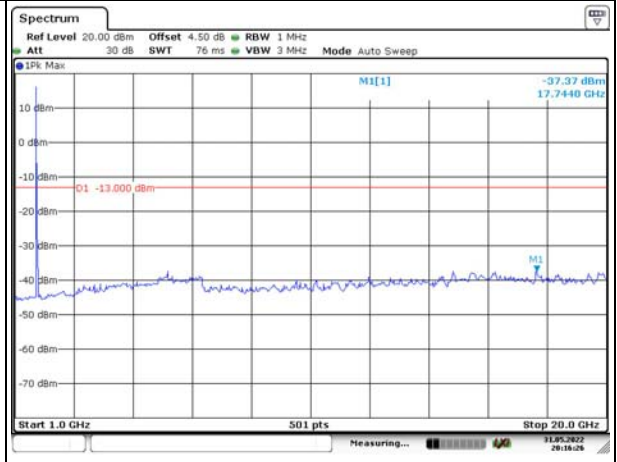
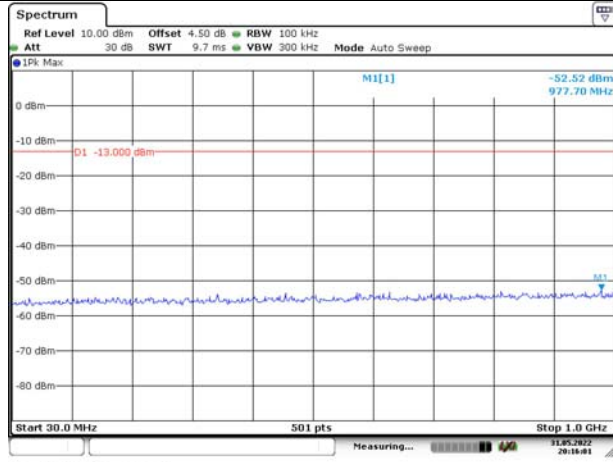


### Spurious Emissions at Antenna Terminal

Channel

5MHz Bandwidth QPSK

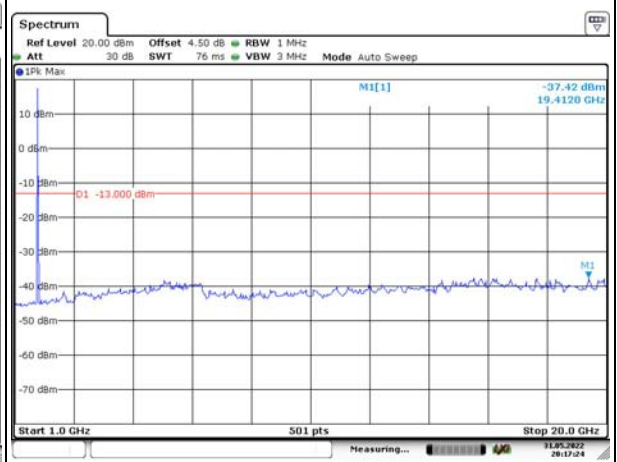
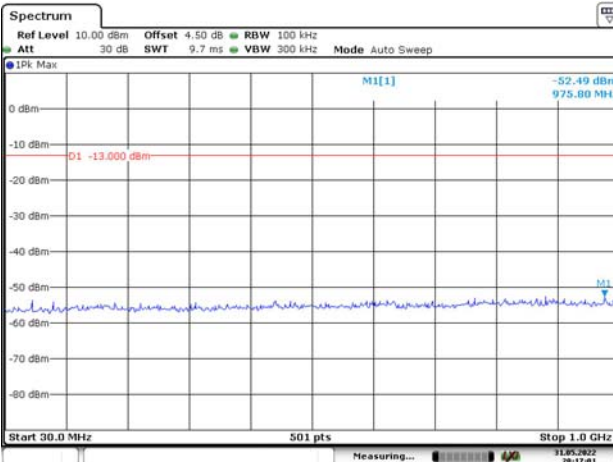
Lowest



Date: 31.MAY.2022 20:16:01

Date: 31.MAY.2022 20:16:26

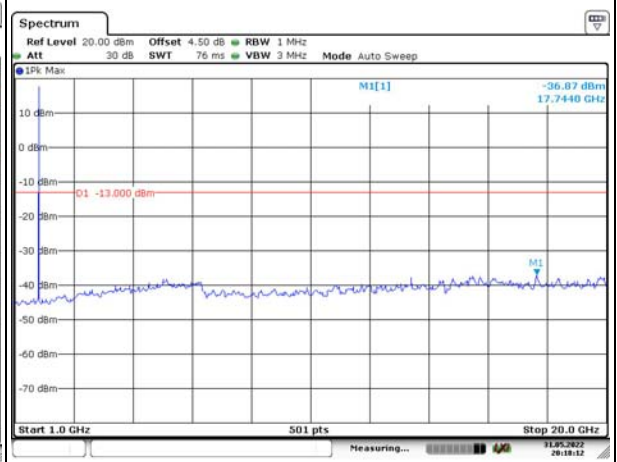
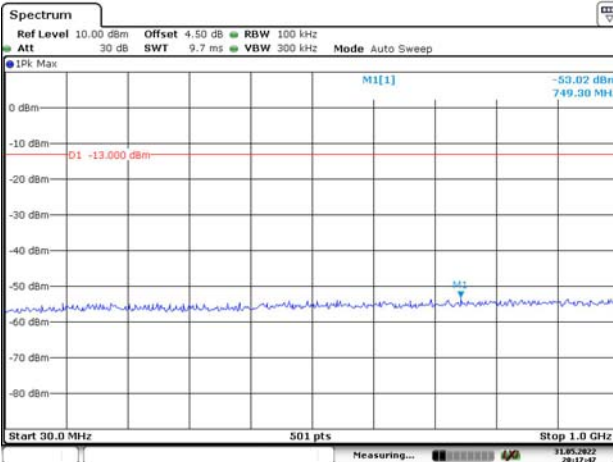
Middle



Date: 31.MAY.2022 20:17:02

Date: 31.MAY.2022 20:17:24

Highest



Date: 31.MAY.2022 20:17:47

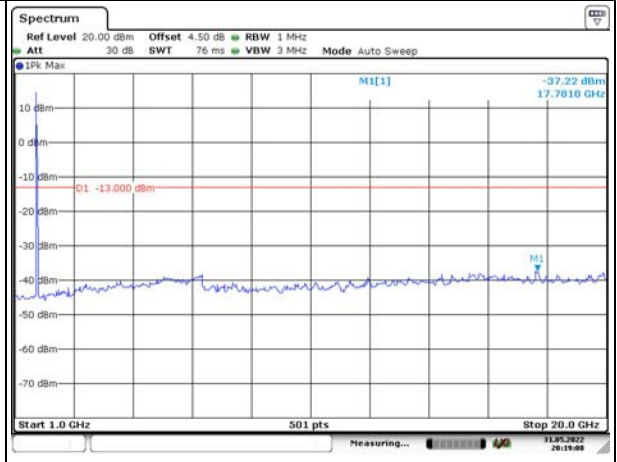
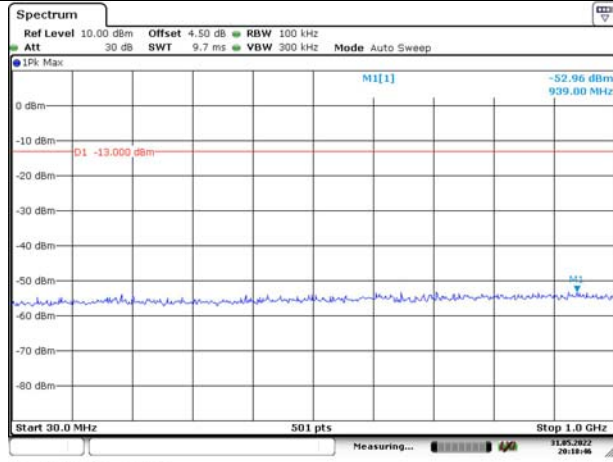
Date: 31.MAY.2022 20:18:13

### Spurious Emissions at Antenna Terminal

Channel

10MHz Bandwidth QPSK

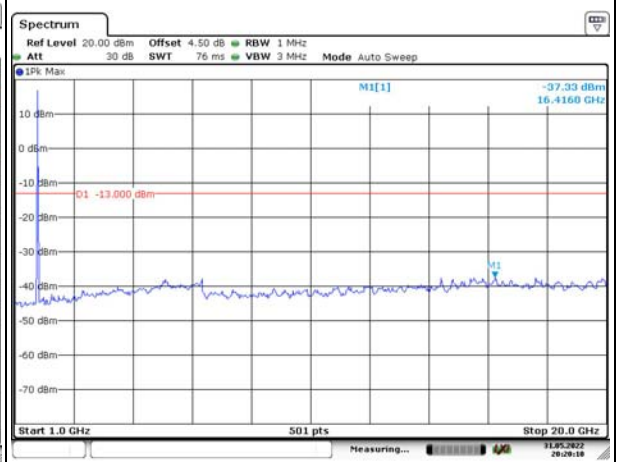
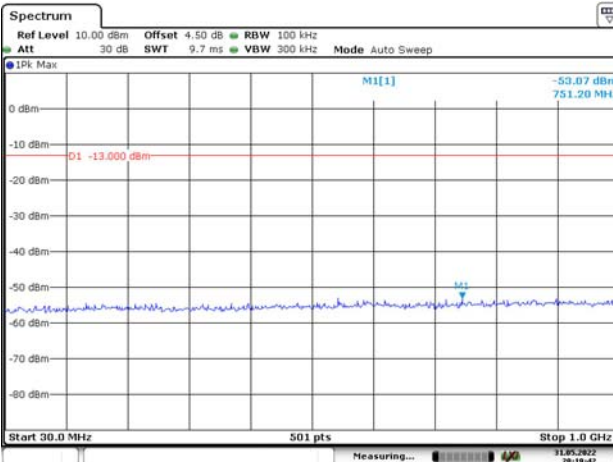
Lowest



Date: 31.MAY.2022 20:19:46

Date: 31.MAY.2022 20:19:09

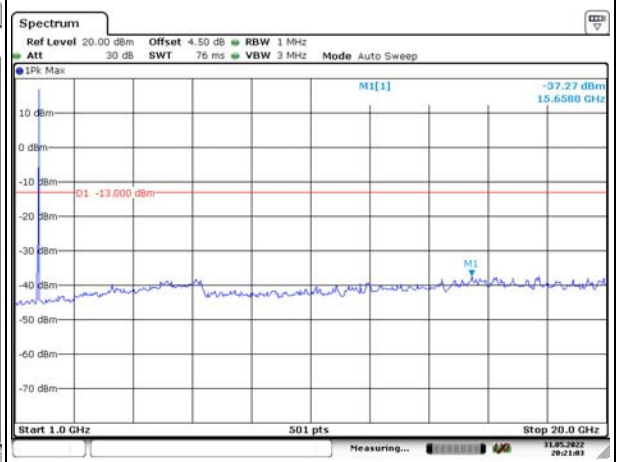
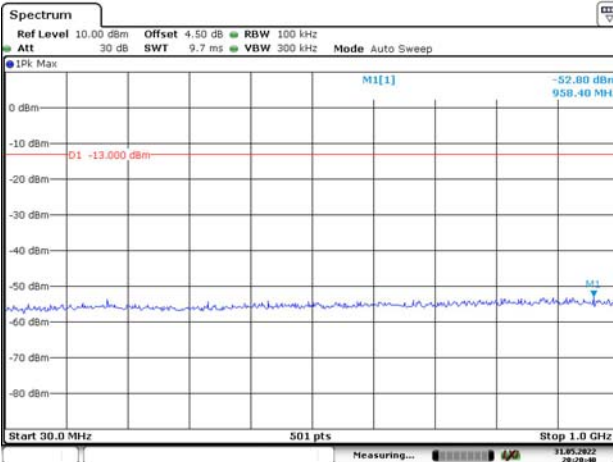
Middle



Date: 31.MAY.2022 20:19:42

Date: 31.MAY.2022 20:20:11

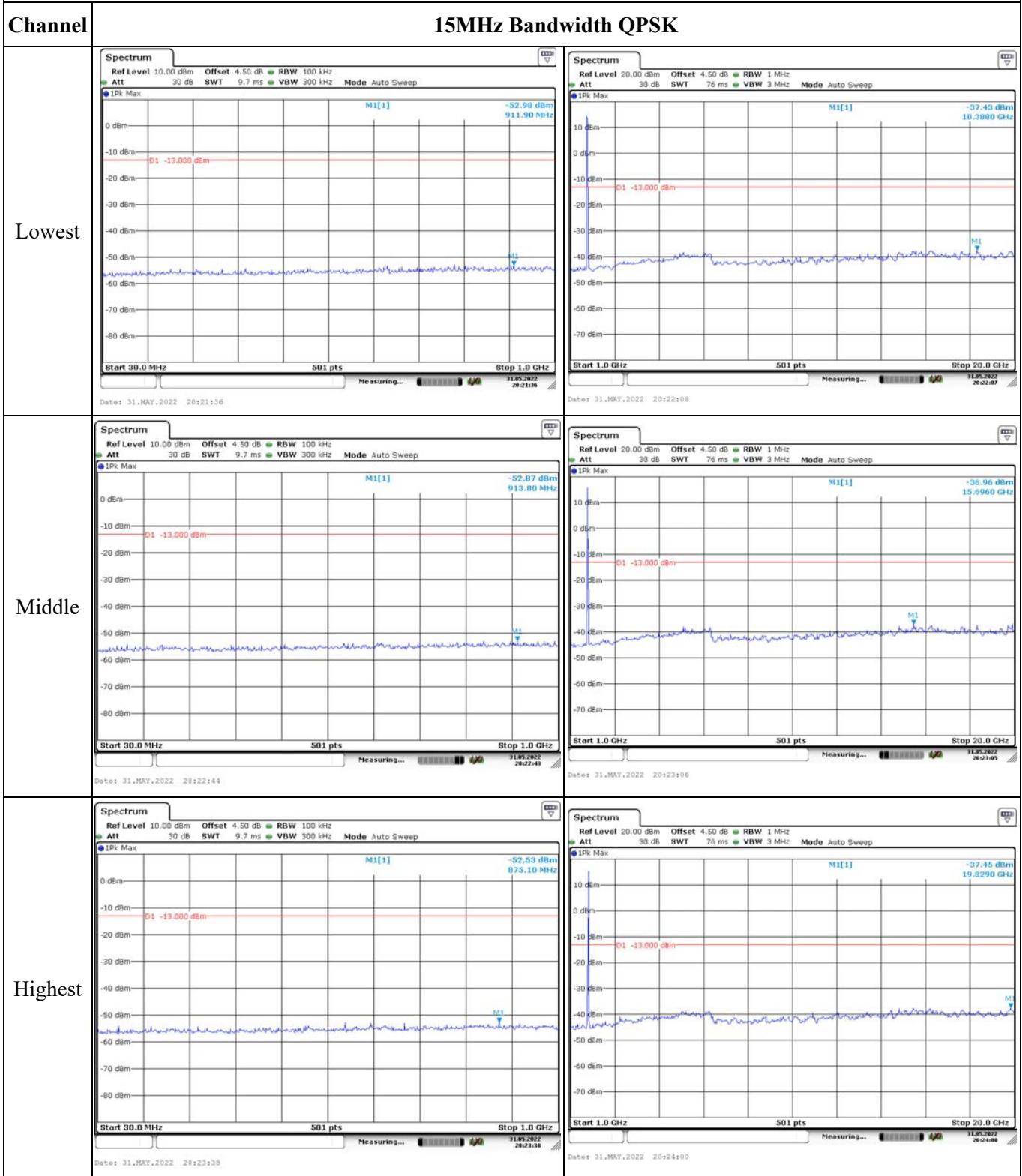
Highest



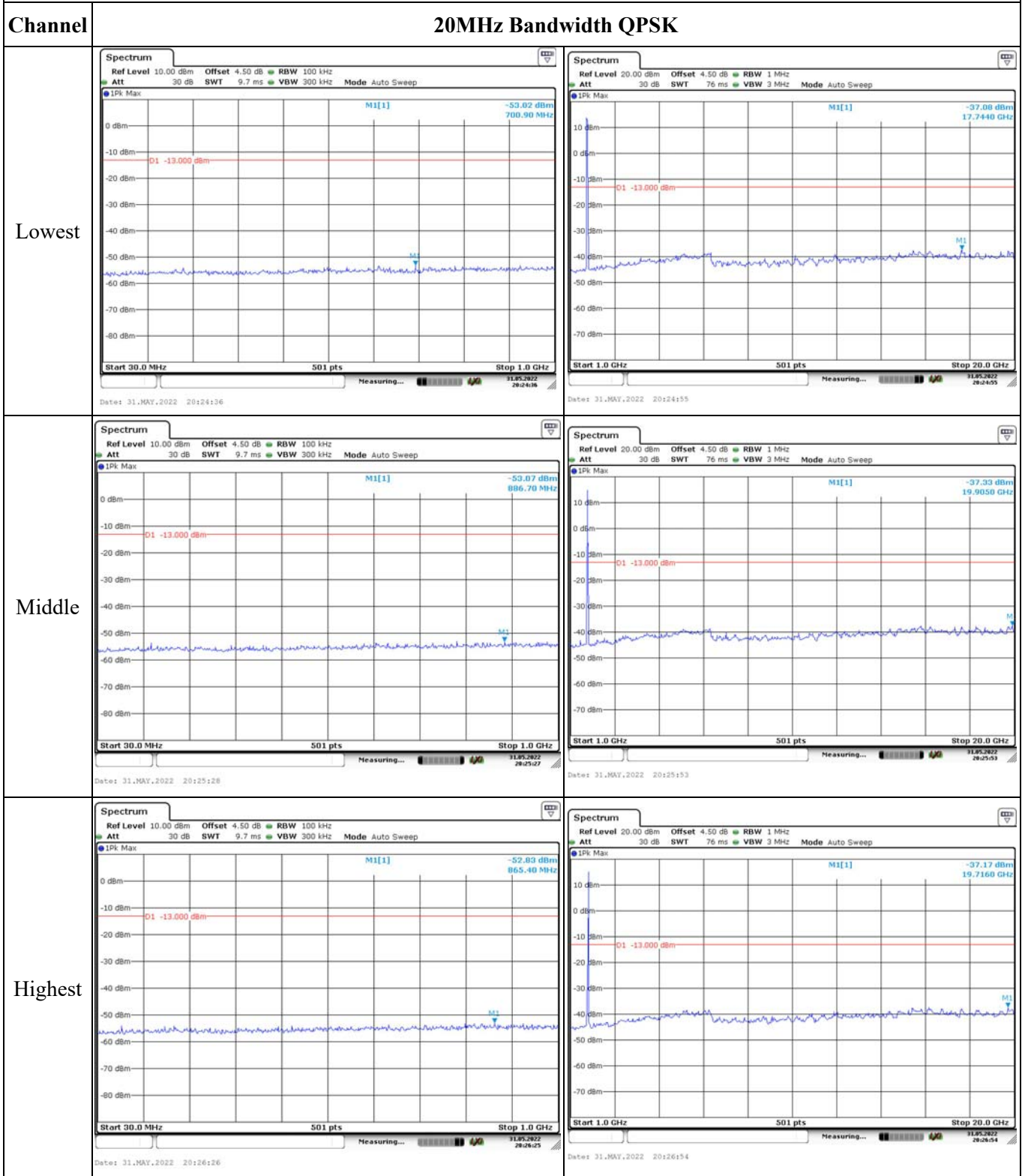
Date: 31.MAY.2022 20:20:41

Date: 31.MAY.2022 20:21:03

### Spurious Emissions at Antenna Terminal



### Spurious Emissions at Antenna Terminal



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz		
QPSK 3MHz		
QPSK 5MHz		



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 10MHz		
QPSK 15MHz		
QPSK 20MHz		

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz		
16QAM 3MHz		
16QAM 5MHz		

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz		
16QAM 15MHz		
16QAM 20MHz		



**4.:11 Antenna Port Test Data and Results for LTE Band 71:**

Serial Number:	CR22050036-RF-S1	Test Date:	2022-06-10
Test Site:	RF	Test Mode:	Transmitting
Tester:	Rinka Li	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	25	Relative Humidity: (%)	68	ATM Pressure: (kPa)	100.1
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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	2021-07-22	2022-07-21
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A
R&S	Wideband Radio Communication Tester	CMW500	149218	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-09-30	2022-09-29
Weinschel	Coaxial Attenuator	53-20-34	LN751	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150	30026	2021-07-22	2022-07-21
UNI-T	Multimeter	UT39A+	C210582554	2021-07-22	2022-07-21
E-Microwave	Two-way Splitter	ODP-1-6	OE0120176	Each Time	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 71▲:**

Antenna Gain (dBi):	-1.38	Antenna Gain (dBd):	-3.53	Cable Loss (dB):	0
Operation Voltage(V <sub>DC</sub> ):					
Lowest:	10.8	Normal:	13.8	Highest:	36

**Test Frequency For Each Mode:**

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	665.5	680.5	695.5
10MHz	668	680.5	693
15MHz	670.5	680.5	690.5
20MHz	673	680.5	688

**Test Data:**

<b>FCC§2.1046;§ 27.50(c) (10)</b>						
<b>RF Output Power:</b>						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	23.04	22.88	22.83	19.51	34.77
	RB1#13	23.04	22.79	22.99		
	RB1#24	22.97	22.73	22.94		
	RB15#0	22.00	21.60	22.10		
	RB15#10	22.02	21.75	22.13		
	RB25#0	21.94	21.95	22.07		
5MHz 16QAM	RB1#0	21.96	21.78	21.92	18.63	34.77
	RB1#13	22.16	21.80	21.69		
	RB1#24	21.94	21.81	21.75		
	RB15#0	20.95	20.89	20.74		
	RB15#10	21.04	20.89	20.82		
	RB25#0	20.95	20.93	20.85		
10MHz QPSK	RB1#0	22.81	22.62	23.18	19.65	34.77
	RB1#25	22.95	22.80	23.08		
	RB1#49	22.79	22.71	23.09		
	RB25#0	21.79	21.73	21.99		
	RB25#25	21.73	21.66	22.13		
	RB50#0	21.80	21.68	22.01		
10MHz 16QAM	RB1#0	21.71	21.71	22.19	18.66	34.77
	RB1#25	21.76	21.92	22.17		
	RB1#49	21.70	21.72	22.10		
	RB25#0	20.79	20.84	20.68		
	RB25#25	20.77	20.82	20.79		
	RB50#0	20.76	20.87	20.82		
15MHz QPSK	RB1#0	22.85	22.87	22.79	19.6	34.77
	RB1#38	22.83	22.84	22.83		
	RB1#74	23.13	22.92	22.94		
	RB36#0	21.98	21.96	21.94		
	RB36#39	22.03	21.92	22.14		
	RB75#0	21.98	21.92	21.97		
15MHz 16QAM	RB1#0	21.86	21.87	21.81	18.42	34.77
	RB1#38	21.95	21.83	21.85		
	RB1#74	21.89	21.90	21.85		
	RB36#0	21.03	20.87	20.87		
	RB36#39	20.99	20.86	21.02		
	RB75#0	21.00	20.86	20.95		

20MHz QPSK	RB1#0	22.87	22.98	22.72	19.57	34.77
	RB1#50	22.99	22.99	23.01		
	RB1#99	22.77	23.10	22.95		
	RB50#0	21.91	21.94	21.84		
	RB50#50	22.01	21.94	22.12		
	RB100#0	21.93	21.97	21.95		
20MHz 16QAM	RB1#0	21.99	21.91	21.79	18.55	34.77
	RB1#50	22.08	21.81	22.08		
	RB1#99	21.87	21.84	22.08		
	RB50#0	20.94	20.93	20.85		
	RB50#50	20.96	21.02	21.07		
	RB100#0	20.96	20.92	20.91		
Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd)						
					<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	
20MHz QPSK	RB1#0	4.17	4.61	4.20	13
	RB100#0	4.64	4.43	4.61	13
20MHz 16QAM	RB1#0	5.07	5.71	5.04	13
	RB100#0	5.62	5.65	5.80	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
5MHz QPSK	4.511	4.491	4.511	5.000	5.000	5.020
5MHz 16QAM	4.511	4.491	4.491	5.000	5.020	5.000
10MHz QPSK	8.902	8.902	8.902	9.680	9.640	9.600
10MHz 16QAM	8.902	8.902	8.902	9.680	9.640	9.680
15MHz QPSK	13.473	13.293	13.473	14.760	14.640	14.640
15MHz 16QAM	13.473	13.293	13.473	14.760	14.580	14.640
20MHz QPSK	17.804	17.804	17.964	19.280	19.120	19.440
20MHz 16QAM	17.804	17.804	17.964	19.200	19.120	19.520

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>

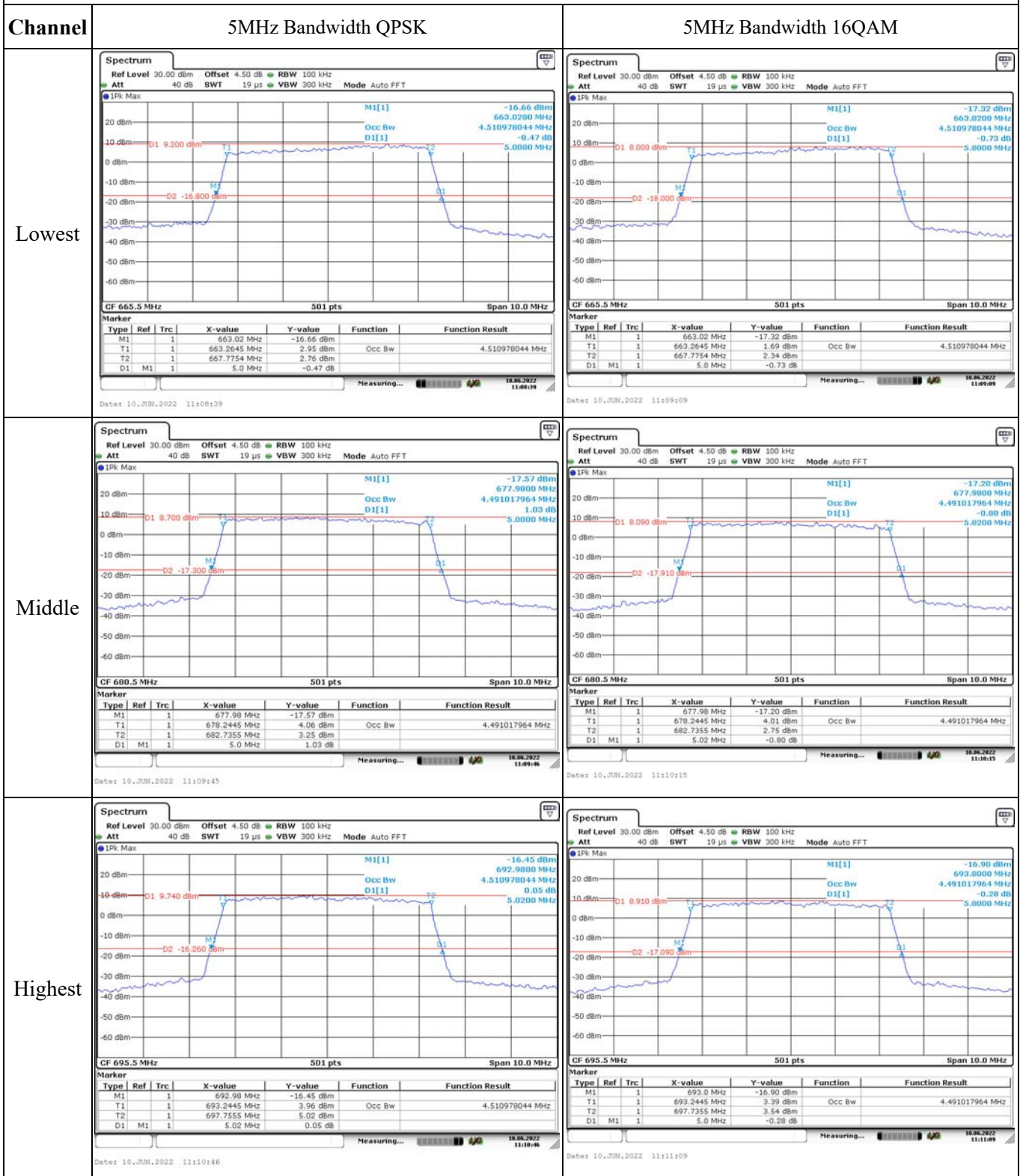
<b>FCC §2.1055, §27.54: Frequency Stability</b>						
Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V <sub>DC</sub> )	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	13.8	663.279	663.00	697.980	698.00
	-20	13.8	663.272	663.00	697.982	698.00
	-10	13.8	663.248	663.00	697.973	698.00
	0	13.8	663.209	663.00	697.982	698.00
	10	13.8	663.169	663.00	697.975	698.00
	20	13.8	663.143	663.00	697.973	698.00
	30	13.8	663.152	663.00	697.975	698.00
	40	13.8	663.166	663.00	697.980	698.00
Frequency Stability vs. Voltage	20	10.8	663.170	663.00	697.984	698.00
	20	10.8	663.182	663.00	697.975	698.00
	20	36	663.195	663.00	697.979	698.00
<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	13.8	663.150	663.00	697.974	698.00
	-20	13.8	663.155	663.00	697.976	698.00
	-10	13.8	663.150	663.00	697.985	698.00
	0	13.8	663.152	663.00	697.977	698.00
	10	13.8	663.147	663.00	697.975	698.00
	20	13.8	663.143	663.00	697.973	698.00
	30	13.8	663.146	663.00	697.976	698.00
	40	13.8	663.150	663.00	697.975	698.00
	50	13.8	663.148	663.00	697.973	698.00
Frequency Stability vs. Voltage	20	10.8	663.146	663.00	697.984	698.00
	20	36	663.152	663.00	697.985	698.00
					<b>Result:</b>	<b>Pass</b>

Test Plots:

Occupied Bandwidth



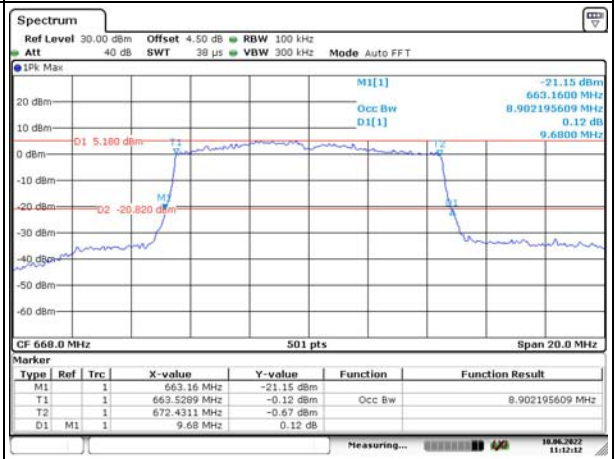
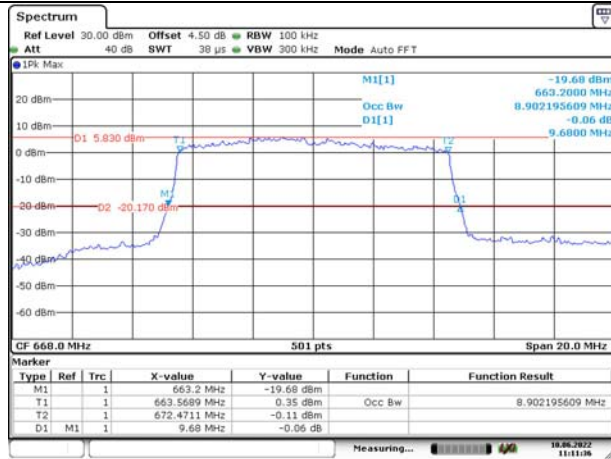
### Occupied Bandwidth

Channel

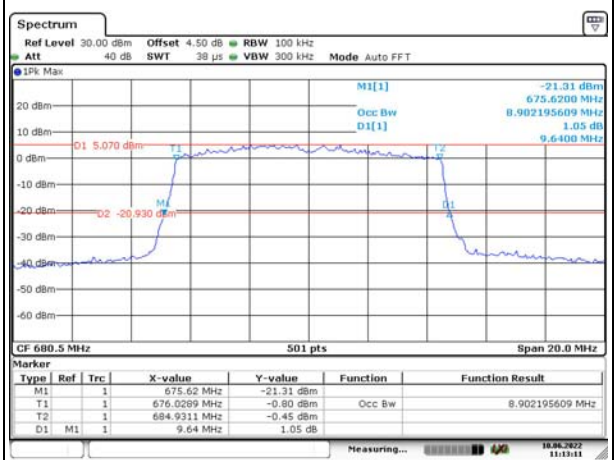
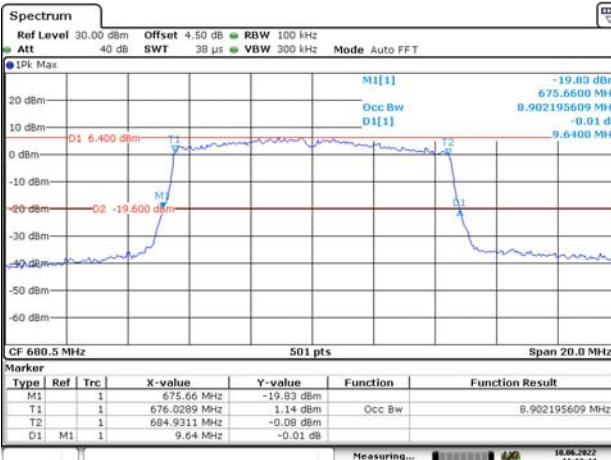
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

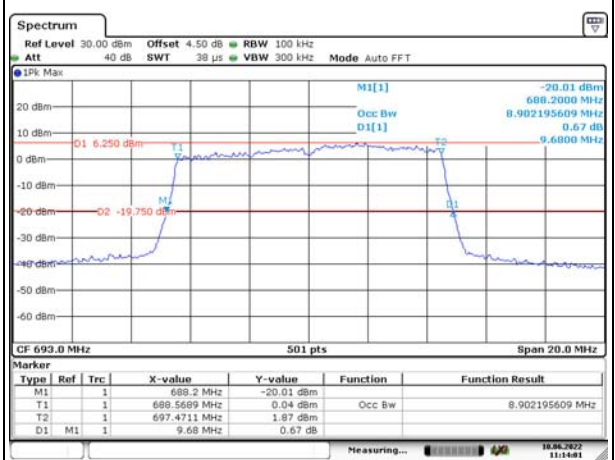
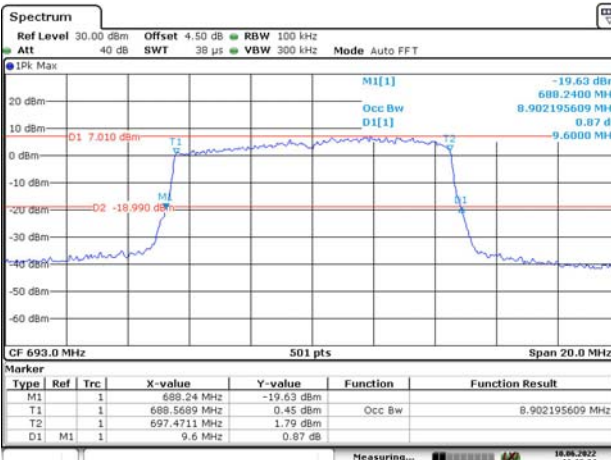
Lowest



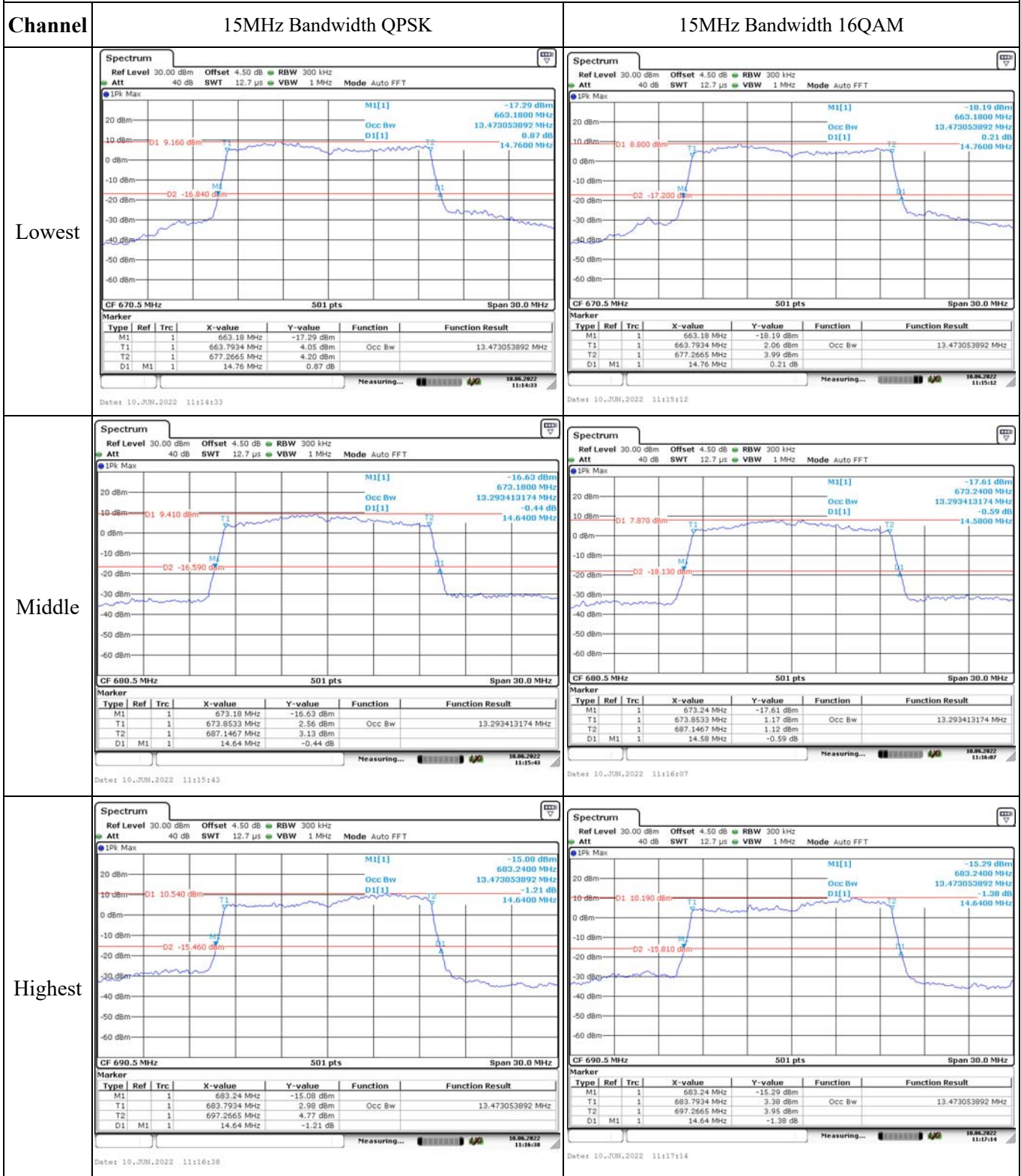
Middle



Highest

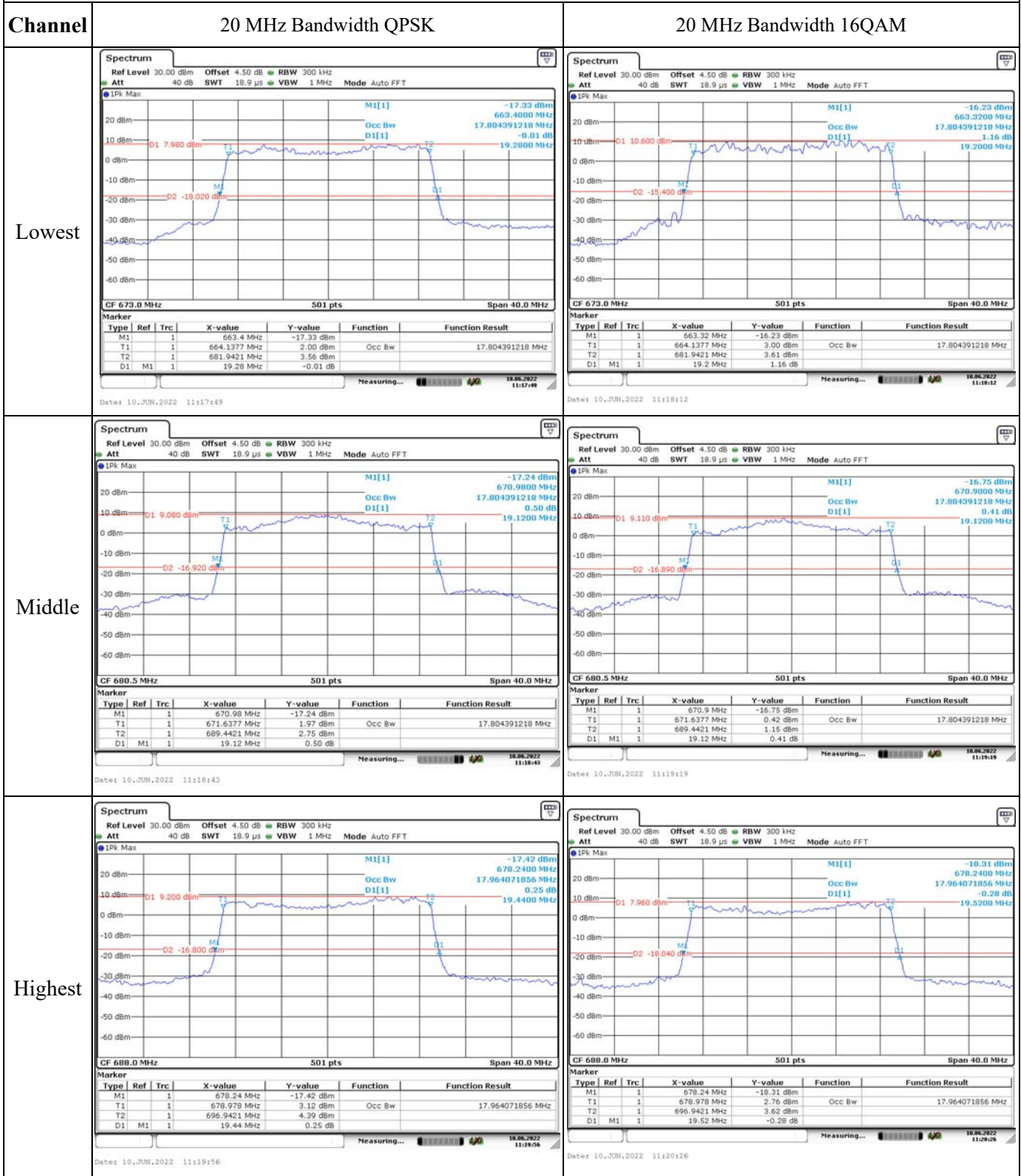


### Occupied Bandwidth





### Occupied Bandwidth

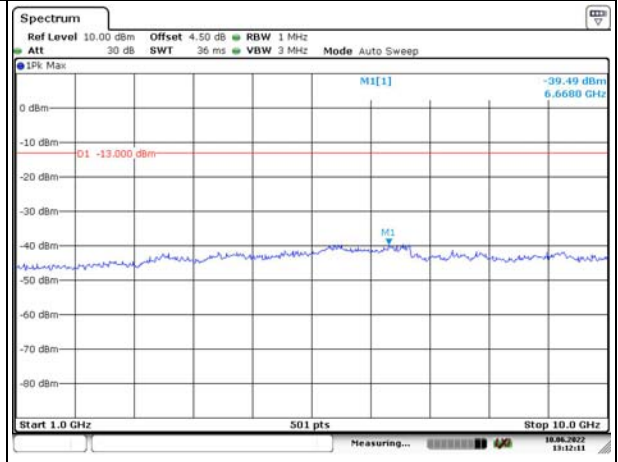
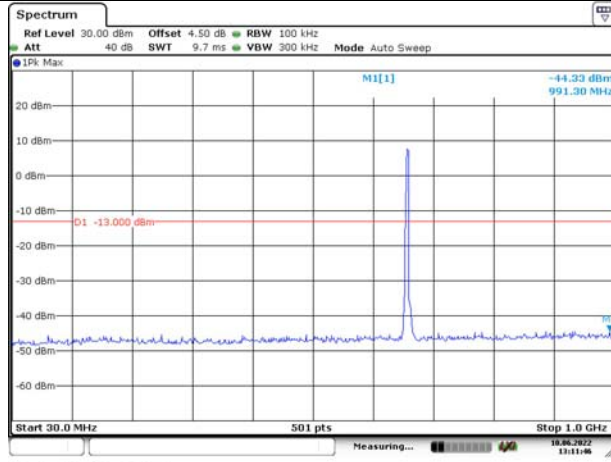


### Spurious Emissions at Antenna Terminal

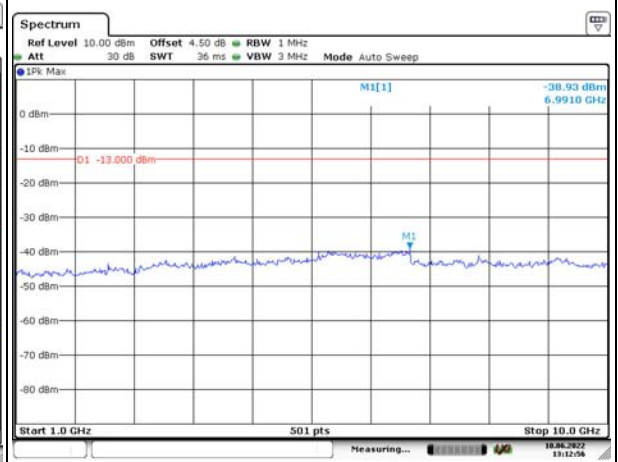
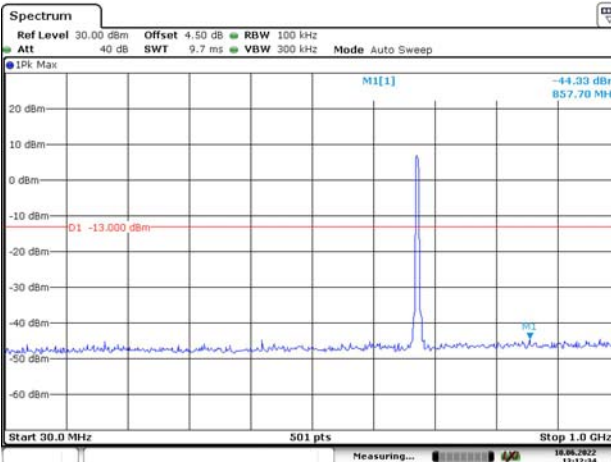
Channel

5MHz Bandwidth QPSK

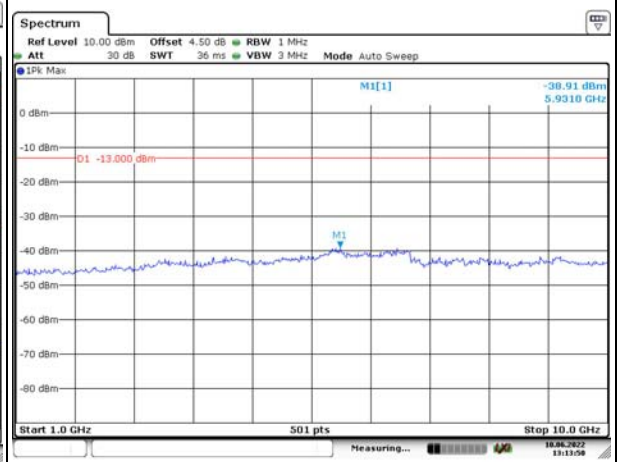
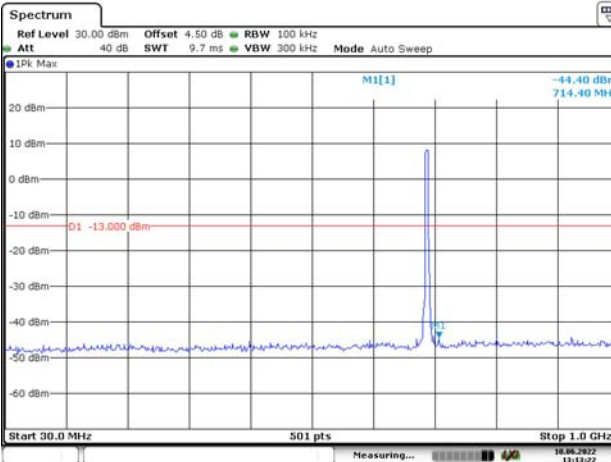
Lowest



Middle



Highest

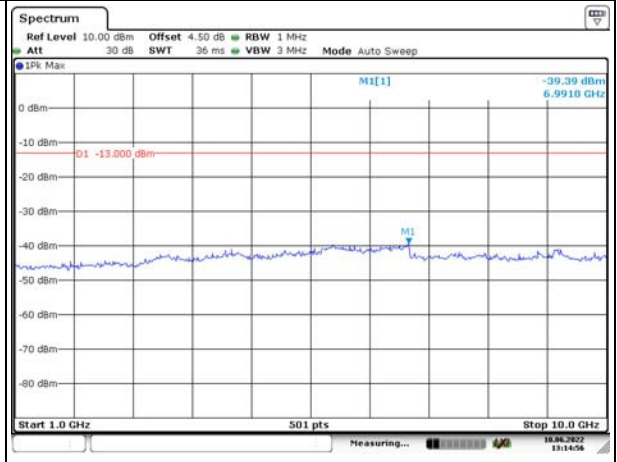
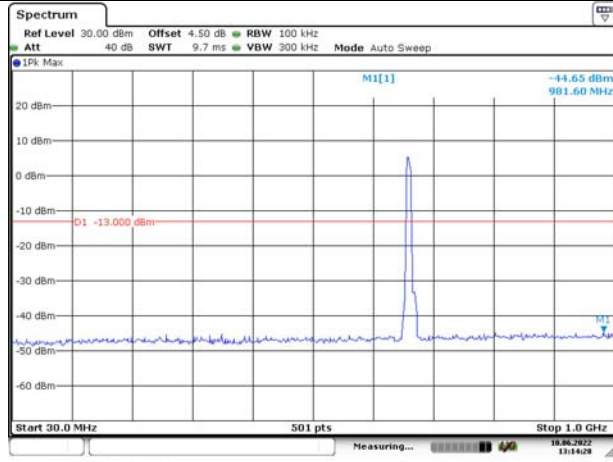


### Spurious Emissions at Antenna Terminal

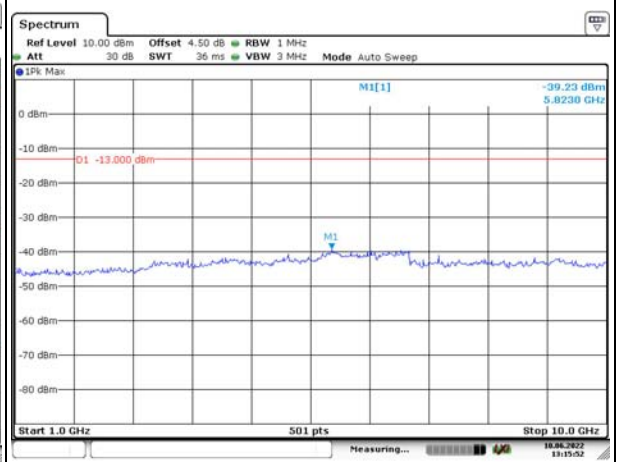
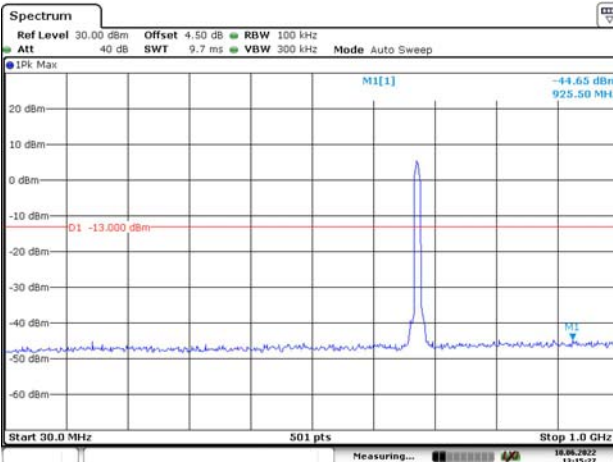
Channel

10MHz Bandwidth QPSK

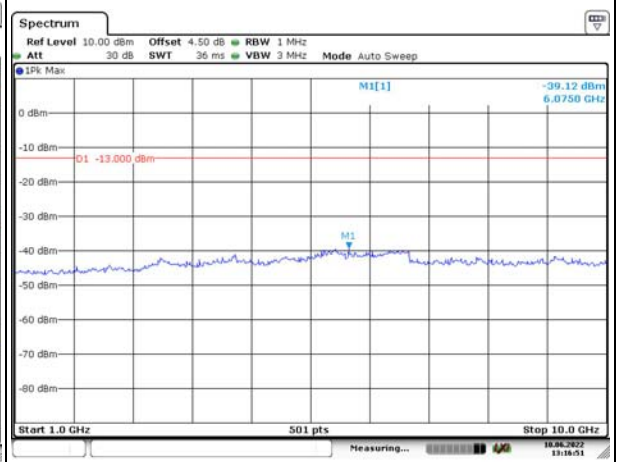
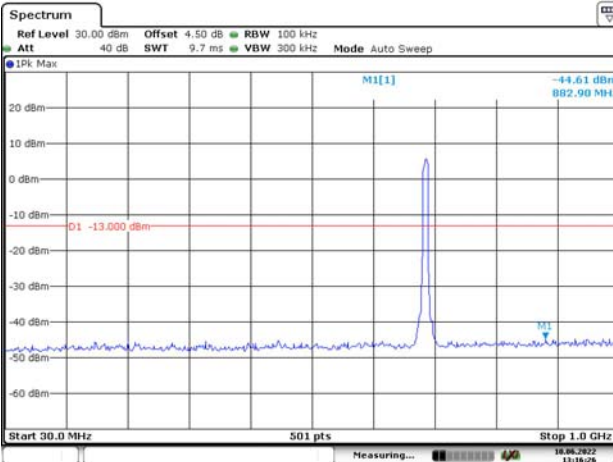
Lowest



Middle



Highest

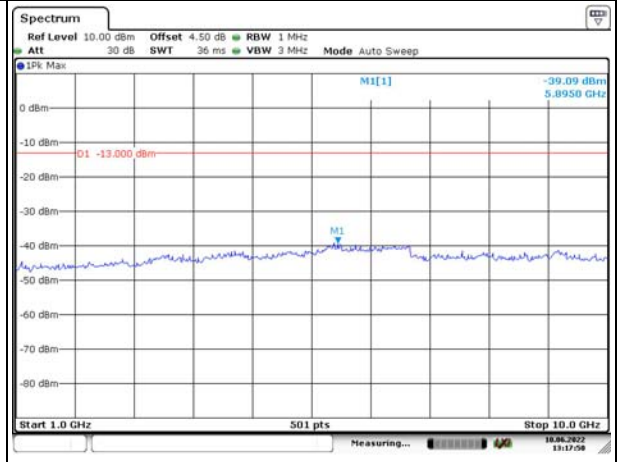
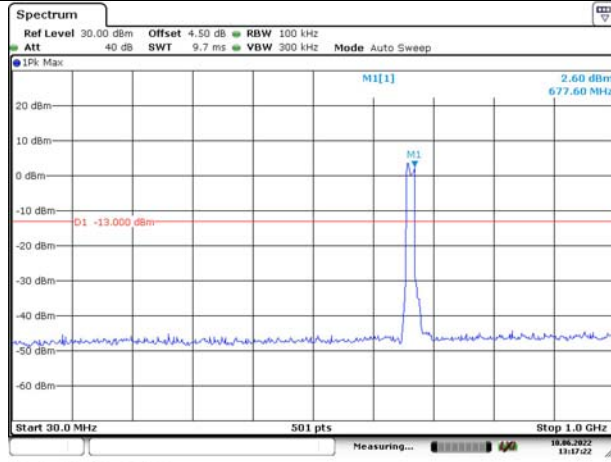


### Spurious Emissions at Antenna Terminal

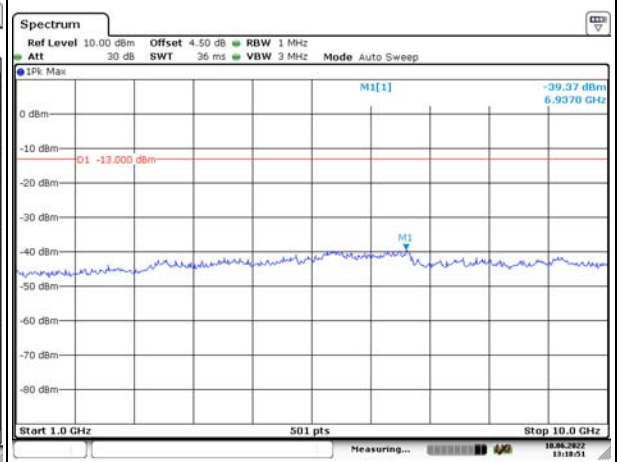
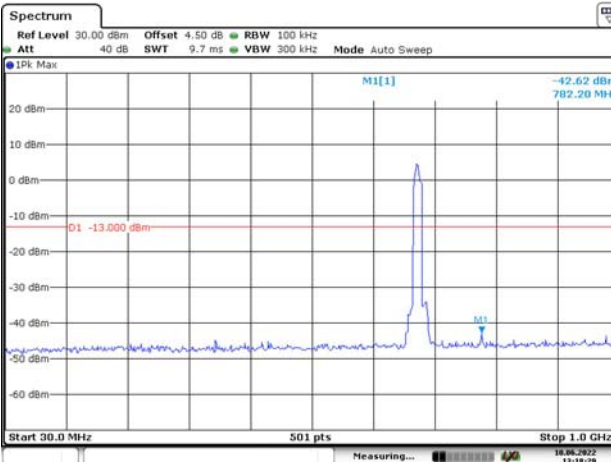
Channel

15MHz Bandwidth QPSK

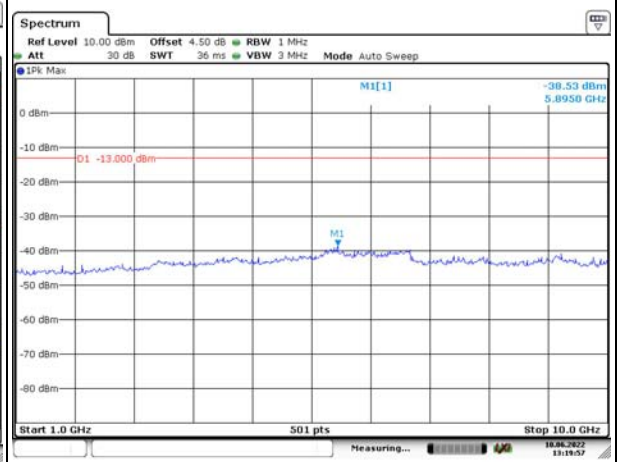
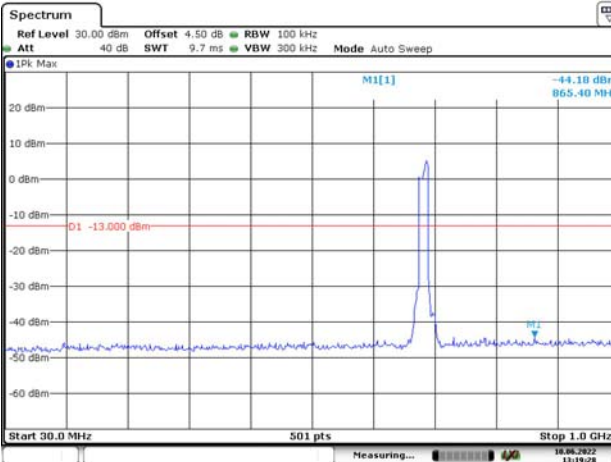
Lowest



Middle



Highest



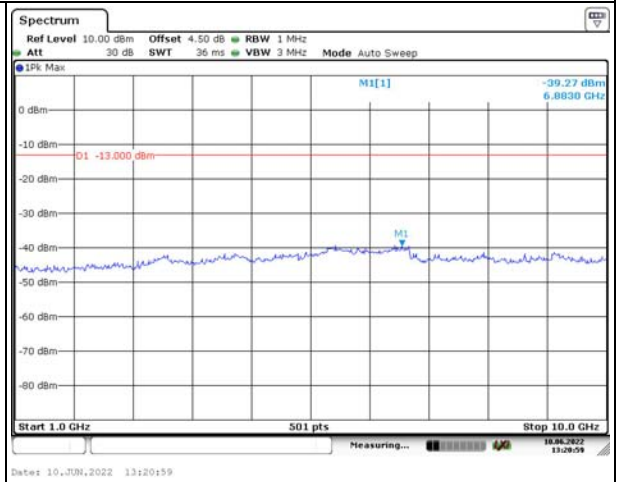
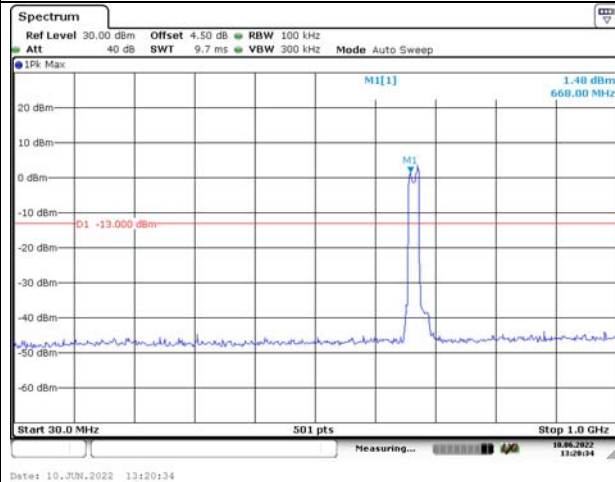


### Spurious Emissions at Antenna Terminal

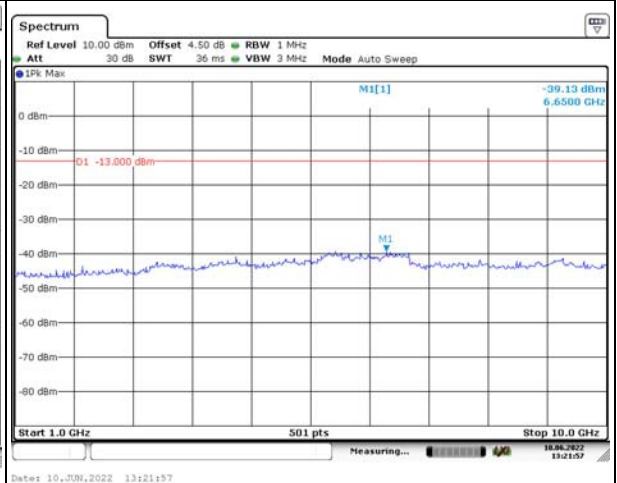
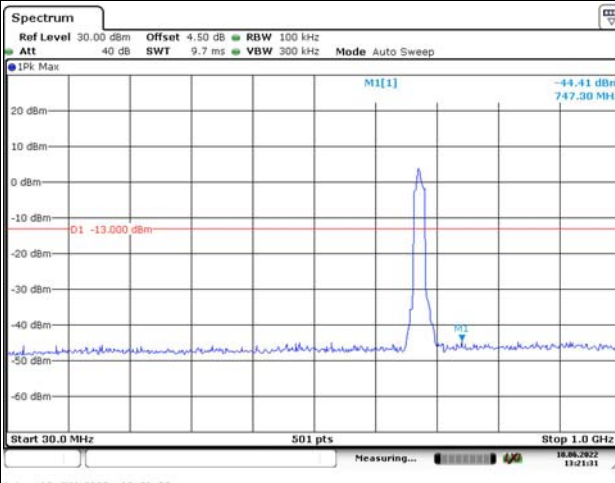
Channel

20 MHz Bandwidth QPSK

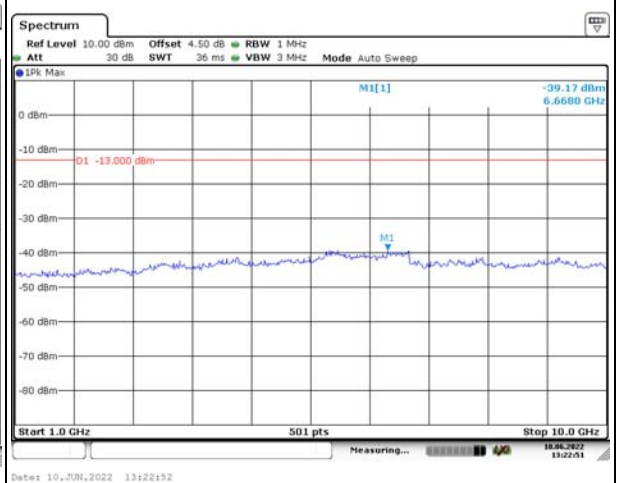
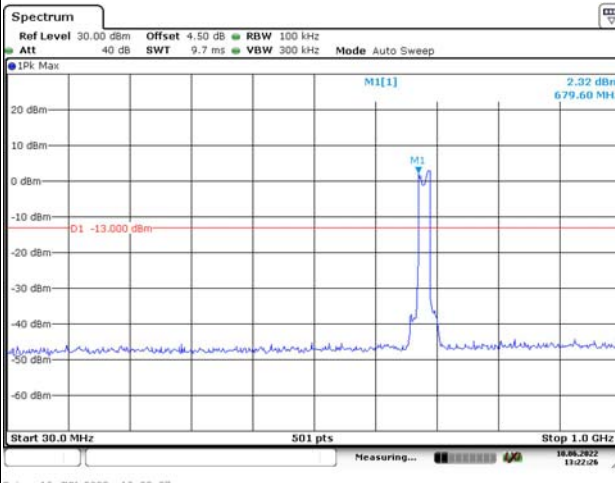
Lowest



Middle



Highest

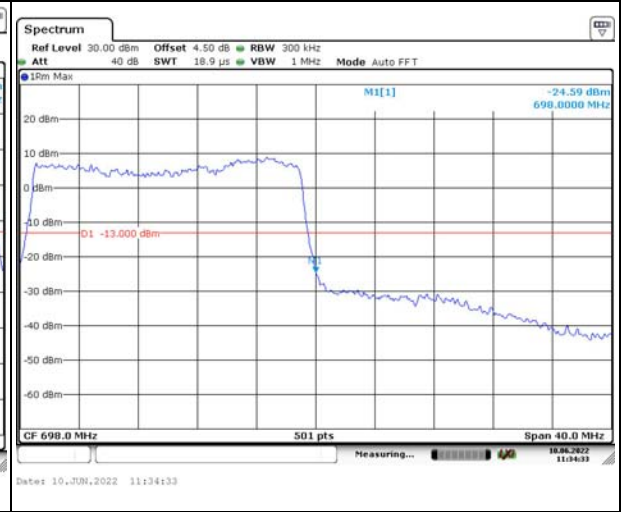


Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz		
QPSK 10MHz		
QPSK 15MHz		

### Out of band emission, Band Edge

QPSK  
20 MHz



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 19 μs VBW 300 kHz Mode Auto FFT CF 663.0 MHz 501 pts Span 10.0 MHz Date: 10 JUN 2022 11:28:05</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 19 μs VBW 300 kHz Mode Auto FFT CF 698.0 MHz 501 pts Span 10.0 MHz Date: 10 JUN 2022 11:28:55</p>
16QAM 10MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 38 μs VBW 300 kHz Mode Auto FFT CF 663.0 MHz 501 pts Span 20.0 MHz Date: 10 JUN 2022 11:29:48</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 100 kHz Att 40 dB SWT 38 μs VBW 300 kHz Mode Auto FFT CF 698.0 MHz 501 pts Span 20.0 MHz Date: 10 JUN 2022 11:30:49</p>
16QAM 15MHz	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 12.7 μs VBW 1 MHz Mode Auto FFT CF 663.0 MHz 501 pts Span 30.0 MHz Date: 10 JUN 2022 11:31:58</p>	<p>Ref Level 30.00 dBm Offset 4.50 dB RBW 300 kHz Att 40 dB SWT 12.7 μs VBW 1 MHz Mode Auto FFT CF 698.0 MHz 501 pts Span 30.0 MHz Date: 10 JUN 2022 11:32:58</p>

Out of band emission, Band Edge





**4.16 Spurious Emissions**

Serial Number:	CR22050036-RF-S1	Test Date:	2022-06-07~2022-06-18
Test Site:	966-1/966-2	Test Mode:	Transmit
Tester:	Gary Ling, Nick Tang	Test Result:	Pass

**Environmental Conditions:**

Temperature: (°C)	24~27.5	Relative Humidity: (%)	61~64	ATM Pressure: (kPa)	100~100.3
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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	2021-07-22	2022-07-21
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2021-07-18	2022-07-17
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2021-07-18	2022-07-17
Sonoma	Amplifier	310N	186165	2021-07-18	2022-07-17
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2021-07-25	2022-07-24
Agilent	Signal Generator	E8247C	MY43321352	2022-04-25	2023-04-24
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020-10-13	2023-10-12
R&S	Spectrum Analyzer	FSV40	101591	2021-07-22	2022-07-21
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2021-08-08	2022-08-07
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2021-08-08	2022-08-07
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
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2021-07-25	2022-07-24
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	Pre-amplifier	PAM-1840VH	190	2021-11-19	2022-11-18
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2021-08-08	2022-08-07

*\* 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)			
WCDMA Band 5 Frequency:826.4 MHz								
189.41	H	57.96	-54.72	0.00	0.26	-54.98	-13.00	41.98
81.84	V	60.30	-48.42	0.00	0.16	-48.58	-13.00	35.58
1652.80	H	36.66	-67.67	8.68	0.81	-59.80	-13.00	46.80
1652.80	V	37.85	-66.56	8.68	0.81	-58.69	-13.00	45.69
2479.20	H	35.18	-65.58	9.39	1.01	-57.20	-13.00	44.20
2479.20	V	36.06	-64.67	9.39	1.01	-56.29	-13.00	43.29
3305.60	H	35.09	-61.64	10.32	1.15	-52.47	-13.00	39.47
3305.60	V	35.85	-60.65	10.32	1.15	-51.48	-13.00	38.48
WCDMA Band 5 Frequency:836.6 MHz								
189.41	H	58.61	-54.07	0.00	0.26	-54.33	-13.00	41.33
81.84	V	61.22	-47.50	0.00	0.16	-47.66	-13.00	34.66
1673.20	H	36.36	-67.95	8.71	0.85	-60.09	-13.00	47.09
1673.20	V	39.98	-64.43	8.71	0.85	-56.57	-13.00	43.57
2509.80	H	35.48	-65.13	9.42	1.01	-56.72	-13.00	43.72
2509.80	V	37.74	-62.88	9.42	1.01	-54.47	-13.00	41.47
3346.40	H	35.61	-61.56	10.34	1.16	-52.38	-13.00	39.38
3346.40	V	35.16	-61.87	10.34	1.16	-52.69	-13.00	39.69
WCDMA Band 5 Frequency:846.6 MHz								
189.41	H	59.31	-53.37	0.00	0.26	-53.63	-13.00	40.63
80.87	V	61.94	-46.71	0.00	0.16	-46.87	-13.00	33.87
1693.20	H	47.48	-56.82	8.73	0.89	-48.98	-13.00	35.98
1693.20	V	45.68	-58.74	8.73	0.89	-50.90	-13.00	37.90
2539.80	H	34.92	-65.46	9.46	1.01	-57.01	-13.00	44.01
2539.80	V	37.27	-63.07	9.46	1.01	-54.62	-13.00	41.62
3386.40	H	35.26	-62.33	10.35	1.18	-53.16	-13.00	40.16
3386.40	V	35.32	-62.22	10.35	1.18	-53.05	-13.00	40.05

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)			
LTE Band 5 Frequency:824.7 MHz								
189.41	H	58.53	-54.15	0.00	0.26	-54.41	-13.00	41.41
80.87	V	59.84	-48.81	0.00	0.16	-48.97	-13.00	35.97
1649.40	H	44.74	-59.59	8.68	0.80	-51.71	-13.00	38.71
1649.40	V	44.96	-59.45	8.68	0.80	-51.57	-13.00	38.57
2474.10	H	38.12	-62.66	9.38	1.00	-54.28	-13.00	41.28
2474.10	V	39.92	-60.81	9.38	1.00	-52.43	-13.00	39.43
3298.80	H	34.96	-61.72	10.32	1.15	-52.55	-13.00	39.55
3298.80	V	35.97	-60.47	10.32	1.15	-51.30	-13.00	38.30
LTE Band 5 Frequency:836.5 MHz								
189.41	H	58.96	-53.72	0.00	0.26	-53.98	-13.00	40.98
81.84	V	59.72	-49.00	0.00	0.16	-49.16	-13.00	36.16
1673.00	H	43.07	-61.24	8.71	0.85	-53.38	-13.00	40.38
1673.00	V	43.19	-61.22	8.71	0.85	-53.36	-13.00	40.36
2509.50	H	39.29	-61.32	9.42	1.01	-52.91	-13.00	39.91
2509.50	V	41.61	-59.01	9.42	1.01	-50.60	-13.00	37.60
3346.00	H	36.01	-61.15	10.34	1.16	-51.97	-13.00	38.97
3346.00	V	35.75	-61.27	10.34	1.16	-52.09	-13.00	39.09
LTE Band 5 Frequency:848.3 MHz								
190.37	H	57.59	-55.11	0.00	0.26	-55.37	-13.00	42.37
81.84	V	58.66	-50.06	0.00	0.16	-50.22	-13.00	37.22
1696.60	H	46.55	-57.74	8.74	0.89	-49.89	-13.00	36.89
1696.60	V	46.84	-57.58	8.74	0.89	-49.73	-13.00	36.73
2544.90	H	37.92	-62.42	9.47	1.01	-53.96	-13.00	40.96
2544.90	V	41.30	-59.00	9.47	1.01	-50.54	-13.00	37.54
3393.20	H	34.89	-62.78	10.36	1.19	-53.61	-13.00	40.61
3393.20	V	36.28	-61.35	10.36	1.19	-52.18	-13.00	39.18

## 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)			
WCDMA Band 2 Frequency:1852.4 MHz								
189.41	H	58.63	-54.05	0.00	0.26	-54.31	-13.00	41.31
81.84	V	61.38	-47.34	0.00	0.16	-47.50	-13.00	34.50
3704.80	H	35.16	-62.10	10.60	1.25	-52.75	-13.00	39.75
3704.80	V	35.28	-61.95	10.60	1.25	-52.60	-13.00	39.60
5557.20	H	34.97	-58.31	11.43	1.49	-48.37	-13.00	35.37
5557.20	V	34.91	-58.22	11.43	1.49	-48.28	-13.00	35.28
WCDMA Band 2 Frequency:1880 MHz								
189.41	H	58.33	-54.35	0.00	0.26	-54.61	-13.00	41.61
81.84	V	61.25	-47.47	0.00	0.16	-47.63	-13.00	34.63
3760.00	H	34.28	-62.13	10.66	1.24	-52.71	-13.00	39.71
3760.00	V	35.06	-61.23	10.66	1.24	-51.81	-13.00	38.81
5640.00	H	34.32	-59.13	11.33	1.54	-49.34	-13.00	36.34
5640.00	V	34.72	-58.61	11.33	1.54	-48.82	-13.00	35.82
WCDMA Band 2 Frequency:1907.6 MHz								
189.41	H	57.97	-54.71	0.00	0.26	-54.97	-13.00	41.97
80.87	V	61.17	-47.48	0.00	0.16	-47.64	-13.00	34.64
3815.20	H	40.14	-55.71	10.72	1.29	-46.28	-13.00	33.28
3815.20	V	35.92	-59.77	10.72	1.29	-50.34	-13.00	37.34
5722.80	H	34.35	-59.14	11.23	1.58	-49.49	-13.00	36.49
5722.80	V	34.97	-58.38	11.23	1.58	-48.73	-13.00	35.73

**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)			
LTE Band 2, Frequency:1850.7 MHz								
189.41	H	58.65	-54.03	0.00	0.26	-54.29	-13.00	41.29
80.87	V	60.77	-47.88	0.00	0.16	-48.04	-13.00	35.04
3701.40	H	37.48	-59.83	10.60	1.25	-50.48	-13.00	37.48
3701.40	V	41.57	-55.72	10.60	1.25	-46.37	-13.00	33.37
5552.10	H	37.80	-55.47	11.44	1.49	-45.52	-13.00	32.52
5552.10	V	40.55	-52.55	11.44	1.49	-42.60	-13.00	29.60
LTE Band 2, Frequency:1880 MHz								
189.41	H	58.09	-54.59	0.00	0.26	-54.85	-13.00	41.85
80.87	V	59.43	-49.22	0.00	0.16	-49.38	-13.00	36.38
3760.00	H	39.61	-56.80	10.66	1.24	-47.38	-13.00	34.38
3760.00	V	38.37	-57.92	10.66	1.24	-48.50	-13.00	35.50
5640.00	H	35.31	-58.14	11.33	1.54	-48.35	-13.00	35.35
5640.00	V	34.89	-58.44	11.33	1.54	-48.65	-13.00	35.65
LTE Band 2, Frequency:1909.3 MHz								
188.44	H	58.55	-54.11	0.00	0.26	-54.37	-13.00	41.37
81.84	V	60.25	-48.47	0.00	0.16	-48.63	-13.00	35.63
3818.60	H	36.55	-59.31	10.72	1.29	-49.88	-13.00	36.88
3818.60	V	37.42	-58.29	10.72	1.29	-48.86	-13.00	35.86
5727.90	H	36.31	-57.17	11.23	1.59	-47.53	-13.00	34.53
5727.90	V	37.48	-55.88	11.23	1.59	-46.24	-13.00	33.24



**PART 27****30MHz-20GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 4, Frequency:1712.4 MHz								
188.44	H	57.99	-54.67	0.00	0.26	-54.93	-13.00	41.93
81.84	V	61.10	-47.62	0.00	0.16	-47.78	-13.00	34.78
3424.80	H	35.32	-62.45	10.37	1.17	-53.25	-13.00	40.25
3424.80	V	35.44	-62.30	10.37	1.17	-53.10	-13.00	40.10
5137.20	H	34.42	-59.20	11.28	1.46	-49.38	-13.00	36.38
5137.20	V	34.89	-58.61	11.28	1.46	-48.79	-13.00	35.79
WCDMA Band 4, Frequency:1732.6 MHz								
188.44	H	58.26	-54.40	0.00	0.26	-54.66	-13.00	41.66
81.84	V	61.34	-47.38	0.00	0.16	-47.54	-13.00	34.54
3465.20	H	35.44	-62.37	10.39	1.15	-53.13	-13.00	40.13
3465.20	V	35.85	-61.92	10.39	1.15	-52.68	-13.00	39.68
5197.80	H	35.26	-58.87	11.32	1.44	-48.99	-13.00	35.99
5197.80	V	34.49	-59.49	11.32	1.44	-49.61	-13.00	36.61
WCDMA Band 4, Frequency:1752.6MHz								
189.41	H	58.75	-53.93	0.00	0.26	-54.19	-13.00	41.19
81.84	V	60.95	-47.77	0.00	0.16	-47.93	-13.00	34.93
3505.20	H	34.96	-62.87	10.41	1.18	-53.64	-13.00	40.64
3505.20	V	37.40	-60.37	10.41	1.18	-51.14	-13.00	38.14
5257.80	H	34.35	-59.38	11.35	1.47	-49.50	-13.00	36.50
5257.80	V	34.79	-58.72	11.35	1.47	-48.84	-13.00	35.84

**30MHz-20GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
LTE Band 4, Frequency:1710.7 MHz								
189.41	H	57.47	-55.21	0.00	0.26	-55.47	-13.00	42.47
81.84	V	59.62	-49.10	0.00	0.16	-49.26	-13.00	36.26
3421.40	H	35.82	-61.94	10.37	1.17	-52.74	-13.00	39.74
3421.40	V	35.93	-61.80	10.37	1.17	-52.60	-13.00	39.60
5132.10	H	34.91	-58.66	11.28	1.47	-48.85	-13.00	35.85
5132.10	V	35.10	-58.36	11.28	1.47	-48.55	-13.00	35.55
LTE Band 4, Frequency:1732.5 MHz								
188.44	H	58.90	-53.76	0.00	0.26	-54.02	-13.00	41.02
81.84	V	59.92	-48.80	0.00	0.16	-48.96	-13.00	35.96
3465.00	H	35.50	-62.31	10.39	1.15	-53.07	-13.00	40.07
3465.00	V	36.07	-61.70	10.39	1.15	-52.46	-13.00	39.46
5197.50	H	35.60	-58.53	11.32	1.44	-48.65	-13.00	35.65
5197.50	V	34.49	-59.49	11.32	1.44	-49.61	-13.00	36.61
LTE Band 4, Frequency:1752.6MHz								
190.37	H	59.17	-53.53	0.00	0.26	-53.79	-13.00	40.79
81.84	V	61.25	-47.47	0.00	0.16	-47.63	-13.00	34.63
3505.20	H	36.36	-61.47	10.41	1.18	-52.24	-13.00	39.24
3505.20	V	38.76	-59.01	10.41	1.18	-49.78	-13.00	36.78
5257.80	H	34.09	-59.64	11.35	1.47	-49.76	-13.00	36.76
5257.80	V	35.21	-58.30	11.35	1.47	-48.42	-13.00	35.42

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)			
LTE Band 66 QPSK, Frequency:1710.7 MHz								
189.41	H	57.04	-55.64	0.00	0.26	-55.90	-13.00	42.90
81.84	V	59.75	-48.97	0.00	0.16	-49.13	-13.00	36.13
3421.40	H	35.21	-62.55	10.37	1.17	-53.35	-13.00	40.35
3421.40	V	35.11	-62.62	10.37	1.17	-53.42	-13.00	40.42
5132.10	H	34.16	-59.41	11.28	1.47	-49.60	-13.00	36.60
5132.10	V	35.92	-57.54	11.28	1.47	-47.73	-13.00	34.73
LTE Band 66 QPSK, Frequency:1745 MHz								
189.41	H	57.82	-54.86	0.00	0.26	-55.12	-13.00	42.12
81.84	V	59.59	-49.13	0.00	0.16	-49.29	-13.00	36.29
3490.00	H	34.98	-62.86	10.40	1.17	-53.63	-13.00	40.63
3490.00	V	35.79	-61.99	10.40	1.17	-52.76	-13.00	39.76
5235.00	H	34.66	-59.24	11.34	1.46	-49.36	-13.00	36.36
5235.00	V	35.62	-58.09	11.34	1.46	-48.21	-13.00	35.21
LTE Band 66 QPSK, Frequency:1779.3 MHz								
189.41	H	57.47	-55.21	0.00	0.26	-55.47	-13.00	42.47
81.84	V	60.57	-48.15	0.00	0.16	-48.31	-13.00	35.31
3558.60	H	35.24	-62.43	10.46	1.22	-53.19	-13.00	40.19
3558.60	V	38.92	-58.65	10.46	1.22	-49.41	-13.00	36.41
5337.90	H	34.19	-59.28	11.40	1.47	-49.35	-13.00	36.35
5337.90	V	34.18	-59.15	11.40	1.47	-49.22	-13.00	36.22

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

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 699.7 MHz								
190.37	H	59.12	-53.58	0.00	0.26	-53.84	-13.00	40.84
81.84	V	59.79	-48.93	0.00	0.16	-49.09	-13.00	36.09
1399.40	H	42.43	-61.27	8.22	0.71	-53.76	-13.00	40.76
1399.40	V	45.89	-57.86	8.22	0.71	-50.35	-13.00	37.35
2099.10	H	44.84	-57.04	9.16	0.91	-48.79	-13.00	35.79
2099.10	V	45.23	-56.60	9.16	0.91	-48.35	-13.00	35.35
2798.80	H	37.65	-62.28	9.88	1.04	-53.44	-13.00	40.44
2798.80	V	40.66	-59.14	9.88	1.04	-50.30	-13.00	37.30
QPSK, Frequency: 707.5 MHz								
188.44	H	59.43	-53.23	0.00	0.26	-53.49	-13.00	40.49
80.87	V	60.22	-48.43	0.00	0.16	-48.59	-13.00	35.59
1415.00	H	47.18	-56.49	8.26	0.72	-48.95	-13.00	35.95
1415.00	V	46.61	-57.11	8.26	0.72	-49.57	-13.00	36.57
2122.50	H	43.36	-58.63	9.17	0.92	-50.38	-13.00	37.38
2122.50	V	43.99	-57.98	9.17	0.92	-49.73	-13.00	36.73
2830.00	H	36.68	-63.12	9.93	1.06	-54.25	-13.00	41.25
2830.00	V	42.07	-57.66	9.93	1.06	-48.79	-13.00	35.79
QPSK, Frequency: 715.3 MHz								
188.44	H	57.97	-54.69	0.00	0.26	-54.95	-13.00	41.95
80.87	V	59.17	-49.48	0.00	0.16	-49.64	-13.00	36.64
1430.60	H	47.07	-56.56	8.31	0.73	-48.98	-13.00	35.98
1430.60	V	44.01	-59.68	8.31	0.73	-52.10	-13.00	39.10
2145.90	H	41.78	-60.32	9.19	0.93	-52.06	-13.00	39.06
2145.90	V	41.36	-60.75	9.19	0.93	-52.49	-13.00	39.49
2861.20	H	36.53	-63.12	9.98	1.07	-54.21	-13.00	41.21
2861.20	V	42.08	-57.59	9.98	1.07	-48.68	-13.00	35.68

**LTE Band 13(30MHz-10GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 779.5								
189.41	H	59.59	-53.09	0.00	0.26	-53.35	-13.00	40.35
81.84	V	60.67	-48.05	0.00	0.16	-48.21	-13.00	35.21
1559.00	H	38.43	-65.56	8.57	0.80	-57.79	-40.00	17.79
1559.00	V	40.55	-63.50	8.57	0.80	-55.73	-40.00	15.73
2338.50	H	35.53	-66.06	9.30	0.97	-57.73	-13.00	44.73
2338.50	V	35.84	-65.52	9.30	0.97	-57.19	-13.00	44.19
3118.00	H	35.22	-62.27	10.25	1.13	-53.15	-13.00	40.15
3118.00	V	35.27	-62.08	10.25	1.13	-52.96	-13.00	39.96
QPSK, Frequency: 784.5								
189.41	H	57.57	-55.11	0.00	0.26	-55.37	-13.00	42.37
81.84	V	59.65	-49.07	0.00	0.16	-49.23	-13.00	36.23
1569.00	H	37.92	-66.16	8.58	0.81	-58.39	-40.00	18.39
1569.00	V	37.48	-66.65	8.58	0.81	-58.88	-40.00	18.88
2353.50	H	35.09	-66.36	9.31	0.97	-58.02	-13.00	45.02
2353.50	V	35.15	-66.07	9.31	0.97	-57.73	-13.00	44.73
3138.00	H	36.03	-61.37	10.26	1.14	-52.25	-13.00	39.25
3138.00	V	35.33	-61.90	10.26	1.14	-52.78	-13.00	39.78



**LTE Band 14(30MHz-10GHz):**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB $\mu$ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 790.5 MHz								
189.41	H	57.89	-54.79	0.00	0.26	-55.05	-13.00	42.05
81.84	V	61.67	-47.05	0.00	0.16	-47.21	-13.00	34.21
1581.00	H	37.26	-66.93	8.60	0.81	-59.14	-40.00	19.14
1581.00	V	39.54	-64.70	8.60	0.81	-56.91	-40.00	16.91
2371.50	H	35.84	-65.46	9.32	0.97	-57.11	-13.00	44.11
2371.50	V	35.32	-65.73	9.32	0.97	-57.38	-13.00	44.38
3162.00	H	36.32	-60.97	10.26	1.13	-51.84	-13.00	38.84
3162.00	V	35.20	-61.89	10.26	1.13	-52.76	-13.00	39.76
QPSK, Frequency: 795.5 MHz								
188.44	H	58.21	-54.45	0.00	0.26	-54.71	-13.00	41.71
80.87	V	60.38	-48.27	0.00	0.16	-48.43	-13.00	35.43
1591.00	H	37.14	-67.15	8.61	0.82	-59.36	-40.00	19.36
1591.00	V	36.27	-68.05	8.61	0.82	-60.26	-40.00	20.26
2386.50	H	35.02	-66.15	9.33	0.98	-57.80	-13.00	44.8
2386.50	V	36.02	-64.89	9.33	0.98	-56.54	-13.00	43.54
3182.00	H	35.43	-61.77	10.27	1.12	-52.62	-13.00	39.62
3182.00	V	35.86	-61.11	10.27	1.12	-51.96	-13.00	38.96

**LTE Band 71(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: 665.5 MHz								
188.44	H	59.83	-52.83	0.00	0.26	-53.09	-13.00	40.09
80.87	V	60.60	-48.05	0.00	0.16	-48.21	-13.00	35.21
1331.00	H	42.32	-60.71	8.03	0.76	-53.44	-13.00	40.44
1331.00	V	45.68	-57.68	8.03	0.76	-50.41	-13.00	37.41
1996.50	H	36.90	-65.26	9.10	0.89	-57.05	-13.00	44.05
1996.50	V	35.84	-65.70	9.10	0.89	-57.49	-13.00	44.49
2662.00	H	35.79	-64.17	9.66	1.06	-55.57	-13.00	42.57
2662.00	V	35.14	-64.74	9.66	1.06	-56.14	-13.00	43.14
QPSK, Frequency: 680.5 MHz								
188.44	H	58.11	-54.55	0.00	0.26	-54.81	-13.00	41.81
81.84	V	60.89	-47.83	0.00	0.16	-47.99	-13.00	34.99
1361.00	H	36.57	-66.76	8.11	0.77	-59.42	-13.00	46.42
1361.00	V	37.68	-65.85	8.11	0.77	-58.51	-13.00	45.51
2041.50	H	39.61	-62.42	9.12	0.91	-54.21	-13.00	41.21
2041.50	V	39.33	-62.31	9.12	0.91	-54.10	-13.00	41.10
2722.00	H	35.22	-64.75	9.76	1.05	-56.04	-13.00	43.04
2722.00	V	35.56	-64.35	9.76	1.05	-55.64	-13.00	42.64
QPSK, Frequency: 695.5 MHz								
189.41	H	59.33	-53.35	0.00	0.26	-53.61	-13.00	40.61
81.84	V	61.25	-47.47	0.00	0.16	-47.63	-13.00	34.63
1391.00	H	37.44	-66.18	8.19	0.72	-58.71	-13.00	45.71
1391.00	V	37.09	-66.61	8.19	0.72	-59.14	-13.00	46.14
2086.50	H	41.11	-60.80	9.15	0.91	-52.56	-13.00	39.56
2086.50	V	44.59	-57.20	9.15	0.91	-48.96	-13.00	35.96
2782.00	H	35.14	-64.80	9.85	1.05	-56.00	-13.00	43.00
2782.00	V	35.62	-64.21	9.85	1.05	-55.41	-13.00	42.41

## 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 \*\*\*\*\***