



Band4-Low Channel-20MHz Bandwidth-6RB-16QAM



Band4-Low Channel-20MHz Bandwidth-6RB-QPSK

6.7.8 CAT-M Band12 Edge Results



High Channel-1.4MHz Bandwidth-1RB-16QAM



High Channel-1.4MHz Bandwidth-1RB-QPSK



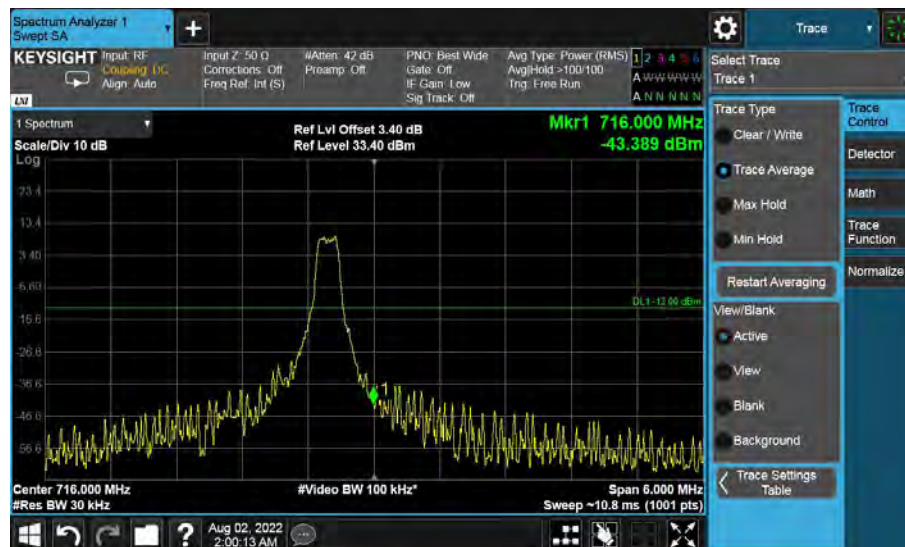
High Channel-1.4MHz Bandwidth-6RB-16QAM



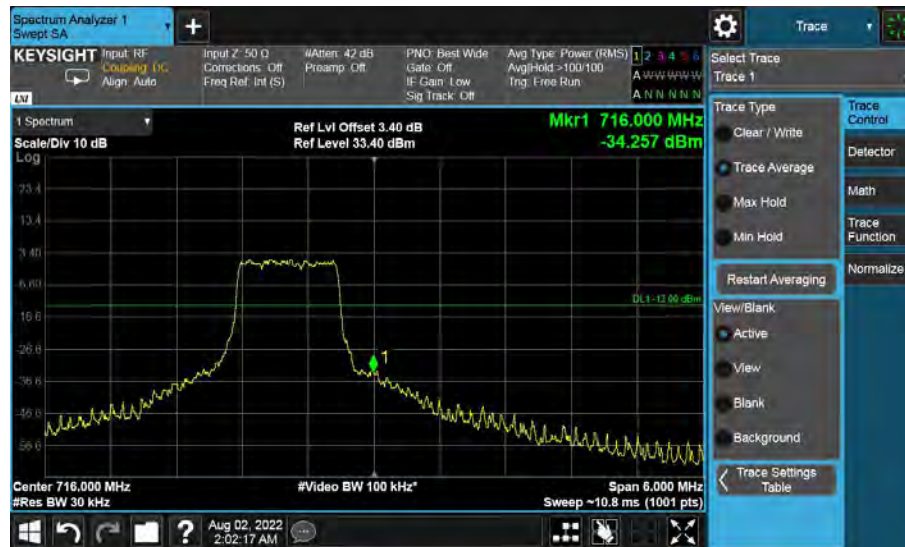
High Channel-1.4MHz Bandwidth-6RB-QPSK



High Channel-3MHz Bandwidth-1RB-16QAM



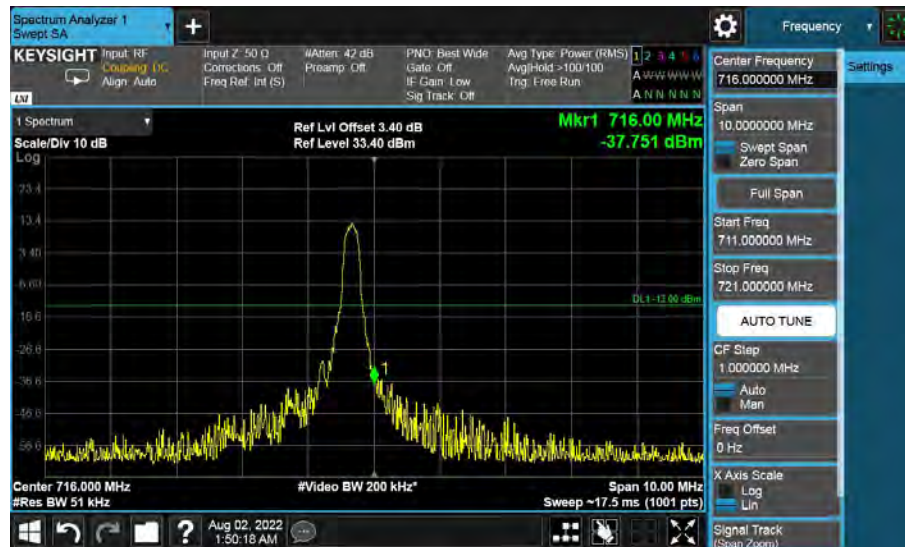
High Channel-3MHz Bandwidth-1RB-QPSK



High Channel-3MHz Bandwidth-6RB-16QAM



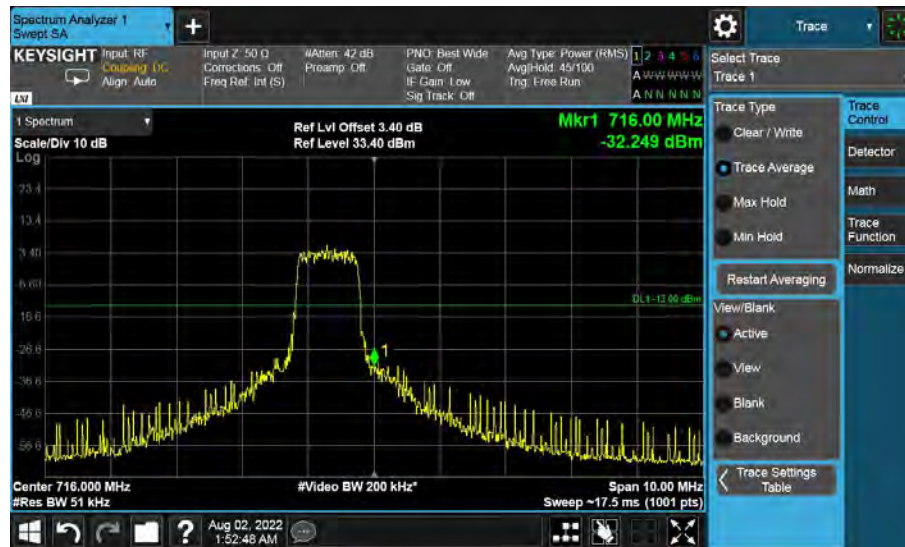
High Channel-3MHz Bandwidth-6RB-QPSK



High Channel-5MHz Bandwidth-1RB-16QAM



High Channel-5MHz Bandwidth-1RB-QPSK



High Channel-5MHz Bandwidth-6RB-16QAM



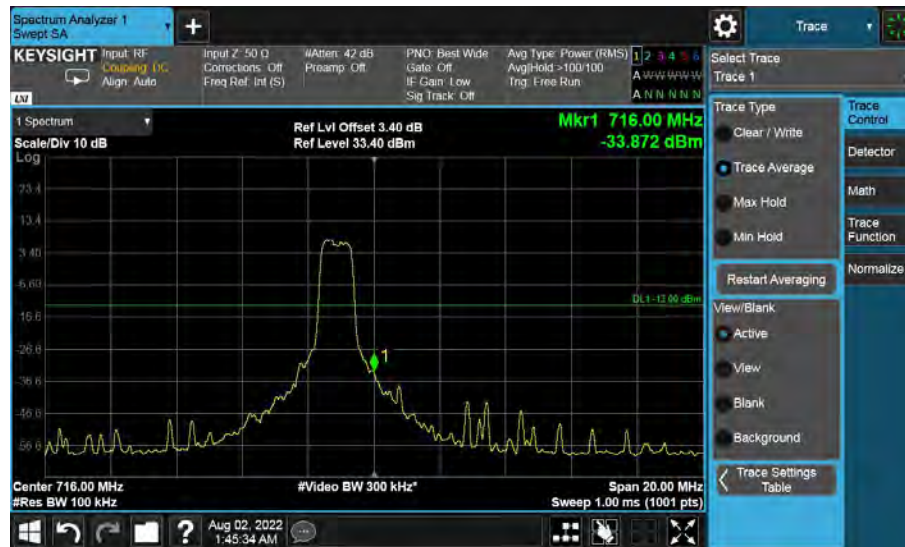
High Channel-5MHz Bandwidth-6RB-QPSK



High Channel-10MHz Bandwidth-1RB-16QAM



High Channel-10MHz Bandwidth-1RB-QPSK



High Channel-10MHz Bandwidth-6RB-16QAM



High Channel-10MHz Bandwidth-6RB-QPSK



Low Channel-1.4MHz Bandwidth-1RB-16QAM



Low Channel-1.4MHz Bandwidth-1RB-QPSK



Low Channel-1.4MHz Bandwidth-6RB-16QAM



Low Channel-1.4MHz Bandwidth-6RB-QPSK

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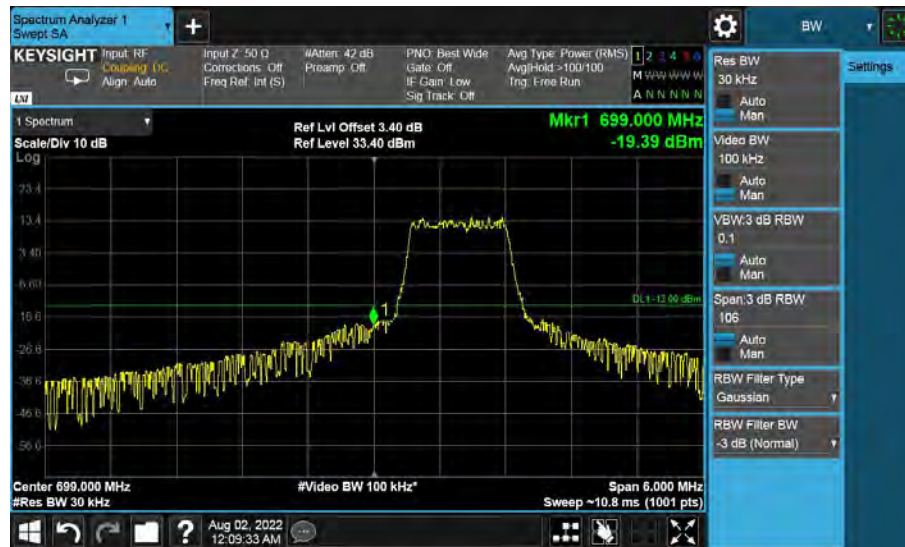
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Low Channel-3MHz Bandwidth-1RB-16QAM



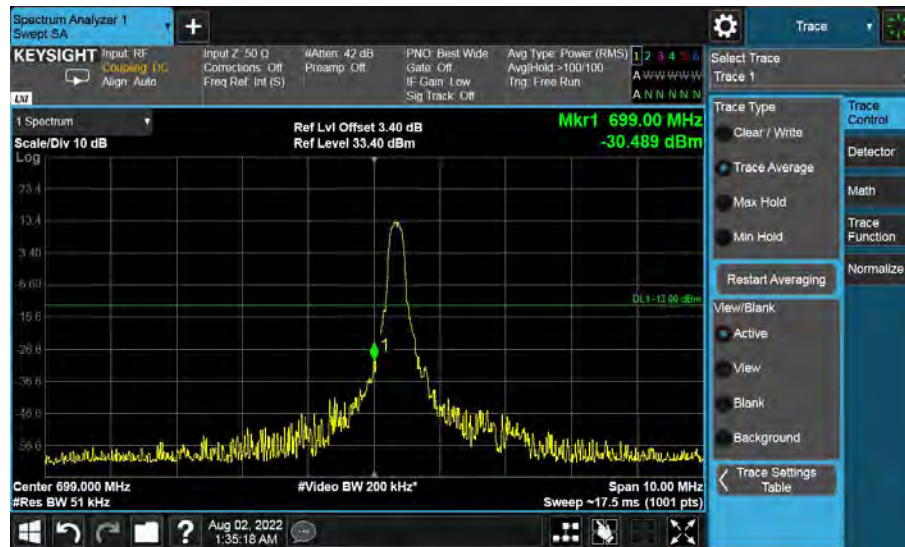
Low Channel-3MHz Bandwidth-1RB-QPSK



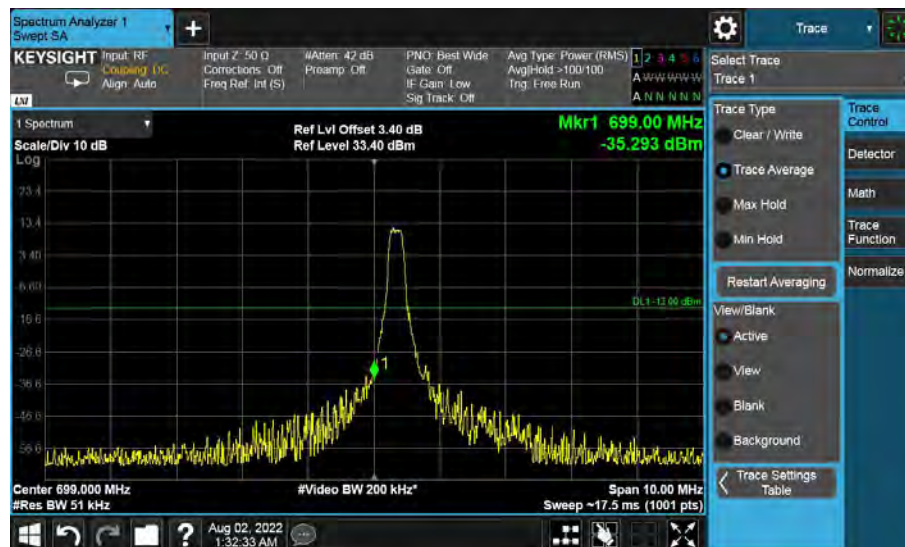
Low Channel-3MHz Bandwidth-6RB-16QAM



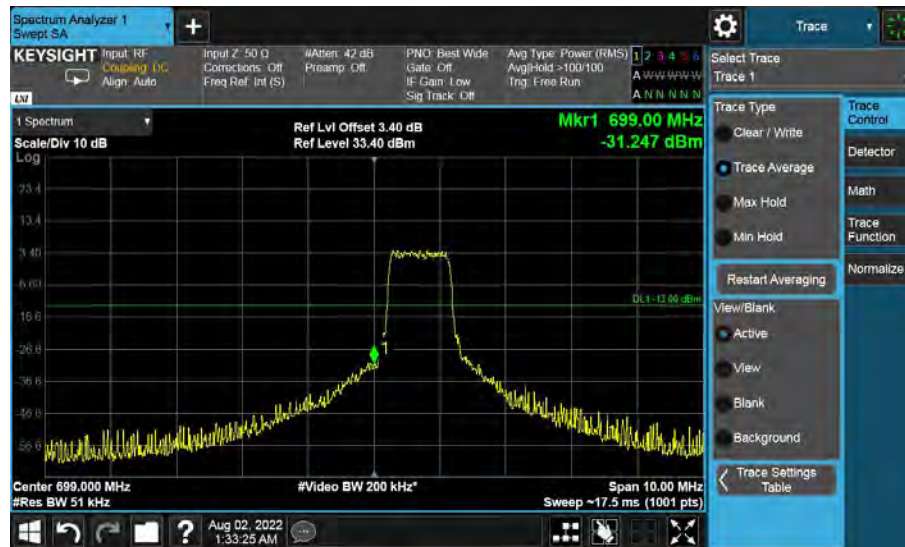
Low Channel-3MHz Bandwidth-6RB-QPSK



Low Channel-5MHz Bandwidth-1RB-16QAM



Low Channel-5MHz Bandwidth-1RB-QPSK



Low Channel-5MHz Bandwidth-6RB-16QAM



Low Channel-5MHz Bandwidth-6RB-QPSK



Low Channel-10MHz Bandwidth-1RB-16QAM



Low Channel-10MHz Bandwidth-1RB-QPSK

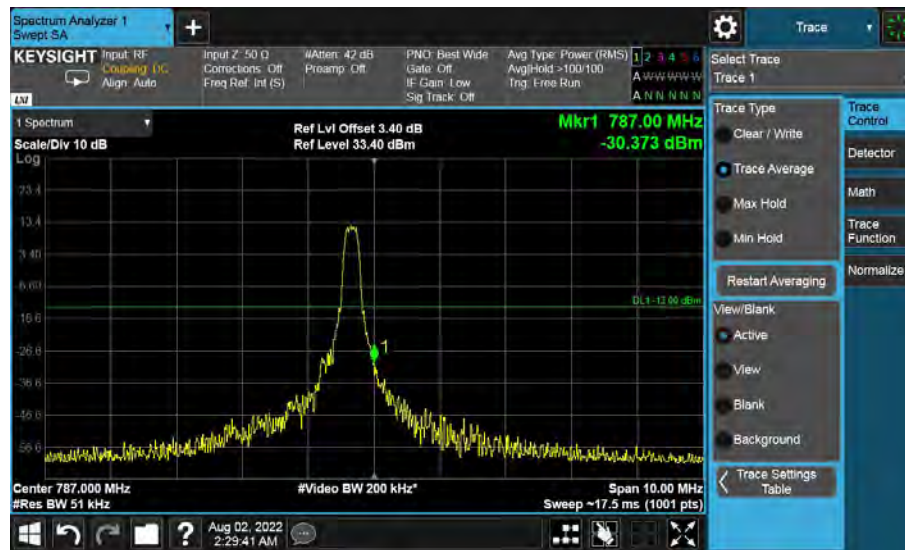


Low Channel-10MHz Bandwidth-6RB-16QAM



Low Channel-10MHz Bandwidth-6RB-QPSK

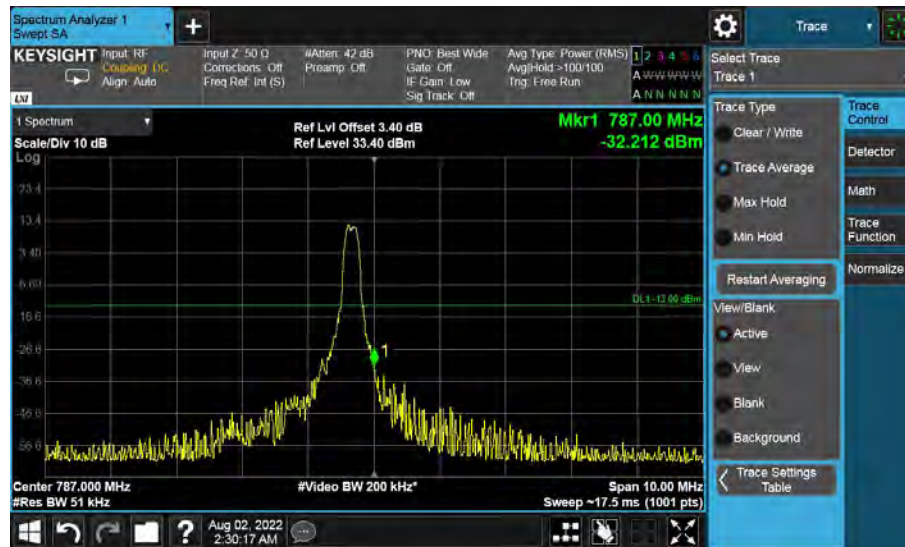
6.7.9 CAT-M Band13 Edge Results



High Channel-5MHz Bandwidth-1RB-16QAM



High Channel-5MHz Bandwidth-6RB-16QAM



High Channel-5MHz Bandwidth-1RB-QPSK



High Channel-5MHz Bandwidth-6RB-QPSK



High Channel-10MHz Bandwidth-1RB-16QAM



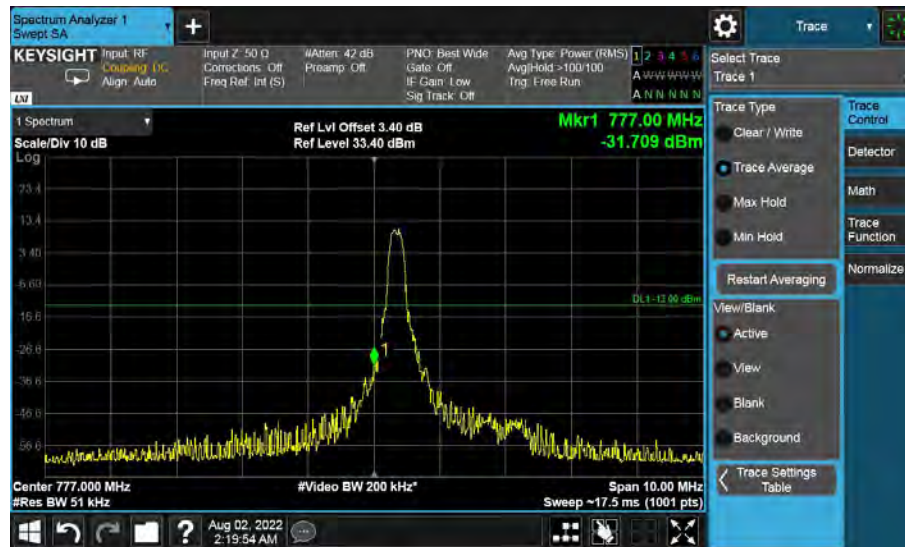
High Channel-10MHz Bandwidth-1RB-QPSK



High Channel-10MHz Bandwidth-6RB-16QAM



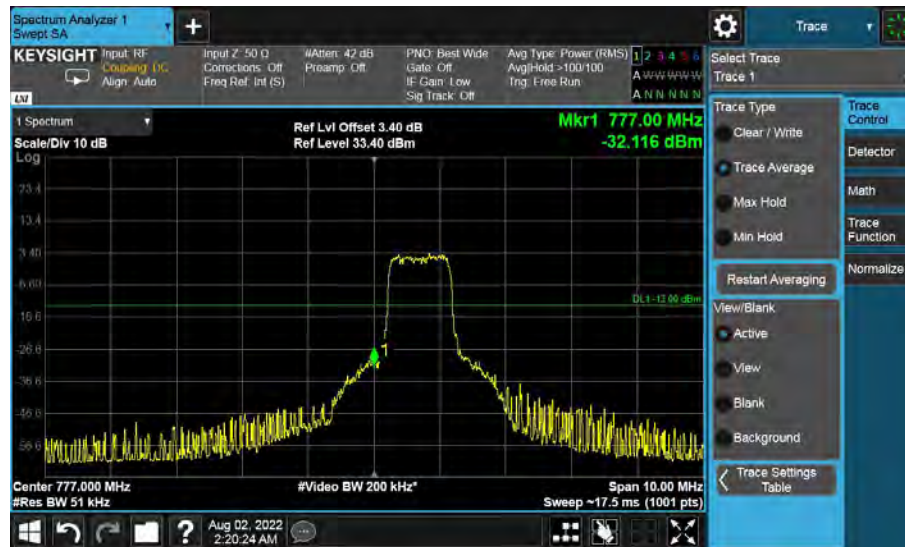
High Channel-10MHz Bandwidth-6RB-QPSK



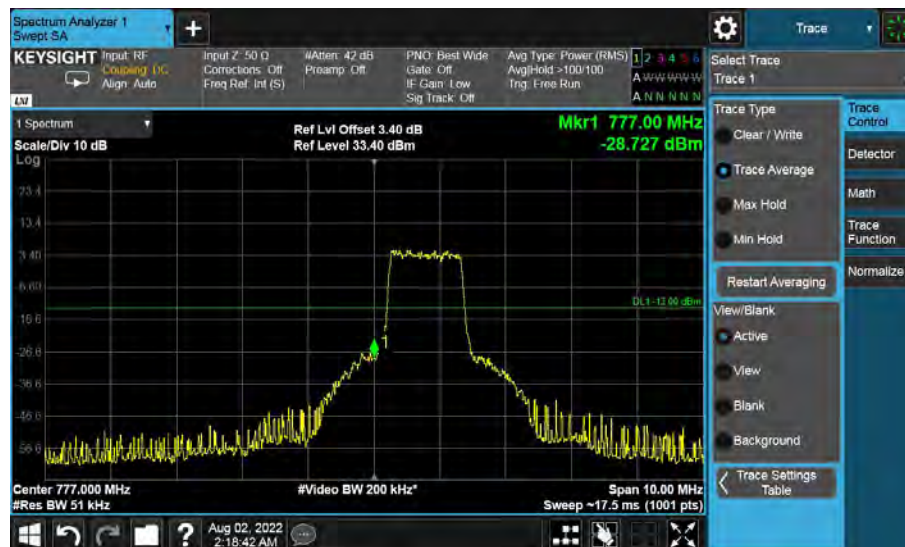
Low Channel-5MHz Bandwidth-1RB-16QAM



Low Channel-5MHz Bandwidth-1RB-QPSK



Low Channel-5MHz Bandwidth-6RB-16QAM



Low Channel-5MHz Bandwidth-6RB-QPSK



Low Channel-10MHz Bandwidth-1RB-16QAM



Low Channel-10MHz Bandwidth-1RB-QPSK



Low Channel-10MHz Bandwidth-6RB-16QAM



Low Channel-10MHz Bandwidth-6RB-QPSK

6.7.10 CAT-M Band26 Edge Results (814MHz-824M)

Note: According to Part 90.691: For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, the test result graph only shows the case where the limit is -13dbm. For the results of this section of data, see the mark peak value.



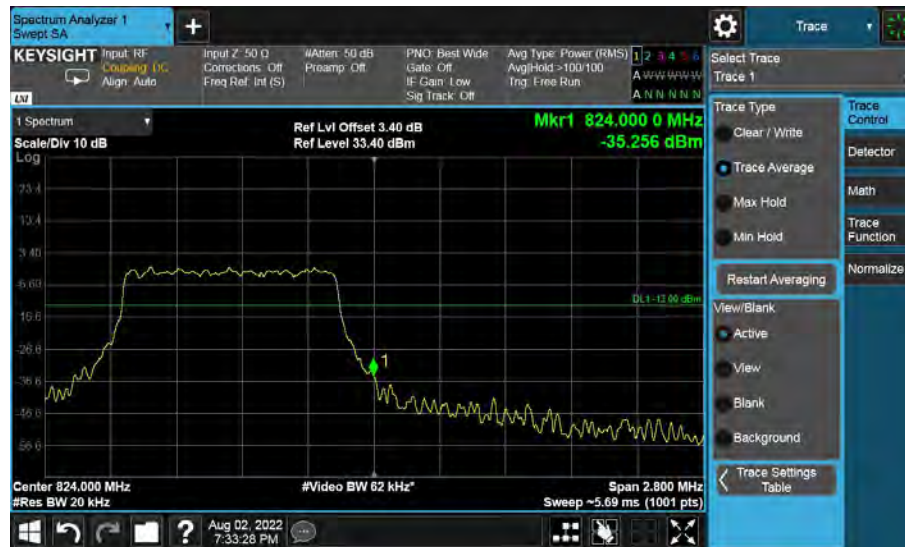
Band26-High Channel-1.4MHz Bandwidth-1RB-16QAM



Band26-High Channel-1.4MHz Bandwidth-1RB-QPSK

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Band26-High Channel-1.4MHz Bandwidth-6RB-16QAM



Band26-High Channel-1.4MHz Bandwidth-6RB-QPSK



Band26-High Channel-3MHz Bandwidth-1RB-16QAM



Band26-High Channel-3MHz Bandwidth-1RB-QPSK



Band26-High Channel-3MHz Bandwidth-6RB-16QAM



Band26-High Channel-3MHz Bandwidth-6RB-QPSK



Band26-High Channel-5MHz Bandwidth-1RB-16QAM



Band26-High Channel-5MHz Bandwidth-1RB-QPSK



Band26-High Channel-5MHz Bandwidth-6RB-16QAM



Band26-High Channel-5MHz Bandwidth-6RB-QPSK



Band26-High Channel-10MHz Bandwidth-1RB-16QAM



Band26-High Channel-10MHz Bandwidth-1RB-QPSK



Band26-High Channel-10MHz Bandwidth-6RB-16QAM



Band26-High Channel-10MHz Bandwidth-6RB-QPSK



Band26-Low Channel-1.4MHz Bandwidth-1RB-16QAM



Band26-Low Channel-1.4MHz Bandwidth-1RB-QPSK



Band26-Low Channel-1.4MHz Bandwidth-6RB-16QAM



Band26-Low Channel-1.4MHz Bandwidth-6RB-QPSK



Band26-Low Channel-3MHz Bandwidth-1RB-16QAM



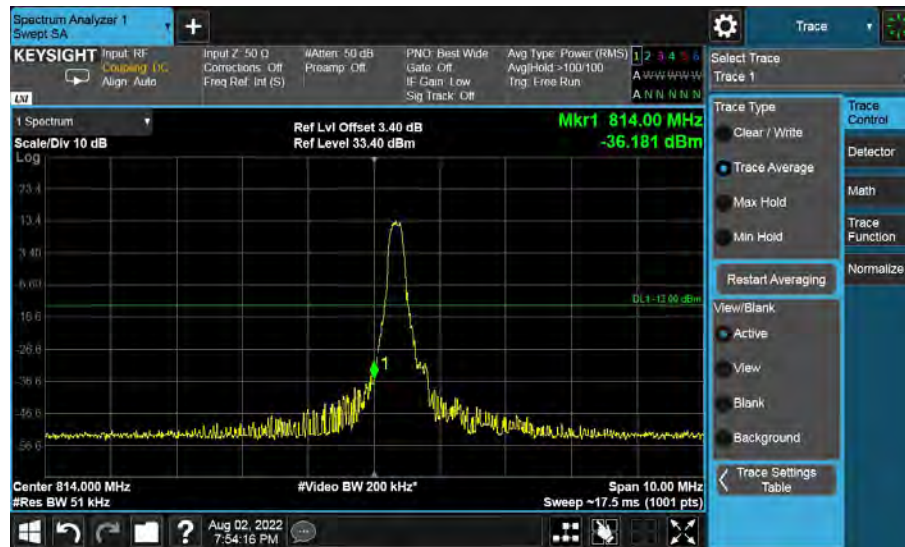
Band26-Low Channel-3MHz Bandwidth-1RB-QPSK



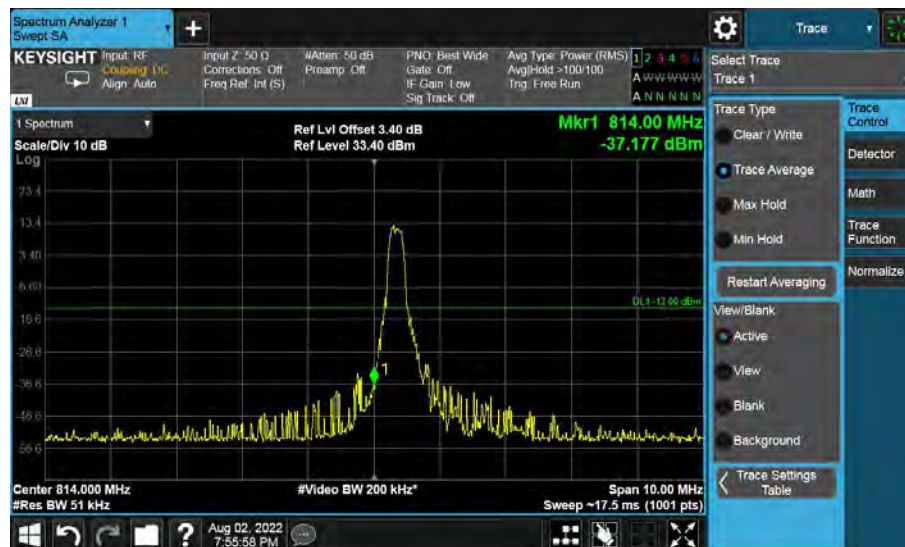
Band26-Low Channel-3MHz Bandwidth-6RB-16QAM



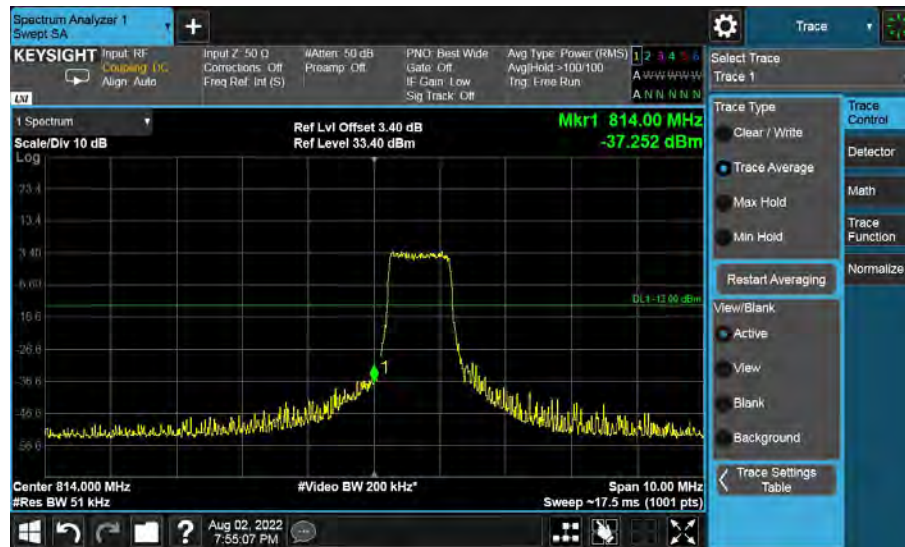
Band26-Low Channel-3MHz Bandwidth-6RB-QPSK



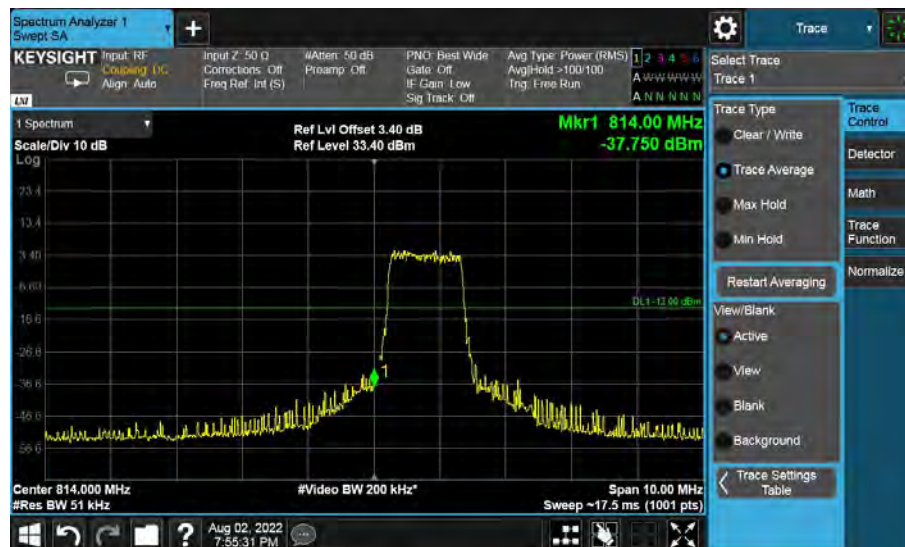
Band26-Low Channel-5MHz Bandwidth-1RB-16QAM



Band26-Low Channel-5MHz Bandwidth-1RB-QPSK



Band26-Low Channel-5MHz Bandwidth-6RB-16QAM



Band26-Low Channel-5MHz Bandwidth-6RB-QPSK



Band26-Low Channel-10MHz Bandwidth-1RB-16QAM



Band26-Low Channel-10MHz Bandwidth-1RB-QPSK



Band26-Low Channel-10MHz Bandwidth-6RB-16QAM



Band26-Low Channel-10MHz Bandwidth-6RB-QPSK

(824MHz-849MHz)



Band26-High Channel-1.4MHz Bandwidth-1RB-16QAM



Band26-High Channel-1.4MHz Bandwidth-1RB-QPSK

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Band26-High Channel-1.4MHz Bandwidth-6RB-16QAM



Band26-High Channel-1.4MHz Bandwidth-6RB-QPSK



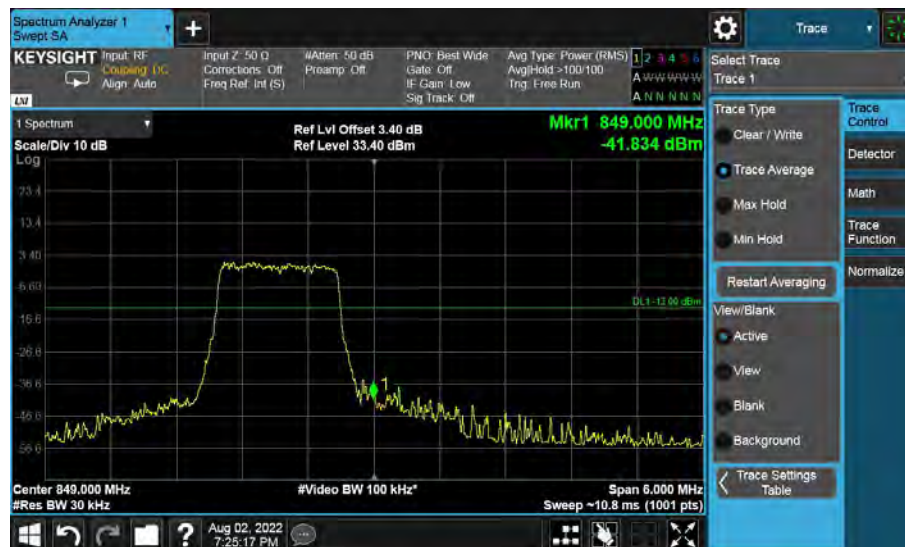
Band26-High Channel-3MHz Bandwidth-1RB-16QAM



Band26-High Channel-3MHz Bandwidth-1RB-QPSK



Band26-High Channel-3MHz Bandwidth-6RB-16QAM



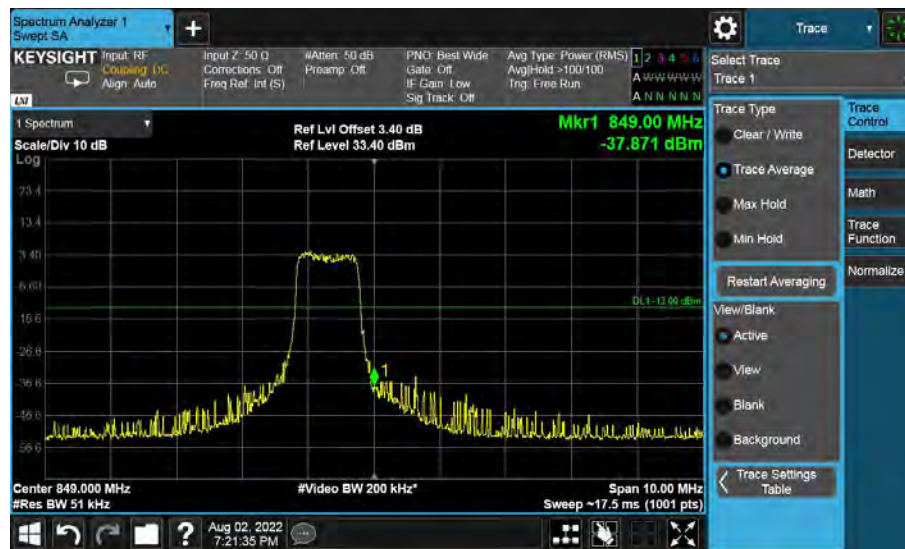
Band26-High Channel-3MHz Bandwidth-6RB-QPSK



Band26-High Channel-5MHz Bandwidth-1RB-16QAM



Band26-High Channel-5MHz Bandwidth-1RB-QPSK



Band26-High Channel-5MHz Bandwidth-6RB-16QAM



Band26-High Channel-5MHz Bandwidth-6RB-QPSK



Band26-High Channel-10MHz Bandwidth-1RB-16QAM



Band26-High Channel-10MHz Bandwidth-1RB-QPSK



Band26-High Channel-10MHz Bandwidth-6RB-16QAM



Band26-High Channel-10MHz Bandwidth-6RB-QPSK



Band26-Low Channel-1.4MHz Bandwidth-1RB-16QAM



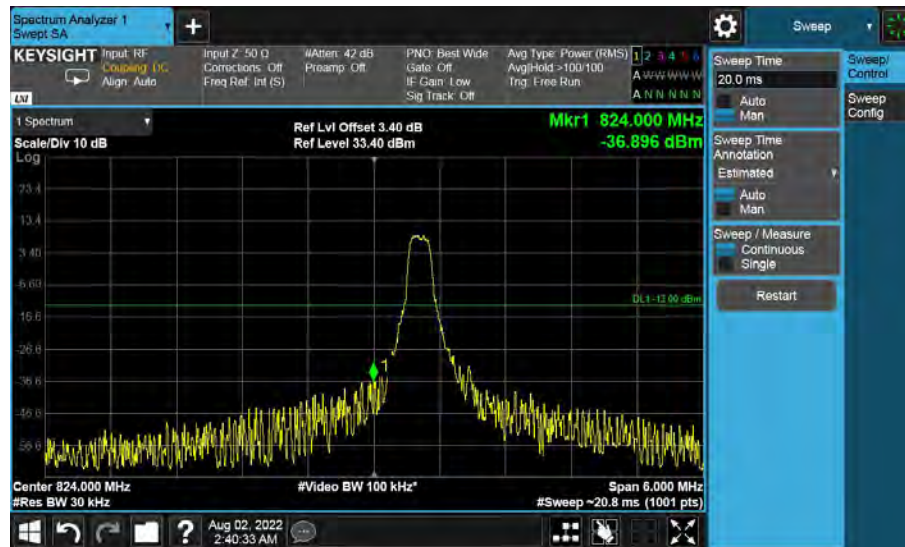
Band26-Low Channel-1.4MHz Bandwidth-1RB-QPSK



Band26-Low Channel-1.4MHz Bandwidth-6RB-16QAM



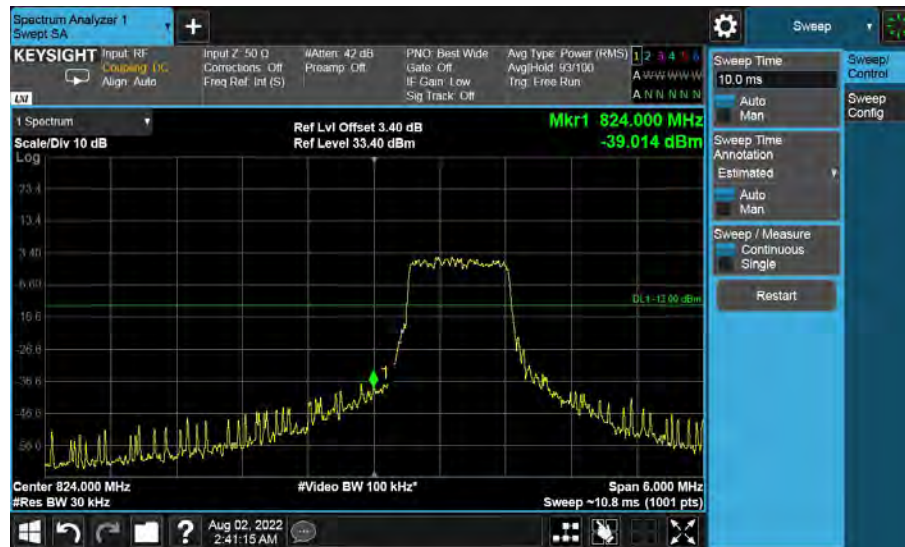
Band26-Low Channel-1.4MHz Bandwidth-6RB-QPSK



Band26-Low Channel-3MHz Bandwidth-1RB-16QAM



Band26-Low Channel-3MHz Bandwidth-1RB-QPSK



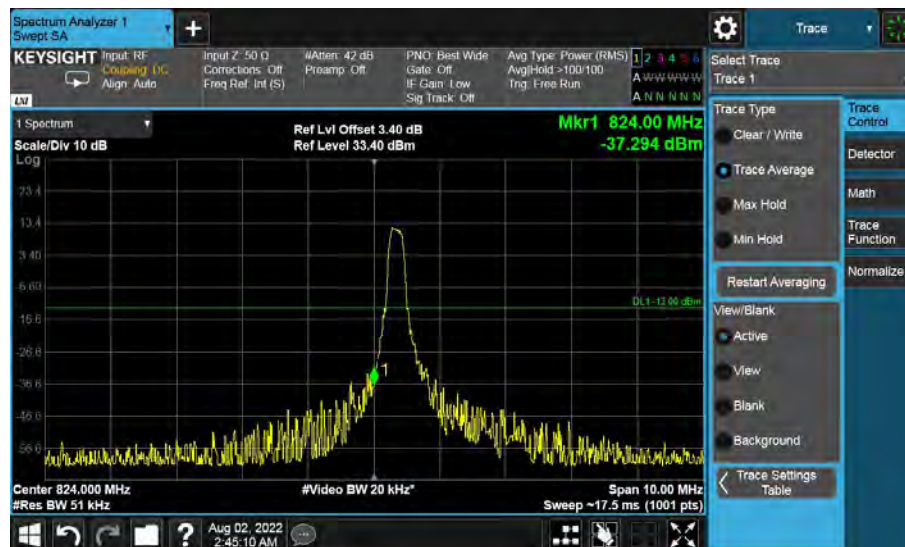
Band26-Low Channel-3MHz Bandwidth-6RB-16QAM



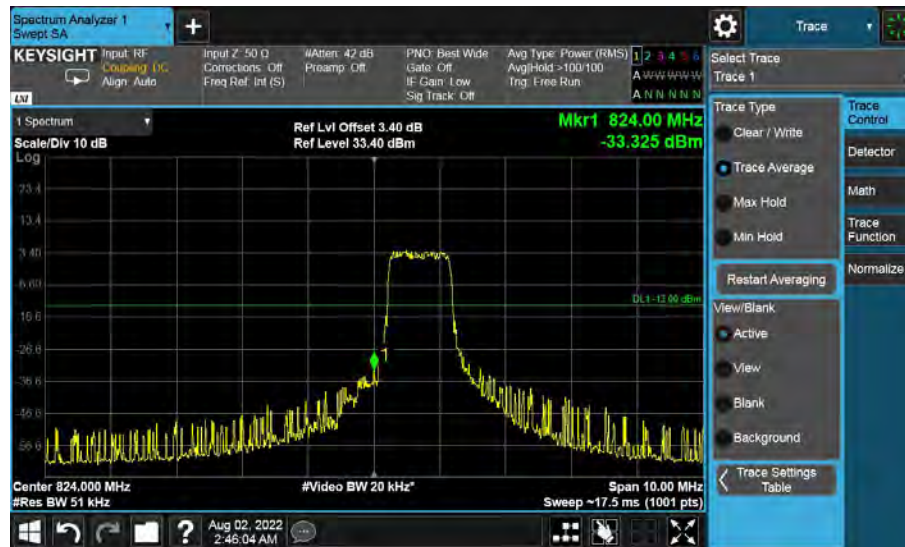
Band26-Low Channel-3MHz Bandwidth-6RB-QPSK



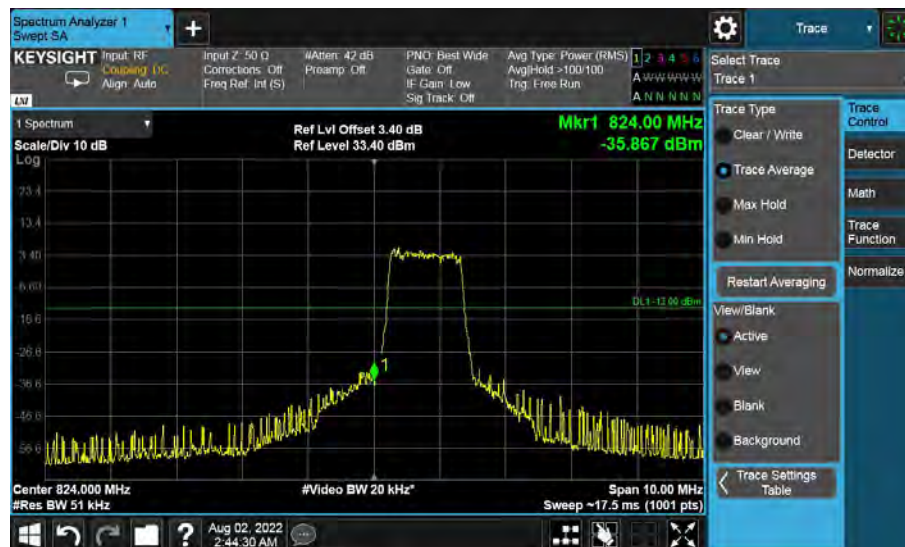
Band26-Low Channel-5MHz Bandwidth-1RB-16QAM



Band26-Low Channel-5MHz Bandwidth-1RB-QPSK



Band26-Low Channel-5MHz Bandwidth-6RB-16QAM



Band26-Low Channel-5MHz Bandwidth-6RB-QPSK



Band26-Low Channel-10MHz Bandwidth-1RB-16QAM



Band26-Low Channel-10MHz Bandwidth-1RB-QPSK



Band26-Low Channel-10MHz Bandwidth-6RB-16QAM



Band26-Low Channel-10MHz Bandwidth-6RB-QPSK

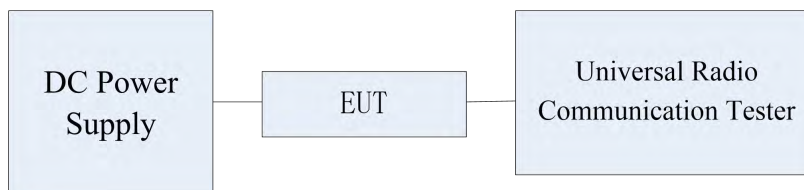
6.8 Frequency Stability over Voltage Variation

Specifications:	FCC Part 2.1055, 22.355, 24.235, 27.54,90.213
DUT Serial Number:	866884046100624
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit	
Frequency deviation [ppm]	±2.5

Test Setup

The EUT was placed in a shielding chamber and powered by an adjustable power supply, demonstrated as figure V. A Wireless Telecommunications Test Set was used to set the TX channel and power level, modulate the TX signal with different bit patterns and measure the frequency of TX.



Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty	15 Hz (k=2)

Test Method

The EUT was powered by the adjustable power supply. The frequency stability is measured by the Wireless Telecommunications Test Set.

Note: Only worst case result is given below.

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6.8.1 Frequency Stability over Temperature Variation Results

6.8.1.1 NB-IoT Band Frequency Stability over Temperature Variation Results

Band	Reference channel frequency (MHz)	Offset	Temperature[°C]								
			-30	-20	-10	0	10	20	30	40	50
2	1880	Hz	-5.76	11.22	18.57	16.97	7.11	0.99	-9.57	-20.50	-39.12
		ppm	-0.0031	0.0060	0.0099	0.0090	0.0038	0.0005	-0.0051	-0.0109	-0.0208
4	1732.5	Hz	-6.38	16.06	12.09	11.42	7.15	-0.49	-13.26	-25.66	-33.12
		ppm	-0.0037	0.0093	0.0070	0.0066	0.0041	-0.0003	-0.0077	-0.0148	-0.0191
12	707.5	Hz	1.75	8.15	10.33	9.47	10.04	5.46	-5.25	-5.52	-11.03
		ppm	0.0025	0.0115	0.0146	0.0134	0.0142	0.0077	-0.0074	-0.0078	-0.0156
13	782	Hz	-4.81	9.54	8.44	7.81	2.66	1.19	-5.55	-10.20	-15.81
		ppm	-0.0062	0.0122	0.0108	0.0100	0.0034	0.0015	-0.0071	-0.0130	-0.0202
26	819	Hz	-7.91	5.05	3.46	3.88	1.22	-5.02	-7.00	-12.67	-19.27
		ppm	-0.0097	0.0062	0.0042	0.0047	0.0015	-0.0061	-0.0085	-0.0155	-0.0235
	836.5	Hz	-3.96	8.57	7.68	8.41	6.59	2.17	-4.41	-10.67	-15.39
		ppm	-0.0047	0.0102	0.0092	0.0101	0.0079	0.0026	-0.0053	-0.0128	-0.0184

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6.8.1.2 CAT-M Band Frequency Stability over Temperature Variation Results

Band	Reference channel frequency (MHz)	Offset	Temperature[°C]								
			-30	-20	-10	0	10	20	30	40	50
2	1880	Hz	9.34	-1.20	-3.42	-4.92	-3.18	4.69	9.08	17.75	23.03
		ppm	0.0050	-0.0006	-0.0018	-0.0026	-0.0017	0.0025	0.0048	0.0094	0.0123
4	1732.5	Hz	7.98	0.96	-3.43	-4.15	-1.04	3.30	8.33	15.66	18.81
		ppm	0.0046	0.0006	-0.0020	-0.0024	-0.0006	0.0019	0.0048	0.0090	0.0109
12	707.5	Hz	-0.21	-8.45	-13.02	-12.85	-11.07	-5.59	2.16	9.04	13.23
		ppm	-0.0003	-0.0119	-0.0184	-0.0182	-0.0156	-0.0079	0.0031	0.0128	0.0187
13	782	Hz	2.13	-8.96	-14.99	-14.93	-11.56	-4.36	0.94	9.78	15.12
		ppm	-0.0115	-0.0192	-0.0191	-0.0148	-0.0056	0.0012	0.0125	0.0193	-0.0115
26	819	Hz	-0.74	-10.04	-15.26	-15.38	-12.23	-5.56	-1.37	5.71	11.47
		ppm	-0.0009	-0.0123	-0.0186	-0.0188	-0.0149	-0.0068	-0.0017	0.0070	0.0140
	836.5	Hz	0.53	-9.06	-12.06	-13.70	-10.53	-4.26	1.33	7.45	13.79
		ppm	0.0006	-0.0108	-0.0144	-0.0164	-0.0126	-0.0051	0.0016	0.0089	0.0165

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6.8.2 Frequency Stability over Voltage Variation

6.8.2.1 NB-IoT Band Frequency Stability over Voltage Variation Results

Test data:

Band	Reference channel frequency (MHz)	Offset	Voltage (V)		
			3.4	3.8	4.2
2	1880	Hz	-16.55	-20.48	-17.61
		ppm	-0.0088	-0.0109	-0.0094
4	1732.5	Hz	-14.66	-22.67	-13.58
		ppm	-0.0085	-0.0131	-0.0078
12	707.5	Hz	-2.07	-5.88	-2.45
		ppm	-0.0029	-0.0083	-0.0035
13	782	Hz	-9.08	-6.37	-9
		ppm	-0.0116	-0.0081	-0.0115
26	819	Hz	-10.49	-11.43	-10.53
		ppm	-0.0128	-0.0140	-0.0129
	836.5	Hz	-7.8	-9.81	-8.83
		ppm	-0.0093	-0.0117	-0.0106

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6.8.2.2 CAT-M Band Frequency Stability over Voltage Variation Results

Test data:

Band	Reference channel frequency (MHz)	Offset	Voltage (V)		
			3.4	3.8	4.2
2	1880	Hz	11.86	12.76	14.38
		ppm	0.0063	0.0068	0.0076
4	1732.5	Hz	9	10.93	12.09
		ppm	0.0052	0.0063	0.0070
12	707.5	Hz	2.02	3	2.46
		ppm	0.0029	0.0042	0.0035
13	782	Hz	2.83	2.63	3
		ppm	0.0036	0.0034	0.0038
26	819	Hz	1.14	1.97	0.57
		ppm	0.0014	0.0024	0.0007
	836.5	Hz	3.85	1.37	2.43
		ppm	0.0046	0.0016	0.0029

6.9 Peak to Average Ratio

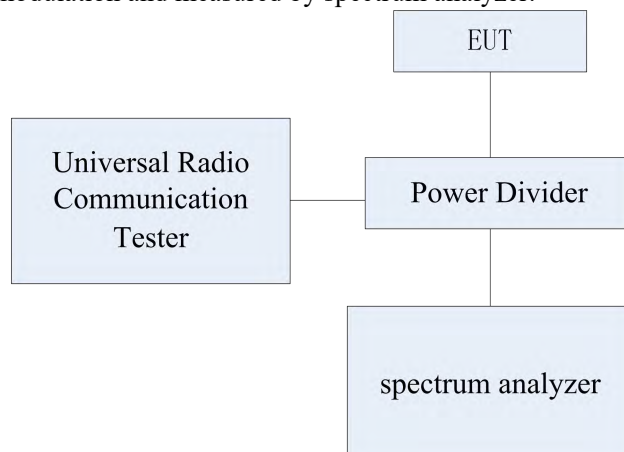
Specifications:	FCC Part 24.232, 27.50
DUT Serial Number:	866884046100624
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa
Test Results:	Pass

Limit

The EUT meets the requirement of having a peak to average ratio of less than 13dB.

Test Setup

During the test, the EUT was controlled via the Wireless Communications Test Set to ensure max power transmission and proper modulation and measured by spectrum analyzer.



Measurement Uncertainty:

Item	Uncertainty
Expanded Uncertainty	0.62 dB (k=2)

Test Method

The transmitter output was connected to a CMW500 through a coaxial RF cable and directional coupler, and configured to operate at maximum power. The peak to average ratio was measured at the required operating frequencies in each Band on the Spectrum Analyzer.

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6.9.1 NB-IoT Peak to Average Ratio Results

Mode	Channel	Frequency (MHz)	PAPR(dB)	PAPR(dB)
			QPSK	BPSK
Band2	18900	1880	9.31	7.94
Band4	20175	1732.5	8.67	8.32
Band12	23095	707.5	8.42	8.25
Band13	23230	782.0	8.55	8.21
Band26 (814MH-824MHz)	26740	819	8.29	8.28
Band26 (824MH-849MHz)	26915	836.5	8.10	8.13

6.9.2 CAT-M Peak to Average Ratio Results

Mode	Bandwidth	Modulation	Channel/Frequency (MHz)	PAPR (dB)
Band2	1.4MHz	QPSK	18900/1880	9.96
		16QAM	18900/1880	10.75
	3MHz	QPSK	18900/1880	10.17
		16QAM	18900/1880	11.30
	5MHz	QPSK	18900/1880	9.82
		16QAM	18900/1880	10.37
	10MHz	QPSK	18900/1880	10.55
		16QAM	18900/1880	10.49
	15MHz	QPSK	18900/1880	9.26
		16QAM	18900/1880	9.75
	20MHz	QPSK	18900/1880	9.40
		16QAM	18900/1880	9.70
Band4	1.4MHz	QPSK	20175/1732.5	9.07
		16QAM	20175/1732.5	9.74
	3MHz	QPSK	20175/1732.5	10.76
		16QAM	20175/1732.5	10.01
	5MHz	QPSK	20175/1732.5	9.29
		16QAM	20175/1732.5	9.80
	10MHz	QPSK	20175/1732.5	8.49
		16QAM	20175/1732.5	9.81
	15MHz	QPSK	20175/1732.5	9.27
		16QAM	20175/1732.5	9.16
	20MHz	QPSK	20175/1732.5	8.38
		16QAM	20175/1732.5	8.64
Band12	1.4MHz	QPSK	23095/707.5	10.51
		16QAM	23095/707.5	11.00
	3MHz	QPSK	23095/707.5	10.67
		16QAM	23095/707.5	11.06
	5MHz	QPSK	23095/707.5	10.83
		16QAM	23095/707.5	10.96
	10MHz	QPSK	23095/707.5	10.76
		16QAM	23095/707.5	10.81
Band13	5MHz	QPSK	23230/782.0	10.93
		16QAM	23230/782.0	11.16
	10MHz	QPSK	23230/782.0	10.87

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		16QAM	23230/782.0	11.20
Band26 (814MHz- 824MHz)	1.4MHz	QPSK	26740/819	10.63
		16QAM	26740/819	10.40
	3MHz	QPSK	26740/819	10.46
		16QAM	26740/819	11.16
	5MHz	QPSK	26740/819	11.13
		16QAM	26740/819	11.03
	10MHz	QPSK	26740/819	10.68
		16QAM	26740/819	11.06
Band26 (824MHz- 849MHz)	1.4MHz	QPSK	26915/836.5	10.63
		16QAM	26915/836.5	10.97
	3MHz	QPSK	26915/836.5	10.49
		16QAM	26915/836.5	11.10
	5MHz	QPSK	26915/836.5	11.08
		16QAM	26915/836.5	11.14
	10MHz	QPSK	26915/836.5	10.81
		16QAM	26915/836.5	10.97

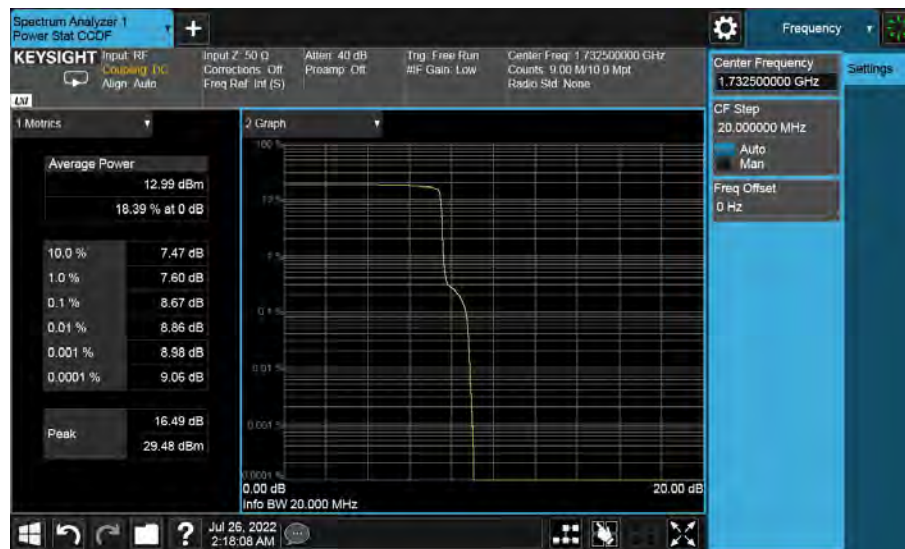
Graphical for Peak to Average Ratio Results for NB-IoT:



Band2-CH18900-1880MHz-QPSK



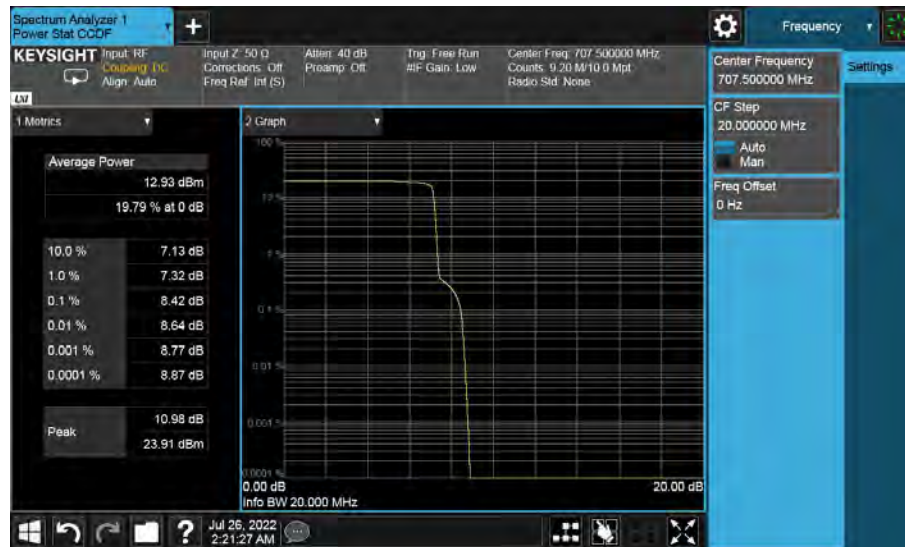
Band2-CH18900-1880MHz-BPSK



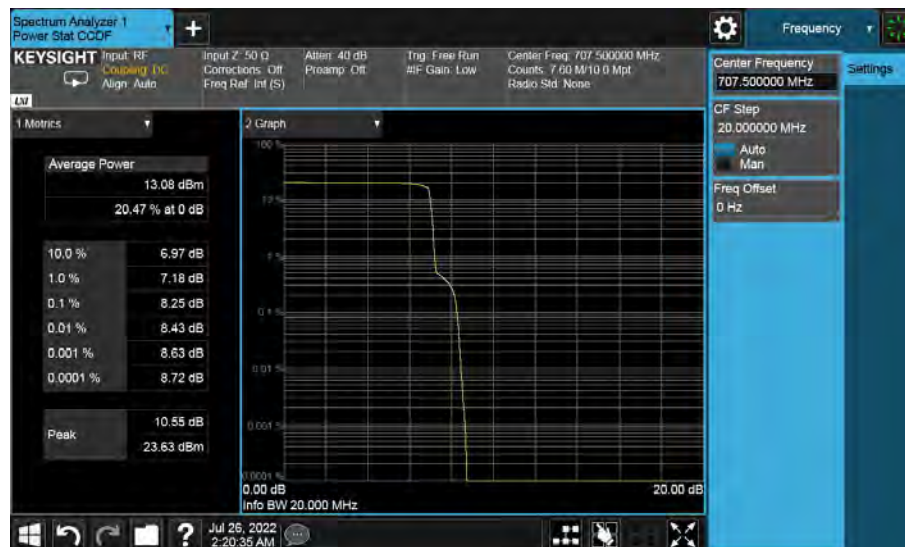
Band4-CH20175-1732.5MHz-QPSK



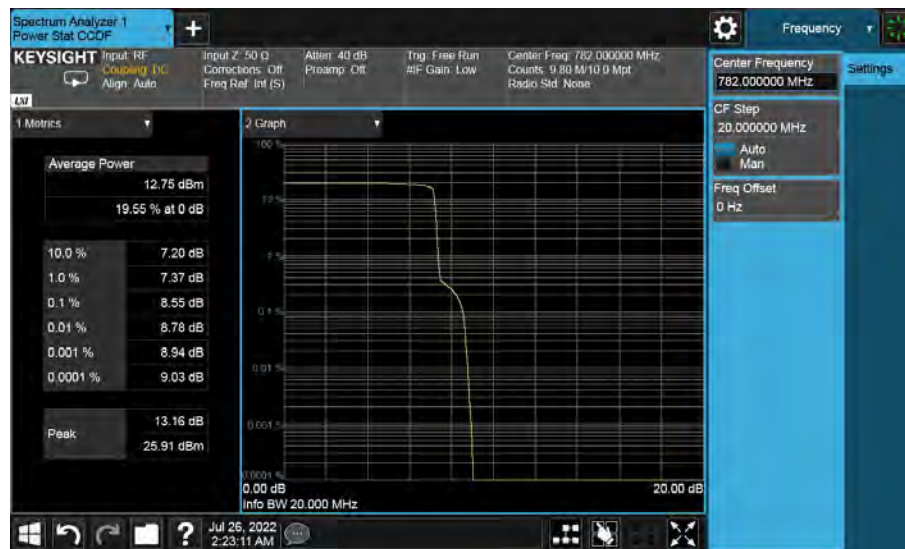
Band4- CH20175-1732.5MHz -BPSK



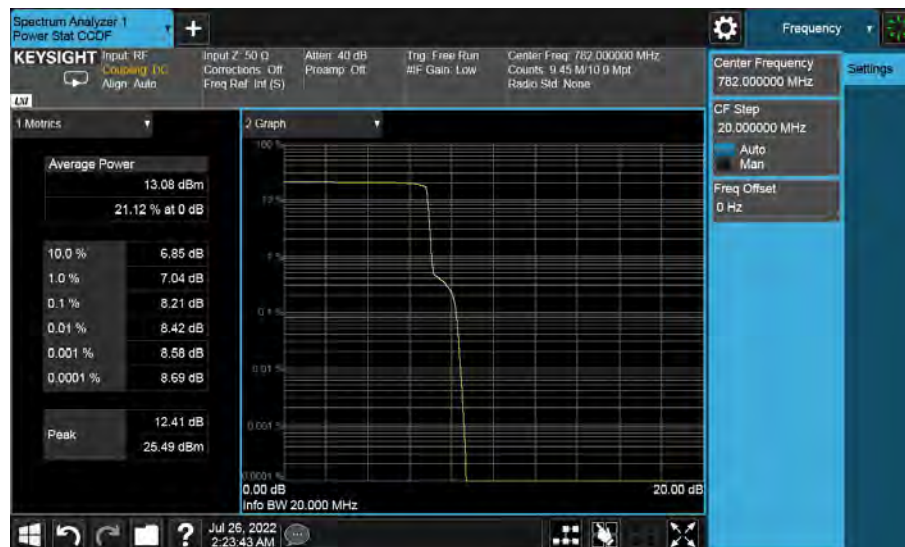
Band12-CH23095-707.5MHz-QPSK



Band12- CH23095-707.5MHz -BPSK

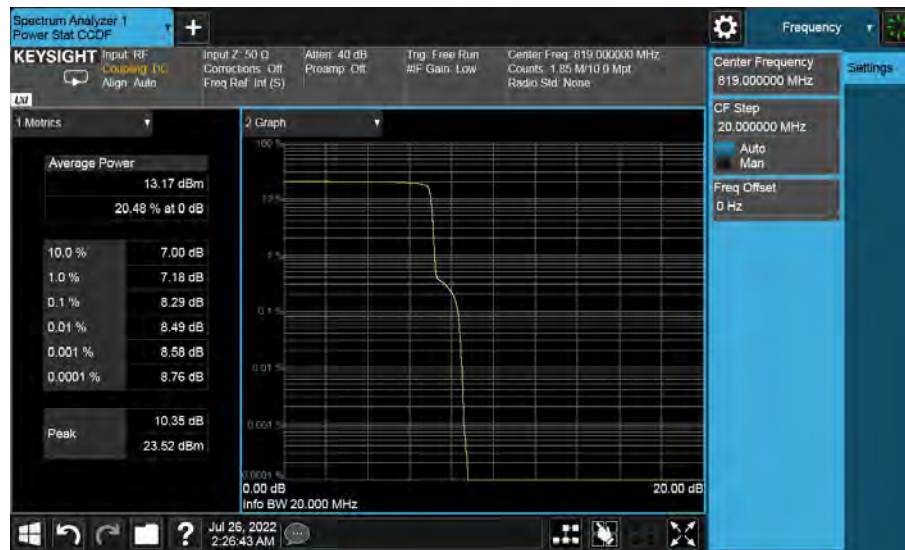


Band13-CH23230-782MHz-QPSK

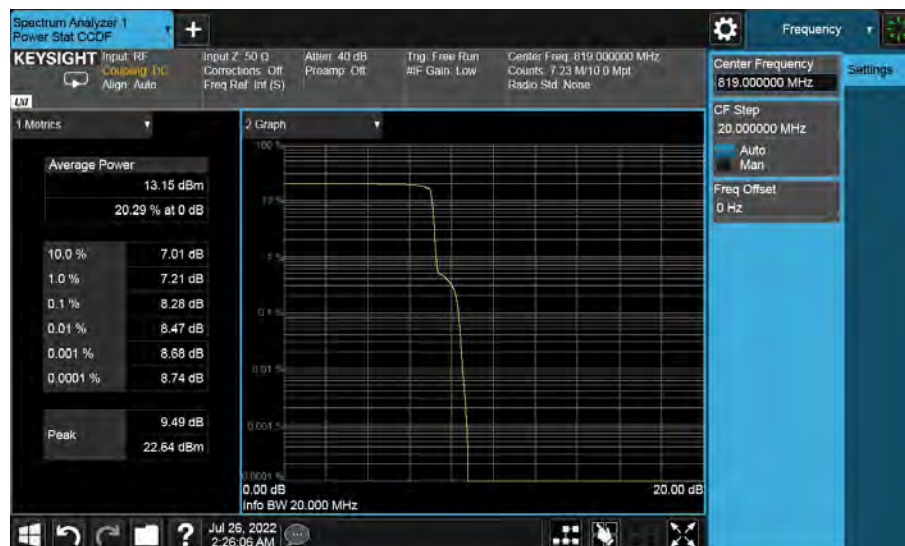


Band13- CH23230-782MHz -BPSK

Part(814MHz-824MHz)

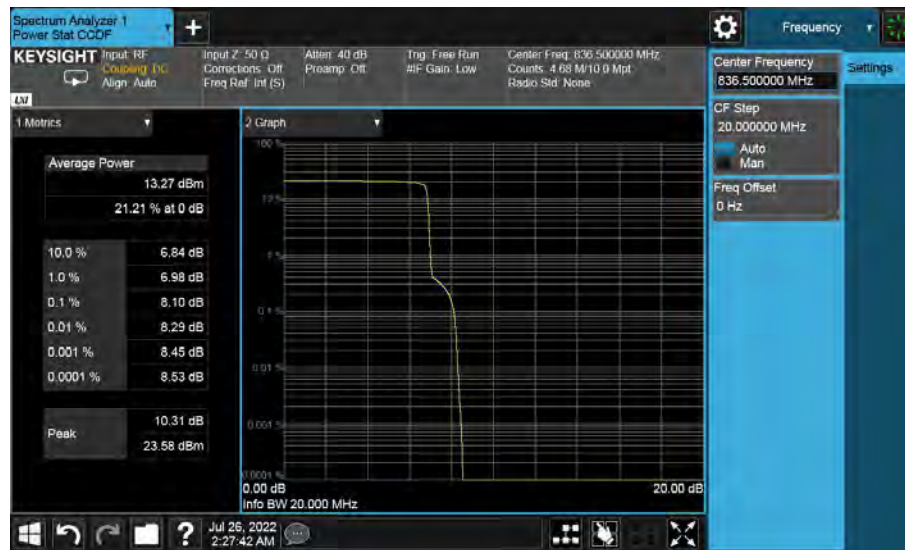


Band26-CH26740-819MHz-QPSK

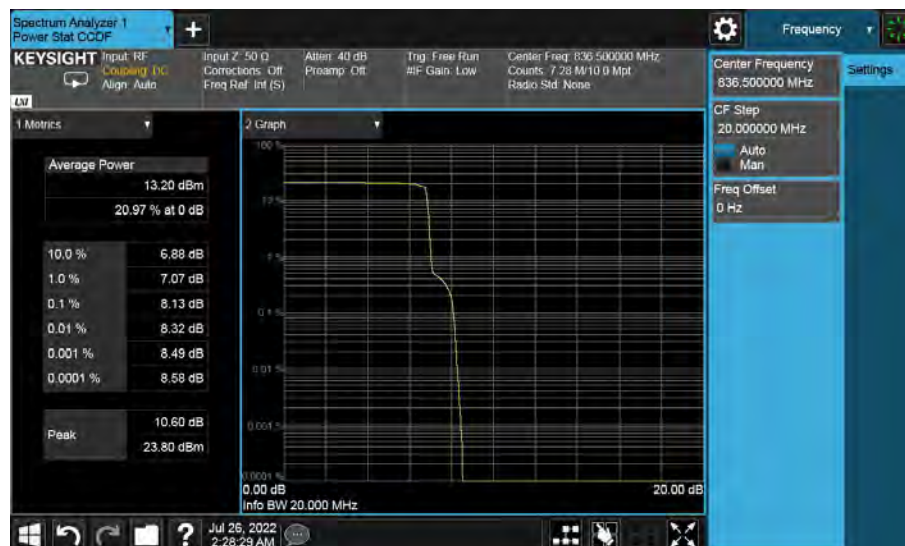


Band26-CH26740-819MHz-BPSK

Part(824MHz-849MHz)



Band26-CH26915-836.5MHz-QPSK



Band26-CH26915-836.5MHz-BPSK

Graphical for Peak to Average Ratio Results for CAT-M:



Band2-CH18900-1880MHz-1.4MHz Bandwidth-QPSK



Band2-CH18900-1880MHz-1.4MHz Bandwidth-16QAM

Keysight Spectrum Analyzer 1
Power Stat CCDF

KEYSIGHT Input RF: 50 Ω, Corrections: Off, Freq Ref: Int (S)
Output: 40 dB, Preamp: Off, Trig: Free Run, #F Gain: Low
Center Freq: 1.880000000 GHz, Counts: 8.00 M/10.0 Mpt, Radio Std: None

1 Metrics

Average Power	
	13.94 dBm
	20.41 % at 0 dB
10.0 %	6.01 dB
1.0 %	10.10 dB
0.1 %	11.30 dB
0.01 %	11.60 dB
0.001 %	11.71 dB
0.0001 %	11.74 dB
Peak	
	12.70 dB
	26.64 dBm

2 Graph

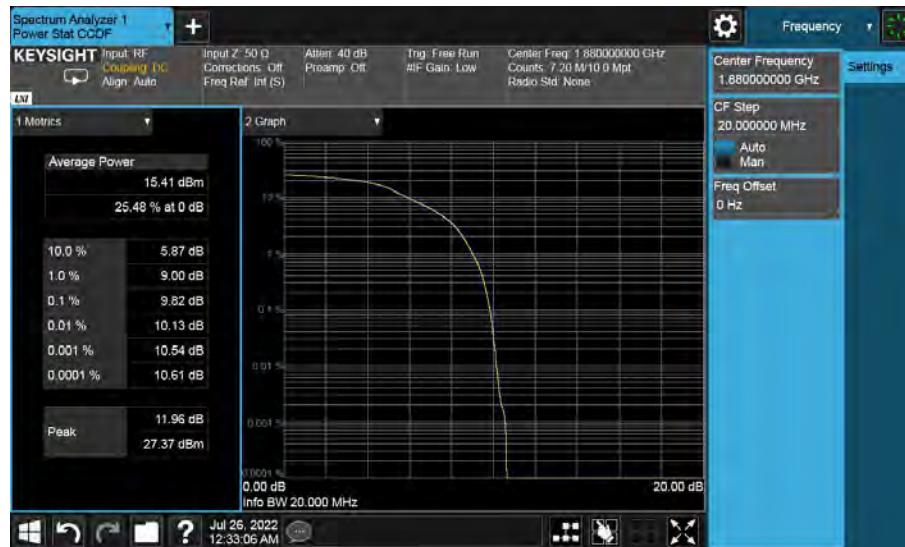
Y-axis: Power (dBm) from 0.0001 to 100
X-axis: Frequency (MHz) from 0 to 20.000
Info BW 20.000 MHz

Settings

Center Frequency: 1.880000000 GHz
CF Step: 20.000000 MHz
Auto (selected) / Man
Freq Offset: 0 Hz

Windows taskbar: Jul 26, 2022 12:21:43 AM

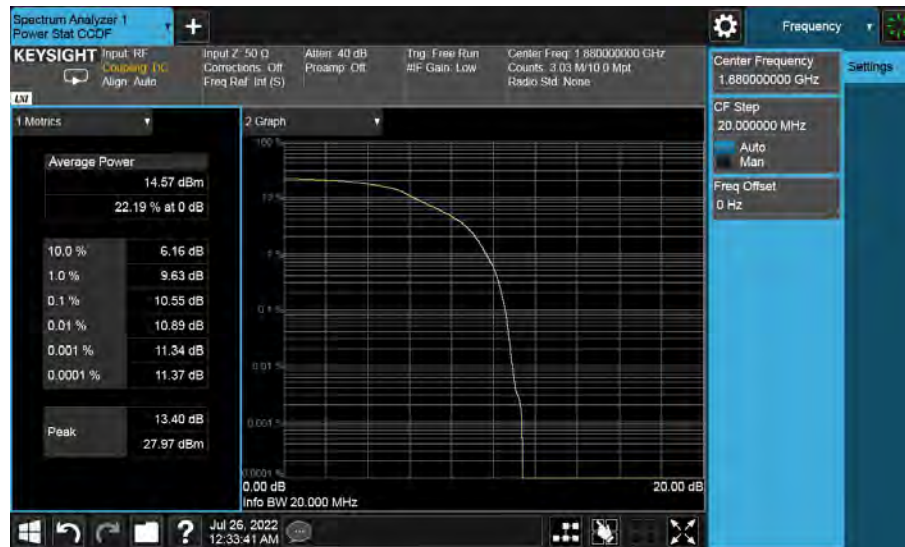
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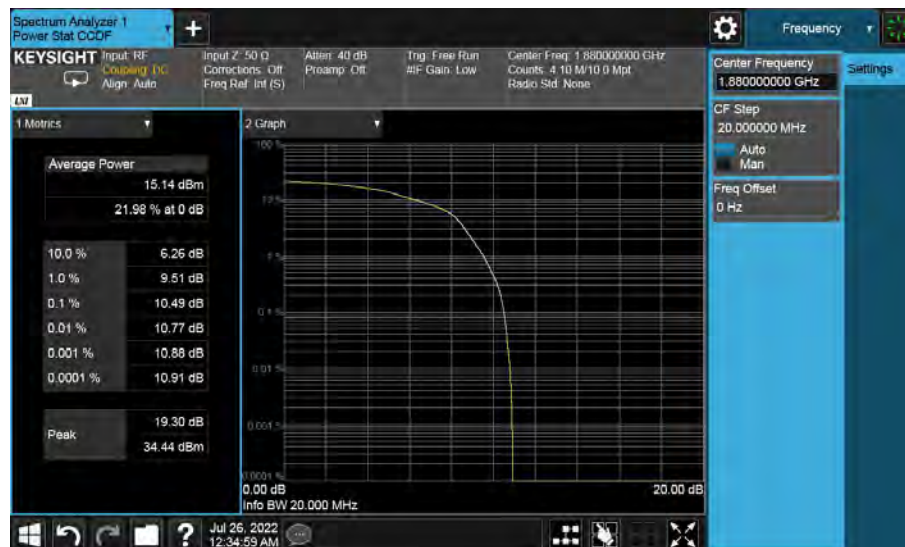
Band2-CH18900-1880MHz-5MHz Bandwidth-QPSK



Band2-CH18900-1880MHz-5MHz Bandwidth-16QAM



Band2-CH18900-1880MHz-10MHz Bandwidth-QPSK



Band2-CH18900-1880MHz-10MHz Bandwidth-16QAM



Band2-CH18900-1880MHz-15MHz Bandwidth-QPSK



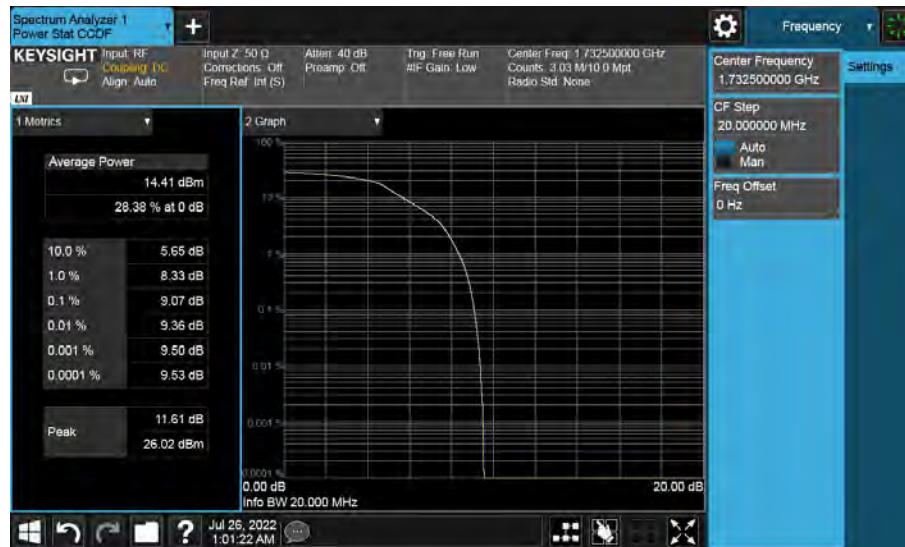
Band2-CH18900-1880MHz-15MHz Bandwidth-16QAM



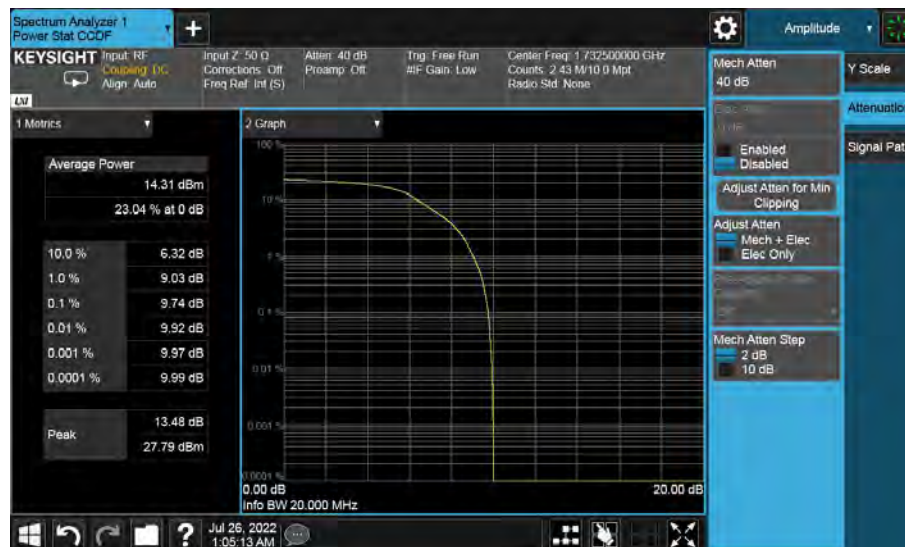
Band2-CH18900-1880MHz-20MHz Bandwidth-QPSK



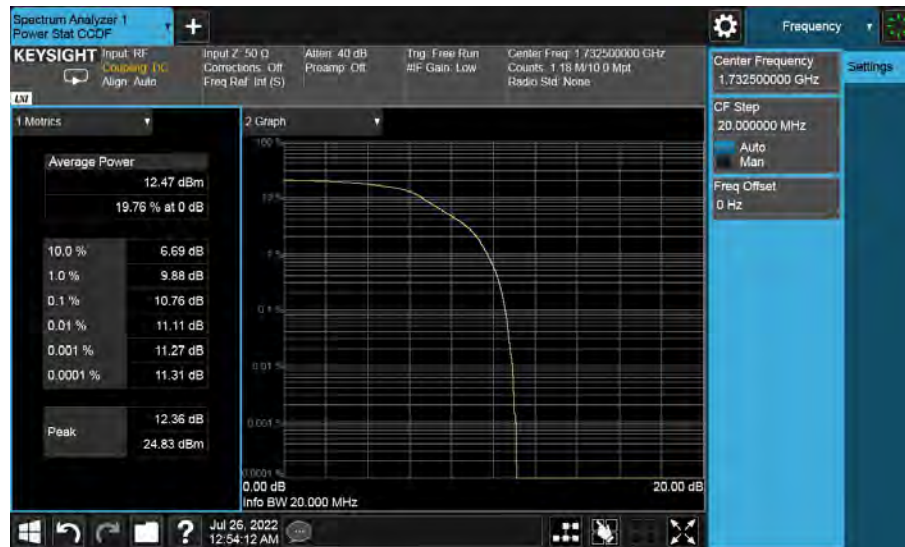
Band2-CH18900-1880MHz-20MHz Bandwidth-16QAM



Band4-CH20175-707.5MHz -1.4MHz Bandwidth-QPSK



Band4-CH20175-707.5MHz -1.4MHz Bandwidth-16QAM



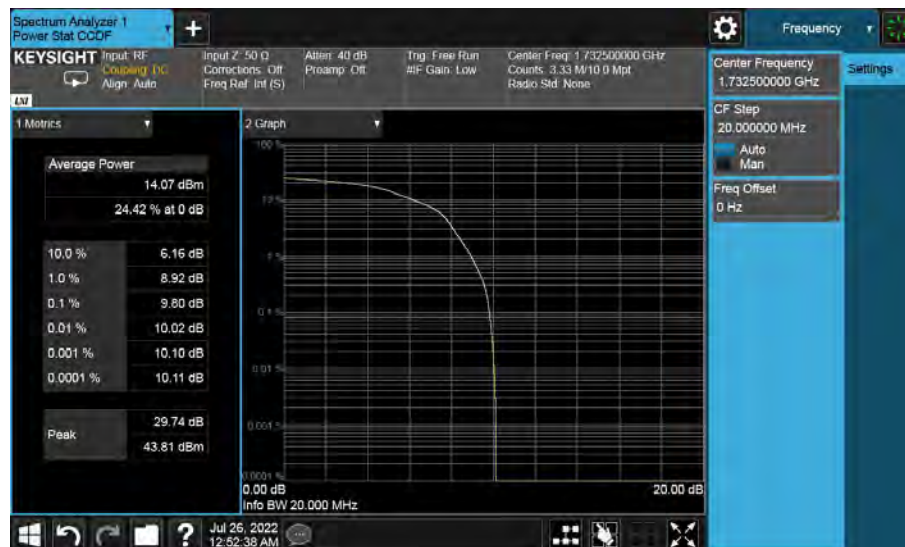
Band4-CH20175-707.5MHz -3MHz Bandwidth-QPSK



Band4-CH20175-707.5MHz -3MHz Bandwidth-16QAM



Band4-CH20175-707.5MHz -5MHz Bandwidth-QPSK



Band4-CH20175-707.5MHz-5MHz Bandwidth-16QAM



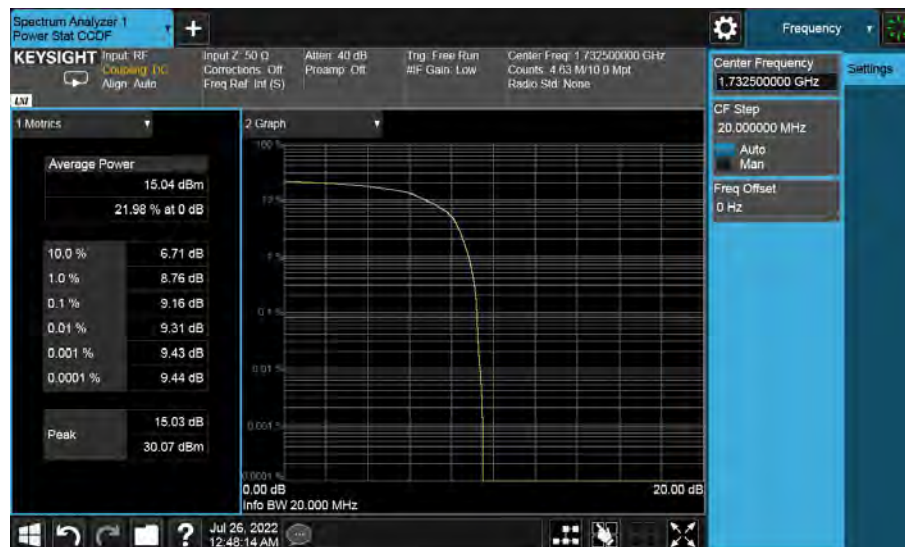
Band4-CH20175-707.5MHz-10MHz Bandwidth-QPSK



Band4-CH20175-707.5MHz-10MHz Bandwidth-16QAM



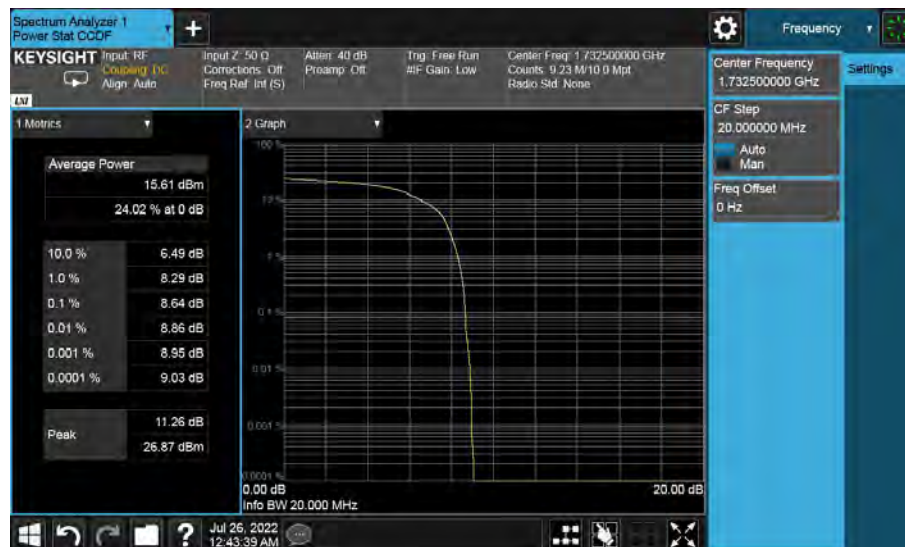
Band4-CH20175-707.5MHz -15MHz Bandwidth-QPSK



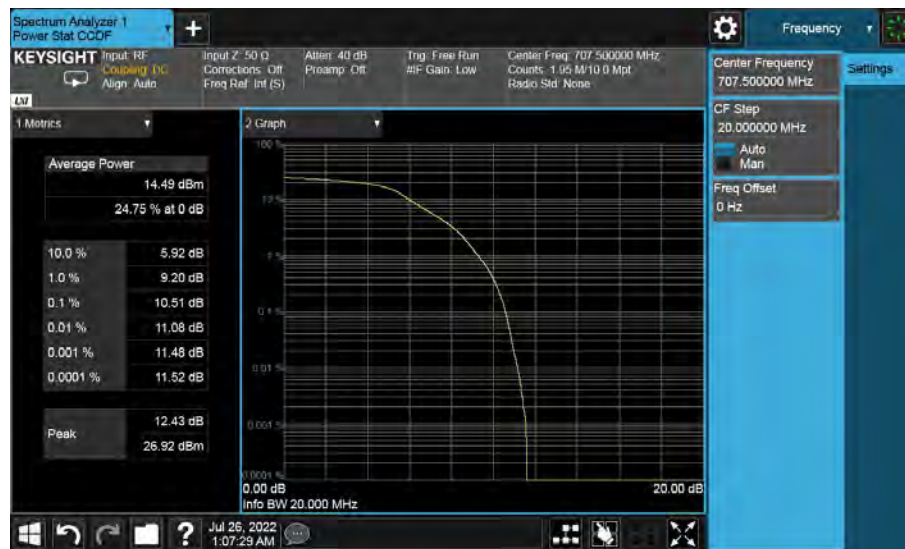
Band4-CH20175-707.5MHz-15MHz Bandwidth-16QAM



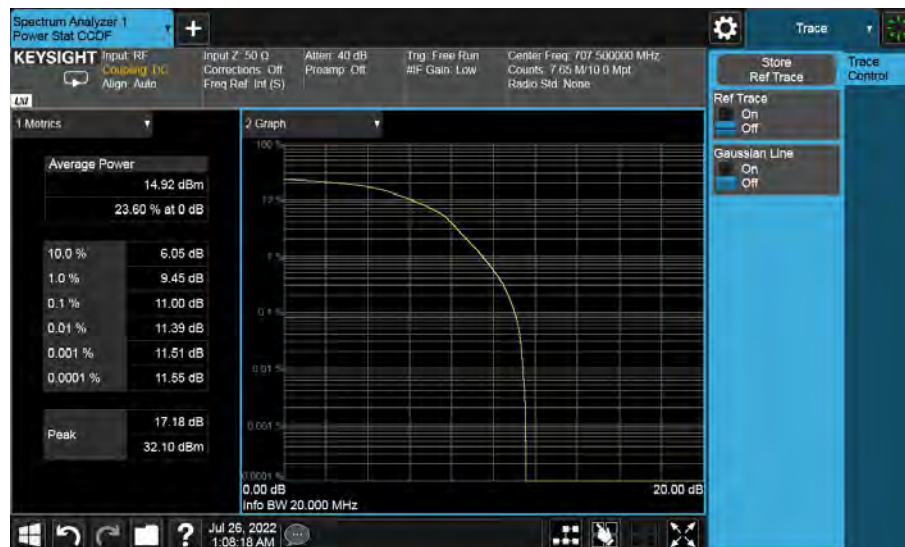
Band4-CH20175-707.5MHz-20MHz Bandwidth-QPSK



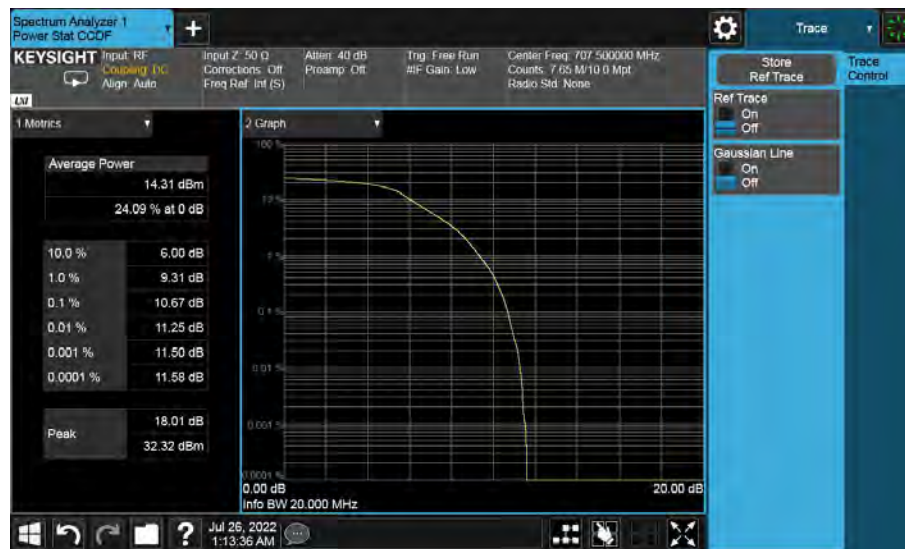
Band4-CH20175-707.5MHz-20MHz Bandwidth-16QAM



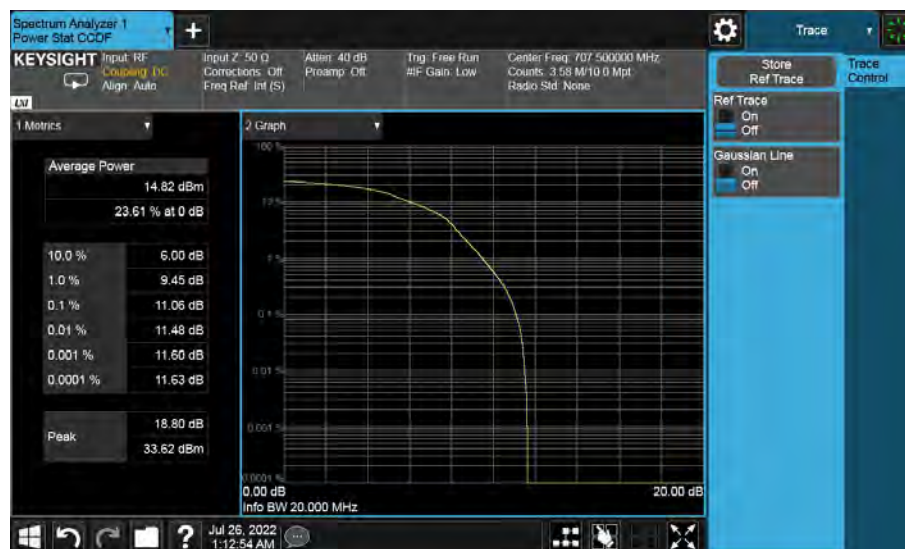
Band12-CH23095-707.5MHz-1.4MHz Bandwidth-QPSK



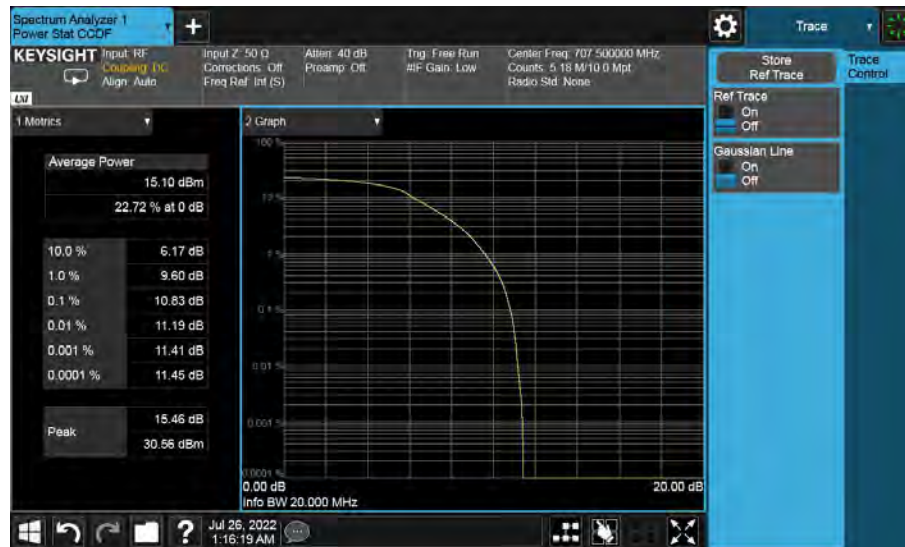
Band12-CH23095-707.5MHz-1.4MHz Bandwidth-16QAM



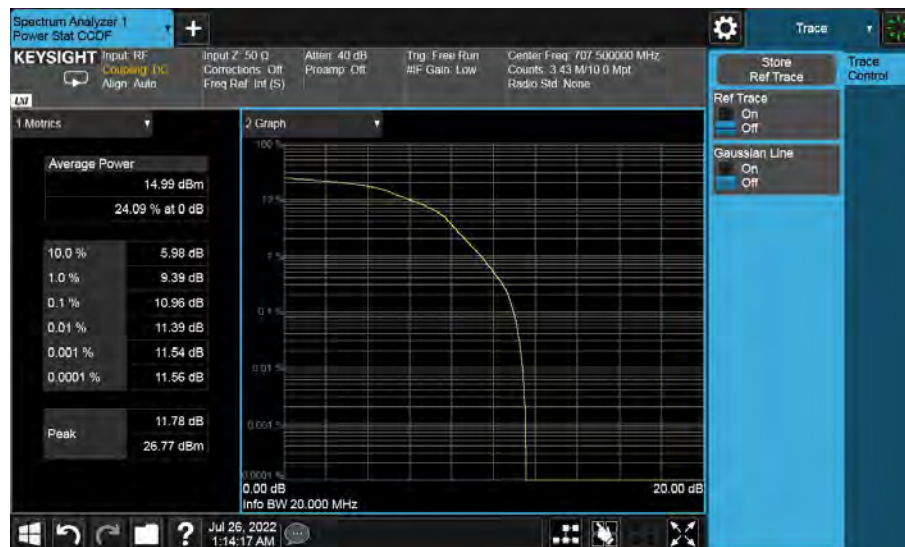
Band12-CH23095-707.5MHz-3MHz Bandwidth-QPSK



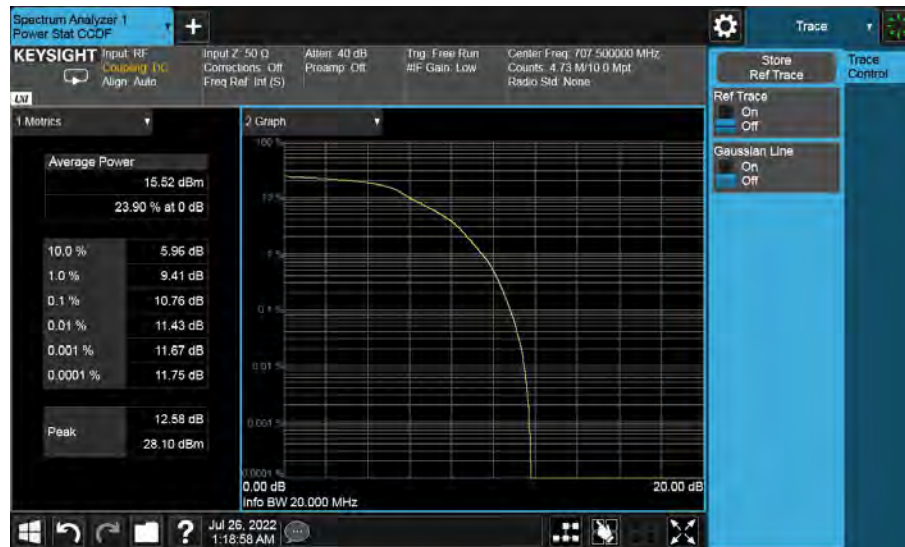
Band12-CH23095-707.5MHz-3MHz Bandwidth-16QAM



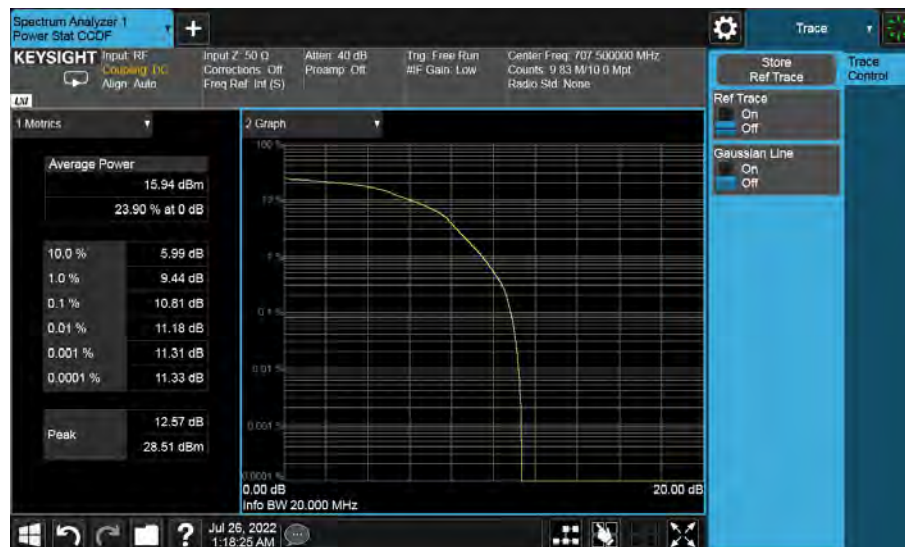
Band12-CH23095-707.5MHz-5MHz Bandwidth-QPSK



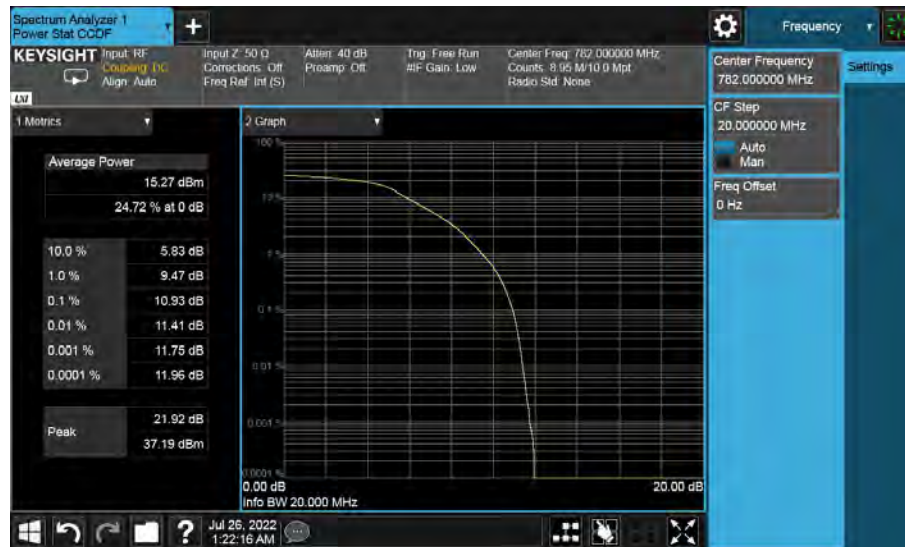
Band12-CH23095-707.5MHz-5MHz Bandwidth-16QAM



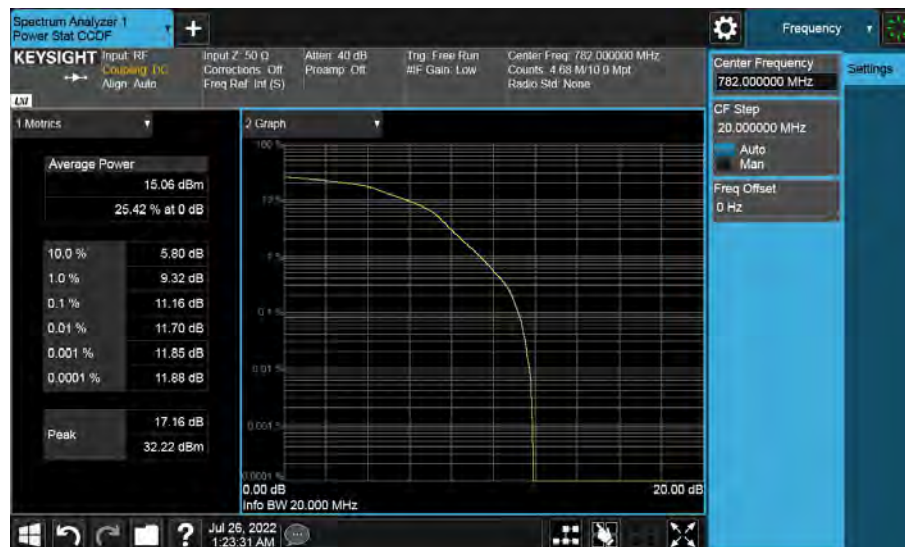
Band12-CH23095-707.5MHz-10MHz Bandwidth-QPSK



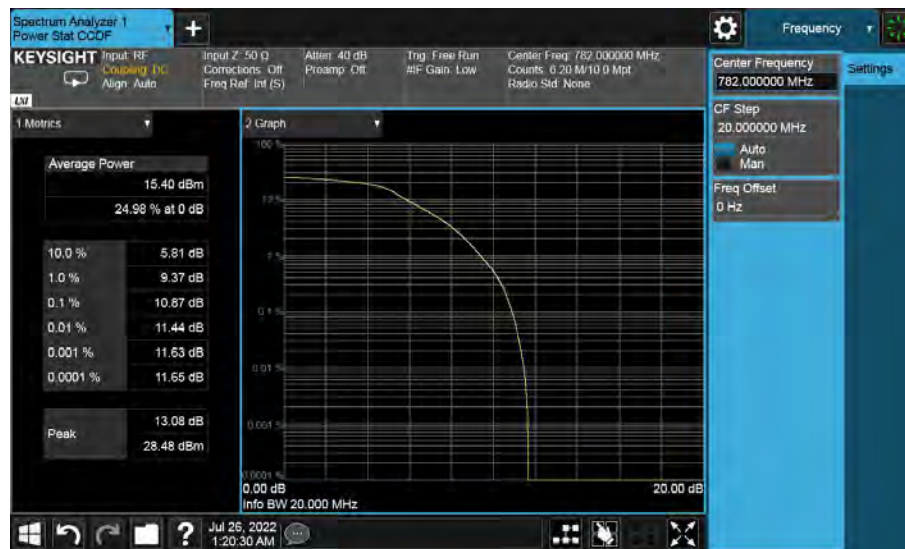
Band12-CH23095-707.5MHz-10MHz Bandwidth-16QAM



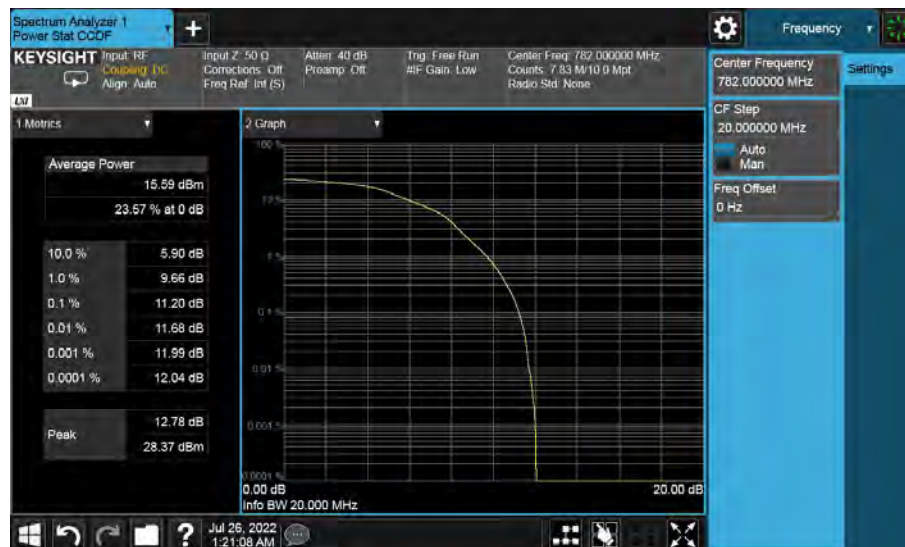
Band13-CH23230-782MHz-5MHz Bandwidth-QPSK



Band13-CH23230-782MHz-5MHz Bandwidth-16QAM

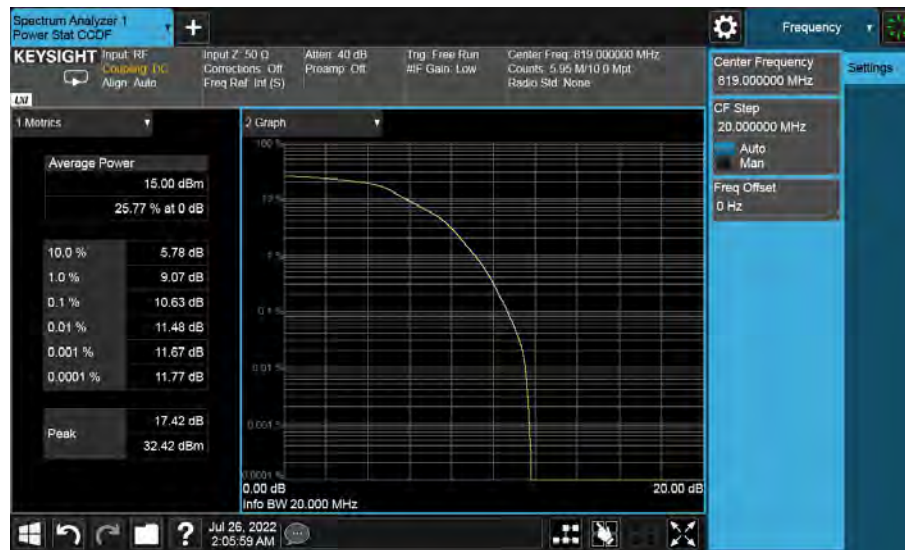


Band13-CH23230-782MHz-10MHz Bandwidth-QPSK

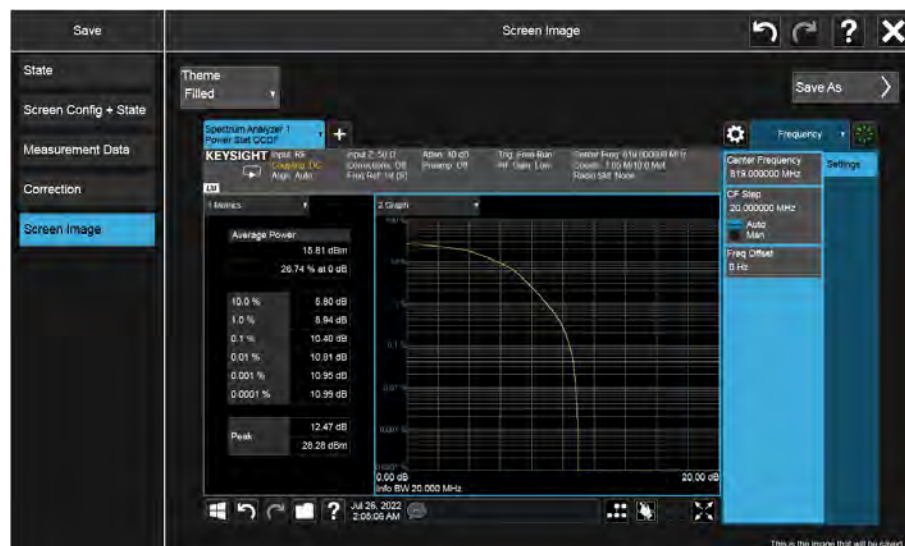


Band13-CH23230-782MHz-10MHz Bandwidth-16QAM

Part(814MHz-824MHz)



Band26-CH26740-819MHz-1.4MHz Bandwidth-QPSK



Band26-CH26740-819MHz-1.4MHz Bandwidth-16QAM

Power Stat CCDF

KEYSIGHT

Input Z: 50 Ohm
Attain: 40 dB
Tng: Free Run
Center Freq: 819.000000 MHz
Counts: 2.58 M/10.0 Mpt
Radio Std: None

1 Metrics

Average Power

15.00 dBm
23.42 % at 0 dB

10.0 % 6.02 dB
1.0 % 9.50 dB
0.1 % 11.16 dB
0.01 % 11.60 dB
0.001 % 11.74 dB
0.0001 % 11.78 dB

Peak

17.89 dB
32.89 dBm

Graph

100 %
70 %
50 %
30 %
10 %
0.0001 %
0.0001 dBm
0.00 dB
20.00 MHz

Settings

Center Frequency
819.000000 MHz

CF Step
20.000000 MHz

Auto
Man

Freq Offset
0 Hz

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Keysight Power Stat CCOF

Input Z: 50 Ω **Corrections:** Off **Freq Ref:** Int (S) **Attenu:** 40 dB **Preamp:** Off **Trig:** Free Run **#F Gain:** Low **Center Freq:** 819.000000 MHz **Counts:** 5.03 M/10.0 Mpt **Radio Std:** None

1 Metrics

Average Power	
	15.07 dBm
	23.20 % at 0 dB
10.0 %	6.12 dB
1.0 %	9.58 dB
0.1 %	11.03 dB
0.01 %	11.45 dB
0.001 %	11.64 dB
0.0001 %	11.67 dB
Peak	
	12.02 dB
	27.09 dBm

2 Graph

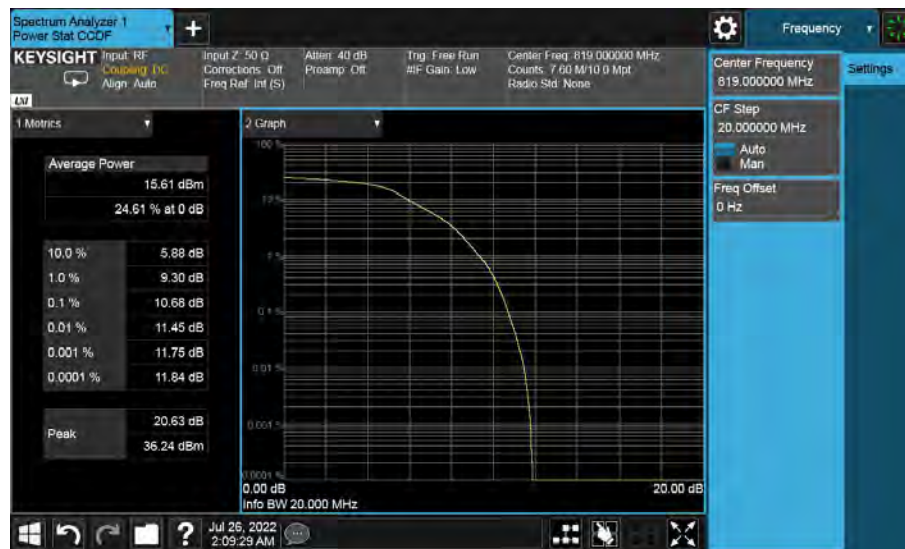
Graph showing Average Power (dBm) vs. Frequency (dB). The y-axis ranges from 0.0001 to 100 dBm. The x-axis ranges from 0.00 dB to 20.00 dB. The curve shows a sharp drop in power around 10 dB.

Settings

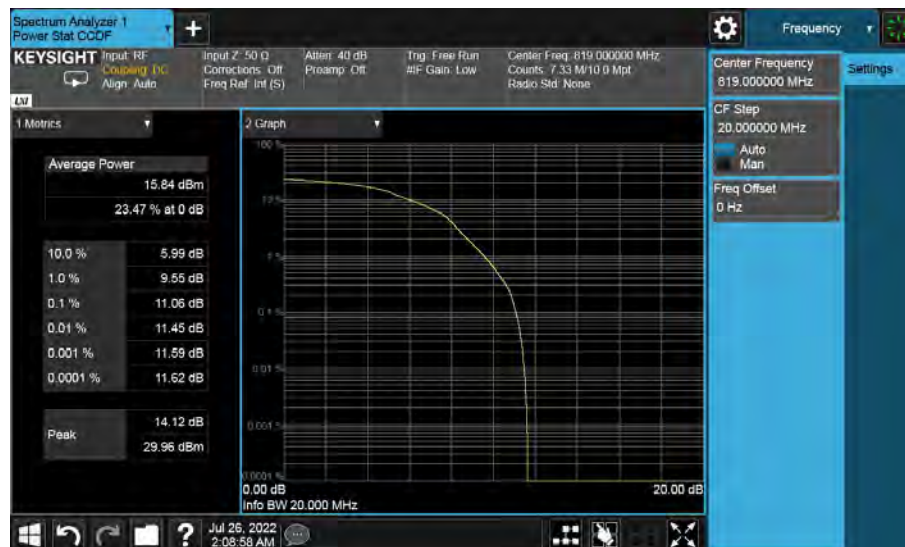
- Center Frequency: 819.000000 MHz
- CF Step: 20.000000 MHz
- Auto Man
- Freq Offset: 0 Hz

Jul 26, 2022 2:08:03 AM

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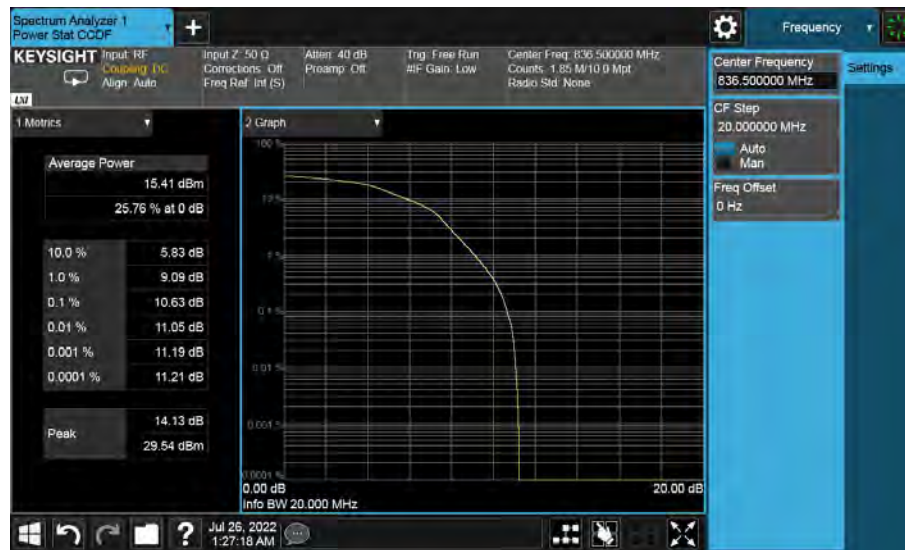


Band26-CH26740-819MHz-10MHz Bandwidth-QPSK

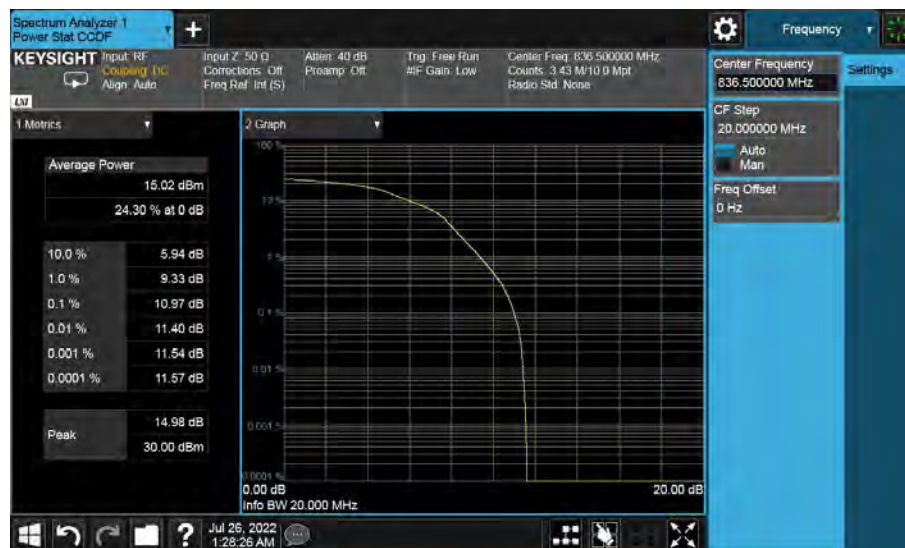


Band26-CH26740-819MHz-10MHz Bandwidth-16QAM

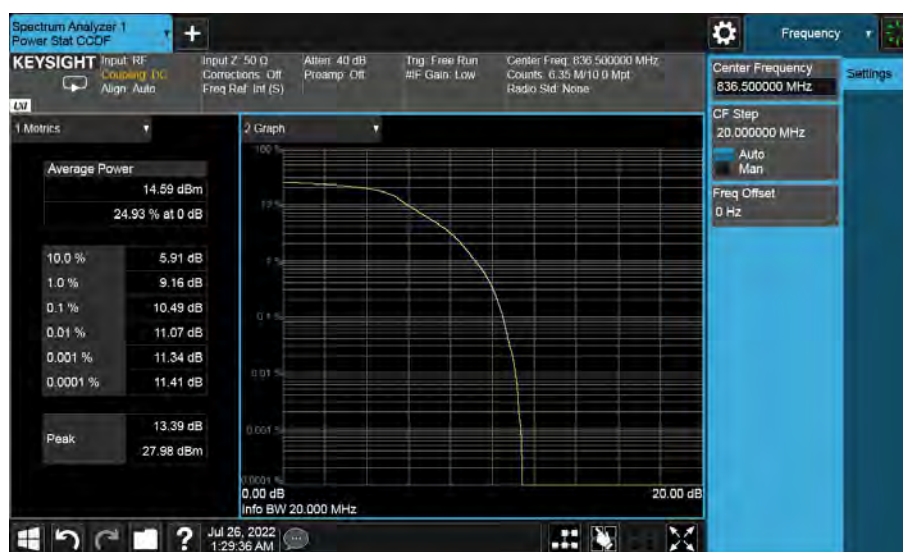
Part(824MHz-849MHz)



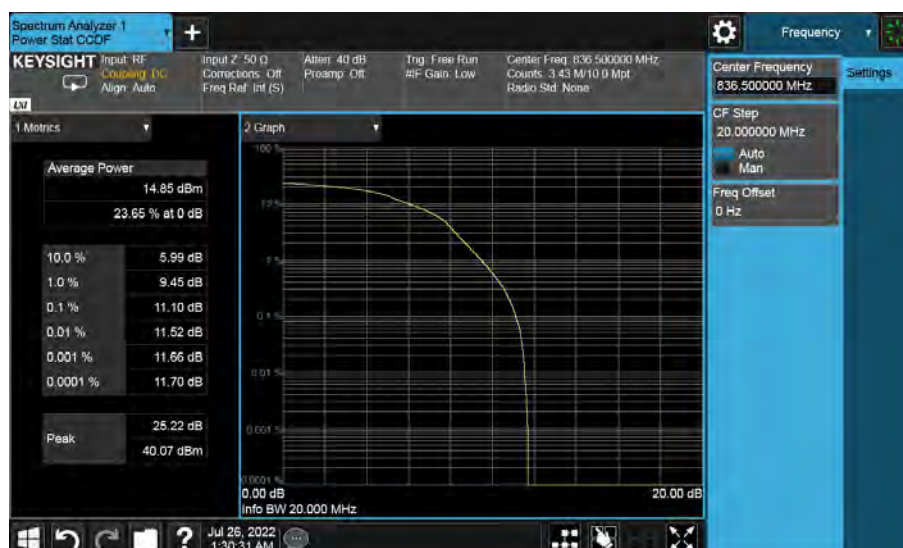
Band26-CH26915-836.5MHz-1.4MHz Bandwidth-QPSK



Band26-CH26915-836.5MHz-1.4MHz Bandwidth-16QAM



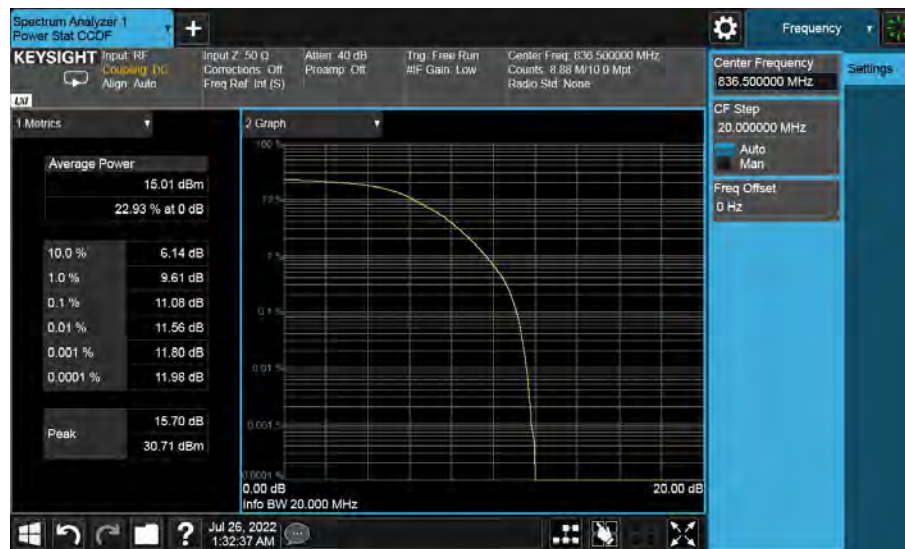
Band26-CH26915-836.5MHz-3MHz Bandwidth-QPSK



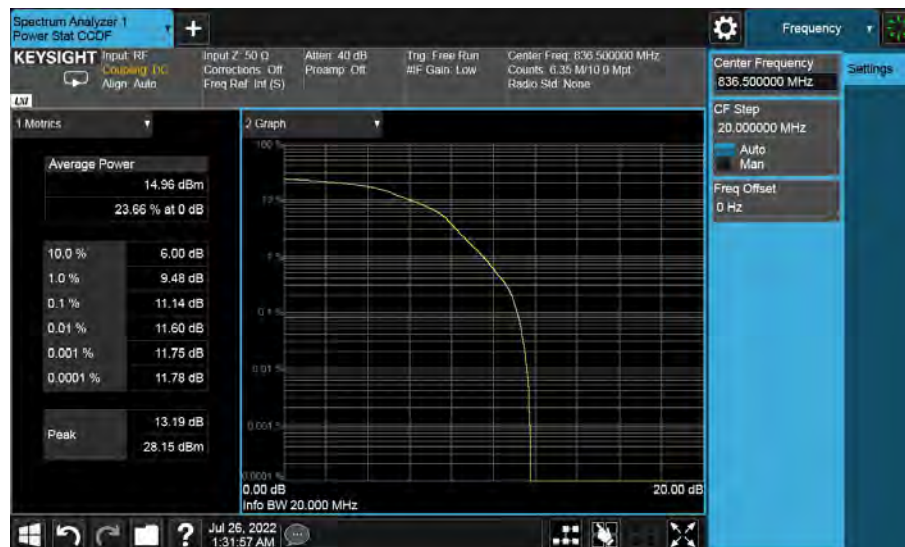
Band26-CH26915-836.5MHz-3MHz Bandwidth-16QAM

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Band26-CH26915-836.5MHz-5MHz Bandwidth-QPSK



Band26-CH26915-836.5MHz-5MHz Bandwidth-16QAM

The screenshot displays the Keysight Power Stat CCOF software interface. The main window is divided into several sections:

- Top Bar:** Contains the title "Spectrum Analyzer 1", "Power Stat CCOF", and a "+" button.
- Left Panel:**
 - KEYSIGHT** logo and "Input RF" section with "Coupling: DC" and "Align: Auto".
 - Input Z:** 50 Ω , "Corrections: Off", "Freq Ref: Int (S)".
 - Attenu:** 40 dB, "Preamp: Off".
 - Trig:** Free Run, "#F Gain: Low".
 - Center Freq:** 836.500000 MHz, "Counts: 2.30 M/10.0 Mpt", "Radio Std: None".
 - LV** (Level) button.
 - 1 Metrics** dropdown menu.
- Main Plot Area:**
 - Graph:** A power spectrum plot showing a single peak. The y-axis is labeled "dBm" and ranges from 0.0001 to 100. The x-axis is labeled "MHz" and ranges from 20.00 to 20.00. The plot shows a sharp peak at 20.00 MHz.
 - Average Power:** 15.85 dBm, 23.49 % at 0 dB.
 - Peak:** 12.28 dB, 28.13 dBm.
 - Metrics Table:**

Level	Power (dBm)
10.0 %	6.00 dB
1.0 %	9.55 dB
0.1 %	10.97 dB
0.01 %	11.37 dB
0.001 %	11.49 dB
0.0001 %	11.52 dB
- Right Panel:**
 - Frequency:** 836.500000 MHz.
 - CF Step:** 20.000000 MHz.
 - Auto/Man** toggle switch.
 - Freq Offset:** 0 Hz.
 - Settings** button.
- Bottom Bar:**
 - Windows taskbar icons (Start, Task View, File Explorer, etc.).
 - System clock: Jul 26, 2022, 1:33:00 AM.
 - System tray icons (Network, Volume, etc.).

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Annex A EUT Photos

See the document "I22W00056-External Photos".

See the document "I22W00056-Internal Photos".

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Report No.: I22W00056-WWAN RF-Rev3

ANNEX B Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

*****END OF REPORT*****

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