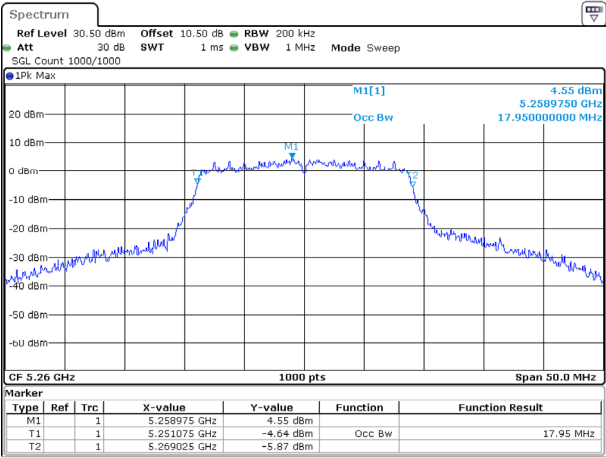
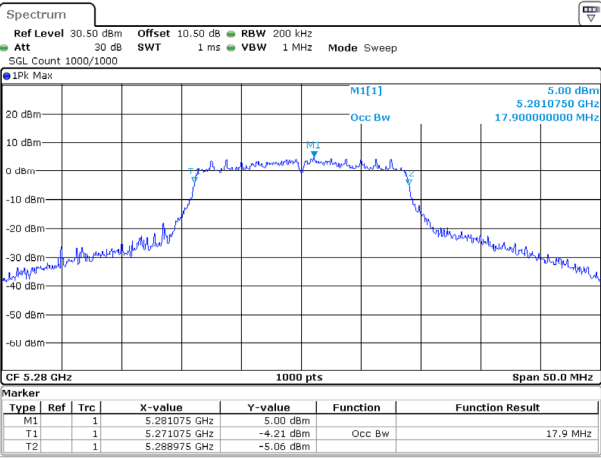


802.11ac20_5260MHz



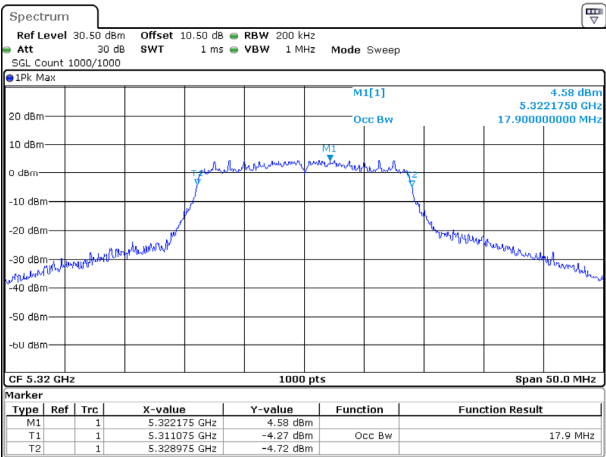
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 23:33:15

802.11ac20_5280MHz



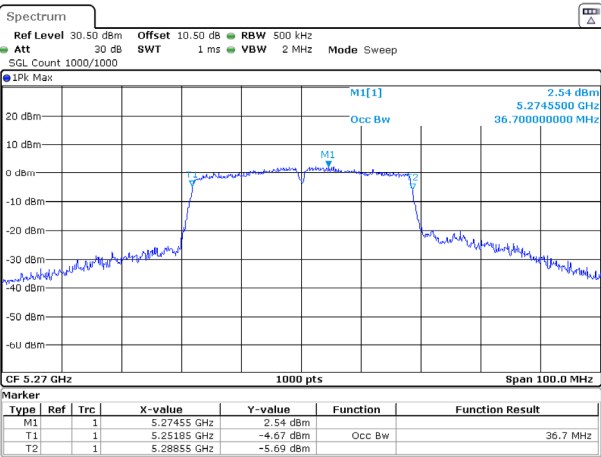
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 23:42:04

802.11ac20_5320MHz



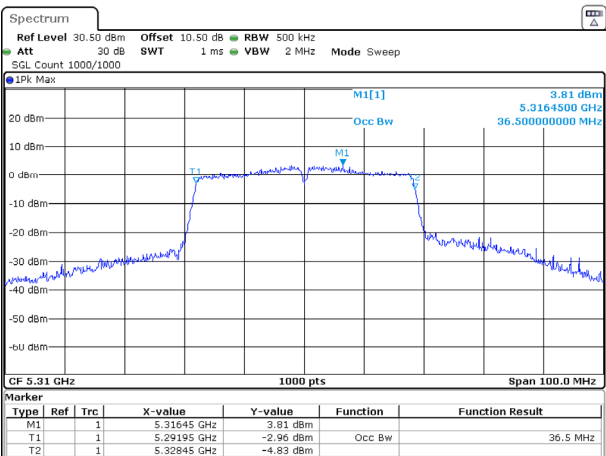
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 23:44:46

802.11ac40_5270MHz



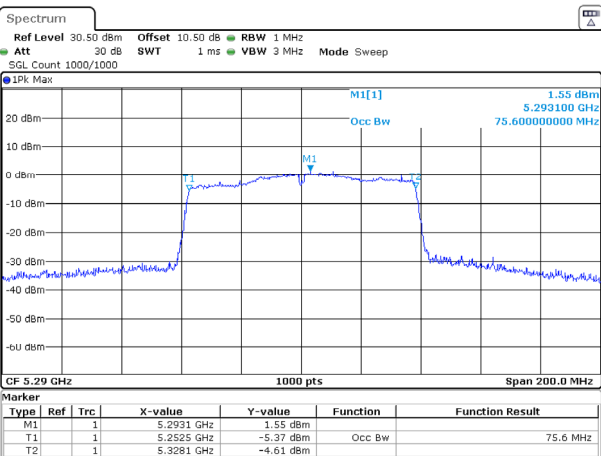
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:49:00

802.11ac40_5310MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:50:27

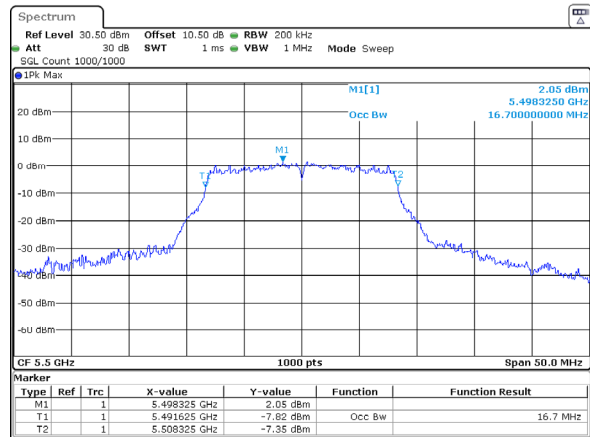
802.11ac80_5290MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:52:03

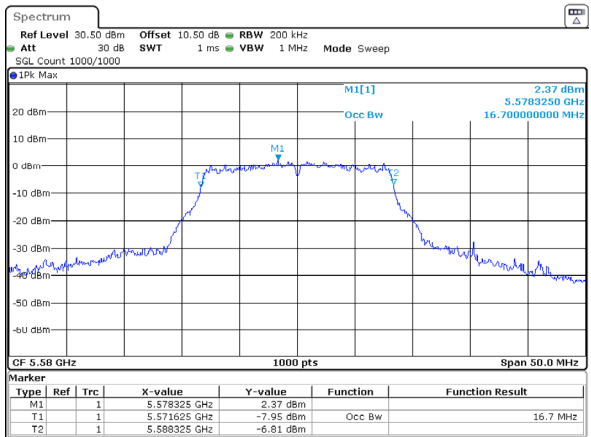
5470-5725MHz

802.11a_5500MHz



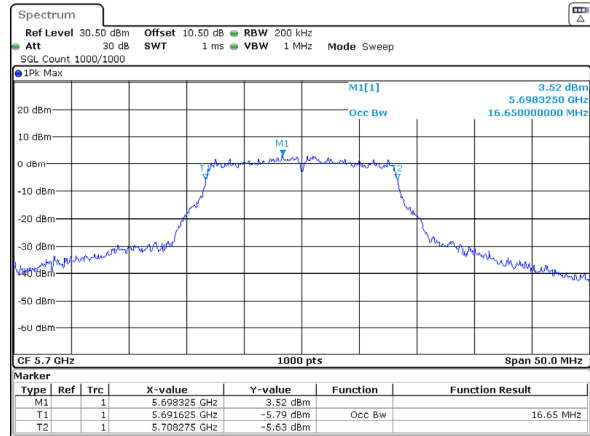
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:57:37

802.11a_5580MHz



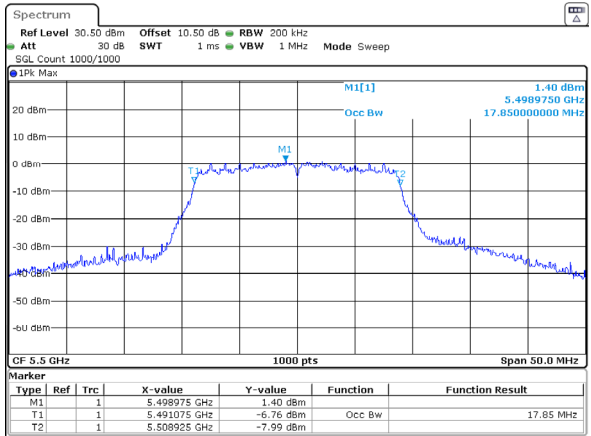
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:00:53

802.11a_5700MHz



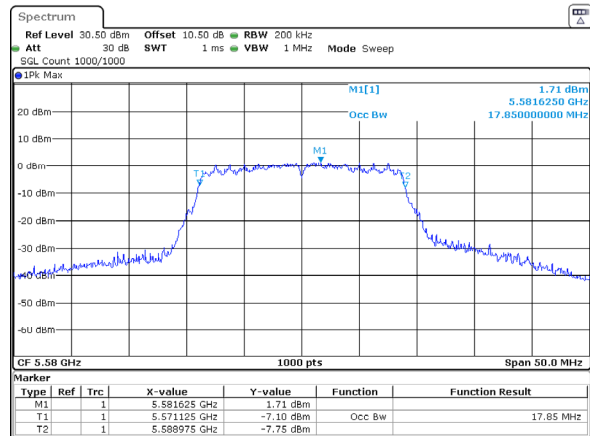
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:07:27

802.11ac20_5500MHz



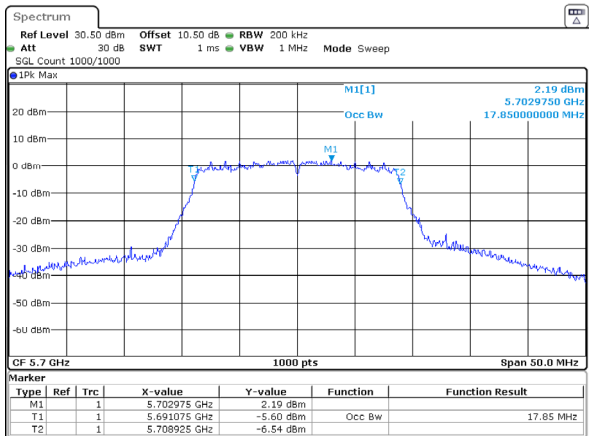
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:11:11

802.11ac20_5580MHz



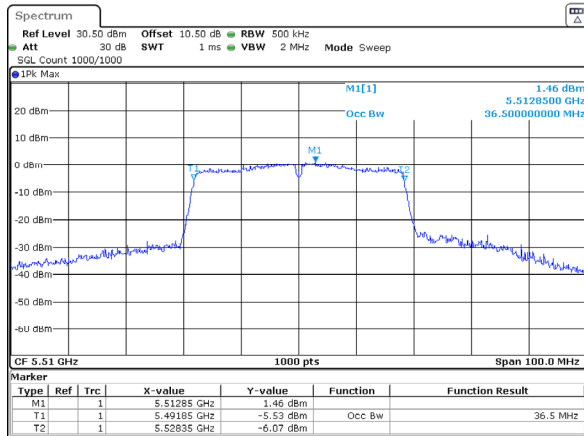
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:13:15

802.11ac20_5700MHz



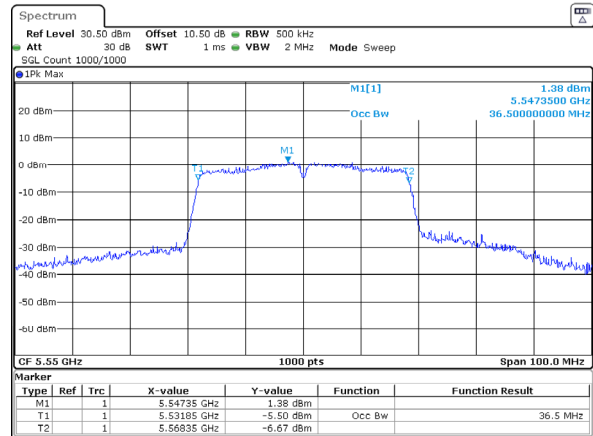
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:15:40

802.11ac40_5510MHz



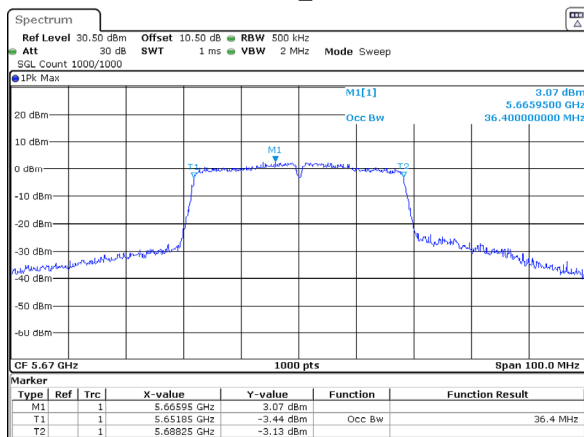
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:17:17

802.11ac40_5550MHz



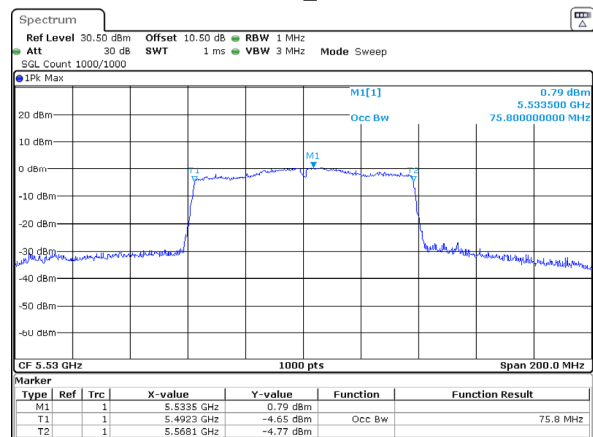
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:19:09

802.11ac40_5670MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:20:36

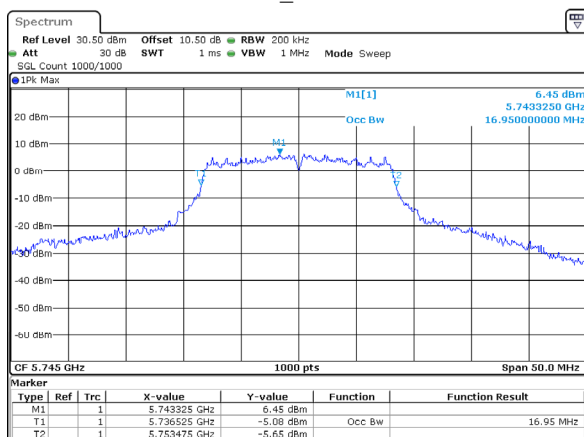
802.11ac80_5530MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:24:20

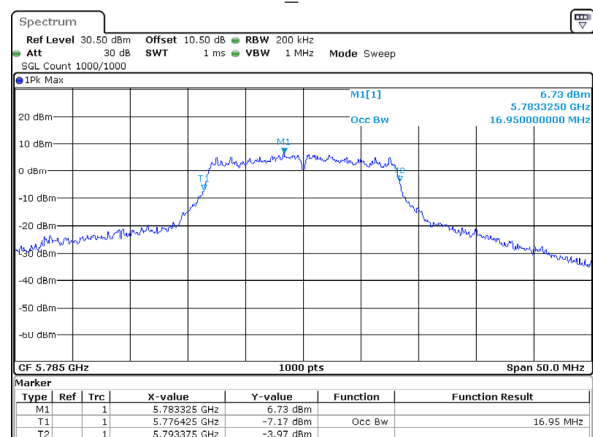
5725-5850MHz

802.11a_5745MHz



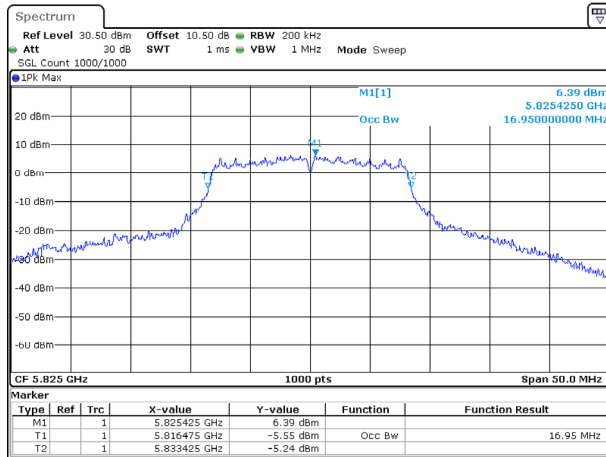
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 00:56:53

802.11a_5785MHz



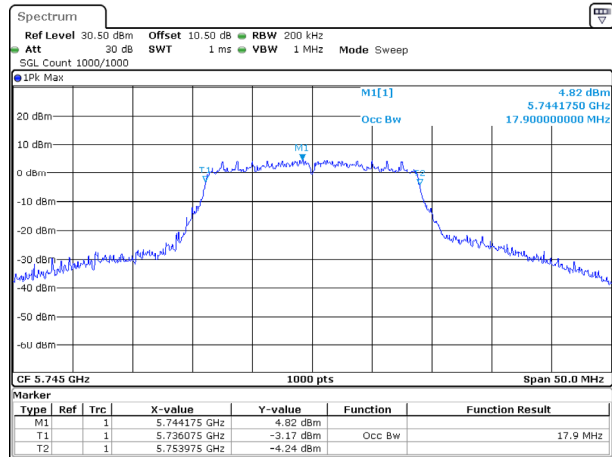
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:00:07

802.11a_5825MHz



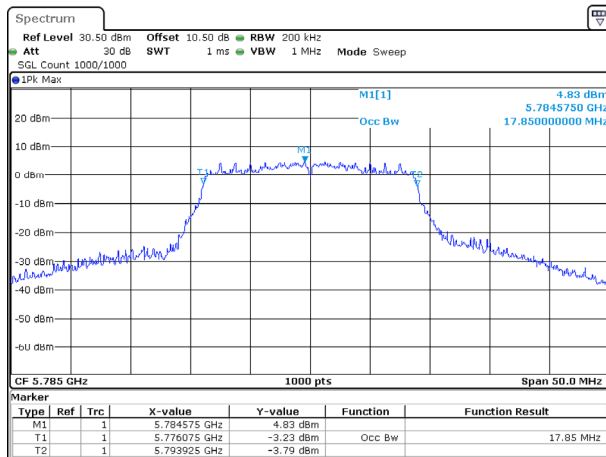
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:02:11

802.11ac20_5745MHz



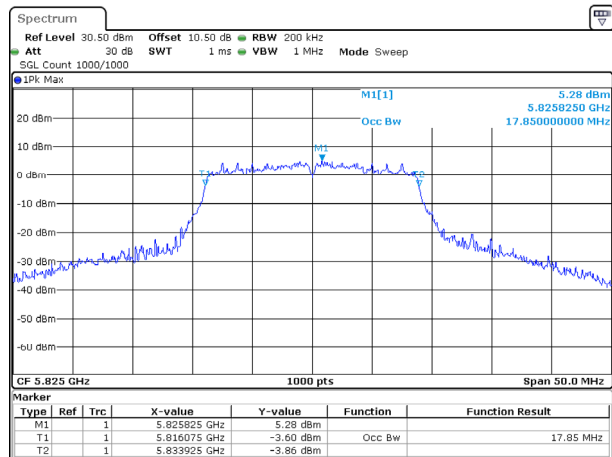
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:40:54

802.11ac20_5785MHz



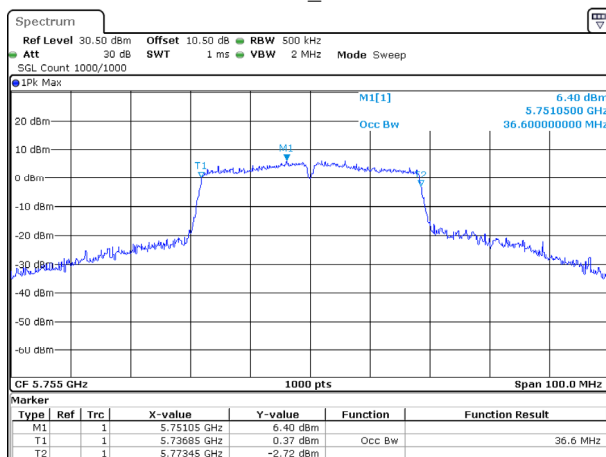
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:43:47

802.11ac20_5825MHz



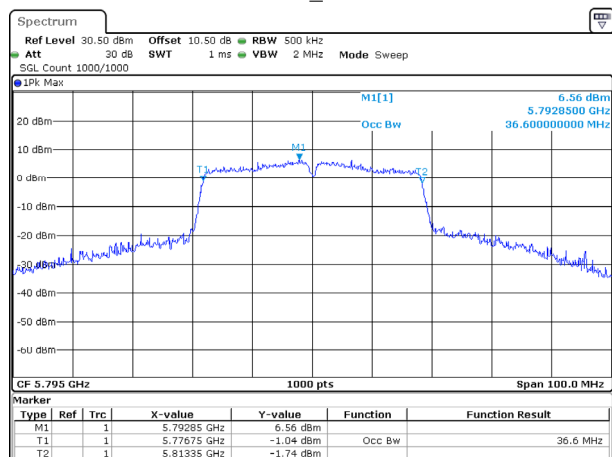
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:46:33

802.11ac40_5755MHz



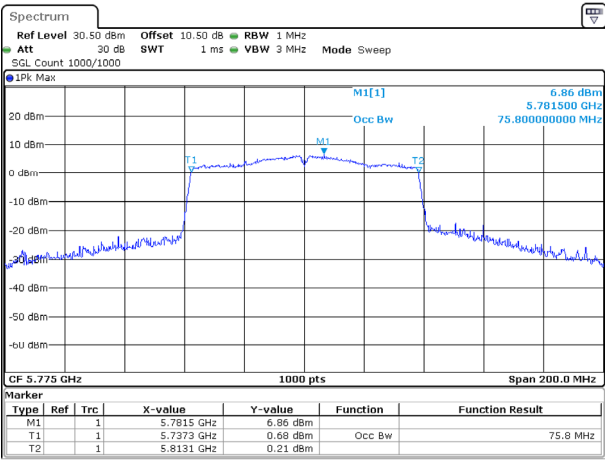
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:48:35

802.11ac40_5795MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:51:23

802.11ac80_5775MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:53:10

Maximum Conducted Output Power

Test Information:

Sample No.:	2VNH-6	Test Date:	2024/12/27~2025/05/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Kungfumaster Liang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.9-26.5	Relative Humidity: (%)	40-46	ATM Pressure: (kPa)	100.4~101
----------------------	-----------	------------------------------	-------	------------------------	-----------

Test Data:**5150-5250MHz**

Mode	Test Frequency (MHz)	Average Output Power(dBm)	Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
			FCC		ISED	
802.11a	5180	14.58	23.98	19.07	22.33	Pass
	5200	14.99	23.98	19.48	22.34	Pass
	5240	15.21	23.98	19.70	22.32	Pass
802.11ac20	5180	13.33	23.98	17.82	22.54	Pass
	5200	13.62	23.98	18.11	22.55	Pass
	5240	14.23	23.98	18.72	22.55	Pass
802.11ac40	5190	10.36	23.98	14.85	23.01	Pass
	5230	10.39	23.98	14.88	23.01	Pass
802.11ac80	5210	7.69	23.98	12.18	23.01	Pass

5250-5350MHz

Mode	Test Frequency (MHz)	Average Output Power(dBm)	Limit (dBm)		EIRP (dBm)	EIRP Limit (dBm)	Verdict
			FCC	ISED		ISED	
802.11a	5260	14.13	23.98	23.24	18.62	29.24	Pass
	5280	14.39	23.98	23.24	18.88	29.24	Pass
	5320	14.79	23.98	23.24	19.28	29.24	Pass
802.11ac20	5260	14.13	23.98	23.54	18.62	29.54	Pass
	5280	14.42	23.98	23.53	18.91	29.53	Pass
	5320	14.60	23.98	23.53	19.09	29.53	Pass
802.11ac40	5270	10.96	23.98	23.98	15.45	29.98	Pass
	5310	11.90	23.98	23.98	16.39	29.98	Pass
802.11ac80	5260	8.76	23.98	23.98	13.25	29.98	Pass

5470-5725MHz

Mode	Test Frequency (MHz)	Average Output Power(dBm)	Limit (dBm)		EIRP (dBm)	EIRP Limit (dBm)	Verdict
			FCC	ISED		ISED	
802.11a	5500	11.32	23.98	23.23	15.81	29.23	Pass
	5580	11.74	23.98	23.23	16.23	29.23	Pass
	5700	12.85	23.98	23.21	17.34	29.21	Pass
802.11ac20	5500	10.79	23.98	23.52	15.28	29.52	Pass
	5580	11.32	23.98	23.52	15.81	29.52	Pass
	5700	12.30	23.98	23.52	16.79	29.52	Pass
802.11ac40	5510	9.73	23.98	23.98	14.22	29.98	Pass
	5550	9.68	23.98	23.98	14.17	29.98	Pass
	5670	11.26	23.98	23.98	15.75	29.98	Pass
802.11ac80	5530	8.77	23.98	23.98	13.26	29.98	Pass

5725-5850MHz

Mode	Test Frequency (MHz)	Average Output Power(dBm)	Limit (dBm)	Verdict
802.11a	5745	16.16	30	Pass
	5785	16.08	30	Pass
	5825	15.95	30	Pass
802.11ac20	5745	14.84	30	Pass
	5785	14.77	30	Pass
	5825	14.70	30	Pass
802.11ac40	5755	14.98	30	Pass
	5795	14.99	30	Pass
802.11ac80	5775	14.47	30	Pass

Power Spectral Density

Test Information:

Sample No.:	2VNH-6	Test Date:	2024/12/27~2025/05/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Kungfumaster Liang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	22.9-26.5	Relative Humidity: (%)	40-46	ATM Pressure: (kPa)	100.4~101
----------------------	-----------	------------------------------	-------	------------------------	-----------

Test Data:**5150-5250MHz**

Mode	Test Frequency (MHz)	Reading (dBm/MHz)	Duty Cycle Factor(dB)	Result (dBm/MHz)	Limit (dBm/MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Verdict
802.11a	5180	4.00	0.31	4.31	11	8.80	10	Pass
	5200	4.67	0.31	4.98	11	9.47	10	Pass
	5240	4.87	0.31	5.18	11	9.67	10	Pass
802.11ac20	5180	2.88	0.33	3.21	11	7.70	10	Pass
	5200	2.56	0.33	2.89	11	7.38	10	Pass
	5240	3.60	0.33	3.93	11	8.42	10	Pass
802.11ac40	5190	-2.86	0.32	-2.54	11	1.95	10	Pass
	5230	-3.19	0.32	-2.87	11	1.62	10	Pass
802.11ac80	5210	-9.69	1.20	-8.49	11	-4.00	10	Pass

5250-5350MHz

Mode	Test Frequency (MHz)	Reading (dBm/MHz)	Duty Cycle Factor(dB)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11a	5260	3.93	0.31	4.24	11	Pass
	5280	4.26	0.31	4.57	11	Pass
	5320	4.55	0.31	4.86	11	Pass
802.11ac20	5260	3.66	0.33	3.99	11	Pass
	5280	4.14	0.33	4.47	11	Pass
	5320	4.22	0.33	4.55	11	Pass
802.11ac40	5270	-2.74	0.32	-2.42	11	Pass
	5310	-1.66	0.32	-1.34	11	Pass
802.11ac80	5290	-8.34	1.20	-7.14	11	Pass

5470-5725MHz

Mode	Test Frequency (MHz)	Reading (dBm/MHz)	Duty Cycle Factor(dB)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11a	5500	0.92	0.31	1.23	11	Pass
	5580	1.47	0.31	1.78	11	Pass
	5700	2.25	0.31	2.56	11	Pass
802.11ac20	5500	0.14	0.33	0.47	11	Pass
	5580	0.93	0.33	1.26	11	Pass
	5700	1.73	0.33	2.06	11	Pass
802.11ac40	5510	-3.50	0.32	-3.18	11	Pass
802.11ac40	5550	-3.67	0.32	-3.35	11	Pass
	5670	-2.13	0.32	-1.81	11	Pass
802.11ac80	5530	-8.69	1.20	-7.49	11	Pass

5725-5850MHz

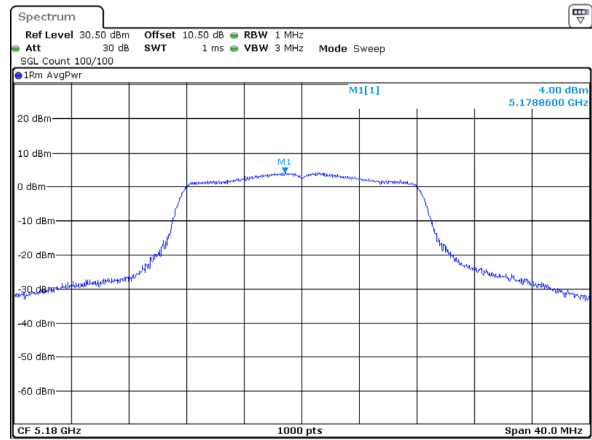
Mode	Test Frequency (MHz)	Reading (dBm/500kHz)	Duty Cycle Factor(dB)	Result (dBm/500kHz)	Limit (dBm/500kHz)	Verdict
802.11a	5745	3.40	0.31	3.71	30	Pass
	5785	3.32	0.31	3.63	30	Pass
	5825	3.06	0.31	3.37	30	Pass
802.11ac20	5745	1.47	0.33	1.80	30	Pass
	5785	1.36	0.33	1.69	30	Pass
	5825	1.32	0.33	1.65	30	Pass
802.11ac40	5755	-1.88	0.32	-1.56	30	Pass
	5795	-1.96	0.32	-1.64	30	Pass
802.11ac80	5775	-5.53	1.20	-4.33	30	Pass

Result = Reading + Duty Cycle Factor

EIRP PSD= Result+ Antenna

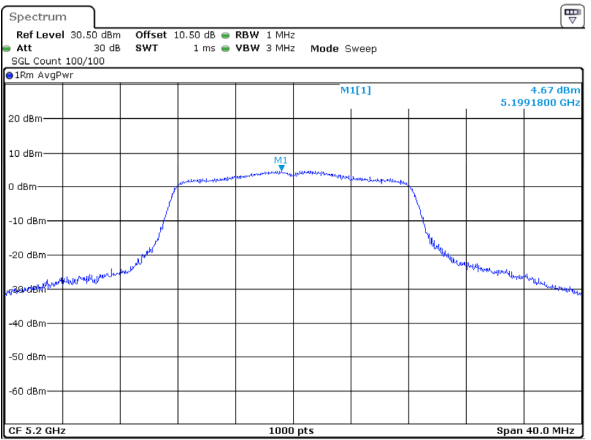
5150-5250MHz

802.11a_5180MHz



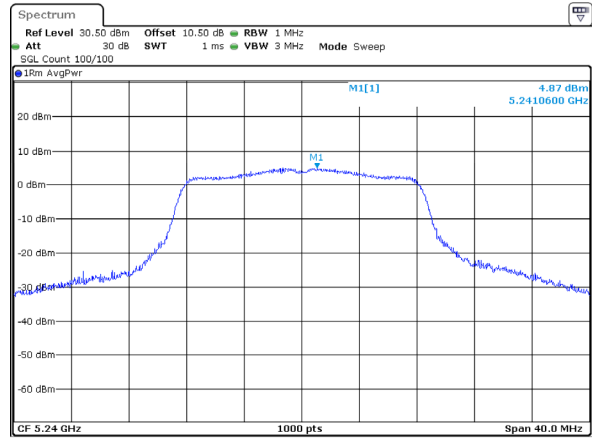
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 22:15:41

802.11a_5200MHz



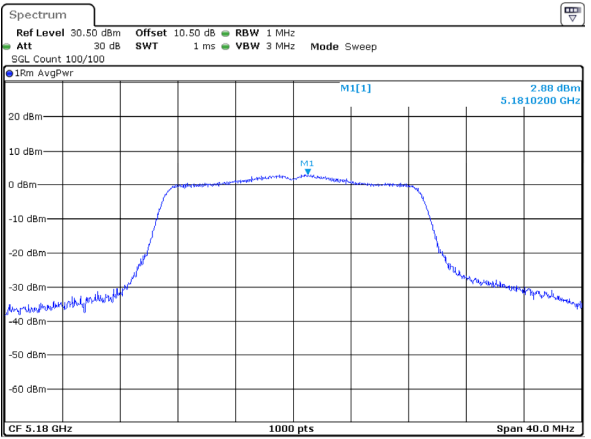
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 22:17:53

802.11a_5240MHz



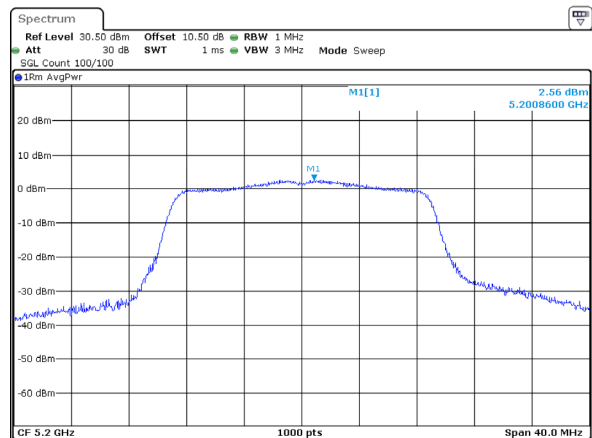
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 22:20:20

802.11ac20_5180MHz



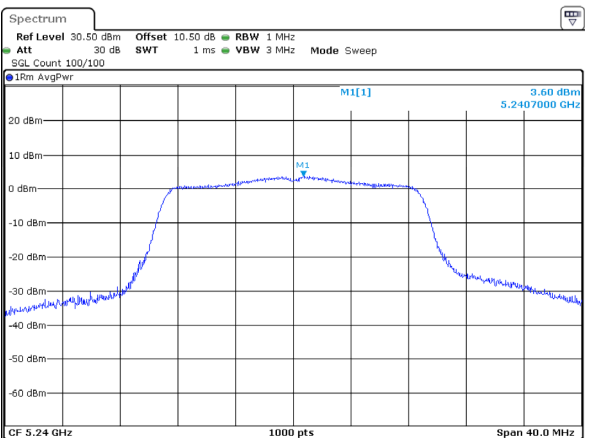
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 22:23:14

802.11ac20_5200MHz



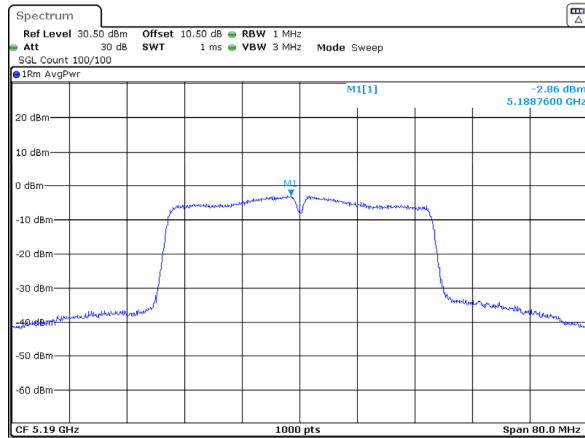
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 16.MAY.2025 14:42:47

802.11ac20_5240MHz



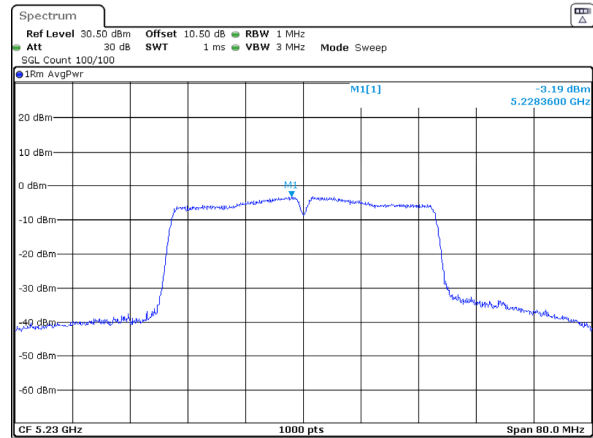
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 22:27:49

802.11ac40_5190MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:47:21

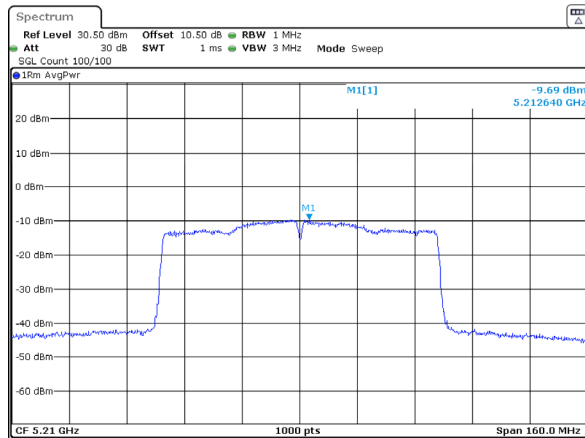
802.11ac40_5230MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:39:41

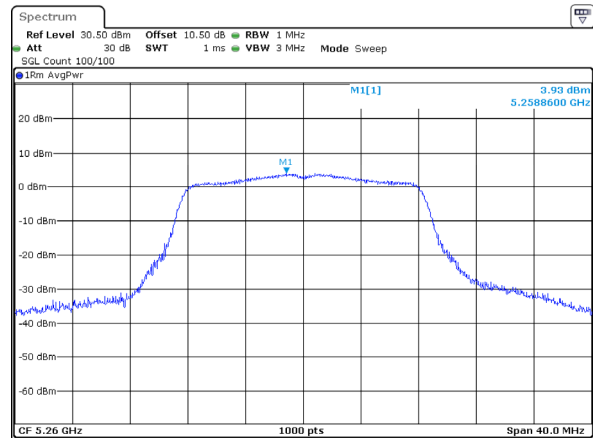
5250-5350MHz

802.11ac80_5210MHz



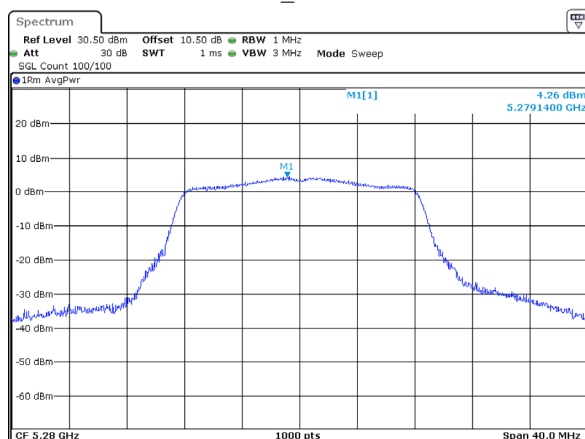
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:43:45

802.11a_5260MHz



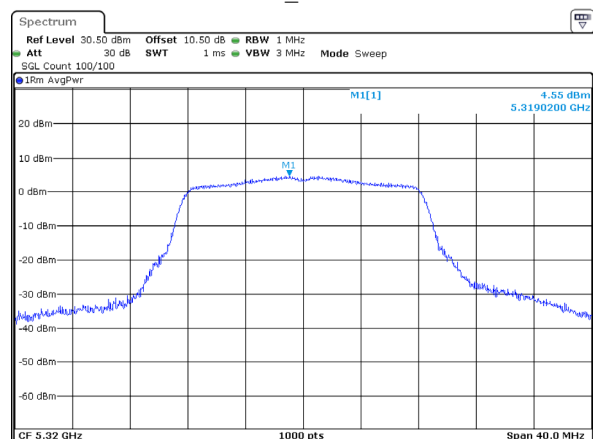
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 16.MAY.2025 15:00:21

802.11a_5280MHz



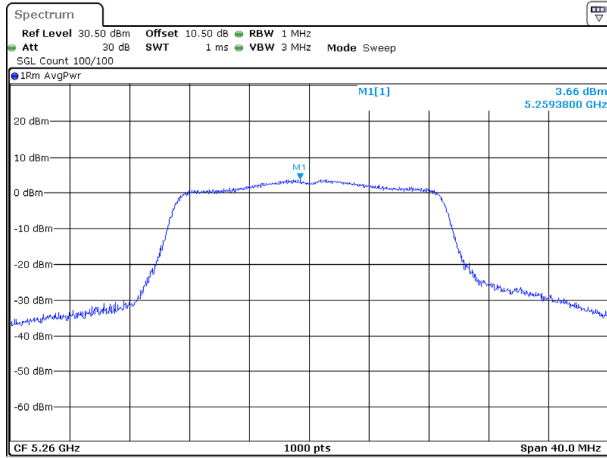
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 16.MAY.2025 15:03:07

802.11a_5320MHz



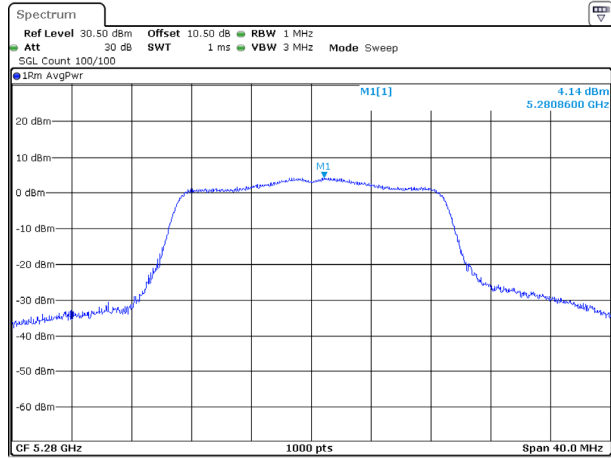
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 16.MAY.2025 15:06:17

802.11ac20_5260MHz



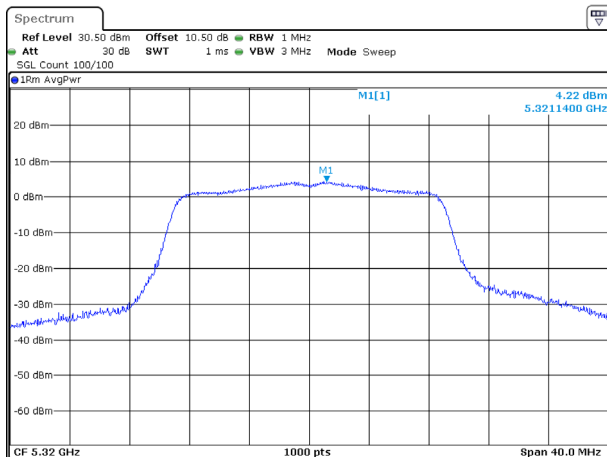
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 23:33:34

802.11ac20_5280MHz



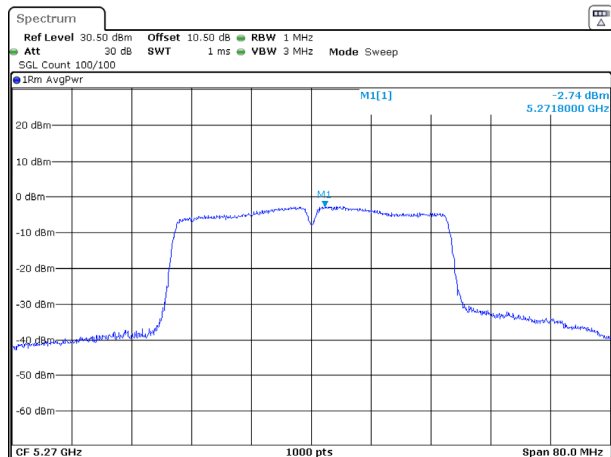
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 23:42:22

802.11ac20_5320MHz



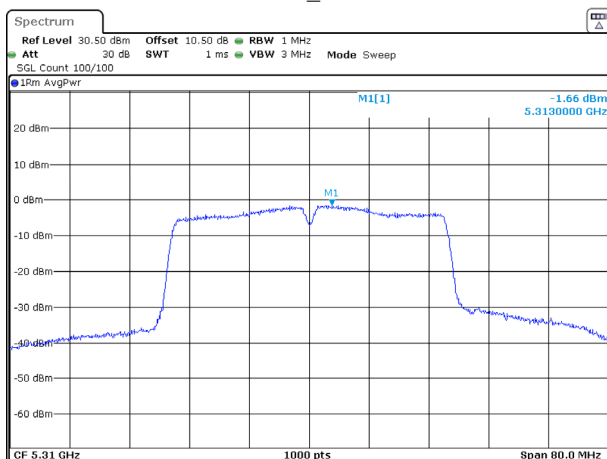
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 27.DEC.2024 23:45:05

802.11ac40_5270MHz



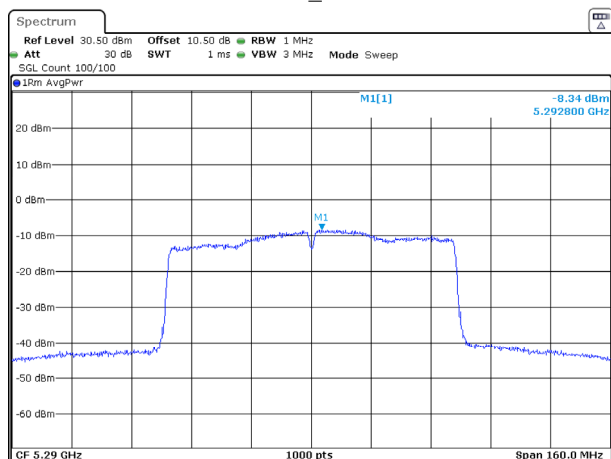
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:49:17

802.11ac40_5310MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:50:44

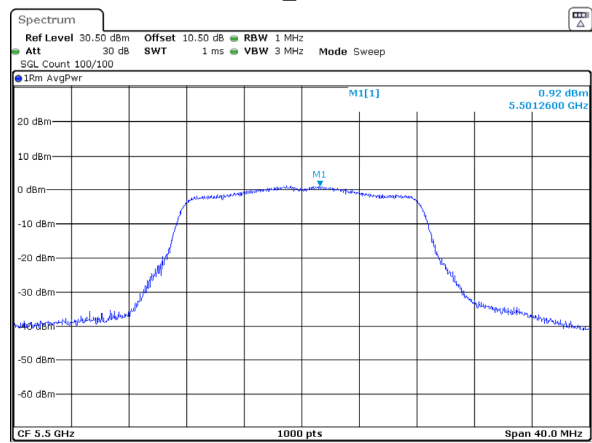
802.11ac80_5290MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:52:22

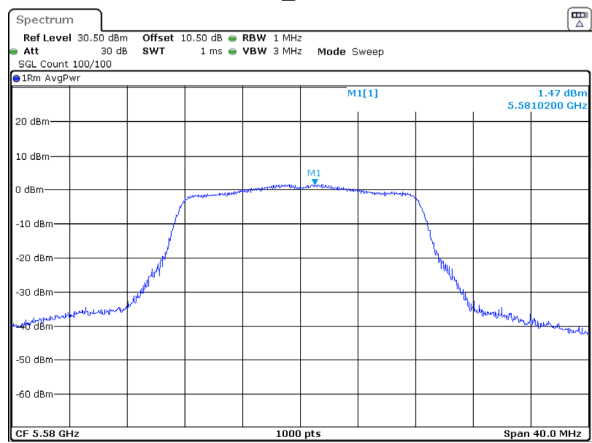
5470-5725MHz

802.11a_5500MHz



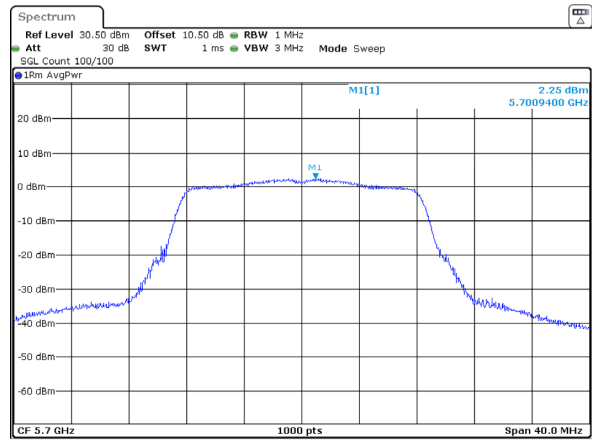
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 10:57:55

802.11a_5580MHz



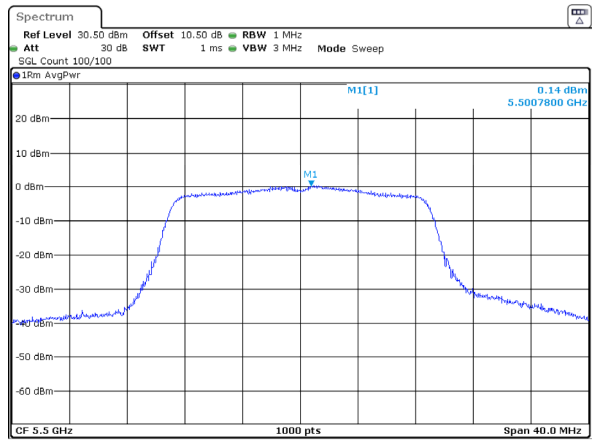
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:01:10

802.11a_5700MHz



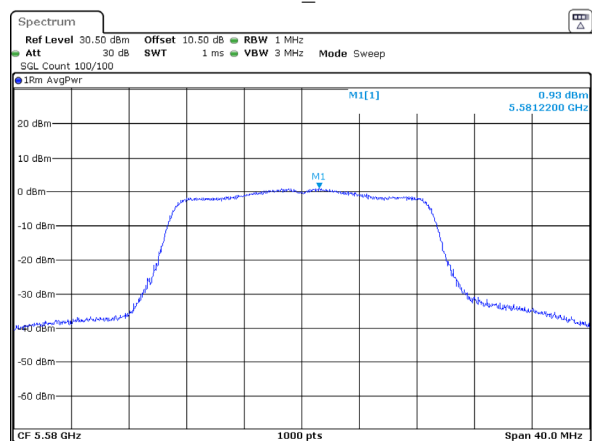
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:07:44

802.11ac20_5500MHz



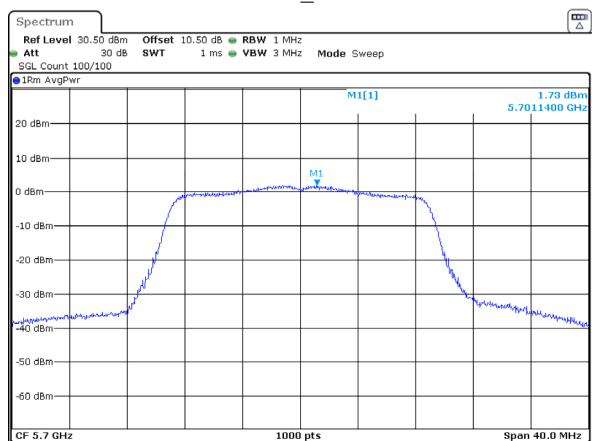
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:11:28

802.11ac20_5580MHz



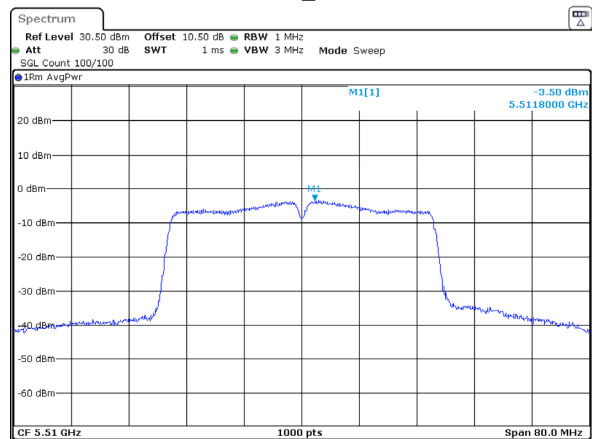
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:13:33

802.11ac20_5700MHz



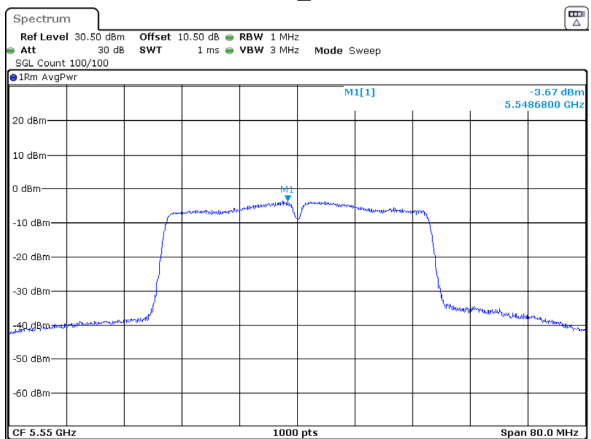
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 17.APR.2025 11:15:58

802.11ac40_5510MHz



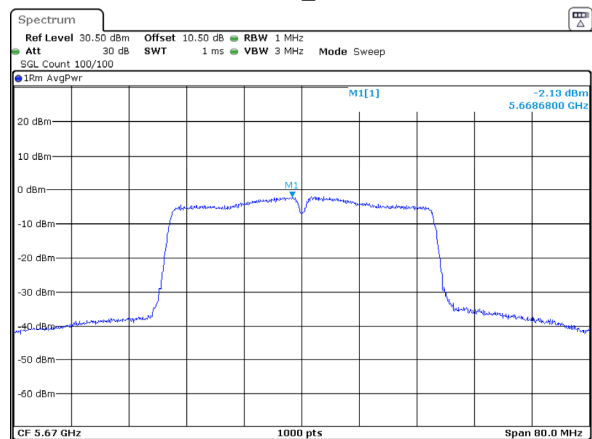
ProjectNo.:2401A63093E-RF Tester:Kungfumaater Liang
Date: 17.APR.2025 11:17:35

802.11ac40_5550MHz



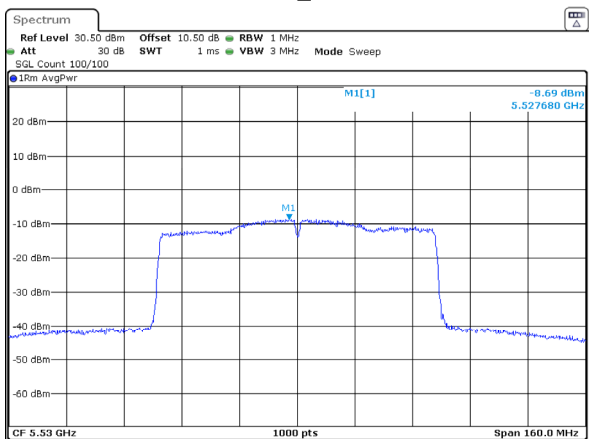
ProjectNo.:2401A63093E-RF Tester:Kungfumaater Liang
Date: 17.APR.2025 11:19:27

802.11ac40_5670MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaater Liang
Date: 17.APR.2025 11:20:54

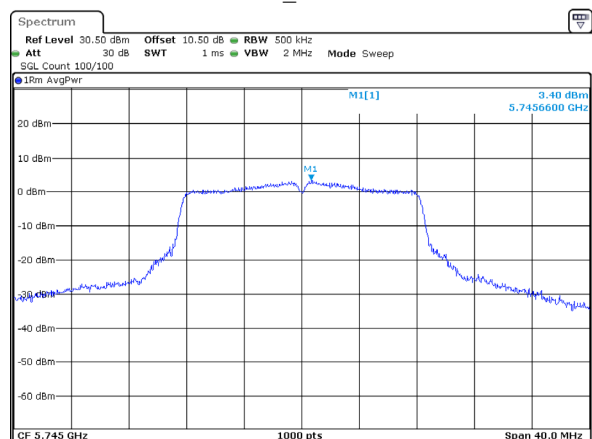
802.11ac80_5530MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaater Liang
Date: 17.APR.2025 11:24:39

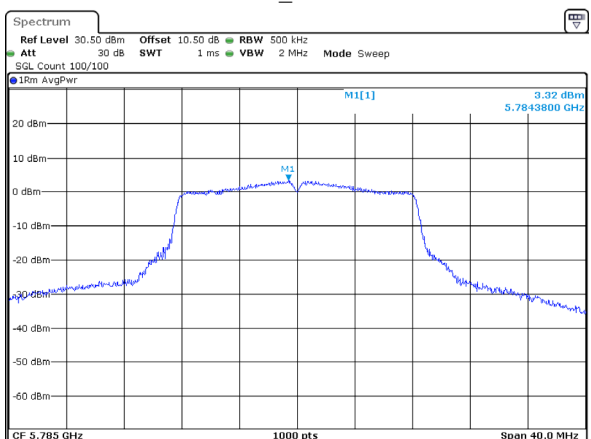
5725-5850MHz

802.11a_5745MHz



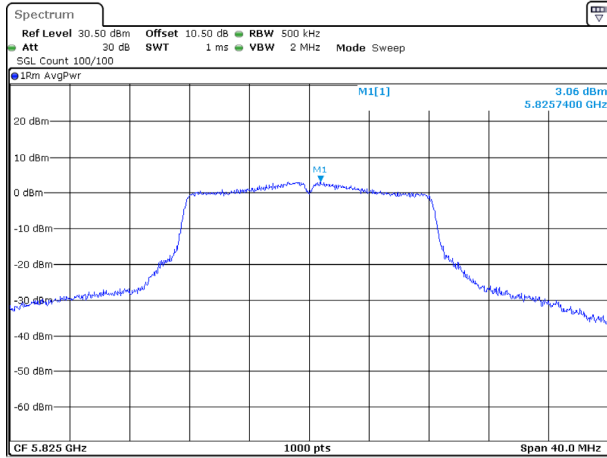
ProjectNo.:2401A63093E-RF Tester:Kungfumaater Liang
Date: 28.DEC.2024 00:57:14

802.11a_5785MHz



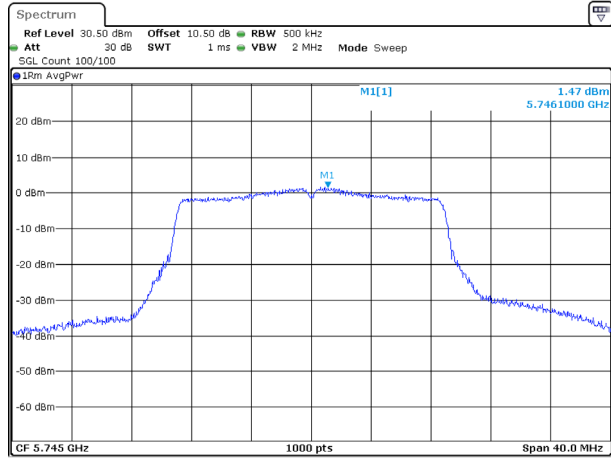
ProjectNo.:2401A63093E-RF Tester:Kungfumaater Liang
Date: 28.DEC.2024 01:00:28

802.11a_5825MHz



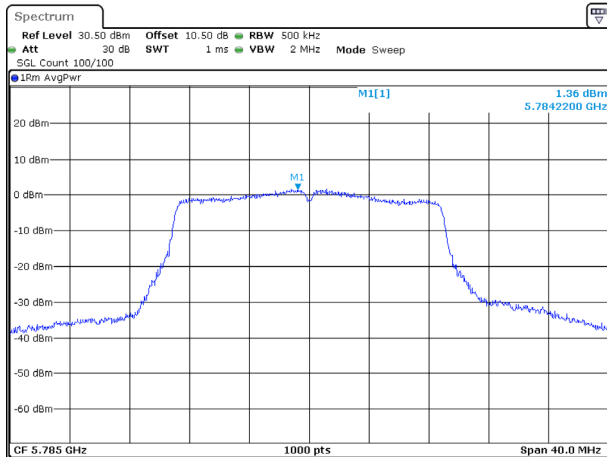
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:02:32

802.11ac20_5745MHz



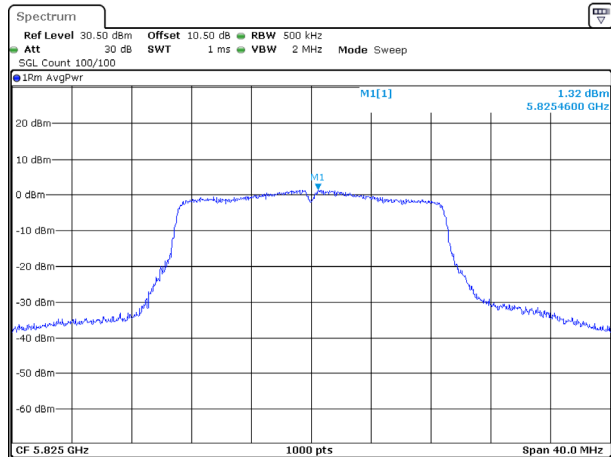
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:41:14

802.11ac20_5785MHz



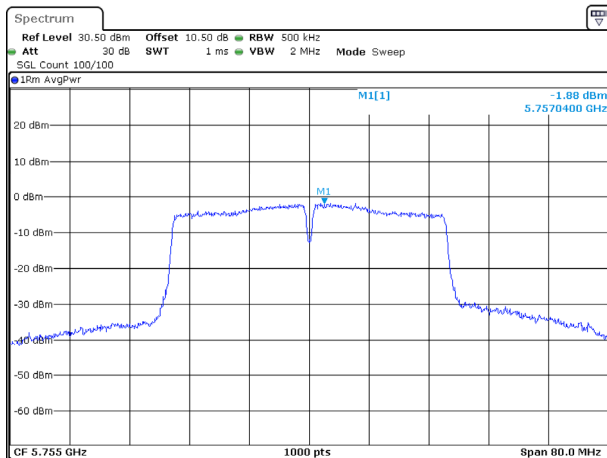
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:44:08

802.11ac20_5825MHz



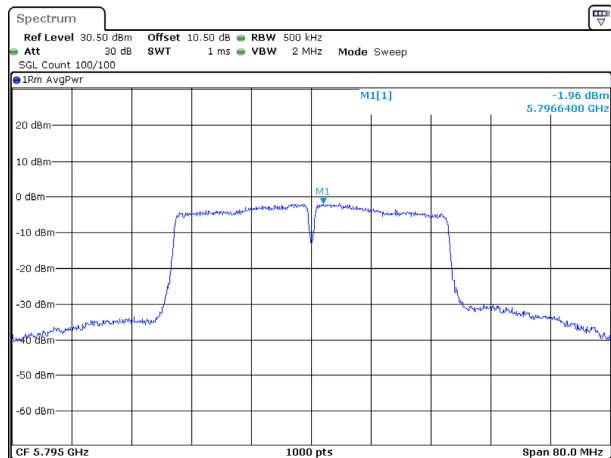
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:46:53

802.11ac40_5755MHz



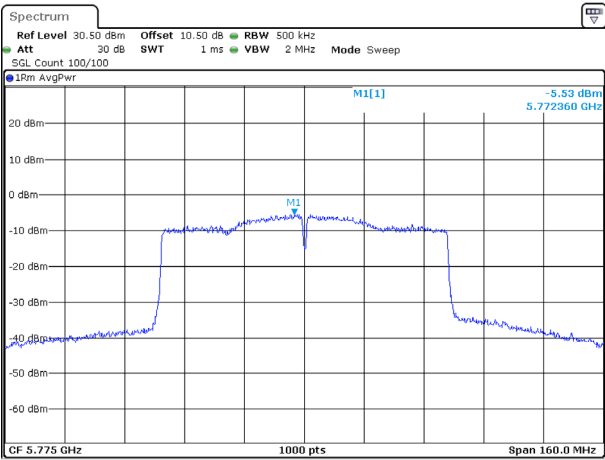
ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:48:56

802.11ac40_5795MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:51:45

802.11ac80_5775MHz



ProjectNo.:2401A63093E-RF Tester:Kungfumaster Liang
Date: 28.DEC.2024 01:50:32

Duty Cycle

Test Information:

Sample No.:	2VNH-6	Test Date:	2024/12/27~2025/04/17
Test Site:	RF	Test Mode:	Transmitting
Tester:	Kungfumaster Liang	Test Result:	N/A

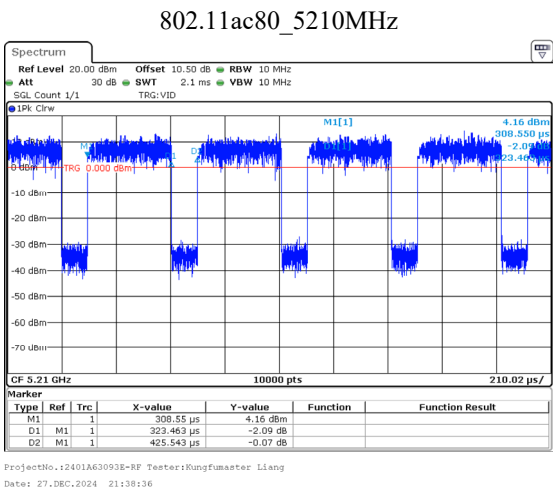
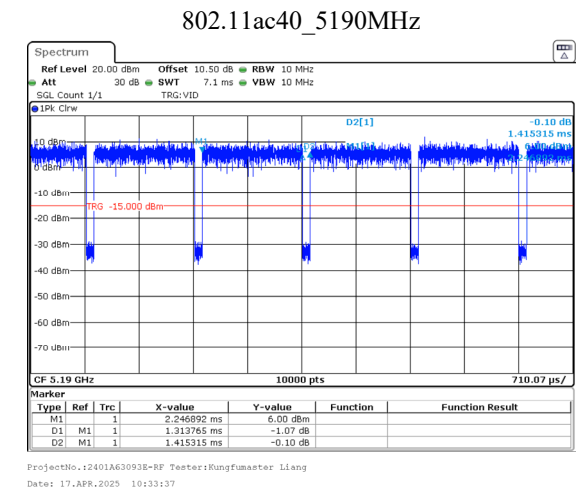
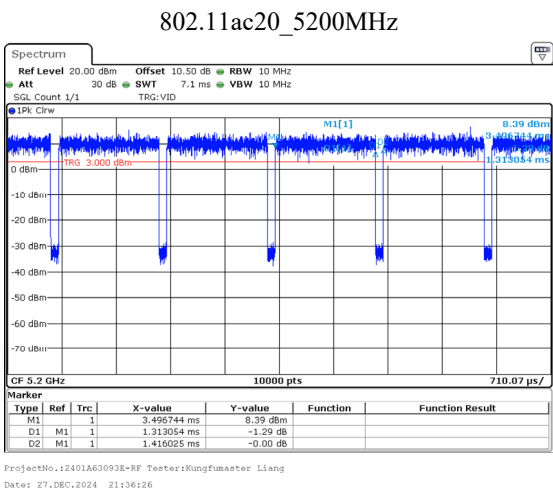
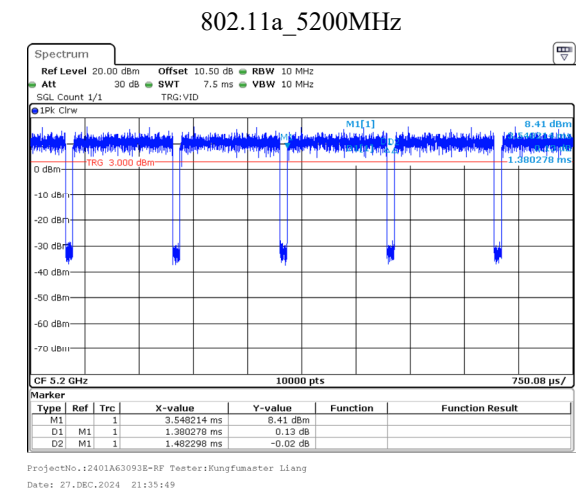
Environmental Conditions:

Temperature: (°C)	22.9-26.5	Relative Humidity: (%)	40-46	ATM Pressure: (kPa)	100.4~101
----------------------	-----------	------------------------------	-------	------------------------	-----------

Test Data:

Mode	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11a	5200	1.380	1.482	93.12	0.31	725	1
802.11ac20	5200	1.313	1.416	92.73	0.33	762	1
802.11ac40	5190	1.314	1.415	92.86	0.32	761	2
802.11ac80	5210	0.323	0.426	75.82	1.20	3096	5

Duty Cycle = Ton/(Ton+Toff)*100%



Frequency Stability

Test Information:

Sample No.:	2VNH-6	Test Date:	2024/12/27~2025/04/17
Test Site:	RF	Test Mode:	Transmitting
Tester:	Kungfumaster Liang	Test Result:	N/A

Environmental Conditions:

Temperature: (°C)	22.9-26.5	Relative Humidity: (%)	40-46	ATM Pressure: (kPa)	100.4~101
----------------------	-----------	------------------------------	-------	------------------------	-----------

5150-5250MHz

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11a	-20	138	5171.666	5150.0000	5248.614	5250.0000
	20	138	5171.612	5150.0000	5248.593	5250.0000
	50	138	5171.575	5150.0000	5248.686	5250.0000
	-20	120	5171.586	5150.0000	5248.711	5250.0000
	20	120	5171.475	5150.0000	5248.575	5250.0000
	50	120	5171.632	5150.0000	5248.646	5250.0000
	-20	102	5171.496	5150.0000	5248.604	5250.0000
	20	102	5171.482	5150.0000	5248.772	5250.0000
	50	102	5171.505	5150.0000	5248.612	5250.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac20	-20	138	5171.161	5150.0000	5249.192	5250.0000
	20	138	5171.108	5150.0000	5249.192	5250.0000
	50	138	5171.159	5150.0000	5249.203	5250.0000
	-20	120	5171.122	5150.0000	5249.163	5250.0000
	20	120	5171.025	5150.0000	5249.025	5250.0000
	50	120	5171.158	5150.0000	5249.197	5250.0000
	-20	102	5171.188	5150.0000	5249.045	5250.0000
	20	102	5171.186	5150.0000	5249.086	5250.0000
	50	102	5171.029	5150.0000	5249.080	5250.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac40	-20	138	5171.848	5150.0000	5248.620	5250.0000
	20	138	5171.916	5150.0000	5248.545	5250.0000
	50	138	5171.882	5150.0000	5248.515	5250.0000
	-20	120	5171.918	5150.0000	5248.477	5250.0000
	20	120	5171.750	5150.0000	5248.450	5250.0000
	50	120	5171.909	5150.0000	5248.558	5250.0000
	-20	102	5171.790	5150.0000	5248.623	5250.0000
	20	102	5171.876	5150.0000	5248.610	5250.0000
	50	102	5171.861	5150.0000	5248.458	5250.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac80	-20	138	5172.203	5150.0000	5248.175	5250.0000
	20	138	5172.224	5150.0000	5248.249	5250.0000
	50	138	5172.228	5150.0000	5248.289	5250.0000
	-20	120	5172.226	5150.0000	5248.271	5250.0000
	20	120	5172.231	5150.0000	5248.100	5250.0000
	50	120	5172.123	5150.0000	5248.158	5250.0000
	-20	102	5172.198	5150.0000	5248.195	5250.0000
	20	102	5172.111	5150.0000	5248.258	5250.0000
	50	102	5172.132	5150.0000	5248.116	5250.0000

5250-5350MHz

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11a	-20	138	5251.727	5250.0000	5328.539	5350.0000
	20	138	5251.780	5250.0000	5328.478	5350.0000
	50	138	5251.658	5250.0000	5328.396	5350.0000
	-20	120	5251.787	5250.0000	5328.439	5350.0000
	20	120	5251.625	5250.0000	5328.375	5350.0000
	50	120	5251.626	5250.0000	5328.415	5350.0000
	-20	102	5251.698	5250.0000	5328.530	5350.0000
	20	102	5251.648	5250.0000	5328.423	5350.0000
	50	102	5251.788	5250.0000	5328.533	5350.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac20	-20	138	5251.178	5250.0000	5329.016	5350.0000
	20	138	5251.108	5250.0000	5329.063	5350.0000
	50	138	5251.256	5250.0000	5329.101	5350.0000
	-20	120	5251.185	5250.0000	5329.133	5350.0000
	20	120	5251.075	5250.0000	5328.975	5350.0000
	50	120	5251.087	5250.0000	5329.035	5350.0000
	-20	102	5251.080	5250.0000	5329.108	5350.0000
	20	102	5251.161	5250.0000	5328.978	5350.0000
	50	102	5251.207	5250.0000	5329.038	5350.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac40	-20	138	5251.985	5250.0000	5328.453	5350.0000
	20	138	5251.980	5250.0000	5328.587	5350.0000
	50	138	5251.869	5250.0000	5328.456	5350.0000
	-20	120	5251.956	5250.0000	5328.586	5350.0000
	20	120	5251.850	5250.0000	5328.450	5350.0000
	50	120	5252.004	5250.0000	5328.556	5350.0000
	-20	102	5251.948	5250.0000	5328.484	5350.0000
	20	102	5251.854	5250.0000	5328.461	5350.0000
	50	102	5251.900	5250.0000	5328.582	5350.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac80	-20	138	5252.595	5250.0000	5328.267	5350.0000
	20	138	5252.573	5250.0000	5328.235	5350.0000
	50	138	5252.585	5250.0000	5328.125	5350.0000
	-20	120	5252.613	5250.0000	5328.235	5350.0000
	20	120	5252.500	5250.0000	5328.100	5350.0000
	50	120	5252.544	5250.0000	5328.253	5350.0000
	-20	102	5252.648	5250.0000	5328.235	5350.0000
	20	102	5252.544	5250.0000	5328.283	5350.0000
	50	102	5252.699	5250.0000	5328.271	5350.0000

5470-5725MHz

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11a	-20	138	5491.736	5470.0000	5708.396	5725.0000
	20	138	5491.768	5470.0000	5708.322	5725.0000
	50	138	5491.633	5470.0000	5708.420	5725.0000
	-20	120	5491.677	5470.0000	5708.435	5725.0000
	20	120	5491.625	5470.0000	5708.275	5725.0000
	50	120	5491.776	5470.0000	5708.465	5725.0000
	-20	102	5491.664	5470.0000	5708.366	5725.0000
	20	102	5491.797	5470.0000	5708.436	5725.0000
	50	102	5491.773	5470.0000	5708.422	5725.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac20	-20	138	5491.119	5470.0000	5709.048	5725.0000
	20	138	5491.239	5470.0000	5709.079	5725.0000
	50	138	5491.257	5470.0000	5708.998	5725.0000
	-20	120	5491.272	5470.0000	5708.934	5725.0000
	20	120	5491.075	5470.0000	5708.925	5725.0000
	50	120	5491.164	5470.0000	5708.949	5725.0000
	-20	102	5491.237	5470.0000	5708.934	5725.0000
	20	102	5491.094	5470.0000	5709.072	5725.0000
	50	102	5491.160	5470.0000	5709.049	5725.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac40	-20	138	5491.969	5470.0000	5688.250	5725.0000
	20	138	5491.897	5470.0000	5688.341	5725.0000
	50	138	5491.910	5470.0000	5688.356	5725.0000
	-20	120	5491.908	5470.0000	5688.345	5725.0000
	20	120	5491.850	5470.0000	5688.250	5725.0000
	50	120	5492.009	5470.0000	5688.326	5725.0000
	-20	102	5491.862	5470.0000	5688.276	5725.0000
	20	102	5491.953	5470.0000	5688.295	5725.0000
	50	102	5491.874	5470.0000	5688.335	5725.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac80	-20	138	5492.303	5470.0000	5568.113	5725.0000
	20	138	5492.393	5470.0000	5568.159	5725.0000
	50	138	5492.326	5470.0000	5568.208	5725.0000
	-20	120	5492.489	5470.0000	5568.131	5725.0000
	20	120	5492.300	5470.0000	5568.100	5725.0000
	50	120	5492.479	5470.0000	5568.175	5725.0000
	-20	102	5492.385	5470.0000	5568.160	5725.0000
	20	102	5492.354	5470.0000	5568.266	5725.0000
	50	102	5492.399	5470.0000	5568.151	5725.0000

5725-5850MHz

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11a	-20	138	5736.643	5725.0000	5833.477	5850.0000
	20	138	5736.699	5725.0000	5833.585	5850.0000
	50	138	5736.682	5725.0000	5833.484	5850.0000
	-20	120	5736.622	5725.0000	5833.535	5850.0000
	20	120	5736.525	5725.0000	5833.425	5850.0000
	50	120	5736.626	5725.0000	5833.513	5850.0000
	-20	102	5736.544	5725.0000	5833.473	5850.0000
	20	102	5736.586	5725.0000	5833.595	5850.0000
	50	102	5736.633	5725.0000	5833.522	5850.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac20	-20	138	5736.202	5725.0000	5834.118	5850.0000
	20	138	5736.194	5725.0000	5834.107	5850.0000
	50	138	5736.245	5725.0000	5834.042	5850.0000
	-20	120	5736.242	5725.0000	5834.109	5850.0000
	20	120	5736.075	5725.0000	5833.925	5850.0000
	50	120	5736.097	5725.0000	5834.114	5850.0000
	-20	102	5736.268	5725.0000	5834.053	5850.0000
	20	102	5736.098	5725.0000	5834.045	5850.0000
	50	102	5736.151	5725.0000	5834.120	5850.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac40	-20	138	5736.978	5725.0000	5813.475	5850.0000
	20	138	5737.049	5725.0000	5813.479	5850.0000
	50	138	5736.986	5725.0000	5813.393	5850.0000
	-20	120	5737.023	5725.0000	5813.360	5850.0000
	20	120	5736.850	5725.0000	5813.350	5850.0000
	50	120	5737.023	5725.0000	5813.504	5850.0000
	-20	102	5736.975	5725.0000	5813.422	5850.0000
	20	102	5736.987	5725.0000	5813.542	5850.0000
	50	102	5737.025	5725.0000	5813.492	5850.0000

Test Channel: Lowest for Lower Edge, Highest for Upper Edge						
Test mode	Temperature (°C)	Voltage (V _{AC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
802.11ac80	-20	138	5737.468	5725.0000	5813.246	5850.0000
	20	138	5737.332	5725.0000	5813.251	5850.0000
	50	138	5737.454	5725.0000	5813.239	5850.0000
	-20	120	5737.408	5725.0000	5813.198	5850.0000
	20	120	5737.300	5725.0000	5813.100	5850.0000
	50	120	5737.431	5725.0000	5813.184	5850.0000
	-20	102	5737.362	5725.0000	5813.132	5850.0000
	20	102	5737.382	5725.0000	5813.214	5850.0000
	50	102	5737.471	5725.0000	5813.111	5850.0000

RF EXPOSURE EVALUATION

MPE-Based Exemption

Applicable Standard

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 v01 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(3)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

R is the minimum separation distance in meters

f = frequency in MHz

For multiple RF sources: Multiple RF sources are exempt if:

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation:

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Result

Mode	Frequency (MHz)	Tune up conducted power [#] (dBm)	Antenna Gain [#]		ERP		Evaluation Distance (m)	ERP Limit (mW)
			(dBi)	(dBd)	(dBm)	(mW)		
For module YL43752								
BLE	2402-2480	5.5	4.49	2.34	7.84	6.08	0.2	768
2.4G Wi-Fi	2412-2462	22.0	4.49	2.34	24.34	271.64	0.2	768
5.2G Wi-Fi	5180-5240	12.5	4.49	2.34	14.84	30.48	0.2	768
5.8G Wi-Fi	5745-5825	12.0	4.49	2.34	14.34	27.16	0.2	768
For module YL43456								
2.4G Wi-Fi	2412-2462	18.0	4.49	2.34	20.34	108.14	0.2	768
5.2G Wi-Fi	5180-5240	15.5	4.49	2.34	17.84	60.81	0.2	768
5.3G Wi-Fi	5260-5320	15.0	4.49	2.34	17.34	54.20	0.2	768
5.6G Wi-Fi	5500-5720	13.0	4.49	2.34	15.34	34.20	0.2	768
5.8G Wi-Fi	5745-5825	16.5	4.49	2.34	18.84	76.56	0.2	768

- Note: 1. The tune up conducted power and antenna gain was declared by the applicant.
 2. 0dBd=2.15dBi
 3. The BLE and Wi-Fi can transmit at same time, the 2.4G and 5G Wi-Fi cannot transmit at same time.
 4. The two Wi-Fi modules can transmit as same time.

Simultaneous transmitting consideration (worst case):

$$\text{The ratio} = \text{ERP}_{\text{BLE}} / \text{limit} + \text{ERP}_{2.4\text{G Wi-Fi}} / \text{limit} + \text{ERP}_{5\text{G}} / \text{limit} = 6.08/768 + 271.64/768 + 76.56/768 = 0.461 < 1.0$$

So simultaneous exposure is compliant.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant

Field reference level exposure exemption limits**Applicable Standard**

According to RSS-102 Issue 6§6.6:

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1 W (adjusted for tune-up tolerance)
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance)
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz
- at or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance) In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the EIRP was derived.

Calculated Data:

Mode	Frequency (MHz)	Maximum tune-up conducted power [#] (dBm)	Antenna Gain [#]	Maximum tune-up EIRP		Evaluation Distance (m)	Limit (mW)
			(dBi)	(dBm)	(mW)		
For module YL43752							
BLE	2402-2480	5.5	4.49	9.99	9.98	0.2	2676
2.4G Wi-Fi	2412-2462	22.0	4.49	26.49	445.66	0.2	2684
5.2G Wi-Fi	5180-5240	12.5	4.49	16.99	50.00	0.2	4525
5.8G Wi-Fi	5745-5825	12.0	4.49	16.49	44.57	0.2	4857
For module YL43456							
2.4G Wi-Fi	2412-2462	18.0	4.49	22.49	177.42	0.2	2684
5.2G Wi-Fi	5180-5240	15.5	4.49	19.99	99.77	0.2	4525
5.3G Wi-Fi	5260-5320	15.0	4.49	19.49	88.92	0.2	4573
5.6G Wi-Fi	5500-5720	13.0	4.49	17.49	56.10	0.2	4714
5.8G Wi-Fi	5745-5825	16.5	4.49	20.99	125.60	0.2	4857

Note:

1. The tune up conducted power[#] and antenna gain[#] was declared by the applicant.
2. The BLE and Wi-Fi can transmit at same time, the 2.4G and 5G Wi-Fi cannot transmit at same time.
3. The two Wi-Fi modules can transmit as same time.

Simultaneous transmitting consideration (worst case):

The ratio= $EIRP_{BLE}/limit + EIRP_{2.4G\ Wi-Fi}/limit + EIRP_{5G}/limit = 9.98/2676 + 445.66/2684 + 125.60/4857 = 0.196 < 1.0$

So simultaneous exposure is compliant.

Result: Compliant

Note: To maintain compliance with the RF exposure guidelines, place the equipment at least 20cm from nearby persons.

EUT PHOTOGRAPHS

Please refer to the attachment 2401A63093E-RF External photo and 2401A63093E-RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2401A63093E-RFB Test Setup photo.

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