

Appendix B: Test Results of Radiated Spurious Emissions & Mains

Conducted Emission Test

Band Edges, 2.31GHz ~ 2.5GHz

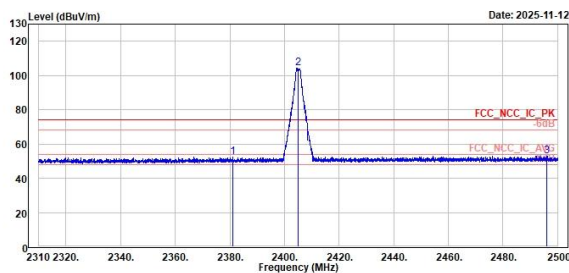
802.15.4

Low Channel (Horizontal) Peak

Low Channel (Vertical) Peak



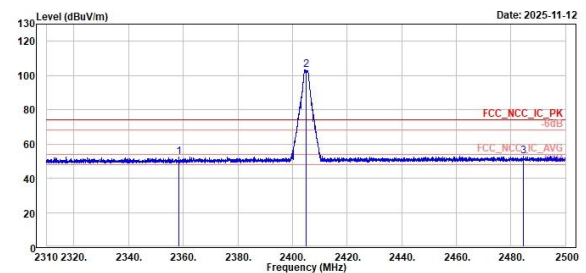
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2381.06	52.48	47.78	4.70	74.00	-21.52	268	262	Peak	Horizontal		
2 *	2405.00	104.10	99.21	4.89	74.00	30.10	268	262	Peak	Horizontal		
3	2496.16	52.95	47.84	5.11	74.00	-21.05	268	262	Peak	Horizontal		



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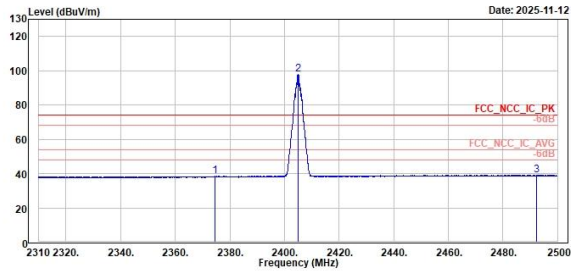
	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2358.30	52.36	47.66	4.50	74.00	-21.64	321	286	Peak	Vertical		
2 *	2405.00	103.27	98.38	4.89	74.00	29.27	321	286	Peak	Vertical		
3	2484.61	52.82	47.72	5.10	74.00	-21.18	321	286	Peak	Vertical		

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Low Channel (Horizontal) Average



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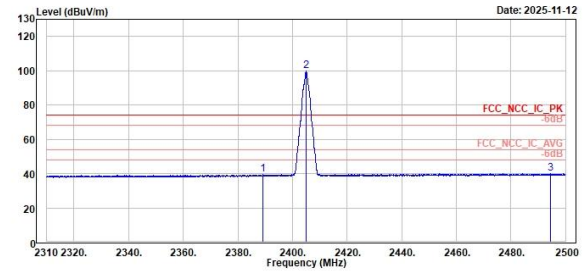


	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2374.45	38.53	33.89	4.64	54.00	-15.47		268	262	Average	Horizontal	
2 *	2405.00	98.09	93.28	4.89	54.00	44.09		268	262	Average	Horizontal	
3	2492.44	39.07	33.97	5.10	54.00	-14.93		268	262	Average	Horizontal	

Low Channel (Vertical) Average



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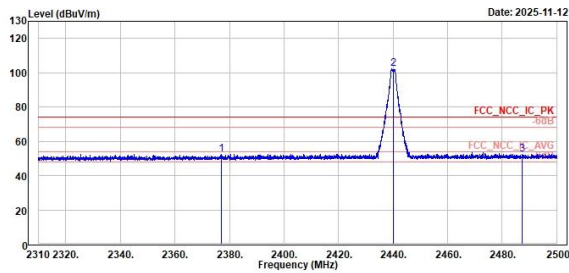
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	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2389.23	39.39	34.63	4.76	54.00	-14.61		321	286	Average	Vertical	
2 *	2405.00	99.61	94.72	4.89	54.00	45.61		321	286	Average	Vertical	
3	2494.49	39.90	34.80	5.10	54.00	-14.10		321	286	Average	Vertical	

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Middle Channel (Horizontal) Peak



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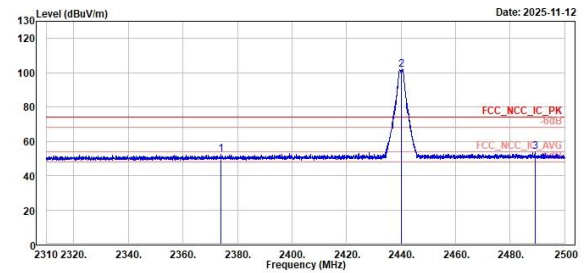


	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2377.18	52.34	47.68	4.66	74.00	-21.66	261	263	Peak	Horizontal		
2 *	2440.00	102.22	97.19	5.03	74.00	28.22	261	263	Peak	Horizontal		
3	2487.27	52.58	47.47	5.11	74.00	-21.42	261	263	Peak	Horizontal		

Middle Channel (Vertical) Peak



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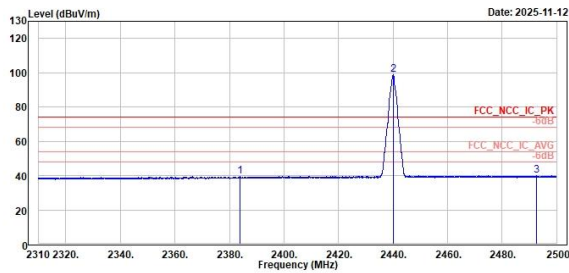
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	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2374.03	52.54	47.91	4.63	74.00	-21.46	319	241	Peak	Vertical		
2 *	2440.00	101.86	96.83	5.03	74.00	27.86	319	241	Peak	Vertical		
3	2489.13	53.84	48.73	5.11	74.00	-20.16	319	241	Peak	Vertical		

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Middle Channel (Horizontal) Average



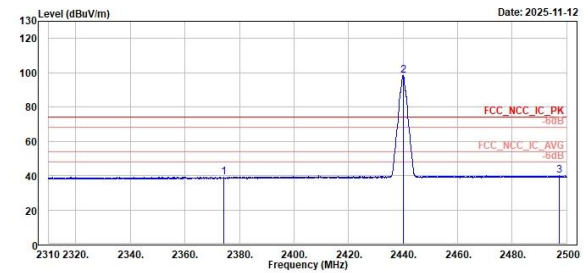
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Middle Channel (Vertical) Average



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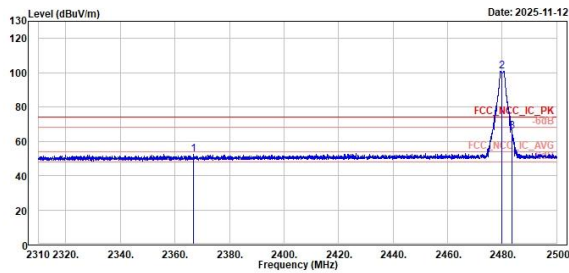


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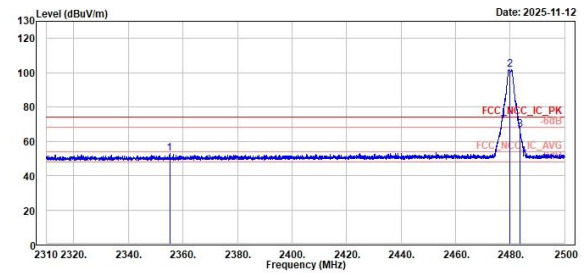
High Channel (Horizontal) Peak



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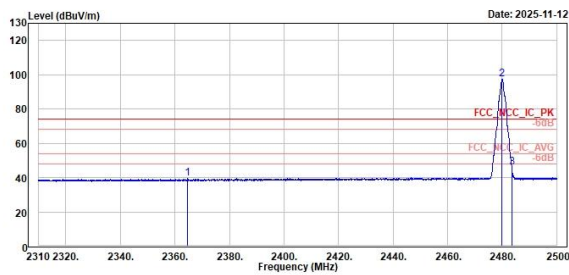


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High Channel (Horizontal) Average



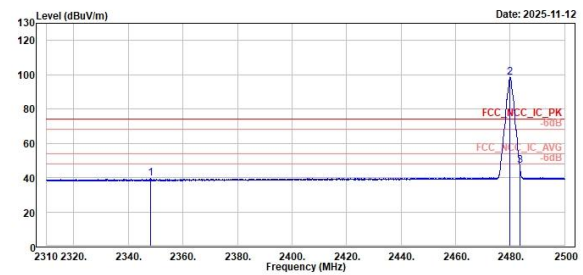
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	2364.76	39.39	34.83	4.56	54.00	-14.61	257	266	Average	Horizontal		
2 *	2480.00	97.52	92.42	5.10	54.00	43.52	237	266	Average	Horizontal		
3	2483.51	46.17	41.07	5.10	54.00	-7.83	257	266	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	cm	deg				
1	2348.27	39.32	34.09	4.43	54.00	-14.68	305	295	Average	Vertical		
2 *	2480.00	98.34	93.24	5.10	54.00	44.34	305	295	Average	Vertical		
3	2483.51	46.85	41.75	5.10	54.00	-7.15	305	295	Average	Vertical		

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

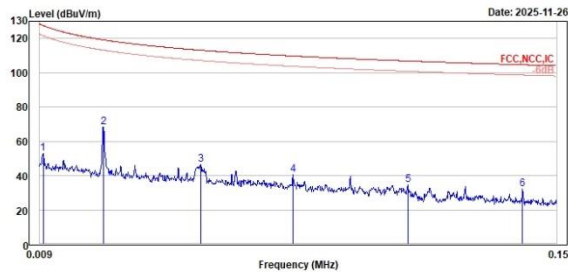
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High Channel (Open) 9kHz~150kHz

High Channel (Open) 150kHz~30MHz



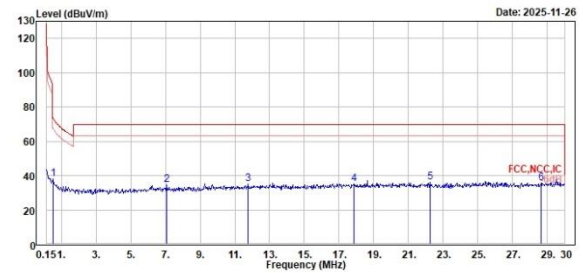
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	0.01	52.86	34.75	18.11	127.60	-74.74	100		43	Peak	Open	
2	0.03	68.24	48.41	19.83	119.13	-50.89	100		203	Peak	Open	
3	0.05	46.40	27.71	18.69	113.11	-66.71	100		331	Peak	Open	
4	0.08	40.66	22.38	18.28	109.74	-69.08	100		264	Peak	Open	
5	0.11	34.69	16.61	18.08	106.82	-72.13	100		261	Peak	Open	
6	0.14	31.97	13.70	18.27	104.63	-72.66	100		158	Peak	Open	



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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	0.51	37.92	19.17	18.75	73.48	-35.56	100		295	Peak	Open	
2	7.08	34.41	13.66	20.75	69.50	-35.09	100		130	Peak	Open	
3	11.76	34.92	13.25	21.67	69.50	-34.58	100		360	Peak	Open	
4	17.85	35.33	12.77	22.56	69.50	-34.17	100		179	Peak	Open	
5	22.24	36.23	13.95	22.28	69.50	-33.27	100		198	Peak	Open	
6	28.66	35.81	12.66	23.15	69.50	-33.69	100		191	Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

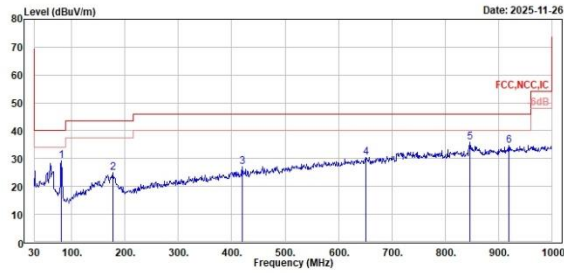
802.15.4

High Channel (Horizontal)

High Channel (Vertical)



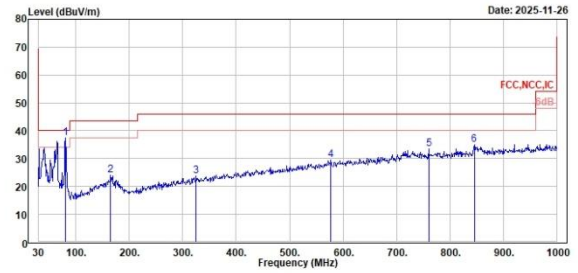
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	88.44	29.86	40.86	-11.00	40.00	-10.94	100	248	Peak	Horizontal		
2	176.47	24.87	31.94	-7.07	43.50	-18.63	200	238	Peak	Horizontal		
3	419.94	27.14	30.55	-3.41	46.00	-18.86	100	151	Peak	Horizontal		
4	650.80	30.52	29.20	1.32	46.00	-15.48	100	230	Peak	Horizontal		
5	846.74	35.82	31.69	4.13	46.00	-10.18	100	100	Peak	Horizontal		
6	919.49	34.53	29.31	5.22	46.00	-11.47	157	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	88.44	37.28	49.08	-11.80	40.00	-2.72	100	244	Peak	Vertical		
2	164.83	24.06	30.49	-6.43	43.50	-19.44	200	68	Peak	Vertical		
3	324.88	23.80	29.04	-5.24	46.00	-22.20	200	92	Peak	Vertical		
4	577.08	29.49	29.68	-0.19	46.00	-16.51	200	67	Peak	Vertical		
5	760.41	33.39	30.04	3.35	46.00	-12.61	100	275	Peak	Vertical		
6	845.77	35.07	30.99	4.08	46.00	-10.93	200	155	Peak	Vertical		

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

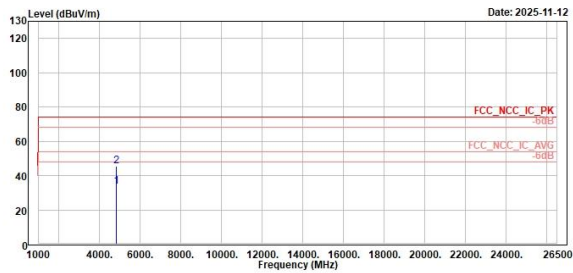
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Low Channel (Horizontal)

Low Channel (Vertical)



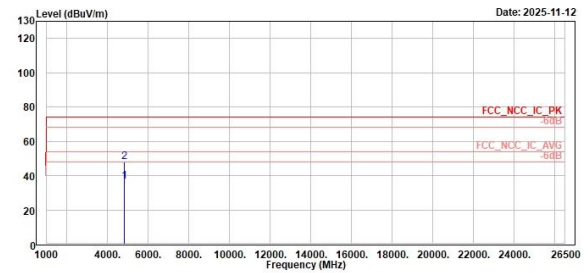
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4810.00	33.54	25.09	8.45	54.00	-20.46	200	200	Average	Horizontal		
2	4810.00	45.48	37.03	8.45	74.00	-28.52	200	200	Peak	Horizontal		



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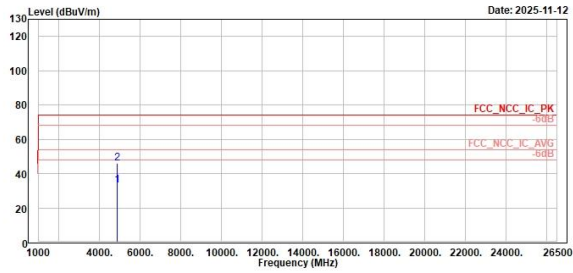
	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
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1	4810.00	36.57	28.12	8.45	54.00	-17.43	300	360	Average	Vertical		
2	4810.00	47.87	39.42	8.45	74.00	-26.13	300	360	Peak	Vertical		

802.15.4

Middle Channel (Horizontal)



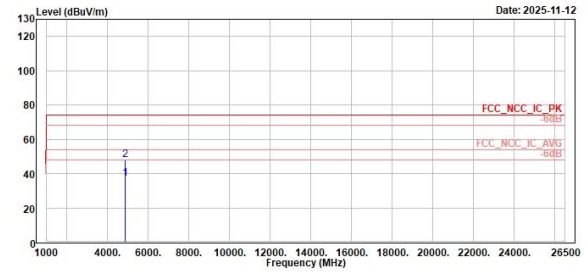
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4880.00	33.24	24.57	8.67	54.00	-20.76	280	360	Average	Horizontal		
2	4880.00	46.15	37.48	8.67	74.00	-27.85	280	360	Peak	Horizontal		



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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	4880.00	37.05	28.38	8.67	54.00	-16.95	300	203	Average	Vertical		
2	4880.00	47.84	39.17	8.67	74.00	-26.16	300	165	Peak	Vertical		

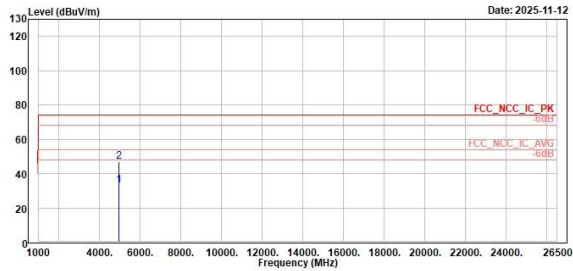
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High Channel (Horizontal)

High Channel (Vertical)



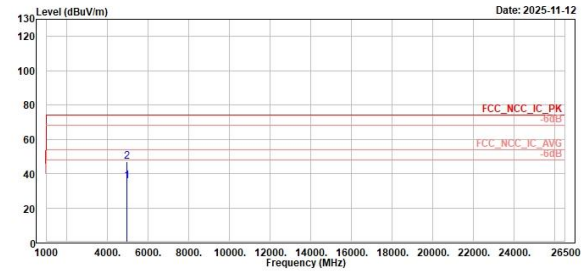
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	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	cm	deg			
1	4960.00	33.15	24.27	8.88	54.00	-20.85	180	211	Average	Horizontal		
2	4960.00	46.76	37.88	8.88	74.00	-27.24	180	211	Peak	Horizontal		



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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	4960.00	35.67	26.79	8.88	54.00	-18.33	179	360	Average	Vertical		
2	4960.00	46.99	38.11	8.88	74.00	-27.01	179	360	Peak	Vertical		

Mains Conducted Emission, Tx Mode, 150kHz ~ 30MHz

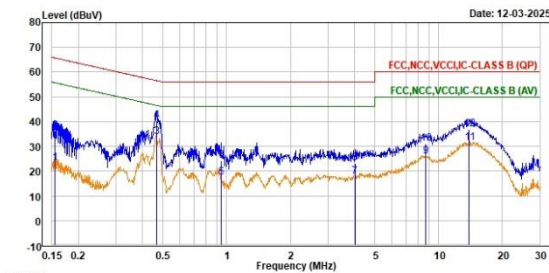
Worst Band

(Line)

(Neutral)



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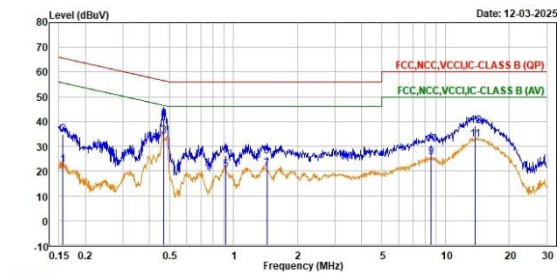


Trace: 1

	Freq	Level	Read	Limit	Over		Pol/Phase	Note
	MHz	dBuV	Level Factor	Line	Limit	Remark		
	MHz	dBuV	dB	dBuV	dB			
1	0.16	23.24	13.61	9.63	55.71	-32.47 Average	line1	
2	0.16	36.35	26.72	9.63	65.71	-29.36 QP	line1	
3	0.47	33.96	24.33	9.63	46.56	-12.60 Average	line1	
4	0.47	40.41	30.78	9.63	56.56	-16.15 QP	line1	
5	0.94	17.54	7.90	9.64	46.00	-28.46 Average	line1	
6	0.94	24.25	14.61	9.64	56.00	-31.75 QP	line1	
7	4.02	17.73	8.05	9.68	46.00	-28.27 Average	line1	
8	4.02	23.27	13.59	9.68	56.00	-32.73 QP	line1	
9	8.72	26.10	16.36	9.74	50.00	-23.90 Average	line1	
10	8.72	31.23	21.49	9.74	60.00	-28.77 QP	line1	
11	13.92	31.53	21.78	9.75	50.00	-18.47 Average	line1	
12	13.92	36.71	26.96	9.75	60.00	-23.29 QP	line1	



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Trace: 1

	Freq	Level	Read	Limit	Over		Pol/Phase	Note
	MHz	dBuV	Level Factor	Line	Limit	Remark		
	MHz	dBuV	dB	dBuV	dB			
1	0.16	22.48	12.84	9.64	55.67	-33.19 Average	neutral	
2	0.16	34.75	25.11	9.64	65.67	-30.92 QP	neutral	
3	0.47	34.15	24.52	9.63	46.52	-12.37 Average	neutral	
4	0.47	40.97	31.34	9.63	56.52	-15.55 QP	neutral	
5	0.92	20.42	10.78	9.64	46.00	-25.58 Average	neutral	
6	0.92	26.13	16.49	9.64	56.00	-29.87 QP	neutral	
7	1.43	20.90	11.25	9.65	46.00	-25.10 Average	neutral	
8	1.43	25.93	16.28	9.65	56.00	-30.07 QP	neutral	
9	8.50	25.46	15.70	9.76	50.00	-24.54 Average	neutral	
10	8.50	30.88	21.12	9.76	60.00	-29.12 QP	neutral	
11	13.79	32.93	23.11	9.82	50.00	-17.07 Average	neutral	
12	13.79	38.22	28.40	9.82	60.00	-21.78 QP	neutral	