

15. Antenna Requirements

15.1. Applicable Requirements

Please refer to FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

15.2. Result

The antenna used for this product is PCB antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 4.94 dBi.

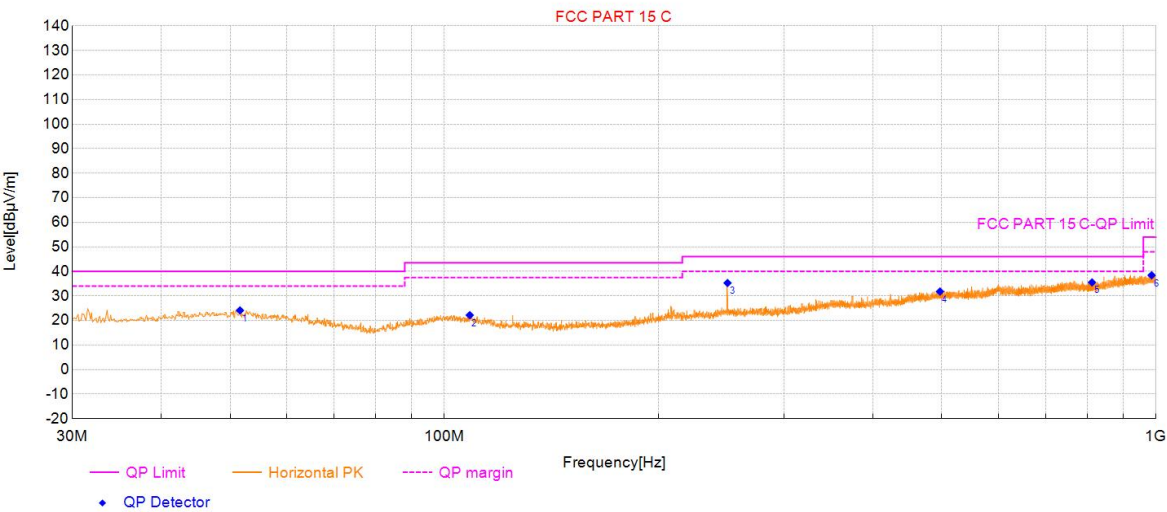
APPENDIX A – Radiated Emission Below 1GHz Test Data

Test Report

Project Information			
EUT:	IEEE 802.11 a/b/g/n/ac AP Model		
Customer:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2422	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-11 19:59:00

Test Graph



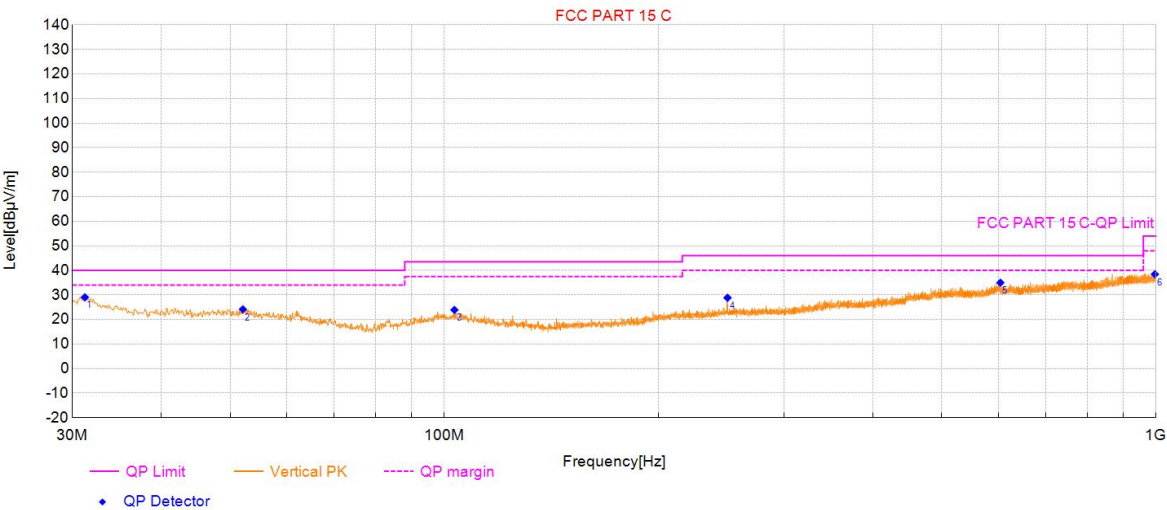
Final Data List									
NO.	Frequency (MHz)	Factor (dB)	QP Value (dBμV/m)	QP Limit (dBμV/m)	QP Margin (dB)	Height (cm)	Angle (°)	Polarity	Verdict
1	51.63	21.34	24.11	40.00	15.89	100	323	Horizontal	PASS
2	108.58	19.50	22.17	43.50	21.33	100	187	Horizontal	PASS
3	250.02	22.01	35.29	46.00	10.71	100	95	Horizontal	PASS
4	497.10	27.61	31.79	46.00	14.21	100	336	Horizontal	PASS
5	812.87	32.44	35.53	46.00	10.47	100	95	Horizontal	PASS
6	985.93	35.12	38.43	54.00	15.57	100	360	Horizontal	PASS

Test Report

Project Information			
EUT:	IEEE 802.11 a/b/g/n/ac AP Model		
Customer:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2422	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-11 19:59:34

Test Graph



Final Data List									
NO.	Frequency (MHz)	Factor (dB)	QP Value (dBµV/m)	QP Limit (dBµV/m)	QP Margin (dB)	Height (cm)	Angle (°)	Polarity	Verdict
1	31.26	17.56	29.03	40.00	10.97	100	110	Vertical	PASS
2	52.12	21.27	24.15	40.00	15.85	100	0	Vertical	PASS
3	103.34	19.86	23.90	43.50	19.60	100	262	Vertical	PASS
4	250.02	22.01	28.86	46.00	17.14	100	331	Vertical	PASS
5	604.30	29.98	34.99	46.00	11.01	100	92	Vertical	PASS
6	996.41	35.23	38.44	54.00	15.56	100	225	Vertical	PASS

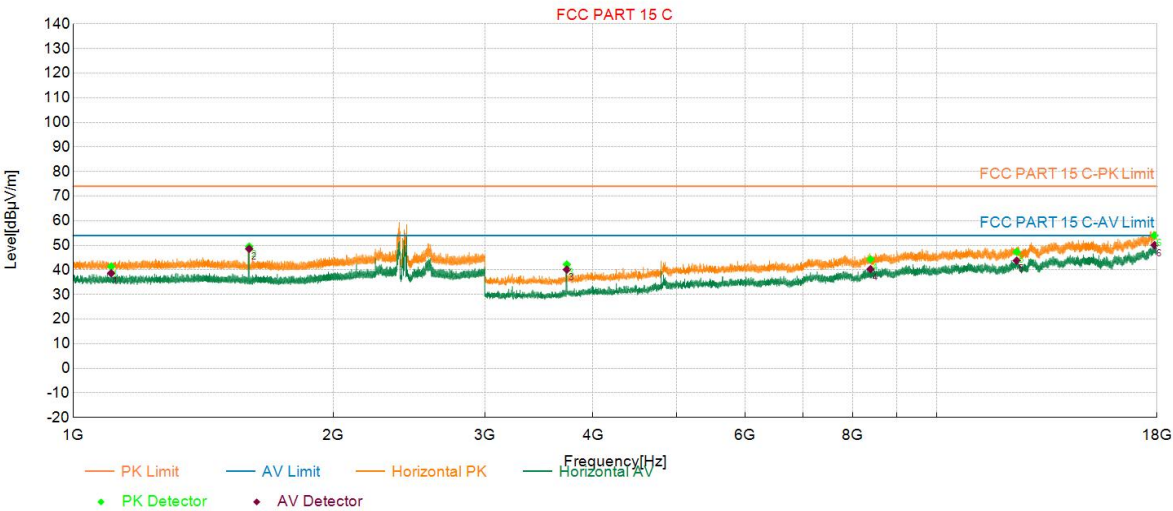
APPENDIX B – Radiated Emission Above 1GHz Test Data

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2422	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-09 10:48:28

Test Graph



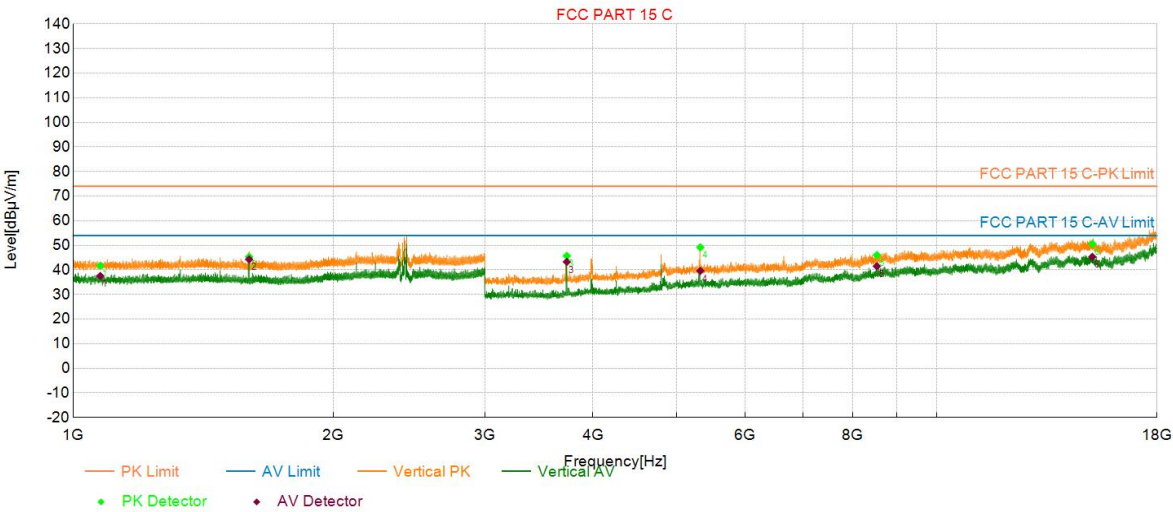
PK Final Data List											
NO.	Frequency (MHz)	Factor (dB)	PK Value (dBµV/m)	PK Limit (dBµV/m)	PK Margin (dB)	AV Value (dBµV/m)	AV Limit (dBµV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1106.71	2.28	41.41	74.00	32.59	38.66	54.00	15.34	150	3	Horizontal
2	1599.03	4.13	49.55	74.00	24.45	48.55	54.00	5.45	150	178	Horizontal
3	3730.54	-12.44	42.23	74.00	31.77	40.16	54.00	13.84	150	346	Horizontal
4	8384.52	2.67	44.35	74.00	29.65	40.33	54.00	13.67	150	69	Horizontal
5	12382.22	7.86	47.34	74.00	26.66	43.80	54.00	10.20	150	199	Horizontal
6	17880.74	18.93	54.03	74.00	19.97	50.09	54.00	3.91	150	304	Horizontal

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2422	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-09 10:49:43

Test Graph



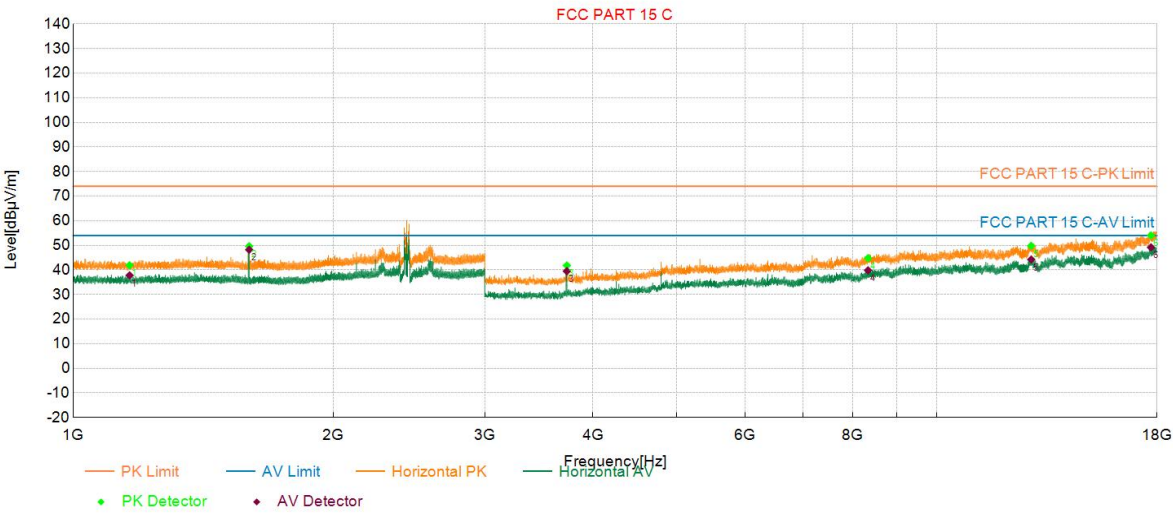
PK Final Data List											
NO.	Frequency (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1075.00	2.17	41.67	74.00	32.33	37.52	54.00	16.48	150	186	Vertical
2	1598.83	4.13	45.36	74.00	28.64	44.29	54.00	9.71	150	266	Vertical
3	3730.54	-12.44	45.72	74.00	28.28	43.31	54.00	10.69	150	17	Vertical
4	5325.12	-5.49	49.18	74.00	24.82	39.62	54.00	14.38	150	67	Vertical
5	8527.03	3.23	46.04	74.00	27.96	41.54	54.00	12.46	150	25	Vertical
6	15145.36	14.51	50.63	74.00	23.37	45.32	54.00	8.68	150	333	Vertical

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2437	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-09 10:57:27

Test Graph



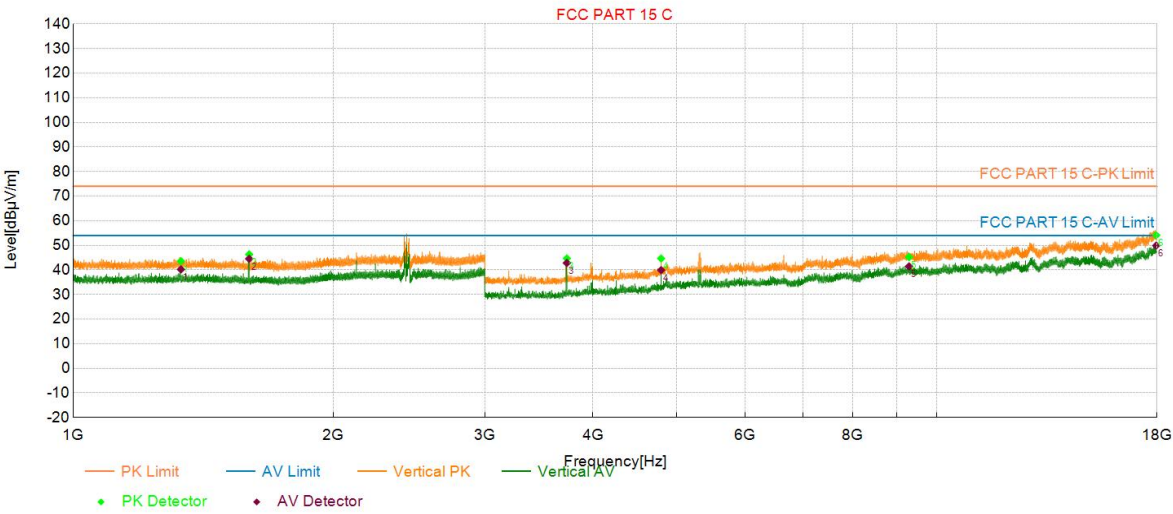
PK Final Data List											
NO.	Frequency (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1162.41	2.54	41.87	74.00	32.13	37.79	54.00	16.21	150	173	Horizontal
2	1599.03	4.13	49.67	74.00	24.33	48.22	54.00	5.78	150	182	Horizontal
3	3730.54	-12.44	41.82	74.00	32.18	39.51	54.00	14.49	150	163	Horizontal
4	8329.02	2.30	44.81	74.00	29.19	39.84	54.00	14.16	150	336	Horizontal
5	12869.74	10.00	49.78	74.00	24.22	44.25	54.00	9.75	150	222	Horizontal
6	17713.49	19.18	54.05	74.00	19.95	49.19	54.00	4.81	150	183	Horizontal

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2437	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-09 10:58:42

Test Graph



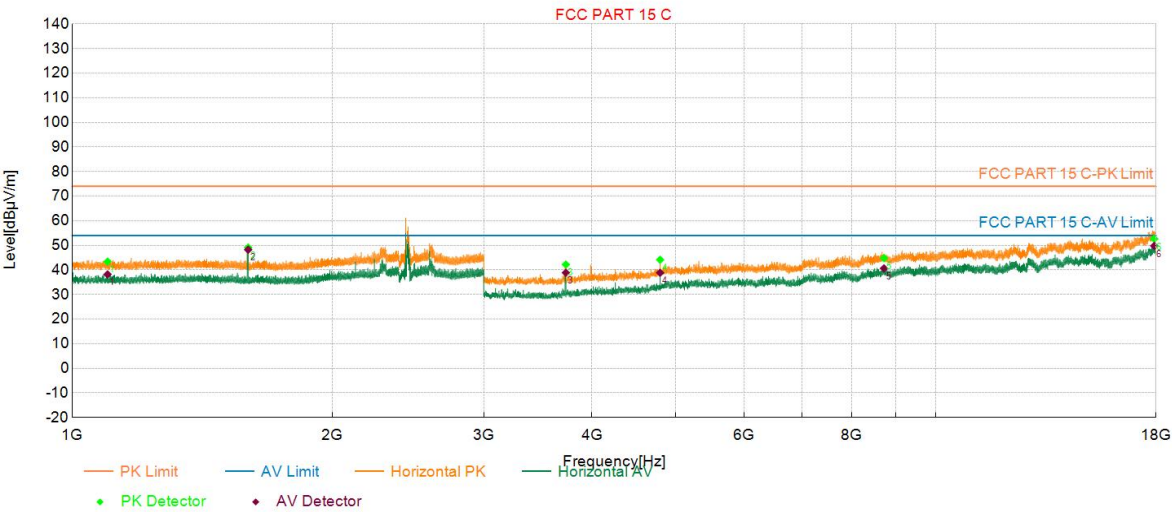
PK Final Data List											
NO.	Frequency (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1333.02	3.64	43.57	74.00	30.43	40.22	54.00	13.78	150	75	Vertical
2	1599.03	4.13	46.32	74.00	27.68	44.55	54.00	9.45	150	264	Vertical
3	3730.54	-12.44	44.69	74.00	29.31	42.83	54.00	11.17	150	18	Vertical
4	4796.34	-7.48	44.65	74.00	29.35	39.93	54.00	14.07	150	269	Vertical
5	9290.56	5.17	45.22	74.00	28.78	41.44	54.00	12.56	150	306	Vertical
6	17963.25	18.18	54.13	74.00	19.87	49.93	54.00	4.07	150	152	Vertical

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2452	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-09 11:01:16

Test Graph



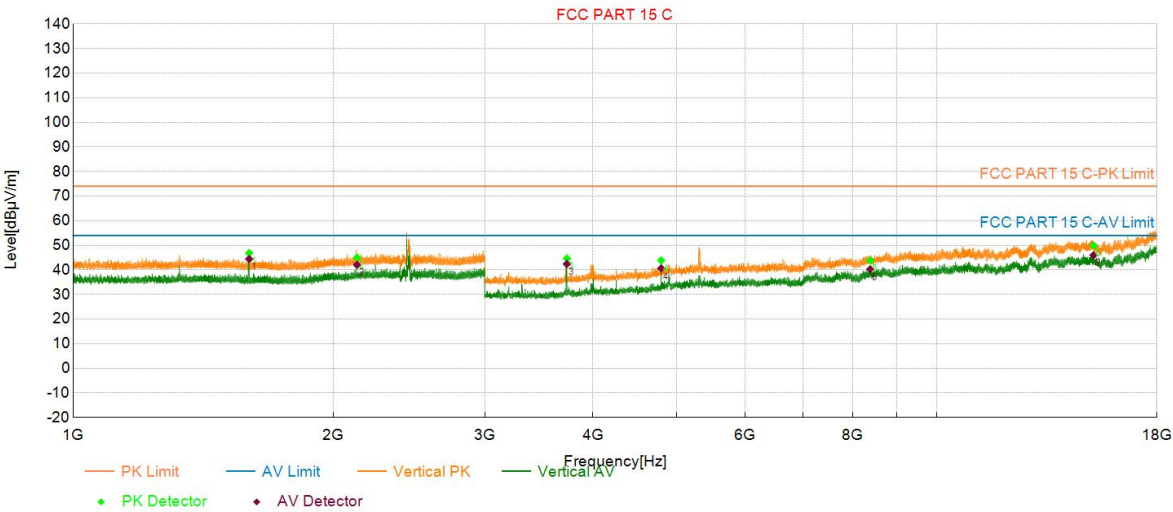
PK Final Data List											
NO.	Frequency (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1099.00	2.26	43.39	74.00	30.61	38.20	54.00	15.80	150	336	Horizontal
2	1598.93	4.13	49.13	74.00	24.87	48.23	54.00	5.77	150	186	Horizontal
3	3730.54	-12.44	42.20	74.00	31.80	38.88	54.00	15.12	150	280	Horizontal
4	4796.34	-7.48	44.14	74.00	29.86	38.85	54.00	15.15	150	171	Horizontal
5	8713.79	4.14	44.82	74.00	29.18	40.62	54.00	13.38	150	354	Horizontal
6	17914.50	18.78	52.66	74.00	21.34	49.78	54.00	4.22	150	326	Horizontal

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11N40_2452	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:0		
Test Standard: FCC PART 15 C			

Start of Test:2025-06-09 11:02:31

Test Graph



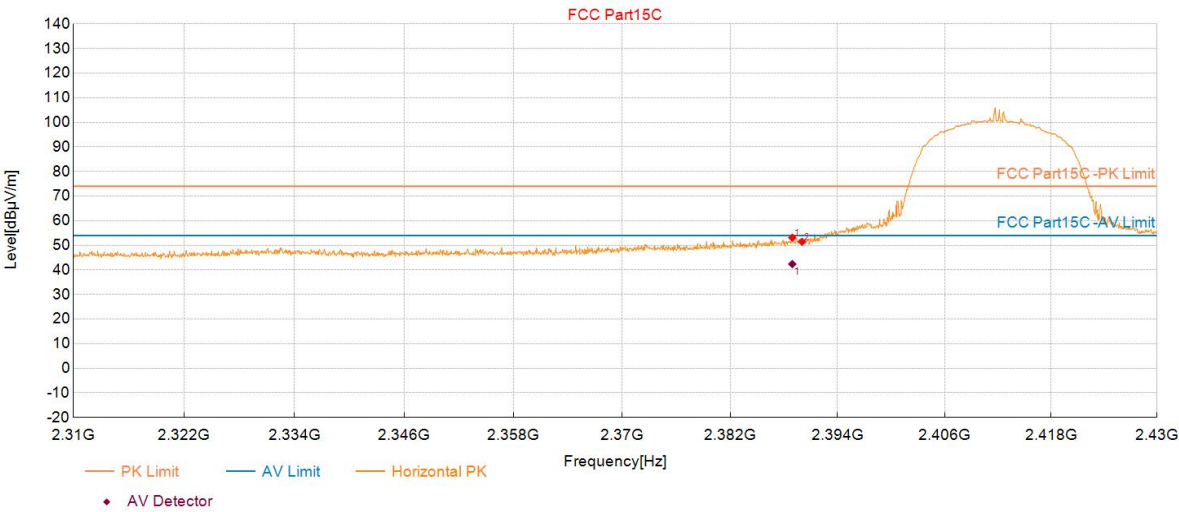
PK Final Data List											
NO.	Frequency (MHz)	Factor (dB)	PK Value (dBμV/m)	PK Limit (dBμV/m)	PK Margin (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	1598.93	4.13	46.87	74.00	27.13	44.45	54.00	9.55	150	27	Vertical
2	2131.86	7.08	45.00	74.00	29.00	42.08	54.00	11.92	150	27	Vertical
3	3730.54	-12.44	44.67	74.00	29.33	42.43	54.00	11.57	150	16	Vertical
4	4796.34	-7.48	43.88	74.00	30.12	40.65	54.00	13.35	150	225	Vertical
5	8377.77	2.63	43.86	74.00	30.14	40.26	54.00	13.74	150	253	Vertical
6	15200.11	14.65	49.89	74.00	24.11	46.02	54.00	7.98	150	5	Vertical

Test Report

Project Information			
Customer:	IEEE 802.11 a/b/g/n/ac AP Model		
EUT:			
Model:	SKO.W2890.1	SN:	
Mode:	11B_2412	Voltage:	DC 12V
Environment:	23.1℃ 45%	Engineer:	Soho Liu
Remark:	Power Set:6		
Test Standard: FCC Part15C			

Start of Test:2025-06-09 11:49:47

Test Graph



Suspected Data List								
NO.	Frequency (MHz)	Level (dBμV/m)	Factor (dB)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Angle (°)	Polarity
1	2388.94	53.14	6.86	74.00	20.86	150	85	Horizontal
2	2390.02	51.45	6.85	74.00	22.55	150	85	Horizontal

PK Final Data List								
NO.	Frequency (MHz)	Factor (dB)	AV Value (dBμV/m)	AV Limit (dBμV/m)	AV Margin (dB)	Height (cm)	Angle (°)	Polarity
1	2388.94	6.86	42.39	54.00	11.61	150	89	Horizontal