

Appendix RF Test Data for WIFI 5G

Company: : Dongguan K-Play Technology Co., Ltd

EUT : Carplay adapter

FCC ID: : 2BRSX-CP218

Model Number : CP218

Report No. : HTT202508229F02

Reviewed By : Heber He

1. Duty Cycle

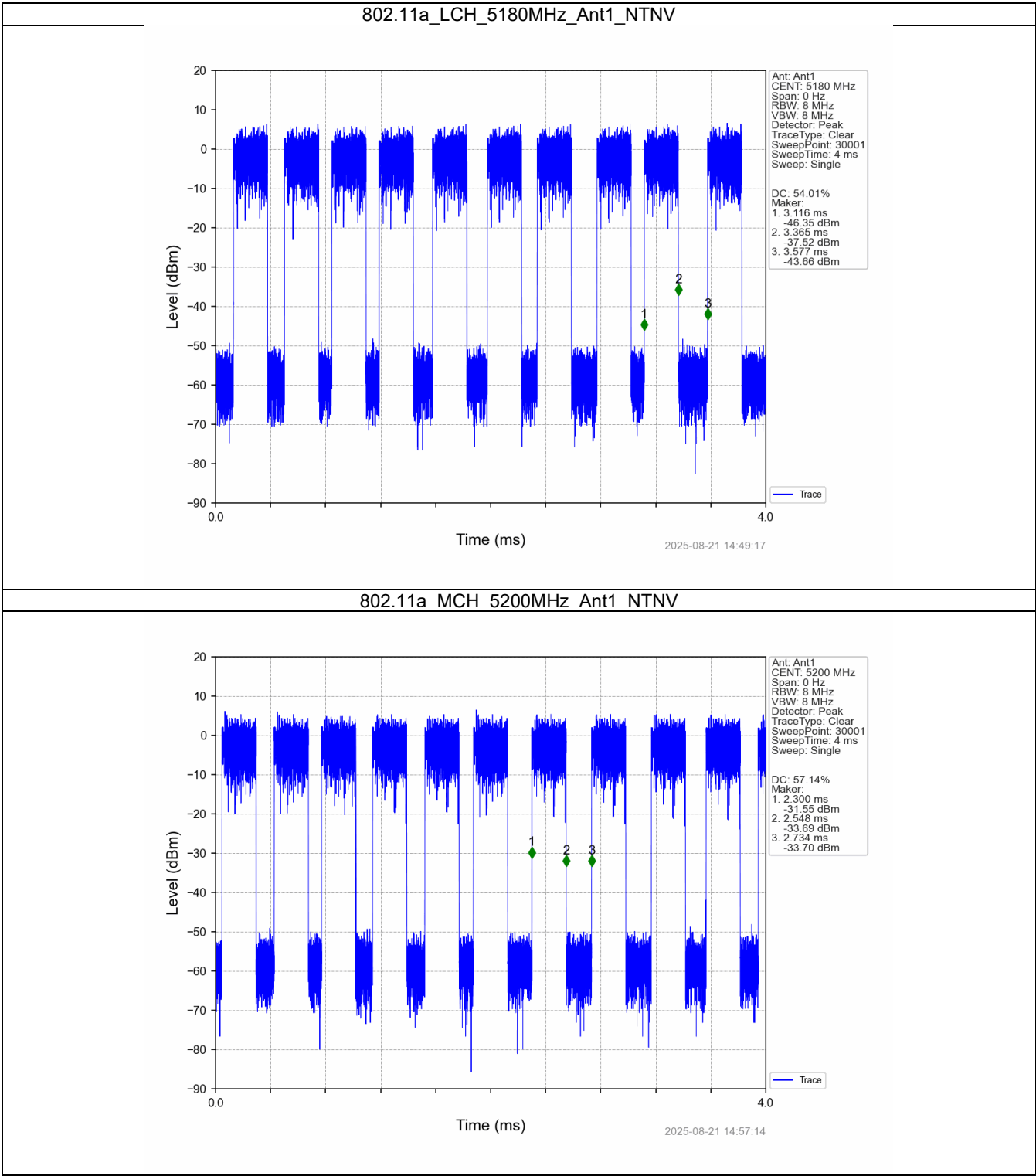
1.1 Test Result

1.1.1 Ant1

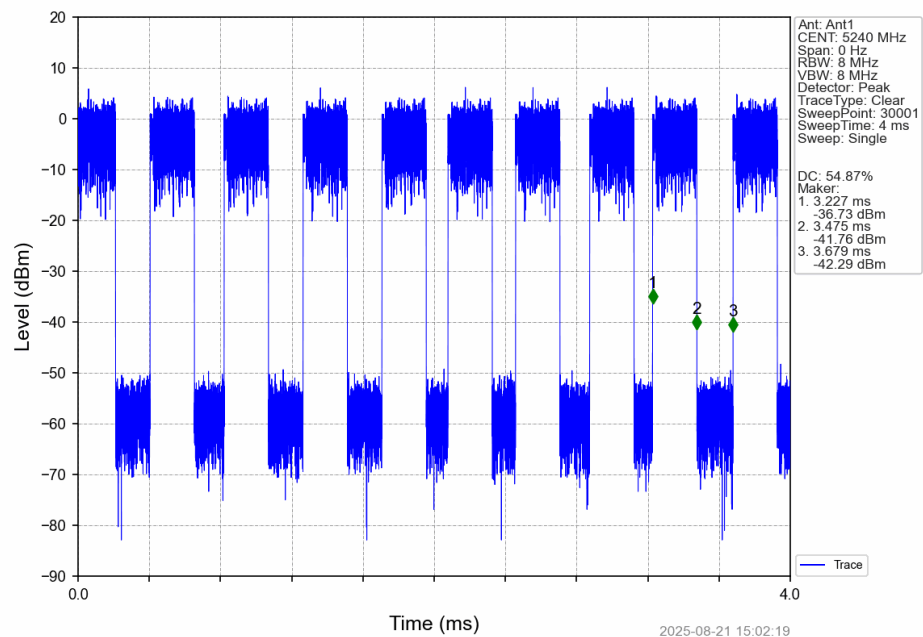
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	0.249	0.461	54.01	2.68	18.39
		5200	0.248	0.434	57.14	2.43	14.95
		5240	0.248	0.452	54.87	2.61	15.38
		5745	0.249	0.479	51.98	2.84	12.01
		5785	0.249	0.480	51.87	2.85	20.39
		5825	0.249	0.461	54.01	2.68	13.13

1.2 Test Graph

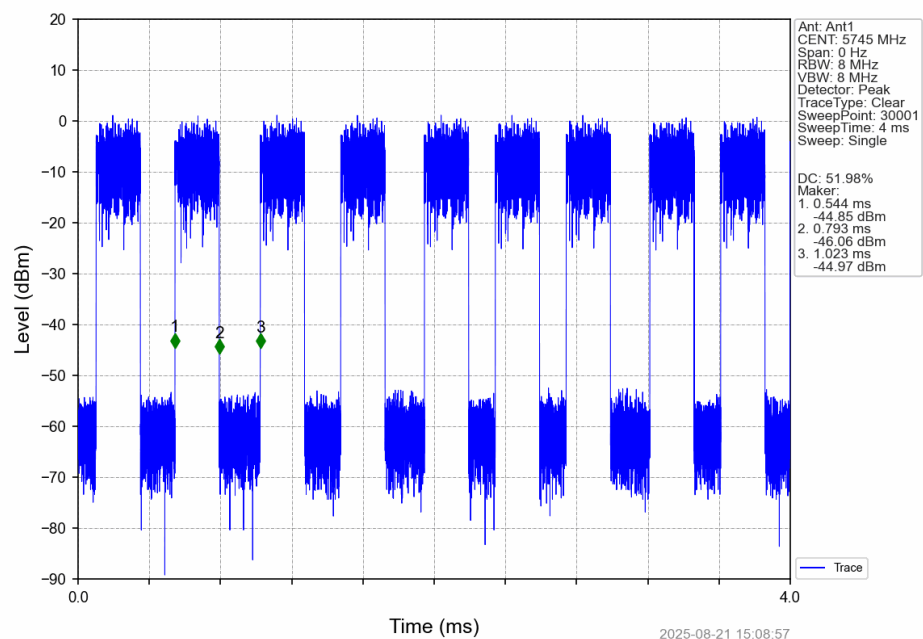
1.2.1 Ant1



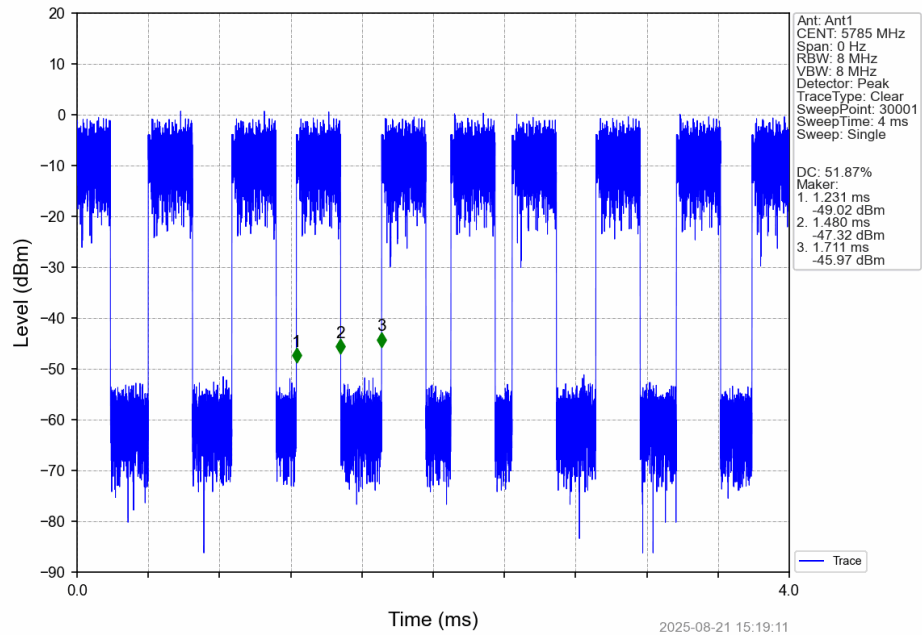
802.11a_HCH_5240MHz_Ant1_NTNV



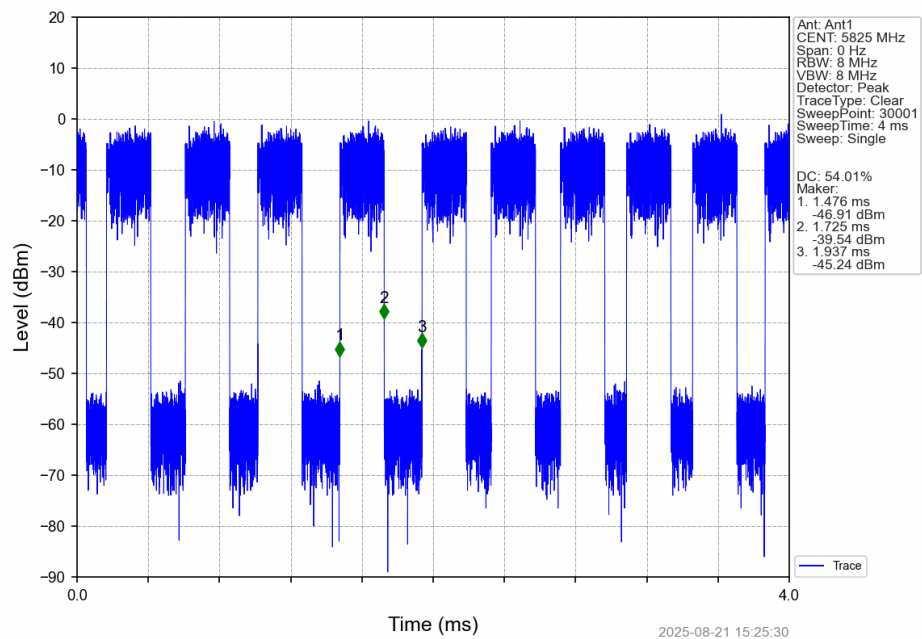
802.11a_LCH_5745MHz_Ant1_NTNV



802.11a_MCH_5785MHz_Ant1_NTNV



802.11a_HCH_5825MHz_Ant1_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	16.945	/	Pass
		5200	1	16.896	/	Pass
		5240	1	16.873	/	Pass
		5745	1	16.833	/	Pass
		5785	1	16.907	/	Pass
		5825	1	16.829	/	Pass

2.1.2 26dB BW

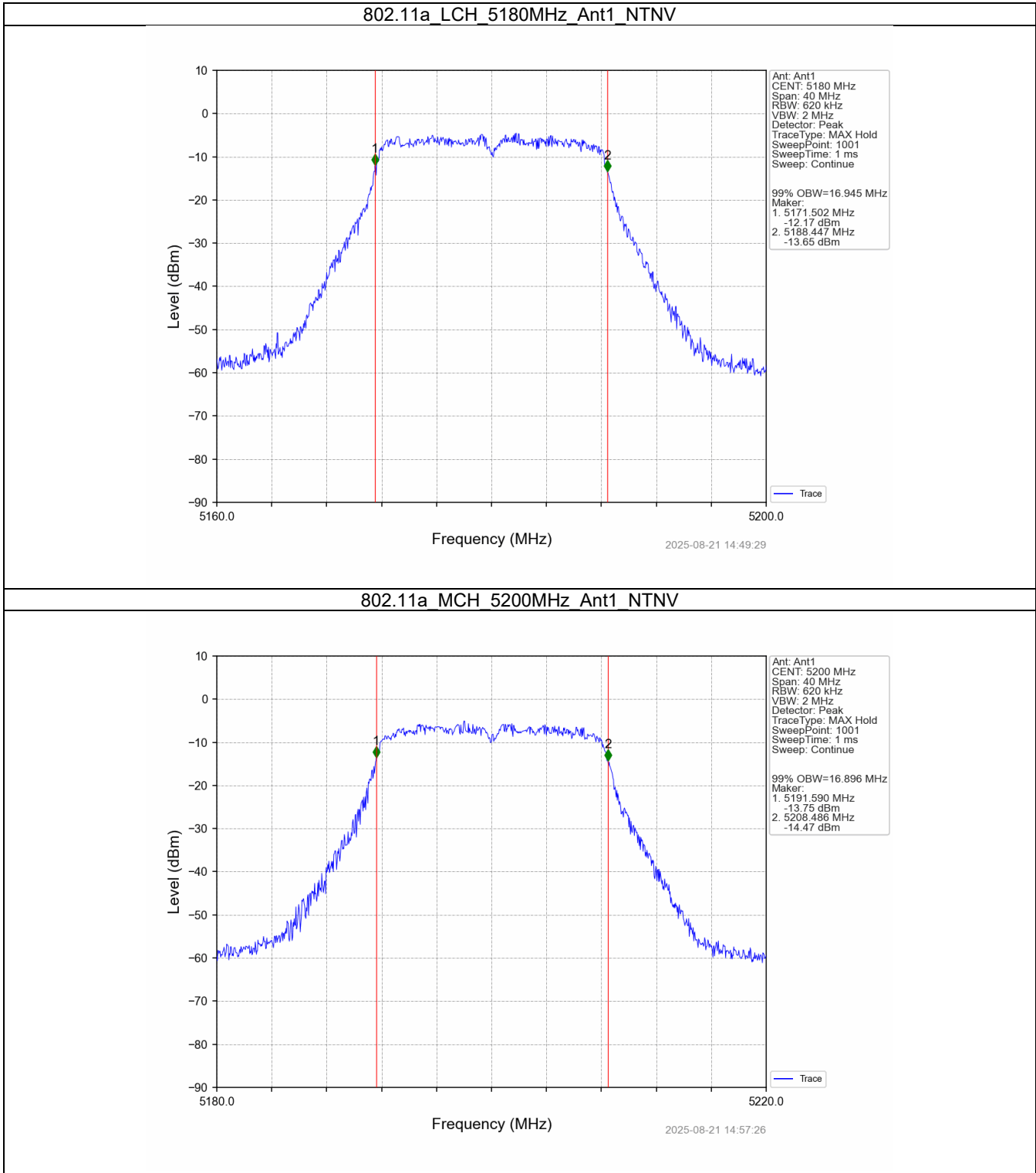
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	20.335	/	Pass
		5200	1	20.587	/	Pass
		5240	1	20.690	/	Pass

2.1.3 6dB BW

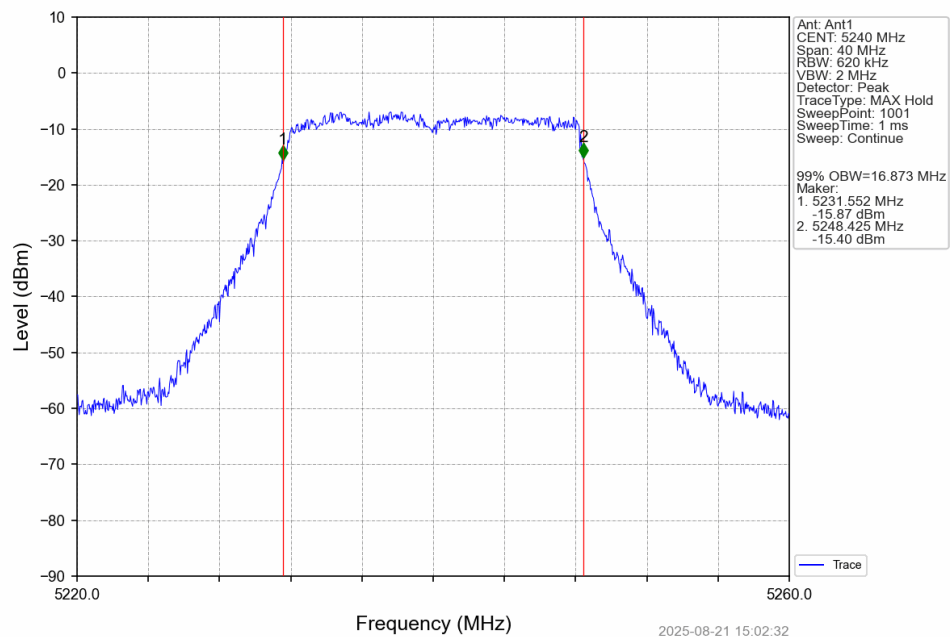
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5745	1	16.370	≥ 0.5	Pass
		5785	1	16.395	≥ 0.5	Pass
		5825	1	15.861	≥ 0.5	Pass

2.2 Test Graph

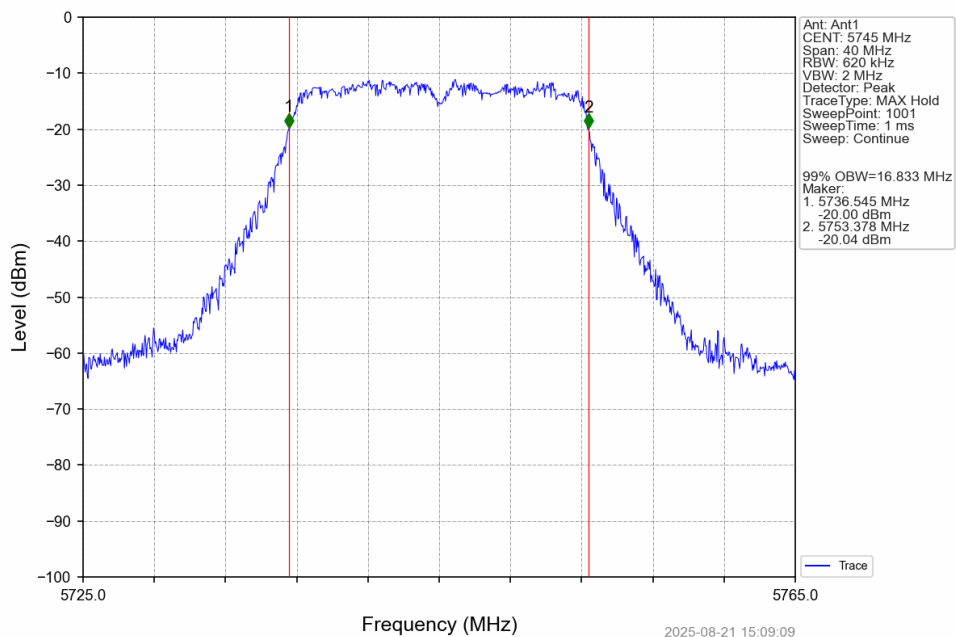
2.2.1 OBW



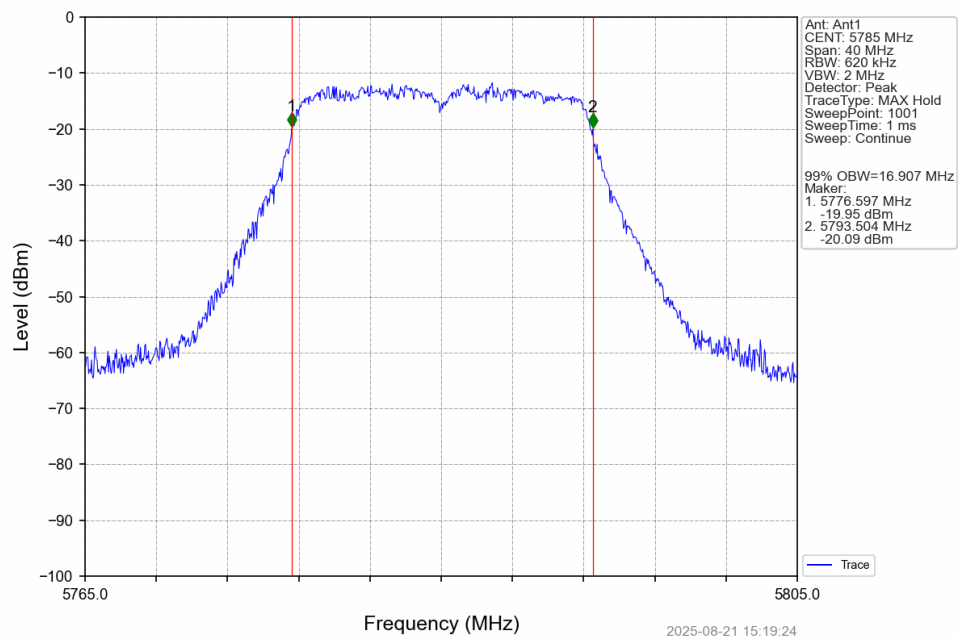
802.11a_HCH_5240MHz_Ant1_NTNV



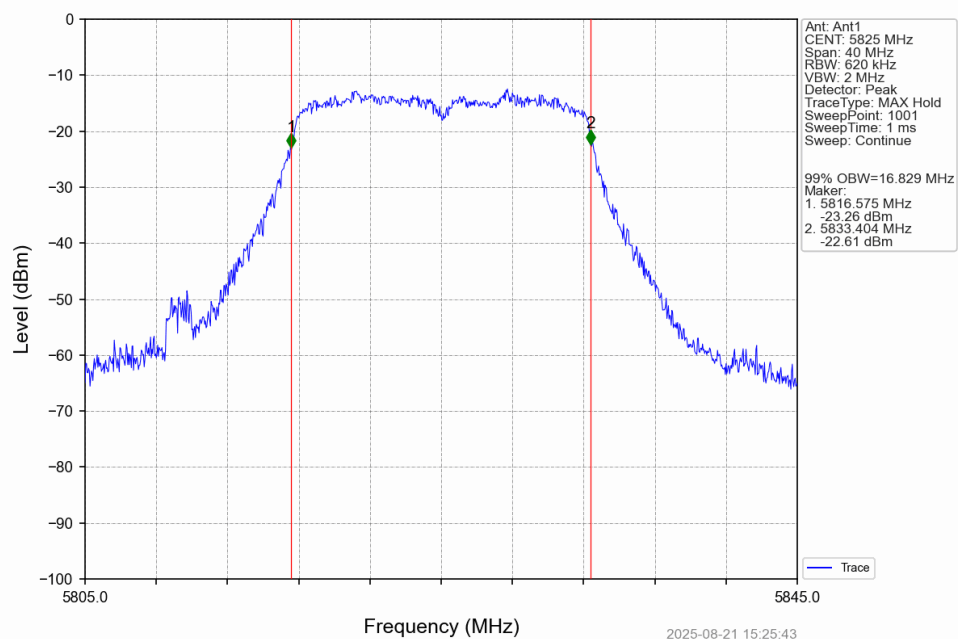
802.11a_LCH_5745MHz_Ant1_NTNV



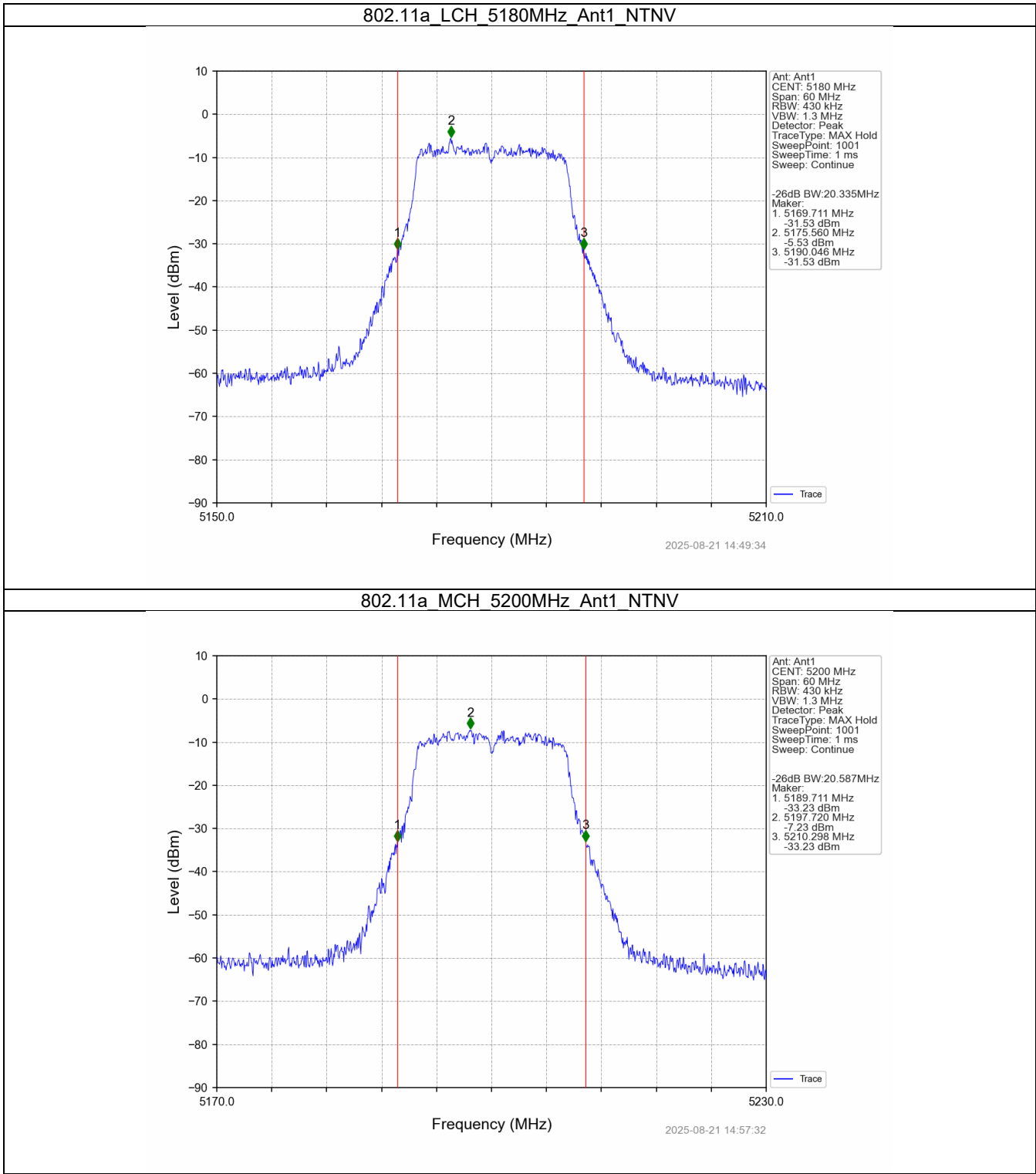
802.11a_MCH_5785MHz_Ant1_NTNV



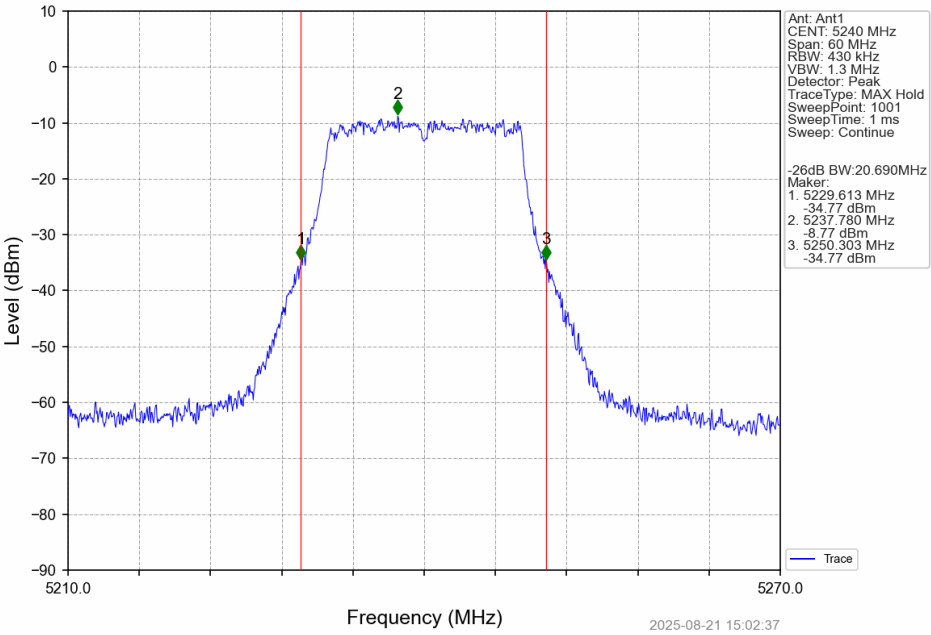
802.11a_HCH_5825MHz_Ant1_NTNV



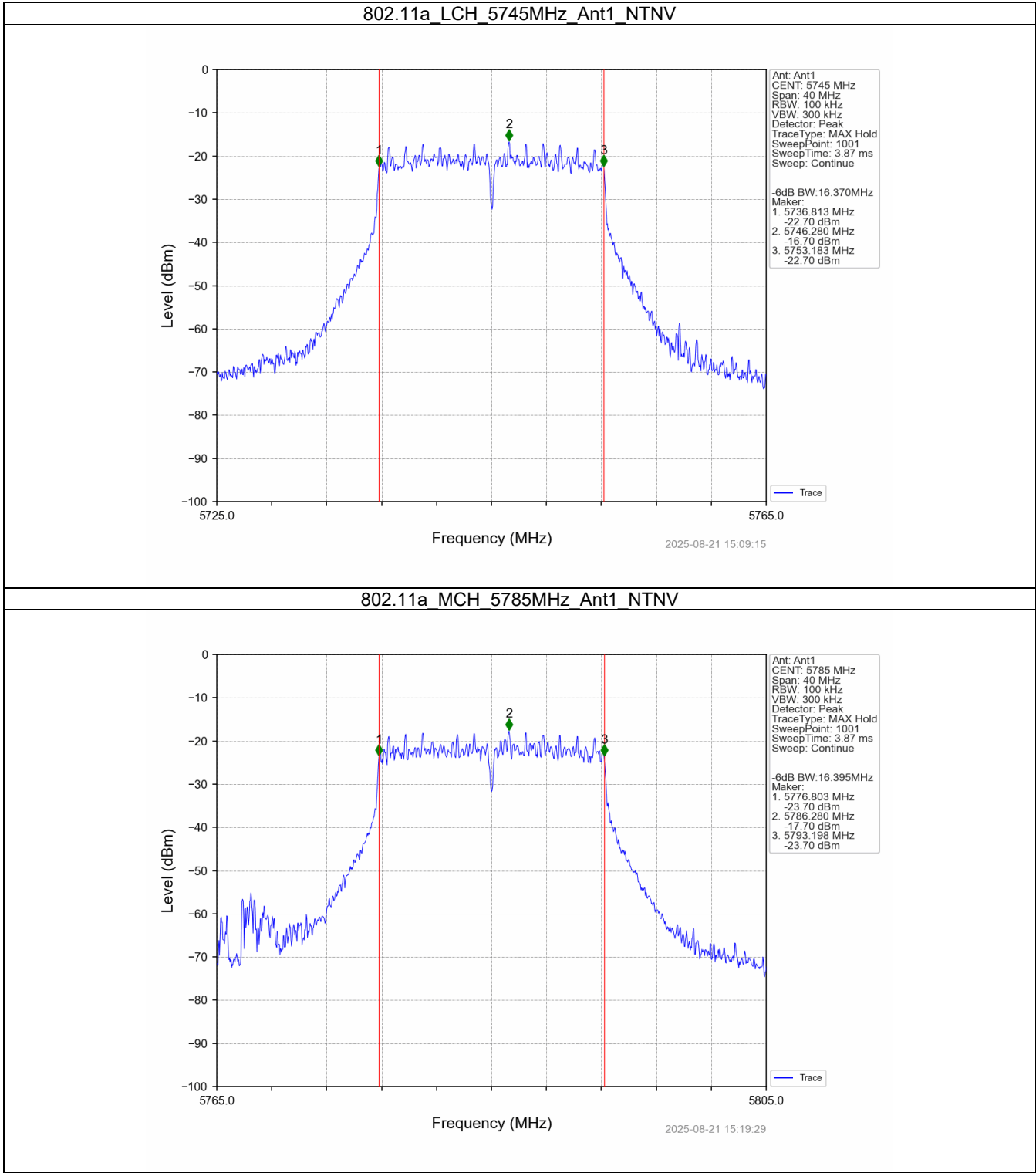
2.2.2 26dB BW



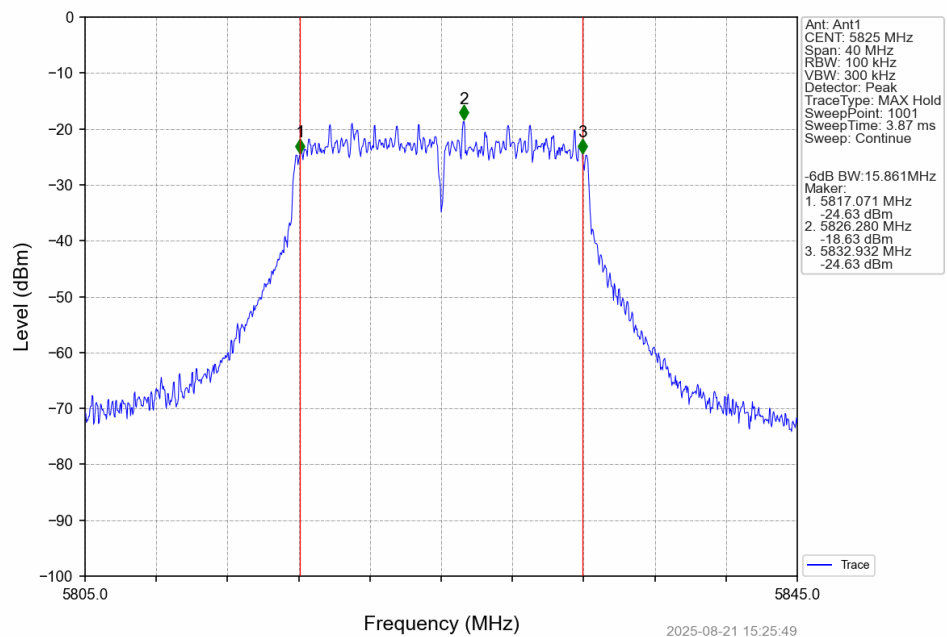
802.11a HCH 5240MHz Ant1 NTN



2.2.3 6dB BW



802.11a HCH 5825MHz Ant1 NTN



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	0.45	<=23.98	Pass
		5200	-0.25	<=23.98	Pass
		5240	-1.28	<=23.98	Pass
		5745	-5.26	<=30	Pass
		5785	-6.37	<=30	Pass
		5825	-7.02	<=30	Pass
Note1: Antenna Gain: - Band: 1 Ant1: 0.60dBi; - Band: 3 Ant1: 2.61dBi; The duty factor is already compensated in the result.					

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

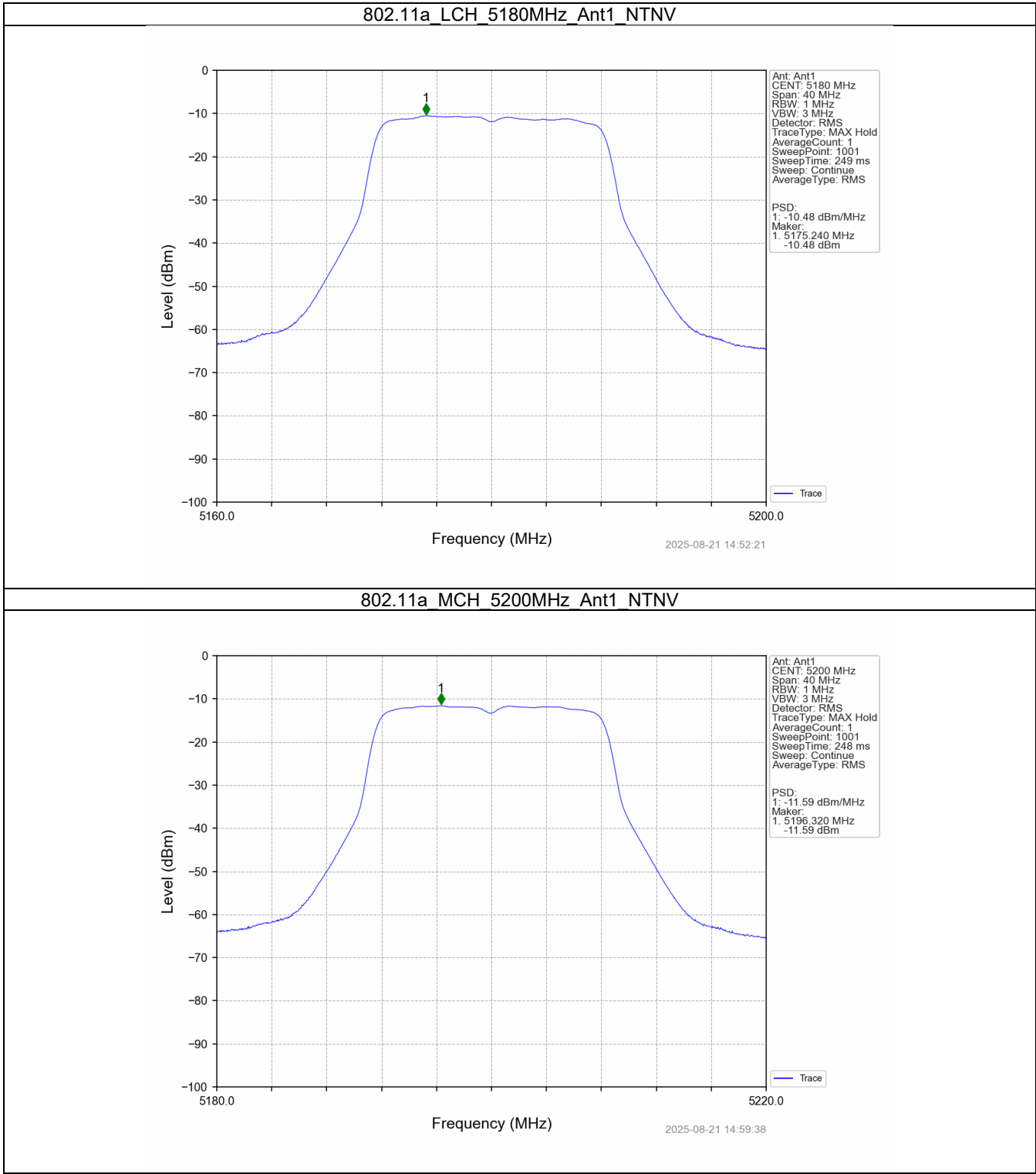
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	-10.48	<=11	Pass
		5200	-11.59	<=11	Pass
		5240	-12.36	<=11	Pass
Note1: Antenna Gain: - Band: 1 Ant1: 0.60dBi; - Band: 3 Ant1: 2.61dBi; The duty factor is already compensated in the result.					

4.1.2 PSD-Band3

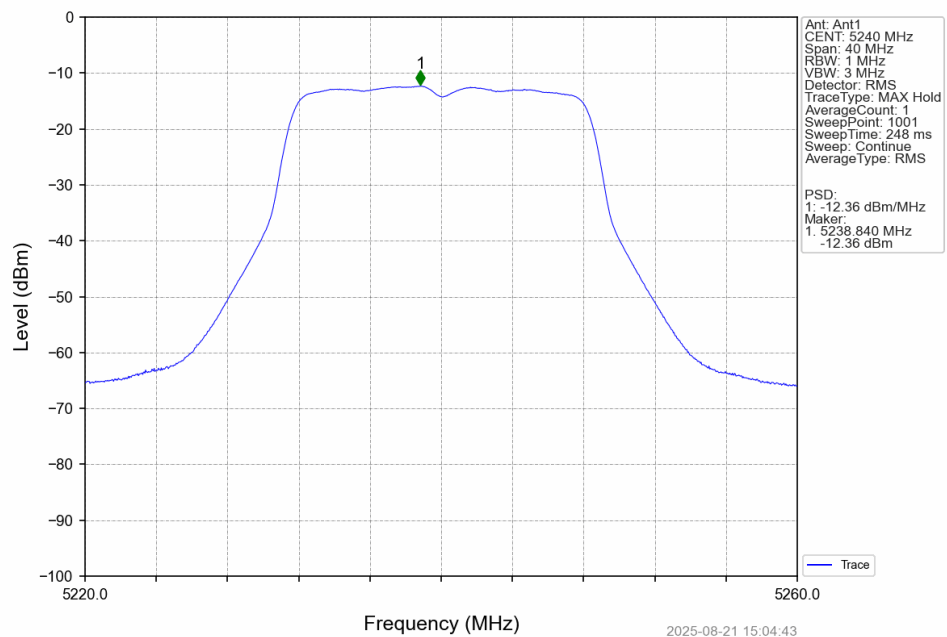
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5745	-19.10	<=30	Pass
		5785	-20.26	<=30	Pass
		5825	-20.77	<=30	Pass
Note1: Antenna Gain: - Band: 1 Ant1: 0.60dBi; - Band: 3 Ant1: 2.61dBi; The duty factor is already compensated in the result.					

4.2 Test Graph

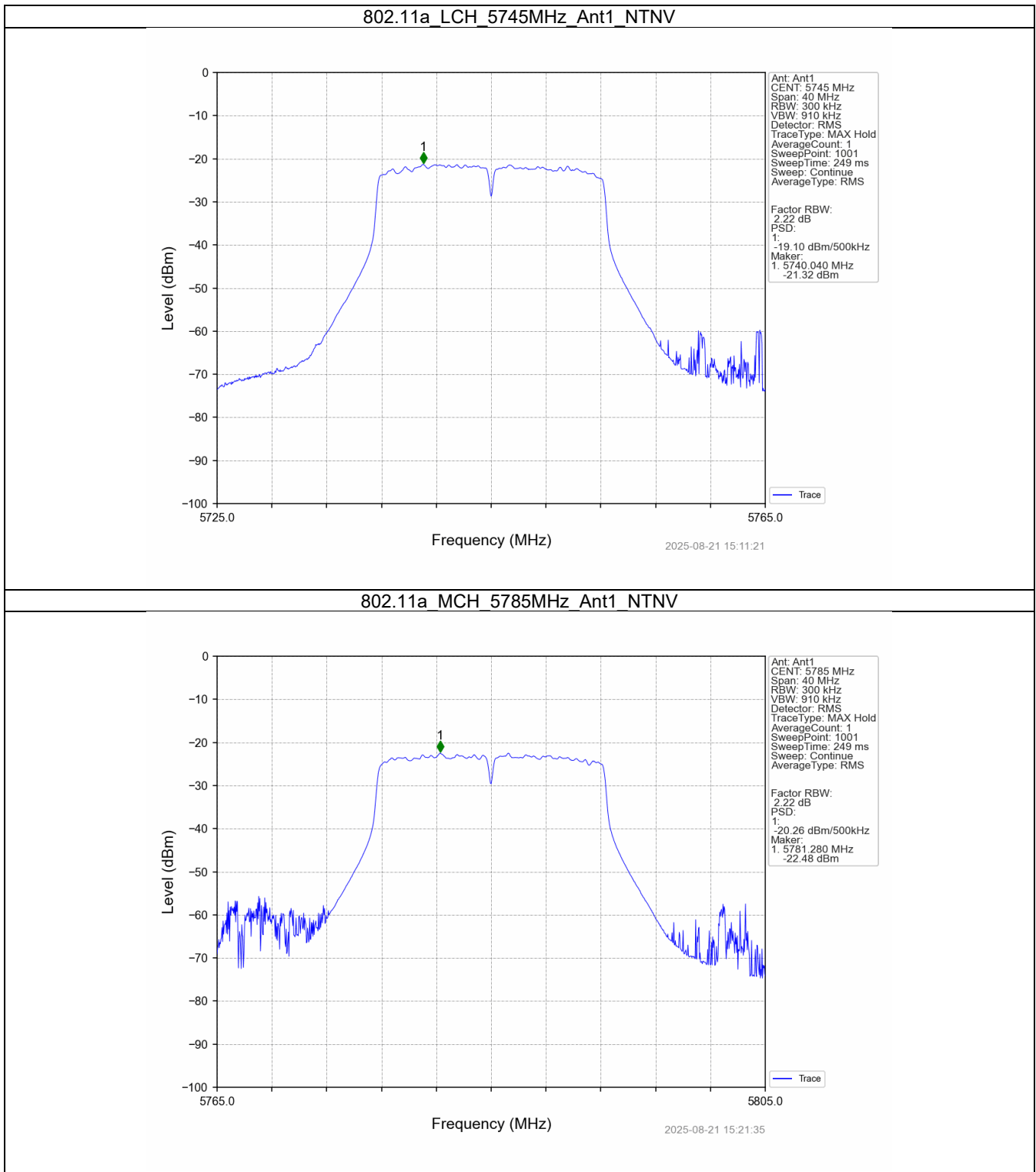
4.2.1 PSD



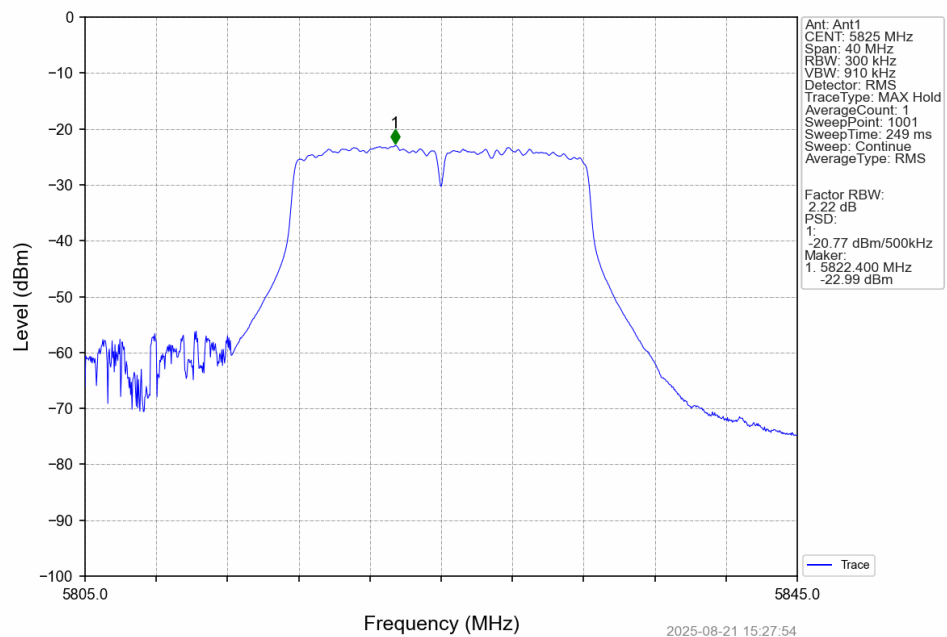
802.11a HCH 5240MHz Ant1 NTN



4.2.2 PSD-Band3



802.11a HCH 5825MHz Ant1 NTNV



5. Unwanted Emissions In Restricted Frequency Bands

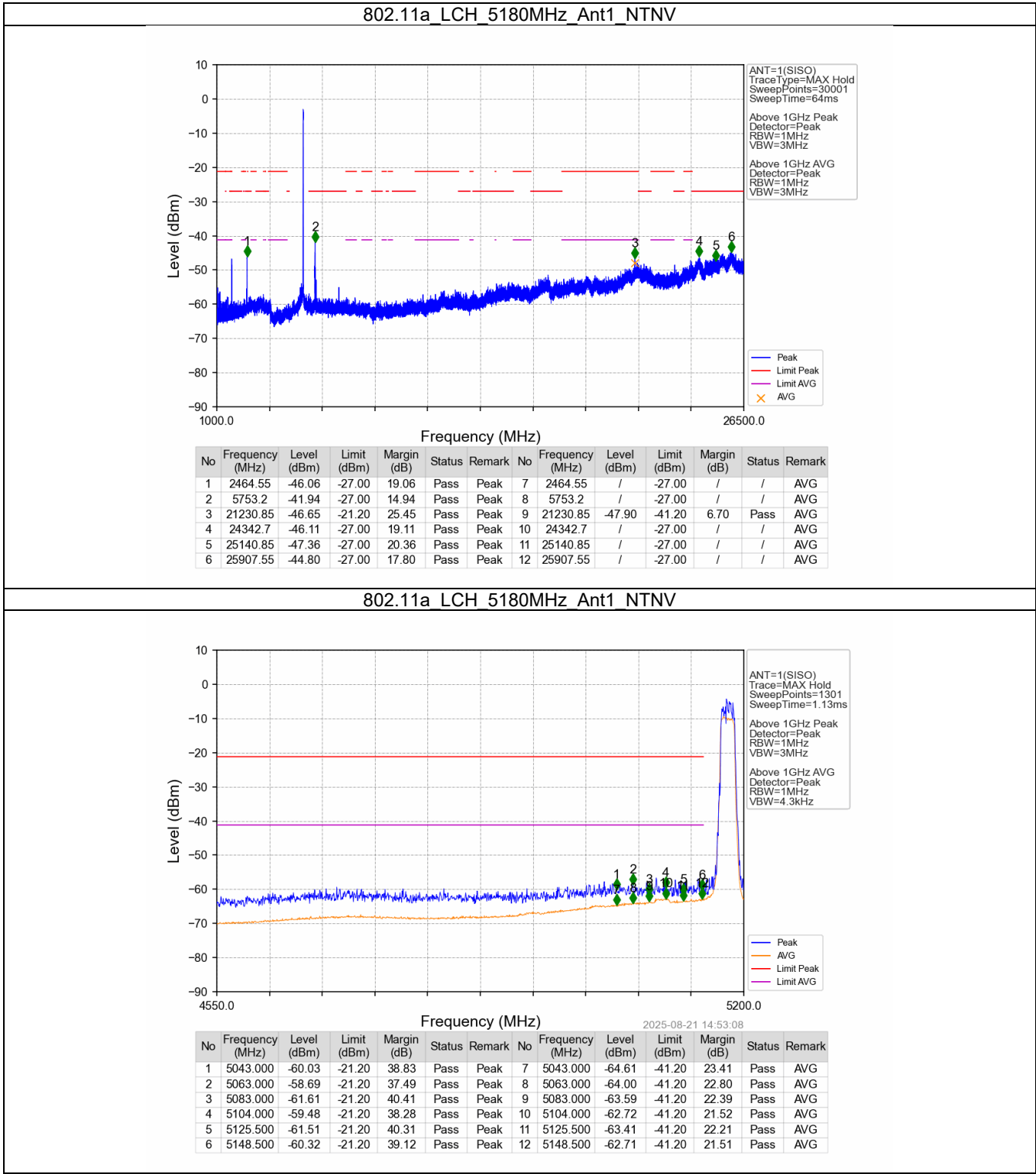
5.1 Test Result

5.1.1 RSE

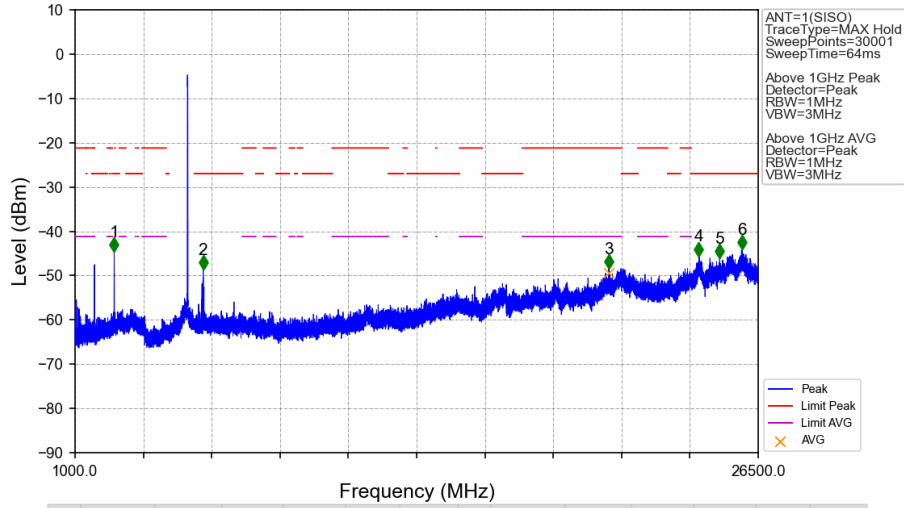
Mode	TX Type	Frequency (MHz)	ANT	Level of Unwanted Emissions (dBm)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	Refer To Test Graph		Pass
		5200	1	Refer To Test Graph		Pass
		5240	1	Refer To Test Graph		Pass
		5745	1	Refer To Test Graph		Pass
		5785	1	Refer To Test Graph		Pass
		5825	1	Refer To Test Graph		Pass

5.2 Test Graph

5.2.1 RSE

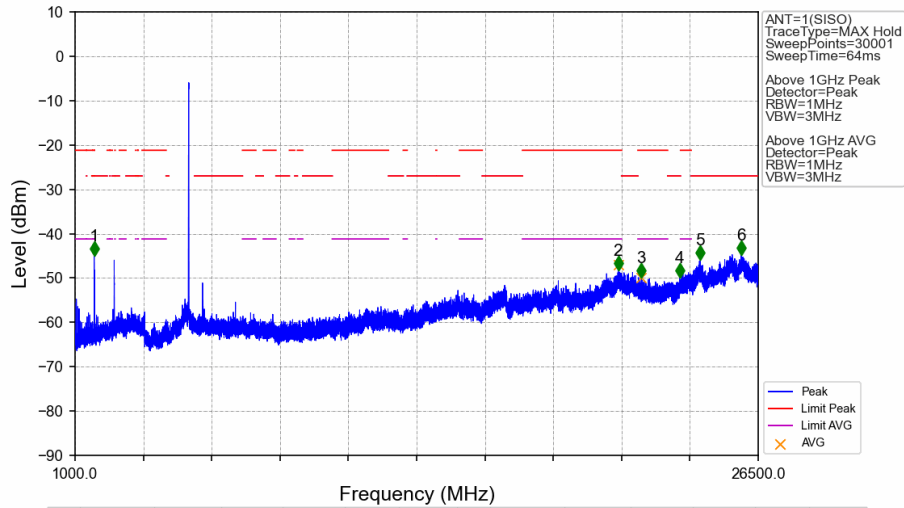


802.11a MCH 5200MHz Ant1 NTN



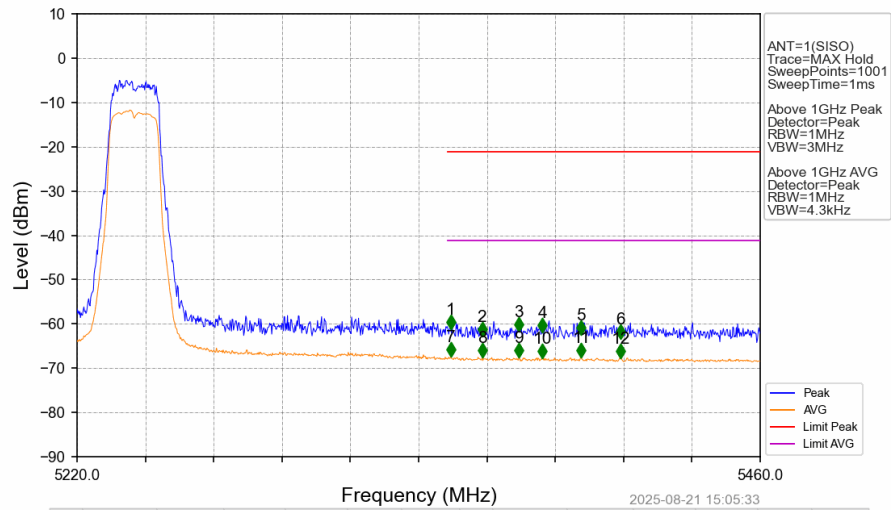
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2460.3	-44.65	-27.00	17.65	Pass	Peak	7	2460.3	/	-27.00	/	/	AVG
2	5782.1	-48.57	-27.00	21.57	Pass	Peak	8	5782.1	/	-27.00	/	/	AVG
3	20924.85	-48.41	-21.20	27.21	Pass	Peak	9	20924.85	-49.32	-41.20	8.12	Pass	AVG
4	24284.05	-45.59	-27.00	18.59	Pass	Peak	10	24284.05	/	-27.00	/	/	AVG
5	25063.5	-45.98	-27.00	18.98	Pass	Peak	11	25063.5	/	-27.00	/	/	AVG
6	25911.8	-44.07	-27.00	17.07	Pass	Peak	12	25911.8	/	-27.00	/	/	AVG

802.11a_HCH 5240MHz_Ant1 NTN



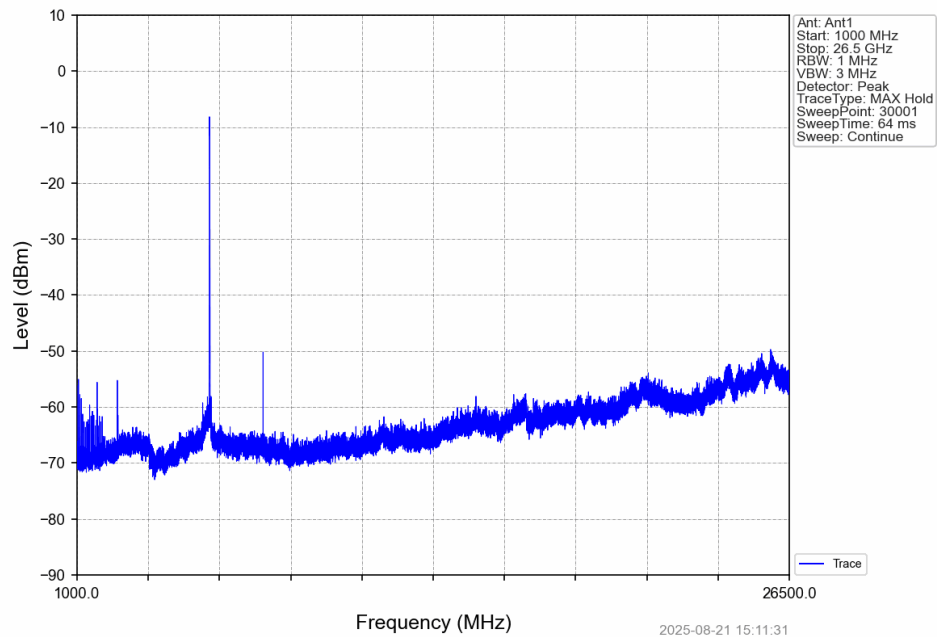
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	1714	-44.97	-27.00	17.97	Pass	Peak	7	1714	/	-27.00	/	/	AVG
2	21275.05	-48.19	-21.20	26.99	Pass	Peak	8	21275.05	-47.06	-41.20	5.86	Pass	AVG
3	22139.5	-49.95	-21.20	28.75	Pass	Peak	9	22139.5	-49.84	-41.20	8.64	Pass	AVG
4	23565.8	-49.95	-27.00	22.95	Pass	Peak	10	23565.8	/	-27.00	/	/	AVG
5	24340.15	-45.90	-27.00	18.90	Pass	Peak	11	24340.15	/	-27.00	/	/	AVG
6	25864.2	-44.69	-27.00	17.69	Pass	Peak	12	25864.2	/	-27.00	/	/	AVG

802.11a_HCH_5240MHz_Ant1_NTNV

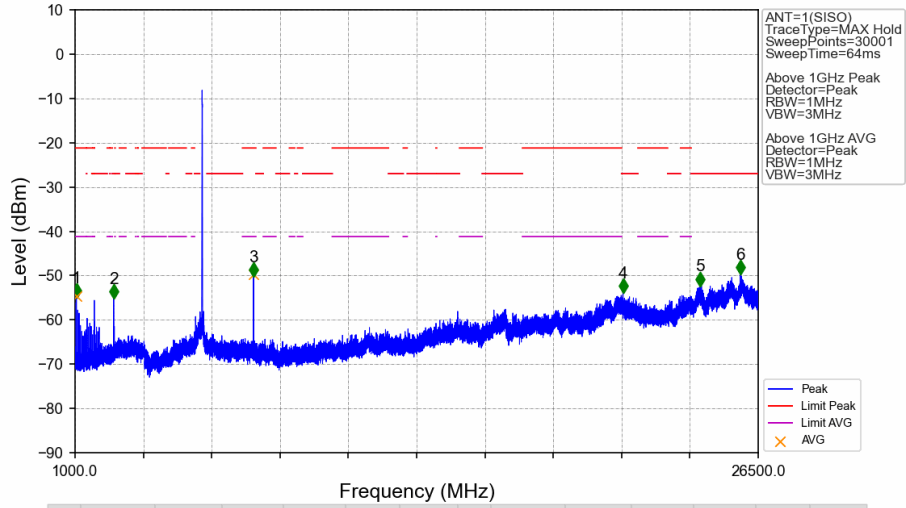


No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5351.280	-61.09	-21.20	39.89	Pass	Peak	7	5351.280	-67.29	-41.20	26.09	Pass	AVG
2	5362.320	-62.78	-21.20	41.58	Pass	Peak	8	5362.320	-67.54	-41.20	26.34	Pass	AVG
3	5375.280	-61.70	-21.20	40.50	Pass	Peak	9	5375.280	-67.49	-41.20	26.29	Pass	AVG
4	5383.440	-61.89	-21.20	40.69	Pass	Peak	10	5383.440	-67.65	-41.20	26.45	Pass	AVG
5	5397.120	-62.36	-21.20	41.16	Pass	Peak	11	5397.120	-67.53	-41.20	26.33	Pass	AVG
6	5411.040	-63.35	-21.20	42.15	Pass	Peak	12	5411.040	-67.73	-41.20	26.53	Pass	AVG

802.11a_LCH_5745MHz_Ant1_NTNV

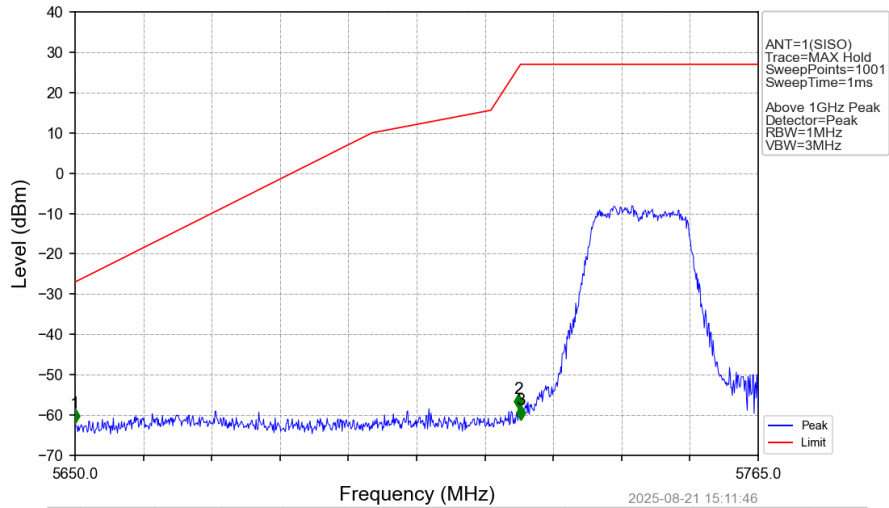


802.11a LCH 5745MHz Ant1 NTN



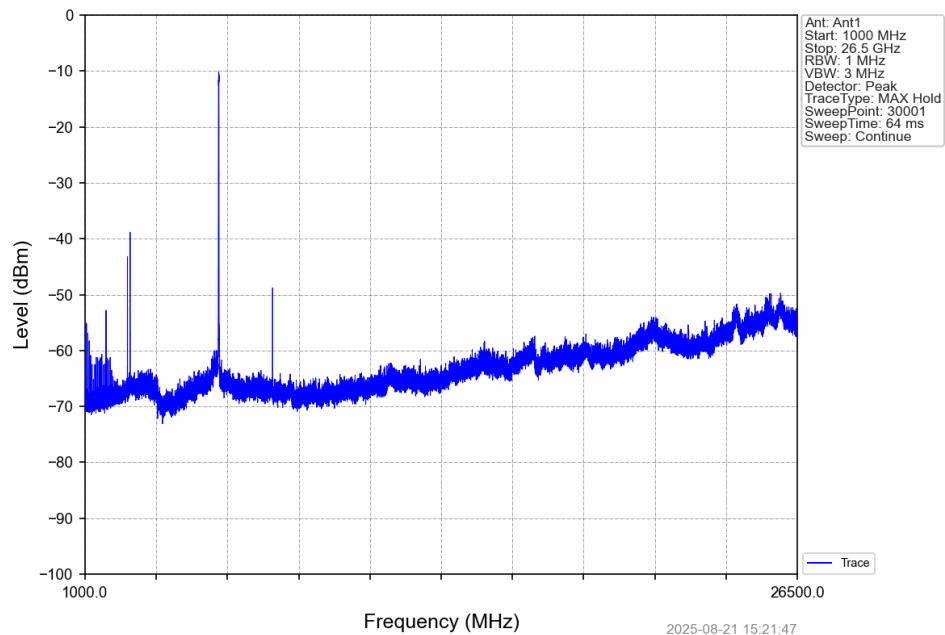
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	1050.15	-55.05	-21.20	33.85	Pass	Peak	7	1050.15	-54.71	-41.20	13.51	Pass	AVG
2	2442.45	-55.23	-27.00	28.23	Pass	Peak	8	2442.45	/	-27.00	/	/	AVG
3	7660.6	-50.19	-21.20	28.99	Pass	Peak	9	7660.6	-49.71	-41.20	8.51	Pass	AVG
4	21454.4	-53.90	-27.00	26.90	Pass	Peak	10	21454.4	/	-27.00	/	/	AVG
5	24333.35	-52.33	-27.00	25.33	Pass	Peak	11	24333.35	/	-27.00	/	/	AVG
6	25831.05	-49.71	-27.00	22.71	Pass	Peak	12	25831.05	/	-27.00	/	/	AVG

802.11a LCH 5745MHz Ant1 NTN



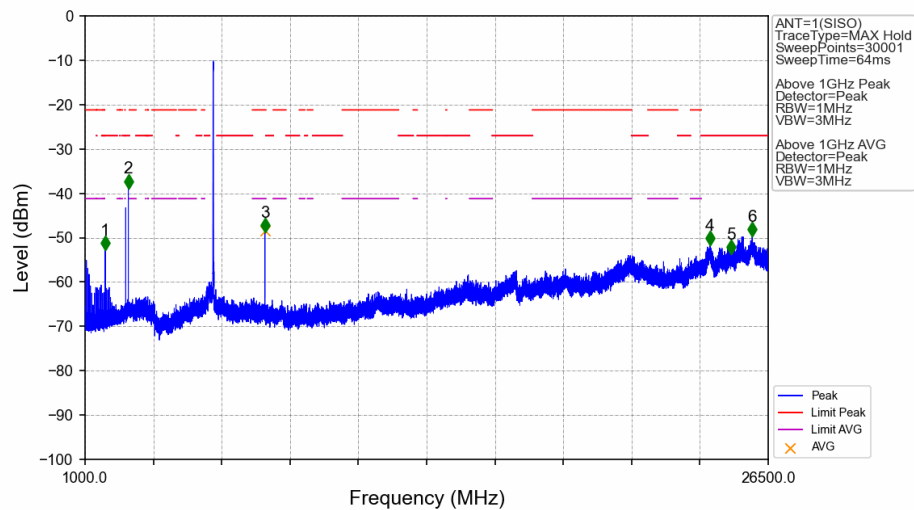
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5650.000	-61.84	-27.00	34.84	Pass	Peak	3	5725.000	-61.16	27.00	88.16	Pass	Peak
2	5724.635	-58.31	26.17	84.48	Pass	Peak							

802.11a MCH 5785MHz Ant1 NTN



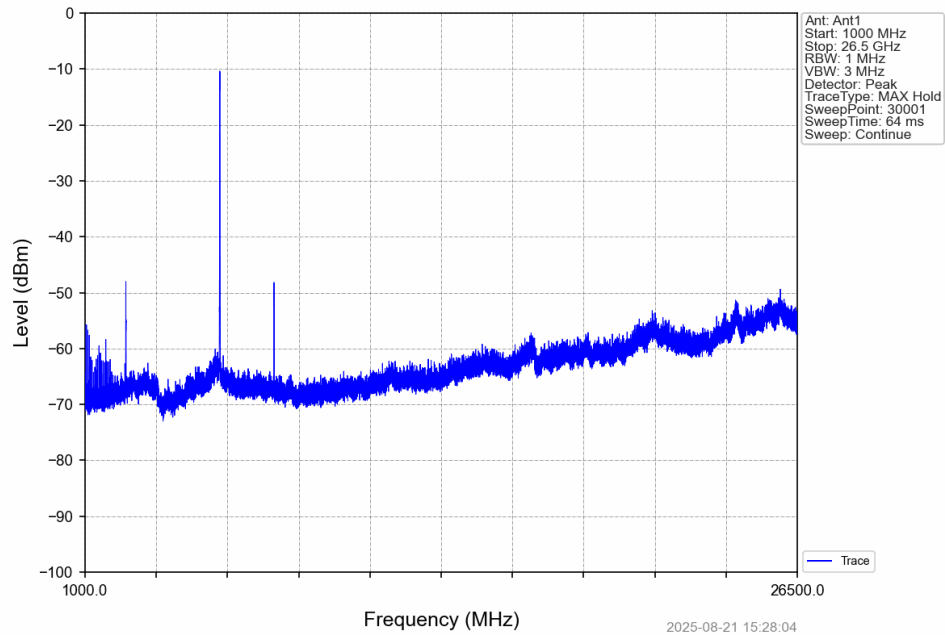
2025-08-21 15:21:47

802.11a MCH 5785MHz Ant1 NTN

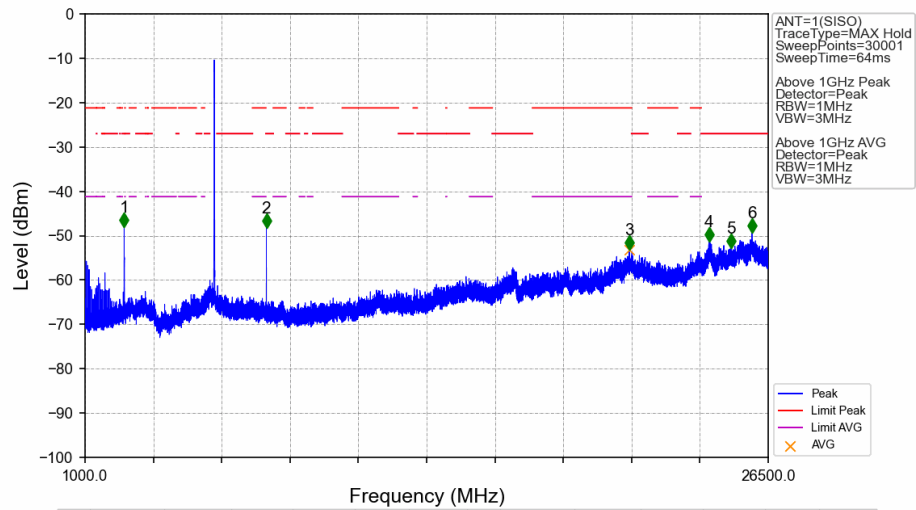


No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	1752.25	-52.82	-27.00	25.82	Pass	Peak	7	1752.25	/	-27.00	/	/	AVG
2	2614.15	-38.84	-27.00	11.84	Pass	Peak	8	2614.15	/	-27.00	/	/	AVG
3	7714.15	-48.78	-21.20	27.58	Pass	Peak	9	7714.15	-48.51	-41.20	7.31	Pass	AVG
4	24330.8	-51.67	-27.00	24.67	Pass	Peak	10	24330.8	/	-27.00	/	/	AVG
5	25122.15	-53.66	-27.00	26.66	Pass	Peak	11	25122.15	/	-27.00	/	/	AVG
6	25901.6	-49.73	-27.00	22.73	Pass	Peak	12	25901.6	/	-27.00	/	/	AVG

802.11a_HCH_5825MHz_Ant1_NTNV

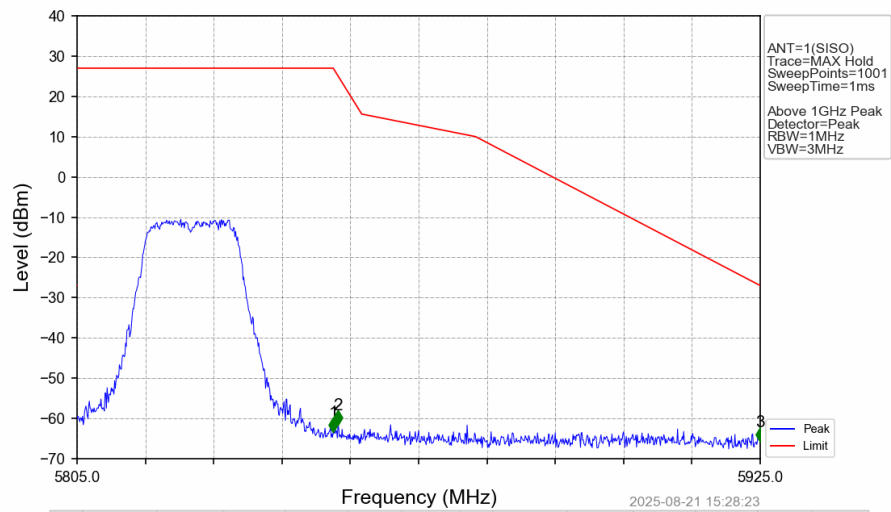


802.11a_HCH_5825MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2460.3	-48.02	-27.00	21.02	Pass	Peak	7	2460.3	/	-27.00	/	/	AVG
2	7766.85	-48.19	-27.00	21.19	Pass	Peak	8	7766.85	/	-27.00	/	/	AVG
3	21307.35	-53.21	-21.20	32.01	Pass	Peak	9	21307.35	-53.13	-41.20	11.93	Pass	AVG
4	24291.7	-51.34	-27.00	24.34	Pass	Peak	10	24291.7	/	-27.00	/	/	AVG
5	25112.8	-52.80	-27.00	25.80	Pass	Peak	11	25112.8	/	-27.00	/	/	AVG
6	25894.8	-49.39	-27.00	22.39	Pass	Peak	12	25894.8	/	-27.00	/	/	AVG

802.11a HCH 5825MHz Ant1 NTN



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	5850.000	-63.40	27.00	90.40	Pass	Peak
2	5850.840	-61.46	25.08	86.54	Pass	Peak

No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
3	5925.000	-65.80	-27.00	38.80	Pass	Peak

6. Frequency Stability

6.1 Test Result

6.1.1 Ant1

Ant1							
Mode	Tx Type	Frequency (MHz)	Temperature (°C)	Voltage (VDC)	Measured Frequency (MHz)	Limit (MHz)	Verdict
802.11a	SISO	5180	20	4.5	5179.980	5150 to 5250	Pass
				5.0	5180.020	5150 to 5250	Pass
				5.5	5180.020	5150 to 5250	Pass
			-30	5.0	5180.000	5150 to 5250	Pass
			-20	5.0	5180.060	5150 to 5250	Pass
			-10	5.0	5180.000	5150 to 5250	Pass
			0	5.0	5180.060	5150 to 5250	Pass
			10	5.0	5180.040	5150 to 5250	Pass
			30	5.0	5180.000	5150 to 5250	Pass
			40	5.0	5180.020	5150 to 5250	Pass
			50	5.0	5180.040	5150 to 5250	Pass
		5200	20	4.5	5200.040	5150 to 5250	Pass
				5.0	5200.020	5150 to 5250	Pass
				5.5	5200.020	5150 to 5250	Pass
			-30	5.0	5200.040	5150 to 5250	Pass
			-20	5.0	5200.060	5150 to 5250	Pass
			-10	5.0	5200.000	5150 to 5250	Pass
			0	5.0	5200.020	5150 to 5250	Pass
			10	5.0	5200.060	5150 to 5250	Pass
			30	5.0	5199.980	5150 to 5250	Pass
			40	5.0	5200.020	5150 to 5250	Pass
			50	5.0	5200.020	5150 to 5250	Pass
		5240	20	4.5	5240.000	5150 to 5250	Pass
				5.0	5240.020	5150 to 5250	Pass
				5.5	5239.980	5150 to 5250	Pass
			-30	5.0	5240.000	5150 to 5250	Pass
			-20	5.0	5239.980	5150 to 5250	Pass
			-10	5.0	5240.000	5150 to 5250	Pass
			0	5.0	5240.000	5150 to 5250	Pass
			10	5.0	5240.000	5150 to 5250	Pass
			30	5.0	5240.020	5150 to 5250	Pass
			40	5.0	5239.960	5150 to 5250	Pass
			50	5.0	5240.000	5150 to 5250	Pass
		5745	20	4.5	5745.020	5725 to 5850	Pass
				5.0	5745.000	5725 to 5850	Pass
				5.5	5745.040	5725 to 5850	Pass
			-30	5.0	5745.000	5725 to 5850	Pass
			-20	5.0	5745.020	5725 to 5850	Pass
			-10	5.0	5745.020	5725 to 5850	Pass
			0	5.0	5745.040	5725 to 5850	Pass
			10	5.0	5745.000	5725 to 5850	Pass
			30	5.0	5744.980	5725 to 5850	Pass
			40	5.0	5745.020	5725 to 5850	Pass
			50	5.0	5745.020	5725 to 5850	Pass
		5785	20	4.5	5785.020	5725 to 5850	Pass
				5.0	5785.100	5725 to 5850	Pass

				5.5	5785.060	5725 to 5850	Pass
			-30	5.0	5785.020	5725 to 5850	Pass
			-20	5.0	5785.080	5725 to 5850	Pass
			-10	5.0	5785.040	5725 to 5850	Pass
			0	5.0	5785.080	5725 to 5850	Pass
			10	5.0	5785.080	5725 to 5850	Pass
			30	5.0	5785.080	5725 to 5850	Pass
			40	5.0	5785.060	5725 to 5850	Pass
			50	5.0	5785.080	5725 to 5850	Pass
		5825	20	4.5	5825.040	5725 to 5850	Pass
				5.0	5825.060	5725 to 5850	Pass
				5.5	5825.020	5725 to 5850	Pass
			-30	5.0	5825.040	5725 to 5850	Pass
			-20	5.0	5825.040	5725 to 5850	Pass
			-10	5.0	5825.040	5725 to 5850	Pass
			0	5.0	5825.040	5725 to 5850	Pass
			10	5.0	5825.060	5725 to 5850	Pass
			30	5.0	5825.040	5725 to 5850	Pass
			40	5.0	5825.060	5725 to 5850	Pass
			50	5.0	5825.020	5725 to 5850	Pass

7. Form731

7.1 Test Result

7.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
5180	5240	0.0011	0.45
5745	5825	0.0003	-5.26