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RADIO TEST REPORT

Report ID:
REP114958

Project number:
PRJ0087177

Type of assessment:
Final product testing

Type of radio equipment:
Wi-Fi device

Equipment class:
DTS

Applicant:
McIntosh Laboratory Inc.

Model(s)/HVIN(s):
DS200

Description of product:
Streaming DAC

FCC identifier:
BWY-DS200

ISED certification number:
2483A-DS200

Specifications:

- FCC 47 CFR Part 15 Subpart C, §15.247
- RSS-247, Issue 3, August 2023, Section 5

Date of issue: September 22, 2025

Sagarkumar Patel, EMC/RF Test Specialist
Tested by

Andrey Adelberg, Senior EMC/RF Specialist
Reviewed by

Andrey Adelberg
Signature

Lab locations

Company name	Nemko Canada Inc.
Facilities	**Ottawa site:** 303 River Road, Ottawa, ON, Canada, K1V 1H2 Tel: +1 613 737 9680 Test site registration number: CA2040 **Montréal site:** 292 Labrosse Avenue, Pointe-Claire, QC, Canada, H9R 5L8 Tel: +1 514 694 2684 Test site registration number: CA2041 **Cambridge site:** 1-130 Saltsman Drive, Cambridge, ON, Canada, N3E 0B2 Tel: +1 519 650 4811 Test site registration number: CA0101
Website	www.nemko.com

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 contained in this report are within Nemko Canada's ISO/IEC 17025 accreditation.

Copyright notification

Table of Contents

Section 1 Report summary

1.1 Test specifications

FCC 47 CFR Part 15, Subpart C, Clause 15.247	Operation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz
RSS-247, Issue 3, August 2023, Section 5	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

1.2 Test methods

558074 D01 15.247 Meas Guidance v05r02 (April 2, 2019)	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.
RSS-Gen, Issue 5, February 2021	General Requirements for Compliance of Radio Apparatus
ANSI C63.10 v2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

1.3 Exclusions

None

1.4 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was performed against all relevant requirements of the test standard except as noted in section 1.3 above. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.
Determining compliance is based on the results of the compliance measurement, not taking into account measurement uncertainty, in accordance with section 1.3 of ANSI C63.10 v2020.

See "Summary of test results" for full details.

1.5 Test report revision history

Table 1.5-1: *Test report revision history*

Revision #	Date of issue	Details of changes made to test report
REP114958	September 22, 2025	Original report issued

Section 2 Engineering considerations

2.1 Modifications incorporated in the EUT for compliance

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

2.2 Technical judgment

None

2.3 Model variant declaration

There were no model variants declared by the applicant.

2.4 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 3 Test conditions

3.1 Atmospheric conditions

Temperature	15 °C – 35 °C
Relative humidity	20 % – 75 %
Air pressure	86 kPa (860 mbar) – 106 kPa (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.

3.2 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 4 Information provided by the applicant

4.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results contained within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

4.2 Applicant / Manufacturer

Applicant name	McIntosh Laboratory Inc
Applicant address	2 Chambers St, Binghamton, 13903, United States, NY USA
Manufacturer name	Same as applicant
Manufacturer address	Same as applicant

4.3 EUT information

Product description	Streaming DAC
Model / HVIN	DS200
Serial number	AKF1427
Power supply requirements	AC: 120-240 V, 50/60 Hz power cord
Product description and theory of operation	2-channel Digital-to-Analog Converter (DAC) with wired digital audio inputs for legacy formats and wired/wireless inputs for streaming audio services.

4.4 Radio technical information

Category of Wideband Data Transmission equipment	☐ Frequency Hopping Spread Spectrum (FHSS) equipment ☒ Other types of Wideband Data Transmission equipment (e.g. DSSS, OFDM, etc.).
Frequency band	2400–2483.5 MHz
Frequency Min	20 MHz Signal :2412 MHz 40 MHz Signal:2422 MHz
Frequency Max	20 MHz Signal :2462 MHz 40 MHz Signal:2452 MHz
RF power Max (W), Conducted	802.11b: 0.0155 W,11.90dBm 802.11.g:0.0007 W, -1.94dBm 802.11n(HT20): 0.001 W, 0.17 dBm 802.11n(HT40): 0.0011 W, 0.43 dBm
Measured BW (kHz), 99% OBW	802.11b: 11.1846 802.11.g:16.629 802.11n(HT20):17.7444 802.11n(HT40):36.1368
Type of modulation	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n(HT20/HT40): OFDM (QPSK, BPSK, 16-QAM, 64-QAM)
Emission classification	20M0G7D, 20M0W7D, 40M0W7D
Transmitter spurious, dBµV/m @ 3 m	Peak :43.99, Average: 30.01@ 2483.5 MHz
Antenna information	External whip antenna, by Tekfun, MN: F04A-SR-V2, 2 dBi

4.5 EUT setup details

4.5.1 Radio exercise details

Operating conditions	The Equipment Under Test (EUT) is powered using a 120V, 50 Hz AC supply. Transmission signals are sent through the antenna ports using PuTTY and LabTool software, utilizing various modulation schemes as listed below 802.11b: 16 dBm 802.11g/n(HT20): 14 dBm 802.11g/n (HT40): 12 dBm
Transmitter state	Transmitter set into continuous mode.

4.5.2 EUT setup configuration

Table 4.5-1: *EUT interface ports*

Description	Qty.
USB	1
AC Power input	1

Table 4.5-2: *Support equipment*

Description	Brand name	Model, Part number, Serial number, Revision level
Laptop	Dell	Nemko Asset, FA003141
TP link Router	TP link	Nemko Asset, FA003562

Table 4.5-3: *Inter-connection cables*

Cable description	From	To	Length (m)
USB	EUT	Laptop	<3
Power cord	AC Mains	EUT	<3
Ethernet	Laptop	Routerr	<3
Ethernet	Router	EUT	<3

EUT setup configuration, continued

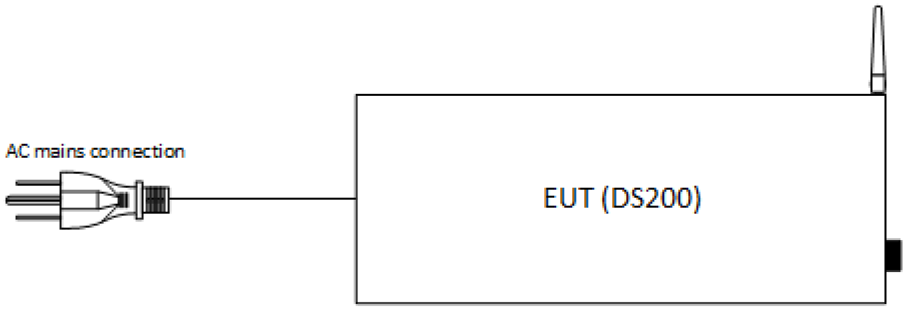


Figure 4.5-1: *Radiated testing block diagram*

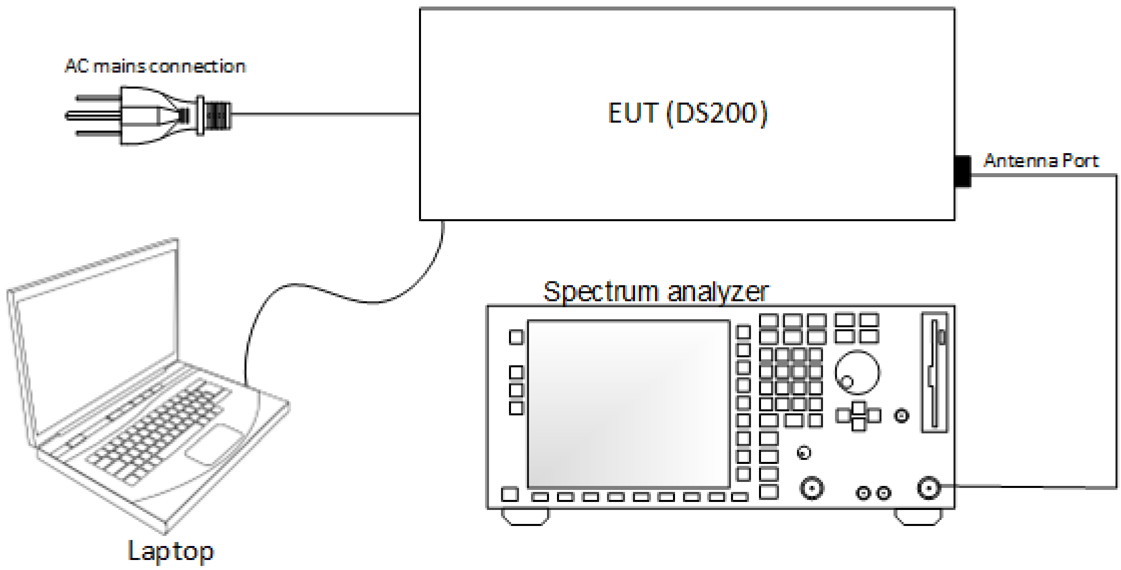


Figure 4.5-2: *Antenna port testing block diagram*

Section 5 Summary of test results

5.1 Testing period

Test start date	September 4, 2025	Test end date	September 10, 2025

5.2 Sample information

Receipt date	September 3, 2025	Nemko sample ID number(s)	PRJ00871770001

5.3 FCC test results

Table 5.3-1: *FCC requirements results*

Part	Test description	Verdict
Generic requirements		
§15.207(a)	Conducted limits	Pass
§15.31(e)	Variation of power source	Pass
§15.31(m)	Number of tested frequencies	Pass
§15.203	Antenna requirement	Pass
§15.247(c)(1)	Fixed point-to-point operation with directional antenna gains greater than 6 dBi	Pass
§15.247(c)(2)	Transmitters operating in the 2400–2483.5 MHz band that emit multiple directional beams	Pass
§15.247(d)	Spurious emissions	Pass
§15.247(f)	Time of occupancy for hybrid systems	Not applicable
DTS specific requirements		
§15.247(a)(2)	Minimum 6 dB bandwidth	Pass
§15.247(b)(3)	Maximum peak output power	Pass
§15.247(e)	Power spectral density	Pass

Notes: EUT is an AC powered device.

5.4 ISED test results

Table 5.4-1: *ISED requirements results*

Part	Test description	Verdict
Generic requirements		
RSS-Gen, 7.3	Receiver radiated emission limits	Pass
RSS-Gen, 7.4	Receiver conducted emission limits	Pass
RSS-Gen, 6.9	Operating bands and selection of test frequencies	Pass
RSS-Gen, 8.8	AC powerline conducted emissions limits	Pass
RSS-247, 5.5	Unwanted emissions	Pass
RSS-247, 5.3	**Hybrid Systems**	
RSS-247, 5.3 (a)	Digital modulation turned off	Not applicable
RSS-247, 5.3 (b)	Frequency hopping turned off	Not applicable
DTS specific requirements		
RSS-247, 5.2 (a)	Minimum 6 dB bandwidth	Pass
RSS-247, 5.2 (b)	Maximum power spectral density	Pass
RSS-247, 5.4 (d)	Transmitter output power and e.i.r.p. requirements for systems employing digital modulation techniques	Pass
RSS-247, 5.4 (e)	Transmitter e.i.r.p. requirements for point-to-point systems in 2400–2483.5 MHz and 5725–5850 MHz band	Pass
RSS-247, 5.4 (f)	Transmitter requirements for operation in the 2400–2483.5 MHz band with multiple directional beams	Not applicable

Notes: [1]According to sections 5.2 and 5.3 of RSS-Gen, Issue 5 the EUT does not have a stand-alone receiver neither scanner receiver, therefore exempt from receiver requirements.
EUT is an AC powered device.

Section 6 Test equipment

6.1 Test equipment list

Table 6.1-1: *Equipment list*

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
3 m EMI test chamber	TDK	SAC-3	FA002047	1 year	March 14, 2026
Flush mount turntable	Sunol	FM2022	FA002082	—	NCR
Controller	Sunol	SC104V	FA002060	—	NCR
Antenna mast	Sunol	TLT2	FA002061	—	NCR
Receiver/spectrum analyzer	Rohde & Schwarz	ESU 40	FA002071	1 year	February 7, 2026
Horn antenna (1-18 GHz)	ETS Lindgren	3117	FA002840	1 year	March 7, 2026
61505 AC/DC programmable source	Chroma	61509	FA003036	—	NCR
Preamp (1–18 GHz)	ETS Lindgren	124334	FA002877	1 year	November 19, 2025
Bilog antenna (20–3000 MHz)	Sunol	JB3	FA002108	1 year	April 8, 2026
50 Ω coax cable	Carlisle	WHU18-1818-072	FA002391	1 year	October 18, 2025
50 Ω coax cable	Huber+Suhner	104B11NX2/11000	FA003441	1 year	October 18, 2025
Horn antenna (18–26.5 GHz)	Electro-metrics	SH-50/60-1	FA000479	—	NCR
Horn antenna 26.5–40 GHz	Electro-metrics	SH-50/60-2	FA000485	—	NCR
Pre-amplifier (18–26 GHz)	Narda	BBS-1826N612	FA001550	1 year	March 21, 2026
Spectrum analyzer	Rohde & Schwarz	FSV 40	FA002731	1 year	March 25, 2026
Notch filter 5150–5350 MHz	Microwave Circuits	5150–5350 MHz	FA001941	1 year	June 5, 2026
2.4 GHz band Notch Filter	Microwave Circuits	N0324413	FA003306	1 year	March 11, 2026
LISN	Rohde & Schwarz	ENV216	FA002023	1 year	December 10, 2025
LISN	Rohde & Schwarz	ENV216	FA002515	1 year	February 6, 2026
50 Ω coax cable	Huber + Suhner	None	FA001652	1 year	April 15, 2026
NRP18A Average Power Sensor	Rohde & Schwarz	NRP18A	FA003586	1 year	June 4, 2026
30 dB attenuator	Aeroflex/Weinschel	73-30-43	FA002058	1 year	April 14, 2026

Note: NCR - no calibration required

All equipment related to the contribution of measurement has been included in this list. Such items include, but are not limited to, cables, attenuators, directional couplers, and pre-amps.

Table 6.1-2: *Automation software details*

Test description	Manufacturer of Software	Details
AC power line conducted emissions	Rohde & Schwarz	EMC32, Software for EMC Measurements, Version 11.20.00
Radiated spurious emissions	Rohde & Schwarz	EMC32, Software for EMC Measurements, Version 11.20.00

Table 6.1-3: *Measurement uncertainty calculations based on equipment list*

Measurement	Measurement uncertainty, ±dB
AC power line conducted emissions	3.42
Radiated spurious emissions (30 MHz to 1 GHz)	4.16
Radiated spurious emissions (1 GHz to 6 GHz)	4.67
Radiated spurious emissions (6 GHz to 18 GHz)	4.95
Radiated spurious emissions (18 GHz to 26 GHz)	4.39
Radiated spurious emissions (18 GHz to 40 GHz)	4.61
Conducted spurious emissions	0.90
RF Output power measurement using Power Meter	0.54
Occupied bandwidth	1.87%
Other antenna port measurements	0.81
Notes: UKAS Lab 34, TIA-603 and ETSI TR 100 028-1&2 have been used as guidance for measurement uncertainty reasonable estimations with regards to previous experience and validation of data. Nemko Canada Inc. follows these test methods in order to satisfy ISO/IEC 17025 requirements for estimation of uncertainty of measurement for wireless products. Measurement uncertainty calculations assume a coverage factor of K = 2 with 95% certainty.	

Section 7 Testing data

7.1 Variation of power source

7.1.1 References, definitions and limits

FCC §15.31 (e):

For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

7.1.2 Test summary

Verdict	Pass		
Test date	September 9, 2025	Temperature	21 °C
Tested by	Sagarkumar Patel	Air pressure	997 mbar
Test location	Ottawa	Relative humidity	49 %

7.1.3 Observations, settings and special notes

The testing was performed as per ANSI C63.10 Section 5.13.

a) Where the device is intended to be powered from an external power adapter, the voltage variations shall be applied to the input of the adapter provided with the device at the time of sale. If the device is not marketed or sold with a specific adapter, then a typical power adapter shall be used.
b) For devices, where operating at a supply voltage deviating ±15% from the nominal rated value may cause damages or loss of intended function, test to minimum and maximum allowable voltage per manufacturer's specification and document in the report.
c) For devices with wide range of rated supply voltage, test at 15% below the lowest and 15% above the highest declared nominal rated supply voltage.
d) For devices obtaining power from an input/output (I/O) port (USB, firewire, etc.), a test jig is necessary to apply voltage variation to the device from a support power supply, while maintaining the functionalities of the device.
e) For battery-operated equipment, the equipment tests shall be performed using a variable power supply.

7.1.4 Test data

EUT Power requirements:	☒ AC	☐ DC	☐ Battery
If EUT is an AC or a DC powered, was the noticeable output power variation observed?	☐ YES	☒ NO	☐ N/A
If EUT is battery operated, was the testing performed using fresh batteries?	☐ YES	☐ NO	☒ N/A
If EUT is rechargeable battery operated, was the testing performed using fully charged batteries?	☐ YES	☐ NO	☒ N/A

7.2 Number of frequencies

7.2.1 References, definitions and limits

FCC §15.31:

(m) Measurements on intentional radiators or receivers shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table.

RSS-Gen, Clause 6.9:

Except where otherwise specified, measurements shall be performed for each frequency band of operation for which the radio apparatus is to be certified, with the device operating at the frequencies in each band of operation shown in table below. The frequencies selected for measurements shall be reported in the test report.

Table 7.2-1: *Frequency Range of Operation*

Frequency range over which the device operates (in each band)	Number of test frequencies required	Location of measurement frequency inside the operating frequency range
1 MHz or less	1	Center (middle of the band)
1–10 MHz	2	1 near high end, 1 near low end
Greater than 10 MHz	3	1 near high end, 1 near center and 1 near low end

Notes: “near” means as close as possible to or at the centre / low end / high end of the frequency range over which the device operates.

7.2.2 Test summary

Verdict	Pass		
Test date	September 8, 2025	Temperature	21 °C
Tested by	Sagarkumar Patel	Air pressure	997 mbar
Test location	Ottawa	Relative humidity	48 %

7.2.3 Observations, settings and special notes

ANSI C63.10, Clause 5.6.2.1:

The number of channels tested can be reduced by measuring the center channel bandwidth first and then applying the following relaxations as appropriate:

a) For each operating mode, if the measured channel bandwidth on the middle channel is at least 150% of the minimum permitted bandwidth, then it is not necessary to measure the bandwidth on the high and low channels.
b) For multiple-input multiple-output (MIMO) systems, if the measured channel bandwidth on testing the middle channel exceeds the minimum permitted bandwidth by more than 50% on one transmit chain, then it is not necessary to repeat testing on the other chains.
c) If the measured channel bandwidth on the middle channel is less than 50% of the maximum permitted bandwidth, then it is not necessary to measure the bandwidth on the high and low channels.

ANSI C63.10, Clause 5.6.2.2:

For devices with multiple operating modes, measurements on the middle channel can be used to determine the worst-case mode(s). The worst-case modes are as follows:

a) Band edge requirements—Measurements on the mode with the widest bandwidth can be used to cover the same channel (center frequency) on modes with narrower bandwidth that have the same or lower output power for each modulation family (e.g., OFDM and direct sequence spread spectrum).
b) Spurious emissions—Measure the mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum).
c) In-band PSD—Measurements on the mode with the narrowest bandwidth can be used to cover all modes within the same modulation family of an equal or lower output power provided the result is less than 50% of the limit.

7.2.4 Test data

Table 7.2-2: *Test channels selection*

Channel bandwidth, MHz	Start of Frequency range, MHz	End of Frequency range, MHz	Frequency range bandwidth, MHz	Low channel, MHz	Mid channel, MHz	High channel, MHz
20	2402	2483.5	83.5	2412	2437	2462
40	2402	2483.5	83.5	2422	2447	2452

7.3 Antenna requirement

7.3.1 References, definitions and limits

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 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.

FCC §15.247:

(b) The maximum peak conducted output power of the intentional radiator shall not exceed the following:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

RSS-Gen, Clause 6.8:

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report.

7.3.2 Test summary

Verdict	Pass		
Test date	September 9, 2025	Temperature	21 °C
Tested by	Sagarkumar Patel	Air pressure	997 mbar
Test location	Ottawa	Relative humidity	49 %

7.3.3 Observations, settings and special notes

None

7.3.4 Test data

Must the EUT be professionally installed? ☐ YES ☒ NO

Does the EUT have detachable antenna(s)? ☒ YES ☐ NO

If detachable, is the antenna connector(s) non-standard? ☒ YES ☐ NO ☐ N/A

Table 7.3-1: *Antenna information*

Antenna type	Manufacturer	Model number	Maximum gain	Connector type
Whip dipole	Tekfun Co.	F04A-SR-V2	2 dBi	reverse-SMA

7.4 AC power line conducted emissions limits

7.4.1 References, definitions and limits

FCC §15.207:

(a) Except as shown in paragraphs (b) and (c) of this section, 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 or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

ANSI C63.10, Clause 6.2:

If the EUT normally receives power from another device that in turn connects to the public utility ac power lines, measurements shall be made on that device with the EUT in operation to demonstrate that the device continues to comply with the appropriate limits while providing the EUT with power. If the EUT is operated only from internal or dedicated batteries, with no provisions for connection to the public utility ac power lines (600 VAC or less) to operate the EUT (such as an adapter), then ac power-line conducted measurements are not required.

For direct current (dc) powered devices where the ac power adapter is not supplied with the device, an "off-the-shelf" unmodified ac power adapter shall be used. If the device is supposed to be installed in a host (e.g., the device is a module or PC card), then it is tested in a typical compliant host.

RSS-Gen, Clause 8.8:

A radio apparatus that is designed to be connected to the public utility (AC) power line shall ensure that the radio frequency voltage, which is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz, shall not exceed the limits in table below.

Unless the requirements applicable to a given device state otherwise, for any radio apparatus equipped to operate from the public utility AC power supply either directly or indirectly (such as with a battery charger), the radio frequency voltage of emissions conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in table below. The more stringent limit applies at the frequency range boundaries.

Table 7.4-1: *Conducted emissions limit*

	Conducted emissions limit, dBµV	
Frequency of emission, MHz	**Quasi-peak**	**Average****
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

Notes: * - The level decreases linearly with the logarithm of the frequency.
** - A linear average detector is required.

7.4.2 Test summary

Verdict	Pass		
Test date	September 8, 2025	Temperature	21 °C
Tested by	Sagarkumar Patel	Air pressure	997 mbar
Test location	Ottawa	Relative humidity	49 %

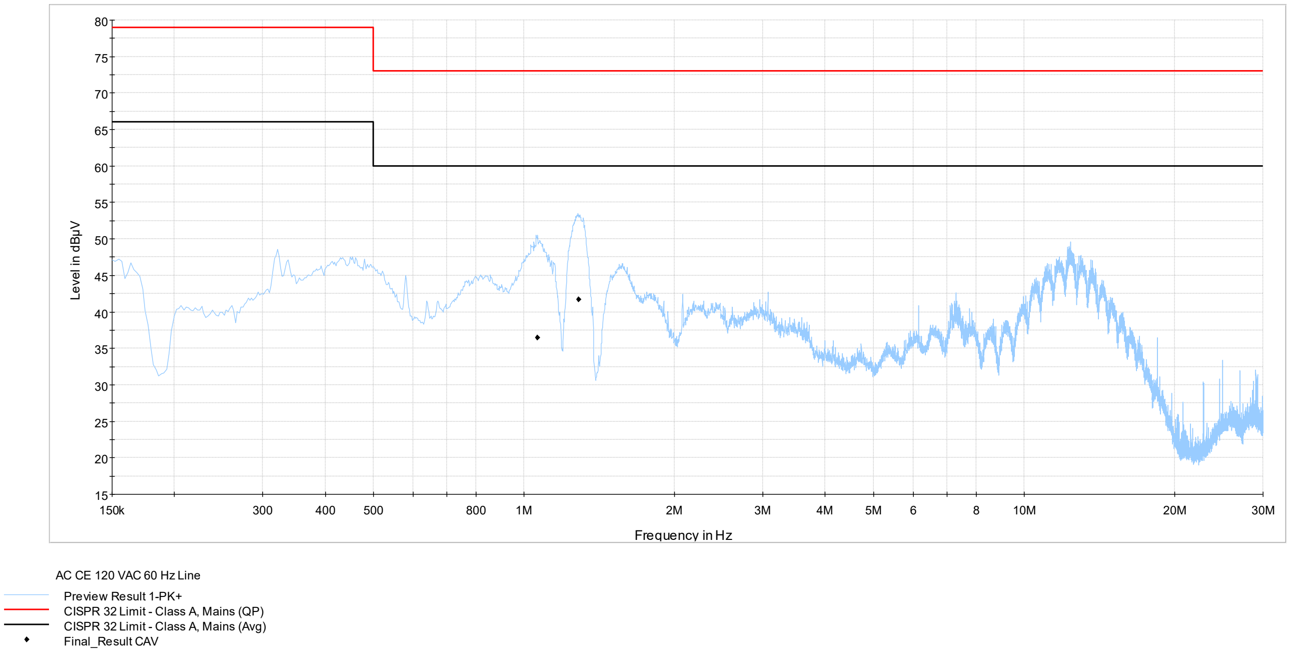
7.4.3 Observations, settings and special notes

Port under test – Coupling device	AC Mains – Artificial Mains Network (AMN)
EUT power input during test	120 V_{AC}, 60 Hz;
EUT setup configuration	Table top
Measurement details	A preview measurement was generated with the receiver in continuous scan mode. Emissions detected within 10 dB or above the limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.
Additional notes:	– The EUT was set up as tabletop configuration per ANSI C63.10-2020 measurement procedure. – The spectral scan has been corrected with transducer factors (i.e. cable loss, LISN factors, and attenuators) for determination of compliance. Correction factor (dB) = LISN factor IL (dB) + cable loss (dB) + attenuator (dB) – Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

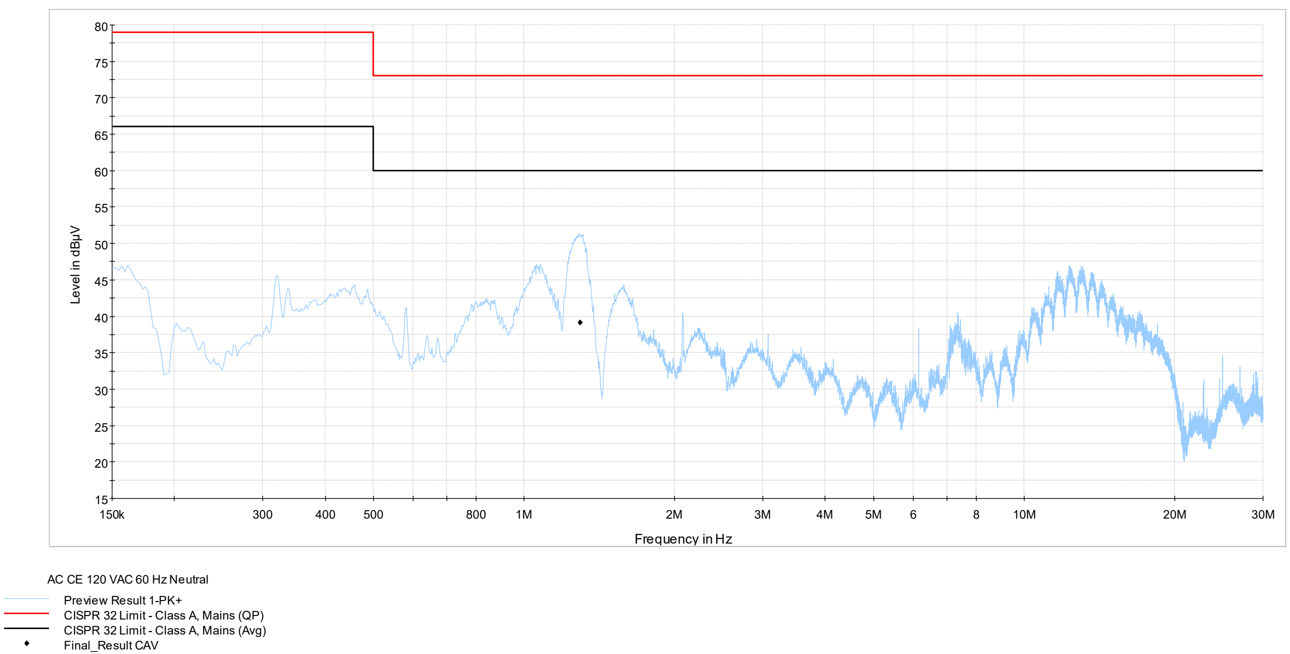
Receiver settings:

Resolution bandwidth	9 kHz
Video bandwidth	30 kHz
Detector mode	Peak and Average (Preview), Quasi-peak and CAverage (Final)
Trace mode	Max Hold
Measurement time	100 ms (Preview), 160 ms (Final)

7.4.4 Test data



Plot 7.4-1: *Conducted emissions on phase line*



Plot 7.4-2: *Conducted emissions on neutral line*

7.5 Minimum 6 dB bandwidth for DTS systems

7.5.1 References, definitions and limits

FCC §15.247:

(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:

(2) Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

RSS-247, Clause 5.2:

DTSs include systems that employ digital modulation techniques resulting in spectral characteristics similar to direct sequence systems. The following applies to the bands 902-928 MHz and 2400-2483.5 MHz:

a. The minimum 6 dB bandwidth shall be 500 kHz.

RSS-Gen, Clause 6.7:

6 dB bandwidth is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated 6 dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

7.5.2 Test summary

Verdict	Pass		
Test date	September 4, 2025	Temperature	22 °C
Tested by	Sagarkumar Patel	Air pressure	996 mbar
Test location	Ottawa	Relative humidity	46 %

7.5.3 Observations, settings and special notes

The test was performed as per KDB 558074, section 8.2 with reference to ANSI C63.10 subclause 11.8.
Spectrum analyser settings:

Resolution bandwidth	6 dB BW: 100 kHz; 99% OBW: 1–5% of OBW
Video bandwidth	≥3 × RBW
Frequency span	30 MHz for 20 MHz channel; 70 MHz for 40 MHz channel
Detector mode	Peak
Trace mode	Max Hold

7.5.4 Test data

Table 7.5-1: *99% occupied bandwidth results*

Modulation	Frequency, MHz	99% occupied bandwidth, kHz
802.11b	2412	13.1621
	2437	13.1771
	2462	13.1846
802.11g	2412	16.6298
	2437	16.6175
	2462	16.5885
802.11n HT20	2412	17.7444
	2437	17.6929
	2462	17.7266
802.11n HT40	2422	36.1254
	2447	36.0620
	2452	36.1368

Notes: There is no 99% occupied bandwidth limit in the standard's requirements, the measurement results provided for information purposes only.

Table 7.5-2: *6 dB bandwidth results*

Modulation	Frequency, MHz	6 dB bandwidth, MHz	Minimum limit, MHz	Margin, MHz
802.11b	2412	7.646	0.500	7.146
	2437	7.668	0.500	7.168
	2462	8.127	0.500	7.627
802.11g	2412	16.460	0.500	15.960
	2437	16.469	0.500	15.969
	2462	16.276	0.500	15.776
802.11n HT20	2412	17.668	0.500	17.168
	2437	17.678	0.500	17.178
	2462	17.682	0.500	17.182
802.11n HT40	2422	35.423	0.500	34.923
	2447	35.441	0.500	34.941
	2452	35.881	0.500	35.381

Test data, continued

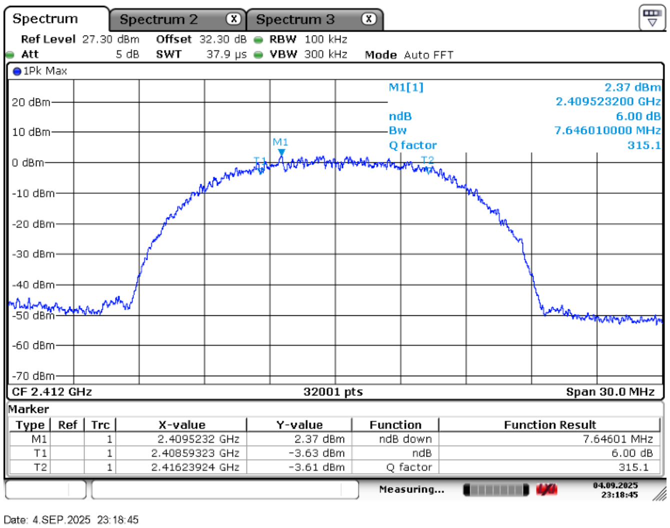


Figure 7.5-1: *6 dB bandwidth on 802.11b Low Channel*

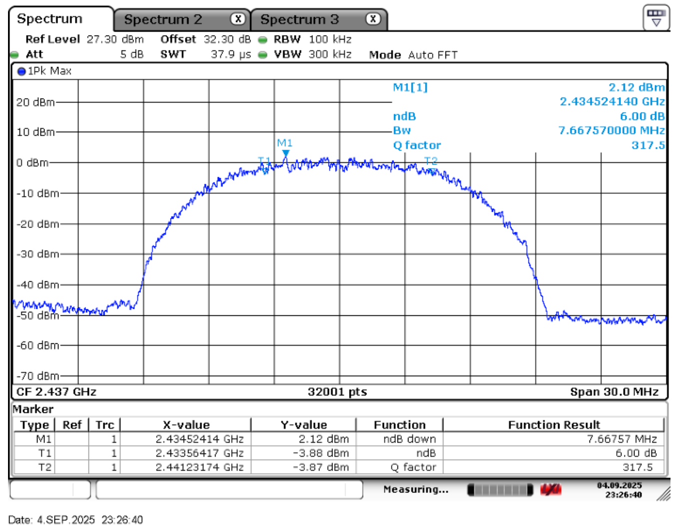


Figure 7.5-2: *6 dB bandwidth 802.11b Mid Channel*

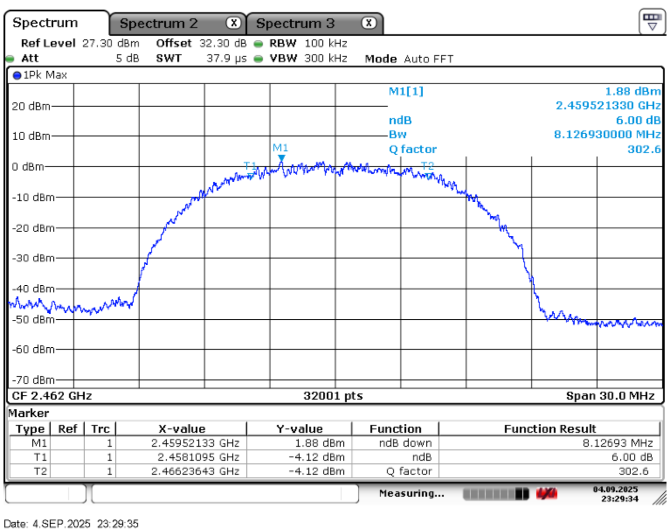


Figure 7.5-3: *6 dB bandwidth on 802.11b High Channel*

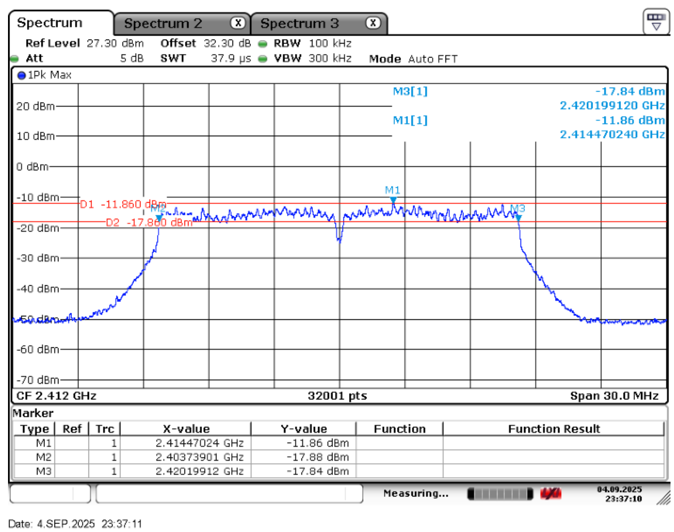
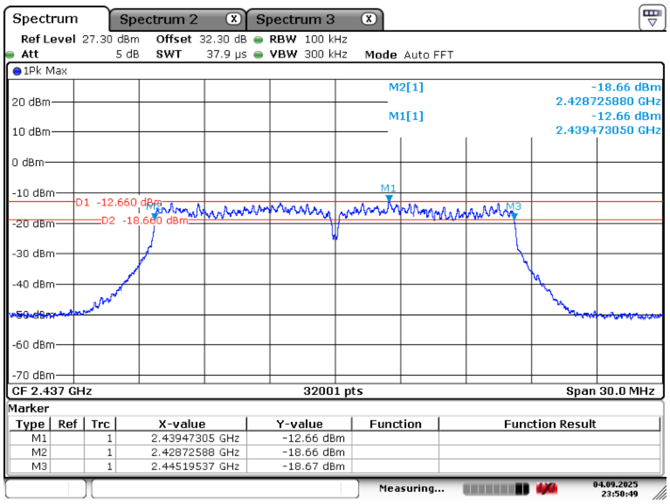


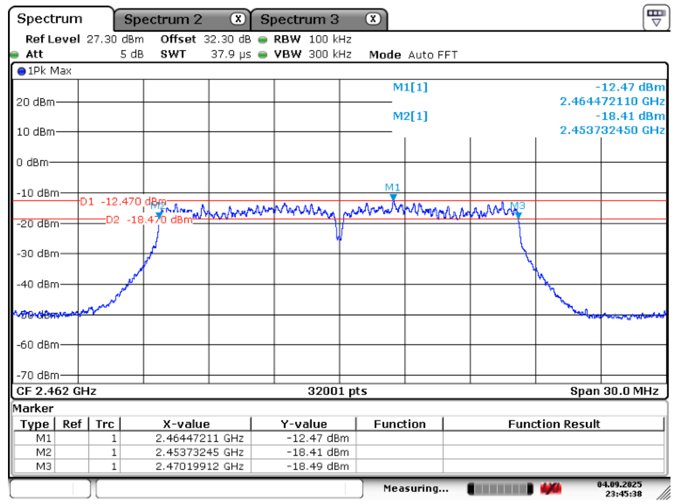
Figure 7.5-4: *6 dB bandwidth on 802.11g Low Channel*

Test data, continued



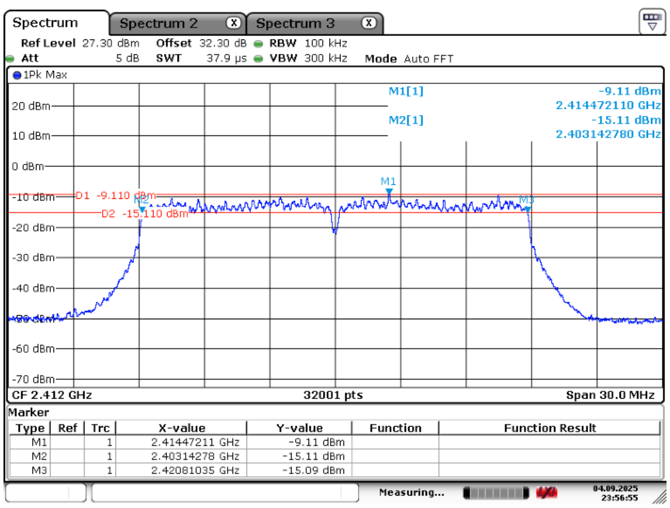
Date: 4.SEP.2025 23:50:49

Figure 7.5-5: *6 dB bandwidth on 802.11g Mid Channel*



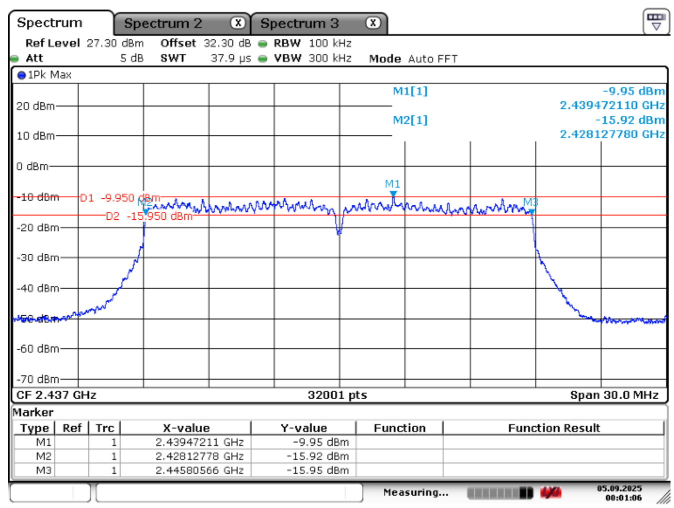
Date: 4.SEP.2025 23:45:39

Figure 7.5-6: *6 dB bandwidth on 802.11g High Channel*



Date: 4.SEP.2025 23:56:55

Figure 7.5-7: *6 dB bandwidth on 802.11n HT20 Low Channel*



Date: 5.SEP.2025 00:01:06

Figure 7.5-8: *6 dB bandwidth on 802.11n HT20 Mid Channel*

Test data, continued

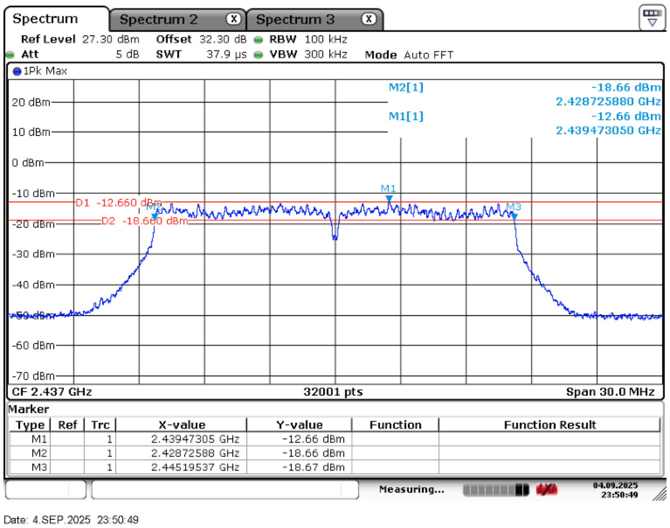


Figure 7.5-9: *6 dB bandwidth on 802.11n HT20 High Channel*

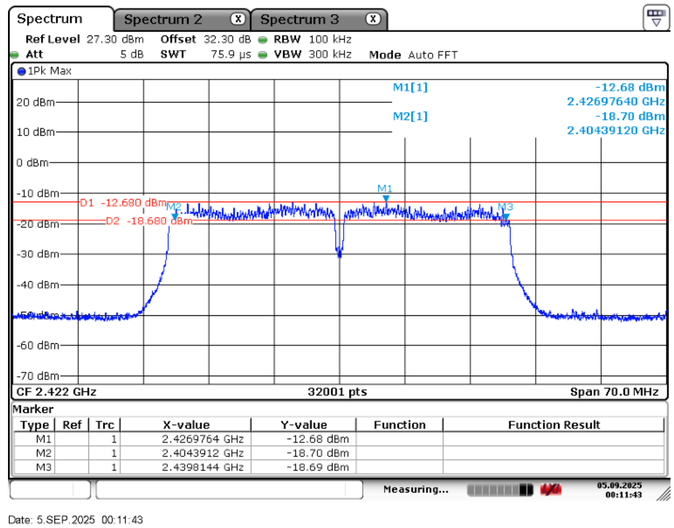


Figure 7.5-10: *6 dB bandwidth on 802.11n HT40 Low Channel*

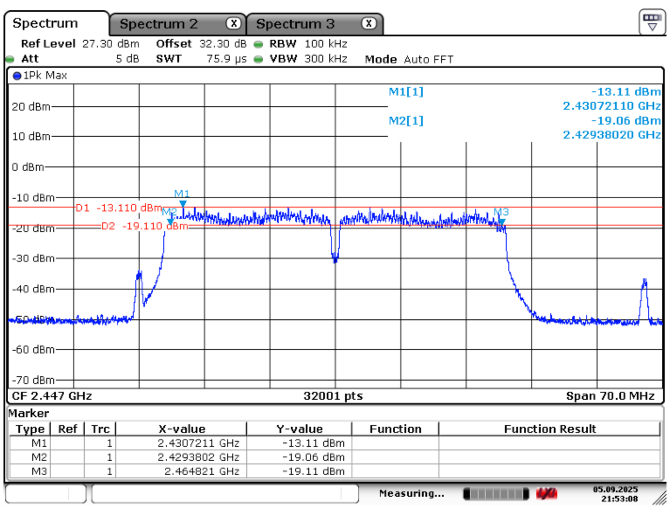


Figure 7.5-11: *6 dB bandwidth on 802.11n HT40 Mid Channel*

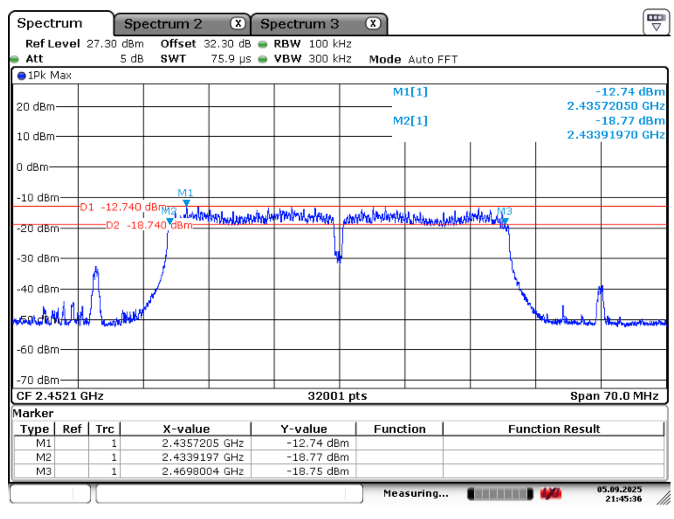


Figure 7.5-12: *6 dB bandwidth on 802.11n HT40 High Channel*

Test data, continued

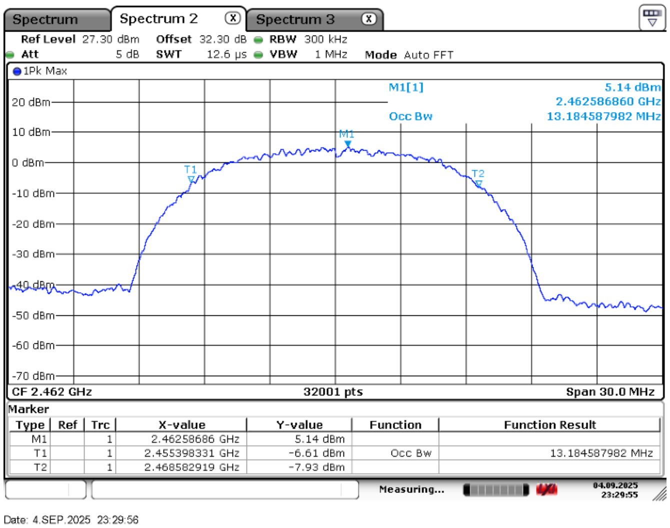


Figure 7.5-13: *99% occupied bandwidth on 802.11b Low Channel*

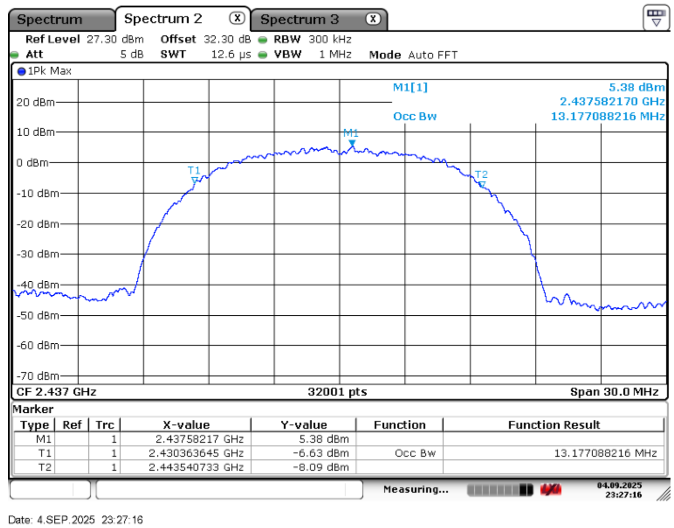


Figure 7.5-14: *99% occupied bandwidth on 802.11b Mid Channel*

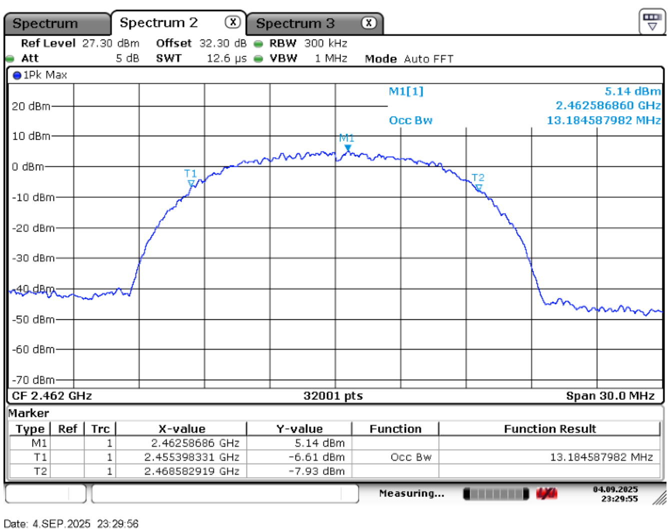


Figure 7.5-15: *99% occupied bandwidth on 802.11b High Channel*

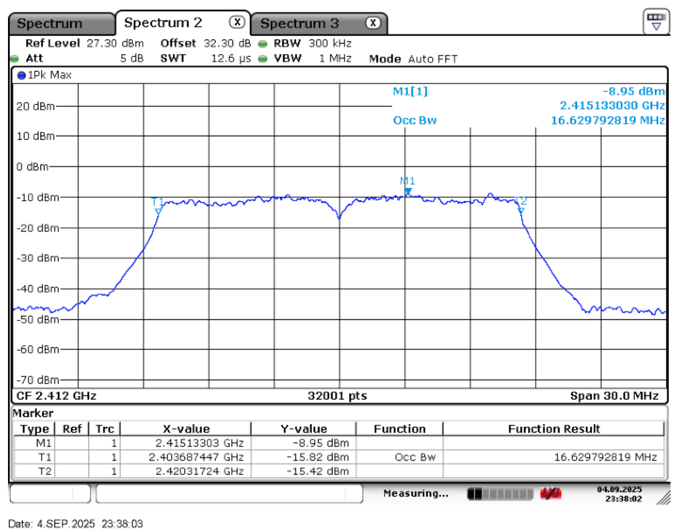


Figure 7.5-16: *99% occupied bandwidth on 802.11g Low Channel*

Test data, continued

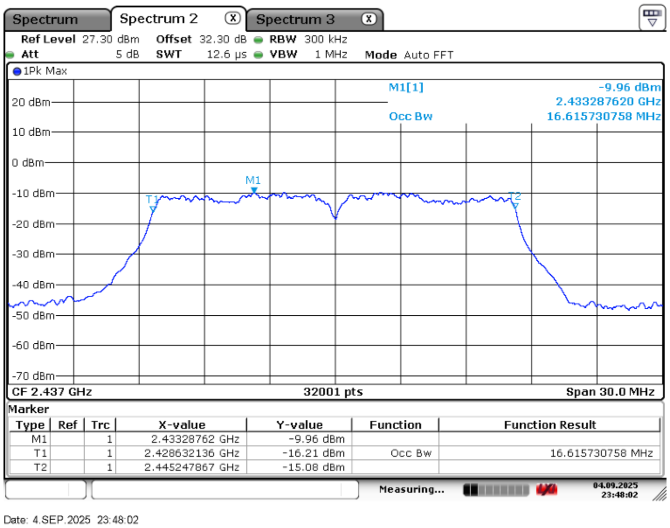


Figure 7.5-17: *99% occupied bandwidth on 802.11g Mid Channel*

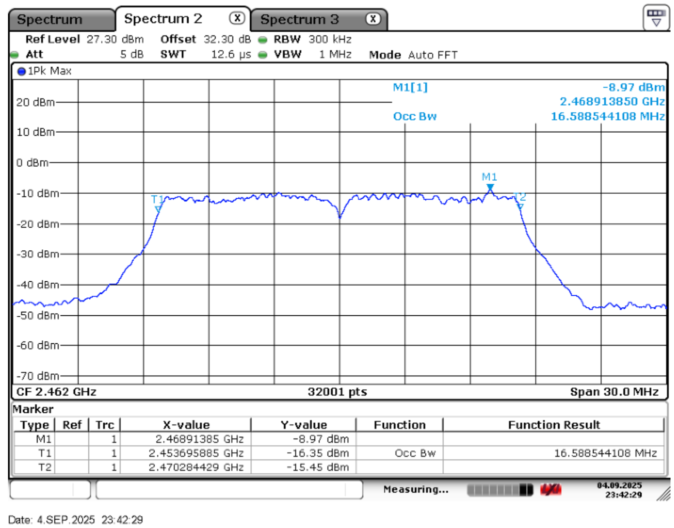


Figure 7.5-18: *99% occupied bandwidth on 802.11g High Channel*

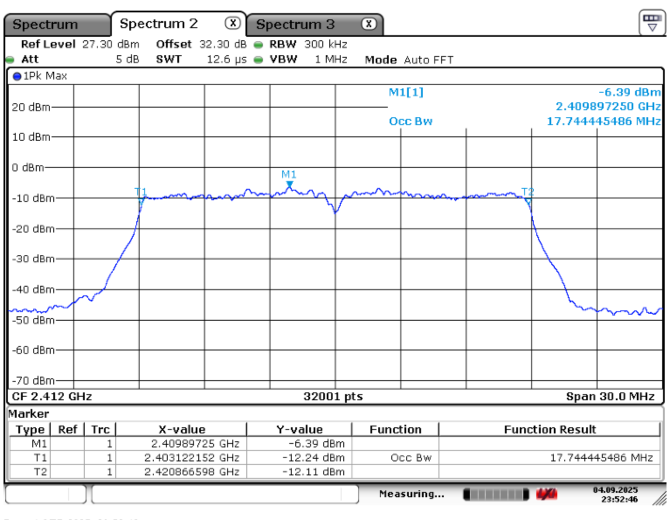


Figure 7.5-19 *99% occupied bandwidth on 802.11n HT20 Low Channel*

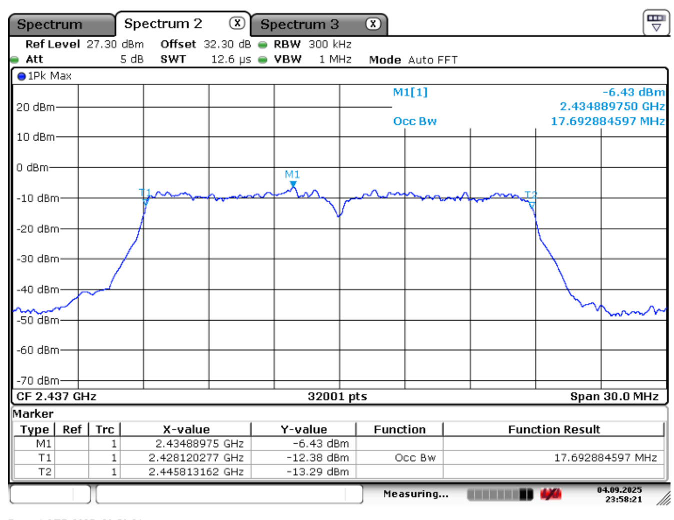


Figure 7.5-20: *99% occupied bandwidth on 802.11n HT20 Mid Channel*

Test data, continued

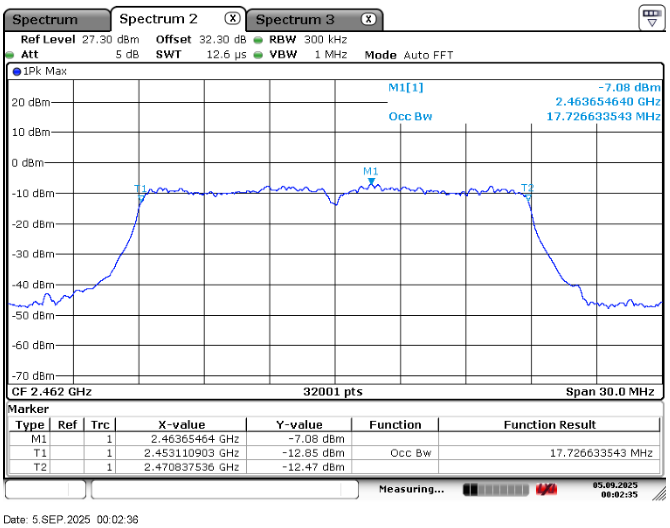


Figure 7.5-21: *99% occupied bandwidth on 802.11n HT20 High Channel*

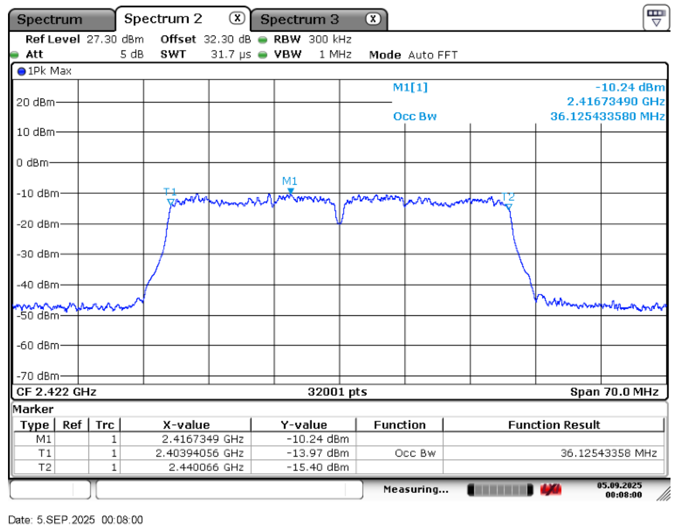


Figure 7.5-22: *99% occupied bandwidth on 802.11n HT40 Low Channel*

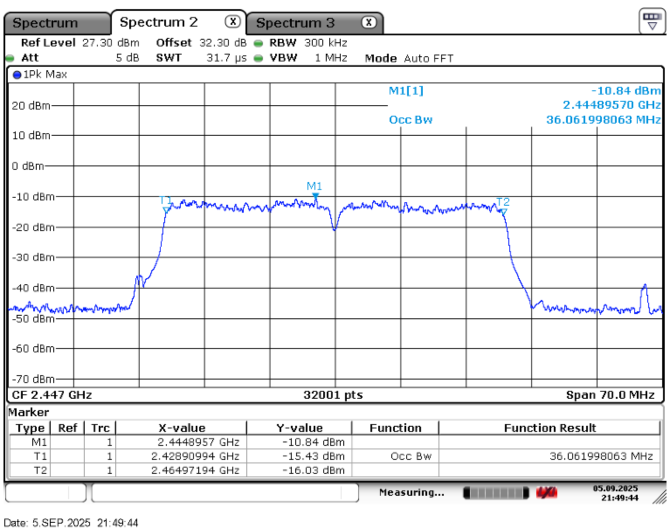


Figure 7.5-23: *99% occupied bandwidth on 802.11n HT40 Mid Channel*

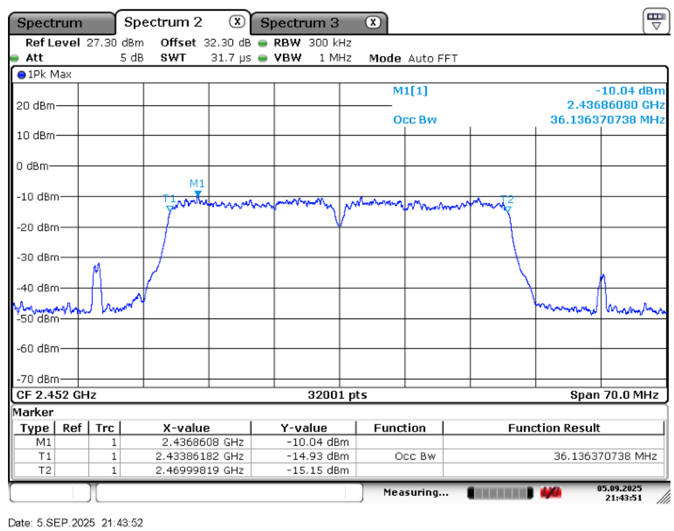


Figure 7.5-24: *99% occupied bandwidth on 802.11n HT40 High Channel*

7.6 Transmitter output power and e.i.r.p. requirements for DTS in 2.4 GHz

7.6.1 References, definitions and limits

FCC §15.247:

(b) The maximum peak conducted output power of the intentional radiator shall not exceed the following:

(3) For systems using digital modulation in the 2400–2483.5 MHz band: 1 W (30 dBm). 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. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(c) Operation with directional antenna gains greater than 6 dBi.

(1) Fixed point-to-point operation:

(i) Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(iii) Fixed, point-to-point operation, as used in paragraphs (c)(1)(i) and (c)(1)(ii) of this section, excludes the use of point-to-multipoint systems, omnidirectional applications, and multiple co-located intentional radiators transmitting the same information. The operator of the spread spectrum or digitally modulated intentional radiator or, if the equipment is professionally installed, the installer is responsible for ensuring that the system is used exclusively for fixed, point-to-point operations. The instruction manual furnished with the intentional radiator shall contain language in the installation instructions informing the operator and the installer of this responsibility.

(2) In addition to the provisions in paragraphs (b)(1), (b)(3), (b)(4) and (c)(1)(i) of this section, transmitters operating in the 2400–2483.5 MHz band that emit multiple directional beams, simultaneously or sequentially, for the purpose of directing signals to individual receivers or to groups of receivers provided the emissions comply with the following:

(i) Different information must be transmitted to each receiver.

(ii) If the transmitter employs an antenna system that emits multiple directional beams but does not do emit multiple directional beams simultaneously, the total output power conducted to the array or arrays that comprise the device, i.e., the sum of the power supplied to all antennas, antenna elements, staves, etc. and summed across all carriers or frequency channels, shall not exceed the limit specified in paragraph (b)(1) or (b)(3) of this section, as applicable. However, the total conducted output power shall be reduced by 1 dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6 dBi. The directional antenna gain shall be computed as follows:

(A) The directional gain shall be calculated as the sum of 10 log (number of array elements or staves) plus the directional gain of the element or stave having the highest gain.

(B) A lower value for the directional gain than that calculated in paragraph (c)(2)(ii)(A) of this section will be accepted if sufficient evidence is presented, e.g., due to shading of the array or coherence loss in the beamforming.

(iii) If a transmitter employs an antenna that operates simultaneously on multiple directional beams using the same or different frequency channels, the power supplied to each emission beam is subject to the power limit specified in paragraph (c)(2)(ii) of this section. If transmitted beams overlap, the power shall be reduced to ensure that their aggregate power does not exceed the limit specified in paragraph (c)(2)(ii) of this section. In addition, the aggregate power transmitted simultaneously on all beams shall not exceed the limit specified in paragraph (c)(2)(ii) of this section by more than 8 dB.

(iv) Transmitters that emit a single directional beam shall operate under the provisions of paragraph (c)(1) of this section.

References, definitions and limits, continued

RSS-247, Clause 5.4:

Devices shall comply with the following requirements, where applicable:

d. For DTSs employing digital modulation techniques operating in the 2400–2483.5 MHz band, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

   As an alternative to a peak power measurement, compliance can be based on a measurement of the maximum conducted output power. The maximum conducted output power is the total transmit power delivered to all antennas and antenna elements, averaged across all symbols in the signalling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or transmitting at a reduced power level. If multiple modes of operation are implemented, the maximum conducted output power is the highest total transmit power occurring in any mode.

e. Fixed point-to-point systems in the 2400–2483.5 MHz band are permitted to have an e.i.r.p. higher than 4 W provided that the higher e.i.r.p. is achieved by employing higher gain directional antennas and not higher transmitter output powers. Point-to-multipoint systems, omnidirectional applications and multiple co-located transmitters transmitting the same information are prohibited from exceeding an e.i.r.p. of 4 W.

f. Transmitters operating in the band 2400–2483.5 MHz, may employ antenna systems that emit multiple directional beams simultaneously or sequentially, for the purpose of directing signals to individual receivers or to groups of receivers, provided that the emissions comply with the following:

i. Different information must be transmitted to each receiver.

ii. If the transmitter employs an antenna system that emits multiple directional beams, but does not emit multiple directional beams simultaneously, the total output power conducted to the array or arrays that comprise the device (i.e. the sum of the power supplied to all antennas, antenna elements, staves, etc., and summed across all carriers or frequency channels) shall not exceed the applicable output power limit specified in sections 5.4(b) and 5.4(d). However, the total conducted output power shall be reduced by 1 dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6 dBi. The directional antenna gain shall be computed as the sum of 10 log (number of array elements or staves) plus the directional gain of the element or stave having the highest gain.

iii. If a transmitter employs an antenna that operates simultaneously on multiple directional beams using the same or different frequency channels, the power supplied to each emission beam is subject to the applicable power limit specified in sections 5.4(b) and 5.4(d). If transmitted beams overlap, the power shall be reduced to ensure that their aggregate power does not exceed the applicable limit specified in sections 5.4(b) and 5.4(d). In addition, the aggregate power transmitted simultaneously on all beams shall not exceed the applicable limit specified in sections 5.4(b) and 5.4(d) by more than 8 dB.

iv. Transmitters that transmit a single directional beam shall operate under the provisions of sections 5.4(b), 5.4(d) and 5.4(e).

7.6.2 Test summary

Verdict	Pass		
Test date	September 4, 2025	Temperature	22 °C
Tested by	Sagarkumar Patel	Air pressure	996 mbar
Test location	Ottawa	Relative humidity	46 %

7.6.3 Observations, settings and special notes

The test was performed as per KDB 558074, section 8.3 with reference to ANSI C63.10 subclause 11.9.1 (peak power) using method PKPM1 (Peak power meter method)

7.6.4 Test data

Table 7.6-1: *Output power and EIRP results (antenna port measurement)*

Modulation	Frequency, MHz	Conducted output power, dBm	Output power limit, dBm	Output power margin, dB	Antenna gain, dBi	EIRP, dBm	EIRP limit, dBm	EIRP margin, dB
802.11b	2412	11.90	30.00	18.10	2.00	13.90	36.00	22.10
	2437	11.58	30.00	18.42	2.00	13.58	36.00	22.42
	2462	11.51	30.00	18.49	2.00	13.51	36.00	22.49
802.11g	2412	-2.49	30.00	32.49	2.00	-0.49	36.00	36.49
	2437	-3.80	30.00	33.8	2.00	-1.80	36.00	37.80
	2462	-1.94	30.00	31.94	2.00	0.06	36.00	35.94
802.11n HT20	2412	0.17	30.00	29.83	2.00	2.17	36.00	33.83
	2437	-0.81	30.00	30.81	2.00	1.19	36.00	34.81
	2462	0.12	30.00	29.88	2.00	2.12	36.00	33.88
802.11n HT40	2422	-0.06	30.00	30.06	2.00	1.94	36.00	34.06
	2447	-0.42	30.00	30.42	2.00	1.58	36.00	34.42
	2452	0.43	30.00	29.57	2.00	2.43	36.00	33.57

Note: EIRP [dBm] = Conducted output power [dBm] + Antenna gain [dBi]

7.7 Spurious (out-of-band) unwanted emissions

7.7.1 References, definitions and limits

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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

RSS-247, Clause 5.5:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

RSS-Gen:

8.9 Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table below.

8.10 Restricted frequency bands are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government uses. The following conditions related to the restricted frequency bands apply:

a The transmit frequency, including fundamental components of modulation, of licence-exempt radio apparatus shall not fall within the restricted frequency bands.

b Unwanted emissions that fall into restricted frequency bands listed in table 7 shall comply with the limits specified in table below.

c Unwanted emissions that do not fall within the restricted frequency bands shall comply either with the limits specified in the applicable RSS or with those specified in table below.

Table 7.7-1: *FCC §15.209 and RSS-Gen – Radiated emission limits*

	Field strength of emissions		
Frequency, MHz	**µV/m**	**dBµV/m**	**Measurement distance, m**
0.009–0.490	2400/F	$67.6 - 20 \times \log_{10}(F)$	300
0.490–1.705	24000/F	$87.6 - 20 \times \log_{10}(F)$	30
1.705–30.0	30	29.5	30
30–88	100	40.0	3
88–216	150	43.5	3
216–960	200	46.0	3
above 960	500	54.0	3

Notes: In the emission table above, the tighter limit applies at the band edges.
For frequencies above 1 GHz the limit on peak RF emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

References, definitions and limits, continued

Table 7.7-2: *ISED restricted frequency bands*

MHz	MHz	MHz	GHz
0.090–0.110	12.57675–12.57725	399.9–410	7.25–7.75
0.495–0.505	13.36–13.41	608–614	8.025–8.5
2.1735–2.1905	16.42–16.423	960–1427	9.0–9.2
3.020–3.026	16.69475–16.69525	1435–1626.5	9.3–9.5
4.125–4.128	16.80425–16.80475	1645.5–1646.5	10.6–12.7
4.17725–4.17775	25.5–25.67	1660–1710	13.25–13.4
4.20725–4.20775	37.5–38.25	1718.8–1722.2	14.47–14.5
5.677–5.683	73–74.6	2200–2300	15.35–16.2
6.215–6.218	74.8–75.2	2310–2390	17.7–21.4
6.26775–6.26825	108–138	2483.5–2500	22.01–23.12
6.31175–6.31225	149.9–150.05	2655–2900	23.6–24.0
8.291–8.294	156.52475–156.52525	3260–3267	31.2–31.8
8.362–8.366	156.7–156.9	3332–3339	36.43–36.5
8.37625–8.38675	162.0125–167.17	3345.8–3358	Above 38.6
8.41425–8.41475	167.72–173.2	3500–4400	
12.29–12.293	240–285	4500–5150	
12.51975–12.52025	322–335.4	5350–5460	

Note: Certain frequency bands listed in Table 7.7-2 and above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

Table 7.7-3: *FCC restricted frequency bands*

MHz	MHz	MHz	GHz
0.090–0.110	16.42–16.423	399.9–410	4.5–5.15
0.495–0.505	16.69475–16.69525	608–614	5.35–5.46
2.1735–2.1905	16.80425–16.80475	960–1240	7.25–7.75
4.125–4.128	25.5–25.67	1300–1427	8.025–8.5
4.17725–4.17775	37.5–38.25	1435–1626.5	9.0–9.2
4.20725–4.20775	73–74.6	1645.5–1646.5	9.3–9.5
6.215–6.218	74.8–75.2	1660–1710	10.6–12.7
6.26775–6.26825	108–121.94	1718.8–1722.2	13.25–13.4
6.31175–6.31225	123–138	2200–2300	14.47–14.5
8.291–8.294	149.9–150.05	2310–2390	15.35–16.2
8.362–8.366	156.52475–156.52525	2483.5–2500	17.7–21.4
8.37625–8.38675	156.7–156.9	2690–2900	22.01–23.12
8.41425–8.41475	162.0125–167.17	3260–3267	23.6–24.0
12.29–12.293	167.72–173.2	3332–3339	31.2–31.8
12.51975–12.52025	240–285	3345.8–3358	36.43–36.5
12.57675–12.57725	322–335.4	3600–4400	Above 38.6
13.36–13.41			

7.7.2 Test summary

Verdict	Pass		
Test date	September 5, 2025	Temperature	21 °C
Tested by	Sagarkumar Patel	Air pressure	998 mbar
Test location	Ottawa	Relative humidity	49 %

7.7.3 Observations, settings and special notes

- As part of the current assessment, the test range of 9 kHz to 10th harmonic has been fully considered and compared to the actual frequencies utilized within the EUT. Since the EUT contains a transmitter in the GHz range, the EUT has been deemed compliant without formal testing in the 9 kHz to 30 MHz test range, therefore formal test results (tabular data and/or plots) are not provided within this test report.
- EUT was set to transmit with 100 % duty cycle.
- Radiated measurements were performed at a distance of 3 m.
- DTS emissions in non-restricted frequency bands test was performed as per KDB 558074, section 8.5 with reference to ANSI C63.10 subclause 11.11.
- Since fundamental power was tested using the maximum peak conducted output power procedure to demonstrate compliance, the spurious emissions limit is −20 dBc/100 kHz.
- DTS emissions in restricted frequency bands test was performed as per KDB 558074, section 8.6 with reference to ANSI C63.10 subclause 11.12.
- DTS band-edge emission measurements test was performed as per KDB 558074, section 8.7 with reference to ANSI C63.10 subclause 11.13.

Spectrum analyser settings for radiated measurements within restricted bands below 1 GHz:

Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Detector mode:	Peak
Trace mode:	Max Hold

Spectrum analyser settings for peak radiated measurements within restricted bands above 1 GHz:

Resolution bandwidth:	1 MHz
Video bandwidth:	3 MHz
Detector mode:	Peak
Trace mode:	Max Hold

Spectrum analyser settings for conducted spurious emissions measurements:

Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Detector mode:	Peak
Trace mode:	Max Hold

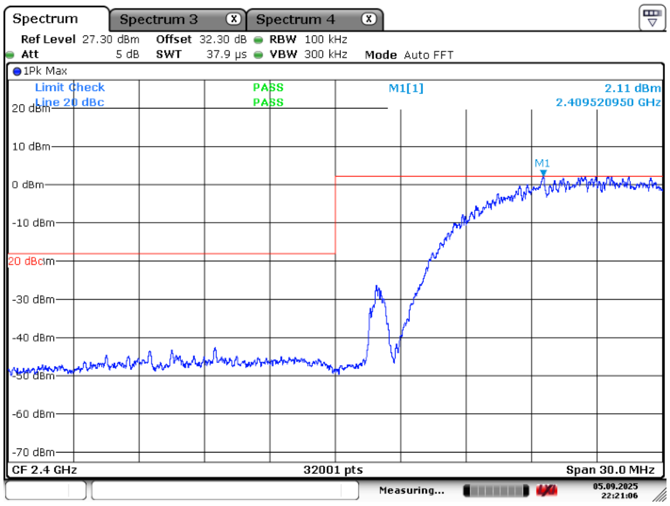
7.7.4 Test data

Table 7.7-4: *Radiated field strength measurement results*

Modulation	Channel	Frequency, MHz	Peak Field strength, dBµV/m		Margin, dB	Average Field strength, dBµV/m		Margin, dB
			Measured	Limit		Measured	Limit	
802.11b	Low	2390.0	44.38	74.00	29.62	35.38	54.00	18.62
	High	2483.5	43.99	74.00	30.01	35.36	54.00	18.64
802.11g	Low	High	42.80	74.00	31.20	34.55	54.00	19.45
	High	High	42.51	74.00	31.49	35.20	54.00	18.80
802.11n HT20	Low	High	44.38	74.00	29.62	35.38	54.00	18.62
	High	High	42.92	74.00	31.08	35.36	54.00	18.64
802.11n HT40	Low	High	42.30	74.00	31.70	32.37	54.00	21.63
	High	High	42.38	74.00	31.62	32.97	54.00	21.03

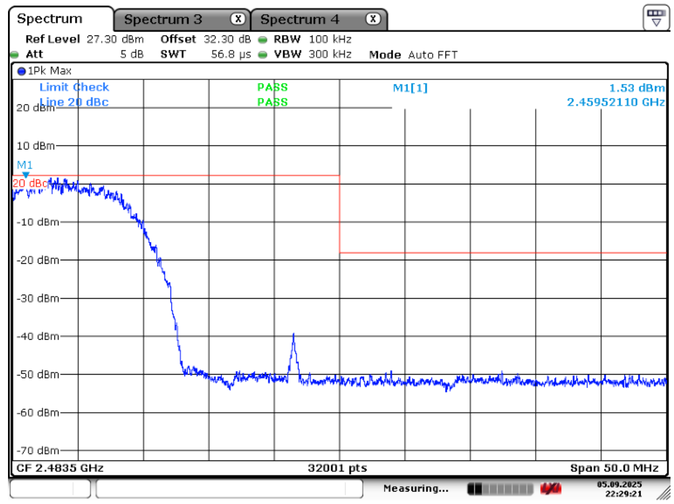
Notes: Field strength includes correction factor of antenna, cable loss, amplifier, and attenuators where applicable.
All emissions in the 30–100 MHz frequency range that exceed the limit are digital emissions and are not associated with radio TX.

Test data, continued



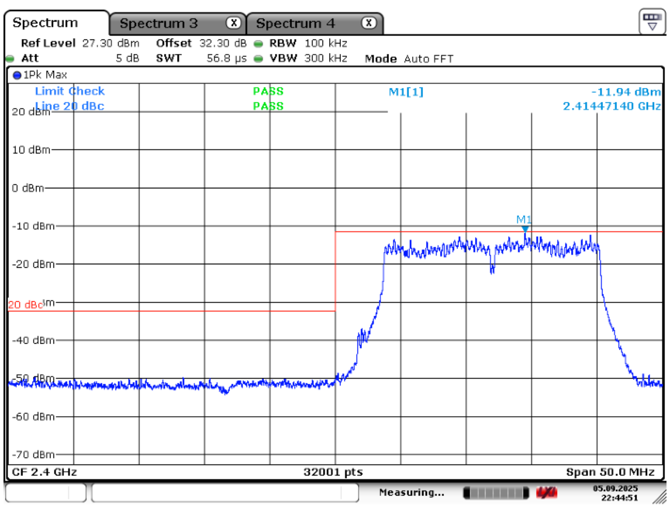
Date: 5.SEP.2025 22:21:07

Figure 7.7-1: *Band edge conducted spurious emissions at 2400 MHz (802.11b)*



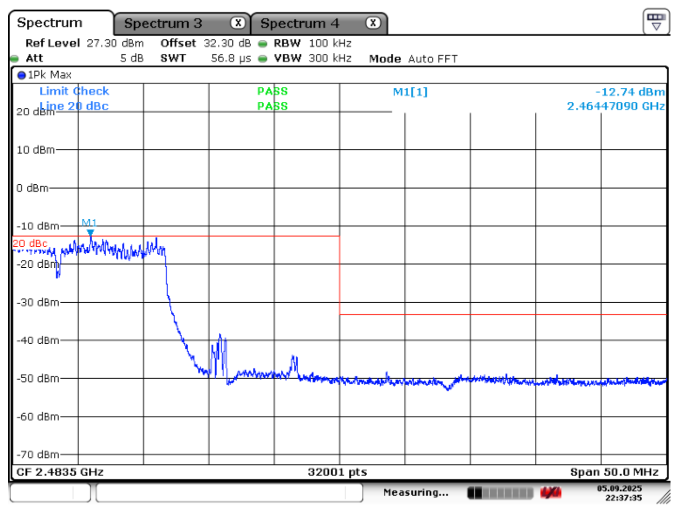
Date: 5.SEP.2025 22:29:22

Figure 7.7-2: *Band edge conducted spurious emissions at 2483.5 MHz (802.11b)*



Date: 5.SEP.2025 22:44:51

Figure 7.7-3: *Band edge conducted spurious emissions at 2400 MHz (802.11g)*



Date: 5.SEP.2025 22:37:36

Figure 7.7-4: *Band edge conducted spurious emissions at 2483.5 MHz (802.11g)*

Test data, continued

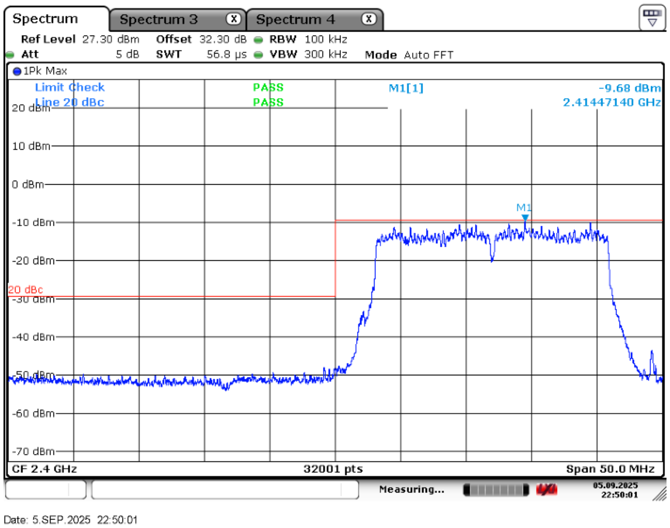


Figure 7.7-5: *Band edge conducted spurious emissions at 2400 MHz (802.11n H20)*

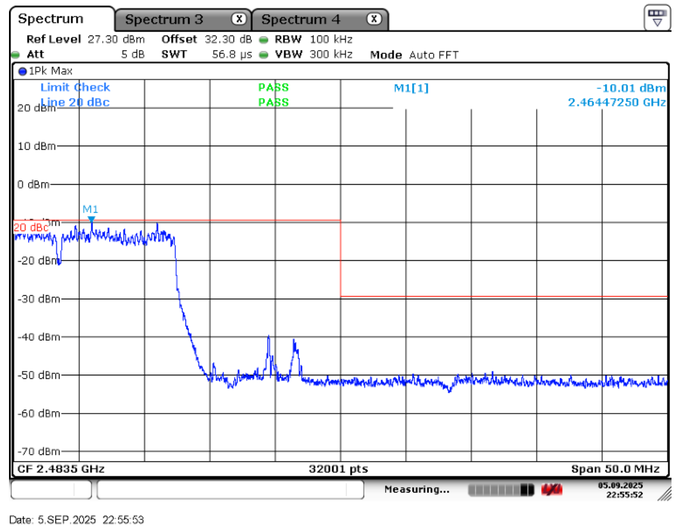


Figure 7.7-6: *Band edge conducted spurious emissions at 2483.5 MHz (802.11n H20)*

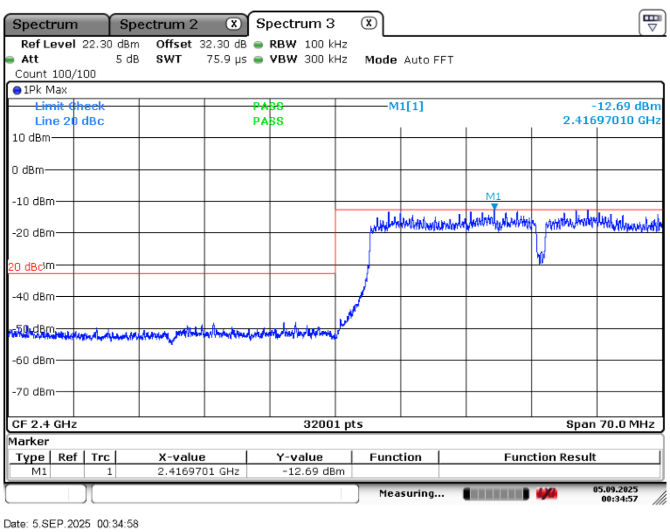


Figure 7.7-7: *Band edge conducted spurious emissions at 2400 MHz (802.11n H40)*

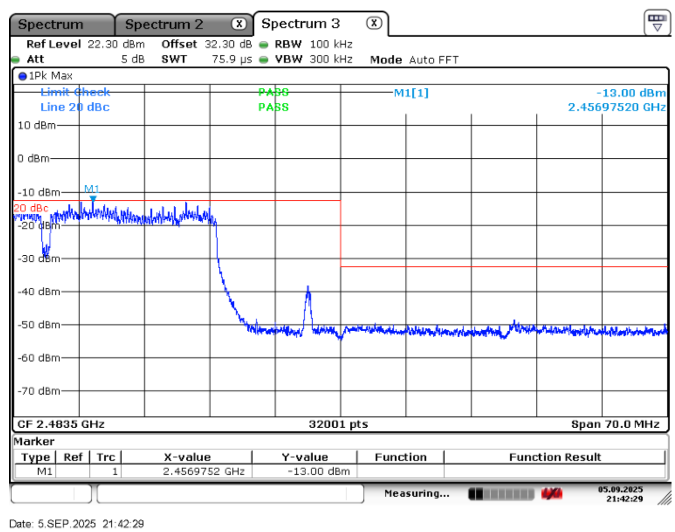


Figure 7.7-8: *Band edge conducted spurious emissions at 2483.5 MHz (802.11n H40)*

Test data, continued

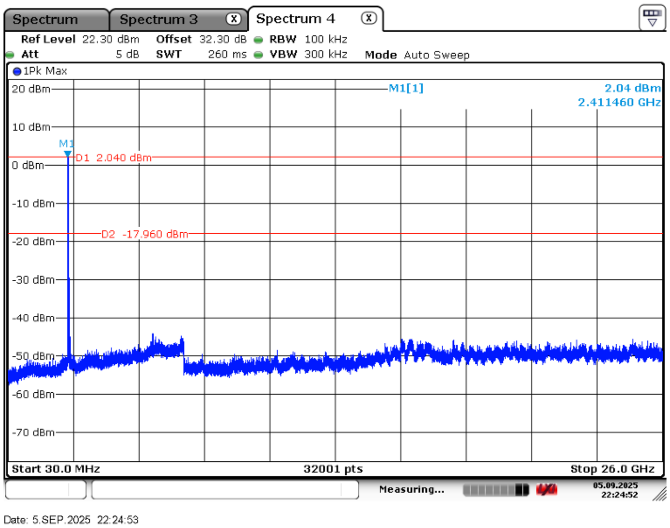


Figure 7.7-9: *Conducted spurious emissions on Low Channel (802.11b)*

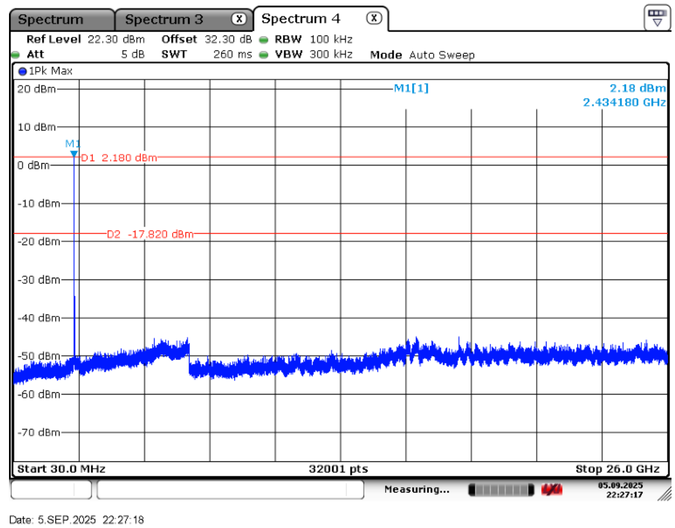


Figure 7.7-10: *Conducted spurious emissions on Mid Channel (802.11b)*

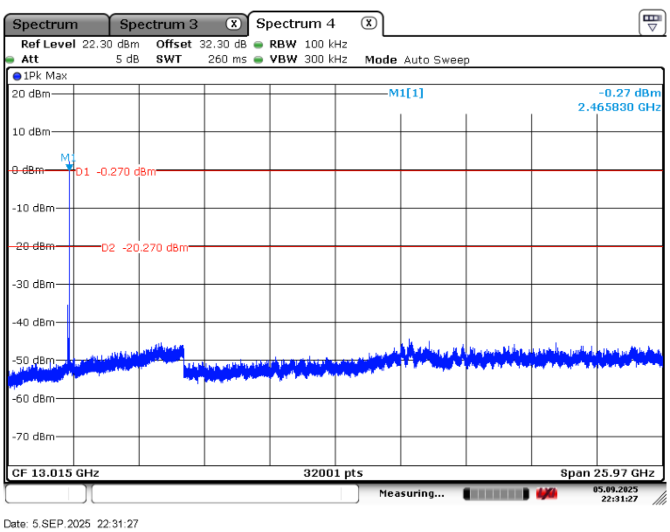


Figure 7.7-11: *Conducted spurious emissions on High Channel (802.11b)*

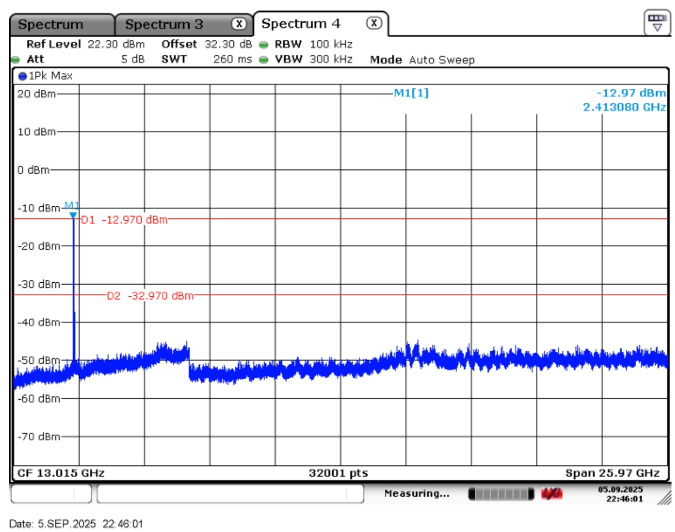


Figure 7.7-12: *Conducted spurious emissions on Low Channel (802.11g)*

Test data, continued

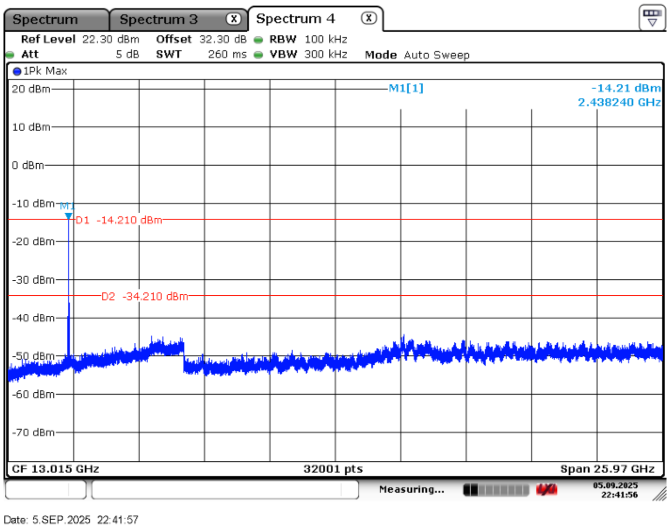


***Figure 7.7-13:** Conducted spurious emissions on Mid Channel (802.11g)*

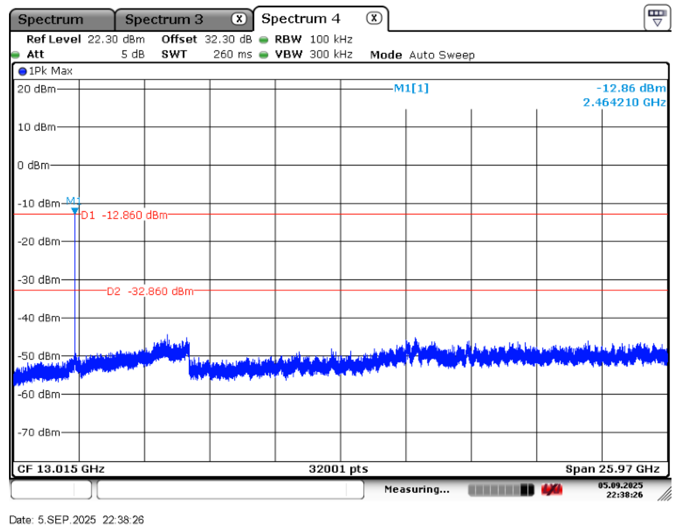


***Figure 7.7-14:** Conducted spurious emissions on High Channel (802.11g)*

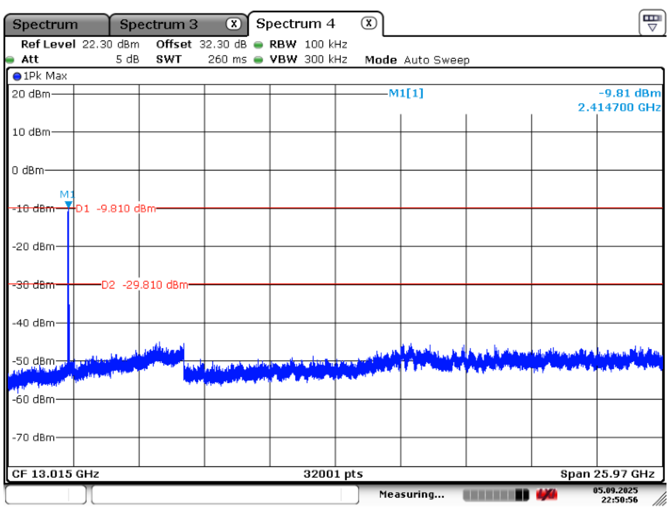


***Figure 7.7-15:** Conducted spurious emissions on Low Channel (802.11n HT20)*

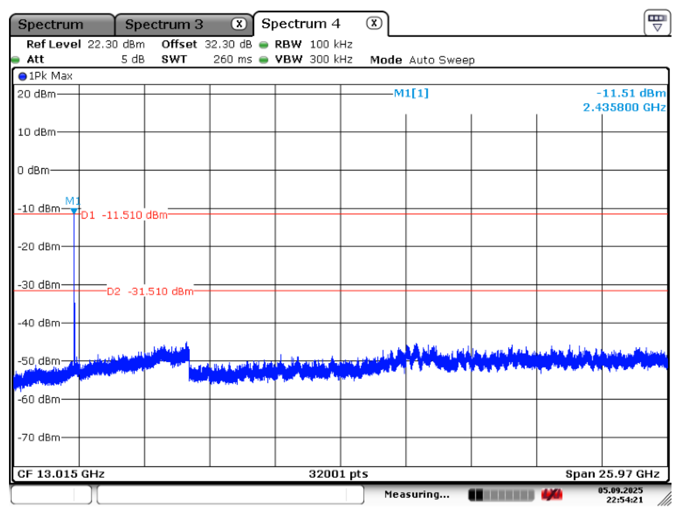


***Figure 7.7-16:** Conducted spurious emissions on Mid Channel (802.11n HT20)*

Test data, continued

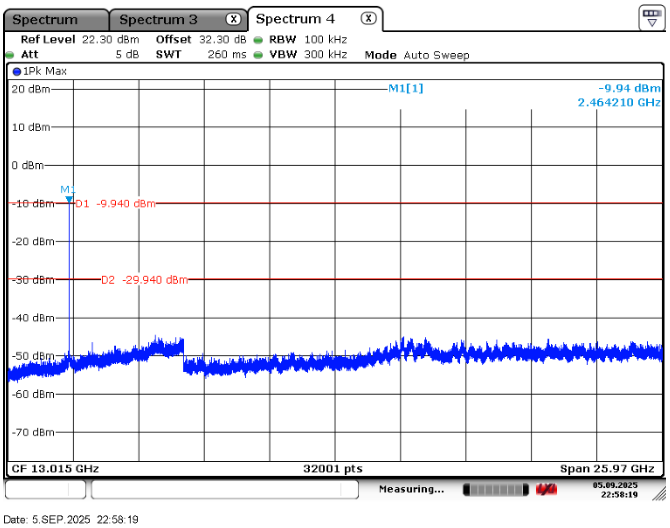


Figure 7.7-17: *Conducted spurious emissions on High Channel (802.11n HT20)*

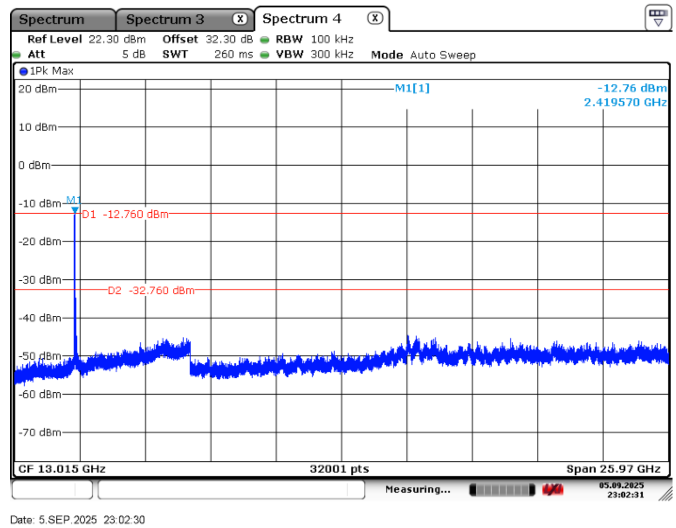


Figure 7.7-18: *Conducted spurious emissions on Low Channel (802.11bn HT40)*

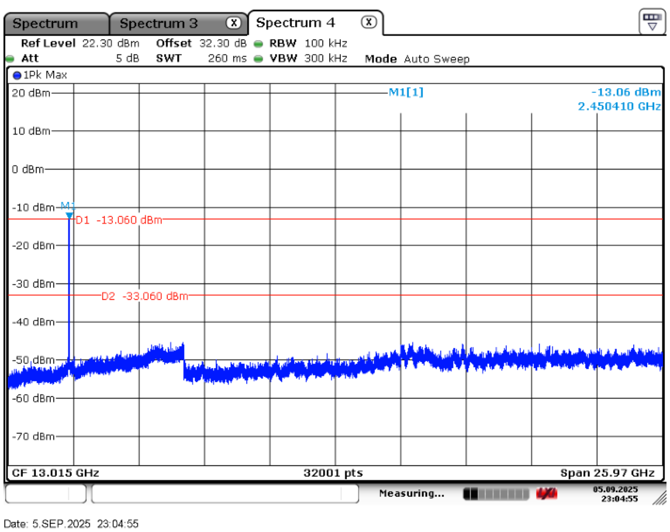


Figure 7.7-19: *Conducted spurious emissions on Mid Channel (802.11bn HT40)*

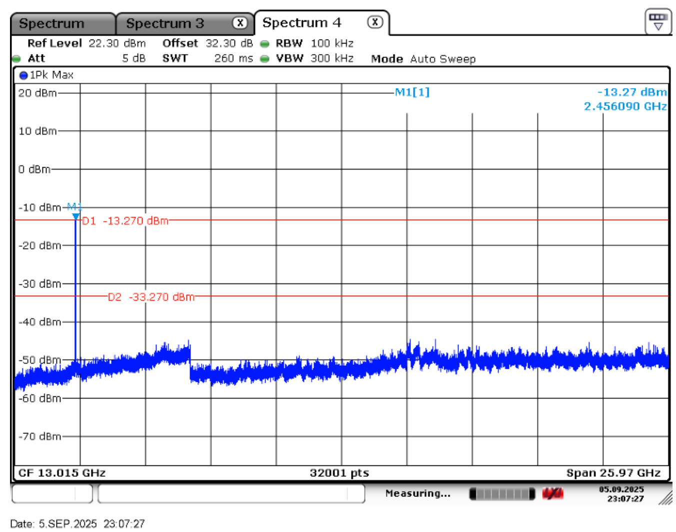


Figure 7.7-20: *Conducted spurious emissions on High Channel (802.11bn HT40)*

Test data, continued

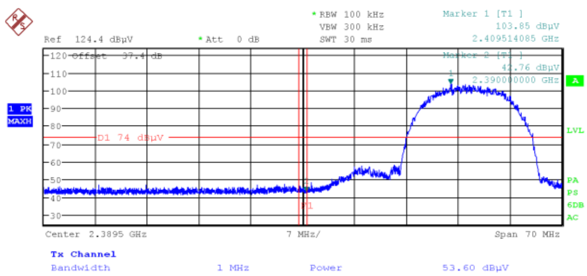


Figure 7.7-21: *Radiated spurious emissions on lower band edge Pk, 2390 MHz (802.11b)*

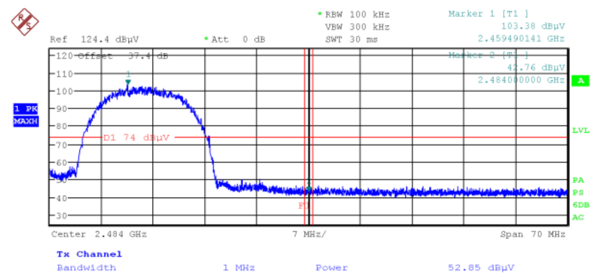


Figure 7.7-22: *Radiated spurious emissions on upper band edge PK, 2483.5 MHz (802.11b)*

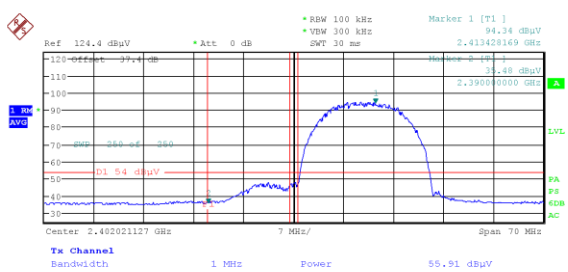


Figure 7.7-23: *Radiated spurious emissions on lower band edge RMS, 2390 MHz (802.11b)*

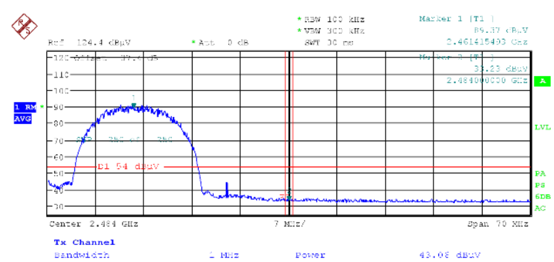


Figure 7.7-24: *Radiated spurious emissions on upper band edge RMS, 2483.5 MHz (802.11b)*

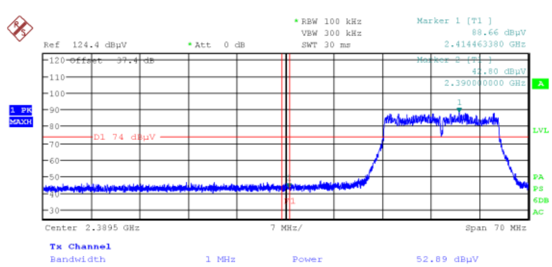


Figure 7.7-25: *Radiated spurious emissions on lower band edge Pk, 2390 MHz (802.11g)*

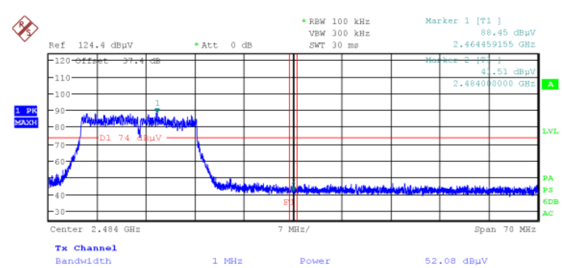


Figure 7.7-26: *Radiated spurious emissions on upper band edge Pk, 2483.5 MHz (802.11g)*

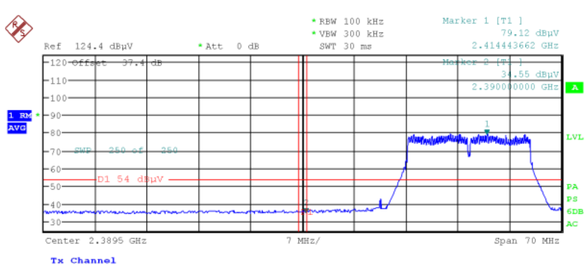


Figure 7.7-27: *Radiated spurious emissions on lower band edge RMS, 2390 MHz (802.1g)*

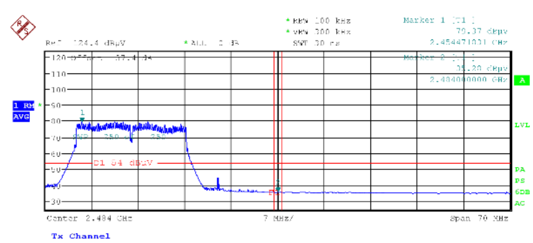


Figure 7.7-28: *Radiated spurious emissions on upper band edge RMS, 2483.5 MHz (802.11g)*

Test data, continued

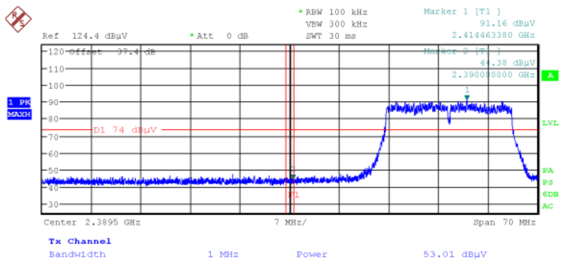


***Figure 7.7-29:** Radiated spurious emissions on lower band edge Pk, 2390 MHz (802.11n HT20)*

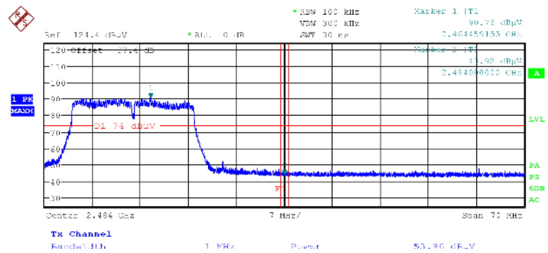


***Figure 7.7-30:** Radiated spurious emissions on upper band edge Pk, 2483.5 MHz (802.11n HT20)*

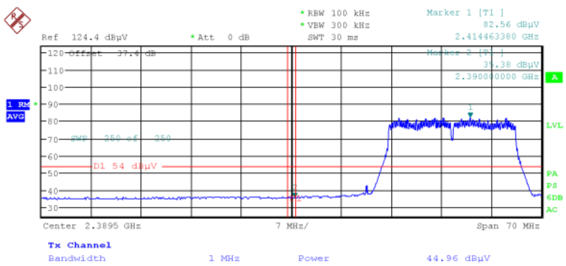


***Figure 7.7-31:** Radiated spurious emissions on lower band edge RMS, 2390 MHz (802.11n HT20)*

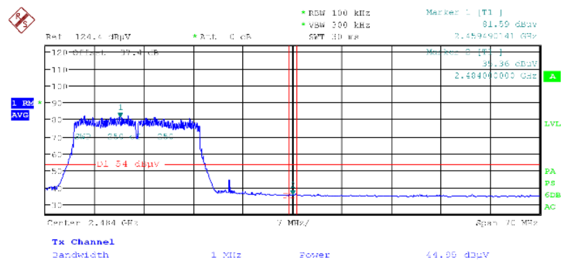


***Figure 7.7-32:** Radiated spurious emissions on upper band edge RMS, 2483.5 MHz (802.11n HT20)*

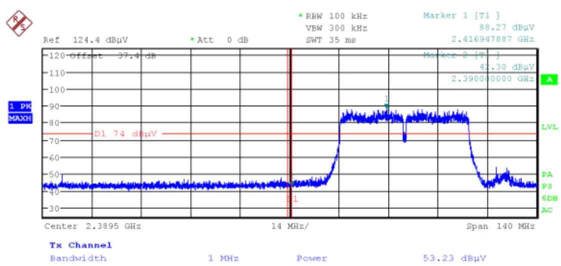


***Figure 7.7-33:** Radiated spurious emissions on lower band edge Pk, 2390 MHz (802.11n HT40)*

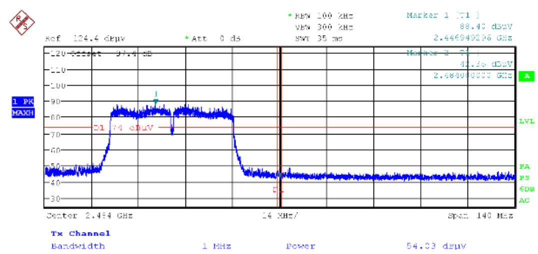


***Figure 7.7-34:** Radiated spurious emissions on upper band edge Pk, 2483.5 MHz (802.11n HT40)*

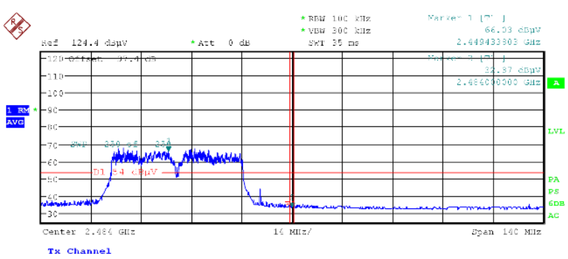


***Figure 7.7-35:** Radiated spurious emissions on lower band edge RMS, 2390 MHz (802.11n HT40)*

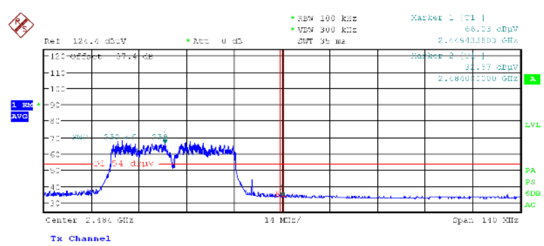


***Figure 7.7-36:** Radiated spurious emissions on upper band edge RMS, 2483.5 MHz (802.11n HT40)*

Test data, continued

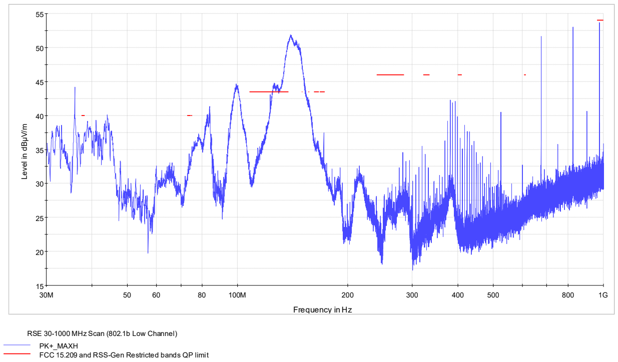


Figure 7.7-37: *Radiated spurious emissions on 30-1000 MHz (802.11b Low Channel)*

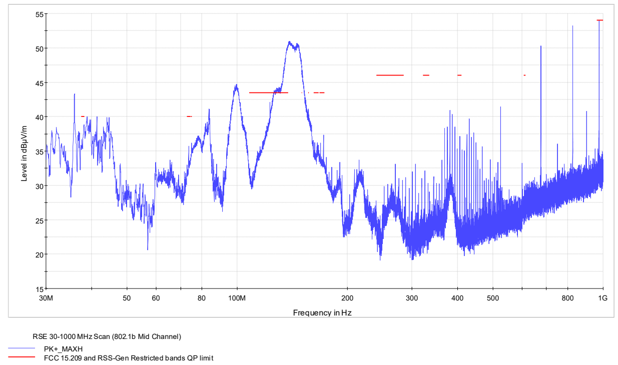


Figure 7.7-38: *Radiated spurious emissions on 30-1000 MHz (802.11b Mid Channel)*

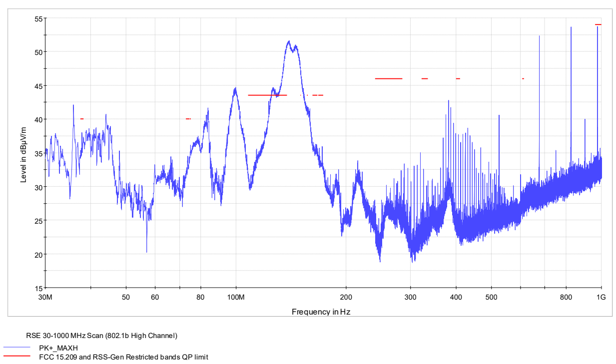


Figure 7.7-39: *Radiated spurious emissions on 30-1000 MHz (802.11b High Channel)*

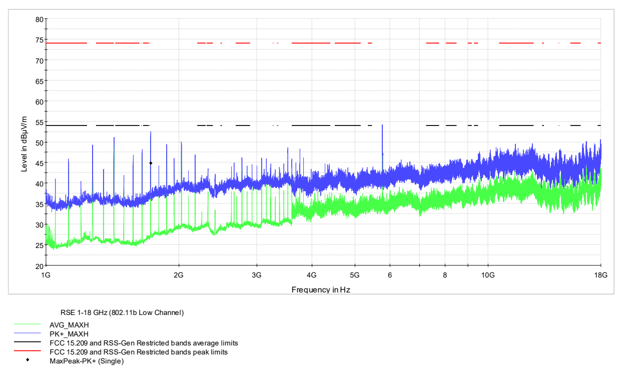


Figure 7.7-40: *Radiated spurious emissions on 1-18 GHz (802.11b Low Channel)*

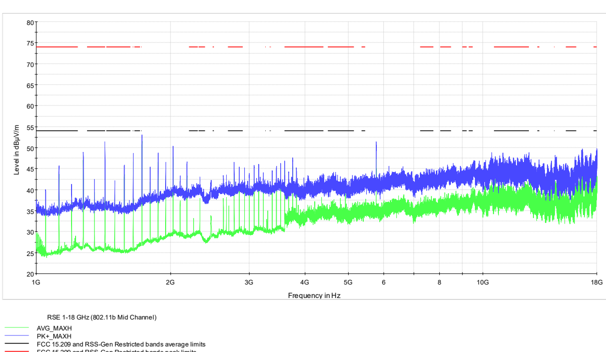


Figure 7.7-41: *Radiated spurious emissions on 1-18 GHz (802.11b Mid Channel)*

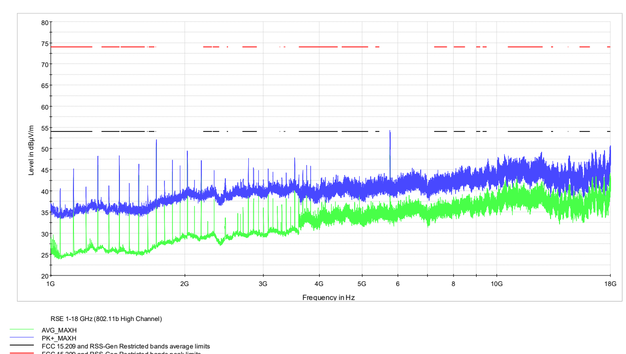


Figure 7.7-42: *Radiated spurious emissions on 1-18 GHz (802.11b High Channel)*

Test data, continued

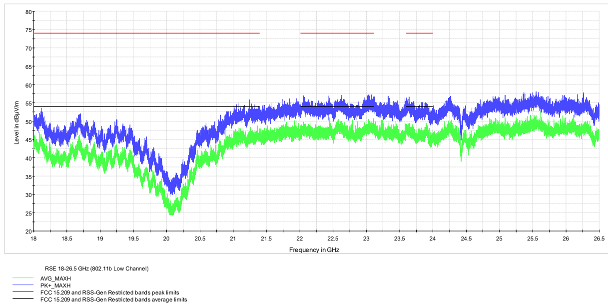


***Figure 7.7-43:** Radiated spurious emissions on 18-26 GHz (802.11b Low Channel)*

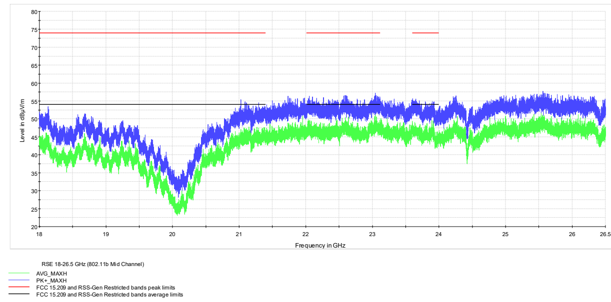


***Figure 7.7-44:** Radiated spurious emissions on 18-26 GHz (802.11b Mid Channel)*

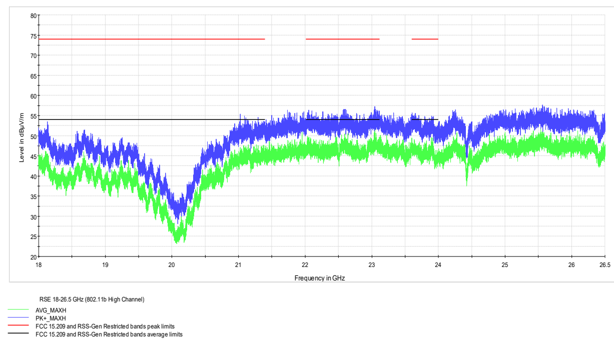


***Figure 7.7-45:** Radiated spurious emissions on 18-26 GHz (802.11b High Channel)*

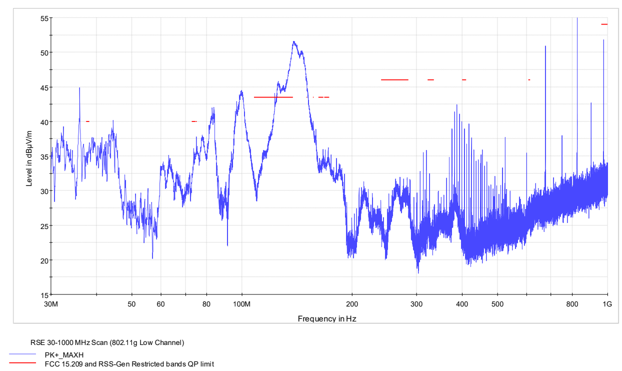


***Figure 7.7-46:** Radiated spurious emissions on 30-1000 MHz (802.11g Low Channel)*

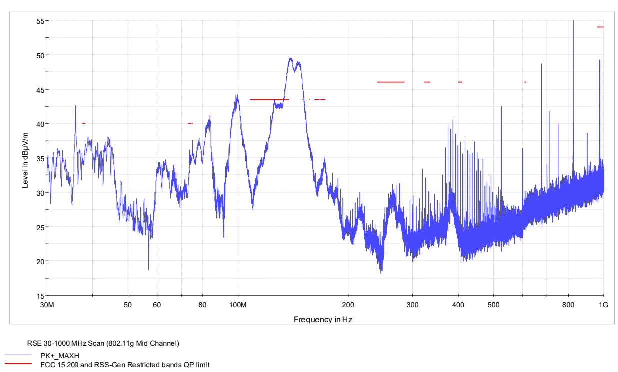


***Figure 7.7-47:** Radiated spurious emissions on 30-1000 MHz (802.11g Mid Channel)*

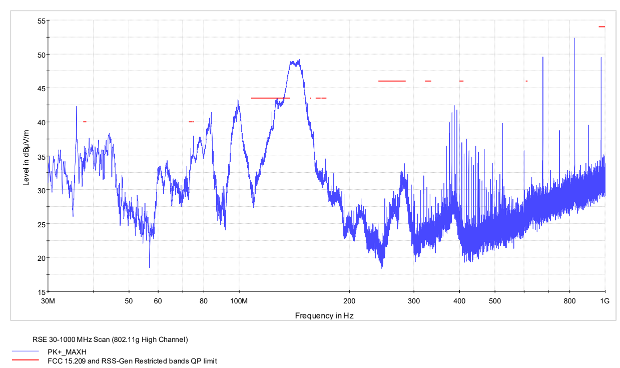


***Figure 7.7-48:** Radiated spurious emissions on 30-1000 MHz (802.11g High Channel)*

Test data, continued

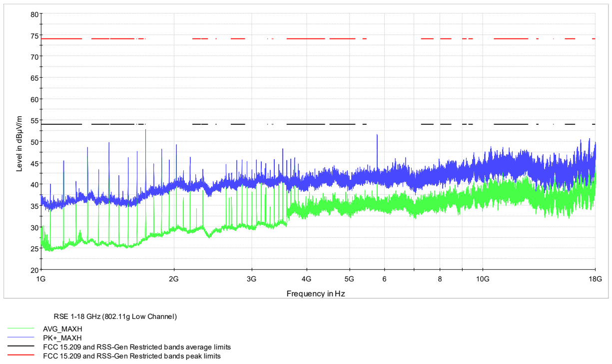


Figure 7.7-49: *Radiated spurious emissions on 1-18 GHz (802.11g Low Channel)*

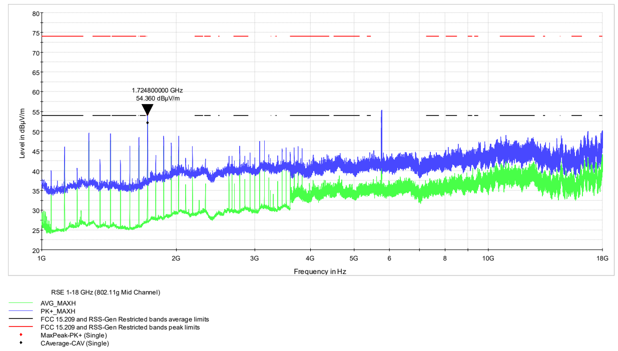


Figure 7.7-50: *Radiated spurious emissions on 1-18 GHz (802.11g Mid Channel)*

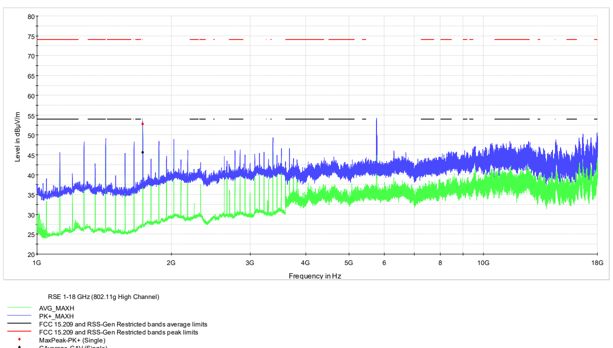


Figure 7.7-51: *Radiated spurious emissions on 1-18 GHz (802.11g High Channel)*

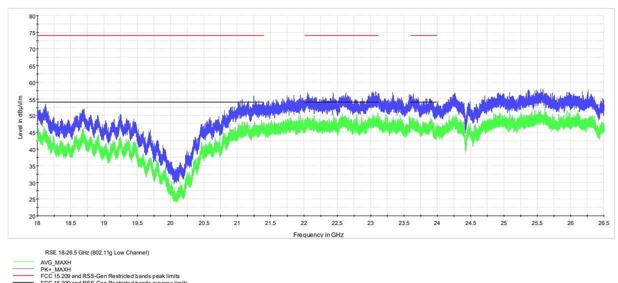


Figure 7.7-52: *Radiated spurious emissions on 18-26 GHz (802.11g Low Channel)*

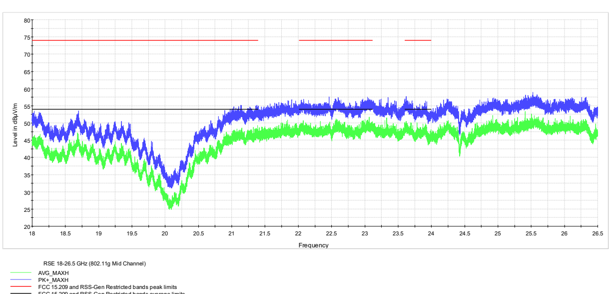


Figure 7.7-53: *Radiated spurious emissions on 18-26 GHz (802.11g Mid Channel)*

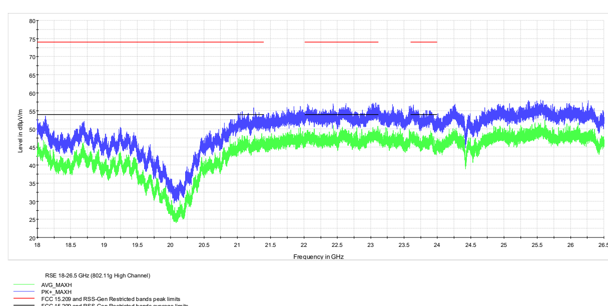


Figure 7.7-54: *Radiated spurious emissions on 18-26 GHz (802.11g High Channel)*