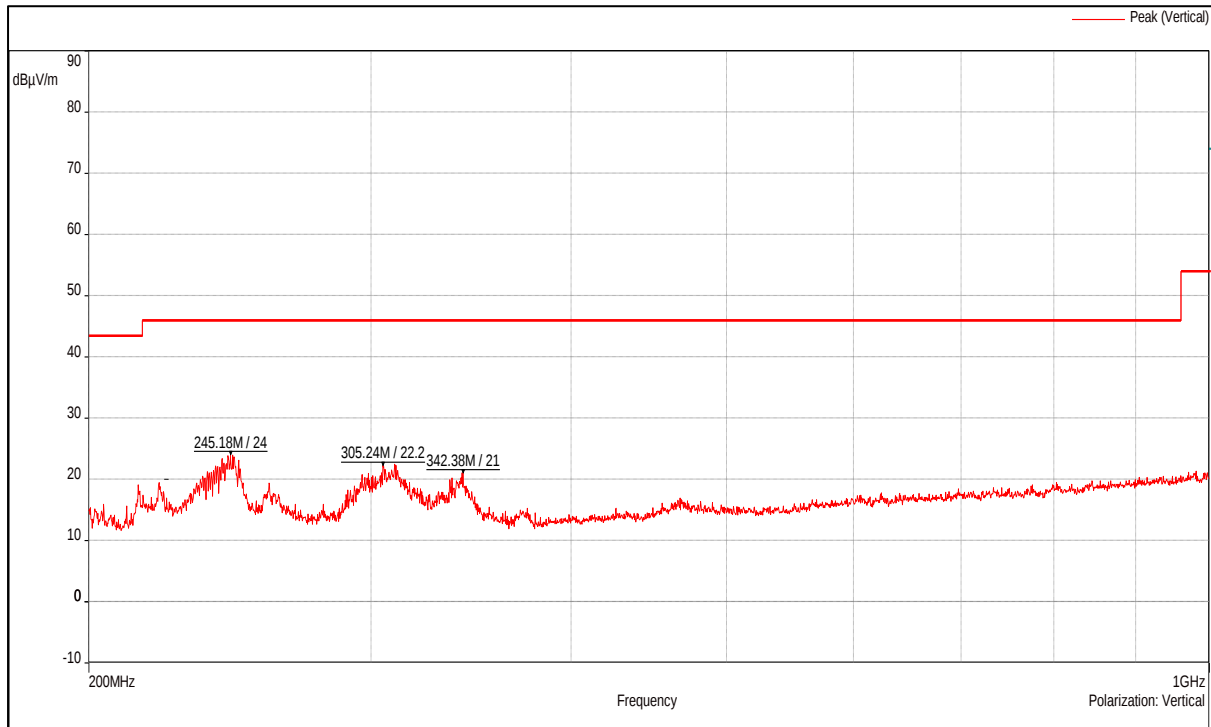
Channel Frequency 30MHz – 200MHz

Polarization Horizontal

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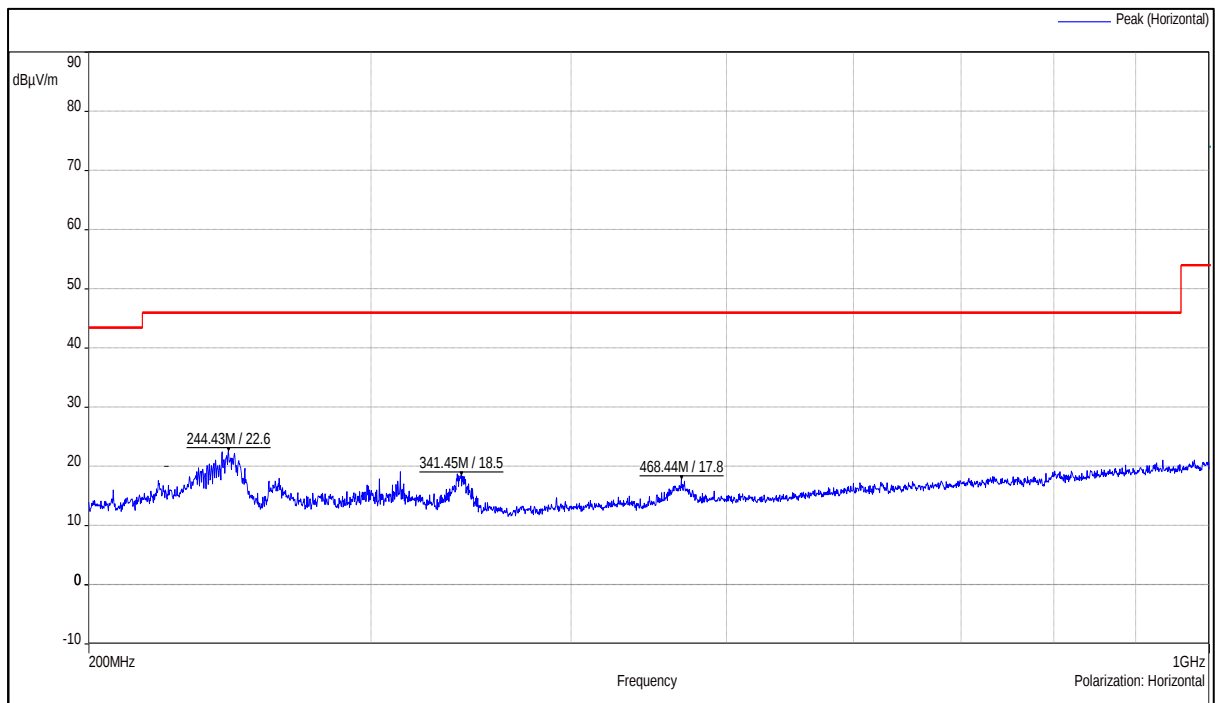
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Channel Frequency 200MHz – 1GHz

Polarization Vertical



Channel Frequency 200MHz – 1GHz

Polarization Horizontal

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Test results for the frequencies above 1GHz

Data Rate (Mbps)	Channel Frequency (MHz)	Measured Frequency (MHz)	Antenna Polarization	Measured Emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1	2402	2390(Pk)	Vertical	37.36	74.00*	-36.64
		2390(Av)		24.52	54.00*	-29.48
		2402(Pk)		97.62	-	-
		2402(Av)		91.90	-	-
		4804(Pk)		41.79	74.00	-32.21
		4804(Av)		29.58	54.00	-24.42
		7206(Pk)	Horizontal	47.71	74.00	-26.29
		7206(Av)		35.20	54.00	-18.80
		2390(Pk)		38.37	74.00*	-35.63
		2390(Av)		25.07	54.00*	-28.93
		2402(Pk)		101.45	-	-
		2402(Av)		95.74	-	-
		4804(Pk)		41.34	74.00	-32.66
		4804(Av)		29.69	54.00	-24.31
		7206(Pk)		47.26	74.00	-26.74
		7206(Av)		35.19	54.00	-18.81
	2440	2440(Pk)	Vertical	98.43	-	-
		2440(Av)		92.70	-	-
		4880(Pk)		41.72	74.00	-32.28
		4880(Av)		29.60	54.00	-24.40
		7320(Pk)		47.82	74.00	-26.18
		7320(Av)		35.26	54.00	-18.74
		2440(Pk)	Horizontal	102.60	-	-
		2440(Av)		96.86	-	-
		4880(Pk)		43.46	74.00	-30.54
		4880(Av)		30.08	54.00	-23.92
		7320(Pk)		48.58	74.00	-25.42
		7320(Av)		35.23	54.00	-18.77
	2480	2480(Pk)	Vertical	94.32	-	-
		2480(Av)		88.53	-	-
		2483.5(Pk)		38.78	74.00*	-35.22
		2483.5(Av)		25.70	54.00*	-28.30
		4960(Pk)		41.72	74.00	-32.28
		4960(Av)		29.32	54.00	-24.68
		7440(Pk)		48.16	74.00	-25.84
		7440(Av)		35.26	54.00	-18.74
		2480(Pk)	Horizontal	100.76	-	-
		2480(Av)		94.98	-	-
		2483.5(Pk)		43.12	74.00*	-30.88
		2483.5(Av)		28.36	54.00*	-25.64
		4960(Pk)		42.16	74.00	-31.84
		4960(Av)		30.25	54.00	-23.75
		7440(Pk)		47.87	74.00	-26.13
		7440(Av)		35.30	54.00	-18.70

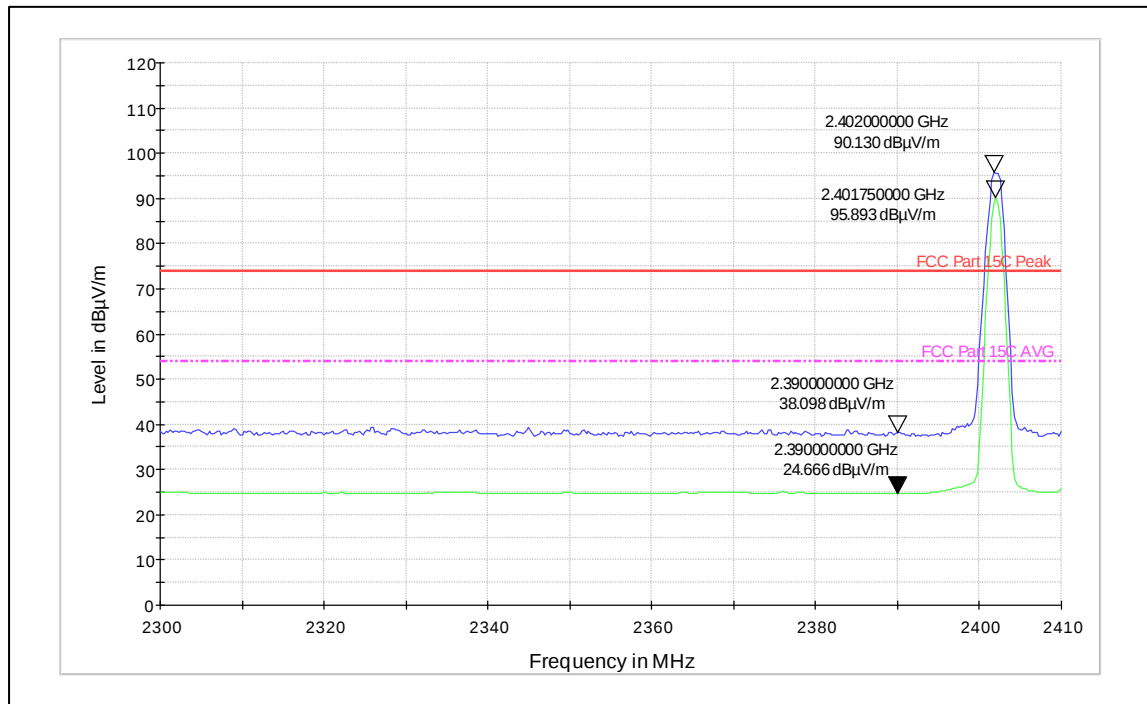
* : Indicate restricted band of operation §15.205

- : Fundamental Frequency

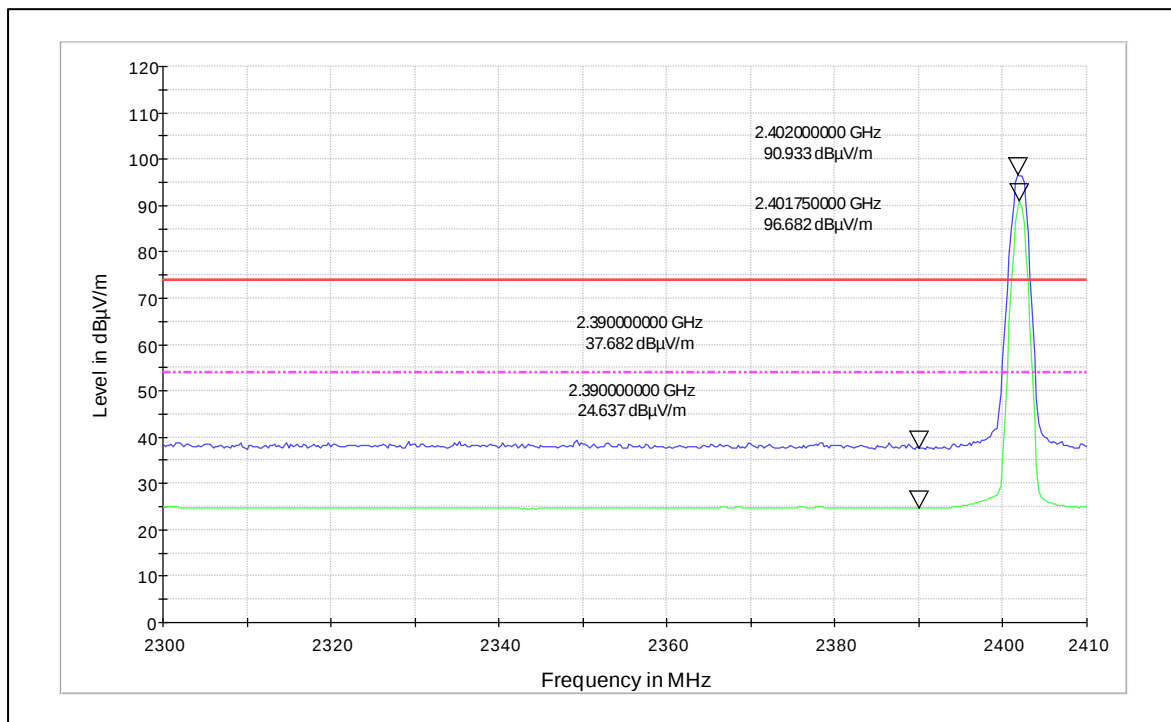
Pk: Peak Detector; Av: Average Detector

Worst Case Plots reported

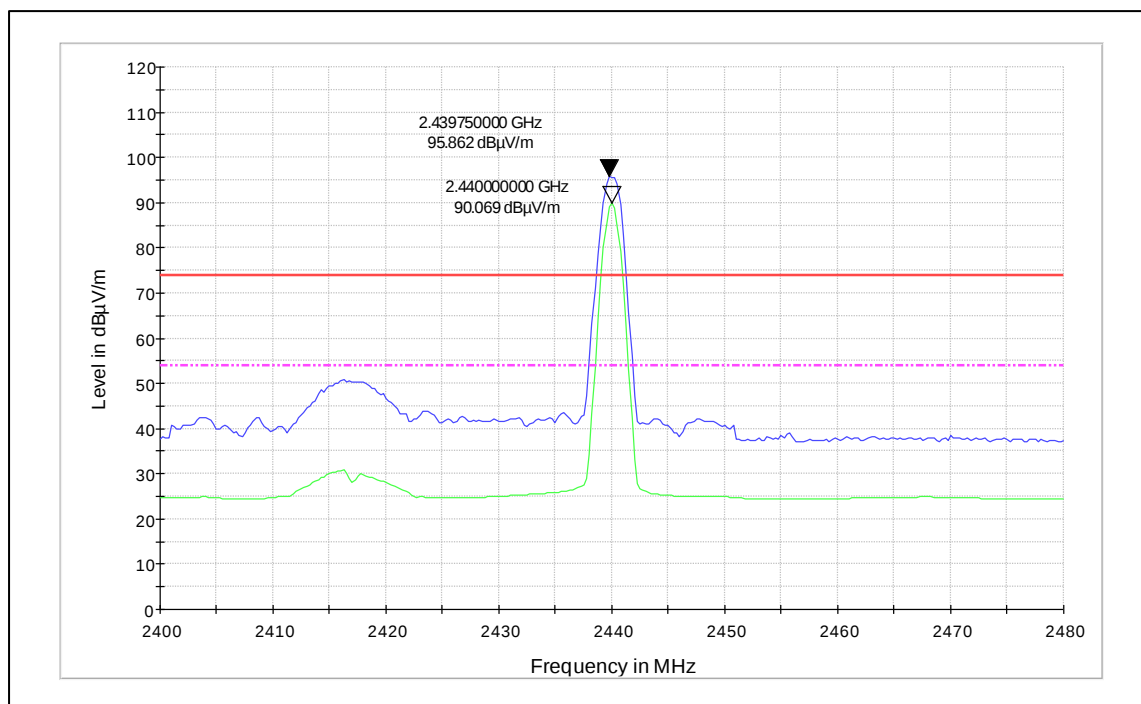
Channel Frequency-2402MHz_Vertical Polarization



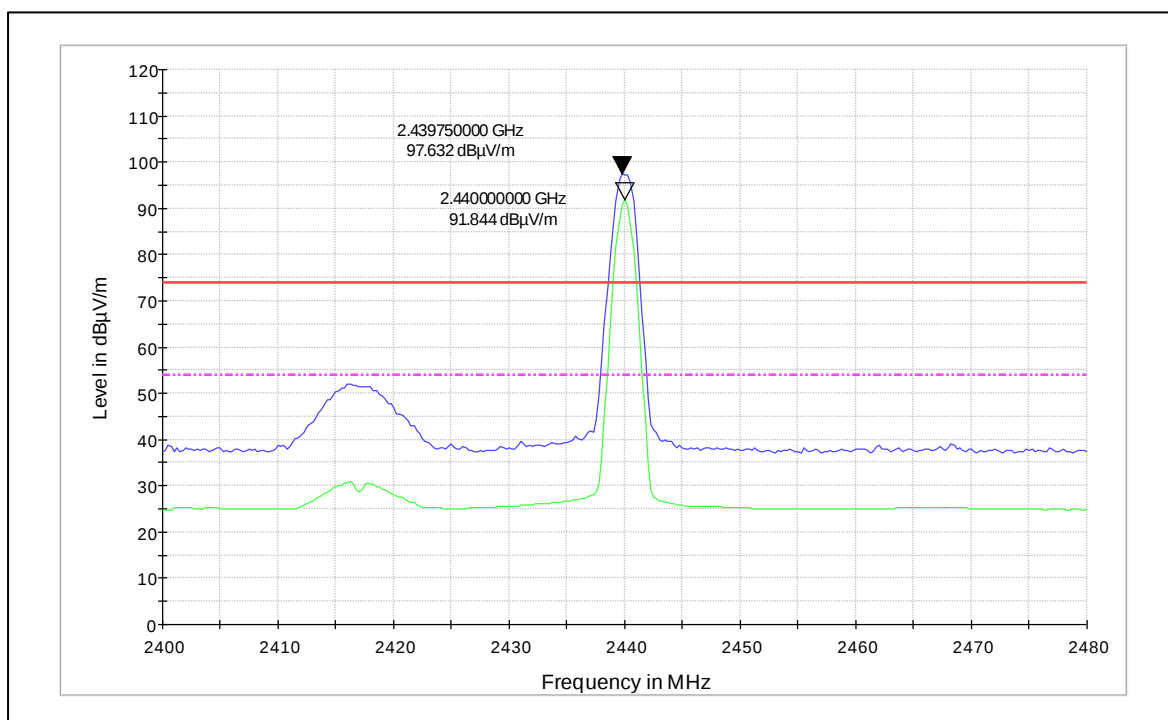
Channel Frequency-2402MHz_Horizontal Polarization



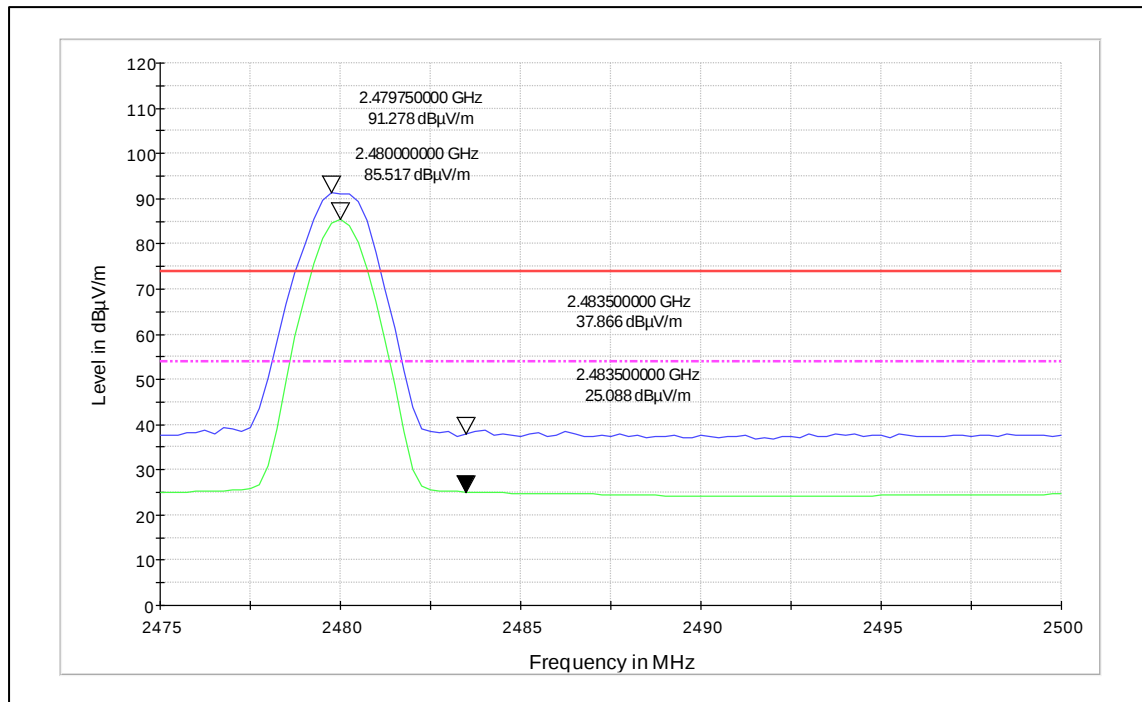
Channel Frequency-2440MHz_Vertical Polarization



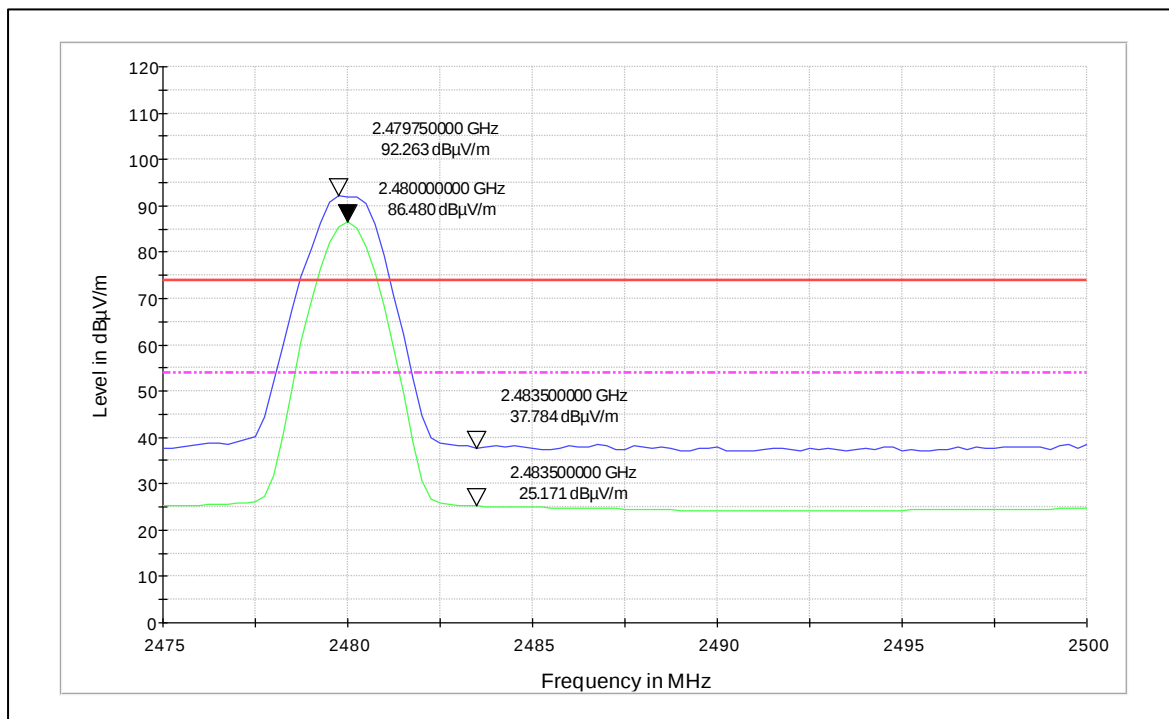
Channel Frequency-2440MHz_Horizontal Polarization



Channel Frequency-2480MHz_Vertical Polarization



Channel Frequency-2480MHz_Horizontal Polarization



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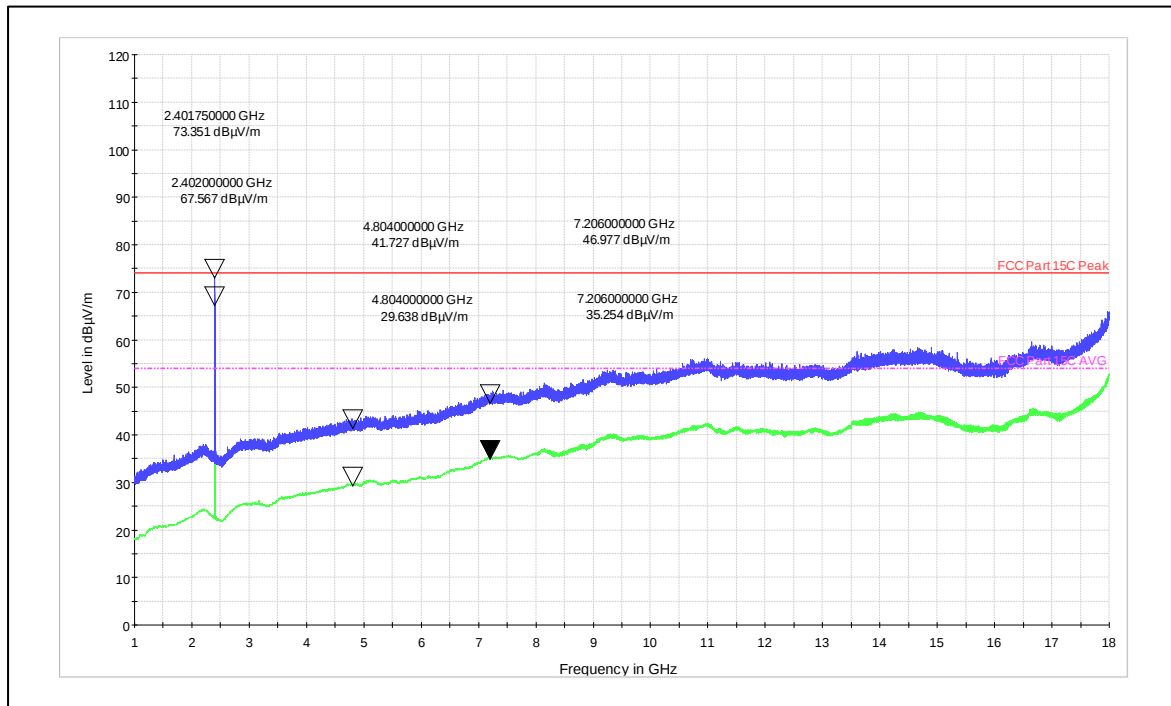
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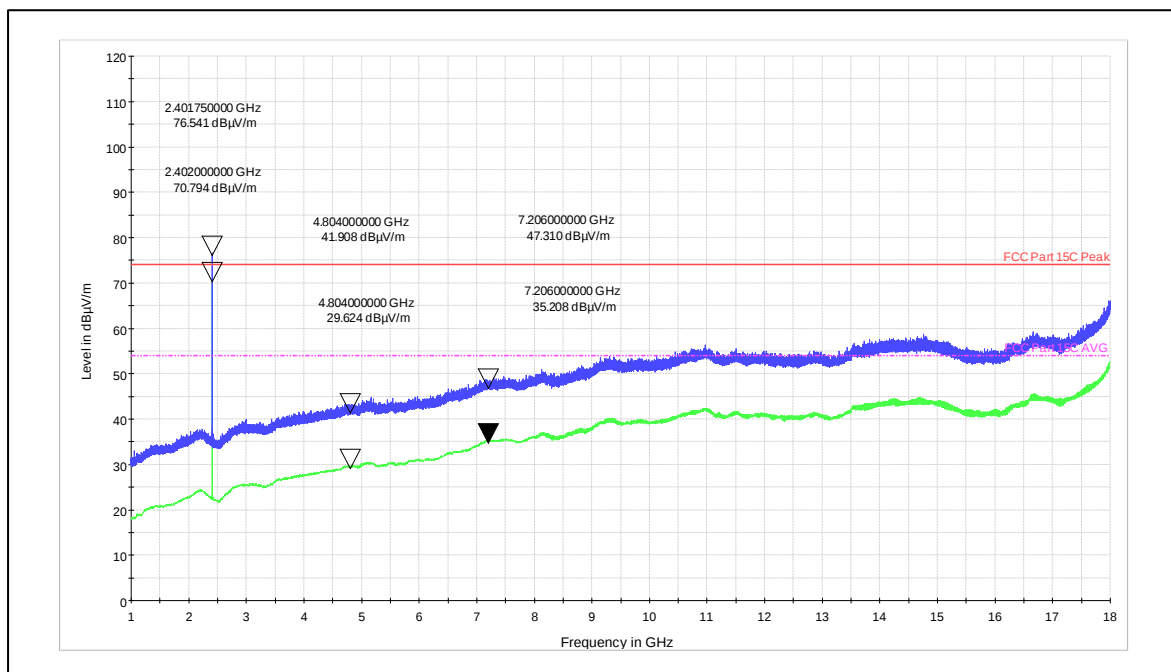
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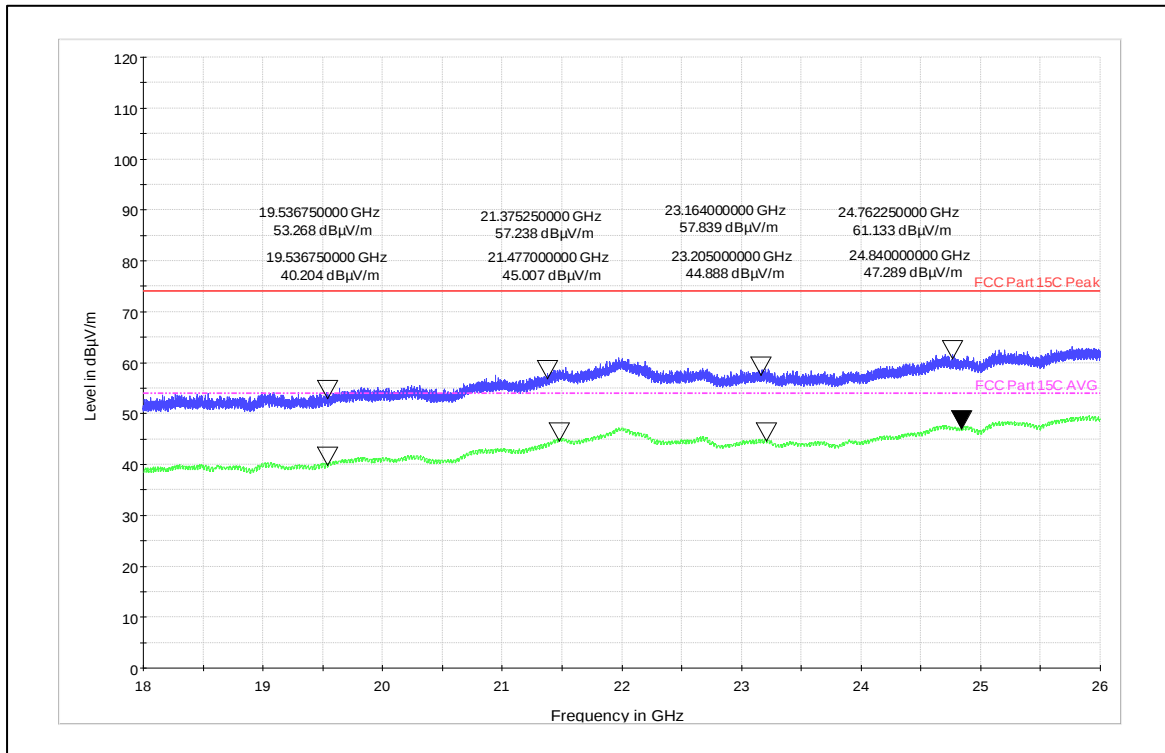
Channel Frequency-2402MHz_ Vertical Polarization



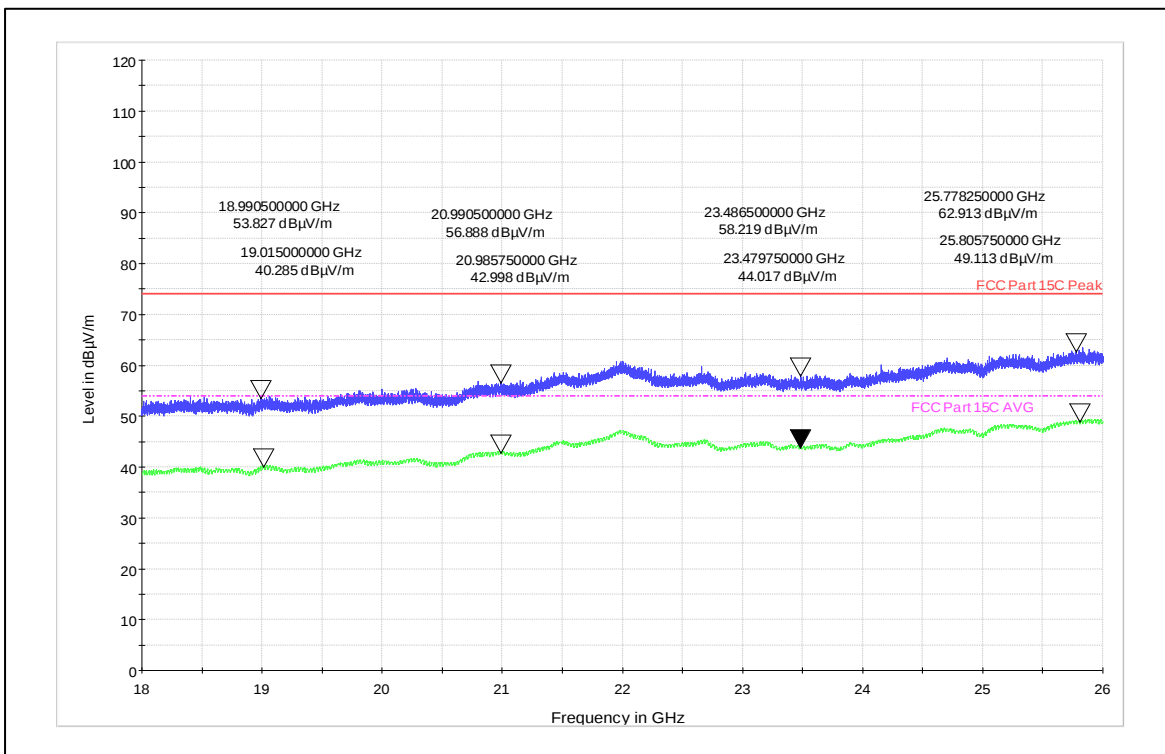
Channel Frequency-2402MHz_ Horizontal Polarization



Frequency Range: 18GHz - 26GHz_Vertical Polarization



Frequency Range: 18GHz - 26GHz_Horizontal Polarization



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9 Conducted Spurious Emission Test on AC Power Line

Result

Pass

Test Specification : FCC Part 15 Section 15.207
Test Method : ANSI C 63.10-2013
Testing Location : Screened room
Measurement Bandwidth : 9kHz
Frequency Range : 150kHz – 30MHz
Supply Voltage : 110VAC,60Hz
Test Method : Refer TEST METHODOLOGY

Limits of section 15.207

Frequency of emission	QP Limit	AV Limit
(MHz)	(dBμV)	(dBμV)
0.15 – 0.5	66 – 56*	56 – 46*
0.5 – 5	56	46
5 – 30	60	50

* Decreases with the logarithm of the frequency

Test Conditions:

Normal Temperature = +24°C Voltage (V norm) = 110V AC (Through AC to DC Adapter) Relative Humidity = 64%

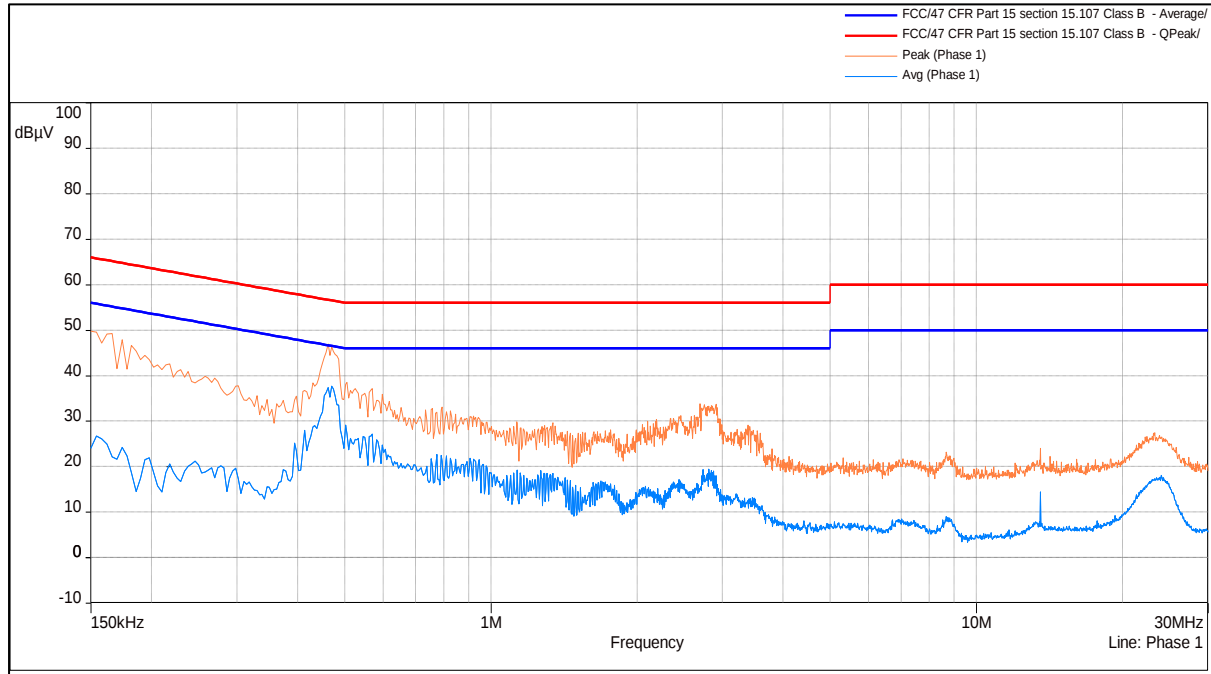
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Test result:

Power: 110V 60HZ_LINE



Line Graph

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Comments
0.46685	44.92	56.58	-11.67	Quasipeak	Pass
0.56415	33.58	56.00	-22.42	Quasipeak	Pass
0.1518	41.22	66.00	-24.78	Quasipeak	Pass
2.8239	29.26	56.00	-26.74	Quasipeak	Pass
0.1809	36.98	64.39	-27.42	Quasipeak	Pass
0.783	28.18	56.00	-27.82	Quasipeak	Pass
0.2881	28.18	60.52	-32.35	Quasipeak	Pass
0.46685	37.03	46.58	-9.56	Average	Pass
0.56415	25.50	46.00	-20.50	Average	Pass
0.783	18.87	46.00	-27.13	Average	Pass
2.8239	17.07	46.00	-28.93	Average	Pass
0.1518	25.88	56.00	-30.12	Average	Pass
0.2881	18.06	50.52	-32.46	Average	Pass
0.1809	20.34	54.39	-34.05	Average	Pass

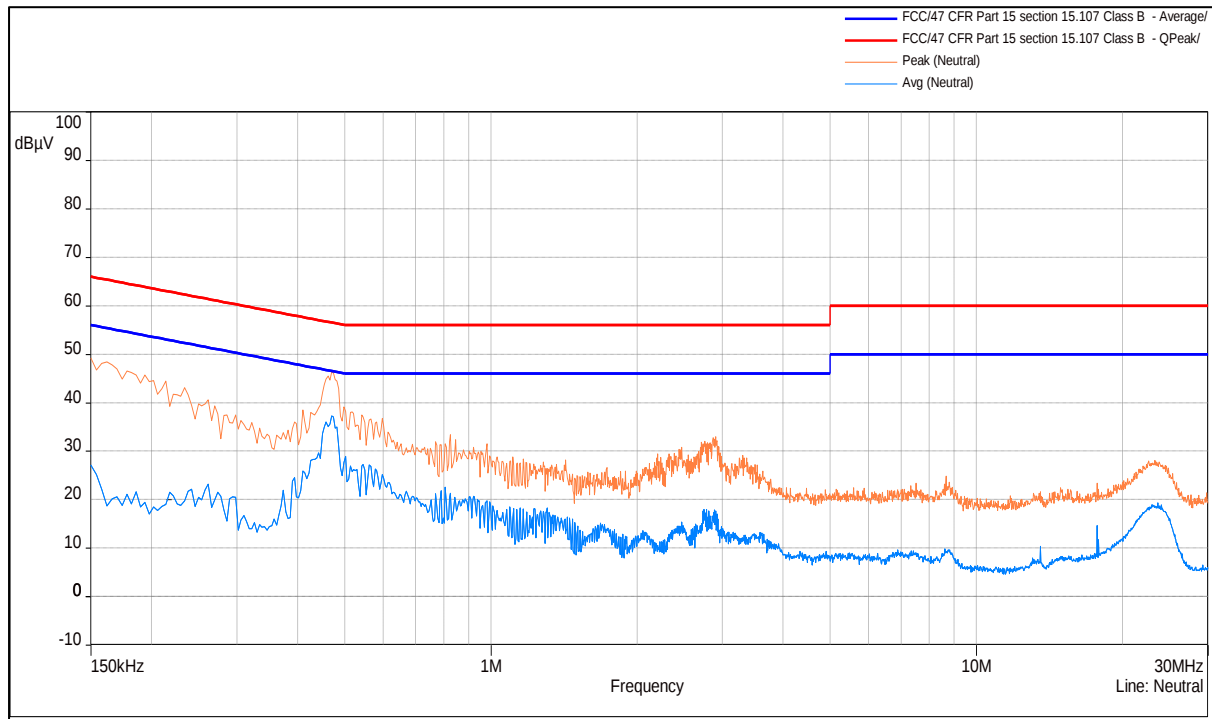
Line Table

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Power: 110V60HZ_NEUTRAL



Neutral Graph

Frequency (MHz)	Level (dBμV)	Limit (dBμV)	Margin (dB)	Detector	Comments
0.4668	44.38	56.58	-12.21	Quasipeak	Pass
0.5629	33.11	56.00	-22.89	Quasipeak	Pass
0.4003	32.48	57.81	-25.33	Quasipeak	Pass
2.8783	27.9	56.00	-28.10	Quasipeak	Pass
0.82625	27.42	56.00	-28.58	Quasipeak	Pass
0.244	32.95	61.89	-28.94	Quasipeak	Pass
1.1599	22.9	56.00	-33.10	Quasipeak	Pass
1.31005	22.41	56.00	-33.59	Quasipeak	Pass
0.4668	36.51	46.58	-10.07	Average	Pass
0.5629	25.46	46.00	-20.54	Average	Pass
0.4003	22.93	47.81	-24.88	Average	Pass
0.82625	18.59	46.00	-27.41	Average	Pass
0.244	22.13	51.89	-29.76	Average	Pass
1.31005	16.14	46.00	-29.86	Average	Pass
2.8783	14.83	46.00	-31.17	Average	Pass
1.1599	14.71	46.00	-31.29	Average	Pass

Neutral Table

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12 Power level used for testing

Wi-Fi 2.4GHz

Channel BandWidth (MHz)	Mode	Data rate	Channel Frequency (MHz)	Power level (dBm)
20 MHz	b	1	2412	13.0
			2437	18.0
			2462	18.0
		11	2412	18.0
			2437	18.0
			2462	18.0
	g	6	2412	13.0
			2437	13.0
			2462	13.0
		54	2412	13.0
			2437	13.0
			2462	13.0
	n	MCS 0	2412	13.0
			2437	13.0
			2462	13.0
		MCS 7	2412	13.0
			2437	13.0
			2462	13.0
	ac	MCS 0	2412	13.0
			2437	13.0
			2462	13.0
		MCS 8	2412	13.0
			2437	13.0
			2462	13.0
	ax	MCS 0	2412	12.0
			2437	12.0
			2462	12.0
		MCS 11	2412	12.0
			2437	12.0
			2462	12.0

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Channel BandWidth (MHz)	Mode	Data rate	Channel Frequency (MHz)	Power level (dBm)
40 MHz	n	MCS 0	2422	13.0
			2437	13.0
			2452	13.0
		MCS 7	2422	13.0
			2437	13.0
			2452	13.0
	ac	MCS 0	2422	13.0
			2437	13.0
			2452	13.0
		MCS 8	2422	13.0
			2437	13.0
			2452	13.0
	ax	MCS 0	2422	12.0
			2437	12.0
			2452	12.0
		MCS 11	2422	12.0
			2437	12.0
			2452	12.0

BLE 2.4GHz

Channel BandWidth (MHz)	Data rate (Mbps)	Channel Frequency (MHz)	Power level (dBm)
2MHz	1	2402	9
		2440	9
		2480	9
	2	2402	9
		2440	9
		2480	9

*****END OF TEST REPORT*****