



Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

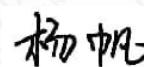
SRD TEST REPORT

PRODUCT	Function Cradle
BRAND	SUNMI
MODEL	NDZ6B
APPLICANT	Shanghai Sunmi Technology Co.,Ltd.
FCC ID	2AH25NDZ6B
IC	22621-NDZ6B
ISSUE DATE	February 6, 2025
STANDARD(S)	FCC Part15C, RSS-247 Issue 3, RSS-Gen Issue 5

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Reviewed by: Yang Fan



Approved by: Zhang Min

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1. Summary of Test Report

1.1 Test Standard(s)

No.	Test Standard	Title	Version
1	FCC Part15C	FCC CFR 47, Part 15, Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.	--
2	RSS-247 Issue 3	Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE- LAN) Devices	2023
3	RSS-Gen Issue 5	General Requirements for Compliance of Radio Apparatus	2021

1.2 Reference Documents

No.	Test Standard	Title	Version
1	ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013
2	KDB 558074 D01 15.247 Meas Guidance v05r02	Guidance for Performing Compliance Measurements on Frequency Hopping Spread Spectrum systems (DSS) Operating Under §15.247	--

NOTE: The standard of KDB 558074 D01 15.247 Meas Guidance v05r02 has not been accredited by A2LA

1.3 Summary of Test Results

No.	Measurement Items	FCC Rules	IC Rules	Verdict
1	Maximum Peak Output Power	15.247(b)	RSS-247 5.4	Pass
2	Peak Power Spectral Density	15.247(e)	RSS-247 5.2	Pass
3	6dB Occupied Bandwidth	15.247(a)	RSS-247 5.2	Pass
4	99% Occupied Bandwidth	N/A	RSS-GEN 6.7	Pass
5	Band Edges Compliance	15.247(d)	RSS-247 5.5	Pass
6	Transmitter Spurious Emission- Conducted	15.247(d)	RSS-247 5.5	Pass
7	Transmitter Spurious Emission- Radiated	15.247/15.205/15.209	RSS-GEN 8.9, 8.10	Pass
8	AC Powerline Conducted Emission	15.207	RSS-GEN 8.8	Pass
9	Antenna requirement	15.203/15.247(c)	RSS Gen 6.8, RSS- 247 5.4	Pass ^{Note 2}

Note 1:

The NDZ6B, manufactured by Shanghai Sunmi Technology Co.,Ltd. is a new product for testing.
Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with
Pass/Fail/Inc result in section 1.3.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested

device specified in section 4 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 1 of this test report.

Note2:

2.4G WLAN used a Internal antenna with max Gain 1.57/2.30 dBi that complied with 15.203 Requirements

- a. All the test data for each data were verified, but only the worst case was reported.

1.4 Data Provided by Applicant

No.	Item(s)	Data
1	2.4G WLAN Antenna 1 gain of EUT	1.57dBi
2	2.4G WLAN Antenna 2 gain of EUT	2.30dBi

Note: The data of antenna gain is provided by the Antenna specification may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.

Cyclic Delay Diversity(CDD)System:

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

If all antennas have the same gain, $GANT$, Directional gain = $GANT + \text{Array Gain}$, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

$\text{Array Gain} = 10 \log(NANT/NSS) dB$.

For power measurements on IEEE 802.11 devices, 1,2

$\text{Array Gain} = 0 dB$ (i.e., no array gain) for $NANT \leq 4$;

$\text{Array Gain} = 0 dB$ (i.e., no array gain) for channel widths ≥ 40 MHz for any $NANT$;

$\text{Array Gain} = 5 \log(NANT/NSS) dB$ or $3 dB$, whichever is less, for 20-MHz channel widths with $NANT \geq 5$.

For power measurements on all other devices:

$\text{Array Gain} = 10 \log(NANT/NSS) dB$. The FCC may permit a lower array gain value based on analysis involving the specific cyclic delays, signal bandwidths, channelization, and antenna configurations used by the device. Contact the FCC through the Knowledge

Unequal antenna gains, with equal transmit powers. For antenna gains given by $G1, G2, \dots, GN$ dBi

(i) If transmit signals are *correlated*, then

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / NANT] dBi$ [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

(ii) If all transmit signals are *completely uncorrelated*, then

Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10}) / NANT] dBi$

The Power and PSD limit should be modified if the directional gain of EUT is over 6dB.

The EUT supports CDD System Unequal antenna gain:

ANT Gain1 (dBi)	ANT Gain2 (dBi)	Directional gain (dBi)
1.57	2.30	4.95

2. General Information of The Laboratory

2.1 Testing Laboratory

Lab Name	Industrial Internet Innovation Center (Shanghai) Co.,Ltd.
Address	Building 4, No. 766, Jingang Road, Pudong, Shanghai, China
Telephone	021-68866880
FCC Registration No.	708870
FCC Designation No.	CN1364
IC Designation No.	10766A
CAB identifier	CN0067

2.2 Laboratory Environmental Requirements

Temperature	15°C~35°C
Relative Humidity	86kPa~106kPa
Atmospheric Pressure	86kPa~106kPa

2.3 Project Information

Project Manager	Gao Hongning
Test Date	December 13, 2024 to January 15, 2025

3. General Information of The Customer

3.1 Applicant

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, No.388,Song Hu Road, Yang Pu District, Shanghai, China
Telephone	18826519551

3.2 Manufacturer

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, No.388,Song Hu Road, Yang Pu District, Shanghai, China
Telephone	18826519551

4. General Information of The Product

4.1 Product Description for Equipment under Test (EUT)

Product Name	Function Cradle
Model name	NDZ6B
Date of Receipt	S12aa: December 13, 2024 S08aa: December 13, 2024
EUT ID*	S12aa/S08aa
SN/IMEI	S12aa: 1C1A1B37C988 S08aa: MM01E4BT00464
Supported Radio Technology and Bands	802.11b/g/n
Hardware Version	CE10A_MMI_V01
Software Version	2.0.0.26
HVIN	NDZ6B
FCC ID	2AH25NDZ6B
IC	22621-NDZ6B

NOTE1: EUT ID is the internal identification code of the laboratory.

NOTE2: Samples in the test report are provided by the customer. The test results are only applicable to the samples received by the laboratory.

4.2 Internal Identification of AE used during the test

AE ID*	Description	Model	SN/Remark
CB02	Adapter	TPA-23A050200UU01	Input: 100~240V, 50/60Hz,0.3 A; Output: 5V DC, 2A
UA04	Network cable	N/A	N/A
AE1	LAN Cable	N/A	N/A
AE3	Mouse	N/A	N/A
AE5	Notebook PC	ThinkPad T440p	N/A
AE6	RF cable	N/A	Cable loss: 1dB

NOTE1: *AE ID is the internal identification code of the laboratory.

4.3 Additional Information

WLAN Frequency	2412MHz-2462MHz
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WLAN Channel	CH1-11
WLAN type of modulation	802.11b: DSSS 802.11g/n: OFDM

Test frequency list:

BW_20M	Channel	1	6	11
	Freq. (MHz)	2412	2437	2462
BW_40M	Channel	3	6	9
	Freq. (MHz)	2422	2437	2452

Note: This report is for 2.4G WLAN only.

Emissions Information:

TestMode	Frequency Min(MHz)	Frequency Max(MHz)	Max OutPut Power(dBm)	Max OutPut Power(W)	OBW (KHz)	Necessary Bandwidth & Emission Classification
11B	2412	2462	10.75	0.0119	15840	15M8G1D
11G	2412	2462	18.72	0.0745	17960	18M0D1D
11N20	2412	2462	19.62	0.0916	19560	19M6D1D
11N40	2422	2452	15.48	0.0353	37280	37M3D1D

5. Test Configuration Information

5.1 Laboratory Environmental Conditions

5.1.1 Permanent Facilities

Relative Humidity	Min. = 45 %, Max. = 55 %		
Atmospheric Pressure	101kPa		
Temperature	Normal	Minimum	Maximum
	25 °C	0 °C	40 °C
Working Voltage of EUT	Normal	Minimum	Maximum
	5V	4.75V	5.25V

5.2 Test Equipments Utilized

5.2.1 Conducted Test System

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Test Software	TS1120	10671	V3.2.22	N/A	Tonscend	N/A	N/A
2	Automatic control unit	JS0806 -2	221806062 1	N/A	N/A	Tonscend	2024-03-25	1 Year
3	Wireless communication comprehensive tester	CMW270	100919	V3.5.137	N/A	R&S	2024-07-25	1 Year
4	Spectrum Analyzer	FSQ40	200063	V4.75	N/A	R&S	2024-09-29	1 Year
5	Vector Signal Generator	SMU200A	104684	V03.20.2 86.21	N/A	R&S	2024-07-25	1 Year
6	Vector Signal Generator	SMBV100A	257904	V4.15.12 5.49	N/A	R&S	2024-12-12	1 Year
7	Programmable Power Supply	Keithley 2303	4039070	N/A	N/A	Keithley	2024-06-07	1 Year
8	Temperature box	B-TF-107C	BTF107C-201804107	N/A	N/A	Boyi	2024-06-07	1 Year
9	Network test unit AP	GT-AXE11000	N2IG0X401 637KWF	V3.0.0.4. 386_459 40	N/A	ASUS	N/A	N/A

5.2.2 Radiated Emission Test System

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123126	V5.2.1	B12	R&S	2024-10-09	1 Year
2	Universal Radio Communication Tester	CMW500	104178	V3.7.20	1206.0600.00	R&S	2024-10-09	1 Year
3	EMI Test Receiver	ESU40	100307	V5.1-24-3	01	R&S	2023-12-19	1 Year
							2024-12-13	
4	TRILOG Broadband Antenna	VULB9163	01345	N/A	N/A	Schwarzbeck	2024-03-29	1 Year
5	Double-ridged Waveguide Antenna	ETS-3117	00135890	N/A	N/A	ETS	2024-03-16	1 Year
6	EMI Test Software	EMC32 V10.35.02	N/A	V10.35.02	N/A	R&S	N/A	N/A
7	Horn Antenna	3160-09	LM6321	N/A	N/A	R&S	2024-07-15	1 Year
8	Horn Antenna	3160-10	LM5942	N/A	N/A	R&S	2024-07-15	1 Year
9	Loop Antenna	AL-130R	121083	N/A	N/A	COM-POWER	2024-08-31	1 Year
10	Preamplifier	SCU08F1	8320024	N/A	N/A	R&S	2024-10-09	1 Year
11	Preamplifier	SCU18	10155	N/A	N/A	R&S	2024-10-09	1 Year
12	Preamplifier	SCU26	10025	N/A	N/A	R&S	2024-10-09	1 Year
13	Preamplifier	SCU40	10020	N/A	N/A	R&S	2024-10-09	1 Year
14	2-Line V-Network	ENV216	101380	N/A	N/A	R&S	2023-12-19	1 Year
							2024-12-13	
15	EMI Test Software	EMC32 V10.35.02	N/A	N/A	N/A	R&S	N/A	N/A
16	Test Receiver	ESCI	101235	V5.1-24-3	0	R&S	2023-12-19	1 Year
							2024-12-13	
17	Antenna Tower	TPMDC-LF	N/A	N/A	N/A	Top Precision	N/A	N/A
18	Antenna Tower	TPMDC-HF	N/A	N/A	N/A	Top Precision	N/A	N/A

5.2.3 Test Environment

Shielding Room1 (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Ground system resistance	< 0.5 Ω
Temperature	Min. = 15 °C, Max. = 35 °C

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber1 (9.8 meters×6.7 meters×6.7 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB, 30MHz to 1GHz

5.3 Measurement Uncertainty

Measurement Uncertainty of Conduction test

Item(s)	Frequency range	Confidence Level	Uncertainty
DTS Bandwidth	2400–2483.5MHz	95%	±1.9%
Maximum Conducted Output Power	2400–2483.5MHz	95%	± 1.18 dB
Maximum Power Spectral Density Level	2400–2483.5MHz	95%	±0.98 dB
Band-edge Compliance	2400–2483.5MHz	95%	±1.21dB
Unwanted Emissions In Non-restricted Freq Bands	9kHz-7GHz	95%	9kHz-7GHz:±1.21dB

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	7GHz-40GHz	95%	7GHz-40GHz: $\pm 3.31\text{dB}$
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Measurement Uncertainty of Radiation test

Measurement Items	Uncertainty(dB)
Radiated Emission 30MHz-1000MHz	± 5.10
Radiated Emission 1000MHz-18000MHz	± 5.66
Radiated Emission 18000MHz-40000MHz	± 5.22
AC Powerline Conducted Emission	± 4.38

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

6. Test Results

6.1 Duty cycle

6.1.1 Measurement Limit

Standard	Limit (dBm)
FCC 47 Part 15.247(b)	N/A
RSS-247 5.4	N/A

6.1.2 Test Procedure

This measurement is according to ANSI C63.10 clause 11.6

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.
 - b) The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
- 1) Set the center frequency of the instrument to the center frequency of the transmission.
 - 2) Set $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.
 - 3) Set $VBW \geq RBW$. Set detector = peak or average.
 - 4) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \leq 16.7 \mu s$.)

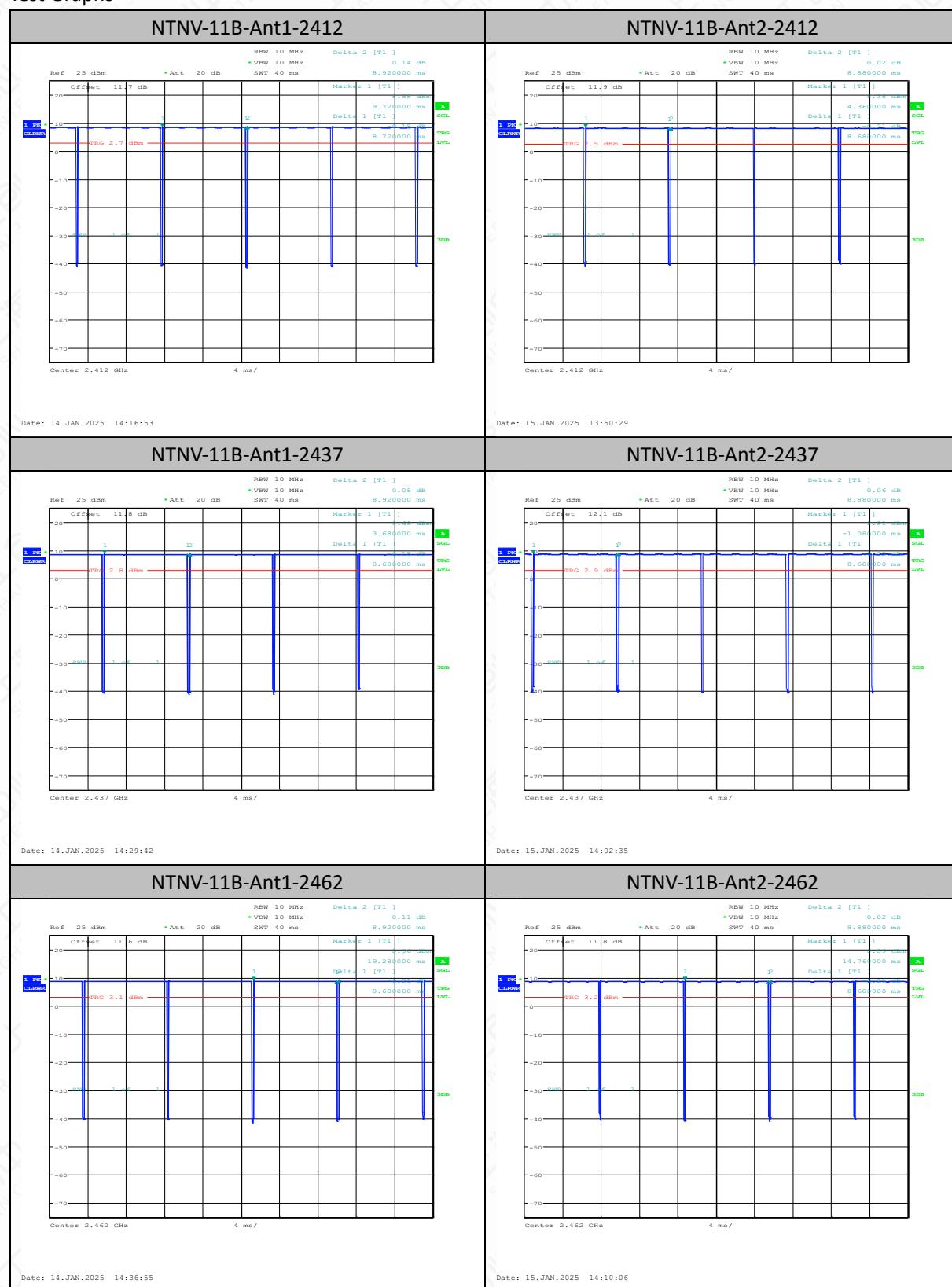
6.1.3 Measurement Results

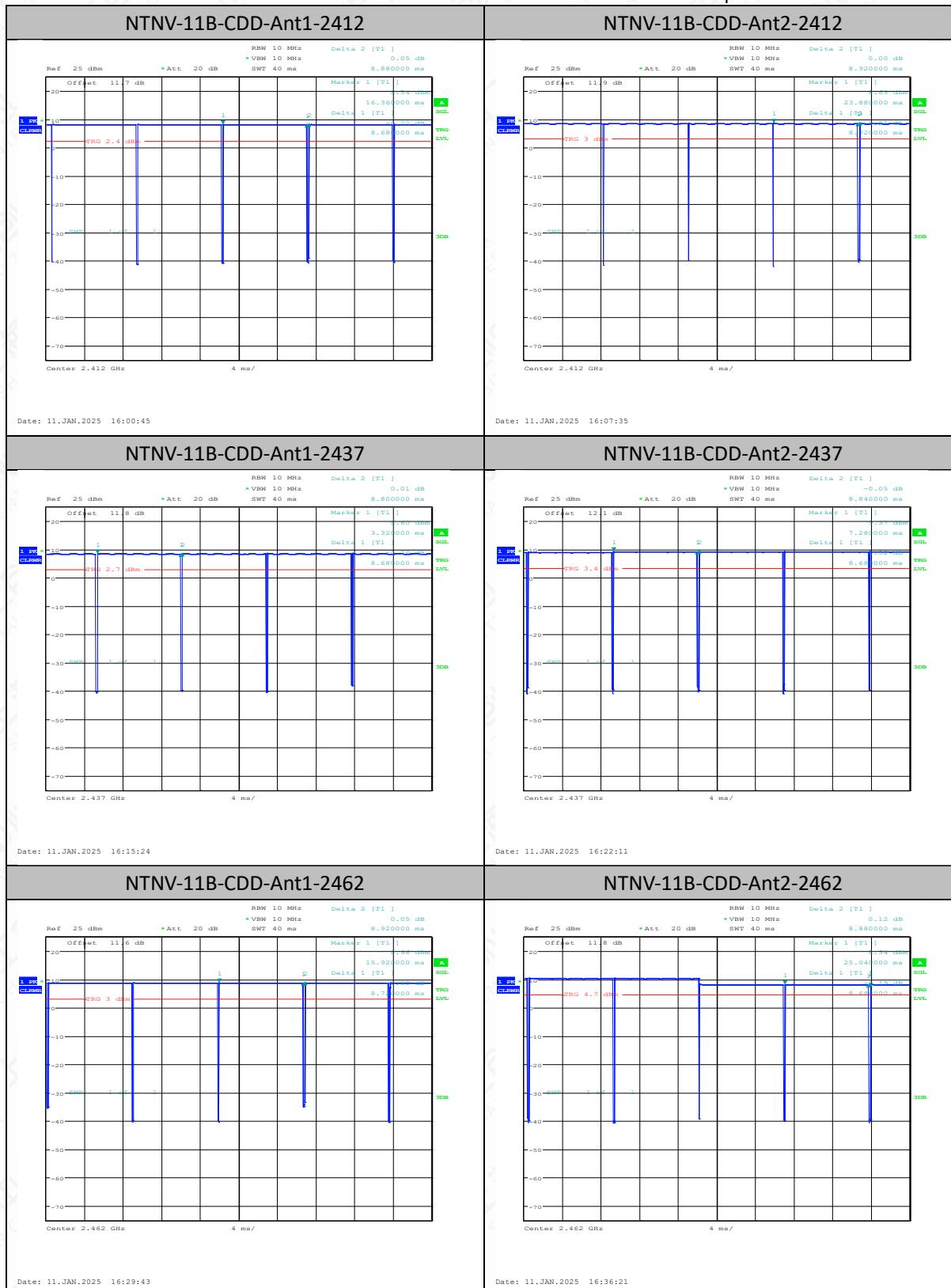
TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Factor
11B	Ant1	2412	8.72	8.92	97.76	0.10
11B	Ant2	2412	8.68	8.88	97.75	0.10
11B	Ant1	2437	8.68	8.92	97.31	0.12
11B	Ant2	2437	8.68	8.88	97.75	0.10
11B	Ant1	2462	8.68	8.92	97.31	0.12
11B	Ant2	2462	8.68	8.88	97.75	0.10
11B-CDD	Ant1	2412	8.68	8.88	97.75	0.10
11B-CDD	Ant2	2412	8.72	8.92	97.76	0.10
11B-CDD	Ant1	2437	8.68	8.80	98.64	0.06
11B-CDD	Ant2	2437	8.68	8.84	98.19	0.08
11B-CDD	Ant1	2462	8.72	8.92	97.76	0.10
11B-CDD	Ant2	2462	8.68	8.88	97.75	0.10
11G	Ant1	2412	1.44	1.68	85.71	0.67
11G	Ant2	2412	1.44	1.68	85.71	0.67

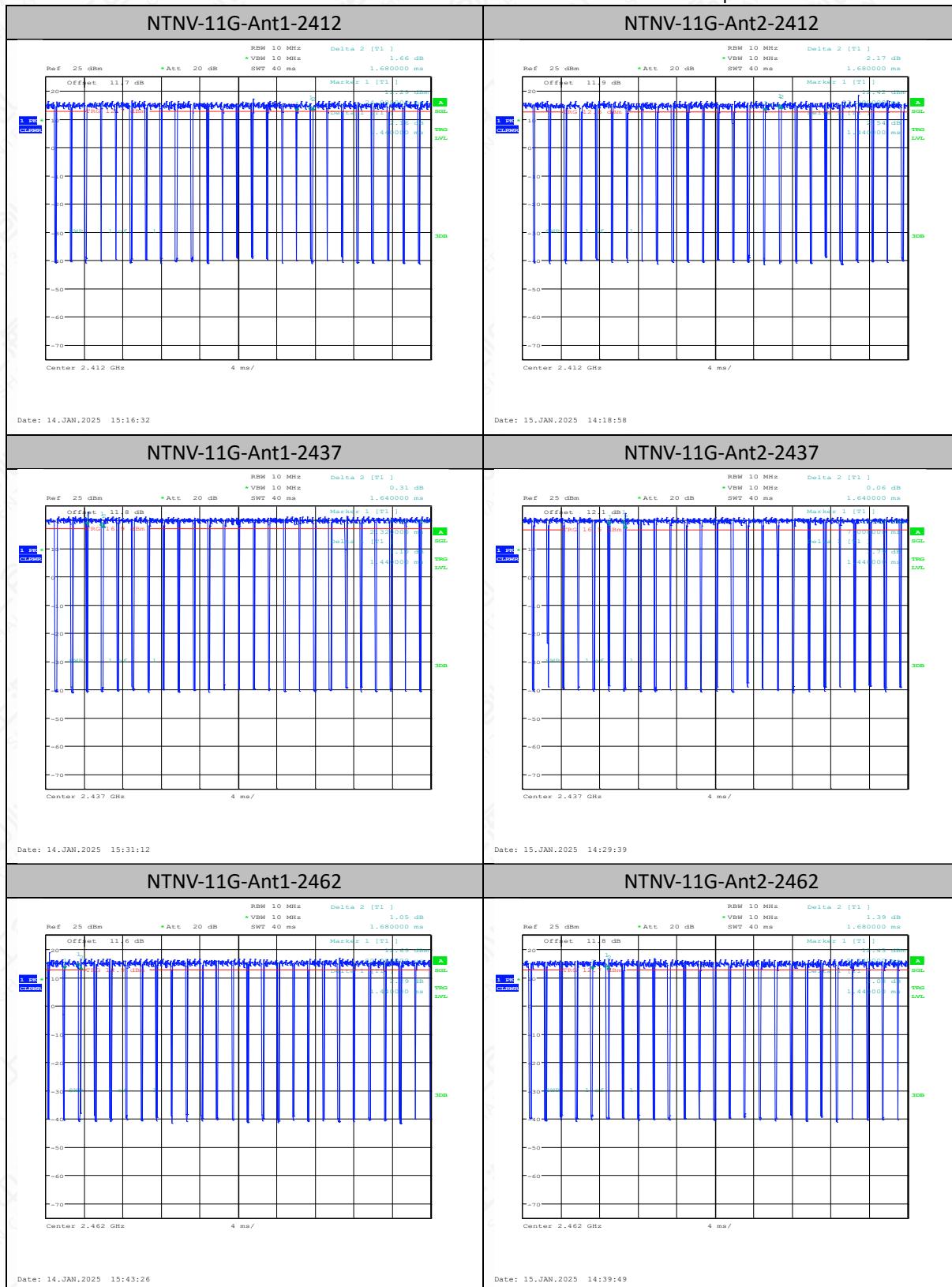
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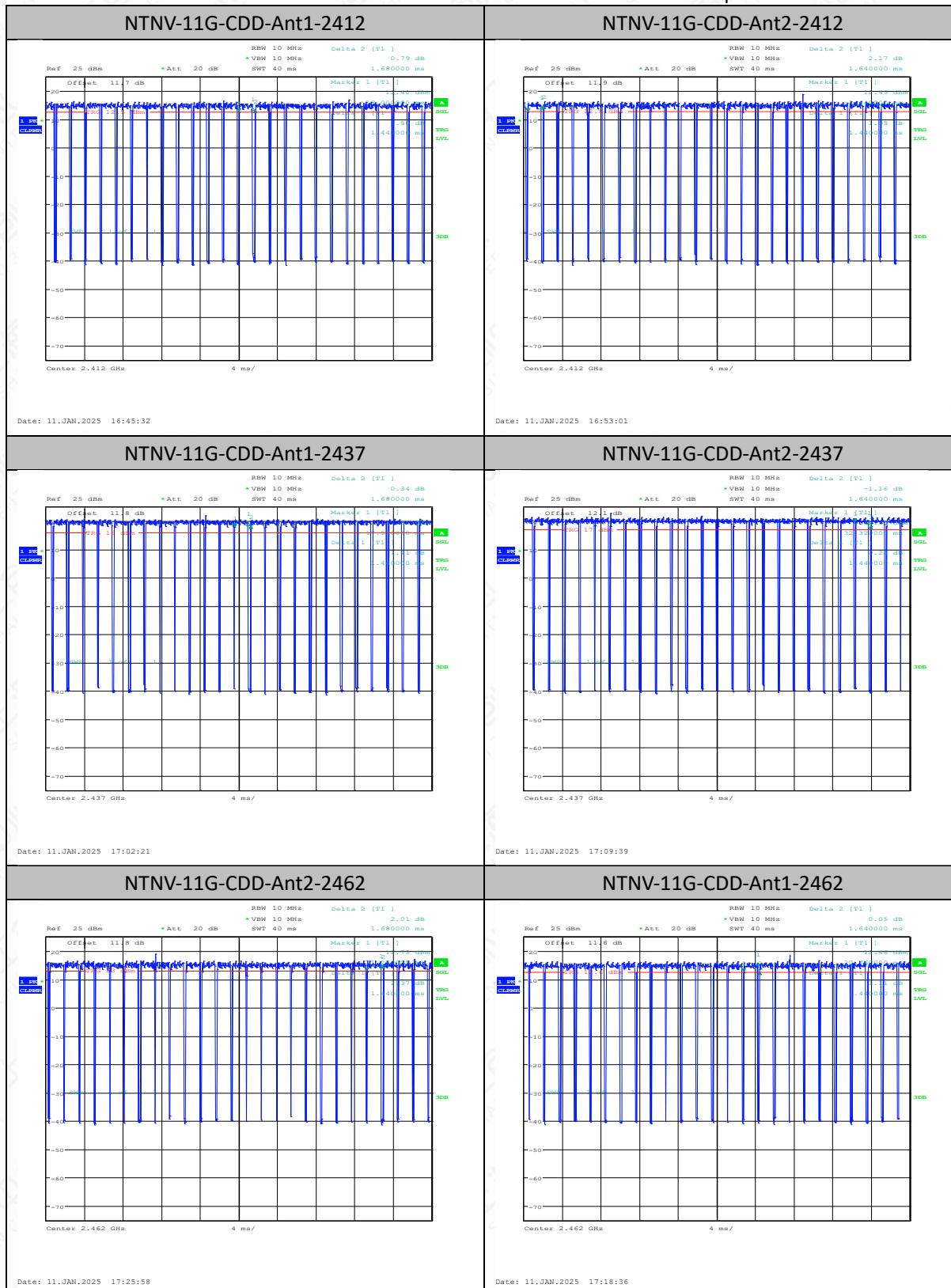
11G	Ant1	2437	1.44	1.64	87.80	0.57
11G	Ant2	2437	1.44	1.64	87.80	0.57
11G	Ant1	2462	1.44	1.68	85.71	0.67
11G	Ant2	2462	1.44	1.68	85.71	0.67
11G-CDD	Ant1	2412	1.44	1.68	85.71	0.67
11G-CDD	Ant2	2412	1.44	1.64	87.80	0.57
11G-CDD	Ant1	2437	1.44	1.68	85.71	0.67
11G-CDD	Ant2	2437	1.44	1.64	87.80	0.57
11G-CDD	Ant2	2462	1.44	1.68	85.71	0.67
11G-CDD	Ant1	2462	1.44	1.64	87.80	0.57
11N20SISO	Ant1	2412	1.32	1.56	84.62	0.73
11N20SISO	Ant2	2412	1.32	1.56	84.62	0.73
11N20SISO	Ant1	2437	1.36	1.60	85.00	0.71
11N20SISO	Ant2	2437	1.32	1.56	84.62	0.73
11N20SISO	Ant1	2462	1.32	1.52	86.84	0.61
11N20SISO	Ant2	2462	1.32	1.56	84.62	0.73
11N20MIMO	Ant1	2412	1.32	1.56	84.62	0.73
11N20MIMO	Ant2	2412	1.36	1.56	87.18	0.60
11N20MIMO	Ant1	2437	1.32	1.56	84.62	0.73
11N20MIMO	Ant2	2437	1.32	1.56	84.62	0.73
11N20MIMO	Ant1	2462	1.32	1.56	84.62	0.73
11N20MIMO	Ant2	2462	1.32	1.56	84.62	0.73
11N40SISO	Ant1	2422	0.64	0.88	72.73	1.38
11N40SISO	Ant2	2422	0.64	0.88	72.73	1.38
11N40SISO	Ant2	2437	0.64	0.88	72.73	1.38
11N40SISO	Ant1	2437	0.64	0.88	72.73	1.38
11N40SISO	Ant2	2452	0.64	0.84	76.19	1.18
11N40SISO	Ant1	2452	0.64	0.88	72.73	1.38
11N40MIMO	Ant1	2422	0.68	0.92	73.91	1.31
11N40MIMO	Ant2	2422	0.68	0.88	77.27	1.12
11N40MIMO	Ant1	2437	0.64	0.88	72.73	1.38
11N40MIMO	Ant2	2437	0.64	0.88	72.73	1.38
11N40MIMO	Ant2	2452	0.64	0.88	72.73	1.38
11N40MIMO	Ant1	2452	0.64	0.84	76.19	1.18

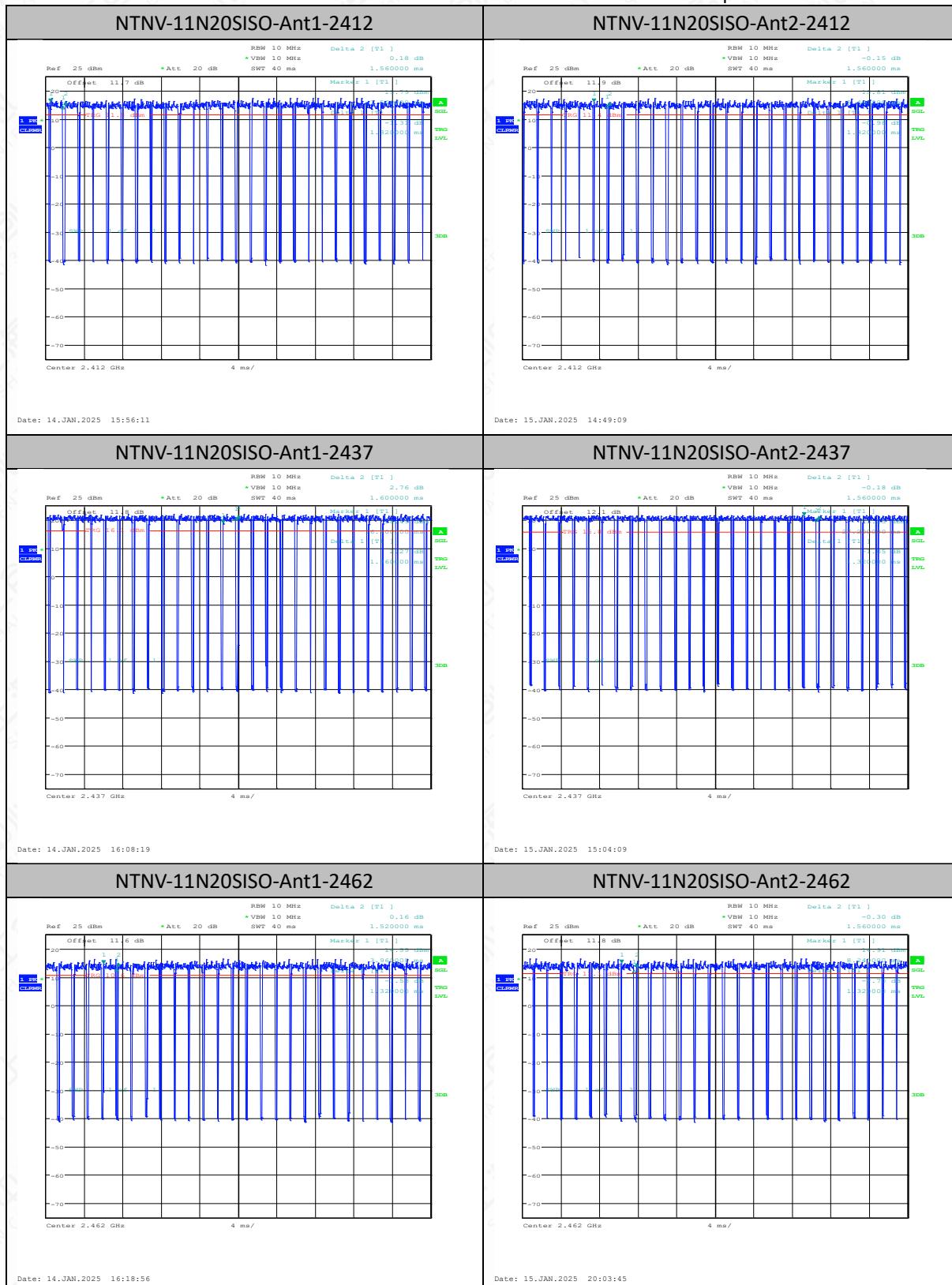
Test Graphs

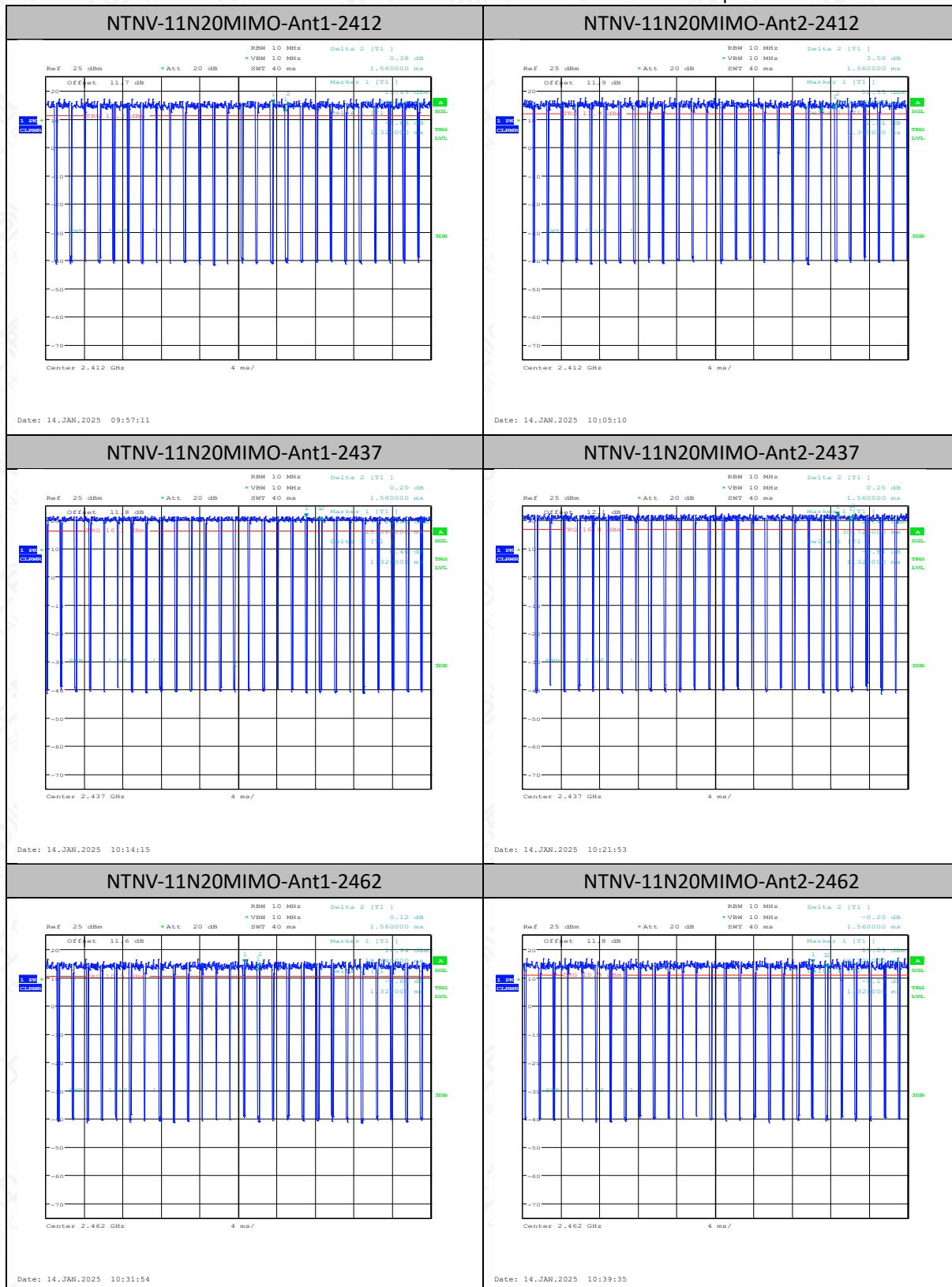


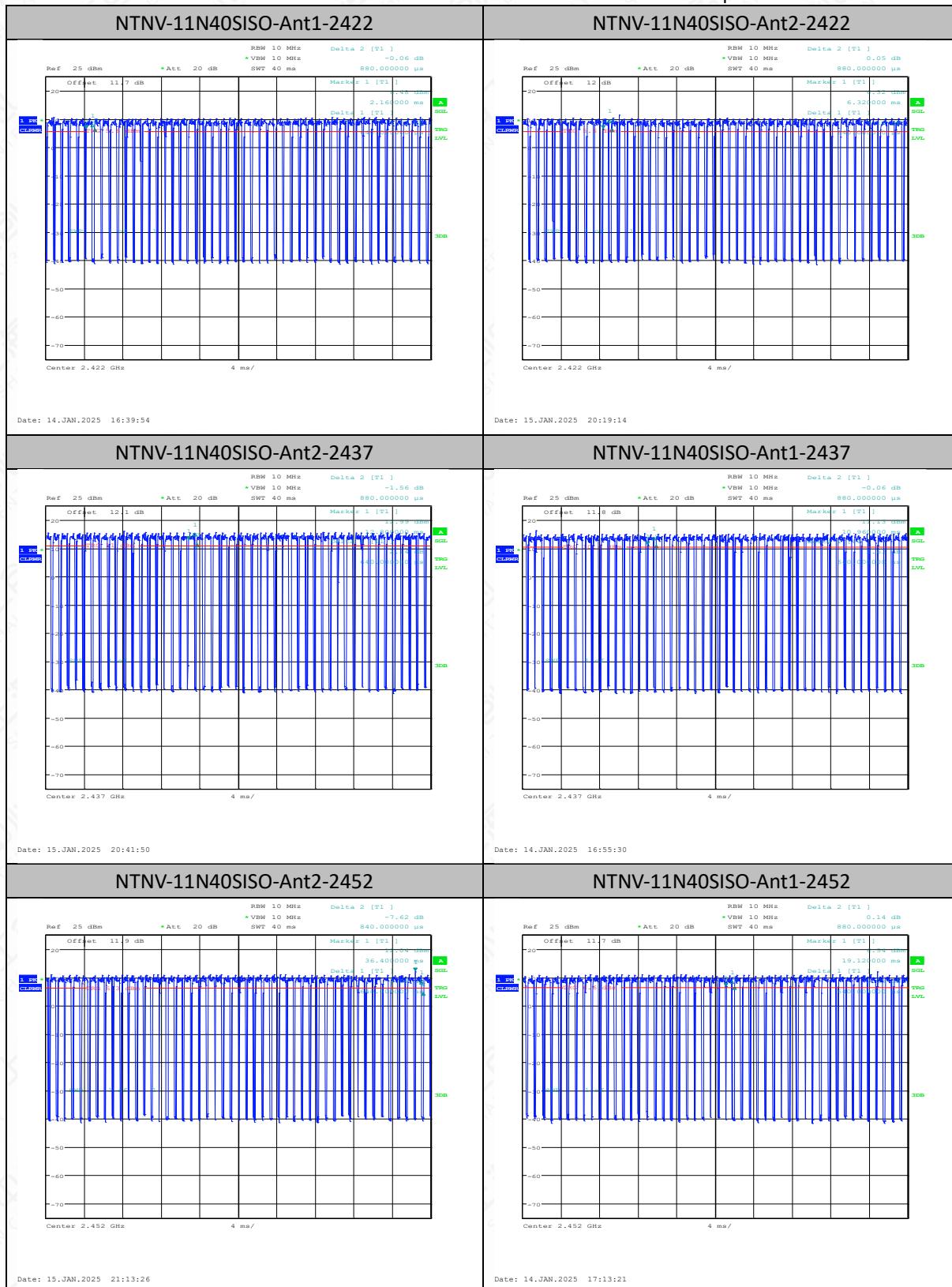


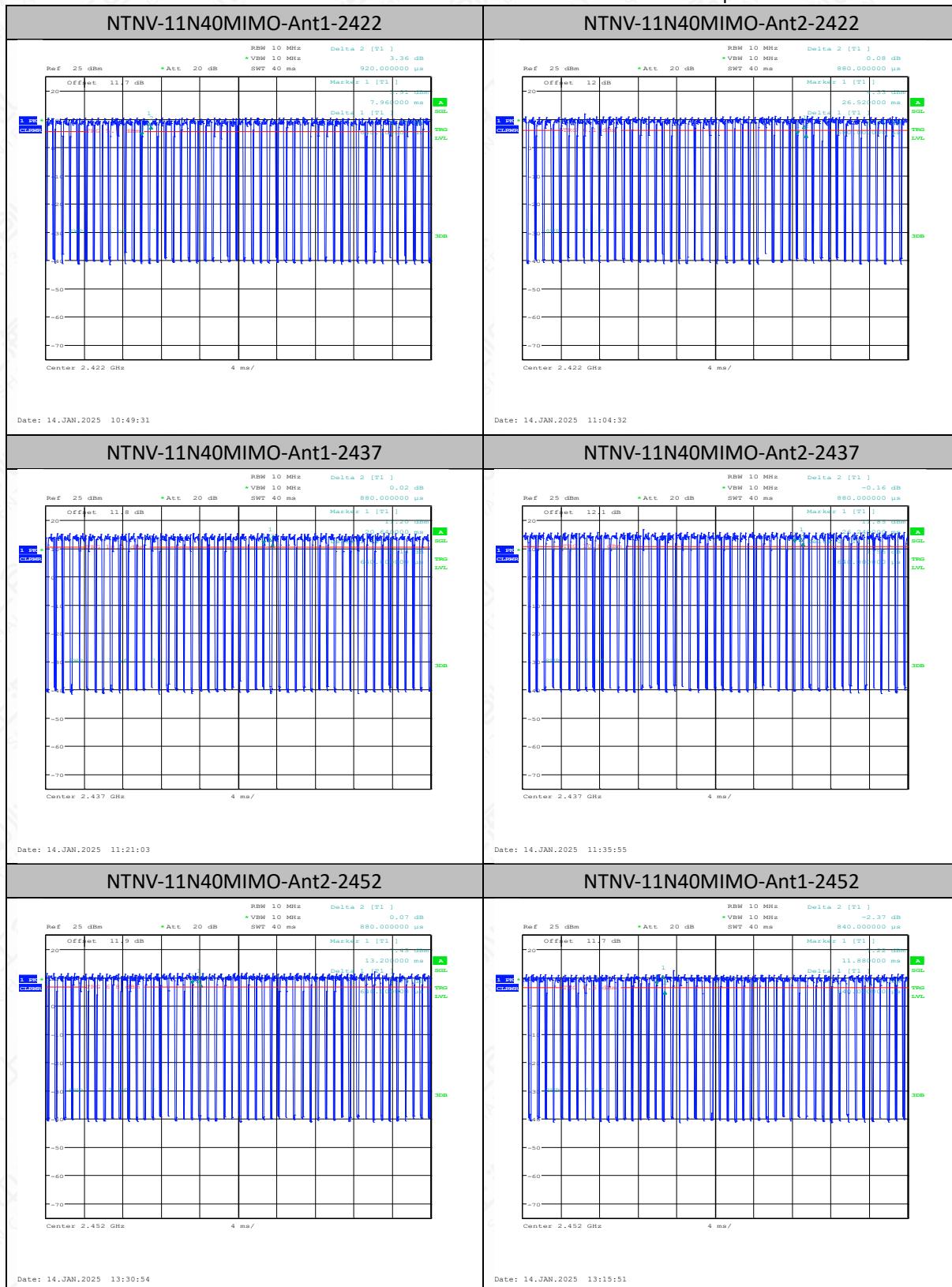












6.2 Output Power-Conducted

6.2.1 Measurement Limit

Standard	Conducted Limit(dBm)	EIRP Limit(dBm)
FCC 47 Part 15.247(b)(3)	<30	N/A
RSS-247 5.4(d)	<30	<36

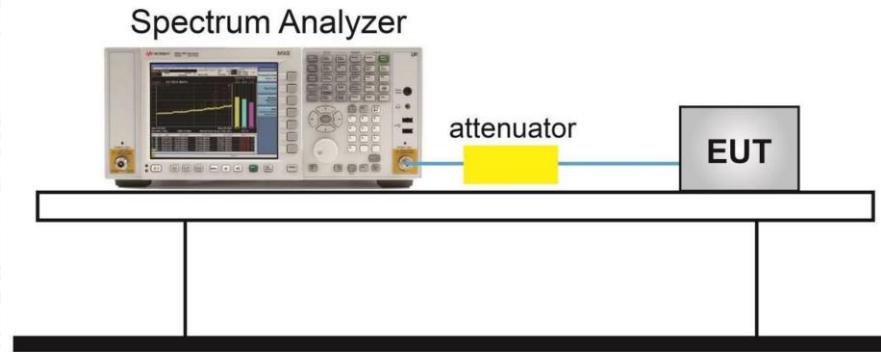
Note: Except as shown in paragraphs (b)(3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2.2 Test Procedure

The measurement is according to ANSI C63.10 clause 11.9.

1. Measure the duty cycle D of the transmitter output signal as described in 11.6.
2. Set span to at least 1.5 times the OBW.
3. Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.
4. Set VBW $\geq [3 \times RBW]$.
5. Number of points in sweep $\geq [2 \times \text{span} / RBW]$. (This gives bin-to-bin spacing $\leq RBW / 2$, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto.
7. Detector = RMS (i.e., power averaging), if available. Otherwise, use the sample detector mode.
8. Do not use sweep triggering. Allow the sweep to “free run.”
9. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
10. Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
11. Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add $[10 \log (1/0.25)] = 6 \text{ dB}$ if the duty cycle is 25%.

6.2.3 Test setup



6.2.4 Measurement Results

TestMode	Antenna	Frequency[MHz]	Set Power	Conducted Power[dBm]	Conducted Limit[dBm]	Gain	EIRP [dBm]	EIRP Limit[dBm]	Verdict
11B	Ant2	2412	13	5.64	≤30.00	2.3	7.94	≤36.00	PASS
11B	Ant1	2412	13	5.85	≤30.00	1.57	7.42	≤36.00	PASS
11B	Ant2	2437	13	6.17	≤30.00	2.3	8.47	≤36.00	PASS
11B	Ant1	2437	13	5.99	≤30.00	1.57	7.56	≤36.00	PASS
11B	Ant2	2462	14	6.26	≤30.00	2.3	8.56	≤36.00	PASS
11B	Ant1	2462	14	6.31	≤30.00	1.57	7.88	≤36.00	PASS
11B-CDD	Ant1	2412	13	5.58	≤30.00	1.57	7.15	≤36.00	PASS
11B-CDD	Ant2	2412	13	6.04	≤30.00	2.3	8.34	≤36.00	PASS
11B-CDD	total	2412	13	8.83	≤30.00	4.95	13.78	≤36.00	PASS
11B-CDD	Ant1	2437	13	6	≤30.00	1.57	7.57	≤36.00	PASS
11B-CDD	Ant2	2437	13	6.53	≤30.00	2.3	8.83	≤36.00	PASS
11B-CDD	total	2437	13	9.28	≤30.00	4.95	14.23	≤36.00	PASS
11B-CDD	Ant1	2462	14	6.29	≤30.00	1.57	7.86	≤36.00	PASS
11B-CDD	Ant2	2462	14	8.82	≤30.00	2.3	11.12	≤36.00	PASS
11B-CDD	total	2462	14	10.75	≤30.00	4.95	15.7	≤36.00	PASS
11G	Ant2	2412	22	10.33	≤30.00	2.3	12.63	≤36.00	PASS
11G	Ant1	2412	22	10.23	≤30.00	1.57	11.8	≤36.00	PASS
11G	Ant1	2437	32	15.59	≤30.00	1.57	17.16	≤36.00	PASS
11G	Ant2	2437	32	15.56	≤30.00	2.3	17.86	≤36.00	PASS
11G	Ant2	2462	22	10.42	≤30.00	2.3	12.72	≤36.00	PASS
11G	Ant1	2462	22	10.65	≤30.00	1.57	12.22	≤36.00	PASS
11G-CDD	Ant1	2412	22	10.22	≤30.00	1.57	11.79	≤36.00	PASS
11G-CDD	Ant2	2412	22	10.36	≤30.00	2.3	12.66	≤36.00	PASS

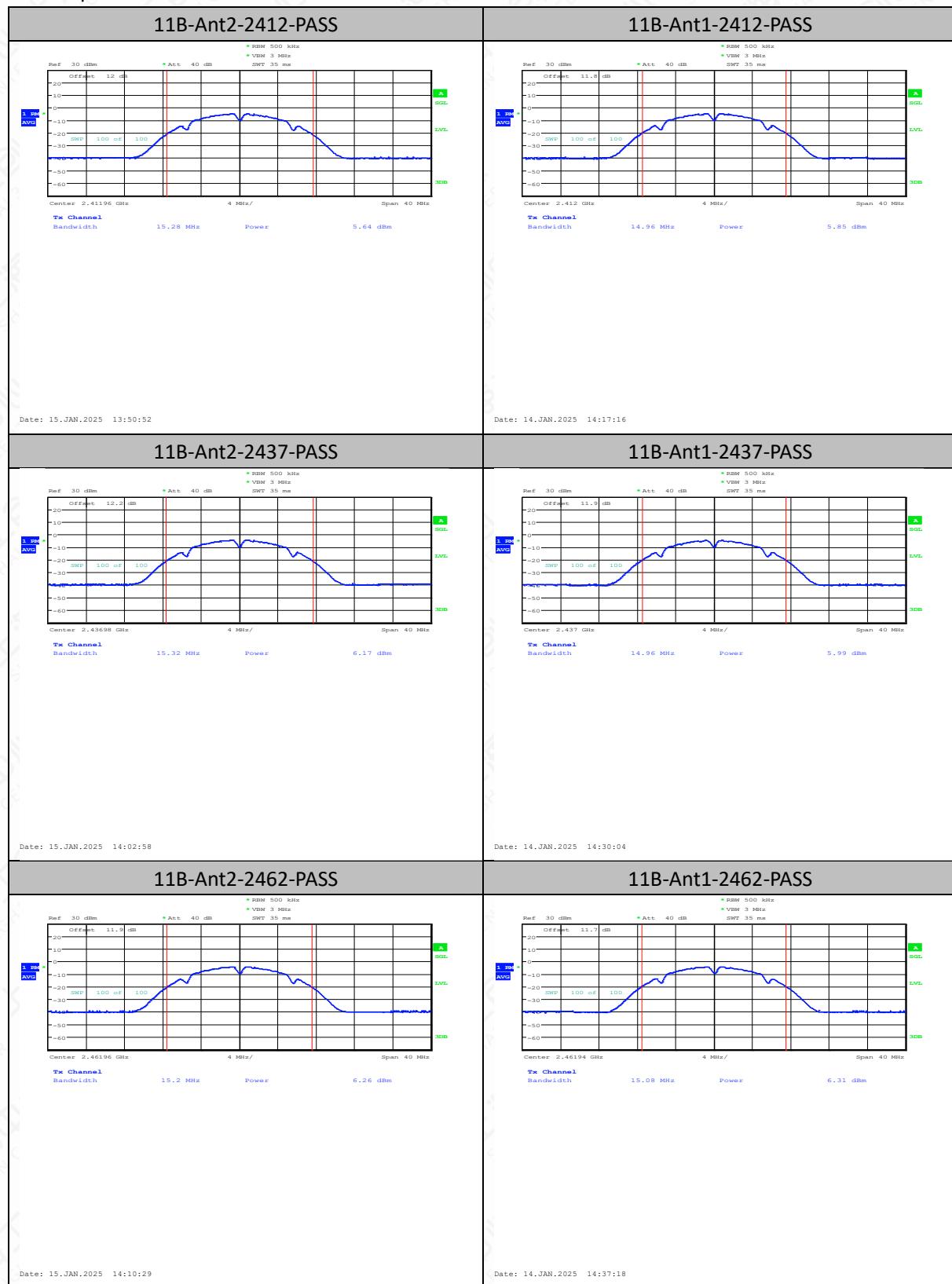
Report No: 24T04I300231-050

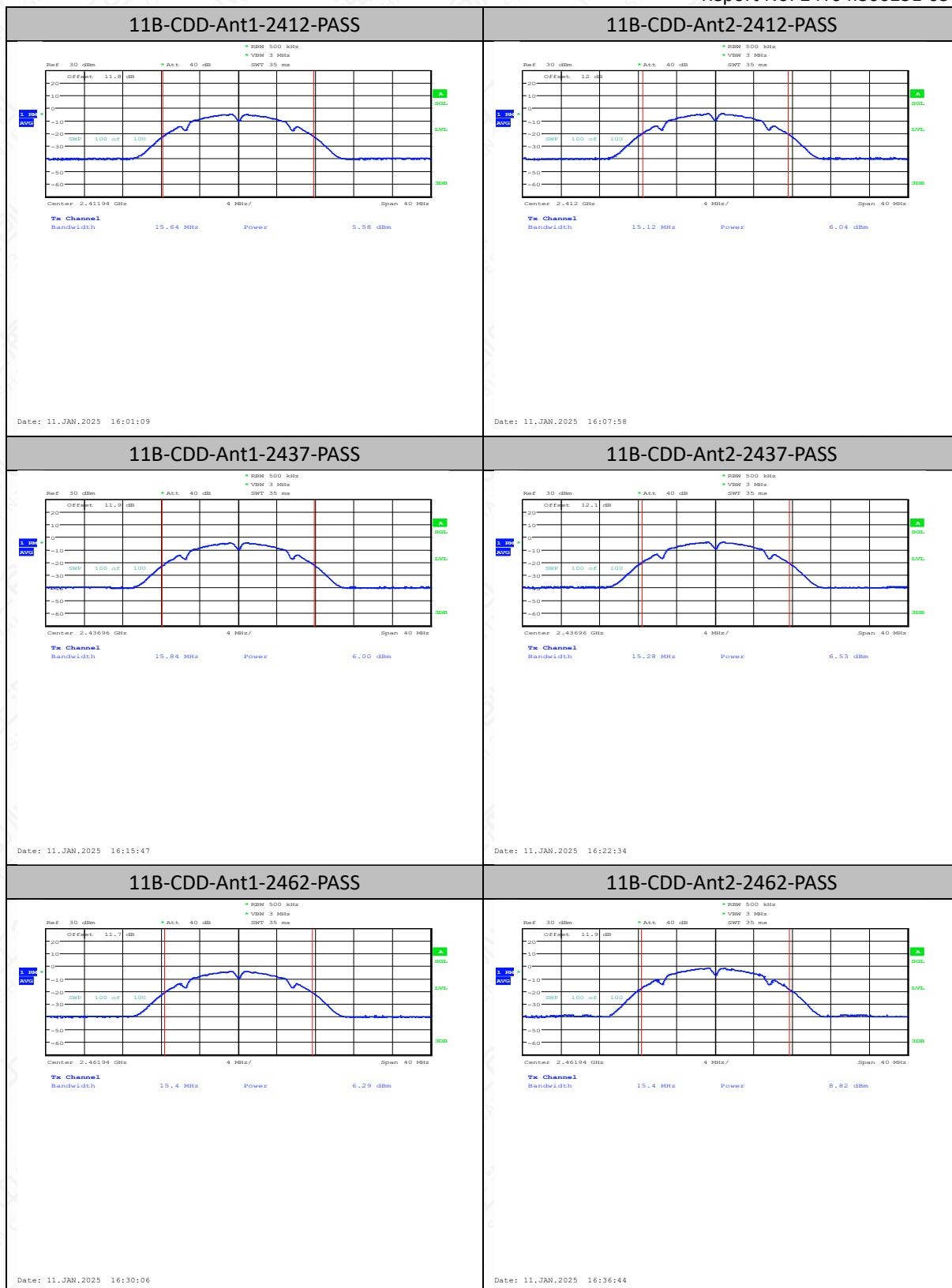
11G-CDD	total	2412	22	13.3	≤ 30.00	4.95	18.25	≤ 36.00	PASS
11G-CDD	Ant1	2437	32	15.59	≤ 30.00	1.57	17.16	≤ 36.00	PASS
11G-CDD	Ant2	2437	32	15.82	≤ 30.00	2.3	18.12	≤ 36.00	PASS
11G-CDD	total	2437	32	18.72	≤ 30.00	4.95	23.67	≤ 36.00	PASS
11G-CDD	Ant2	2462	22	10.63	≤ 30.00	2.3	12.93	≤ 36.00	PASS
11G-CDD	total	2462	22	13.5	≤ 30.00	4.95	18.45	≤ 36.00	PASS
11G-CDD	Ant1	2462	22	10.34	≤ 30.00	1.57	11.91	≤ 36.00	PASS
11N20SISO	Ant2	2412	22	10.13	≤ 30.00	2.3	12.43	≤ 36.00	PASS
11N20SISO	Ant1	2412	22	10.01	≤ 30.00	1.57	11.58	≤ 36.00	PASS
11N20SISO	Ant1	2437	34	16.13	≤ 30.00	1.57	17.7	≤ 36.00	PASS
11N20SISO	Ant2	2437	34	16.56	≤ 30.00	2.3	18.86	≤ 36.00	PASS
11N20SISO	Ant1	2462	20	8.85	≤ 30.00	1.57	10.42	≤ 36.00	PASS
11N20SISO	Ant2	2462	20	9.21	≤ 30.00	2.3	11.51	≤ 36.00	PASS
11N20MIMO	Ant1	2412	22	10.26	≤ 30.00	1.57	11.83	≤ 36.00	PASS
11N20MIMO	Ant2	2412	22	10.1	≤ 30.00	2.3	12.4	≤ 36.00	PASS
11N20MIMO	total	2412	22	13.19	≤ 30.00	4.95	18.14	≤ 36.00	PASS
11N20MIMO	Ant1	2437	34	16.59	≤ 30.00	1.57	18.16	≤ 36.00	PASS
11N20MIMO	Ant2	2437	34	16.62	≤ 30.00	2.3	18.92	≤ 36.00	PASS
11N20MIMO	total	2437	34	19.62	≤ 30.00	4.95	24.57	≤ 36.00	PASS
11N20MIMO	Ant1	2462	20	9.32	≤ 30.00	1.57	10.89	≤ 36.00	PASS
11N20MIMO	Ant2	2462	20	9.52	≤ 30.00	2.3	11.82	≤ 36.00	PASS
11N20MIMO	total	2462	20	12.43	≤ 30.00	4.95	17.38	≤ 36.00	PASS
11N40SISO	Ant1	2422	18	7.17	≤ 30.00	1.57	8.74	≤ 36.00	PASS
11N40SISO	Ant2	2422	18	7.24	≤ 30.00	2.3	9.54	≤ 36.00	PASS
11N40SISO	Ant1	2437	27	11.99	≤ 30.00	1.57	13.56	≤ 36.00	PASS
11N40SISO	Ant2	2437	27	12.55	≤ 30.00	2.3	14.85	≤ 36.00	PASS
11N40SISO	Ant1	2452	19	7.76	≤ 30.00	1.57	9.33	≤ 36.00	PASS
11N40SISO	Ant2	2452	19	7.64	≤ 30.00	2.3	9.94	≤ 36.00	PASS
11N40MIMO	Ant1	2422	18	7.18	≤ 30.00	1.57	8.75	≤ 36.00	PASS
11N40MIMO	Ant2	2422	18	7.33	≤ 30.00	2.3	9.63	≤ 36.00	PASS
11N40MIMO	total	2422	18	10.27	≤ 30.00	4.95	15.22	≤ 36.00	PASS
11N40MIMO	Ant1	2437	27	12.4	≤ 30.00	1.57	13.97	≤ 36.00	PASS
11N40MIMO	Ant2	2437	27	12.54	≤ 30.00	2.3	14.84	≤ 36.00	PASS
11N40MIMO	total	2437	27	15.48	≤ 30.00	4.95	20.43	≤ 36.00	PASS
11N40MIMO	Ant1	2452	19	7.74	≤ 30.00	1.57	9.31	≤ 36.00	PASS
11N40MIMO	Ant2	2452	19	8.33	≤ 30.00	2.3	10.63	≤ 36.00	PASS
11N40MIMO	total	2452	19	11.06	≤ 30.00	4.95	16.01	≤ 36.00	PASS

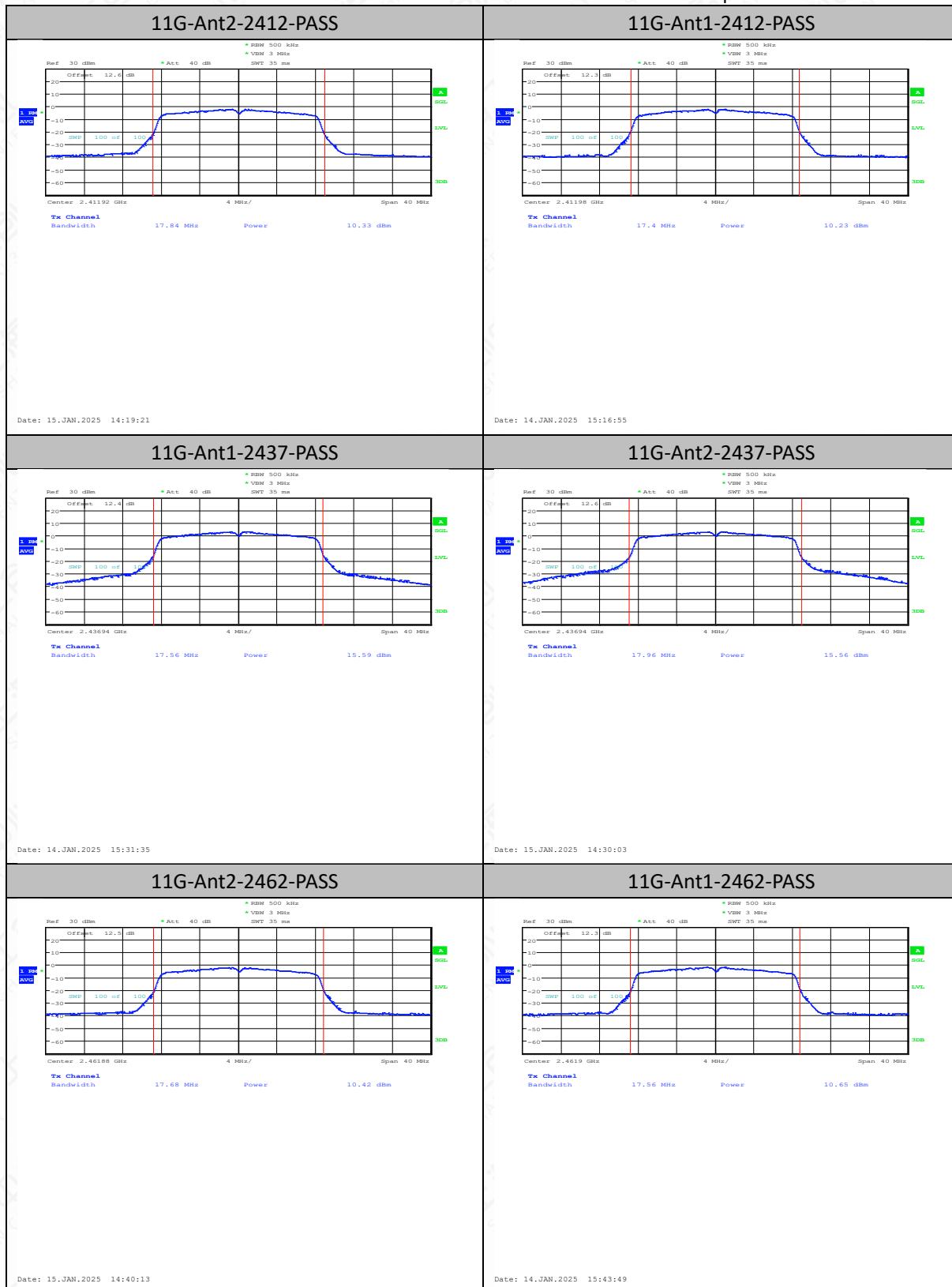
Note:

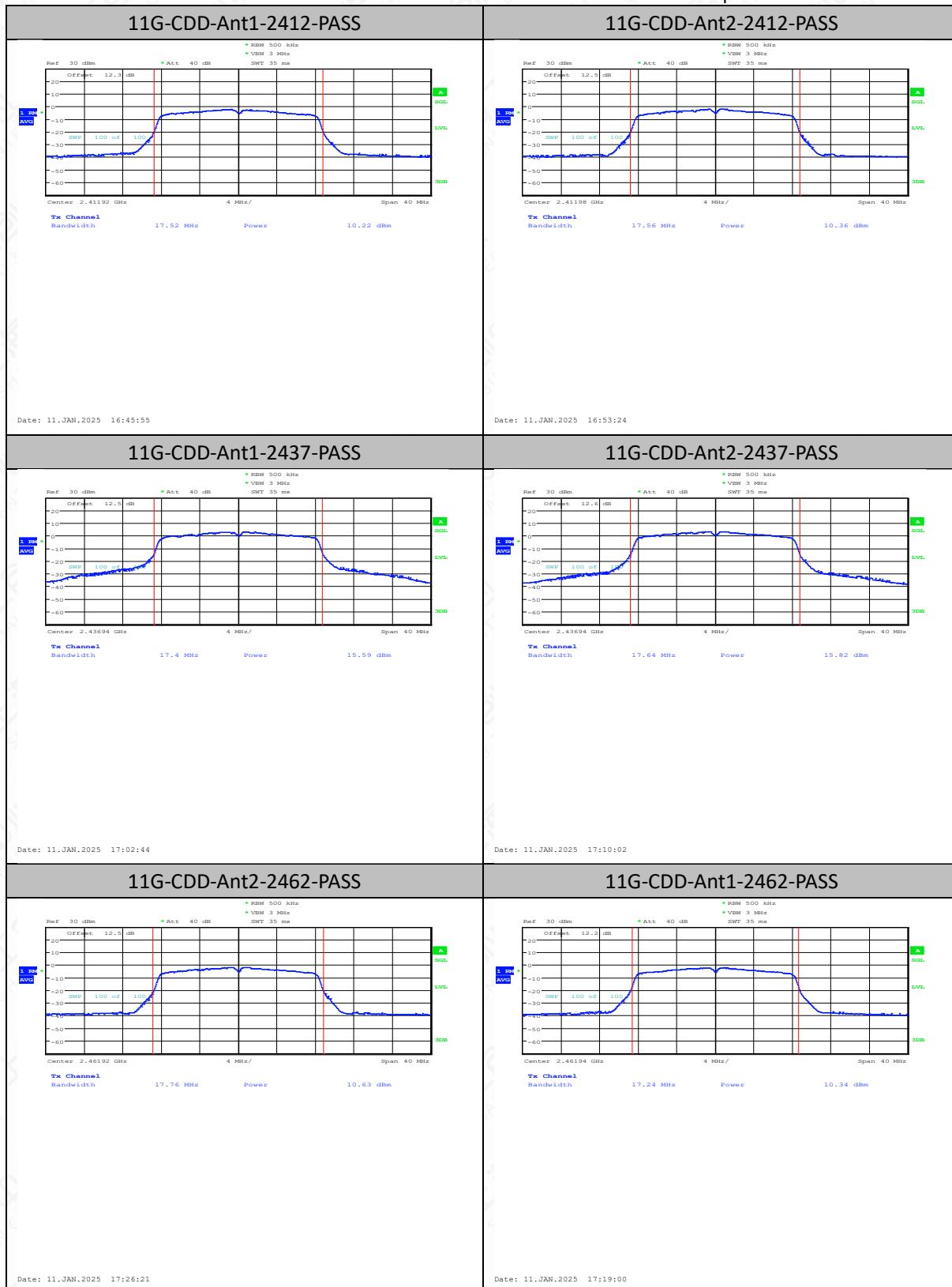
- 1.The Duty Cycle Factor is compensated in the graph.
2. In the graph, the Center frequency = (Low frequency of 99% OBW + High frequency of 99% OBW) / 2.

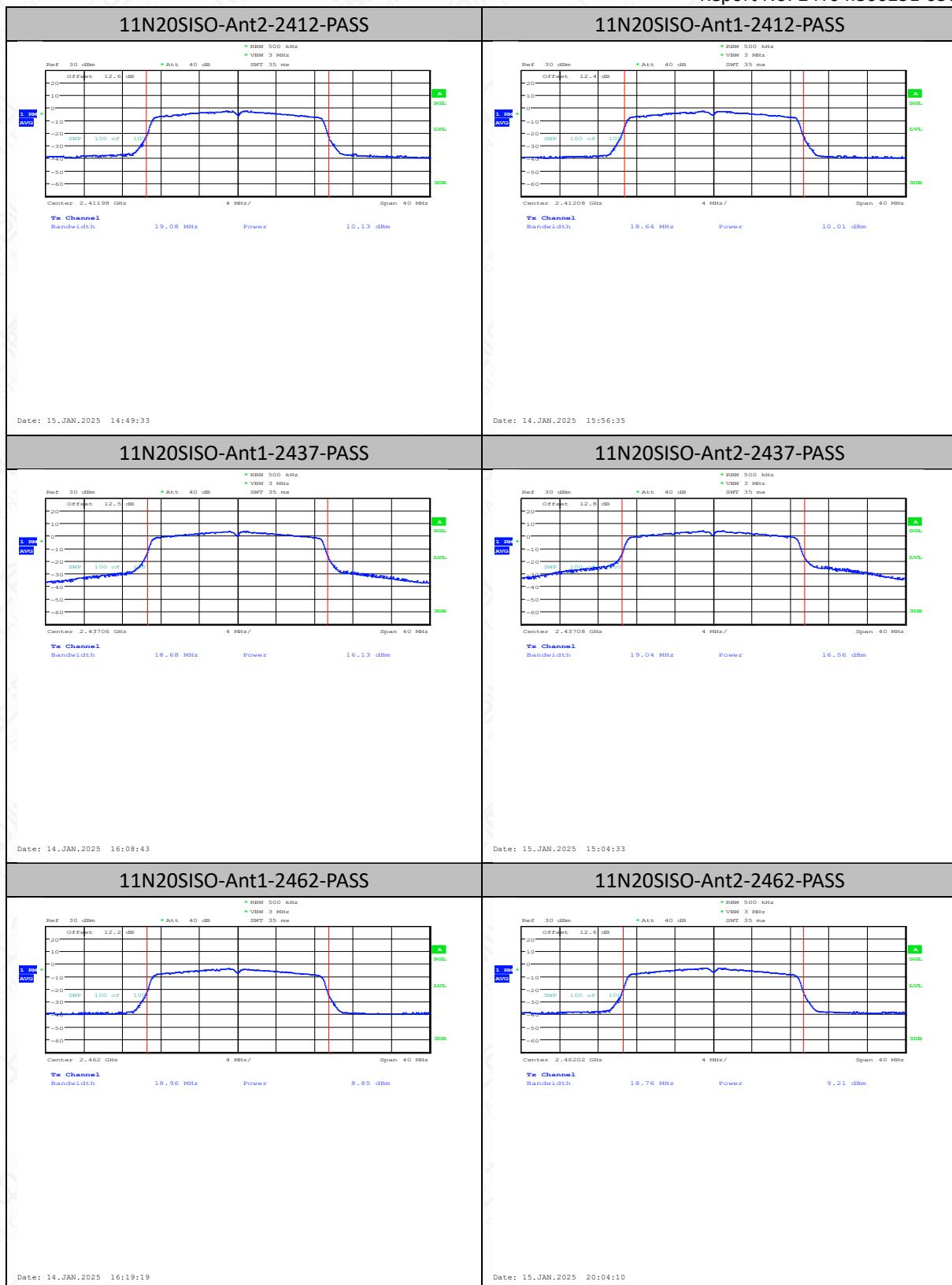
Test Graphs

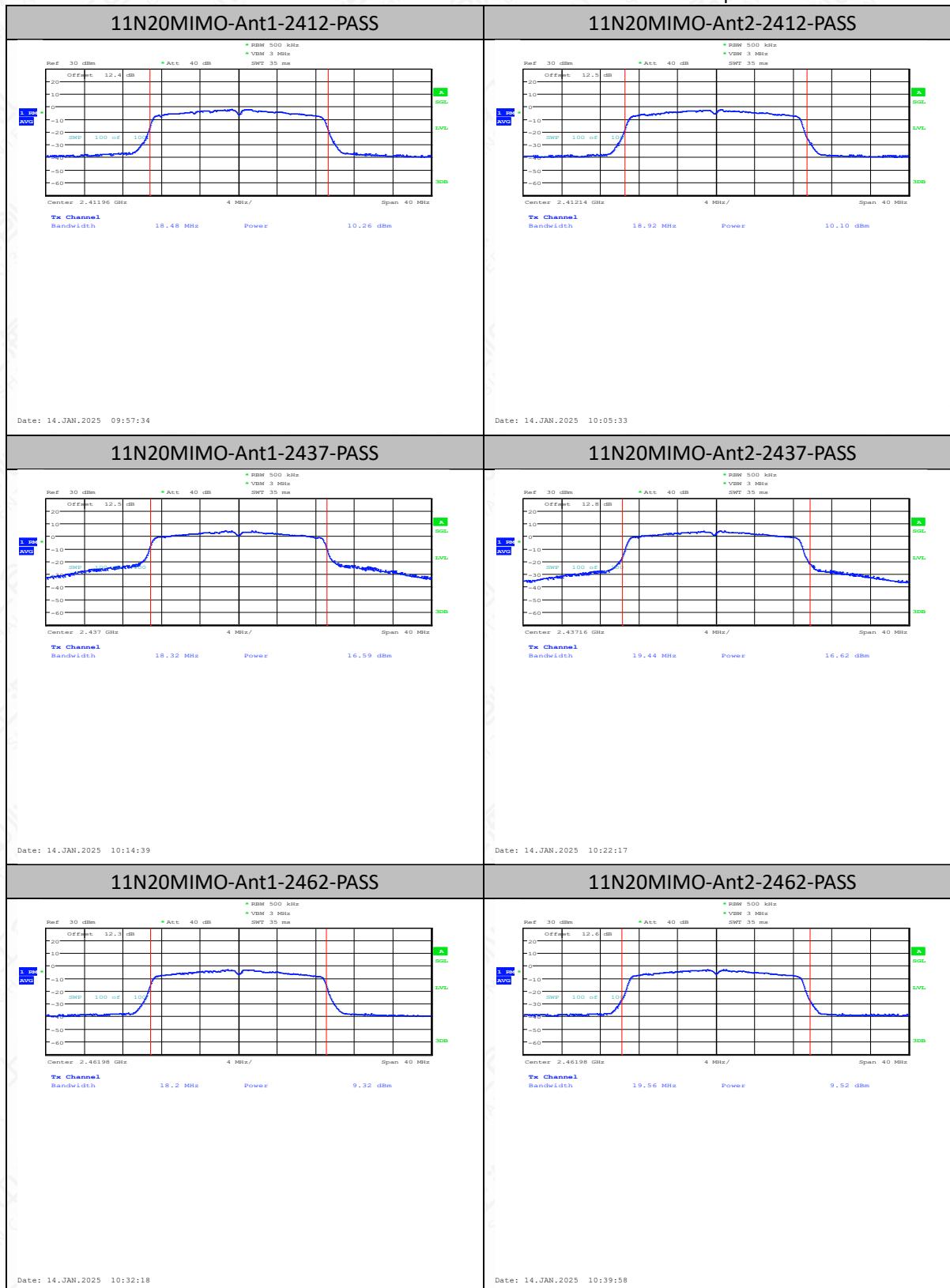


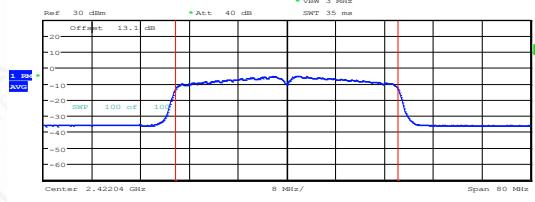
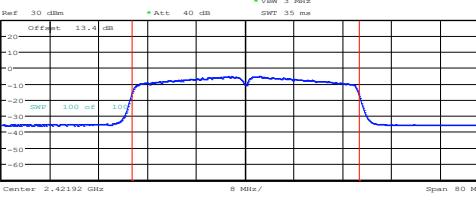
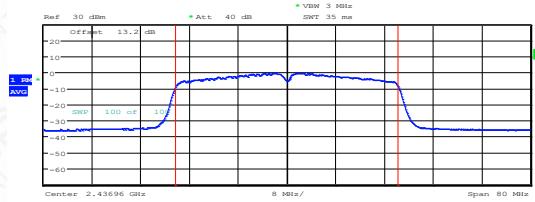
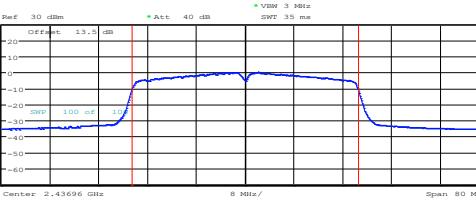
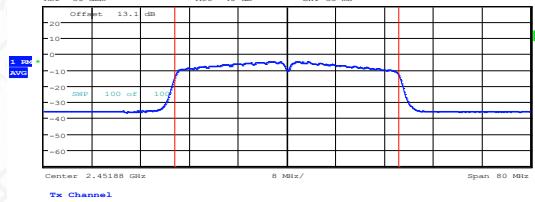
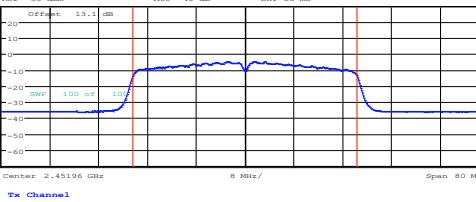


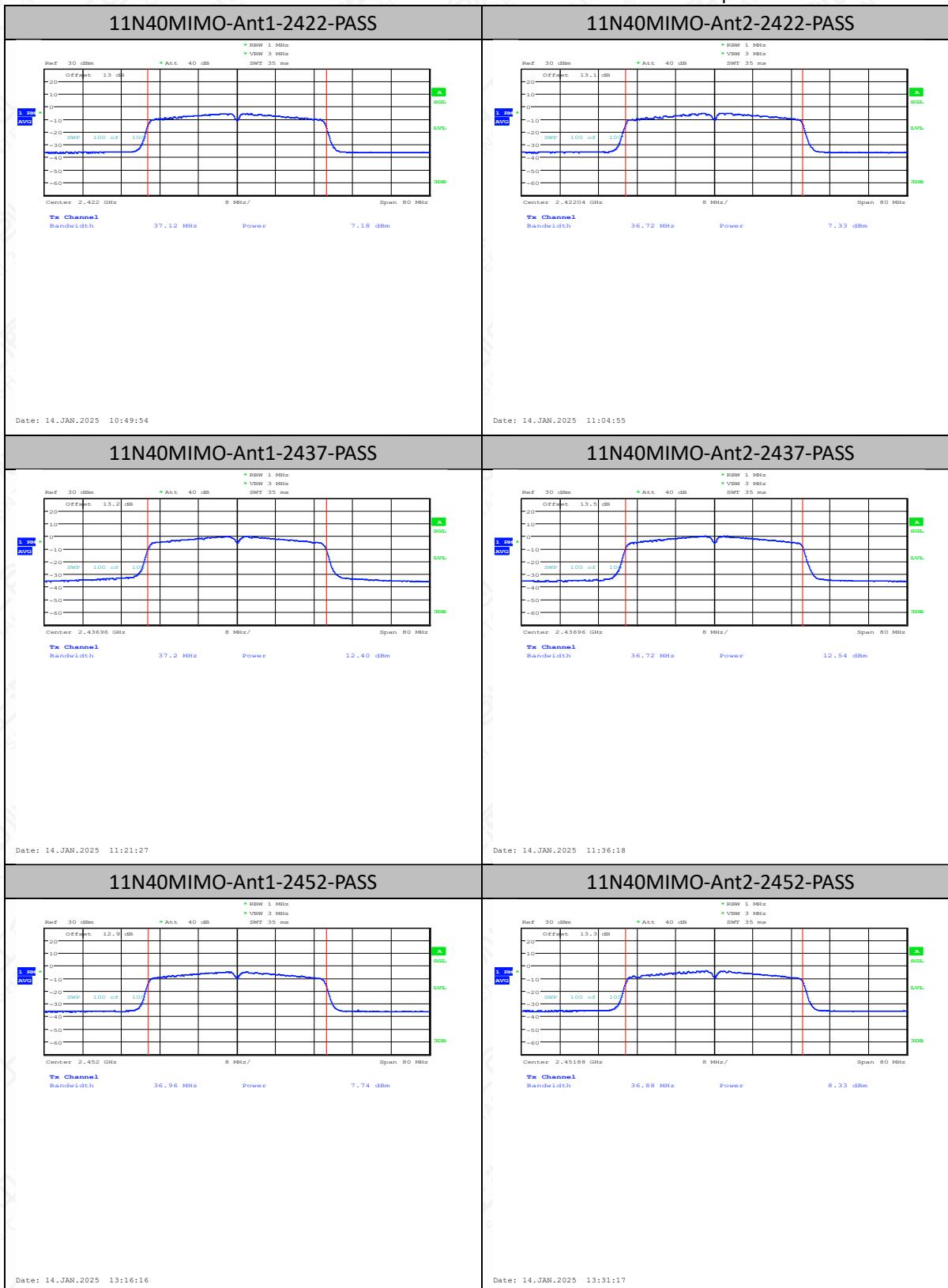








11N40SISO-Ant1-2422-PASS		11N40SISO-Ant2-2422-PASS	
 <p>Ref 30 dBm Att 40 dB Offset 13.1 dB SWR 1.00 VBW 1 MHz VBW 3 MHz SWT 35 ms</p> <p>Center 2.42204 GHz Span 80 MHz</p> <p>Tx Channel Bandwidth 36.56 MHz Power 7.17 dBm</p>		 <p>Ref 30 dBm Att 40 dB Offset 13.1 dB SWR 1.00 VBW 1 MHz VBW 3 MHz SWT 35 ms</p> <p>Center 2.42192 GHz Span 80 MHz</p> <p>Tx Channel Bandwidth 37.28 MHz Power 7.24 dBm</p>	
Date: 14.JAN.2025 16:40:18		Date: 15.JAN.2025 20:19:37	
11N40SISO-Ant1-2437-PASS		11N40SISO-Ant2-2437-PASS	
 <p>Ref 30 dBm Att 40 dB Offset 13.2 dB SWR 1.00 VBW 1 MHz VBW 3 MHz SWT 35 ms</p> <p>Center 2.43696 GHz Span 80 MHz</p> <p>Tx Channel Bandwidth 36.56 MHz Power 11.99 dBm</p>		 <p>Ref 30 dBm Att 40 dB Offset 13.1 dB SWR 1.00 VBW 1 MHz VBW 3 MHz SWT 35 ms</p> <p>Center 2.43696 GHz Span 80 MHz</p> <p>Tx Channel Bandwidth 37.04 MHz Power 12.55 dBm</p>	
Date: 14.JAN.2025 16:55:54		Date: 15.JAN.2025 20:42:11	
11N40SISO-Ant1-2452-PASS		11N40SISO-Ant2-2452-PASS	
 <p>Ref 30 dBm Att 40 dB Offset 13.1 dB SWR 1.00 VBW 1 MHz VBW 3 MHz SWT 35 ms</p> <p>Center 2.45198 GHz Span 80 MHz</p> <p>Tx Channel Bandwidth 36.72 MHz Power 7.76 dBm</p>		 <p>Ref 30 dBm Att 40 dB Offset 13.1 dB SWR 1.00 VBW 1 MHz VBW 3 MHz SWT 35 ms</p> <p>Center 2.45196 GHz Span 80 MHz</p> <p>Tx Channel Bandwidth 36.88 MHz Power 7.64 dBm</p>	
Date: 14.JAN.2025 17:13:44		Date: 15.JAN.2025 21:13:49	



6.3 Peak Power Spectral Density

6.3.1 Measurement Limit

Standard	Limit
FCC 47 Part 15.247(e)	$\leq 8\text{dBm}/3 \text{ KHz}$
RSS-247 5.2(b)	$\leq 8\text{dBm}/3 \text{ kHz}$

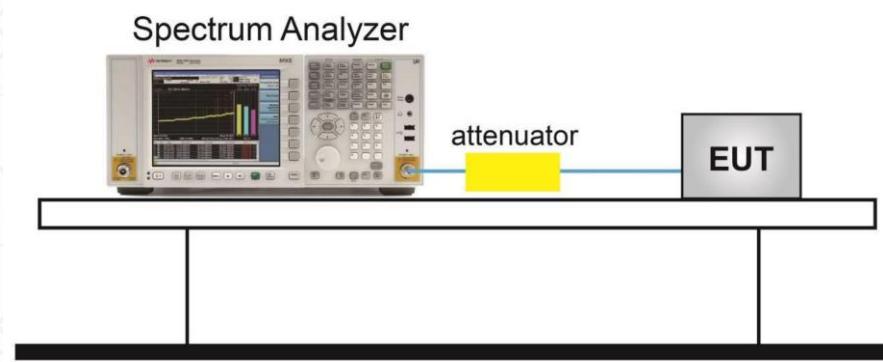
6.3.2 Test procedures

The measurement is according to ANSI C63.10 clause 11.10.

The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.

1. Measure the duty cycle (D) of the transmitter output signal as described in 11.6.
2. Set instrument center frequency to DTS channel center frequency.
3. Set span to at least 1.5 times the OBW.
4. Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
5. Set VBW $\geq [3 \times \text{RBW}]$.
6. Detector = power averaging (rms) or sample detector (when rms not available).
7. Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span} / \text{RBW}]$.
8. Sweep time = auto couple.
9. Do not use sweep triggering; allow sweep to “free run.”
10. Employ trace averaging (rms) mode over a minimum of 100 traces.
11. Use the peak marker function to determine the maximum amplitude level.
12. Add $[10 \log (1 / D)]$, where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.
13. If measured value exceeds requirement specified by regulatory agency, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

6.3.3 Test setup



6.3.4 Measurement Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant2	2412	-24.74	≤8.00	PASS
11B	Ant1	2412	-21.21	≤8.00	PASS
11B	Ant2	2437	-21.69	≤8.00	PASS
11B	Ant1	2437	-21.19	≤8.00	PASS
11B	Ant2	2462	-24.72	≤8.00	PASS
11B	Ant1	2462	-23.55	≤8.00	PASS
11B-CDD	Ant1	2412	-24.04	≤8.00	PASS
11B-CDD	Ant2	2412	-23.68	≤8.00	PASS
11B-CDD	total	2412	-20.85	≤8.00	PASS
11B-CDD	Ant1	2437	-25.98	≤8.00	PASS
11B-CDD	Ant2	2437	-21.83	≤8.00	PASS
11B-CDD	total	2437	-20.42	≤8.00	PASS
11B-CDD	Ant1	2462	-22.23	≤8.00	PASS
11B-CDD	Ant2	2462	-18.60	≤8.00	PASS
11B-CDD	total	2462	-17.04	≤8.00	PASS
11G	Ant2	2412	-21.28	≤8.00	PASS
11G	Ant1	2412	-21.78	≤8.00	PASS
11G	Ant2	2437	-16.09	≤8.00	PASS
11G	Ant1	2437	-16.25	≤8.00	PASS
11G	Ant2	2462	-21.25	≤8.00	PASS
11G	Ant1	2462	-21.46	≤8.00	PASS
11G-CDD	Ant1	2412	-21.62	≤8.00	PASS
11G-CDD	Ant2	2412	-20.96	≤8.00	PASS
11G-CDD	total	2412	-18.27	≤8.00	PASS
11G-CDD	Ant1	2437	-16.15	≤8.00	PASS
11G-CDD	Ant2	2437	-15.79	≤8.00	PASS
11G-CDD	total	2437	-12.96	≤8.00	PASS
11G-CDD	Ant1	2462	-21.58	≤8.00	PASS
11G-CDD	Ant2	2462	-21.25	≤8.00	PASS
11G-CDD	total	2462	-18.40	≤8.00	PASS
11N20ISO	Ant2	2412	-21.89	≤8.00	PASS
11N20ISO	Ant1	2412	-22.28	≤8.00	PASS
11N20ISO	Ant2	2437	-15.69	≤8.00	PASS
11N20ISO	Ant1	2437	-15.99	≤8.00	PASS
11N20ISO	Ant2	2462	-22.57	≤8.00	PASS
11N20ISO	Ant1	2462	-23.22	≤8.00	PASS
11N20MIMO	Ant1	2412	-21.54	≤8.00	PASS
11N20MIMO	Ant2	2412	-21.91	≤8.00	PASS

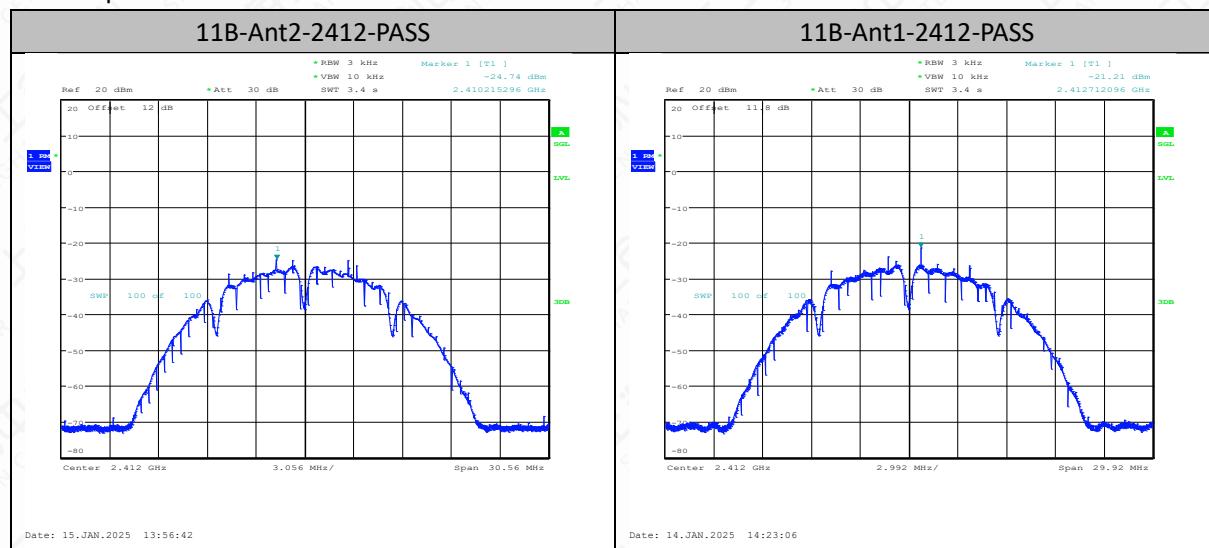
Report No: 24T04I300231-050

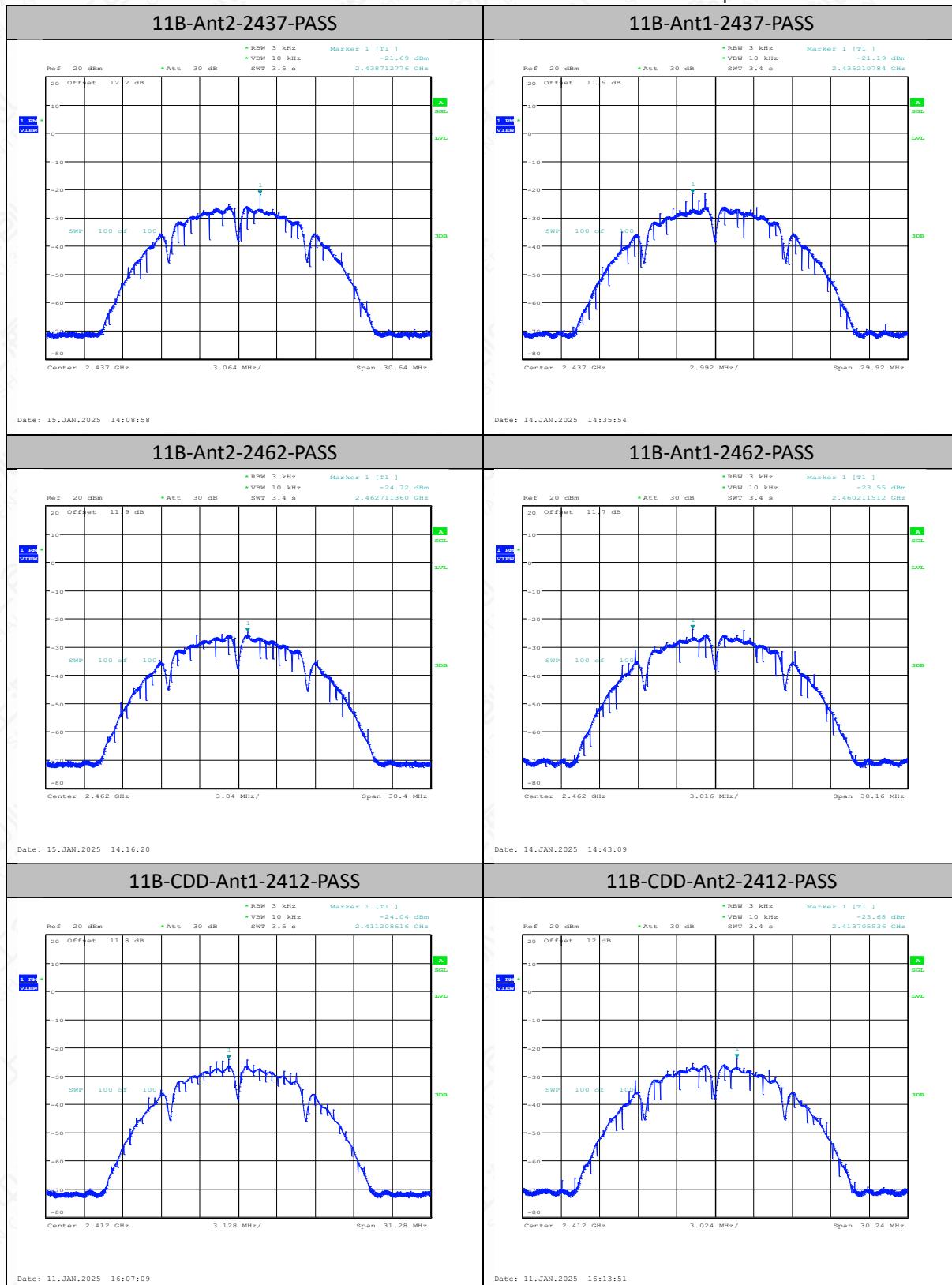
11N20MIMO	total	2412	-18.71	≤ 8.00	PASS
11N20MIMO	Ant1	2437	-15.25	≤ 8.00	PASS
11N20MIMO	Ant2	2437	-15.29	≤ 8.00	PASS
11N20MIMO	total	2437	-12.26	≤ 8.00	PASS
11N20MIMO	Ant1	2462	-22.74	≤ 8.00	PASS
11N20MIMO	Ant2	2462	-22.49	≤ 8.00	PASS
11N20MIMO	total	2462	-19.60	≤ 8.00	PASS
11N40SISO	Ant2	2422	-27.34	≤ 8.00	PASS
11N40SISO	Ant1	2422	-27.38	≤ 8.00	PASS
11N40SISO	Ant1	2437	-22.46	≤ 8.00	PASS
11N40SISO	Ant2	2437	-21.98	≤ 8.00	PASS
11N40SISO	Ant1	2452	-26.98	≤ 8.00	PASS
11N40SISO	Ant2	2452	-26.64	≤ 8.00	PASS
11N40MIMO	Ant1	2422	-27.17	≤ 8.00	PASS
11N40MIMO	Ant2	2422	-27.48	≤ 8.00	PASS
11N40MIMO	total	2422	-24.31	≤ 8.00	PASS
11N40MIMO	Ant1	2437	-22.15	≤ 8.00	PASS
11N40MIMO	Ant2	2437	-22.01	≤ 8.00	PASS
11N40MIMO	total	2437	-19.07	≤ 8.00	PASS
11N40MIMO	Ant1	2452	-26.80	≤ 8.00	PASS
11N40MIMO	Ant2	2452	-25.87	≤ 8.00	PASS
11N40MIMO	total	2452	-23.30	≤ 8.00	PASS

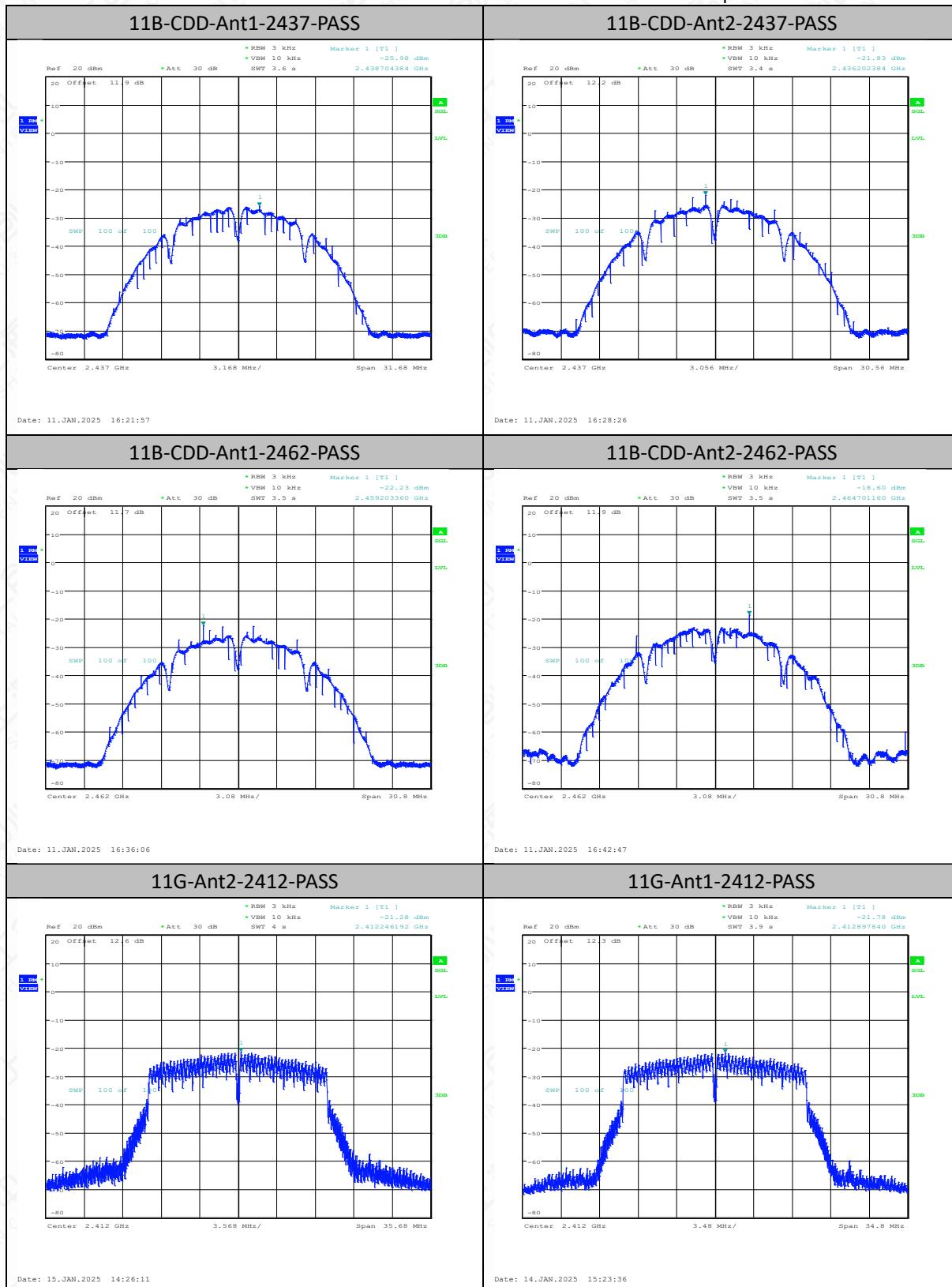
Note:

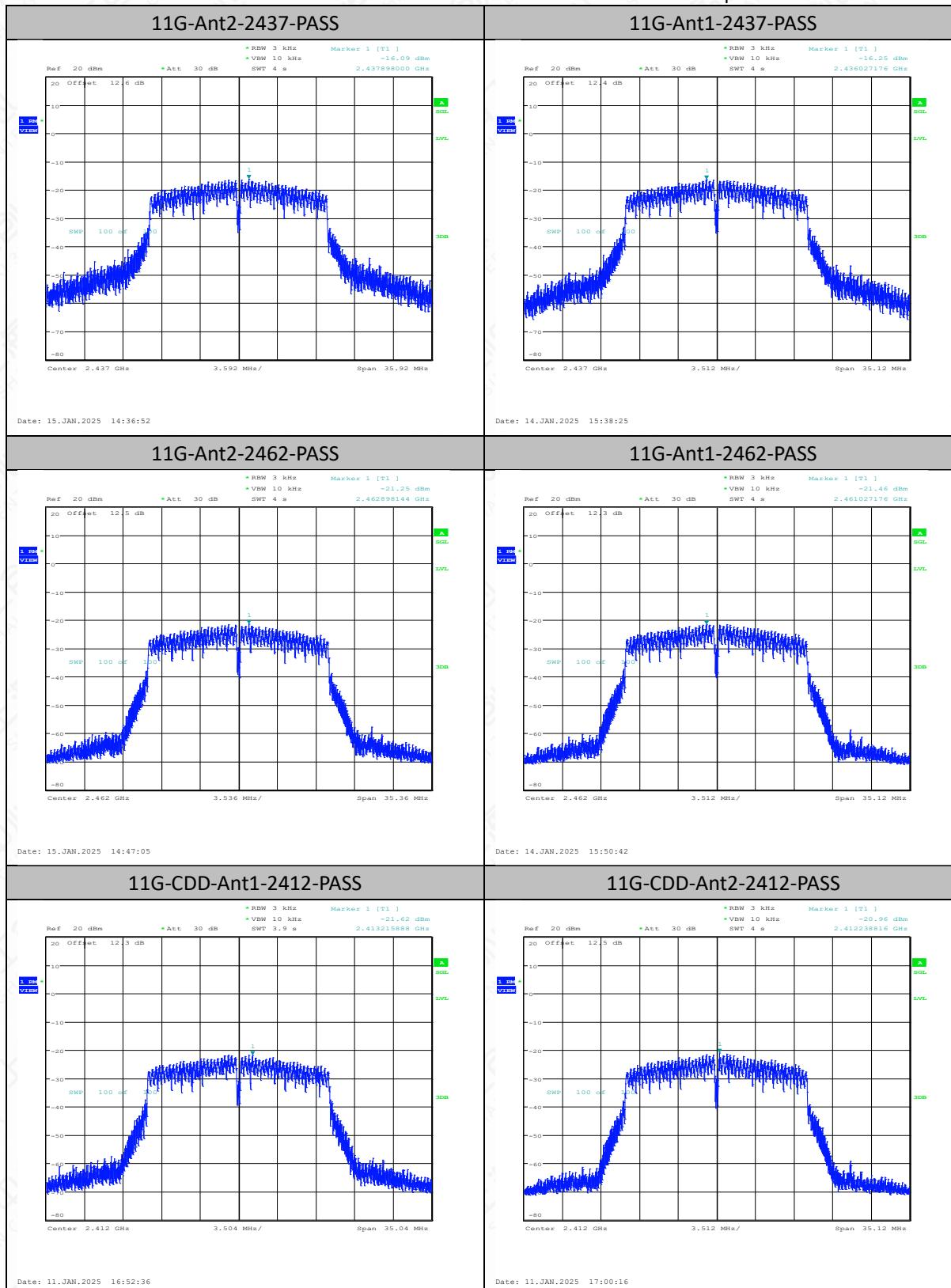
1.The Duty Cycle Factor is compensated in the graph.

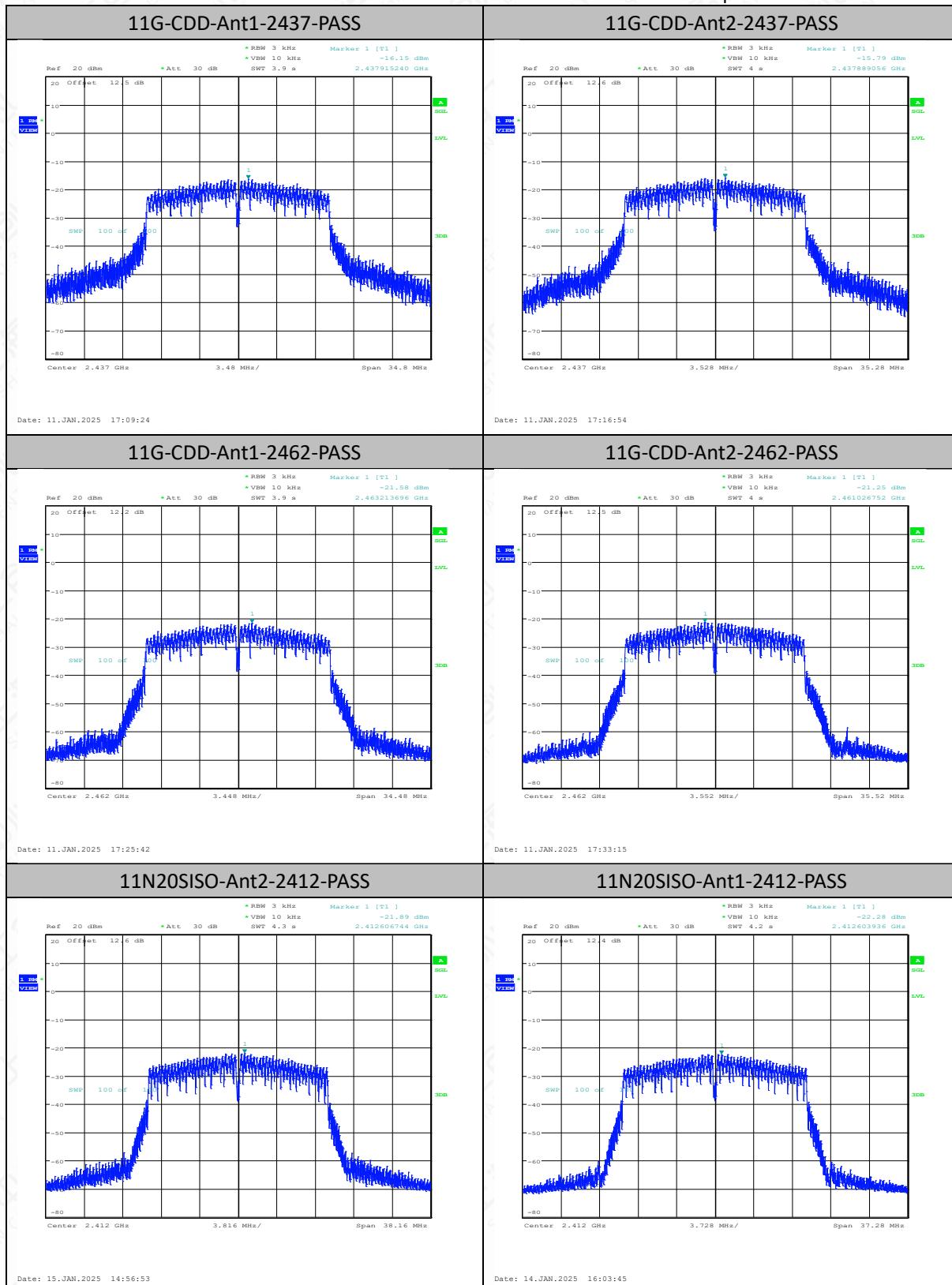
Test Graphs

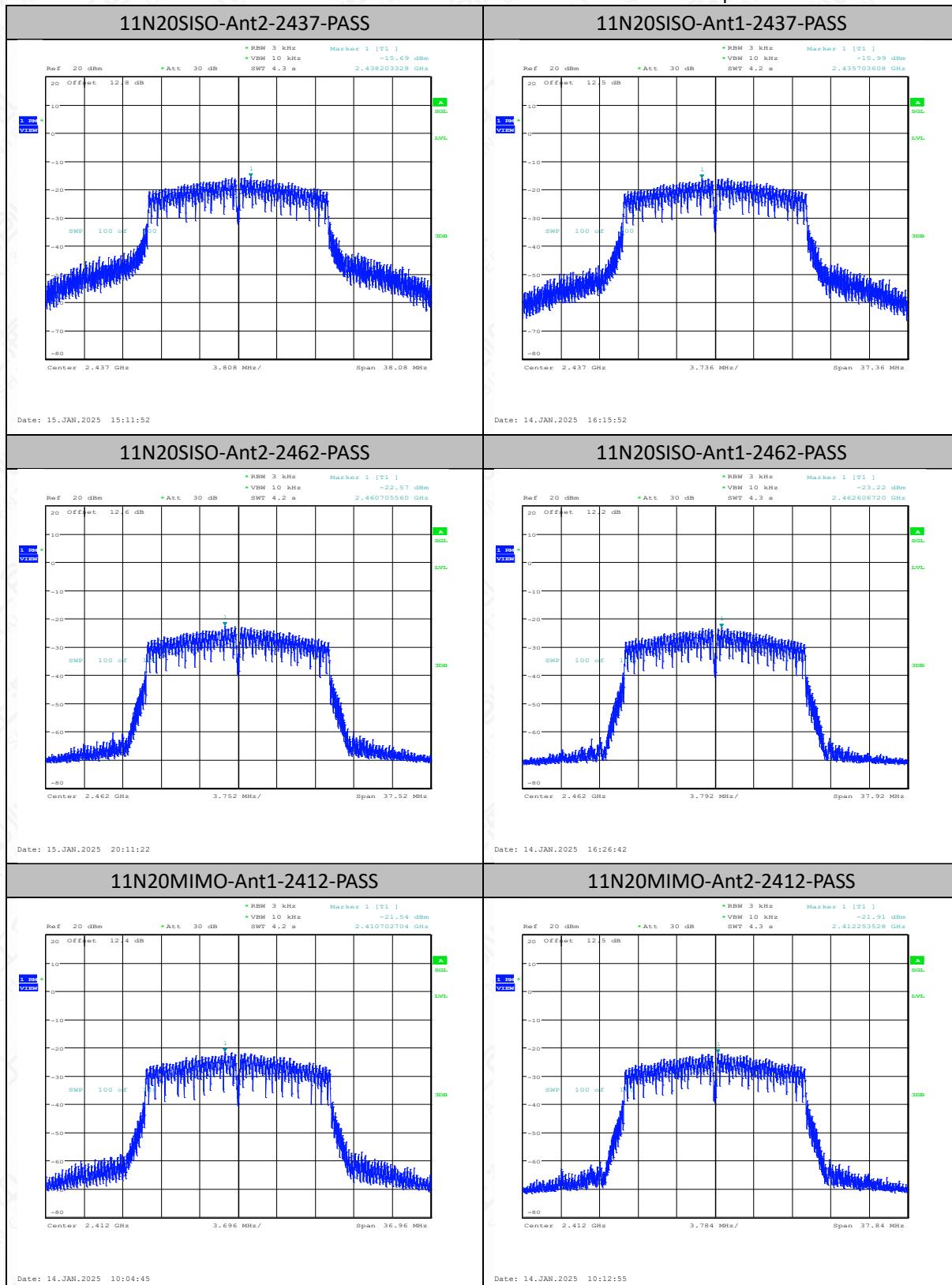


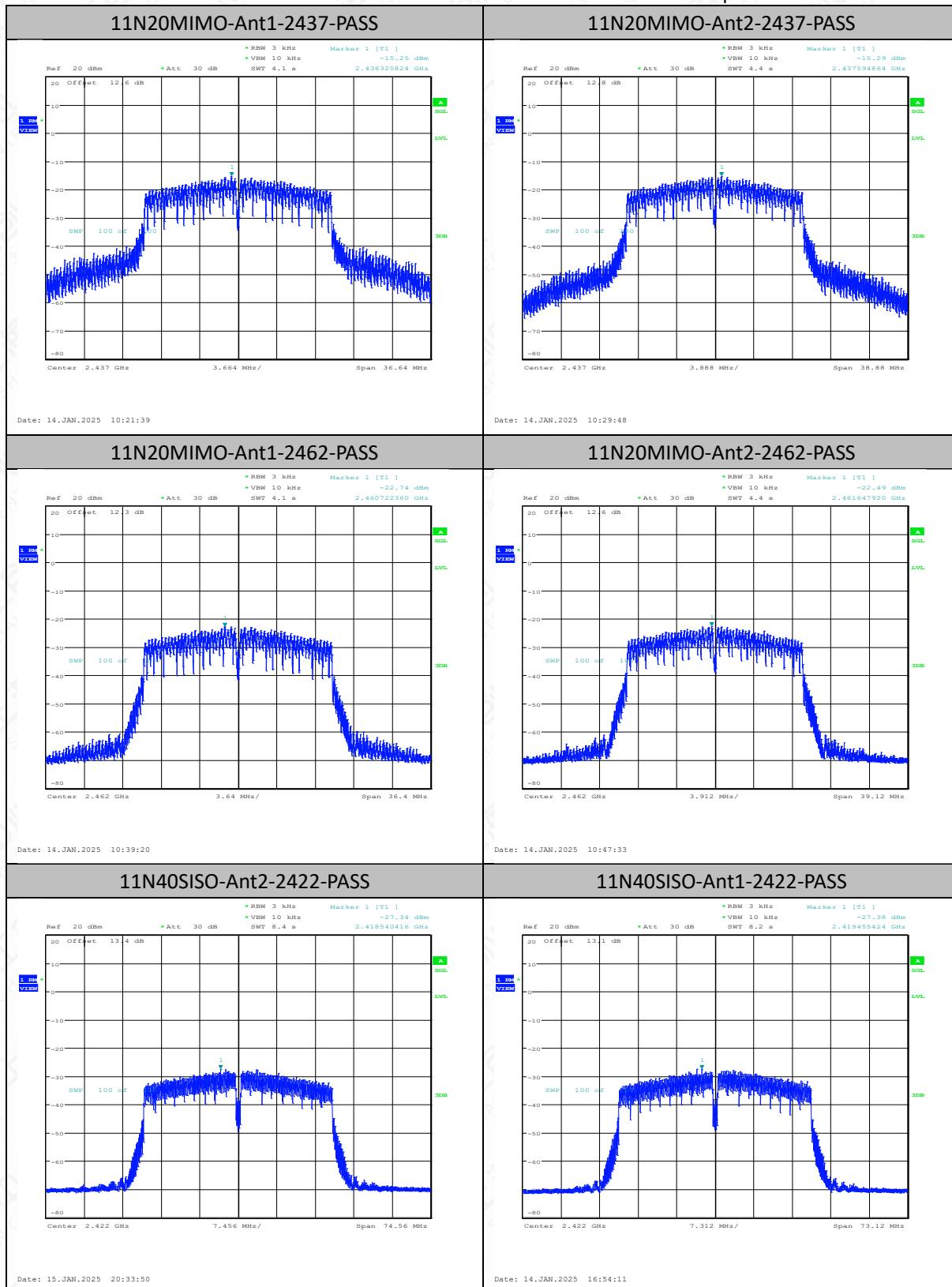


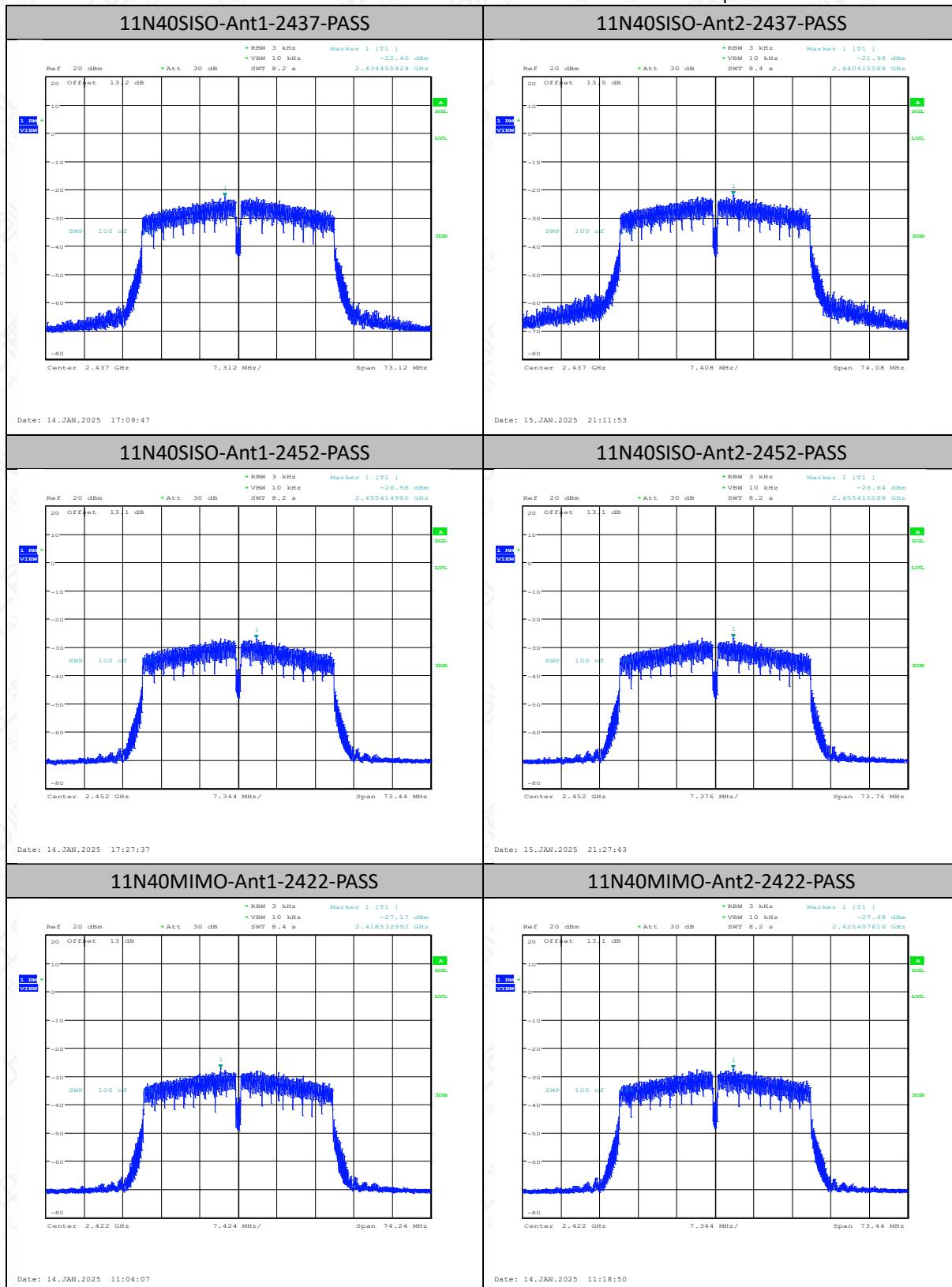


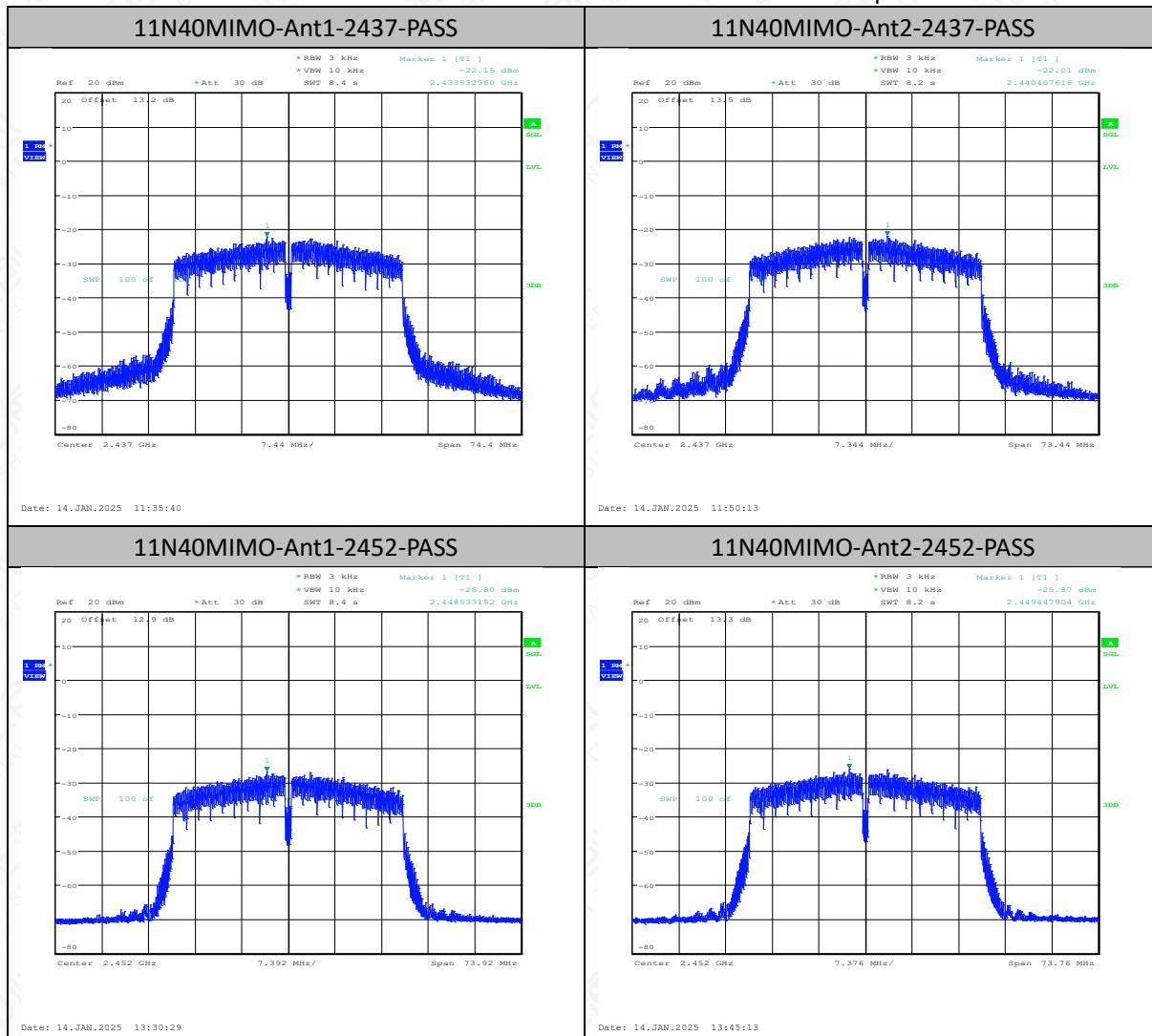












6.4 Occupied 6dB Bandwidth

6.4.1 Measurement Limit

Standard	Limit(KHz)
FCC 47 Part 15.247(a) (2)	$\geq 500\text{kHz}$
RSS-247 5.2(a)	$\geq 500\text{kHz}$

6.4.2 Test procedures

1. The output power of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Enable EUT transmitter maximum power continuously.
3. Set RBW = 100 kHz.
4. Set the VBW $\geq [3 \times \text{RBW}]$.
5. Detector = peak.
6. Trace mode = max hold.
7. Sweep = auto couple.
8. Allow the trace to stabilize.
9. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.4.3 Test Setup

