

# FCC Radio Test Report

**FCC ID** : QXO-AP4020FX  
**Equipment** : Access Point  
**Brand Name** : Extreme Networks  
**Model Name** : AP4020FX  
**Applicant** : Extreme Networks, Inc.  
2121 RDU Center Drive Morrisville North  
Carolina United States 27560  
**Manufacturer** : Extreme Networks, Inc.  
2121 RDU Center Drive Morrisville North  
Carolina United States 27560  
**Standard** : 47 CFR FCC Part 15.247

The product was received on Jan. 20, 2025, and testing was started from Mar. 05, 2025 and completed on Jun. 19, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Jackson Tsai

**SPORTON INTERNATIONAL INC. Hsinhua Laboratory**

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



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### Summary of Test Result

Report Clause	Ref. Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.207	AC Power-line Conducted Emissions	PASS	-
3.2	15.247(a)	DTS Bandwidth	PASS	-
3.3	15.247(b)	Maximum Conducted Output Power	PASS	-
3.4	15.247(e)	Power Spectral Density	PASS	-
3.5	15.247(d)	Emissions in Non-restricted Frequency Bands	PASS	-
3.6	15.247(d)	Emissions in Restricted Frequency Bands	PASS	-

<b>Declaration of Conformity:</b>
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
<b>Comments and explanations:</b>
The EUT supports beamforming and CDD modes, and the CDD mode is the worst case. Therefore, all test items are evaluated in the report. The beamforming mode only evaluates the output power.

Reviewed by: Barry Hsiao

Report Producer: Michelle Tsai



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), VHT20, ax(HEW20), be(EHT20)	2412-2462	1-11 [11]

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_1T1S

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11be EHT20	20	1TX

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_2T1S

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11be EHT20	20	2TX

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_2T2S

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11be EHT20	20	2TX

#### Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_1T1S

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11be EHT20	20	1TX

#### Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_2T1S

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11be EHT20	20	2TX

#### Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_2T2S

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11be EHT20	20	2TX



**Non-Beamforming\_Radio 1\_Panel Antenna\_1T1S**

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	1TX
2.4-2.4835GHz	802.11g	20	1TX
2.4-2.4835GHz	802.11be EHT20	20	1TX

**Non-Beamforming\_Radio 1\_Panel Antenna\_2T1S**

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11be EHT20	20	2TX

**Non-Beamforming\_Radio 1\_Panel Antenna\_2T2S**

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11be EHT20	20	2TX

**Beamforming\_Radio 1\_Dipole Antenna**

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11be EHT20-BF	20	2TX

**Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna**

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11be EHT20-BF	20	2TX

**Beamforming\_Radio 1\_Panel Antenna**

Band	Mode	BWch	Nant
2.4-2.4835GHz	802.11be EHT20-BF	20	2TX

**Non-Beamforming\_Radio 1\_Scan**

Band	Mode	BWch	Nant
2.4-2.4835GHz	b20	20	1TX
2.4-2.4835GHz	g20	20	1TX

Note:

- ◆ 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- ◆ 11g, HT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- ◆ VHT20 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- ◆ HEW20 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- ◆ EHT20 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM modulation.
- ◆ BWch is the nominal channel bandwidth.
- ◆ Evaluated EHT20 mode only due to the similar modulation. The power setting of HT20/VHT20/HEW20 mode are the same or lower than EHT20.



1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	AWAN	AW158SM002	Dipole	Reverse SMA	2.4G+5G	Radio 1_2.4G
						Radio 2_5G
2	AWAN	AW158SM002	Dipole	Reverse SMA	2.4G+5G	Radio 1_2.4G
						Radio 2_5G
3	AWAN	AW158SM002	Dipole	Reverse SMA	5G	Radio 3_5G
4	AWAN	AW158SM002	Dipole	Reverse SMA	5G+BT	Radio 3_5G
						BLE_chain 0_E
5	AWAN	AW158SM002	Dipole	Reverse SMA	6G	Radio 3_6G
6	AWAN	AW158SM002	Dipole	Reverse SMA	6G	Radio 3_6G
7	Sercomm	6172005QWA03	PIFA	I-Pex	2.4G+5G+6G	Radio 1_Scan
8	Sercomm	6172005QWA08	PIFA	I-Pex	BT	BLE_chain 0_I
9	Sercomm	6172005QWA09	PIFA	I-Pex	BT	BLE_chain 1_H
10	Sercomm	6172005QWA10	PIFA	I-Pex	BT	BLE_chain 1_V
11	Sercomm	6172005QWA11	PIFA	I-Pex	GPS	N/A
12	Extreme	WX6PB6508R	Dual-Polarized MIMO Panel	Reverse SMA	2.4G+5G+6G+BT	Radio 1_2.4G
						Radio 2_5G
						Radio 3_5G
						Radio 3_6G
						BLE_chain 0_E
13	Signal Plus	61723018SG	Panel	Reverse SMA	2.4G+5G+6G+BT	Radio 1_2.4G
						Radio 2_5G
						Radio 3_5G
						Radio 3_6G
						BLE_chain 0_E



Ant.	Port	Gain (dBi)													
		2.4G	5G				6G				BT0-E	BT0-I	BT1-H	BT1-V	GPS
			UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8					
1	1	2.28	5.59	5.59	5.61	5.53	-	-	-	-	-	-	-	-	-
2	2	2.28	5.59	5.59	5.61	5.53	-	-	-	-	-	-	-	-	-
3	1	-	5.59	5.59	-	-	-	-	-	-	-	-	-	-	-
4	2	-	5.59	5.59	-	-	-	-	-	-	-	2.28	-	-	-
5	1	-	-	-	-	-	5.56	5.24	5.32	5.21	-	-	-	-	-
6	2	-	-	-	-	-	5.56	5.24	5.32	5.21	-	-	-	-	-
7	1	4.5	5	5	5	5	5	5	5	5	-	-	-	-	-
8	1	-	-	-	-	-	-	-	-	-	-	4.9	-	-	-
9	1	-	-	-	-	-	-	-	-	-	-	-	4.1	-	-
10	2	-	-	-	-	-	-	-	-	-	-	-	-	3.7	-
11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8
12-1	1	8	8	8	8	8	-	-	-	-	-	-	-	-	-
12-2	2	8	8	8	8	8	-	-	-	-	-	-	-	-	-
12-3	1	-	8	8	-	-	-	-	-	-	-	-	-	-	-
12-4	2	-	8	8	-	-	-	-	-	-	-	8	-	-	-
12-5	1	-	-	-	-	-	8	8	8	8	-	-	-	-	-
12-6	2	-	-	-	-	-	8	8	8	8	-	-	-	-	-
13-1	1	12.52	12.19	12.18	12.42	12.36	-	-	-	-	-	-	-	-	-
13-2	2	12.52	12.19	12.18	12.42	12.36	-	-	-	-	-	-	-	-	-
13-3	1	-	12.19	12.18	-	-	-	-	-	-	-	-	-	-	-
13-4	2	-	12.19	12.18	-	-	-	-	-	-	-	12.52	-	-	-
13-5	1	-	-	-	-	-	12.46	11.8	12.45	12.41	-	-	-	-	-
13-6	2	-	-	-	-	-	12.46	11.8	12.45	12.41	-	-	-	-	-

Note 1: The EUT has thirteen antennas.

**For 2.4GHz function:**

For IEEE 802.11 b/g/n/VHT/ax/be mode (1TX/2RX) (Radio 1)

Ant. 1 (port 1) could transmit/receive.

Ant. 12-1 (port 1) could transmit/receive.

Ant. 13-1 (port 1) could transmit/receive

For IEEE 802.11 b/g/n/VHT/ax/be mode (2TX/2RX) (Radio 1)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

Ant. 12-1 (port 1) and Ant. 12-2 (port 2) could transmit/receive simultaneously.

Ant. 13-1 (port 1) and Ant. 13-2 (port 2) could transmit/receive simultaneously.

For b20, g20 mode (1TX/1RX) (Radio 1\_Scan)

Ant. 7 (port 1) could transmit/receive.





**For 5GHz function:**

For IEEE 802.11 a/n/ac/ax/be mode (1TX/2RX) (Radio 2)

Ant. 1 (port 1) could transmit/receive.

Ant. 12-1 (port 1) could transmit/receive.

Ant. 13-1 (port 1) could transmit/receive.

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX) (Radio 2)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

Ant. 12-1 (port 1) and Ant. 12-2 (port 2) could transmit/receive simultaneously.

Ant. 13-1 (port 1) and Ant. 13-2 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 a/n/ac/ax/be mode (1TX/2RX) (Radio 3)

Ant. 3 (port 1) could transmit/receive.

Ant. 12-3 (port 1) could transmit/receive.

Ant. 13-3 (port 1) could transmit/receive.

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX) (Radio 3)

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

Ant. 12-3 (port 1) and Ant. 12-4 (port 2) could transmit/receive simultaneously.

Ant. 13-3 (port 1) and Ant. 13-4 (port 2) could transmit/receive simultaneously.

For a20, a40, a80, a160 (1TX/1RX) (Radio 1\_Scan)

Ant. 7 (port 1) could transmit/receive.

**For BT function:**

For IEEE 802.15.1 Bluetooth mode (1TX/1RX) (Chain 0)

Ant. 4 (port 2) could transmit/receive.

Ant. 8 (port 1) could transmit/receive.

Ant. 12-4 (port 2) could transmit/receive.

Ant. 13-4 (port 2) could transmit/receive.

For IEEE 802.15.1 Bluetooth mode (1TX/2RX) (Chain 1)

Ant. 9 (port 1) or Ant. 10 (port 2) could transmit/receive

Support diversity function and pre-tested on each single chain, the worst case was Ant. 9 (port 1) and it was recorded in this test report.

Note 2: Directional gain information

	Maximum Output Power	Power Spectral Density
<b>Non-BF</b>	Directional gain = Max.gain + array gain. For power measurements on IEEE 802.11 devices Array Gain = 0 dB (i.e., no array gain) for N ANT ≤ 4	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{IS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$
<b>BF</b>	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{IS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$	$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{IS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$



1.1.3 EUT Information

Operational Condition			
EUT Power Type	From AC Adapter / PoE		
Beamforming Function	<input checked="" type="checkbox"/> With beamforming	<input type="checkbox"/> Without beamforming	
Resource Unit	<input checked="" type="checkbox"/> Full RU	<input type="checkbox"/> Partial RU	
Type of EUT			
<input checked="" type="checkbox"/>	Stand-alone		
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device)		
	Combined Equipment - Brand Name / Model No.:	...	
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems)		
	Host System - Brand Name / Model No.:	...	
<input type="checkbox"/>	Other:		



### 1.1.4 Mode Test Duty Cycle

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_1T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11b_Nss1,(1Mbps)_1TX	0.990	0.04	3.194m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_1TX	0.989	0.05	3.009m	10Hz (DC>=0.98)
802.11be EHT20_Nss1,(MCS0)_1TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_2T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11b_Nss1,(1Mbps)_2TX	0.988	0.05	3.194m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_2TX	0.989	0.05	3.009m	10Hz (DC>=0.98)
802.11be EHT20_Nss1,(MCS0)_2TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_2T2S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11be EHT20_Nss2,(MCS0)_2TX	0.988	0.05	2.852m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

#### Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_1T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11b_Nss1,(1Mbps)_1TX	0.990	0.04	3.194m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_1TX	0.989	0.05	3.009m	10Hz (DC>=0.98)
802.11be EHT20_Nss1,(MCS0)_1TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

#### Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_2T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11b_Nss1,(1Mbps)_2TX	0.988	0.05	3.194m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_2TX	0.989	0.05	3.009m	10Hz (DC>=0.98)
802.11be EHT20_Nss1,(MCS0)_2TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.



Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_2T2S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11be EHT20_Nss2,(MCS0)_2TX	0.988	0.05	2.852m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Non-Beamforming\_Radio 1\_Panel Antenna\_1T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11b_Nss1,(1Mbps)_1TX	0.989	0.05	3.194m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_1TX	0.989	0.05	3.009m	10Hz (DC>=0.98)
802.11be EHT20_Nss1,(MCS0)_1TX	0.987	0.06	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Non-Beamforming\_Radio 1\_Panel Antenna\_2T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11b_Nss1,(1Mbps)_2TX	0.990	0.04	3.194m	10Hz (DC>=0.98)
802.11g_Nss1,(6Mbps)_2TX	0.989	0.05	3.009m	10Hz (DC>=0.98)
802.11be EHT20_Nss1,(MCS0)_2TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Non-Beamforming\_Radio 1\_Panel Antenna\_2T2S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11be EHT20_Nss2,(MCS0)_2TX	0.987	0.06	2.852m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Beamforming\_Radio 1\_Dipole Antenna

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11be EHT20-BF_Nss1,(MCS0)_2TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11be EHT20-BF_Nss1,(MCS0)_2TX	0.988	0.05	2.886m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.



**Beamforming\_Radio 1\_Panel Antenna**

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
802.11be EHT20-BF_Nss1,(MCS0)_2TX	0.988	0.05	2.866m	10Hz (DC>=0.98)

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

**Non-Beamforming\_Radio 1\_Scan**

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
b20_Nss1,(1Mbps)_1TX	0.914	0.39	8.418m	200
g20_Nss1,(6Mbps)_1TX	0.692	1.6	1.398m	1k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

## 1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ◆ 47 CFR FCC Part 15
- ◆ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF:

- ◆ KDB 558074 D01 v05r02
- ◆ KDB 662911 D01 v02r01
- ◆ KDB 414788 D01 v01r01

## 1.3 Testing Location Information

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
<input checked="" type="checkbox"/>	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)		
		TEL: 886-3-327-3456	FAX: 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
AC Conduction	CO04-HY	Lego Lin	22.5~23.2°C / 52~64%	17/Jun/2025
Radiated (Co-location)	03CH02-HY	Vasari Huang	20.9~23.1°C / 57~65%	17/Jun/2025~19/Jun/2025
<input checked="" type="checkbox"/>	Wenhua 3rd. (TAF: 3785)	ADD: No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)		
		TEL: 886-3-327-0868		
Test site Designation No. TW0036 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH06-HY	Johnny Yu	21.6~22.3°C / 52~55%	17/Mar/2025~09/May/2025
Radiated (Other Antenna)	03CH25-HY	Henry Ho	20.2~22.1°C / 55~60%	05/Mar/2025~15/Mar/2025
Radiated (Panel Antenna)	03CH25-HY	Henry Ho	21.1~22.8°C / 52~62%	26/Apr/2025~08/May/2025
<input checked="" type="checkbox"/>	Wen 33rd. St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
		TEL: 886-3-318-0787	FAX: 886-3-318-0287	
Test site Designation No. TW0008 with FCC.				
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated (Radio 1_Scan)	03CH09-HY	Edward Wang	19.2~21.1°C / 55~63%	06/Mar/2025~15/Mar/2025



### 1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
AC Power-line Conducted Emissions	4.53 dB	Confidence levels of 95%
Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Emissions in Non-restricted Frequency Bands	0.14 dB	Confidence levels of 95%
Emissions in Restricted Frequency Bands	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%



## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

Test Software Version	accessMTool_REL_3_3_0_4
-----------------------	-------------------------

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_1T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	80
2437MHz	80
2457MHz	78
2462MHz	76
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	78
2417MHz	78
2437MHz	80
2457MHz	77
2462MHz	74
802.11be EHT20_Nss1,(MCS0)_1TX	-
2412MHz	77
2417MHz	78
2437MHz	80
2457MHz	77
2462MHz	75

#### Non-Beamforming\_Radio 1\_Dipole Antenna\_2T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	72
2417MHz	77
2437MHz	80
2457MHz	77
2462MHz	72
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	74
2417MHz	70
2437MHz	78
2457MHz	74
2462MHz	72
802.11be EHT20_Nss1,(MCS0)_2TX	-
2412MHz	73





2417MHz	73
2437MHz	77
2457MHz	74
2462MHz	71

**Non-Beamforming\_Radio 1\_Dipole Antenna\_2T2S**

Mode	Power Setting
802.11be EHT20_Nss2,(MCS0)_2TX	-
2412MHz	74
2417MHz	74
2437MHz	77
2457MHz	74
2462MHz	71

**Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_1T1S**

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	75
2417MHz	76
2437MHz	80
2457MHz	76
2462MHz	73
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	77
2417MHz	71
2437MHz	80
2457MHz	74
2462MHz	71
802.11be EHT20_Nss1,(MCS0)_1TX	-
2412MHz	77
2417MHz	72
2437MHz	78
2457MHz	74
2462MHz	71



Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_2T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	69
2417MHz	72
2437MHz	80
2457MHz	69
2462MHz	70
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	74
2417MHz	69
2437MHz	78
2457MHz	72
2462MHz	70
802.11be EHT20_Nss1,(MCS0)_2TX	-
2412MHz	72
2417MHz	71
2437MHz	77
2457MHz	72
2462MHz	68

Non-Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna\_2T2S

Mode	Power Setting
802.11be EHT20_Nss2,(MCS0)_2TX	-
2412MHz	73
2417MHz	73
2437MHz	77
2457MHz	72
2462MHz	69



Non-Beamforming\_Radio 1\_Panel Antenna\_1T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_1TX	-
2412MHz	75
2417MHz	74
2437MHz	75
2457MHz	72
2462MHz	71
802.11g_Nss1,(6Mbps)_1TX	-
2412MHz	73
2417MHz	59
2437MHz	76
2457MHz	71
2462MHz	68
802.11be EHT20_Nss1,(MCS0)_1TX	-
2412MHz	72
2417MHz	58
2437MHz	75
2457MHz	71
2462MHz	69

Non-Beamforming\_Radio 1\_Panel Antenna\_2T1S

Mode	Power Setting
802.11b_Nss1,(1Mbps)_2TX	-
2412MHz	69
2437MHz	69
2457MHz	69
2462MHz	68
802.11g_Nss1,(6Mbps)_2TX	-
2412MHz	70
2417MHz	52
2437MHz	73
2457MHz	72
2462MHz	67
802.11be EHT20_Nss1,(MCS0)_2TX	-
2412MHz	70
2417MHz	61
2437MHz	73
2457MHz	71
2462MHz	67



**Non-Beamforming\_Radio 1\_Panel Antenna\_2T2S**

Mode	Power Setting
802.11be EHT20_Nss2,(MCS0)_2TX	-
2412MHz	70
2417MHz	58
2437MHz	72
2457MHz	69
2462MHz	64

**Beamforming\_Radio 1\_Dipole Antenna**

Mode	Power Setting
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-
2412MHz	73
2417MHz	73
2437MHz	77
2457MHz	74
2462MHz	71

**Beamforming\_Radio 1\_Dual-Polarized MIMO Panel Antenna**

Mode	Power Setting
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-
2412MHz	72
2417MHz	71
2437MHz	77
2457MHz	72
2462MHz	68

**Beamforming\_Radio 1\_Panel Antenna**

Mode	Power Setting
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-
2412MHz	70
2417MHz	61
2437MHz	73
2457MHz	71
2462MHz	67



Non-Beamforming\_Radio 1\_Scan




Test Software Version	PuTTY Release 0.62
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Mode	Power Setting
b20_Nss1,(1Mbps)_1TX	-
2412MHz	76
2417MHz	78
2437MHz	80
2457MHz	78
2462MHz	76
g20_Nss1,(6Mbps)_1TX	-
2412MHz	56
2417MHz	63
2437MHz	80
2457MHz	67
2462MHz	56

## 2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz
<b>Operating Mode</b>	CTX
1	Adapter Mode

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands
<b>Test Condition</b>	Conducted measurement at transmit chains

The Worst Case Mode for Following Conformance Tests			
<b>Tests Item</b>	Emissions in Restricted Frequency Bands		
<b>Test Condition</b>	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.		
<b>Operating Mode &lt; 1GHz</b>	CTX		
1	Adapter Mode ; Dipole Antenna		
2	Adapter Mode ; Dual-Polarized MIMO Panel Antenna		
3	Adapter Mode ; Panel Antenna		
4	Adapter Mode ; Radio 1_Scan		
<b>Operating Mode &gt; 1GHz</b>	CTX		
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b>	<b>Y Plane</b>	<b>Z Plane</b>
			
<b>Worst Planes of EUT</b>			
<b>Dipole Antenna_1T1S</b>			V
<b>Dipole Antenna_2T1S</b>			V
<b>Dipole Antenna_2T2S</b>		V	
<b>Dual-Polarized MIMO Panel Antenna</b>			V
<b>Panel Antenna</b>			V
<b>Radio 1_Scan</b>			V



The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Test Condition	Radiated measurement
Operating Mode	CTX
1	R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G+BT(chain 0)
2	R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+BT(chain 0)
3	R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G+BT(chain 1)
4	R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+BT(chain 1)
5	R1:2.4G+R2:5G Full+R1:Scan 2.4G+R1:Scan 5G+BT-E(chain 0)
6	R1:2.4G+R2:5G High(Band3/4)+R3:5G Low(Band1/2)+R1:Scan 2.4G+R1:Scan 5G+BT-E(chain 0)

Refer to Sporton Test Report No.: FA462705-03 for Co-location RF Exposure Evaluation and Appendix G for Radiated Emission Co-location.

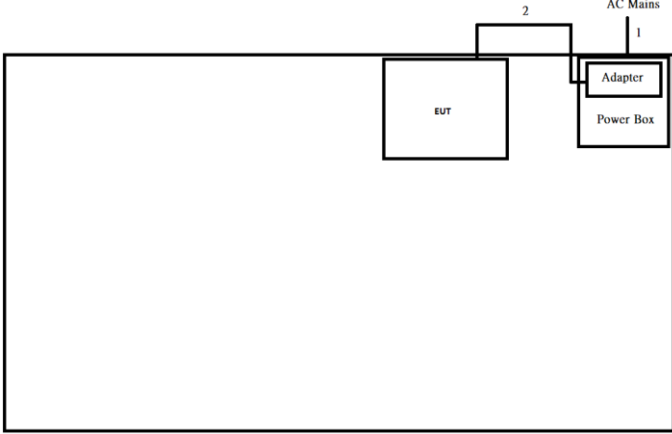
### 2.3 Support Equipment

Support Equipment – AC Conduction and Radiated					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Adapter	Powertron	PA1045-120HIB300	-	Provided by Customer

Support Equipment – Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID	Remark
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	PoE	PHIHONG	POE60U-1BT-X	-	Provided by Customer

## 2.4 Test Setup Diagram

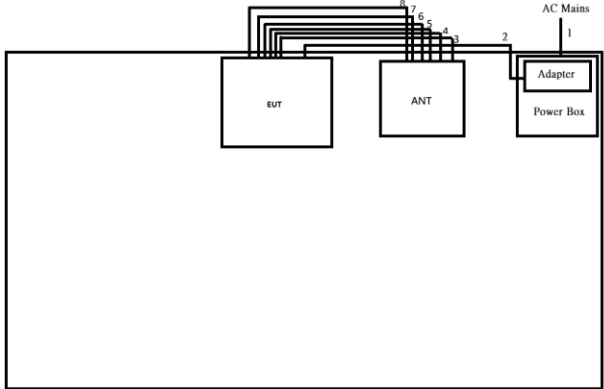
**Test Setup Diagram – AC Line Conducted Emission Test (Dipole Antenna)**



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-

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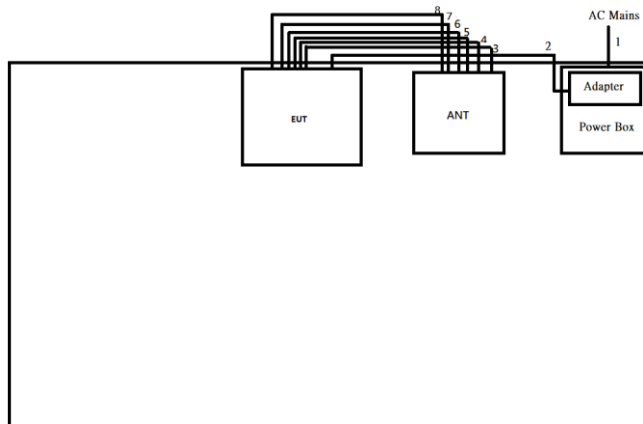
**Test Setup Diagram – AC Line Conducted Emission Test (Dual-Polarized MIMO Panel Antenna)**



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8m	-
2	DC Power Cable	No	1.5m	-
3	RF Cable	No	1.0m	-
4	RF Cable	No	1.0m	-
5	RF Cable	No	1.0m	-
6	RF Cable	No	1.0m	-
7	RF Cable	No	1.0m	-
8	RF Cable	No	1.0m	-

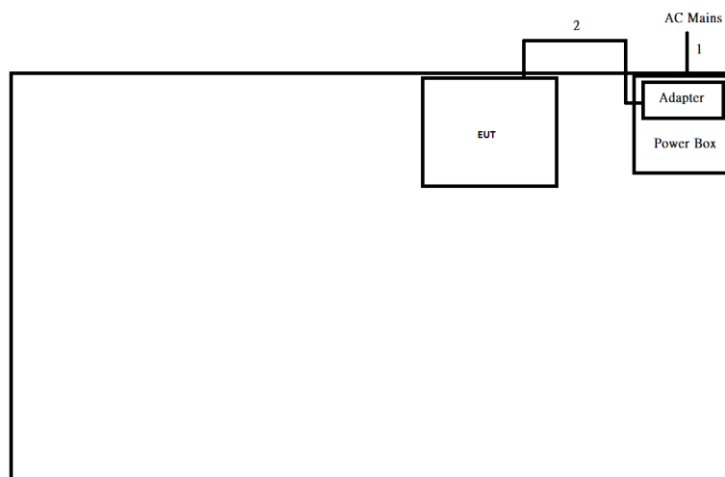


**Test Setup Diagram – AC Line Conducted Emission Test (Panel Antenna)**



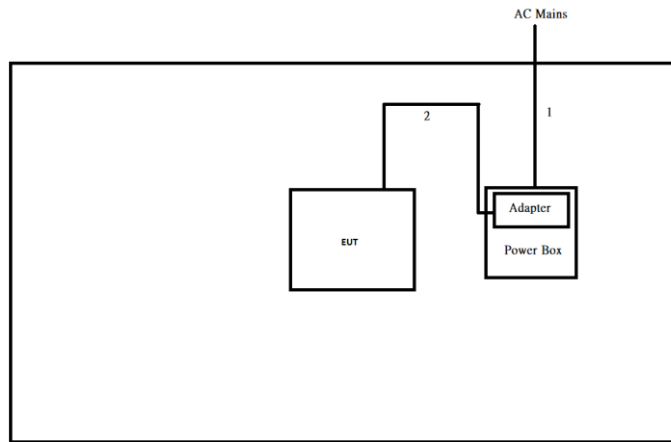
Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-
3	RF Cable	No	1.0	-
4	RF Cable	No	1.0	-
5	RF Cable	No	1.0	-
6	RF Cable	No	1.0	-
7	RF Cable	No	1.0	-
8	RF Cable	No	1.0	-

**Test Setup Diagram – AC Line Conducted Emission Test (Radio 1\_Scan)**



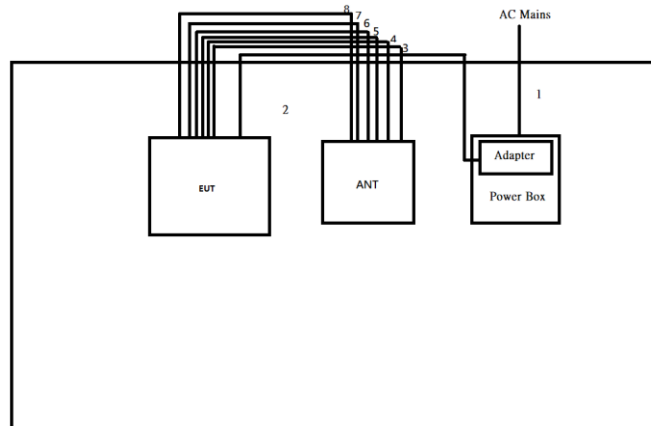
Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-

**Test Setup Diagram – Radiated Test (Dipole Antenna)**



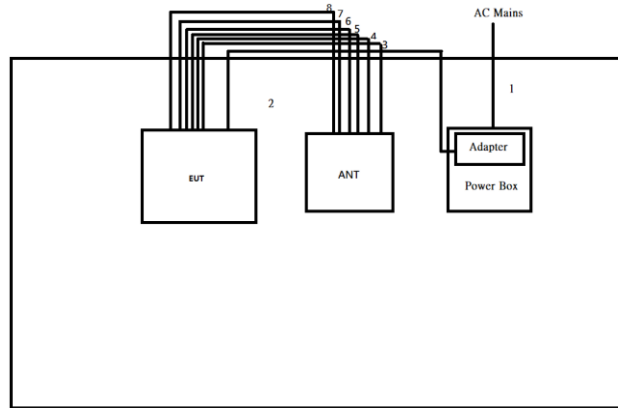
Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-

**Test Setup Diagram – Radiated Test (Dual-Polarized MIMO Panel Antenna)**



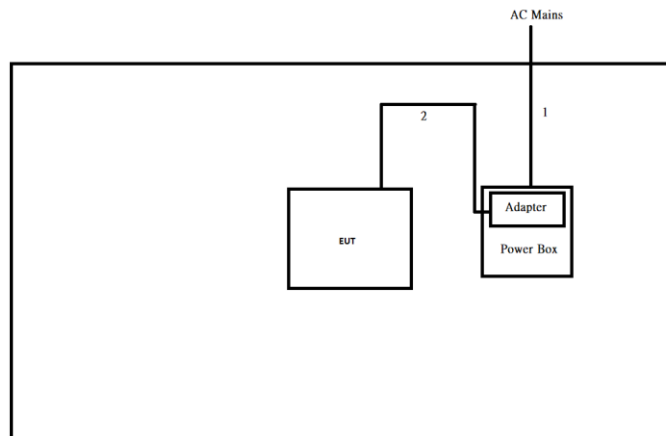
Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-
3	RF Cable	No	1.0	-
4	RF Cable	No	1.0	-
5	RF Cable	No	1.0	-
6	RF Cable	No	1.0	-
7	RF Cable	No	1.0	-
8	RF Cable	No	1.0	-

**Test Setup Diagram – Radiated Test (Panel Antenna)**



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-
3	RF Cable	No	1.0	-
4	RF Cable	No	1.0	-
5	RF Cable	No	1.0	-
6	RF Cable	No	1.0	-
7	RF Cable	No	1.0	-
8	RF Cable	No	1.0	-

**Test Setup Diagram – Radiated Test (Radio 1\_Scan)**



Item	Connection	Shielded	Length(m)	Remark
1	AC Power Cable	No	1.8	-
2	DC Power Cable	No	1.5	-

### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: \* Decreases with the logarithm of the frequency.

##### 3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

##### 3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

##### 3.1.4 Measurement Results Calculation

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) +LISN(LISN Factor) + CL(Cable Loss) + AT(Attenuator).



### 3.2 DTS Bandwidth

#### 3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit	
Systems using digital modulation techniques:	
▪	6 dB bandwidth $\geq$ 500 kHz.

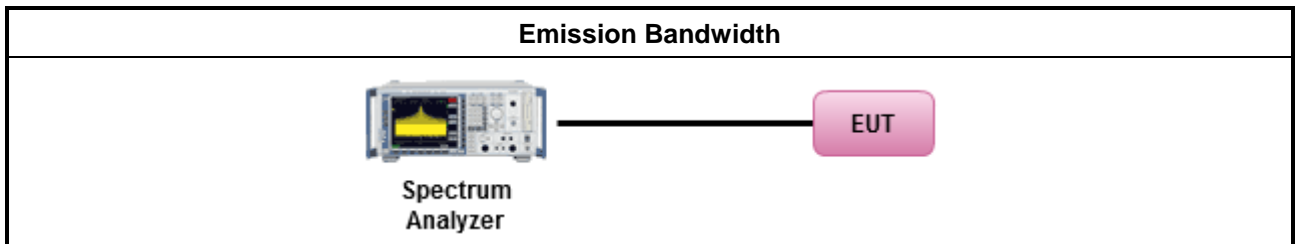
#### 3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.2.3 Test Procedures

Test Method	
▪	For the emission bandwidth shall be measured using one of the options below:
<input checked="" type="checkbox"/>	Refer as KDB 558074. clause 8.2 (11.8 of ANSI C63.10) DTS bandwidth measurement.
<input type="checkbox"/>	Refer as RSS-Gen, clause 6.7 for occupied bandwidth testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.

#### 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

### 3.3 Maximum Conducted Output Power

#### 3.3.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
	<ul style="list-style-type: none"> <li>▪ If <math>G_{TX} \leq 6</math> dBi, then <math>P_{Out} \leq 30</math> dBm (1 W)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-point systems (P2P): If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Smart antenna system (SAS):</li> </ul>
	<ul style="list-style-type: none"> <li>- Single beam: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Overlap beam: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Aggregate power on all beams: If <math>G_{TX} &gt; 6</math> dBi, then <math>P_{Out} = 30 - (G_{TX} - 6)/3 + 8</math> dBm</li> </ul>
e.i.r.p. Power Limit:	
	<ul style="list-style-type: none"> <li>▪ 2400-2483.5 MHz Band</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-multipoint systems (P2M): <math>P_{eirp} \leq 36</math> dBm (4 W)</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Point-to-point systems (P2P): <math>P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX}])</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Smart antenna system (SAS)</li> </ul>
	<ul style="list-style-type: none"> <li>- Single beam: <math>P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Overlap beam: <math>P_{eirp} \leq \text{MAX}(36, P_{Out} + G_{TX})</math> dBm</li> </ul>
	<ul style="list-style-type: none"> <li>- Aggregate power on all beams: <math>P_{eirp} \leq \text{MAX}(36, [P_{Out} + G_{TX} + 8])</math> dBm</li> </ul>
<p><math>P_{Out}</math> = maximum peak conducted output power or maximum conducted output power in dBm,  <math>G_{TX}</math> = the maximum transmitting antenna directional gain in dBi.</p>	

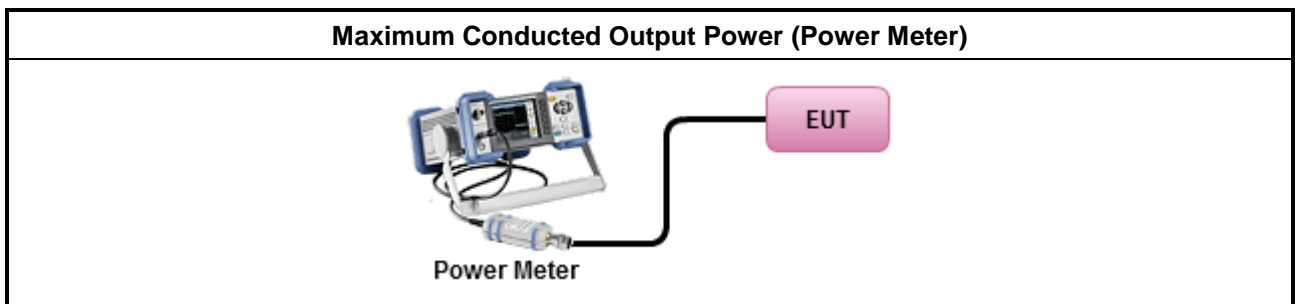
#### 3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

### 3.3.3 Test Procedures

Test Method	
<ul style="list-style-type: none"> <li>▪ Maximum Peak Conducted Output Power</li> </ul>	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.1 (11.9.1.1 of ANSI C63.10) RBW ≥ EBW method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.2 (11.9.1.2 of ANSI C63.10) integrated band power method.
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.1.3 (11.9.1.3 of ANSI C63.10) peak power meter.
<ul style="list-style-type: none"> <li>▪ Maximum Average Conducted Output Power</li> </ul>	
<input type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.2 (11.9.2.2 of ANSI C63.10) using a spectrum analyzer.
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.3.2.3 (11.9.2.3 of ANSI C63.10) using a power meter.
<ul style="list-style-type: none"> <li>▪ For conducted measurement.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.</li> </ul>	
<ul style="list-style-type: none"> <li>▪ If multiple transmit chains, EIRP calculation could be following as methods:  <math>P_{total} = P_1 + P_2 + \dots + P_n</math>                      (calculated in linear unit [mW] and transfer to log unit [dBm])  <math>EIRP_{total} = P_{total} + DG</math> </li> </ul>	

### 3.3.4 Test Setup



### 3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C



### 3.4 Power Spectral Density

#### 3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul style="list-style-type: none"> <li>Power Spectral Density (PSD) <math>\leq</math> 8 dBm/3kHz</li> </ul>

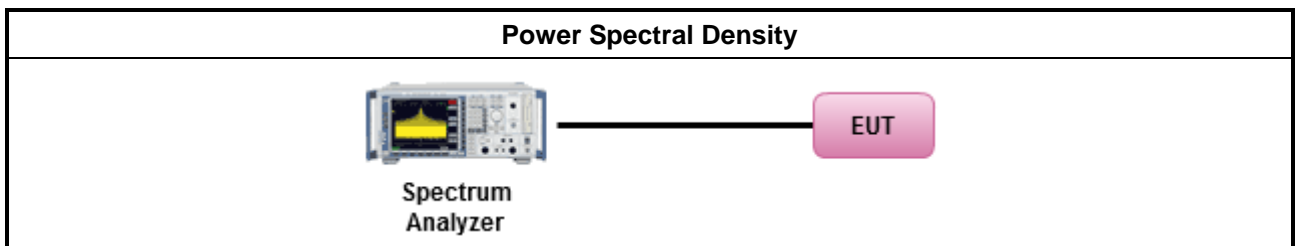
#### 3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.4.3 Test Procedures

Test Method	
	<ul style="list-style-type: none"> <li>Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).</li> </ul>
<input checked="" type="checkbox"/>	Refer as KDB 558074, clause 8.4 (11.10 of ANSI C63.10) Max. PSD.
	<ul style="list-style-type: none"> <li>For conducted measurement.</li> </ul>
	<ul style="list-style-type: none"> <li>If The EUT supports multiple transmit chains using options given below:               <ul style="list-style-type: none"> <li>Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.</li> </ul> </li> </ul>

#### 3.4.4 Test Setup



#### 3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

### 3.5 Emissions in Non-restricted Frequency Bands

#### 3.5.1 Emissions in Non-restricted Frequency Bands Limit

Un-restricted Band Emissions Limit	
RF output power procedure	Limit (dB)
Peak output power procedure	20
Average output power procedure	30

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average level.

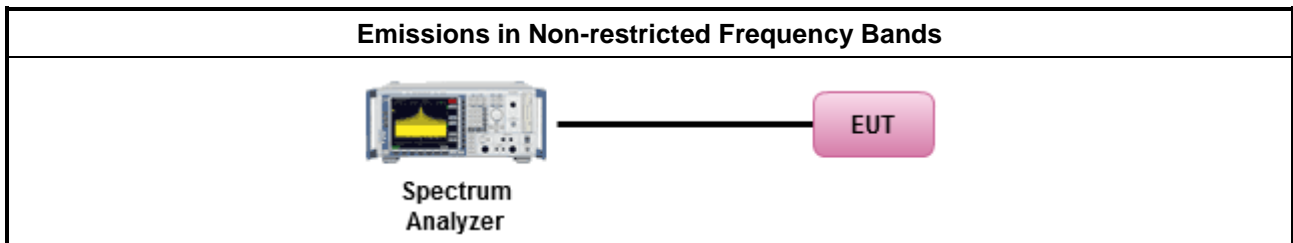
#### 3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.5.3 Test Procedures

Test Method
<ul style="list-style-type: none"> <li>Refer as KDB 558074, clause 8.5 (11.11 of ANSI C63.10) for non-restricted frequency bands.</li> </ul>

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E



### 3.6 Emissions in Restricted Frequency Bands

#### 3.6.1 Emissions in Restricted Frequency Bands Limit

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m.

#### 3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

**3.6.3 Test Procedures**

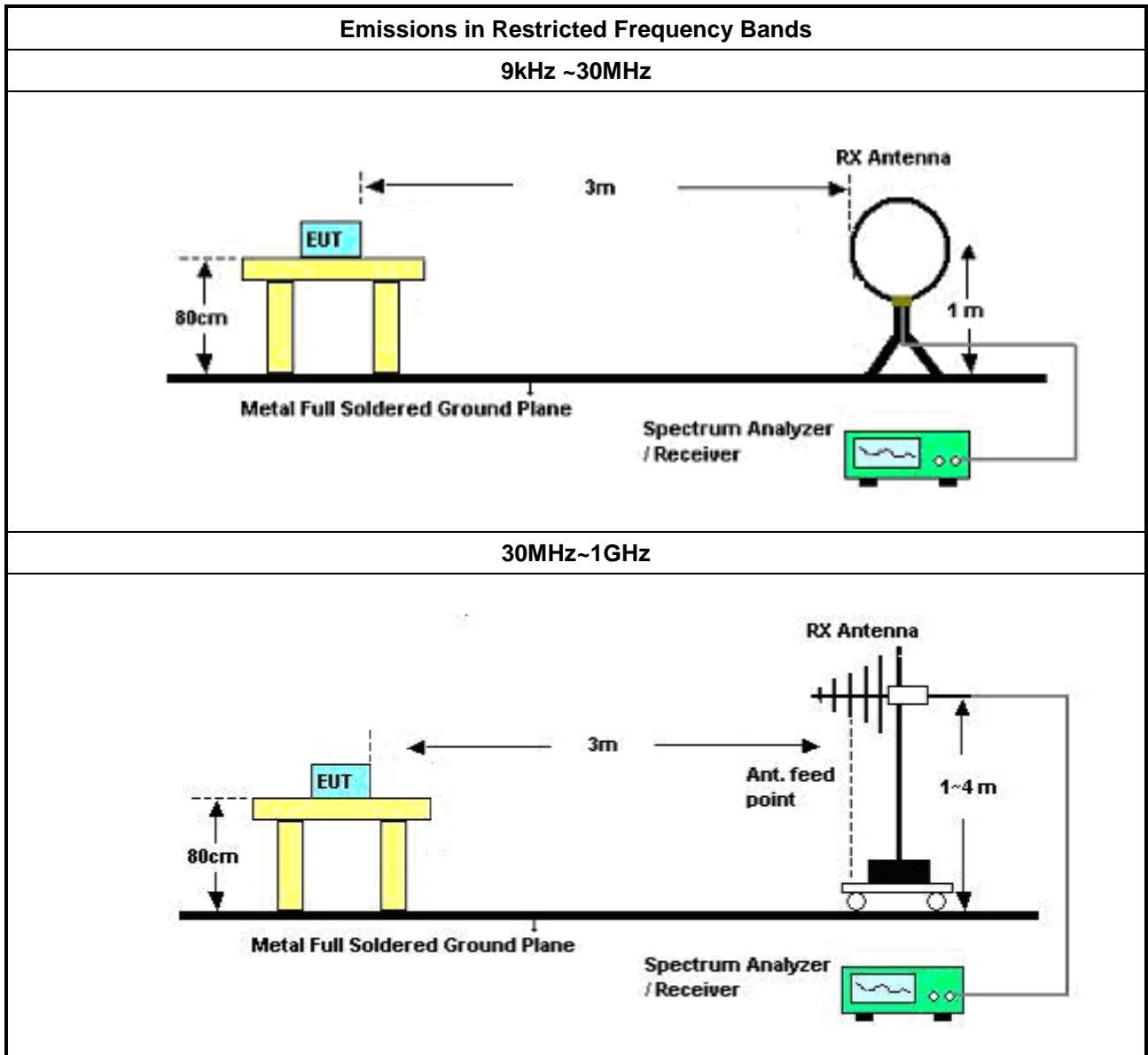
<b>Test Method</b>	
	<ul style="list-style-type: none"> <li>▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as ANSI C63.10, clause 6.10.3 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For the transmitter unwanted emissions shall be measured using following options below:</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as KDB 558074, clause 8.6 (11.12 of ANSI C63.10) for restricted frequency bands.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For the transmitter band-edge emissions shall be measured using following options below:</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as KDB 558074 clause 8.7.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as KDB 558074, clause 8.7.2 (6.10.6 of ANSI C63.10) for marker-delta method for band-edge measurements.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Refer as KDB 558074, clause 8.7.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Use the following spectrum analyzer settings:</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Set RBW=100 kHz for f &lt; 1 GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.</li> </ul>

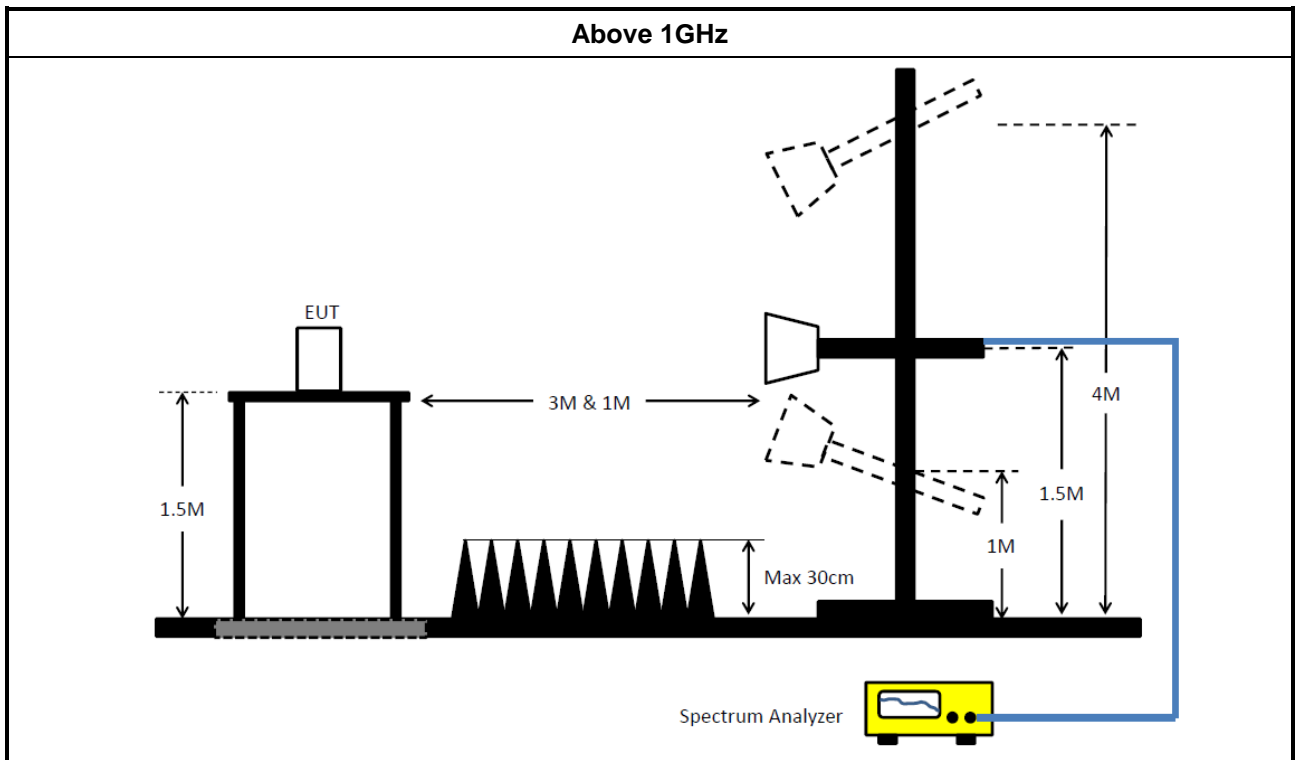
**3.6.4 Measurement Results Calculation**

The measured Level is calculated using:

Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

### 3.6.5 Test Setup





### 3.6.6 Test Result of Emissions in Restricted Frequency Bands (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

### 3.6.7 Test Result of Emissions in Restricted Frequency Bands

Refer as Appendix F



## 4 Test Equipment and Calibration Data

### Instrument for AC Conduction

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
EMI Test Receiver	ROHDE & SCHWARZ	ESR3	102051	9kHz ~ 3.6GHz	21/May/2025	20/May/2026
Two-Line V-Network	ROHDE & SCHWARZ	ENV 216	100003	9kHz ~ 30MHz	18/Apr/2025	17/Apr/2026
RF Cable 5m	TITAN	TITAN	CO04-cable-01	9 kHz~200MHz	26/Feb/2025	25/Feb/2026
Impuls Begrenzer Pulse Limiter	SCHWARZBECK	VTSD 9561-F	9561-F041	9kHz ~ 30MHz	17/Oct/2024	16/Oct/2025
Software	Sporton	SENSE-EMI	V5.11.3	-	NCR	NCR

NCR: No Calibration Required

### Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	28/Oct/2024	27/Oct/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	949003	300MHz~40GHz	13/Feb/2025	12/Feb/2026
Pulse Sensor	Anritsu	MA2411B	917017	300MHz~40GHz	13/Feb/2025	12/Feb/2026
SENSE-15247_DTS	Sporton	V5.11.23	N/A	N/A	N/A	N/A

### Instrument for Radiated Test (03CH02-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Site V.S.W.R	SIDT FRANKONIA	SAC-3M	03CH02-HY	1GHz~18GHz 3M	14/Jul/2024	13/Jul/2025
Signal Analyzer	ROHDE & SCHWARZ	FSV3044	101750	10Hz~44GHz	10/Apr/2025	09/Apr/2026
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	02268	1GHz~18GHz	23/Sep/2024	22/Sep/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
RF Cable-R03m	HUBER+SUHNER	SUCOFLEX 104	03CH02-cable-01	1GHz~40GHz	13/Feb/2025	12/Feb/2026
Microwave Preamplifier	Agilent	8449B	3008A02373	1GHz~26.5GHz	01/Oct/2024	30/Sep/2025
Microwave Preamplifier	EMC INSTRUMENTS	EM18G40G	060604	18GHz ~40GHz	26/Apr/2025	25/Apr/2026
SENSE-EMI	Sporton	V5.11.9	N/A	N/A	26/Apr/2025	25/Apr/2026



Instrument for Radiated Test (03CH25-HY) (Other Antenna)

Table with 7 columns: Instrument, Manufacturer /Brand, Model No., Serial No., Spec., Calibration Date, Calibration Due Date. Rows include 3m Semi Anechoic Chamber, EMI Test Receiver, Signal Analyzer, Loop Antenna, Bilog Antenna & 6dB Attenuator, Double Ridged Guide Horn Antenna, Broadband Horn Antenna, RF Cable, Preamplifier, Amplifier, and SENSE-15247-DTS.

Instrument for Radiated Test (03CH25-HY) (Panel Antenna)

Table with 7 columns: Instrument, Manufacturer /Brand, Model No., Serial No., Spec., Calibration Date, Calibration Due Date. Rows include 3m Semi Anechoic Chamber, ESR7 EMI Test Receiver, Signal Analyzer, Loop Antenna, Bilog Antenna & 6dB Attenuator, Double Ridged Guide Horn Antenna, Broadband Horn Antenna, RF Cable, Preamplifier, Amplifier, and SENSE-15407-NII.





Instrument for Radiated Test (03CH09-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz~1GHz 3m	07/Mar/2025	06/Mar/2026
Site V.S.W.R	TDK	SAC-3M	03CH09-HY	1GHz~18GHz 3m	06/Mar/2025	05/Mar/2026
EMI Test Receiver	R&S	ESR3	102052	9kHz~3.6GHz	03/May/2024	02/May/2025
EXA Signal Analyzer	KEYSIGHT	N9010A	MY54200885	10Hz~44GHz	04/Oct/2024	03/Oct/2025
Loop Antenna	TESEQ	HLA 6121	65417	9kHz~30MHz	17/Oct/2024	16/Oct/2025
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL6111D&MT J6102-05	35418 & 3	30MHz~1GHz	26/Aug/2024	25/Aug/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1531	1GHz ~ 18GHz	20/Dec/2024	19/Dec/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	01248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
RF Cable-R03m	Jye Bao	RG142	03CH09-cable-01	9kHz~1GHz	19/Feb/2025	18/Feb/2026
RF CABLE 5m+3m+1m	HUBER+SUHNER	SUCOFLEX104	03CH09-cable-02	1GHz~40GHz	07/Oct/2024	06/Oct/2025
Amplifier	EMC	EMC9135	980232	9kHz~1GHz	08/Apr/2024	07/Apr/2025
Microwave Preamplifier	Agilent	8449B	3008A02096	1GHz~26.5GHz	19/Jul/2024	18/Jul/2025
Amplifier	EM	EM18G40GA	060874	18GHz~40GHz	15/Apr/2024	14/Apr/2025
SENSE-15247_DTS	Sporton	V5.11.21	NA	NA	NA	NA



**Summary**

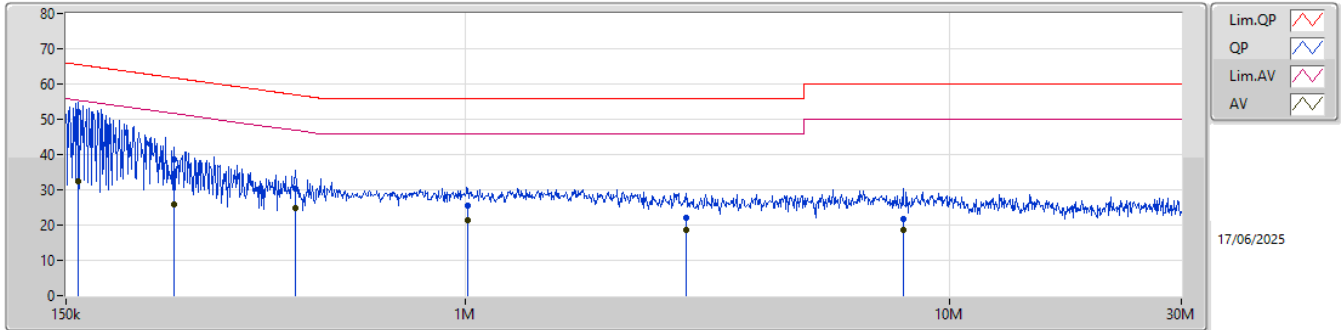
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150k	53.18	66.00	-12.82	Neutral



Result

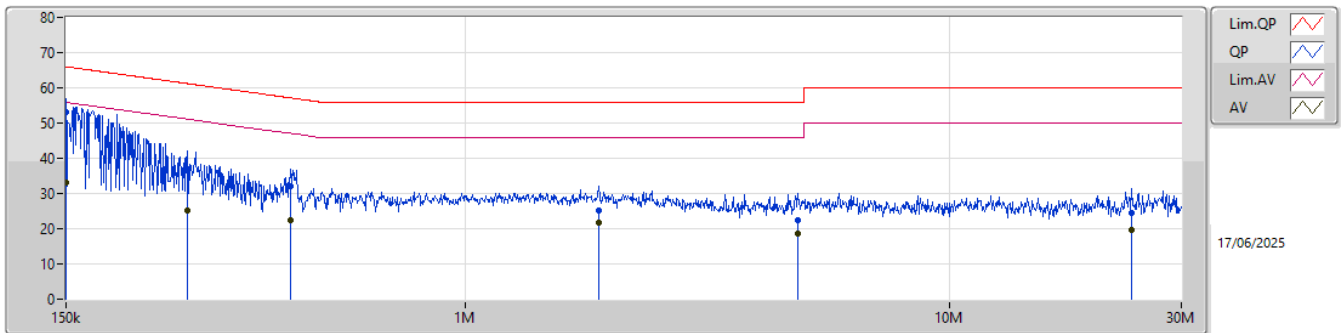
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	159.26k	51.91	65.50	-13.59	Line
Mode 1	Pass	AV	159.26k	32.58	55.50	-22.92	Line
Mode 1	Pass	QP	251.04k	38.56	61.72	-23.16	Line
Mode 1	Pass	AV	251.04k	25.94	51.72	-25.78	Line
Mode 1	Pass	QP	446.06k	30.40	56.96	-26.56	Line
Mode 1	Pass	AV	446.06k	24.77	46.96	-22.19	Line
Mode 1	Pass	QP	1.01M	25.51	56.00	-30.49	Line
Mode 1	Pass	AV	1.01M	21.25	46.00	-24.75	Line
Mode 1	Pass	QP	2.86M	21.97	56.00	-34.03	Line
Mode 1	Pass	AV	2.86M	18.72	46.00	-27.28	Line
Mode 1	Pass	QP	8M	21.64	60.00	-38.36	Line
Mode 1	Pass	AV	8M	18.51	50.00	-31.49	Line
Mode 1	Pass	QP	150k	53.18	66.00	-12.82	Neutral
Mode 1	Pass	AV	150k	33.03	56.00	-22.97	Neutral
Mode 1	Pass	QP	267.6k	36.79	61.20	-24.41	Neutral
Mode 1	Pass	AV	267.6k	25.10	51.20	-26.10	Neutral
Mode 1	Pass	QP	435.5k	31.92	57.15	-25.23	Neutral
Mode 1	Pass	AV	435.5k	22.55	47.15	-24.60	Neutral
Mode 1	Pass	QP	1.89M	25.21	56.00	-30.79	Neutral
Mode 1	Pass	AV	1.89M	21.68	46.00	-24.32	Neutral
Mode 1	Pass	QP	4.86M	22.32	56.00	-33.68	Neutral
Mode 1	Pass	AV	4.86M	18.73	46.00	-27.27	Neutral
Mode 1	Pass	QP	23.68M	24.52	60.00	-35.48	Neutral
Mode 1	Pass	AV	23.68M	19.55	50.00	-30.45	Neutral

Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	159.26k	51.91	65.50	-13.59	19.61	Line	-	32.30	9.63	0.01	9.97
AV	159.26k	32.58	55.50	-22.92	19.61	Line	-	12.97	9.63	0.01	9.97
QP	251.04k	38.56	61.72	-23.16	19.62	Line	-	18.94	9.63	0.02	9.97
AV	251.04k	25.94	51.72	-25.78	19.62	Line	-	6.32	9.63	0.02	9.97
QP	446.06k	30.40	56.96	-26.56	19.64	Line	-	10.76	9.63	0.03	9.98
AV	446.06k	24.77	46.96	-22.19	19.64	Line	-	5.13	9.63	0.03	9.98
QP	1.01M	25.51	56.00	-30.49	19.67	Line	-	5.84	9.64	0.05	9.98
AV	1.01M	21.25	46.00	-24.75	19.67	Line	-	1.58	9.64	0.05	9.98
QP	2.86M	21.97	56.00	-34.03	19.69	Line	-	2.28	9.67	0.04	9.98
AV	2.86M	18.72	46.00	-27.28	19.69	Line	-	-0.97	9.67	0.04	9.98
QP	8M	21.64	60.00	-38.36	19.92	Line	-	1.72	9.75	0.19	9.98
AV	8M	18.51	50.00	-31.49	19.92	Line	-	-1.41	9.75	0.19	9.98

Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	150k	53.18	66.00	-12.82	19.71	Neutral	-	33.47	9.73	0.01	9.97
AV	150k	33.03	56.00	-22.97	19.71	Neutral	-	13.32	9.73	0.01	9.97
QP	267.6k	36.79	61.20	-24.41	19.71	Neutral	-	17.08	9.72	0.02	9.97
AV	267.6k	25.10	51.20	-26.10	19.71	Neutral	-	5.39	9.72	0.02	9.97
QP	435.5k	31.92	57.15	-25.23	19.72	Neutral	-	12.20	9.71	0.03	9.98
AV	435.5k	22.55	47.15	-24.60	19.72	Neutral	-	2.83	9.71	0.03	9.98
QP	1.89M	25.21	56.00	-30.79	19.74	Neutral	-	5.47	9.74	0.03	9.97
AV	1.89M	21.68	46.00	-24.32	19.74	Neutral	-	1.94	9.74	0.03	9.97
QP	4.86M	22.32	56.00	-33.68	19.90	Neutral	-	2.42	9.83	0.09	9.98
AV	4.86M	18.73	46.00	-27.27	19.90	Neutral	-	-1.17	9.83	0.09	9.98
QP	23.68M	24.52	60.00	-35.48	20.46	Neutral	-	4.06	10.15	0.32	9.99
AV	23.68M	19.55	50.00	-30.45	20.46	Neutral	-	-0.91	10.15	0.32	9.99



**Conducted Emissions at Powerline\_  
Dual-Polarized MIMO Panel Antenna**

**Appendix A.2**

**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	52.12	65.96	-13.84	Neutral



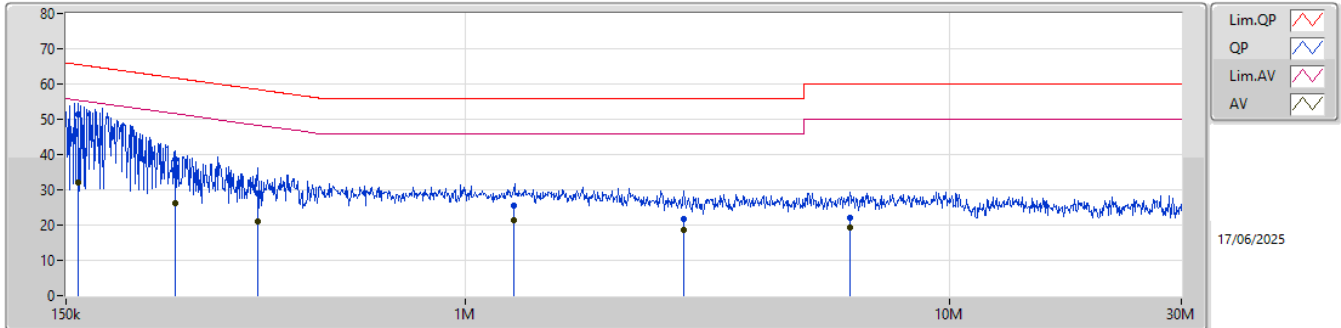
**Conducted Emissions at Powerline\_  
Dual-Polarized MIMO Panel Antenna**

**Appendix A.2**

**Result**

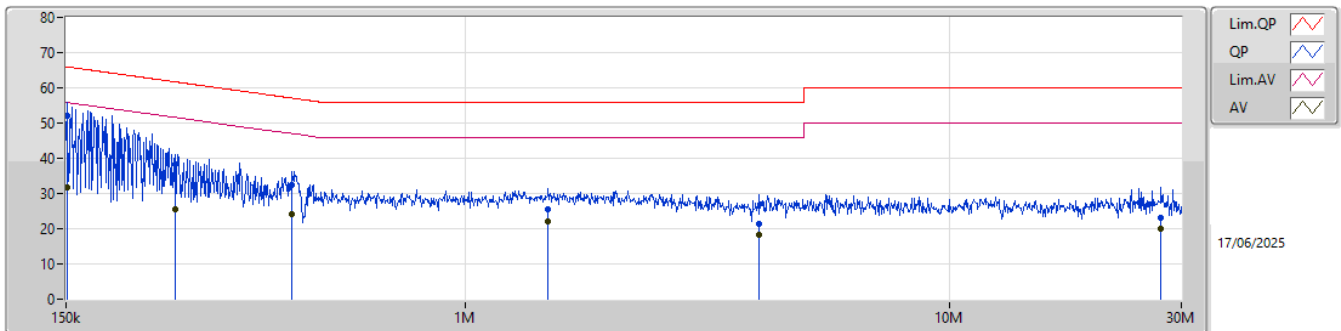
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	159.26k	51.50	65.50	-14.00	Line
Mode 1	Pass	AV	159.26k	32.18	55.50	-23.32	Line
Mode 1	Pass	QP	252.04k	38.54	61.70	-23.16	Line
Mode 1	Pass	AV	252.04k	26.18	51.70	-25.52	Line
Mode 1	Pass	QP	372.72k	29.10	58.45	-29.35	Line
Mode 1	Pass	AV	372.72k	21.18	48.45	-27.27	Line
Mode 1	Pass	QP	1.26M	25.40	56.00	-30.60	Line
Mode 1	Pass	AV	1.26M	21.36	46.00	-24.64	Line
Mode 1	Pass	QP	2.82M	21.83	56.00	-34.17	Line
Mode 1	Pass	AV	2.82M	18.65	46.00	-27.35	Line
Mode 1	Pass	QP	6.22M	22.21	60.00	-37.79	Line
Mode 1	Pass	AV	6.22M	19.25	50.00	-30.75	Line
Mode 1	Pass	QP	150.6k	52.12	65.96	-13.84	Neutral
Mode 1	Pass	AV	150.6k	31.87	55.96	-24.09	Neutral
Mode 1	Pass	QP	252.04k	38.36	61.70	-23.34	Neutral
Mode 1	Pass	AV	252.04k	25.60	51.70	-26.10	Neutral
Mode 1	Pass	QP	439k	32.32	57.09	-24.77	Neutral
Mode 1	Pass	AV	439k	24.15	47.09	-22.94	Neutral
Mode 1	Pass	QP	1.48M	25.61	56.00	-30.39	Neutral
Mode 1	Pass	AV	1.48M	22.06	46.00	-23.94	Neutral
Mode 1	Pass	QP	4.04M	21.26	56.00	-34.74	Neutral
Mode 1	Pass	AV	4.04M	18.27	46.00	-27.73	Neutral
Mode 1	Pass	QP	27.23M	23.05	60.00	-36.95	Neutral
Mode 1	Pass	AV	27.23M	19.94	50.00	-30.06	Neutral

### Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	159.26k	51.50	65.50	-14.00	19.61	Line	-	31.89	9.63	0.01	9.97
AV	159.26k	32.18	55.50	-23.32	19.61	Line	-	12.57	9.63	0.01	9.97
QP	252.04k	38.54	61.70	-23.16	19.62	Line	-	18.92	9.63	0.02	9.97
AV	252.04k	26.18	51.70	-25.52	19.62	Line	-	6.56	9.63	0.02	9.97
QP	372.72k	29.10	58.45	-29.35	19.64	Line	-	9.46	9.63	0.03	9.98
AV	372.72k	21.18	48.45	-27.27	19.64	Line	-	1.54	9.63	0.03	9.98
QP	1.26M	25.40	56.00	-30.60	19.67	Line	-	5.73	9.65	0.04	9.98
AV	1.26M	21.36	46.00	-24.64	19.67	Line	-	1.69	9.65	0.04	9.98
QP	2.82M	21.83	56.00	-34.17	19.67	Line	-	2.16	9.66	0.04	9.97
AV	2.82M	18.65	46.00	-27.35	19.67	Line	-	-1.02	9.66	0.04	9.97
QP	6.22M	22.21	60.00	-37.79	19.84	Line	-	2.37	9.72	0.14	9.98
AV	6.22M	19.25	50.00	-30.75	19.84	Line	-	-0.59	9.72	0.14	9.98

### Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	150.6k	52.12	65.96	-13.84	19.71	Neutral	-	32.41	9.73	0.01	9.97
AV	150.6k	31.87	55.96	-24.09	19.71	Neutral	-	12.16	9.73	0.01	9.97
QP	252.04k	38.36	61.70	-23.34	19.71	Neutral	-	18.65	9.72	0.02	9.97
AV	252.04k	25.60	51.70	-26.10	19.71	Neutral	-	5.89	9.72	0.02	9.97
QP	439k	32.32	57.09	-24.77	19.72	Neutral	-	12.60	9.71	0.03	9.98
AV	439k	24.15	47.09	-22.94	19.72	Neutral	-	4.43	9.71	0.03	9.98
QP	1.48M	25.61	56.00	-30.39	19.74	Neutral	-	5.87	9.73	0.04	9.97
AV	1.48M	22.06	46.00	-23.94	19.74	Neutral	-	2.32	9.73	0.04	9.97
QP	4.04M	21.26	56.00	-34.74	19.82	Neutral	-	1.44	9.79	0.05	9.98
AV	4.04M	18.27	46.00	-27.73	19.82	Neutral	-	-1.55	9.79	0.05	9.98
QP	27.23M	23.05	60.00	-36.95	20.52	Neutral	-	2.53	10.20	0.35	9.97
AV	27.23M	19.94	50.00	-30.06	20.52	Neutral	-	-0.58	10.20	0.35	9.97



**Summary**

Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	52.22	65.96	-13.74	Neutral

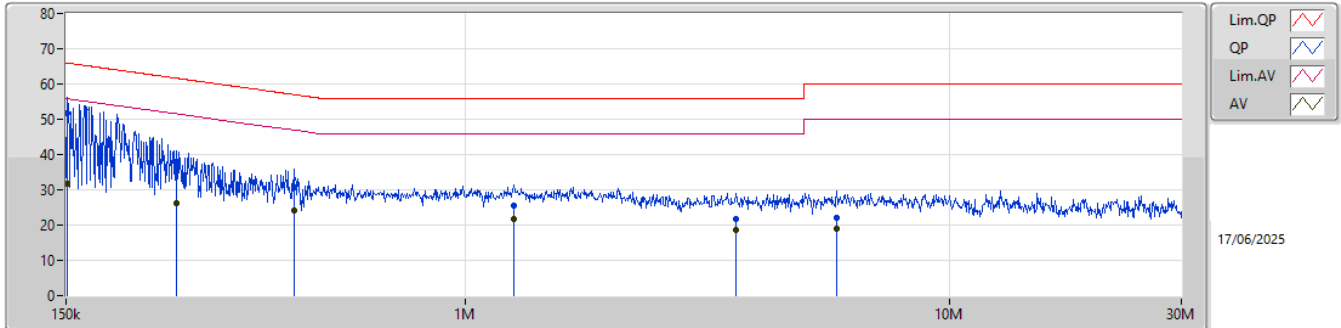




Result

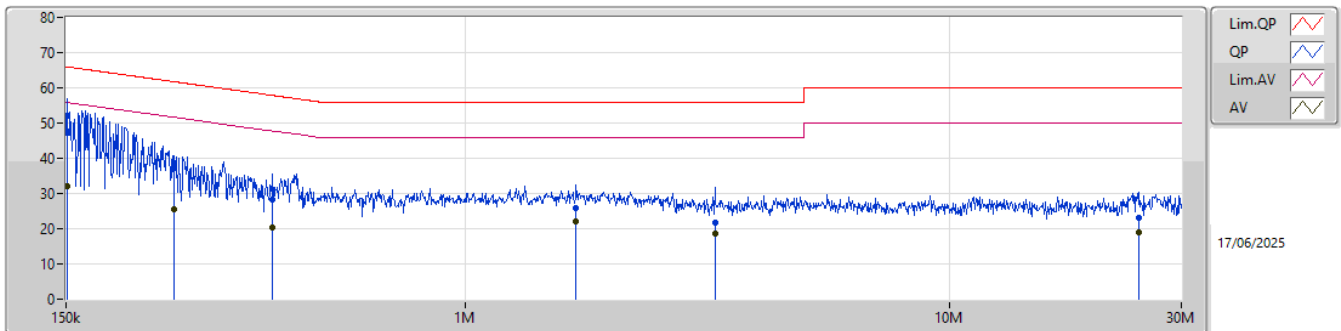
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	150.6k	51.76	65.96	-14.20	Line
Mode 1	Pass	AV	150.6k	31.87	55.96	-24.09	Line
Mode 1	Pass	QP	253.05k	37.96	61.66	-23.70	Line
Mode 1	Pass	AV	253.05k	26.32	51.66	-25.34	Line
Mode 1	Pass	QP	442.51k	30.66	57.01	-26.35	Line
Mode 1	Pass	AV	442.51k	24.11	47.01	-22.90	Line
Mode 1	Pass	QP	1.26M	25.54	56.00	-30.46	Line
Mode 1	Pass	AV	1.26M	21.62	46.00	-24.38	Line
Mode 1	Pass	QP	3.61M	21.77	56.00	-34.23	Line
Mode 1	Pass	AV	3.61M	18.66	46.00	-27.34	Line
Mode 1	Pass	QP	5.83M	22.05	60.00	-37.95	Line
Mode 1	Pass	AV	5.83M	19.07	50.00	-30.93	Line
Mode 1	Pass	QP	150.6k	52.22	65.96	-13.74	Neutral
Mode 1	Pass	AV	150.6k	31.93	55.96	-24.03	Neutral
Mode 1	Pass	QP	251.04k	38.33	61.72	-23.39	Neutral
Mode 1	Pass	AV	251.04k	25.40	51.72	-26.32	Neutral
Mode 1	Pass	QP	400.48k	28.35	57.84	-29.49	Neutral
Mode 1	Pass	AV	400.48k	20.39	47.84	-27.45	Neutral
Mode 1	Pass	QP	1.69M	25.69	56.00	-30.31	Neutral
Mode 1	Pass	AV	1.69M	22.01	46.00	-23.99	Neutral
Mode 1	Pass	QP	3.27M	21.85	56.00	-34.15	Neutral
Mode 1	Pass	AV	3.27M	18.70	46.00	-27.30	Neutral
Mode 1	Pass	QP	24.55M	23.27	60.00	-36.73	Neutral
Mode 1	Pass	AV	24.55M	19.05	50.00	-30.95	Neutral

## Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	150.6k	51.76	65.96	-14.20	19.61	Line	-	32.15	9.63	0.01	9.97
AV	150.6k	31.87	55.96	-24.09	19.61	Line	-	12.26	9.63	0.01	9.97
QP	253.05k	37.96	61.66	-23.70	19.62	Line	-	18.34	9.63	0.02	9.97
AV	253.05k	26.32	51.66	-25.34	19.62	Line	-	6.70	9.63	0.02	9.97
QP	442.51k	30.66	57.01	-26.35	19.64	Line	-	11.02	9.63	0.03	9.98
AV	442.51k	24.11	47.01	-22.90	19.64	Line	-	4.47	9.63	0.03	9.98
QP	1.26M	25.54	56.00	-30.46	19.67	Line	-	5.87	9.65	0.04	9.98
AV	1.26M	21.62	46.00	-24.38	19.67	Line	-	1.95	9.65	0.04	9.98
QP	3.61M	21.77	56.00	-34.23	19.70	Line	-	2.07	9.67	0.05	9.98
AV	3.61M	18.66	46.00	-27.34	19.70	Line	-	-1.04	9.67	0.05	9.98
QP	5.83M	22.05	60.00	-37.95	19.83	Line	-	2.22	9.72	0.13	9.98
AV	5.83M	19.07	50.00	-30.93	19.83	Line	-	-0.76	9.72	0.13	9.98

## Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	150.6k	52.22	65.96	-13.74	19.71	Neutral	-	32.51	9.73	0.01	9.97
AV	150.6k	31.93	55.96	-24.03	19.71	Neutral	-	12.22	9.73	0.01	9.97
QP	251.04k	38.33	61.72	-23.39	19.71	Neutral	-	18.62	9.72	0.02	9.97
AV	251.04k	25.40	51.72	-26.32	19.71	Neutral	-	5.69	9.72	0.02	9.97
QP	400.48k	28.35	57.84	-29.49	19.72	Neutral	-	8.63	9.71	0.03	9.98
AV	400.48k	20.39	47.84	-27.45	19.72	Neutral	-	0.67	9.71	0.03	9.98
QP	1.69M	25.69	56.00	-30.31	19.74	Neutral	-	5.95	9.74	0.03	9.97
AV	1.69M	22.01	46.00	-23.99	19.74	Neutral	-	2.27	9.74	0.03	9.97
QP	3.27M	21.85	56.00	-34.15	19.80	Neutral	-	2.05	9.78	0.04	9.98
AV	3.27M	18.70	46.00	-27.30	19.80	Neutral	-	-1.10	9.78	0.04	9.98
QP	24.55M	23.27	60.00	-36.73	20.48	Neutral	-	2.79	10.16	0.33	9.99
AV	24.55M	19.05	50.00	-30.95	20.48	Neutral	-	-1.43	10.16	0.33	9.99



**Summary**

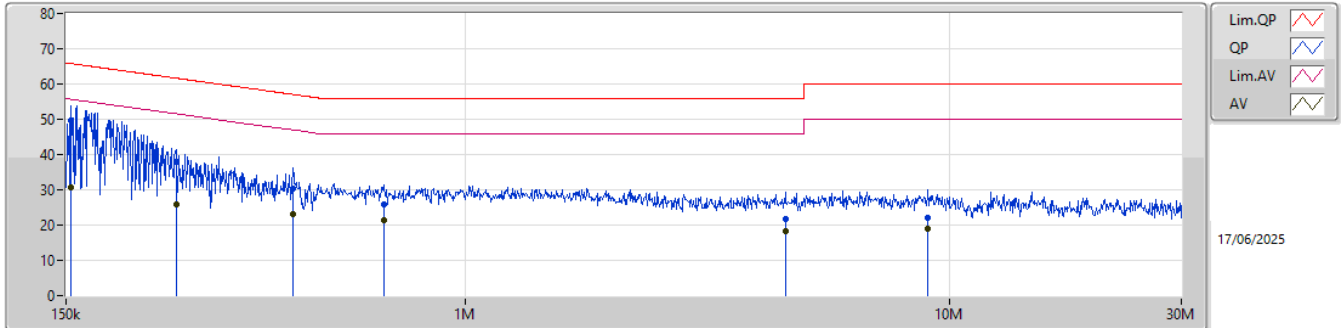
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	151.81k	50.09	65.90	-15.81	Neutral



Result

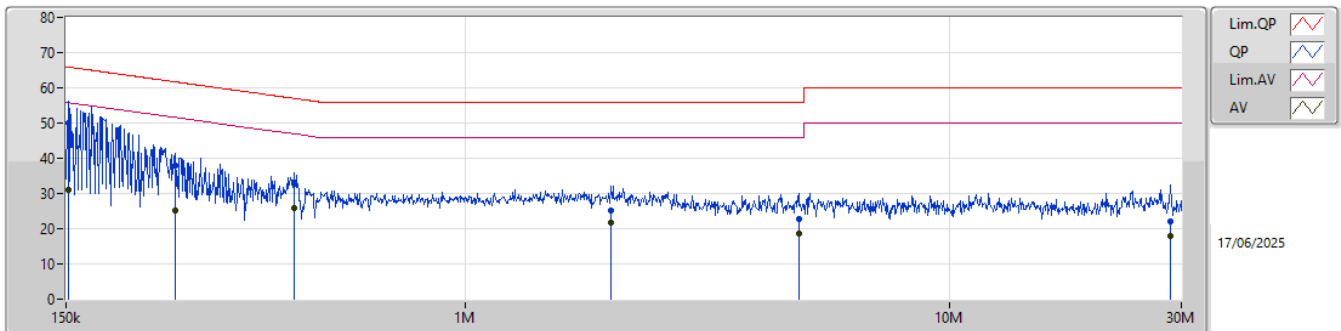
Mode	Result	Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Condition
Mode 1	Pass	QP	153.64k	49.80	65.81	-16.01	Line
Mode 1	Pass	AV	153.64k	30.80	55.81	-25.01	Line
Mode 1	Pass	QP	253.05k	37.85	61.66	-23.81	Line
Mode 1	Pass	AV	253.05k	25.89	51.66	-25.77	Line
Mode 1	Pass	QP	440.75k	30.35	57.05	-26.70	Line
Mode 1	Pass	AV	440.75k	23.11	47.05	-23.94	Line
Mode 1	Pass	QP	678.32k	25.78	56.00	-30.22	Line
Mode 1	Pass	AV	678.32k	21.26	46.00	-24.74	Line
Mode 1	Pass	QP	4.57M	21.81	56.00	-34.19	Line
Mode 1	Pass	AV	4.57M	18.28	46.00	-27.72	Line
Mode 1	Pass	QP	9.01M	22.20	60.00	-37.80	Line
Mode 1	Pass	AV	9.01M	18.99	50.00	-31.01	Line
Mode 1	Pass	QP	151.81k	50.09	65.90	-15.81	Neutral
Mode 1	Pass	AV	151.81k	31.13	55.90	-24.77	Neutral
Mode 1	Pass	QP	252.04k	37.94	61.70	-23.76	Neutral
Mode 1	Pass	AV	252.04k	25.26	51.70	-26.44	Neutral
Mode 1	Pass	QP	442.51k	32.81	57.01	-24.20	Neutral
Mode 1	Pass	AV	442.51k	25.87	47.01	-21.14	Neutral
Mode 1	Pass	QP	2M	25.20	56.00	-30.80	Neutral
Mode 1	Pass	AV	2M	21.63	46.00	-24.37	Neutral
Mode 1	Pass	QP	4.87M	22.69	56.00	-33.31	Neutral
Mode 1	Pass	AV	4.87M	18.77	46.00	-27.23	Neutral
Mode 1	Pass	QP	28.46M	22.10	60.00	-37.90	Neutral
Mode 1	Pass	AV	28.46M	17.93	50.00	-32.07	Neutral

Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	153.64k	49.80	65.81	-16.01	19.61	Line	-	30.19	9.63	0.01	9.97
AV	153.64k	30.80	55.81	-25.01	19.61	Line	-	11.19	9.63	0.01	9.97
QP	253.05k	37.85	61.66	-23.81	19.62	Line	-	18.23	9.63	0.02	9.97
AV	253.05k	25.89	51.66	-25.77	19.62	Line	-	6.27	9.63	0.02	9.97
QP	440.75k	30.35	57.05	-26.70	19.64	Line	-	10.71	9.63	0.03	9.98
AV	440.75k	23.11	47.05	-23.94	19.64	Line	-	3.47	9.63	0.03	9.98
QP	678.32k	25.78	56.00	-30.22	19.66	Line	-	6.12	9.64	0.04	9.98
AV	678.32k	21.26	46.00	-24.74	19.66	Line	-	1.60	9.64	0.04	9.98
QP	4.57M	21.81	56.00	-34.19	19.75	Line	-	2.06	9.69	0.08	9.98
AV	4.57M	18.28	46.00	-27.72	19.75	Line	-	-1.47	9.69	0.08	9.98
QP	9.01M	22.20	60.00	-37.80	19.97	Line	-	2.23	9.77	0.22	9.98
AV	9.01M	18.99	50.00	-31.01	19.97	Line	-	-0.98	9.77	0.22	9.98

Conducted Emissions at Powerline\_Mode 1



Type	Freq (Hz)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Factor (dB)	Condition	Comment	Raw (dBuV)	LISN (dB)	CL (dB)	AT (dB)
QP	151.81k	50.09	65.90	-15.81	19.71	Neutral	-	30.38	9.73	0.01	9.97
AV	151.81k	31.13	55.90	-24.77	19.71	Neutral	-	11.42	9.73	0.01	9.97
QP	252.04k	37.94	61.70	-23.76	19.71	Neutral	-	18.23	9.72	0.02	9.97
AV	252.04k	25.26	51.70	-26.44	19.71	Neutral	-	5.55	9.72	0.02	9.97
QP	442.51k	32.81	57.01	-24.20	19.72	Neutral	-	13.09	9.71	0.03	9.98
AV	442.51k	25.87	47.01	-21.14	19.72	Neutral	-	6.15	9.71	0.03	9.98
QP	2M	25.20	56.00	-30.80	19.74	Neutral	-	5.46	9.74	0.03	9.97
AV	2M	21.63	46.00	-24.37	19.74	Neutral	-	1.89	9.74	0.03	9.97
QP	4.87M	22.69	56.00	-33.31	19.90	Neutral	-	2.79	9.83	0.09	9.98
AV	4.87M	18.77	46.00	-27.23	19.90	Neutral	-	-1.13	9.83	0.09	9.98
QP	28.46M	22.10	60.00	-37.90	20.53	Neutral	-	1.57	10.21	0.36	9.96
AV	28.46M	17.93	50.00	-32.07	20.53	Neutral	-	-2.60	10.21	0.36	9.96



Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	7M	12.039M	12M0G1D	6.075M	10.96M
802.11g_Nss1,(6Mbps)_1TX	16.5M	17.613M	17M6D1D	16.45M	16.778M
802.11be EHT20_Nss1,(MCS0)_1TX	19.15M	19.115M	19M1D1D	18.9M	18.941M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7M	11.544M
2437MHz	Pass	500k	6.075M	12.039M
2462MHz	Pass	500k	6.625M	10.96M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.475M	17.019M
2437MHz	Pass	500k	16.45M	17.613M
2462MHz	Pass	500k	16.5M	16.778M
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	19.1M	18.966M
2437MHz	Pass	500k	19.15M	19.115M
2462MHz	Pass	500k	18.9M	18.941M

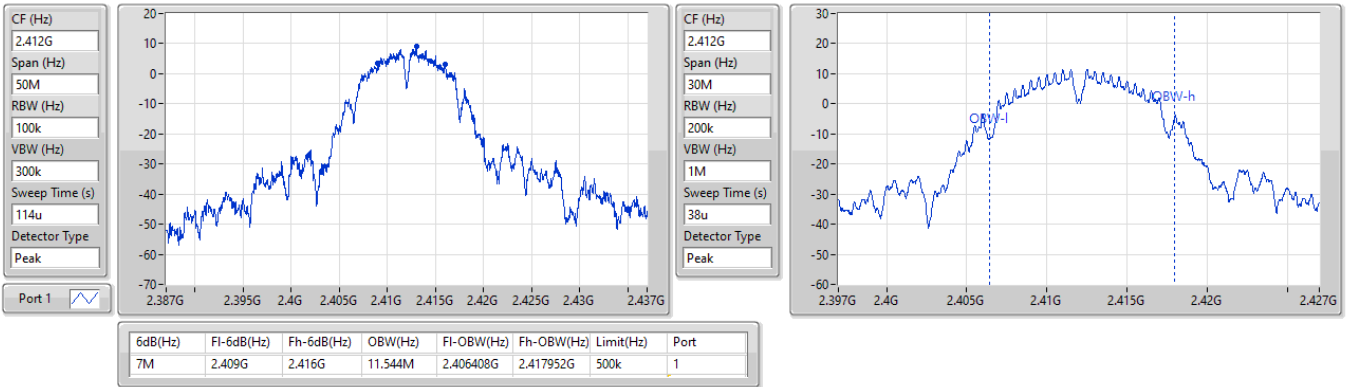
Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz\_802.11b\_Nss1,(1Mbps)\_1TX

EBW

2412MHz

17/03/2025

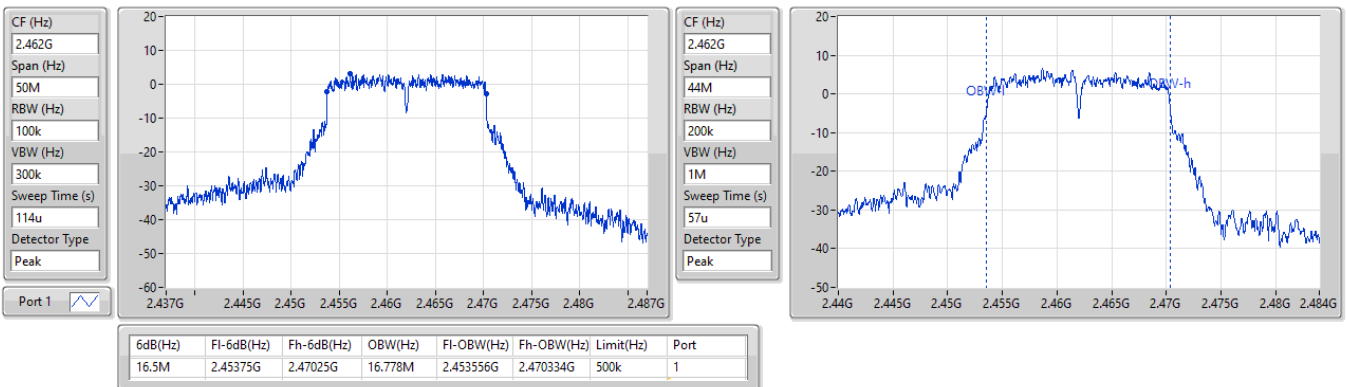


2.4-2.4835GHz\_802.11g\_Nss1,(6Mbps)\_1TX

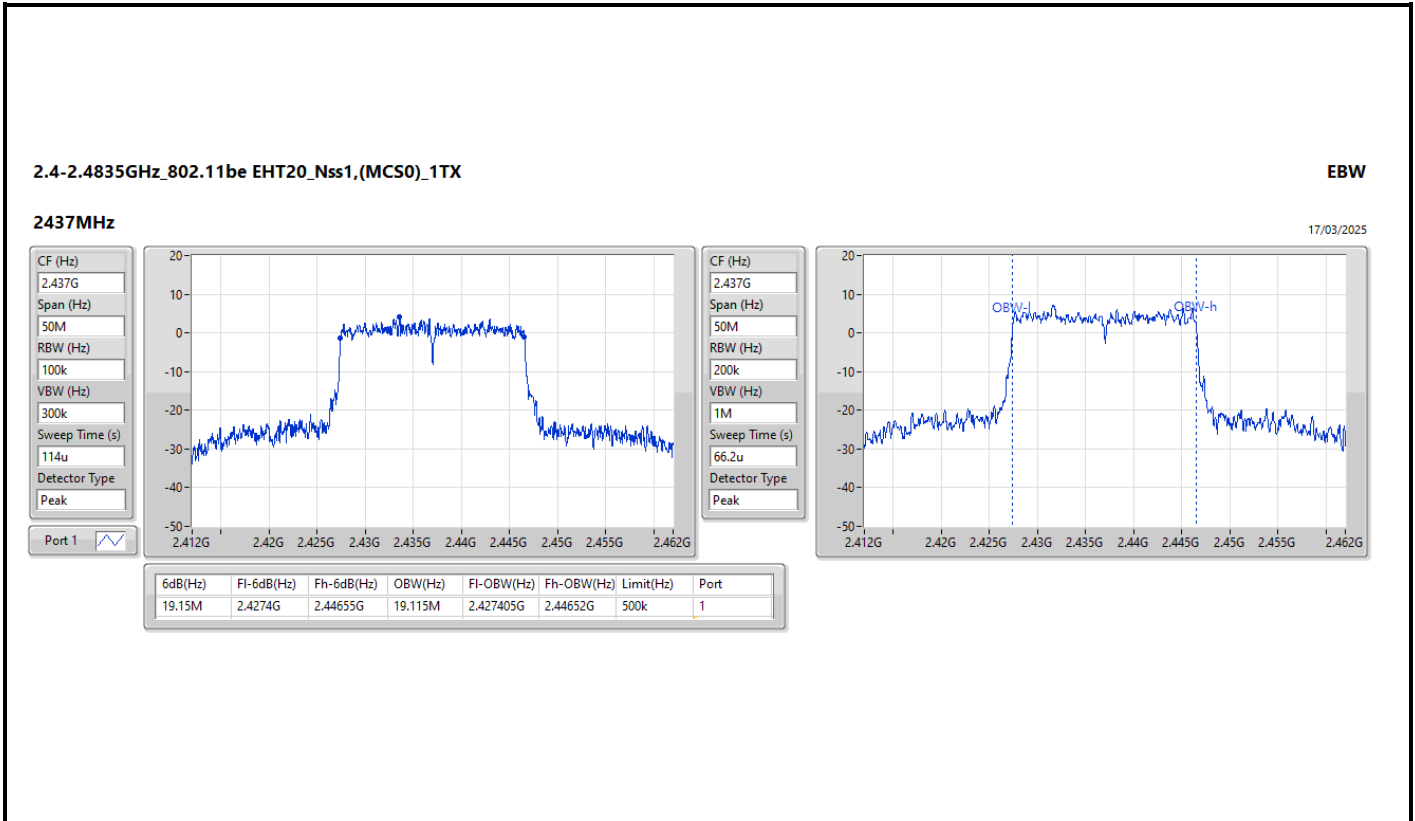
EBW

2462MHz

17/03/2025









Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	8.6M	14.798M	14M8G1D	6.325M	10.15M
802.11g_Nss1,(6Mbps)_2TX	16.475M	18.449M	18M4D1D	15.725M	16.712M
802.11be EHT20_Nss1,(MCS0)_2TX	19.075M	19.19M	19M2D1D	8.7M	18.941M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	6.55M	10.27M	7.125M	10.645M
2437MHz	Pass	500k	6.575M	11.874M	8.6M	14.798M
2462MHz	Pass	500k	6.325M	10.15M	7.025M	11.124M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.475M	17.041M	15.725M	17.239M
2437MHz	Pass	500k	16.475M	16.954M	16.425M	18.449M
2462MHz	Pass	500k	16.4M	16.712M	16.4M	16.778M
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	19.025M	18.941M	17.075M	19.14M
2437MHz	Pass	500k	17.55M	19.04M	19.05M	19.19M
2462MHz	Pass	500k	19.075M	19.015M	8.7M	18.991M

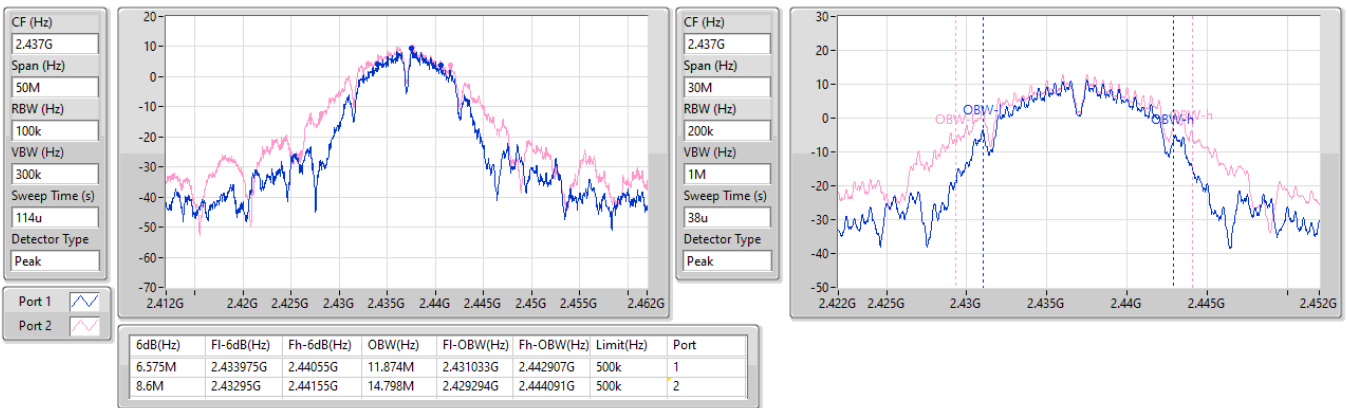
Port X-N dB = Port X 6dB down bandwidth;  
 Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz\_802.11b\_Nss1,(1Mbps)\_2TX

EBW

2437MHz

17/03/2025

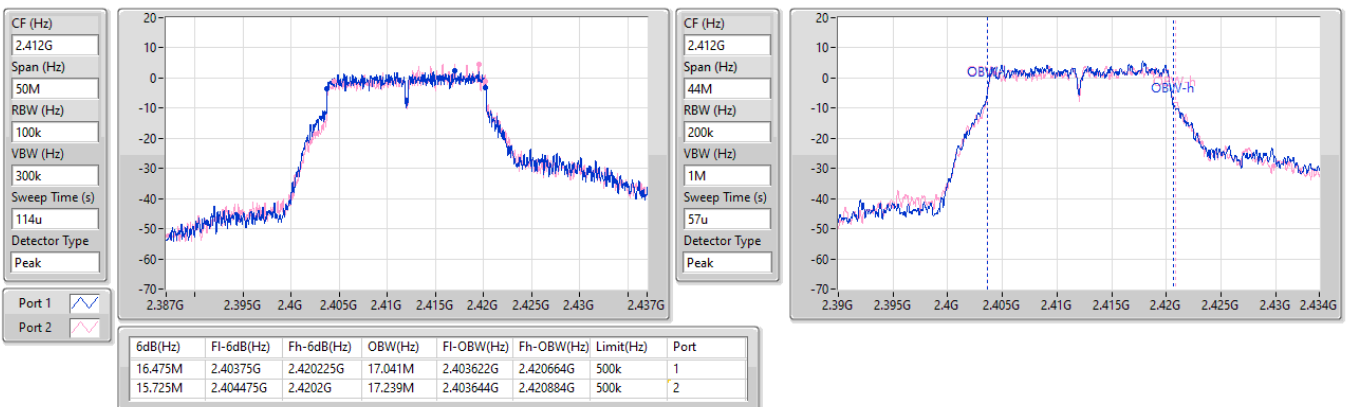


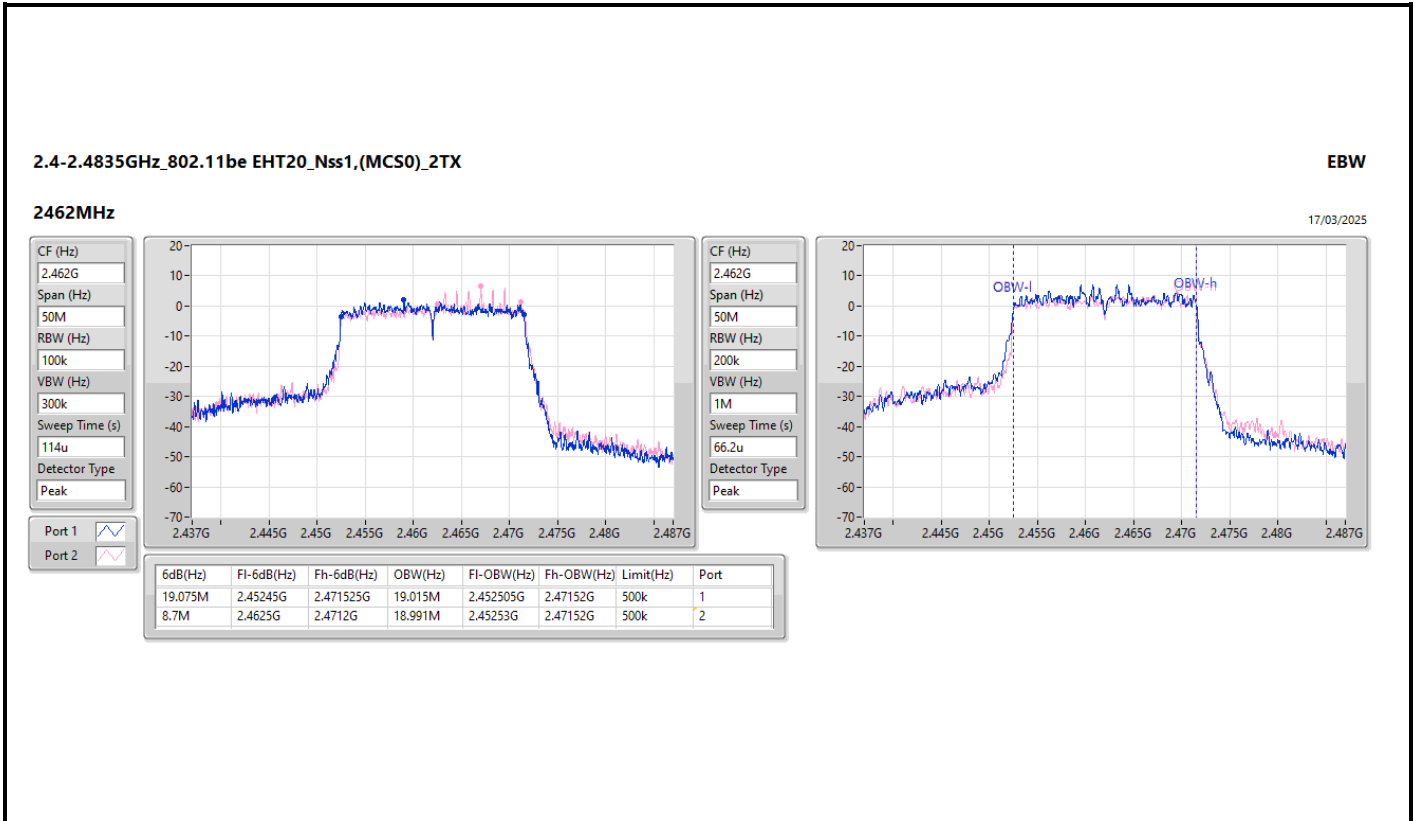
2.4-2.4835GHz\_802.11g\_Nss1,(6Mbps)\_2TX

EBW

2412MHz

17/03/2025







**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	19.125M	19.165M	19M2D1D	19M	18.991M

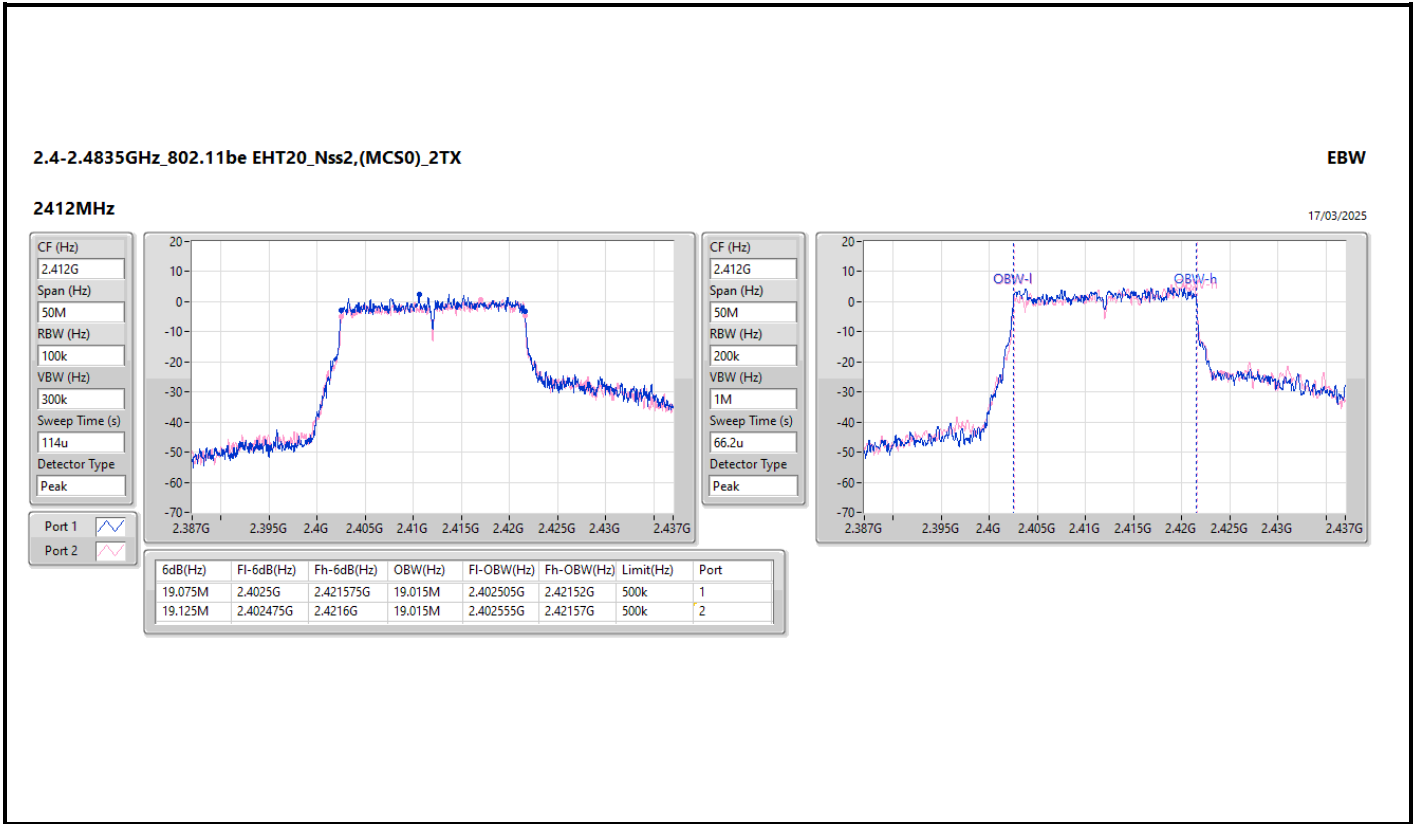
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	19.075M	19.015M	19.125M	19.015M
2437MHz	Pass	500k	19.125M	19.09M	19.025M	19.165M
2462MHz	Pass	500k	19M	19.04M	19.1M	18.991M

Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth







# EBW\_Non-Beamforming\_Radio 1\_ Dual-Polarized MIMO Panel Antenna\_1T1S

## Appendix B.4

### Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	7.075M	12.039M	12M0G1D	6.075M	10.255M
802.11g_Nss1,(6Mbps)_1TX	16.5M	17.613M	17M6D1D	15.9M	16.602M
802.11be EHT20_Nss1,(MCS0)_1TX	19.15M	19.065M	19M1D1D	19.05M	18.966M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	6.55M	10.345M
2437MHz	Pass	500k	6.075M	12.039M
2462MHz	Pass	500k	7.075M	10.255M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	15.9M	17.063M
2437MHz	Pass	500k	16.45M	17.613M
2462MHz	Pass	500k	16.5M	16.602M
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	19.1M	18.966M
2437MHz	Pass	500k	19.15M	19.065M
2462MHz	Pass	500k	19.05M	19.04M

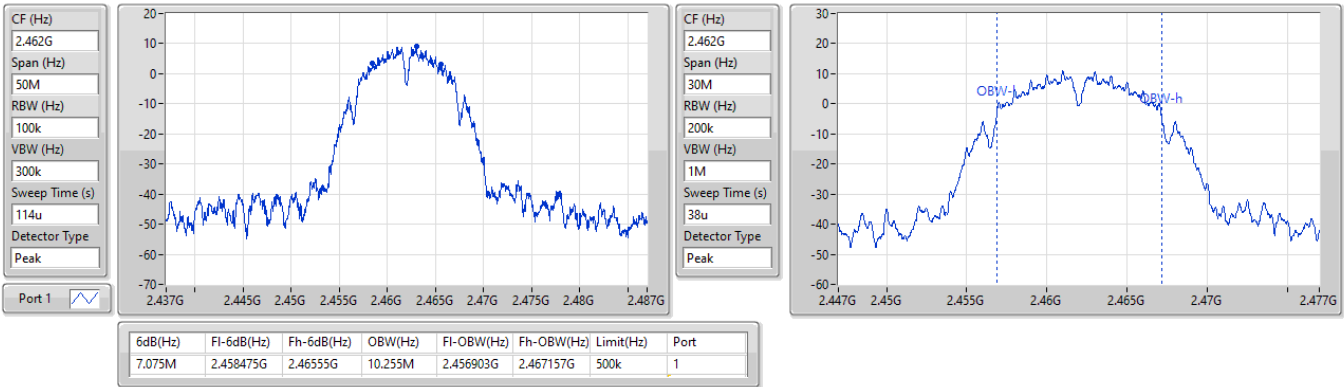
Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth

**2.4-2.4835GHz\_802.11b\_Nss1,(1Mbps)\_1TX**

EBW

2462MHz

17/03/2025

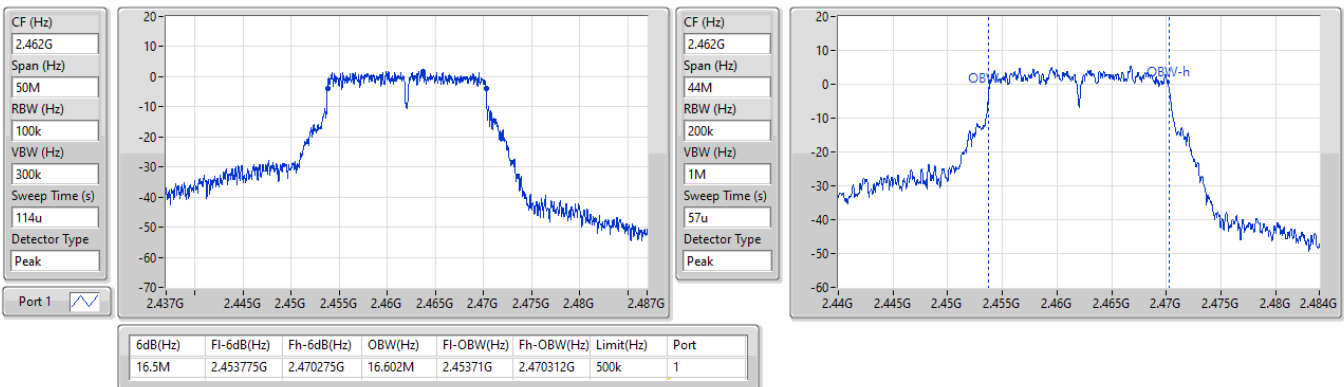


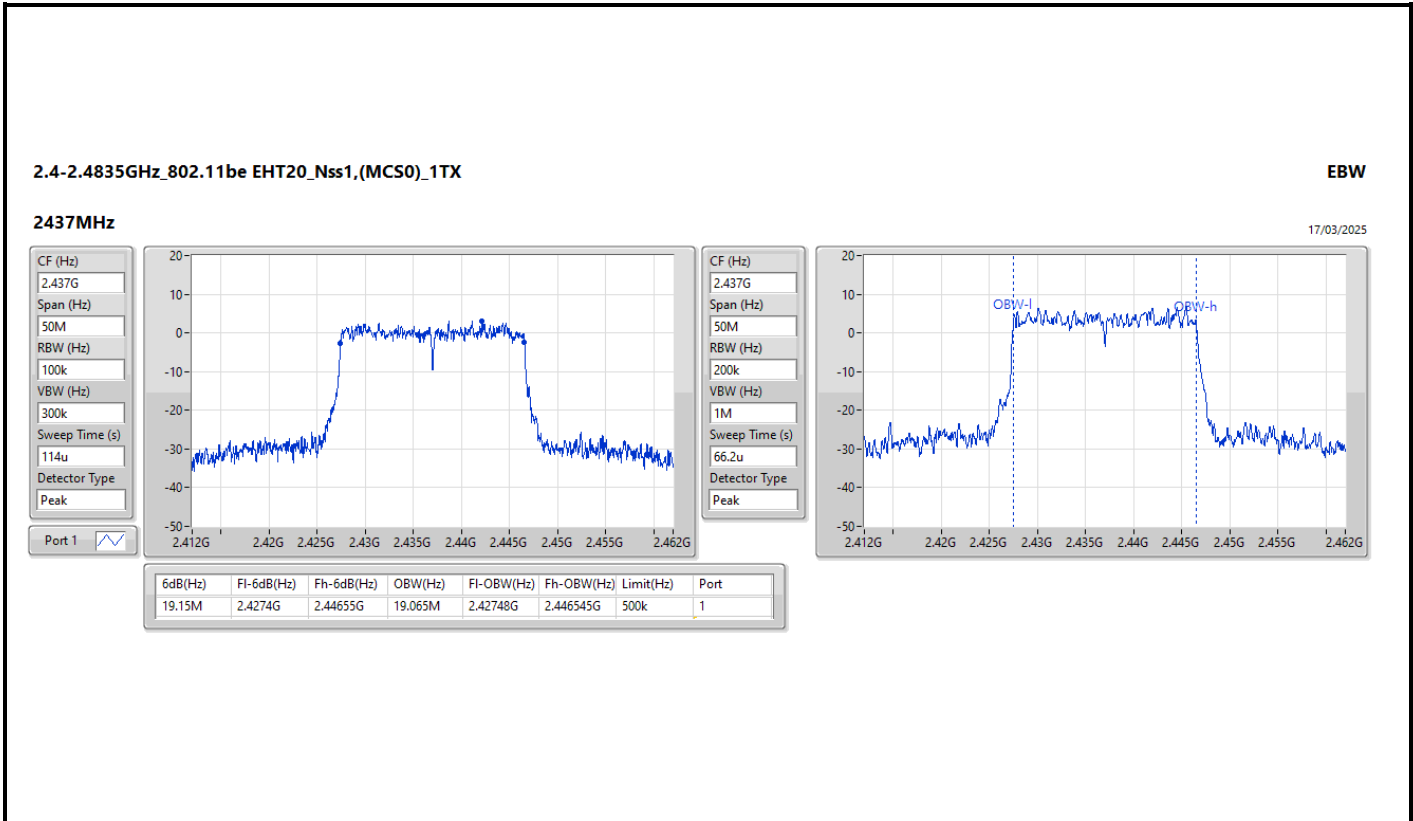
**2.4-2.4835GHz\_802.11g\_Nss1,(6Mbps)\_1TX**

EBW

2462MHz

17/03/2025







**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	8.6M	14.798M	14M8G1D	6.1M	10.21M
802.11g_Nss1,(6Mbps)_2TX	16.475M	18.449M	18M4D1D	15.725M	16.558M
802.11be EHT20_Nss1,(MCS0)_2TX	19.075M	19.19M	19M2D1D	8.775M	18.991M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



**EBW\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T1S**

**Appendix B.5**

**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	6.1M	10.255M	7.125M	10.39M
2437MHz	Pass	500k	6.575M	11.874M	8.6M	14.798M
2462MHz	Pass	500k	6.575M	10.21M	6.575M	10.285M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.475M	17.041M	15.725M	17.239M
2437MHz	Pass	500k	16.475M	16.954M	16.425M	18.449M
2462MHz	Pass	500k	16.45M	16.558M	16.4M	16.932M
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	19.05M	19.04M	8.775M	18.991M
2437MHz	Pass	500k	17.55M	19.04M	19.05M	19.19M
2462MHz	Pass	500k	19.05M	18.991M	19.075M	19.015M

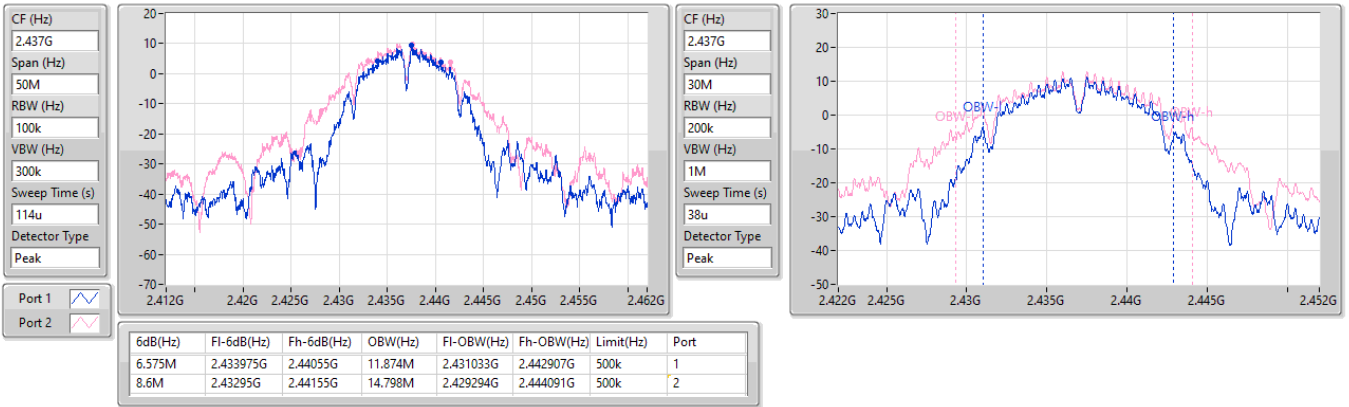
Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth

**2.4-2.4835GHz\_802.11b\_Nss1,(1Mbps)\_2TX**

**EBW**

**2437MHz**

17/03/2025

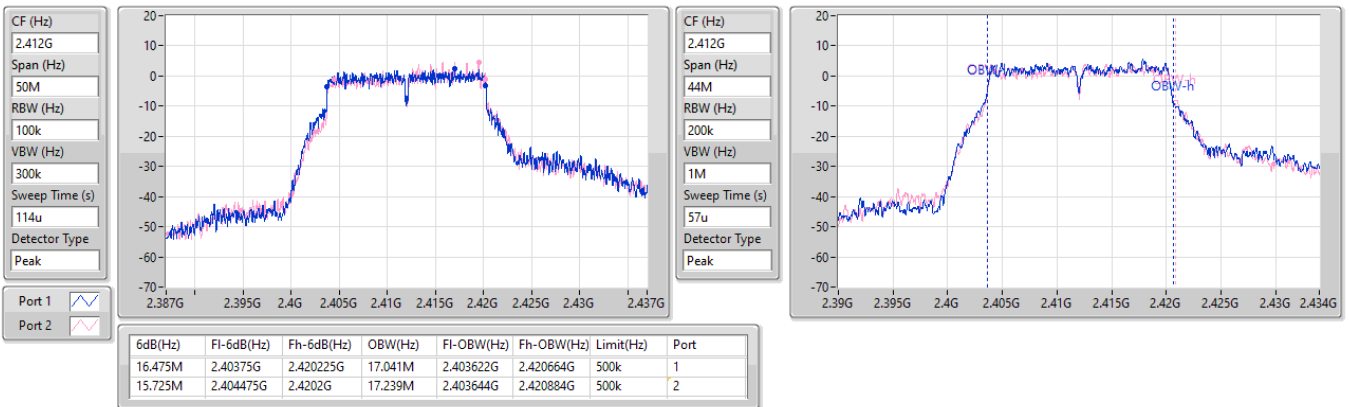


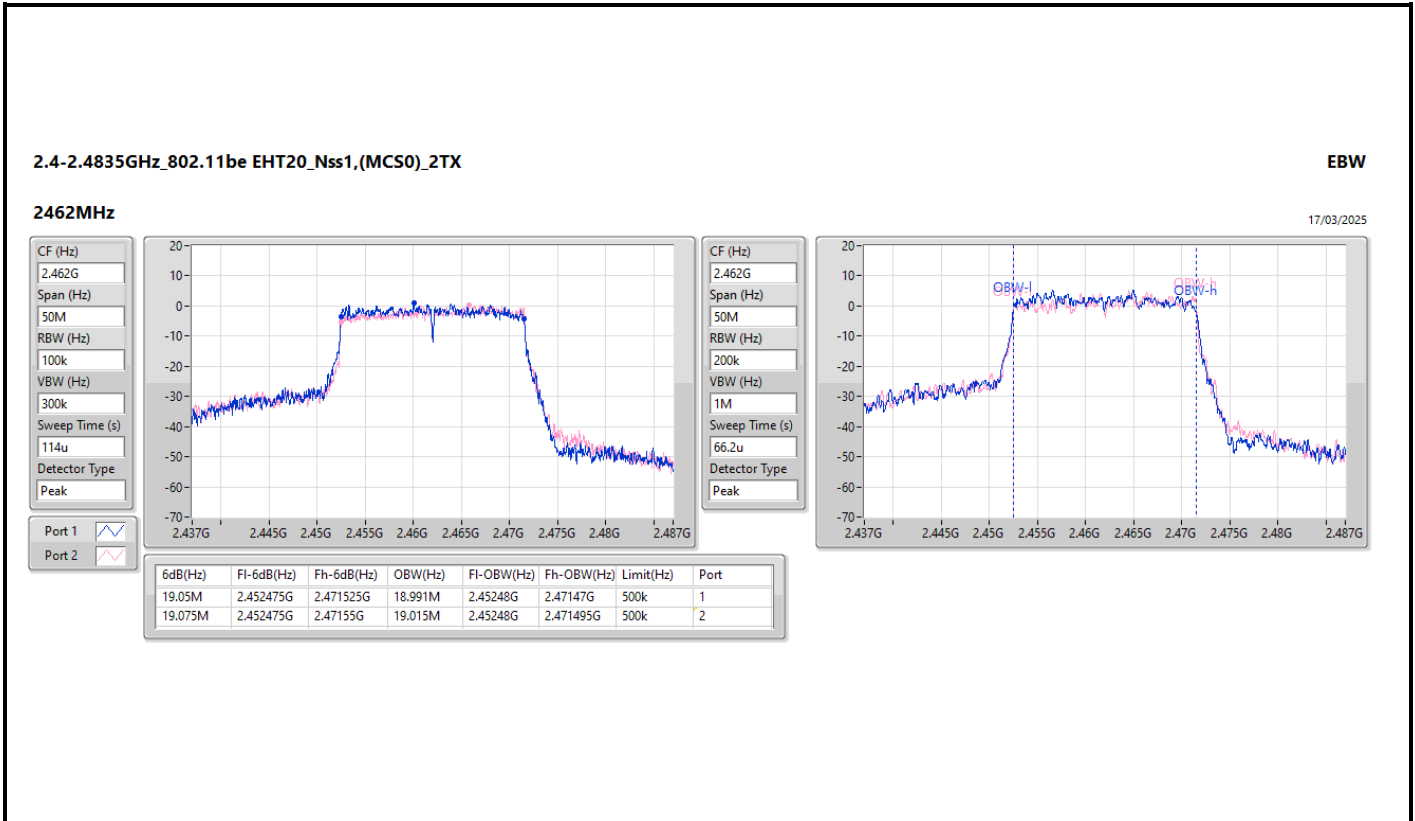
**2.4-2.4835GHz\_802.11g\_Nss1,(6Mbps)\_2TX**

**EBW**

**2412MHz**

17/03/2025









**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	19.125M	19.215M	19M2D1D	13.675M	18.991M

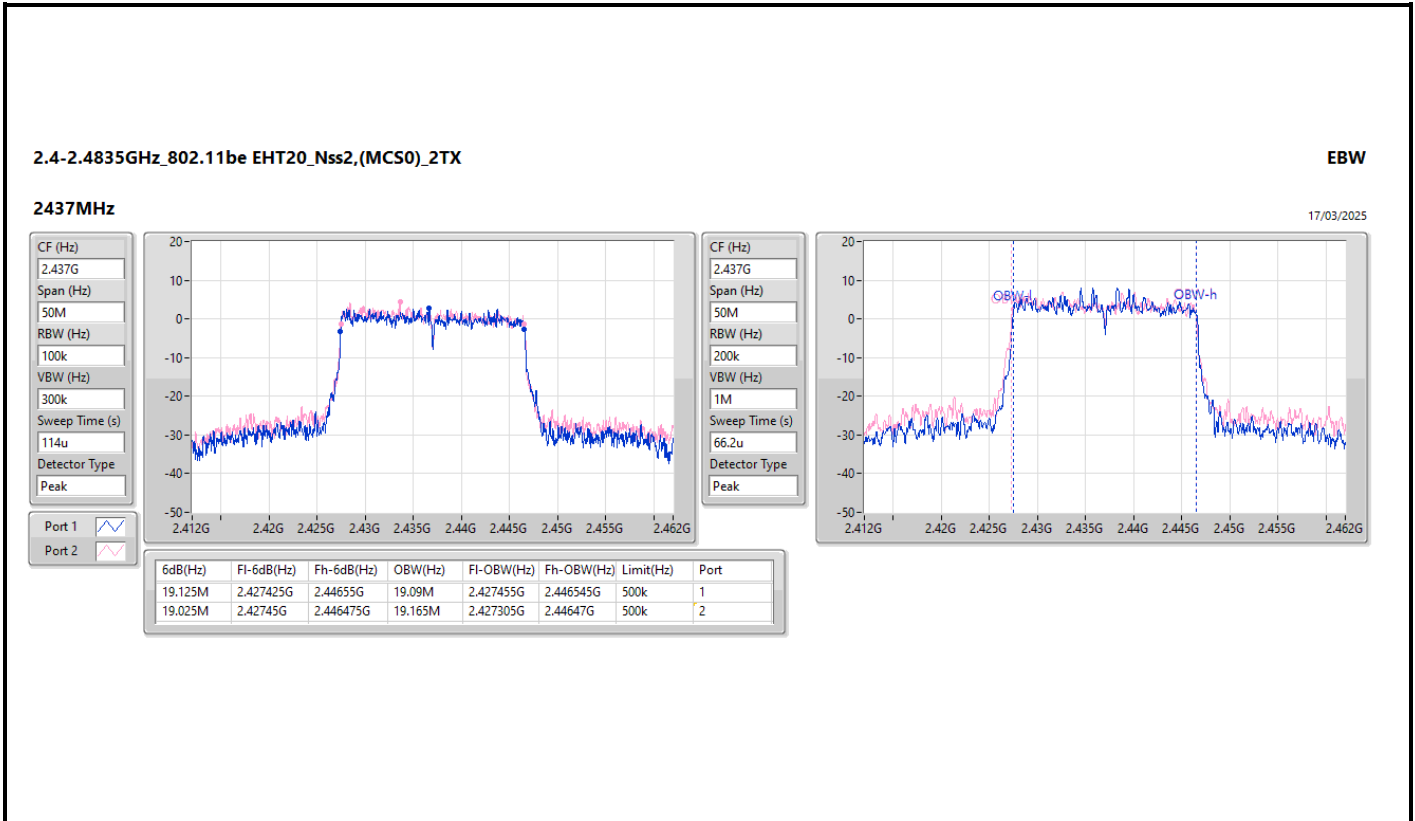
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	19.075M	19.215M	19.1M	19.09M
2437MHz	Pass	500k	19.125M	19.09M	19.025M	19.165M
2462MHz	Pass	500k	19.05M	18.991M	13.675M	19.065M

Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	7.55M	10.435M	10M4G1D	6.625M	10.195M
802.11g_Nss1,(6Mbps)_1TX	16.45M	17.173M	17M2D1D	16.4M	16.602M
802.11be EHT20_Nss1,(MCS0)_1TX	19.15M	19.065M	19M1D1D	18.175M	19.04M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	7.55M	10.435M
2437MHz	Pass	500k	6.625M	10.33M
2462MHz	Pass	500k	7.025M	10.195M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.45M	17.173M
2437MHz	Pass	500k	16.425M	16.8M
2462MHz	Pass	500k	16.4M	16.602M
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	19.15M	19.04M
2437MHz	Pass	500k	18.175M	19.065M
2462MHz	Pass	500k	19.1M	19.04M

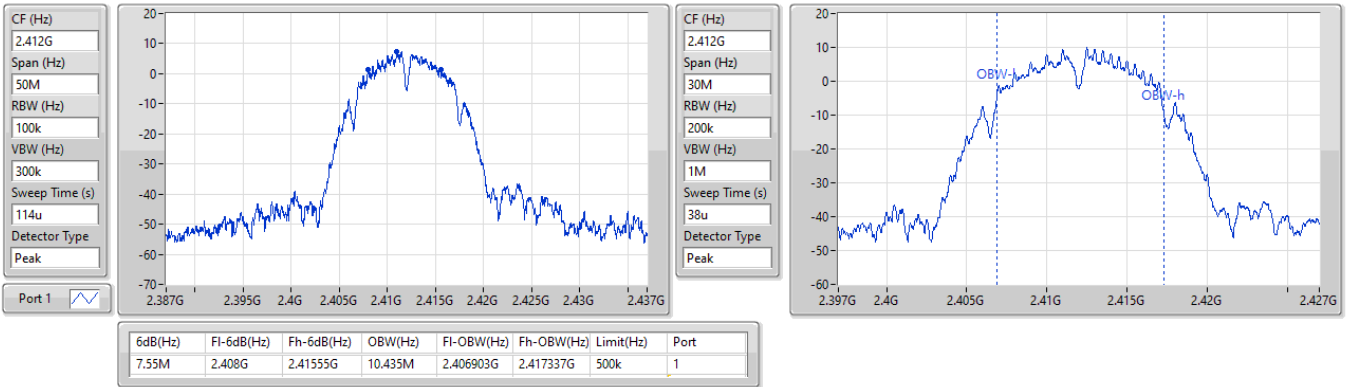
Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz\_802.11b\_Nss1,(1Mbps)\_1TX

EBW

2412MHz

05/05/2025

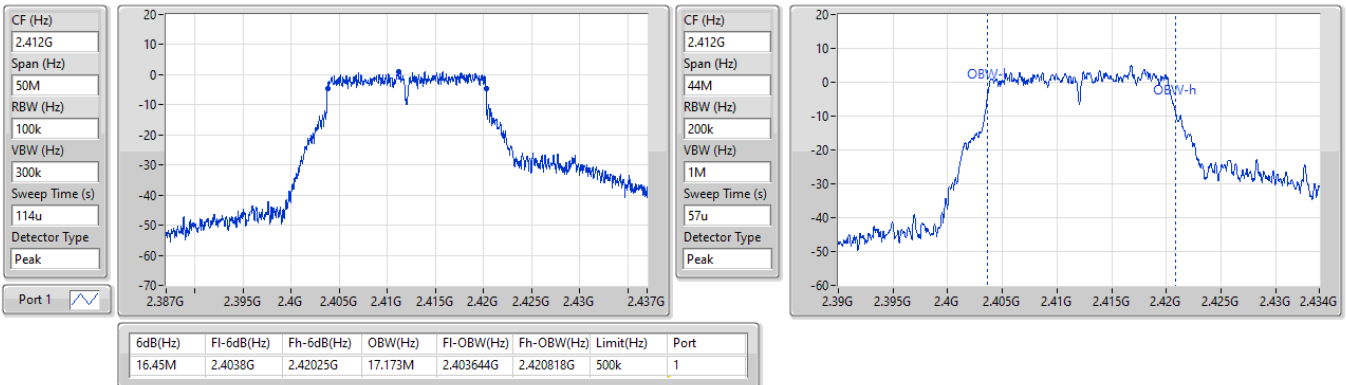


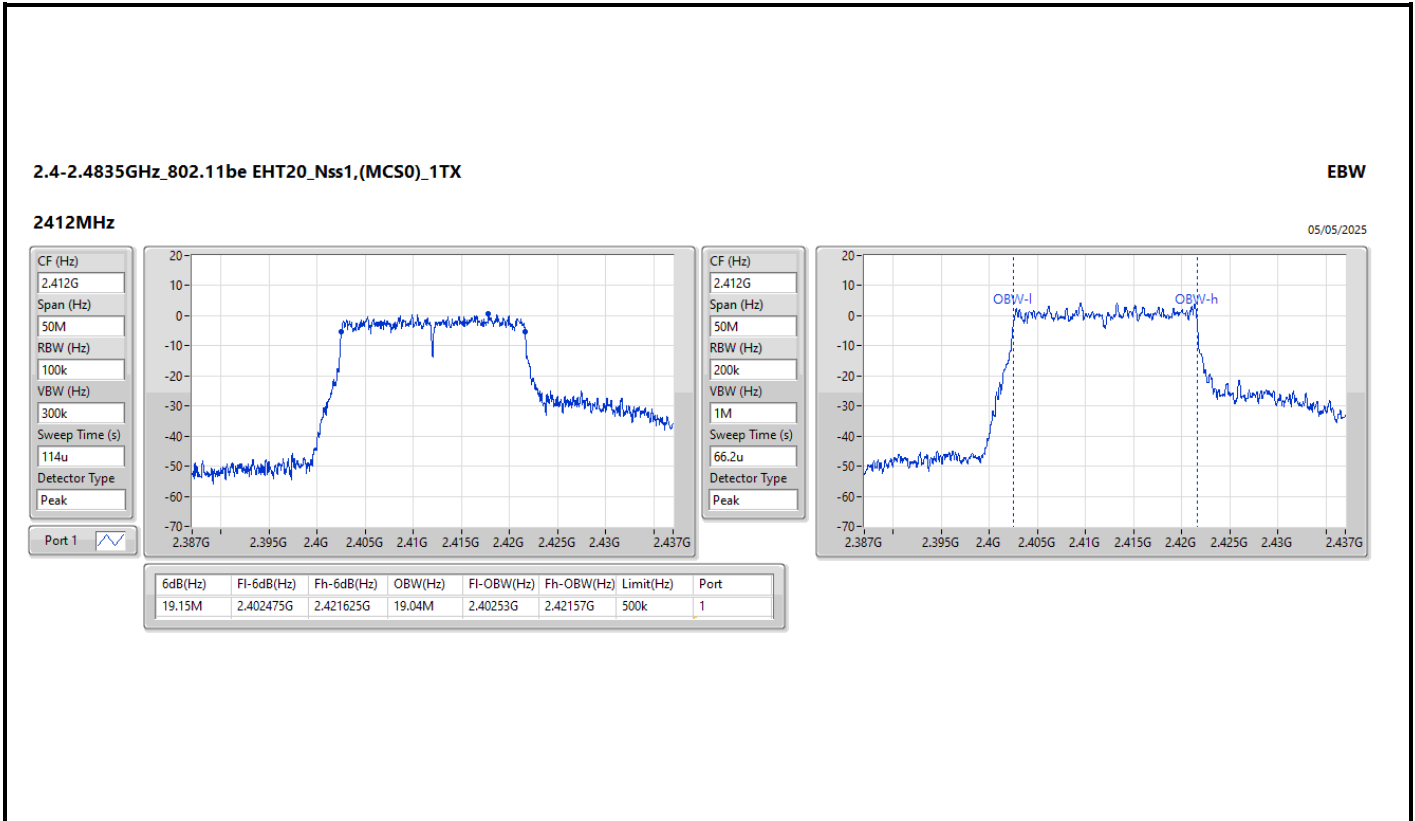
2.4-2.4835GHz\_802.11g\_Nss1,(6Mbps)\_1TX

EBW

2412MHz

05/05/2025







Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	7.55M	10.585M	10M6G1D	5.475M	10.165M
802.11g_Nss1,(6Mbps)_2TX	16.55M	17.217M	17M2D1D	16.4M	16.58M
802.11be EHT20_Nss1,(MCS0)_2TX	19.1M	19.04M	19M0D1D	17.275M	18.966M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth





**Result**

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	7.55M	10.24M	6.55M	10.315M
2437MHz	Pass	500k	5.475M	10.27M	6.55M	10.585M
2462MHz	Pass	500k	6.55M	10.165M	6.1M	10.255M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.425M	16.624M	16.425M	17.217M
2437MHz	Pass	500k	16.55M	16.976M	16.425M	17.195M
2462MHz	Pass	500k	16.4M	16.668M	16.425M	16.58M
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.275M	19.015M	18.375M	19.015M
2437MHz	Pass	500k	19.1M	19.04M	19.1M	18.991M
2462MHz	Pass	500k	18.85M	18.966M	19.05M	19.015M

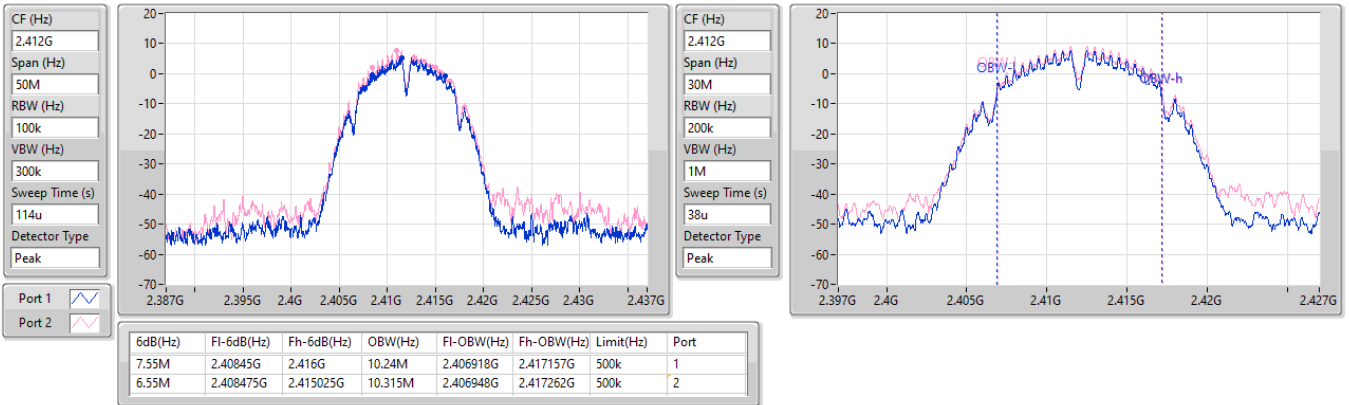
Port X-N dB = Port X 6dB down bandwidth;  
 Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz\_802.11b\_Nss1,(1Mbps)\_2TX

EBW

2412MHz

05/05/2025

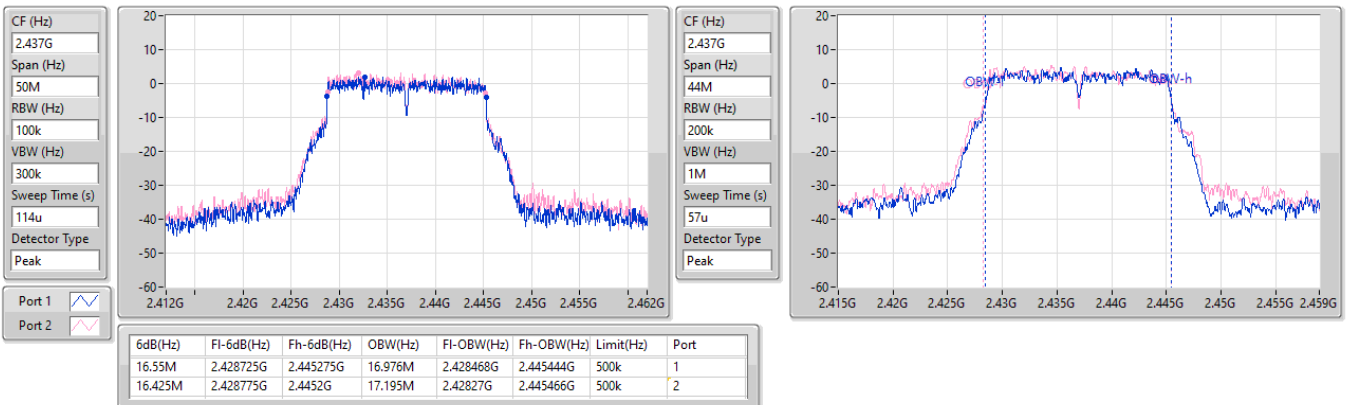


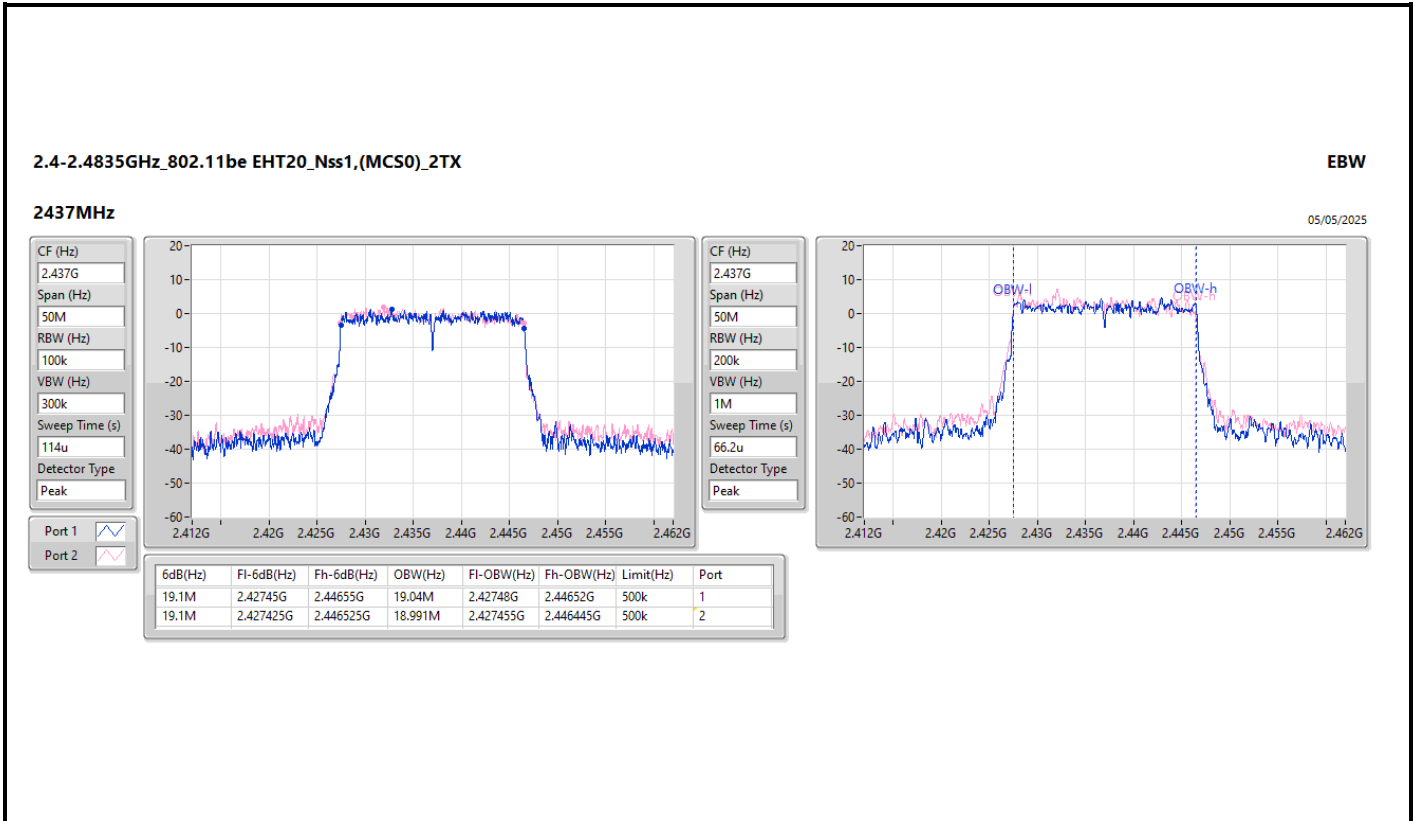
2.4-2.4835GHz\_802.11g\_Nss1,(6Mbps)\_2TX

EBW

2437MHz

05/05/2025







Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	19.1M	19.165M	19M2D1D	19.075M	18.966M

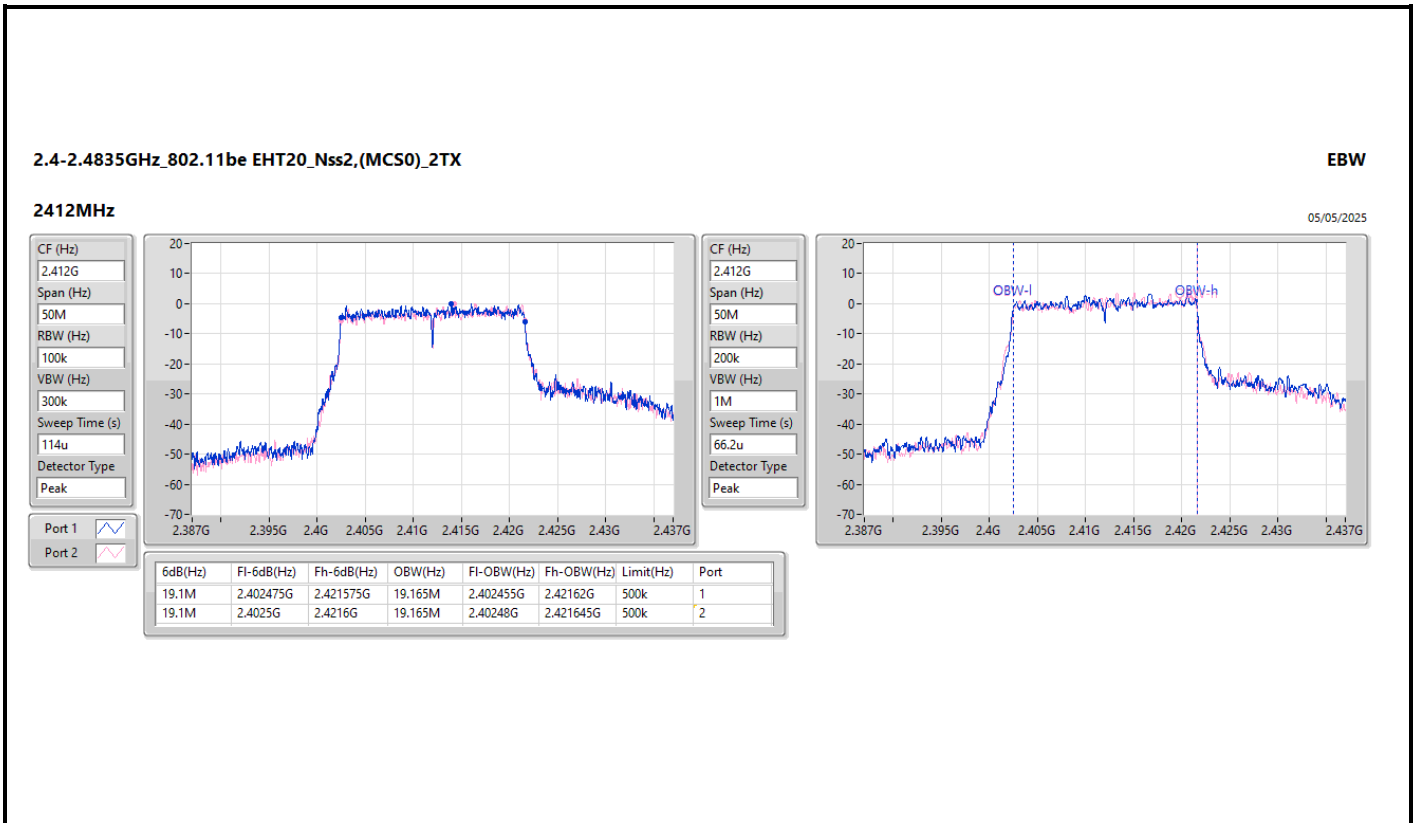
Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	19.1M	19.165M	19.1M	19.165M
2437MHz	Pass	500k	19.1M	18.966M	19.075M	19.015M
2462MHz	Pass	500k	19.075M	19.015M	19.075M	18.991M

Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth





Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
b20_Nss1,(1Mbps)_1TX	8.35M	13.118M	13M1G1D	7.575M	13.088M
g20_Nss1,(6Mbps)_1TX	16.45M	17.833M	17M8D1D	16.425M	16.514M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;  
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth



Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
b20_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	8.05M	13.088M
2437MHz	Pass	500k	8.35M	13.118M
2462MHz	Pass	500k	7.575M	13.118M
g20_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.45M	16.514M
2437MHz	Pass	500k	16.425M	17.833M
2462MHz	Pass	500k	16.45M	16.8M

Port X-N dB = Port X 6dB down bandwidth;  
Port X-OBW = Port X 99% occupied bandwidth

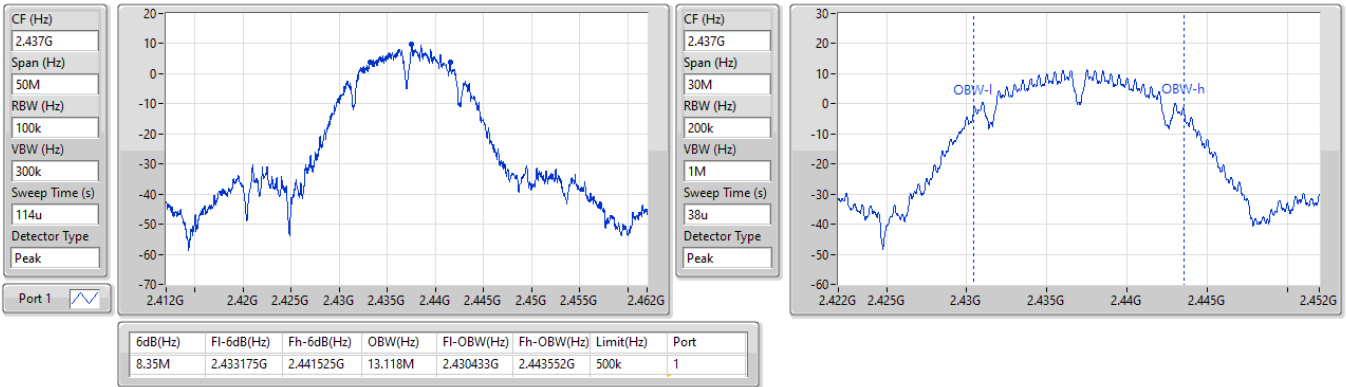


2.4-2.4835GHz\_b20\_Nss1,(1Mbps)\_1TX

EBW

2437MHz

18/03/2025

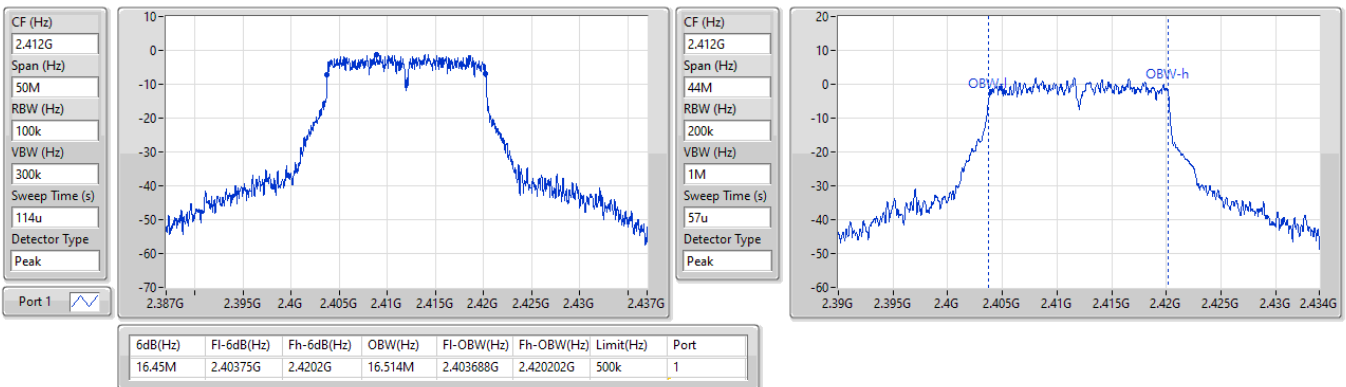


2.4-2.4835GHz\_g20\_Nss1,(6Mbps)\_1TX

EBW

2412MHz

18/03/2025





**Average Power\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_1T1S**

**Appendix C.1**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	19.03	0.07998
802.11g_Nss1,(6Mbps)_1TX	18.24	0.06668
802.11be EHT20_Nss1,(MCS0)_1TX	18.40	0.06918



# Average Power\_Non-Beamforming\_Radio 1\_ Dipole Antenna\_1T1S

## Appendix C.1

### Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.28	18.45	18.45	30.00
2437MHz	Pass	2.28	19.03	19.03	30.00
2457MHz	Pass	2.28	18.94	18.94	30.00
2462MHz	Pass	2.28	18.82	18.82	30.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.28	17.14	17.14	30.00
2417MHz	Pass	2.28	17.40	17.40	30.00
2437MHz	Pass	2.28	18.24	18.24	30.00
2457MHz	Pass	2.28	17.78	17.78	30.00
2462MHz	Pass	2.28	17.54	17.54	30.00
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.28	16.86	16.86	30.00
2417MHz	Pass	2.28	17.53	17.53	30.00
2437MHz	Pass	2.28	18.40	18.40	30.00
2457MHz	Pass	2.28	17.78	17.78	30.00
2462MHz	Pass	2.28	17.62	17.62	30.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_2T1S**

**Appendix C.2**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	22.36	0.17219
802.11g_Nss1,(6Mbps)_2TX	21.14	0.13002
802.11be EHT20_Nss1,(MCS0)_2TX	20.92	0.12359



**Average Power\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_2T1S**

**Appendix C.2**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.28	15.91	17.55	19.82	30.00
2417MHz	Pass	2.28	17.65	19.11	21.45	30.00
2437MHz	Pass	2.28	18.43	20.11	22.36	30.00
2457MHz	Pass	2.28	18.30	19.12	21.74	30.00
2462MHz	Pass	2.28	17.51	18.24	20.90	30.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.28	16.34	15.86	19.12	30.00
2417MHz	Pass	2.28	15.34	15.49	18.43	30.00
2437MHz	Pass	2.28	17.71	18.51	21.14	30.00
2457MHz	Pass	2.28	17.17	16.60	19.90	30.00
2462MHz	Pass	2.28	16.95	16.45	19.72	30.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.28	16.07	15.72	18.91	30.00
2417MHz	Pass	2.28	16.43	16.08	19.27	30.00
2437MHz	Pass	2.28	17.52	18.27	20.92	30.00
2457MHz	Pass	2.28	17.04	16.78	19.92	30.00
2462MHz	Pass	2.28	16.51	15.92	19.24	30.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_2T2S**

**Appendix C.3**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	20.95	0.12445



**Average Power\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_2T2S**

**Appendix C.3**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.28	16.12	15.80	18.97	30.00
2417MHz	Pass	2.28	16.45	16.22	19.35	30.00
2437MHz	Pass	2.28	17.63	18.22	20.95	30.00
2457MHz	Pass	2.28	17.08	16.63	19.87	30.00
2462MHz	Pass	2.28	16.36	15.98	19.18	30.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_1T1S**

**Appendix C.4**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	19.03	0.07998
802.11g_Nss1,(6Mbps)_1TX	18.24	0.06668
802.11be EHT20_Nss1,(MCS0)_1TX	17.72	0.05916





# Average Power\_Non-Beamforming\_Radio 1\_ Dual-Polarized MIMO Panel Antenna\_1T1S

## Appendix C.4

### Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	8.00	17.26	17.26	28.00
2417MHz	Pass	8.00	18.02	18.02	28.00
2437MHz	Pass	8.00	19.03	19.03	28.00
2457MHz	Pass	8.00	18.49	18.49	28.00
2462MHz	Pass	8.00	18.34	18.34	28.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	8.00	16.91	16.91	28.00
2417MHz	Pass	8.00	15.57	15.57	28.00
2437MHz	Pass	8.00	18.24	18.24	28.00
2457MHz	Pass	8.00	16.88	16.88	28.00
2462MHz	Pass	8.00	16.36	16.36	28.00
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	8.00	16.86	16.86	28.00
2417MHz	Pass	8.00	15.79	15.79	28.00
2437MHz	Pass	8.00	17.72	17.72	28.00
2457MHz	Pass	8.00	16.89	16.89	28.00
2462MHz	Pass	8.00	16.30	16.30	28.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T1S**

**Appendix C.5**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	22.36	0.17219
802.11g_Nss1,(6Mbps)_2TX	21.14	0.13002
802.11be EHT20_Nss1,(MCS0)_2TX	20.92	0.12359



**Average Power\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T1S**

**Appendix C.5**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.00	15.21	16.77	19.07	28.00
2417MHz	Pass	8.00	16.45	18.11	20.37	28.00
2437MHz	Pass	8.00	18.43	20.11	22.36	28.00
2457MHz	Pass	8.00	16.32	17.34	19.87	28.00
2462MHz	Pass	8.00	16.91	18.14	20.58	28.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.00	16.34	15.86	19.12	28.00
2417MHz	Pass	8.00	15.37	15.42	18.41	28.00
2437MHz	Pass	8.00	17.71	18.51	21.14	28.00
2457MHz	Pass	8.00	16.82	16.29	19.57	28.00
2462MHz	Pass	8.00	16.37	15.72	19.07	28.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.00	15.77	15.55	18.67	28.00
2417MHz	Pass	8.00	15.82	15.78	18.81	28.00
2437MHz	Pass	8.00	17.52	18.27	20.92	28.00
2457MHz	Pass	8.00	16.68	16.20	19.46	28.00
2462MHz	Pass	8.00	15.65	15.27	18.47	28.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T2S**

**Appendix C.6**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	20.95	0.12445



**Average Power\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T2S**

**Appendix C.6**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.00	16.27	15.77	19.04	28.00
2417MHz	Pass	8.00	16.38	16.31	19.36	28.00
2437MHz	Pass	8.00	17.63	18.22	20.95	28.00
2457MHz	Pass	8.00	16.70	16.16	19.45	28.00
2462MHz	Pass	8.00	16.06	15.70	18.89	28.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_1T1S**

**Appendix C.7**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	17.29	0.05358
802.11g_Nss1,(6Mbps)_1TX	16.43	0.04395
802.11be EHT20_Nss1,(MCS0)_1TX	16.21	0.04178



# Average Power\_Non-Beamforming\_Radio 1\_ Panel Antenna\_1T1S

## Appendix C.7

### Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	12.52	16.85	16.85	23.48
2417MHz	Pass	12.52	16.99	16.99	23.48
2437MHz	Pass	12.52	17.29	17.29	23.48
2457MHz	Pass	12.52	17.09	17.09	23.48
2462MHz	Pass	12.52	17.14	17.14	23.48
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	12.52	15.39	15.39	23.48
2417MHz	Pass	12.52	12.25	12.25	23.48
2437MHz	Pass	12.52	16.43	16.43	23.48
2457MHz	Pass	12.52	15.69	15.69	23.48
2462MHz	Pass	12.52	14.98	14.98	23.48
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	12.52	15.24	15.24	23.48
2417MHz	Pass	12.52	12.09	12.09	23.48
2437MHz	Pass	12.52	16.21	16.21	23.48
2457MHz	Pass	12.52	15.67	15.67	23.48
2462MHz	Pass	12.52	15.23	15.23	23.48

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_2T1S**

**Appendix C.8**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	19.66	0.09247
802.11g_Nss1,(6Mbps)_2TX	19.50	0.08913
802.11be EHT20_Nss1,(MCS0)_2TX	19.47	0.08851





**Average Power\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_2T1S**

**Appendix C.8**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	12.52	14.80	16.31	18.63	23.48
2437MHz	Pass	12.52	15.37	17.33	19.47	23.48
2457MHz	Pass	12.52	15.79	17.37	19.66	23.48
2462MHz	Pass	12.52	16.00	17.10	19.60	23.48
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	12.52	14.97	14.91	17.95	23.48
2417MHz	Pass	12.52	11.13	11.37	14.26	23.48
2437MHz	Pass	12.52	16.23	16.74	19.50	23.48
2457MHz	Pass	12.52	16.43	16.01	19.24	23.48
2462MHz	Pass	12.52	15.11	14.96	18.05	23.48
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	12.52	14.94	14.68	17.82	23.48
2417MHz	Pass	12.52	13.15	13.25	16.21	23.48
2437MHz	Pass	12.52	16.12	16.78	19.47	23.48
2457MHz	Pass	12.52	15.95	15.78	18.88	23.48
2462MHz	Pass	12.52	16.02	15.69	18.87	23.48

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_2T2S**

**Appendix C.9**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	18.94	0.07834



# Average Power\_Non-Beamforming\_Radio 1\_ Panel Antenna\_2T2S

## Appendix C.9

### Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	12.52	14.81	14.50	17.67	23.48
2417MHz	Pass	12.52	12.32	12.07	15.21	23.48
2437MHz	Pass	12.52	15.89	15.97	18.94	23.48
2457MHz	Pass	12.52	15.42	14.82	18.14	23.48
2462MHz	Pass	12.52	14.27	13.90	17.10	23.48

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11be EHT20-BF_Nss1,(MCS0)_2TX	20.92	0.12359



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.29	16.07	15.72	18.91	30.00
2417MHz	Pass	5.29	16.43	16.08	19.27	30.00
2437MHz	Pass	5.29	17.52	18.27	20.92	30.00
2457MHz	Pass	5.29	17.04	16.78	19.92	30.00
2462MHz	Pass	5.29	16.51	15.92	19.24	30.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Average Power\_Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna**

**Appendix C.11**

**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11be EHT20-BF_Nss1,(MCS0)_2TX	20.92	0.12359



**Average Power\_Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna**

**Appendix C.11**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	11.01	15.77	15.55	18.67	24.99
2417MHz	Pass	11.01	15.82	15.78	18.81	24.99
2437MHz	Pass	11.01	17.52	18.27	20.92	24.99
2457MHz	Pass	11.01	16.68	16.20	19.46	24.99
2462MHz	Pass	11.01	15.65	15.27	18.47	24.99

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11be EHT20-BF_Nss1,(MCS0)_2TX	19.47	0.08851





Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)
802.11be EHT20-BF_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	15.53	14.94	14.68	17.82	20.47
2417MHz	Pass	15.53	13.15	13.25	16.21	20.47
2437MHz	Pass	15.53	16.12	16.78	19.47	20.47
2457MHz	Pass	15.53	15.95	15.78	18.88	20.47
2462MHz	Pass	15.53	16.02	15.69	18.87	20.47

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



**Summary**

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
b20_Nss1,(1Mbps)_1TX	19.38	0.08670
g20_Nss1,(6Mbps)_1TX	18.79	0.07568



Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
b20_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	4.50	18.19	18.19	30.00
2417MHz	Pass	4.50	18.52	18.52	30.00
2437MHz	Pass	4.50	19.38	19.38	30.00
2457MHz	Pass	4.50	18.72	18.72	30.00
2462MHz	Pass	4.50	18.10	18.10	30.00
g20_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	4.50	13.45	13.45	30.00
2417MHz	Pass	4.50	15.19	15.19	30.00
2437MHz	Pass	4.50	18.79	18.79	30.00
2457MHz	Pass	4.50	16.13	16.13	30.00
2462MHz	Pass	4.50	13.52	13.52	30.00

DG = Directional Gain; Port X = Port X output power;  
Inf = There's no restriction for the limit.



Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-3.72
802.11g_Nss1,(6Mbps)_1TX	-7.81
802.11be EHT20_Nss1,(MCS0)_1TX	-7.04

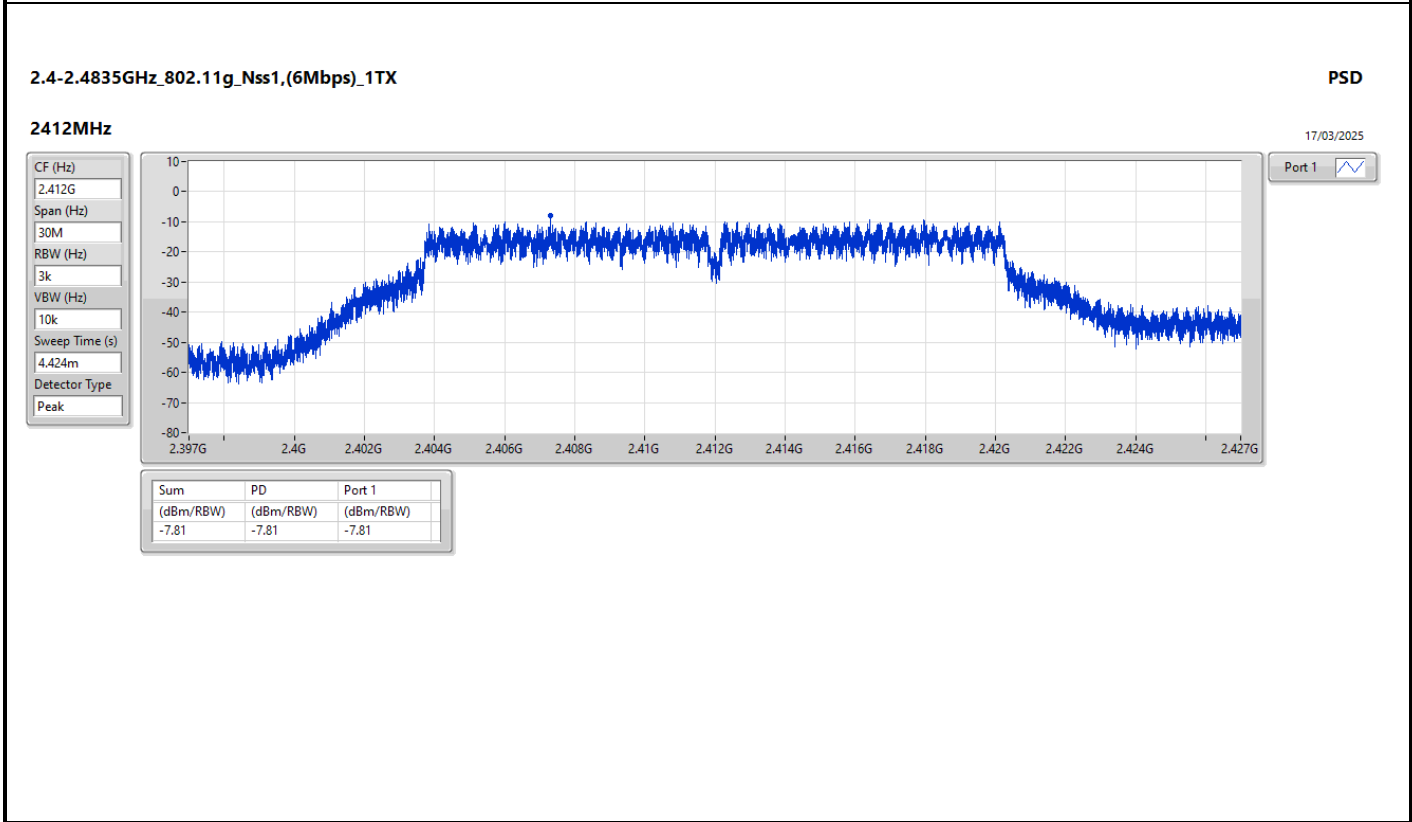
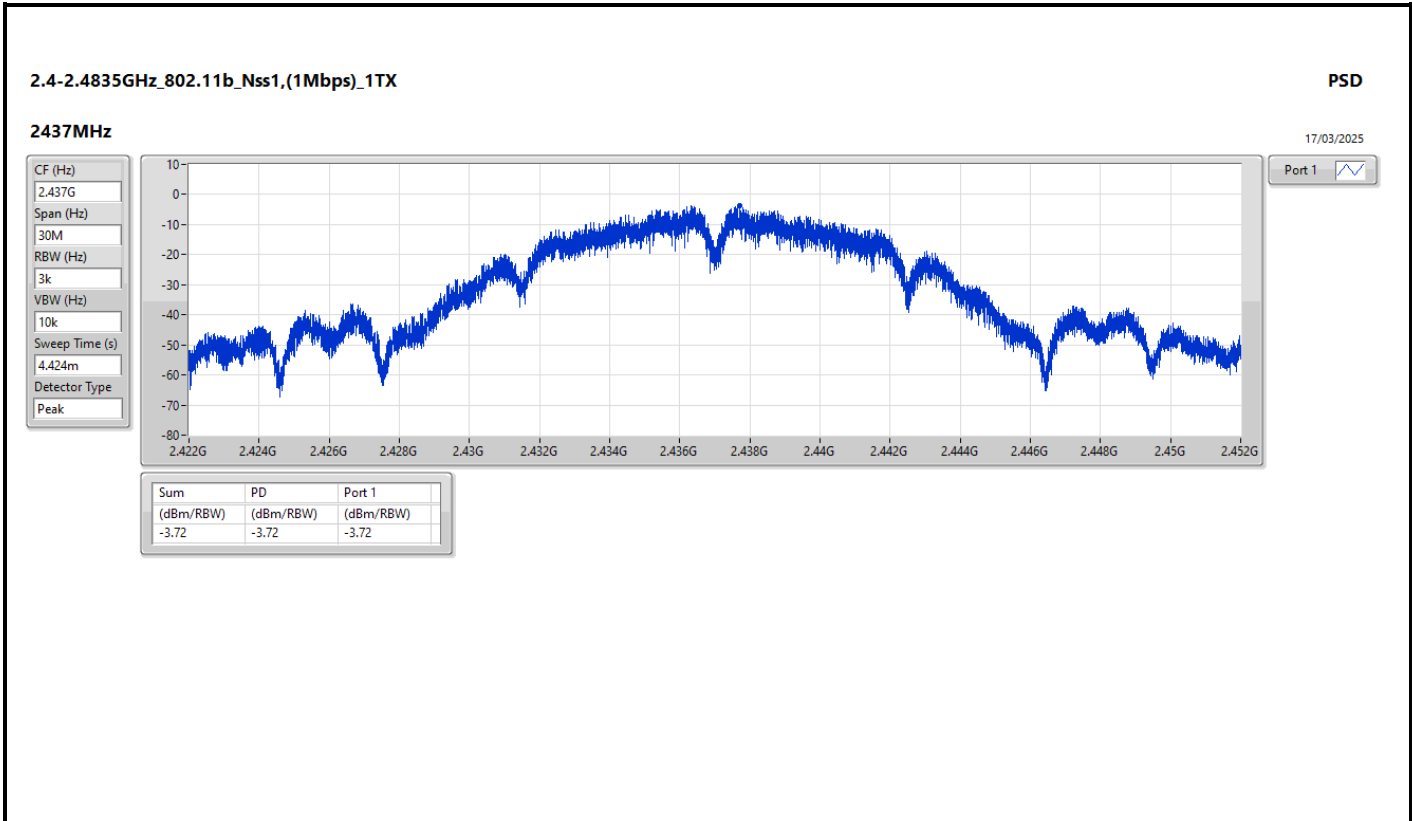
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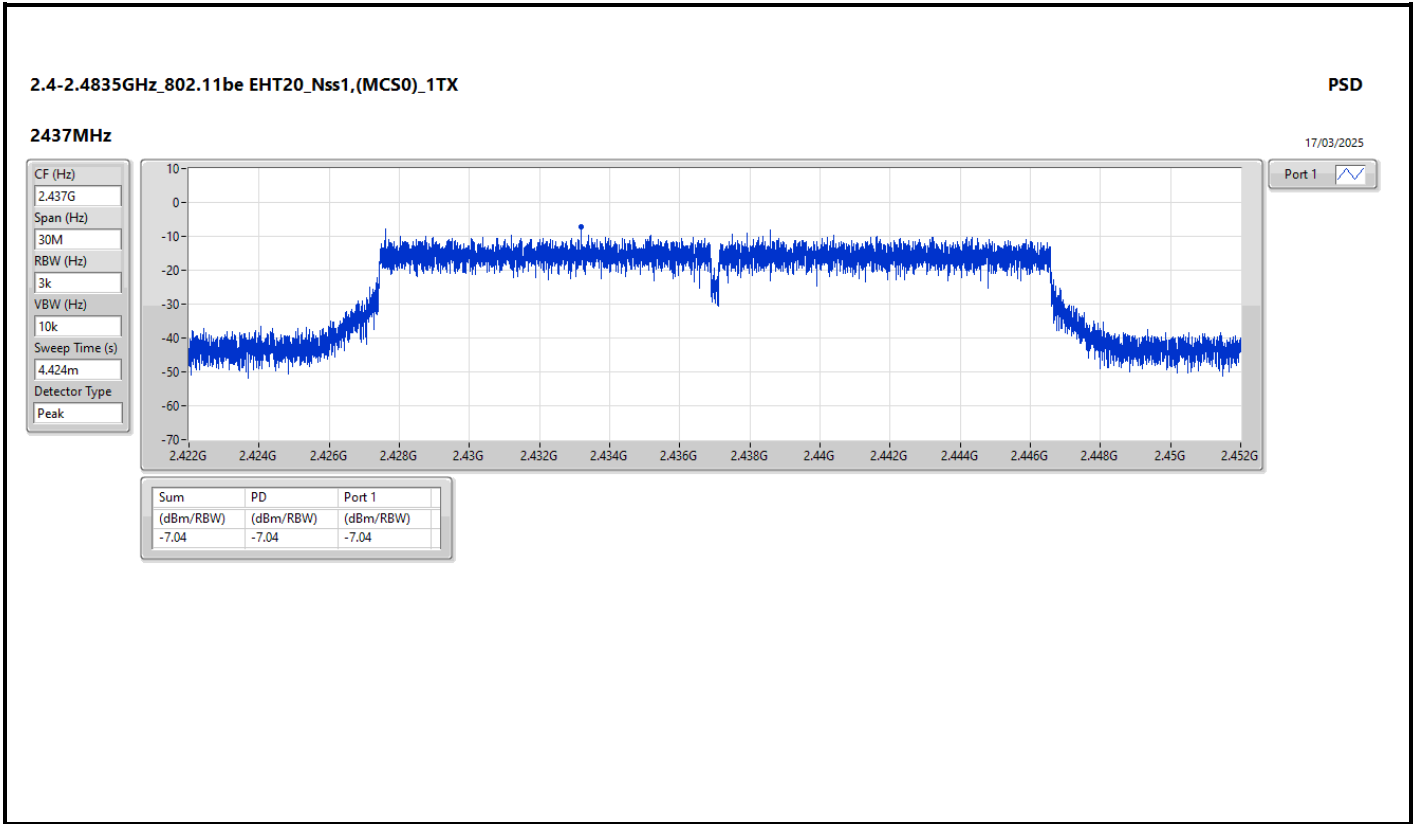


Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.28	-4.55	-4.55	8.00
2437MHz	Pass	2.28	-3.72	-3.72	8.00
2462MHz	Pass	2.28	-4.30	-4.30	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.28	-7.81	-7.81	8.00
2437MHz	Pass	2.28	-8.07	-8.07	8.00
2462MHz	Pass	2.28	-8.97	-8.97	8.00
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.28	-8.68	-8.68	8.00
2437MHz	Pass	2.28	-7.04	-7.04	8.00
2462MHz	Pass	2.28	-9.57	-9.57	8.00

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.







Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-1.26
802.11g_Nss1,(6Mbps)_2TX	-5.53
802.11be EHT20_Nss1,(MCS0)_2TX	-6.51

RBW = 3kHz;

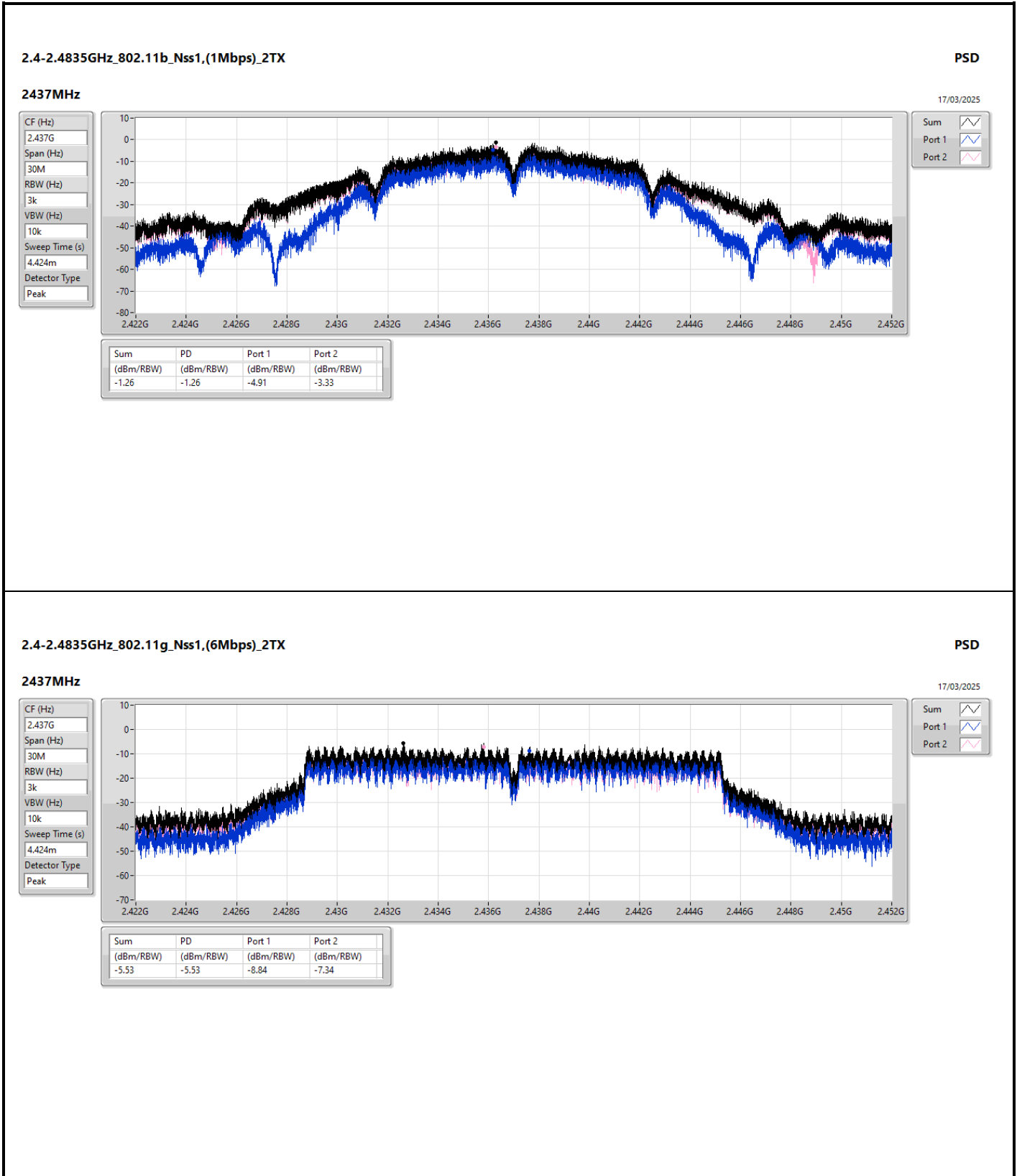


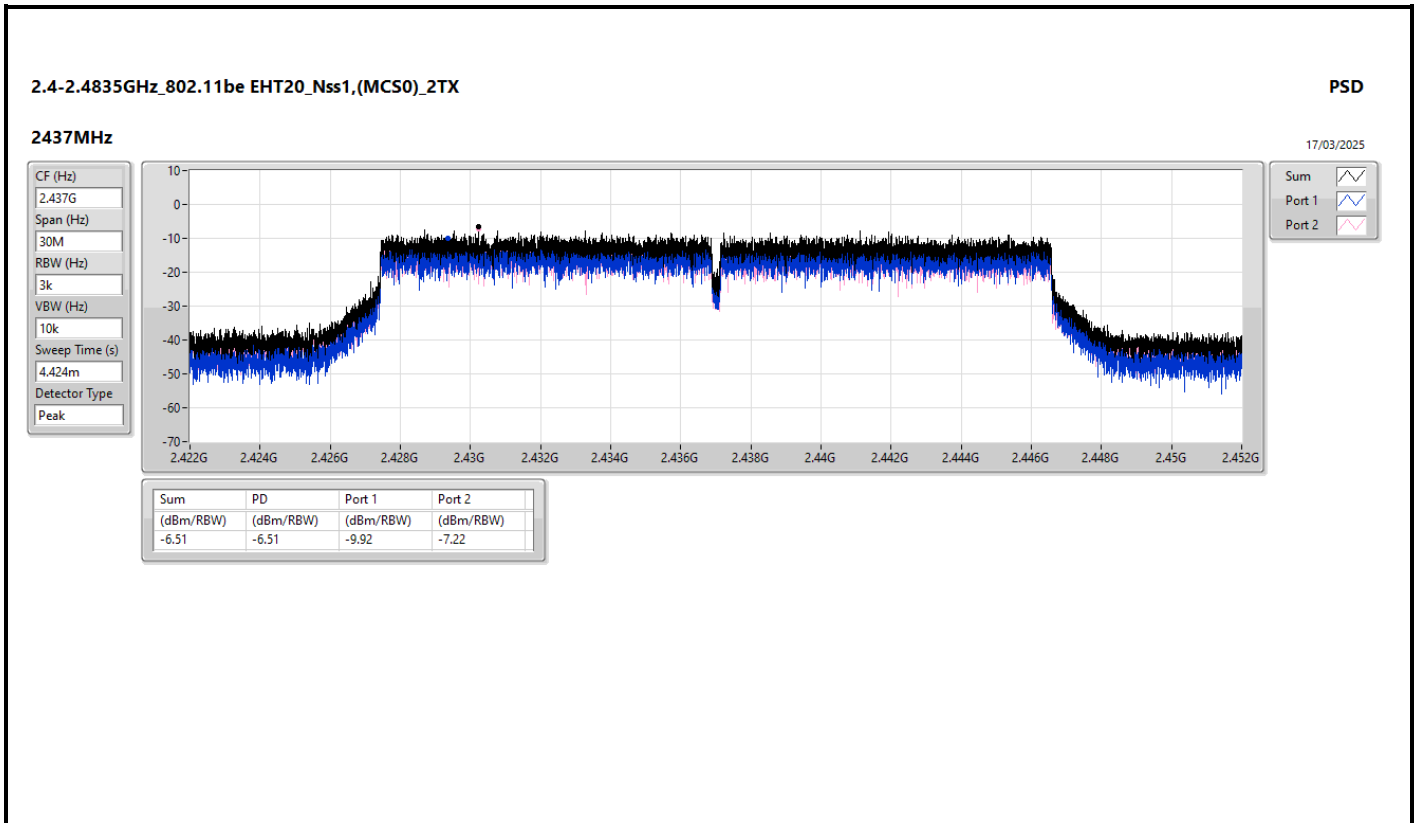


Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.29	-8.09	-5.17	-3.38	8.00
2437MHz	Pass	5.29	-4.91	-3.33	-1.26	8.00
2462MHz	Pass	5.29	-5.33	-4.46	-2.20	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.29	-8.92	-9.61	-8.06	8.00
2437MHz	Pass	5.29	-8.84	-7.34	-5.53	8.00
2462MHz	Pass	5.29	-8.75	-10.26	-6.99	8.00
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.29	-10.61	-11.48	-8.98	8.00
2437MHz	Pass	5.29	-9.92	-7.22	-6.51	8.00
2462MHz	Pass	5.29	-9.27	-10.55	-8.53	8.00

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.







Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11be EHT20_Nss2,(MCS0)_2TX	-6.98

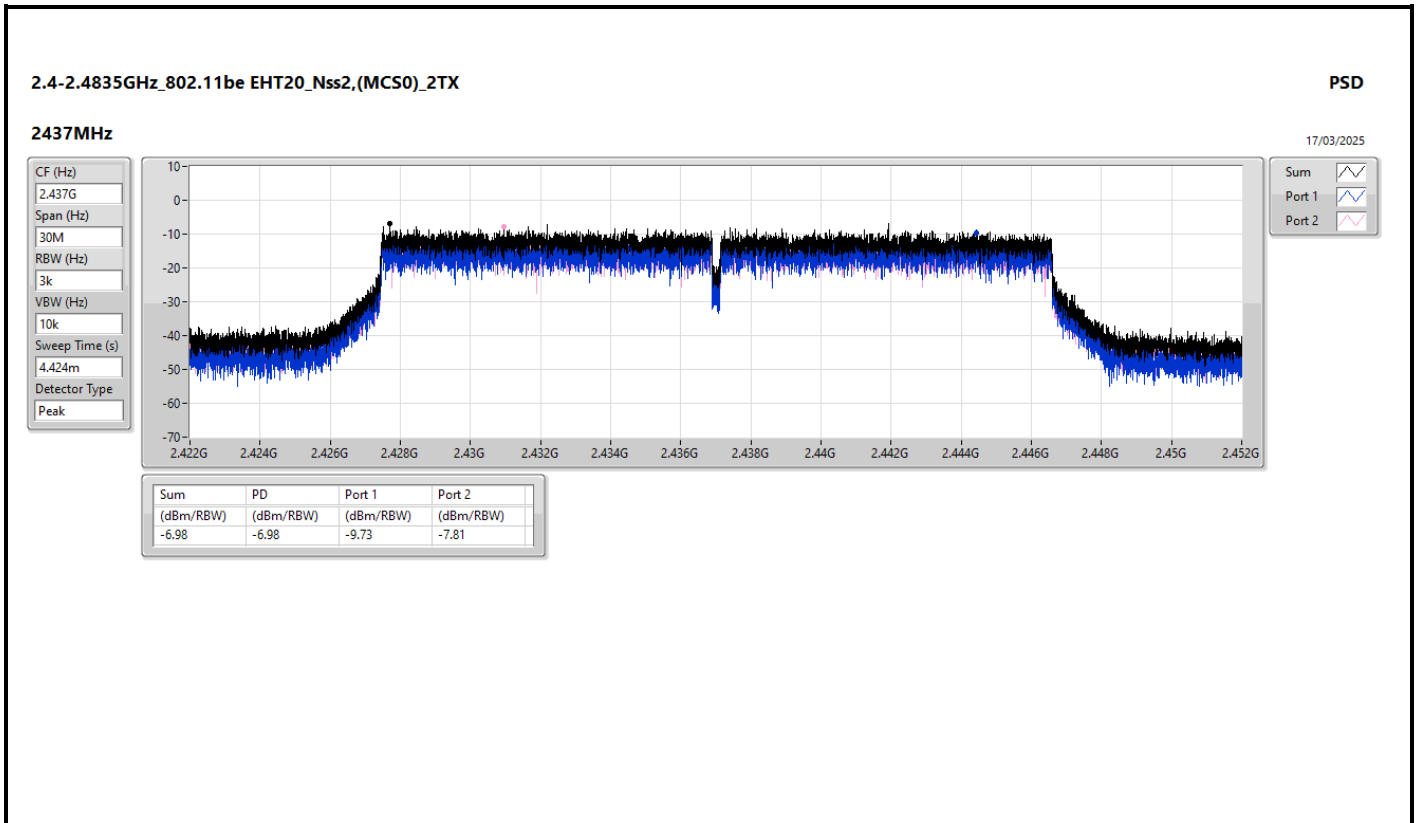
RBW = 3kHz;



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.28	-10.48	-9.67	-8.08	8.00
2437MHz	Pass	2.28	-9.73	-7.81	-6.98	8.00
2462MHz	Pass	2.28	-10.25	-10.63	-9.14	8.00

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.





**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-3.72
802.11g_Nss1,(6Mbps)_1TX	-8.07
802.11be EHT20_Nss1,(MCS0)_1TX	-8.58

RBW = 3kHz;



**PSD\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_1T1S**

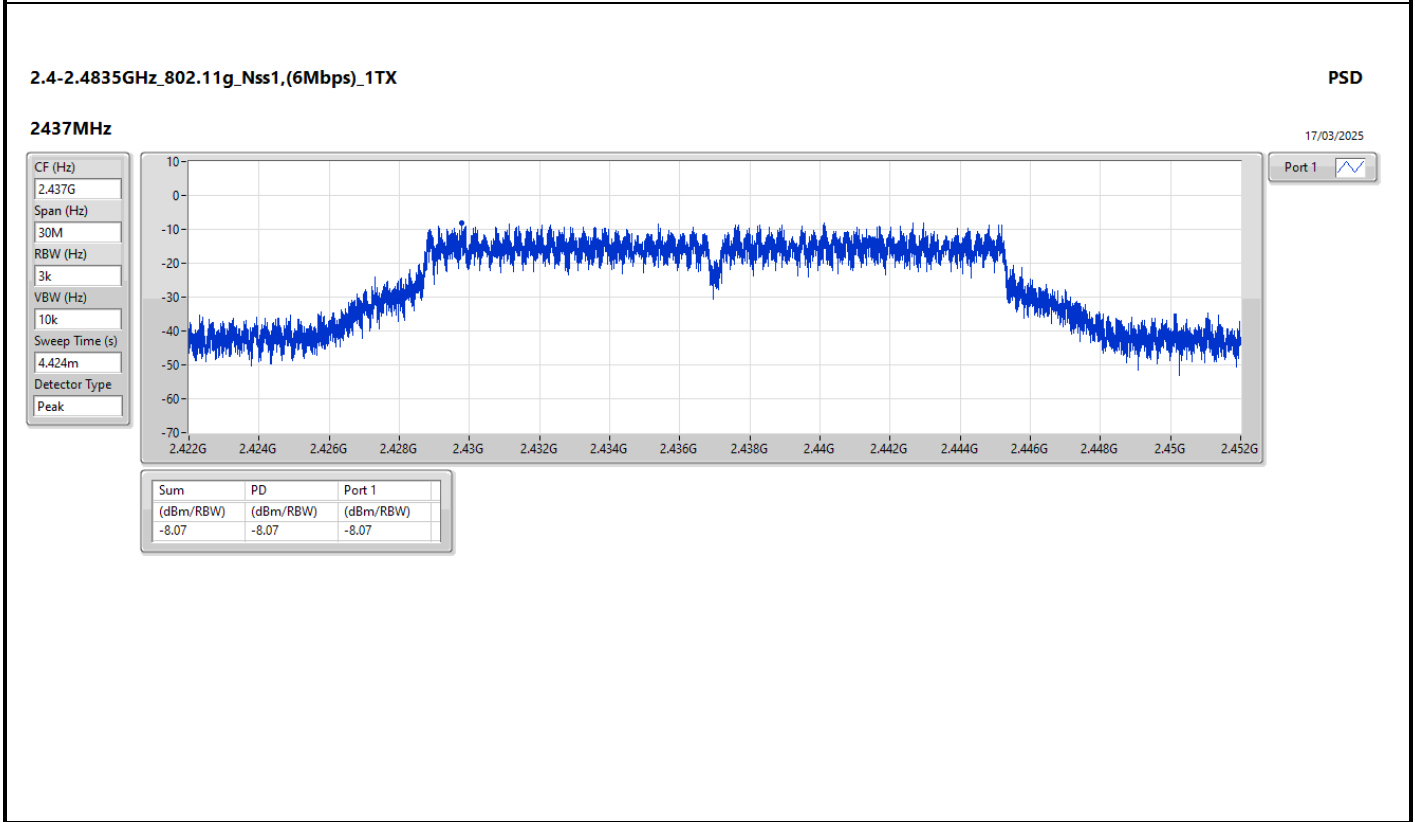
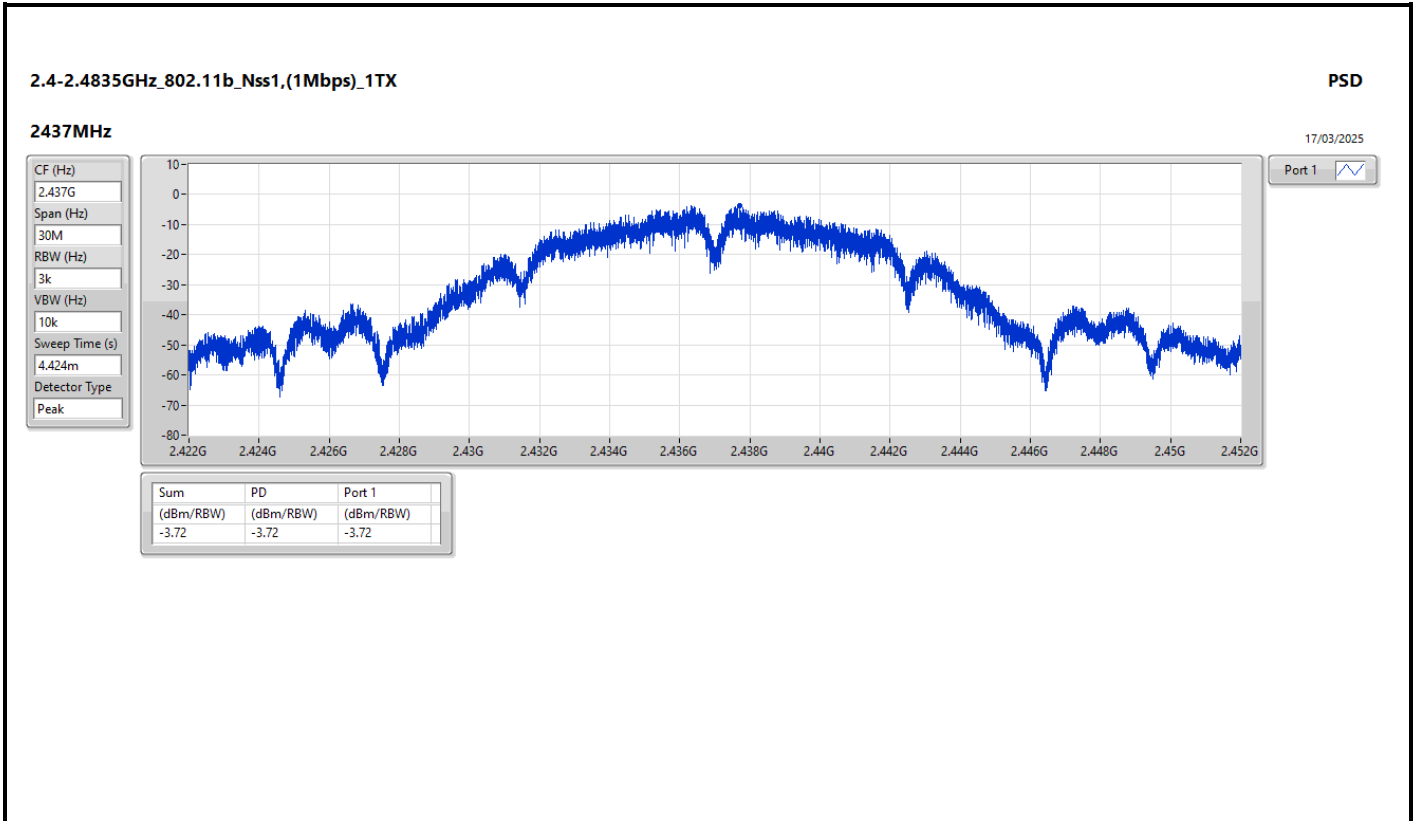
**Appendix D.4**

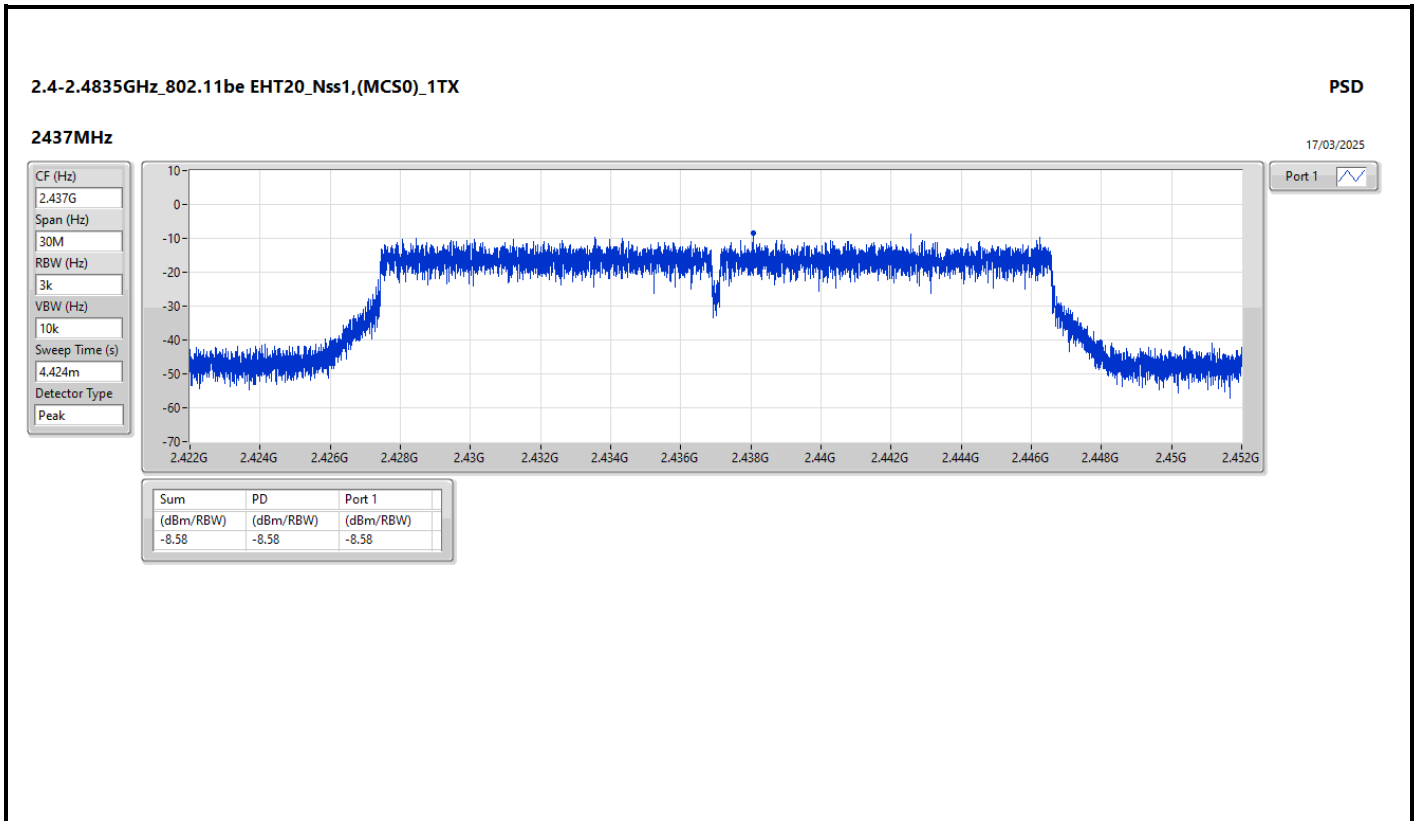
**Result**

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	8.00	-5.58	-5.58	6.00
2437MHz	Pass	8.00	-3.72	-3.72	6.00
2462MHz	Pass	8.00	-5.56	-5.56	6.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	8.00	-8.41	-8.41	6.00
2437MHz	Pass	8.00	-8.07	-8.07	6.00
2462MHz	Pass	8.00	-9.60	-9.60	6.00
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	8.00	-8.68	-8.68	6.00
2437MHz	Pass	8.00	-8.58	-8.58	6.00
2462MHz	Pass	8.00	-10.79	-10.79	6.00

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.









**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-1.26
802.11g_Nss1,(6Mbps)_2TX	-5.53
802.11be EHT20_Nss1,(MCS0)_2TX	-6.51

RBW = 3kHz;



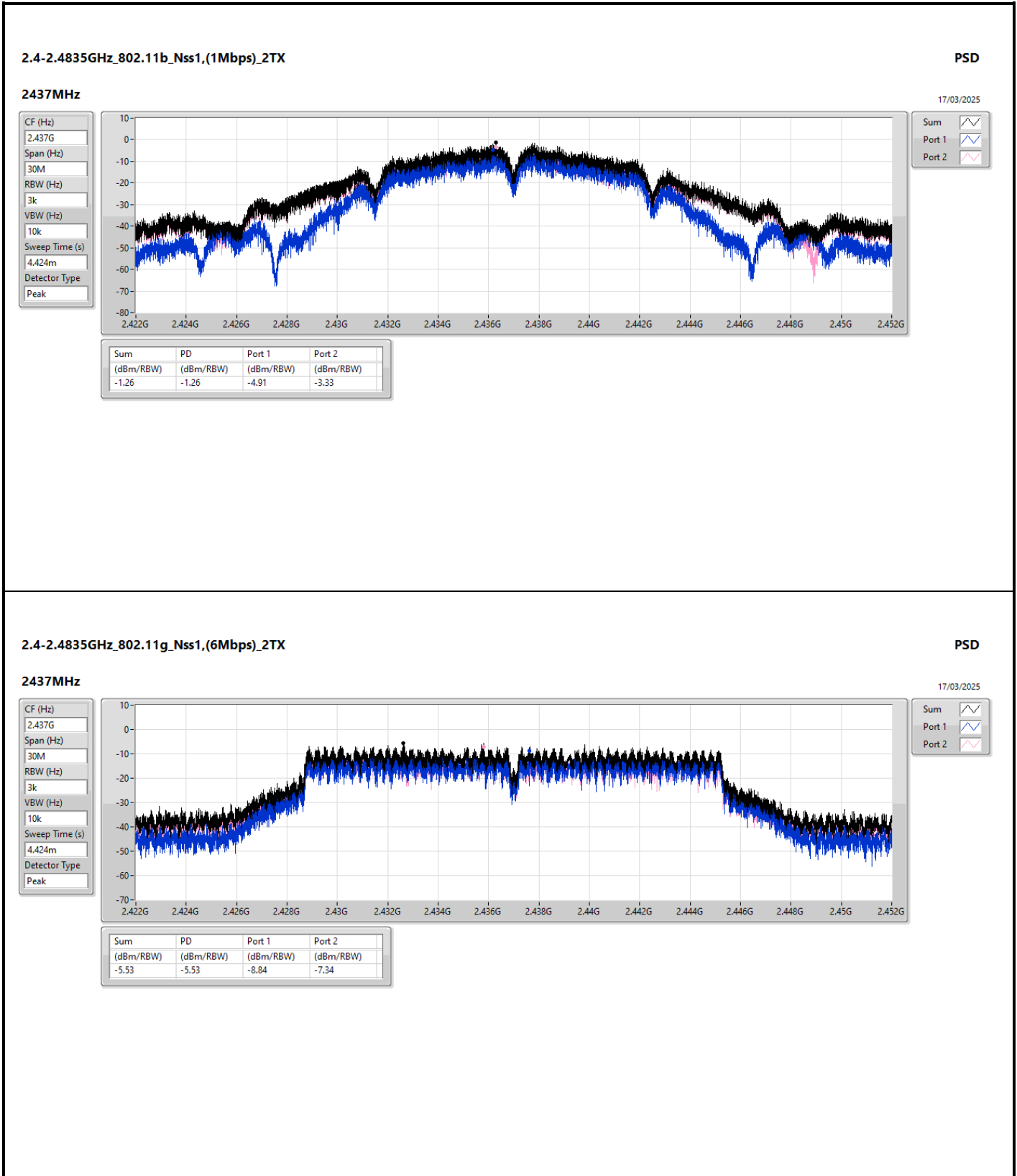
**PSD\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T1S**

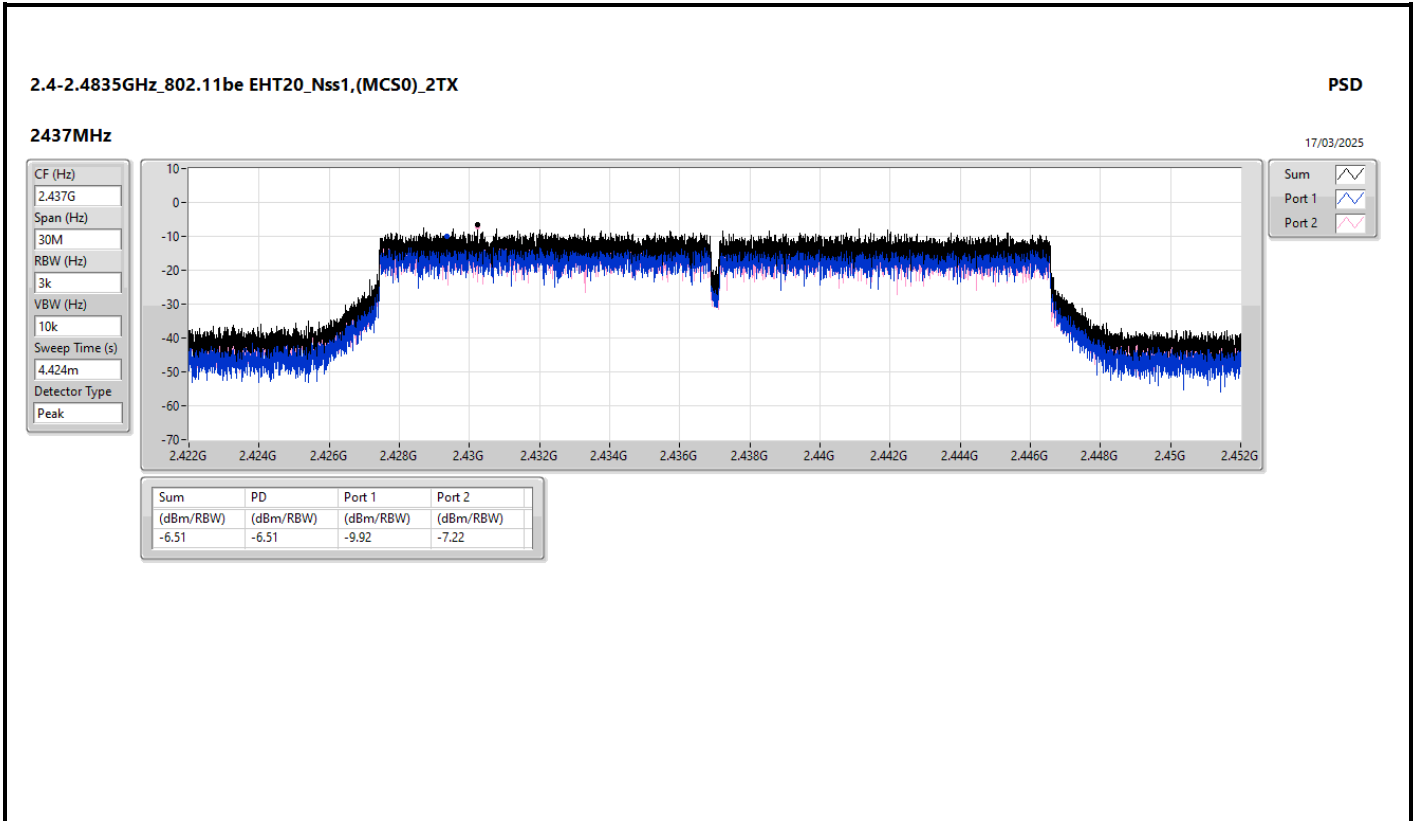
**Appendix D.5**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	11.01	-7.95	-6.12	-4.46	2.99
2437MHz	Pass	11.01	-4.91	-3.33	-1.26	2.99
2462MHz	Pass	11.01	-5.58	-4.67	-2.46	2.99
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	11.01	-8.92	-9.61	-8.06	2.99
2437MHz	Pass	11.01	-8.84	-7.34	-5.53	2.99
2462MHz	Pass	11.01	-9.02	-9.29	-7.29	2.99
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	11.01	-10.58	-10.52	-8.61	2.99
2437MHz	Pass	11.01	-9.92	-7.22	-6.51	2.99
2462MHz	Pass	11.01	-11.19	-10.60	-9.72	2.99

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.







**Summary**

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11be EHT20_Nss2,(MCS0)_2TX	-6.98

RBW = 3kHz;



**PSD\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T2S**

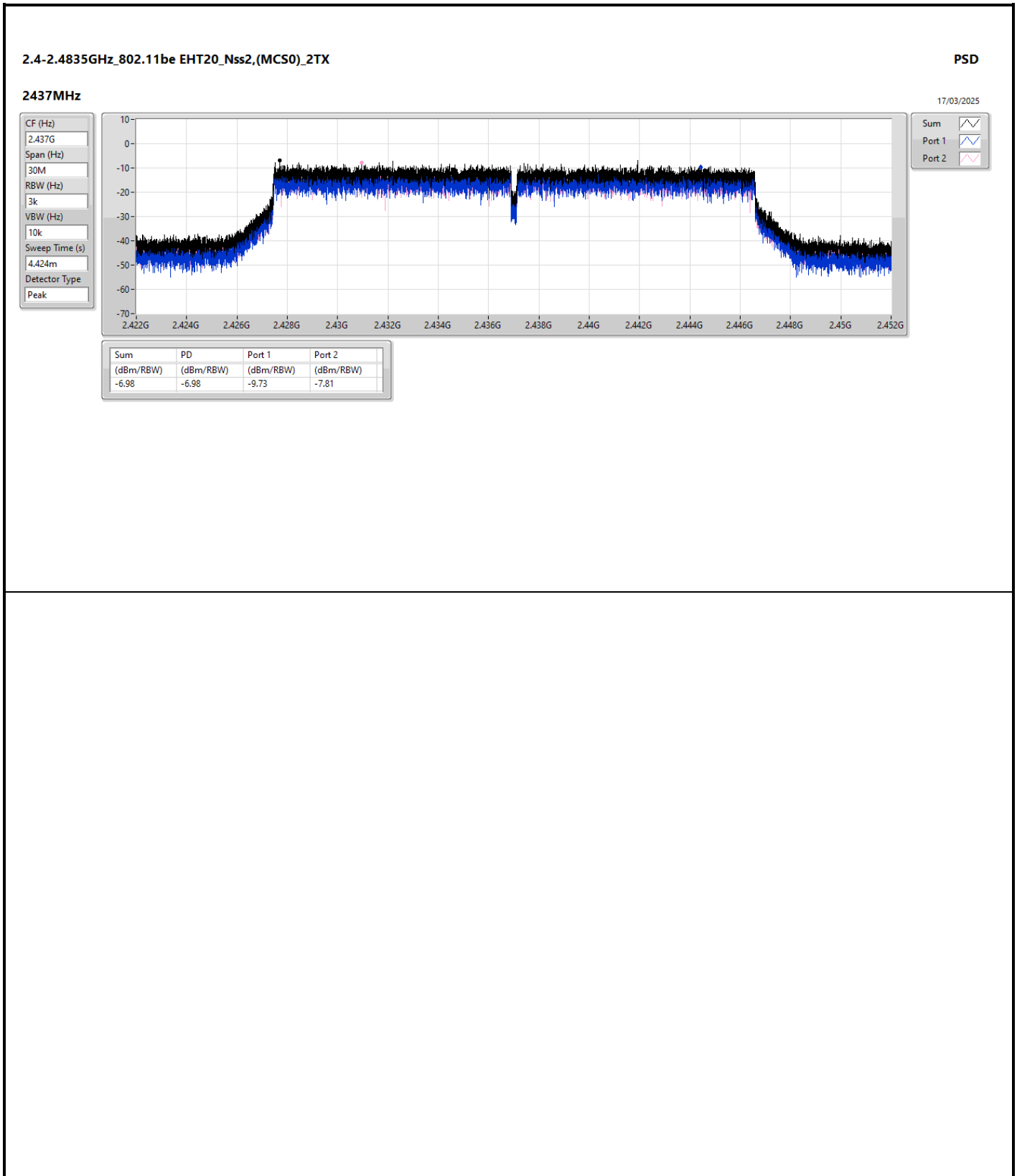
**Appendix D.6**

**Result**

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	8.00	-10.79	-10.03	-8.44	6.00
2437MHz	Pass	8.00	-9.73	-7.81	-6.98	6.00
2462MHz	Pass	8.00	-10.46	-10.26	-9.19	6.00

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.







Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-5.34
802.11g_Nss1,(6Mbps)_1TX	-9.59
802.11be EHT20_Nss1,(MCS0)_1TX	-10.17

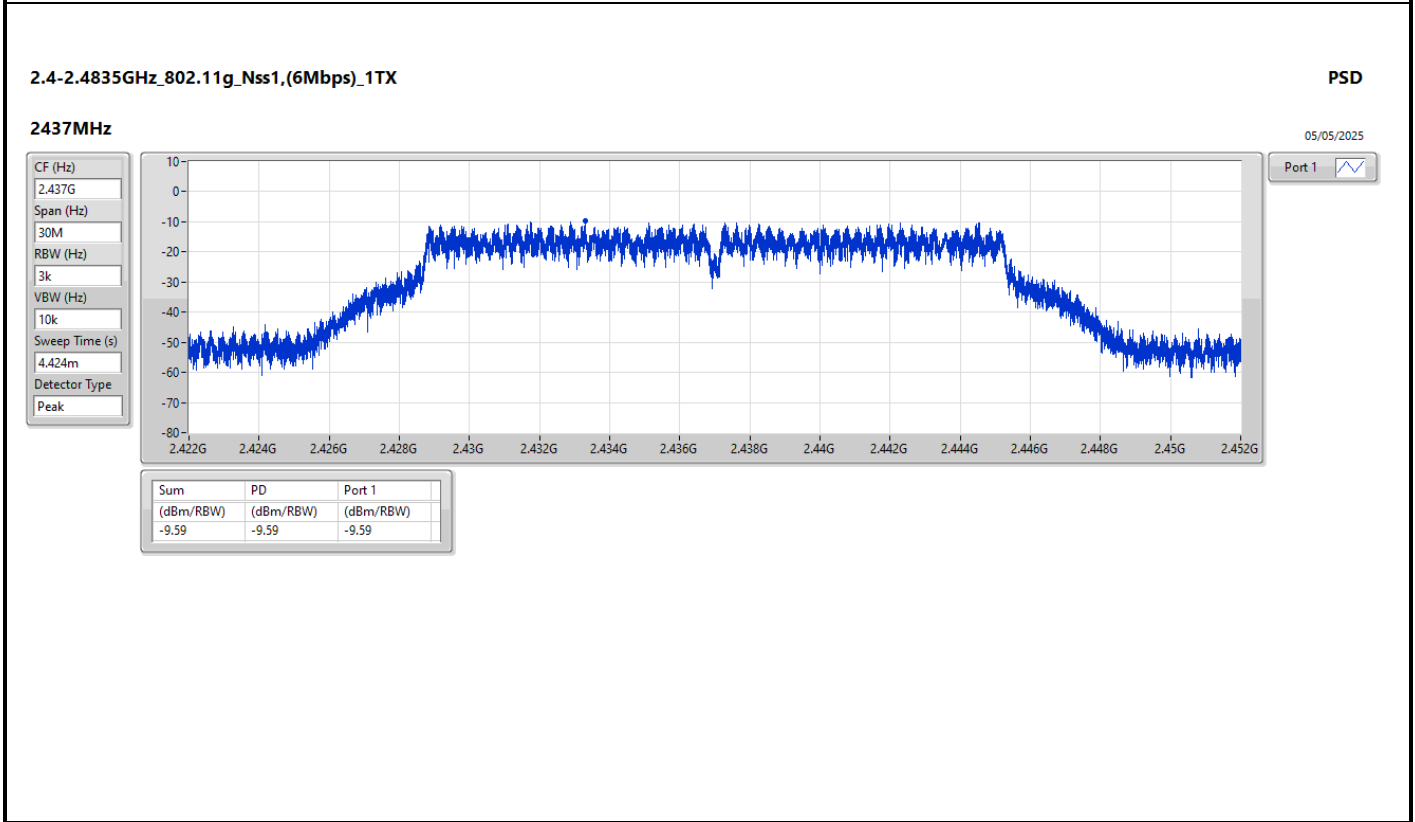
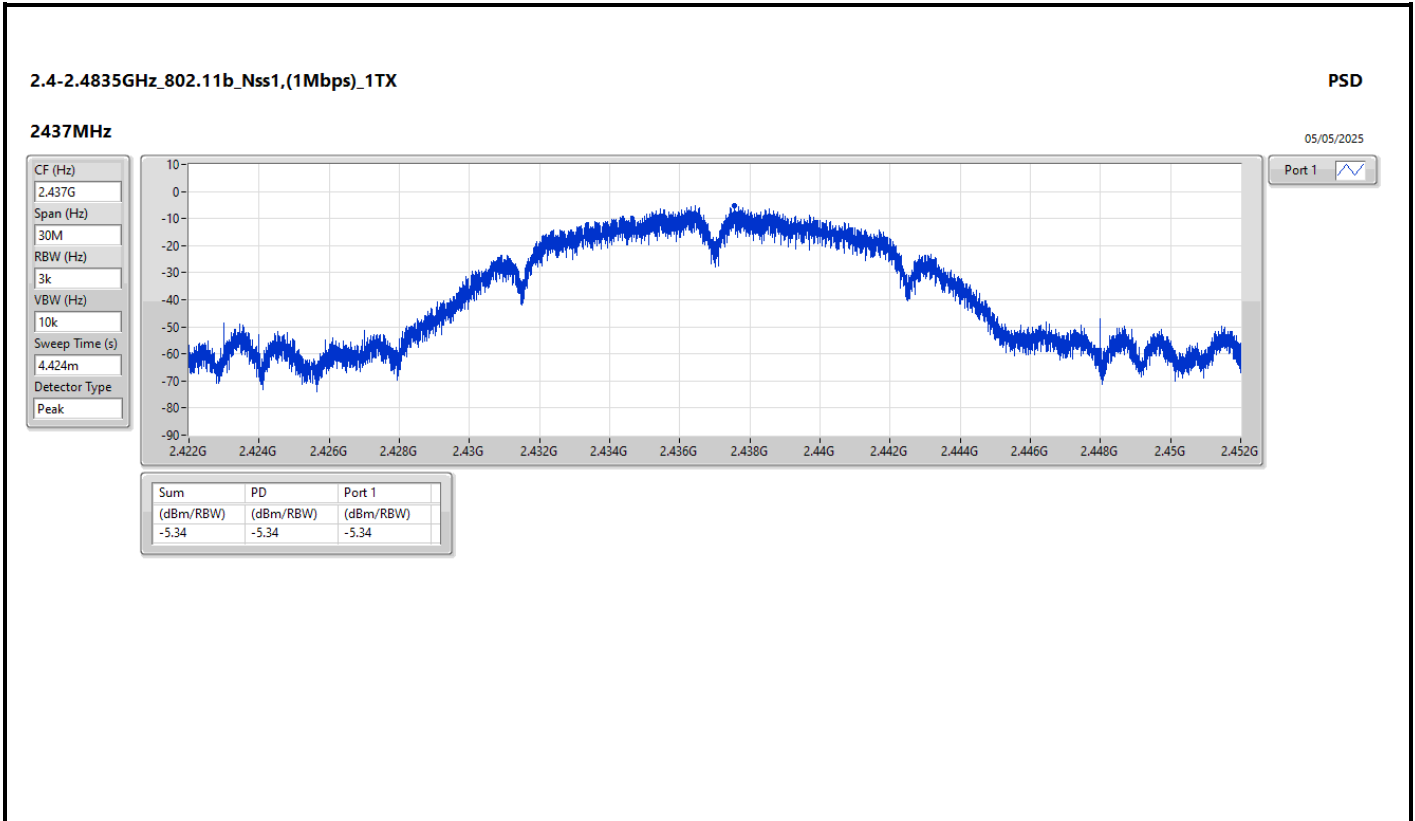
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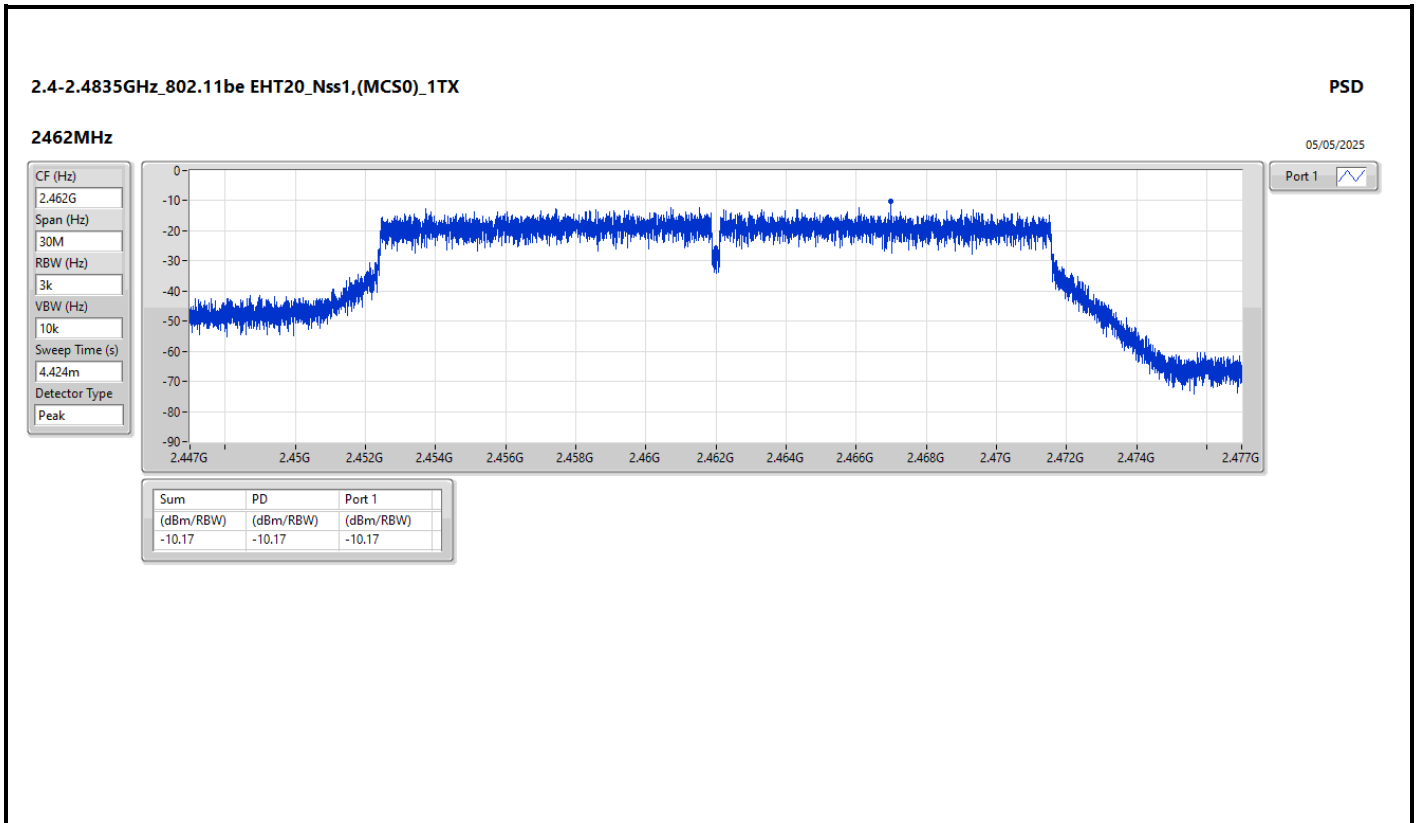


Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	12.52	-5.94	-5.94	1.48
2437MHz	Pass	12.52	-5.34	-5.34	1.48
2462MHz	Pass	12.52	-5.93	-5.93	1.48
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	12.52	-11.19	-11.19	1.48
2437MHz	Pass	12.52	-9.59	-9.59	1.48
2462MHz	Pass	12.52	-11.73	-11.73	1.48
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	12.52	-10.88	-10.88	1.48
2437MHz	Pass	12.52	-11.04	-11.04	1.48
2462MHz	Pass	12.52	-10.17	-10.17	1.48

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.







Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-4.00
802.11g_Nss1,(6Mbps)_2TX	-6.91
802.11be EHT20_Nss1,(MCS0)_2TX	-8.52

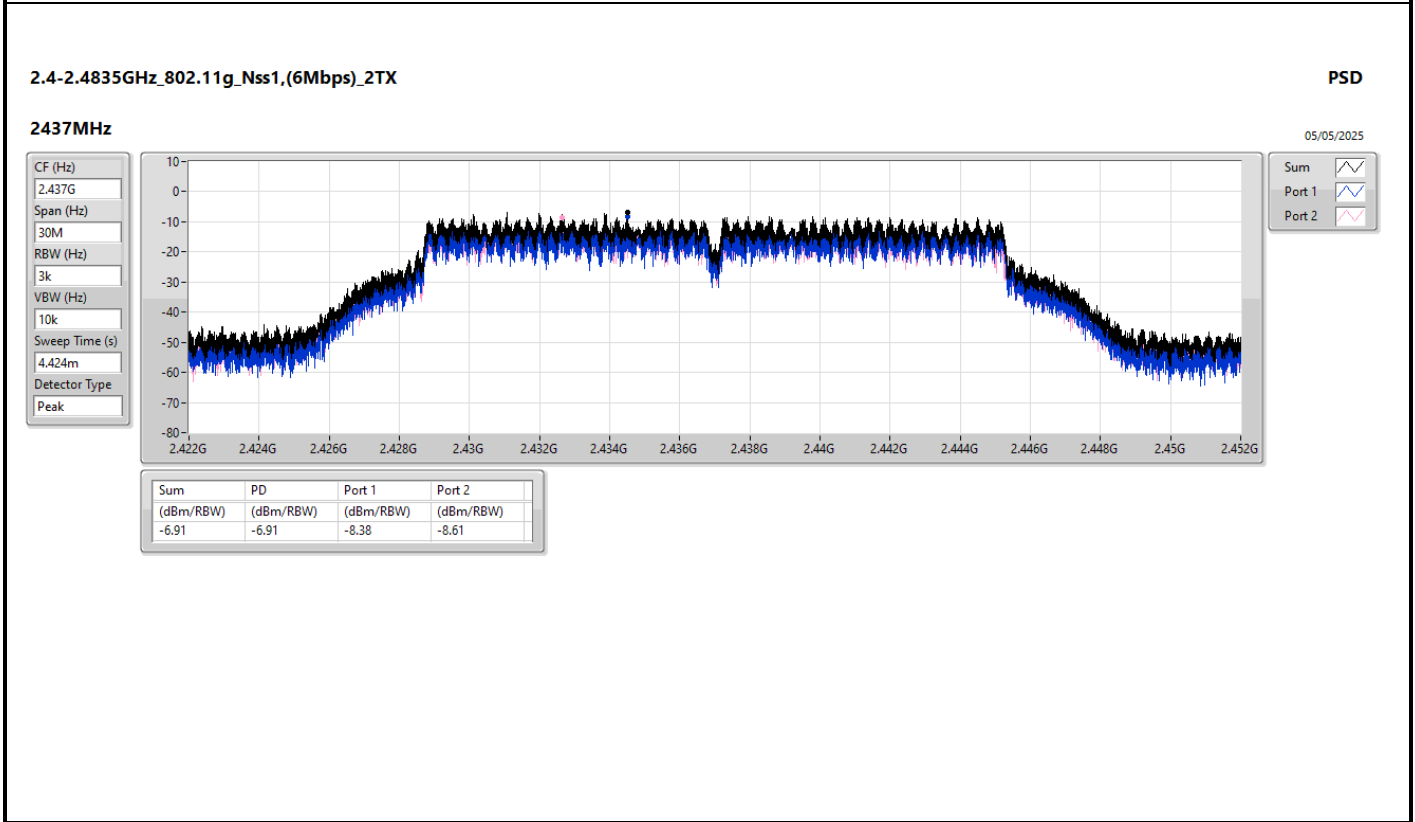
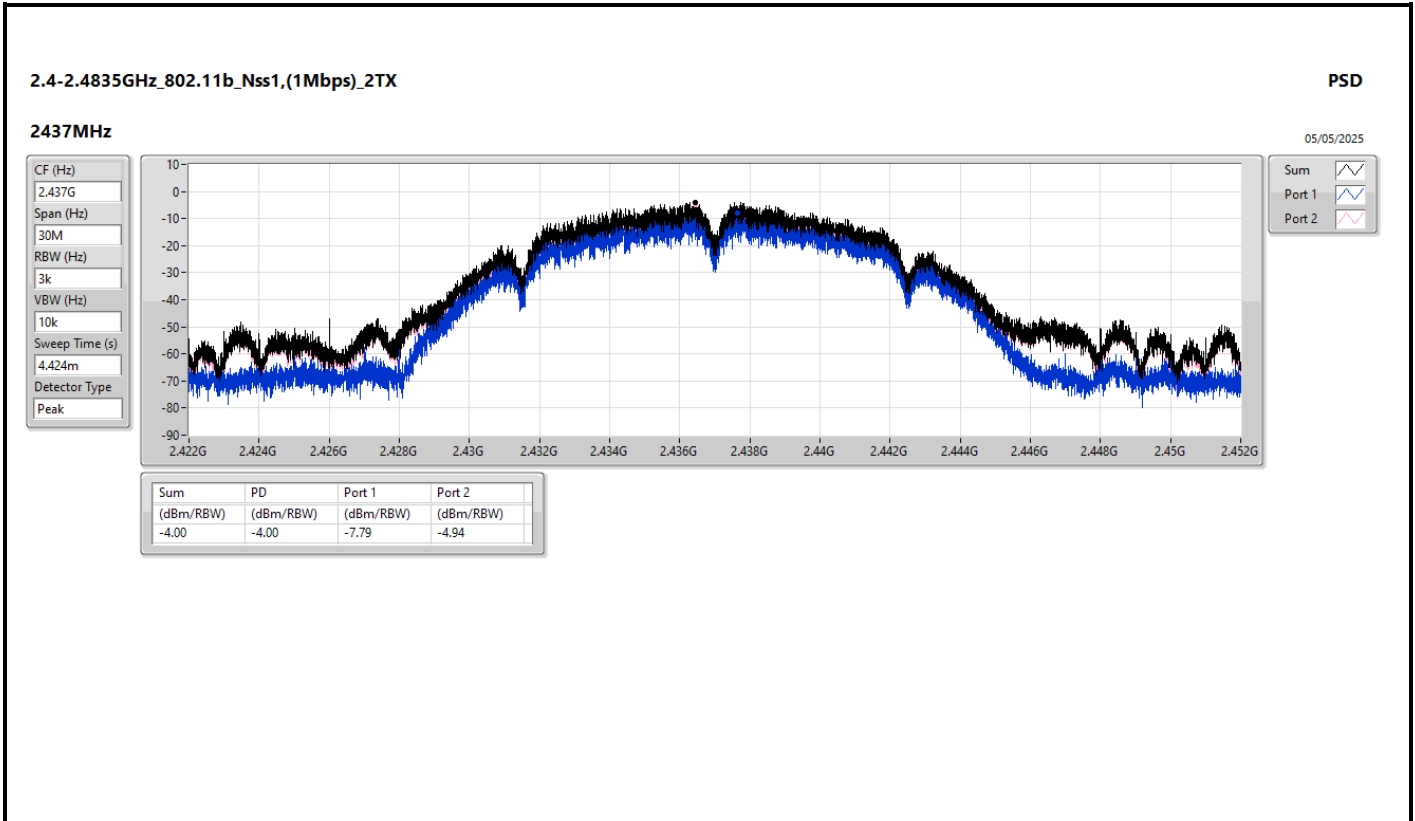
RBW = 3kHz;



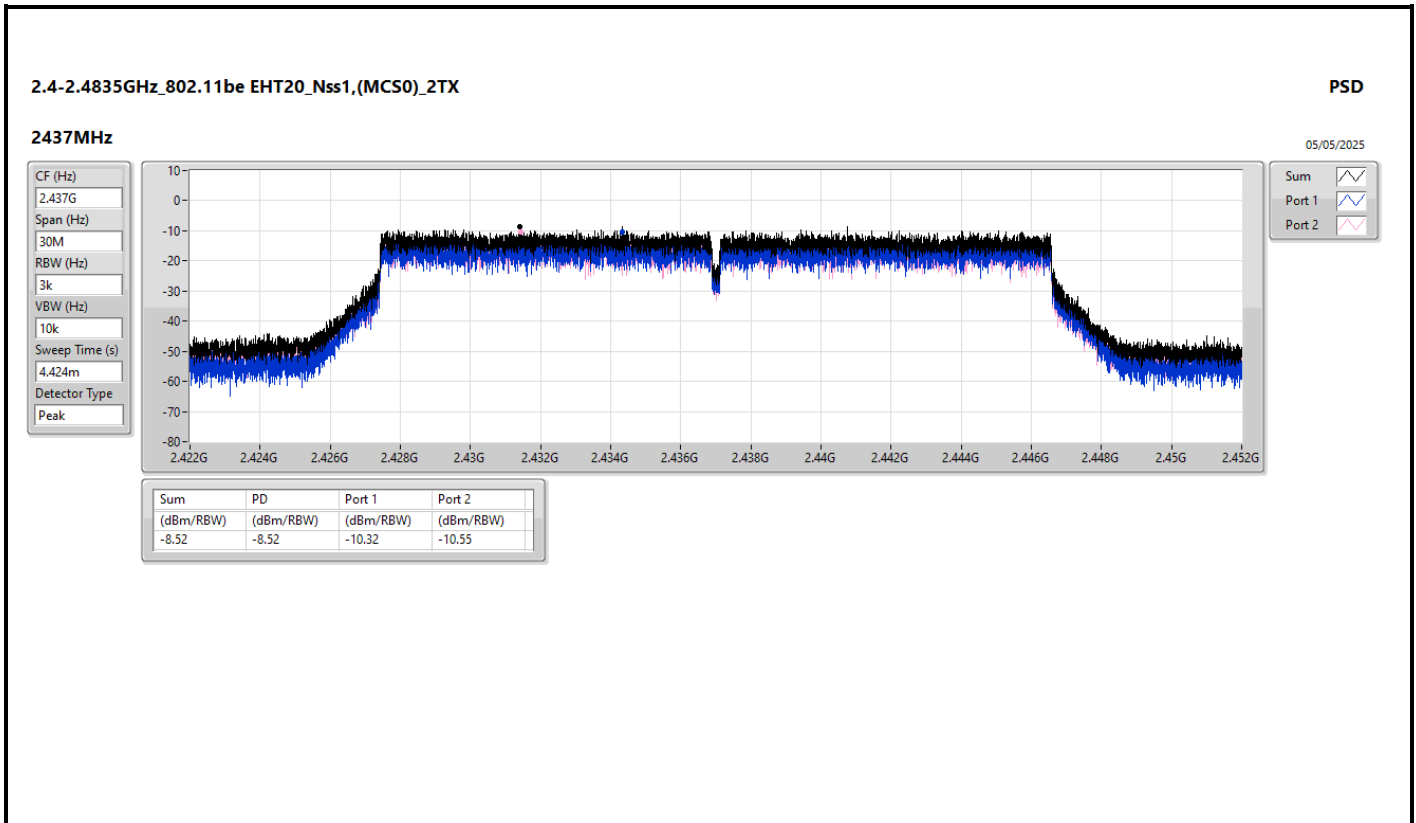
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	15.53	-8.21	-6.99	-5.88	-1.53
2437MHz	Pass	15.53	-7.79	-4.94	-4.00	-1.53
2462MHz	Pass	15.53	-6.94	-7.16	-4.04	-1.53
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	15.53	-10.91	-11.26	-9.00	-1.53
2437MHz	Pass	15.53	-8.38	-8.61	-6.91	-1.53
2462MHz	Pass	15.53	-9.90	-11.11	-9.16	-1.53
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	15.53	-11.90	-12.21	-10.15	-1.53
2437MHz	Pass	15.53	-10.32	-10.55	-8.52	-1.53
2462MHz	Pass	15.53	-10.42	-12.25	-8.95	-1.53

DG = Directional Gain; RBW = 3kHz;  
 PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
 Inf = There's no restriction for the limit.









Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11be EHT20_Nss2,(MCS0)_2TX	-9.35

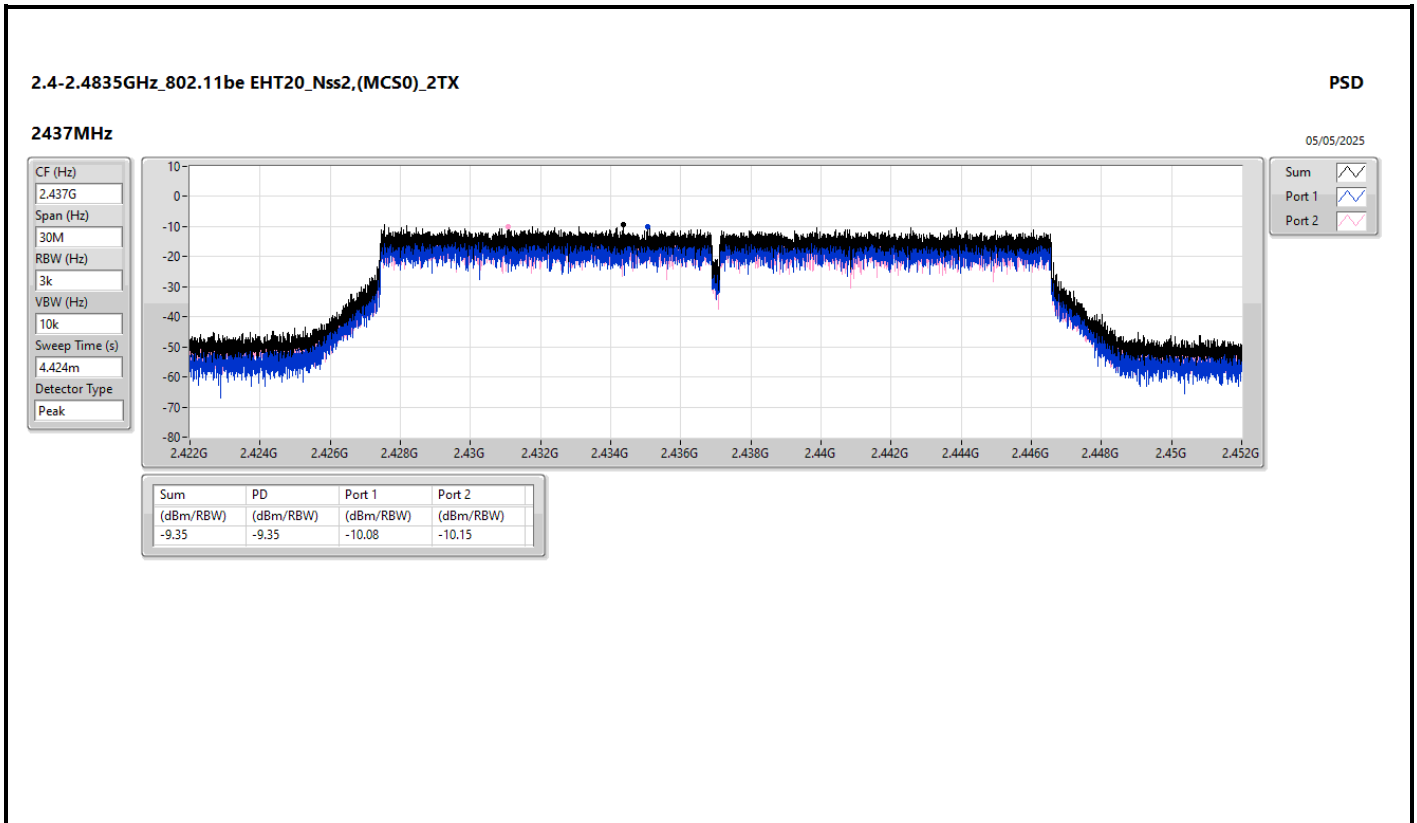
RBW = 3kHz;



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11be EHT20_Nss2,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	12.52	-12.77	-13.44	-11.40	1.48
2437MHz	Pass	12.52	-10.08	-10.15	-9.35	1.48
2462MHz	Pass	12.52	-13.05	-13.86	-11.68	1.48

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.





Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
b20_Nss1,(1Mbps)_1TX	-3.95
g20_Nss1,(6Mbps)_1TX	-7.10

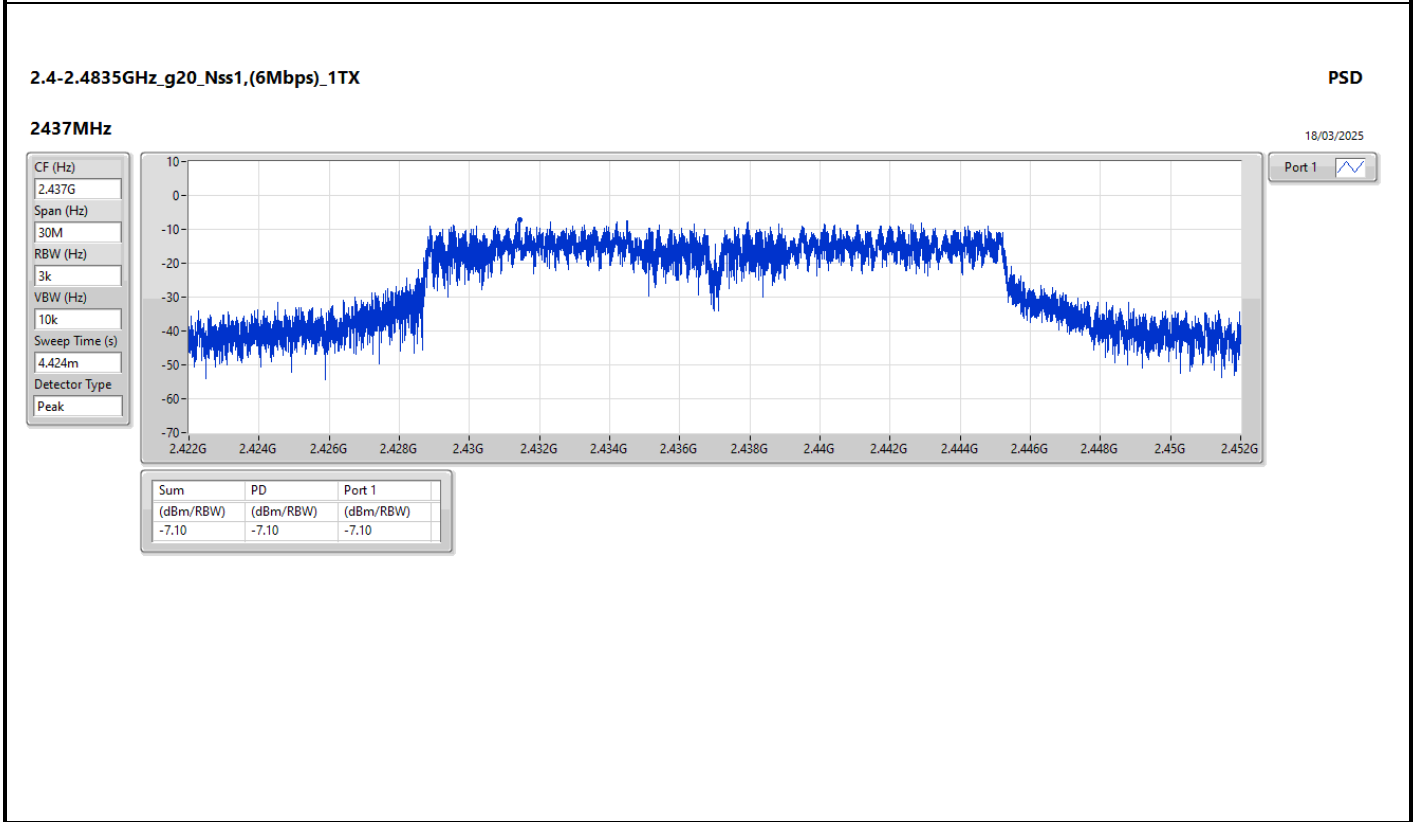
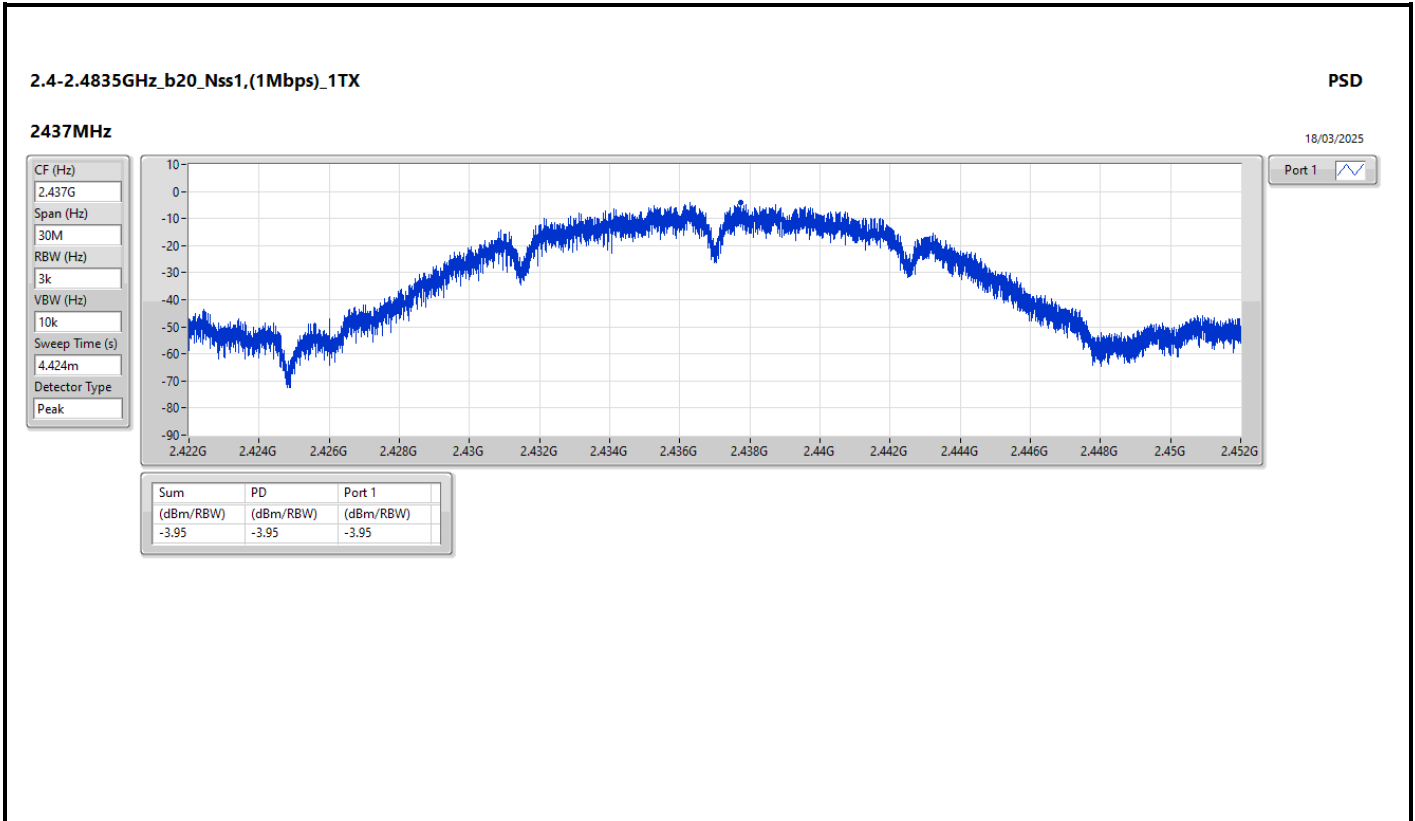
RBW = 3kHz;



Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
b20_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	4.50	-5.52	-5.52	8.00
2437MHz	Pass	4.50	-3.95	-3.95	8.00
2462MHz	Pass	4.50	-5.86	-5.86	8.00
g20_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	4.50	-9.74	-9.74	8.00
2437MHz	Pass	4.50	-7.10	-7.10	8.00
2462MHz	Pass	4.50	-12.50	-12.50	8.00

DG = Directional Gain; RBW = 3kHz;  
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;  
Inf = There's no restriction for the limit.





**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_1T1S**

**Appendix E.1**

**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.43808G	11.13	-18.87	1.72741G	-56.22	2.39904G	-29.48	2.4G	-28.76	2.50118G	-54.82	23.27212G	-41.79	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.43574G	7.47	-22.53	855.99M	-56.27	2.39984G	-31.73	2.4G	-30.27	2.51374G	-54.06	15.24801G	-41.80	1
802.11be EHT20_Nss1,(MCS0)_1TX	Pass	2.43574G	7.47	-22.53	901.42M	-56.25	2.4G	-33.57	2.4G	-29.44	2.52294G	-54.76	16.64998G	-42.32	1



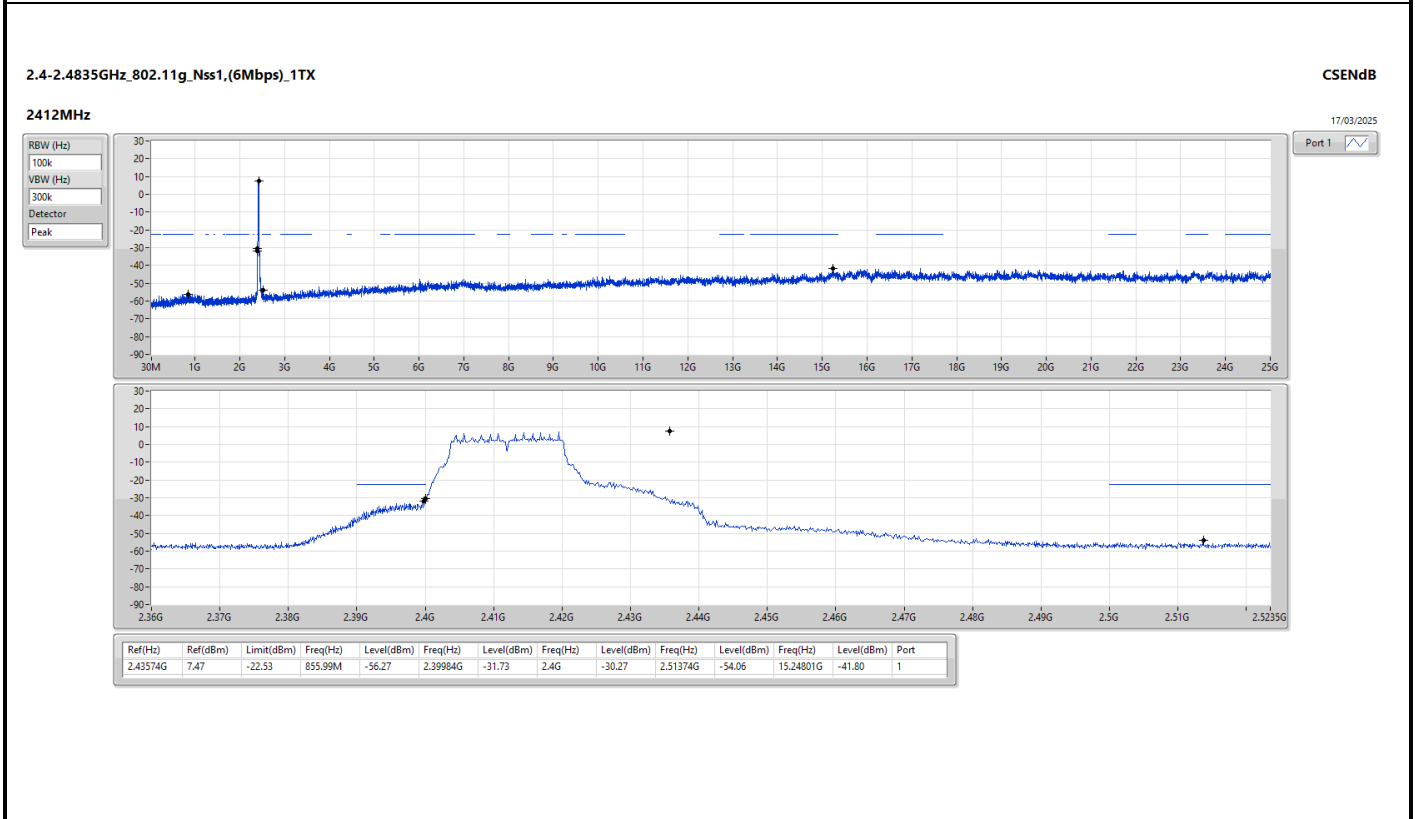
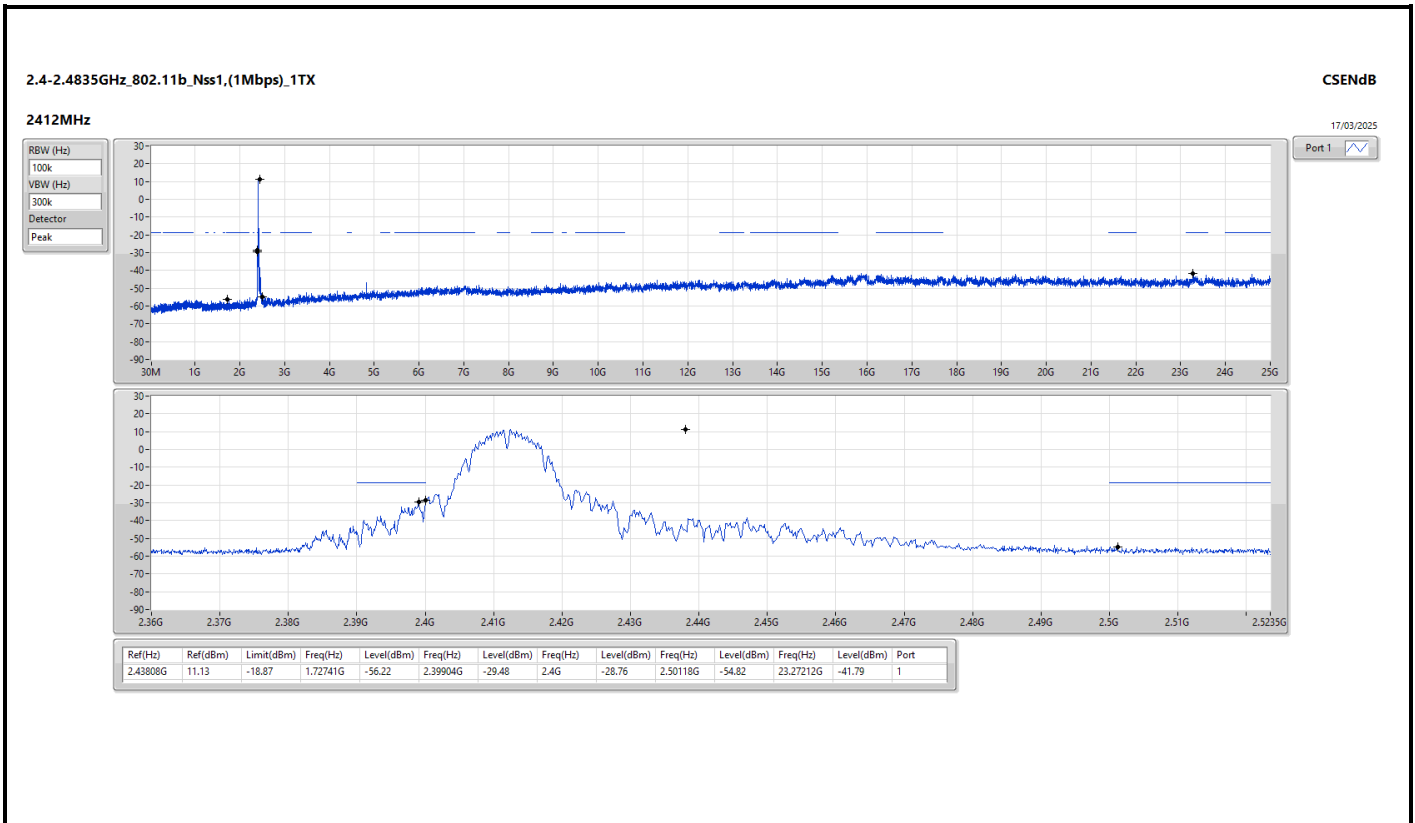


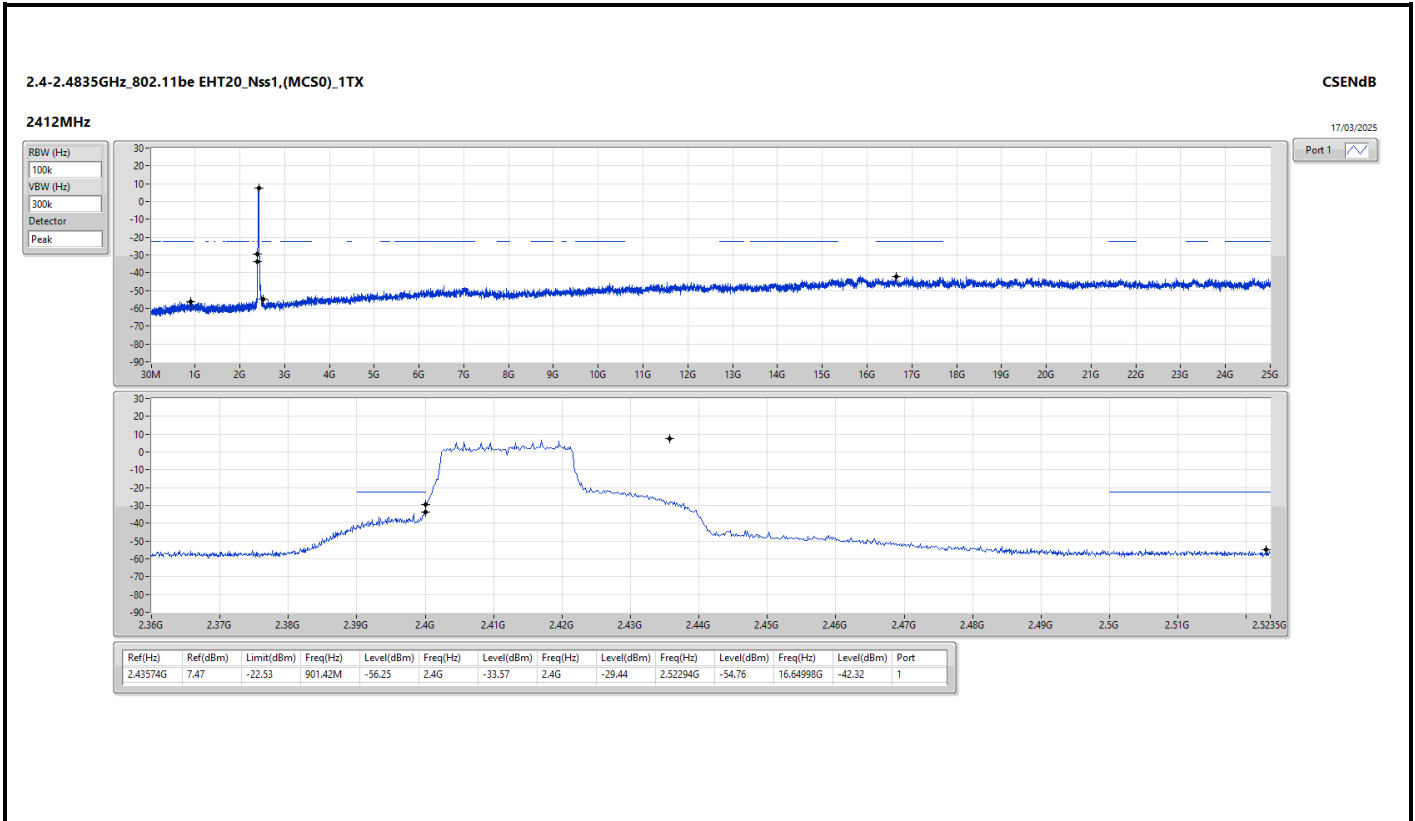
**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_1T1S**

**Appendix E.1**

**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43808G	11.13	-18.87	1.72741G	-56.22	2.39904G	-29.48	2.4G	-28.76	2.50118G	-54.82	23.27212G	-41.79	1
2437MHz	Pass	2.43808G	11.13	-18.87	795.41M	-56.24	2.3996G	-42.55	2.4G	-46.13	2.50158G	-55.10	16.23978G	-41.47	1
2462MHz	Pass	2.43808G	11.13	-18.87	2.30408G	-55.82	2.39728G	-53.19	2.4G	-53.10	2.52078G	-54.82	16.27631G	-40.67	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43574G	7.47	-22.53	855.99M	-56.27	2.39984G	-31.73	2.4G	-30.27	2.51374G	-54.06	15.24801G	-41.80	1
2437MHz	Pass	2.43574G	7.47	-22.53	2.30991G	-55.43	2.39872G	-39.86	2.4G	-40.67	2.50534G	-53.54	16.24259G	-41.22	1
2462MHz	Pass	2.43574G	7.47	-22.53	2.30175G	-56.11	2.39904G	-53.37	2.4G	-54.81	2.5091G	-53.91	16.24259G	-42.19	1
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43574G	7.47	-22.53	901.42M	-56.25	2.4G	-33.57	2.4G	-29.44	2.52294G	-54.76	16.64998G	-42.32	1
2437MHz	Pass	2.43574G	7.47	-22.53	1.90565G	-56.58	2.3992G	-37.64	2.4G	-38.58	2.50102G	-54.57	16.89722G	-42.68	1
2462MHz	Pass	2.43574G	7.47	-22.53	915.4M	-56.14	2.39904G	-51.37	2.4G	-52.41	2.50062G	-54.49	17.65861G	-41.08	1







**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_2T1S**

**Appendix E.2**

**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43591G	12.36	-17.64	2.07924G	-56.53	2.39952G	-37.51	2.4G	-44.19	2.50142G	-54.75	16.20607G	-41.59	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.44192G	8.36	-21.64	896.76M	-55.82	2.39992G	-37.65	2.4G	-31.37	2.51358G	-54.63	23.28055G	-41.63	2
802.11be EHT20_Nss1,(MCS0)_2TX	Pass	2.4319G	7.98	-22.02	896.76M	-56.79	2.4G	-35.78	2.4G	-32.95	2.51822G	-53.92	23.34236G	-42.31	1

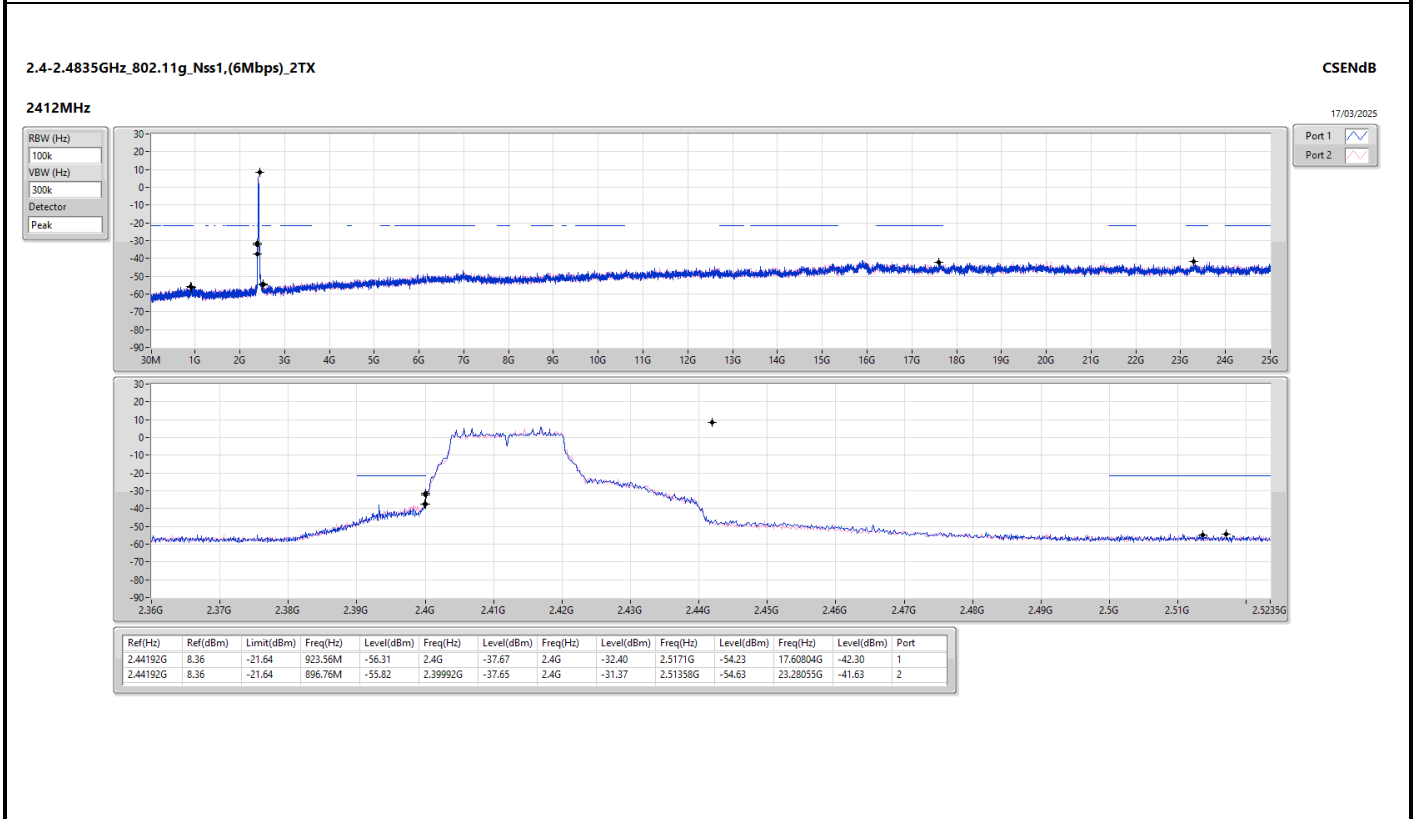
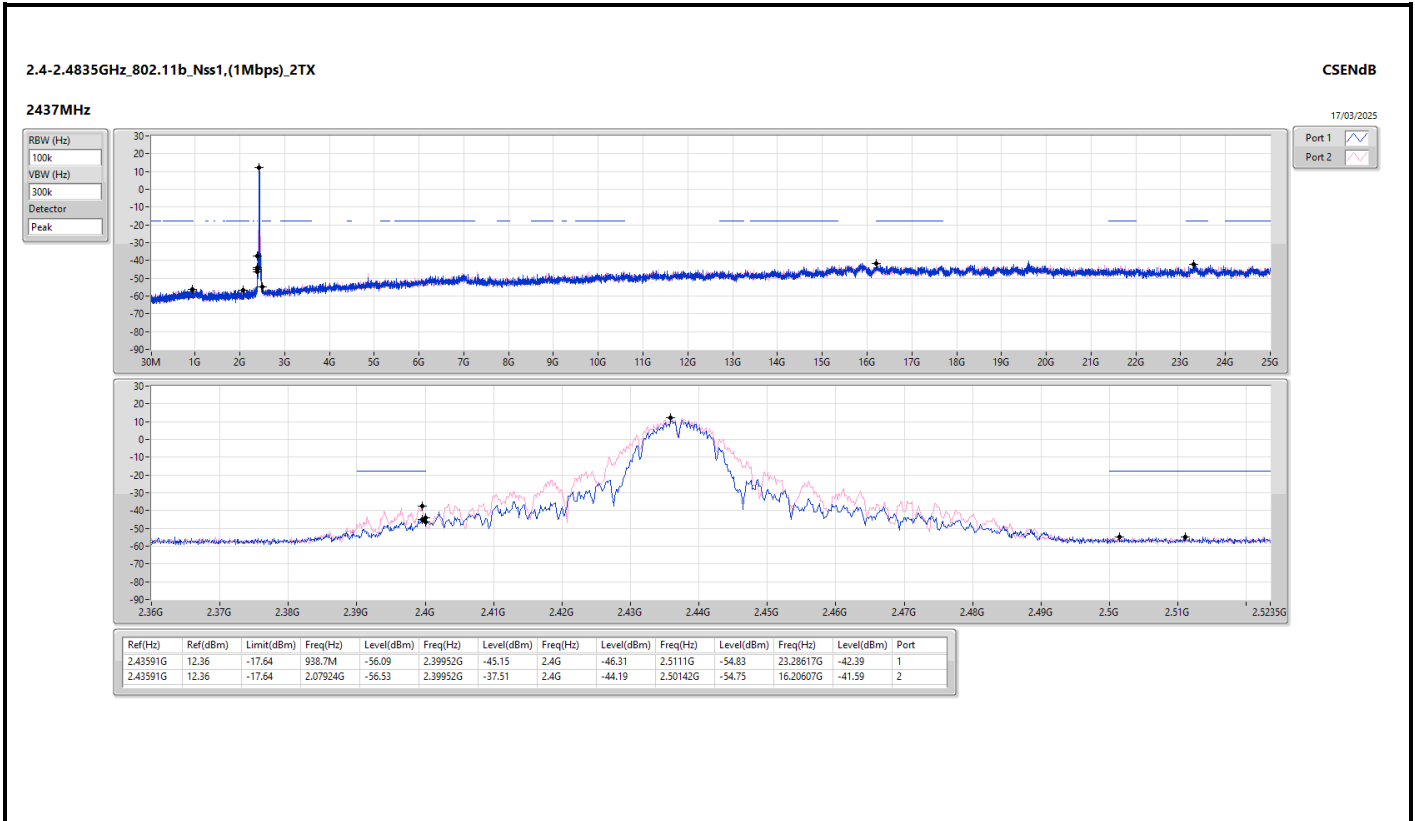


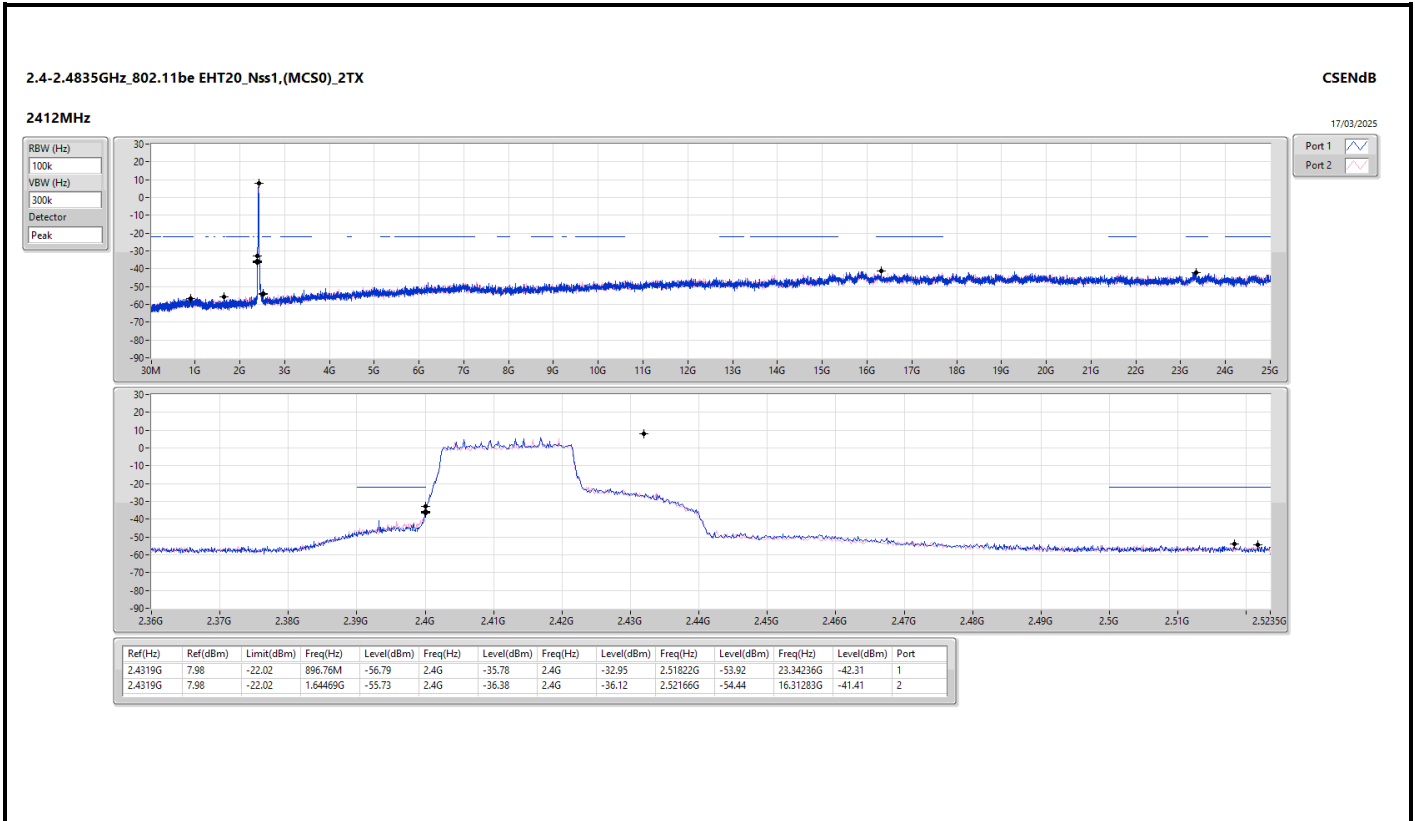
**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dipole Antenna\_2T1S**

**Appendix E.2**

**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43591G	12.36	-17.64	2.1736G	-55.49	2.4G	-45.41	2.4G	-46.34	2.51286G	-53.84	16.27069G	-42.36	1
2412MHz	Pass	2.43591G	12.36	-17.64	959.67M	-55.26	2.4G	-40.32	2.4G	-38.44	2.5051G	-54.82	17.66142G	-41.84	2
2437MHz	Pass	2.43591G	12.36	-17.64	938.7M	-56.09	2.39952G	-45.15	2.4G	-46.31	2.5111G	-54.83	23.28617G	-42.39	1
2437MHz	Pass	2.43591G	12.36	-17.64	2.07924G	-56.53	2.39952G	-37.51	2.4G	-44.19	2.50142G	-54.75	16.20607G	-41.59	2
2462MHz	Pass	2.43591G	12.36	-17.64	2.06642G	-55.67	2.39496G	-54.54	2.4G	-55.05	2.5163G	-52.63	15.2452G	-41.48	1
2462MHz	Pass	2.43591G	12.36	-17.64	2.15496G	-54.99	2.39968G	-53.10	2.4G	-53.00	2.50358G	-54.85	16.25383G	-41.59	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44192G	8.36	-21.64	923.56M	-56.31	2.4G	-37.67	2.4G	-32.40	2.5171G	-54.23	17.60804G	-42.30	1
2412MHz	Pass	2.44192G	8.36	-21.64	896.76M	-55.82	2.39992G	-37.65	2.4G	-31.37	2.51358G	-54.63	23.28055G	-41.63	2
2437MHz	Pass	2.44192G	8.36	-21.64	2.30874G	-56.23	2.39952G	-38.32	2.4G	-42.27	2.50646G	-54.88	16.2454G	-41.92	1
2437MHz	Pass	2.44192G	8.36	-21.64	896.76M	-55.50	2.398G	-37.26	2.4G	-38.94	2.50638G	-54.99	16.23136G	-42.06	2
2462MHz	Pass	2.44192G	8.36	-21.64	727.84M	-55.46	2.39792G	-53.47	2.4G	-55.05	2.51534G	-54.59	21.65943G	-42.19	1
2462MHz	Pass	2.44192G	8.36	-21.64	918.9M	-54.70	2.39712G	-53.45	2.4G	-54.62	2.50462G	-53.69	17.63614G	-41.81	2
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4319G	7.98	-22.02	896.76M	-56.79	2.4G	-35.78	2.4G	-32.95	2.51822G	-53.92	23.34236G	-42.31	1
2412MHz	Pass	2.4319G	7.98	-22.02	1.64469G	-55.73	2.4G	-36.38	2.4G	-36.12	2.52166G	-54.44	16.31283G	-41.41	2
2437MHz	Pass	2.4319G	7.98	-22.02	894.43M	-56.34	2.39912G	-38.83	2.4G	-40.27	2.50894G	-54.29	16.23417G	-42.41	1
2437MHz	Pass	2.4319G	7.98	-22.02	779.1M	-56.28	2.39992G	-37.66	2.4G	-39.85	2.5199G	-54.84	15.23958G	-42.20	2
2462MHz	Pass	2.4319G	7.98	-22.02	2.13516G	-55.68	2.39736G	-53.61	2.4G	-55.56	2.51886G	-54.37	16.65841G	-41.61	1
2462MHz	Pass	2.4319G	7.98	-22.02	911.91M	-55.88	2.39952G	-53.17	2.4G	-54.38	2.5103G	-54.90	16.24821G	-41.86	2







Summary

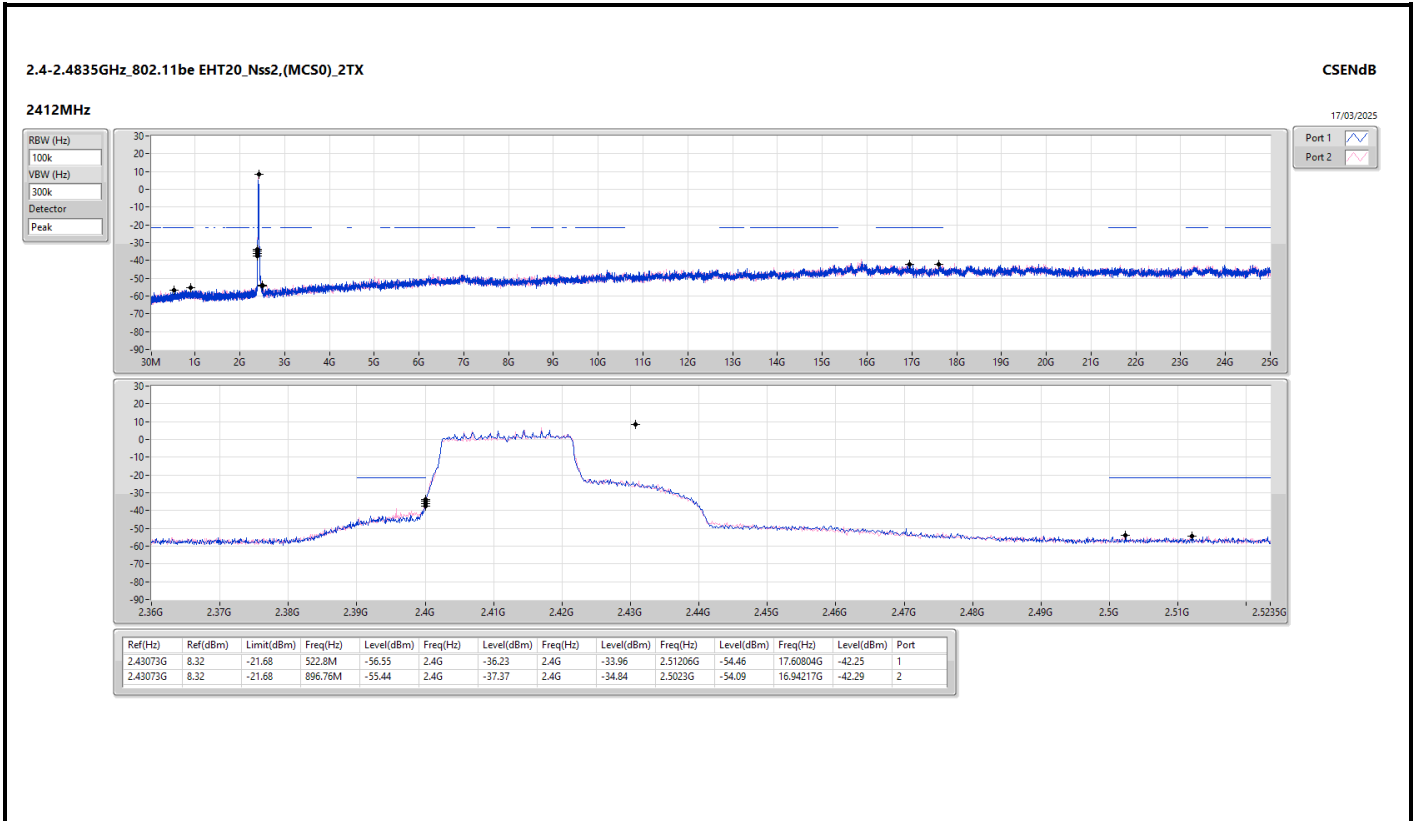
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	Pass	2.43073G	8.32	-21.68	522.8M	-56.55	2.4G	-36.23	2.4G	-33.96	2.51206G	-54.46	17.60804G	-42.25	1





Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11be EHT20_Nss2(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43073G	8.32	-21.68	522.8M	-56.55	2.4G	-36.23	2.4G	-33.96	2.51206G	-54.46	17.60804G	-42.25	1
2412MHz	Pass	2.43073G	8.32	-21.68	896.76M	-55.44	2.4G	-37.37	2.4G	-34.84	2.5023G	-54.09	16.94217G	-42.29	2
2437MHz	Pass	2.43073G	8.32	-21.68	1.98021G	-56.29	2.39976G	-38.93	2.4G	-39.85	2.52174G	-54.61	17.59961G	-40.85	1
2437MHz	Pass	2.43073G	8.32	-21.68	569.4M	-56.29	2.4G	-37.14	2.4G	-38.34	2.50782G	-53.43	17.60804G	-41.61	2
2462MHz	Pass	2.43073G	8.32	-21.68	2.00701G	-56.44	2.4G	-54.05	2.4G	-55.28	2.5135G	-54.00	16.24259G	-41.47	1
2462MHz	Pass	2.43073G	8.32	-21.68	2.30525G	-56.09	2.39808G	-53.92	2.4G	-55.28	2.50454G	-55.07	17.69233G	-42.43	2





**CSE (NdB Down) \_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_1T1S**

**Appendix E.4**

**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.43758G	11.52	-18.48	2.30525G	-56.04	2.39648G	-39.65	2.4G	-42.41	2.51062G	-54.28	17.6558G	-41.42	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.44192G	7.82	-22.18	2.12001G	-56.52	2.39992G	-34.52	2.4G	-30.49	2.51278G	-54.18	16.40555G	-42.60	1
802.11be EHT20_Nss1,(MCS0)_1TX	Pass	2.4319G	7.09	-22.91	878.12M	-56.10	2.39832G	-32.39	2.4G	-30.67	2.5011G	-53.61	17.63052G	-42.24	1

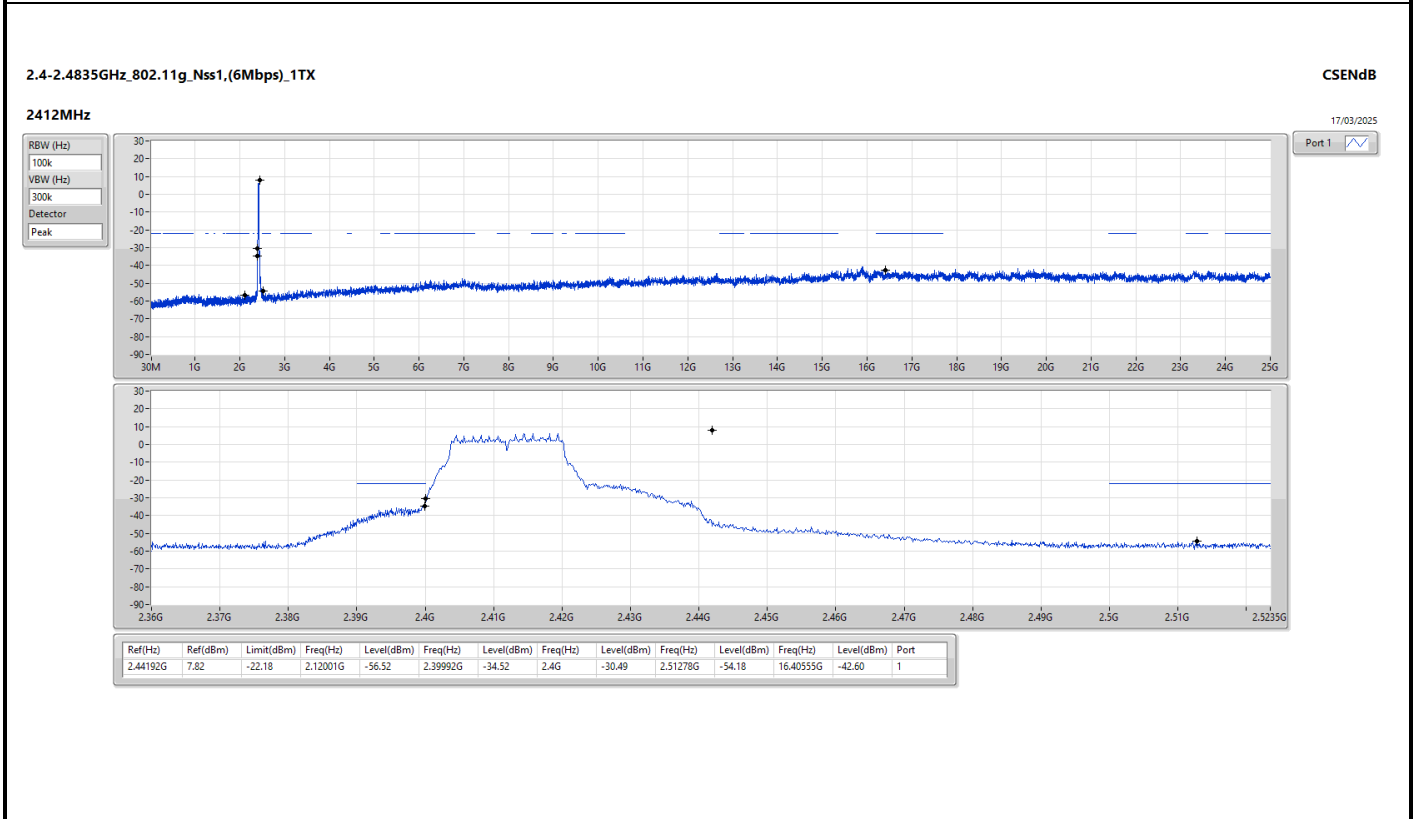
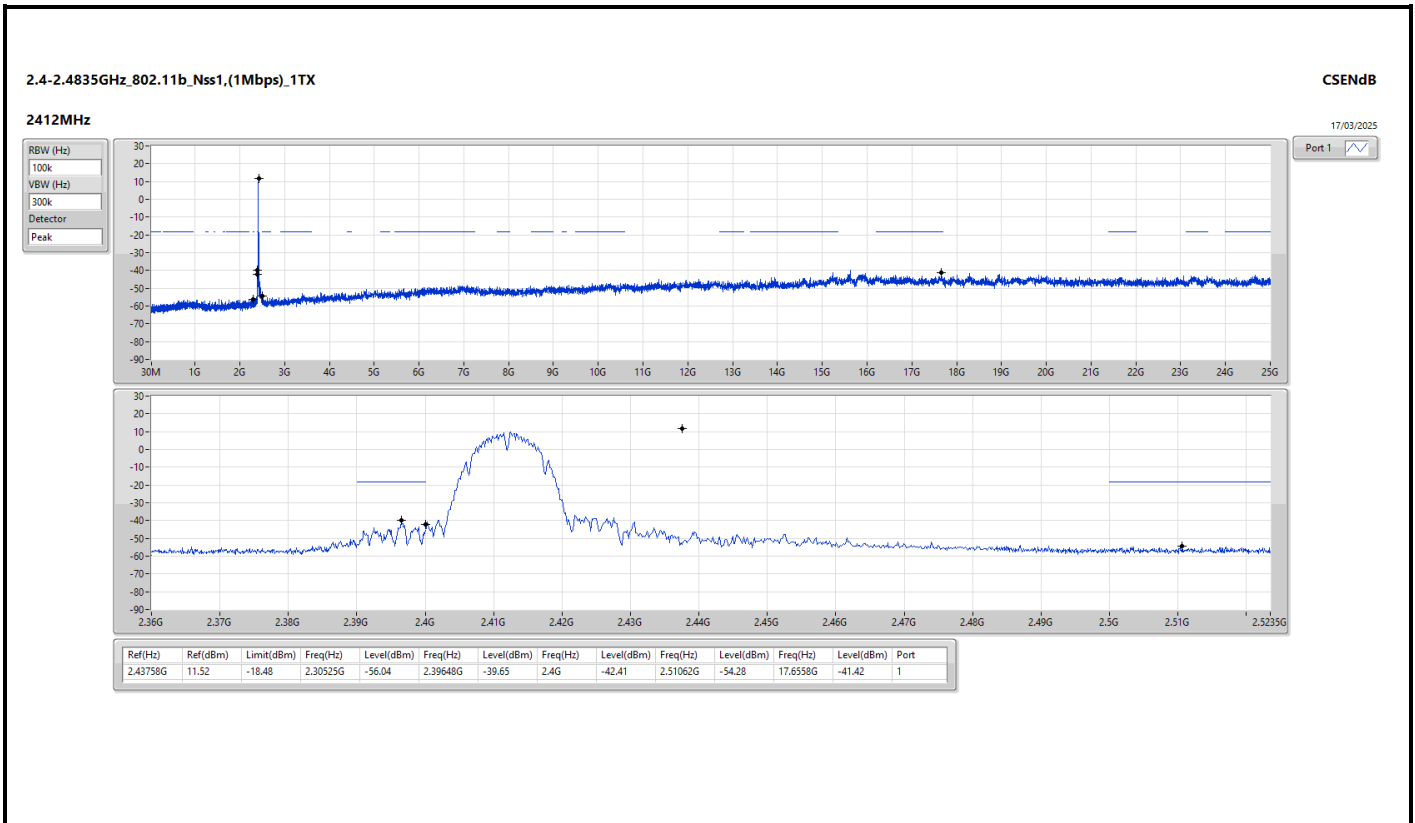


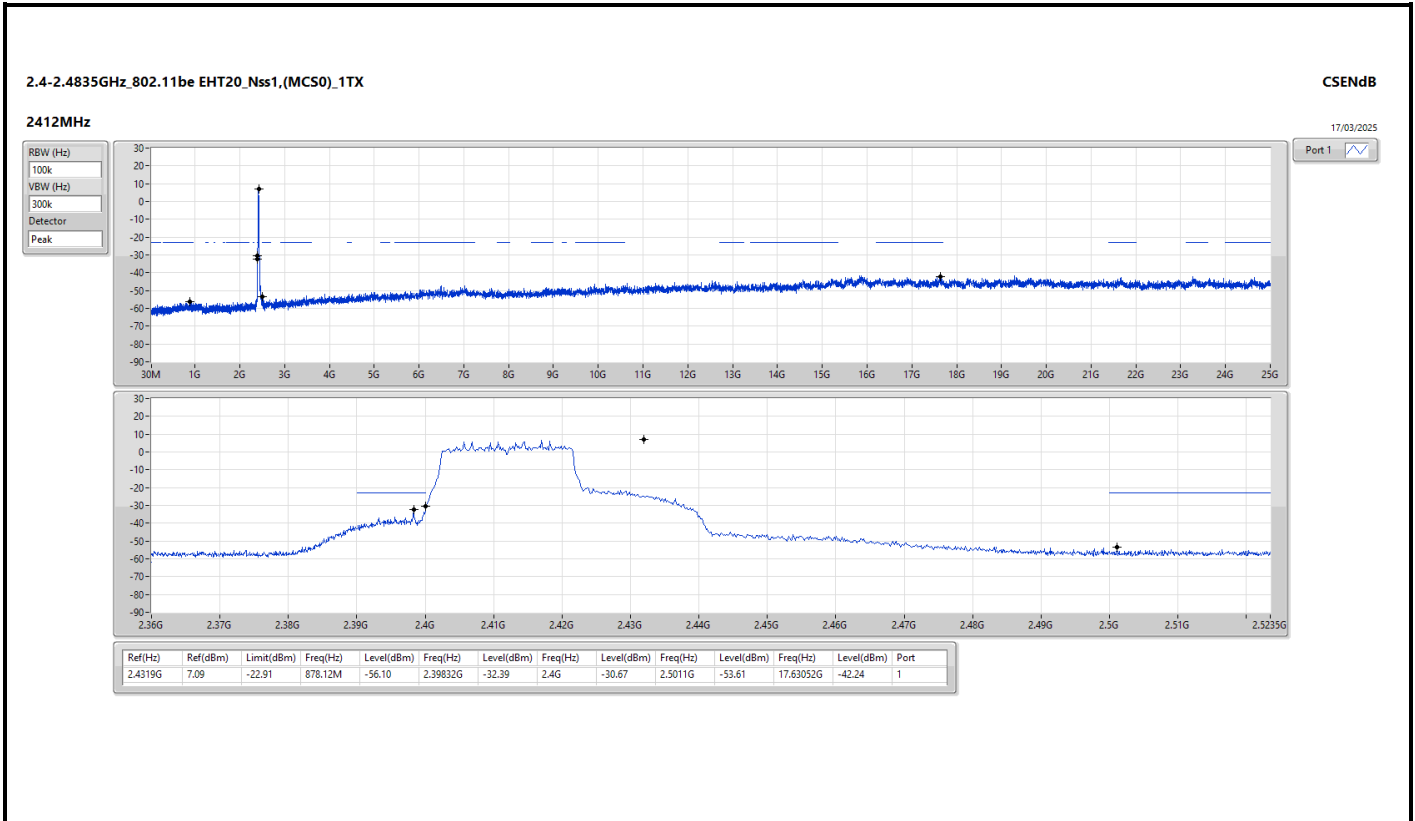
**CSE (NdB Down) \_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_1T1S**

**Appendix E.4**

**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43758G	11.52	-18.48	2.30525G	-56.04	2.39648G	-39.65	2.4G	-42.41	2.51062G	-54.28	17.6558G	-41.42	1
2437MHz	Pass	2.43758G	11.52	-18.48	2.02681G	-55.98	2.39952G	-42.13	2.4G	-44.96	2.51238G	-54.74	16.91408G	-42.51	1
2462MHz	Pass	2.43758G	11.52	-18.48	760.46M	-55.93	2.3984G	-53.59	2.4G	-55.77	2.50326G	-54.67	15.20867G	-41.70	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.44192G	7.82	-22.18	2.12001G	-56.52	2.39992G	-34.52	2.4G	-30.49	2.51278G	-54.18	16.40555G	-42.60	1
2437MHz	Pass	2.44192G	7.82	-22.18	897.93M	-55.45	2.39992G	-40.35	2.4G	-41.58	2.52118G	-54.82	16.61346G	-42.05	1
2462MHz	Pass	2.44192G	7.82	-22.18	1.97905G	-56.18	2.39832G	-53.14	2.4G	-55.50	2.51966G	-54.65	16.22293G	-41.68	1
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4319G	7.09	-22.91	878.12M	-56.10	2.39832G	-32.39	2.4G	-30.67	2.5011G	-53.61	17.63052G	-42.24	1
2437MHz	Pass	2.4319G	7.09	-22.91	1.98837G	-55.72	2.4G	-40.07	2.4G	-41.15	2.50718G	-54.16	16.24821G	-42.21	1
2462MHz	Pass	2.4319G	7.09	-22.91	708.03M	-56.82	2.39624G	-52.98	2.4G	-55.55	2.50702G	-54.19	16.23697G	-42.07	1







**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T1S**

**Appendix E.5**

**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.43758G	12.34	-17.66	719.68M	-54.89	2.39904G	-37.64	2.4G	-45.12	2.51358G	-54.55	16.3325G	-42.36	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.4319G	9.24	-20.76	854.82M	-55.86	2.39992G	-36.35	2.4G	-32.48	2.51374G	-54.31	16.27631G	-41.30	2
802.11be EHT20_Nss1,(MCS0)_2TX	Pass	2.43206G	8.62	-21.38	1.97672G	-56.39	2.4G	-36.49	2.4G	-35.20	2.5099G	-54.53	16.3044G	-41.05	1



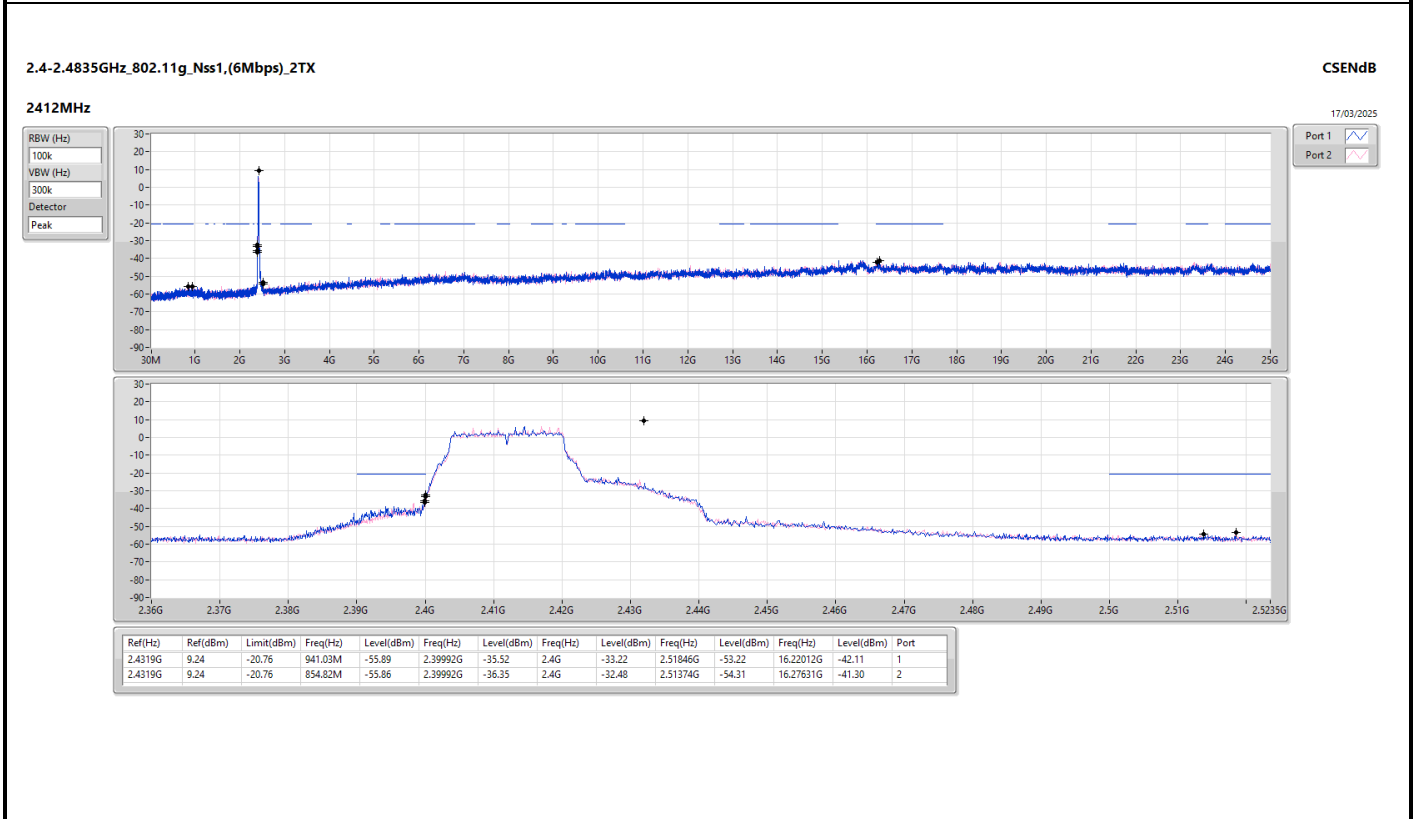
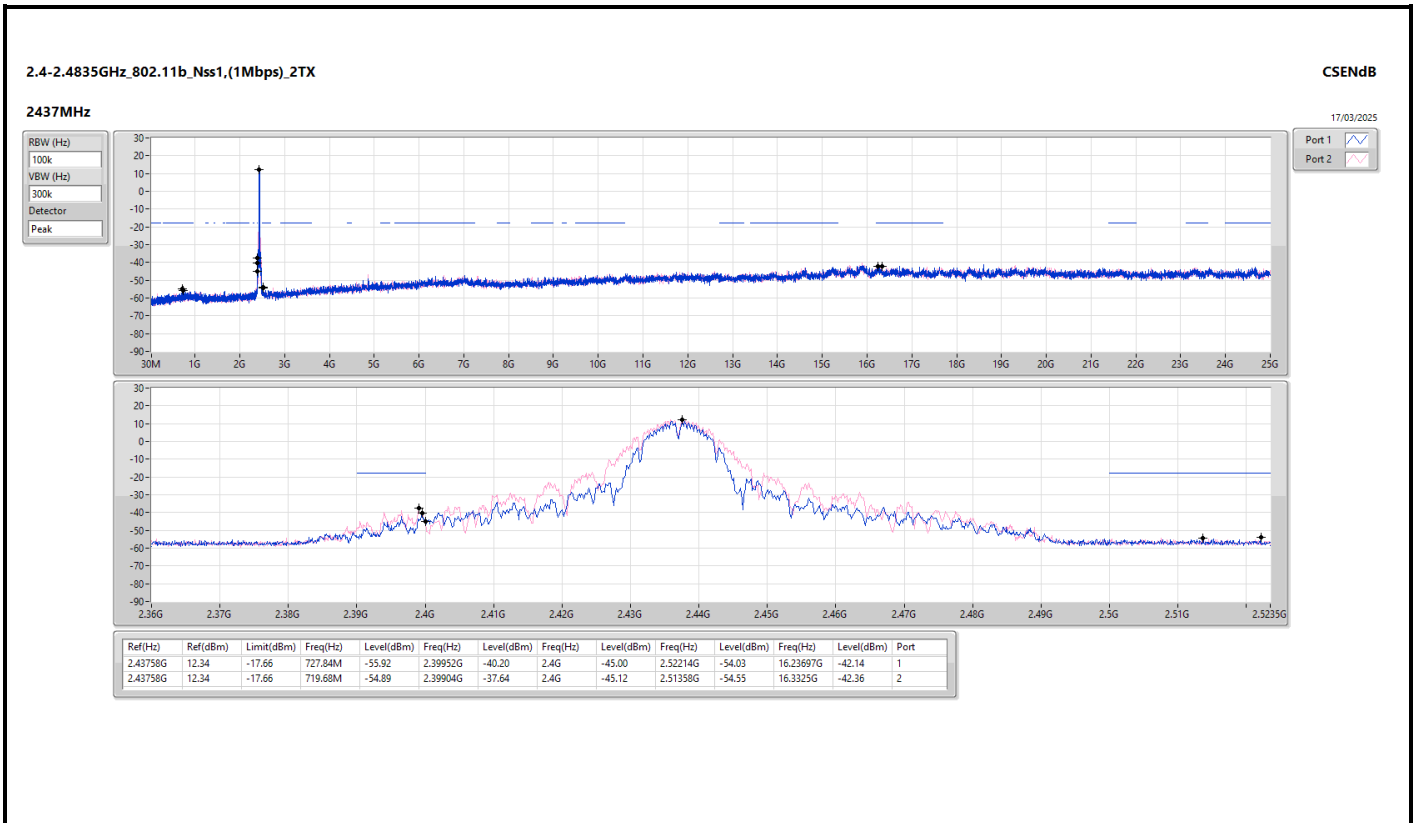
**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T1S**

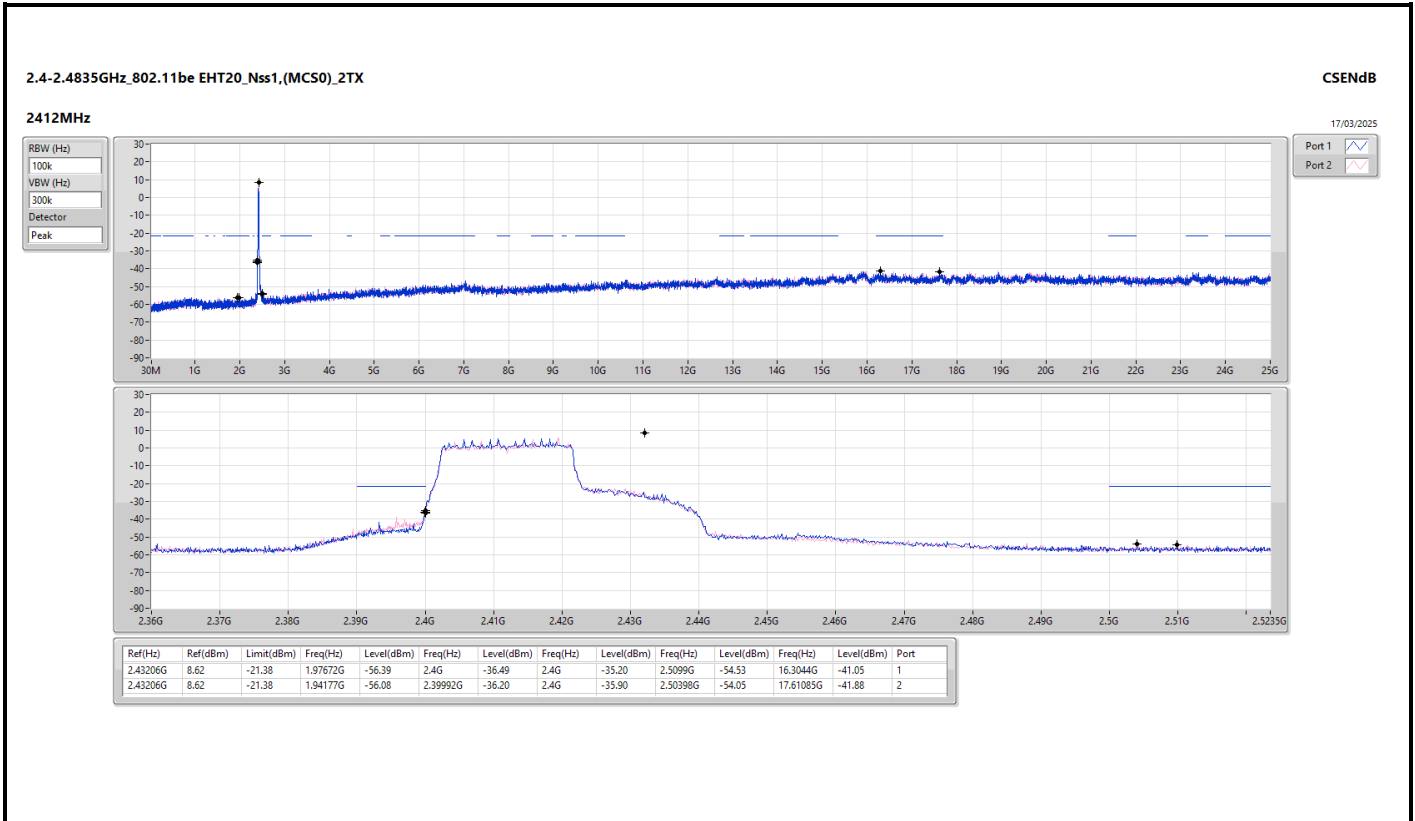
**Appendix E.5**

**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43758G	12.34	-17.66	846.67M	-56.25	2.396G	-46.82	2.4G	-51.62	2.50518G	-53.96	16.24821G	-41.24	1
2412MHz	Pass	2.43758G	12.34	-17.66	2.15729G	-56.48	2.39904G	-41.38	2.4G	-42.95	2.5227G	-53.90	23.26369G	-42.17	2
2437MHz	Pass	2.43758G	12.34	-17.66	727.84M	-55.92	2.39952G	-40.20	2.4G	-45.00	2.52214G	-54.03	16.23697G	-42.14	1
2437MHz	Pass	2.43758G	12.34	-17.66	719.68M	-54.89	2.39904G	-37.64	2.4G	-45.12	2.51358G	-54.55	16.3325G	-42.36	2
2462MHz	Pass	2.43758G	12.34	-17.66	770.94M	-55.99	2.39432G	-54.43	2.4G	-56.48	2.50166G	-54.23	17.23718G	-41.68	1
2462MHz	Pass	2.43758G	12.34	-17.66	2.02215G	-56.27	2.396G	-53.27	2.4G	-54.83	2.5083G	-54.57	16.93937G	-42.61	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4319G	9.24	-20.76	941.03M	-55.89	2.39992G	-35.52	2.4G	-33.22	2.51846G	-53.22	16.22012G	-42.11	1
2412MHz	Pass	2.4319G	9.24	-20.76	854.82M	-55.86	2.39992G	-36.35	2.4G	-32.48	2.51374G	-54.31	16.27631G	-41.30	2
2437MHz	Pass	2.4319G	9.24	-20.76	2.14681G	-56.72	2.39888G	-39.71	2.4G	-41.21	2.50774G	-54.36	17.6249G	-42.07	1
2437MHz	Pass	2.4319G	9.24	-20.76	1.81012G	-55.76	2.39984G	-37.76	2.4G	-37.76	2.50918G	-53.75	16.2735G	-41.86	2
2462MHz	Pass	2.4319G	9.24	-20.76	953.85M	-56.15	2.3952G	-54.00	2.4G	-55.30	2.51886G	-54.18	16.96746G	-42.11	1
2462MHz	Pass	2.4319G	9.24	-20.76	843.17M	-56.21	2.39616G	-54.43	2.4G	-55.72	2.52142G	-54.50	17.61085G	-40.87	2
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43206G	8.62	-21.38	1.97672G	-56.39	2.4G	-36.49	2.4G	-35.20	2.5099G	-54.53	16.3044G	-41.05	1
2412MHz	Pass	2.43206G	8.62	-21.38	1.94177G	-56.08	2.39992G	-36.20	2.4G	-35.90	2.50398G	-54.05	17.61085G	-41.88	2
2437MHz	Pass	2.43206G	8.62	-21.38	784.92M	-56.31	2.4G	-38.97	2.4G	-39.77	2.50054G	-53.91	23.34236G	-41.56	1
2437MHz	Pass	2.43206G	8.62	-21.38	1.98138G	-56.43	2.39896G	-36.47	2.4G	-36.53	2.51086G	-54.26	14.96143G	-42.05	2
2462MHz	Pass	2.43206G	8.62	-21.38	537.94M	-55.97	2.39616G	-53.93	2.4G	-55.72	2.50086G	-54.57	23.59522G	-41.70	1
2462MHz	Pass	2.43206G	8.62	-21.38	2.15147G	-55.51	2.3964G	-53.56	2.4G	-55.74	2.52118G	-53.99	15.25925G	-41.53	2









**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Dual-Polarized MIMO Panel Antenna\_2T2S**

**Appendix E.6**

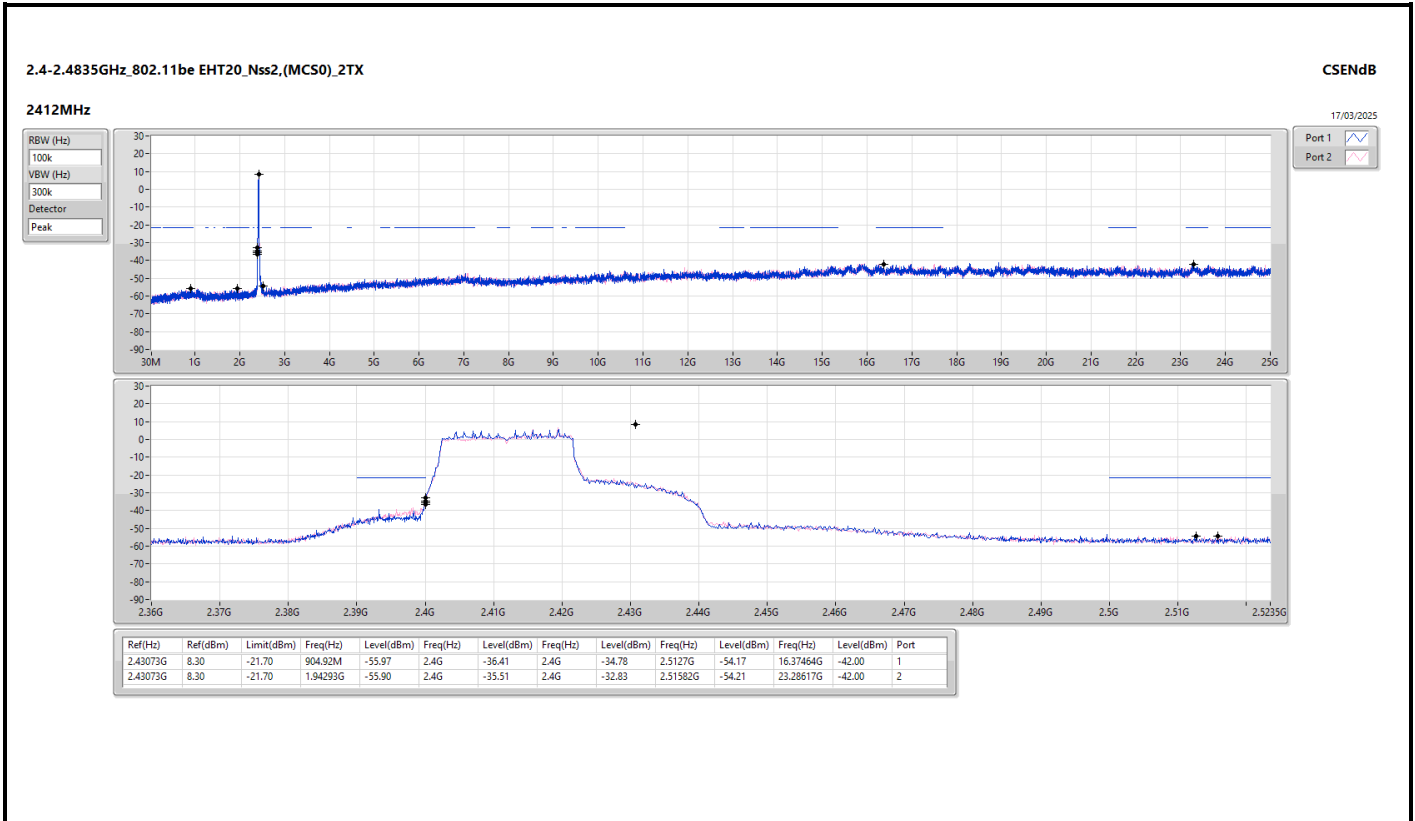
**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	Pass	2.43073G	8.30	-21.70	1.94293G	-55.90	2.4G	-35.51	2.4G	-32.83	2.51582G	-54.21	23.28617G	-42.00	2



**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11be EHT20_Nss2(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43073G	8.30	-21.70	904.92M	-55.97	2.4G	-36.41	2.4G	-34.78	2.5127G	-54.17	16.37464G	-42.00	1
2412MHz	Pass	2.43073G	8.30	-21.70	1.94293G	-55.90	2.4G	-35.51	2.4G	-32.83	2.51582G	-54.21	23.28617G	-42.00	2
2437MHz	Pass	2.43073G	8.30	-21.70	2.18409G	-56.28	2.3996G	-38.24	2.4G	-39.27	2.51206G	-54.12	15.2171G	-42.39	1
2437MHz	Pass	2.43073G	8.30	-21.70	789.58M	-56.24	2.39912G	-37.21	2.4G	-38.00	2.52094G	-53.93	23.25526G	-41.93	2
2462MHz	Pass	2.43073G	8.30	-21.70	951.52M	-56.34	2.39848G	-54.07	2.4G	-55.84	2.50974G	-54.26	16.28193G	-42.09	1
2462MHz	Pass	2.43073G	8.30	-21.70	2.13749G	-56.19	2.39544G	-54.40	2.4G	-55.99	2.51254G	-54.59	17.60804G	-42.40	2





**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_1T1S**

**Appendix E.7**

**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.43657G	9.93	-20.07	2.18059G	-56.59	2.4G	-41.35	2.4G	-39.96	2.5199G	-54.71	23.30302G	-44.11	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.43206G	6.17	-23.83	2.07924G	-55.69	2.39984G	-36.79	2.4G	-31.03	2.5019G	-54.47	16.29598G	-43.44	1
802.11be EHT20_Nss1,(MCS0)_1TX	Pass	2.43206G	5.53	-24.47	2.30758G	-56.07	2.4G	-38.60	2.4G	-34.89	2.50502G	-54.41	23.29741G	-43.97	1

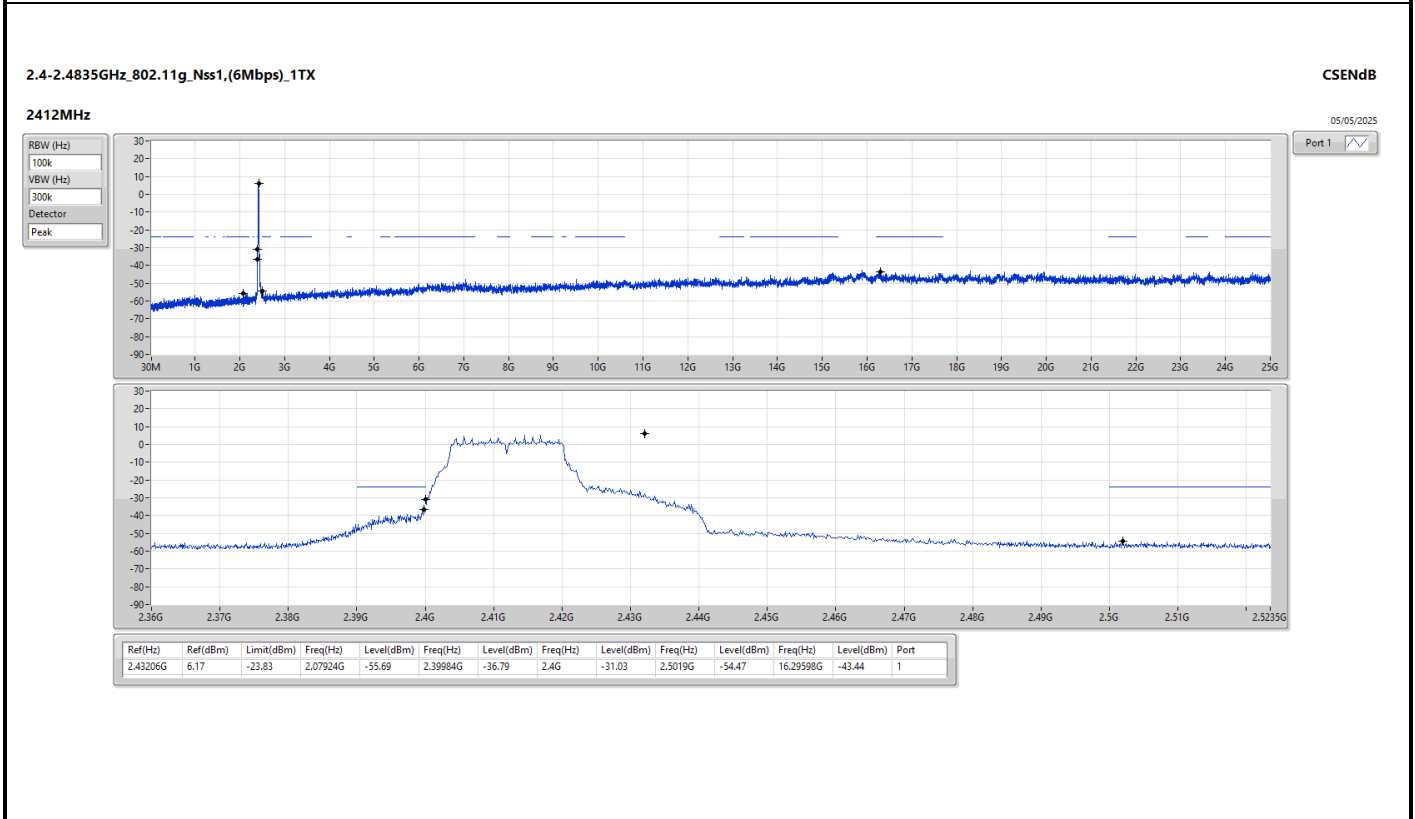
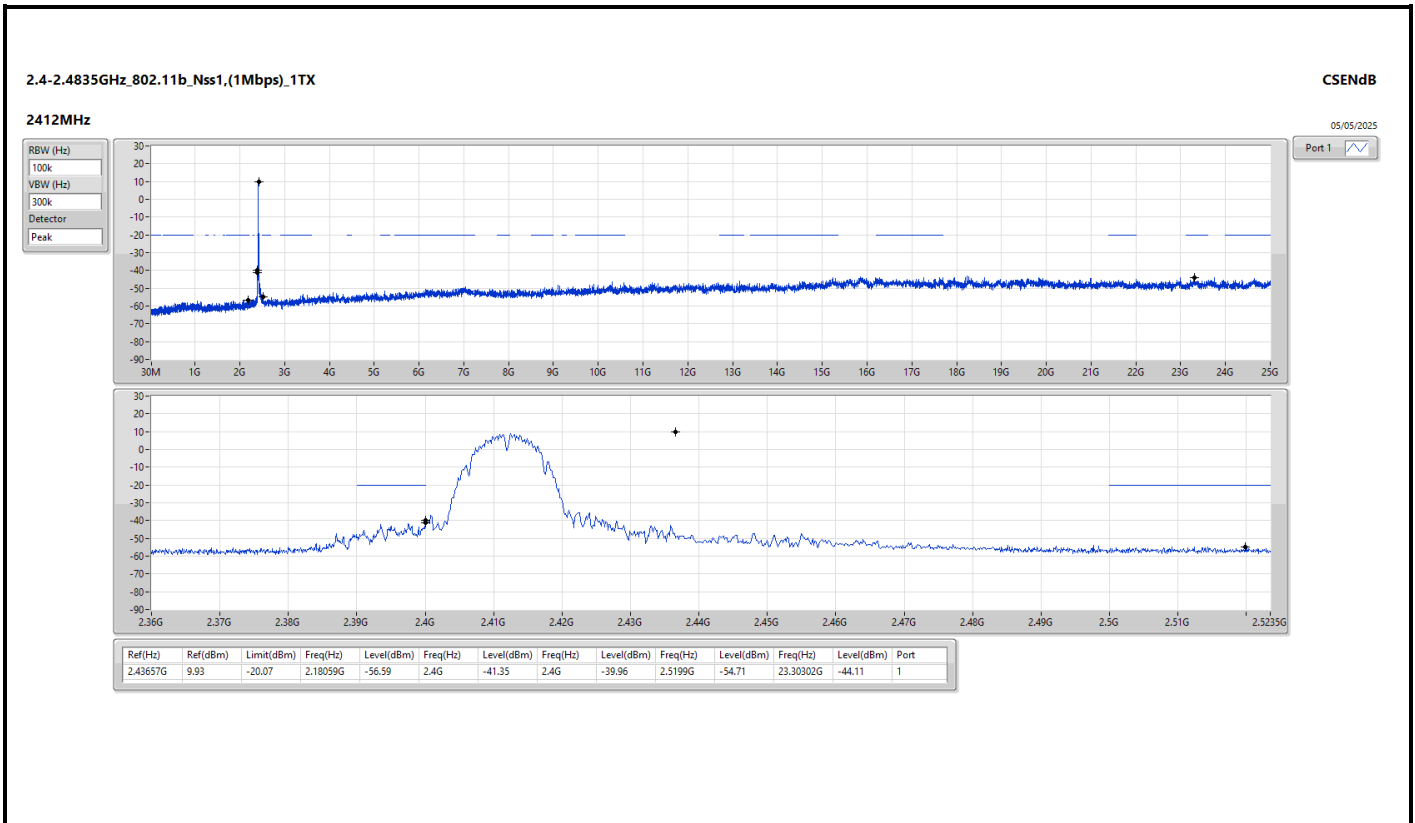


**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_1T1S**

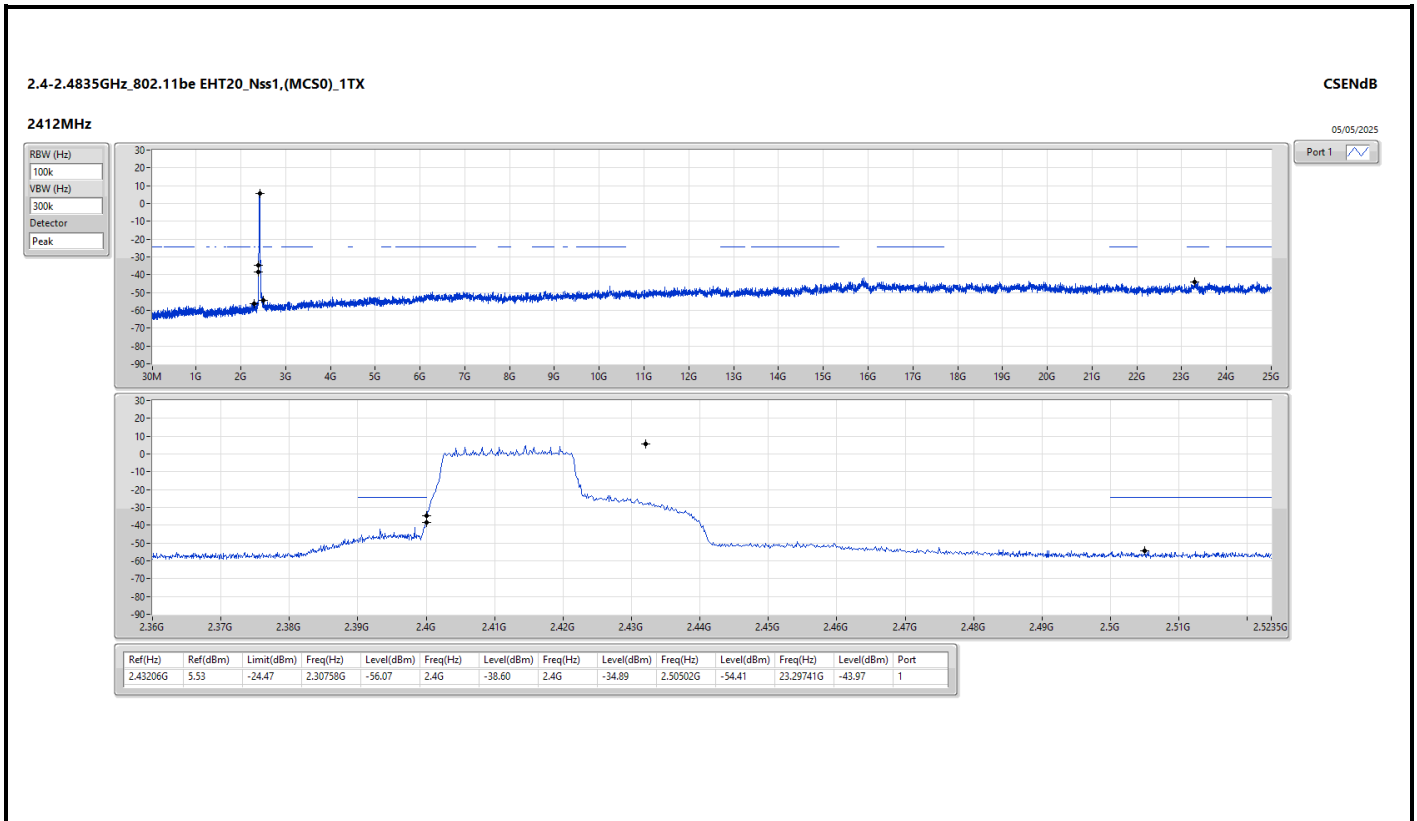
**Appendix E.7**

**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43657G	9.93	-20.07	2.18059G	-56.59	2.4G	-41.35	2.4G	-39.96	2.5199G	-54.71	23.30302G	-44.11	1
2437MHz	Pass	2.43657G	9.93	-20.07	1.88585G	-56.03	2.394G	-43.95	2.4G	-48.80	2.51166G	-54.15	16.92813G	-43.65	1
2462MHz	Pass	2.43657G	9.93	-20.07	2.30525G	-54.18	2.3996G	-54.11	2.4G	-55.80	2.51326G	-54.68	16.29598G	-43.69	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43206G	6.17	-23.83	2.07924G	-55.69	2.39984G	-36.79	2.4G	-31.03	2.5019G	-54.47	16.29598G	-43.44	1
2437MHz	Pass	2.43206G	6.17	-23.83	2.18642G	-56.93	2.39992G	-42.45	2.4G	-43.27	2.51174G	-54.55	17.52375G	-43.32	1
2462MHz	Pass	2.43206G	6.17	-23.83	2.16545G	-56.65	2.39344G	-54.32	2.4G	-55.05	2.5055G	-53.89	16.31845G	-43.31	1
802.11be EHT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43206G	5.53	-24.47	2.30758G	-56.07	2.4G	-38.60	2.4G	-34.89	2.50502G	-54.41	23.29741G	-43.97	1
2437MHz	Pass	2.43206G	5.53	-24.47	2.15496G	-56.58	2.39936G	-43.56	2.4G	-45.02	2.50718G	-54.63	15.21148G	-43.89	1
2462MHz	Pass	2.43206G	5.53	-24.47	2.30758G	-56.19	2.39704G	-54.52	2.4G	-55.58	2.52326G	-54.63	16.83541G	-43.36	1









**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_2T1S**

**Appendix E.8**

**Summary**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_2TX	Pass	2.46146G	9.21	-20.79	2.30758G	-55.68	2.4G	-40.34	2.4G	-40.76	2.50398G	-54.27	16.36902G	-43.03	2
802.11g_Nss1,(6Mbps)_2TX	Pass	2.4319G	6.93	-23.07	2.03613G	-56.44	2.39992G	-40.13	2.4G	-35.53	2.50326G	-53.06	16.3044G	-42.55	1
802.11be EHT20_Nss1,(MCS0)_2TX	Pass	2.43073G	6.86	-23.14	1.96973G	-55.48	2.4G	-37.61	2.4G	-36.54	2.5115G	-53.55	16.20326G	-43.46	1

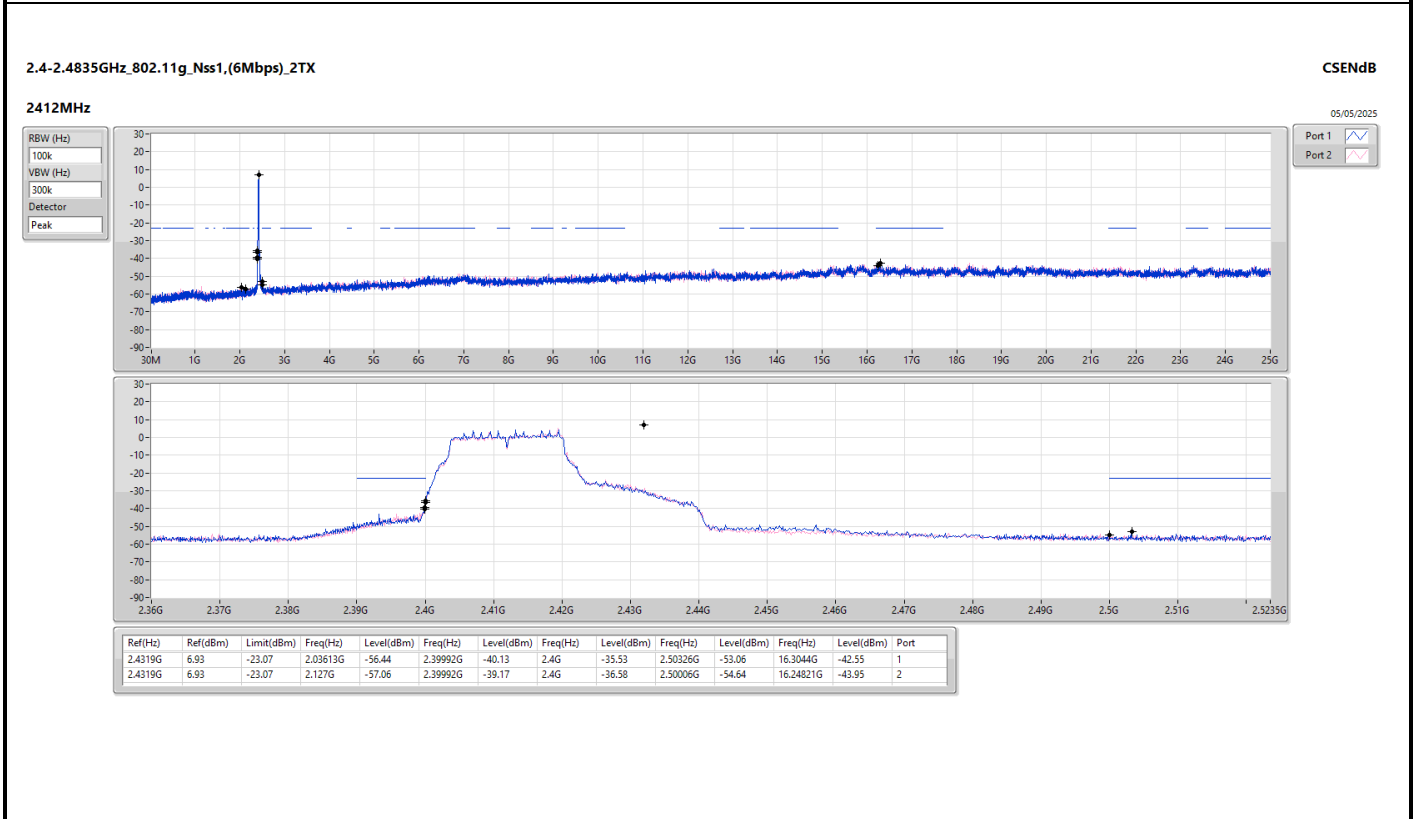
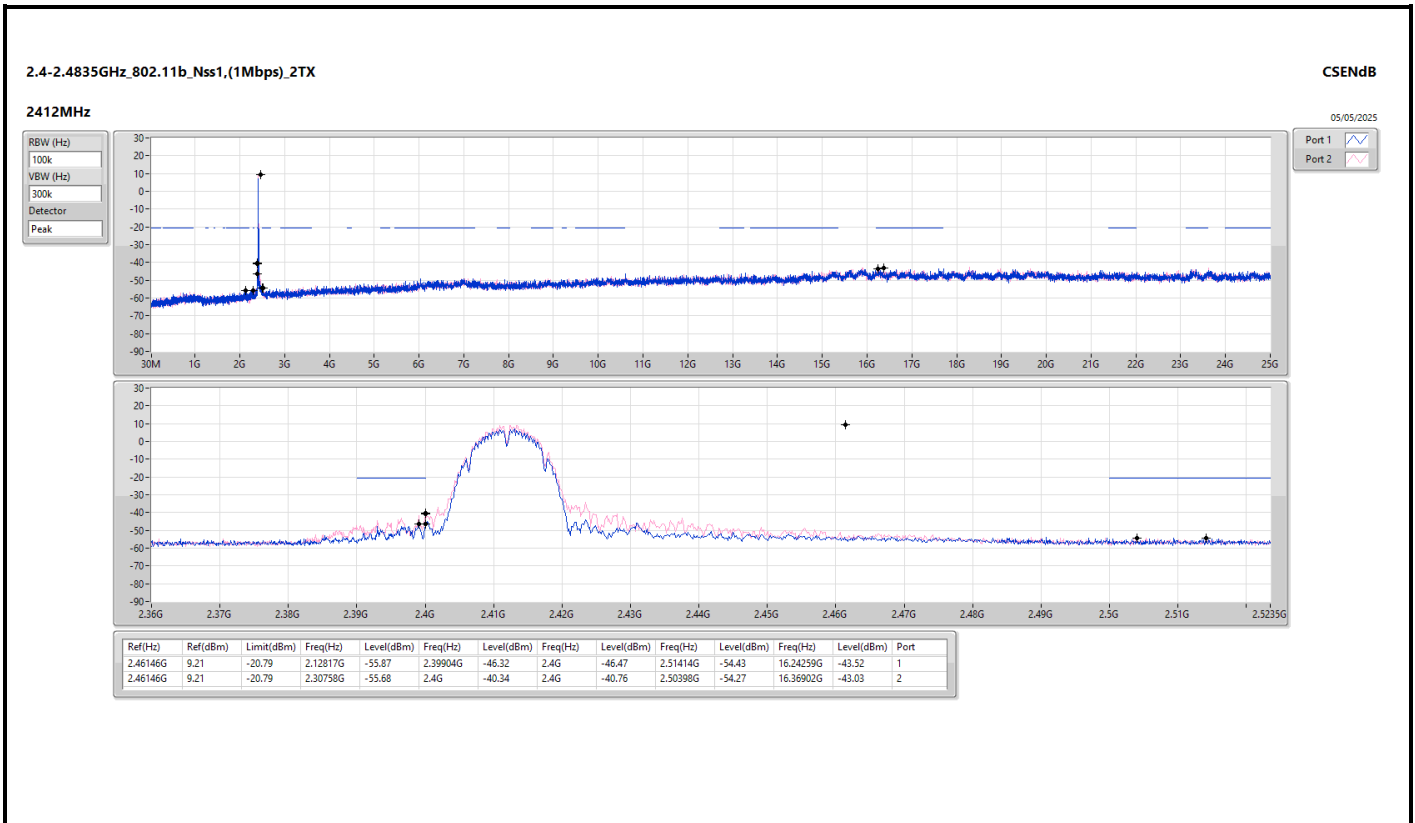


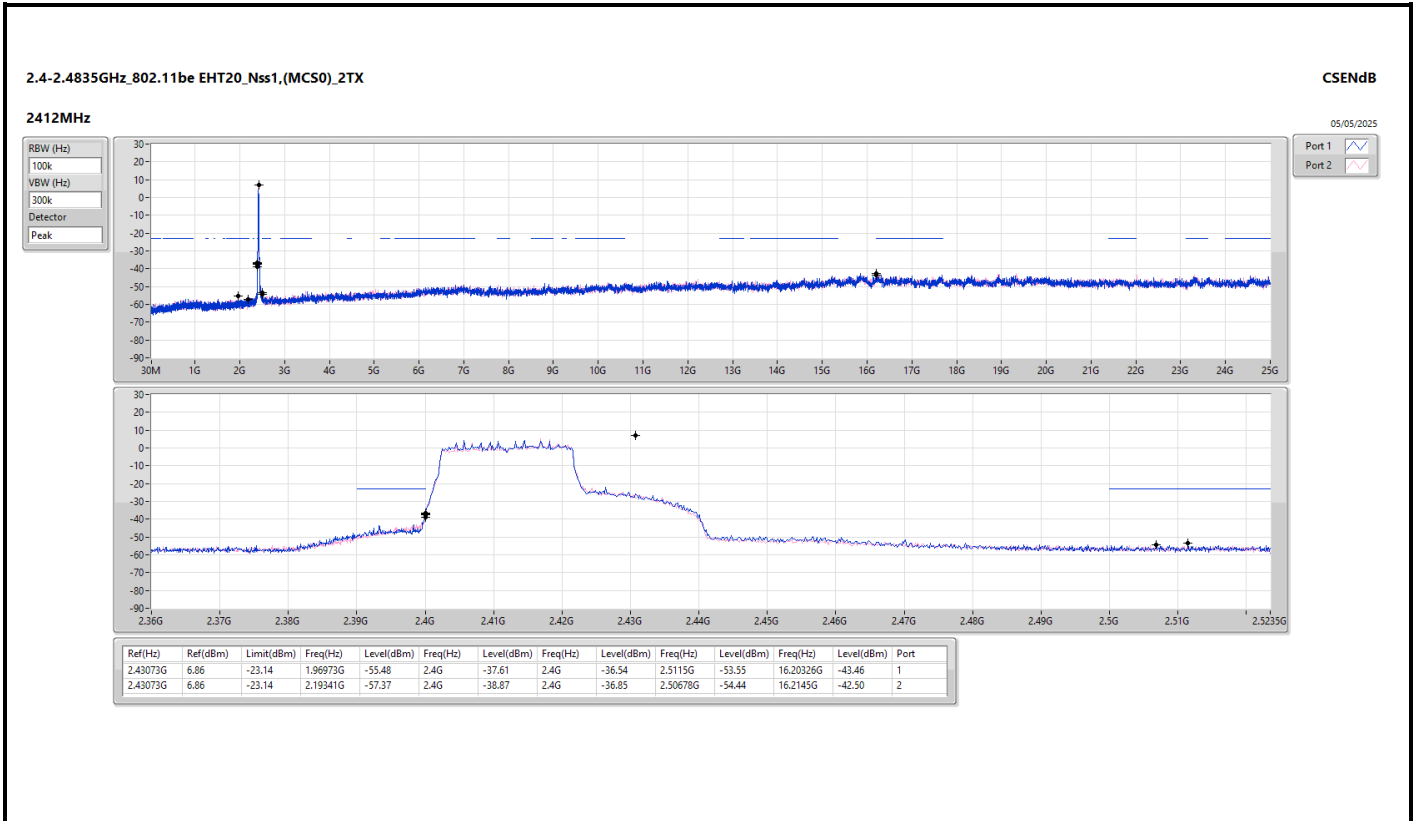
**CSE (NdB Down)\_Non-Beamforming\_Radio 1\_  
Panel Antenna\_2T1S**

**Appendix E.8**

**Result**

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.46146G	9.21	-20.79	2.12817G	-55.87	2.39904G	-46.32	2.4G	-46.47	2.51414G	-54.43	16.24259G	-43.52	1
2412MHz	Pass	2.46146G	9.21	-20.79	2.30758G	-55.68	2.4G	-40.34	2.4G	-40.76	2.50398G	-54.27	16.36902G	-43.03	2
2437MHz	Pass	2.46146G	9.21	-20.79	2.30641G	-56.50	2.39544G	-54.01	2.4G	-55.22	2.51734G	-53.36	17.61085G	-43.37	1
2437MHz	Pass	2.46146G	9.21	-20.79	2.16661G	-56.38	2.39904G	-45.43	2.4G	-48.83	2.50078G	-54.28	16.25664G	-43.56	2
2462MHz	Pass	2.46146G	9.21	-20.79	2.04778G	-57.38	2.39168G	-54.69	2.4G	-55.12	2.52054G	-53.86	17.61647G	-43.52	1
2462MHz	Pass	2.46146G	9.21	-20.79	2.30292G	-56.66	2.39616G	-54.36	2.4G	-55.45	2.50006G	-54.01	17.67266G	-42.61	2
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4319G	6.93	-23.07	2.03613G	-56.44	2.39992G	-40.13	2.4G	-35.53	2.50326G	-53.06	16.3044G	-42.55	1
2412MHz	Pass	2.4319G	6.93	-23.07	2.127G	-57.06	2.39992G	-39.17	2.4G	-36.58	2.50006G	-54.64	16.24821G	-43.95	2
2437MHz	Pass	2.4319G	6.93	-23.07	2.12467G	-55.99	2.39928G	-42.73	2.4G	-42.93	2.50638G	-53.70	17.62771G	-43.89	1
2437MHz	Pass	2.4319G	6.93	-23.07	2.13632G	-57.02	2.39856G	-42.11	2.4G	-42.85	2.5083G	-53.33	23.31145G	-44.35	2
2462MHz	Pass	2.4319G	6.93	-23.07	916.57M	-56.63	2.39744G	-54.35	2.4G	-55.28	2.50742G	-54.26	16.3325G	-43.88	1
2462MHz	Pass	2.4319G	6.93	-23.07	1.94293G	-56.43	2.39768G	-54.68	2.4G	-55.72	2.51654G	-54.46	16.41679G	-43.72	2
802.11be EHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.43073G	6.86	-23.14	1.96973G	-55.48	2.4G	-37.61	2.4G	-36.54	2.5115G	-53.55	16.20326G	-43.46	1
2412MHz	Pass	2.43073G	6.86	-23.14	2.19341G	-57.37	2.4G	-38.87	2.4G	-36.85	2.50678G	-54.44	16.2145G	-42.50	2
2437MHz	Pass	2.43073G	6.86	-23.14	2.10137G	-56.44	2.3996G	-41.56	2.4G	-41.28	2.5015G	-54.29	16.82417G	-43.26	1
2437MHz	Pass	2.43073G	6.86	-23.14	2.13516G	-55.73	2.39952G	-40.39	2.4G	-41.41	2.51678G	-54.17	16.44488G	-43.89	2
2462MHz	Pass	2.43073G	6.86	-23.14	1.98138G	-56.85	2.39368G	-53.83	2.4G	-56.77	2.51134G	-54.47	23.58398G	-44.08	1
2462MHz	Pass	2.43073G	6.86	-23.14	1.96041G	-56.78	2.39224G	-55.07	2.4G	-55.87	2.50598G	-54.59	16.23978G	-43.28	2







Summary

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11be EHT20_Nss2,(MCS0)_2TX	Pass	2.4319G	5.99	-24.01	2.19807G	-56.87	2.4G	-39.73	2.4G	-36.02	2.51582G	-54.41	17.61366G	-44.02	1



Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11be EHT20_Nss2(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.4319G	5.99	-24.01	2.19807G	-56.87	2.4G	-39.73	2.4G	-36.02	2.51582G	-54.41	17.61366G	-44.02	1
2412MHz	Pass	2.4319G	5.99	-24.01	2.17011G	-56.88	2.4G	-37.91	2.4G	-36.45	2.51902G	-54.17	16.22012G	-43.09	2
2437MHz	Pass	2.4319G	5.99	-24.01	2.12933G	-56.65	2.39992G	-43.89	2.4G	-45.90	2.50198G	-54.63	16.53198G	-44.34	1
2437MHz	Pass	2.4319G	5.99	-24.01	1.97089G	-55.80	2.3968G	-42.98	2.4G	-43.65	2.51254G	-54.23	23.26088G	-43.81	2
2462MHz	Pass	2.4319G	5.99	-24.01	2.13166G	-56.74	2.3956G	-53.70	2.4G	-56.28	2.51174G	-54.21	16.92251G	-42.74	1
2462MHz	Pass	2.4319G	5.99	-24.01	1.99303G	-57.22	2.4G	-54.41	2.4G	-55.97	2.51534G	-53.69	16.22293G	-43.20	2