

Test Data:**FCC §2.1046; § 24.232****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	22.18	21.94	21.70	22.88	33
	RB1#3	22.35	22.03	21.90		
	RB1#5	22.15	21.88	21.72		
	RB3#0	22.25	21.99	21.75		
	RB3#3	22.22	22.00	21.82		
	RB6#0	21.25	21.00	20.75		
1.4MHz 16QAM	RB1#0	21.16	21.00	20.69	21.94	33
	RB1#3	21.33	21.28	20.90		
	RB1#5	21.14	20.99	20.71		
	RB3#0	21.41	21.00	20.81		
	RB3#3	21.40	20.89	20.80		
	RB6#0	20.30	20.04	19.72		
3MHz QPSK	RB1#0	21.74	21.77	21.73	22.3	33
	RB1#8	21.69	21.74	21.68		
	RB1#14	21.66	21.73	21.67		
	RB6#0	20.71	20.73	20.59		
	RB6#9	20.73	20.74	20.66		
	RB15#0	20.75	20.87	20.65		
3MHz 16QAM	RB1#0	21.56	21.01	20.79	22.11	33
	RB1#8	21.58	21.05	20.66		
	RB1#14	21.55	20.97	20.61		
	RB6#0	20.02	19.90	19.58		
	RB6#9	20.04	19.93	19.64		
	RB15#0	19.95	19.83	19.71		
5MHz QPSK	RB1#0	22.05	21.73	21.47	22.68	33
	RB1#13	22.15	21.87	21.56		
	RB1#24	21.96	21.72	21.45		
	RB15#0	21.06	20.81	20.54		
	RB15#10	21.14	20.84	20.66		
	RB25#0	21.03	20.83	20.55		
5MHz 16QAM	RB1#0	20.93	21.01	20.56	21.67	33
	RB1#13	21.00	21.14	20.68		
	RB1#24	20.75	20.98	20.56		
	RB15#0	20.04	19.77	19.50		
	RB15#10	20.10	19.81	19.69		
	RB25#0	20.09	19.84	19.58		
10MHz QPSK	RB1#0	22.06	21.81	21.63	22.7	33
	RB1#25	22.17	21.97	21.79		
	RB1#49	21.96	21.77	21.52		

	RB25#0	20.96	20.91	20.74		
	RB25#25	21.12	20.99	20.85		
	RB50#0	21.05	20.95	20.81		
10MHz 16QAM	RB1#0	21.61	20.92	20.59	22.22	33
	RB1#25	21.69	21.10	20.76		
	RB1#49	21.40	20.91	20.50		
	RB25#0	20.00	19.92	19.84		
	RB25#25	20.12	19.99	19.88		
	RB50#0	20.01	19.96	19.83		
15MHz QPSK	RB1#0	21.99	21.82	21.70	22.55	33
	RB1#38	22.02	21.87	21.69		
	RB1#74	21.83	21.58	21.54		
	RB36#0	21.03	20.98	20.98		
	RB36#39	21.06	20.93	20.79		
	RB75#0	21.06	20.96	20.88		
15MHz 16QAM	RB1#0	21.61	20.94	20.91	22.14	33
	RB1#38	21.50	21.03	21.12		
	RB1#74	21.25	20.80	20.89		
	RB36#0	20.01	19.95	19.88		
	RB36#39	20.03	19.93	19.77		
	RB75#0	20.03	20.01	19.86		
20MHz QPSK	RB1#0	21.98	21.81	21.57	22.71	33
	RB1#50	22.14	22.18	21.92		
	RB1#99	21.42	21.67	21.41		
	RB50#0	20.63	21.11	21.05		
	RB50#50	20.53	21.19	20.86		
	RB100#0	20.57	21.20	21.01		
20MHz 16QAM	RB1#0	21.22	20.94	21.04	22.05	33
	RB1#50	21.52	21.34	21.42		
	RB1#99	21.00	20.79	20.98		
	RB50#0	19.95	20.13	20.04		
	RB50#50	19.87	20.15	19.82		
	RB100#0	19.97	20.16	19.96		

Note: EIRP=Conducted Power(dBm) - Lc(dB) + Gr(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	5.39	4.23	4.14	13
	RB100#0	3.77	4.41	4.17	13
20MHz 16QAM	RB1#0	6.06	5.19	5.19	13
	RB100#0	5.45	5.88	5.59	13
				Result:	Pass

FCC §2.1049, §24.238: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	1.108	1.102	1.102	1.302	1.308	1.332
1.4MHz 16QAM	1.096	1.102	1.096	1.302	1.332	1.302
3MHz QPSK	2.683	2.695	2.695	2.868	2.880	2.892
3MHz 16QAM	2.671	2.683	2.683	2.880	2.880	2.880
5MHz QPSK	4.531	4.511	4.511	4.940	4.960	5.300
5MHz 16QAM	4.491	4.531	4.511	4.920	4.980	4.960
10MHz QPSK	8.902	8.942	8.982	9.600	9.640	9.640
10MHz 16QAM	8.982	8.942	8.982	9.600	9.680	9.520
15MHz QPSK	13.473	13.473	13.533	14.760	14.760	14.880
15MHz 16QAM	13.533	13.593	13.533	14.760	16.680	14.880
20MHz QPSK	17.964	17.964	18.044	19.120	19.360	19.520
20MHz 16QAM	17.884	18.044	18.044	19.360	19.600	19.360

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

FCC §2.1051, § 24.238 (a):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, § 24.238 (a):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, §24.235: 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	1851.034	1850.000	1909.010	1910.000
	-20	3.8	1851.055	1850.000	1909.019	1910.000
	-10	3.8	1851.031	1850.000	1908.995	1910.000
	0	3.8	1851.046	1850.000	1909.016	1910.000
	10	3.8	1851.034	1850.000	1909.007	1910.000
	20	3.8	1851.058	1850.000	1909.022	1910.000
	30	3.8	1851.079	1850.000	1909.031	1910.000
	40	3.8	1851.061	1850.000	1909.043	1910.000
	50	3.8	1851.085	1850.000	1909.046	1910.000
Frequency Stability vs. Voltage	20	3.4	1851.064	1850.000	1909.043	1910.000
	20	4.35	1851.061	1850.000	1909.025	1910.000
					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	1851.135	1850.000	1908.998	1910.000
	-20	3.8	1851.129	1850.000	1908.998	1910.000
	-10	3.8	1851.117	1850.000	1909.001	1910.000
	0	3.8	1851.129	1850.000	1909.007	1910.000
	10	3.8	1851.117	1850.000	1909.013	1910.000
	20	3.8	1851.138	1850.000	1909.022	1910.000
	30	3.8	1851.141	1850.000	1909.043	1910.000
	40	3.8	1851.150	1850.000	1909.049	1910.000
	50	3.8	1851.159	1850.000	1909.031	1910.000
Frequency Stability vs. Voltage	20	3.4	1851.156	1850.000	1909.046	1910.000
	20	4.35	1851.162	1850.000	1909.028	1910.000
					Result:	Pass

Test Plots:

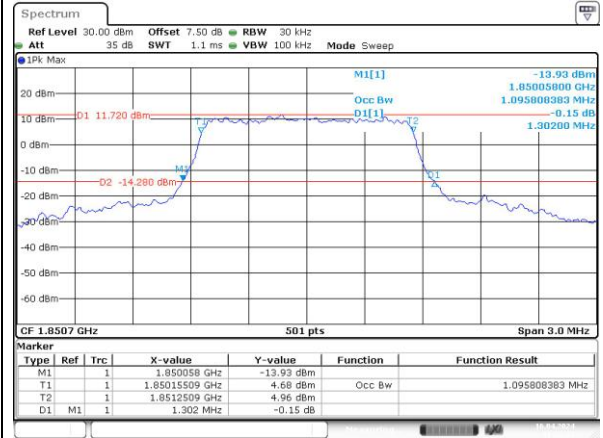
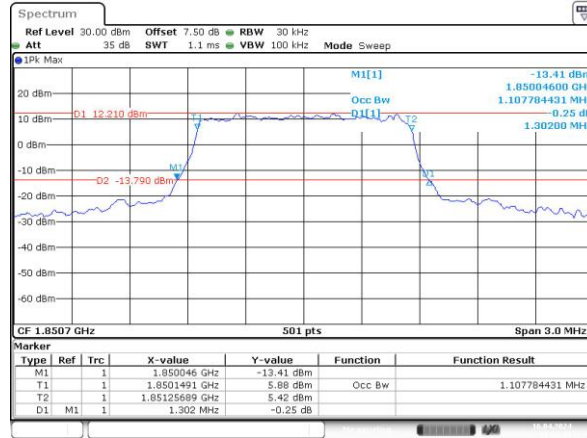
Occupied Bandwidth

Channel

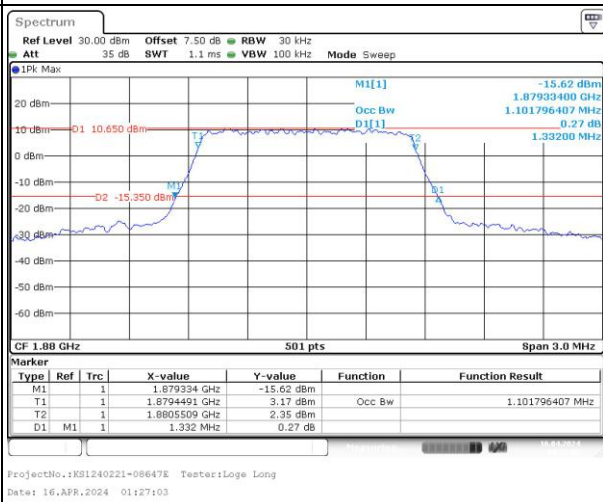
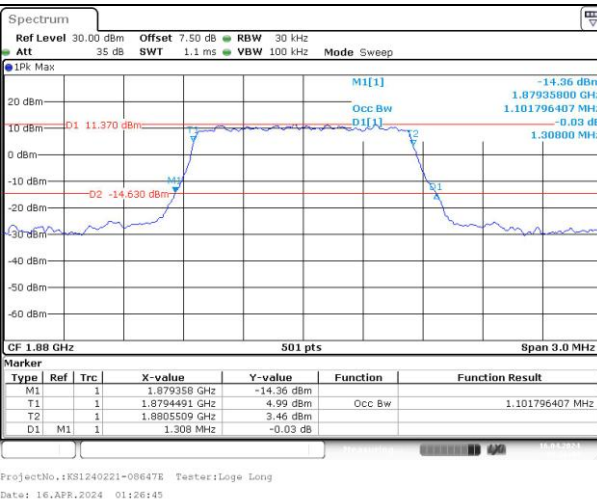
1.4MHz Bandwidth QPSK

1.4MHz Bandwidth 16QAM

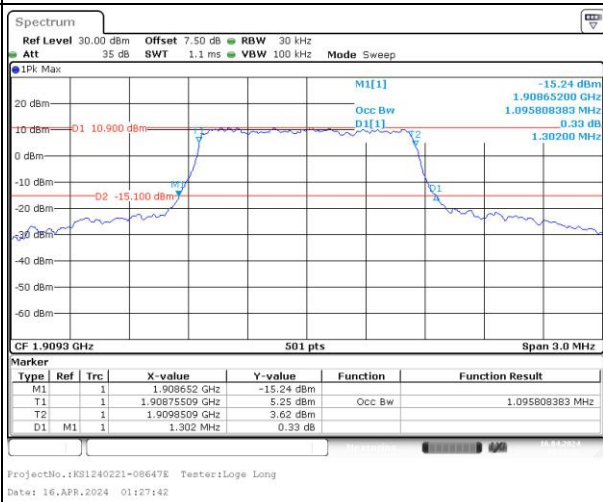
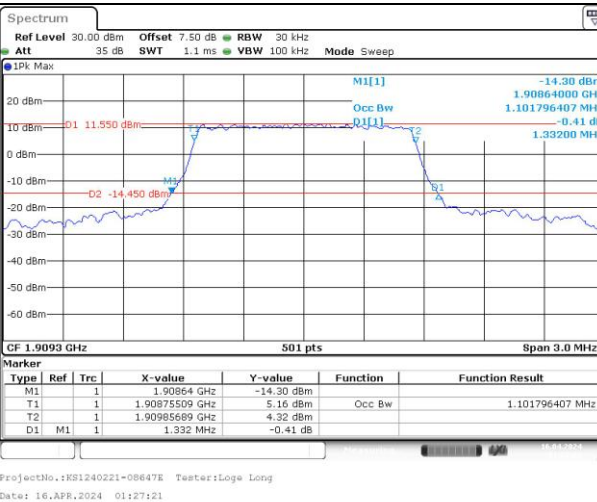
Lowest



Middle



Highest



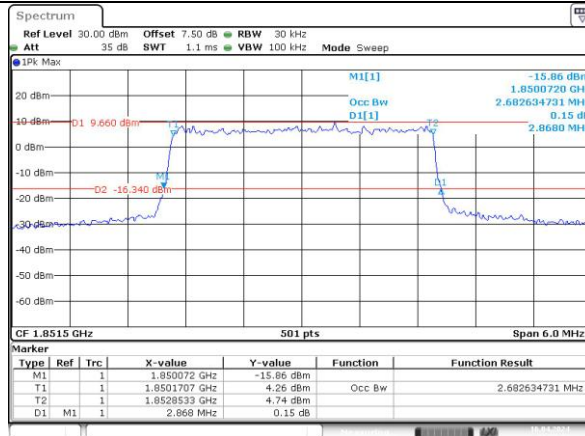
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Channel

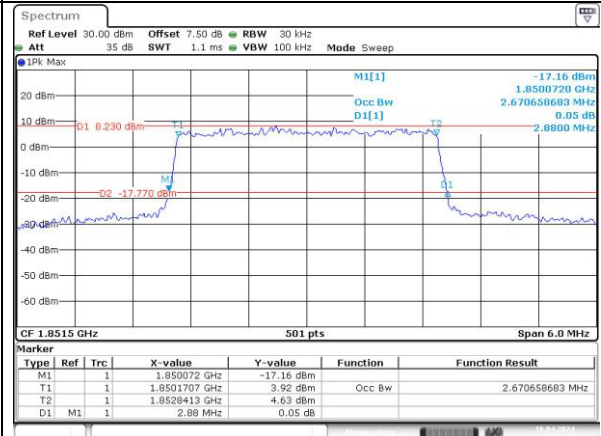
3MHz Bandwidth QPSK

3MHz Bandwidth 16QAM

Lowest

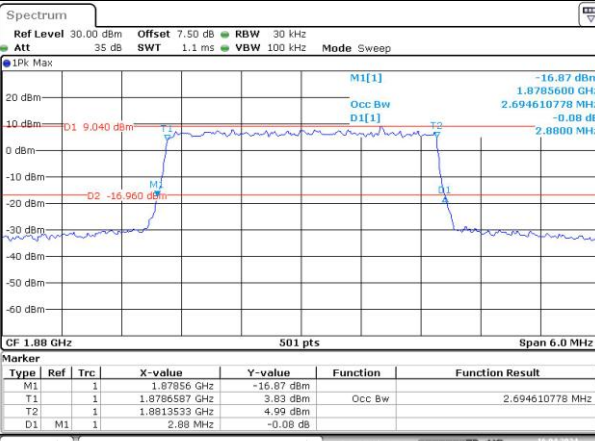


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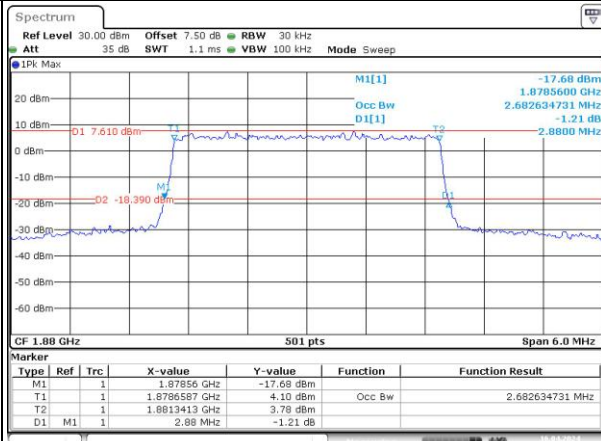


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Middle

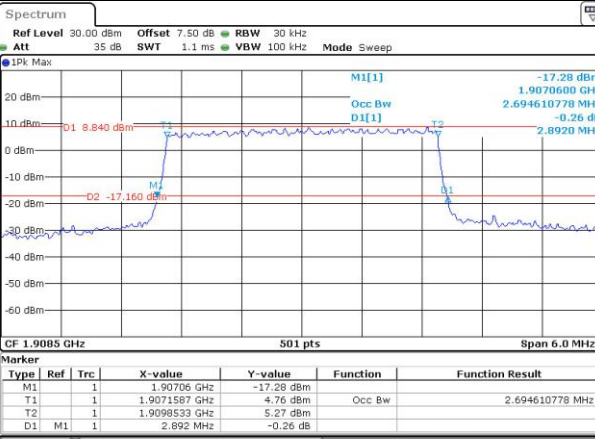


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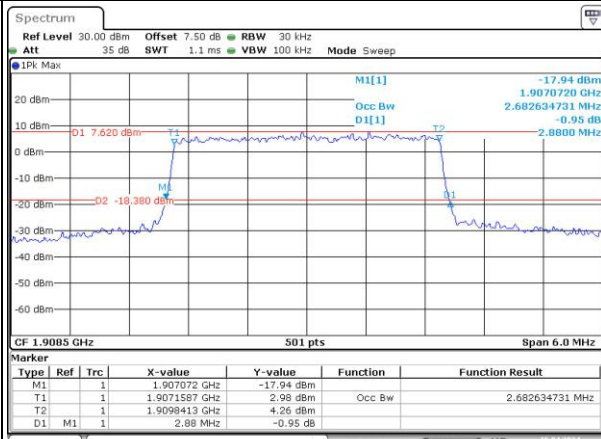


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Highest



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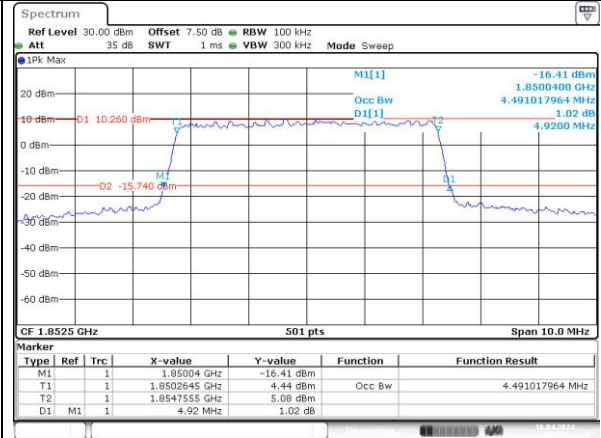
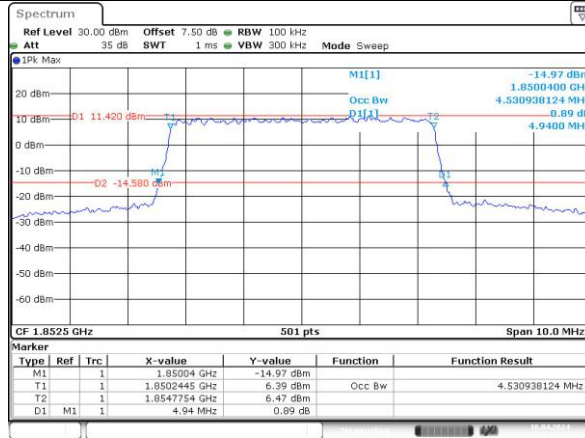
Occupied Bandwidth

Channel

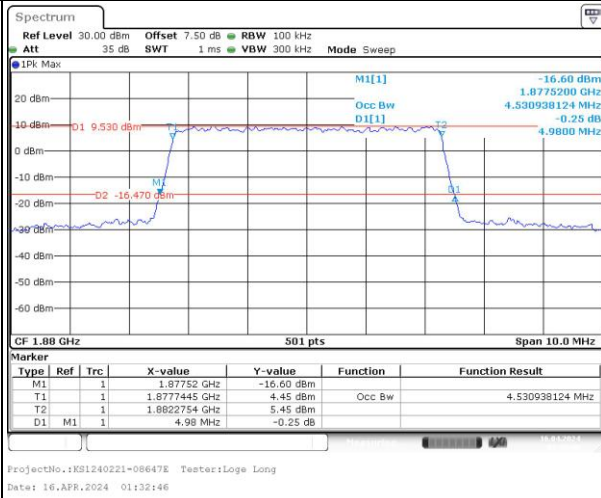
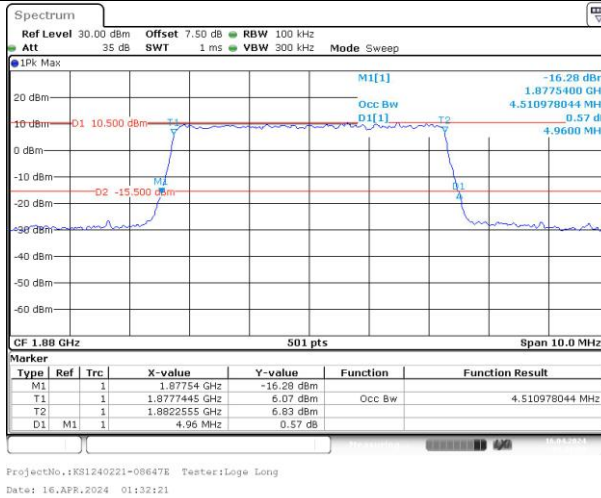
5MHz Bandwidth QPSK

5MHz Bandwidth 16QAM

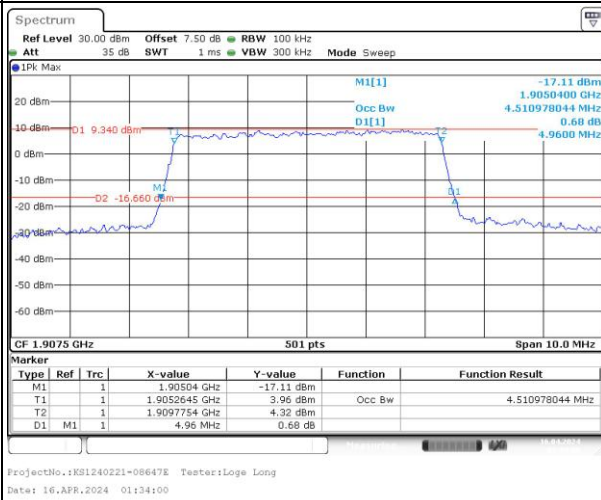
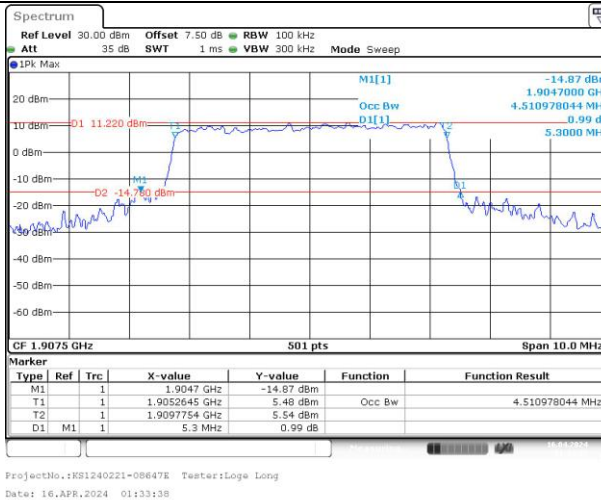
Lowest



Middle



Highest



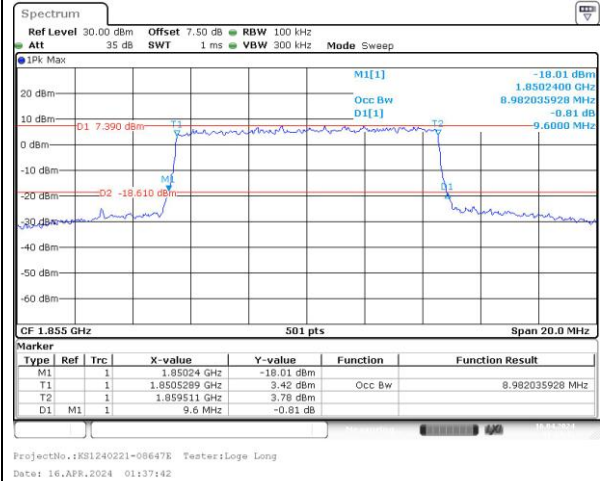
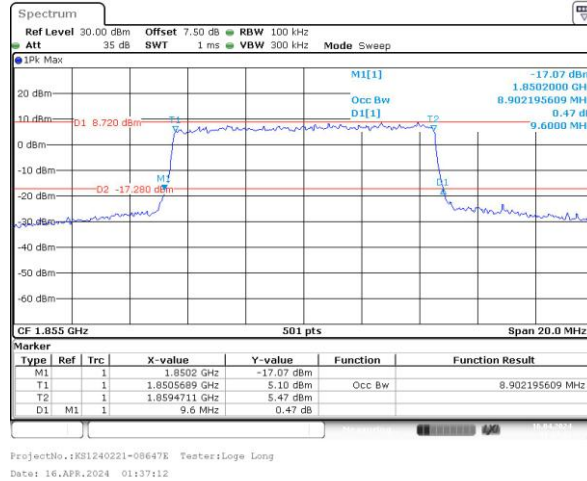
Occupied Bandwidth

Channel

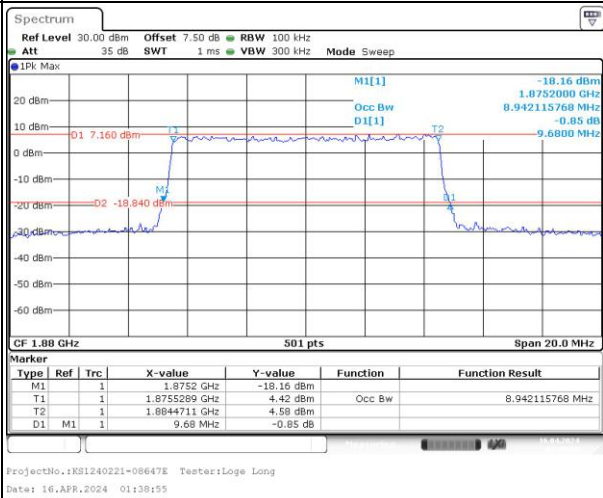
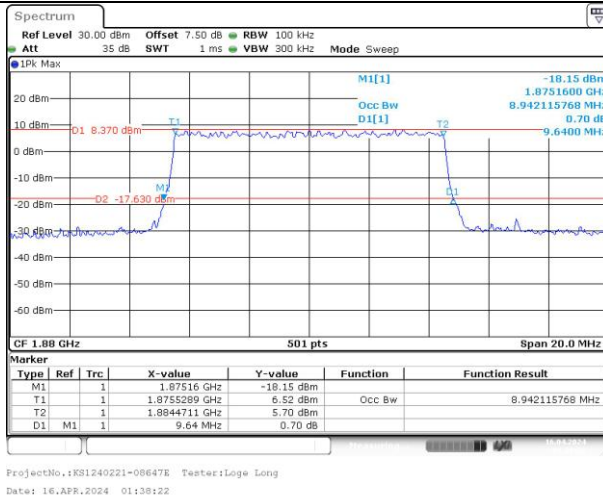
10MHz Bandwidth QPSK

10MHz Bandwidth 16QAM

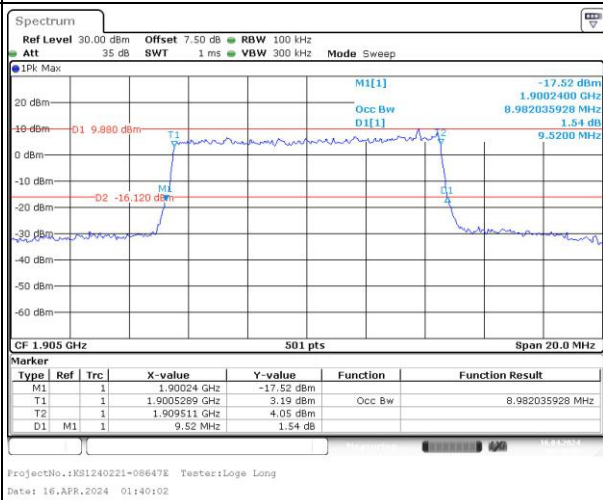
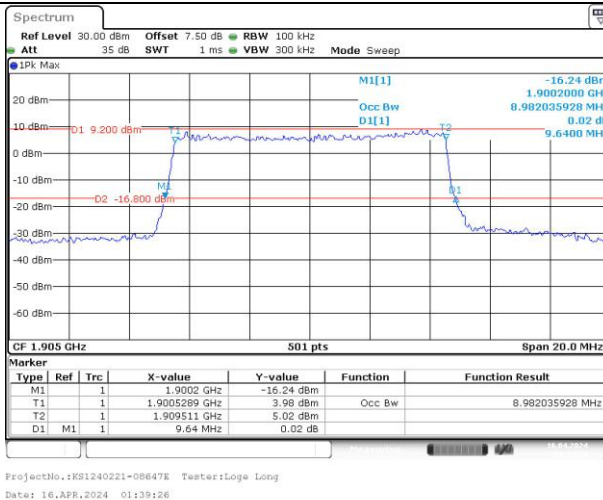
Lowest



Middle



Highest



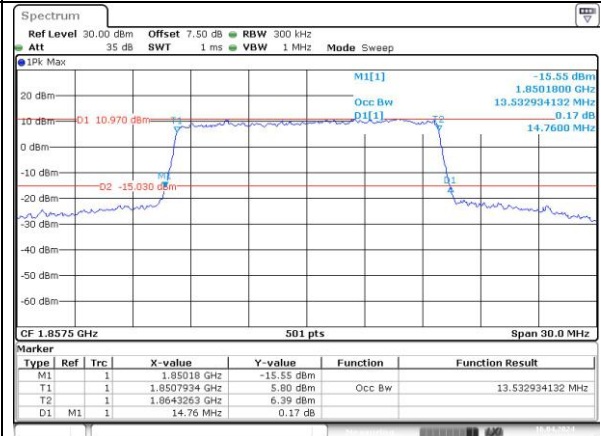
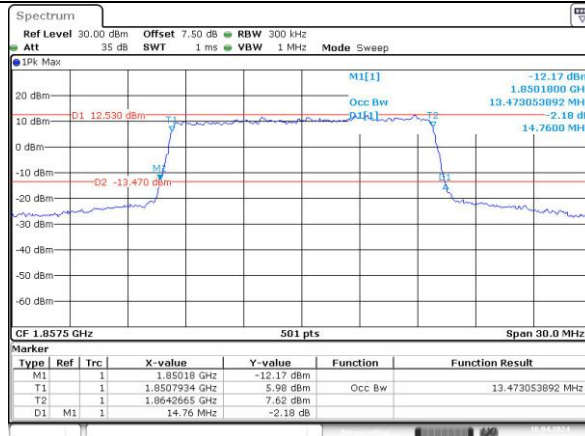
Occupied Bandwidth

Channel

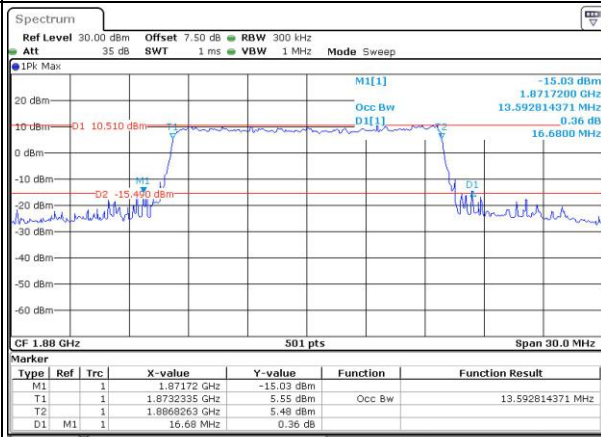
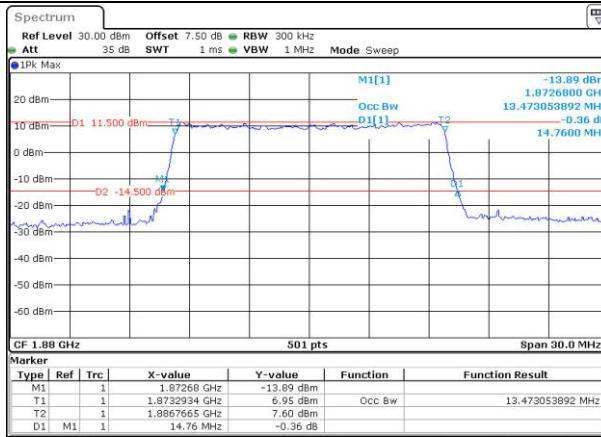
15MHz Bandwidth QPSK

15MHz Bandwidth 16QAM

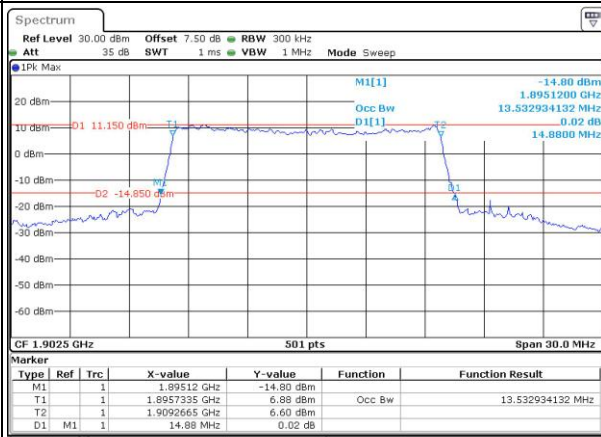
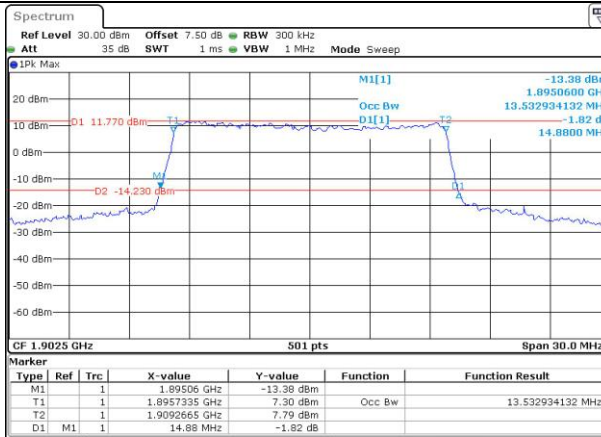
Lowest



Middle



Highest



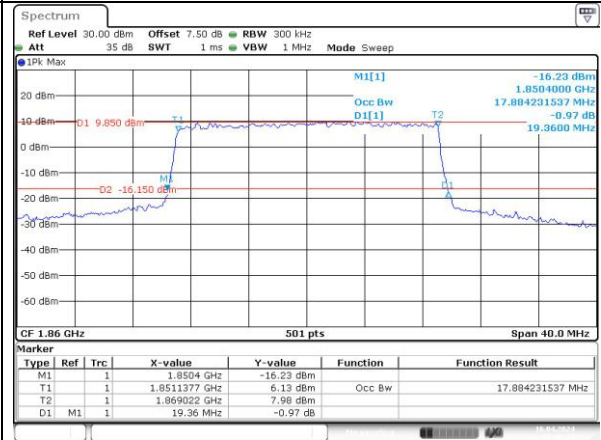
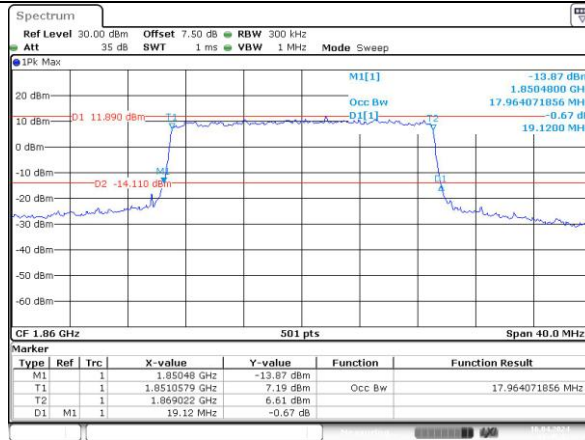
Occupied Bandwidth

Channel

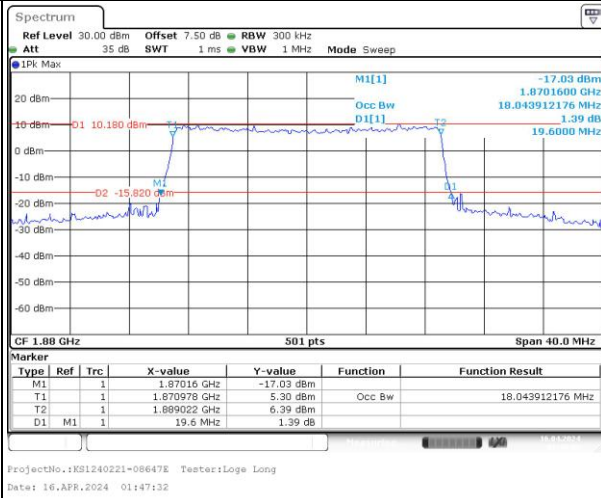
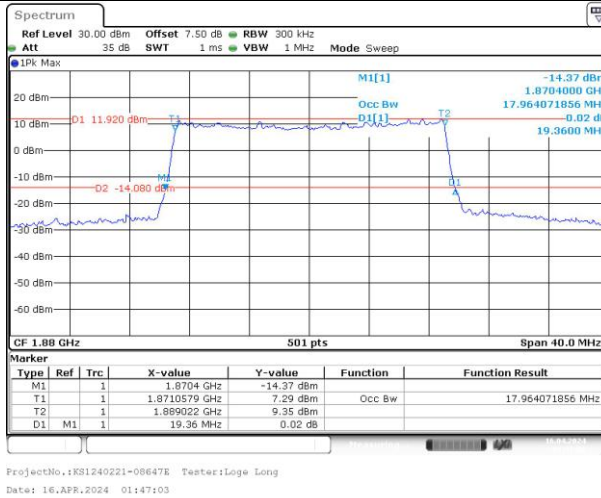
20MHz Bandwidth QPSK

20MHz Bandwidth 16QAM

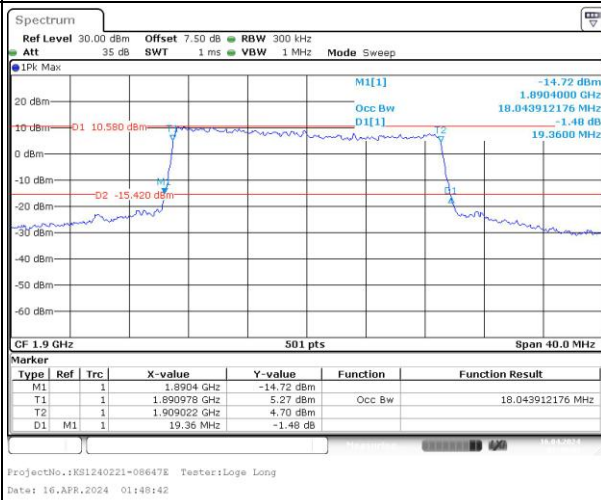
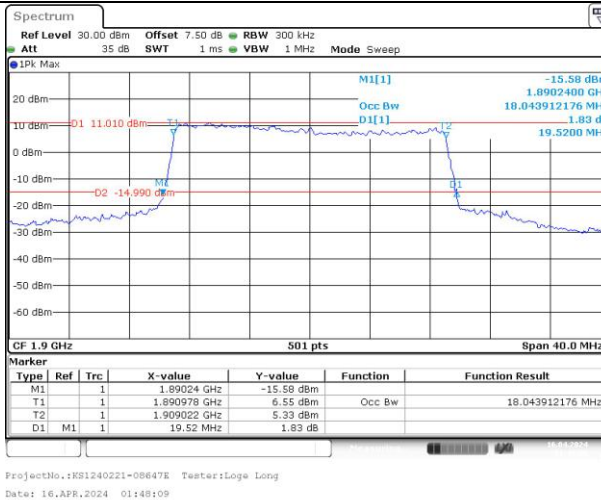
Lowest



Middle



Highest



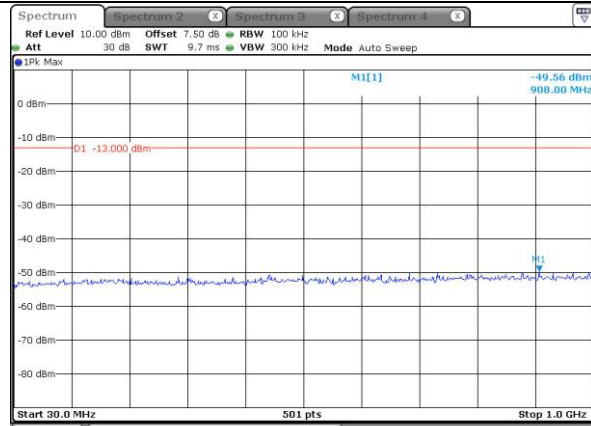
1RB:

Spurious Emissions at Antenna Terminal

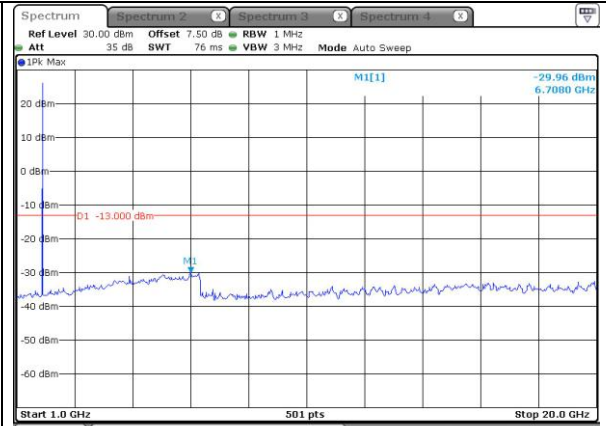
Channel

1.4MHz Bandwidth QPSK

Lowest

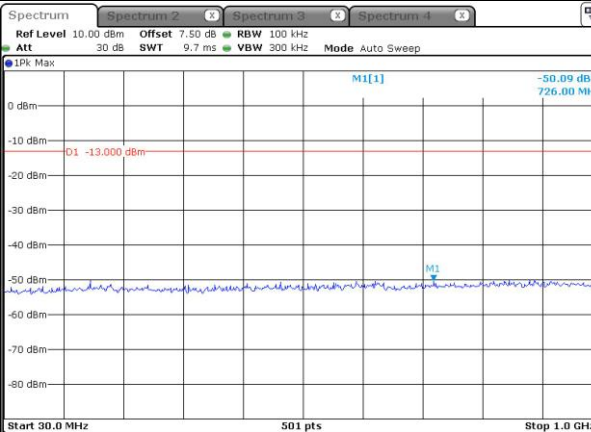


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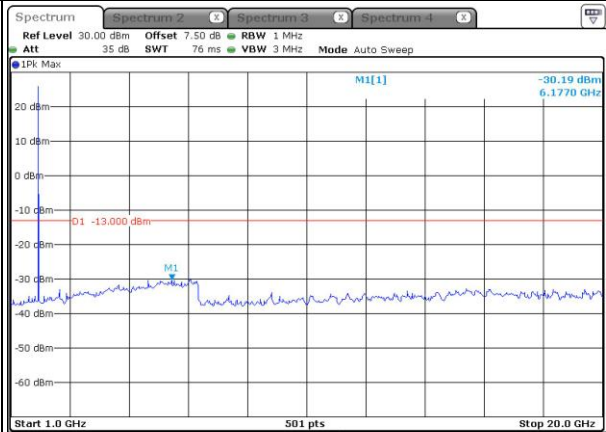


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Middle

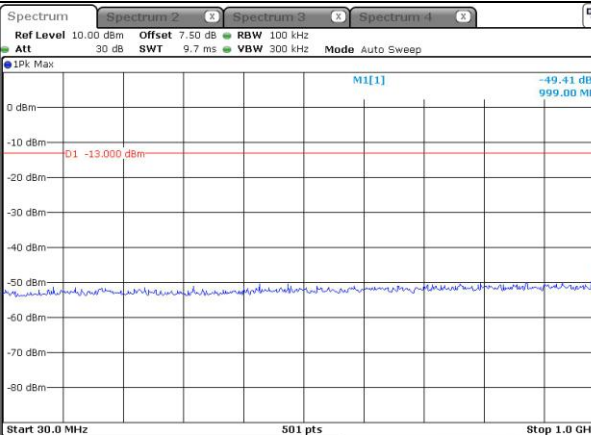


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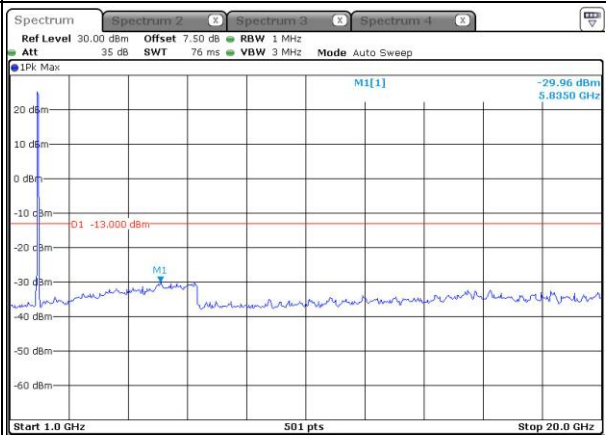


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Highest



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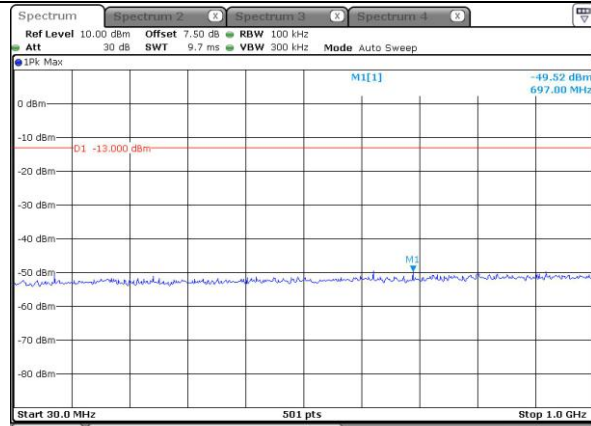
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Spurious Emissions at Antenna Terminal

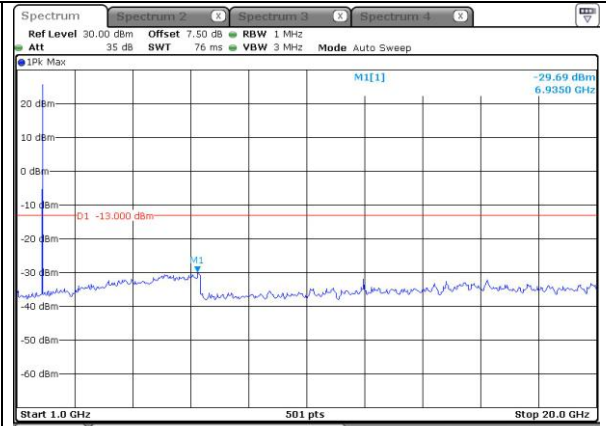
Channel

3MHz Bandwidth QPSK

Lowest

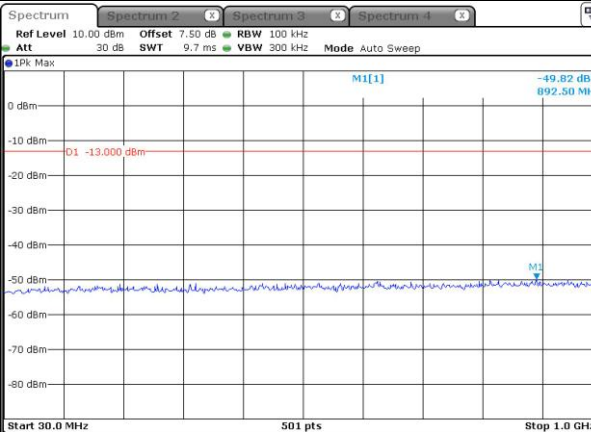


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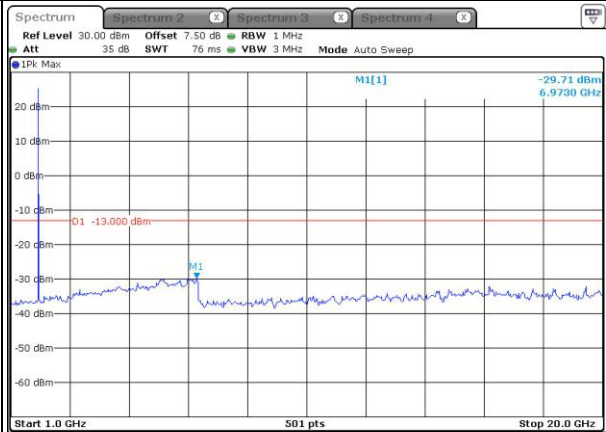


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Middle

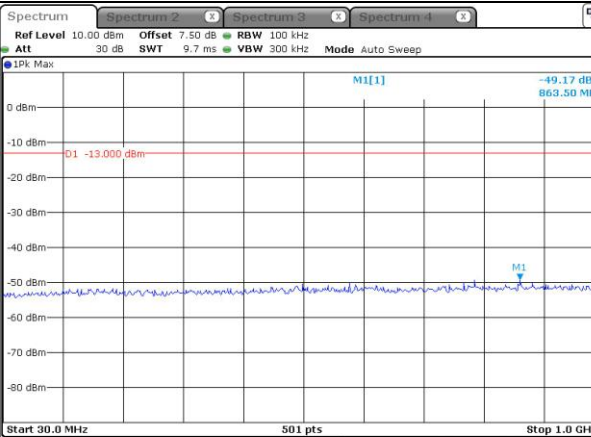


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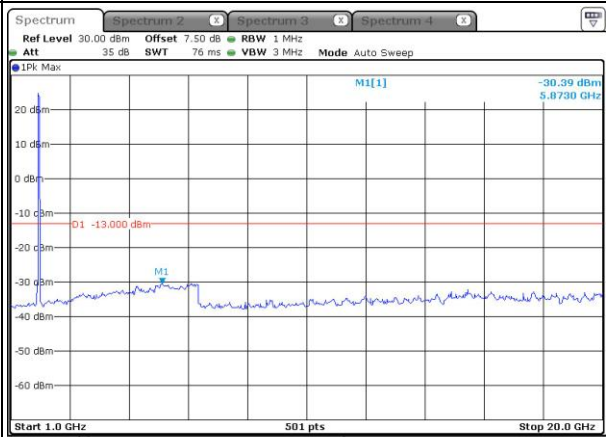


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Date: 17.APR.2024 20:32:31

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:32:57



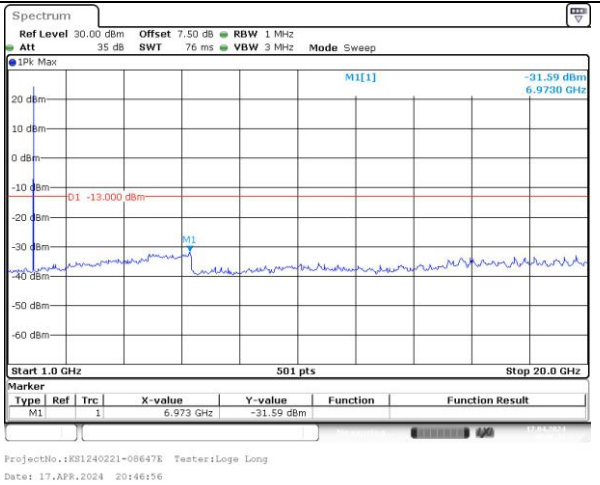
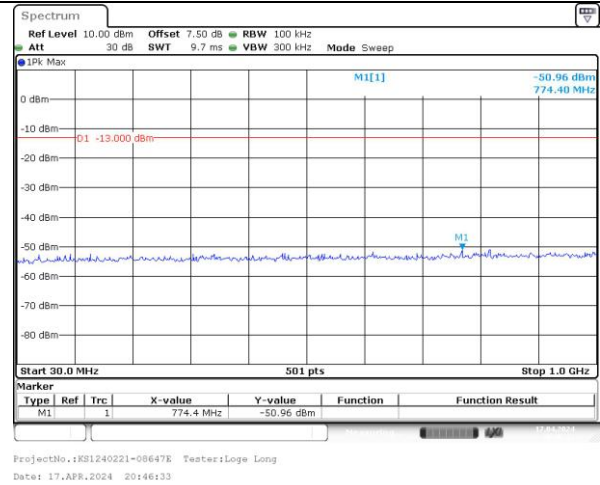
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:33:26

Spurious Emissions at Antenna Terminal

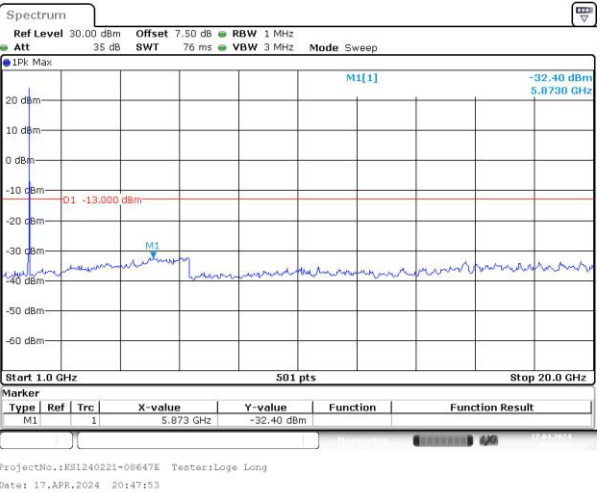
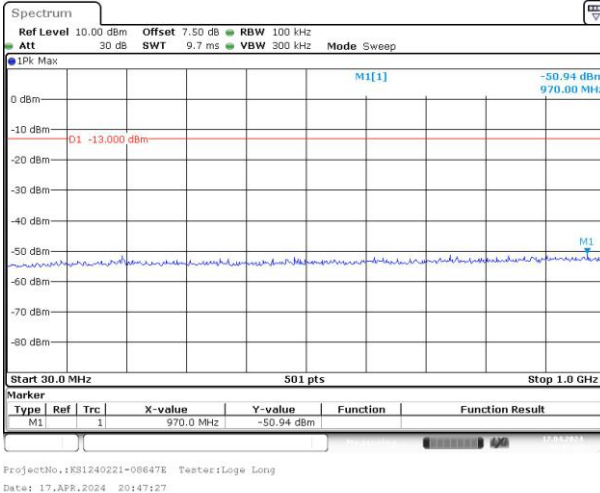
Channel

5MHz Bandwidth QPSK

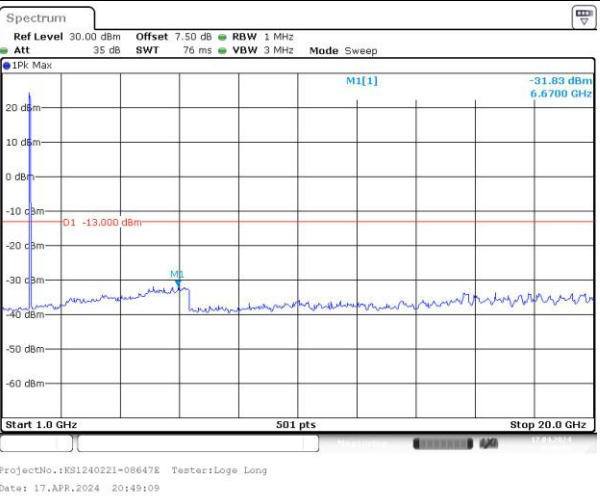
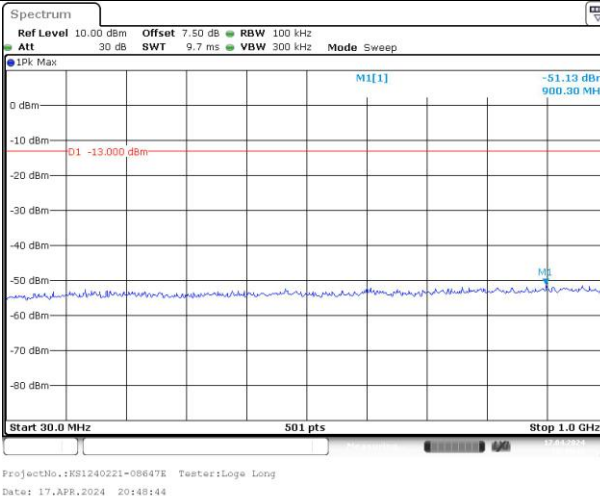
Lowest



Middle



Highest

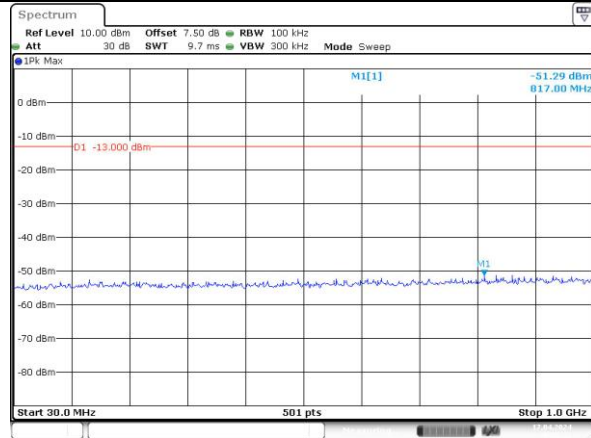


Spurious Emissions at Antenna Terminal

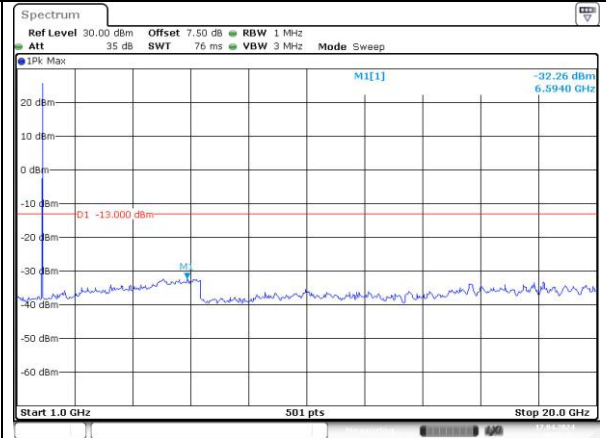
Channel

10MHz Bandwidth QPSK

Lowest

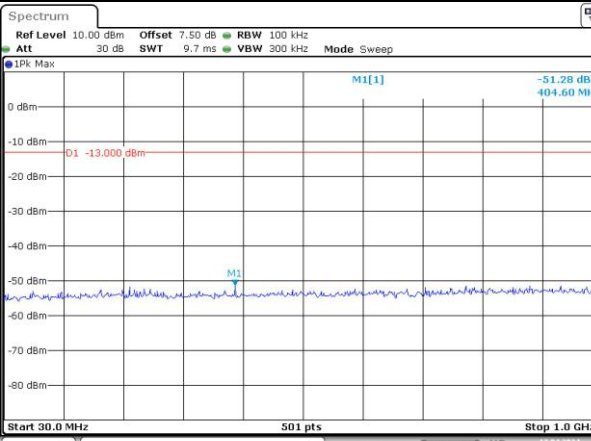


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:50:12

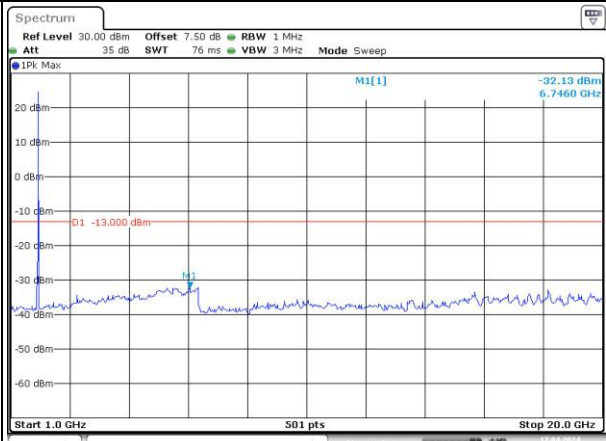


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:50:37

Middle

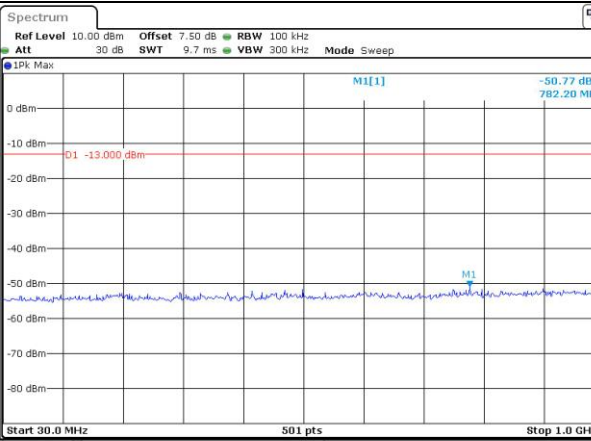


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:51:06

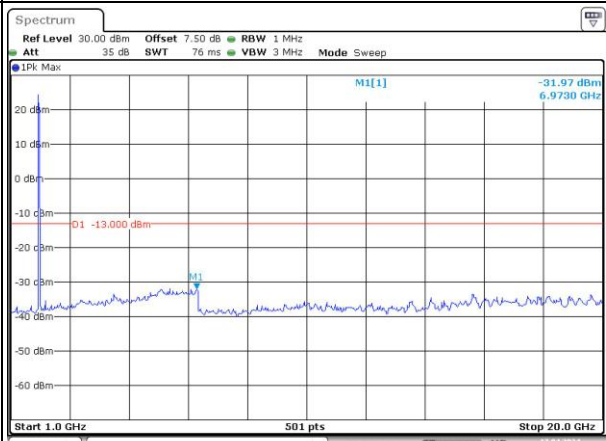


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:51:28

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:52:08



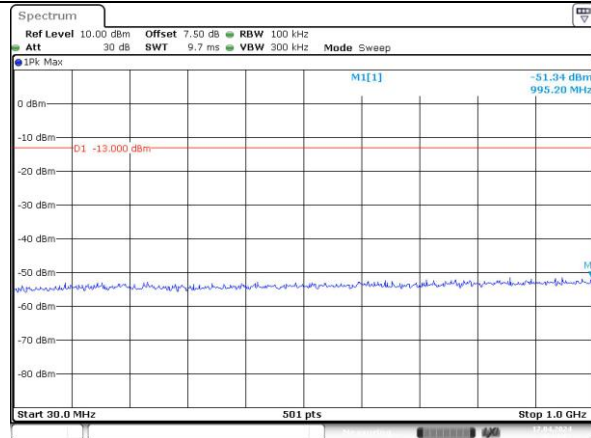
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:52:30

Spurious Emissions at Antenna Terminal

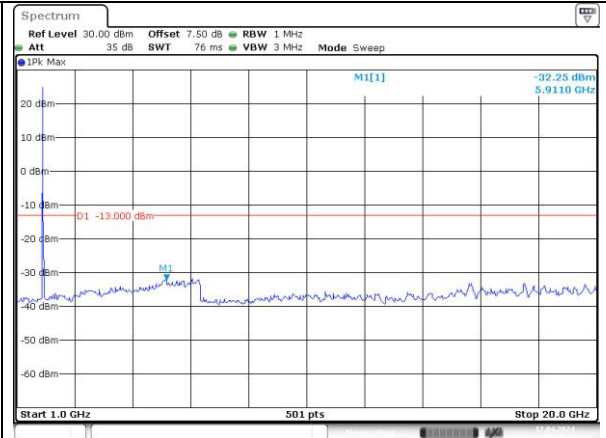
Channel

15MHz Bandwidth QPSK

Lowest

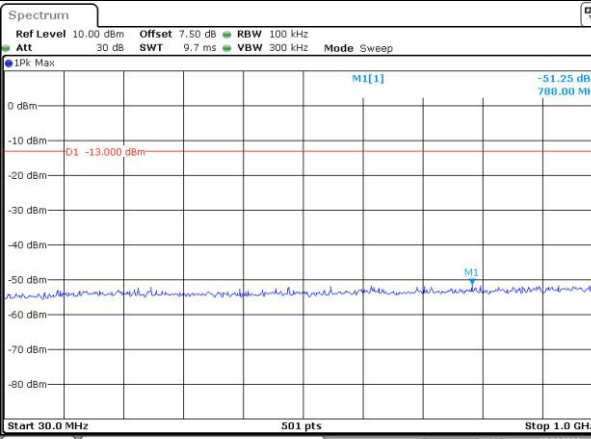


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:54:01

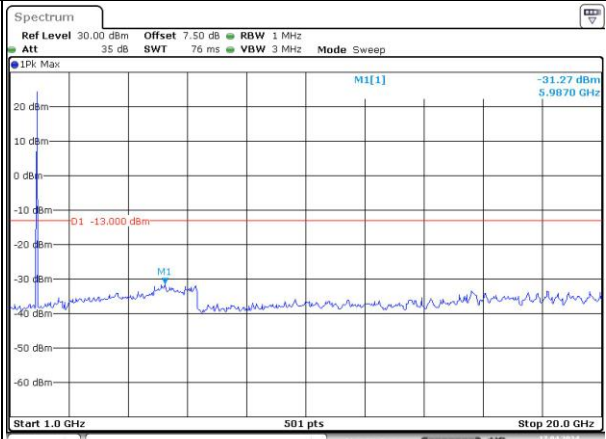


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:54:30

Middle

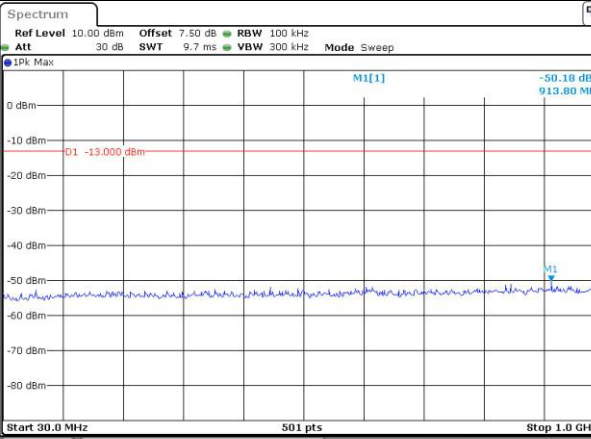


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:55:06

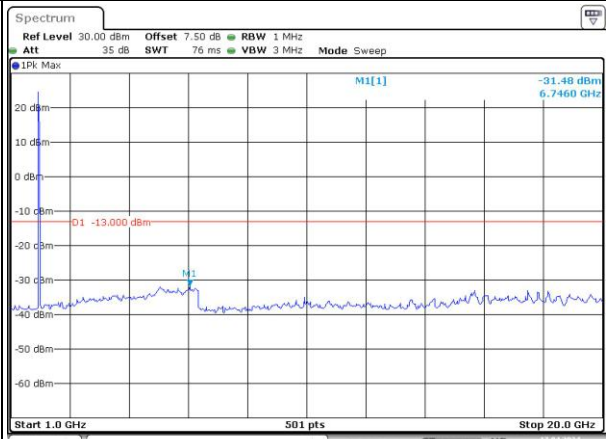


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:55:31

Highest



ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:56:04



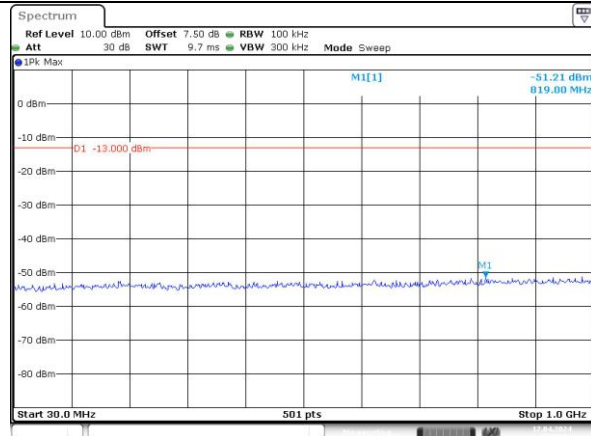
ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:56:35

Spurious Emissions at Antenna Terminal

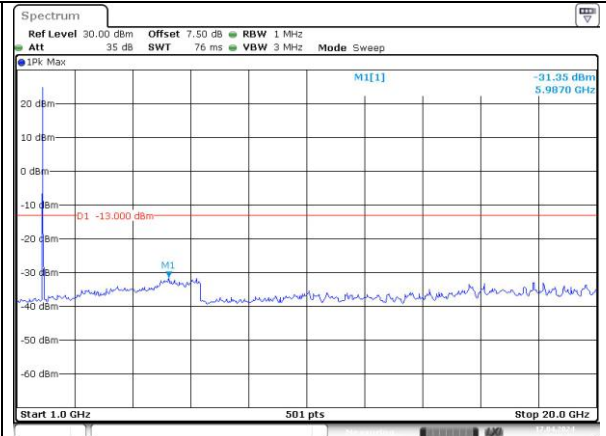
Channel

20MHz Bandwidth QPSK

Lowest

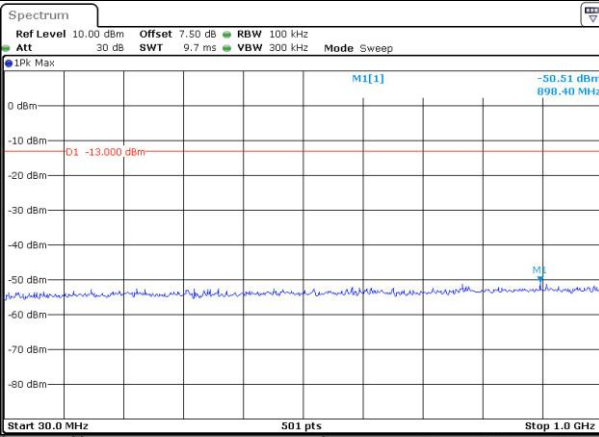


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:58:09

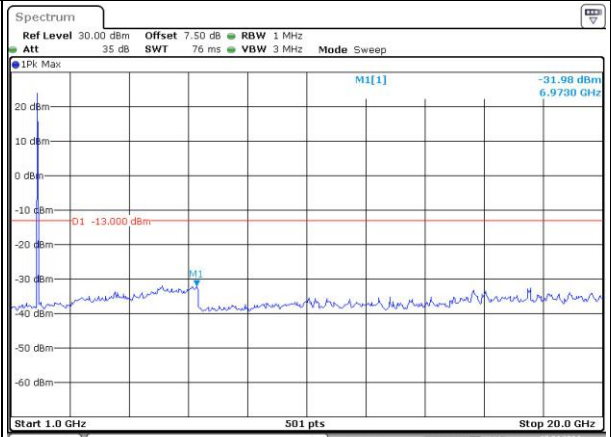


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:58:38

Middle

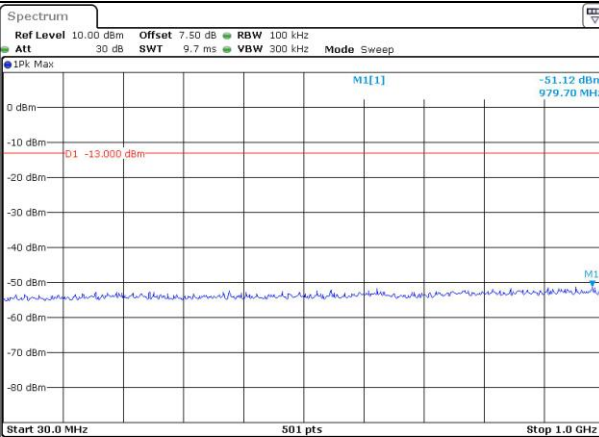


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:59:11

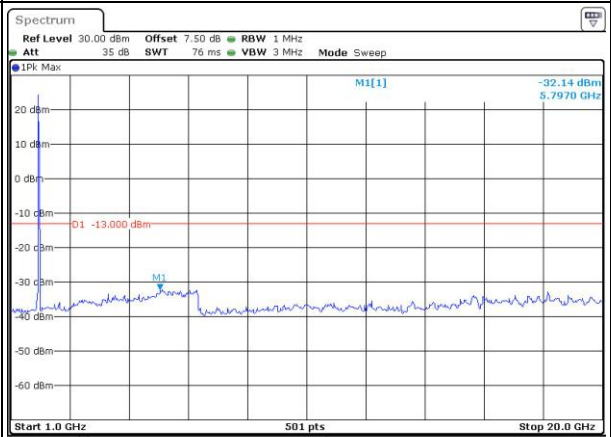


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 20:59:39

Highest

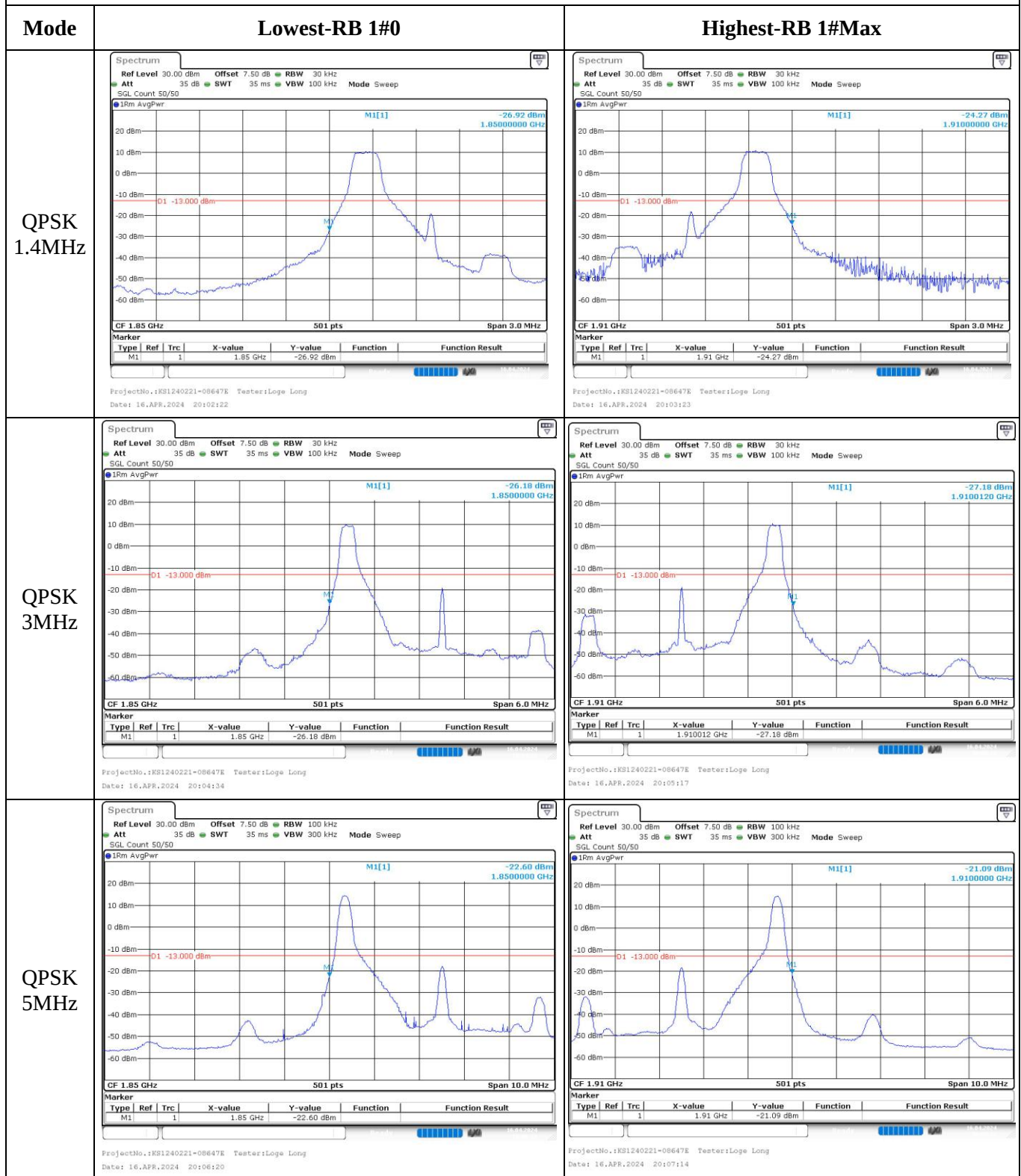


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 21:00:18

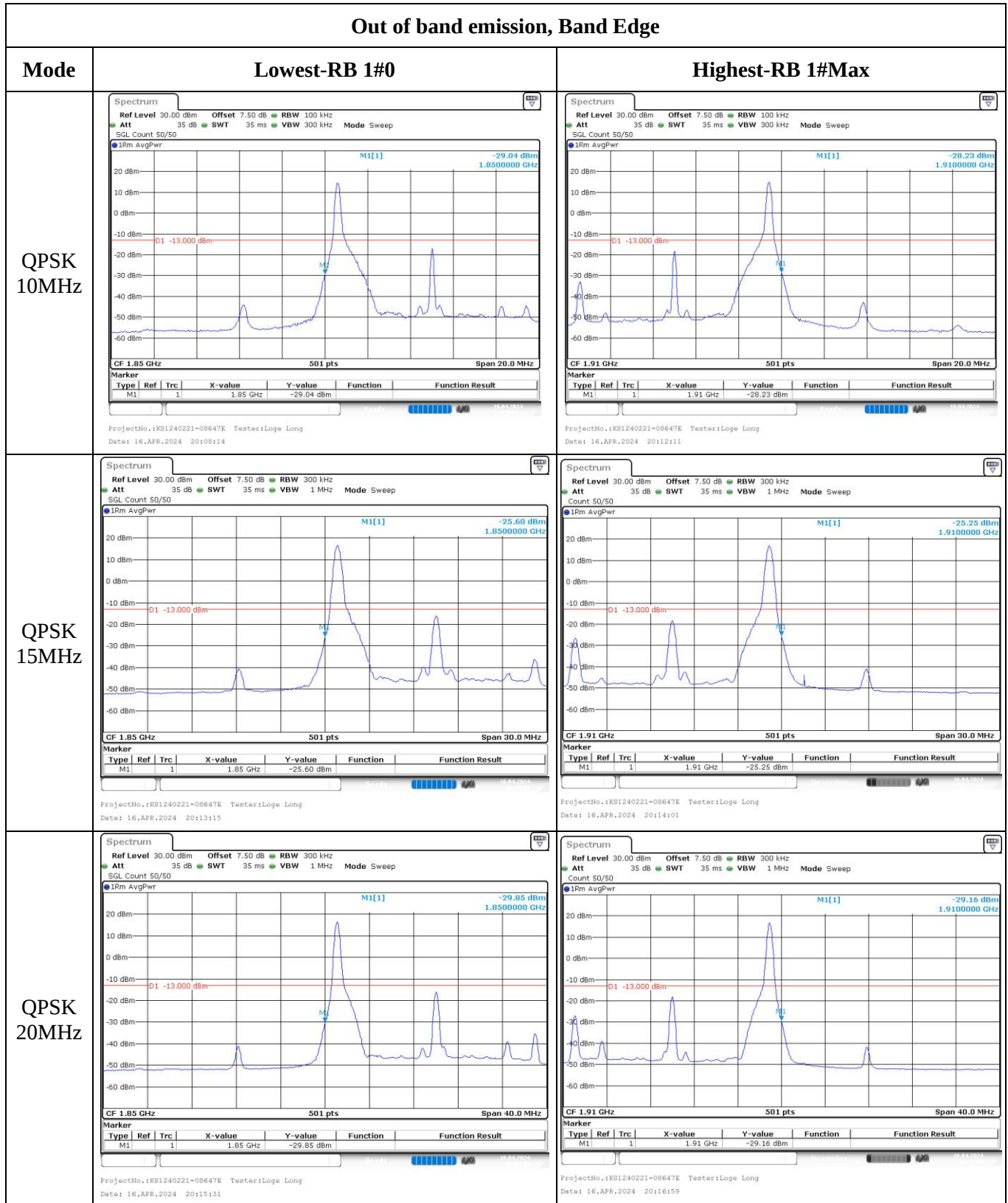


ProjectNo.:KS1240221-08647E Tester:Loge Long
Date: 17.APR.2024 21:00:47

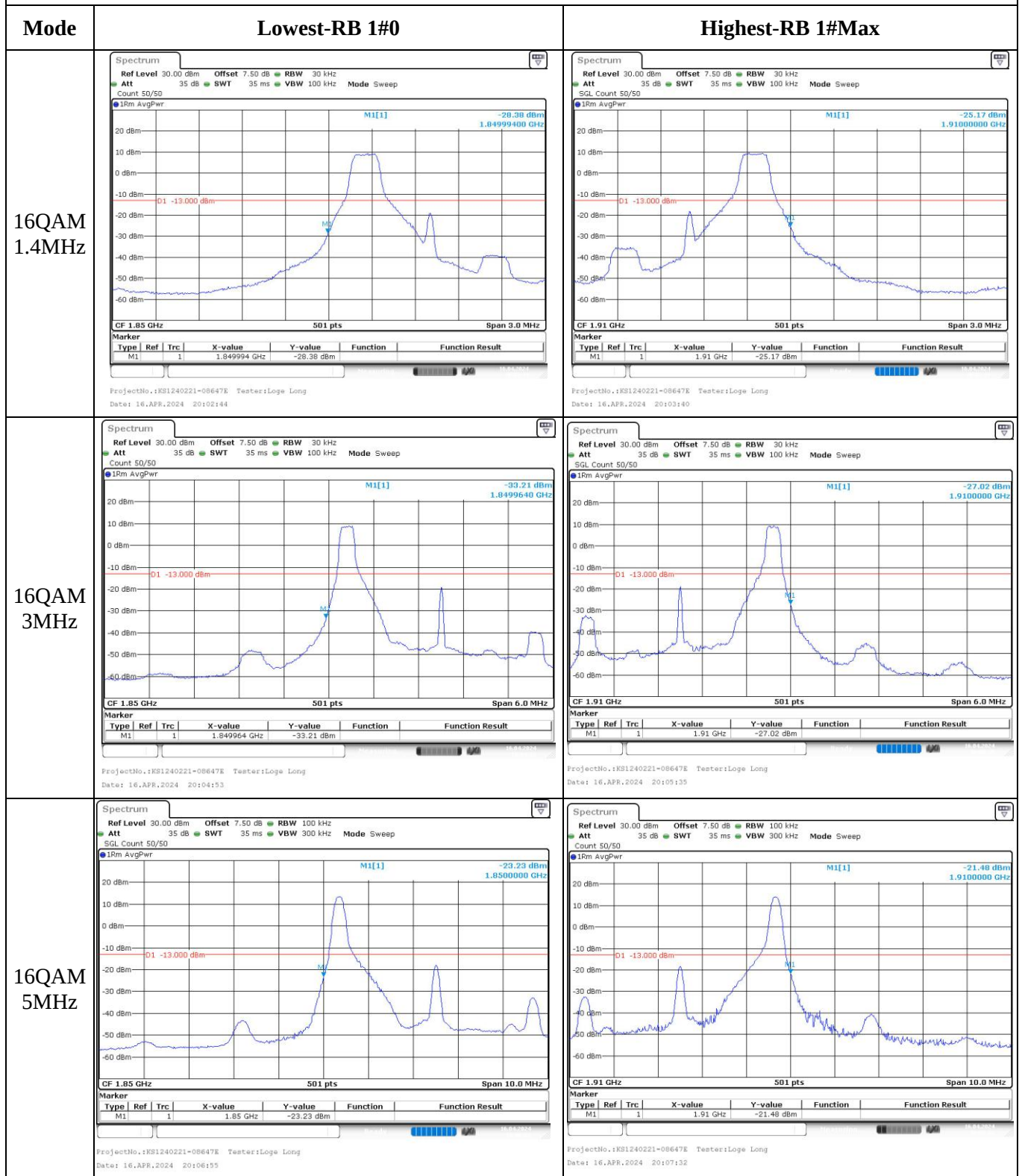
Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge



Out of band emission, Band Edge

