

**Appendix A.17****1. Effective (Isotropic) Radiated Power Output Data****1.1 Test Result****1.1.1 B38_5MHz_EIRP**

Band: 38 / Bandwidth: 5MHz / NTN								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	2572.5	1	0	22.24	-0.30	21.94	<=33.01	Pass
			13	22.35	-0.30	22.05	<=33.01	Pass
			24	22.42	-0.30	22.12	<=33.01	Pass
		12	0	21.72	-0.30	21.42	<=33.01	Pass
			6	21.66	-0.30	21.36	<=33.01	Pass
			13	21.59	-0.30	21.29	<=33.01	Pass
		25	0	21.66	-0.30	21.36	<=33.01	Pass
	2595	1	0	22.32	-0.30	22.02	<=33.01	Pass
			13	22.30	-0.30	22.00	<=33.01	Pass
			24	22.38	-0.30	22.08	<=33.01	Pass
		12	0	21.34	-0.30	21.04	<=33.01	Pass
			6	21.43	-0.30	21.13	<=33.01	Pass
			13	21.33	-0.30	21.03	<=33.01	Pass
		25	0	21.35	-0.30	21.05	<=33.01	Pass
	2617.5	1	0	22.22	-0.30	21.92	<=33.01	Pass
			13	22.25	-0.30	21.95	<=33.01	Pass
			24	22.19	-0.30	21.89	<=33.01	Pass
		12	0	21.67	-0.30	21.37	<=33.01	Pass
			6	21.68	-0.30	21.38	<=33.01	Pass
			13	21.57	-0.30	21.27	<=33.01	Pass
		25	0	21.69	-0.30	21.39	<=33.01	Pass
16QAM	2572.5	1	0	21.41	-0.30	21.11	<=33.01	Pass
			13	21.45	-0.30	21.15	<=33.01	Pass
			24	21.36	-0.30	21.06	<=33.01	Pass
		12	0	20.50	-0.30	20.20	<=33.01	Pass
			6	20.53	-0.30	20.23	<=33.01	Pass
			13	20.53	-0.30	20.23	<=33.01	Pass
		25	0	20.79	-0.30	20.49	<=33.01	Pass
	2595	1	0	21.32	-0.30	21.02	<=33.01	Pass
			13	21.72	-0.30	21.42	<=33.01	Pass
			24	21.70	-0.30	21.40	<=33.01	Pass
		12	0	19.98	-0.30	19.68	<=33.01	Pass
			6	20.36	-0.30	20.06	<=33.01	Pass



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			13	20.05	-0.30	19.75	<=33.01	Pass
		25	0	20.36	-0.30	20.06	<=33.01	Pass
	2617.5	1	0	22.06	-0.30	21.76	<=33.01	Pass
			13	22.21	-0.30	21.91	<=33.01	Pass
			24	22.20	-0.30	21.90	<=33.01	Pass
		12	0	20.26	-0.30	19.96	<=33.01	Pass
			6	20.62	-0.30	20.32	<=33.01	Pass
			13	20.46	-0.30	20.16	<=33.01	Pass
			25	0	20.45	-0.30	20.15	<=33.01
Note1: EIRP=Conducted Power+Antenna Gain								

1.1.2 B38_10MHz_EIRP

Band: 38 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	2575	1	0	22.25	-0.30	21.95	<=33.01	Pass
			25	22.30	-0.30	22.00	<=33.01	Pass
			49	22.34	-0.30	22.04	<=33.01	Pass
		25	0	21.67	-0.30	21.37	<=33.01	Pass
			13	21.77	-0.30	21.47	<=33.01	Pass
			25	21.62	-0.30	21.32	<=33.01	Pass
		50	0	21.69	-0.30	21.39	<=33.01	Pass
	2595	1	0	22.62	-0.30	22.32	<=33.01	Pass
			25	22.59	-0.30	22.29	<=33.01	Pass
			49	22.51	-0.30	22.21	<=33.01	Pass
		25	0	21.46	-0.30	21.16	<=33.01	Pass
			13	21.50	-0.30	21.20	<=33.01	Pass
			25	21.39	-0.30	21.09	<=33.01	Pass
		50	0	21.48	-0.30	21.18	<=33.01	Pass
	2615	1	0	22.44	-0.30	22.14	<=33.01	Pass
			25	22.53	-0.30	22.23	<=33.01	Pass
			49	22.50	-0.30	22.20	<=33.01	Pass
		25	0	21.68	-0.30	21.38	<=33.01	Pass
			13	21.64	-0.30	21.34	<=33.01	Pass
			25	21.69	-0.30	21.39	<=33.01	Pass
		50	0	21.73	-0.30	21.43	<=33.01	Pass
16QAM	2575	1	0	22.11	-0.30	21.81	<=33.01	Pass
			25	22.65	-0.30	22.35	<=33.01	Pass
			49	22.14	-0.30	21.84	<=33.01	Pass
		25	0	20.64	-0.30	20.34	<=33.01	Pass
			13	20.65	-0.30	20.35	<=33.01	Pass
			25	20.74	-0.30	20.44	<=33.01	Pass



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		50	0	20.64	-0.30	20.34	<=33.01	Pass
	2595	1	0	22.11	-0.30	21.81	<=33.01	Pass
			25	22.14	-0.30	21.84	<=33.01	Pass
			49	22.20	-0.30	21.90	<=33.01	Pass
		25	0	20.59	-0.30	20.29	<=33.01	Pass
			13	20.43	-0.30	20.13	<=33.01	Pass
			25	20.29	-0.30	19.99	<=33.01	Pass
		50	0	20.38	-0.30	20.08	<=33.01	Pass
	2615	1	0	21.14	-0.30	20.84	<=33.01	Pass
			25	21.35	-0.30	21.05	<=33.01	Pass
			49	21.20	-0.30	20.90	<=33.01	Pass
		25	0	20.35	-0.30	20.05	<=33.01	Pass
			13	20.44	-0.30	20.14	<=33.01	Pass
			25	20.39	-0.30	20.09	<=33.01	Pass
		50	0	20.69	-0.30	20.39	<=33.01	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

1.1.3 B38_15MHz_EIRP

Band: 38 / Bandwidth: 15MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	2577.5	1	0	22.64	-0.30	22.34	<=33.01	Pass
			38	22.57	-0.30	22.27	<=33.01	Pass
			74	22.48	-0.30	22.18	<=33.01	Pass
		36	0	21.62	-0.30	21.32	<=33.01	Pass
			18	21.58	-0.30	21.28	<=33.01	Pass
			39	21.76	-0.30	21.46	<=33.01	Pass
		75	0	21.76	-0.30	21.46	<=33.01	Pass
			0	22.61	-0.30	22.31	<=33.01	Pass
			38	22.44	-0.30	22.14	<=33.01	Pass
	2595	1	74	22.58	-0.30	22.28	<=33.01	Pass
			0	21.43	-0.30	21.13	<=33.01	Pass
			18	21.53	-0.30	21.23	<=33.01	Pass
		36	39	21.50	-0.30	21.20	<=33.01	Pass
			0	21.36	-0.30	21.06	<=33.01	Pass
			0	22.63	-0.30	22.33	<=33.01	Pass
		75	38	22.64	-0.30	22.34	<=33.01	Pass
			74	22.59	-0.30	22.29	<=33.01	Pass
			0	21.63	-0.30	21.33	<=33.01	Pass
	2612.5	1	18	21.53	-0.30	21.23	<=33.01	Pass
			39	21.50	-0.30	21.20	<=33.01	Pass
			0	21.36	-0.30	21.06	<=33.01	Pass
		36	0	22.63	-0.30	22.33	<=33.01	Pass
			38	22.64	-0.30	22.34	<=33.01	Pass
			74	22.59	-0.30	22.29	<=33.01	Pass
		75	0	21.63	-0.30	21.33	<=33.01	Pass
			18	21.64	-0.30	21.34	<=33.01	Pass
			39	21.59	-0.30	21.29	<=33.01	Pass



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16QAM	2577.5	1	0	21.54	-0.30	21.24	<=33.01	Pass
			38	21.71	-0.30	21.41	<=33.01	Pass
			74	21.88	-0.30	21.58	<=33.01	Pass
		36	0	20.75	-0.30	20.45	<=33.01	Pass
			18	20.73	-0.30	20.43	<=33.01	Pass
			39	20.61	-0.30	20.31	<=33.01	Pass
		75	0	20.61	-0.30	20.31	<=33.01	Pass
	2595	1	0	21.88	-0.30	21.58	<=33.01	Pass
			38	21.87	-0.30	21.57	<=33.01	Pass
			74	22.08	-0.30	21.78	<=33.01	Pass
		36	0	20.36	-0.30	20.06	<=33.01	Pass
			18	20.57	-0.30	20.27	<=33.01	Pass
			39	20.43	-0.30	20.13	<=33.01	Pass
		75	0	20.36	-0.30	20.06	<=33.01	Pass
	2612.5	1	0	21.23	-0.30	20.93	<=33.01	Pass
			38	21.29	-0.30	20.99	<=33.01	Pass
			74	21.24	-0.30	20.94	<=33.01	Pass
		36	0	20.34	-0.30	20.04	<=33.01	Pass
			18	20.52	-0.30	20.22	<=33.01	Pass
			39	20.52	-0.30	20.22	<=33.01	Pass
		75	0	20.53	-0.30	20.23	<=33.01	Pass

Note1: EIRP=Conducted Power+Antenna Gain

1.1.4 B38_20MHz_EIRP

Band: 38 / Bandwidth: 20MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	2580	1	0	22.96	-0.30	22.66	<=33.01	Pass
			50	22.95	-0.30	22.65	<=33.01	Pass
			99	22.68	-0.30	22.38	<=33.01	Pass
		50	0	21.65	-0.30	21.35	<=33.01	Pass
			25	21.73	-0.30	21.43	<=33.01	Pass
			50	21.54	-0.30	21.24	<=33.01	Pass
		100	0	21.65	-0.30	21.35	<=33.01	Pass
	2595	1	0	22.34	-0.30	22.04	<=33.01	Pass
			50	22.41	-0.30	22.11	<=33.01	Pass
			99	22.15	-0.30	21.85	<=33.01	Pass
		50	0	21.42	-0.30	21.12	<=33.01	Pass
			25	21.48	-0.30	21.18	<=33.01	Pass
			50	21.58	-0.30	21.28	<=33.01	Pass
		100	0	21.42	-0.30	21.12	<=33.01	Pass
	2610	1	0	22.10	-0.30	21.80	<=33.01	Pass

			50	22.48	-0.30	22.18	<=33.01	Pass
			99	22.17	-0.30	21.87	<=33.01	Pass
16QAM	2580	50	0	21.54	-0.30	21.24	<=33.01	Pass
			25	21.53	-0.30	21.23	<=33.01	Pass
			50	21.62	-0.30	21.32	<=33.01	Pass
		100	0	21.57	-0.30	21.27	<=33.01	Pass
			1	22.12	-0.30	21.82	<=33.01	Pass
			50	21.88	-0.30	21.58	<=33.01	Pass
	2595	1	99	21.45	-0.30	21.15	<=33.01	Pass
			0	20.63	-0.30	20.33	<=33.01	Pass
			25	20.69	-0.30	20.39	<=33.01	Pass
		50	50	20.67	-0.30	20.37	<=33.01	Pass
			100	0	20.75	20.45	<=33.01	Pass
			1	21.59	-0.30	21.29	<=33.01	Pass
		50	50	21.56	-0.30	21.26	<=33.01	Pass
			99	21.25	-0.30	20.95	<=33.01	Pass
			0	20.41	-0.30	20.11	<=33.01	Pass
		100	25	20.38	-0.30	20.08	<=33.01	Pass
			50	20.58	-0.30	20.28	<=33.01	Pass
			0	20.33	-0.30	20.03	<=33.01	Pass
	2610	1	0	22.06	-0.30	21.76	<=33.01	Pass
			50	22.53	-0.30	22.23	<=33.01	Pass
			99	21.85	-0.30	21.55	<=33.01	Pass
		50	0	20.57	-0.30	20.27	<=33.01	Pass
			25	20.67	-0.30	20.37	<=33.01	Pass
			50	20.59	-0.30	20.29	<=33.01	Pass
		100	0	20.55	-0.30	20.25	<=33.01	Pass

Note1: EIRP=Conducted Power+Antenna Gain

2. Frequency Stability

2.1 Test Result

2.1.1 B38_10MHz

Band: 38 / Bandwidth: 10MHz									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
		Size	Offset				Result	Limit	
QPSK	2595	50	0	20	LV	4.478	0.0017	-2.5 to 2.5	Pass
					NV	7.739	0.0030	-2.5 to 2.5	Pass
					HV	3.877	0.0015	-2.5 to 2.5	Pass
				-30	NV	2.875	0.0011	-2.5 to 2.5	Pass
				-20	NV	0.858	0.0003	-2.5 to 2.5	Pass



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				-10	NV	5.279	0.0020	-2.5 to 2.5	Pass
				0	NV	2.761	0.0011	-2.5 to 2.5	Pass
				10	NV	2.704	0.0010	-2.5 to 2.5	Pass
				30	NV	2.503	0.0010	-2.5 to 2.5	Pass
				40	NV	7.768	0.0030	-2.5 to 2.5	Pass
				50	NV	5.121	0.0020	-2.5 to 2.5	Pass

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band38_OBW

Band: 38 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	2595	25	0	4.482	/	Pass
	16QAM	2595	25	0	4.478	/	Pass
10	QPSK	2595	50	0	8.951	/	Pass
	16QAM	2595	50	0	8.944	/	Pass
15	QPSK	2595	75	0	13.419	/	Pass
	16QAM	2595	75	0	13.445	/	Pass
20	QPSK	2595	100	0	17.896	/	Pass
	16QAM	2595	100	0	17.842	/	Pass

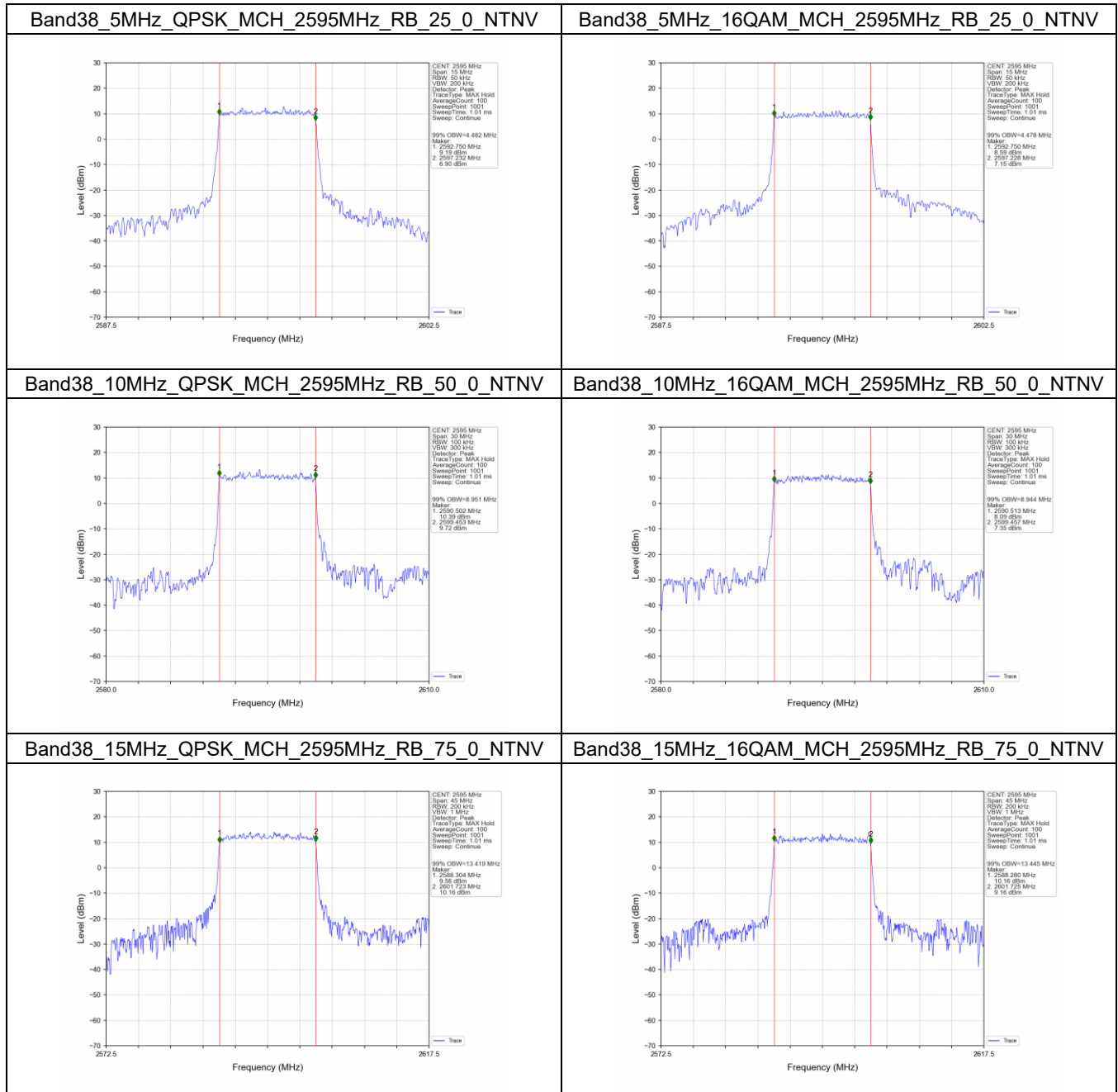
3.1.2 Band38_XDB

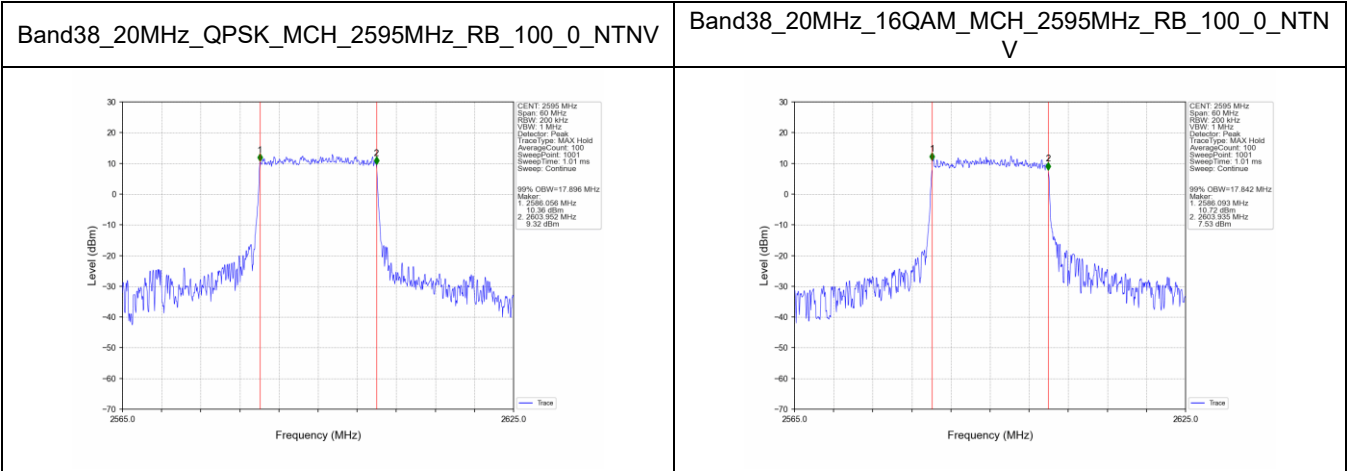
Band: 38 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
5	QPSK	2595	25	0	4.925	/	Pass
	16QAM	2595	25	0	4.895	/	Pass
10	QPSK	2595	50	0	9.624	/	Pass
	16QAM	2595	50	0	9.901	/	Pass
15	QPSK	2595	75	0	14.729	/	Pass
	16QAM	2595	75	0	14.568	/	Pass
20	QPSK	2595	100	0	19.208	/	Pass
	16QAM	2595	100	0	19.202	/	Pass



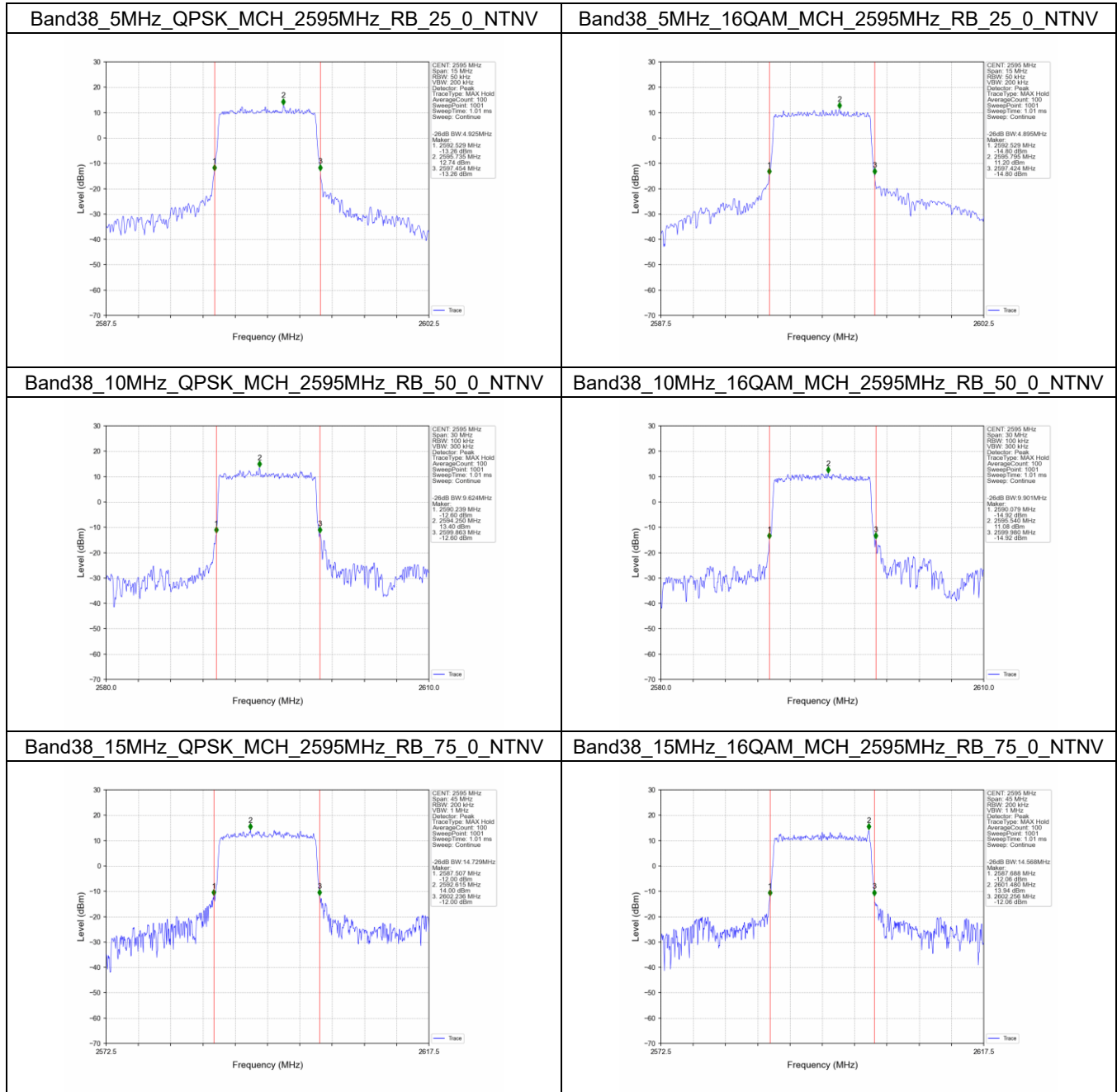
3.2 Test Graph

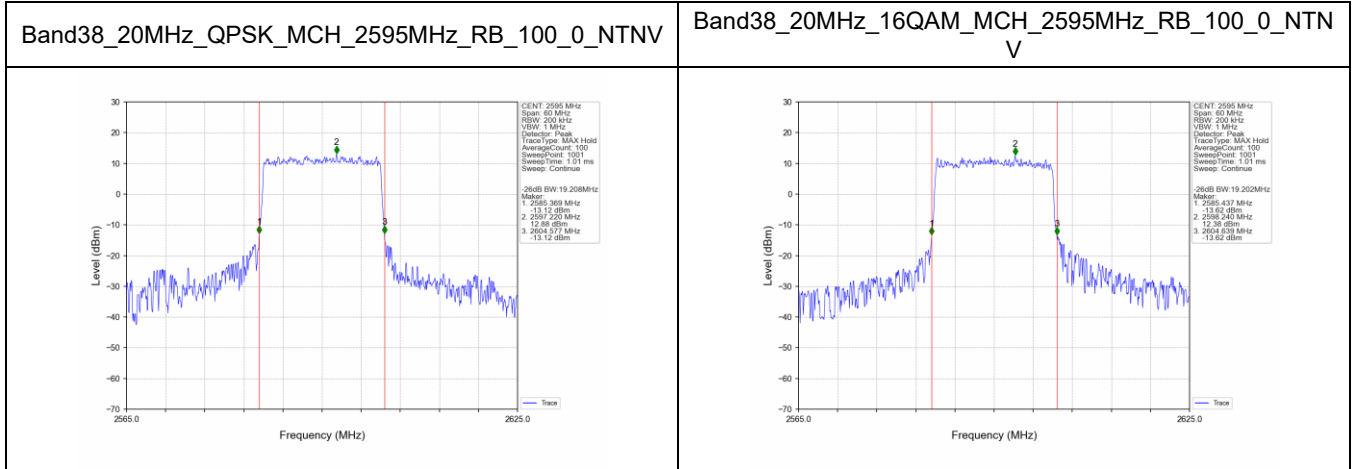
3.2.1 Band38_OBW





3.2.2 Band38_XDB







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4. Peak-Average Ratio

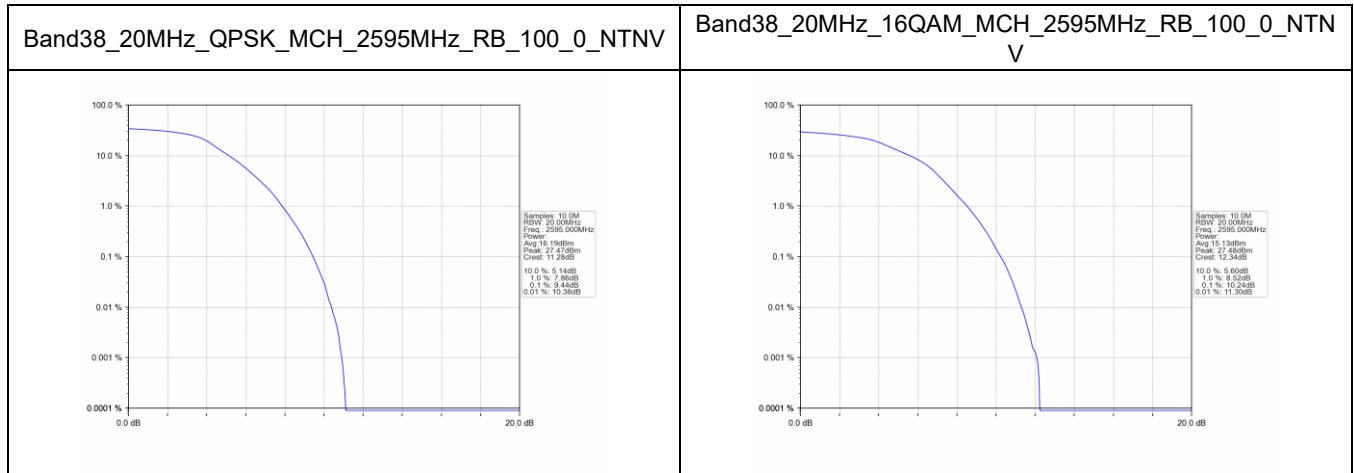
4.1 Test Result

4.1.1 B38_20MHz

Band: 38 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	2595	100	0	9.44	<=13	Pass
16QAM	2595	100	0	10.24	<=13	Pass

4.2 Test Graph

4.2.1 B38_20MHz





5. Spurious Emission

5.1 Test Result

5.1.1 B38_5MHz

Band: 38 / Bandwidth: 5MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2572.5	1	0	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass
	2595	1	0	Refer To Test Graph		Pass
	2617.5	1	0	Refer To Test Graph		Pass
			24	Refer To Test Graph		Pass
		25	0	Refer To Test Graph		Pass

5.1.2 B38_10MHz

Band: 38 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2575	1	0	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass
	2595	1	0	Refer To Test Graph		Pass
	2615	1	0	Refer To Test Graph		Pass
			49	Refer To Test Graph		Pass
		50	0	Refer To Test Graph		Pass

5.1.3 B38_15MHz

Band: 38 / Bandwidth: 15MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2577.5	1	0	Refer To Test Graph		Pass
		75	0	Refer To Test Graph		Pass
	2595	1	0	Refer To Test Graph		Pass
	2612.5	1	0	Refer To Test Graph		Pass
			74	Refer To Test Graph		Pass
		75	0	Refer To Test Graph		Pass

5.1.4 B38_20MHz



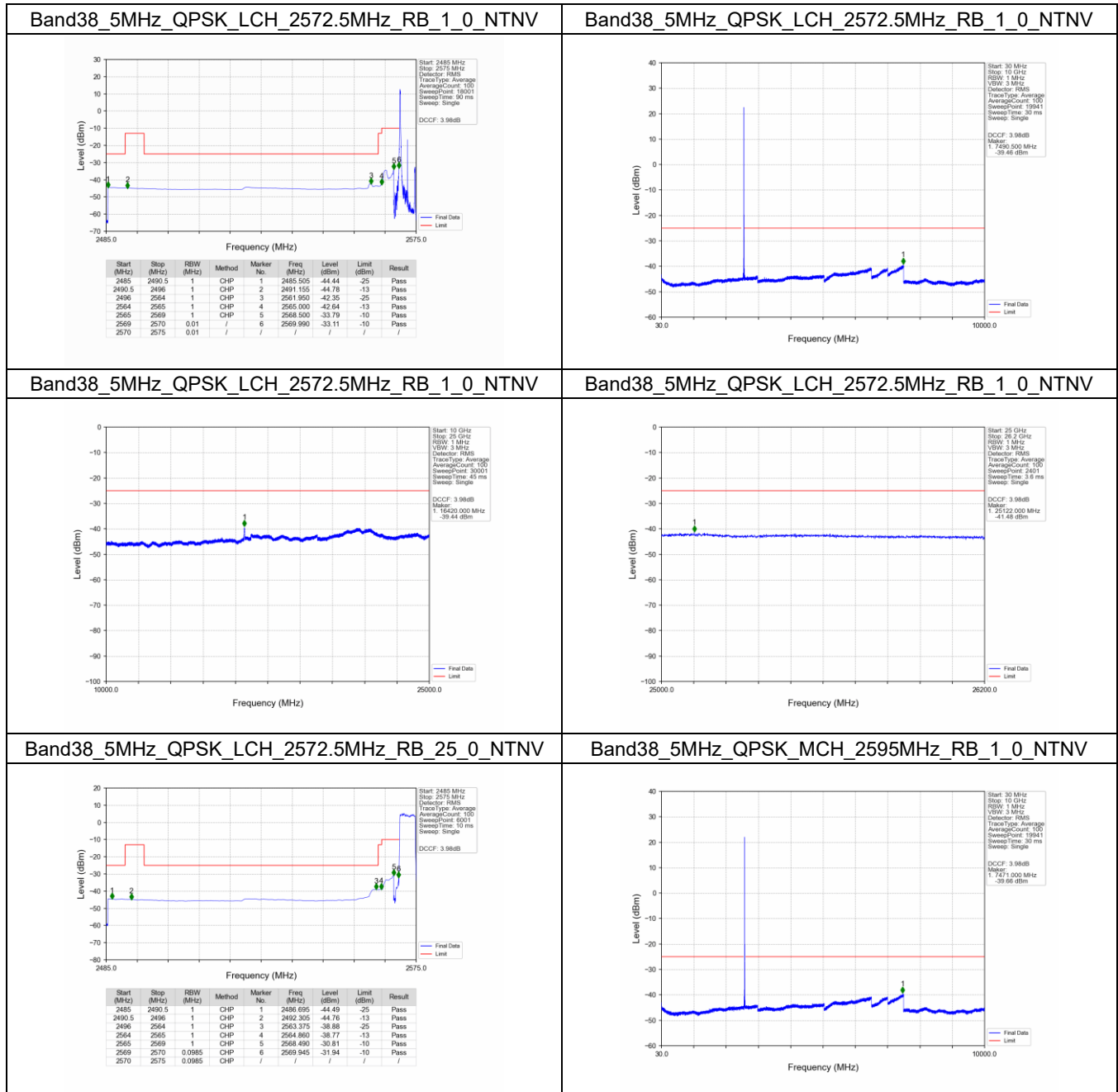
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Band: 38 / Bandwidth: 20MHz / NTVN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2580	1	0	Refer To Test Graph		Pass
		100	0	Refer To Test Graph		Pass
	2595	1	0	Refer To Test Graph		Pass
	2610	1	0	Refer To Test Graph		Pass
			99	Refer To Test Graph		Pass
		100	0	Refer To Test Graph		Pass

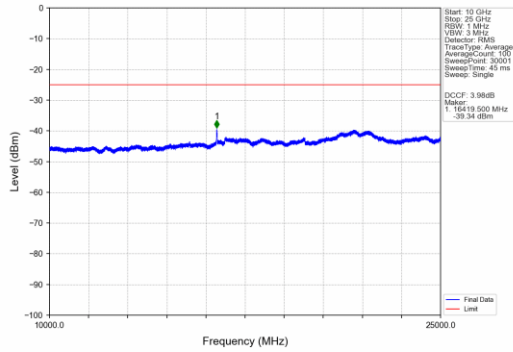


5.2 Test Graph

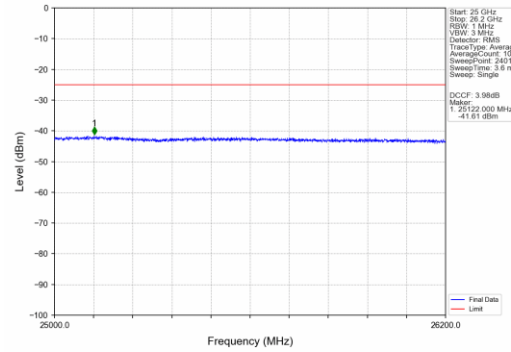
5.2.1 B38_5MHz



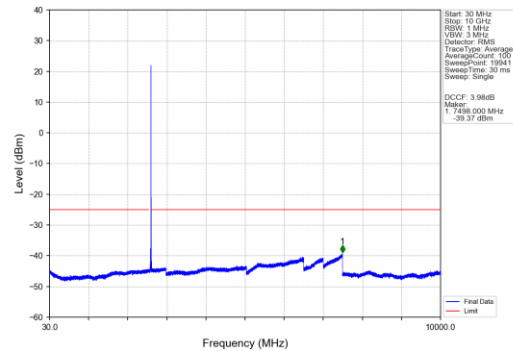
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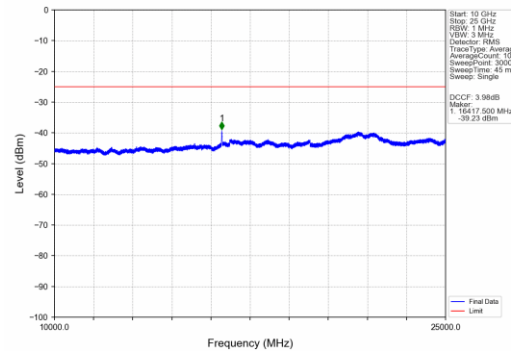
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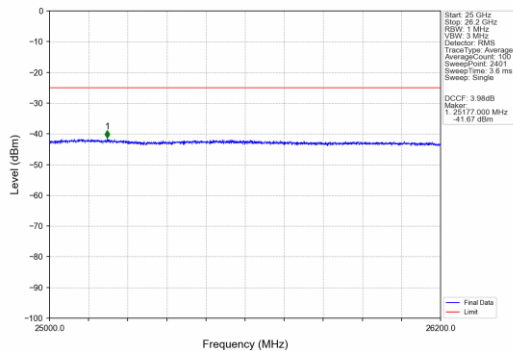
Band38_5MHz_QPSK_HCH_2617.5MHz_RB_1_0_NTNV



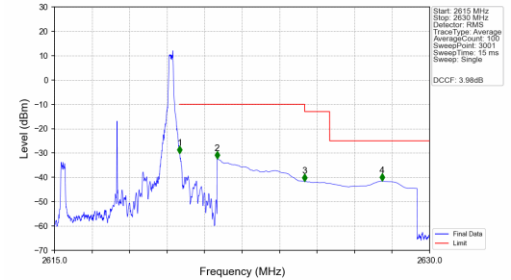
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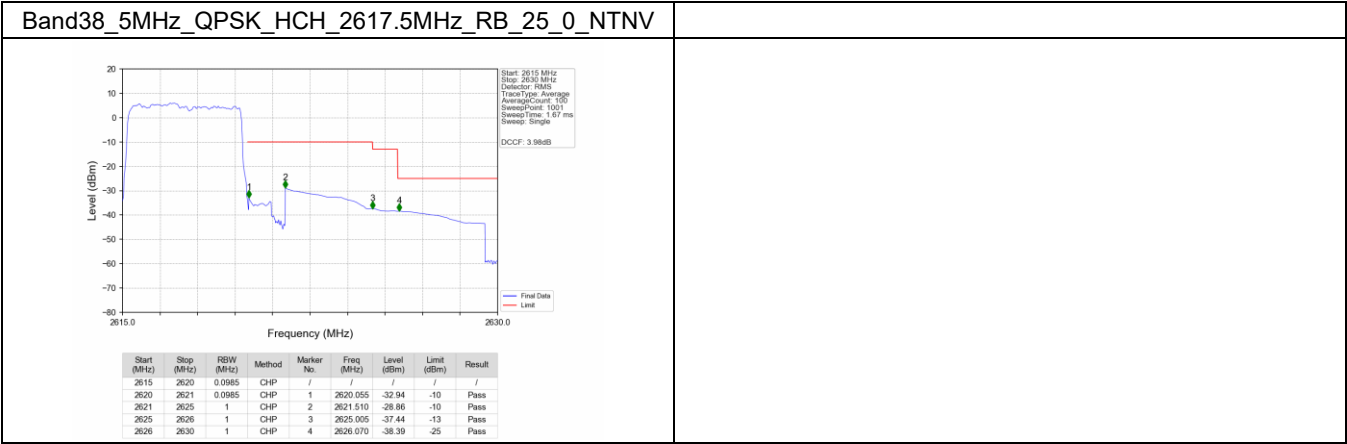
Band38_5MHz_QPSK_HCH_2617.5MHz_RB_1_0_NTNV



Band38_5MHz_QPSK_HCH_2617.5MHz_RB_1_24_NTNV

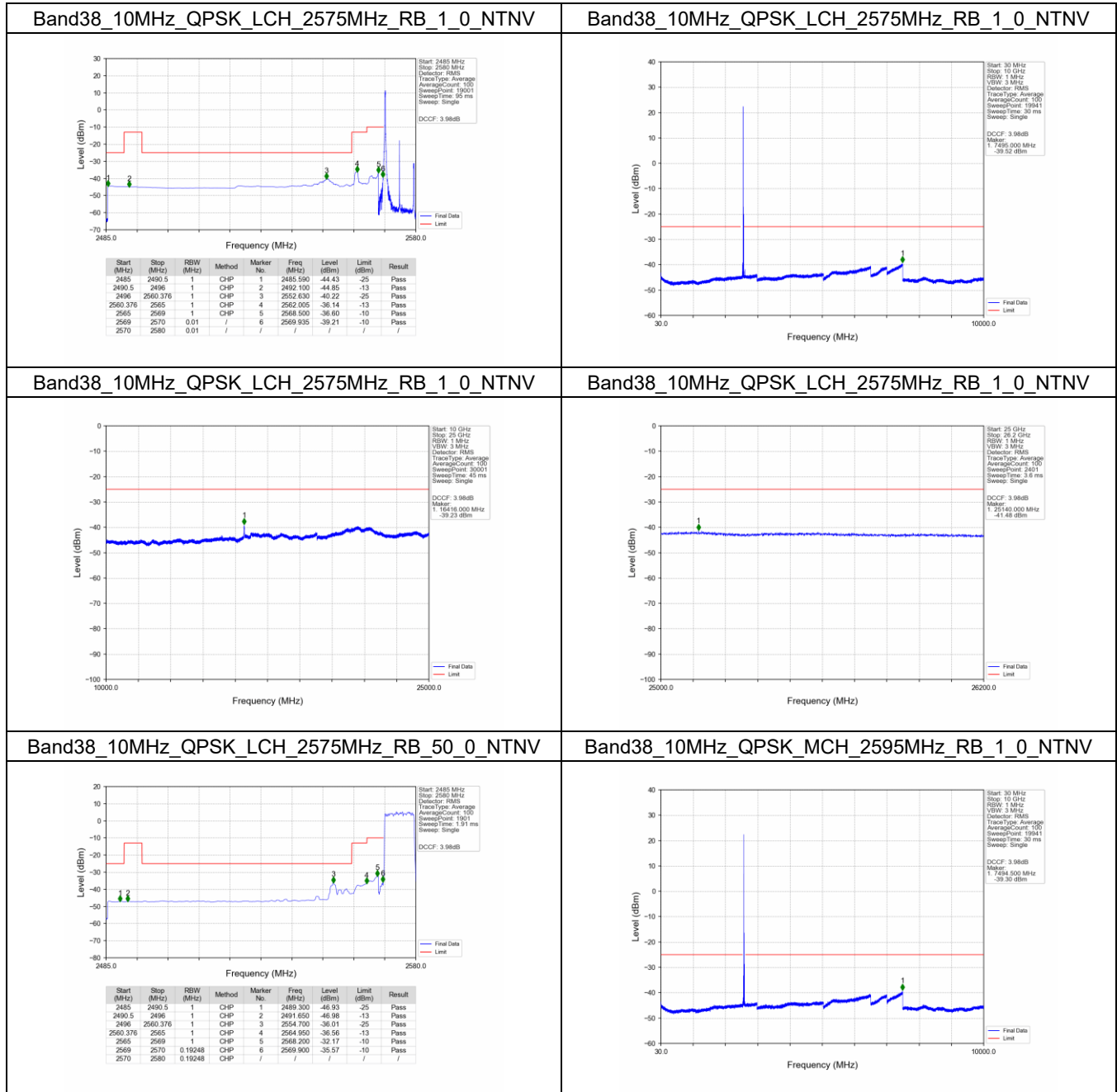


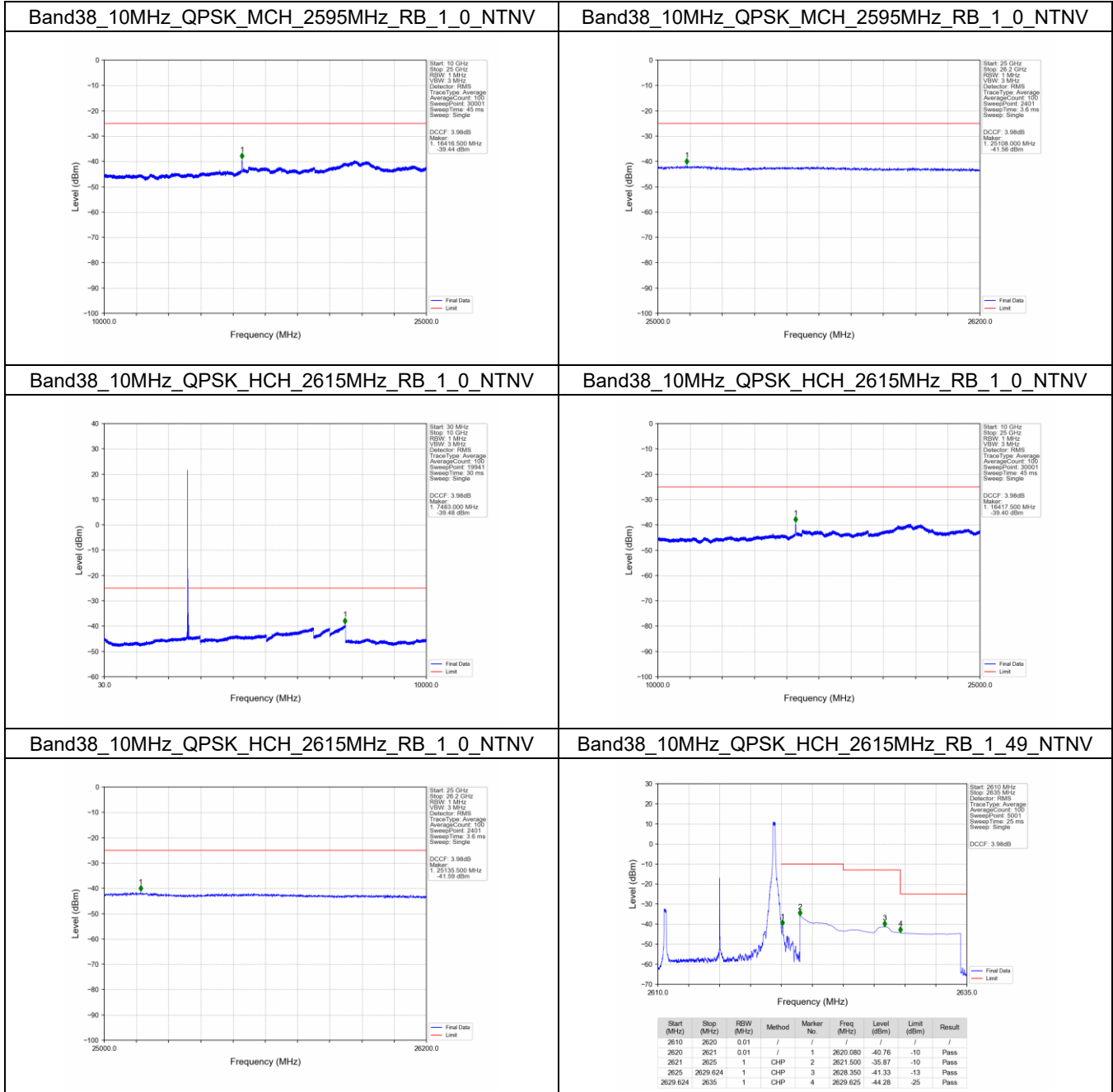
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
2615	2620	0.01	/	/	/	/	/	/
2620	2621	0.01	/	1	2620.005	-30.28	-10	Pass
2621	2625	1	CHP	2	2621.500	-32.35	-10	Pass
2625	2626	1	CHP	3	2625.005	-41.71	-13	Pass
2626	2630	1	CHP	4	2628.095	-41.58	-25	Pass

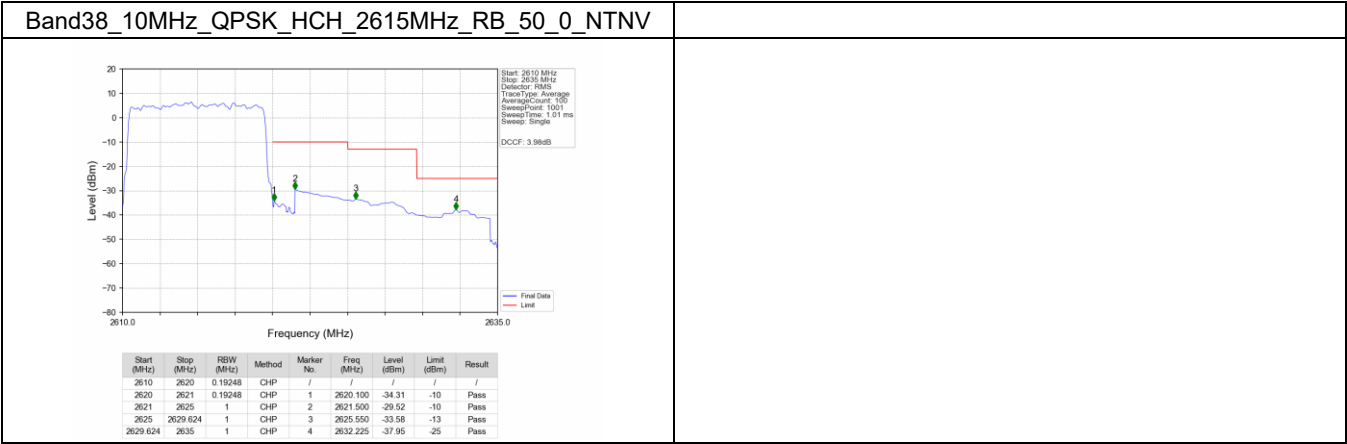




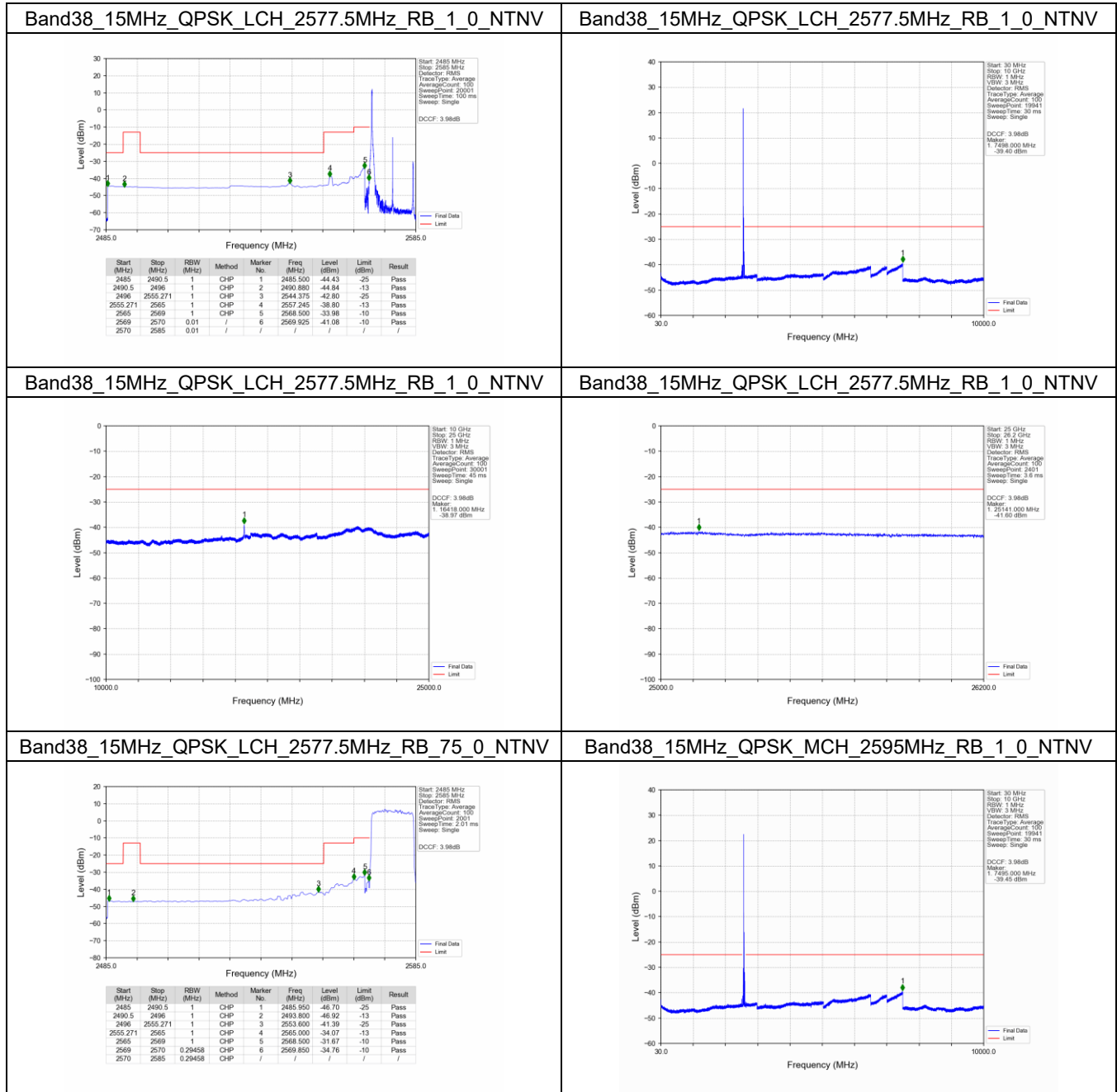
5.2.2 B38_10MHz



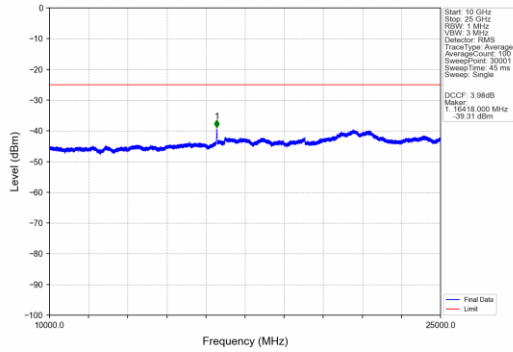




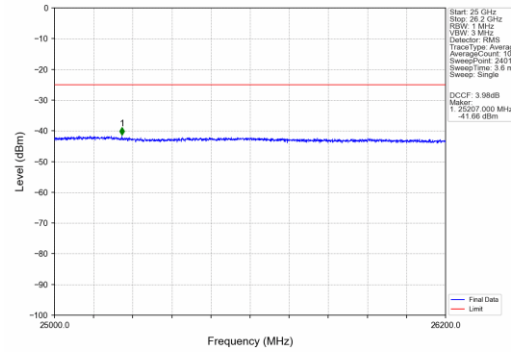
5.2.3 B38_15MHz



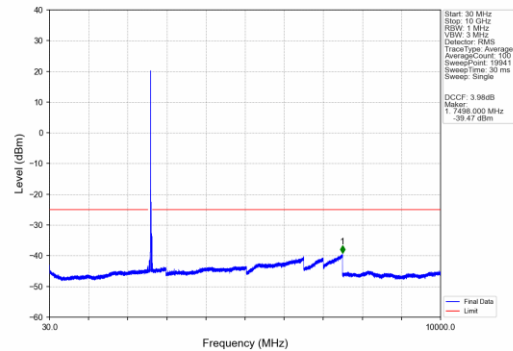
Band38_15MHz_QPSK_MCH_2595MHz_RB_1_0_NTNV



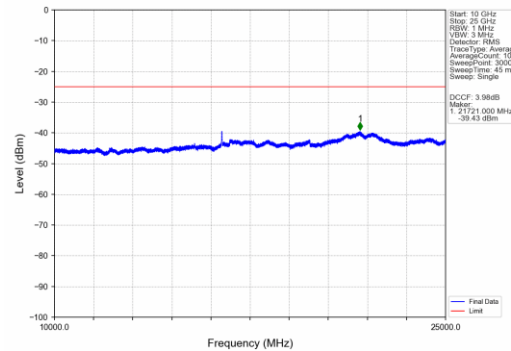
Band38_15MHz_QPSK_MCH_2595MHz_RB_1_0_NTNV



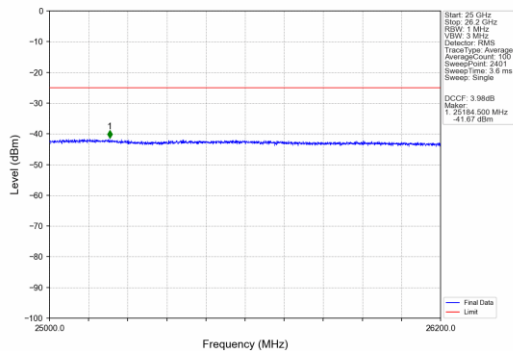
Band38_15MHz_QPSK_HCH_2612.5MHz_RB_1_0_NTNV



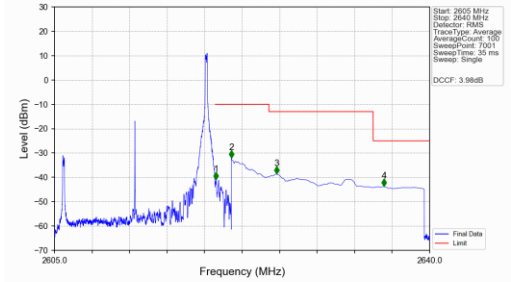
Band38_15MHz_QPSK_HCH_2612.5MHz_RB_1_0_NTNV



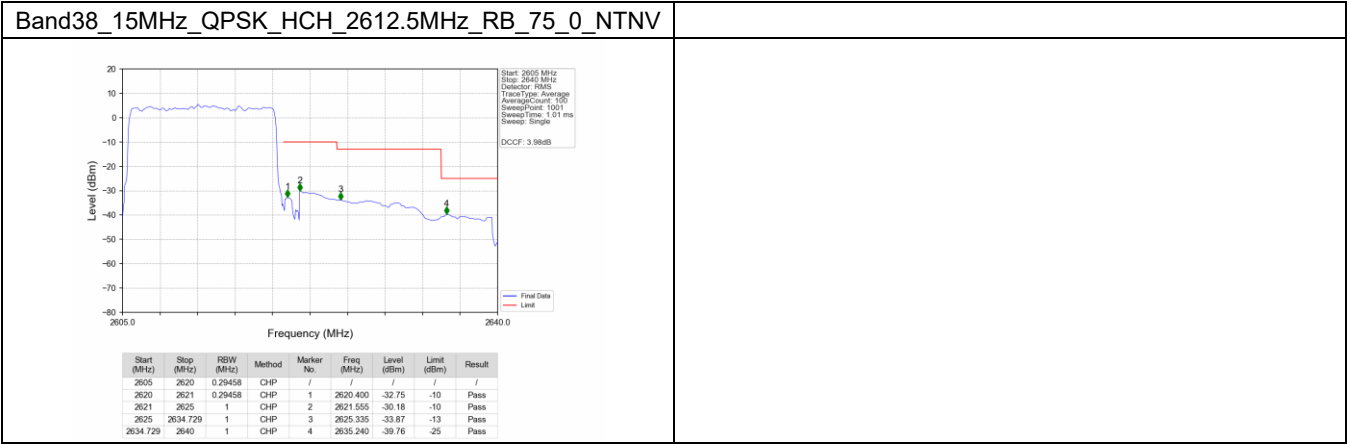
Band38_15MHz_QPSK_HCH_2612.5MHz_RB_1_0_NTNV



Band38_15MHz_QPSK_HCH_2612.5MHz_RB_1_74_NTNV

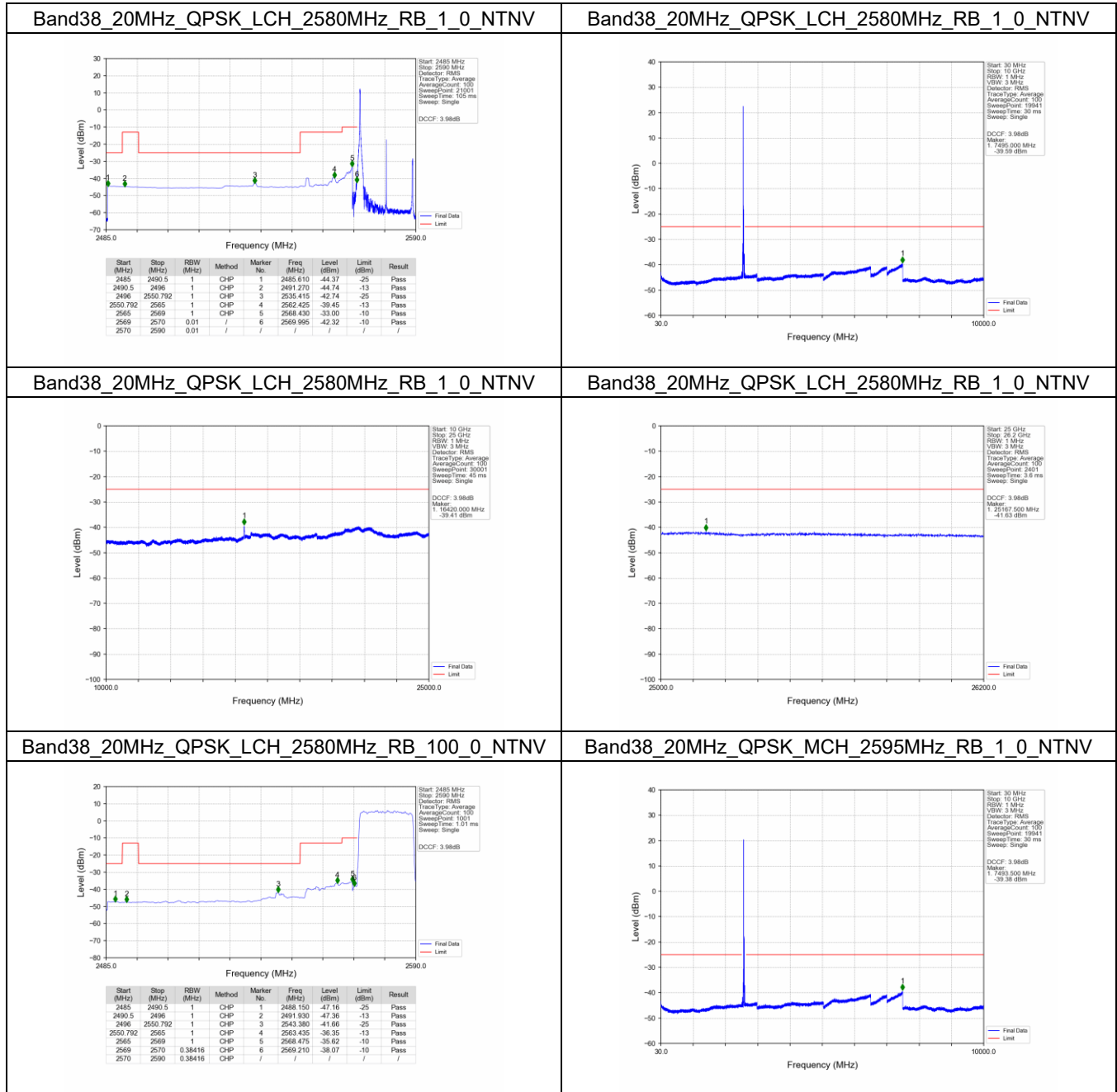


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
2605	2620	0.01	/	/	/	/	/	/
2620	2621	0.01	/	1	2620.065	-41.00	-10	Pass
2621	2625	1	CHP	2	2621.500	-32.10	-10	Pass
2625	2634.729	1	CHP	3	2625.730	-38.62	-13	Pass
2634.729	2640	1	CHP	4	2635.745	-43.78	-25	Pass

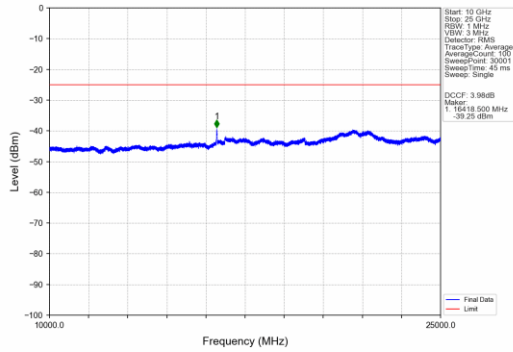




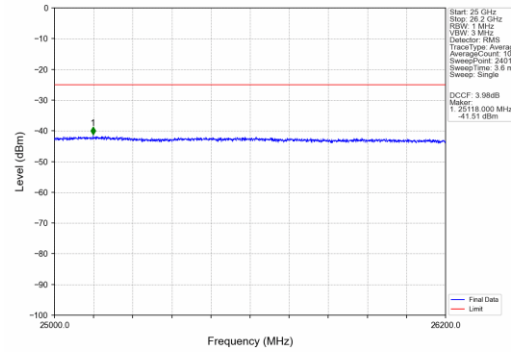
5.2.4 B38_20MHz



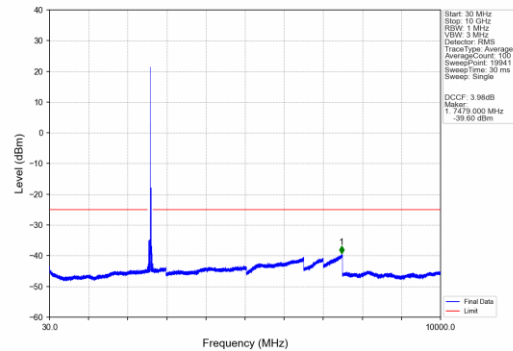
Band38_20MHz_QPSK_MCH_2595MHz_RB_1_0_NTNV



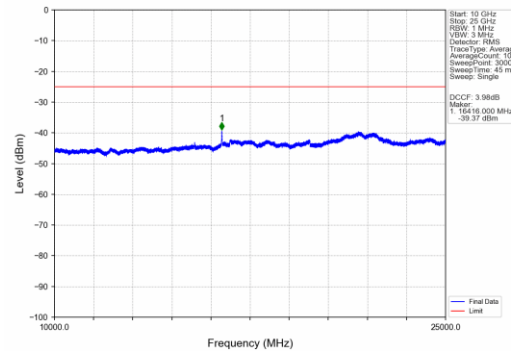
Band38_20MHz_QPSK_MCH_2595MHz_RB_1_0_NTNV



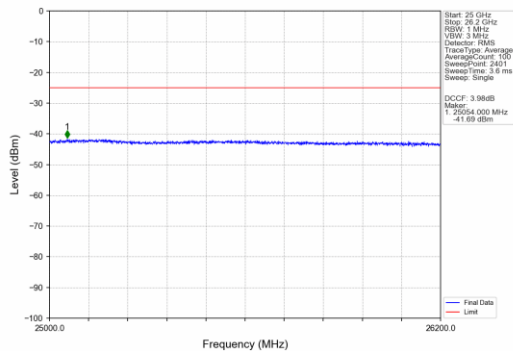
Band38_20MHz_QPSK_HCH_2610MHz_RB_1_0_NTNV



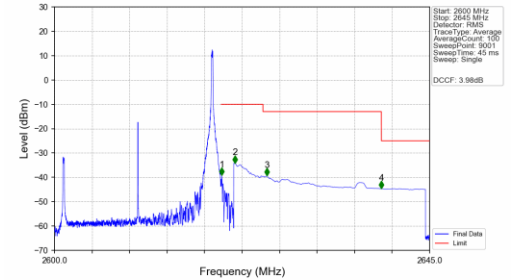
Band38_20MHz_QPSK_HCH_2610MHz_RB_1_0_NTNV



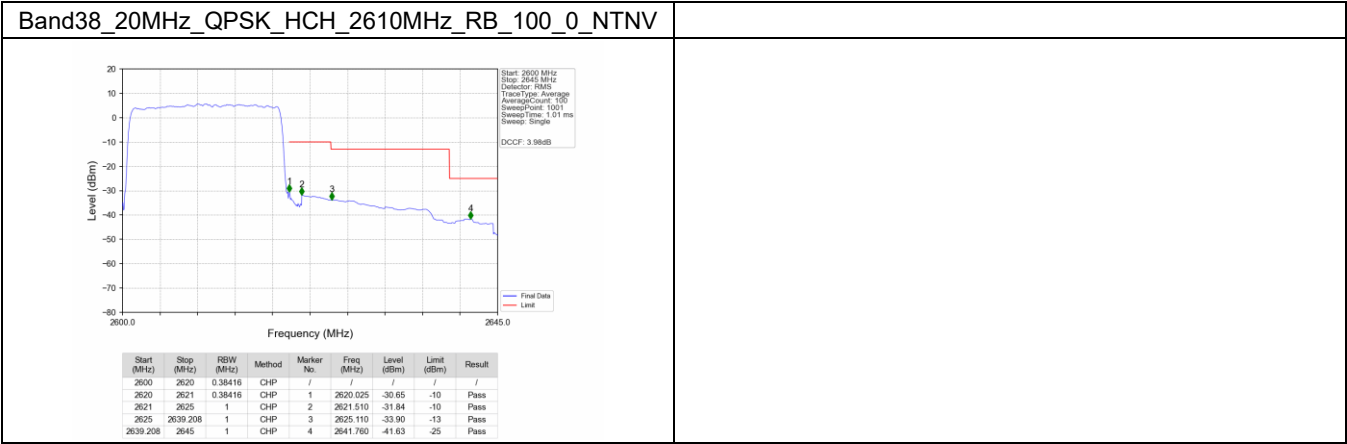
Band38_20MHz_QPSK_HCH_2610MHz_RB_1_0_NTNV



Band38_20MHz_QPSK_HCH_2610MHz_RB_1_99_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
2600	2620	0.01	/	/	/	/	/	/
2620	2621	0.01	/	1	2620.070	-39.21	-10	Pass
2621	2625	1	CHP	2	2621.645	-34.15	-10	Pass
2625	2639.208	1	CHP	3	2625.455	-39.33	-13	Pass
2639.208	2645	1	CHP	4	2639.220	-44.66	-25	Pass





6. Frequency Stability (IC)

6.1 Test Result

6.1.1 B38_10MHz

Band: 38 / Bandwidth: 10MHz / NTNV									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	OBW (FL - FH) (MHz)		Limit	Verdict
		Size	Offset			FL	FH		
QPSK	2595	50	0	20	LV	2590.468	2599.489	2570 to 2620	Pass
					NV	2590.471	2599.480	2570 to 2620	Pass
					HV	2590.492	2599.478	2570 to 2620	Pass
				-30	NV	2590.479	2599.474	2570 to 2620	Pass
				-20	NV	2590.471	2599.469	2570 to 2620	Pass
				-10	NV	2590.469	2599.491	2570 to 2620	Pass
				0	NV	2590.501	2599.486	2570 to 2620	Pass
				10	NV	2590.477	2599.486	2570 to 2620	Pass
				30	NV	2590.474	2599.476	2570 to 2620	Pass
				40	NV	2590.493	2599.481	2570 to 2620	Pass
				50	NV	2590.479	2599.475	2570 to 2620	Pass

---End of Attachment---