RF MEASUREMENT REPORT

FCC ID:	XMR2023RG520FNA
Applicant:	Quectel Wireless Solutions Co., Ltd
Product:	5G Sub-6 GHz LGA Module
Model No.:	RG520F-NA
Brand Name:	Quectel
FCC Rule Part(s):	Part 96
Test Procedure(s):	ANSI C63.26: 2015
Result:	Complies
Received Date:	2023-05-11
Test Date:	2023-05-12 ~ 2023-06-04

Reviewed By: Sunny Sun

Approved By: Robin Wu

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.26-2015. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2305RSU024-U11	Rev. 01	Initial Report	2023-07-01	Valid

Note: RG520F-NA and RG520N-NA share the same chipset baseline, same software and hardware design, support same bands, the difference is on software enable or disable modem features like some ENDC/CA combs. This application for certification is leveraging the data reuse procedures from KDB 484596 based on reference FCC ID “XMR2023RG520NNA” to cover this variant and assessing the output power, band edge, radiated spurious emissions.

Test Item	Reuse Data Description
Occupied Bandwidth	Refer to FCC ID: XMR2023RG520NNA
Frequency Stability	Refer to FCC ID: XMR2023RG520NNA
Equivalent (Isotropic) Radiated Power	Make Spot Check
Peak to Average Ratio	Refer to FCC ID: XMR2023RG520NNA
End User Device Additional Requirement	Refer to FCC ID: XMR2023RG520NNA
Band Edge	Make Spot Check
Spurious Emission	Make Spot Check
Remark: This application resued the following bands test data of the original FCC ID: XMR2023RG520NNA LTE Band: Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 48, 66, 71 NR Bands: n2, n5, n7, n12, n13, n14, n25, n26, n30, n38, n41, n48, n66, n71, n77, n78	

CONTENTS

1. General Information

1.1. Applicant

Quectel Wireless Solutions Co., Ltd

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.2. Manufacturer

Quectel Wireless Solutions Co., Ltd

Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233

1.3. Testing Facility

☒	**Test Site - MRT Suzhou Laboratory**				
	Laboratory Location (Suzhou - Wuzhong)				
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China				
	Laboratory Location (Suzhou - SIP)				
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**Test Site - MRT Shenzhen Laboratory**				
	Laboratory Location (Shenzhen)				
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China				
	Laboratory Accreditations				
	A2LA: 3628.02		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	**Test Site - MRT Taiwan Laboratory**				
	Laboratory Location (Taiwan)				
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accreditations				
	TAF: L3261-190725				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	5G Sub-6 GHz LGA Module
Model No.	RG520F-NA
Brand Name	Quectel
IMEI	Conducted Measurement 1: 864766050012138 Conducted Measurement 2: 864766050012534 Radiated Measurement 1: 864766050012070 Radiated Measurement 2: 864766050012716
E-UTRA Band	Band 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 42, 43, 48, 66, 71
5G NR Band	n2, n5, n7, n12, n13, n14, n25, n26, n30, n38, n41, n48, n66, n71, n77, n78
5G NR NSA Band	n2, n5, n7, n12, n13, n14, n25, n26, n30, n38, n41, n48, n66, n71, n77, n78
Operating Temperature	-30 ~ 75 °C
Power Type	3.3 ~ 4.4Vdc, typical 3.8Vdc
Remark: The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.	

1.5. Radio Specification

TDD T_X & R_X Frequency Range	Band 48: 3550 ~ 3700 MHz
Modulation	UL up to 256QAM, DL up to 256QAM
Device Type	End User Device
Remark: For other features of this EUT, test report will be issued separately.	

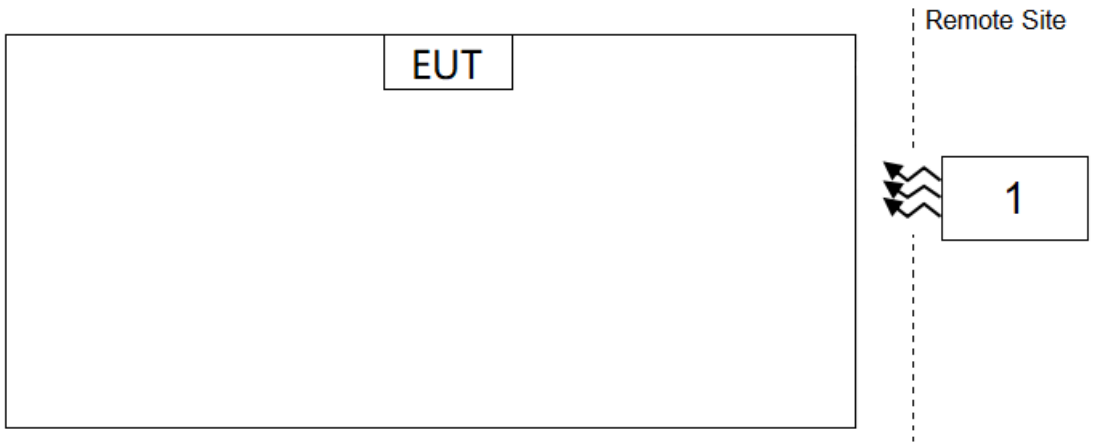
1.6. Test Methodology

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

- ANSI C63.26:2015
- FCC CFR 47 Part Part 96
- FCC KDB 971168 D01 v03r01: Power Meas License Digital Systems
- FCC KDB 971168 D02 v02r01: Misc Rev Approv License Devices
- FCC KDB 412172 D01 v01r01: Determining ERP and EIRP
- FCC KDB 940660 D01 v03 Part 96 CBRS Eqpt

2. Test Configuration

2.1. Test System Connection Diagram



Product		Manufacturer	Model No.
1	Wideband Radio Communication Tester	R&S	CMW 500

2.2. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20% ~ 75%RH

3. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
Signal Analyzer	Keysight	N9010B	MRTSUE07028	1 year	2023-11-25	SIP-SR1
Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2024-05-23	SIP-SR1
Signal Analyzer	Keysight	N9010B	MRTSUE06603	1 year	2023-10-25	SIP-SR1
Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2023-11-07	SIP-SR1
Communication Tester	R&S	CMU 200	MRTSUE06009	1 year	2023-08-23	SIP-SR1
Communication Tester	R&S	CMW500	MRTSUE06243	1 year	2023-10-08	SIP-SR1
Signal Generator	Keysight	E8257D	MRTSUE06453	1 year	2024-05-23	SIP-SR1
Thermohygrometer	testo	622	MRTSUE06629	1 year	2024-01-03	SIP-SR1
5G Wireless Test Platform	Keysight	E7515B	MRTSUE06903	1 year	2023-10-25	SIP-SR1
Signal Generator	Keysight	E8257D	MRTSUE06904	1 year	2023-10-25	SIP-SR1
DC POWER MODULE	Keysight	N6743B	MRTSUE06905	N/A	N/A	SIP-SR1
DC POWER MODULE	Keysight	N6743B	MRTSUE06906	N/A	N/A	SIP-SR1
Low-Profile Modular Power System Mainframe	Keysight	N6700C	MRTSUE06907	N/A	N/A	SIP-SR1
FR1 Switching Unit	Keysight	C8880A	MRTSUE06908	N/A	N/A	SIP-SR1
Signal Analyzer	Keysight	N9021B	MRTSUE06915	1 year	2023-12-28	SIP-SR1
Temperature Chamber	BAOYT	BYG-80CL	MRTSUE06932	1 year	2024-02-12	SIP-SR1
Shielding Room	MIX-BEP	SIP-SR1	MRTSUE06948	N/A	N/A	SIP-SR1
Millimeter-Wave Transceiver for 5G	Keysight	M1740A	MRTSUE06954	3 years	2024-06-02	SIP-SR1
Millimeter-Wave Transceiver for 5G	Keysight	M1740A	MRTSUE06955	3 years	2024-06-02	SIP-SR1
5G Wireless Test Platform	Keysight	E7515B	MRTSUE06956	1 year	2024-05-23	SIP-SR1
Common Interface Unit	Keysight	E7770A	MRTSUE06957	N/A	N/A	SIP-SR1
USB Power Sensor	Keysight	U8488A	MRTSUE06958	1 year	2026-07-08	SIP-SR1
Directional Coupler	ar	DC7200A	MRTSUE06147	N/A	N/A	SIP
Directional Coupler	ar	DC6080A	MRTSUE06148	N/A	N/A	SIP-SR1
Directional Coupler	narda	4226-10	MRTSUE06564	1 year	2023-10-10	SIP-SR1
Directional Coupler	PULSAR	CS10-23-436/20	MRTSUE06846	1 year	2024-06-01	SIP-SR1
Directional Coupler	PULSAR	CS10-23-436/20	MRTSUE06848	1 year	2024-06-01	SIP-SR1
Attenuator	MVE	MVE2213	MRTSUE11055	1 year	2024-06-08	SIP-SR1
Attenuator	MVE	MVE2213	MRTSUE11056	1 year	2024-06-08	SIP-SR1
Attenuator	MVE	MVE2213	MRTSUE11057	1 year	2024-06-08	SIP-SR1
Attenuator	MVE	MVE2213	MRTSUE11058	1 year	2024-06-08	SIP-SR1
Attenuator	MVE	MVE2213	MRTSUE11059	1 year	2024-06-08	SIP-SR1

Attenuator	MVE	MVE2213	MRTSUE11060	1 year	2024-06-08	SIP-SR1

Software	Version	Function
EMI Software	V3.0.0	EMI Test Software

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Radiated Spurious Emissions
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 9kHz ~ 300MHz: 5.04dB 300MHz ~ 1GHz: 4.95dB 1GHz ~ 40GHz: 6.40dB Vertical: 9kHz ~ 300MHz: 5.24dB 300MHz ~ 1GHz: 6.03dB 1GHz ~ 40GHz: 6.40dB
Conducted Spurious Emissions
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB

5. Test Result

5.1. Summary

FCC Part Section(s)	Test Description	Test Condition	Verdict
96.41(b)	Equivalent Isotropic Radiated Power	Conducted	Pass
96.41(e)	Band Edge Emissions		Pass
2.1053, 96.41(e)	Spurious Emissions	Radiated	Pass

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part ofthe system to connect the EUT to the analyzer at all frequencies of interest.
2) The worst-case emission of modulation was selected. Therefore, the Channel Band Edge, Radiated Emission were presented worst-case in the test report.
3) For radiated emission tests, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.

5.2. Equivalent Isotropically Radiated Power Measurement

5.2.1. Test Limit

The maximum effective isotropic radiated power (EIRP) End User Device is 23dBm/10MHz

5.2.2. Test Procedure

ANSI C63.26-2015 - Section 5.2.4.4.2 &5.2.5.5

5.2.3. Test Setting

When the fundamental condition for average power measurements cannot be realized (i.e., the EUT can not be configured to transmit at full-power on a continuous basis (i.e., duty cycle < 98%) and the instrumentation cannot be configured to measure only during active full-power transmissions), then thefollowing procedure can be used if the EUT duty cycle is constant (i.e., duty cycle variations are less thanor equal to ±2%).

a) Set span to 2 × to 3 × the OBW.

b) Set RBW = 1% to 5% of the OBW.

c) Set VBW ≥ 3 × RBW.

d) Set number of measurement points in sweep ≥ 2 × span / RBW.

e) Sweep time:

1) Set = auto-couple, or

2) Set ≥ [10 × (number of points in sweep) × (transmission symbol period)] for single sweep (automation-compatible) measurement.

f) Detector = power averaging (rms).

g) Set sweep trigger to “free run.”

h) Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

i) Using the marker function to identify the maximum PSD.

j) Add 10 log (1/duty cycle) to the measured power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25%.

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation (1) as follows:

$$\text{ERP or EIRP} = P_{Meas} + G_T \quad (1)$$

where

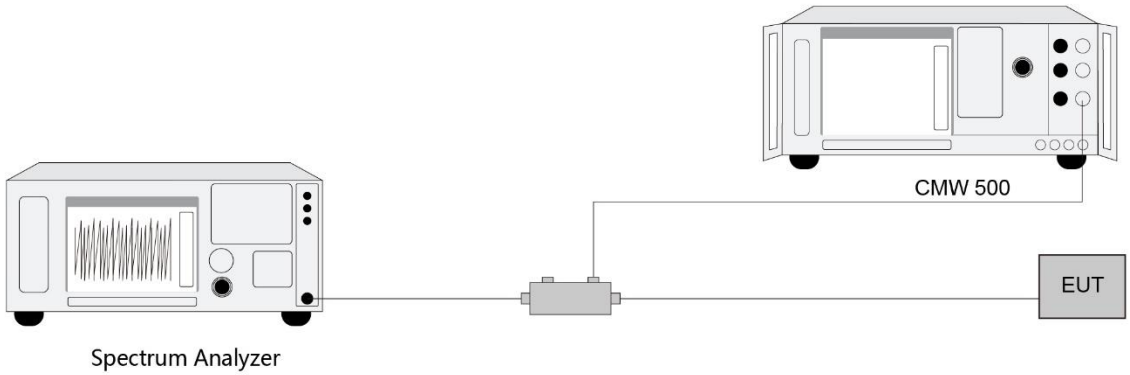
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g., dBm or dBW)

P_{Meas} measured transmitter output power or PSD, in dBm or dBW

G_T gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

For devices utilizing multiple antennas, see 6.4 for guidance with respect to determining the effective array transmit antenna gain term to be used in the above equation.

5.2.4. Test Setup



5.2.5. Test Result

Refer to Appendix A.1.

5.3. Band Edge Measurement

5.3.1. Test Limit

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst-case configuration. All modes of operation were investigated, and the worst-case configuration results are reported in this section.

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.

5.3.2. Test Procedure

ANSI C63.26-2015 - Section5.7

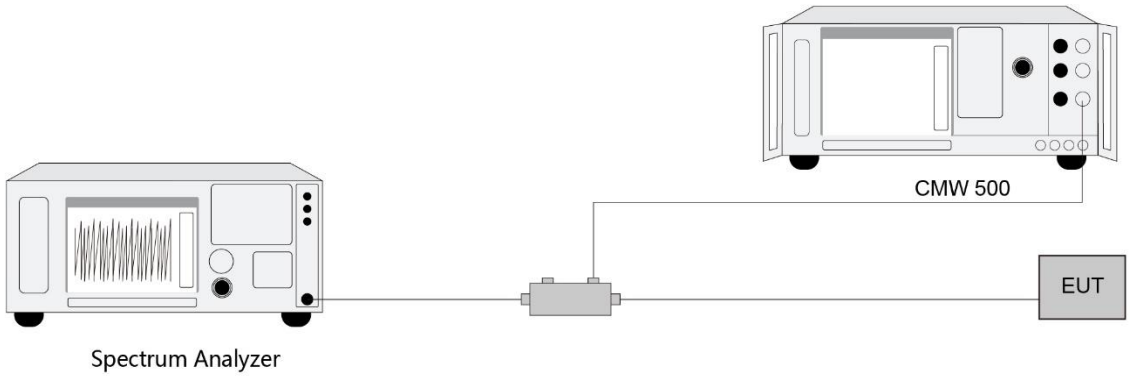
5.3.3. Test Setting

1. Set the analyzer frequency to low, middle, high channel.
2. RBW ≥ The nominal RBW shall be in the range of 1% of the anticipated OBW (in the 1MHz band immediately outside and adjacent to the band edge). For improvement of the accuracy in the measurement of the average power of a noise-like emission, a RBW narrower than the specified reference bandwidth can be used (generally limited to no less than 1% of the OBW), provided that a subsequent integration is performed over the full required measurement bandwidth. This integration should be performed using the spectrum analyzer's band power functions.
3. VBW ≥ 3*RBW
4. Sweep time = auto
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run."
7. User gate triggered such that the analyzer only sweeps when the device is transmitting at full power
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time,

increase the sweep time.

9. Used power integration whenusing a measurement bandwidth smaller than the specified bandwidth.

5.3.4. Test Setup



5.3.5. Test Result

Refer to Appendix A.2.

5.4. Radiated Spurious Emissions Measurement

5.4.1. Test Limit

Out of band emissions: The power of any emissions below 3530 MHz or above 3720 MHz shall not exceed −40dBm/MHz.

E (dBμV/m) = EIRP (dBm) - 20 log D + 104.8; where D is the measurement distance in meters. The emission limit equal to 55.3dBμV/m.

5.4.2. Test Procedure

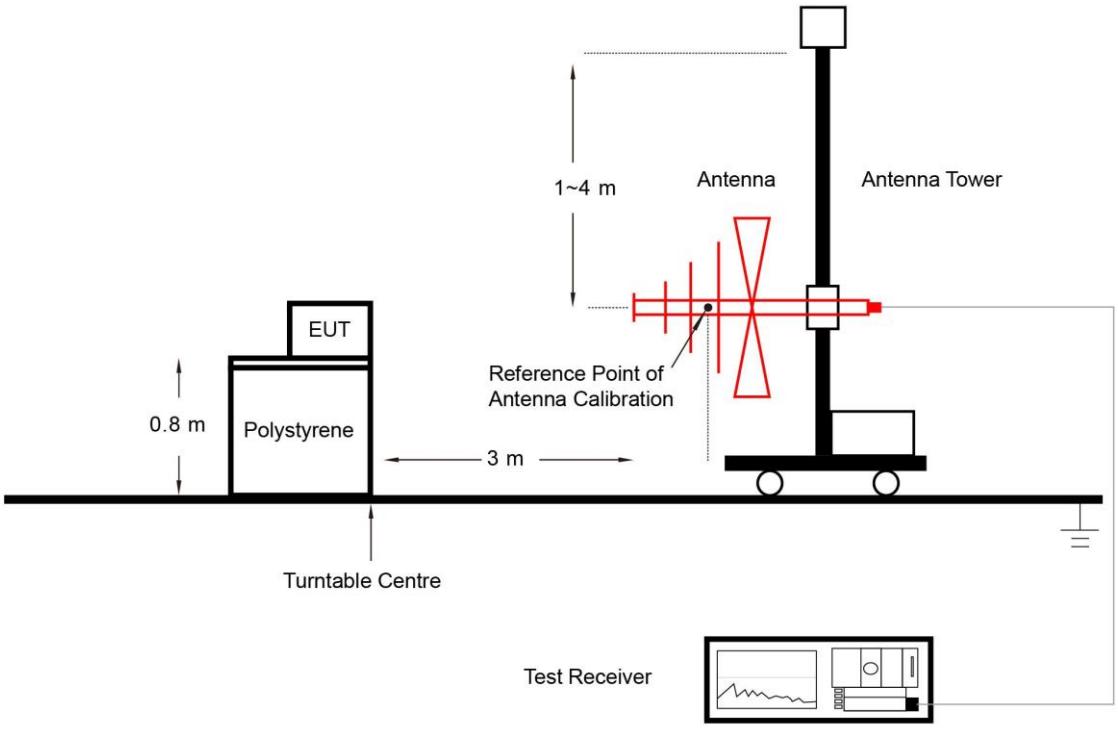
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.4.3. Test Setting

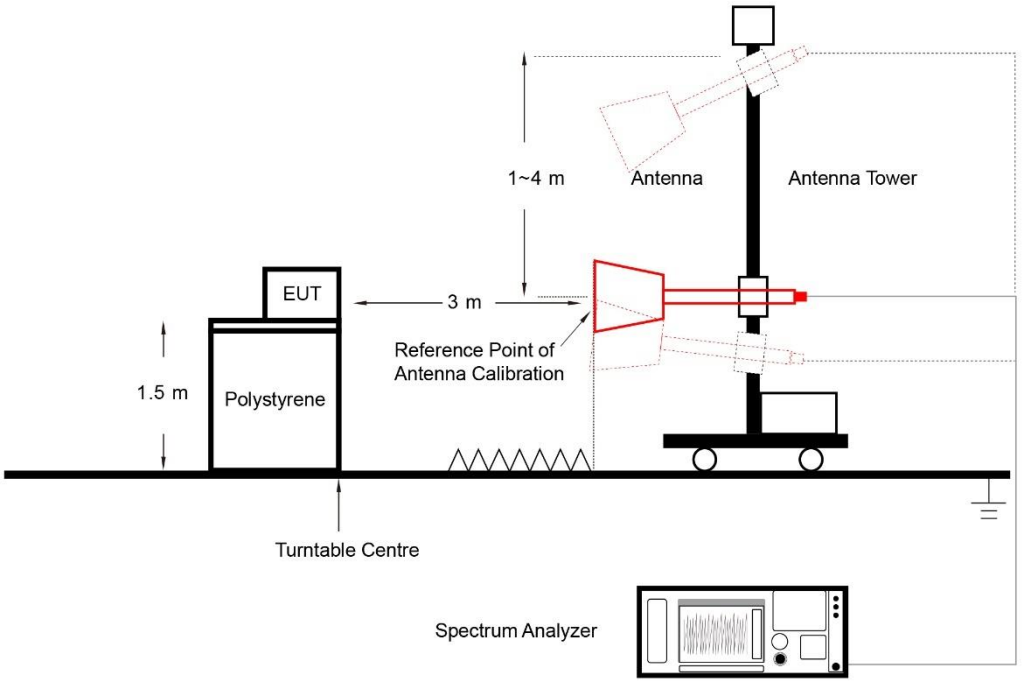
1. RBW = 1MHz
2. VBW ≥ 3*RBW
3. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

5.4.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.4.5. Test Result

Refer to Appendix A.3.

Appendix A - Test Result

A.2 Equivalent Isotropically Radiated Power Test Result

Test Site	SIP-SR1	Test Engineer	Sunshine Wan
Test Date	2023/05/12 ~ 2023/06/04	Test Band	Band 48

Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm/10MHz)	EIRP (dBm/ 10MHz)	Limit (dBm/ 10MHz)
QPSK						
3552.50	5	25	0	20.54	21.12	<23.00
3625.00				20.15	20.73	<23.00
3697.50				20.56	21.14	<23.00
3555.00	10	50	0	20.60	21.18	<23.00
3625.00				20.82	21.40	<23.00
3695.00				20.68	21.26	<23.00
3557.50	15	75	0	19.19	19.77	<23.00
3625.00				18.98	19.56	<23.00
3692.50				19.37	19.95	<23.00
3560.00	20	100	0	18.12	18.70	<23.00
3625.00				17.93	18.51	<23.00
3690.00				17.99	18.57	<23.00
Note: The EIRP (dBm/10MHz) = Output Power (dBm/10MHz) + Antenna Gain (dBi)						

Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	EIRP (dBm)
QPSK					
3552.50	5	25	0	21.89	22.47
3625.00				22.06	22.64
3697.50				22.16	22.74
3555.00	10	50	0	21.87	22.45
3625.00				22.08	22.66
3695.00				22.20	22.78
3557.50	15	75	0	21.60	22.18
3625.00				21.81	22.39
3692.50				22.09	22.67
3560.00	20	100	0	21.75	22.33
3625.00				21.88	22.46
3690.00				21.98	22.56
Note: The EIRP (dBm/10MHz) = Output Power (dBm/10MHz) + Antenna Gain (dBi)					

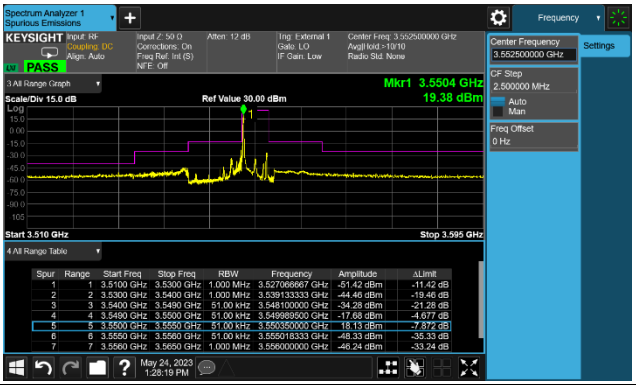
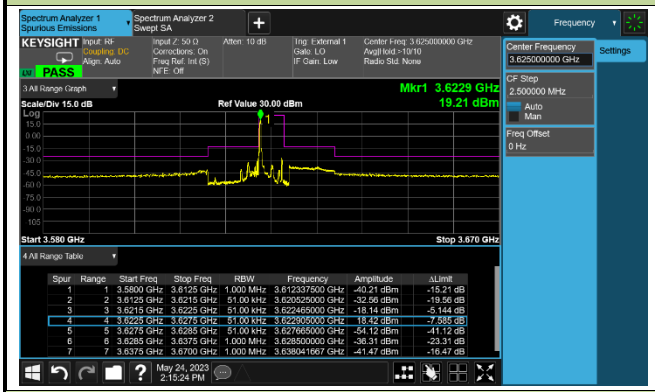
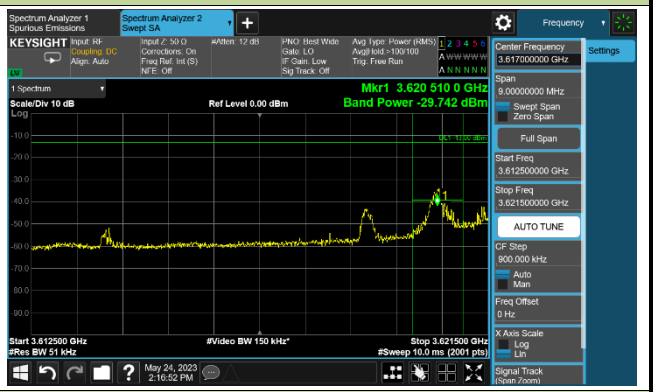
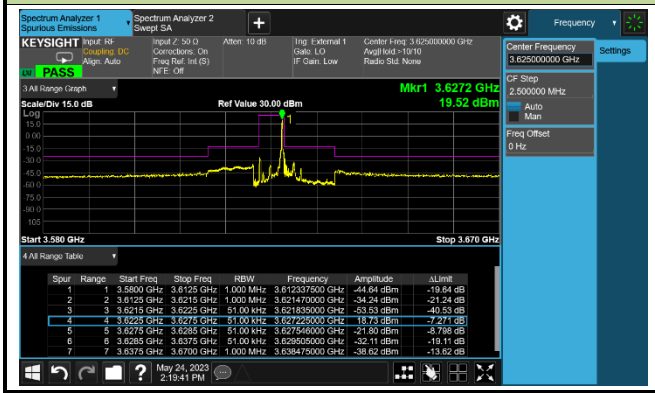
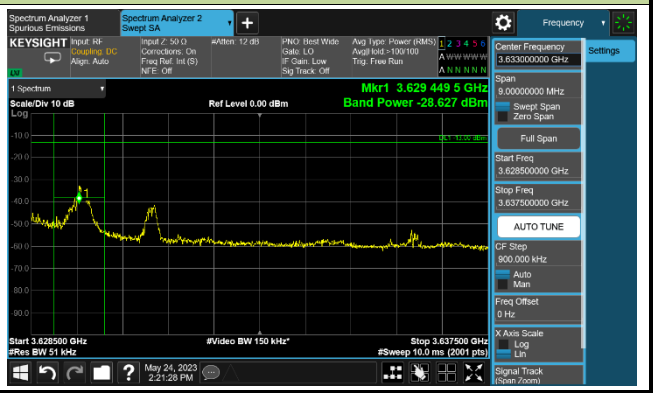
Test Site	SIP-SR1	Test Engineer	Sunshine Wan
Test Date	2023/05/12 ~ 2023/06/04	Test Band	Intra-Band CA_48C

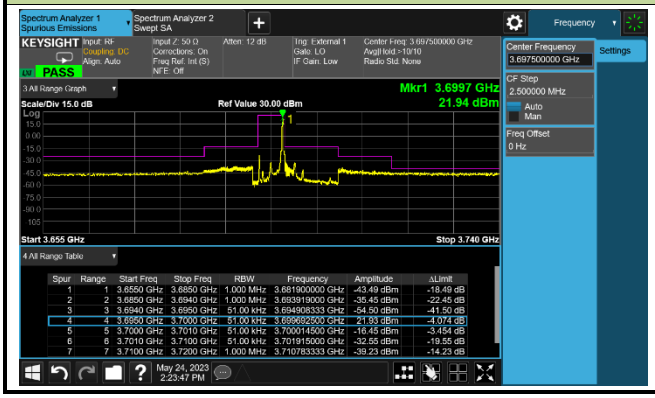
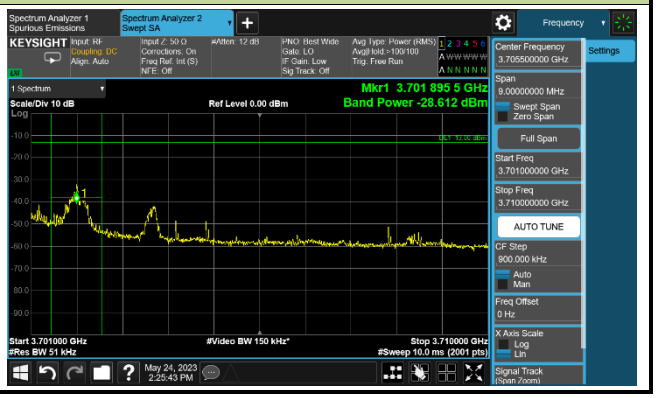
Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm/10MHz)	EIRP (dBm/ 10MHz)	Limit (dBm/ 10MHz)
PCC	SCC						
QPSK							
3553.3	3565.0	5+20	P_25@0	S_100@0	20.37	20.95	<23.00
3615.8	3627.5				20.08	20.66	<23.00
3678.3	3690.0				20.09	20.67	<23.00
3560.0	3571.7	20+5	P_100@0	S_25@0	18.28	18.86	<23.00
3622.5	3634.2				17.78	18.36	<23.00
3685.0	3696.7				17.74	18.32	<23.00
3555.5	3569.9	10+20	P_50@99	S_100@0	21.03	21.61	<23.00
3615.6	3630.0				20.36	20.94	<23.00
3675.6	3690.0				20.37	20.95	<23.00
3560.0	3574.4	20+10	P_100@0	S_50@0	18.56	19.14	<23.00
3620.1	3634.5				18.44	19.02	<23.00
3680.1	3694.5				18.42	19.00	<23.00
3557.8	3574.9	15+20	P_75@0	S_75@0	19.55	20.13	<23.00
3615.3	3632.4				19.60	20.18	<23.00
3672.9	3690.0				19.55	20.13	<23.00
3560.0	3577.1	20+15	P_100@0	S_100@0	18.19	18.77	<23.00
3617.6	3634.7				18.44	19.02	<23.00
3675.1	3692.2				18.38	18.96	<23.00
3560.0	3579.8	20+20	P_100@0	S_100@0	18.42	19.00	<23.00
3615.1	3634.9				18.40	18.98	<23.00
3670.2	3690.0				18.34	18.92	<23.00
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)							

Frequency (MHz)		Channel Bandwidth (MHz)	PCC RB	SCC RB	Output Power (dBm)	EIRP (dBm)
PCC	SCC					
QPSK						
3553.3	3565.0	5+20	P_25@0	S_100@0	21.13	21.71
3615.8	3627.5				21.33	21.91
3678.3	3690.0				21.26	21.84
3560.0	3571.7	20+5	P_100@0	S_25@0	21.00	21.58
3622.5	3634.2				21.23	21.81
3685.0	3696.7				21.33	21.91
3555.5	3569.9	10+20	P_50@99	S_100@0	21.21	21.79
3615.6	3630.0				21.30	21.88
3675.6	3690.0				21.34	21.92
3560.0	3574.4	20+10	P_100@0	S_50@0	21.17	21.75
3620.1	3634.5				21.19	21.77
3680.1	3694.5				21.32	21.90
3557.8	3574.9	15+20	P_75@0	S_75@0	21.24	21.82
3615.3	3632.4				21.28	21.86
3672.9	3690.0				21.35	21.93
3560.0	3577.1	20+15	P_100@0	S_100@0	21.27	21.85
3617.6	3634.7				21.33	21.91
3675.1	3692.2				21.37	21.95
3560.0	3579.8	20+20	P_100@0	S_100@0	21.26	21.84
3615.1	3634.9				21.26	21.84
3670.2	3690.0				21.46	22.04
Note: The EIRP (dBm) = Output Power (dBm) + Antenna Gain (dBi)						

A.4 Band Edge Test Result

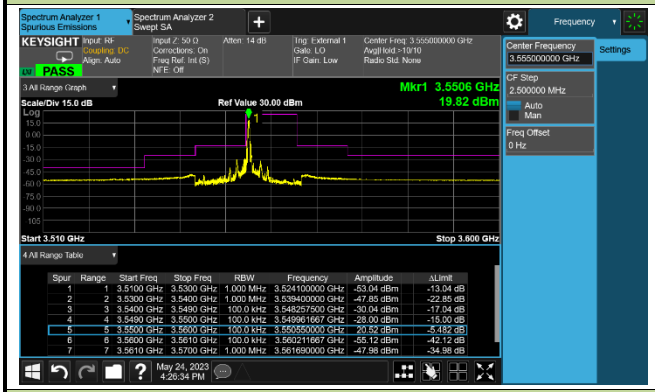
Test Site	SIP-SR1	Test Engineer	Sunshine Wan
Test Date	2023/05/24 ~ 2023/06/01	Test Band	Band 48

<table>
<tr><th colspan="2">5MHz Channel Bandwidth - 1RB</th></tr>
<tr><td>Low Channel ACP</td><td>Extended Band Edge</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>MiddleChannel ACP - Low RB Position</td><td>Extended Band Edge</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Middle Channel ACP - High RB Position</td><td>Extended Band Edge</td></tr>
<tr><td>  </td><td>  </td></tr>
</table>

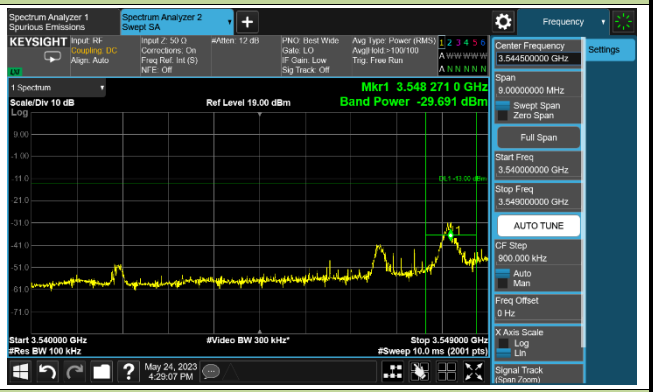
High Channel ACP	Extended Band Edge
	

10MHz Channel Bandwidth - 1RB

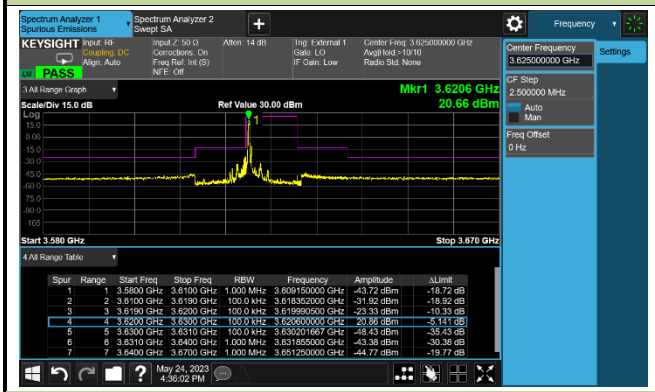
Low Channel ACP



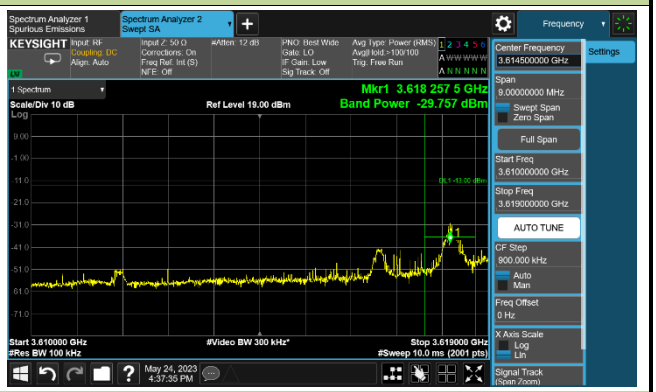
Extended Band Edge



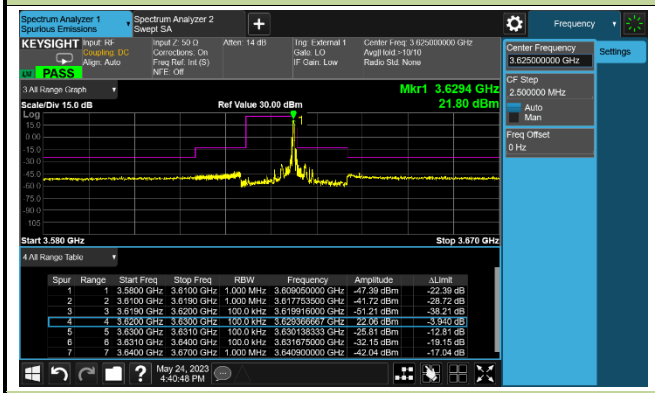
MiddleChannel ACP - Low RB Position



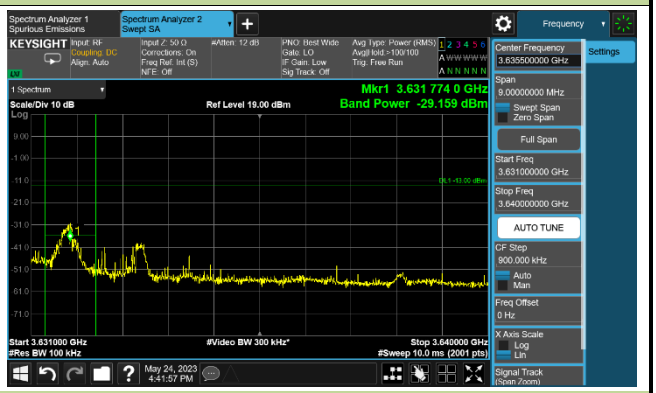
Extended Band Edge



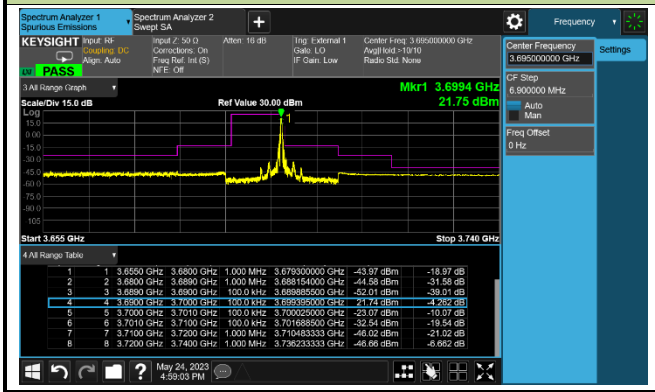
MiddleChannel ACP - High RB Position



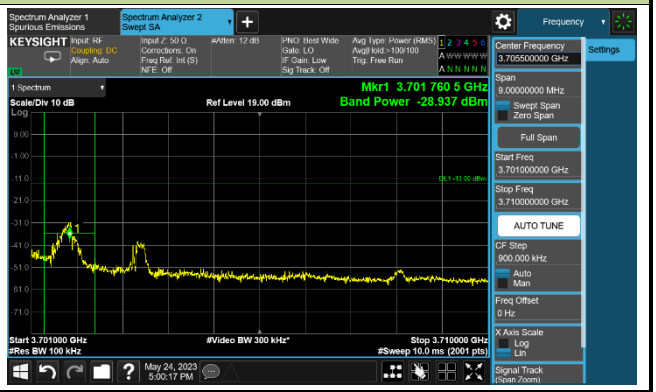
Extended Band Edge

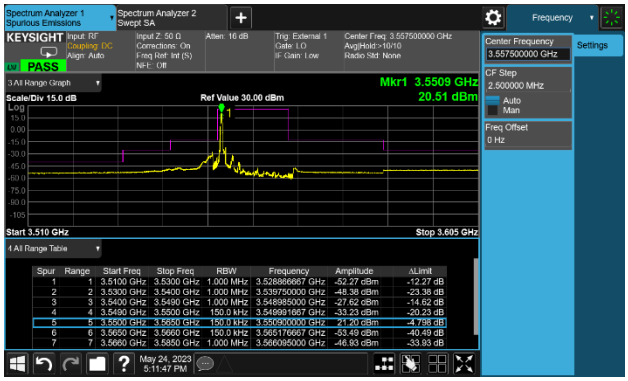
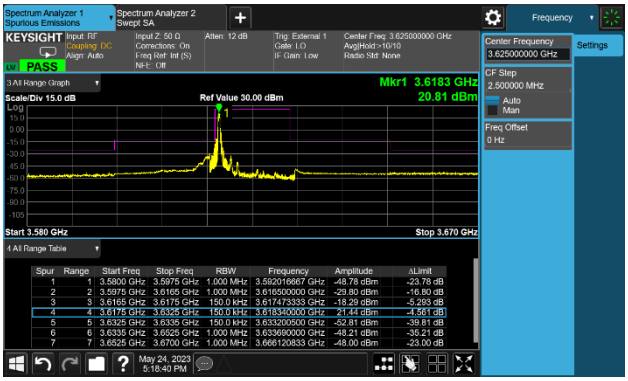
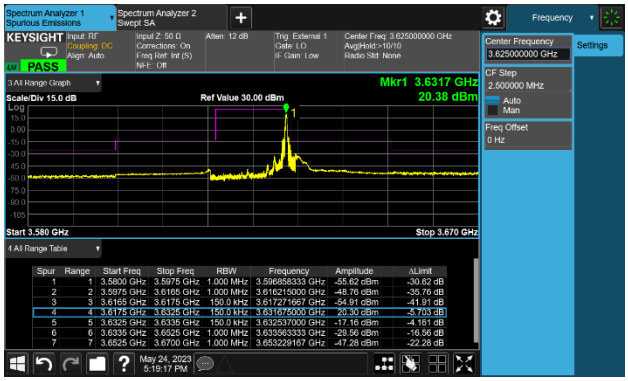
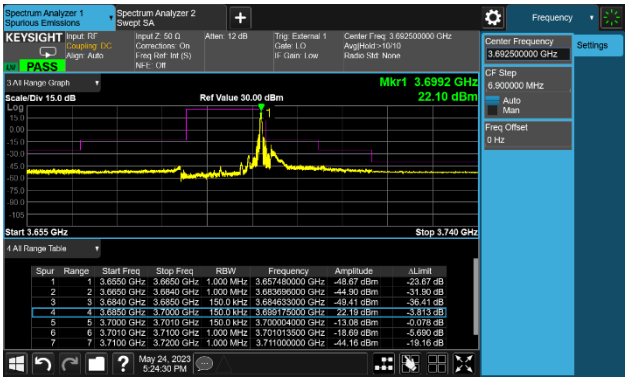


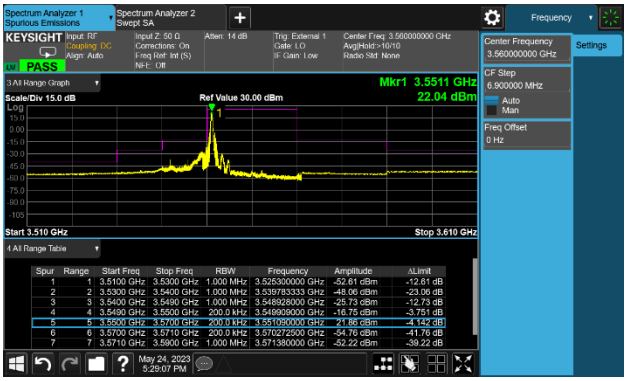
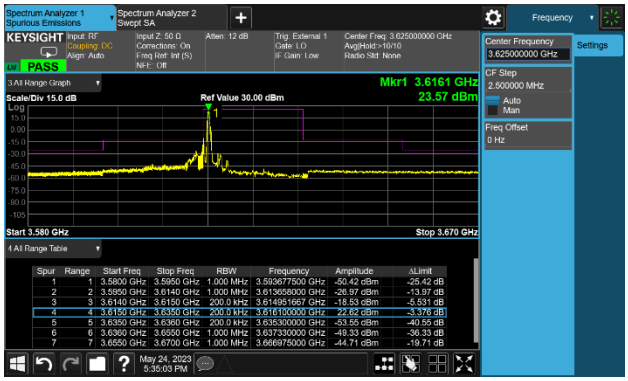
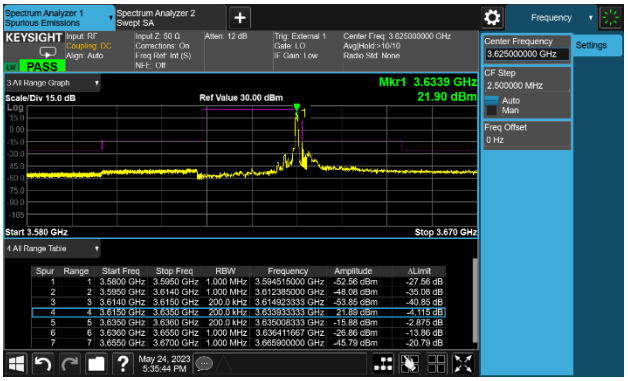
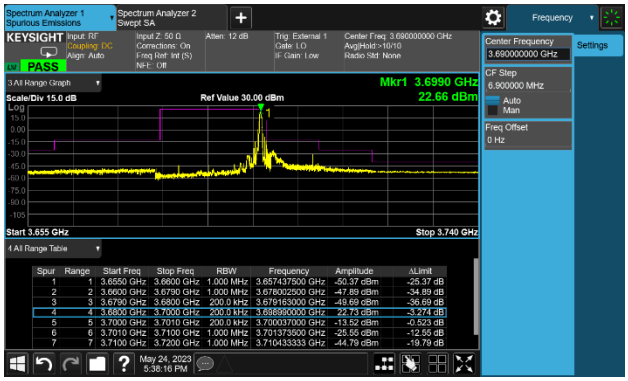
High Channel ACP



Extended Band Edge

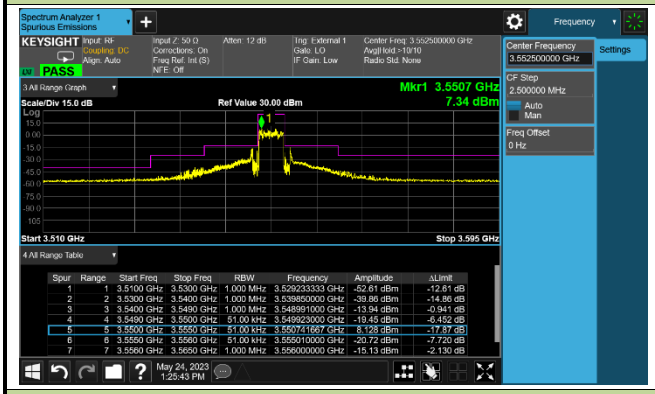


15MHz Channel Bandwidth - 1RB	
Low Channel ACP	MiddleChannel ACP - Low RB Position
	
MiddleChannel ACP - High RB Position	High Channel ACP
	

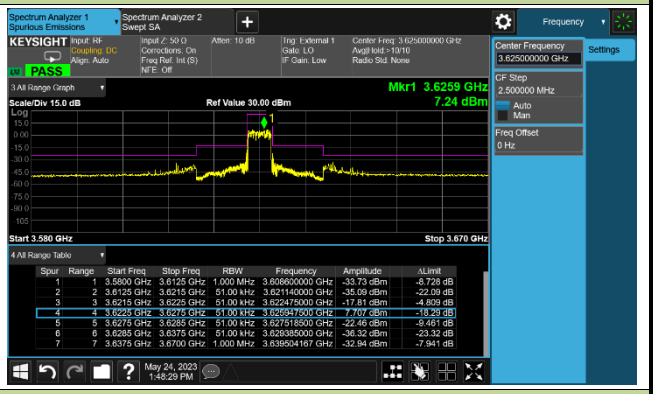
20MHz Channel Bandwidth - 1RB	
Low Channel ACP	MiddleChannel ACP - Low RB Position
	
MiddleChannel ACP - High RB Position	High Channel ACP
	

5MHz Channel Bandwidth - Full RB

Low Channel ACP

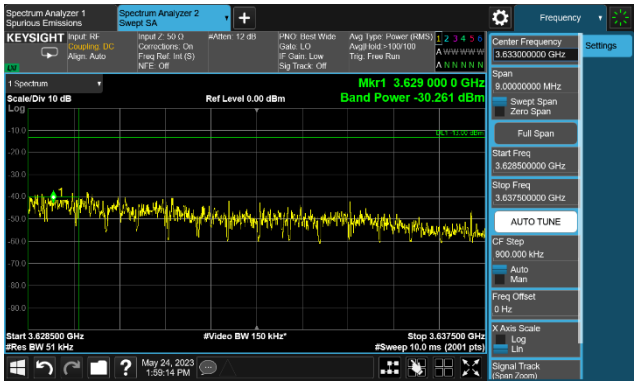


Middle Channel ACP

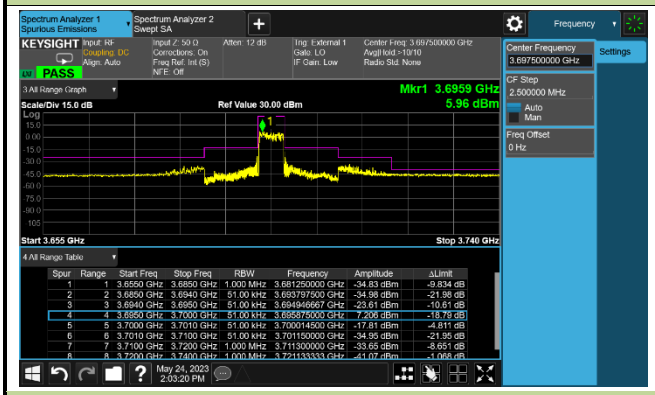


Extended Band Edge

Extended Band Edge

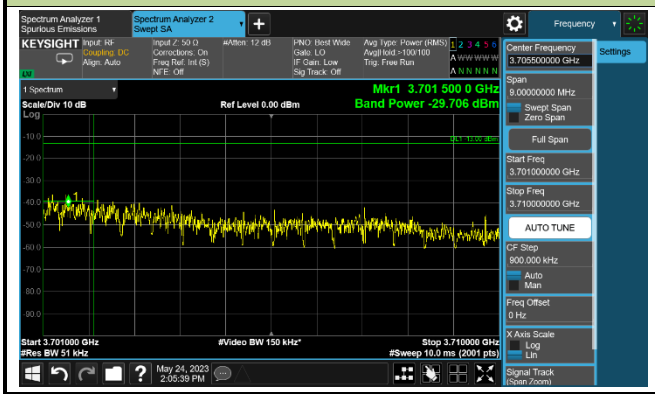


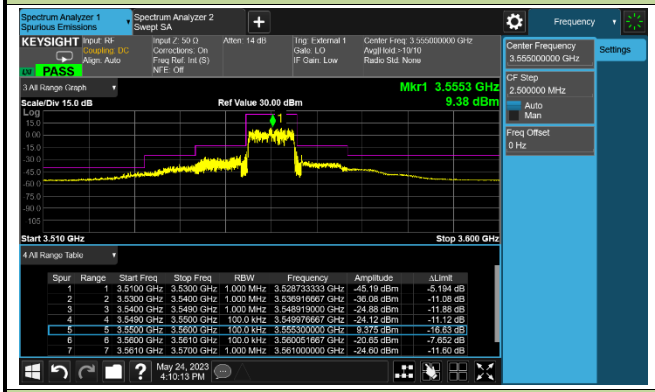
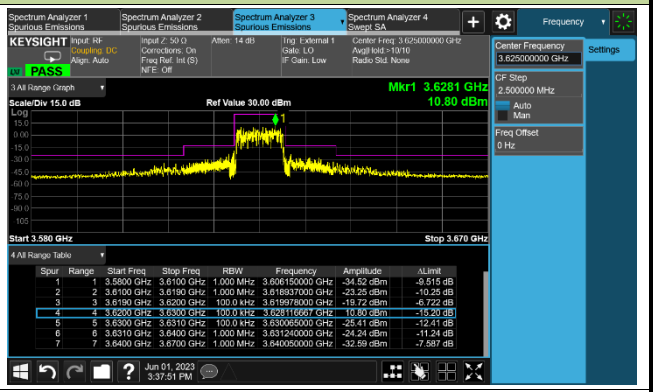
High Channel ACP

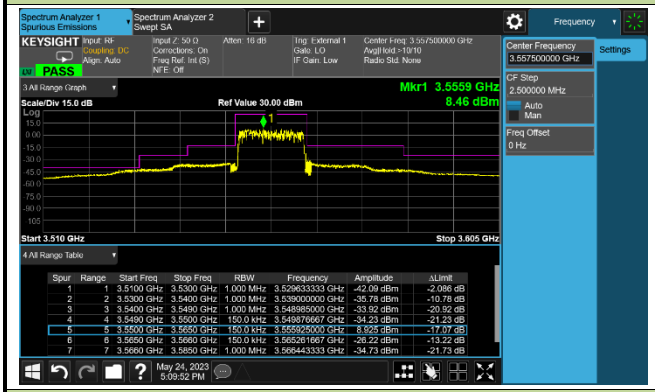
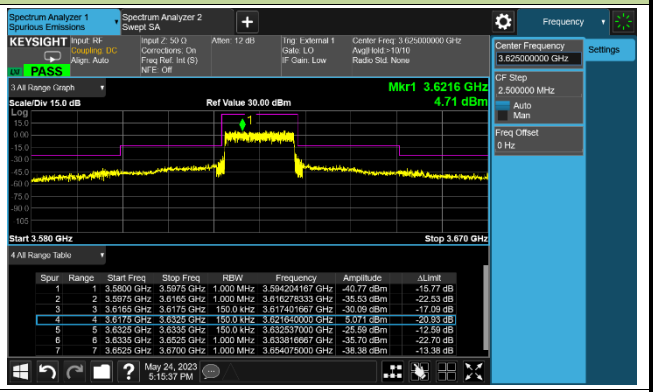


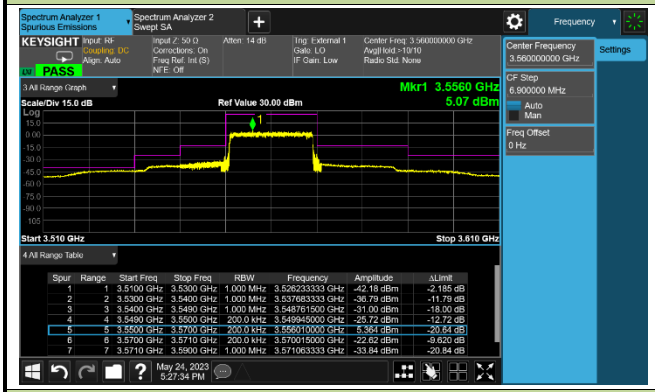
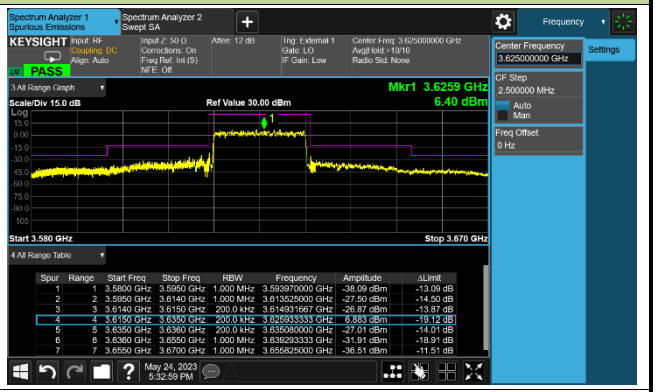
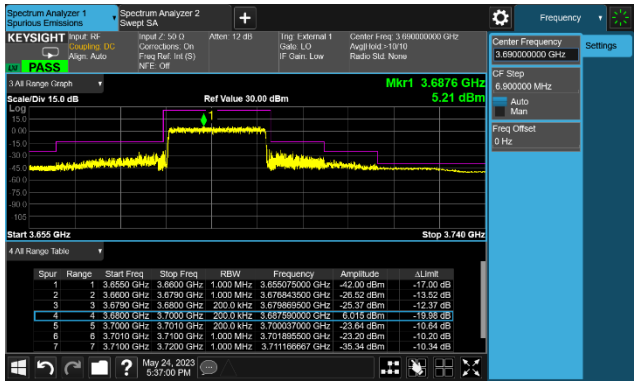
Extended Band Edge

Extended Band Edge



10MHz Channel Bandwidth - Full RB	
Low Channel ACP	Middle Channel ACP
	
High Channel ACP	
	

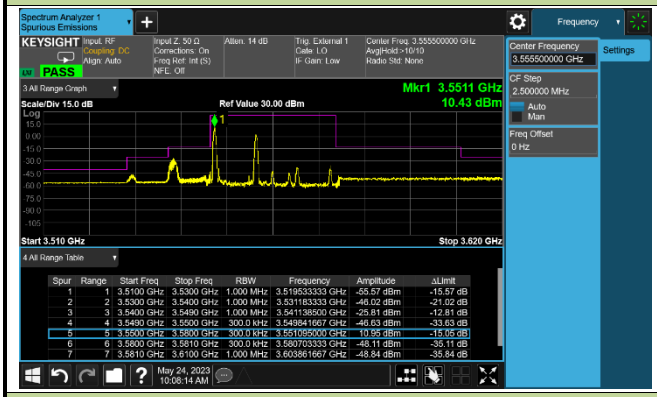
15MHz Channel Bandwidth - Full RB	
Low Channel ACP	Middle Channel ACP
	
High Channel ACP	
	

20MHz Channel Bandwidth - Full RB	
Low Channel ACP	Middle Channel ACP
	
High Channel ACP	
	

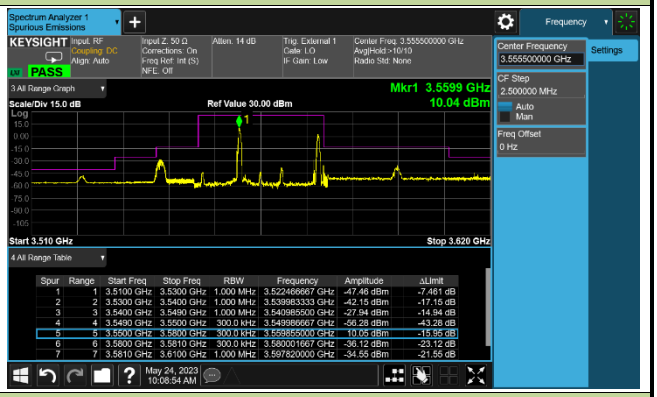
Test Site	SIP-SR1	Test Engineer	Sunshine Wan
Test Date	2023/05/24	Test Band	Intra-Band CA_48C

10+20MHz Channel Bandwidth

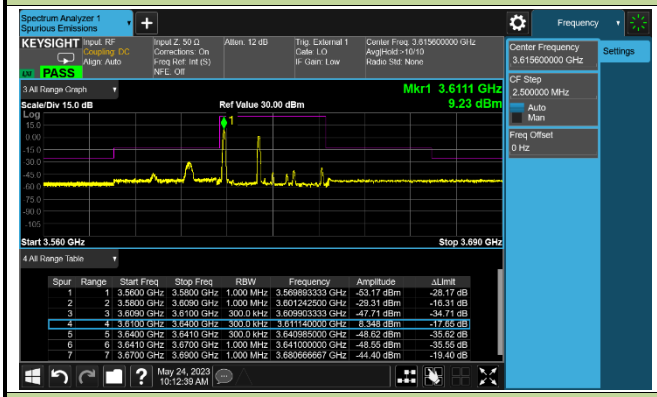
Lower Band Edge RB = 0 & 0



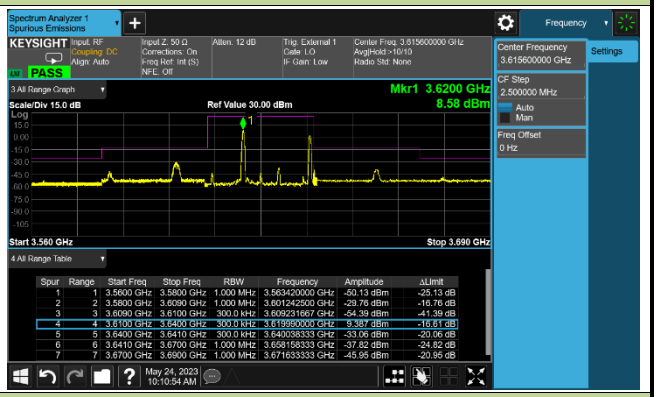
Lower Band Edge RB = 49 & 99



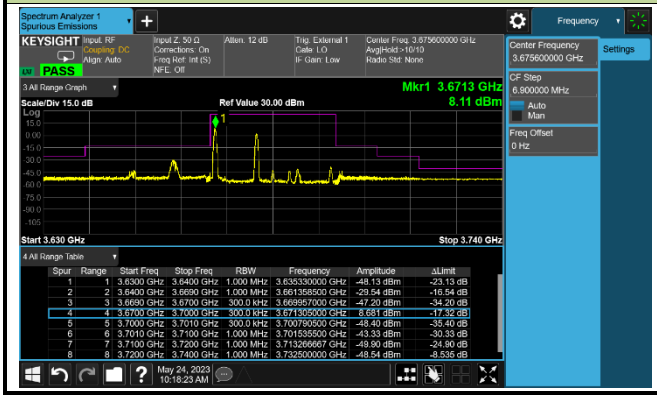
Middle Band Edge RB = 0 & 0



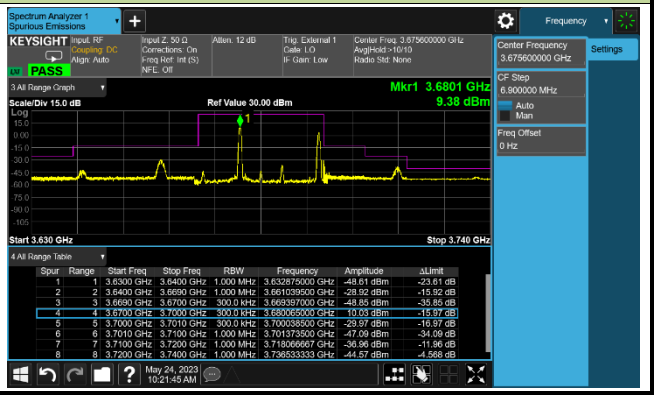
Middle Band Edge RB = 49 & 99



Upper Band Edge RB = 0 & 0

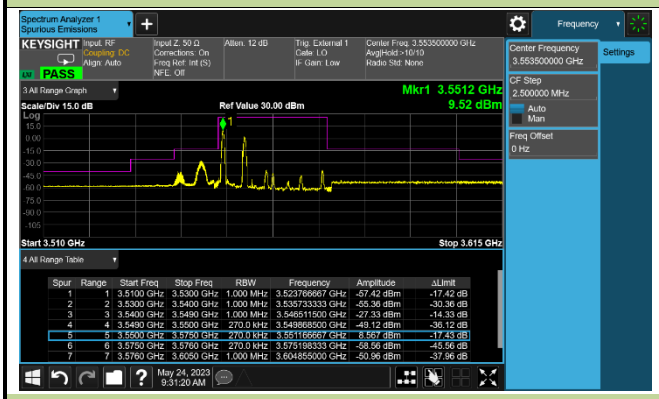


Upper Band Edge RB = 49 & 99

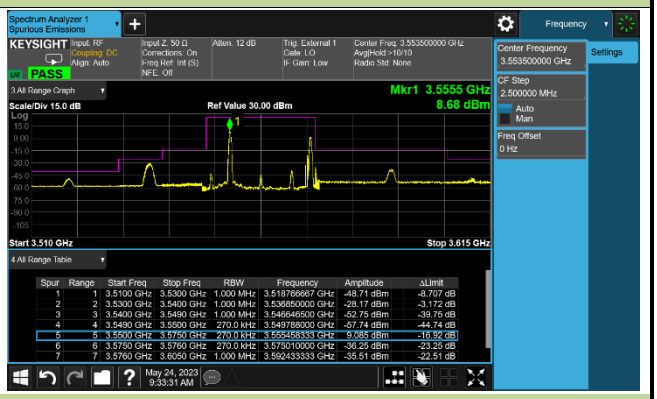


5+20MHz Channel Bandwidth

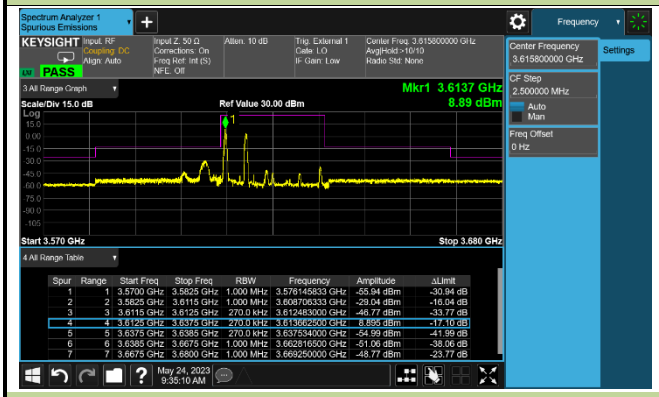
Lower Band Edge RB = 0 & 0



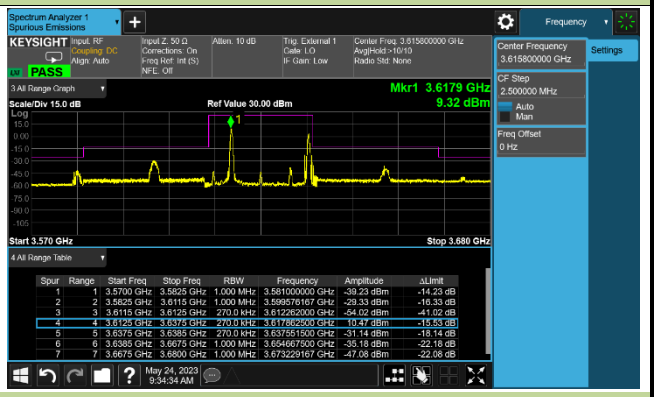
Lower Band Edge RB = 24 & 99



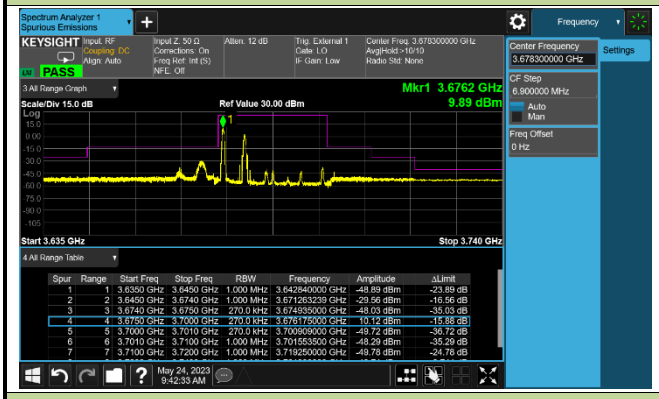
Middle Band Edge RB = 0 & 0



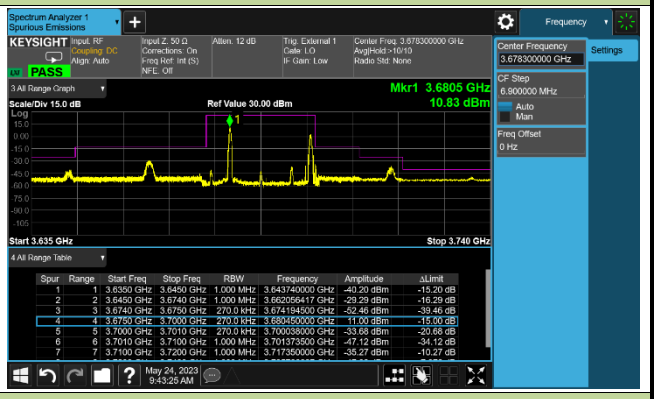
Middle Band Edge RB = 24 & 99



Upper Band Edge RB = 0 & 0

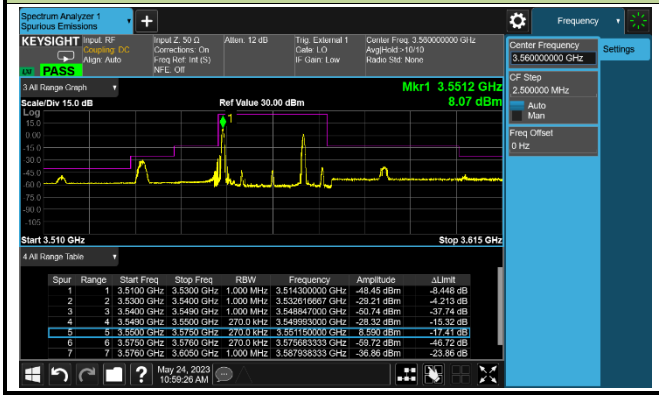


Upper Band Edge RB = 24 & 99

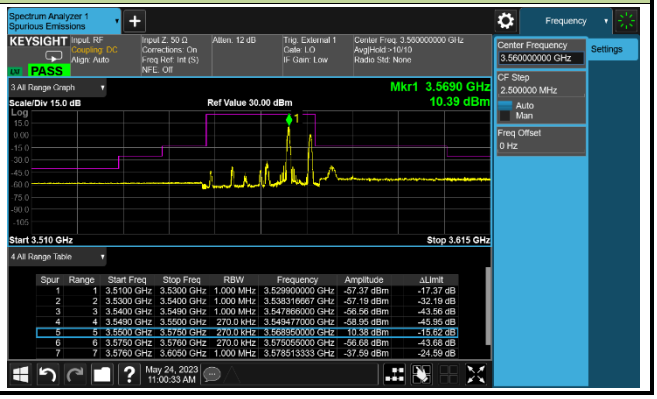


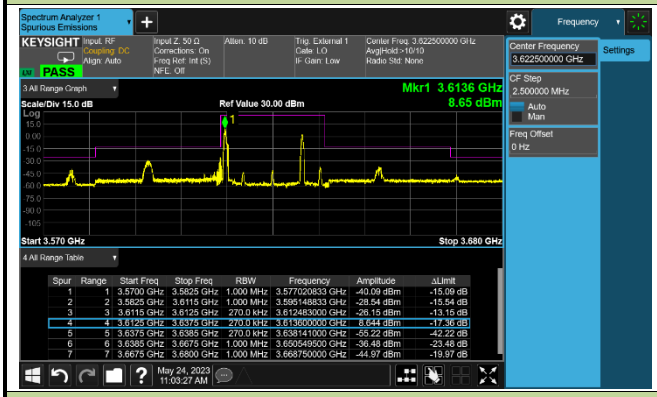
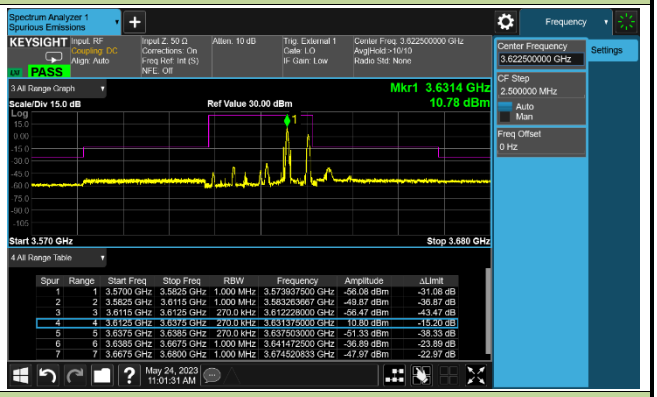
20+5MHz Channel Bandwidth

Lower Band Edge RB = 0 & 0



Lower Band Edge RB = 99 & 24



Middle Band Edge RB = 0 & 0	Middle Band Edge RB = 99 & 24
	
Upper Band Edge RB = 0 & 0	**Upper Band Edge RB = 99 & 24**