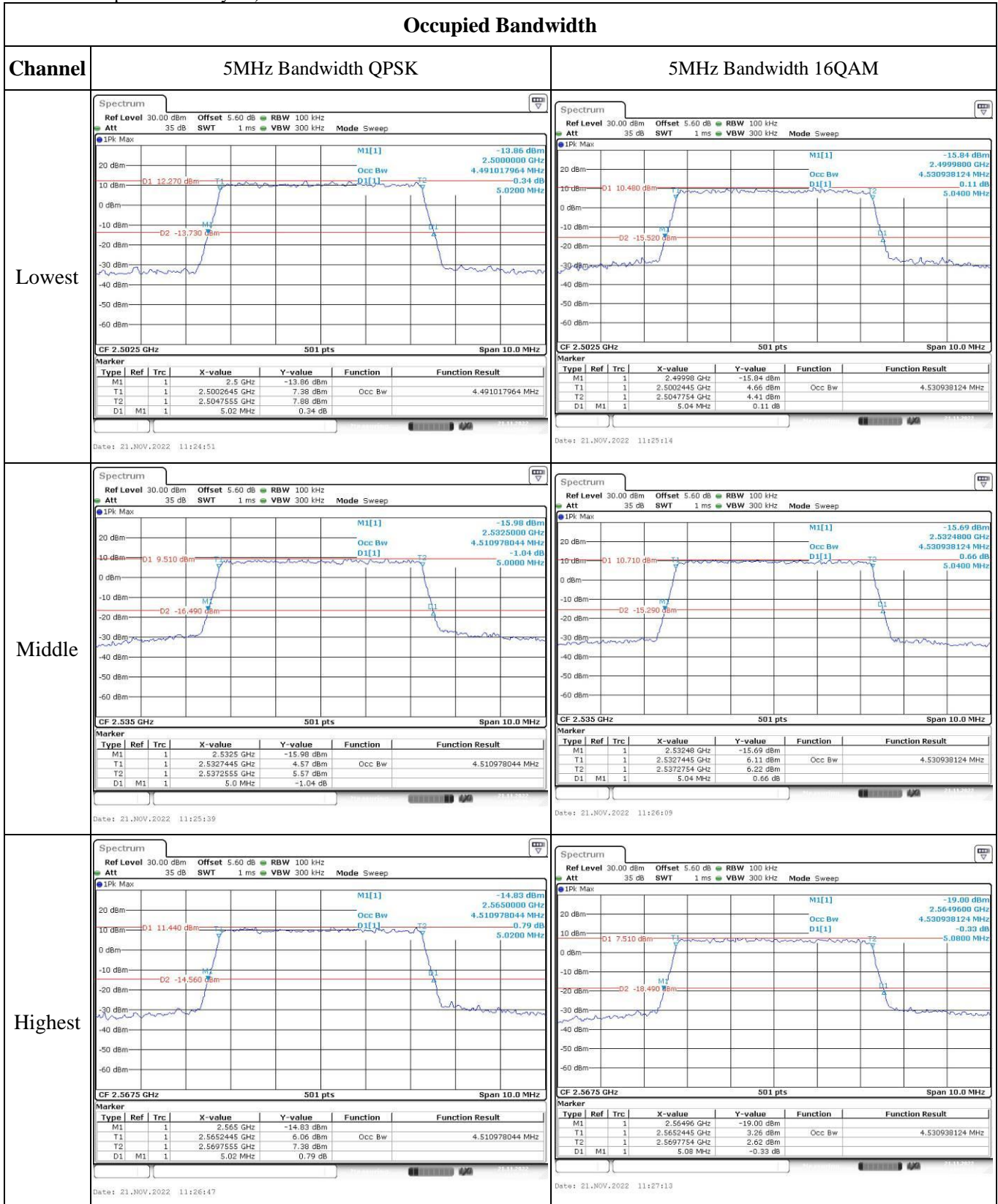


**Test Plots**(Note: The 5.6dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):



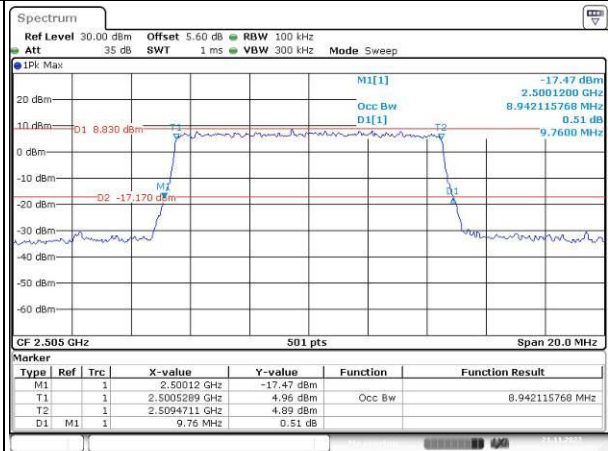
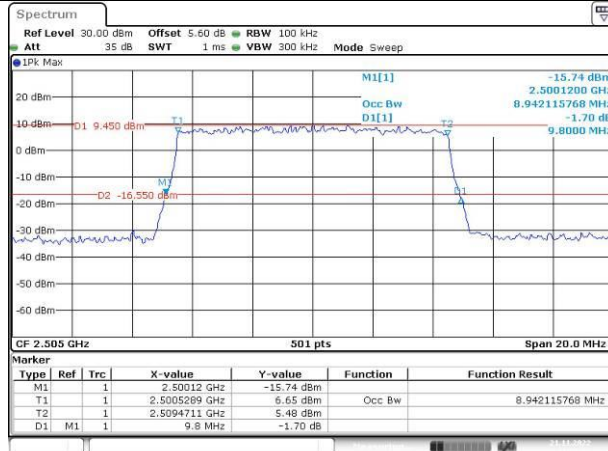
### Occupied Bandwidth

Channel

10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

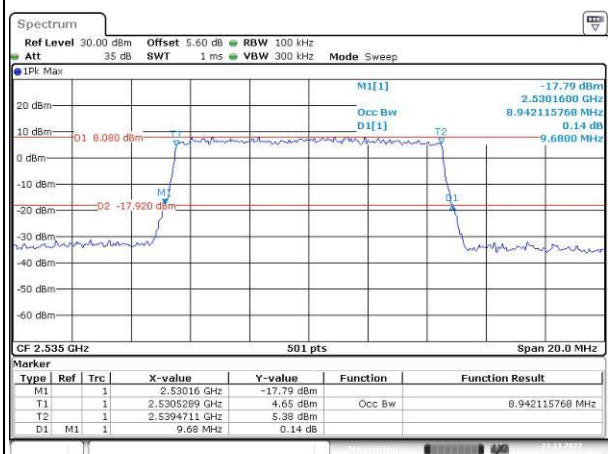
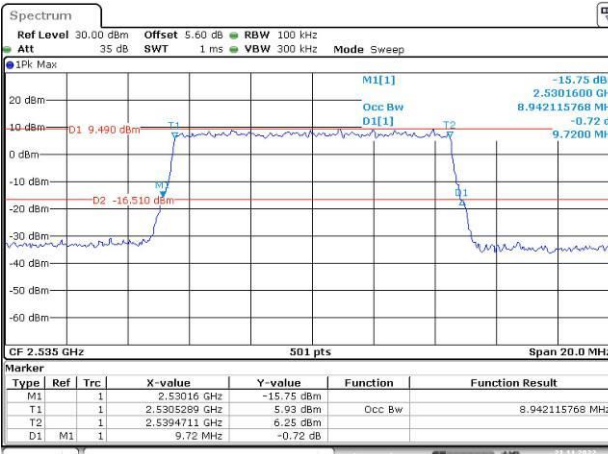
Lowest



Date: 21.NOV.2022 11:29:01

Date: 21.NOV.2022 11:29:34

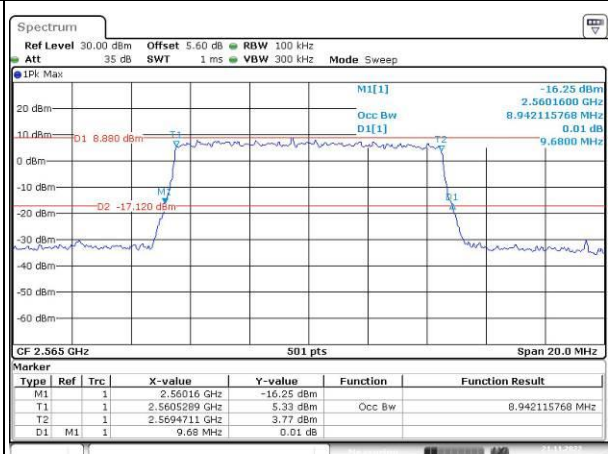
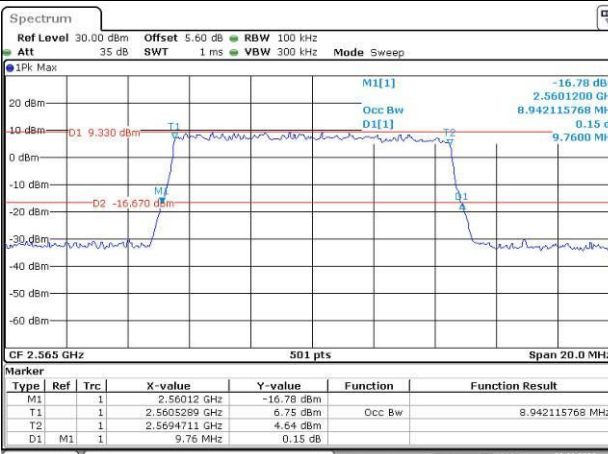
Middle



Date: 21.NOV.2022 11:30:04

Date: 21.NOV.2022 11:30:26

Highest



Date: 21.NOV.2022 11:31:04

Date: 21.NOV.2022 11:31:37

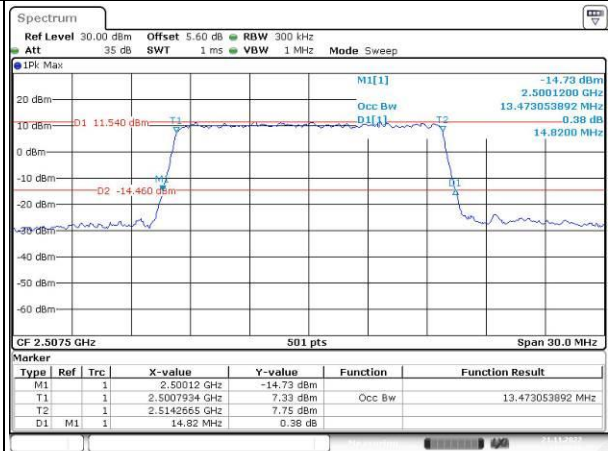
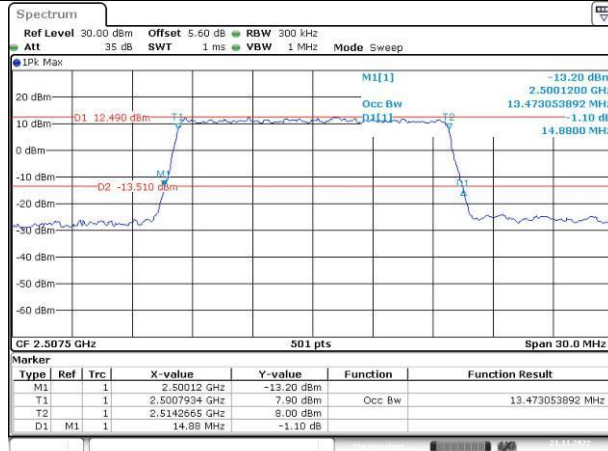
### Occupied Bandwidth

Channel

15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

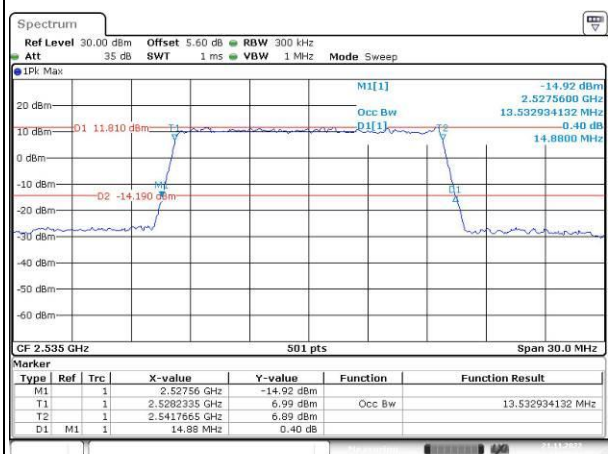
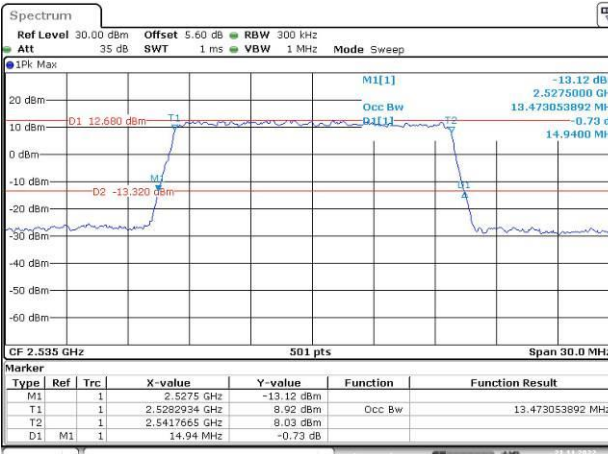
Lowest



Date: 21.NOV.2022 11:33:00

Date: 21.NOV.2022 11:33:31

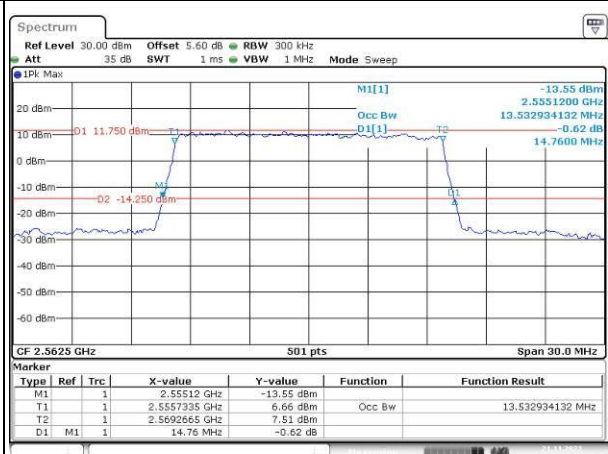
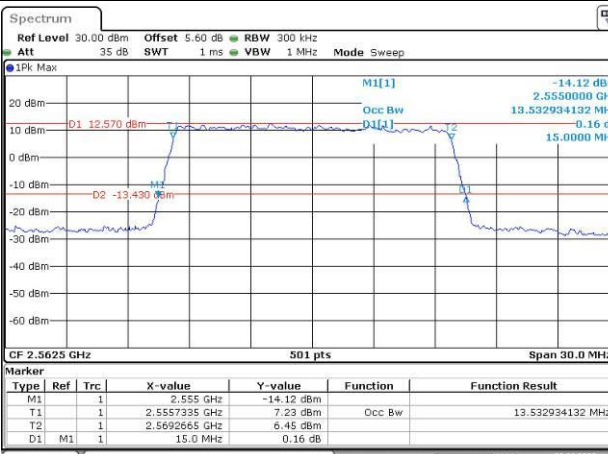
Middle



Date: 21.NOV.2022 11:34:17

Date: 21.NOV.2022 11:34:44

Highest



Date: 21.NOV.2022 11:35:09

Date: 21.NOV.2022 11:35:36

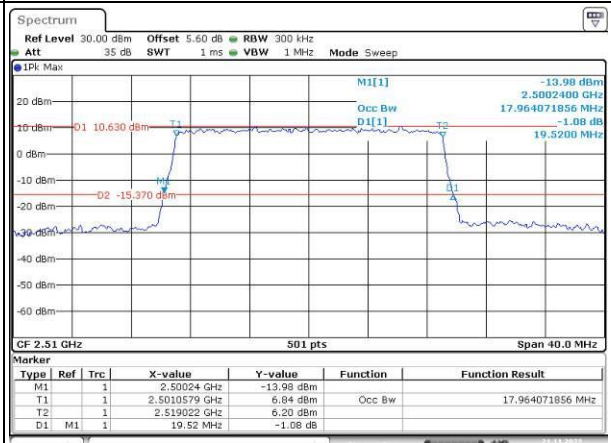
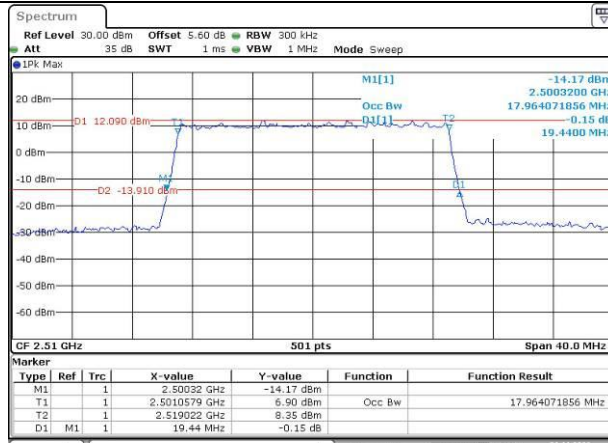
### Occupied Bandwidth

Channel

20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

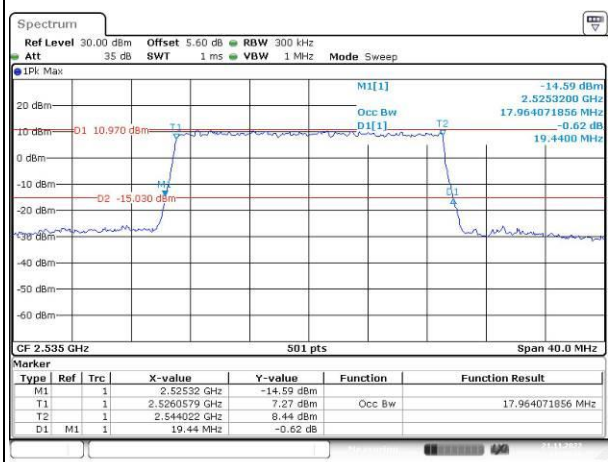
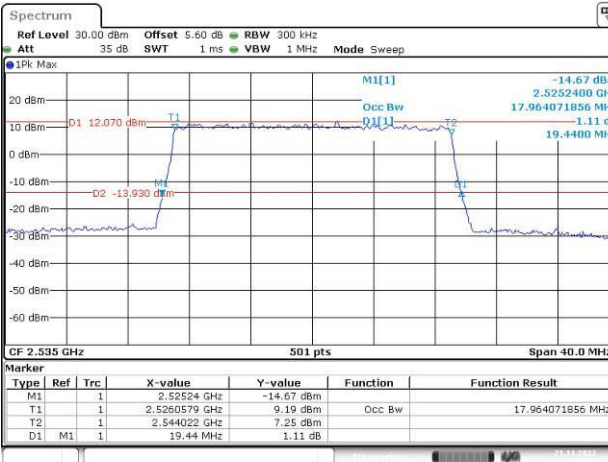
Lowest



Date: 21.NOV.2022 11:36:59

Date: 21.NOV.2022 11:37:23

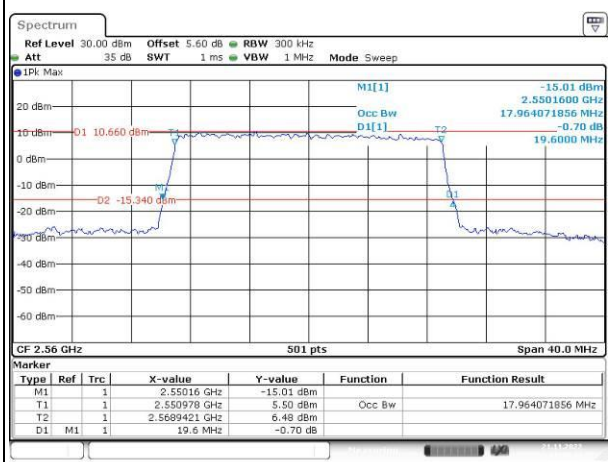
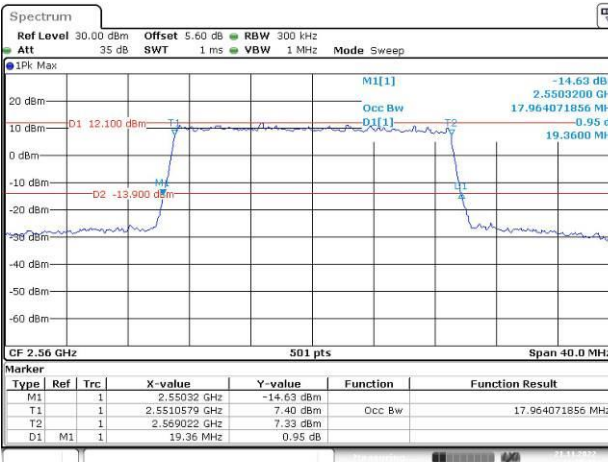
Middle



Date: 21.NOV.2022 11:37:57

Date: 21.NOV.2022 11:38:20

Highest



Date: 21.NOV.2022 11:39:48

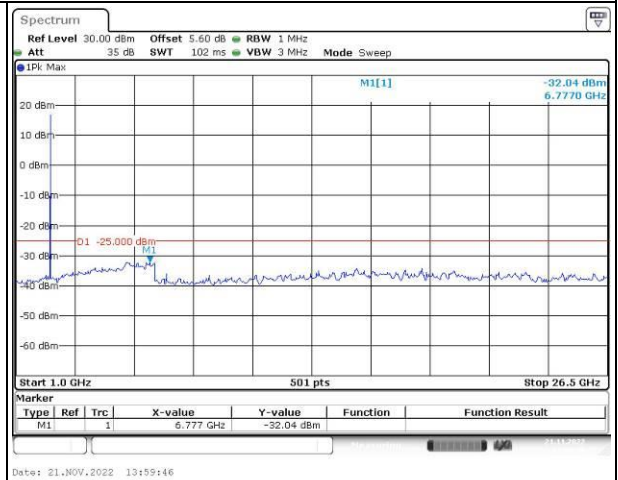
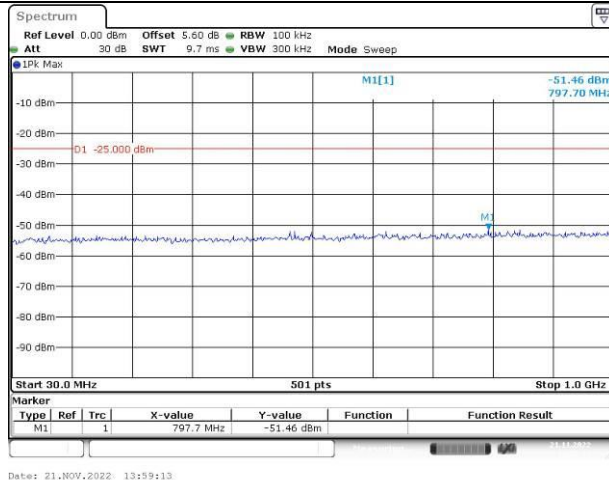
Date: 21.NOV.2022 11:39:15

### Spurious Emissions at Antenna Terminal

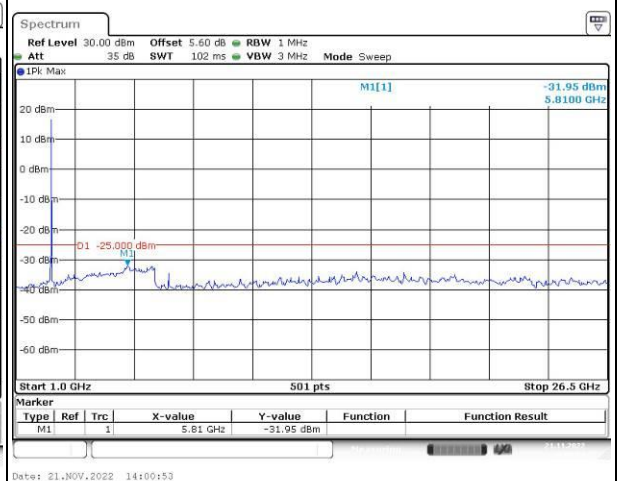
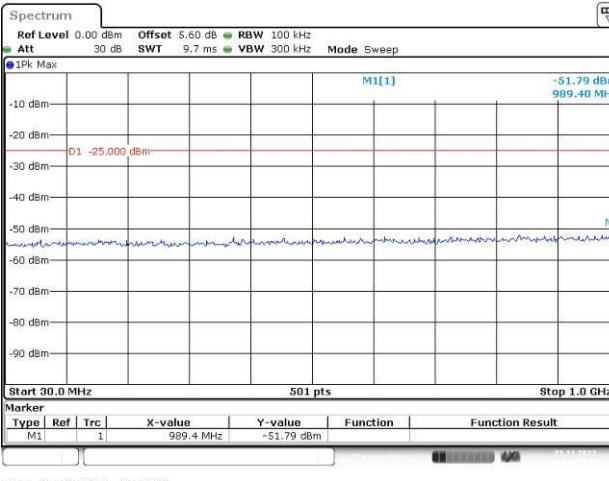
Channel

5MHz Bandwidth QPSK

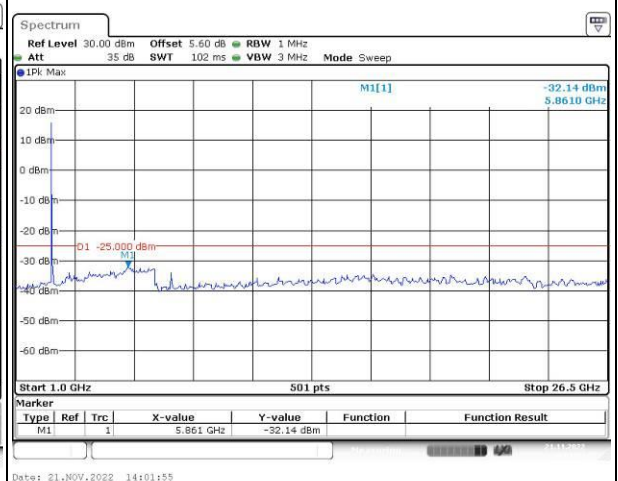
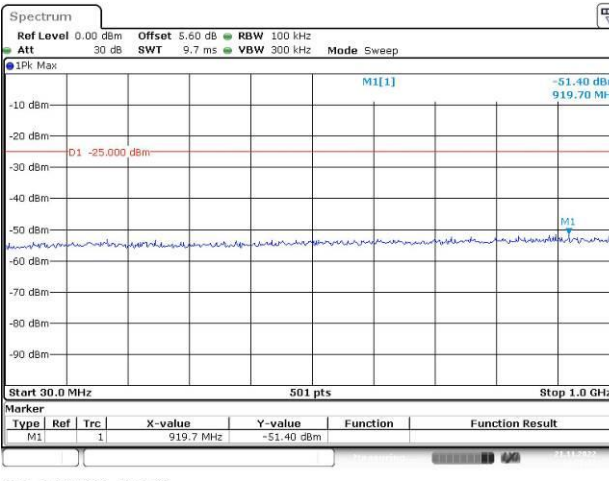
Lowest



Middle



Highest

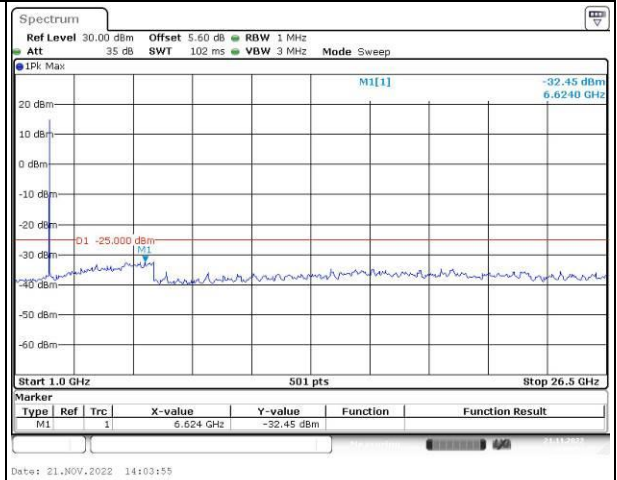
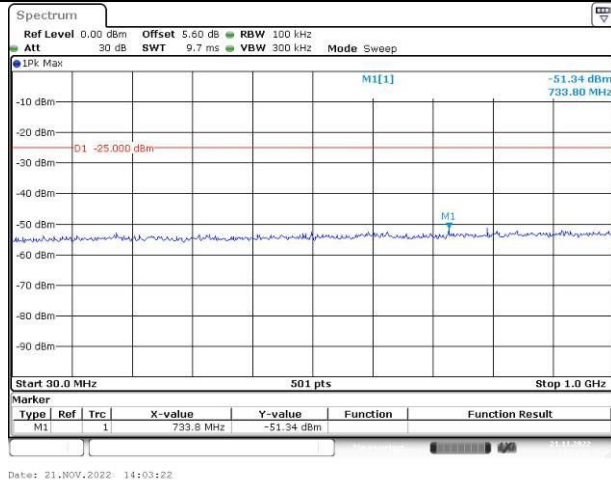


### Spurious Emissions at Antenna Terminal

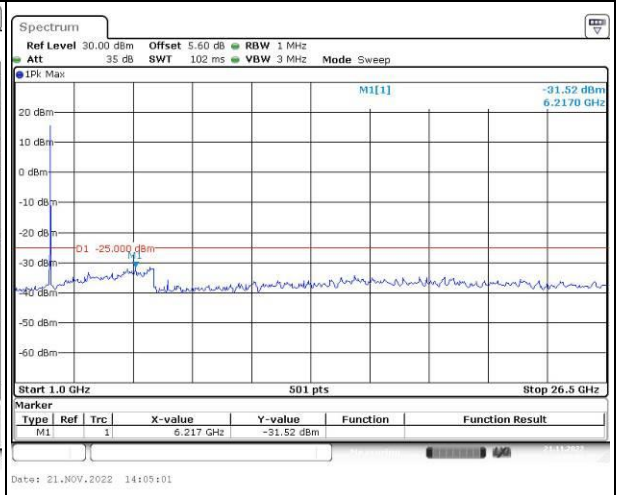
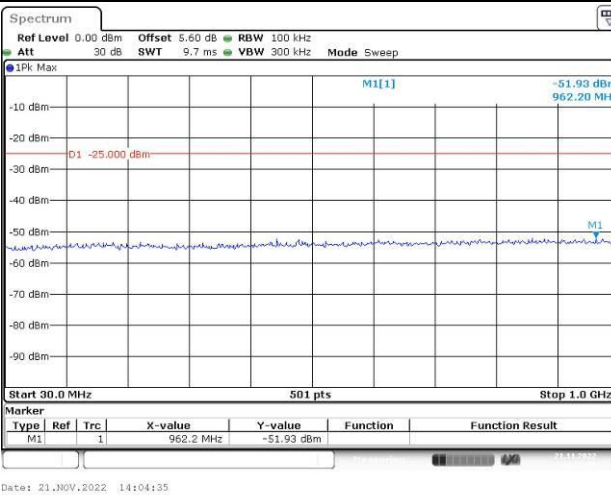
Channel

10MHz Bandwidth QPSK

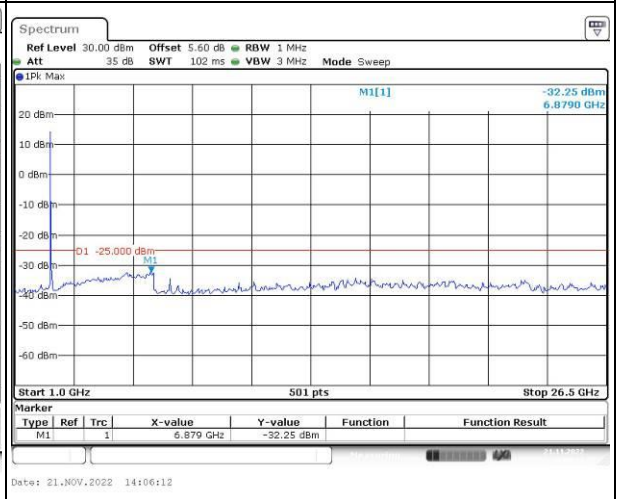
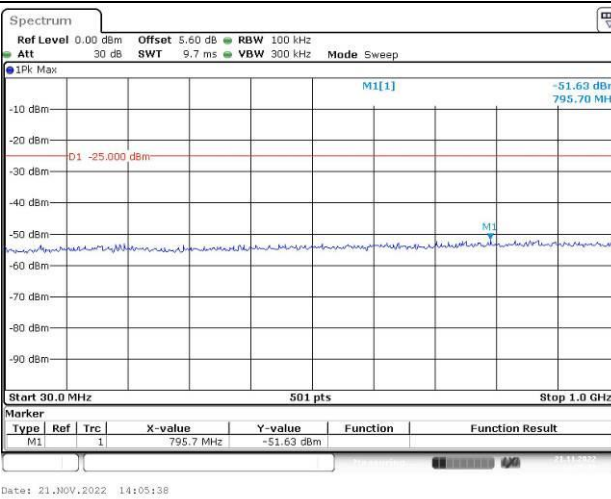
Lowest



Middle



Highest

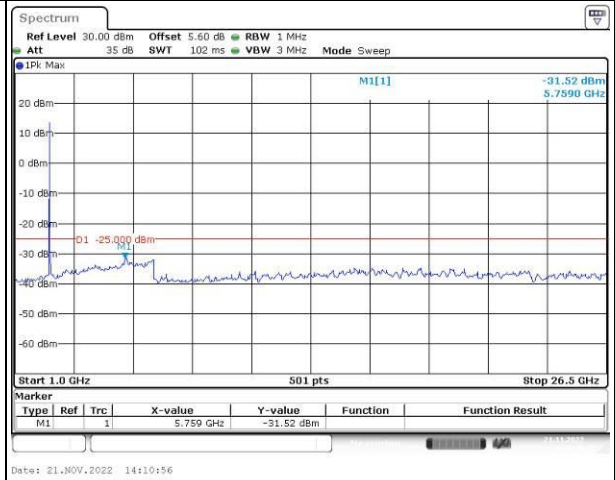
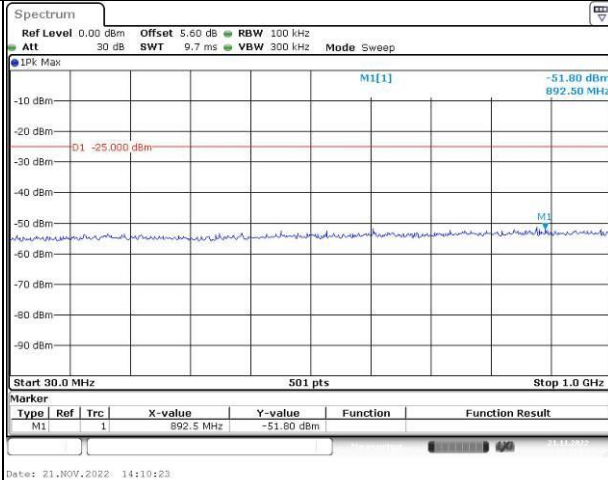


### Spurious Emissions at Antenna Terminal

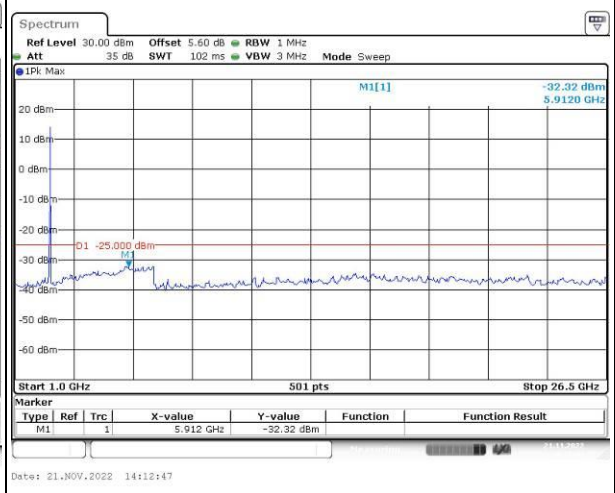
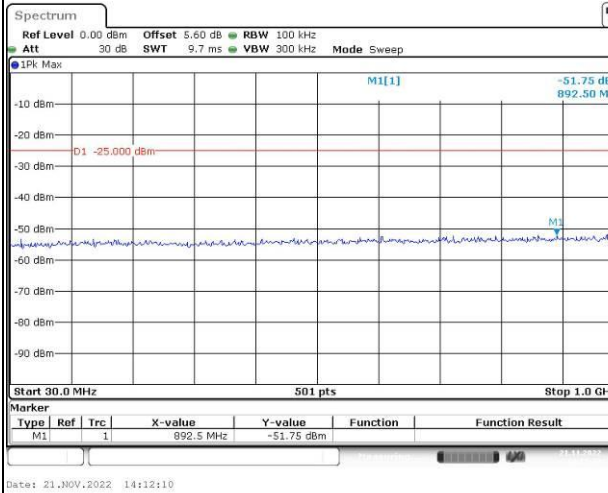
Channel

15MHz Bandwidth QPSK

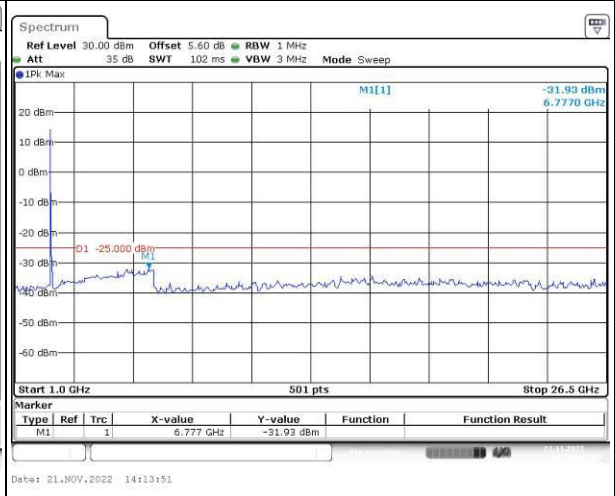
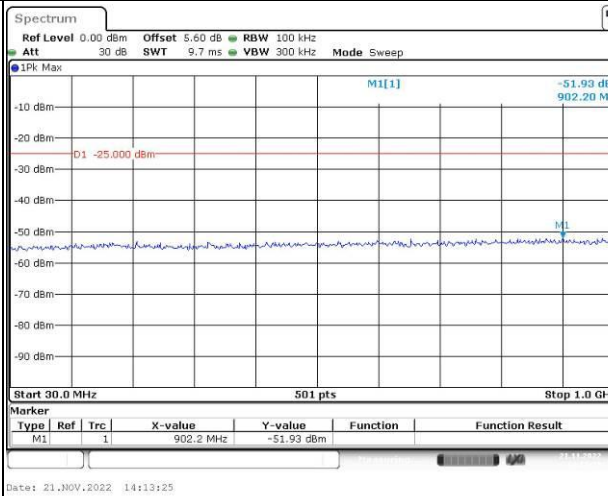
Lowest



Middle



Highest

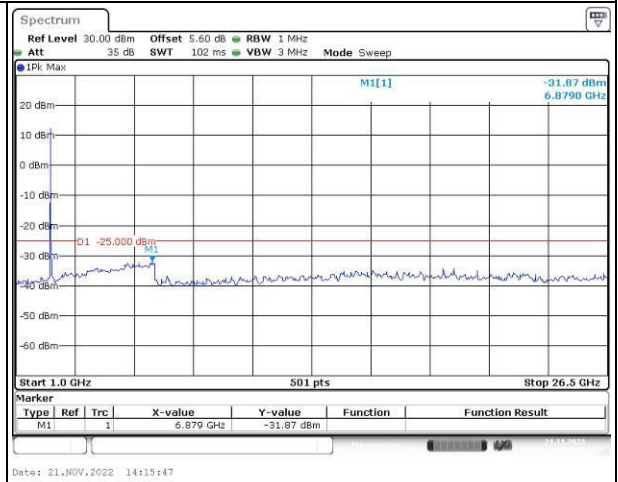
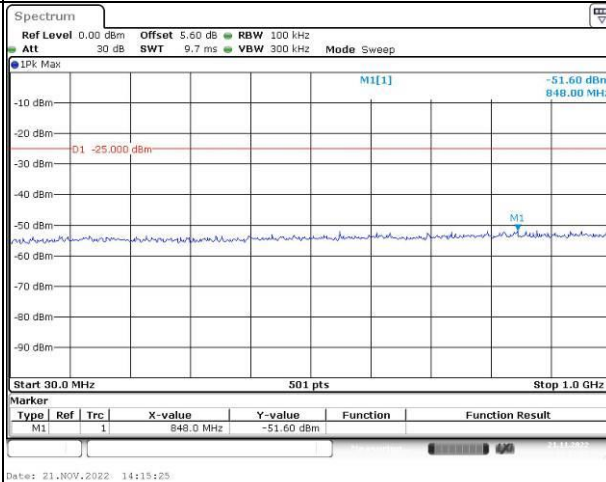


### Spurious Emissions at Antenna Terminal

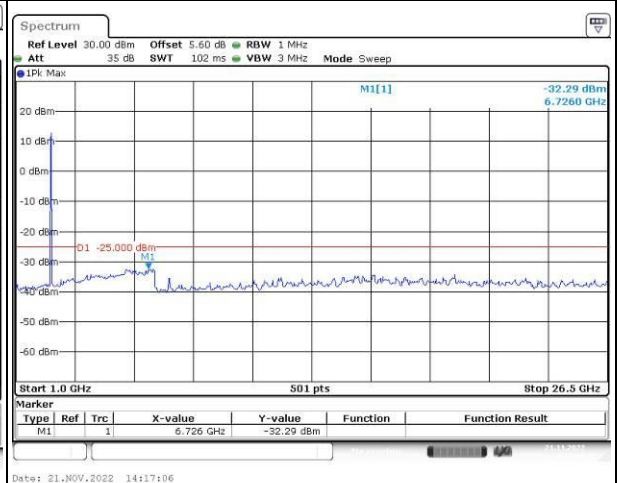
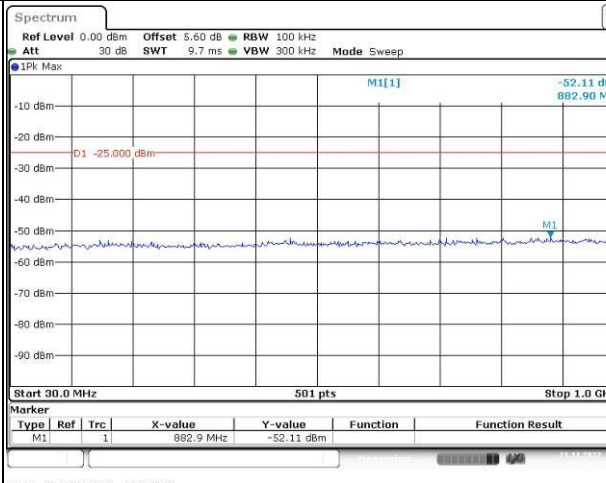
Channel

20MHz Bandwidth QPSK

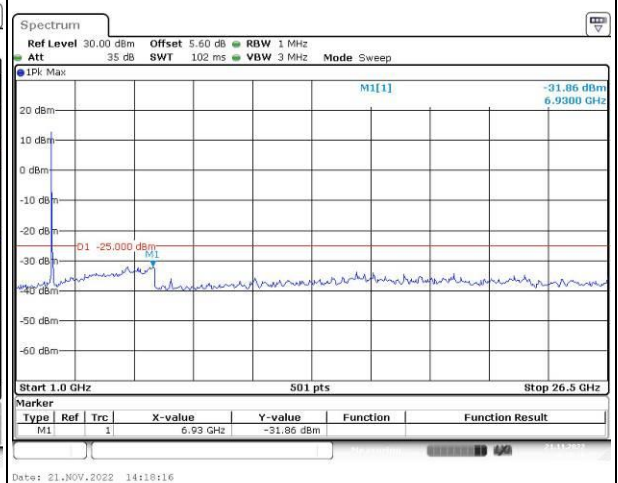
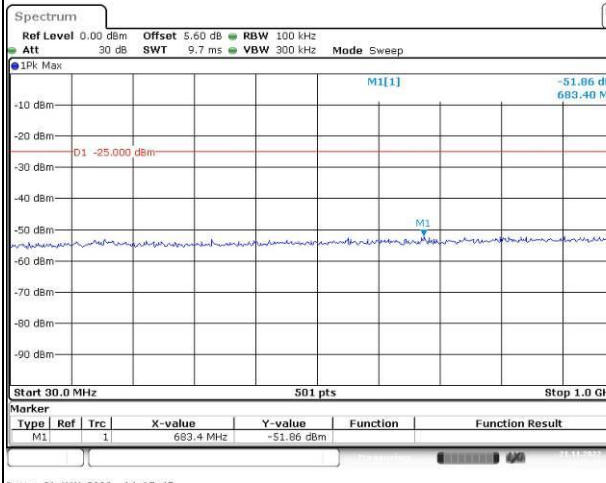
Lowest



Middle

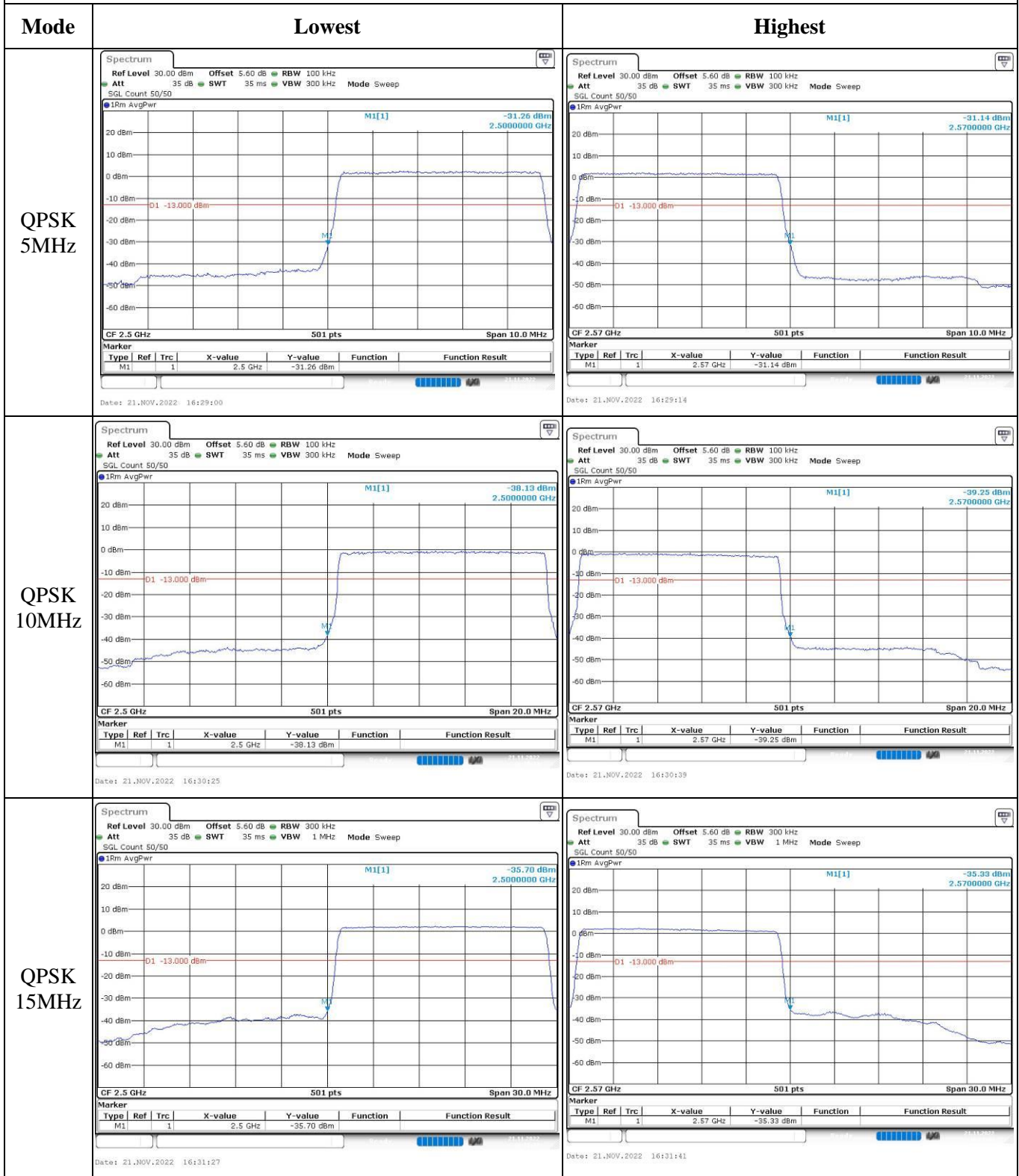


Highest

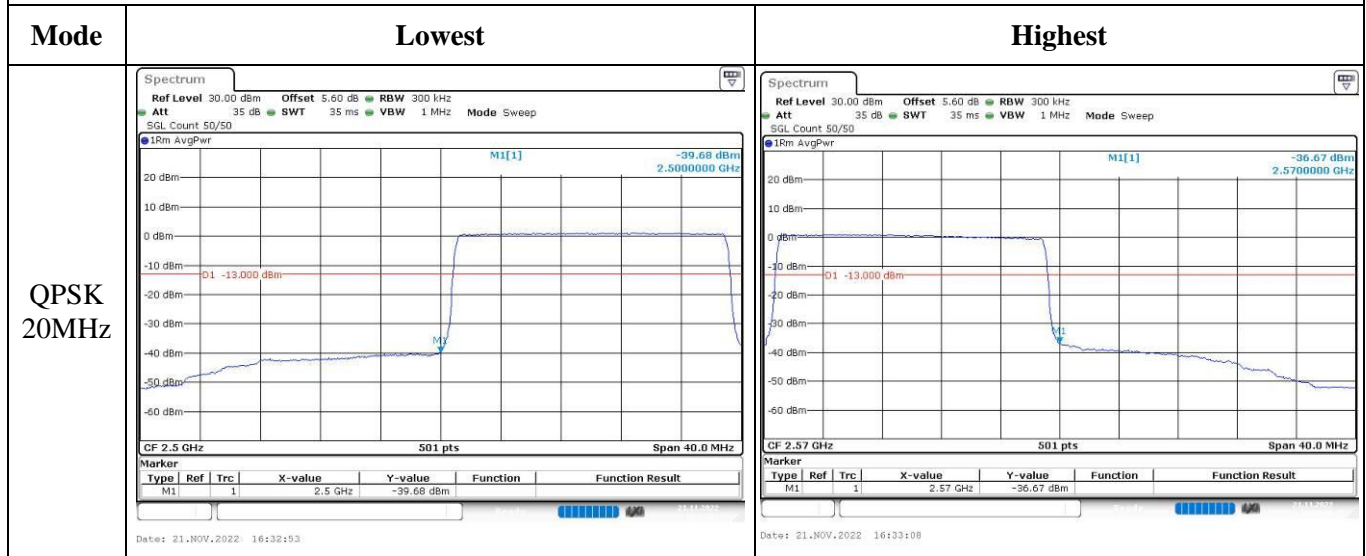




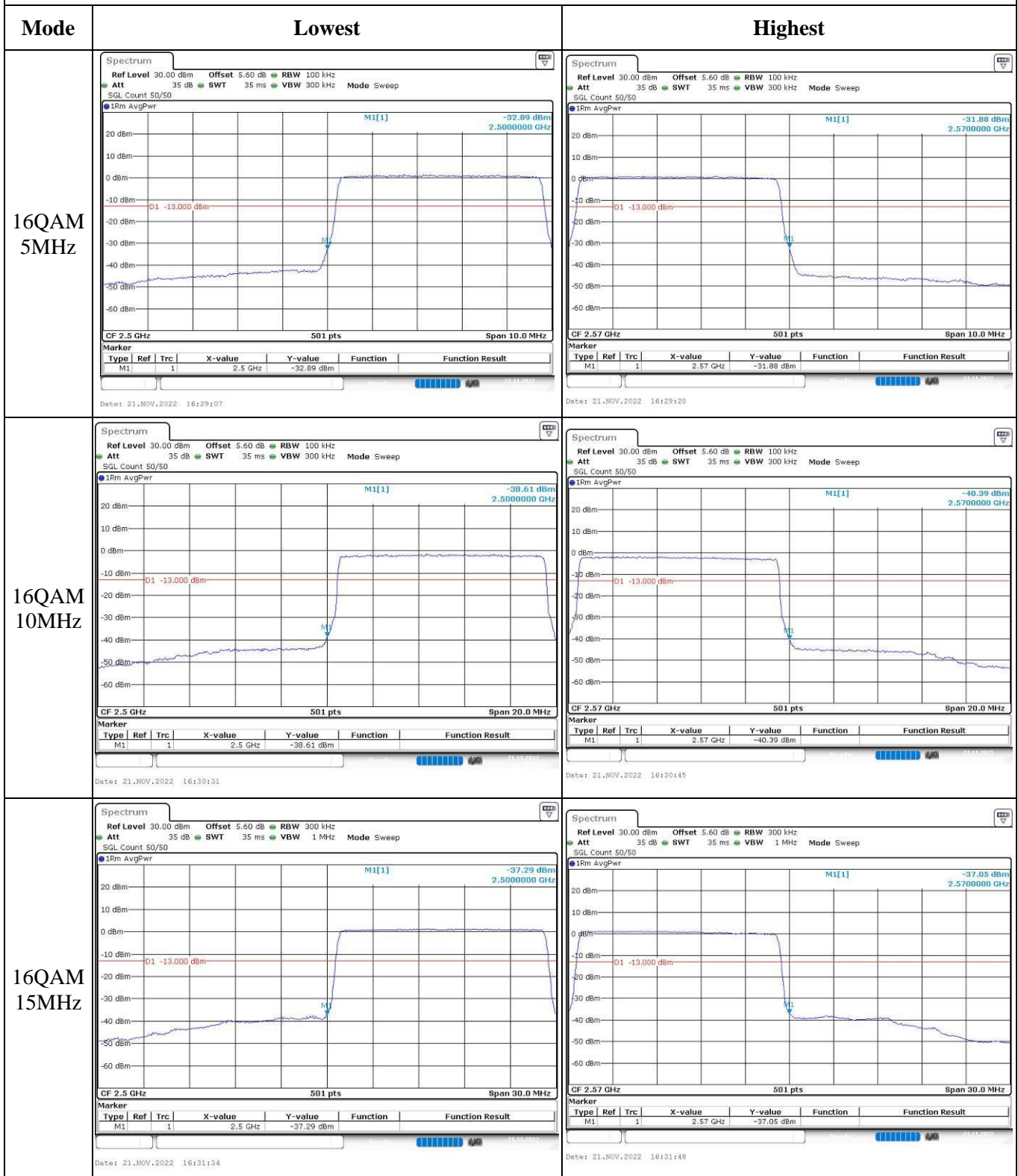
### Out of band emission, Band Edge



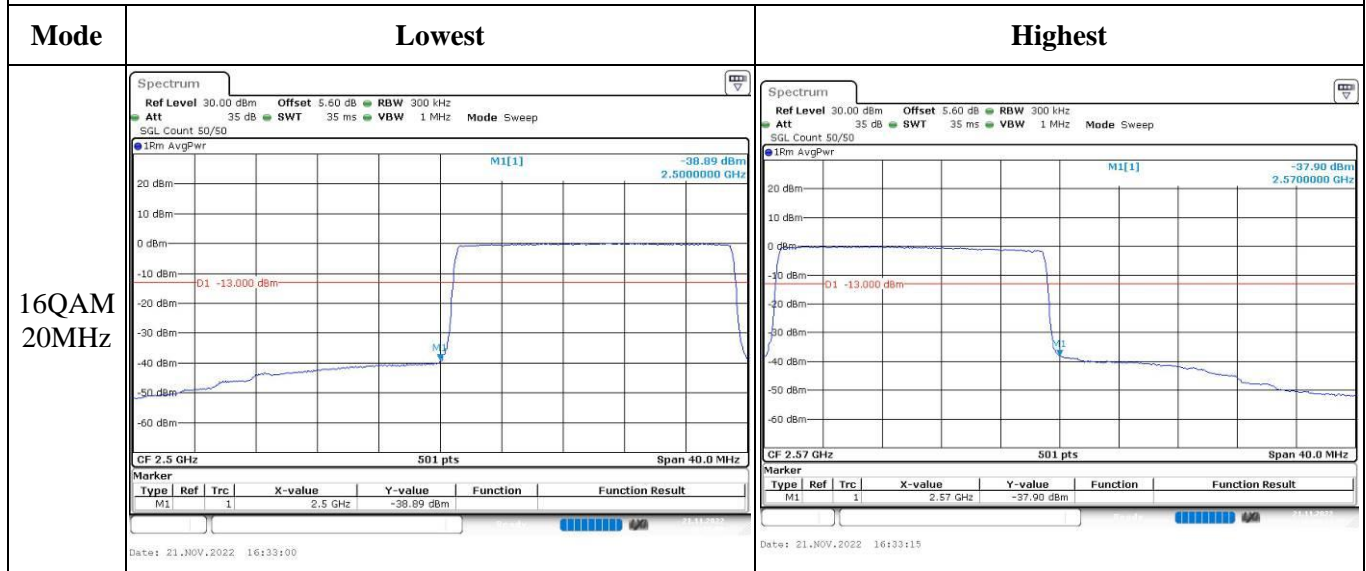
Out of band emission, Band Edge



Out of band emission, Band Edge



### Out of band emission, Band Edge



**4.10 Antenna Port Test Data and Results for LTE Band 12**

Serial Number:	1OGW	Test Date:	2022/11/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chen	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.8	Relative Humidity: (%)	66	ATM Pressure: (kPa)	101.2
----------------------	------	------------------------------	----	------------------------	-------

**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022/7/15	2023/7/14
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100002	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2022/7/15	2023/7/14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022/4/6	2023/4/5
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A

\* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	699.7	707.5	715.3
3MHz	700.5	707.5	714.5
5MHz	701.5	707.5	713.5
10MHz	704	707.5	711

**Test Data:****FCC §2.1046; § 27.50(c) (10)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	22.47	22.19	22.41	19.54	34.77
	RB1#3	22.42	22.25	22.44		
	RB1#5	22.43	22.13	22.49		
	RB3#0	22.35	22.2	22.48		
	RB3#3	22.4	22.12	22.38		
	RB6#0	21.37	21.19	21.43		
1.4MHz 16QAM	RB1#0	21.49	21.14	21.39	18.67	34.77
	RB1#3	21.52	21.26	21.43		
	RB1#5	21.5	21.16	21.46		
	RB3#0	21.32	21.32	21.62		
	RB3#3	21.41	21.34	21.59		
	RB6#0	20.4	20.21	20.46		
3MHz QPSK	RB1#0	22.51	22.22	22.43	19.56	34.77
	RB1#8	22.44	22.17	22.48		
	RB1#14	22.45	22.18	22.46		
	RB6#0	21.41	21.24	21.43		
	RB6#9	21.38	21.24	21.49		
	RB15#0	21.44	21.27	21.45		
3MHz 16QAM	RB1#0	21.56	21.27	22.01	19.08	34.77
	RB1#8	21.53	21.17	22		
	RB1#14	21.51	21.19	22.03		
	RB6#0	20.43	20.21	20.43		
	RB6#9	20.4	20.2	20.55		
	RB15#0	20.42	20.32	20.53		
5MHz QPSK	RB1#0	22.59	22.34	22.35	19.64	34.77
	RB1#13	22.52	22.22	22.44		
	RB1#24	22.39	22.4	22.55		
	RB15#0	21.45	21.32	21.36		
	RB15#10	21.42	21.3	21.53		
	RB25#0	21.46	21.33	21.44		
5MHz 16QAM	RB1#0	21.45	21.6	21.36	18.71	34.77
	RB1#13	21.4	21.5	21.51		
	RB1#24	21.31	21.66	21.59		
	RB15#0	20.48	20.29	20.37		
	RB15#10	20.47	20.26	20.57		
	RB25#0	20.48	20.32	20.47		

10MHz QPSK	RB1#0	22.71	22.6	22.55	19.76	34.77
	RB1#25	22.38	22.24	22.32		
	RB1#49	22.48	22.52	22.65		
	RB25#0	21.49	21.36	21.27		
	RB25#25	21.34	21.36	21.45		
	RB50#0	21.39	21.24	21.42		
10MHz 16QAM	RB1#0	21.7	22.19	21.64	19.24	34.77
	RB1#25	21.31	21.81	21.4		
	RB1#49	21.45	22.03	21.71		
	RB25#0	20.6	20.41	20.36		
	RB25#25	20.43	20.4	20.43		
	RB50#0	20.48	20.26	20.42		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + Gr(dBd)

Gr(dBd)=Gr(dBi)-2.15

<b>Result:</b>	<b>Pass</b>
----------------	-------------

**Peak-to-average Ratio(PAR)**

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit(dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	5.39	5.68	5.57	13
	RB50#0	5.39	5.25	5.33	13
10MHz 16QAM	RB1#0	5.94	6.52	6.52	13
	RB50#0	6.29	6.17	6.23	13
<b>Result:</b>					<b>Pass</b>

**FCC §2.1049, §27.53:Occupied Bandwidth**

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.108	1.096	1.108	1.308	1.308	1.302
1.4MHz 16QAM	1.102	1.096	1.102	1.302	1.308	1.308
3MHz QPSK	2.683	2.695	2.695	2.952	2.952	2.94
3MHz 16QAM	2.683	2.695	2.683	2.952	2.976	2.952
5MHz QPSK	4.511	4.491	4.531	5.02	5	5.04
5MHz 16QAM	4.531	4.531	4.511	5.02	5.04	5.02
10MHz QPSK	8.942	8.942	8.942	9.72	9.84	9.68
10MHz 16QAM	8.942	8.942	8.942	9.68	9.72	9.72

Note: The test plots please refer to the Plots of Occupied Bandwidth

**FCC §2.1051, §27.53:Spurious Emissions at Antenna Terminal**

<b>Result:</b>	<b>Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.</b>
----------------	--

**FCC §2.1051, §27.53:Out of band emission, Band Edge**

<b>Result:</b>	<b>Pass, Please refer to the test plots of Out of band emission, Band Edge.</b>
----------------	---

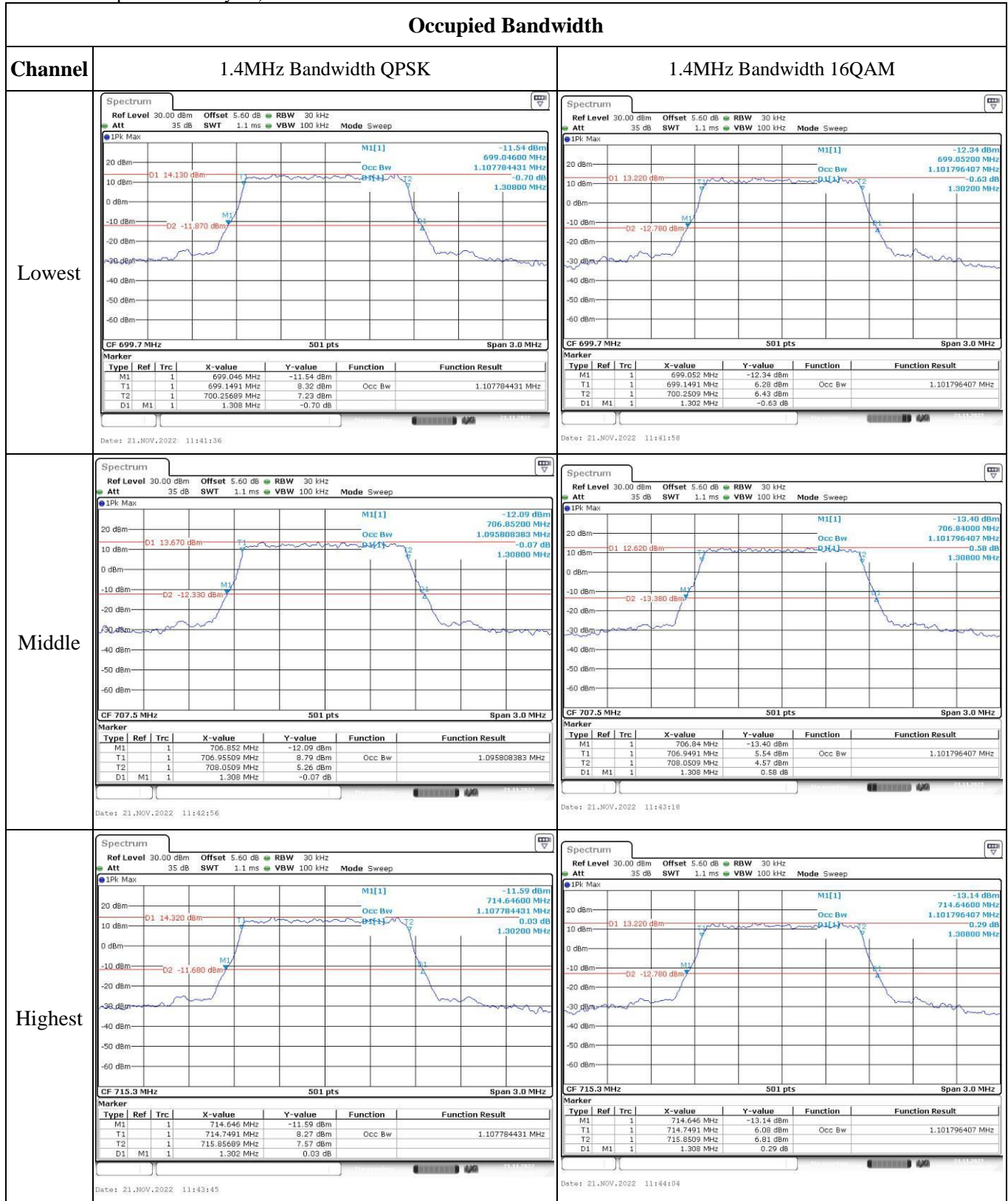
**FCC §2.1055, §27.54: Frequency Stability**

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	699.536	699.00	715.439	716.00
	-20	3.87	699.577	699.00	715.461	716.00
	-10	3.87	699.517	699.00	715.418	716.00
	0	3.87	699.598	699.00	715.474	716.00
	10	3.87	699.512	699.00	715.467	716.00
	20	3.87	699.529	699.00	715.471	716.00
	30	3.87	699.552	699.00	715.463	716.00
	40	3.87	699.512	699.00	715.469	716.00
Frequency Stability vs. Voltage	20	3.3	699.532	699.00	715.493	716.00
	20	4.45	699.536	699.00	715.489	716.00
					<b>Result:</b>	<b>Pass</b>

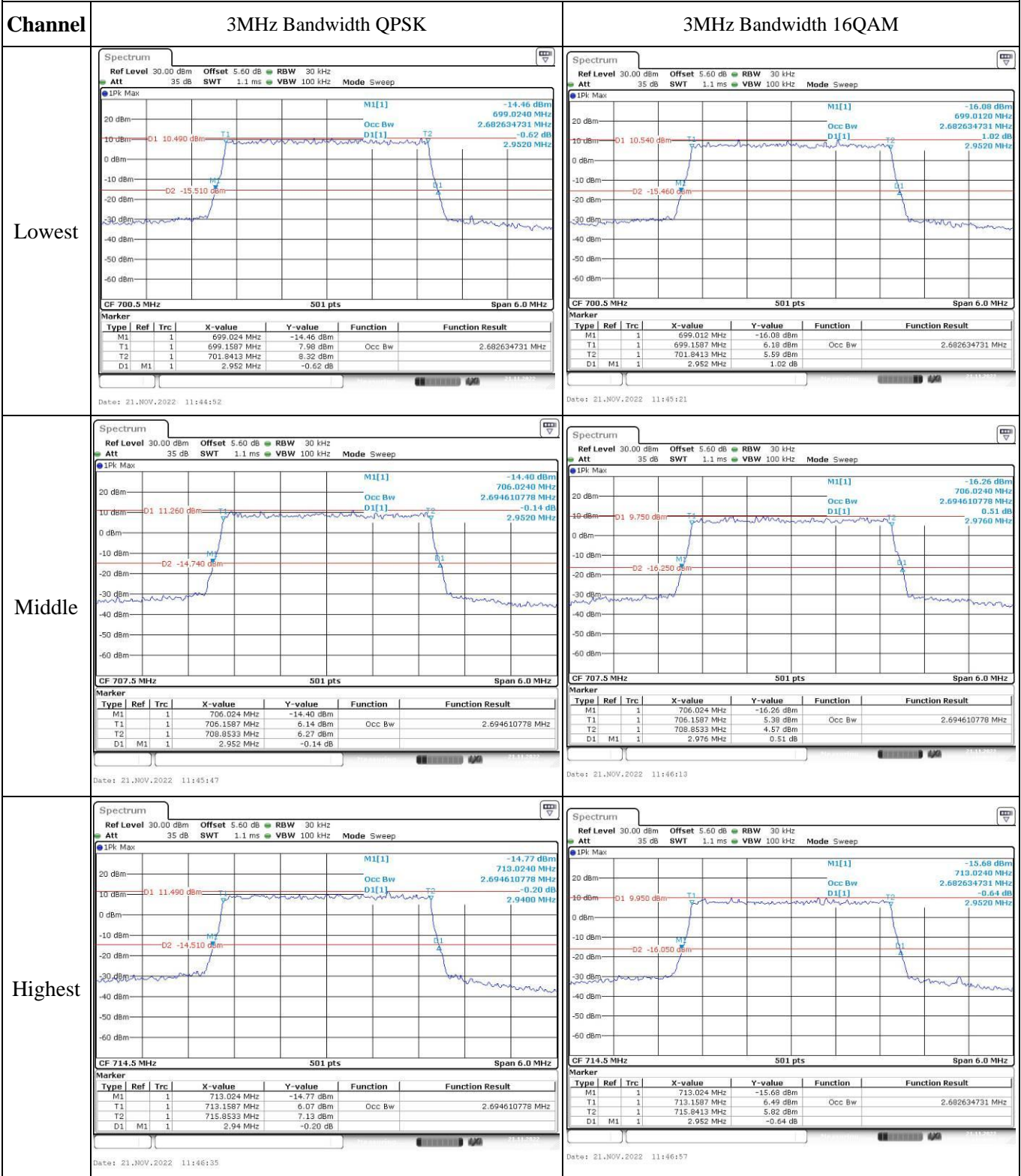
Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature(°C)	Voltage(V <sub>DC</sub> )	Lower Edge(MHz)		Upper Edge(MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	699.567	699.00	715.415	716.00
	-20	3.87	699.519	699.00	715.498	716.00
	-10	3.87	699.578	699.00	715.409	716.00
	0	3.87	699.558	699.00	715.436	716.00
	10	3.87	699.501	699.00	715.420	716.00
	20	3.87	699.529	699.00	715.471	716.00
	30	3.87	699.536	699.00	715.454	716.00
	40	3.87	699.531	699.00	715.433	716.00
Frequency Stability vs. Voltage	20	3.3	699.571	699.00	715.467	716.00
	20	4.45	699.546	699.00	715.443	716.00
					<b>Result:</b>	<b>Pass</b>



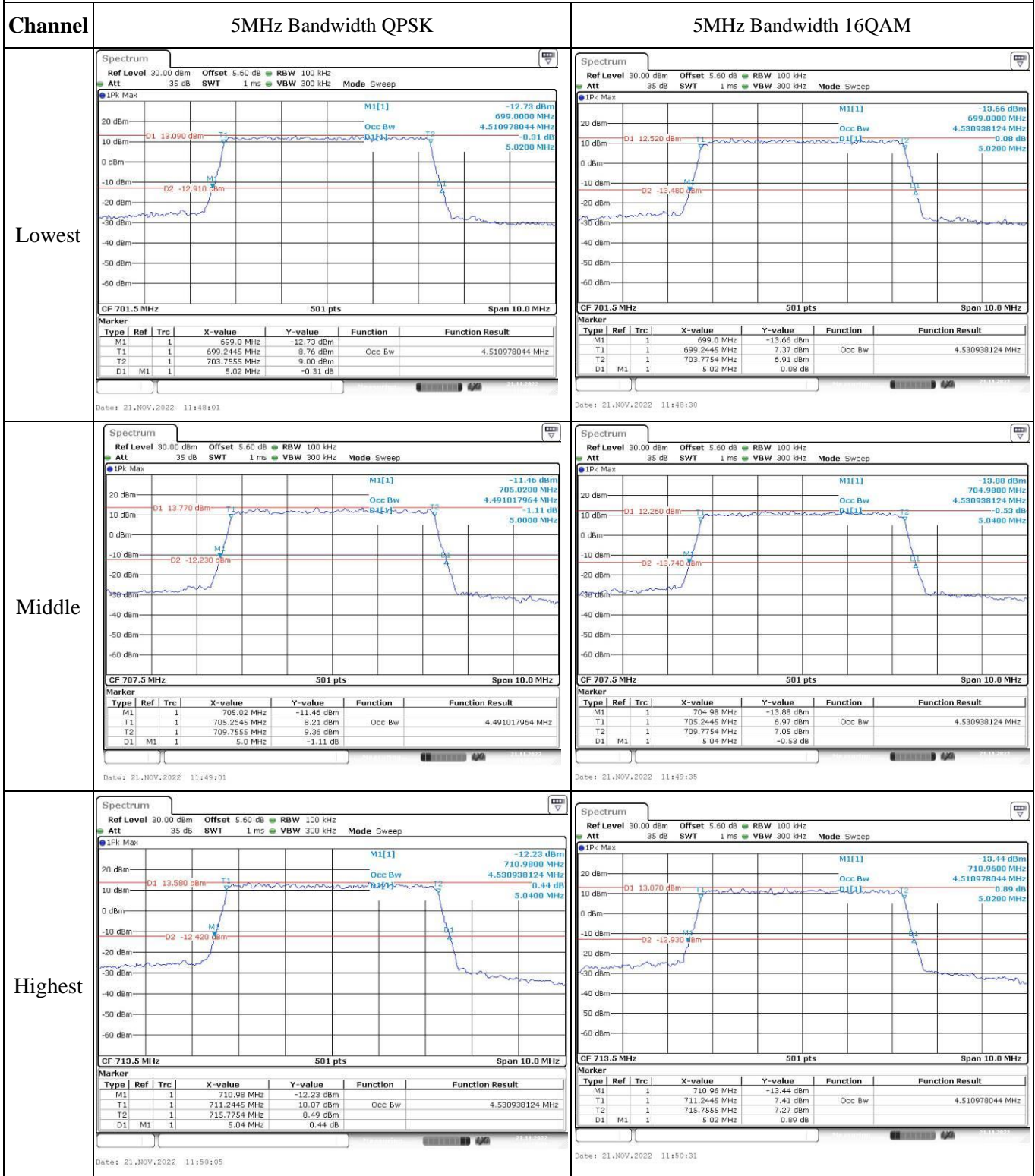
**Test Plots**(Note: The 5.6dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):



### Occupied Bandwidth



### Occupied Bandwidth



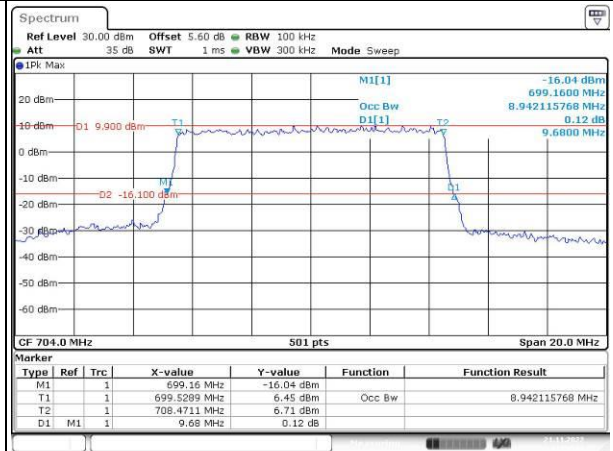
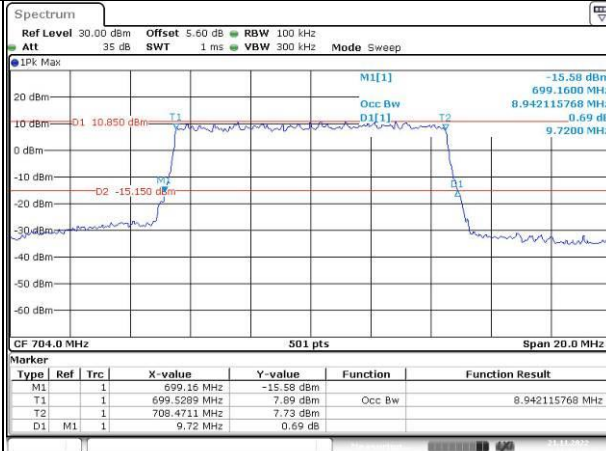
### Occupied Bandwidth

Channel

10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

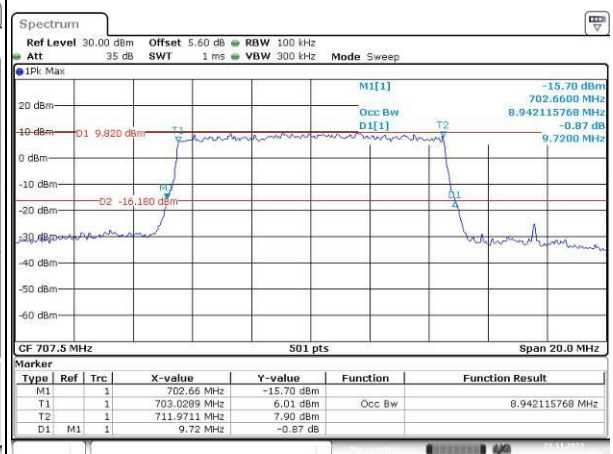
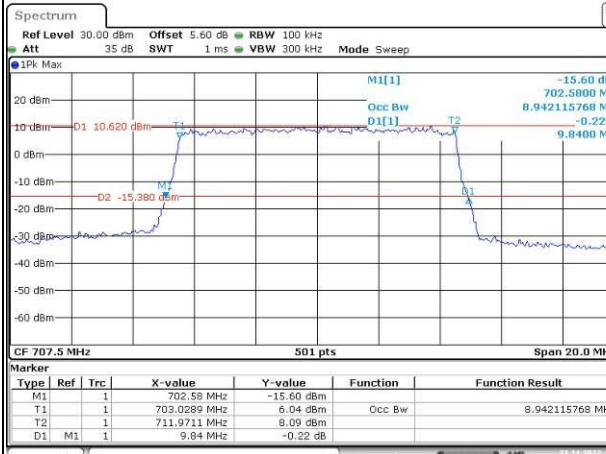
Lowest



Date: 21.NOV.2022 11:51:50

Date: 21.NOV.2022 11:52:23

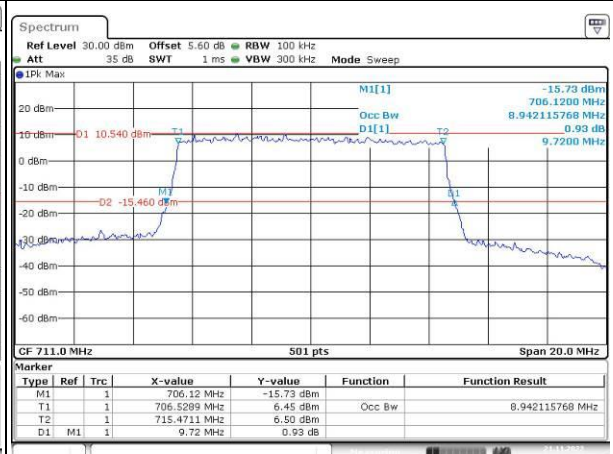
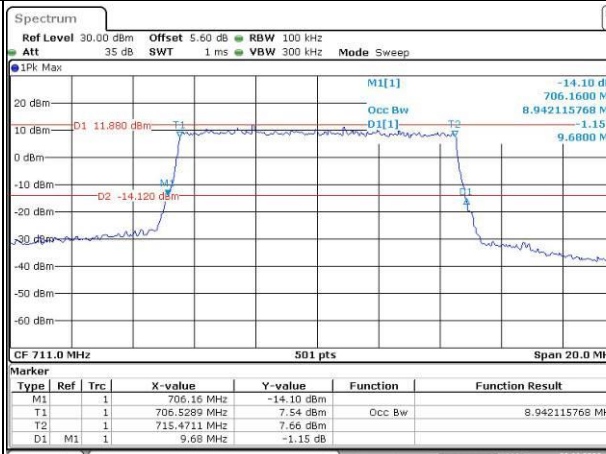
Middle



Date: 21.NOV.2022 11:52:57

Date: 21.NOV.2022 11:53:30

Highest



Date: 21.NOV.2022 11:54:11

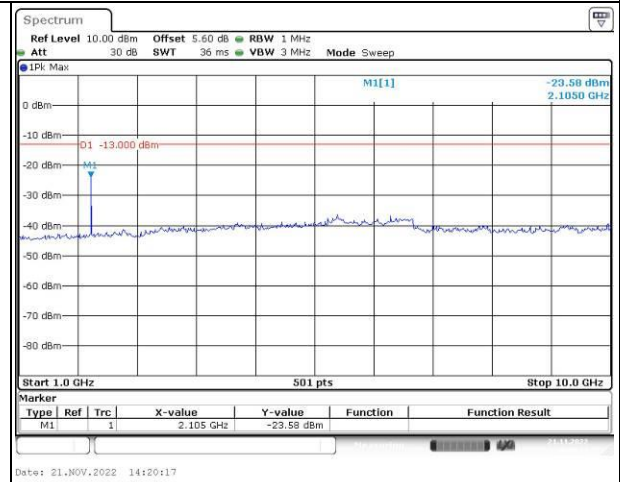
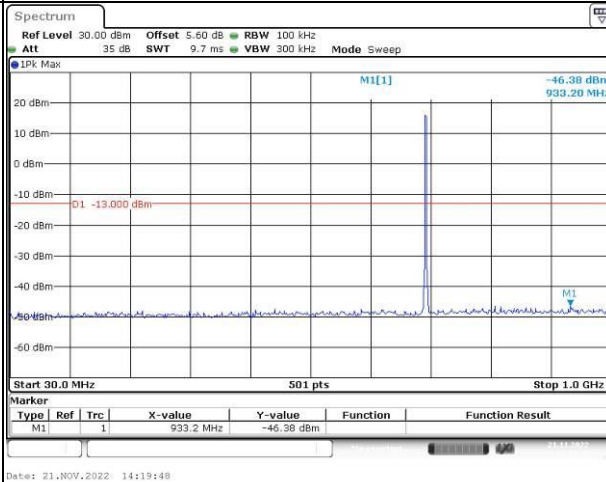
Date: 21.NOV.2022 11:54:48

### Spurious Emissions at Antenna Terminal

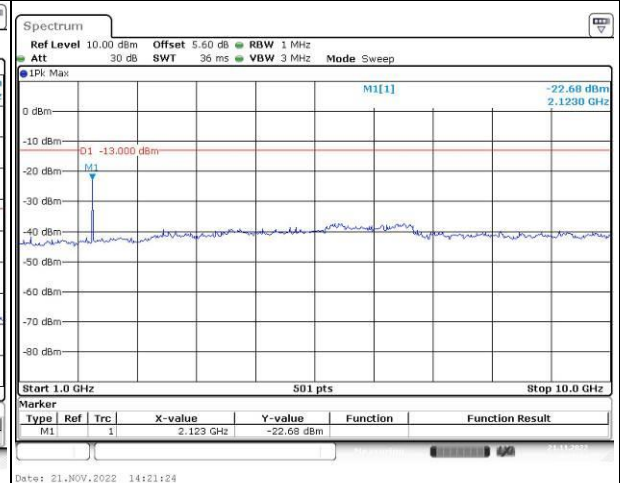
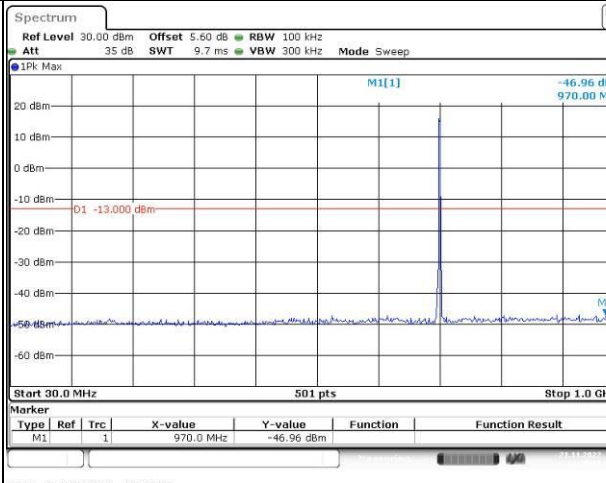
Channel

1.4MHz Bandwidth QPSK

Lowest



Middle



Highest

