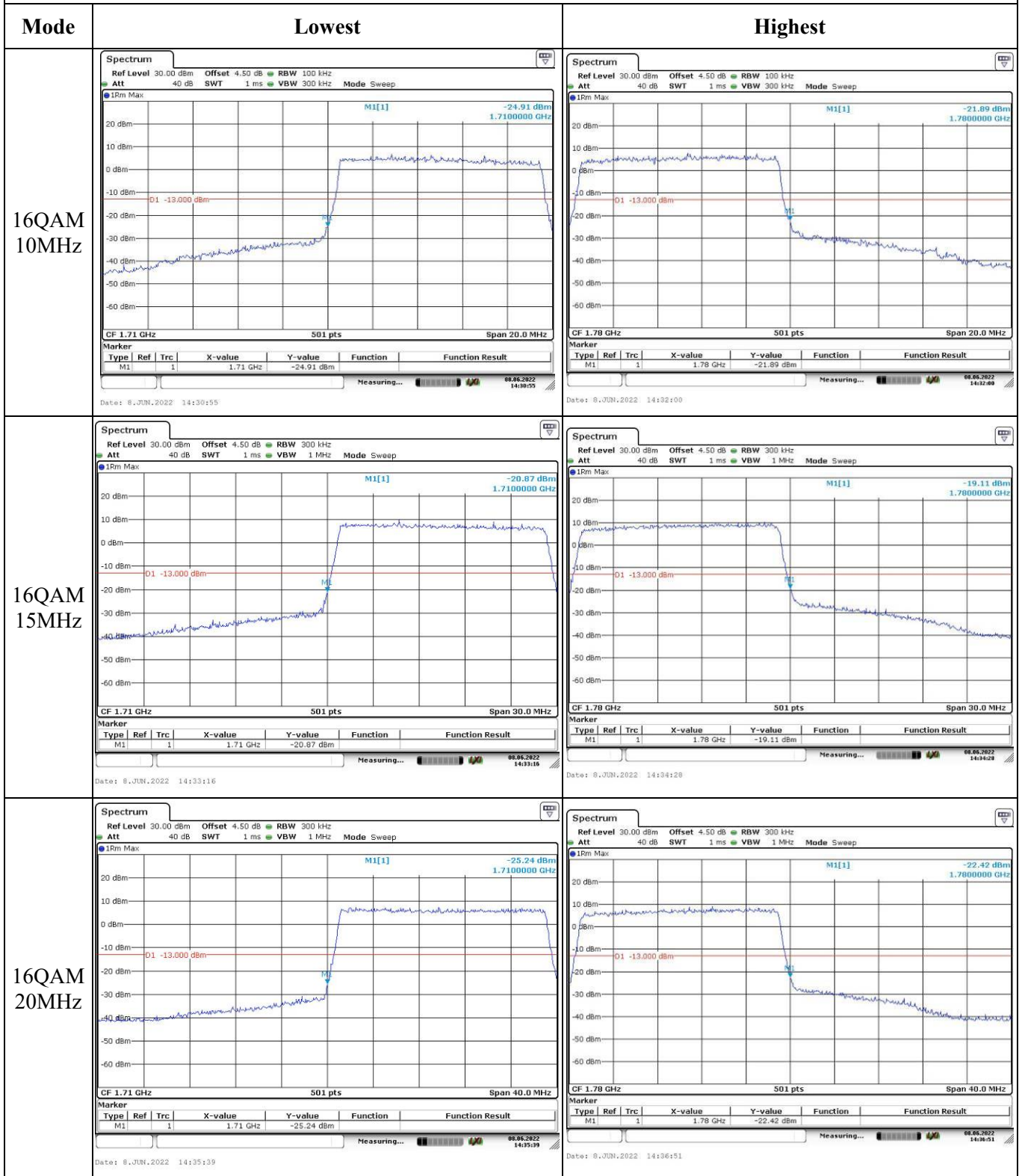


Out of band emission, Band Edge



4.11 Antenna Port Test Data and Results for LTE Band 71:

Serial Number:	CR22050037-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
----------------------	----	---------------------------	----	------------------------	-------

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 _{DC}):					
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:

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		
5MHz QPSK	RB1#0	22.73	22.69	22.88	19.41	34.77
	RB1#13	22.90	22.66	22.90		
	RB1#24	22.71	22.80	22.94		
	RB15#0	21.78	21.80	21.93		
	RB15#10	21.86	21.82	21.95		
	RB25#0	21.94	21.88	21.96		
5MHz 16QAM	RB1#0	21.77	21.88	21.93	18.53	34.77
	RB1#13	21.93	21.74	21.81		
	RB1#24	21.77	21.88	22.06		
	RB15#0	20.78	20.88	20.88		
	RB15#10	20.82	20.85	20.90		
	RB25#0	20.81	20.97	20.98		
10MHz QPSK	RB1#0	23.06	22.80	23.03	19.53	34.77
	RB1#25	23.02	22.93	23.00		
	RB1#49	22.96	22.90	23.05		
	RB25#0	21.98	21.91	21.94		
	RB25#25	21.92	21.83	22.06		
	RB50#0	21.98	21.96	22.00		
10MHz 16QAM	RB1#0	21.89	21.95	22.07	18.57	34.77
	RB1#25	22.03	21.88	22.02		
	RB1#49	21.81	21.77	22.10		
	RB25#0	20.96	20.91	20.87		
	RB25#25	20.95	20.81	20.97		
	RB50#0	20.97	20.86	20.94		
15MHz QPSK	RB1#0	23.02	22.83	22.77	19.53	34.77
	RB1#38	23.06	22.72	22.73		
	RB1#74	23.01	22.87	22.83		
	RB36#0	21.92	21.79	21.77		
	RB36#39	22.05	21.83	22.01		
	RB75#0	21.96	21.89	21.87		
15MHz 16QAM	RB1#0	21.85	21.66	21.83	18.5	34.77
	RB1#38	21.62	21.66	21.62		
	RB1#74	22.03	21.78	21.99		
	RB36#0	20.93	20.77	20.76		
	RB36#39	20.91	20.87	21.00		
	RB75#0	20.93	20.83	20.90		
20MHz QPSK	RB1#0	22.75	22.89	22.66	19.47	34.77
	RB1#50	22.82	23.00	22.82		
	RB1#99	22.73	22.99	22.77		

	RB50#0	21.77	21.78	21.67		
	RB50#50	21.88	21.77	21.93		
	RB100#0	21.84	21.74	21.82		
20MHz 16QAM	RB1#0	21.82	21.37	21.60	18.41	34.77
	RB1#50	21.94	21.61	21.89		
	RB1#99	21.78	21.59	21.75		
	RB50#0	20.81	20.79	20.68		
	RB50#50	20.79	20.92	20.99		
	RB100#0	20.95	20.85	20.83		
Note: ERP=Conducted Power(dBm) - Cable loss(dB) + Antenna Gain(dBd)						
					Result:	Pass

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	4.12	4.61	4.35	13	
	RB100#0	4.49	4.46	4.64	13	
20MHz 16QAM	RB1#0	5.16	5.57	5.36	13	
	RB100#0	5.57	5.65	5.80	13	
					Result:	Pass

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
5MHz QPSK	4.511	4.491	4.511	5.000	5.020	5.020
5MHz 16QAM	4.491	4.491	4.511	5.020	5.020	5.020
10MHz QPSK	8.901	8.901	8.862	9.560	9.640	9.600
10MHz 16QAM	8.901	8.901	8.901	9.640	9.560	9.640
15MHz QPSK	13.473	13.353	13.473	14.760	14.520	14.580
15MHz 16QAM	13.533	13.293	13.413	14.820	14.520	14.580
20MHz QPSK	17.884	17.804	18.044	19.280	19.200	19.520
20MHz 16QAM	17.884	17.804	18.044	19.440	19.120	19.360
Note: The test plots please refer to the Plots of Occupied Bandwidth						

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

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

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

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

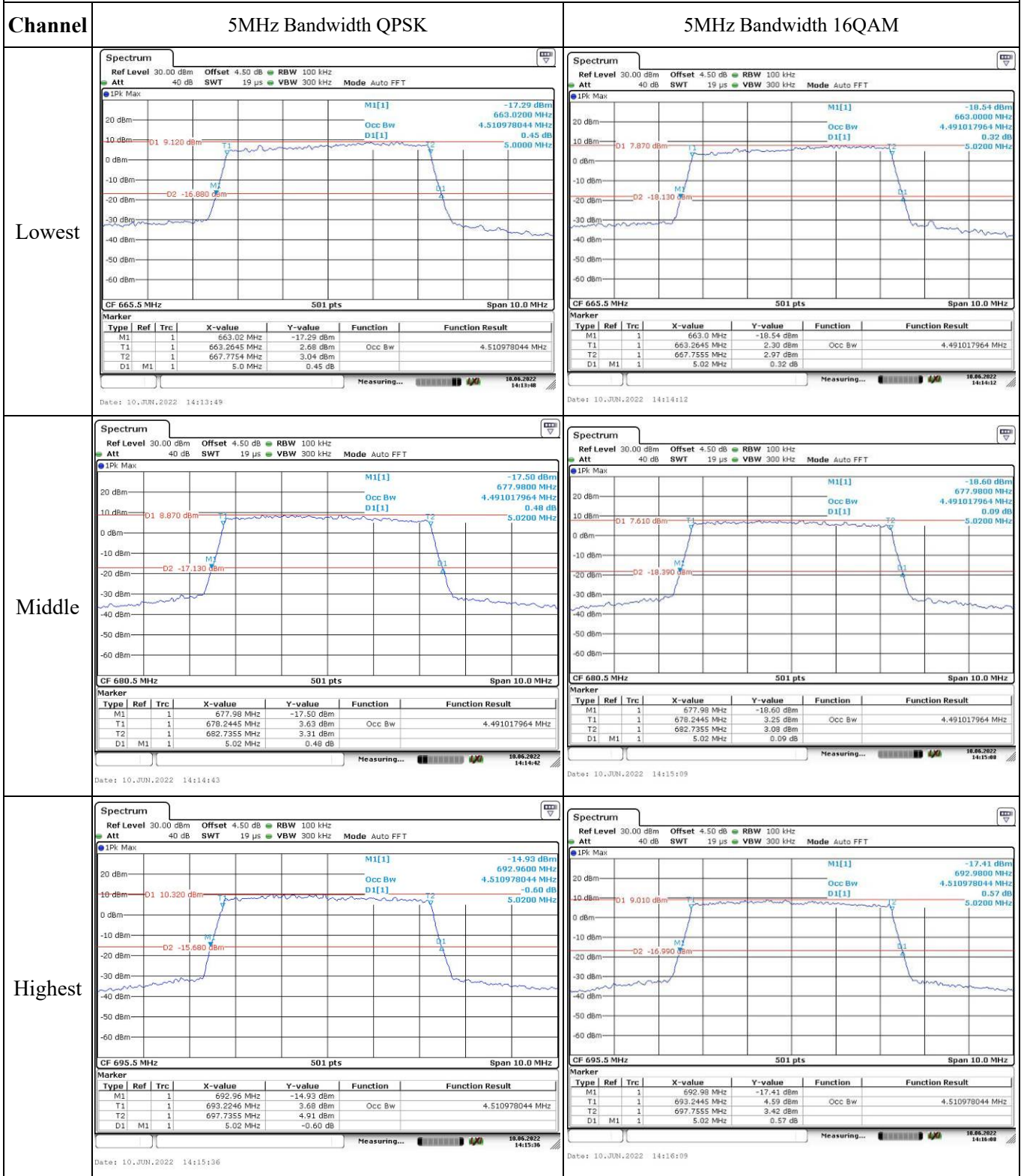
FCC §2.1055, §27.54: Frequency Stability

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	13.8	663.145	663.00	697.922	698.00
	-20	13.8	663.150	663.00	697.922	698.00
	-10	13.8	663.148	663.00	697.916	698.00
	0	13.8	663.146	663.00	697.917	698.00
	10	13.8	663.145	663.00	697.925	698.00
	20	13.8	663.143	663.00	697.915	698.00
	30	13.8	663.147	663.00	697.915	698.00
	40	13.8	663.151	663.00	697.915	698.00
Frequency Stability vs. Voltage	20	10.8	663.144	663.00	697.920	698.00
	20	36	663.148	663.00	697.924	698.00
Result:					Pass	

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	13.8	663.092	663.00	697.981	698.00
	-20	13.8	663.090	663.00	697.973	698.00
	-10	13.8	663.086	663.00	697.983	698.00
	0	13.8	663.091	663.00	697.977	698.00
	10	13.8	663.091	663.00	697.975	698.00
	20	13.8	663.085	663.00	697.973	698.00
	30	13.8	663.089	663.00	697.974	698.00
	40	13.8	663.098	663.00	697.979	698.00
Frequency Stability vs. Voltage	20	10.8	663.097	663.00	697.974	698.00
	20	36	663.093	663.00	697.981	698.00
Result:					Pass	

Test Plots:

Occupied Bandwidth



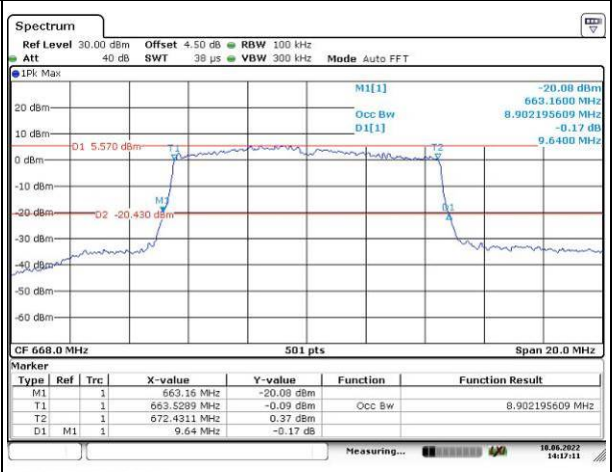
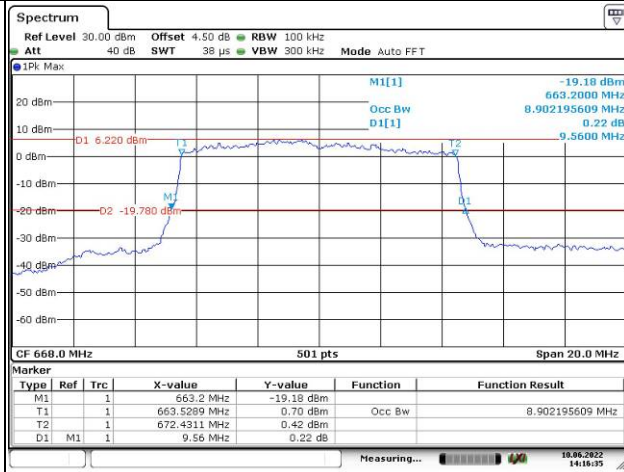
Occupied Bandwidth

Channel

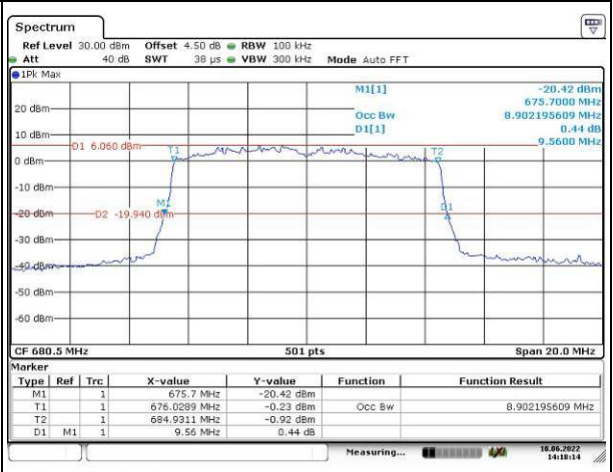
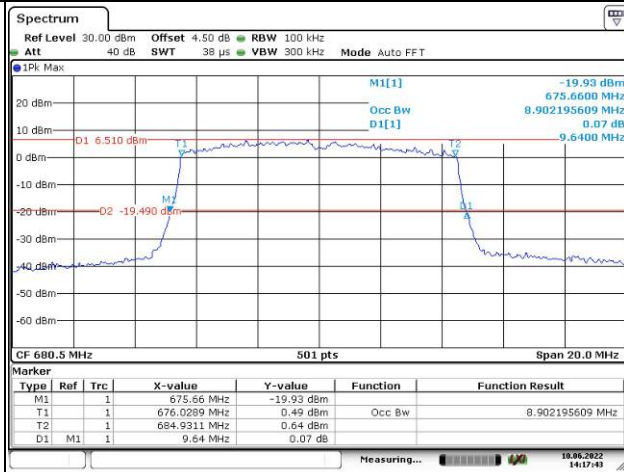
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

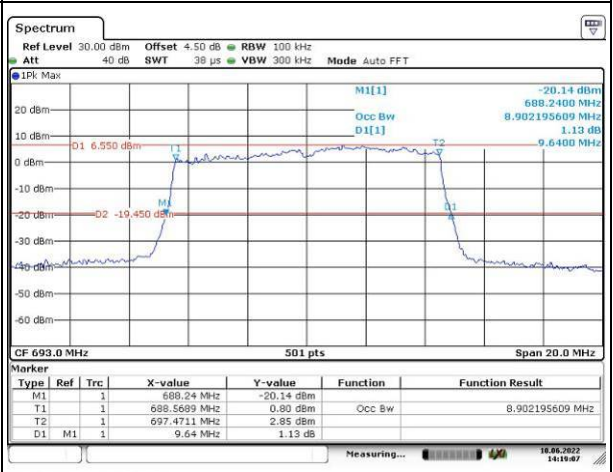
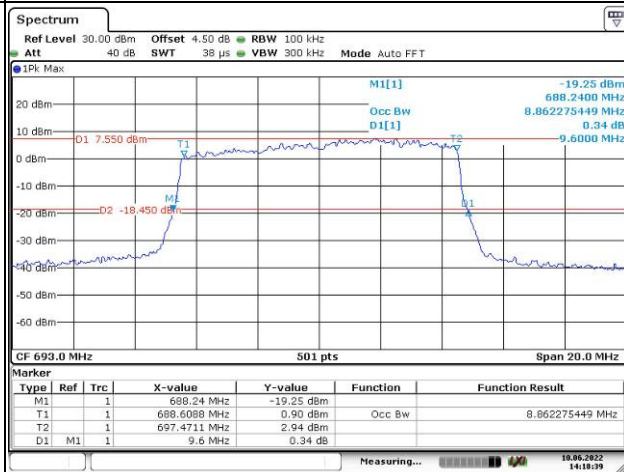
Lowest



Middle



Highest



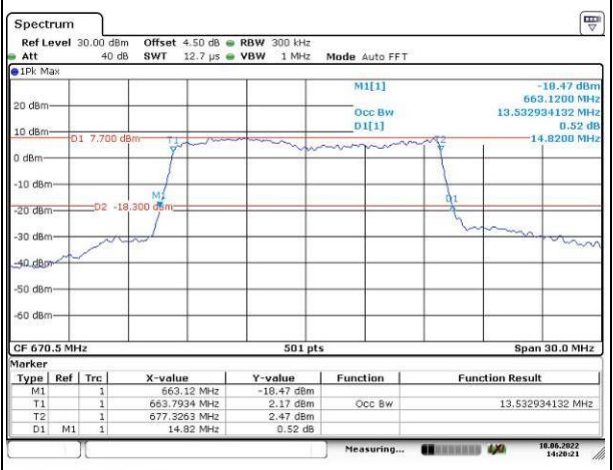
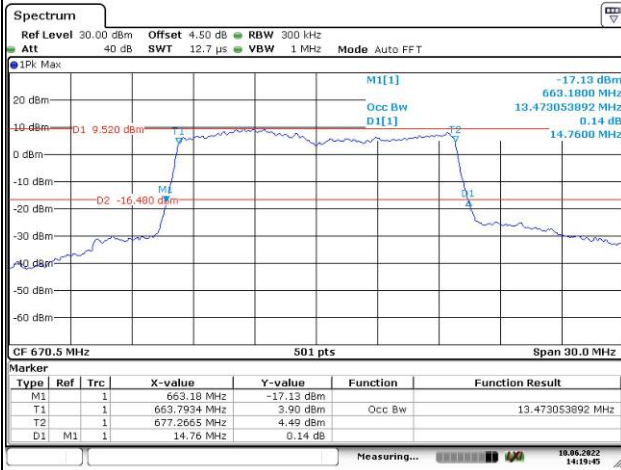
Occupied Bandwidth

Channel

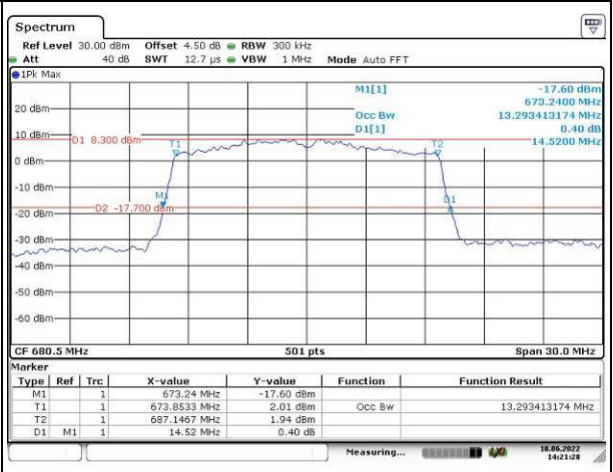
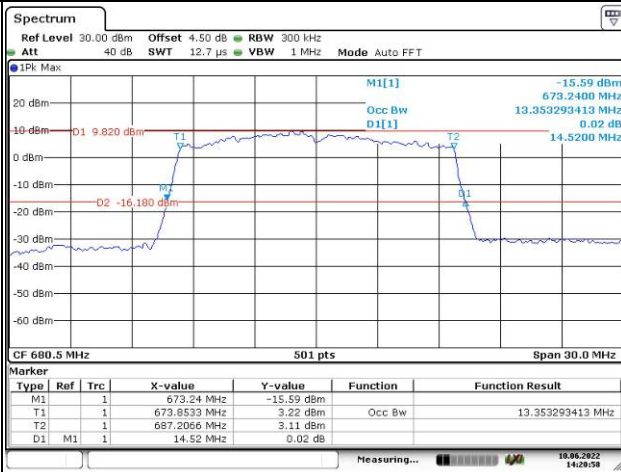
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

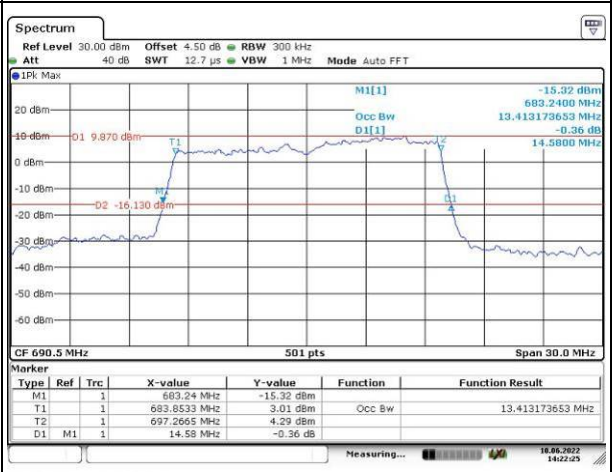
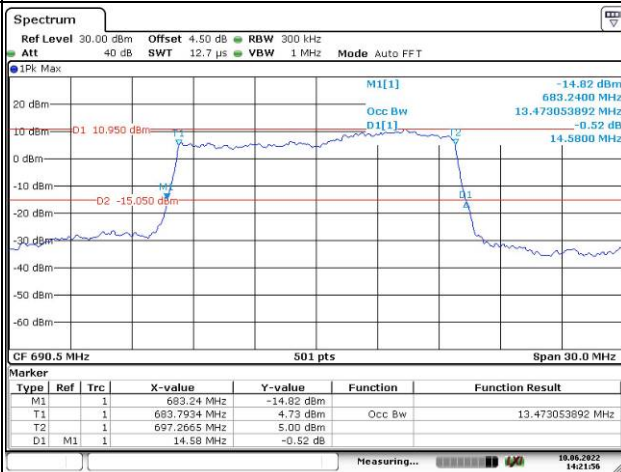
Lowest



Middle



Highest



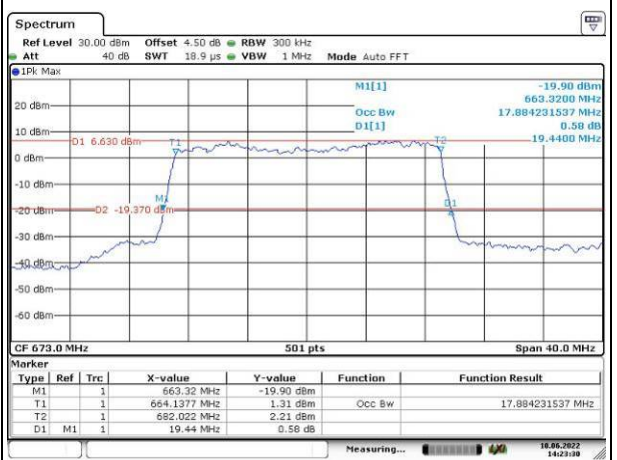
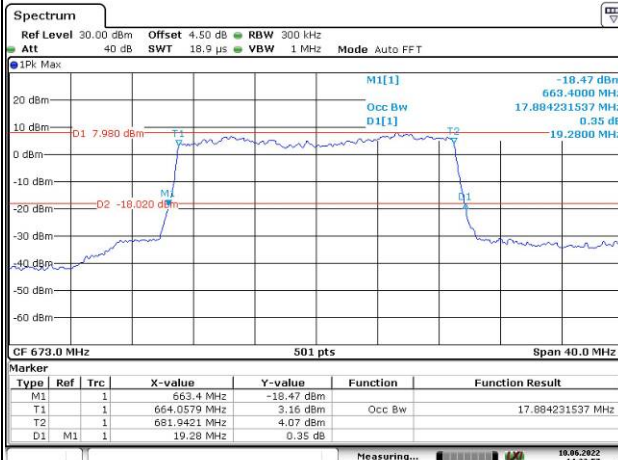
Occupied Bandwidth

Channel

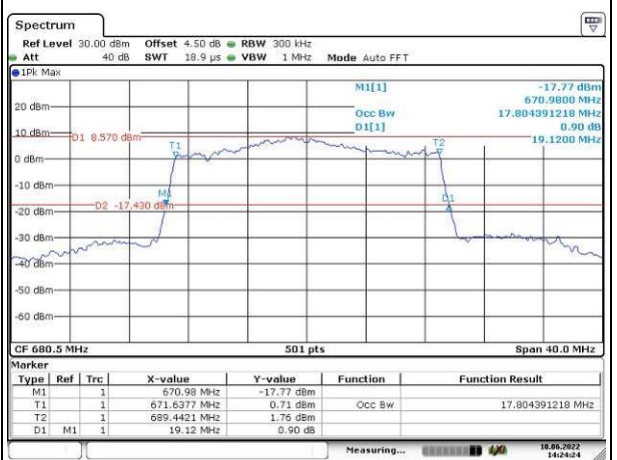
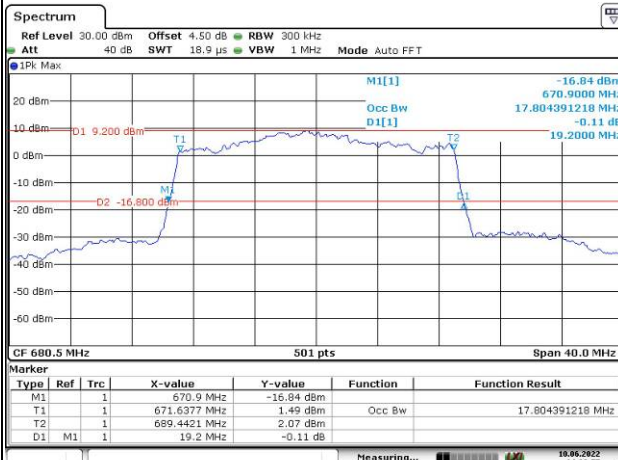
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

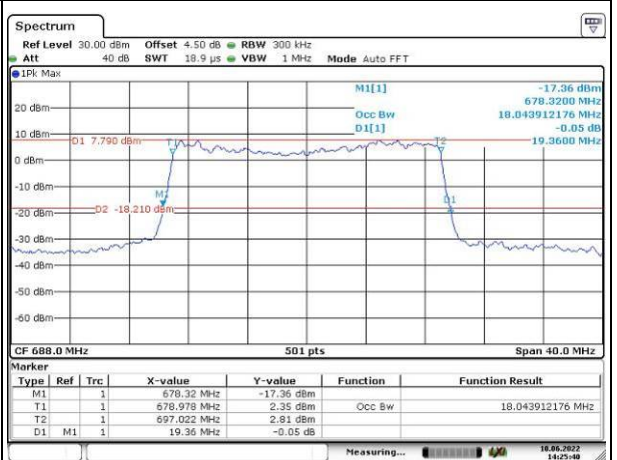
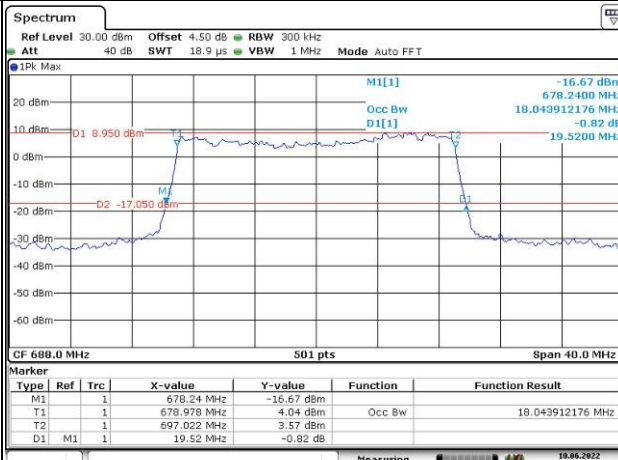
Lowest



Middle



Highest

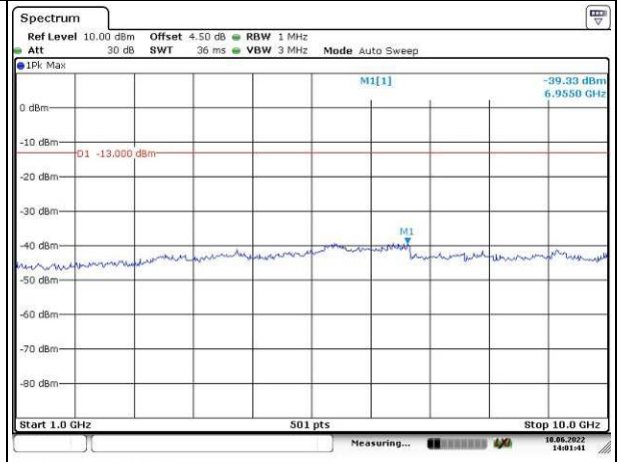
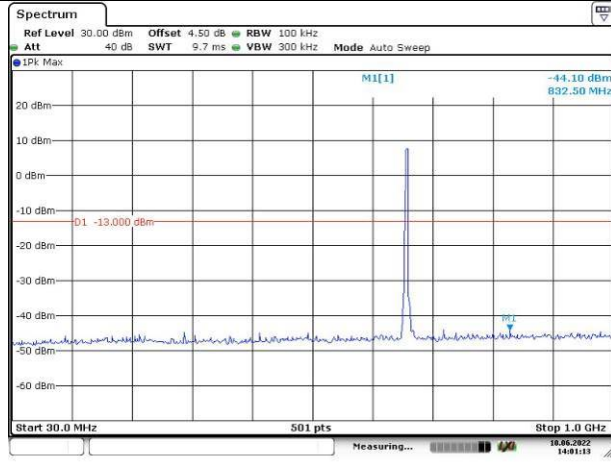


Spurious Emissions at Antenna Terminal

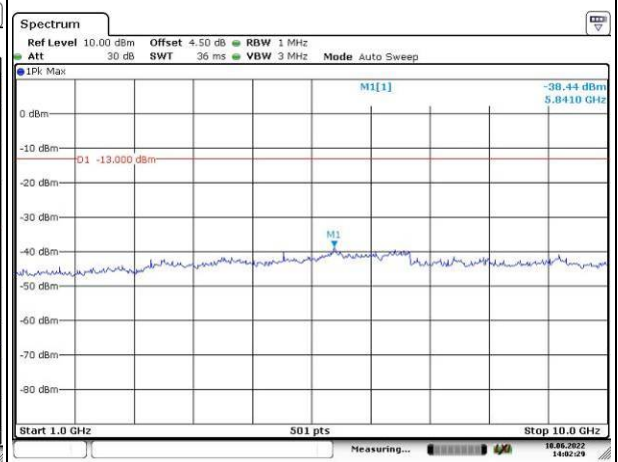
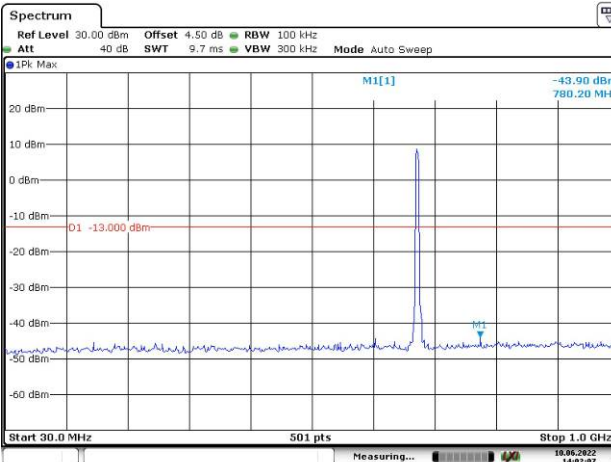
Channel

5MHz Bandwidth QPSK

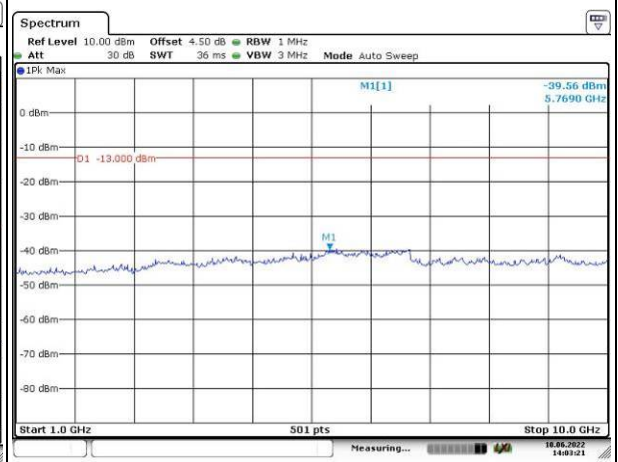
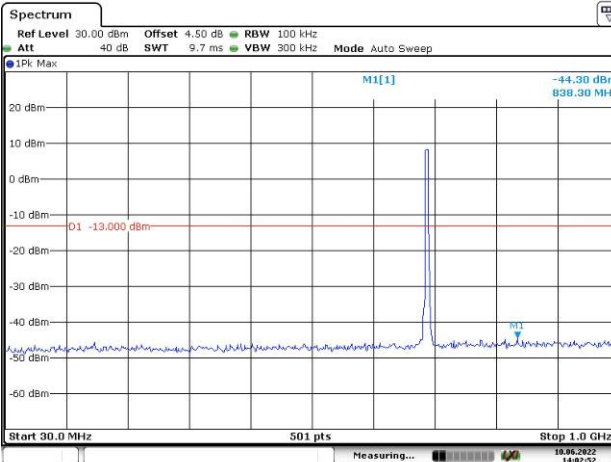
Lowest



Middle



Highest

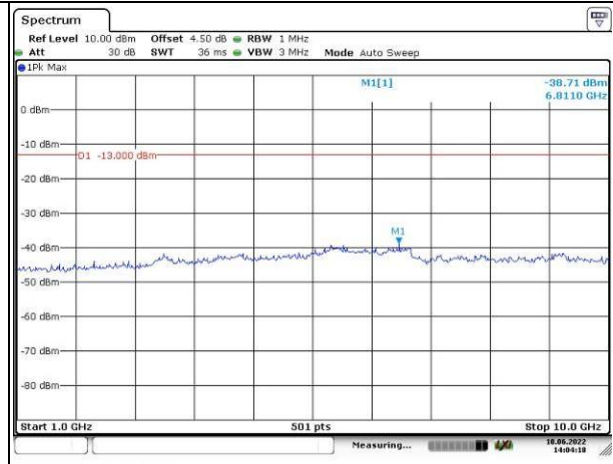
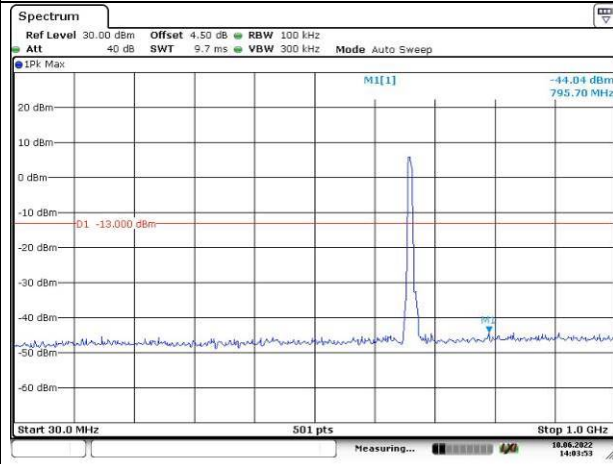


Spurious Emissions at Antenna Terminal

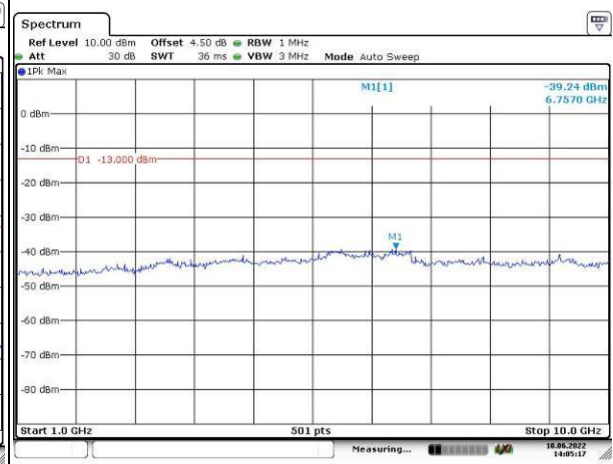
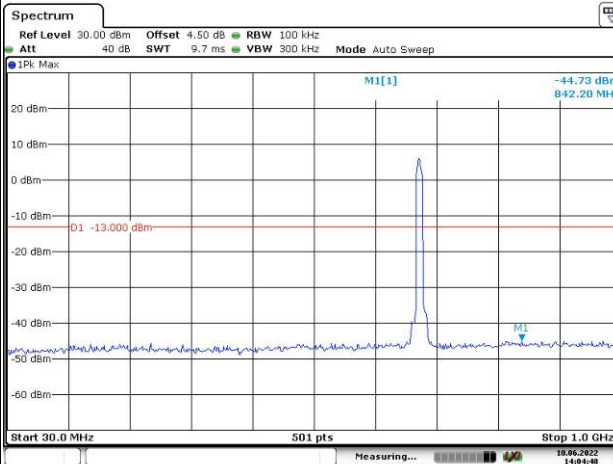
Channel

10MHz Bandwidth QPSK

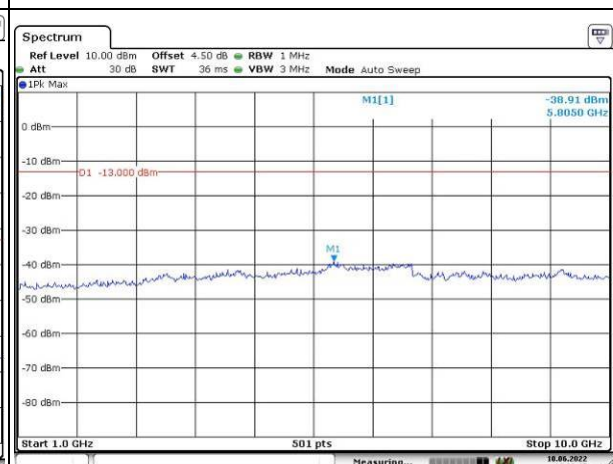
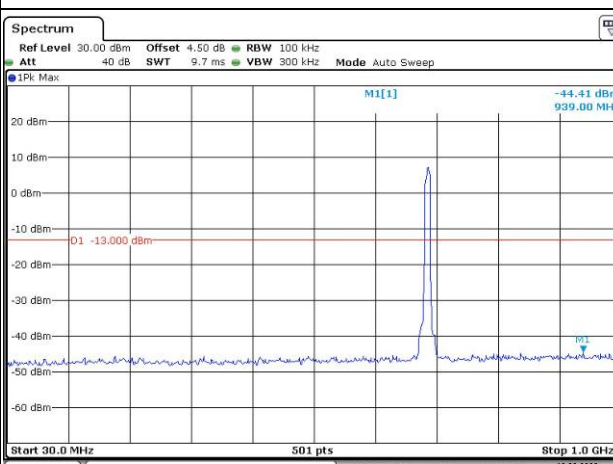
Lowest



Middle



Highest

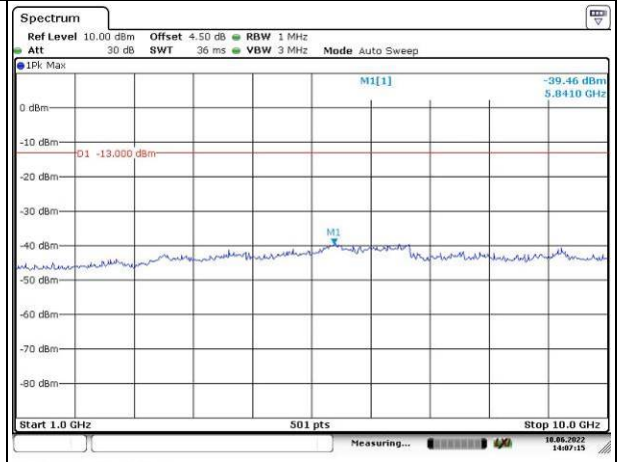
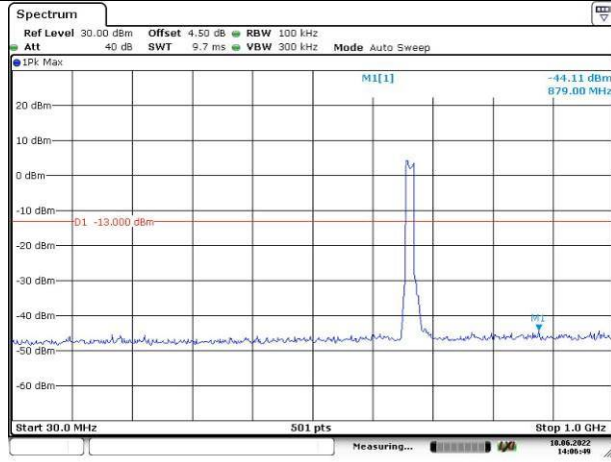


Spurious Emissions at Antenna Terminal

Channel

15MHz Bandwidth QPSK

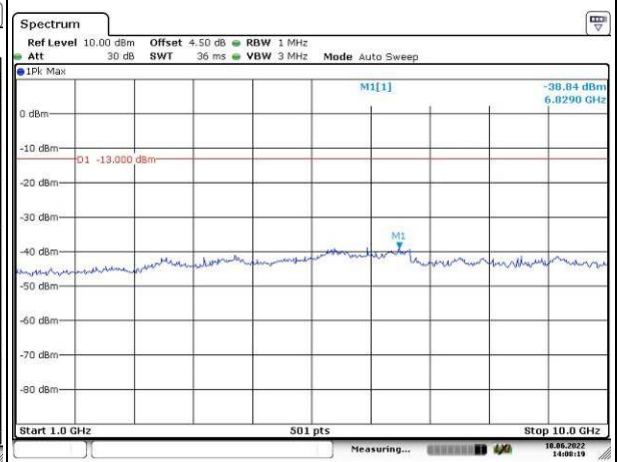
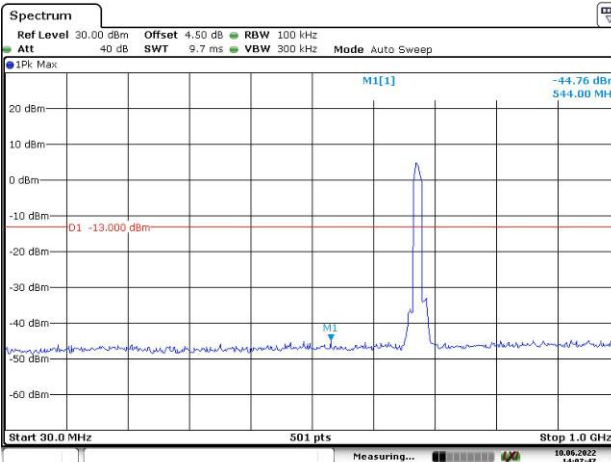
Lowest



Date: 10 JUN 2022 14:06:58

Date: 10 JUN 2022 14:07:15

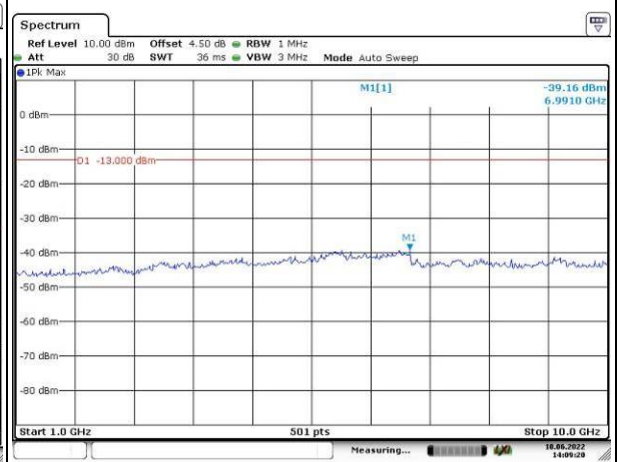
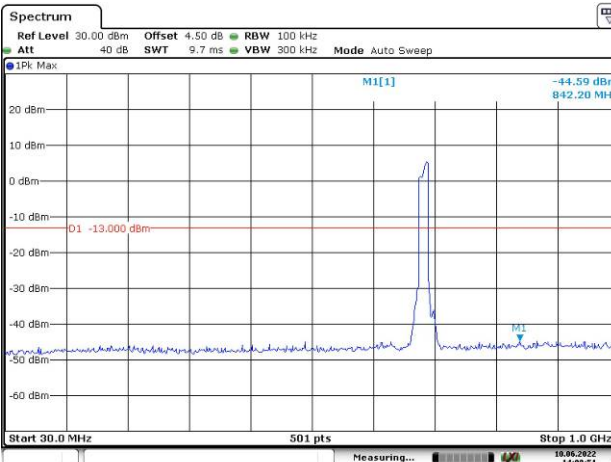
Middle



Date: 10 JUN 2022 14:07:48

Date: 10 JUN 2022 14:08:19

Highest



Date: 10 JUN 2022 14:08:52

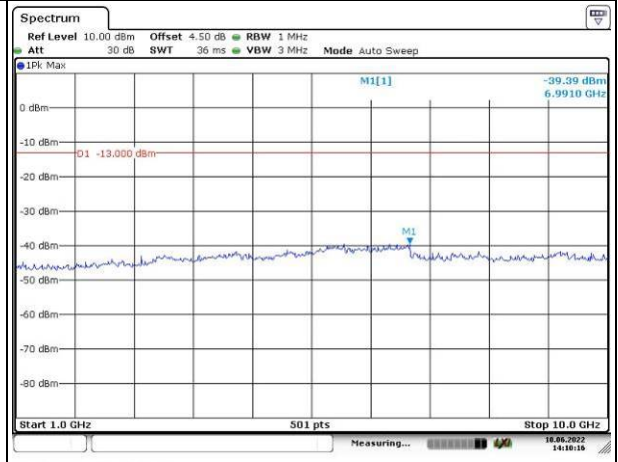
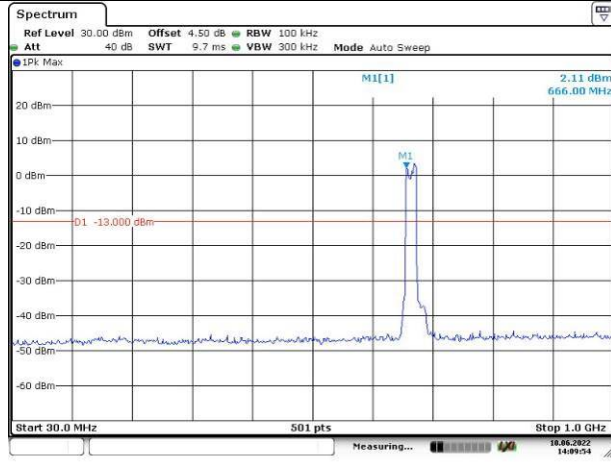
Date: 10 JUN 2022 14:09:20

Spurious Emissions at Antenna Terminal

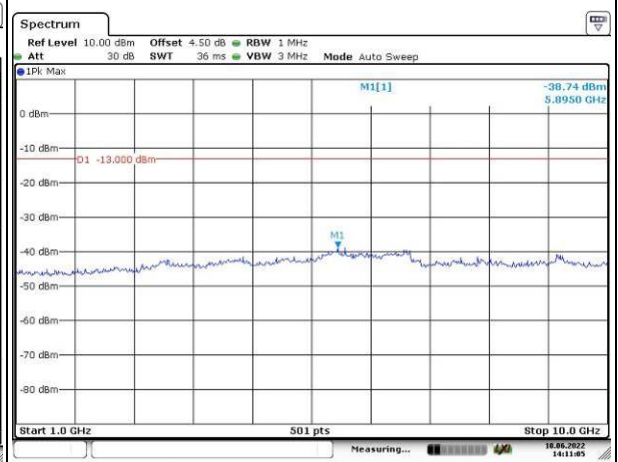
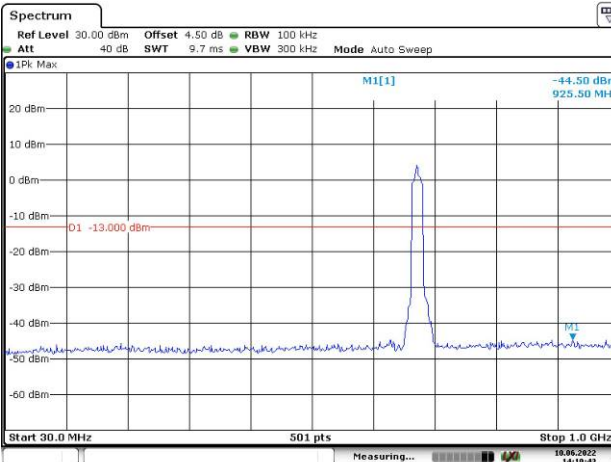
Channel

20MHz Bandwidth QPSK

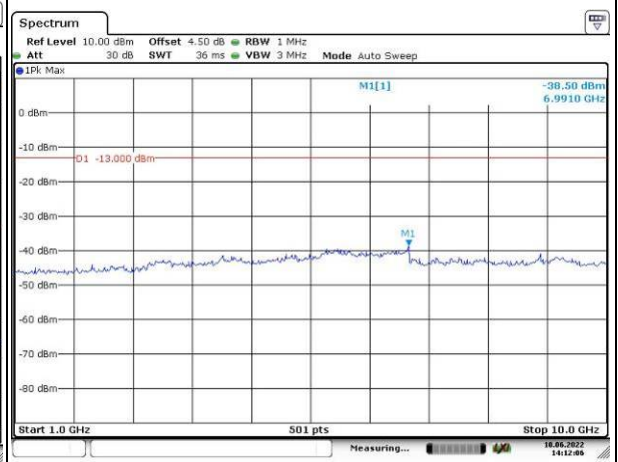
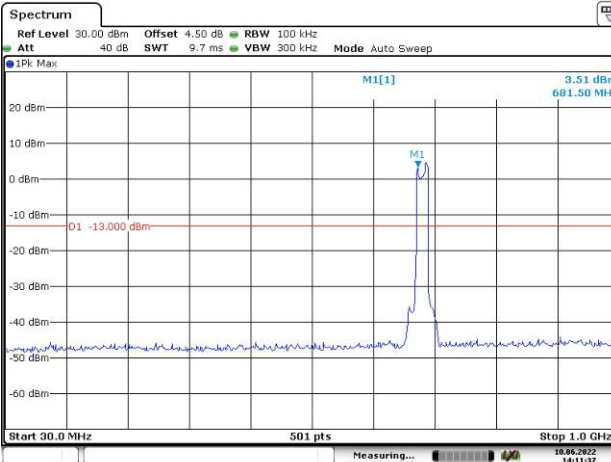
Lowest



Middle



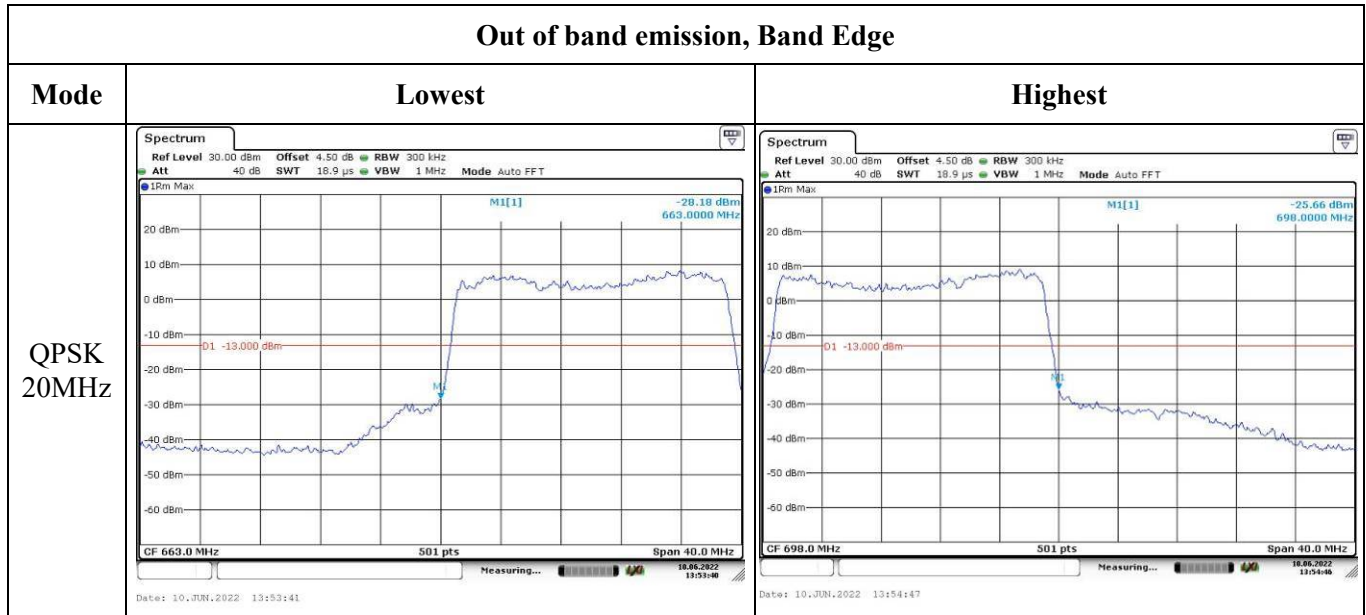
Highest



Out of band emission, Band Edge

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

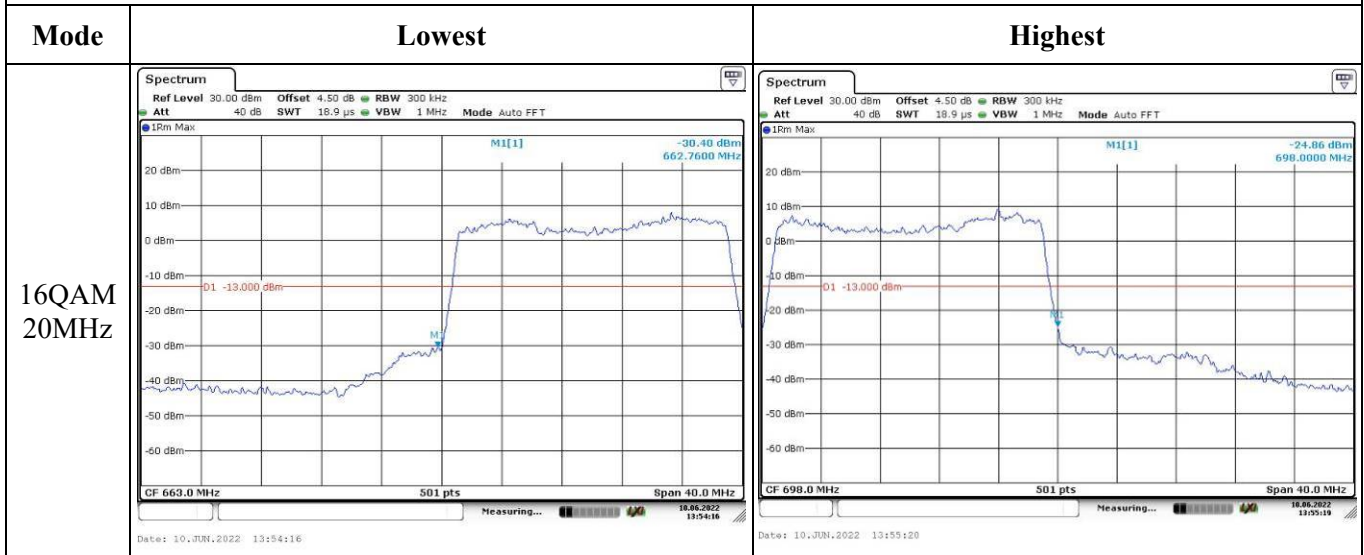
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz		
16QAM 10MHz		
16QAM 15MHz		

Out of band emission, Band Edge



4.12 Spurious Emissions

Serial Number:	CR2205037-RF-S1	Test Date:	2022-06-08~2022-6-19
Test Site:	966-2, 966-1	Test Mode:	Transmit
Tester:	Carl Liang, Nick Tang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23.7~27.5	Relative Humidity: (%)	63~64	ATM Pressure: (kPa)	100.0~100.3
----------------------	-----------	---------------------------	-------	------------------------	-------------

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	Preamplifier	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.

Test Data:**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								
1652.80	H	36.73	-67.60	8.68	0.81	-59.73	-13.00	46.73
1652.80	V	37.75	-66.66	8.68	0.81	-58.79	-13.00	45.79
2479.20	H	35.69	-65.07	9.39	1.01	-56.69	-13.00	43.69
2479.20	V	36.27	-64.46	9.39	1.01	-56.08	-13.00	43.08
3305.60	H	35.12	-61.61	10.32	1.15	-52.44	-13.00	39.44
3305.60	V	36.15	-60.35	10.32	1.15	-51.18	-13.00	38.18
189.41	H	58.01	-54.67	0.00	0.26	-54.93	-13.00	41.93
80.87	V	61.31	-47.34	0.00	0.16	-47.50	-13.00	34.50
WCDMA Band 5 Frequency:836.6MHz								
1673.20	H	36.68	-67.63	8.71	0.85	-59.77	-13.00	46.77
1673.20	V	40.50	-63.91	8.71	0.85	-56.05	-13.00	43.05
2509.80	H	35.87	-64.74	9.42	1.01	-56.33	-13.00	43.33
2509.80	V	37.89	-62.73	9.42	1.01	-54.32	-13.00	41.32
3346.40	H	36.03	-61.14	10.34	1.16	-51.96	-13.00	38.96
3346.40	V	35.45	-61.58	10.34	1.16	-52.40	-13.00	39.40
189.41	H	57.87	-54.81	0.00	0.26	-55.07	-13.00	42.07
81.84	V	61.20	-47.52	0.00	0.16	-47.68	-13.00	34.68
WCDMA Band 5 Frequency:846.6MHz								
1693.20	H	47.54	-56.76	8.73	0.89	-48.92	-13.00	35.92
1693.20	V	45.59	-58.83	8.73	0.89	-50.99	-13.00	37.99
2539.80	H	34.97	-65.41	9.46	1.01	-56.96	-13.00	43.96
2539.80	V	37.20	-63.14	9.46	1.01	-54.69	-13.00	41.69
3386.40	H	35.46	-62.13	10.35	1.18	-52.96	-13.00	39.96
3386.40	V	35.50	-62.04	10.35	1.18	-52.87	-13.00	39.87
189.41	H	58.85	-53.83	0.00	0.26	-54.09	-13.00	41.09
81.84	V	60.28	-48.44	0.00	0.16	-48.60	-13.00	35.60

PCS Band (PART 24E)

30 MHz-20 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	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								
3704.80	H	35.38	-61.88	10.60	1.25	-52.53	-13.00	39.53
3704.80	V	35.23	-62.00	10.60	1.25	-52.65	-13.00	39.65
5557.20	H	34.92	-58.36	11.43	1.49	-48.42	-13.00	35.42
5557.20	V	35.51	-57.62	11.43	1.49	-47.68	-13.00	34.68
189.41	H	57.86	-54.82	0.00	0.26	-55.08	-13.00	42.08
81.84	V	60.39	-48.33	0.00	0.16	-48.49	-13.00	35.49
WCDMA Band II, Frequency:1880 MHz								
3760.00	H	34.20	-62.21	10.66	1.24	-52.79	-13.00	39.79
3760.00	V	35.15	-61.14	10.66	1.24	-51.72	-13.00	38.72
5640.00	H	34.61	-58.84	11.33	1.54	-49.05	-13.00	36.05
5640.00	V	35.22	-58.11	11.33	1.54	-48.32	-13.00	35.32
189.41	H	57.69	-54.99	0.00	0.26	-55.25	-13.00	42.25
80.87	V	61.34	-47.31	0.00	0.16	-47.47	-13.00	34.47
WCDMA Band II, Frequency:1907.6MHz								
3815.20	H	40.31	-55.54	10.72	1.29	-46.11	-13.00	33.11
3815.20	V	35.95	-59.74	10.72	1.29	-50.31	-13.00	37.31
5722.80	H	34.19	-59.30	11.23	1.58	-49.65	-13.00	36.65
5722.80	V	34.95	-58.40	11.23	1.58	-48.75	-13.00	35.75
189.41	H	58.58	-54.10	0.00	0.26	-54.36	-13.00	41.36
81.84	V	61.35	-47.37	0.00	0.16	-47.53	-13.00	34.53

AWS Band (PART 27)

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	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								
3424.80	H	35.85	-61.92	10.37	1.17	-52.72	-13.00	39.72
3424.80	V	35.85	-61.89	10.37	1.17	-52.69	-13.00	39.69
5137.20	H	34.29	-59.33	11.28	1.46	-49.51	-13.00	36.51
5137.20	V	34.74	-58.76	11.28	1.46	-48.94	-13.00	35.94
189.41	H	58.24	-54.44	0.00	0.26	-54.70	-13.00	41.70
81.84	V	61.88	-46.84	0.00	0.16	-47.00	-13.00	34.00
WCDMA Band IV, Frequency:1732.6 MHz								
3465.20	H	35.93	-61.88	10.39	1.15	-52.64	-13.00	39.64
3465.20	V	35.65	-62.12	10.39	1.15	-52.88	-13.00	39.88
5197.80	H	35.18	-58.95	11.32	1.44	-49.07	-13.00	36.07
5197.80	V	34.47	-59.51	11.32	1.44	-49.63	-13.00	36.63
189.41	H	58.36	-54.32	0.00	0.26	-54.58	-13.00	41.58
80.87	V	61.33	-47.32	0.00	0.16	-47.48	-13.00	34.48
WCDMA Band IV, Frequency:1752.6MHz								
3505.20	H	35.51	-62.32	10.41	1.18	-53.09	-13.00	40.09
3505.20	V	37.89	-59.88	10.41	1.18	-50.65	-13.00	37.65
5257.80	H	34.39	-59.34	11.35	1.47	-49.46	-13.00	36.46
5257.80	V	35.38	-58.13	11.35	1.47	-48.25	-13.00	35.25
189.41	H	57.63	-55.05	0.00	0.26	-55.31	-13.00	42.31
80.87	V	60.13	-48.52	0.00	0.16	-48.68	-13.00	35.68

LTE Band 2 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1850.7 MHz								
3701.40	H	37.48	-59.83	10.60	1.25	-50.48	-13.00	37.48
3701.40	V	42.09	-55.20	10.60	1.25	-45.85	-13.00	32.85
5552.10	H	37.74	-55.53	11.44	1.49	-45.58	-13.00	32.58
5552.10	V	40.56	-52.54	11.44	1.49	-42.59	-13.00	29.59
189.41	H	57.56	-55.12	0.00	0.26	-55.38	-13.00	42.38
81.84	V	60.11	-48.61	0.00	0.16	-48.77	-13.00	35.77
QPSK, Frequency: 1880 MHz								
3760.00	H	39.97	-56.44	10.66	1.24	-47.02	-13.00	34.02
3760.00	V	38.67	-57.62	10.66	1.24	-48.20	-13.00	35.20
5640.00	H	35.51	-57.94	11.33	1.54	-48.15	-13.00	35.15
5640.00	V	35.48	-57.85	11.33	1.54	-48.06	-13.00	35.06
188.44	H	58.58	-54.08	0.00	0.26	-54.34	-13.00	41.34
81.84	V	60.38	-48.34	0.00	0.16	-48.50	-13.00	35.50
QPSK, Frequency: 1909.3 MHz								
3818.60	H	37.14	-58.72	10.72	1.29	-49.29	-13.00	36.29
3818.60	V	37.97	-57.74	10.72	1.29	-48.31	-13.00	35.31
5727.90	H	36.76	-56.72	11.23	1.59	-47.08	-13.00	34.08
5727.90	V	37.60	-55.76	11.23	1.59	-46.12	-13.00	33.12
188.44	H	57.68	-54.98	0.00	0.26	-55.24	-13.00	42.24
81.84	V	61.25	-47.47	0.00	0.16	-47.63	-13.00	34.63

LTE Band 4 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
3421.40	H	36.10	-61.66	10.37	1.17	-52.46	-13.00	39.46
3421.40	V	36.07	-61.66	10.37	1.17	-52.46	-13.00	39.46
5132.10	H	34.71	-58.86	11.28	1.47	-49.05	-13.00	36.05
5132.10	V	35.08	-58.38	11.28	1.47	-48.57	-13.00	35.57
188.44	H	57.12	-55.54	0.00	0.26	-55.80	-13.00	42.80
81.84	V	60.36	-48.36	0.00	0.16	-48.52	-13.00	35.52
QPSK, Frequency: 1732.5 MHz								
3465.00	H	36.09	-61.72	10.39	1.15	-52.48	-13.00	39.48
3465.00	V	35.90	-61.87	10.39	1.15	-52.63	-13.00	39.63
5197.50	H	35.76	-58.37	11.32	1.44	-48.49	-13.00	35.49
5197.50	V	34.79	-59.19	11.32	1.44	-49.31	-13.00	36.31
189.41	H	57.46	-55.22	0.00	0.26	-55.48	-13.00	42.48
81.84	V	59.98	-48.74	0.00	0.16	-48.90	-13.00	35.90
QPSK, Frequency: 1754.3 MHz								
3505.20	H	36.67	-61.16	10.41	1.18	-51.93	-13.00	38.93
3505.20	V	39.08	-58.69	10.41	1.18	-49.46	-13.00	36.46
5257.80	H	34.13	-59.60	11.35	1.47	-49.72	-13.00	36.72
5257.80	V	35.17	-58.34	11.35	1.47	-48.46	-13.00	35.46
190.37	H	59.49	-53.21	0.00	0.26	-53.47	-13.00	40.47
81.84	V	61.28	-47.44	0.00	0.16	-47.60	-13.00	34.60

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								
1649.40	H	45.30	-59.03	8.68	0.80	-51.15	-13.00	38.15
1649.40	V	45.20	-59.21	8.68	0.80	-51.33	-13.00	38.33
2474.10	H	38.59	-62.19	9.38	1.00	-53.81	-13.00	40.81
2474.10	V	40.13	-60.60	9.38	1.00	-52.22	-13.00	39.22
3298.80	H	34.99	-61.69	10.32	1.15	-52.52	-13.00	39.52
3298.80	V	35.79	-60.65	10.32	1.15	-51.48	-13.00	38.48
189.41	H	57.66	-55.02	0.00	0.26	-55.28	-13.00	42.28
80.87	V	60.37	-48.28	0.00	0.16	-48.44	-13.00	35.44
QPSK, Frequency: 836.5 MHz								
1673.00	H	43.05	-61.26	8.71	0.85	-53.40	-13.00	40.40
1673.00	V	43.22	-61.19	8.71	0.85	-53.33	-13.00	40.33
2509.50	H	39.13	-61.48	9.42	1.01	-53.07	-13.00	40.07
2509.50	V	41.49	-59.13	9.42	1.01	-50.72	-13.00	37.72
3346.00	H	36.57	-60.59	10.34	1.16	-51.41	-13.00	38.41
3346.00	V	35.59	-61.43	10.34	1.16	-52.25	-13.00	39.25
189.41	H	57.46	-55.22	0.00	0.26	-55.48	-13.00	42.48
81.84	V	60.13	-48.59	0.00	0.16	-48.75	-13.00	35.75
QPSK, Frequency: 848.3 MHz								
1696.60	H	46.78	-57.51	8.74	0.89	-49.66	-13.00	36.66
1696.60	V	46.88	-57.54	8.74	0.89	-49.69	-13.00	36.69
2544.90	H	37.97	-62.37	9.47	1.01	-53.91	-13.00	40.91
2544.90	V	41.25	-59.05	9.47	1.01	-50.59	-13.00	37.59
3393.20	H	35.14	-62.53	10.36	1.19	-53.36	-13.00	40.36
3393.20	V	36.76	-60.87	10.36	1.19	-51.70	-13.00	38.70
189.41	H	58.12	-54.56	0.00	0.26	-54.82	-13.00	41.82
80.87	V	59.33	-49.32	0.00	0.16	-49.48	-13.00	36.48

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								
1399.40	H	42.91	-60.79	8.22	0.71	-53.28	-13.00	40.28
1399.40	V	46.40	-57.35	8.22	0.71	-49.84	-13.00	36.84
2099.10	H	45.14	-56.74	9.16	0.91	-48.49	-13.00	35.49
2099.10	V	45.47	-56.36	9.16	0.91	-48.11	-13.00	35.11
2798.80	H	37.81	-62.12	9.88	1.04	-53.28	-13.00	40.28
2798.80	V	40.72	-59.08	9.88	1.04	-50.24	-13.00	37.24
188.44	H	58.46	-54.20	0.00	0.26	-54.46	-13.00	41.46
80.87	V	60.61	-48.04	0.00	0.16	-48.20	-13.00	35.20
QPSK, Frequency: 707.5 MHz								
1415.00	H	47.13	-56.54	8.26	0.72	-49.00	-13.00	36.00
1415.00	V	46.56	-57.16	8.26	0.72	-49.62	-13.00	36.62
2122.50	H	43.83	-58.16	9.17	0.92	-49.91	-13.00	36.91
2122.50	V	44.38	-57.59	9.17	0.92	-49.34	-13.00	36.34
2830.00	H	37.10	-62.70	9.93	1.06	-53.83	-13.00	40.83
2830.00	V	42.29	-57.44	9.93	1.06	-48.57	-13.00	35.57
189.41	H	58.66	-54.02	0.00	0.26	-54.28	-13.00	41.28
80.87	V	61.32	-47.33	0.00	0.16	-47.49	-13.00	34.49
QPSK, Frequency: 715.3 MHz								
1430.60	H	46.87	-56.76	8.31	0.73	-49.18	-13.00	36.18
1430.60	V	44.34	-59.35	8.31	0.73	-51.77	-13.00	38.77
2145.90	H	41.71	-60.39	9.19	0.93	-52.13	-13.00	39.13
2145.90	V	41.72	-60.39	9.19	0.93	-52.13	-13.00	39.13
2861.20	H	36.75	-62.90	9.98	1.07	-53.99	-13.00	40.99
2861.20	V	42.44	-57.23	9.98	1.07	-48.32	-13.00	35.32
189.41	H	57.40	-55.28	0.00	0.26	-55.54	-13.00	42.54
80.87	V	59.69	-48.96	0.00	0.16	-49.12	-13.00	36.12

LTE Band 13(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 779.5 MHz								
1559.00	H	38.54	-65.45	8.57	0.80	-57.68	-40.00	17.68
1559.00	V	40.98	-63.07	8.57	0.80	-55.30	-40.00	15.30
2338.50	H	36.09	-65.50	9.30	0.97	-57.17	-13.00	44.17
2338.50	V	35.94	-65.42	9.30	0.97	-57.09	-13.00	44.09
3118.00	H	35.55	-61.94	10.25	1.13	-52.82	-13.00	39.82
3118.00	V	35.64	-61.71	10.25	1.13	-52.59	-13.00	39.59
1569.00	H	38.31	-65.77	8.58	0.81	-58.00	-40.00	18.00
1569.00	V	37.91	-66.22	8.58	0.81	-58.45	-40.00	18.45
QPSK, Frequency: 784.5 MHz								
1569.00	H	38.31	-65.77	8.58	0.81	-58.00	-40.00	18.00
1569.00	V	37.91	-66.22	8.58	0.81	-58.45	-40.00	18.45
2353.50	H	35.11	-66.34	9.31	0.97	-58.00	-13.00	45.00
2353.50	V	35.07	-66.15	9.31	0.97	-57.81	-13.00	44.81
3138.00	H	36.28	-61.12	10.26	1.14	-52.00	-13.00	39.00
3138.00	V	35.58	-61.65	10.26	1.14	-52.53	-13.00	39.53
189.41	H	58.11	-54.57	0.00	0.26	-54.83	-13.00	41.83
81.84	V	59.36	-49.36	0.00	0.16	-49.52	-13.00	36.52

LTE Band 14(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ 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								
1581.00	H	37.86	-66.33	8.60	0.81	-58.54	-40.00	18.54
1581.00	V	39.70	-64.54	8.60	0.81	-56.75	-40.00	16.75
2371.50	H	36.15	-65.15	9.32	0.97	-56.80	-40.00	16.80
2371.50	V	35.36	-65.69	9.32	0.97	-57.34	-40.00	17.34
3162.00	H	36.12	-61.17	10.26	1.13	-52.04	-40.00	12.04
3162.00	V	35.08	-62.01	10.26	1.13	-52.88	-40.00	12.88
188.44	H	57.37	-55.29	0.00	0.26	-55.55	-40.00	15.55
80.87	V	61.03	-47.62	0.00	0.16	-47.78	-40.00	7.78
QPSK, Frequency: 795.5 MHz								
1591.00	H	36.96	-67.33	8.61	0.82	-59.54	-40.00	19.54
1591.00	V	36.50	-67.82	8.61	0.82	-60.03	-40.00	20.03
2386.50	H	35.27	-65.90	9.33	0.98	-57.55	-40.00	17.55
2386.50	V	36.03	-64.88	9.33	0.98	-56.53	-40.00	16.53
3182.00	H	35.48	-61.72	10.27	1.12	-52.57	-40.00	12.57
3182.00	V	36.11	-60.86	10.27	1.12	-51.71	-40.00	11.71
188.44	H	58.58	-54.08	0.00	0.26	-54.34	-40.00	14.34
80.87	V	61.10	-47.55	0.00	0.16	-47.71	-40.00	7.71

LTE Band 66(30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
3421.40	H	35.33	-62.43	10.37	1.17	-53.23	-13.00	40.23
3421.40	V	35.34	-62.39	10.37	1.17	-53.19	-13.00	40.19
5132.10	H	34.25	-59.32	11.28	1.47	-49.51	-13.00	36.51
5132.10	V	36.24	-57.22	11.28	1.47	-47.41	-13.00	34.41
188.44	H	58.03	-54.63	0.00	0.26	-54.89	-13.00	41.89
80.87	V	60.33	-48.32	0.00	0.16	-48.48	-13.00	35.48
QPSK, Frequency:1745 MHz								
3490.00	H	35.11	-62.73	10.40	1.17	-53.50	-13.00	40.50
3490.00	V	35.91	-61.87	10.40	1.17	-52.64	-13.00	39.64
5235.00	H	34.57	-59.33	11.34	1.46	-49.45	-13.00	36.45
5235.00	V	35.48	-58.23	11.34	1.46	-48.35	-13.00	35.35
188.44	H	57.24	-55.42	0.00	0.26	-55.68	-13.00	42.68
80.87	V	61.01	-47.64	0.00	0.16	-47.80	-13.00	34.80
QPSK, Frequency: 1779.3 MHz								
3558.60	H	35.31	-62.36	10.46	1.22	-53.12	-13.00	40.12
3558.60	V	39.04	-58.53	10.46	1.22	-49.29	-13.00	36.29
5337.90	H	34.67	-58.80	11.40	1.47	-48.87	-13.00	35.87
5337.90	V	34.13	-59.20	11.40	1.47	-49.27	-13.00	36.27
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

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								
1331.00	H	42.50	-60.53	8.03	0.76	-53.26	-13.00	40.26
1331.00	V	45.81	-57.55	8.03	0.76	-50.28	-13.00	37.28
1996.50	H	37.19	-64.97	9.10	0.89	-56.76	-13.00	43.76
1996.50	V	35.80	-65.74	9.10	0.89	-57.53	-13.00	44.53
2662.00	H	35.81	-64.15	9.66	1.06	-55.55	-13.00	42.55
2662.00	V	35.39	-64.49	9.66	1.06	-55.89	-13.00	42.89
189.41	H	58.94	-53.74	0.00	0.26	-54.00	-13.00	41.00
80.87	V	61.66	-46.99	0.00	0.16	-47.15	-13.00	34.15
QPSK, Frequency:680.5 MHz								
1361.00	H	36.93	-66.40	8.11	0.77	-59.06	-13.00	46.06
1361.00	V	37.54	-65.99	8.11	0.77	-58.65	-13.00	45.65
2041.50	H	40.16	-61.87	9.12	0.91	-53.66	-13.00	40.66
2041.50	V	39.61	-62.03	9.12	0.91	-53.82	-13.00	40.82
2722.00	H	35.57	-64.40	9.76	1.05	-55.69	-13.00	42.69
2722.00	V	35.69	-64.22	9.76	1.05	-55.51	-13.00	42.51
189.41	H	58.45	-54.23	0.00	0.26	-54.49	-13.00	41.49
81.84	V	61.45	-47.27	0.00	0.16	-47.43	-13.00	34.43
QPSK, Frequency: 695.5 MHz								
1391.00	H	37.31	-66.31	8.19	0.72	-58.84	-13.00	45.84
1391.00	V	37.11	-66.59	8.19	0.72	-59.12	-13.00	46.12
2086.50	H	41.56	-60.35	9.15	0.91	-52.11	-13.00	39.11
2086.50	V	44.82	-56.97	9.15	0.91	-48.73	-13.00	35.73
2782.00	H	35.58	-64.36	9.85	1.05	-55.56	-13.00	42.56
2782.00	V	36.10	-63.73	9.85	1.05	-54.93	-13.00	41.93
189.41	H	58.36	-54.32	0.00	0.26	-54.58	-13.00	41.58
80.87	V	61.11	-47.54	0.00	0.16	-47.70	-13.00	34.70

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 *******