

Limited test report

451748-1TRFWL

Date of issue: February 10, 2022

Applicant:

Fujitsu Network Communications

Product:

Dual Band RU for North America

Model:

DB 5G RU

Model variant:

N/A

FCC ID:

CFD5GRUDB

Specifications:

◆ **FCC 47 CFR Part 27**

Miscellaneous Wireless Communications Services

Lab and test locations

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Tested by	Martha Espinoza, Wireless Test Engineer
Reviewed by	James Cunningham, EMC/MIL/WL Supervisor
Review date	February 10, 2022
Reviewer signature	

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

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Section 1. Report summary

1.1 Applicant and manufacturer

Company name	Fujitsu Networks Communications, Inc.
Address	2801 Telecom Parkway
City	Richardson
Province/State	TX
Postal/Zip code	75082
Country	United States of America

1.2 Test specifications

FCC 47 CFR Part 27	Miscellaneous Wireless Communications Services
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1.3 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was completed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See "Summary of test results" for full details.

1.4 Exclusions

None

1.5 Test report revision history

Revision #	Details of changes made to test report
451748-1TRFWL	Original report issued

Section 2. Summary of test results

2.1 FCC Part 27 test results

Part	Test description	Verdict
§2.1033(c)(4)	Modulation type	Pass
§2.1049(h)	99% Occupied bandwidth	Pass
§27.50(h)(j)	Frequency ranges	Pass
§27.50(d)(2)(ii)	Output power at RF antenna connector	Pass
§27.50(d)(5)	Peak to average power ratio	Pass
§27.53(h)(1)	Conducted spurious emissions	Pass
§27.53(h)(1)	Radiated spurious emissions	Pass
§27.53(h)(3)	26 dB Occupied bandwidth	Pass
§27.54	Frequency stability	Not tested ¹

¹Note: Methodology and test result for frequency stability test are described in the report 443812-1TRFWL Section 8.7, Page 65.

This testing covers the addition of a 15 MHz bandwidth option for the 1995 - 2020 MHz band (Band n70) and the 2110 – 2200 MHz (Band n66) band.

Section 3. Equipment under test (EUT) details

3.1 Sample information

Receipt date	January 21, 2022
Nemko sample ID number	NEx: 451748

3.2 EUT information

Product name	Dual Band RU for North America
Model	DB 5G RU
Model variant	N/A
Serial number	10016

3.3 Technical information

Frequency band	1995 - 2020 MHz (Band n70) and 2110 – 2200 MHz (Band n66)
Frequency Min (MHz)	2117.5 MHz (Band 66); 2002.5 MHz (Band 70)
Frequency Max (MHz)	2192.5 MHz (Band 66); 2012.5 MHz (Band 70)
RF power Min (W), Conducted	61.801 Watts or 47.91 dBm (Port B); 247.172 Watts or 53.93 dBm (Total power across all ports); Band n66
RF power Max (W), Conducted	64.714 Watts or 48.11 dBm (Port B); 258.821 Watts or 54.13 dBm (Total power across all ports); Band n66
RF power Min (W), Conducted	42.266 Watts or 46.26 dBm (Port B); 169.044 Watts or 52.28 dBm (Total power across all ports); Band n70
RF power Max (W), Conducted	44.258 Watts or 46.46 dBm (Port B); 177.010 Watts or 52.48 dBm (Total power across all ports); Band n70
Field strength, Units @ distance	54.24 dBμV/m @ 3m (23594.733333 MHz); Band n66
Field strength, Units @ distance	52.09 dBμV/m @ 3m (13760.733333 MHz); Band n70
Measured BW (kHz) (26 dB)	15.29015 MHz (15 MHz OBW Declared); Band n66
Measured BW (kHz) (26 dB)	15.28358 MHz (15 MHz OBW Declared); Band n70
Type of modulation	QPSK; 16QAM; 64QAM; 256QAM
Transmitter spurious, Units @ distance	3 Meters
Power requirements	-48 VDC
Antenna information	The EUT is professionally installed.

3.4 Product description and theory of operation

The radio unit (RU) is one of the components to configure the 5G RAN mobile communication system. The RU has two band frequencies: band n66 and band n70. Four antenna ports are shared across the frequency bands.

3.5 EUT exercise details

A laptop computer was used to send test commands to EUT to force it to transmit the appropriate signal. Unit transmit the selected signal at full power: 60 Watts in band n66 and 40 Watts in band n70. The maximum power is only available in one band at the time due the maximum power supported by unit is 80 Watts. The unit was tested using a conducted port. The antenna installation shall be done by professionals, and they are not within the scope of the tests evaluated on this document.

3.6 EUT setup diagram

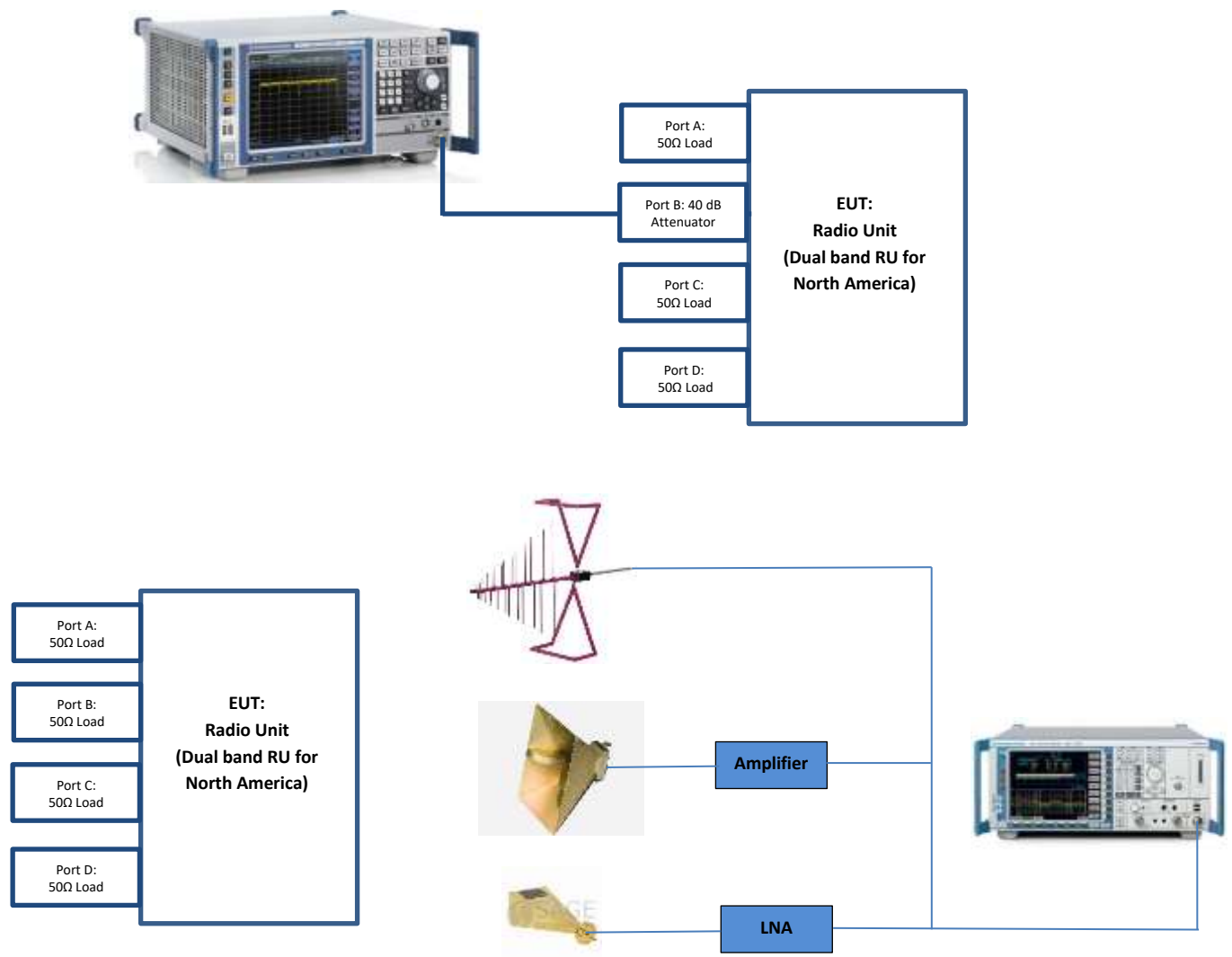


Figure 3.6-1: Setup diagram

Section 4. Engineering considerations

4.1 Modifications incorporated in the EUT

There were no modifications performed to the EUT during this assessment.

4.2 Technical judgment

None

4.3 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 5. Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	860–1060 mbar

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages ± 5 %, for which the equipment was designed.

Section 6. Measurement uncertainty

6.1 Uncertainty of measurement

Measurement uncertainty budgets for the tests are detailed below. Measurement uncertainty calculations assume a coverage factor of $K = 2$ with 95% certainty.

Table 6.1-1: Measurement uncertainty.

Test name	Measurement uncertainty, dB
All antenna port measurements/ including OBW	0.55
Conducted spurious emissions	1.13
Radiated spurious emissions	3.78
AC power line conducted emissions	1.38
Supply Voltages	0.05%
Time	2.09%

Section 7. Test equipment

7.1 Test equipment list

Table 7.1-1: Equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
EMC Test Receiver	Rohde & Schwarz	ESU 40	E1121	1 year	05-19-2022
Signal Analyzer	Rohde & Schwarz	FSV 40	E1120	2 years	11-19-2023
Antenna, Bilog	Schaffner-Chase	CBL6111C	1763	2 years	02-18-2022
Antenna, Horn	ETS	3117-PA	E1139	2 years	04-20-2022
Antenna, Horn	Sage Millimeter	SAR-2309-42-S2	E1143	2 years	11-13-2022
Low Noise Amplifier	Sage Millimeter	SBL-1834034030-KFKF-SI	E1228	NCR	NCR
Power sensor	ETS-Lindgren	7002-006	E1062	1 year	05-20-2022

Note: NCR - no calibration required

Section 8. Testing data

8.1 FCC §2.1033(c)(4) Modulation type

8.1.1 Definitions and limits

(c) Applications for equipment other than that operating under parts 15, 11 and 18 of this chapter shall be accompanied by a technical report containing the following information:

(4) Type or types of emission

8.1.2 Test summary

Test date	January 24, 2022	Temperature	22 °C
Test engineer	Martha Espinoza	Air pressure	1003 mbar
Verdict	Pass	Relative humidity	54 %

8.1.3 Observations, settings and special notes

None

8.1.4 Test data

Band	Channel (MHz)	Bandwidth (MHz)	Emission type
n66	2117.5	15	QPSK; 16QAM; 64QAM; 256QAM
n66	2155	15	QPSK; 16QAM; 64QAM; 256QAM
n66	2192.5	15	QPSK; 16QAM; 64QAM; 256QAM
n70	2002.5	15	QPSK; 16QAM; 64QAM; 256QAM
n70	2012.5	15	QPSK; 16QAM; 64QAM; 256QAM

Table 8.1-1: Types of emission

8.2 FCC §2.1049(h) & 99% §27.5 (h)(j) Occupied Bandwidth and frequency ranges

8.2.1 Definitions and limits

§2.1049 (h) Transmitters employing digital modulation techniques—when modulated by an input signal such that its amplitude and symbol rate represent the maximum rated conditions under which the equipment will be operated. The signal shall be applied through any filter networks, pseudo-random generators or other devices required in normal service. Additionally, the occupied bandwidth shall be shown for operation with any devices used for modifying the spectrum when such devices are optional at the discretion of the use.

§27 (h)(j)(k)

(h) 1710-1755 MHz, 2110-2155 MHz, 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz bands.

(j) 2000-2020 MHz and 2180-2200 MHz bands.

(k) 1915-1920 MHz and 1995-2000 MHz bands.

8.2.2 Test summary

Test date	January 24, 2022	Temperature	22 °C
Test engineer	Martha Espinoza	Air pressure	1003 mbar
Verdict	Pass	Relative humidity	54 %

8.2.3 Observations, settings and special notes

Spectrum analyzer settings:

Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Frequency span	2*OBW
Detector mode	Peak
Trace mode	Max Hold

8.2.4 Test data

Band	OBW Declared	Port	Channel (MHz)	99% OBW
n66	15 MHz	B	2117.5	14.239 MHz
n66	15 MHz	B	2155	14.242 MHz
n66	15 MHz	B	2192.5	14.242 MHz
n70	15 MHz	B	2002.5	14.239 MHz
n70	15 MHz	B	2012.5	14.242 MHz

Table 8.2-1: 99% Occupied bandwidth, QPSK Modulation.

Band	OBW Declared	Port	Channel (MHz)	99% OBW
n66	15 MHz	B	2117.5	14.304 MHz
n66	15 MHz	B	2155	14.310 MHz
n66	15 MHz	B	2192.5	14.309 MHz
n70	15 MHz	B	2002.5	14.307 MHz
n70	15 MHz	B	2012.5	14.314 MHz

Table 8.2-2: 99% Occupied bandwidth, 16QAM Modulation.

Band	OBW Declared	Port	Channel (MHz)	99% OBW
n66	15 MHz	B	2117.5	14.235 MHz
n66	15 MHz	B	2155	14.236 MHz
n66	15 MHz	B	2192.5	14.234 MHz
n70	15 MHz	B	2002.5	14.234 MHz
n70	15 MHz	B	2012.5	14.237 MHz

Table 8.2-3: 99% Occupied bandwidth, 64QAM Modulation.

Band	OBW Declared	Port	Channel (MHz)	99% OBW
n66	15 MHz	B	2117.5	14.224 MHz
n66	15 MHz	B	2155	14.231 MHz
n66	15 MHz	B	2192.5	14.221 MHz
n70	15 MHz	B	2002.5	14.223 MHz
n70	15 MHz	B	2012.5	14.227 MHz

Table 8.2-4: 99% Occupied bandwidth, 256QAM Modulation.

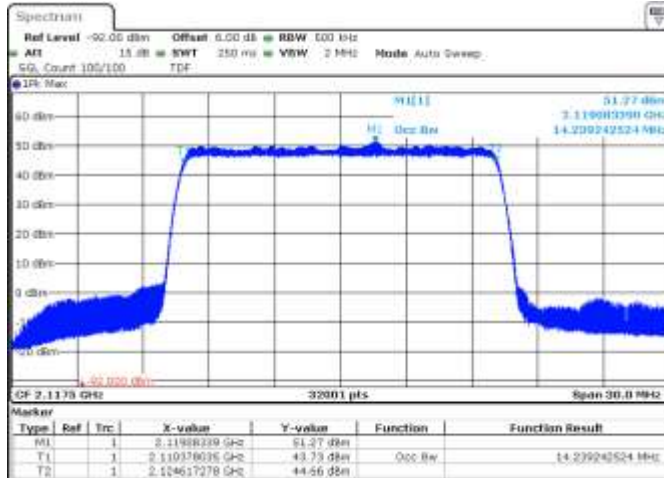


Figure 8.2-1: 99% Occupied bandwidth, QPSK Modulation, low and middle channel (15 MHz), respectively, band n66.

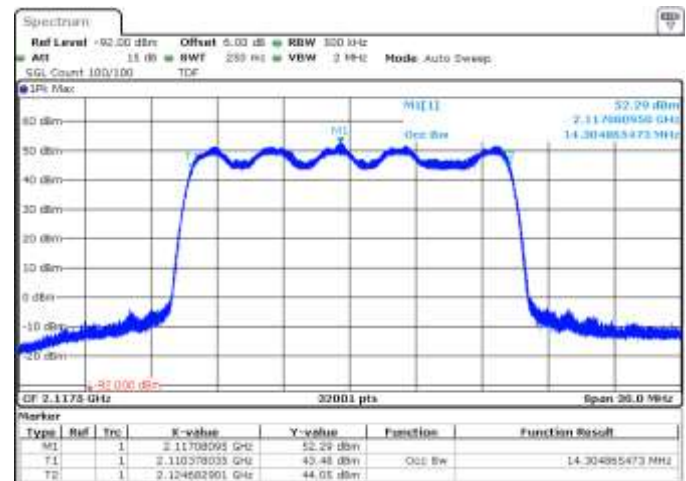
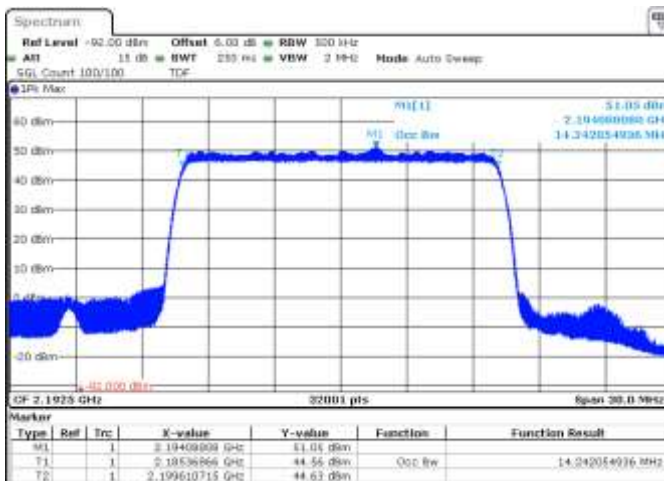
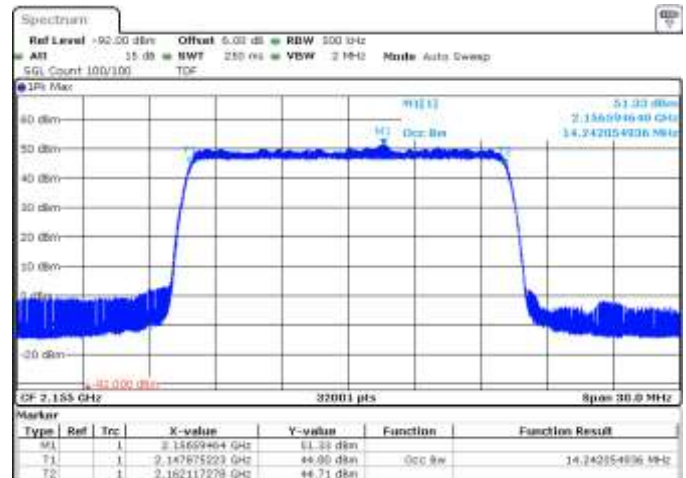


Figure 8.2-2: 99% Occupied bandwidth, QPSK Modulation, high channel (15 MHz) and 16QAM Modulation, low channel (15 MHz), respectively, band n66

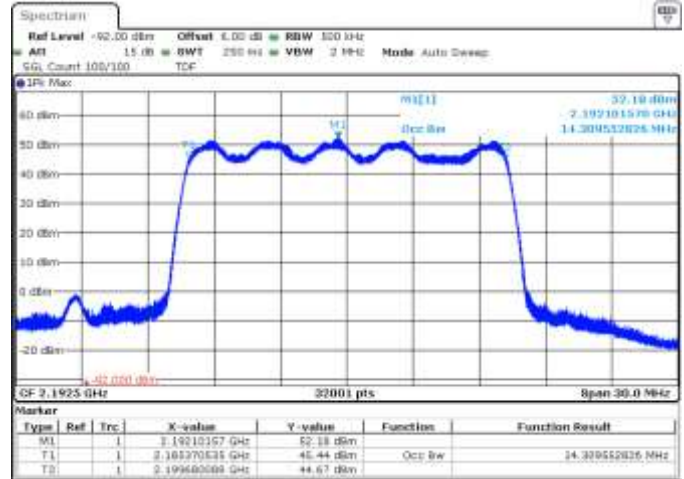
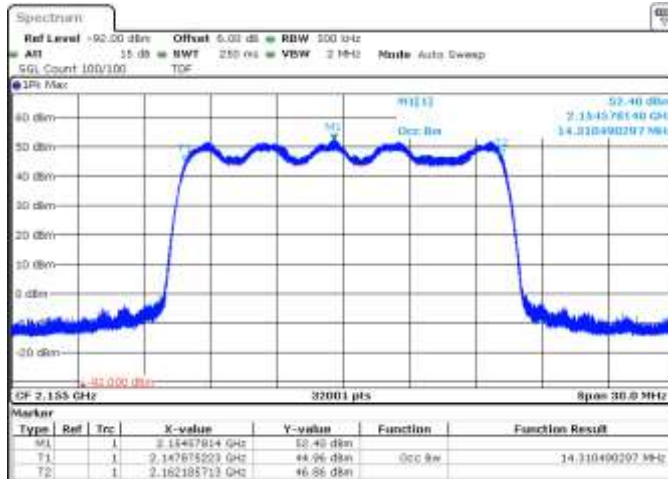


Figure 8.2-3: 99% Occupied bandwidth, 16QAM Modulation, middle and high channel (15 MHz), respectively, band n66.

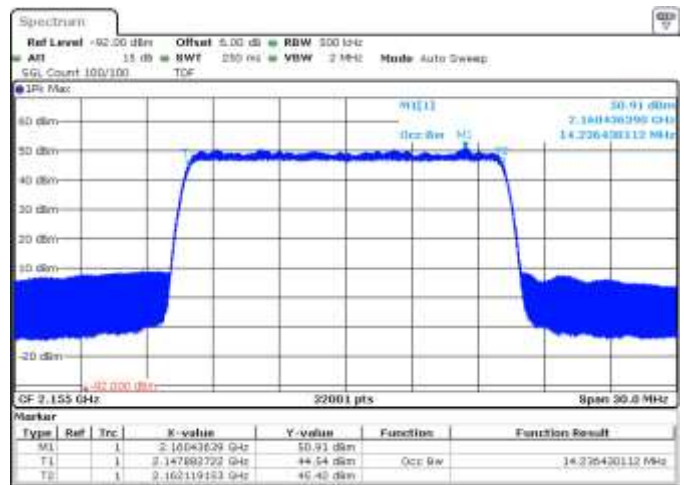
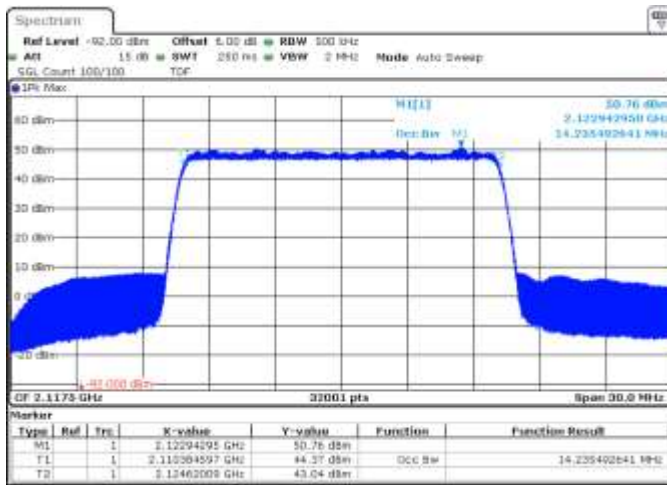


Figure 8.2-4: 99% Occupied bandwidth, 64QAM Modulation, low and middle channel (15 MHz), respectively, band n66.

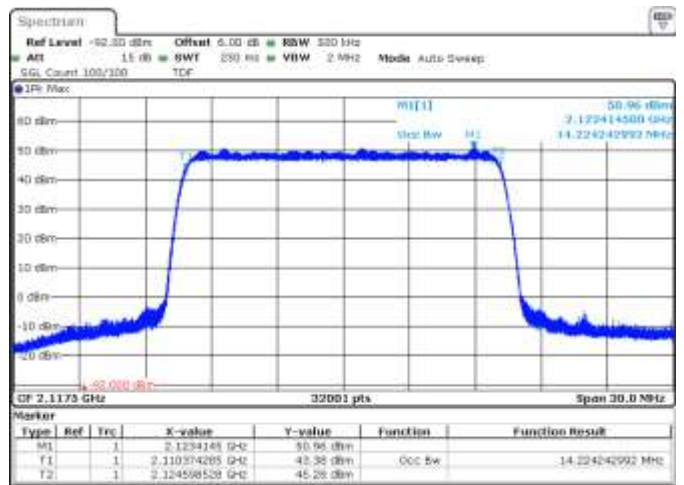
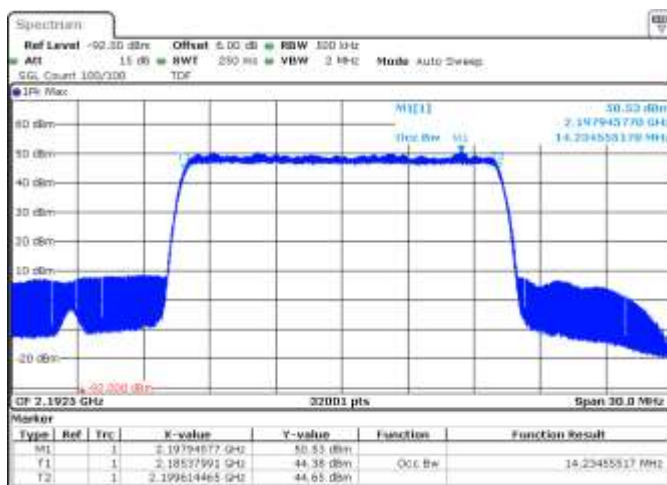


Figure 8.2-5: 99% Occupied bandwidth, 64QAM Modulation, high channel (15 MHz) and 256QAM Modulation, low channel (15 MHz), respectively, band n66

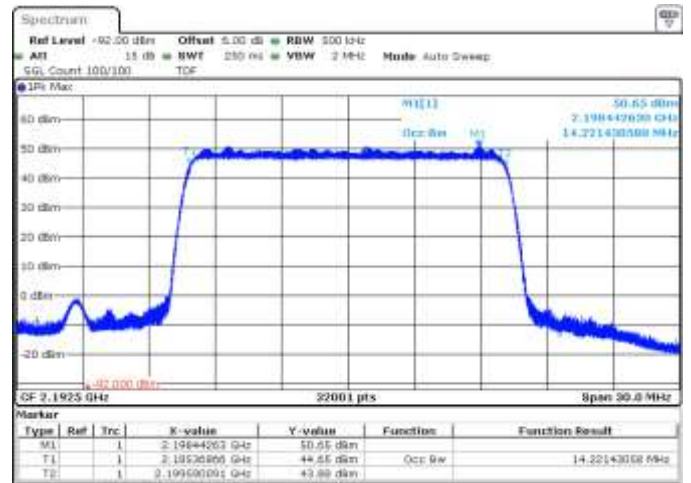
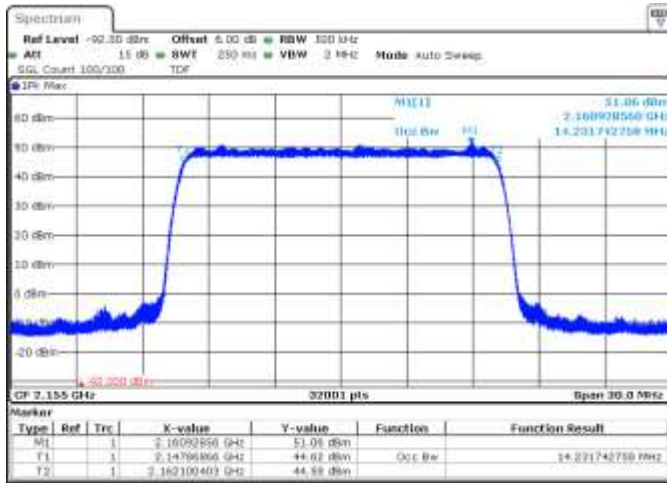


Figure 8.2-6: 99% Occupied bandwidth, 256QAM Modulation, middle and high channel (15 MHz), respectively, band n66.

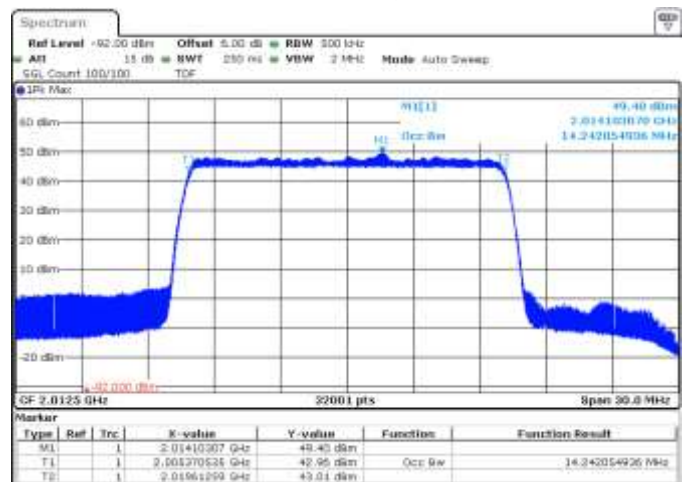
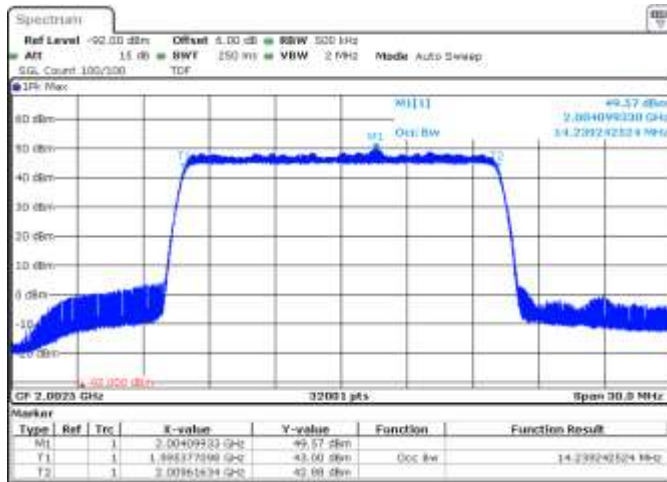


Figure 8.2-7: 99% Occupied bandwidth, QPSK Modulation, low and high channel (15 MHz), respectively, band n70.

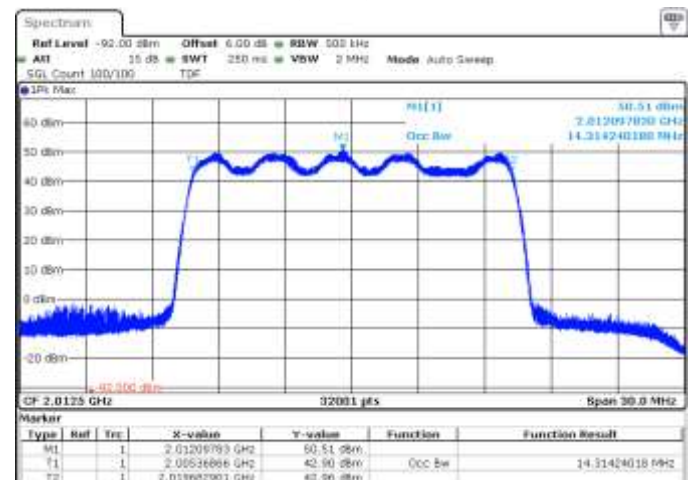
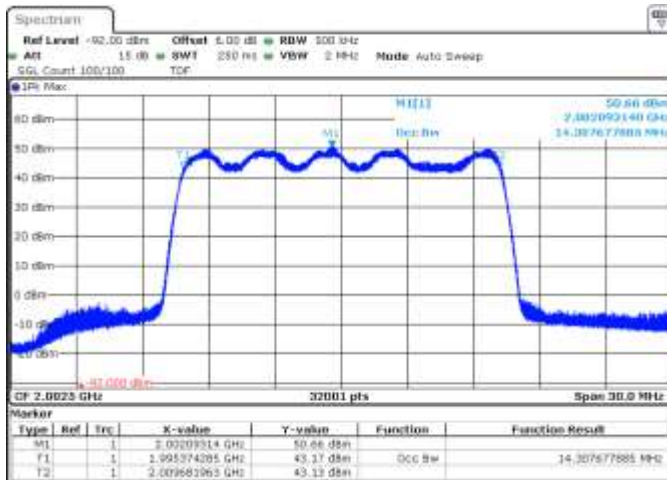
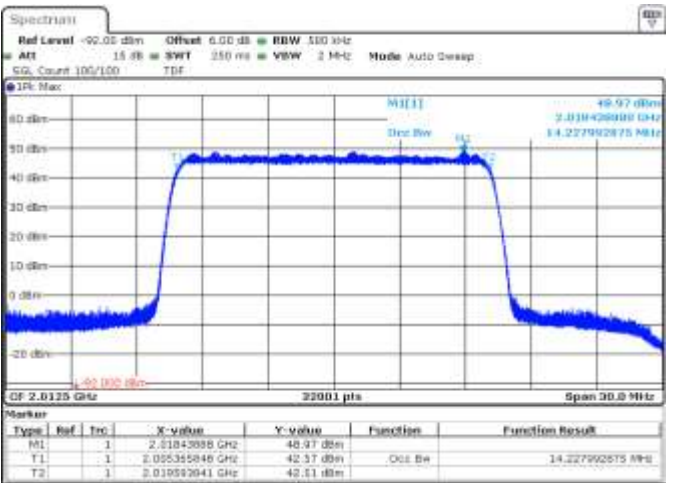
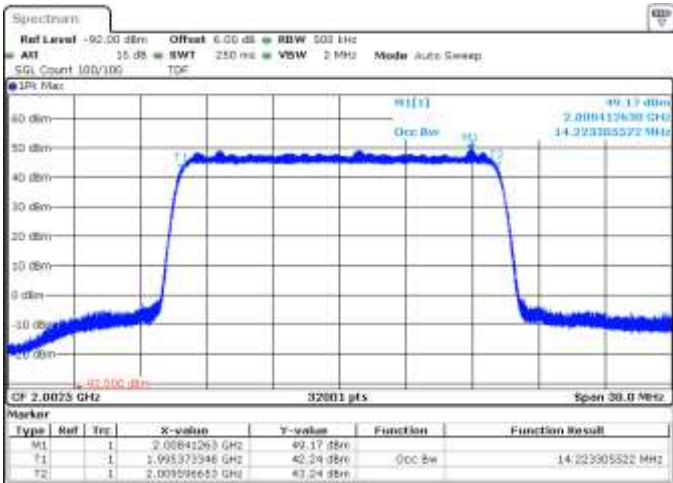
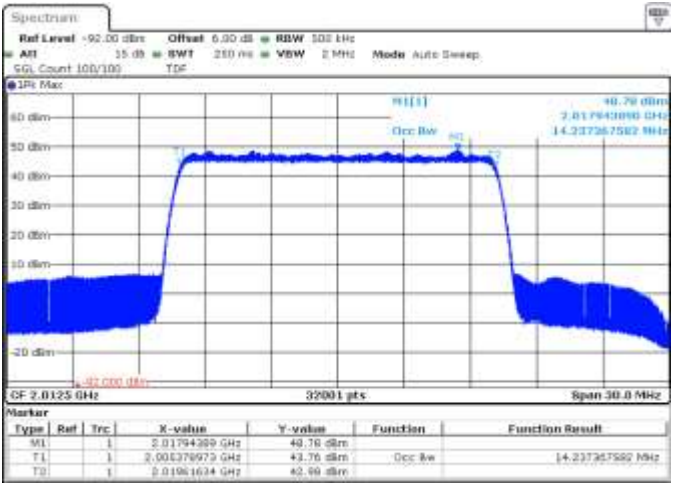
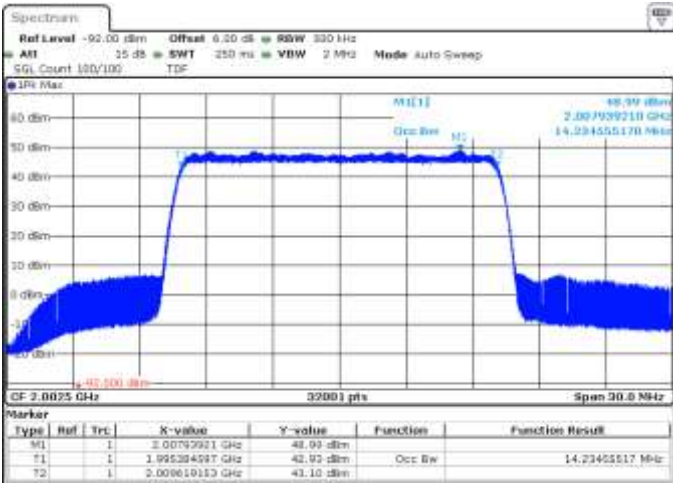


Figure 8.2-8: 99% Occupied bandwidth, 16QAM Modulation, low and high channel (15 MHz), respectively, band n70.



8.3 FCC §27.53 (h)(3) 26 dB Occupied Bandwidth

8.3.1 Definitions and limits

(3) Measurement procedure. (i) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1-megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

8.3.2 Test summary

Test date	January 24, 2022	Temperature	22 °C
Test engineer	Martha Espinoza	Air pressure	1003 mbar
Verdict	Pass	Relative humidity	54 %

8.3.3 Observations, settings and special notes

Spectrum analyzer settings:

Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Frequency span	2*OBW
Detector mode	Peak
Trace mode	Max Hold

8.3.4 Test data

Band	OBW Declared	Port	Channel (MHz)	26 dB OBW
n66	15 MHz	B	2117.5	15.263 MHz
n66	15 MHz	B	2155	15.259 MHz
n66	15 MHz	B	2192.5	15.242 MHz
n70	15 MHz	B	2002.5	15.272 MHz
n70	15 MHz	B	2012.5	15.263 MHz

Table 8.3-1: 26 dB Occupied bandwidth, QPSK Modulation.

Band	OBW Declared	Port	Channel (MHz)	26 dB OBW
n66	15 MHz	B	2117.5	15.258 MHz
n66	15 MHz	B	2155	15.258 MHz
n66	15 MHz	B	2192.5	15.246 MHz
n70	15 MHz	B	2002.5	15.266 MHz
n70	15 MHz	B	2012.5	15.253 MHz

Table 8.3-2: 26 dB Occupied bandwidth, 16QAM Modulation.

Band	OBW Declared	Port	Channel (MHz)	26 dB OBW
n66	15 MHz	B	2117.5	15.272 MHz
n66	15 MHz	B	2155	15.289 MHz
n66	15 MHz	B	2192.5	15.290 MHz
n70	15 MHz	B	2002.5	15.283 MHz
n70	15 MHz	B	2012.5	15.263 MHz

Table 8.3-3: 26 dB Occupied bandwidth, 64QAM Modulation.

Band	OBW Declared	Port	Channel (MHz)	26 dB OBW
n66	15 MHz	B	2117.5	15.263 MHz
n66	15 MHz	B	2155	15.279 MHz
n66	15 MHz	B	2192.5	15.258 MHz
n70	15 MHz	B	2002.5	15.272 MHz
n70	15 MHz	B	2012.5	15.274 MHz

Table 8.3-4: 26 dB Occupied bandwidth, 256QAM Modulation.

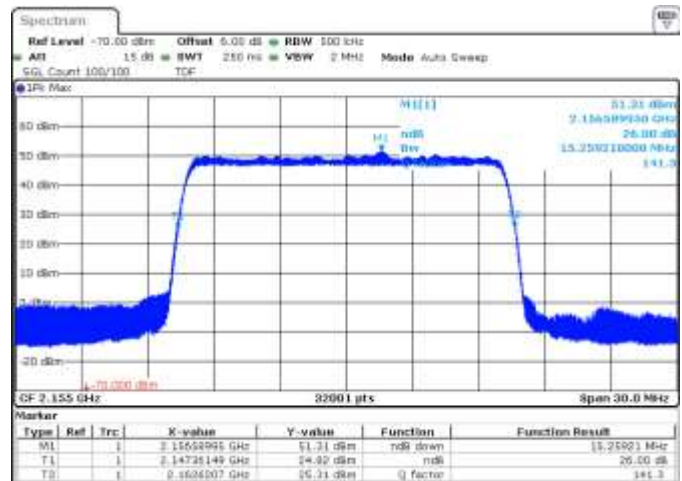
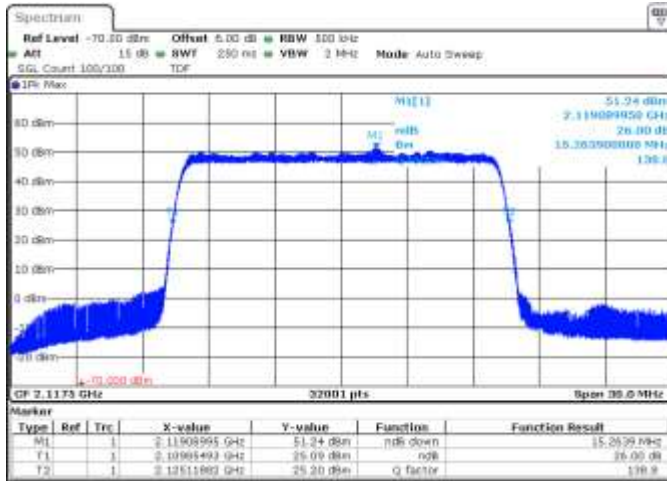


Figure 8.3-1: 26 dB Occupied bandwidth, QPSK Modulation, low and middle channel (15 MHz), respectively, band n66.

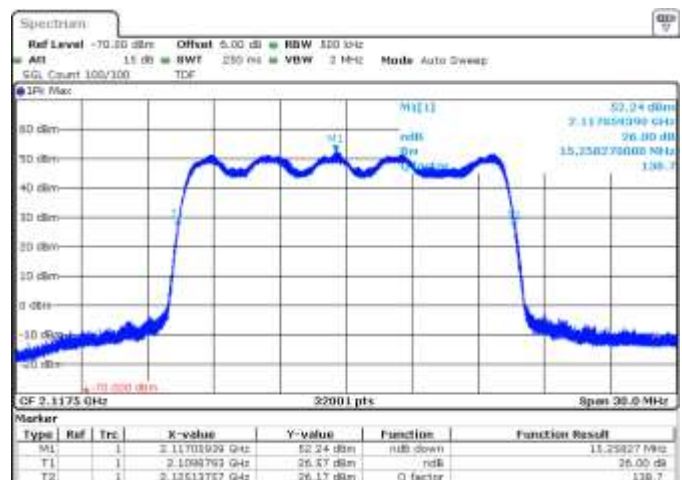
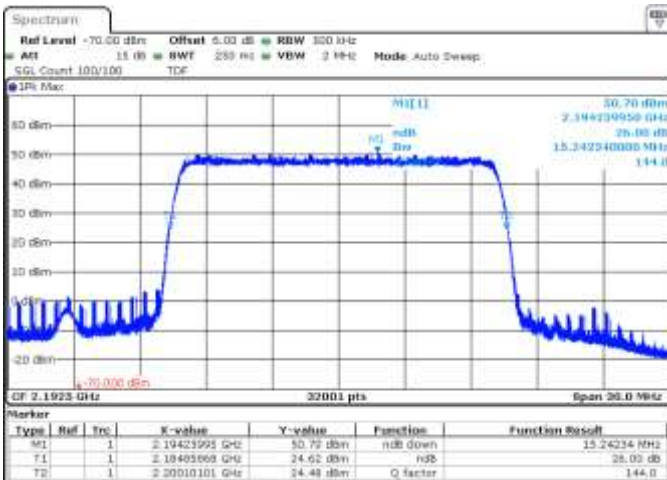


Figure 8.3-2: 26 dB Occupied bandwidth, QPSK Modulation, high channel (15 MHz) and 16QAM Modulation, low channel (15 MHz), respectively, band n66.

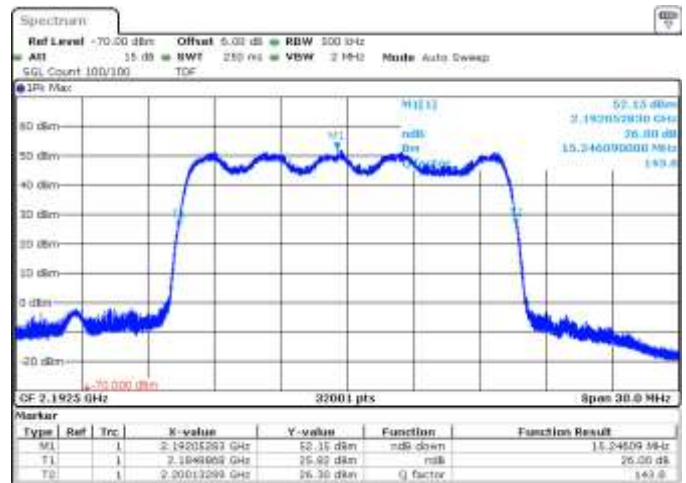
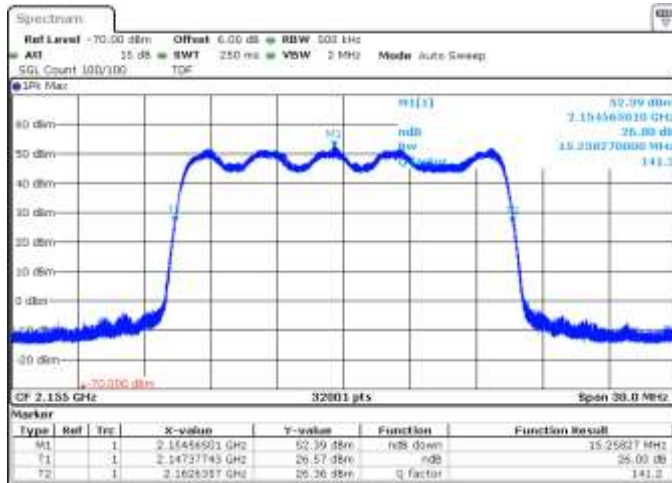


Figure 8.3-3: 26 dB Occupied bandwidth, 16QAM, Modulation, middle and high channel (15 MHz), respectively, band n66.

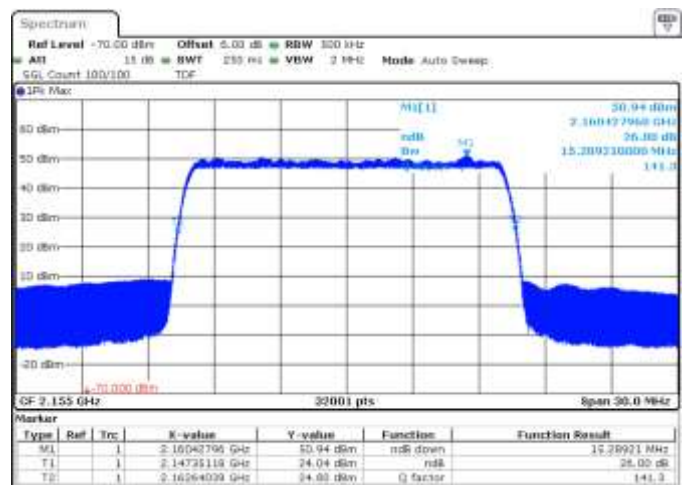
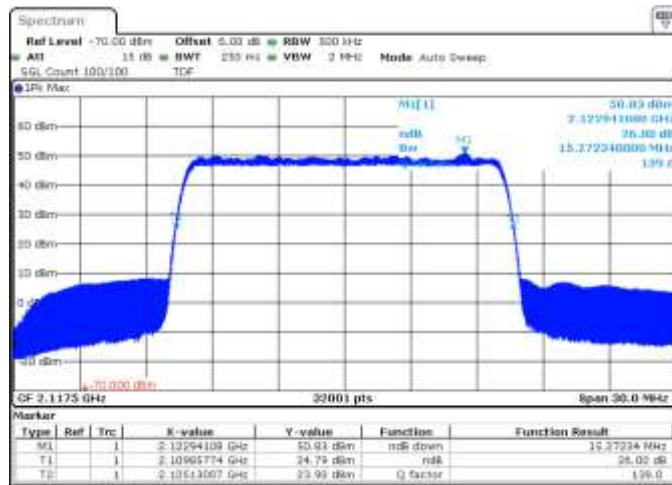


Figure 8.3-4: 26 dB Occupied bandwidth, 64QAM, Modulation, low and middle channel (15 MHz), respectively, band n66.

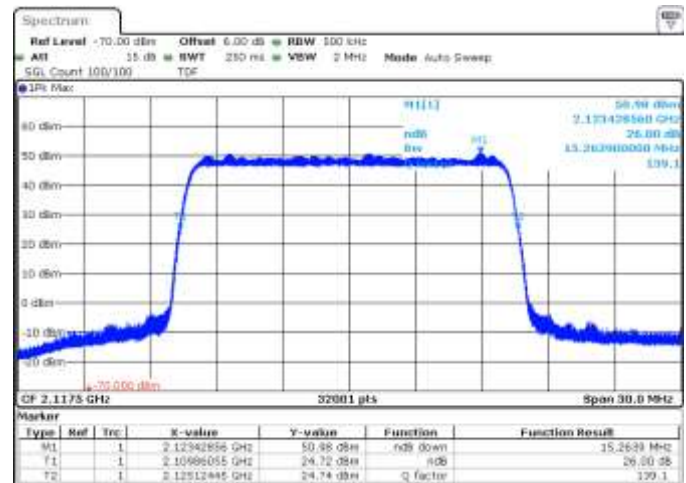
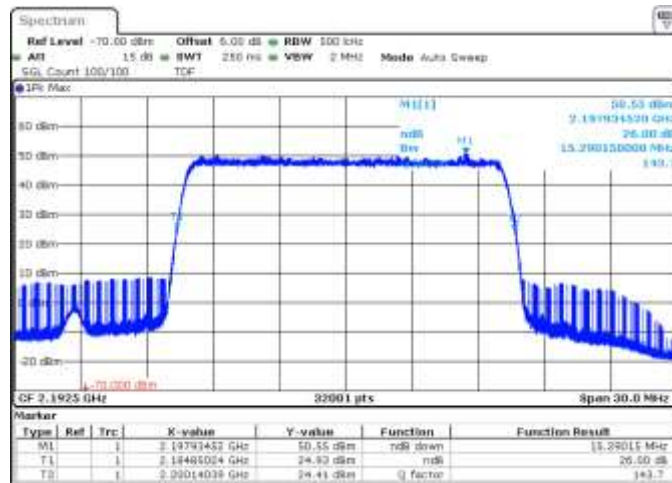


Figure 8.3-5: 26 dB Occupied bandwidth, 64QAM, Modulation, high channel (15 MHz) and 256QAM Modulation, low channel (15 MHz), respectively, band n66.

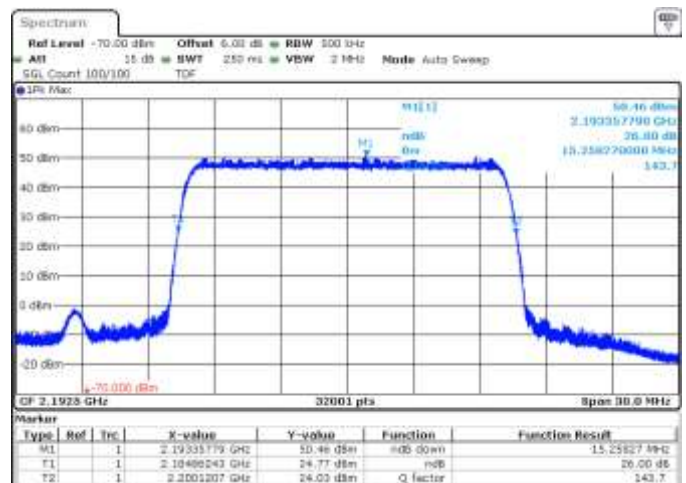
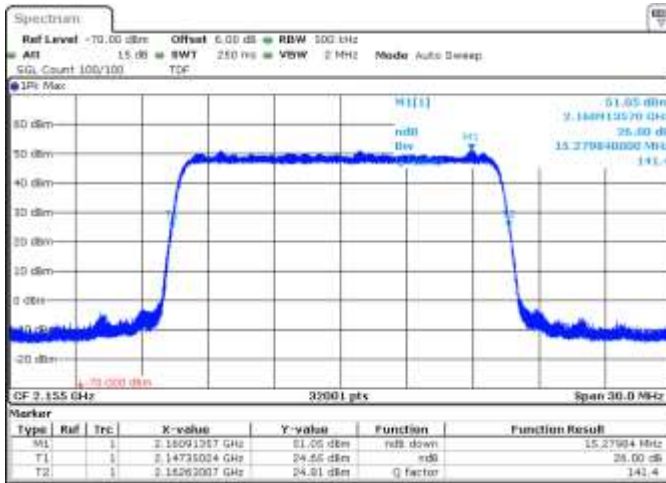


Figure 8.3-6: 26 dB Occupied bandwidth, 256QAM, Modulation, middle and high channel (15 MHz), respectively, band n66.

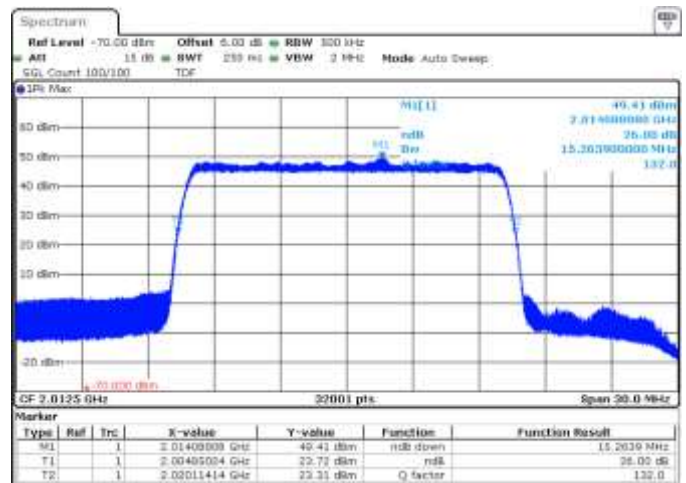
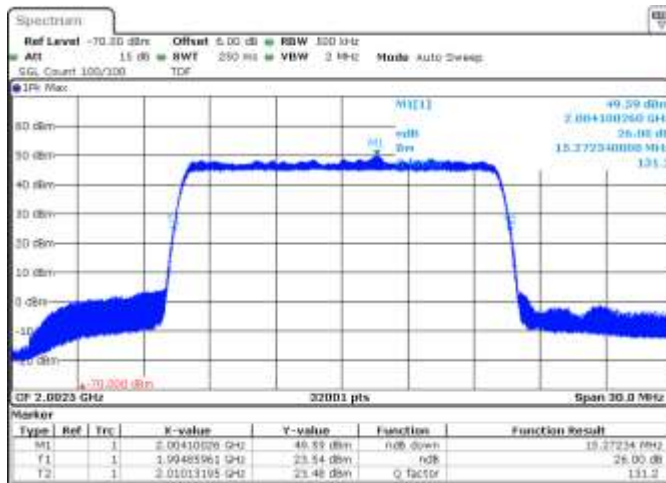


Figure 8.3-7: 26 dB Occupied bandwidth, QPSK, Modulation, low and high channel (15 MHz), respectively, band n70.

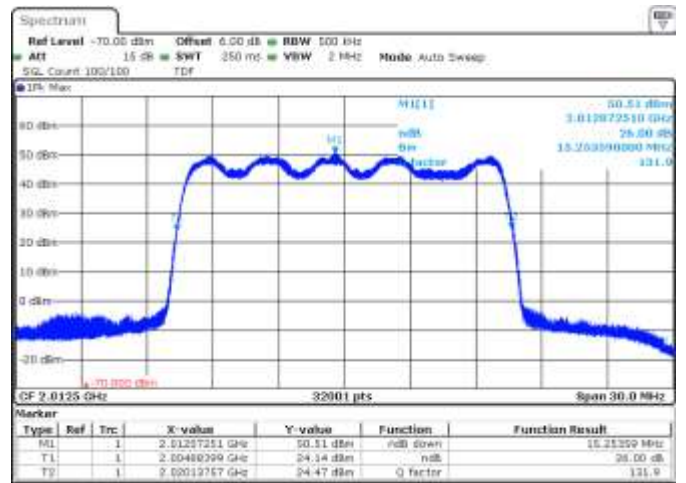
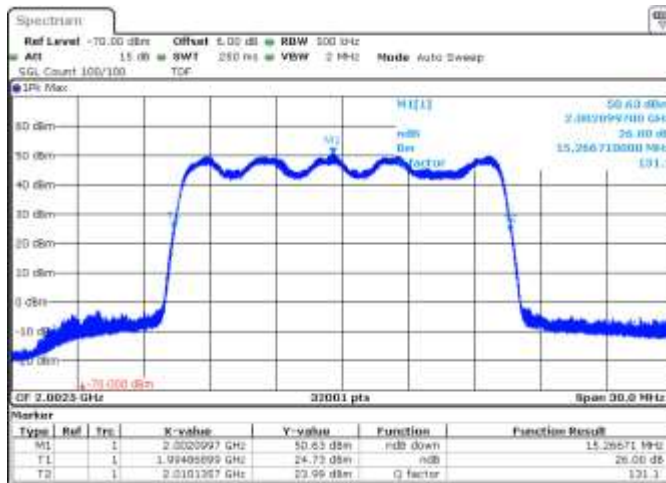


Figure 8.3-8: 26 dB Occupied bandwidth, 16QAM, Modulation, low and high channel (15 MHz), respectively, band n70.

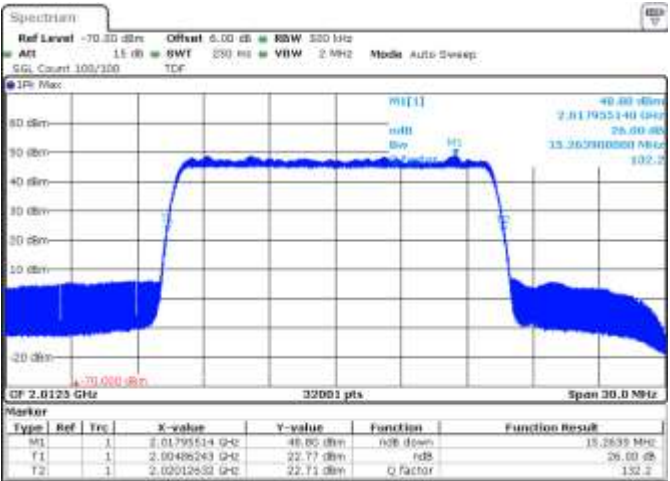
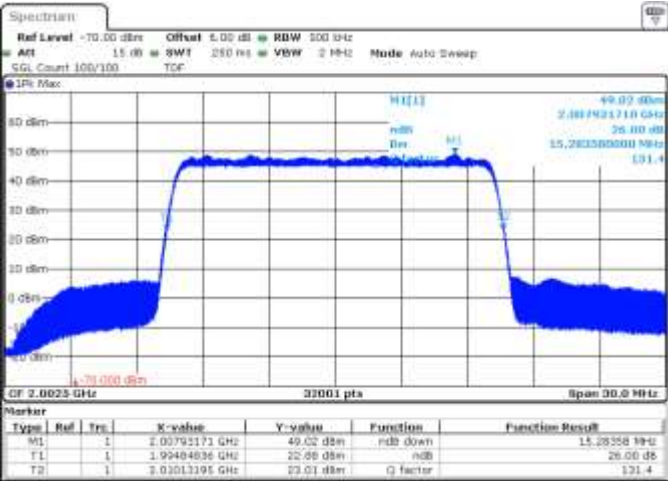


Figure 8.3-9: 26 dB Occupied bandwidth, 64QAM, Modulation, low and high channel (15 MHz), respectively, band n70.

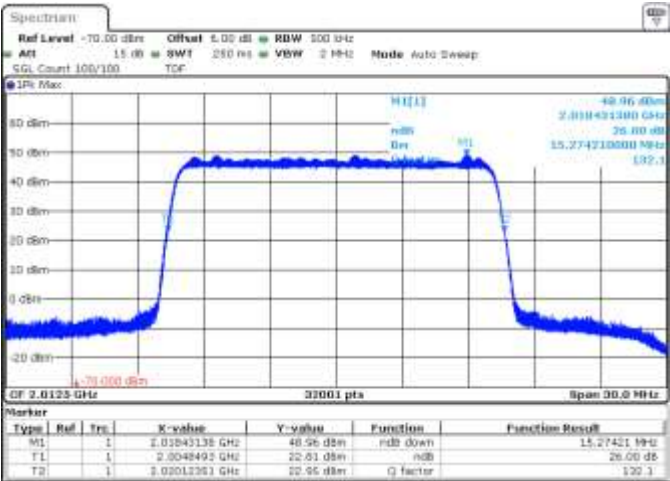
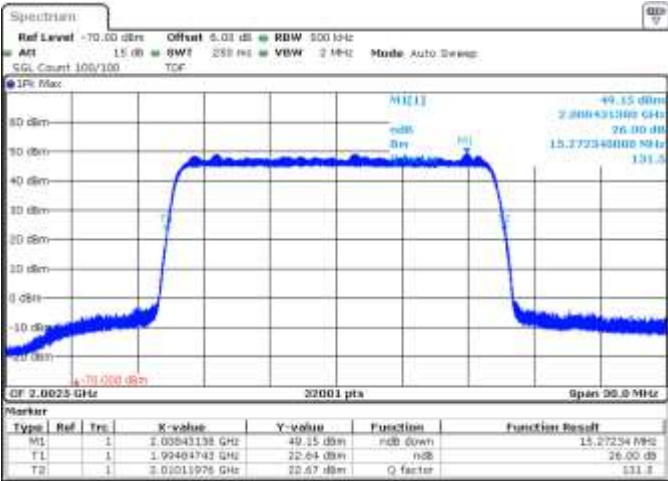


Figure 8.3-10: 26 dB Occupied bandwidth, 256QAM, Modulation, low and high channel (15 MHz), respectively, band n70.

8.4 FCC 27.50(d)(2)(ii) Output power

8.4.1 Definitions and limits

(d) The following power and antenna height requirements apply to stations transmitting in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz and 2180-2200 MHz bands:

(2) The power of each fixed or base station transmitting in the 1995-2000 MHz, the 2110-2155 MHz 2155-2180 MHz band, or 2180-2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

8.4.2 Test summary

Test date	January 24, 2022	Temperature	22 °C
Test engineer	Martha Espinoza	Air pressure	1003 mbar
Verdict	Pass	Relative humidity	54 %

8.4.3 Observations, settings and special notes

Power sensor settings were:

Sample rate	5MS/s
Gap time	100 ms
Detector mode	RMS
Trigger level	-40 dBm

This test was made across the conducted port and using a sensor power. An offset of 41.3 dB was added to the measurement to compensate the losses from the cable and attenuator (40 dB) used. The signal transmitted continuously and with a 100% of duty cycle.

EUT has four ports which can transmit at the same time in a correlated way. This correlation permit to make the measurement in one port getting as a result the total power from the four ports adding a factor calculated from the next equation:

$$\text{Correlation factor} = 10\text{Log} (N)$$

Where N is the number of ports. In this specific case, N = 4,

$$\text{Correlation factor} = 10\text{Log} (4) = 6.02 \text{ dB}$$

To select the measurement port, a quick power test was done. The four ports are similar, however, the port with maximum power was chosen to make all the remaining tests. This pre-test was applied to both bands (n66 and n70):

Band	Modulation	OBW	Channel	Power Port A	Power Port B	Power Port C	Power Port D
n66	256QAM	15 MHz	2117.5 MHz	47.98 dBm	48.01 dBm	47.99 dBm	47.98 dBm
n70	64QAM	15 MHz	2002.5 MHz	46.3 dBm	46.45 dBm	46.33 dBm	46.40 dBm

Port B was selected for both bands, and it will be used to evaluate all the tests of this document.

EUT can transmit dual band: band n66 and band n70. The scope of this document for band n66 consist in three channels, four modulations, one bandwidth. For band n70, only one channel, four modulations and one bandwidth are under test. Unit transmit the selected signal at full power: 60 Watts in band n66 and 40 Watts in band n70. The maximum power is only available in one band at the time due the maximum power supported by unit is 80 Watts.

8.4.4 Test data

Band	Modulation	OBW (MHz)	Port	Channel (MHz)	Power (RMS) (dBm)	Correlation factor (dB)	Total power across all ports (dBm)
n66	QPSK	15	B	2117.5	47.97	6.02	53.99
n66	QPSK	15	B	2155	48.07	6.02	54.09
n66	QPSK	15	B	2192.5	47.91	6.02	53.93
n66	16QAM	15	B	2117.5	47.99	6.02	54.01
n66	16QAM	15	B	2155	48.09	6.02	54.11
n66	16QAM	15	B	2192.5	47.93	6.02	53.95
n66	64QAM	15	B	2117.5	48.02	6.02	54.04
n66	64QAM	15	B	2155	48.09	6.02	54.11
n66	64QAM	15	B	2192.5	47.98	6.02	54.00
n66	256QAM	15	B	2117.5	48.01	6.02	54.03
n66	256QAM	15	B	2155	48.11	6.02	54.13
n66	256QAM	15	B	2192.5	47.96	6.02	53.98

Table 8.4-1: Conducted output power, band n66, 15 MHz OBW

Band	Modulation	OBW (MHz)	Port	Channel (MHz)	Power (RMS) (dBm)	Correlation factor (dB)	Total power across all ports (dBm)
n70	QPSK	15	B	2002.5	46.42	6.02	52.44
n70	QPSK	15	B	2012.5	46.26	6.02	52.28
n70	16QAM	15	B	2002.5	46.44	6.02	52.46
n70	16QAM	15	B	2012.5	46.32	6.02	52.34
n70	64QAM	15	B	2002.5	46.45	6.02	52.47
n70	64QAM	15	B	2012.5	46.31	6.02	52.33
n70	256QAM	15	B	2002.5	46.46	6.02	52.48
n70	256QAM	15	B	2012.5	46.32	6.02	52.34

Table 8.4-2: Conducted output power, band n70, 15 MHz OBW

8.5 FCC 27.50(d)(5) Peak to Average Power Ratio

8.5.1 Definitions and limits

(d) The following power and antenna height requirements apply to stations transmitting in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 MHz bands:

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

8.5.2 Test summary

Test date	January 24, 2022	Temperature	22 °C
Test engineer	Martha Espinoza	Air pressure	1003 mbar
Verdict	Pass	Relative humidity	54 %

8.5.3 Observations, settings and special notes

Spectrum analyzer settings:

Resolution bandwidth	≥ OBW
Number of counts	The necessary number up to stabilizes the measured
Trace mode	Clear/Write

8.5.4 Test data

Band	OBW Declared	Port	Channel (MHz)	0.1%	0.1% Limit	Margin
n66	15 MHz	B	2117.5	7.74 dB	13 dB	5.26 dB
n66	15 MHz	B	2155	7.74 dB	13 dB	5.26 dB
n66	15 MHz	B	2192.5	7.74 dB	13 dB	5.26 dB
n70	15 MHz	B	2002.5	7.62 dB	13 dB	5.38 dB
n70	15 MHz	B	2012.5	7.62 dB	13 dB	5.38 dB

Table 8.5-1: Peak to average power ratio, QPSK Modulation.

Band	OBW Declared	Port	Channel (MHz)	0.1%	0.1% Limit	Margin
n66	15 MHz	B	2117.5	7.77 dB	13 dB	5.23 dB
n66	15 MHz	B	2155	7.77 dB	13 dB	5.23 dB
n66	15 MHz	B	2192.5	7.77 dB	13 dB	5.23 dB
n70	15 MHz	B	2002.5	7.65 dB	13 dB	5.35 dB
n70	15 MHz	B	2012.5	7.65 dB	13 dB	5.35 dB

Table 8.5-2: Peak to average power ratio, 16QAM Modulation.

Band	OBW Declared	Port	Channel (MHz)	0.1%	0.1% Limit	Margin
n66	15 MHz	B	2117.5	7.74 dB	13 dB	5.26 dB
n66	15 MHz	B	2155	7.74 dB	13 dB	5.26 dB
n66	15 MHz	B	2192.5	7.74 dB	13 dB	5.26 dB
n70	15 MHz	B	2002.5	7.62 dB	13 dB	5.38 dB
n70	15 MHz	B	2012.5	7.62 dB	13 dB	5.38 dB

Table 8.5-3: Peak to average power ratio, 64QAM Modulation.

Band	OBW Declared	Port	Channel (MHz)	0.1%	0.1% Limit	Margin
n66	15 MHz	B	2117.5	7.74 dB	13 dB	5.26 dB
n66	15 MHz	B	2155	7.74 dB	13 dB	5.26 dB
n66	15 MHz	B	2192.5	7.74 dB	13 dB	5.26 dB
n70	15 MHz	B	2002.5	7.62 dB	13 dB	5.38 dB
n70	15 MHz	B	2012.5	7.62 dB	13 dB	5.38 dB

Table 8.5-4: Peak to average power ratio, 256QAM Modulation.

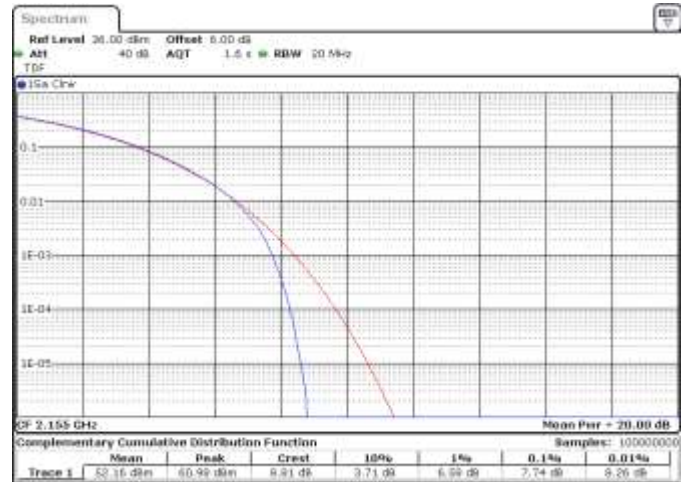
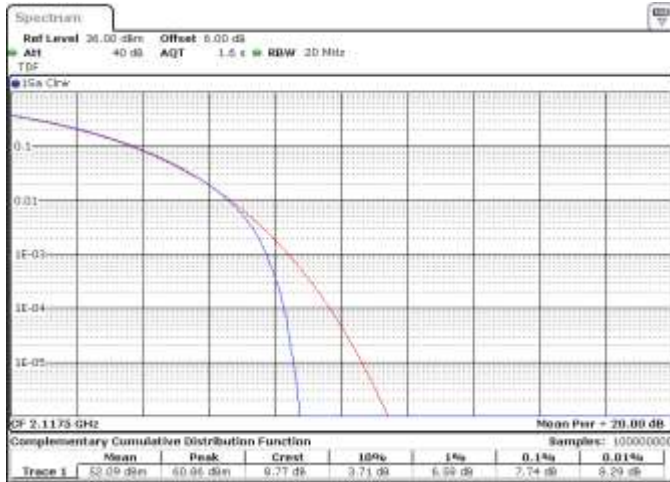


Figure 8.5-1: Peak to average power ratio, QPSK Modulation, low and middle channel (15 MHz), respectively, band n66.



Figure 8.5-2: Peak to average power ratio, QPSK Modulation, high channel (15 MHz) and 16QAM Modulation, low channel (15 MHz), respectively, band n66.

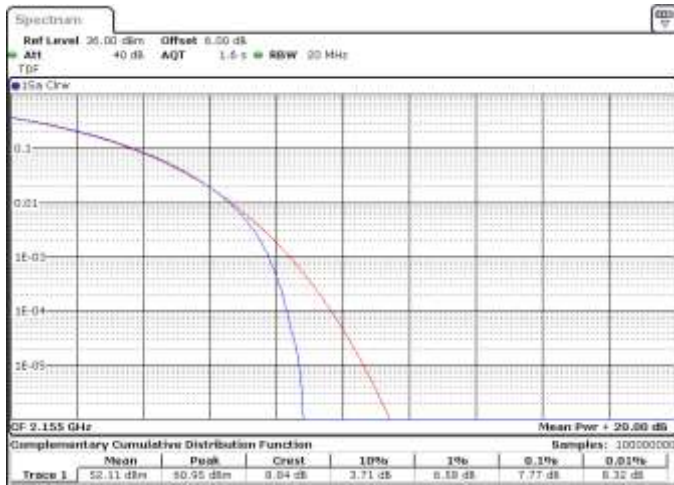


Figure 8.5-3: Peak to average power ratio, 16QAM Modulation, middle and high channel (15 MHz), respectively, band n66.

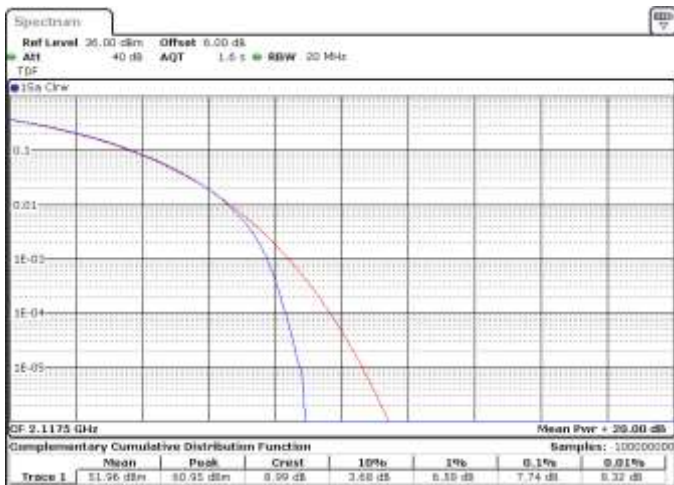


Figure 8.5-4: Peak to average power ratio, 64QAM Modulation, low and middle channel (15 MHz), respectively, band n66.

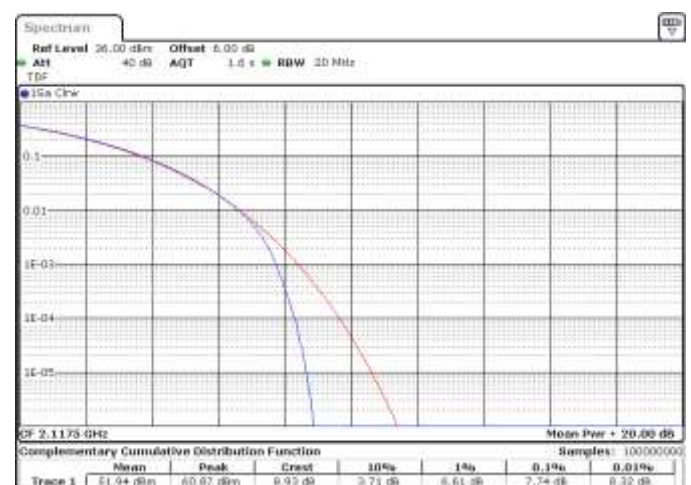
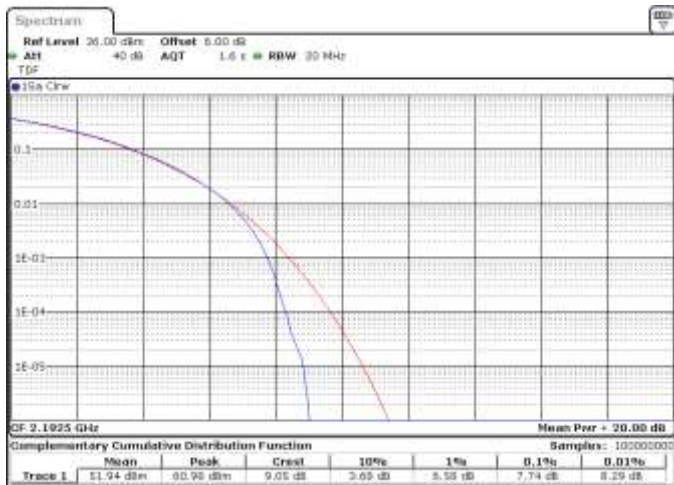


Figure 8.5-5: Peak to average power ratio, 64QAM Modulation, high channel (15 MHz) and 256QAM Modulation, low channel (15 MHz), respectively, band n66

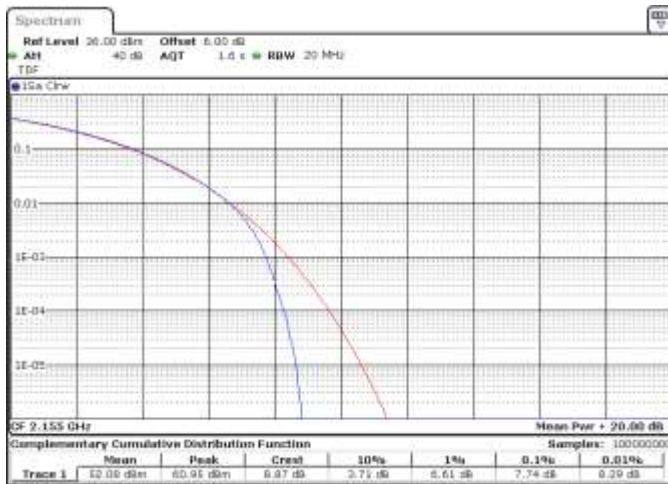


Figure 8.5-6: Peak to average power ratio, 256QAM Modulation, middle and high channel (15 MHz), respectively, band n66.

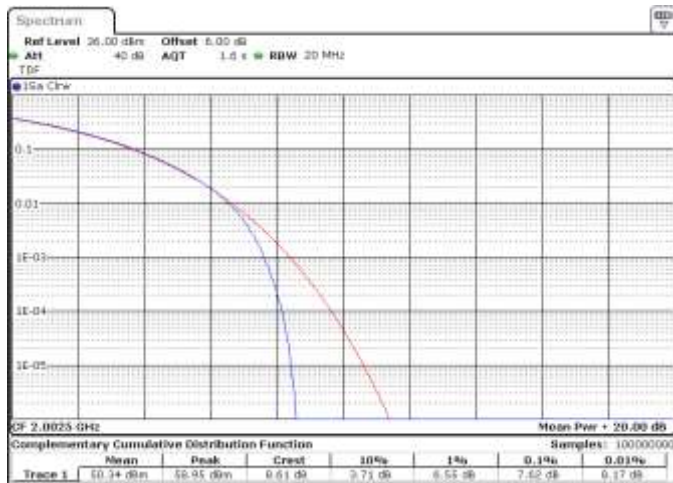


Figure 8.5-7: Peak to average power ratio, QPSK Modulation, low and high channel (15 MHz), respectively, band n70.

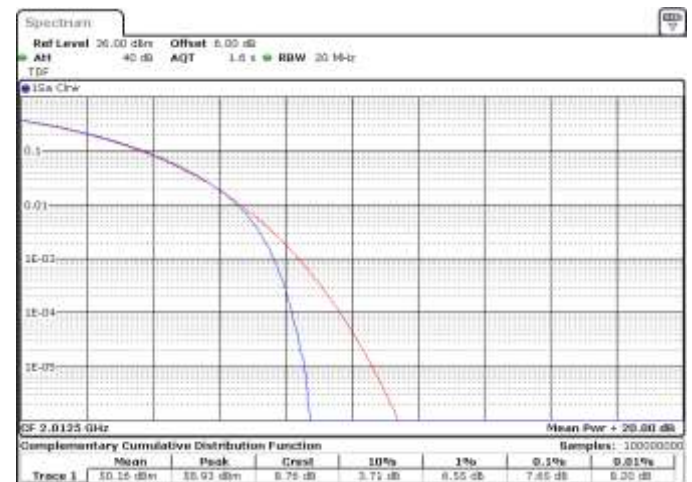
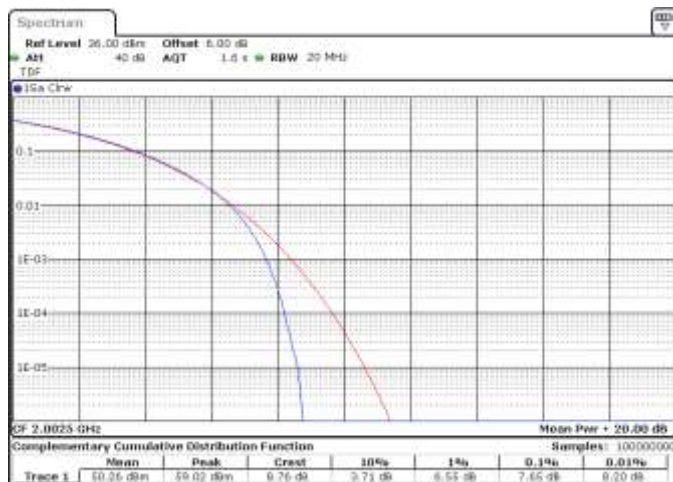


Figure 8.5-8: Peak to average power ratio, 16QAM Modulation, low and high channel (15 MHz), respectively, band n70.

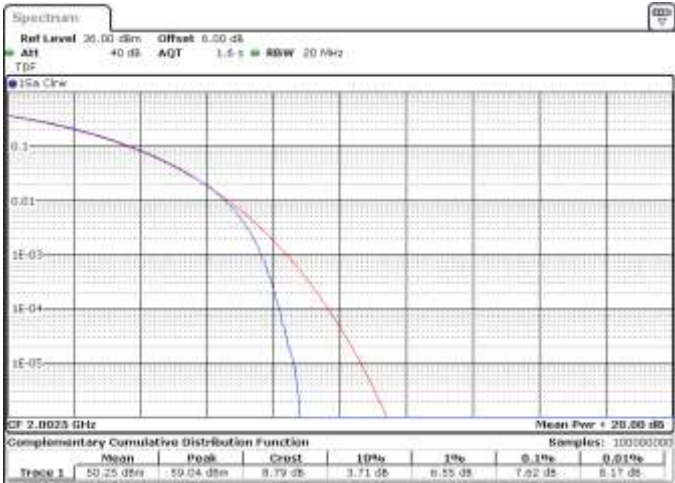


Figure 8.5-9: Peak to average power ratio, 64QAM Modulation, low and high channel (15 MHz), respectively, band n70.

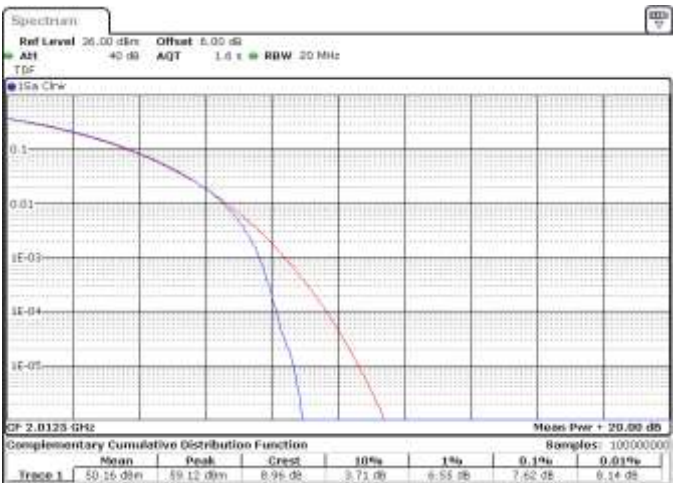
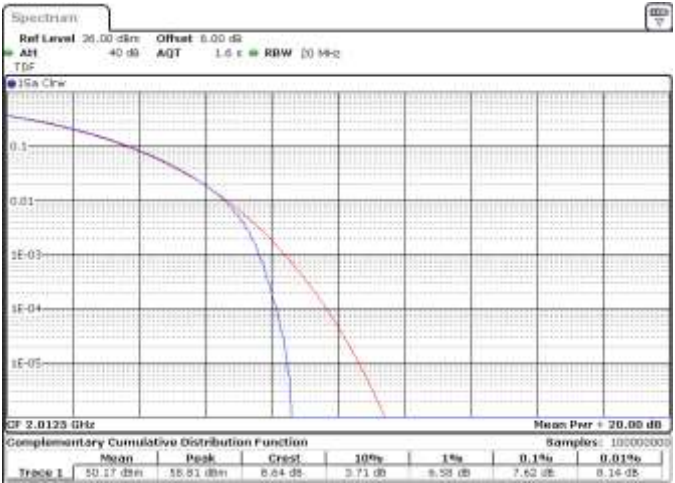


Figure 8.5-10: Peak to average power ratio, 256QAM Modulation, low and high channel (15 MHz), respectively, band n70.



8.6 FCC 27.53(h) Emission Limits

8.6.1 Definitions and limits

(h) AWS emission limits— (1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

8.6.2 Test summary

Test date	January 25, 2022	Temperature	20 °C
	January 26, 2022		19 °C
	January 27, 2022		19 °C
Test engineer	Martha Espinoza	Air pressure	1003; 1005; 1002 mbar
Verdict	Pass	Relative humidity	56%; 55%; 57%

8.6.3 Observations, settings and special notes

EUT setup configuration	Table top
Test facility	3 m Semi anechoic chamber
Measuring distance	3m
Antenna height variation	1–4 m
Turn table position	0–360°
Measurement details	A preview measurement was generated with receiver in continuous scan or sweep mode while the EUT was rotated and antenna adjusted to maximize radiated emission. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.

Receiver/spectrum analyzer settings for frequencies below 1 GHz:

Resolution bandwidth	120 kHz
Video bandwidth	300 kHz
Detector mode	– Peak (Preview measurement) – Quasi-peak (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Quasi-peak final measurement)

Receiver/spectrum analyzer settings for frequencies above 1 GHz:

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Detector mode	Peak (Preview measurement) Peak and CAverage (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Peak and CAverage final measurement)

Spectrum analyzer settings (conducted test):

Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Frequency span	The necessary to make an accuracy measurement
Detector mode	RMS
Trace mode	Average power

8.6.3 Observations, settings and special notes, continued

This test was realized in two parts: one with a conducted setup and another one with a radiated setup.

The conducted test was made in the port B (this port was selected based on test showed on section 8.4), transmitting at max power and with the other three ports loaded with 50 Ω loads. For capturing the signal with the equipment, it was divided in three ranges, using a transducer factor to compensate the losses caused by a cable and attenuator used to protect the test equipment. Additional to this number, a 6 dB correlation factor was added to evaluate the complete power across the four ports, considering the ranges where harmonic can be observed. The first range was measured from 30 MHz to 3 GHz where the fundamental signal is visible. The second range was selected from 3 GHz to 15 GHz, where a highpass filter was used to avoid saturation in the port. Last range was measured from 15 GHz to 26.5 GHz, three ranges used the 6 dB offset and a transducer factor (include the cable losses and attenuator). The evaluation was made using three channels for band n66 and two channels for band n70 and all the modulations for both bands.

The radiated test was made transmitting at max power with the four ports terminated with 50 Ω loads. The scans were made from 30 MHz to 26 GHz with the modulation with the highest power as was shown at section 8.4. For band n66 and band n70, the modulation selected was 256QAM.

Based on equation $43 + 10 \log_{10}(P)$ dB, the general emission limit is -13 dBm (conducted and radiated test) or the equivalent at 3m is 82.23 dB μ V/m above 1 GHz and 84.38 dB μ V/m below 1 GHz.

8.6.4 Test data

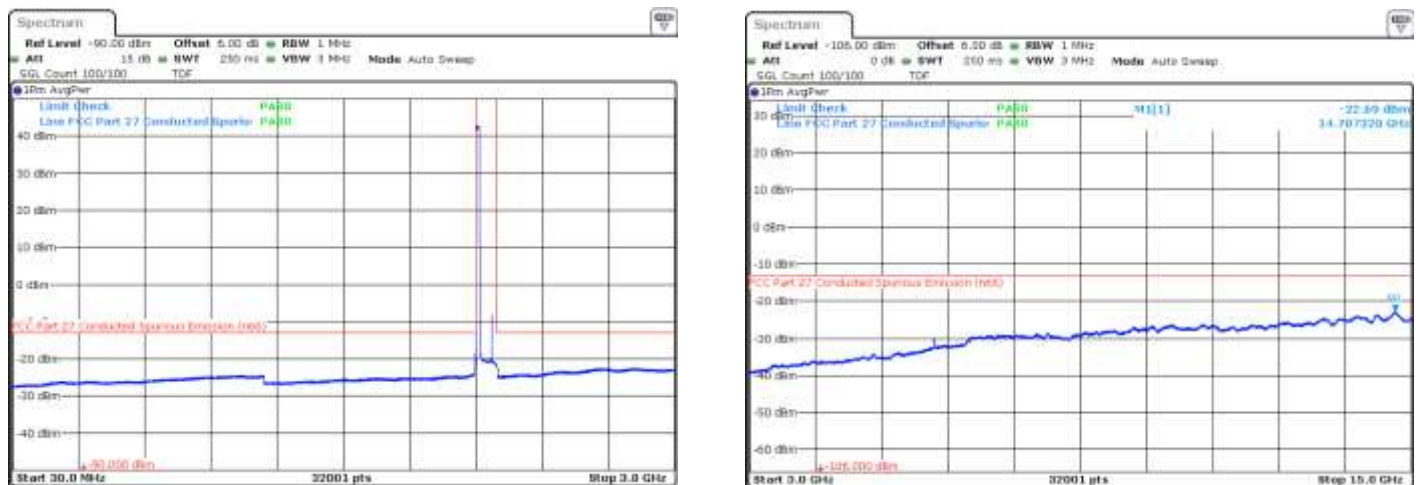


Figure 8.6-1: Conducted emission test, QPSK Modulation, low channel (15 MHz), band n66.

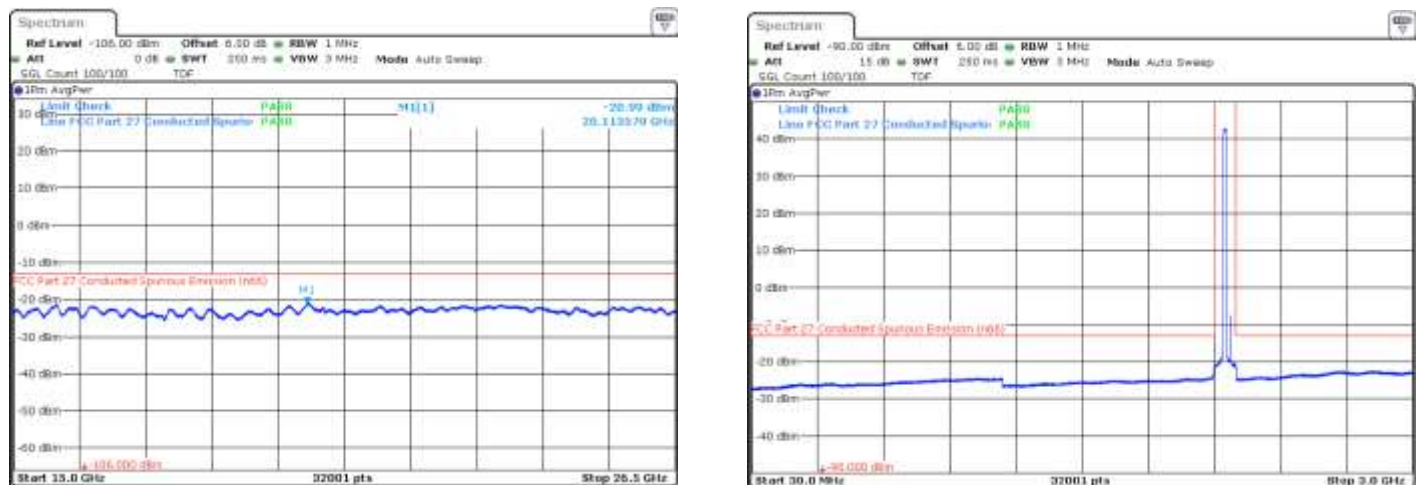


Figure 8.6-2: Conducted emission test, QPSK Modulation, low channel and middle channel (15 MHz), respectively, band n66.

8.6.4 Test data, continued

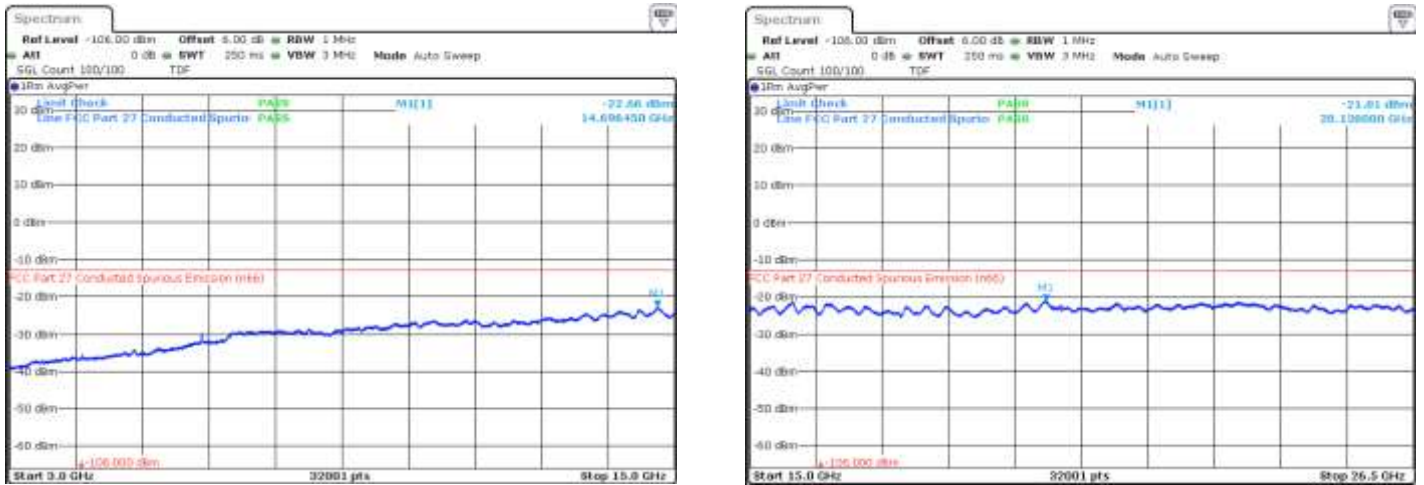


Figure 8.6-3: Conducted emission test, QPSK Modulation, middle channel (15 MHz), band n66.

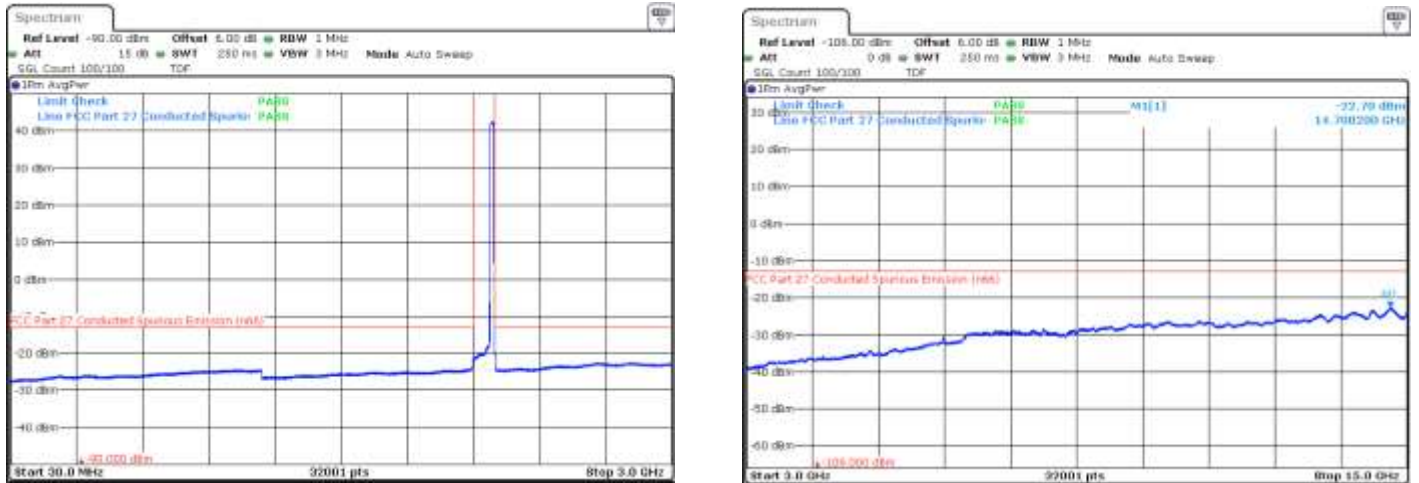


Figure 8.6-4: Conducted emission test, QPSK Modulation, high channel (15 MHz), band n66.

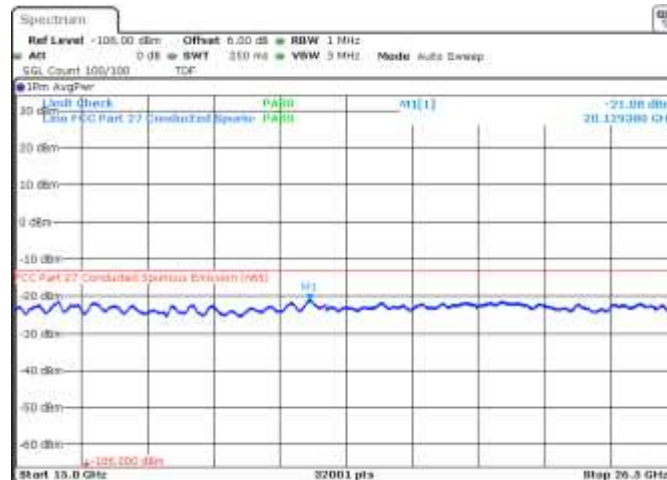


Figure 8.6-5: Conducted emission test, QPSK Modulation, high channel (15 MHz), band n66.

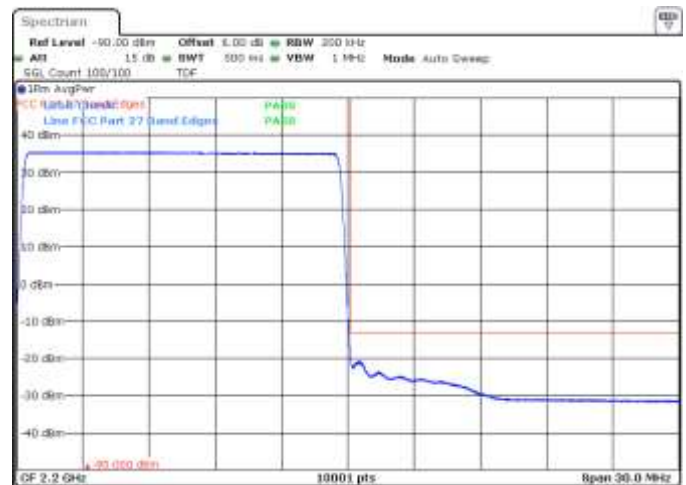
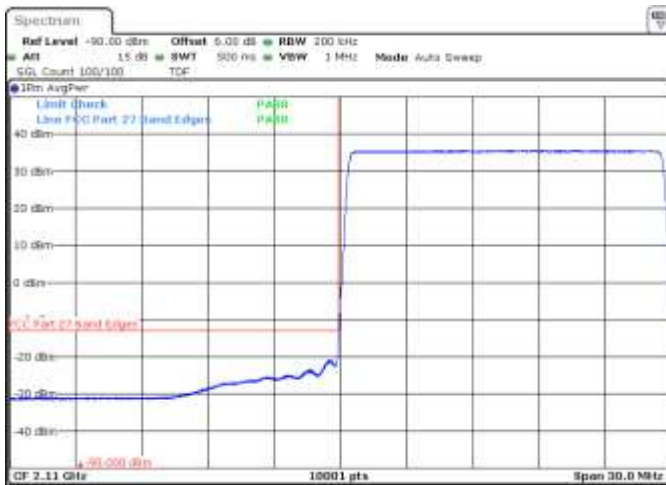


Figure 8.6-6: Conducted emission test, QPSK Modulation, band edge: low and high channels, respectively (15 MHz), band n66.

***Note: For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (q) rules.**

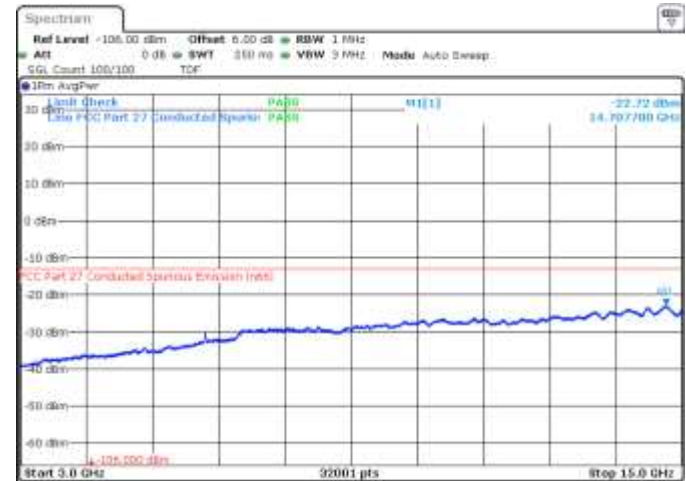
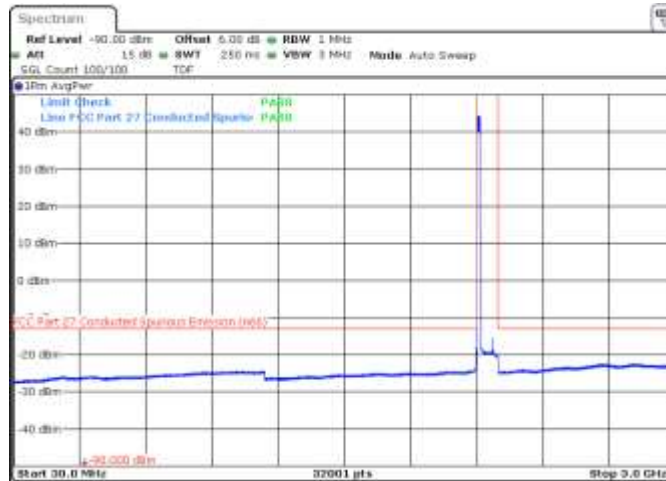


Figure 8.6-7: Conducted emission test, 16QAM Modulation, low channel (15 MHz), band n66.

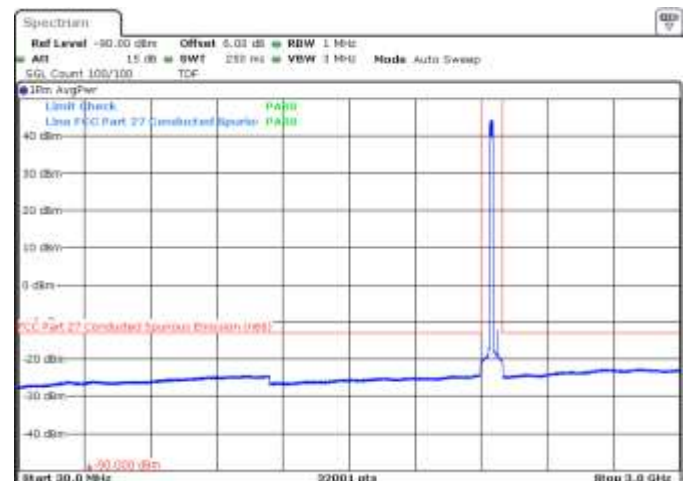
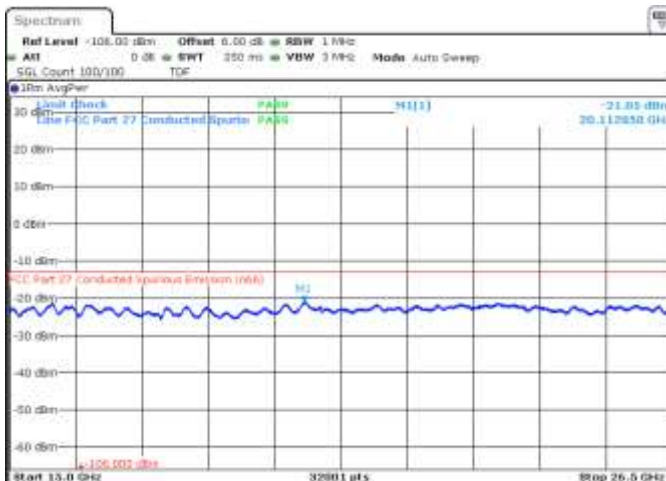


Figure 8.6-8: Conducted emission test, 16QAM Modulation, low and middle channel (15 MHz), band n66.

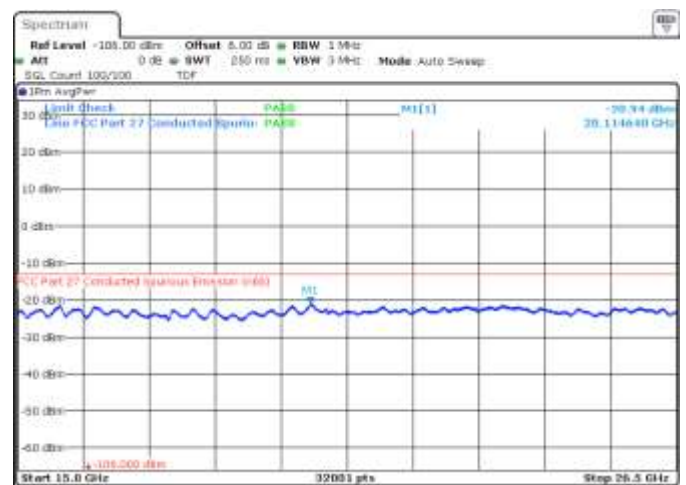
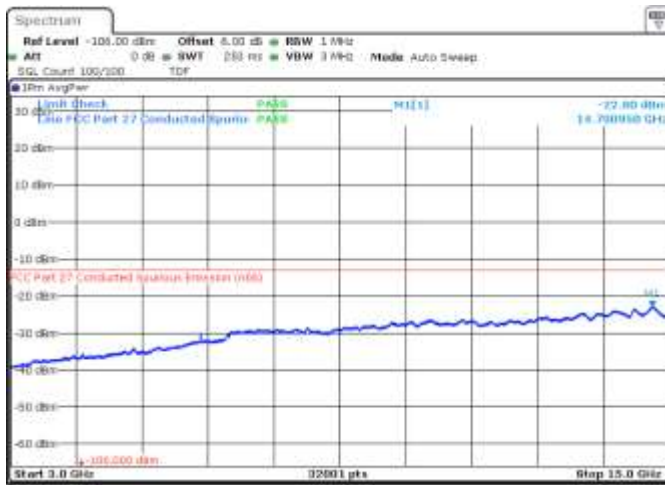


Figure 8.6-9: Conducted emission test, 16QAM Modulation, middle channel (15 MHz), respectively, band n66.

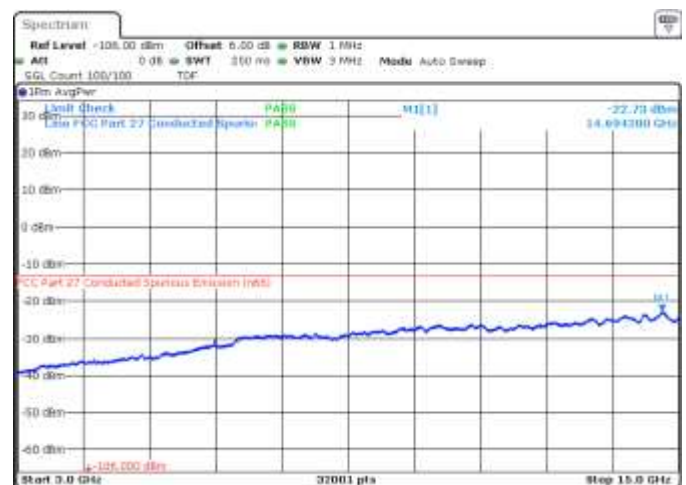
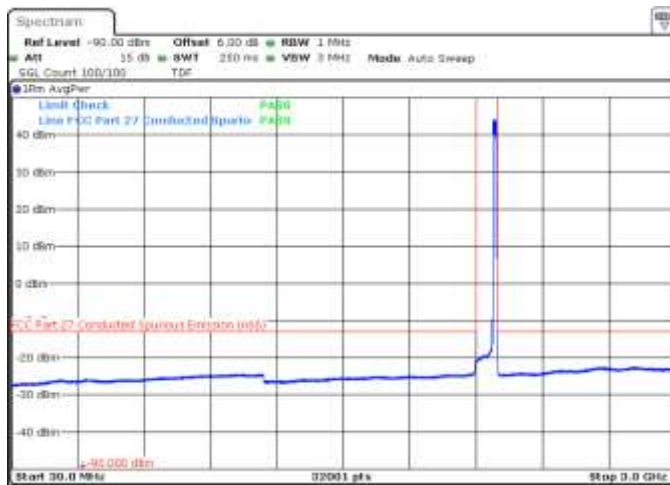


Figure 8.6-10: Conducted emission test, 16QAM Modulation, high channel (15 MHz), band n66.

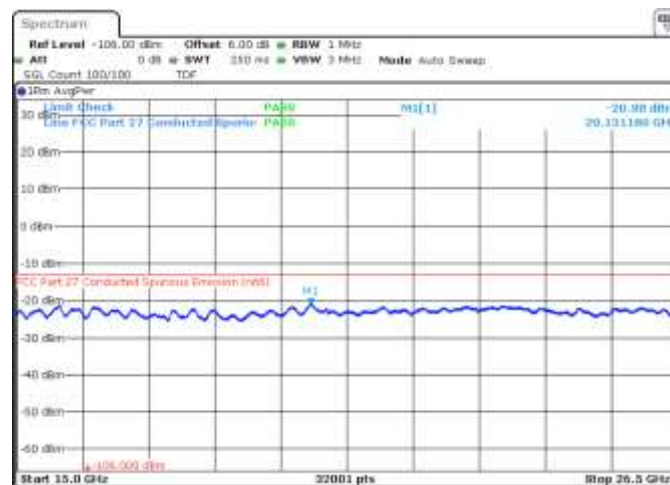


Figure 8.6-11: Conducted emission test, 16QAM Modulation, high channel (15 MHz), band n66.

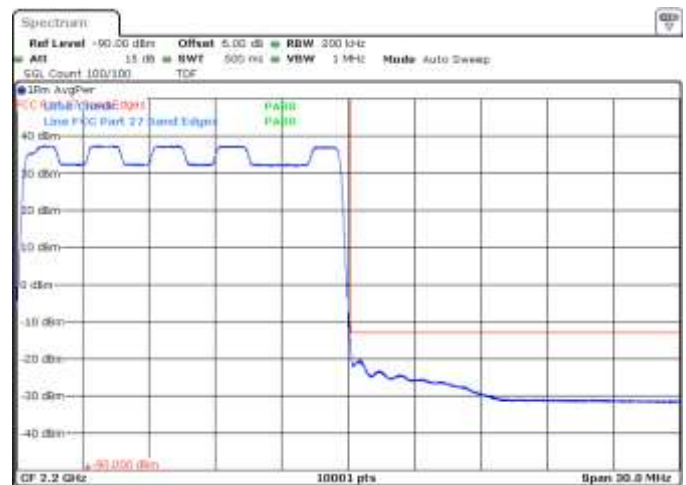
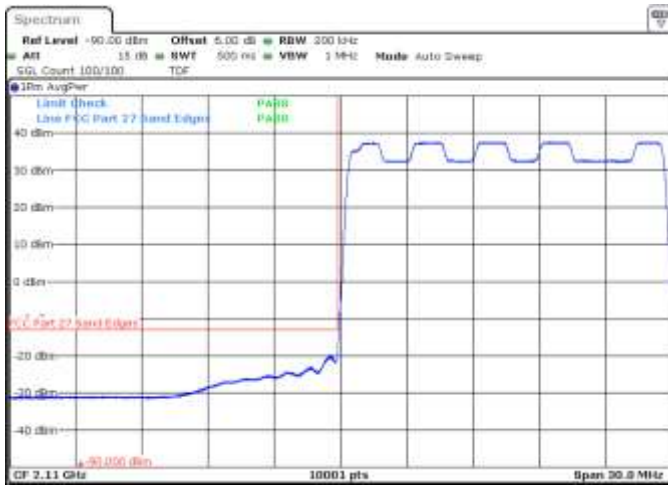


Figure 8.6-12: Conducted emission test, 16QAM Modulation, band edge: low and high channels, respectively (15 MHz), band n66.

***Note: For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (q) rules.**

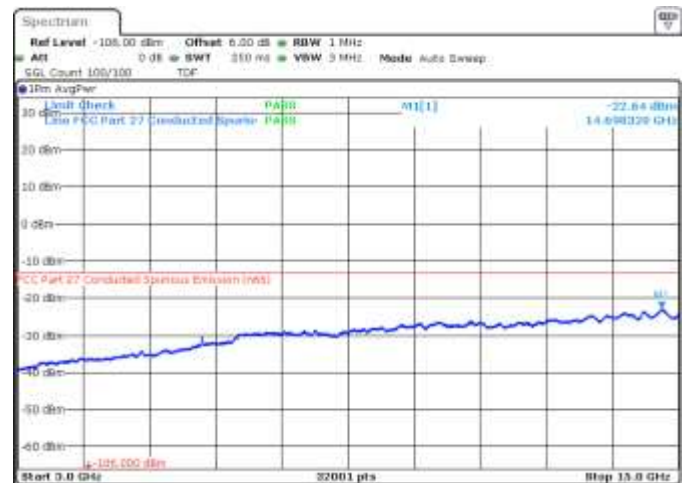
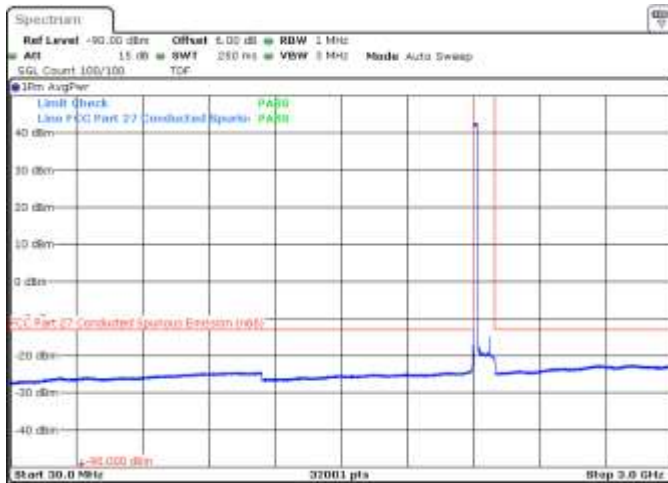


Figure 8.6-13: Conducted emission test, 64QAM Modulation, low channel (15 MHz), band n66.

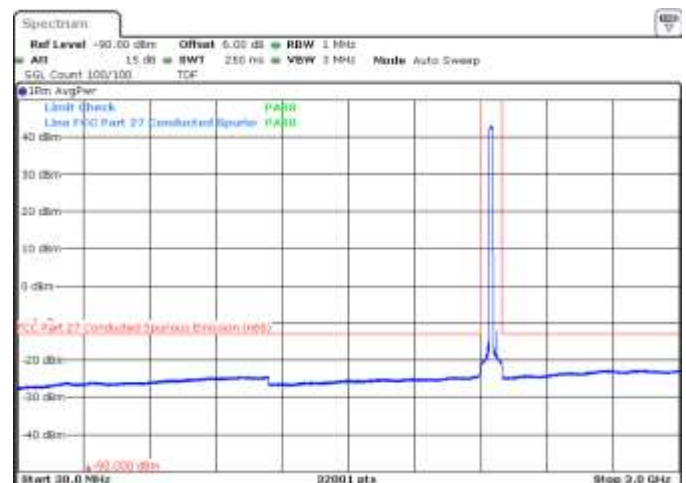
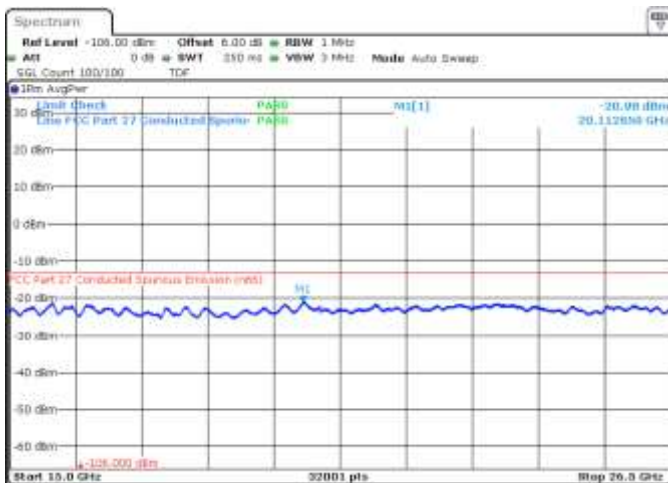


Figure 8.6-14: Conducted emission test, 64QAM Modulation, low and middle channel (15 MHz), band n66.

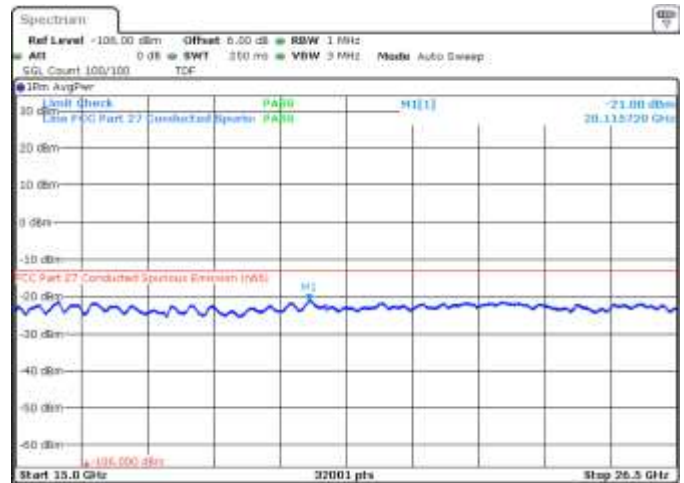
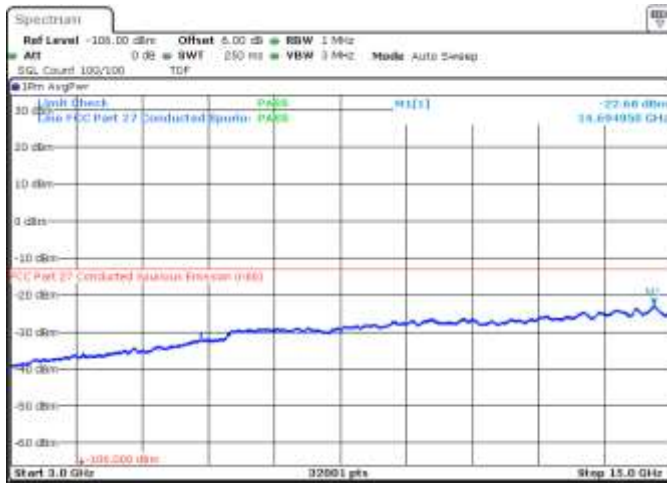


Figure 8.6-15: Conducted emission test, 64QAM Modulation, middle channel (15 MHz), respectively, band n66.

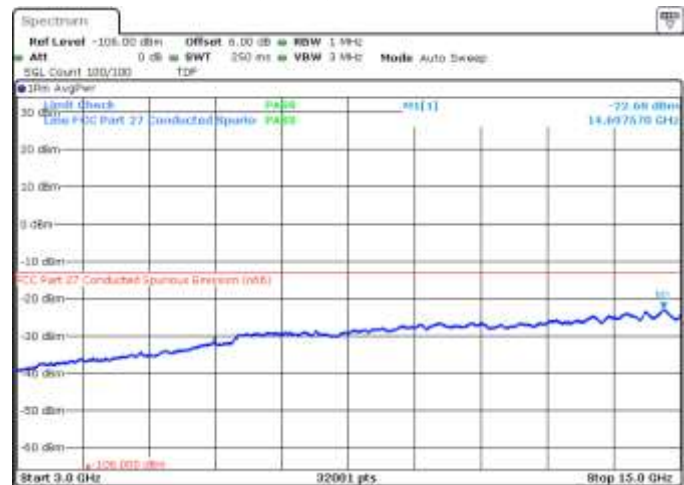
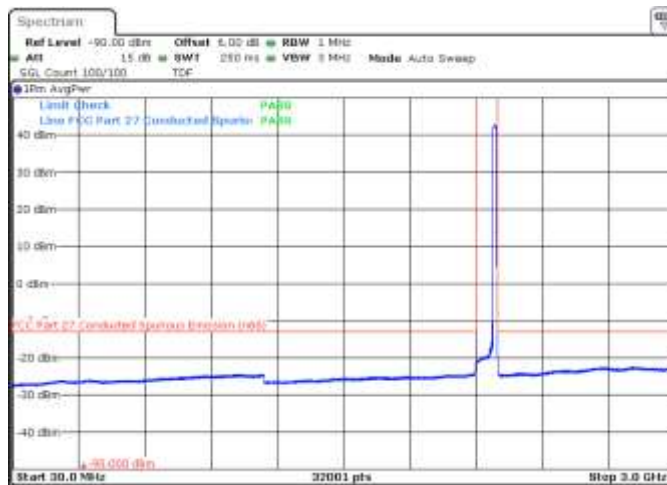


Figure 8.6-16: Conducted emission test, 64QAM Modulation, high channel (15 MHz), respectively, band n66.

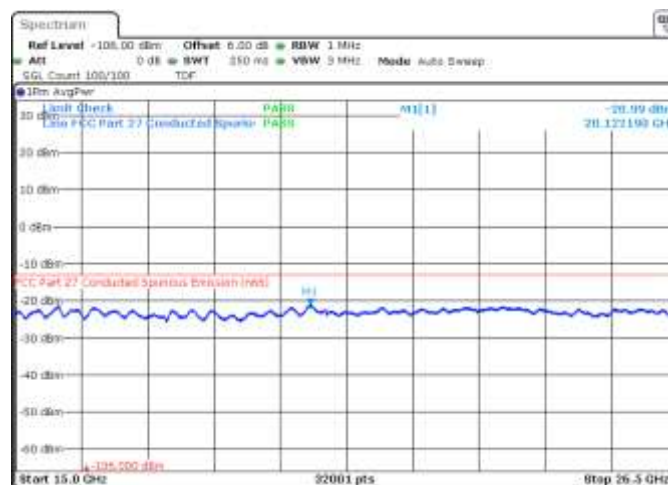


Figure 8.6-17: Conducted emission test, 64QAM Modulation, high channel (15 MHz), respectively, band n66.

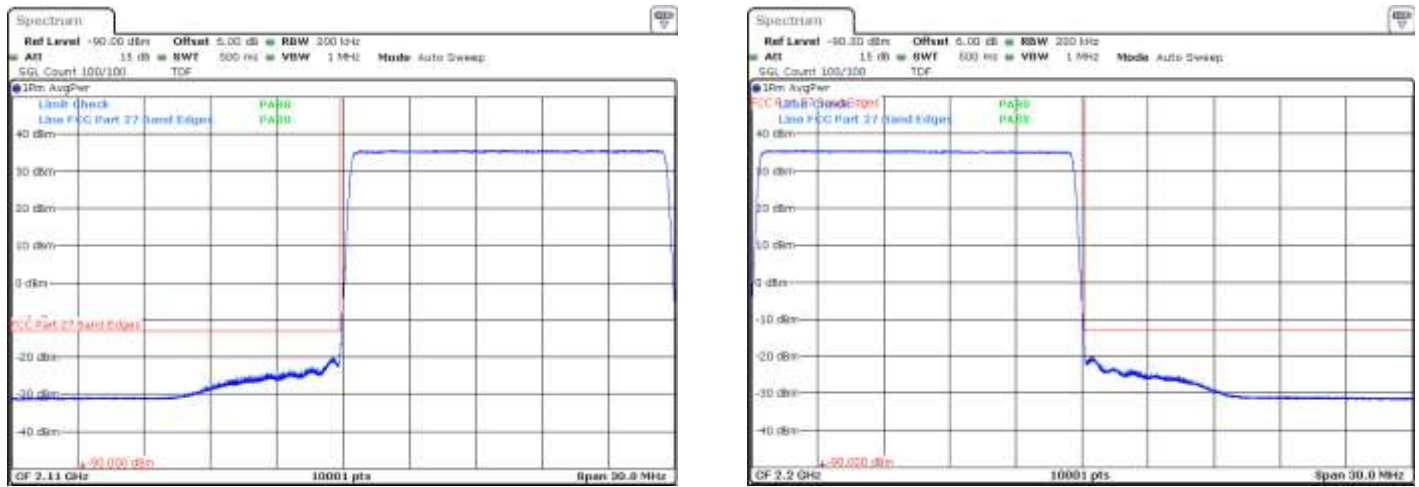


Figure 8.6-18: Conducted emission test, 64QAM Modulation, band edge: low and high channels, respectively (15 MHz), band n66.

***Note: For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (q) rules.**

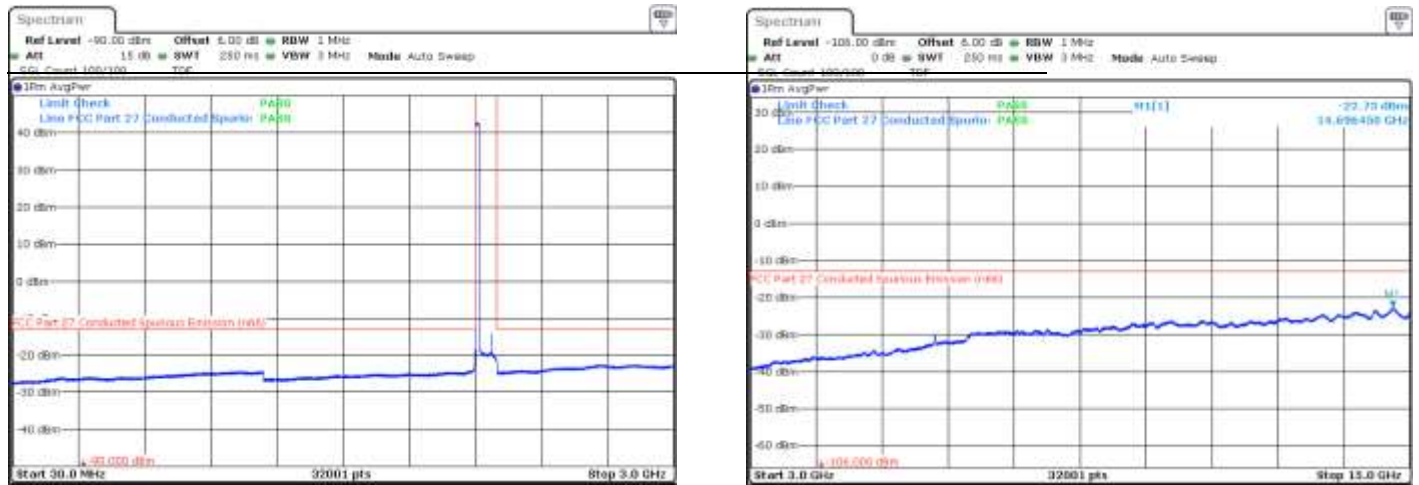


Figure 8.6-19: Conducted emission test, 256QAM Modulation, low channel (15 MHz), band n66.

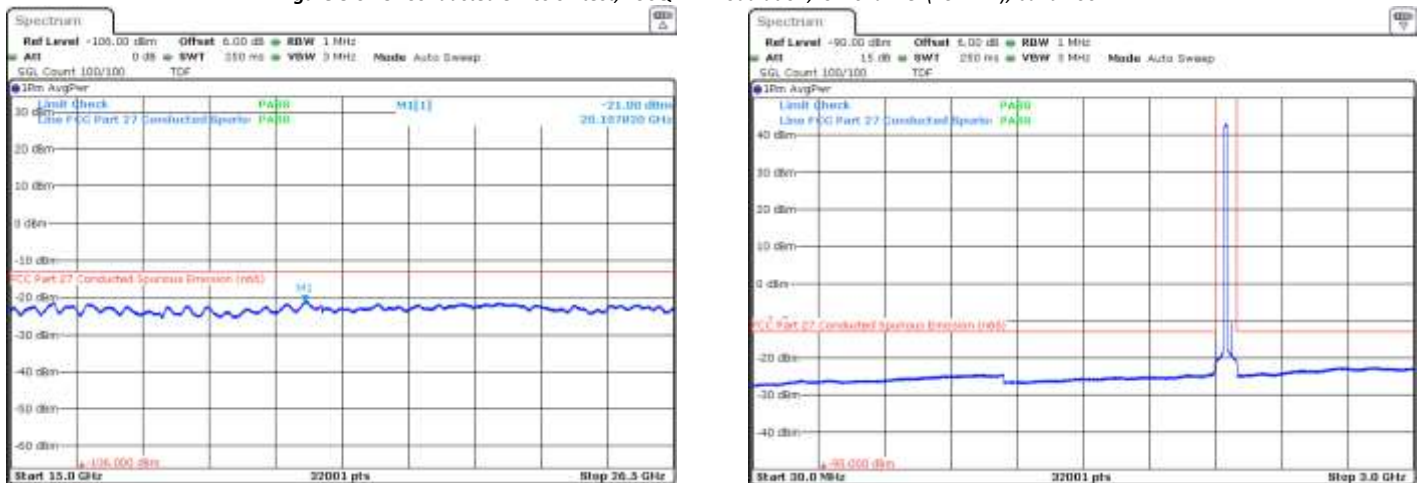


Figure 8.6-20: Conducted emission test, 256QAM Modulation, low and middle channel (15 MHz), band n66.

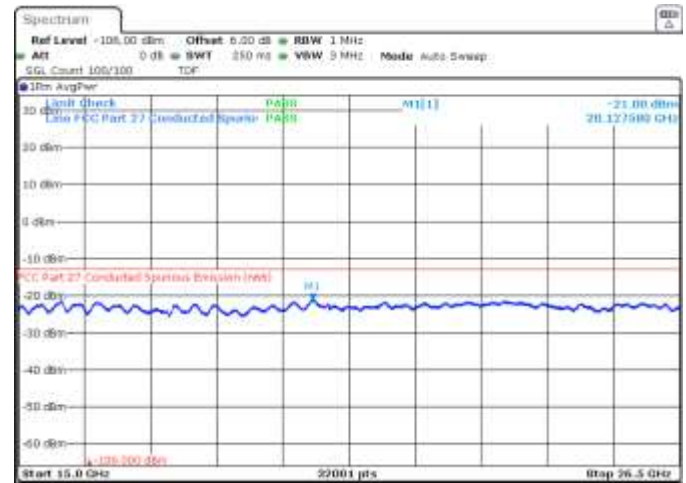
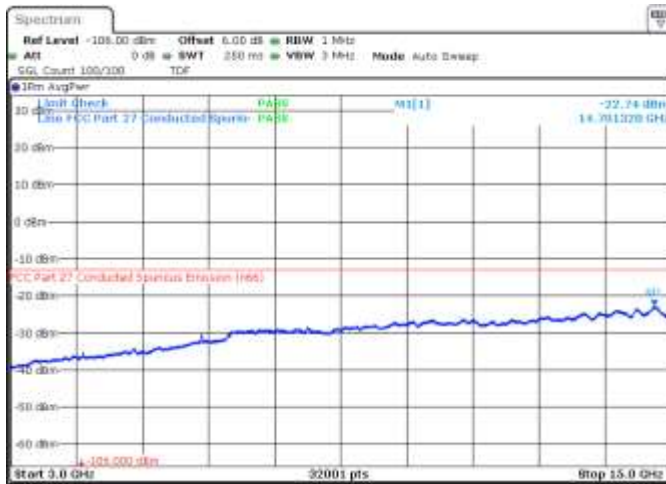


Figure 8.6-21: Conducted emission test, 256QAM Modulation, middle channel (15 MHz), respectively, band n66.

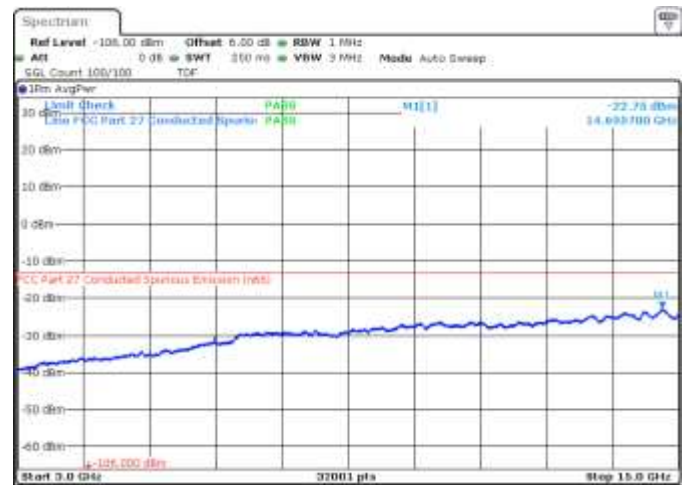
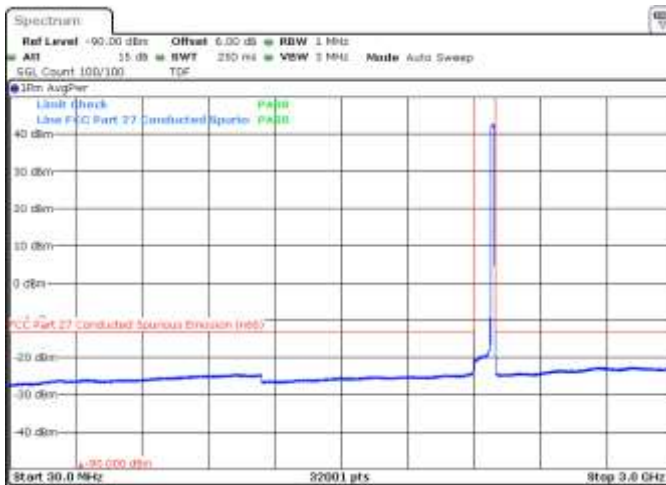


Figure 8.6-22: Conducted emission test, 256QAM Modulation, high channel (15 MHz), respectively, band n66.

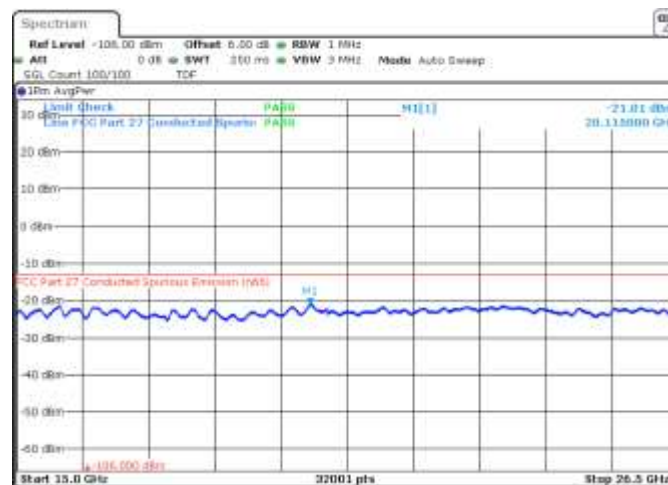


Figure 8.6-23: Conducted emission test, 256QAM Modulation, high channel (15 MHz), respectively, band n66.

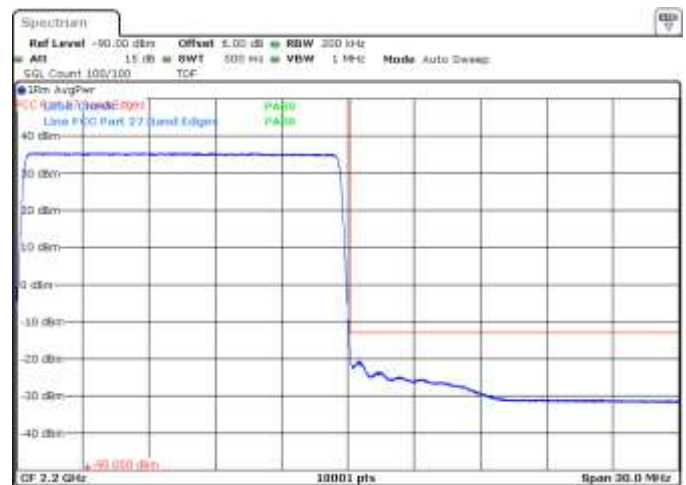
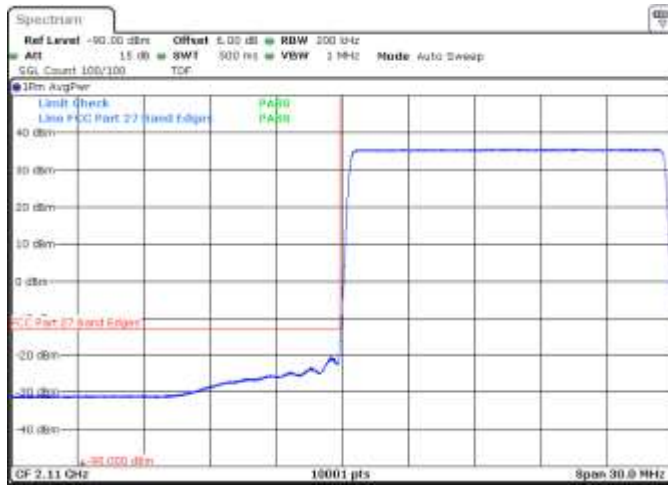


Figure 8.6-24: Conducted emission test, 256QAM Modulation, band edge: low and high channels, respectively (15 MHz), band n66.

***Note: For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (q) rules.**

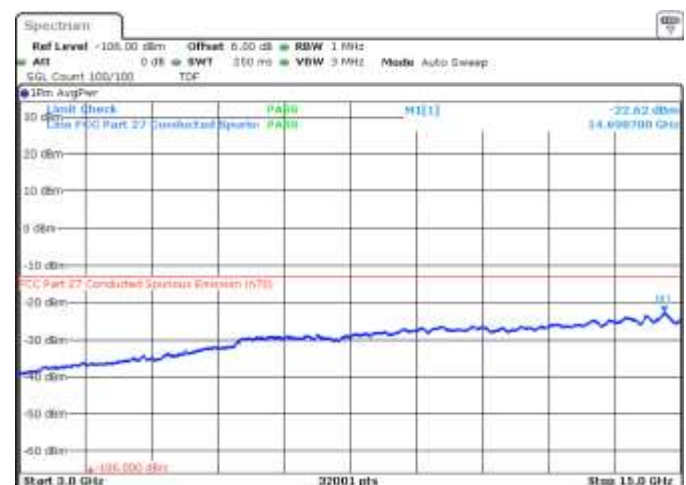
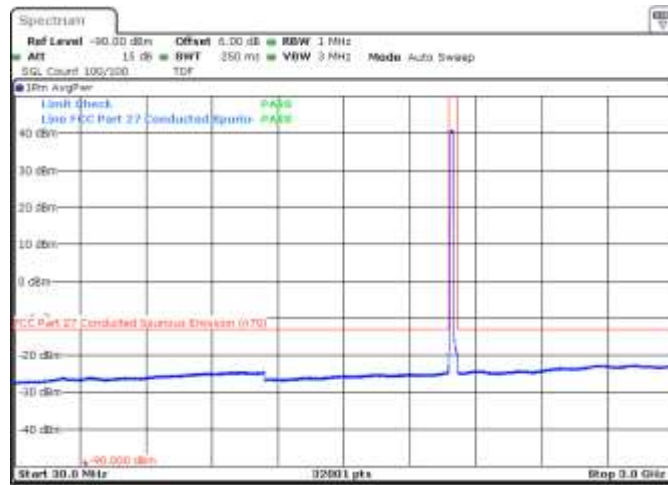


Figure 8.6-25: Conducted emission test, QPSK Modulation, low channel (15 MHz), band n70.

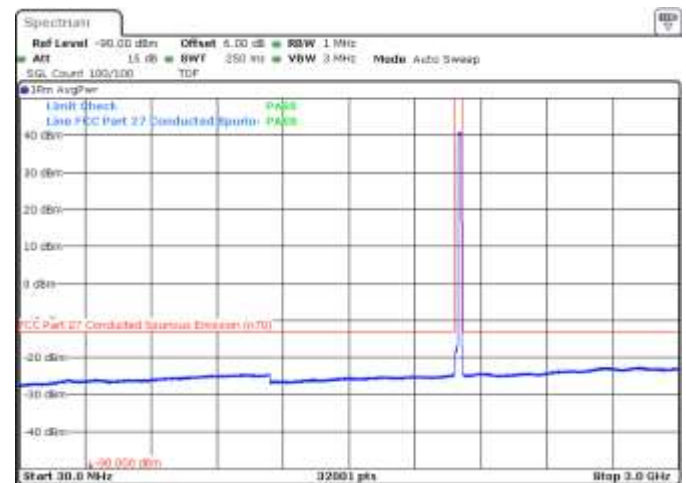
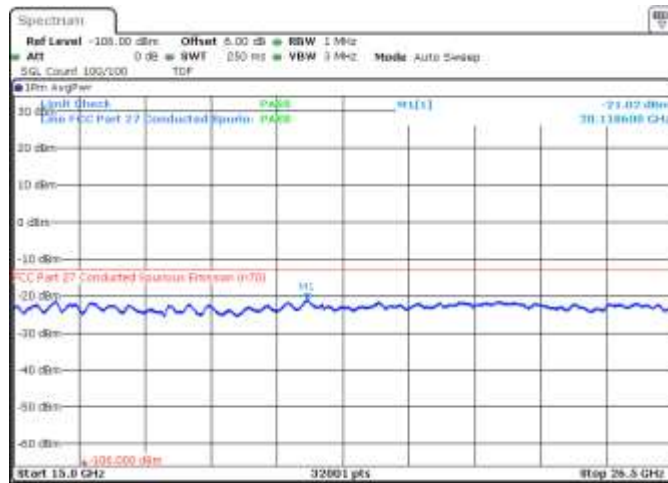


Figure 8.6-26: Conducted emission test, QPSK Modulation, low channel and high channel (15 MHz), respectively, band n70.

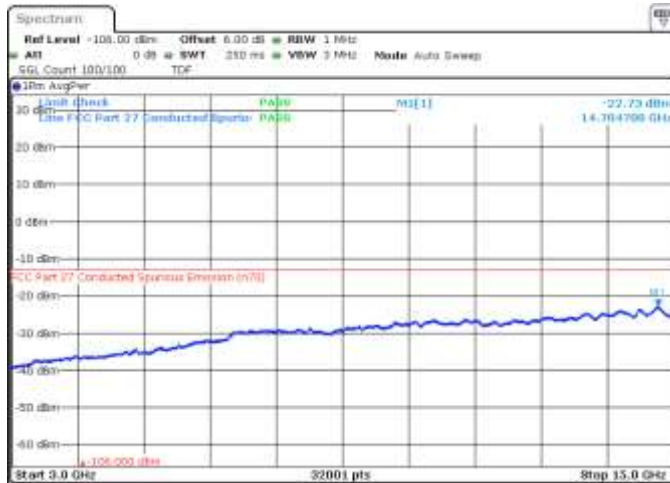


Figure 8.6-27: Conducted emission test, QPSK Modulation, high channel (15 MHz), band n70.

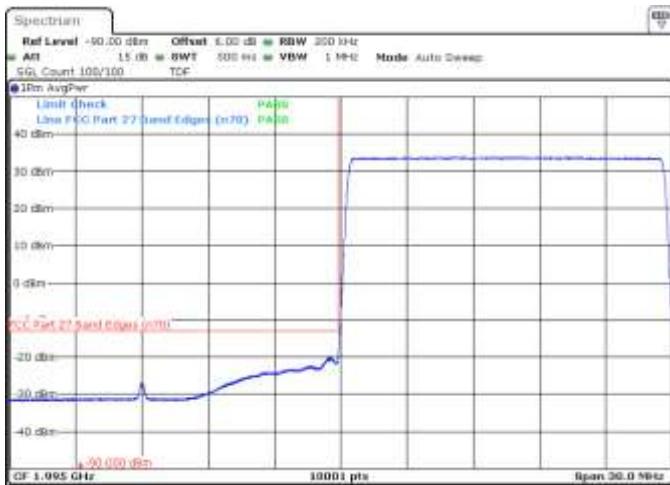
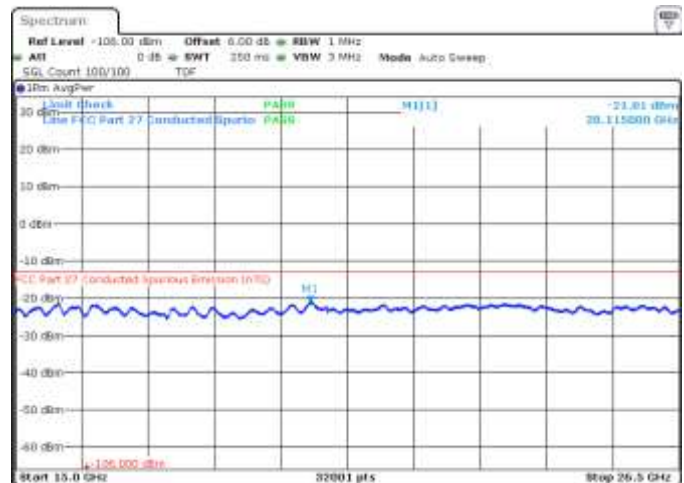


Figure 8.6-28: Conducted emission test, QPSK Modulation, band edge: low and high channels, respectively (15 MHz), band n70.

***Note: For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (g) rules.**

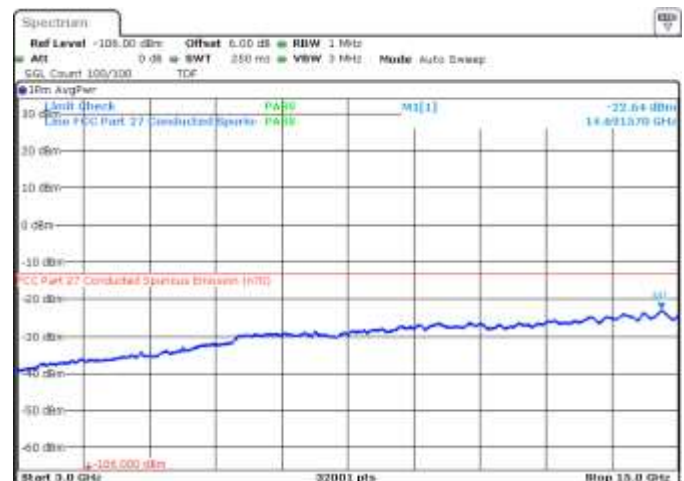
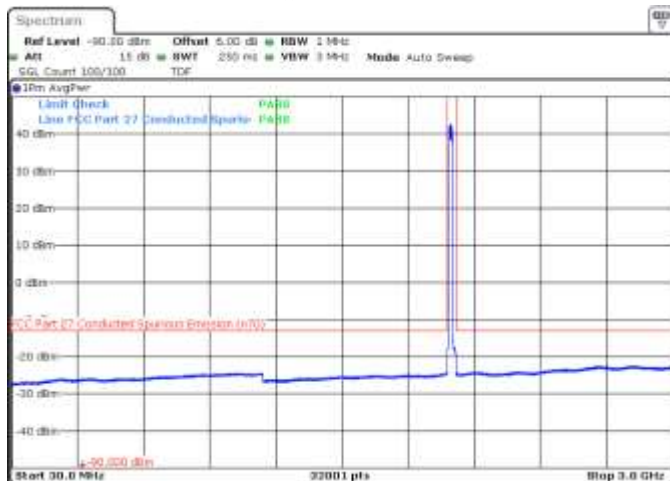


Figure 8.6-29: Conducted emission test, 16QAM Modulation, low channel (15 MHz), band n70.

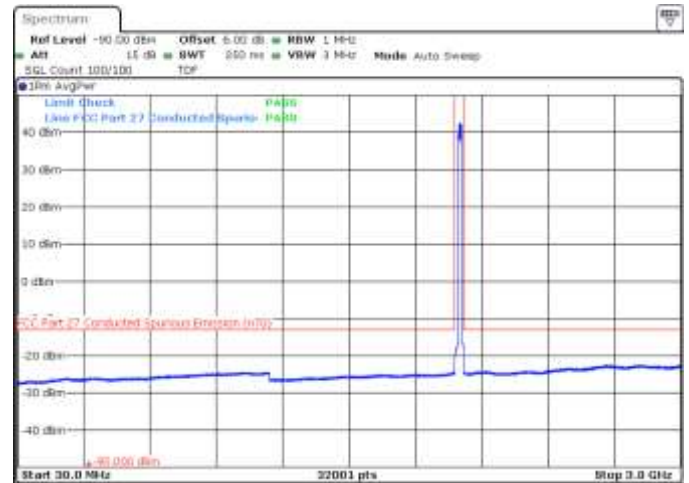
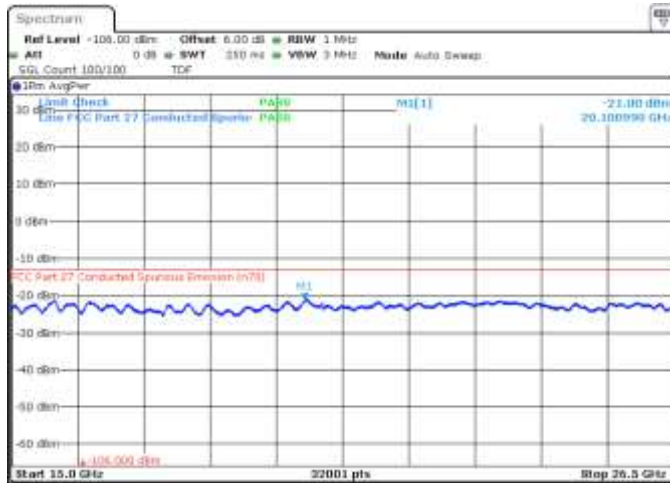


Figure 8.6-30: Conducted emission test, 16QAM Modulation, low channel and high channel (15 MHz), respectively, band n70.

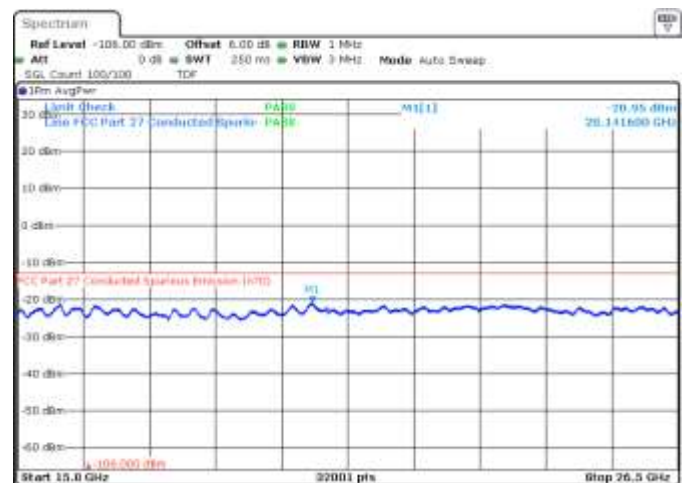
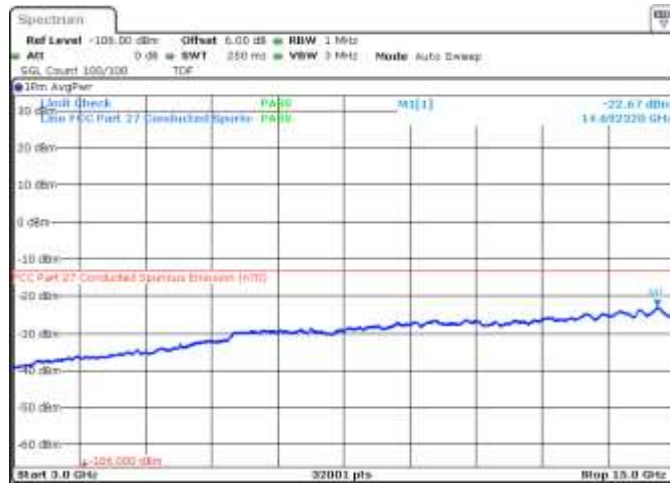


Figure 8.6-31: Conducted emission test, 16QAM Modulation, high channel (15 MHz), band n70.

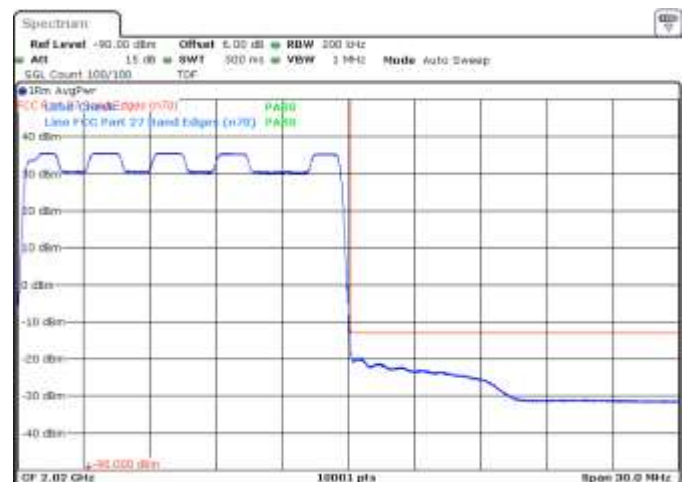
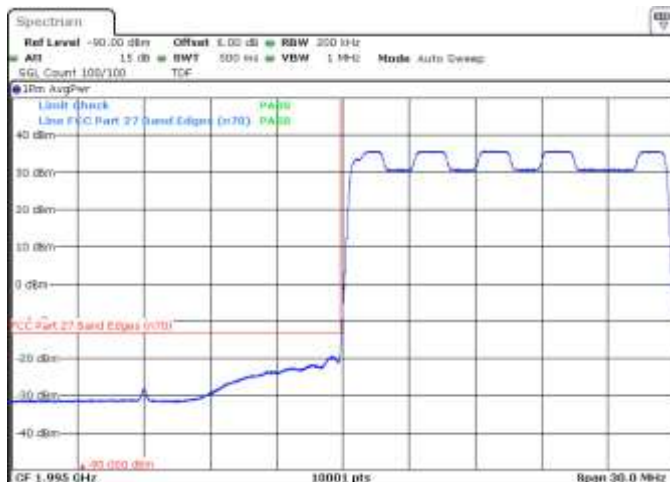


Figure 8.6-32: Conducted emission test, 16QAM Modulation, band edge: low and high channels, respectively (15 MHz), band n70.

***Note:** For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (g) rules.

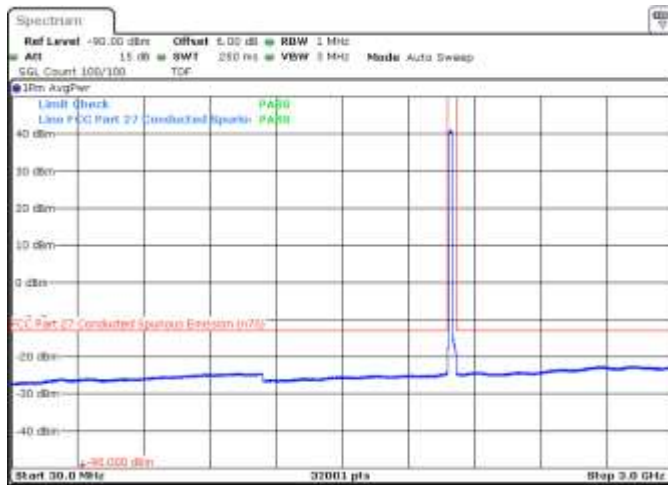


Figure 8.6-33: Conducted emission test, 64QAM Modulation, low channel (15 MHz), band n70.

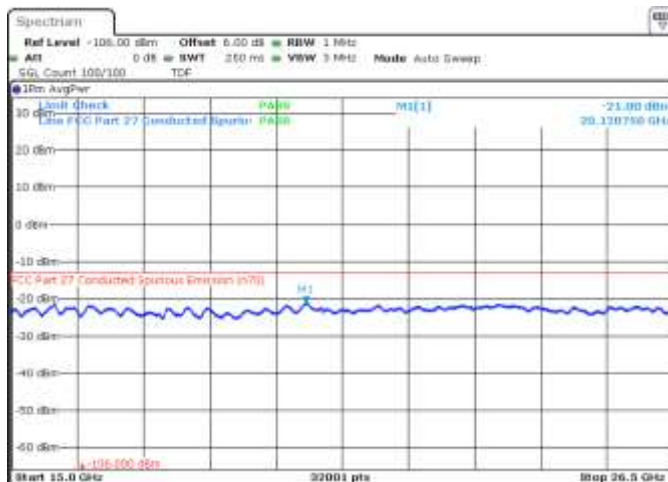
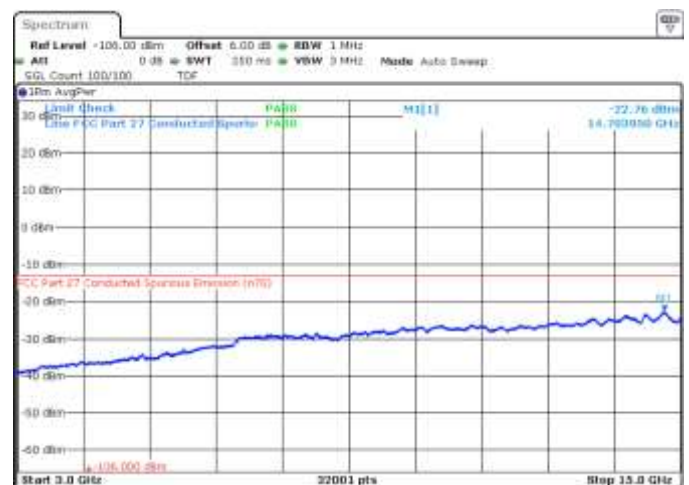


Figure 8.6-34: Conducted emission test, 64QAM Modulation, low channel and high channel (15 MHz), respectively, band n70.

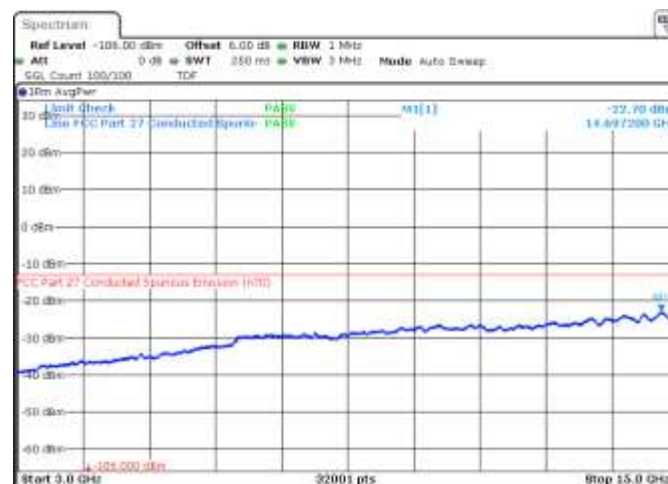
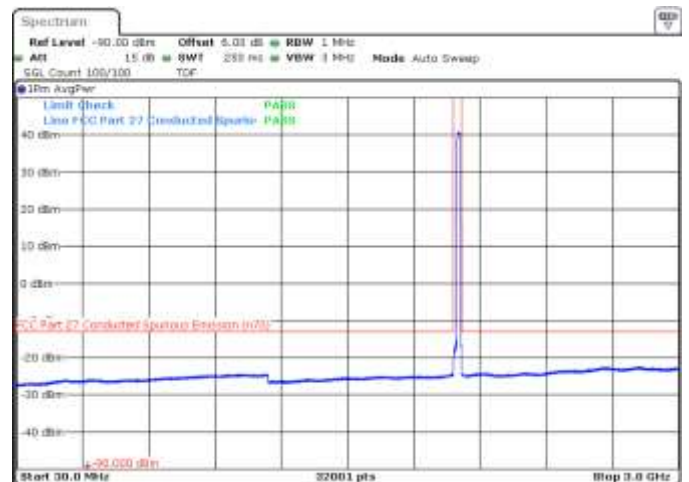


Figure 8.6-35: Conducted emission test, 64QAM Modulation, high channel (15 MHz), band n70.

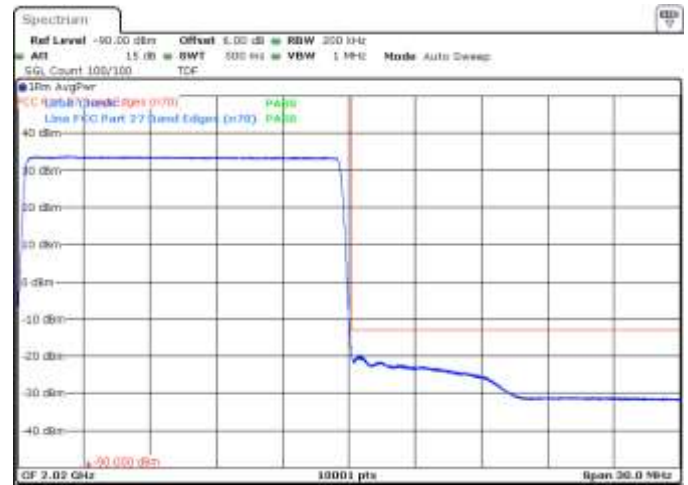
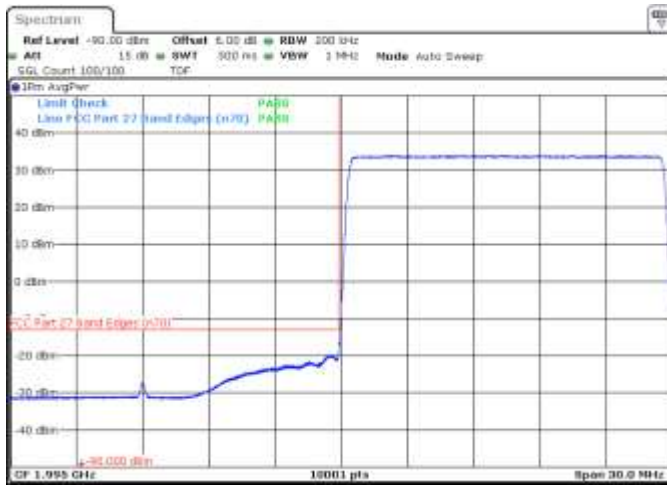


Figure 8.6-36: Conducted emission test, 64QAM Modulation, band edge: low and high channels, respectively (15 MHz), band n70.

***Note: For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (q) rules.**

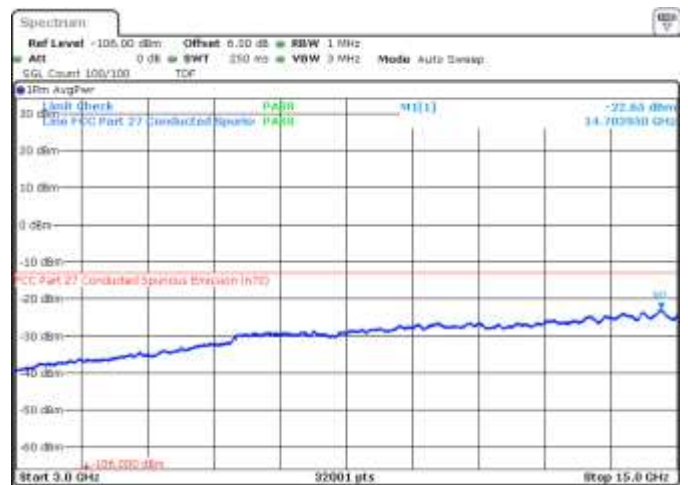
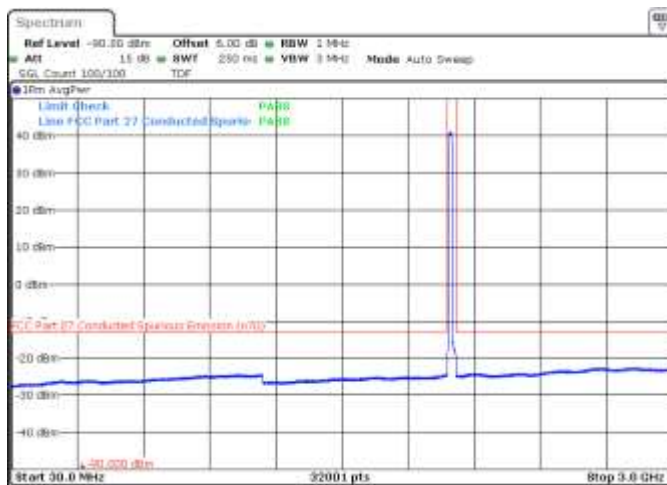


Figure 8.6-37: Conducted emission test, 256QAM Modulation, low channel (15 MHz), band n70.

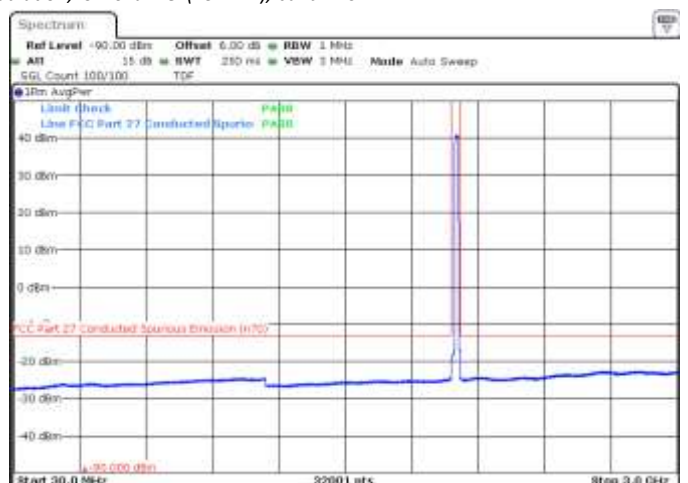
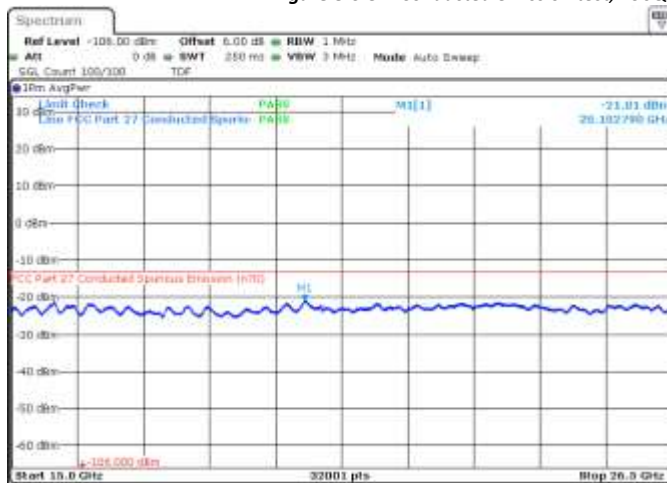


Figure 8.6-38: Conducted emission test, 256QAM Modulation, low channel and high channel (15 MHz), respectively, band n70.

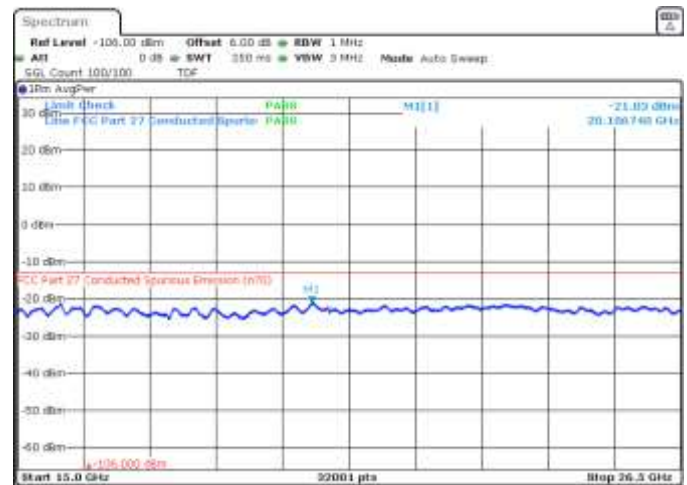
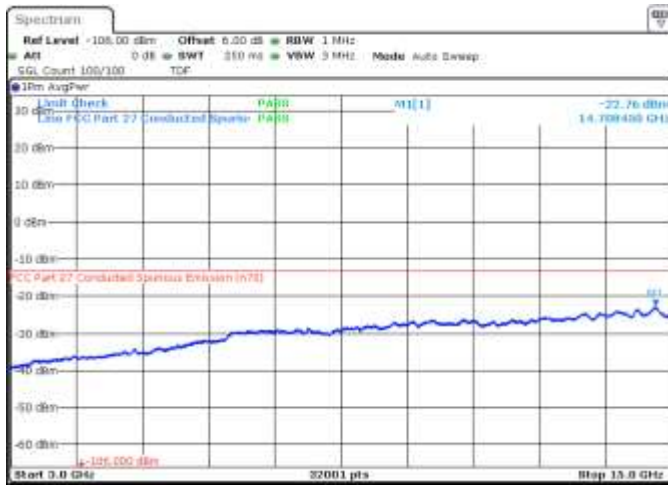


Figure 8.6-39: Conducted emission test, 256QAM Modulation, high channel (15 MHz), band n70.

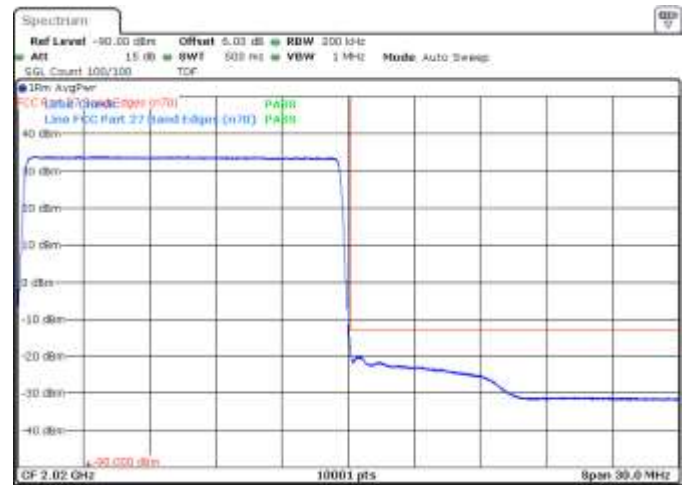
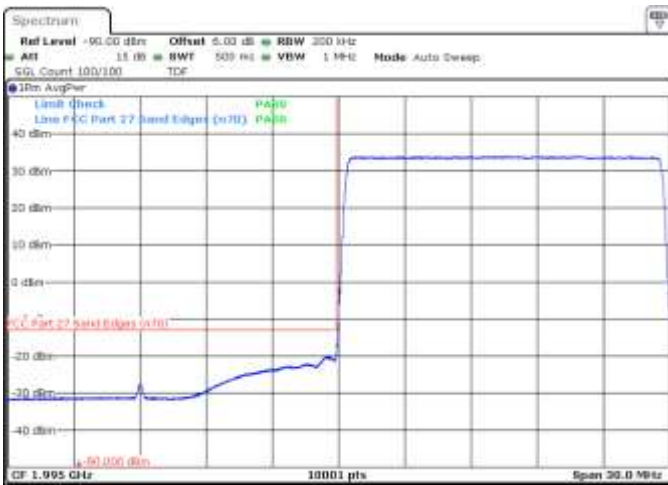
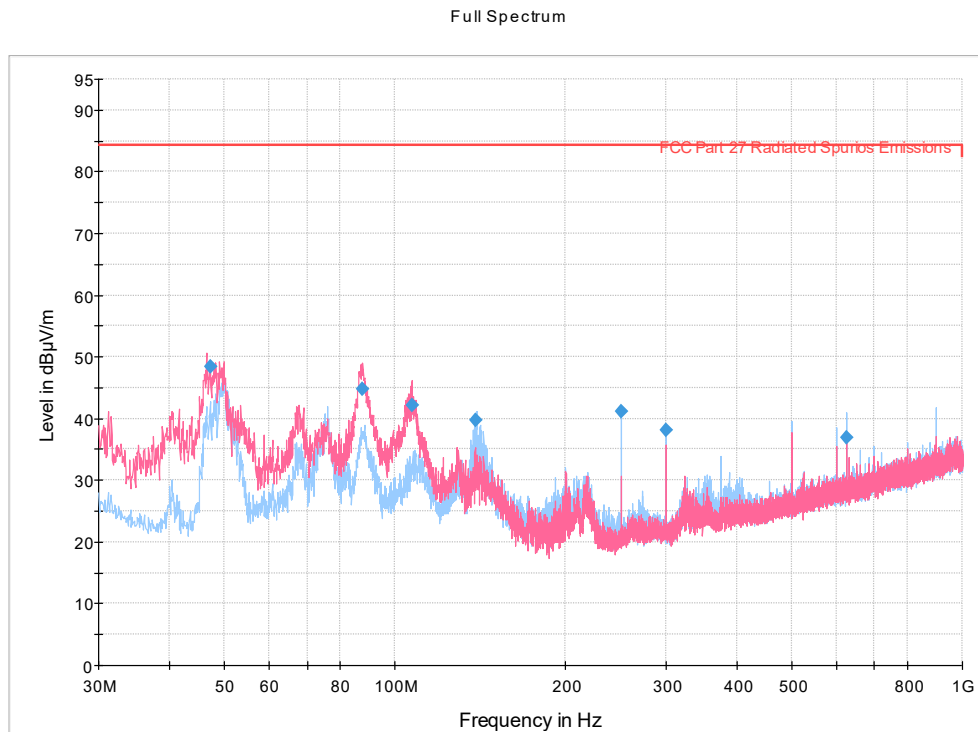


Figure 8.6-40: Conducted emission test, 256QAM Modulation, band edge: low and high channels, respectively (15 MHz), band n70.

***Note:** For this specific test the frequency limit has a frequency offset equivalent at $RBW/2$ (± 100 kHz from the low and high edge of the band), in order to demonstrate compliance. This offset was taken according to ANSI C63.26 Clause 5.7.2 (g) rules.



The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

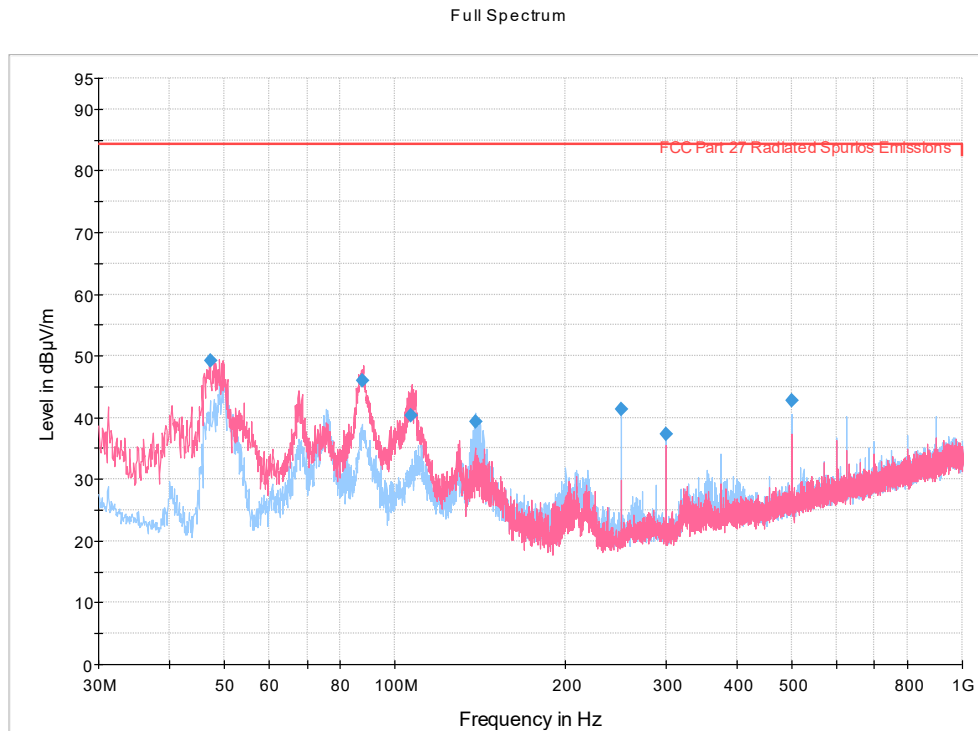
Figure 8.6-41: Emissions limit plot – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n66.

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
47.290000	48.50	84.38	35.88	5000.0	120.000	100.0	V	32.0	17.2
87.555000	44.72	84.38	39.66	5000.0	120.000	100.0	V	348.0	15.8
107.153333	42.08	84.38	42.30	5000.0	120.000	110.0	V	322.0	18.5
138.405833	39.79	84.38	44.59	5000.0	120.000	174.0	H	86.0	19.7
250.028333	41.23	84.38	43.15	5000.0	120.000	100.0	H	121.0	20.9
300.023333	38.19	84.38	46.19	5000.0	120.000	225.0	H	112.0	22.0
624.974167	36.91	84.38	47.47	5000.0	120.000	200.0	H	156.0	29.4

Table 8.6-1: Emissions limit results – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n66.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m

8.6.4 Test data, continued



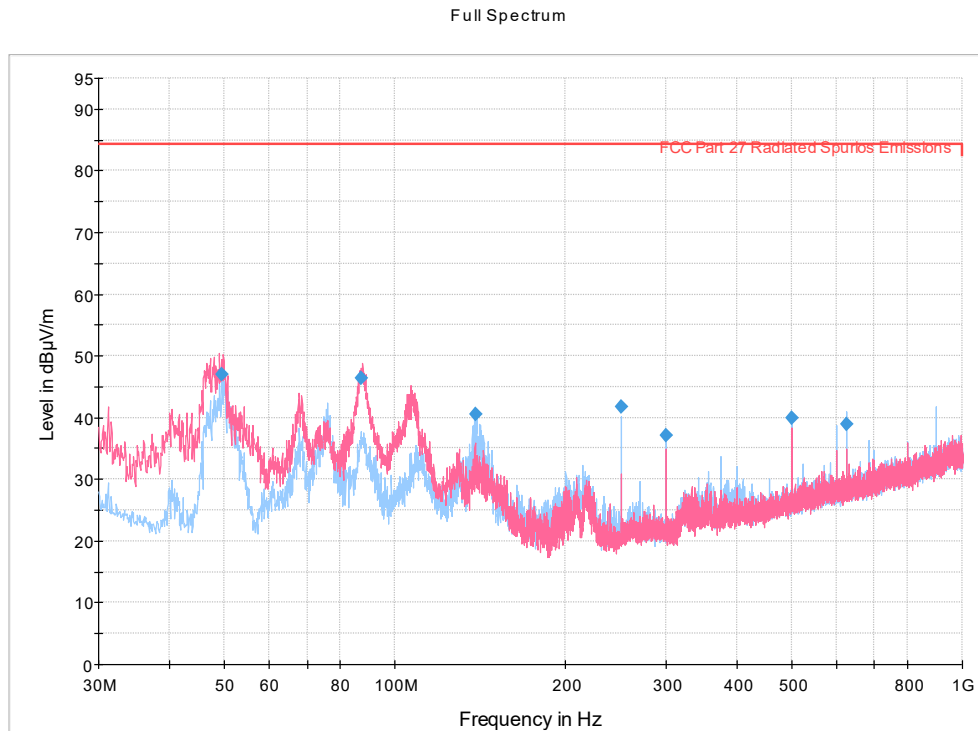
The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-42: Emissions limit plot – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, Middle channel, band n66

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
47.265000	49.15	84.38	35.23	5000.0	120.000	100.0	V	32.0	17.2
87.596667	45.98	84.38	38.40	5000.0	120.000	109.0	V	316.0	15.8
106.473333	40.29	84.38	44.09	5000.0	120.000	128.0	V	323.0	18.4
138.397500	39.43	84.38	44.95	5000.0	120.000	154.0	H	54.0	19.7
250.028333	41.26	84.38	43.12	5000.0	120.000	100.0	H	122.0	20.9
300.024167	37.25	84.38	47.13	5000.0	120.000	110.0	H	317.0	22.0
500.045833	42.80	84.38	41.58	5000.0	120.000	128.0	H	134.0	27.1

Table 8.6-2: Emissions limit results – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, Middle channel, band n66.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m



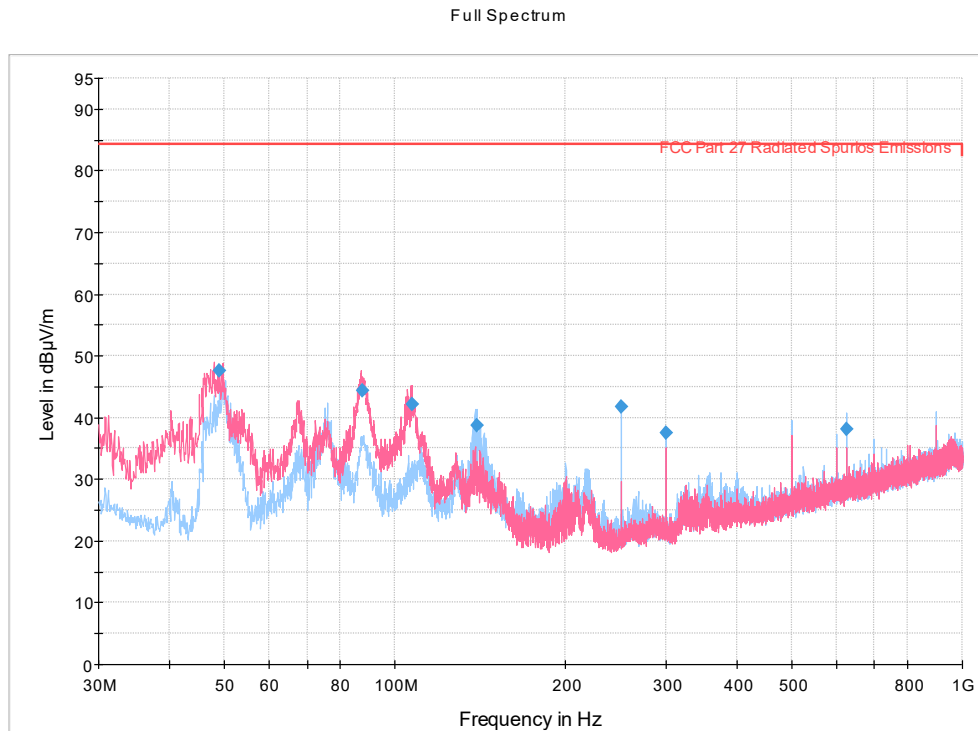
The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-43: Emissions limit plot – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n66

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.515833	46.90	84.38	37.48	5000.0	120.000	100.0	V	20.0	16.1
87.195000	46.37	84.38	38.01	5000.0	120.000	100.0	V	330.0	15.7
138.396667	40.59	84.38	43.79	5000.0	120.000	211.0	H	64.0	19.7
250.028333	41.67	84.38	42.71	5000.0	120.000	100.0	H	126.0	20.9
300.024167	37.19	84.38	47.19	5000.0	120.000	100.0	H	290.0	22.0
500.046667	40.02	84.38	44.36	5000.0	120.000	193.0	H	0.0	27.1
625.014167	38.86	84.38	45.52	5000.0	120.000	202.0	H	76.0	29.4

Table 8.6-3: Emissions limit results – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n66

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m



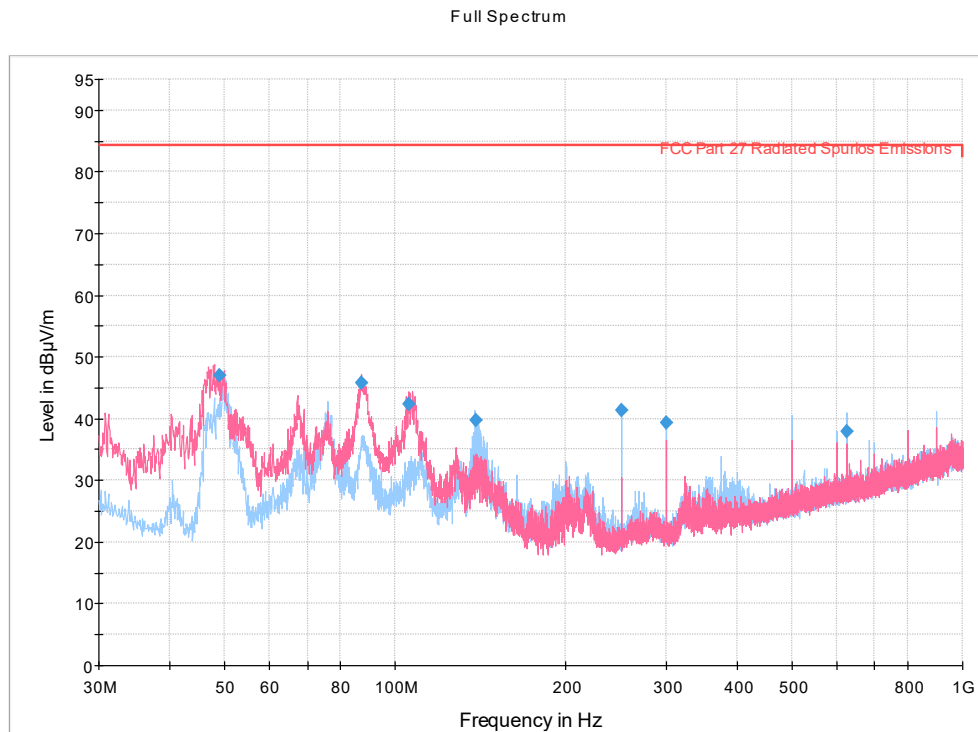
The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-44: Emissions limit plot – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n70.

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.043333	47.68	84.38	36.70	5000.0	120.000	100.0	V	55.0	16.4
87.749167	44.45	84.38	39.93	5000.0	120.000	146.0	V	293.0	15.8
107.187500	42.21	84.38	42.17	5000.0	120.000	110.0	V	336.0	18.5
139.245833	38.69	84.38	45.69	5000.0	120.000	175.0	H	66.0	19.6
250.028333	41.81	84.38	42.57	5000.0	120.000	100.0	H	126.0	20.9
300.024167	37.50	84.38	46.88	5000.0	120.000	100.0	H	304.0	22.0
624.974167	38.15	84.38	46.23	5000.0	120.000	212.0	H	131.0	29.4

Table 8.6-4: Emissions limit results – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n70.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m



The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

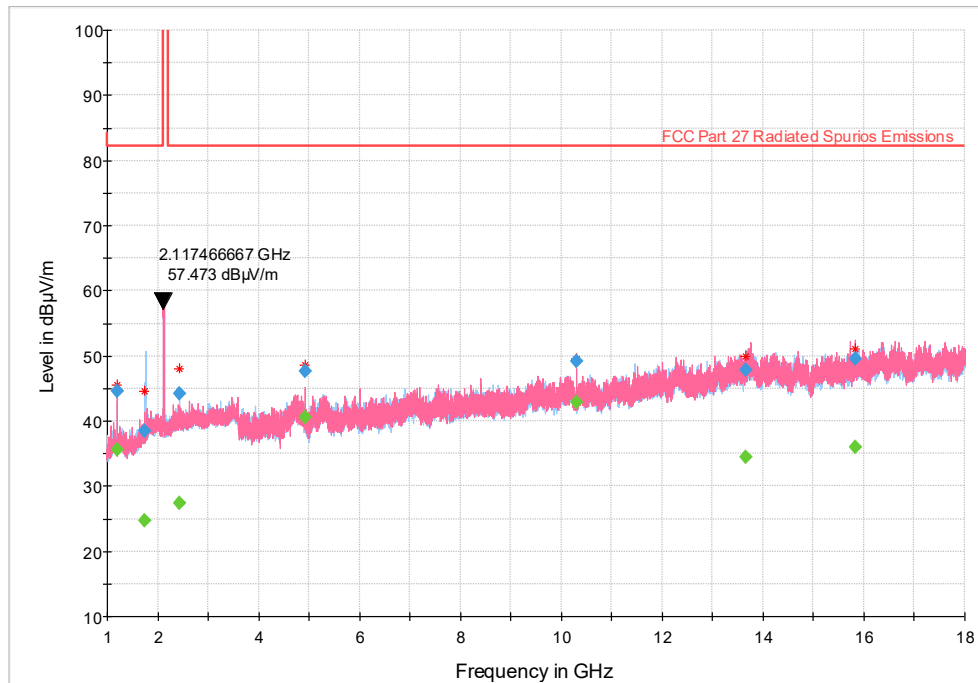
Figure 8.6-45: Emissions limit plot – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n70.

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
49.065000	46.91	84.38	37.47	5000.0	120.000	100.0	V	20.0	16.4
87.027500	45.71	84.38	38.67	5000.0	120.000	110.0	V	319.0	15.7
105.376667	42.30	84.38	42.08	5000.0	120.000	118.0	V	342.0	18.3
138.396667	39.64	84.38	44.74	5000.0	120.000	193.0	H	66.0	19.7
250.028333	41.26	84.38	43.12	5000.0	120.000	100.0	H	121.0	20.9
300.023333	39.40	84.38	44.98	5000.0	120.000	212.0	H	109.0	22.0
625.014167	37.99	84.38	46.39	5000.0	120.000	203.0	H	64.0	29.4

Table 8.6-5: Emissions limit results – Field strength measured from 0.030 to 1 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n70.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m

Full Spectrum



The spectral plot is a summation of a vertical and horizontal scan. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-46: Emissions limit plot – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n66.

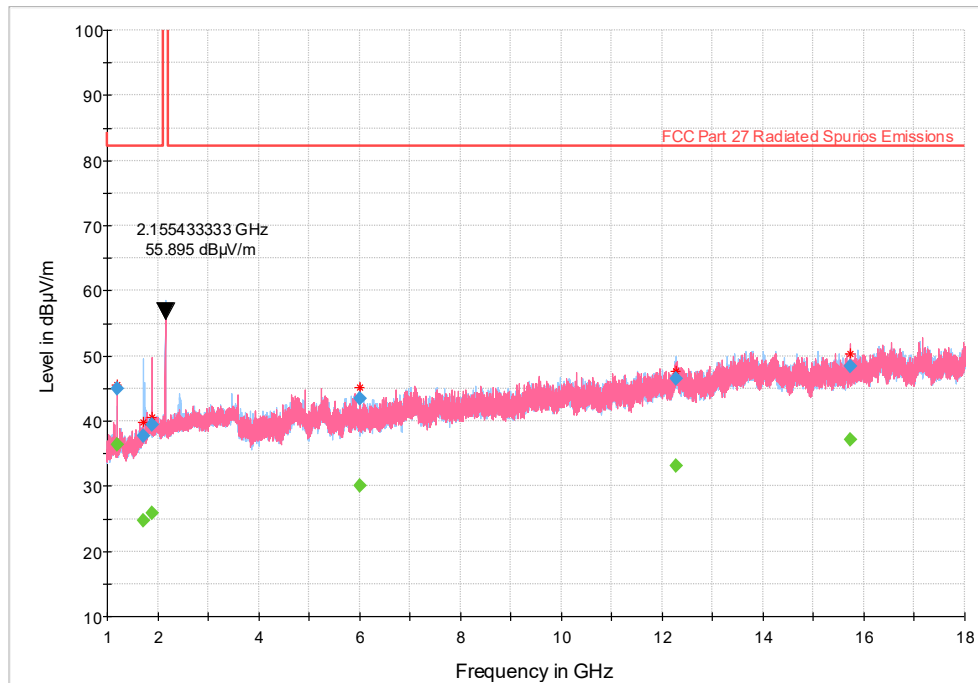
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1200.033333	44.60	---	82.23	37.63	5000.0	1000.000	164.0	V	79.0	-13.2
1200.033333	---	35.54	82.23	46.69	5000.0	1000.000	164.0	V	79.0	-13.2
1751.666667	38.38	---	82.23	43.85	5000.0	1000.000	131.0	H	316.0	-11.4
1751.666667	---	24.77	82.23	57.46	5000.0	1000.000	131.0	H	316.0	-11.4
2433.333333	44.22	---	82.23	38.01	5000.0	1000.000	316.0	H	31.0	-8.8
2433.333333	---	27.30	82.23	54.93	5000.0	1000.000	316.0	H	31.0	-8.8
4915.266667	---	40.58	82.23	41.65	5000.0	1000.000	114.0	V	20.0	-1.0
4915.266667	47.65	---	82.23	34.58	5000.0	1000.000	114.0	V	20.0	-1.0
10312.600000	49.21	---	82.23	33.02	5000.0	1000.000	100.0	V	294.0	5.0
10312.600000	---	42.86	82.23	39.37	5000.0	1000.000	100.0	V	294.0	5.0
13664.033333	---	34.41	82.23	47.82	5000.0	1000.000	133.0	H	20.0	12.4
13664.033333	47.75	---	82.23	34.48	5000.0	1000.000	133.0	H	20.0	12.4
15829.333333	---	35.95	82.23	46.28	5000.0	1000.000	174.0	V	266.0	13.2
15829.333333	49.47	---	82.23	32.76	5000.0	1000.000	174.0	V	266.0	13.2

Table 8.6-6: Emissions limit results – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n66.

Notes:

- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
- ² Correction factors = antenna factor ACF (dB) + cable loss (dB)+20 dB attenuator to protect the test equipment
- ³ The maximum measured value observed over a period of 5 seconds was recorded.
- ⁴ The spectral plot is a summation of a vertical and horizontal scan.
- ⁵ This measurement was done at 3m

Full Spectrum



The spectral plot is a summation of a vertical and horizontal scan. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-47: Emissions limit plot – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, Middle channel, band n66.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1200.433333	---	36.36	82.23	45.87	5000.0	1000.000	167.0	V	76.0	-13.2
1200.433333	45.00	---	82.23	37.23	5000.0	1000.000	167.0	V	76.0	-13.2
1710.933333	---	24.68	82.23	57.55	5000.0	1000.000	121.0	H	234.0	-11.8
1710.933333	37.69	---	82.23	44.54	5000.0	1000.000	121.0	H	234.0	-11.8
1886.066667	---	25.76	82.23	56.47	5000.0	1000.000	339.0	V	222.0	-10.1
1886.066667	39.40	---	82.23	42.83	5000.0	1000.000	339.0	V	222.0	-10.1
5999.266667	43.42	---	82.23	38.81	5000.0	1000.000	147.0	V	20.0	0.4
5999.266667	---	29.98	82.23	52.25	5000.0	1000.000	147.0	V	20.0	0.4
12271.400000	---	33.05	82.23	49.18	5000.0	1000.000	361.0	H	126.0	8.2
12271.400000	46.52	---	82.23	35.71	5000.0	1000.000	361.0	H	126.0	8.2
15731.066667	48.38	---	82.23	33.85	5000.0	1000.000	117.0	V	66.0	12.9
15731.066667	---	37.10	82.23	45.13	5000.0	1000.000	117.0	V	66.0	12.9

Table 8.6-7: Emissions limit results – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, Middle channel, band n66.

Notes:

¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

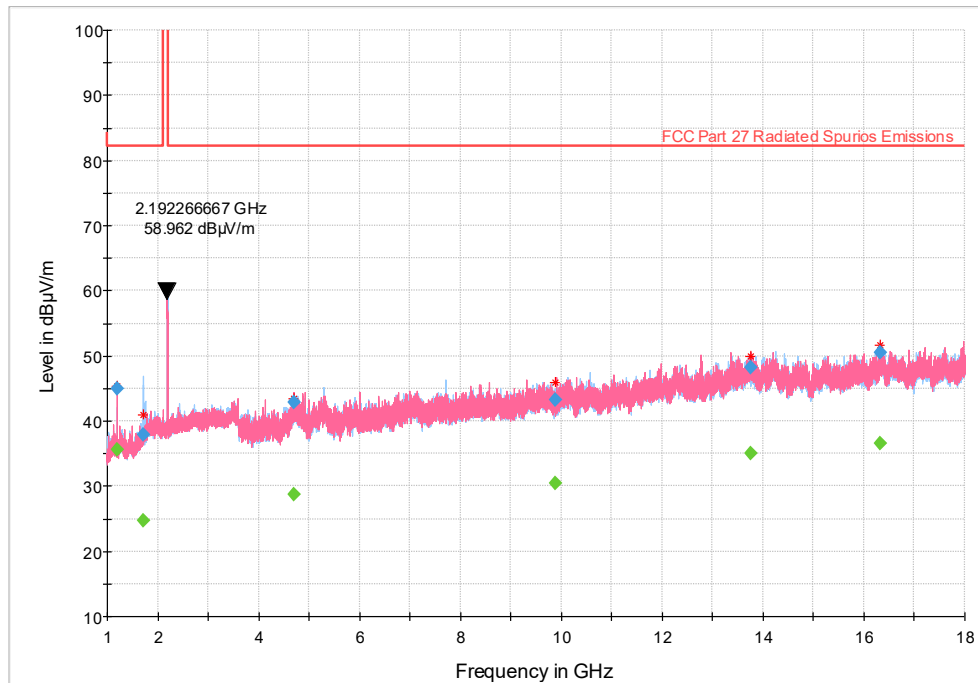
² Correction factors = antenna factor ACF (dB) + cable loss (dB)+20 dB attenuator to protect the test equipment

³ The maximum measured value observed over a period of 5 seconds was recorded.

⁴ The spectral plot is a summation of a vertical and horizontal scan.

⁵ This measurement was done at 3m

Full Spectrum



The spectral plot is a summation of a vertical and horizontal scan. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-48: Emissions limit plot – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n66.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1200.033333	---	35.61	82.23	46.62	5000.0	1000.000	164.0	V	77.0	-13.2
1200.033333	45.03	---	82.23	37.20	5000.0	1000.000	164.0	V	77.0	-13.2
1714.366667	37.99	---	82.23	44.24	5000.0	1000.000	275.0	H	304.0	-11.8
1714.366667	---	24.63	82.23	57.60	5000.0	1000.000	275.0	H	304.0	-11.8
4710.466667	42.84	---	82.23	39.39	5000.0	1000.000	249.0	V	222.0	-0.6
4710.466667	---	28.76	82.23	53.47	5000.0	1000.000	249.0	V	222.0	-0.6
9888.333333	43.34	---	82.23	38.89	5000.0	1000.000	383.0	V	0.0	4.8
9888.333333	---	30.46	82.23	51.77	5000.0	1000.000	383.0	V	0.0	4.8
13760.100000	---	35.01	82.23	47.22	5000.0	1000.000	243.0	H	354.0	12.9
13760.100000	48.22	---	82.23	34.01	5000.0	1000.000	243.0	H	354.0	12.9
16328.266667	50.43	---	82.23	31.80	5000.0	1000.000	188.0	H	300.0	14.9
16328.266667	---	36.60	82.23	45.63	5000.0	1000.000	188.0	H	300.0	14.9

Table 8.6-8: Emissions limit results – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n66.

Notes:

¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

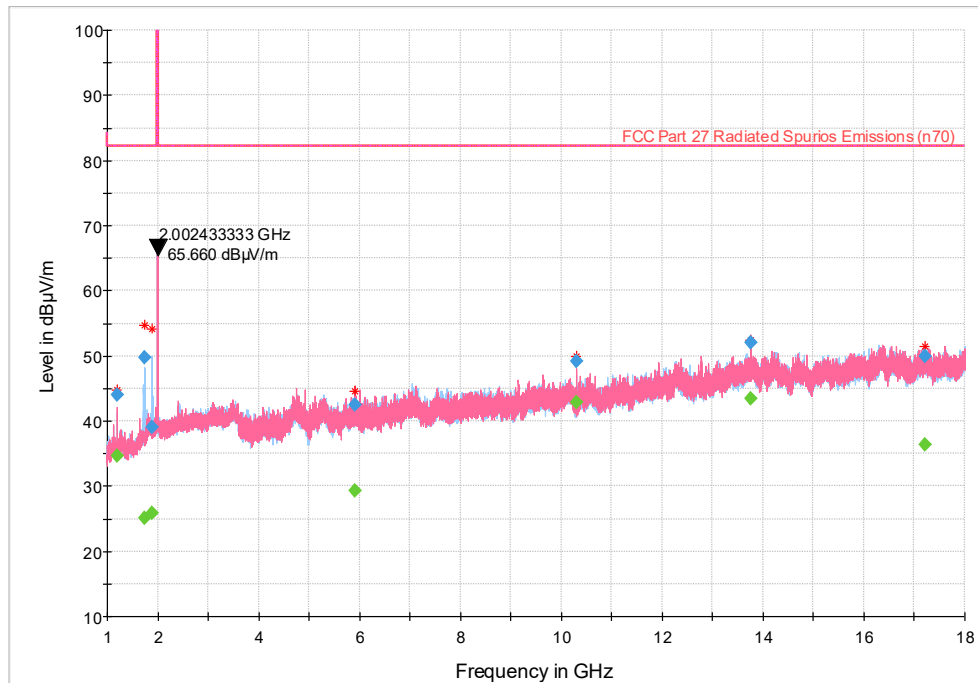
² Correction factors = antenna factor ACF (dB) + cable loss (dB)+20 dB attenuator to protect the test equipment

³ The maximum measured value observed over a period of 5 seconds was recorded.

⁴ The spectral plot is a summation of a vertical and horizontal scan.

⁵ This measurement was done at 3m

Full Spectrum



The spectral plot is a summation of a vertical and horizontal scan. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-49: Emissions limit plot – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n70.

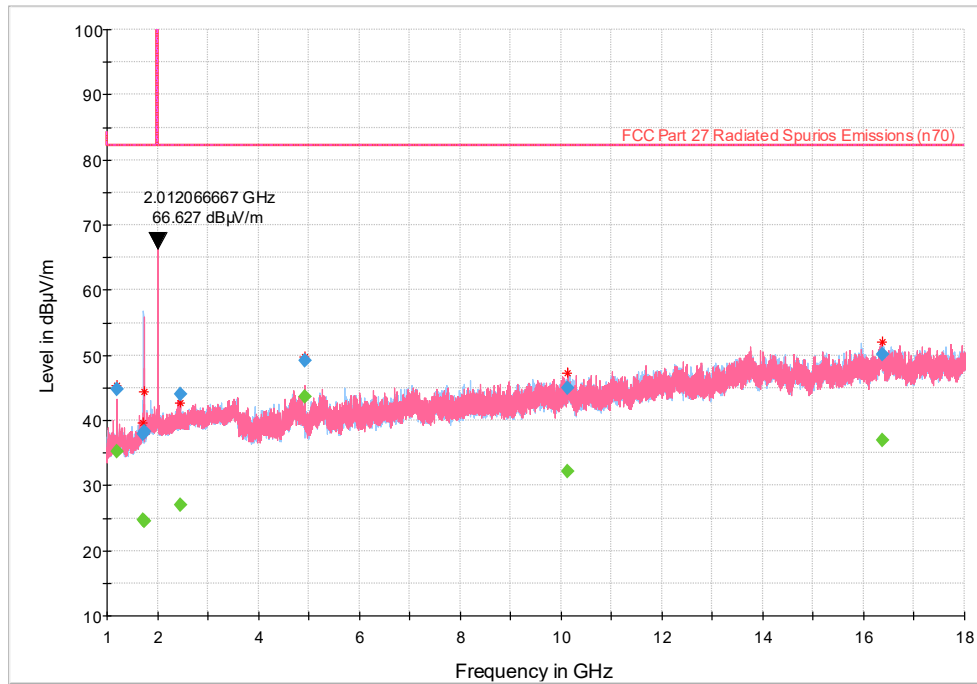
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1200.033333	44.03	---	82.23	38.20	5000.0	1000.000	213.0	V	54.0	-13.2
1200.033333	---	34.71	82.23	47.52	5000.0	1000.000	213.0	V	54.0	-13.2
1740.566667	---	25.19	82.23	57.04	5000.0	1000.000	187.0	H	294.0	-11.5
1740.566667	49.75	---	82.23	32.48	5000.0	1000.000	187.0	H	294.0	-11.5
1883.366667	---	25.80	82.23	56.43	5000.0	1000.000	127.0	H	66.0	-10.1
1883.366667	39.10	---	82.23	43.13	5000.0	1000.000	127.0	H	66.0	-10.1
5898.833333	42.43	---	82.23	39.80	5000.0	1000.000	380.0	V	145.0	0.3
5898.833333	---	29.27	82.23	52.96	5000.0	1000.000	380.0	V	145.0	0.3
10312.600000	---	42.80	82.23	39.43	5000.0	1000.000	114.0	V	256.0	5.0
10312.600000	49.13	---	82.23	33.10	5000.0	1000.000	114.0	V	256.0	5.0
13760.733333	52.09	---	82.23	30.14	5000.0	1000.000	137.0	V	20.0	13.0
13760.733333	---	43.36	82.23	38.87	5000.0	1000.000	137.0	V	20.0	13.0
17200.200000	49.87	---	82.23	32.36	5000.0	1000.000	271.0	H	116.0	16.6
17200.200000	---	36.38	82.23	45.85	5000.0	1000.000	271.0	H	116.0	16.6

Table 8.6-9: Emissions limit results – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n70.

Notes:

- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
- ² Correction factors = antenna factor ACF (dB) + cable loss (dB)+20 dB attenuator to protect the test equipment
- ³ The maximum measured value observed over a period of 5 seconds was recorded.
- ⁴ The spectral plot is a summation of a vertical and horizontal scan.
- ⁵ This measurement was done at 3m

Full Spectrum



The spectral plot is a summation of a vertical and horizontal scan. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-50: Emissions limit plot – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n70.

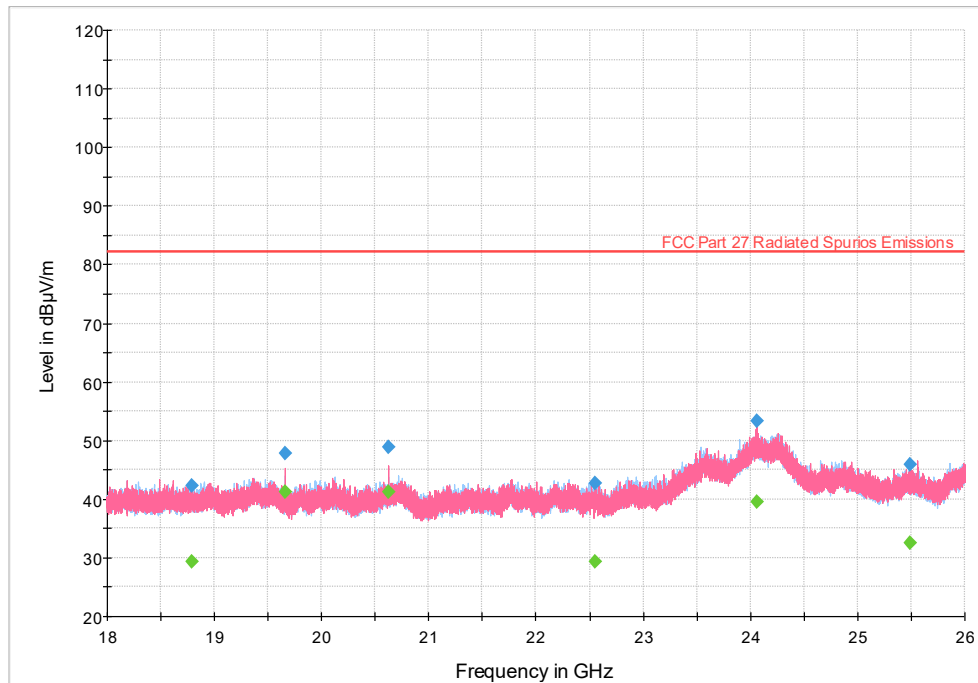
Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1200.033333	44.74	---	82.23	37.49	5000.0	1000.000	161.0	V	76.0	-13.2
1200.033333	---	35.15	82.23	47.08	5000.0	1000.000	161.0	V	76.0	-13.2
1727.200000	37.97	---	82.23	44.26	5000.0	1000.000	292.0	H	356.0	-11.7
1727.200000	---	24.68	82.23	57.55	5000.0	1000.000	292.0	H	356.0	-11.7
1743.766667	38.29	---	82.23	43.94	5000.0	1000.000	207.0	V	0.0	-11.5
1743.766667	---	24.60	82.23	57.63	5000.0	1000.000	207.0	V	0.0	-11.5
2462.433333	43.94	---	82.23	38.29	5000.0	1000.000	110.0	H	354.0	-8.7
2462.433333	---	27.02	82.23	55.21	5000.0	1000.000	110.0	H	354.0	-8.7
4915.100000	49.16	---	82.23	33.07	5000.0	1000.000	110.0	V	20.0	-1.0
4915.100000	---	43.71	82.23	38.52	5000.0	1000.000	110.0	V	20.0	-1.0
10116.866667	---	32.21	82.23	50.02	5000.0	1000.000	207.0	V	222.0	5.4
10116.866667	45.02	---	82.23	37.21	5000.0	1000.000	207.0	V	222.0	5.4
16362.833333	50.17	---	82.23	32.06	5000.0	1000.000	318.0	H	80.0	14.7
16362.833333	---	37.01	82.23	45.22	5000.0	1000.000	318.0	H	80.0	14.7

Table 8.6-10: Emissions limit results – Field strength measured from 1 to 18 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n70.

Notes:

- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
- ² Correction factors = antenna factor ACF (dB) + cable loss (dB)+20 dB attenuator to protect the test equipment
- ³ The maximum measured value observed over a period of 5 seconds was recorded.
- ⁴ The spectral plot is a summation of a vertical and horizontal scan.
- ⁵ This measurement was done at 3m

Full Spectrum



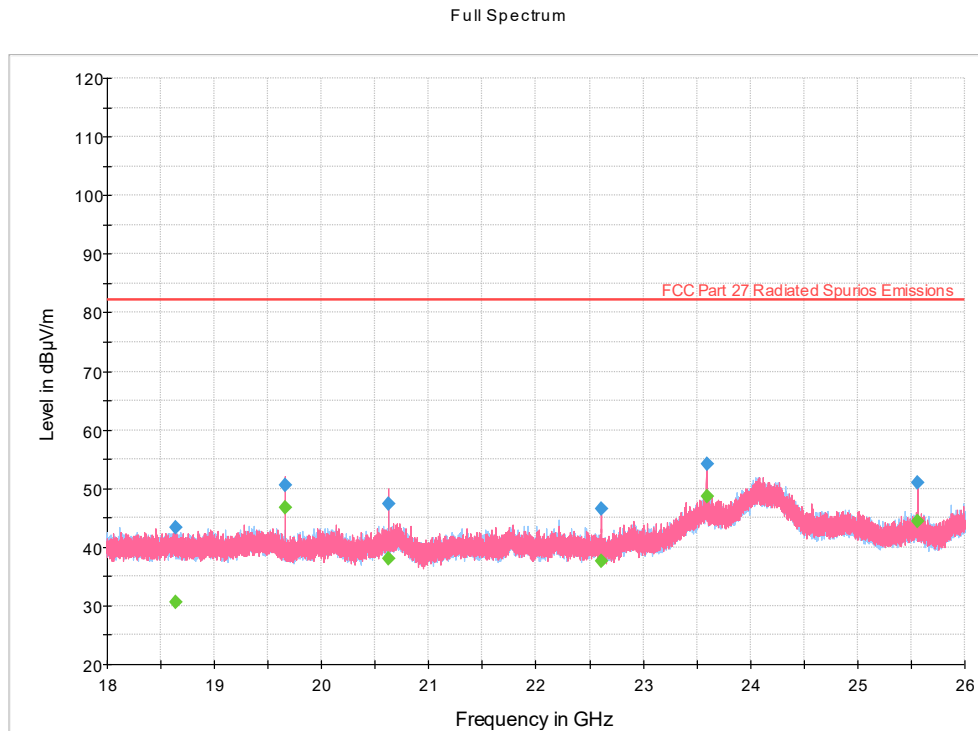
The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-51: Emissions limit plot – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n66.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18785.800000	42.26	---	82.23	39.97	5000.0	1000.000	167.0	H	142.0	17.6
18785.800000	---	29.37	82.23	52.86	5000.0	1000.000	167.0	H	142.0	17.6
19660.600000	47.71	---	82.23	34.52	5000.0	1000.000	110.0	V	96.0	18.0
19660.600000	---	41.18	82.23	41.05	5000.0	1000.000	110.0	V	96.0	18.0
20624.866667	---	41.30	82.23	40.93	5000.0	1000.000	119.0	V	130.0	19.5
20624.866667	48.85	---	82.23	33.38	5000.0	1000.000	119.0	V	130.0	19.5
22549.666667	---	29.43	82.23	52.80	5000.0	1000.000	350.0	H	68.0	19.6
22549.666667	42.62	---	82.23	39.61	5000.0	1000.000	350.0	H	68.0	19.6
24056.066667	---	39.45	82.23	42.78	5000.0	1000.000	272.0	V	239.0	29.7
24056.066667	53.32	---	82.23	28.91	5000.0	1000.000	272.0	V	239.0	29.7
25483.533333	---	32.59	82.23	49.64	5000.0	1000.000	150.0	H	182.0	24.1
25483.533333	45.97	---	82.23	36.26	5000.0	1000.000	150.0	H	182.0	24.1

Table 8.6-11: Emissions limit results – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n66.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m



The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

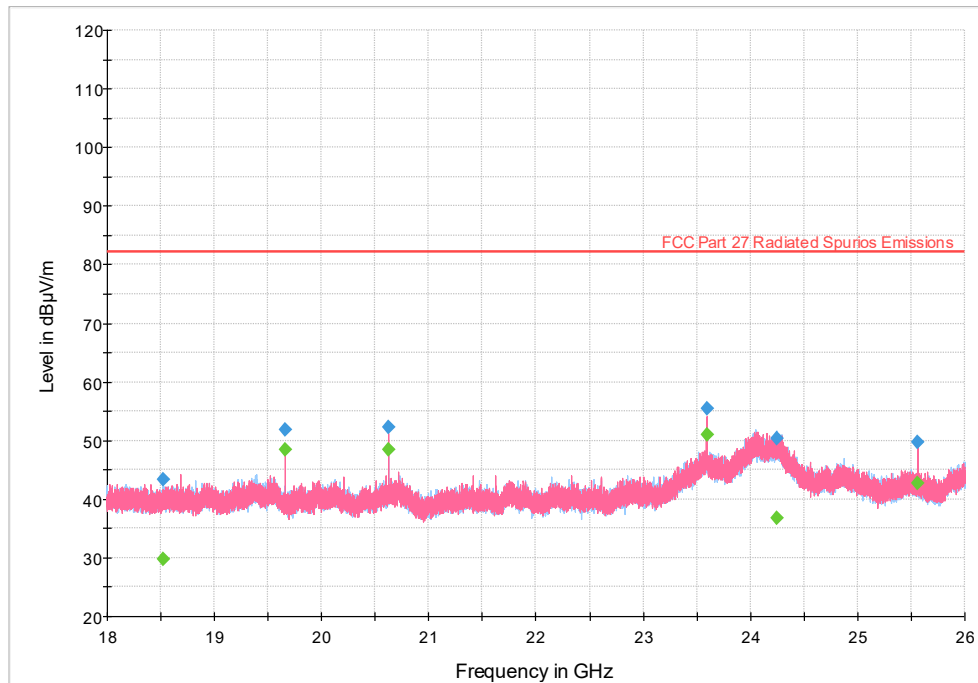
Figure 8.6-52: Emissions limit plot – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, Middle channel, band n66.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18639.133333	---	30.56	82.23	51.67	5000.0	1000.000	332.0	H	302.0	17.9
18639.133333	43.35	---	82.23	38.88	5000.0	1000.000	332.0	H	302.0	17.9
19661.000000	---	46.69	82.23	35.54	5000.0	1000.000	100.0	V	85.0	18.0
19661.000000	50.59	---	82.23	31.64	5000.0	1000.000	100.0	V	85.0	18.0
20625.000000	47.45	---	82.23	34.78	5000.0	1000.000	118.0	V	246.0	19.5
20625.000000	---	37.99	82.23	44.24	5000.0	1000.000	118.0	V	246.0	19.5
22609.933333	46.57	---	82.23	35.66	5000.0	1000.000	203.0	V	290.0	19.9
22609.933333	---	37.57	82.23	44.66	5000.0	1000.000	203.0	V	290.0	19.9
23594.733333	54.24	---	82.23	27.99	5000.0	1000.000	100.0	V	225.0	25.9
23594.733333	---	48.69	82.23	33.54	5000.0	1000.000	100.0	V	225.0	25.9
25557.133333	50.96	---	82.23	31.27	5000.0	1000.000	100.0	V	70.0	24.3
25557.133333	---	44.52	82.23	37.71	5000.0	1000.000	100.0	V	70.0	24.3

Table 8.6-12: Emissions limit results – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, Middle channel, band n66.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m

Full Spectrum



The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-53: Emissions limit plot – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n66.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18522.200000	43.41	---	82.23	38.82	5000.0	1000.000	410.0	H	162.0	17.8
18522.200000	---	29.70	82.23	52.53	5000.0	1000.000	410.0	H	162.0	17.8
19660.733333	---	48.49	82.23	33.74	5000.0	1000.000	100.0	V	87.0	18.0
19660.733333	51.87	---	82.23	30.36	5000.0	1000.000	100.0	V	87.0	18.0
20624.866667	52.18	---	82.23	30.05	5000.0	1000.000	100.0	V	131.0	19.5
20624.866667	---	48.49	82.23	33.74	5000.0	1000.000	100.0	V	131.0	19.5
23591.133333	---	50.99	82.23	31.24	5000.0	1000.000	118.0	V	230.0	25.9
23591.133333	55.37	---	82.23	26.86	5000.0	1000.000	118.0	V	230.0	25.9
24251.800000	50.26	---	82.23	31.97	5000.0	1000.000	302.0	H	100.0	29.0
24251.800000	---	36.87	82.23	45.36	5000.0	1000.000	302.0	H	100.0	29.0
25557.266667	49.81	---	82.23	32.42	5000.0	1000.000	100.0	V	132.0	24.3
25557.266667	---	42.79	82.23	39.44	5000.0	1000.000	100.0	V	132.0	24.3

Table 8.6-13: Emissions limit results – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n66.

Notes:

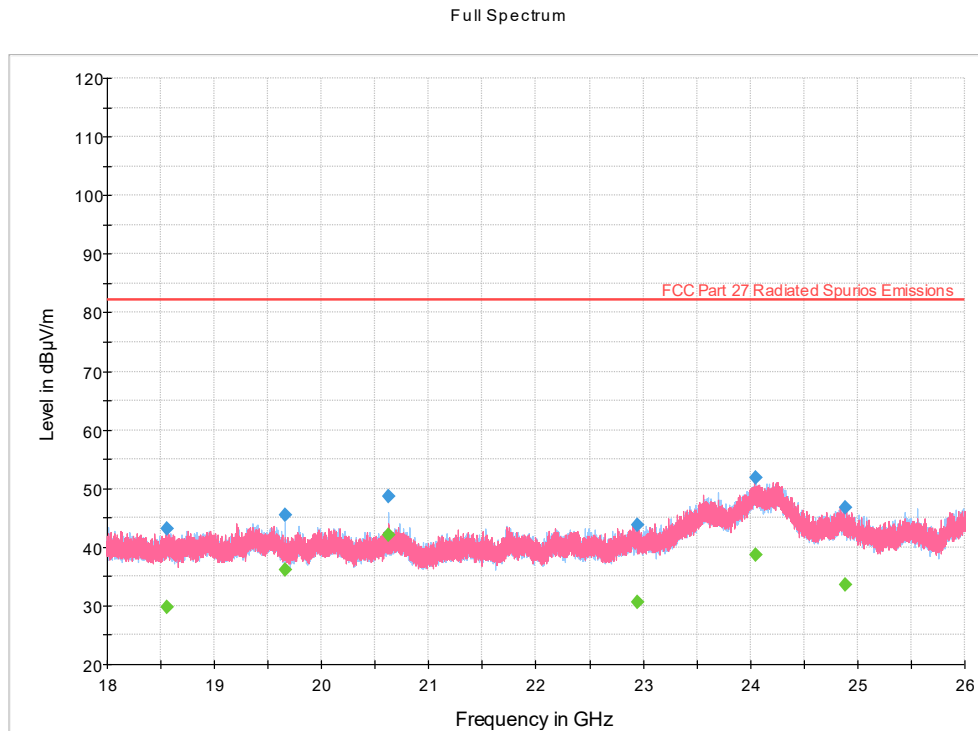
¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ The maximum measured value observed over a period of 5 seconds was recorded.

⁴ The spectral plot shows the vertical and horizontal scan separately.

⁵ This measurement was done at 3m



The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

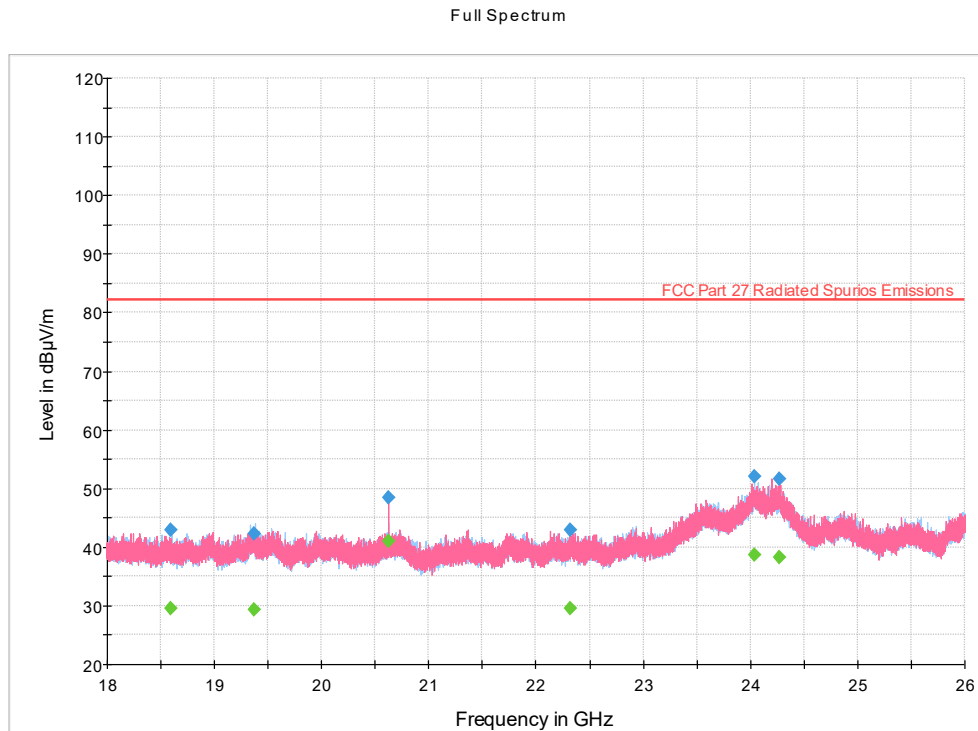
Figure 8.6-54: Emissions limit plot – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n70.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18561.533333	43.25	---	82.23	38.98	5000.0	1000.000	402.0	V	195.0	18.0
18561.533333	---	29.73	82.23	52.50	5000.0	1000.000	402.0	V	195.0	18.0
19661.000000	45.58	---	82.23	36.65	5000.0	1000.000	117.0	H	198.0	18.0
19661.000000	---	36.11	82.23	46.12	5000.0	1000.000	117.0	H	198.0	18.0
20624.866667	48.59	---	82.23	33.64	5000.0	1000.000	100.0	H	146.0	19.5
20624.866667	---	42.17	82.23	40.06	5000.0	1000.000	100.0	H	146.0	19.5
22941.533333	43.71	---	82.23	38.52	5000.0	1000.000	98.0	V	333.0	21.1
22941.533333	---	30.52	82.23	51.71	5000.0	1000.000	98.0	V	333.0	21.1
24054.200000	51.75	---	82.23	30.48	5000.0	1000.000	166.0	H	162.0	29.7
24054.200000	---	38.65	82.23	43.58	5000.0	1000.000	166.0	H	162.0	29.7
24890.600000	46.70	---	82.23	35.53	5000.0	1000.000	208.0	V	194.0	24.7
24890.600000	---	33.55	82.23	48.68	5000.0	1000.000	208.0	V	194.0	24.7

Table 8.6-14: Emissions limit results – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, Low channel, band n70.

- Notes:
- ¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)
 - ² Correction factors = antenna factor ACF (dB) + cable loss (dB)
 - ³ The maximum measured value observed over a period of 5 seconds was recorded.
 - ⁴ The spectral plot shows the vertical and horizontal scan separately.
 - ⁵ This measurement was done at 3m

8.6.4 Test data, continued



The spectral plot shows the vertical (red plot) and horizontal (blue plot) scans separately. The spectral scan has been corrected with the associated transducer factors (i.e. antenna factors, cable loss, amplifier gains, and attenuators).

Figure 8.6-55: Emissions limit plot – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n70.

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18597.933333	42.94	---	82.23	39.29	5000.0	1000.000	166.0	H	239.0	17.9
18597.933333	---	29.59	82.23	52.64	5000.0	1000.000	166.0	H	239.0	17.9
19373.933333	---	29.32	82.23	52.91	5000.0	1000.000	382.0	H	255.0	18.4
19373.933333	42.33	---	82.23	39.90	5000.0	1000.000	382.0	H	255.0	18.4
20624.866667	48.46	---	82.23	33.77	5000.0	1000.000	110.0	V	130.0	19.5
20624.866667	---	40.94	82.23	41.29	5000.0	1000.000	110.0	V	130.0	19.5
22314.200000	43.01	---	82.23	39.22	5000.0	1000.000	146.0	V	0.0	19.5
22314.200000	---	29.65	82.23	52.58	5000.0	1000.000	146.0	V	0.0	19.5
24033.800000	---	38.67	82.23	43.56	5000.0	1000.000	369.0	H	68.0	29.7
24033.800000	51.96	---	82.23	30.27	5000.0	1000.000	369.0	H	68.0	29.7
24264.866667	51.72	---	82.23	30.51	5000.0	1000.000	147.0	V	221.0	28.9
24264.866667	---	38.24	82.23	43.99	5000.0	1000.000	147.0	V	221.0	28.9

Table 8.6-15: Emissions limit results – Field strength measured from 18 to 26 GHz, 256QAM Modulation, 15 MHz OBW, High channel, band n70.

Notes:

¹ Field strength (dBµV/m) = receiver/spectrum analyzer value (dBµV) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ The maximum measured value observed over a period of 5 seconds was recorded.

⁴ The spectral plot shows the vertical and horizontal scan separately.

⁵ This measurement was done at 3m

Section 9. Block diagrams of test setups

9.1 Radiated emissions set-up

