

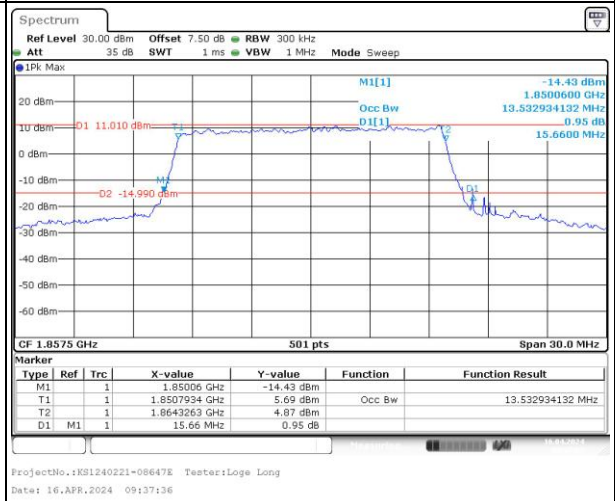
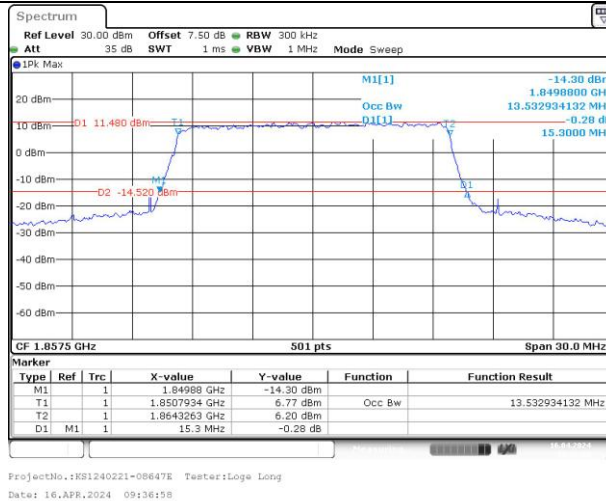
Occupied Bandwidth

Channel

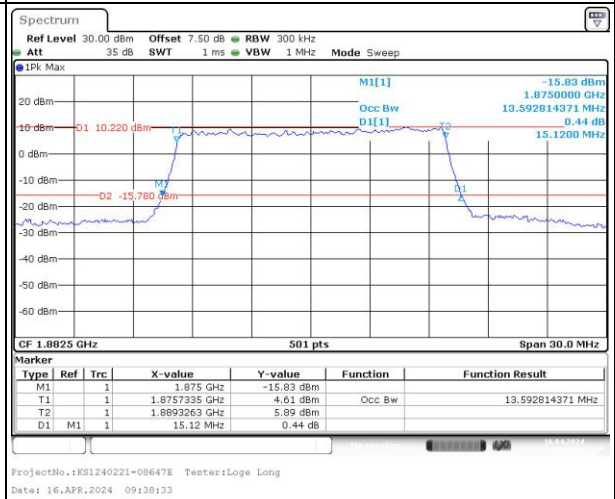
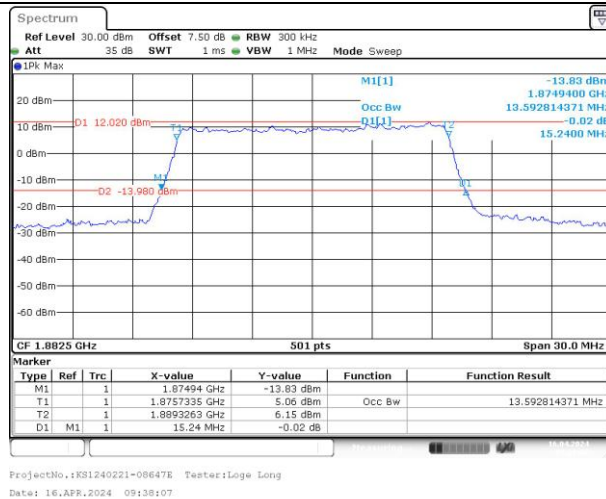
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

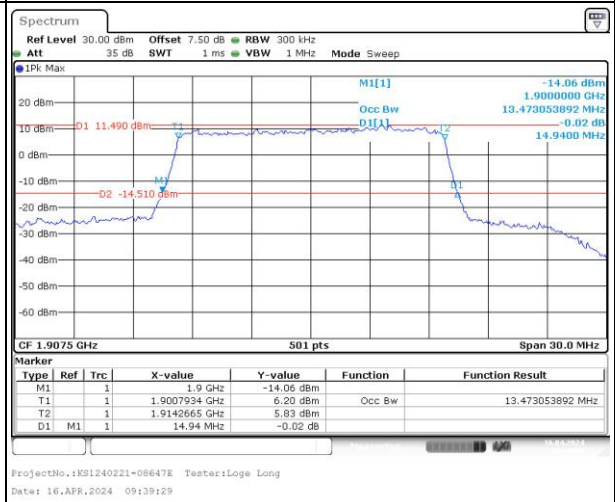
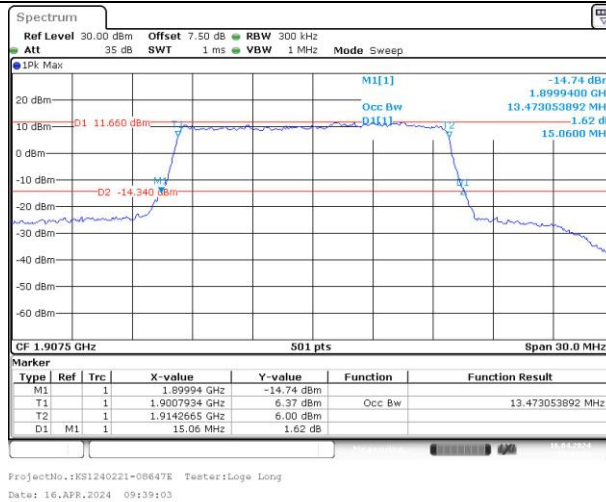
Lowest



Middle



Highest



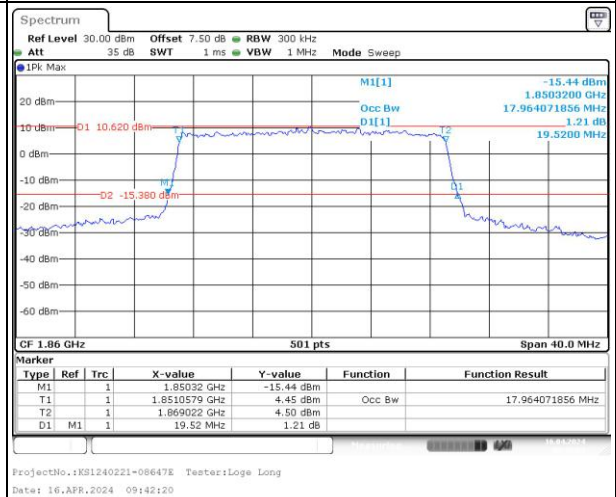
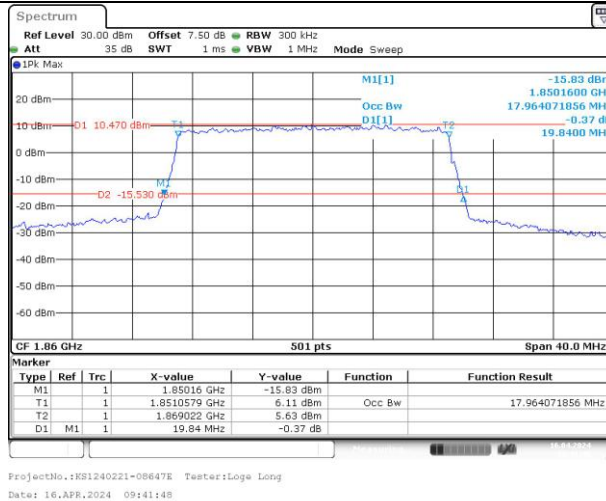
Occupied Bandwidth

Channel

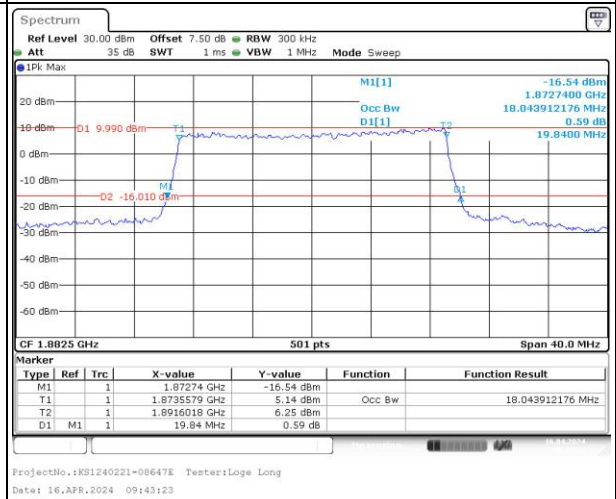
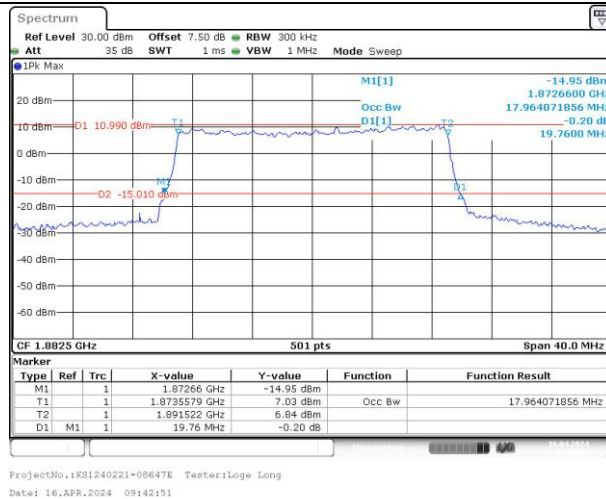
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

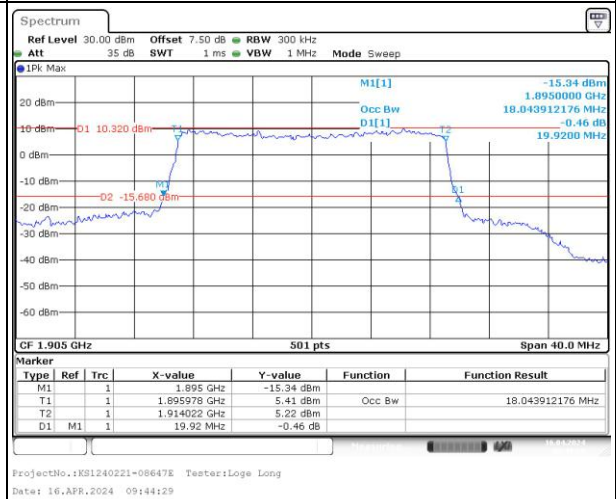
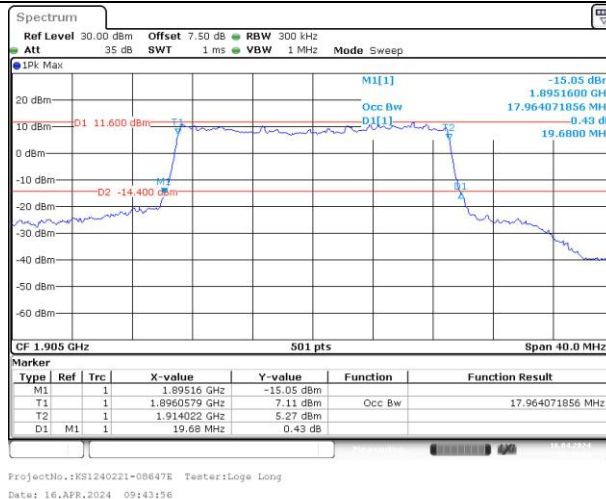
Lowest



Middle

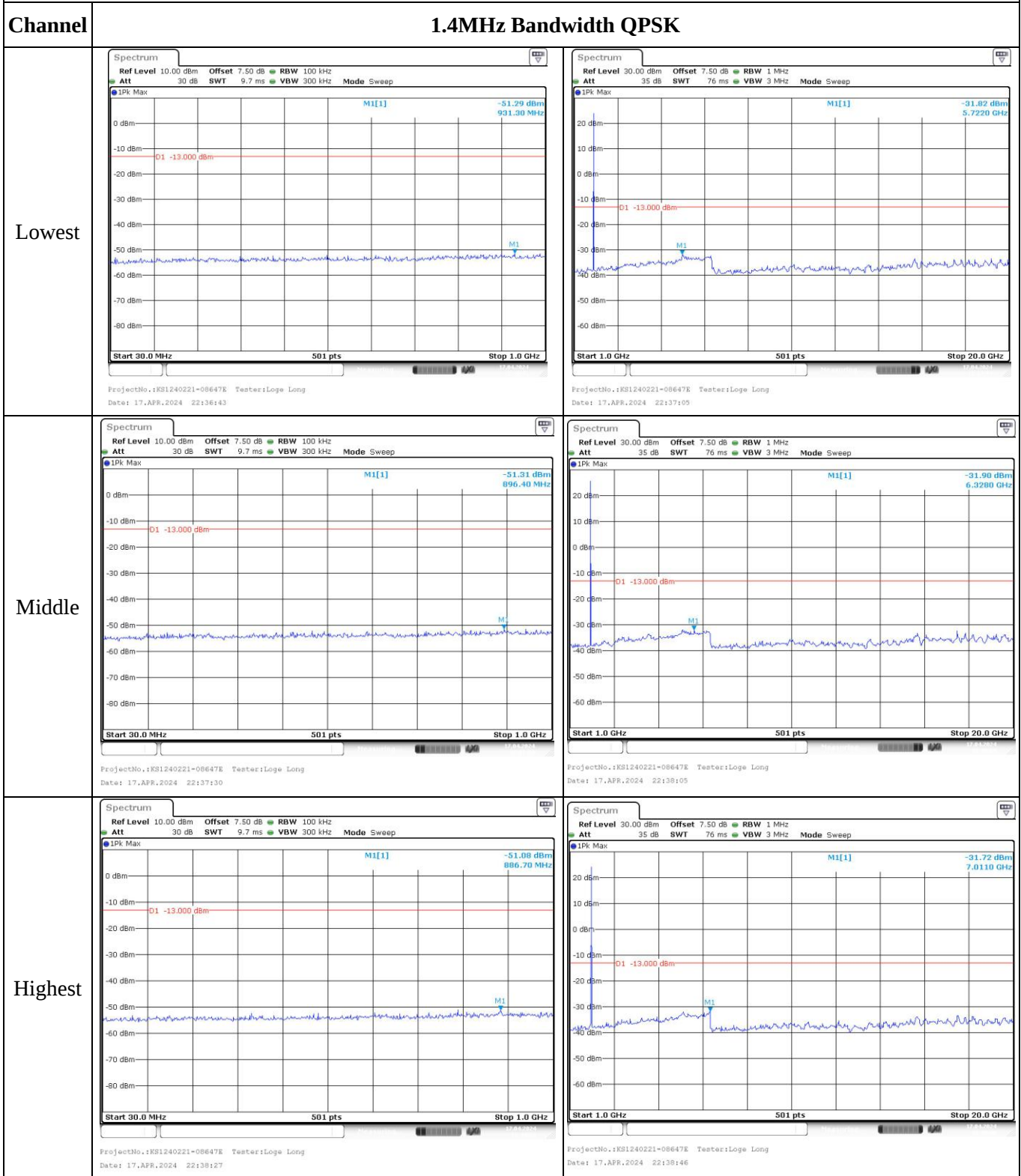


Highest



1RB:

Spurious Emissions at Antenna Terminal

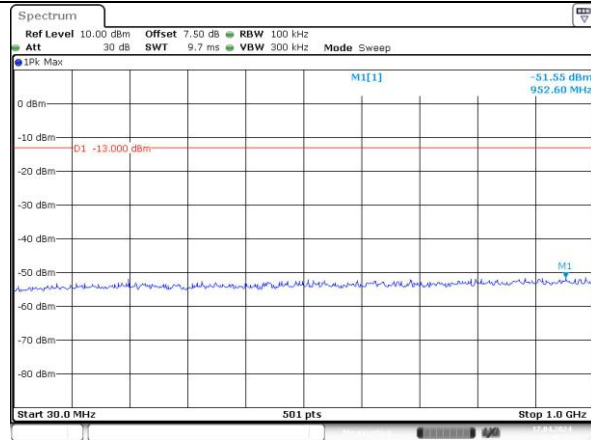


Spurious Emissions at Antenna Terminal

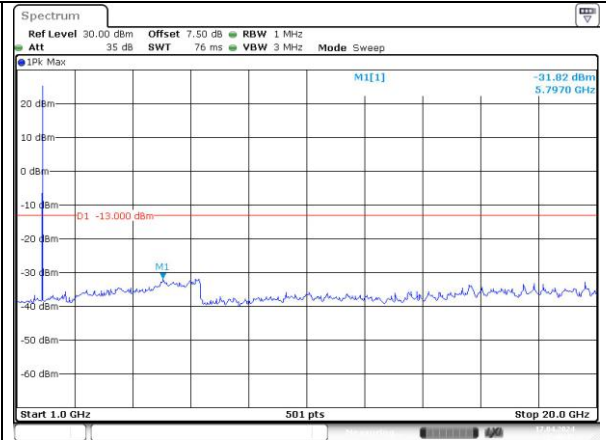
Channel

3MHz Bandwidth QPSK

Lowest

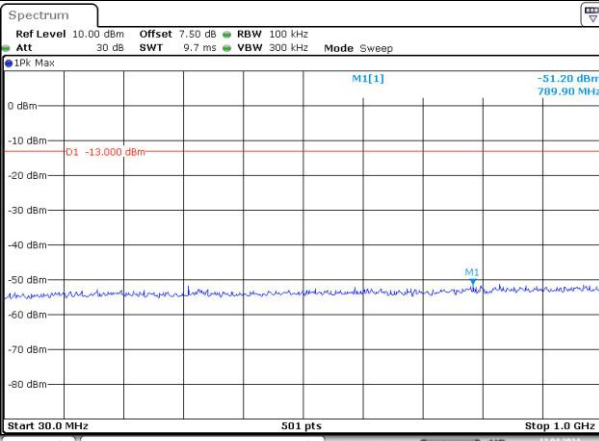


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:40:10

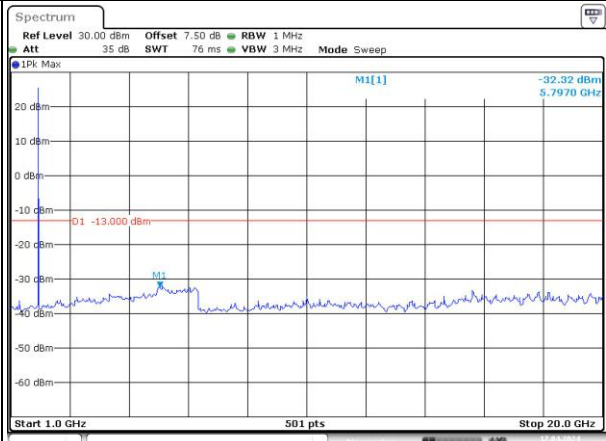


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:40:42

Middle

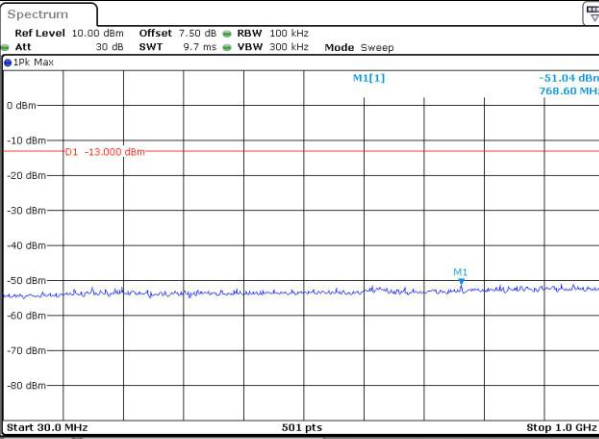


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:41:14

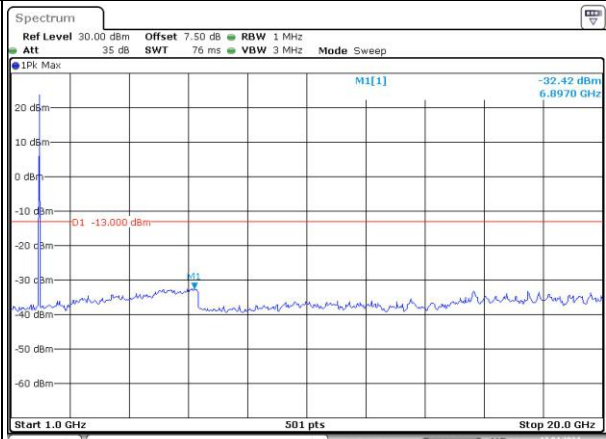


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:41:33

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:42:13



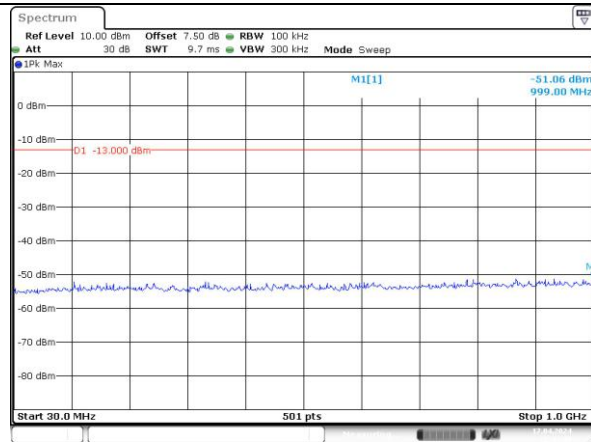
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:43:08

Spurious Emissions at Antenna Terminal

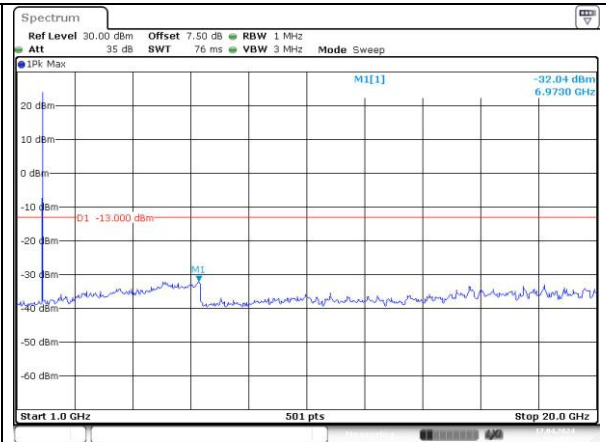
Channel

5MHz Bandwidth QPSK

Lowest

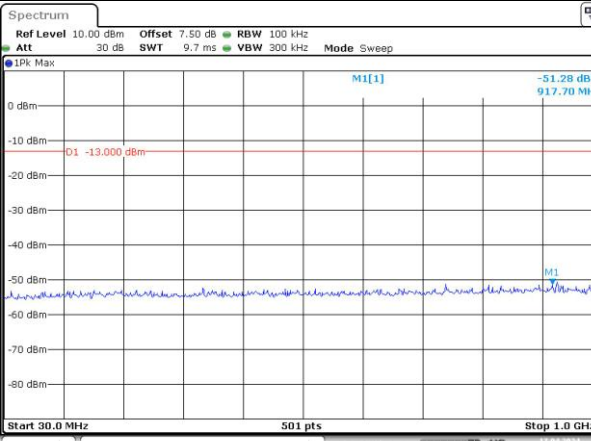


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:43:19

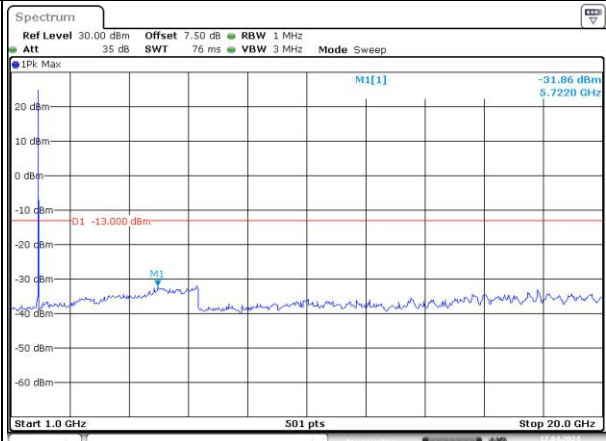


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:44:02

Middle

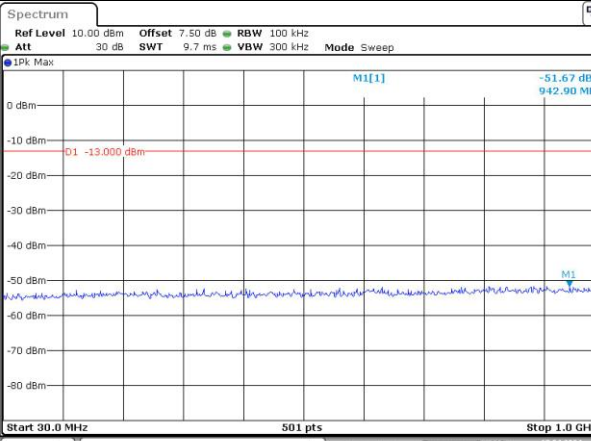


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:44:27

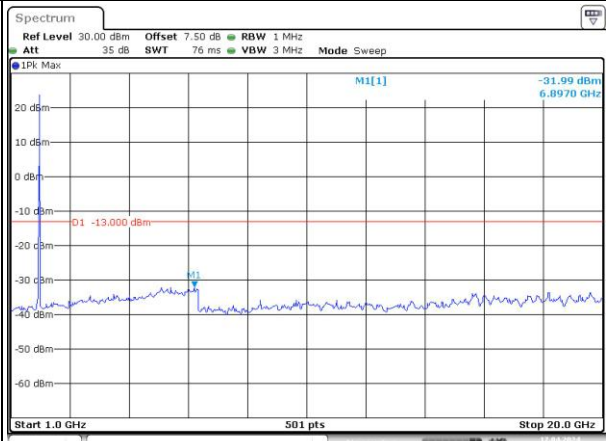


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:44:49

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:45:21



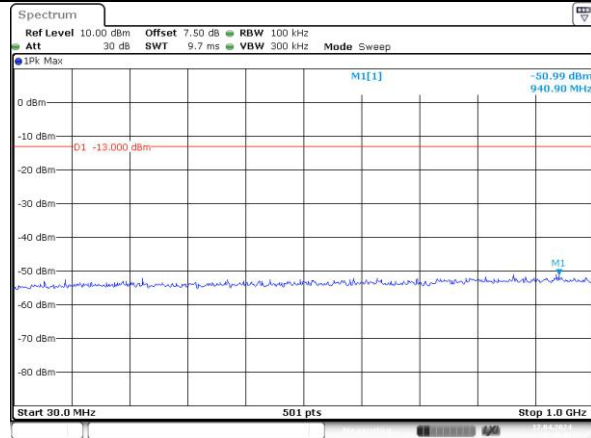
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:45:43

Spurious Emissions at Antenna Terminal

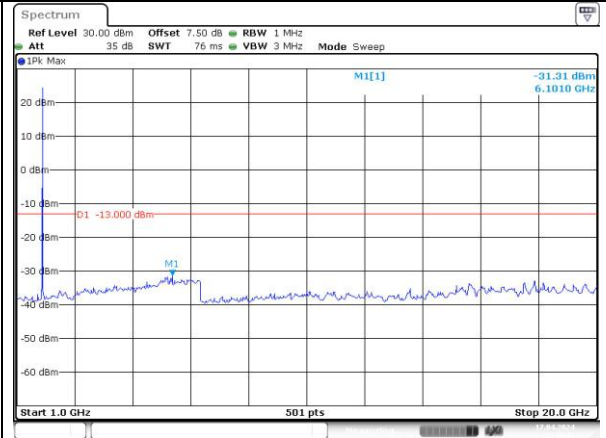
Channel

10MHz Bandwidth QPSK

Lowest

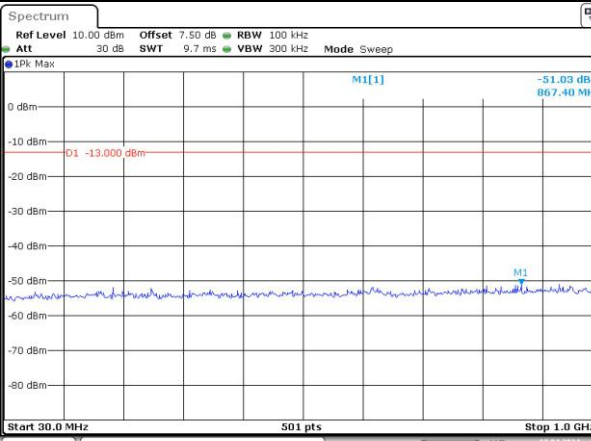


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:47:16

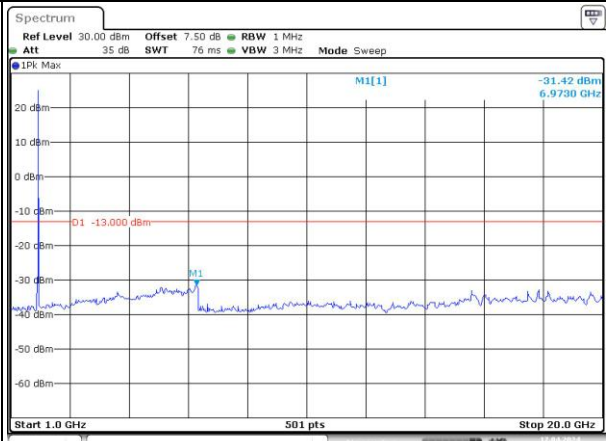


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:47:42

Middle

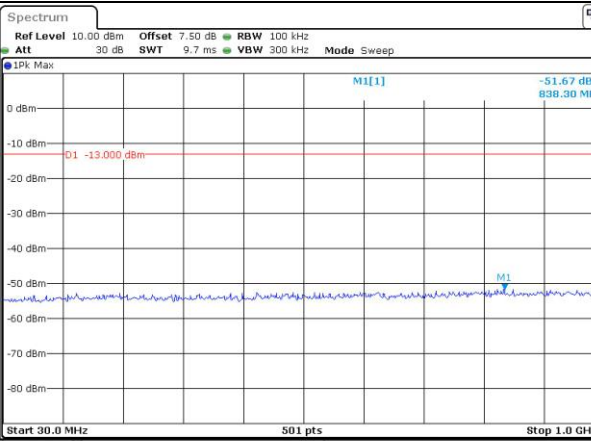


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:48:12

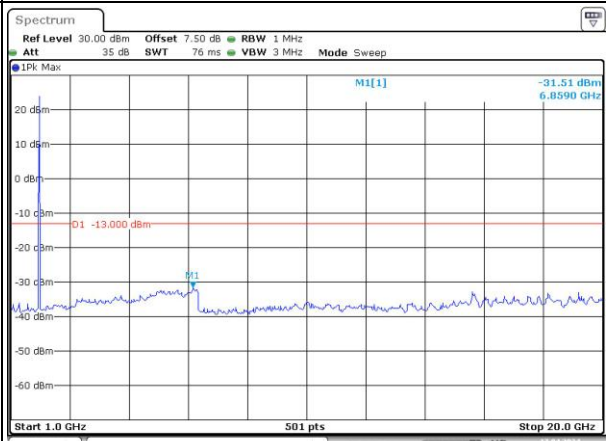


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:48:38

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:49:09



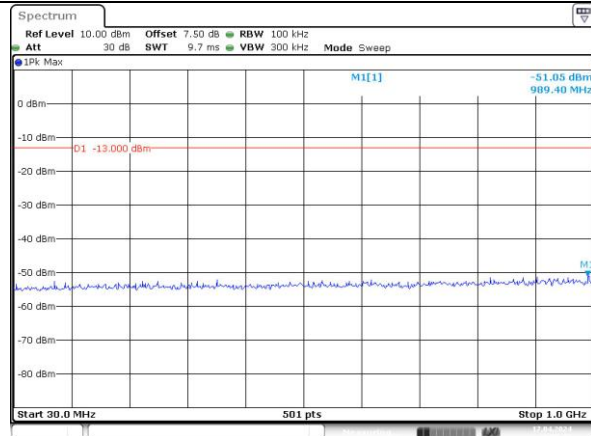
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:49:41

Spurious Emissions at Antenna Terminal

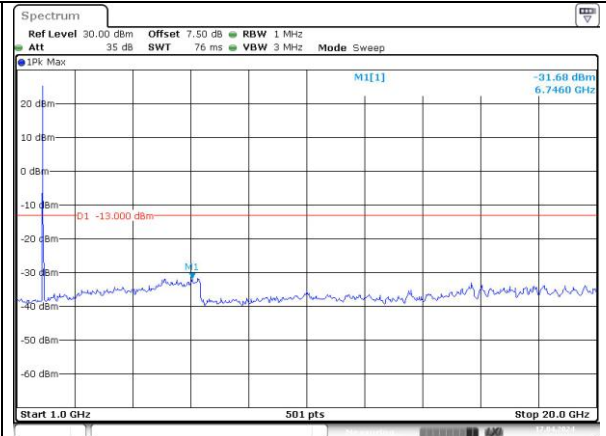
Channel

15MHz Bandwidth QPSK

Lowest

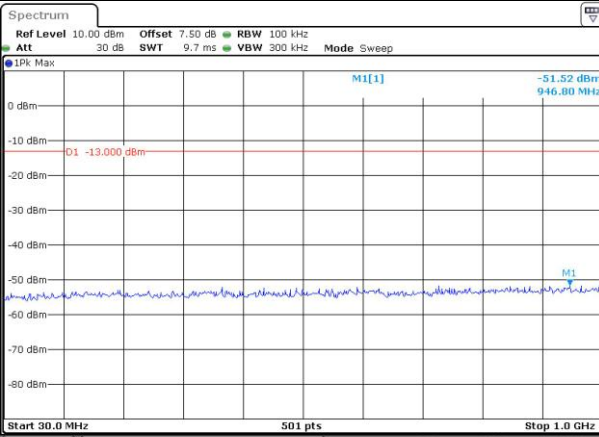


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:50:58

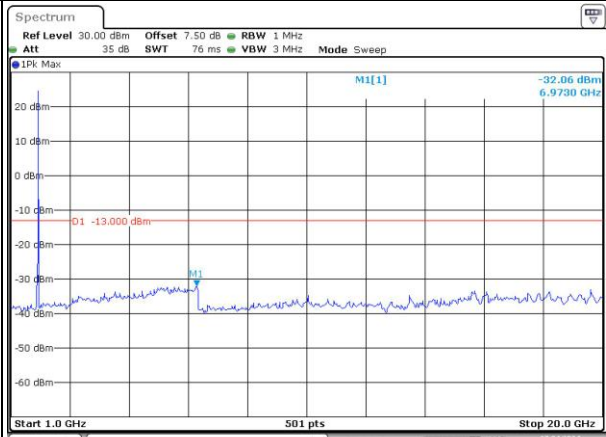


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:51:23

Middle

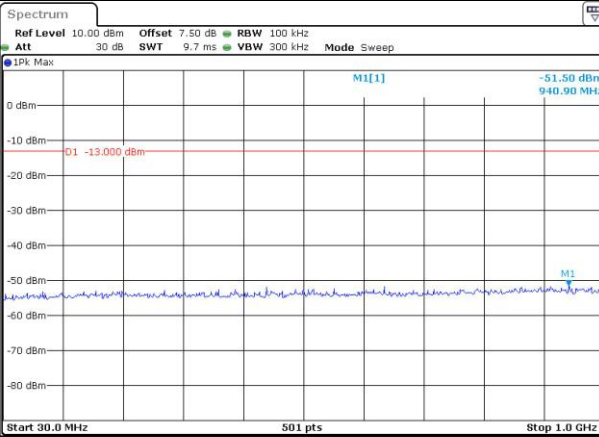


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:51:45

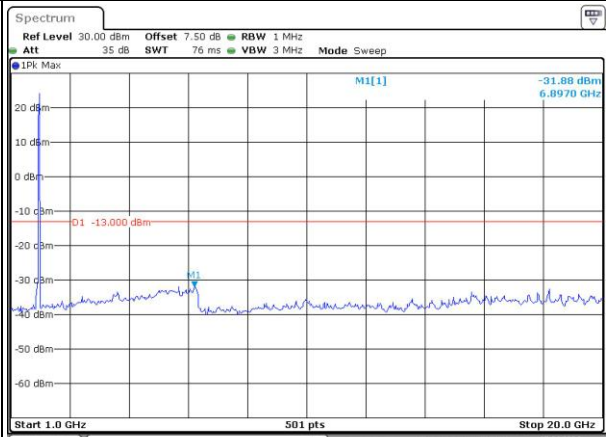


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:52:14

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:52:39



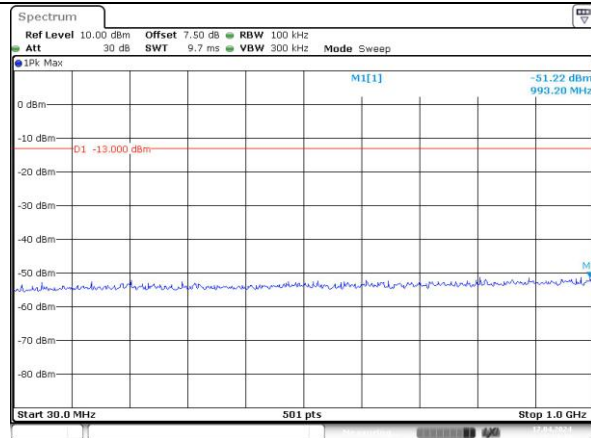
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:52:57

Spurious Emissions at Antenna Terminal

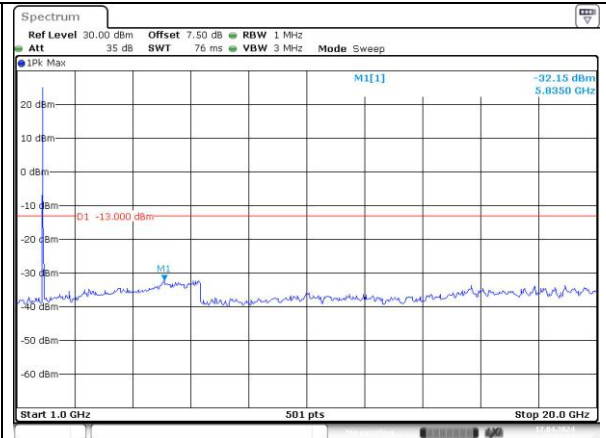
Channel

20MHz Bandwidth QPSK

Lowest

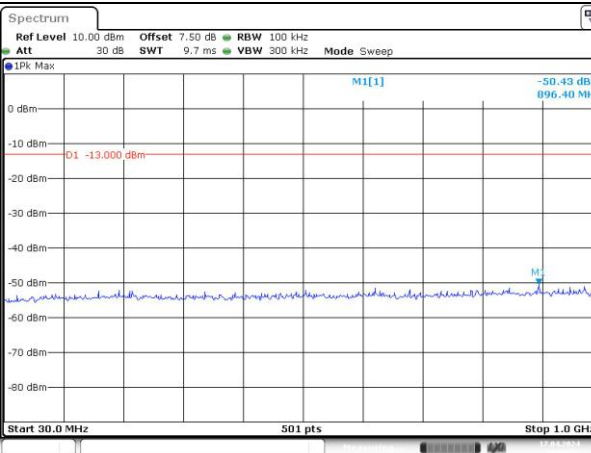


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:54:45

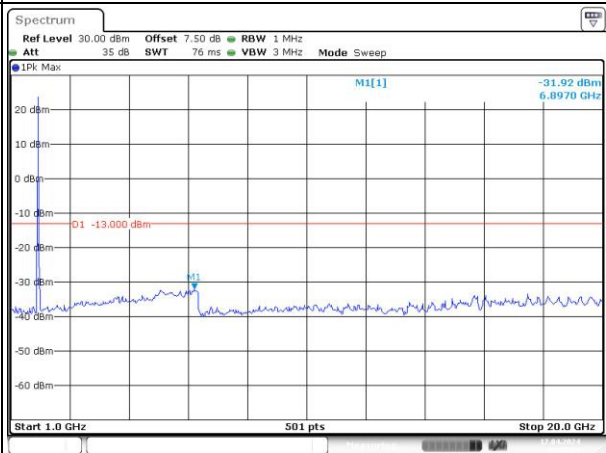


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:55:04

Middle

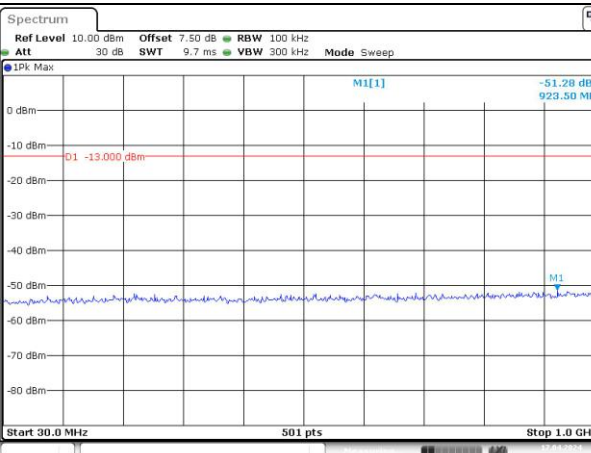


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:55:33

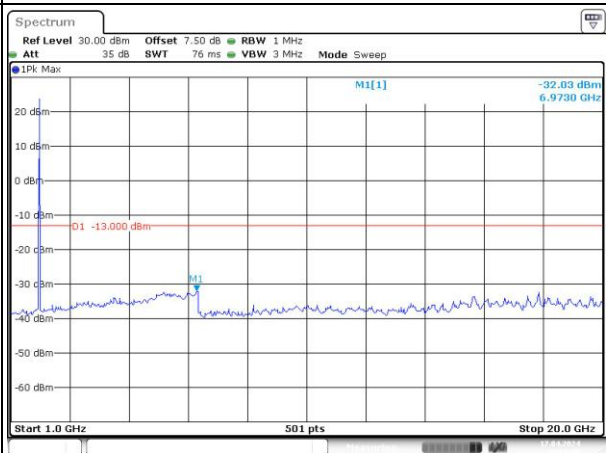


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:55:52

Highest

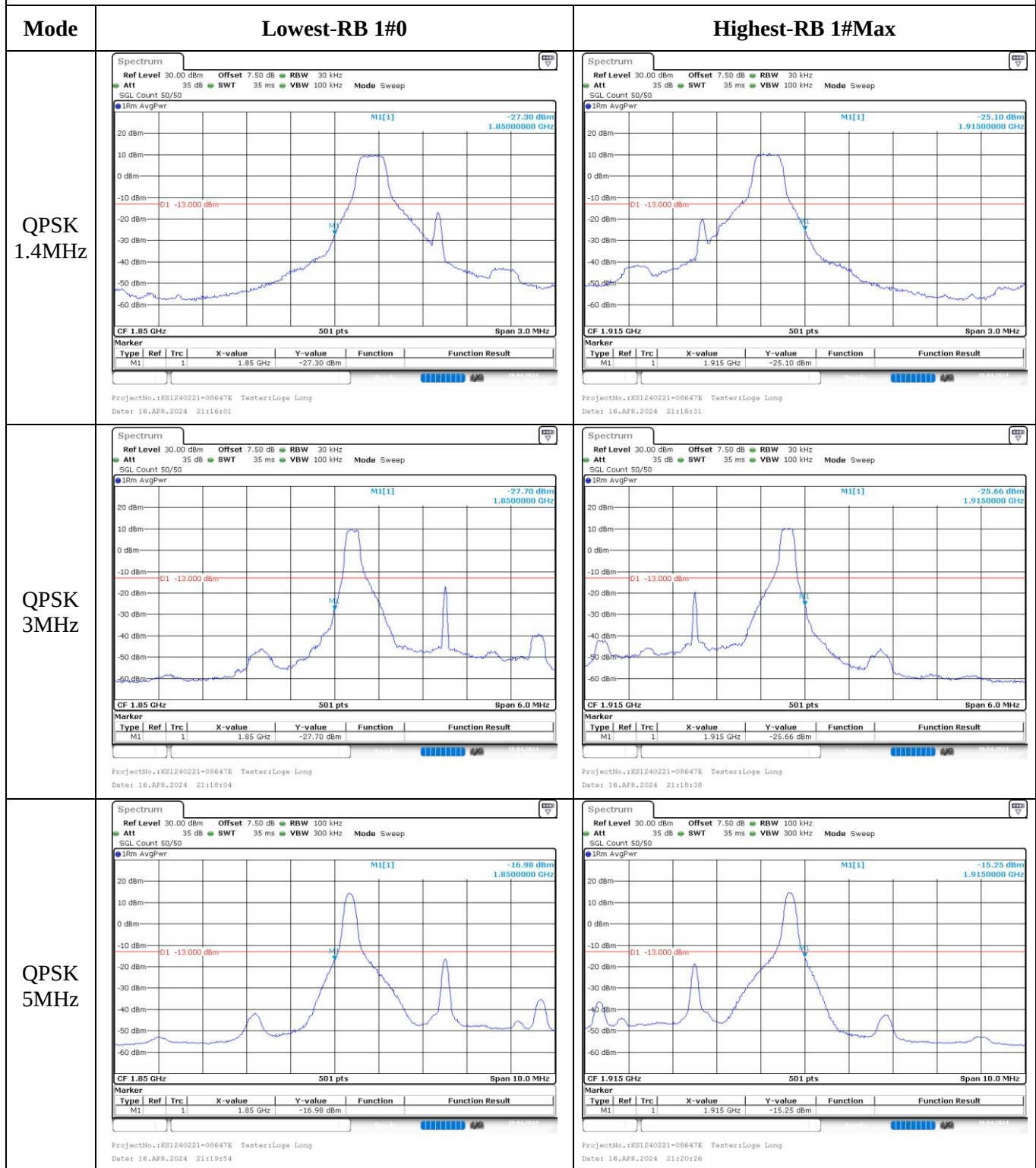


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:56:23

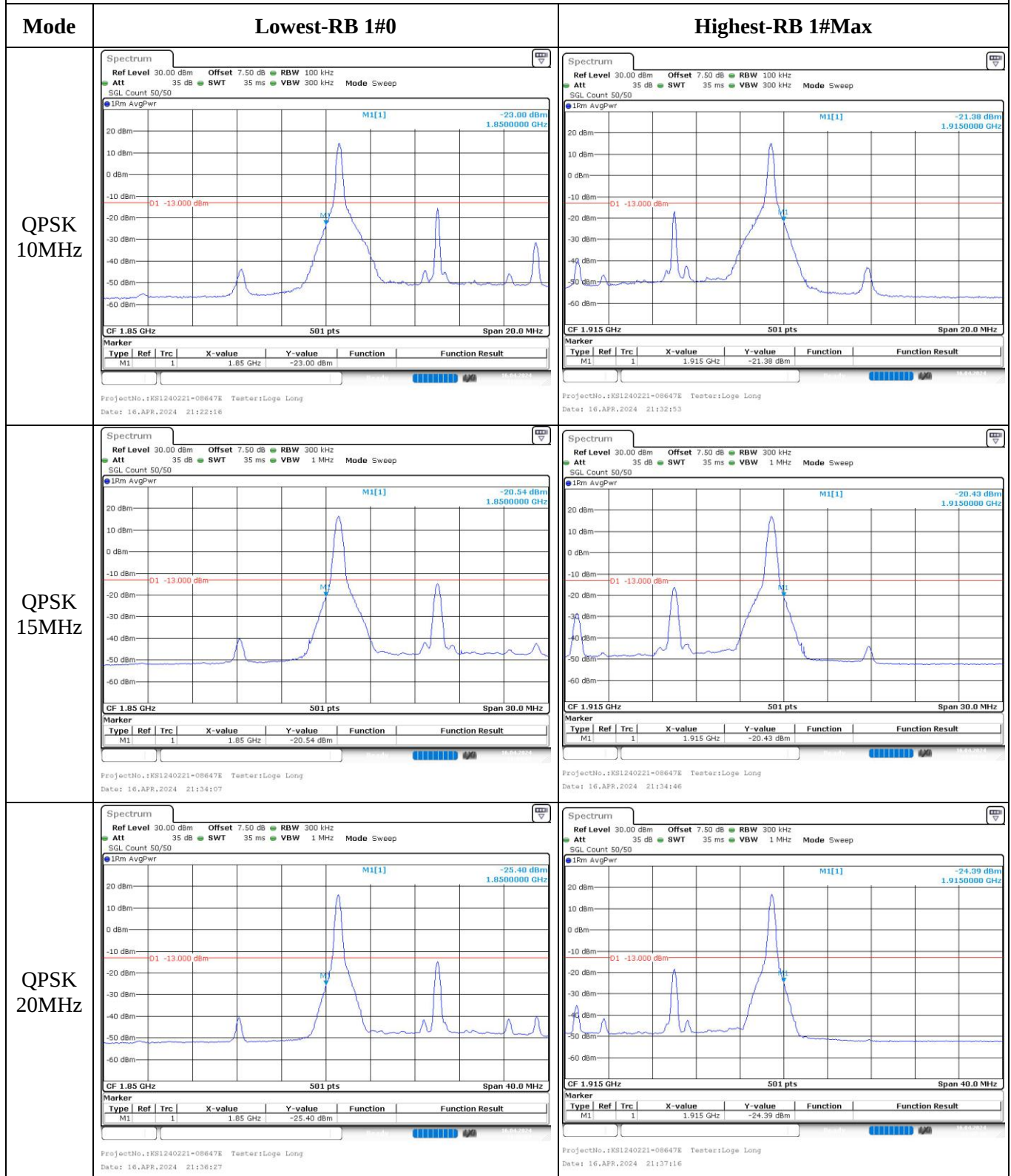


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 22:56:49

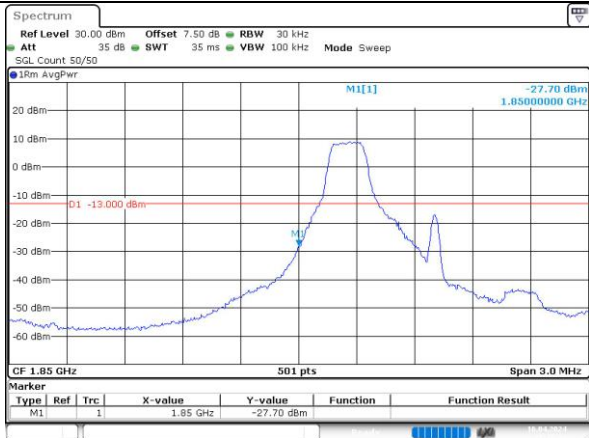
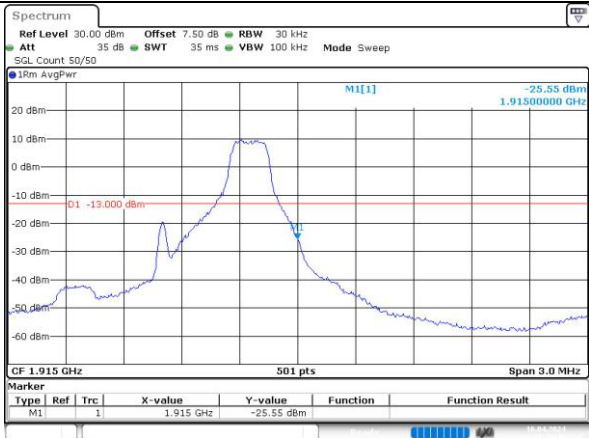
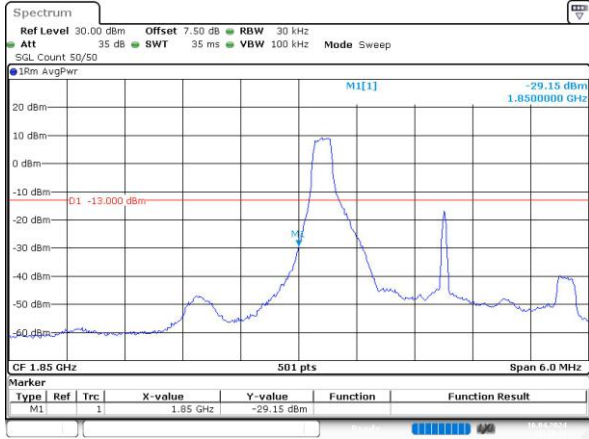
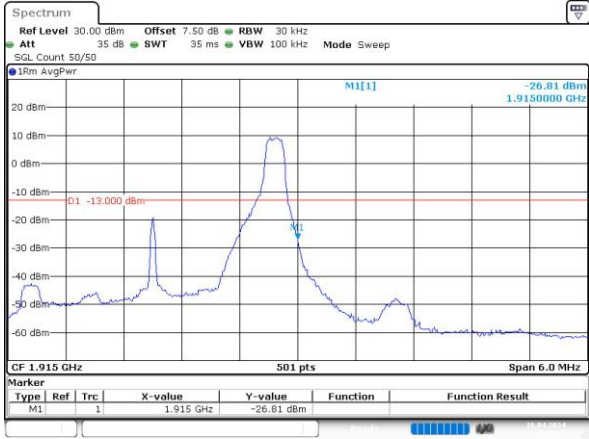
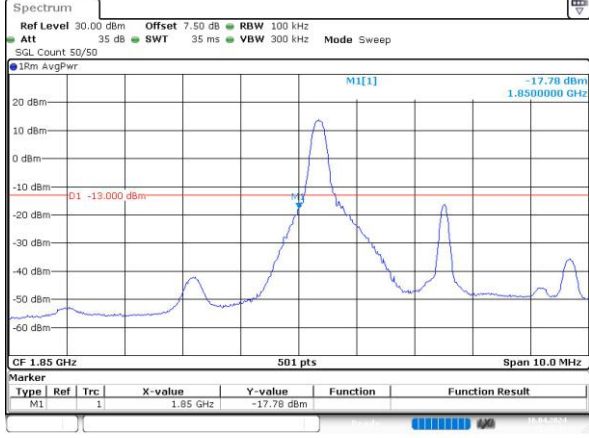
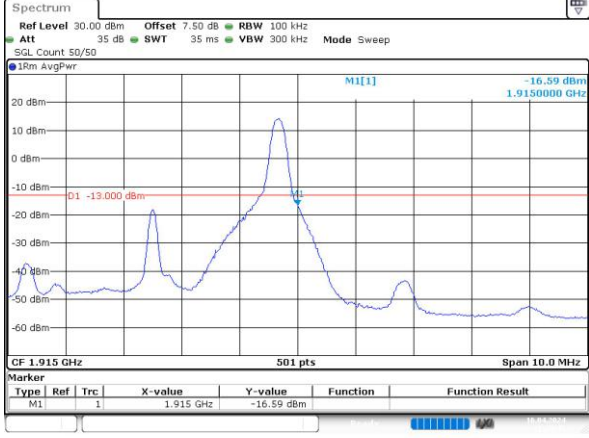
Out of band emission, Band Edge



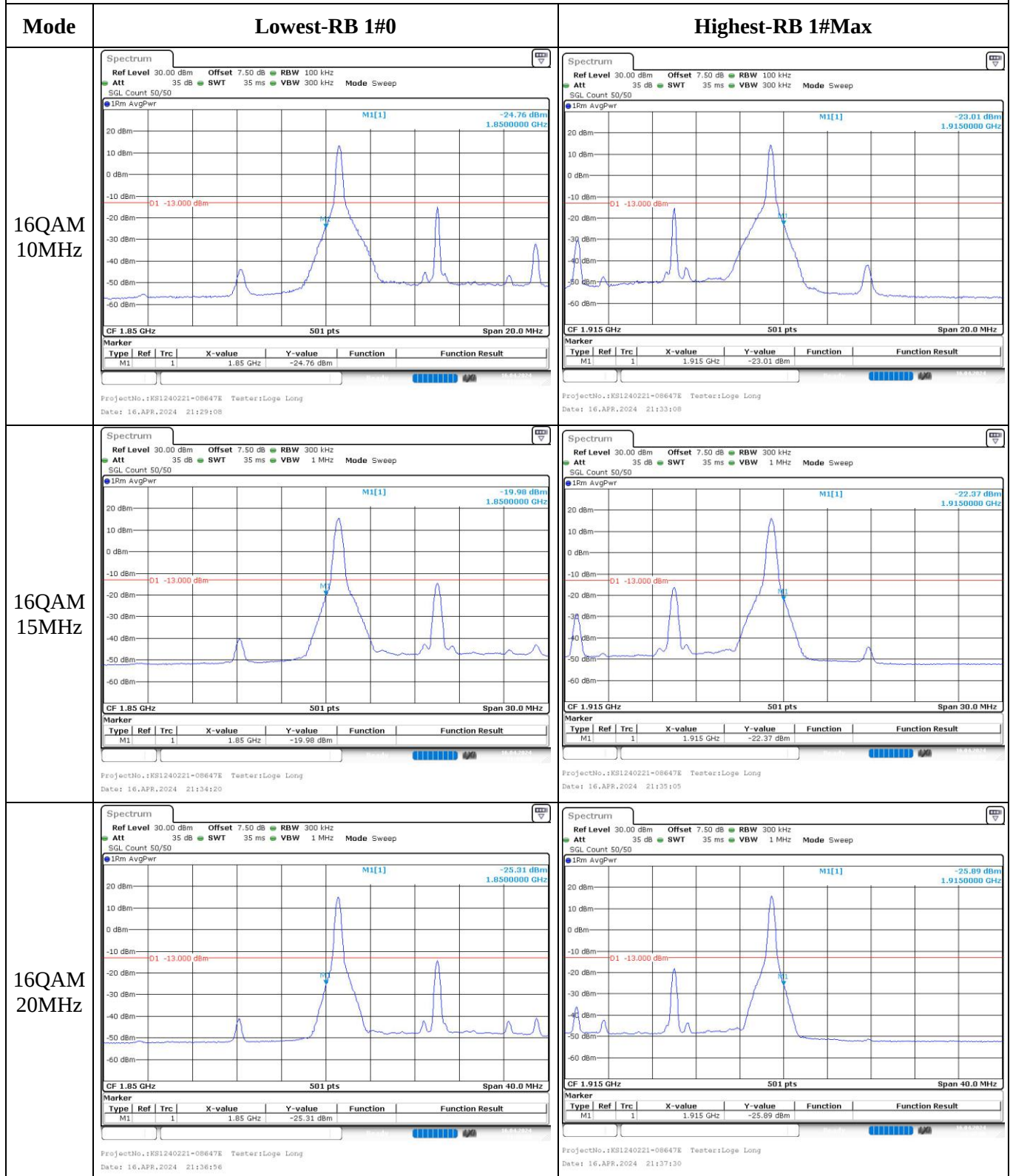
Out of band emission, Band Edge



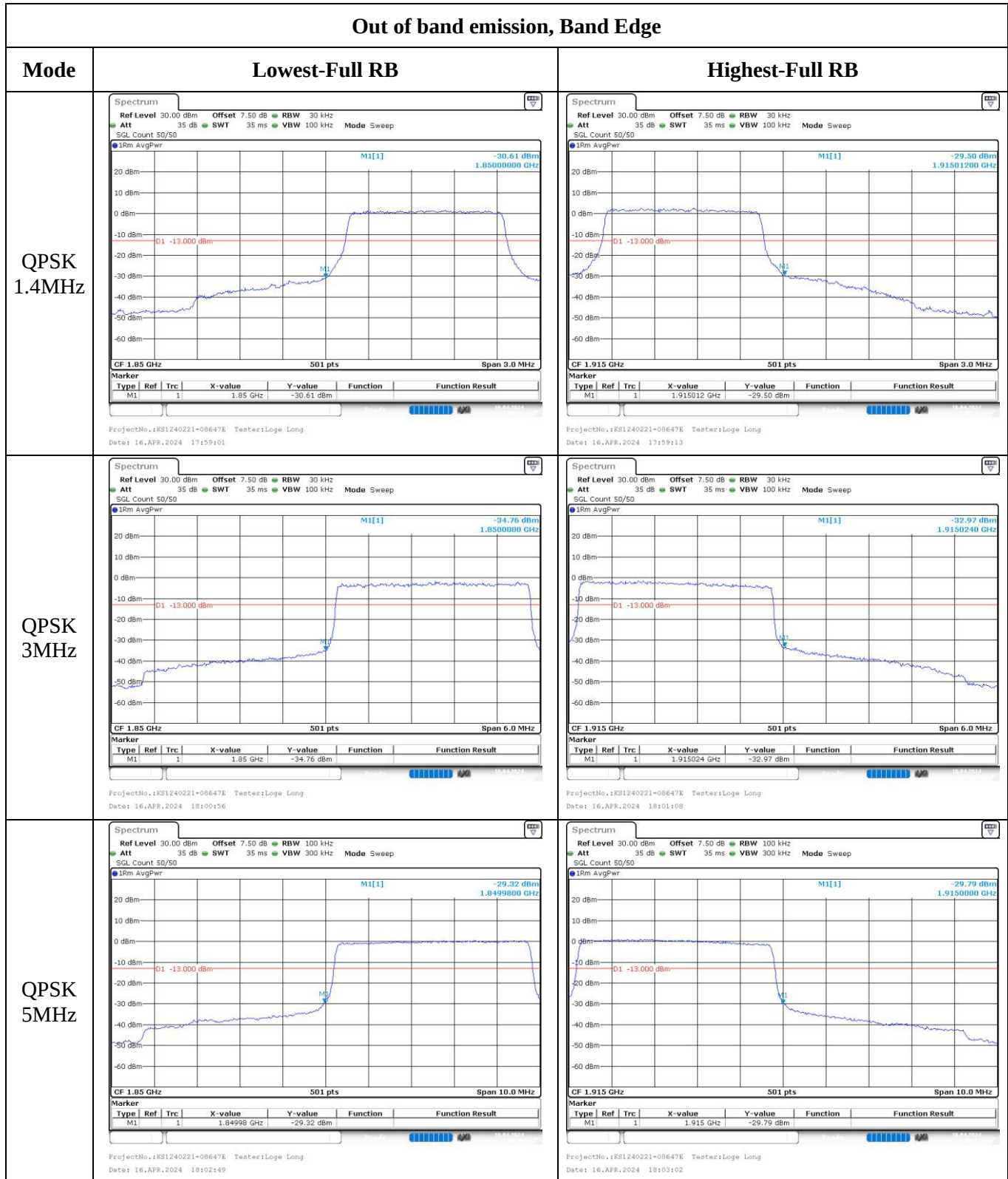
Out of band emission, Band Edge

Mode	Lowest-RB 1#0	Highest-RB 1#Max
16QAM 1.4MHz	 ProjectNo.:KS1240221-08647E Tester:Loge Long Date: 16.APR.2024 21:16:14	 ProjectNo.:KS1240221-08647E Tester:Loge Long Date: 16.APR.2024 21:16:46
16QAM 3MHz	 ProjectNo.:KS1240221-08647E Tester:Loge Long Date: 16.APR.2024 21:18:20	 ProjectNo.:KS1240221-08647E Tester:Loge Long Date: 16.APR.2024 21:18:52
16QAM 5MHz	 ProjectNo.:KS1240221-08647E Tester:Loge Long Date: 16.APR.2024 21:20:09	 ProjectNo.:KS1240221-08647E Tester:Loge Long Date: 16.APR.2024 21:20:41

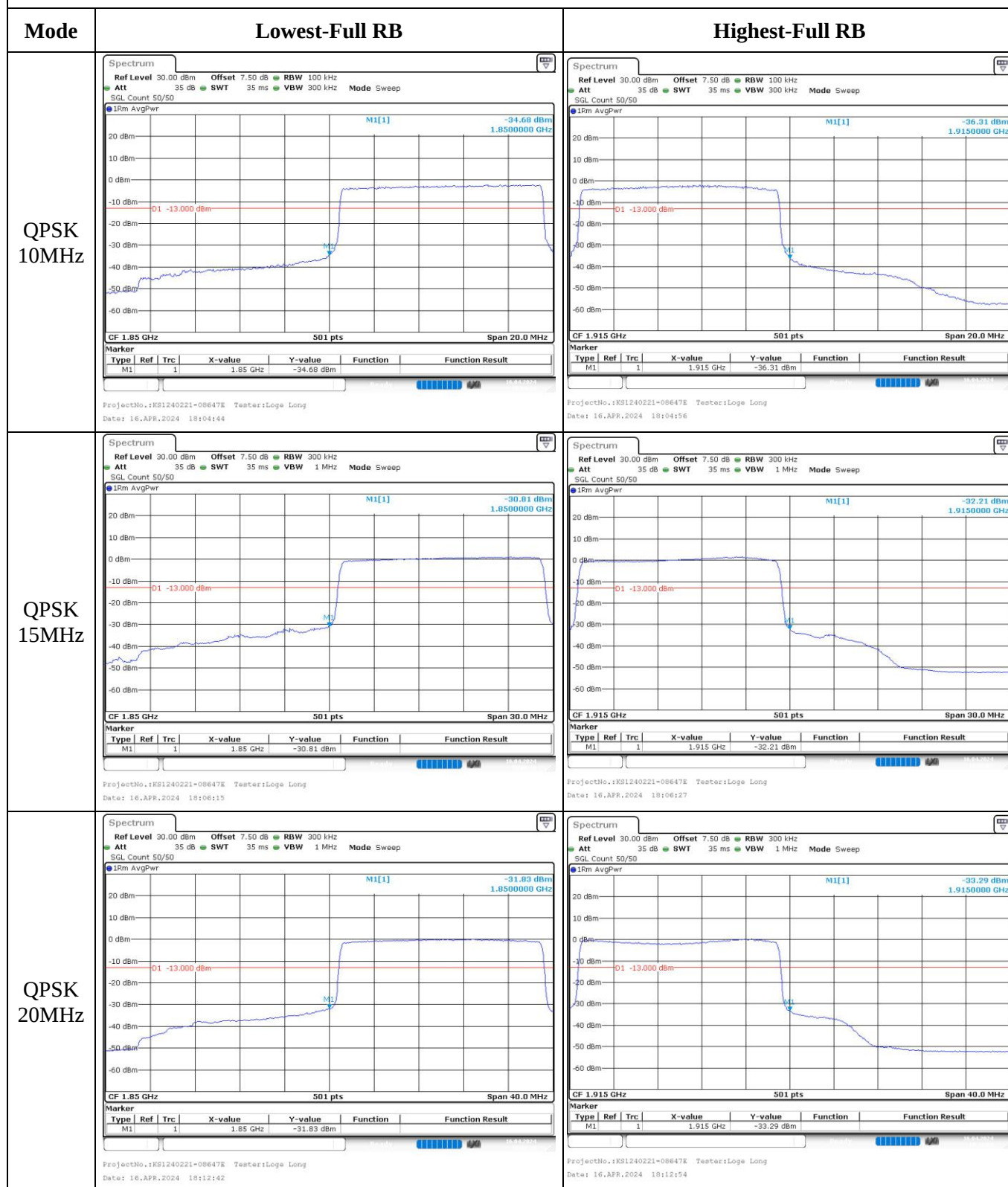
Out of band emission, Band Edge



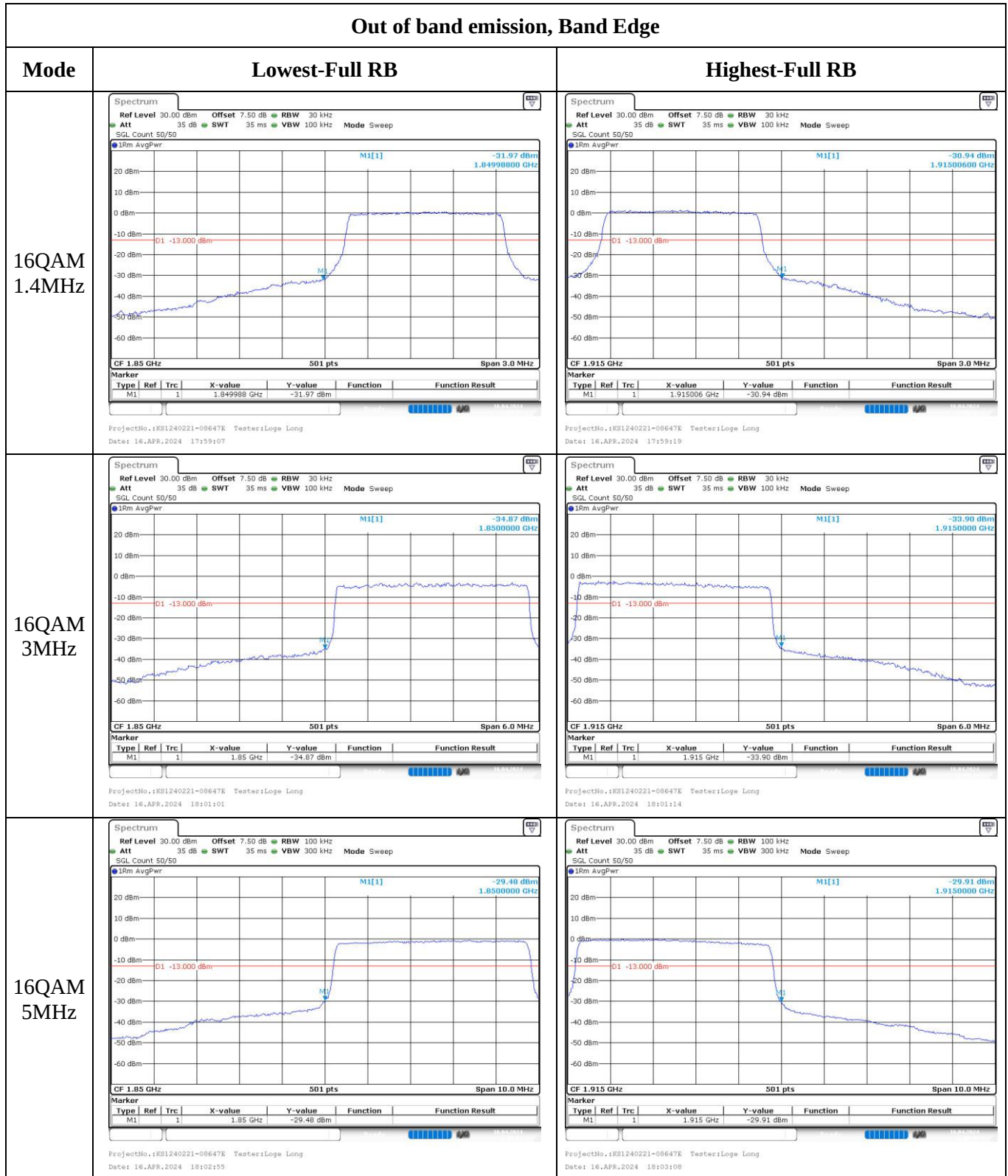
Out of band emission, Band Edge



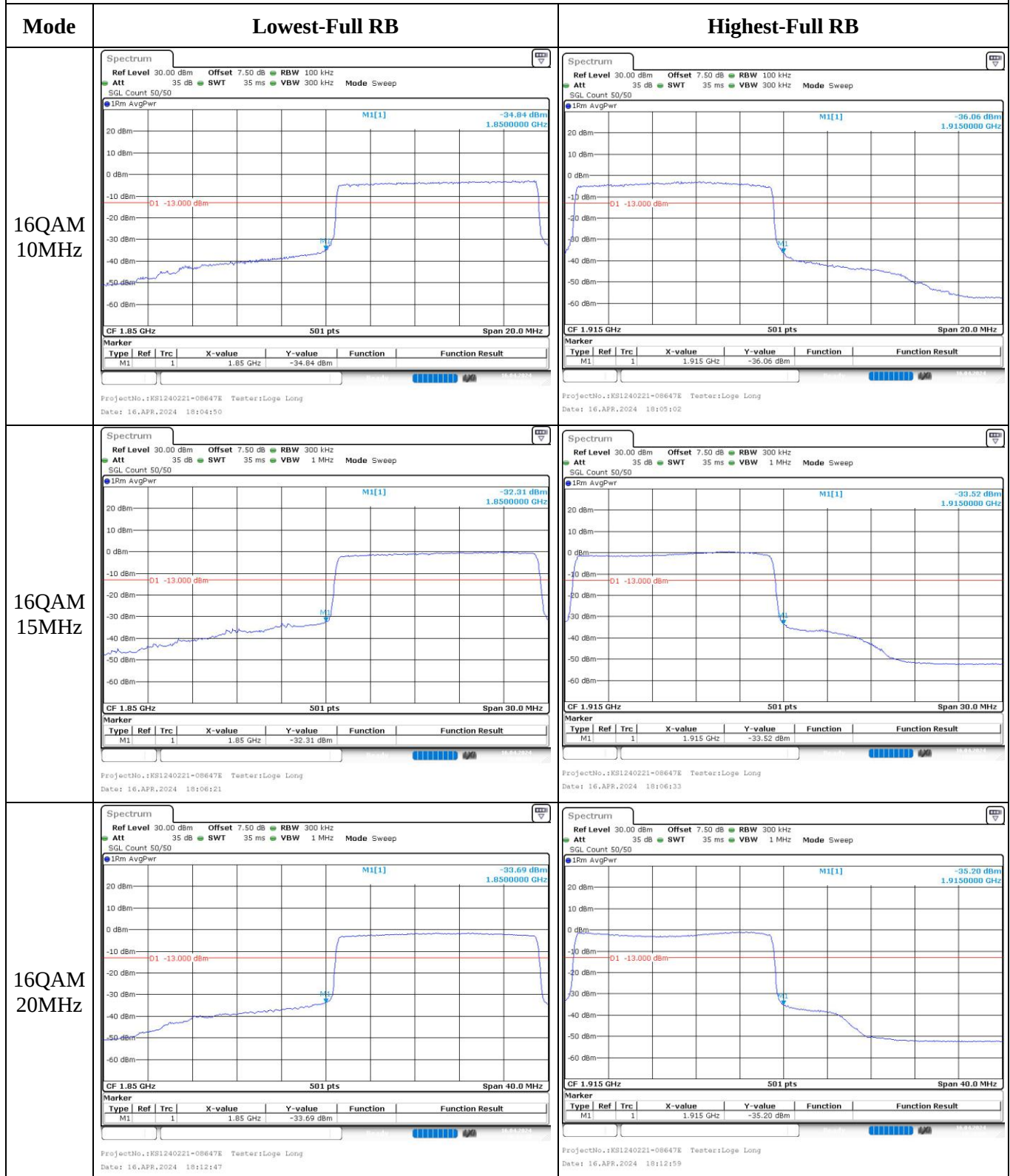
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



5.13 Antenna Port Test Data and Results for LTE Band 26

Serial Number:	2HV7-2	Test Date:	2024/4/16~2024/4/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:					
Temperature: (°C)	26.4~28.1	Relative Humidity: (%)	46~61	ATM Pressure: (kPa)	100.1~100.5

Test Equipment List and Details:					
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101461	2023/11/27	2024/11/26
Minl-Clrucits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/2/25	2025/2/24
R&S	Wideband Radio Communication Tester	CMW500	110479	2023/10/18	2024/10/17
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2023/10/18	2024/10/17
All-sun	Clamp Meter	EM305A	8348897	2023/8/3	2024/8/2
Micro-Coax	Coaxial Cable	UFB205A	323308-024	2024/1/2	2025/1/1
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A

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	836.5	848.3
3MHz	815.5	822.5	824	825.5	836.5	847.5
5MHz	816.5	821.5	824	826.5	836.5	846.5
10MHz	819	/	824	829	836.5	844
15MHz	821.5	/	824	831.5	836.5	841.5

Test Data:**FCC §2.1046; § 22.913 (a), § 90.542****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 Channe	Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H		
1.4MHz QPSK	RB1#0	22.86	22.95	22.93	23.12	23.16	22.85	20.92	38.45
	RB1#3	23.07	22.99	23.11	23.37	23.09	22.93		
	RB1#5	22.86	22.92	22.89	23.13	22.84	22.87		
	RB3#0	23.00	23.02	23.02	23.29	23.09	22.92		
	RB3#3	23.01	23.00	23.03	23.30	23.02	22.87		
	RB6#0	21.97	21.99	21.99	22.23	22.16	21.84		
1.4MHz 16QAM	RB1#0	21.91	22.01	22.04	22.20	22.18	21.92	19.94	38.45
	RB1#3	22.09	22.25	22.25	22.39	22.11	22.12		
	RB1#5	21.95	22.02	22.11	22.23	21.93	21.94		
	RB3#0	22.10	21.99	21.98	22.37	22.22	21.87		
	RB3#3	22.08	22.03	22.11	22.35	22.21	21.91		
	RB6#0	20.93	21.05	21.04	21.22	20.97	20.96		
3MHz QPSK	RB1#0	23.01	22.99	22.97	23.22	23.25	23.20	20.82	38.45
	RB1#8	23.02	22.90	22.97	23.27	23.22	23.21		
	RB1#14	22.98	22.91	22.92	23.25	23.15	23.19		
	RB6#0	21.89	21.91	21.89	22.20	22.22	22.10		
	RB6#9	21.98	21.94	21.90	22.19	22.16	22.16		
	RB15#0	22.01	21.98	21.95	22.26	22.25	22.18		
3MHz 16QAM	RB1#0	22.14	22.57	22.01	22.29	22.88	22.30	20.43	38.45
	RB1#8	22.17	22.47	21.97	22.32	22.79	22.32		
	RB1#14	22.17	22.48	21.92	22.28	22.78	22.31		
	RB6#0	21.00	21.04	20.93	21.19	21.28	21.19		
	RB6#9	21.06	21.03	20.93	21.20	21.27	21.23		
	RB15#0	21.02	21.09	21.04	21.35	21.37	21.19		
5MHz QPSK	RB1#0	22.93	22.91	22.95	23.13	23.08	22.95	20.78	38.45
	RB1#13	23.04	23.00	22.98	23.22	23.15	23.06		
	RB1#24	22.94	22.85	22.92	23.23	23.03	22.93		
	RB15#0	21.99	21.92	22.00	22.26	22.15	22.16		
	RB15#10	22.07	22.00	21.99	22.20	22.19	22.07		
	RB25#0	22.04	21.96	21.95	22.25	22.15	22.08		
5MHz 16QAM	RB1#0	22.24	21.80	21.98	22.40	22.10	21.85	20.09	38.45
	RB1#13	22.36	21.89	22.08	22.54	22.19	21.99		
	RB1#24	22.25	21.80	22.02	22.45	22.09	21.86		
	RB15#0	21.01	21.01	21.08	21.29	21.24	21.24		
	RB15#10	21.13	21.08	21.05	21.20	21.26	21.13		
	RB25#0	21.11	21.09	21.02	21.24	21.23	21.18		
10MHz QPSK	RB1#0	22.96	/	22.99	23.13	23.11	23.04	20.9	38.45
	RB1#25	23.13	/	23.17	23.35	23.28	23.25		

	RB1#49	23.00	/	22.99	23.17	23.05	23.01		
	RB25#0	21.97	/	21.97	22.34	22.13	22.16		
	RB25#25	22.08	/	21.91	22.16	22.20	21.98		
	RB50#0	22.07	/	21.94	22.25	22.19	22.09		
10MHz 16QAM	RB1#0	22.14	/	22.00	22.27	22.18	22.65	20.28	38.45
	RB1#25	22.31	/	22.17	22.47	22.20	22.73		
	RB1#49	22.13	/	22.00	22.30	22.06	22.59		
	RB25#0	21.08	/	21.11	21.39	21.31	21.27		
	RB25#25	21.20	/	21.09	21.25	21.34	21.09		
	RB50#0	21.11	/	21.05	21.31	21.27	21.17		
15MHz QPSK	RB1#0	22.84	/	23.01	23.08	22.89	22.83	20.69	38.45
	RB1#38	22.76	/	23.09	23.14	22.91	22.71		
	RB1#74	22.92	/	23.05	22.95	22.66	22.68		
	RB36#0	21.89	/	22.06	22.25	21.89	21.79		
	RB36#39	21.93	/	22.08	22.23	21.83	21.62		
	RB75#0	21.94	/	22.07	22.23	21.92	21.68		
15MHz 16QAM	RB1#0	21.96	/	22.19	22.58	22.02	22.24	20.24	38.45
	RB1#38	21.95	/	22.22	22.69	22.05	22.03		
	RB1#74	22.16	/	22.20	22.35	21.81	22.03		
	RB36#0	21.00	/	21.09	21.00	20.97	20.78		
	RB36#39	21.04	/	21.13	20.97	20.87	20.63		
	RB75#0	21.01	/	21.10	20.99	20.94	20.69		

Note:

ERP= Conducted Power(dBm) - LC(dB) + GT(dBd)

GT(dBd)=GT(dBi)-2.15

Result:	Pass
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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	4.35	5.42	5.80	13
	RB75#0	5.45	5.30	5.07	13
15MHz 16QAM	RB1#0	5.22	6.41	6.38	13
	RB75#0	6.29	6.20	6.09	13
Result:					Pass

FCC §2.1049, §2.905, §90.209:Occupied Bandwidth						
Operation Mode	99% Occupied Bandwidth (MHz)					
	Lowest For 90S	Highest For 90S	Cross	Lowest For 22H	Middle For 22H	Highest For 22H
1.4MHz QPSK	1.096	1.102	1.096	1.096	1.102	1.096
1.4MHz 16QAM	1.102	1.096	1.090	1.090	1.096	1.102
3MHz QPSK	2.695	2.683	2.683	2.683	2.695	2.683
3MHz 16QAM	2.683	2.683	2.683	2.683	2.683	2.683
5MHz QPSK	4.511	4.531	4.511	4.511	4.491	4.511
5MHz 16QAM	4.531	4.491	4.511	4.511	4.511	4.491
10MHz QPSK	8.942	/	8.942	8.942	8.942	8.902
10MHz 16QAM	8.942	/	8.942	8.942	8.982	8.942
15MHz QPSK	13.473	/	13.473	13.533	13.473	13.413
15MHz 16QAM	13.473	/	13.473	13.533	13.473	13.473
Operation Mode	26 dB Occupied Bandwidth (MHz)					
	Lowest For 90S	Highest For 90S	Cross	Lowest For 22H	Middle For 22H	Highest For 22H
1.4MHz QPSK	1.296	1.290	1.308	1.314	1.290	1.302
1.4MHz 16QAM	1.326	1.284	1.290	1.284	1.290	1.320
3MHz QPSK	2.868	2.892	2.880	2.880	2.880	2.892
3MHz 16QAM	2.880	2.868	2.880	2.892	2.880	2.868
5MHz QPSK	4.940	4.960	5.080	4.960	4.920	4.940
5MHz 16QAM	4.940	4.920	5.520	4.960	4.980	4.960
10MHz QPSK	9.720	/	9.600	9.640	9.680	9.600
10MHz 16QAM	9.600	/	9.600	9.600	9.600	9.600
15MHz QPSK	14.940	/	14.640	14.820	14.700	14.940
15MHz 16QAM	14.700	/	14.700	14.760	14.220	14.700
Note: The test plots please refer to the Plots of Occupied Bandwidth						

FCC §2.1051, §22.917(a), §90.543: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, §22.917(a), §90.543: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, §22.355, §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	-7.25	-0.009	2.5
	-20	3.8	6.89	0.008	2.5
	-10	3.8	7.16	0.009	2.5
	0	3.8	-1.61	-0.002	2.5
	10	3.8	0.73	0.001	2.5
	20	3.8	-5.81	-0.007	2.5
	30	3.8	0.34	0.000	2.5
	40	3.8	-1.47	-0.002	2.5
	50	3.8	-2.43	-0.003	2.5
Frequency Stability vs. Voltage	20	3.4	-7.51	-0.009	2.5
	20	4.35	-4.61	-0.006	2.5
Result:				Pass	

FCC §2.1055, §22.355, §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	4.99	0.006	2.5
	-20	3.8	2.62	0.003	2.5
	-10	3.8	-7.44	-0.009	2.5
	0	3.8	4.31	0.005	2.5
	10	3.8	-3.37	-0.004	2.5
	20	3.8	-3.59	-0.004	2.5
	30	3.8	-0.81	-0.001	2.5
	40	3.8	7.24	0.009	2.5
	50	3.8	3.74	0.004	2.5
Frequency Stability vs. Voltage	20	3.4	3.53	0.004	2.5
	20	4.35	-1.71	-0.002	2.5
Result:				Pass	

FCC §2.1055, §22.355, §90.213: Frequency Stability					
Test Modulation:	15 MHz QPSK		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	-0.84	-0.001	2.5
	-20	3.8	0.15	0.000	2.5
	-10	3.8	5.12	0.006	2.5
	0	3.8	2	0.002	2.5
	10	3.8	2.35	0.003	2.5
	20	3.8	-2.07	-0.002	2.5
	30	3.8	6.11	0.007	2.5
	40	3.8	-4.66	-0.006	2.5
	50	3.8	7.37	0.009	2.5
Frequency Stability vs. Voltage	20	3.4	6.58	0.008	2.5
	20	4.35	-5.55	-0.007	2.5
				Result:	Pass

FCC §2.1055, §22.355, §90.213: Frequency Stability					
Test Modulation:	15 MHz 16QAM		Test Channel:	836.5	MHz
Test Item	Temperature (°C)	Voltage (V _{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	-3.8	-0.005	2.5
	-20	3.8	-2.92	-0.004	2.5
	-10	3.8	-0.48	-0.001	2.5
	0	3.8	1.15	0.001	2.5
	10	3.8	2.41	0.003	2.5
	20	3.8	-0.51	-0.001	2.5
	30	3.8	-7.31	-0.009	2.5
	40	3.8	0.17	0.000	2.5
	50	3.8	1.9	0.002	2.5
Frequency Stability vs. Voltage	20	3.4	-1.45	-0.002	2.5
	20	4.35	7.18	0.009	2.5
				Result:	Pass