

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B71_5MHz_ERP

Band: 71 / Bandwidth: 5MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	665.5	1	0	22.78	-3.17	17.46	<=34.77	Pass
			24	22.71	-3.17	17.39	<=34.77	Pass
		25	0	21.77	-3.17	16.45	<=34.77	Pass
	680.5	1	0	22.81	-3.17	17.49	<=34.77	Pass
			24	22.72	-3.17	17.40	<=34.77	Pass
		25	0	21.79	-3.17	16.47	<=34.77	Pass
	695.5	1	0	22.71	-3.17	17.39	<=34.77	Pass
			24	22.58	-3.17	17.26	<=34.77	Pass
		25	0	21.73	-3.17	16.41	<=34.77	Pass
16QAM	665.5	1	0	22.02	-3.17	16.70	<=34.77	Pass
			24	21.99	-3.17	16.67	<=34.77	Pass
		25	0	20.79	-3.17	15.47	<=34.77	Pass
	680.5	1	0	21.96	-3.17	16.64	<=34.77	Pass
			24	21.96	-3.17	16.64	<=34.77	Pass
		25	0	20.74	-3.17	15.42	<=34.77	Pass
	695.5	1	0	22.00	-3.17	16.68	<=34.77	Pass
			24	21.90	-3.17	16.58	<=34.77	Pass
		25	0	20.71	-3.17	15.39	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.2 B71_10MHz_ERP

Band: 71 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	668	1	0	23.01	-3.17	17.69	<=34.77	Pass
			49	22.90	-3.17	17.58	<=34.77	Pass
		50	0	21.83	-3.17	16.51	<=34.77	Pass
	680.5	1	0	23.01	-3.17	17.69	<=34.77	Pass
			49	22.84	-3.17	17.52	<=34.77	Pass
		50	0	21.88	-3.17	16.56	<=34.77	Pass
	693	1	0	23.12	-3.17	17.80	<=34.77	Pass
			49	22.91	-3.17	17.59	<=34.77	Pass
		50	0	21.85	-3.17	16.53	<=34.77	Pass
16QAM	668	1	0	22.20	-3.17	16.88	<=34.77	Pass
			49	22.17	-3.17	16.85	<=34.77	Pass
		50	0	20.86	-3.17	15.54	<=34.77	Pass
	680.5	1	0	22.11	-3.17	16.79	<=34.77	Pass
			49	21.97	-3.17	16.65	<=34.77	Pass
		50	0	20.81	-3.17	15.49	<=34.77	Pass
	693	1	0	21.99	-3.17	16.67	<=34.77	Pass
			49	21.77	-3.17	16.45	<=34.77	Pass
		50	0	20.80	-3.17	15.48	<=34.77	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

1.1.3 B71_15MHz_ERP

Band: 71 / Bandwidth: 15MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	670.5	1	0	23.09	-3.17	17.77	<=34.77	Pass
			74	22.74	-3.17	17.42	<=34.77	Pass
		75	0	21.85	-3.17	16.53	<=34.77	Pass
	680.5	1	0	23.11	-3.17	17.79	<=34.77	Pass
			74	22.66	-3.17	17.34	<=34.77	Pass
		75	0	21.94	-3.17	16.62	<=34.77	Pass
	690.5	1	0	23.15	-3.17	17.83	<=34.77	Pass
			74	22.61	-3.17	17.29	<=34.77	Pass
		75	0	21.77	-3.17	16.45	<=34.77	Pass
16QAM	670.5	1	0	22.11	-3.17	16.79	<=34.77	Pass
			74	21.94	-3.17	16.62	<=34.77	Pass
		75	0	20.83	-3.17	15.51	<=34.77	Pass
	680.5	1	0	22.24	-3.17	16.92	<=34.77	Pass
			74	21.78	-3.17	16.46	<=34.77	Pass
		75	0	20.87	-3.17	15.55	<=34.77	Pass
	690.5	1	0	22.13	-3.17	16.81	<=34.77	Pass
			74	21.63	-3.17	16.31	<=34.77	Pass
		75	0	20.76	-3.17	15.44	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

1.1.4 B71 20MHz ERP

Band: 71 / Bandwidth: 20MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	673	1	0	22.56	-3.17	17.24	<=34.77	Pass
			99	22.45	-3.17	17.13	<=34.77	Pass
		100	0	21.82	-3.17	16.50	<=34.77	Pass
	683	1	0	22.77	-3.17	17.45	<=34.77	Pass
			99	22.52	-3.17	17.20	<=34.77	Pass
		100	0	21.88	-3.17	16.56	<=34.77	Pass
	688	1	0	22.58	-3.17	17.26	<=34.77	Pass
			99	22.30	-3.17	16.98	<=34.77	Pass
		100	0	21.74	-3.17	16.42	<=34.77	Pass
16QAM	673	1	0	21.77	-3.17	16.45	<=34.77	Pass
			99	21.61	-3.17	16.29	<=34.77	Pass
		100	0	20.79	-3.17	15.47	<=34.77	Pass
	683	1	0	21.58	-3.17	16.26	<=34.77	Pass
			99	21.27	-3.17	15.95	<=34.77	Pass
		100	0	20.84	-3.17	15.52	<=34.77	Pass
	688	1	0	21.39	-3.17	16.07	<=34.77	Pass
			99	21.07	-3.17	15.75	<=34.77	Pass
		100	0	20.71	-3.17	15.39	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

2. Frequency Stability

2.1 Test Result

2.1.1 B71_10MHz

Band: 71 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	680.5	50	0	20	12	-0.958	-0.0014	-2.5 to 2.5	Pass
					24	-1.431	-0.0021	-2.5 to 2.5	Pass
					48	-1.273	-0.0019	-2.5 to 2.5	Pass
				-30	24	-1.101	-0.0016	-2.5 to 2.5	Pass
				-20	24	-0.687	-0.0010	-2.5 to 2.5	Pass
				-10	24	-0.958	-0.0014	-2.5 to 2.5	Pass
				0	24	-0.758	-0.0011	-2.5 to 2.5	Pass
				10	24	-0.901	-0.0013	-2.5 to 2.5	Pass
				30	24	-0.973	-0.0014	-2.5 to 2.5	Pass
				40	24	-0.587	-0.0009	-2.5 to 2.5	Pass
				50	24	-0.443	-0.0007	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band71_OBW

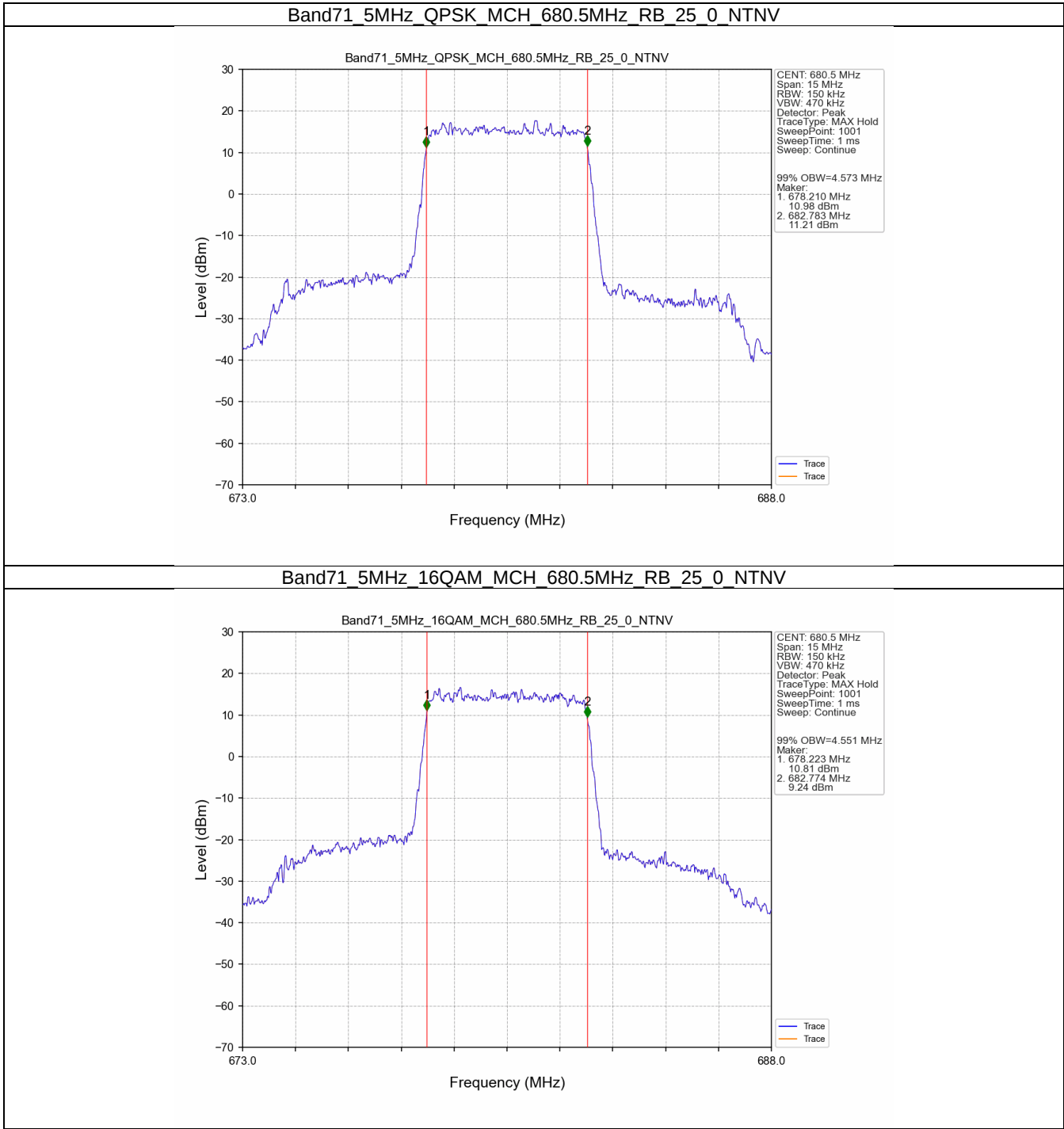
Band: 71 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	680.5	25	0	4.573	/	Pass
	16QAM	680.5	25	0	4.551	/	Pass
10	QPSK	680.5	50	0	9.084	/	Pass
	16QAM	680.5	50	0	9.041	/	Pass
15	QPSK	680.5	75	0	13.552	/	Pass
	16QAM	680.5	75	0	13.528	/	Pass
20	QPSK	683	100	0	18.081	/	Pass
	16QAM	683	100	0	18.177	/	Pass

3.1.2 Band71_XDB

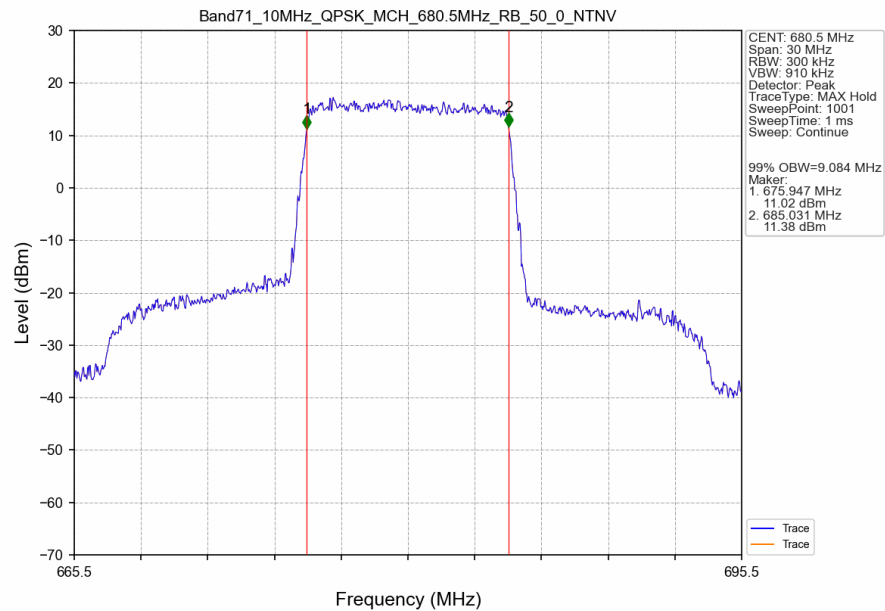
Band: 71 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	680.5	25	0	5.093	/	Pass
	16QAM	680.5	25	0	5.075	/	Pass
10	QPSK	680.5	50	0	10.119	/	Pass
	16QAM	680.5	50	0	10.058	/	Pass
15	QPSK	680.5	75	0	15.017	/	Pass
	16QAM	680.5	75	0	14.967	/	Pass
20	QPSK	683	100	0	19.780	/	Pass
	16QAM	683	100	0	19.796	/	Pass

3.2 Test Graph

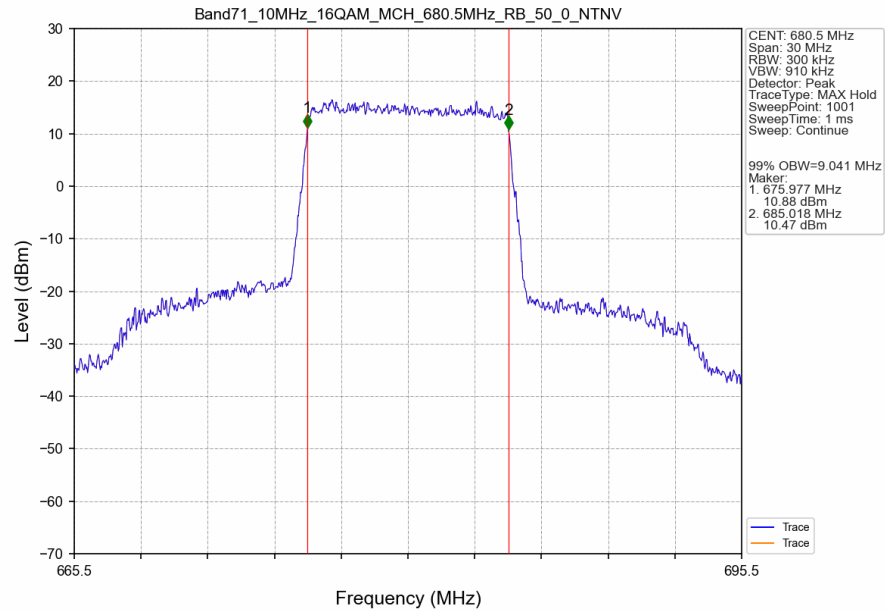
3.2.1 Band71_OBW



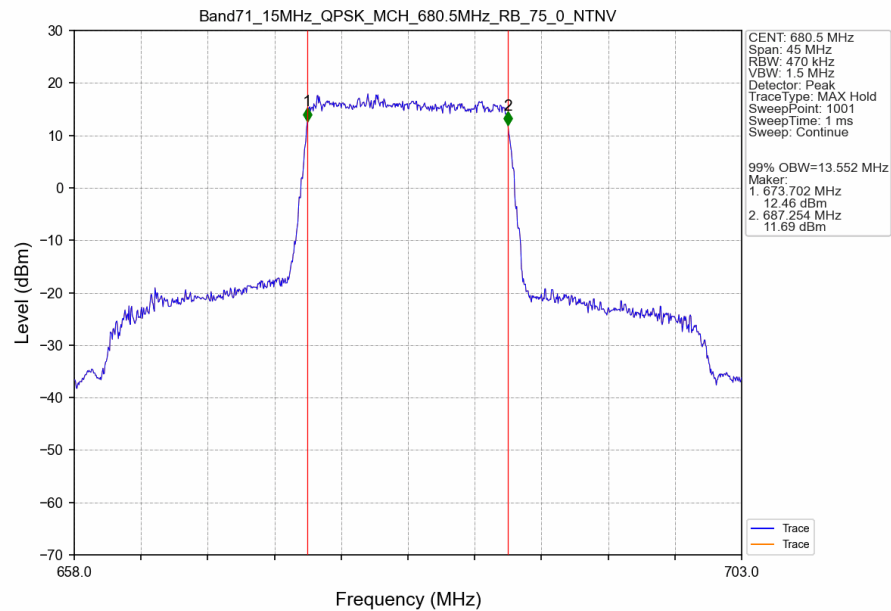
Band71 10MHz QPSK MCH 680.5MHz RB 50 0 NTV



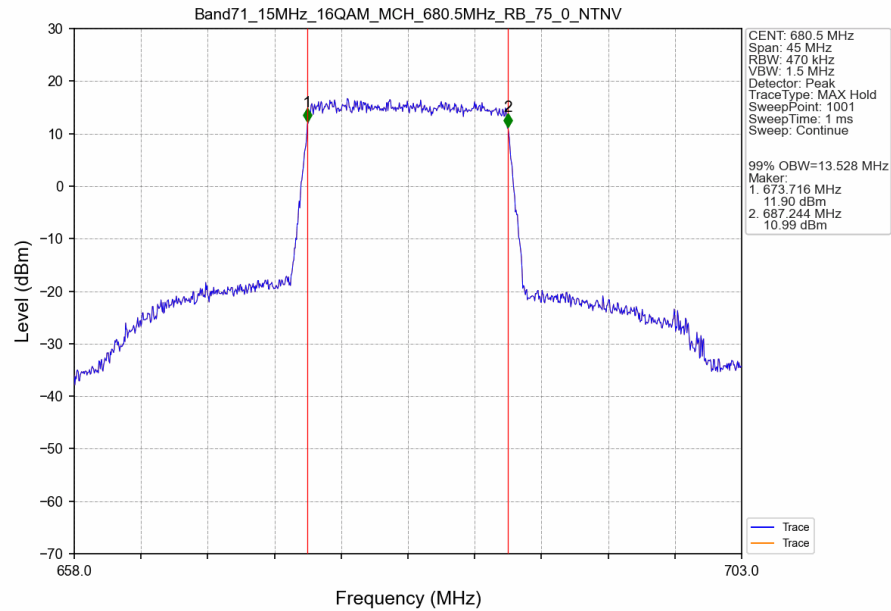
Band71 10MHz 16QAM MCH 680.5MHz RB 50 0 NTV



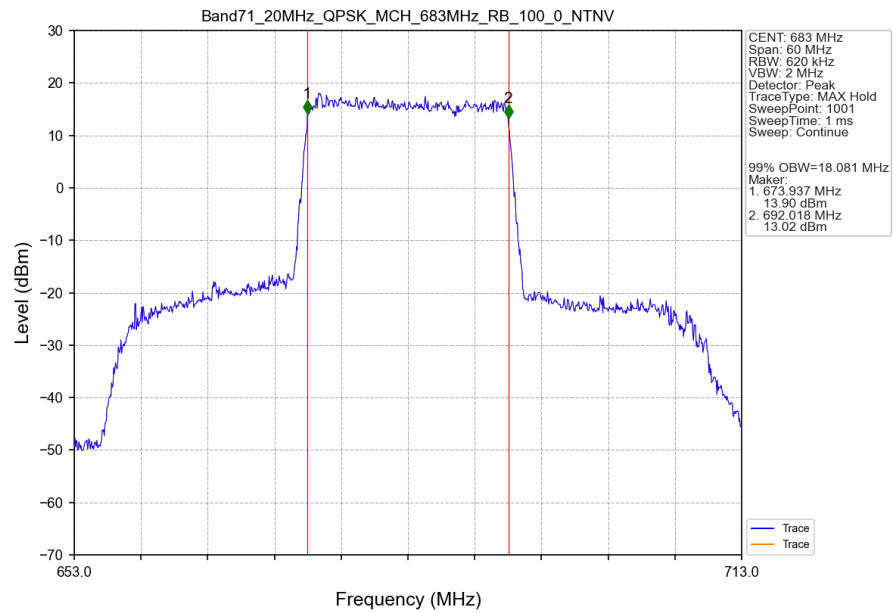
Band71 15MHz QPSK MCH 680.5MHz RB 75 0 NTNV



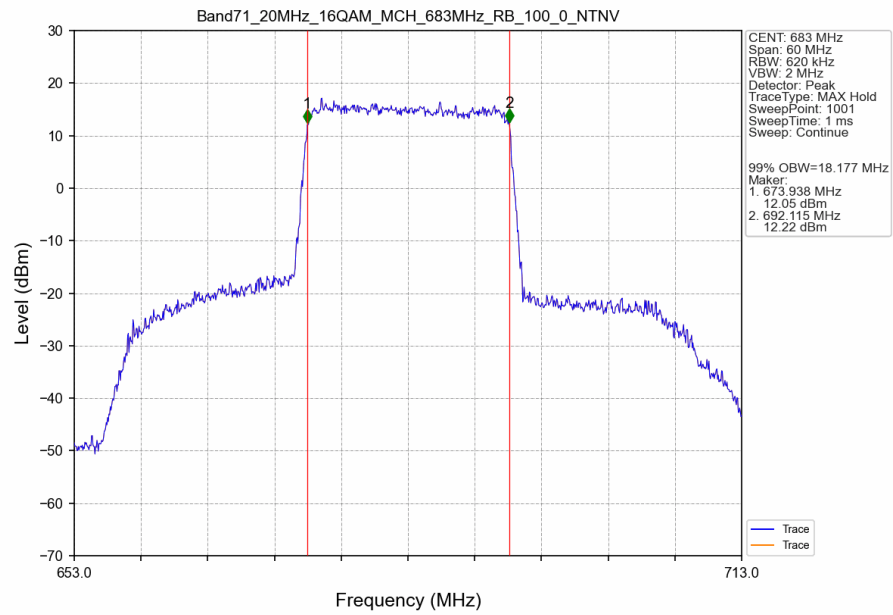
Band71 15MHz 16QAM MCH 680.5MHz RB 75 0 NTNV



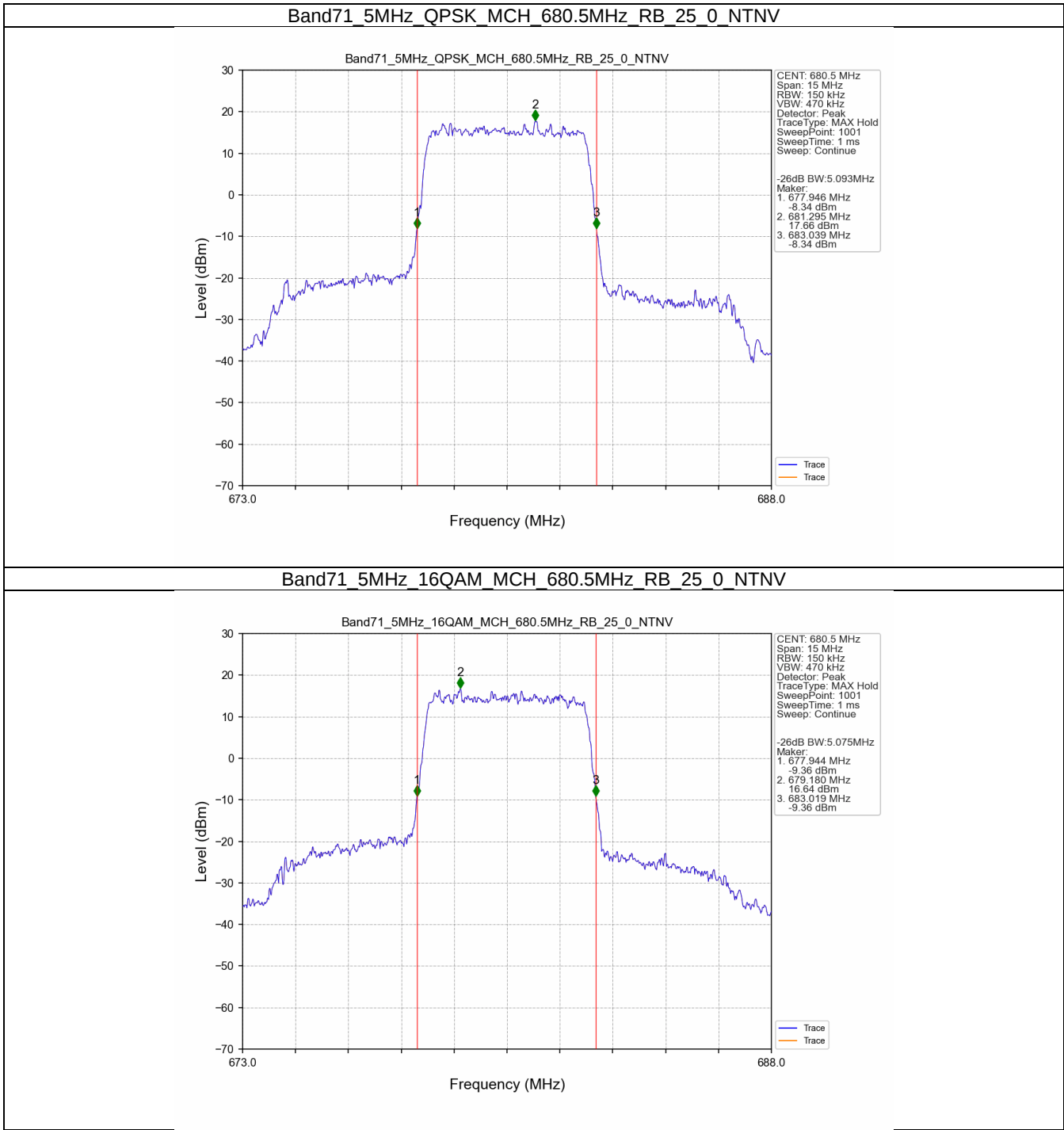
Band71 20MHz QPSK MCH 683MHz RB 100 0 NTNV



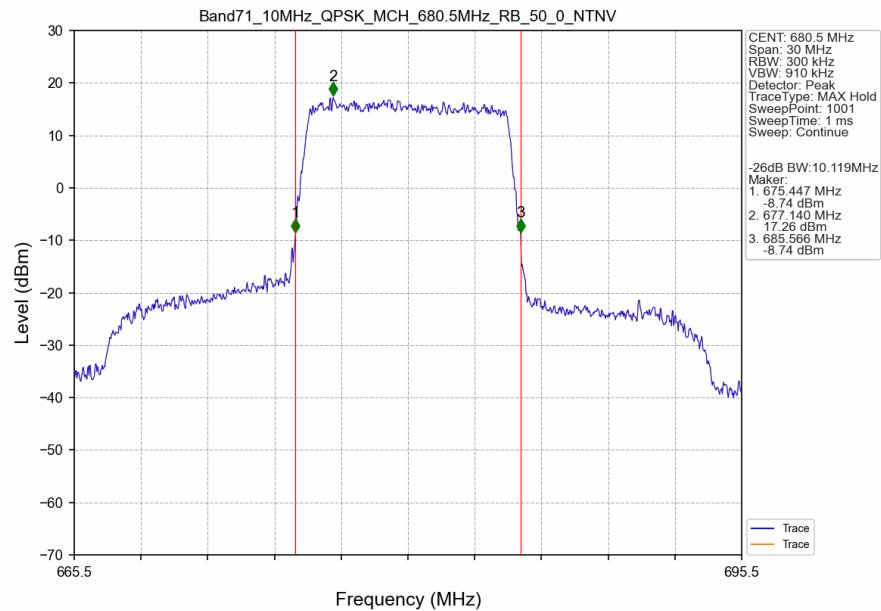
Band71 20MHz 16QAM MCH 683MHz RB 100 0 NTNV



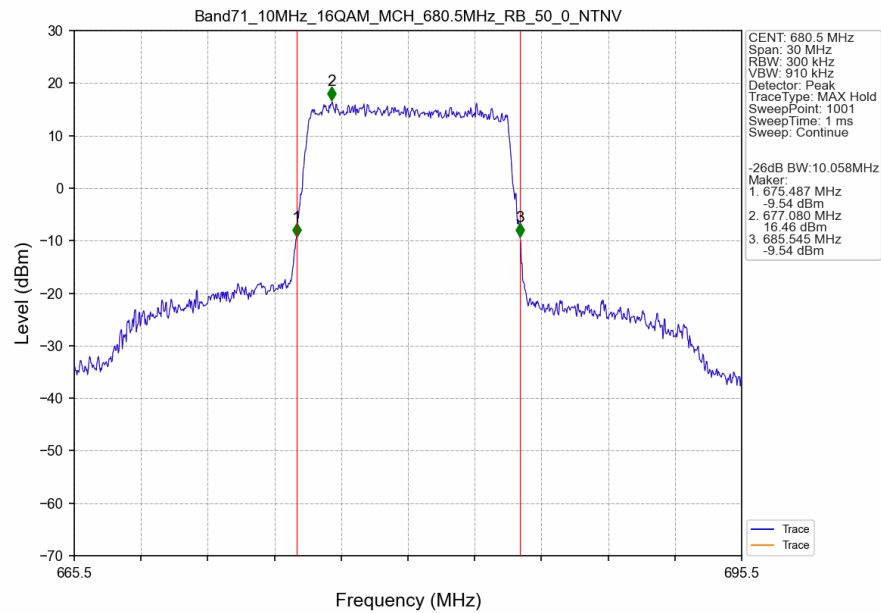
3.2.2 Band71_XDB



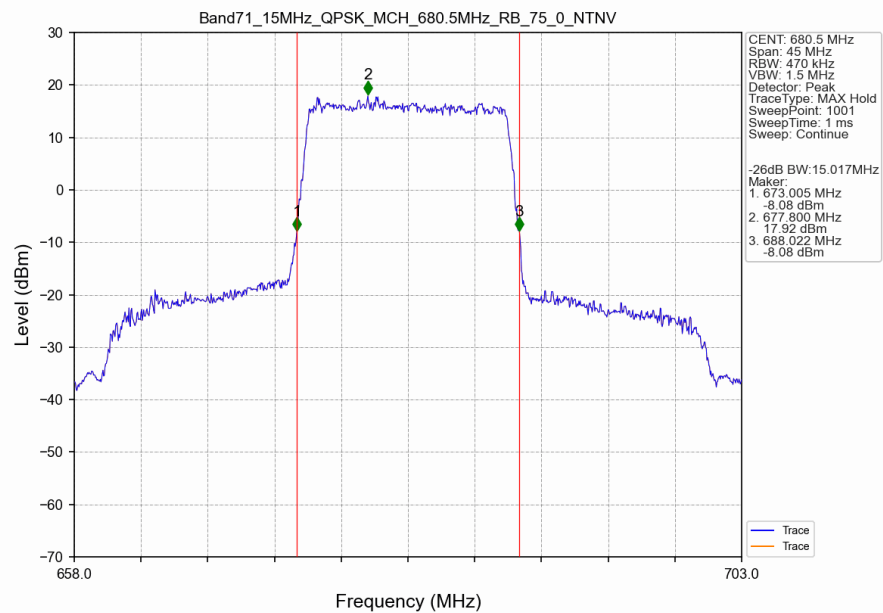
Band71 10MHz QPSK MCH 680.5MHz RB 50 0 NTV



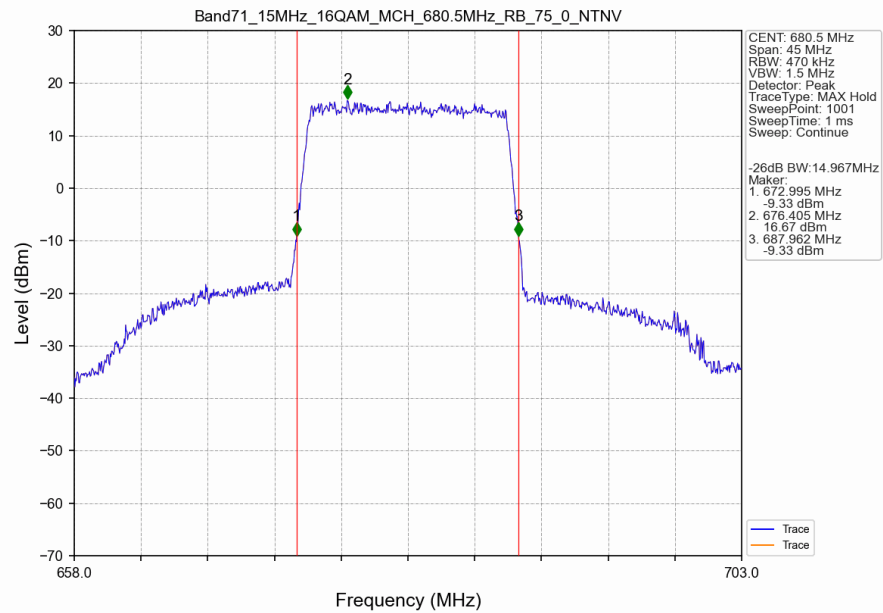
Band71 10MHz 16QAM MCH 680.5MHz RB 50 0 NTV



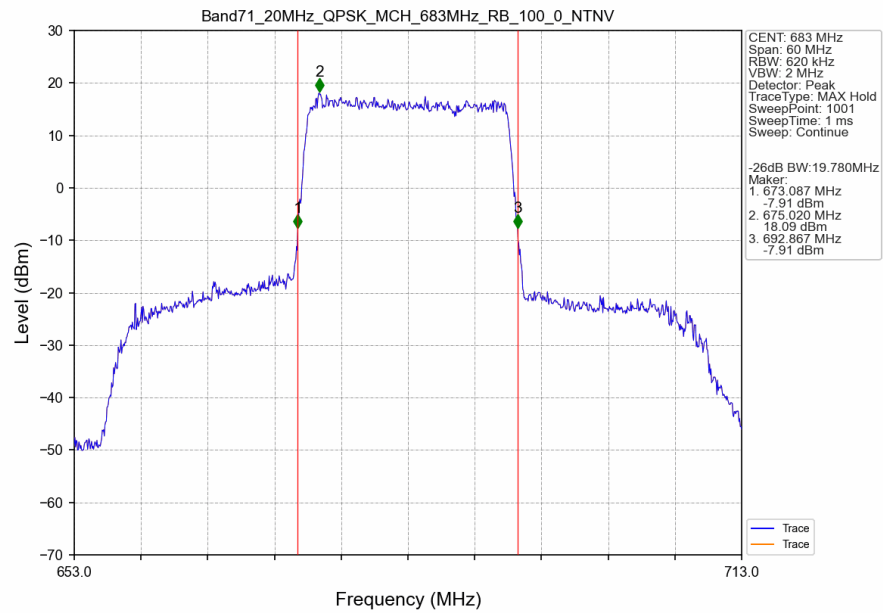
Band71 15MHz QPSK MCH 680.5MHz RB 75 0 NTN



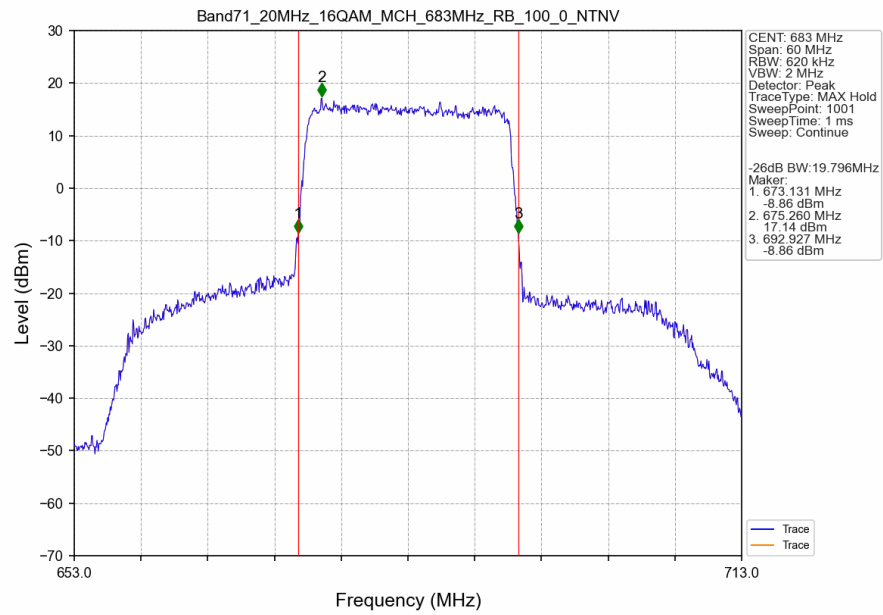
Band71 15MHz 16QAM MCH 680.5MHz RB 75 0 NTN



Band71 20MHz QPSK MCH 683MHz RB 100 0 NTN



Band71 20MHz 16QAM MCH 683MHz RB 100 0 NTN



4. Peak-Average Ratio

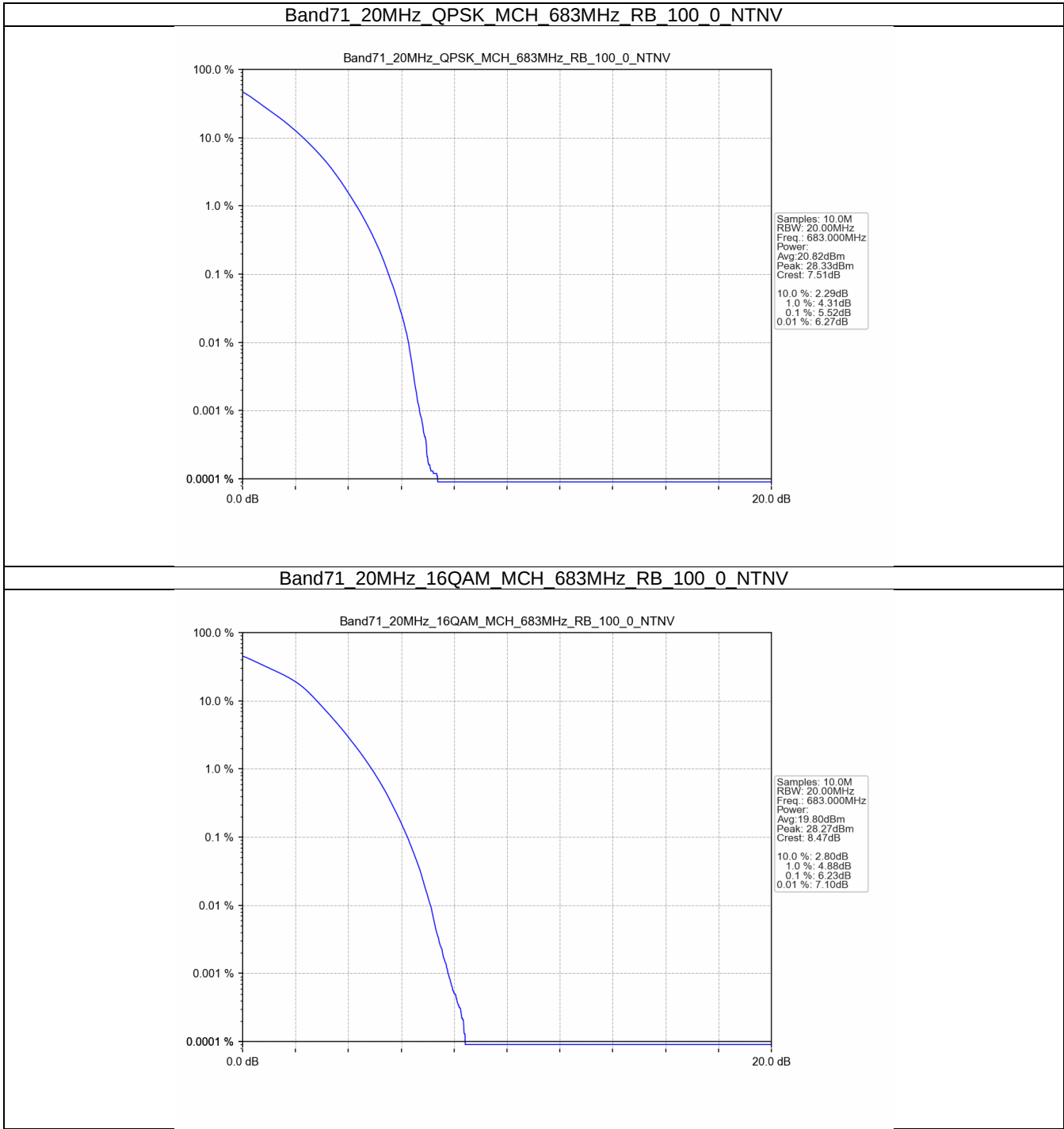
4.1 Test Result

4.1.1 B71_20MHz

Band: 71 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	683	100	0	5.52	<=13	Pass
16QAM	683	100	0	6.23	<=13	Pass

4.2 Test Graph

4.2.1 B71_20MHz



5. Spurious Emission

5.1 Test Result

5.1.1 B71_5MHz

Band: 71 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	665.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	680.5	1	0	Refer To Test Graph		Pass
	695.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

5.1.2 B71_10MHz

Band: 71 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	668	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	680.5	1	0	Refer To Test Graph		Pass
	693	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.1.3 B71_15MHz

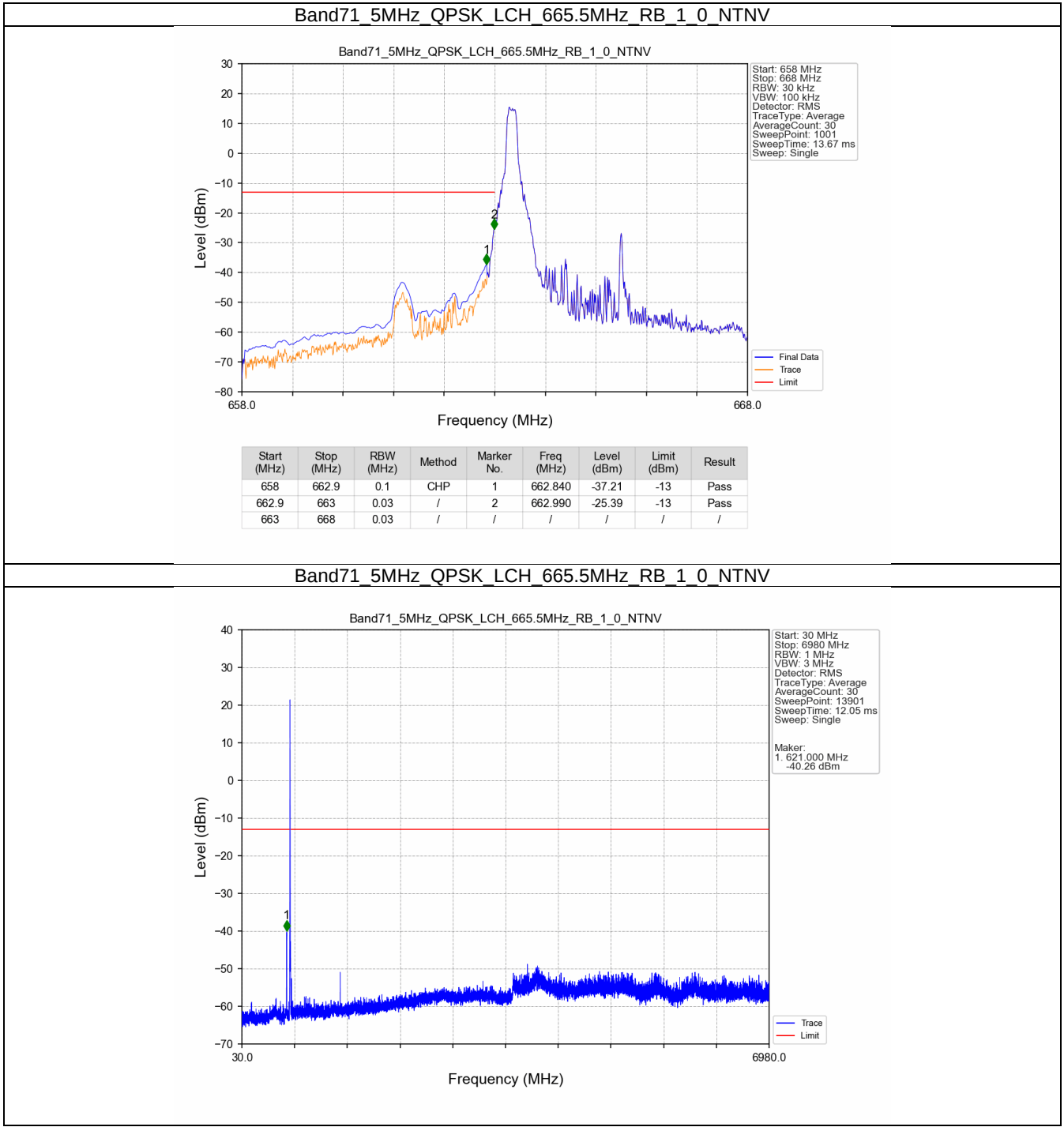
Band: 71 / Bandwidth: 15MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	670.5	1	0	Refer To Test Graph		Pass
		75	0	Refer To Test Graph		Pass
	680.5	1	0	Refer To Test Graph		Pass
	690.5	1	0	Refer To Test Graph		Pass
			74	Refer To Test Graph		Pass
		75	0	Refer To Test Graph		Pass

5.1.4 B71_20MHz

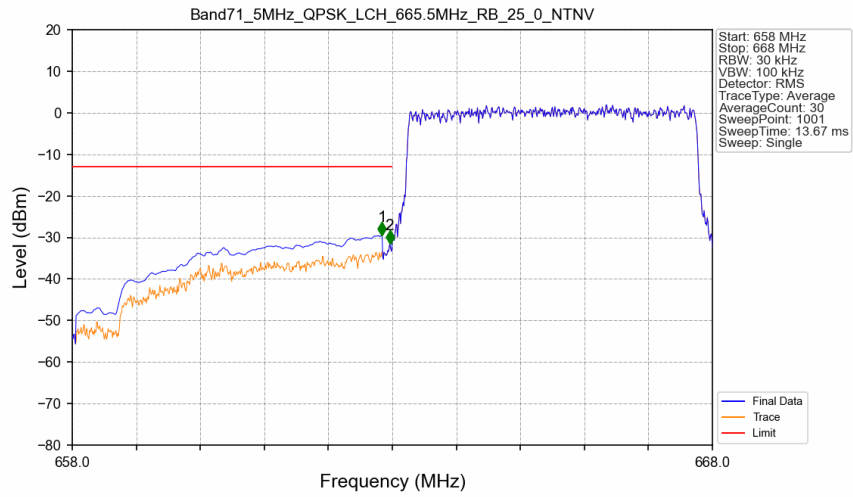
Band: 71 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	673	1	0	Refer To Test Graph		Pass
		100	0	Refer To Test Graph		Pass
	683	1	0	Refer To Test Graph		Pass
	688	1	0	Refer To Test Graph		Pass
			99	Refer To Test Graph		Pass
		100	0	Refer To Test Graph		Pass

5.2 Test Graph

5.2.1 B71_5MHz

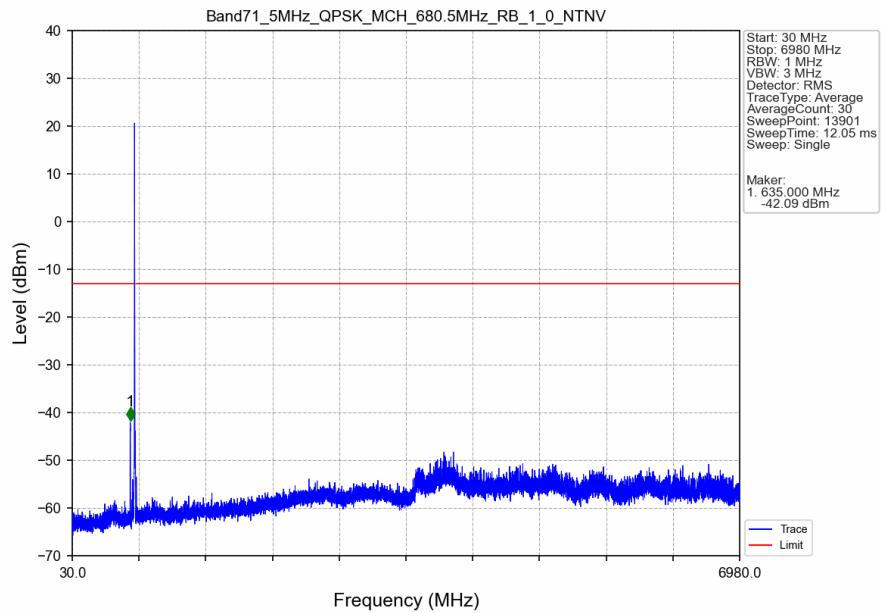


Band71 5MHz QPSK LCH 665.5MHz RB 25 0 NTNV

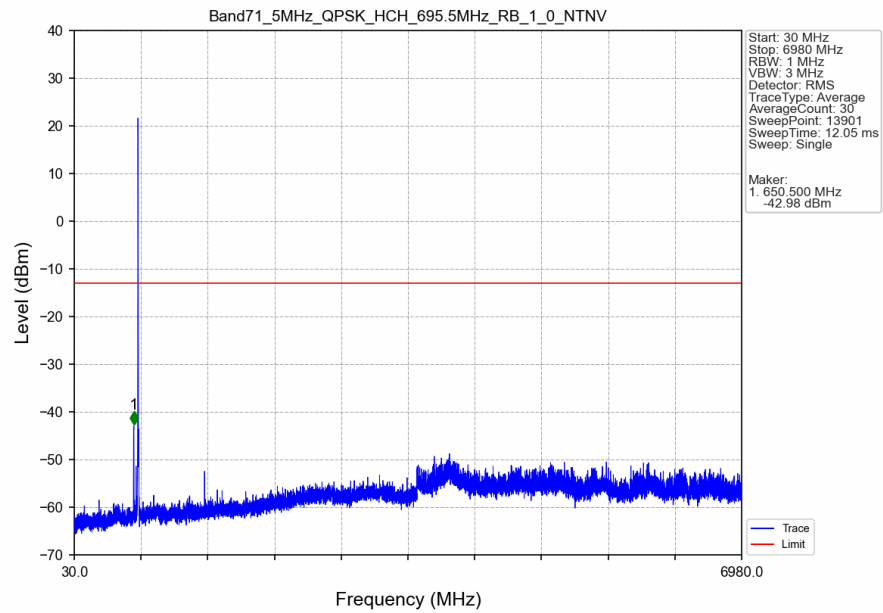


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
658	662.9	0.1	CHP	1	662.840	-29.52	-13	Pass
662.9	663	0.03	/	2	662.960	-31.41	-13	Pass
663	668	0.03	/	/	/	/	/	/

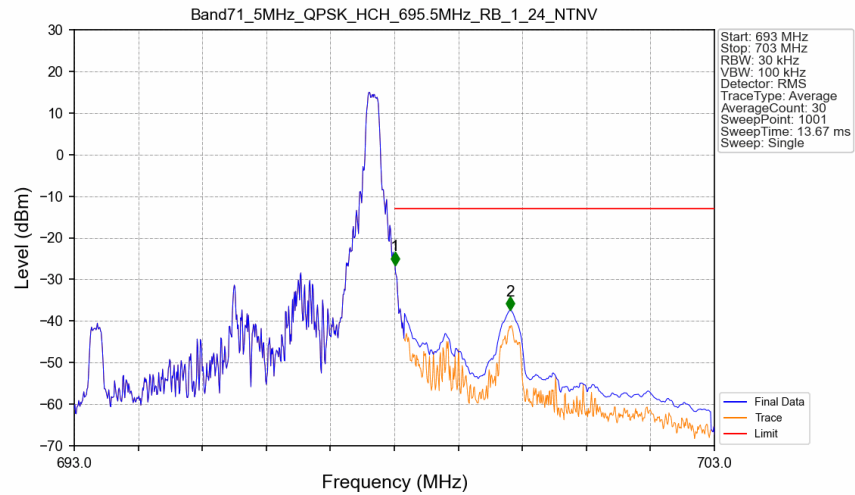
Band71 5MHz QPSK MCH 680.5MHz RB 1 0 NTNV



Band71 5MHz QPSK HCH 695.5MHz RB 1 0 NTNV

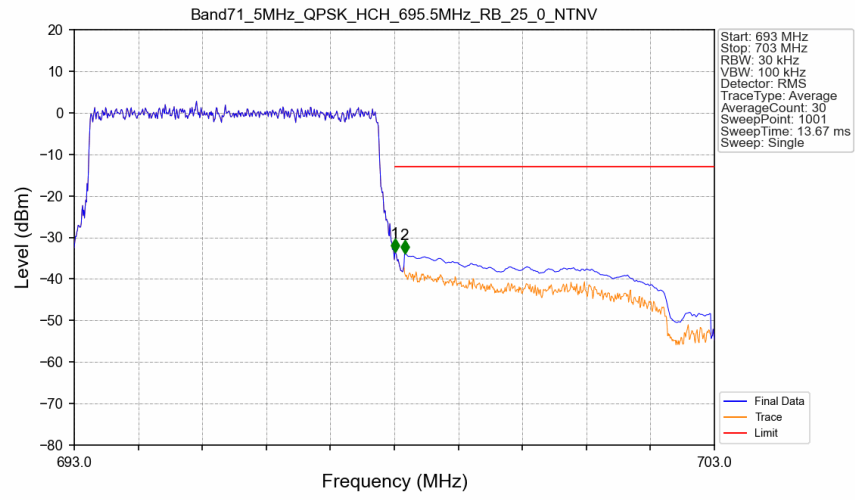


Band71 5MHz QPSK HCH 695.5MHz RB 1 24 NTNV



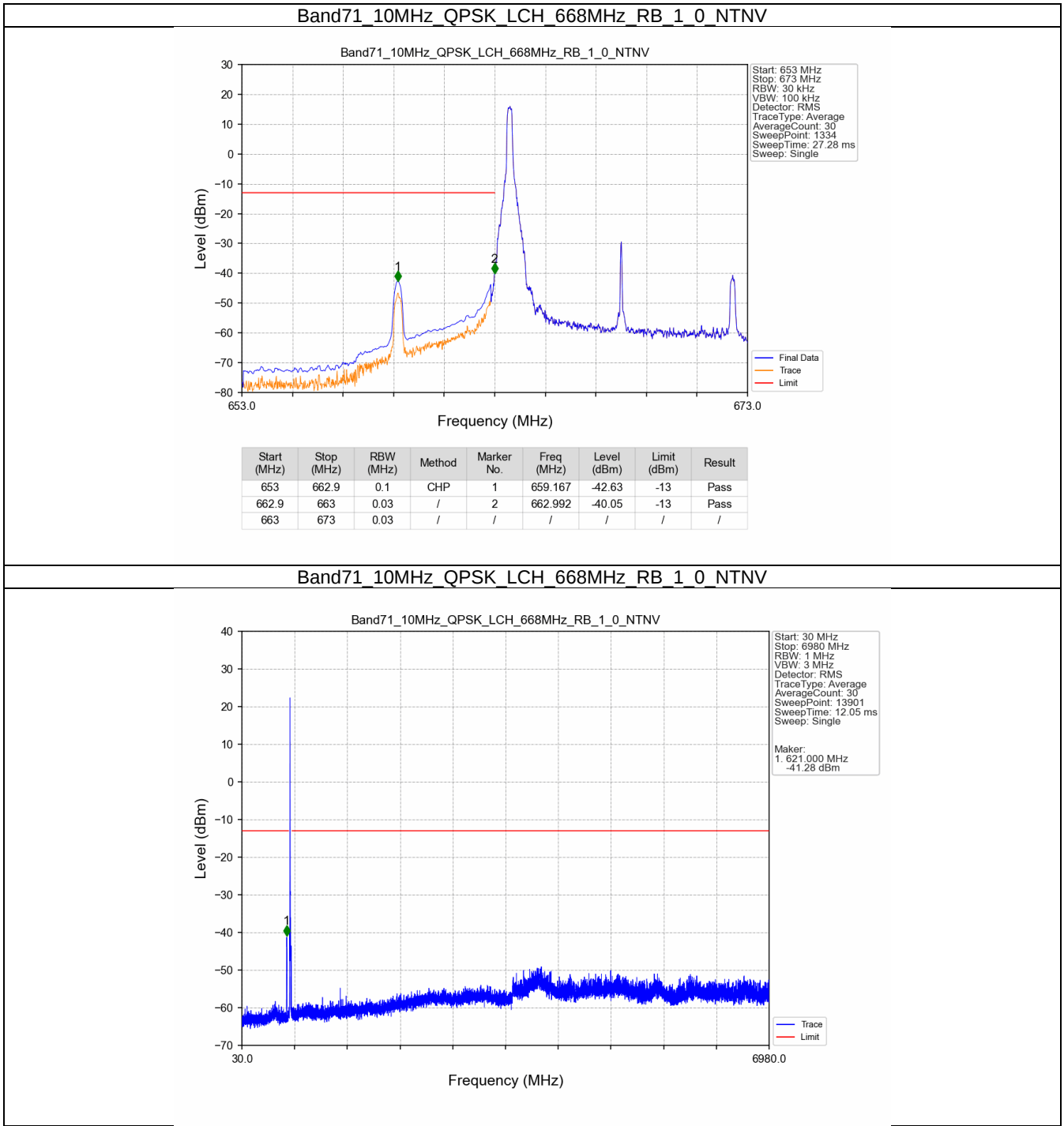
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
693	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.010	-26.51	-13	Pass
698.1	703	0.1	CHP	2	699.810	-37.41	-13	Pass

Band71 5MHz QPSK HCH 695.5MHz RB 25 0 NTN

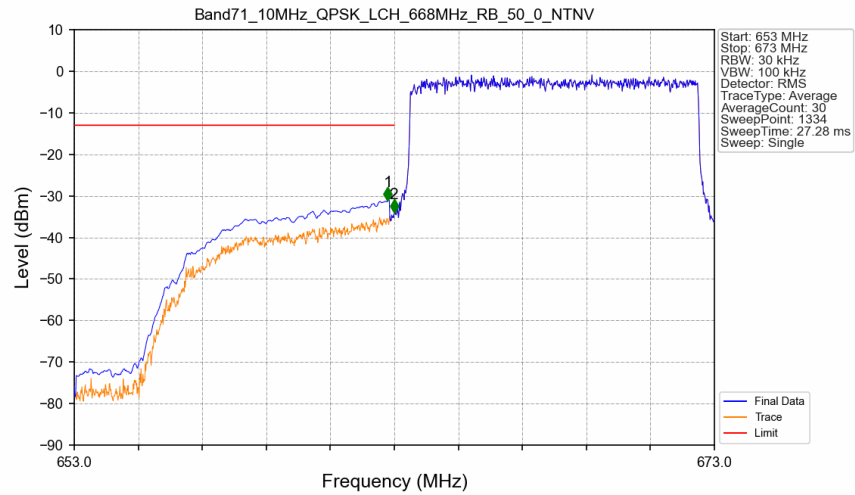


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
693	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.010	-33.44	-13	Pass
698.1	703	0.1	CHP	2	698.160	-33.88	-13	Pass

5.2.2 B71_10MHz

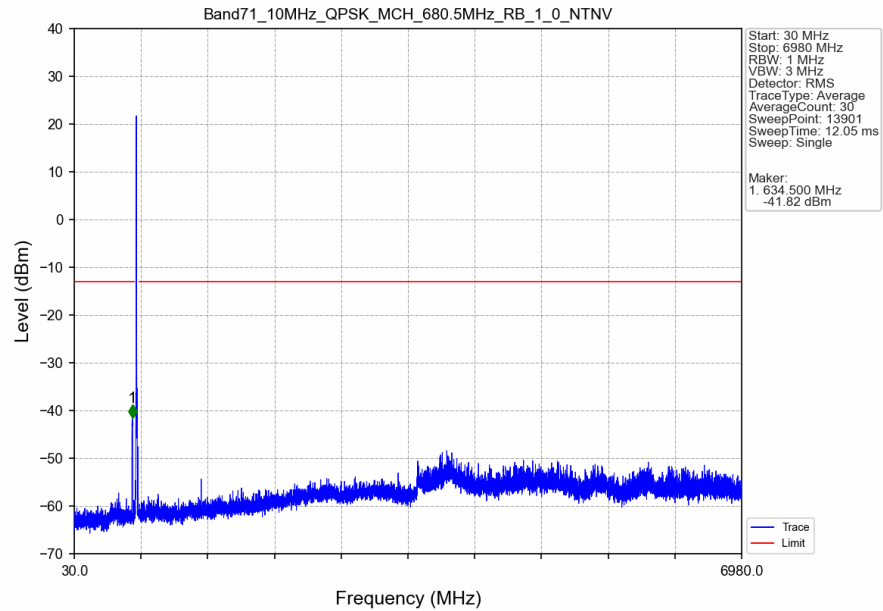


Band71 10MHz QPSK LCH 668MHz RB 50 0 NTNV

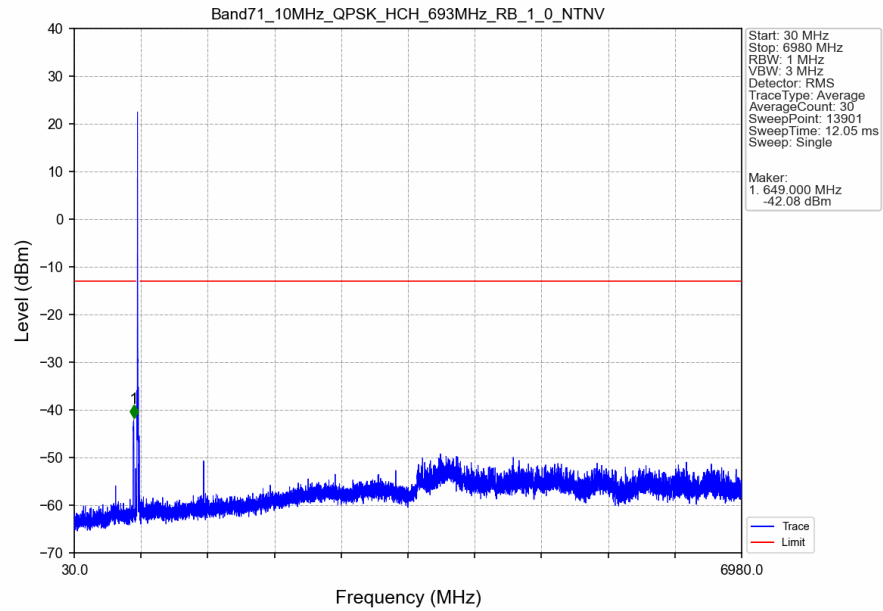


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
653	662.9	0.1	CHP	1	662.797	-31.05	-13	Pass
662.9	663	0.03	/	2	662.992	-33.98	-13	Pass
663	673	0.03	/	/	/	/	/	/

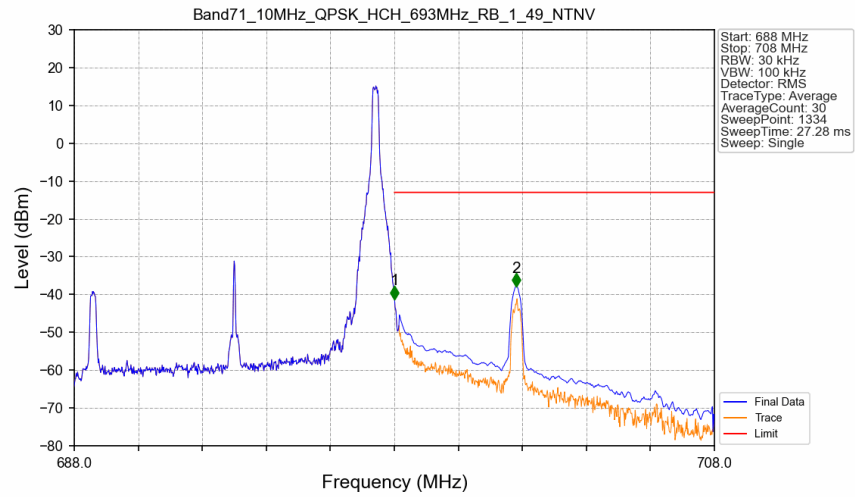
Band71 10MHz QPSK MCH 680.5MHz RB 1 0 NTNV



Band71 10MHz QPSK HCH 693MHz RB 1 0 NTNV

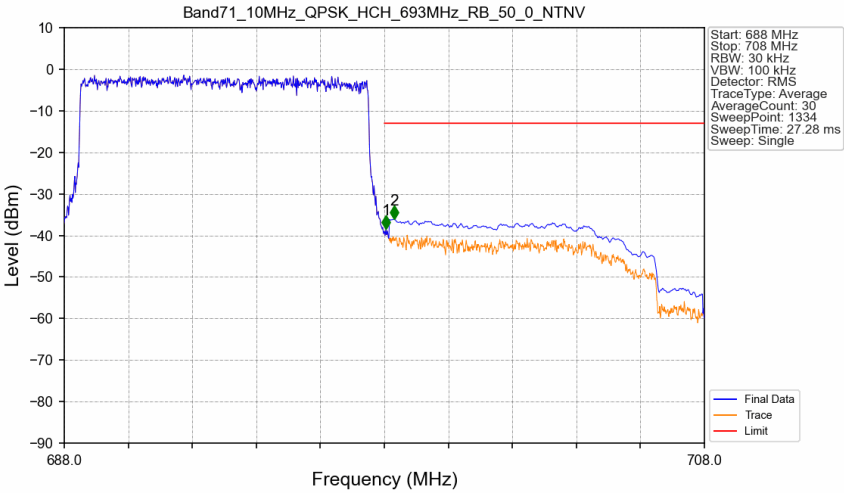


Band71 10MHz QPSK HCH 693MHz RB 1 49 NTNV



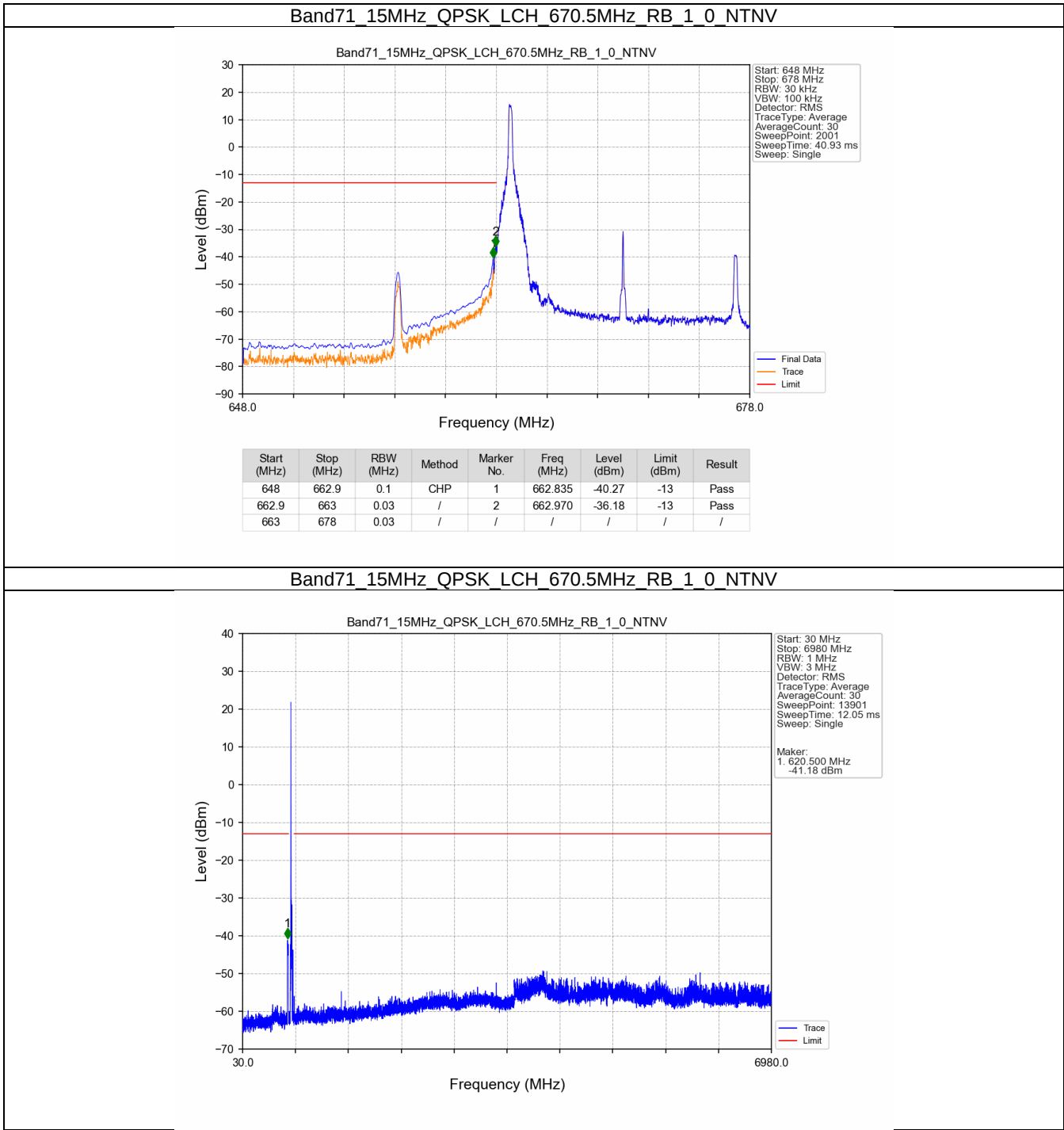
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
688	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.008	-41.17	-13	Pass
698.1	708	0.1	CHP	2	701.803	-37.90	-13	Pass

Band71 10MHz QPSK HCH 693MHz RB 50 0 NTN

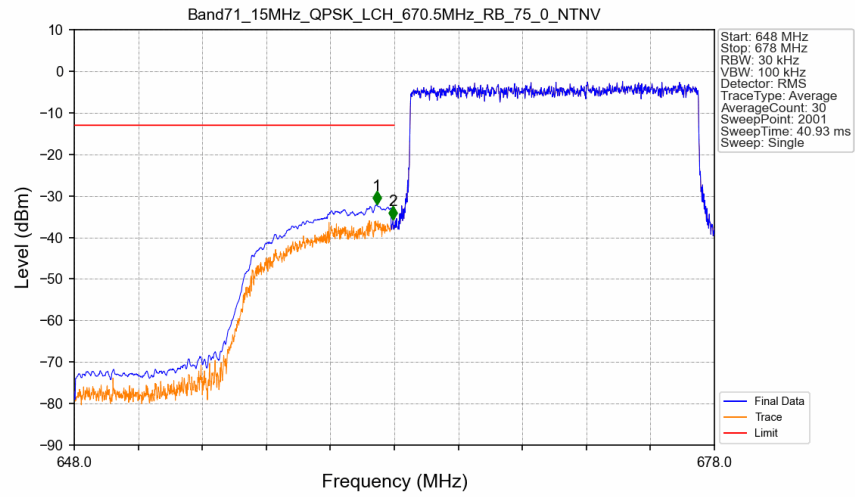


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
688	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.053	-38.48	-13	Pass
698.1	708	0.1	CHP	2	698.308	-36.07	-13	Pass

5.2.3 B71_15MHz

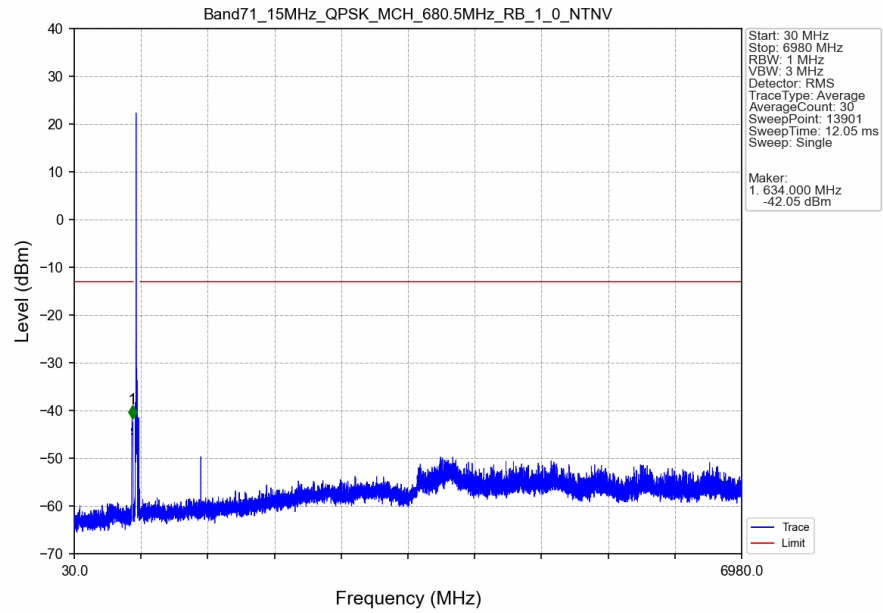


Band71 15MHz QPSK LCH 670.5MHz RB 75 0 NTV

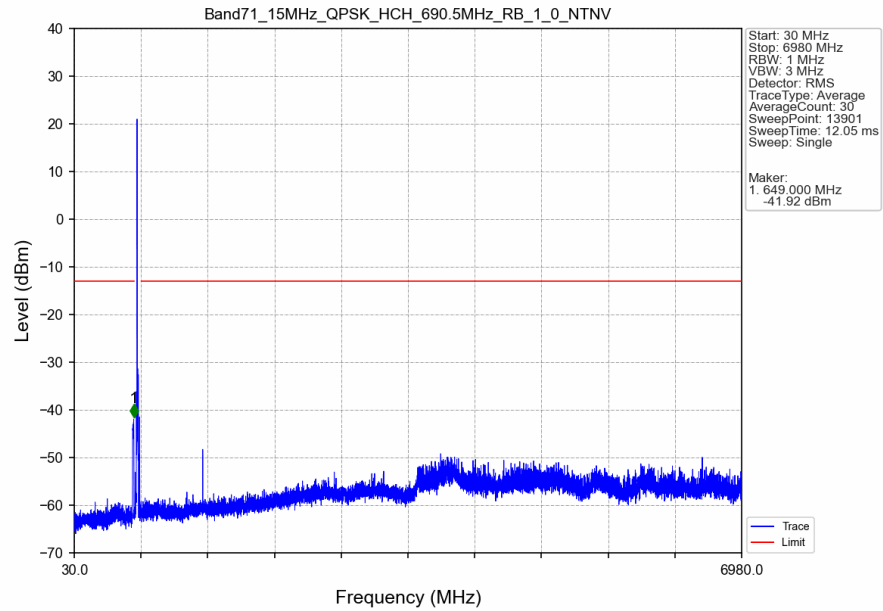


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
648	662.9	0.1	CHP	1	662.175	-32.05	-13	Pass
662.9	663	0.03	/	2	662.940	-35.74	-13	Pass
663	678	0.03	/	/	/	/	/	/

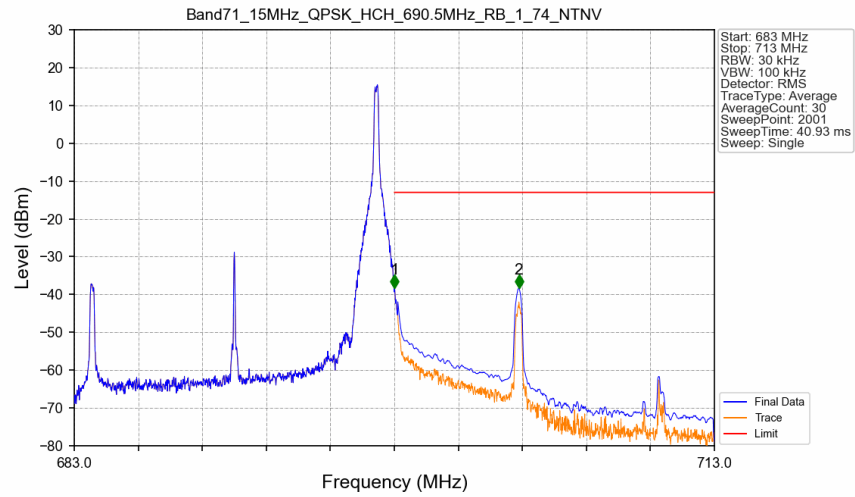
Band71 15MHz QPSK MCH 680.5MHz RB 1 0 NTV



Band71_15MHz_QPSK_HCH_690.5MHz_RB_1_0_NTNV

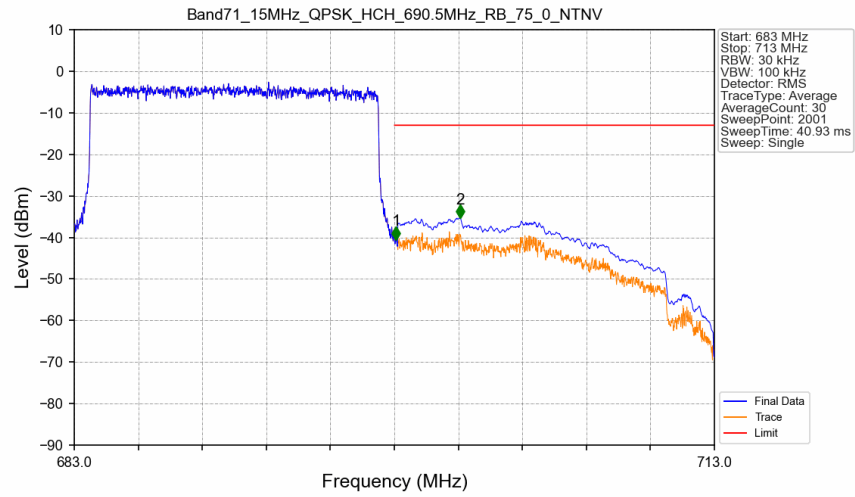


Band71_15MHz_QPSK_HCH_690.5MHz_RB_1_74_NTNV



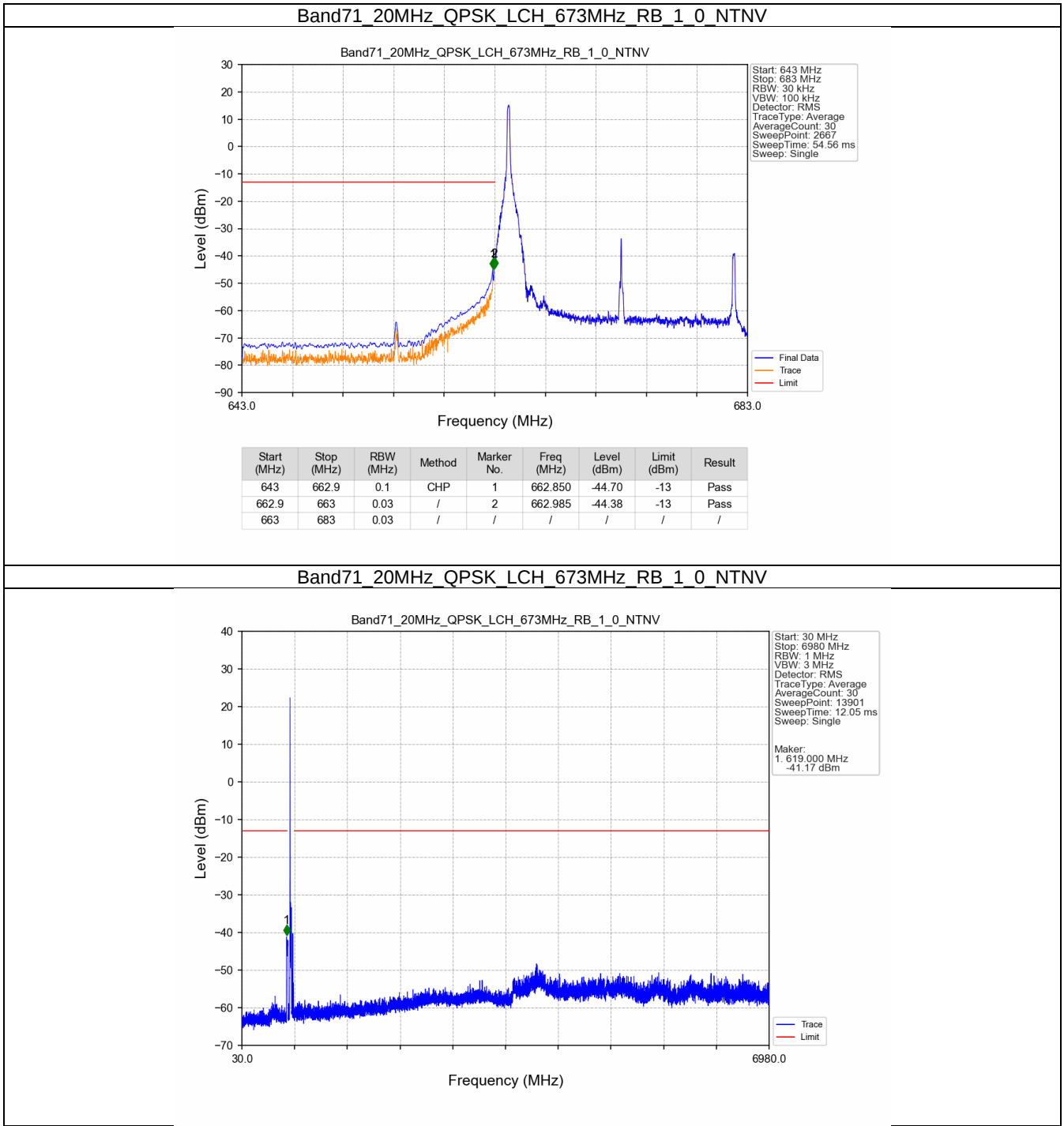
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
683	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.015	-38.19	-13	Pass
698.1	713	0.1	CHP	2	703.835	-38.36	-13	Pass

Band71 15MHz QPSK HCH 690.5MHz RB 75 0 NTNV

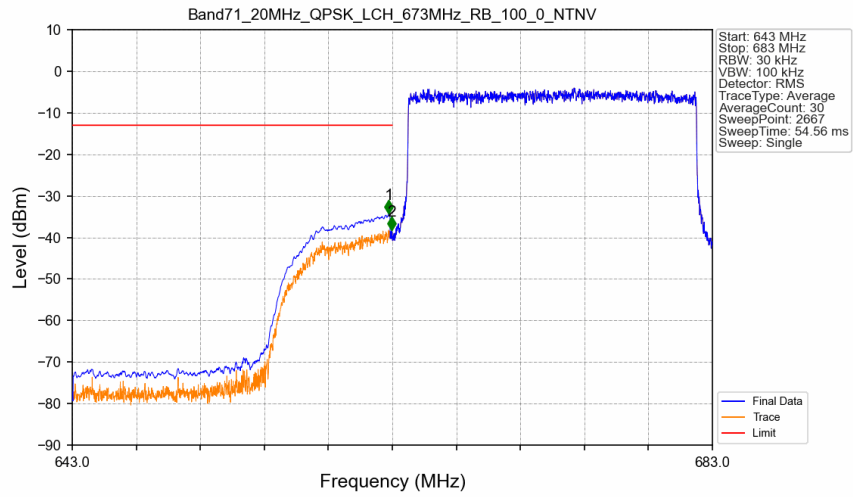


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
683	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.075	-40.49	-13	Pass
698.1	713	0.1	CHP	2	701.090	-35.31	-13	Pass

5.2.4 B71_20MHz

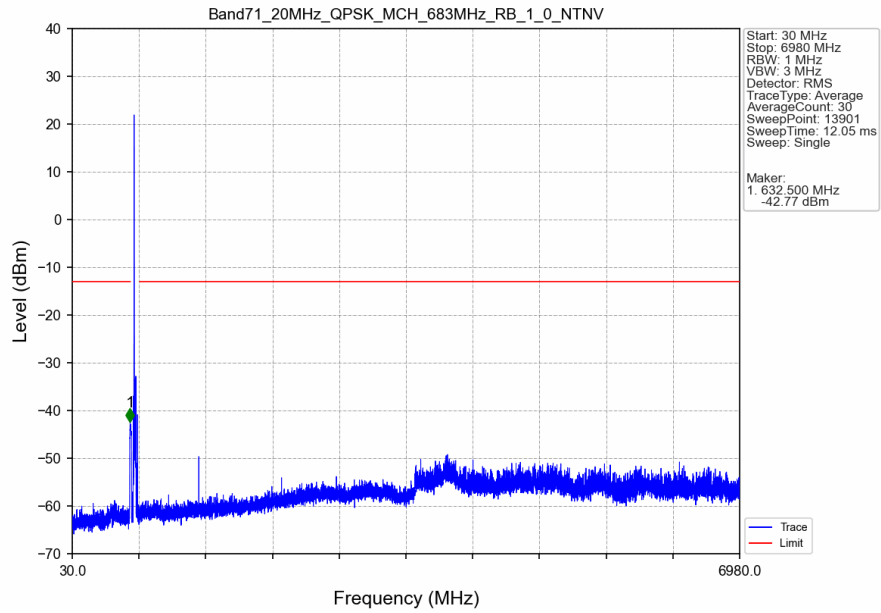


Band71 20MHz QPSK LCH 673MHz RB 100 0 NTNV

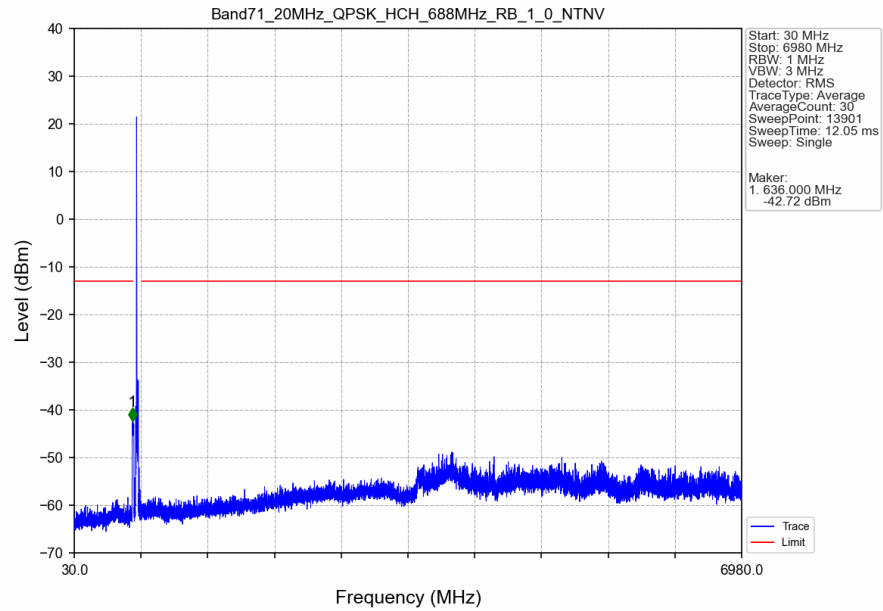


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
643	662.9	0.1	CHP	1	662.775	-34.18	-13	Pass
662.9	663	0.03	/	2	662.970	-38.19	-13	Pass
663	683	0.03	/	/	/	/	/	/

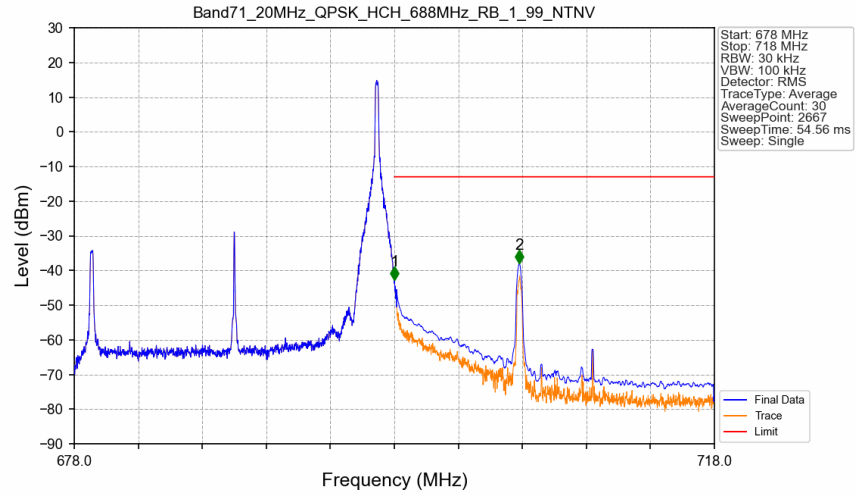
Band71 20MHz QPSK MCH 683MHz RB 1 0 NTNV



Band71 20MHz QPSK HCH 688MHz RB 1 0 NTN

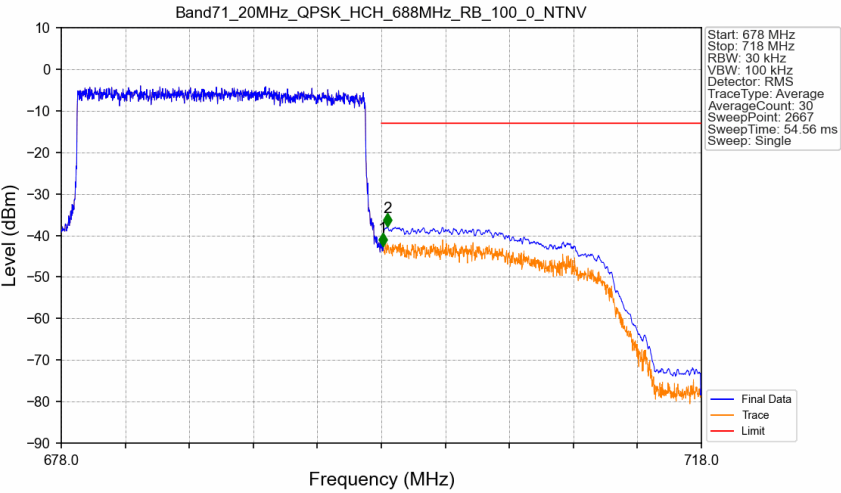


Band71 20MHz QPSK HCH 688MHz RB 1 99 NTN



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
678	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.015	-42.77	-13	Pass
698.1	718	0.1	CHP	2	705.802	-37.86	-13	Pass

Band71 20MHz QPSK HCH 688MHz RB 100 0 NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
678	698	0.03	/	/	/	/	/	/
698	698.1	0.03	/	1	698.075	-42.61	-13	Pass
698.1	718	0.1	CHP	2	698.390	-37.86	-13	Pass

6. Field Strength of Spurious Radiation

LTE Band 71-Low channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0				
Frequency	Spurious Emission Level		Limit	Margin
(MHz)	Polaxis	(dBm)	(dBm)	(dB)
1333	H	-63.28	-13	50.28
1999.5	H	-60.25	-13	47.25
2666	H	-58.72	-13	45.72
1333	V	-63.57	-13	50.57
1999.5	V	-60.85	-13	47.85
2666	V	-59.01	-13	46.01

LTE Band 71-Middle channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0				
Frequency	Spurious Emission Level		Limit	Margin
(MHz)	Polaxis	(dBm)	(dBm)	(dB)
1343	H	-63.37	-13	50.37
2014.5	H	-59.47	-13	46.47
2686	H	-59.3	-13	46.3
1343	V	-63.15	-13	50.15
2014.5	V	-60.67	-13	47.67
2686	V	-58.91	-13	45.91

LTE Band 71-High channel, Modulation: QPSK, Bandwidth:20MHz, 1RB#0				
Frequency	Spurious Emission Level		Limit	Margin
(MHz)	Polaxis	(dBm)	(dBm)	(dB)
1353	H	-63.21	-13	50.21
2029.5	H	-60.65	-13	47.65
2706	H	-58.36	-13	45.36
1353	V	-64.02	-13	51.02
2029.5	V	-60.55	-13	47.55
2706	V	-59.13	-13	46.13