

Prüfbericht-Nr.: <i>Test report no.:</i>	CN23QG53 004	Auftrags-Nr.: <i>Order no.:</i>	168428354 P01070601	Seite 1 von 24 <i>Page 1 of 24</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2023-05-25	
Auftraggeber: <i>Client:</i>	ELSYS EQUIPAMENTOS ELETRONICOS LTD RUA DOUTOR ALCIDES GOMES MIRANDA, 251, Valinhos, Brazil			
Prüfgegenstand: <i>Test item:</i>	Amplimax Ultra			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	EPRL30			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	47 CFR Part 96 47 CFR Part 2 Subpart J			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2023-08-17			
Prüfmuster-Nr.: <i>Test sample no:</i>	A003541536-003			
Prüfzeitraum: <i>Testing period:</i>	2023-09-07 – 2024-01-31			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	<u>X  Hardy Suo</u>	genehmigt von: <i>authorized by:</i>	<u>X  Lin Lin</u>	
Datum: <i>Date:</i>	2024-04-07	Ausstellungsdatum: <i>Issue date:</i>	2024-04-07	
Stellung / Position:	Sachverständige(r)/Expert	Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / Other:	FCC ID:2AZC5-02			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet				
* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
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V05

Anmerkungen

Remarks

- | | |
|----------|---|
| 1 | <p>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system.</p> <p>Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</p> <p><i>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.</i></p> <p><i>Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</i></p> |
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| 3 | <p>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</p> <p><i>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</i></p> |
| 4 | <p>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</p> <p><i>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</i></p> |

TEST SUMMARY

5.1.1 RF POWER OUTPUT

RESULT: Pass

5.1.2 MODULATION CHARACTERISTICS

RESULT: Pass

5.1.3 OCCUPIED BANDWIDTH AND 26DB BANDWIDTH

RESULT: Pass

5.1.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

RESULT: Pass

5.1.5 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – BAND EDGE

RESULT: Pass

5.1.6 FIELD STRENGTH OF SPURIOUS RADIATION

RESULT: Pass

5.1.7 FREQUENCY STABILITY

RESULT: Pass

5.1.8 PEAK TO AVERAGE RATIO

RESULT: Pass

5.1.9 END USER DEVICE ADDITIONAL REQUIREMENTS

RESULT: Pass

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1. GENERAL REMARKS

1.1 COMPLEMENTARY MATERIALS

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Band 48 for NR operation

Appendix B: Test Results of Band 48 for LTE operation

Appendix C: Test Results of Field Strength of Spurious Radiation

Appendix D: Photographs of the Test Set-Up

1.2 TEST STANDARD(S)

Applied Rules: 47 CFR Part 96
47 CFR Part 2 Subpart J
Test Method: KDB 971168 D01 v03r01 Power Meas License Digital Systems
KDB 971168 D02 v02r01 Misc Rev Approv License Devices
KDB 662911 D01 v02r01 Multiple Transmitter Output
KDB 412172 D01 v01r01 Determining ERP and EIRP
ANSI C63.26:2015

1.3 List of Document Change

No.	Report No.	Description
1	CN23QG53 004	First release.

2. TEST SITES

2.1 TEST FACILITIES

TÜV Rheinland (Shenzhen) Co., Ltd.

(FCC Registration No.: 694916 & IC Registration Number: 25069)

Address: No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China

2.2 TEST DATE

Date of test: 2023-09-07 to 2024-01-31

2.3 LIST OF TEST AND MEASUREMENT INSTRUMENTS

Table 1: List of Test and Measurement Equipment

Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
Field Strength of Spurious Radiation				
EMI Test Receiver	R&S	ESR 7	102021	25.07.2024
Signal Analyzer	R&S	FSV 40	101439	25.07.2024
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	25.07.2024
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	25.07.2024
Amplifier	R&S	SCU-18F	180070	25.07.2024
Amplifier	R&S	SCU40A	100475	25.07.2024
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	06.08.2024
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	06.08.2024
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	27.08.2024
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	06.08.2024
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A

3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	22.06.2024
Radio Spectrum Testing (CTE6000)				
Shielding Room 6#	Albatross	SR6	APC17151-SR6	22.06.2024
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	166305	25.07.2024
Signal Analyzer	Rohde & Schwarz	FSV 40	101475	25.07.2024
Vector Signal Generator	Rohde & Schwarz	SMBV100A	263466	21.09.2024
Signal Generator	Rohde & Schwarz	SMB100A	181041	05.11.2024
High Speed Power Supply	KEITHLEY	2303	4080052	05.11.2024
RF Control Unit	Tonscend	JS0806-1	19H8060192	N/A
Band Reject Filter Group	Tonscend	JS0806-F	19I8060194	13.11.2025
Temp.&Humidity Chamber	GIANT FORCE	ITH-150-40-CP-AR	IAA1406-004	31.10.2024
NB-IoT&Emtc Integration Filter Group	Tonscend	JS0806-F	21D8060410	31.07.2024
Test Software	Tonscend	JS1120	N/A	N/A
Control PC	Dell	Inspiron3670	5HVGWS2	N/A
Radio Spectrum Testing (5G NR)				
UXM 5G Wireless Test Platform	Keysight	E7515B	MY60192758	29.06.2024
EXA Signal Analyzer	Keysight	N9010B	MY60240665	24.05.2024
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY59101222	24.05.2024
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY59101124	24.05.2024
DC Power Supply	Keysight	E3642A	MY61086017	24.05.2024
RF Control Unit	Tonscend	JS0806-1	21D8060407	N/A
Band Reject Filter Group	Tonscend	JS0806-F	21D8060406	27.05.2024
High Low Temperature Test Chamber	KOWINTEST	TH-30FJX	KW-21040497	25.07.2024
Test Software	Tonscend	JS1120-5	N/A	N/A
Control PC	Lenovo	Tianyi510Pro-141MB	M70JFXP3	N/A

2.4 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.5 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. facility located at No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. GENERAL PRODUCT INFORMATION

3.1 GENERAL DESCRIPTION

The EUT is outdoor CPE with embedded directional antenna for fixed wireless access used for internet access. It transmits data over 4G and 5G cellular network.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 RATING AND SYSTEM DETAILS

Table 2: Rating of EUT

General Information of EUT	Description
Kind of Equipment:	Amplimax Ultra
Type Designation:	EPRL30
FCC ID:	2AZC5-02
Type of Equipment:	End device
Antenna Type:	Integrated Antenna
Operating Voltage:	DC 24V via AC/DC power supply or PoE supply

Table 3: Technical Specification of EUT

Characteristic	Description
Operated Modes:	LTE and NR
Certified Transmitter Module:	Integrated module (FCC ID:XMR2022RG520NNA)
Operational Frequency Band(s):	E-UTRA Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 29, 30, 38, 41, 48, 66, 71 NR Band n2, n5, n7, n12, n14, n25, n26, n30, n38, n41, n48, n66, n71, n77, n78
Rated RF output power (Conducted):	LTE Power Class 3: +23 dBm $\pm$ 2 dB (except band 48) NR Power Class 3: +23 dBm $\pm$ 2 dB (except band n48) NR Power Class 2: +26 dBm $\pm$ 2 dB (only for Band n38 and n41) NR Power Class 2: +24 dBm $\pm$ 2 dB (only for Band n77 and n78) LTE Band 48 / NR Band n48: 16 dBm $\pm$ 1 dB
Channel Bandwidth:	E-UTRA Band Band 2, Band 4, Band 5, Band 25 Band 26, Band 66: 1.4, 3, 5, 10, 15, 20 MHz Band 7, Band 38, Band 41, Band 48, Band 71: 5, 10, 15, 20 MHz Band 12: 1.4, 3, 5, 10 MHz Band 13, Band 14, Band 17, Band 30: 5, 10 MHz

	NR Band n2, n5, n26, n71: 5, 10, 15, 20MHz n7, n25: 5, 10, 15, 20, 25, 30, 40MHz n66: 5, 10, 15, 20, 30, 40MHz n12: 5, 10, 15MHz n14: 5, 10MHz n38: 10, 15, 20, 30, 40MHz n41: 20, 30, 40, 50, 60, 70, 80, 90, 100MHz n48: 10, 20, 30, 40 MHz n77, n78: 10, 15, 20, 30, 40, 50, 60, 70, 80, 90, 100MHz
Modulation Type:	QPSK, 16QAM, 64QAM, 256QAM
Antenna Type:	Integrated Antenna, directional antenna
Operation mode:	Stand-alone

Table 4: Operating Frequency Range and Antenna Gain

Frequency Band(s)	Frequency Range		Applicable	Antenna Gain (dBi)
	Transmitting f_{UL} (MHz)	Receiving f_{DL} (MHz)		
Band 2	1850 ~ 1910	1930 ~ 1990	LTE, NR	7
Band 4	1710 ~ 1755	2110 ~ 2155	LTE	5
Band 5	824 ~ 849	869 ~ 894	LTE, NR	7
Band 7	2500 ~ 2570	2620 ~ 2690	LTE, NR	7
Band 12	699 ~ 716	729 ~ 746	LTE, NR	6
Band 13	777 ~ 787	746 ~ 756	LTE	6
Band 14	788 ~ 798	758 ~ 768	LTE, NR	6
Band 17	704 ~ 716	734 ~ 746	LTE	6
Band 25	1850 ~ 1915	1930 ~ 1995	LTE, NR	7
Band 26	814 ~ 849	859 ~ 894	LTE, NR	7
Band 29	NA ~ NA	717 ~ 728	LTE	--
Band 30	2305 ~ 2315	2350 ~ 2360	LTE, NR	7
Band 38	2570 ~ 2620	2570 ~ 2620	LTE, NR	5
Band 41	2496 ~ 2690	2496 ~ 2690	LTE, NR	5
Band 48	3550 ~ 3700	3550 ~ 3700	LTE, NR	6
Band 66	1710 ~ 1780	2110 ~ 2200	LTE, NR	5
Band 71	663 ~ 698	617 ~ 652	LTE, NR	6
Band 77	3700 ~ 3980	3700 ~ 3980	NR	6
Band 78	3300 ~ 3800	3300 ~ 3800	NR	6

3.3 INDEPENDENT OPERATION MODES

The basic operation modes are:

- A. On, communication link established
 - 1) LTE operating
 - i. Low channel
 - ii. Middle channel
 - iii. High channel
 - 2) NR operating
 - i. Low channel
 - ii. Middle channel
 - iii. High channel
- B. Standby/Idle
- C. Off

3.4 NOISE GENERATING AND NOISE SUPPRESSING PARTS

Refer to the Circuit Diagram.

3.5 SUBMITTED DOCUMENTS

- | | |
|---|--|
| ☒ User Manual | ☒ Rating Label |
| ☒ Circuit Diagram | ☒ PCB Layout |
| ☒ Block Diagram | ☒ Photo Document |
| ☒ Schematics | ☒ Parts List |
| ☐ Model Difference Letter | |

4. TEST SET-UP AND OPERATION MODES

4.1 PRINCIPLE OF CONFIGURATION SELECTION

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 TEST OPERATION AND TEST SOFTWARE

Test operation refers to test setup in chapter 5. All testing were performed according to the procedure in KDB 971168 D01 and ANSI C63.26.

Table 5: Test Environments

Environment Parameter	Selected Values During Tests		
	Temperature (°C)	Voltage (V) AC	Relative Humidity
Normal (NTNV)	23	120V via AC/DC adapter	51%
HTHV	50 °C	138.0	---
LTHV	-30 °C	138.0	---
HTLV	50 °C	102.0	---
LTLV	-30 °C	102.0	---

The worst-case scenario for all measurements is based on an engineering evaluation. The modulation of QPSK were observed as the worst one and set for all conducted and radiated measurement. Output power measurements were measured on QPSK & 16QAM modulations.

4.3 SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT

Table 6: Auxiliary Equipment used during test

Name	Model	Manufacturer	S/N
Switching Power Supply	S024AMU2400100	TEN PAO INDUSTRIAL CO LTD.	N/A
PoE Adapter	Amplimax Ultra POE adapter	ELSYS	N/A

4.4 COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Equipment Configuration for Transmitter Measurement

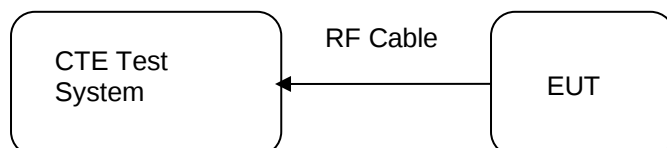


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

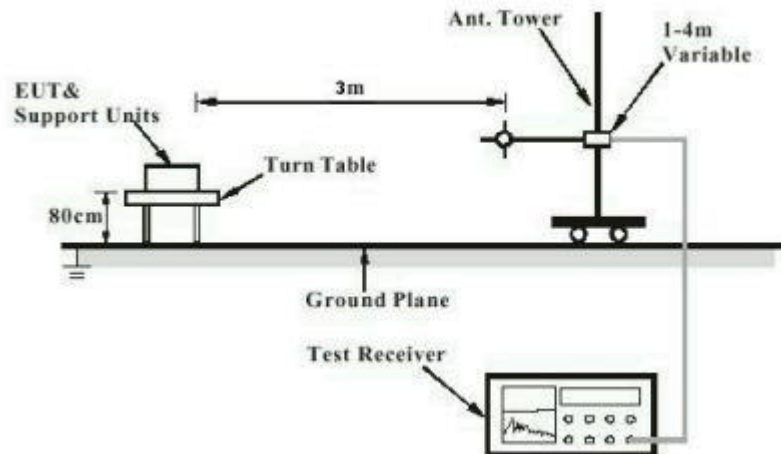
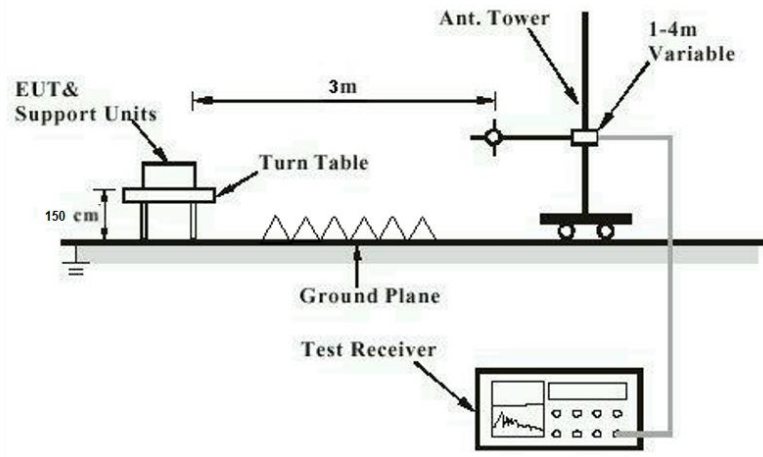


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)



5. TEST RESULTS

5.1 ESSENTIAL REQUIREMENTS OF STANDARD

5.1.1 RF POWER OUTPUT

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	The EIRP of End device must not exceed 23 dBm/10MHz for Band 48
Test procedure	:	Clause 5.2.4.2 of ANSI C63.26
Kind of test site	:	Shielding Room

Test Setup

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapter
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}}$$

where

ERP or EIRP: effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , e.g. dBm)

P_{Meas} : measured transmitter output power, in dBm

G_{T} : gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

$$\text{ERP} = \text{EIRP} - 2.15$$

Refer to attached Appendix for details of test results.

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5.1.2 MODULATION CHARACTERISTICS

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	"Other types of equipment", the use of higher order modulations such as OFDM or LTE or other modulation are acceptable for use
Test procedure	:	Clause 5.2.3 of ANSI C63.26
Kind of test site	:	Shielding Room

Note:

The device implements digital modulation such as QPSK and 16QAM, hence the EUT is deemed to comply with this requirement without additional testing.

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5.1.3 OCCUPIED BANDWIDTH AND 26DB BANDWIDTH

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Test requirement	:	Section 2.1049 of 47 CFR Part 2 Subpart J
Limits	:	No limit, the occupied bandwidth shall be less than the channel bandwidth
Test procedure	:	Section 5.4.3 of ANSI C63.26 ☒ Conducted measurements ☐ Radiated measurements
Kind of test site	:	Shielding Room

TEST SETUP

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapter
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix for details of test results.

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5.1.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	47 CFR 96.41(e)(2) The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/Mhz.
Test procedure	:	Clause 5.7.3 of ANSI C63.26
Kind of test site	:	Shielding Room

TEST SETUP

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapter
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix for details of test results.

Prüfbericht - Nr.: CN23QG53 004
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Page 19 of 24**5.1.5 SPURIOUS EMISSIONS AT ANTENNA TERMINALS – BAND EDGE****RESULT:****Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	47 CFR 96.41(e)(1)(i) & 47 CFR 96.41(e)(2) The conducted power of any emission outside the fundamental emission (whether in or outside of the authorized band) shall not exceed -13 dBm/MHz within 0-10 megahertz above the upper SAS-assigned channel edge and within 0-10 megahertz below the lower SAS-assigned channel edge. At all frequencies greater than 10 megahertz above the upper SAS assigned channel edge and less than 10 MHz below the lower SAS assigned channel edge, the conducted power of any emission shall not exceed -25 dBm/MHz. The conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40 dBm/Mhz.
Test procedure	:	Clause 5.7.4 of ANSI C63.26 In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed
Kind of test site	:	Shielding Room

TEST SETUP

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapter
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix for details of test results.

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5.1.6 FIELD STRENGTH OF SPURIOUS RADIATION

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	Out of band emissions: The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.
Test procedure	:	Clause 5.5 of ANSI C63.26
Kind of test site	:	3m Semi Anechoic Room

Test Setup

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapter
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Setting of Measurement

Following setting is configed in spectrum a

RBW = 1MHz

VBW ≥ 3*RBW

Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)

Detector = Peak

Trace mode = max hold

The trace was allowed to stabilize

Sweep the whole frequency band through the range from 9 kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in this report. The measurement is performed for all operational modes and both antenna polarization, only the data of the worst mode is recorded in this report.

Refer to attached Appendix for details of test results.

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5.1.7 FREQUENCY STABILITY

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ± 2.5 ppm of the center frequency.
Test procedure	:	Clause 5.6.3 of ANSI C63.26
Kind of test site	:	Shielding Room

TEST SETUP

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapterV
Test environment	:	☒ Normal test conditions ☒ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix for details of test results.

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5.1.8 PEAK TO AVERAGE RATIO

RESULT:**Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	47 CFR 96.41(g) The peak-to-average power ratio (PAPR) of any CBSD transmitter output power must not exceed 13 dB.
Test procedure	:	Clause 5.2.3.4 of ANSI C63.26
Kind of test site	:	Shielding Room

TEST SETUP

Date of testing	:	2023-09-07 to 2024-01-31
Input voltage	:	AC 120V via AC/DC adapterV
Test environment	:	☒ Normal test conditions ☐ Extreme test conditions
Operation mode	:	A
Ambient temperature	:	23 °C
Relative humidity	:	51%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix for details of test results.

Prüfbericht - Nr.: **CN23QG53 004**
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Page 23 of 24**5.1.9 END USER DEVICE ADDITIONAL REQUIREMENTS****RESULT:****Pass**

Test standard	:	47 CFR Part 96 47 CFR Part 2 Subpart J
Limits	:	47 CFR 96.47(a) An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD..
Kind of test site	:	Shielding Room

The pre-certified RF module (FCC ID: XMR2022RG520NNA) was integrated into the product. No hardware change to the RF module, and the RF power is verified to be less than the original results, hence the module's report accurately represents test results under the new conditions. Refer to the RG520N-NA module report (Report No.: 2209RSU052-U1, FCC ID: XMR2022RG520NNA).

6. SYSTEM MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Table 7: System Measurement Uncertainty

Items		Extended Uncertainty
Radiated Spurious Emissions	Radiated emission below 1 GHz	±3.97 dB
	Radiated emission above 1 GHz	±4.30 dB
Remark: 95% Confidence Levels, k=2.		

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===== END OF REPORT =====

APPENDIX A: TEST RESULTS FOR NR OPERATING BAND 48

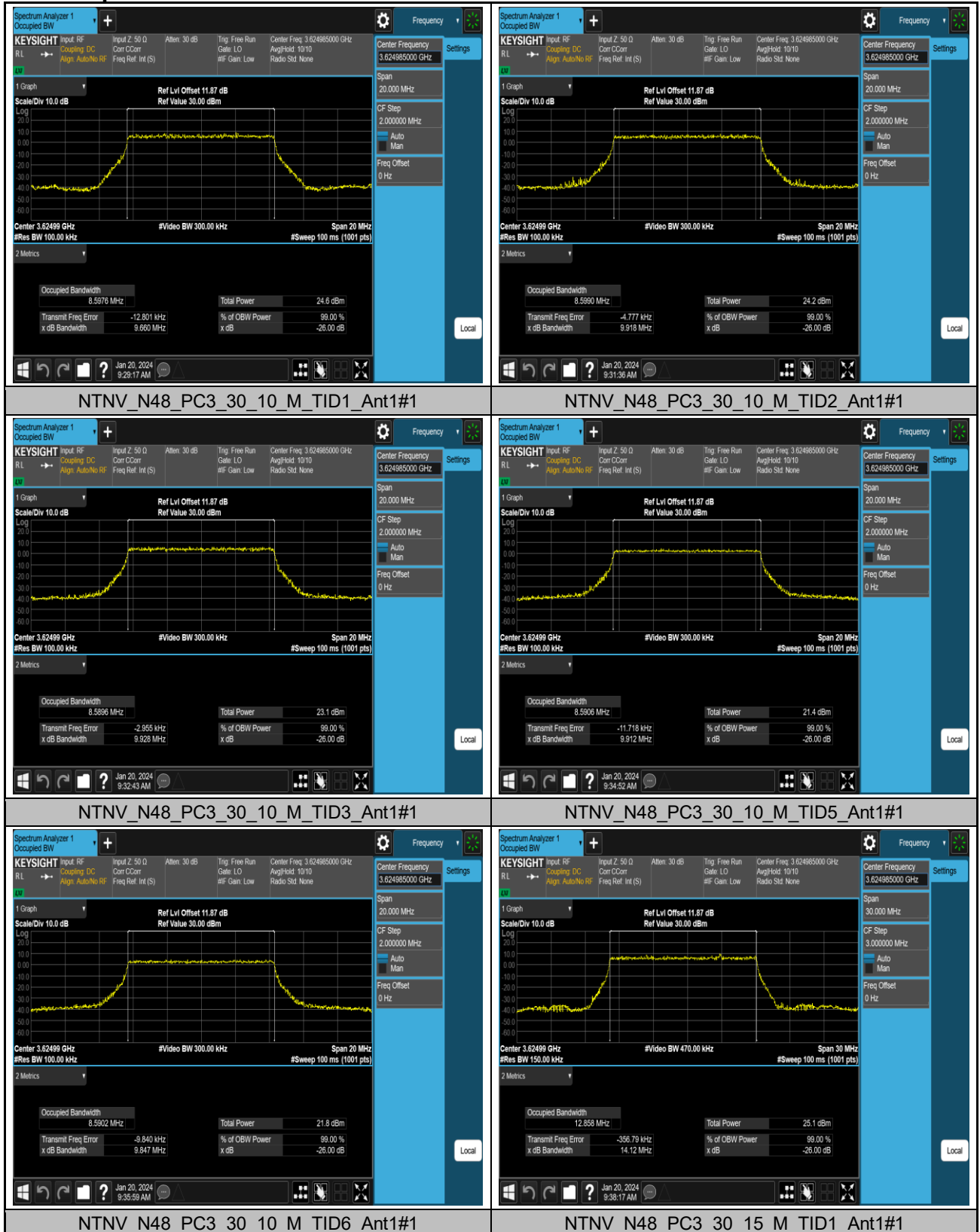
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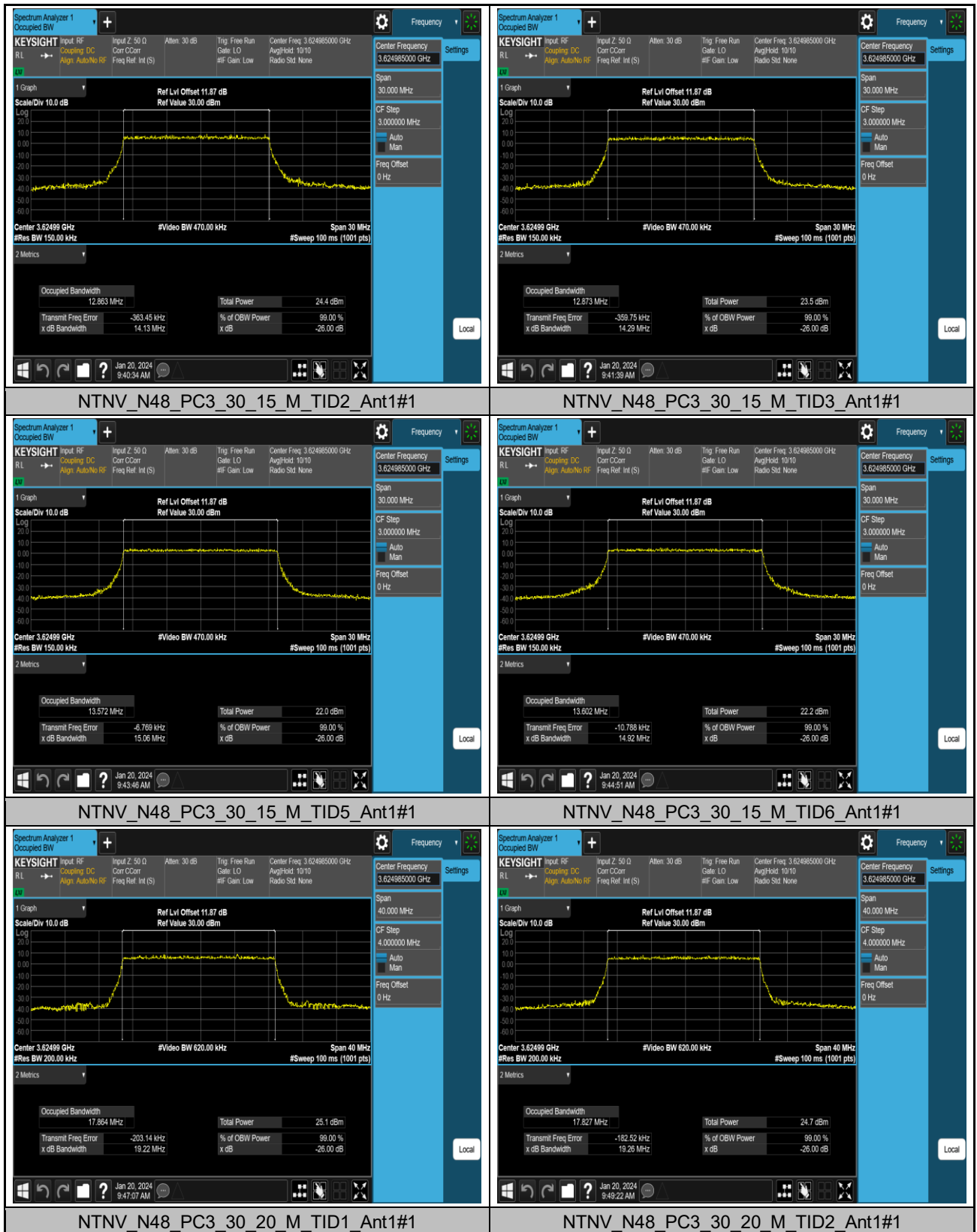
APPENDIX A.1: 26 dB BANDWIDTH AND OCCUPIED BANDWIDTH

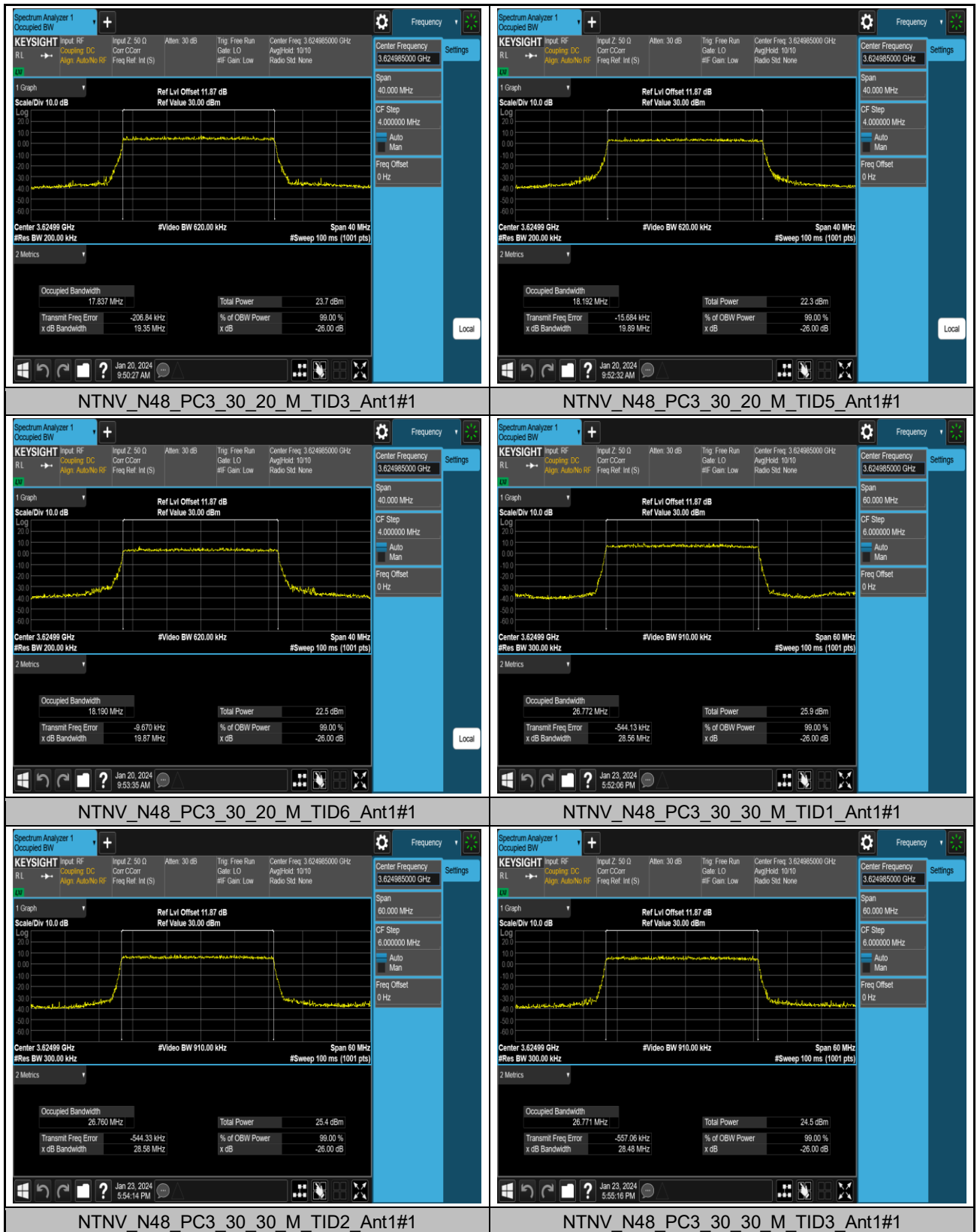
Test Results

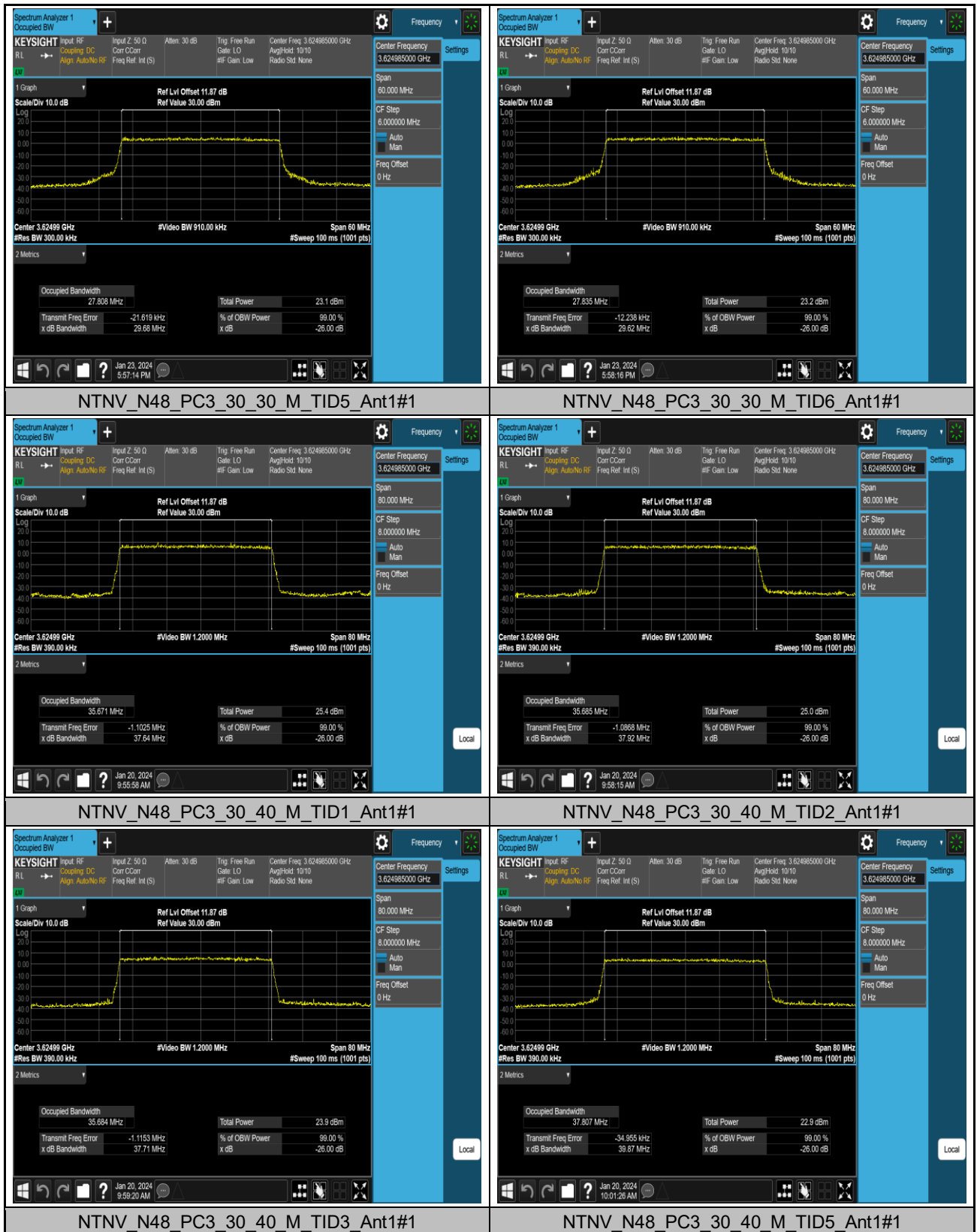
Band	SCS	Bandwidth	Modulation	Channel	RB Config	OBW (MHz)	Limit (MHz)	Verdict
N48	30	10	DFT-PI2BPSK	M	Outer_Full	8.5976	≤10	PASS
N48	30	10	DFT-QPSK	M	Outer_Full	8.5990	≤10	PASS
N48	30	10	DFT-16QAM	M	Outer_Full	8.5896	≤10	PASS
N48	30	10	CP-QPSK	M	Outer_Full	8.5906	≤10	PASS
N48	30	10	CP-16QAM	M	Outer_Full	8.5902	≤10	PASS
N48	30	15	DFT-PI2BPSK	M	Outer_Full	12.858	≤15	PASS
N48	30	15	DFT-QPSK	M	Outer_Full	12.863	≤15	PASS
N48	30	15	DFT-16QAM	M	Outer_Full	12.873	≤15	PASS
N48	30	15	CP-QPSK	M	Outer_Full	13.572	≤15	PASS
N48	30	15	CP-16QAM	M	Outer_Full	13.602	≤15	PASS
N48	30	20	DFT-PI2BPSK	M	Outer_Full	17.864	≤20	PASS
N48	30	20	DFT-QPSK	M	Outer_Full	17.827	≤20	PASS
N48	30	20	DFT-16QAM	M	Outer_Full	17.837	≤20	PASS
N48	30	20	CP-QPSK	M	Outer_Full	18.192	≤20	PASS
N48	30	20	CP-16QAM	M	Outer_Full	18.190	≤20	PASS
N48	30	30	DFT-PI2BPSK	M	Outer_Full	26.772	≤30	PASS
N48	30	30	DFT-QPSK	M	Outer_Full	26.760	≤30	PASS
N48	30	30	DFT-16QAM	M	Outer_Full	26.771	≤30	PASS
N48	30	30	CP-QPSK	M	Outer_Full	27.808	≤30	PASS
N48	30	30	CP-16QAM	M	Outer_Full	27.835	≤30	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	35.671	≤40	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	35.685	≤40	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	35.684	≤40	PASS
N48	30	40	CP-QPSK	M	Outer_Full	37.807	≤40	PASS
N48	30	40	CP-16QAM	M	Outer_Full	37.748	≤40	PASS

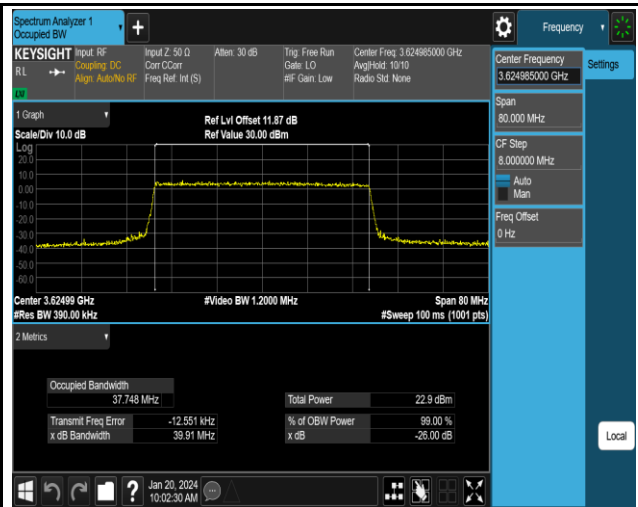
Test Graphs











NTNV_N48_PC3_30_40_M_TID6_Ant1#1

APPENDIX A.2: FREQUENCY STABILITY

Test Results

Frequency Error VS. Voltage

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Deviation (Hz)	Deviation (ppm)	Limit	Verdict
N48	30	40	DFT-PI2BPSK	M	Outer_Full	VL	-7.48	0.00	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	VN	-5.70	0.00	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	VH	2.06	0.00	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	VL	0.32	0.00	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	VN	4.72	0.00	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	VH	-3.14	0.00	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	VL	-11.90	0.00	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	VN	-4.31	0.00	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	VH	-10.22	0.00	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	VL	-6.02	0.00	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	VN	-9.05	0.00	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	VH	3.18	0.00	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	VL	-0.42	0.00	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	VN	-4.58	0.00	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	VH	-15.09	0.00	±2.5ppm	PASS

Frequency Error VS. Temperature

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit	Verdict
N48	30	40	DFT-PI2BPSK	M	Outer_Full	-30	-10.662577	-0.002941	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	-20	-5.845007	-0.001612	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	-10	-4.233943	-0.001168	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	0	-9.133819	-0.002520	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	10	-5.344274	-0.001474	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	20	-13.124738	-0.003621	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	30	3.797608	0.001048	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	40	-9.410143	-0.002596	±2.5ppm	PASS
N48	30	40	DFT-PI2BPSK	M	Outer_Full	50	-10.676060	-0.002945	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	-30	1.601287	0.000442	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	-20	-9.531201	-0.002629	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	-10	-0.860452	-0.000237	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	0	-7.749641	-0.002138	±2.5ppm	PASS

N48	30	40	DFT-QPSK	M	Outer_Full	10	-5.537270	-0.001528	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	20	5.694715	0.001571	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	30	-6.558868	-0.001809	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	40	-1.735302	-0.000479	±2.5ppm	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	50	-6.308500	-0.001740	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	-30	-7.808420	-0.002154	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	-20	-3.853891	-0.001063	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	-10	-10.941198	-0.003018	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	0	-2.916996	-0.000805	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	10	-2.930230	-0.000808	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	20	-3.806140	-0.001050	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	30	0.633626	0.000175	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	40	-4.592320	-0.001267	±2.5ppm	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	50	-8.228017	-0.002270	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	-30	-2.347622	-0.000648	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	-20	-8.021063	-0.002213	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	-10	-3.231943	-0.000892	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	0	-4.972930	-0.001372	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	10	-12.110796	-0.003341	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	20	-12.697331	-0.003503	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	30	-4.723064	-0.001303	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	40	-4.942823	-0.001364	±2.5ppm	PASS
N48	30	40	CP-QPSK	M	Outer_Full	50	-11.867659	-0.003274	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	-30	-3.030651	-0.000836	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	-20	-5.421103	-0.001495	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	-10	-0.709023	-0.000196	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	0	0.526018	0.000145	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	10	-8.336955	-0.002300	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	20	-6.168132	-0.001702	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	30	-8.595318	-0.002371	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	40	-2.467733	-0.000681	±2.5ppm	PASS
N48	30	40	CP-16QAM	M	Outer_Full	50	-3.916200	-0.001080	±2.5ppm	PASS

APPENDIX A.3: EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA

Test Results

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Power (dBm/10MHz)	EIRP (dBm/10MHz)	Limit (dBm/10MHz)	Verdict
N48	30	10	DFT-PI2BPSK	L	Outer_Full	15.24	21.24	23.01	PASS
N48	30	10	DFT-PI2BPSK	L	Inner_Full	16.39	22.39	23.01	PASS
N48	30	10	DFT-PI2BPSK	L	Edge_1RB_Left	15.72	21.72	23.01	PASS
N48	30	10	DFT-PI2BPSK	L	Edge_1RB_Right	15.82	21.82	23.01	PASS
N48	30	10	DFT-QPSK	L	Outer_Full	14.49	20.49	23.01	PASS
N48	30	10	DFT-QPSK	L	Inner_Full	16.27	22.27	23.01	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Left	15.33	21.33	23.01	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Right	15.83	21.83	23.01	PASS
N48	30	10	DFT-16QAM	L	Outer_Full	13.65	19.65	23.01	PASS
N48	30	10	DFT-16QAM	L	Inner_Full	15.13	21.13	23.01	PASS
N48	30	10	DFT-16QAM	L	Edge_1RB_Left	14.30	20.3	23.01	PASS
N48	30	10	DFT-16QAM	L	Edge_1RB_Right	14.51	20.51	23.01	PASS
N48	30	10	CP-QPSK	L	Outer_Full	12.86	18.86	23.01	PASS
N48	30	10	CP-QPSK	L	Inner_Full	16.87	22.87	23.01	PASS
N48	30	10	CP-QPSK	L	Edge_1RB_Left	13.61	19.61	23.01	PASS
N48	30	10	CP-QPSK	L	Edge_1RB_Right	13.15	19.15	23.01	PASS
N48	30	10	CP-16QAM	L	Outer_Full	12.57	18.57	23.01	PASS
N48	30	10	CP-16QAM	L	Inner_Full	14.17	20.17	23.01	PASS
N48	30	10	CP-16QAM	L	Edge_1RB_Left	13.28	19.28	23.01	PASS
N48	30	10	CP-16QAM	L	Edge_1RB_Right	13.58	19.58	23.01	PASS
N48	30	10	DFT-PI2BPSK	M	Outer_Full	15.18	21.18	23.01	PASS
N48	30	10	DFT-PI2BPSK	M	Inner_Full	16.28	22.28	23.01	PASS
N48	30	10	DFT-PI2BPSK	M	Edge_1RB_Left	15.78	21.78	23.01	PASS
N48	30	10	DFT-PI2BPSK	M	Edge_1RB_Right	16.13	22.13	23.01	PASS
N48	30	10	DFT-QPSK	M	Outer_Full	14.72	20.72	23.01	PASS
N48	30	10	DFT-QPSK	M	Inner_Full	16.19	22.19	23.01	PASS
N48	30	10	DFT-QPSK	M	Edge_1RB_Left	15.58	21.58	23.01	PASS
N48	30	10	DFT-QPSK	M	Edge_1RB_Right	15.63	21.63	23.01	PASS
N48	30	10	DFT-16QAM	M	Outer_Full	13.72	19.72	23.01	PASS
N48	30	10	DFT-16QAM	M	Inner_Full	15.32	21.32	23.01	PASS
N48	30	10	DFT-16QAM	M	Edge_1RB_Left	14.53	20.53	23.01	PASS

N48	30	10	DFT-16QAM	M	Edge_1RB_Right	14.39	20.39	23.01	PASS
N48	30	10	CP-QPSK	M	Outer_Full	12.64	18.64	23.01	PASS
N48	30	10	CP-QPSK	M	Inner_Full	14.83	20.83	23.01	PASS
N48	30	10	CP-QPSK	M	Edge_1RB_Left	13.46	19.46	23.01	PASS
N48	30	10	CP-QPSK	M	Edge_1RB_Right	13.65	19.65	23.01	PASS
N48	30	10	CP-16QAM	M	Outer_Full	12.75	18.75	23.01	PASS
N48	30	10	CP-16QAM	M	Inner_Full	14.31	20.31	23.01	PASS
N48	30	10	CP-16QAM	M	Edge_1RB_Left	13.65	19.65	23.01	PASS
N48	30	10	CP-16QAM	M	Edge_1RB_Right	13.42	19.42	23.01	PASS
N48	30	10	DFT-PI2BPSK	H	Outer_Full	15.23	21.23	23.01	PASS
N48	30	10	DFT-PI2BPSK	H	Inner_Full	16.27	22.27	23.01	PASS
N48	30	10	DFT-PI2BPSK	H	Edge_1RB_Left	15.85	21.85	23.01	PASS
N48	30	10	DFT-PI2BPSK	H	Edge_1RB_Right	15.63	21.63	23.01	PASS
N48	30	10	DFT-QPSK	H	Outer_Full	14.66	20.66	23.01	PASS
N48	30	10	DFT-QPSK	H	Inner_Full	15.95	21.95	23.01	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Left	15.38	21.38	23.01	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Right	15.06	21.06	23.01	PASS
N48	30	10	DFT-16QAM	H	Outer_Full	13.86	19.86	23.01	PASS
N48	30	10	DFT-16QAM	H	Inner_Full	14.94	20.94	23.01	PASS
N48	30	10	DFT-16QAM	H	Edge_1RB_Left	14.58	20.58	23.01	PASS
N48	30	10	DFT-16QAM	H	Edge_1RB_Right	14.01	20.01	23.01	PASS
N48	30	10	CP-QPSK	H	Outer_Full	12.46	18.46	23.01	PASS
N48	30	10	CP-QPSK	H	Inner_Full	14.57	20.57	23.01	PASS
N48	30	10	CP-QPSK	H	Edge_1RB_Left	13.50	19.5	23.01	PASS
N48	30	10	CP-QPSK	H	Edge_1RB_Right	13.56	19.56	23.01	PASS
N48	30	10	CP-16QAM	H	Outer_Full	12.53	18.53	23.01	PASS
N48	30	10	CP-16QAM	H	Inner_Full	13.95	19.95	23.01	PASS
N48	30	10	CP-16QAM	H	Edge_1RB_Left	13.55	19.55	23.01	PASS
N48	30	10	CP-16QAM	H	Edge_1RB_Right	13.23	19.23	23.01	PASS
N48	30	15	DFT-PI2BPSK	L	Outer_Full	14.68	20.68	23.01	PASS
N48	30	15	DFT-PI2BPSK	L	Inner_Full	16.41	22.41	23.01	PASS
N48	30	15	DFT-PI2BPSK	L	Edge_1RB_Left	16.06	22.06	23.01	PASS
N48	30	15	DFT-PI2BPSK	L	Edge_1RB_Right	15.90	21.9	23.01	PASS
N48	30	15	DFT-QPSK	L	Outer_Full	14.42	20.42	23.01	PASS
N48	30	15	DFT-QPSK	L	Inner_Full	16.55	22.55	23.01	PASS
N48	30	15	DFT-QPSK	L	Edge_1RB_Left	15.61	21.61	23.01	PASS
N48	30	15	DFT-QPSK	L	Edge_1RB_Right	16.01	22.01	23.01	PASS
N48	30	15	DFT-16QAM	L	Outer_Full	13.26	19.26	23.01	PASS

N48	30	15	DFT-16QAM	L	Inner_Full	15.52	21.52	23.01	PASS
N48	30	15	DFT-16QAM	L	Edge_1RB_Left	14.95	20.95	23.01	PASS
N48	30	15	DFT-16QAM	L	Edge_1RB_Right	15.24	21.24	23.01	PASS
N48	30	15	CP-QPSK	L	Outer_Full	12.16	18.16	23.01	PASS
N48	30	15	CP-QPSK	L	Inner_Full	15.18	21.18	23.01	PASS
N48	30	15	CP-QPSK	L	Edge_1RB_Left	13.86	19.86	23.01	PASS
N48	30	15	CP-QPSK	L	Edge_1RB_Right	13.65	19.65	23.01	PASS
N48	30	15	CP-16QAM	L	Outer_Full	12.37	18.37	23.01	PASS
N48	30	15	CP-16QAM	L	Inner_Full	14.49	20.49	23.01	PASS
N48	30	15	CP-16QAM	L	Edge_1RB_Left	13.60	19.6	23.01	PASS
N48	30	15	CP-16QAM	L	Edge_1RB_Right	13.68	19.68	23.01	PASS
N48	30	15	DFT-PI2BPSK	M	Outer_Full	14.95	20.95	23.01	PASS
N48	30	15	DFT-PI2BPSK	M	Inner_Full	16.65	22.65	23.01	PASS
N48	30	15	DFT-PI2BPSK	M	Edge_1RB_Left	16.32	22.32	23.01	PASS
N48	30	15	DFT-PI2BPSK	M	Edge_1RB_Right	16.18	22.18	23.01	PASS
N48	30	15	DFT-QPSK	M	Outer_Full	14.59	20.59	23.01	PASS
N48	30	15	DFT-QPSK	M	Inner_Full	16.62	22.62	23.01	PASS
N48	30	15	DFT-QPSK	M	Edge_1RB_Left	15.90	21.9	23.01	PASS
N48	30	15	DFT-QPSK	M	Edge_1RB_Right	15.93	21.93	23.01	PASS
N48	30	15	DFT-16QAM	M	Outer_Full	13.45	19.45	23.01	PASS
N48	30	15	DFT-16QAM	M	Inner_Full	15.45	21.45	23.01	PASS
N48	30	15	DFT-16QAM	M	Edge_1RB_Left	14.80	20.8	23.01	PASS
N48	30	15	DFT-16QAM	M	Edge_1RB_Right	14.89	20.89	23.01	PASS
N48	30	15	CP-QPSK	M	Outer_Full	12.39	18.39	23.01	PASS
N48	30	15	CP-QPSK	M	Inner_Full	15.20	21.2	23.01	PASS
N48	30	15	CP-QPSK	M	Edge_1RB_Left	13.88	19.88	23.01	PASS
N48	30	15	CP-QPSK	M	Edge_1RB_Right	13.95	19.95	23.01	PASS
N48	30	15	CP-16QAM	M	Outer_Full	12.47	18.47	23.01	PASS
N48	30	15	CP-16QAM	M	Inner_Full	14.41	20.41	23.01	PASS
N48	30	15	CP-16QAM	M	Edge_1RB_Left	13.87	19.87	23.01	PASS
N48	30	15	CP-16QAM	M	Edge_1RB_Right	13.93	19.93	23.01	PASS
N48	30	15	DFT-PI2BPSK	H	Outer_Full	16.31	22.31	23.01	PASS
N48	30	15	DFT-PI2BPSK	H	Inner_Full	16.63	22.63	23.01	PASS
N48	30	15	DFT-PI2BPSK	H	Edge_1RB_Left	16.52	22.52	23.01	PASS
N48	30	15	DFT-PI2BPSK	H	Edge_1RB_Right	16.36	22.36	23.01	PASS
N48	30	15	DFT-QPSK	H	Outer_Full	15.59	21.59	23.01	PASS
N48	30	15	DFT-QPSK	H	Inner_Full	16.95	22.95	23.01	PASS
N48	30	15	DFT-QPSK	H	Edge_1RB_Left	16.79	22.79	23.01	PASS

N48	30	15	DFT-QPSK	H	Edge_1RB_Right	16.79	22.79	23.01	PASS
N48	30	15	DFT-16QAM	H	Outer_Full	15.14	21.14	23.01	PASS
N48	30	15	DFT-16QAM	H	Inner_Full	16.72	22.72	23.01	PASS
N48	30	15	DFT-16QAM	H	Edge_1RB_Left	16.14	22.14	23.01	PASS
N48	30	15	DFT-16QAM	H	Edge_1RB_Right	15.77	21.77	23.01	PASS
N48	30	15	CP-QPSK	H	Outer_Full	14.25	20.25	23.01	PASS
N48	30	15	CP-QPSK	H	Inner_Full	15.42	21.42	23.01	PASS
N48	30	15	CP-QPSK	H	Edge_1RB_Left	15.59	21.59	23.01	PASS
N48	30	15	CP-QPSK	H	Edge_1RB_Right	14.98	20.98	23.01	PASS
N48	30	15	CP-16QAM	H	Outer_Full	13.39	19.39	23.01	PASS
N48	30	15	CP-16QAM	H	Inner_Full	14.70	20.7	23.01	PASS
N48	30	15	CP-16QAM	H	Edge_1RB_Left	14.05	20.05	23.01	PASS
N48	30	15	CP-16QAM	H	Edge_1RB_Right	15.07	21.07	23.01	PASS
N48	30	20	DFT-PI2BPSK	L	Outer_Full	13.72	19.72	23.01	PASS
N48	30	20	DFT-PI2BPSK	L	Inner_Full	15.88	21.88	23.01	PASS
N48	30	20	DFT-PI2BPSK	L	Edge_1RB_Left	16.13	22.13	23.01	PASS
N48	30	20	DFT-PI2BPSK	L	Edge_1RB_Right	16.14	22.14	23.01	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	13.27	19.27	23.01	PASS
N48	30	20	DFT-QPSK	L	Inner_Full	16.20	22.2	23.01	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Left	15.49	21.49	23.01	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Right	15.83	21.83	23.01	PASS
N48	30	20	DFT-16QAM	L	Outer_Full	12.09	18.09	23.01	PASS
N48	30	20	DFT-16QAM	L	Inner_Full	14.88	20.88	23.01	PASS
N48	30	20	DFT-16QAM	L	Edge_1RB_Left	14.68	20.68	23.01	PASS
N48	30	20	DFT-16QAM	L	Edge_1RB_Right	14.71	20.71	23.01	PASS
N48	30	20	CP-QPSK	L	Outer_Full	11.10	17.1	23.01	PASS
N48	30	20	CP-QPSK	L	Inner_Full	13.01	19.01	23.01	PASS
N48	30	20	CP-QPSK	L	Edge_1RB_Left	13.66	19.66	23.01	PASS
N48	30	20	CP-QPSK	L	Edge_1RB_Right	13.55	19.55	23.01	PASS
N48	30	20	CP-16QAM	L	Outer_Full	11.21	17.21	23.01	PASS
N48	30	20	CP-16QAM	L	Inner_Full	12.87	18.87	23.01	PASS
N48	30	20	CP-16QAM	L	Edge_1RB_Left	13.93	19.93	23.01	PASS
N48	30	20	CP-16QAM	L	Edge_1RB_Right	13.70	19.7	23.01	PASS
N48	30	20	DFT-PI2BPSK	M	Outer_Full	13.94	19.94	23.01	PASS
N48	30	20	DFT-PI2BPSK	M	Inner_Full	16.14	22.14	23.01	PASS
N48	30	20	DFT-PI2BPSK	M	Edge_1RB_Left	16.33	22.33	23.01	PASS
N48	30	20	DFT-PI2BPSK	M	Edge_1RB_Right	16.14	22.14	23.01	PASS

N48	30	20	DFT-QPSK	M	Outer_Full	13.52	19.52	23.01	PASS
N48	30	20	DFT-QPSK	M	Inner_Full	16.00	22	23.01	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Left	15.65	21.65	23.01	PASS
N48	30	20	DFT-QPSK	M	Edge_1RB_Right	15.57	21.57	23.01	PASS
N48	30	20	DFT-16QAM	M	Outer_Full	12.53	18.53	23.01	PASS
N48	30	20	DFT-16QAM	M	Inner_Full	15.15	21.15	23.01	PASS
N48	30	20	DFT-16QAM	M	Edge_1RB_Left	14.75	20.75	23.01	PASS
N48	30	20	DFT-16QAM	M	Edge_1RB_Right	14.58	20.58	23.01	PASS
N48	30	20	CP-QPSK	M	Outer_Full	11.67	17.67	23.01	PASS
N48	30	20	CP-QPSK	M	Inner_Full	13.08	19.08	23.01	PASS
N48	30	20	CP-QPSK	M	Edge_1RB_Left	13.85	19.85	23.01	PASS
N48	30	20	CP-QPSK	M	Edge_1RB_Right	13.71	19.71	23.01	PASS
N48	30	20	CP-16QAM	M	Outer_Full	11.34	17.34	23.01	PASS
N48	30	20	CP-16QAM	M	Inner_Full	13.04	19.04	23.01	PASS
N48	30	20	CP-16QAM	M	Edge_1RB_Left	13.74	19.74	23.01	PASS
N48	30	20	CP-16QAM	M	Edge_1RB_Right	13.61	19.61	23.01	PASS
N48	30	20	DFT-PI2BPSK	H	Outer_Full	13.90	19.9	23.01	PASS
N48	30	20	DFT-PI2BPSK	H	Inner_Full	16.06	22.06	23.01	PASS
N48	30	20	DFT-PI2BPSK	H	Edge_1RB_Left	16.34	22.34	23.01	PASS
N48	30	20	DFT-PI2BPSK	H	Edge_1RB_Right	16.67	22.67	23.01	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	13.37	19.37	23.01	PASS
N48	30	20	DFT-QPSK	H	Inner_Full	16.28	22.28	23.01	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Left	15.77	21.77	23.01	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Right	15.57	21.57	23.01	PASS
N48	30	20	DFT-16QAM	H	Outer_Full	12.52	18.52	23.01	PASS
N48	30	20	DFT-16QAM	H	Inner_Full	15.05	21.05	23.01	PASS
N48	30	20	DFT-16QAM	H	Edge_1RB_Left	14.87	20.87	23.01	PASS
N48	30	20	CP-QPSK	H	Outer_Full	11.64	17.64	23.01	PASS
N48	30	20	CP-QPSK	H	Inner_Full	13.20	19.2	23.01	PASS
N48	30	20	CP-QPSK	H	Edge_1RB_Left	13.85	19.85	23.01	PASS
N48	30	20	CP-QPSK	H	Edge_1RB_Right	13.69	19.69	23.01	PASS
N48	30	20	CP-16QAM	H	Outer_Full	11.28	17.28	23.01	PASS
N48	30	20	CP-16QAM	H	Inner_Full	13.18	19.18	23.01	PASS
N48	30	20	CP-16QAM	H	Edge_1RB_Left	13.83	19.83	23.01	PASS
N48	30	20	CP-16QAM	H	Edge_1RB_Right	13.72	19.72	23.01	PASS
N48	30	30	DFT-PI2BPSK	L	Outer_Full	12.24	18.24	23.01	PASS
N48	30	30	DFT-PI2BPSK	L	Inner_Full	15.13	21.13	23.01	PASS
N48	30	30	DFT-PI2BPSK	L	Edge_1RB_Left	16.11	22.11	23.01	PASS

N48	30	30	DFT-PI2BPSK	L	Edge_1RB_Right	16.01	22.01	23.01	PASS
N48	30	30	DFT-QPSK	L	Outer_Full	11.85	17.85	23.01	PASS
N48	30	30	DFT-QPSK	L	Inner_Full	15.27	21.27	23.01	PASS
N48	30	30	DFT-QPSK	L	Edge_1RB_Left	15.95	21.95	23.01	PASS
N48	30	30	DFT-QPSK	L	Edge_1RB_Right	15.55	21.55	23.01	PASS
N48	30	30	DFT-16QAM	L	Outer_Full	10.74	16.74	23.01	PASS
N48	30	30	DFT-16QAM	L	Inner_Full	14.26	20.26	23.01	PASS
N48	30	30	DFT-16QAM	L	Edge_1RB_Left	14.71	20.71	23.01	PASS
N48	30	30	DFT-16QAM	L	Edge_1RB_Right	14.59	20.59	23.01	PASS
N48	30	30	CP-QPSK	L	Outer_Full	9.64	15.64	23.01	PASS
N48	30	30	CP-QPSK	L	Inner_Full	13.51	19.51	23.01	PASS
N48	30	30	CP-QPSK	L	Edge_1RB_Left	13.86	19.86	23.01	PASS
N48	30	30	CP-QPSK	L	Edge_1RB_Right	13.54	19.54	23.01	PASS
N48	30	30	CP-16QAM	L	Outer_Full	9.66	15.66	23.01	PASS
N48	30	30	CP-16QAM	L	Inner_Full	13.25	19.25	23.01	PASS
N48	30	30	CP-16QAM	L	Edge_1RB_Left	13.61	19.61	23.01	PASS
N48	30	30	CP-16QAM	L	Edge_1RB_Right	13.50	19.5	23.01	PASS
N48	30	30	DFT-PI2BPSK	M	Outer_Full	12.66	18.66	23.01	PASS
N48	30	30	DFT-PI2BPSK	M	Inner_Full	15.53	21.53	23.01	PASS
N48	30	30	DFT-PI2BPSK	M	Edge_1RB_Left	16.47	22.47	23.01	PASS
N48	30	30	DFT-PI2BPSK	M	Edge_1RB_Right	16.00	22	23.01	PASS
N48	30	30	DFT-QPSK	M	Outer_Full	12.12	18.12	23.01	PASS
N48	30	30	DFT-QPSK	M	Inner_Full	15.62	21.62	23.01	PASS
N48	30	30	DFT-QPSK	M	Edge_1RB_Left	15.70	21.7	23.01	PASS
N48	30	30	DFT-QPSK	M	Edge_1RB_Right	15.44	21.44	23.01	PASS
N48	30	30	DFT-16QAM	M	Outer_Full	11.26	17.26	23.01	PASS
N48	30	30	DFT-16QAM	M	Inner_Full	14.80	20.8	23.01	PASS
N48	30	30	DFT-16QAM	M	Edge_1RB_Left	15.02	21.02	23.01	PASS
N48	30	30	DFT-16QAM	M	Edge_1RB_Right	14.75	20.75	23.01	PASS
N48	30	30	CP-QPSK	M	Inner_Full	13.82	19.82	23.01	PASS
N48	30	30	CP-QPSK	M	Edge_1RB_Left	13.63	19.63	23.01	PASS
N48	30	30	CP-QPSK	M	Edge_1RB_Right	13.92	19.92	23.01	PASS
N48	30	30	CP-16QAM	M	Outer_Full	9.77	15.77	23.01	PASS
N48	30	30	CP-16QAM	M	Inner_Full	13.31	19.31	23.01	PASS
N48	30	30	CP-16QAM	M	Edge_1RB_Left	13.66	19.66	23.01	PASS
N48	30	30	CP-16QAM	M	Edge_1RB_Right	13.75	19.75	23.01	PASS
N48	30	30	DFT-PI2BPSK	H	Outer_Full	12.51	18.51	23.01	PASS
N48	30	30	DFT-PI2BPSK	H	Inner_Full	15.90	21.9	23.01	PASS

N48	30	30	DFT-PI2BPSK	H	Edge_1RB_Left	16.34	22.34	23.01	PASS
N48	30	30	DFT-PI2BPSK	H	Edge_1RB_Right	16.26	22.26	23.01	PASS
N48	30	30	DFT-QPSK	H	Outer_Full	12.39	18.39	23.01	PASS
N48	30	30	DFT-QPSK	H	Inner_Full	15.89	21.89	23.01	PASS
N48	30	30	DFT-QPSK	H	Edge_1RB_Left	16.07	22.07	23.01	PASS
N48	30	30	DFT-QPSK	H	Edge_1RB_Right	15.45	21.45	23.01	PASS
N48	30	30	DFT-16QAM	H	Outer_Full	11.47	17.47	23.01	PASS
N48	30	30	DFT-16QAM	H	Inner_Full	14.82	20.82	23.01	PASS
N48	30	30	DFT-16QAM	H	Edge_1RB_Left	15.08	21.08	23.01	PASS
N48	30	30	DFT-16QAM	H	Edge_1RB_Right	14.71	20.71	23.01	PASS
N48	30	30	CP-QPSK	H	Outer_Full	9.87	15.87	23.01	PASS
N48	30	30	CP-QPSK	H	Inner_Full	14.04	20.04	23.01	PASS
N48	30	30	CP-QPSK	H	Edge_1RB_Left	13.81	19.81	23.01	PASS
N48	30	30	CP-QPSK	H	Edge_1RB_Right	14.01	20.01	23.01	PASS
N48	30	30	CP-16QAM	H	Outer_Full	9.87	15.87	23.01	PASS
N48	30	30	CP-16QAM	H	Inner_Full	13.60	19.6	23.01	PASS
N48	30	30	CP-16QAM	H	Edge_1RB_Left	14.87	20.87	23.01	PASS
N48	30	30	CP-16QAM	H	Edge_1RB_Right	14.00	20	23.01	PASS
N48	30	40	DFT-PI2BPSK	L	Outer_Full	11.40	17.4	23.01	PASS
N48	30	40	DFT-PI2BPSK	L	Inner_Full	14.51	20.51	23.01	PASS
N48	30	40	DFT-PI2BPSK	L	Edge_1RB_Left	16.46	22.46	23.01	PASS
N48	30	40	DFT-PI2BPSK	L	Edge_1RB_Right	16.31	22.31	23.01	PASS
N48	30	40	DFT-QPSK	L	Outer_Full	10.81	16.81	23.01	PASS
N48	30	40	DFT-QPSK	L	Inner_Full	14.27	20.27	23.01	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Left	15.80	21.8	23.01	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Right	15.62	21.62	23.01	PASS
N48	30	40	DFT-16QAM	L	Outer_Full	9.79	15.79	23.01	PASS
N48	30	40	DFT-16QAM	L	Inner_Full	13.66	19.66	23.01	PASS
N48	30	40	DFT-16QAM	L	Edge_1RB_Left	14.79	20.79	23.01	PASS
N48	30	40	DFT-16QAM	L	Edge_1RB_Right	15.14	21.14	23.01	PASS
N48	30	40	CP-QPSK	L	Outer_Full	8.37	14.37	23.01	PASS
N48	30	40	CP-QPSK	L	Inner_Full	12.85	18.85	23.01	PASS
N48	30	40	CP-QPSK	L	Edge_1RB_Left	13.76	19.76	23.01	PASS
N48	30	40	CP-QPSK	L	Edge_1RB_Right	13.74	19.74	23.01	PASS
N48	30	40	CP-16QAM	L	Outer_Full	8.40	14.4	23.01	PASS
N48	30	40	CP-16QAM	L	Inner_Full	12.13	18.13	23.01	PASS
N48	30	40	CP-16QAM	L	Edge_1RB_Left	13.70	19.7	23.01	PASS
N48	30	40	CP-16QAM	L	Edge_1RB_Right	13.94	19.94	23.01	PASS

N48	30	40	DFT-PI2BPSK	M	Outer_Full	11.41	17.41	23.01	PASS
N48	30	40	DFT-PI2BPSK	M	Inner_Full	14.33	20.33	23.01	PASS
N48	30	40	DFT-PI2BPSK	M	Edge_1RB_Left	16.19	22.19	23.01	PASS
N48	30	40	DFT-PI2BPSK	M	Edge_1RB_Right	16.15	22.15	23.01	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	10.73	16.73	23.01	PASS
N48	30	40	DFT-QPSK	M	Inner_Full	14.38	20.38	23.01	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Left	15.62	21.62	23.01	PASS
N48	30	40	DFT-QPSK	M	Edge_1RB_Right	15.64	21.64	23.01	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	9.81	15.81	23.01	PASS
N48	30	40	DFT-16QAM	M	Inner_Full	13.47	19.47	23.01	PASS
N48	30	40	DFT-16QAM	M	Edge_1RB_Left	14.66	20.66	23.01	PASS
N48	30	40	DFT-16QAM	M	Edge_1RB_Right	14.95	20.95	23.01	PASS
N48	30	40	CP-QPSK	M	Outer_Full	8.61	14.61	23.01	PASS
N48	30	40	CP-QPSK	M	Inner_Full	12.66	18.66	23.01	PASS
N48	30	40	CP-QPSK	M	Edge_1RB_Left	13.60	19.6	23.01	PASS
N48	30	40	CP-QPSK	M	Edge_1RB_Right	13.42	19.42	23.01	PASS
N48	30	40	CP-16QAM	M	Outer_Full	8.32	14.32	23.01	PASS
N48	30	40	CP-16QAM	M	Inner_Full	12.23	18.23	23.01	PASS
N48	30	40	CP-16QAM	M	Edge_1RB_Left	13.76	19.76	23.01	PASS
N48	30	40	CP-16QAM	M	Edge_1RB_Right	13.47	19.47	23.01	PASS
N48	30	40	DFT-PI2BPSK	H	Outer_Full	12.04	18.04	23.01	PASS
N48	30	40	DFT-PI2BPSK	H	Inner_Full	14.99	20.99	23.01	PASS
N48	30	40	DFT-PI2BPSK	H	Edge_1RB_Left	16.61	22.61	23.01	PASS
N48	30	40	DFT-PI2BPSK	H	Edge_1RB_Right	16.50	22.5	23.01	PASS
N48	30	40	DFT-QPSK	H	Outer_Full	11.07	17.07	23.01	PASS
N48	30	40	DFT-QPSK	H	Inner_Full	14.57	20.57	23.01	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Left	16.68	22.68	23.01	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Right	16.09	22.09	23.01	PASS
N48	30	40	DFT-16QAM	H	Outer_Full	10.37	16.37	23.01	PASS
N48	30	40	DFT-16QAM	H	Inner_Full	13.41	19.41	23.01	PASS
N48	30	40	DFT-16QAM	H	Edge_1RB_Left	16.01	22.01	23.01	PASS
N48	30	40	DFT-16QAM	H	Edge_1RB_Right	14.96	20.96	23.01	PASS
N48	30	40	CP-QPSK	H	Outer_Full	8.62	14.62	23.01	PASS
N48	30	40	CP-QPSK	H	Inner_Full	13.56	19.56	23.01	PASS
N48	30	40	CP-QPSK	H	Edge_1RB_Left	14.87	20.87	23.01	PASS
N48	30	40	CP-QPSK	H	Edge_1RB_Right	14.22	20.22	23.01	PASS
N48	30	40	CP-16QAM	H	Outer_Full	8.79	14.79	23.01	PASS

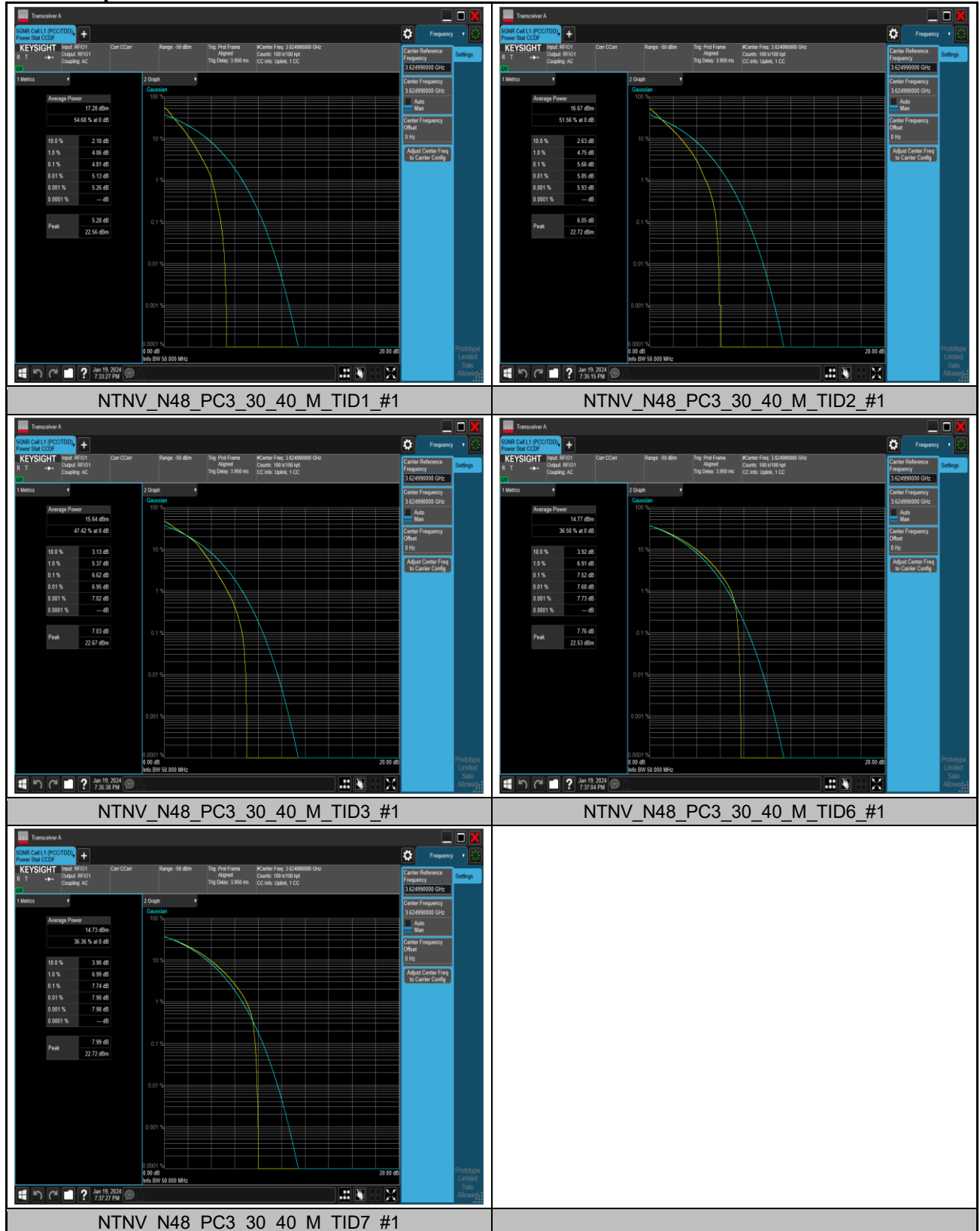
N48	30	40	CP-16QAM	H	Inner_Full	12.59	18.59	23.01	PASS
N48	30	40	CP-16QAM	H	Edge_1RB_Left	14.61	20.61	23.01	PASS
N48	30	40	CP-16QAM	H	Edge_1RB_Right	14.04	20.04	23.01	PASS

APPENDIX A.4: PEAK TO AVERAGE RATIO (CCDF)

Test Results

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Limit	Verdict
N48	30	40	DFT-PI2BPSK	M	Outer_Full	-2.27	≤13	PASS
N48	30	40	DFT-QPSK	M	Outer_Full	-1.42	≤13	PASS
N48	30	40	DFT-16QAM	M	Outer_Full	-0.46	≤13	PASS
N48	30	40	CP-QPSK	M	Outer_Full	0.44	≤13	PASS
N48	30	40	CP-16QAM	M	Outer_Full	0.66	≤13	PASS

Test Graphs



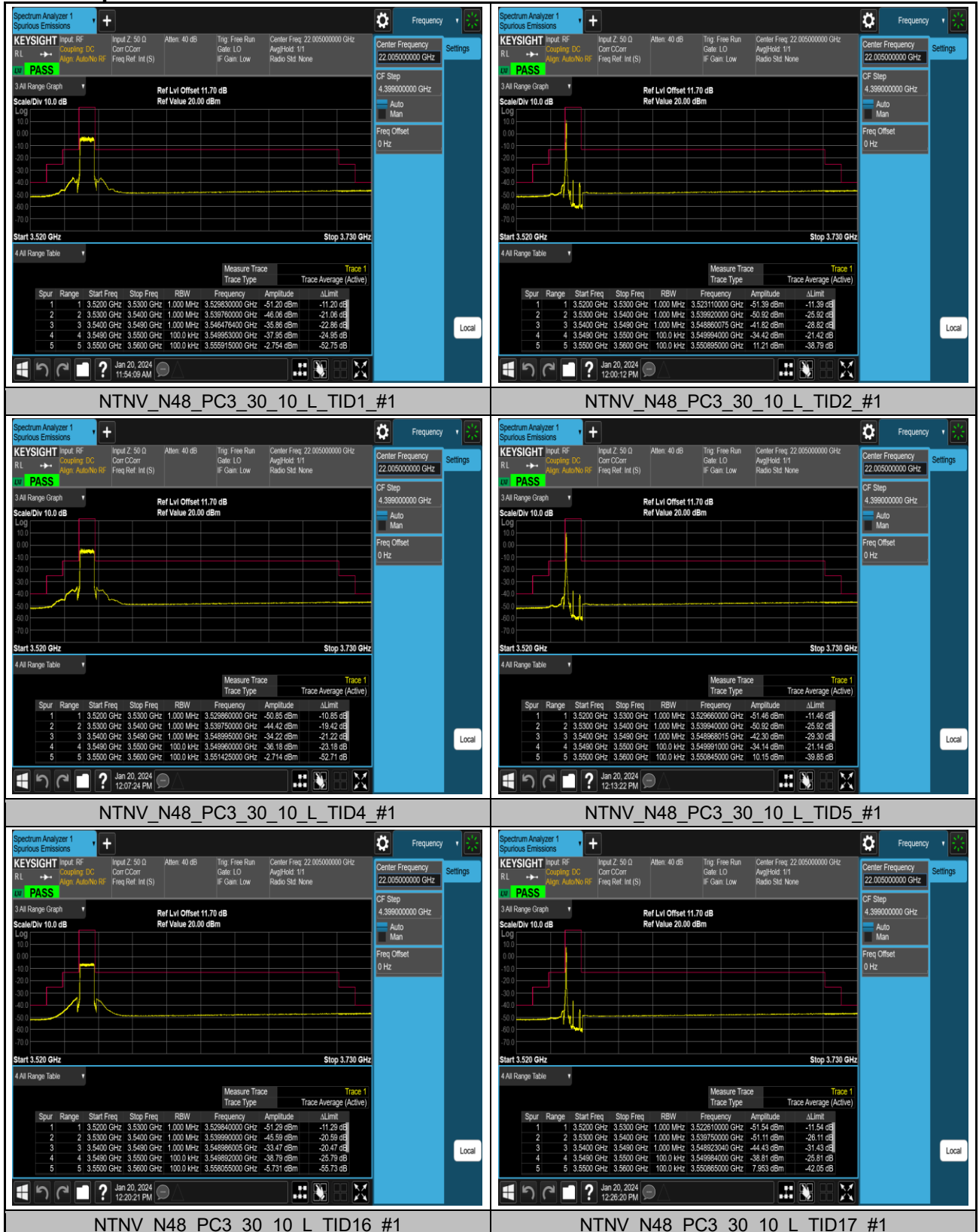
APPENDIX A.5: BAND EDGE

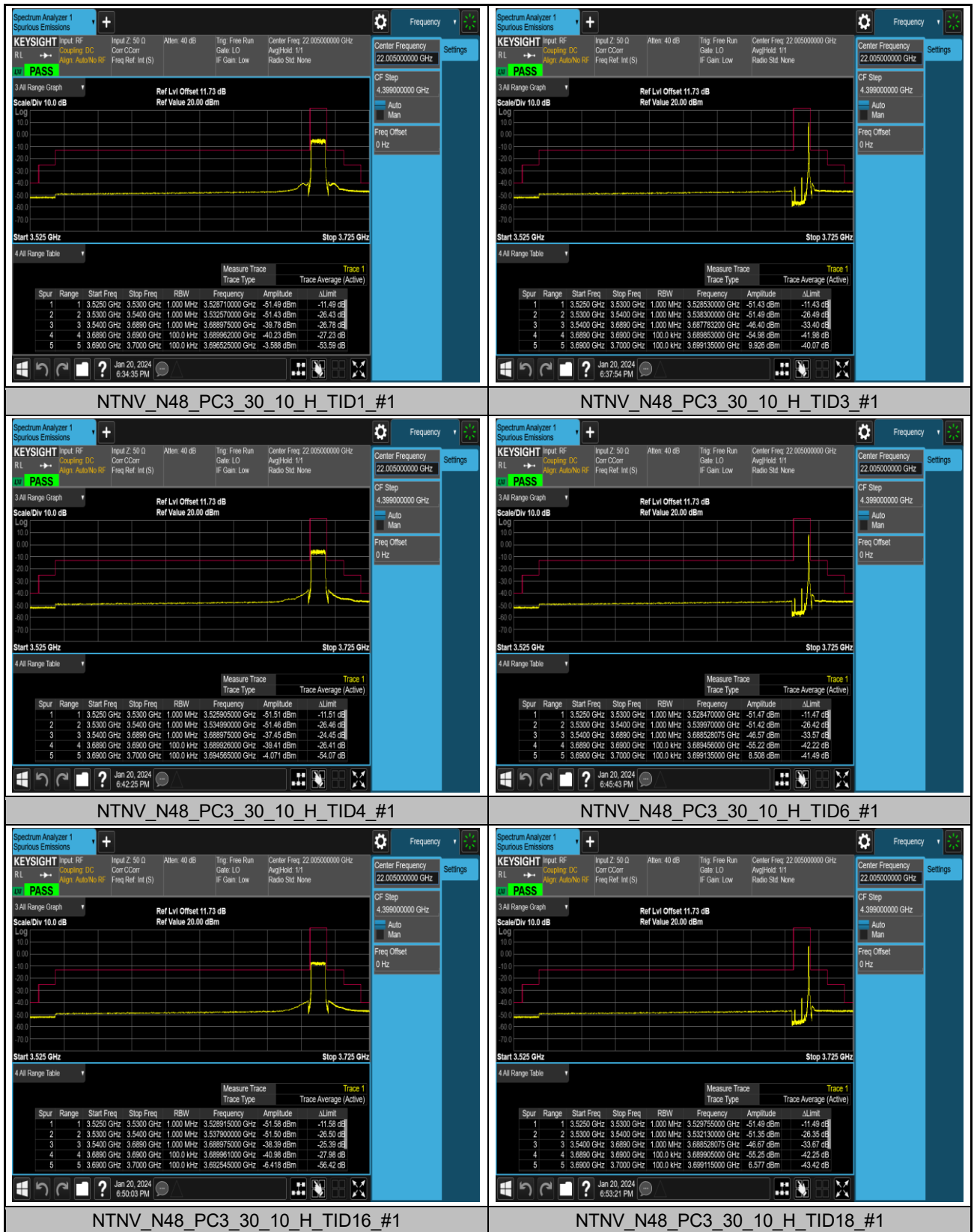
Test Results

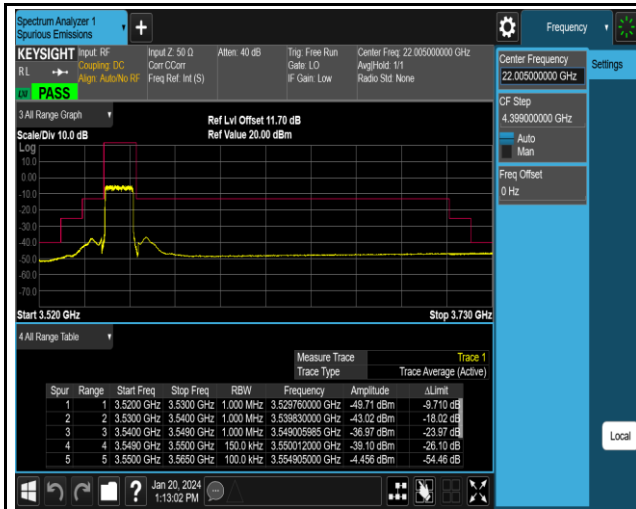
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Margin	Verdict
N48	30	10	DFT-PI2BPSK	L	Outer_Full	6.52	PASS
N48	30	10	DFT-PI2BPSK	L	Edge_1RB_Left	6.58	PASS
N48	30	10	DFT-QPSK	L	Outer_Full	6.66	PASS
N48	30	10	DFT-QPSK	L	Edge_1RB_Left	6.71	PASS
N48	30	10	CP-QPSK	L	Outer_Full	6.65	PASS
N48	30	10	CP-QPSK	L	Edge_1RB_Left	6.64	PASS
N48	30	10	DFT-PI2BPSK	H	Outer_Full	6.33	PASS
N48	30	10	DFT-PI2BPSK	H	Edge_1RB_Right	6.48	PASS
N48	30	10	DFT-QPSK	H	Outer_Full	6.16	PASS
N48	30	10	DFT-QPSK	H	Edge_1RB_Right	6.35	PASS
N48	30	10	CP-QPSK	H	Outer_Full	6.42	PASS
N48	30	10	CP-QPSK	H	Edge_1RB_Right	6.43	PASS
N48	30	15	DFT-PI2BPSK	L	Outer_Full	6.58	PASS
N48	30	15	DFT-PI2BPSK	L	Edge_1RB_Left	6.62	PASS
N48	30	15	DFT-QPSK	L	Outer_Full	6.67	PASS
N48	30	15	DFT-QPSK	L	Edge_1RB_Left	6.60	PASS
N48	30	15	CP-QPSK	L	Outer_Full	6.60	PASS
N48	30	15	CP-QPSK	L	Edge_1RB_Left	6.58	PASS
N48	30	15	DFT-PI2BPSK	H	Outer_Full	6.00	PASS
N48	30	15	DFT-PI2BPSK	H	Edge_1RB_Right	6.42	PASS
N48	30	15	DFT-QPSK	H	Outer_Full	5.02	PASS
N48	30	15	DFT-QPSK	H	Edge_1RB_Right	6.40	PASS
N48	30	15	CP-QPSK	H	Outer_Full	5.72	PASS
N48	30	15	CP-QPSK	H	Edge_1RB_Right	6.54	PASS
N48	30	20	DFT-PI2BPSK	L	Outer_Full	6.64	PASS
N48	30	20	DFT-PI2BPSK	L	Edge_1RB_Left	6.60	PASS
N48	30	20	DFT-QPSK	L	Outer_Full	6.50	PASS
N48	30	20	DFT-QPSK	L	Edge_1RB_Left	6.64	PASS
N48	30	20	CP-QPSK	L	Outer_Full	6.65	PASS
N48	30	20	CP-QPSK	L	Edge_1RB_Left	6.57	PASS
N48	30	20	DFT-PI2BPSK	H	Outer_Full	5.81	PASS
N48	30	20	DFT-PI2BPSK	H	Edge_1RB_Right	6.43	PASS
N48	30	20	DFT-QPSK	H	Outer_Full	5.23	PASS
N48	30	20	DFT-QPSK	H	Edge_1RB_Right	6.52	PASS
N48	30	20	CP-QPSK	H	Outer_Full	5.27	PASS
N48	30	20	CP-QPSK	H	Edge_1RB_Right	6.33	PASS
N48	30	30	DFT-PI2BPSK	L	Outer_Full	5.33	PASS
N48	30	30	DFT-PI2BPSK	L	Edge_1RB_Left	6.47	PASS
N48	30	30	DFT-QPSK	L	Outer_Full	3.27	PASS
N48	30	30	DFT-QPSK	L	Edge_1RB_Left	6.40	PASS
N48	30	30	CP-QPSK	L	Outer_Full	4.33	PASS
N48	30	30	CP-QPSK	L	Edge_1RB_Left	6.44	PASS
N48	30	30	DFT-PI2BPSK	H	Outer_Full	5.26	PASS
N48	30	30	DFT-PI2BPSK	H	Edge_1RB_Right	6.47	PASS

N48	30	30	DFT-QPSK	H	Outer_Full	4.49	PASS
N48	30	30	DFT-QPSK	H	Edge_1RB_Right	6.42	PASS
N48	30	30	CP-QPSK	H	Outer_Full	4.61	PASS
N48	30	30	CP-QPSK	H	Edge_1RB_Right	6.53	PASS
N48	30	40	DFT-PI2BPSK	L	Outer_Full	3.99	PASS
N48	30	40	DFT-PI2BPSK	L	Edge_1RB_Left	6.57	PASS
N48	30	40	DFT-QPSK	L	Outer_Full	4.15	PASS
N48	30	40	DFT-QPSK	L	Edge_1RB_Left	6.61	PASS
N48	30	40	CP-QPSK	L	Outer_Full	4.10	PASS
N48	30	40	CP-QPSK	L	Edge_1RB_Left	6.67	PASS
N48	30	40	DFT-PI2BPSK	H	Outer_Full	3.89	PASS
N48	30	40	DFT-PI2BPSK	H	Edge_1RB_Right	6.57	PASS
N48	30	40	DFT-QPSK	H	Outer_Full	4.55	PASS
N48	30	40	DFT-QPSK	H	Edge_1RB_Right	6.52	PASS
N48	30	40	CP-QPSK	H	Outer_Full	3.95	PASS
N48	30	40	CP-QPSK	H	Edge_1RB_Right	6.36	PASS

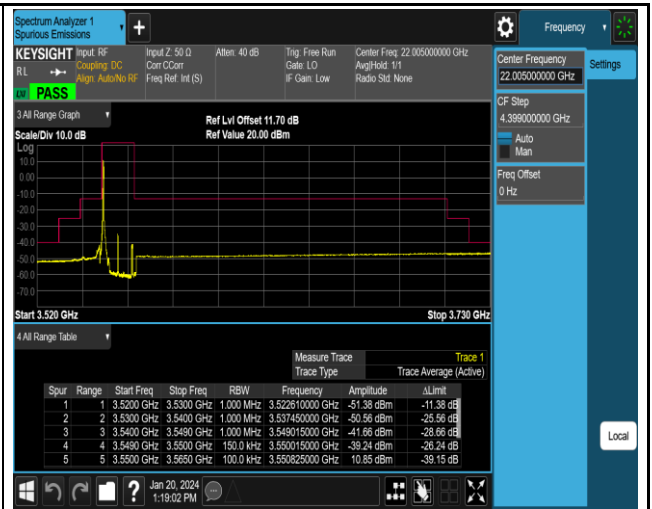
Test Graphs



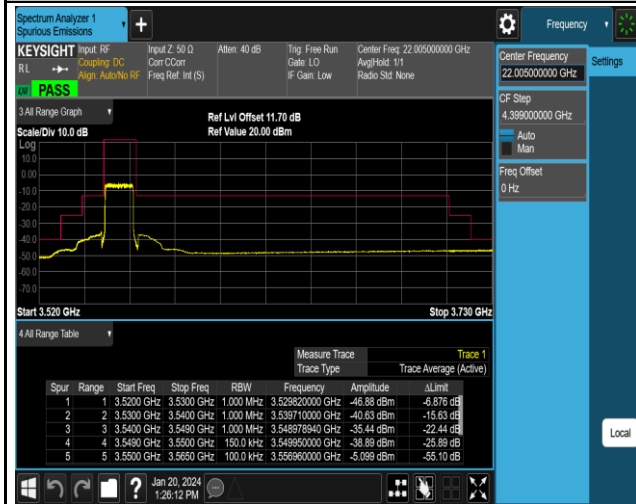




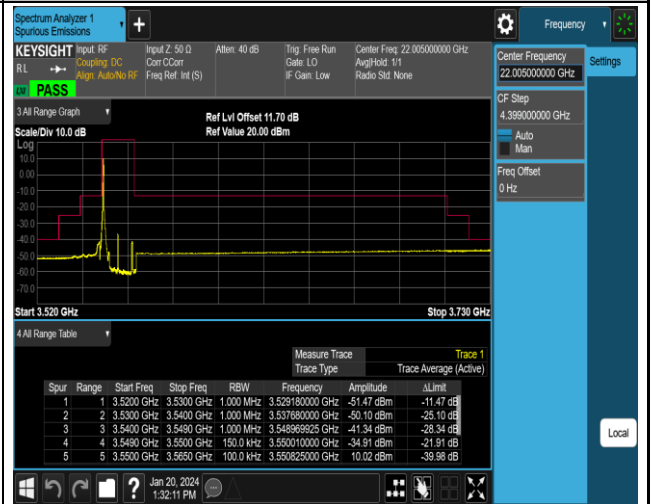
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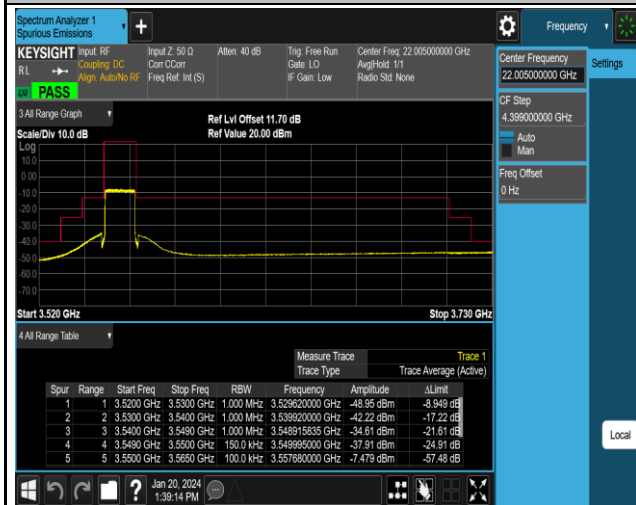
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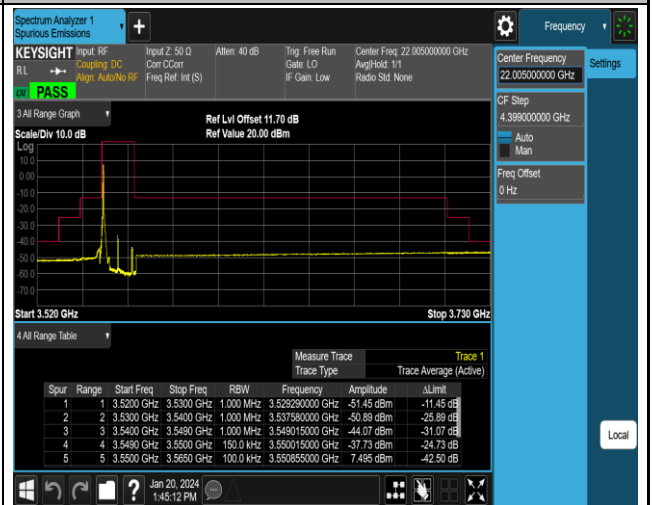
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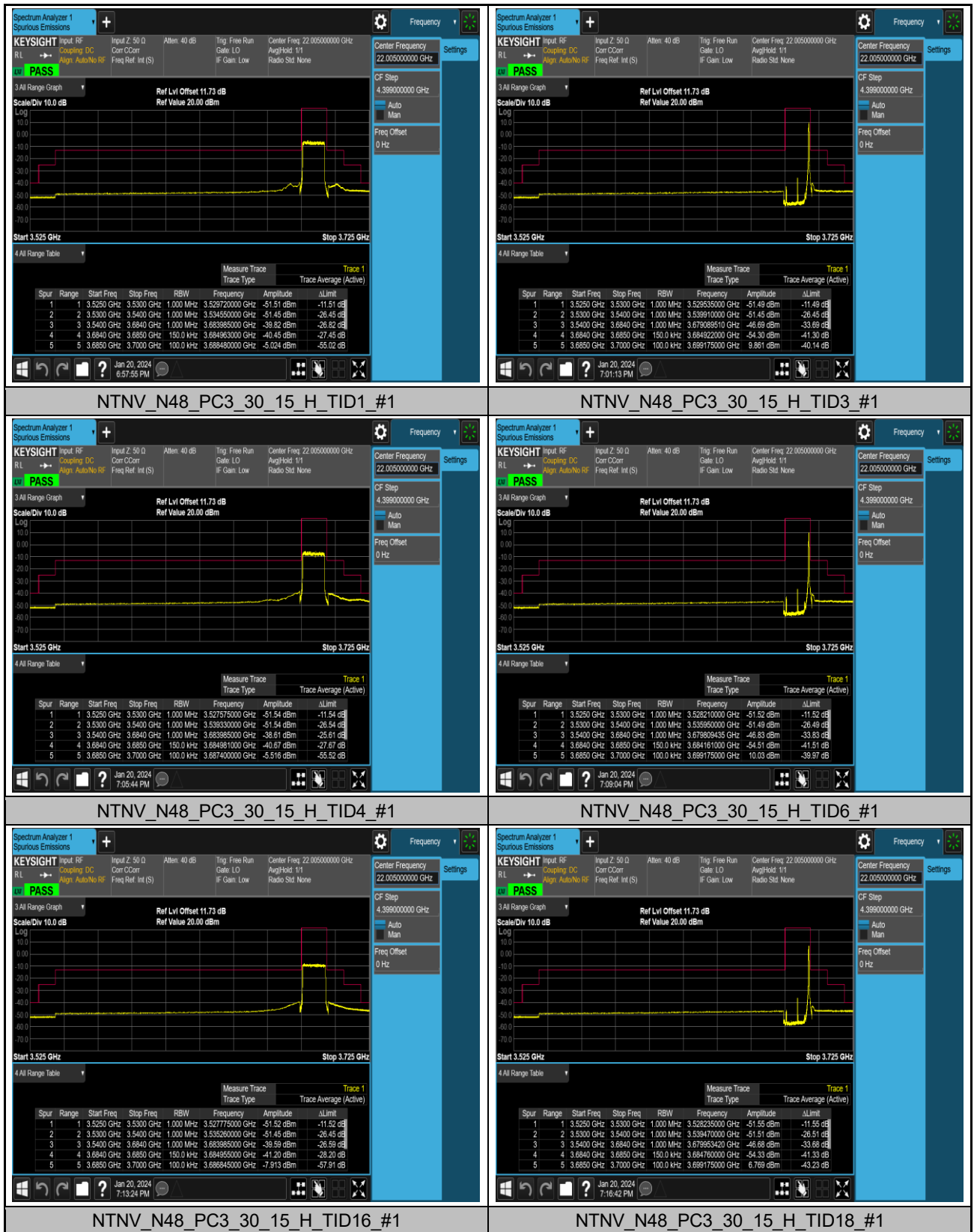
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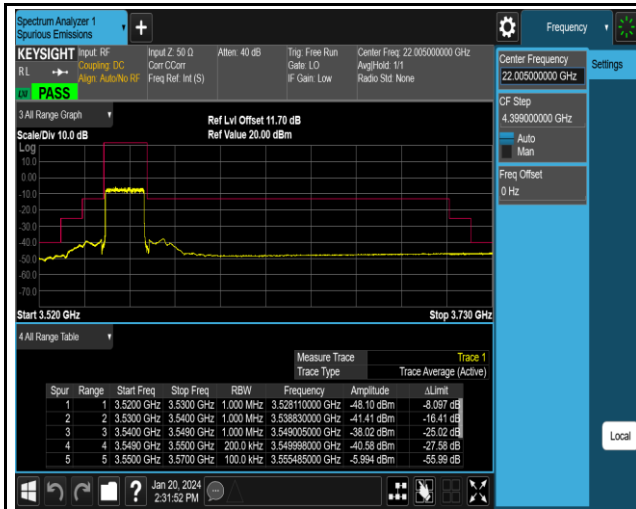


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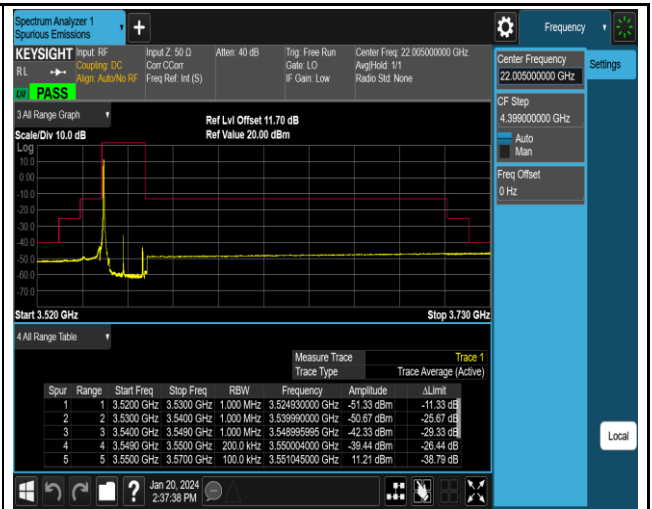


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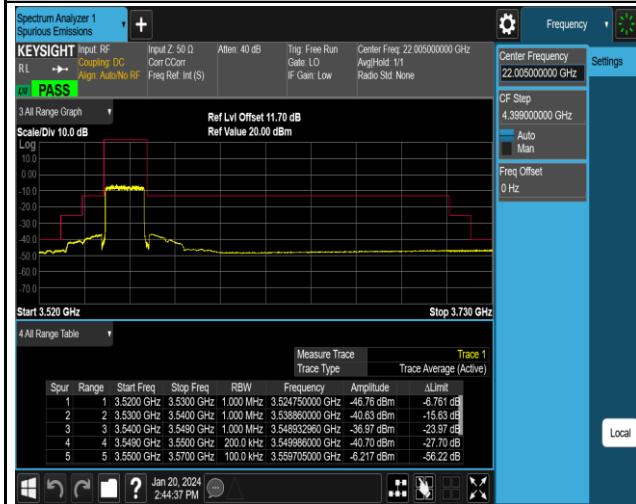




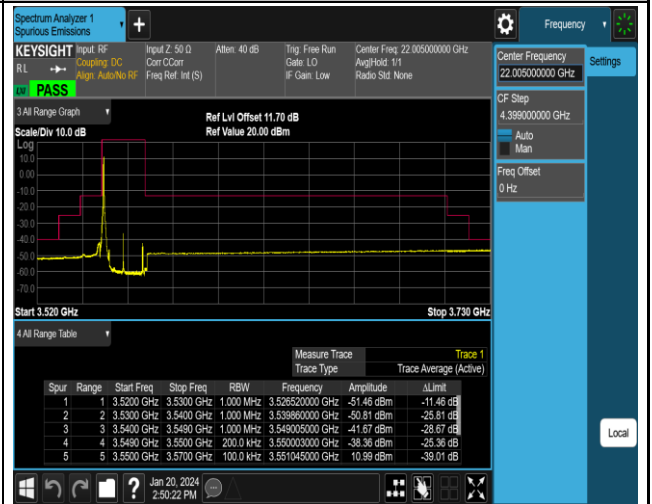
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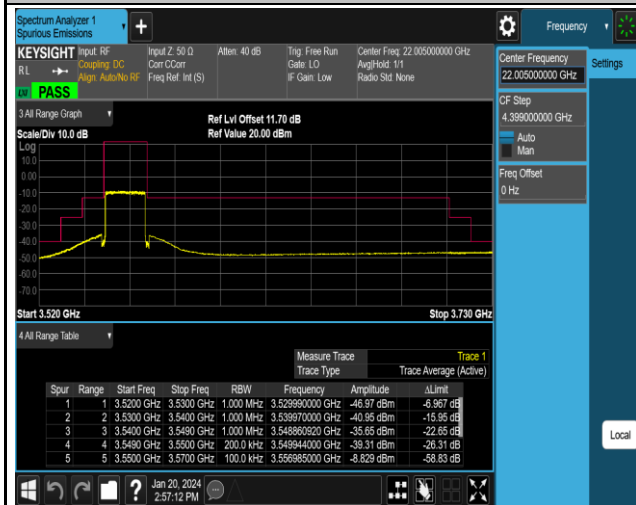
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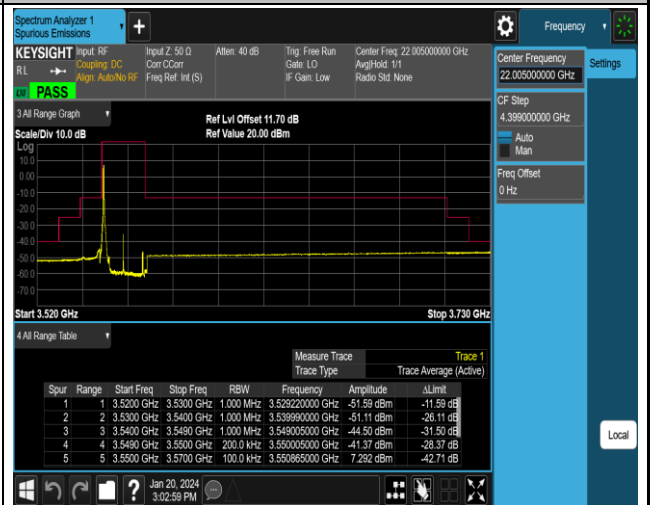
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NTNV_N48_PC3_30_20_L_TID5_#1



NTNV_N48_PC3_30_20_L_TID16_#1



NTNV_N48_PC3_30_20_L_TID17_#1