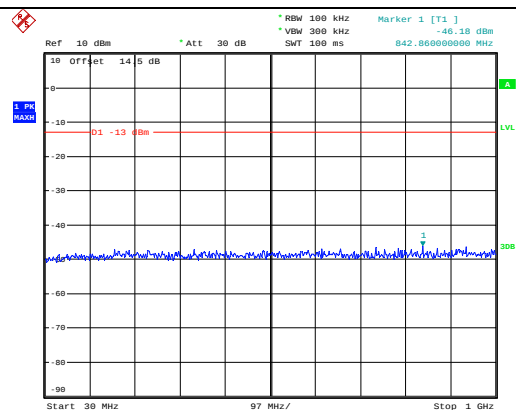


Spurious Emissions at Antenna Terminal

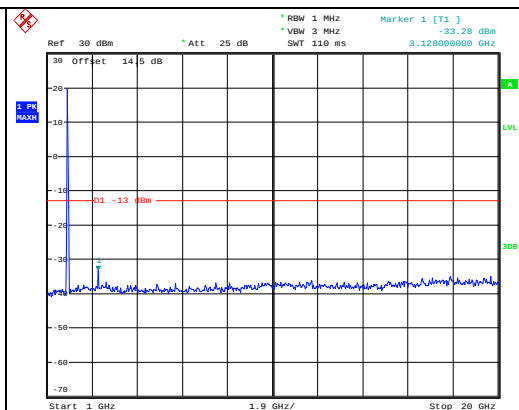
Channel

20MHz Bandwidth QPSK

Lowest

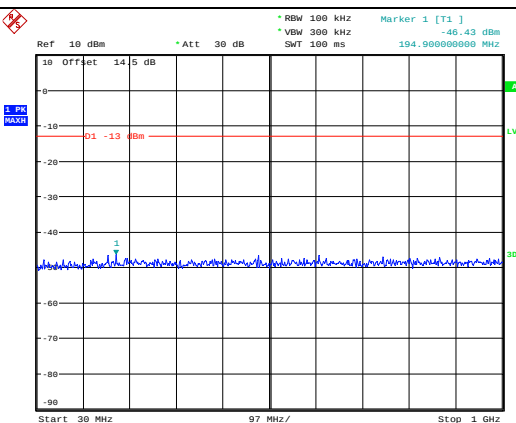


Date: 19.AUG.2023 11:17:26

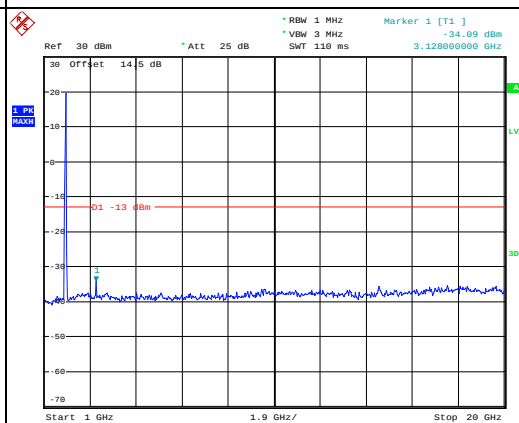


Date: 19.AUG.2023 11:17:37

Middle

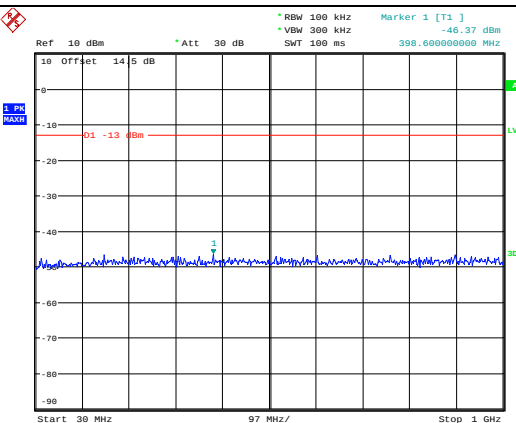


Date: 19.AUG.2023 11:17:51

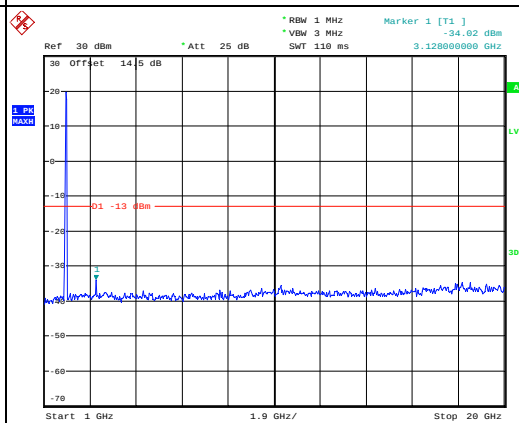


Date: 19.AUG.2023 11:18:02

Highest

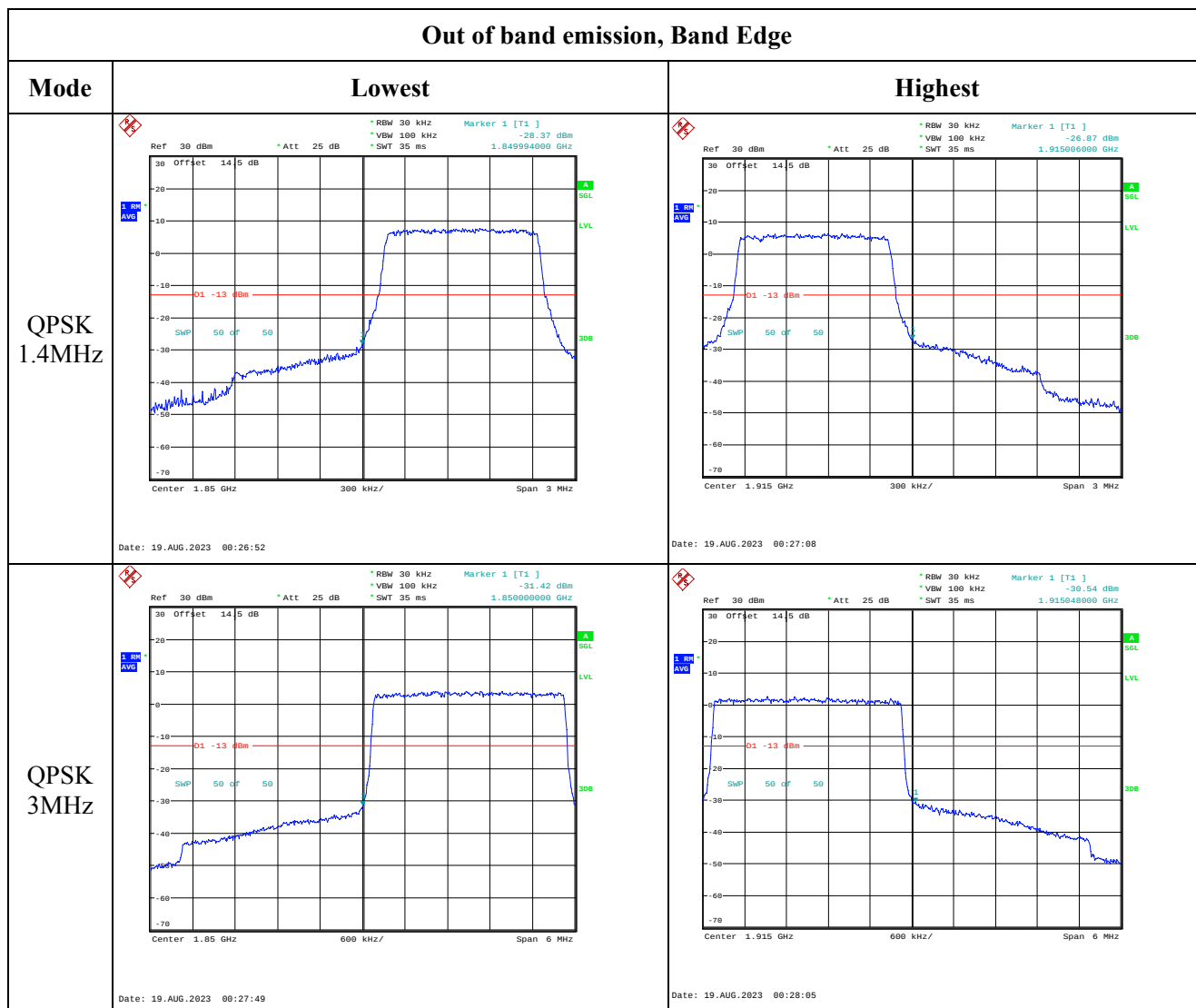


Date: 19.AUG.2023 11:18:19

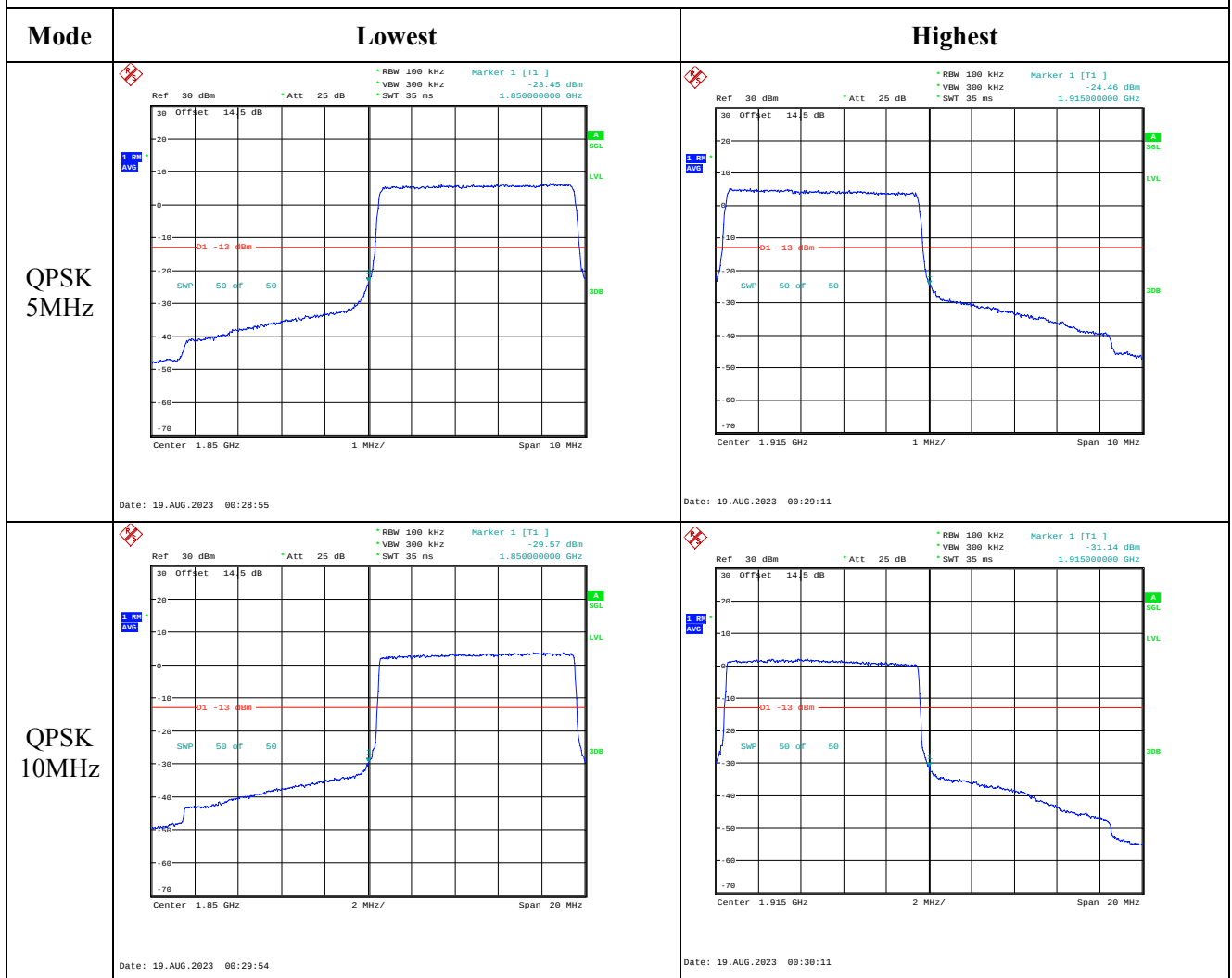


Date: 19.AUG.2023 11:18:30

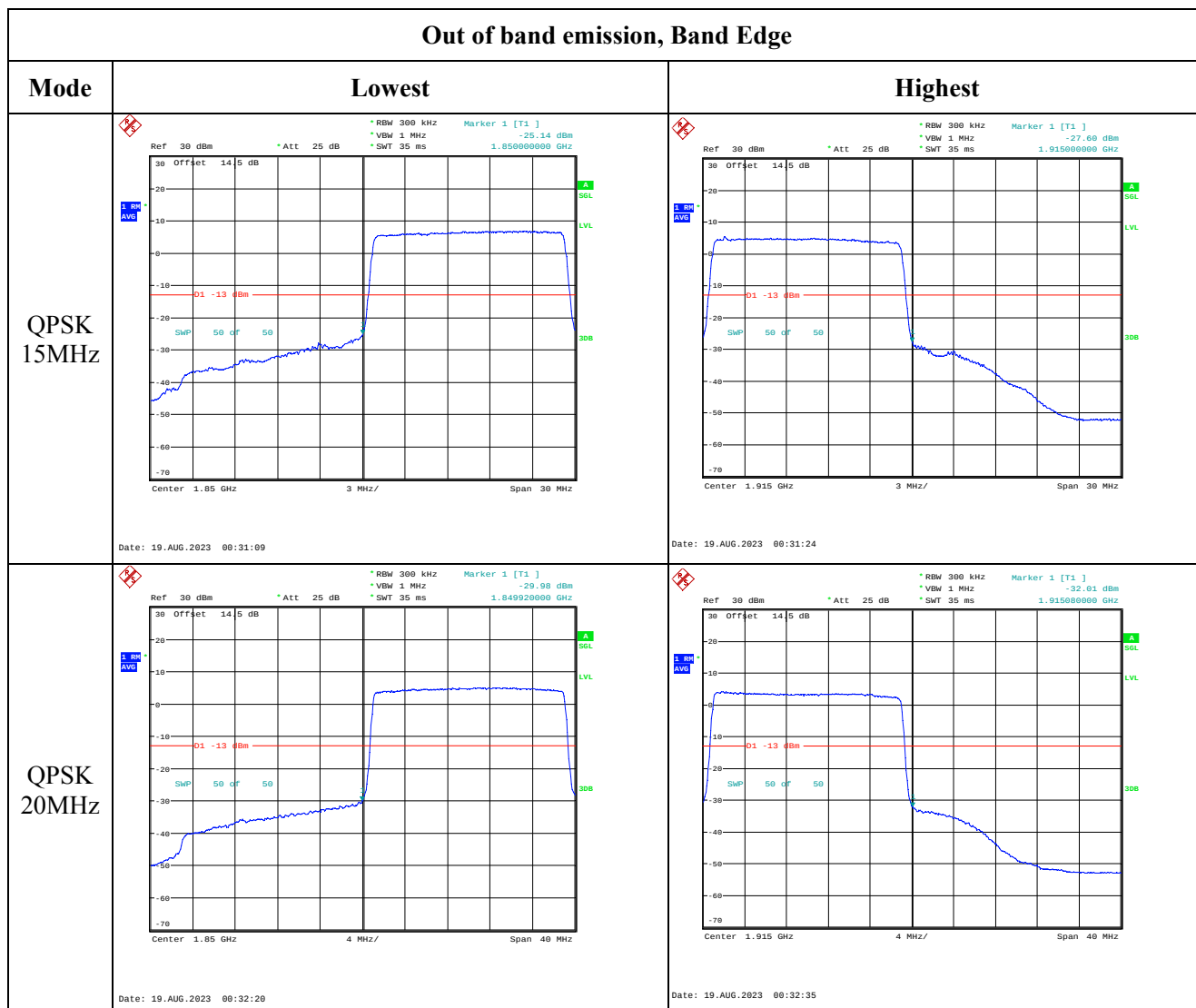
Out of band emission, Band Edge



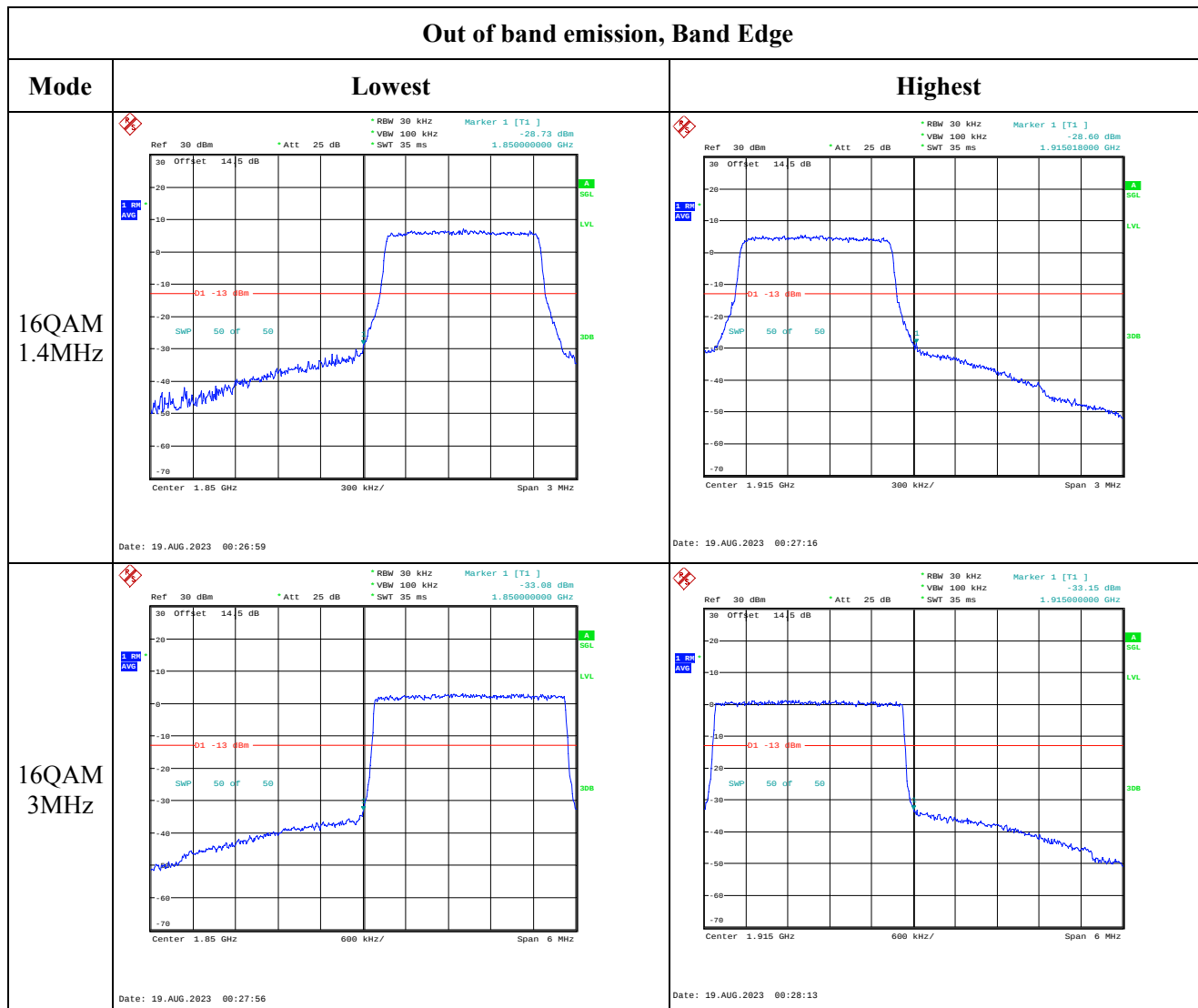
Out of band emission, Band Edge



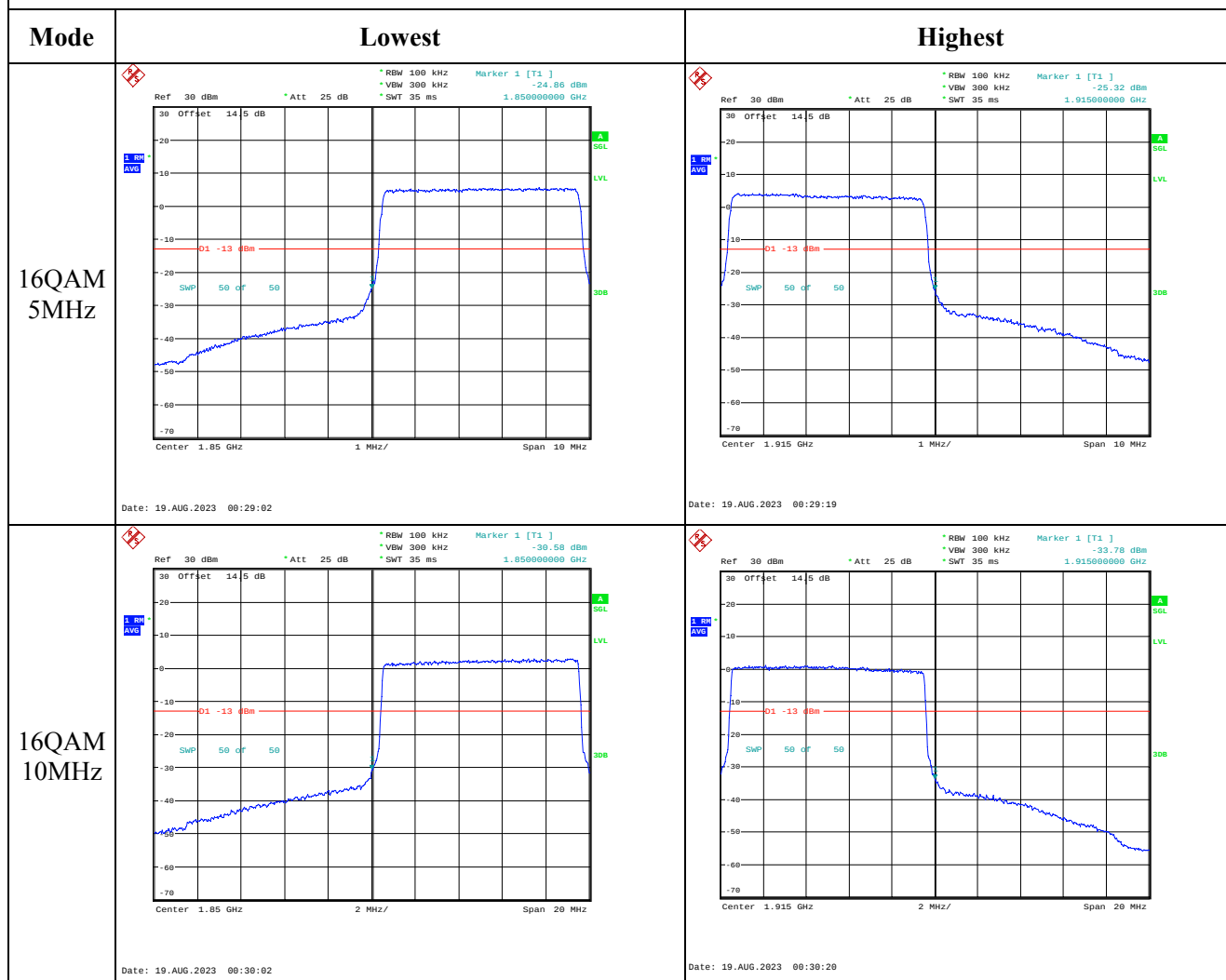
Out of band emission, Band Edge



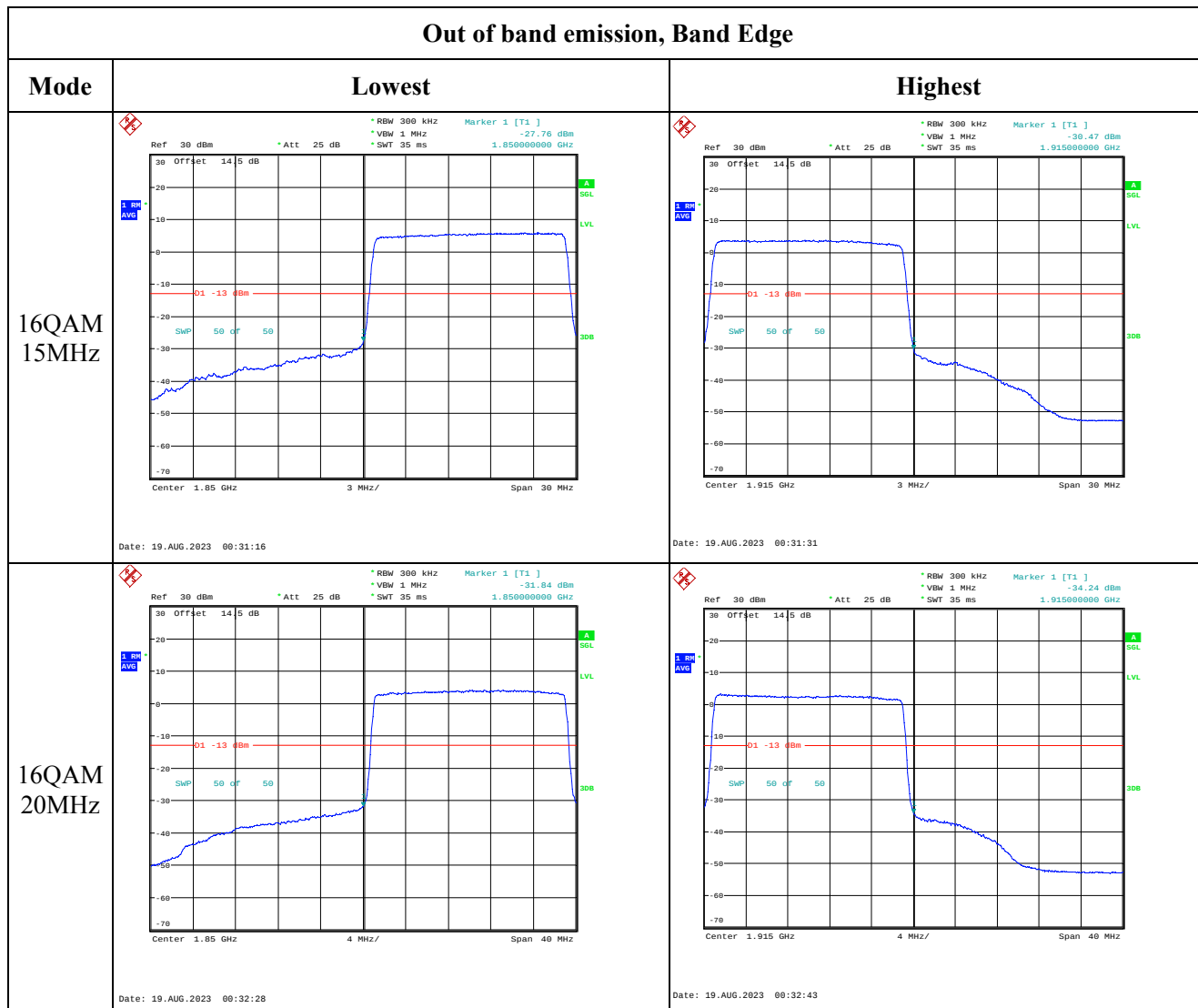
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



4.12 Antenna Port Test Data and Results for LTE Band 26

Serial Number:	29K3-1	Test Date:	2023/8/17-2023/8/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.2-25.9	Relative Humidity: (%)	56-61	ATM Pressure: (kPa)	99.7-100
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	100147	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	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).

Test Frequency for Each Mode:

Operation Bandwidth	Lowest Frequency For 90S (MHz)	Highest Frequency For 90S (MHz)	Channel Cross 90S and 22H	Lowest Frequency For 22H (MHz)	Middle Frequency For 22H (MHz)	Highest Frequency For 22H (MHz)
1.4MHz	814.7	823.3	824	824.7	831.5	848.3
3MHz	815.5	822.5	824	825.5	831.5	847.5
5MHz	816.5	821.5	824	826.5	831.5	846.5
10MHz	819	/	824	829	831.5	844
15MHz	821.5	/	824	831.5	836.5	841.5

Note: 15MHz bandwidth 821.5MHz cross Rules 90S and 22H.

4.12.1 Test Data for Part 90S:**FCC§2.1046; § 90.635****RF Output Power:**

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel For 90S	Highest Channel For 90S	Cross Channel		
1.4MHz QPSK	RB1#0	25.76	25.22	25.45	21.37	50
	RB1#3	25.97	25.86	25.69		
	RB1#5	25.67	25.59	25.4		
	RB3#0	25.78	25.55	25.12		
	RB3#3	25.79	25.37	25.67		
	RB6#0	24.84	24.39	24.25		
1.4MHz 16QAM	RB1#0	24.88	24.5	24.36	20.5	50
	RB1#3	25.1	24.5	24.39		
	RB1#5	24.95	24.29	24.23		
	RB3#0	24.83	24.45	24.4		
	RB3#3	24.72	24.75	24.7		
	RB6#0	23.91	23.54	23.52		
3MHz QPSK	RB1#0	25.84	25.29	25.73	21.25	50
	RB1#8	25.85	25.35	25.61		
	RB1#14	25.83	25.57	25.67		
	RB6#0	24.84	24.65	24.37		
	RB6#9	24.83	24.46	24.68		
	RB15#0	24.84	24.65	24.38		
3MHz 16QAM	RB1#0	24.9	24.76	24.74	20.32	50
	RB1#8	24.92	24.58	24.46		
	RB1#14	24.85	24.4	24.43		
	RB6#0	23.78	23.53	23.62		
	RB6#9	23.82	23.32	23.48		
	RB15#0	23.89	23.4	23.59		
5MHz QPSK	RB1#0	25.7	25.43	25.56	21.33	50
	RB1#13	25.93	25.32	25.26		
	RB1#24	25.77	25.41	25.49		
	RB15#0	24.8	24.45	24.7		
	RB15#10	24.93	24.46	24.52		
	RB25#0	24.82	24.21	24.55		
5MHz 16QAM	RB1#0	24.79	24.58	24.76	20.39	50
	RB1#13	24.99	24.92	24.48		
	RB1#24	24.82	24.38	24.65		
	RB15#0	23.83	23.56	23.34		
	RB15#10	23.93	23.4	23.38		
	RB25#0	23.88	23.69	23.32		
10MHz QPSK	RB1#0	25.83	/	25.75	21.39	50

	RB1#25	25.99	/	25.72		
	RB1#49	25.82	/	25.21		
	RB25#0	24.81	/	24.35		
	RB25#25	24.85	/	24.56		
	RB50#0	24.82	/	24.25		
10MHz 16QAM	RB1#0	24.81	/	24.53	20.37	50
	RB1#25	24.97	/	24.72		
	RB1#49	24.83	/	24.7		
	RB25#0	23.91	/	23.84		
	RB25#25	23.97	/	23.37		
	RB50#0	23.85	/	23.56		
15MHz QPSK	RB1#0	25.75	/	25.59	21.23	50
	RB1#38	25.83	/	25.49		
	RB1#74	25.74	/	25.58		
	RB36#0	24.86	/	24.41		
	RB36#39	24.83	/	24.39		
	RB75#0	24.78	/	24.3		
15MHz 16QAM	RB1#0	25.21	/	24.52	20.61	50
	RB1#38	25.2	/	24.5		
	RB1#74	25.15	/	24.38		
	RB36#0	23.8	/	23.37		
	RB36#39	23.77	/	23.38		
	RB75#0	23.76	/	23.64		

Note:

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

Gr(dBd)=Gr(dBi)-2.15

Result:

Pass

FCC §2.1049, §90.209: Occupied Bandwidth

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Lowest For 90S	Highest For 90S	Cross	Lowest For 90S	Highest For 90S	Cross
1.4MHz QPSK	1.11	1.11	1.098	1.308	1.328	1.307
1.4MHz 16QAM	1.092	1.104	1.11	1.29	1.328	1.317
3MHz QPSK	2.687	2.688	2.688	2.88	2.9	2.88
3MHz 16QAM	2.687	2.688	2.688	2.88	2.891	2.912
5MHz QPSK	4.5	4.52	4.54	4.9	4.979	4.961
5MHz 16QAM	4.52	4.52	4.5	4.96	4.991	4.93
10MHz QPSK	8.96	/	8.96	9.6	/	9.66
10MHz 16QAM	8.96	/	8.96	9.6	/	9.631
15MHz QPSK	13.5	/	13.56	14.76	/	14.933
15MHz 16QAM	13.5	/	13.56	14.82	/	14.78

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

FCC §2.1051, §90.691: Spurious Emissions at Antenna Terminal

Result:	Pass, please refer to the test plots of Spurious Emissions at Antenna Terminal.
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FCC §2.1051, §90.691: Out of band emission, Band Edge

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

FCC §2.1055, §90.213: Frequency Stability

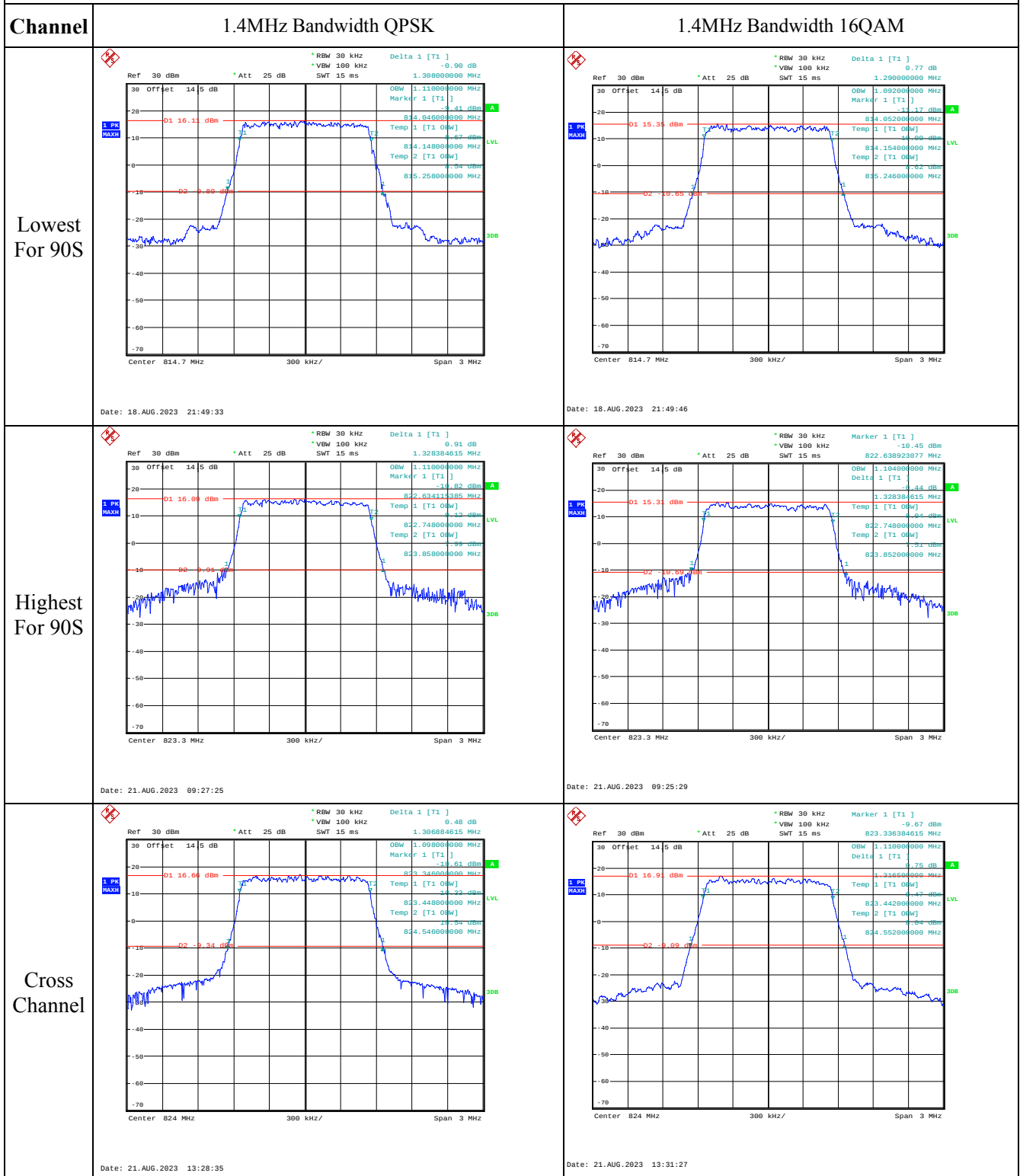
Test Modulation:	15 MHz QPSK		Test Channel:	821.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	19	0.023	2.5
	-20	3.8	40	0.048	2.5
	-10	3.8	26	0.031	2.5
	0	3.8	18	0.022	2.5
	10	3.8	1	0.001	2.5
	20	3.8	6	0.007	2.5
	30	3.8	18	0.022	2.5
	40	3.8	31	0.037	2.5
	50	3.8	33	0.040	2.5
Frequency Stability vs. Voltage	20	3.6	27	0.032	2.5
	20	4.35	39	0.047	2.5
Result:				Pass	

FCC §2.1055, §90.213: Frequency Stability

Test Modulation:	15 MHz 16QAM		Test Channel:	821.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	25	0.030	2.5
	-20	3.8	33	0.040	2.5
	-10	3.8	25	0.030	2.5
	0	3.8	22	0.026	2.5
	10	3.8	3	0.004	2.5
	20	3.8	19	0.023	2.5
	30	3.8	9	0.011	2.5
	40	3.8	38	0.046	2.5
	50	3.8	26	0.031	2.5
Frequency Stability vs. Voltage	20	3.6	3	0.004	2.5
	20	4.35	30	0.036	2.5
Result:				Pass	

4.12.2 Test Plots for Part 90S:

(Note: The 14.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

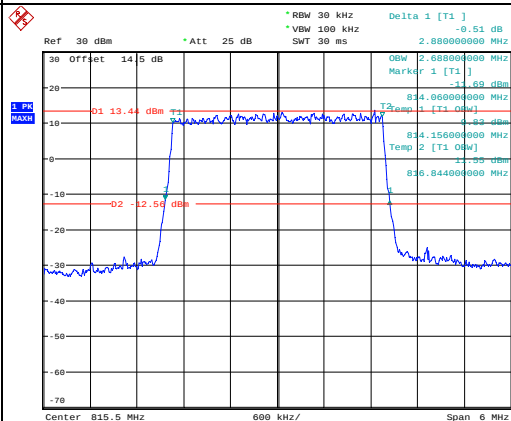
Occupied Bandwidth

Occupied Bandwidth

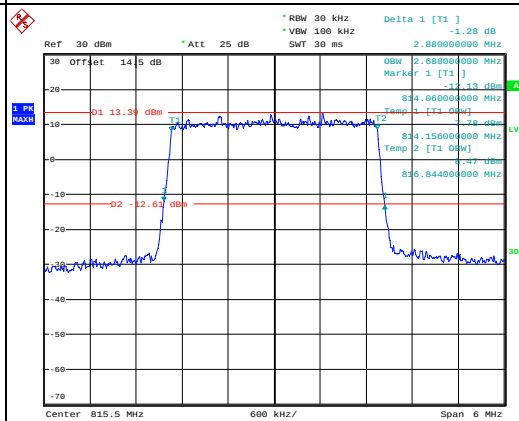
Channel

3MHz Bandwidth QPSK

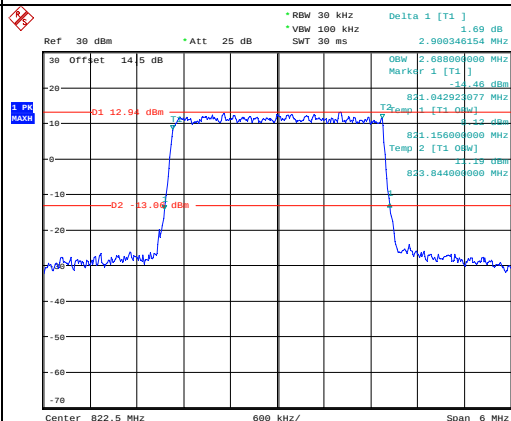
3MHz Bandwidth 16QAM

Lowest
For 90S

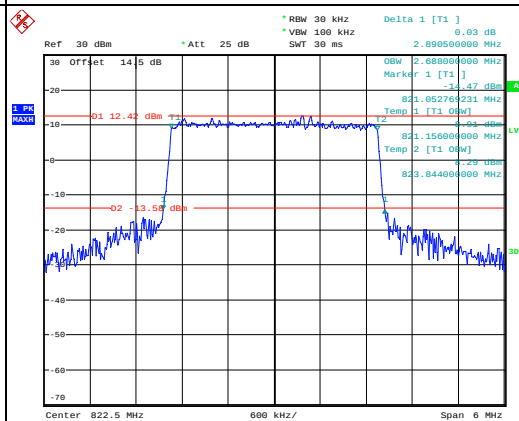
Date: 18.AUG.2023 21:52:02



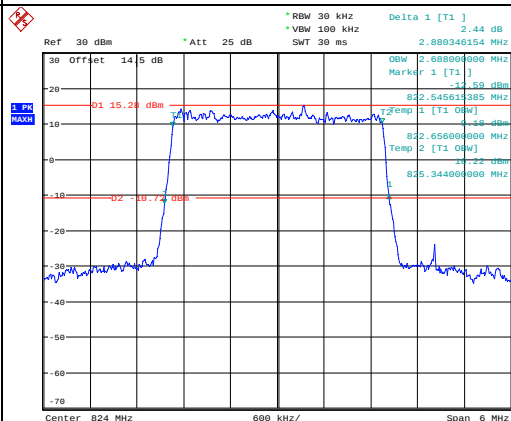
Date: 18.AUG.2023 21:52:16

Highest
For 90S

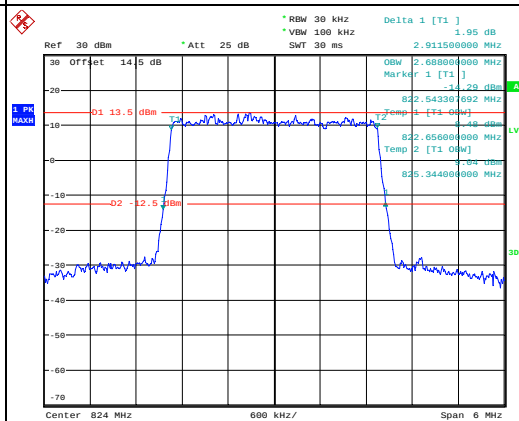
Date: 21.AUG.2023 09:33:31



Date: 21.AUG.2023 09:35:05

Cross
Channel

Date: 21.AUG.2023 13:33:22



Date: 21.AUG.2023 13:34:53

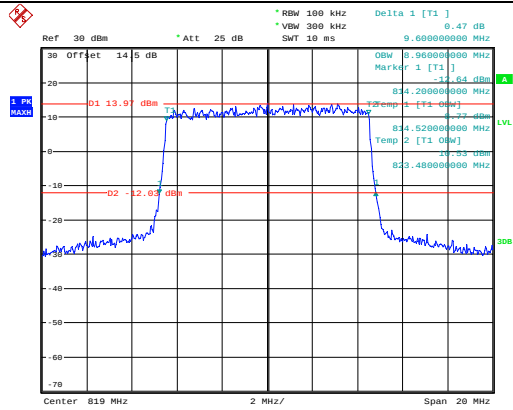
Occupied Bandwidth	
Channel	
Lowest For 90S	5MHz Bandwidth QPSK
	5MHz Bandwidth 16QAM
Highest For 90S	5MHz Bandwidth QPSK
	5MHz Bandwidth 16QAM
Cross Channel	5MHz Bandwidth QPSK
	5MHz Bandwidth 16QAM

Occupied Bandwidth

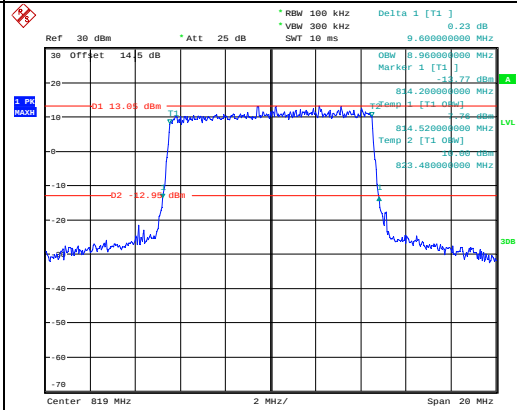
Channel

10MHz Bandwidth QPSK

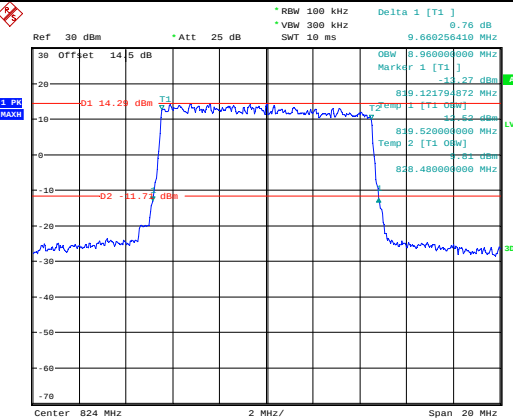
10MHz Bandwidth 16QAM

Lowest
For 90S

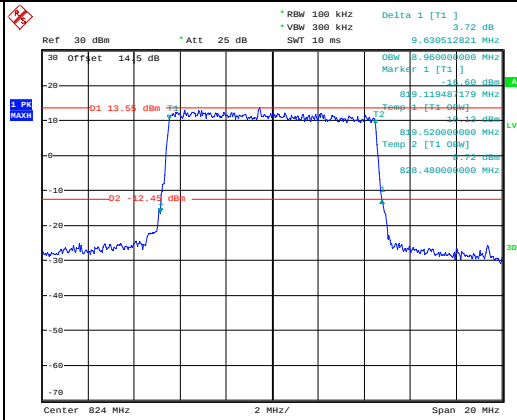
Date: 18.AUG.2023 21:56:37



Date: 18.AUG.2023 21:56:51

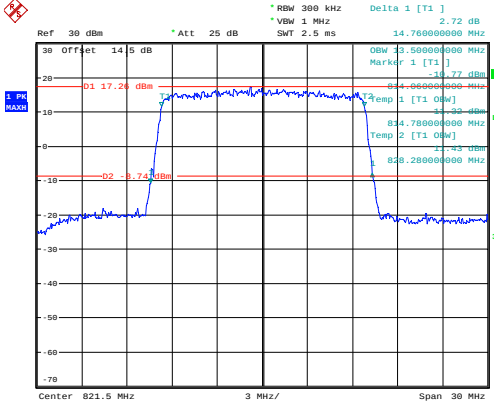
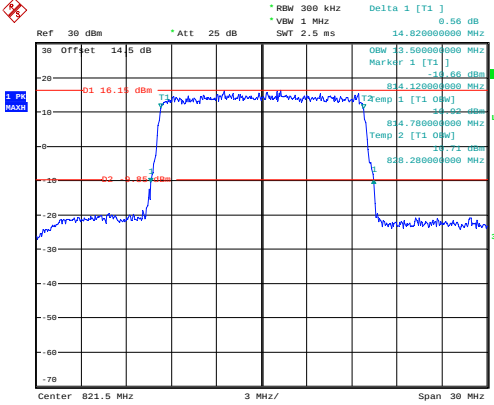
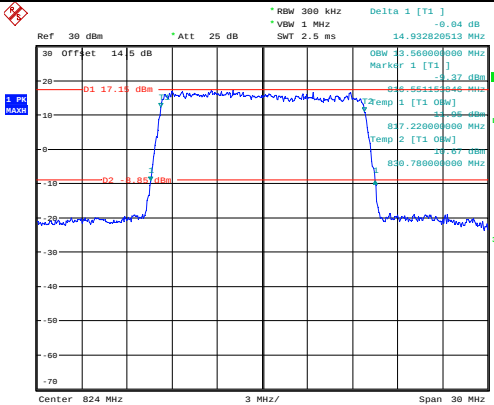
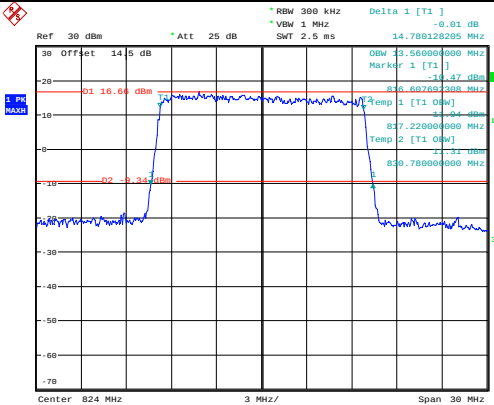
Cross
Channel

Date: 21.AUG.2023 13:08:13



Date: 21.AUG.2023 13:09:48

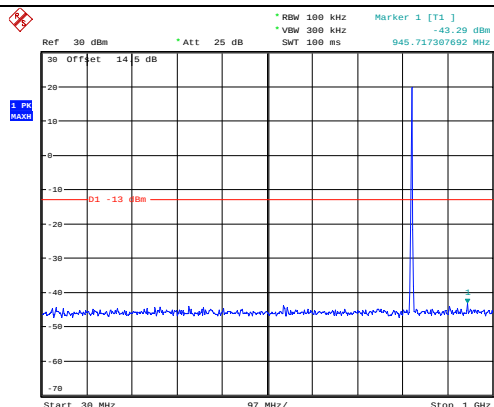
Occupied Bandwidth

Channel	15MHz Bandwidth QPSK	15MHz Bandwidth 16QAM
Middle For 90S	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 2.72 dB VBW 1 MHz SMT 2.5 ms 14.760000000 MHz OBW 13.500000000 MHz Marker 1 [T1] 13.77 dB D1 17.24 dBm D2 -0.74 dBm Temp 1 [T1] 0dB Temp 2 [T1] 0dB Center 821.5 MHz 3 MHz/ Span 30 MHz Date: 18.AUG.2023 21:59:07	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 0.56 dB VBW 1 MHz SMT 2.5 ms 14.820000000 MHz OBW 13.500000000 MHz Marker 1 [T1] 13.66 dB D1 16.19 dBm D2 -0.85 dBm Temp 1 [T1] 0dB Temp 2 [T1] 0dB Center 821.5 MHz 3 MHz/ Span 30 MHz Date: 18.AUG.2023 21:59:21
Cross Channel	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] -0.04 dB VBW 1 MHz SMT 2.5 ms 14.932820513 MHz OBW 13.500000000 MHz Marker 1 [T1] 13.37 dB D1 17.14 dBm D2 -0.80 dBm Temp 1 [T1] 0dB Temp 2 [T1] 0dB Center 824 MHz 3 MHz/ Span 30 MHz Date: 21.AUG.2023 13:25:35	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] -0.01 dB VBW 1 MHz SMT 2.5 ms 14.780128205 MHz OBW 13.500000000 MHz Marker 1 [T1] 13.47 dB D1 16.64 dBm D2 -0.34 dBm Temp 1 [T1] 0dB Temp 2 [T1] 0dB Center 824 MHz 3 MHz/ Span 30 MHz Date: 21.AUG.2023 13:27:09

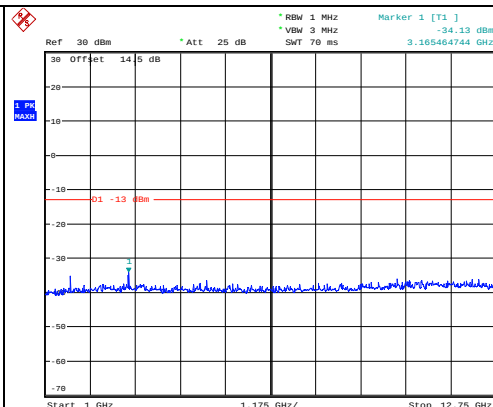
Spurious Emissions at Antenna Terminal

Channel

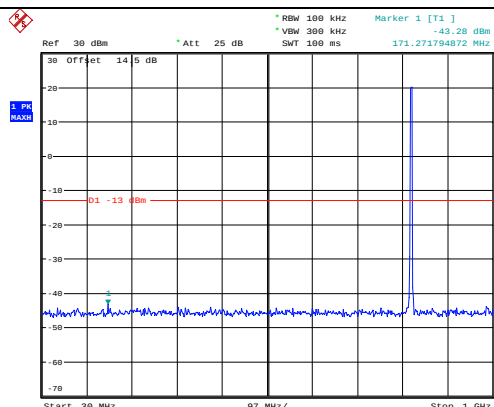
1.4MHz Bandwidth QPSK

Lowest
For 90S

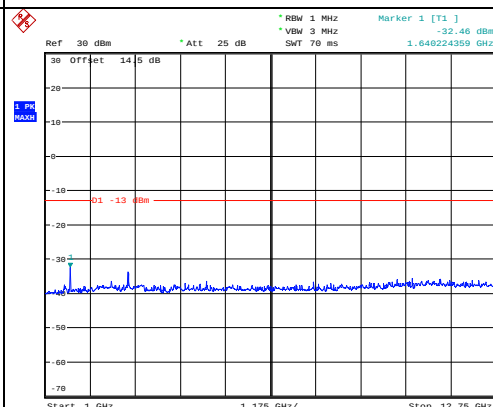
Date: 21.AUG.2023 14:36:29



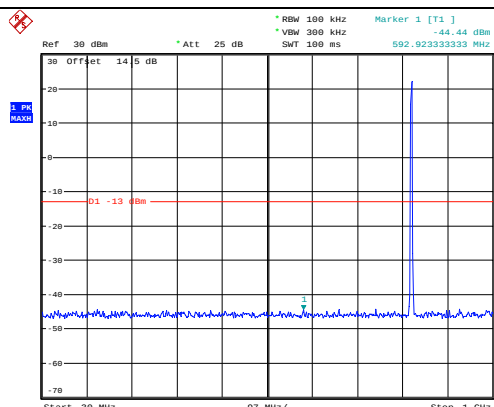
Date: 21.AUG.2023 13:40:34

Highest
For 90S

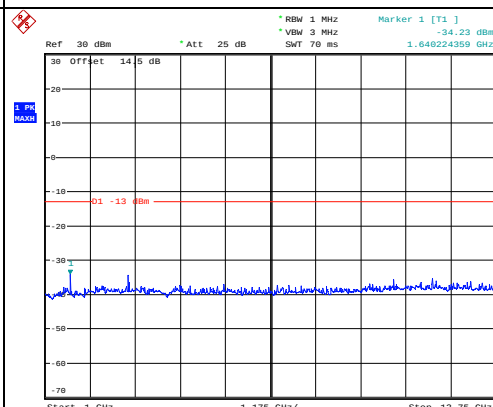
Date: 21.AUG.2023 14:37:39



Date: 21.AUG.2023 13:41:01

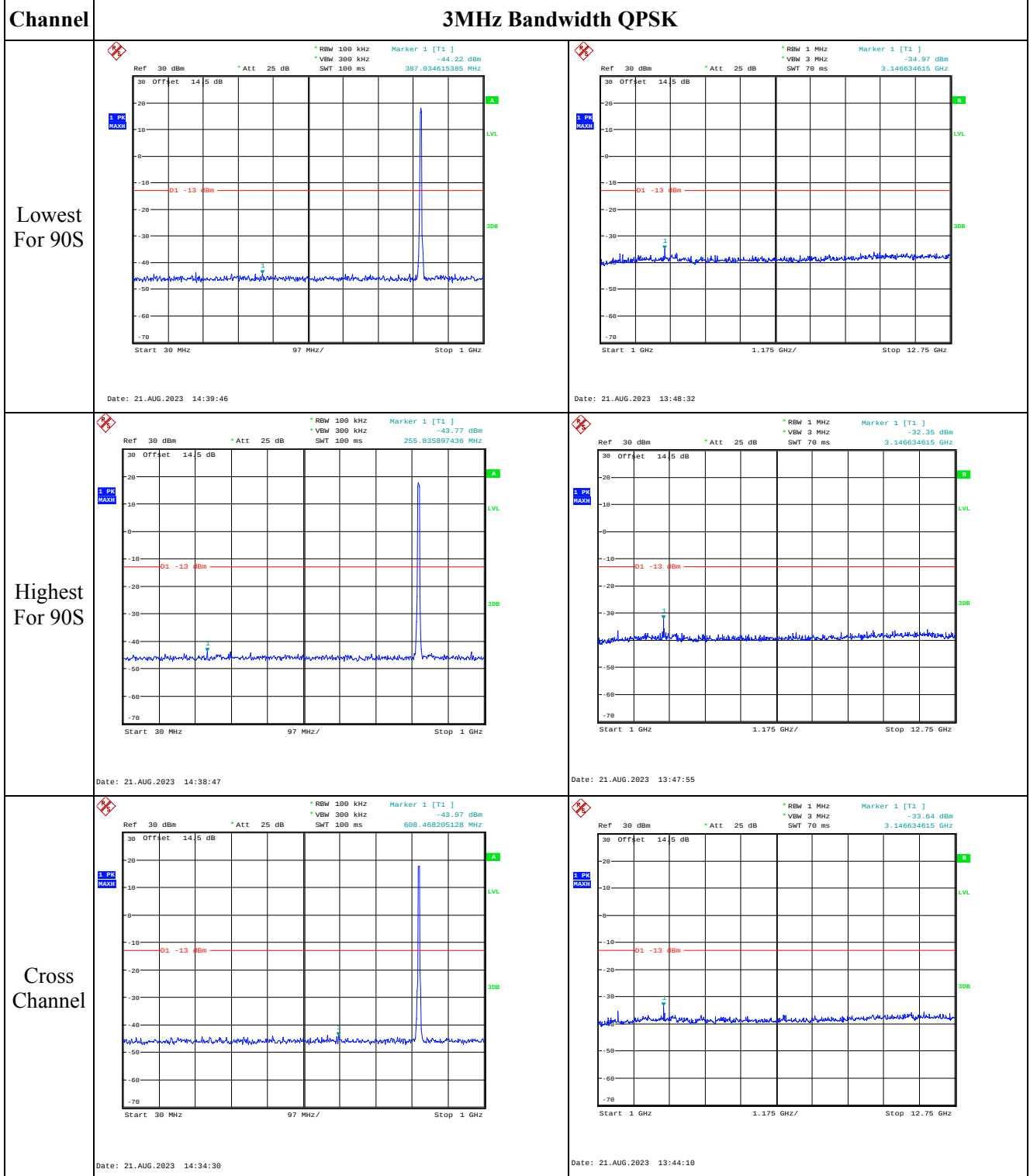
Cross
Channel

Date: 21.AUG.2023 14:35:15

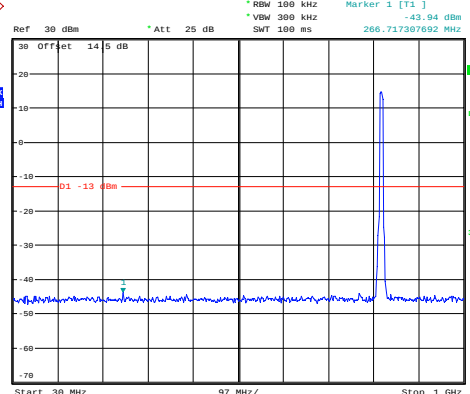
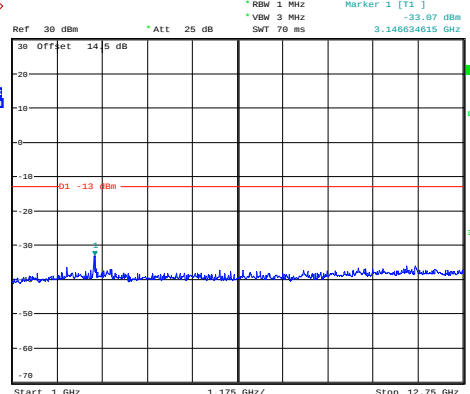
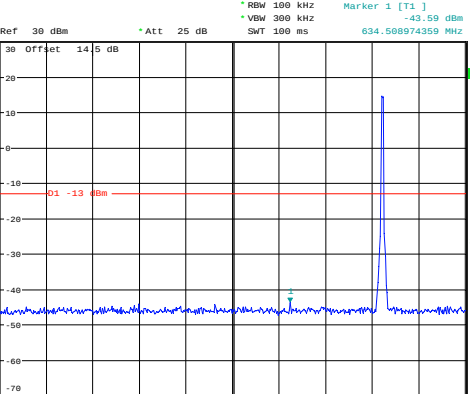
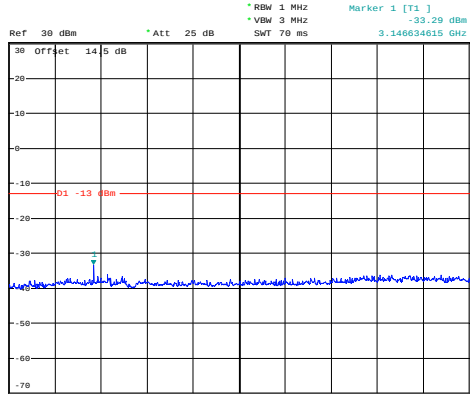
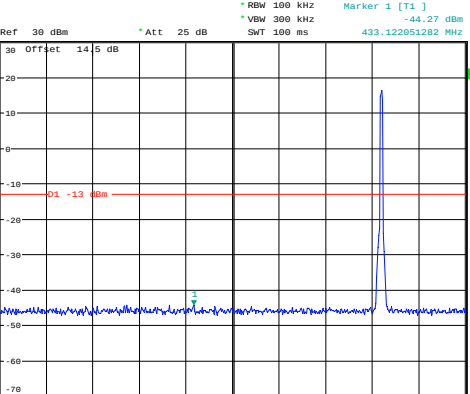
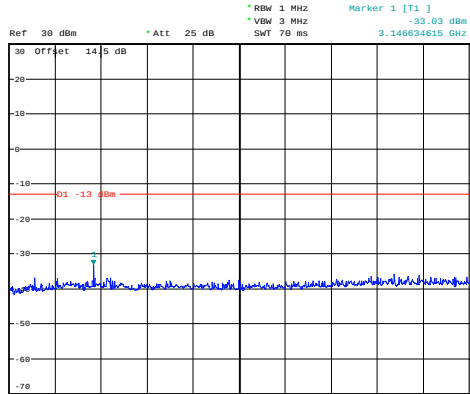


Date: 21.AUG.2023 13:43:14

Spurious Emissions at Antenna Terminal



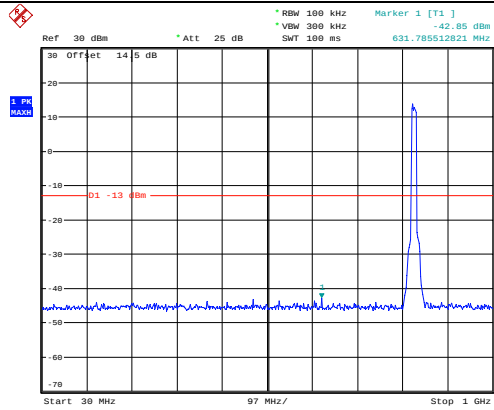
Spurious Emissions at Antenna Terminal

Channel	5MHz Bandwidth QPSK	
Lowest For 90S	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -43.94 dBm *VBW 300 kHz SWT 100 ms 266.717307692 MHz Start 30 MHz 97 MHz/ Stop 1 GHz Date: 21.AUG.2023 14:40:58	 Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -33.07 dBm *VBW 3 MHz SWT 70 ms 3.146634615 GHz Start 1 GHz 1.175 GHz/ Stop 12.75 GHz Date: 21.AUG.2023 14:16:47
Highest For 90S	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -43.59 dBm *VBW 300 kHz SWT 100 ms 634.568974359 MHz Start 30 MHz 97 MHz/ Stop 1 GHz Date: 21.AUG.2023 14:41:59	 Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -33.03 dBm *VBW 3 MHz SWT 70 ms 3.146634615 GHz Start 1 GHz 1.175 GHz/ Stop 12.75 GHz Date: 21.AUG.2023 14:18:05
Cross Channel	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Marker 1 [T1] -44.27 dBm *VBW 300 kHz SWT 100 ms 433.122851282 MHz Start 30 MHz 97 MHz/ Stop 1 GHz Date: 21.AUG.2023 14:33:52	 Ref 30 dBm *Att 25 dB *RBW 1 MHz Marker 1 [T1] -33.03 dBm *VBW 3 MHz SWT 70 ms 3.146634615 GHz Start 1 GHz 1.175 GHz/ Stop 12.75 GHz Date: 21.AUG.2023 14:21:58

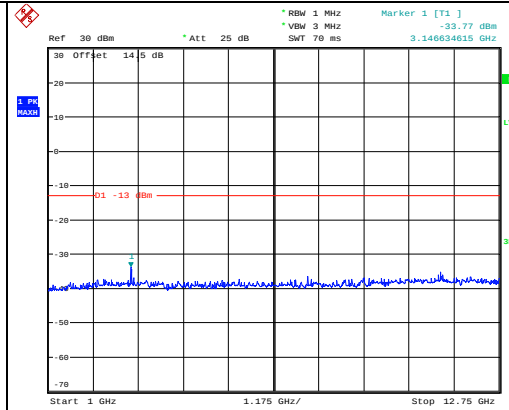
Spurious Emissions at Antenna Terminal

Channel

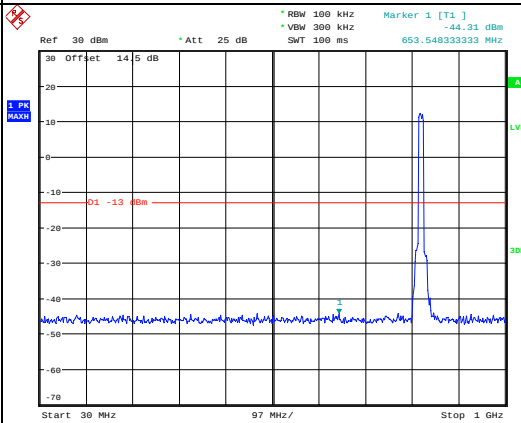
10MHz Bandwidth QPSK

Lowest
For 90S

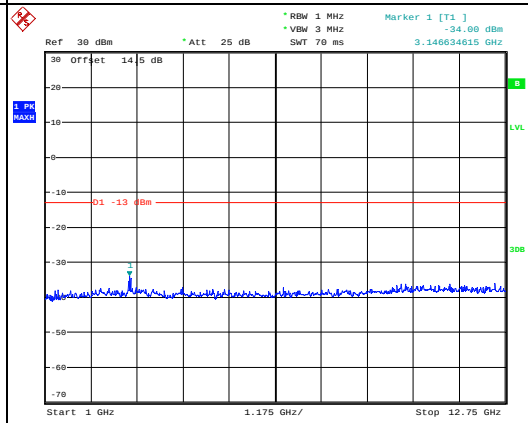
Date: 21.AUG.2023 14:29:27



Date: 21.AUG.2023 14:22:48

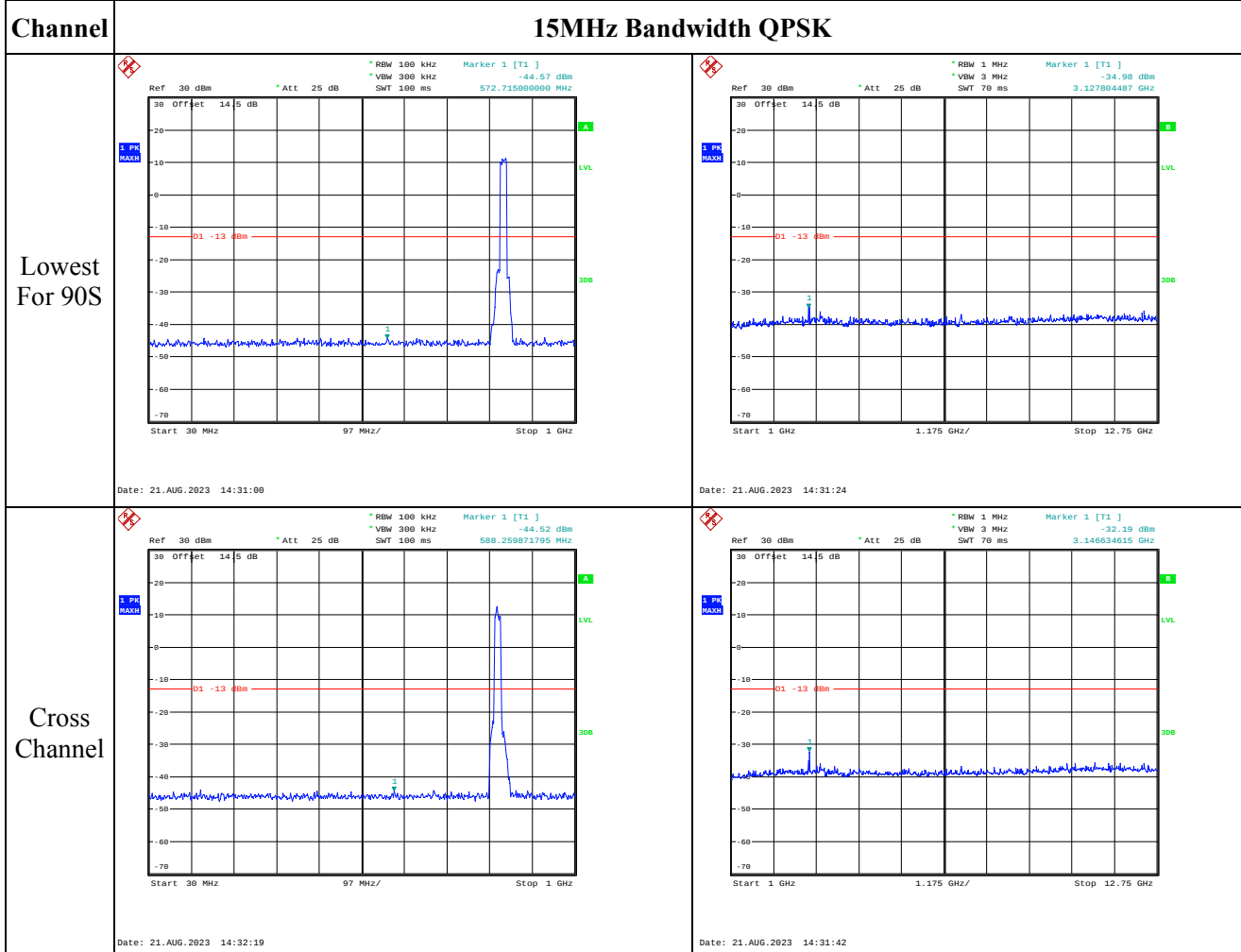
Cross
Channel

Date: 21.AUG.2023 14:25:19

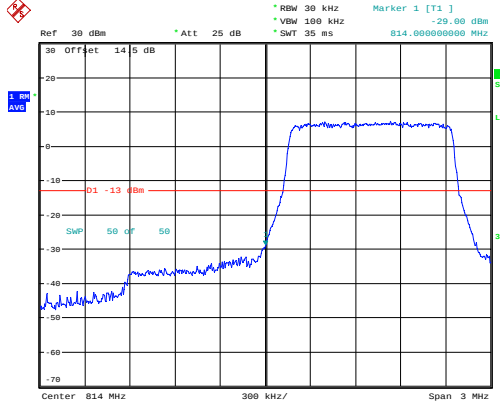
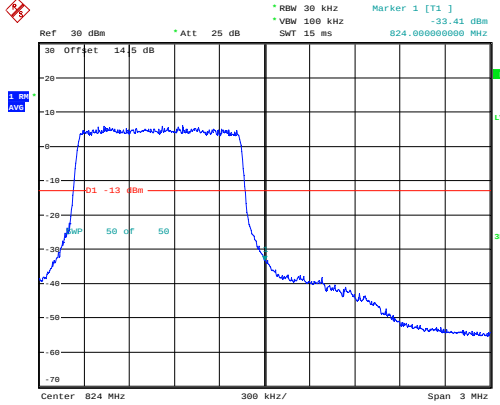
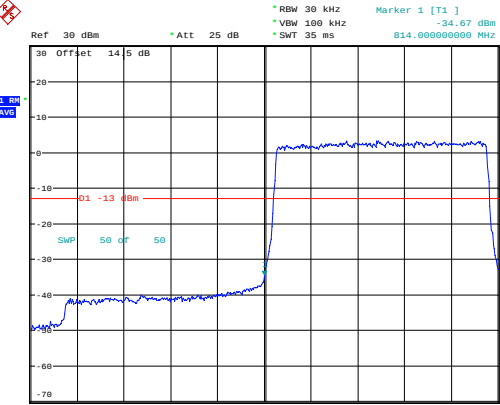
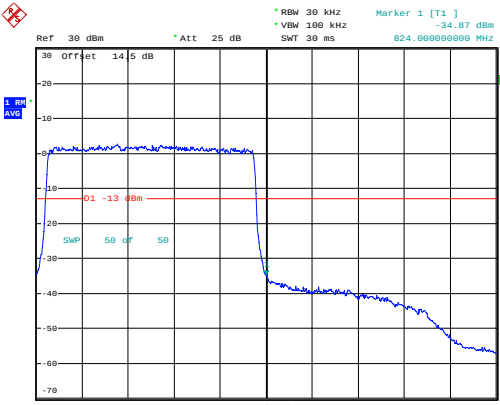
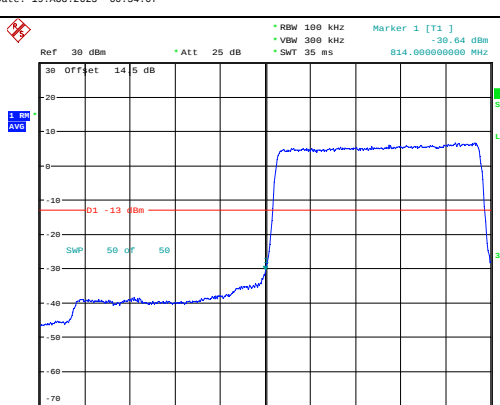
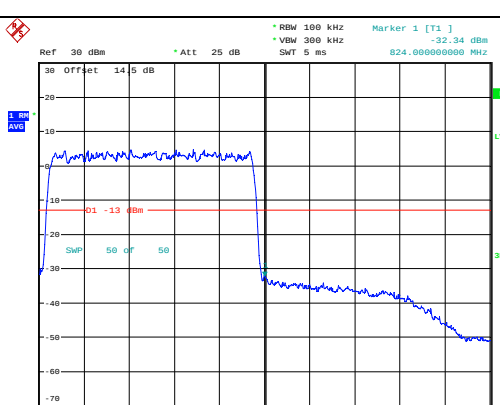


Date: 21.AUG.2023 14:25:42

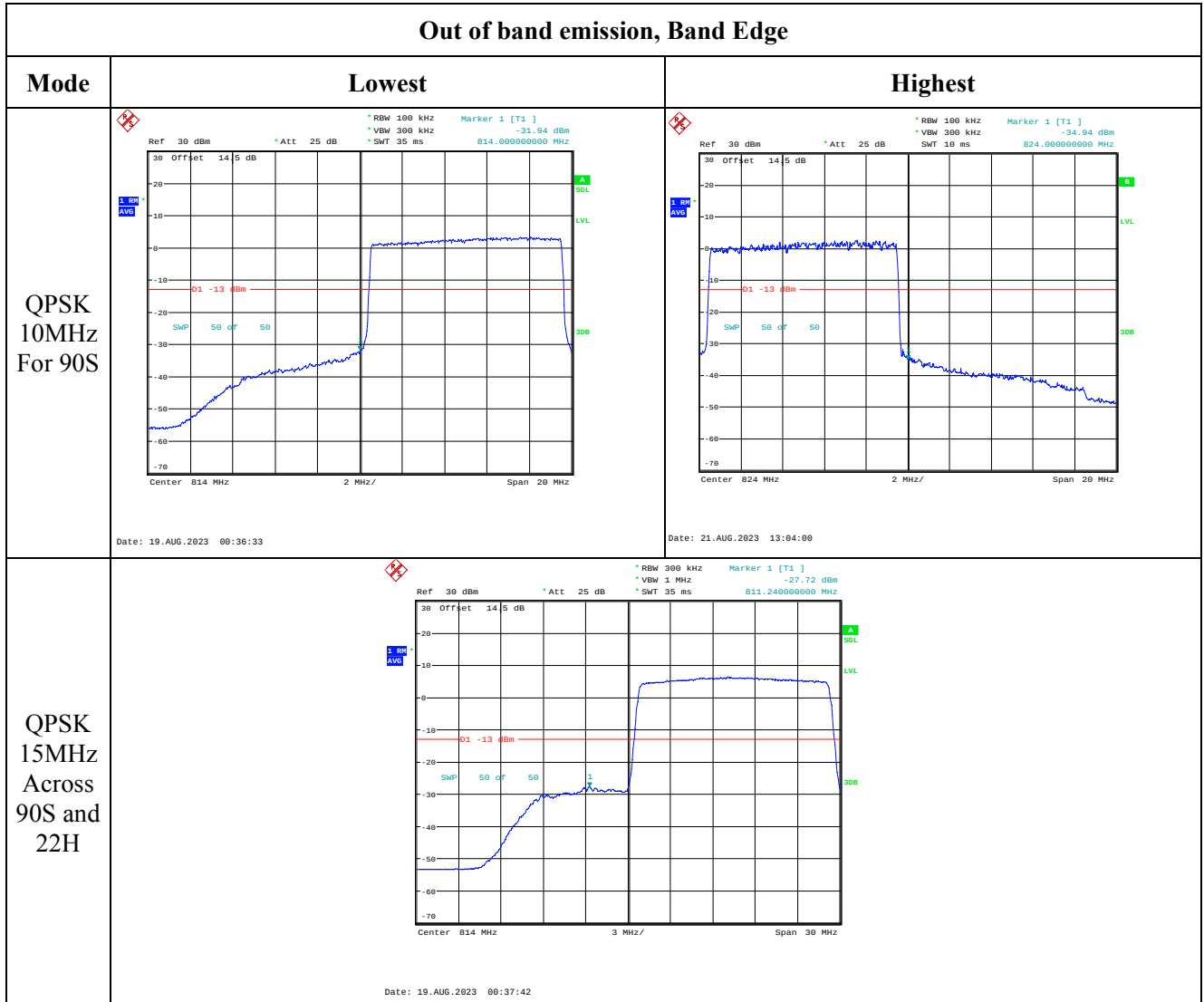
Spurious Emissions at Antenna Terminal



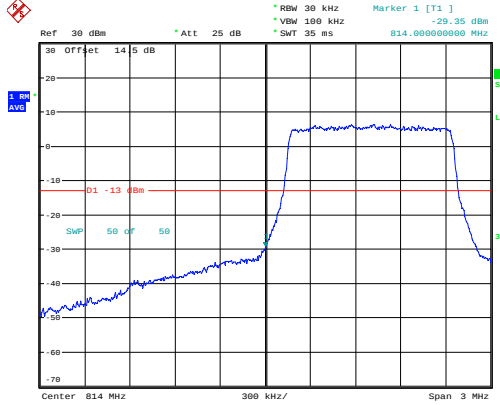
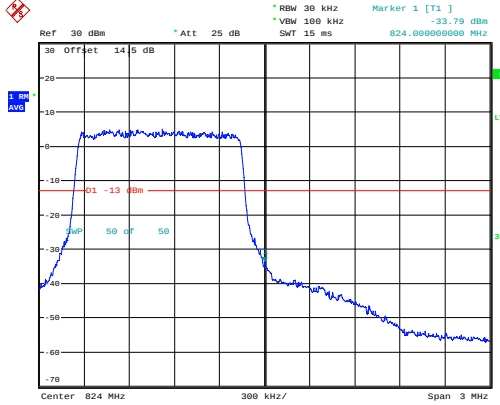
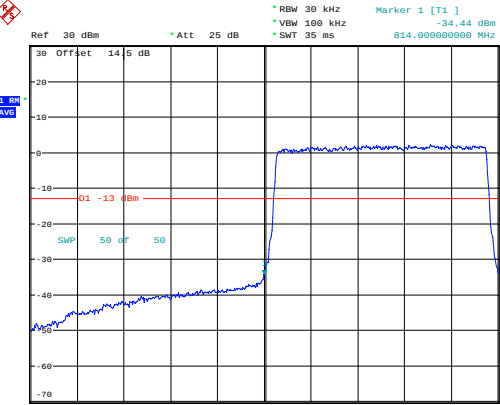
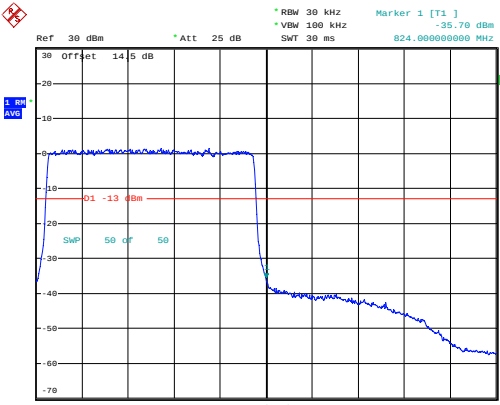
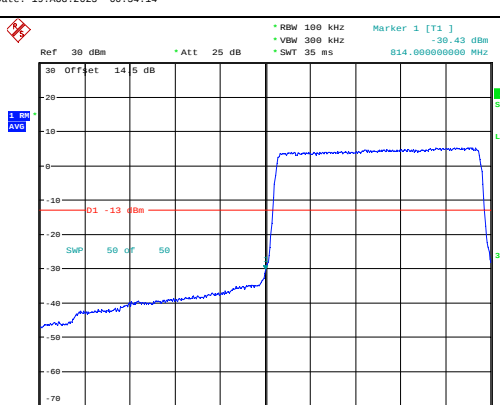
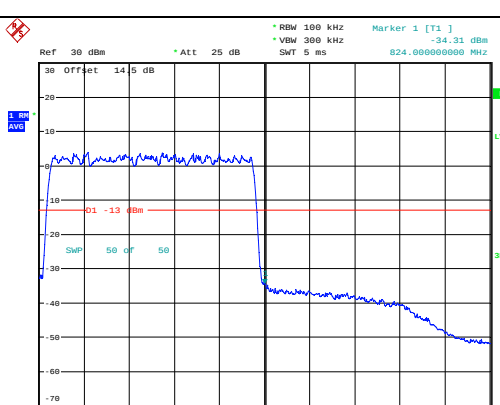
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz For 90S	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 100 kHz * SWT 35 ms * Marker 1 [T1] -29.00 dBm 814.000000000 MHz Center 814 MHz 300 kHz/ Span 3 MHz Date: 19.AUG.2023 09:32:55	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 100 kHz * SWT 15 ms * Marker 1 [T1] -33.41 dBm 824.000000000 MHz Center 824 MHz 300 kHz/ Span 3 MHz Date: 21.AUG.2023 09:27:44
QPSK 3MHz For 90S	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 300 kHz * SWT 35 ms * Marker 1 [T1] -34.67 dBm 814.000000000 MHz Center 814 MHz 600 kHz/ Span 6 MHz Date: 19.AUG.2023 09:34:07	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 300 kHz * SWT 30 ms * Marker 1 [T1] -34.87 dBm 824.000000000 MHz Center 824 MHz 600 kHz/ Span 6 MHz Date: 21.AUG.2023 09:32:11
QPSK 5MHz For 90S	 Ref 30 dBm * Att 25 dB * RBW 100 kHz * VBW 300 kHz * SWT 35 ms * Marker 1 [T1] -30.64 dBm 814.000000000 MHz Center 814 MHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 09:35:19	 Ref 30 dBm * Att 25 dB * RBW 100 kHz * VBW 300 kHz * SWT 5 ms * Marker 1 [T1] -32.34 dBm 824.000000000 MHz Center 824 MHz 1 MHz/ Span 10 MHz Date: 21.AUG.2023 11:13:34

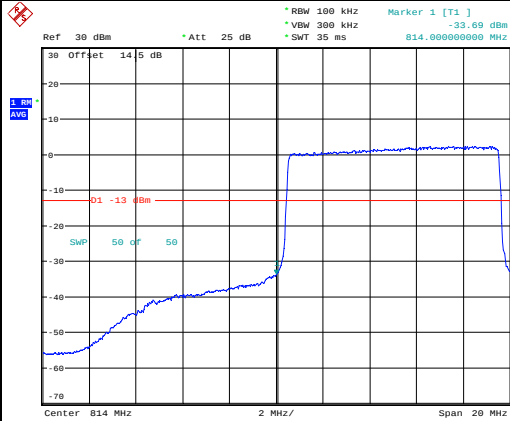
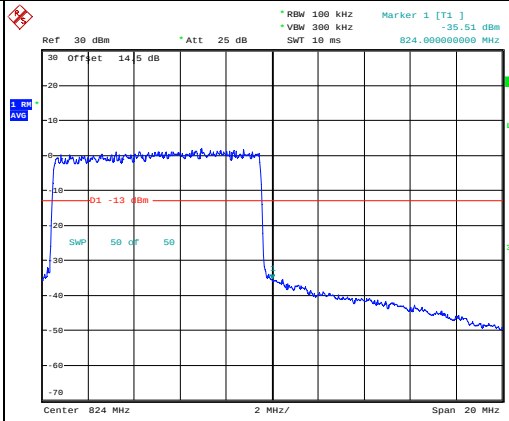
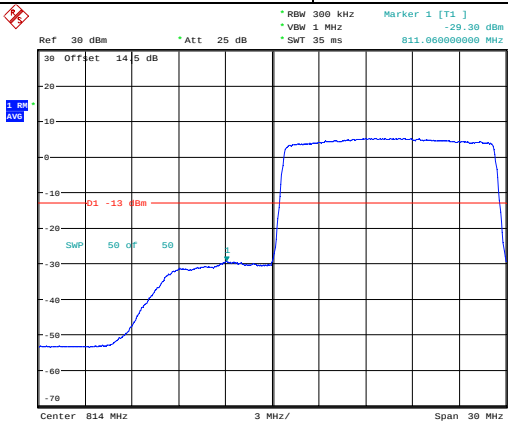
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz For 90S	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 30 kHz, VBW: 100 kHz, SMT: 35 ms, Marker 1 [T1]: -29.35 dBm, 814.000000000 MHz Center: 814 MHz, Span: 3 MHz Date: 19.AUG.2023 09:33:02	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 30 kHz, VBW: 100 kHz, SMT: 15 ms, Marker 1 [T1]: -33.79 dBm, 824.000000000 MHz Center: 824 MHz, Span: 3 MHz Date: 21.AUG.2023 09:23:50
16QAM 3MHz For 90S	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 30 kHz, VBW: 300 kHz, SMT: 35 ms, Marker 1 [T1]: -34.44 dBm, 814.000000000 MHz Center: 814 MHz, Span: 6 MHz Date: 19.AUG.2023 09:34:14	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 30 kHz, VBW: 300 kHz, SMT: 30 ms, Marker 1 [T1]: -35.70 dBm, 824.000000000 MHz Center: 824 MHz, Span: 6 MHz Date: 21.AUG.2023 09:35:47
16QAM 5MHz For 90S	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 100 kHz, VBW: 300 kHz, SMT: 35 ms, Marker 1 [T1]: -30.43 dBm, 814.000000000 MHz Center: 814 MHz, Span: 10 MHz Date: 19.AUG.2023 09:35:27	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 100 kHz, VBW: 300 kHz, SMT: 5 ms, Marker 1 [T1]: -34.31 dBm, 824.000000000 MHz Center: 824 MHz, Span: 10 MHz Date: 21.AUG.2023 11:12:52

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz For 90S	1. BW AVG Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -33.69 dBm 814.000000000 MHz  Center 814 MHz 2 MHz/ Span 20 MHz	1. BW AVG Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 10 ms Marker 1 [T1] -35.51 dBm 824.000000000 MHz  Center 824 MHz 2 MHz/ Span 20 MHz
	Date: 19.AUG.2023 00:36:42	
16QAM 15MHz Across 90S and 22H	1. BW AVG Ref 30 dBm *Att 25 dB *RBW 300 kHz *VBW 1 MHz *SWT 35 ms Marker 1 [T1] -29.30 dBm 811.000000000 MHz  Center 814 MHz 3 MHz/ Span 30 MHz	
	Date: 19.AUG.2023 00:37:49	

4.12.3 Test Data for Part 22H:

FCC§2.1046; § 22.913 (a)						
RF Output Power:						
Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H		
1.4MHz QPSK	RB1#0	25.42	25.71	25.67	21.34	38.45
	RB1#3	25.73	25.94	25.94		
	RB1#5	25.36	25.65	25.7		
	RB3#0	25.09	25.81	25.56		
	RB3#3	25.55	25.82	25.72		
	RB6#0	24.23	24.82	24.71		
1.4MHz 16QAM	RB1#0	24.26	24.78	24.59	20.4	38.45
	RB1#3	24.52	25	24.8		
	RB1#5	24.35	24.76	24.6		
	RB3#0	24.8	24.94	24.85		
	RB3#3	24.54	24.94	24.82		
	RB6#0	23.28	23.77	23.73		
3MHz QPSK	RB1#0	25.26	25.77	25.74	21.17	38.45
	RB1#8	25.32	25.77	25.7		
	RB1#14	25.5	25.75	25.69		
	RB6#0	24.54	24.76	24.73		
	RB6#9	24.48	24.82	24.68		
	RB15#0	24.56	24.83	24.72		
3MHz 16QAM	RB1#0	24.51	25.43	24.85	20.83	38.45
	RB1#8	24.63	25.38	24.8		
	RB1#14	24.58	25.35	24.76		
	RB6#0	23.38	23.91	23.72		
	RB6#9	23.5	23.88	23.69		
	RB15#0	23.47	23.9	23.68		
5MHz QPSK	RB1#0	25.49	25.7	25.62	21.19	38.45
	RB1#13	25.68	25.79	25.73		
	RB1#24	25.19	25.66	25.59		
	RB15#0	24.38	24.79	24.74		
	RB15#10	24.49	24.81	24.64		
	RB25#0	24.16	24.8	24.65		
5MHz 16QAM	RB1#0	24.48	24.61	24.86	20.36	38.45
	RB1#13	24.74	24.7	24.96		
	RB1#24	24.32	24.58	24.78		
	RB15#0	23.27	23.83	23.75		
	RB15#10	23.47	23.88	23.65		
	RB25#0	23.51	23.9	23.71		

10MHz QPSK	RB1#0	25.35	25.8	25.76	21.32	38.45
	RB1#25	25.46	25.92	25.84		
	RB1#49	25.25	25.75	25.7		
	RB25#0	24.74	24.89	24.83		
	RB25#25	24.59	24.9	24.64		
	RB50#0	24.27	24.91	24.74		
10MHz 16QAM	RB1#0	24.61	25.35	24.87	20.96	38.45
	RB1#25	24.78	25.56	24.99		
	RB1#49	24.32	25.35	24.77		
	RB25#0	23.59	23.96	23.87		
	RB25#25	23.63	23.95	23.7		
	RB50#0	23.48	23.94	23.75		
15MHz QPSK	RB1#0	25.35	25.73	25.69	21.14	38.45
	RB1#38	25.31	25.72	25.74		
	RB1#74	25.57	25.6	25.6		
	RB36#0	24.76	24.86	24.85		
	RB36#39	24.63	24.83	24.75		
	RB75#0	24.33	24.88	24.79		
15MHz 16QAM	RB1#0	24.57	25.36	24.88	20.79	38.45
	RB1#38	24.34	25.39	24.84		
	RB1#74	24.43	25.2	24.67		
	RB36#0	23.51	23.85	23.83		
	RB36#39	23.29	23.84	23.75		
	RB75#0	23.57	23.89	23.8		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + G_T(dBd)G_T(dBd)=G_T(dBi)-2.15**Result:****Pass****Peak-to-average Ratio (PAR)**

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H	
15MHz QPSK	RB1#0	7.08	6.92	7.02	13
	RB75#0	5.67	6.06	5.96	13
15MHz 16QAM	RB1#0	7.53	7.72	7.37	13
	RB75#0	6.7	6.96	6.86	13
				Result:	Pass

FCC §2.1049, §22.905: Occupied Bandwidth

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Lowest For 22H	Middle For 22H	Highest For 22H	Lowest For 22H	Middle For 22H	Highest For 22H
1.4MHz QPSK	1.11	1.116	1.11	1.323	1.29	1.332
1.4MHz 16QAM	1.092	1.104	1.104	1.285	1.434	1.326
3MHz QPSK	2.688	2.7	2.688	2.894	2.88	2.88
3MHz 16QAM	2.688	2.688	2.688	2.892	2.904	2.868
5MHz QPSK	4.54	4.52	4.52	4.974	4.96	4.94
5MHz 16QAM	4.5	4.5	4.52	4.944	4.96	4.94
10MHz QPSK	8.96	9	8.96	9.668	9.68	9.6
10MHz 16QAM	8.96	8.96	8.96	9.643	9.56	9.6
15MHz QPSK	13.62	13.56	13.5	14.88	15.074	14.76
15MHz 16QAM	13.56	13.5	13.5	14.82	14.831	14.76

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

FCC §2.1051, §22.917(a): Spurious Emissions at Antenna Terminal

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

FCC §2.1051, §22.917(a): Out of band emission, Band Edge

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

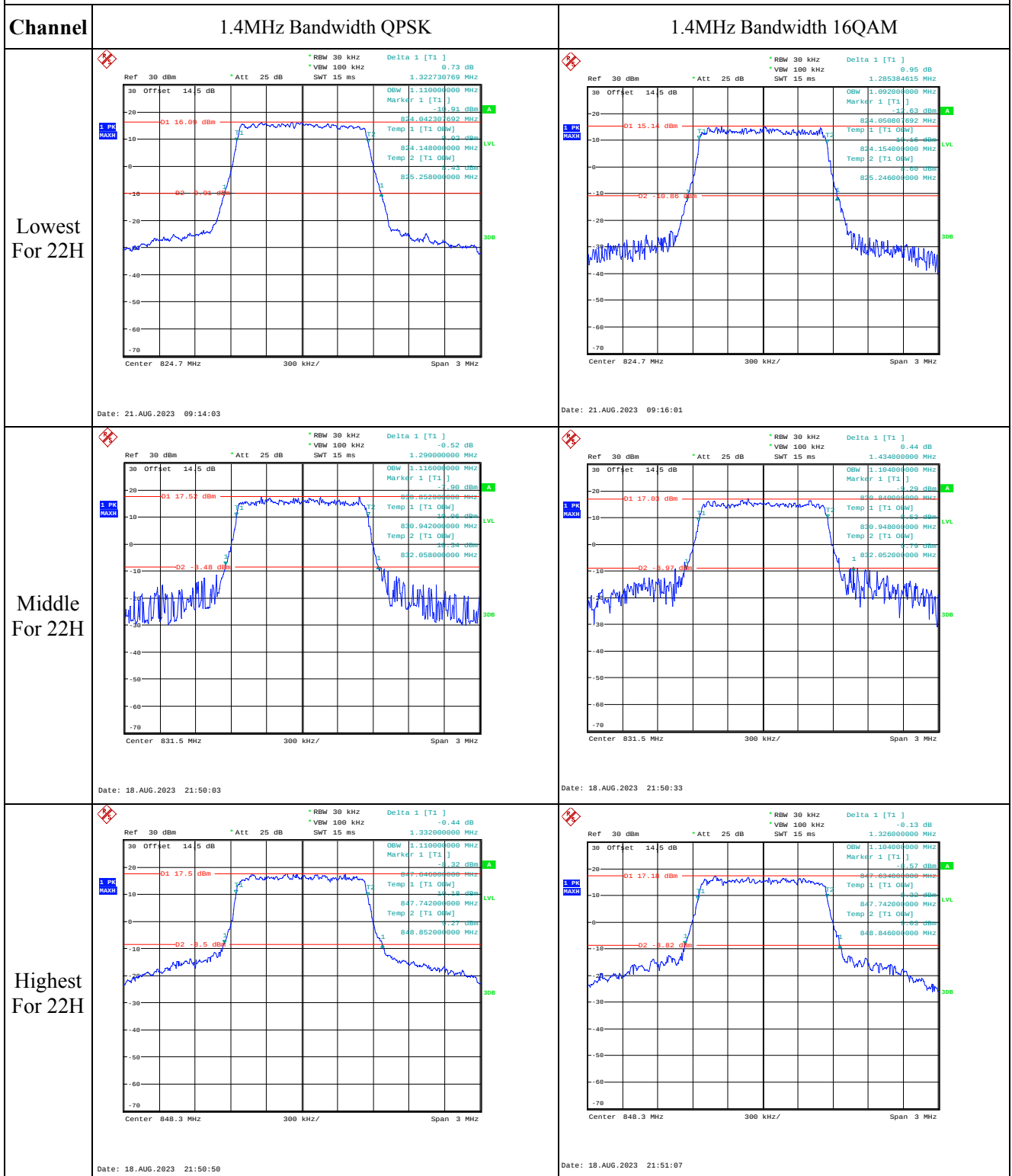
FCC §2.1055, §22.355: Frequency Stability

Test Modulation:	15 MHz QPSK		Test Channel:	831.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	9	0.011	2.5
	-20	3.8	7	0.008	2.5
	-10	3.8	5	0.006	2.5
	0	3.8	1	0.001	2.5
	10	3.8	1	0.001	2.5
	20	3.8	4	0.005	2.5
	30	3.8	5	0.006	2.5
	40	3.8	12	0.014	2.5
	50	3.8	36	0.043	2.5
Frequency Stability vs. Voltage	20	3.6	17	0.020	2.5
	20	4.35	17	0.020	2.5
Result:				Pass	

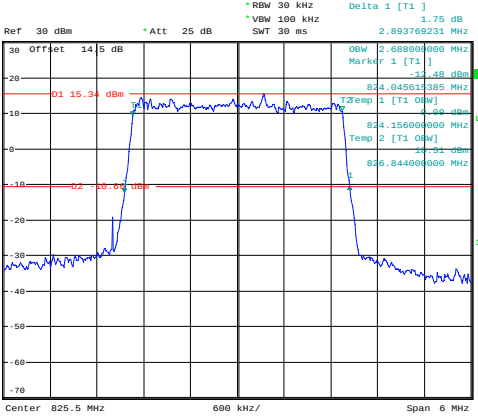
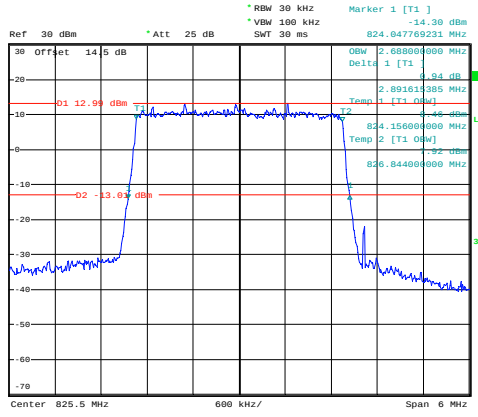
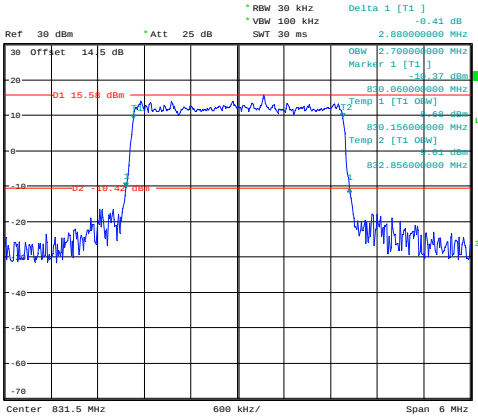
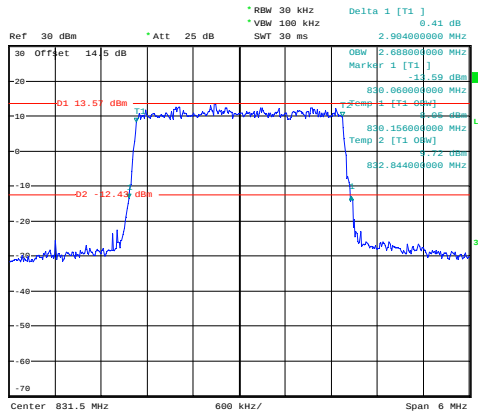
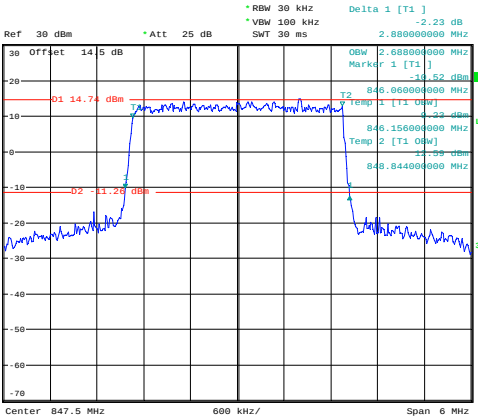
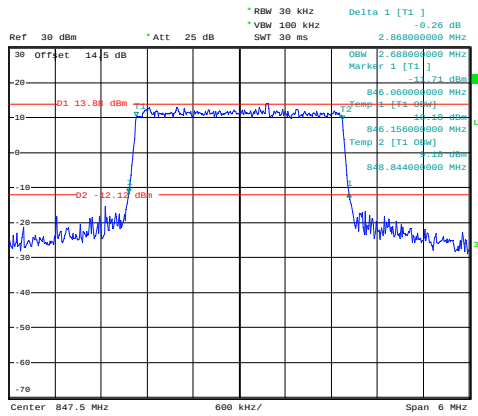
FCC §2.1055, §22.355: Frequency Stability					
Test Modulation:	15 MHz 16QAM		Test Channel:	831.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	17	0.020	2.5
	-20	3.8	4	0.005	2.5
	-10	3.8	5	0.006	2.5
	0	3.8	0	0.000	2.5
	10	3.8	6	0.007	2.5
	20	3.8	16	0.019	2.5
	30	3.8	7	0.008	2.5
	40	3.8	37	0.044	2.5
	50	3.8	50	0.060	2.5
Frequency Stability vs. Voltage	20	3.6	25	0.030	2.5
	20	4.35	34	0.041	2.5
				Result:	Pass

4.12.4 Test Plots for Part 22H:

(Note: The 14.5dB is the Insertion loss of the RF cable, Power Splitter and DC Block, which was offset into the Spectrum Analyzer):

Occupied Bandwidth

Occupied Bandwidth

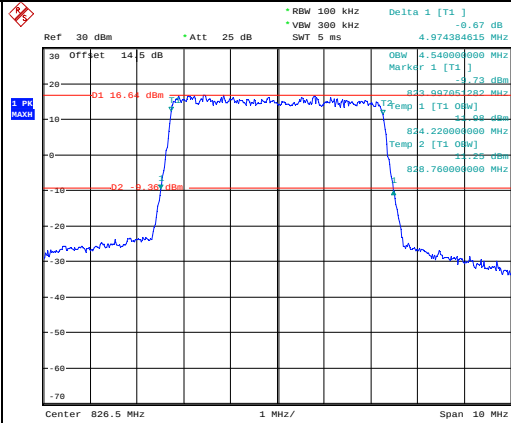
Channel	3MHz Bandwidth QPSK	3MHz Bandwidth 16QAM
Lowest For 22H	 Date: 21.AUG.2023 10:59:08	 Date: 21.AUG.2023 09:45:38
Middle For 22H	 Date: 18.AUG.2023 21:52:40	 Date: 18.AUG.2023 21:52:54
Highest For 22H	 Date: 18.AUG.2023 21:53:11	 Date: 18.AUG.2023 21:53:28

Occupied Bandwidth

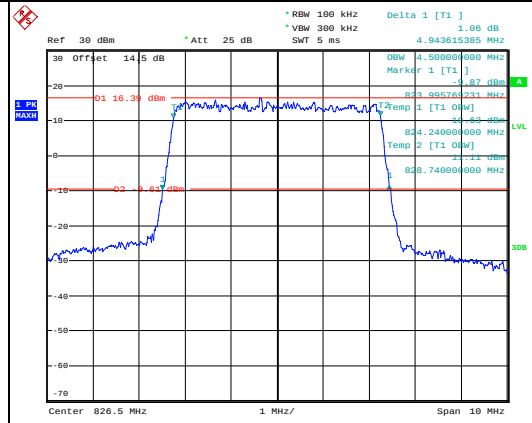
Channel

5MHz Bandwidth QPSK

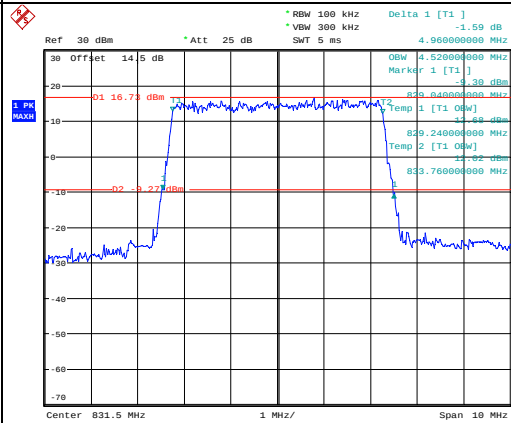
5MHz Bandwidth 16QAM

Lowest
For 22H

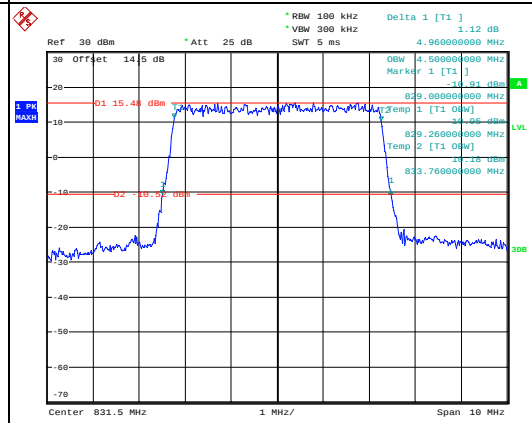
Date: 21.AUG.2023 11:03:43



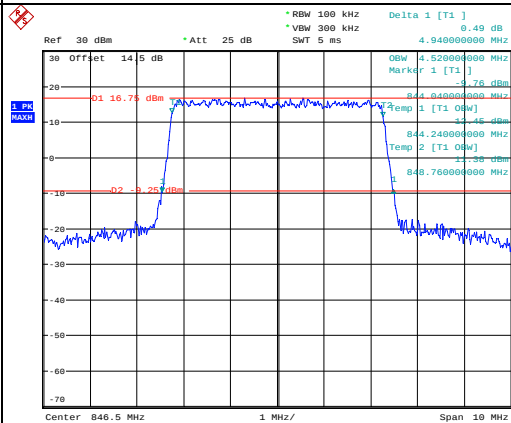
Date: 21.AUG.2023 11:08:21

Middle
For 22H

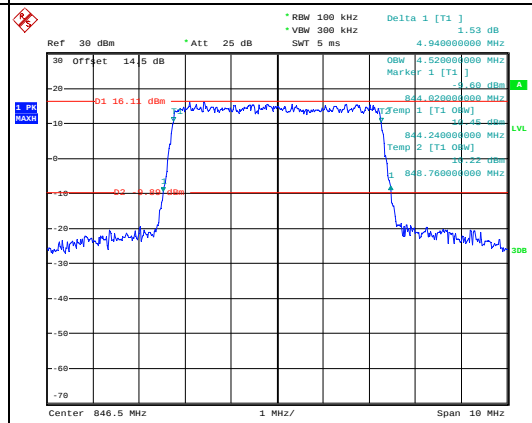
Date: 18.AUG.2023 21:54:51



Date: 18.AUG.2023 21:55:08

Highest
For 22H

Date: 18.AUG.2023 21:55:25



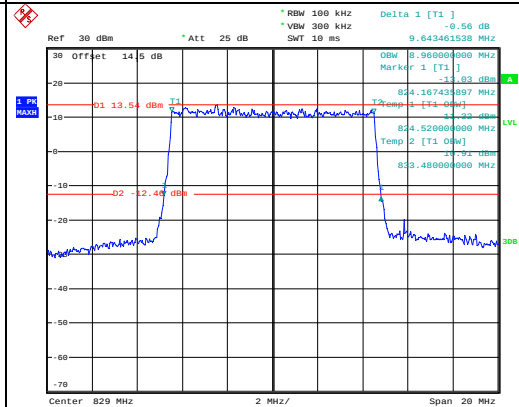
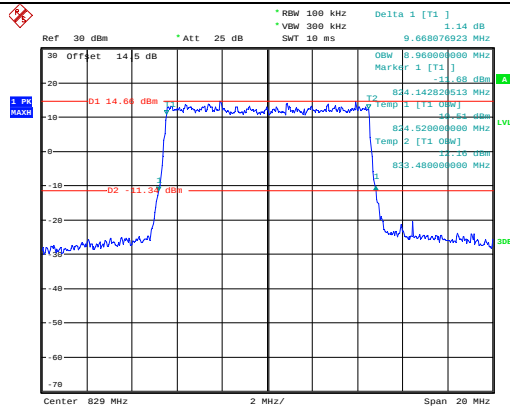
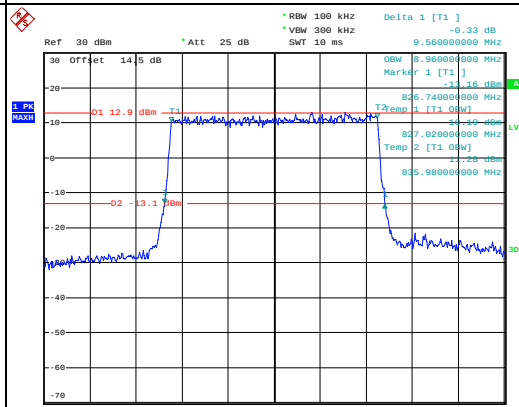
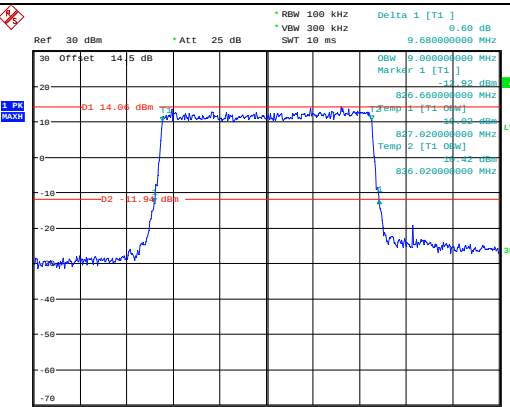
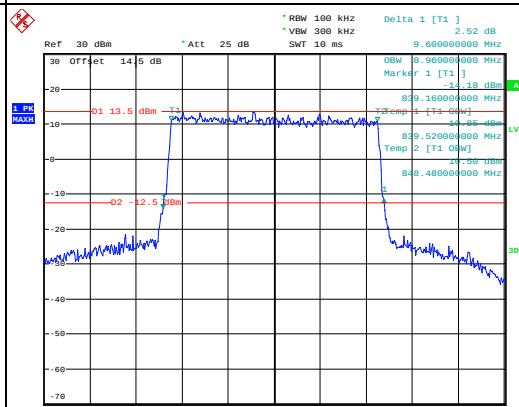
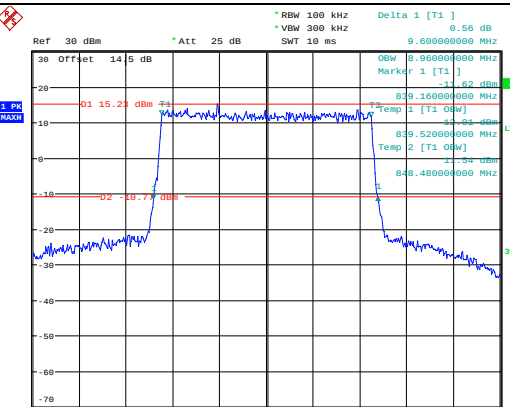
Date: 18.AUG.2023 21:55:42

Occupied Bandwidth

Channel

10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

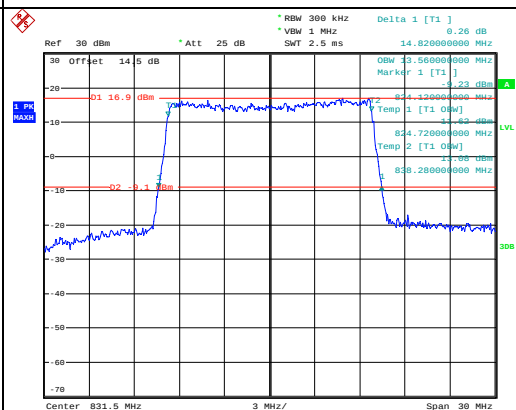
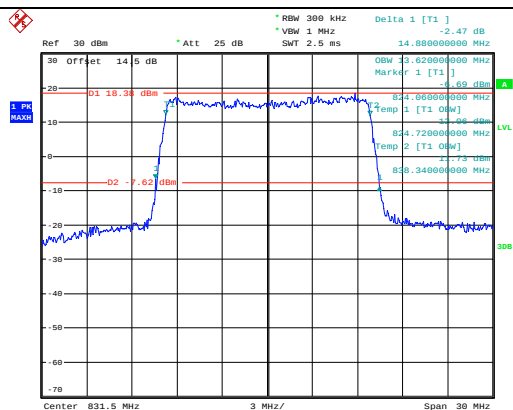
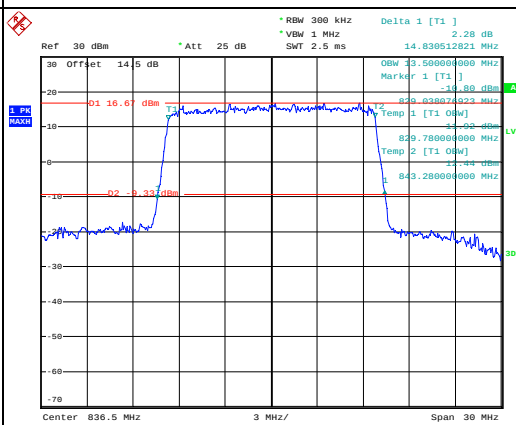
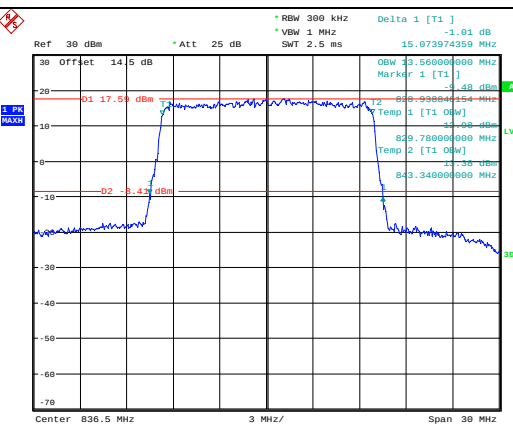
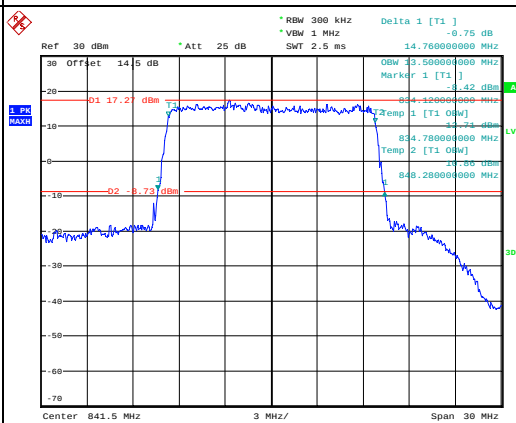
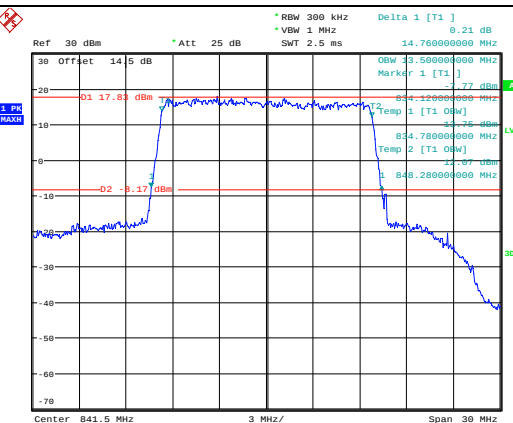
Lowest
For 22HMiddle
For 22HHighest
For 22H

Occupied Bandwidth

Channel

15MHz Bandwidth QPSK

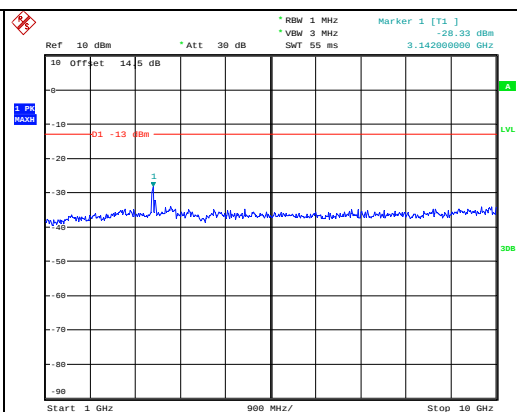
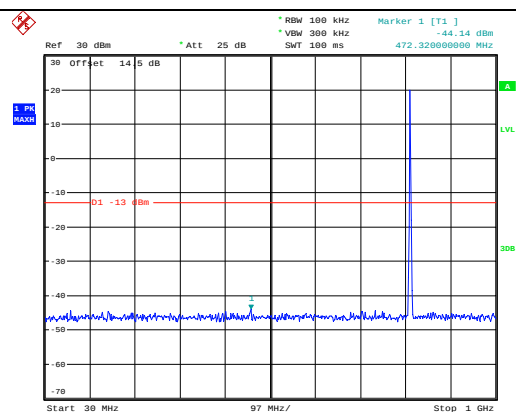
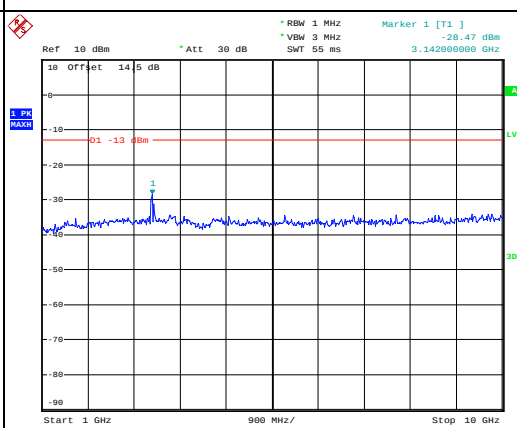
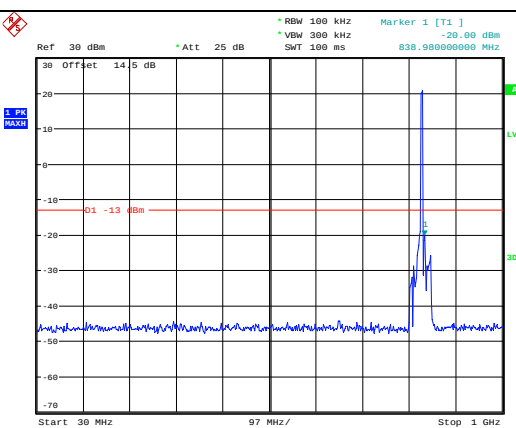
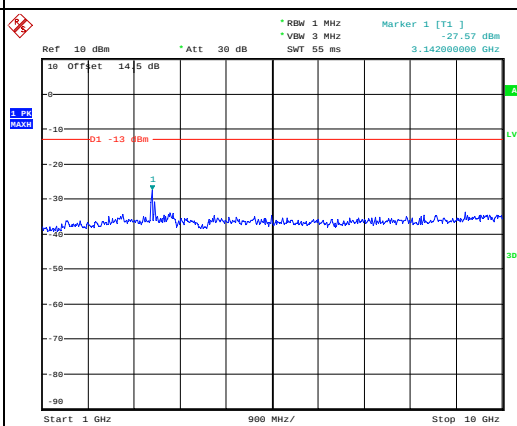
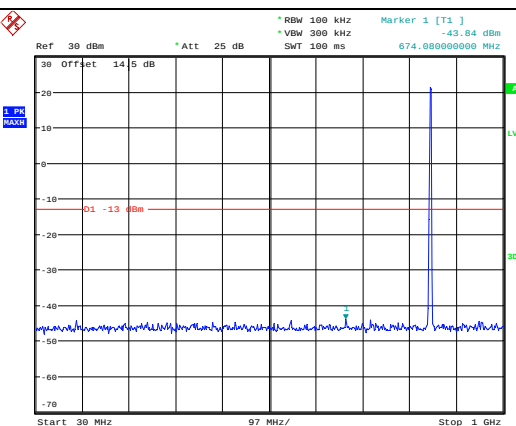
15MHz Bandwidth 16QAM

Lowest
For 22HMiddle
For 22HHighest
For 22H

Spurious Emissions at Antenna Terminal

Channel

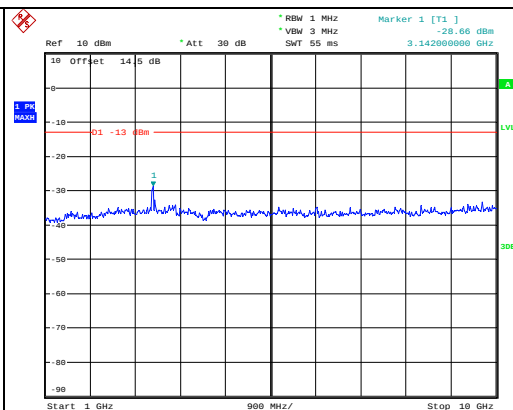
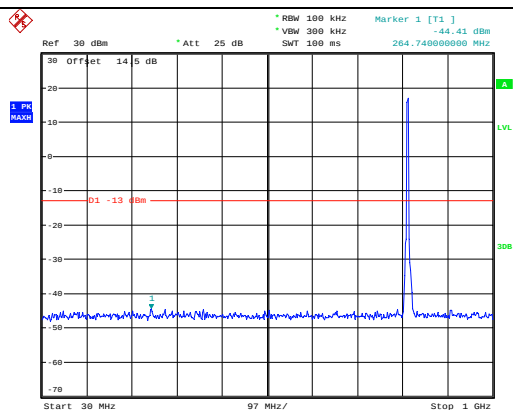
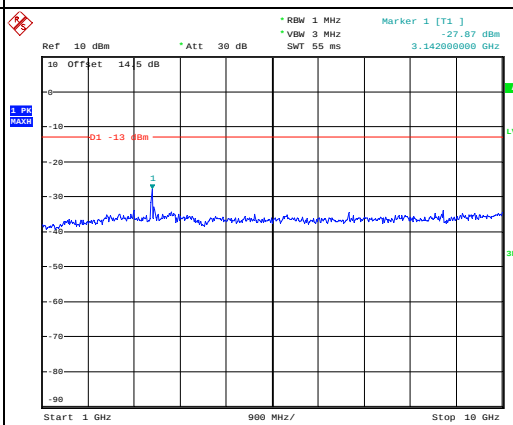
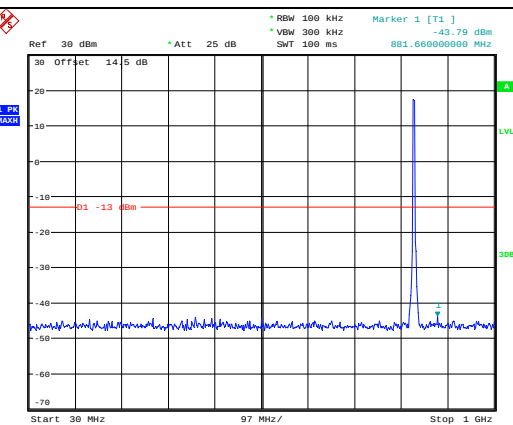
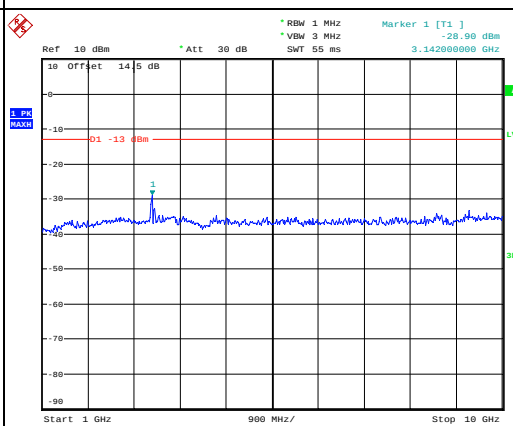
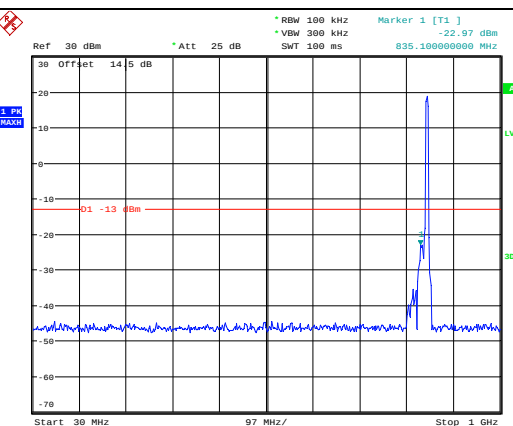
1.4MHz Bandwidth QPSK

Lowest
For 22HMiddle
For 22HHighest
For 22H

Spurious Emissions at Antenna Terminal

Channel

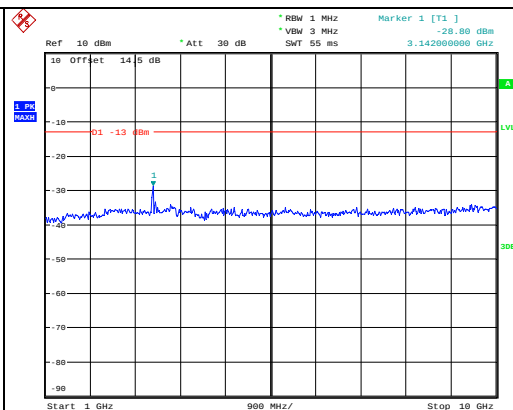
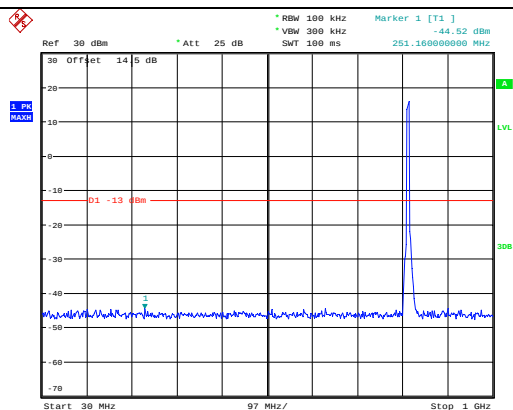
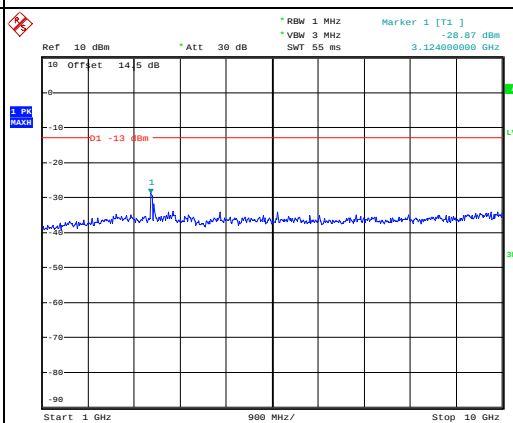
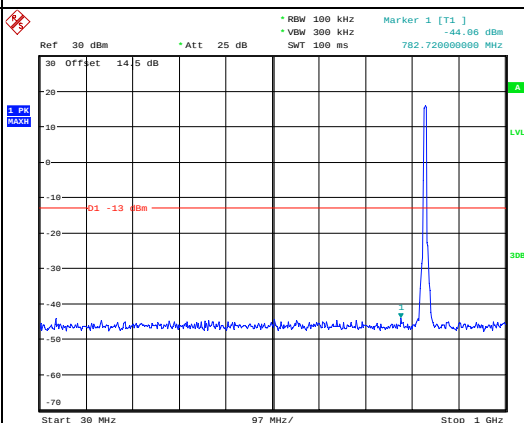
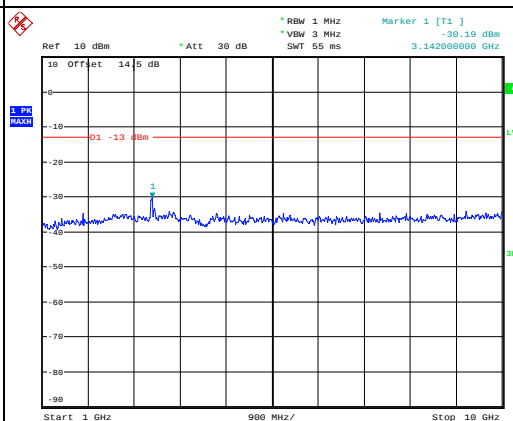
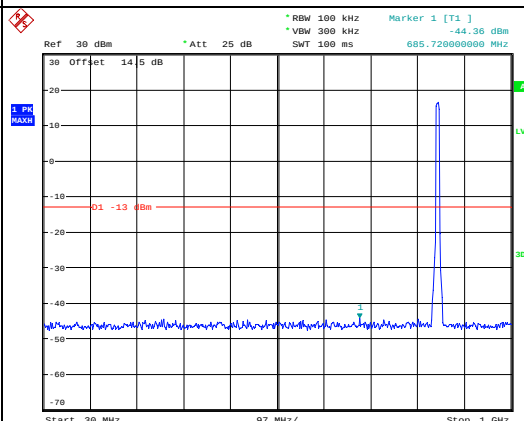
3MHz Bandwidth QPSK

Lowest
For 22HMiddle
For 22HHighest
For 22H

Spurious Emissions at Antenna Terminal

Channel

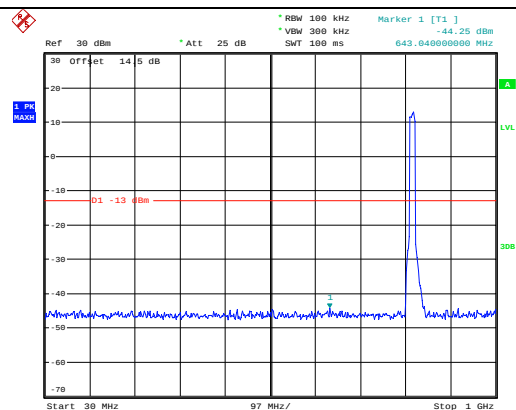
5MHz Bandwidth QPSK

Lowest
For 22HMiddle
For 22HHighest
For 22H

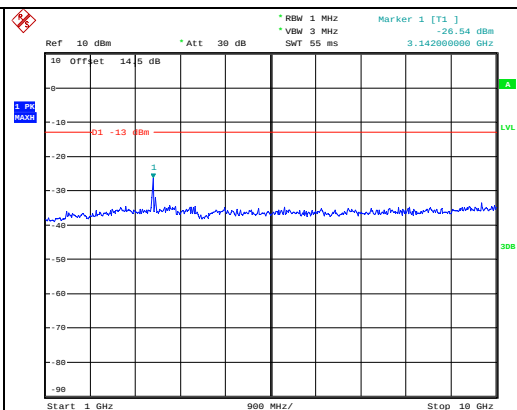
Spurious Emissions at Antenna Terminal

Channel

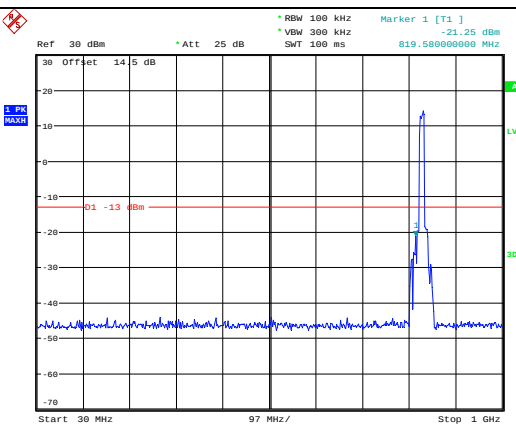
10MHz Bandwidth QPSK

Lowest
For 22H

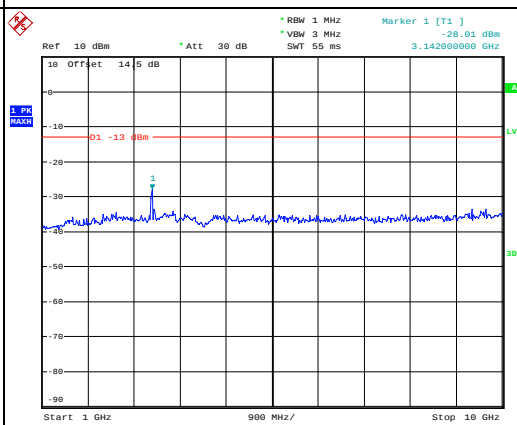
Date: 19.AUG.2023 11:27:43



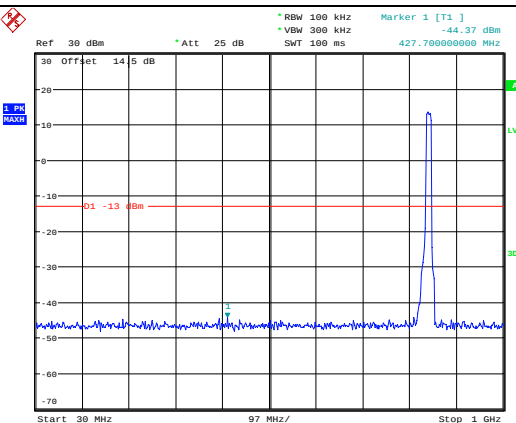
Date: 19.AUG.2023 11:27:58

Middle
For 22H

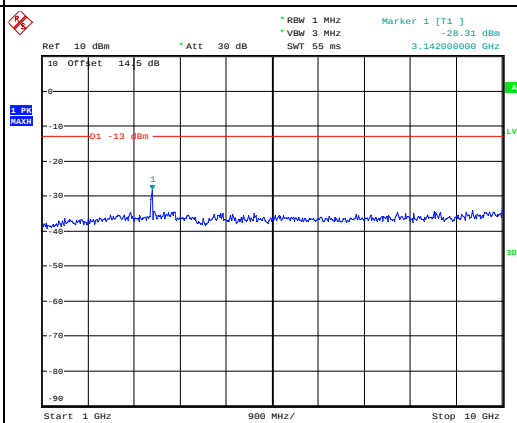
Date: 19.AUG.2023 11:28:15



Date: 19.AUG.2023 11:28:26

Highest
For 22H

Date: 19.AUG.2023 11:28:40

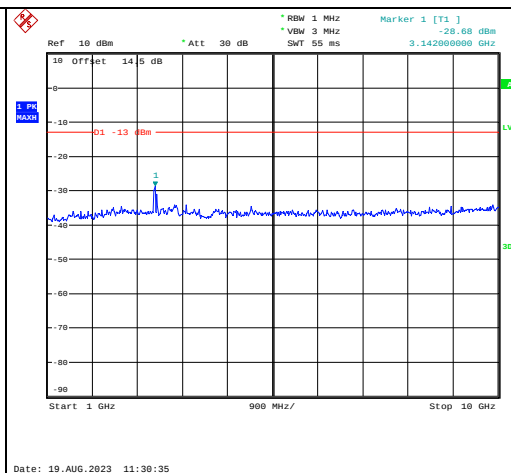
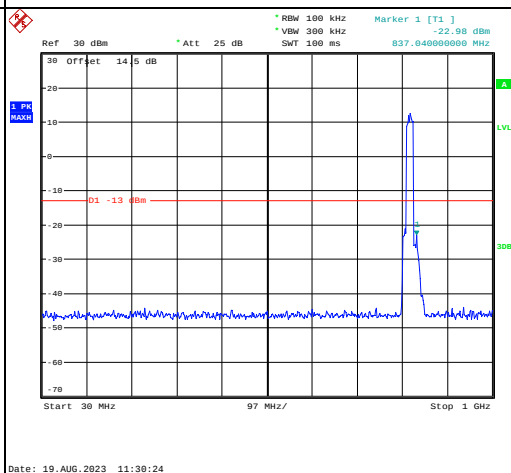
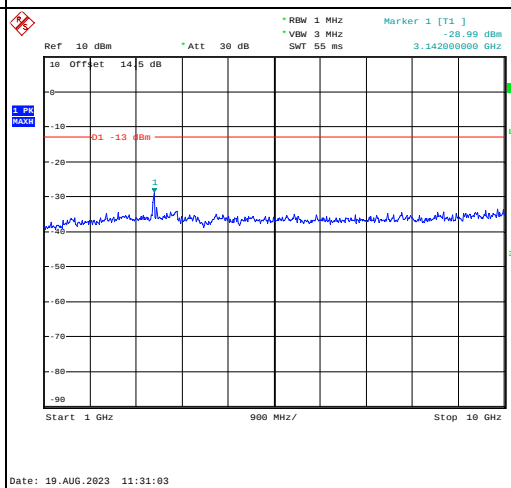
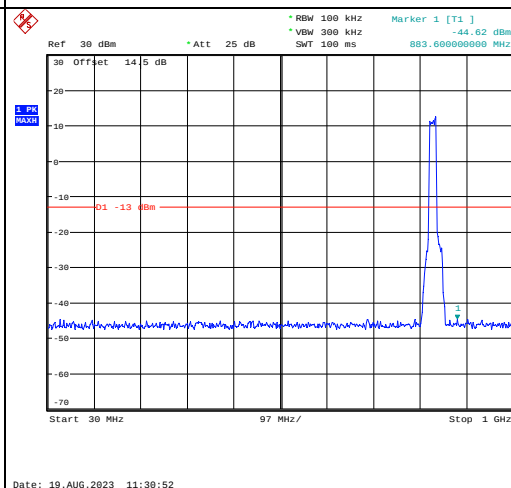
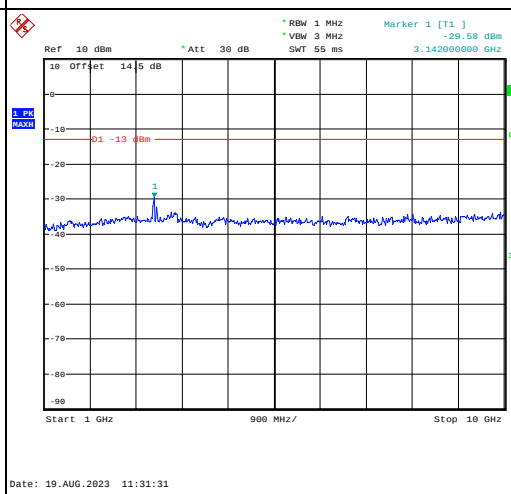
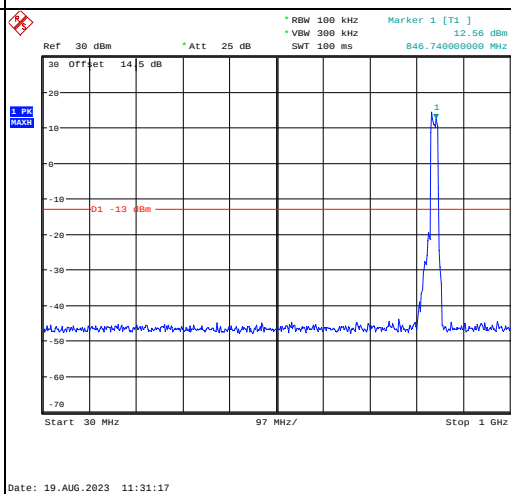


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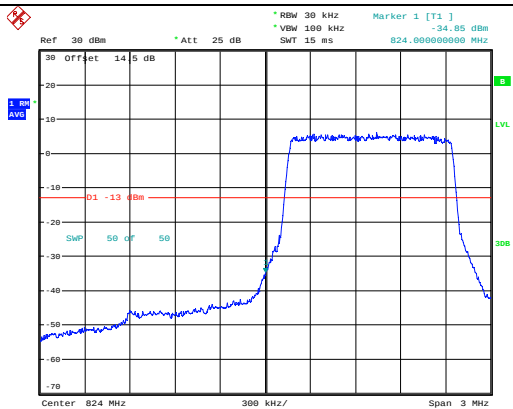
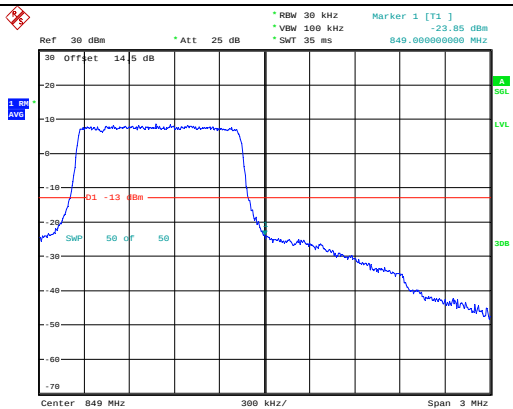
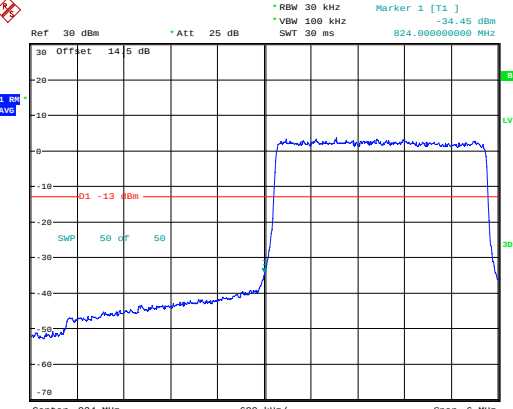
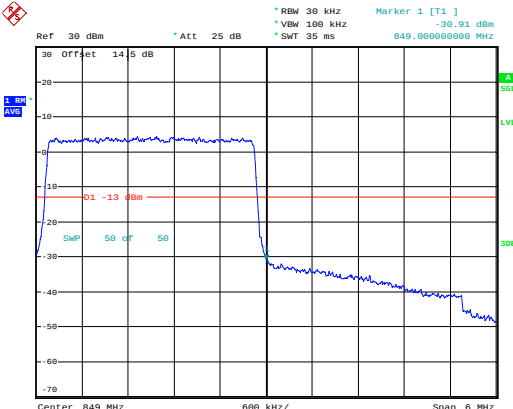
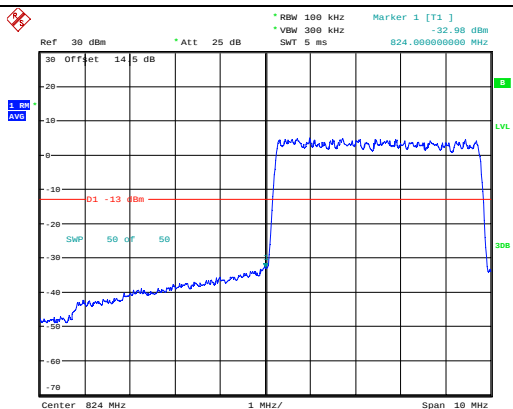
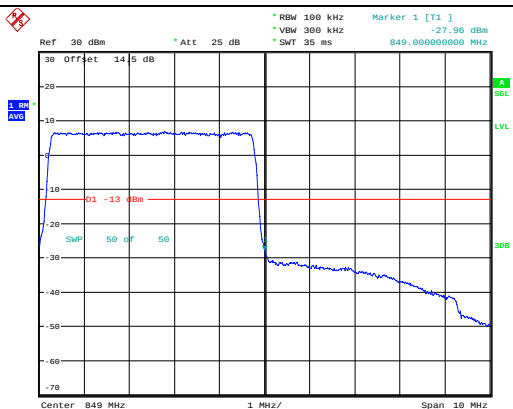
Spurious Emissions at Antenna Terminal

Channel

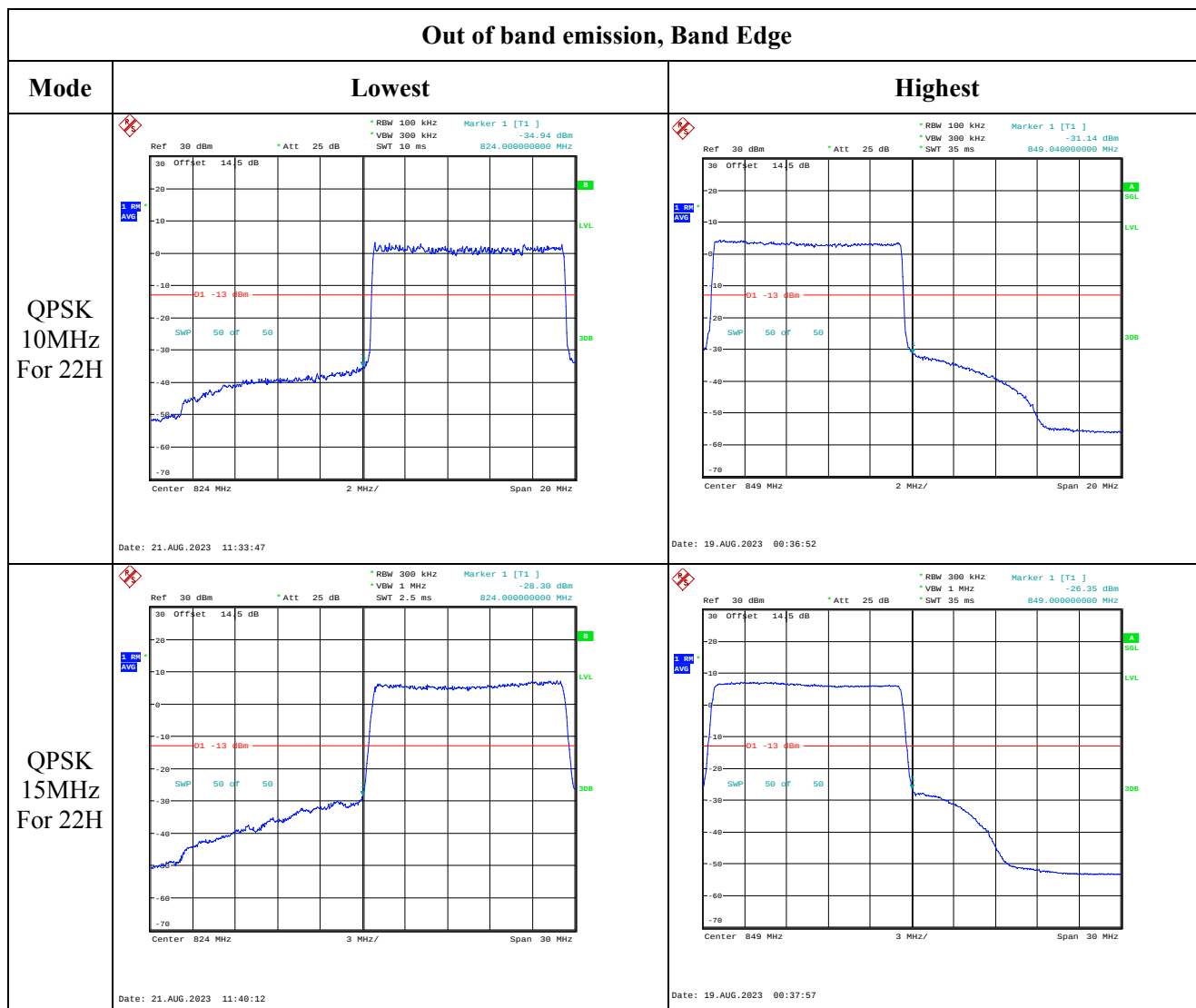
15MHz Bandwidth QPSK

Lowest
For 22HMiddle
For 22HHighest
For 22H

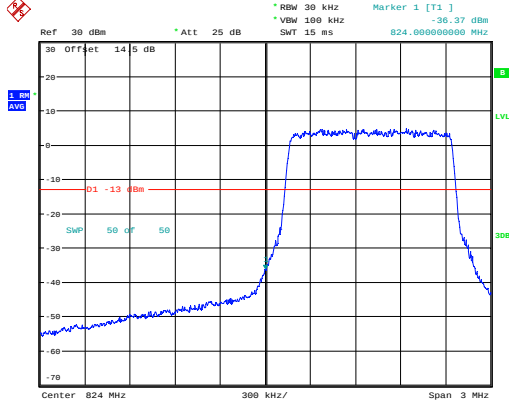
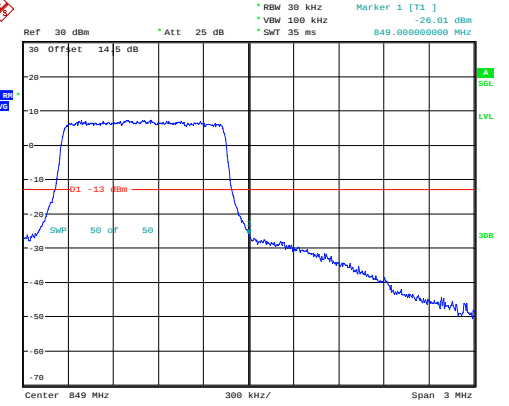
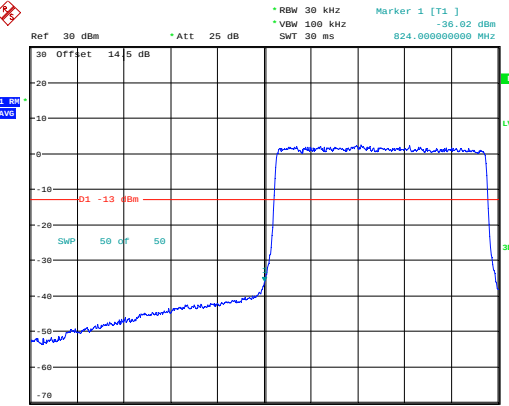
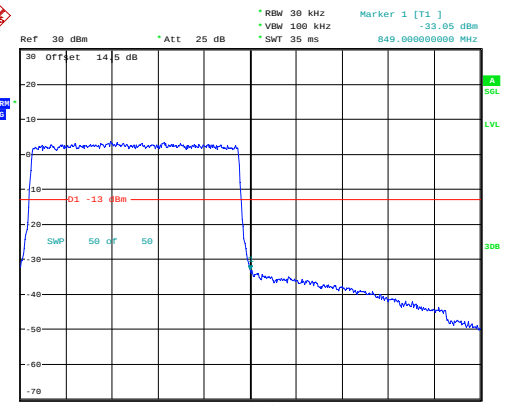
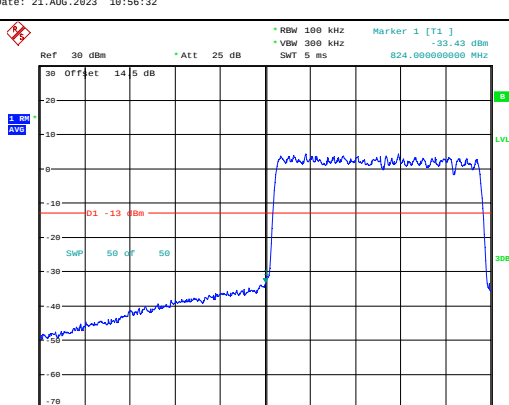
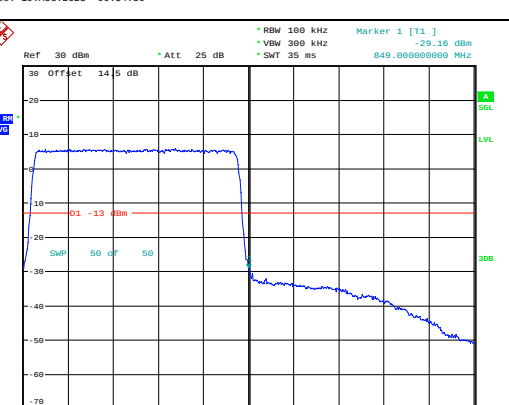
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz For 22H	 Ref: 30 dBm, Att: 25 dB, RBW: 30 kHz, VSW: 100 kHz, SWT: 15 ms, Marker 1 [T1]: -34.85 dBm, 824.000000000 MHz 30 Offset 14.5 dB, -13 dBm, -34.85 dBm, 824.000000000 MHz Center: 824 MHz, Span: 3 MHz Date: 21.AUG.2023 09:10:32	 Ref: 30 dBm, Att: 25 dB, RBW: 30 kHz, VSW: 100 kHz, SWT: 35 ms, Marker 1 [T1]: -23.85 dBm, 849.000000000 MHz 30 Offset 14.5 dB, -13 dBm, -23.85 dBm, 849.000000000 MHz Center: 849 MHz, Span: 3 MHz Date: 19.AUG.2023 00:33:10
QPSK 3MHz For 22H	 Ref: 30 dBm, Att: 25 dB, RBW: 30 kHz, VSW: 100 kHz, SWT: 30 ms, Marker 1 [T1]: -34.90 dBm, 824.000000000 MHz 30 Offset 14.5 dB, -13 dBm, -34.90 dBm, 824.000000000 MHz Center: 824 MHz, Span: 6 MHz Date: 21.AUG.2023 10:57:17	 Ref: 30 dBm, Att: 25 dB, RBW: 30 kHz, VSW: 100 kHz, SWT: 35 ms, Marker 1 [T1]: -30.91 dBm, 849.000000000 MHz 30 Offset 14.5 dB, -13 dBm, -30.91 dBm, 849.000000000 MHz Center: 849 MHz, Span: 6 MHz Date: 19.AUG.2023 00:34:22
QPSK 5MHz For 22H	 Ref: 30 dBm, Att: 25 dB, RBW: 100 kHz, VSW: 300 kHz, SWT: 5 ms, Marker 1 [T1]: -32.90 dBm, 824.000000000 MHz 30 Offset 14.5 dB, -13 dBm, -32.90 dBm, 824.000000000 MHz Center: 824 MHz, Span: 10 MHz Date: 21.AUG.2023 11:06:39	 Ref: 30 dBm, Att: 25 dB, RBW: 100 kHz, VSW: 300 kHz, SWT: 35 ms, Marker 1 [T1]: -27.96 dBm, 849.000000000 MHz 30 Offset 14.5 dB, -13 dBm, -27.96 dBm, 849.000000000 MHz Center: 849 MHz, Span: 10 MHz Date: 19.AUG.2023 00:35:35

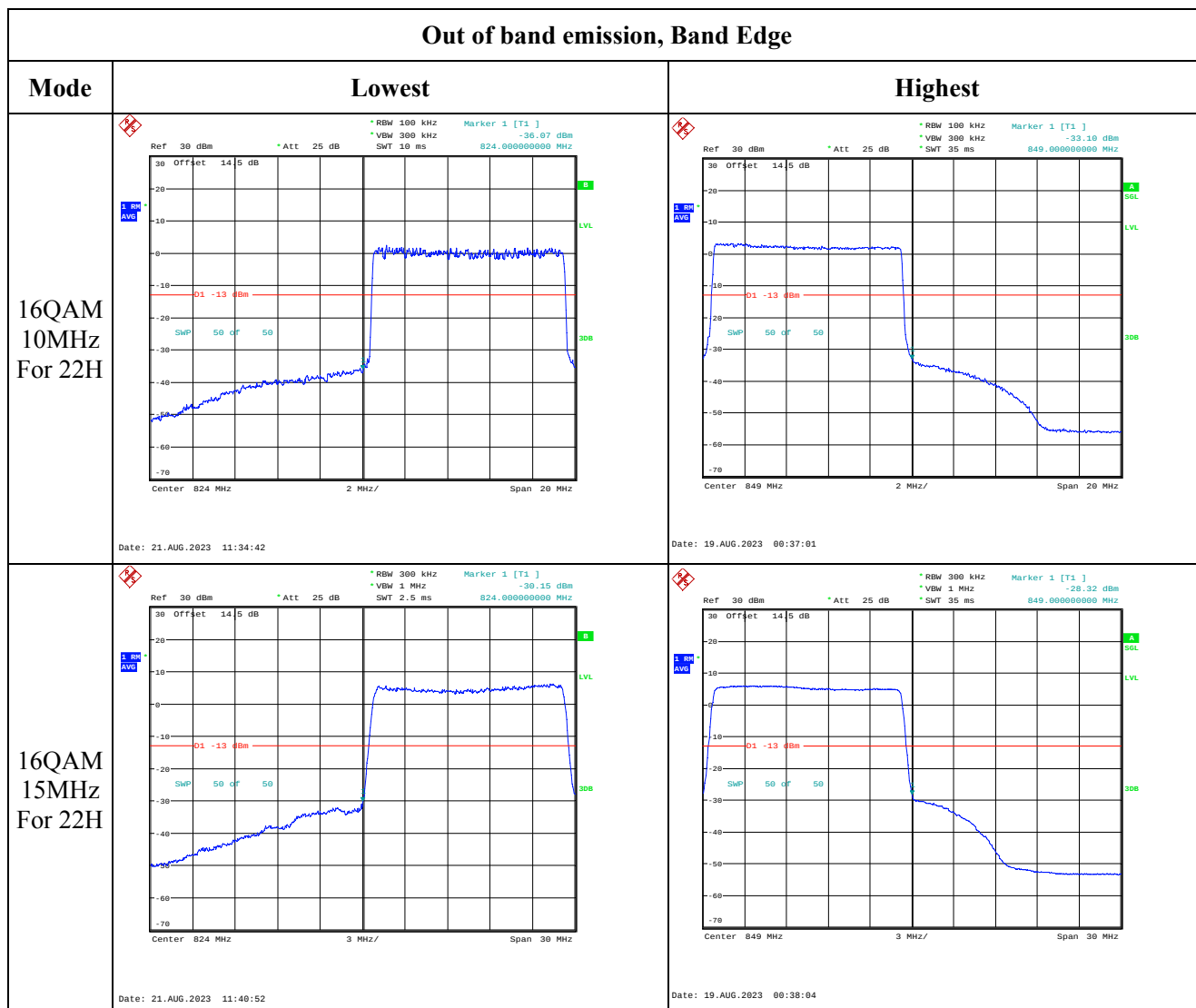
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz For 22H	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 100 kHz * SWT 15 ms * Marker 1 [T1] * -36.37 dBm * 824.000000000 MHz 30 Offset 14 5 dB SWP 50 OF 50 Center 824 MHz 300 kHz/ Span 3 MHz Date: 21.AUG.2023 09:22:25	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 100 kHz * SWT 35 ms * Marker 1 [T1] * -26.01 dBm * 849.000000000 MHz 30 Offset 14 5 dB SWP 50 OF 50 Center 849 MHz 300 kHz/ Span 3 MHz Date: 19.AUG.2023 00:33:17
16QAM 3MHz For 22H	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 300 kHz * SWT 5 ms * Marker 1 [T1] * -33.43 dBm * 824.000000000 MHz 30 Offset 14 5 dB SWP 50 OF 50 Center 824 MHz 600 kHz/ Span 6 MHz Date: 21.AUG.2023 10:56:32	 Ref 30 dBm * Att 25 dB * RBW 30 kHz * VBW 300 kHz * SWT 35 ms * Marker 1 [T1] * -33.05 dBm * 849.000000000 MHz 30 Offset 14 5 dB SWP 50 OF 50 Center 849 MHz 600 kHz/ Span 6 MHz Date: 19.AUG.2023 00:34:30
16QAM 5MHz For 22H	 Ref 30 dBm * Att 25 dB * RBW 100 kHz * VBW 300 kHz * SWT 5 ms * Marker 1 [T1] * -33.43 dBm * 824.000000000 MHz 30 Offset 14 5 dB SWP 50 OF 50 Center 824 MHz 1 MHz/ Span 10 MHz Date: 21.AUG.2023 11:07:23	 Ref 30 dBm * Att 25 dB * RBW 100 kHz * VBW 300 kHz * SWT 35 ms * Marker 1 [T1] * -29.16 dBm * 849.000000000 MHz 30 Offset 14 5 dB SWP 50 OF 50 Center 849 MHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 00:35:43

Out of band emission, Band Edge



4.13 Antenna Port Test Data and Results for LTE Band 41

Serial Number:	29K3-1	Test Date:	2023/8/17-2023/8/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.2-25.9	Relative Humidity: (%)	56-61	ATM Pressure: (kPa)	99.7-100
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	100147	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	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).*

Test Frequency for Each Mode:

Operation Bandwidth	Lowest Frequency (MHz)	Middle Frequency (MHz)	Highest Frequency (MHz)
5MHz	2498.5	2593	2687.5
10MHz	2501	2593	2685
15MHz	2503.5	2593	2682.5
20MHz	2506	2593	2680

Test Data:**FCC§2.1046;§ 27.50(h)(2)****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		
5MHz QPSK	RB1#0	18.81	17.9	19.74	17.56	33
	RB1#13	18.89	17.96	19.86		
	RB1#24	18.75	17.99	19.74		
	RB15#0	18.77	17.87	19.81		
	RB15#10	18.8	17.97	19.76		
	RB25#0	18.76	17.96	19.8		
5MHz 16QAM	RB1#0	19.04	17.91	19.76	17.59	33
	RB1#13	19.1	18.02	19.89		
	RB1#24	18.98	17.9	19.77		
	RB15#0	18.8	17.89	19.79		
	RB15#10	18.82	17.93	19.77		
	RB25#0	18.77	17.97	19.78		
10MHz QPSK	RB1#0	18.93	18.67	19.14	17.09	33
	RB1#25	19.13	18.95	19.39		
	RB1#49	18.79	18.8	19.11		
	RB25#0	18.75	18.64	19.14		
	RB25#25	18.81	18.7	19.16		
	RB50#0	18.79	18.66	19.08		
10MHz 16QAM	RB1#0	18.98	18.86	19.04	17.03	33
	RB1#25	19.18	19.15	19.33		
	RB1#49	18.85	18.92	19.04		
	RB25#0	18.78	18.68	19.15		
	RB25#25	18.85	18.78	19.16		
	RB50#0	18.8	18.71	19.1		
15MHz QPSK	RB1#0	18.84	18.55	19.34	17.25	33
	RB1#38	18.83	18.61	19.42		
	RB1#74	18.59	18.71	19.3		
	RB36#0	18.82	18.72	19.53		
	RB36#39	18.78	18.67	19.52		
	RB75#0	18.76	18.6	19.55		
15MHz 16QAM	RB1#0	19.02	18.7	19.27	17.14	33
	RB1#38	19.04	18.81	19.33		
	RB1#74	18.8	18.72	19.23		
	RB36#0	18.83	18.59	19.38		
	RB36#39	18.81	18.68	19.39		
	RB75#0	18.76	18.62	19.44		
20MHz QPSK	RB1#0	18.74	18.34	19.32	17.54	33
	RB1#50	19.07	18.85	19.84		
	RB1#99	18.5	18.38	19.35		

20MHz 16QAM	RB50#0	18.71	18.55	19.49	17.52	33
	RB50#50	18.76	18.67	19.57		
	RB100#0	18.71	18.61	19.56		
	RB1#0	18.93	18.43	19.3		
	RB1#50	19.27	18.9	19.82		
	RB1#99	18.73	18.47	19.35		
	RB50#0	18.7	18.52	19.52		
	RB50#50	18.76	18.64	19.64		
	RB100#0	18.73	18.6	19.55		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + G_T(dBi)

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	5.32	5.22	5	13
	RB100#0	5.64	5.67	5.77	13
20MHz 16QAM	RB1#0	6.76	5.8	6.35	13
	RB100#0	6.44	6.47	6.51	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	4.5	4.52	4.52	5.12	5.12	4.98
5MHz 16QAM	4.5	4.52	4.5	4.9	5.18	5
10MHz QPSK	8.96	8.96	8.96	9.64	9.92	9.6
10MHz 16QAM	8.96	8.96	8.96	9.6	9.48	9.48
15MHz QPSK	13.44	13.62	13.5	15.24	16.2	14.7
15MHz 16QAM	13.5	13.56	13.56	15.3	15.24	15.42
20MHz QPSK	17.92	18	17.92	19.36	19.28	19.2
20MHz 16QAM	17.92	17.92	17.84	19.28	19.28	19.6

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.
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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.
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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	3.8	2497.110	2496.00	2688.962	2690
	-20	3.8	2497.116	2496.00	2688.962	2690
	-10	3.8	2497.117	2496.00	2688.978	2690
	0	3.8	2497.103	2496.00	2688.964	2690
	10	3.8	2497.095	2496.00	2688.962	2690
	20	3.8	2497.120	2496.00	2688.960	2690
	30	3.8	2497.117	2496.00	2688.975	2690
	40	3.8	2497.100	2496.00	2688.974	2690
	50	3.8	2497.102	2496.00	2688.976	2690
Frequency Stability vs. Voltage	20	3.6	2497.108	2496.00	2688.960	2690
	20	4.35	2497.113	2496.00	2688.970	2690
					Result:	Pass

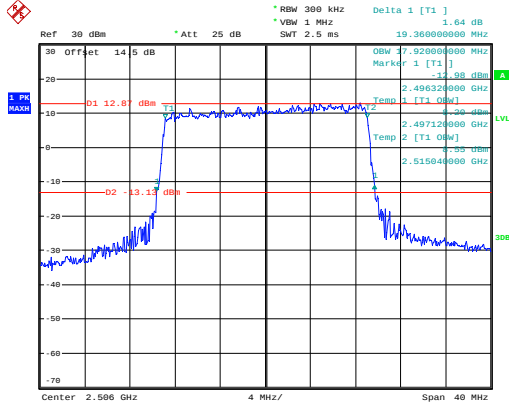
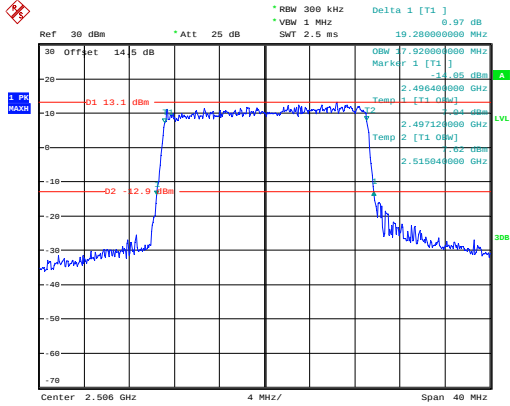
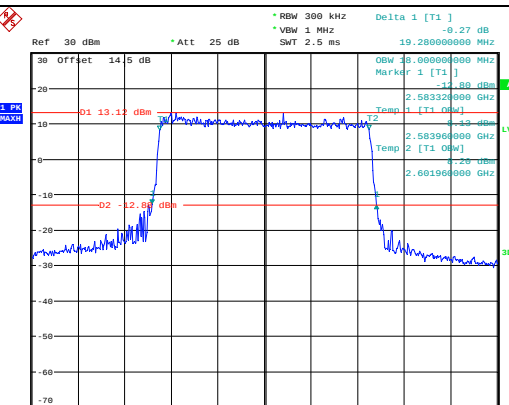
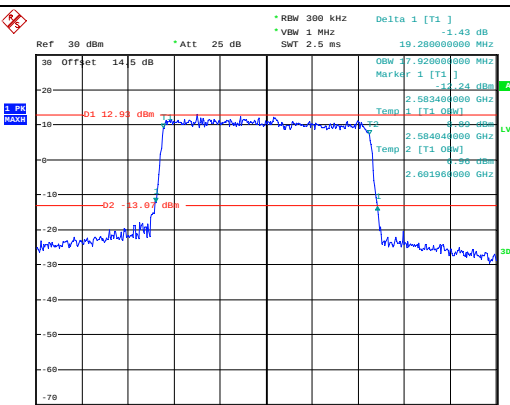
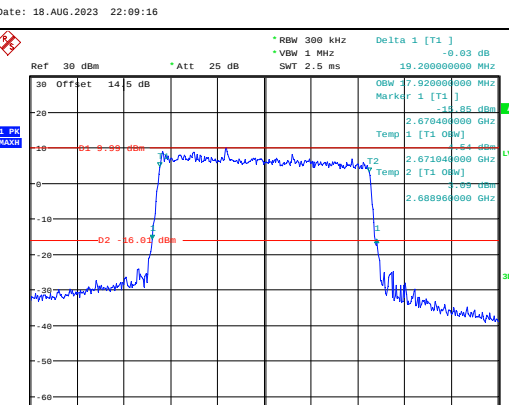
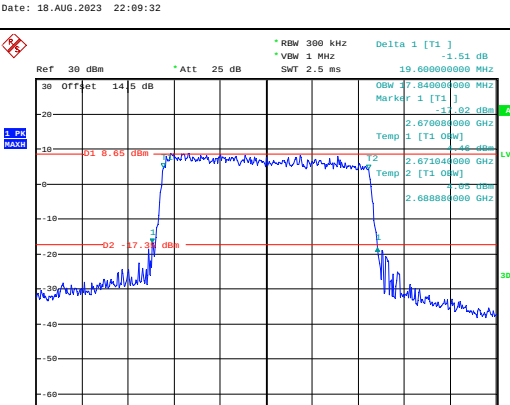
Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (°C)	Voltage (V _{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2497.108	2496.00	2688.892	2690
	-20	3.8	2497.118	2496.00	2688.904	2690
	-10	3.8	2497.096	2496.00	2688.895	2690
	0	3.8	2497.115	2496.00	2688.897	2690
	10	3.8	2497.092	2496.00	2688.891	2690
	20	3.8	2497.120	2496.00	2688.880	2690
	30	3.8	2497.114	2496.00	2688.884	2690
	40	3.8	2497.097	2496.00	2688.896	2690
	50	3.8	2497.110	2496.00	2688.897	2690
Frequency Stability vs. Voltage	20	3.6	2497.101	2496.00	2688.898	2690
	20	4.35	2497.091	2496.00	2688.900	2690
					Result:	Pass

Occupied Bandwidth

Page 208 of 273

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	Ref 30 dBm *Att 25 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 1.51 dB 9.640000000 MHz OSW 8.960000000 MHz Marker 1 [T1] -15.93 dBm 2.496200000 GHz Temp 1 [T1 0dB] 2.496520000 GHz Temp 2 [T1 0dB] 2.505400000 GHz Center 2.501 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:03:38	Ref 30 dBm *Att 25 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 1.07 dB 9.600000000 MHz OSW 8.960000000 MHz Marker 1 [T1] -15.23 dBm 2.496200000 GHz Temp 1 [T1 0dB] 2.496520000 GHz Temp 2 [T1 0dB] 2.505400000 GHz Center 2.501 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:03:55
Middle	Ref 30 dBm *Att 25 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 1.93 dB 9.920000000 MHz OSW 8.960000000 MHz Marker 1 [T1] -16.04 dBm 2.588520000 GHz Temp 1 [T1 0dB] 2.597480000 GHz Temp 2 [T1 0dB] Center 2.593 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:04:12	Ref 30 dBm *Att 25 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 0.81 dB 9.480000000 MHz OSW 8.960000000 MHz Marker 1 [T1] -14.62 dBm 2.588520000 GHz Temp 1 [T1 0dB] 2.597480000 GHz Temp 2 [T1 0dB] Center 2.593 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:04:29
Highest	Ref 30 dBm *Att 25 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 0.94 dB 9.600000000 MHz OSW 8.960000000 MHz Marker 1 [T1] -16.30 dBm 2.689480000 GHz Temp 1 [T1 0dB] 2.689480000 GHz Temp 2 [T1 0dB] Center 2.685 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:04:46	Ref 30 dBm *Att 25 dB RBW 100 kHz VBW 300 kHz SWT 10 ms Delta 1 [T1] 0.66 dB 9.480000000 MHz OSW 8.960000000 MHz Marker 1 [T1] -15.48 dBm 2.689480000 GHz Temp 1 [T1 0dB] 2.689480000 GHz Temp 2 [T1 0dB] Center 2.685 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:05:03

Occupied Bandwidth

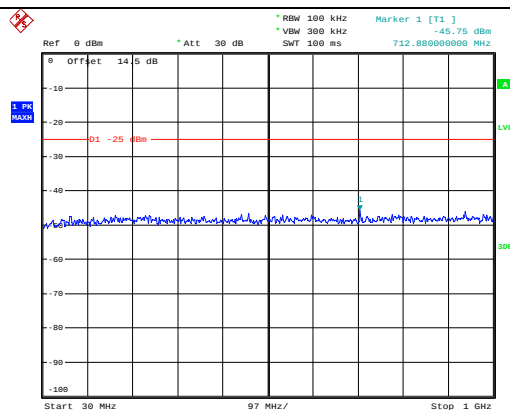
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm * Att 25 dB * RBW 300 kHz Delta 1 [T1] * VBW 1 MHz 1.64 dB SWT 2.5 ms 19.360000000 MHz OBW 17.920000000 MHz Marker 1 [T1] -12.8 dBm Temp 1 [T1 0dB] 2.496320000 GHz Temp 2 [T1 0dB] 2.497120000 GHz Temp 2 [T1 0dB] 2.515040000 GHz -13.13 dBm -12.9 dBm Center 2.586 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:08:42	 Ref 30 dBm * Att 25 dB * RBW 300 kHz Delta 1 [T1] * VBW 1 MHz 0.97 dB SWT 2.5 ms 19.280000000 MHz OBW 17.920000000 MHz Marker 1 [T1] -13.1 dBm Temp 1 [T1 0dB] 2.496400000 GHz Temp 2 [T1 0dB] 2.497120000 GHz Temp 2 [T1 0dB] 2.515040000 GHz -13.1 dBm -12.9 dBm Center 2.586 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:08:58
Middle	 Ref 30 dBm * Att 25 dB * RBW 300 kHz Delta 1 [T1] * VBW 1 MHz 0.27 dB SWT 2.5 ms 19.280000000 MHz OBW 17.920000000 MHz Marker 1 [T1] -13.1 dBm Temp 1 [T1 0dB] 2.583320000 GHz Temp 2 [T1 0dB] 2.583960000 GHz Temp 2 [T1 0dB] 2.601960000 GHz -13.1 dBm -12.9 dBm Center 2.593 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:09:16	 Ref 30 dBm * Att 25 dB * RBW 300 kHz Delta 1 [T1] * VBW 1 MHz 1.43 dB SWT 2.5 ms 19.280000000 MHz OBW 17.920000000 MHz Marker 1 [T1] -13.1 dBm Temp 1 [T1 0dB] 2.583480000 GHz Temp 2 [T1 0dB] 2.584040000 GHz Temp 2 [T1 0dB] 2.601960000 GHz -13.1 dBm -12.9 dBm Center 2.593 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:09:32
Highest	 Ref 30 dBm * Att 25 dB * RBW 300 kHz Delta 1 [T1] * VBW 1 MHz 0.93 dB SWT 2.5 ms 19.200000000 MHz OBW 17.920000000 MHz Marker 1 [T1] -9.99 dBm Temp 1 [T1 0dB] 2.678000000 GHz Temp 2 [T1 0dB] 2.671040000 GHz Temp 2 [T1 0dB] 2.688960000 GHz -10.0 dBm -17.3 dBm Center 2.68 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:09:50	 Ref 30 dBm * Att 25 dB * RBW 300 kHz Delta 1 [T1] * VBW 1 MHz 1.51 dB SWT 2.5 ms 19.600000000 MHz OBW 17.920000000 MHz Marker 1 [T1] -8.65 dBm Temp 1 [T1 0dB] 2.678000000 GHz Temp 2 [T1 0dB] 2.673040000 GHz Temp 2 [T1 0dB] 2.688880000 GHz -10.0 dBm -17.3 dBm Center 2.68 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:10:06

Spurious Emissions at Antenna Terminal

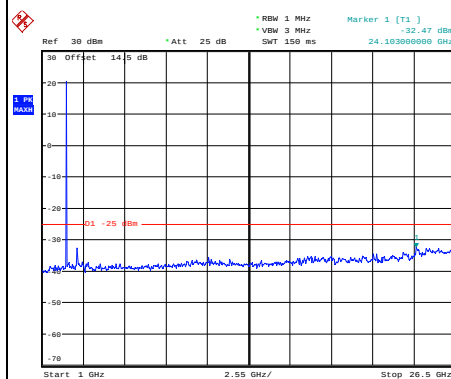
Channel

5MHz Bandwidth QPSK

Lowest

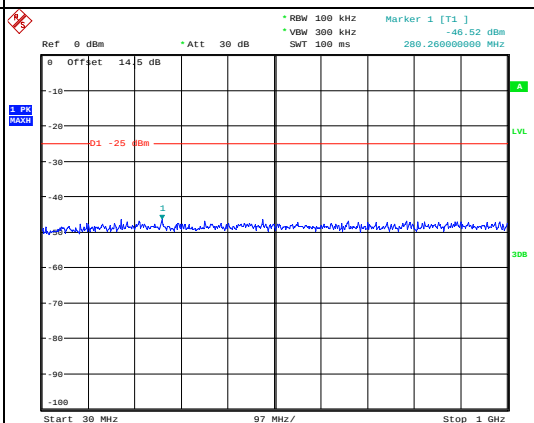


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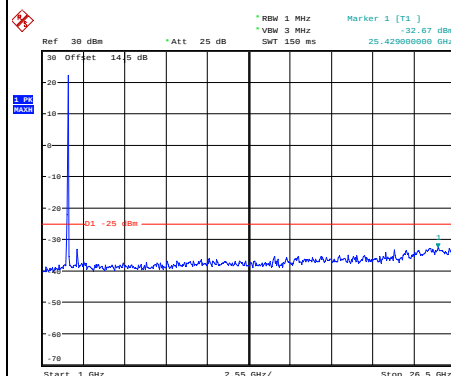


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Middle

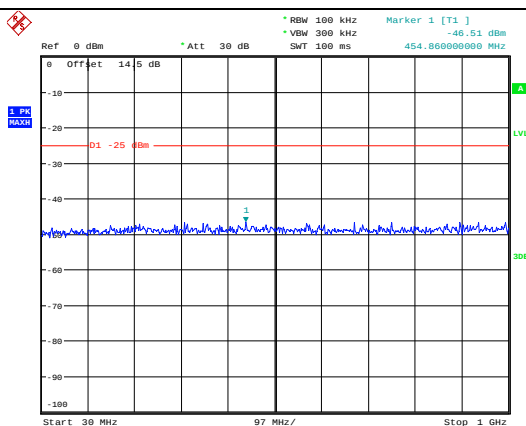


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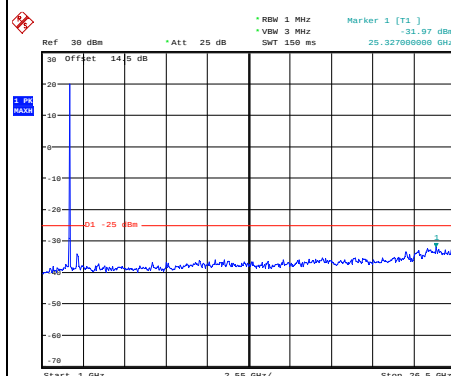


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Highest



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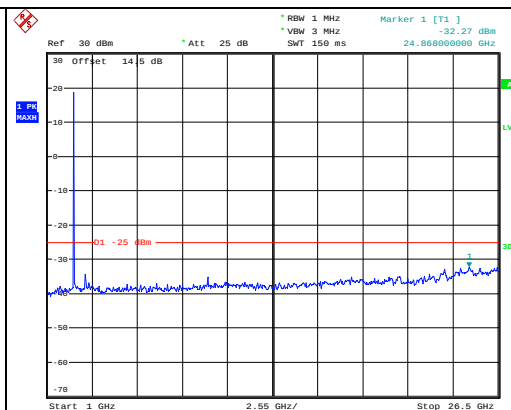
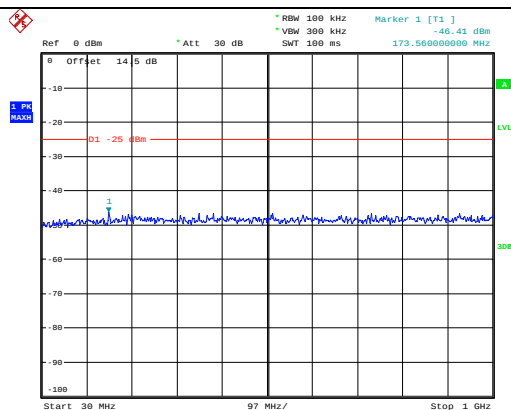
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Spurious Emissions at Antenna Terminal

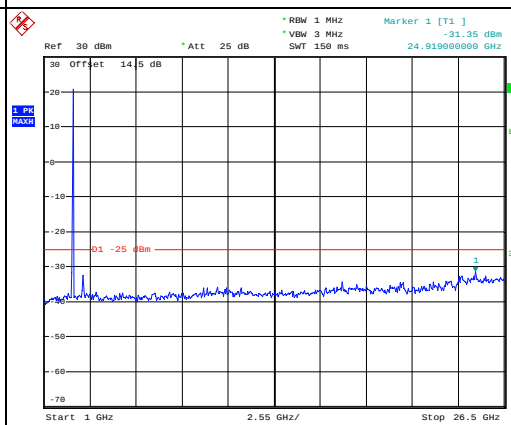
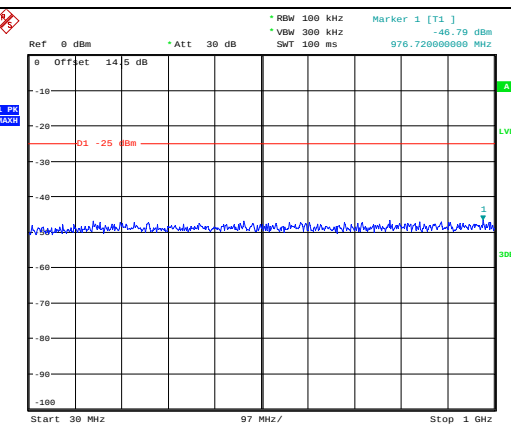
Channel

10MHz Bandwidth QPSK

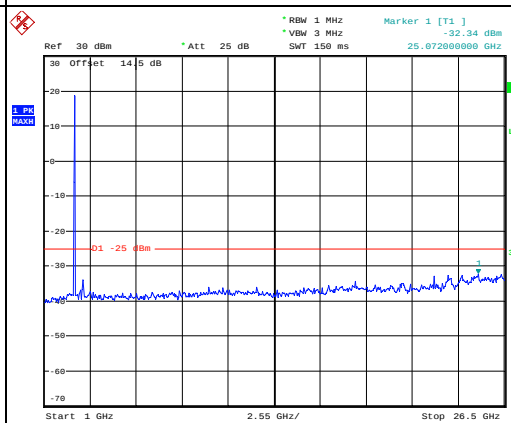
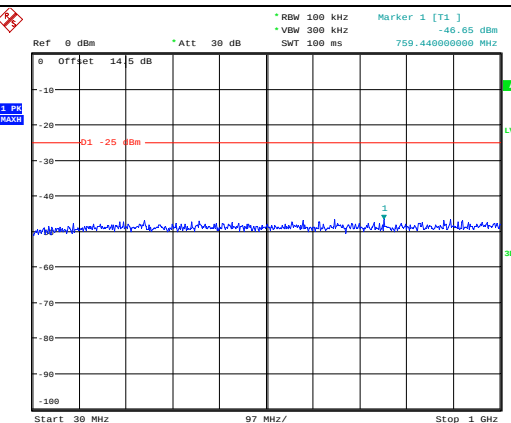
Lowest



Middle



Highest

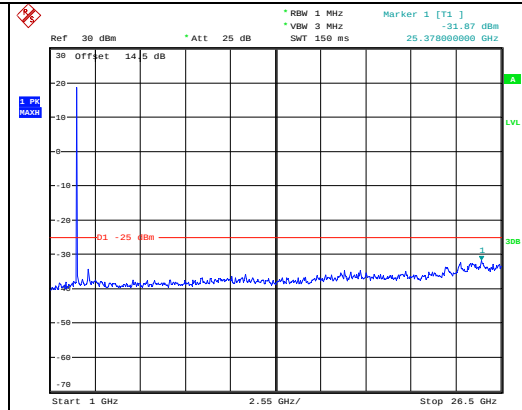
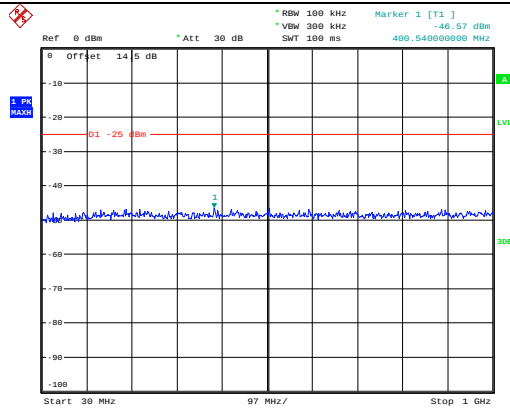


Spurious Emissions at Antenna Terminal

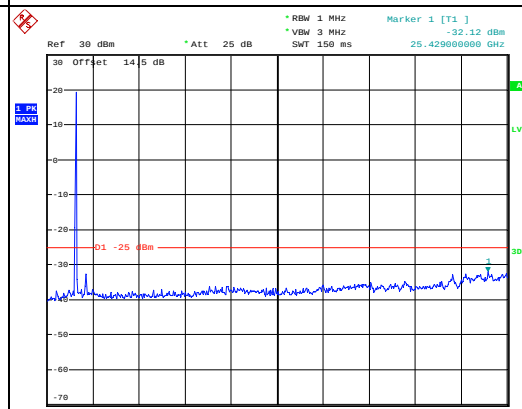
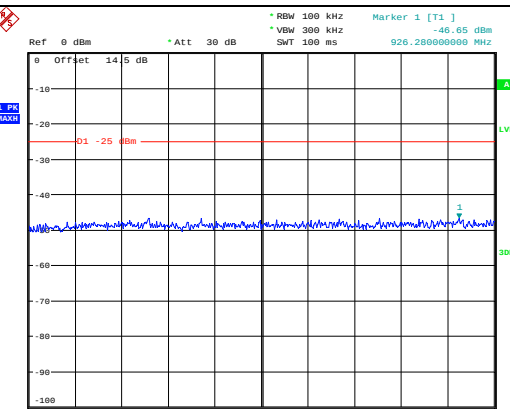
Channel

15MHz Bandwidth QPSK

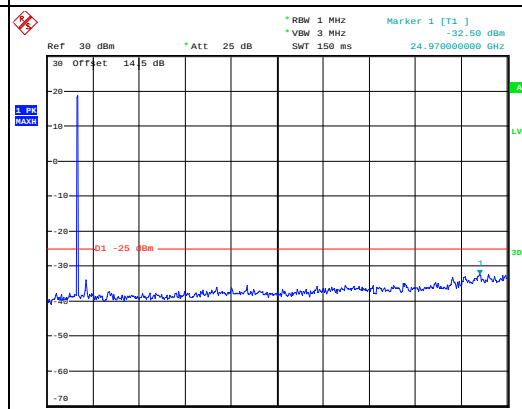
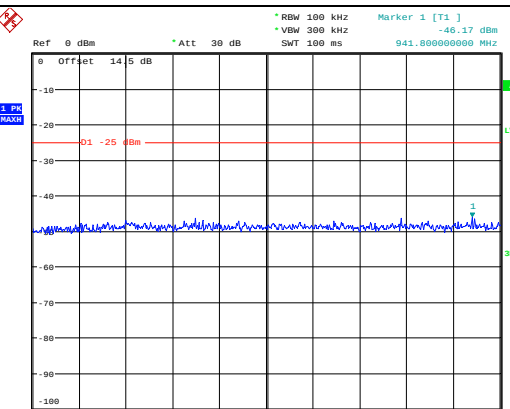
Lowest



Middle



Highest

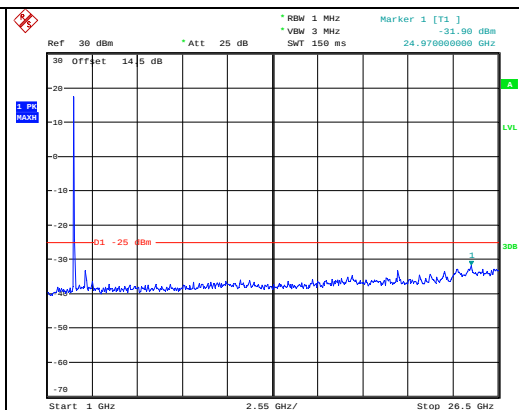
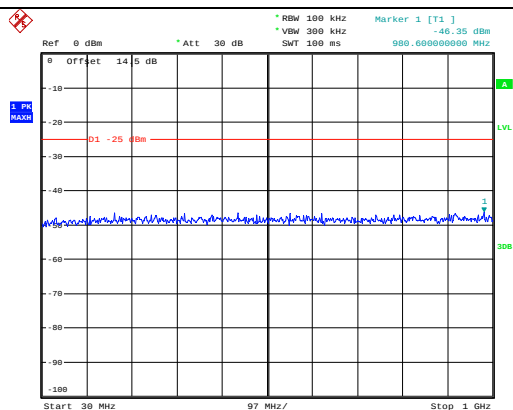


Spurious Emissions at Antenna Terminal

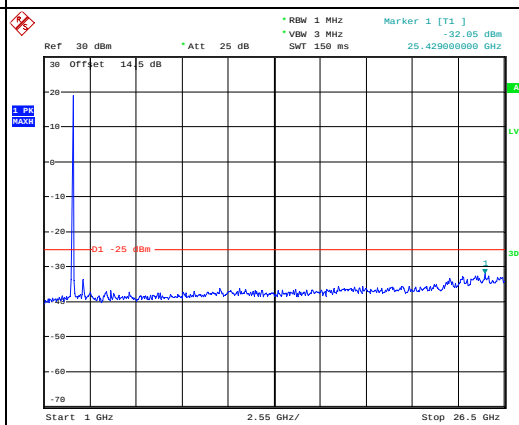
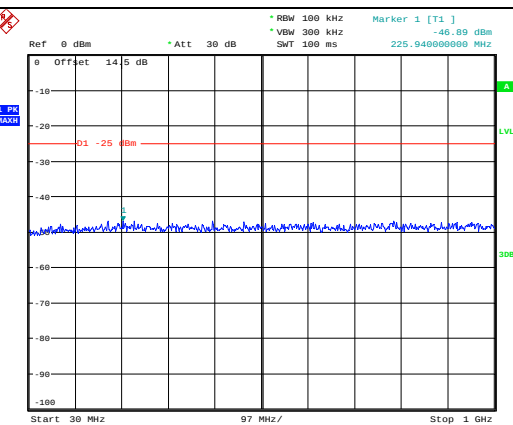
Channel

20MHz Bandwidth QPSK

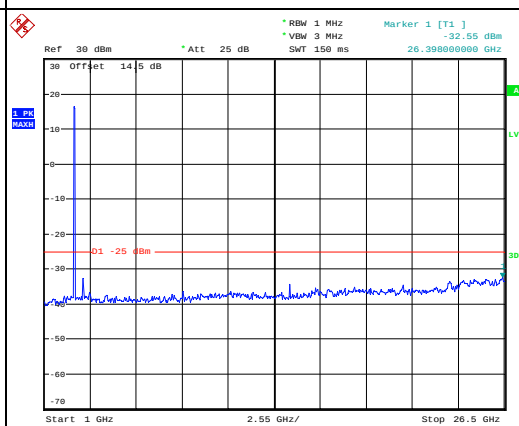
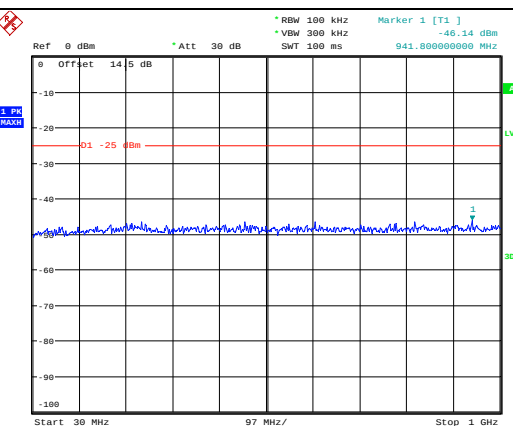
Lowest



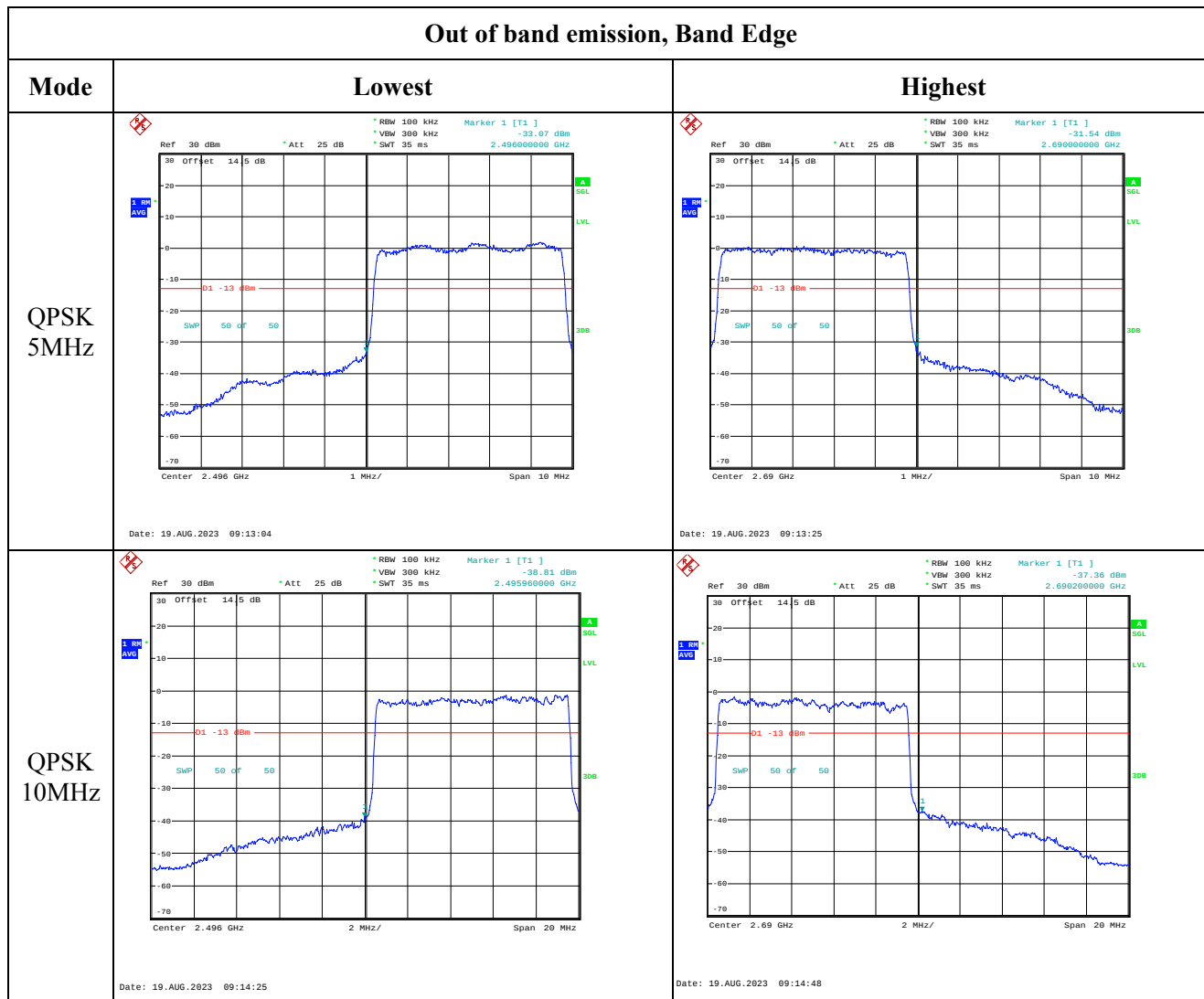
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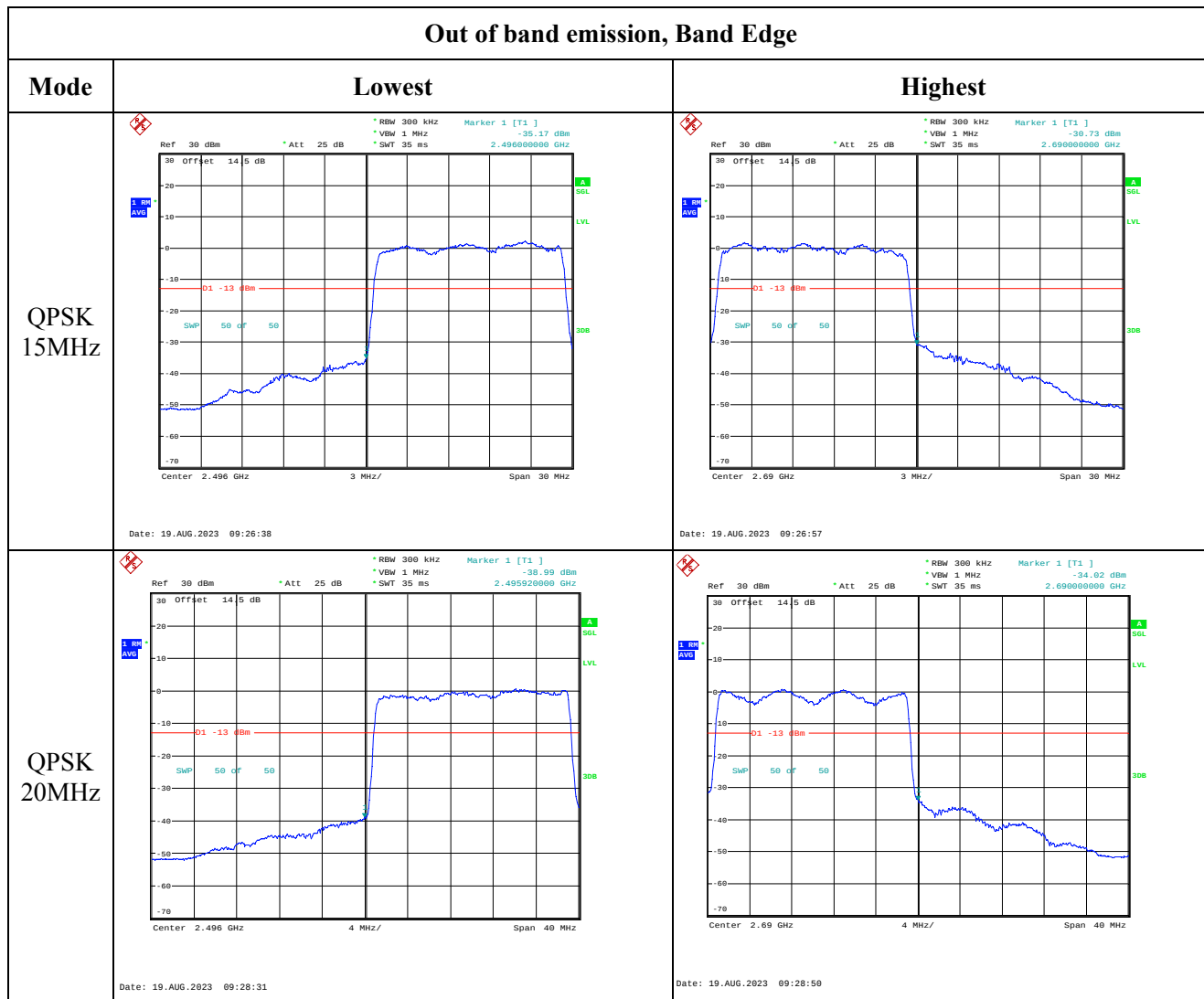
Highest



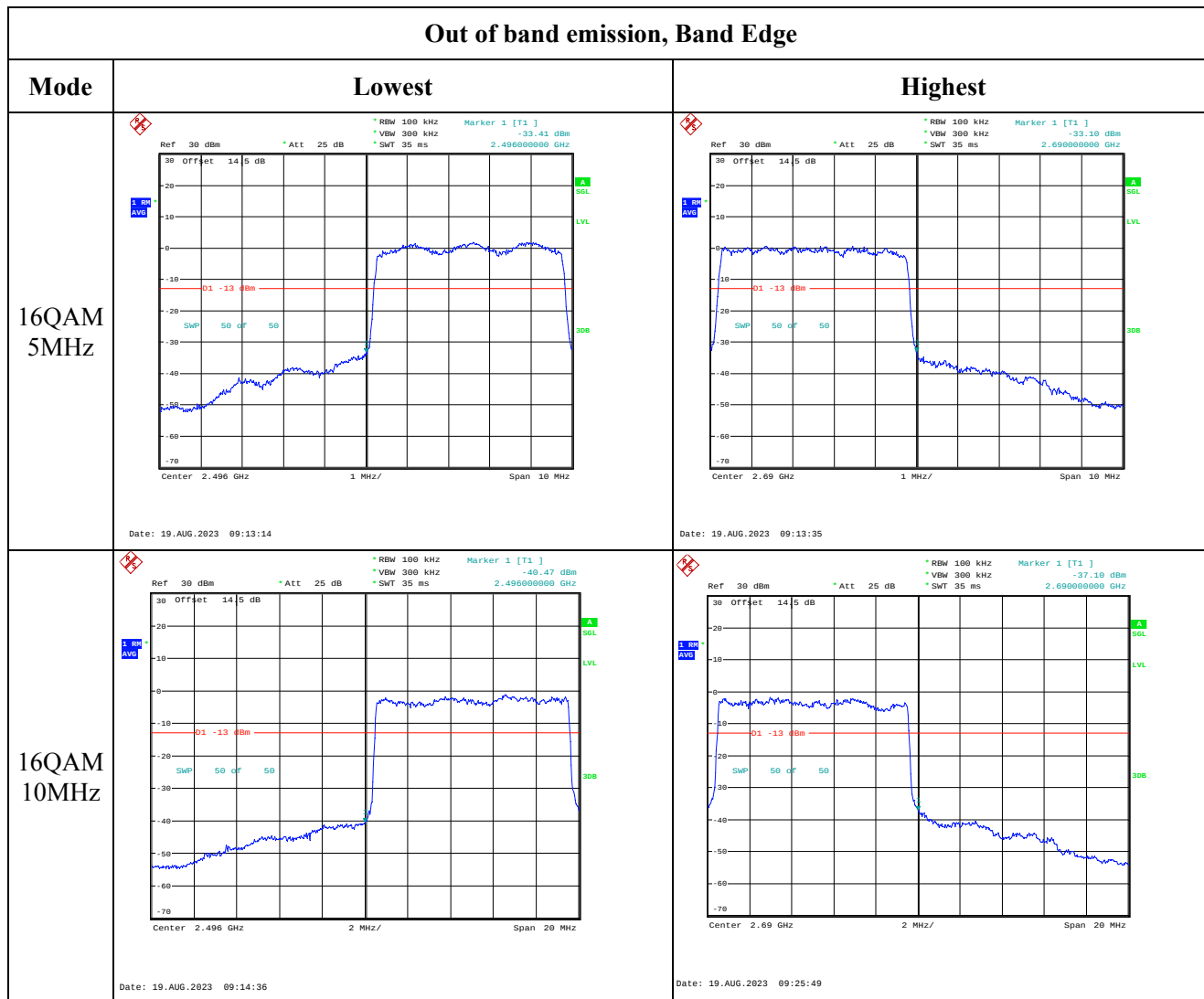
Out of band emission, Band Edge



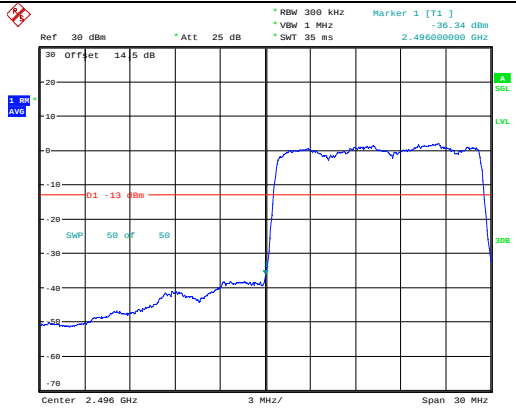
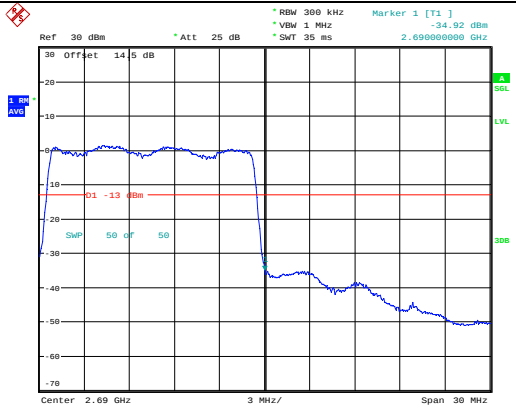
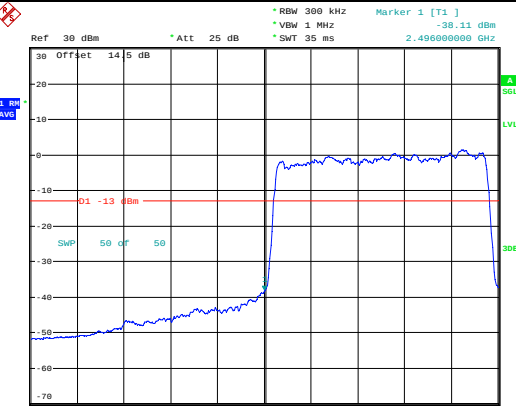
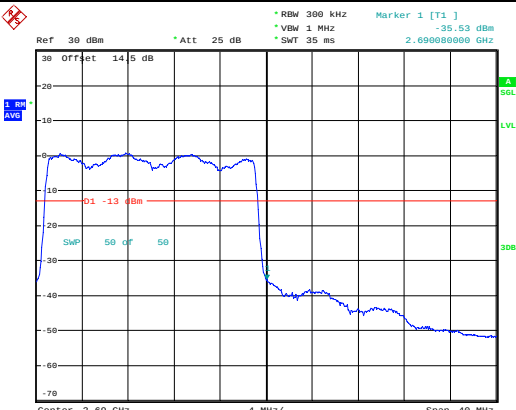
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 15MHz	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 35 ms, Marker 1 [T1]: -30.34 dBm, 2.496000000 GHz Center: 2.496 GHz, Span: 30 MHz Date: 19.AUG.2023 09:26:47	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 35 ms, Marker 1 [T1]: -34.82 dBm, 2.690000000 GHz Center: 2.69 GHz, Span: 30 MHz Date: 19.AUG.2023 09:27:06
16QAM 20MHz	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 35 ms, Marker 1 [T1]: -30.11 dBm, 2.496000000 GHz Center: 2.496 GHz, Span: 40 MHz Date: 19.AUG.2023 09:28:40	 Ref: 30 dBm, Offset: 14.5 dB, Att: 25 dB, RBW: 300 kHz, VBW: 1 MHz, SWT: 35 ms, Marker 1 [T1]: -35.53 dBm, 2.690000000 GHz Center: 2.69 GHz, Span: 40 MHz Date: 19.AUG.2023 09:28:58

4.14 Antenna Port Test Data and Results for LTE Band 66

Serial Number:	29K3-1	Test Date:	2023/8/17-2023/8/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.2-25.9	Relative Humidity: (%)	56-61	ATM Pressure: (kPa)	99.7-100
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	100147	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	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).*

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	23.16	22.75	23.57	23.7	30
	RB1#3	23.35	22.94	23.22		
	RB1#5	23.15	22.76	23.05		
	RB3#0	23.23	22.81	23.1		
	RB3#3	23.22	22.78	23.14		
	RB6#0	22.23	21.83	22.16		
1.4MHz 16QAM	RB1#0	22.11	21.74	22.16	22.46	30
	RB1#3	22.33	21.9	22.27		
	RB1#5	22.14	21.72	22.16		
	RB3#0	22.21	21.95	22.07		
	RB3#3	22.18	21.94	22.1		
	RB6#0	21.16	20.83	21.18		
3MHz QPSK	RB1#0	23.34	22.97	23.45	23.58	30
	RB1#8	23.3	22.97	23.06		
	RB1#14	23.31	22.97	23.08		
	RB6#0	22.27	21.93	22.01		
	RB6#9	22.26	21.95	22.03		
	RB15#0	22.25	21.92	22.04		
3MHz 16QAM	RB1#0	22.26	22.4	22.19	22.53	30
	RB1#8	22.26	22.39	22.15		
	RB1#14	22.22	22.39	22.15		
	RB6#0	21.19	20.97	21.05		
	RB6#9	21.23	20.97	21.1		
	RB15#0	21.31	20.94	21.05		
5MHz QPSK	RB1#0	23.18	23.35	22.73	23.61	30
	RB1#13	23.33	23.48	22.36		
	RB1#24	23.18	23.37	22.26		
	RB15#0	22.27	22.44	21.33		
	RB15#10	22.26	22.48	21.35		
	RB25#0	22.23	22.4	21.31		
5MHz 16QAM	RB1#0	22.22	22.19	21.49	22.48	30
	RB1#13	22.35	22.33	21.59		
	RB1#24	22.22	22.21	21.53		
	RB15#0	21.3	21.42	20.35		
	RB15#10	21.28	21.46	20.37		
	RB25#0	21.26	21.42	20.34		
10MHz QPSK	RB1#0	23.26	23.47	22.31	23.6	30
	RB1#25	23.36	23.17	22.49		
	RB1#49	23.25	23.07	22.39		
	RB25#0	22.08	22.13	21.47		

	RB25#25	22.04	22.38	21.4		
	RB50#0	22.13	22.24	21.45		
10MHz 16QAM	RB1#0	21.81	22.56	21.44	22.77	30
	RB1#25	22.08	22.64	21.63		
	RB1#49	21.74	22.6	21.48		
	RB25#0	21.04	21.22	20.54		
	RB25#25	21.31	21.55	20.48		
	RB50#0	21.12	21.44	20.52		
	RB1#0	23.19	23.25	22.24		
15MHz QPSK	RB1#38	23.3	23.42	22.3	23.55	30
	RB1#74	23.15	23.34	22.3		
	RB36#0	22.21	22.36	21.42		
	RB36#39	22.3	22.53	21.44		
	RB75#0	22.32	22.44	21.43		
15MHz 16QAM	RB1#0	22.47	22.74	21.29	22.87	30
	RB1#38	22.6	22.7	21.44		
	RB1#74	22.5	22.61	21.39		
	RB36#0	21.21	21.39	20.36		
	RB36#39	21.28	21.45	20.46		
	RB75#0	21.24	21.42	20.46		
20MHz QPSK	RB1#0	22.96	22.34	22.19	23.44	30
	RB1#50	23.31	22.73	22.69		
	RB1#99	23	22.42	22.39		
	RB50#0	22.24	21.73	21.65		
	RB50#50	22.17	21.67	21.46		
	RB100#0	22.13	21.83	21.57		
20MHz 16QAM	RB1#0	22.2	21.62	21.34	22.7	30
	RB1#50	22.57	22.02	21.89		
	RB1#99	22.01	21.66	21.52		
	RB50#0	20.97	20.79	20.66		
	RB50#50	21.01	20.9	20.5		
	RB100#0	21.12	21.06	20.63		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + G_T(dBi)

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	9.62	9.46	8.46	13
	RB100#0	6.47	6.54	6.47	13
20MHz 16QAM	RB1#0	8.53	8.49	8.56	13
	RB100#0	7.21	7.05	7.18	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
1.4MHz QPSK	1.11	1.104	1.104	1.332	1.344	1.314
1.4MHz 16QAM	1.104	1.11	1.098	1.338	1.32	1.29
3MHz QPSK	2.687	2.687	2.687	2.904	2.88	2.88
3MHz 16QAM	2.687	2.687	2.687	2.892	2.892	2.88
5MHz QPSK	4.54	4.54	4.54	5.24	5.28	5.16
5MHz 16QAM	4.54	4.52	4.56	5.3	5.18	5.18
10MHz QPSK	8.96	9	8.96	9.84	10.12	9.84
10MHz 16QAM	8.96	8.96	8.96	9.88	9.8	10
15MHz QPSK	13.56	13.68	13.56	15.18	15.24	15.36
15MHz 16QAM	13.56	13.56	13.62	15.18	15.24	15.24
20MHz QPSK	18.08	18	18.08	20	19.84	19.84
20MHz 16QAM	18	18	18.08	19.6	19.68	19.92

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.
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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.
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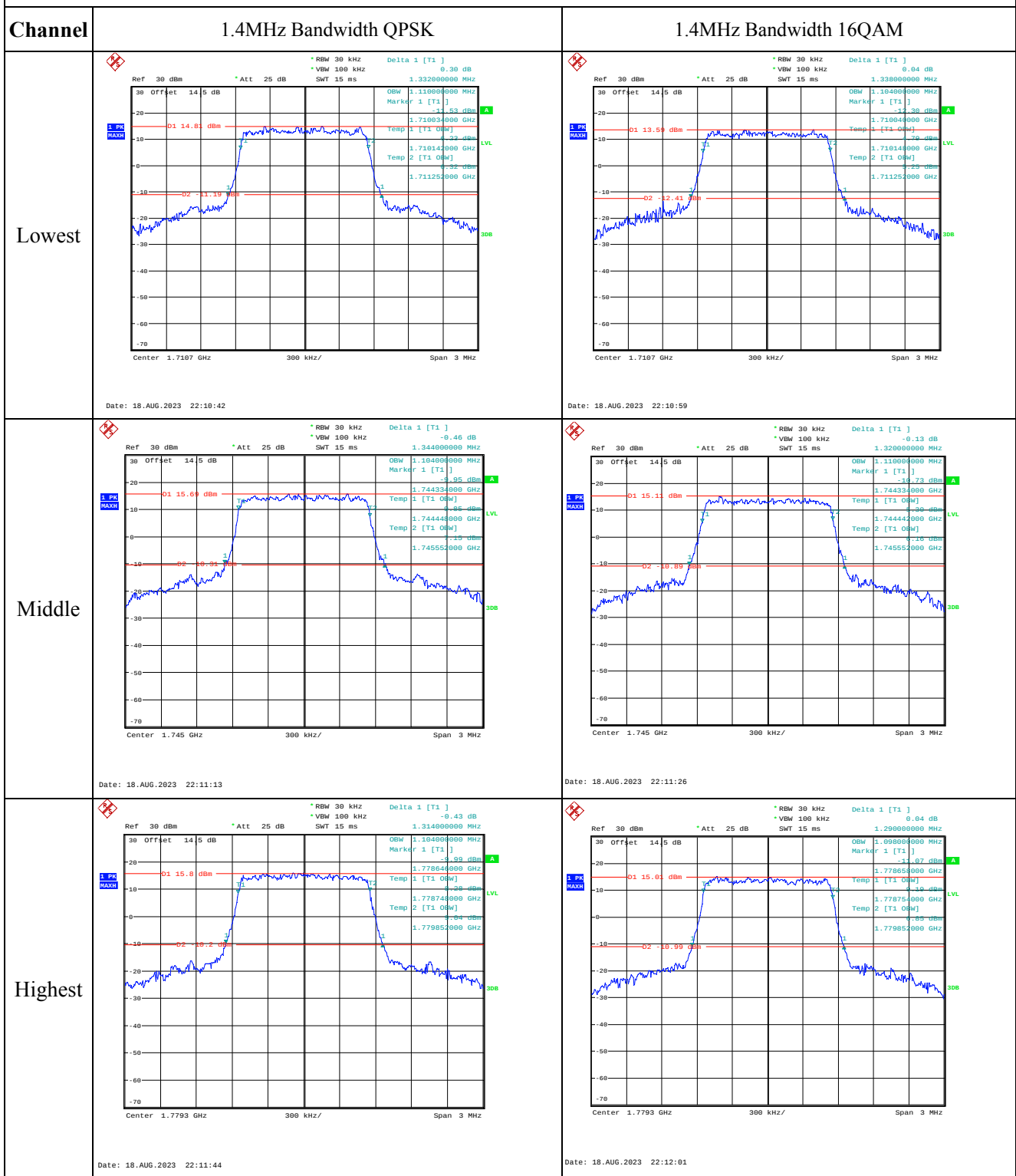
FCC §2.1055, §27.54: Frequency Stability

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	3.8	1710.939	1710.00	1779.047	1780
	-20	3.8	1710.933	1710.00	1779.059	1780
	-10	3.8	1710.937	1710.00	1779.055	1780
	0	3.8	1710.938	1710.00	1779.057	1780
	10	3.8	1710.950	1710.00	1779.050	1780
	20	3.8	1710.960	1710.00	1779.040	1780
	30	3.8	1710.949	1710.00	1779.054	1780
	40	3.8	1710.949	1710.00	1779.056	1780
	50	3.8	1710.934	1710.00	1779.051	1780
Frequency Stability vs. Voltage	20	3.6	1710.949	1710.00	1779.062	1780
	20	4.35	1710.960	1710.00	1779.052	1780
					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	3.8	1711.037	1710.00	1779.063	1780
	-20	3.8	1711.030	1710.00	1779.065	1780
	-10	3.8	1711.034	1710.00	1779.047	1780
	0	3.8	1711.014	1710.00	1779.058	1780
	10	3.8	1711.028	1710.00	1779.055	1780
	20	3.8	1711.040	1710.00	1779.040	1780
	30	3.8	1711.023	1710.00	1779.061	1780
	40	3.8	1711.028	1710.00	1779.052	1780
	50	3.8	1711.019	1710.00	1779.041	1780
Frequency Stability vs. Voltage	20	3.6	1711.033	1710.00	1779.065	1780
	20	4.35	1711.019	1710.00	1779.063	1780
					Result:	Pass

Test Plots (Note: The 14.5 dB is the Insertion loss of the RF cable and Power Splitter, which was offset into the Spectrum Analyzer):

Occupied Bandwidth



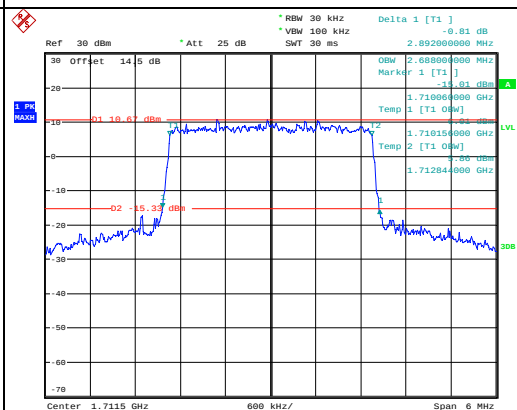
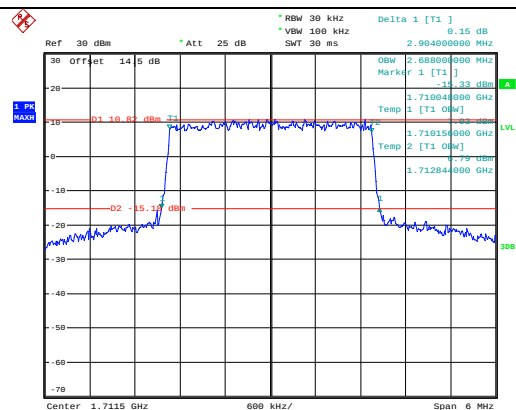
Occupied Bandwidth

Channel

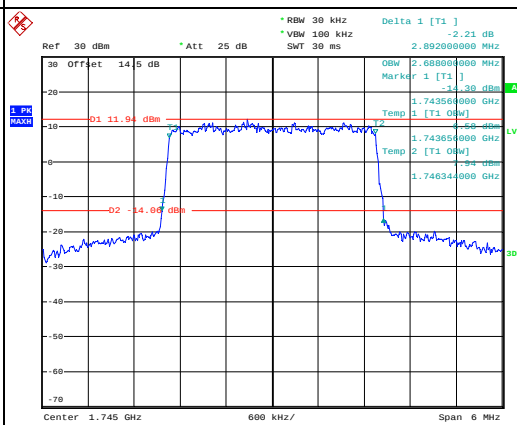
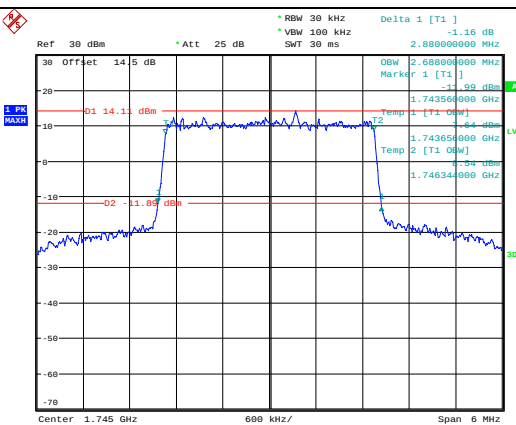
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

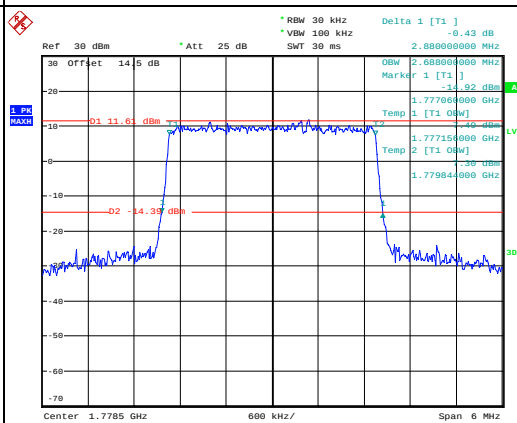
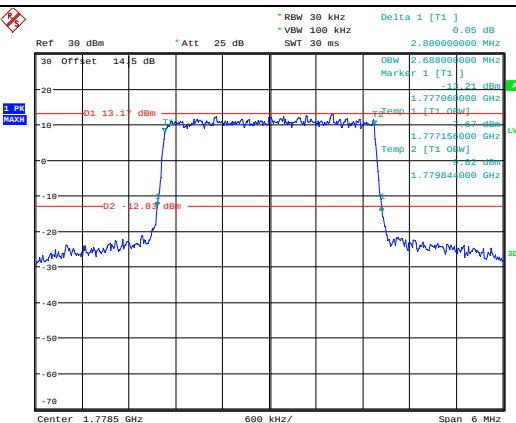
Lowest



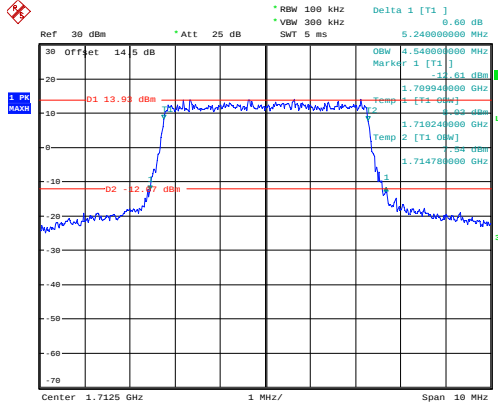
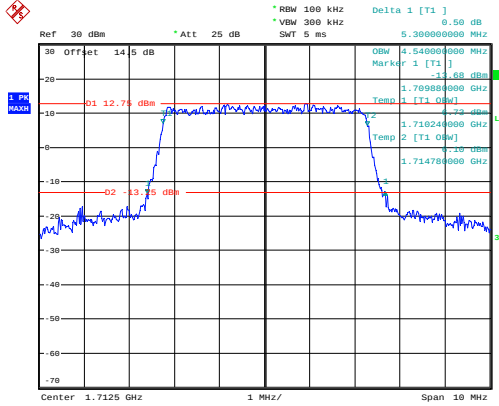
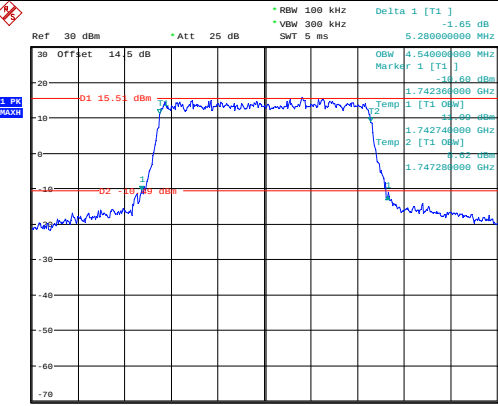
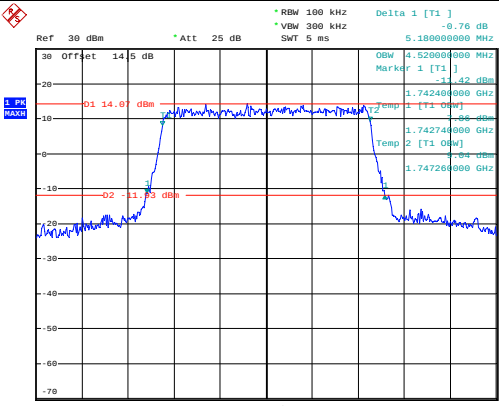
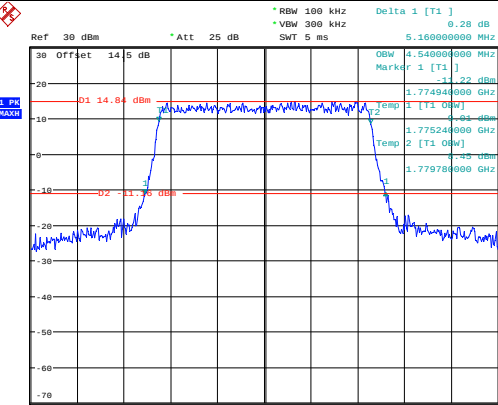
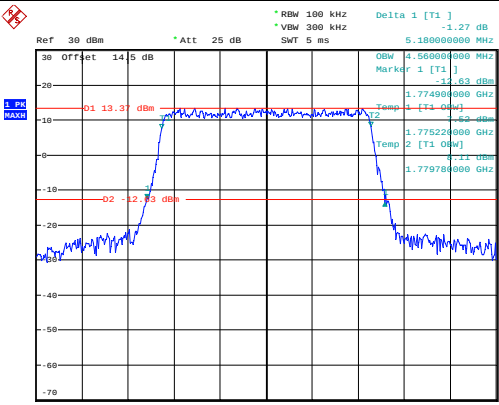
Middle



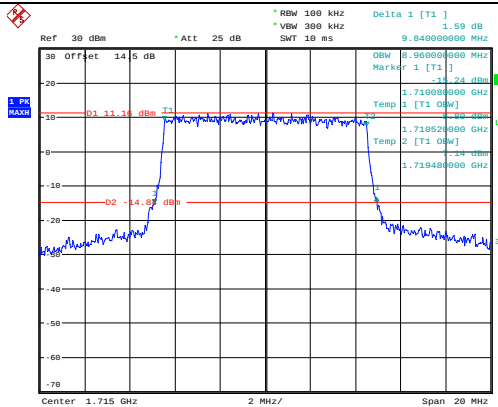
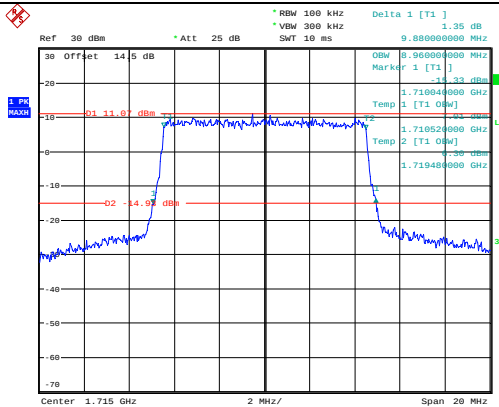
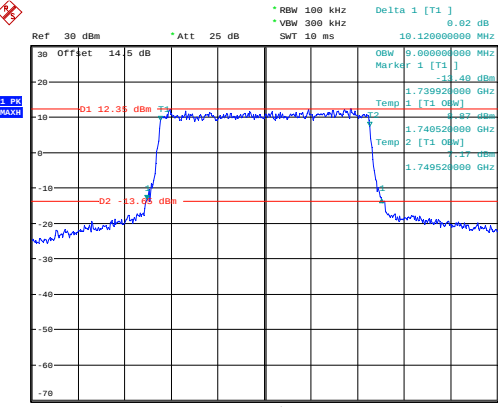
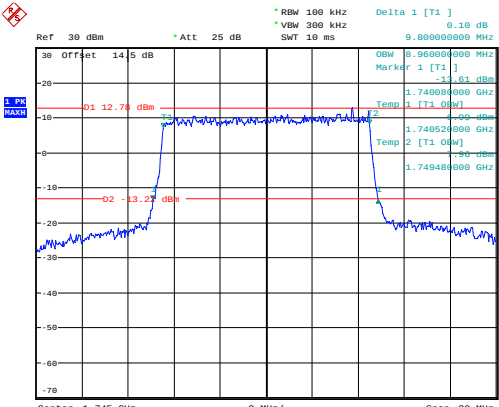
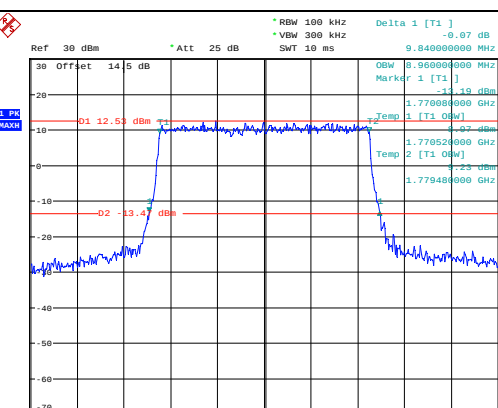
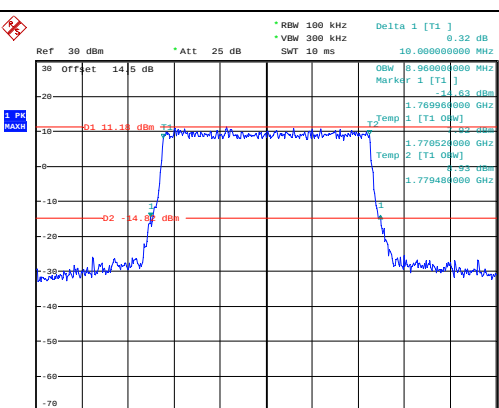
Highest



Occupied Bandwidth

Channel	5MHz Bandwidth QPSK	5MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 5 ms Delta 1 [T1] 0.60 dB OBW 4.540000000 MHz Marker 1 [T1] -13.91 dBm Temp 1 [T1] 1.709940000 GHz Temp 2 [T1] 1.710240000 GHz Temp 3 [T1] 1.714780000 GHz Center 1.7125 GHz 1 MHz/ Span 10 MHz Date: 18.AUG.2023 22:15:20	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 5 ms Delta 1 [T1] 0.50 dB OBW 4.540000000 MHz Marker 1 [T1] -12.75 dBm Temp 1 [T1] 1.709880000 GHz Temp 2 [T1] 1.710240000 GHz Temp 3 [T1] 1.714780000 GHz Center 1.7125 GHz 1 MHz/ Span 10 MHz Date: 18.AUG.2023 22:15:36
Middle	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 5 ms Delta 1 [T1] -1.65 dB OBW 4.540000000 MHz Marker 1 [T1] -15.53 dBm Temp 1 [T1] 1.742360000 GHz Temp 2 [T1] 1.742740000 GHz Temp 3 [T1] 1.747280000 GHz Center 1.745 GHz 1 MHz/ Span 10 MHz Date: 18.AUG.2023 22:16:00	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 5 ms Delta 1 [T1] -1.76 dB OBW 4.520000000 MHz Marker 1 [T1] -14.01 dBm Temp 1 [T1] 1.742480000 GHz Temp 2 [T1] 1.742740000 GHz Temp 3 [T1] 1.747280000 GHz Center 1.745 GHz 1 MHz/ Span 10 MHz Date: 18.AUG.2023 22:16:14
Highest	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 5 ms Delta 1 [T1] 0.28 dB OBW 4.540000000 MHz Marker 1 [T1] -14.84 dBm Temp 1 [T1] 1.774940000 GHz Temp 2 [T1] 1.775240000 GHz Temp 3 [T1] 1.779780000 GHz Center 1.7775 GHz 1 MHz/ Span 10 MHz Date: 18.AUG.2023 22:16:28	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 5 ms Delta 1 [T1] -1.27 dB OBW 4.560000000 MHz Marker 1 [T1] -13.31 dBm Temp 1 [T1] 1.774980000 GHz Temp 2 [T1] 1.775220000 GHz Temp 3 [T1] 1.779780000 GHz Center 1.7775 GHz 1 MHz/ Span 10 MHz Date: 18.AUG.2023 22:16:44

Occupied Bandwidth

Channel	10MHz Bandwidth QPSK	10MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 1.59 dB *VBW 300 kHz 9.840000000 MHz SWT 10 ms OBW 9.960000000 MHz Marker 1 [T1] -14.07 dBm Temp 1 [T1] 1.715000000 GHz Temp 2 [T1] 1.715000000 GHz Temp 3 [T1] 1.719480000 GHz Center 1.715 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:17:46	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 1.35 dB *VBW 300 kHz 9.880000000 MHz SWT 10 ms OBW 9.960000000 MHz Marker 1 [T1] -14.07 dBm Temp 1 [T1] 1.715000000 GHz Temp 2 [T1] 1.715000000 GHz Temp 3 [T1] 1.719480000 GHz Center 1.715 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:17:57
Middle	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 0.02 dB *VBW 300 kHz 10.120000000 MHz SWT 10 ms OBW 9.960000000 MHz Marker 1 [T1] -13.08 dBm Temp 1 [T1] 1.739520000 GHz Temp 2 [T1] 1.740520000 GHz Temp 3 [T1] 1.749520000 GHz Center 1.745 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:18:14	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 0.10 dB *VBW 300 kHz 9.800000000 MHz SWT 10 ms OBW 9.960000000 MHz Marker 1 [T1] -13.27 dBm Temp 1 [T1] 1.740000000 GHz Temp 2 [T1] 1.740520000 GHz Temp 3 [T1] 1.749480000 GHz Center 1.745 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:18:27
Highest	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] -0.07 dB *VBW 300 kHz 9.840000000 MHz SWT 10 ms OBW 9.960000000 MHz Marker 1 [T1] -13.47 dBm Temp 1 [T1] 1.770000000 GHz Temp 2 [T1] 1.770520000 GHz Temp 3 [T1] 1.779480000 GHz Center 1.775 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:18:45	 Ref 30 dBm *Att 25 dB *RBW 100 kHz Delta 1 [T1] 0.32 dB *VBW 300 kHz 10.000000000 MHz SWT 10 ms OBW 9.960000000 MHz Marker 1 [T1] -14.07 dBm Temp 1 [T1] 1.770000000 GHz Temp 2 [T1] 1.770520000 GHz Temp 3 [T1] 1.779480000 GHz Center 1.775 GHz 2 MHz/ Span 20 MHz Date: 18.AUG.2023 22:19:05

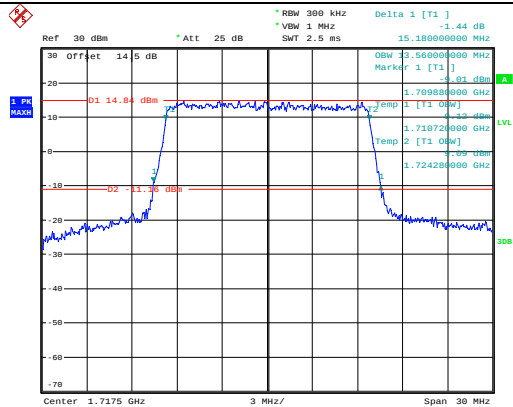
Occupied Bandwidth

Channel

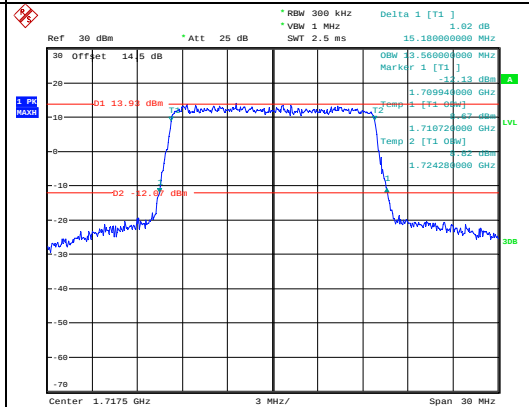
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

Lowest

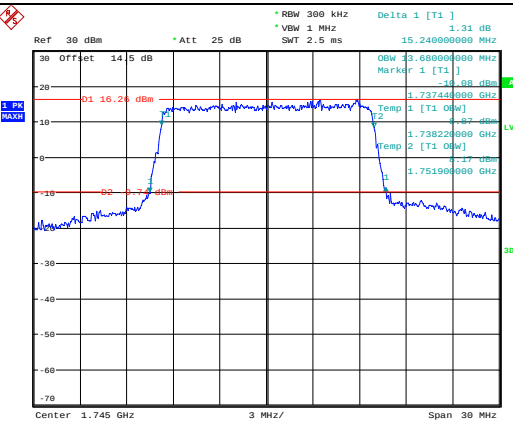


Date: 18.AUG.2023 22:19:44

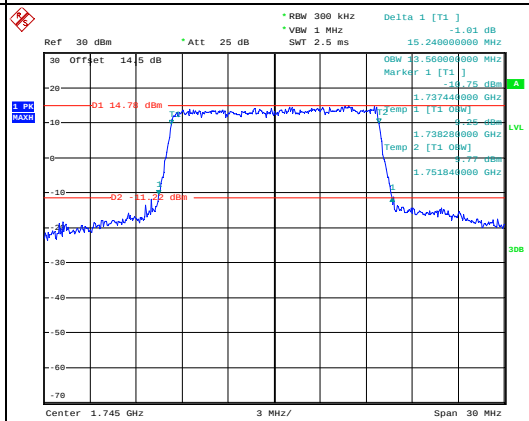


Date: 18.AUG.2023 22:19:58

Middle

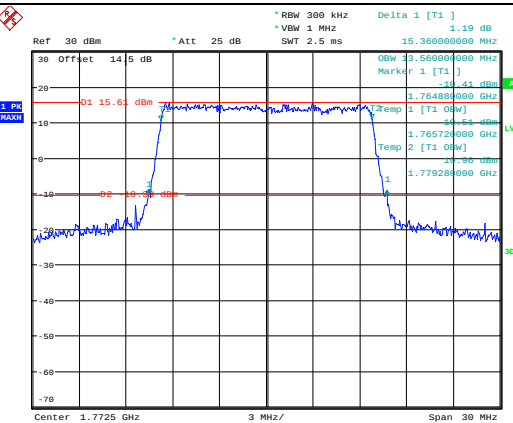


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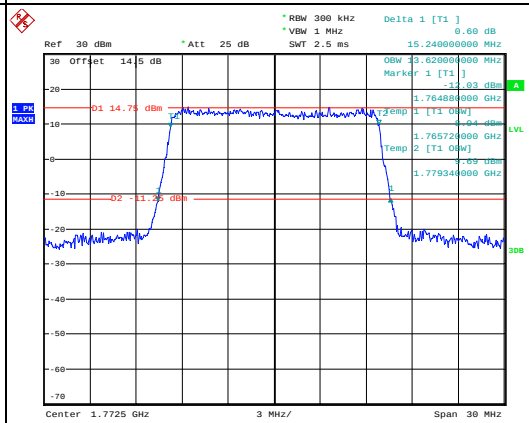


Date: 18.AUG.2023 22:20:32

Highest

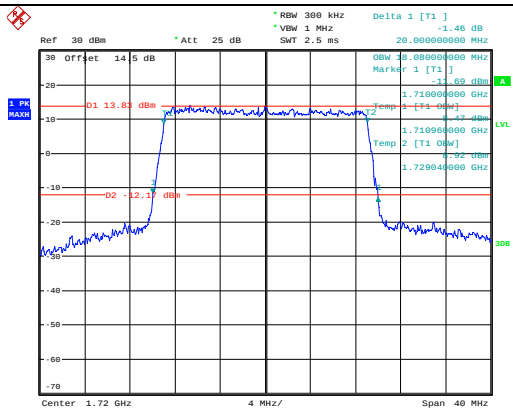
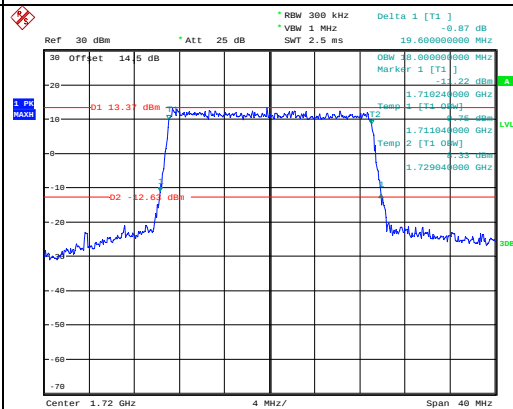
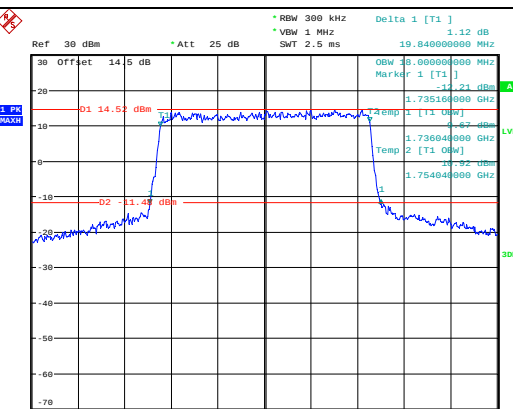
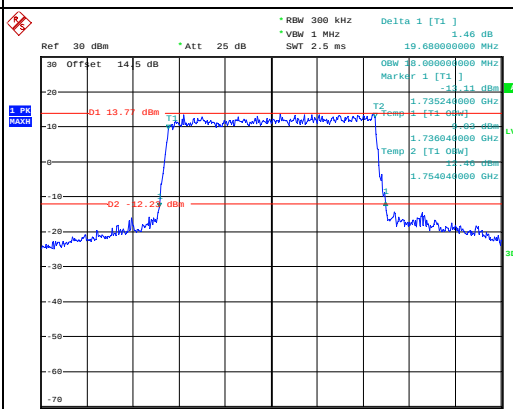
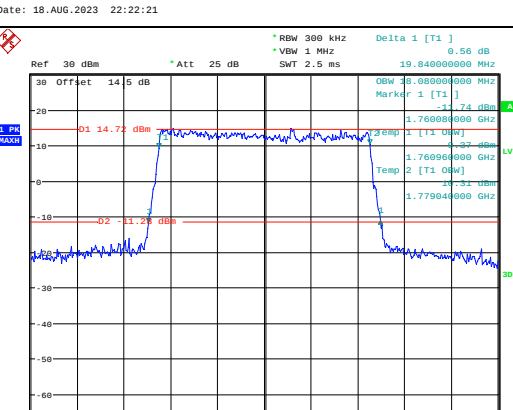
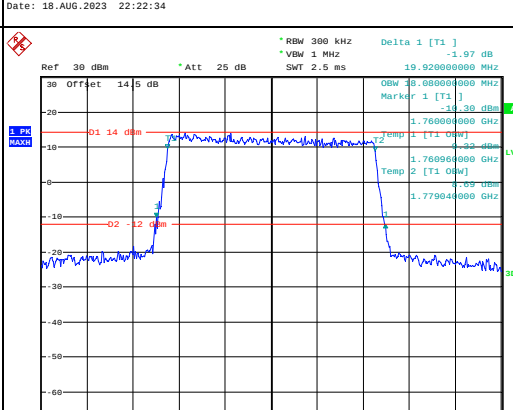


Date: 18.AUG.2023 22:20:46



Date: 18.AUG.2023 22:21:03

Occupied Bandwidth

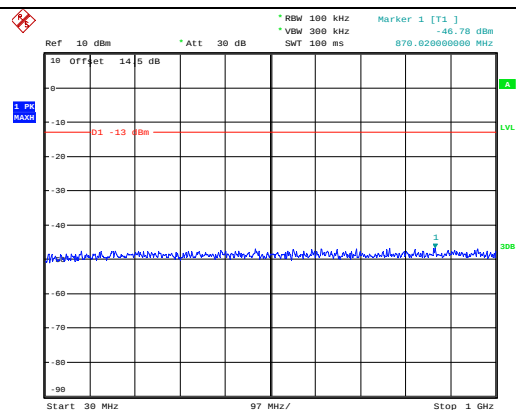
Channel	20MHz Bandwidth QPSK	20MHz Bandwidth 16QAM
Lowest	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 1.46 dB VBW 1 MHz SWT 2.5 ms 20.00000000 MHz Marker 1 [T1] 1.710000000 GHz -13.81 dBm Temp 1 [T1] 1.710000000 GHz -13.81 dBm Temp 2 [T1] 1.720000000 GHz -12.17 dBm Center 1.72 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:21:46	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 1.46 dB VBW 1 MHz SWT 2.5 ms 19.60000000 MHz Marker 1 [T1] 1.710240000 GHz -13.37 dBm Temp 1 [T1] 1.710240000 GHz -13.37 dBm Temp 2 [T1] 1.720000000 GHz -12.63 dBm Center 1.72 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:22:03
Middle	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 1.12 dB VBW 1 MHz SWT 2.5 ms 19.84000000 MHz Marker 1 [T1] 1.735160000 GHz -14.52 dBm Temp 1 [T1] 1.735160000 GHz -14.52 dBm Temp 2 [T1] 1.750000000 GHz -11.49 dBm Center 1.745 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:22:21	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 1.46 dB VBW 1 MHz SWT 2.5 ms 19.68000000 MHz Marker 1 [T1] 1.735240000 GHz -13.77 dBm Temp 1 [T1] 1.735240000 GHz -13.77 dBm Temp 2 [T1] 1.750000000 GHz -12.29 dBm Center 1.745 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:22:34
Highest	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 0.56 dB VBW 1 MHz SWT 2.5 ms 19.84000000 MHz Marker 1 [T1] 1.760000000 GHz -14.72 dBm Temp 1 [T1] 1.760000000 GHz -14.72 dBm Temp 2 [T1] 1.770000000 GHz -11.29 dBm Center 1.77 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:22:49	 Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz Delta 1 [T1] 1.97 dB VBW 1 MHz SWT 2.5 ms 19.92000000 MHz Marker 1 [T1] 1.760000000 GHz -14.00 dBm Temp 1 [T1] 1.760000000 GHz -14.00 dBm Temp 2 [T1] 1.770000000 GHz -12.00 dBm Center 1.77 GHz 4 MHz/ Span 40 MHz Date: 18.AUG.2023 22:23:05

Spurious Emissions at Antenna Terminal

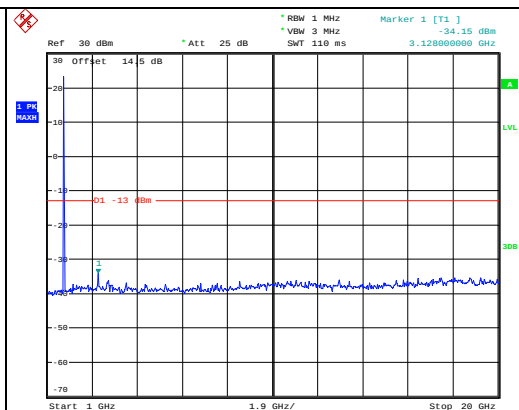
Channel

1.4MHz Bandwidth QPSK

Lowest

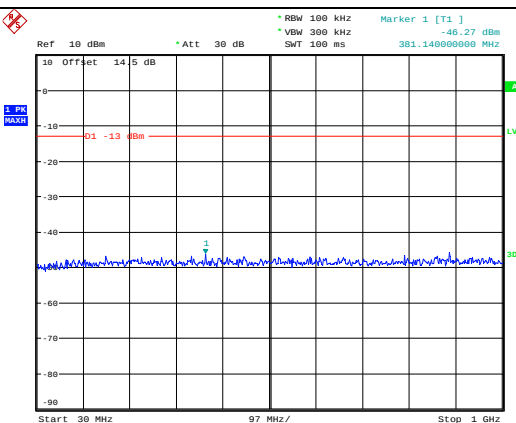


Date: 19.AUG.2023 11:42:16

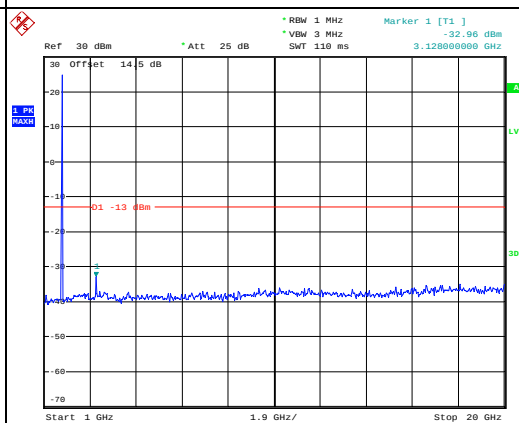


Date: 19.AUG.2023 11:42:27

Middle

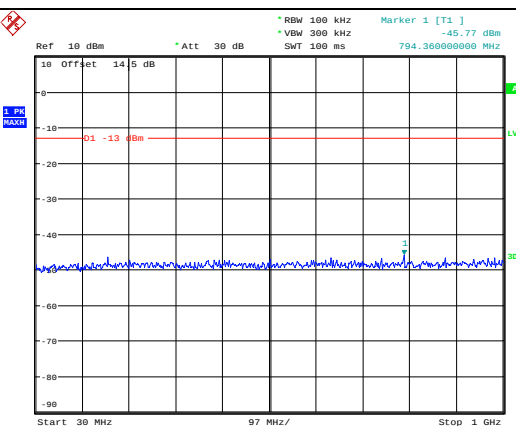


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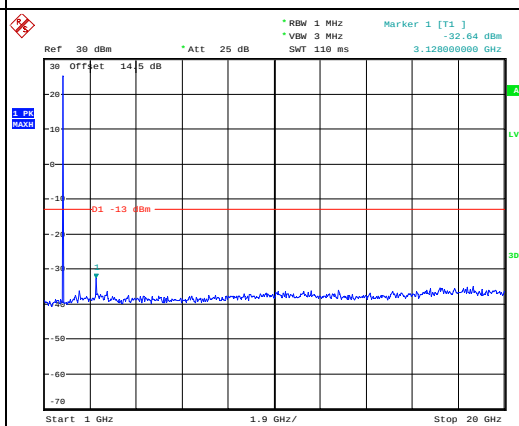


Date: 19.AUG.2023 11:42:55

Highest



Date: 19.AUG.2023 11:43:12



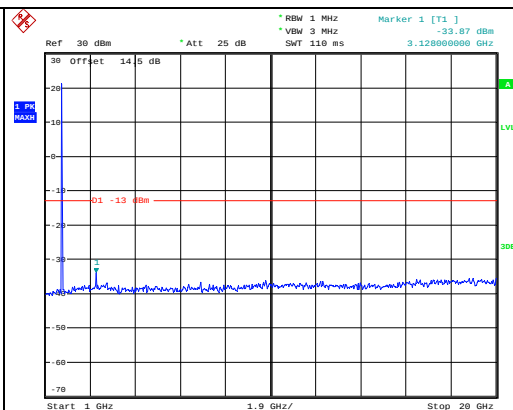
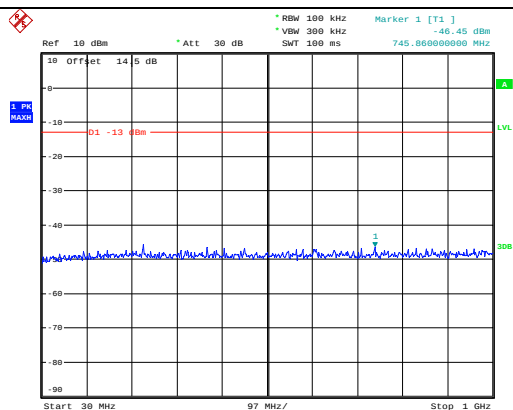
Date: 19.AUG.2023 11:43:23

Spurious Emissions at Antenna Terminal

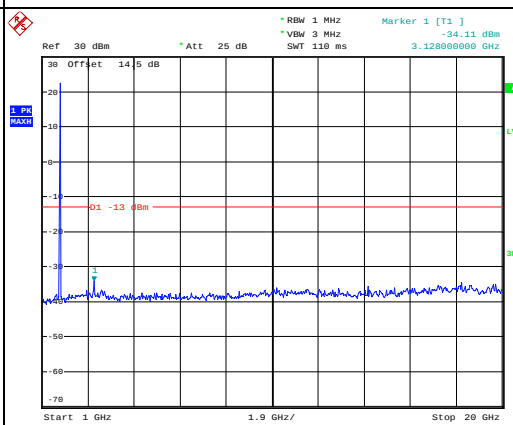
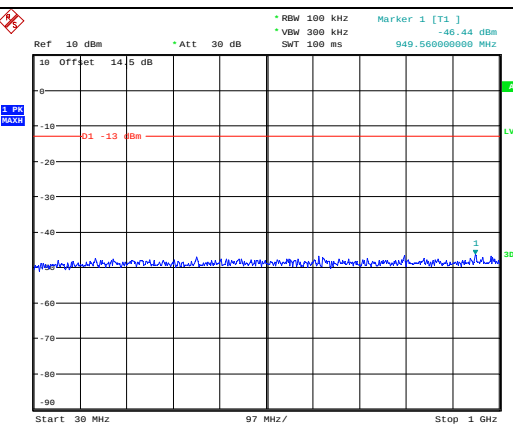
Channel

3MHz Bandwidth QPSK

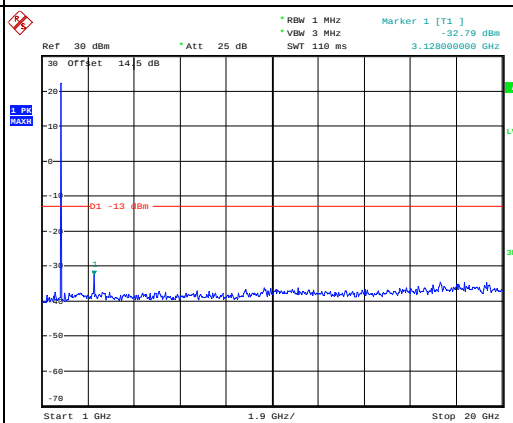
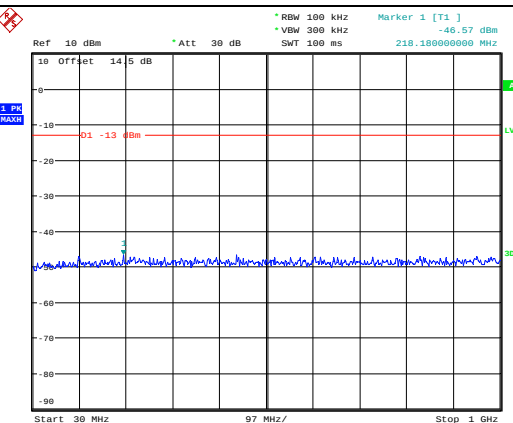
Lowest



Middle



Highest

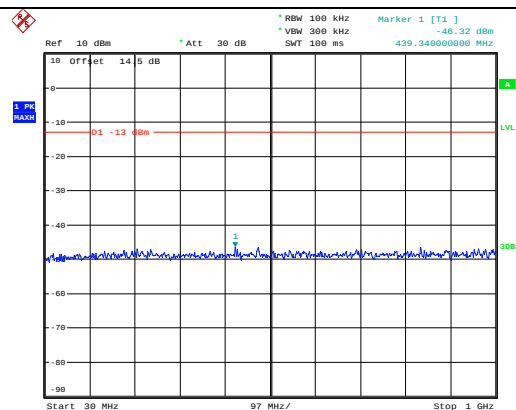


Spurious Emissions at Antenna Terminal

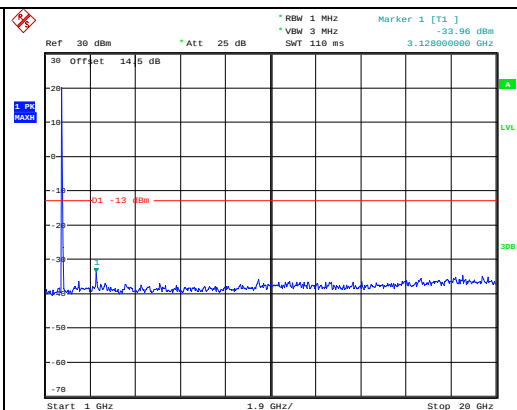
Channel

5MHz Bandwidth QPSK

Lowest

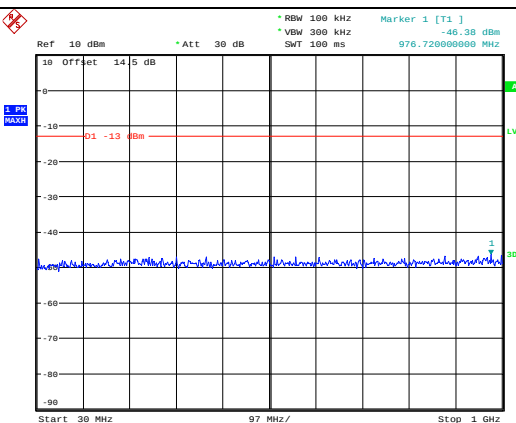


Date: 19.AUG.2023 11:46:08

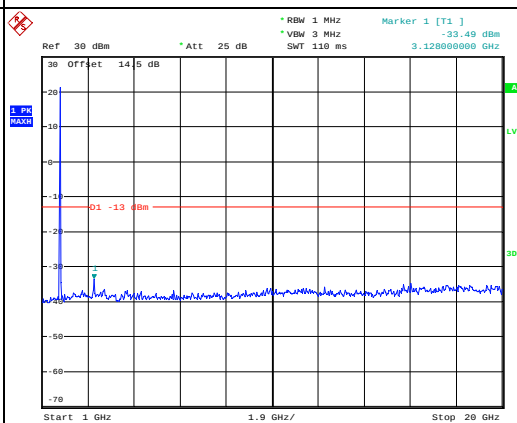


Date: 19.AUG.2023 11:46:19

Middle

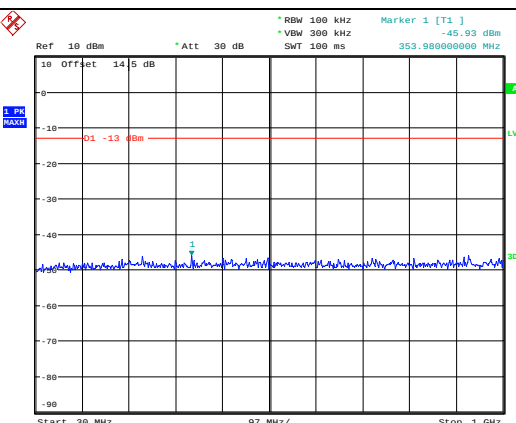


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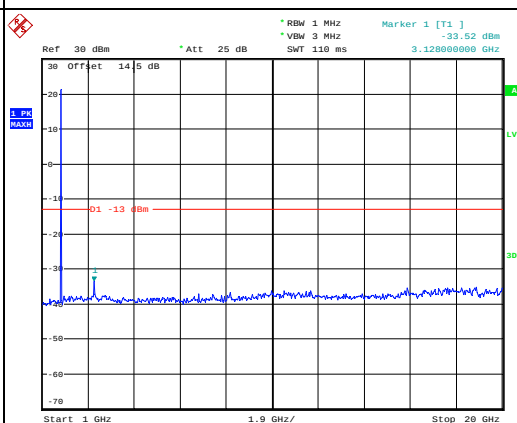


Date: 19.AUG.2023 11:46:47

Highest

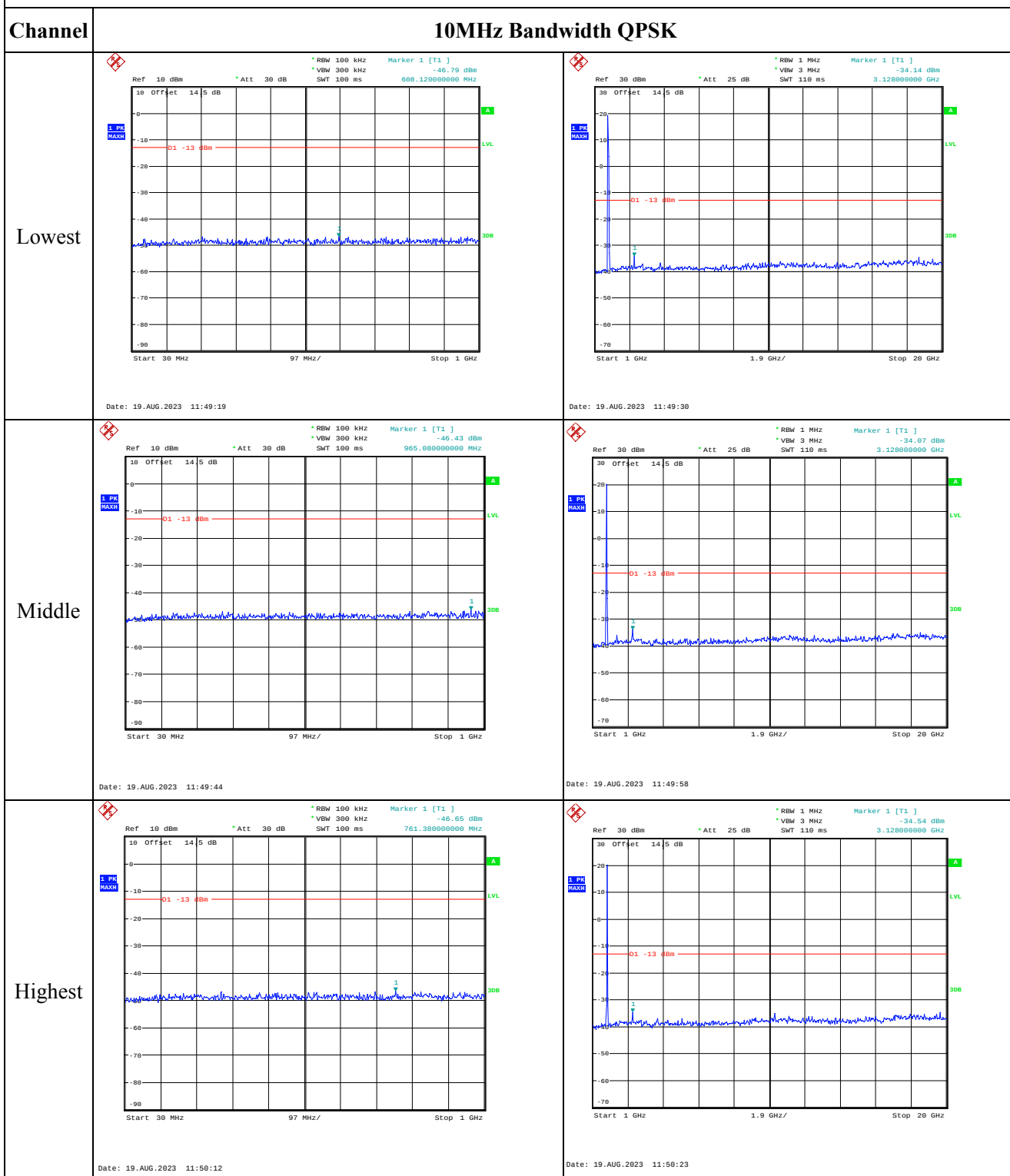


Date: 19.AUG.2023 11:47:04



Date: 19.AUG.2023 11:47:15

Spurious Emissions at Antenna Terminal

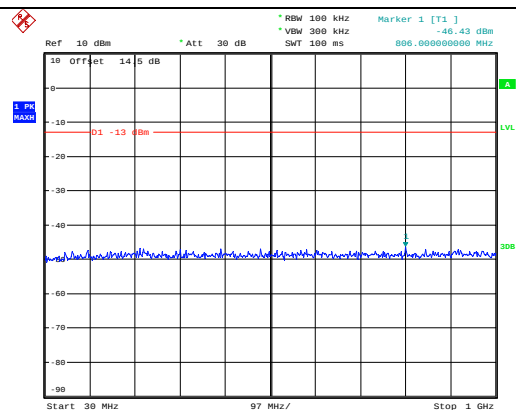


Spurious Emissions at Antenna Terminal

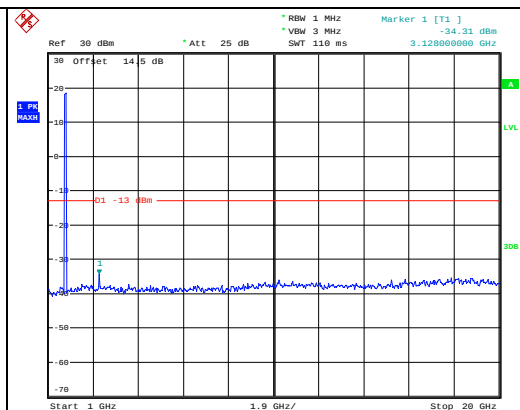
Channel

15MHz Bandwidth QPSK

Lowest

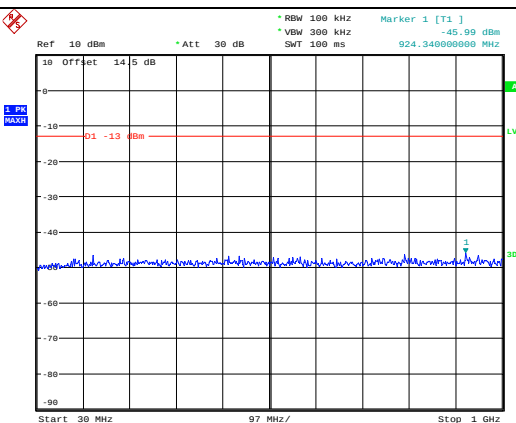


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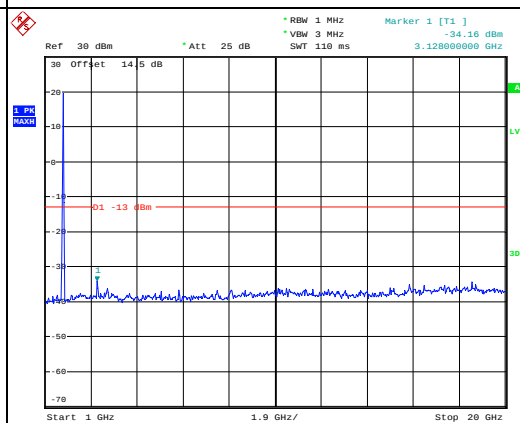


Date: 19.AUG.2023 11:51:27

Middle

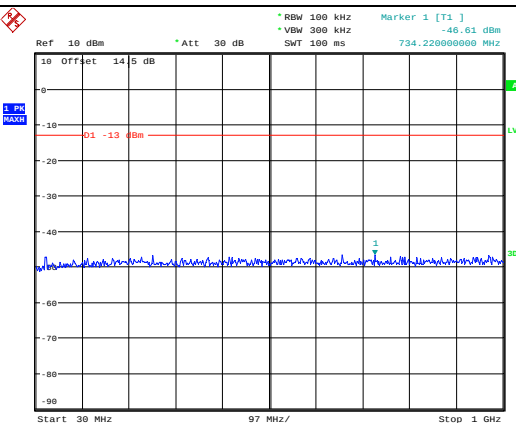


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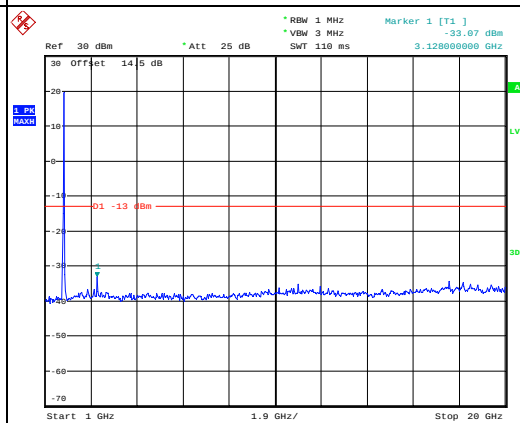


Date: 19.AUG.2023 11:51:52

Highest



Date: 19.AUG.2023 11:52:06



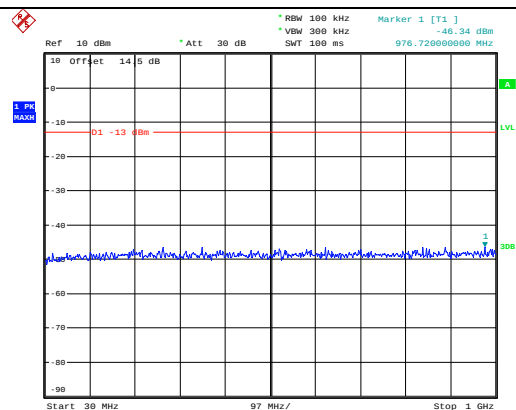
Date: 19.AUG.2023 11:52:17

Spurious Emissions at Antenna Terminal

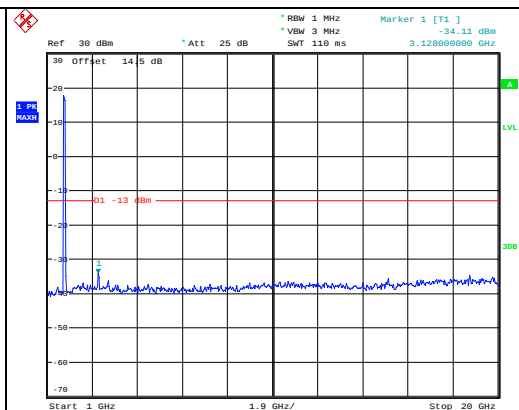
Channel

20MHz Bandwidth QPSK

Lowest

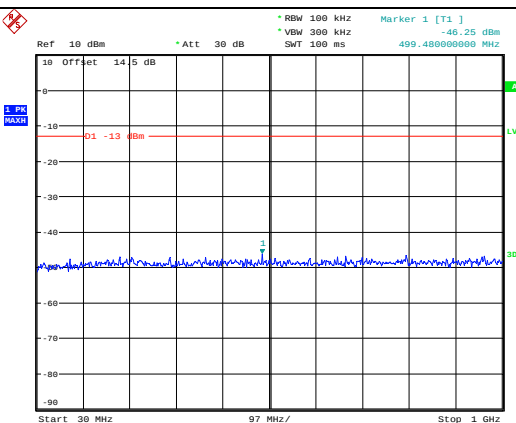


Date: 19.AUG.2023 11:54:05

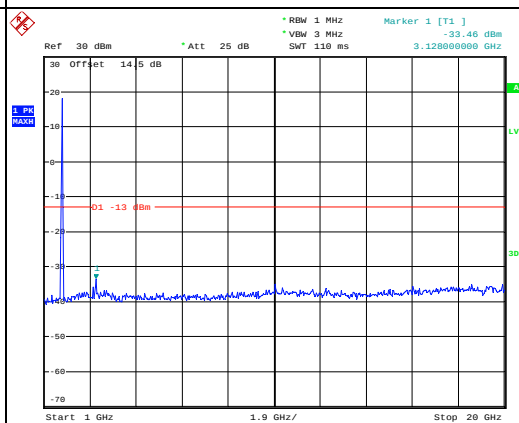


Date: 19.AUG.2023 11:54:16

Middle

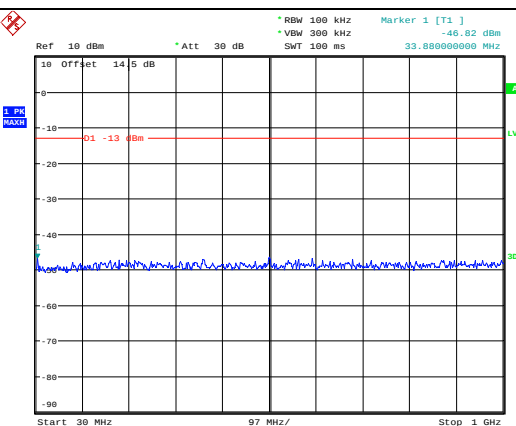


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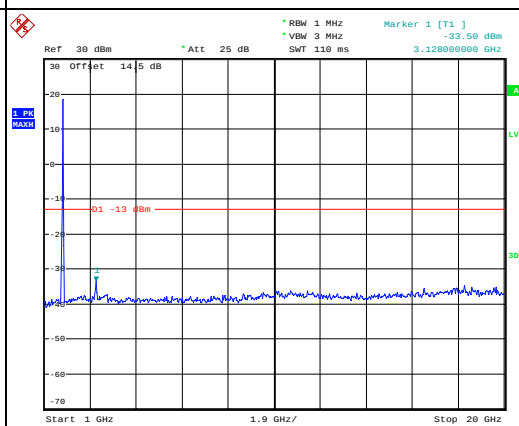


Date: 19.AUG.2023 11:54:41

Highest

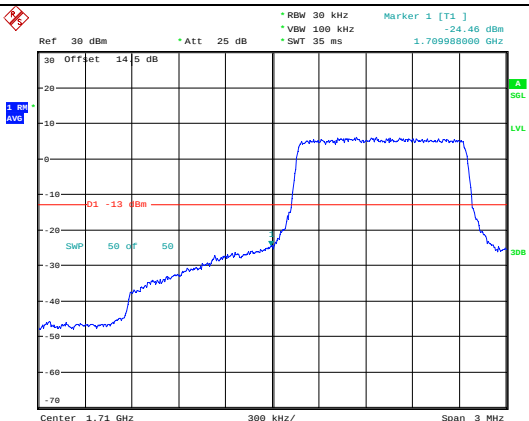
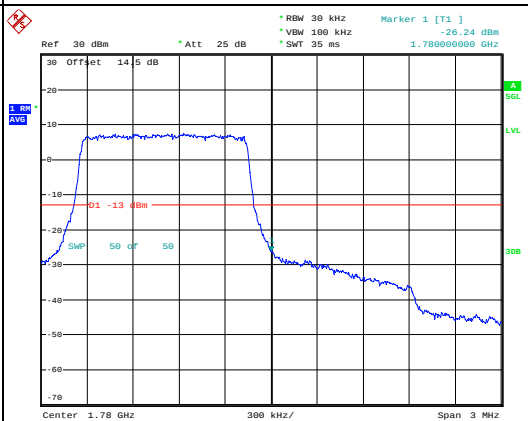
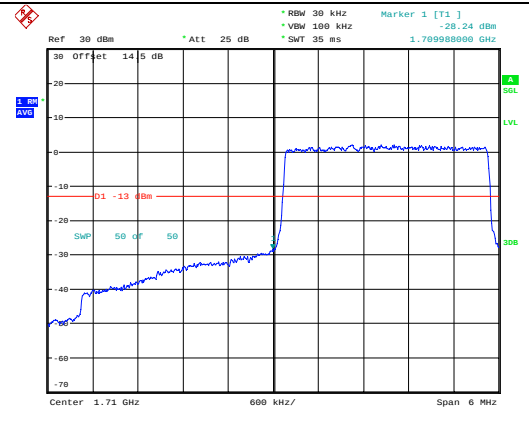
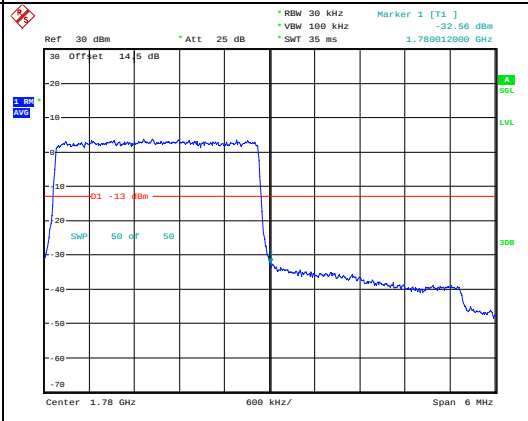
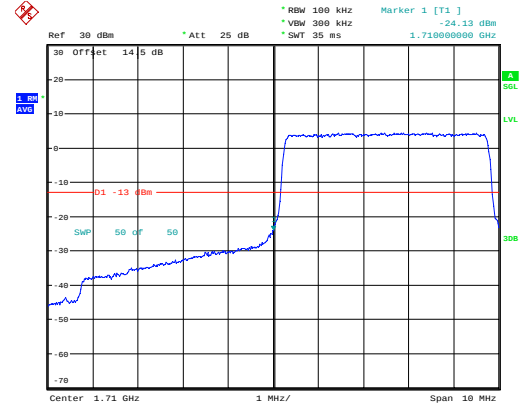
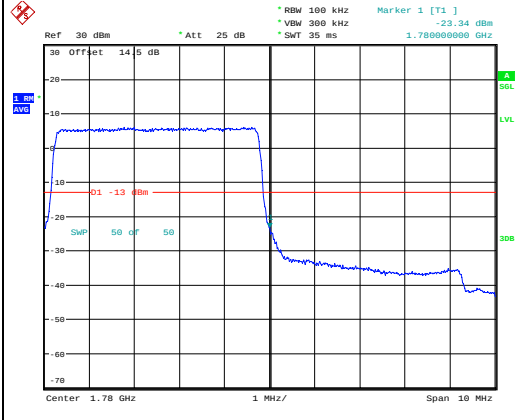


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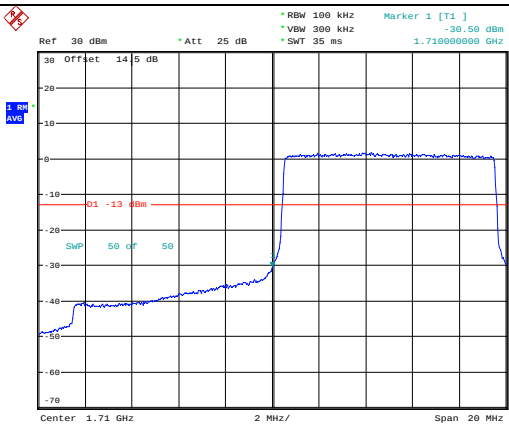
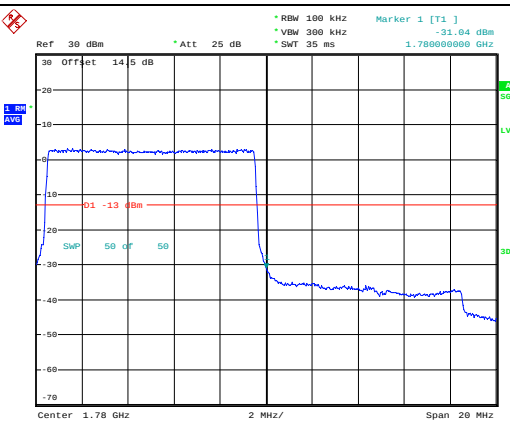
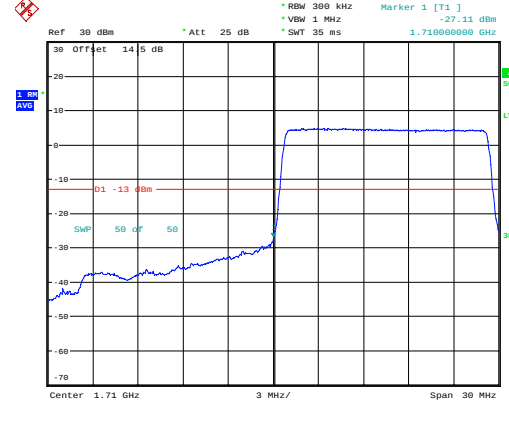
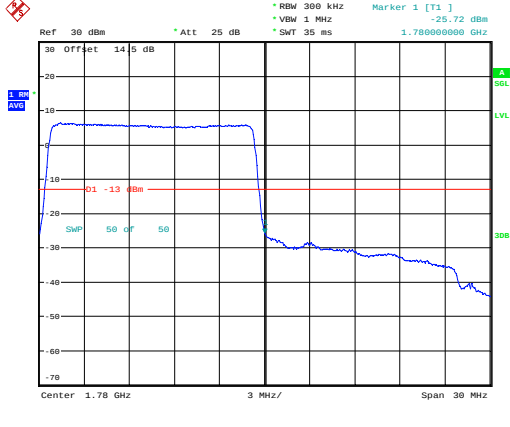
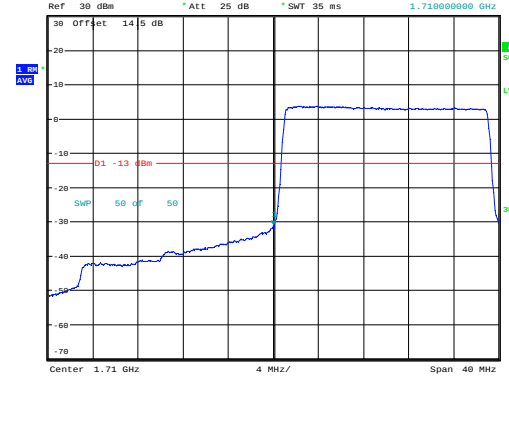
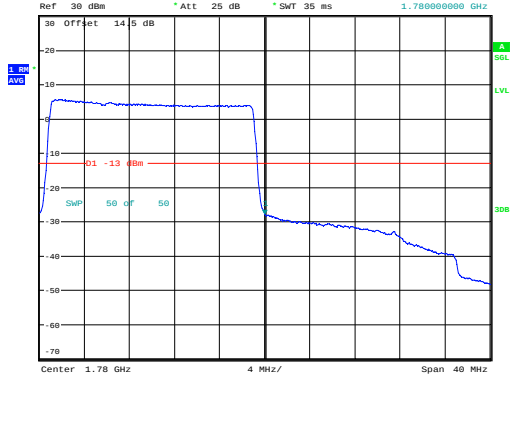


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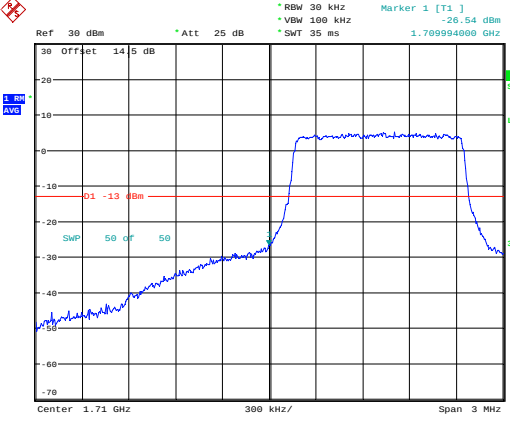
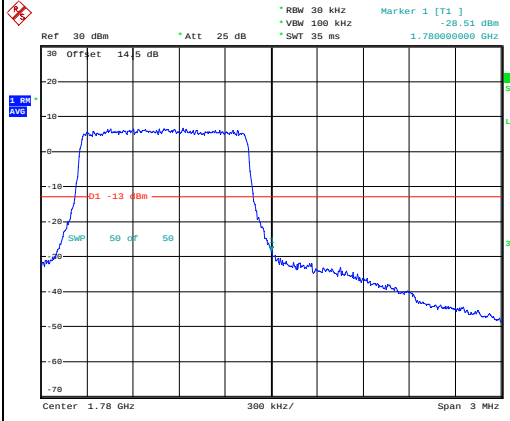
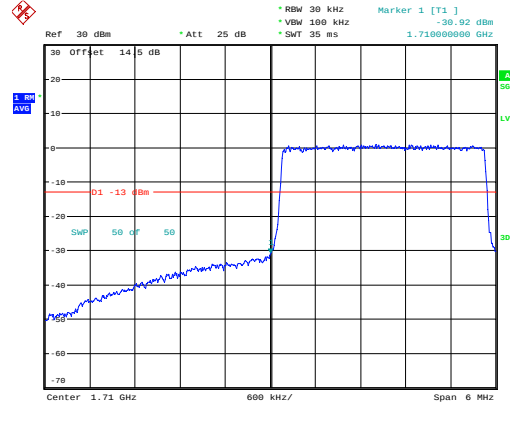
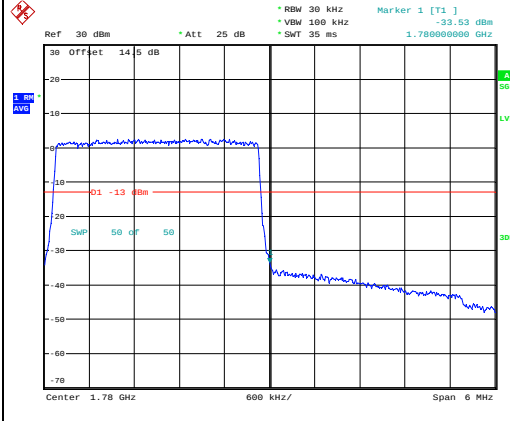
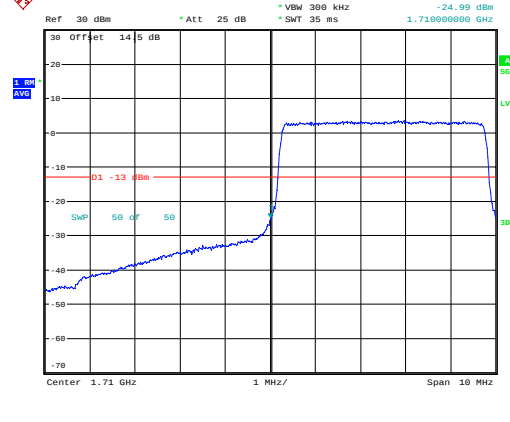
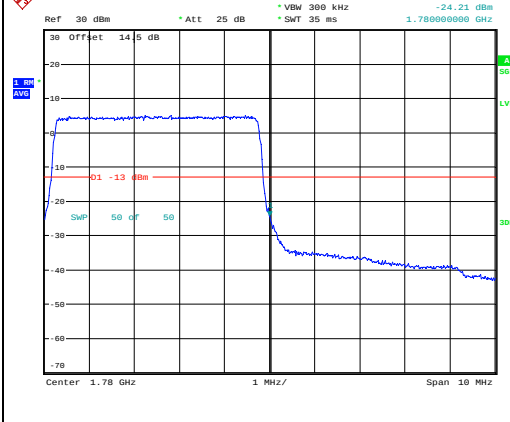
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 1.4MHz	 Ref 30 dBm *Att 25 dB *RBW 30 kHz *VBW 100 kHz *SWT 35 ms Marker 1 [T1] -24.46 dBm 1.709988000 GHz Center 1.71 GHz 300 kHz/ Span 3 MHz Date: 19.AUG.2023 09:40:16	 Ref 30 dBm *Att 25 dB *RBW 30 kHz *VBW 100 kHz *SWT 35 ms Marker 1 [T1] -26.24 dBm 1.780000000 GHz Center 1.78 GHz 300 kHz/ Span 3 MHz Date: 19.AUG.2023 09:40:33
QPSK 3MHz	 Ref 30 dBm *Att 25 dB *RBW 30 kHz *VBW 100 kHz *SWT 35 ms Marker 1 [T1] -24.13 dBm 1.709988000 GHz Center 1.71 GHz 600 kHz/ Span 6 MHz Date: 19.AUG.2023 09:41:29	 Ref 30 dBm *Att 25 dB *RBW 30 kHz *VBW 100 kHz *SWT 35 ms Marker 1 [T1] -22.56 dBm 1.780012000 GHz Center 1.78 GHz 600 kHz/ Span 6 MHz Date: 19.AUG.2023 09:41:47
QPSK 5MHz	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -24.13 dBm 1.710000000 GHz Center 1.71 GHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 09:43:19	 Ref 30 dBm *Att 25 dB *RBW 100 kHz *VBW 300 kHz *SWT 35 ms Marker 1 [T1] -23.34 dBm 1.780000000 GHz Center 1.78 GHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 09:43:38

Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 10MHz	 Date: 19.AUG.2023 09:45:05	 Date: 19.AUG.2023 09:45:26
QPSK 15MHz	 Date: 19.AUG.2023 09:46:46	 Date: 19.AUG.2023 09:47:05
QPSK 20MHz	 Date: 19.AUG.2023 09:55:36	 Date: 19.AUG.2023 09:55:56

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 1.4MHz	 Ref 30 dBm Att 25 dB RBW 30 kHz Marker 1 [T1] -26.54 dBm VBW 100 kHz SWT 35 ms 1.709994000 GHz Center 1.71 GHz 300 kHz/ Span 3 MHz Date: 19.AUG.2023 09:40:25	 Ref 30 dBm Att 25 dB RBW 30 kHz Marker 1 [T1] -26.51 dBm VBW 100 kHz SWT 35 ms 1.780000000 GHz Center 1.78 GHz 300 kHz/ Span 3 MHz Date: 19.AUG.2023 09:40:41
16QAM 3MHz	 Ref 30 dBm Att 25 dB RBW 30 kHz Marker 1 [T1] -30.92 dBm VBW 300 kHz SWT 35 ms 1.710000000 GHz Center 1.71 GHz 600 kHz/ Span 6 MHz Date: 19.AUG.2023 09:41:38	 Ref 30 dBm Att 25 dB RBW 30 kHz Marker 1 [T1] -33.53 dBm VBW 300 kHz SWT 35 ms 1.780000000 GHz Center 1.78 GHz 600 kHz/ Span 6 MHz Date: 19.AUG.2023 09:41:55
16QAM 5MHz	 Ref 30 dBm Att 25 dB RBW 100 kHz Marker 1 [T1] -24.99 dBm VBW 300 kHz SWT 35 ms 1.710000000 GHz Center 1.71 GHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 09:43:28	 Ref 30 dBm Att 25 dB RBW 100 kHz Marker 1 [T1] -24.21 dBm VBW 300 kHz SWT 35 ms 1.780000000 GHz Center 1.78 GHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 09:43:47

Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 10MHz	Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 35 ms Marker 1 [T1] -32.43 dBm 1.710000000 GHz Center 1.71 GHz 2 MHz/ Span 20 MHz Date: 19.AUG.2023 09:45:15	Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 100 kHz VBW 300 kHz SWT 35 ms Marker 1 [T1] -31.62 dBm 1.780000000 GHz Center 1.78 GHz 2 MHz/ Span 20 MHz Date: 19.AUG.2023 09:45:36
16QAM 15MHz	Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz VBW 1 MHz SWT 35 ms Marker 1 [T1] -29.98 dBm 1.710000000 GHz Center 1.71 GHz 3 MHz/ Span 30 MHz Date: 19.AUG.2023 09:46:55	Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz VBW 1 MHz SWT 35 ms Marker 1 [T1] -27.79 dBm 1.780000000 GHz Center 1.78 GHz 3 MHz/ Span 30 MHz Date: 19.AUG.2023 09:47:14
16QAM 20MH	Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz VBW 1 MHz SWT 35 ms Marker 1 [T1] -33.09 dBm 1.710000000 GHz Center 1.71 GHz 4 MHz/ Span 40 MHz Date: 19.AUG.2023 09:55:46	Ref 30 dBm Offset 14.5 dB Att 25 dB RBW 300 kHz VBW 1 MHz SWT 35 ms Marker 1 [T1] -30.43 dBm 1.780000000 GHz Center 1.78 GHz 4 MHz/ Span 40 MHz Date: 19.AUG.2023 09:56:05

4.15 Antenna Port Test Data and Results for LTE Band 71

Serial Number:	29K3-1	Test Date:	2023/8/17-2023/8/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Arthur Su	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.2-25.9	Relative Humidity: (%)	56-61	ATM Pressure: (kPa)	99.7-100
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSU26	100147	2023/3/31	2024/3/30
R&S	Wideband Radio Communication Tester	CMW500	143458	2023/3/31	2024/3/30
eastsheep	Coaxial Attenuator	2W-SMA-JK-18G	21060301	Each time	N/A
Weinschel	Power Splitter	1515	RA914	Each time	N/A
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30174	2023/3/31	2024/3/30
UNI-T	Multimeter	UT39A+	C210582554	2022/9/29	2023/9/28
ZHAOXIN	DC Power Supply	RXN-6010D	21R6010D0912386	N/A	N/A
YINSAIGE	Coaxial Cable	SS402	SJ0100001	Each time	N/A
zhuoxiang	Coaxial Cable	SMA-178	211001	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).*

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	25.97	25.81	25.8	21.45	34.77
	RB1#13	26.01	25.88	25.93		
	RB1#24	25.92	25.8	25.72		
	RB15#0	24.87	24.78	24.82		
	RB15#10	25.03	24.98	24.87		
	RB25#0	24.96	24.85	24.79		
5MHz 16QAM	RB1#0	25.04	24.9	25.08	20.57	34.77
	RB1#13	25.04	24.94	25.13		
	RB1#24	24.96	24.87	24.99		
	RB15#0	23.89	23.83	23.82		
	RB15#10	24.05	24.05	23.86		
	RB25#0	23.99	23.92	23.83		
10MHz QPSK	RB1#0	26.11	25.95	26.32	21.86	34.77
	RB1#25	26.18	26.07	26.42		
	RB1#49	25.97	25.88	26.25		
	RB25#0	24.92	24.83	25.45		
	RB25#25	24.94	25.07	25.37		
	RB50#0	24.9	24.93	25.32		
10MHz 16QAM	RB1#0	25.63	25.09	25.31	21.13	34.77
	RB1#25	25.69	25.19	25.41		
	RB1#49	25.5	24.99	25.21		
	RB25#0	23.95	23.86	24.44		
	RB25#25	24	24.11	24.44		
	RB50#0	23.92	23.99	24.34		
15MHz QPSK	RB1#0	26.52	26.38	26.22	21.96	34.77
	RB1#38	26.52	26.36	26.28		
	RB1#74	26.32	26.25	26.16		
	RB36#0	25.54	25.35	25.39		
	RB36#39	25.54	25.47	25.37		
	RB75#0	25.51	25.36	25.44		
15MHz 16QAM	RB1#0	25.8	25.41	25.36	21.25	34.77
	RB1#38	25.81	25.44	25.38		
	RB1#74	25.63	25.33	25.25		
	RB36#0	24.46	24.35	24.38		
	RB36#39	24.47	24.44	24.25		
	RB75#0	24.48	24.39	24.34		
20MHz QPSK	RB1#0	26.31	26.19	26.1	22.05	34.77
	RB1#50	26.61	26.46	26.46		
	RB1#99	26.07	26.04	25.99		

20MHz 16QAM	RB50#0	25.5	25.22	25.23	21.51	34.77
	RB50#50	25.53	25.33	25.3		
	RB100#0	25.53	25.31	25.27		
	RB1#0	25.77	25.45	25.33		
	RB1#50	26.07	25.76	25.7		
	RB1#99	25.61	25.31	25.25		
	RB50#0	24.5	24.19	24.23		
	RB50#50	24.49	24.36	24.3		
	RB100#0	24.52	24.31	24.28		

Note:

ERP= Conducted Power(dBm) - Lc(dB) + G_T(dBd)G_T(dBd)=G_T(dBi)-2.15

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	9.94	9.65	9.9	13
	RB100#0	6.31	6.73	6.35	13
20MHz 16QAM	RB1#0	8.94	9.23	9.1	13
	RB100#0	7.08	7.31	7.12	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	4.54	4.54	4.54	5.16	5.2	5.22
5MHz 16QAM	4.52	4.54	4.54	5.16	5.12	5.18
10MHz QPSK	8.96	9	9	9.96	9.92	9.88
10MHz 16QAM	8.96	9	9	9.8	9.8	9.8
15MHz QPSK	13.5	13.62	13.56	15.18	15.18	15.06
15MHz 16QAM	13.5	13.56	13.56	15	15.06	15.12
20MHz QPSK	18	18	18	19.52	19.6	19.76
20MHz 16QAM	18	18	17.84	19.68	19.84	19.68

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.
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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.
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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	3.8	664.031	663.00	697.047	698.00
	-20	3.8	664.019	663.00	697.056	698.00
	-10	3.8	664.024	663.00	697.043	698.00
	0	3.8	664.020	663.00	697.067	698.00
	10	3.8	664.011	663.00	697.042	698.00
	20	3.8	664.040	663.00	697.040	698.00
	30	3.8	664.017	663.00	697.048	698.00
	40	3.8	664.032	663.00	697.058	698.00
	50	3.8	664.016	663.00	697.043	698.00
Frequency Stability vs. Voltage	20	3.6	664.016	663.00	697.060	698.00
	20	4.35	664.037	663.00	697.052	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	3.8	664.020	663.00	696.961	698.00
	-20	3.8	664.033	663.00	696.970	698.00
	-10	3.8	664.037	663.00	696.988	698.00
	0	3.8	664.039	663.00	696.972	698.00
	10	3.8	664.033	663.00	696.966	698.00
	20	3.8	664.040	663.00	696.960	698.00
	30	3.8	664.021	663.00	696.983	698.00
	40	3.8	664.034	663.00	696.963	698.00
	50	3.8	664.012	663.00	696.986	698.00
Frequency Stability vs. Voltage	20	3.6	664.024	663.00	696.964	698.00
	20	4.35	664.018	663.00	696.960	698.00
					Result:	Pass

	Occupied Bandwidth					
Channel	10MHz Bandwidth QPSK			10MHz Bandwidth 16QAM		
Lowest	Date: 19.AUG.2023 13:06:02			Date: 19.AUG.2023 13:06:20		
Middle	Date: 19.AUG.2023 13:07:10			Date: 19.AUG.2023 13:07:27		
Highest	Date: 19.AUG.2023 13:08:34			Date: 19.AUG.2023 13:08:52		

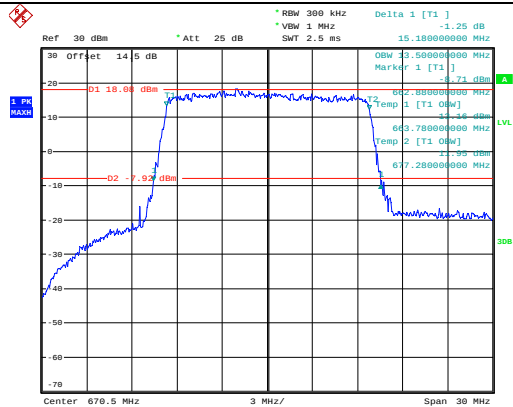
Occupied Bandwidth

Channel

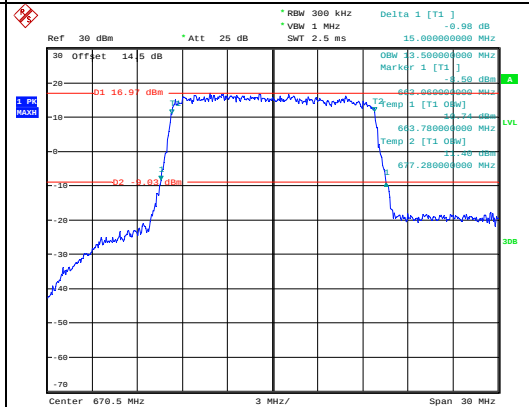
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

Lowest

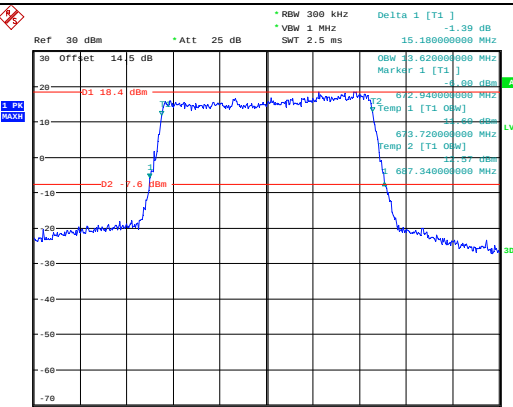


Date: 19.AUG.2023 13:10:00

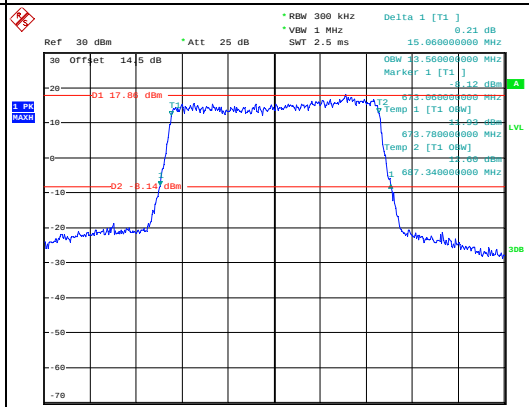


Date: 19.AUG.2023 13:10:17

Middle

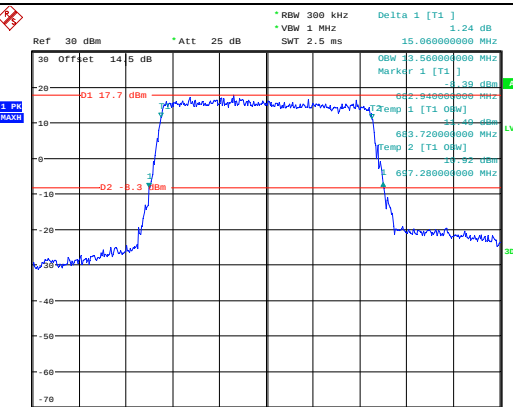


Date: 19.AUG.2023 13:11:04

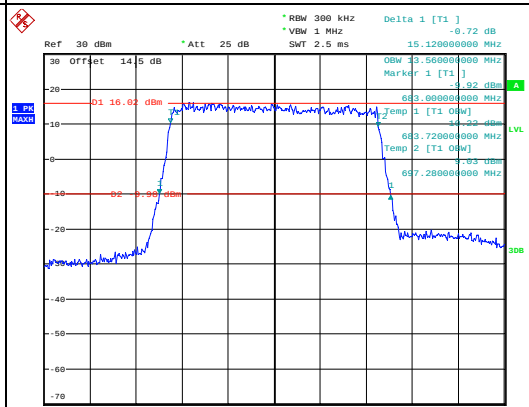


Date: 19.AUG.2023 13:11:22

Highest



Date: 19.AUG.2023 13:13:47



Date: 19.AUG.2023 13:14:02

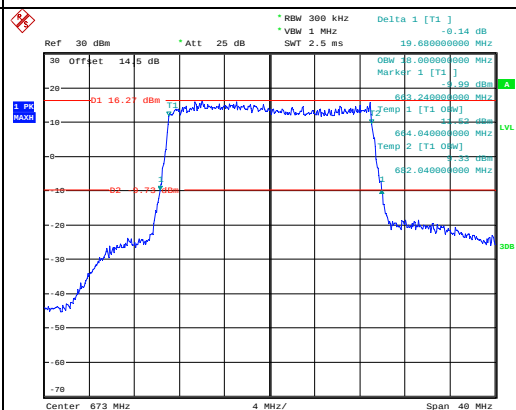
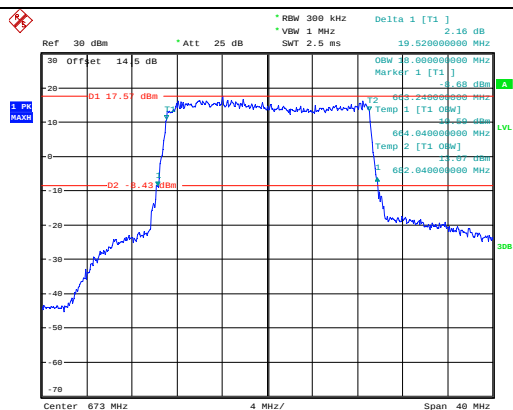
Occupied Bandwidth

Channel

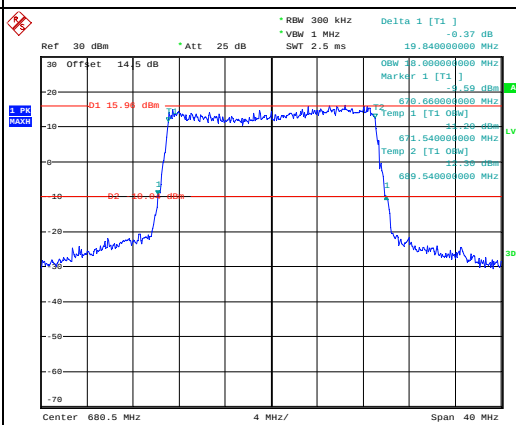
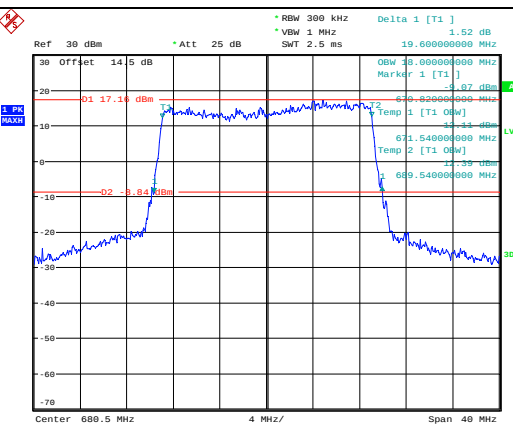
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

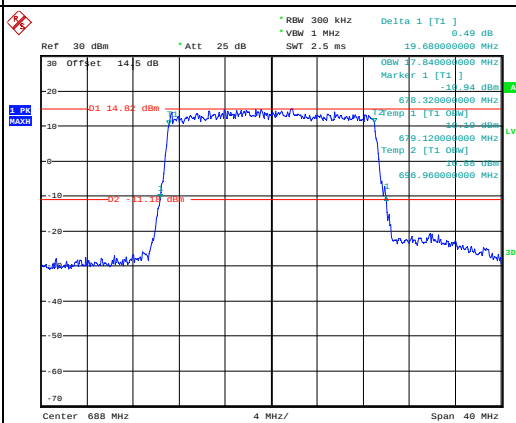
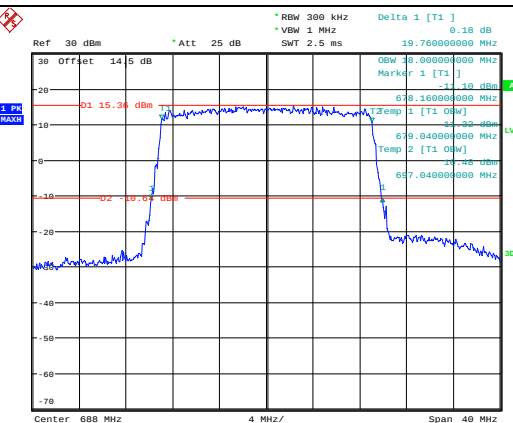
Lowest



Middle



Highest

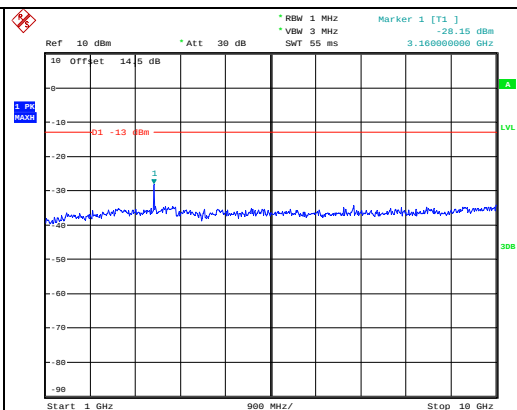
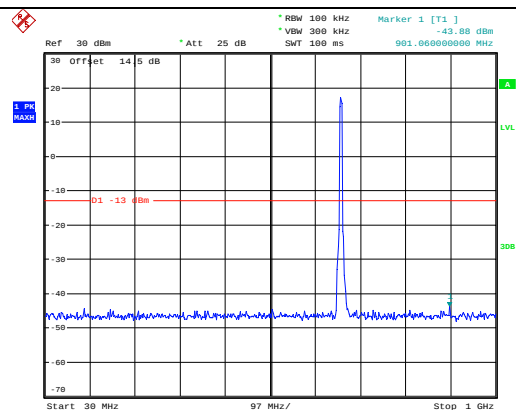


Spurious Emissions at Antenna Terminal

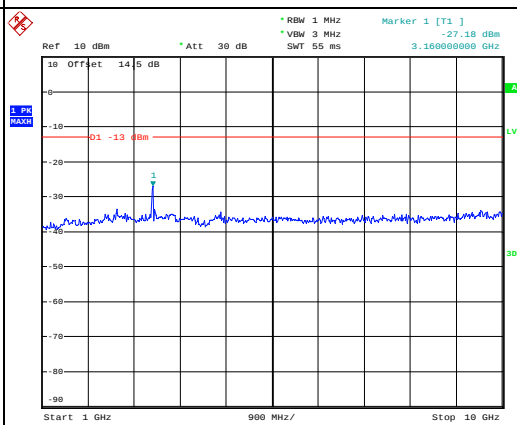
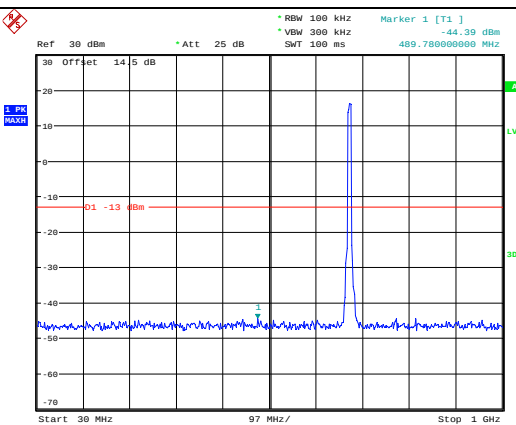
Channel

5MHz Bandwidth QPSK

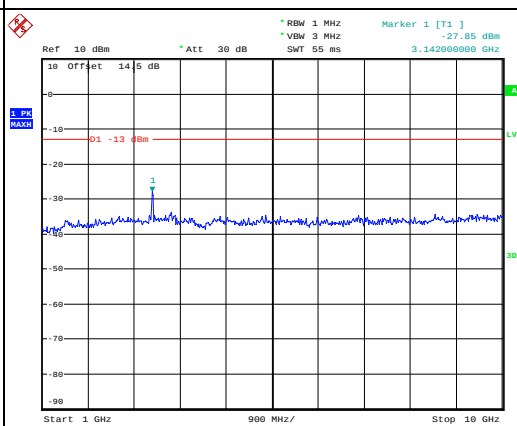
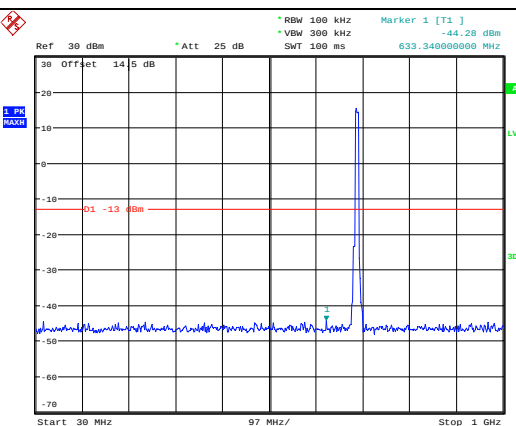
Lowest



Middle



Highest

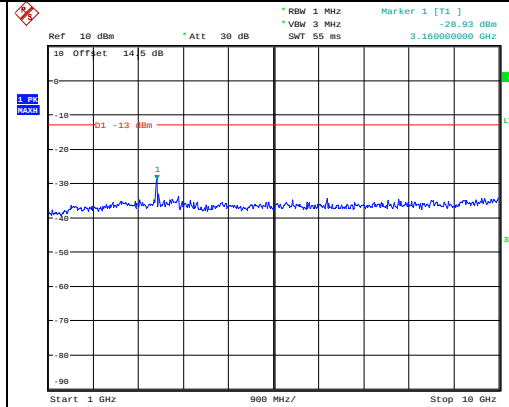
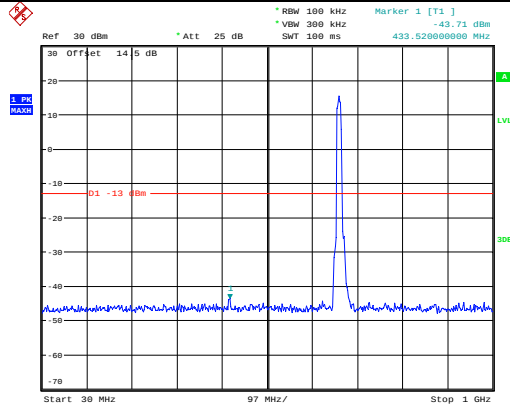


Spurious Emissions at Antenna Terminal

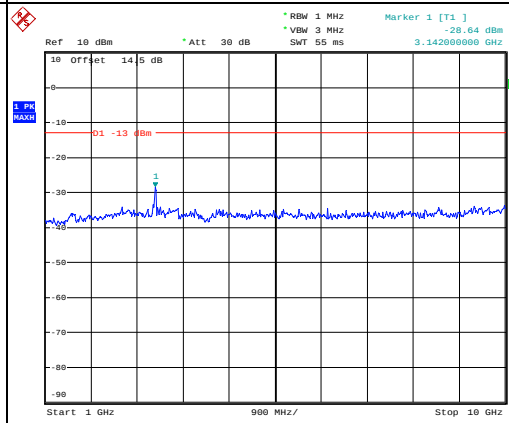
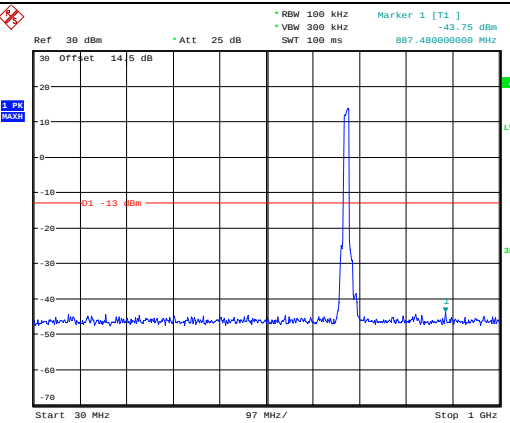
Channel

10MHz Bandwidth QPSK

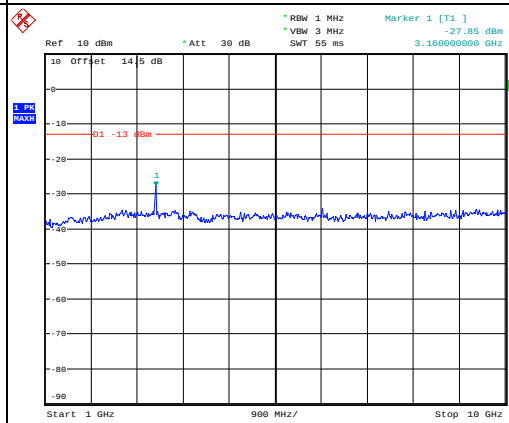
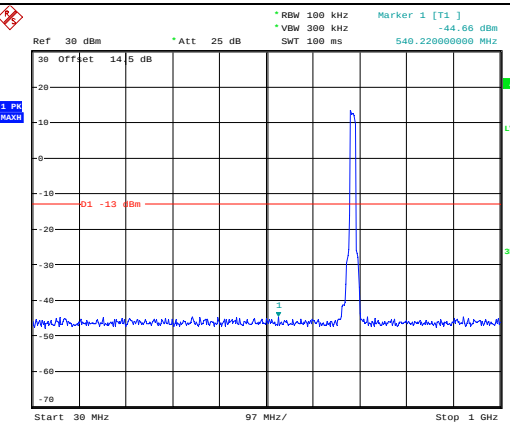
Lowest



Middle



Highest

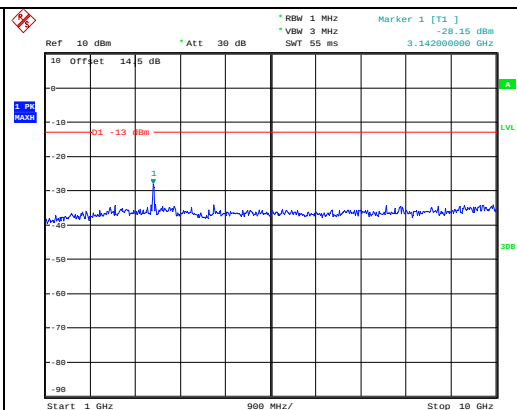
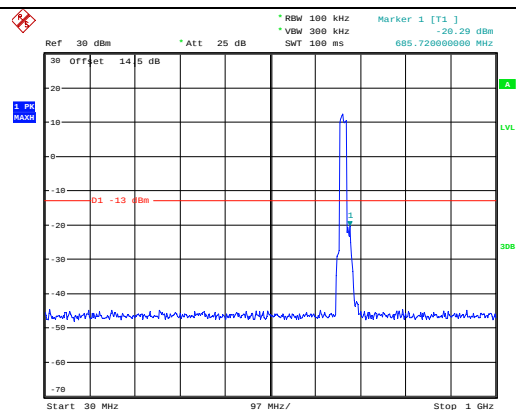


Spurious Emissions at Antenna Terminal

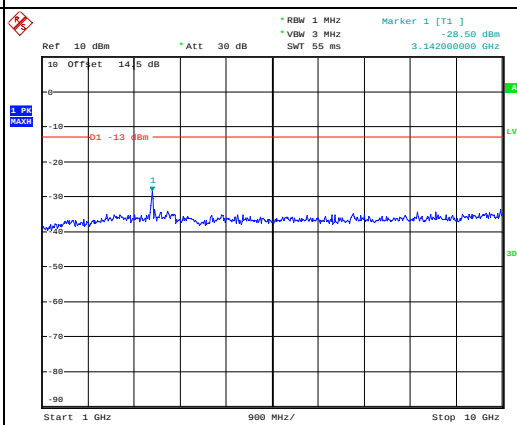
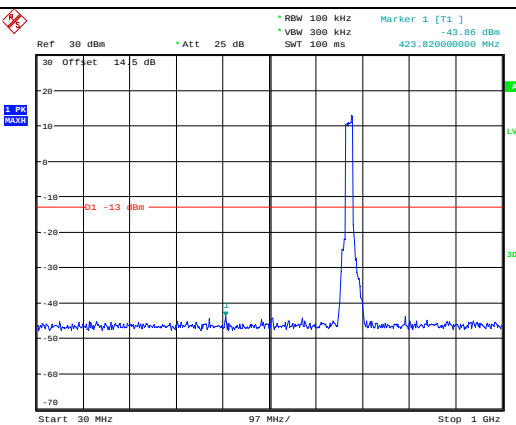
Channel

15MHz Bandwidth QPSK

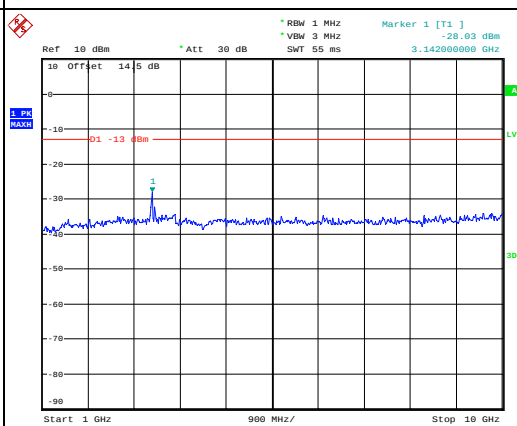
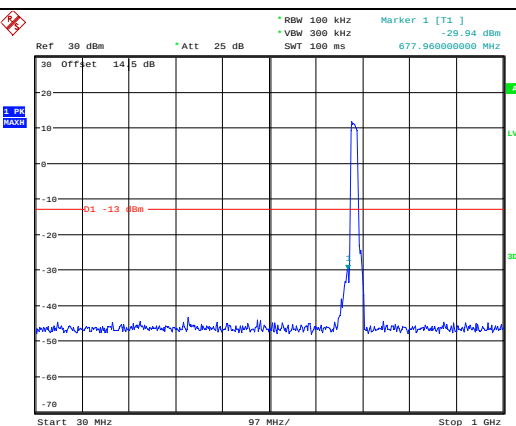
Lowest



Middle



Highest

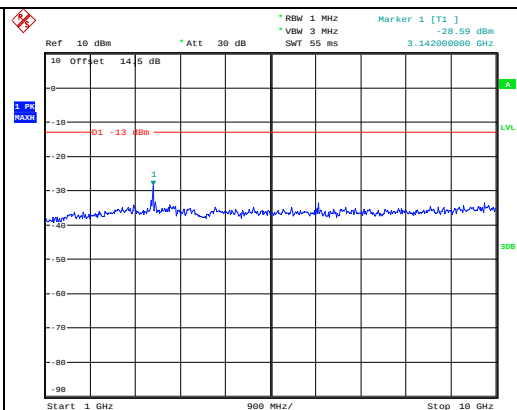
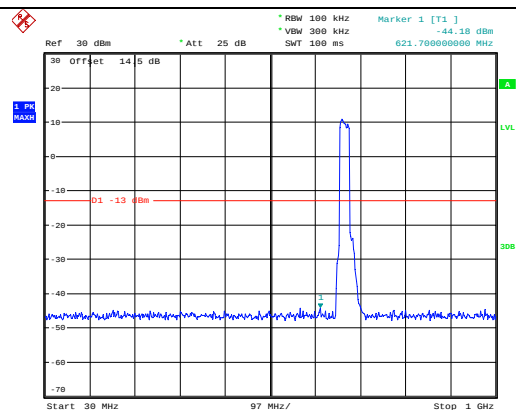


Spurious Emissions at Antenna Terminal

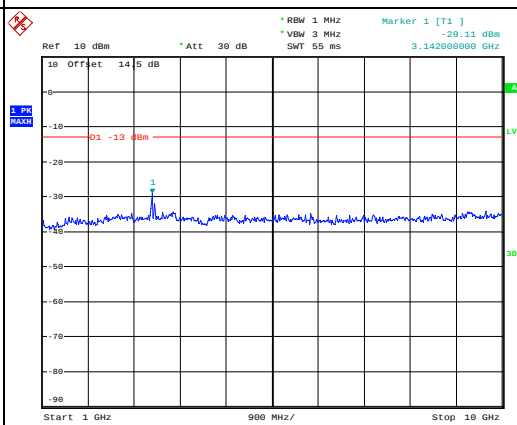
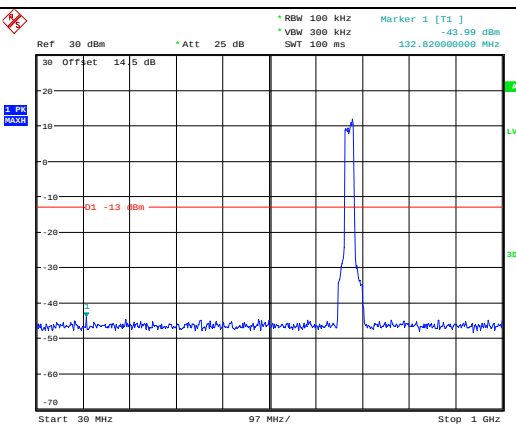
Channel

20MHz Bandwidth QPSK

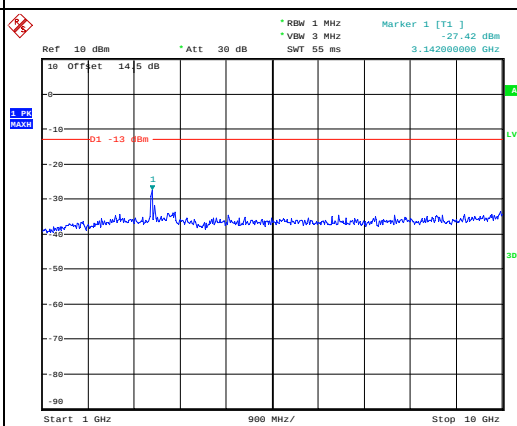
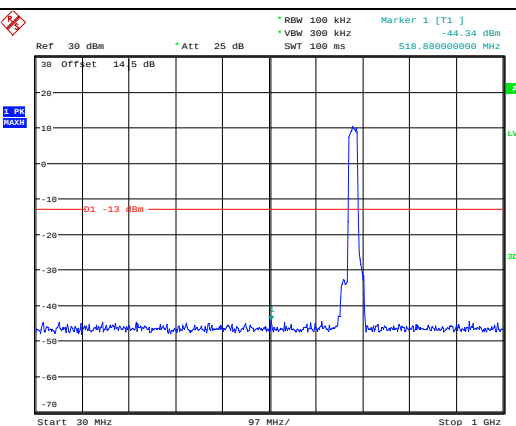
Lowest



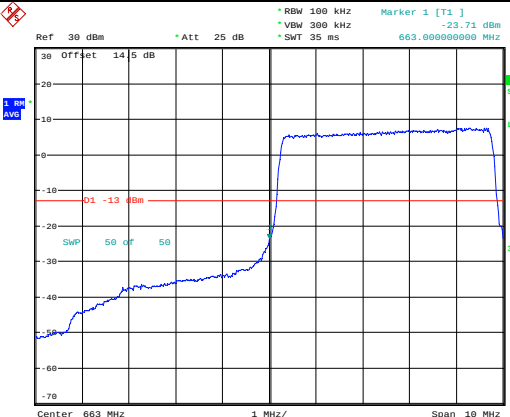
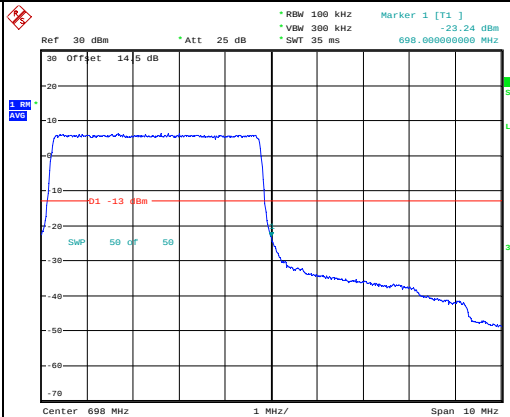
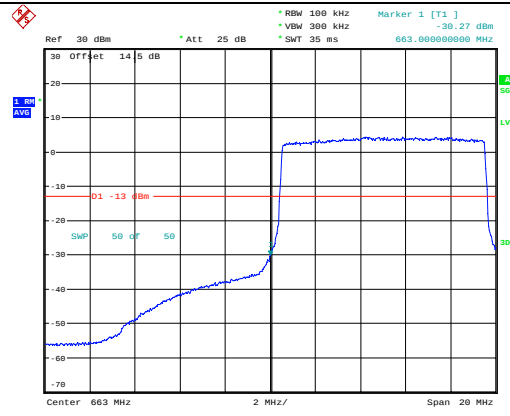
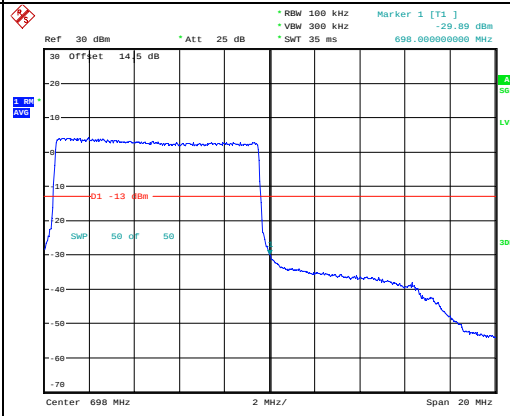
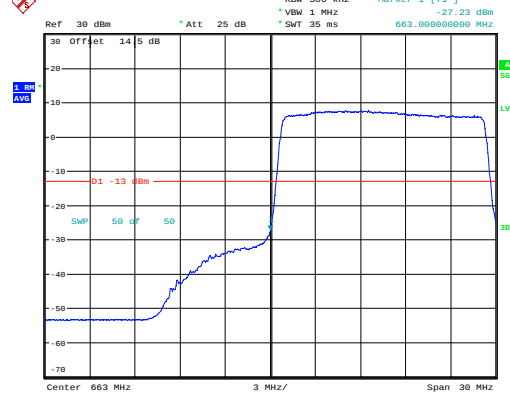
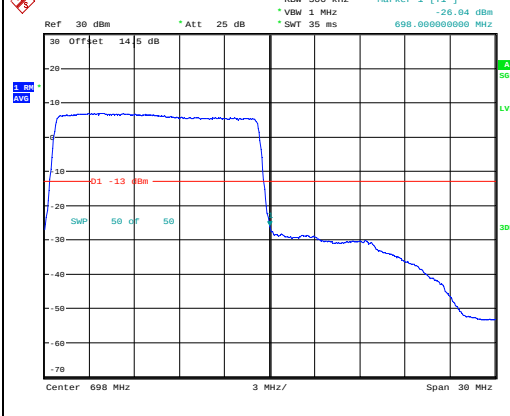
Middle



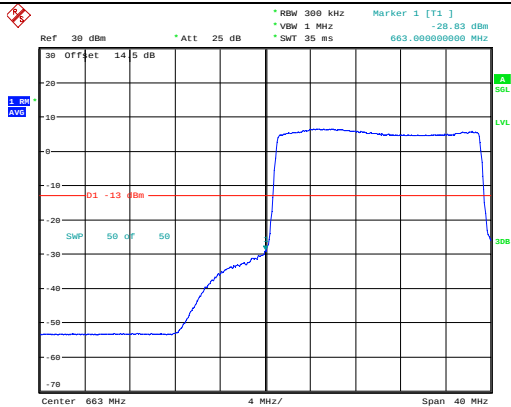
Highest



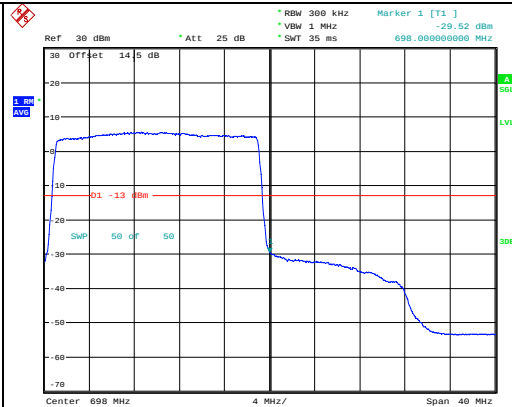
Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz	 Ref 30 dBm Att 25 dB RBW 100 kHz Marker 1 [T1] -23.71 dBm VBW 300 kHz 663.000000000 MHz SWT 35 ms Center 663 MHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 14:25:59	 Ref 30 dBm Att 25 dB RBW 100 kHz Marker 1 [T1] -23.24 dBm VBW 300 kHz 698.000000000 MHz SWT 35 ms Center 698 MHz 1 MHz/ Span 10 MHz Date: 19.AUG.2023 14:27:57
QPSK 10MHz	 Ref 30 dBm Att 25 dB RBW 100 kHz Marker 1 [T1] -28.27 dBm VBW 300 kHz 663.000000000 MHz SWT 35 ms Center 663 MHz 2 MHz/ Span 20 MHz Date: 19.AUG.2023 14:28:41	 Ref 30 dBm Att 25 dB RBW 100 kHz Marker 1 [T1] -29.89 dBm VBW 300 kHz 698.000000000 MHz SWT 35 ms Center 698 MHz 2 MHz/ Span 20 MHz Date: 19.AUG.2023 14:29:28
QPSK 15MHz	 Ref 30 dBm Att 25 dB RBW 300 kHz Marker 1 [T1] -27.23 dBm VBW 1 MHz 663.000000000 MHz SWT 35 ms Center 663 MHz 3 MHz/ Span 30 MHz Date: 19.AUG.2023 14:30:17	 Ref 30 dBm Att 25 dB RBW 300 kHz Marker 1 [T1] -26.04 dBm VBW 1 MHz 698.000000000 MHz SWT 35 ms Center 698 MHz 3 MHz/ Span 30 MHz Date: 19.AUG.2023 14:31:07

QPSK
20MHz

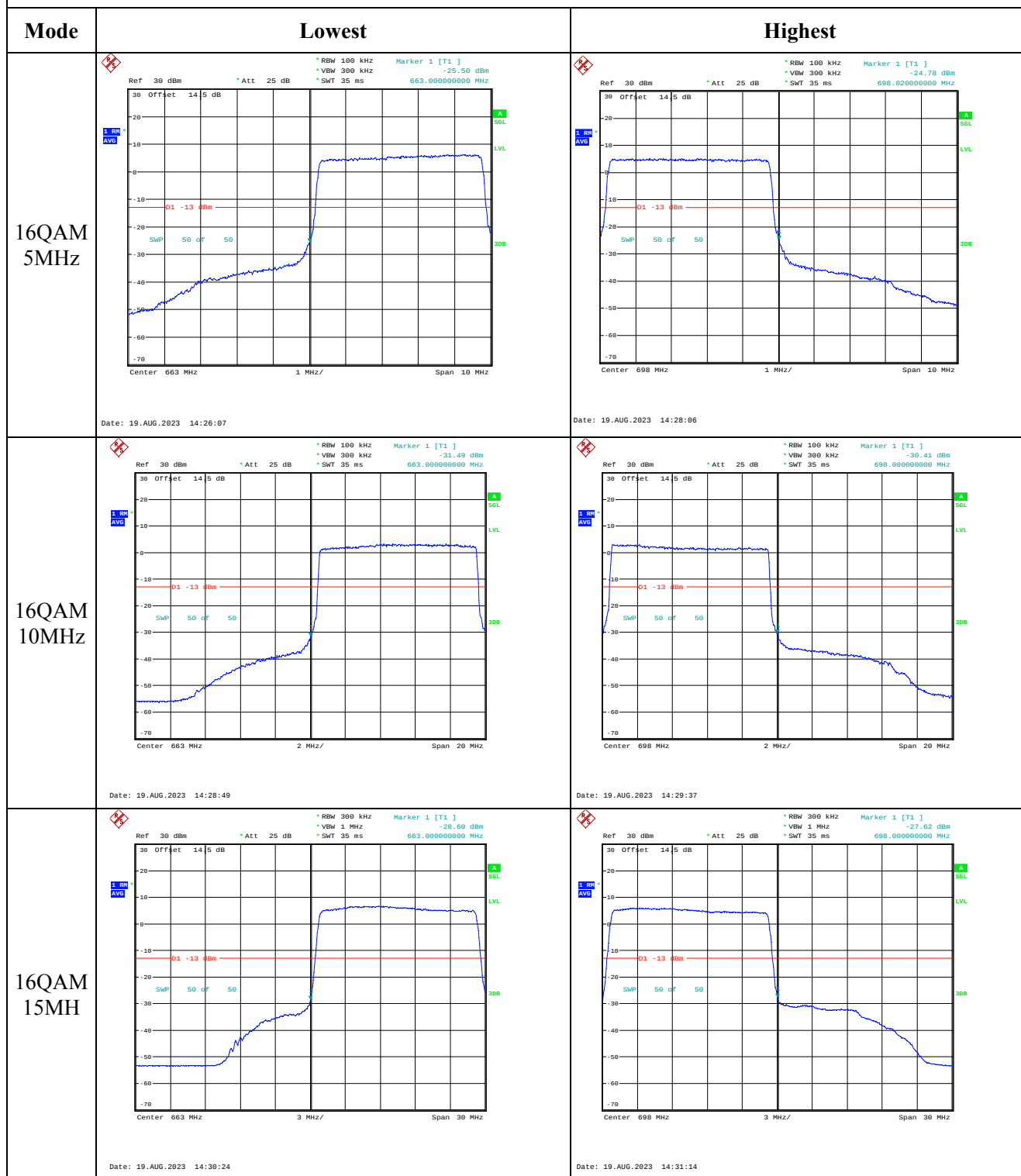


Date: 19.AUG.2023 14:31:54

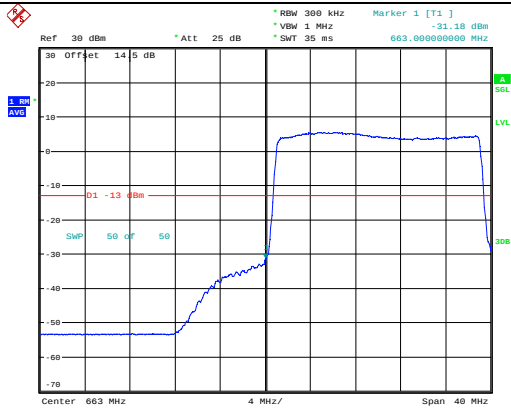


Date: 19.AUG.2023 14:37:58

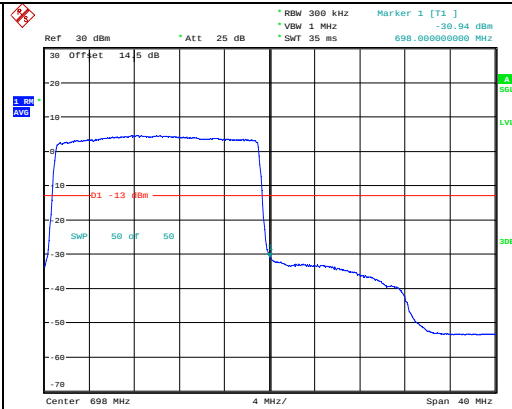
Out of band emission, Band Edge



16QAM
20MH



Date: 19.AUG.2023 14:32:01



Date: 19.AUG.2023 14:37:57

4.16 Radiated Spurious Emissions

Serial Number:	29K3-2	Test Date:	2023/8/13~2023/8/18
Test Site:	966-2,966-1	Test Mode:	Transmitting
Tester:	Carl Xue, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25~27.4	Relative Humidity: (%)	55~69	ATM Pressure: (kPa)	99.7~100.1
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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	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2022/11/9	2023/11/8
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	2024/7/15
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2022/9/16	2023/9/15
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9850/2F-20	072002	2021/2/5	2024/2/4
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2023/8/6	2024/8/5

*** 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.

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

Cellular Band (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)			
Frequency: 824.2 MHz								
707.23	H	20.93	-52.24	0.00	0.54	-52.78	-13.00	39.78
727.33	V	20.91	-48.41	0.00	0.52	-48.93	-13.00	35.93
1648.400	H	43.21	-61.12	8.68	0.80	-53.24	-13.00	40.24
1648.400	V	44.43	-59.98	8.68	0.80	-52.10	-13.00	39.10
2472.600	H	46.56	-54.22	9.38	1.00	-45.84	-13.00	32.84
2472.600	V	47.58	-53.15	9.38	1.00	-44.77	-13.00	31.77
3296.800	H	36.35	-60.33	10.32	1.15	-51.16	-13.00	38.16
3296.800	V	36.14	-60.30	10.32	1.15	-51.13	-13.00	38.13
Frequency: 836.6 MHz								
714.70	H	21.19	-51.83	0.00	0.50	-52.33	-13.00	39.33
583.29	V	20.73	-50.97	0.00	0.46	-51.43	-13.00	38.43
1673.200	H	43.89	-60.42	8.71	0.85	-52.56	-13.00	39.56
1673.200	V	44.62	-59.79	8.71	0.85	-51.93	-13.00	38.93
2509.800	H	45.43	-55.18	9.42	1.01	-46.77	-13.00	33.77
2509.800	V	47.79	-52.83	9.42	1.01	-44.42	-13.00	31.42
3346.400	H	36.01	-61.16	10.34	1.16	-51.98	-13.00	38.98
3346.400	V	35.66	-61.37	10.34	1.16	-52.19	-13.00	39.19
Frequency: 848.8 MHz								
567.17	H	21.02	-53.49	0.00	0.46	-53.95	-13.00	40.95
571.16	V	20.81	-50.88	0.00	0.46	-51.34	-13.00	38.34
1697.600	H	44.49	-59.80	8.74	0.90	-51.96	-13.00	38.96
1697.600	V	43.85	-60.57	8.74	0.90	-52.73	-13.00	39.73
2546.400	H	44.69	-55.64	9.47	1.01	-47.18	-13.00	34.18
2546.400	V	48.61	-51.67	9.47	1.01	-43.21	-13.00	30.21
3395.200	H	35.78	-61.91	10.36	1.19	-52.74	-13.00	39.74
3395.200	V	36.02	-61.64	10.36	1.19	-52.47	-13.00	39.47

PCS Band (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)			
GSM 1900 Frequency:1850.2MHz								
338.40	H	34.13	-76.01	0.00	0.36	-76.37	-13.00	63.37
44.90	V	38.14	-58.03	-19.93	0.12	-78.08	-13.00	65.08
3700.400	H	36.11	-61.21	10.60	1.25	-51.86	-13.00	38.86
3700.400	V	39.86	-57.44	10.60	1.25	-48.09	-13.00	35.09
5550.600	H	52.09	-41.17	11.44	1.49	-31.22	-13.00	18.22
5550.600	V	51.23	-41.87	11.44	1.49	-31.92	-13.00	18.92
GSM 1900 Frequency:1880MHz								
340.78	H	33.80	-76.30	0.00	0.36	-76.66	-13.00	63.66
46.34	V	37.83	-59.79	-18.49	0.12	-78.40	-13.00	65.40
3760.000	H	37.06	-59.35	10.66	1.24	-49.93	-13.00	36.93
3760.000	V	39.69	-56.60	10.66	1.24	-47.18	-13.00	34.18
5640.000	H	53.66	-39.79	11.33	1.54	-30.00	-13.00	17.00
5640.000	V	51.33	-42.00	11.33	1.54	-32.21	-13.00	19.21
GSM 1900 Frequency:1909.8MHz								
336.01	H	33.91	-76.27	0.00	0.35	-76.62	-13.00	63.62
46.01	V	37.76	-59.54	-18.81	0.12	-78.47	-13.00	65.47
3819.600	H	40.14	-55.72	10.72	1.29	-46.29	-13.00	33.29
3819.600	V	37.29	-58.43	10.72	1.29	-49.00	-13.00	36.00
5729.400	H	51.71	-41.77	11.22	1.59	-32.14	-13.00	19.14
5729.400	V	51.82	-41.54	11.22	1.59	-31.91	-13.00	18.91

WCDMA 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)			
WCDMA Band II, Frequency:1852.4 MHz								
345.59	H	33.95	-76.08	0.00	0.37	-76.45	-13.00	63.45
44.58	V	38.01	-57.75	-20.35	0.12	-78.22	-13.00	65.22
3704.800	H	36.07	-61.19	10.60	1.25	-51.84	-13.00	38.84
3704.800	V	35.67	-61.56	10.60	1.25	-52.21	-13.00	39.21
5557.200	H	40.77	-52.51	11.43	1.49	-42.57	-13.00	29.57
5557.200	V	38.41	-54.72	11.43	1.49	-44.78	-13.00	31.78
WCDMA Band II, Frequency:1880 MHz								
339.58	H	34.26	-75.86	0.00	0.36	-76.22	-13.00	63.22
45.21	V	38.12	-58.39	-19.59	0.12	-78.10	-13.00	65.10
3760.000	H	35.78	-60.63	10.66	1.24	-51.21	-13.00	38.21
3760.000	V	36.10	-60.19	10.66	1.24	-50.77	-13.00	37.77
5640.000	H	40.63	-52.82	11.33	1.54	-43.03	-13.00	30.03
5640.000	V	38.68	-54.65	11.33	1.54	-44.86	-13.00	31.86
WCDMA Band II, Frequency:1907.6MHz								
344.37	H	34.13	-75.92	0.00	0.37	-76.29	-13.00	63.29
46.50	V	37.82	-59.96	-18.33	0.12	-78.41	-13.00	65.41
3815.200	H	36.41	-59.44	10.72	1.29	-50.01	-13.00	37.01
3815.200	V	36.23	-59.46	10.72	1.29	-50.03	-13.00	37.03
5722.800	H	41.02	-52.47	11.23	1.58	-42.82	-13.00	29.82
5722.800	V	39.11	-54.24	11.23	1.58	-44.59	-13.00	31.59

WCDMA 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)			
Frequency:			1712.4	MHz				
336.05	H	34.83	-75.35	0.00	0.35	-75.70	-13.00	62.70
46.33	V	38.17	-59.44	-18.50	0.12	-78.06	-13.00	65.06
3424.800	H	36.58	-61.19	10.37	1.17	-51.99	-13.00	38.99
3424.800	V	37.12	-60.62	10.37	1.17	-51.42	-13.00	38.42
5137.200	H	36.22	-57.40	11.28	1.46	-47.58	-13.00	34.58
5137.200	V	35.64	-57.86	11.28	1.46	-48.04	-13.00	35.04
Frequency:			1732.6	MHz				
339.52	H	34.35	-75.77	0.00	0.36	-76.13	-13.00	63.13
43.50	V	37.96	-56.40	-21.78	0.12	-78.30	-13.00	65.30
3465.200	H	36.12	-61.69	10.39	1.15	-52.45	-13.00	39.45
3465.200	V	36.33	-61.44	10.39	1.15	-52.20	-13.00	39.20
5197.800	H	37.05	-57.08	11.32	1.44	-47.20	-13.00	34.20
5197.800	V	36.39	-57.59	11.32	1.44	-47.71	-13.00	34.71
Frequency:			1752.6	MHz				
343.18	H	34.67	-75.40	0.00	0.37	-75.77	-13.00	62.77
45.69	V	37.85	-59.13	-19.12	0.12	-78.37	-13.00	65.37
3505.200	H	36.78	-61.05	10.41	1.18	-51.82	-13.00	38.82
3505.200	V	35.12	-62.65	10.41	1.18	-53.42	-13.00	40.42
5257.800	H	36.69	-57.04	11.35	1.47	-47.16	-13.00	34.16
5257.800	V	36.44	-57.07	11.35	1.47	-47.19	-13.00	34.19

WCDMA 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)			
WCDMA Band 5 Frequency:826.4 MHz								
616.92	H	21.02	-52.75	0.00	0.48	-53.23	-13.00	40.23
727.35	V	20.69	-48.63	0.00	0.52	-49.15	-13.00	36.15
1652.800	H	35.78	-68.55	8.68	0.81	-60.68	-13.00	47.68
1652.800	V	36.05	-68.36	8.68	0.81	-60.49	-13.00	47.49
2479.200	H	36.41	-64.35	9.39	1.01	-55.97	-13.00	42.97
2479.200	V	35.28	-65.45	9.39	1.01	-57.07	-13.00	44.07
3305.600	H	36.33	-60.40	10.32	1.15	-51.23	-13.00	38.23
3305.600	V	36.89	-59.61	10.32	1.15	-50.44	-13.00	37.44
WCDMA Band 5 Frequency:836.6MHz								
712.20	H	21.28	-51.79	0.00	0.51	-52.30	-13.00	39.30
724.79	V	20.50	-48.88	0.00	0.51	-49.39	-13.00	36.39
1673.200	H	36.77	-67.54	8.71	0.85	-59.68	-13.00	46.68
1673.200	V	35.64	-68.77	8.71	0.85	-60.91	-13.00	47.91
2509.800	H	36.23	-64.38	9.42	1.01	-55.97	-13.00	42.97
2509.800	V	36.52	-64.10	9.42	1.01	-55.69	-13.00	42.69
3346.400	H	36.10	-61.07	10.34	1.16	-51.89	-13.00	38.89
3346.400	V	36.89	-60.14	10.34	1.16	-50.96	-13.00	37.96
WCDMA Band 5 Frequency:846.6MHz								
675.75	H	20.63	-52.82	0.00	0.50	-53.32	-13.00	40.32
585.34	V	20.43	-51.28	0.00	0.46	-51.74	-13.00	38.74
1693.200	H	35.93	-68.37	8.73	0.89	-60.53	-13.00	47.53
1693.200	V	36.01	-68.41	8.73	0.89	-60.57	-13.00	47.57
2539.800	H	35.56	-64.82	9.46	1.01	-56.37	-13.00	43.37
2539.800	V	35.78	-64.56	9.46	1.01	-56.11	-13.00	43.11
3386.400	H	36.37	-61.22	10.35	1.18	-52.05	-13.00	39.05
3386.400	V	36.44	-61.10	10.35	1.18	-51.93	-13.00	38.93

LTE Bands:

(The Worst modulation and bandwidth were 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, 1.4MHz, Frequency:1850.7 MHz								
63.75	H	34.60	-69.24	-8.31	0.14	-77.69	-13.00	64.69
44.60	V	37.92	-57.86	-20.33	0.12	-78.31	-13.00	65.31
3701.400	H	36.57	-60.74	10.60	1.25	-51.39	-13.00	38.39
3701.400	V	36.33	-60.96	10.60	1.25	-51.61	-13.00	38.61
5552.100	H	49.83	-43.44	11.44	1.49	-33.49	-13.00	20.49
5552.100	V	48.34	-44.76	11.44	1.49	-34.81	-13.00	21.81
QPSK, 1.4MHz, Frequency:1880 MHz								
63.98	H	34.89	-68.95	-8.19	0.14	-77.28	-13.00	64.28
66.49	V	38.29	-65.51	-6.86	0.15	-72.52	-13.00	59.52
3760.000	H	36.44	-59.97	10.66	1.24	-50.55	-13.00	37.55
3760.000	V	37.45	-58.84	10.66	1.24	-49.42	-13.00	36.42
5640.000	H	50.60	-42.85	11.33	1.54	-33.06	-13.00	20.06
5640.000	V	49.91	-43.42	11.33	1.54	-33.63	-13.00	20.63
QPSK, 1.4MHz, Frequency:1909.3 MHz								
188.87	H	34.39	-78.28	0.00	0.26	-78.54	-13.00	65.54
66.96	V	38.25	-65.39	-6.61	0.15	-72.15	-13.00	59.15
3818.600	H	36.45	-59.41	10.72	1.29	-49.98	-13.00	36.98
3818.600	V	36.12	-59.59	10.72	1.29	-50.16	-13.00	37.16
5727.900	H	51.48	-42.00	11.23	1.59	-32.36	-13.00	19.36
5727.900	V	50.57	-42.79	11.23	1.59	-33.15	-13.00	20.15

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)			
1.4MHz QPSK, Frequency: 1710.7 MHz								
192.42	H	33.23	-79.51	0.00	0.26	-79.77	-13.00	66.77
44.58	V	37.20	-58.56	-20.35	0.12	-79.03	-13.00	66.03
3421.400	H	36.45	-61.31	10.37	1.17	-52.11	-13.00	39.11
3421.400	V	36.66	-61.07	10.37	1.17	-51.87	-13.00	38.87
5132.100	H	44.70	-48.87	11.28	1.47	-39.06	-13.00	26.06
5132.100	V	46.04	-47.42	11.28	1.47	-37.61	-13.00	24.61
1.4MHz QPSK, Frequency: 1732.5 MHz								
189.74	H	33.71	-78.97	0.00	0.26	-79.23	-13.00	66.23
45.21	V	37.82	-58.69	-19.59	0.12	-78.40	-13.00	65.40
3465.000	H	36.02	-61.79	10.39	1.15	-52.55	-13.00	39.55
3465.000	V	36.02	-61.75	10.39	1.15	-52.51	-13.00	39.51
5197.500	H	47.12	-47.01	11.32	1.44	-37.13	-13.00	24.13
5197.500	V	45.38	-48.60	11.32	1.44	-38.72	-13.00	25.72
1.4MHz QPSK, Frequency: 1754.3 MHz								
193.77	H	33.48	-79.29	0.00	0.26	-79.55	-13.00	66.55
66.24	V	37.58	-66.31	-6.99	0.15	-73.45	-13.00	60.45
3508.600	H	36.12	-61.70	10.41	1.19	-52.48	-13.00	39.48
3508.600	V	36.10	-61.66	10.41	1.19	-52.44	-13.00	39.44
5262.900	H	47.22	-46.48	11.36	1.47	-36.59	-13.00	23.59
5262.900	V	45.02	-48.45	11.36	1.47	-38.56	-13.00	25.56

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, 1.4MHz, Frequency: 824.7 MHz								
714.70	H	20.84	-52.18	0.00	0.50	-52.68	-13.00	39.68
729.88	V	20.93	-48.34	0.00	0.53	-48.87	-13.00	35.87
1649.400	H	36.07	-68.26	8.68	0.80	-60.38	-13.00	47.38
1649.400	V	36.21	-68.20	8.68	0.80	-60.32	-13.00	47.32
2474.100	H	44.89	-55.89	9.38	1.00	-47.51	-13.00	34.51
2474.100	V	44.07	-56.66	9.38	1.00	-48.28	-13.00	35.28
3298.800	H	36.53	-60.15	10.32	1.15	-50.98	-13.00	37.98
3298.800	V	35.78	-60.66	10.32	1.15	-51.49	-13.00	38.49
QPSK, 1.4MHz, Frequency: 836.5 MHz								
699.84	H	20.73	-52.59	0.00	0.55	-53.14	-13.00	40.14
671.03	V	20.76	-49.68	0.00	0.50	-50.18	-13.00	37.18
1673.000	H	35.47	-68.84	8.71	0.85	-60.98	-13.00	47.98
1673.000	V	36.12	-68.29	8.71	0.85	-60.43	-13.00	47.43
2509.500	H	43.46	-57.15	9.42	1.01	-48.74	-13.00	35.74
2509.500	V	44.47	-56.15	9.42	1.01	-47.74	-13.00	34.74
3346.000	H	35.63	-61.53	10.34	1.16	-52.35	-13.00	39.35
3346.000	V	35.02	-62.00	10.34	1.16	-52.82	-13.00	39.82
QPSK, 1.4MHz, Frequency: 848.3 MHz								
557.32	H	20.94	-53.76	0.00	0.48	-54.24	-13.00	41.24
650.20	V	20.85	-49.97	0.00	0.52	-50.49	-13.00	37.49
1696.600	H	36.44	-67.85	8.74	0.89	-60.00	-13.00	47.00
1696.600	V	35.47	-68.95	8.74	0.89	-61.10	-13.00	48.10
2544.900	H	43.52	-56.82	9.47	1.01	-48.36	-13.00	35.36
2544.900	V	44.11	-56.19	9.47	1.01	-47.73	-13.00	34.73
3393.200	H	36.01	-61.66	10.36	1.19	-52.49	-13.00	39.49
3393.200	V	36.85	-60.78	10.36	1.19	-51.61	-13.00	38.61

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, 1.4MHz, Frequency: 699.7 MHz								
517.80	H	20.42	-55.06	0.00	0.42	-55.48	-13.00	42.48
477.71	V	20.52	-51.94	0.00	0.41	-52.35	-13.00	39.35
1399.400	H	36.57	-67.13	8.22	0.71	-59.62	-13.00	46.62
1399.400	V	36.78	-66.97	8.22	0.71	-59.46	-13.00	46.46
2099.100	H	41.24	-60.64	9.16	0.91	-52.39	-13.00	39.39
2099.100	V	44.32	-57.51	9.16	0.91	-49.26	-13.00	36.26
2798.800	H	36.11	-63.82	9.88	1.04	-54.98	-13.00	41.98
2798.800	V	36.12	-63.68	9.88	1.04	-54.84	-13.00	41.84
QPSK, 1.4MHz, Frequency:707.5 MHz								
559.28	H	20.60	-54.06	0.00	0.47	-54.53	-13.00	41.53
581.25	V	20.20	-51.50	0.00	0.46	-51.96	-13.00	38.96
1415.000	H	41.35	-62.32	8.26	0.72	-54.78	-13.00	41.78
1415.000	V	37.67	-66.05	8.26	0.72	-58.51	-13.00	45.51
2122.500	H	46.60	-55.39	9.17	0.92	-47.14	-13.00	34.14
2122.500	V	48.31	-53.66	9.17	0.92	-45.41	-13.00	32.41
2830.000	H	36.78	-63.02	9.93	1.06	-54.15	-13.00	41.15
2830.000	V	36.63	-63.10	9.93	1.06	-54.23	-13.00	41.23
QPSK, 1.4MHz, Frequency: 715.3 MHz								
606.21	H	20.51	-53.32	0.00	0.49	-53.81	-13.00	40.81
541.92	V	20.65	-50.99	0.00	0.46	-51.45	-13.00	38.45
1430.600	H	42.52	-61.11	8.31	0.73	-53.53	-13.00	40.53
1430.600	V	40.43	-63.26	8.31	0.73	-55.68	-13.00	42.68
2145.900	H	51.60	-50.50	9.19	0.93	-42.24	-13.00	29.24
2145.900	V	53.32	-48.79	9.19	0.93	-40.53	-13.00	27.53
2861.200	H	36.45	-63.20	9.98	1.07	-54.29	-13.00	41.29
2861.200	V	36.32	-63.35	9.98	1.07	-54.44	-13.00	41.44

LTE Band 17(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, 5MHz, Frequency: 706.5 MHz								
499.97	H	20.47	-55.36	0.00	0.45	-55.81	-13.00	42.81
647.93	V	20.41	-50.45	0.00	0.52	-50.97	-13.00	37.97
1413.000	H	36.04	-67.63	8.26	0.72	-60.09	-13.00	47.09
1413.000	V	36.02	-67.70	8.26	0.72	-60.16	-13.00	47.16
2119.500	H	35.61	-66.36	9.17	0.92	-58.11	-13.00	45.11
2119.500	V	37.11	-64.84	9.17	0.92	-56.59	-13.00	43.59
2826.000	H	36.22	-63.59	9.92	1.06	-54.73	-13.00	41.73
2826.000	V	36.42	-63.32	9.92	1.06	-54.46	-13.00	41.46
QPSK, 5MHz, Frequency:710 MHz								
545.73	H	20.56	-54.37	0.00	0.47	-54.84	-13.00	41.84
551.50	V	20.11	-51.55	0.00	0.48	-52.03	-13.00	39.03
1420.000	H	35.78	-67.88	8.28	0.73	-60.33	-13.00	47.33
1420.000	V	36.43	-67.28	8.28	0.73	-59.73	-13.00	46.73
2130.000	H	36.37	-65.65	9.18	0.92	-57.39	-13.00	44.39
2130.000	V	39.55	-62.46	9.18	0.92	-54.20	-13.00	41.20
2840.000	H	36.10	-63.65	9.94	1.06	-54.77	-13.00	41.77
2840.000	V	36.21	-63.50	9.94	1.06	-54.62	-13.00	41.62
QPSK, 5MHz, Frequency: 713.5 MHz								
538.14	H	20.39	-54.69	0.00	0.46	-55.15	-13.00	42.15
577.19	V	20.27	-51.43	0.00	0.46	-51.89	-13.00	38.89
1427.000	H	36.23	-67.41	8.30	0.73	-59.84	-13.00	46.84
1427.000	V	36.24	-67.45	8.30	0.73	-59.88	-13.00	46.88
2140.500	H	39.11	-62.96	9.18	0.93	-54.71	-13.00	41.71
2140.500	V	39.75	-62.33	9.18	0.93	-54.08	-13.00	41.08
2854.000	H	36.01	-63.68	9.97	1.07	-54.78	-13.00	41.78
2854.000	V	36.12	-63.56	9.97	1.07	-54.66	-13.00	41.66

LTE Band 25 (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)			
1.4MHz QPSK, Frequency: 1850.7 MHz								
191.76	H	33.79	-78.94	0.00	0.26	-79.20	-13.00	66.20
44.60	V	36.96	-58.82	-20.33	0.12	-79.27	-13.00	66.27
3701.400	H	36.11	-61.20	10.60	1.25	-51.85	-13.00	38.85
3701.400	V	36.10	-61.19	10.60	1.25	-51.84	-13.00	38.84
5552.100	H	48.39	-44.88	11.44	1.49	-34.93	-13.00	21.93
5552.100	V	46.56	-46.54	11.44	1.49	-36.59	-13.00	23.59
1.4MHz QPSK, Frequency: 1882.5 MHz								
207.85	H	33.72	-79.01	0.00	0.26	-79.27	-13.00	66.27
66.26	V	37.30	-66.58	-6.98	0.15	-73.71	-13.00	60.71
3765.000	H	36.11	-60.22	10.67	1.25	-50.80	-13.00	37.80
3765.000	V	36.45	-59.76	10.67	1.25	-50.34	-13.00	37.34
5647.500	H	49.08	-44.37	11.32	1.55	-34.60	-13.00	21.60
5647.500	V	48.81	-44.52	11.32	1.55	-34.75	-13.00	21.75
1.4MHz QPSK, Frequency: 1914.3 MHz								
210.04	H	34.05	-78.64	0.00	0.26	-78.90	-13.00	65.90
45.30	V	36.89	-59.71	-19.51	0.12	-79.34	-13.00	66.34
3828.600	H	36.45	-59.45	10.73	1.28	-50.00	-13.00	37.00
3828.600	V	36.02	-59.75	10.73	1.28	-50.30	-13.00	37.30
5742.900	H	47.44	-46.04	11.21	1.60	-36.43	-13.00	23.43
5742.900	V	48.23	-45.13	11.21	1.60	-35.52	-13.00	22.52

LTE Band 26 for Part 90s (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)			
1.4MHz QPSK, Frequency: 814.7 MHz								
694.95	H	20.81	-52.54	0.00	0.55	-53.09	-13.00	40.09
671.03	V	20.73	-49.71	0.00	0.50	-50.21	-13.00	37.21
1629.400	H	36.59	-67.76	8.66	0.81	-59.91	-13.00	46.91
1629.400	V	35.98	-68.43	8.66	0.81	-60.58	-13.00	47.58
2444.100	H	48.93	-51.96	9.37	1.00	-43.59	-13.00	30.59
2444.100	V	53.66	-47.09	9.37	1.00	-38.72	-13.00	25.72
3258.800	H	36.25	-60.61	10.30	1.17	-51.48	-13.00	38.48
3258.800	V	36.04	-60.57	10.30	1.17	-51.44	-13.00	38.44
1.4MHz QPSK, Frequency: 823.3 MHz								
699.54	H	22.14	-51.18	0.00	0.55	-51.73	-13.00	38.73
674.62	V	21.74	-48.64	0.00	0.50	-49.14	-13.00	36.14
1646.600	H	37.84	-66.49	8.68	0.80	-58.61	-13.00	45.61
1646.600	V	36.54	-67.87	8.68	0.80	-59.99	-13.00	46.99
2469.900	H	51.24	-49.55	9.38	1.00	-41.17	-13.00	28.17
2469.900	V	57.95	-42.78	9.38	1.00	-34.40	-13.00	21.40
3293.200	H	36.24	-60.46	10.32	1.15	-51.29	-13.00	38.29
3293.200	V	37.95	-58.51	10.32	1.15	-49.34	-13.00	36.34

LTE Band 26 for Part 22H (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)			
1.4MHz QPSK, Frequency: 824.7 MHz								
702.50	H	21.74	-51.53	0.00	0.55	-52.08	-13.00	39.08
679.54	V	22.09	-48.20	0.00	0.52	-48.72	-13.00	35.72
1649.400	H	37.95	-66.38	8.68	0.80	-58.50	-13.00	45.50
1649.400	V	36.11	-68.30	8.68	0.80	-60.42	-13.00	47.42
2474.100	H	50.14	-50.64	9.38	1.00	-42.26	-13.00	29.26
2474.100	V	56.74	-43.99	9.38	1.00	-35.61	-13.00	22.61
3298.800	H	35.94	-60.74	10.32	1.15	-51.57	-13.00	38.57
3298.800	V	36.87	-59.57	10.32	1.15	-50.40	-13.00	37.40
1.4MHz QPSK, Frequency: 831.5 MHz								
724.79	H	21.45	-51.37	0.00	0.51	-51.88	-13.00	38.88
498.22	V	20.87	-50.78	0.00	0.45	-51.23	-13.00	38.23
1663.000	H	36.78	-67.54	8.70	0.83	-59.67	-13.00	46.67
1663.000	V	36.55	-67.86	8.70	0.83	-59.99	-13.00	46.99
2494.500	H	51.97	-48.73	9.40	1.01	-40.34	-13.00	27.34
2494.500	V	56.60	-44.11	9.40	1.01	-35.72	-13.00	22.72
3326.000	H	36.44	-60.51	10.33	1.16	-51.34	-13.00	38.34
3326.000	V	36.13	-60.64	10.33	1.16	-51.47	-13.00	38.47
1.4MHz QPSK, Frequency: 848.3 MHz								
709.71	H	20.93	-52.19	0.00	0.52	-52.71	-13.00	39.71
682.88	V	21.05	-49.18	0.00	0.53	-49.71	-13.00	36.71
1696.600	H	36.45	-67.84	8.74	0.89	-59.99	-13.00	46.99
1696.600	V	36.39	-68.03	8.74	0.89	-60.18	-13.00	47.18
2544.900	H	50.12	-50.22	9.47	1.01	-41.76	-13.00	28.76
2544.900	V	54.11	-46.19	9.47	1.01	-37.73	-13.00	24.73
3393.200	H	36.05	-61.62	10.36	1.19	-52.45	-13.00	39.45
3393.200	V	36.46	-61.17	10.36	1.19	-52.00	-13.00	39.00

LTE Band 41 (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)			
5MHz QPSK, Frequency: 2498.5 MHz								
91.89	H	33.97	-78.94	0.00	0.18	-79.12	-25.00	54.12
45.05	V	37.69	-58.66	-19.75	0.12	-78.53	-25.00	53.53
4997.000	H	36.78	-56.16	11.20	1.48	-46.44	-25.00	21.44
4997.000	V	37.01	-55.79	11.20	1.48	-46.07	-25.00	21.07
7495.500	H	36.58	-53.21	10.90	1.94	-44.25	-25.00	19.25
7495.500	V	36.99	-53.30	10.90	1.94	-44.34	-25.00	19.34
5MHz QPSK, Frequency: 2593 MHz								
207.85	H	34.06	-78.67	0.00	0.26	-78.93	-25.00	53.93
65.77	V	36.73	-67.32	-7.24	0.15	-74.71	-25.00	49.71
5186.000	H	36.11	-57.92	11.31	1.44	-48.05	-25.00	23.05
5186.000	V	36.33	-57.56	11.31	1.44	-47.69	-25.00	22.69
7779.000	H	36.69	-52.80	10.84	1.99	-43.95	-25.00	18.95
7779.000	V	36.45	-53.49	10.84	1.99	-44.64	-25.00	19.64
5MHz QPSK, Frequency: 2687.5 MHz								
94.42	H	33.95	-78.79	0.00	0.18	-78.97	-25.00	53.97
45.21	V	37.20	-59.31	-19.59	0.12	-79.02	-25.00	54.02
5375.000	H	36.75	-56.76	11.43	1.49	-46.82	-25.00	21.82
5375.000	V	36.12	-57.38	11.43	1.49	-47.44	-25.00	22.44
8062.500	H	36.58	-51.64	10.81	2.12	-42.95	-25.00	17.95
8062.500	V	37.10	-51.62	10.81	2.12	-42.93	-25.00	17.93

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)			
1.4MHz QPSK, Frequency: 1710.7 MHz								
202.65	H	33.80	-79.04	0.00	0.26	-79.30	-13.00	66.30
66.24	V	36.86	-67.03	-6.99	0.15	-74.17	-13.00	61.17
3421.400	H	36.01	-61.75	10.37	1.17	-52.55	-13.00	39.55
3421.400	V	35.78	-61.95	10.37	1.17	-52.75	-13.00	39.75
5132.100	H	44.14	-49.43	11.28	1.47	-39.62	-13.00	26.62
5132.100	V	44.56	-48.90	11.28	1.47	-39.09	-13.00	26.09
1.4MHz QPSK, Frequency: 1745 MHz								
93.76	H	34.16	-78.62	0.00	0.18	-78.80	-13.00	65.80
46.83	V	36.90	-61.20	-18.01	0.12	-79.33	-13.00	66.33
3490.000	H	36.11	-61.73	10.40	1.17	-52.50	-13.00	39.50
3490.000	V	36.66	-61.12	10.40	1.17	-51.89	-13.00	38.89
5235.000	H	45.43	-48.47	11.34	1.46	-38.59	-13.00	25.59
5235.000	V	47.80	-45.91	11.34	1.46	-36.03	-13.00	23.03
1.4MHz QPSK, Frequency: 1779.3 MHz								
204.95	H	34.35	-78.44	0.00	0.26	-78.70	-13.00	65.70
45.53	V	36.71	-60.11	-19.28	0.12	-79.51	-13.00	66.51
3558.600	H	36.74	-60.93	10.46	1.22	-51.69	-13.00	38.69
3558.600	V	36.02	-61.55	10.46	1.22	-52.31	-13.00	39.31
5337.900	H	48.45	-45.02	11.40	1.47	-35.09	-13.00	22.09
5337.900	V	45.35	-47.98	11.40	1.47	-38.05	-13.00	25.05

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)			
5MHz QPSK, Frequency: 665.5 MHz								
540.03	H	20.72	-54.32	0.00	0.46	-54.78	-13.00	41.78
575.18	V	20.81	-50.88	0.00	0.46	-51.34	-13.00	38.34
1331.000	H	36.44	-66.59	8.03	0.76	-59.32	-13.00	46.32
1331.000	V	35.87	-67.49	8.03	0.76	-60.22	-13.00	47.22
1996.500	H	38.46	-63.70	9.10	0.89	-55.49	-13.00	42.49
1996.500	V	39.01	-62.53	9.10	0.89	-54.32	-13.00	41.32
2662.000	H	36.23	-63.73	9.66	1.06	-55.13	-13.00	42.13
2662.000	V	36.33	-63.55	9.66	1.06	-54.95	-13.00	41.95
5MHz QPSK, Frequency: 680.5 MHz								
583.29	H	20.84	-53.35	0.00	0.46	-53.81	-13.00	40.81
623.44	V	20.90	-50.41	0.00	0.48	-50.89	-13.00	37.89
1361.000	H	36.56	-66.77	8.11	0.77	-59.43	-13.00	46.43
1361.000	V	35.58	-67.95	8.11	0.77	-60.61	-13.00	47.61
2041.500	H	37.01	-65.02	9.12	0.91	-56.81	-13.00	43.81
2041.500	V	38.26	-63.38	9.12	0.91	-55.17	-13.00	42.17
2722.000	H	36.23	-63.74	9.76	1.05	-55.03	-13.00	42.03
2722.000	V	36.41	-63.50	9.76	1.05	-54.79	-13.00	41.79
5MHz QPSK, Frequency: 695.5 MHz								
610.47	H	20.63	-53.17	0.00	0.47	-53.64	-13.00	40.64
536.26	V	21.09	-50.54	0.00	0.46	-51.00	-13.00	38.00
1391.000	H	36.24	-67.38	8.19	0.72	-59.91	-13.00	46.91
1391.000	V	36.12	-67.58	8.19	0.72	-60.11	-13.00	47.11
2086.500	H	37.48	-64.43	9.15	0.91	-56.19	-13.00	43.19
2086.500	V	39.55	-62.24	9.15	0.91	-54.00	-13.00	41.00
2782.000	H	36.22	-63.72	9.85	1.05	-54.92	-13.00	41.92
2782.000	V	36.43	-63.40	9.85	1.05	-54.60	-13.00	41.60

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 =====