

TEST REPORT

Applicant: vivo Mobile Communication Co., Ltd.
Address: No.1, vivo Road, Chang'an, Dongguan,
Guangdong, China
Equipment Type: Mobile Phone
Model Name: V2434
Brand Name: vivo
FCC ID: 2AUCY-V2434
Test Standard: 47 CFR Part 15 Subpart C
(refer to section 3.1)
Sample Arrival Date: Dec. 30, 2024
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ISSUED BY:

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Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Feb. 07, 2025</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	vivo Mobile Communication Co., Ltd.
Address	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China

2.2 Manufacturer Information

Manufacturer	vivo Mobile Communication Co., Ltd.
Address	No.1, vivo Road, Chang'an, Dongguan, Guangdong, China

2.3 General Description for Equipment under Test (EUT)

EUT Name	Mobile Phone
Model Name Under Test	V2434
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	MP_0.1
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A
EUT ID	S01, S08
IMEI Number	S01: IMEI:868503079997379
	S08: IMEI:868503079997916

2.4 Technical Information

Network and Wireless connectivity	802.11b, 802.11g, 802.11n(HT20/40), VHT20/40
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The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	802.11b/g/n (20 MHz)/ VHT20: 2.412 GHz - 2.462 GHz $f_c = 2412 \text{ MHz} + (N-1)*5 \text{ MHz}$, where - f_c = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 1 to 11. 802.11n (40 MHz)/ VHT40: 2.422 GHz - 2.452 GHz $f_c = 2412 \text{ MHz} + (N-1)*5 \text{ MHz}$, where - f_c = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 3 to 9.
Modulation Type	DSSS, OFDM
Product Type	☐ Mobile ☒ Portable ☐ Fix Location
Antenna System (eg., MIMO, Smart Antenna)	N/A
Categorization as Correlated or Completely Uncorrelated	N/A
Antenna Type	PIFA Antenna
Antenna Gain	0.82 dBi
About the Product	Only the WIFI 802.11b, 802.11g, 802.11n (HT20/40) and VHT20/40 was tested in this report.

Modulation technology	Modulation Type	Transfer Rate (Mbps)(Single RF path)
DSSS (802.11b)	DBPSK	1
	DQPSK	2
	CCK	5.5/11
OFDM (802.11g)	BPSK	6/9
	QPSK	12/18
	16QAM	24/36
	64QAM	48/54
OFDM (802.11n-20/ VHT20 MHz)	BPSK	6.5/7.2
	QPSK	13/19.5/14.4/21.7
	16QAM	26/39/28.9/43.3
	64QAM	52/58.5/65/57.8/65/72.2
OFDM (802.11n-40/ VHT40 MHz)	BPSK	13.5/15
	QPSK	27/40.5/30/45
	16QAM	54/81/60/90
	64QAM	108/121.5/135/120/150

Note: Preliminary tests were performed in different data rate in above table to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel	
Output Power	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9
Occupied Bandwidth	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9
Conducted Spurious Emission	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9
Conducted Emission	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9
Radiated Spurious Emission	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9
Band Edge	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9
Power spectral density (PSD)	11b/11g/11n20/11n40/ VHT20/40	1/6/6.5/13.5/6. 5/13.5 Mbps	1/6/11	3/6/9

Note: The above EUT information in section 2.4 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Intentional radiators of radio frequency equipment
2	ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
3	KDB Publication 558074 D01v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES

3.2 Test Verdict

No.	Description	FCC PART No.	Test Result	Verdict
1	Antenna Requirement	15.203	N/A	Pass ^{Note 1}
2	Output Power	15.247 (b)	ANNEX A.1	Pass
3	Occupied Bandwidth	15.247 (a)	ANNEX A.2	Pass
4	Conducted Spurious Emission	15.247 (d)	ANNEX A.3	Pass
5	Band Edge(Authorized-band band-edge)	15.247 (d)	ANNEX A.4	Pass
6	Conducted Emission	15.207	ANNEX A.5	Pass
7	Radiated Spurious Emission	15.209; 15.247 (d)	ANNEX A.6	Pass
8	Band Edge(Restricted-band band-edge)	15.209; 15.247 (d)	ANNEX A.7	Pass
9	Power spectral density (PSD)	15.247 (e)	ANNEX A.8	Pass

Note 1: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	39% to 69%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.8℃ to +25.1℃
Working Voltage of the EUT	NV (Normal Voltage)	3.91V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	MY56060183	2024.08.01	2025.07.31
Power Sensor	KEYSIGHT	U2063XA	MY58000251	2024.07.04	2025.07.03
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-40	101544	2024.12.16	2025.12.15
Spectrum Analyzer	KEYSIGHT	N9020A	MY52510065	2024.08.01	2025.07.31
Signaling Unit	ROHDE&SCHWARZ	CMW500	171150	2024.05.22	2025.05.21
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01631	2022.02.23	2025.02.22
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	144	2022.02.19	2025.09.03
Amplifier	COM-MV	LSCX_LNA1-12G-01	180602	2024.08.01	2025.07.31
Amplifier	COM-MV	XKu_LNA7-18G-01	180601	2024.08.01	2025.07.31
Amplifier	COM-MV	KA LNA18 40G-01	18050001	2024.12.05	2025.12.04
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2024.08.01	2025.07.31
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30-1000M	B2018054558	2024.11.28	2025.11.27
Anechoic Chamber	EMC Electronic Co., Ltd	20.10*11.60*7.35m	130	2024.07.13	2027.07.12
EMI Receiver	Agilent	N9038A	MY55330120	2024.08.01	2025.07.31
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-00867	2022.04.12	2025.04.11
Amplifier	COM-MV	ZT30-1000M	B2017119081	2024.11.28	2025.11.27
Anechoic Chamber	YiHeng	9m*6m*6m	142	2024.07.21	2027.07.20
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2024.08.01	2025.07.31
LISN	SCHWARZBECK	NSLK 8127	8127-687	2024.05.09	2025.05.08
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8 m	112	2022.02.19	2025.02.18

4.3 Test Software List

Description	Manufacturer	Software Version	Serial No.	Applicable test Setup
BL410R	BALUN	V2.1.1.488	N/A	The section 4.5.1
BL410E	BALUN	V22.930	N/A	The section 4.5.2&4.5.3&4.5.4&4.5.5

4.4 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.8°C
Humidity	4%

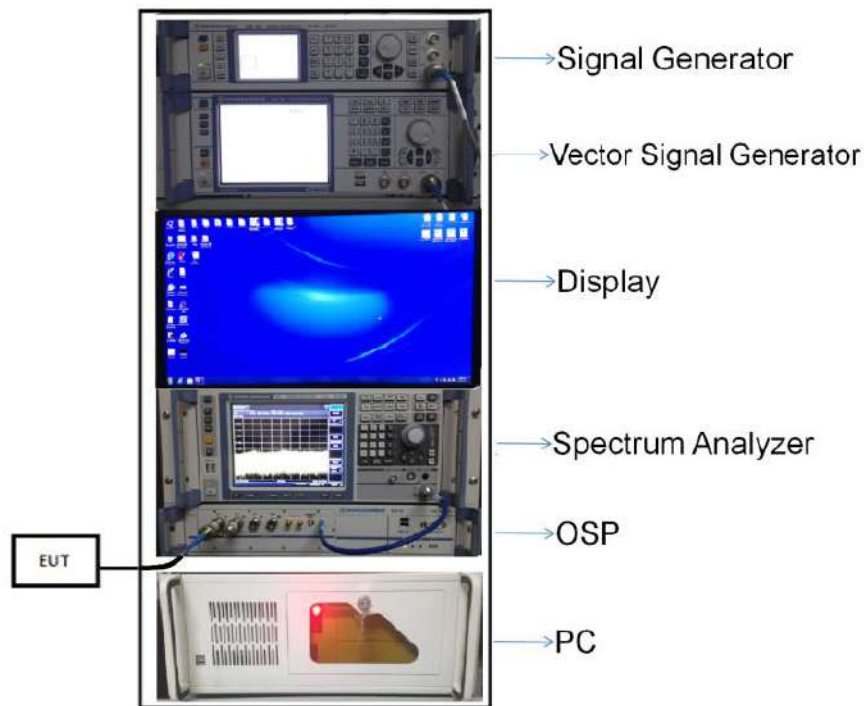
4.5 Description of Test Setup

4.5.1 For Antenna Port Test

Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

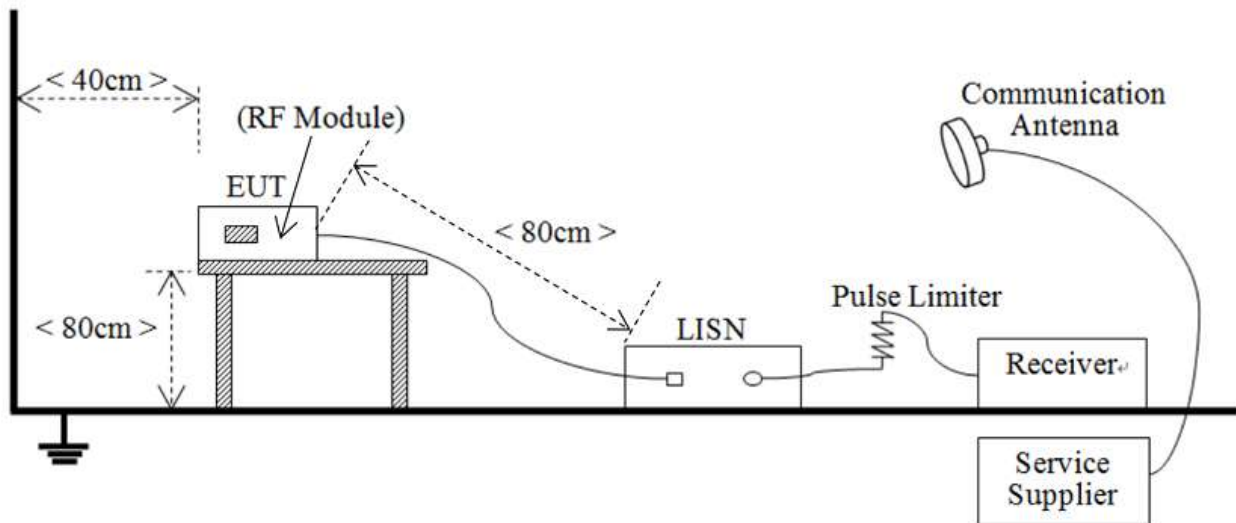
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



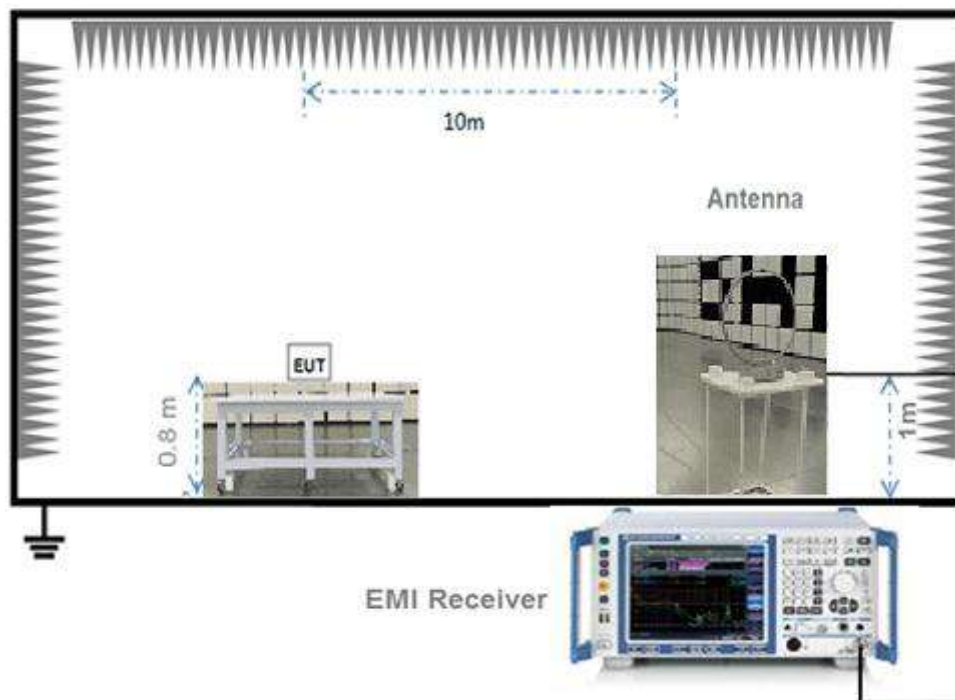
(Diagram 1)

4.5.2 For AC Power Supply Port Test



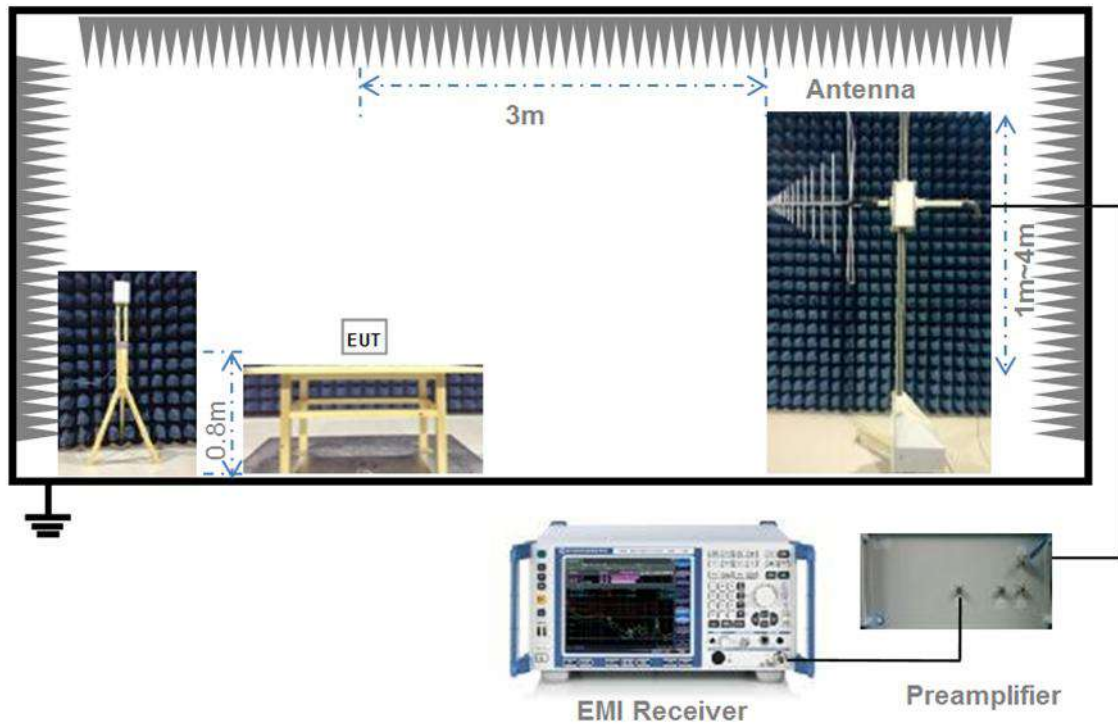
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



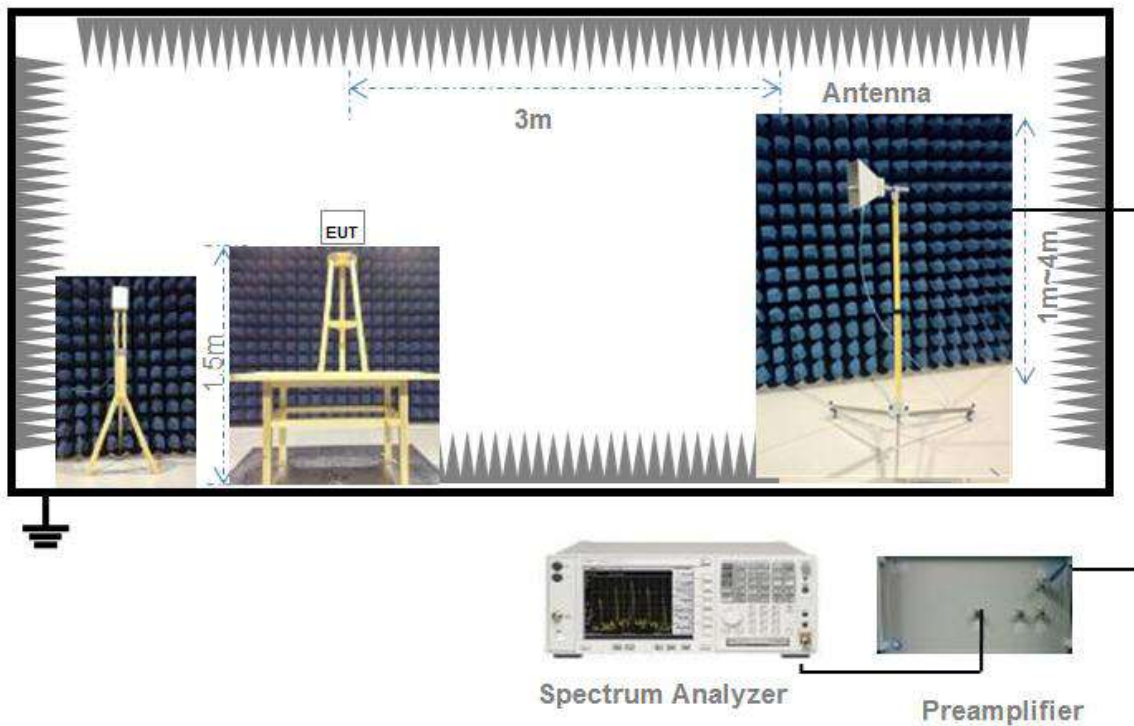
(Diagram 3)

4.5.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.5.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.6 Measurement Results Explanation Example

4.6.1 For conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

4.6.2 For radiated band edges and spurious emission test:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

EIRP = Measure Conducted output power Value (dBm) + Maximum transmit antenna gain (dBi) + the appropriate maximum ground reflection factor (dB)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna design is used.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 Output Power

5.2.1 Test Limit

FCC § 15.247(b)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements.

5.2.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Maximum peak conducted output power

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

The EUT shall be transmitted at its maximum power control level.

Maximum conducted (average) output power (Reporting Only)

a) As an alternative to spectrum analyzer or EMI receiver measurements, measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty factor.
 - 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
 - 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- b) If the transmitter does not transmit continuously, measure the duty cycle (x) of the transmitter output signal.
- c) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
- d) Adjust the measurement in dBm by adding $10\log(1/x)$, where x is the duty cycle.

Measurements of duty cycle

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between

bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission.

Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.

Set $VBW \geq RBW$. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if $T \leq 16.7$ microseconds.)

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 Occupied Bandwidth

5.3.1 Limit

FCC §15.247(a)

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW. The 6 dB bandwidth must be greater than 500 kHz.

5.3.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

Use the following spectrum analyzer settings:

Set RBW = 100 kHz.

Set the video bandwidth (VBW) ≥ 3 RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = auto couple.

Allow the trace to stabilize.

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

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Conducted Spurious Emission

5.4.1 Limit

FCC §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.4.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

- a) If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).
- b) If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).
- c) In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required.

The following procedures shall be used to demonstrate compliance to these limits. Note that these procedures can be used in either an antenna-port conducted or radiated test set-up. Radiated tests must conform to the test site requirements and utilize maximization procedures defined herein.

Reference level measurement

Establish a reference level by using the following procedure:

Set instrument center frequency to DTS channel center frequency.

Set the span to ≥ 1.5 times the DTS bandwidth.

Set the RBW = 100 kHz.

Set the VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

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

Emission level measurement

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

Set the RBW = 100 kHz.

Set the VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

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

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge (Authorized-band band-edge)

5.5.1 Limit

FCC §15.247(d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.5.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The following procedures may be used to determine the peak or average field strength or power of an unwanted emission that is within 2 MHz of the authorized band edge. If a peak detector is utilized, use the procedure described in 13.2.1. Use the procedure described in 13.2.2 when using an average detector and the EUT can be configured to transmit continuously (i.e., duty cycle $\geq 98\%$). Use the procedure described in 13.2.3 when using an average detector and the EUT cannot be configured to transmit continuously but the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent). Use the procedure described in 13.2.4 when using an average detector for those cases where the EUT cannot be configured to transmit continuously and the duty cycle is not constant (duty cycle variations equal or exceed 2 percent).

When using a peak detector to measure unwanted emissions at or near the band edge (within 2 MHz of the authorized band), the following integration procedure can be used.

Set instrument center frequency to the frequency of the emission to be measured (must be within 2 MHz of the authorized band edge).

Set span to 2 MHz

RBW = 100 kHz.

VBW $\geq 3 \times$ RBW.

Detector = peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweep to continue until the trace stabilizes (required measurement time may increase for low duty cycle applications)

Compute the power by integrating the spectrum over 1 MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency (femission) ± 0.5 MHz. If the instrument does not have a band power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by femission ± 0.5 MHz.

Standard method(The 99% OBW of the fundamental emission is without 2 MHz of the authorized band):

Span: Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products that fall outside of the authorized band of operation.

Reference level: As required to keep the signal from exceeding the maximum instrument input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (\text{OBW/RBW})]$ below the reference level. Specific guidance is given in 4.1.5.2.

Attenuation: Auto (at least 10 dB preferred).

Sweep time: Coupled.

Resolution bandwidth: 100 kHz.

Video bandwidth: 300 kHz.

Detector: Peak.

Trace: Max hold.

5.5.4 Test Result

Please refer to ANNEX A.4.

5.6 Conducted Emission

5.6.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.6.2 Test Setup

See section 4.5.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.6.4 Test Result

Please refer to ANNEX A.5.

5.7 Radiated Spurious Emission

5.7.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.7.2 Test Setup

See section 4.5.3 to 4.5.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

Since the emission limits are specified in terms of radiated field strength levels, measurements performed to demonstrate compliance have traditionally relied on a radiated test configuration. Radiated measurements remain the principal method for demonstrating compliance to the specified limits; however antenna-port conducted measurements are also now acceptable to demonstrate compliance (see below for details). When radiated measurements are utilized, test site requirements and procedures for maximizing and measuring radiated emissions that are described in ANSI C63.10 shall be followed.

Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

General Procedure for conducted measurements in restricted bands

- a) Measure the conducted output power (in dBm) using the detector specified (see guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
- b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see guidance on determining the applicable antenna gain)
- c) Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
- d) For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
- e) Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8$$

where:

E = electric field strength in dB μ V/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

- f) Compare the resultant electric field strength level to the applicable limit.
- g) Perform radiated spurious emission test.

Quasi-Peak measurement procedure

The specifications for measurements using the CISPR quasi-peak detector can be found in Publication 16 of the International Special Committee on Radio Frequency Interference (CISPR) of the International Electrotechnical Commission.

As an alternative to CISPR quasi-peak measurement, compliance can be demonstrated to the applicable emission limits using a peak detector.

Peak power measurement procedure

Peak emission levels are measured by setting the instrument as follows:

- a) RBW = as specified in Table 1.
- b) VBW $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Sweep time = auto.
- e) Trace mode = max hold.
- f) Allow sweeps to continue until the trace stabilizes. (Note that the required measurement time may be

longer for low duty cycle applications).

Table 1—RBW as a function of frequency

Frequency	RBW
9-150 kHz	200-300 Hz
0.15-30 MHz	9-10 kHz
30-1000 MHz	100-120 kHz
> 1000 MHz	1 MHz

If the peak-detected amplitude can be shown to comply with the average limit, then it is not necessary to perform a separate average measurement.

Trace averaging across on and off times of the EUT transmissions followed by duty cycle correction

If continuous transmission of the EUT (i.e., duty cycle ≥ 98 percent) cannot be achieved and the duty cycle is constant (i.e., duty cycle variations are less than ± 2 percent), then the following procedure shall be used:

- a) The EUT shall be configured to operate at the maximum achievable duty cycle.
- b) Measure the duty cycle, x , of the transmitter output signal as described in section 6.0.
- c) RBW = 1 MHz (unless otherwise specified).
- d) VBW $\geq 3 \times$ RBW.
- e) Detector = RMS, if $\text{span}/(\# \text{ of points in sweep}) \leq (\text{RBW}/2)$. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If this condition cannot be satisfied, then the detector mode shall be set to peak.
- f) Averaging type = power (i.e., RMS).
 - 1) As an alternative, the detector and averaging type may be set for linear voltage averaging.
 - 2) Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
- g) Sweep time = auto.
- h) Perform a trace average of at least 100 traces.
- i) A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (RMS) mode was used in step f), then the applicable correction factor is $10 \log(1/x)$, where x is the duty cycle.
 - 2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $20 \log(1/x)$, where x is the duty cycle.
 - 3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

NOTE: Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

Determining the applicable transmit antenna gain

A conducted power measurement will determine the maximum output power associated with a restricted band emission; however, in order to determine the associated EIRP level, the gain of the transmitting antenna (in dBi) must be added to the measured output power (in dBm).

Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

See KDB 662911 for guidance on calculating the additional array gain term when determining the effective antenna gain for a EUT with multiple outputs occupying the same or overlapping frequency ranges in the same band.

Radiated spurious emission test

An additional consideration when performing conducted measurements of restricted band emissions is that unwanted emissions radiating from the EUT cabinet, control circuits, power leads, or intermediate circuit elements will likely go undetected in a conducted measurement configuration. To address this concern, a radiated test shall be performed to ensure that emissions emanating from the EUT cabinet (rather than the antenna port) also comply with the applicable limits.

For these cabinet radiated spurious emission measurements the EUT transmit antenna may be replaced with a termination matching the nominal impedance of the antenna. Procedures for performing radiated measurements are specified in ANSI C63.10. All detected emissions shall comply with the applicable limits.

The measurement frequency range is from 30 MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.7.4 Test Result

Please refer to ANNEX A.6.

5.8 Band Edge (Restricted-band band-edge)

5.8.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.8.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.8.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

For transmitters operating above 1 GHz repeat the measurement with an average detector.

5.8.4 Test Result

Please refer to ANNEX A.7.

5.9 Power Spectral density (PSD)

5.9.1 Limit

FCC §15.247(e)

The same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

5.9.2 Test Setup

See section 4.5.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.9.3 Test Procedure

Set analyzer center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.

Set the VBW $\geq 3 \text{ RBW}$.

Detector = peak.

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.9.4 Test Result

Please refer to ANNEX A.8.

ANNEX A TEST RESULT

A.1 Output Power

Duty Cycle

Test Mode	On Time (ms)	On+Off time (ms)	Duty Cycle
802.11b	13.200	13.470	98.00%
802.11g	2.195	2.235	98.21%
802.11n-20 MHz	2.045	2.085	98.08%
802.11n-40 MHz	1.004	1.056	95.08%
VHT-20 MHz	2.052	2.093	98.04%
VHT-40 MHz	1.008	1.061	95.00%

Peak Power Test Data

802.11b Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	21.61	144.88	30	1000	Pass
CH6	21.81	151.71			Pass
CH11	22.03	159.59			Pass

802.11g Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	24.36	272.90	30	1000	Pass
CH6	24.85	305.49			Pass
CH10	24.61	289.07			Pass
CH11	21.94	156.31			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	dBm	mW	30	1000	Pass
CH6	23.42	219.79			Pass
CH10	23.43	220.29			Pass
CH11	22.60	181.97			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH3	20.28	106.66	30	1000	Pass
CH4	22.08	161.44			Pass
CH5	23.29	213.30			Pass
CH6	23.42	219.79			Pass
CH8	23.52	224.91			Pass
CH9	19.04	80.17			Pass

VHT20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	23.08	203.24	30	1000	Pass
CH6	23.30	213.80			Pass
CH10	23.32	214.78			Pass
CH11	21.19	131.52			Pass

VHT40 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH3	21.18	131.22	30	1000	Pass
CH4	22.13	163.31			Pass
CH5	23.34	215.77			Pass
CH6	23.49	223.36			Pass
CH8	23.53	225.42			Pass
CH9	19.11	81.47			Pass

Average Power Test Data

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	18.53	71.29	30	1000	Pass
CH6	18.66	73.45			Pass
CH11	18.86	76.91			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	17.30	53.70	30	1000	Pass
CH6	17.77	59.84			Middle
CH10	17.59	57.41			Middle
CH11	14.89	30.83			Middle

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	16.20	41.69	30	1000	Pass
CH6	16.35	43.15			Pass
CH10	16.36	43.25			Pass
CH11	15.52	35.65			Pass

802.11n-40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH3	13.01	20.00	30	1000	Pass
CH4	15.04	31.92			Pass
CH5	16.17	41.40			Pass
CH6	16.12	40.93			Pass
CH8	16.22	41.88			Pass
CH9	11.78	15.07			Pass

VHT20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH1	16.03	40.09	30	1000	Pass
CH6	16.20	41.69			Pass
CH10	16.24	42.07			Pass
CH11	14.13	25.88			Pass

VHT40 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
CH3	14.03	25.29	30	1000	Pass
CH4	15.12	32.51			Pass
CH5	16.28	42.46			Pass
CH6	16.20	41.69			Pass
CH8	16.26	42.27			Pass
CH9	12.05	16.03			Pass

A.2 Occupied Bandwidth

Test Data

802.11b Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
CH1	9.100000	13.765000	≥500
CH6	9.100000	13.943000	≥500
CH11	9.100000	13.819000	≥500

802.11g Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
CH1	15.550000	17.011000	≥500
CH6	16.150000	17.223000	≥500
CH11	15.400000	17.100000	≥500

802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
CH1	15.200000	18.183000	≥500
CH6	15.800000	18.332000	≥500
CH11	15.500000	18.196000	≥500

802.11n-40MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
CH3	35.200000	36.239000	≥500
CH6	36.350000	36.435000	≥500
CH9	35.200000	36.236000	≥500

VHT-20 MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
CH1	15.450000	18.187000	≥500
CH6	15.800000	18.334000	≥500
CH11	15.200000	18.149000	≥500

VHT-40 MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
CH3	35.200000	36.239000	≥ 500
CH6	36.150000	36.341000	≥ 500
CH9	35.200000	36.230000	≥ 500

Test Plots

6 dB Bandwidth

802.11b CHANNEL 1



802.11b CHANNEL 6



802.11b CHANNEL 11



802.11g CHANNEL 1



802.11g CHANNEL 6



802.11g CHANNEL 11



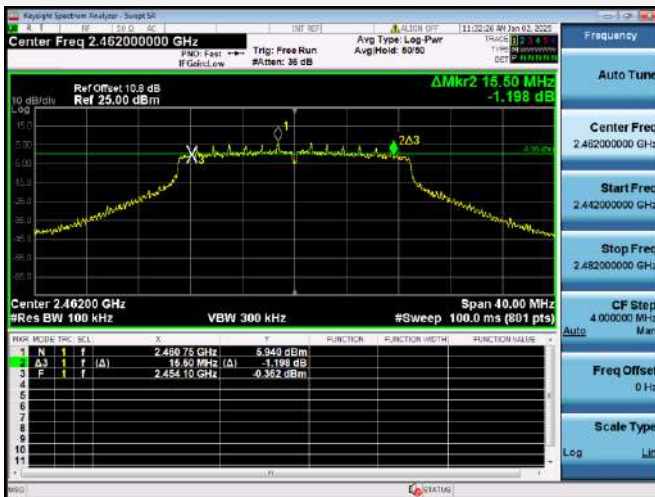
802.11n-20 MHz CHANNEL 1



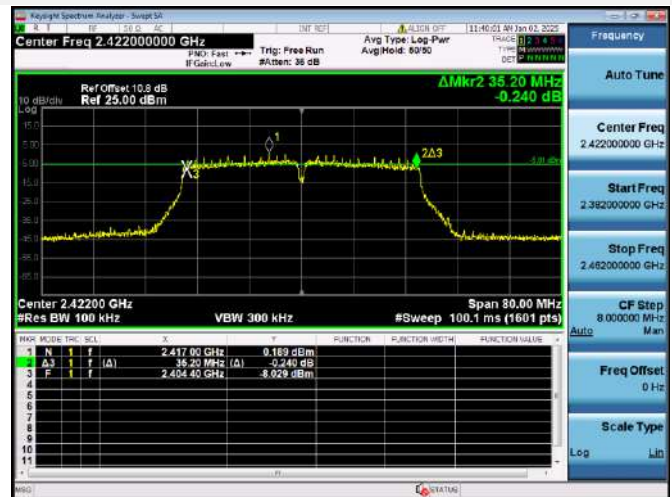
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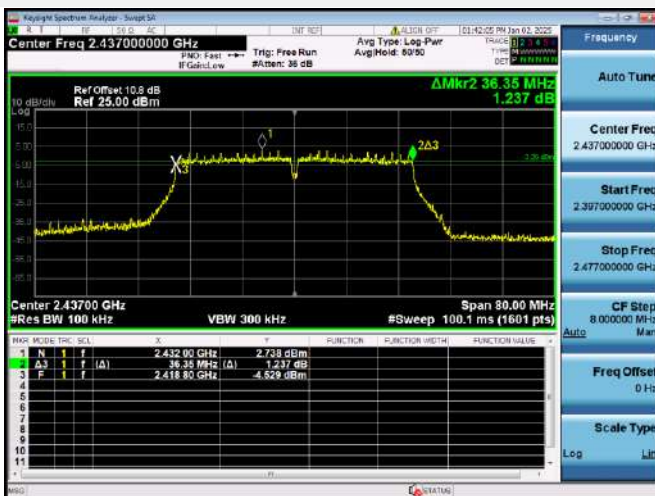
802.11n-20 MHz CHANNEL 11



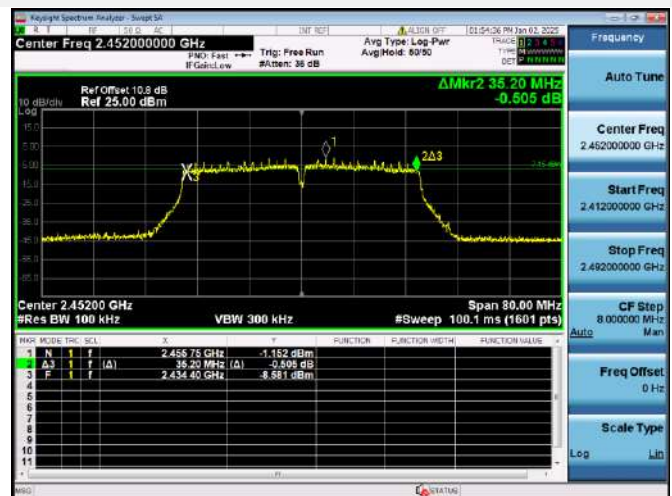
802.11n-40 MHz CHANNEL 3



802.11n-40 MHz CHANNEL 6



802.11n-40 MHz CHANNEL 9



VHT-20 MHz CHANNEL 1



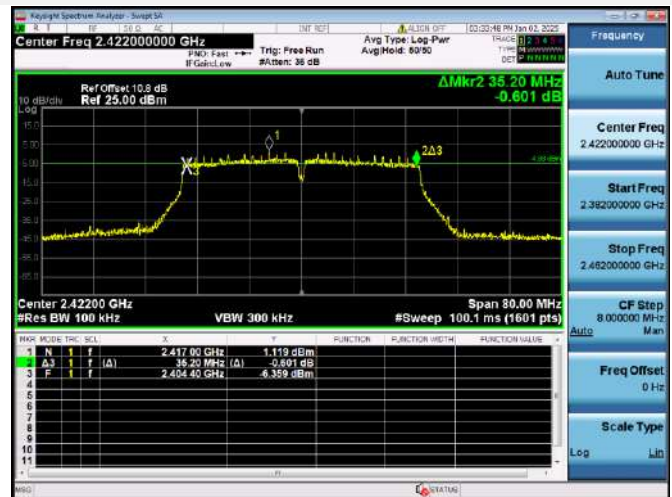
VHT-20 MHz CHANNEL 6



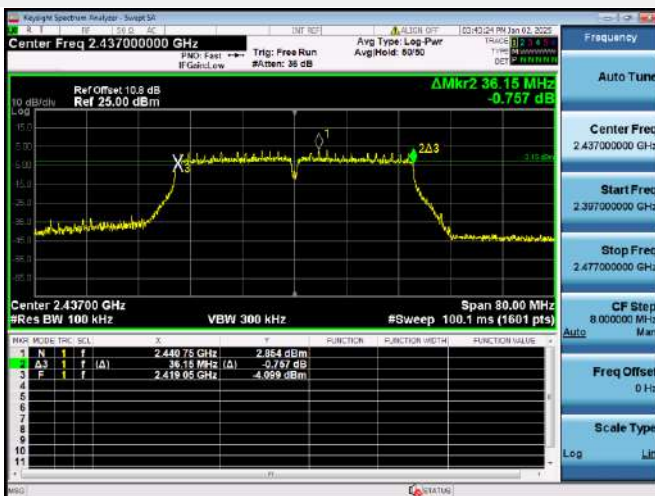
VHT-20 MHz CHANNEL 11



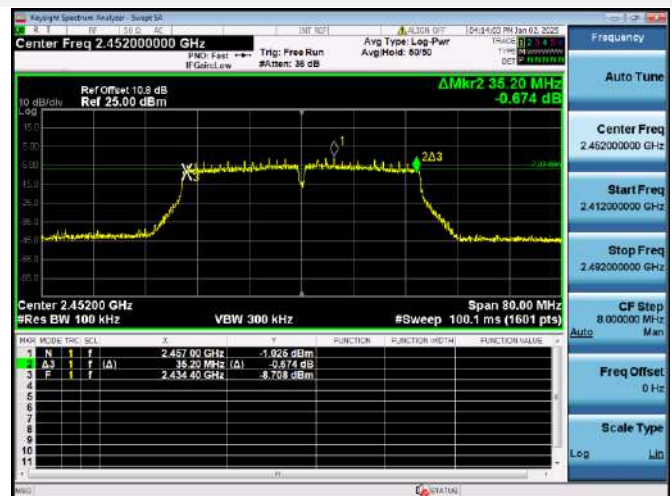
VHT-40 MHz CHANNEL 3



VHT-40 MHz CHANNEL 6



VHT-40 MHz CHANNEL 9



99% Bandwidth

802.11b CHANNEL 1



802.11b CHANNEL 6



802.11b CHANNEL 11



802.11g CHANNEL 1



802.11g CHANNEL 6



802.11g CHANNEL 11



802.11n-20 MHz CHANNEL 1



802.11n-20 MHz CHANNEL 6



802.11n-20 MHz CHANNEL 11



802.11n-40 MHz CHANNEL 3



802.11n-40 MHz CHANNEL 6



802.11n-40 MHz CHANNEL 9



VHT-20 MHz CHANNEL 1



VHT-20 MHz CHANNEL 6



VHT-20 MHz CHANNEL 11



VHT-40 MHz CHANNEL 3



VHT-40 MHz CHANNEL 6



VHT-40 MHz CHANNEL 9



A.3 Conducted Spurious Emissions

Test Data

802.11b Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-39.82	10.38	-9.62	Pass
CH6	-37.92	10.65	-9.35	Pass
CH11	-37.31	10.67	-9.33	Pass

802.11g Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-37.06	8.46	-11.54	Pass
CH6	-37.52	8.48	-11.52	Pass
CH10	-37.61	8.58	-11.42	Pass
CH11	-37.46	5.80	-14.20	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-39.99	7.47	-12.53	Pass
CH6	-36.96	7.43	-12.57	Pass
CH10	-40.55	7.53	-12.47	Pass
CH11	-37.76	6.60	-13.40	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH3	-37.55	0.42	-19.58	Pass
CH4	-37.83	2.14	-17.86	Pass
CH5	-38.48	2.79	-17.21	Pass
CH6	-37.87	3.00	-17.00	Pass
CH8	-39.91	3.42	-16.58	Pass
CH9	-40.35	-0.79	-20.79	Pass

VHT-20 MHz Mode:

Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-40.65	7.45	-12.55	Pass
CH6	-40.08	7.31	-12.69	Pass
CH10	-40.88	7.49	-12.51	Pass
CH11	-36.19	5.35	-14.65	Pass

VHT-40 MHz Mode:

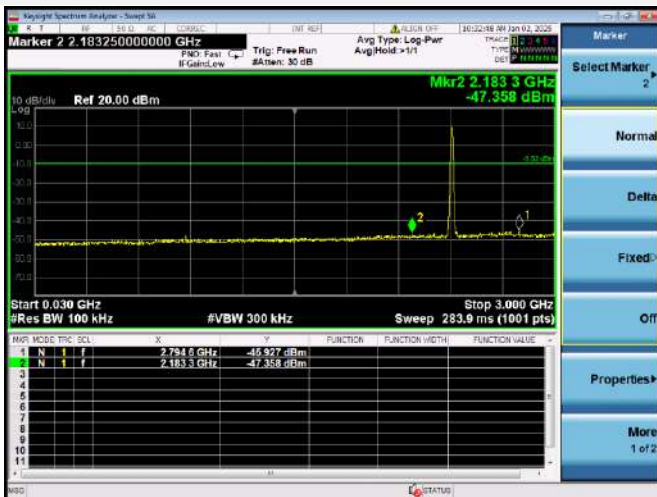
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH3	-37.46	1.37	-18.63	Pass
CH4	-37.31	2.10	-17.90	Pass
CH5	-38.79	3.28	-16.72	Pass
CH6	-38.01	3.05	-16.95	Pass
CH8	-40.33	3.36	-16.64	Pass
CH9	-37.38	-0.84	-20.84	Pass

Test Plots

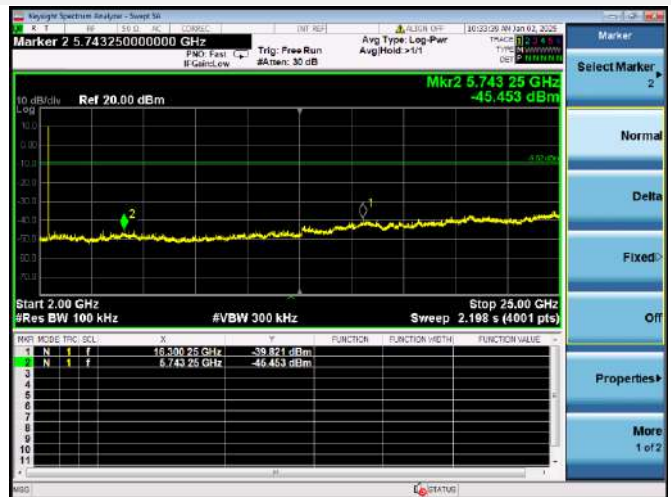
802.11b CHANNEL 1 CARRIER LEVEL



802.11b CHANNEL 1, SPURIOUS 30 MHz ~ 3 GHz



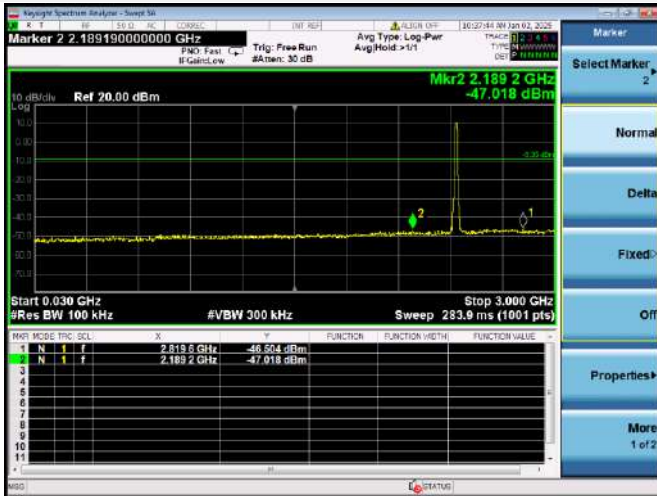
802.11b CHANNEL 1, SPURIOUS 2 GHz ~ 25 GHz



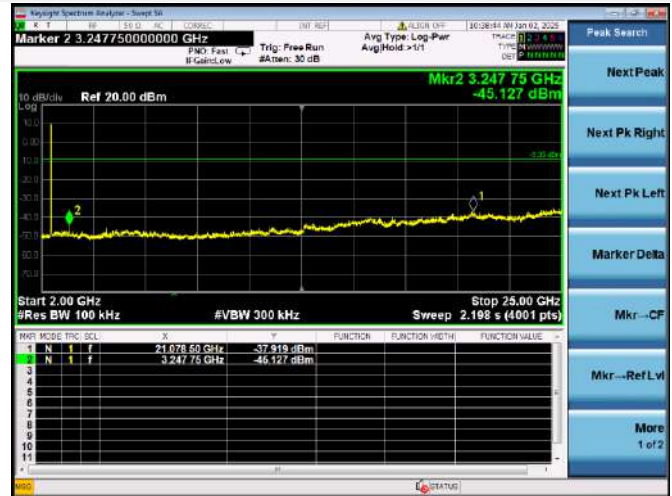
802.11b CHANNEL 6 CARRIER LEVEL



802.11b CHANNEL 6, SPURIOUS 30 MHz ~ 3 GHz



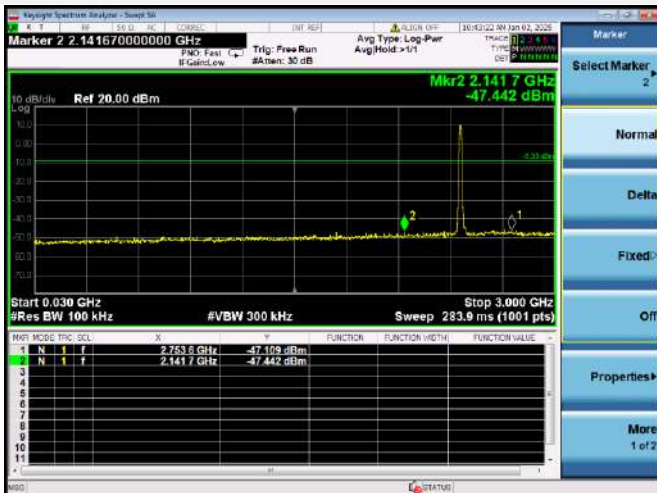
802.11b CHANNEL 6, SPURIOUS 2 GHz ~ 25 GHz



802.11b CHANNEL 11 CARRIER LEVEL



802.11b CHANNEL 11, SPURIOUS 30 MHz ~ 3 GHz



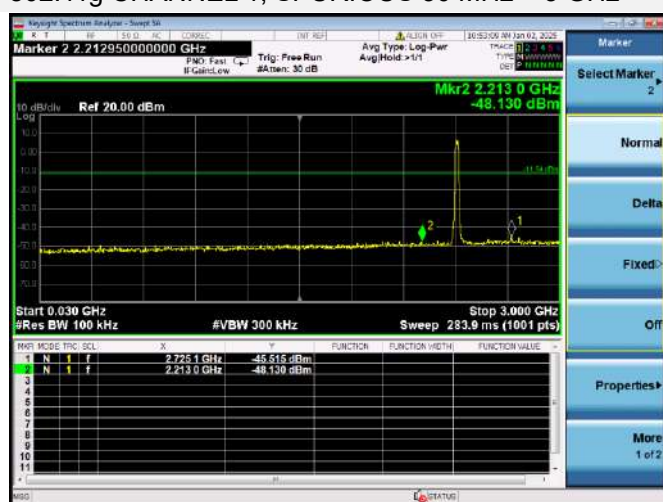
802.11b HIGH CHANNEL 11, SPURIOUS 2 GHz ~ 25 GHz



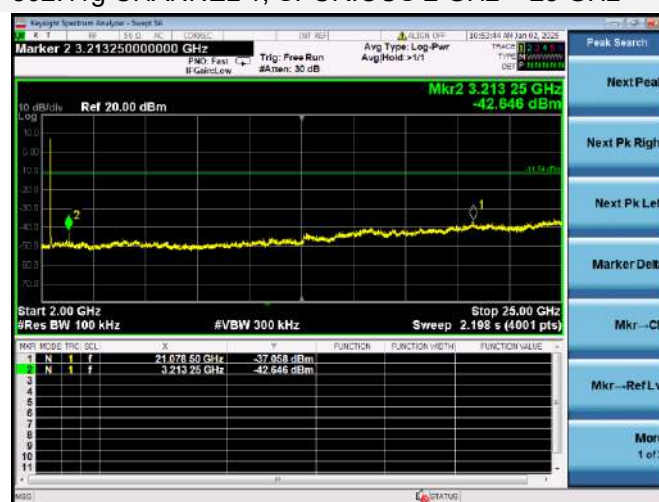
802.11g CHANNEL 1 CARRIER LEVEL



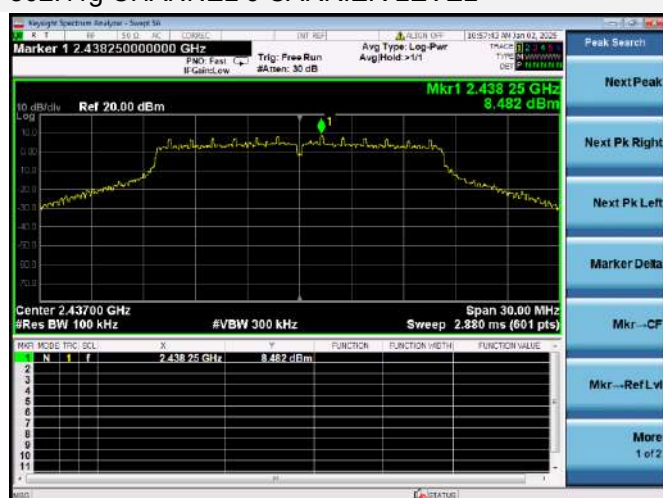
802.11g CHANNEL 1, SPURIOUS 30 MHz ~ 3 GHz



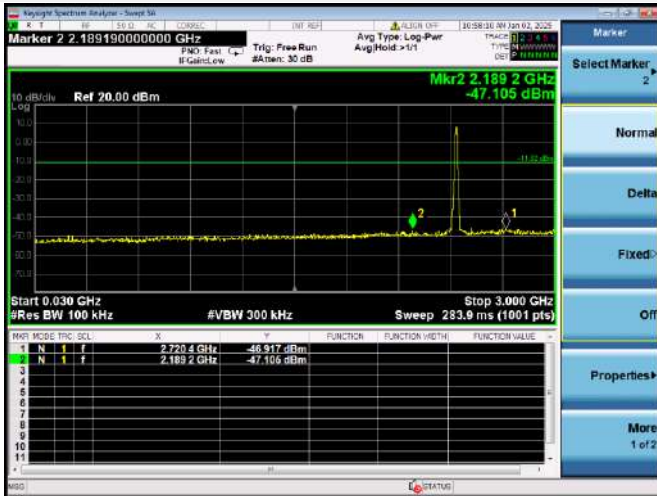
802.11g CHANNEL 1, SPURIOUS 2 GHz ~ 25 GHz



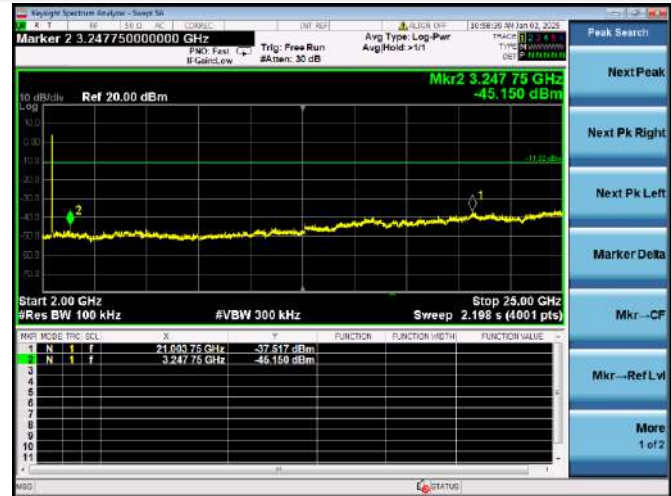
802.11g CHANNEL 6 CARRIER LEVEL



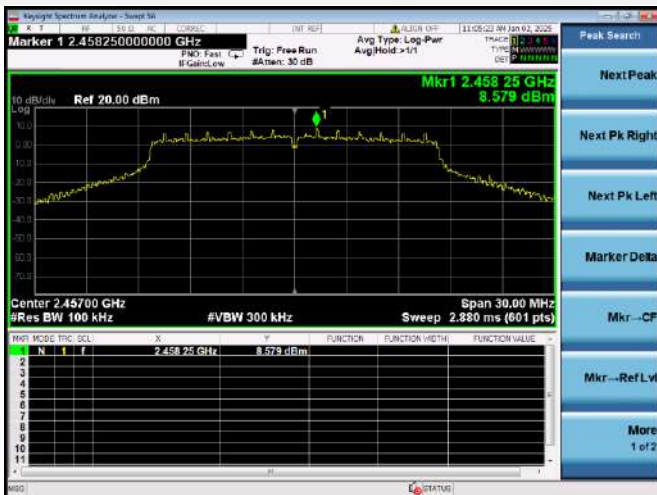
802.11g CHANNEL 6, SPURIOUS 30 MHz ~ 3 GHz



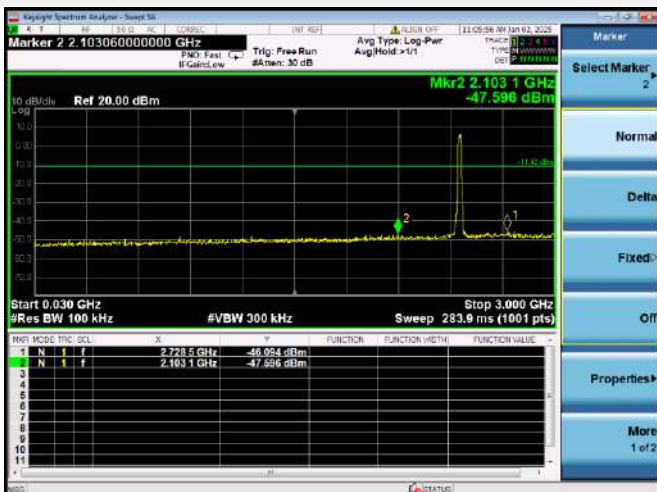
802.11g CHANNEL 6, SPURIOUS 2 GHz ~ 25 GHz



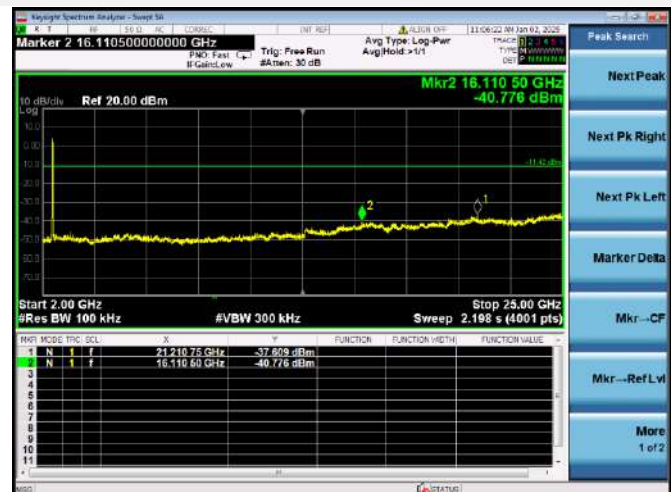
802.11g CHANNEL 10 CARRIER LEVEL



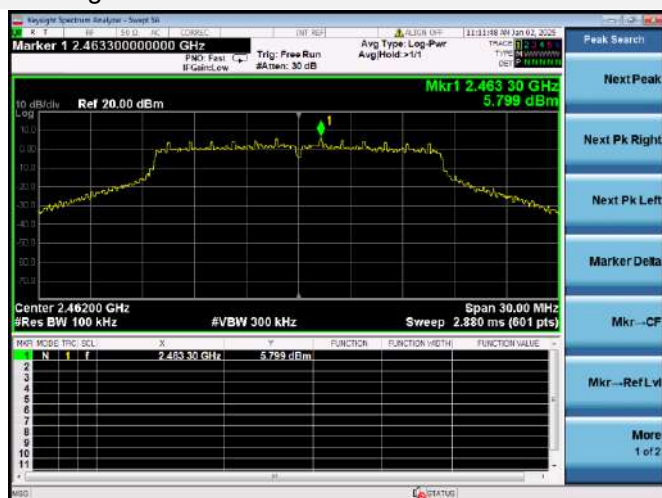
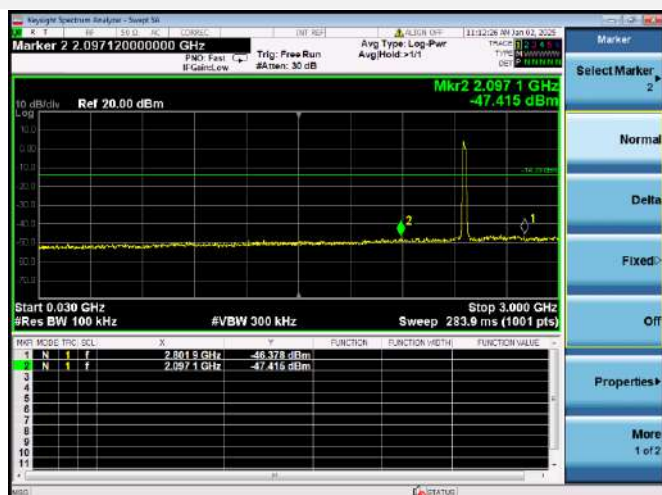
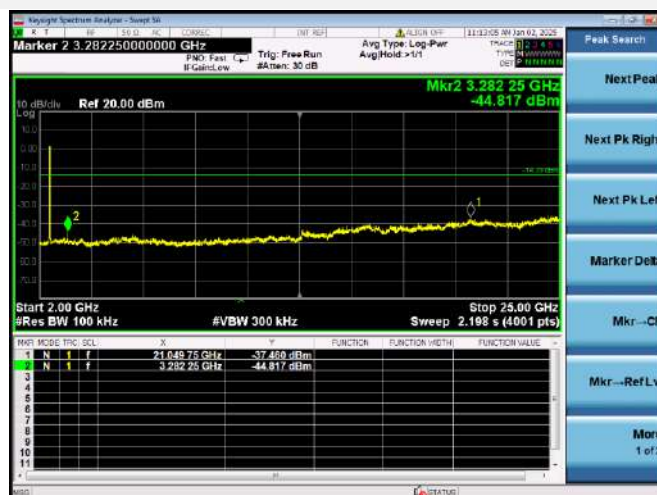
802.11g CHANNEL 10, SPURIOUS 30 MHz ~ 3 GHz



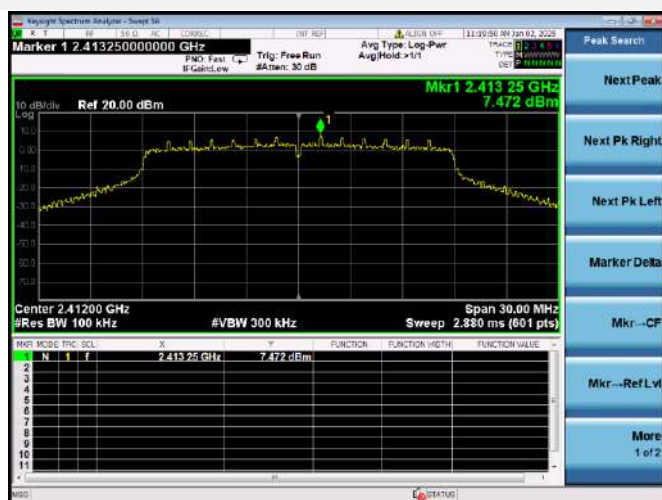
802.11g CHANNEL 10, SPURIOUS 2 GHz ~ 25 GHz



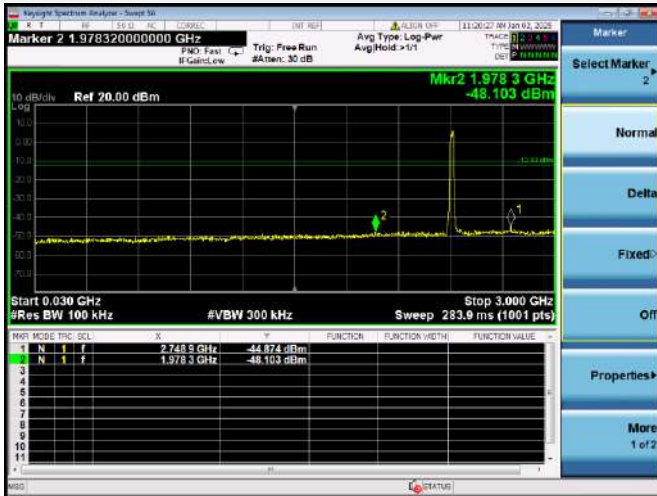
802.11g CHANNEL 11 CARRIER LEVEL

802.11g CHANNEL 11, SPURIOUS
30 MHz ~ 3 GHz802.11g CHANNEL 11, SPURIOUS
2 GHz ~ 25 GHz

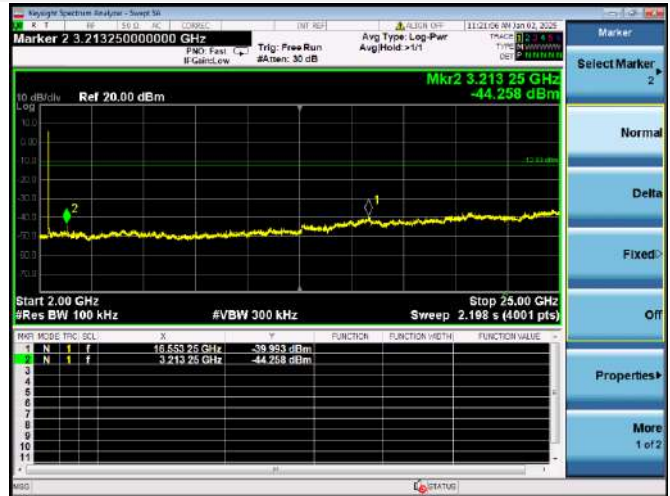
802.11n-20 MHz CHANNEL 1 CARRIER LEVEL



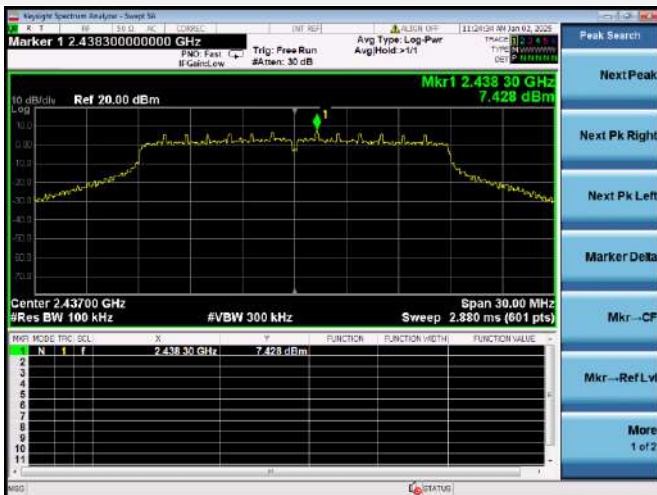
802.11n-20 MHz CHANNEL 1, SPURIOUS 30 MHz ~ 3 GHz



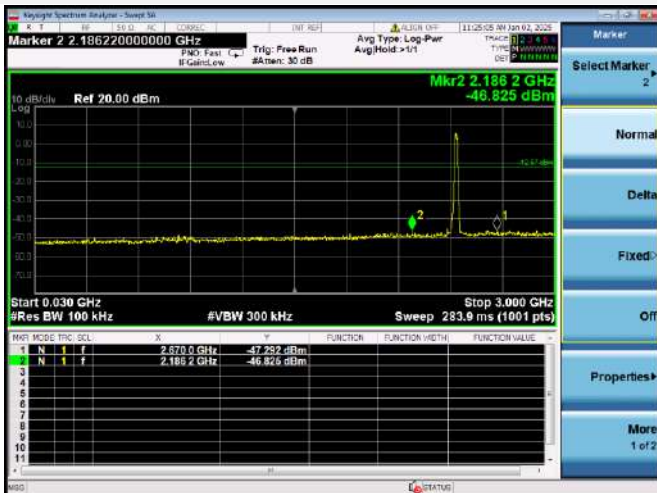
802.11n-20 MHz CHANNEL 1, SPURIOUS 2 GHz ~ 25 GHz



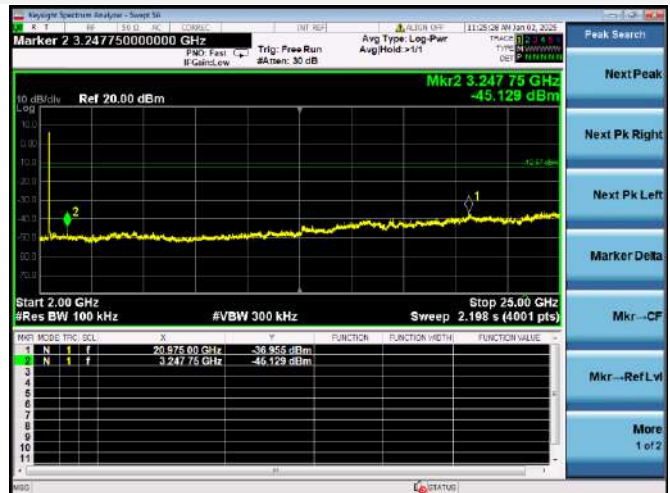
802.11n-20 MHz CHANNEL 6 CARRIER LEVEL



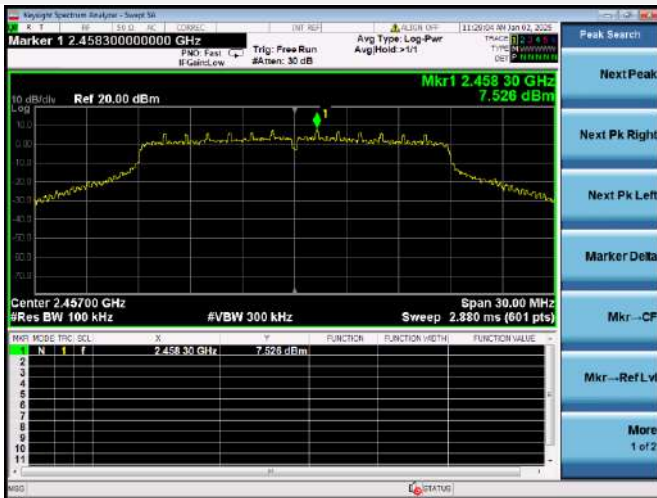
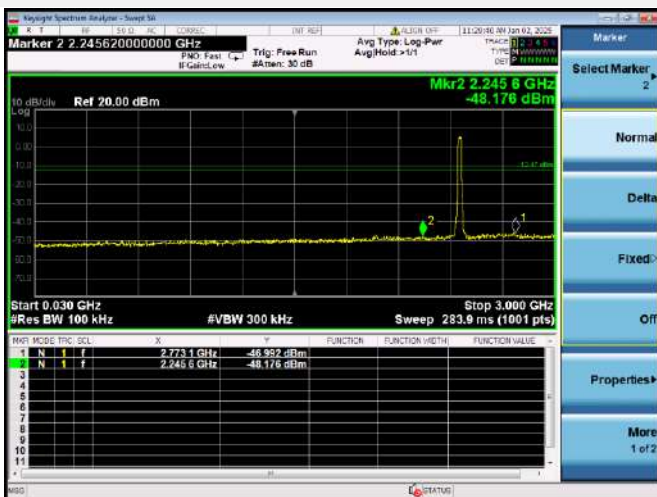
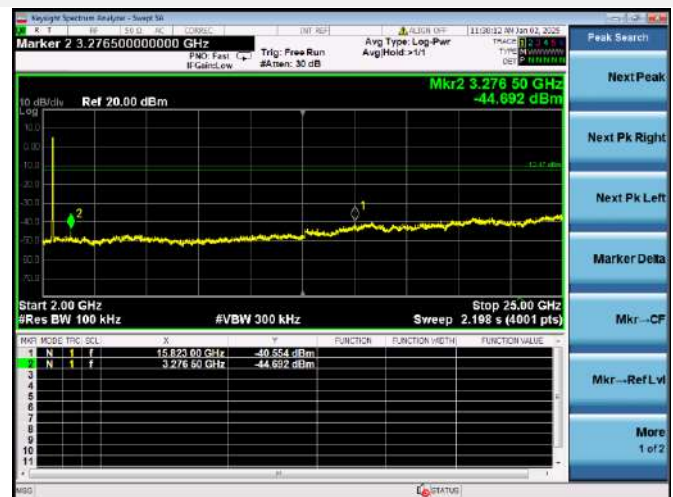
802.11n-20 MHz CHANNEL 6, SPURIOUS 30 MHz ~ 3 GHz



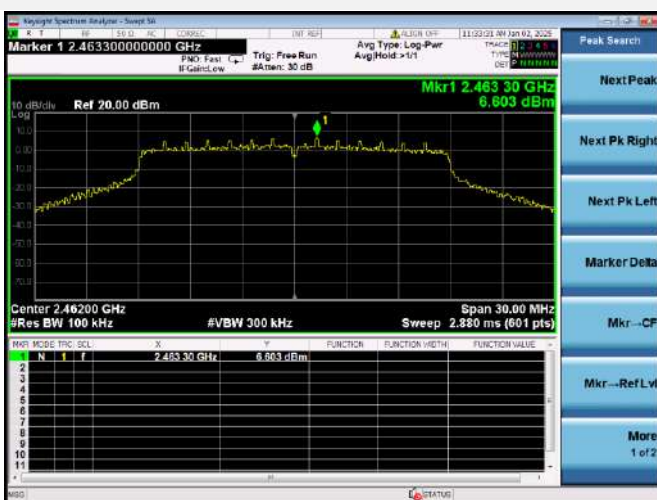
802.11n-20 MHz CHANNEL 6, SPURIOUS 2 GHz ~ 25 GHz



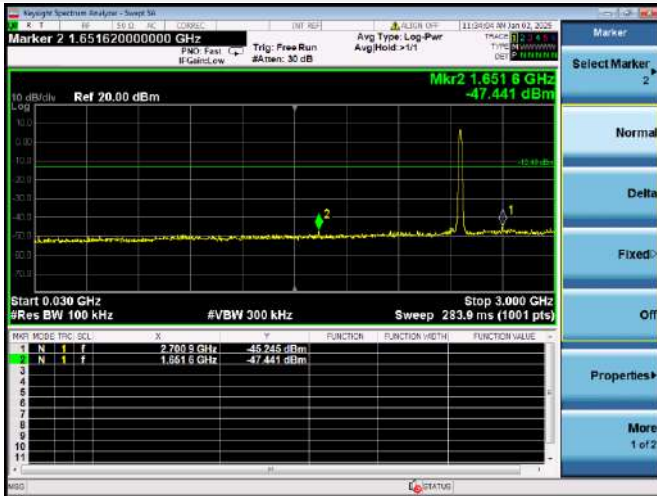
802.11n-20 MHz CHANNEL 10 CARRIER LEVEL

802.11n-20 MHz CHANNEL 10, SPURIOUS
30 MHz ~ 3 GHz802.11n-20 MHz CHANNEL 10, SPURIOUS
2 GHz ~ 25 GHz

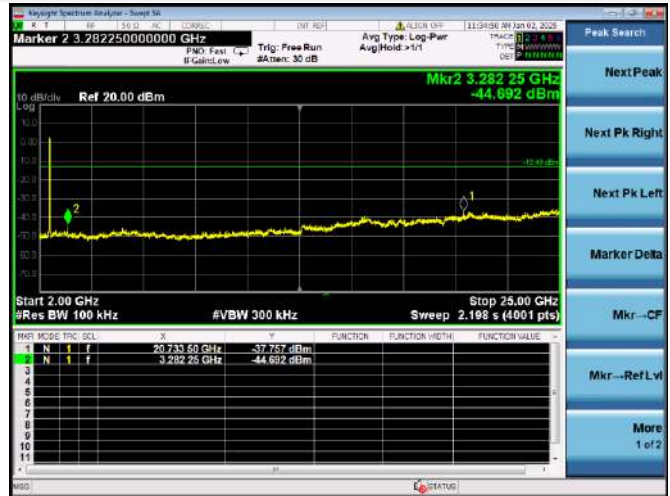
802.11n-20 MHz 11 CHANNEL CARRIER LEVEL



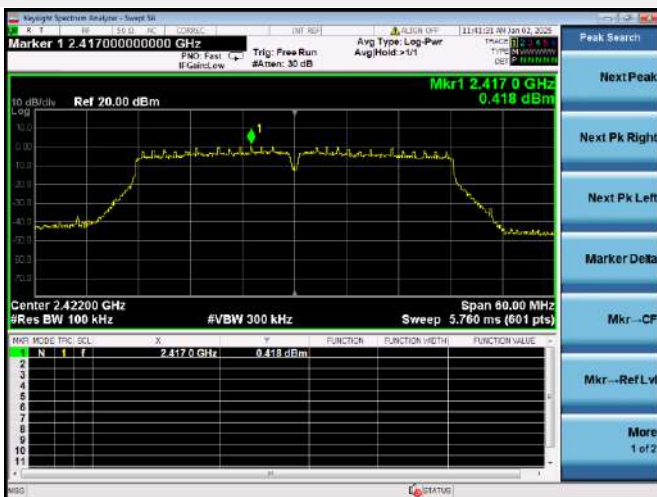
802.11n-20 MHz CHANNEL 11, SPURIOUS 30 MHz ~ 3 GHz



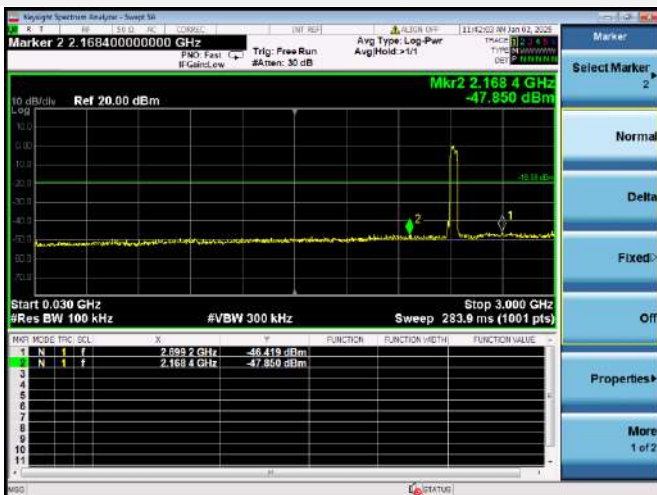
802.11n-20 MHz CHANNEL 11, SPURIOUS 2 GHz ~ 25 GHz



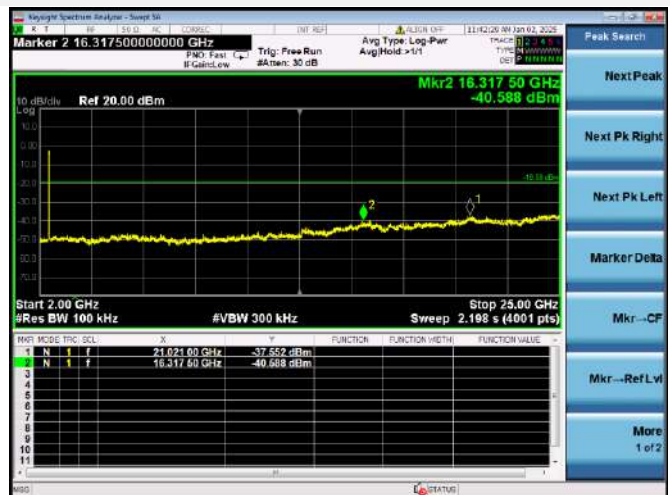
802.11n-40 MHz CHANNEL 3 CARRIER LEVEL



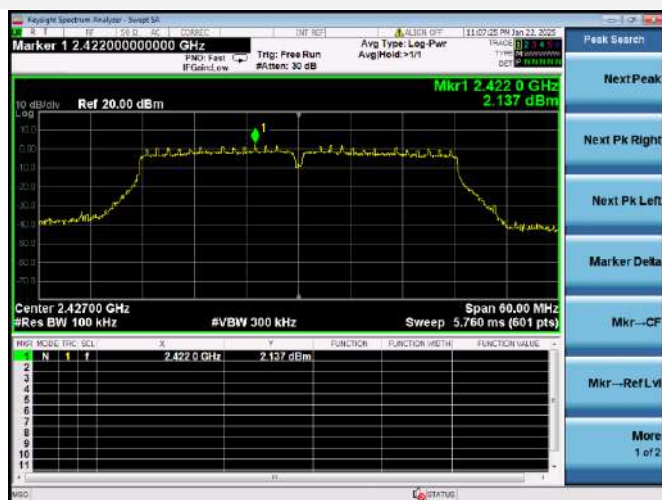
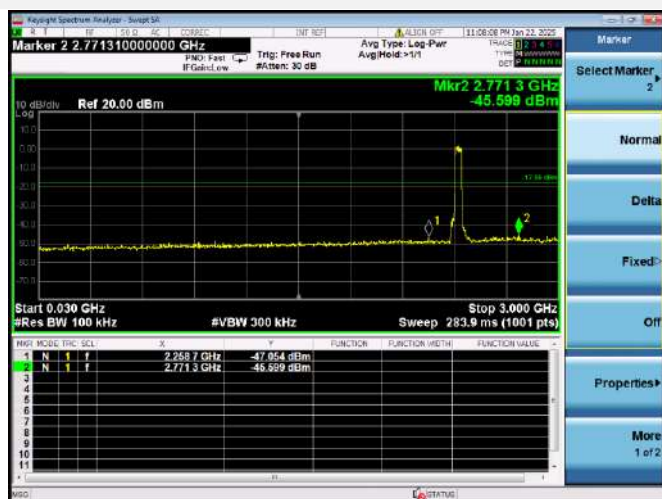
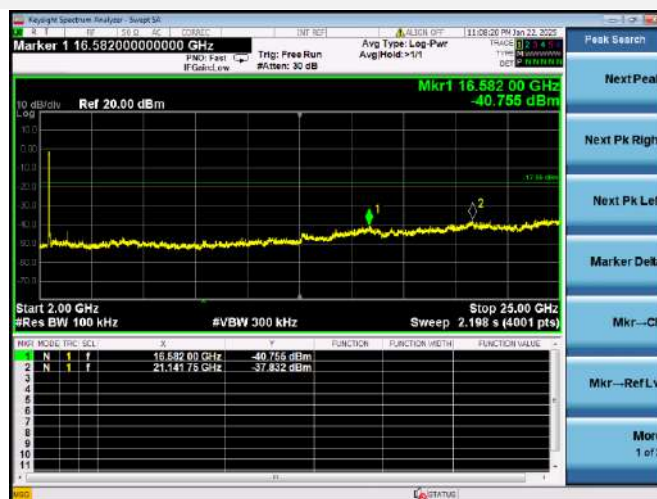
802.11n-40 MHz CHANNEL 3, SPURIOUS 30 MHz ~ 3 GHz



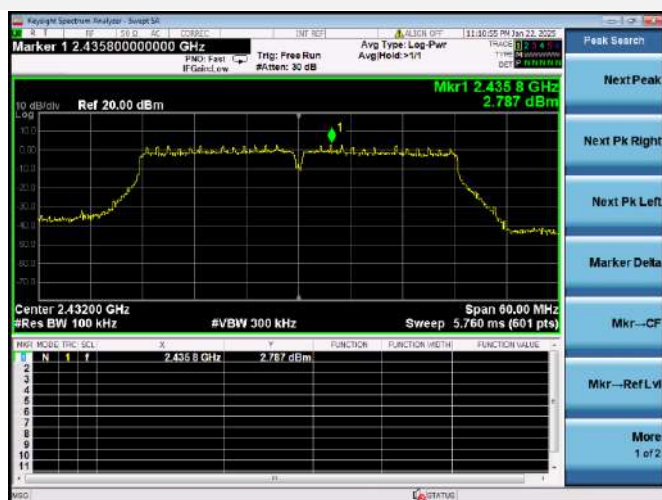
802.11n-40 MHz CHANNEL 3, SPURIOUS 2 GHz ~ 25 GHz



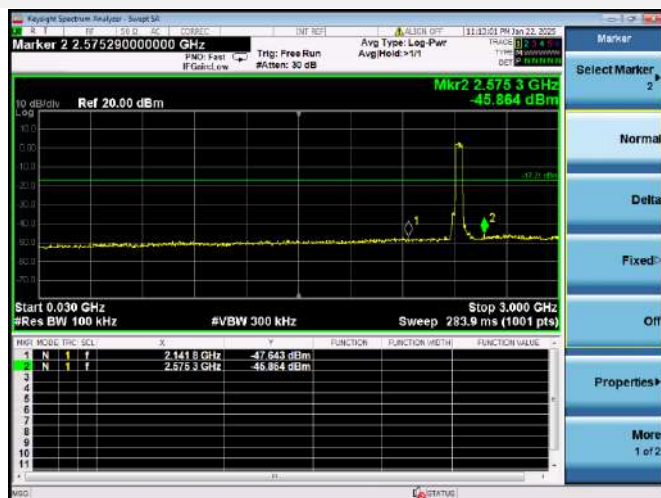
802.11n-40 MHz CHANNEL 4 CARRIER LEVEL

802.11n-40 MHz CHANNEL 4, SPURIOUS
30 MHz ~ 3 GHz802.11n-40 MHz CHANNEL 4, SPURIOUS
2 GHz ~ 25 GHz

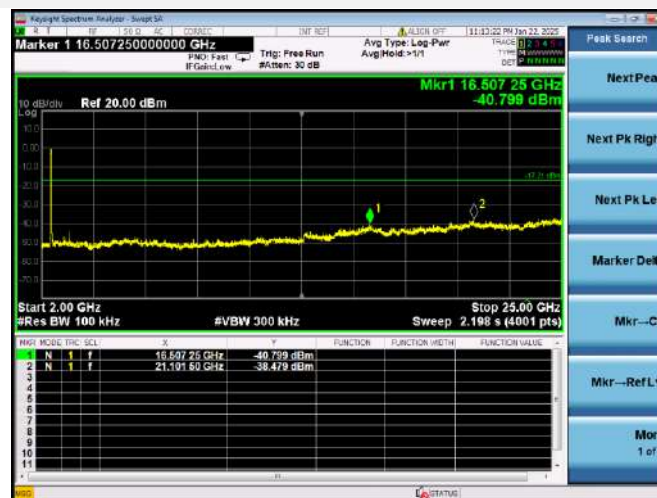
802.11n-40 MHz CHANNEL 5 CARRIER LEVEL



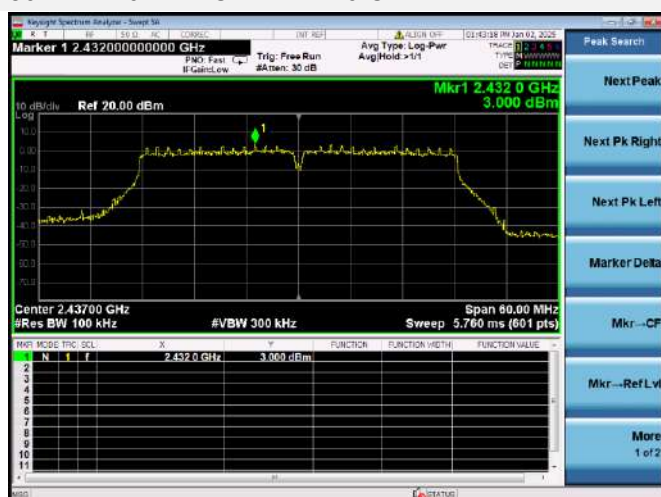
802.11n-40 MHz CHANNEL 5, SPURIOUS 30 MHz ~ 3 GHz



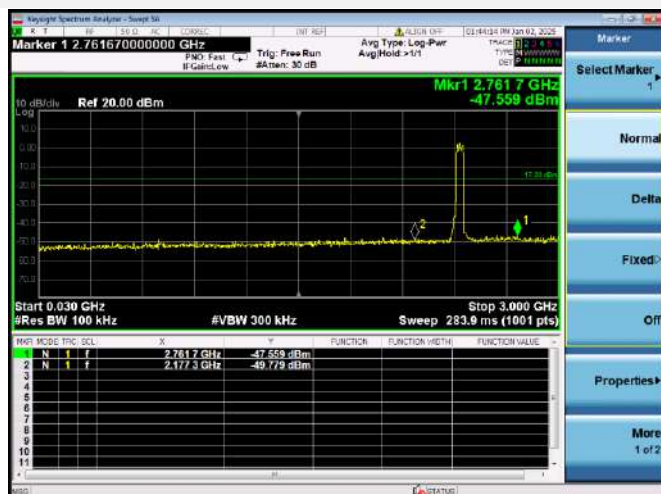
802.11n-40 MHz CHANNEL 5, SPURIOUS 2 GHz ~ 25 GHz



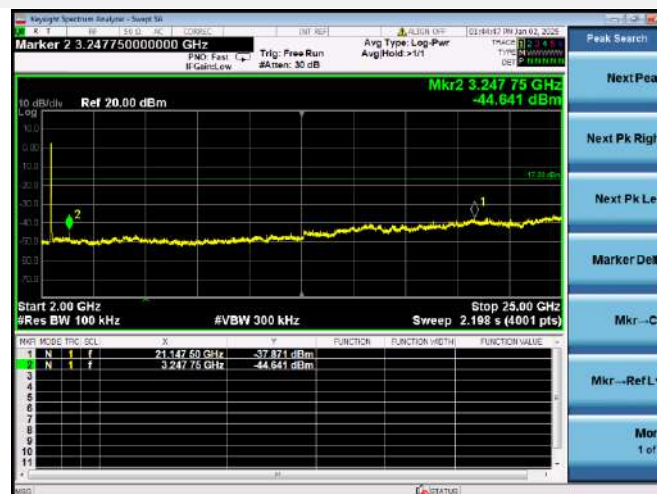
802.11n-40 MHz CHANNEL 6 CARRIER LEVEL



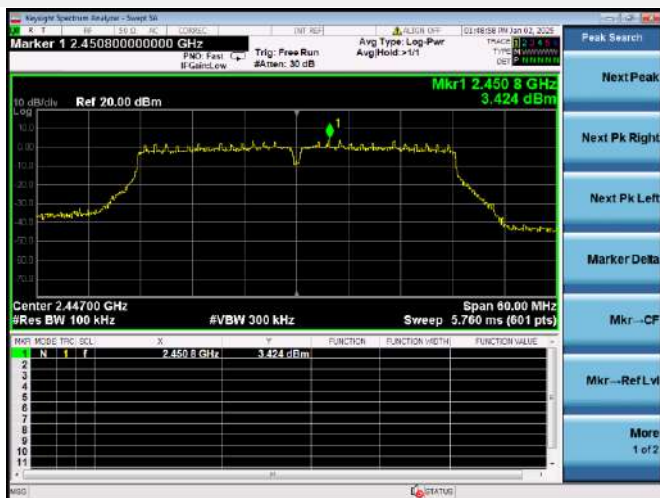
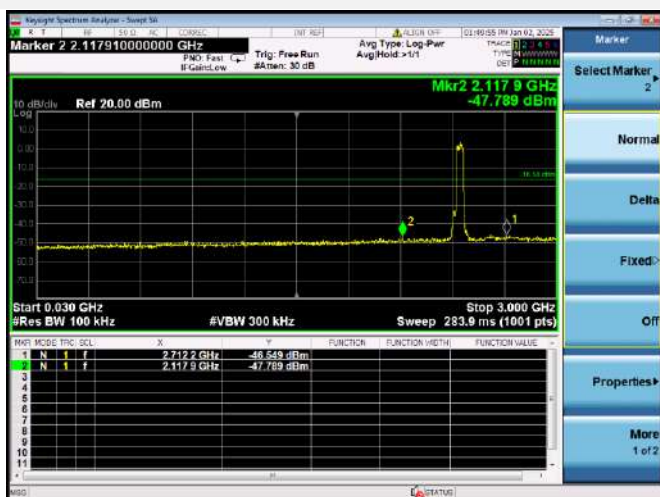
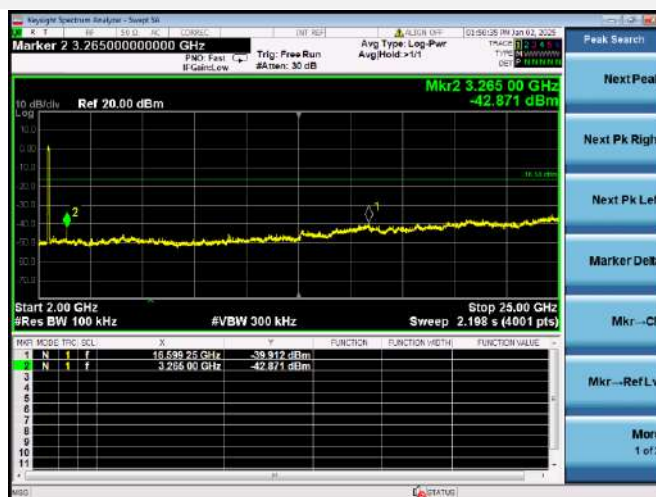
802.11n-40 MHz CHANNEL 6, SPURIOUS 30 MHz ~ 3 GHz



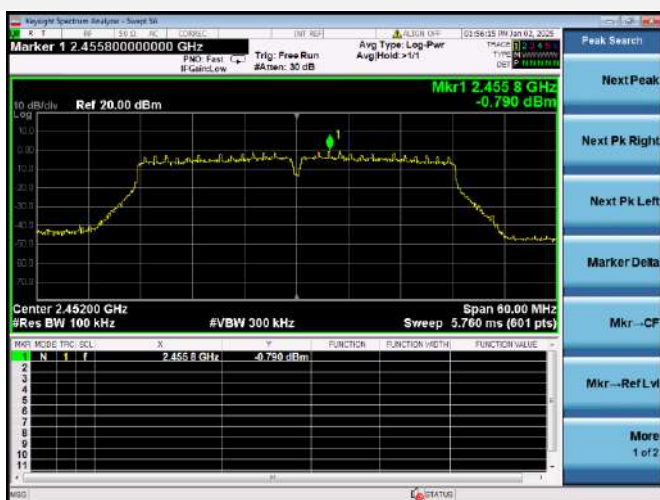
802.11n-40 MHz CHANNEL 6, SPURIOUS 2 GHz ~ 25 GHz



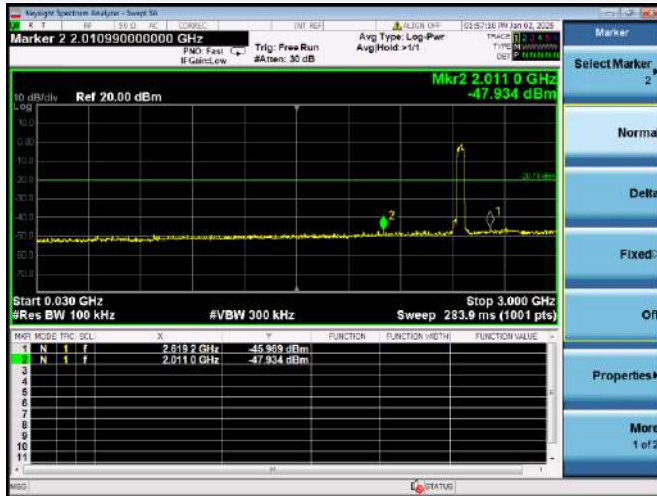
802.11n-40 MHz CHANNEL 8 CARRIER LEVEL

802.11n-40 MHz CHANNEL 8, SPURIOUS
30 MHz ~ 3 GHz802.11n-40 MHz CHANNEL 8, SPURIOUS
2 GHz ~ 25 GHz

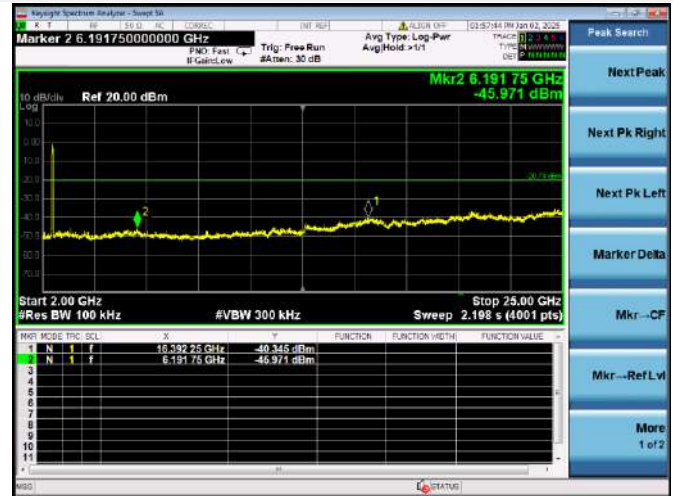
802.11n-40 MHz CHANNEL 9 CARRIER LEVEL



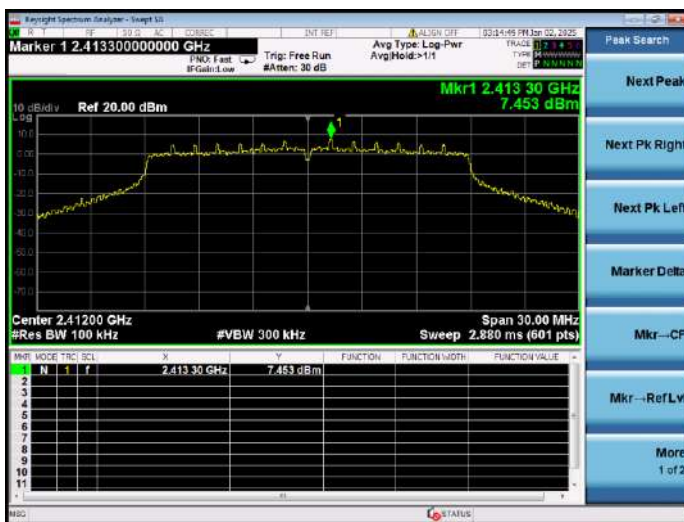
802.11n-40 MHz CHANNEL 9, SPURIOUS 30 MHz ~ 3 GHz



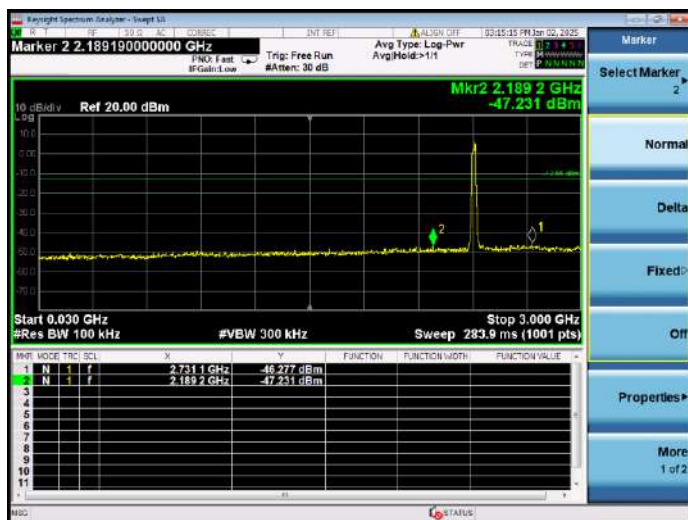
802.11n-40 MHz CHANNEL 9, SPURIOUS 2 GHz ~ 25 GHz



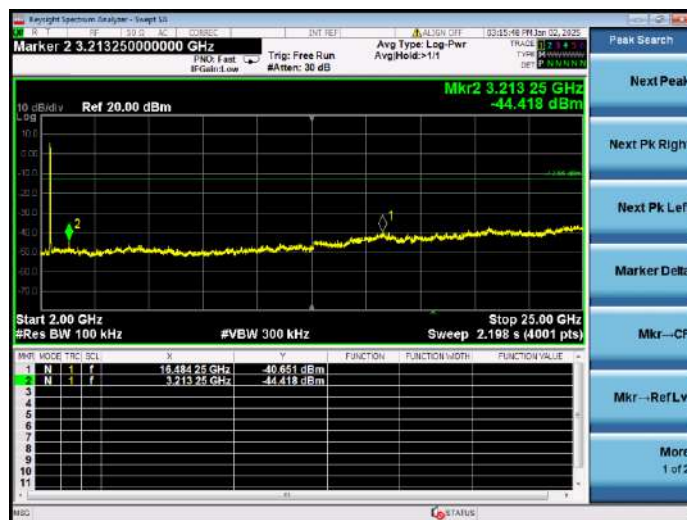
VHT20 MHz CHANNEL 1 CARRIER LEVEL



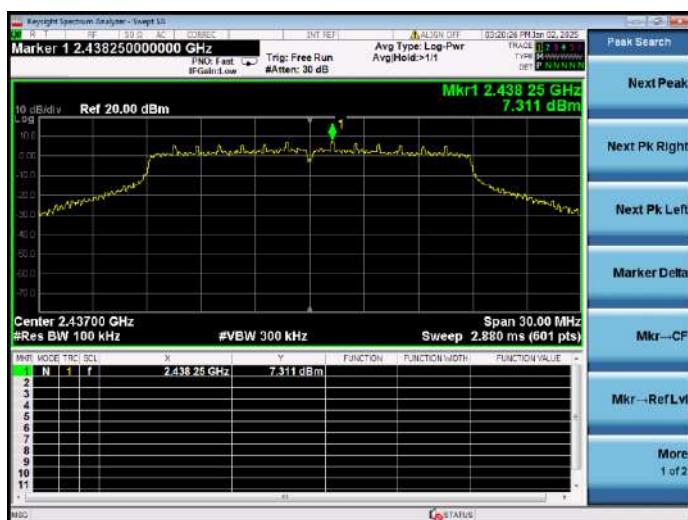
VHT20 MHz CHANNEL 1, SPURIOUS 30 MHz ~ 3 GHz



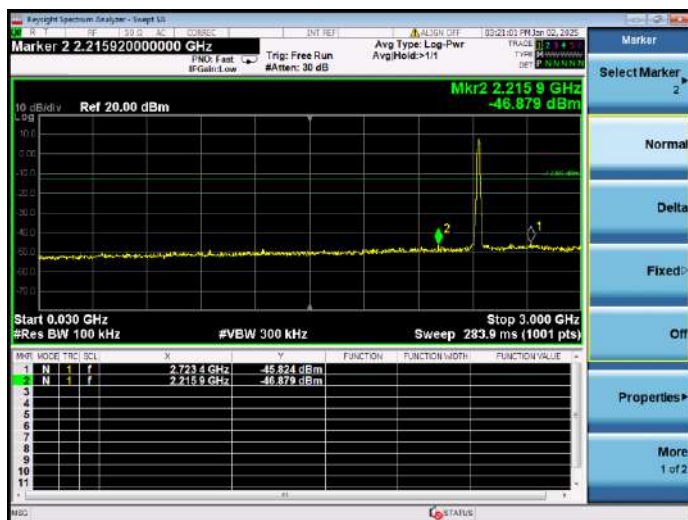
VHT20 MHz CHANNEL 1, SPURIOUS 2 GHz ~ 25 GHz



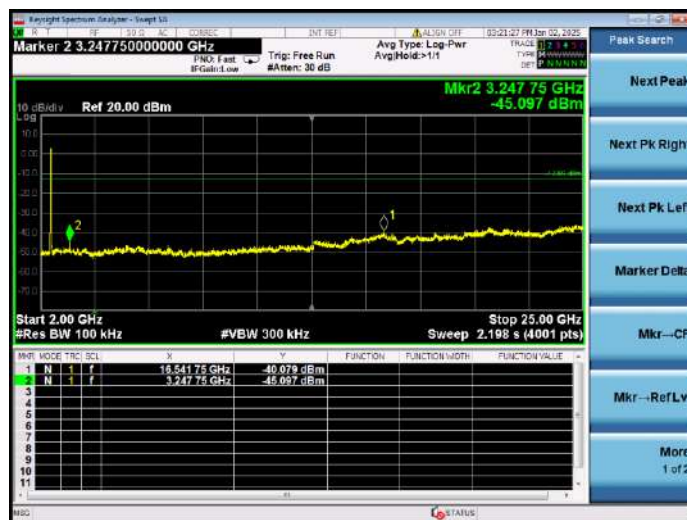
VHT20 MHz CHANNEL 6 CARRIER LEVEL



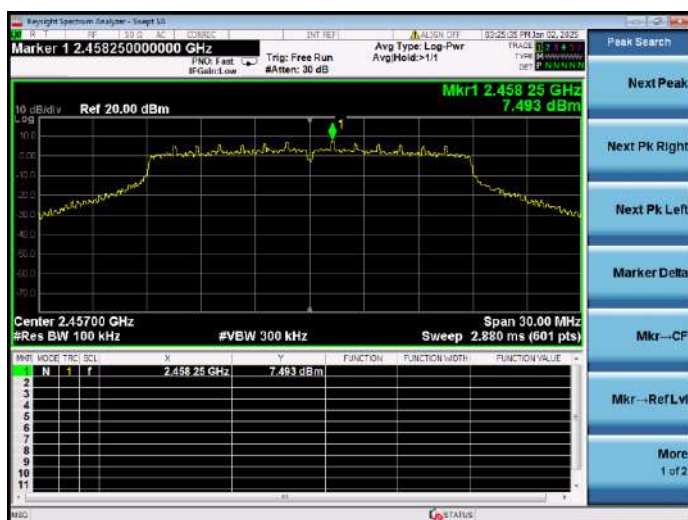
VHT20 MHz CHANNEL 6, SPURIOUS 30 MHz ~ 3 GHz



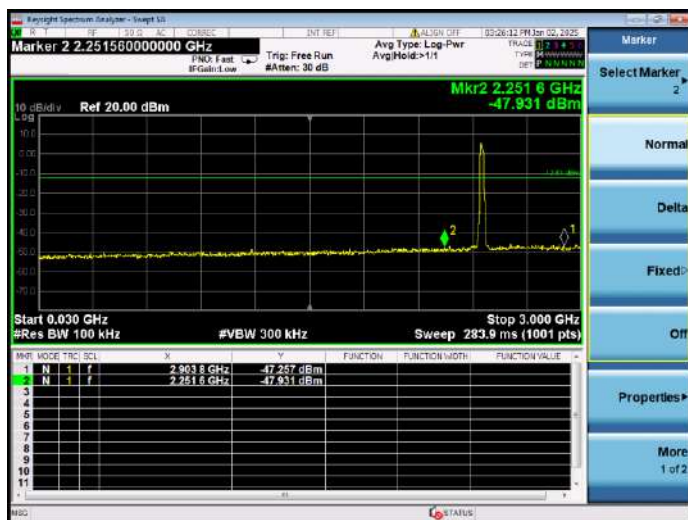
VHT20 MHz CHANNEL 6, SPURIOUS 2 GHz ~ 25 GHz



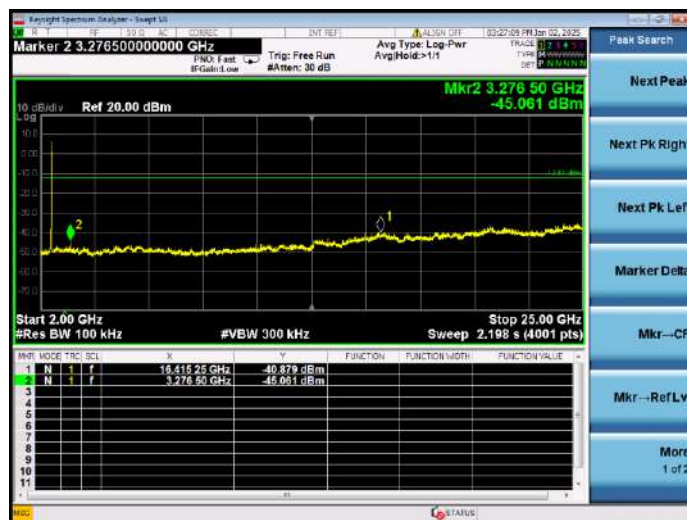
VHT20 MHz CHANNEL 10 CARRIER LEVEL



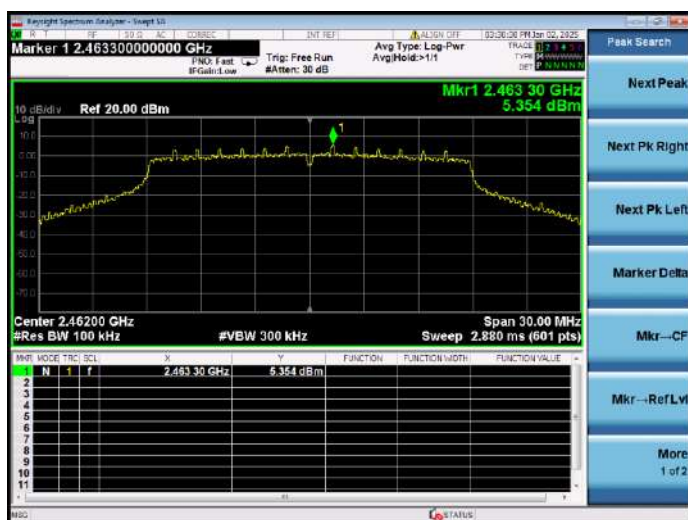
VHT20 MHz CHANNEL 10, SPURIOUS 30 MHz ~ 3 GHz



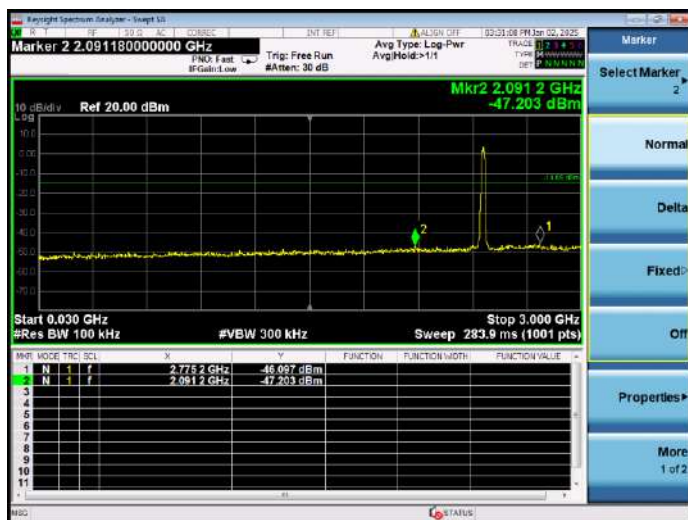
VHT20 MHz CHANNEL 10, SPURIOUS 2 GHz ~ 25 GHz



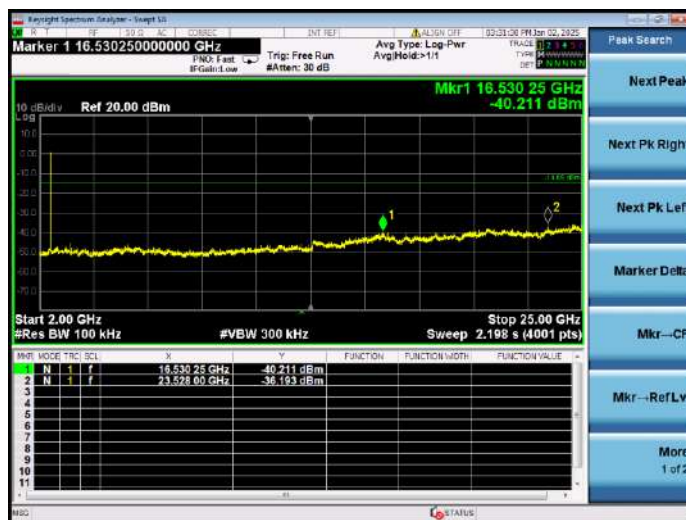
VHT20 MHz CHANNEL 11 CARRIER LEVEL



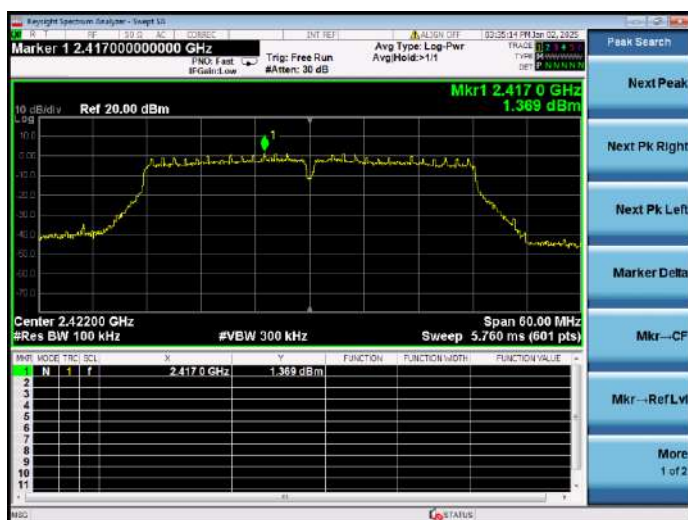
VHT20 MHz CHANNEL 11, SPURIOUS 30 MHz ~ 3 GHz



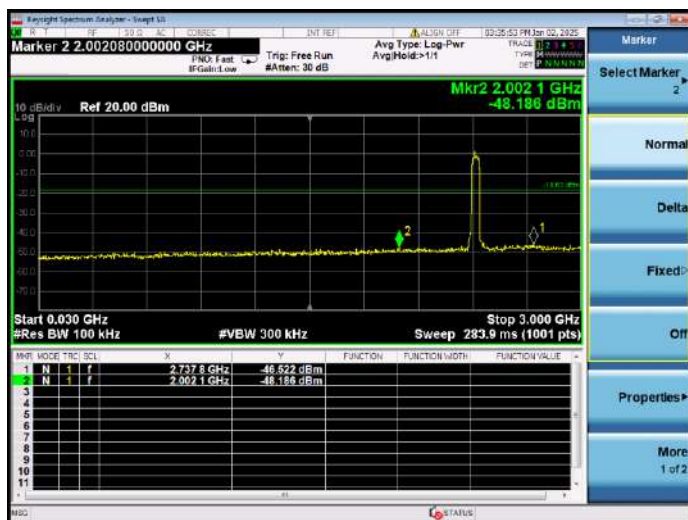
VHT20 MHz CHANNEL 11, SPURIOUS 2 GHz ~ 25 GHz



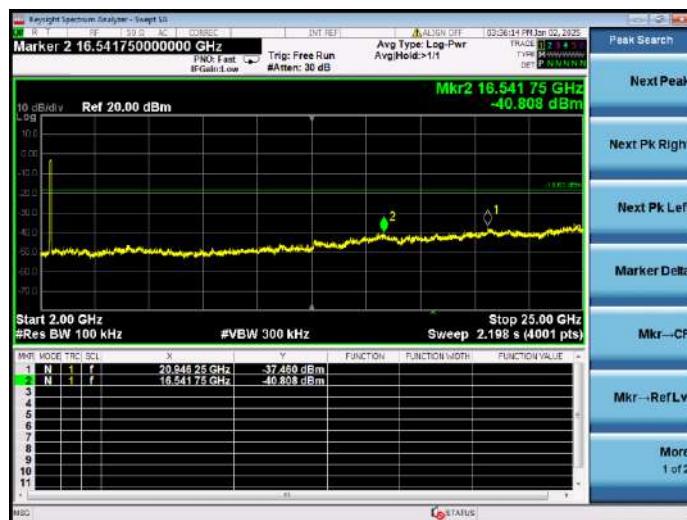
VHT40 MHz CHANNEL 3 CARRIER LEVEL



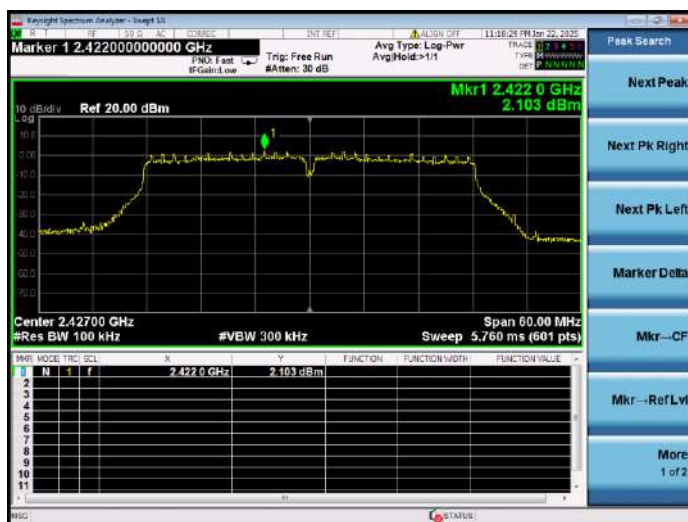
VHT40 MHz CHANNEL 3, SPURIOUS 30 MHz ~ 3 GHz



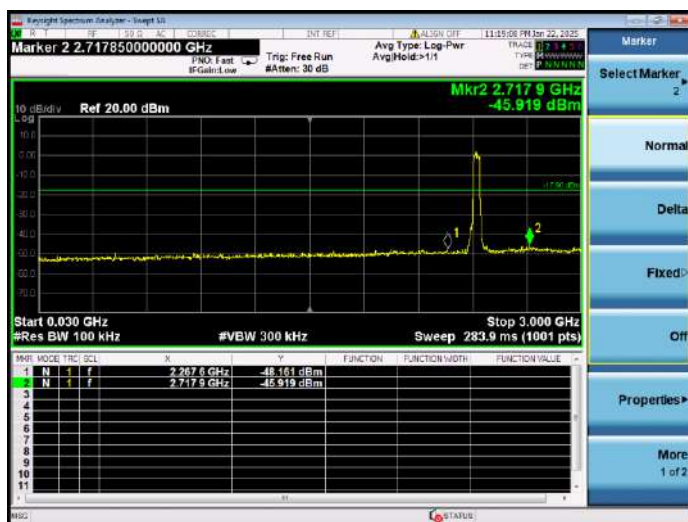
VHT40 MHz CHANNEL 3, SPURIOUS 2 GHz ~ 25 GHz



VHT40 MHz CHANNEL 4 CARRIER LEVEL



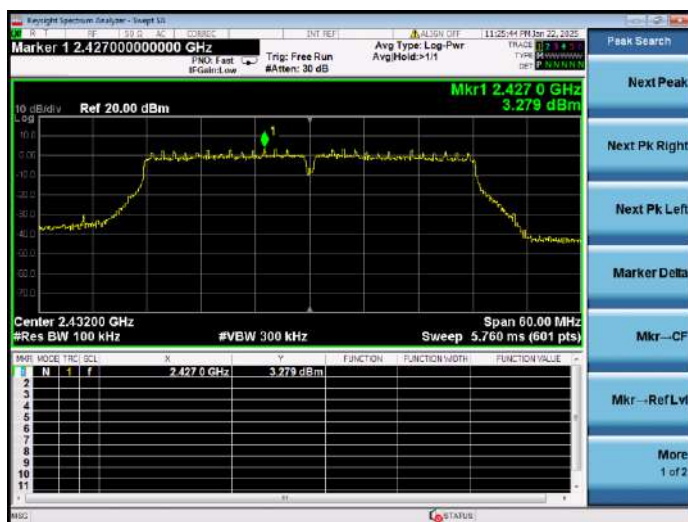
VHT40 MHz CHANNEL 4, SPURIOUS 30 MHz ~ 3 GHz



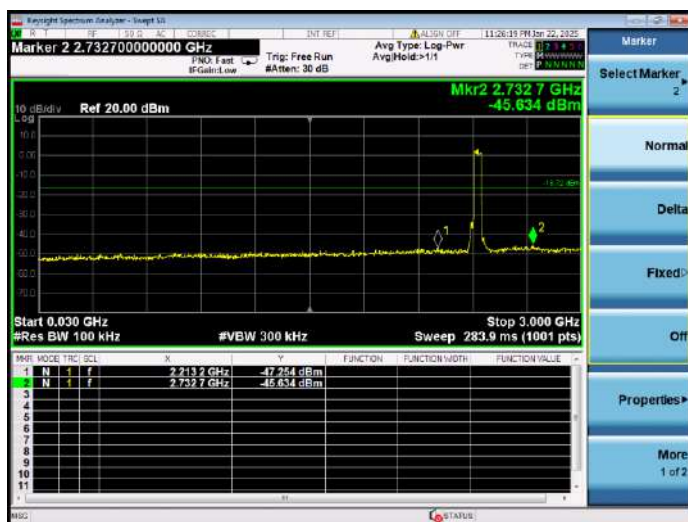
VHT40 MHz CHANNEL 4, SPURIOUS 2 GHz ~ 25 GHz



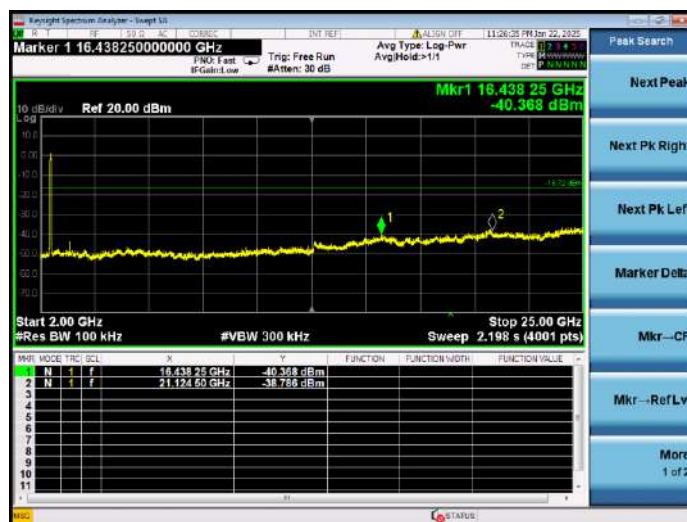
VHT40 MHz CHANNEL 5 CARRIER LEVEL



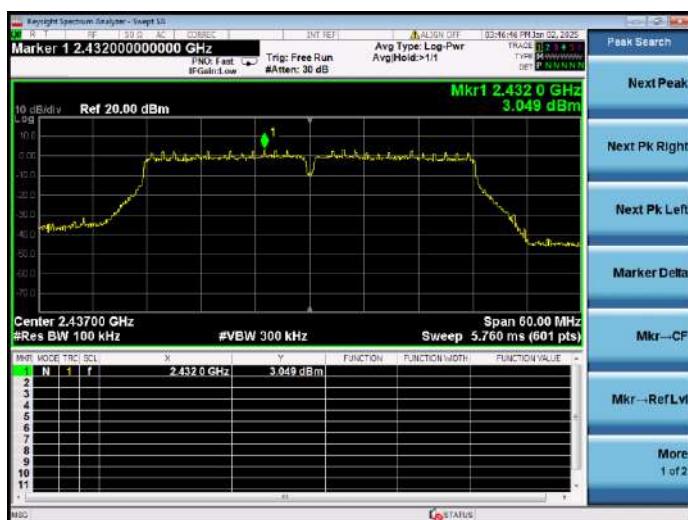
VHT40 MHz CHANNEL 5, SPURIOUS 30 MHz ~ 3 GHz



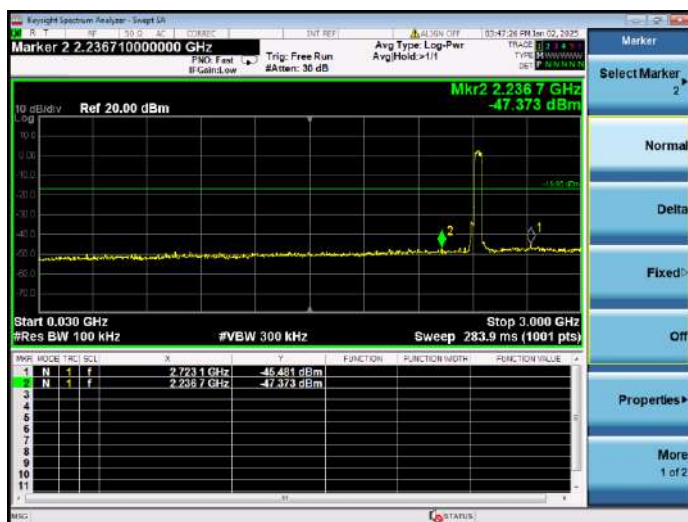
VHT40 MHz CHANNEL 5, SPURIOUS 2 GHz ~ 25 GHz



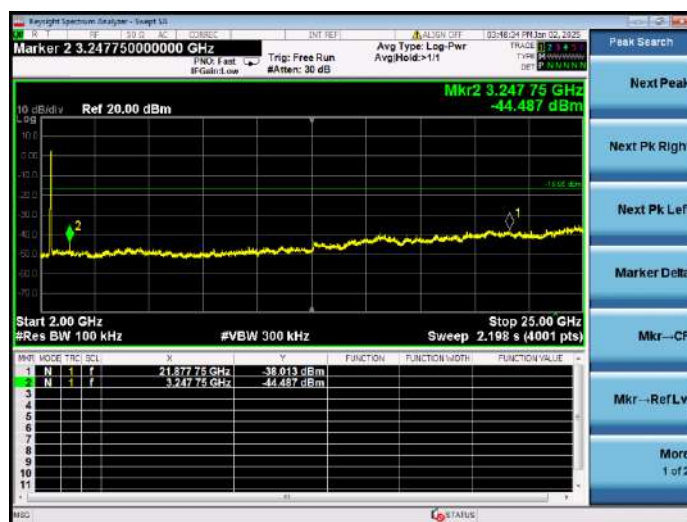
VHT40 MHz CHANNEL 6 CARRIER LEVEL



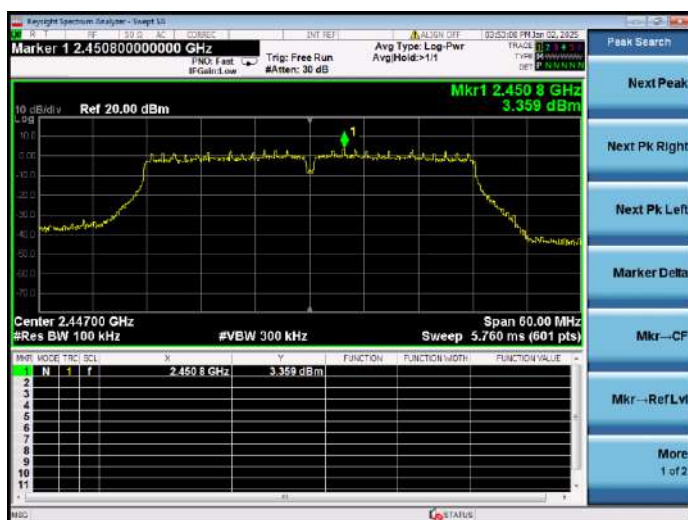
VHT40 MHz CHANNEL 6, SPURIOUS 30 MHz ~ 3 GHz



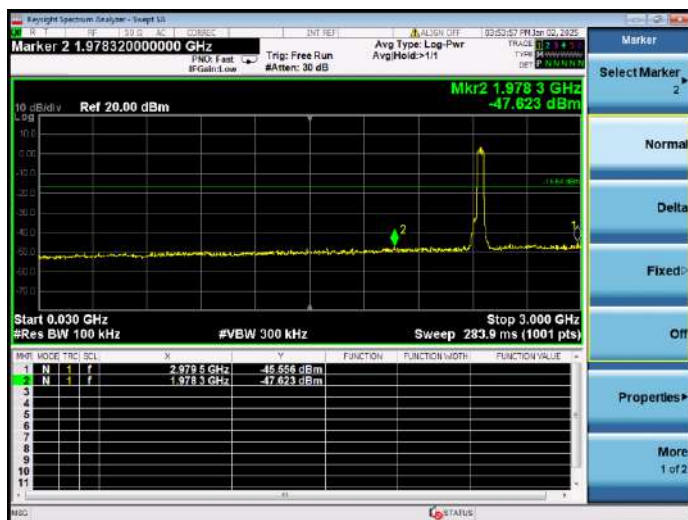
VHT40 MHz CHANNEL 6, SPURIOUS 2 GHz ~ 25 GHz



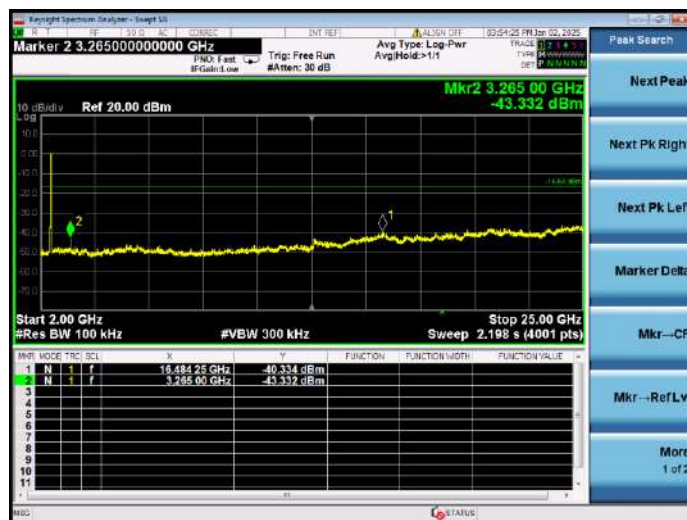
VHT40 MHz CHANNEL 8 CARRIER LEVEL



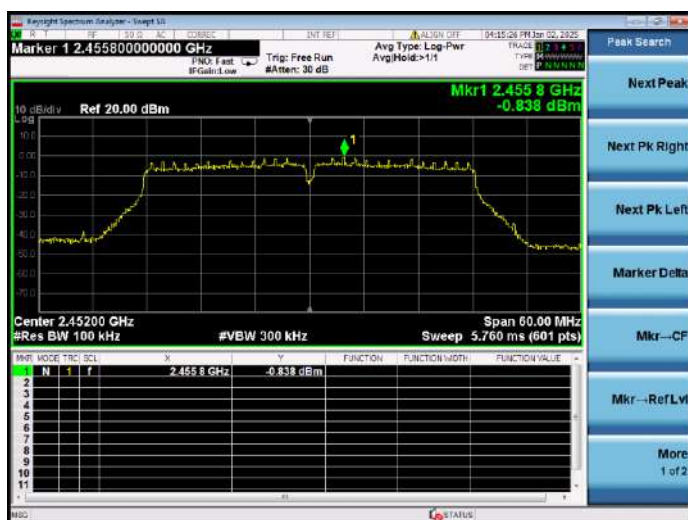
VHT40 MHz CHANNEL 8, SPURIOUS 30 MHz ~ 3 GHz

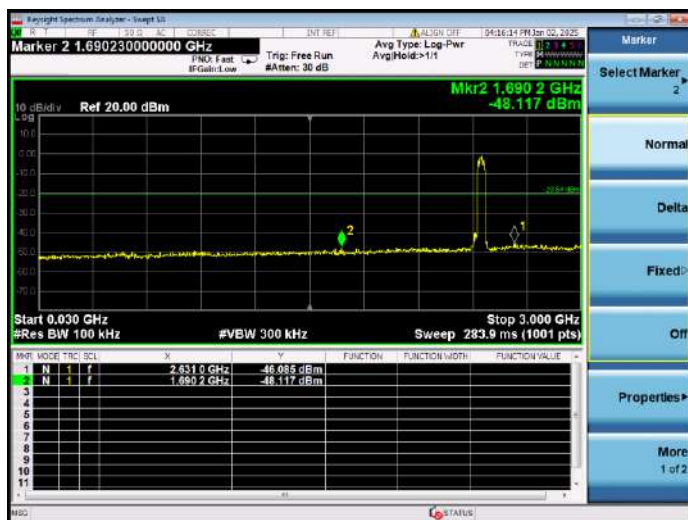
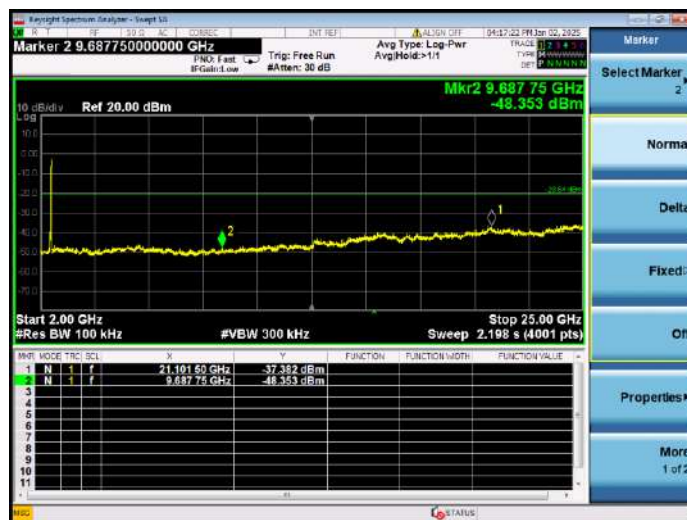


VHT40 MHz CHANNEL 8, SPURIOUS 2 GHz ~ 25 GHz



VHT40 MHz CHANNEL 9 CARRIER LEVEL



VHT40 MHz CHANNEL 9, SPURIOUS
30 MHz ~ 3 GHzVHT40 MHz CHANNEL 9, SPURIOUS
2 GHz ~ 25 GHz

A.4 Band Edge (Authorized-band band-edge)

Note 1: The 99% OBW of the fundamental emission is without 2 MHz of the authorized band.

Test Data

802.11b Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-33.13	10.38	-9.62	Pass
CH11	-44.17	10.67	-9.33	Pass

802.11g Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-24.23	8.46	-11.54	Pass
CH10	-45.95	8.58	-11.42	Pass
CH11	-46.09	5.80	-14.20	Pass

802.11n-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-21.71	7.47	-12.53	Pass
CH10	-45.60	7.53	-12.47	Pass
CH11	-44.85	6.60	-13.40	Pass

802.11n-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH3	-35.85	0.42	-19.58	Pass
CH4	-37.30	2.14	-17.86	Pass
CH5	-34.45	2.79	-17.21	Pass
CH8	-40.15	3.42	-16.58	Pass
CH9	-45.02	-0.79	-20.79	Pass

VHT-20 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH1	-23.65	7.45	-12.55	Pass
CH10	-45.78	7.49	-12.51	Pass
CH11	-44.73	5.35	-14.65	Pass

VHT-40 MHz Mode:

Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
CH3	-34.54	1.37	-18.63	Pass
CH4	-37.57	2.10	-17.90	Pass
CH5	-33.27	3.28	-16.72	Pass
CH8	-41.05	3.36	-16.64	Pass
CH9	-44.95	-0.84	-20.84	Pass

Test Plots

802.11b CHANNEL 1, CARRIER LEVEL



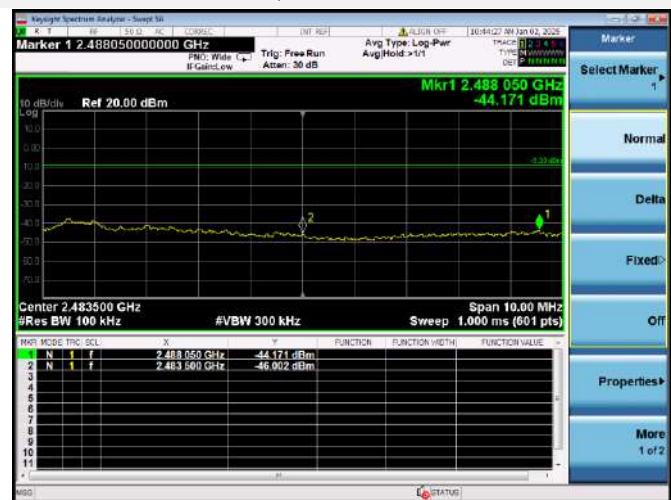
802.11b CHANNEL 1, BAND EDGE



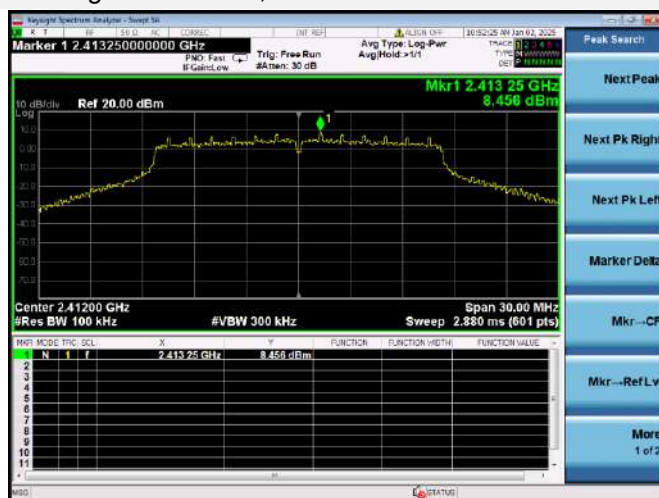
802.11b CHANNEL 11, CARRIER LEVEL



802.11b CHANNEL 11, BAND EDGE



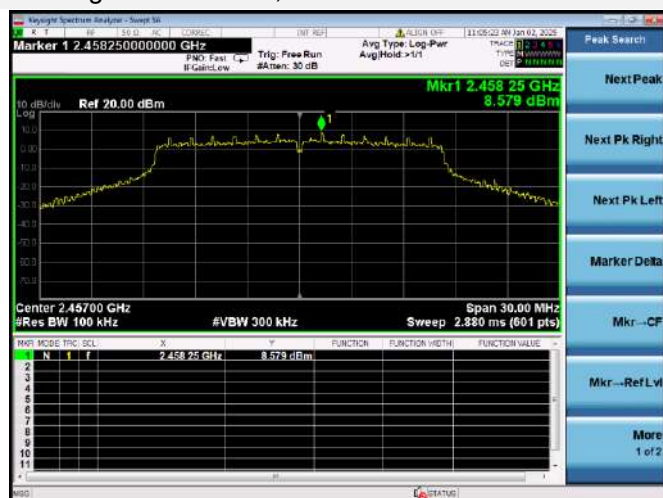
802.11g CHANNEL 1, CARRIER LEVEL



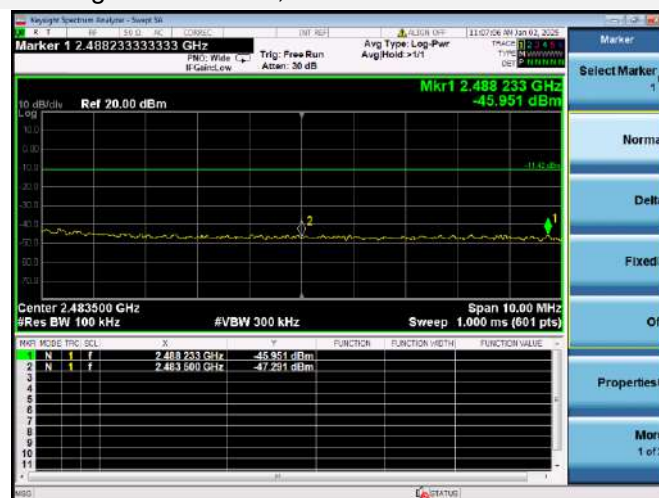
802.11g CHANNEL 1, BAND EDGE



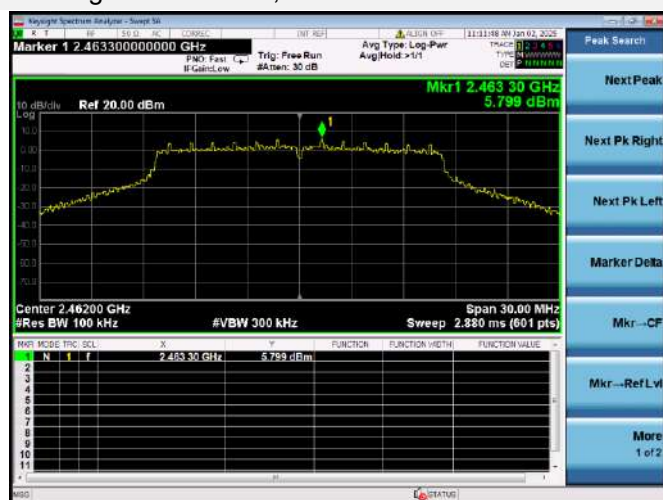
802.11g CHANNEL 10, CARRIER LEVEL



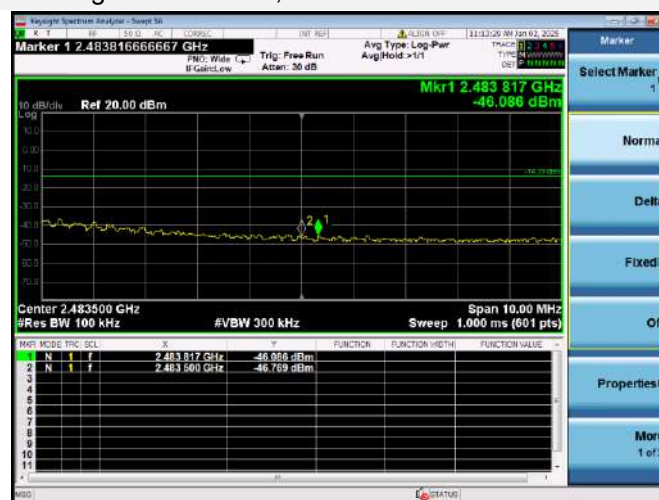
802.11g CHANNEL 10, BAND EDGE



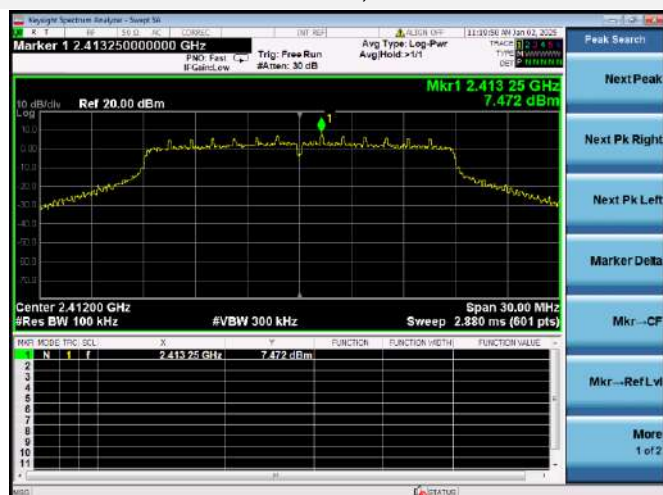
802.11g CHANNEL 11, CARRIER LEVEL



802.11g CHANNEL 11, BAND EDGE



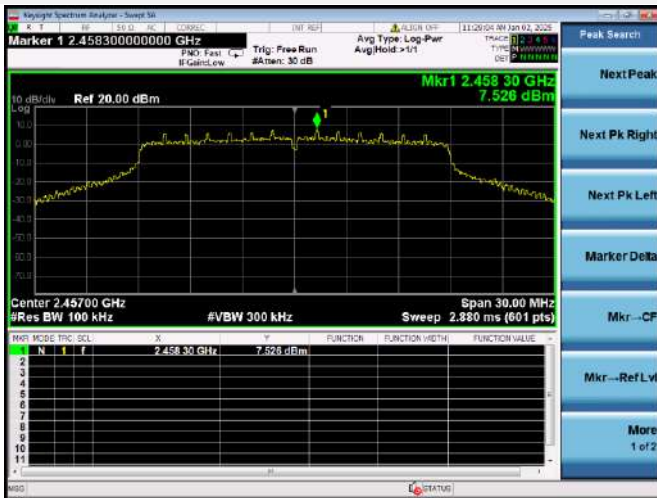
802.11n-20 MHz CHANNEL 1, CARRIER LEVEL



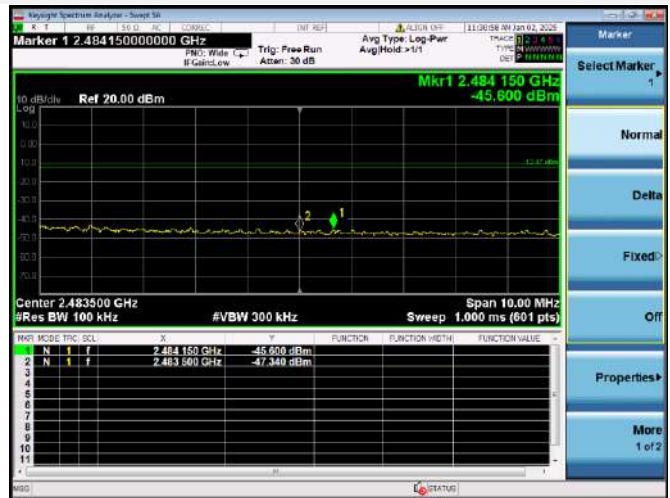
802.11n-20 MHz CHANNEL 1, BAND EDGE



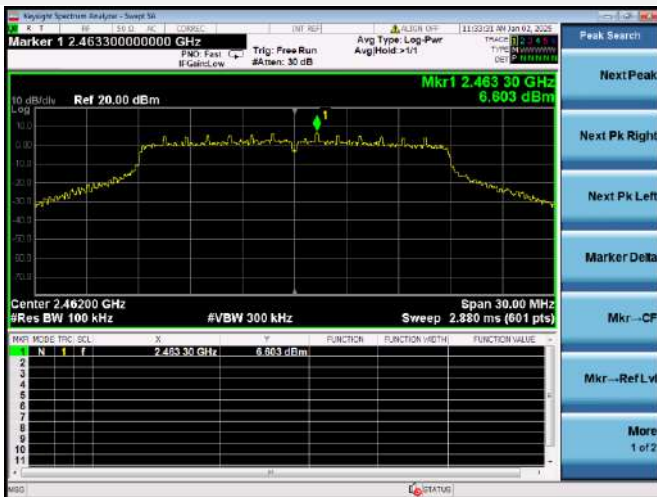
802.11n-20 MHz CHANNEL 10, CARRIER LEVEL



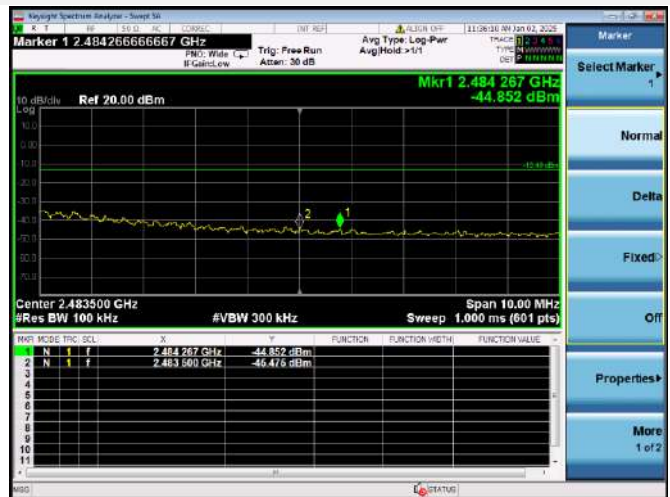
802.11n-20 MHz CHANNEL 10, BAND EDGE



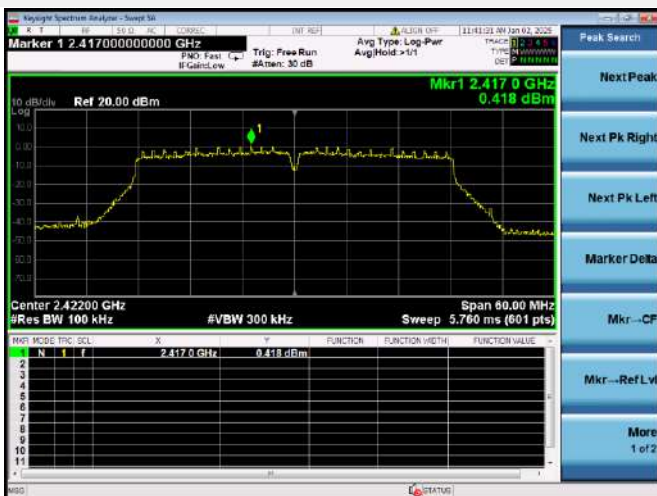
802.11n-20 MHz CHANNEL 11, CARRIER LEVEL



802.11n-20 MHz CHANNEL 11, BAND EDGE



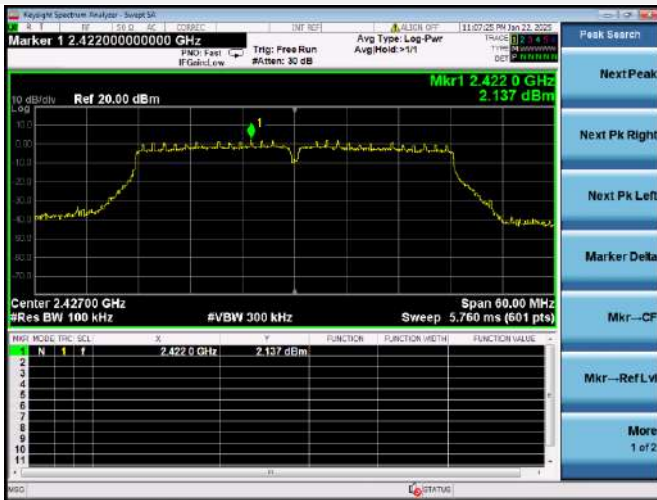
802.11n-40 MHz CHANNEL 3, CARRIER LEVEL



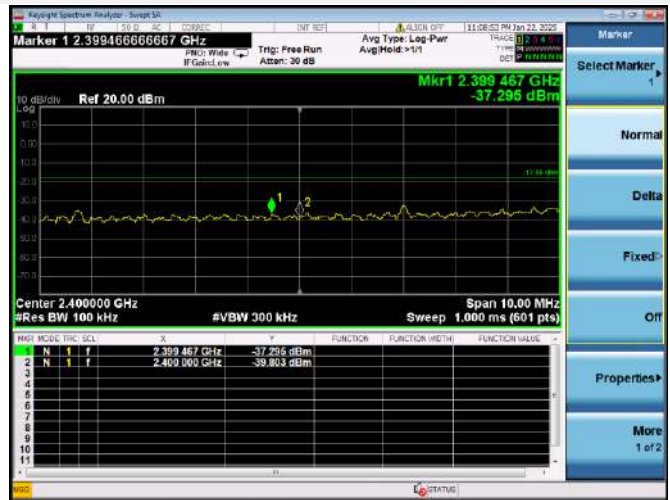
802.11n-40 MHz CHANNEL 3, BAND EDGE



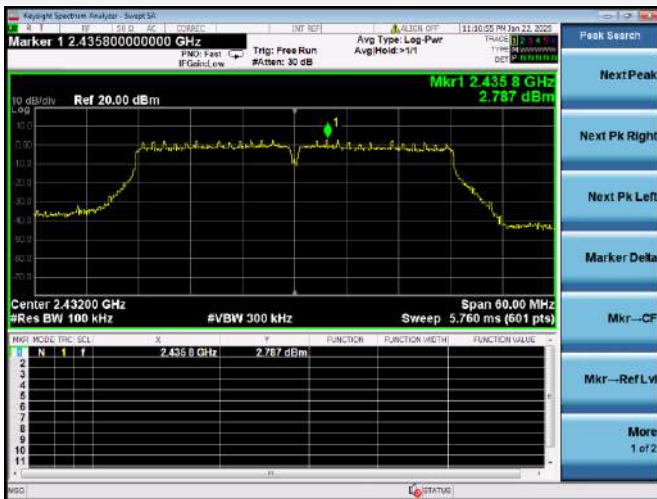
802.11n-40 MHz CHANNEL 4, CARRIER LEVEL



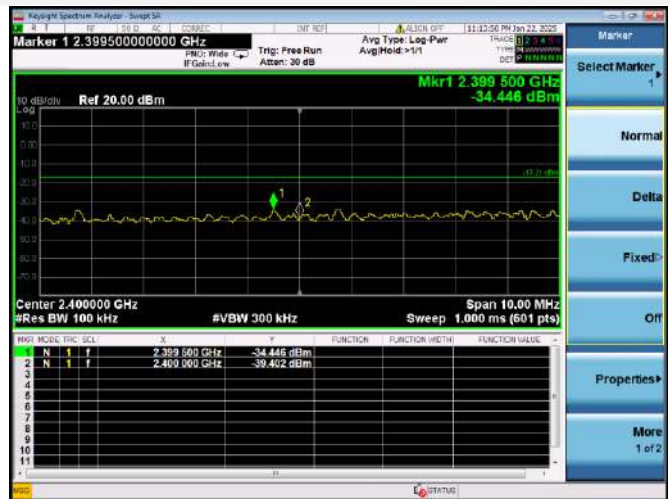
802.11n-40 MHz CHANNEL 4, BAND EDGE



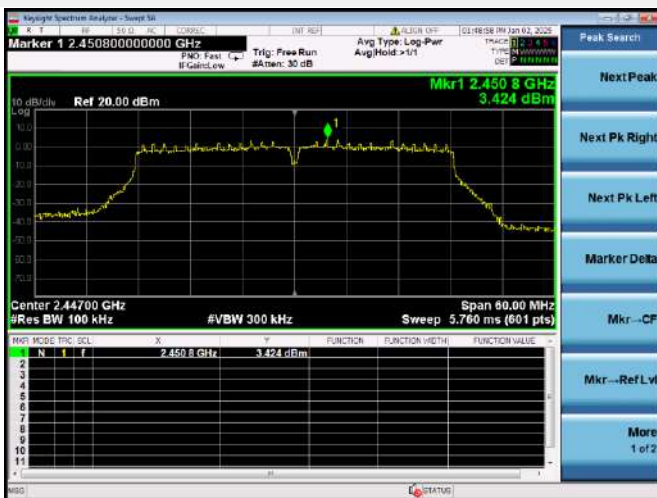
802.11n-40 MHz CHANNEL 5, CARRIER LEVEL



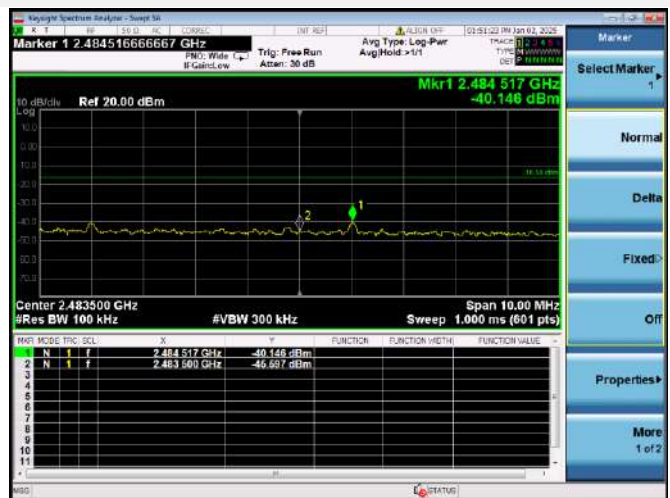
802.11n-40 MHz CHANNEL 5, BAND EDGE



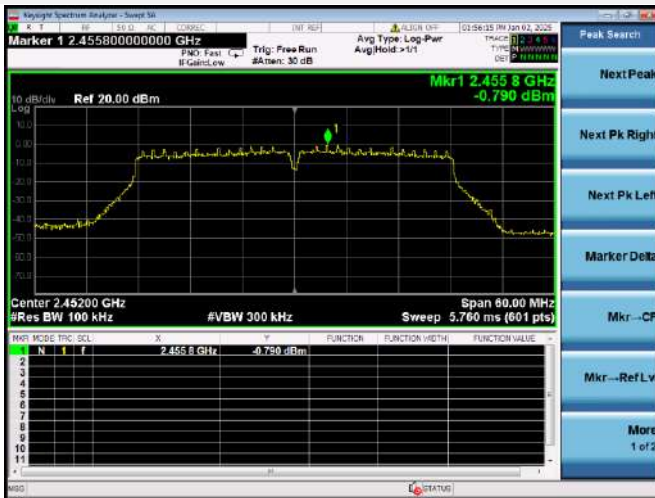
802.11n-40 MHz CHANNEL 8, CARRIER LEVEL



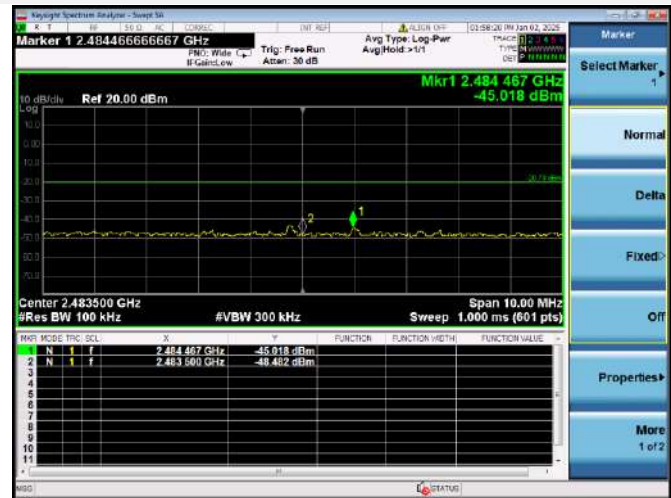
802.11n-40 MHz CHANNEL 8, BAND EDGE



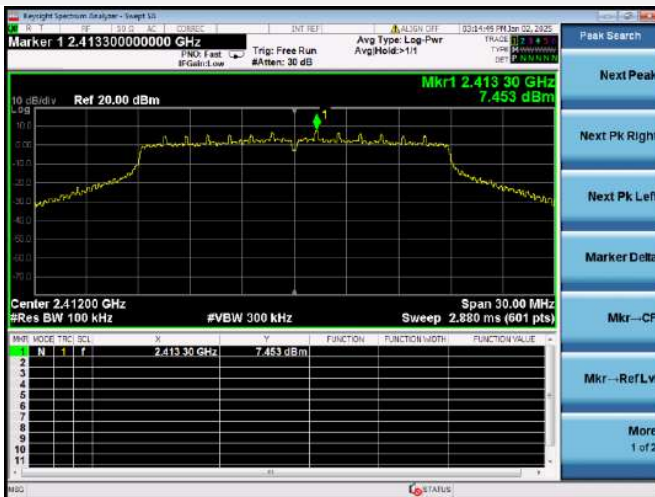
802.11n-40 MHz CHANNEL 9, CARRIER LEVEL



802.11n-40 MHz CHANNEL 9, BAND EDGE



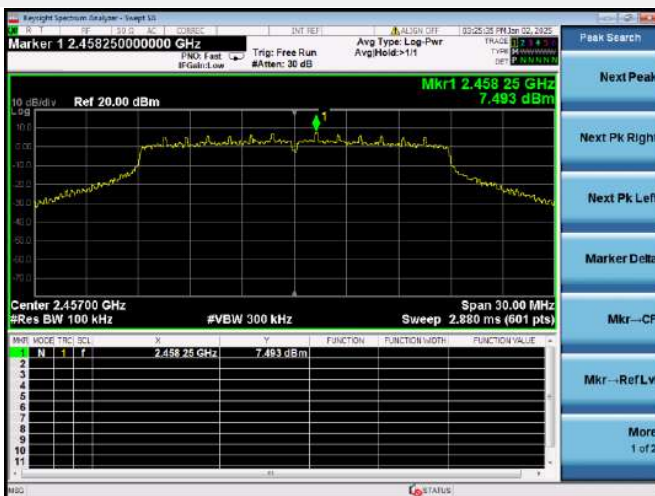
VHT20 MHz CHANNEL 1, CARRIER LEVEL



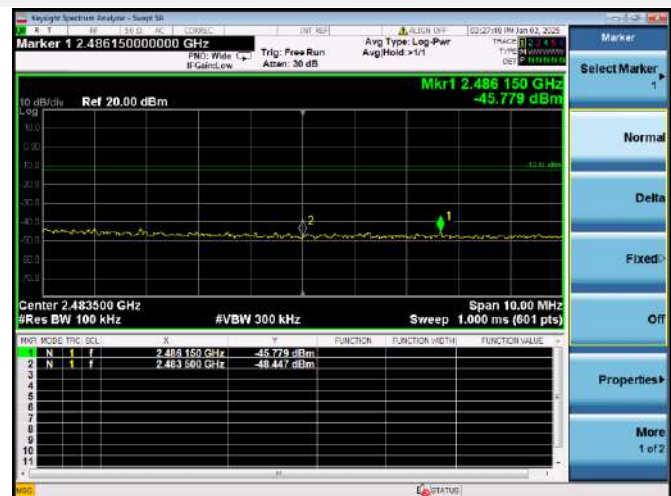
VHT20 MHz CHANNEL 1, BAND EDGE



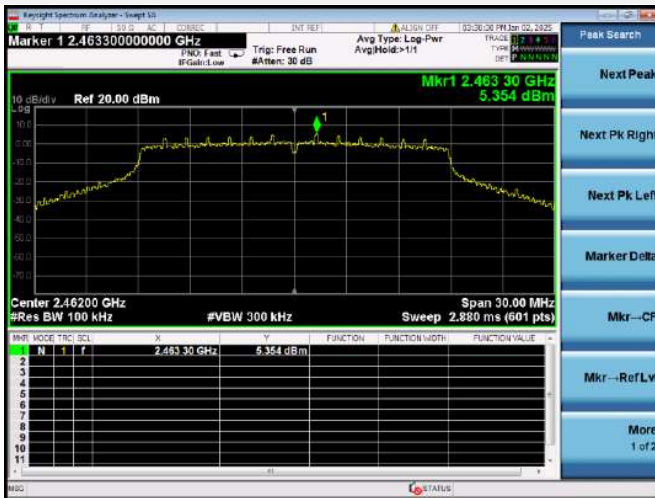
VHT20 MHz CHANNEL 10, CARRIER LEVEL



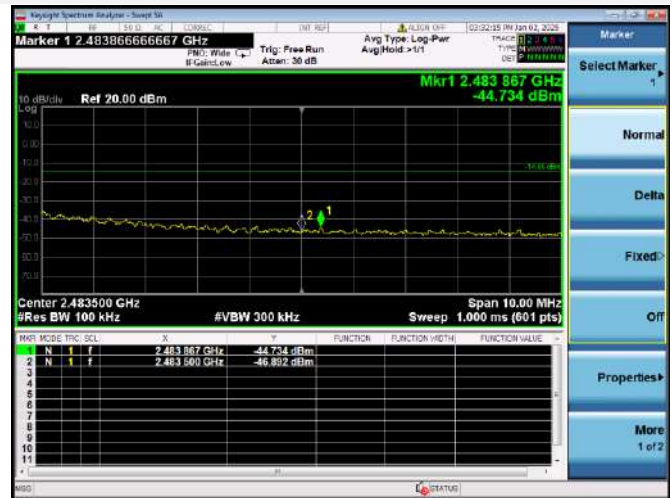
VHT20 MHz CHANNEL 10, BAND EDGE



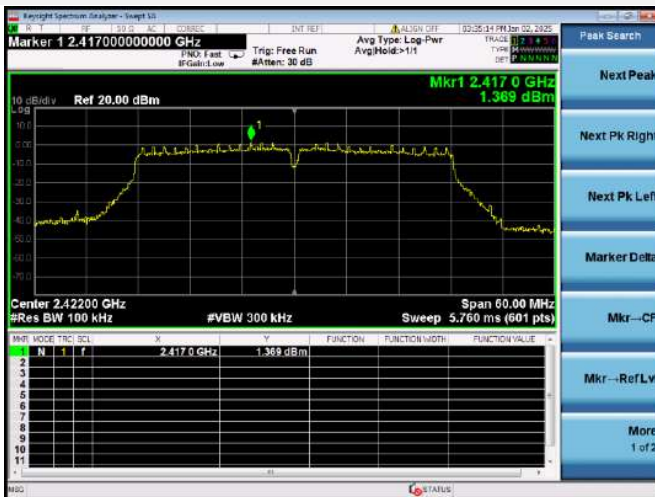
VHT20 MHz CHANNEL 11, CARRIER LEVEL



VHT20 MHz CHANNEL 11, BAND EDGE



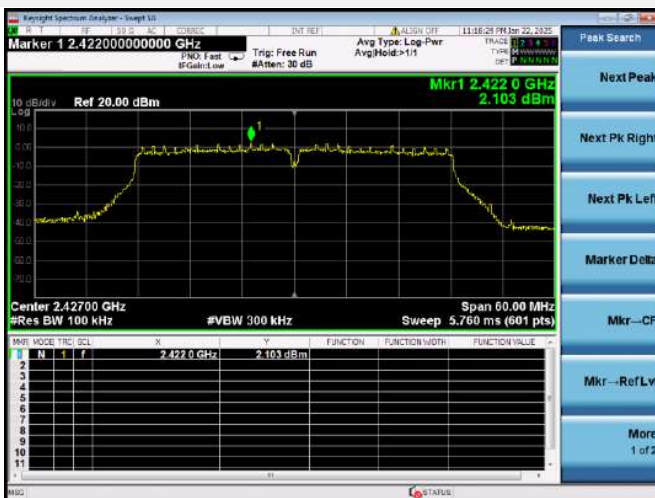
VHT40 MHz CHANNEL 3, CARRIER LEVEL



VHT40 MHz CHANNEL 3, BAND EDGE



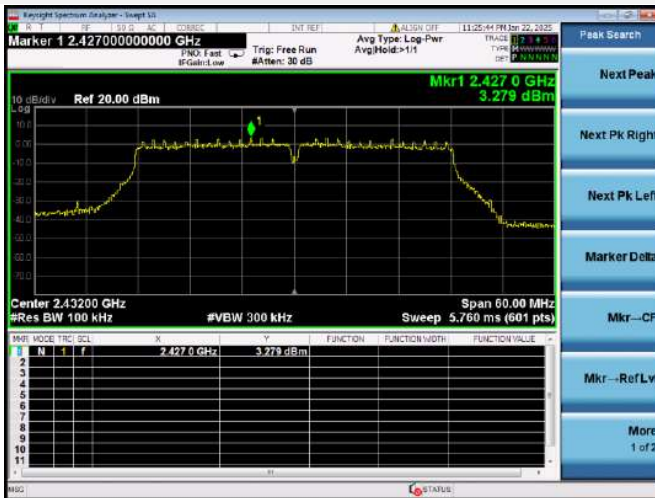
VHT40 MHz CHANNEL 4, CARRIER LEVEL



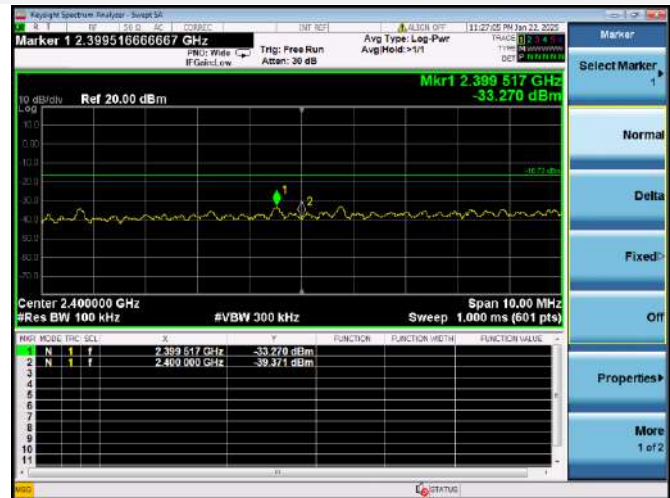
VHT40 MHz CHANNEL 4, BAND EDGE



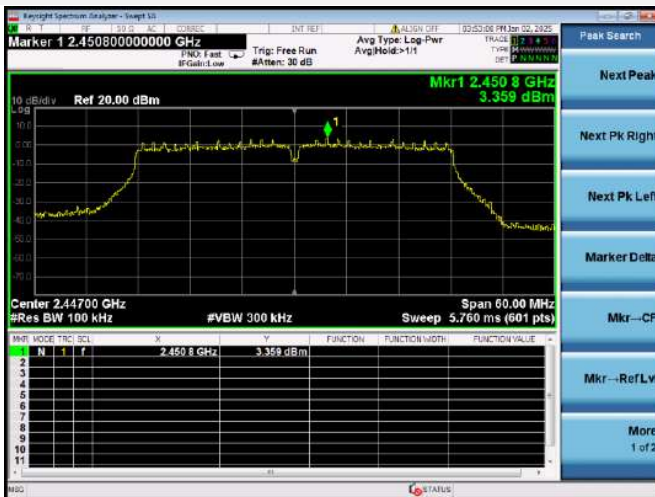
VHT40 MHz CHANNEL 5, CARRIER LEVEL



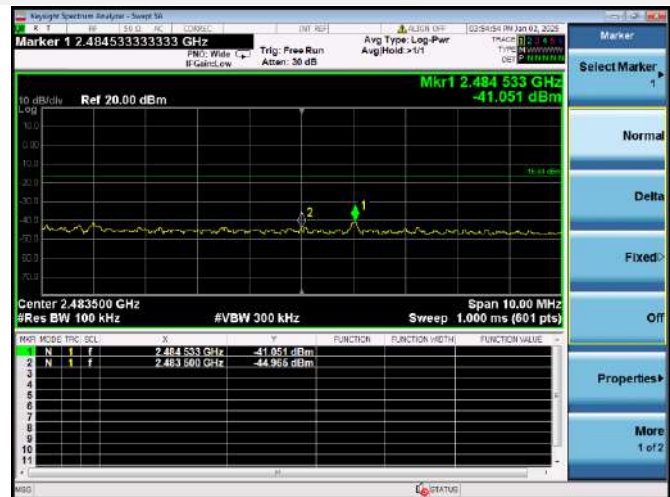
VHT40 MHz CHANNEL 5, BAND EDGE



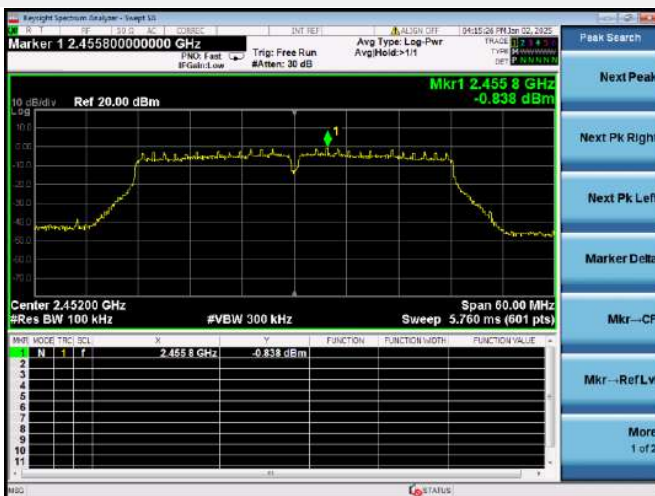
VHT40 MHz CHANNEL 8, CARRIER LEVEL



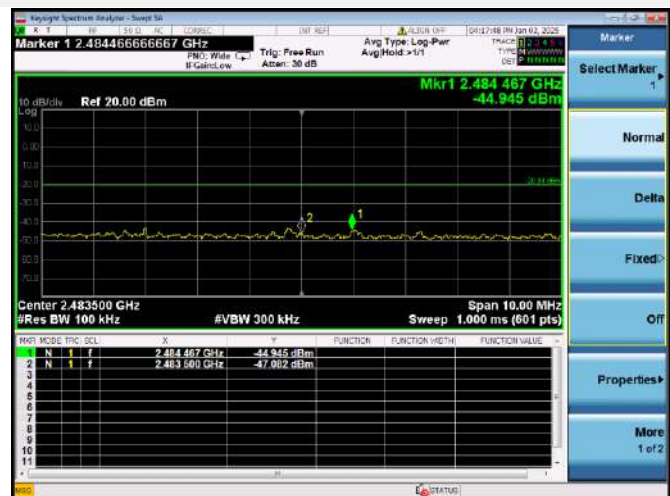
VHT40 MHz CHANNEL 8, BAND EDGE



VHT40 MHz CHANNEL 9, CARRIER LEVEL



VHT40 MHz CHANNEL 9, BAND EDGE



A.5 Conducted Emissions

Note ¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

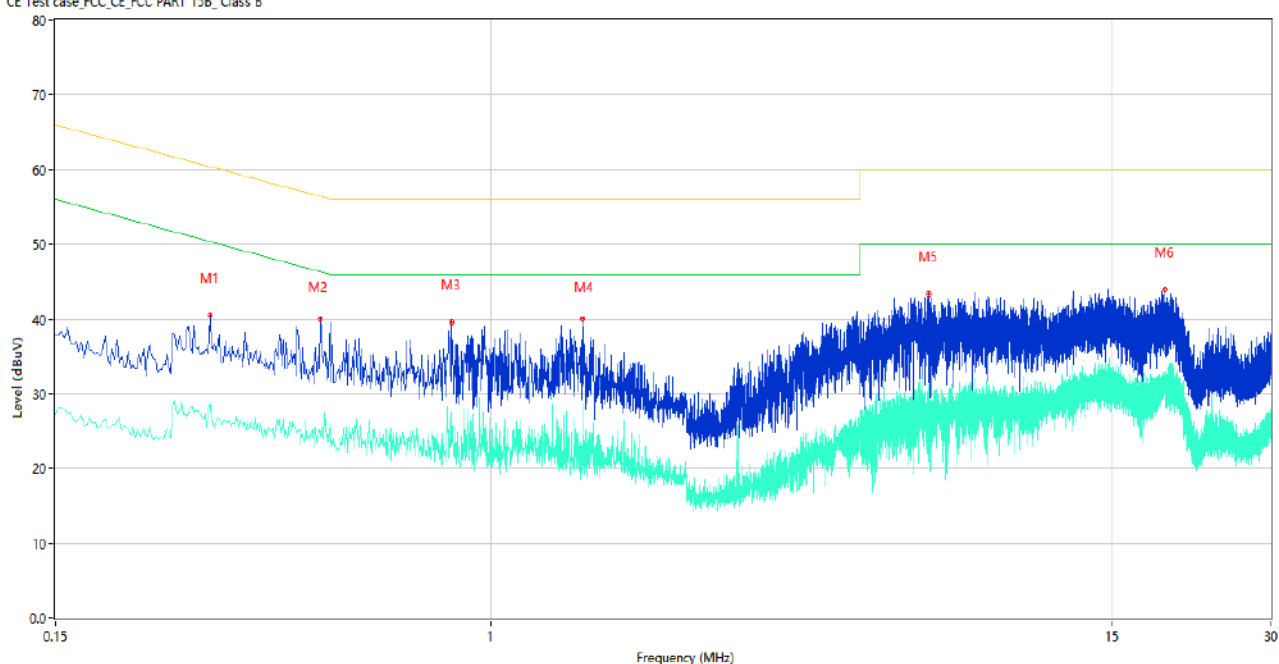
Note ²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note ³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

PHASE L

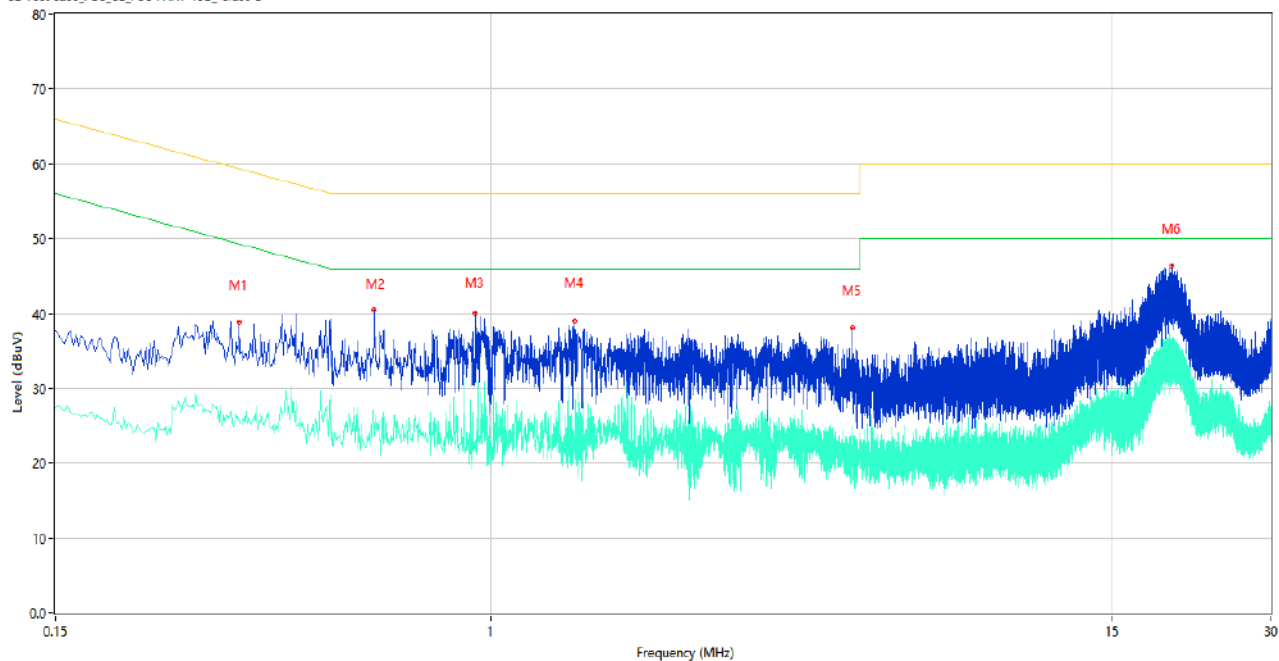
CE Test case_FCC_CE_FCC PART 15B_Class B



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.294	40.51	10.04	60.41	19.90	Peak	L	Pass
1**	0.294	28.66	10.04	50.41	21.75	AV	L	Pass
2	0.476	40.01	10.42	56.41	16.40	Peak	L	Pass
2**	0.476	24.47	10.42	46.41	21.94	AV	L	Pass
3	0.844	39.56	10.57	56.00	16.44	Peak	L	Pass
3**	0.844	27.64	10.57	46.00	18.36	AV	L	Pass
4	1.492	40.11	10.46	56.00	15.89	Peak	L	Pass
4**	1.492	28.58	10.46	46.00	17.42	AV	L	Pass
5	6.734	43.38	11.44	60.00	16.62	Peak	L	Pass
5**	6.734	31.25	11.44	50.00	18.75	AV	L	Pass
6	18.886	44.02	15.10	60.00	15.98	Peak	L	Pass
6**	18.886	31.90	15.10	50.00	18.10	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15B_Class B



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.334	38.80	9.97	59.35	20.55	Peak	N	Pass
1**	0.334	26.06	9.97	49.35	23.29	AV	N	Pass
2	0.602	40.52	10.64	56.00	15.48	Peak	N	Pass
2**	0.602	24.58	10.64	46.00	21.42	AV	N	Pass
3	0.936	40.15	10.77	56.00	15.85	Peak	N	Pass
3**	0.936	22.16	10.77	46.00	23.84	AV	N	Pass
4	1.442	39.07	10.60	56.00	16.93	Peak	N	Pass
4**	1.442	22.66	10.60	46.00	23.34	AV	N	Pass
5	4.840	38.15	11.05	56.00	17.85	Peak	N	Pass
5**	4.840	24.95	11.05	46.00	21.05	AV	N	Pass
6	19.484	46.40	14.92	60.00	13.60	Peak	N	Pass
6**	19.484	35.65	14.92	50.00	14.35	AV	N	Pass

A.6 Radiated Emission

Note¹: The symbol of “--” in the table which means not application.

Note²: For the test data above 1 GHz, According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

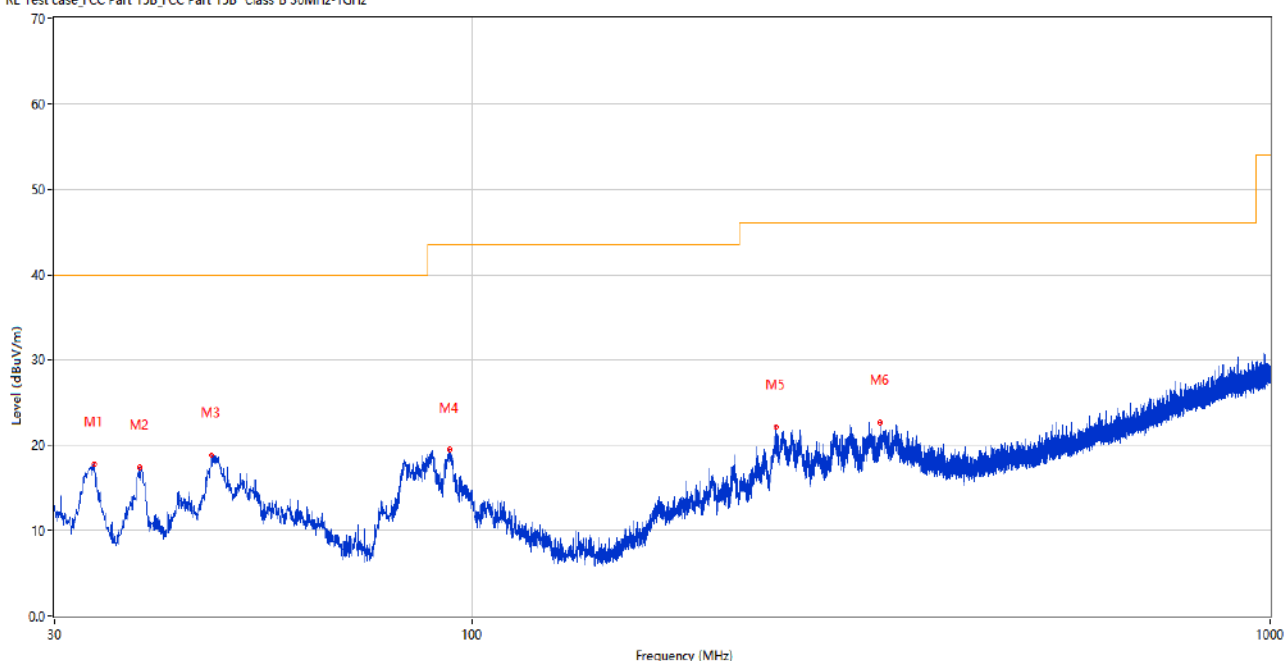
Note³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note⁴: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

Test Data and Plots

30 MHz to 1 GHz, ANT H

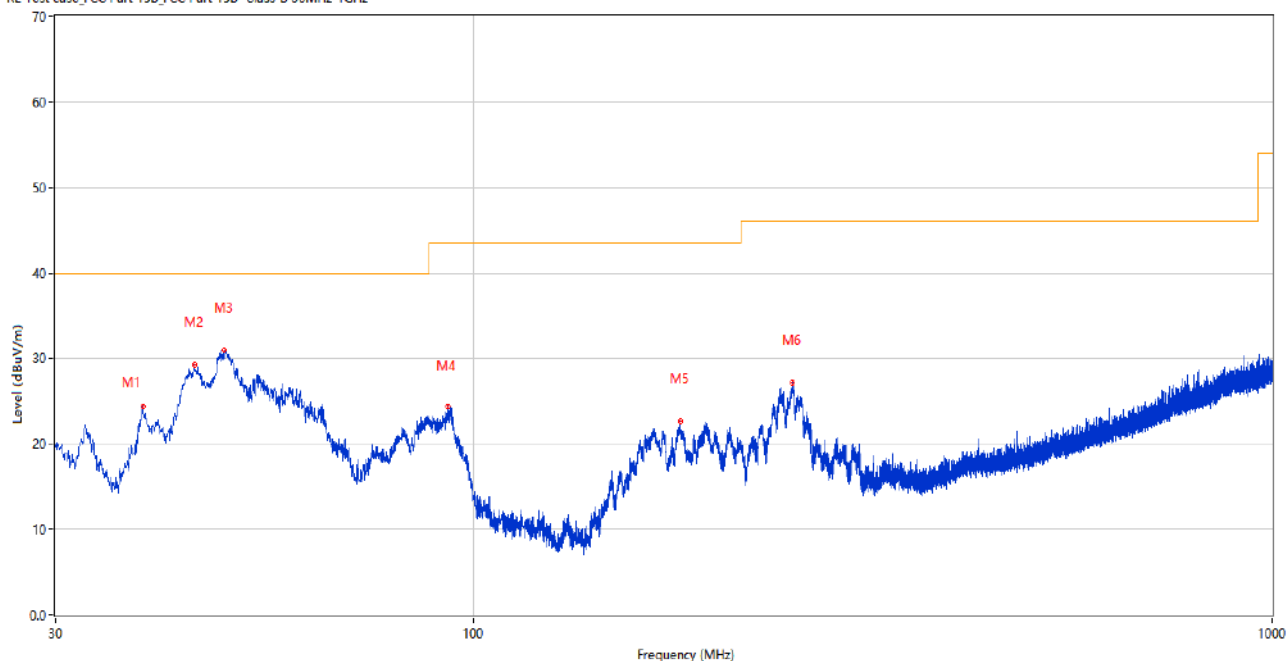
RE Test case_FCC Part 15B_FCC Part 15B Class B 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	33.686	17.81	-29.84	40.0	22.19	Peak	30.00	100	Horizontal	Pass
2	38.342	17.34	-26.34	40.0	22.66	Peak	83.00	100	Horizontal	Pass
3	47.218	18.83	-25.58	40.0	21.17	Peak	111.00	100	Horizontal	Pass
4	93.680	19.45	-27.55	43.5	24.05	Peak	139.00	200	Horizontal	Pass
5	240.150	22.10	-25.24	46.0	23.90	Peak	231.00	100	Horizontal	Pass
6	324.589	22.69	-23.02	46.0	23.31	Peak	72.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15B_FCC Part 15B Class B 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	38.584	24.33	-25.78	40.0	15.67	Peak	97.00	100	Vertical	Pass
2	44.792	29.24	-26.17	40.0	10.76	Peak	135.00	100	Vertical	Pass
3	48.867	30.97	-25.65	40.0	9.03	Peak	191.00	100	Vertical	Pass
4	92.856	24.38	-27.90	43.5	19.12	Peak	170.00	100	Vertical	Pass
5	181.417	22.66	-28.14	43.5	20.84	Peak	229.00	100	Vertical	Pass
6	251.014	27.13	-24.97	46.0	18.87	Peak	208.00	100	Vertical	Pass

Note ¹: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note ²: The spurious above 18G is noise only, do not show on the report.

1 GHz to 18 GHz, ANT H 802.11b Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1497.500	42.24	-17.57	74.0	31.76	Peak	171.00	300	Horizontal	Pass
1**	1497.500	32.44	-17.57	54.0	21.56	AV	171.00	300	Horizontal	Pass
2	2413.300	104.76	-12.84	74.0	-30.76	Peak	16.00	100	Horizontal	N/A
2**	2413.300	101.86	-12.84	54.0	-47.86	AV	16.00	100	Horizontal	N/A
3	3216.200	48.32	-8.82	74.0	25.68	Peak	138.00	100	Horizontal	Pass
3**	3216.200	44.96	-8.82	54.0	9.04	AV	138.00	100	Horizontal	Pass
4	4824.200	50.08	-3.44	74.0	23.92	Peak	7.00	200	Horizontal	Pass
4**	4824.200	46.43	-3.44	54.0	7.57	AV	7.00	200	Horizontal	Pass
5	6680.600	52.70	-1.27	74.0	21.30	Peak	1.00	200	Horizontal	Pass
5**	6680.600	42.92	-1.27	54.0	11.08	AV	1.00	200	Horizontal	Pass
6	14847.112	53.65	4.47	74.0	20.35	Peak	315.00	400	Horizontal	Pass
6**	14847.112	43.77	4.47	54.0	10.23	AV	315.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.300	44.56	-17.63	74.0	29.44	Peak	274.00	400	Vertical	Pass
1**	1333.300	34.06	-17.63	54.0	19.94	AV	274.00	400	Vertical	Pass
2	2413.200	95.51	-12.85	74.0	-21.51	Peak	345.00	100	Vertical	N/A
2**	2413.200	92.56	-12.85	54.0	-38.56	AV	345.00	100	Vertical	N/A
3	2990.400	51.16	-10.01	74.0	22.84	Peak	358.00	200	Vertical	Pass
3**	2990.400	41.13	-10.01	54.0	12.87	AV	358.00	200	Vertical	Pass
4	4824.200	48.58	-3.44	74.0	25.42	Peak	179.00	150	Vertical	Pass
4**	4824.200	43.17	-3.44	54.0	10.83	AV	179.00	150	Vertical	Pass
5	6982.600	53.33	-0.32	74.0	20.67	Peak	210.00	200	Vertical	Pass
5**	6982.600	43.40	-0.32	54.0	10.60	AV	210.00	200	Vertical	Pass
6	16030.987	53.75	5.80	74.0	20.25	Peak	208.00	400	Vertical	Pass
6**	16030.987	44.65	5.80	54.0	9.35	AV	208.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.400	42.58	-17.63	74.0	31.42	Peak	202.00	200	Horizontal	Pass
1**	1333.400	31.93	-17.63	54.0	22.07	AV	202.00	200	Horizontal	Pass
2	2437.800	105.39	-11.86	74.0	-31.39	Peak	2.00	100	Horizontal	N/A
2**	2437.800	102.51	-11.86	54.0	-48.51	AV	2.00	100	Horizontal	N/A
3	3249.400	50.14	-8.40	74.0	23.86	Peak	142.00	100	Horizontal	Pass
3**	3249.400	48.15	-8.40	54.0	5.85	AV	142.00	100	Horizontal	Pass
4	4874.200	51.22	-3.52	74.0	22.78	Peak	148.00	300	Horizontal	Pass
4**	4874.200	48.75	-3.52	54.0	5.25	AV	148.00	300	Horizontal	Pass
5	6771.800	52.46	-1.02	74.0	21.54	Peak	352.00	100	Horizontal	Pass
5**	6771.800	42.22	-1.02	54.0	11.78	AV	352.00	100	Horizontal	Pass
6	14818.500	53.95	5.05	74.0	20.05	Peak	344.00	100	Horizontal	Pass
6**	14818.500	44.26	5.05	54.0	9.74	AV	344.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.700	42.76	-17.60	74.0	31.24	Peak	290.00	300	Vertical	Pass
1**	1331.700	31.44	-17.60	54.0	22.56	AV	290.00	300	Vertical	Pass
2	2437.800	96.28	-11.86	74.0	-22.28	Peak	343.00	200	Vertical	N/A
2**	2437.800	93.36	-11.86	54.0	-39.36	AV	343.00	200	Vertical	N/A
3	2958.800	51.05	-10.08	74.0	22.95	Peak	7.00	150	Vertical	Pass
3**	2958.800	41.22	-10.08	54.0	12.78	AV	7.00	150	Vertical	Pass
4	4874.000	49.35	-3.50	74.0	24.65	Peak	166.00	150	Vertical	Pass
4**	4874.000	43.58	-3.50	54.0	10.42	AV	166.00	150	Vertical	Pass
5	7000.000	53.00	-0.53	74.0	21.00	Peak	246.00	200	Vertical	Pass
5**	7000.000	44.01	-0.53	54.0	9.99	AV	246.00	200	Vertical	Pass
6	16078.500	53.90	5.41	74.0	20.10	Peak	60.00	300	Vertical	Pass
6**	16078.500	44.59	5.41	54.0	9.41	AV	60.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11b Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1306.100	41.70	-17.28	74.0	32.30	Peak	351.00	200	Horizontal	Pass
1**	1306.100	31.86	-17.28	54.0	22.14	AV	351.00	200	Horizontal	Pass
2	2460.800	104.86	-12.69	74.0	-30.86	Peak	16.00	100	Horizontal	N/A
2**	2460.800	101.96	-12.69	54.0	-47.96	AV	16.00	100	Horizontal	N/A
3	3282.800	47.88	-8.33	74.0	26.12	Peak	143.00	150	Horizontal	Pass
3**	3282.800	46.50	-8.33	54.0	7.50	AV	143.00	150	Horizontal	Pass
4	4924.200	51.48	-3.61	74.0	22.52	Peak	152.00	150	Horizontal	Pass
4**	4924.200	48.11	-3.61	54.0	5.89	AV	152.00	150	Horizontal	Pass
5	6649.200	52.60	-1.08	74.0	21.40	Peak	160.00	200	Horizontal	Pass
5**	6649.200	42.38	-1.08	54.0	11.62	AV	160.00	200	Horizontal	Pass
6	16257.526	54.50	5.44	74.0	19.50	Peak	14.00	400	Horizontal	Pass
6**	16257.526	43.23	5.44	54.0	10.77	AV	14.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11b Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.000	42.55	-17.52	74.0	31.45	Peak	137.00	300	Vertical	Pass
1**	1330.000	32.67	-17.52	54.0	21.33	AV	137.00	300	Vertical	Pass
2	2463.200	96.68	-12.78	74.0	-22.68	Peak	323.00	100	Vertical	N/A
2**	2463.200	93.74	-12.78	54.0	-39.74	AV	323.00	100	Vertical	N/A
3	2959.700	50.11	-10.10	74.0	23.89	Peak	182.00	100	Vertical	Pass
3**	2959.700	41.66	-10.10	54.0	12.34	AV	182.00	100	Vertical	Pass
4	4924.200	48.29	-3.61	74.0	25.71	Peak	14.00	150	Vertical	Pass
4**	4924.200	43.57	-3.61	54.0	10.43	AV	14.00	150	Vertical	Pass
5	6650.000	53.22	-1.05	74.0	20.78	Peak	277.00	300	Vertical	Pass
5**	6650.000	42.84	-1.05	54.0	11.16	AV	277.00	300	Vertical	Pass
6	14848.425	53.95	4.50	74.0	20.05	Peak	198.00	200	Vertical	Pass
6**	14848.425	43.71	4.50	54.0	10.29	AV	198.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1407.600	41.83	-17.10	74.0	32.17	Peak	250.00	150	Horizontal	Pass
1**	1407.600	31.52	-17.10	54.0	22.48	AV	250.00	150	Horizontal	Pass
2	2416.200	106.41	-12.70	74.0	-32.41	Peak	7.00	150	Horizontal	N/A
2**	2416.200	99.07	-12.70	54.0	-45.07	AV	7.00	150	Horizontal	N/A
3	3216.200	51.15	-8.82	74.0	22.85	Peak	134.00	150	Horizontal	Pass
3**	3216.200	49.92	-8.82	54.0	4.08	AV	134.00	150	Horizontal	Pass
4	4889.800	49.67	-3.57	74.0	24.33	Peak	307.00	100	Horizontal	Pass
4**	4889.800	40.12	-3.57	54.0	13.88	AV	307.00	100	Horizontal	Pass
5	6952.800	53.16	-0.49	74.0	20.84	Peak	323.00	200	Horizontal	Pass
5**	6952.800	43.76	-0.49	54.0	10.24	AV	323.00	200	Horizontal	Pass
6	14917.200	54.00	4.48	74.0	20.00	Peak	0.00	300	Horizontal	Pass
6**	14917.200	44.46	4.48	54.0	9.54	AV	0.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1344.700	41.44	-17.48	74.0	32.56	Peak	297.00	150	Vertical	Pass
1**	1344.700	32.02	-17.48	54.0	21.98	AV	297.00	150	Vertical	Pass
2	2412.800	97.04	-12.86	74.0	-23.04	Peak	182.00	150	Vertical	N/A
2**	2412.800	89.63	-12.86	54.0	-35.63	AV	182.00	150	Vertical	N/A
3	3216.000	43.38	-8.84	74.0	30.62	Peak	300.00	150	Vertical	Pass
3**	3216.000	37.86	-8.84	54.0	16.14	AV	300.00	150	Vertical	Pass
4	4986.400	49.30	-3.47	74.0	24.70	Peak	61.00	100	Vertical	Pass
4**	4986.400	40.42	-3.47	54.0	13.58	AV	61.00	100	Vertical	Pass
5	6955.000	52.72	-0.52	74.0	21.28	Peak	156.00	300	Vertical	Pass
5**	6955.000	43.34	-0.52	54.0	10.66	AV	156.00	300	Vertical	Pass
6	14605.350	54.42	5.18	74.0	19.58	Peak	290.00	400	Vertical	Pass
6**	14605.350	44.36	5.18	54.0	9.64	AV	290.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1595.500	41.77	-17.66	74.0	32.23	Peak	331.00	100	Horizontal	Pass
1**	1595.500	33.24	-17.66	54.0	20.76	AV	331.00	100	Horizontal	Pass
2	2437.900	108.35	-11.79	74.0	-34.35	Peak	271.00	150	Horizontal	N/A
2**	2437.900	101.27	-11.79	54.0	-47.27	AV	271.00	150	Horizontal	N/A
3	3249.400	53.48	-8.40	74.0	20.52	Peak	42.00	150	Horizontal	Pass
3**	3249.400	51.86	-8.40	54.0	2.14	AV	42.00	150	Horizontal	Pass
4	5444.600	50.57	-3.00	74.0	23.43	Peak	155.00	150	Horizontal	Pass
4**	5444.600	41.60	-3.00	54.0	12.40	AV	155.00	150	Horizontal	Pass
5	9728.663	49.24	0.19	74.0	24.76	Peak	21.00	150	Horizontal	Pass
5**	9728.663	42.07	0.19	54.0	11.93	AV	21.00	150	Horizontal	Pass
6	15659.025	53.45	4.96	74.0	20.55	Peak	1.00	200	Horizontal	Pass
6**	15659.025	43.76	4.96	54.0	10.24	AV	1.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.500	44.68	-17.59	74.0	29.32	Peak	285.00	400	Vertical	Pass
1**	1331.500	31.93	-17.59	54.0	22.07	AV	285.00	400	Vertical	Pass
2	2435.800	97.61	-11.86	74.0	-23.61	Peak	110.00	200	Vertical	N/A
2**	2435.800	90.04	-11.86	54.0	-36.04	AV	110.00	200	Vertical	N/A
3	3249.600	44.51	-8.39	74.0	29.49	Peak	280.00	150	Vertical	Pass
3**	3249.600	41.76	-8.39	54.0	12.24	AV	280.00	150	Vertical	Pass
4	5053.600	51.00	-2.86	74.0	23.00	Peak	26.00	150	Vertical	Pass
4**	5053.600	41.22	-2.86	54.0	12.78	AV	26.00	150	Vertical	Pass
5	9645.862	49.24	0.34	74.0	24.76	Peak	207.00	150	Vertical	Pass
5**	9645.862	40.35	0.34	54.0	13.65	AV	207.00	150	Vertical	Pass
6	17999.999	55.49	9.27	74.0	18.51	Peak	231.00	150	Vertical	Pass
6**	17999.999	47.25	9.27	54.0	6.75	AV	231.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Channel 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1498.200	42.07	-17.54	74.0	31.93	Peak	168.00	400	Horizontal	Pass
1**	1498.200	32.15	-17.54	54.0	21.85	AV	168.00	400	Horizontal	Pass
2	2461.900	107.09	-12.74	74.0	-33.09	Peak	284.00	150	Horizontal	N/A
2**	2461.900	98.98	-12.74	54.0	-44.98	AV	284.00	150	Horizontal	N/A
3	3276.200	53.11	-8.48	74.0	20.89	Peak	55.00	150	Horizontal	Pass
3**	3276.200	51.60	-8.48	54.0	2.40	AV	55.00	150	Horizontal	Pass
4	4912.800	49.97	-3.52	74.0	24.03	Peak	62.00	100	Horizontal	Pass
4**	4912.800	40.58	-3.52	54.0	13.42	AV	62.00	100	Horizontal	Pass
5	9690.138	48.94	0.37	74.0	25.06	Peak	93.00	150	Horizontal	Pass
5**	9690.138	39.76	0.37	54.0	14.24	AV	93.00	150	Horizontal	Pass
6	15588.938	53.46	4.55	74.0	20.54	Peak	360.00	100	Horizontal	Pass
6**	15588.938	44.09	4.55	54.0	9.91	AV	360.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Channel 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.100	44.70	-17.46	74.0	29.30	Peak	281.00	100	Vertical	Pass
1**	1329.100	36.86	-17.46	54.0	17.14	AV	281.00	100	Vertical	Pass
2	2458.400	96.40	-12.75	74.0	-22.40	Peak	299.00	150	Vertical	N/A
2**	2458.400	88.24	-12.75	54.0	-34.24	AV	299.00	150	Vertical	N/A
3	3276.400	42.96	-8.47	74.0	31.04	Peak	284.00	150	Vertical	Pass
3**	3276.400	40.51	-8.47	54.0	13.49	AV	284.00	150	Vertical	Pass
4	4857.200	49.60	-3.23	74.0	24.40	Peak	21.00	400	Vertical	Pass
4**	4857.200	40.41	-3.23	54.0	13.59	AV	21.00	400	Vertical	Pass
5	9647.300	49.38	0.33	74.0	24.62	Peak	1.00	150	Vertical	Pass
5**	9647.300	39.52	0.33	54.0	14.48	AV	1.00	150	Vertical	Pass
6	14759.700	54.04	4.74	74.0	19.96	Peak	360.00	100	Vertical	Pass
6**	14759.700	43.68	4.74	54.0	10.32	AV	360.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11g Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1591.800	41.81	-17.60	74.0	32.19	Peak	155.00	400	Horizontal	Pass
1**	1591.800	32.93	-17.60	54.0	21.07	AV	155.00	400	Horizontal	Pass
2	2460.900	106.11	-12.69	74.0	-32.11	Peak	282.00	100	Horizontal	N/A
2**	2460.900	99.46	-12.69	54.0	-45.46	AV	282.00	100	Horizontal	N/A
3	3282.800	52.60	-8.33	74.0	21.40	Peak	47.00	150	Horizontal	Pass
3**	3282.800	50.92	-8.33	54.0	3.08	AV	47.00	150	Horizontal	Pass
4	4860.600	49.17	-3.27	74.0	24.83	Peak	213.00	200	Horizontal	Pass
4**	4860.600	40.54	-3.27	54.0	13.46	AV	213.00	200	Horizontal	Pass
5	8589.012	49.16	-0.77	74.0	24.84	Peak	132.00	150	Horizontal	Pass
5**	8589.012	39.53	-0.77	54.0	14.47	AV	132.00	150	Horizontal	Pass
6	17999.999	55.19	9.27	74.0	18.81	Peak	58.00	150	Horizontal	Pass
6**	17999.999	47.96	9.27	54.0	6.04	AV	58.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11g Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.700	46.01	-17.50	74.0	27.99	Peak	274.00	400	Vertical	Pass
1**	1329.700	31.90	-17.50	54.0	22.10	AV	274.00	400	Vertical	Pass
2	2464.800	94.27	-12.73	74.0	-20.27	Peak	41.00	100	Vertical	N/A
2**	2464.800	85.43	-12.73	54.0	-31.43	AV	41.00	100	Vertical	N/A
3	3282.800	44.40	-8.33	74.0	29.60	Peak	143.00	150	Vertical	Pass
3**	3282.800	40.30	-8.33	54.0	13.70	AV	143.00	150	Vertical	Pass
4	4985.600	49.59	-3.43	74.0	24.41	Peak	358.00	300	Vertical	Pass
4**	4985.600	40.13	-3.43	54.0	13.87	AV	358.00	300	Vertical	Pass
5	9592.674	48.87	0.70	74.0	25.13	Peak	360.00	150	Vertical	Pass
5**	9592.674	39.81	0.70	54.0	14.19	AV	360.00	150	Vertical	Pass
6	16106.325	54.04	5.66	74.0	19.96	Peak	148.00	100	Vertical	Pass
6**	16106.325	45.51	5.66	54.0	8.49	AV	148.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1678.200	42.00	-17.47	74.0	32.00	Peak	217.00	300	Horizontal	Pass
1**	1678.200	32.56	-17.47	54.0	21.44	AV	217.00	300	Horizontal	Pass
2	2413.500	107.42	-12.84	74.0	-33.42	Peak	290.00	100	Horizontal	N/A
2**	2413.500	98.73	-12.84	54.0	-44.73	AV	290.00	100	Horizontal	N/A
3	3216.000	51.09	-8.84	74.0	22.91	Peak	42.00	150	Horizontal	Pass
3**	3216.000	49.25	-8.84	54.0	4.75	AV	42.00	150	Horizontal	Pass
4	4861.800	49.95	-3.24	74.0	24.05	Peak	224.00	200	Horizontal	Pass
4**	4861.800	40.09	-3.24	54.0	13.91	AV	224.00	200	Horizontal	Pass
5	9672.025	49.38	0.59	74.0	24.62	Peak	26.00	150	Horizontal	Pass
5**	9672.025	40.11	0.59	54.0	13.89	AV	26.00	150	Horizontal	Pass
6	14823.224	54.03	4.98	74.0	19.97	Peak	0.00	200	Horizontal	Pass
6**	14823.224	44.97	4.98	54.0	9.03	AV	0.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1497.600	44.34	-17.56	74.0	29.66	Peak	310.00	200	Vertical	Pass
1**	1497.600	31.96	-17.56	54.0	22.04	AV	310.00	200	Vertical	Pass
2	2414.900	95.09	-12.77	74.0	-21.09	Peak	337.00	200	Vertical	N/A
2**	2414.900	87.69	-12.77	54.0	-33.69	AV	337.00	200	Vertical	N/A
3	2991.900	50.75	-9.94	74.0	23.25	Peak	337.00	100	Vertical	Pass
3**	2991.900	41.44	-9.94	54.0	12.56	AV	337.00	100	Vertical	Pass
4	4884.800	50.02	-3.53	74.0	23.98	Peak	360.00	400	Vertical	Pass
4**	4884.800	40.52	-3.53	54.0	13.48	AV	360.00	400	Vertical	Pass
5	6995.000	53.56	-0.42	74.0	20.44	Peak	1.00	400	Vertical	Pass
5**	6995.000	44.35	-0.42	54.0	9.65	AV	1.00	400	Vertical	Pass
6	15645.375	54.21	4.91	74.0	19.79	Peak	254.00	200	Vertical	Pass
6**	15645.375	43.63	4.91	54.0	10.37	AV	254.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1577.500	42.17	-17.45	74.0	31.83	Peak	1.00	400	Horizontal	Pass
1**	1577.500	31.99	-17.45	54.0	22.01	AV	1.00	400	Horizontal	Pass
2	2437.900	106.99	-11.79	74.0	-32.99	Peak	291.00	100	Horizontal	N/A
2**	2437.900	99.26	-11.79	54.0	-45.26	AV	291.00	100	Horizontal	N/A
3	3249.600	52.72	-8.39	74.0	21.28	Peak	44.00	150	Horizontal	Pass
3**	3249.600	51.99	-8.39	54.0	2.01	AV	44.00	150	Horizontal	Pass
4	4881.400	49.71	-3.60	74.0	24.29	Peak	215.00	300	Horizontal	Pass
4**	4881.400	40.09	-3.60	54.0	13.91	AV	215.00	300	Horizontal	Pass
5	8612.013	49.15	-1.37	74.0	24.85	Peak	204.00	150	Horizontal	Pass
5**	8612.013	39.19	-1.37	54.0	14.81	AV	204.00	150	Horizontal	Pass
6	17999.739	54.73	8.41	74.0	19.27	Peak	102.00	150	Horizontal	Pass
6**	17999.739	46.86	8.41	54.0	7.14	AV	102.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1501.800	43.05	-17.51	74.0	30.95	Peak	300.00	400	Vertical	Pass
1**	1501.800	31.82	-17.51	54.0	22.18	AV	300.00	400	Vertical	Pass
2	2435.400	95.98	-11.87	74.0	-21.98	Peak	44.00	150	Vertical	N/A
2**	2435.400	88.33	-11.87	54.0	-34.33	AV	44.00	150	Vertical	N/A
3	3249.600	44.93	-8.39	74.0	29.07	Peak	289.00	150	Vertical	Pass
3**	3249.600	40.88	-8.39	54.0	13.12	AV	289.00	150	Vertical	Pass
4	4839.800	49.69	-3.46	74.0	24.31	Peak	328.00	100	Vertical	Pass
4**	4839.800	40.46	-3.46	54.0	13.54	AV	328.00	100	Vertical	Pass
5	9644.425	49.06	0.37	74.0	24.94	Peak	153.00	150	Vertical	Pass
5**	9644.425	39.85	0.37	54.0	14.15	AV	153.00	150	Vertical	Pass
6	17999.739	55.36	8.41	74.0	18.64	Peak	42.00	150	Vertical	Pass
6**	17999.739	46.76	8.41	54.0	7.24	AV	42.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Channel 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1664.500	41.66	-17.32	74.0	32.34	Peak	360.00	400	Horizontal	Pass
1**	1664.500	32.83	-17.32	54.0	21.17	AV	360.00	400	Horizontal	Pass
2	2458.600	106.92	-12.75	74.0	-32.92	Peak	269.00	200	Horizontal	N/A
2**	2458.600	99.51	-12.75	54.0	-45.51	AV	269.00	200	Horizontal	N/A
3	3276.200	52.83	-8.48	74.0	21.17	Peak	333.00	150	Horizontal	Pass
3**	3276.200	51.93	-8.48	54.0	2.07	AV	333.00	150	Horizontal	Pass
4	4903.600	49.90	-3.49	74.0	24.10	Peak	270.00	100	Horizontal	Pass
4**	4903.600	40.77	-3.49	54.0	13.23	AV	270.00	100	Horizontal	Pass
5	9705.662	49.49	0.27	74.0	24.51	Peak	111.00	150	Horizontal	Pass
5**	9705.662	41.06	0.27	54.0	12.94	AV	111.00	150	Horizontal	Pass
6	17999.999	54.92	9.27	74.0	19.08	Peak	244.00	150	Horizontal	Pass
6**	17999.999	49.26	9.27	54.0	4.74	AV	244.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Channel 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.400	43.92	-17.62	74.0	30.08	Peak	278.00	100	Vertical	Pass
1**	1332.400	34.09	-17.62	54.0	19.91	AV	278.00	100	Vertical	Pass
2	2458.200	94.63	-12.74	74.0	-20.63	Peak	304.00	200	Vertical	N/A
2**	2458.200	87.50	-12.74	54.0	-33.50	AV	304.00	200	Vertical	N/A
3	3276.200	44.50	-8.48	74.0	29.50	Peak	102.00	150	Vertical	Pass
3**	3276.200	39.98	-8.48	54.0	14.02	AV	102.00	150	Vertical	Pass
4	5128.000	51.23	-2.83	74.0	22.77	Peak	110.00	150	Vertical	Pass
4**	5128.000	40.76	-2.83	54.0	13.24	AV	110.00	150	Vertical	Pass
5	9644.425	49.65	0.37	74.0	24.35	Peak	323.00	150	Vertical	Pass
5**	9644.425	40.19	0.37	54.0	13.81	AV	323.00	150	Vertical	Pass
6	16222.612	54.98	5.32	74.0	19.02	Peak	333.00	100	Vertical	Pass
6**	16222.612	43.91	5.32	54.0	10.09	AV	333.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n20 Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.000	43.12	-17.46	74.0	30.88	Peak	243.00	200	Horizontal	Pass
1**	1327.000	32.60	-17.46	54.0	21.40	AV	243.00	200	Horizontal	Pass
2	2463.300	106.16	-12.78	74.0	-32.16	Peak	278.00	200	Horizontal	N/A
2**	2463.300	99.03	-12.78	54.0	-45.03	AV	278.00	200	Horizontal	N/A
3	3282.800	52.67	-8.33	74.0	21.33	Peak	47.00	150	Horizontal	Pass
3**	3282.800	50.97	-8.33	54.0	3.03	AV	47.00	150	Horizontal	Pass
4	4924.200	49.50	-3.61	74.0	24.50	Peak	0.00	300	Horizontal	Pass
4**	4924.200	40.30	-3.61	54.0	13.70	AV	0.00	300	Horizontal	Pass
5	6914.200	53.18	-0.31	74.0	20.82	Peak	292.00	200	Horizontal	Pass
5**	6914.200	43.29	-0.31	54.0	10.71	AV	292.00	200	Horizontal	Pass
6	16025.737	54.00	5.56	74.0	20.00	Peak	119.00	400	Horizontal	Pass
6**	16025.737	44.26	5.56	54.0	9.74	AV	119.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n20 Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.300	44.65	-17.48	74.0	29.35	Peak	271.00	100	Vertical	Pass
1**	1329.300	32.50	-17.48	54.0	21.50	AV	271.00	100	Vertical	Pass
2	2460.600	94.61	-12.69	74.0	-20.61	Peak	304.00	200	Vertical	N/A
2**	2460.600	86.94	-12.69	54.0	-32.94	AV	304.00	200	Vertical	N/A
3	3282.800	45.61	-8.33	74.0	28.39	Peak	261.00	150	Vertical	Pass
3**	3282.800	40.39	-8.33	54.0	13.61	AV	261.00	150	Vertical	Pass
4	4825.000	50.53	-3.42	74.0	23.47	Peak	324.00	400	Vertical	Pass
4**	4825.000	40.55	-3.42	54.0	13.45	AV	324.00	400	Vertical	Pass
5	9670.013	49.48	0.63	74.0	24.52	Peak	344.00	150	Vertical	Pass
5**	9670.013	39.99	0.63	54.0	14.01	AV	344.00	150	Vertical	Pass
6	14592.750	54.16	5.03	74.0	19.84	Peak	358.00	100	Vertical	Pass
6**	14592.750	45.09	5.03	54.0	8.91	AV	358.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Channel 3

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.500	42.81	-17.63	74.0	31.19	Peak	197.00	200	Horizontal	Pass
1**	1333.500	31.62	-17.63	54.0	22.38	AV	197.00	200	Horizontal	Pass
2	2417.800	100.98	-12.63	74.0	-26.98	Peak	5.00	100	Horizontal	N/A
2**	2417.800	93.57	-12.63	54.0	-39.57	AV	5.00	100	Horizontal	N/A
3	3229.600	47.35	-8.69	74.0	26.65	Peak	133.00	150	Horizontal	Pass
3**	3229.600	45.17	-8.69	54.0	8.83	AV	133.00	150	Horizontal	Pass
4	4939.400	49.45	-3.70	74.0	24.55	Peak	102.00	300	Horizontal	Pass
4**	4939.400	40.10	-3.70	54.0	13.90	AV	102.00	300	Horizontal	Pass
5	6916.600	52.88	-0.30	74.0	21.12	Peak	339.00	300	Horizontal	Pass
5**	6916.600	43.65	-0.30	54.0	10.35	AV	339.00	300	Horizontal	Pass
6	14773.613	54.37	4.91	74.0	19.63	Peak	173.00	100	Horizontal	Pass
6**	14773.613	43.82	4.91	54.0	10.18	AV	173.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Channel 3

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.200	43.56	-17.47	74.0	30.44	Peak	6.00	200	Vertical	Pass
1**	1329.200	31.81	-17.47	54.0	22.19	AV	6.00	200	Vertical	Pass
2	2418.600	89.13	-12.58	74.0	-15.13	Peak	38.00	100	Vertical	N/A
2**	2418.600	81.82	-12.58	54.0	-27.82	AV	38.00	100	Vertical	N/A
3	2971.600	50.71	-10.21	74.0	23.29	Peak	357.00	100	Vertical	Pass
3**	2971.600	40.80	-10.21	54.0	13.20	AV	357.00	100	Vertical	Pass
4	4880.600	49.32	-3.59	74.0	24.68	Peak	226.00	300	Vertical	Pass
4**	4880.600	39.74	-3.59	54.0	14.26	AV	226.00	300	Vertical	Pass
5	6998.000	52.47	-0.45	74.0	21.53	Peak	54.00	200	Vertical	Pass
5**	6998.000	43.88	-0.45	54.0	10.12	AV	54.00	200	Vertical	Pass
6	15611.775	54.64	4.57	74.0	19.36	Peak	1.00	100	Vertical	Pass
6**	15611.775	43.41	4.57	54.0	10.59	AV	1.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Channel 4

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.300	43.37	-17.41	74.0	30.63	Peak	221.00	400	Horizontal	Pass
1**	1328.300	31.34	-17.41	54.0	22.66	AV	221.00	400	Horizontal	Pass
2	2431.000	102.95	-12.00	74.0	-28.95	Peak	240.00	200	Horizontal	N/A
2**	2431.000	95.04	-12.00	54.0	-41.04	AV	240.00	200	Horizontal	N/A
3	3236.200	52.10	-8.83	74.0	21.90	Peak	137.00	150	Horizontal	Pass
3**	3236.200	51.09	-8.83	54.0	2.91	AV	137.00	150	Horizontal	Pass
4	4878.600	49.01	-3.54	74.0	24.99	Peak	34.00	100	Horizontal	Pass
4**	4878.600	39.81	-3.54	54.0	14.19	AV	34.00	100	Horizontal	Pass
5	6700.400	52.49	-1.23	74.0	21.51	Peak	360.00	400	Horizontal	Pass
5**	6700.400	42.56	-1.23	54.0	11.44	AV	360.00	400	Horizontal	Pass
6	16453.088	54.52	4.45	74.0	19.48	Peak	342.00	200	Horizontal	Pass
6**	16453.088	42.90	4.45	54.0	11.10	AV	342.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Channel 4

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.400	45.71	-17.62	74.0	28.29	Peak	320.00	200	Vertical	Pass
1**	1332.400	36.83	-17.62	54.0	17.17	AV	320.00	200	Vertical	Pass
2	2430.000	92.76	-12.00	74.0	-18.76	Peak	149.00	150	Vertical	N/A
2**	2430.000	84.84	-12.00	54.0	-30.84	AV	149.00	150	Vertical	N/A
3	3236.200	44.44	-8.83	74.0	29.56	Peak	42.00	100	Vertical	Pass
3**	3236.200	41.17	-8.83	54.0	12.83	AV	42.00	100	Vertical	Pass
4	4959.200	48.94	-3.58	74.0	25.06	Peak	42.00	300	Vertical	Pass
4**	4959.200	39.99	-3.58	54.0	14.01	AV	42.00	300	Vertical	Pass
5	6992.200	52.78	-0.33	74.0	21.22	Peak	0.00	300	Vertical	Pass
5**	6992.200	43.53	-0.33	54.0	10.47	AV	0.00	300	Vertical	Pass
6	16130.737	53.79	5.52	74.0	20.21	Peak	352.00	300	Vertical	Pass
6**	16130.737	43.68	5.52	54.0	10.32	AV	352.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Channel 5

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1325.300	41.45	-17.48	74.0	32.55	Peak	127.00	200	Horizontal	Pass
1**	1325.300	31.67	-17.48	54.0	22.33	AV	127.00	200	Horizontal	Pass
2	2441.300	104.06	-11.74	74.0	-30.06	Peak	289.00	100	Horizontal	N/A
2**	2441.300	95.03	-11.74	54.0	-41.03	AV	289.00	100	Horizontal	N/A
3	3242.800	52.27	-8.69	74.0	21.73	Peak	55.00	150	Horizontal	Pass
3**	3242.800	50.85	-8.69	54.0	3.15	AV	55.00	150	Horizontal	Pass
4	4873.200	49.92	-3.43	74.0	24.08	Peak	200.00	300	Horizontal	Pass
4**	4873.200	40.92	-3.43	54.0	13.08	AV	200.00	300	Horizontal	Pass
5	6480.400	52.83	-1.52	74.0	21.17	Peak	71.00	400	Horizontal	Pass
5**	6480.400	42.88	-1.52	54.0	11.12	AV	71.00	400	Horizontal	Pass
6	16284.300	53.55	4.76	74.0	20.45	Peak	58.00	200	Horizontal	Pass
6**	16284.300	44.06	4.76	54.0	9.94	AV	58.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Channel 5

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.600	43.12	-17.43	74.0	30.88	Peak	119.00	300	Vertical	Pass
1**	1327.600	31.43	-17.43	54.0	22.57	AV	119.00	300	Vertical	Pass
2	2428.600	92.49	-11.99	74.0	-18.49	Peak	303.00	200	Vertical	N/A
2**	2428.600	84.60	-11.99	54.0	-30.60	AV	303.00	200	Vertical	N/A
3	3243.000	44.63	-8.68	74.0	29.37	Peak	63.00	150	Vertical	Pass
3**	3243.000	40.08	-8.68	54.0	13.92	AV	63.00	150	Vertical	Pass
4	4966.400	49.92	-3.53	74.0	24.08	Peak	137.00	200	Vertical	Pass
4**	4966.400	40.55	-3.53	54.0	13.45	AV	137.00	200	Vertical	Pass
5	6892.000	52.80	-0.49	74.0	21.20	Peak	272.00	300	Vertical	Pass
5**	6892.000	43.16	-0.49	54.0	10.84	AV	272.00	300	Vertical	Pass
6	16044.112	54.33	6.14	74.0	19.67	Peak	320.00	100	Vertical	Pass
6**	16044.112	44.79	6.14	54.0	9.21	AV	320.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.800	44.35	-17.56	74.0	29.65	Peak	223.00	100	Horizontal	Pass
1**	1330.800	36.54	-17.56	54.0	17.46	AV	223.00	100	Horizontal	Pass
2	2441.300	103.53	-11.74	74.0	-29.53	Peak	232.00	100	Horizontal	N/A
2**	2441.300	95.08	-11.74	54.0	-41.08	AV	232.00	100	Horizontal	N/A
3	3249.600	53.23	-8.39	74.0	20.77	Peak	138.00	200	Horizontal	Pass
3**	3249.600	52.33	-8.39	54.0	1.67	AV	138.00	200	Horizontal	N/A
3***	3249.600*	51.35	-8.39	54.0	2.65	AV	138.00	200	Horizontal	Pass
4	4953.400	49.28	-3.63	74.0	24.72	Peak	360.00	100	Horizontal	Pass
4**	4953.400	40.36	-3.63	54.0	13.64	AV	360.00	100	Horizontal	Pass
5	6926.400	52.99	-0.48	74.0	21.01	Peak	17.00	100	Horizontal	Pass
5**	6926.400	42.46	-0.48	54.0	11.54	AV	17.00	100	Horizontal	Pass
6	16051.200	53.98	6.05	74.0	20.02	Peak	320.00	300	Horizontal	Pass
6**	16051.200	44.32	6.05	54.0	9.68	AV	320.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.600	43.84	-17.55	74.0	30.16	Peak	220.00	200	Vertical	Pass
1**	1330.600	31.90	-17.55	54.0	22.10	AV	220.00	200	Vertical	Pass
2	2440.300	93.42	-11.71	74.0	-19.42	Peak	296.00	200	Vertical	N/A
2**	2440.300	85.93	-11.71	54.0	-31.93	AV	296.00	200	Vertical	N/A
3	3249.600	43.76	-8.39	74.0	30.24	Peak	29.00	150	Vertical	Pass
3**	3249.600	40.68	-8.39	54.0	13.32	AV	29.00	150	Vertical	Pass
4	4985.600	49.97	-3.43	74.0	24.03	Peak	166.00	100	Vertical	Pass
4**	4985.600	40.50	-3.43	54.0	13.50	AV	166.00	100	Vertical	Pass
5	6890.600	52.79	-0.48	74.0	21.21	Peak	53.00	300	Vertical	Pass
5**	6890.600	43.56	-0.48	54.0	10.44	AV	53.00	300	Vertical	Pass
6	15984.525	55.09	4.96	74.0	18.91	Peak	208.00	300	Vertical	Pass
6**	15984.525	43.24	4.96	54.0	10.76	AV	208.00	300	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Channel 8

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1498.500	41.68	-17.52	74.0	32.32	Peak	214.00	300	Horizontal	Pass
1**	1498.500	31.43	-17.52	54.0	22.57	AV	214.00	300	Horizontal	Pass
2	2440.100	102.65	-11.71	74.0	-28.65	Peak	233.00	100	Horizontal	N/A
2**	2440.100	94.78	-11.71	54.0	-40.78	AV	233.00	100	Horizontal	N/A
3	3262.800	52.76	-8.31	74.0	21.24	Peak	126.00	150	Horizontal	Pass
3**	3262.800	51.58	-8.31	54.0	2.42	AV	126.00	150	Horizontal	Pass
4	4831.800	49.13	-3.35	74.0	24.87	Peak	262.00	100	Horizontal	Pass
4**	4831.800	39.95	-3.35	54.0	14.05	AV	262.00	100	Horizontal	Pass
5	6959.000	52.81	-0.43	74.0	21.19	Peak	342.00	100	Horizontal	Pass
5**	6959.000	42.85	-0.43	54.0	11.15	AV	342.00	100	Horizontal	Pass
6	16059.600	54.04	5.76	74.0	19.96	Peak	184.00	300	Horizontal	Pass
6**	16059.600	44.39	5.76	54.0	9.61	AV	184.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Channel 8

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.100	42.39	-17.57	74.0	31.61	Peak	342.00	400	Vertical	Pass
1**	1331.100	32.74	-17.57	54.0	21.26	AV	342.00	400	Vertical	Pass
2	2443.100	93.45	-11.69	74.0	-19.45	Peak	288.00	150	Vertical	N/A
2**	2443.100	85.95	-11.69	54.0	-31.95	AV	288.00	150	Vertical	N/A
3	3262.800	44.52	-8.31	74.0	29.48	Peak	32.00	150	Vertical	Pass
3**	3262.800	39.91	-8.31	54.0	14.09	AV	32.00	150	Vertical	Pass
4	4877.600	49.26	-3.47	74.0	24.74	Peak	191.00	300	Vertical	Pass
4**	4877.600	40.31	-3.47	54.0	13.69	AV	191.00	300	Vertical	Pass
5	6708.600	53.19	-1.31	74.0	20.81	Peak	11.00	100	Vertical	Pass
5**	6708.600	43.71	-1.31	54.0	10.29	AV	11.00	100	Vertical	Pass
6	16114.201	53.53	5.69	74.0	20.47	Peak	53.00	400	Vertical	Pass
6**	16114.201	44.20	5.69	54.0	9.80	AV	53.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H 802.11n40 Channel 9

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.200	42.44	-17.54	74.0	31.56	Peak	196.00	300	Horizontal	Pass
1**	1330.200	33.19	-17.54	54.0	20.81	AV	196.00	300	Horizontal	Pass
2	2455.000	98.94	-12.51	74.0	-24.94	Peak	13.00	100	Horizontal	N/A
2**	2455.000	91.00	-12.51	54.0	-37.00	AV	13.00	100	Horizontal	N/A
3	3269.400	47.73	-8.63	74.0	26.27	Peak	143.00	150	Horizontal	Pass
3**	3269.400	46.11	-8.63	54.0	7.89	AV	143.00	150	Horizontal	Pass
4	4950.600	49.57	-3.76	74.0	24.43	Peak	202.00	200	Horizontal	Pass
4**	4950.600	39.61	-3.76	54.0	14.39	AV	202.00	200	Horizontal	Pass
5	6939.000	52.58	-0.64	74.0	21.42	Peak	0.00	400	Horizontal	Pass
5**	6939.000	43.49	-0.64	54.0	10.51	AV	0.00	400	Horizontal	Pass
6	16044.900	53.70	6.15	74.0	20.30	Peak	103.00	400	Horizontal	Pass
6**	16044.900	44.09	6.15	54.0	9.91	AV	103.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V 802.11n40 Channel 9

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1660.700	42.06	-17.34	74.0	31.94	Peak	234.00	200	Vertical	Pass
1**	1660.700	31.89	-17.34	54.0	22.11	AV	234.00	200	Vertical	Pass
2	2454.200	89.42	-12.43	74.0	-15.42	Peak	290.00	100	Vertical	N/A
2**	2454.200	82.12	-12.43	54.0	-28.12	AV	290.00	100	Vertical	N/A
3	2971.500	50.15	-10.21	74.0	23.85	Peak	359.00	100	Vertical	Pass
3**	2971.500	41.74	-10.21	54.0	12.26	AV	359.00	100	Vertical	Pass
4	4851.000	49.54	-3.33	74.0	24.46	Peak	110.00	200	Vertical	Pass
4**	4851.000	39.60	-3.33	54.0	14.40	AV	110.00	200	Vertical	Pass
5	6978.400	53.91	-0.31	74.0	20.09	Peak	279.00	200	Vertical	Pass
5**	6978.400	42.84	-0.31	54.0	11.16	AV	279.00	200	Vertical	Pass
6	16713.750	53.59	3.70	74.0	20.41	Peak	1.00	200	Vertical	Pass
6**	16713.750	42.48	3.70	54.0	11.52	AV	1.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT20 Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.800	41.88	-17.56	74.0	32.12	Peak	68.00	100	Horizontal	Pass
1**	1330.800	31.15	-17.56	54.0	22.85	AV	68.00	100	Horizontal	Pass
2	2414.000	106.18	-12.82	74.0	-32.18	Peak	284.00	200	Horizontal	N/A
2**	2414.000	98.83	-12.82	54.0	-44.83	AV	284.00	200	Horizontal	N/A
3	3216.200	50.70	-8.82	74.0	23.30	Peak	39.00	150	Horizontal	Pass
3**	3216.200	49.21	-8.82	54.0	4.79	AV	39.00	150	Horizontal	Pass
4	4966.400	49.72	-3.53	74.0	24.28	Peak	46.00	300	Horizontal	Pass
4**	4966.400	40.43	-3.53	54.0	13.57	AV	46.00	300	Horizontal	Pass
5	6915.800	53.30	-0.29	74.0	20.70	Peak	204.00	400	Horizontal	Pass
5**	6915.800	43.64	-0.29	54.0	10.36	AV	204.00	400	Horizontal	Pass
6	16620.037	53.91	3.77	74.0	20.09	Peak	353.00	200	Horizontal	Pass
6**	16620.037	43.56	3.77	54.0	10.44	AV	353.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT VVHT20 Channel 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.900	43.84	-17.45	74.0	30.16	Peak	282.00	300	Vertical	Pass
1**	1328.900	32.66	-17.45	54.0	21.34	AV	282.00	300	Vertical	Pass
2	2415.600	95.49	-12.73	74.0	-21.49	Peak	330.00	200	Vertical	N/A
2**	2415.600	87.58	-12.73	54.0	-33.58	AV	330.00	200	Vertical	N/A
3	3216.400	43.45	-8.80	74.0	30.55	Peak	240.00	150	Vertical	Pass
3**	3216.400	38.86	-8.80	54.0	15.14	AV	240.00	150	Vertical	Pass
4	4897.600	49.53	-3.54	74.0	24.47	Peak	279.00	200	Vertical	Pass
4**	4897.600	39.70	-3.54	54.0	14.30	AV	279.00	200	Vertical	Pass
5	6958.800	52.55	-0.43	74.0	21.45	Peak	207.00	400	Vertical	Pass
5**	6958.800	44.19	-0.43	54.0	9.81	AV	207.00	400	Vertical	Pass
6	14820.338	54.04	5.03	74.0	19.96	Peak	29.00	200	Vertical	Pass
6**	14820.338	44.77	5.03	54.0	9.23	AV	29.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT20 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.000	42.33	-17.52	74.0	31.67	Peak	302.00	300	Horizontal	Pass
1**	1330.000	32.58	-17.52	54.0	21.42	AV	302.00	300	Horizontal	Pass
2	2438.700	107.62	-11.75	74.0	-33.62	Peak	282.00	100	Horizontal	N/A
2**	2438.700	99.72	-11.75	54.0	-45.72	AV	282.00	100	Horizontal	N/A
3	3249.400	53.06	-8.40	74.0	20.94	Peak	55.00	150	Horizontal	Pass
3**	3249.400	51.84	-8.40	54.0	2.16	AV	55.00	150	Horizontal	Pass
4	4876.400	49.82	-3.45	74.0	24.18	Peak	55.00	200	Horizontal	Pass
4**	4876.400	40.30	-3.45	54.0	13.70	AV	55.00	200	Horizontal	Pass
5	6999.000	52.88	-0.49	74.0	21.12	Peak	61.00	200	Horizontal	Pass
5**	6999.000	44.00	-0.49	54.0	10.00	AV	61.00	200	Horizontal	Pass
6	17999.999	56.39	9.27	74.0	17.61	Peak	241.00	150	Horizontal	Pass
6**	17999.999	48.21	9.27	54.0	5.79	AV	241.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT VVHT20 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.500	42.21	-17.49	74.0	31.79	Peak	70.00	300	Vertical	Pass
1**	1329.500	31.91	-17.49	54.0	22.09	AV	70.00	300	Vertical	Pass
2	2435.400	95.36	-11.87	74.0	-21.36	Peak	42.00	150	Vertical	N/A
2**	2435.400	87.73	-11.87	54.0	-33.73	AV	42.00	150	Vertical	N/A
3	3249.200	46.02	-8.42	74.0	27.98	Peak	292.00	150	Vertical	Pass
3**	3249.200	40.58	-8.42	54.0	13.42	AV	292.00	150	Vertical	Pass
4	4859.400	49.50	-3.26	74.0	24.50	Peak	150.00	200	Vertical	Pass
4**	4859.400	39.79	-3.26	54.0	14.21	AV	150.00	200	Vertical	Pass
5	6752.800	52.65	-1.05	74.0	21.35	Peak	236.00	200	Vertical	Pass
5**	6752.800	42.94	-1.05	54.0	11.06	AV	236.00	200	Vertical	Pass
6	15671.363	53.63	4.95	74.0	20.37	Peak	58.00	200	Vertical	Pass
6**	15671.363	44.73	4.95	54.0	9.27	AV	58.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT20 Channel 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.800	42.29	-17.51	74.0	31.71	Peak	169.00	400	Horizontal	Pass
1**	1329.800	31.85	-17.51	54.0	22.15	AV	169.00	400	Horizontal	Pass
2	2455.800	105.93	-12.58	74.0	-31.93	Peak	284.00	150	Horizontal	N/A
2**	2455.800	99.47	-12.58	54.0	-45.47	AV	284.00	150	Horizontal	N/A
3	3276.000	52.83	-8.49	74.0	21.17	Peak	50.00	150	Horizontal	Pass
3**	3276.000	51.59	-8.49	54.0	2.41	AV	50.00	150	Horizontal	Pass
4	4921.200	49.29	-3.53	74.0	24.71	Peak	42.00	100	Horizontal	Pass
4**	4921.200	40.01	-3.53	54.0	13.99	AV	42.00	100	Horizontal	Pass
5	6660.800	53.13	-1.05	74.0	20.87	Peak	145.00	300	Horizontal	Pass
5**	6660.800	43.29	-1.05	54.0	10.71	AV	145.00	300	Horizontal	Pass
6	15598.650	54.20	4.55	74.0	19.80	Peak	358.00	400	Horizontal	Pass
6**	15598.650	43.91	4.55	54.0	10.09	AV	358.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT VVHT20 Channel 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.800	43.94	-17.42	74.0	30.06	Peak	86.00	100	Vertical	Pass
1**	1327.800	33.48	-17.42	54.0	20.52	AV	86.00	100	Vertical	Pass
2	2454.800	93.79	-12.49	74.0	-19.79	Peak	73.00	200	Vertical	N/A
2**	2454.800	85.47	-12.49	54.0	-31.47	AV	73.00	200	Vertical	N/A
3	3276.400	44.16	-8.47	74.0	29.84	Peak	331.00	150	Vertical	Pass
3**	3276.400	39.80	-8.47	54.0	14.20	AV	331.00	150	Vertical	Pass
4	4923.200	49.45	-3.61	74.0	24.55	Peak	22.00	400	Vertical	Pass
4**	4923.200	39.61	-3.61	54.0	14.39	AV	22.00	400	Vertical	Pass
5	6946.200	53.07	-0.57	74.0	20.93	Peak	78.00	200	Vertical	Pass
5**	6946.200	43.56	-0.57	54.0	10.44	AV	78.00	200	Vertical	Pass
6	15607.050	53.65	4.55	74.0	20.35	Peak	196.00	100	Vertical	Pass
6**	15607.050	44.33	4.55	54.0	9.67	AV	196.00	100	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT20 Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1519.400	42.20	-17.51	74.0	31.80	Peak	17.00	400	Horizontal	Pass
1**	1519.400	31.63	-17.51	54.0	22.37	AV	17.00	400	Horizontal	Pass
2	2462.800	105.10	-12.78	74.0	-31.10	Peak	283.00	100	Horizontal	N/A
2**	2462.800	97.29	-12.78	54.0	-43.29	AV	283.00	100	Horizontal	N/A
3	3283.000	51.22	-8.33	74.0	22.78	Peak	47.00	150	Horizontal	Pass
3**	3283.000	50.87	-8.33	54.0	3.13	AV	47.00	150	Horizontal	Pass
4	4966.000	49.50	-3.54	74.0	24.50	Peak	173.00	400	Horizontal	Pass
4**	4966.000	40.18	-3.54	54.0	13.82	AV	173.00	400	Horizontal	Pass
5	6343.600	52.67	-1.48	74.0	21.33	Peak	315.00	100	Horizontal	Pass
5**	6343.600	42.53	-1.48	54.0	11.47	AV	315.00	100	Horizontal	Pass
6	17999.999	55.32	9.27	74.0	18.68	Peak	272.00	150	Horizontal	Pass
6**	17999.999	48.39	9.27	54.0	5.61	AV	272.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT VVHT20 Channel 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.300	44.84	-17.48	74.0	29.16	Peak	276.00	400	Vertical	Pass
1**	1329.300	31.76	-17.48	54.0	22.24	AV	276.00	400	Vertical	Pass
2	2463.500	93.48	-12.77	74.0	-19.48	Peak	116.00	150	Vertical	N/A
2**	2463.500	85.33	-12.77	54.0	-31.33	AV	116.00	150	Vertical	N/A
3	3282.800	44.72	-8.33	74.0	29.28	Peak	292.00	150	Vertical	Pass
3**	3282.800	39.78	-8.33	54.0	14.22	AV	292.00	150	Vertical	Pass
4	4967.200	49.19	-3.55	74.0	24.81	Peak	94.00	200	Vertical	Pass
4**	4967.200	40.07	-3.55	54.0	13.93	AV	94.00	200	Vertical	Pass
5	6935.800	52.96	-0.64	74.0	21.04	Peak	110.00	100	Vertical	Pass
5**	6935.800	43.74	-0.64	54.0	10.26	AV	110.00	100	Vertical	Pass
6	17999.999	55.11	9.27	74.0	18.89	Peak	164.00	150	Vertical	Pass
6**	17999.999	47.64	9.27	54.0	6.36	AV	164.00	150	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT40 Channel 3

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.000	43.66	-17.46	74.0	30.34	Peak	215.00	200	Horizontal	Pass
1**	1329.000	32.07	-17.46	54.0	21.93	AV	215.00	200	Horizontal	Pass
2	2419.800	101.71	-12.47	74.0	-27.71	Peak	23.00	200	Horizontal	N/A
2**	2419.800	94.69	-12.47	54.0	-40.69	AV	23.00	200	Horizontal	N/A
3	3229.600	46.09	-8.69	74.0	27.91	Peak	143.00	150	Horizontal	Pass
3**	3229.600	44.43	-8.69	54.0	9.57	AV	143.00	150	Horizontal	Pass
4	4984.800	49.59	-3.46	74.0	24.41	Peak	98.00	400	Horizontal	Pass
4**	4984.800	40.17	-3.46	54.0	13.83	AV	98.00	400	Horizontal	Pass
5	6952.000	52.46	-0.50	74.0	21.54	Peak	282.00	200	Horizontal	Pass
5**	6952.000	43.25	-0.50	54.0	10.75	AV	282.00	200	Horizontal	Pass
6	14825.062	54.06	4.94	74.0	19.94	Peak	174.00	100	Horizontal	Pass
6**	14825.062	44.59	4.94	54.0	9.41	AV	174.00	100	Horizontal	Pass

1 GHz to 18 GHz, ANT V VHT40 Channel 3

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.800	44.91	-17.63	74.0	29.09	Peak	4.00	200	Vertical	Pass
1**	1332.800	32.82	-17.63	54.0	21.18	AV	4.00	200	Vertical	Pass
2	2417.200	90.03	-12.66	74.0	-16.03	Peak	339.00	100	Vertical	N/A
2**	2417.200	82.70	-12.66	54.0	-28.70	AV	339.00	100	Vertical	N/A
3	2987.900	50.18	-9.99	74.0	23.82	Peak	359.00	200	Vertical	Pass
3**	2987.900	41.30	-9.99	54.0	12.70	AV	359.00	200	Vertical	Pass
4	4910.000	49.14	-3.44	74.0	24.86	Peak	280.00	400	Vertical	Pass
4**	4910.000	39.94	-3.44	54.0	14.06	AV	280.00	400	Vertical	Pass
5	6938.400	52.54	-0.65	74.0	21.46	Peak	99.00	400	Vertical	Pass
5**	6938.400	42.68	-0.65	54.0	11.32	AV	99.00	400	Vertical	Pass
6	16089.000	53.89	5.52	74.0	20.11	Peak	40.00	200	Vertical	Pass
6**	16089.000	44.86	5.52	54.0	9.14	AV	40.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT40 Channel 4

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1557.600	41.40	-17.58	74.0	32.60	Peak	348.00	200	Horizontal	Pass
1**	1557.600	31.80	-17.58	54.0	22.20	AV	348.00	200	Horizontal	Pass
2	2421.900	102.80	-12.30	74.0	-28.80	Peak	14.00	100	Horizontal	N/A
2**	2421.900	95.06	-12.30	54.0	-41.06	AV	14.00	100	Horizontal	N/A
3	3236.200	51.62	-8.83	74.0	22.38	Peak	135.00	150	Horizontal	Pass
3**	3236.200	50.80	-8.83	54.0	3.20	AV	135.00	150	Horizontal	Pass
4	4996.000	49.59	-3.32	74.0	24.41	Peak	4.00	400	Horizontal	Pass
4**	4996.000	40.13	-3.32	54.0	13.87	AV	4.00	400	Horizontal	Pass
5	6998.800	53.63	-0.48	74.0	20.37	Peak	170.00	100	Horizontal	Pass
5**	6998.800	43.22	-0.48	54.0	10.78	AV	170.00	100	Horizontal	Pass
6	16032.825	54.45	5.86	74.0	19.55	Peak	32.00	200	Horizontal	Pass
6**	16032.825	44.23	5.86	54.0	9.77	AV	32.00	200	Horizontal	Pass

1 GHz to 18 GHz, ANT V VHT40 Channel 4

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1595.400	41.80	-17.66	74.0	32.20	Peak	350.00	200	Vertical	Pass
1**	1595.400	34.53	-17.66	54.0	19.47	AV	350.00	200	Vertical	Pass
2	2429.100	92.47	-12.00	74.0	-18.47	Peak	350.00	100	Vertical	N/A
2**	2429.100	84.78	-12.00	54.0	-30.78	AV	350.00	100	Vertical	N/A
3	3236.000	43.70	-8.82	74.0	30.30	Peak	34.00	150	Vertical	Pass
3**	3236.000	41.50	-8.82	54.0	12.50	AV	34.00	150	Vertical	Pass
4	4946.200	50.40	-3.77	74.0	23.60	Peak	360.00	100	Vertical	Pass
4**	4946.200	40.85	-3.77	54.0	13.15	AV	360.00	100	Vertical	Pass
5	6991.800	52.56	-0.33	74.0	21.44	Peak	159.00	300	Vertical	Pass
5**	6991.800	43.85	-0.33	54.0	10.15	AV	159.00	300	Vertical	Pass
6	16054.875	53.80	5.92	74.0	20.20	Peak	359.00	200	Vertical	Pass
6**	16054.875	45.59	5.92	54.0	8.41	AV	359.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT40 Channel 5

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1305.900	42.62	-17.28	74.0	31.38	Peak	0.00	150	Horizontal	Pass
1**	1305.900	33.25	-17.28	54.0	20.75	AV	0.00	150	Horizontal	Pass
2	2434.700	104.27	-11.91	74.0	-30.27	Peak	285.00	150	Horizontal	N/A
2**	2434.700	96.63	-11.91	54.0	-42.63	AV	285.00	150	Horizontal	N/A
3	3242.800	52.33	-8.69	74.0	21.67	Peak	40.00	150	Horizontal	Pass
3**	3242.800	51.08	-8.69	54.0	2.92	AV	40.00	150	Horizontal	Pass
4	4967.400	50.06	-3.55	74.0	23.94	Peak	6.00	150	Horizontal	Pass
4**	4967.400	40.16	-3.55	54.0	13.84	AV	6.00	150	Horizontal	Pass
5	6765.200	53.23	-0.95	74.0	20.77	Peak	65.00	150	Horizontal	Pass
5**	6765.200	43.86	-0.95	54.0	10.14	AV	65.00	150	Horizontal	Pass
6	14763.375	53.70	4.86	74.0	20.30	Peak	360.00	150	Horizontal	Pass
6**	14763.375	44.71	4.86	54.0	9.29	AV	360.00	150	Horizontal	Pass

1 GHz to 18 GHz, ANT V VHT40 Channel 5

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.500	42.49	-17.55	74.0	31.51	Peak	329.00	200	Vertical	Pass
1**	1330.500	31.63	-17.55	54.0	22.37	AV	329.00	200	Vertical	Pass
2	2427.900	92.98	-11.97	74.0	-18.98	Peak	308.00	150	Vertical	N/A
2**	2427.900	84.63	-11.97	54.0	-30.63	AV	308.00	150	Vertical	N/A
3	3242.800	44.11	-8.69	74.0	29.89	Peak	289.00	150	Vertical	Pass
3**	3242.800	40.29	-8.69	54.0	13.71	AV	289.00	150	Vertical	Pass
4	4857.400	49.60	-3.21	74.0	24.40	Peak	330.00	100	Vertical	Pass
4**	4857.400	40.91	-3.21	54.0	13.09	AV	330.00	100	Vertical	Pass
5	6991.600	52.68	-0.33	74.0	21.32	Peak	73.00	300	Vertical	Pass
5**	6991.600	43.84	-0.33	54.0	10.16	AV	73.00	300	Vertical	Pass
6	16080.075	53.93	5.43	74.0	20.07	Peak	360.00	400	Vertical	Pass
6**	16080.075	44.30	5.43	54.0	9.70	AV	360.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT40 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.500	41.90	-17.55	74.0	32.10	Peak	70.00	200	Horizontal	Pass
1**	1330.500	32.06	-17.55	54.0	21.94	AV	70.00	200	Horizontal	Pass
2	2433.900	103.39	-11.97	74.0	-29.39	Peak	0.00	150	Horizontal	N/A
2**	2433.900	95.00	-11.97	54.0	-41.00	AV	0.00	150	Horizontal	N/A
3	3249.600	52.73	-8.39	74.0	21.27	Peak	125.00	150	Horizontal	Pass
3**	3249.600	51.78	-8.39	54.0	2.22	AV	125.00	150	Horizontal	Pass
4	4828.800	49.60	-3.41	74.0	24.40	Peak	250.00	200	Horizontal	Pass
4**	4828.800	39.89	-3.41	54.0	14.11	AV	250.00	200	Horizontal	Pass
5	6989.400	52.22	-0.41	74.0	21.78	Peak	329.00	400	Horizontal	Pass
5**	6989.400	44.91	-0.41	54.0	9.09	AV	329.00	400	Horizontal	Pass
6	16249.388	53.36	5.54	74.0	20.64	Peak	208.00	300	Horizontal	Pass
6**	16249.388	44.91	5.54	54.0	9.09	AV	208.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V VHT40 Channel 6

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.000	43.46	-17.61	74.0	30.54	Peak	270.00	100	Vertical	Pass
1**	1332.000	32.05	-17.61	54.0	21.95	AV	270.00	100	Vertical	Pass
2	2441.800	92.91	-11.74	74.0	-18.91	Peak	289.00	200	Vertical	N/A
2**	2441.800	86.42	-11.74	54.0	-32.42	AV	289.00	200	Vertical	N/A
3	3249.600	44.30	-8.39	74.0	29.70	Peak	330.00	150	Vertical	Pass
3**	3249.600	40.78	-8.39	54.0	13.22	AV	330.00	150	Vertical	Pass
4	4883.000	49.90	-3.60	74.0	24.10	Peak	229.00	100	Vertical	Pass
4**	4883.000	39.59	-3.60	54.0	14.41	AV	229.00	100	Vertical	Pass
5	6763.000	52.89	-0.99	74.0	21.11	Peak	319.00	100	Vertical	Pass
5**	6763.000	42.16	-0.99	54.0	11.84	AV	319.00	100	Vertical	Pass
6	15614.925	53.94	4.60	74.0	20.06	Peak	297.00	400	Vertical	Pass
6**	15614.925	44.76	4.60	54.0	9.24	AV	297.00	400	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT40 Channel 8

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1339.500	41.59	-17.48	74.0	32.41	Peak	320.00	200	Horizontal	Pass
1**	1339.500	31.29	-17.48	54.0	22.71	AV	320.00	200	Horizontal	Pass
2	2442.800	103.55	-11.70	74.0	-29.55	Peak	235.00	150	Horizontal	N/A
2**	2442.800	94.96	-11.70	54.0	-40.96	AV	235.00	150	Horizontal	N/A
3	3263.000	52.02	-8.33	74.0	21.98	Peak	132.00	150	Horizontal	Pass
3**	3263.000	51.33	-8.33	54.0	2.67	AV	132.00	150	Horizontal	Pass
4	4962.000	49.39	-3.59	74.0	24.61	Peak	19.00	400	Horizontal	Pass
4**	4962.000	40.09	-3.59	54.0	13.91	AV	19.00	400	Horizontal	Pass
5	6895.800	53.20	-0.41	74.0	20.80	Peak	360.00	400	Horizontal	Pass
5**	6895.800	43.88	-0.41	54.0	10.12	AV	360.00	400	Horizontal	Pass
6	14879.662	53.37	4.60	74.0	20.63	Peak	360.00	400	Horizontal	Pass
6**	14879.662	43.24	4.60	54.0	10.76	AV	360.00	400	Horizontal	Pass

1 GHz to 18 GHz, ANT V VHT40 Channel 8

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.200	41.62	-17.40	74.0	32.38	Peak	263.00	400	Vertical	Pass
1**	1328.200	31.89	-17.40	54.0	22.11	AV	263.00	400	Vertical	Pass
2	2442.000	93.84	-11.73	74.0	-19.84	Peak	291.00	100	Vertical	N/A
2**	2442.000	85.32	-11.73	54.0	-31.32	AV	291.00	100	Vertical	N/A
3	3263.000	43.39	-8.33	74.0	30.61	Peak	327.00	150	Vertical	Pass
3**	3263.000	40.29	-8.33	54.0	13.71	AV	327.00	150	Vertical	Pass
4	4315.400	49.31	-4.76	74.0	24.69	Peak	238.00	150	Vertical	Pass
4**	4315.400	38.39	-4.76	54.0	15.61	AV	238.00	150	Vertical	Pass
5	6892.000	52.73	-0.49	74.0	21.27	Peak	318.00	200	Vertical	Pass
5**	6892.000	43.07	-0.49	54.0	10.93	AV	318.00	200	Vertical	Pass
6	15612.562	54.37	4.57	74.0	19.63	Peak	122.00	200	Vertical	Pass
6**	15612.562	44.56	4.57	54.0	9.44	AV	122.00	200	Vertical	Pass

1 GHz to 18 GHz, ANT H VHT40 Channel 9

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1394.600	42.08	-17.34	74.0	31.92	Peak	1.00	200	Horizontal	Pass
1**	1394.600	31.97	-17.34	54.0	22.03	AV	1.00	200	Horizontal	Pass
2	2459.300	99.50	-12.74	74.0	-25.50	Peak	12.00	100	Horizontal	N/A
2**	2459.300	91.57	-12.74	54.0	-37.57	AV	12.00	100	Horizontal	N/A
3	3276.200	48.40	-8.48	74.0	25.60	Peak	147.00	150	Horizontal	Pass
3**	3276.200	45.98	-8.48	54.0	8.02	AV	147.00	150	Horizontal	Pass
4	5005.200	49.16	-3.18	74.0	24.84	Peak	112.00	150	Horizontal	Pass
4**	5005.200	39.95	-3.18	54.0	14.05	AV	112.00	150	Horizontal	Pass
5	6958.000	52.65	-0.44	74.0	21.35	Peak	147.00	100	Horizontal	Pass
5**	6958.000	43.63	-0.44	54.0	10.37	AV	147.00	100	Horizontal	Pass
6	16571.475	54.14	4.48	74.0	19.86	Peak	341.00	300	Horizontal	Pass
6**	16571.475	43.61	4.48	54.0	10.39	AV	341.00	300	Horizontal	Pass

1 GHz to 18 GHz, ANT V VHT40 Channel 9

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.300	43.18	-17.62	74.0	30.82	Peak	279.00	100	Vertical	Pass
1**	1332.300	32.05	-17.62	54.0	21.95	AV	279.00	100	Vertical	Pass
2	2454.800	90.24	-12.49	74.0	-16.24	Peak	298.00	200	Vertical	N/A
2**	2454.800	82.56	-12.49	54.0	-28.56	AV	298.00	200	Vertical	N/A
3	2962.600	50.09	-10.27	74.0	23.91	Peak	359.00	100	Vertical	Pass
3**	2962.600	40.72	-10.27	54.0	13.28	AV	359.00	100	Vertical	Pass
4	4818.800	49.31	-3.49	74.0	24.69	Peak	360.00	100	Vertical	Pass
4**	4818.800	39.64	-3.49	54.0	14.36	AV	360.00	100	Vertical	Pass
5	6938.800	52.34	-0.64	74.0	21.66	Peak	16.00	100	Vertical	Pass
5**	6938.800	42.46	-0.64	54.0	11.54	AV	16.00	100	Vertical	Pass
6	15470.287	53.99	4.82	74.0	20.01	Peak	34.00	100	Vertical	Pass
6**	15470.287	43.79	4.82	54.0	10.21	AV	34.00	100	Vertical	Pass

A.7 Band Edge (Restricted-band band-edge)

Note ¹: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note ³: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Test Data and Plots

802.11b CHANNEL 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2359.500	55.24	-0.67	74.0	18.76	Peak	318.00	100	Horizontal	Pass
1**	2359.500	42.90	-0.67	54.0	11.10	AV	318.00	100	Horizontal	Pass
2	2390.000	53.77	-1.15	74.0	20.23	Peak	233.00	400	Horizontal	Pass
2**	2390.000	43.06	-1.15	54.0	10.94	AV	233.00	400	Horizontal	Pass

802.11b CHANNEL 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	55.04	-0.51	74.0	18.96	Peak	13.00	300	Horizontal	Pass
1**	2483.500	44.43	-0.51	54.0	9.57	AV	13.00	300	Horizontal	Pass
2	2483.850	55.49	-0.50	74.0	18.51	Peak	357.00	100	Horizontal	Pass
2**	2483.850	44.11	-0.50	54.0	9.89	AV	357.00	100	Horizontal	Pass
3	2483.550	54.63	-0.51	74.0	19.37	Peak	264.00	300	Horizontal	Pass
3**	2483.550	44.68	-0.51	54.0	9.32	AV	264.00	300	Horizontal	Pass

802.11g CHANNEL 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.833	62.09	-1.15	74.0	11.91	Peak	8.00	150	Horizontal	Pass
1**	2389.833	48.53	-1.15	54.0	5.47	AV	8.00	150	Horizontal	Pass
2	2390.000	61.72	-1.15	74.0	12.28	Peak	8.00	150	Horizontal	Pass
2**	2390.000	48.61	-1.15	54.0	5.39	AV	8.00	150	Horizontal	Pass

802.11g CHANNEL 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.550	56.22	-0.51	74.0	17.78	Peak	284.00	100	Horizontal	Pass
1**	2483.550	45.94	-0.51	54.0	8.06	AV	284.00	100	Horizontal	Pass
2	2486.400	57.52	-0.75	74.0	16.48	Peak	287.00	200	Horizontal	Pass
2**	2486.400	45.40	-0.75	54.0	8.60	AV	287.00	200	Horizontal	Pass

802.11g CHANNEL 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.550	57.09	-0.51	74.0	16.91	Peak	13.00	300	Horizontal	Pass
1**	2483.550	46.38	-0.51	54.0	7.62	AV	13.00	300	Horizontal	Pass
2	2497.700	57.45	-0.54	74.0	16.55	Peak	328.00	300	Horizontal	Pass
2**	2497.700	43.81	-0.54	54.0	10.19	AV	328.00	300	Horizontal	Pass
3	2483.800	56.67	-0.51	74.0	17.33	Peak	237.00	300	Horizontal	Pass
3**	2483.800	46.43	-0.51	54.0	7.57	AV	237.00	300	Horizontal	Pass

802.11n20 CHANNEL 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.667	60.70	-1.15	74.0	13.30	Peak	11.00	100	Horizontal	Pass
1**	2389.667	48.81	-1.15	54.0	5.19	AV	11.00	100	Horizontal	Pass
2	2390.000	60.50	-1.15	74.0	13.50	Peak	18.00	150	Horizontal	Pass
2**	2390.000	48.93	-1.15	54.0	5.07	AV	18.00	150	Horizontal	Pass

802.11n20 CHANNEL 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.550	56.34	-0.51	74.0	17.66	Peak	271.00	100	Horizontal	Pass
1**	2483.550	46.22	-0.51	54.0	7.78	AV	271.00	100	Horizontal	Pass
2	2486.150	57.43	-0.73	74.0	16.57	Peak	290.00	400	Horizontal	Pass
2**	2486.150	45.74	-0.73	54.0	8.26	AV	290.00	400	Horizontal	Pass

802.11n20 CHANNEL 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.550	57.87	-0.51	74.0	16.13	Peak	233.00	400	Horizontal	Pass
1**	2483.550	46.83	-0.51	54.0	7.17	AV	233.00	400	Horizontal	Pass
2	2483.800	56.50	-0.51	74.0	17.50	Peak	235.00	200	Horizontal	Pass
2**	2483.800	46.91	-0.51	54.0	7.09	AV	235.00	200	Horizontal	Pass

802.11n40 CHANNEL 3

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.500	57.68	-1.15	74.0	16.32	Peak	31.00	300	Horizontal	Pass
1**	2389.500	46.81	-1.15	54.0	7.19	AV	31.00	300	Horizontal	Pass
2	2390.000	57.35	-1.15	74.0	16.65	Peak	27.00	100	Horizontal	Pass
2**	2390.000	47.33	-1.15	54.0	6.67	AV	27.00	100	Horizontal	Pass

802.11n40 CHANNEL 4

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2388.500	62.72	-1.15	74.0	11.28	Peak	143.00	400	Horizontal	Pass
1**	2388.500	50.28	-1.15	54.0	3.72	AV	143.00	400	Horizontal	Pass
2	2389.833	62.07	-1.15	74.0	11.93	Peak	287.00	300	Horizontal	Pass
2**	2389.833	51.88	-1.15	54.0	2.12	AV	287.00	300	Horizontal	Pass

802.11n40 CHANNEL 8

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.550	56.77	-0.51	74.0	17.23	Peak	284.00	300	Horizontal	Pass
1**	2483.550	47.32	-0.51	54.0	6.68	AV	284.00	300	Horizontal	Pass
2	2486.600	58.75	-0.74	74.0	15.25	Peak	279.00	200	Horizontal	Pass
2**	2486.600	46.77	-0.74	54.0	7.23	AV	279.00	200	Horizontal	Pass

802.11n40 CHANNEL 9

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	55.04	-0.51	74.0	18.96	Peak	64.00	200	Horizontal	Pass
1**	2483.500	44.22	-0.51	54.0	9.78	AV	64.00	200	Horizontal	Pass
2	2484.100	56.70	-0.50	74.0	17.30	Peak	220.00	400	Horizontal	Pass
2**	2484.100	44.32	-0.50	54.0	9.68	AV	220.00	400	Horizontal	Pass
3	2484.050	54.56	-0.50	74.0	19.44	Peak	360.00	150	Horizontal	Pass
3**	2484.050	44.56	-0.50	54.0	9.44	AV	360.00	150	Horizontal	Pass

VHT20 CHANNEL 1

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.167	60.00	-1.16	74.0	14.00	Peak	274.00	100	Horizontal	Pass
1**	2389.167	47.00	-1.16	54.0	7.00	AV	274.00	100	Horizontal	Pass
2	2390.000	59.29	-1.15	74.0	14.71	Peak	0.00	300	Horizontal	Pass
2**	2390.000	48.57	-1.15	54.0	5.43	AV	0.00	300	Horizontal	Pass

VHT20 CHANNEL 10

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	56.13	-0.51	74.0	17.87	Peak	275.00	200	Horizontal	Pass
1**	2483.500	45.68	-0.51	54.0	8.32	AV	275.00	200	Horizontal	Pass
2	2484.950	57.40	-0.59	74.0	16.60	Peak	280.00	300	Horizontal	Pass
2**	2484.950	45.45	-0.59	54.0	8.55	AV	280.00	300	Horizontal	Pass

VHT20 CHANNEL 11

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	58.11	-0.51	74.0	15.89	Peak	235.00	300	Horizontal	Pass
1**	2483.500	46.91	-0.51	54.0	7.09	AV	235.00	300	Horizontal	Pass
2	2483.650	58.49	-0.51	74.0	15.51	Peak	0.00	100	Horizontal	Pass
2**	2483.650	47.06	-0.51	54.0	6.94	AV	0.00	100	Horizontal	Pass
3	2483.600	58.09	-0.51	74.0	15.91	Peak	21.00	100	Horizontal	Pass
3**	2483.600	47.31	-0.51	54.0	6.69	AV	21.00	100	Horizontal	Pass

VHT40 CHANNEL 3

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.167	58.14	-1.16	74.0	15.86	Peak	33.00	200	Horizontal	Pass
1**	2389.167	46.70	-1.16	54.0	7.30	AV	33.00	200	Horizontal	Pass
2	2390.000	57.67	-1.15	74.0	16.33	Peak	8.00	100	Horizontal	Pass
2**	2390.000	47.00	-1.15	54.0	7.00	AV	8.00	100	Horizontal	Pass
3	2389.500	57.30	-1.15	74.0	16.70	Peak	4.00	150	Horizontal	Pass
3**	2389.500	47.22	-1.15	54.0	6.78	AV	4.00	150	Horizontal	Pass

VHT40 CHANNEL 4

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.500	62.24	-1.15	74.0	11.76	Peak	285.00	300	Horizontal	Pass
1**	2389.500	51.17	-1.15	54.0	2.83	AV	285.00	300	Horizontal	Pass
2	2389.833	61.57	-1.15	74.0	12.43	Peak	285.00	300	Horizontal	Pass
2**	2389.833	51.47	-1.15	54.0	2.53	AV	285.00	300	Horizontal	Pass

VHT40 CHANNEL 8

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.550	56.91	-0.51	74.0	17.09	Peak	277.00	100	Horizontal	Pass
1**	2483.550	47.75	-0.51	54.0	6.25	AV	277.00	100	Horizontal	Pass
2	2486.500	59.08	-0.74	74.0	14.92	Peak	280.00	400	Horizontal	Pass
2**	2486.500	46.72	-0.74	54.0	7.28	AV	280.00	400	Horizontal	Pass

VHT40 CHANNEL 9

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	54.20	-0.51	74.0	19.80	Peak	68.00	300	Horizontal	Pass
1**	2483.500	44.13	-0.51	54.0	9.87	AV	68.00	300	Horizontal	Pass
2	2483.900	55.58	-0.50	74.0	18.42	Peak	227.00	300	Horizontal	Pass
2**	2483.900	43.94	-0.50	54.0	10.06	AV	227.00	300	Horizontal	Pass
3	2484.550	54.14	-0.54	74.0	19.86	Peak	205.00	150	Horizontal	Pass
3**	2484.550	44.21	-0.54	54.0	9.79	AV	205.00	150	Horizontal	Pass

A.8 Power Spectral Density (PSD)

Test Data

802.11b Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
CH1	-3.34	8
CH6	-4.53	8
CH11	-3.56	8

802.11g Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
CH1	-5.38	8
CH6	-7.89	8
CH11	-8.72	8

802.11n-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
CH1	-8.84	8
CH6	-8.61	8
CH11	-9.59	8

802.11n-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
CH1	-14.03	8
CH6	-11.23	8
CH11	-16.18	8

VHT-20 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
CH1	-9.02	8
CH6	-8.67	8
CH11	-10.01	8

VHT-40 MHz Mode:

Channel	Spectral power density (dBm/3kHz)	Limit (dBm/3kHz)
CH1	-13.94	8
CH6	-12.23	8
CH11	-16.23	8

Test Plots

802.11b CHANNEL 1



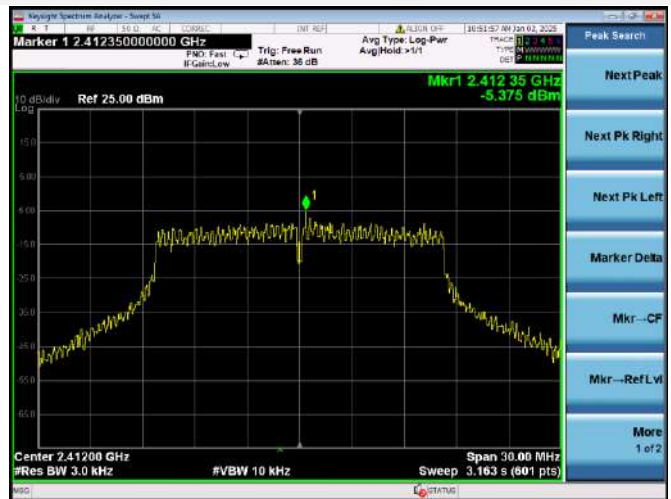
802.11b CHANNEL 6



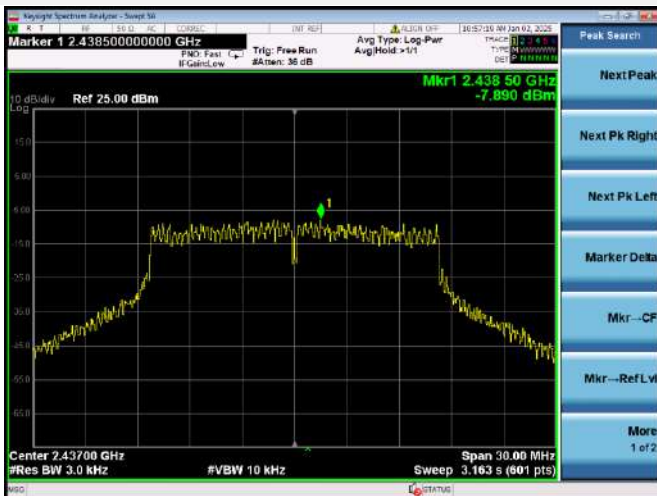
802.11b CHANNEL 11



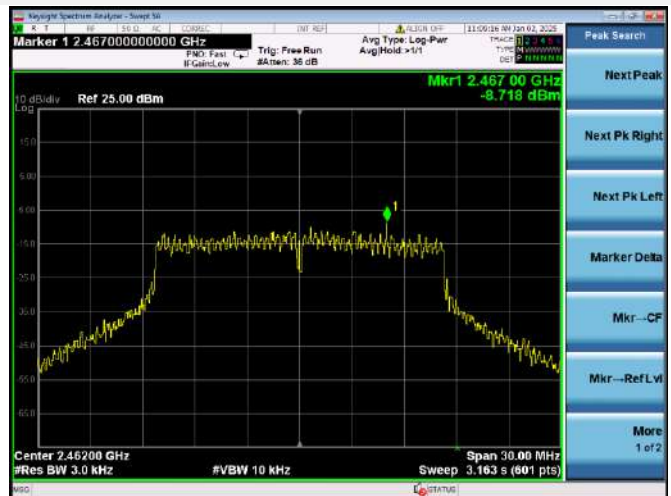
802.11g CHANNEL 1



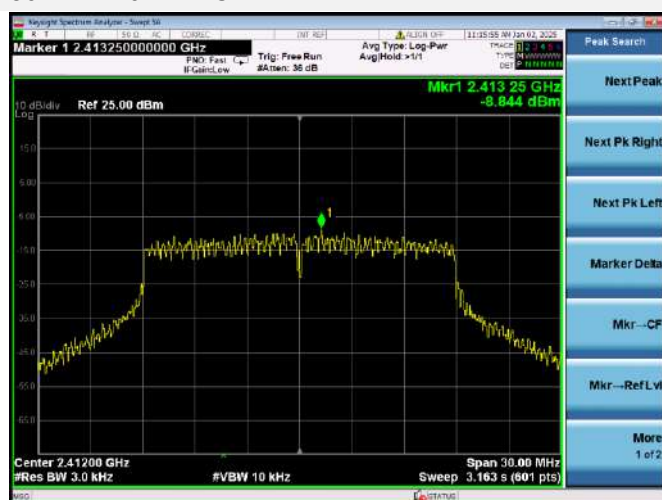
802.11g CHANNEL 6



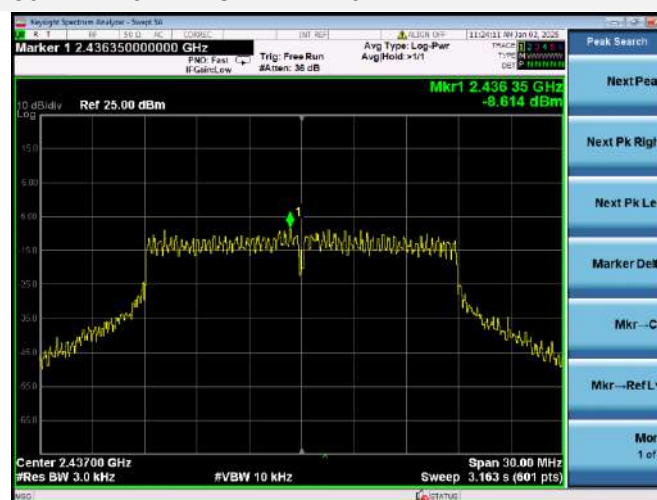
802.11g CHANNEL 11



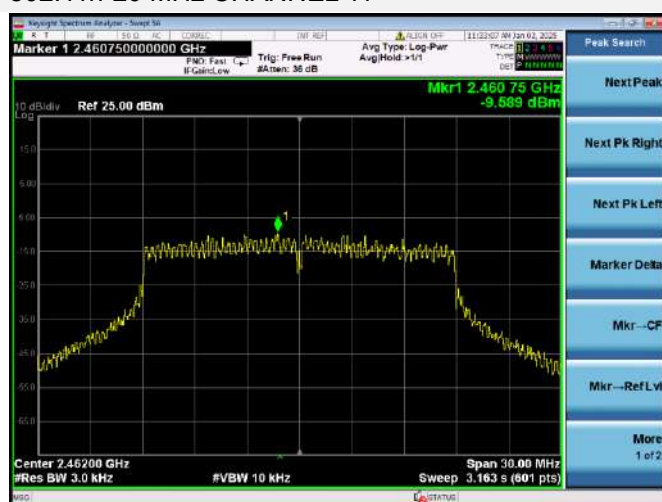
802.11n-20 MHz CHANNEL 1



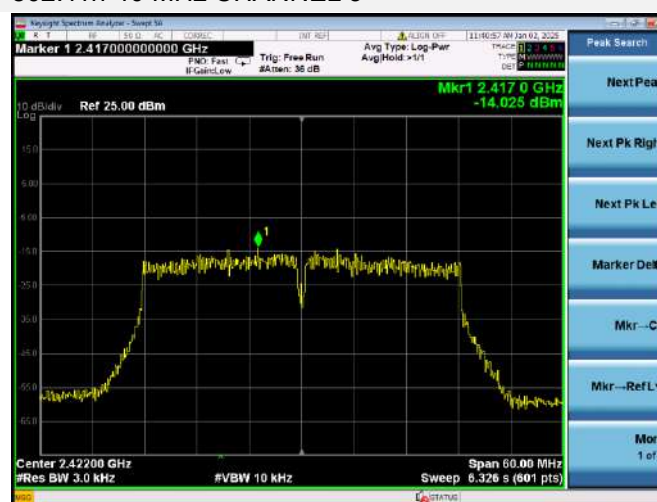
802.11n-20 MHz CHANNEL 6



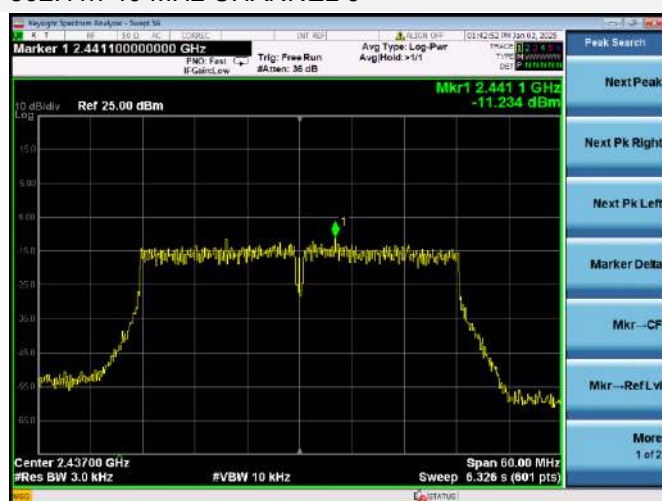
802.11n-20 MHz CHANNEL 11



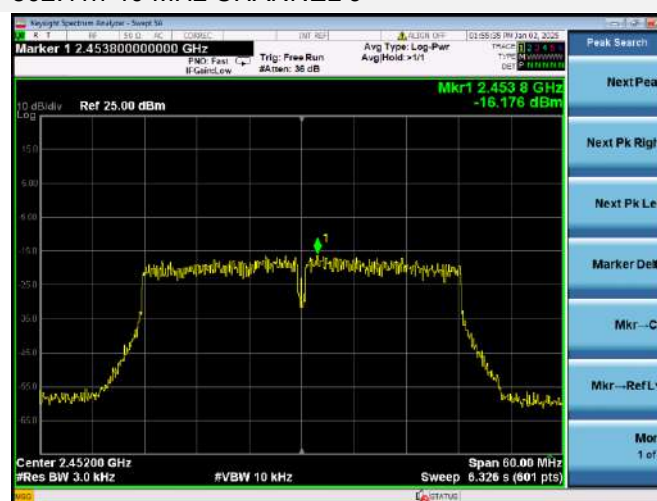
802.11n-40 MHz CHANNEL 3



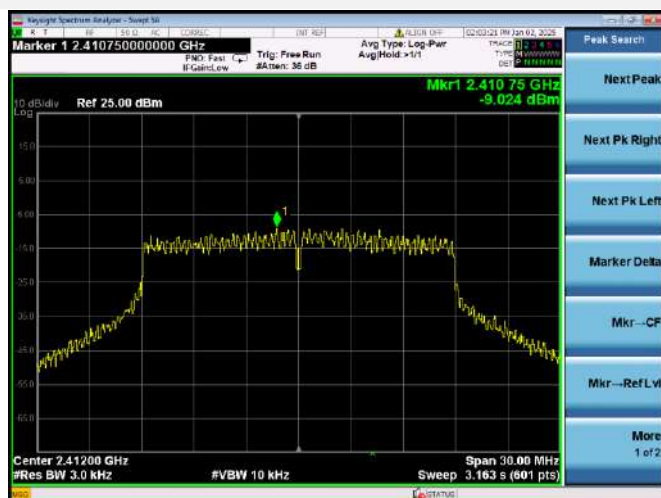
802.11n-40 MHz CHANNEL 6



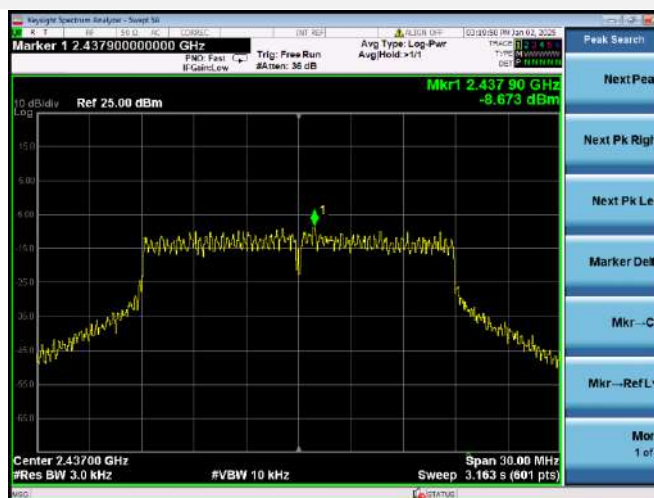
802.11n-40 MHz CHANNEL 9



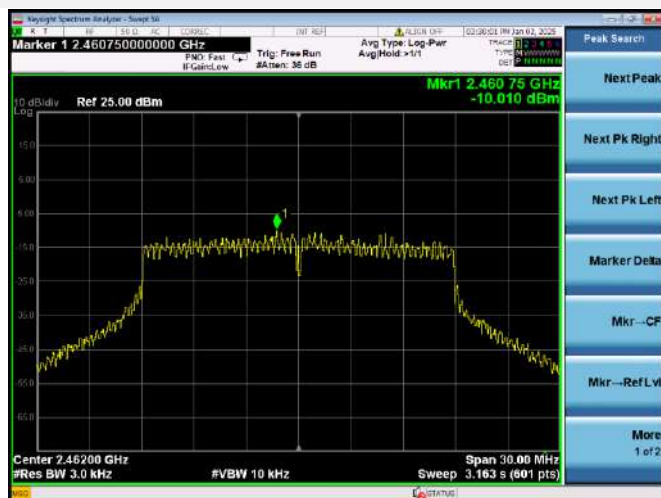
VHT-20 MHz CHANNEL 1



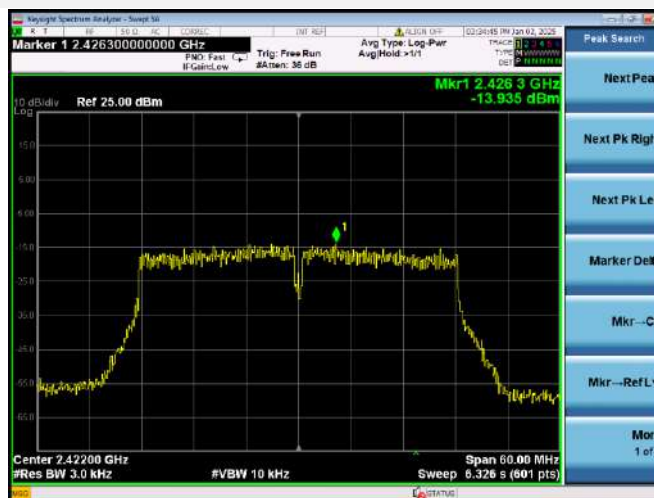
VHT-20 MHz CHANNEL 6



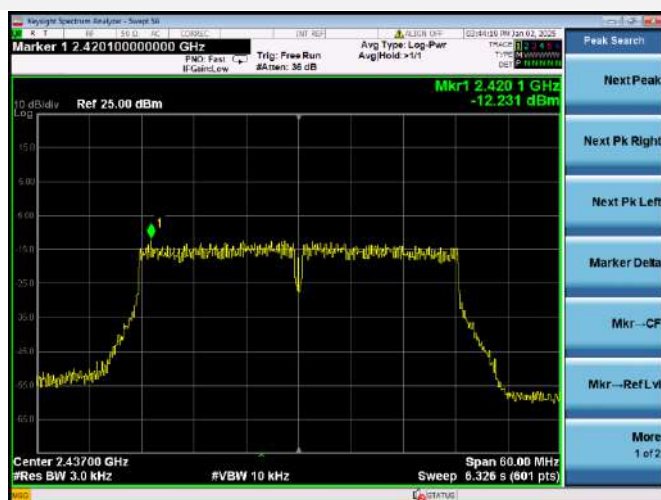
VHT-20 MHz CHANNEL 11



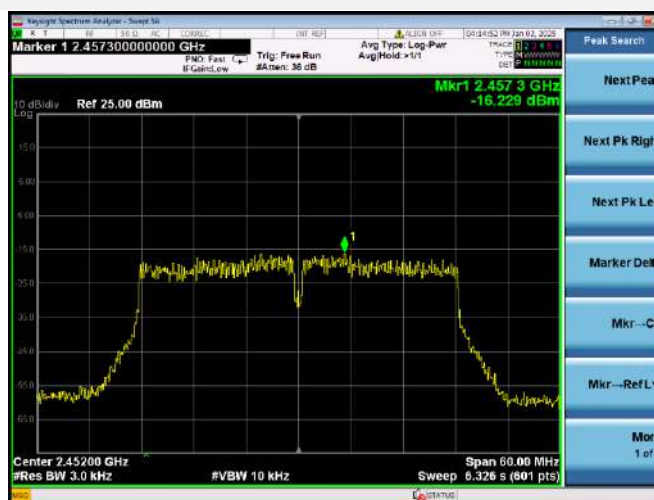
VHT-40 MHz CHANNEL 3



VHT-40 MHz CHANNEL 6



VHT-40 MHz CHANNEL 11



ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ24C1475-AR-2.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ24C1475-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ24C1475-AI.PDF”.

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