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# RADIO TEST REPORT

Report ID:

**REP107974**

Project number

**PRJ0079248**

Applicant:

**Emergent Solutions Inc.**

Product type:

**Television Band Device (TVBD)**

Model:

**EBR100MODX - Module Level**

FCC ID:

**2BOHX-EBR100MODX**

ISED Certification Number:

**33834-EBR100MODX**

Specifications:

- ◆ FCC 47 CFR Part 15 Subpart H – RF testing only
- ◆ RSS-222 Issue 4 November 2024 – RF testing only

Date of issue: September 5, 2025

**Dhara Patel, EMC/RF Specialist**

Tested by

**Andrey Adelberg, Senior EMC/RF Specialist**

Reviewed by

Signature



#### Test location

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City	Ottawa
Province	ON
Postal code	K1V 1H2
Country	Canada
Telephone	+1 613 737 9680
Facsimile	+1 613 737 9691
Toll free	+1 800 563 6336
Website	www.nemko.com
Site number	FCC: CA2040; (3 m semi anechoic chamber)

#### Limits of responsibility

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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.

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## Section 1. Report summary

### 1.1 Applicant and manufacturer

Company name	Emergent Solutions Inc.
Address	1801 Woodward Drive
City	Ottawa
Province/State	ON
Postal/Zip code	K2C 0R3
Country	Canada

### 1.2 Test specifications

FCC 47 CFR Part 15, Subpart H	Television Band Devices
RSS-222 November, 2024; Issue 4	White Space Devices (WSDs)

### 1.3 Test procedures

KDB 416721 D01 White Space Test Procedures v04r01	Part 15 Subpart H, White Space, Certification Test Procedures
ANSI C63.10 2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

### 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 1.5 below. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

This White Space Device incorporates geolocation capability with a confidence level of 95% that conforms to the requirements specified in RSS-222, Section 12 (Geolocation requirements for fixed WSDs). The manufacturer takes full responsibility for the conformity of the geolocation capability to RSS-222 requirements and commits to maintaining this conformity throughout the product's lifecycle.

See "Summary of test results" for full details.

### 1.5 Exclusions

None

### 1.6 Test report revision history

Revision #	Date of issue	Details of changes made to test report
REP107974	September 5, 2025	Original report issued

## Section 2. Summary of test results

### 2.1 FCC Part 15, general requirements test results

Part	Test description	Verdict
§15.207(a)	Conducted limits <sup>1</sup>	Not applicable
§15.31(e)	Variation of power source <sup>1</sup>	Not applicable
§15.31(m)	Number of tested frequencies	Pass
§15.203	Antenna requirement	Pass

Notes: EUT operates using PoE

### 2.2 FCC Part 15 Subpart H, test results

Part	Test description	Verdict
§15.709(b)(ii), §15.709(c)(1,3)	Maximum conducted output power for fixed TVBDs	Pass
§15.709(a)(1)(i)	Reduced power to meet the co-channel and adjacent channel separation requirements	Pass
§15.709(b)(iii), §15.709(c)(1)	Power spectral density for fixed TVBDs	Pass
§15.709(d)	Adjacent channel power for fixed TVBDs	Pass
§15.709(d)	Radiated spurious emissions outside TV bands	Pass
§15.709(c)(5)	AC power line conducted limits <sup>1</sup>	Not applicable

Note: <sup>1</sup> EUT operates using DC or PoE

### 2.3 IC RSS-GEN, Issue 5, test results

Part	Test description	Verdict
7.1.2	Receiver radiated emission limits	Not applicable
7.1.3	Receiver conducted emission limits	Not applicable
6.7	Occupied bandwidth	Pass
8.8	Power Line Conducted Emissions Limits for Licence-Exempt Radio Apparatus <sup>2</sup>	Not applicable

Notes: <sup>1</sup> According to sections 5.2 and 5.3 of RSS-Gen, Issue 4 the EUT does not have a stand-alone receiver neither scanner receiver, therefore exempt from receiver requirements.

<sup>2</sup> EUT operates using PoE

### 2.4 RSS-222, test results

Section	Test description	Verdict
11.4	Transmitter power and PSD for fixed and mobile WSDs	Pass
11.7.1	Transmitter band edge and adjacent channel power limits	Pass
11.7.2	Unwanted emissions measurements and limits	Pass

Note: none

## Section 3. Equipment under test (EUT) details

### 3.1 Sample information

Receipt date	June 24, 2025
Nemko sample ID number	PRJ00792480001

### 3.2 EUT information

Product name	EBR100 Platform
Model	EBR100MODX
Serial number	SCU as 317VL25260001 and the SSU as 317VL25260002

### 3.3 Technical information

Operating band	470–602 MHz (channels 14–35)
Operating frequency*	473–599 MHz
Modulation type	BPSK, QPSK, 16-QAM, and 64-QAM
Channel bandwidth	6, 12, 24 MHz
Emission designator	6M00D1D, 12M0D1D, 24M0D1D
Power requirements	12 VDC or PoE 48VDC
WSD Class	Class A and B
WSD Type:	Fixed
Antenna type and gain:	12 dBi Dipole, 9 dBi Log-Periodic

Note: \* see section 7.2 for detailed channel frequencies.

**Table 3.3-1: Antenna information**

<b>Antenna information (max gain*)</b>
12-dBi Panel Dual-polarized MTI PN: MT006D12VH/RB/A

\*Note: Additional antenna with 9 dBi gain

**Table 3.3-2: Power supplies**

<b>Power Supply information</b>
As this is modular approval, the power supply is not sold with the EBR100MODX.

### 3.4 Product description and theory of operation

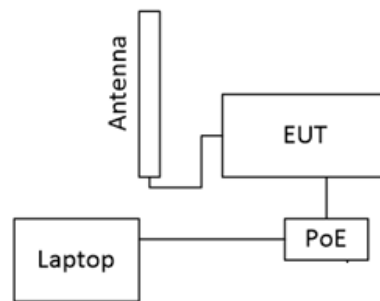
The EBR100MODX is a 2x2 MIMO broadband radio that provides high capacity, long range communications links. Operating across 470–602 MHz band, the EBR100MODX is configured via firmware options and electronic feature and region secure certificates. The EBR100MODX is a Fixed WSD that supports PAWS Protocol to Access White Space Database. It operates with RED database provider which is both FCC and ISSED approved. Has embedded GNSS module for geo-location. Has dual-PoE GbE ports and 2 RF ports. Also supports 12 VDC input. The EBR100MODX fully complies with WSDB channel availability and EIRP information that includes scheduled changes in channel availability.

### 3.5 EUT exercise details

The EUT was powered from a PoE. During the tests a laptop was used to connect to the EUT and configure the device to transmit continuously with the desired modulation and power.

All conducted measurements were with the MIMO TX version as the worst case. EUT was tested with the appropriate antennas for spurious and conducted emissions to ensure the enclosure variation did not have impact.

### 3.6 EUT setup diagram



**Figure 3.6-1:** Setup diagram

## Section 4. Engineering considerations

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### 4.1 Modifications incorporated in the EUT

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

### 4.2 Technical judgment

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The EBR100MODX is software defined for the network node type as a sector controller or subscriber station. It incorporates TDD duplexing scheme in a 2x2 MIMO transmission mode. For the purpose of this compliance exercise, the compliance operator was allowed to put the transmitters in continuous transmit mode..

### 4.3 Deviations from laboratory tests procedures

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No deviations were made from laboratory procedures.



## Section 5. Test conditions

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### 5.1 Atmospheric conditions

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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

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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  $\pm 5$  %, for which the equipment was designed.

## 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
Preamplifier (1–18 GHz)	ETS Lindgren	124334	FA002877	1 year	November 19, 2025
Biconical antenna (30–300 MHz)	Sunol	BC2	FA002078	1 year	June 10, 2026
Log periodic antenna (200–5000 MHz)	Sunol	LP5	FA002077	1 year	June 11, 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

Notes: 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: Radiated emissions test software details**

Manufacturer of Software	Details
Rohde & Schwarz	EMC32, Software for EMC Measurements, Version 11.20.00

**Table 6.1-3: Measurement uncertainty calculations**

Test name	Measurement uncertainty, dB
All antenna port measurements	0.55
Conducted spurious emissions	1.13
Radiated spurious emissions	3.78

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

## Section 7. Testing data

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### 7.1 FCC 15.31(e) Variation of power source

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#### Definitions and limits

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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.

#### Test date

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Start date June 24, 2025

#### Observations, settings and special notes

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EUT input is 48 V<sub>DC</sub> from the PoE power supply.

#### Test data

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EUT Power requirements:

	<input checked="" type="checkbox"/> AC	<input type="checkbox"/> DC	<input type="checkbox"/> Battery
If EUT is an AC or a DC powered, was the noticeable output power variation observed?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> N/A
If EUT is battery operated, was the testing performed using fresh batteries?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> N/A
If EUT is rechargeable battery operated, was the testing performed using fully charged batteries?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> N/A



## 7.2    FCC 15.31(m) and RSS-Gen 6.9 Number of frequencies

### Definitions and limits

**FCC:**  
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.

**ISED:**  
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

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

### Test date

Start date      June 24, 2025

### Observations, settings and special notes

None

### Test data

*Table 7.2-2: Test channels frequencies selection*

Start of Frequency range, MHz	End of Frequency range, MHz	Frequency range bandwidth, MHz	Channel size, MHz	Low channel, MHz	Mid channel, MHz	High channel, MHz
470	602	132	6	473	539	599
			12	476	542	596
			24	482	542	590



## 7.3 FCC 15.203 and RSS-Gen, section 6.8 Antenna requirement

### Definitions and limits

#### FCC:

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.

#### ISED:

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.

### Test date

Start date	June 24, 2025
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### Observations, settings and special notes

None

### Test data

Must the EUT be professionally installed?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
Does the EUT have detachable antenna(s)?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	
If detachable, is the antenna connector(s) non-standard?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	<input type="checkbox"/> N/A

The product is a radio frequency (RF) module intended for integration by qualified professionals. Installation must be performed within the host device, and the antenna must be mounted externally, such as on a tower structure. For detailed installation procedures and compliance requirements, please refer to the installation guide. Only the following antennas are approved for use to ensure regulatory compliance:

12 dBi Dipole antenna

9 dBi Log-periodic antenna

Use of any other antenna type may invalidate compliance.

## 7.4 RSS-Gen 6.7 Occupied (Emission) bandwidth

### Definitions and limits

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

### Test date

Start date June 24, 2025

### Observations, settings and special notes

Spectrum analyzer settings:

Detector mode	Peak
Resolution bandwidth	100 kHz
Video bandwidth	RBW × 3
Trace mode	Max Hold

### Test data

**Table 7.4-1: 99% occupied bandwidth verification results**

Channel bandwidth, MHz	99% occupied bandwidth, MHz
6	4.375
6	4.375
6	4.375

Note: there is no 99% occupied bandwidth limit in the standard’s requirements, the measurement results provided for information purposes only.

**Table 7.4-2: 99% occupied bandwidth verification results**

Channel bandwidth, MHz	99% occupied bandwidth, MHz
12	8.691
12	8.716
12	8.716

Note: there is no 99% occupied bandwidth limit in the standard’s requirements, the measurement results provided for information purposes only.

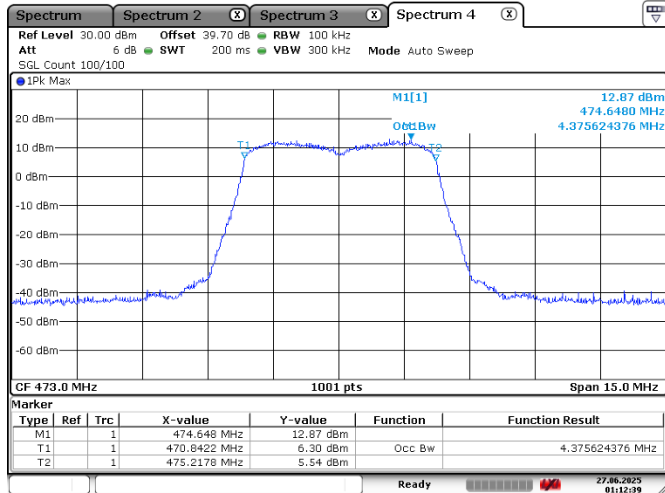
**Table 7.4-3: 99% occupied bandwidth verification results**

Channel bandwidth, MHz	99% occupied bandwidth, MHz
24	17.382
24	17.432
24	17.382

Note: there is no 99% occupied bandwidth limit in the standard’s requirements, the measurement results provided for information purposes only.

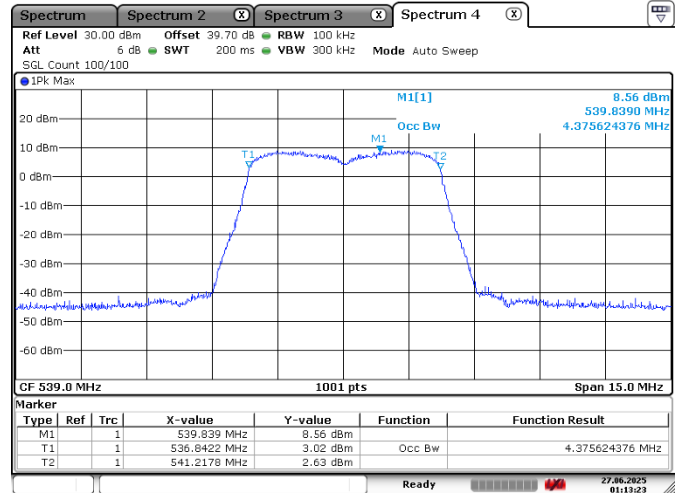


Test data, continued



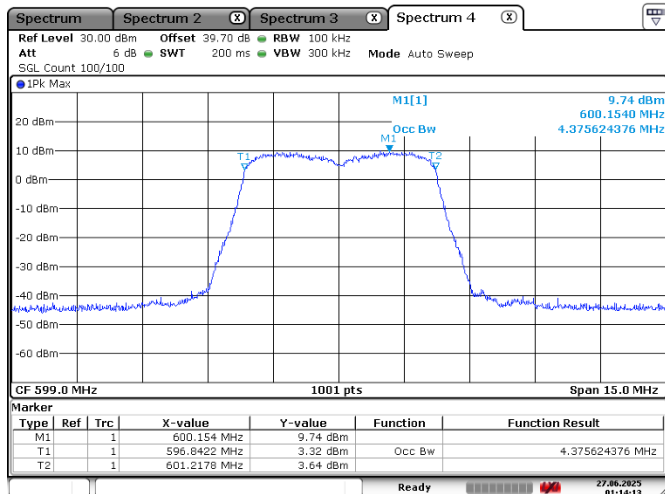
Date: 27 JUN 2025 01:12:39

Figure 7.4-1: Sample plot for 6 MHz channel low



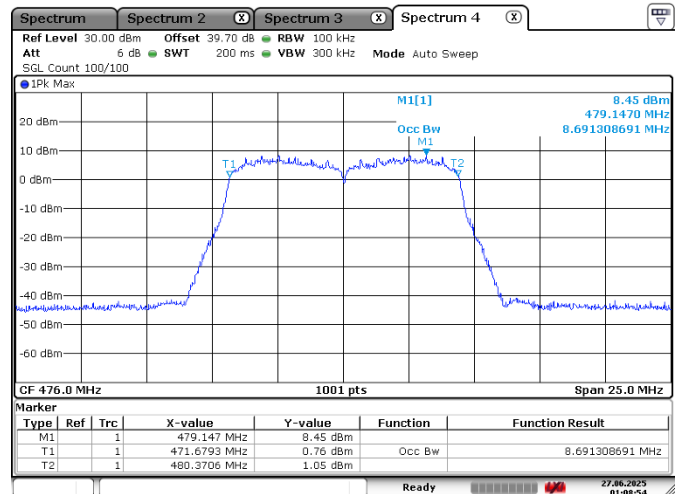
Date: 27 JUN 2025 01:13:24

Figure 7.4-2: Sample plot for 6 MHz channel mid



Date: 27 JUN 2025 01:14:13

Figure 7.4-3: Sample plot for 6 MHz channel high



Date: 27 JUN 2025 01:08:54

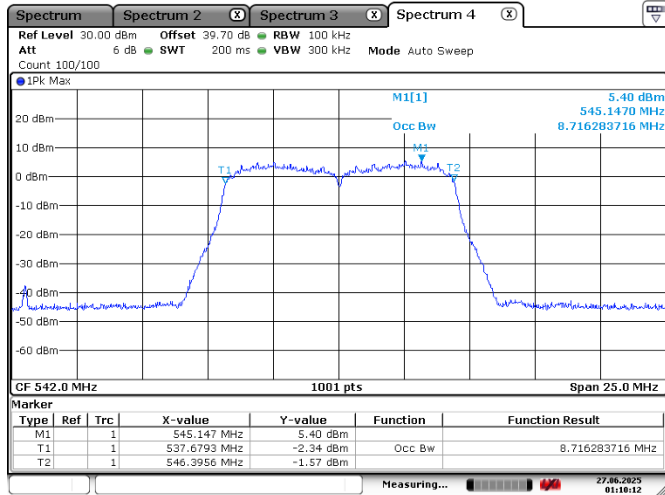
Figure 7.4-4: Sample plot for 12 MHz channel low



Section 8  
Test name  
Specification

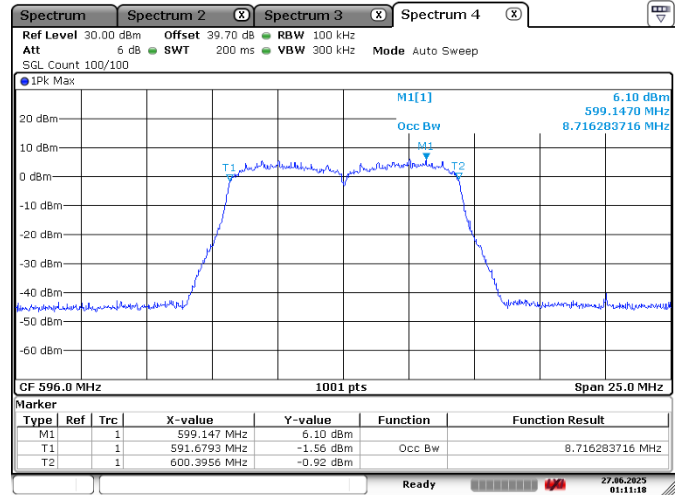
Testing data  
RSS-Gen 6.7 Occupied (Emission) bandwidth  
RSS-Gen, Issue 5

Test data, continued



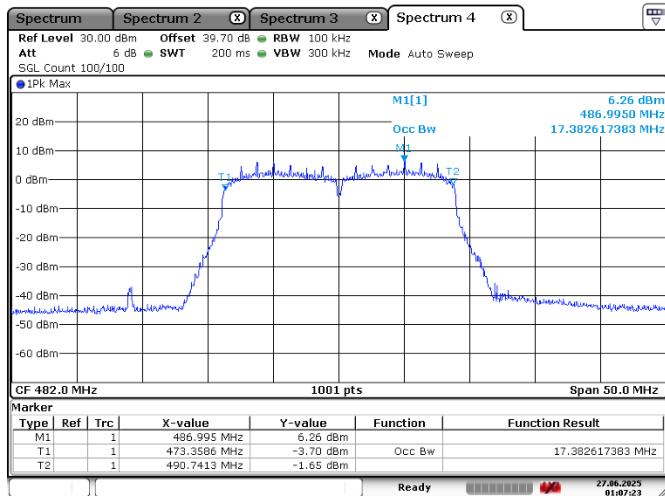
Date: 27 JUN 2025 01:10:12

Figure 7.4-5: Sample plot for 12 MHz channel mid



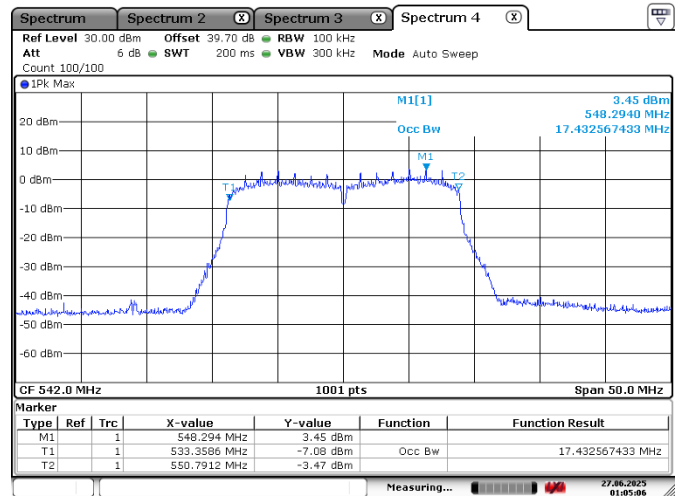
Date: 27 JUN 2025 01:11:18

Figure 7.4-6: Sample plot for 12 MHz channel high



Date: 27 JUN 2025 01:07:24

Figure 7.4-7: Sample plot for 24 MHz channel low



Date: 27 JUN 2025 01:05:07

Figure 7.4-8: Sample plot for 24 MHz channel mid



## Test data, continued

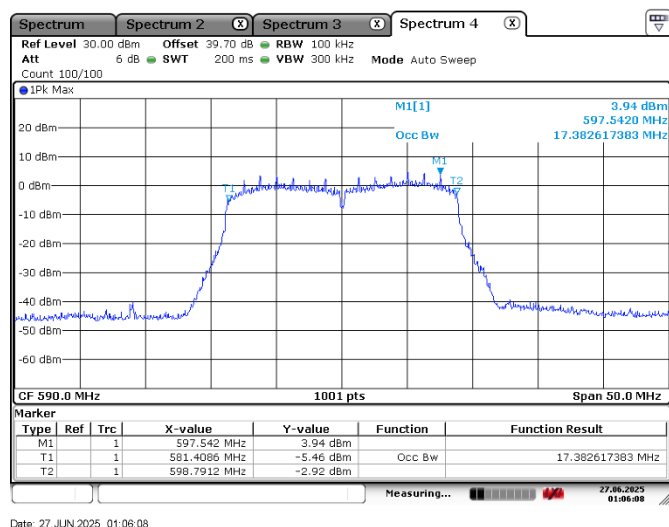


Figure 7.4-9: Sample plot for 24 MHz channel high



## 7.5 FCC 15.709(b)(1)(ii), 15.709(a), 15.709(c) and RSS-222 11.4.1 Maximum conducted output power for fixed TVBDs

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### Definitions and limits

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#### **FCC 15.709(b):**

For fixed TVBDs, the maximum power delivered to the transmitting antenna shall not exceed one watt per 6 megahertz of bandwidth on which the device operates. The power delivered to the transmitting antenna is the maximum conducted output power reduced by the signal loss experienced in the cable used to connect the transmitter to the transmit antenna. The maximum gain of the transmitting antenna used with a Fixed WSD must be declared by the manufacturer in the certification application. If the transmitting antenna gain exceeds 6 dBi for fixed white space device operating at up to 36 dBm EIRP, the conducted output power limit shall all be reduced by the amount in dB by which the gain exceeds 6 dBi.

#### **FCC 15.709(a)(1)(i):**

White space devices may be required to operate with less power than the maximum permitted to meet the co-channel and adjacent channel separation requirements of § 15.712 of this part.

#### **FCC 15.709(c)(1):**

The conducted power, PSD and adjacent channel limits for fixed white space devices operating at up to 36 dBm (4000 milliwatts) EIRP shown in the table in paragraph (b)(1) of this section are based on a maximum transmitting antenna gain of 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **FCC 15.709(c)(3):**

Maximum conducted output power is the total transmit power over the occupied bandwidth delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power 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.

#### **FCC 15.709(a)(2)(i)(A):**

Fixed devices in the TV bands below 602 MHz: Up to 4 W (36 dBm) EIRP, and up to 16 W (42 dBm) EIRP in less congested areas. Fixed devices in the 602-608 MHz band may operate with up to 4 W (36 dBm) EIRP.

#### **ISED:**

Fixed and mobile WSDs shall operate only at e.i.r.p. power levels at or below the levels established by a WSDB for each specific channel indicated as being available at the WSD's location. For a discrete e.i.r.p. level established by the WSDB, the conducted power and conducted PSD of the fixed or mobile WSD's channel shall not exceed the prescribed limits of table 2. If a fixed or mobile WSD is operating at an e.i.r.p. below the discrete level established by a WSDB, it is required to meet only the limits in table 2 that are prescribed for the e.i.r.p. level identified by the WSDB.

The maximum conducted power of a fixed or mobile WSD shall not exceed 30 dBm per 6 MHz channel. The conducted PSD of a fixed or mobile WSD shall not exceed 12.6 dBm per 100 kHz.

The e.i.r.p. of a fixed or mobile WSD shall not exceed 42 dBm per 6 MHz channel in less congested areas (as determined by a WSDB), and shall not exceed 36 dBm per 6 MHz channel in areas not considered "less congested".

The power limits in table 2 for a channel e.i.r.p. of 36 dBm or less are based on a maximum antenna gain of 6 dBi; if the antenna gain exceeds 6 dBi, then both the channel conducted power and channel conducted PSD limits shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The power limits in table 2 for a channel e.i.r.p. above 36 dBm are based on a maximum antenna gain of 12 dBi; if the antenna gain exceeds 12 dBi, then both the channel conducted power and channel conducted PSD limits shall be reduced by the amount in dB that the directional gain of the antenna exceeds 12 dBi.

### Test date

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Start date June 24, 2025



**Section 8**  
**Test name**  
**Specification**

Testing data  
FCC 15.709(b)(1)(ii), 15.709(a), and RSS-222 11.4.1 Maximum conducted output power for fixed TVBDs  
FCC Part 15 Subpart H and RSS-222, Issue 4

Observations, settings and special notes

The power integration was performed over 6 MHz, 12 MHz, and 24 MHz channel bandwidth for information purposes only.

Measurement spectrum analyzer plots are in section 7.7

Spectrum analyser settings for output power:

Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Detector mode:	RMS
Sweep time:	5 s
Trace mode:	Power Averaging over 10 traces
Integration bandwidth:	6, 12, and 24 MHz

Test data

**Table 7.5-1:** Conducted output power and EIRP measurements for 8 dBi antenna configuration (Class B)

(BW) Channel	Frequency, MHz	Power, dBm/6 MHz	MIMO Power, dBm/6 MHz	Power limit, dBm/6 MHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	20.01	23.01	24.00	8.00	31.01	32.00
(6 MHz) Mid	539	20.82	23.82	24.00	8.00	31.82	32.00
(6 MHz) High	599	20.10	23.10	24.00	8.00	31.10	32.00
(12 MHz) Low	476	17.85	20.85	24.00	8.00	28.85	32.00
(12 MHz) Mid	542	18.15	21.15	24.00	8.00	29.15	32.00
(12 MHz) High	596	18.37	21.37	24.00	8.00	29.37	32.00
(24 MHz) Low	482	15.10	18.10	20.00	8.00	26.10	28.00
(24 MHz) Mid	542	15.17	18.17	20.00	8.00	26.17	28.00
(24 MHz) High	590	14.76	17.76	20.00	8.00	25.76	28.00

Note: \* Antenna gain is 9 dBi with 1 dB cable loss, the net gain is 8 dBi (more than 6 dBi), therefore 2 dB reduction in output power limit was required.

**Table 7.5-2:** Conducted output power and EIRP measurements for 11 dBi antenna configuration (for less congested areas)(Class B)

(BW) Channel	Frequency, MHz	Power, dBm/6 MHz	MIMO Power, dBm/6 MHz	Power limit, dBm/6 MHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	20.01	23.01	25.00	11.00	34.01	36.00
(6 MHz) Mid	539	20.82	23.82	25.00	11.00	34.82	36.00
(6 MHz) High	599	20.10	23.10	25.00	11.00	34.10	36.00
(12 MHz) Low	476	17.85	20.85	25.00	11.00	31.85	36.00
(12 MHz) Mid	542	18.15	21.15	25.00	11.00	32.15	36.00
(12 MHz) High	596	18.37	21.37	25.00	11.00	32.37	36.00
(24 MHz) Low	482	15.10	18.10	21.00	11.00	29.10	32.00
(24 MHz) Mid	542	15.17	18.17	21.00	11.00	29.17	32.00
(24 MHz) High	590	14.76	17.76	21.00	11.00	28.76	32.00

Note: Antenna gain is 12 dBi with 1 dB cable loss, therefore net gain is 11 dBi (more than 6 dBi), reduction of 5 dB is required for output power limit.



**Section 8**  
**Test name**  
**Specification**

Testing data  
FCC 15.709(b)(1)(ii), 15.709(a), and RSS-222 11.4.1 Maximum conducted output power for fixed TVBDs  
FCC Part 15 Subpart H and RSS-222, Issue 4

Test data, continued

**Table 7.5-3: Conducted output power and EIRP measurements for 8 dBi antenna configuration (Class A)**

(BW) Channel	Frequency, MHz	Power, dBm/6 MHz	MIMO Power, dBm/6 MHz	Power limit, dBm/6 MHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	27.00	30.00	30.00	8.00	38.00	40.00
(6 MHz) Mid	539	26.99	29.99	30.00	8.00	37.99	40.00
(6 MHz) High	599	26.93	29.93	30.00	8.00	37.93	40.00
(12 MHz) Low	476	24.09	27.09	28.00	8.00	35.09	36.00
(12 MHz) Mid	542	24.18	27.18	28.00	8.00	35.18	36.00
(12 MHz) High	596	24.28	27.28	28.00	8.00	35.28	36.00
(24 MHz) Low	482	21.11	24.11	28.00	8.00	32.11	36.00
(24 MHz) Mid	542	20.98	23.98	28.00	8.00	31.98	36.00
(24 MHz) High	590	21.11	24.11	28.00	8.00	32.11	36.00

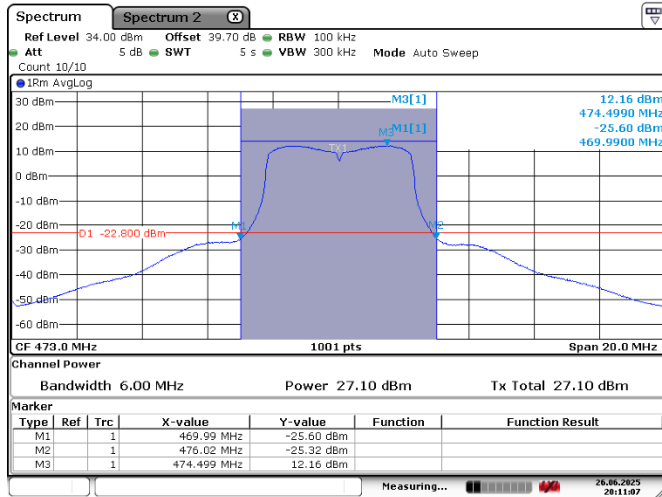
Note: \* Antenna gain is 9 dBi with 1 dB cable loss, the net gain is 8 dBi (less than 12 dBi for >36 dBm EIRP and more than 6 dBi for ≤36 dBm EIRP), no reduction of power is required for 6 MHz channel, 2 dB reduction for 12 MHz and 24 MHz channels.

**Table 7.5-4: Conducted output power and EIRP measurements for 11 dBi antenna configuration (Class A)**

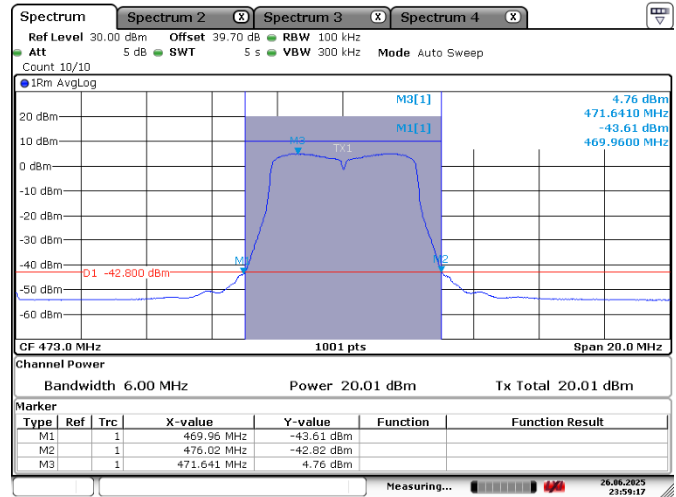
(BW) Channel	Frequency, MHz	Power, dBm/6 MHz	MIMO Power, dBm/6 MHz	Power limit, dBm/6 MHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	27.00	30.00	30.00	11.00	41.00	42.00
(6 MHz) Mid	539	26.99	29.99	30.00	11.00	40.99	42.00
(6 MHz) High	599	26.93	29.93	30.00	11.00	40.93	42.00
(12 MHz) Low	476	24.09	27.09	30.00	11.00	38.09	40.00
(12 MHz) Mid	542	24.18	27.18	30.00	11.00	38.18	40.00
(12 MHz) High	596	24.28	27.28	30.00	11.00	38.28	40.00
(24 MHz) Low	482	21.11	24.11	25.00	11.00	35.11	36.00
(24 MHz) Mid	542	20.98	23.98	25.00	11.00	34.98	36.00
(24 MHz) High	590	21.11	24.11	25.00	11.00	35.11	36.00

Note: Antenna gain is 12 dBi with 1 dB cable loss, therefore net gain is 11 dBi (less than 12 dBi for >36 dBm EIRP and more than 6 dBi for ≤36 dBm EIRP), no reduction of power is required for 6 MHz and 12 MHz channel, 5 dB reduction for 24 MHz channels.

## Test data, continued



**Figure 7.5-1:** Power measurement at the maximum transmit power setting



**Figure 7.5-2:** Power measurement with the reduced transmit power

Conclusion: The product is capable of operating at reduced power levels, in addition to its maximum permitted output, to meet 15.709(a) co-channel and adjacent channel separation requirements. According to the manufacturer, the power adjustment step is 0.1 dB.

## 7.6 FCC 15.709(b)(1)(ii), 15.709(c), and RSS-222 11.4.1 The power spectral density from the TVBD

### Definitions and limits

#### **FCC 15.709(b)(1)(ii):**

The power spectral density from the TVBD shall not be greater than the following values when measured in any 100 kHz band during any time interval of continuous transmission:

Fixed devices with 36 dBm EIRP: 12.6 dBm/100 kHz conducted power density.

The PSD limits for fixed white space devices operating at up to 36 dBm (4000 milliwatts) are based on a maximum transmitting antenna gain of 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **FCC 15.709(c)(1):**

The conducted power, PSD and adjacent channel limits for fixed white space devices operating at up to 36 dBm (4000 milliwatts) EIRP shown in the table in paragraph (b)(1) of this section are based on a maximum transmitting antenna gain of 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **ISED:**

Fixed and mobile WSDs shall operate only at e.i.r.p. power levels at or below the levels established by a WSDB for each specific channel indicated as being available at the WSD's location. For a discrete e.i.r.p. level established by the WSDB, the conducted power and conducted PSD of the fixed or mobile WSD's channel shall not exceed the prescribed limits of table 2. If a fixed or mobile WSD is operating at an e.i.r.p. below the discrete level established by a WSDB, it is required to meet only the limits in table 2 that are prescribed for the e.i.r.p. level identified by the WSDB.

The maximum conducted power of a fixed or mobile WSD shall not exceed 30 dBm per 6 MHz channel. The conducted PSD of a fixed or mobile WSD shall not exceed 12.6 dBm per 100 kHz.

The e.i.r.p. of a fixed or mobile WSD shall not exceed 42 dBm per 6 MHz channel in less congested areas (as determined by a WSDB), and shall not exceed 36 dBm per 6 MHz channel in areas not considered "less congested".

The power limits in table 2 for a channel e.i.r.p. of 36 dBm or less are based on a maximum antenna gain of 6 dBi; if the antenna gain exceeds 6 dBi, then both the channel conducted power and channel conducted PSD limits shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The power limits in table 2 for a channel e.i.r.p. above 36 dBm are based on a maximum antenna gain of 12 dBi; if the antenna gain exceeds 12 dBi, then both the channel conducted power and channel conducted PSD limits shall be reduced by the amount in dB that the directional gain of the antenna exceeds 12 dBi.

### Test date

Start date June 24, 2025

### Observations, settings and special notes

Measurement spectrum analyzer plots are in section 7.7

Spectrum analyser settings for PSD:

Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Detector mode:	RMS
Sweep time:	5 s
Trace mode:	Power Averaging over 10 traces



**Section 8**  
**Test name**  
**Specification**

Testing data  
FCC 15.709(b)(ii) and RSS-222 11.4.1 The power spectral density from the TVBD  
FCC Part 15 Subpart H and RSS-222, Issue 4

Test data

**Table 7.6-1:** Conducted PSD measurements for 8 dBi antenna configuration (Class B)

(BW) Channel	Frequency, MHz	PSD, dBm/100 kHz	PSD limit, dBm/100 kHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	4.76	6.6	8.00	31.01	32.00
(6 MHz) Mid	539	5.83	6.6	8.00	31.82	32.00
(6 MHz) High	599	5.63	6.6	8.00	31.10	32.00
(12 MHz) Low	476	2.95	6.6	8.00	28.85	32.00
(12 MHz) Mid	542	3.57	6.6	8.00	29.15	32.00
(12 MHz) High	596	3.57	6.6	8.00	29.37	32.00
(24 MHz) Low	482	1.17	2.6	8.00	26.10	28.00
(24 MHz) Mid	542	1.43	2.6	8.00	26.17	28.00
(24 MHz) High	590	1.09	2.6	8.00	25.76	28.00

Note: \* Antenna gain is 9 dBi with 1 dB cable loss, the net gain is 8 dBi (more than 6 dBi), therefore 2 dB reduction in PSD limit was required.

**Table 7.6-2:** Conducted PSD measurements for 11 dBi antenna configuration (for less congested areas)(Class B)

(BW) Channel	Frequency, MHz	PSD, dBm/100 kHz	PSD limit, dBm/100 kHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	4.76	7.6	11.00	34.01	36.00
(6 MHz) Mid	539	5.83	7.6	11.00	34.82	36.00
(6 MHz) High	599	5.63	7.6	11.00	34.10	36.00
(12 MHz) Low	476	2.95	7.6	11.00	31.85	36.00
(12 MHz) Mid	542	3.57	7.6	11.00	32.15	36.00
(12 MHz) High	596	3.57	7.6	11.00	32.37	36.00
(24 MHz) Low	482	1.17	6.6	11.00	29.10	32.00
(24 MHz) Mid	542	1.43	6.6	11.00	29.17	32.00
(24 MHz) High	590	1.09	6.6	11.00	28.76	32.00

Note: Antenna gain is 12 dBi with 1 dB cable loss, therefore net gain is 11 dBi (more than 6 dBi), reduction of 5 dB is required for PSD limit.



**Section 8**  
**Test name**  
**Specification**

Testing data  
FCC 15.709(b)(ii) and RSS-222 11.4.1 The power spectral density from the TVBD  
FCC Part 15 Subpart H and RSS-222, Issue 4

Test data, continued

**Table 7.6-3:** Conducted PSD measurements for 8 dBi antenna configuration (Class A)

(BW) Channel	Frequency, MHz	PSD, dBm/100 kHz	PSD limit, dBm/100 kHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	12.06	12.6	8.00	38.00	40.00
(6 MHz) Mid	539	11.97	12.6	8.00	37.99	40.00
(6 MHz) High	599	11.60	12.6	8.00	37.93	40.00
(12 MHz) Low	476	9.39	10.6	8.00	35.09	36.00
(12 MHz) Mid	542	9.04	10.6	8.00	35.18	36.00
(12 MHz) High	596	9.68	10.6	8.00	35.28	36.00
(24 MHz) Low	482	6.97	10.6	8.00	32.11	36.00
(24 MHz) Mid	542	7.20	10.6	8.00	31.98	36.00
(24 MHz) High	590	7.46	10.6	8.00	32.11	36.00

Note: \* Antenna gain is 9 dBi with 1 dB cable loss, the net gain is 8 dBi (less than 12 dBi for >36 dBm EIRP and more than 6 dBi for ≤36 dBm EIRP), no reduction of PSD is required for 6 MHz channel, 2 dB reduction for 12 MHz and 24 MHz channels.

**Table 7.6-4:** Conducted PSD measurements for 11 dBi antenna configuration (for less congested areas)(Class A)

(BW) Channel	Frequency, MHz	PSD, dBm/100 kHz	PSD limit, dBm/100 kHz	Antenna net gain*, dBi	EIRP, dBm/6 MHz	EIRP threshold, dBm/6 MHz
(6 MHz) Low	473	12.06	12.6	11.00	41.00	42.00
(6 MHz) Mid	539	11.97	12.6	11.00	40.99	42.00
(6 MHz) High	599	11.60	12.6	11.00	40.93	42.00
(12 MHz) Low	476	9.39	12.6	11.00	38.09	40.00
(12 MHz) Mid	542	9.04	12.6	11.00	38.18	40.00
(12 MHz) High	596	9.68	12.6	11.00	38.28	40.00
(24 MHz) Low	482	6.97	7.6	11.00	35.11	36.00
(24 MHz) Mid	542	7.20	7.6	11.00	34.98	36.00
(24 MHz) High	590	7.46	7.6	11.00	35.11	36.00

Note: Antenna gain is 12 dBi with 1 dB cable loss, therefore net gain is 11 dBi (less than 12 dBi for >36 dBm EIRP and more than 6 dBi for ≤36 dBm EIRP), no reduction of PSD is required for 6 MHz and 12 MHz channel, 5 dB reduction for 24 MHz channels.



## 7.7 FCC 15.709(d) and RSS-222 11.7.1 Transmitter band edge and adjacent channel power for fixed TVBDs

### Definitions and limits

#### FCC:

(1) The adjacent channel emission limits apply in the six-megahertz channel immediately adjacent to each white space channel or group of contiguous white space channels in which the white space device is operating.

Fixed devices with 36 dBm EIRP: -42.8 dBm/100 kHz conducted power.

(2) At frequencies beyond the six-megahertz channel immediately adjacent to each white space channel or group of contiguous white space channels in which the white space device is operating the white space device shall meet the requirements of §15.209.

(3) Emission measurements in the adjacent bands shall be performed using a minimum resolution bandwidth of 100 kHz with an average detector. A narrower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 100 kHz.

#### ISED:

A WSD shall operate only at e.i.r.p. power levels at or below the levels established by a WSDB for each specific channel indicated as being available at the WSD's location. For a discrete e.i.r.p. level established by the WSDB, the WSD's band edge and adjacent channel conducted power shall not exceed the limits prescribed in table 5 and table 6 during any time of transmission. If a WSD is operating at an e.i.r.p. below the level established by a WSDB, it is required to meet only the limits that are prescribed for the e.i.r.p. level established by the WSDB.

The power limits in table 5 for a channel e.i.r.p. of 36 dBm or less are based on a maximum antenna gain of 6 dBi; if the antenna gain exceeds 6 dBi, then the band edge and adjacent channel conducted power limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The power limits in table 5 for a channel e.i.r.p. above 36 dBm are based on a maximum antenna gain of 12 dBi; if the antenna gain exceeds 12 dBi, then the band edge and adjacent channel conducted power limit shall be reduced by the amount in dB that the directional gain of the antenna exceeds 12 dBi.

### Test date

Start date June 24, 2025

### Observations, settings and special notes

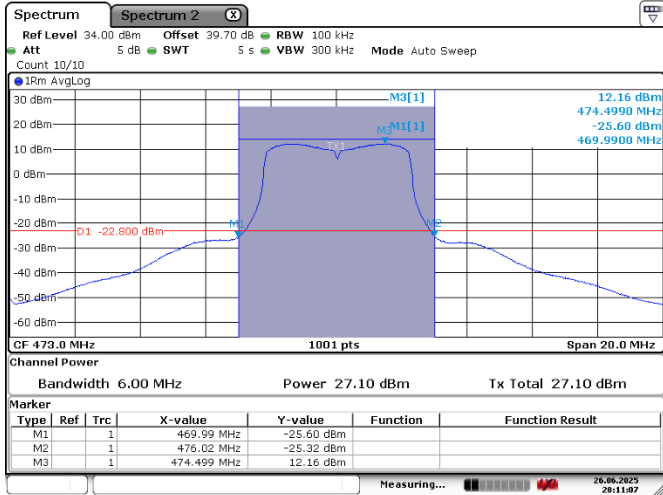
Adjacent channel is located 100 kHz away from the Band edge frequency and they both have the same limit, therefore 'Based edge level' reported in the tables below is the highest measured value between the two.

**Based on the KDB submission guidance for testing of a multiple contiguous channel TV Whitespace device, no reduction of adjacent channel power and band edge power for antennas greater than 6 dBi is required.**

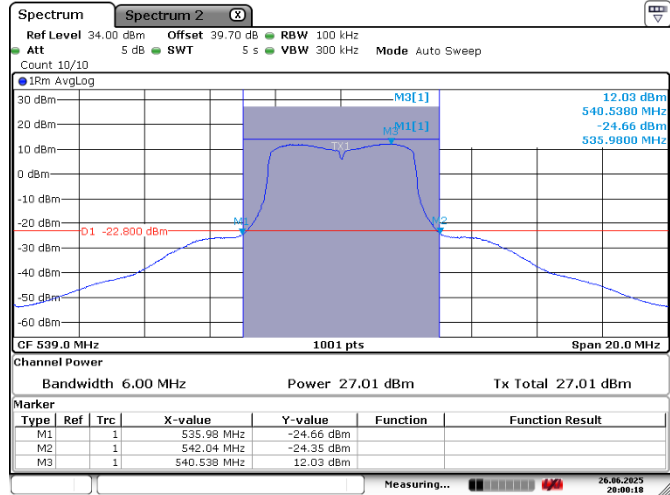
Spectrum analyser settings for adjacent channel power and band edge power:

Resolution bandwidth:	100 kHz
Video bandwidth:	300 kHz
Detector mode:	RMS
Sweep time:	5 s
Trace mode:	Power Averaging over 10 traces

## Test data



Date: 26 JUN 2025 20:11:07



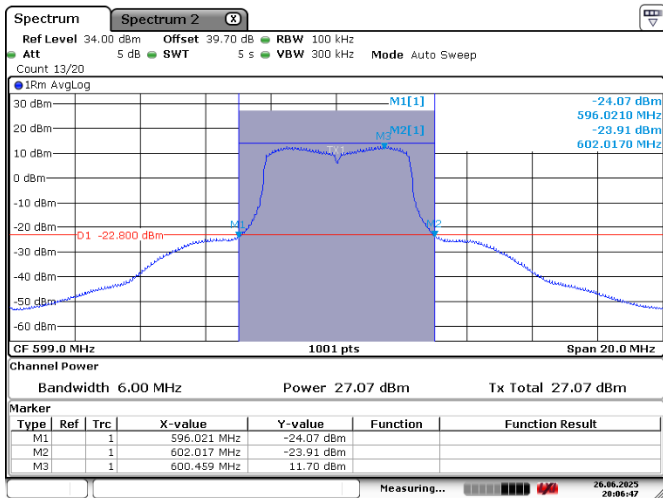
Date: 26 JUN 2025 20:00:18

**Figure 7.7-1: Conducted band edge and adjacent channel emissions [Class A]**

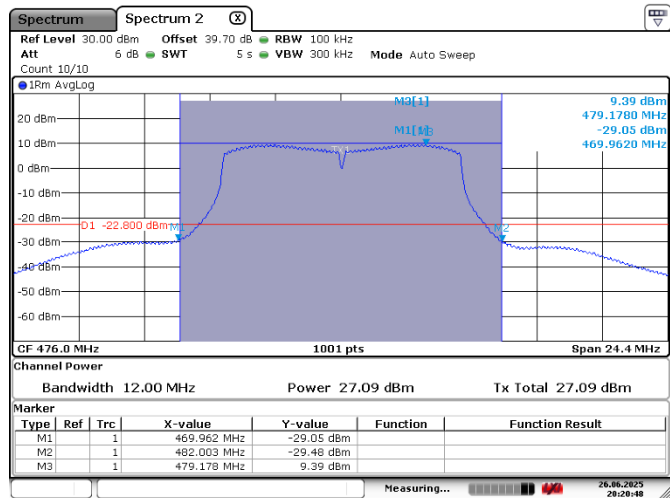
**Figure 7.7-2: Conducted band edge and adjacent channel emissions [Class A]**

Bandwidth: 6 MHz  
Channel: Low  
Frequency: 473 MHz

Bandwidth: 6 MHz  
Channel: Mid  
Frequency: 539 MHz



Date: 26 JUN 2025 20:06:48



Date: 26 JUN 2025 20:20:48

**Figure 7.7-3: Conducted band edge and adjacent channel emissions [Class A]**

**Figure 7.7-4: Conducted band edge and adjacent channel emissions [Class A]**

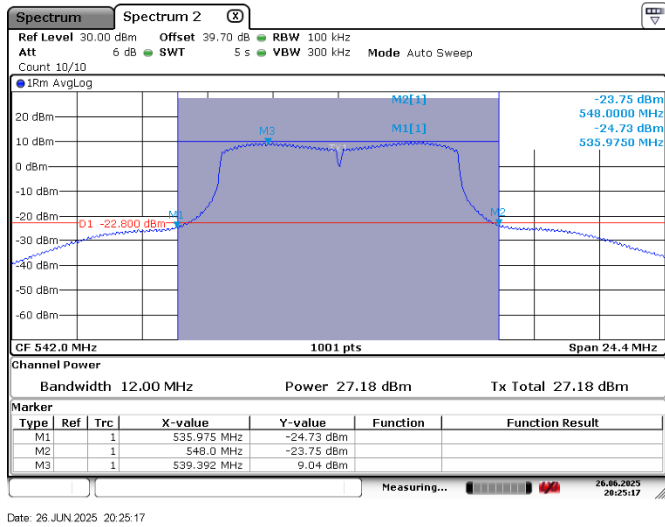
Bandwidth: 6 MHz  
Channel: High  
Frequency: 599 MHz

Bandwidth: 12 MHz  
Channel: Low  
Frequency: 476 MHz



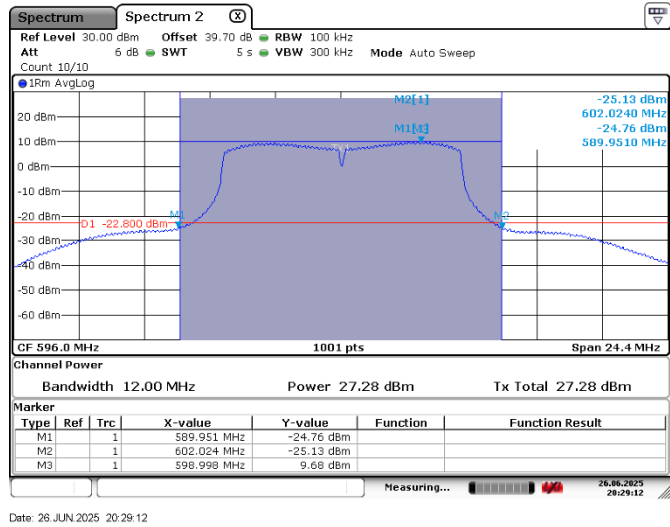
**Section 8**  
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Testing data  
FCC 15.709(d) and RSS-222 11.7.1 Transmitter band edge and adjacent channel power for fixed TVBDs  
FCC Part 15 Subpart H and RSS-222, Issue 4



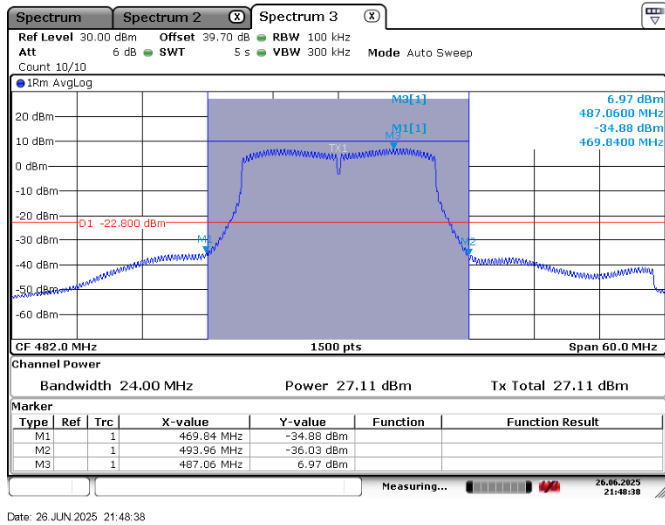
**Figure 7.7-5: Conducted band edge and adjacent channel emissions [Class A]**

Bandwidth: 12 MHz  
Channel: Mid  
Frequency: 542 MHz



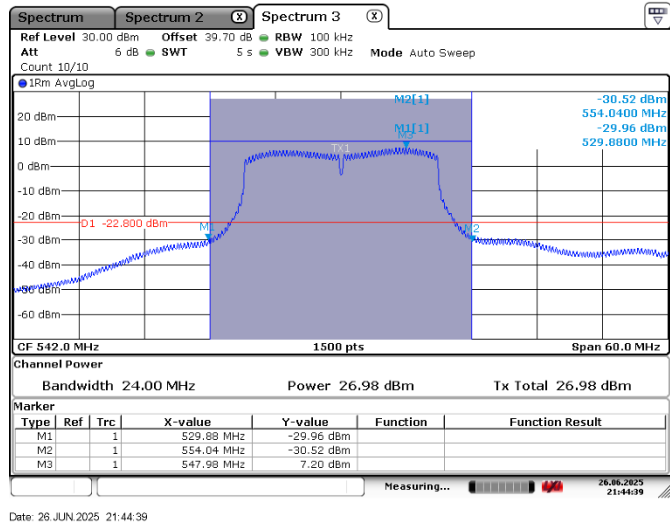
**Figure 7.7-6: Conducted band edge and adjacent channel emissions [Class A]**

Bandwidth: 12 MHz  
Channel: High  
Frequency: 596 MHz



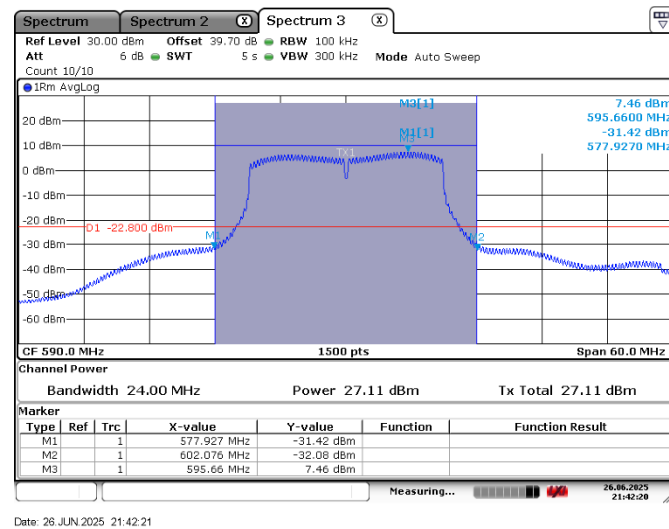
**Figure 7.7-7: Conducted band edge and adjacent channel emissions [Class A]**

Bandwidth: 24 MHz  
Channel: Low  
Frequency: 482 MHz



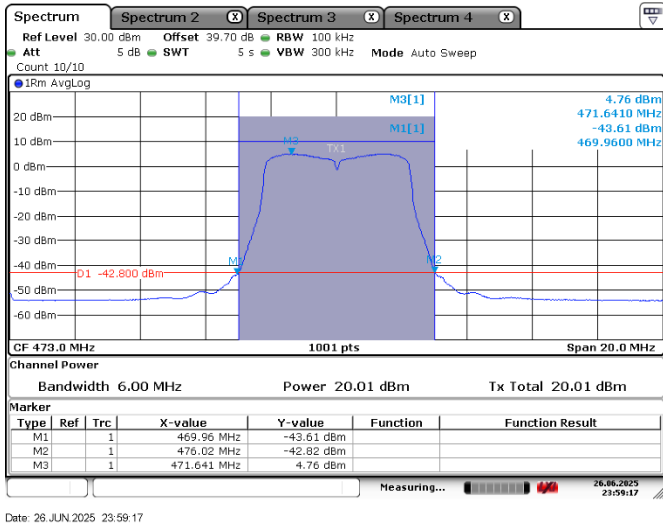
**Figure 7.7-8: Conducted band edge and adjacent channel emissions [Class A]**

Bandwidth: 24 MHz  
Channel: Mid  
Frequency: 542 MHz



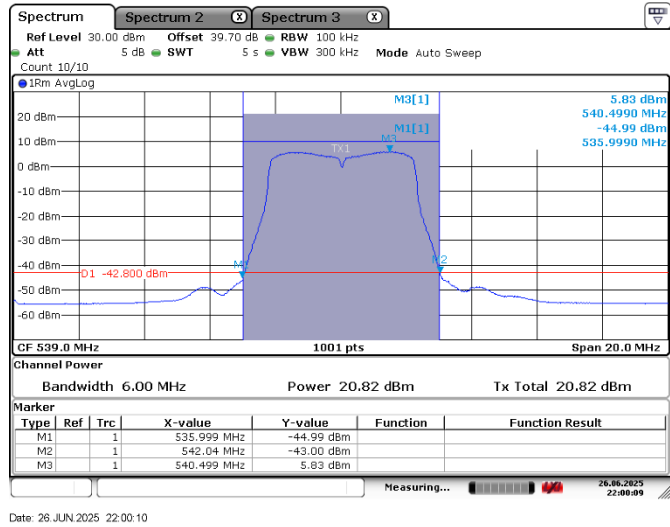
**Figure 7.7-9:** Conducted band edge and adjacent channel emissions [Class A]

Bandwidth: 18 MHz  
 Channel: High  
 Frequency: 590 MHz



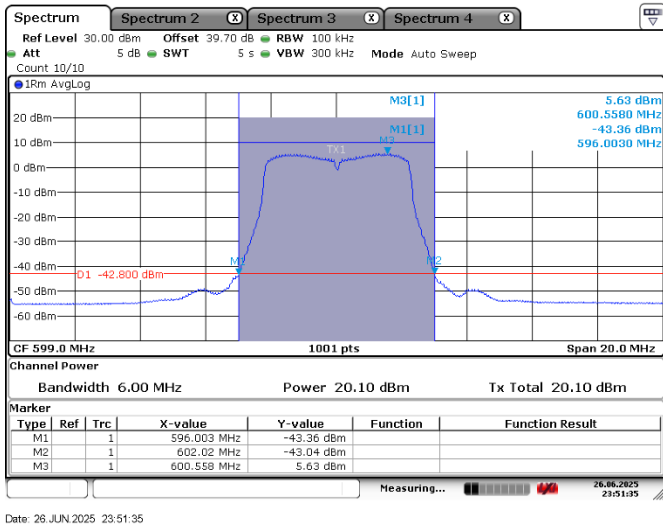
**Figure 7.7-10: Conducted band edge and adjacent channel emissions [Class B]**

Bandwidth: 6 MHz  
Channel: Low  
Frequency: 473 MHz



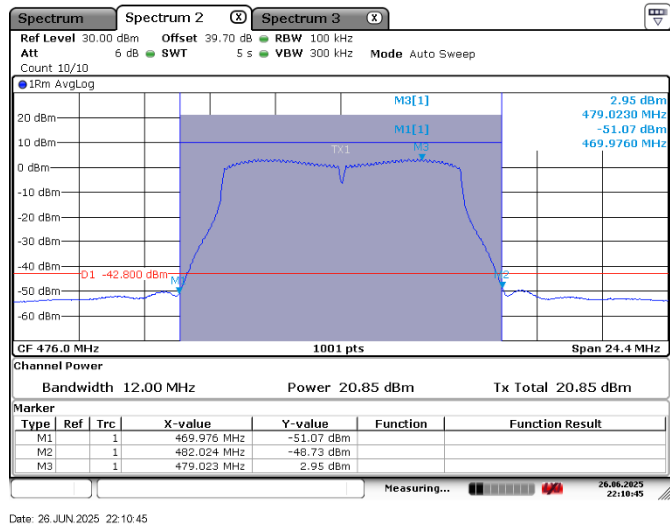
**Figure 7.7-11: Conducted band edge and adjacent channel emissions [Class B]**

Bandwidth: 6 MHz  
Channel: Mid  
Frequency: 539 MHz



**Figure 7.7-12: Conducted band edge and adjacent channel emissions [Class B]**

Bandwidth: 6 MHz  
Channel: High  
Frequency: 599 MHz



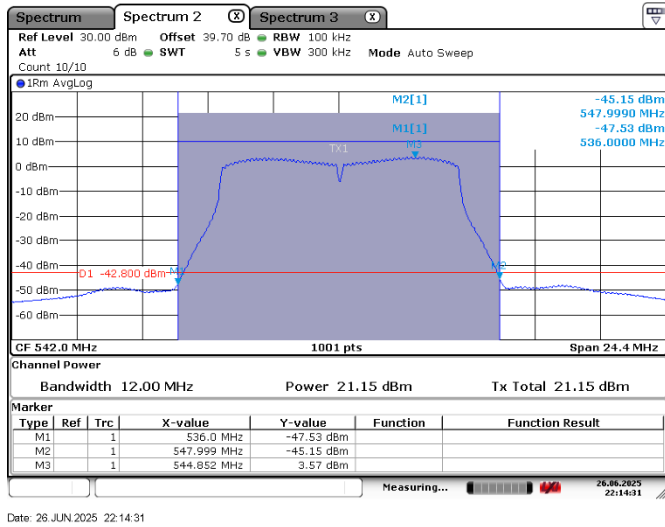
**Figure 7.7-13: Conducted band edge and adjacent channel emissions [Class B]**

Bandwidth: 12 MHz  
Channel: Low  
Frequency: 476 MHz



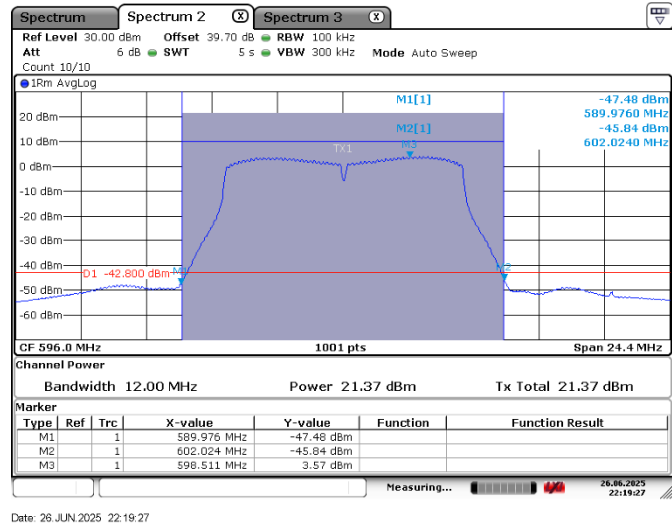
**Section 8**  
**Test name**  
**Specification**

Testing data  
FCC 15.709(d) and RSS-222 11.7.1 Transmitter band edge and adjacent channel power for fixed TVBDs  
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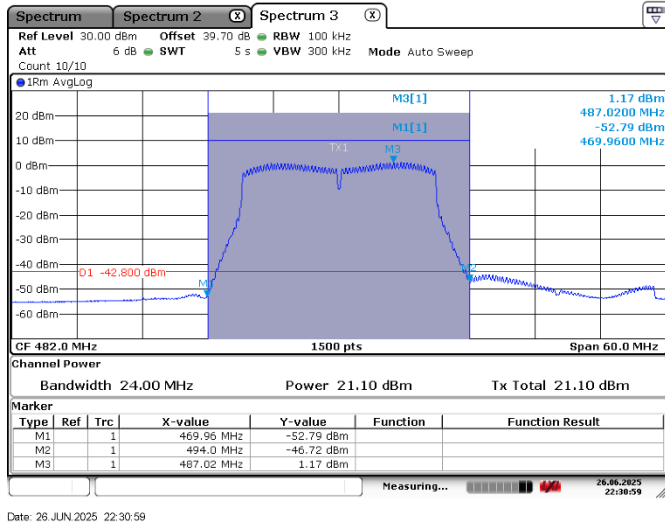
**Figure 7.7-14:** Conducted band edge and adjacent channel emissions [Class B]

Bandwidth: 12 MHz  
Channel: Mid  
Frequency: 542 MHz



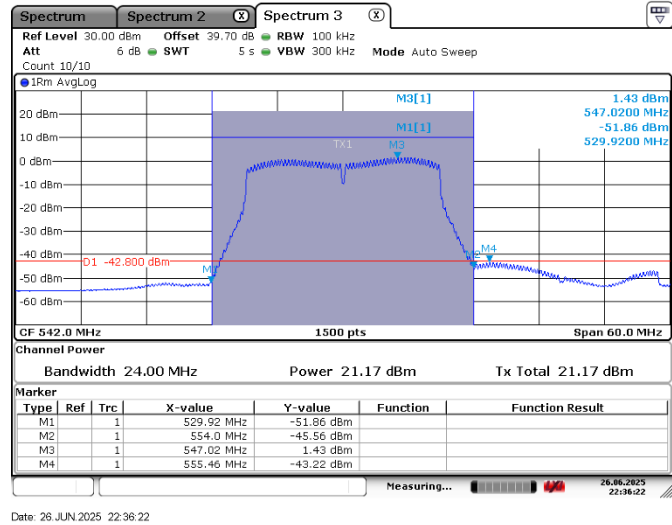
**Figure 7.7-15:** Conducted band edge and adjacent channel emissions [Class B]

Bandwidth: 12 MHz  
Channel: High  
Frequency: 596 MHz



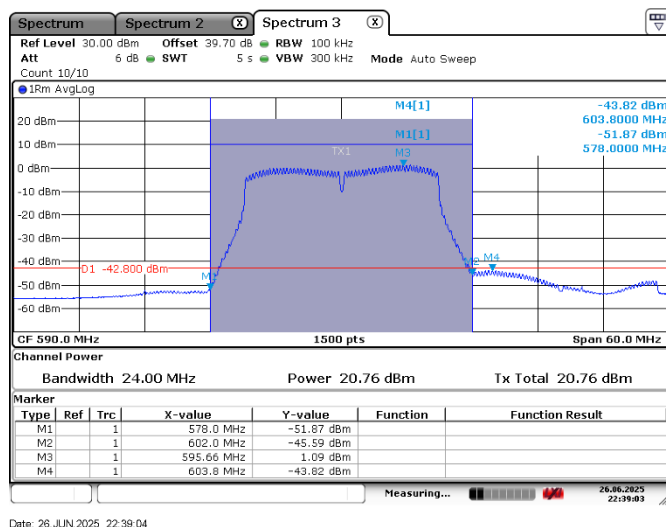
**Figure 7.7-16:** Conducted band edge and adjacent channel emissions [Class B]

Bandwidth: 24 MHz  
Channel: Low  
Frequency: 482 MHz



**Figure 7.7-17:** Conducted band edge and adjacent channel emissions [Class B]

Bandwidth: 24 MHz  
Channel: Mid  
Frequency: 542 MHz



**Figure 7.7-18:** Conducted band edge and adjacent channel emissions [Class B]

Bandwidth: 18 MHz  
 Channel: High  
 Frequency: 590 MHz



**Section 8**  
**Test name**  
**Specification**

Testing data  
FCC 15.709(d) and RSS-222 11.7.1 Transmitter band edge and adjacent channel power for fixed TVBDs  
FCC Part 15 Subpart H and RSS-222, Issue 4

**Table 7.7-1:** Band edge measurements for 6 MHz channel [Class A]

Channel	Frequency, MHz	Band edge level, dBm/100 kHz	Band edge limit, dBm/100 kHz	Margin, dB
Low	469.9	-25.60	-22.80	2.8
Low	476.0	-25.32	-22.80	2.52
Mid	535.9	-24.66	-22.80	1.86
Mid	542.0	-24.35	-22.80	1.55
High	596.0	-24.07	-22.80	1.27
High	602.0	-23.91	-22.80	1.11

**Table 7.7-2:** Band edge measurements for 12 MHz channel [Class A]

Channel	Frequency, MHz	Band edge level, dBm/100 kHz	Band edge limit, dBm/100 kHz	Margin, dB
Low	469.9	-29.05	-22.80	6.25
Low	482.0	-29.48	-22.80	6.68
Mid	535.9	-24.73	-22.80	1.93
Mid	548.0	-23.75	-22.80	0.95
High	589.9	-24.76	-22.80	1.96
High	602.0	-25.13	-22.80	2.33

**Table 7.7-3:** Band edge measurements for 24 MHz channel [Class A]

Channel	Frequency, MHz	Band edge level, dBm/100 kHz	Band edge limit, dBm/100 kHz	Margin, dB
Low	469.9	-34.88	-22.80	12.08
Low	493.9	-36.03	-22.80	13.23
Mid	529.9	-29.96	-22.80	7.16
Mid	554.0	-30.52	-22.80	7.72
High	577.9	-31.42	-22.80	8.62
High	602.0	-32.08	-22.80	9.28





**Section 8**  
**Test name**  
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Testing data  
FCC 15.709(d) and RSS-222 11.7.1 Transmitter band edge and adjacent channel power for fixed TVBDs  
FCC Part 15 Subpart H and RSS-222, Issue 4

**Table 7.7-4:** Band edge measurements for 6 MHz channel [Class B]

Channel	Frequency, MHz	Band edge level, dBm/100 kHz	Band edge limit, dBm/100 kHz	Margin, dB
Low	469.9	-43.61	-42.80	0.81
Low	476.0	-42.82	-42.80	0.02
Mid	535.9	-44.99	-42.80	2.19
Mid	542.0	-43.00	-42.80	0.20
High	596.0	-43.36	-42.80	0.56
High	602.0	-43.04	-42.80	0.24

**Table 7.7-5:** Band edge measurements for 12 MHz channel [Class B]

Channel	Frequency, MHz	Band edge level, dBm/100 kHz	Band edge limit, dBm/100 kHz	Margin, dB
Low	469.9	-51.07	-42.80	8.27
Low	482.0	-48.73	-42.80	5.93
Mid	536.0	-47.53	-42.80	4.73
Mid	547.9	-45.15	-42.80	2.35
High	589.9	-47.48	-42.80	4.68
High	602.0	-45.84	-42.80	3.04

**Table 7.7-6:** Band edge measurements for 24 MHz channel [Class B]

Channel	Frequency, MHz	Band edge level, dBm/100 kHz	Band edge limit, dBm/100 kHz	Margin, dB
Low	469.9	-52.79	-42.80	9.99
Low	494.0	-46.72	-42.80	3.92
Mid	529.9	-51.86	-42.80	9.06
Mid	554.0	-45.56	-42.80	2.76
High	578.0	-51.87	-42.80	9.07
High	602.0	-45.59	-42.80	2.79

## 7.8 FCC 15.709(d)(2) and RSS-222 11.7.2 Radiated spurious emissions beyond the television channels

### Definitions and limits

**FCC:**

At frequencies beyond the television channels immediately adjacent to the channel in which the TVBD is operating, the radiated emissions from TVBDs shall meet the requirements of § 15.209.

**ISED:**

For frequencies separated by more than 6 MHz from the edge of a WSD's channel of operation, the WSD's unwanted emissions shall comply with the general field strengths prescribed in RSS-Gen. The unwanted emissions shall be measured according to the RSS-Gen requirements. For WSDs using channel bonding to operate on multiple contiguous 6 MHz channels, this limit shall apply for frequencies separated by more than 6 MHz from the edge of the group of contiguous channels. Beyond the adjacent channel emissions, the emission limits of RSS-Gen apply. See RSS-Gen for guidance on performing those measurements

**Table 7.8-1:** FCC §15.209 and RSS-Gen Radiated emission limits

Frequency, MHz	Field strength of emissions		Measurement distance
	µV/m	dBµV/m	m
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

### Test date

Start date July 21, 2025

### Observations, settings and special notes

The spectrum was searched from 30 MHz to the 7 GHz.  
Radiated measurements were performed at a distance of 3 m.

Spectrum analyser settings for radiated measurements below 1 GHz:

Resolution bandwidth:	120 kHz
Video bandwidth:	300 kHz
Detector mode:	Peak or Quasi-peak
Trace mode:	Max Hold

Spectrum analyser settings for peak radiated measurements above 1 GHz:

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

Spectrum analyser settings for average radiated measurements above 1 GHz:

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

Test data

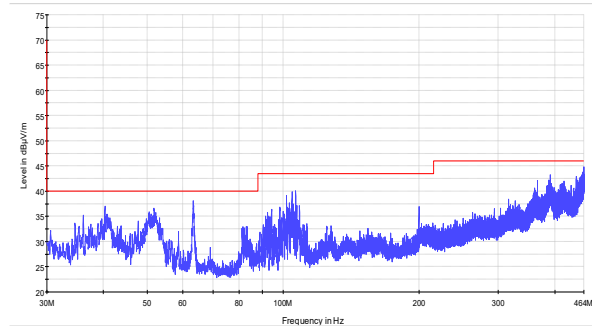


Figure 7.8-1: Radiated spurious emissions within 30–464 MHz for 6 MHz low channel

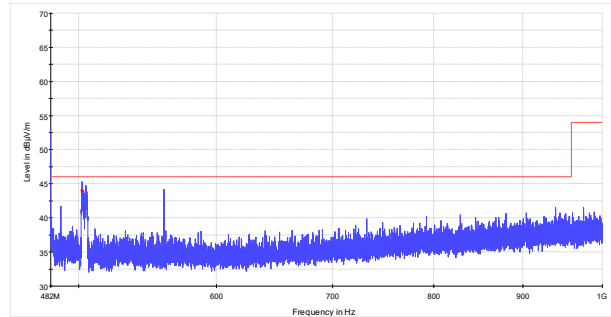


Figure 7.8-2: Radiated spurious emissions within 482–1000 MHz for 6 MHz low channel

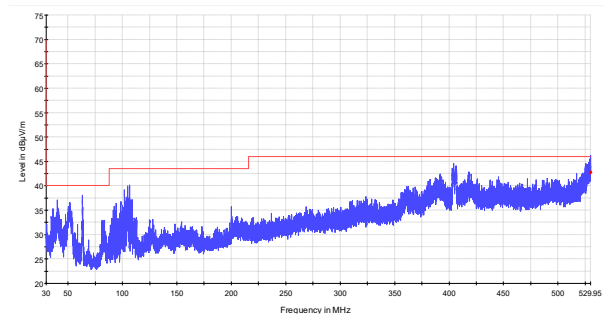


Figure 7.8-3: Radiated spurious emissions within 30–530 MHz for 6 MHz mid channel

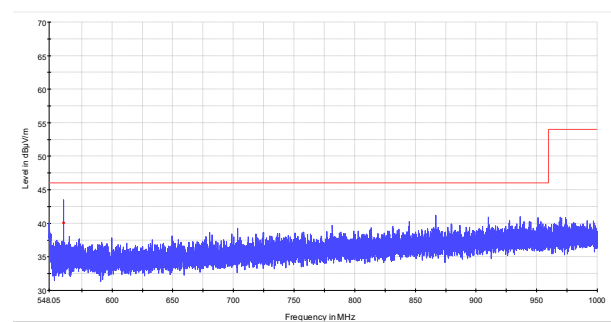


Figure 7.8-4: Radiated spurious emissions within 548–1000 MHz for 6 MHz mid channel

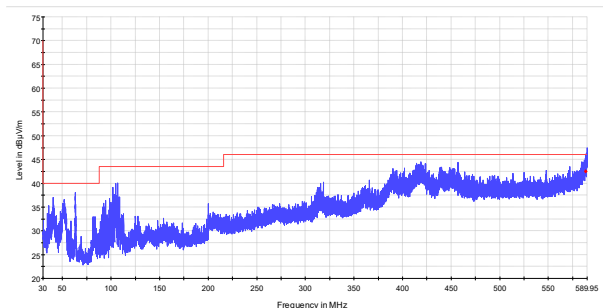


Figure 7.8-5: Radiated spurious emissions within 30–590 MHz for 6 MHz high channel

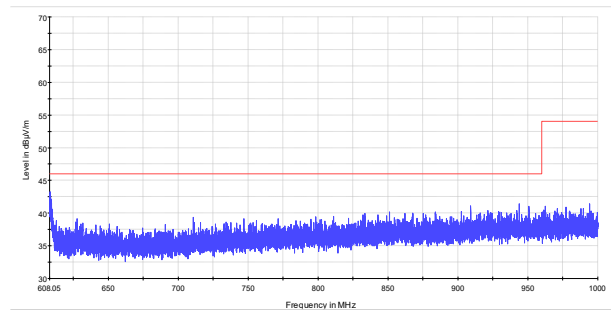


Figure 7.8-6: Radiated spurious emissions within 608–1000 MHz for 6 MHz high channel

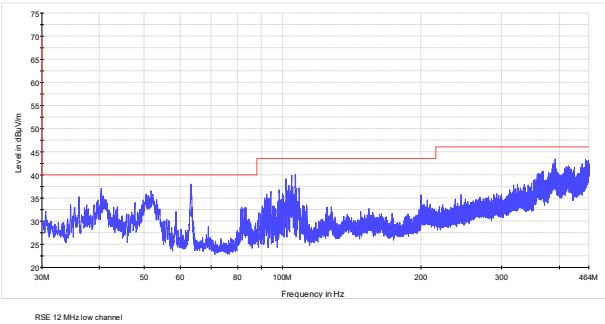


Figure 7.8-7: Radiated spurious emissions within 30–464 MHz for 12 MHz low channel

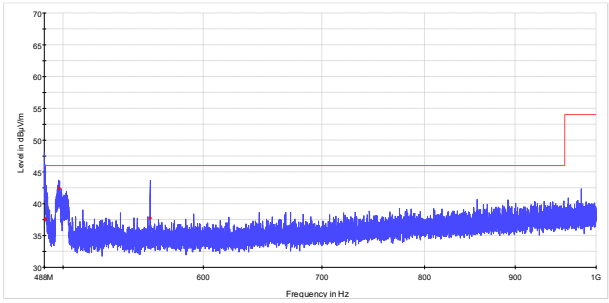


Figure 7.8-8: Radiated spurious emissions within 488–1000 MHz for 12 MHz low channel

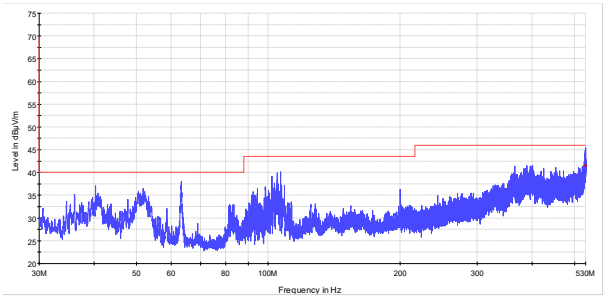


Figure 7.8-9: Radiated spurious emissions within 30–530 MHz for 12 MHz mid channel

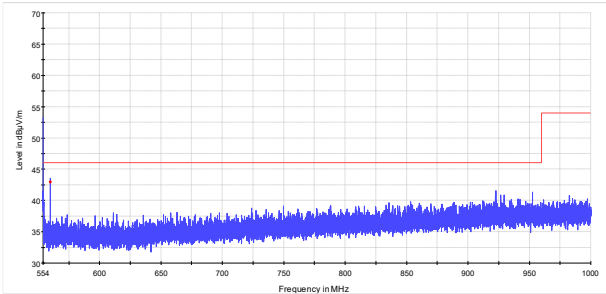


Figure 7.8-10: Radiated spurious emissions within 554–1000 MHz for 12 MHz mid channel

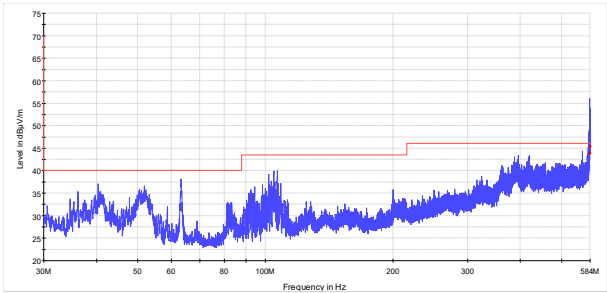


Figure 7.8-11: Radiated spurious emissions within 30–584 MHz for 12 MHz high channel

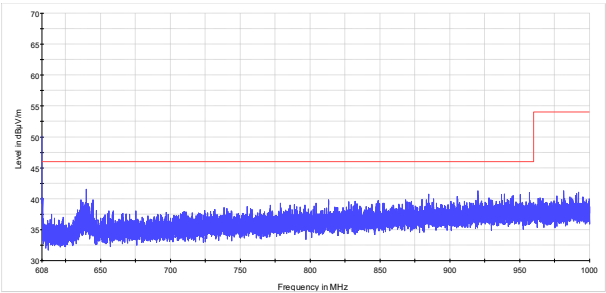


Figure 7.8-12: Radiated spurious emissions within 608–1000 MHz for 12 MHz high channel

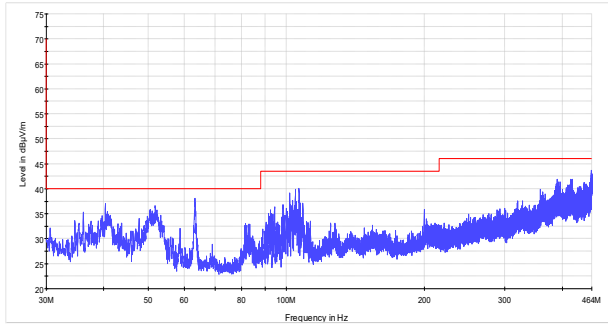


Figure 7.8-13: Radiated spurious emissions within 30–464 MHz for 24 MHz low channel

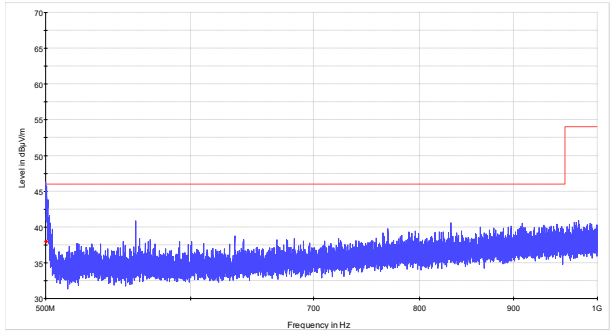


Figure 7.8-14: Radiated spurious emissions within 500–1000 MHz for 24 MHz low channel

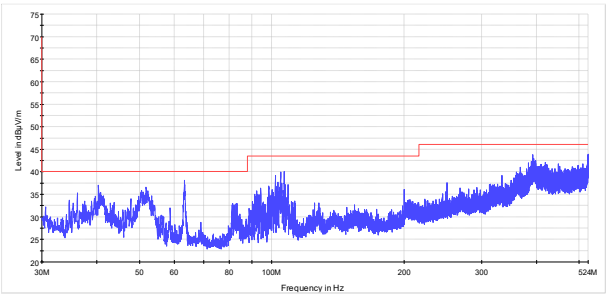


Figure 7.8-15: Radiated spurious emissions within 30–524 MHz for 24 MHz mid channel

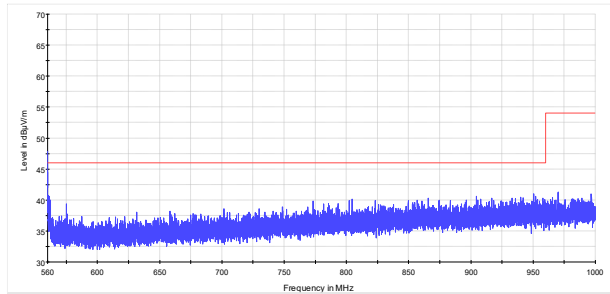


Figure 7.8-16: Radiated spurious emissions within 560–1000 MHz for 24 MHz mid channel

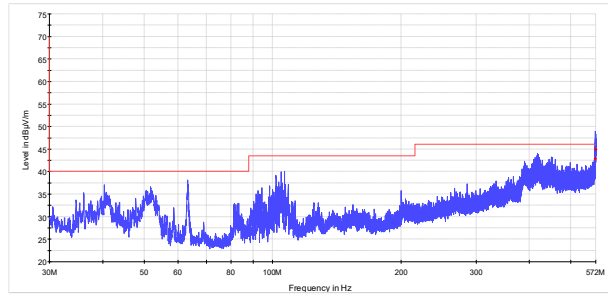


Figure 7.8-17: Radiated spurious emissions within 30–572 MHz for 24 MHz high channel

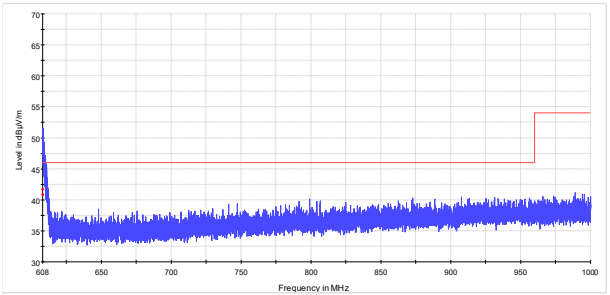
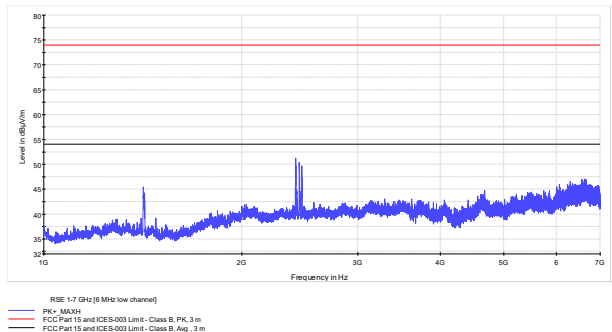


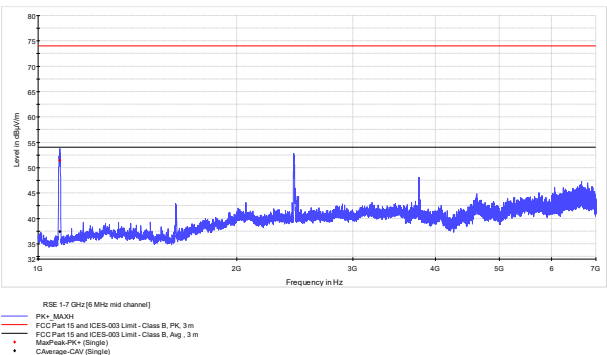
Figure 7.8-18: Radiated spurious emissions within 608–1000 MHz for 24 MHz high channel

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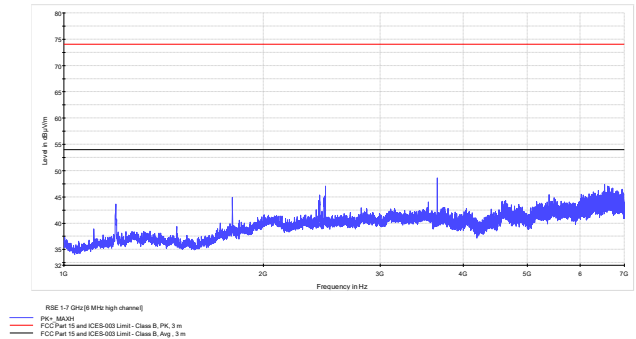
Testing data  
FCC 15.709(d)(2) and RSS-222 11.7.2 Field Strength Emissions in the band 602–620 MHz  
FCC Part 15 Subpart H and RSS-222, Issue 4



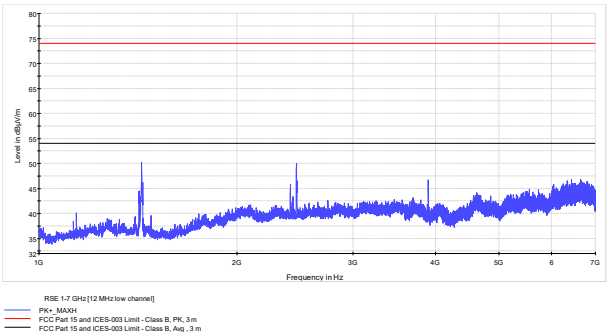
**Figure 7.8-19:** Radiated spurious emissions within 1–7 GHz for 6 MHz low channel



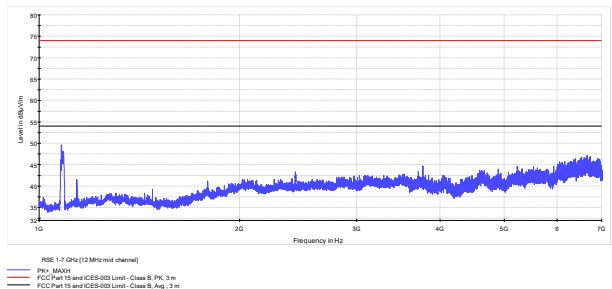
**Figure 7.8-20:** Radiated spurious emissions within 1–7 GHz for 6 MHz mid channel



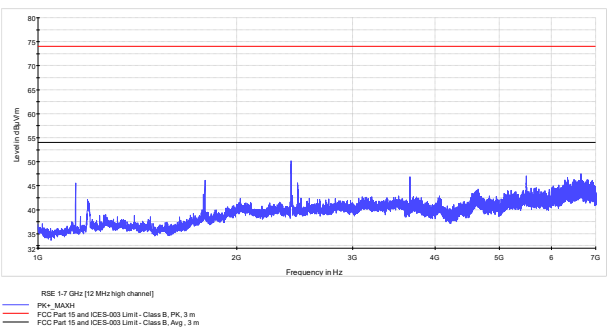
**Figure 7.8-21:** Radiated spurious emissions within 1–7 GHz for 6 MHz high channel



**Figure 7.8-22:** Radiated spurious emissions within 1–7 GHz for 12 MHz low channel



**Figure 7.8-23:** Radiated spurious emissions within 1–7 GHz for 12 MHz mid channel



**Figure 7.8-24:** Radiated spurious emissions within 1–7 GHz for 12 MHz high channel

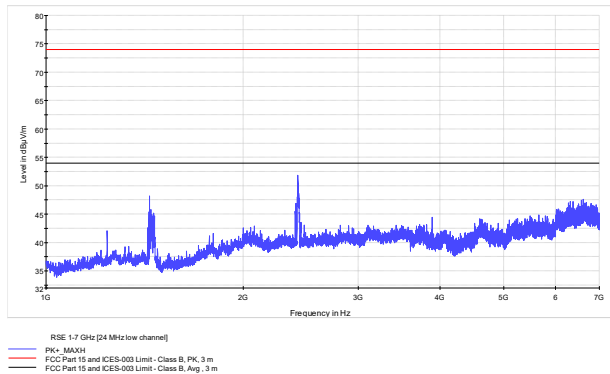


Figure 7.8-25: Radiated spurious emissions within 1–7 GHz for 24 MHz low channel

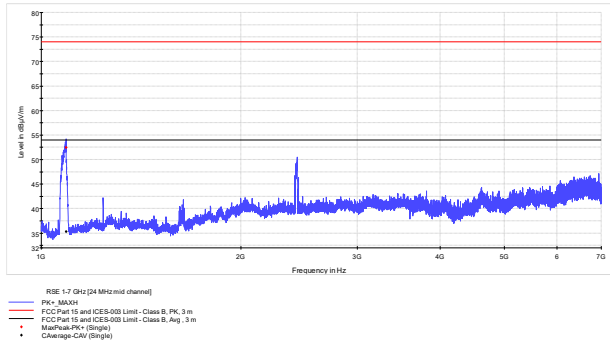


Figure 7.8-26: Radiated spurious emissions within 1–7 GHz for 24 MHz mid channel

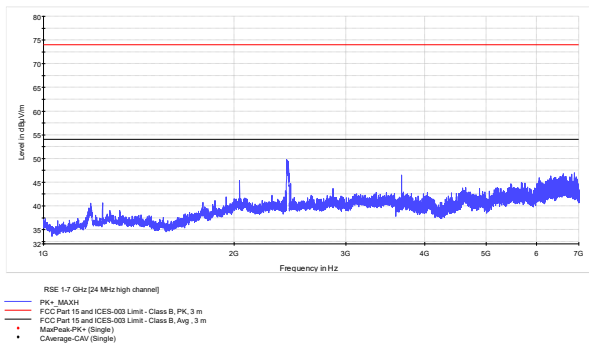
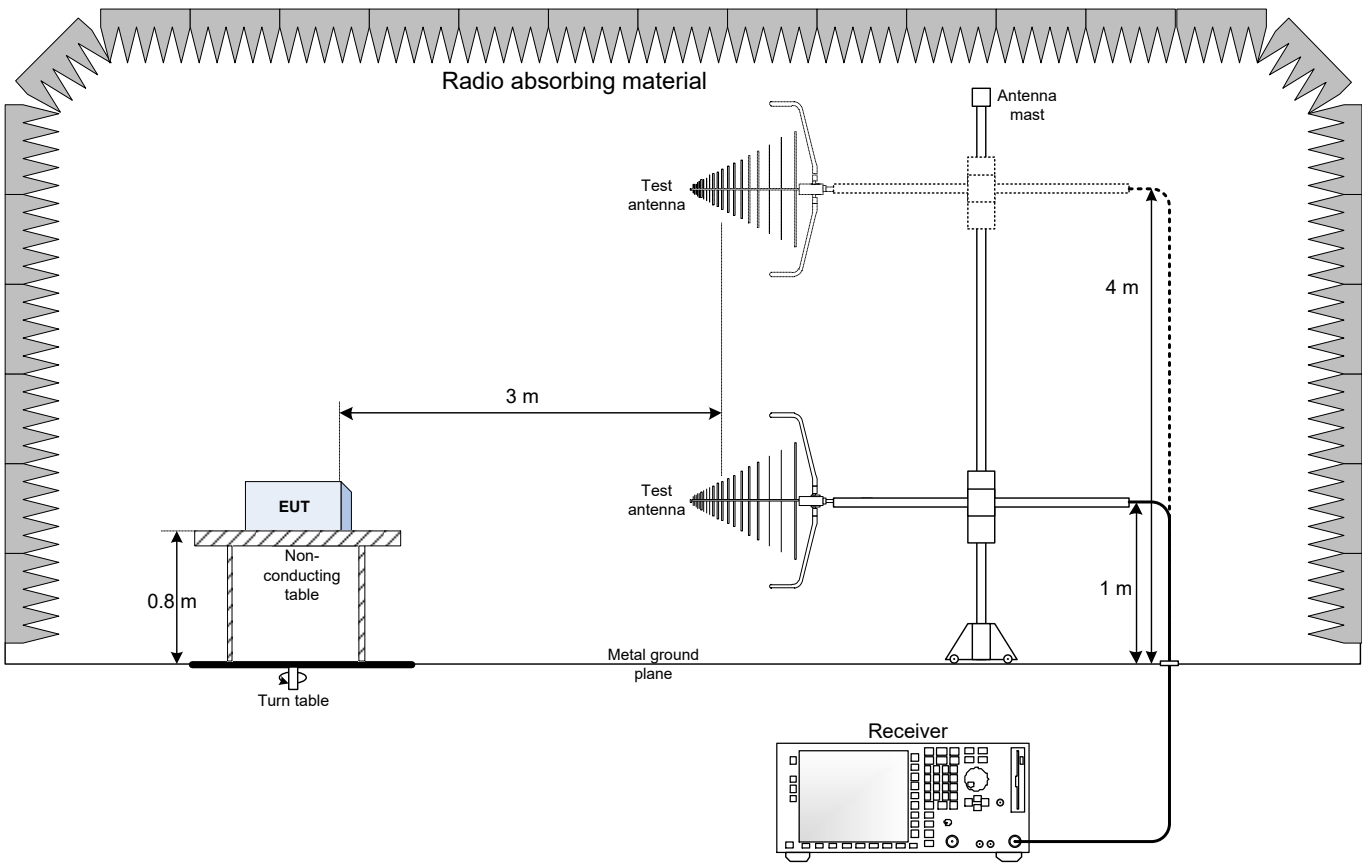


Figure 7.8-27: Radiated spurious emissions within 1–7 GHz for 24 MHz high channel

# Section 8. Block diagrams and photos of test set-ups

## 8.1 Radiated emissions set-up for frequencies below 1 GHz





8.2 Radiated emissions set-up for frequencies above 1 GHz

