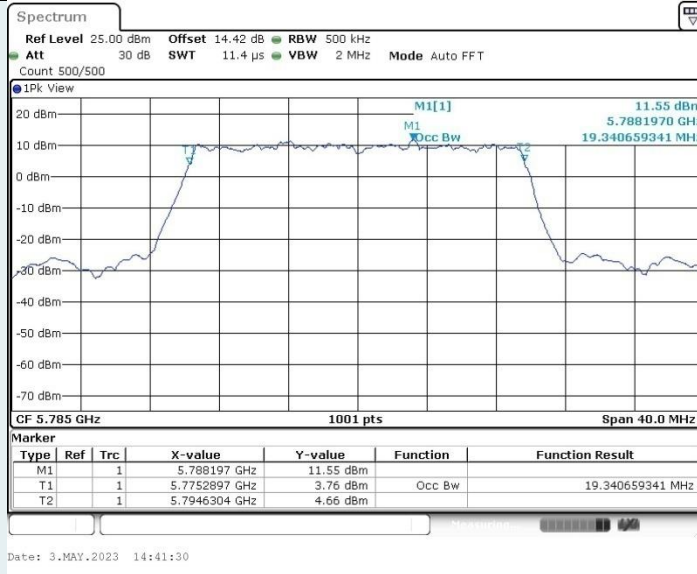
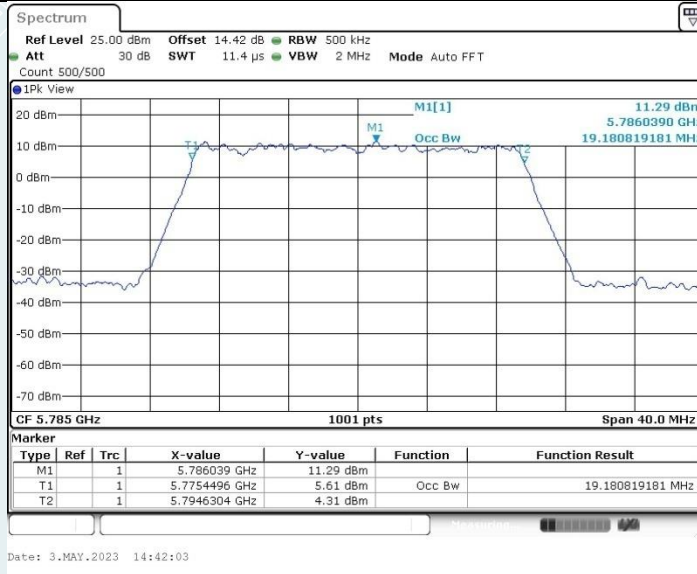


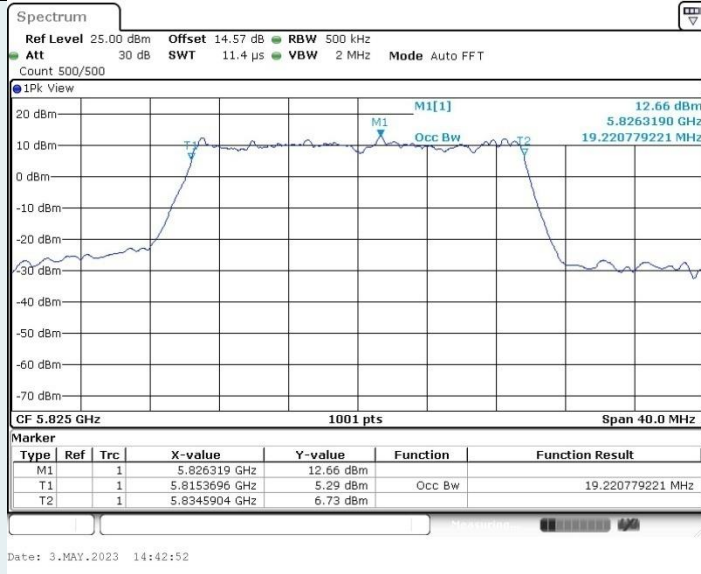
802.11ax HE20 MIMO_Ant1_5785 MHz



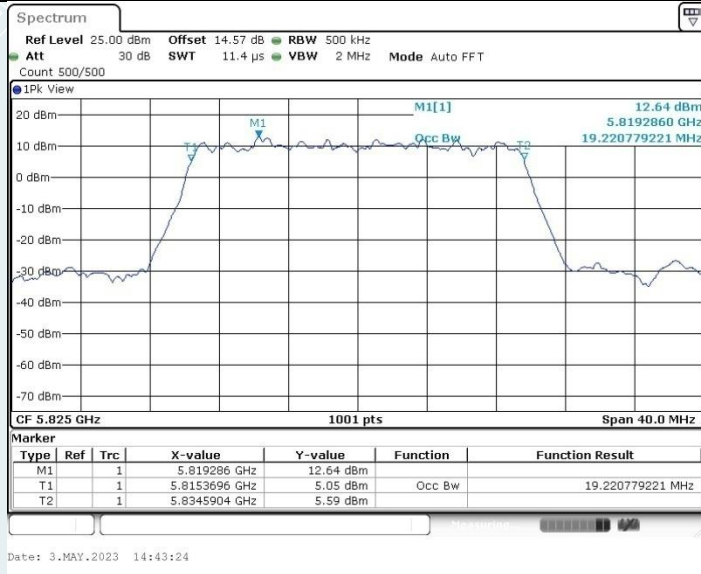
802.11ax HE20 MIMO_Ant2_5785 MHz

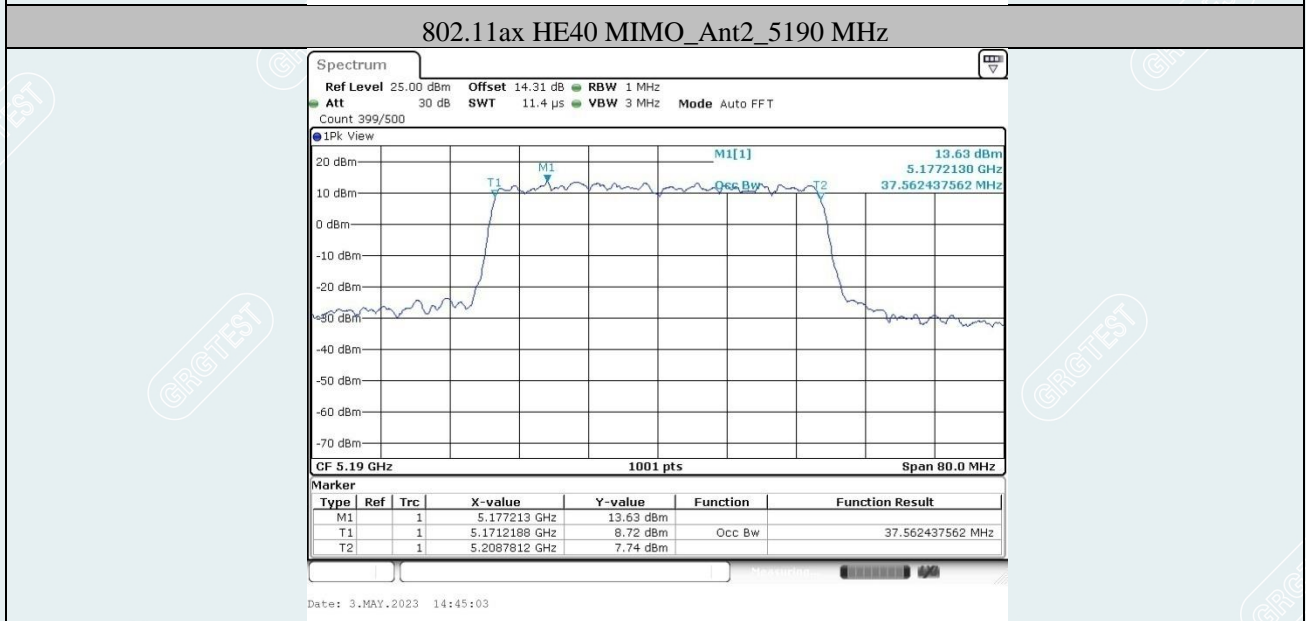
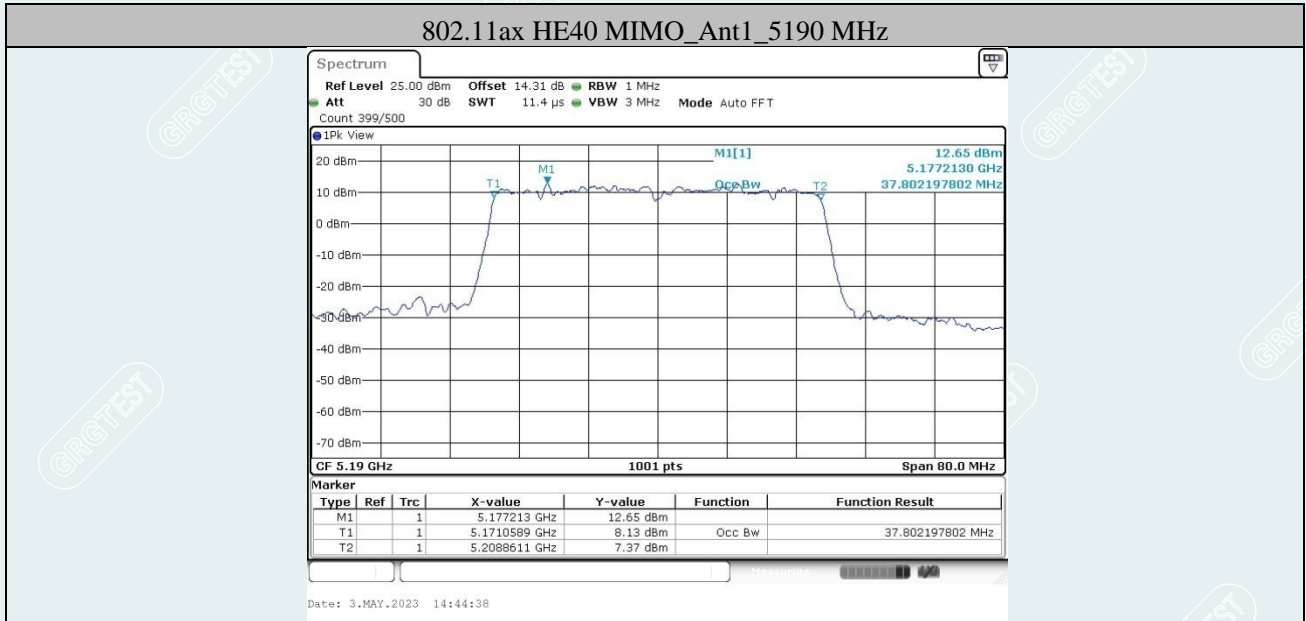


802.11ax HE20 MIMO_Ant1_5825 MHz

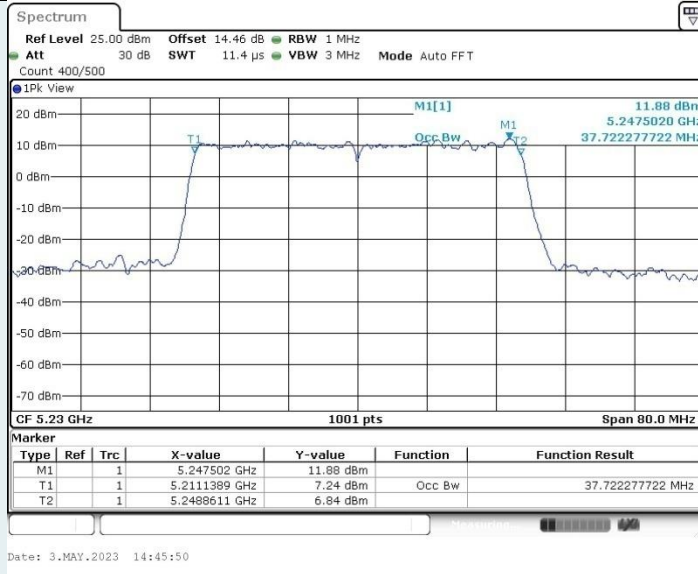


802.11ax HE20 MIMO_Ant2_5825 MHz

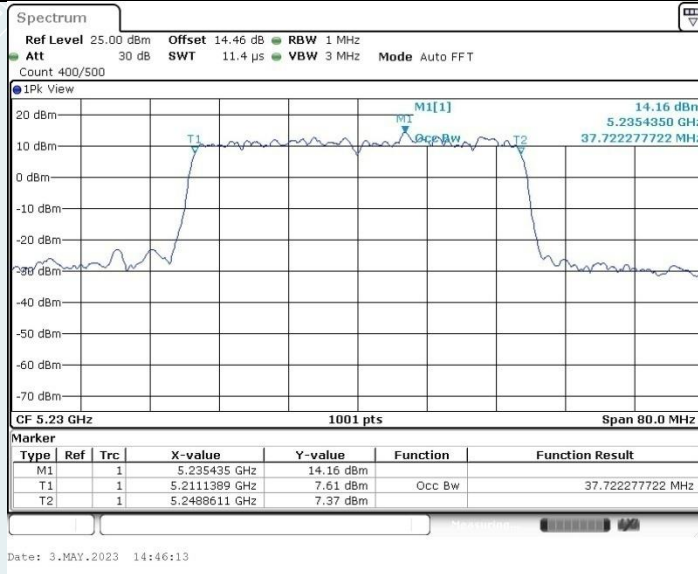


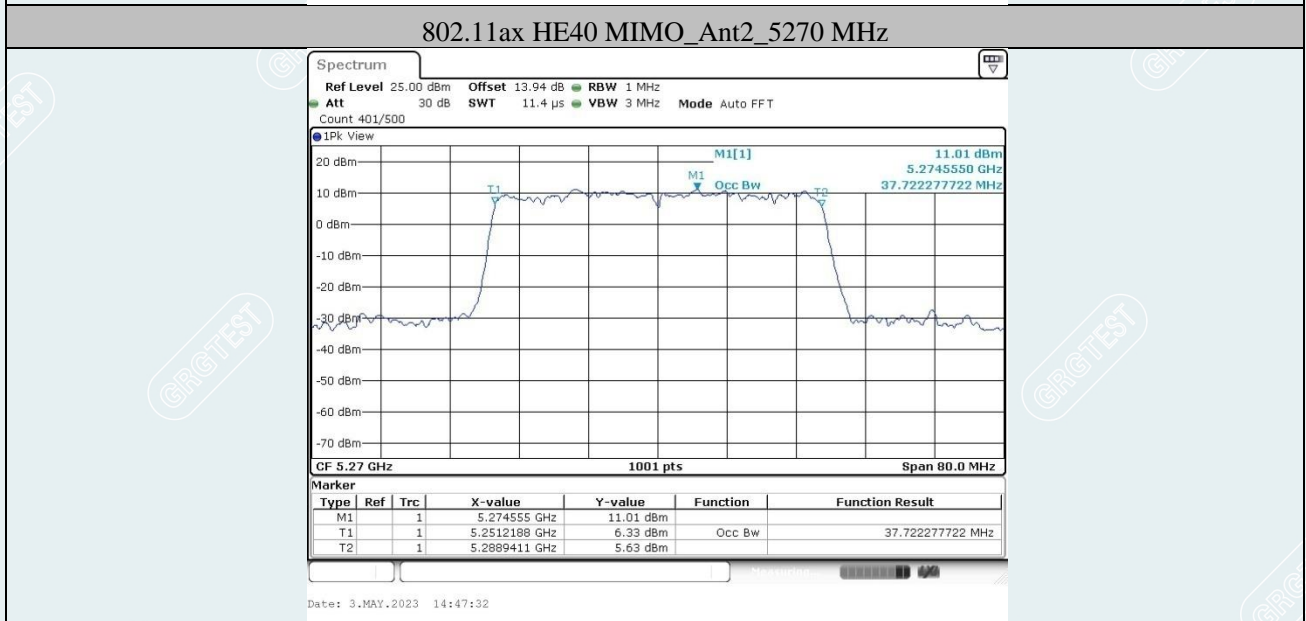
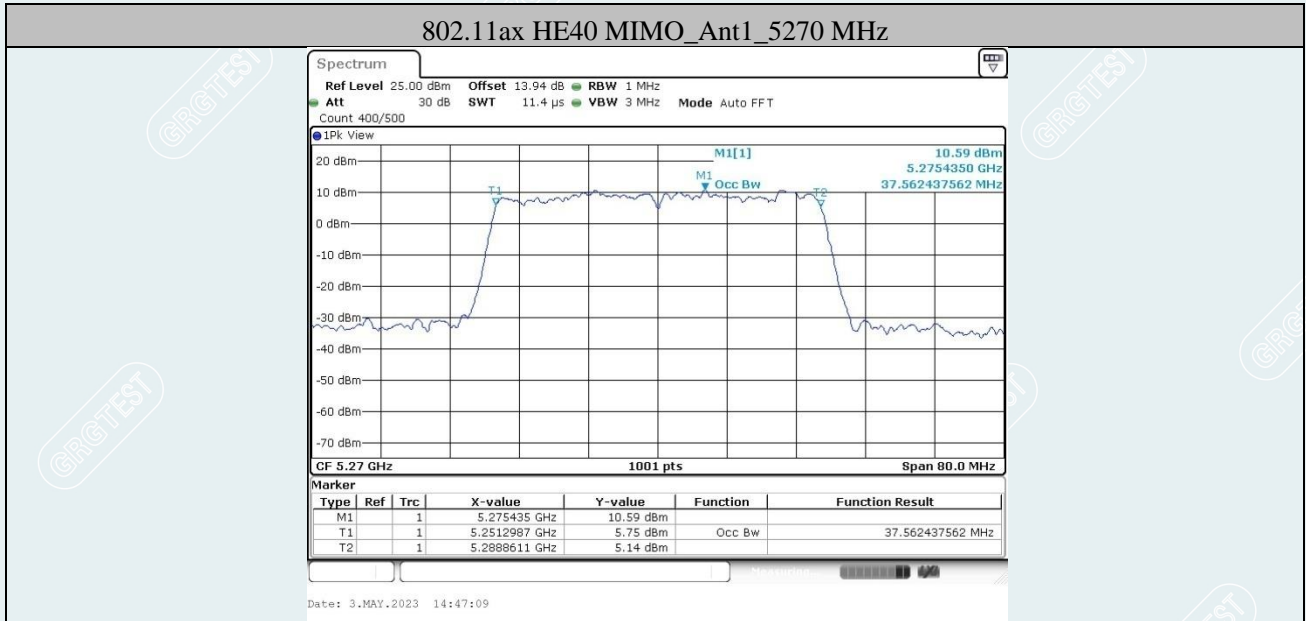


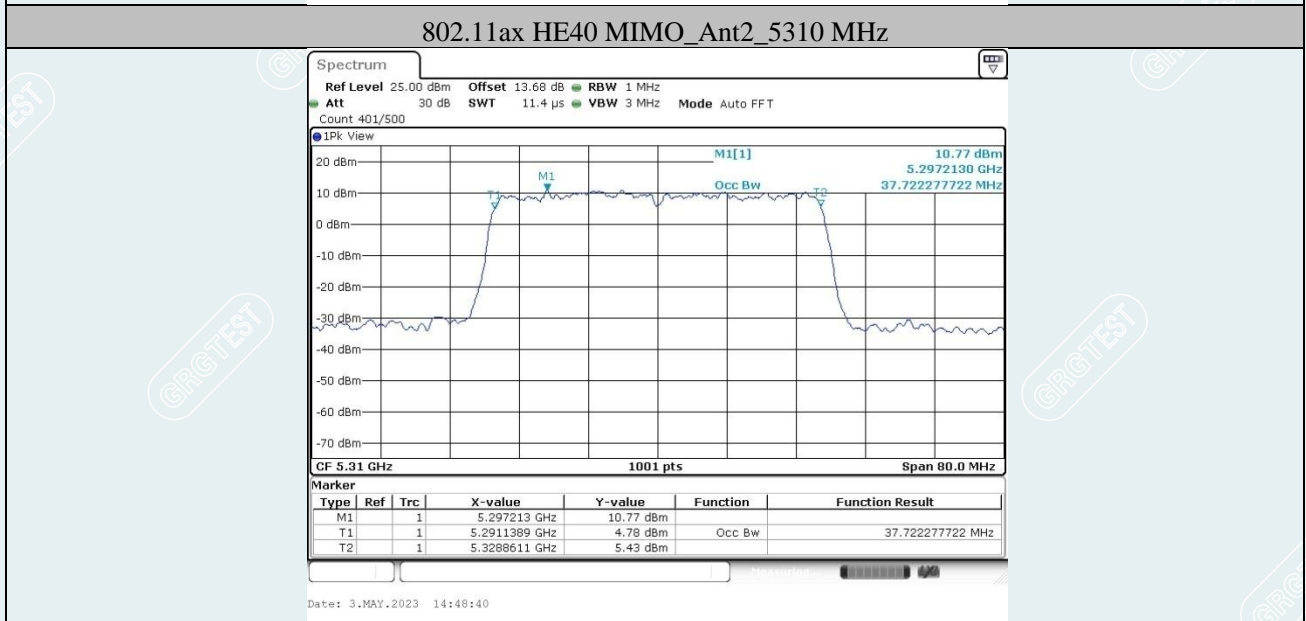
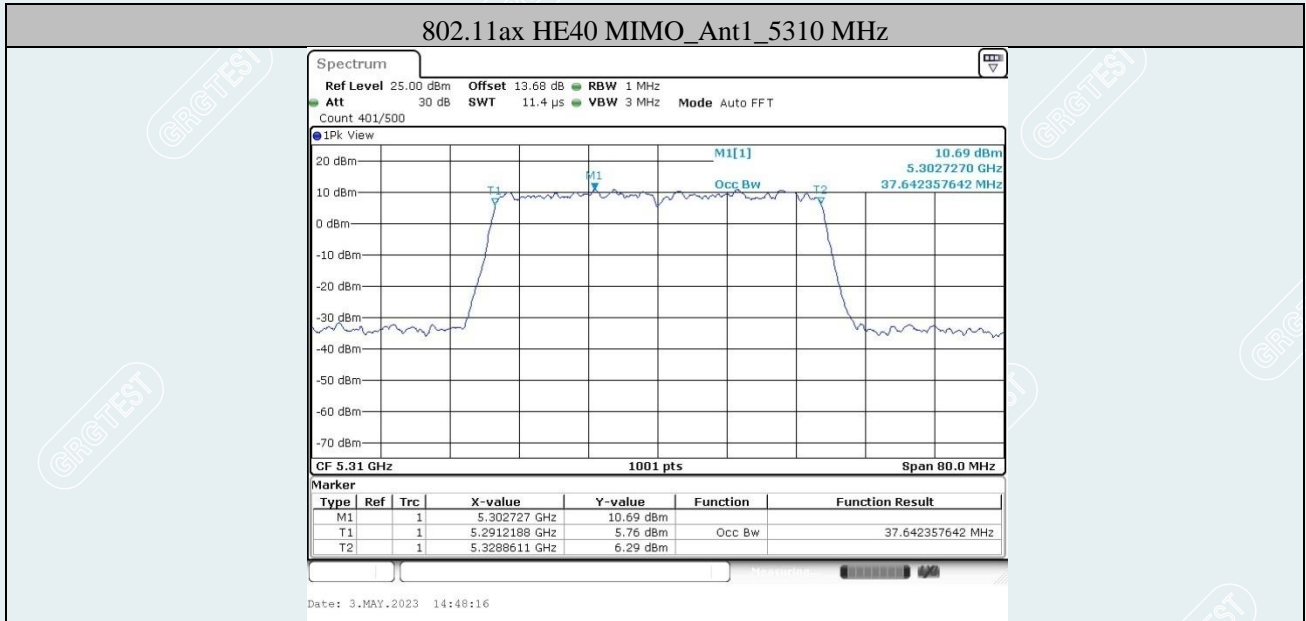
802.11ax HE40 MIMO_Ant1_5230 MHz



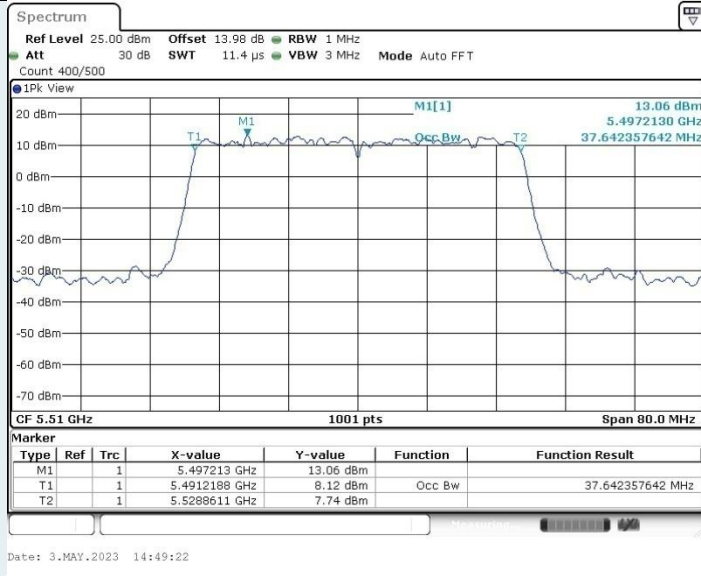
802.11ax HE40 MIMO_Ant2_5230 MHz



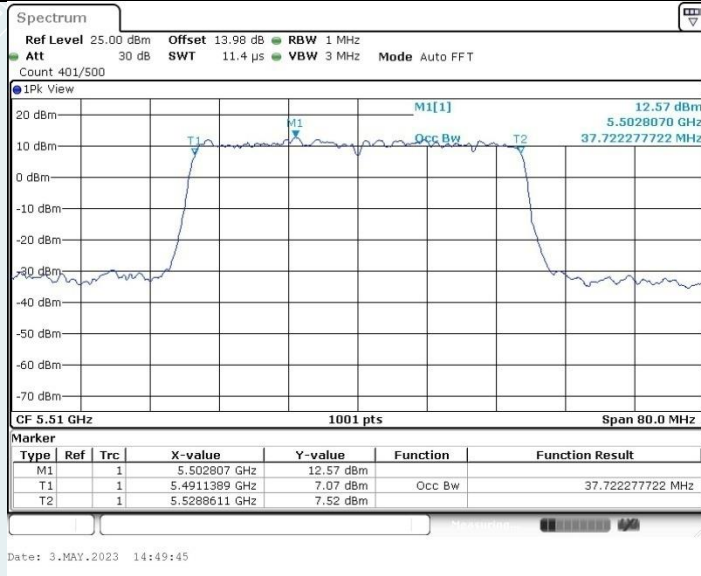


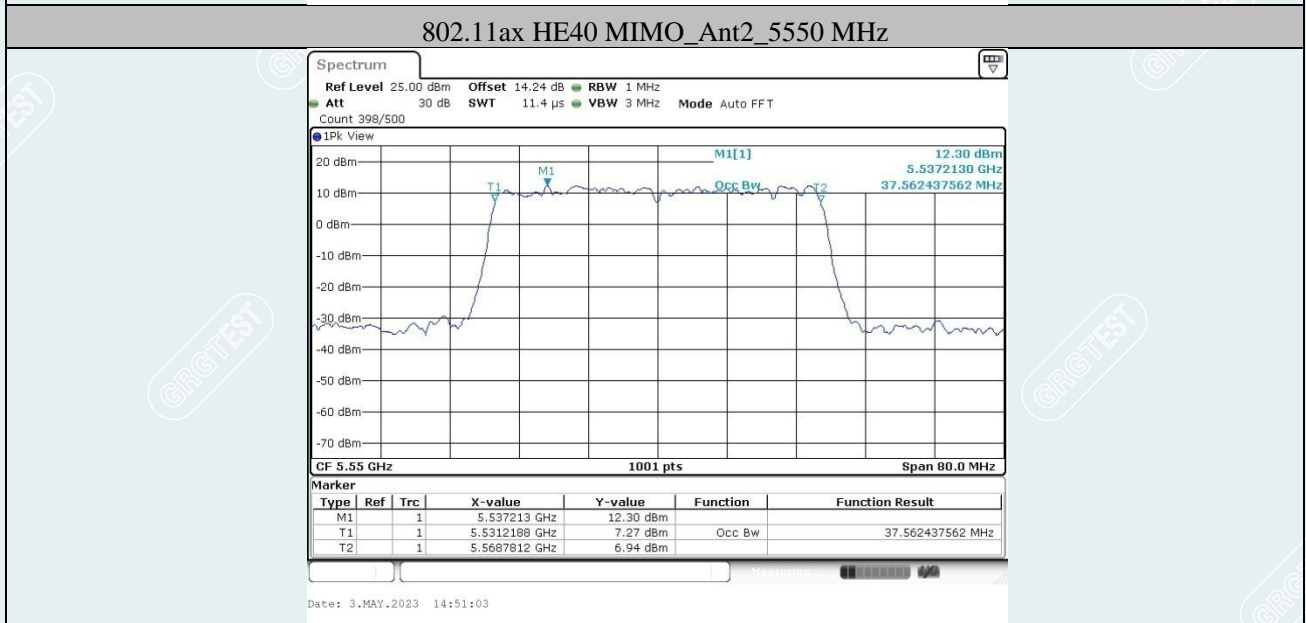
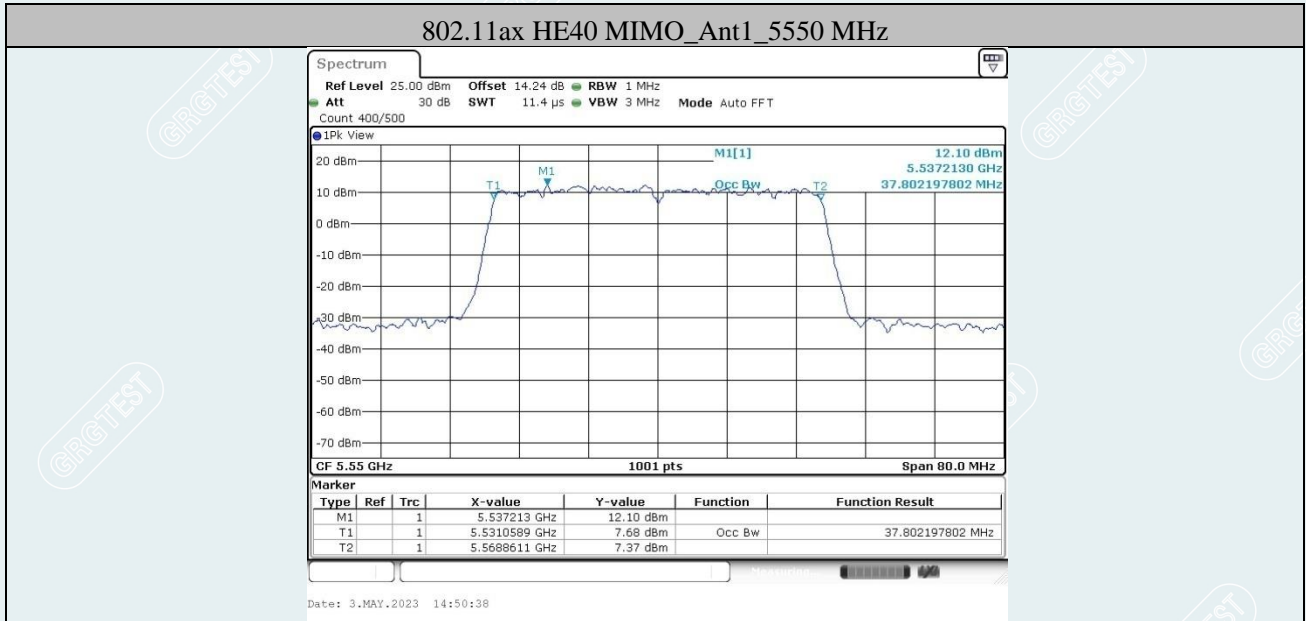


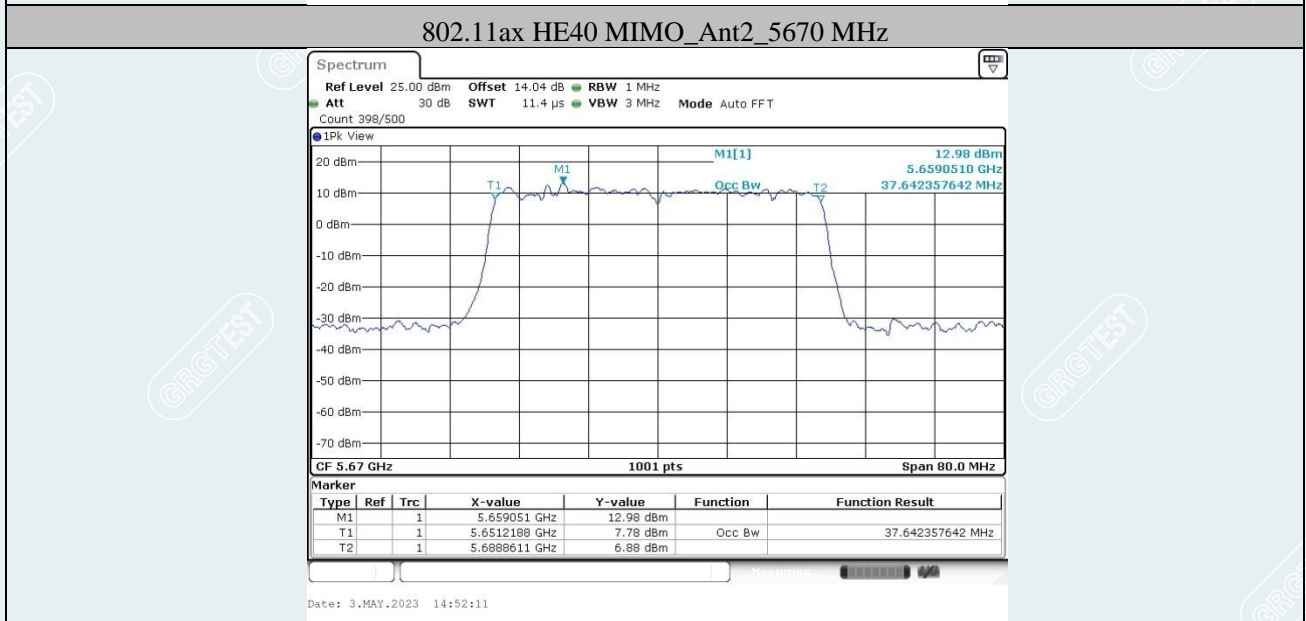
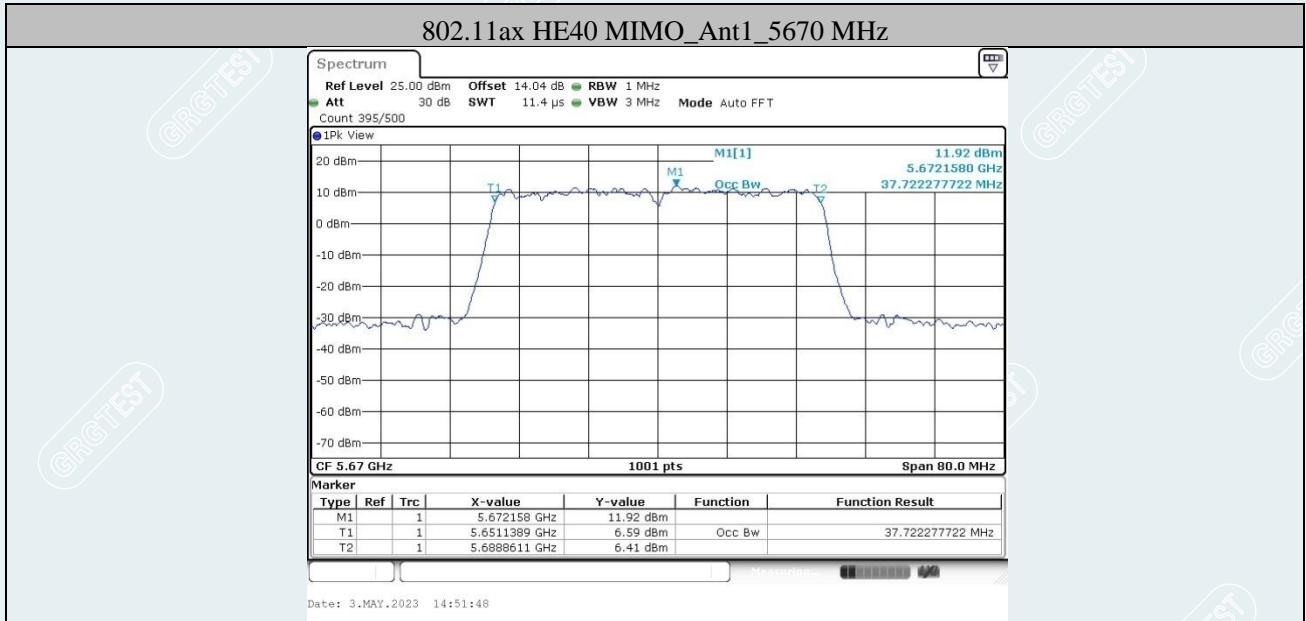
802.11ax HE40 MIMO_Ant1_5510 MHz

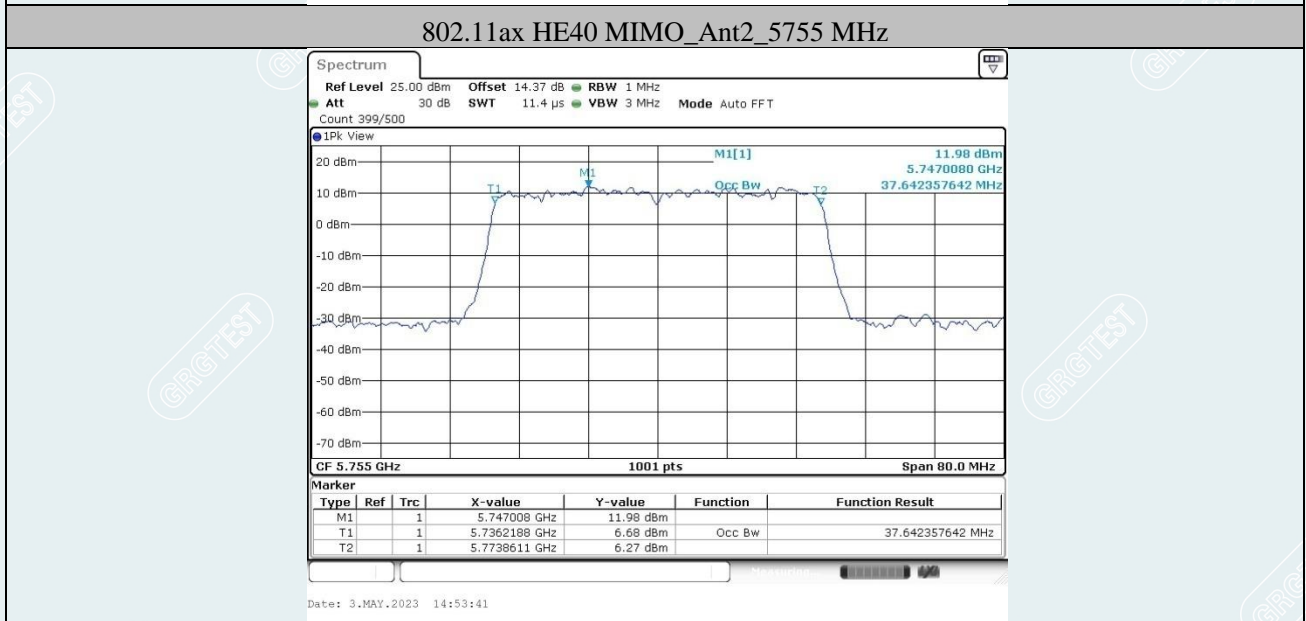
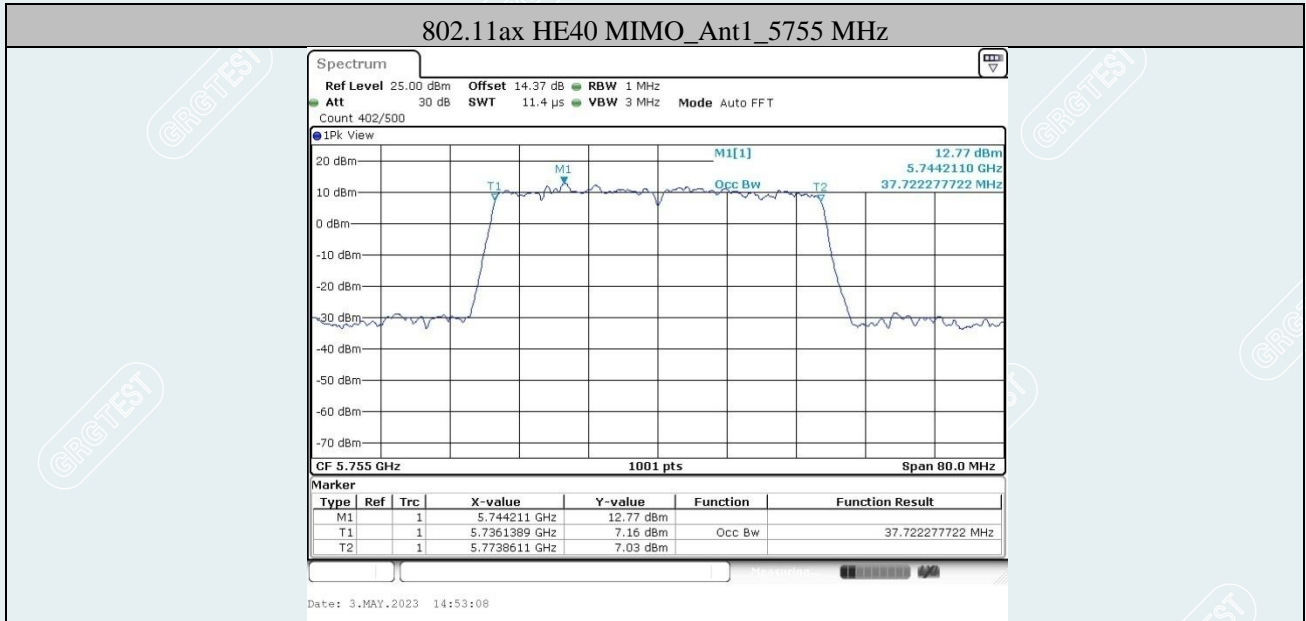


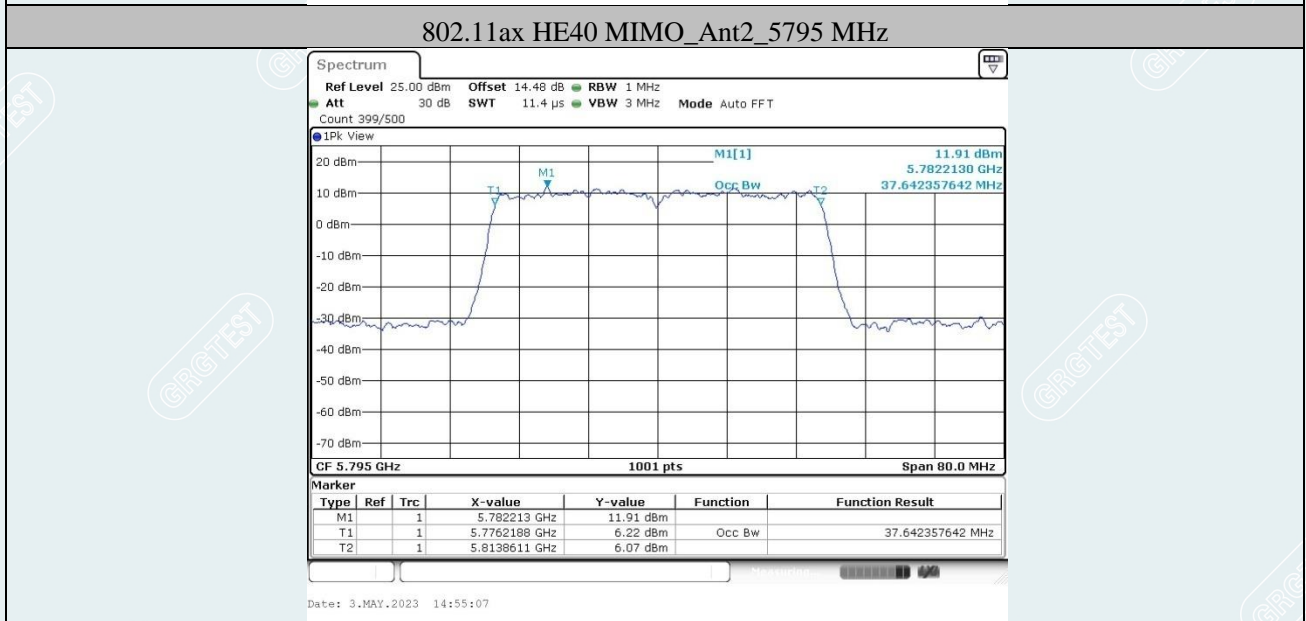
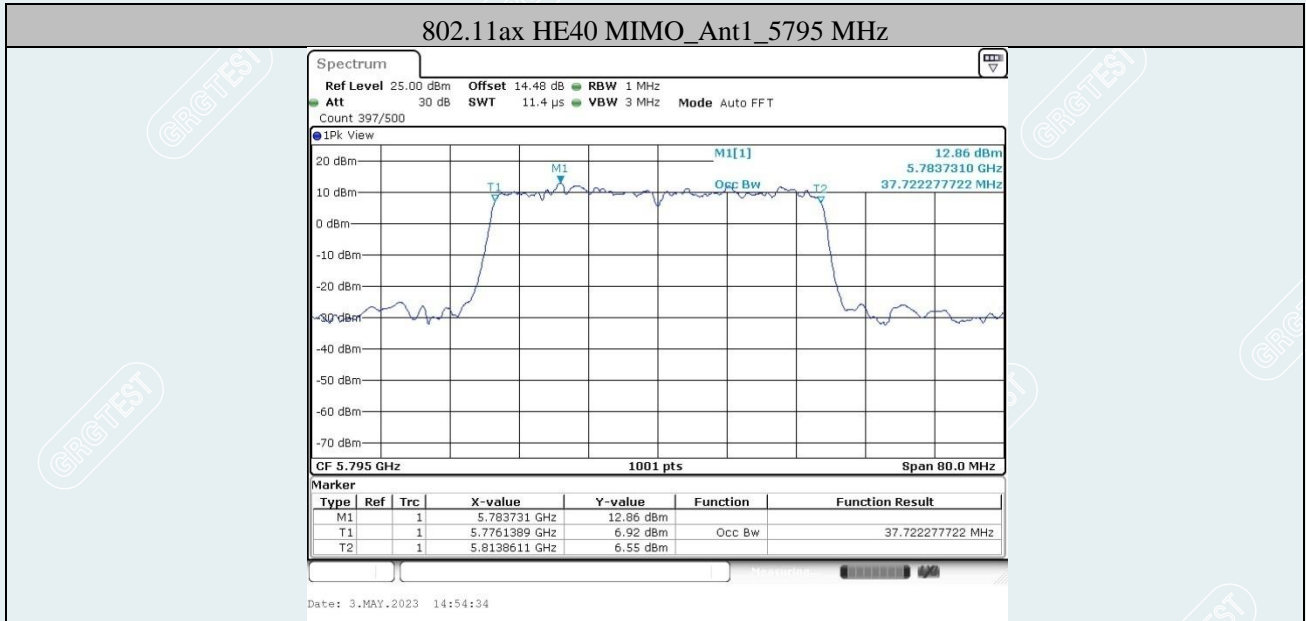
802.11ax HE40 MIMO_Ant2_5510 MHz

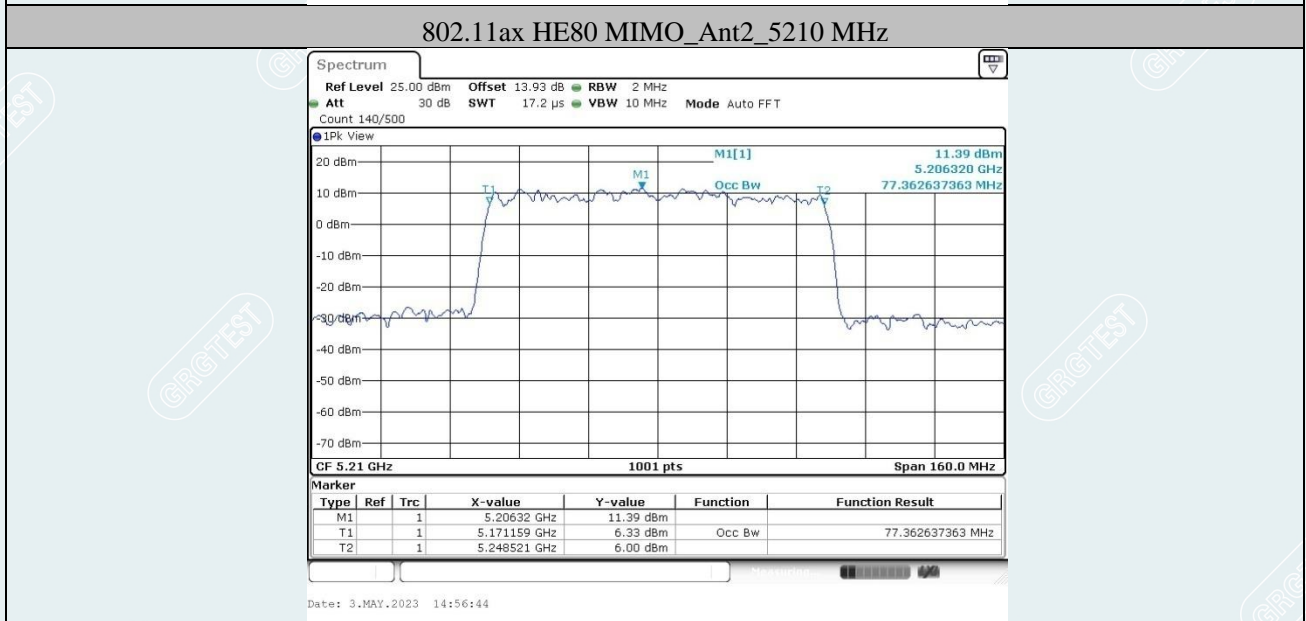
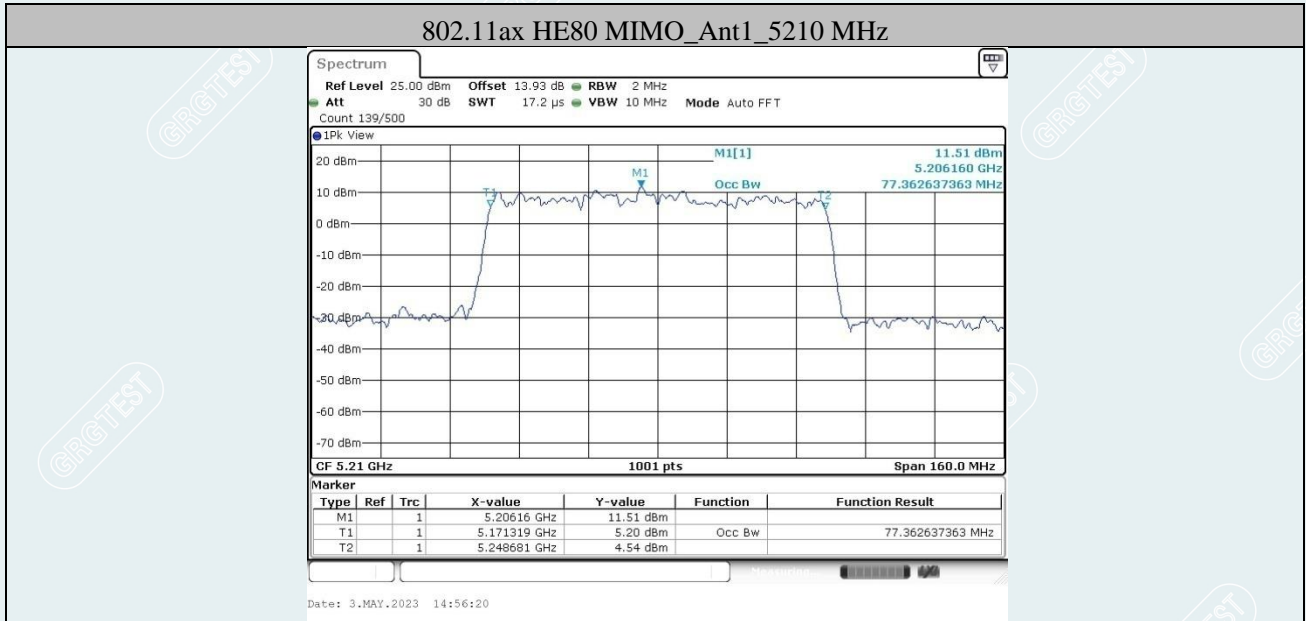




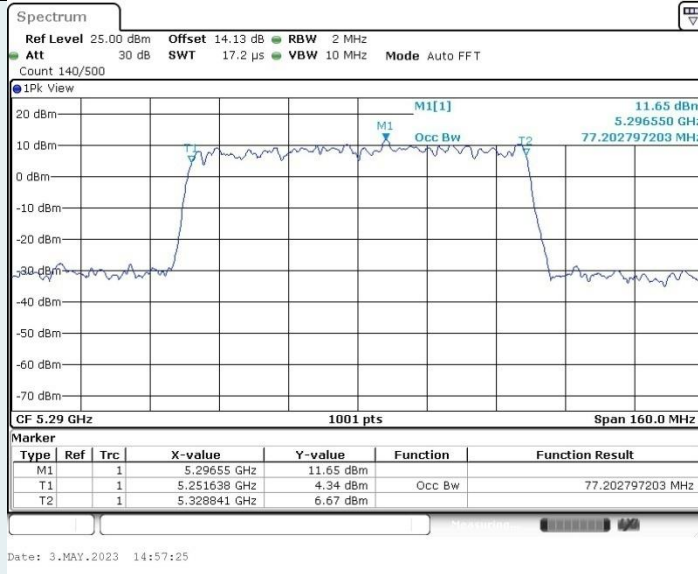




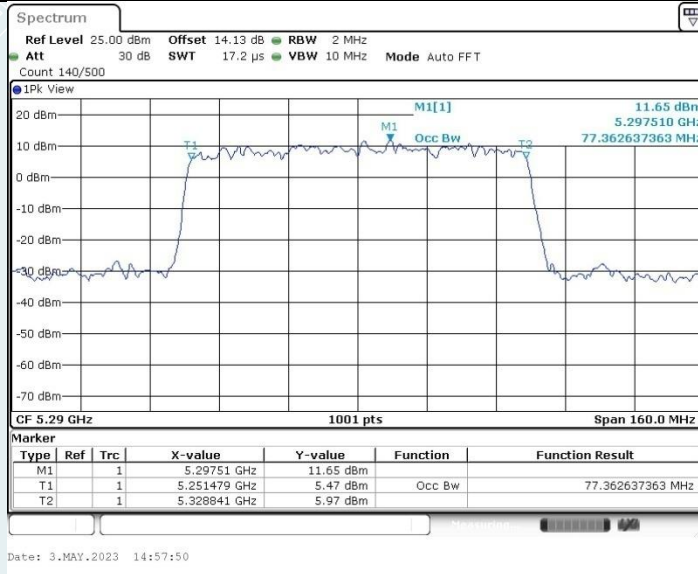




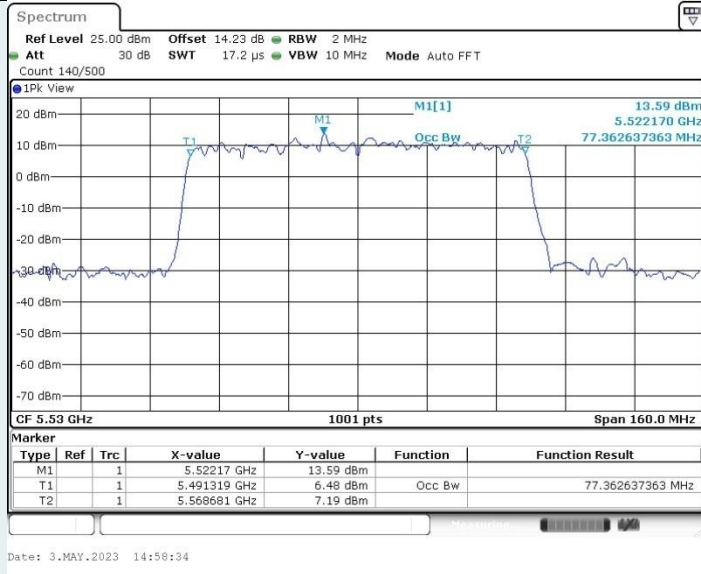
802.11ax HE80 MIMO_Ant1_5290 MHz



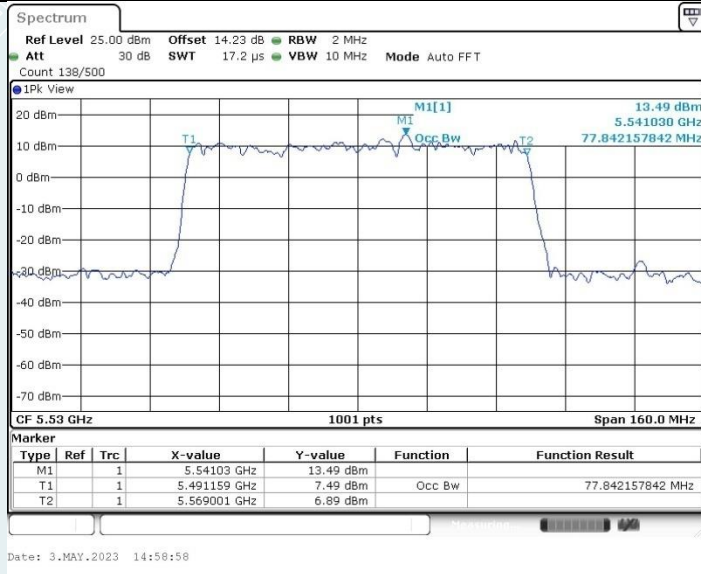
802.11ax HE80 MIMO_Ant2_5290 MHz



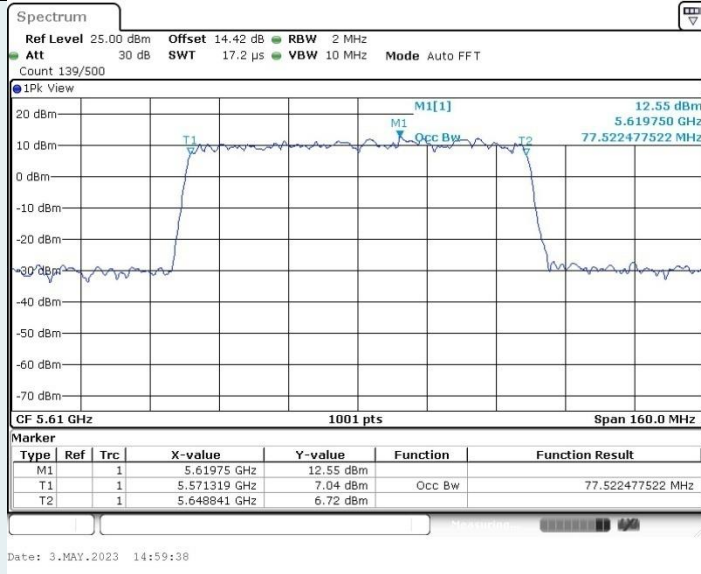
802.11ax HE80 MIMO_Ant1_5530 MHz



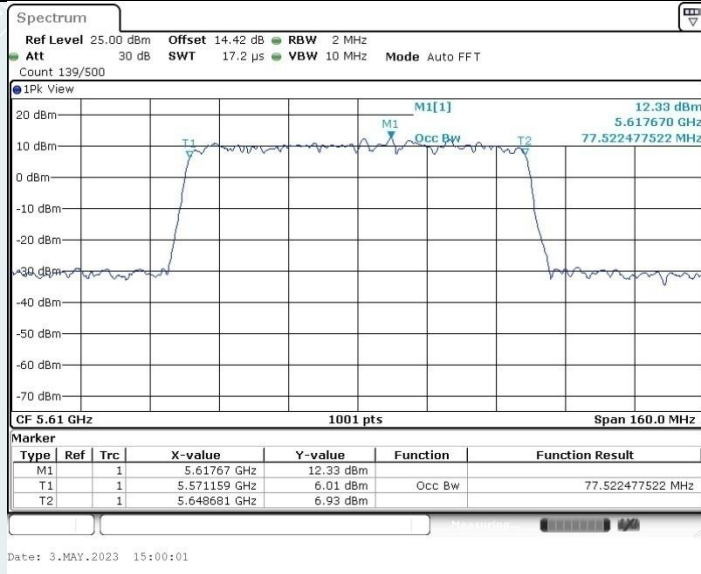
802.11ax HE80 MIMO_Ant2_5530 MHz

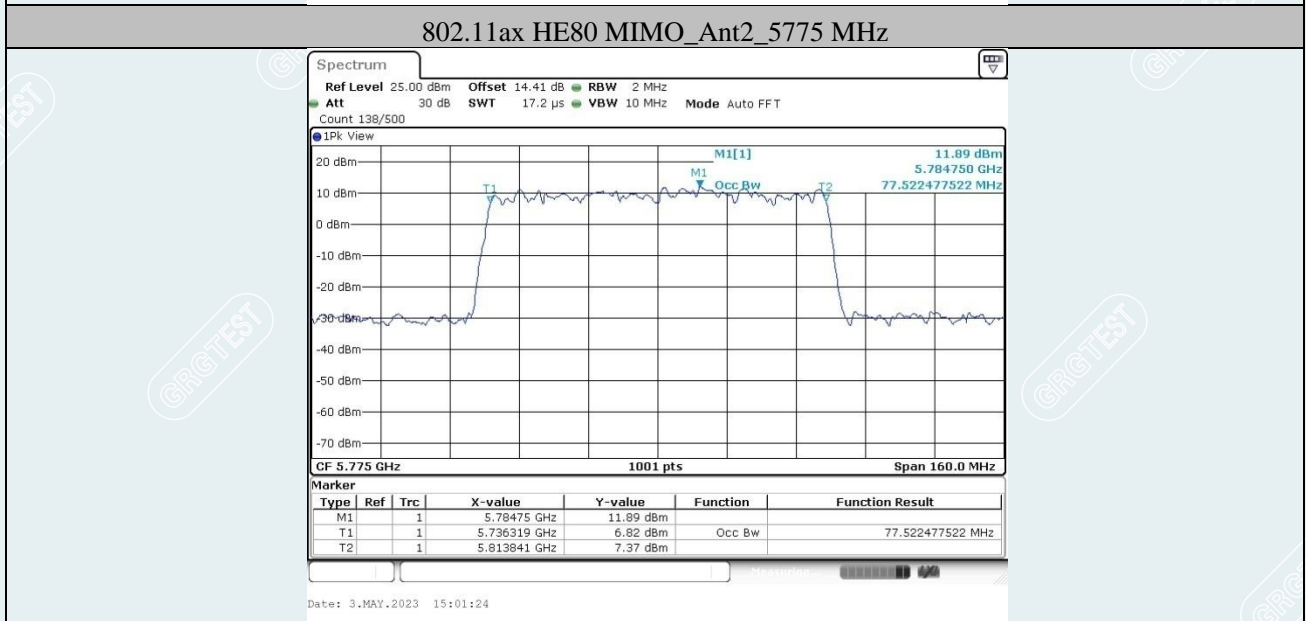
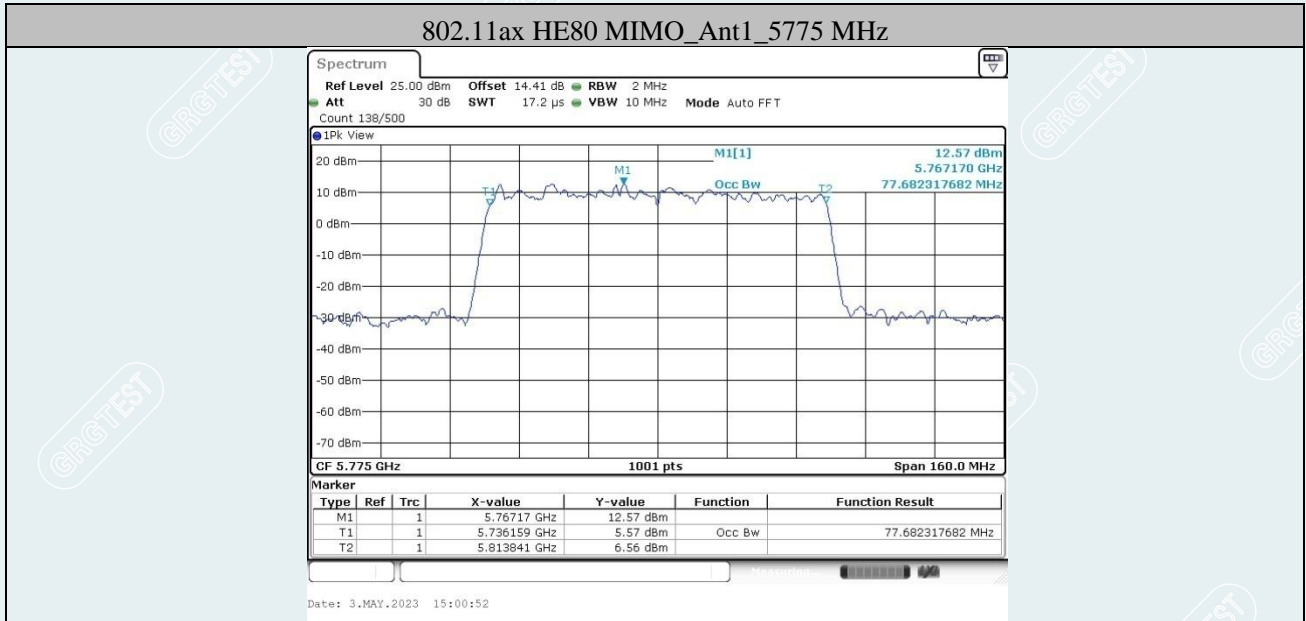


802.11ax HE80 MIMO_Ant1_5610 MHz

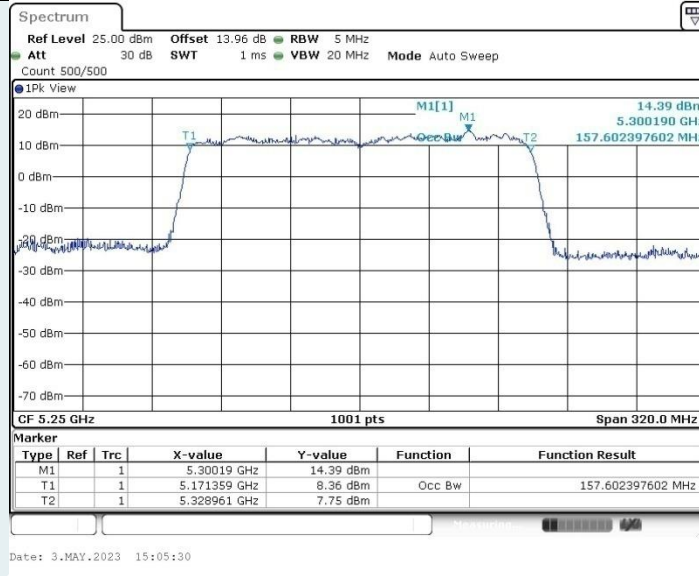


802.11ax HE80 MIMO_Ant2_5610 MHz

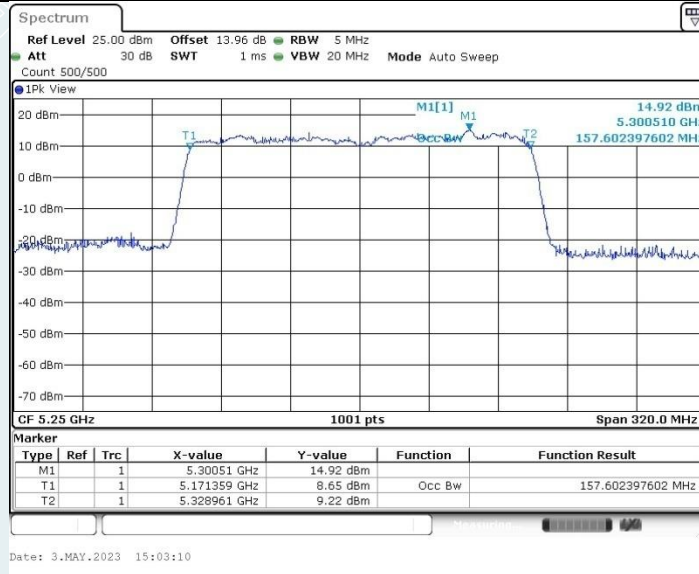




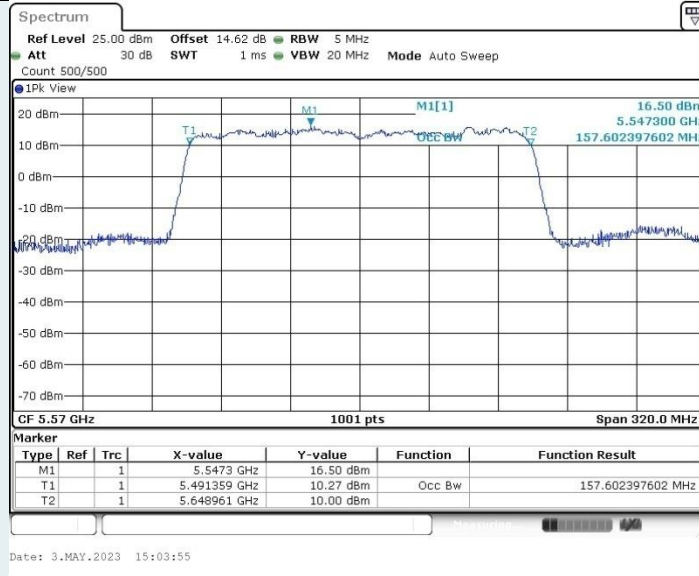
802.11ax HE160 MIMO_Ant1_5250 MHz



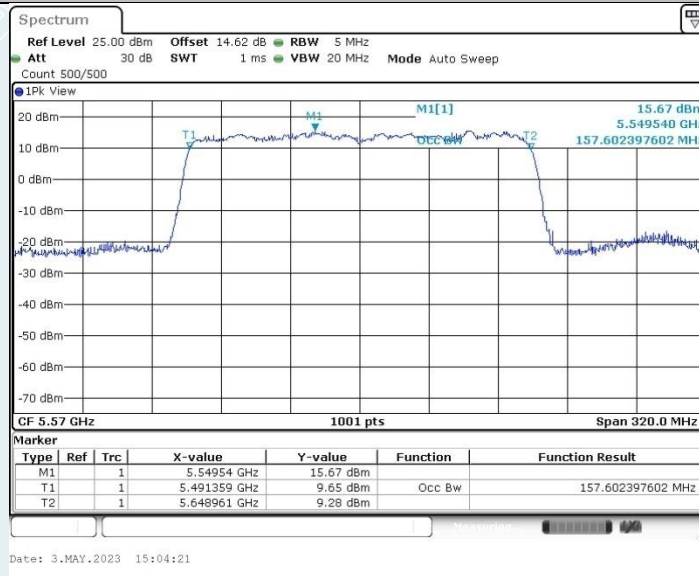
802.11ax HE160 MIMO_Ant2_5250 MHz



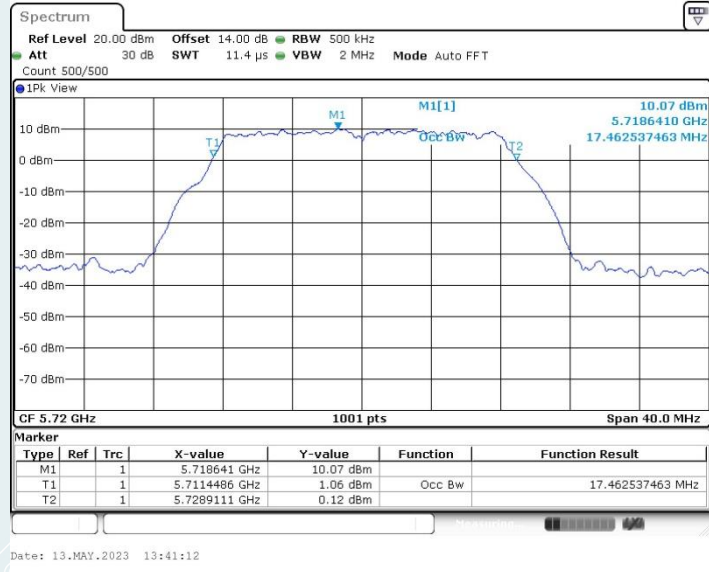
802.11ax HE160 MIMO_Ant1_5570 MHz



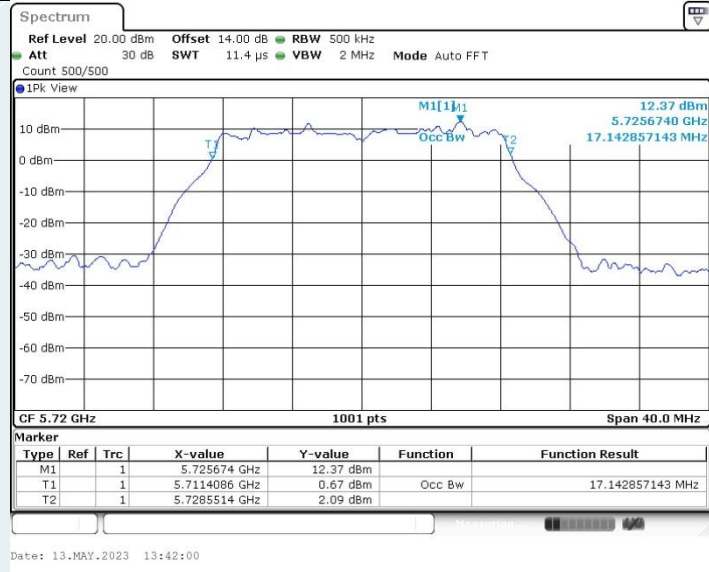
802.11ax HE160 MIMO_Ant2_5570 MHz



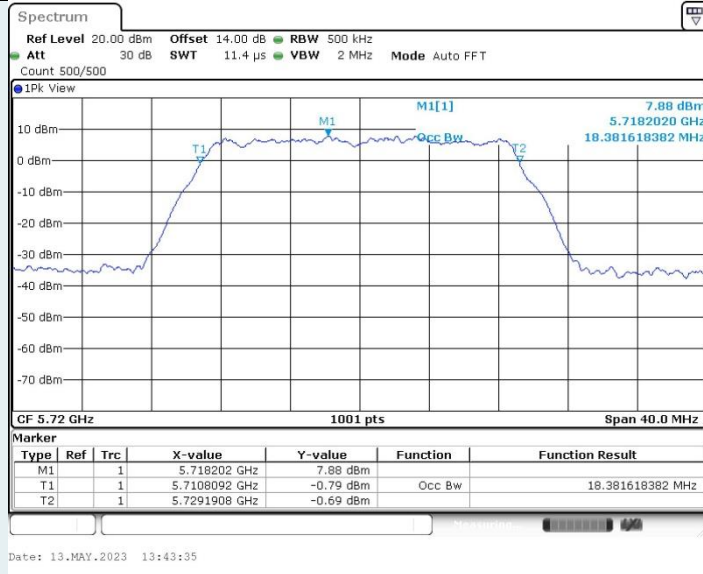
802.11a-CDD_Ant1_5720 MHz



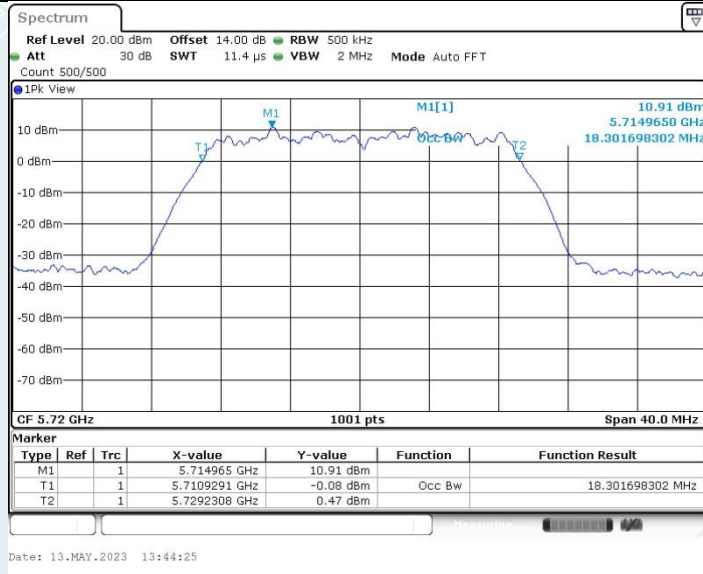
802.11a-CDD_Ant2_5720 MHz



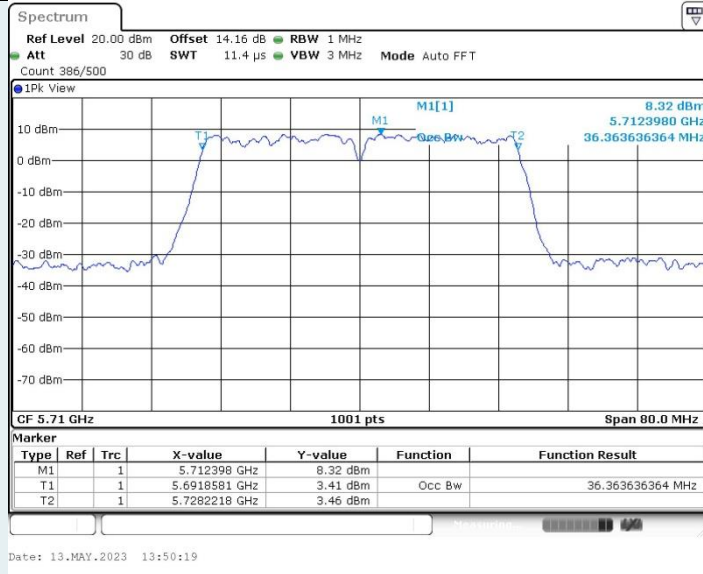
802.11n HT20 MIMO_Ant1_5720 MHz



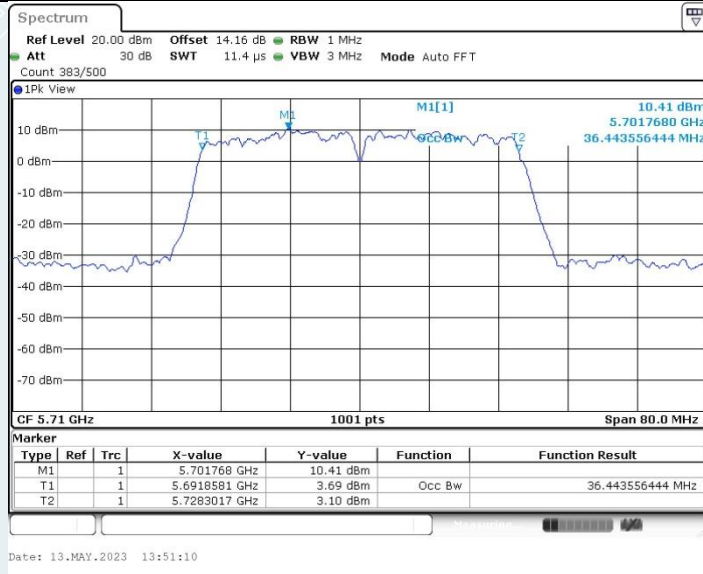
802.11n HT20 MIMO_Ant2_5720 MHz



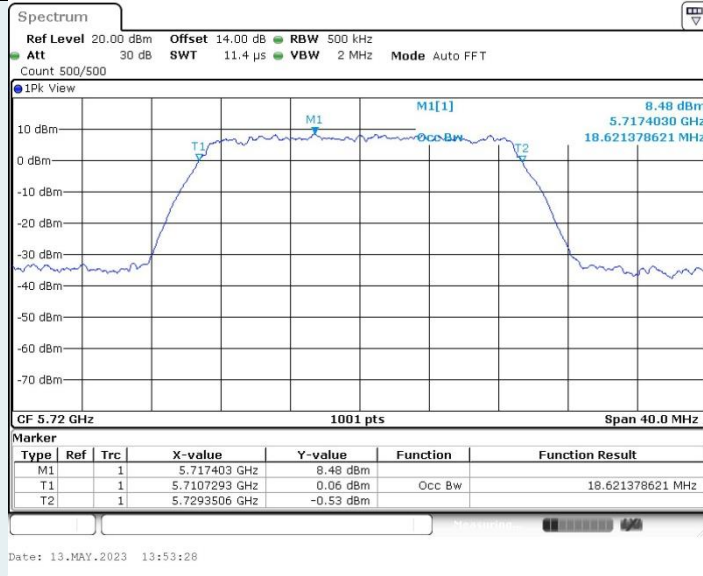
802.11n HT40 MIMO_Ant1_5710 MHz



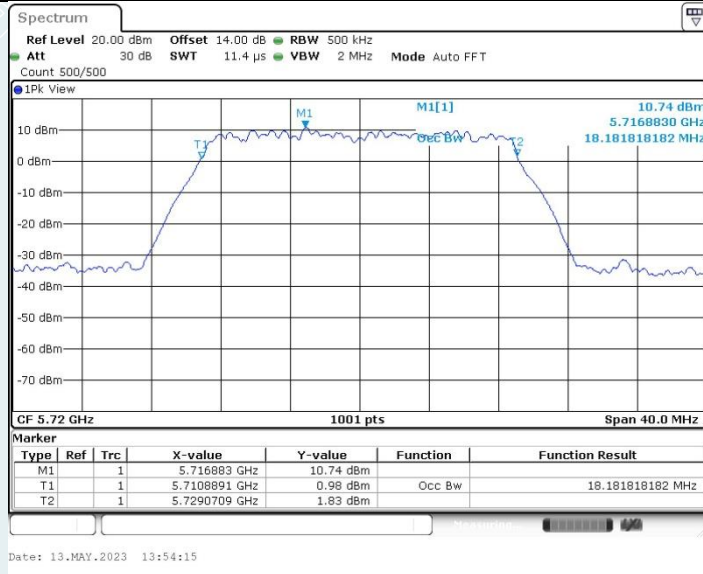
802.11n HT40 MIMO_Ant2_5710 MHz



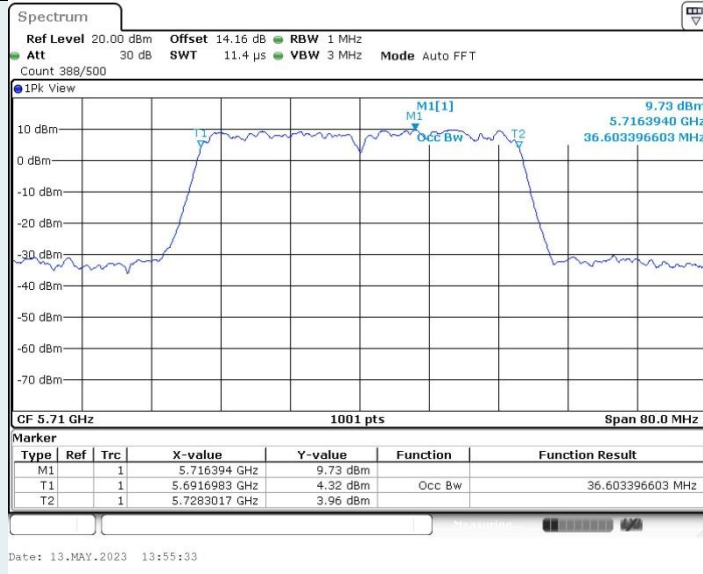
802.11ac VHT20 MIMO_Ant1_5720 MHz



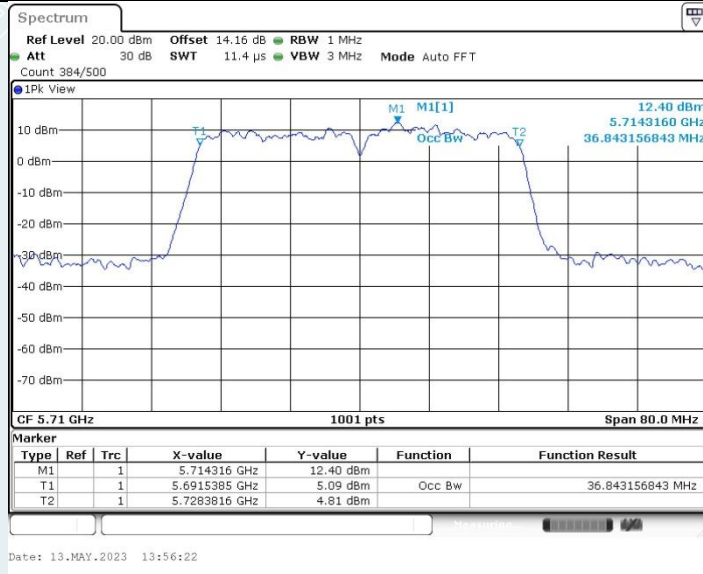
802.11ac VHT20 MIMO_Ant2_5720 MHz



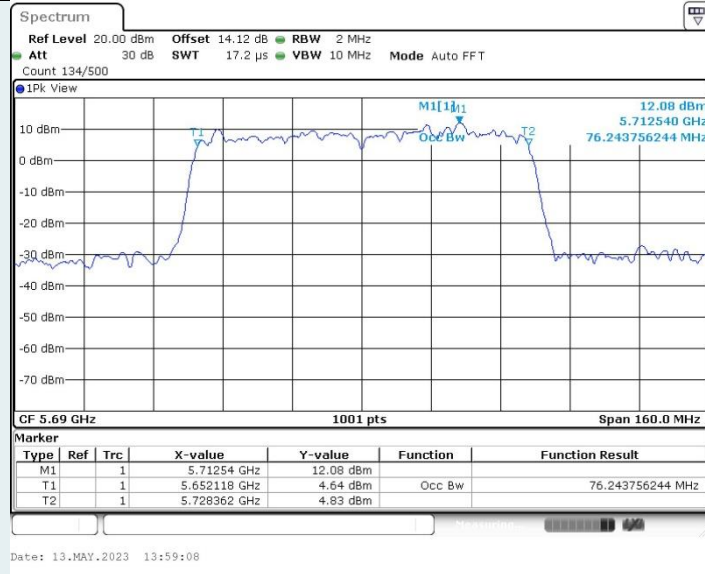
802.11ac VHT40 MIMO_Ant1_5710 MHz



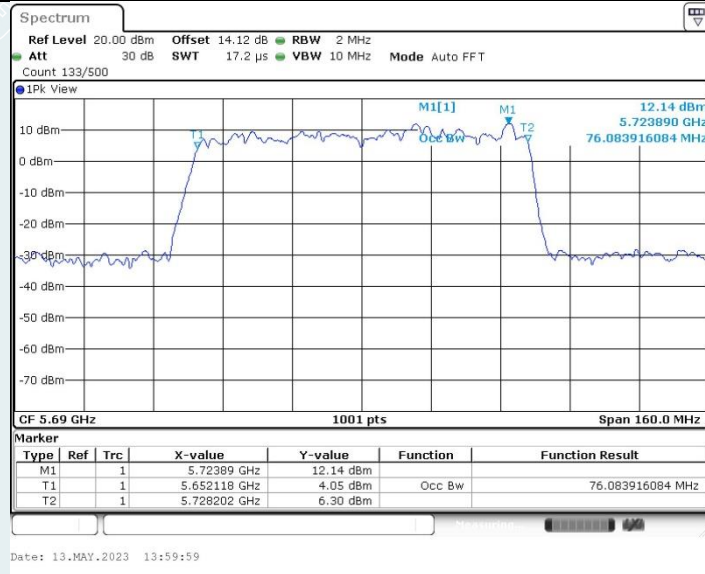
802.11ac VHT40 MIMO_Ant2_5710 MHz



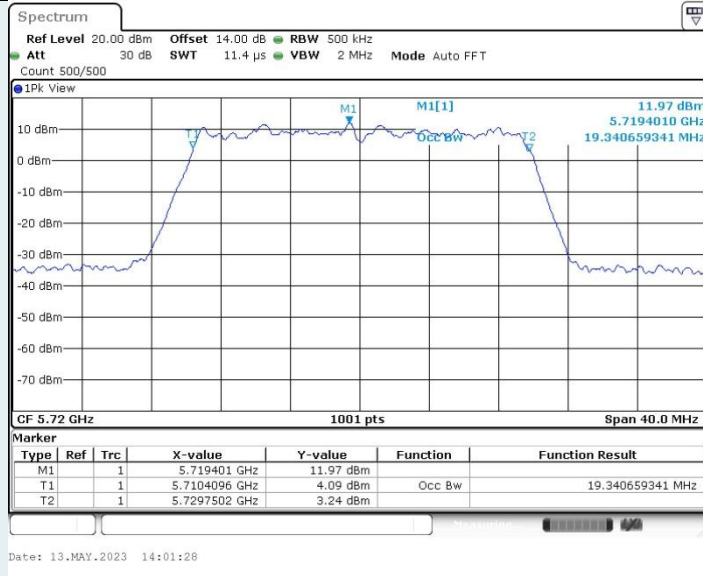
802.11ac VHT80 MIMO_Ant1_5690 MHz



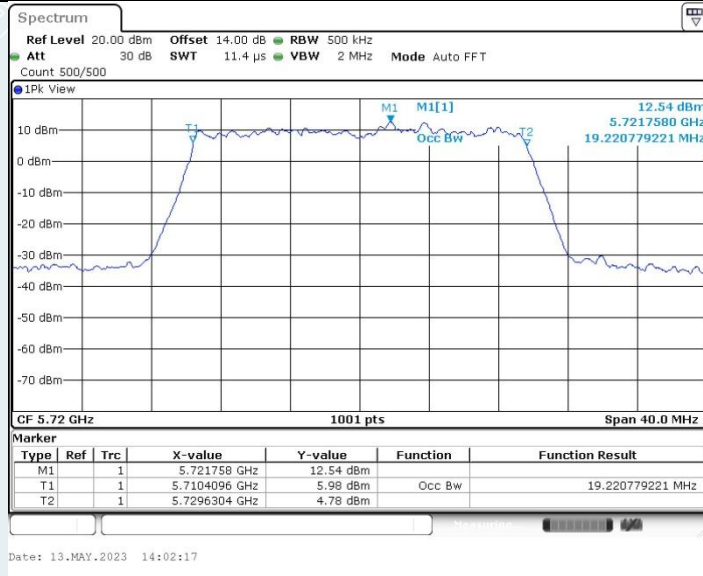
802.11ac VHT80 MIMO_Ant2_5690 MHz



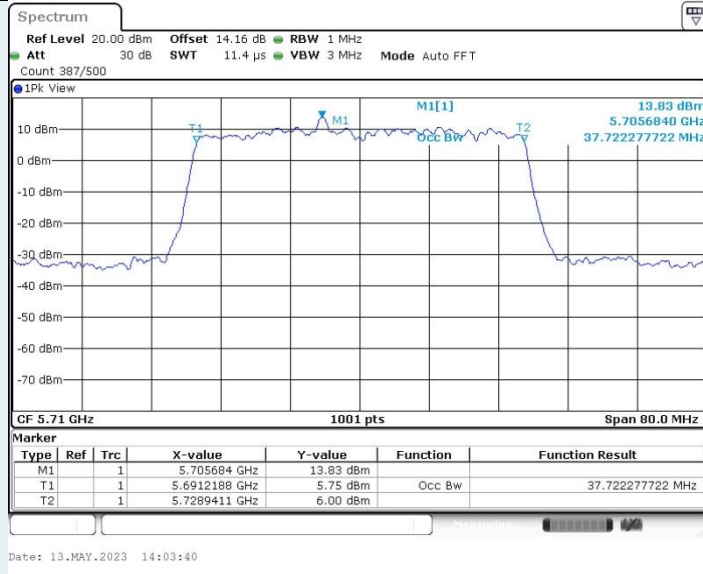
802.11ax HE20 MIMO_Ant1_5720 MHz



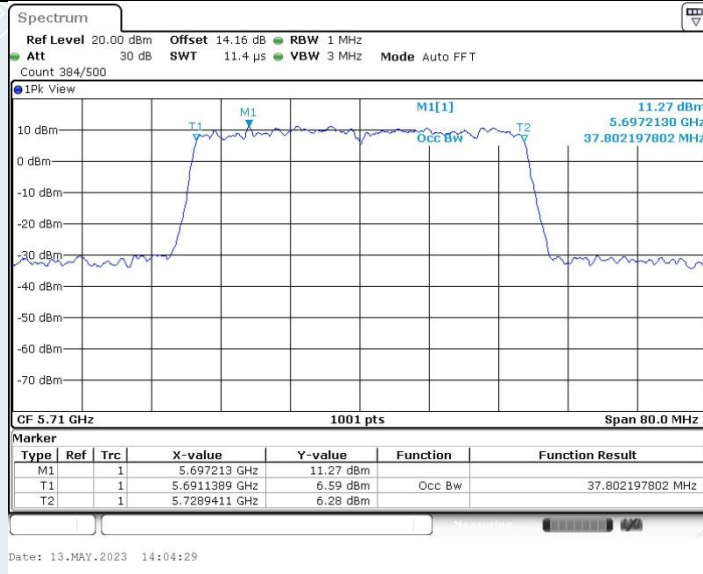
802.11ax HE20 MIMO_Ant2_5720 MHz



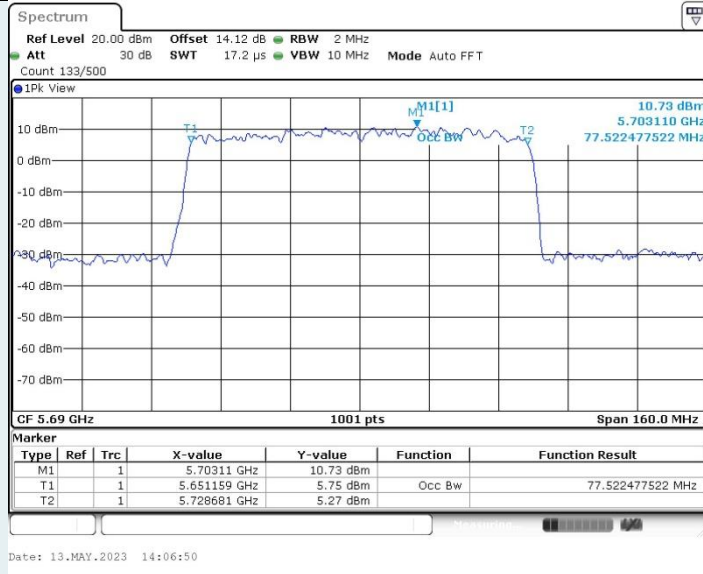
802.11ax HE40 MIMO_Ant1_5710 MHz



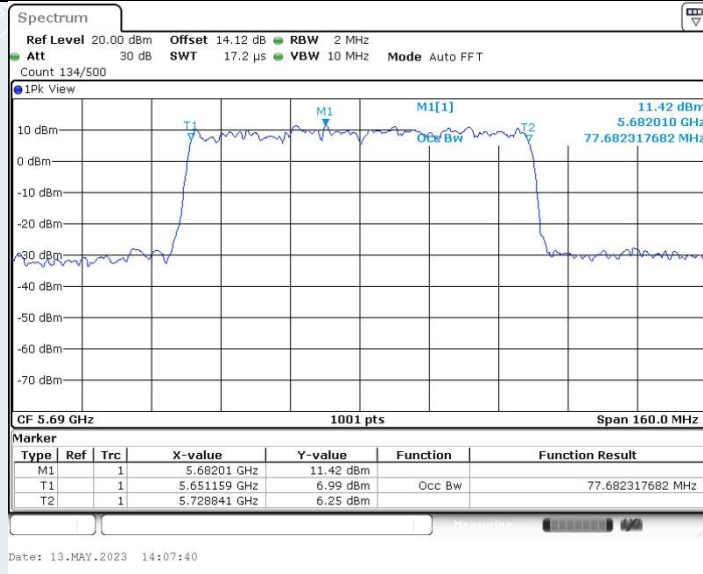
802.11ax HE40 MIMO_Ant2_5710 MHz



802.11ax HE80 MIMO_Ant1_5690 MHz



802.11ax HE80 MIMO_Ant2_5690 MHz



9. OUTPUT POWER

9.1. LIMITS

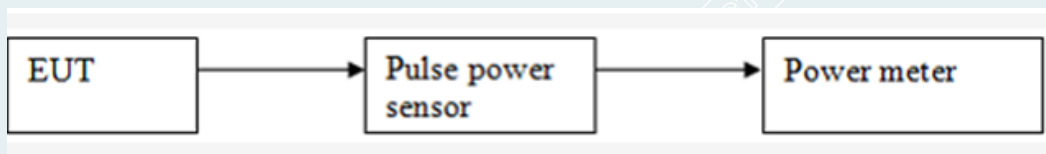
The FCC 15.407(a),The maximum conducted output power should not exceed:

Band	EUT Type	Limit
U-NII-1	Outdoor Access Point	1W(30dBm) (Max. e.i.r.p \leq 125mW at any elevation angle above 30 degrees as measured from the horizon)
	Indoor Access Point	1W(30dBm)
	Fixed point-to-point Access Point	1W(30dBm)
	Mobile and Portable Client Device	250mW(23.98dBm)
U-NII-2A	All Device	250mW(23.98dBm) or 11dBm+10 log B, Which is lesser. (B is 26dB Bandwidth in MHz)
U-NII-2C	All Device	250mW(23.98dBm) or 11dBm+10 log B, Which is lesser. (B is 26dB Bandwidth in MHz)
U-NII-3	All Device	1W(30dBm)

9.2. TEST PROCEDURES

- 1) The RF output of EUT was connected to the broadband average RF power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 2) Set to the maximum power setting and enable the EUT transmit continuously.
- 3) Measure the conducted output power and record the results in the test report.

9.3. TEST SETUP



9.4. TEST RESULTS

Environmental Conditions	23.9°C/47%RH	Test Voltage	AC120V/60Hz
Tested By	Lu Wei	Tested Date	2023/05/10

Non Beamforming

SISO

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)		Limit (dBm)	Result
			antenna 1	antenna 2		
802.11a	U-NII-1	5180	17.73	18.96	30.00	Pass
		5200	17.44	18.73		Pass
		5240	17.23	18.38		Pass
	U-NII-2A	5260	17.32	18.09	23.98	Pass
		5300	17.28	17.94	23.98	Pass
		5320	17.51	17.76	23.98	Pass
	U-NII-2C	5500	20.40	19.93	23.98	Pass
		5580	19.97	19.82	23.98	Pass
		5700	19.61	19.03	23.98	Pass
		5720	16.69	14.02	22.93	Pass
	U-NII-3	5720	7.78	7.99	30.00	Pass
		5745	19.94	19.21		Pass
		5785	19.80	19.19		Pass
		5825	19.71	19.21		Pass

Note

1. The measured results were corrected by duty cycle factor (section 2.8)
2. For 802.11a 5720MHz, Output Power Limit=(11+10 log 15.6) = 22.93 dBm

----- The following blanks -----

CDD

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11a	U-NII-1	5180	16.77	17.96	20.42	30.00	Pass
		5200	16.50	17.73	20.17		Pass
		5240	16.28	17.19	19.77		Pass
	U-NII-2A	5260	16.38	17.04	19.74	23.98	Pass
		5300	16.45	16.77	19.63	23.98	Pass
		5320	16.47	16.78	19.64	23.98	Pass
	U-NII-2C	5500	20.40	19.93	23.18	23.98	Pass
		5580	19.97	19.82	22.91	23.98	Pass
		5700	19.61	19.03	22.34	23.98	Pass
		5720	16.60	16.49	19.56	22.93	Pass
	U-NII-3	5720	7.98	8.06	11.03	30.00	Pass
		5745	19.94	19.21	22.60		Pass
		5785	19.80	19.19	22.52		Pass
		5825	19.71	19.21	22.48		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11n HT20	U-NII-1	5180	17.83	18.82	21.37	30.00	Pass
		5200	17.71	18.55	21.16		Pass
		5240	17.51	18.21	20.89		Pass
	U-NII-2A	5260	17.61	18.20	20.93	23.98	Pass
		5300	17.59	17.97	20.80	23.98	Pass
		5320	17.54	17.86	20.72	23.98	Pass
	U-NII-2C	5500	18.45	17.99	21.24	23.98	Pass
		5580	17.86	17.79	20.84	23.98	Pass
		5700	17.18	17.25	20.23	23.98	Pass
		5720	14.68	14.78	17.74	22.99	Pass
	U-NII-3	5720	6.43	6.58	9.52	30.00	Pass
		5745	17.48	17.46	20.48		Pass
		5785	17.48	17.25	20.38		Pass
		5825	17.49	17.30	20.41		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
IEEE 802.11ac VHT20	U-NII-1	5180	16.35	17.19	19.80	30.00	Pass
		5200	16.22	17.13	19.71		Pass
		5240	16.06	16.62	19.36		Pass
	U-NII-2A	5260	16.02	16.56	19.31	23.98	Pass
		5300	16.08	16.45	19.28	23.98	Pass
		5320	16.14	16.42	19.30	23.98	Pass
	U-NII-2C	5500	18.86	18.37	21.64	23.98	Pass
		5580	18.40	18.12	21.28	23.98	Pass
		5700	17.62	17.70	20.67	23.98	Pass
		5720	15.08	15.26	18.18	22.96	Pass
	U-NII-3	5720	8.47	8.67	11.58	30.00	Pass
		5745	18.04	17.86	20.96		Pass
		5785	17.90	17.76	20.84		Pass
		5825	18.04	17.69	20.88		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
IEEE 802.11ax HE20	U-NII-1	5180	15.51	16.43	19.01	30.00	Pass
		5200	15.21	16.23	18.76		Pass
		5240	15.03	15.75	18.42		Pass
	U-NII-2A	5260	15.18	15.91	18.57	23.98	Pass
		5300	15.10	15.85	18.50	23.98	Pass
		5320	15.22	15.79	18.53	23.98	Pass
	U-NII-2C	5500	19.72	19.03	22.40	23.98	Pass
		5580	19.22	18.95	22.10	23.98	Pass
		5700	18.28	18.57	21.44	23.98	Pass
		5720	15.65	15.95	18.81	22.94	Pass
	U-NII-3	5720	10.03	10.34	13.20	30.00	Pass
		5745	18.71	18.52	21.63		Pass
		5785	18.47	18.32	21.41		Pass
		5825	18.73	18.41	21.58		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11n HT40 mode	U-NII-1	5190	17.20	18.07	20.67	30.00	Pass
		5230	16.93	17.69	20.34		Pass
	U-NII-2A	5270	16.09	16.50	19.31	23.98	Pass
		5310	16.00	16.20	19.11	23.98	Pass
	U-NII-2C	5510	17.84	17.52	20.70	23.98	Pass
		5550	17.70	17.66	20.69	23.98	Pass
		5670	16.86	17.14	20.01	23.98	Pass
		5710	15.29	15.09	18.20	23.98	Pass
	U-NII-3	5710	2.52	2.44	5.49	30.00	
		5755	17.28	17.08	20.19		Pass
5795		17.32	16.97	20.16	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT40 mode	U-NII-1	5190	17.14	18.03	20.62	30.00	Pass
		5230	16.90	17.57	20.26		Pass
	U-NII-2A	5270	17.31	17.72	20.53	23.98	Pass
		5310	17.09	17.41	20.26	23.98	Pass
	U-NII-2C	5510	19.37	18.77	22.09	23.98	Pass
		5550	18.99	18.78	21.90	23.98	Pass
		5670	18.08	18.20	21.15	23.98	Pass
		5710	16.24	16.25	19.26	23.98	Pass
	U-NII-3	5710	5.03	5.25	8.15	30.00	Pass
		5755	18.56	18.34	21.46		Pass
5795		18.43	18.22	21.34	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE40 mode	U-NII-1	5190	16.02	16.84	19.46	30.00	Pass
		5230	15.75	16.37	19.08		Pass
	U-NII-2A	5270	17.39	17.99	20.71	23.98	Pass
		5310	17.35	17.56	20.47	23.98	Pass
	U-NII-2C	5510	19.59	19.06	22.35	23.98	Pass
		5550	19.44	18.99	22.23	23.98	Pass
		5670	18.45	18.46	21.47	23.98	Pass
	U-NII-3	5710	16.28	16.65	19.48	23.98	Pass
		5710	6.18	6.44	9.32	30.00	Pass
		5755	18.89	18.66	21.79		Pass
5795	18.81	18.56	21.70	Pass			

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT80	U-NII-1	5210	16.92	17.79	20.39	30.00	Pass
	U-NII-2A	5290	17.05	17.34	20.21	23.98	Pass
	U-NII-2C	5530	18.93	18.58	21.77	23.98	Pass
		5610	18.80	18.59	21.71	23.98	Pass
		5690	16.78	16.58	19.69	23.98	Pass
	U-NII-3	5690	2.16	2.11	5.15	30.00	Pass
		5775	18.31	18.14	21.24		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE80	U-NII-1	5210	17.06	18.06	20.60	30.00	Pass
	U-NII-2A	5290	17.39	17.54	20.48	23.98	Pass
	U-NII-2C	5530	19.04	18.70	21.89	23.98	Pass
		5610	18.79	18.76	21.79	23.98	Pass
		5690	16.95	16.88	19.93	23.98	Pass
	U-NII-3	5690	3.47	3.45	6.47	30.00	Pass
		5775	18.49	18.32	21.42		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT160	U-NII-1	5250	15.86	15.47	18.68	30.00	Pass
	U-NII-2A	5250	15.64	15.34	18.50	23.98	Pass
	U-NII-2C	5570	16.47	16.38	19.43	23.98	Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE160	U-NII-1	5250	15.94	15.90	18.93	30.00	Pass
	U-NII-2A	5250	15.04	14.96	18.01	23.98	Pass
	U-NII-2C	5570	16.52	16.49	19.52	23.98	Pass

- 1) The measured results were corrected by duty cycle factor (section 2.8)
- 2) U-NII-1:

Note1: The antenna gain is equal and the number of antennas is less than 4, Array gain=0, and power does not need to be counted as rollback.

U-NII-2A:

Note1: The antenna gain is equal and the number of antennas is less than 4, Array gain=0, and power does not need to be counted as rollback.

U-NII-2C:

Note1: The antenna gain is equal and the number of antennas is less than 4, Array gain=0, and power does not need to be counted as rollback.

Note2: For 802.11a CDD 5720MHz, Output Power Limit=(11+10 log 15.6) = 22.93dBm

Note3: For 802.11n HT20 CDD 5720MHz, Output Power Limit=(11+10 log 15.8) = 22.99dBm

Note4: For 802.11ac VHT20 CDD 5720MHz, Output Power Limit=(11+10 log 15.72) = 22.96dBm

Note5: For 802.11ax HE20 CDD 5720MHz, Output Power Limit=(11+10 log 15.64) = 22.94dBm

U-NII-3:

Note1: The antenna gain is equal and the number of antennas is less than 4, Array gain=0, and power does not need to be counted as rollback.

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SDM

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11n HT20	U-NII-1	5180	17.39	18.44	20.96	30.00	Pass
		5200	17.16	18.24	20.75		Pass
		5240	17.03	17.86	20.48		Pass
	U-NII-2A	5260	17.05	17.67	20.38	23.98	Pass
		5300	16.95	17.36	20.17	23.98	Pass
		5320	17.09	17.21	20.16	23.98	Pass
	U-NII-2C	5500	19.10	18.71	21.92	23.98	Pass
		5580	18.70	18.64	21.68	23.98	Pass
		5700	18.34	18.02	21.20	23.98	Pass
		5720	14.14	14.37	17.27	29.98	Pass
	U-NII-3	5720	5.89	6.13	9.02	30.00	Pass
		5745	18.74	17.97	21.38		Pass
		5785	18.70	17.99	21.37		Pass
		5825	18.71	18.04	21.40		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
IEEE 802.11ac VHT20	U-NII-1	5180	16.10	17.39	19.81	30.00	Pass
		5200	15.86	16.49	19.20		Pass
		5240	15.62	16.17	18.92		Pass
	U-NII-2A	5260	15.65	15.96	18.82	23.98	Pass
		5300	15.67	15.86	18.78	23.98	Pass
		5320	15.82	15.82	18.83	23.98	Pass
	U-NII-2C	5500	19.47	18.72	22.12	23.98	Pass
		5580	18.87	18.49	21.70	23.98	Pass
		5700	18.16	17.97	21.08	23.98	Pass
		5720	14.17	14.46	17.33	23.98	Pass
	U-NII-3	5720	7.66	7.94	10.81	30.00	Pass
		5745	18.45	18.15	21.32		Pass
		5785	18.49	18.01	21.27		Pass
		5825	18.49	18.09	21.31		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
IEEE 802.11ax HE20	U-NII-1	5180	16.63	17.56	20.13	30.00	Pass
		5200	16.88	17.73	20.34		Pass
		5240	16.21	16.96	19.61		Pass
	U-NII-2A	5260	16.83	17.21	20.04	23.98	Pass
		5300	16.85	17.07	19.97	23.98	Pass
		5320	16.92	16.96	19.95	23.98	Pass
	U-NII-2C	5500	19.89	19.39	22.66	23.98	Pass
		5580	19.32	19.18	22.26	23.98	Pass
		5700	18.71	18.71	21.72	23.98	Pass
		5720	14.28	14.65	17.48	23.98	Pass
	U-NII-3	5720	8.68	9.09	11.90	30.00	Pass
		5745	19.01	18.65	21.85		Pass
		5785	19.03	18.48	21.78		Pass
		5825	19.07	18.55	21.83		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11n HT40 mode	U-NII-1	5190	18.37	18.02	21.21	30.00	Pass
		5230	18.34	18.04	21.21		Pass
	U-NII-2A	5270	17.38	16.65	20.04	23.98	Pass
		5310	17.22	16.66	19.96	23.98	Pass
	U-NII-2C	5510	17.24	16.63	19.96	23.98	Pass
		5550	17.27	16.65	19.98	23.98	Pass
		5670	17.24	16.68	19.98	23.98	Pass
		5710	14.78	14.81	17.81	23.98	Pass
	U-NII-3	5710	1.95	1.98	4.98	30.00	Pass
		5755	17.21	16.69	19.97		Pass
5795		17.15	16.75	19.97	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT40 mode	U-NII-1	5190	17.53	17.23	20.39	30.00	Pass
		5230	17.18	17.75	20.48		Pass
	U-NII-2A	5270	19.33	19.01	22.18	23.98	Pass
		5310	19.36	19.02	22.20	23.98	Pass
	U-NII-2C	5510	19.42	19.03	22.24	23.98	Pass
		5550	19.44	19.05	22.26	23.98	Pass
		5670	19.43	19.03	22.24	23.98	Pass
		5710	15.06	15.10	18.09	23.98	Pass
	U-NII-3	5710	3.89	4.14	7.03	30.00	Pass
		5755	19.49	19.03	22.28		Pass
		5795	19.43	19.05	22.25		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE40 mode	U-NII-1	5190	16.50	16.17	19.35	30.00	Pass
		5230	16.52	16.19	19.37		Pass
	U-NII-2A	5270	18.21	17.92	21.08	23.98	Pass
		5310	18.24	17.93	21.10	23.98	Pass
	U-NII-2C	5510	19.23	18.91	22.09	23.98	Pass
		5550	19.26	18.92	22.11	23.98	Pass
		5670	19.24	18.89	22.08	23.98	Pass
		5710	15.25	15.42	18.35	23.98	Pass
	U-NII-3	5710	5.14	5.23	8.20	30.00	Pass
		5755	19.25	18.74	22.02		Pass
		5795	19.27	18.88	22.09		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT80	U-NII-1	5210	17.82	17.42	20.63	30.00	Pass
	U-NII-2A	5290	18.59	18.18	21.40	23.98	Pass
	U-NII-2C	5530	18.59	18.22	21.42	23.98	Pass
		5610	18.56	18.15	21.37	23.98	Pass
		5690	15.60	15.44	18.53	23.98	Pass
	U-NII-3	5690	0.94	0.99	3.98	30.00	Pass
		5775	18.60	18.17	21.40		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE80	U-NII-1	5210	17.56	18.34	20.98	30.00	Pass
	U-NII-2A	5290	19.14	18.81	21.99	23.98	Pass
	U-NII-2C	5530	19.14	18.80	21.99	23.98	Pass
		5610	19.22	18.83	22.04	23.98	Pass
		5690	15.89	15.60	18.76	23.98	Pass
	U-NII-3	5690	2.27	2.18	5.24	30.00	Pass
		5775	19.12	18.66	21.91		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT160	U-NII-1	5250	15.79	16.07	18.94	30.00	Pass
	U-NII-2A	5250	15.36	15.41	18.40	23.98	Pass
	U-NII-2C	5570	16.33	16.25	19.30	23.98	Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE160	U-NII-1	5250	14.86	14.93	17.91	30.00	Pass
	U-NII-2A	5250	13.43	13.68	16.57	23.98	Pass
	U-NII-2C	5570	16.49	16.57	19.54	23.98	Pass

- The measured results were corrected by duty cycle factor (section 2.8)
- U-NII-1:
According to the calculation of SDM independent spatial stream formula,
Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS}=2$, $N_{ANT}=2$,
Directional gain = $3.86 + 10 \log(2/2)$ dBi = 3.86 dBi, So do not consider the limit rollback.
U-NII-2A:

According to the calculation of SDM independent spatial stream formula,
Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS} = 2$, $N_{ANT} = 2$,
Directional gain = $3.67 + 10 \log(2/2)$ dBi = 3.67 dBi, So do not consider the limit rollback.
U-NII-2C:

According to the calculation of SDM independent spatial stream formula,
Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS} = 2$, $N_{ANT} = 2$,
Directional gain = $3.67 + 10 \log(2/2)$ dBi = 3.67 dBi, So do not consider the limit rollback.
U-NII-3:

According to the calculation of SDM independent spatial stream formula,
Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS} = 2$, $N_{ANT} = 2$,
Directional gain = $2.56 + 10 \log(2/2)$ dBi = 2.56 dBi, So do not consider the limit rollback.

----- The following blanks -----

Beamforming

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11n HT20	U-NII-1	5180	16.90	17.15	20.04	29.13	Pass
		5200	16.65	16.95	19.82		Pass
		5240	16.47	17.56	20.06		Pass
	U-NII-2A	5260	16.57	17.47	20.06	23.32	Pass
		5300	16.47	17.29	19.91	23.32	Pass
		5320	16.64	17.12	19.90	23.32	Pass
	U-NII-2C	5500	18.25	17.30	20.81	23.32	Pass
		5580	17.42	17.34	20.39	23.32	Pass
		5700	16.92	16.85	19.90	23.32	Pass
		5720	14.18	14.33	17.27	22.31	Pass
	U-NII-3	5720	5.83	6.15	9.00	30.00	Pass
		5745	17.40	16.74	20.10		Pass
		5785	17.26	16.80	20.05		Pass
5825		17.32	16.60	19.99	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
IEEE 802.11ac VHT20	U-NII-1	5180	15.64	16.62	19.17	29.13	Pass
		5200	15.73	16.32	19.05		Pass
		5240	15.25	15.99	18.65		Pass
	U-NII-2A	5260	15.32	16.10	18.74	23.32	Pass
		5300	15.27	16.01	18.67	23.32	Pass
		5320	15.39	16.02	18.73	23.32	Pass
	U-NII-2C	5500	18.34	17.45	20.93	23.32	Pass
		5580	17.87	17.31	20.61	23.32	Pass
		5700	16.91	16.95	19.94	23.32	Pass
		5720	14.00	14.24	17.13	22.28	Pass
	U-NII-3	5720	7.45	7.67	10.57	30.00	Pass
		5745	18.32	16.99	20.72		Pass
		5785	18.31	16.76	20.62		Pass
5825		18.29	16.79	20.62	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
IEEE 802.11ax HE20	U-NII-1	5180	15.37	16.26	18.85	29.13	Pass
		5200	17.06	16.12	19.63		Pass
		5240	14.78	15.79	18.33		Pass
	U-NII-2A	5260	15.93	15.55	18.76	23.32	Pass
		5300	15.78	15.39	18.60	23.32	Pass
		5320	15.87	15.32	18.62	23.32	Pass
	U-NII-2C	5500	18.60	17.76	21.21	23.32	Pass
		5580	18.04	17.75	20.91	23.32	Pass
		5700	17.24	18.25	20.79	23.32	Pass
		5720	14.05	14.35	17.21	22.26	Pass
	U-NII-3	5720	8.46	8.75	11.62	30.00	Pass
		5745	18.47	17.95	21.23		
		5785	18.48	18.01	21.26		Pass
		5825	18.58	17.87	21.25		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11n HT40 mode	U-NII-1	5190	17.45	17.38	20.43	29.13	Pass
		5230	17.13	16.94	20.05		Pass
	U-NII-2A	5270	16.37	16.21	19.30	23.32	Pass
		5310	16.22	16.01	19.13	23.32	Pass
	U-NII-2C	5510	17.03	17.46	20.26	23.32	Pass
		5550	16.86	17.41	20.16	23.32	Pass
		5670	17.26	16.89	20.09	23.32	Pass
		5710	14.65	14.70	17.69	23.32	Pass
	U-NII-3	5710	1.91	2.11	5.02	30.00	Pass
		5755	16.59	16.86	19.74		
5795		16.61	16.54	19.59	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT40 mode	U-NII-1	5190	16.89	16.93	19.92	29.13	Pass
		5230	16.72	17.49	20.13		Pass
	U-NII-2A	5270	17.58	16.57	20.11	23.32	Pass
		5310	17.35	16.31	19.87	23.32	Pass
	U-NII-2C	5510	18.12	17.59	20.87	23.32	Pass
		5550	17.99	17.51	20.77	23.32	Pass
		5670	17.35	17.17	20.27	23.32	Pass
		5710	14.86	14.88	17.88	23.32	Pass
	U-NII-3	5710	3.67	3.84	6.77	30.00	Pass
		5755	17.72	17.07	20.42		Pass
5795		17.87	16.89	20.42	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE40 mode	U-NII-1	5190	16.20	15.77	19.00	29.13	Pass
		5230	15.80	16.42	19.13		Pass
	U-NII-2A	5270	17.82	16.90	20.40	23.32	Pass
		5310	17.91	16.48	20.27	23.32	Pass
	U-NII-2C	5510	18.57	17.82	21.23	23.32	Pass
		5550	18.18	17.92	21.07	23.32	Pass
		5670	17.62	17.36	20.51	23.32	Pass
		5710	14.94	15.01	17.99	23.32	Pass
	U-NII-3	5710	4.88	4.89	7.90	30.00	Pass
		5755	18.05	17.36	20.73		Pass
5795		17.98	17.16	20.60	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT80	U-NII-1	5210	16.58	16.48	19.54	29.13	Pass
	U-NII-2A	5290	17.37	16.24	19.85	23.32	Pass
	U-NII-2C	5530	17.81	17.31	20.58	23.32	Pass
		5610	17.79	17.32	20.57	23.32	Pass
		5690	15.49	15.09	18.30	23.32	Pass
	U-NII-3	5690	0.88	0.66	3.78	30.00	Pass
		5775	17.37	16.81	20.11		Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE80	U-NII-1	5210	17.07	16.69	19.90	29.13	Pass
	U-NII-2A	5290	17.76	16.48	20.18	23.32	Pass
	U-NII-2C	5530	18.14	17.45	20.82	23.32	Pass
		5610	17.94	17.44	20.71	23.32	Pass
		5690	15.77	15.36	18.58	23.32	Pass
	U-NII-3	5690	2.25	1.96	5.12	30.00	Pass
5775		17.51	16.97	20.26	Pass		

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ac VHT160	U-NII-1	5250	14.67	14.85	17.77	29.13	Pass
	U-NII-2A	5250	14.12	14.23	17.19	23.32	Pass
	U-NII-2C	5570	16.42	16.76	19.60	23.32	Pass

Test Mode	Band	Frequency (MHz)	AVG Conducted Output Power with Duty Factor (dBm)			Limit (dBm)	Result
			antenna 1	antenna 2	total		
802.11ax HE160	U-NII-1	5250	14.25	14.31	17.29	29.13	Pass
	U-NII-2A	5250	13.37	13.48	16.44	23.32	Pass
	U-NII-2C	5570	15.83	16.24	19.05	23.32	Pass

- The measured results were corrected by duty cycle factor (section 2.8)
- This EUT supports MIMO 2X2, any transmit signals are correlated with each other
- U-NII-1: Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS}=1$, $N_{ANT}=2$, Directional gain = $3.86+10\log(2) = 6.87$ dBi, Antenna gain is greater than 6, Output Power Limit= $30-(6.87-6)=29.13$ dBm
- U-NII-2A: Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS}=1$, $N_{ANT}=2$, Directional gain = $3.67+10\log(2) = 6.68$ dBi, Antenna gain is greater than 6, Output Power Limit= $24-(6.68-6)=23.32$ dBm
- U-NII-2C: Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS}=1$, $N_{ANT}=2$, Directional gain = $3.67+10\log(2) = 6.68$ dBi, Antenna gain is greater than 6, Output Power Limit= $24-(6.68-6) = 23.32$ dBm
For 802.11n HT20 5720MHz, Output Power Limit= $(11+10 \log 15.8) - (6.68-6) = 22.31$ dBm
For 802.11ac VHT20 5720MHz, Output Power Limit= $(11+10 \log 15.72) - (6.68-6) = 22.28$ dBm
For 802.11ax HE20 5720MHz, Output Power Limit= $(11+10 \log 15.64) - (6.68-6) = 22.26$ dBm
- U-NII-3: Directional gain = $G_{ANTMAX} + 10 \log(N_{ANT}/N_{SS})$ dBi, where $N_{SS}=1$, $N_{ANT}=2$, Directional gain = $2.56+10\log(2) = 5.57$ dBi, Antenna gain is no greater than 6, Output Power Limit= 30 dBm

10. POWER SPECTRAL DENSITY

10.1. LIMITS

FCC 15.407(a)

The maximum power spectral density should not exceed:

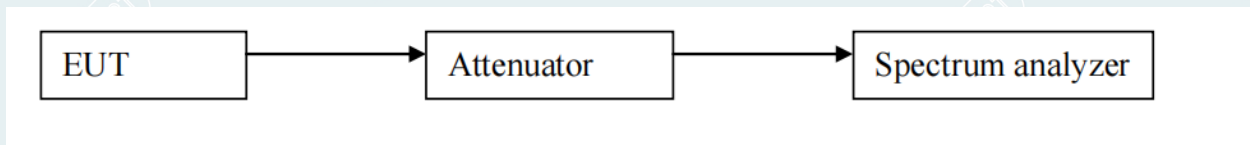
Band	EUT Type	Limit
U-NII-1	Outdoor Access Point	17dBm/MHz
	Indoor Access Point	17dBm/MHz
	Fixed point-to-point Access Point	17dBm/MHz
	Mobile and Portable Client Device	11dBm/MHz
U-NII-2A	All Device	11dBm/MHz
U-NII-2C	All Device	11dBm/MHz
U-NII-3	All Device	30dBm/500kHz

If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

10.2. TEST PROCEDURES

Spectrum Parameters	Setting
RBW	1MHz(For U-NII-1&U-NII-2A&U-NII-2C) 500KHz(For U-NII-3)
VBW	3MHz(For U-NII-1&U-NII-2A&U-NII-2C) 2MHz(For U-NII-3)
Span	encompass the entire 26 dB EBW or 99% OBW of the signal
Sweep Time	Auto
Number of Sweep Point	$\geq 2 \times \text{SPAN} / \text{RBW}$
Detector	RMS(power averaging)
Trace Average	≥ 100 traces

10.3. TEST SETUP



10.4. TEST RESULTS

Environmental Conditions	23.9°C/47%RH	Test Voltage	AC120V/60Hz
Tested By	Lu Wei	Tested Date	2023/05/04-2023/05/05

Non beamforming
SISO

TestMode	Antenna	Freq(MHz)	Result + Duty factor [dBm/MHz]	Limit[dBm/MHz]	Verdict
802.11a	Ant1	5180	6.98	≤17.00	PASS
	Ant2	5180	5.18	≤17.00	PASS
	Ant1	5200	6.17	≤17.00	PASS
	Ant2	5200	7.18	≤17.00	PASS
	Ant1	5240	3.10	≤17.00	PASS
	Ant2	5240	4.07	≤17.00	PASS
	Ant1	5260	5.94	≤11.00	PASS
	Ant2	5260	6.14	≤11.00	PASS
	Ant1	5280	6.52	≤11.00	PASS
	Ant2	5280	6.42	≤11.00	PASS
	Ant1	5320	2.92	≤11.00	PASS
	Ant2	5320	3.63	≤11.00	PASS
	Ant1	5500	5.35	≤11.00	PASS
	Ant2	5500	5.09	≤11.00	PASS
	Ant1	5580	6.41	≤11.00	PASS
	Ant2	5580	5.66	≤11.00	PASS
	Ant1	5700	4.39	≤11.00	PASS
	Ant2	5700	4.05	≤11.00	PASS
	Ant1	5720_UNII-2C	6.92	≤11.00	PASS
	Ant2	5720_UNII-2C	7.10	≤11.00	PASS

UNII-3

TestMode	Antenna	Freq(MHz)	Result + Duty factor [dBm/500kHz]	Limit[dBm/500kHz]	Verdict
802.11a	Ant1	5720_UNII-3	3.83	≤30.00	PASS
	Ant2	5720_UNII-3	3.17	≤30.00	PASS
	Ant1	5745	2.03	≤30.00	PASS
	Ant2	5745	1.04	≤30.00	PASS
	Ant1	5785	1.43	≤30.00	PASS
	Ant2	5785	1.34	≤30.00	PASS
	Ant1	5825	1.57	≤30.00	PASS
	Ant2	5825	1.01	≤30.00	PASS

1) The measured results were corrected by duty cycle factor (section 2.8)

CDD Mode

TestMode	Antenna	Freq(MHz)	Result + Duty factor [dBm/MHz]	Limit[dBm/MHz]	Verdict
802.11a-CDD	Ant1	5180	4.91	≤16.13	PASS
	Ant2	5180	6.51	≤16.13	PASS
	total	5180	8.79	≤16.13	PASS
	Ant1	5200	5.63	≤16.13	PASS
	Ant2	5200	6.66	≤16.13	PASS
	total	5200	9.19	≤16.13	PASS
	Ant1	5240	1.51	≤16.13	PASS
	Ant2	5240	6.24	≤16.13	PASS
	total	5240	7.50	≤16.13	PASS
	Ant1	5260	4.67	≤10.32	PASS
	Ant2	5260	5.38	≤10.32	PASS
	total	5260	8.05	≤10.32	PASS
	Ant1	5280	5.70	≤10.32	PASS
	Ant2	5280	5.83	≤10.32	PASS
	total	5280	8.78	≤10.32	PASS
	Ant1	5320	3.23	≤10.32	PASS
	Ant2	5320	5.78	≤10.32	PASS
	total	5320	7.70	≤10.32	PASS
	Ant1	5500	6.32	≤10.32	PASS
	Ant2	5500	7.96	≤10.32	PASS
	total	5500	10.23	≤10.32	PASS
	Ant1	5580	6.01	≤10.32	PASS
	Ant2	5580	8.08	≤10.32	PASS
	total	5580	10.18	≤10.32	PASS
	Ant1	5700	4.53	≤10.32	PASS
	Ant2	5700	6.77	≤10.32	PASS
	total	5700	8.80	≤10.32	PASS
Ant1	5720_UNII-2C	6.93	≤10.32	PASS	
Ant2	5720_UNII-2C	6.38	≤10.32	PASS	
total	5720_UNII-2C	9.67	≤10.32	PASS	

TestMode	Antenna	Freq(MHz)	Result + Duty factor [dBm/MHz]	Limit[dBm/MHz]	Verdict
802.11n HT20 MIMO	Ant1	5180	5.46	≤16.13	PASS
	Ant2	5180	6.78	≤16.13	PASS
	total	5180	9.18	≤16.13	PASS
	Ant1	5200	4.99	≤16.13	PASS
	Ant2	5200	6.44	≤16.13	PASS
	total	5200	8.79	≤16.13	PASS
	Ant1	5240	2.65	≤16.13	PASS
	Ant2	5240	5.99	≤16.13	PASS
	total	5240	7.64	≤16.13	PASS
	Ant1	5260	4.87	≤10.32	PASS
	Ant2	5260	5.41	≤10.32	PASS
	total	5260	8.16	≤10.32	PASS
	Ant1	5280	5.82	≤10.32	PASS
	Ant2	5280	6.21	≤10.32	PASS
	total	5280	9.03	≤10.32	PASS
	Ant1	5320	3.35	≤10.32	PASS
	Ant2	5320	6.21	≤10.32	PASS
	total	5320	8.02	≤10.32	PASS
	Ant1	5500	3.82	≤10.32	PASS
	Ant2	5500	5.84	≤10.32	PASS
	total	5500	7.96	≤10.32	PASS
	Ant1	5580	4.44	≤10.32	PASS
	Ant2	5580	5.99	≤10.32	PASS
	total	5580	8.29	≤10.32	PASS
	Ant1	5700	1.89	≤10.32	PASS
	Ant2	5700	5.30	≤10.32	PASS
	total	5700	6.93	≤10.32	PASS
Ant1	5720_UNII-2C	4.45	≤10.32	PASS	
Ant2	5720_UNII-2C	5.08	≤10.32	PASS	
total	5720_UNII-2C	7.79	≤10.32	PASS	