

Appendix C: Test Results of Radiated Spurious Emissions & Mains

Conducted Emission Test_FPCB Antenna

PIC32WM-BW1002UC, ANT 11, Main Source
Band Edges, 2.31GHz ~ 2.5GHz

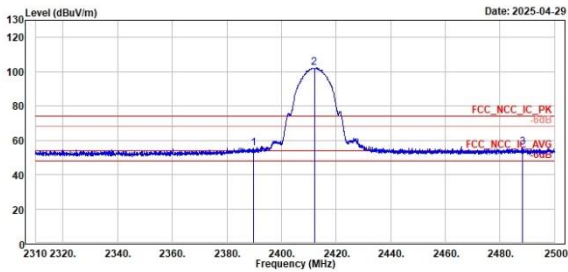
802.11b

Low Channel (Horizontal) Peak

Low Channel (Vertical) Peak



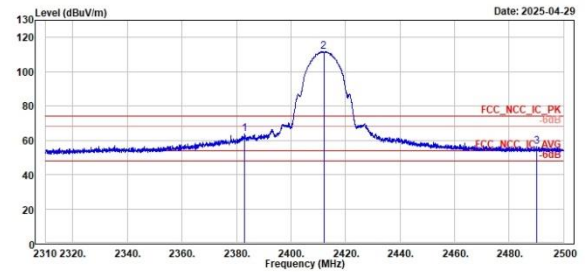
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level Factor	Line	Limit	cm	deg			
1	2389.05	55.59	17.51	38.08	74.00	-18.41	391	43 Peak	Horizontal	
2 *	2412.00	102.15	63.91	38.24	74.00	28.15	391	43 Peak	Horizontal	
3	2488.13	56.03	17.55	38.48	74.00	-17.97	391	43 Peak	Horizontal	



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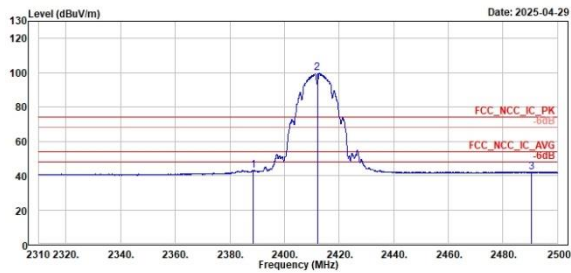
	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level Factor	Line	Limit	cm	deg			
1	2383.06	63.63	25.62	38.01	74.00	-10.37	231	290 Peak	Vertical	
2 *	2412.00	111.79	73.55	38.24	74.00	37.79	231	290 Peak	Vertical	
3	2490.07	56.38	17.90	38.48	74.00	-17.62	231	290 Peak	Vertical	

802.11b

Low Channel (Horizontal) Average



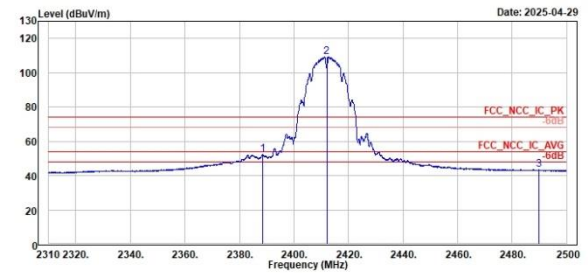
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Low Channel (Vertical) Average

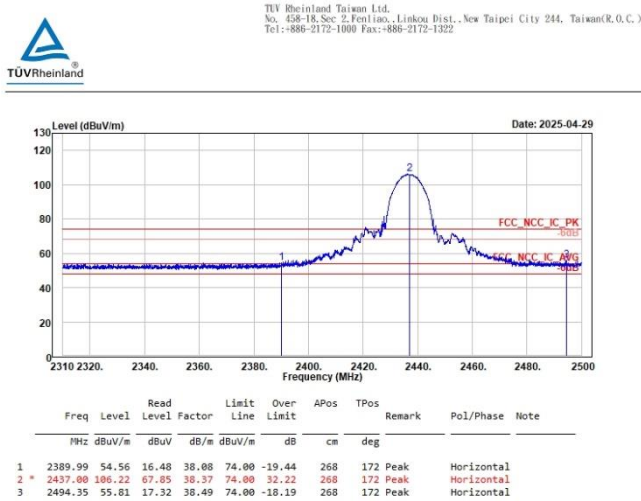


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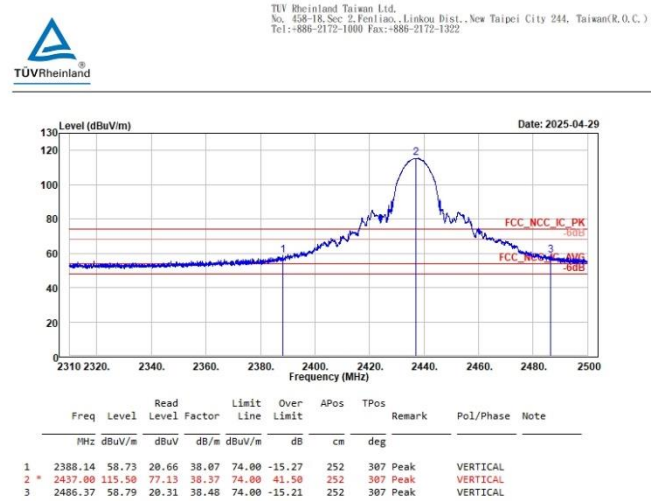


802.11b

Middle Channel (Horizontal) Peak



Middle Channel (Vertical) Peak

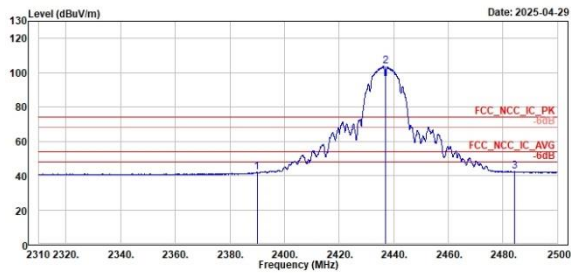


802.11b

Middle Channel (Horizontal) Average



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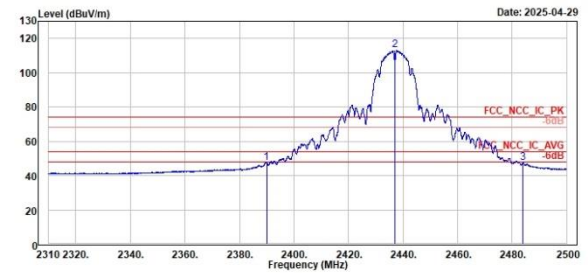


	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.94	42.03	3.95	38.08	54.00	-11.97	268	172	Average	Horizontal		
2 *	2437.00	103.70	65.33	38.37	54.00	49.70	268	172	Average	Horizontal		
3	2484.37	42.31	3.83	38.48	54.00	-11.69	268	172	Average	Horizontal		

Middle Channel (Vertical) Average



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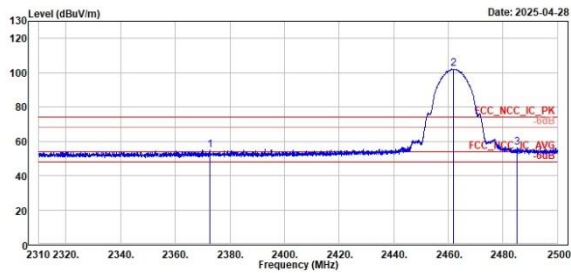
	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.94	47.55	9.47	38.08	54.00	-6.45	252	307	Average	VERTICAL		
2 *	2437.00	112.95	74.58	38.37	54.00	58.95	252	307	Average	VERTICAL		
3	2484.04	47.45	8.97	38.48	54.00	-6.55	252	307	Average	VERTICAL		

802.11b

High Channel (Horizontal) Peak



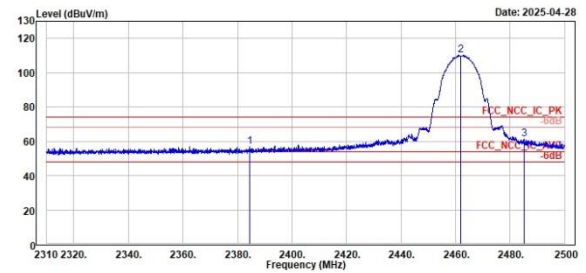
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2372.65	54.87	16.95	37.92	74.00	-19.13	331	295	Peak	Horizontal		
2 *	2462.00	102.10	63.65	38.45	74.00	28.10	331	295	Peak	Horizontal		
3	2485.09	56.12	17.64	38.48	74.00	-17.88	331	295	Peak	Horizontal		



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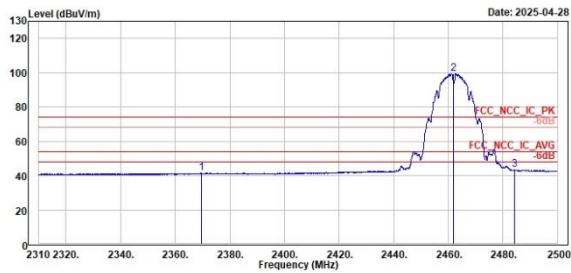
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	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2384.39	56.99	18.95	38.04	74.00	-17.01	247	287	Peak	Vertical		
2 *	2462.00	110.18	71.73	38.45	74.00	36.18	247	287	Peak	Vertical		
3	2485.18	61.20	22.72	38.48	74.00	-12.80	247	287	Peak	Vertical		

802.11b

High Channel (Horizontal) Average



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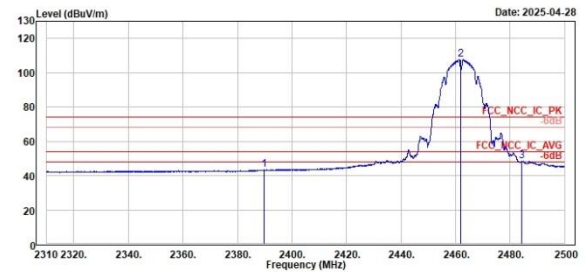


Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2369.47	41.51	3.61	37.90	54.00	-12.49	331	295	Average	Horizontal	
2 *	2462.00	99.58	61.13	38.45	54.00	45.58	331	295	Average	Horizontal	
3	2484.23	43.27	4.79	38.48	54.00	-10.73	331	295	Average	Horizontal	

High Channel (Vertical) Average



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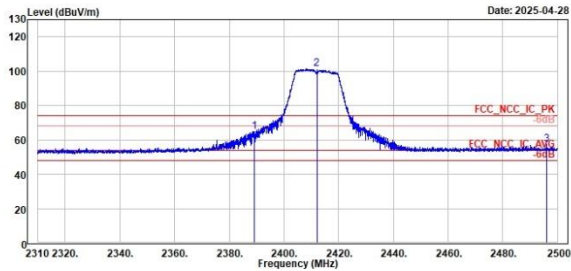
Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2369.90	43.34	5.26	38.08	54.00	-10.66	247	287	Average	Vertical	
2 *	2462.00	107.65	69.28	38.45	54.00	53.65	247	287	Average	Vertical	
3 †	2484.23	48.54	10.06	38.48	54.00	-5.46	247	287	Average	Vertical	

802.11g

Low Channel (Horizontal) Peak



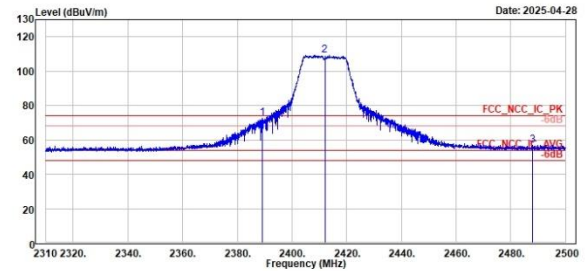
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.09	64.68	26.61	38.07	74.00	-9.32	302	216	Peak	Horizontal		
2 *	2412.00	101.40	63.16	38.24	74.00	27.40	302	216	Peak	Horizontal		
3	2495.92	57.11	18.62	38.49	74.00	-16.89	302	216	Peak	Horizontal		



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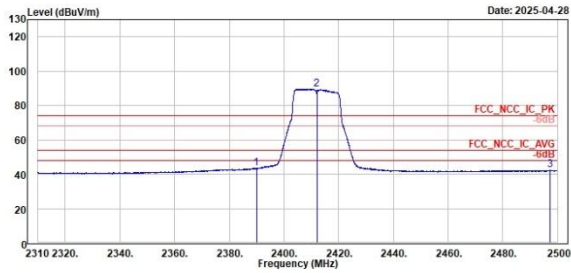
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	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.04	72.76	34.69	38.07	74.00	-1.24	283	284	Peak	Vertical		
2 *	2412.00	109.25	71.01	38.24	74.00	35.25	283	284	Peak	Vertical		
3	2487.84	57.00	18.52	38.48	74.00	-17.00	283	284	Peak	Vertical		

802.11g

Low Channel (Horizontal) Average



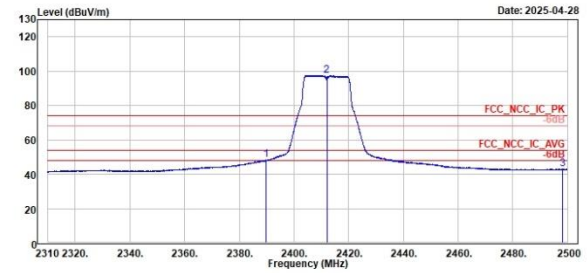
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Low Channel (Vertical) Average

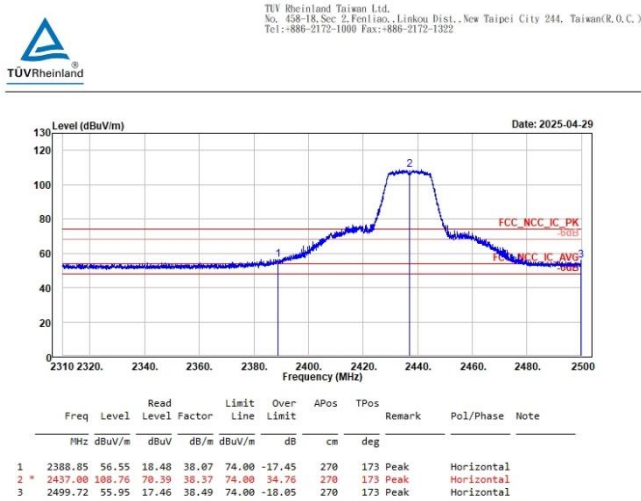


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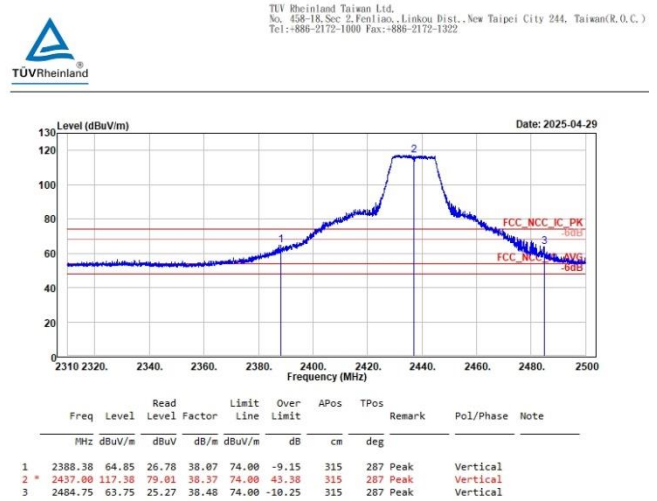


802.11g

Middle Channel (Horizontal) Peak



Middle Channel (Vertical) Peak

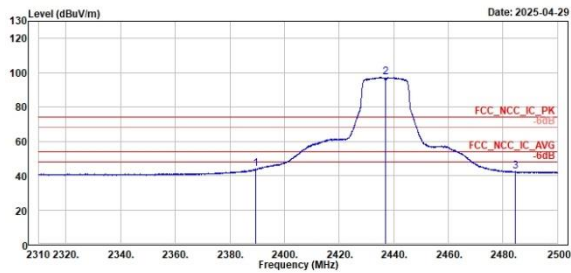


802.11g

Middle Channel (Horizontal) Average



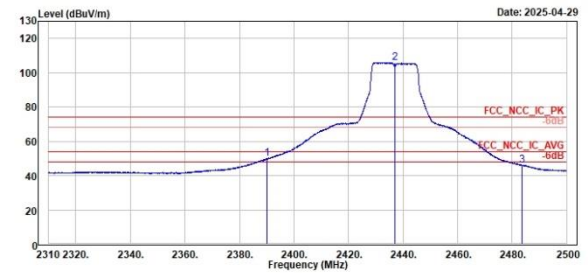
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Middle Channel (Vertical) Average



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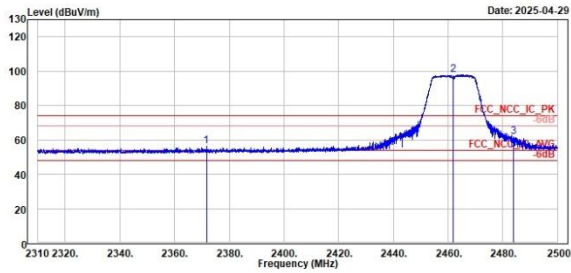


802.11g

High Channel (Horizontal) Peak



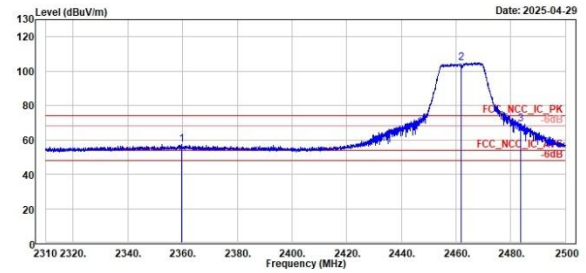
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2371.61	56.27	18.36	37.91	74.00	-17.73	246	296	Peak	Horizontal	
2 *	2462.00	98.00	59.55	38.45	74.00	24.00	246	296	Peak	Horizontal	
3	2483.95	61.74	23.26	38.48	74.00	-12.26	246	296	Peak	Horizontal	



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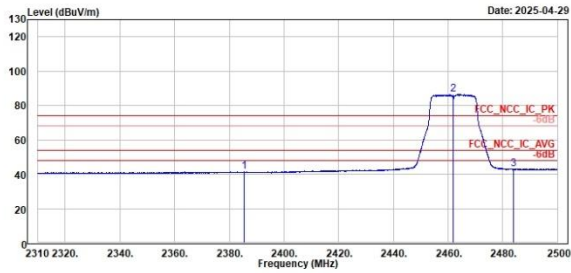
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MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2359.54	57.13	19.32	37.81	74.00	-16.87	303	284	Peak	Vertical	
2 *	2462.00	105.00	66.55	38.45	74.00	31.00	303	284	Peak	Vertical	
3 †	2483.52	69.30	30.82	38.48	74.00	-4.70	303	284	Peak	Vertical	

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High Channel (Horizontal) Average



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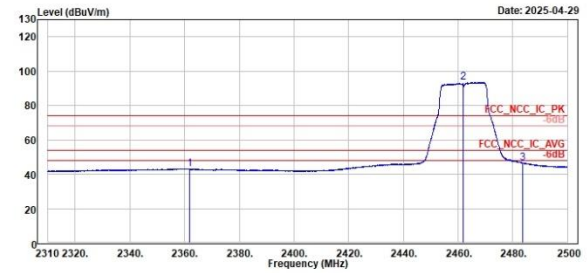


	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2385.57	41.53	3.49	38.04	54.00	-12.47	246	296 Average	Horizontal	
2 *	2462.00	86.38	47.93	38.45	54.00	32.38	246	296 Average	Horizontal	
3	2483.85	43.08	4.60	38.48	54.00	-10.92	246	296 Average	Horizontal	

High Channel (Vertical) Average



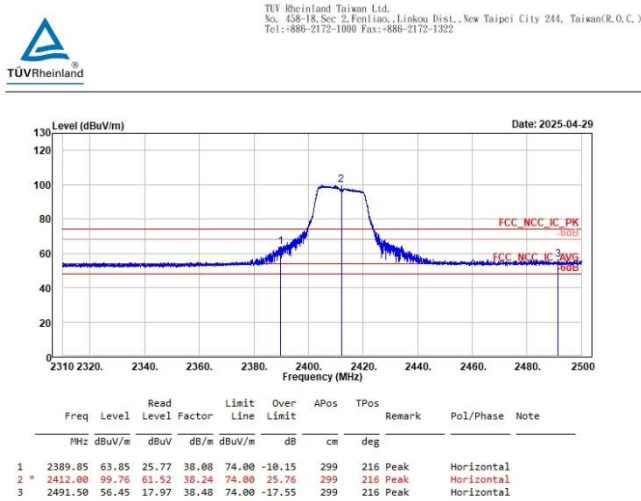
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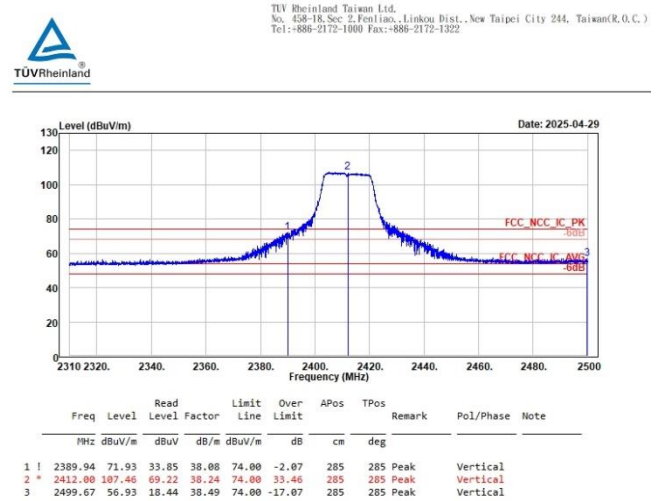
	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2361.97	43.18	5.35	37.83	54.00	-10.82	303	284 Average	Vertical	
2 *	2462.00	93.53	55.08	38.45	54.00	39.53	303	284 Average	Vertical	
3	2483.66	46.60	8.12	38.48	54.00	-7.40	303	284 Average	Vertical	

802.11n HT20

Low Channel (Horizontal) Peak



Low Channel (Vertical) Peak

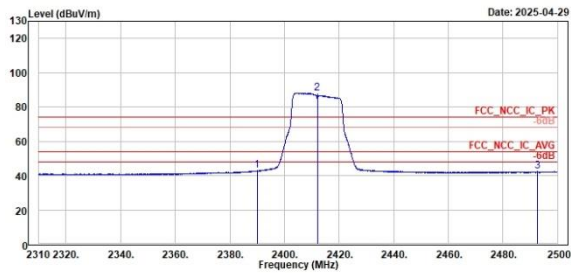


802.11n HT20

Low Channel (Horizontal) Average



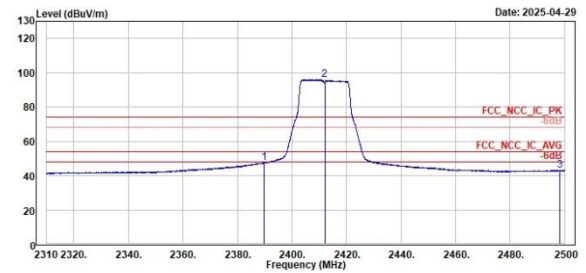
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Low Channel (Vertical) Average

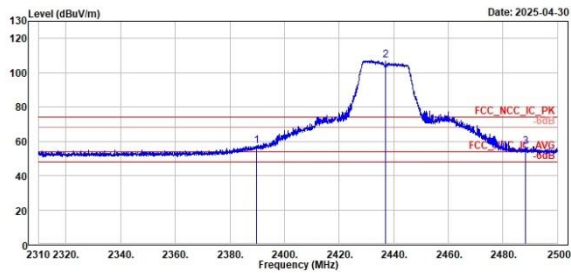


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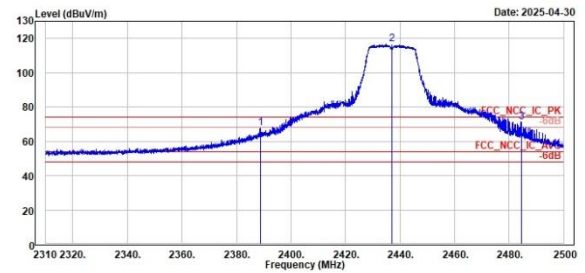
802.11n HT20

Middle Channel (Horizontal) Peak



	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.05	57.39	19.31	38.08	74.00	-16.61	195	154	Peak	Horizontal		
2 *	2437.00	107.19	68.82	38.37	74.00	33.19	195	154	Peak	Horizontal		
3	2488.27	56.77	18.29	38.48	74.00	-17.23	195	154	Peak	Horizontal		

Middle Channel (Vertical) Peak



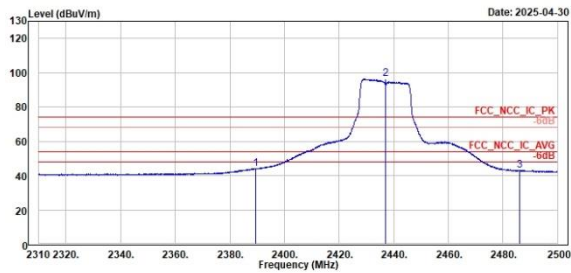
	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.99	67.88	29.81	38.07	74.00	-6.12	179	304	Peak	Vertical		
2 *	2437.00	116.68	78.23	38.37	74.00	42.68	179	304	Peak	Vertical		
3 †	2484.42	71.22	32.74	38.48	74.00	-2.78	179	304	Peak	Vertical		

802.11n HT20

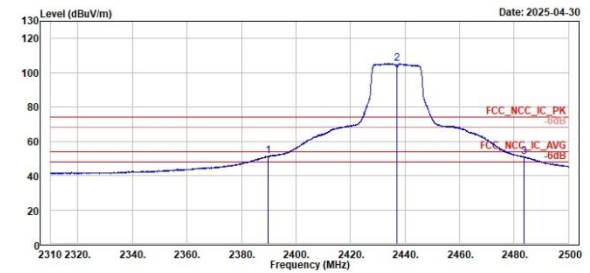
Middle Channel (Horizontal) Average



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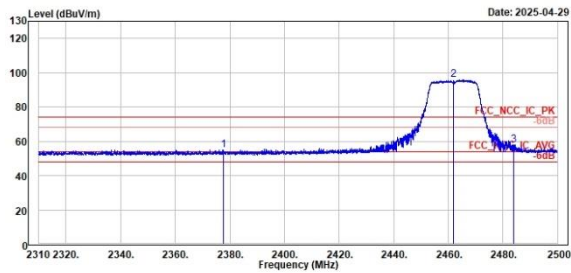


802.11n HT20

High Channel (Horizontal) Peak



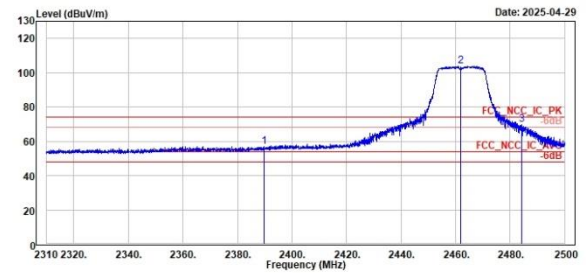
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2377.69	54.99	17.02	37.97	74.00	-19.01	270	16	Peak	Horizontal		
2 *	2462.00	96.01	57.56	38.45	74.00	22.01	270	16	Peak	Horizontal		
3	2483.95	57.94	19.46	38.48	74.00	-16.06	270	16	Peak	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.85	56.92	18.84	38.08	74.00	-17.08	157	302	Peak	Vertical		
2 *	2462.00	103.88	65.43	38.45	74.00	29.88	157	302	Peak	Vertical		
3 †	2484.18	69.75	31.27	38.48	74.00	-4.25	157	302	Peak	Vertical		

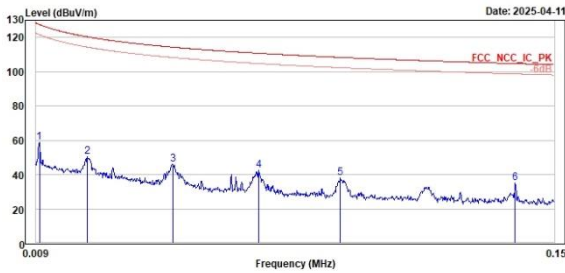
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

802.11b

Low Channel(Open) 9kHz~150kHz



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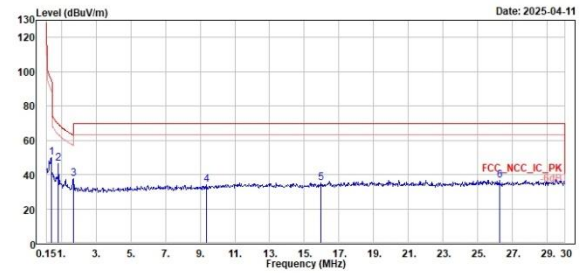


	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	58.68	40.57	18.11	127.60	-68.92	100	110 Peak	Open	
2	0.02	50.64	30.98	19.66	120.37	-69.73	100	201 Peak	Open	
3	0.05	45.93	26.91	19.02	114.30	-68.37	100	201 Peak	Open	
4	0.07	42.48	23.99	18.49	110.76	-68.28	100	191 Peak	Open	
5	0.09	37.85	19.83	18.02	108.34	-70.49	100	198 Peak	Open	
6	0.14	35.29	17.02	18.27	104.72	-69.43	100	175 Peak	Open	

Low Channel(Open) 150kHz~30MHz



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.42	49.68	31.01	18.67	95.17	-45.49	100	184 Peak	Open	
2	0.84	46.57	27.64	18.93	69.15	-22.58	100	137 Peak	Open	
3	1.70	37.67	18.84	18.83	62.98	-25.31	100	137 Peak	Open	
4	9.37	34.07	13.07	21.00	69.50	-35.43	100	19 Peak	Open	
5	15.97	35.12	13.23	21.89	69.50	-34.38	100	61 Peak	Open	
6	26.24	36.63	13.76	22.87	69.50	-32.87	100	248 Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

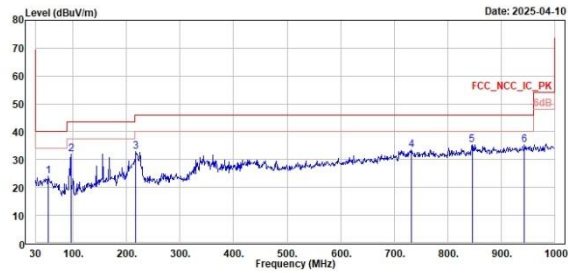
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



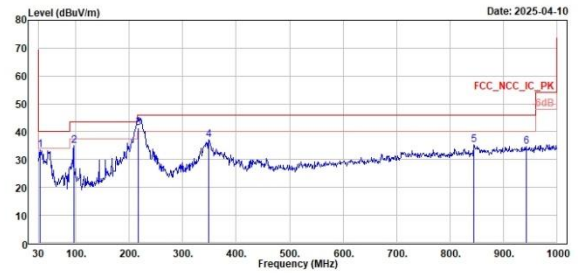
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	53.28	24.11	29.81	-5.78	40.00	-15.89	200	114 Peak	Horizontal	
2	95.96	31.82	43.58	-11.68	43.50	-11.68	200	221 Peak	Horizontal	
3	217.21	32.78	41.05	-8.27	46.00	-13.22	200	273 Peak	Horizontal	
4	732.28	33.60	30.81	2.79	46.00	-12.40	100	52 Peak	Horizontal	
5	845.77	35.42	31.33	4.09	46.00	-10.58	100	212 Peak	Horizontal	
6	943.74	35.39	29.72	5.67	46.00	-10.61	100	55 Peak	Horizontal	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	32.91	33.57	41.21	-7.64	40.00	-6.43	150	360 Peak	Vertical	
2	95.96	34.90	46.58	-11.68	43.50	-8.60	100	222 Peak	Vertical	
3	217.21	41.33	49.60	-8.27	46.00	-4.67	100	233 QP	Vertical	
4	349.13	37.20	41.51	-4.31	46.00	-8.80	100	218 Peak	Vertical	
5	844.80	35.20	31.13	4.07	46.00	-10.80	100	81 Peak	Vertical	
6	942.77	34.69	29.03	5.66	46.00	-11.31	100	309 Peak	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

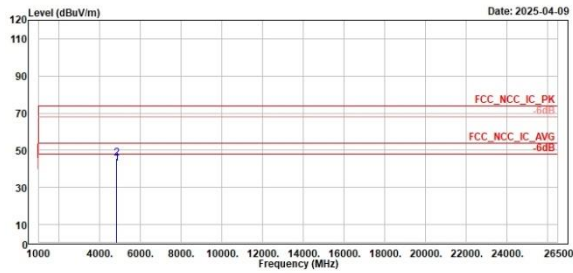
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



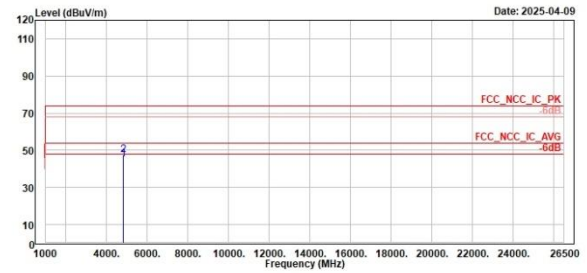
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level	Line	Limit	dB	cm	deg		
1	4824.00	42.74	51.00	-9.06	54.00	-11.26	100	61 Average	Horizontal	
2	4824.00	45.41	54.47	-9.06	74.00	-28.59	100	61 Peak	Horizontal	



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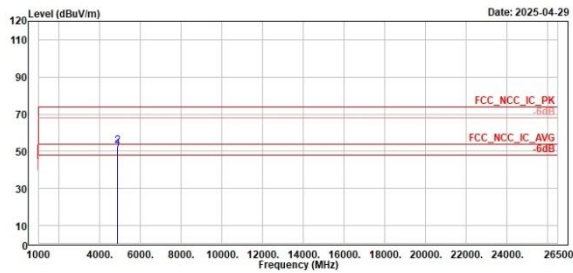
	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level	Line	Limit	dB	cm	deg		
1	4824.00	45.05	54.11	-9.06	54.00	-8.95	111	294 Average	Vertical	
2	4824.00	47.39	56.45	-9.06	74.00	-26.61	111	294 Peak	Vertical	

802.11b

Middle Channel (Horizontal)



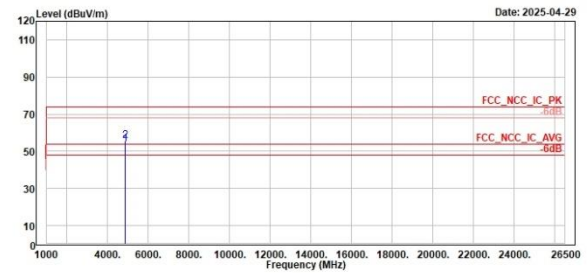
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4874.00	50.93	59.97	-9.04	54.00	-3.07	290	188	Average	Horizontal		
2	4874.00	53.10	62.14	-9.04	74.00	-20.90	290	188	Peak	Horizontal		



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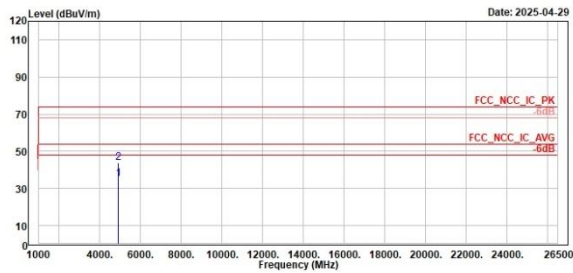
	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4874.00	53.70	62.74	-9.04	54.00	-0.30	283	303	Average	Vertical		
2	4874.00	55.63	64.67	-9.04	74.00	-18.37	283	303	Peak	Vertical		

802.11b

High Channel (Horizontal)



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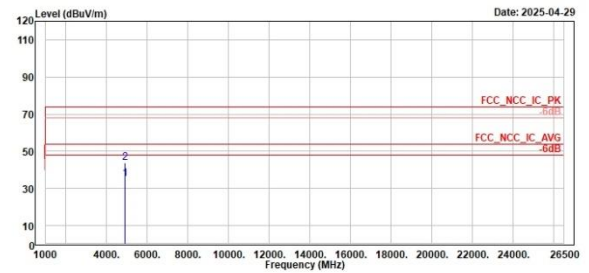


	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4924.00	35.00	43.83	-8.83	54.00	-19.00	375	129	Average	Horizontal		
2	4924.00	43.73	52.56	-8.83	74.00	-30.27	375	129	Peak	Horizontal		

High Channel (Vertical)



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4924.00	35.27	44.10	-8.83	54.00	-18.73	180	6	Average	Vertical		
2	4924.00	43.59	52.42	-8.83	74.00	-30.41	180	6	Peak	Vertical		

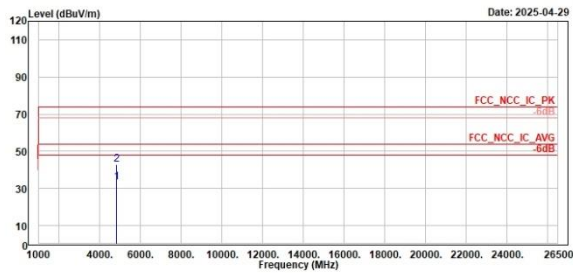
802.11g

Low Channel (Horizontal)

Low Channel (Vertical)



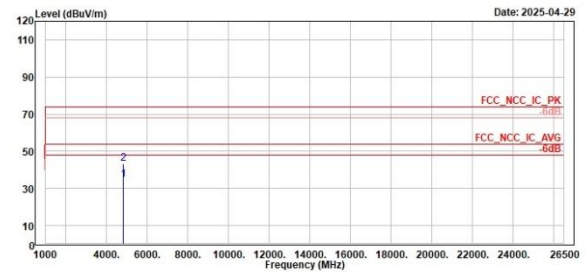
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4824.00	33.11	42.30	-9.19	54.00	-20.89	249	351	Average	Horizontal	
2	4824.00	43.04	52.23	-9.19	74.00	-30.96	249	351	Peak	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4824.00	34.88	44.07	-9.19	54.00	-19.12	180	12	Average	Vertical	
2	4824.00	43.41	52.60	-9.19	74.00	-30.59	180	12	Peak	Vertical	

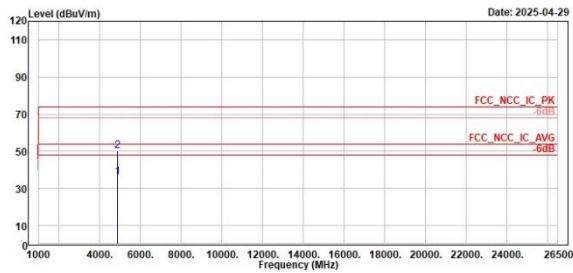
802.11g

Middle Channel (Horizontal)

Middle Channel (Vertical)



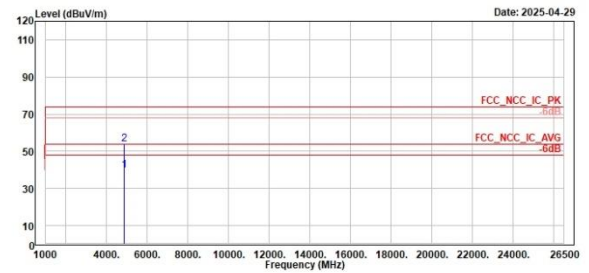
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4874.00	36.23	45.27	-9.04	54.00	-17.77	272	187	Average	Horizontal		
2	4874.00	50.06	59.10	-9.04	74.00	-23.94	272	187	Peak	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4874.00	39.71	48.75	-9.04	54.00	-14.29	210	292	Average	Vertical		
2	4874.00	53.68	62.72	-9.04	74.00	-20.32	210	292	Peak	Vertical		

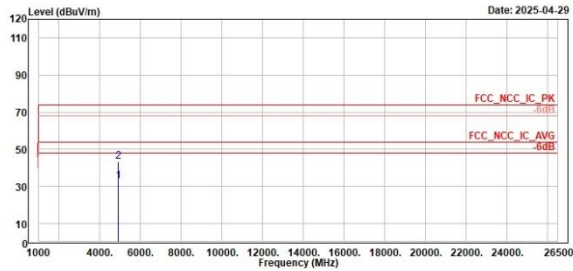
802.11g

High Channel (Horizontal)

High Channel (Vertical)



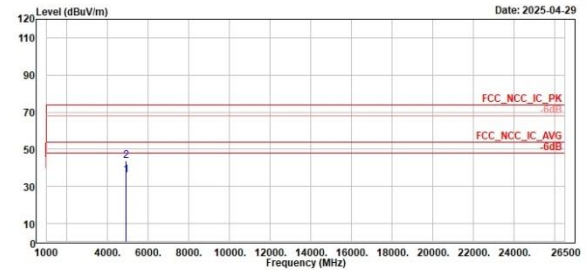
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4924.00	32.86	41.69	-8.83	54.00	-21.14	269	360	Average	Horizontal	
2	4924.00	43.39	52.22	-8.83	74.00	-30.61	269	360	Peak	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4924.00	36.14	44.97	-8.83	54.00	-17.86	255	306	Average	Vertical	
2	4924.00	43.98	52.81	-8.83	74.00	-30.02	255	306	Peak	Vertical	

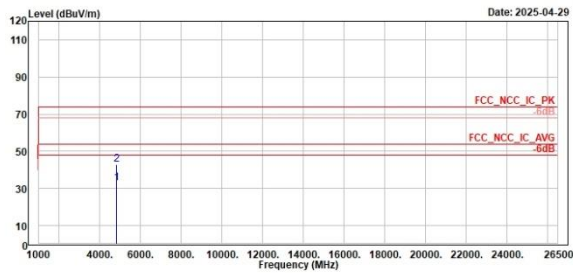
802.11n HT20

Low Channel (Horizontal)

Low Channel (Vertical)



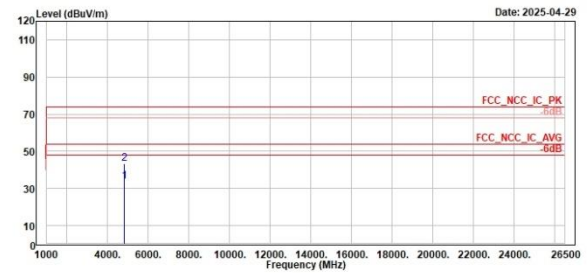
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4824.00	32.89	42.08	-9.19	54.00	-21.11	350	171	Average	Horizontal	
2	4824.00	42.72	51.91	-9.19	74.00	-31.28	350	171	Peak	Horizontal	



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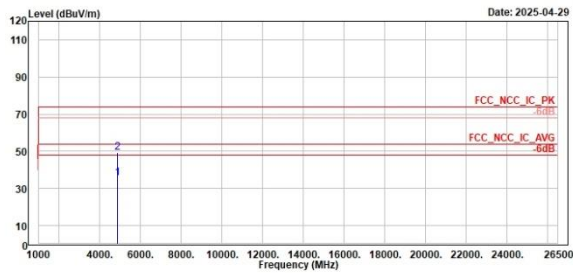
Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4824.00	33.97	43.16	-9.19	54.00	-20.83	286	11	Average	Vertical	
2	4824.00	43.49	52.68	-9.19	74.00	-30.51	286	11	Peak	Vertical	

802.11n HT20

Middle Channel (Horizontal)



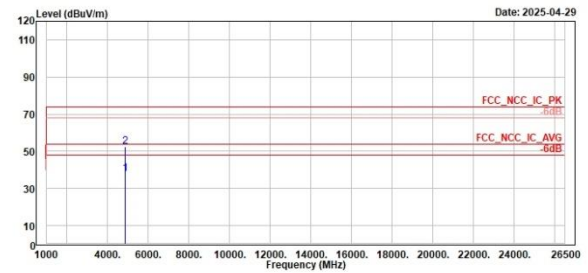
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	4874.00	35.52	44.56	-9.04	54.00	-18.48	288			0 Average	Horizontal	
2	4874.00	49.08	58.12	-9.04	74.00	-24.92	288			0 Peak	Horizontal	



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	4874.00	37.76	46.80	-9.04	54.00	-16.24	287			294 Average	Vertical	
2	4874.00	52.35	61.39	-9.04	74.00	-21.65	287			294 Peak	Vertical	

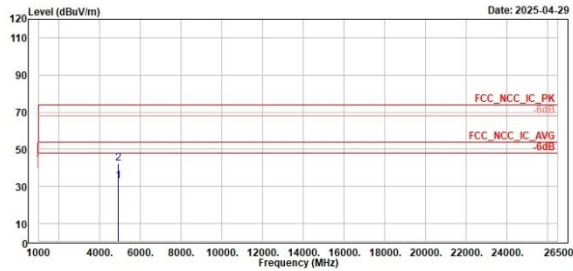
802.11n HT20

High Channel (Horizontal)

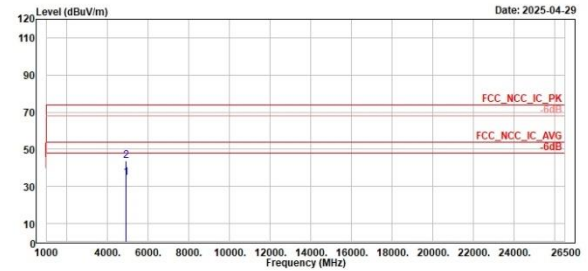
High Channel (Vertical)



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Mains Conducted Emission, 150kHz ~ 30MHz

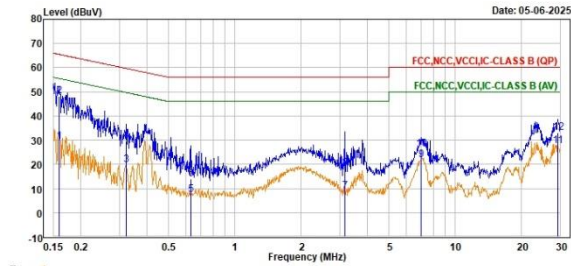
Worst Band

(Line)

(Neutral)



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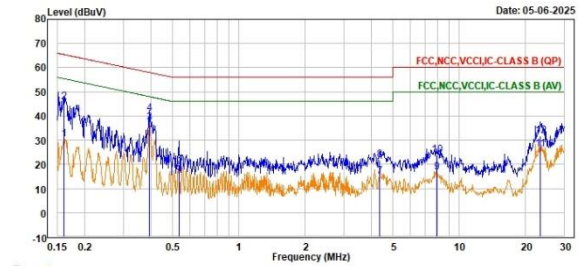


Trace: 1

	Freq	Level	Read	Level	Factor	Limit	Over			
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	Remark	Pol/Phase	Note
1	0.16	29.35	19.72	9.63	55.54	-26.19	Average	line1		
2	0.16	48.01	38.38	9.63	65.54	-17.53	QP	line1		
3	0.32	19.92	10.29	9.63	49.71	-29.79	Average	line1		
4	0.32	29.84	20.21	9.63	59.71	-29.87	QP	line1		
5	0.63	7.61	-2.02	9.63	46.00	-38.39	Average	line1		
6	0.63	14.01	4.38	9.63	56.00	-41.99	QP	line1		
7	3.15	8.00	-0.88	9.68	46.00	-37.20	Average	line1		
8	3.15	16.28	8.60	9.68	56.00	-37.72	QP	line1		
9	7.00	21.92	12.20	9.72	50.00	-28.08	Average	line1		
10	7.00	26.37	16.65	9.72	60.00	-33.63	QP	line1		
11	29.26	27.65	17.97	9.68	50.00	-22.35	Average	line1		
12	29.26	33.01	23.33	9.68	60.00	-26.99	QP	line1		



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Trace: 1

	Freq	Level	Read	Level	Factor	Limit	Over			
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	Remark	Pol/Phase	Note
1	0.16	30.38	20.74	9.64	55.46	-25.08	Average	neutral		
2	0.16	45.75	36.11	9.64	65.46	-19.71	QP	neutral		
3	0.39	37.21	27.58	9.63	48.01	-10.00	Average	neutral		
4	0.39	40.91	31.28	9.63	58.01	-17.10	QP	neutral		
5	0.53	16.25	6.62	9.63	46.00	-29.75	Average	neutral		
6	0.53	19.91	10.28	9.63	56.00	-36.09	QP	neutral		
7	4.36	14.97	5.27	9.70	46.00	-31.03	Average	neutral		
8	4.36	21.93	12.23	9.70	56.00	-34.07	QP	neutral		
9	7.89	16.70	6.94	9.76	50.00	-33.30	Average	neutral		
10	7.89	23.90	14.14	9.76	60.00	-36.10	QP	neutral		
11	23.38	26.32	16.48	9.84	50.00	-23.68	Average	neutral		
12	23.38	31.61	21.77	9.84	60.00	-28.39	QP	neutral		

PIC32WM-BW1002UC, ANT 11, 2nd Source
Band Edges, 2.31GHz ~ 2.9GHz

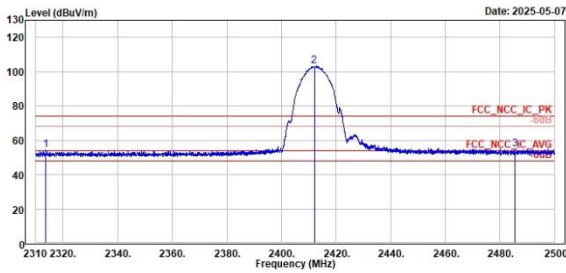
802.11b

Low Channel (Horizontal) Peak

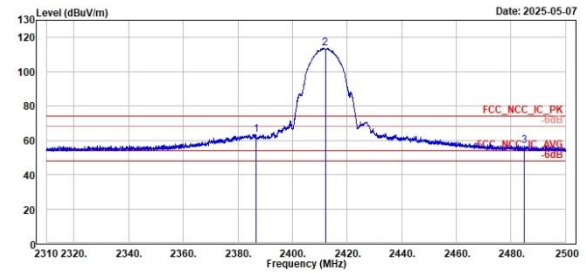
Low Channel (Vertical) Peak



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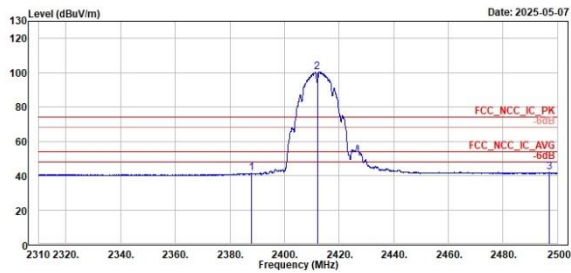


802.11b

Low Channel (Horizontal) Average



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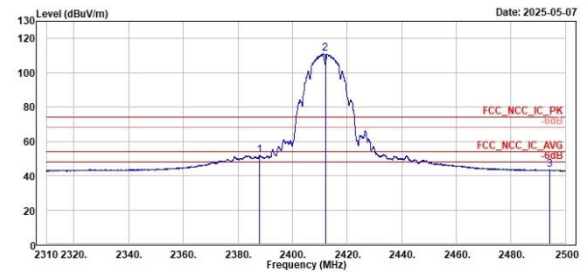


	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2388.04	41.35	3.29	38.06	54.00	-12.65		333	22	Average	Horizontal	
2 *	2412.00	100.54	62.30	38.24	54.00	46.54		333	22	Average	Horizontal	
3	2496.96	41.78	3.29	38.49	54.00	-12.22		333	22	Average	Horizontal	

Low Channel (Vertical) Average



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2388.04	51.73	13.67	38.06	54.00	-2.27		228	290	Average	Vertical	
2 *	2412.00	111.07	72.83	38.24	54.00	57.07		228	290	Average	Vertical	
3	2494.25	43.42	4.93	38.49	54.00	-10.58		228	290	Average	Vertical	

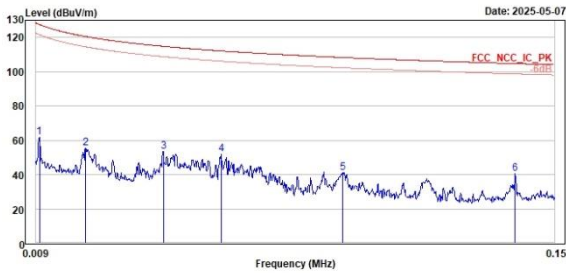
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

802.11b

Low Channel(Open) 9kHz~150kHz



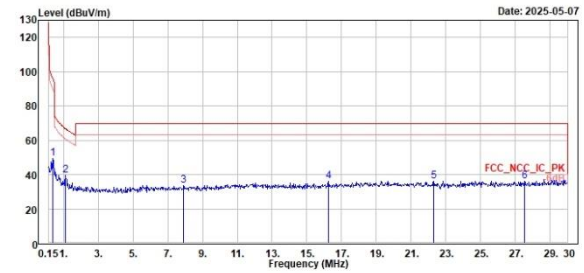
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Factor	Line	Limit	cm	deg			
1	0.01	61.69	43.58	18.11	127.60	-65.91	100	316 Peak	Open	
2	0.02	55.21	35.57	19.64	120.53	-65.32	100	298 Peak	Open	
3	0.04	53.35	34.34	19.01	114.79	-61.44	100	360 Peak	Open	
4	0.06	51.66	33.67	17.99	112.13	-60.47	100	316 Peak	Open	
5	0.09	41.21	23.19	18.02	108.29	-67.08	100	258 Peak	Open	
6	0.14	40.58	22.31	18.27	104.72	-64.14	100	204 Peak	Open	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Factor	Line	Limit	cm	deg			
1	0.39	49.54	30.90	18.64	95.81	-46.27	100	230 Peak	Open	
2	1.11	39.35	20.56	18.79	66.74	-27.39	100	224 Peak	Open	
3	7.91	33.64	12.87	20.77	69.50	-35.86	100	216 Peak	Open	
4	16.27	36.10	14.11	21.99	69.50	-33.40	100	221 Peak	Open	
5	22.30	36.12	13.86	22.26	69.50	-33.38	100	360 Peak	Open	
6	27.52	36.21	13.20	23.01	69.50	-33.29	100	188 Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

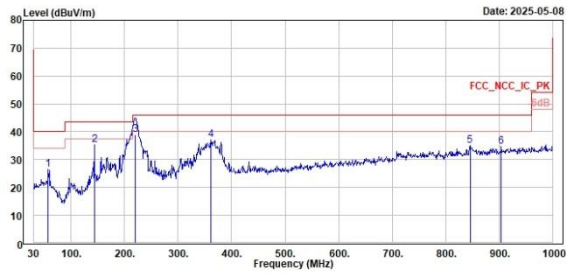
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



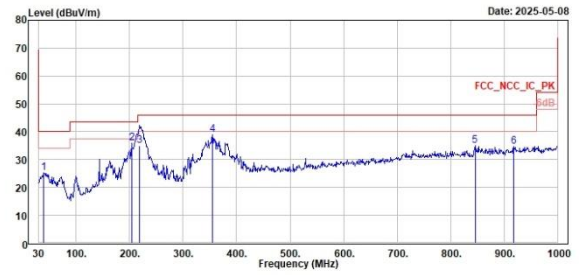
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	57.16	26.39	32.36	-5.97	40.00	-13.61	200	327 Peak	Horizontal	
2	143.49	35.21	41.72	-6.51	43.50	-8.29	200	87 Peak	Horizontal	
3	220.12	38.81	47.10	-8.29	46.00	-7.19	100	222 QP	Horizontal	
4	361.74	37.21	41.11	-3.90	46.00	-8.79	100	360 Peak	Horizontal	
5	845.77	34.94	30.68	4.26	46.00	-11.06	200	102 Peak	Horizontal	
6	903.97	34.72	29.47	5.25	46.00	-11.28	152	360 Peak	Horizontal	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	39.70	25.25	31.05	-6.70	40.00	-14.75	100	205 Peak	Vertical	
2	203.63	35.94	44.23	-8.29	43.50	-7.56	100	344 Peak	Vertical	
3	219.15	34.93	43.26	-8.33	46.00	-11.07	100	334 QP	Vertical	
4	354.95	38.81	42.97	-4.16	46.00	-7.19	100	150 Peak	Vertical	
5	845.77	34.92	30.66	4.26	46.00	-11.08	100	107 Peak	Vertical	
6	917.55	34.61	29.24	5.37	46.00	-11.39	100	247 Peak	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

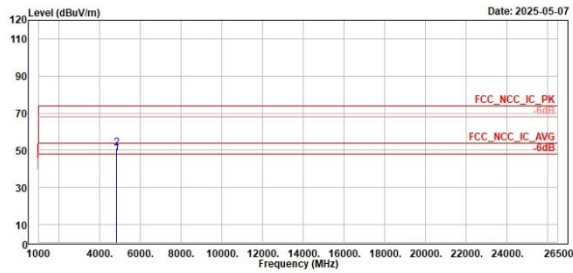
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



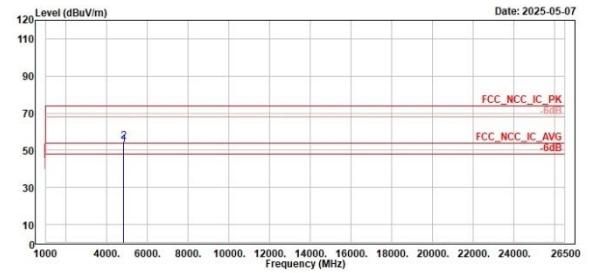
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	4824.00	48.23	57.42	-9.19	54.00	-5.77	100	61 Average	Horizontal	
2	4824.00	51.14	60.33	-9.19	74.00	-22.66	100	61 Peak	Horizontal	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	4824.00	52.98	62.17	-9.19	54.00	-1.02	361	298 Average	Vertical	
2	4824.00	54.76	63.95	-9.19	74.00	-19.24	361	298 Peak	Vertical	

Mains Conducted Emission, 150kHz ~ 30MHz

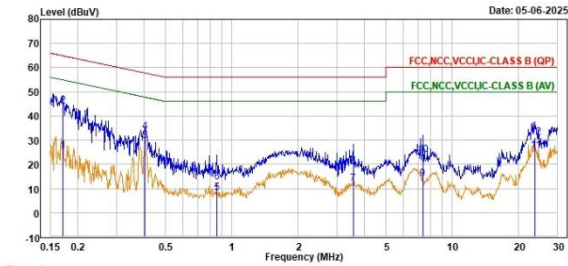
Worst Band

(Line)

(Neutral)



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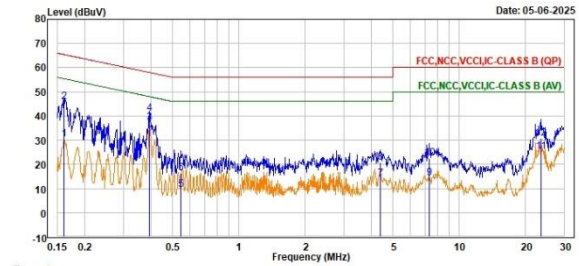


Trace: 1

	Freq	Level	Read	Limit	Over	Remark	Pol/Phase	Note
	MHz	dBuV	Factor	Line	Limit			
	MHz	dBuV	dB	dBuV	dB			
1	0.17	25.63	16.00	9.63	54.97	-29.34 Average	line1	
2	0.17	44.08	34.45	9.63	64.97	-20.89 QP	line1	
3	0.40	29.79	20.07	9.63	47.00	-18.10 Average	line1	
4	0.40	33.33	23.70	9.63	57.00	-24.47 QP	line1	
5	0.85	8.27	-1.37	9.64	46.00	-37.73 Average	line1	
6	0.85	12.51	2.87	9.64	56.00	-43.49 QP	line1	
7	3.55	12.06	2.38	9.68	46.00	-33.94 Average	line1	
8	3.55	18.97	9.29	9.68	56.00	-37.03 QP	line1	
9	7.36	13.90	4.18	9.72	50.00	-36.10 Average	line1	
10	7.36	23.88	14.16	9.72	60.00	-36.12 QP	line1	
11	23.85	25.75	16.03	9.72	50.00	-24.25 Average	line1	
12	23.85	30.96	21.26	9.72	60.00	-29.02 QP	line1	



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Trace: 1

	Freq	Level	Read	Limit	Over	Remark	Pol/Phase	Note
	MHz	dBuV	Factor	Line	Limit			
	MHz	dBuV	dB	dBuV	dB			
1	0.16	30.50	20.86	9.64	55.42	-24.92 Average	neutral	
2	0.16	45.90	36.26	9.64	65.42	-19.52 QP	neutral	
3	0.39	37.08	27.45	9.63	48.01	-10.93 Average	neutral	
4	0.39	40.85	31.22	9.63	58.01	-17.16 QP	neutral	
5	0.54	9.49	-0.14	9.63	46.00	-36.51 Average	neutral	
6	0.54	16.50	6.87	9.63	56.00	-39.50 QP	neutral	
7	4.38	14.11	4.41	9.70	46.00	-31.89 Average	neutral	
8	4.38	20.66	10.96	9.70	56.00	-35.34 QP	neutral	
9	7.32	14.19	4.45	9.74	50.00	-35.81 Average	neutral	
10	7.32	22.50	12.76	9.74	60.00	-37.50 QP	neutral	
11	23.50	25.29	15.45	9.84	50.00	-24.71 Average	neutral	
12	23.50	30.65	20.81	9.84	60.00	-29.35 QP	neutral	

PIC32WM-BW1002UC, ANT 12, Main Source
Band Edges, 2.31GHz ~ 2.9GHz

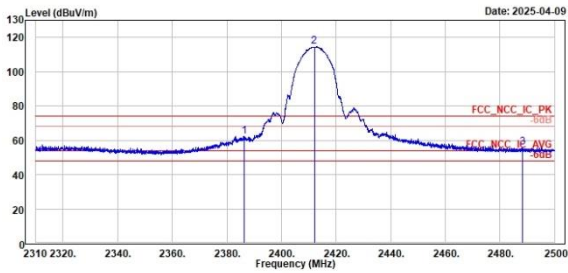
802.11b

Low Channel (Horizontal) Peak

Low Channel (Vertical) Peak



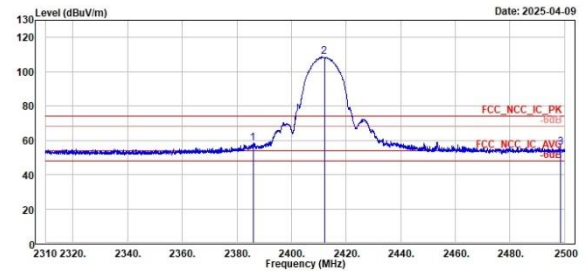
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	Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2386.24	62.19	24.02	38.17	74.00	-11.81	312		S Peak	Horizontal	
2 *	2412.00	114.67	76.31	38.36	74.00	40.67	312		S Peak	Horizontal	
3	2488.22	55.97	17.36	38.61	74.00	-18.03	312		S Peak	Horizontal	



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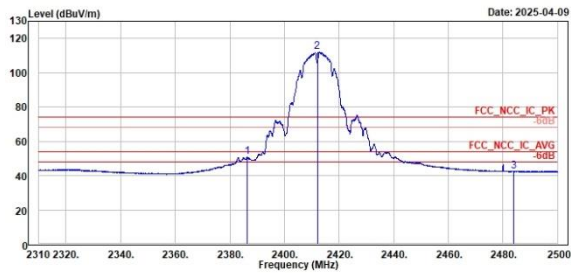
	Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2385.91	58.33	20.16	38.17	74.00	-15.67	309		74 Peak	Vertical	
2 *	2412.00	108.68	70.32	38.36	74.00	34.68	309		74 Peak	Vertical	
3	2498.48	55.87	17.25	38.62	74.00	-18.13	309		74 Peak	Vertical	

802.11b

Low Channel (Horizontal) Average



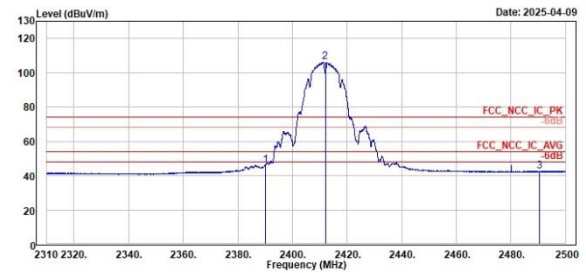
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2386.33	50.72	12.55	38.17	54.00	-3.28	312	5	Average	Horizontal		
2	2412.00	112.11	75.75	38.36	54.00	58.11	312	5	Average	Horizontal		
3	2483.90	42.67	4.07	38.60	54.00	-11.33	312	5	Average	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.99	46.00	7.79	38.21	54.00	-8.00	309	74	Average	Vertical		
2	2412.00	106.14	67.78	38.36	54.00	52.14	309	74	Average	Vertical		
3	2490.31	42.54	3.93	38.61	54.00	-11.46	309	74	Average	Vertical		

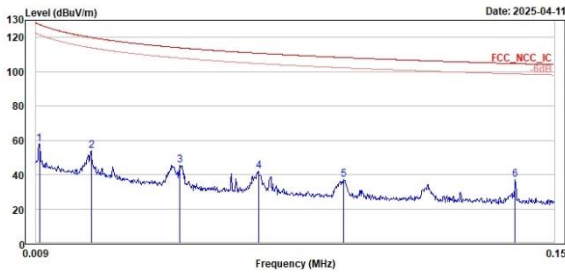
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

802.11b

Low Channel(Open) 9kHz~150kHz



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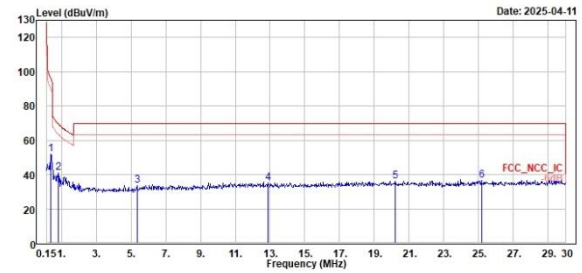


Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level	Line	Limit	cm	deg			
1	0.01	57.90	39.79	18.11	127.60	-69.70	100	142 Peak	Open	
2	0.02	53.64	33.93	19.71	119.95	-66.31	100	201 Peak	Open	
3	0.05	45.59	26.57	19.02	113.93	-68.34	100	201 Peak	Open	
4	0.07	41.88	23.39	18.49	110.76	-68.88	100	197 Peak	Open	
5	0.09	37.03	19.01	18.02	108.26	-71.23	100	195 Peak	Open	
6	0.14	36.90	18.63	18.27	104.72	-67.82	100	184 Peak	Open	

Low Channel(Open) 150kHz~30MHz



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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level	Line	Limit	cm	deg			
1	0.39	51.91	33.27	18.64	95.81	-43.90	100	195 Peak	Open	
2	8.81	41.12	22.16	18.96	69.47	-28.35	100	144 Peak	Open	
3	5.34	33.52	13.50	20.02	69.50	-35.98	100	123 Peak	Open	
4	12.87	35.06	13.47	21.59	69.50	-34.44	100	129 Peak	Open	
5	20.21	36.23	13.41	22.82	69.50	-33.27	100	355 Peak	Open	
6	25.16	36.76	13.53	23.23	69.50	-32.74	100	14 Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

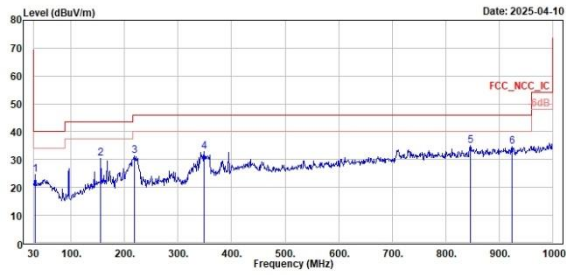
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



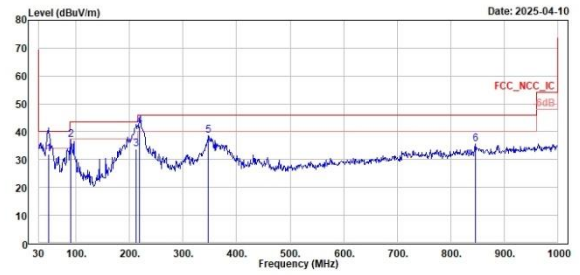
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	32.91	24.76	32.40	-7.64	40.00	-15.24	100	152 Peak	Horizontal	
2	155.13	30.42	36.22	-5.80	43.50	-13.08	100	264 Peak	Horizontal	
3	219.15	31.25	39.49	-8.24	46.00	-14.75	100	181 Peak	Horizontal	
4	349.13	32.92	37.23	-4.31	46.00	-13.08	100	278 Peak	Horizontal	
5	846.74	34.94	38.83	4.11	46.00	-11.06	100	178 Peak	Horizontal	
6	924.34	34.59	29.43	5.16	46.00	-11.41	100	22 Peak	Horizontal	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	48.43	31.61	37.58	-5.77	40.00	-8.19	100	113 QP	Vertical	
2	98.14	36.97	49.39	-12.42	43.50	-6.53	100	41 Peak	Vertical	
3	212.36	33.75	42.10	-8.35	43.50	-9.75	100	100 QP	Vertical	
4	219.15	41.97	50.21	-8.24	46.00	-4.03	100	233 QP	Vertical	
5	347.19	38.76	43.03	-4.27	46.00	-7.24	100	181 Peak	Vertical	
6	846.74	35.56	31.45	4.11	46.00	-10.44	200	320 Peak	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

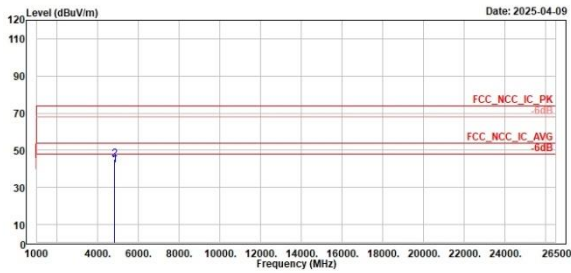
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



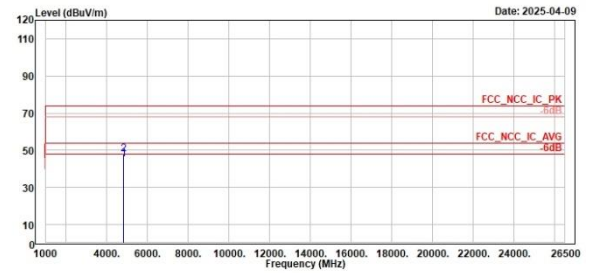
TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4824.00	41.98	51.04	-9.06	54.00	-12.02	100	327	Average	Horizontal	
2	4824.00	45.35	54.41	-9.06	74.00	-28.65	100	327	Peak	Horizontal	



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4824.00	45.16	54.22	-9.06	54.00	-8.84	106	84	Average	Vertical	
2	4824.00	47.82	56.88	-9.06	74.00	-26.18	106	84	Peak	Vertical	

PIC32WM-BW1002UE, ANT 11, Main Source
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

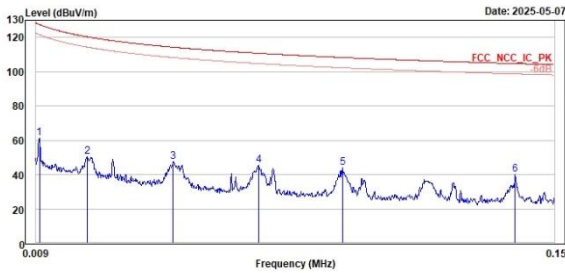
802.11b

Low Channel(Open) 9kHz~150kHz

Low Channel(Open) 150kHz~30MHz



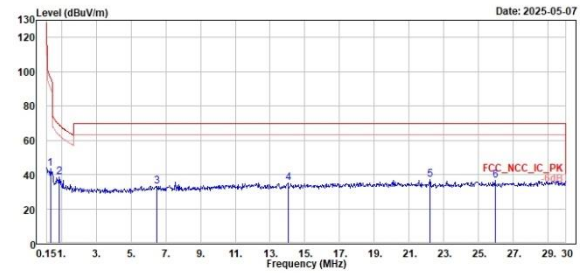
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	61.52	43.41	18.11	127.60	-66.08	100	278 Peak	Open	
2	0.02	50.61	30.95	19.66	120.37	-69.76	100	277 Peak	Open	
3	0.05	47.30	28.28	19.02	114.27	-66.97	100	157 Peak	Open	
4	0.07	45.31	26.82	18.49	110.76	-65.45	100	277 Peak	Open	
5	0.09	44.08	26.06	18.02	108.29	-64.21	100	277 Peak	Open	
6	0.14	39.86	21.59	18.27	104.72	-64.86	100	191 Peak	Open	



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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.36	43.35	24.74	18.61	96.50	-53.15	100	323 Peak	Open	
2	0.87	38.36	19.46	18.90	68.85	-30.49	100	268 Peak	Open	
3	6.51	33.11	12.36	20.75	69.50	-36.39	100	54 Peak	Open	
4	14.03	35.16	13.61	21.55	69.50	-34.34	100	266 Peak	Open	
5	22.18	37.09	14.79	22.30	69.50	-32.41	100	300 Peak	Open	
6	25.94	36.63	13.81	22.82	69.50	-32.87	100	360 Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

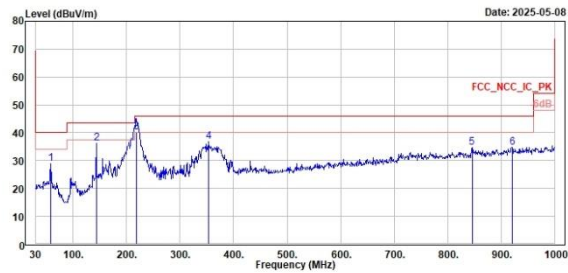
802.11b

Low Channel (Horizontal)

Low Channel (Vertical)



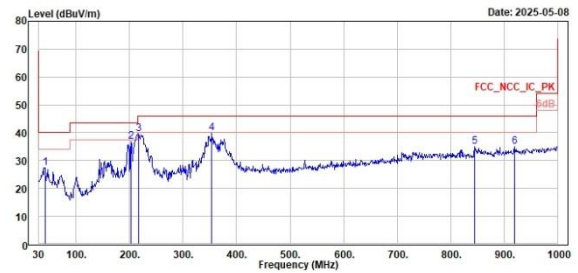
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	58.13	29.05	35.20	-6.15	40.00	-10.95	200	135	Peak	Horizontal		
2	143.49	36.13	42.64	-6.51	43.50	-7.37	200	90	Peak	Horizontal		
3	218.18	40.19	48.54	-8.35	46.00	-5.81	100	283	QP	Horizontal		
4	353.01	36.69	40.89	-4.20	46.00	-9.31	100	306	Peak	Horizontal		
5	845.77	34.70	30.44	4.26	46.00	-11.30	100	28	Peak	Horizontal		
6	920.46	34.63	29.30	5.33	46.00	-11.37	100	150	Peak	Horizontal		



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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	41.64	27.33	33.09	-6.56	40.00	-12.67	100	263	Peak	Vertical		
2	202.66	36.81	45.10	-8.29	43.50	-6.69	100	359	Peak	Vertical		
3	216.24	39.55	47.93	-8.38	46.00	-6.45	100	232	Peak	Vertical		
4	353.98	39.89	44.07	-4.18	46.00	-6.11	100	176	Peak	Vertical		
5	844.80	34.88	30.64	4.24	46.00	-11.12	200	360	Peak	Vertical		
6	919.49	34.84	29.50	5.34	46.00	-11.16	100	162	Peak	Vertical		

Mains Conducted Emission, 150kHz ~ 30MHz

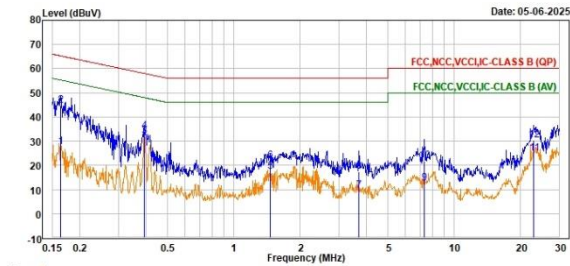
Worst Band

(Line)

(Neutral)



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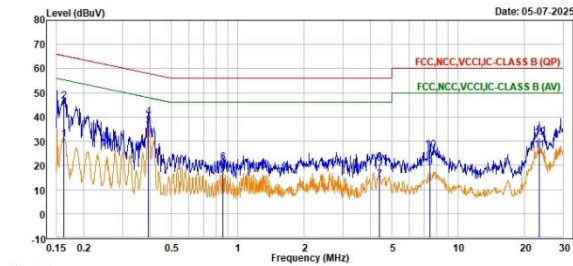


Trace: 1

	Freq	Level	Read	Limit	Over		
	MHz	dBuV	Level	Line	Limit	Remark	Pol/Phase
1	0.16	27.74	18.11	9.63	55.30	-27.56 Average	line1
2	0.16	44.85	35.22	9.63	65.30	-20.45 QP	line1
3	0.39	31.93	22.30	9.63	48.05	-16.12 Average	line1
4	0.39	34.16	24.53	9.63	58.05	-23.89 QP	line1
5	1.46	17.50	7.85	9.65	46.00	-28.50 Average	line1
6	1.46	21.72	12.07	9.65	56.00	-34.28 QP	line1
7	3.68	9.50	-0.18	9.68	46.00	-36.50 Average	line1
8	3.68	17.32	7.64	9.68	56.00	-38.68 QP	line1
9	7.32	12.74	3.02	9.72	50.00	-37.26 Average	line1
10	7.32	21.80	12.08	9.72	60.00	-38.20 QP	line1
11	23.04	24.89	15.17	9.72	50.00	-25.11 Average	line1
12	23.04	30.24	20.52	9.72	60.00	-29.76 QP	line1



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Trace: 1

	Freq	Level	Read	Limit	Over		
	MHz	dBuV	Level	Line	Limit	Remark	Pol/Phase
1	0.16	30.89	21.25	9.64	55.30	-24.49 Average	neutral
2	0.16	46.39	36.75	9.64	65.30	-18.99 QP	neutral
3	0.39	36.18	26.55	9.63	48.05	-11.67 Average	neutral
4	0.39	39.79	30.16	9.63	58.05	-18.26 QP	neutral
5	0.85	17.63	7.99	9.64	46.00	-28.37 Average	neutral
6	0.85	21.08	11.44	9.64	56.00	-34.92 QP	neutral
7	4.38	13.88	4.18	9.70	46.00	-32.12 Average	neutral
8	4.38	20.89	11.19	9.70	56.00	-35.11 QP	neutral
9	7.47	19.05	9.31	9.74	50.00	-30.95 Average	neutral
10	7.47	26.24	16.50	9.74	60.00	-33.76 QP	neutral
11	23.38	26.18	16.34	9.84	50.00	-23.82 Average	neutral
12	23.38	31.51	21.67	9.84	60.00	-28.49 QP	neutral