FCC RF Test Report

APPLICANT	:	Shenzhen Gongjin Electronics Co.,Ltd.
EQUIPMENT	:	Nokia Smart Node
BRAND NAME	:	Nokia
MODEL NAME	:	Nokia Multi-Standard Smart Node N77(SN5I77)
FCC ID	:	V4VSN5I77
STANDARD	:	47 CFR Part 27 Subpart O (3700-3980MHz)
CLASSIFICATION	:	Licensed Non-Broadcast Station Transmitter (TNB)
TEST DATE(S)	:	Aug. 26, 2024 ~ Sep 27, 2024

We, Sporton International Inc. (KunShan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 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. (KunShan), the test report shall not be reproduced except in full.

Note:

1. The Nokia Multi Standard Smart Node N77 can work in SA mode (5G Only): n77 MIMO (Model: SN5I77; FCC ID: V4VSN5I77).
2. The Nokia Multi Standard Smart Node N77 can work in NSA mode (5G+4G), provided that smart node 4G (Model SN4IBN; FCC ID: V4V1SN4IBN) devices and 5G (Model : SN5I77; FCC ID: V4VSN5I77) devices need to be used together(n77 MIMO+ B2/B14/B66 MIMO).

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG472906	Rev. 01	Initial issue of report	Dec. 18, 2024

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§27.50(j)(2)	Equivalent Isotropic Radiated Power (5G NR n77)	EIRP < 1640Watt		
3.5	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.6	§2.1051 §27.53(l)(1)	Conducted Band Edge Measurement (5G NR n77)	< 43+10log10(P[Watts])	PASS	-
3.7	§2.1051 §27.53(l)(2)	Conducted Spurious Emission (5G NR n77)	< 43+10log10(P[Watts])	PASS	-
4.4	§2.1053 §27.53(l)(2)	Radiated Spurious Emission (5G NR n77)	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 31.57 dB at 7682.00 MHz

Note: This is a variant report, the change note could be referred to the Nokia Multi-Standard Smart Node N77(SN5I77)_ Class II Permissive Change letter which is exhibit separately. According to the change, only the related test cases were verified from original report FG331457.

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

1 General Description

1.1 Applicant

Shenzhen Gongjin Electronics Co.,Ltd.
No.2 Danzi North Road, Kengzi Street, Pingshan District, Shenzhen, Guangdong, 518122, P.R. China

1.2 Manufacturer

Nokia Solutions and Networks Oy
Karakaari 7, 02610 Espoo, Finland

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Nokia Smart Node
Brand Name	Nokia
Model Name	Nokia Multi-Standard Smart Node N77(SN5I77)
FCC ID	V4VSN5I77
HW Version	V0.2
SW Version	1.2.26.47.77
EUT Stage	Identical Prototype

Remark: There are three types of EUT, sample 1 is SA mode (5G only), sample 2 and sample 3 are both NSA mode (5G devices + 4G devices), the differences between the sample 2 and 3 is that the LTE interface board is replaced. According to the differences, we choose sample 1 to full test and the sample 2 is verified the worst RSE mode for the differences

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency	5G NR n77: 3700 MHz ~ 3980 MHz
SCS	30kHz
Bandwidth	n77 (30kHz): 10 / 20 / 30 / 40 / 50 / 60 / 70 / 80 / 90 / 100MHz
Antenna Gain	**<Ant. 1>** 5G NR n77: 6.14 dBi **<Ant. 2>** 5G NR n77: 8.16 dBi
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM

Remark:

1. 5GNR Tx is non-signaling mode (Control tool ”QRCT”).
2. The base station only support 5GNR full RB.
3. For SISO & UL MIMO mode, the testing has assessed only UL MIMO mode by referring to the higher output power. The UL MIMO mode is completely uncorrelated, so the directional gain is selected the maximum gain among all antennas.
4. The device supported NSA combinations, only combination of LTE worst band (Nokia Smart Node (SN4IBN)) and 5G NR n77(sample 1) test data is shown in the report.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum EIRP and Emission Designator

5G NR n77 UL MIMO for SCS 30kHz		QPSK		16QAM / 64QAM / 256QAM	
BW (MHz)	Frequency Range (MHz)	Maximum EIRP(W)	Emission Designator (99%OBW)	Maximum EIRP(W)	Emission Designator (99%OBW)
10	3705.00 ~ 3975.00	3.5941	8M77G7D	3.7074	8M67W7D
20	3710.01 ~ 3969.99	3.6143	18M7G7D	3.6185	18M7W7D
30	3715.02 ~ 3964.98	3.5978	28M2G7D	3.5772	28M3W7D

Note: All modulations have been tested, and only the worst test results of PSK & QAM are shown in the report.

1.7 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	03CH04-KS TH01-KS	CN1257	314309

1.8 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH04-KS	AUDIX	E3	6.2009-8-24al

1.9 Applicable Standards

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

- 47 CFR Part 27
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

	X Plane	Y Plane	Z Plane
Orthogonal Planes of EUT			

Test Items	5G NR	Bandwidth (MHz)										Modulation					RB #			Test Channel		
		10	20	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256 QAM	1	Partial	Full	L	M	H
Max. Output Power	n77	v	v	v								-	v	v	v	v	-	-	v	v	v	v
26dB and 99% Bandwidth	n77	v	v	v								-	v	v	v	v	-	-	v		v	
Conducted Band Edge	n77	v	v	v								-	v	v	v	v	-	-	v	v		v
Conducted Spurious Emission	n77	v	v	v								-	v	v	v	v	-	-	v	v	v	v
E.I.R.P	n77	v	v	v								-	v	v	v	v	-	-	v	v	v	v
Radiated Spurious Emission	n77	Worst Case																			v	
Note	1. The mark "**v** " means that this configuration is chosen for testing 2. The mark "-" means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported. 4. Frequency Stability：Normal Voltage = 12V; Low Voltage =10V; High Voltage =14V.																					

2.2 Connection Diagram of Test System

This example is connection diagram of EUT test configurations.

. For detail, please refer to test mode configuration and setup photographs for each test item.

2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	Lenovo	G480	QDS-BRCM1050I	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
3.	Nokia Smart Node(SN4IBN)	Nokia	SN4IBN	V4V1SN4IBN	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 6.50 dB.

Example :

Offset(dB) = RF cable loss(dB).

=6.50 (dB)

2.5 Frequency List of Low/Middle/High Channels

5G n77 (30kHz) Channel and Frequency List				
BW [MHz]	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
30	Channel	647668	656000	664332
	Frequency	3715.02	3840	3964.98
20	Channel	647334	656000	664666
	Frequency	3710.01	3840	3969.99
10	Channel	647000	656000	665000
	Frequency	3705	3840	3975

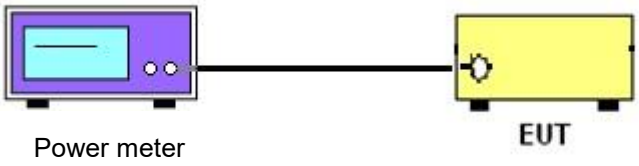
3 Conducted Test Items

3.1 Measuring Instruments

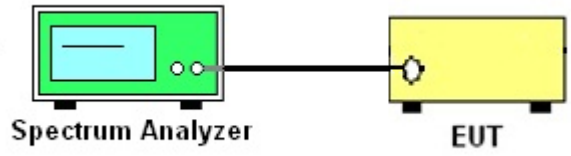
See list of measuring instruments of this test report.

3.2 Test Setup

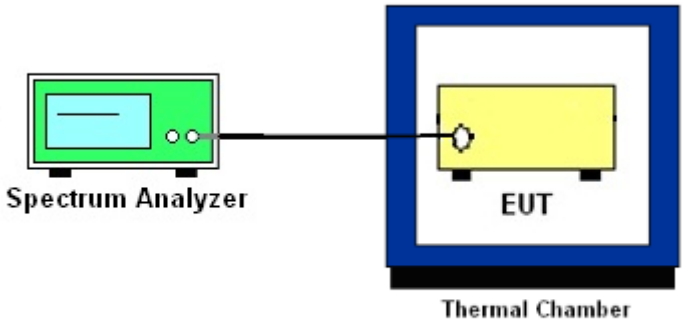
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and EIRP

3.4.1 Description of the Conducted Output Power Measurement and EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The power of each fixed or base station transmitting in the 3700–3980 MHz band and situated in any geographic location is limited to an EIRP of 1640 Watts/MHz.

According to KDB 412172 D01 Power Approach,

EIRP = P_T + G_T – L_C, ERP = EIRP -2.15, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the Power meter.
3. Set EUT at maximum power.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the Power meter.

3.5 Occupied Bandwidth

3.5.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.5.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.4
2. The EUT was connected to spectrum analyzer.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.6 Conducted Band Edge

3.6.1 Description of Conducted Band Edge Measurement

27.53(l)(1)

For base station operations in the 3700–3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

3.6.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used or a narrower RBW was used (generally limited to no less than 1% of the OBW) and the measured power was integrated over the full required measurement bandwidth.
6. Set spectrum analyzer with RMS detector.
7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
8. Checked that all the results comply with the emission limit line.

   Example:

   The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

   = P(W)- [43 + 10log(P)] (dB)

   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB) = -13dBm.

3.7 Conducted Spurious Emission

3.7.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.7.2 Test Procedures

1. The testing follows ANSI C63.26 section 5.7
2. The EUT was connected to spectrum analyzer.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

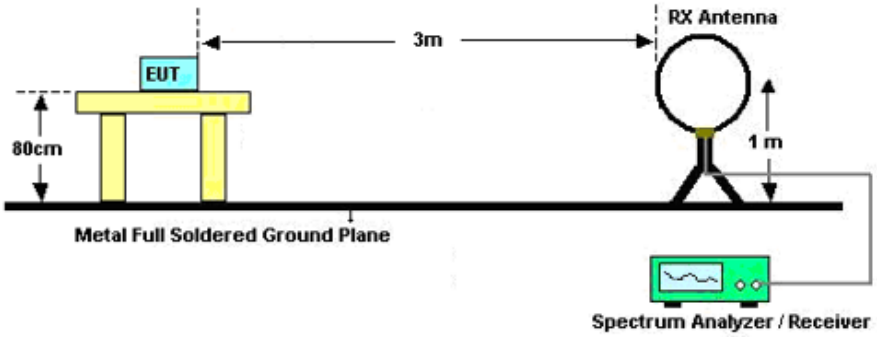
4 Radiated Test Items

4.1 Measuring Instruments

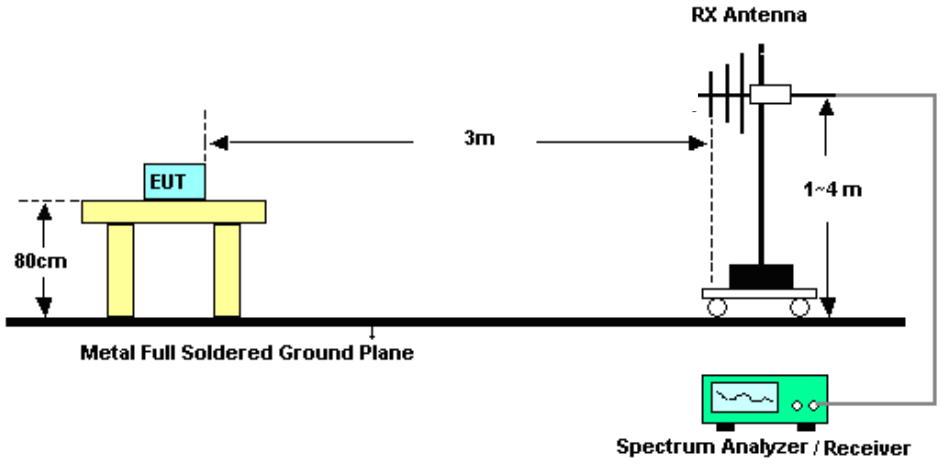
See list of measuring instruments of this test report.

4.2 Test Setup

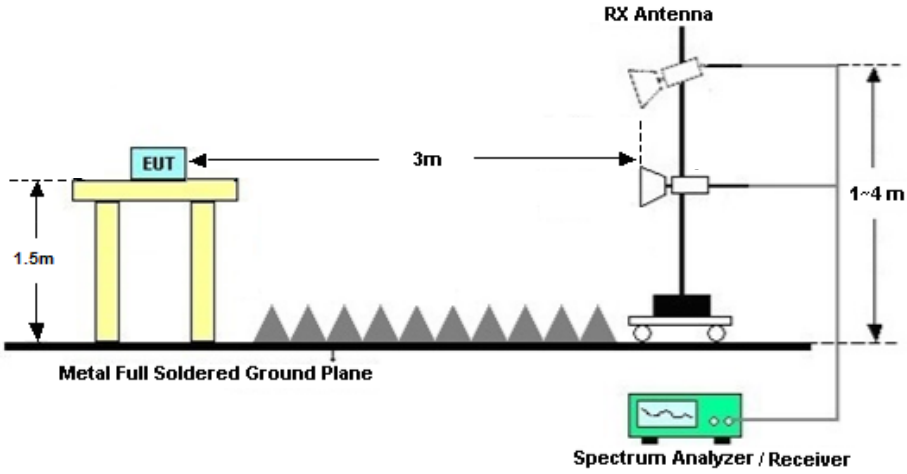
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 11, 2023	Aug. 27, 2024~ Sep. 27, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2024	Aug. 27, 2024~ Sep. 27, 2024	Jan. 01, 2025	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2024	Aug. 27, 2024~ Sep. 27, 2024	Jan. 01, 2025	Conducted (TH01-KS)
Temperature &humidity chamber	Hongzhan	LP-150U	H20140114 40	-40~+150°C 20%~95%RH	Jul. 04, 2024	Aug. 27, 2024~ Sep. 27, 2024	Jul. 03, 2025	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 11, 2023	Aug. 26, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11 2023	Aug. 26, 2024	Sep. 10, 2024	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Dec. 06, 2023	Aug. 26, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Oct. 23, 2023	Aug. 26, 2024	Oct. 22, 2024	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Aug. 26, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 03, 2024	Aug. 26, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40GA	060728	18~40GHz	Jan. 02, 2024	Aug. 26, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz-18Ghz	Oct. 11, 2023	Aug. 26, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
Amplifier	EM	EM01G18GA	060892	1Ghz-18Ghz	Oct. 11, 2023	Aug. 26, 2024	Oct. 10, 2024	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Aug. 26, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Aug. 26, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Aug. 26, 2024	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

6 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Conducted Spurious Emission & Bandedge	**±2.22 dB**
Occupied Channel Bandwidth	**±0.1%**
Conducted Power	**±0.50 dB**
Peak to Average Ratio	**±0.46 dB**
Frequency Stability	**±0.4 Hz**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.83dB**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.83dB**

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.82dB**

---------- THE END ----------

Appendix A. Test Results of Conducted Test

Test Engineer :	Smile Wang	**Temperature :**	22~23℃
		Relative Humidity :	40~42%

R1 n77

Transmitter Conducted Output Power And EIRP, (GT - LC)=8.16dB

BW	Channel	Frequency MHz	Power	Gain	EIRP (W)	Modulation
10M	647000	3705	27.36	8.16	3.5648	QPSK
	656000	3840	27.40	8.16	3.5941	QPSK
	665000	3975	27.20	8.16	3.4322	QPSK
20M	647334	3710.01	27.42	8.16	3.6143	QPSK
	656000	3840	27.36	8.16	3.5621	QPSK
	664666	3969.99	27.10	8.16	3.3554	QPSK
30M	647668	3715.02	27.40	8.16	3.5978	QPSK
	656000	3840	27.30	8.16	3.5122	QPSK
	664332	3964.98	27.21	8.16	3.4417	QPSK
10M	647000	3705	27.42	8.16	3.6102	16QAM
	656000	3840	27.53	8.16	3.7074	16QAM
	665000	3975	27.32	8.16	3.5323	16QAM
20M	647334	3710.01	27.36	8.16	3.5648	16QAM
	656000	3840	27.29	8.16	3.5084	16QAM
	664666	3969.99	27.35	8.16	3.5533	16QAM
30M	647668	3715.02	27.38	8.16	3.5772	16QAM
	656000	3840	27.02	8.16	3.2932	16QAM
	664332	3964.98	26.96	8.16	3.2511	16QAM
10M	647000	3705	27.40	8.16	3.5978	64QAM
	656000	3840	27.40	8.16	3.5980	64QAM
	665000	3975	27.39	8.16	3.5896	64QAM
20M	647334	3710.01	27.43	8.16	3.6185	64QAM
	656000	3840	27.22	8.16	3.4480	64QAM
	664666	3969.99	27.37	8.16	3.5734	64QAM
30M	647668	3715.02	26.99	8.16	3.2706	64QAM
	656000	3840	27.14	8.16	3.3888	64QAM
	664332	3964.98	27.27	8.16	3.4917	64QAM
10M	647000	3705	27.37	8.16	3.5689	256QAM
	656000	3840	27.35	8.16	3.5566	256QAM
	665000	3975	27.19	8.16	3.4282	256QAM
20M	647334	3710.01	27.40	8.16	3.5937	256QAM
	656000	3840	27.37	8.16	3.5689	256QAM
	664666	3969.99	27.15	8.16	3.3940	256QAM
30M	647668	3715.02	27.22	8.16	3.4484	256QAM
	656000	3840	27.17	8.16	3.4091	256QAM
	664332	3964.98	27.06	8.16	3.3300	256QAM

26DB Bandwidth

Mode	FR1 n77 : 26dB BW(MHz) / CP			
ANT.	Ant2			
BW	10MHz			
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	9.53	9.51	9.33	9.59

ANT.	Ant1			
BW	10MHz			
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	9.57	9.71	9.47	9.65

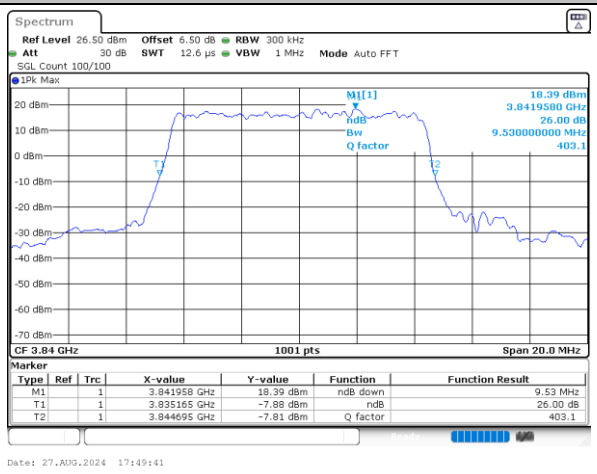
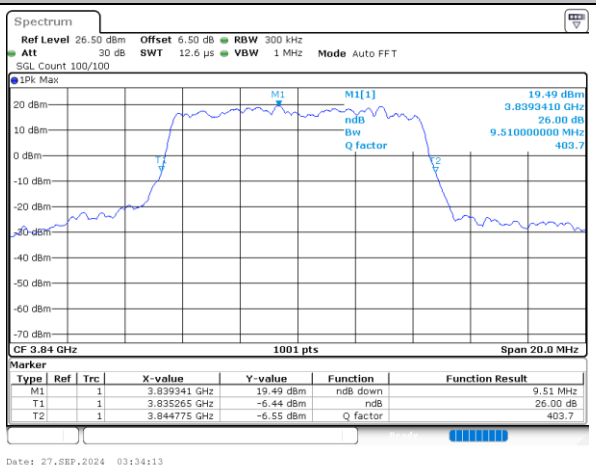
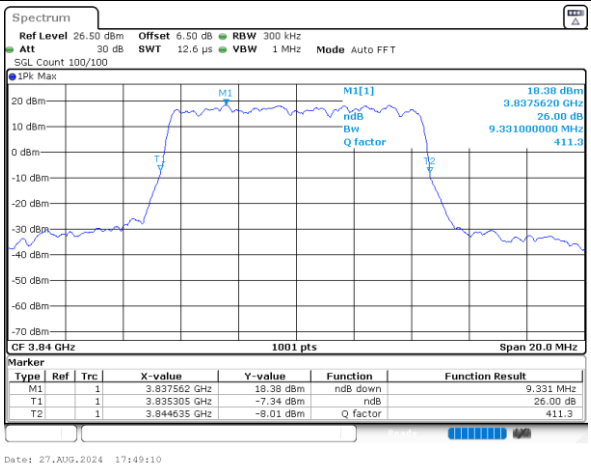
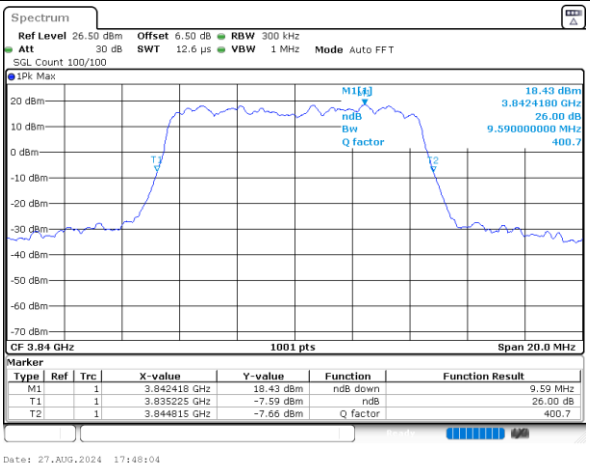
Mode	FR1 n77 : 26dB BW(MHz) / CP			
ANT.	Ant2			
BW	20MHz			
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	20.46	20.62	20.50	20.38

ANT.	Ant1			
BW	20MHz			
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	20.38	20.46	20.46	20.38

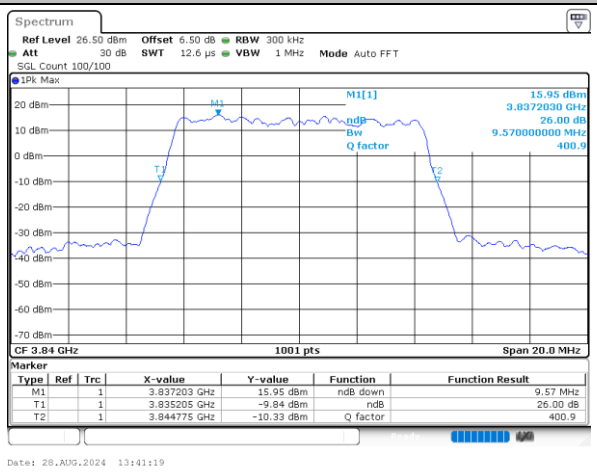
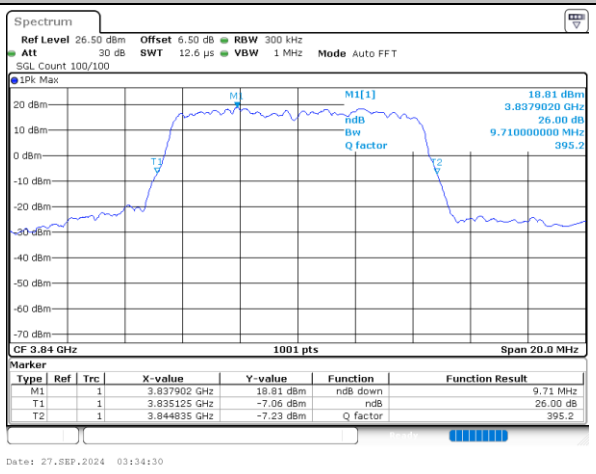
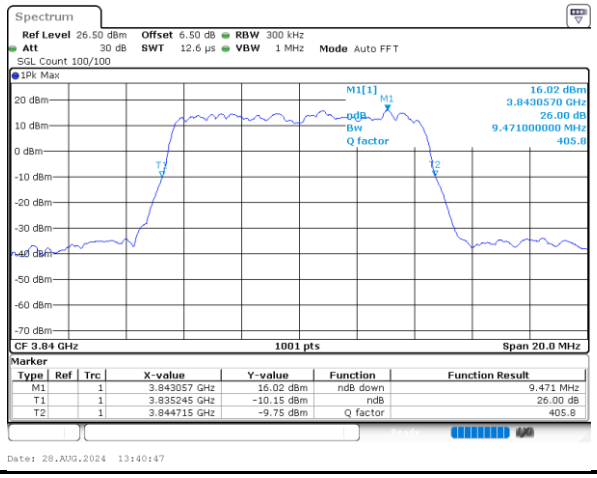
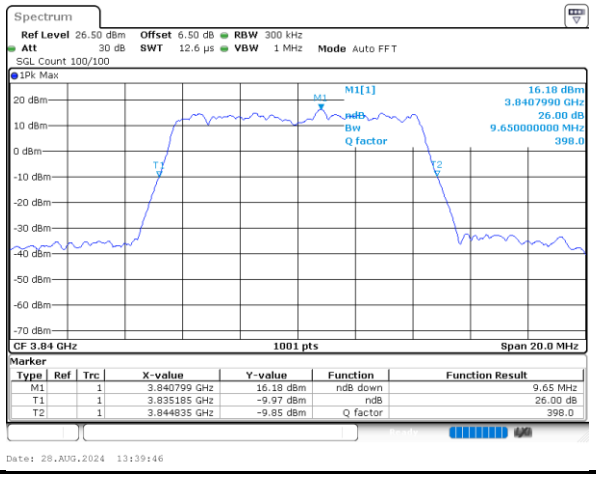
Mode	FR1 n77 : 26dB BW(MHz) / CP			
ANT.	Ant2			
BW	30MHz			
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	30.21	30.39	30.09	30.51

ANT.	Ant1			
BW	30MHz			
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	30.45	30.27	30.33	30.27

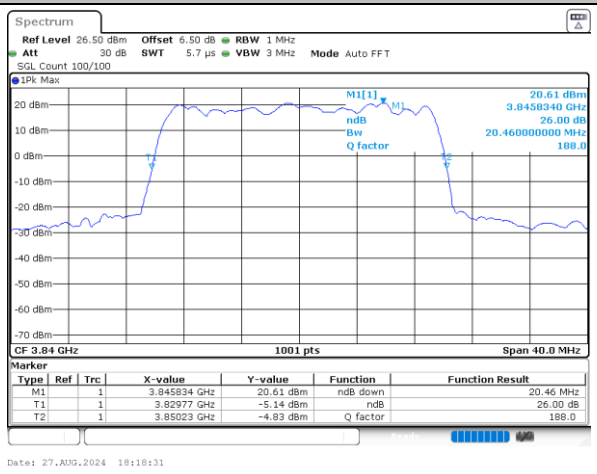
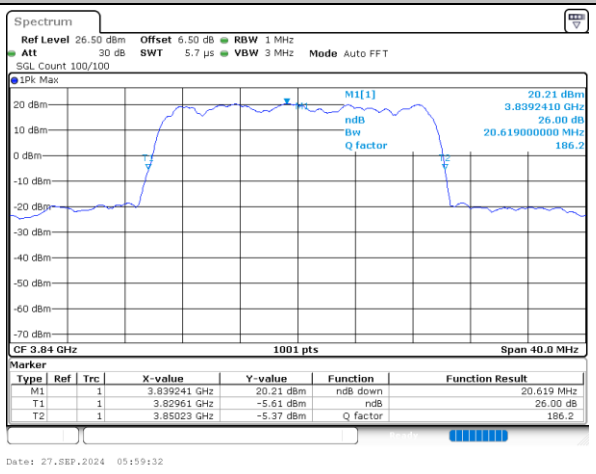
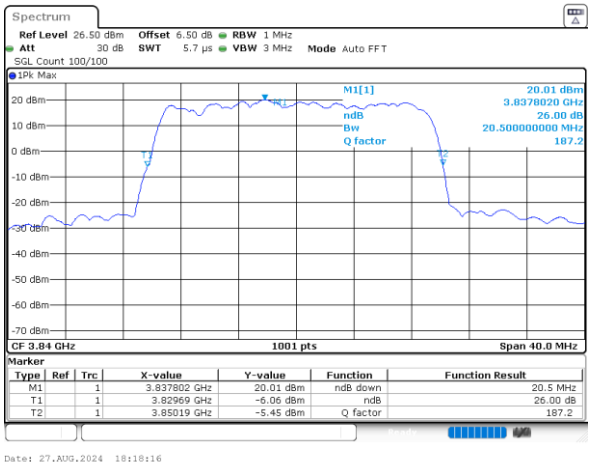
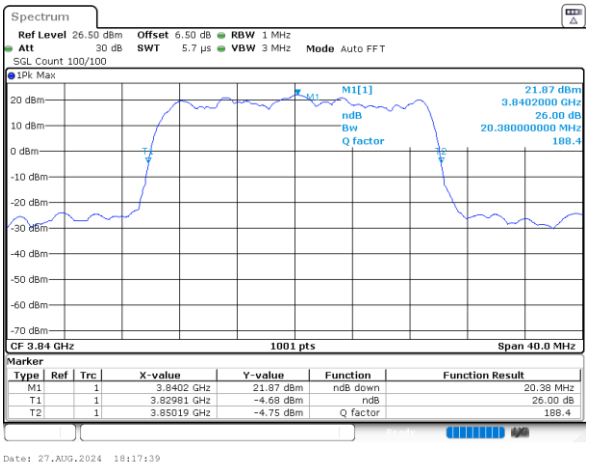
10M-ANT2

FR1 n77 / 10MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

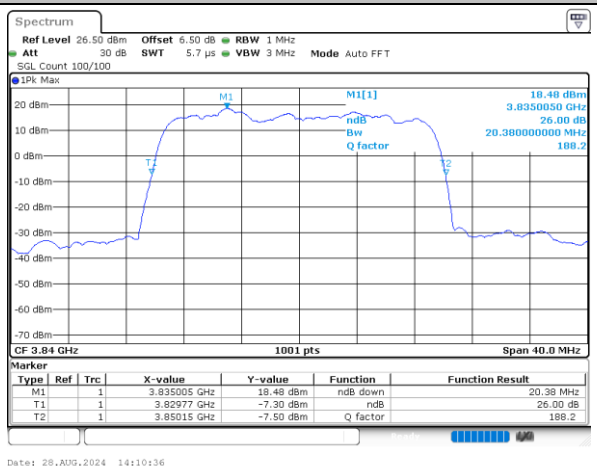
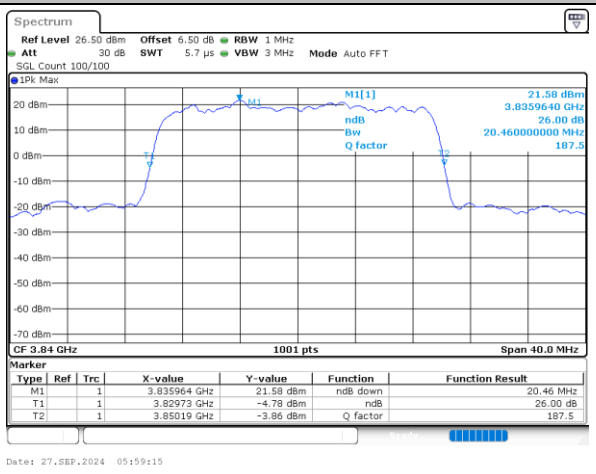
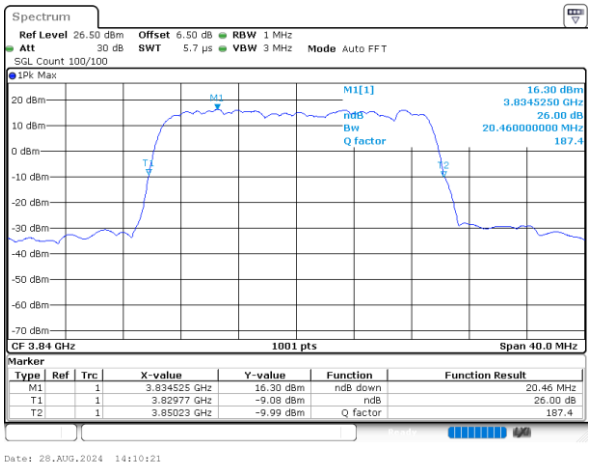
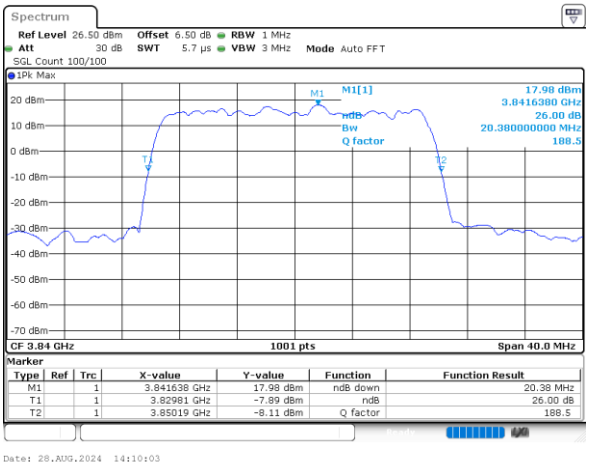
10M-ANT1

FR1 n77 / 10MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

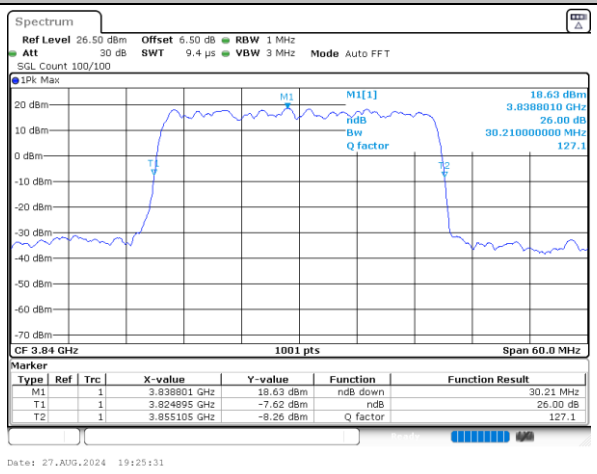
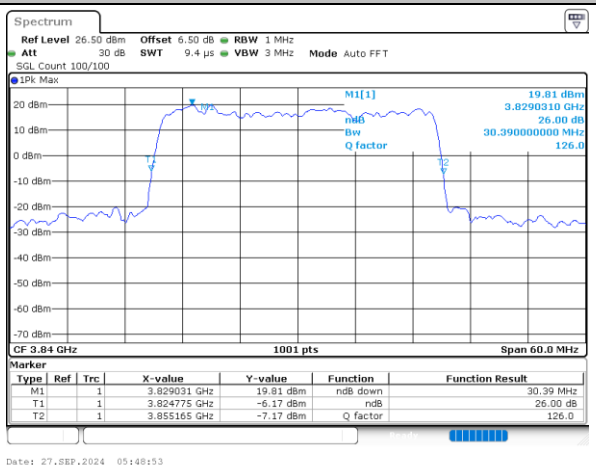
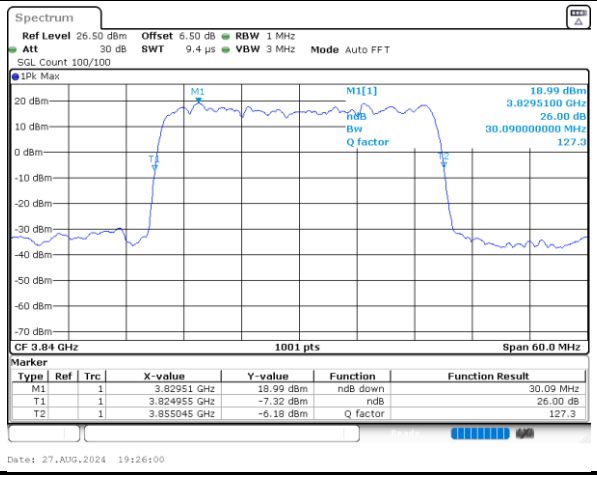
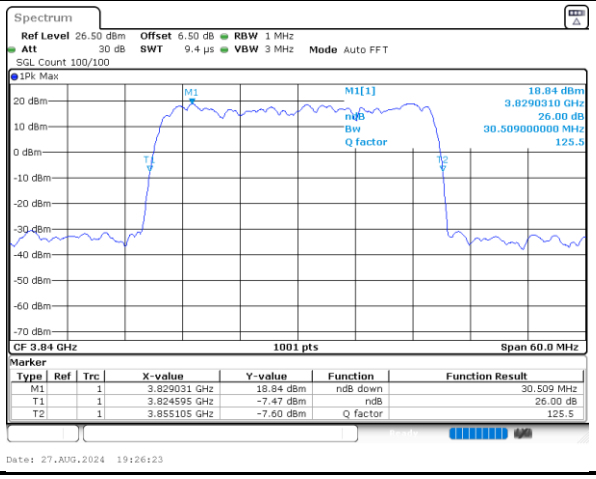
20M-ANT2

FR1 n77 / 20MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

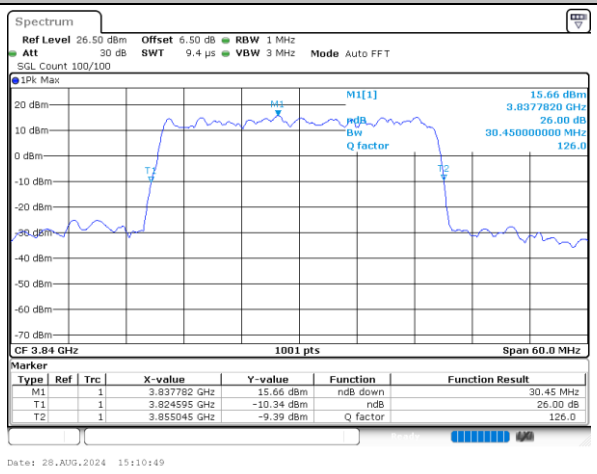
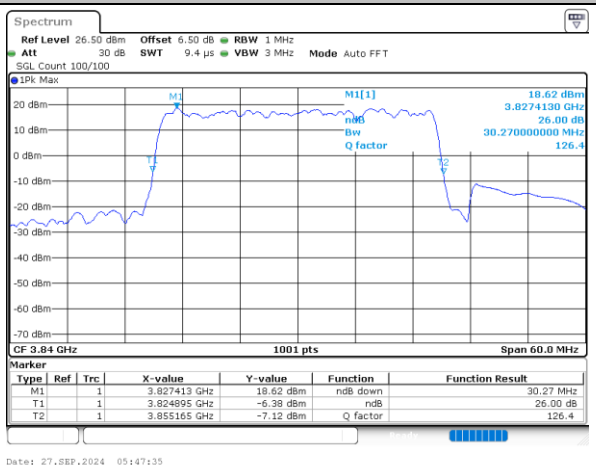
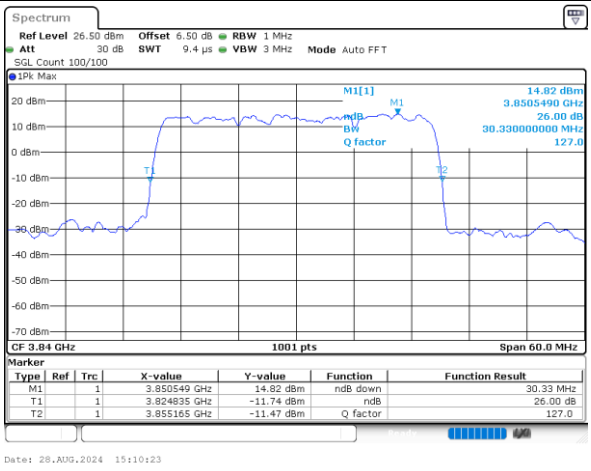
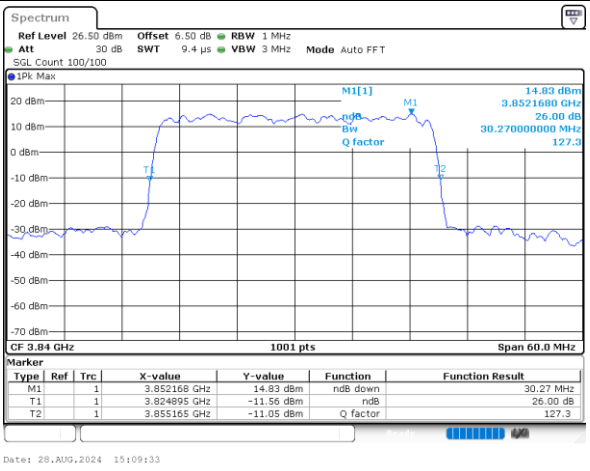
20M-ANT1

FR1 n77 / 20MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

30M-ANT2

FR1 n77 / 30MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

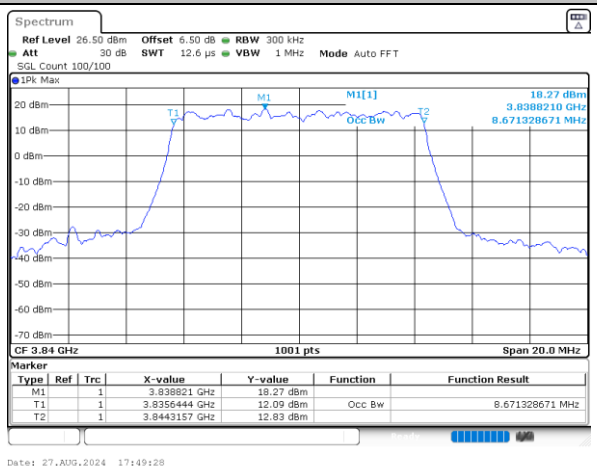
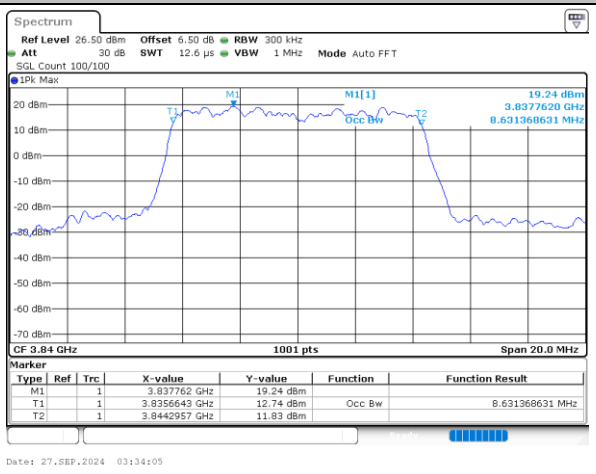
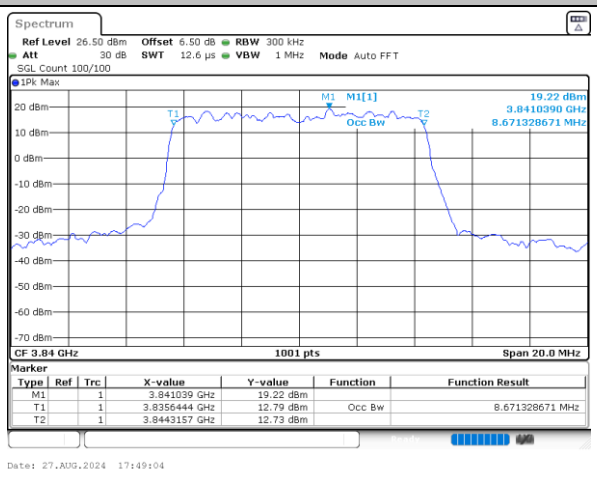
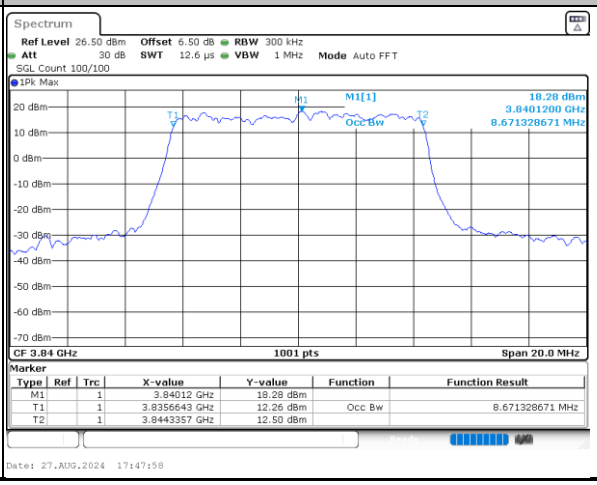
30M-ANT1

FR1 n77 / 30MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

Occupied Bandwidth

Mode	FR1 n77 : OB / CP			
ANT.	Ant2			
BW	10MHz	10MHz	10MHz	10MHz
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	8.67	8.63	8.67	8.67
ANT.	Ant1			
BW	10MHz	10MHz	10MHz	10MHz
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	8.77	8.65	8.65	8.63
Mode	FR1 n77 : OB / CP			
ANT.	Ant2			
BW	20MHz	20MHz	20MHz	20MHz
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	18.62	18.66	18.74	18.66
ANT.	Ant1			
BW	20MHz	20MHz	20MHz	20MHz
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	18.74	18.74	18.62	18.58
Mode	FR1 n77 : OB / CP			
ANT.	Ant2			
BW	30MHz	30MHz	30MHz	30MHz
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	28.05	28.29	28.05	28.17
ANT.	Ant1			
BW	30MHz	30MHz	30MHz	30MHz
Mod.	QPSK	16QAM	64QAM	256QAM
Middle CH	28.17	28.05	28.23	28.17

10M-ANT2

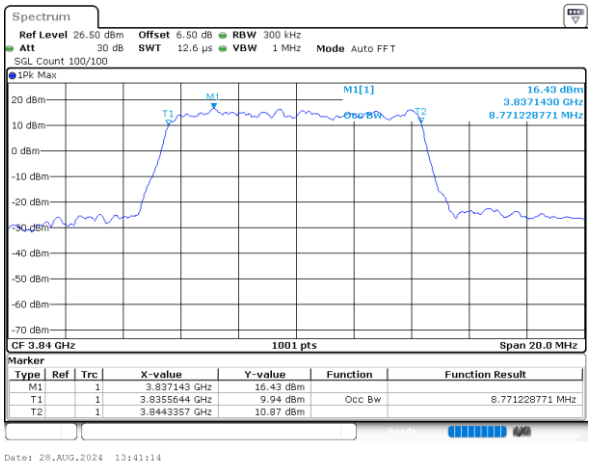
FR1 n77 / 10MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

10M-ANT1

FR1 n77 / 10MHz / CP

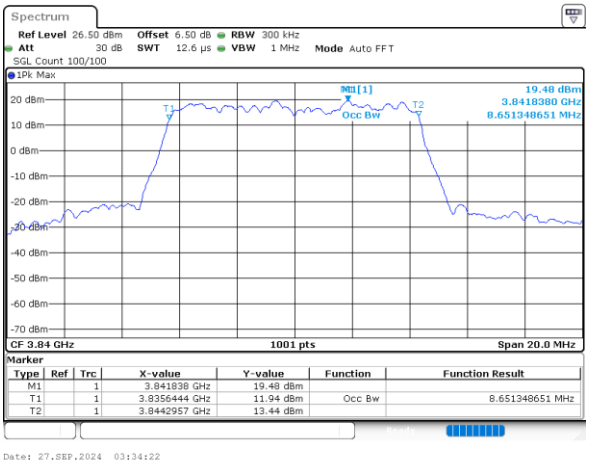
QPSK

Middle Channel



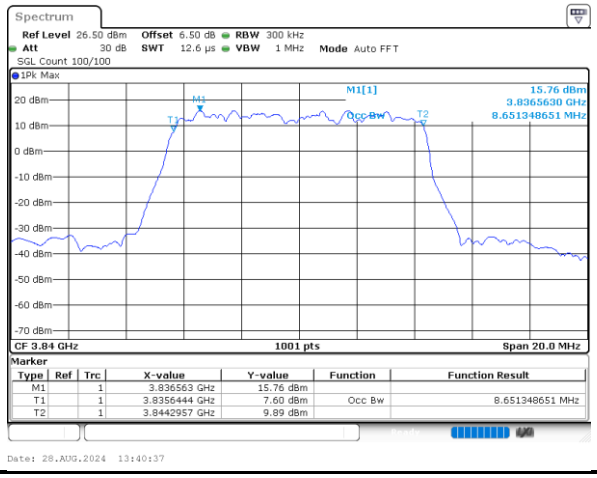
16QAM

Middle Channel



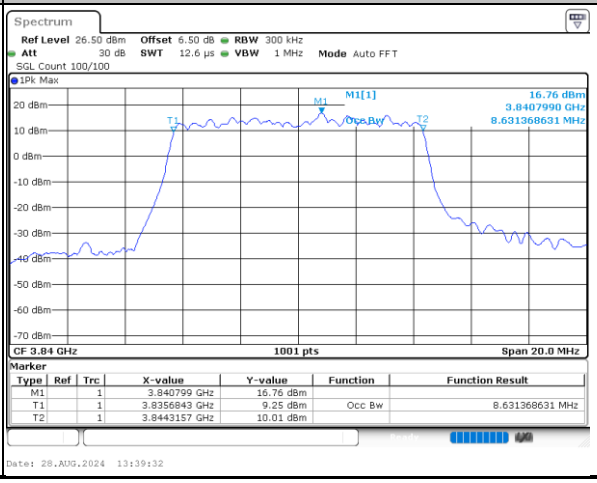
64QAM

Middle Channel

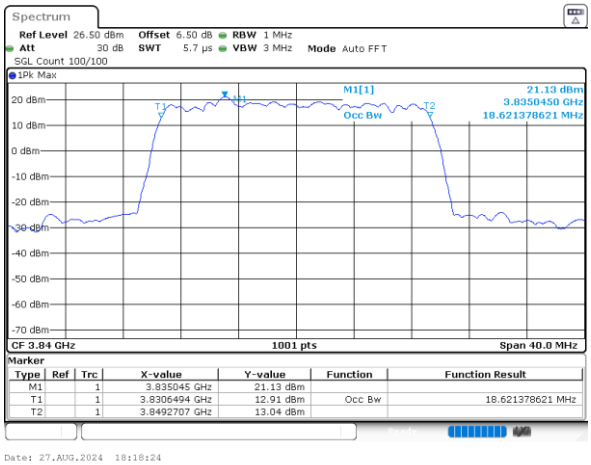
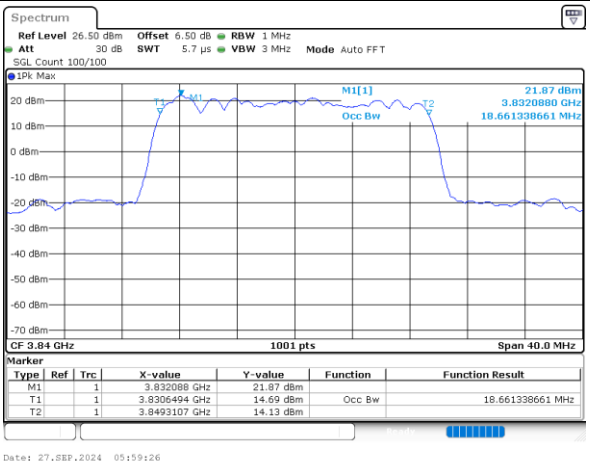
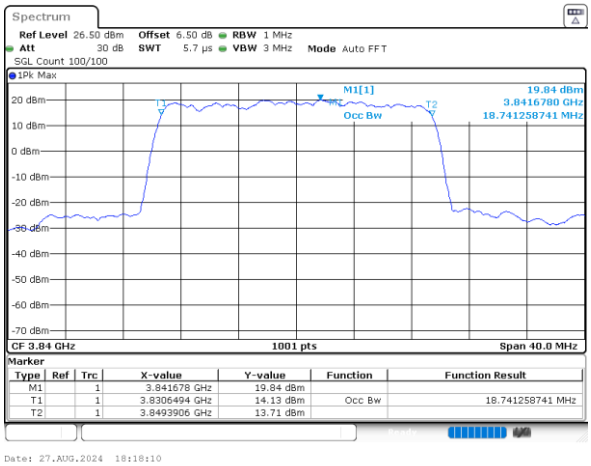
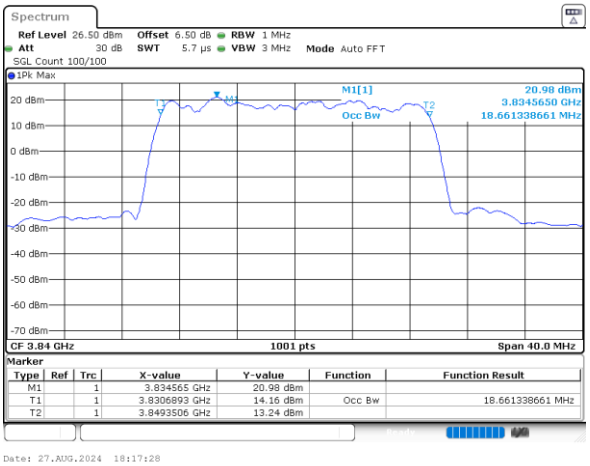


256QAM

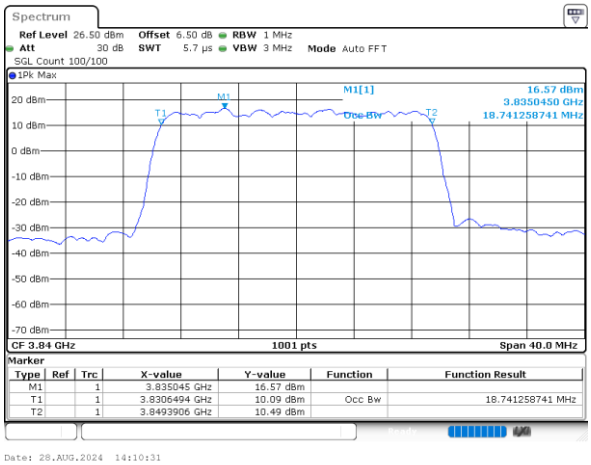
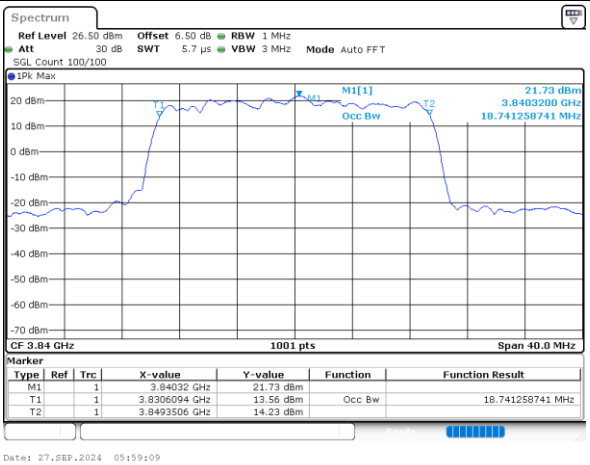
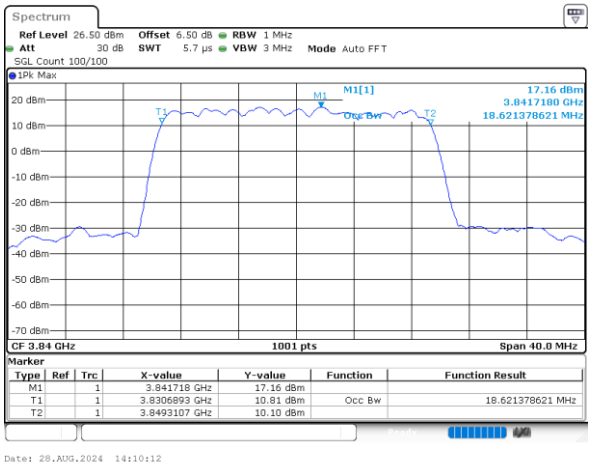
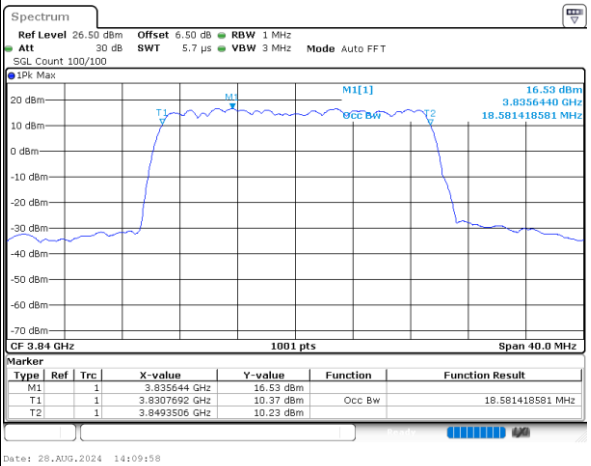
Middle Channel



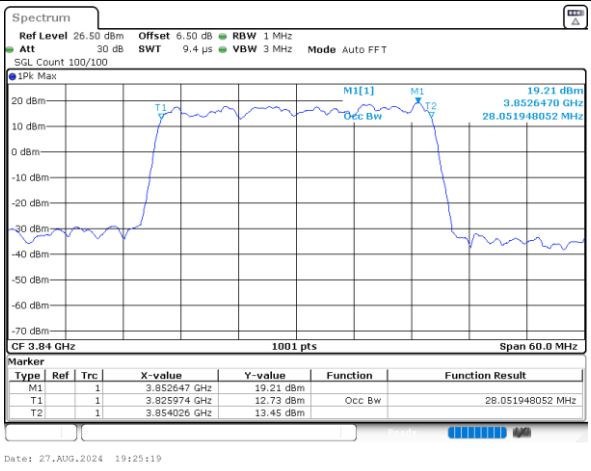
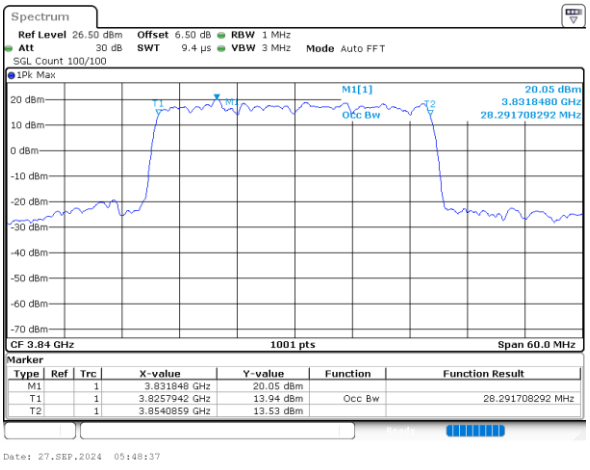
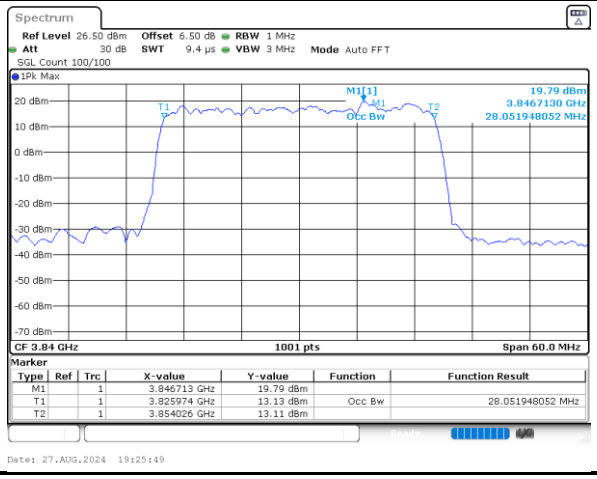
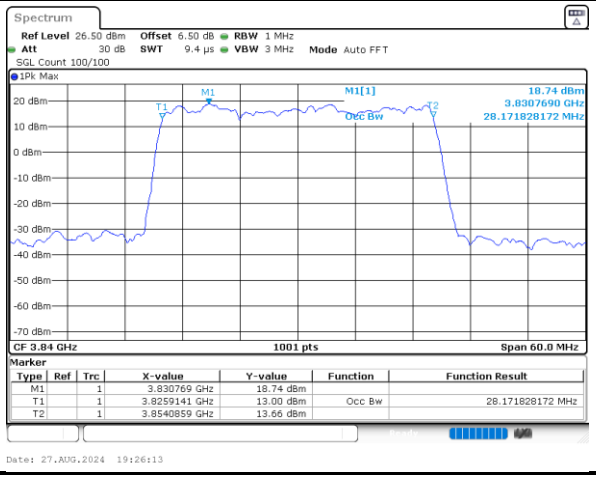
20M-ANT2

FR1 n77 / 20MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

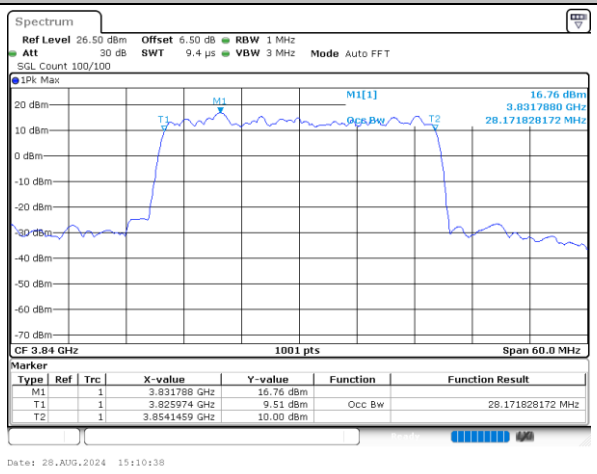
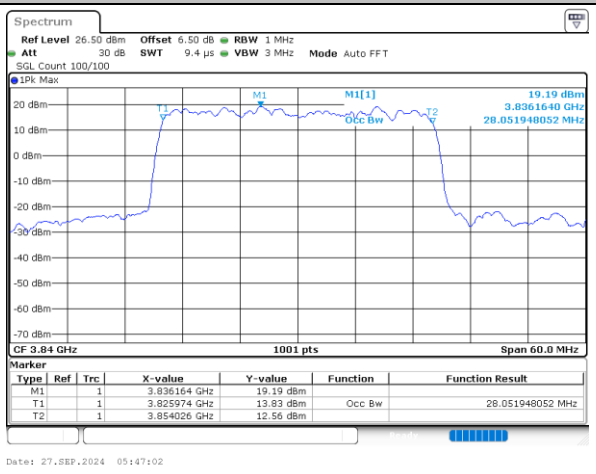
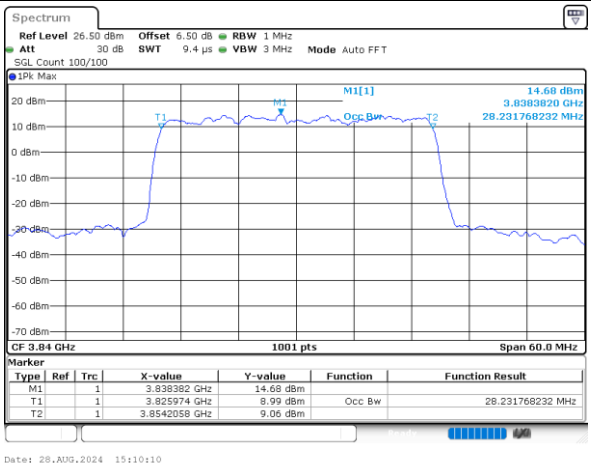
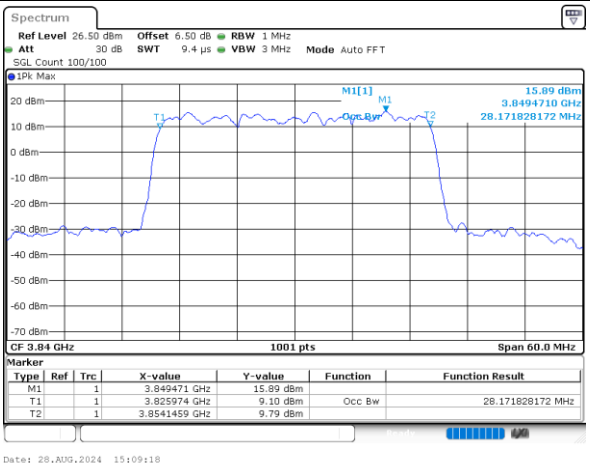
20M-ANT1

FR1 n77 / 20MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

30M-ANT2

FR1 n77 / 30MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

30M-ANT1

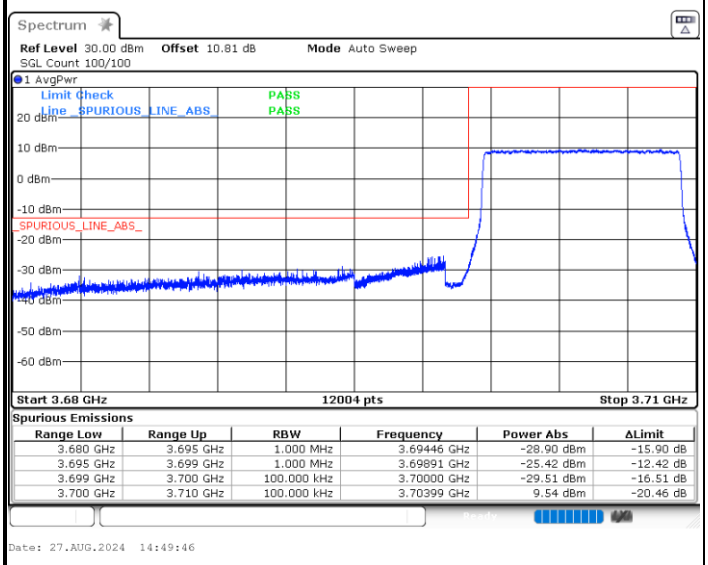
FR1 n77 / 30MHz / CP	
QPSK	**16QAM**
Middle Channel	**Middle Channel**
	
64QAM	**256QAM**
Middle Channel	**Middle Channel**
	

Conducted Band Edge

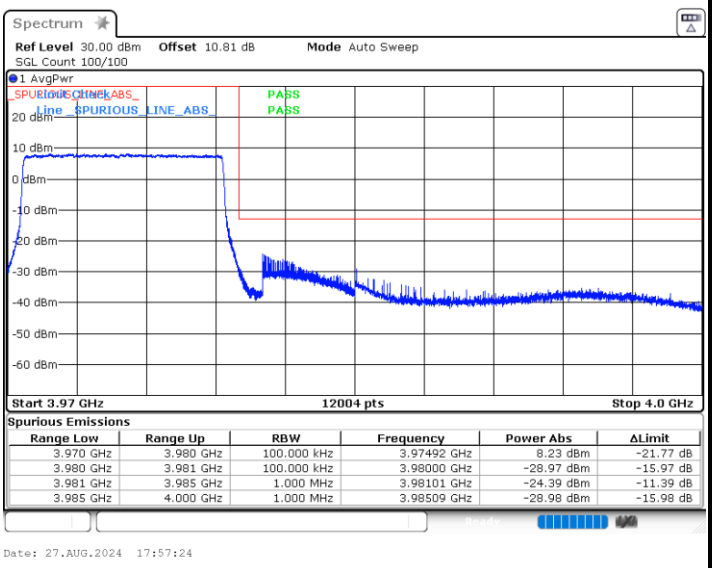
10M-ANT2

FR1 n77 / 10MHz / CP QPSK

Lowest Band Edge / FULL RB

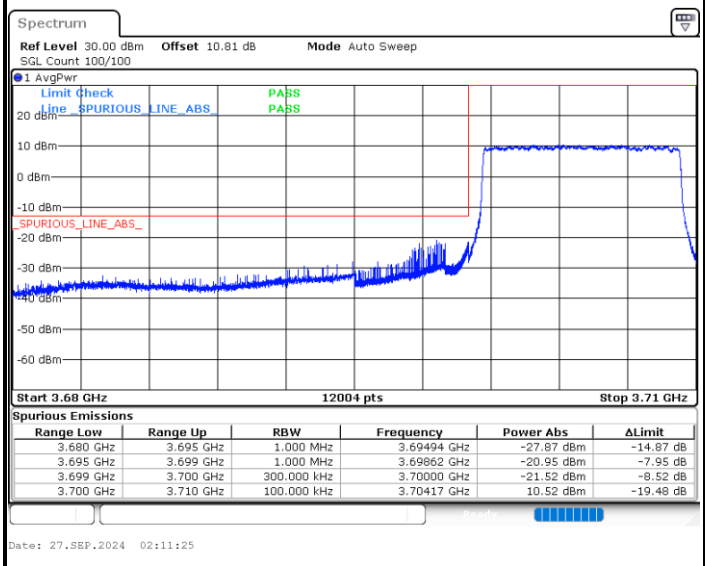


Highest Band Edge / Full RB

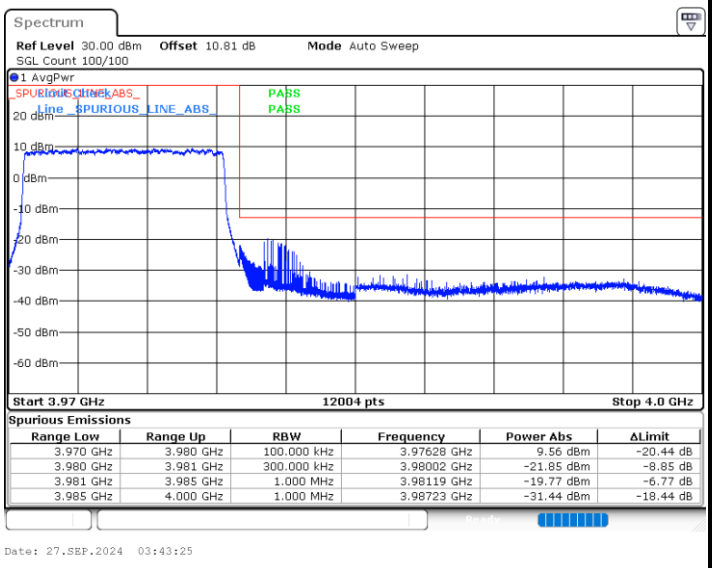


FR1 n77 / 10MHz / CP 16Q

Lowest Band Edge / FULL RB

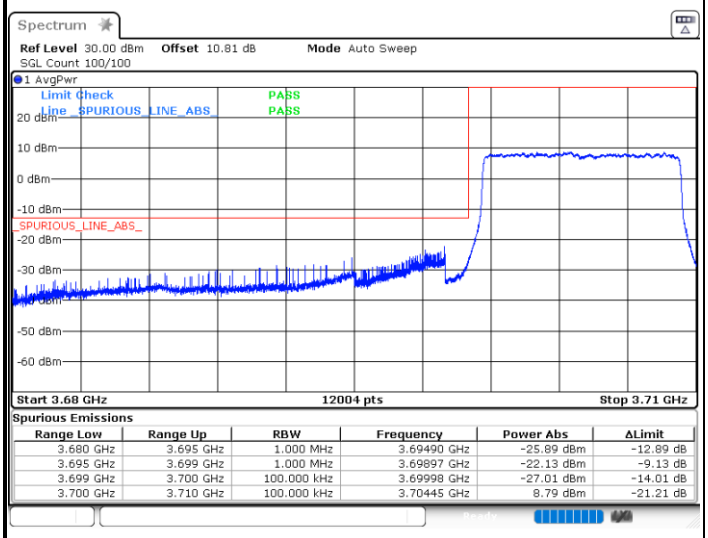


Highest Band Edge / Full RB



FR1 n77 / 10MHz / CP 64Q

Lowest Band Edge / FULL RB

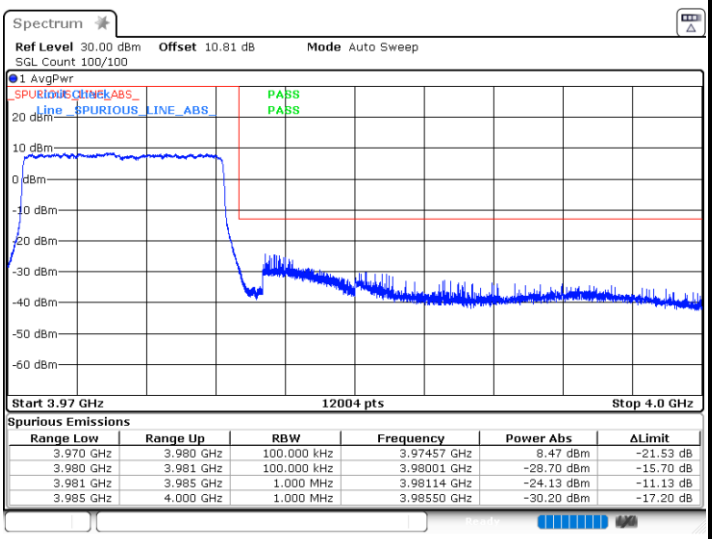


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69490 GHz	-25.89 dBm	-12.89 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69897 GHz	-22.13 dBm	-9.13 dB
3.699 GHz	3.700 GHz	100.000 kHz	3.69998 GHz	-27.01 dBm	-14.01 dB
3.700 GHz	3.710 GHz	100.000 kHz	3.70445 GHz	8.79 dBm	-21.21 dB

Date: 27.AUG.2024 16:54:17

Highest Band Edge / Full RB



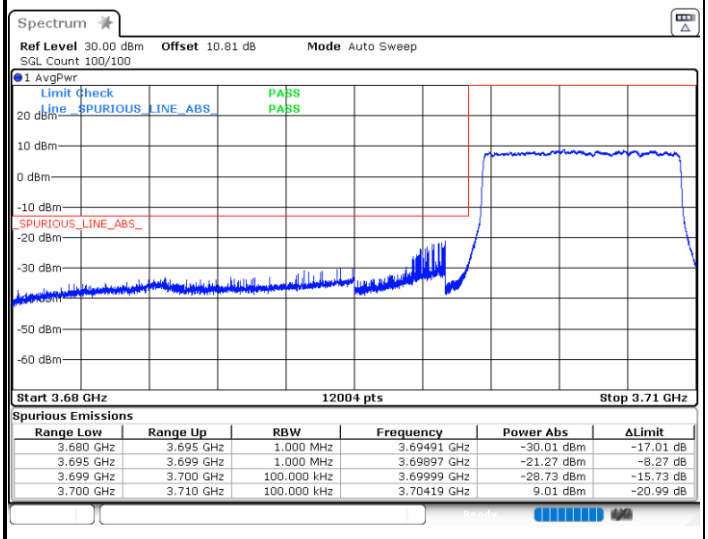
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.970 GHz	3.980 GHz	100.000 kHz	3.97457 GHz	8.47 dBm	-21.53 dB
3.980 GHz	3.981 GHz	100.000 kHz	3.98001 GHz	-28.70 dBm	-15.70 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98114 GHz	-24.13 dBm	-11.13 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98550 GHz	-30.20 dBm	-17.20 dB

Date: 27.AUG.2024 17:58:49

FR1 n77 / 10MHz / CP 256Q

Lowest Band Edge / FULL RB

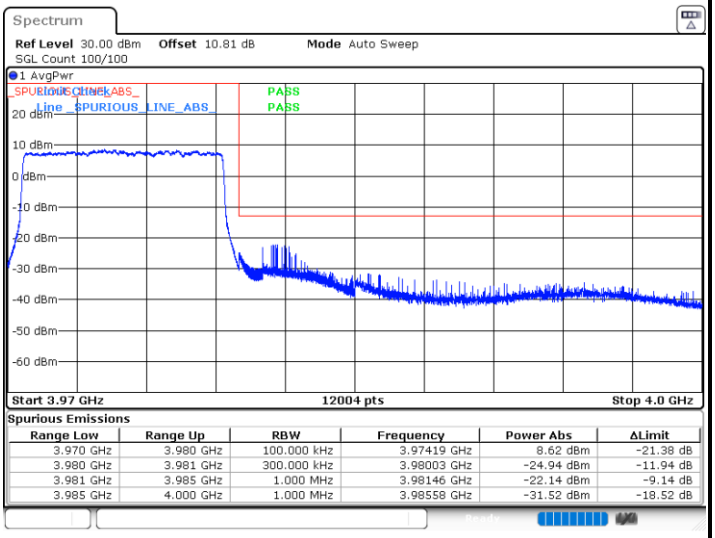


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69491 GHz	-30.01 dBm	-17.01 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69897 GHz	-21.27 dBm	-8.27 dB
3.699 GHz	3.700 GHz	100.000 kHz	3.69999 GHz	-28.73 dBm	-15.73 dB
3.700 GHz	3.710 GHz	100.000 kHz	3.70419 GHz	9.01 dBm	-20.99 dB

Date: 27.AUG.2024 16:58:12

Highest Band Edge / Full RB



Spurious Emissions

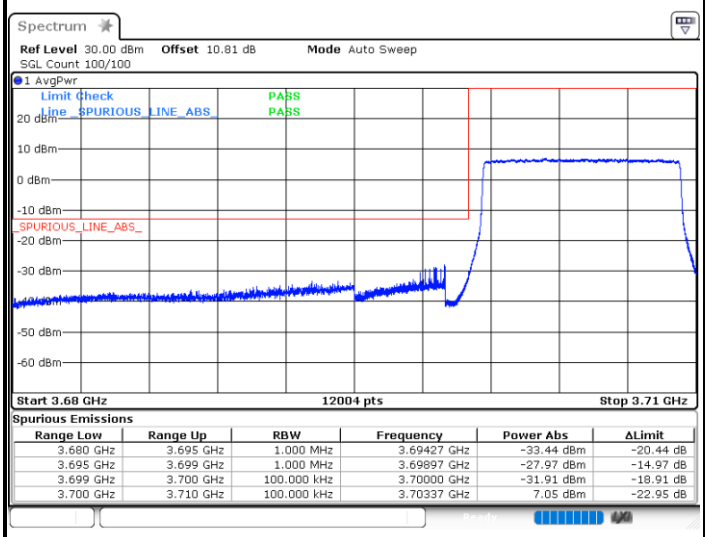
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.970 GHz	3.980 GHz	100.000 kHz	3.97419 GHz	8.62 dBm	-21.38 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98003 GHz	-24.94 dBm	-11.94 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98146 GHz	-22.14 dBm	-9.14 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98558 GHz	-31.52 dBm	-18.52 dB

Date: 27.AUG.2024 18:00:31

10M-ANT1

FR1 n77 / 10MHz / CP QPSK

Lowest Band Edge / FULL RB

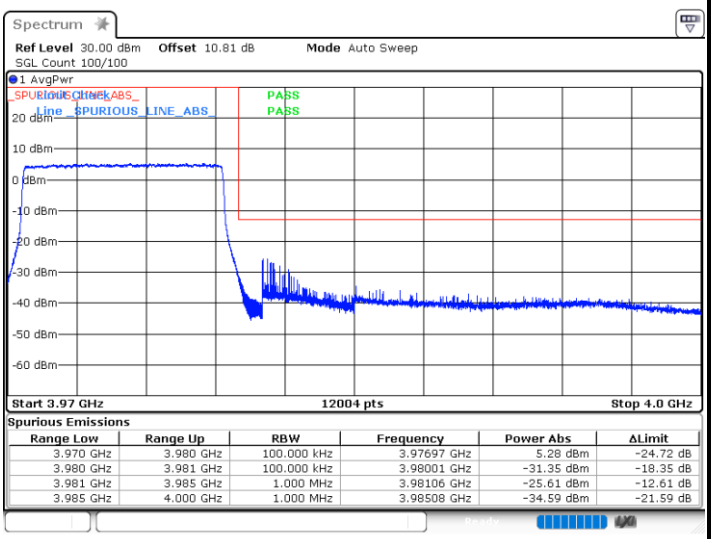


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69427 GHz	-33.44 dBm	-20.44 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69897 GHz	-27.97 dBm	-14.97 dB
3.699 GHz	3.700 GHz	100.000 kHz	3.70000 GHz	-31.91 dBm	-18.91 dB
3.700 GHz	3.710 GHz	100.000 kHz	3.70337 GHz	7.05 dBm	-22.95 dB

Date: 28.AUG.2024 13:24:47

Highest Band Edge / Full RB



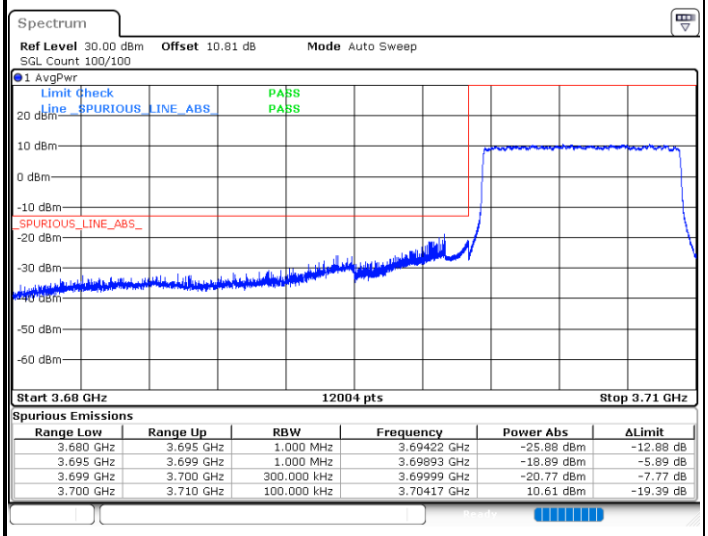
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.970 GHz	3.980 GHz	100.000 kHz	3.97697 GHz	5.28 dBm	-24.72 dB
3.980 GHz	3.981 GHz	100.000 kHz	3.98001 GHz	-31.35 dBm	-18.35 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98106 GHz	-25.61 dBm	-12.61 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98508 GHz	-34.59 dBm	-21.59 dB

Date: 28.AUG.2024 13:43:12

FR1 n77 / 10MHz / CP 16Q

Lowest Band Edge / FULL RB

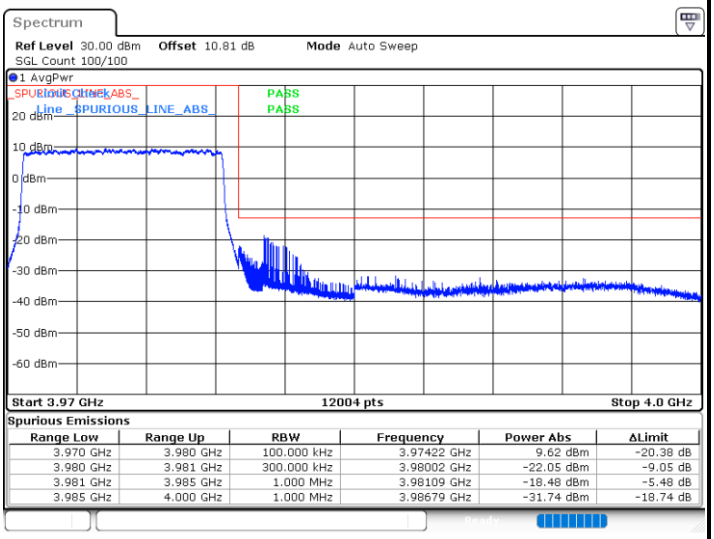


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69422 GHz	-25.88 dBm	-12.88 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69893 GHz	-18.89 dBm	-5.89 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69999 GHz	-20.77 dBm	-7.77 dB
3.700 GHz	3.710 GHz	100.000 kHz	3.70417 GHz	10.61 dBm	-19.39 dB

Date: 27.SEP.2024 02:18:04

Highest Band Edge / Full RB



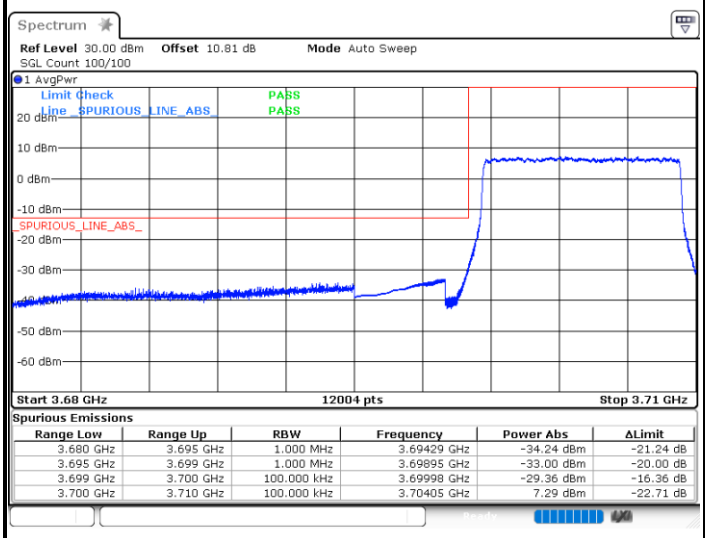
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.970 GHz	3.980 GHz	100.000 kHz	3.97422 GHz	9.62 dBm	-20.38 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98002 GHz	-22.05 dBm	-9.05 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98109 GHz	-18.48 dBm	-5.48 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98679 GHz	-31.74 dBm	-18.74 dB

Date: 27.SEP.2024 03:37:57

FR1 n77 / 10MHz / CP 64Q

Lowest Band Edge / FULL RB

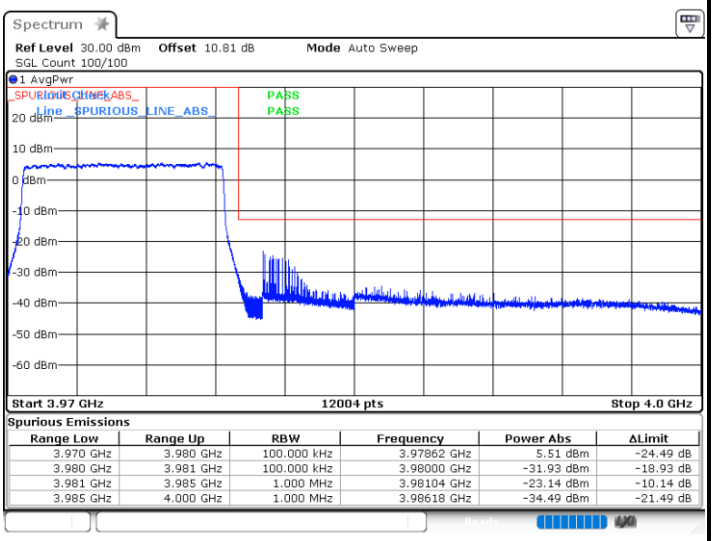


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69429 GHz	-34.24 dBm	-21.24 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69895 GHz	-33.00 dBm	-20.00 dB
3.699 GHz	3.700 GHz	100.000 kHz	3.69998 GHz	-29.36 dBm	-16.36 dB
3.700 GHz	3.710 GHz	100.000 kHz	3.70405 GHz	7.29 dBm	-22.71 dB

Date: 28.AUG.2024 13:28:24

Highest Band Edge / Full RB



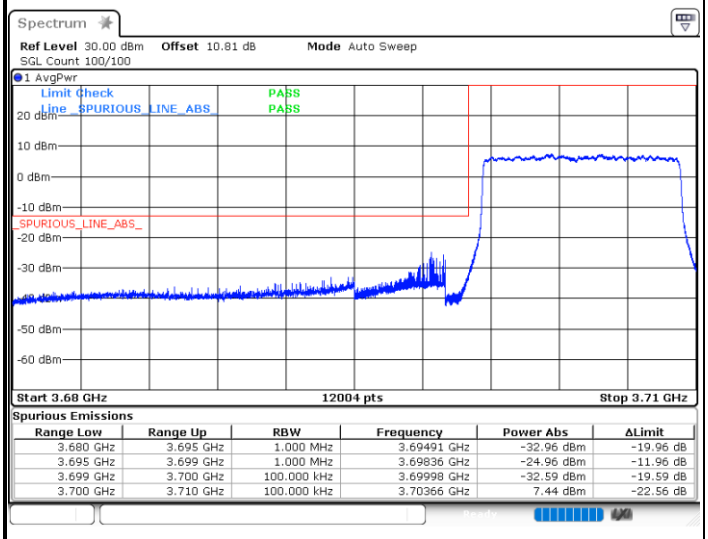
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.970 GHz	3.980 GHz	100.000 kHz	3.97862 GHz	5.51 dBm	-24.49 dB
3.980 GHz	3.981 GHz	100.000 kHz	3.98000 GHz	-31.93 dBm	-18.93 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98104 GHz	-23.14 dBm	-10.14 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98618 GHz	-34.49 dBm	-21.49 dB

Date: 28.AUG.2024 13:45:55

FR1 n77 / 10MHz / CP 256Q

Lowest Band Edge / FULL RB

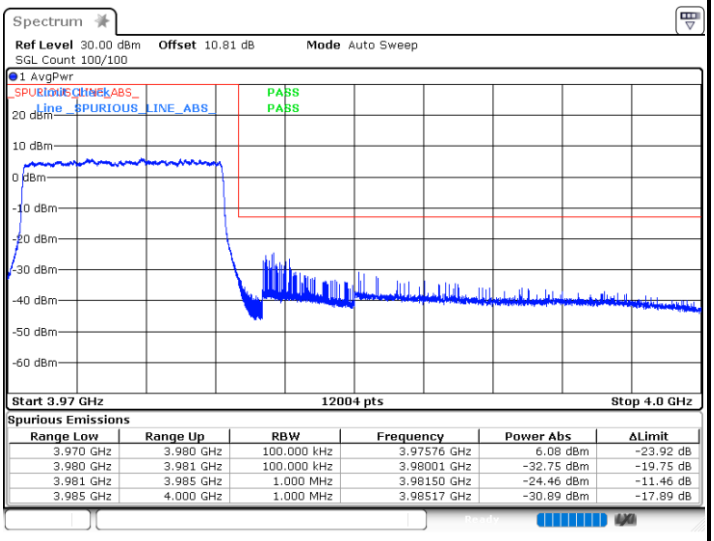


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69491 GHz	-32.96 dBm	-19.96 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69836 GHz	-24.96 dBm	-11.96 dB
3.699 GHz	3.700 GHz	100.000 kHz	3.69998 GHz	-32.59 dBm	-19.59 dB
3.700 GHz	3.710 GHz	100.000 kHz	3.70366 GHz	7.44 dBm	-22.56 dB

Date: 28.AUG.2024 13:30:16

Highest Band Edge / Full RB



Spurious Emissions

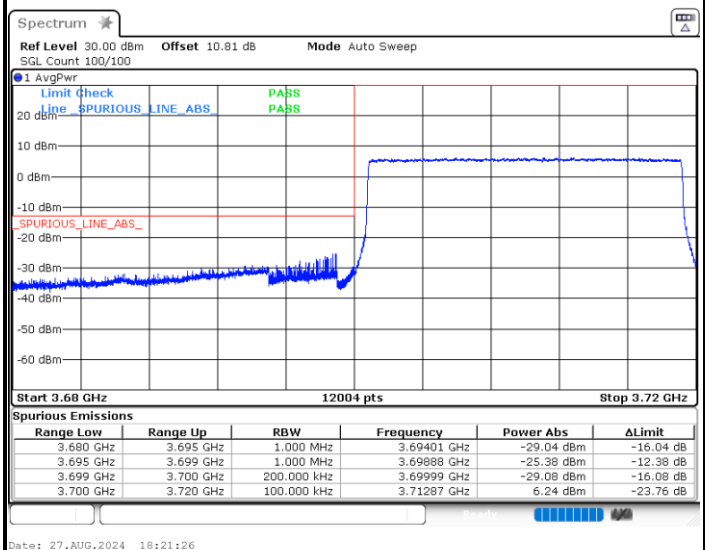
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.970 GHz	3.980 GHz	100.000 kHz	3.97576 GHz	6.08 dBm	-23.92 dB
3.980 GHz	3.981 GHz	100.000 kHz	3.98001 GHz	-32.75 dBm	-19.75 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98150 GHz	-24.46 dBm	-11.46 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98517 GHz	-30.89 dBm	-17.89 dB

Date: 28.AUG.2024 13:47:21

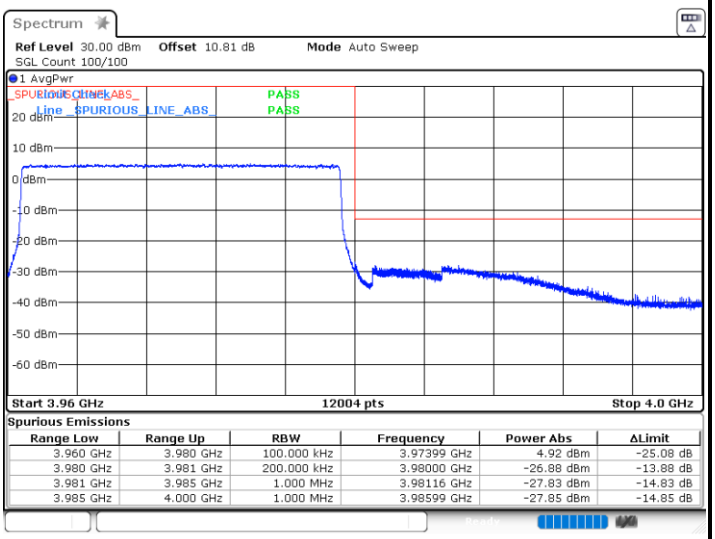
20M-ANT2

FR1 n77 / 20MHz / CP QPSK

Lowest Band Edge / FULL RB

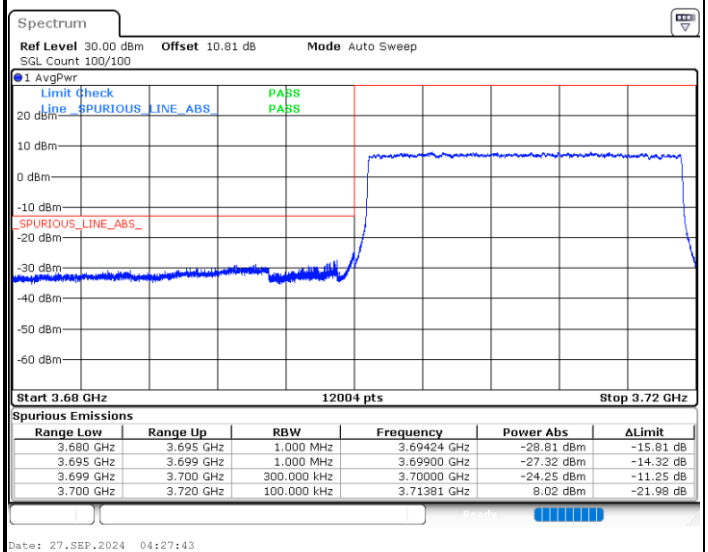


Highest Band Edge / Full RB

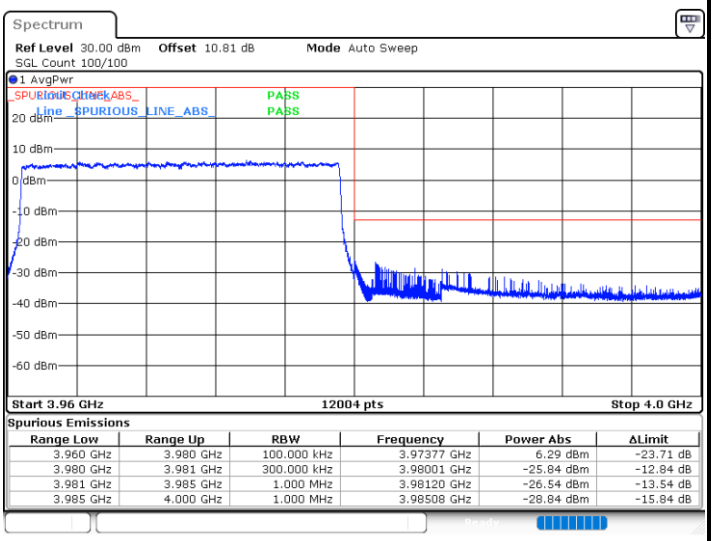


FR1 n77 / 20MHz / CP 16Q

Lowest Band Edge / FULL RB

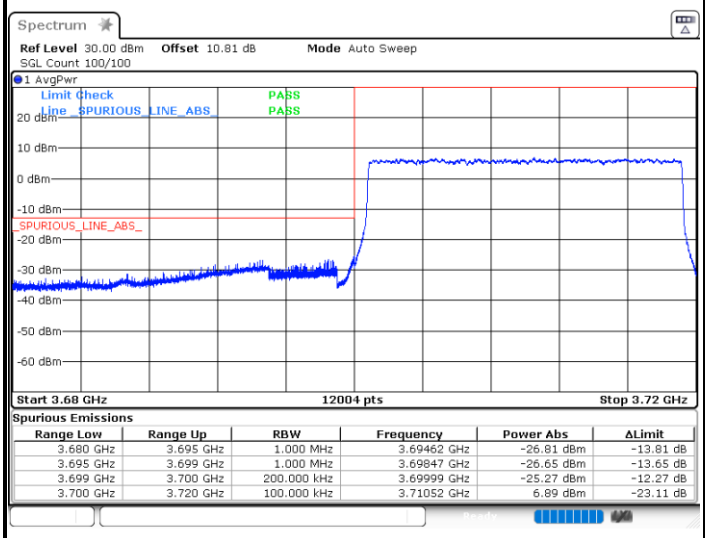


Highest Band Edge / Full RB



FR1 n77 / 20MHz / CP 64Q

Lowest Band Edge / FULL RB

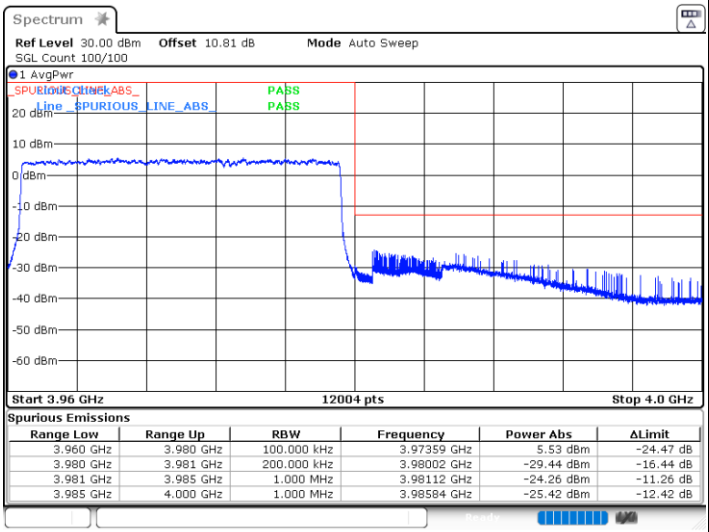


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69462 GHz	-26.81 dBm	-13.81 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69847 GHz	-26.65 dBm	-13.65 dB
3.699 GHz	3.700 GHz	200.000 kHz	3.69999 GHz	-25.27 dBm	-12.27 dB
3.700 GHz	3.720 GHz	100.000 kHz	3.71052 GHz	6.89 dBm	-23.11 dB

Date: 27.AUG.2024 18:23:47

Highest Band Edge / Full RB



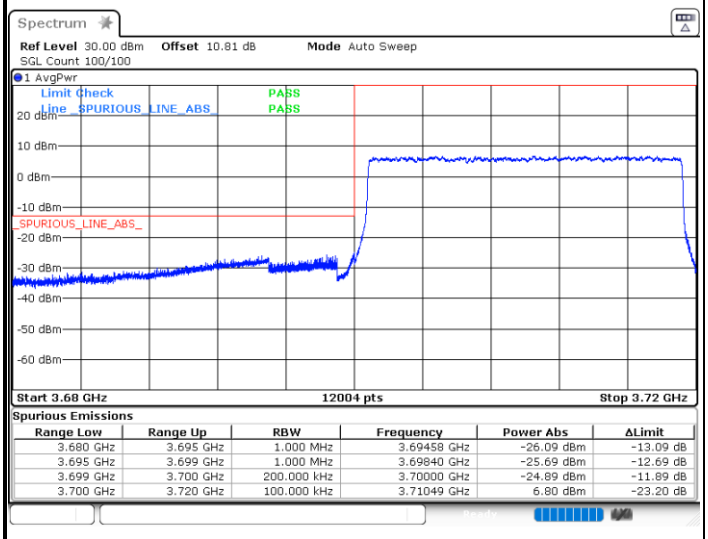
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.960 GHz	3.980 GHz	100.000 kHz	3.97359 GHz	5.53 dBm	-24.47 dB
3.980 GHz	3.981 GHz	200.000 kHz	3.98002 GHz	-29.44 dBm	-16.44 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98112 GHz	-24.26 dBm	-11.26 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98584 GHz	-25.42 dBm	-12.42 dB

Date: 27.AUG.2024 18:55:59

FR1 n77 / 20MHz / CP 256Q

Lowest Band Edge / FULL RB

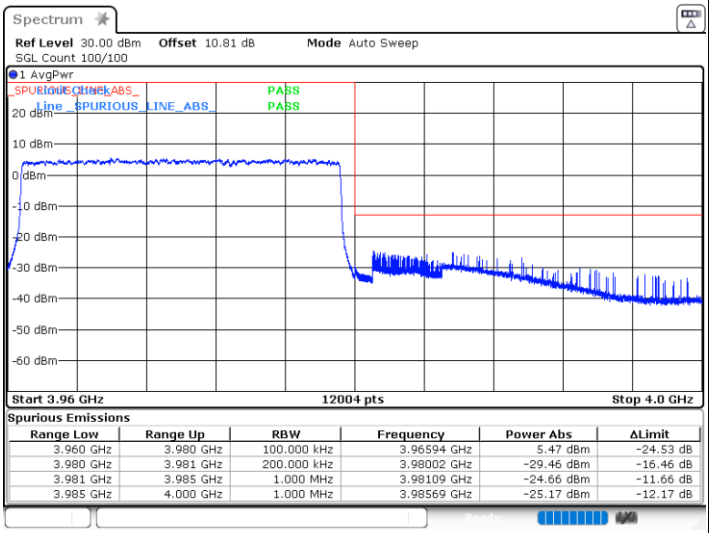


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69458 GHz	-26.09 dBm	-13.09 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69840 GHz	-25.69 dBm	-12.69 dB
3.699 GHz	3.700 GHz	200.000 kHz	3.70000 GHz	-24.89 dBm	-11.89 dB
3.700 GHz	3.720 GHz	100.000 kHz	3.71049 GHz	6.80 dBm	-23.20 dB

Date: 27.AUG.2024 18:24:39

Highest Band Edge / Full RB



Spurious Emissions

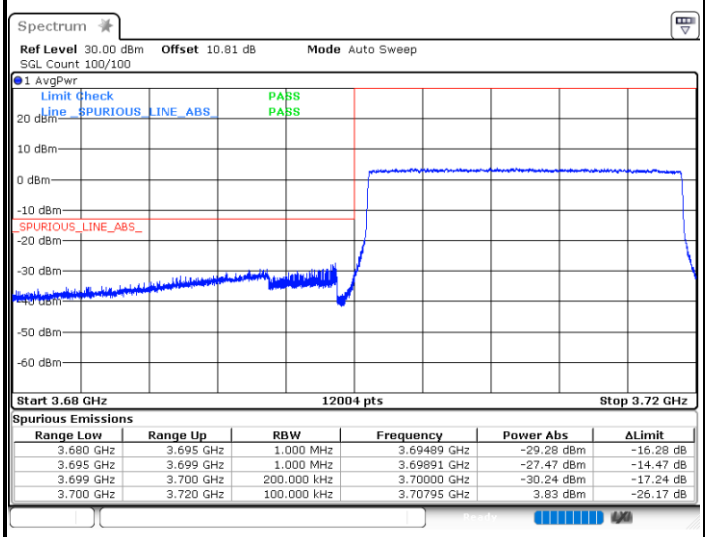
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.960 GHz	3.980 GHz	100.000 kHz	3.96594 GHz	5.47 dBm	-24.53 dB
3.980 GHz	3.981 GHz	200.000 kHz	3.98002 GHz	-29.46 dBm	-16.46 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98109 GHz	-24.66 dBm	-11.66 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98569 GHz	-25.17 dBm	-12.17 dB

Date: 27.AUG.2024 18:54:39

20M-ANT1

FR1 n77 / 20MHz / CP QPSK

Lowest Band Edge / FULL RB

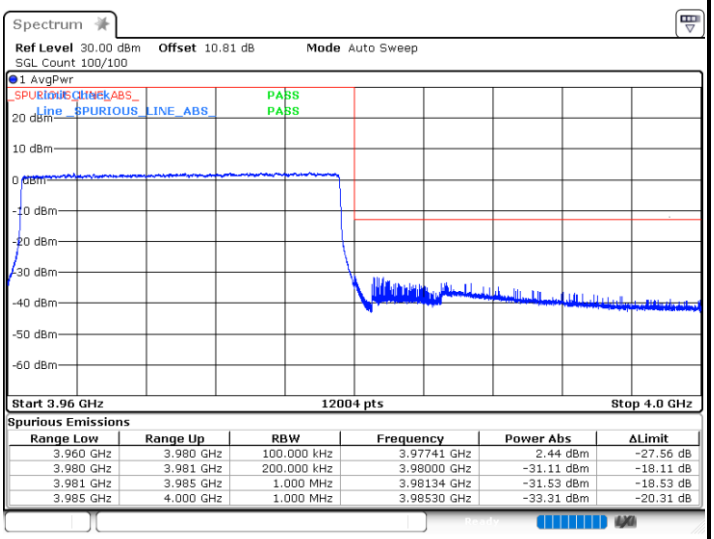


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69489 GHz	-29.28 dBm	-16.28 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69891 GHz	-27.47 dBm	-14.47 dB
3.699 GHz	3.700 GHz	200.000 kHz	3.70000 GHz	-30.24 dBm	-17.24 dB
3.700 GHz	3.720 GHz	100.000 kHz	3.70795 GHz	3.83 dBm	-26.17 dB

Date: 28.AUG.2024 13:57:56

Highest Band Edge / Full RB



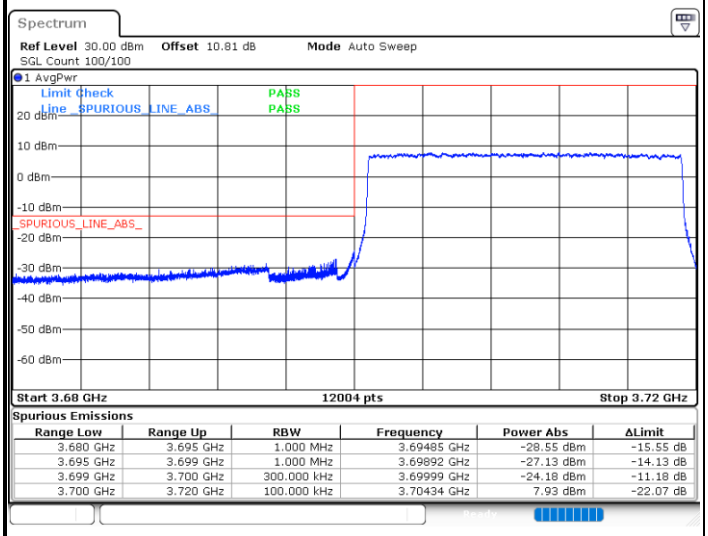
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.960 GHz	3.980 GHz	100.000 kHz	3.97741 GHz	2.44 dBm	-27.56 dB
3.980 GHz	3.981 GHz	200.000 kHz	3.98000 GHz	-31.11 dBm	-18.11 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98134 GHz	-31.53 dBm	-18.53 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98530 GHz	-33.31 dBm	-20.31 dB

Date: 28.AUG.2024 14:12:59

FR1 n77 / 20MHz / CP 16Q

Lowest Band Edge / FULL RB

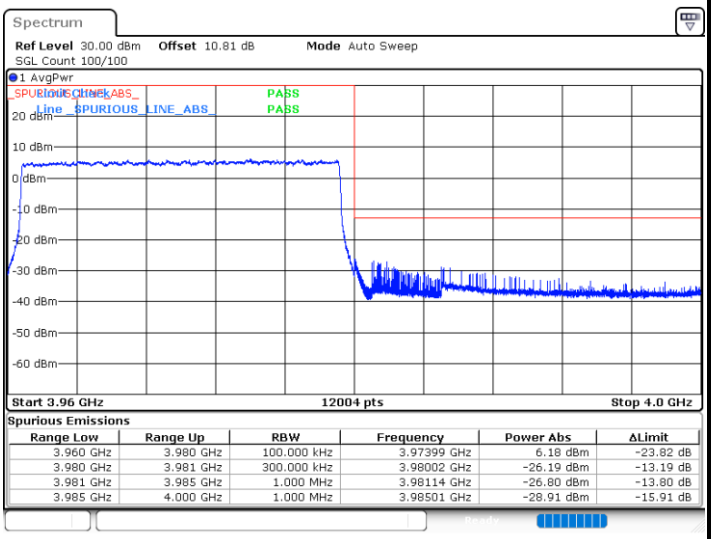


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69485 GHz	-28.55 dBm	-15.55 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69892 GHz	-27.13 dBm	-14.13 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69999 GHz	-24.18 dBm	-11.18 dB
3.700 GHz	3.720 GHz	100.000 kHz	3.70434 GHz	7.93 dBm	-22.07 dB

Date: 27.SEP.2024 04:31:50

Highest Band Edge / Full RB

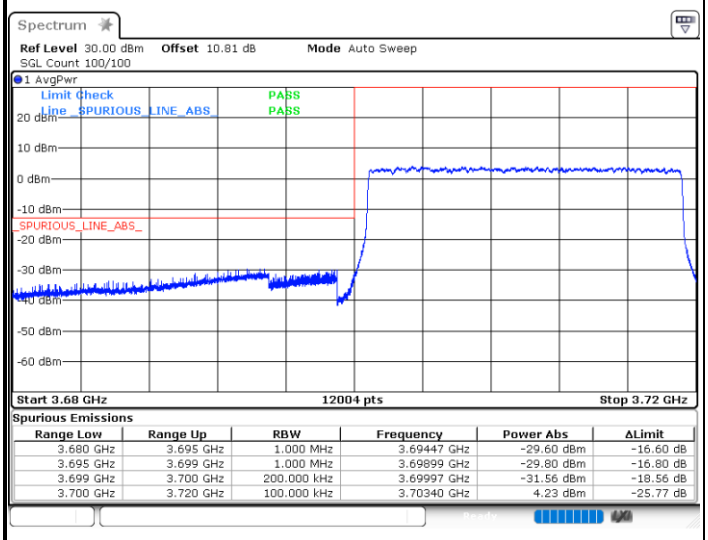


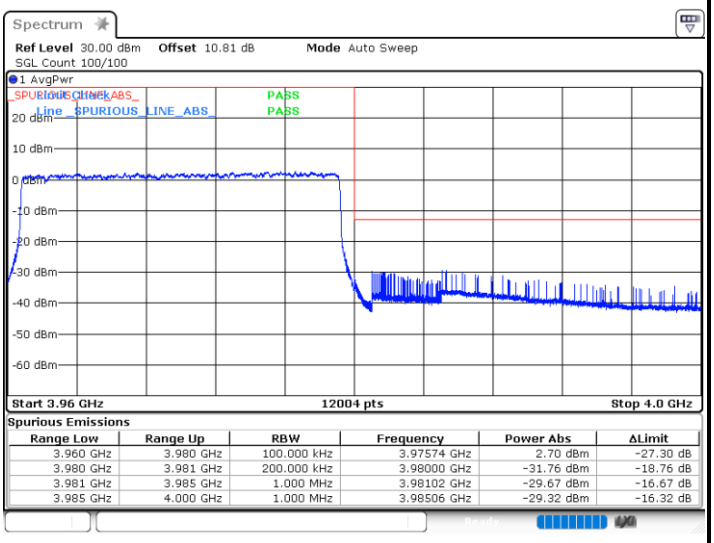
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.960 GHz	3.980 GHz	100.000 kHz	3.97399 GHz	6.18 dBm	-23.82 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98002 GHz	-26.19 dBm	-13.19 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98114 GHz	-26.80 dBm	-13.80 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98501 GHz	-28.91 dBm	-15.91 dB

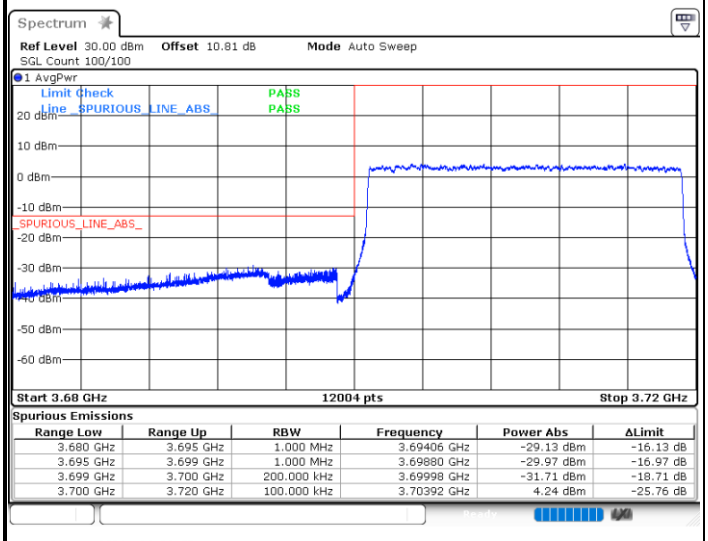
Date: 27.SEP.2024 04:48:57

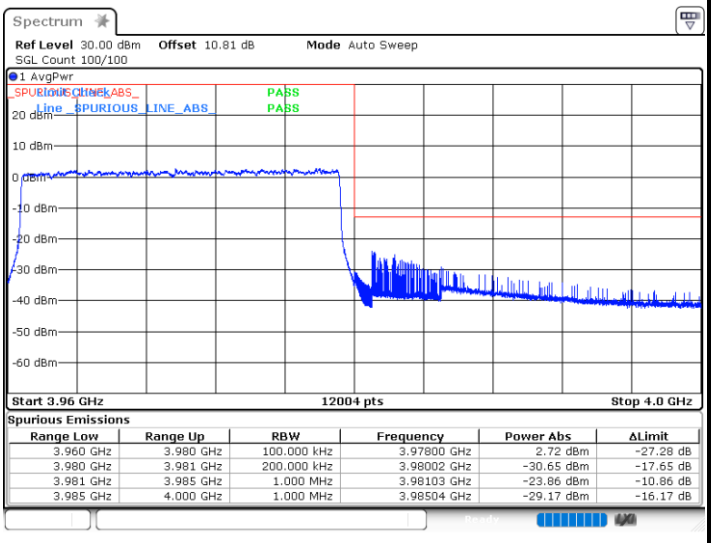
FR1 n77 / 20MHz / CP 64Q	
Lowest Band Edge / FULL RB	**Highest Band Edge / Full RB**





FR1 n77 / 20MHz / CP 256Q	
Lowest Band Edge / FULL RB	**Highest Band Edge / Full RB**

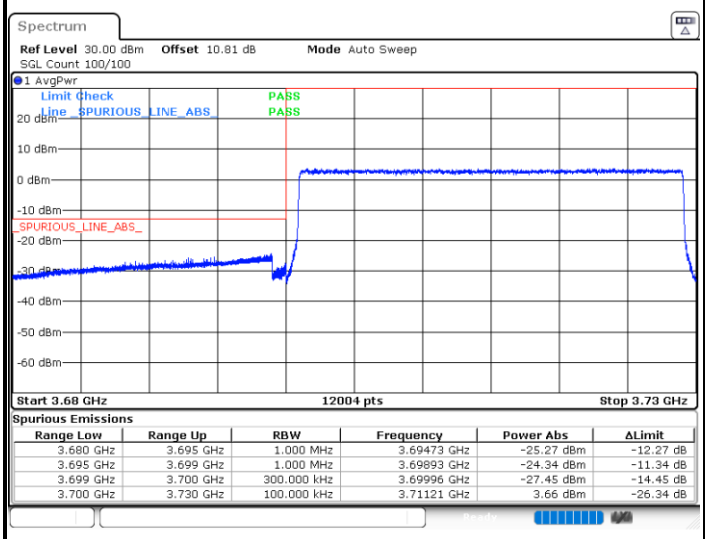




30M-ANT2

FR1 n77 / 30MHz / CP QPSK

Lowest Band Edge / FULL RB

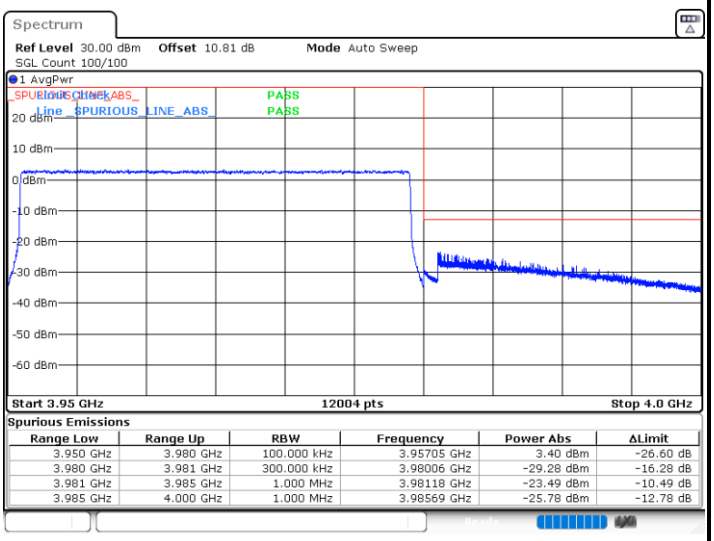


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69473 GHz	-25.27 dBm	-12.27 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69893 GHz	-24.34 dBm	-11.34 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69996 GHz	-27.45 dBm	-14.45 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.71121 GHz	3.66 dBm	-26.34 dB

Date: 27.AUG.2024 19:07:45

Highest Band Edge / Full RB



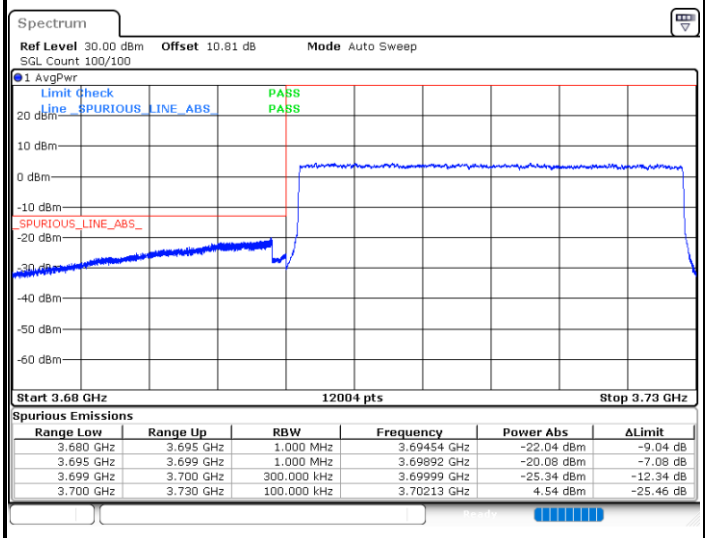
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.95705 GHz	3.40 dBm	-26.60 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98006 GHz	-29.28 dBm	-16.28 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98118 GHz	-23.49 dBm	-10.49 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98569 GHz	-25.78 dBm	-12.78 dB

Date: 27.AUG.2024 19:47:56

FR1 n77 / 30MHz / CP 16Q

Lowest Band Edge / FULL RB

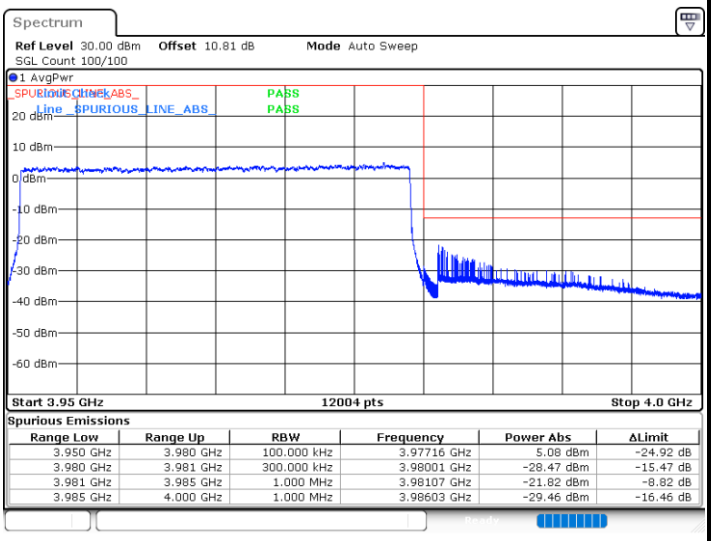


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69454 GHz	-22.04 dBm	-9.04 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69892 GHz	-20.08 dBm	-7.08 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69999 GHz	-25.34 dBm	-12.34 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70213 GHz	4.54 dBm	-25.46 dB

Date: 27.SEP.2024 05:40:01

Highest Band Edge / Full RB



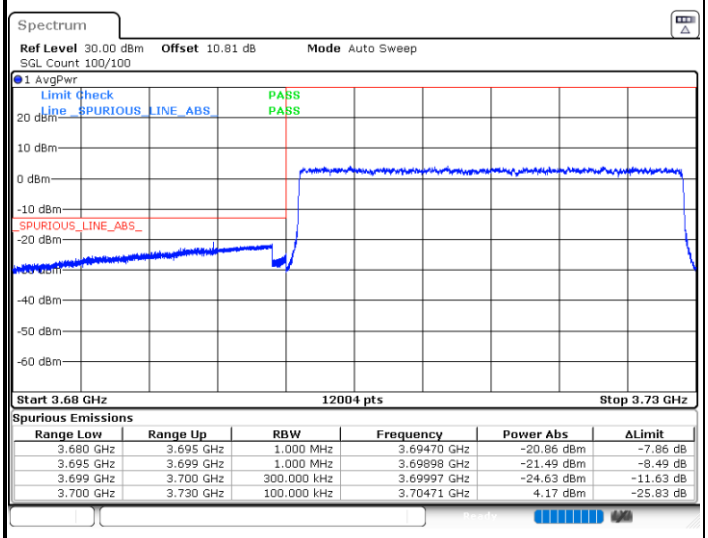
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.97716 GHz	5.08 dBm	-24.92 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98001 GHz	-28.47 dBm	-15.47 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98107 GHz	-21.82 dBm	-8.82 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98603 GHz	-29.46 dBm	-16.46 dB

Date: 27.SEP.2024 05:53:30

FR1 n77 / 30MHz / CP 64Q

Lowest Band Edge / FULL RB

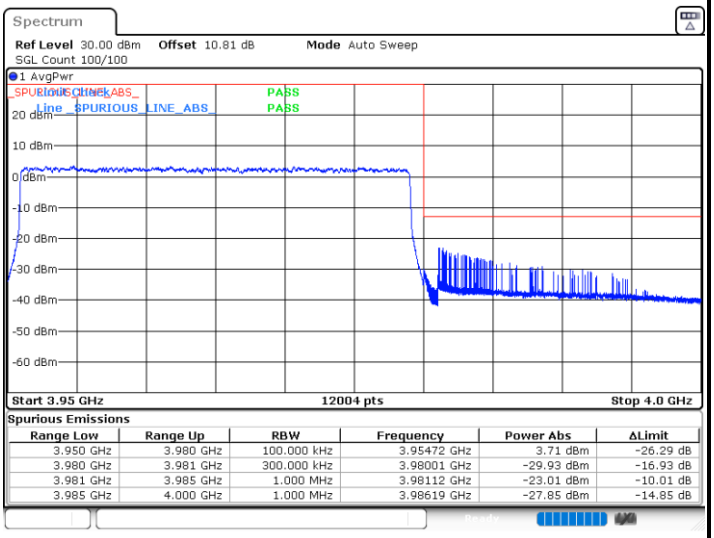


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69470 GHz	-20.86 dBm	-7.86 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69898 GHz	-21.49 dBm	-8.49 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69997 GHz	-24.63 dBm	-11.63 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70471 GHz	4.17 dBm	-25.83 dB

Date: 27.AUG.2024 19:08:48

Highest Band Edge / Full RB



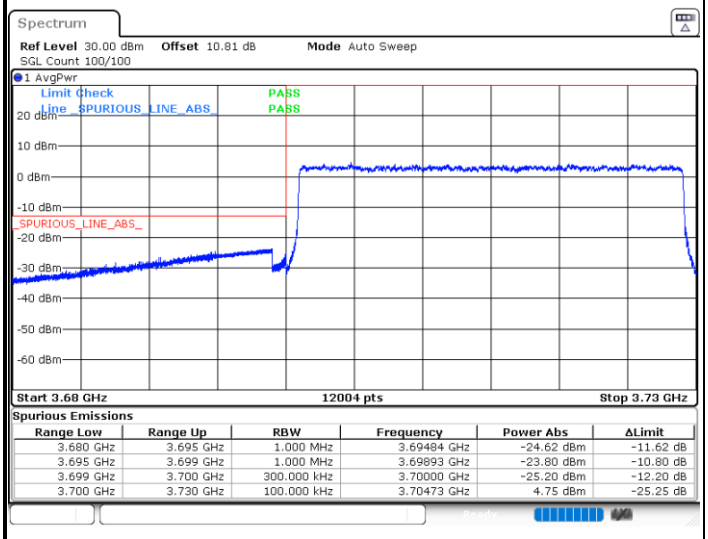
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.95472 GHz	3.71 dBm	-26.29 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98001 GHz	-29.93 dBm	-16.93 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98112 GHz	-23.01 dBm	-10.01 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98619 GHz	-27.85 dBm	-14.85 dB

Date: 27.AUG.2024 19:49:06

FR1 n77 / 30MHz / CP 256Q

Lowest Band Edge / FULL RB

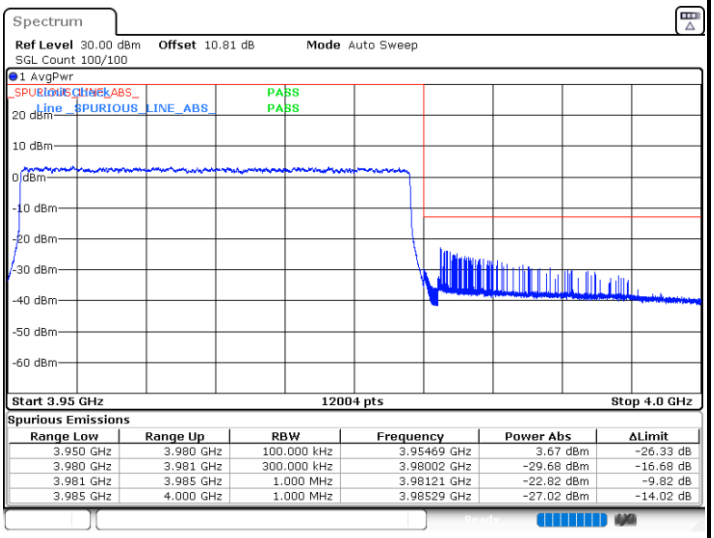


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69484 GHz	-24.62 dBm	-11.62 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69893 GHz	-23.80 dBm	-10.80 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.70000 GHz	-25.20 dBm	-12.20 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70473 GHz	4.75 dBm	-25.25 dB

Date: 27.AUG.2024 19:21:31

Highest Band Edge / Full RB



Spurious Emissions

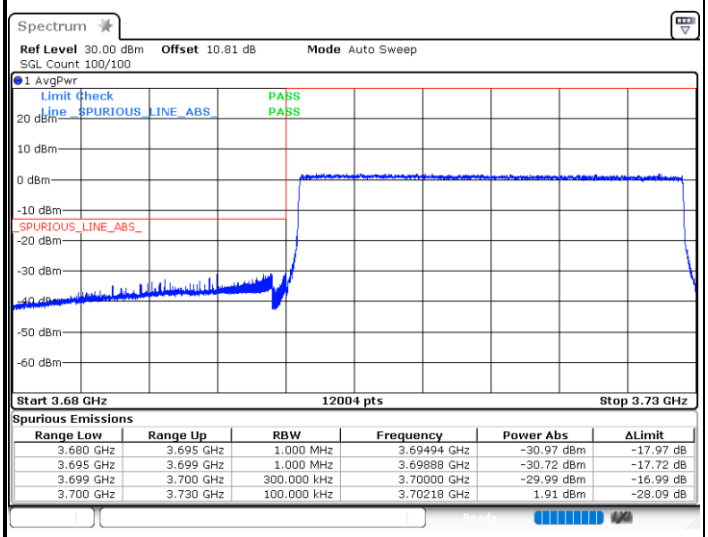
Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.95469 GHz	3.67 dBm	-26.33 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98002 GHz	-29.68 dBm	-16.68 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98121 GHz	-22.82 dBm	-9.82 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98529 GHz	-27.02 dBm	-14.02 dB

Date: 27.AUG.2024 19:49:49

30M-ANT1

FR1 n77 / 30MHz / CP QPSK

Lowest Band Edge / FULL RB

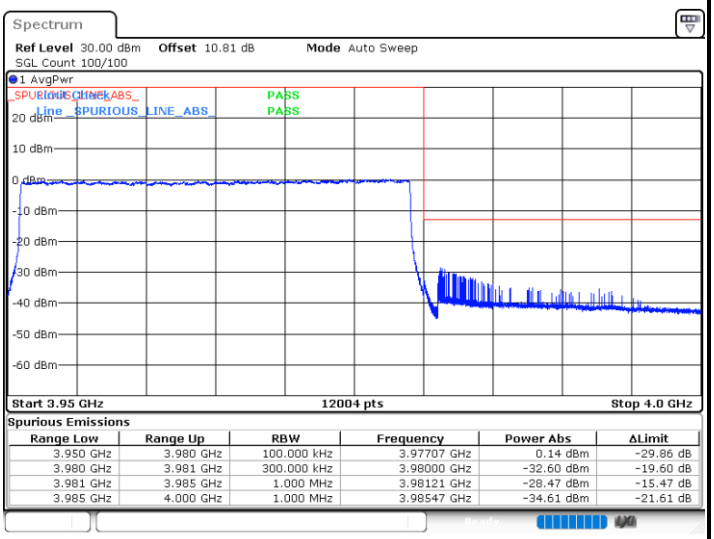


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69494 GHz	-30.97 dBm	-17.97 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69888 GHz	-30.72 dBm	-17.72 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.70000 GHz	-29.99 dBm	-16.99 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70218 GHz	1.91 dBm	-28.09 dB

Date: 28.AUG.2024 14:31:39

Highest Band Edge / Full RB



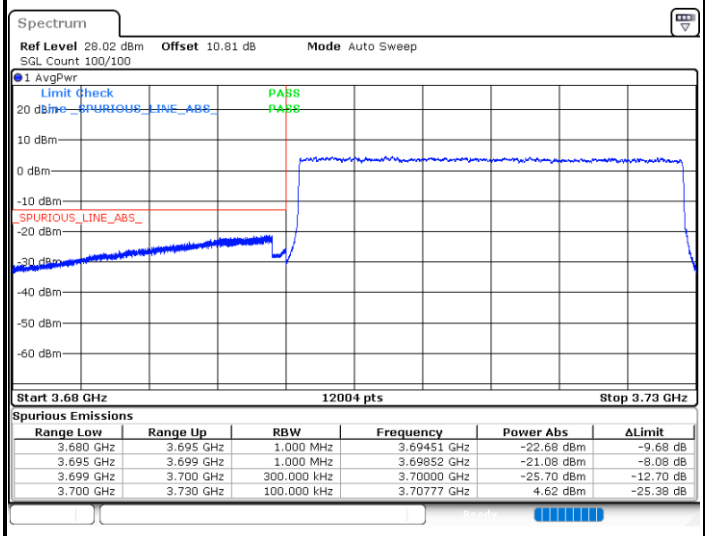
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.97707 GHz	0.14 dBm	-29.86 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98000 GHz	-32.60 dBm	-19.60 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98121 GHz	-28.47 dBm	-15.47 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98547 GHz	-34.61 dBm	-21.61 dB

Date: 28.AUG.2024 15:14:28

FR1 n77 / 30MHz / CP 16Q

Lowest Band Edge / FULL RB

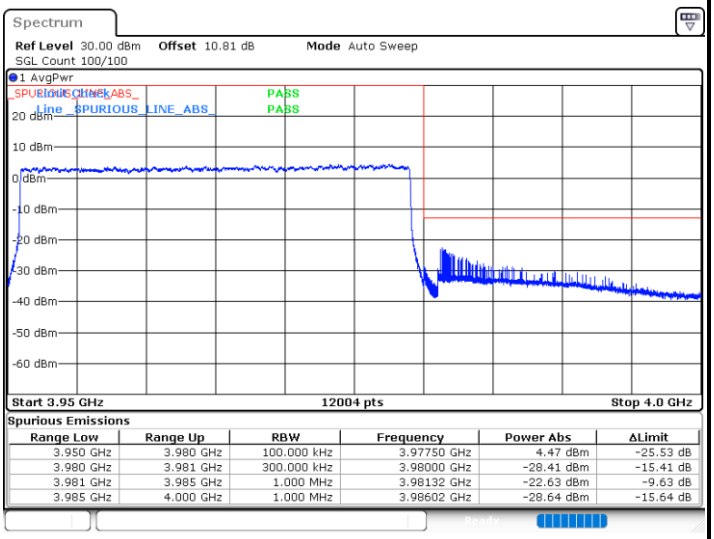


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69451 GHz	-22.68 dBm	-9.68 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69852 GHz	-21.08 dBm	-8.08 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.70000 GHz	-25.70 dBm	-12.70 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70777 GHz	4.62 dBm	-25.38 dB

Date: 27.SEP.2024 05:36:28

Highest Band Edge / Full RB



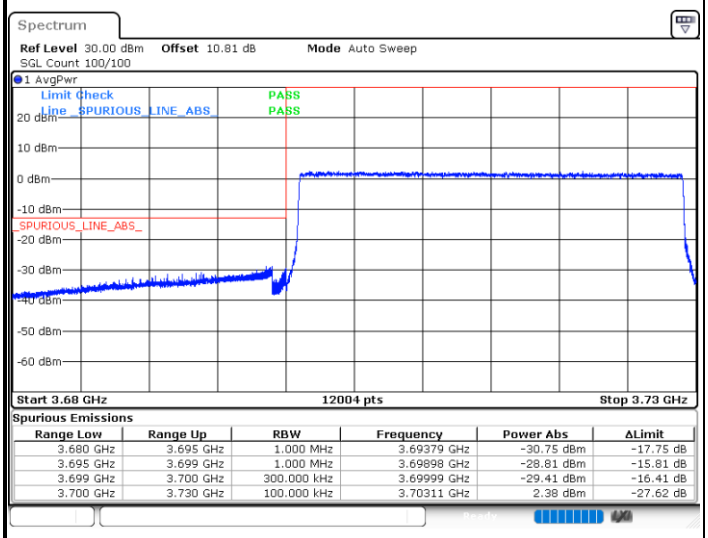
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.97750 GHz	4.47 dBm	-25.53 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98000 GHz	-28.41 dBm	-15.41 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98132 GHz	-22.63 dBm	-9.63 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98602 GHz	-28.64 dBm	-15.64 dB

Date: 27.SEP.2024 05:57:19

FR1 n77 / 30MHz / CP 64Q

Lowest Band Edge / FULL RB

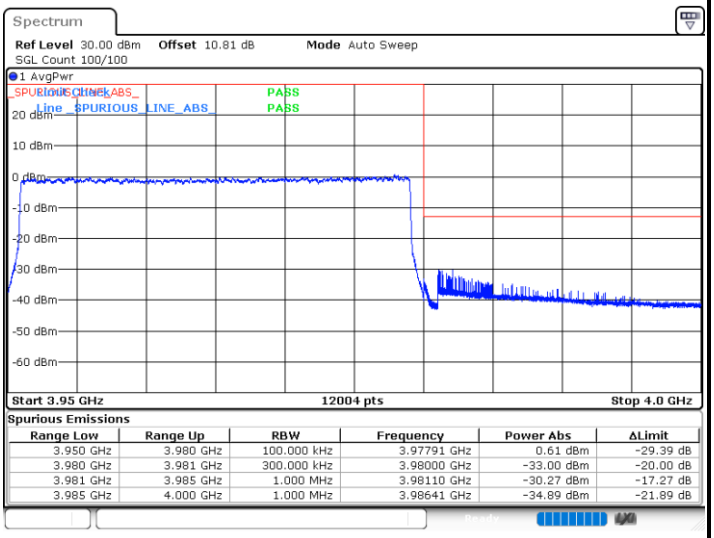


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69379 GHz	-30.75 dBm	-17.75 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69898 GHz	-28.81 dBm	-15.81 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69999 GHz	-29.41 dBm	-16.41 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70311 GHz	2.38 dBm	-27.62 dB

Date: 28.AUG.2024 14:32:38

Highest Band Edge / Full RB



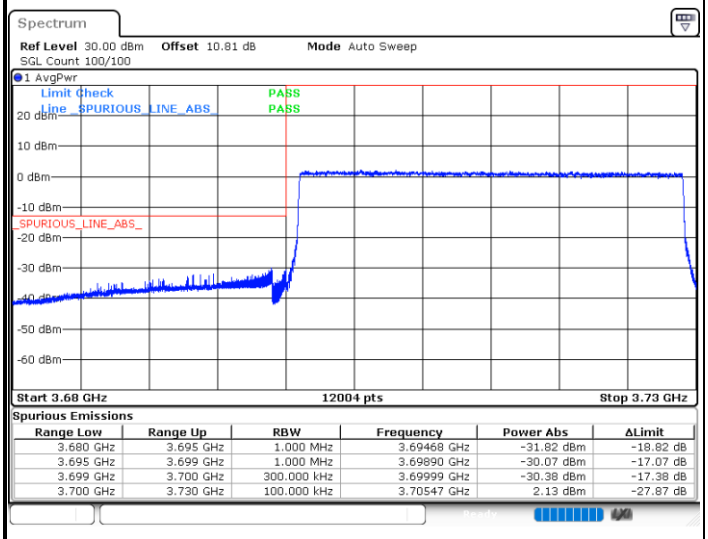
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.97791 GHz	0.61 dBm	-29.39 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98000 GHz	-33.00 dBm	-20.00 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98110 GHz	-30.27 dBm	-17.27 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98641 GHz	-34.89 dBm	-21.89 dB

Date: 28.AUG.2024 15:16:32

FR1 n77 / 30MHz / CP 256Q

Lowest Band Edge / FULL RB

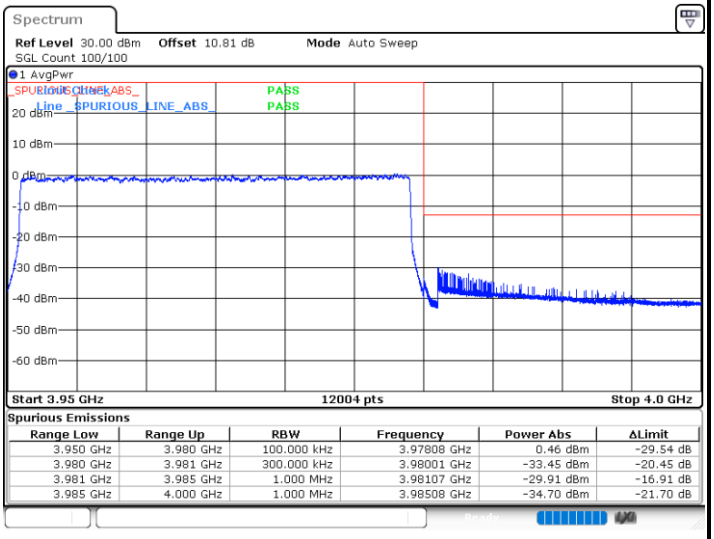


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.680 GHz	3.695 GHz	1.000 MHz	3.69468 GHz	-31.82 dBm	-18.82 dB
3.695 GHz	3.699 GHz	1.000 MHz	3.69890 GHz	-30.07 dBm	-17.07 dB
3.699 GHz	3.700 GHz	300.000 kHz	3.69999 GHz	-30.38 dBm	-17.38 dB
3.700 GHz	3.730 GHz	100.000 kHz	3.70547 GHz	2.13 dBm	-27.87 dB

Date: 28.AUG.2024 14:33:39

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
3.950 GHz	3.980 GHz	100.000 kHz	3.97808 GHz	0.46 dBm	-29.54 dB
3.980 GHz	3.981 GHz	300.000 kHz	3.98001 GHz	-33.45 dBm	-20.45 dB
3.981 GHz	3.985 GHz	1.000 MHz	3.98107 GHz	-29.91 dBm	-16.91 dB
3.985 GHz	4.000 GHz	1.000 MHz	3.98508 GHz	-34.70 dBm	-21.70 dB

Date: 28.AUG.2024 15:17:12