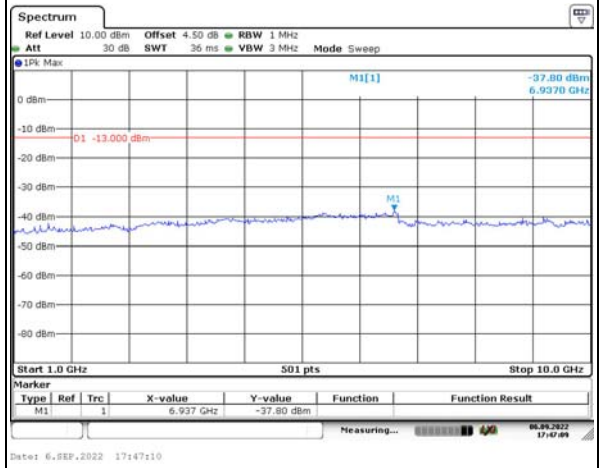
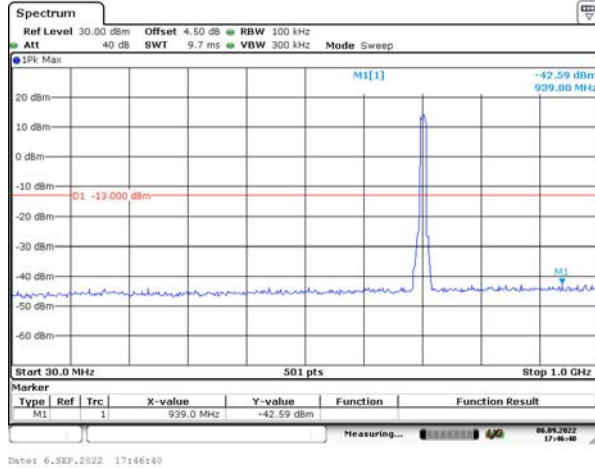


### Spurious Emissions at Antenna Terminal

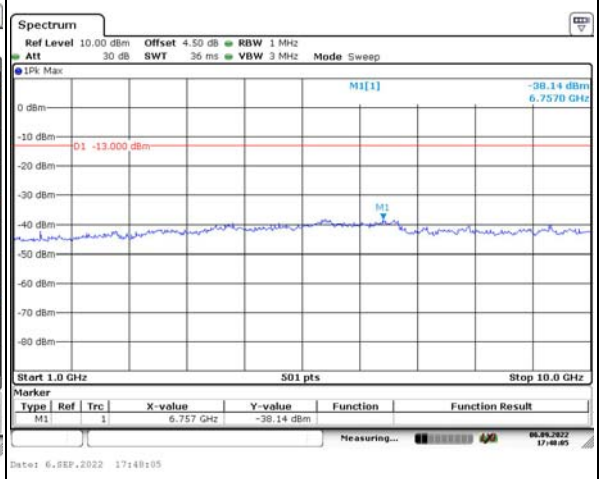
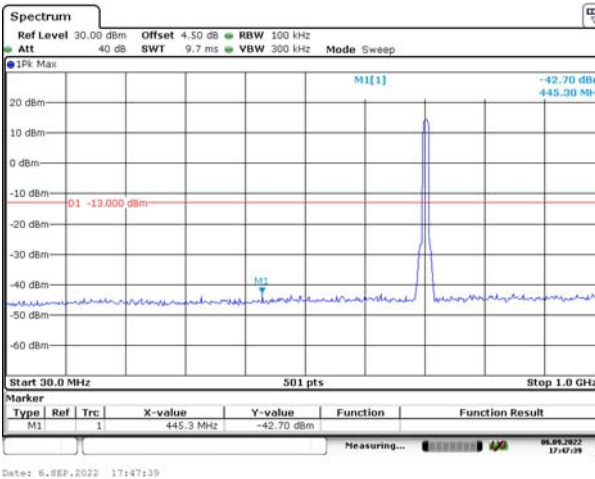
Channel

10MHz Bandwidth QPSK

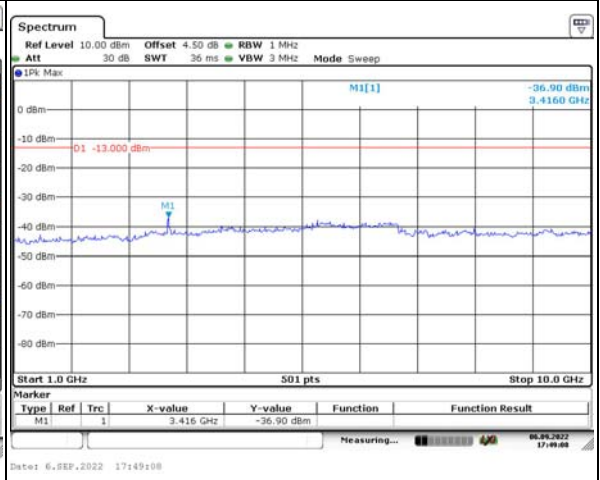
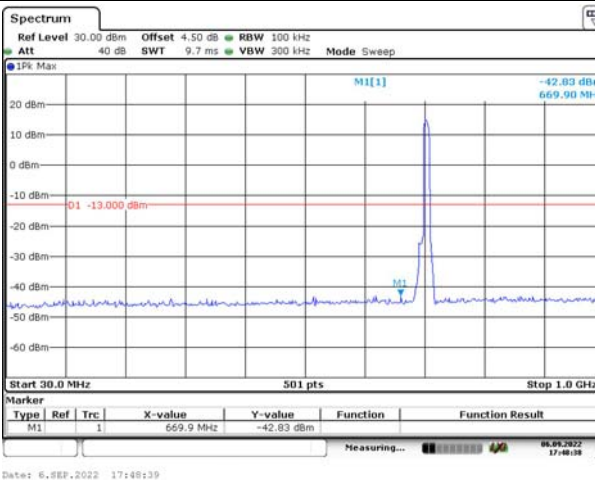
Lowest



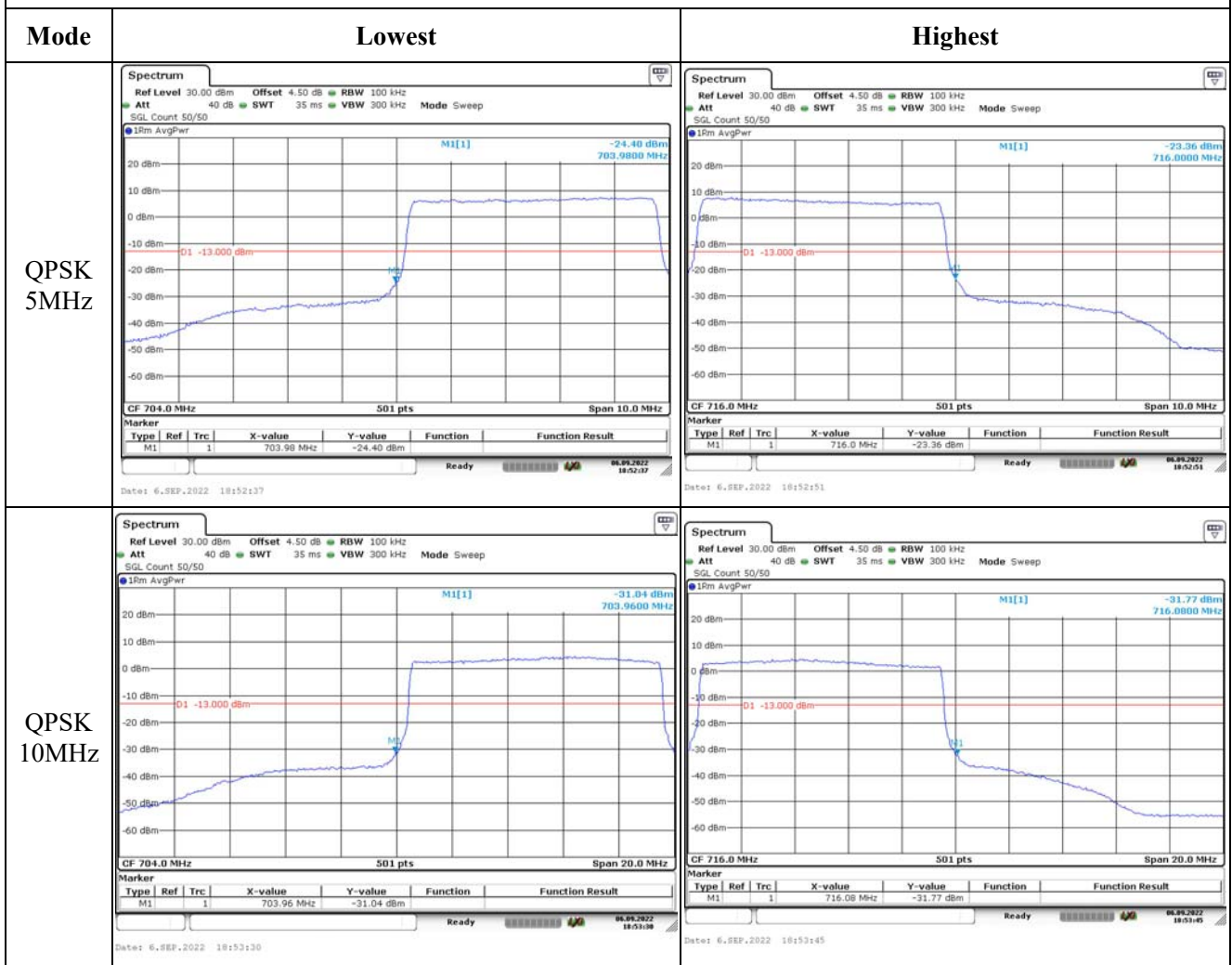
Middle



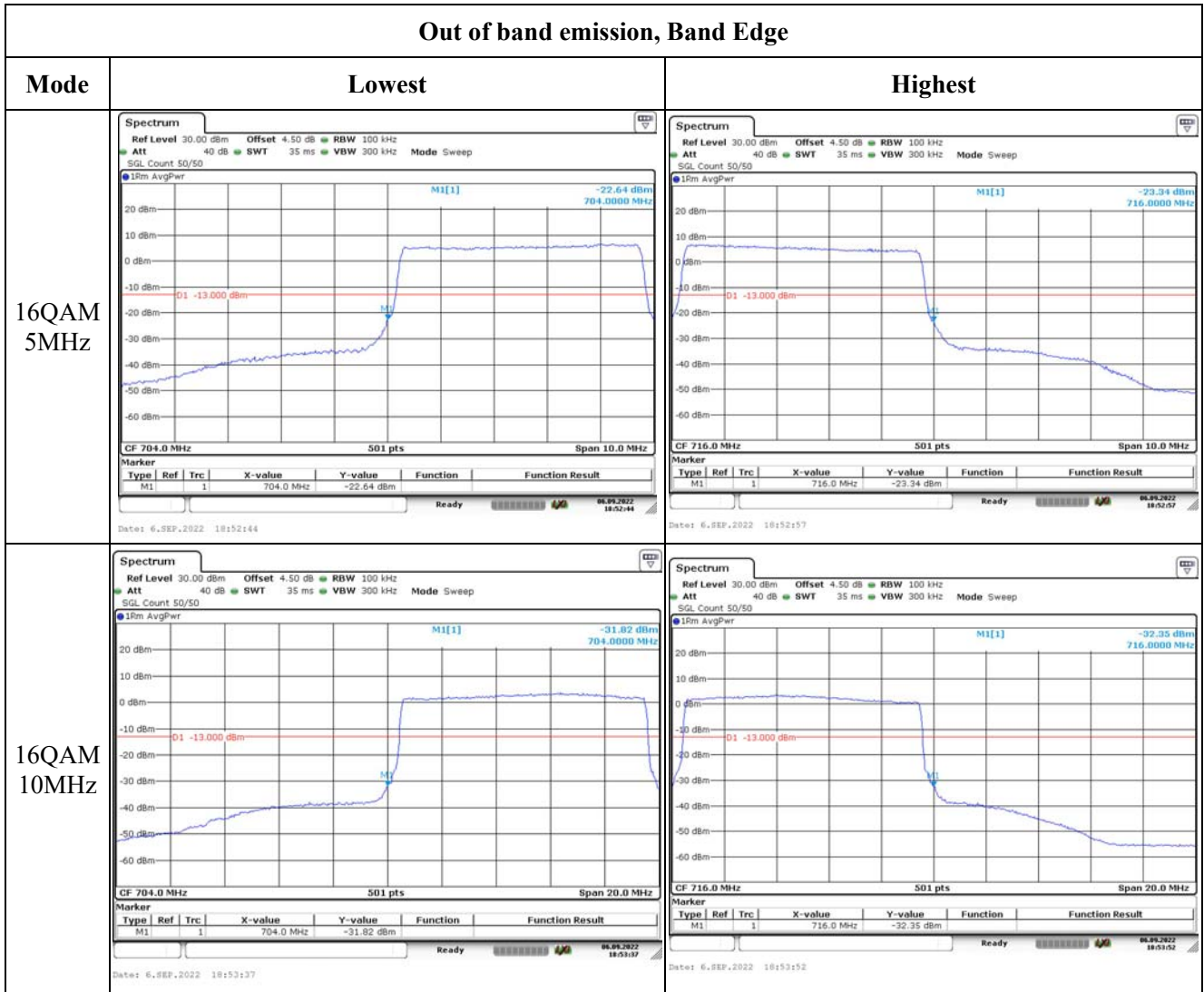
Highest



Out of band emission, Band Edge



Out of band emission, Band Edge



**4.10 Antenna Port Test Data and Results for LTE Band 66**

Serial Number:	CR22090006-RF-S1	Test Date:	2022-09-06~2022-09-07
Test Site:	RF	Test Mode:	Transmitting
Tester:	George Chan	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25.1~25.6	Relative Humidity: (%)	52~58	ATM Pressure: (kPa)	100.1~100.8
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101474	2022-07-15	2023-07-14
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100004	2022-08-07	2023-08-06
Mini-Circuits	DC Block	BLK-18-S+	1554404	2022-08-07	2023-08-06
R&S	Wideband Radio Communication Tester	CMW500	149218	2022-07-15	2023-07-14
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2022-04-06	2023-04-05
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
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).

**EUT Information@ LTE Band 66▲:**

Antenna Gain (dBi):	0.63	Cable Loss (dB):	0.3
Operation Voltage(V <sub>DC</sub> ):			
Lowest:	3.3	Normal:	3.87
		Highest:	4.45

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
1.4MHz	1710.7	1745	1779.3
3MHz	1711.5	1745	1778.5
5MHz	1712.5	1745	1777.5
10MHz	1715	1745	1775
15MHz	1717.5	1745	1772.5
20MHz	1720	1745	1770

**Test Data:****FCC§2.1046;§ 27.50(d)(4)****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	24.2	24.2	24.08	24.71	30
	RB1#3	24.36	24.38	24.23		
	RB1#5	24.17	24.17	24.04		
	RB3#0	24.26	24.28	24.04		
	RB3#3	24.27	24.25	24.03		
	RB6#0	23.25	23.23	23.11		
1.4MHz 16QAM	RB1#0	23.29	23.17	22.96	23.82	30
	RB1#3	23.49	23.33	23.11		
	RB1#5	23.31	23.21	22.98		
	RB3#0	23.2	23.32	23.15		
	RB3#3	23.24	23.3	23.19		
	RB6#0	22.26	22.18	22.05		
3MHz QPSK	RB1#0	24.29	24.27	24.18	24.64	30
	RB1#8	24.29	24.24	24.14		
	RB1#14	24.31	24.24	24.15		
	RB6#0	23.22	23.26	23.16		
	RB6#9	23.25	23.25	23.1		
	RB15#0	23.26	23.31	23.08		
3MHz 16QAM	RB1#0	23.31	23.79	23.21	24.12	30
	RB1#8	23.27	23.77	23.2		
	RB1#14	23.26	23.74	23.22		
	RB6#0	22.18	22.32	22.09		
	RB6#9	22.18	22.31	22.08		
	RB15#0	22.33	22.35	22.03		
5MHz QPSK	RB1#0	24.22	24.24	24.07	24.65	30
	RB1#13	24.31	24.32	24.15		
	RB1#24	24.23	24.21	24.07		
	RB15#0	23.26	23.31	23.17		
	RB15#10	23.3	23.32	23.12		
	RB25#0	23.25	23.27	23.08		
5MHz 16QAM	RB1#0	23.1	23.52	23.07	23.92	30
	RB1#13	23.18	23.59	23.14		
	RB1#24	23.09	23.47	23.03		
	RB15#0	22.32	22.27	22.13		
	RB15#10	22.35	22.31	22.12		
	RB25#0	22.31	22.3	22.07		
10MHz QPSK	RB1#0	24.26	24.32	24.24	24.79	30
	RB1#25	24.46	24.44	24.38		
	RB1#49	24.29	24.3	24.21		

	RB25#0	23.31	23.37	23.26		
	RB25#25	23.41	23.37	23.17		
	RB50#0	23.36	23.4	23.18		
10MHz 16QAM	RB1#0	23.79	23.45	23.14	24.32	30
	RB1#25	23.99	23.6	23.29		
	RB1#49	23.82	23.4	23.08		
	RB25#0	22.34	22.4	22.29		
	RB25#25	22.45	22.47	22.22		
	RB50#0	22.36	22.42	22.23		
15MHz QPSK	RB1#0	24.23	24.24	24.17	24.71	30
	RB1#38	24.38	24.34	24.26		
	RB1#74	24.28	24.19	24.1		
	RB36#0	23.36	23.38	23.35		
	RB36#39	23.48	23.43	23.34		
	RB75#0	23.4	23.45	23.34		
15MHz 16QAM	RB1#0	23.56	23.77	23.22	24.18	30
	RB1#38	23.73	23.85	23.3		
	RB1#74	23.66	23.71	23.15		
	RB36#0	22.27	22.37	22.26		
	RB36#39	22.42	22.41	22.23		
	RB75#0	22.34	22.42	22.26		
20MHz QPSK	RB1#0	24.02	24.09	23.92	24.81	30
	RB1#50	24.41	24.48	24.35		
	RB1#99	24.14	24.02	23.93		
	RB50#0	23.28	23.32	23.18		
	RB50#50	23.38	23.34	23.1		
	RB100#0	23.33	23.3	23.17		
20MHz 16QAM	RB1#0	23.56	23.37	23.08	24.31	30
	RB1#50	23.98	23.76	23.46		
	RB1#99	23.64	23.32	22.99		
	RB50#0	22.25	22.3	22.15		
	RB50#50	22.38	22.35	22.1		
	RB100#0	22.28	22.33	22.15		

Note: EIRP=Conducted Power(dBm) - L<sub>C</sub>(dB) + G<sub>T</sub>(dBi)

**Result:**

**Pass**

<b>Peak-to-average Ratio(PAR)</b>					
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	4.61	3.91	3.8	13
	RB100#0	5.13	4.49	4.26	13
20MHz 16QAM	RB1#0	5.1	4.55	4.7	13
	RB100#0	6	5.54	5.25	13
<b>Result:</b>					<b>Pass</b>

<b>FCC §2.1049, §27.53:Occupied Bandwidth</b>						
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	1.096	1.102	1.102	1.314	1.308	1.362
1.4MHz 16QAM	1.102	1.096	1.108	1.32	1.29	1.314
3MHz QPSK	2.683	2.683	2.695	2.904	2.88	2.892
3MHz 16QAM	2.683	2.683	2.683	2.88	2.892	2.892
5MHz QPSK	4.531	4.531	4.531	5.2	5.24	5.2
5MHz 16QAM	4.511	4.551	4.551	5.14	5.84	5.28
10MHz QPSK	8.942	8.982	8.942	9.96	10	9.92
10MHz 16QAM	8.942	8.942	8.982	10	9.76	9.84
15MHz QPSK	13.593	13.473	13.533	15.3	15.18	15.3
15MHz 16QAM	13.593	13.593	13.533	15.18	15.12	15.3
20MHz QPSK	18.044	17.964	17.964	20	19.68	19.76
20MHz 16QAM	17.964	17.964	18.044	19.84	19.76	19.84

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

<b>FCC §2.1051, § 27.53:Spurious Emissions at Antenna Terminal</b>	
<b>Result:</b>	<b>Pass, Please refer to the test plots of Spurious Emissions at Antenna Terminal.</b>

<b>FCC §2.1051, § 27.53:Out of band emission, Band Edge</b>	
<b>Result:</b>	<b>Pass, Please refer to the test plots of Out of band emission, Band Edge.</b>

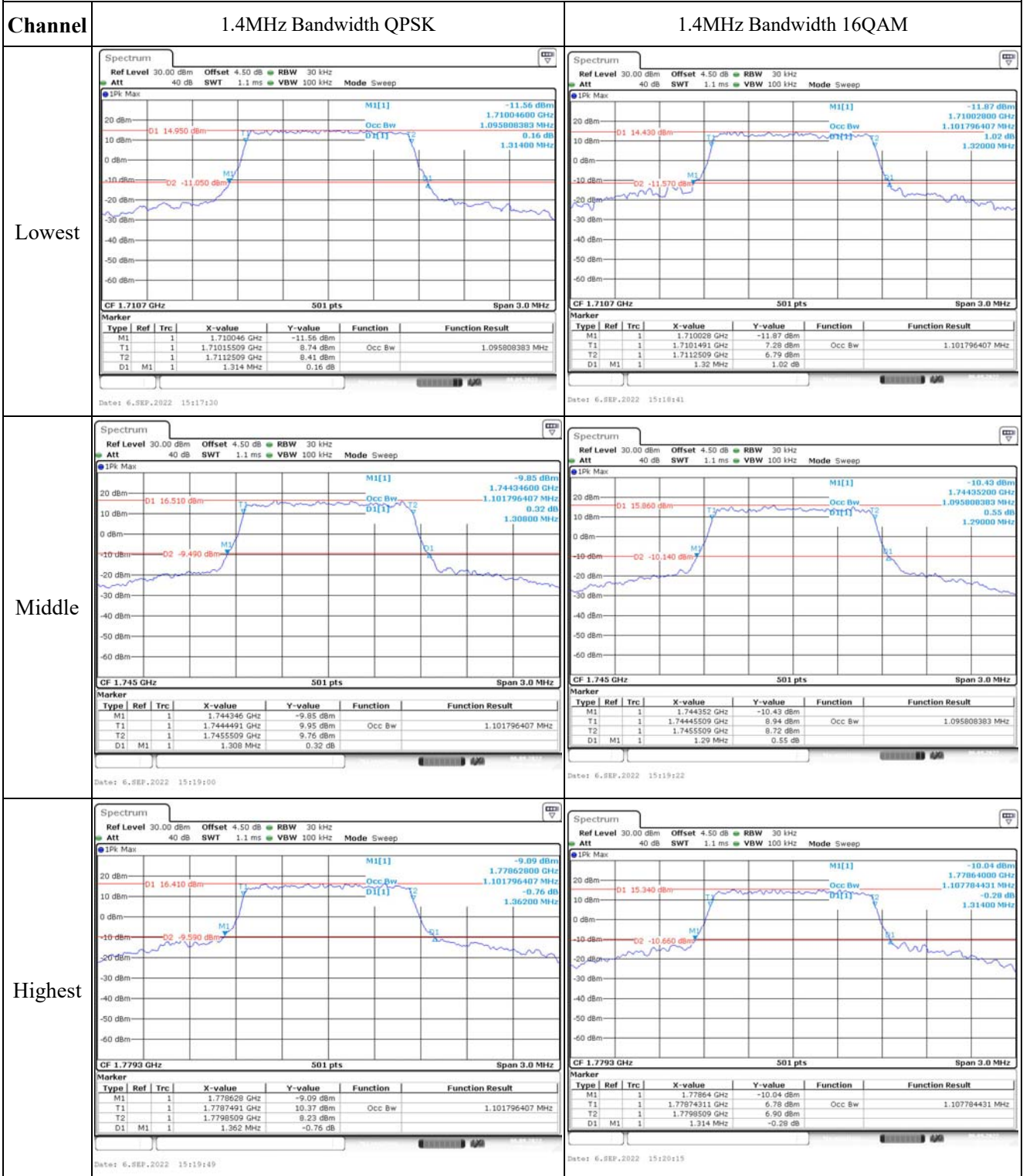
FCC §2.1055, §27.54: Frequency Stability						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.87	1710.996	1710.00	1779.030	1780
	-20	3.87	1710.930	1710.00	1779.010	1780
	-10	3.87	1710.942	1710.00	1779.081	1780
	0	3.87	1710.927	1710.00	1779.030	1780
	10	3.87	1710.932	1710.00	1779.066	1780
	20	3.87	1710.933	1710.00	1779.078	1780
	30	3.87	1710.956	1710.00	1779.031	1780
	40	3.87	1710.941	1710.00	1779.032	1780
	50	3.87	1710.965	1710.00	1779.085	1780
Frequency Stability vs. Voltage	20	3.3	1710.965	1710.00	1779.094	1780
	20	4.45	1710.965	1710.00	1779.057	1780
					<b>Result:</b>	<b>Pass</b>

Test Mode:	20M 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	1711.081	1710.00	1779.016	1780
	-20	3.87	1711.047	1710.00	1779.012	1780
	-10	3.87	1711.053	1710.00	1779.001	1780
	0	3.87	1711.067	1710.00	1779.015	1780
	10	3.87	1711.030	1710.00	1779.050	1780
	20	3.87	1711.018	1710.00	1779.050	1780
	30	3.87	1711.068	1710.00	1779.079	1780
	40	3.87	1711.043	1710.00	1779.036	1780
	50	3.87	1711.085	1710.00	1779.039	1780
Frequency Stability vs. Voltage	20	3.3	1711.025	1710.00	1779.006	1780
	20	4.45	1711.054	1710.00	1779.025	1780
					<b>Result:</b>	<b>Pass</b>



Test Plots:

Occupied Bandwidth



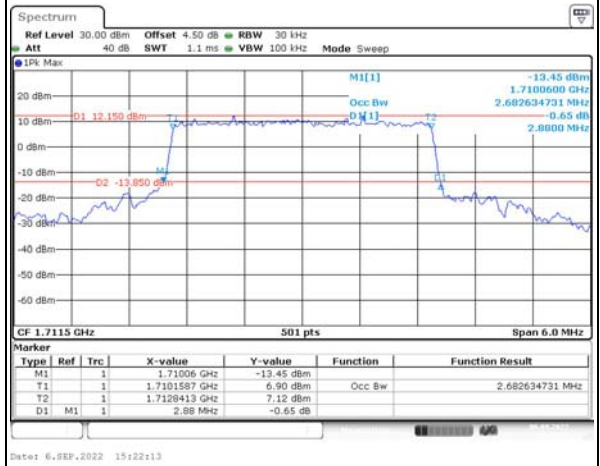
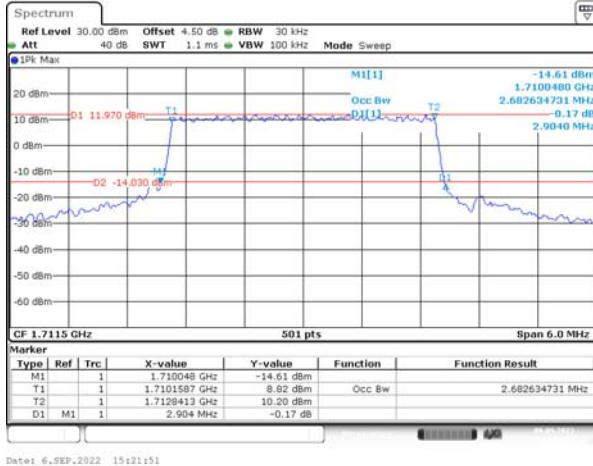
### Occupied Bandwidth

Channel

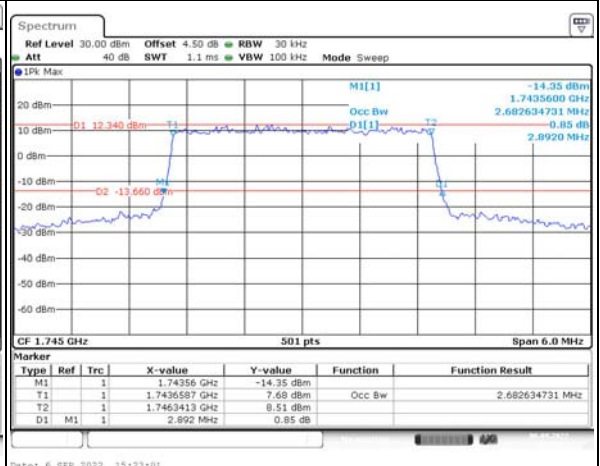
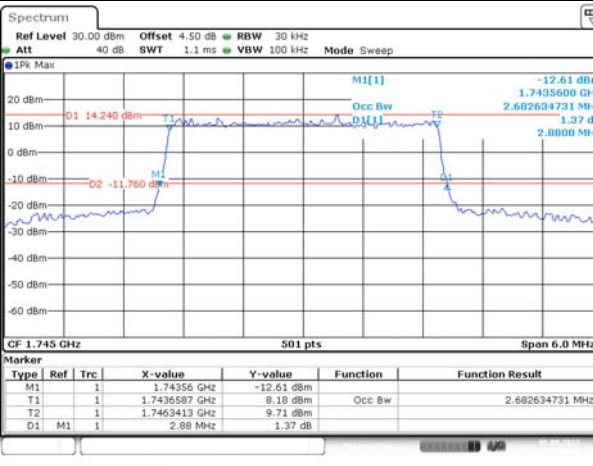
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

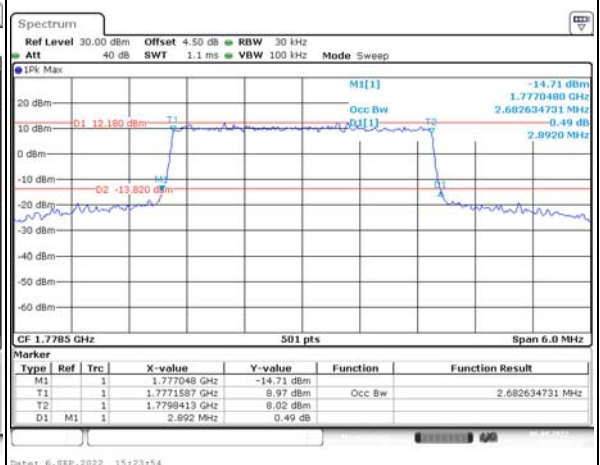
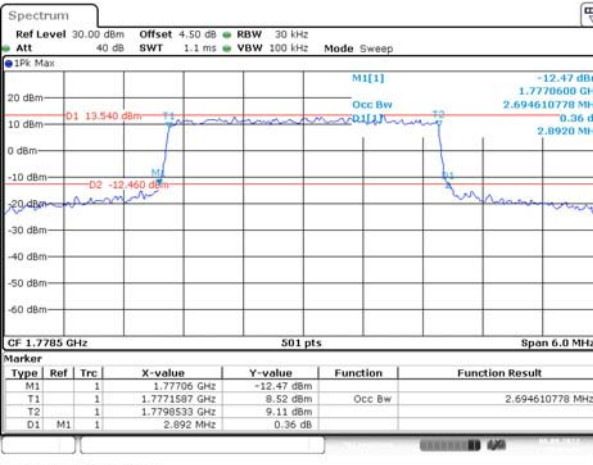
Lowest



Middle



Highest



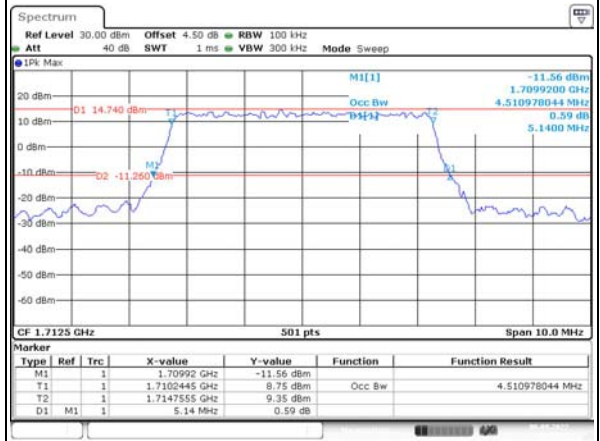
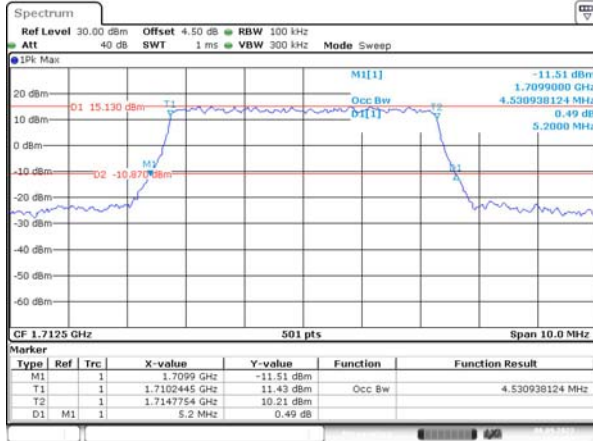
### Occupied Bandwidth

Channel

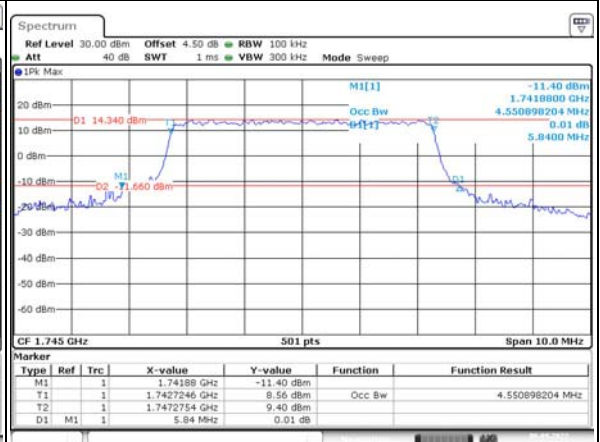
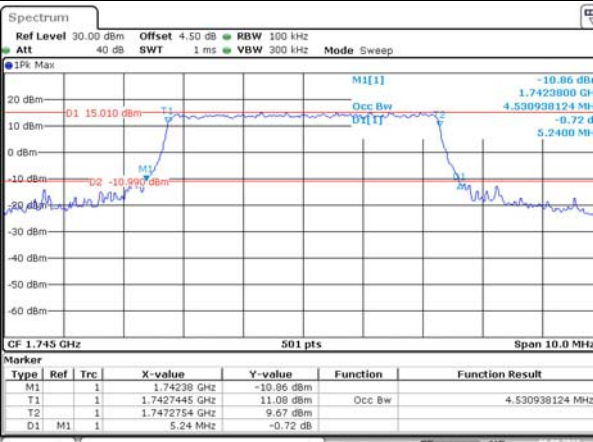
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

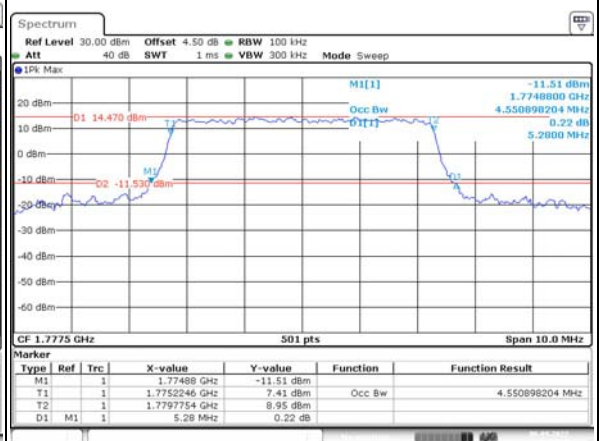
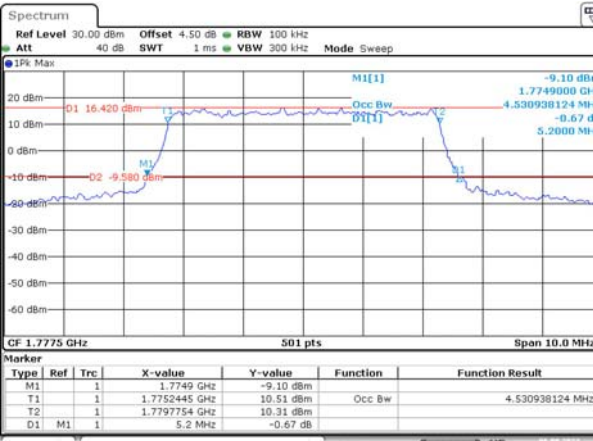
Lowest



Middle

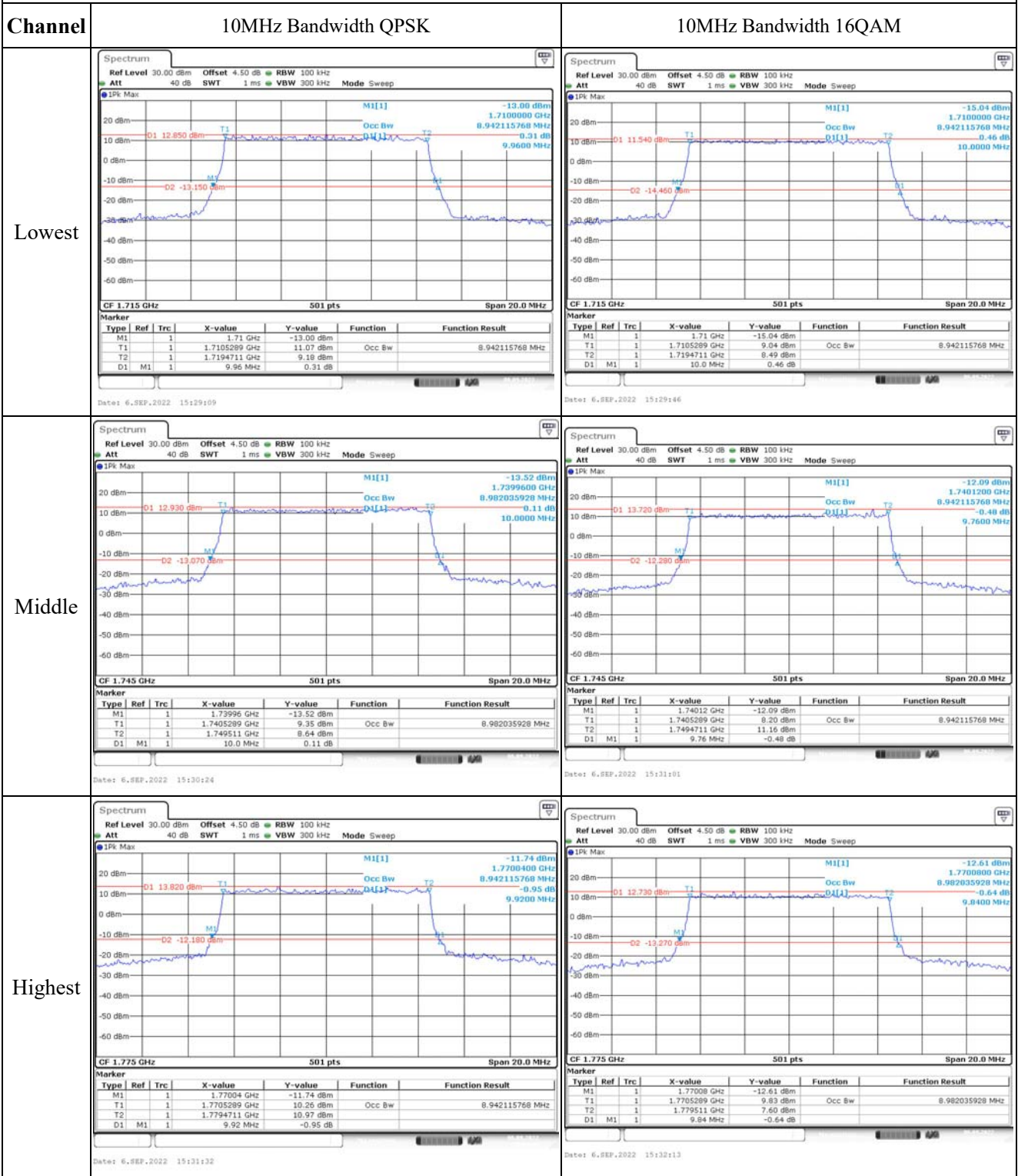


Highest





Occupied Bandwidth



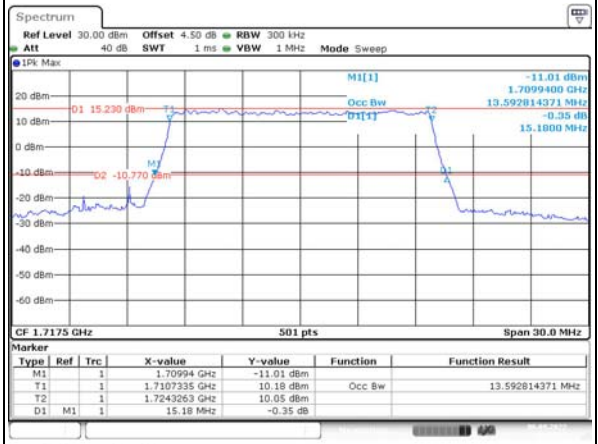
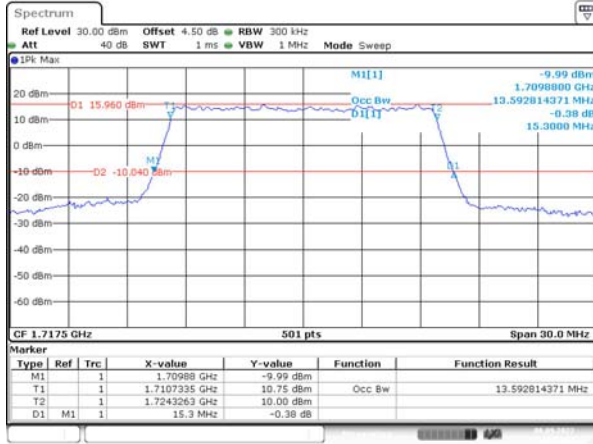
Occupied Bandwidth

Channel

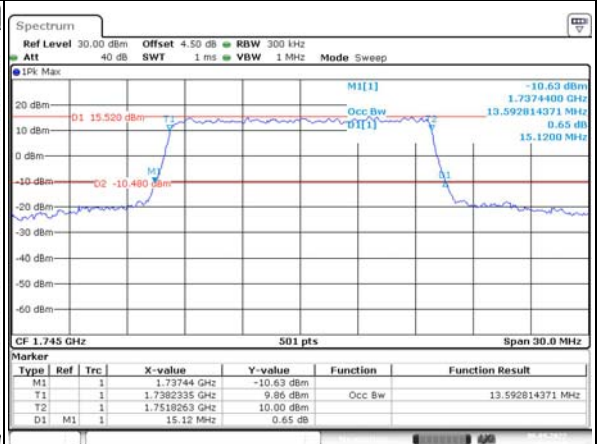
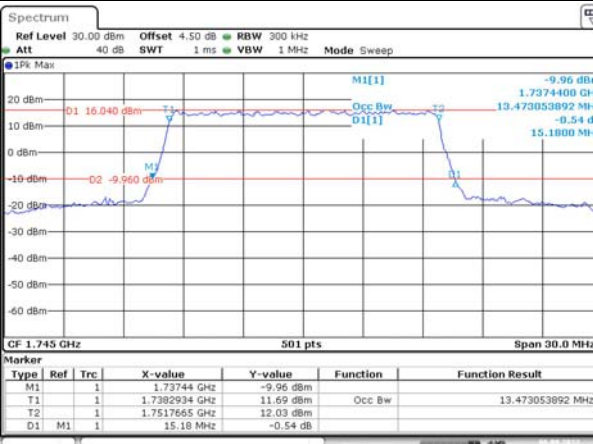
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

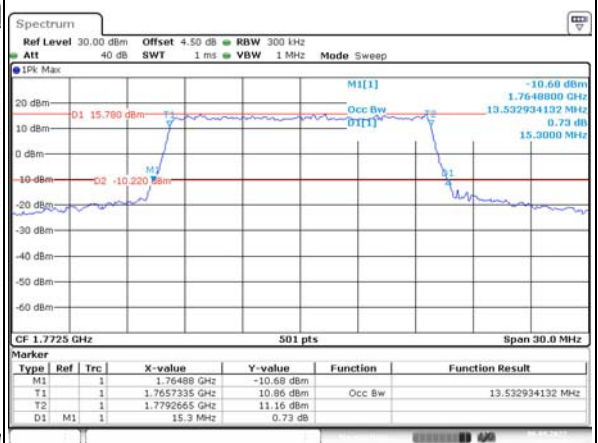
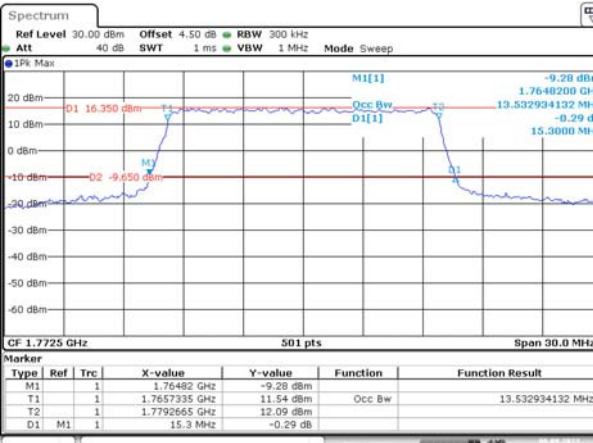
Lowest



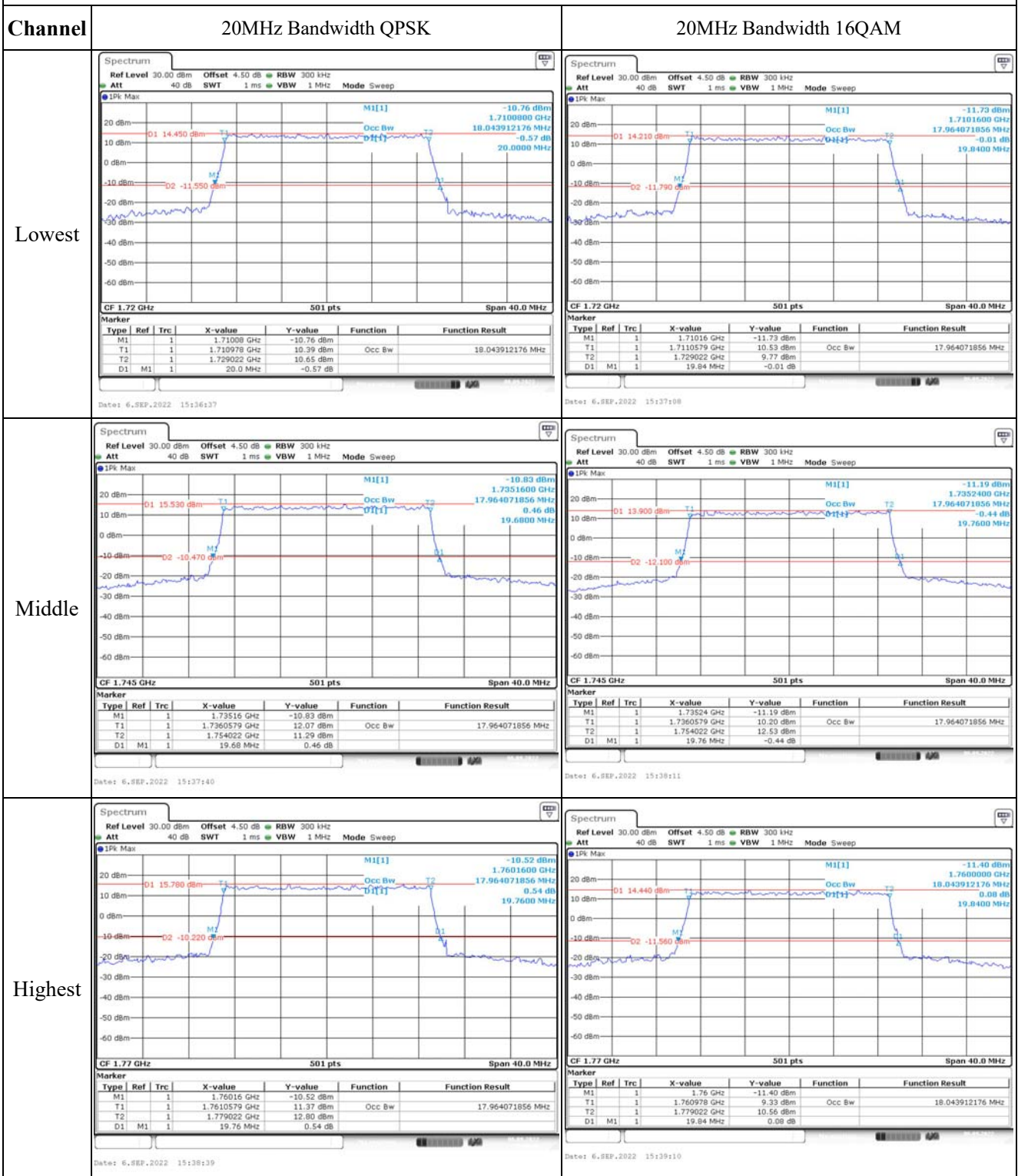
Middle



Highest



Occupied Bandwidth

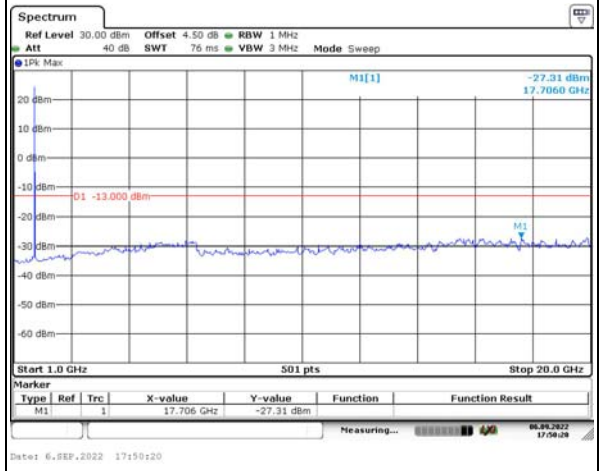
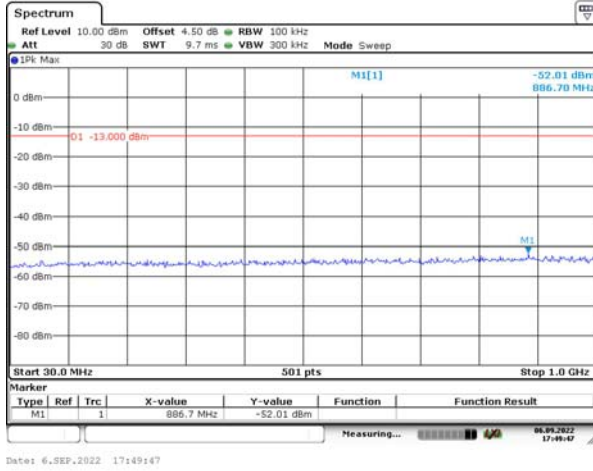


### Spurious Emissions at Antenna Terminal

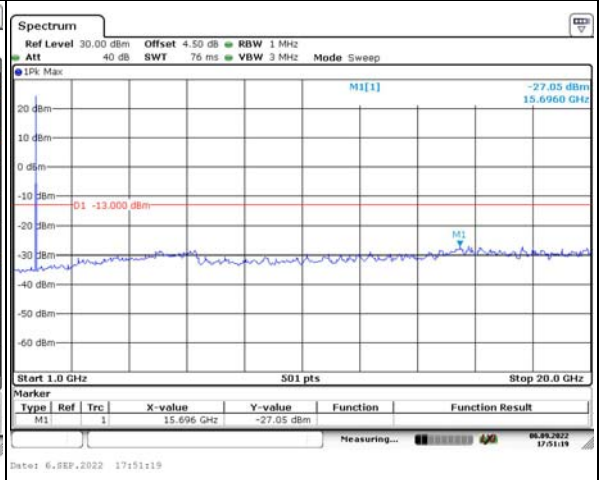
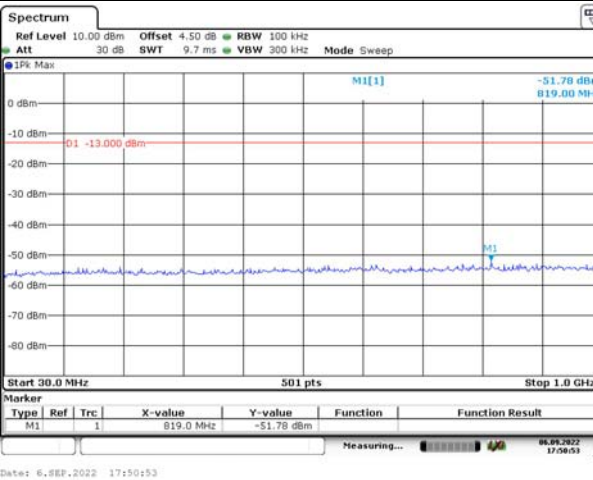
Channel

1.4MHz Bandwidth QPSK

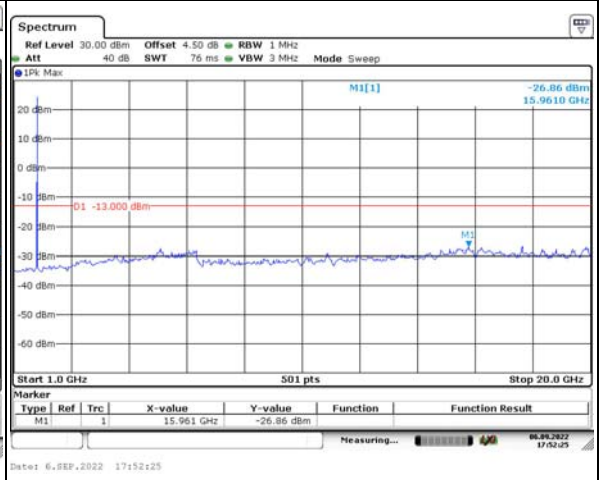
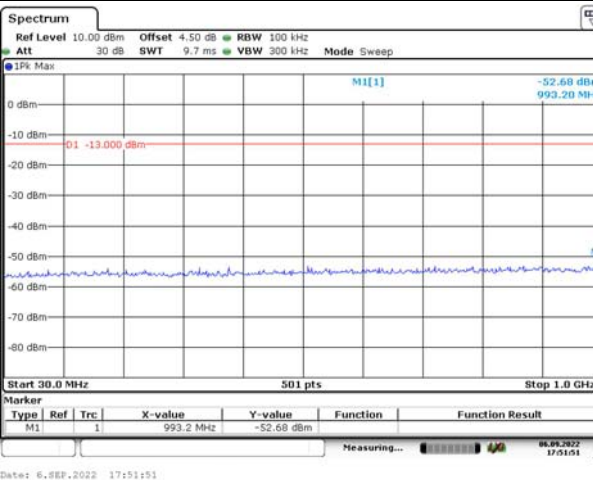
Lowest



Middle



Highest



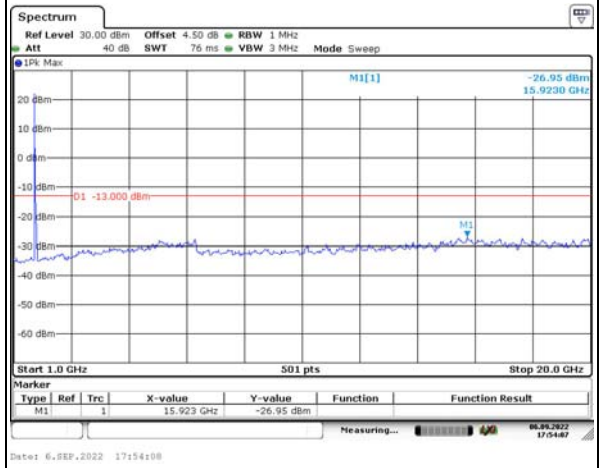
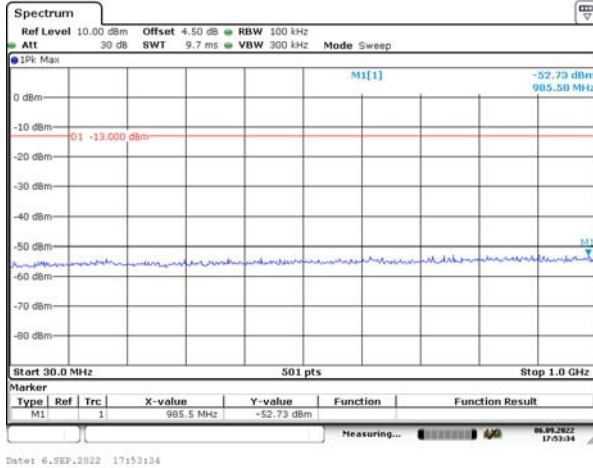


### Spurious Emissions at Antenna Terminal

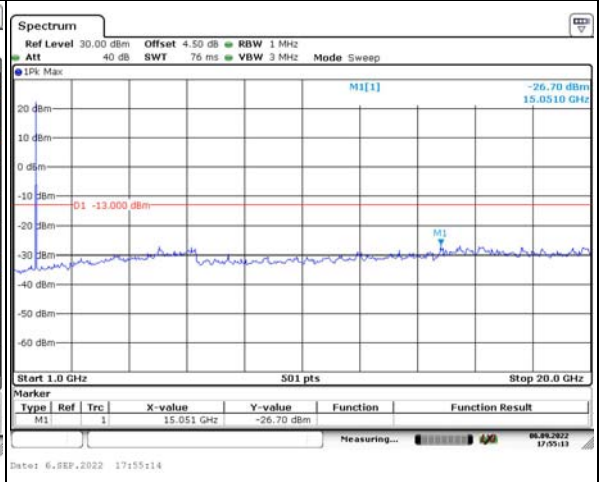
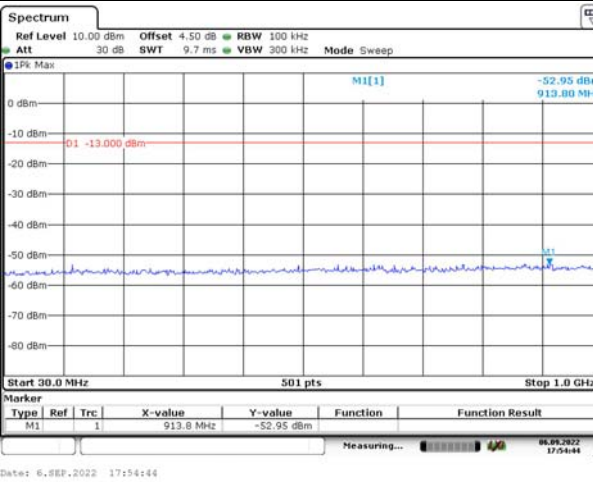
Channel

3MHz Bandwidth QPSK

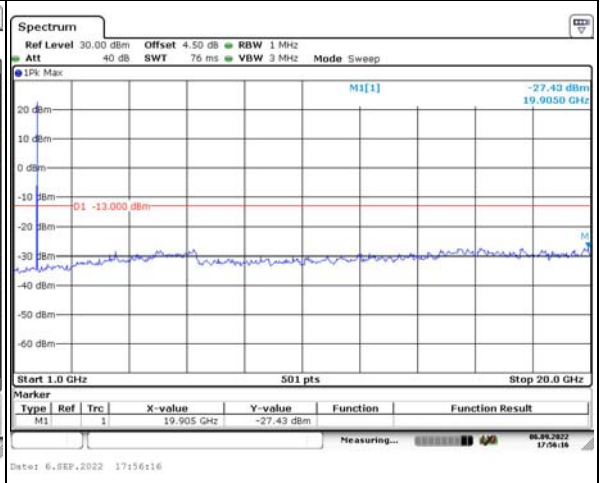
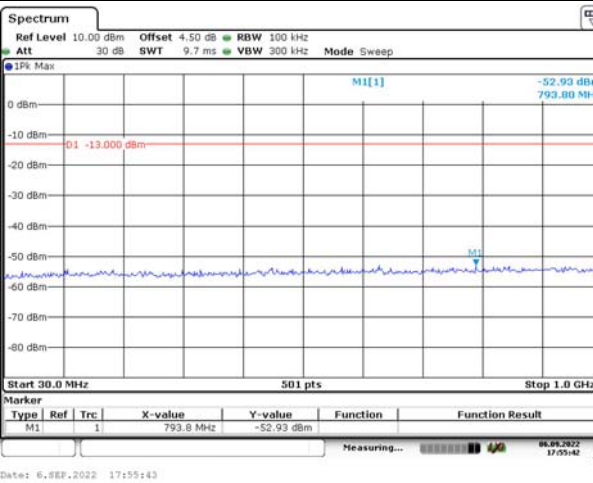
Lowest



Middle



Highest



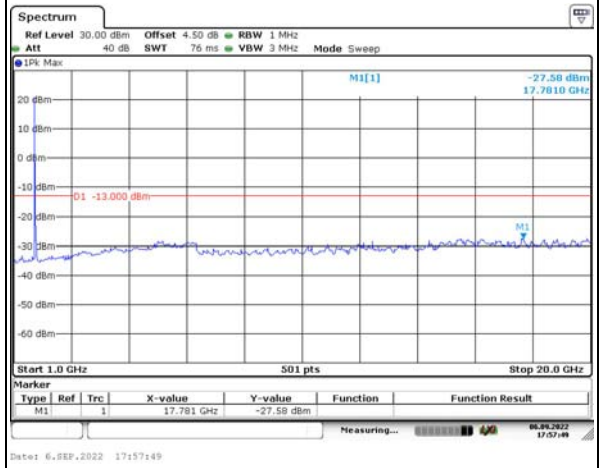
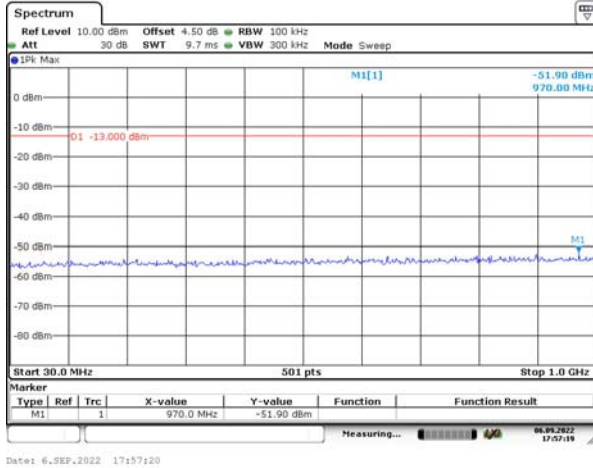


### Spurious Emissions at Antenna Terminal

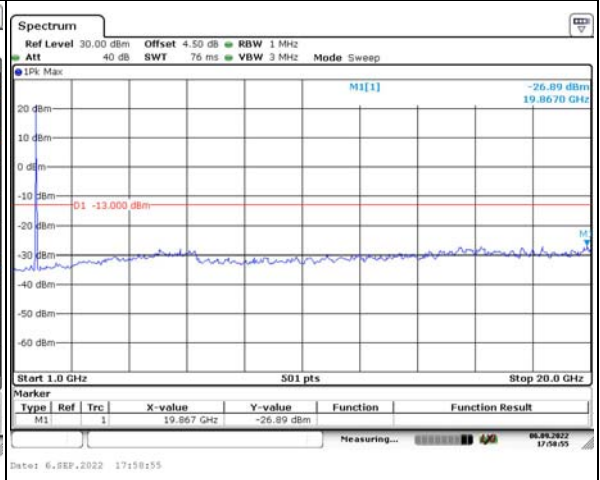
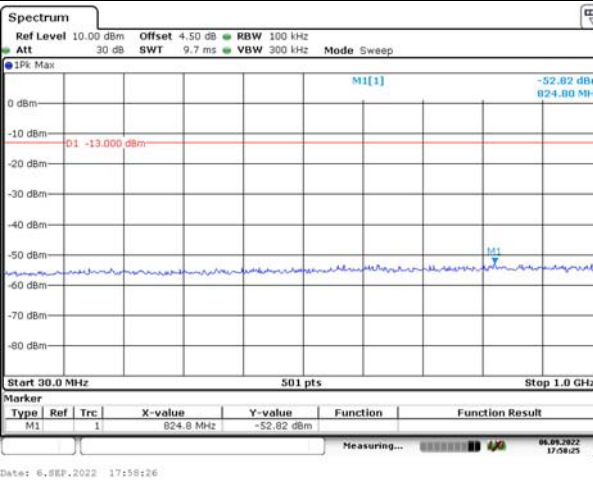
Channel

5MHz Bandwidth QPSK

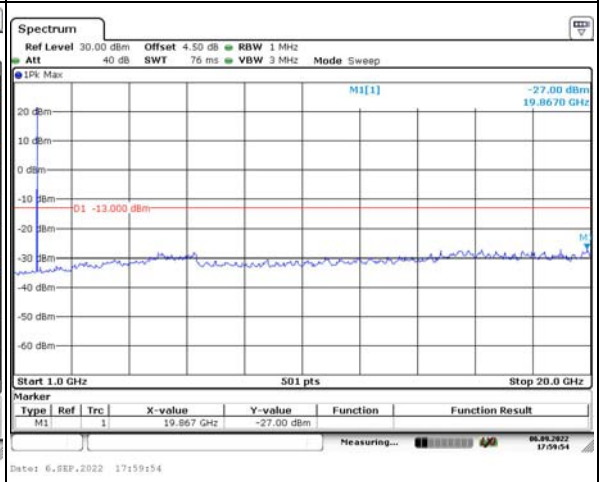
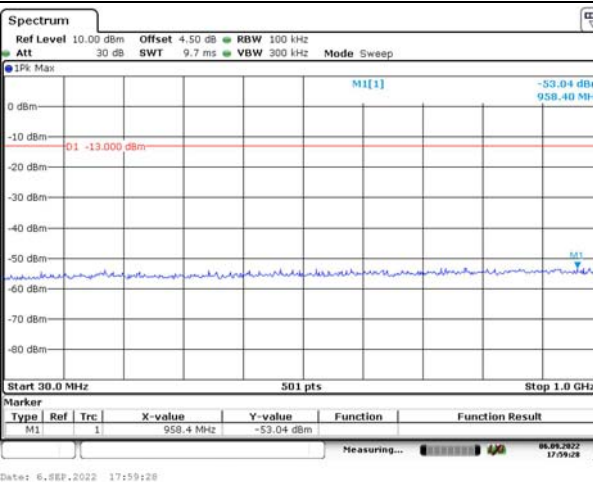
Lowest



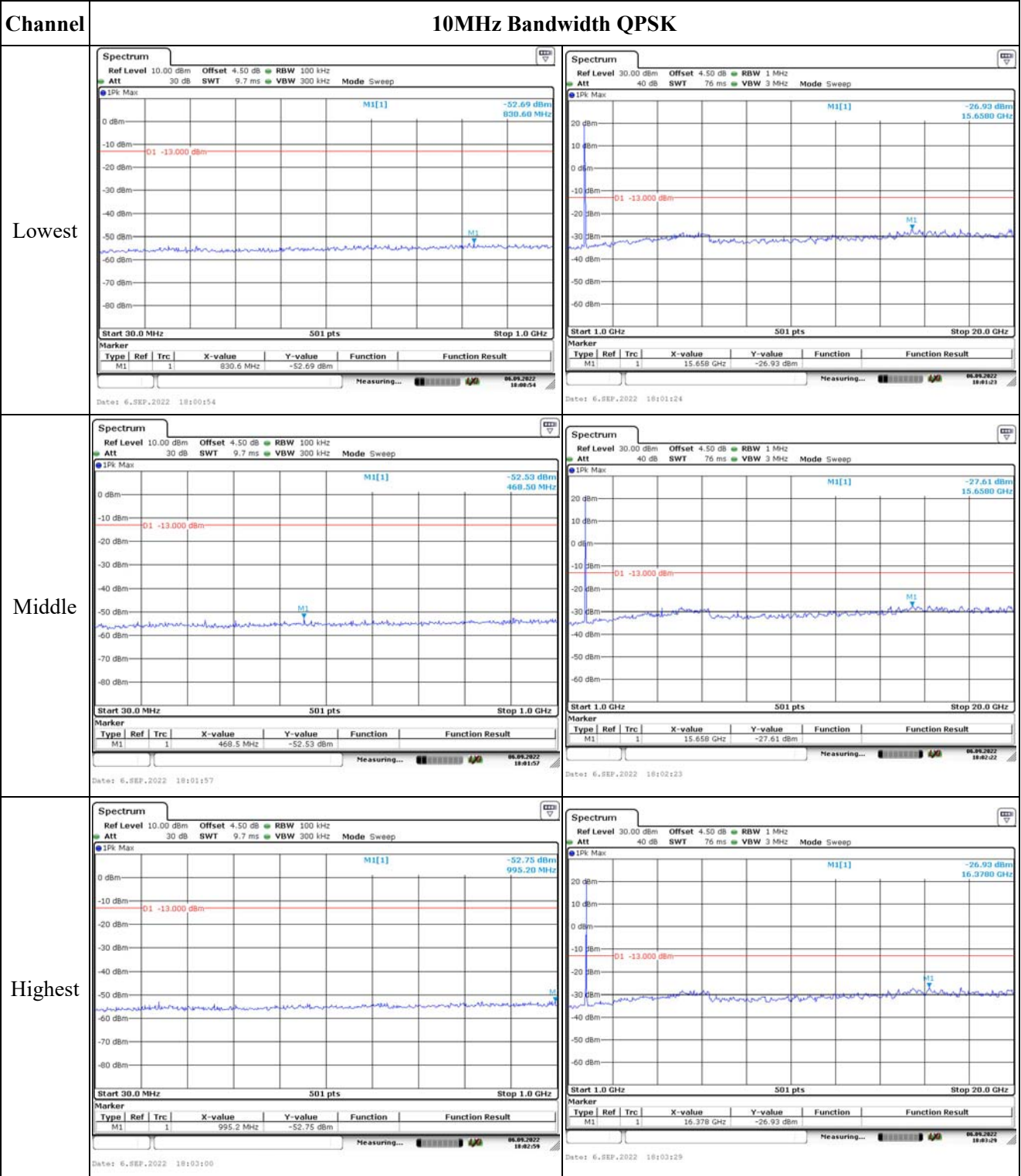
Middle



Highest



Spurious Emissions at Antenna Terminal

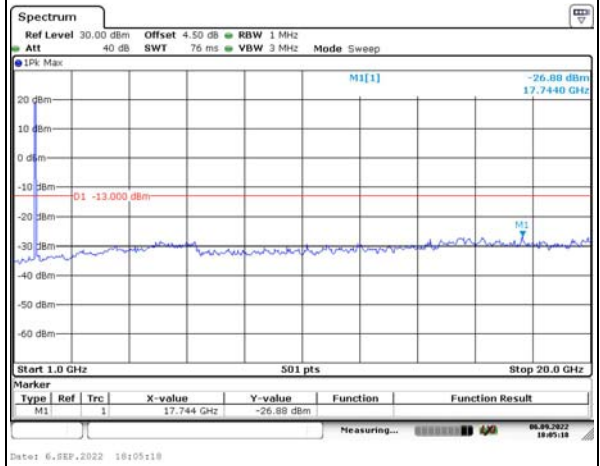
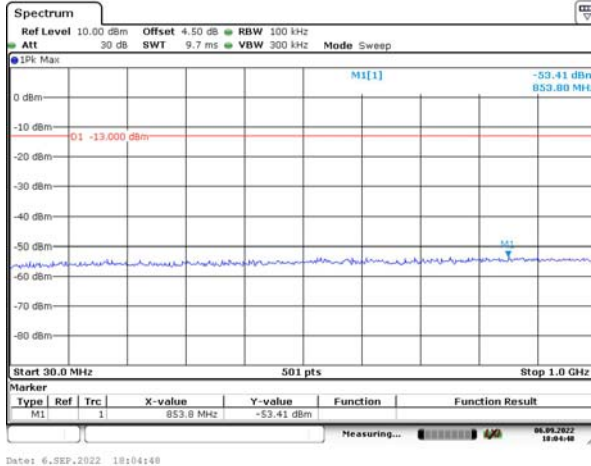


### Spurious Emissions at Antenna Terminal

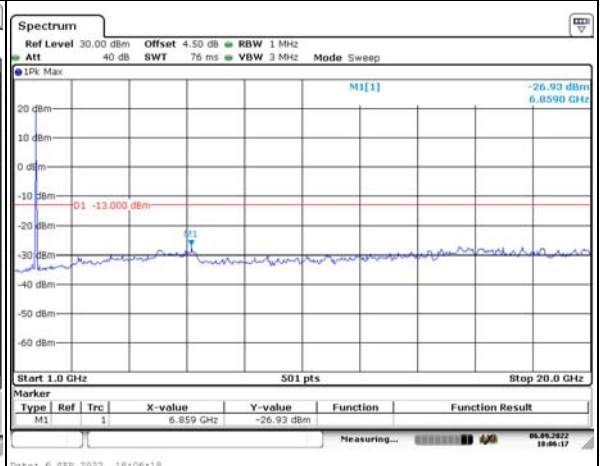
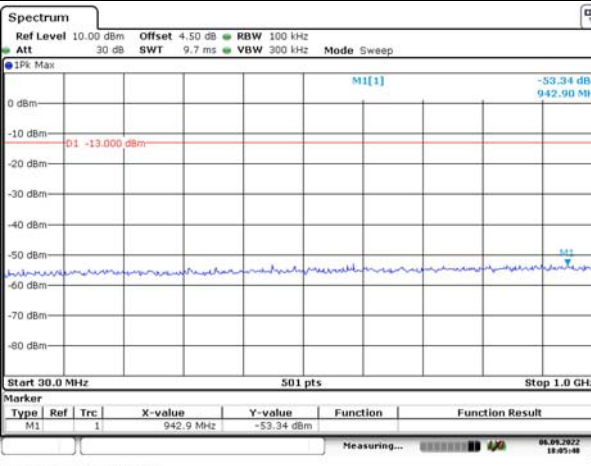
Channel

15MHz Bandwidth QPSK

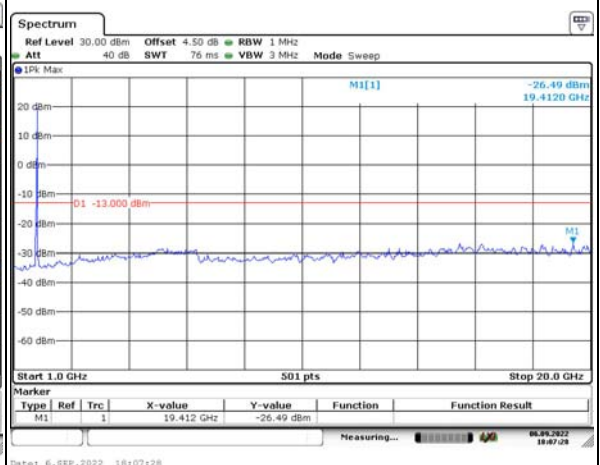
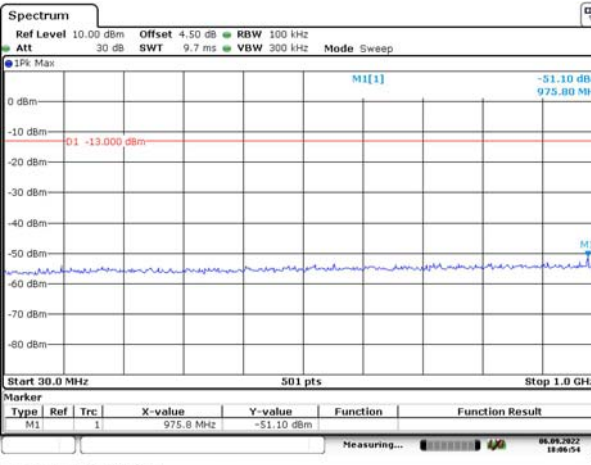
Lowest



Middle



Highest

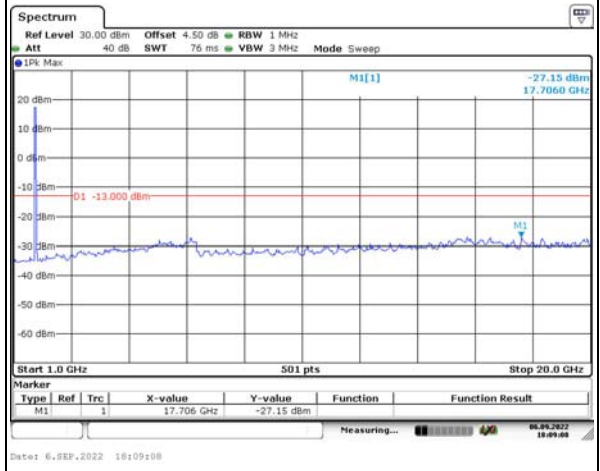
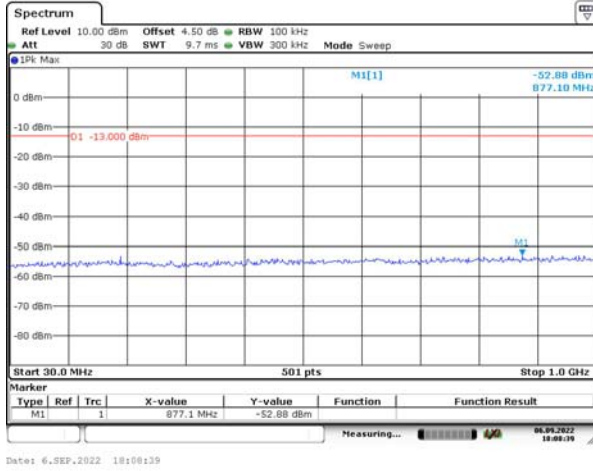


### Spurious Emissions at Antenna Terminal

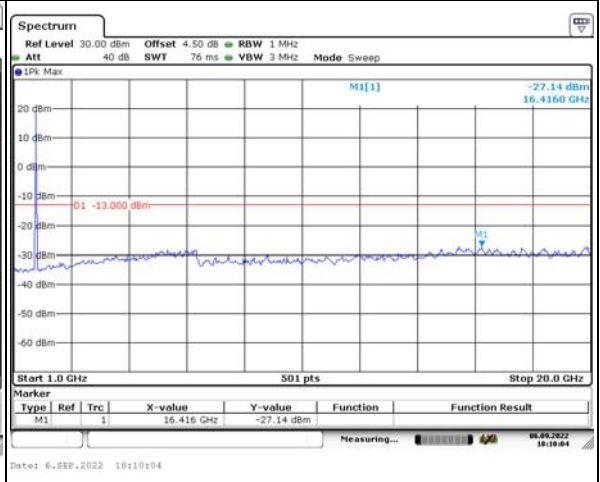
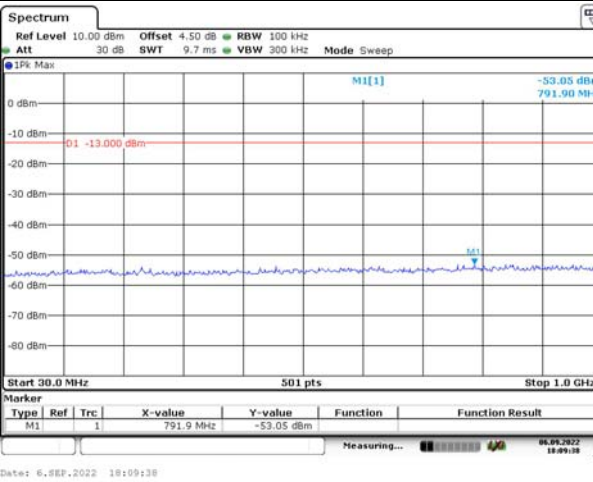
Channel

20MHz Bandwidth QPSK

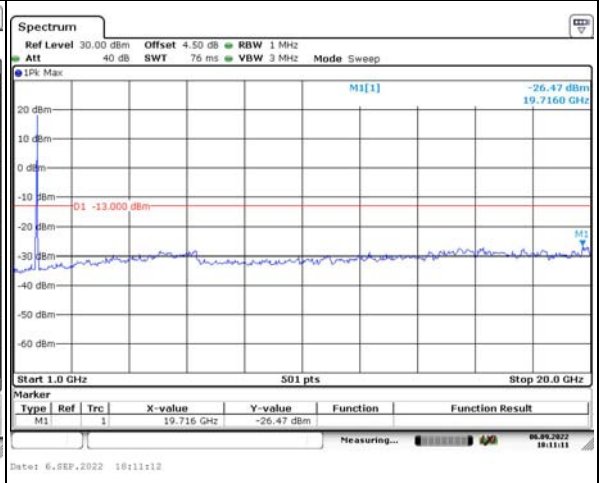
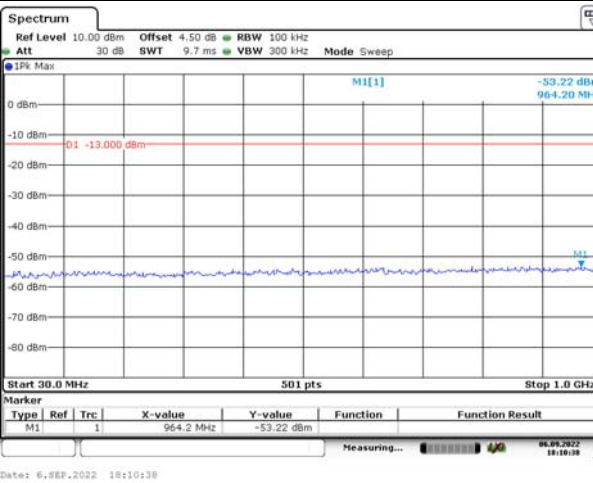
Lowest



Middle

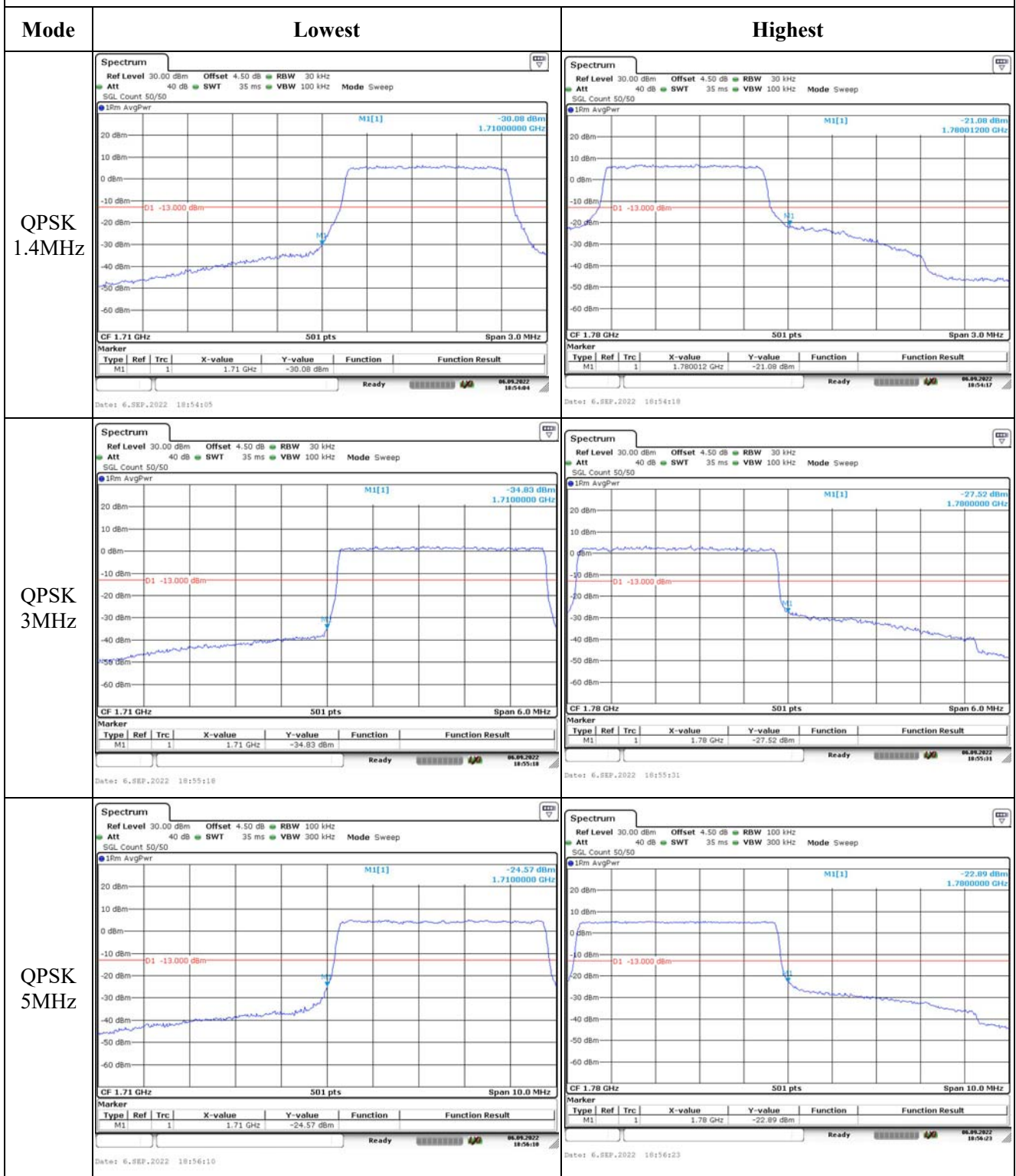


Highest

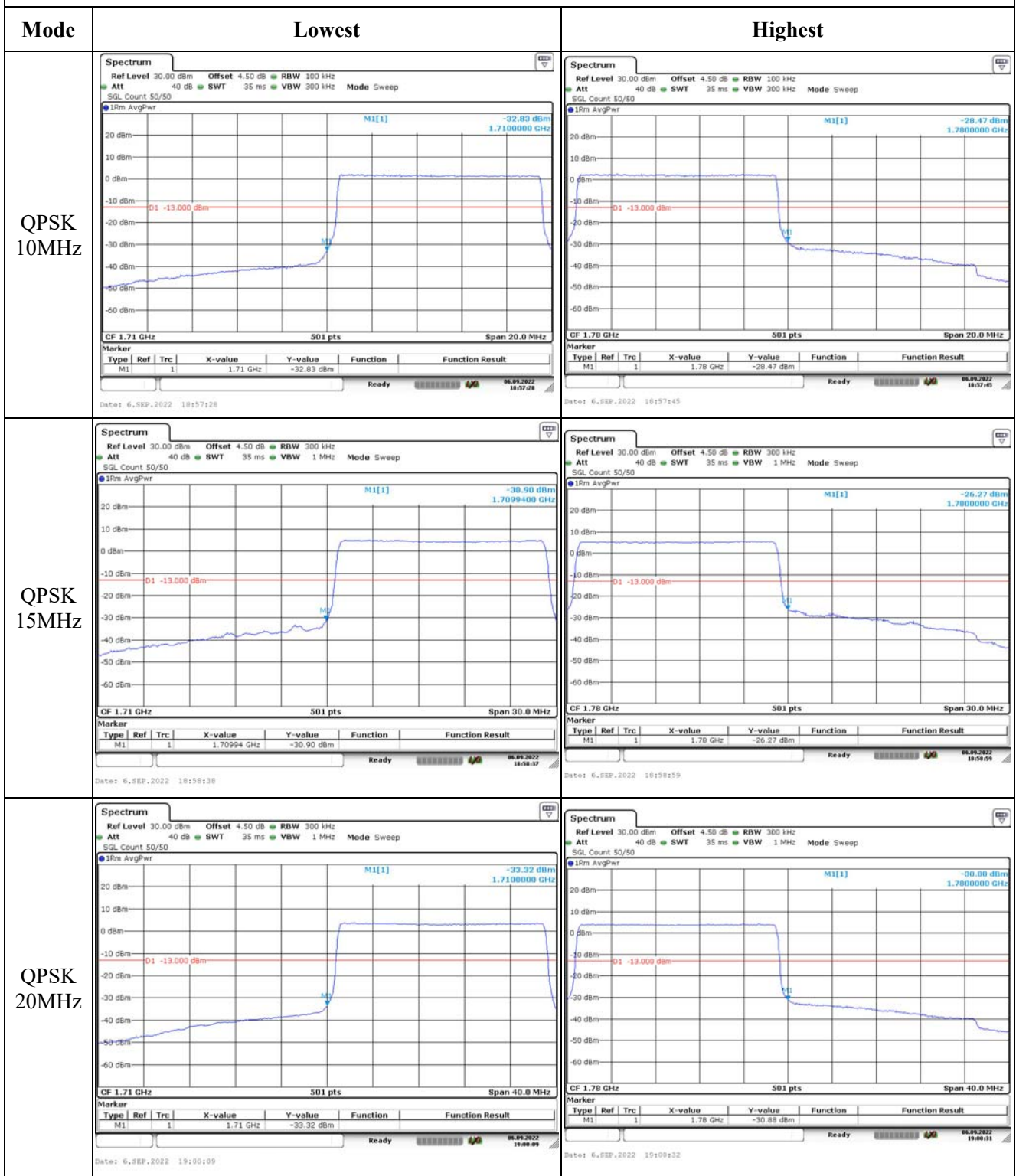




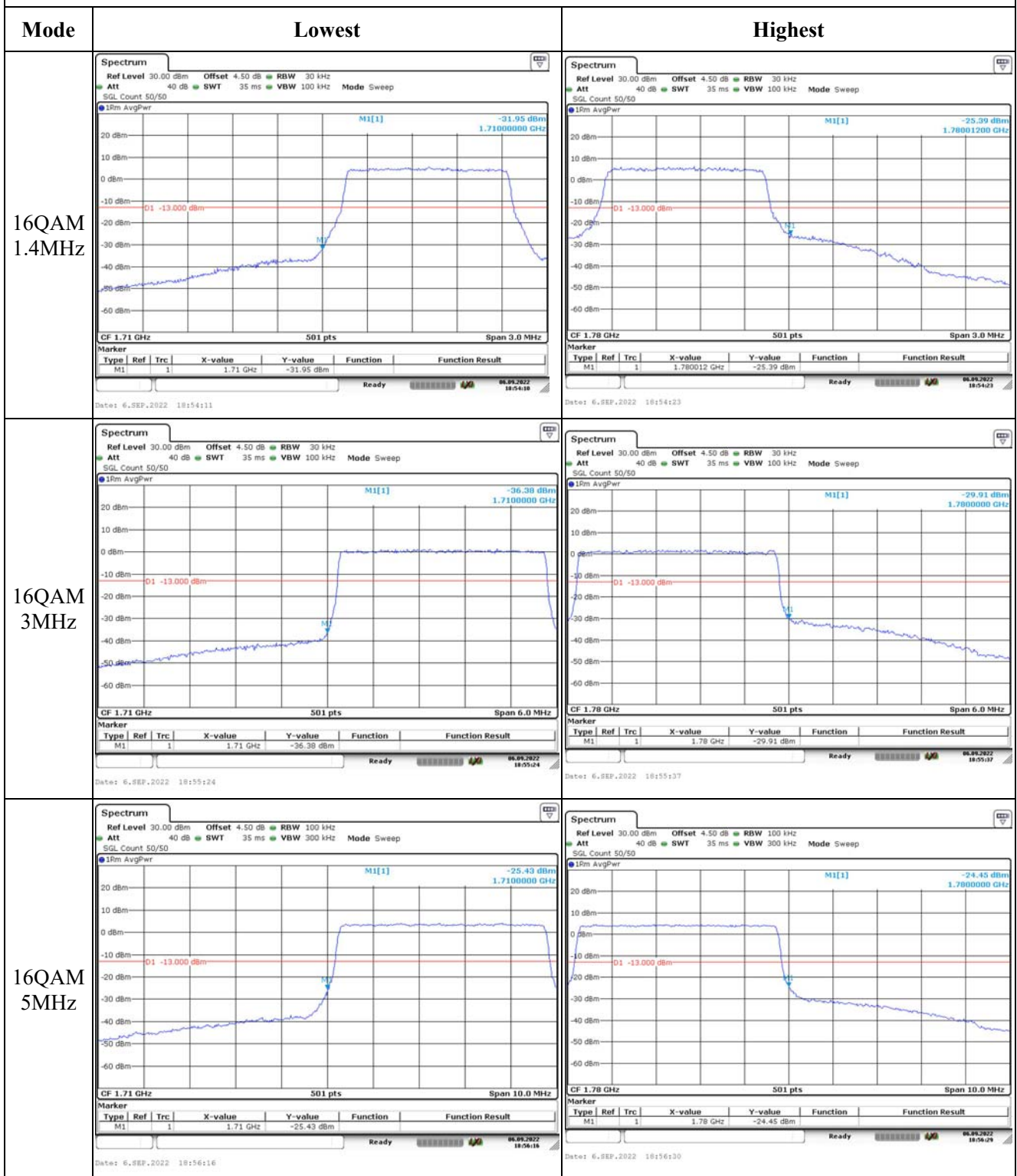
Out of band emission, Band Edge



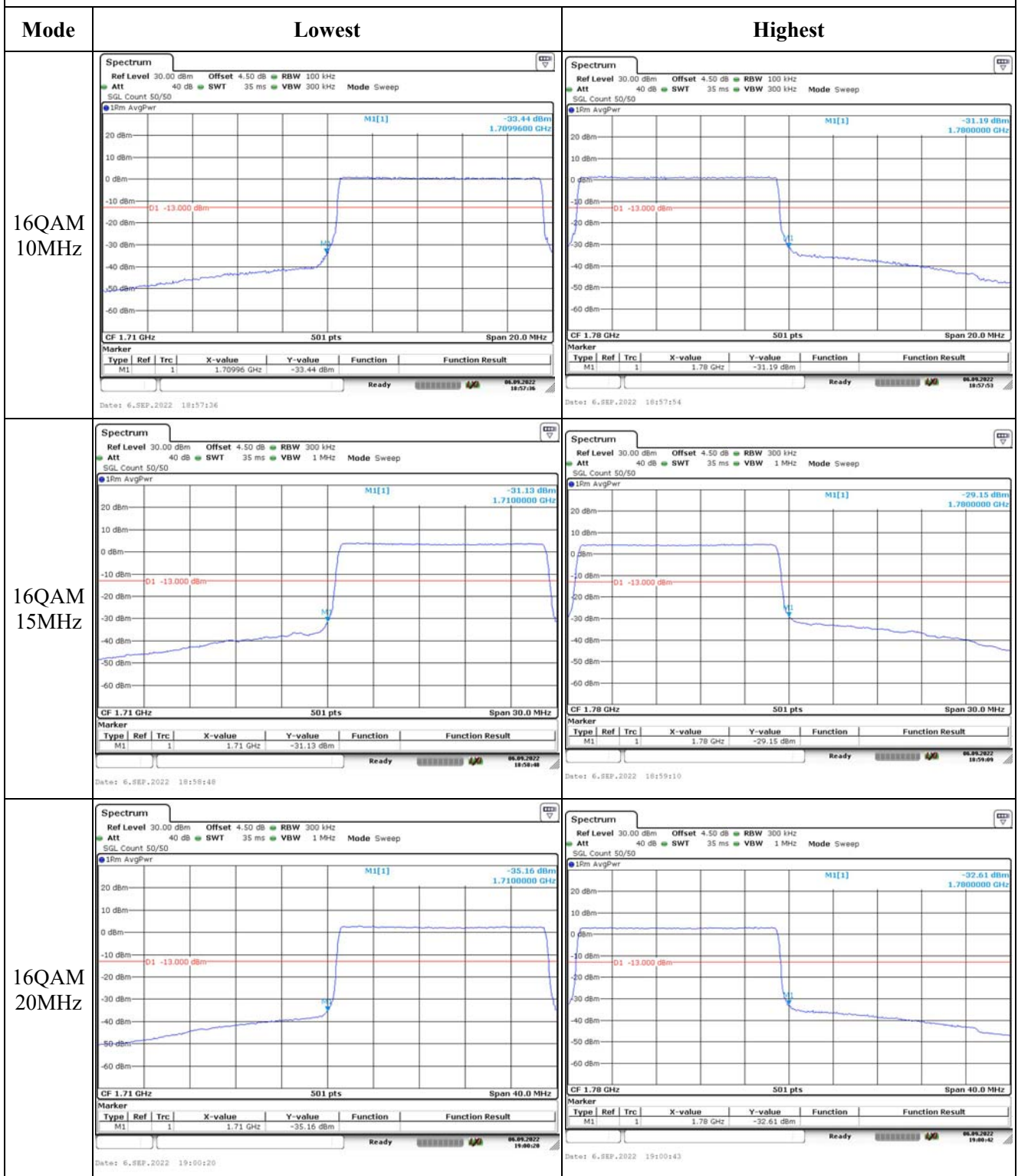
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge





**4.11 Radiated Spurious Emissions**

Serial Number:	CR22090006-RF-S1	Test Date:	2022-09-09~2022-09-13
Test Site:	966-2, 966-1	Test Mode:	Transmitting
Tester:	Carl Xue, Nick Tang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	26.7~27.4	Relative Humidity: (%)	49~53	ATM Pressure: (kPa)	100.2~100.4
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**Test Equipment List and Details:**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020-10-19	2023-10-18
R&S	EMI Test Receiver	ESR3	102724	2022-07-15	2023-07-14
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2022-07-17	2023-07-16
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2022-07-17	2023-07-16
Sonoma	Amplifier	310N	186165	2022-07-17	2023-07-16
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022-07-17	2023-07-16
Agilent	Signal Generator	E8247C	MY43321352	2022-04-01	2023-03-31
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020-10-13	2023-10-12
R&S	Spectrum Analyzer	FSV40	101591	2022-07-15	2023-07-14
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2022-08-07	2023-08-06
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2022-08-07	2023-08-06
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2021-11-10	2022-11-09
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021-10-18	2024-10-17
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021-02-05	2024-02-04
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021-02-05	2024-02-04
AH	Preamplifier	PAM-1840VH	190	2021-11-19	2022-11-18
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2022-08-07	2023-08-06
Mini Circuits	High Pass Filter	VHF-6010+	31119	2022-08-08	2023-08-07
Mini Circuits	High Pass Filter	VHF-3100+	31251	2022-08-08	2023-08-07

\* 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 Data:**

Please refer to the below table and plots.

Note: The device can be mounted in multiple orientations, test was performed with X,Y, Z Axis according to C63.26 figure 5, the worst orientation was photographed and it's data was recorded.

**Cellular Band (PART 22H)****30 MHz-10 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 850 Frequency:824.2MHz								
68.39	H	35.35	-68.45	-5.85	0.15	-74.45	-13.00	61.45
52.01	V	42.46	-59.73	-13.98	0.13	-73.84	-13.00	60.84
1648.40	H	63.63	-40.70	8.68	0.80	-32.82	-13.00	19.82
1648.40	V	58.52	-45.89	8.68	0.80	-38.01	-13.00	25.01
2472.60	H	48.63	-52.15	9.38	1.00	-43.77	-13.00	30.77
2472.60	V	45.85	-54.88	9.38	1.00	-46.50	-13.00	33.50
3296.80	H	37.50	-59.18	10.32	1.15	-50.01	-13.00	37.01
3296.80	V	36.26	-60.18	10.32	1.15	-51.01	-13.00	38.01
GSM 850 Frequency:836.6MHz								
66.26	H	35.04	-68.78	-6.98	0.15	-75.91	-13.00	62.91
44.58	V	43.51	-52.25	-20.35	0.12	-72.72	-13.00	59.72
1673.20	H	64.43	-39.88	8.71	0.85	-32.02	-13.00	19.02
1673.20	V	59.37	-45.04	8.71	0.85	-37.18	-13.00	24.18
2509.80	H	48.71	-51.90	9.42	1.01	-43.49	-13.00	30.49
2509.80	V	46.09	-54.53	9.42	1.01	-46.12	-13.00	33.12
3346.40	H	38.62	-58.55	10.34	1.16	-49.37	-13.00	36.37
3346.40	V	37.47	-59.56	10.34	1.16	-50.38	-13.00	37.38
GSM 850 Frequency:848.8MHz								
66.26	H	35.69	-68.13	-6.98	0.15	-75.26	-13.00	62.26
45.21	V	42.66	-53.85	-19.59	0.12	-73.56	-13.00	60.56
1697.60	H	64.61	-39.68	8.74	0.90	-31.84	-13.00	18.84
1697.60	V	59.61	-44.81	8.74	0.90	-36.97	-13.00	23.97
2546.40	H	47.95	-52.38	9.47	1.01	-43.92	-13.00	30.92
2546.40	V	45.06	-55.22	9.47	1.01	-46.76	-13.00	33.76
3395.20	H	39.17	-58.52	10.36	1.19	-49.35	-13.00	36.35
3395.20	V	38.12	-59.54	10.36	1.19	-50.37	-13.00	37.37

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 5 Frequency:826.4 MHz								
75.06	H	33.41	-73.41	-2.47	0.16	-76.04	-13.00	63.04
789.24	V	47.35	-51.66	0.00	0.60	-52.26	-13.00	39.26
1652.80	H	40.71	-63.62	8.68	0.81	-55.75	-13.00	42.75
1652.80	V	39.09	-65.32	8.68	0.81	-57.45	-13.00	44.45
2479.20	H	38.54	-62.22	9.39	1.01	-53.84	-13.00	40.84
2479.20	V	38.69	-62.04	9.39	1.01	-53.66	-13.00	40.66
3305.60	H	36.98	-59.75	10.32	1.15	-50.58	-13.00	37.58
3305.60	V	36.79	-59.71	10.32	1.15	-50.54	-13.00	37.54
WCDMA Band 5 Frequency:836.6MHz								
75.06	H	33.05	-73.77	-2.47	0.16	-76.40	-13.00	63.40
790.20	V	46.17	-52.82	0.00	0.61	-53.43	-13.00	40.43
1673.20	H	41.55	-62.76	8.71	0.85	-54.90	-13.00	41.90
1673.20	V	38.98	-65.43	8.71	0.85	-57.57	-13.00	44.57
2509.80	H	38.80	-61.81	9.42	1.01	-53.40	-13.00	40.40
2509.80	V	39.00	-61.62	9.42	1.01	-53.21	-13.00	40.21
3346.40	H	38.14	-59.03	10.34	1.16	-49.85	-13.00	36.85
3346.40	V	37.99	-59.04	10.34	1.16	-49.86	-13.00	36.86
WCDMA Band 5 Frequency:846.6MHz								
66.34	H	33.38	-70.44	-6.94	0.15	-77.53	-13.00	64.53
799.90	V	47.43	-51.31	0.00	0.58	-51.89	-13.00	38.89
1693.20	H	41.87	-62.43	8.73	0.89	-54.59	-13.00	41.59
1693.20	V	39.27	-65.15	8.73	0.89	-57.31	-13.00	44.31
2539.80	H	38.29	-62.09	9.46	1.01	-53.64	-13.00	40.64
2539.80	V	38.35	-61.99	9.46	1.01	-53.54	-13.00	40.54
3386.40	H	38.76	-58.83	10.35	1.18	-49.66	-13.00	36.66
3386.40	V	38.66	-58.88	10.35	1.18	-49.71	-13.00	36.71

**PCS Band (PART 24E)****30 MHz-20 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GSM 1900 Frequency:1850.2MHz								
68.15	H	34.31	-69.49	-5.98	0.15	-75.62	-13.00	62.62
45.21	V	43.98	-52.53	-19.59	0.12	-72.24	-13.00	59.24
3700.40	H	48.54	-48.78	10.60	1.25	-39.43	-13.00	26.43
3700.40	V	46.70	-50.60	10.60	1.25	-41.25	-13.00	28.25
5550.60	H	42.04	-51.22	11.44	1.49	-41.27	-13.00	28.27
5550.60	V	41.51	-51.59	11.44	1.49	-41.64	-13.00	28.64
GSM 1900 Frequency:1880MHz								
66.26	H	35.46	-68.36	-6.98	0.15	-75.49	-13.00	62.49
44.58	V	45.05	-50.71	-20.35	0.12	-71.18	-13.00	58.18
3760.00	H	48.37	-48.04	10.66	1.24	-38.62	-13.00	25.62
3760.00	V	46.52	-49.77	10.66	1.24	-40.35	-13.00	27.35
5640.00	H	43.01	-50.44	11.33	1.54	-40.65	-13.00	27.65
5640.00	V	42.49	-50.84	11.33	1.54	-41.05	-13.00	28.05
GSM 1900 Frequency:1909.8MHz								
66.26	H	36.53	-67.29	-6.98	0.15	-74.42	-13.00	61.42
45.05	V	44.91	-51.44	-19.75	0.12	-71.31	-13.00	58.31
3819.60	H	47.91	-47.95	10.72	1.29	-38.52	-13.00	25.52
3819.60	V	46.11	-49.61	10.72	1.29	-40.18	-13.00	27.18
5729.40	H	42.74	-50.74	11.22	1.59	-41.11	-13.00	28.11
5729.40	V	42.14	-51.22	11.22	1.59	-41.59	-13.00	28.59

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band II, Frequency:1852.4 MHz								
74.58	H	33.44	-73.09	-2.71	0.16	-75.96	-13.00	62.96
44.05	V	44.05	-51.02	-21.05	0.12	-72.19	-13.00	59.19
3704.80	H	40.51	-56.75	10.60	1.25	-47.40	-13.00	34.40
3704.80	V	38.40	-58.83	10.60	1.25	-49.48	-13.00	36.48
5557.20	H	38.77	-54.51	11.43	1.49	-44.57	-13.00	31.57
5557.20	V	38.66	-54.47	11.43	1.49	-44.53	-13.00	31.53
WCDMA Band II, Frequency:1880 MHz								
768.89	H	33.21	-69.83	0.00	0.55	-70.38	-13.00	57.38
44.05	V	43.31	-51.76	-21.05	0.12	-72.93	-13.00	59.93
3760.00	H	40.19	-56.22	10.66	1.24	-46.80	-13.00	33.80
3760.00	V	39.02	-57.27	10.66	1.24	-47.85	-13.00	34.85
5640.00	H	39.67	-53.78	11.33	1.54	-43.99	-13.00	30.99
5640.00	V	39.79	-53.54	11.33	1.54	-43.75	-13.00	30.75
WCDMA Band II, Frequency:1907.6MHz								
66.26	H	35.83	-67.99	-6.98	0.15	-75.12	-13.00	62.12
44.58	V	44.16	-51.60	-20.35	0.12	-72.07	-13.00	59.07
3815.20	H	40.20	-55.65	10.72	1.29	-46.22	-13.00	33.22
3815.20	V	37.73	-57.96	10.72	1.29	-48.53	-13.00	35.53
5722.80	H	39.26	-54.23	11.23	1.58	-44.58	-13.00	31.58
5722.80	V	38.94	-54.41	11.23	1.58	-44.76	-13.00	31.76

## AWS Band(Part 27)

## 30 MHz-20 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band IV, Frequency:1712.4 MHz								
66.34	H	33.40	-70.42	-6.94	0.15	-77.51	-13.00	64.51
44.05	V	43.75	-51.32	-21.05	0.12	-72.49	-13.00	59.49
3424.80	H	40.96	-56.81	10.37	1.17	-47.61	-13.00	34.61
3424.80	V	38.68	-59.06	10.37	1.17	-49.86	-13.00	36.86
5137.20	H	38.88	-54.74	11.28	1.46	-44.92	-13.00	31.92
5137.20	V	39.05	-54.45	11.28	1.46	-44.63	-13.00	31.63
2130.50	H	49.89	-52.13	9.18	0.92	-43.87	-13.00	30.87
2130.23	V	44.17	-57.84	9.18	0.92	-49.58	-13.00	36.58
WCDMA Band IV, Frequency:1732.6 MHz								
66.34	H	33.36	-70.46	-6.94	0.15	-77.55	-13.00	64.55
44.05	V	41.42	-53.65	-21.05	0.12	-74.82	-13.00	61.82
3465.20	H	40.77	-57.04	10.39	1.15	-47.80	-13.00	34.80
3465.20	V	38.62	-59.15	10.39	1.15	-49.91	-13.00	36.91
5197.80	H	39.62	-54.51	11.32	1.44	-44.63	-13.00	31.63
5197.80	V	39.61	-54.37	11.32	1.44	-44.49	-13.00	31.49
2130.50	H	49.76	-52.26	9.18	0.92	-44.00	-13.00	31.00
2130.23	V	44.05	-57.96	9.18	0.92	-49.70	-13.00	36.70
WCDMA Band IV, Frequency:1752.6MHz								
66.34	H	33.26	-70.56	-6.94	0.15	-77.65	-13.00	64.65
44.05	V	42.13	-52.94	-21.05	0.12	-74.11	-13.00	61.11
3505.20	H	40.90	-56.93	10.41	1.18	-47.70	-13.00	34.70
3505.20	V	38.74	-59.03	10.41	1.18	-49.80	-13.00	36.80
5257.80	H	38.64	-55.09	11.35	1.47	-45.21	-13.00	32.21
5257.80	V	38.56	-54.95	11.35	1.47	-45.07	-13.00	32.07
2130.50	H	49.73	-52.29	9.18	0.92	-44.03	-13.00	31.03
2130.23	V	44.13	-57.88	9.18	0.92	-49.62	-13.00	36.62

**LTE Bands:**  
(The Worst modulation and bandwidth was below)

**LTE Band 2 (30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1850.7 MHz								
562.48	H	33.43	-72.15	0.00	0.47	-72.62	-13.00	59.62
65.37	V	43.36	-60.82	-7.45	0.14	-68.41	-13.00	55.41
3701.40	H	41.52	-55.79	10.60	1.25	-46.44	-13.00	33.44
3701.40	V	40.42	-56.87	10.60	1.25	-47.52	-13.00	34.52
5552.10	H	39.10	-54.17	11.44	1.49	-44.22	-13.00	31.22
5552.10	V	39.38	-53.72	11.44	1.49	-43.77	-13.00	30.77
QPSK, Frequency: 1880 MHz								
519.85	H	32.71	-73.74	0.00	0.41	-74.15	-13.00	61.15
45.02	V	41.75	-54.57	-19.78	0.12	-74.47	-13.00	61.47
3760.00	H	41.27	-55.14	10.66	1.24	-45.72	-13.00	32.72
3760.00	V	40.17	-56.12	10.66	1.24	-46.70	-13.00	33.70
5640.00	H	39.94	-53.51	11.33	1.54	-43.72	-13.00	30.72
5640.00	V	40.24	-53.09	11.33	1.54	-43.30	-13.00	30.30
QPSK, Frequency: 1909.3 MHz								
64.58	H	33.74	-70.09	-7.87	0.14	-78.10	-13.00	65.10
44.38	V	42.33	-53.17	-20.62	0.12	-73.91	-13.00	60.91
3818.60	H	41.50	-54.36	10.72	1.29	-44.93	-13.00	31.93
3818.60	V	40.43	-55.28	10.72	1.29	-45.85	-13.00	32.85
5727.90	H	40.36	-53.12	11.23	1.59	-43.48	-13.00	30.48
5727.90	V	40.58	-52.78	11.23	1.59	-43.14	-13.00	30.14

**LTE Band 4 (30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
928.78	H	33.31	-65.12	0.00	0.63	-65.75	-13.00	52.75
44.05	V	43.13	-51.94	-21.05	0.12	-73.11	-13.00	60.11
3424.80	H	40.96	-56.81	10.37	1.17	-47.61	-13.00	34.61
3424.80	V	38.68	-59.06	10.37	1.17	-49.86	-13.00	36.86
5137.20	H	38.88	-54.74	11.28	1.46	-44.92	-13.00	31.92
5137.20	V	39.05	-54.45	11.28	1.46	-44.63	-13.00	31.63
2130.50	H	49.89	-52.13	9.18	0.92	-43.87	-13.00	30.87
2130.23	V	44.17	-57.84	9.18	0.92	-49.58	-13.00	36.58
QPSK, Frequency: 1732.5 MHz								
808.81	H	33.53	-68.53	0.00	0.56	-69.09	-13.00	56.09
44.05	V	42.31	-52.76	-21.05	0.12	-73.93	-13.00	60.93
3465.20	H	40.77	-57.04	10.39	1.15	-47.80	-13.00	34.80
3465.20	V	38.62	-59.15	10.39	1.15	-49.91	-13.00	36.91
5197.80	H	39.62	-54.51	11.32	1.44	-44.63	-13.00	31.63
5197.80	V	39.61	-54.37	11.32	1.44	-44.49	-13.00	31.49
2130.50	H	49.76	-52.26	9.18	0.92	-44.00	-13.00	31.00
2130.23	V	44.05	-57.96	9.18	0.92	-49.70	-13.00	36.70
QPSK, Frequency: 1752.6 MHz								
768.13	H	33.46	-69.60	0.00	0.54	-70.14	-13.00	57.14
44.05	V	42.85	-52.22	-21.05	0.12	-73.39	-13.00	60.39
3505.20	H	40.90	-56.93	10.41	1.18	-47.70	-13.00	34.70
3505.20	V	38.74	-59.03	10.41	1.18	-49.80	-13.00	36.80
5257.80	H	38.64	-55.09	11.35	1.47	-45.21	-13.00	32.21
5257.80	V	38.56	-54.95	11.35	1.47	-45.07	-13.00	32.07
2130.50	H	49.73	-52.29	9.18	0.92	-44.03	-13.00	31.03
2130.23	V	44.13	-57.88	9.18	0.92	-49.62	-13.00	36.62



**LTE Band 5(30MHz-10GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 824.7 MHz								
66.34	H	34.25	-69.57	-6.94	0.15	-76.66	-13.00	63.66
44.58	V	42.16	-53.60	-20.35	0.12	-74.07	-13.00	61.07
1649.40	H	41.45	-62.88	8.68	0.80	-55.00	-13.00	42.00
1649.40	V	39.88	-64.53	8.68	0.80	-56.65	-13.00	43.65
2474.10	H	38.57	-62.21	9.38	1.00	-53.83	-13.00	40.83
2474.10	V	38.26	-62.47	9.38	1.00	-54.09	-13.00	41.09
3298.80	H	37.07	-59.61	10.32	1.15	-50.44	-13.00	37.44
3298.80	V	36.59	-59.85	10.32	1.15	-50.68	-13.00	37.68
QPSK, Frequency: 836.5 MHz								
66.58	H	35.11	-68.70	-6.81	0.15	-75.66	-13.00	62.66
45.99	V	44.38	-52.90	-18.83	0.12	-71.85	-13.00	58.85
1673.00	H	42.06	-62.25	8.71	0.85	-54.39	-13.00	41.39
1673.00	V	41.06	-63.35	8.71	0.85	-55.49	-13.00	42.49
2509.50	H	37.85	-62.76	9.42	1.01	-54.35	-13.00	41.35
2509.50	V	38.42	-62.20	9.42	1.01	-53.79	-13.00	40.79
3346.00	H	38.33	-58.83	10.34	1.16	-49.65	-13.00	36.65
3346.00	V	37.46	-59.56	10.34	1.16	-50.38	-13.00	37.38
QPSK, Frequency: 848.3 MHz								
74.08	H	33.79	-72.44	-2.96	0.16	-75.56	-13.00	62.56
45.99	V	42.72	-54.56	-18.83	0.12	-73.51	-13.00	60.51
1696.60	H	42.64	-61.65	8.74	0.89	-53.80	-13.00	40.80
1696.60	V	41.15	-63.27	8.74	0.89	-55.42	-13.00	42.42
2544.90	H	38.17	-62.17	9.47	1.01	-53.71	-13.00	40.71
2544.90	V	37.80	-62.50	9.47	1.01	-54.04	-13.00	41.04
3393.20	H	39.00	-58.67	10.36	1.19	-49.50	-13.00	36.50
3393.20	V	38.63	-59.00	10.36	1.19	-49.83	-13.00	36.83

**LTE Band 7 (30MHz-26.5GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 2502.5 MHz								
75.06	H	33.84	-72.98	-2.47	0.16	-75.61	-25.00	50.61
44.05	V	43.64	-51.43	-21.05	0.12	-72.60	-25.00	47.60
5005.00	H	42.02	-50.94	11.20	1.47	-41.21	-25.00	16.21
5005.00	V	40.33	-52.49	11.20	1.47	-42.76	-25.00	17.76
7507.50	H	40.40	-49.39	10.90	1.95	-40.44	-25.00	15.44
7507.50	V	40.60	-49.69	10.90	1.95	-40.74	-25.00	15.74
QPSK, Frequency:2535 MHz								
184.56	H	33.72	-78.86	0.00	0.25	-79.11	-25.00	54.11
43.08	V	41.44	-52.37	-22.33	0.12	-74.82	-25.00	49.82
5070.00	H	42.98	-50.21	11.24	1.47	-40.44	-25.00	15.44
5070.00	V	41.28	-51.81	11.24	1.47	-42.04	-25.00	17.04
7605.00	H	39.62	-49.85	10.88	2.01	-40.98	-25.00	15.98
7605.00	V	40.12	-50.07	10.88	2.01	-41.20	-25.00	16.20
QPSK, Frequency: 2567.5 MHz								
66.40	H	36.36	-67.46	-6.91	0.15	-74.52	-25.00	49.52
65.37	V	41.89	-62.29	-7.45	0.14	-69.88	-25.00	44.88
5135.00	H	44.21	-49.39	11.28	1.47	-39.58	-25.00	14.58
5135.00	V	42.39	-51.10	11.28	1.47	-41.29	-25.00	16.29
7702.50	H	39.67	-49.85	10.86	1.97	-40.96	-25.00	15.96
7702.50	V	40.19	-49.99	10.86	1.97	-41.10	-25.00	16.10

**LTE Band 12 (30MHz-10GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 699.7 MHz								
75.06	H	33.93	-72.89	-2.47	0.16	-75.52	-13.00	62.52
44.05	V	42.85	-52.22	-21.05	0.12	-73.39	-13.00	60.39
1399.40	H	40.36	-63.34	8.22	0.71	-55.83	-13.00	42.83
1399.40	V	38.76	-64.99	8.22	0.71	-57.48	-13.00	44.48
2099.10	H	38.28	-63.60	9.16	0.91	-55.35	-13.00	42.35
2099.10	V	38.02	-63.81	9.16	0.91	-55.56	-13.00	42.56
2798.80	H	37.77	-62.16	9.88	1.04	-53.32	-13.00	40.32
2798.80	V	37.21	-62.59	9.88	1.04	-53.75	-13.00	40.75
QPSK, Frequency:707.5 MHz								
66.34	H	34.30	-69.52	-6.94	0.15	-76.61	-13.00	63.61
66.40	V	41.77	-62.06	-6.91	0.15	-69.12	-13.00	56.12
1415.00	H	40.34	-63.33	8.26	0.72	-55.79	-13.00	42.79
1415.00	V	39.33	-64.39	8.26	0.72	-56.85	-13.00	43.85
2122.50	H	37.85	-64.14	9.17	0.92	-55.89	-13.00	42.89
2122.50	V	38.44	-63.53	9.17	0.92	-55.28	-13.00	42.28
2830.00	H	38.94	-60.86	9.93	1.06	-51.99	-13.00	38.99
2830.00	V	37.90	-61.83	9.93	1.06	-52.96	-13.00	39.96
QPSK, Frequency: 715.3 MHz								
66.34	H	35.20	-68.62	-6.94	0.15	-75.71	-13.00	62.71
44.05	V	42.48	-52.59	-21.05	0.12	-73.76	-13.00	60.76
1430.60	H	39.98	-63.65	8.31	0.73	-56.07	-13.00	43.07
1430.60	V	38.58	-65.11	8.31	0.73	-57.53	-13.00	44.53
2145.90	H	38.56	-63.54	9.19	0.93	-55.28	-13.00	42.28
2145.90	V	38.42	-63.69	9.19	0.93	-55.43	-13.00	42.43
2861.20	H	39.18	-60.47	9.98	1.07	-51.56	-13.00	38.56
2861.20	V	38.70	-60.97	9.98	1.07	-52.06	-13.00	39.06

**LTE Band 17:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 706.5 MHz								
65.37	H	33.36	-70.47	-7.45	0.14	-78.06	-13.00	65.06
30.48	V	44.05	-36.35	-26.08	0.10	-62.53	-13.00	49.53
1413.00	H	40.13	-63.54	8.26	0.72	-56.00	-13.00	43.00
1413.00	V	37.58	-66.14	8.26	0.72	-58.60	-13.00	45.60
2119.50	H	39.10	-62.87	9.17	0.92	-54.62	-13.00	41.62
2119.50	V	39.32	-62.63	9.17	0.92	-54.38	-13.00	41.38
2826.00	H	38.93	-60.88	9.92	1.06	-52.02	-13.00	39.02
2826.00	V	38.67	-61.07	9.92	1.06	-52.21	-13.00	39.21
QPSK, Frequency: 710 MHz								
74.06	H	33.44	-72.78	-2.97	0.16	-75.91	-13.00	62.91
44.05	V	43.18	-51.89	-21.05	0.12	-73.06	-13.00	60.06
1420.00	H	39.86	-63.80	8.28	0.73	-56.25	-13.00	43.25
1420.00	V	37.29	-66.42	8.28	0.73	-58.87	-13.00	45.87
2130.00	H	38.95	-63.07	9.18	0.92	-54.81	-13.00	41.81
2130.00	V	39.19	-62.82	9.18	0.92	-54.56	-13.00	41.56
2840.00	H	39.00	-60.75	9.94	1.06	-51.87	-13.00	38.87
2840.00	V	38.79	-60.92	9.94	1.06	-52.04	-13.00	39.04
QPSK, Frequency: 713.5 MHz								
64.58	H	32.35	-71.48	-7.87	0.14	-79.49	-13.00	66.49
44.05	V	43.52	-51.55	-21.05	0.12	-72.72	-13.00	59.72
1427.00	H	39.40	-64.24	8.30	0.73	-56.67	-13.00	43.67
1427.00	V	37.87	-65.82	8.30	0.73	-58.25	-13.00	45.25
2140.50	H	38.64	-63.43	9.18	0.93	-55.18	-13.00	42.18
2140.50	V	38.91	-63.17	9.18	0.93	-54.92	-13.00	41.92
2854.00	H	38.97	-60.72	9.97	1.07	-51.82	-13.00	38.82
2854.00	V	38.76	-60.92	9.97	1.07	-52.02	-13.00	39.02

**LTE Band 66(30MHz-20GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
727.22	H	33.12	-70.87	0.00	0.52	-71.39	-13.00	58.39
44.05	V	41.89	-53.18	-21.05	0.12	-74.35	-13.00	61.35
3425.00	H	44.55	-53.22	10.37	1.17	-44.02	-13.00	31.02
3425.00	V	42.66	-55.08	10.37	1.17	-45.88	-13.00	32.88
5137.50	H	38.20	-55.42	11.28	1.46	-45.60	-13.00	32.60
5137.50	V	38.34	-55.17	11.28	1.46	-45.35	-13.00	32.35
QPSK, Frequency:1745 MHz								
609.00	H	33.17	-71.62	0.00	0.48	-72.10	-13.00	59.10
43.08	V	41.43	-52.38	-22.33	0.12	-74.83	-13.00	61.83
3490.00	H	44.51	-53.33	10.40	1.17	-44.10	-13.00	31.10
3490.00	V	42.65	-55.13	10.40	1.17	-45.90	-13.00	32.90
5235.00	H	38.36	-55.54	11.34	1.46	-45.66	-13.00	32.66
5235.00	V	38.27	-55.44	11.34	1.46	-45.56	-13.00	32.56
QPSK, Frequency: 1779.3 MHz								
64.58	H	33.67	-70.16	-7.87	0.14	-78.17	-13.00	65.17
44.05	V	42.03	-53.04	-21.05	0.12	-74.21	-13.00	61.21
3555.00	H	44.65	-53.04	10.46	1.22	-43.80	-13.00	30.80
3555.00	V	42.76	-54.82	10.46	1.22	-45.58	-13.00	32.58
5332.50	H	37.87	-55.60	11.40	1.47	-45.67	-13.00	32.67
5332.50	V	37.87	-55.44	11.40	1.47	-45.51	-13.00	32.51

## Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

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