

TEST REPORT

Applicant: Balco Brands Pty Ltd
Address: C/ Siemens Building Ground Floor 885 Mountain Hwy, Bayswater Victoria 3153 Australia
Equipment Type: Smart pan & tilt camera
Model Name: CE260007
Brand Name: BAUHN
FCC ID: 2BNW2-CE260007
Test Standard: 47 CFR Part 15 Subpart C (refer to section 3.1)
Sample Arrival Date: May 06, 2026
Test Date: May 08, 2026 - May 12, 2026
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ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.



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Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>May 27, 2026</u>	<u>Initial Issue</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION	4
1.1	Test Laboratory	4
1.2	Test Location	4
2	PRODUCT INFORMATION	5
2.1	Applicant Information	5
2.2	Manufacturer Information	5
2.3	General Description for Equipment under Test (EUT)	5
2.4	Technical Information	6
2.5	Channel List	7
3	SUMMARY OF TEST RESULTS	8
3.1	Test Standards	8
3.2	Test Verdict	8
4	GENERAL TEST CONFIGURATIONS	9
4.1	Test Environments	9
4.2	Test Equipment List	9
4.3	Test Software List	9
4.4	Measurement Uncertainty	10
4.5	Description of Test Setup	10
4.6	Measurement Results Explanation Example	13
5	TEST ITEMS	14
5.1	Antenna Requirements	14
5.2	Output Power	15
5.3	Occupied Bandwidth	17
5.4	Conducted Spurious Emission	19

5.5	Band Edge (Authorized-band band-edge).....	21
5.6	Conducted Emission.....	23
5.7	Radiated Spurious Emission.....	24
5.8	Band Edge (Restricted-band band-edge).....	29
5.9	Power Spectral density (PSD)	32
ANNEX A	TEST RESULT	33
A.1	Output Power	33
A.2	Occupied Bandwidth.....	35
A.3	Conducted Spurious Emissions	40
A.4	Band Edge (Authorized-band band-edge).....	47
A.5	Conducted Emissions	50
A.6	Radiated Emission.....	52
A.7	Band Edge (Restricted-band band-edge).....	64
A.8	Power Spectral Density (PSD).....	67
ANNEX B	TEST SETUP PHOTOS	70
ANNEX C	EUT EXTERNAL PHOTOS.....	70
ANNEX D	EUT INTERNAL PHOTOS.....	70

1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	601, Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong
	☐ 1/F., Building B, Ganghongji High-Tech Intelligent Industrial Park, No.1008, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong
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	Balco Brands Pty Ltd
Address	C/ Siemens Building Ground Floor 885 Mountain Hwy, Bayswater Victoria 3153 Australia

2.2 Manufacturer Information

Manufacturer	N/A
Address	N/A

2.3 General Description for Equipment under Test (EUT)

EUT Name	Smart pan & tilt camera
Model Name Under Test	CE260007
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	v1.0
Software Version	v8.7.101
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	WIFI 802.11b, 802.11g and 802.11n
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The requirement for the following technical information of the EUT was tested in this report:

Frequency Range	2.400 GHz - 2.4835 GHz
Modulation Technology	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	PCB Antenna
Antenna Gain	1.5 dBi (In test items related to antenna gain, the final results reflect this figure. This value is provided by the applicant.)
About the Product	Only the WIFI 802.11b, 802.11g and 802.11n (HT20) was tested in this report.

2.5 Channel List

20 MHz	
Channel Number	Frequency (MHz)
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

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 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

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	1/6/6.5 Mbps	1/6/11
Occupied Bandwidth	11b/11g/11n20	1/6/6.5 Mbps	1/6/11
Conducted Spurious Emission	11b/11g/11n20	1/6/6.5 Mbps	1/6/11
Conducted Emission	11b/11g/11n20	1/6/6.5 Mbps	1/6/11
Radiated Spurious Emission	11b/11g/11n20	1/6/6.5 Mbps	1/6/11
Band Edge	11b/11g/11n20	1/6/6.5 Mbps	1/6/11
Power spectral density (PSD)	11b/11g/11n20	1/6/6.5 Mbps	1/6/11

Note: The above EUT information in section 2.5 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 C63.10-2020	American National Standard for 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: 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	47% to 63%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.1℃ to +23.4℃
Working Voltage of the EUT	NV (Normal Voltage)	5 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	MY50330200	2026.03.24	2027.03.23
Power Sensor	KEYSIGHT	U2063XA	MY58000247	2025.06.16	2026.06.15
Signaling Unit	ROHDE&SCHWARZ	CMW500	171150	2026.03.24	2027.03.23
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	01631	2025.02.22	2028.02.21
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	144	2025.01.04	2028.01.03
Amplifier	COM-MV	LSCX_LNA1-12G-01	180602	2025.06.17	2026.06.16
Amplifier	COM-MV	XKu_LNA7-18G-01	180601	2025.06.17	2026.06.16
EMI Receiver	KEYSIGHT	N9010B	MY57110309	2025.06.16	2026.06.15
LISN	SCHWARZBECK	NSLK 8127	8127-687	2026.03.25	2027.03.24
Shielded Enclosure	YiHeng Electronic Co., Ltd	3.5m*3.1m*2.8m	112	2025.02.14	2028.02.13
EMI Receiver	KEYSIGHT	N9038A	MY53220118	2025.06.16	2026.06.15
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9163	9163-624	2024.07.06	2027.07.05
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30-1000M	B2017119082	2025.11.26	2026.11.25
Anechoic Chamber	RAINFORD	9m*6m*6m	101	2026.01.09	2029.01.08

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%

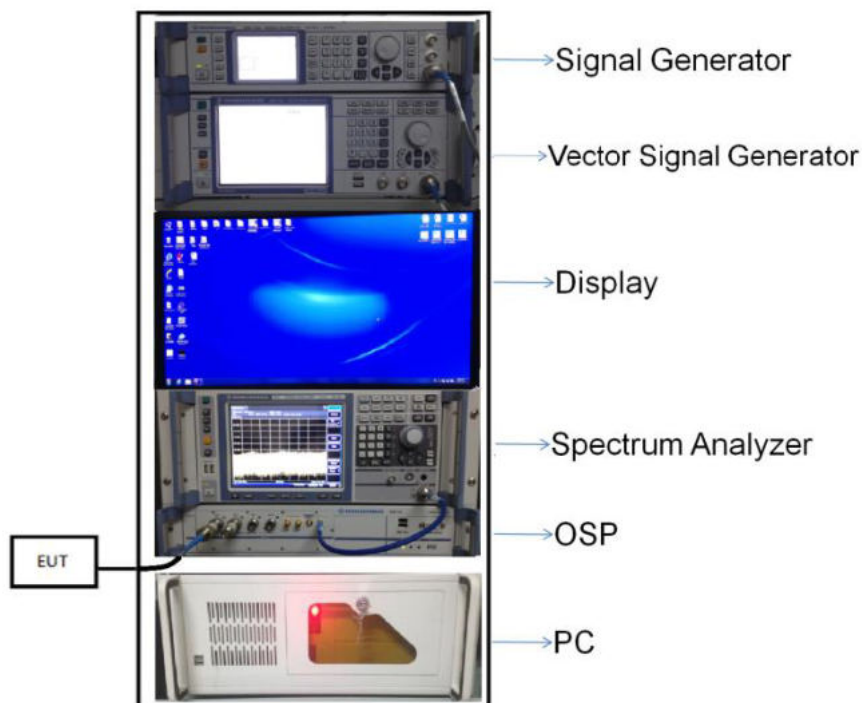
4.5 Description of Test Setup

4.5.1 For Antenna Port Test

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

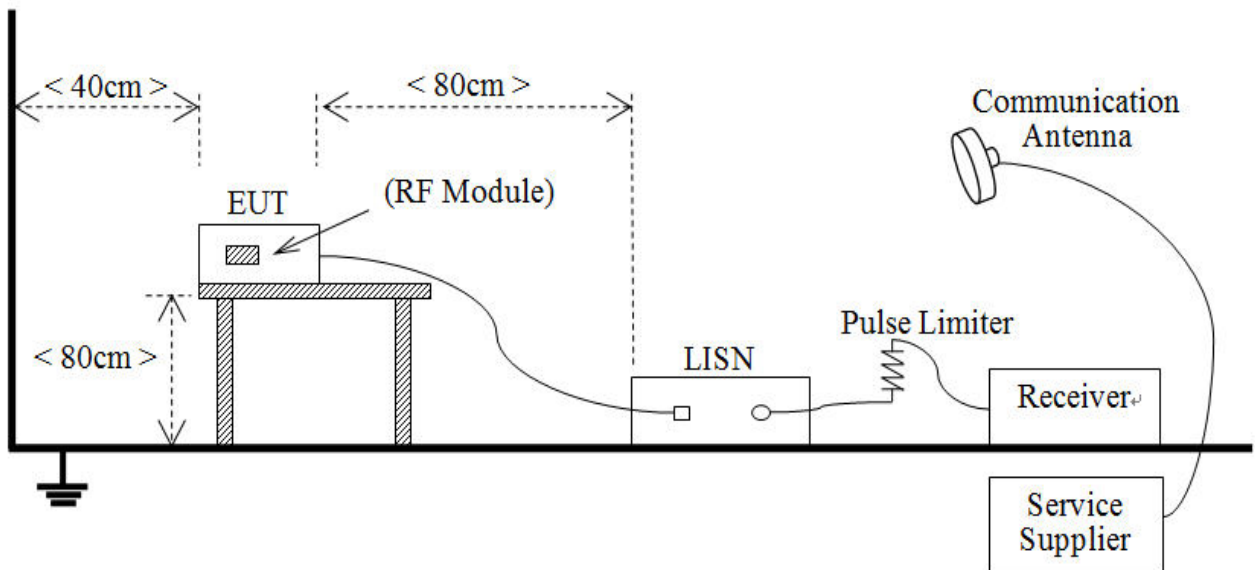
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

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



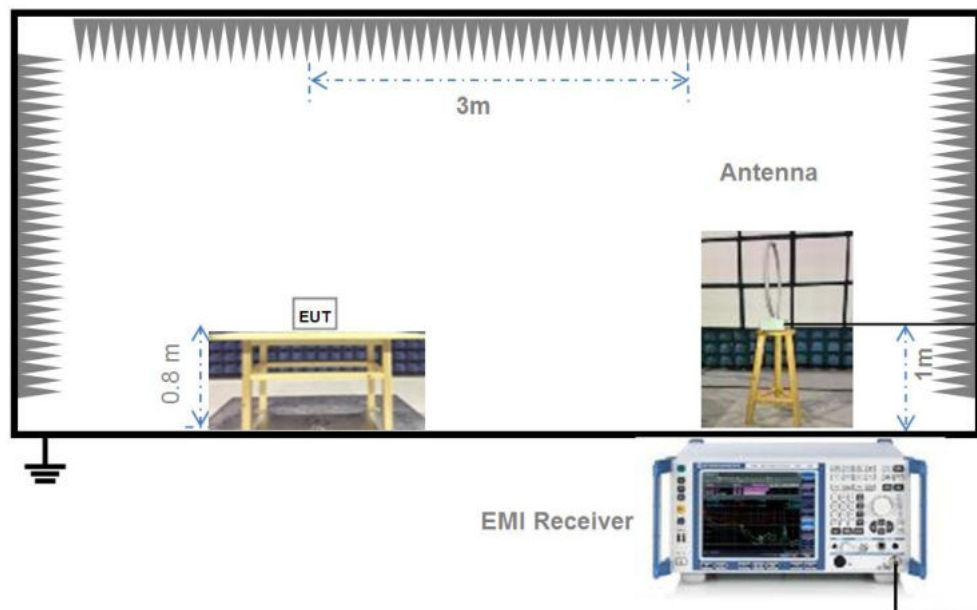
(Diagram 1)

4.5.2 For AC Power Supply Port Test



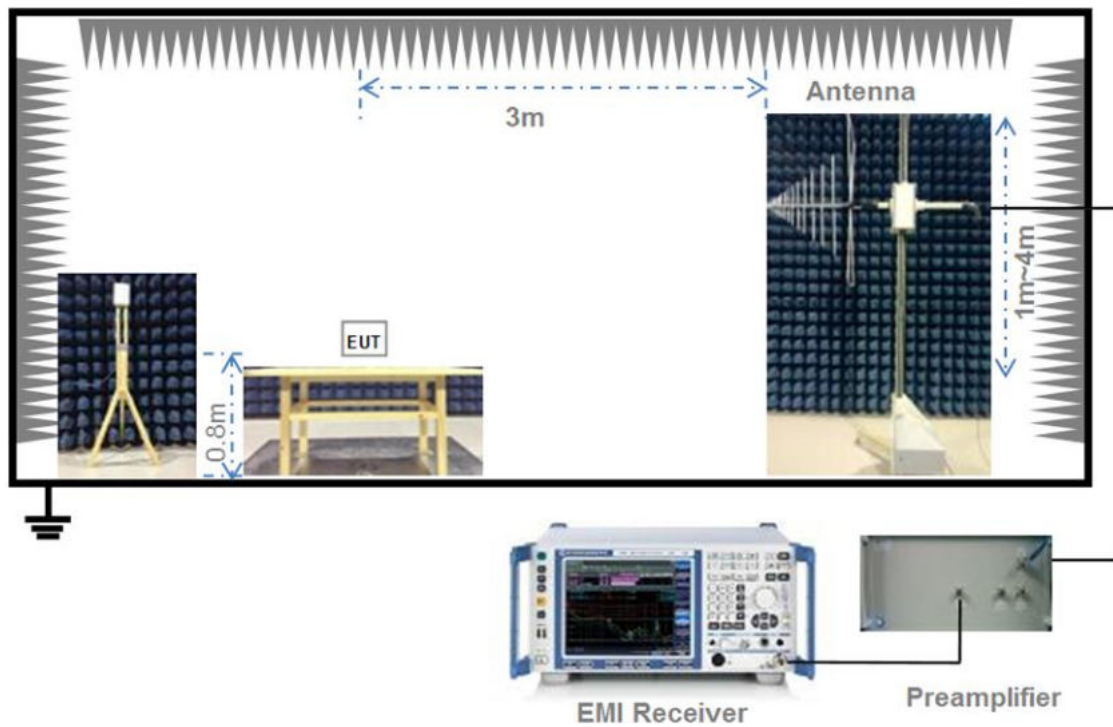
(Diagram 2)

4.5.3 For Radiated Test (Below 30 MHz)



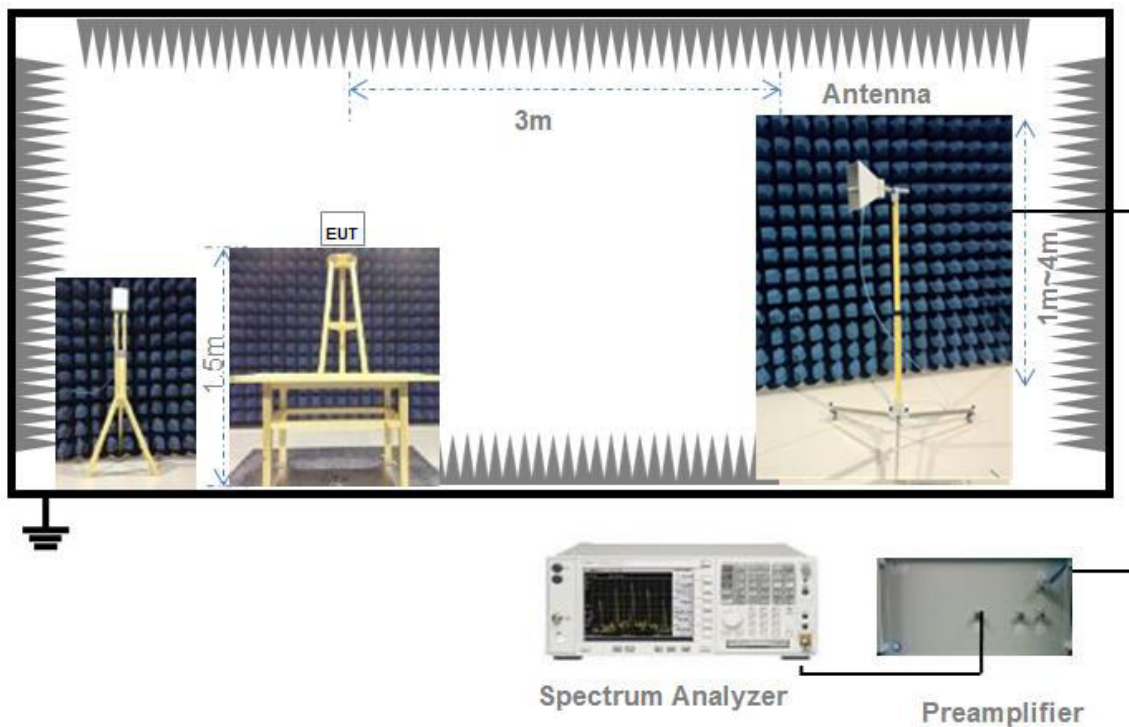
(Diagram 3)

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

Option 1:

Use the following spectrum analyzer settings:

Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.

Set the video bandwidth (VBW) ≥ 3 RBW.

Detector = Peak.

Trace mode = max hold.

Sweep = No faster than coupled (auto) time.

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.

Option 2:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz,

VBW $\geq 3 \times$ RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

99% bandwidth:

Use the following spectrum analyzer settings:

Set RBW = shall be in the range of 1% to 5% of the OBW.

Set the video bandwidth (VBW) ≥ 3 RBW.

Set the Span to 1.5 to 5 times of OBW.

Detector = Peak.

Trace mode = max hold.

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given 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 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 = No faster than coupled auto time.

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 = No faster than coupled auto time.

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.

5.5.4 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 (μV/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 following procedures may be used to determine the average field strength or power of an unwanted emission that is within 2 MHz of the authorized band-edge. Use the procedure described in 11.12.3.2.2 when using an average detector and the EUT can be configured to transmit continuously (i.e., $D \geq 98\%$). Use the procedure described in 11.12.3.2.3 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 $\pm 2\%$). Use the procedure described in 11.12.3.2.4 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%).

If the EUT can be configured or modified to transmit continuously ($D \geq 98\%$), measured using the following method (with EUT transmitting continuously):

Use the following spectrum analyzer settings:

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

RBW = 100 kHz.

VBW $\geq [3 \times \text{RBW}]$.

Detector = Power averaging (rms), if $[\text{span} / (\# \text{ of points in sweep})] \leq (\text{RBW} / 2)$.

Averaging type = power (i.e., rms):

As an alternative, the detector and averaging type may be set for linear voltage averaging.

Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.

Sweep time = auto.

Perform a trace average of at least 100 traces.

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.

If continuous transmission of the EUT ($D \geq 98\%$) cannot be achieved and the duty cycle is constant (duty cycle variations are less $\pm 2\%$), then the following procedure may be used to measure the average power of unwanted emissions within 2 MHz of the authorized band-edge:

RBW = 100 kHz.

VBW $\geq [3 \times \text{RBW}]$.

Detector = Power averaging (rms), if $[\text{span} / (\# \text{ of points in sweep})] \leq (\text{RBW} / 2)$.

Averaging type = power (i.e., rms):

Detector = Power averaging (rms), if $[\text{span} / (\# \text{ of points in sweep})] \leq (\text{RBW} / 2)$. Satisfying this condition might 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.

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 to use linear voltage averaging. Log or dB averaging shall not be used.

Sweep time = auto.

Perform a trace average of at least 100 traces.

Compute the power by integrating the spectrum over 1 MHz using the instrument's band-power measurement function with band limits set equal to the emission frequency (femission) ± 0.5 MHz. If the spectrum analyzer 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.

A correction factor shall be added to the measurement results prior to comparing with the emission limit to compute the emission level that would have been measured had the test been performed at 100% 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 $[10 \log (1 / D)]$, where D is the duty cycle.

2) If linear voltage averaging mode was used in step f), then the applicable correction factor is $[20 \log (1 / D)]$, where D is the duty cycle.

3) If a specific emission is demonstrated to be continuous ($D \geq 98\%$) rather than turning ON and

OFF with the transmit cycle, then no duty cycle correction is required for that emission.

Reduction of the measured emission amplitude levels to account for operational duty cycle is not permitted. Determining compliance is based on emission levels occurring during transmission—it is not based on an average across ON and OFF times of the transmitter.

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	Duty Factor
802.11b	50	50	100.00%	0.00
802.11g	50	50	100.00%	0.00
802.11n-20 MHz	50	50	100.00%	0.00

Peak Power Test Data

802.11b Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	19.28	84.72	30	1000	Pass
Middle	20.23	105.44			Pass
High	19.99	99.77			Pass

802.11g Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	21.56	143.22	30	1000	Pass
Middle	21.14	130.02			Pass
High	20.09	102.09			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Peak Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	21.55	142.89	30	1000	Pass
Middle	22.61	182.39			Pass
High	21.87	153.82			Pass

Average Power Test Data

802.11b Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	16.05	40.27	30	1000	Pass
Middle	17.03	50.47			Pass
High	16.83	48.19			Pass

802.11g Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	14.62	28.97	30	1000	Pass
Middle	15.15	32.73			Pass
High	14.92	31.05			Pass

802.11n-20 MHz Mode:

Channel	Measured Output Average Power		Limit		Verdict
	dBm	mW	dBm	mW	
Low	14.68	29.38	30	1000	Pass
Middle	15.17	32.89			Pass
High	14.81	30.27			Pass

A.2 Occupied Bandwidth

Test Data

802.11b Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	10.300000	14.895000	≥ 500
Middle	10.300000	14.914000	≥ 500
High	10.300000	14.943000	≥ 500

802.11g Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	16.600000	17.080000	≥ 500
Middle	16.600000	170.067000	≥ 500
High	16.600000	17.049000	≥ 500

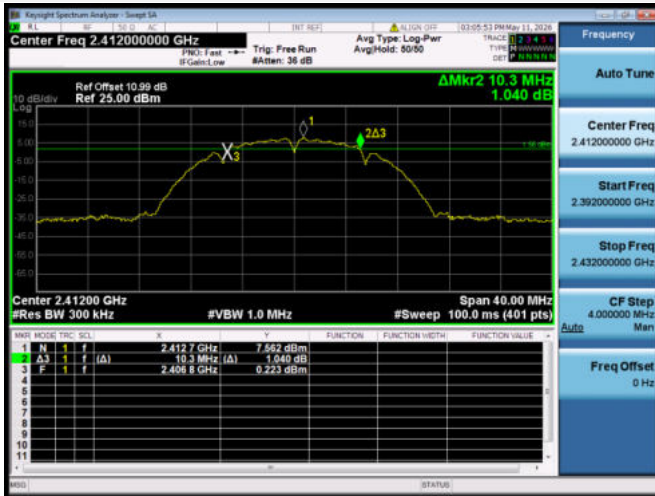
802.11n-20MHz Mode:

Channel	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limits (kHz)
Low	17.800000	17.757000	≥ 500
Middle	17.800000	17.830000	≥ 500
High	17.700000	17.767000	≥ 500

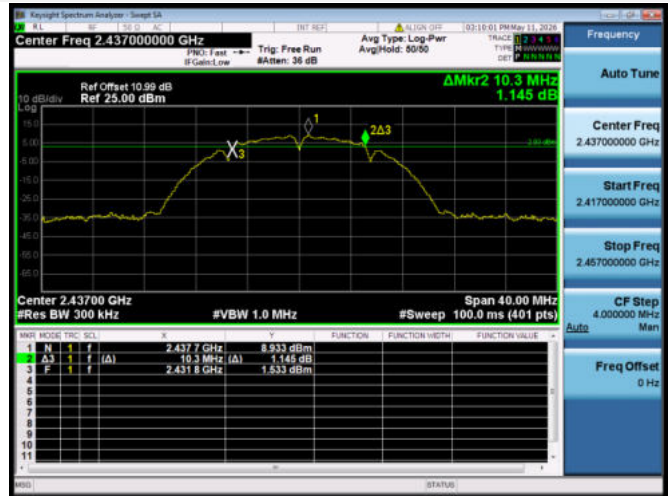
Test Plots

6 dB Bandwidth

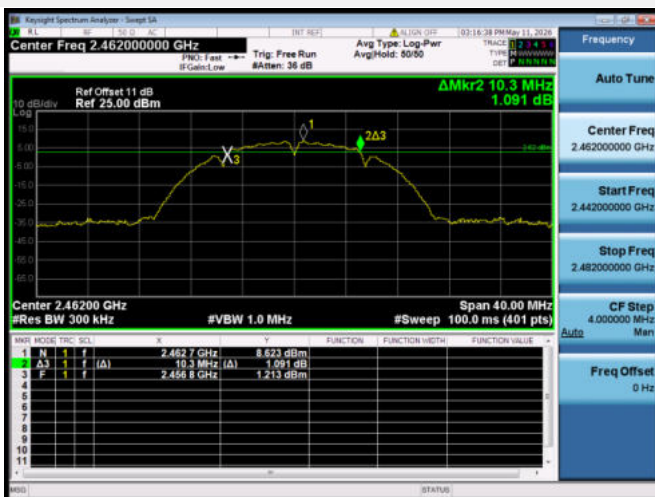
802.11b LOW CHANNEL



802.11b MIDDLE CHANNEL



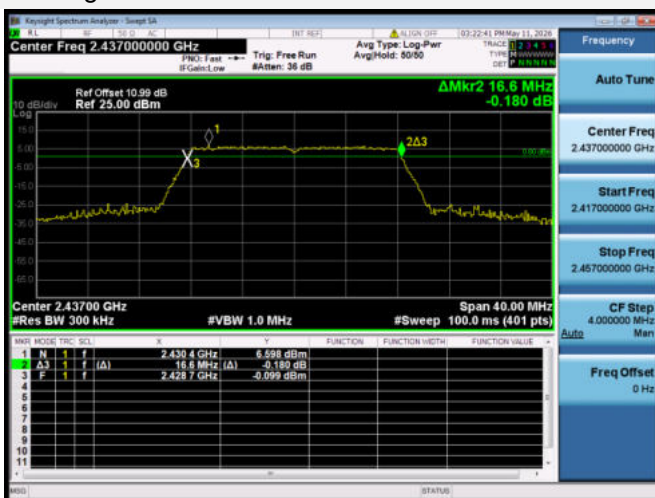
802.11b HIGH CHANNEL



802.11g LOW CHANNEL



802.11g MIDDLE CHANNEL



802.11g HIGH CHANNEL



802.11n-20 MHz LOW CHANNEL



802.11n-20 MHz MIDDLE CHANNEL

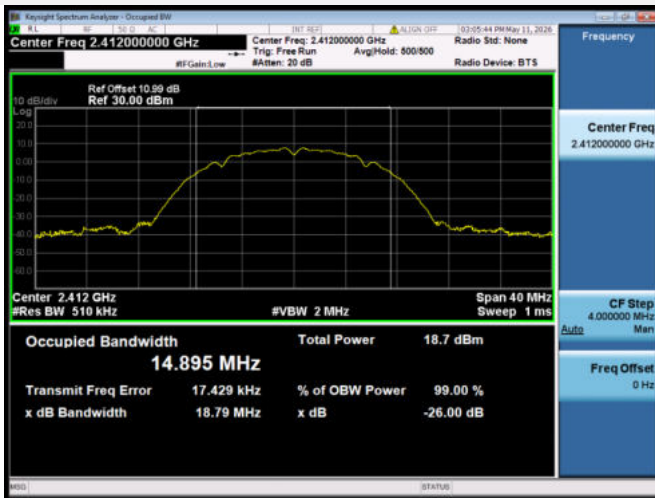


802.11n-20 MHz HIGH CHANNEL

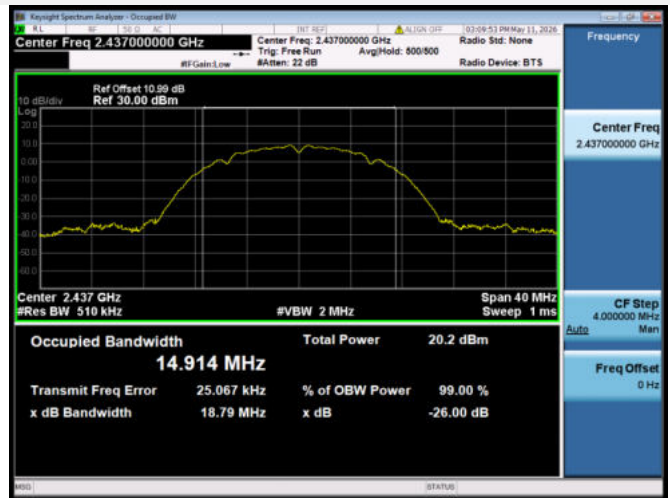


99% Bandwidth

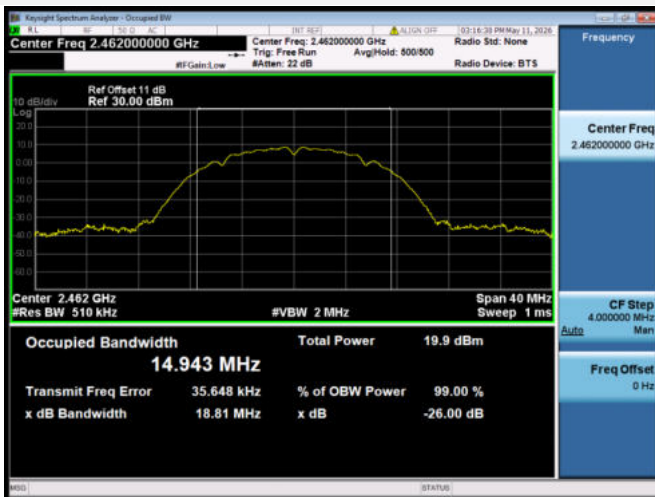
802.11b LOW CHANNEL



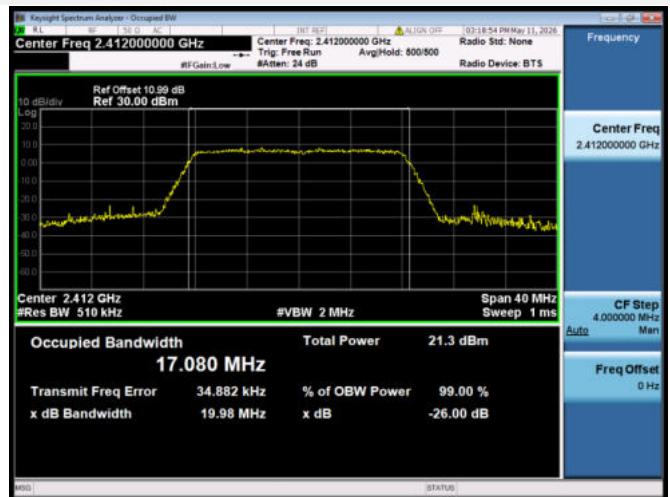
802.11b MIDDLE CHANNEL



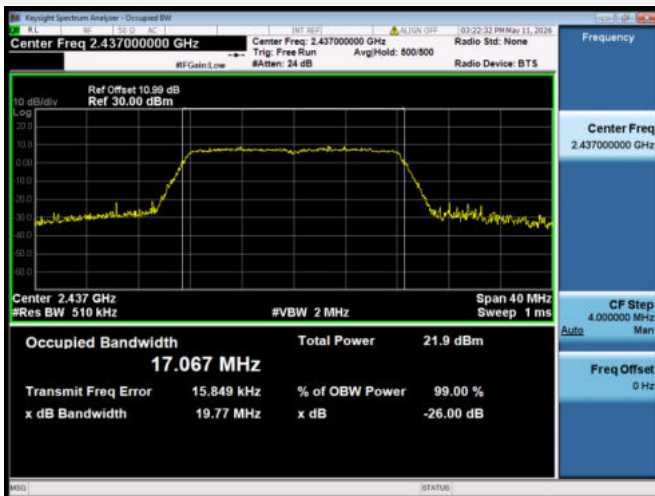
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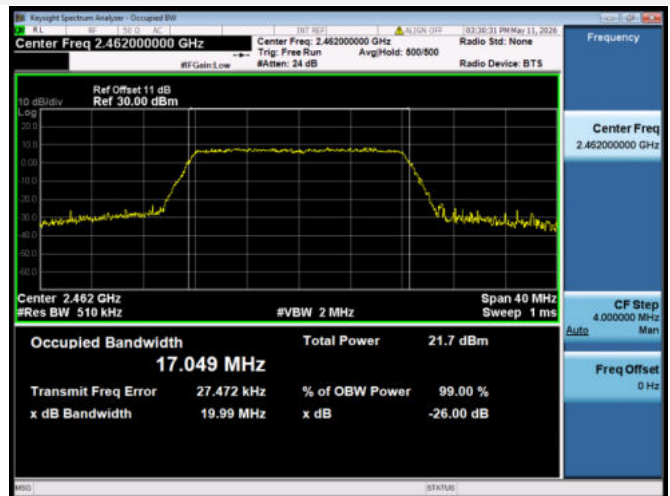
802.11g LOW CHANNEL



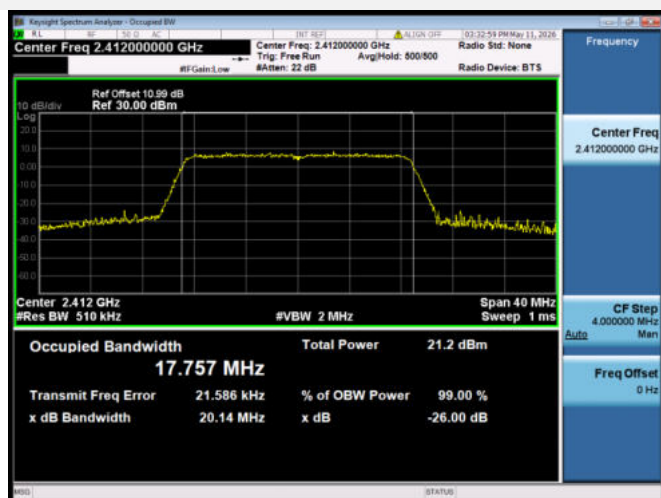
802.11g MIDDLE CHANNEL



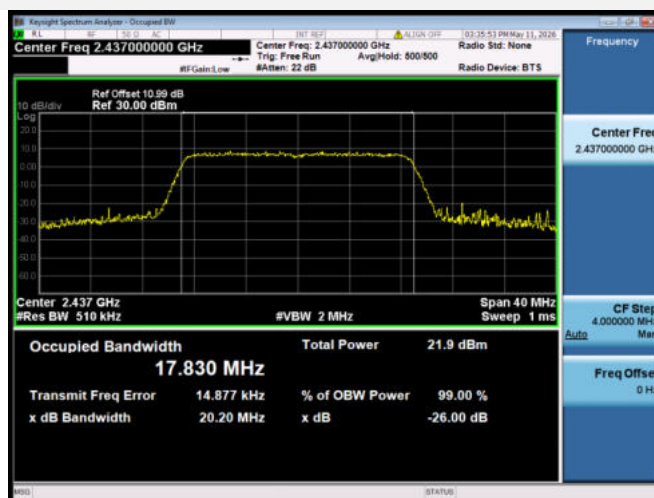
802.11g HIGH CHANNEL



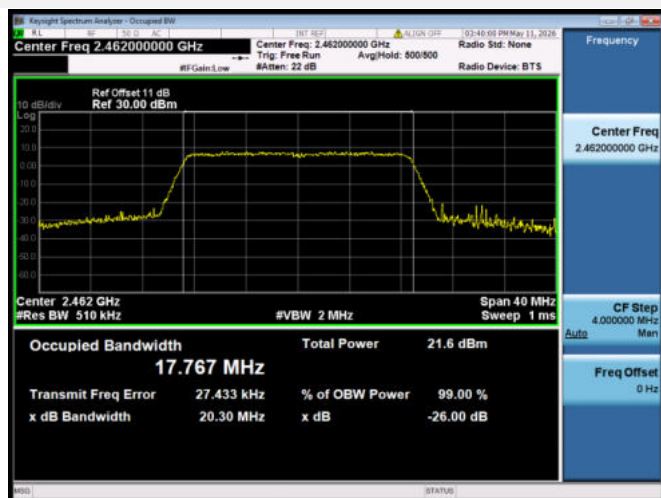
802.11n-20 MHz LOW CHANNEL



802.11n-20 MHz MIDDLE CHANNEL



802.11n-20 MHz HIGH CHANNEL



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	
Low	-33.38	5.80	-14.20	Pass
Middle	-32.94	7.13	-12.87	Pass
High	-33.11	6.72	-13.28	Pass

802.11g Mode:

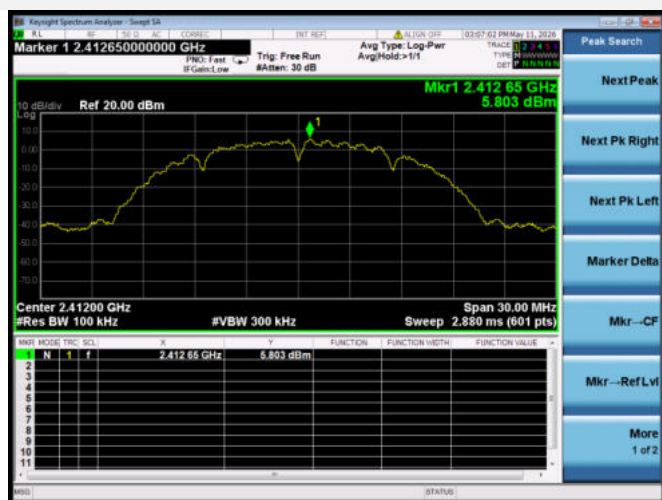
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-32.18	3.18	-16.82	Pass
Middle	-32.21	3.66	-16.34	Pass
High	-34.76	3.54	-16.46	Pass

802.11n-20MHz Mode:

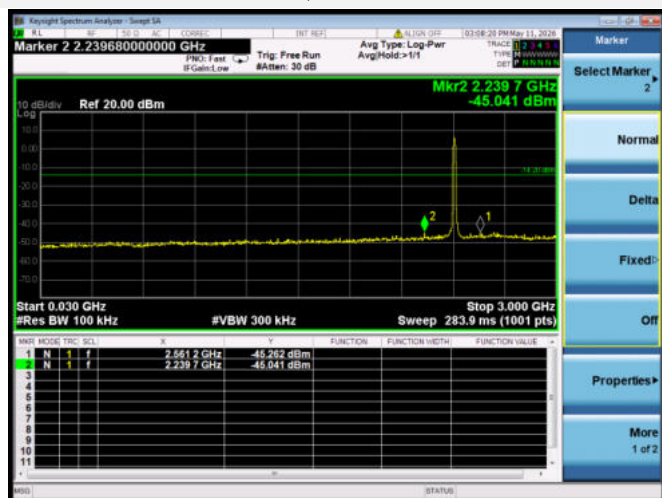
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-31.06	2.87	-17.13	Pass
Middle	-34.04	3.98	-16.02	Pass
High	-32.66	3.22	-16.78	Pass

Test Plots

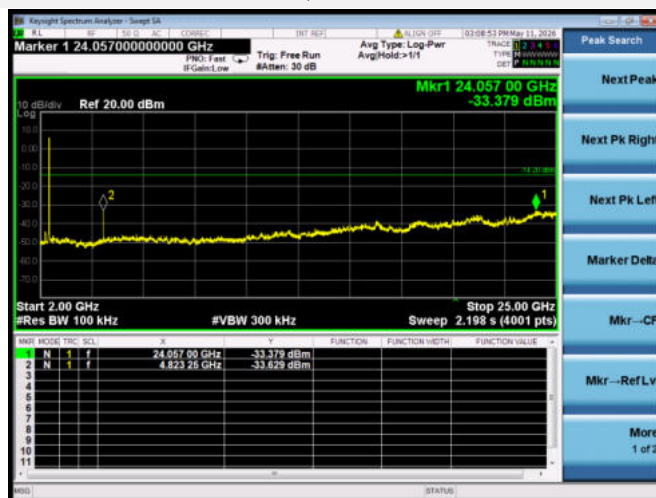
802.11b LOW CHANNEL CARRIER LEVEL



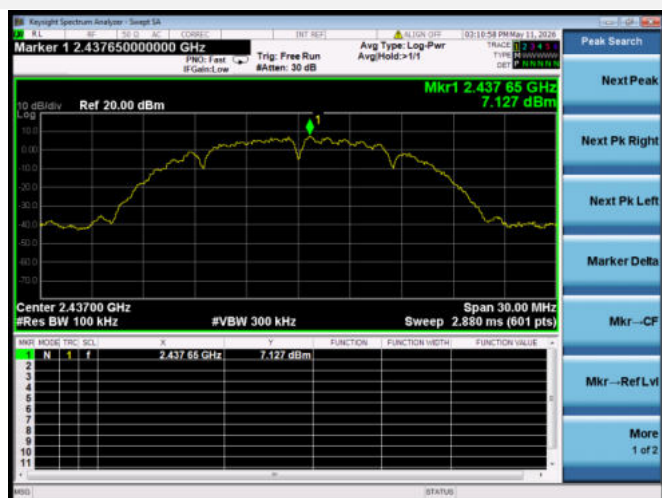
802.11b LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



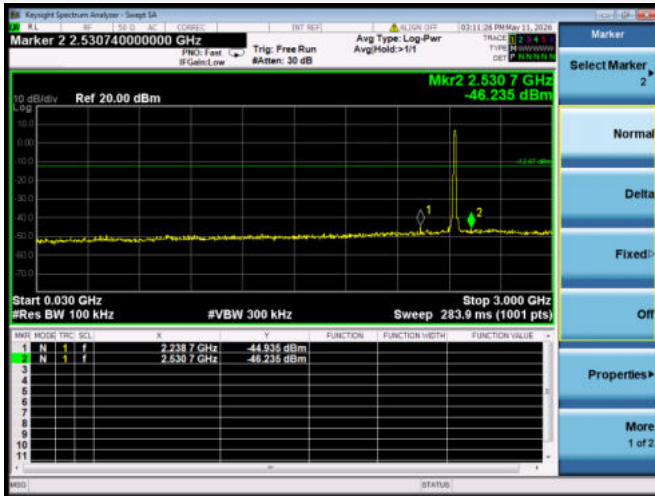
802.11b LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



802.11b MIDDLE CHANNEL CARRIER LEVEL



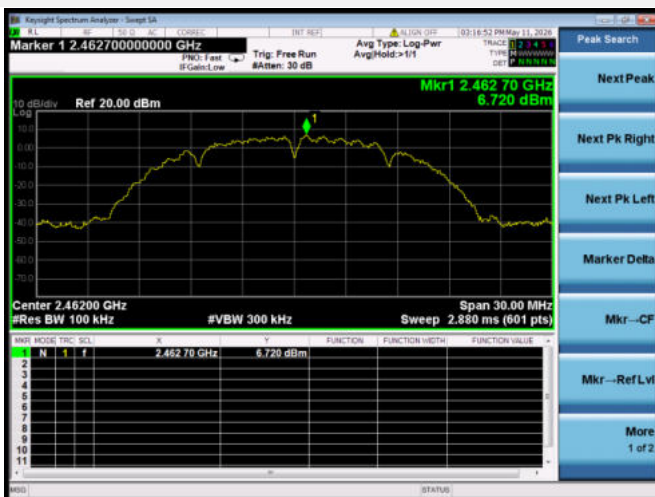
802.11b MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



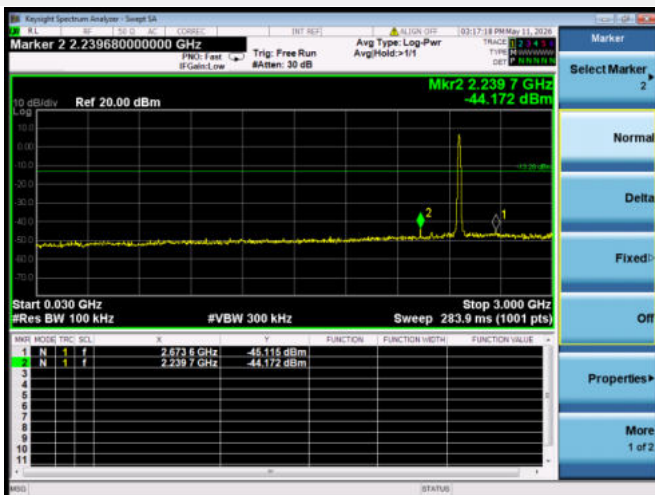
802.11b MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



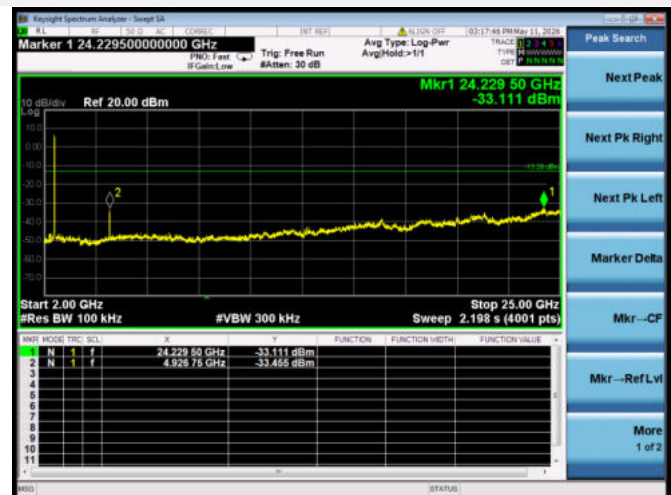
802.11b HIGH CHANNEL CARRIER LEVEL



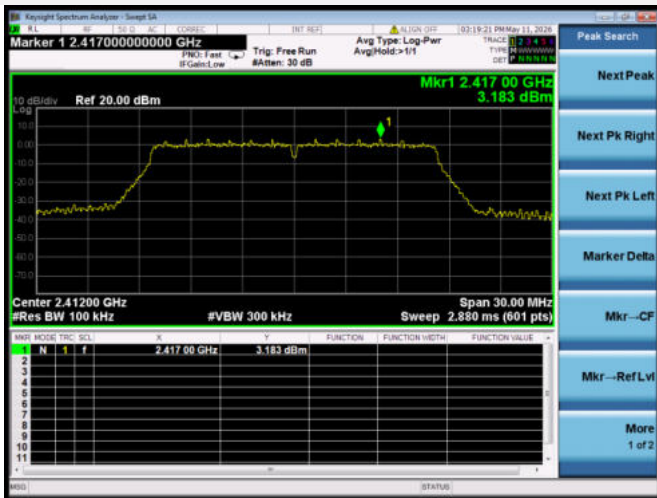
802.11b HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



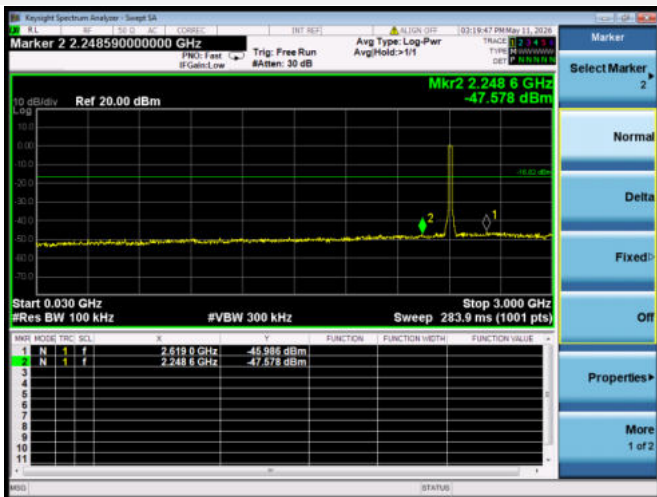
802.11b HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



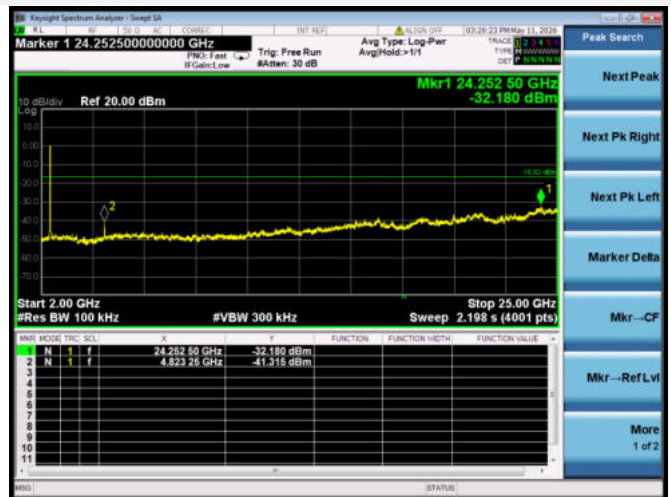
802.11g LOW CHANNEL CARRIER LEVEL



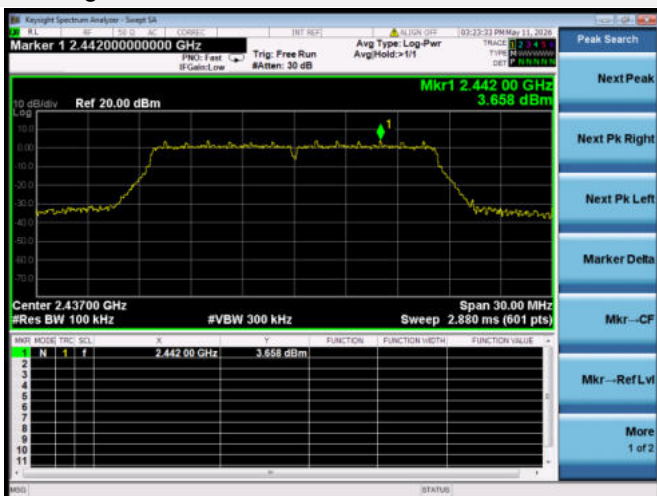
802.11g LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



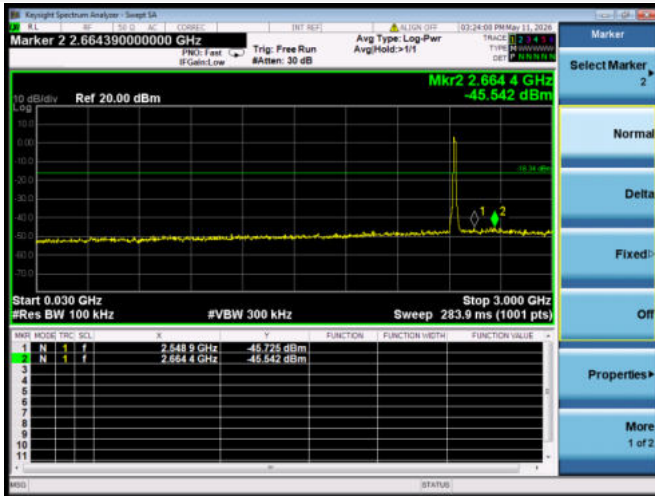
802.11g LOW CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



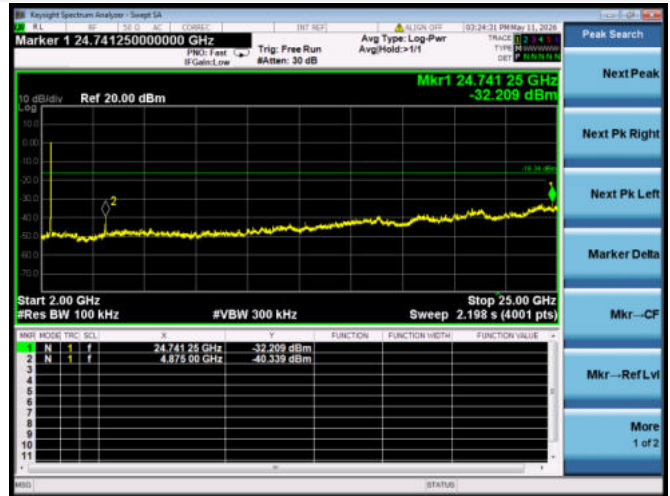
802.11g MIDDLE CHANNEL CARRIER LEVEL



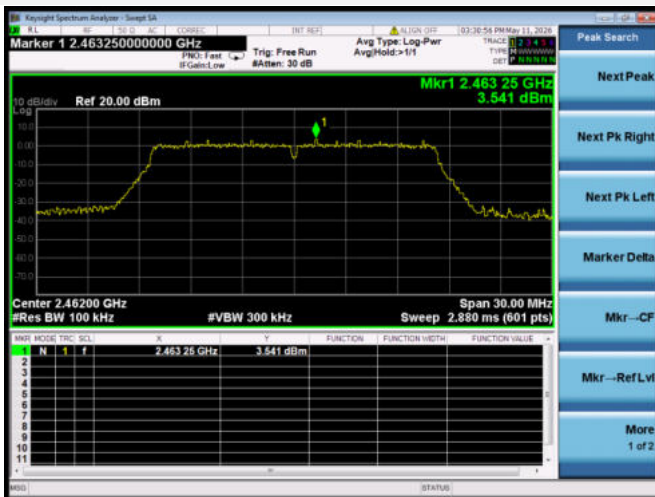
802.11g MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



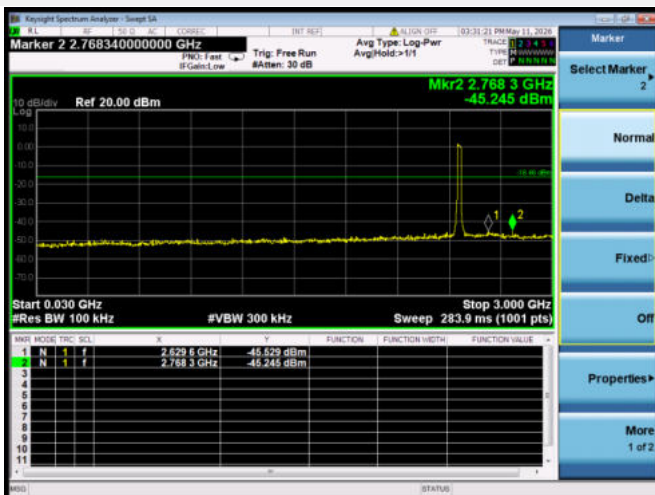
802.11g MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



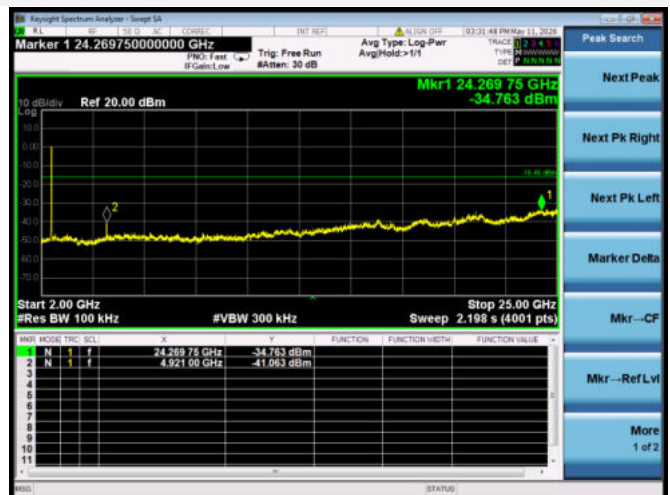
802.11g HIGH CHANNEL CARRIER LEVEL



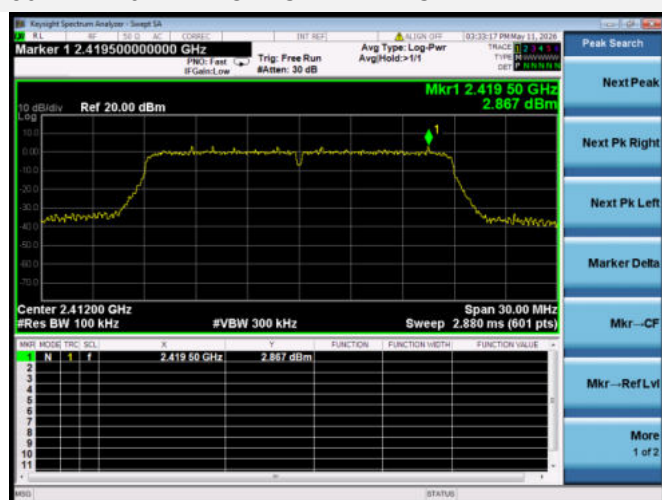
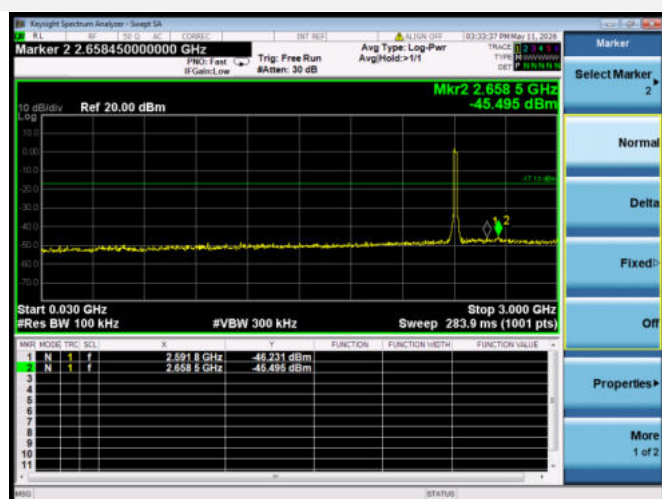
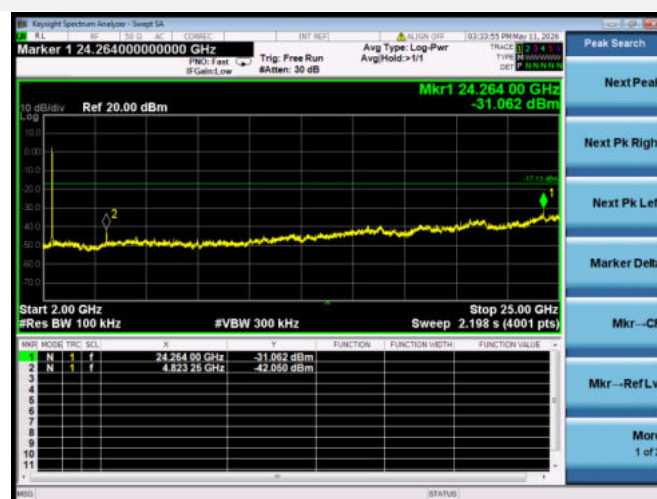
802.11g HIGH CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



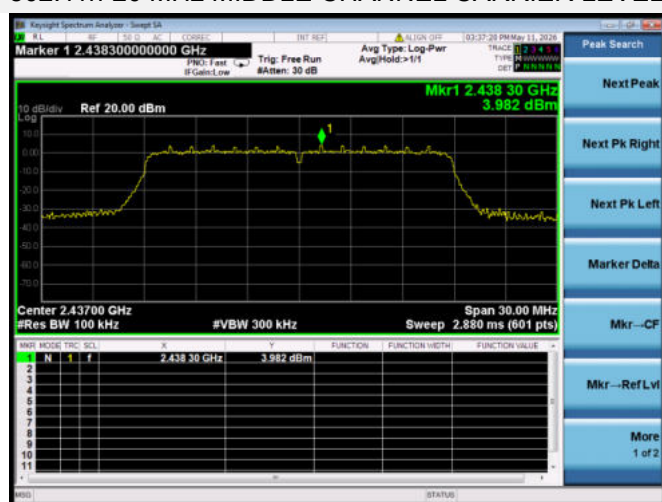
802.11g HIGH CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



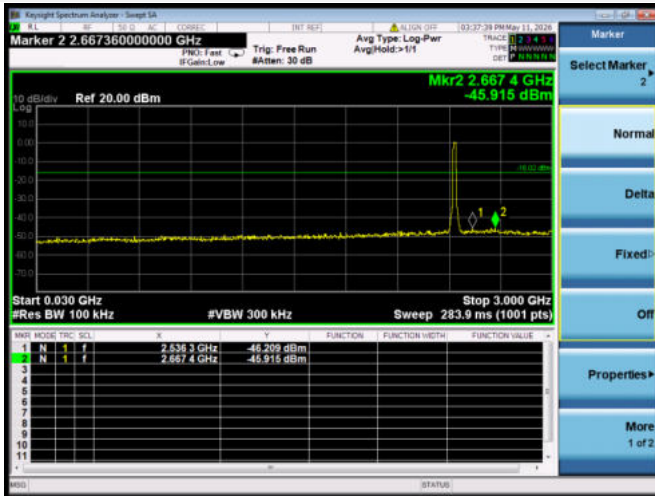
802.11n-20 MHz LOW CHANNEL CARRIER LEVEL

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

802.11n-20 MHz MIDDLE CHANNEL CARRIER LEVEL



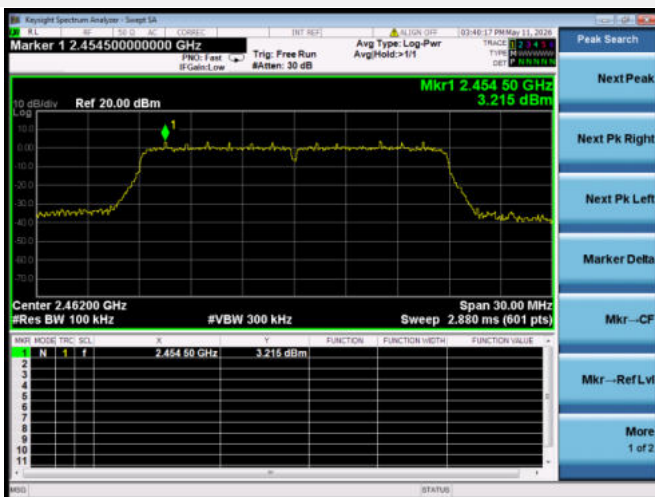
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



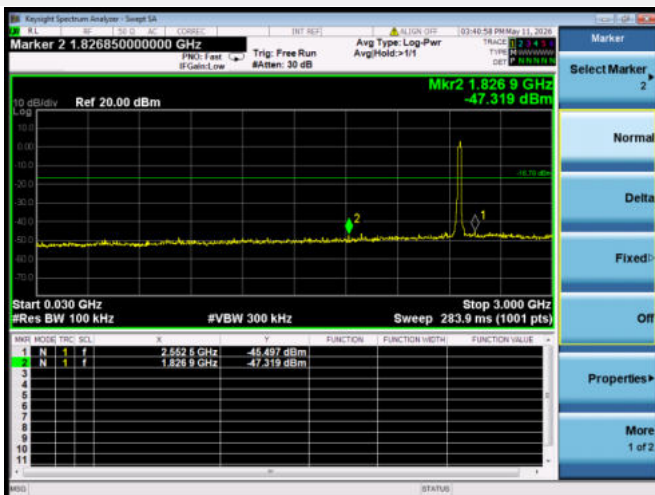
802.11n-20 MHz MIDDLE CHANNEL, SPURIOUS 2 GHz ~ 25 GHz



802.11n-20 MHz HIGH CHANNEL CARRIER LEVEL



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



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



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

Note: 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	
Low Channel	-38.68	5.80	-14.20	Pass
High Channel	-43.52	6.72	-13.28	Pass

802.11g Mode:

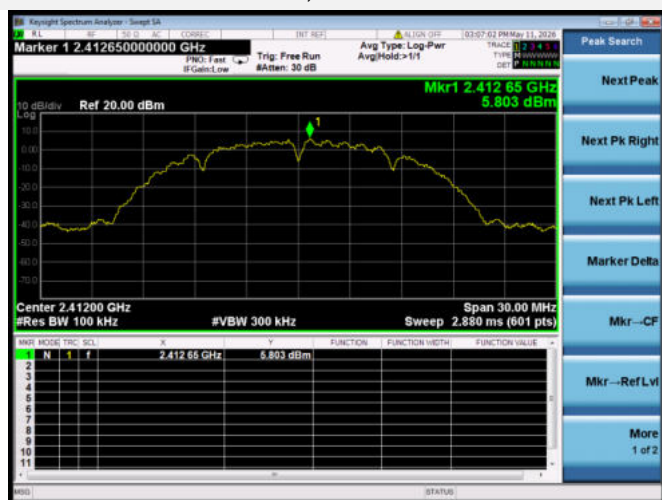
Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-33.35	3.18	-16.82	Pass
High Channel	-41.07	3.54	-16.46	Pass

802.11n-20 MHz Mode:

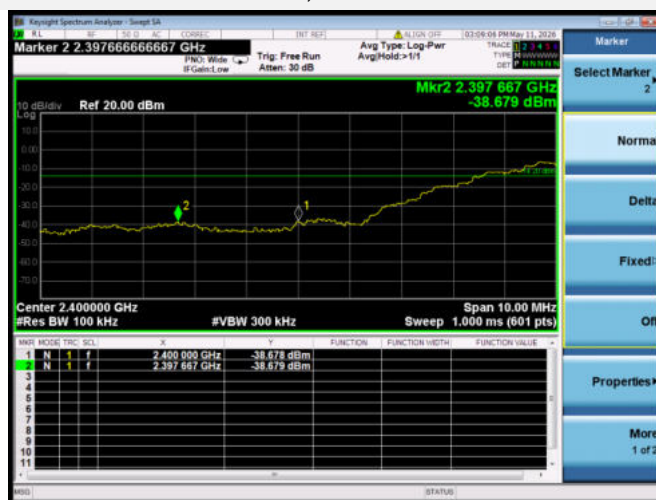
Channel	Measured Max. Band Edge Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low Channel	-31.78	2.87	-17.13	Pass
High Channel	-39.65	3.22	-16.78	Pass

Test Plots

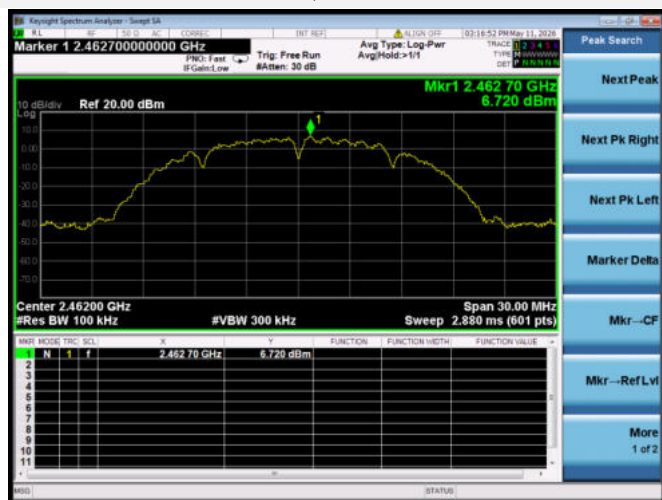
802.11b LOW CHANNEL, CARRIER LEVEL



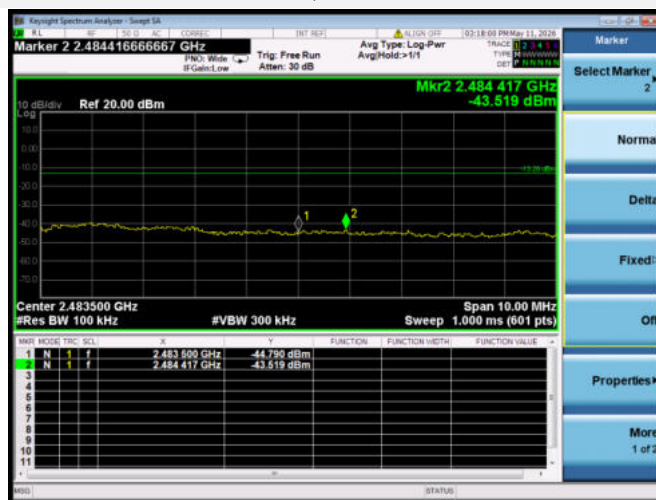
802.11b LOW CHANNEL, BAND EDGE



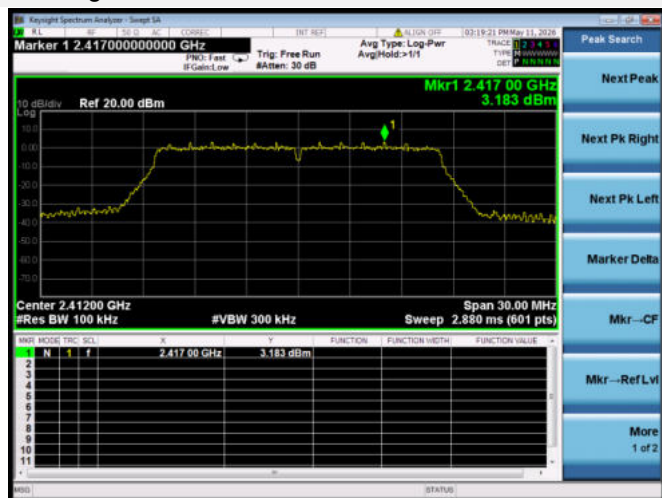
802.11b HIGH CHANNEL, CARRIER LEVEL



802.11b HIGH CHANNEL, BAND EDGE



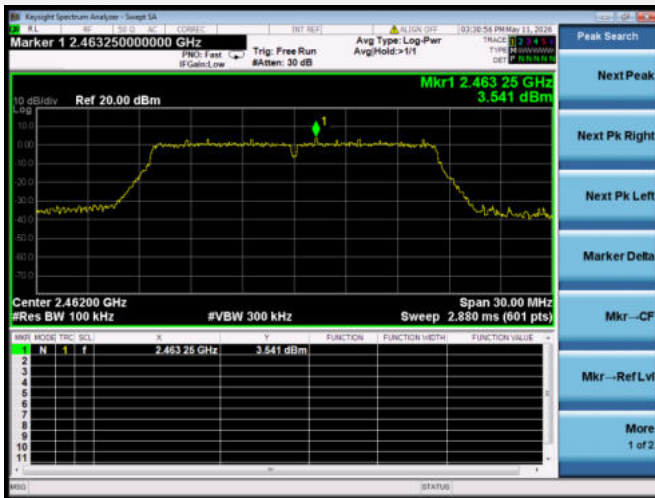
802.11g LOW CHANNEL, CARRIER LEVEL



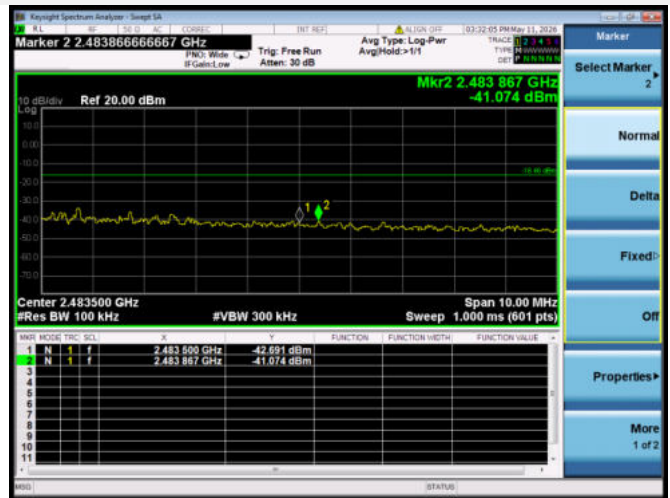
802.11g LOW CHANNEL, BAND EDGE



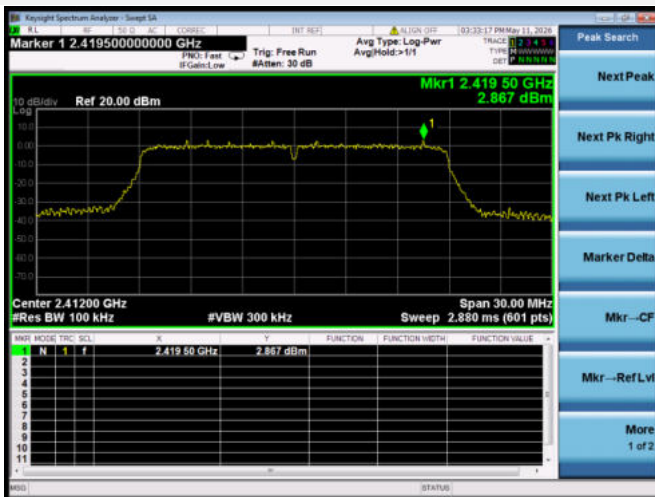
802.11g HIGH CHANNEL, CARRIER LEVEL



802.11g HIGH CHANNEL, BAND EDGE



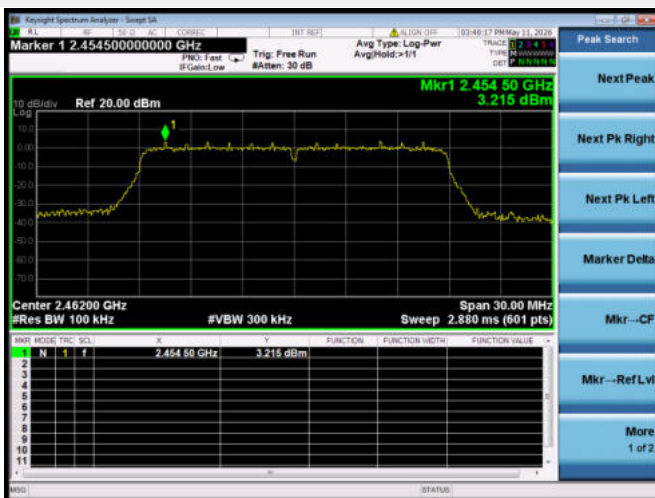
802.11n-20 MHz LOW CHANNEL, CARRIER LEVEL



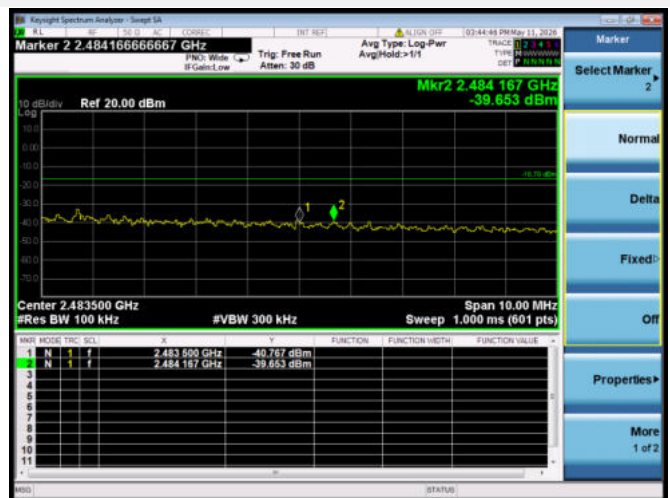
802.11n-20 MHz LOW CHANNEL, BAND EDGE



802.11n-20 MHz HIGH CHANNEL, CARRIER LEVEL



802.11n-20 MHz HIGH CHANNEL, BAND EDGE



A.5 Conducted Emissions

Note¹: The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

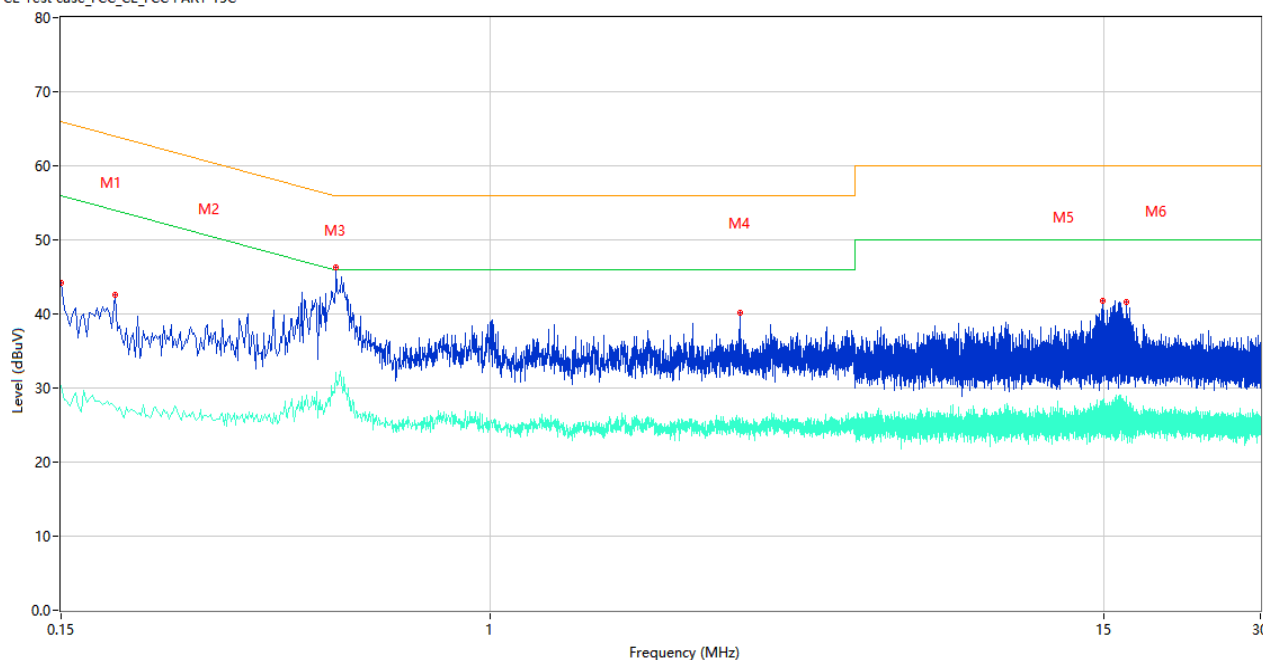
Note²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

PHASE L

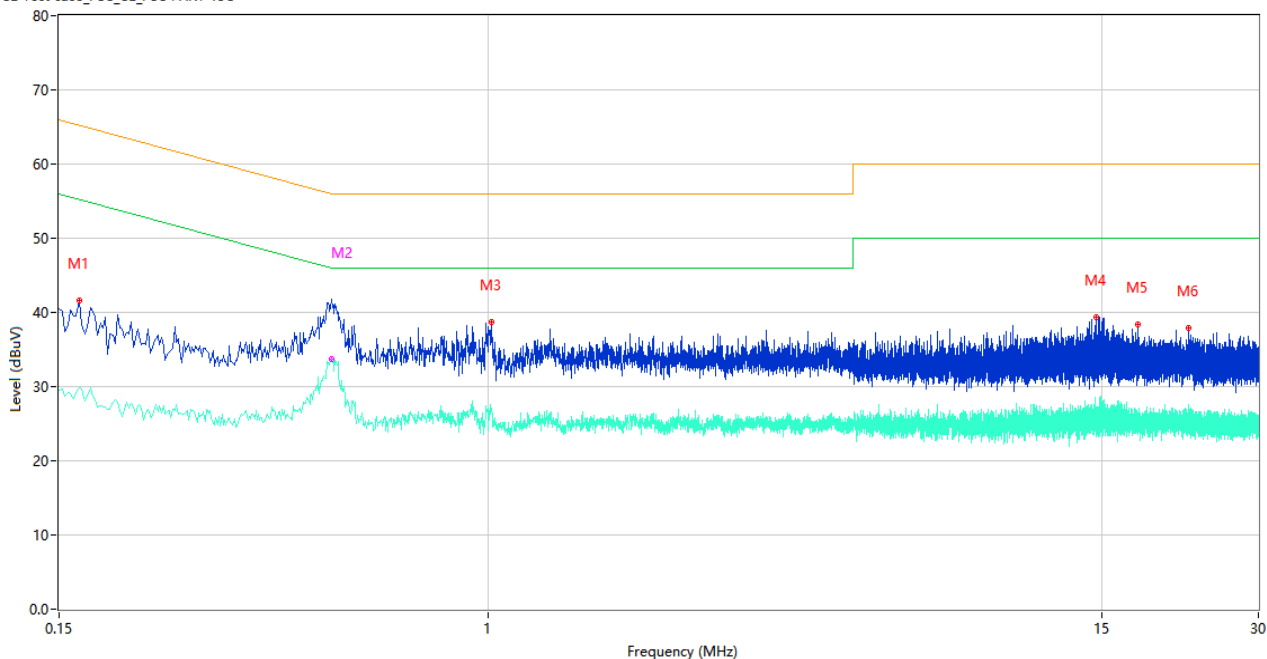
CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.150	44.12	9.86	66.00	21.88	Peak	L	Pass
1**	0.150	30.31	9.86	56.00	25.69	AV	L	Pass
2	0.190	42.59	9.84	64.04	21.45	Peak	L	Pass
2**	0.190	27.50	9.84	54.04	26.54	AV	L	Pass
3	0.506	46.23	10.05	56.00	9.77	Peak	L	Pass
3**	0.506	31.98	10.05	46.00	14.02	AV	L	Pass
4	3.014	40.16	10.27	56.00	15.84	Peak	L	Pass
4**	3.014	25.76	10.27	46.00	20.24	AV	L	Pass
5	14.964	41.85	10.70	60.00	18.15	Peak	L	Pass
5**	14.964	24.44	10.70	50.00	25.56	AV	L	Pass
6	16.598	41.57	11.06	60.00	18.43	Peak	L	Pass
6**	16.598	27.99	11.06	50.00	22.01	AV	L	Pass

PHASE N

CE Test case_FCC_CE_FCC PART 15C



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.164	41.55	9.85	65.26	23.71	Peak	N	Pass
1**	0.164	29.77	9.85	55.26	25.49	AV	N	Pass
2	0.500	41.73	10.04	56.00	14.27	Peak	N	Pass
2**	0.500	33.66	10.04	46.00	12.34	AV	N	Pass
3	1.014	38.65	10.09	56.00	17.35	Peak	N	Pass
3**	1.014	27.10	10.09	46.00	18.90	AV	N	Pass
4	14.690	39.42	10.41	60.00	20.58	Peak	N	Pass
4**	14.690	26.91	10.41	50.00	23.09	AV	N	Pass
5	17.630	38.36	11.02	60.00	21.64	Peak	N	Pass
5**	17.630	26.53	11.02	50.00	23.47	AV	N	Pass
6	22.084	37.90	11.28	60.00	22.10	Peak	N	Pass
6**	22.084	25.55	11.28	50.00	24.45	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 C63.10-2020, 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.

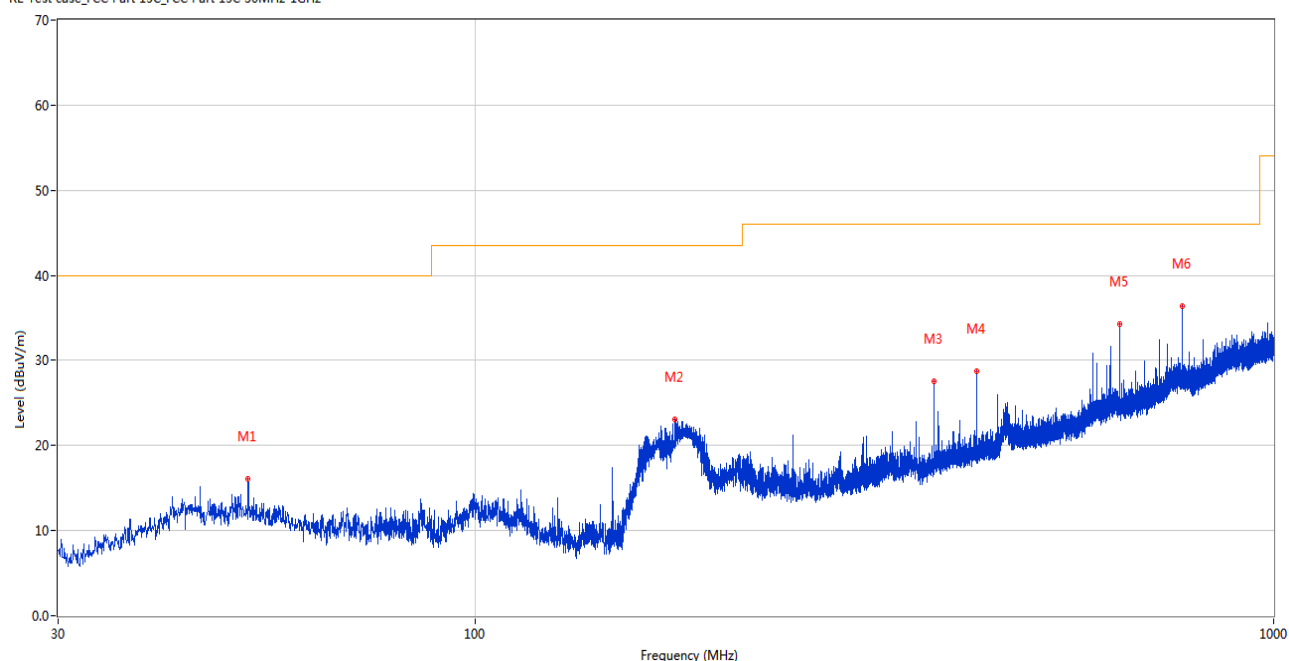
Note³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

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

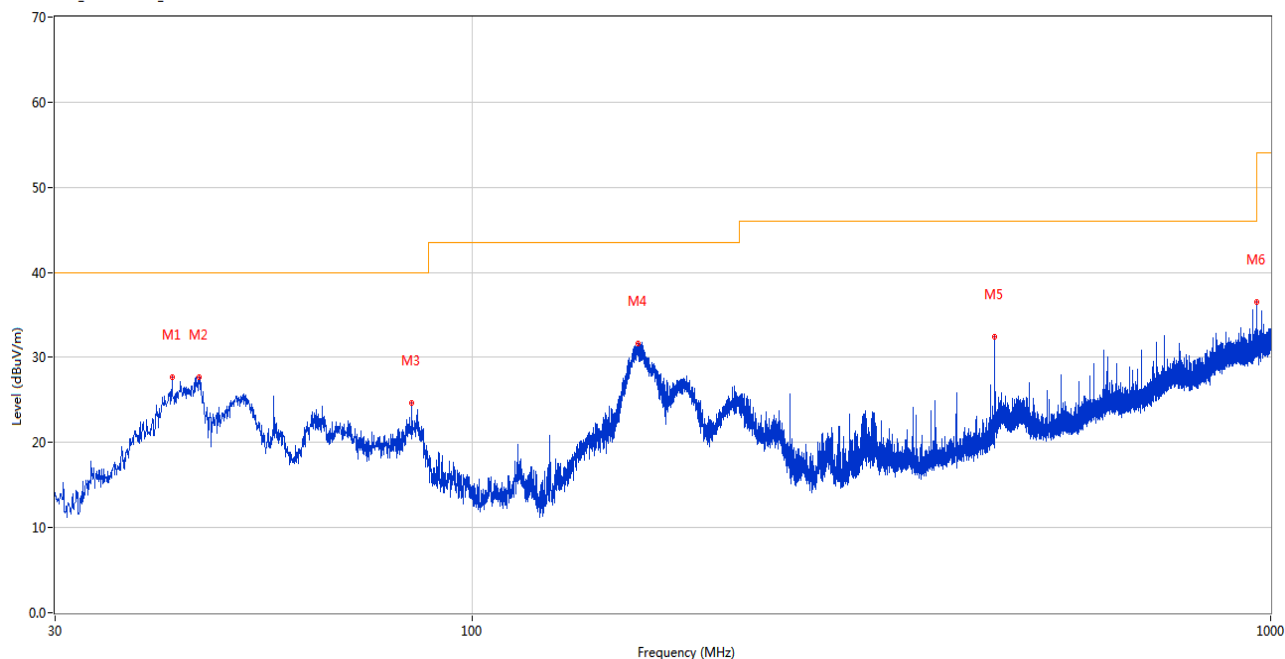
RE Test case_FCC Part 15C_FCC Part 15C 30MHz-1GHz



No.	Frequency (MHz)	Results (dBUV/m)	Factor (dB)	Limit (dBUV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	51.922	16.04	-24.05	40.0	23.96	Peak	302.00	100	Horizontal	Pass
2	177.973	23.11	-26.66	43.5	20.39	Peak	306.40	100	Horizontal	Pass
3	375.029	27.51	-19.33	46.0	18.49	Peak	226.30	100	Horizontal	Pass
4	424.984	28.76	-17.59	46.0	17.24	Peak	226.30	100	Horizontal	Pass
5	641.537	34.25	-11.77	46.0	11.75	Peak	278.20	100	Horizontal	Pass
6	768.024	36.37	-8.89	46.0	9.63	Peak	78.20	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15C_FCC Part 15C 30MHz-1GHz



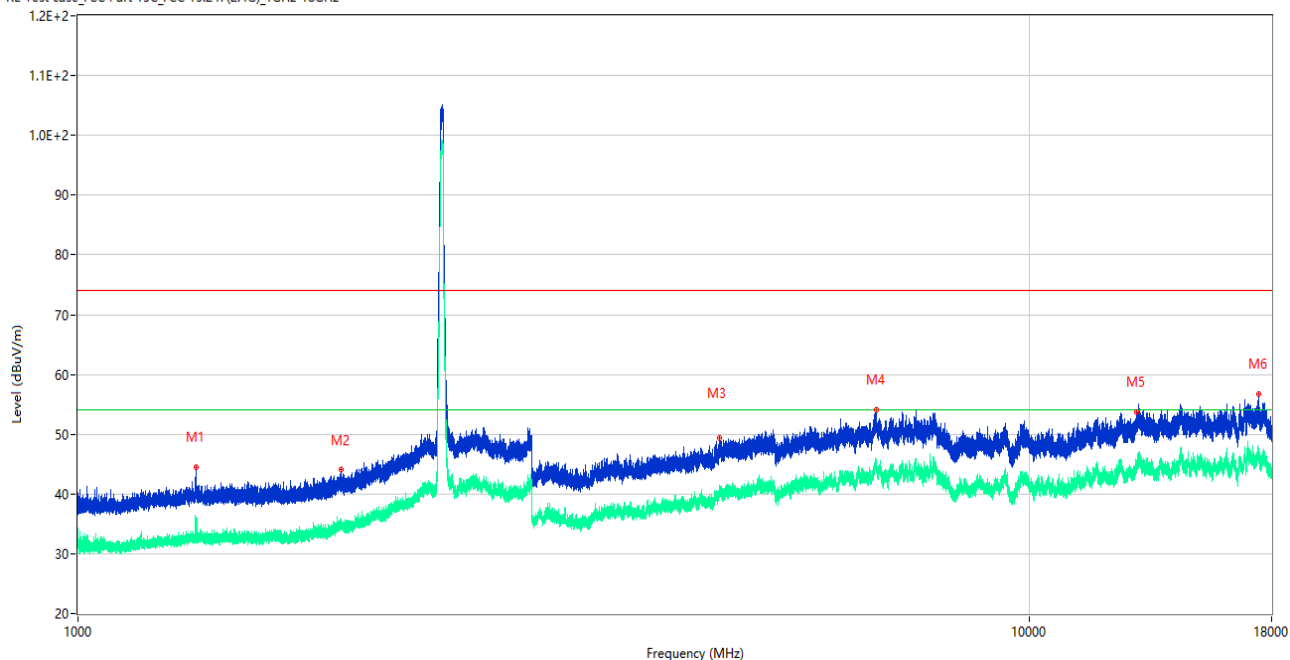
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	42.077	27.65	-25.14	40.0	12.35	Peak	29.20	100	Vertical	Pass
2	45.471	27.74	-24.38	40.0	12.26	Peak	128.10	100	Vertical	Pass
3	83.883	24.67	-29.75	40.0	15.33	Peak	112.70	100	Vertical	Pass
4	161.435	31.63	-27.63	43.5	11.87	Peak	327.10	100	Vertical	Pass
5	451.465	32.45	-17.25	46.0	13.55	Peak	0.00	100	Vertical	Pass
6	959.987	36.48	-5.02	46.0	9.52	Peak	248.00	100	Vertical	Pass

Note¹: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental signal.

Note²: The spurious above 18G is noise only, do not show on the report.

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

RE Test case_FCC Part 15C_FCC 15.247(2.4G)_1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.402	44.80	74.0	29.20	Peak	348.00	200	Horizontal	Pass
1**	1330.402	35.80	54.0	18.20	AV	348.00	200	Horizontal	Pass
2	1888.848	44.12	74.0	29.89	Peak	57.00	400	Horizontal	Pass
2**	1888.848	35.94	54.0	18.06	AV	57.00	400	Horizontal	Pass
3	4721.058	49.48	74.0	24.52	Peak	0.00	200	Horizontal	Pass
3**	4721.058	40.51	54.0	13.49	AV	0.00	200	Horizontal	Pass
4	6911.737	54.31	74.0	19.69	Peak	51.00	300	Horizontal	Pass
4**	6911.737	45.13	54.0	8.87	AV	51.00	300	Horizontal	Pass
5	12990.695	53.83	74.0	20.17	Peak	323.00	200	Horizontal	Pass
5**	12990.695	45.33	54.0	8.67	AV	323.00	200	Horizontal	Pass
6	17431.327	56.95	74.0	17.05	Peak	282.00	300	Horizontal	Pass
6**	17431.327	46.47	54.0	7.53	AV	282.00	300	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1165.772	49.91	74.0	24.09	Peak	252.00	200	Vertical	Pass
1**	1165.772	36.61	54.0	17.39	AV	252.00	200	Vertical	Pass
2	1331.661	44.71	74.0	29.29	Peak	163.00	400	Vertical	Pass
2**	1331.661	33.50	54.0	20.51	AV	163.00	400	Vertical	Pass
3	4823.802	51.14	74.0	22.86	Peak	90.00	200	Vertical	Pass
3**	4823.802	41.80	54.0	12.20	AV	90.00	200	Vertical	Pass
4	7935.038	54.60	74.0	19.40	Peak	262.00	200	Vertical	Pass
4**	7935.038	45.61	54.0	8.39	AV	262.00	200	Vertical	Pass
5	12978.408	54.03	74.0	19.97	Peak	33.00	100	Vertical	Pass
5**	12978.408	44.97	54.0	9.03	AV	33.00	100	Vertical	Pass
6	17442.301	56.49	74.0	17.51	Peak	154.00	100	Vertical	Pass
6**	17442.301	44.50	54.0	9.50	AV	154.00	100	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.245	44.66	74.0	29.34	Peak	34.00	100	Horizontal	Pass
1**	1329.245	35.79	54.0	18.21	AV	34.00	100	Horizontal	Pass
2	1891.220	43.55	74.0	30.46	Peak	251.00	300	Horizontal	Pass
2**	1891.220	35.85	54.0	18.15	AV	251.00	300	Horizontal	Pass
3	4724.342	49.26	74.0	24.74	Peak	253.00	200	Horizontal	Pass
3**	4724.342	39.96	54.0	14.04	AV	253.00	200	Horizontal	Pass
4	6916.480	53.53	74.0	20.47	Peak	206.00	200	Horizontal	Pass
4**	6916.480	44.97	54.0	9.03	AV	206.00	200	Horizontal	Pass
5	12987.297	53.79	74.0	20.21	Peak	235.00	400	Horizontal	Pass
5**	12987.297	44.58	54.0	9.42	AV	235.00	400	Horizontal	Pass
6	17426.909	56.24	74.0	17.76	Peak	265.00	300	Horizontal	Pass
6**	17426.909	46.46	54.0	7.54	AV	265.00	300	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1164.099	49.19	74.0	24.81	Peak	325.00	400	Vertical	Pass
1**	1164.099	36.35	54.0	17.65	AV	325.00	400	Vertical	Pass
2	1329.469	43.87	74.0	30.13	Peak	240.00	400	Vertical	Pass
2**	1329.469	33.44	54.0	20.57	AV	240.00	400	Vertical	Pass
3	4825.479	50.26	74.0	23.74	Peak	136.00	200	Vertical	Pass
3**	4825.479	41.29	54.0	12.71	AV	136.00	200	Vertical	Pass
4	7938.448	54.20	74.0	19.80	Peak	182.00	100	Vertical	Pass
4**	7938.448	44.73	54.0	9.27	AV	182.00	100	Vertical	Pass
5	12979.528	53.58	74.0	20.42	Peak	302.00	400	Vertical	Pass
5**	12979.528	44.63	54.0	9.37	AV	302.00	400	Vertical	Pass
6	17441.273	56.12	74.0	17.88	Peak	201.00	100	Vertical	Pass
6**	17441.273	43.93	54.0	10.07	AV	201.00	100	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.829	43.97	74.0	30.03	Peak	240.00	200	Horizontal	Pass
1**	1331.829	35.15	54.0	18.85	AV	240.00	200	Horizontal	Pass
2	1887.760	43.97	74.0	30.04	Peak	124.00	400	Horizontal	Pass
2**	1887.760	35.30	54.0	18.70	AV	124.00	400	Horizontal	Pass
3	4727.960	49.21	74.0	24.79	Peak	268.00	200	Horizontal	Pass
3**	4727.960	40.32	54.0	13.68	AV	268.00	200	Horizontal	Pass
4	6911.617	53.47	74.0	20.53	Peak	52.00	400	Horizontal	Pass
4**	6911.617	44.55	54.0	9.45	AV	52.00	400	Horizontal	Pass
5	12989.722	53.36	74.0	20.64	Peak	272.00	400	Horizontal	Pass
5**	12989.722	44.87	54.0	9.13	AV	272.00	400	Horizontal	Pass
6	17431.017	56.46	74.0	17.54	Peak	299.00	100	Horizontal	Pass
6**	17431.017	45.63	54.0	8.37	AV	299.00	100	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1164.424	49.20	74.0	24.80	Peak	242.00	400	Vertical	Pass
1**	1164.424	36.34	54.0	17.66	AV	242.00	400	Vertical	Pass
2	1329.607	44.02	74.0	29.98	Peak	269.00	100	Vertical	Pass
2**	1329.607	33.47	54.0	20.54	AV	269.00	100	Vertical	Pass
3	4822.063	50.80	74.0	23.20	Peak	8.00	200	Vertical	Pass
3**	4822.063	41.33	54.0	12.67	AV	8.00	200	Vertical	Pass
4	7937.074	54.08	74.0	19.92	Peak	204.00	300	Vertical	Pass
4**	7937.074	44.62	54.0	9.38	AV	204.00	300	Vertical	Pass
5	12976.050	53.96	74.0	20.04	Peak	250.00	300	Vertical	Pass
5**	12976.050	44.81	54.0	9.19	AV	250.00	300	Vertical	Pass
6	17442.350	56.27	74.0	17.73	Peak	28.00	200	Vertical	Pass
6**	17442.350	43.65	54.0	10.35	AV	28.00	200	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1327.816	43.94	74.0	30.06	Peak	274.00	300	Horizontal	Pass
1**	1327.816	35.49	54.0	18.51	AV	274.00	300	Horizontal	Pass
2	1891.717	43.42	74.0	30.59	Peak	141.00	200	Horizontal	Pass
2**	1891.717	35.64	54.0	18.36	AV	141.00	200	Horizontal	Pass
3	4725.417	49.09	74.0	24.91	Peak	27.00	200	Horizontal	Pass
3**	4725.417	40.29	54.0	13.71	AV	27.00	200	Horizontal	Pass
4	6916.553	54.22	74.0	19.78	Peak	352.00	200	Horizontal	Pass
4**	6916.553	44.78	54.0	9.22	AV	352.00	200	Horizontal	Pass
5	12986.108	53.21	74.0	20.79	Peak	183.00	200	Horizontal	Pass
5**	12986.108	45.21	54.0	8.79	AV	183.00	200	Horizontal	Pass
6	17429.447	55.99	74.0	18.01	Peak	246.00	300	Horizontal	Pass
6**	17429.447	46.46	54.0	7.54	AV	246.00	300	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1163.752	48.55	74.0	25.45	Peak	227.00	200	Vertical	Pass
1**	1163.752	35.39	54.0	18.61	AV	227.00	200	Vertical	Pass
2	1326.584	43.76	74.0	30.24	Peak	236.00	300	Vertical	Pass
2**	1326.584	32.91	54.0	21.10	AV	236.00	300	Vertical	Pass
3	4825.531	49.36	74.0	24.64	Peak	309.00	200	Vertical	Pass
3**	4825.531	40.80	54.0	13.20	AV	309.00	200	Vertical	Pass
4	7940.424	53.99	74.0	20.01	Peak	299.00	200	Vertical	Pass
4**	7940.424	43.91	54.0	10.09	AV	299.00	200	Vertical	Pass
5	12976.026	52.87	74.0	21.13	Peak	221.00	200	Vertical	Pass
5**	12976.026	43.65	54.0	10.35	AV	221.00	200	Vertical	Pass
6	17443.347	55.27	74.0	18.73	Peak	124.00	200	Vertical	Pass
6**	17443.347	43.23	54.0	10.77	AV	124.00	200	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1332.406	43.77	74.0	30.23	Peak	82.00	400	Horizontal	Pass
1**	1332.406	35.31	54.0	18.69	AV	82.00	400	Horizontal	Pass
2	1887.785	43.05	74.0	30.96	Peak	313.00	300	Horizontal	Pass
2**	1887.785	35.09	54.0	18.91	AV	313.00	300	Horizontal	Pass
3	4722.080	48.75	74.0	25.25	Peak	349.00	200	Horizontal	Pass
3**	4722.080	39.03	54.0	14.97	AV	349.00	200	Horizontal	Pass
4	6917.592	52.84	74.0	21.16	Peak	120.00	300	Horizontal	Pass
4**	6917.592	44.06	54.0	9.94	AV	120.00	300	Horizontal	Pass
5	12993.029	53.58	74.0	20.42	Peak	113.00	100	Horizontal	Pass
5**	12993.029	43.91	54.0	10.09	AV	113.00	100	Horizontal	Pass
6	17432.907	55.71	74.0	18.29	Peak	193.00	400	Horizontal	Pass
6**	17432.907	45.70	54.0	8.30	AV	193.00	400	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1165.328	49.19	74.0	24.81	Peak	336.00	400	Vertical	Pass
1**	1165.328	35.79	54.0	18.21	AV	336.00	400	Vertical	Pass
2	1330.891	43.43	74.0	30.57	Peak	320.00	200	Vertical	Pass
2**	1330.891	32.96	54.0	21.05	AV	320.00	200	Vertical	Pass
3	4825.192	50.44	74.0	23.56	Peak	338.00	200	Vertical	Pass
3**	4825.192	41.06	54.0	12.94	AV	338.00	200	Vertical	Pass
4	7935.579	53.21	74.0	20.79	Peak	134.00	100	Vertical	Pass
4**	7935.579	43.74	54.0	10.26	AV	134.00	100	Vertical	Pass
5	12979.456	52.96	74.0	21.04	Peak	59.00	400	Vertical	Pass
5**	12979.456	44.00	54.0	10.00	AV	59.00	400	Vertical	Pass
6	17437.843	55.48	74.0	18.52	Peak	249.00	300	Vertical	Pass
6**	17437.843	43.59	54.0	10.41	AV	249.00	300	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.107	43.88	74.0	30.12	Peak	113.00	200	Horizontal	Pass
1**	1328.107	34.41	54.0	19.59	AV	113.00	200	Horizontal	Pass
2	1890.513	43.52	74.0	30.49	Peak	114.00	300	Horizontal	Pass
2**	1890.513	34.83	54.0	19.17	AV	114.00	300	Horizontal	Pass
3	4726.953	48.27	74.0	25.73	Peak	168.00	200	Horizontal	Pass
3**	4726.953	39.59	54.0	14.41	AV	168.00	200	Horizontal	Pass
4	6917.569	53.14	74.0	20.86	Peak	31.00	200	Horizontal	Pass
4**	6917.569	44.48	54.0	9.52	AV	31.00	200	Horizontal	Pass
5	12989.450	52.85	74.0	21.15	Peak	322.00	400	Horizontal	Pass
5**	12989.450	44.42	54.0	9.58	AV	322.00	400	Horizontal	Pass
6	17431.335	56.06	74.0	17.94	Peak	139.00	200	Horizontal	Pass
6**	17431.335	45.02	54.0	8.98	AV	139.00	200	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1160.825	48.51	74.0	25.49	Peak	53.00	400	Vertical	Pass
1**	1160.825	35.33	54.0	18.67	AV	53.00	400	Vertical	Pass
2	1326.911	43.75	74.0	30.25	Peak	219.00	200	Vertical	Pass
2**	1326.911	32.83	54.0	21.17	AV	219.00	200	Vertical	Pass
3	4823.633	49.30	74.0	24.71	Peak	201.00	200	Vertical	Pass
3**	4823.633	40.72	54.0	13.28	AV	201.00	200	Vertical	Pass
4	7935.106	53.89	74.0	20.11	Peak	137.00	400	Vertical	Pass
4**	7935.106	43.85	54.0	10.15	AV	137.00	400	Vertical	Pass
5	12979.241	52.81	74.0	21.20	Peak	190.00	100	Vertical	Pass
5**	12979.241	43.60	54.0	10.40	AV	190.00	100	Vertical	Pass
6	17441.253	55.27	74.0	18.73	Peak	330.00	300	Vertical	Pass
6**	17441.253	43.14	54.0	10.87	AV	330.00	300	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1329.269	43.93	74.0	30.07	Peak	81.00	400	Horizontal	Pass
1**	1329.269	35.40	54.0	18.60	AV	81.00	400	Horizontal	Pass
2	1891.710	43.40	74.0	30.60	Peak	99.00	400	Horizontal	Pass
2**	1891.710	35.62	54.0	18.38	AV	99.00	400	Horizontal	Pass
3	4726.240	49.07	74.0	24.93	Peak	338.00	200	Horizontal	Pass
3**	4726.240	40.26	54.0	13.74	AV	338.00	200	Horizontal	Pass
4	6917.800	54.14	74.0	19.86	Peak	358.00	200	Horizontal	Pass
4**	6917.800	44.73	54.0	9.27	AV	358.00	200	Horizontal	Pass
5	12990.530	53.16	74.0	20.84	Peak	94.00	100	Horizontal	Pass
5**	12990.530	45.19	54.0	8.81	AV	94.00	100	Horizontal	Pass
6	17429.925	55.91	74.0	18.09	Peak	349.00	100	Horizontal	Pass
6**	17429.925	46.38	54.0	7.62	AV	349.00	100	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1160.932	49.10	74.0	24.90	Peak	131.00	300	Vertical	Pass
1**	1160.932	35.78	54.0	18.22	AV	131.00	300	Vertical	Pass
2	1326.173	43.42	74.0	30.58	Peak	323.00	100	Vertical	Pass
2**	1326.173	32.94	54.0	21.06	AV	323.00	100	Vertical	Pass
3	4821.117	50.41	74.0	23.60	Peak	201.00	200	Vertical	Pass
3**	4821.117	41.05	54.0	12.95	AV	201.00	200	Vertical	Pass
4	7934.692	53.17	74.0	20.83	Peak	227.00	200	Vertical	Pass
4**	7934.692	43.72	54.0	10.29	AV	227.00	200	Vertical	Pass
5	12978.953	52.93	74.0	21.07	Peak	3.00	400	Vertical	Pass
5**	12978.953	43.94	54.0	10.06	AV	3.00	400	Vertical	Pass
6	17443.012	55.40	74.0	18.60	Peak	65.00	300	Vertical	Pass
6**	17443.012	43.53	54.0	10.47	AV	65.00	300	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1328.451	44.75	74.0	29.25	Peak	215.00	400	Horizontal	Pass
1**	1328.451	35.80	54.0	18.20	AV	215.00	400	Horizontal	Pass
2	1890.471	44.10	74.0	29.90	Peak	276.00	400	Horizontal	Pass
2**	1890.471	35.88	54.0	18.12	AV	276.00	400	Horizontal	Pass
3	4723.030	49.43	74.0	24.57	Peak	30.00	200	Horizontal	Pass
3**	4723.030	40.49	54.0	13.52	AV	30.00	200	Horizontal	Pass
4	6912.315	54.23	74.0	19.77	Peak	265.00	100	Horizontal	Pass
4**	6912.315	45.06	54.0	8.94	AV	265.00	100	Horizontal	Pass
5	12989.941	53.81	74.0	20.19	Peak	29.00	200	Horizontal	Pass
5**	12989.941	45.30	54.0	8.70	AV	29.00	200	Horizontal	Pass
6	17428.531	56.87	74.0	17.13	Peak	70.00	200	Horizontal	Pass
6**	17428.531	46.46	54.0	7.54	AV	70.00	200	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1163.156	47.96	74.0	26.04	Peak	308.00	300	Vertical	Pass
1**	1163.156	34.78	54.0	19.22	AV	308.00	300	Vertical	Pass
2	1324.555	43.52	74.0	30.48	Peak	31.00	300	Vertical	Pass
2**	1324.555	32.58	54.0	21.42	AV	31.00	300	Vertical	Pass
3	4822.508	48.48	74.0	25.53	Peak	22.00	200	Vertical	Pass
3**	4822.508	40.47	54.0	13.53	AV	22.00	200	Vertical	Pass
4	7938.663	53.56	74.0	20.44	Peak	156.00	200	Vertical	Pass
4**	7938.663	43.17	54.0	10.83	AV	156.00	200	Vertical	Pass
5	12977.373	52.31	74.0	21.70	Peak	192.00	200	Vertical	Pass
5**	12977.373	42.73	54.0	11.27	AV	192.00	200	Vertical	Pass
6	17441.636	54.91	74.0	19.09	Peak	313.00	200	Vertical	Pass
6**	17441.636	42.37	54.0	11.64	AV	313.00	200	Vertical	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1330.636	44.74	74.0	29.26	Peak	101.00	200	Horizontal	Pass
1**	1330.636	35.80	54.0	18.20	AV	101.00	200	Horizontal	Pass
2	1889.795	44.09	74.0	29.92	Peak	359.00	200	Horizontal	Pass
2**	1889.795	35.92	54.0	18.08	AV	359.00	200	Horizontal	Pass
3	4723.526	49.39	74.0	24.61	Peak	229.00	200	Horizontal	Pass
3**	4723.526	40.46	54.0	13.54	AV	229.00	200	Horizontal	Pass
4	6913.947	54.29	74.0	19.71	Peak	208.00	300	Horizontal	Pass
4**	6913.947	45.05	54.0	8.95	AV	208.00	300	Horizontal	Pass
5	12991.016	53.74	74.0	20.26	Peak	72.00	100	Horizontal	Pass
5**	12991.016	45.29	54.0	8.71	AV	72.00	100	Horizontal	Pass
6	17430.577	56.91	74.0	17.09	Peak	130.00	300	Horizontal	Pass
6**	17430.577	46.47	54.0	7.53	AV	130.00	300	Horizontal	Pass

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

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1160.634	49.01	74.0	24.99	Peak	21.00	400	Vertical	Pass
1**	1160.634	35.13	54.0	18.87	AV	21.00	400	Vertical	Pass
2	1331.262	42.62	74.0	31.38	Peak	82.00	200	Vertical	Pass
2**	1331.262	32.78	54.0	21.22	AV	82.00	200	Vertical	Pass
3	4821.974	50.10	74.0	23.91	Peak	194.00	200	Vertical	Pass
3**	4821.974	40.28	54.0	13.72	AV	194.00	200	Vertical	Pass
4	7936.271	52.29	74.0	21.71	Peak	51.00	300	Vertical	Pass
4**	7936.271	43.17	54.0	10.84	AV	51.00	300	Vertical	Pass
5	12979.896	52.62	74.0	21.38	Peak	29.00	200	Vertical	Pass
5**	12979.896	43.54	54.0	10.46	AV	29.00	200	Vertical	Pass
6	17438.699	54.85	74.0	19.15	Peak	43.00	200	Vertical	Pass
6**	17438.699	43.04	54.0	10.96	AV	43.00	200	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 C63.10-2020, 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.

Note ⁴: Both horizontal and vertical directions were pre tested, only the worst configuration has been reported in this report.

Test Data and Plots

802.11b LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2388.512	55.60	74.0	18.40	Peak	293.00	100	Horizontal	Pass
1**	2388.512	44.47	54.0	9.53	AV	293.00	100	Horizontal	Pass
2	2390.000	53.85	74.0	20.15	Peak	28.00	300	Horizontal	Pass
2**	2390.000	45.49	54.0	8.51	AV	28.00	300	Horizontal	Pass

802.11b HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	54.03	74.0	19.97	Peak	50.00	300	Horizontal	Pass
1**	2483.500	42.93	54.0	11.07	AV	50.00	300	Horizontal	Pass
2	2494.752	55.47	74.0	18.53	Peak	231.00	100	Horizontal	Pass
2**	2494.752	43.00	54.0	11.00	AV	231.00	100	Horizontal	Pass

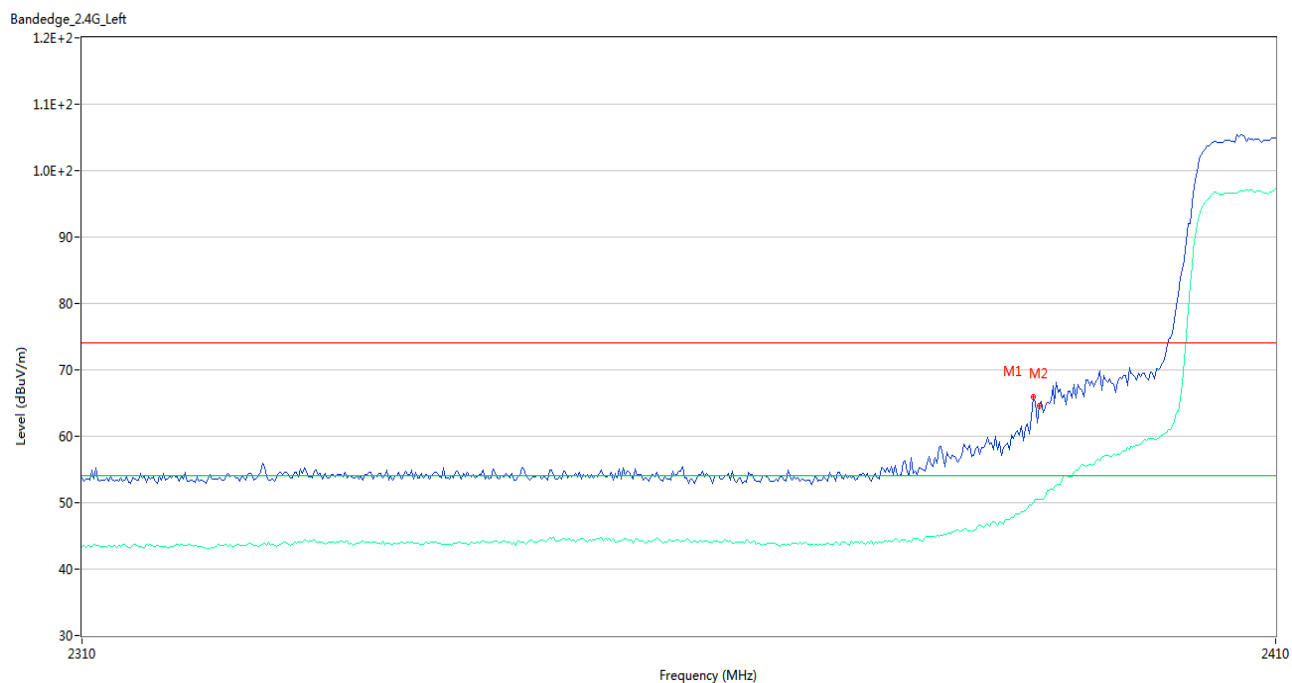
802.11g LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2334.055	55.38	74.0	18.62	Peak	260.00	300	Horizontal	Pass
1**	2334.055	43.15	54.0	10.85	AV	260.00	300	Horizontal	Pass
2	2390.000	55.61	74.0	18.39	Peak	32.00	300	Horizontal	Pass
2**	2390.000	44.81	54.0	9.19	AV	32.00	300	Horizontal	Pass

802.11g HIGH CHANNEL

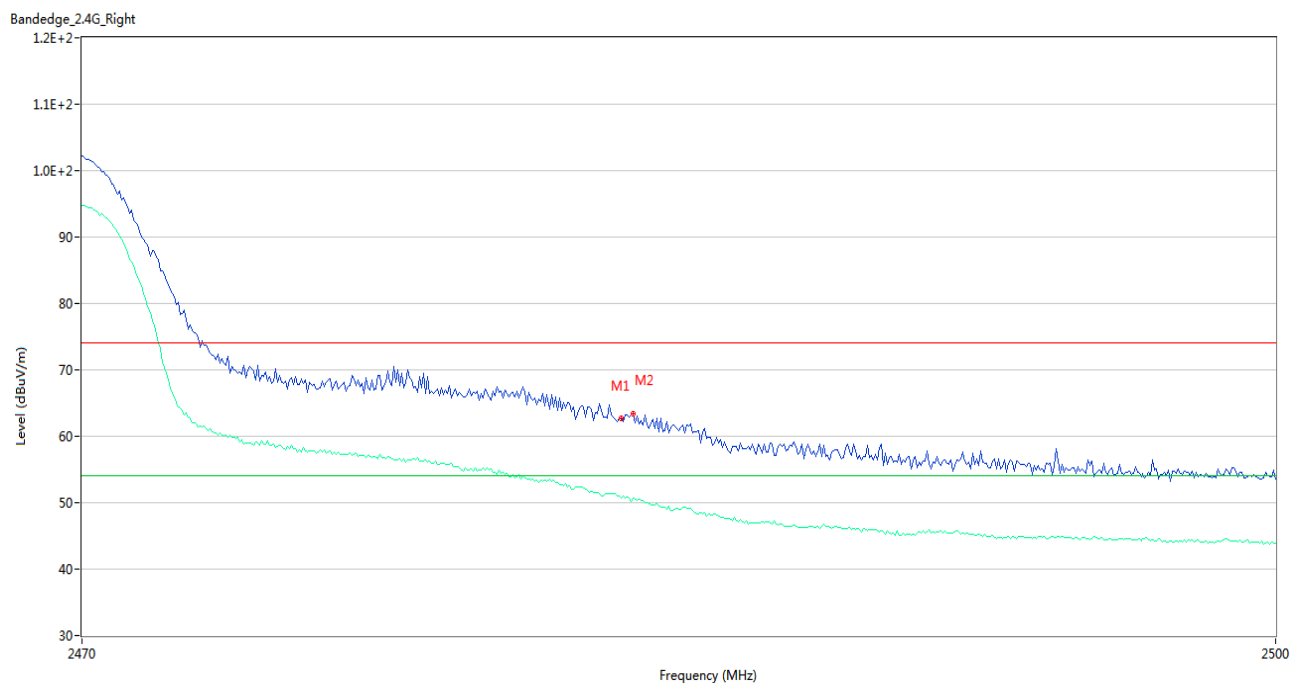
No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	55.91	74.0	18.09	Peak	289.00	300	Horizontal	Pass
1**	2483.500	45.05	54.0	8.95	AV	289.00	300	Horizontal	Pass
2	2484.587	56.42	74.0	17.58	Peak	109.00	100	Horizontal	Pass
2**	2484.587	44.54	54.0	9.46	AV	109.00	100	Horizontal	Pass

802.11n20 LOW CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2389.333	66.00	74.0	8.00	Peak	135.00	200	Horizontal	Pass
1**	2389.333	50.04	54.0	3.96	AV	135.00	200	Horizontal	Pass
2	2389.833	64.57	74.0	9.43	Peak	267.00	100	Horizontal	Pass
2**	2389.833	50.48	54.0	3.52	AV	267.00	100	Horizontal	Pass

802.11n20 HIGH CHANNEL



No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	62.67	74.0	11.33	Peak	134.00	200	Horizontal	Pass
1**	2483.500	50.70	54.0	3.30	AV	134.00	200	Horizontal	Pass
2	2483.800	63.47	74.0	10.53	Peak	82.00	100	Horizontal	Pass
2**	2483.800	50.75	54.0	3.25	AV	82.00	100	Horizontal	Pass

A.8 Power Spectral Density (PSD)

Test Data

802.11b Mode:

Channel	Spectral Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
Low	-5.95	8	Pass
Middle	-4.93	8	Pass
High	-5.55	8	Pass

802.11g Mode:

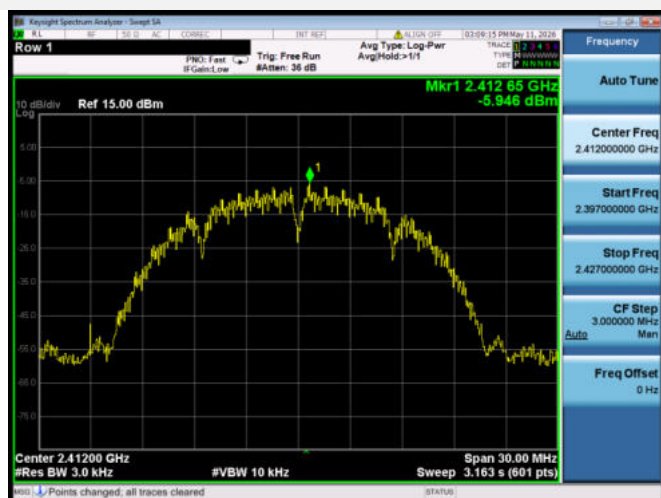
Channel	Spectral Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
Low	-9.95	8	Pass
Middle	-10.64	8	Pass
High	-10.85	8	Pass

802.11n-20 MHz Mode:

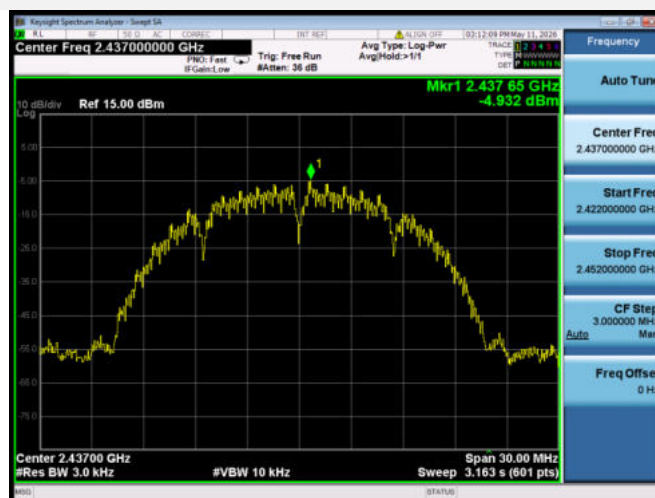
Channel	Spectral Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
Low	-11.35	8	Pass
Middle	-10.00	8	Pass
High	-10.25	8	Pass

Test Plots

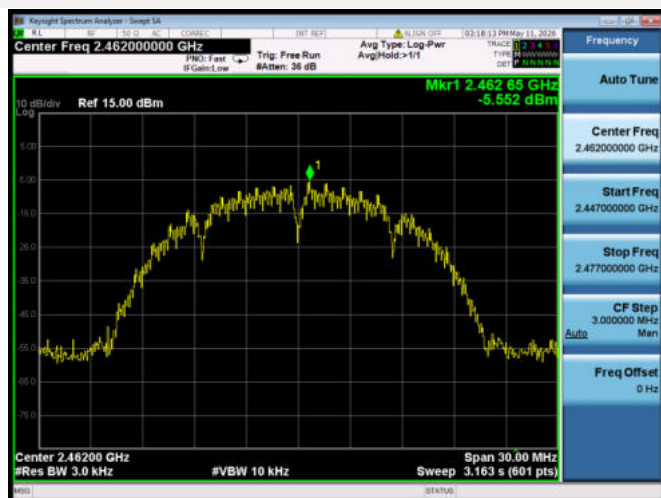
802.11b LOW CHANNEL



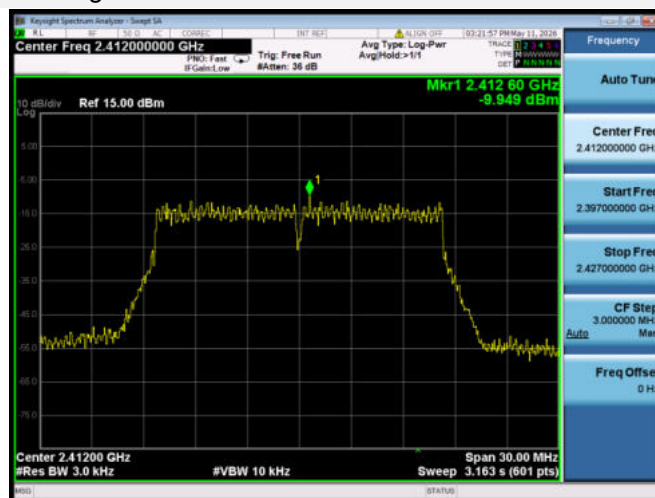
802.11b MIDDLE CHANNEL



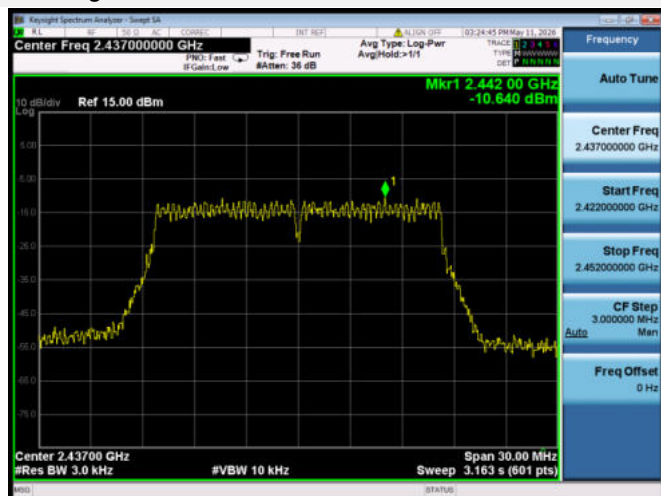
802.11b HIGH CHANNEL



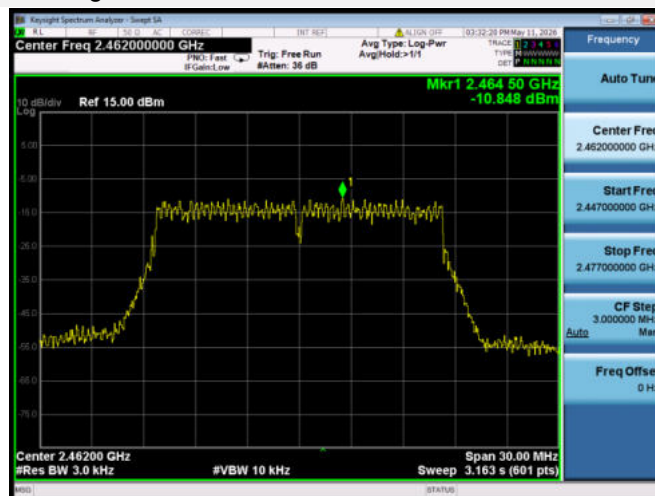
802.11g LOW CHANNEL



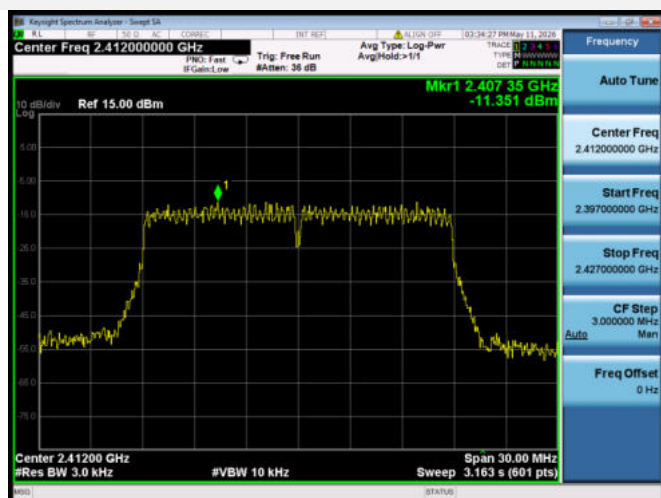
802.11g MIDDLE CHANNEL



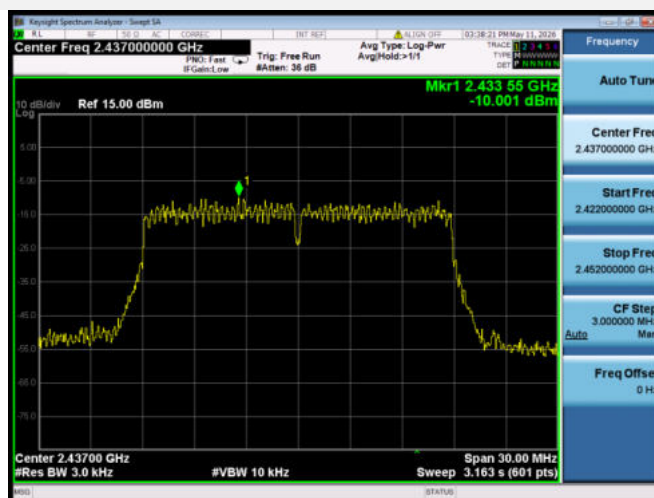
802.11g HIGH CHANNEL



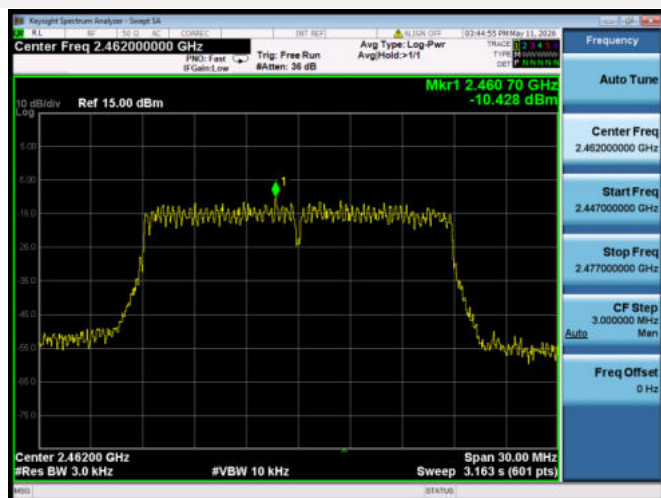
802.11n-20 MHz LOW CHANNEL



802.11n-20 MHz MIDDLE CHANNEL



802.11n-20 MHz HIGH CHANNEL



ANNEX B TEST SETUP PHOTOS

Please refer the document “Ti-EE26040789-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “Ti-EE26040789-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “Ti-EE26040789-AI.PDF”.

Statement

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--END OF REPORT--