

# Appendix C: Test Results of Radiated Spurious Emissions & Mains

## Conducted Emission Test for FPCB Antenna

ANT 11, Main Source, ECC, PIC32WM-BZ6204UC  
Band Edges, 2.31GHz ~ 2.5GHz

### IEEE® 802.15.4\_250k

#### Low Channel (Horizontal) Peak

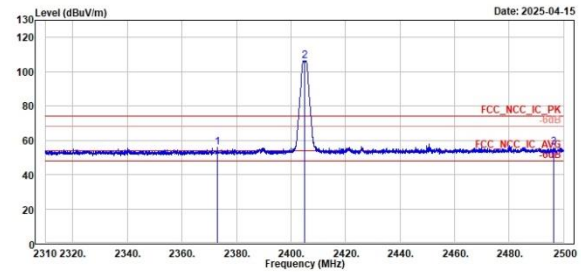
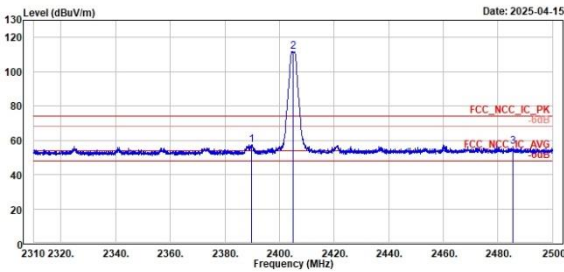
#### Low Channel (Vertical) Peak



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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2389.75	57.45	19.24	38.21	74.00	-16.55	103	38	Peak	Horizontal	
2 *	2405.00	111.66	73.33	38.33	74.00	37.66	103	38	Peak	Horizontal	
3	2485.47	56.13	17.53	38.60	74.00	-17.87	103	38	Peak	Horizontal	

Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2372.94	55.63	17.58	38.05	74.00	-18.37	132	289	Peak	Vertical	
2 *	2405.00	106.29	67.96	38.33	74.00	32.29	132	289	Peak	Vertical	
3	2496.25	56.03	17.41	38.62	74.00	-17.97	132	289	Peak	Vertical	

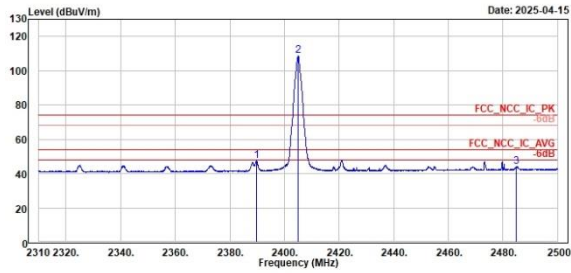
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Low Channel (Horizontal) Average

Low Channel (Vertical) Average



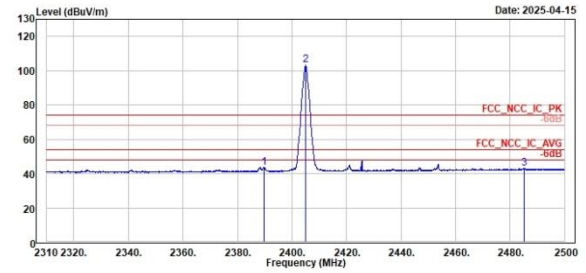
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.90	47.24	9.03	38.21	54.00	-6.75	103	38	Average Horizontal
2 *	2405.00	108.59	70.28	38.33	54.00	54.59	103	38	Average Horizontal
3	2494.94	44.22	5.62	38.60	54.00	-9.78	103	38	Average 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	2389.71	43.73	5.52	38.21	54.00	-10.27	132	289	Average Vertical
2 *	2405.00	103.20	64.07	38.33	54.00	49.20	132	289	Average Vertical
3	2485.09	42.93	4.33	38.60	54.00	-11.07	132	289	Average Vertical

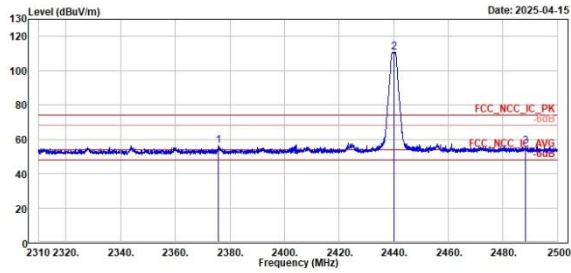
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Middle Channel (Horizontal) Peak

Middle Channel (Vertical) Peak



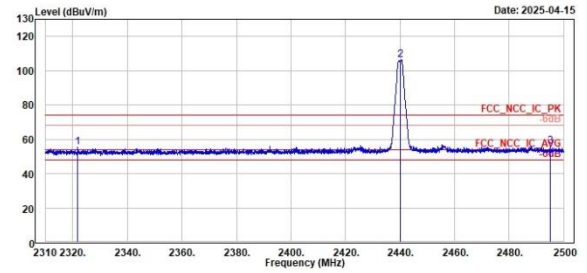
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2375.93	56.59	18.51	38.08	74.00	-17.41	188	40	Peak	Horizontal	
2 *	2440.00	118.04	72.33	38.51	74.00	36.04	188	48	Peak	Horizontal	
3	2488.36	55.92	17.31	38.61	74.00	-18.08	188	40	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2321.69	55.50	17.75	37.75	74.00	-18.50	194	175	Peak	Vertical	
2 *	2440.00	106.05	67.54	38.51	74.00	32.05	194	175	Peak	Vertical	
3	2495.11	55.71	17.10	38.61	74.00	-18.29	194	175	Peak	Vertical	

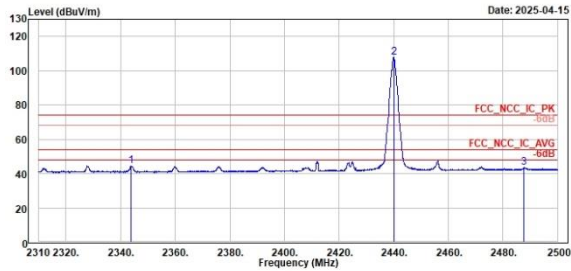
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Middle Channel (Horizontal) Average

Middle Channel (Vertical) Average



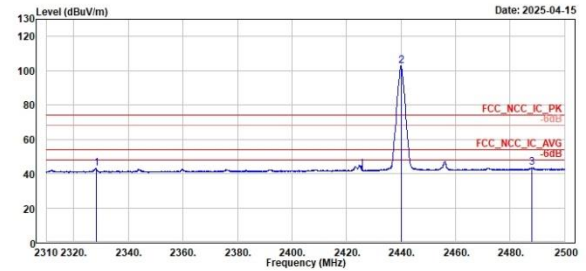
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2343.92	44.48	6.66	37.82	54.00	-9.52	188	40 Average	Horizontal
2 *	2440.00	107.76	69.25	38.51	54.00	53.76	188	40 average	Horizontal
3	2487.75	43.35	4.74	38.61	54.00	-10.65	188	40 Average	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	2328.24	42.85	5.88	37.77	54.00	-11.15	194	175 Average	Vertical
2 *	2440.00	102.94	64.43	38.51	54.00	48.94	194	175 Average	Vertical
3	2487.98	43.38	4.77	38.61	54.00	-10.62	194	175 Average	Vertical

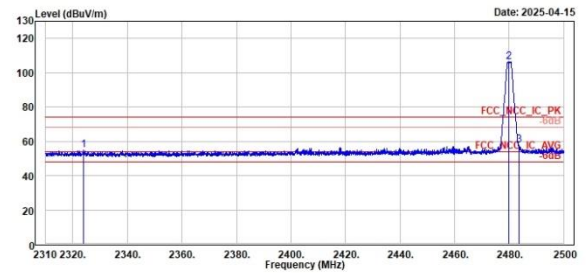
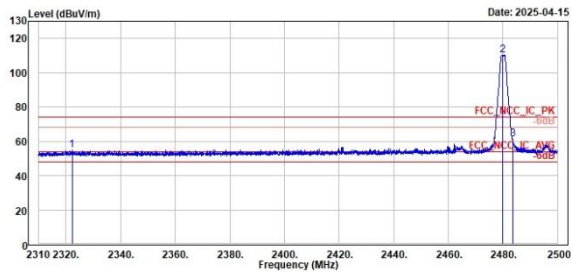
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High Channel (Horizontal) Peak

High Channel (Vertical) Peak

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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2322.21	55.10	17.35	37.75	74.00	-18.90	272	45	Peak	Horizontal	
2 *	2480.00	118.29	71.69	38.60	74.00	36.29	272	45	Peak	Horizontal	
3	2483.52	61.08	22.48	38.60	74.00	-12.92	272	45	Peak	Horizontal	

Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2323.70	54.84	17.08	37.76	74.00	-19.16	189	288	Peak	Vertical	
2 *	2480.00	106.31	67.71	38.60	74.00	32.31	189	288	Peak	Vertical	
3	2483.50	57.64	19.24	38.60	74.00	-16.16	109	288	Peak	Vertical	



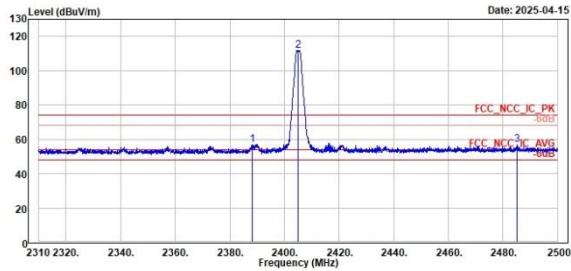
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Low Channel (Horizontal) Peak

Low Channel (Vertical) Peak



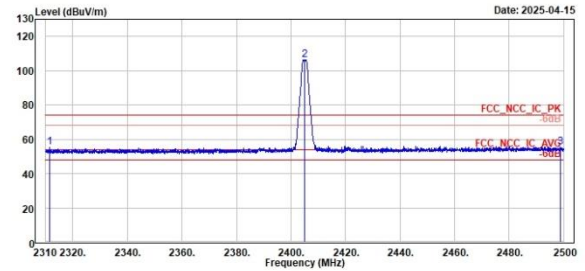
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1	2	3							
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2388.23	56.99	18.79	38.20	74.00	-17.01	183	39 Peak	Horizontal	
2485.00	111.73	73.48	38.33	74.00	37.73	183	39 Peak	Horizontal	
2485.23	56.70	18.10	38.60	74.00	-17.30	183	39 Peak	Horizontal	



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1	2	3							
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2311.57	55.22	17.51	37.71	74.00	-18.78	132	289 Peak	Vertical	
2485.00	106.35	68.82	38.33	74.00	32.35	132	289 Peak	Vertical	
2498.81	55.53	16.91	38.62	74.00	-18.47	132	289 Peak	Vertical	

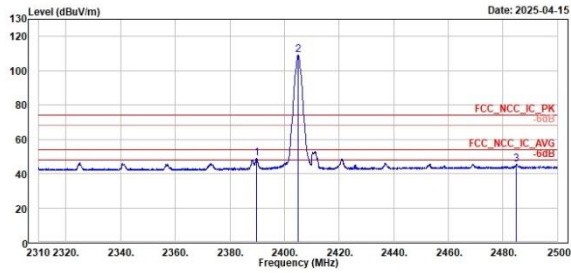
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Low Channel (Horizontal) Average

Low Channel (Vertical) Average



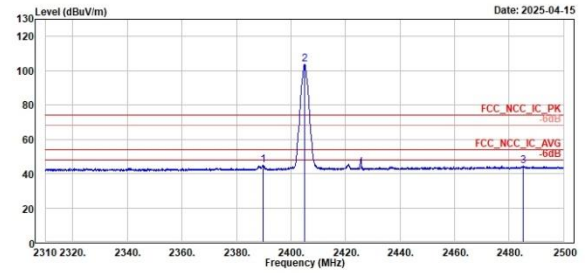
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2389.90	48.98	18.77	38.21	54.00	-5.02	183	39	Average Horizontal
2	2485.00	109.26	79.93	38.33	54.00	55.26	183	39	average Horizontal
3	2484.94	45.35	6.75	38.60	54.00	-8.65	183	39	Average 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	2389.75	44.80	6.59	38.21	54.00	-9.20	132	289	Average Vertical
2	2485.00	103.84	65.51	38.33	54.00	49.84	132	289	Average Vertical
3	2485.18	44.36	5.76	38.60	54.00	-9.64	132	289	Average Vertical



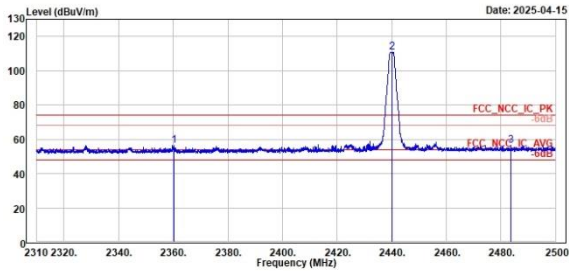
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Middle Channel (Horizontal) Peak

Middle Channel (Vertical) Peak



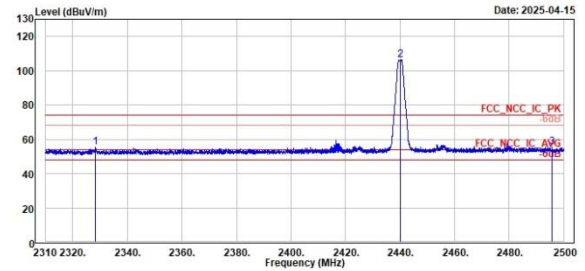
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1	2	3	Read Level	Level Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2369.16	56.32	18.39	37.93	74.00	-17.68	188	41	Peak	Horizontal		
2440.00	118.95	72.44	38.51	74.00	36.95	188	41	Peak	Horizontal		
2483.76	56.42	17.82	38.60	74.00	-17.58	188	41	Peak	Horizontal		



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1	2	3	Read Level	Level Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2328.38	55.33	17.56	37.77	74.00	-18.67	194	175	Peak	Vertical		
2440.00	106.13	67.62	38.51	74.00	32.13	194	175	Peak	Vertical		
2495.82	55.40	16.79	38.61	74.00	-18.60	194	175	Peak	Vertical		

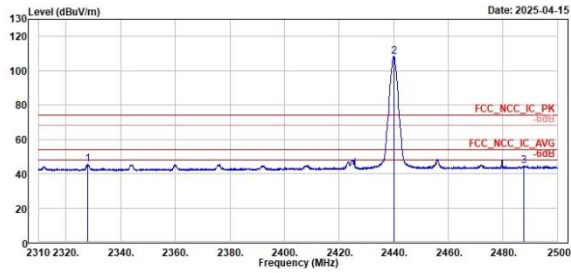
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Middle Channel (Horizontal) Average

Middle Channel (Vertical) Average



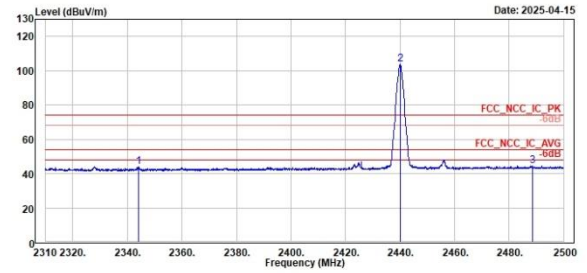
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2328.18	45.42	7.65	37.77	54.00	-8.58	188	41 Average	Horizontal
2 *	2448.00	108.44	69.93	38.51	54.00	54.44	188	41 Average	Horizontal
3	2487.79	44.44	5.83	38.61	54.00	-9.56	188	41 Average	Horizontal



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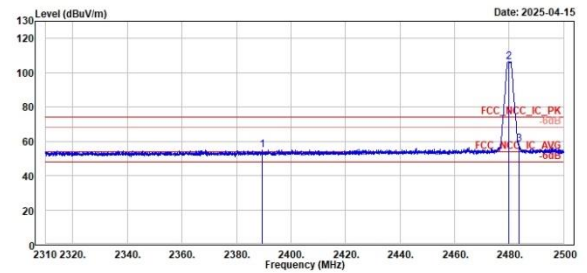
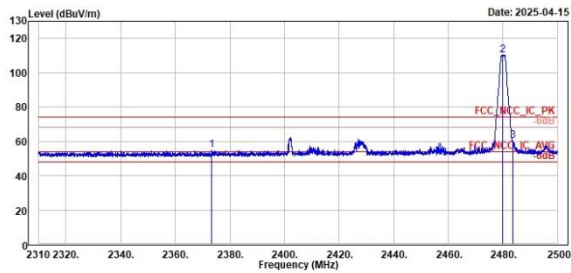
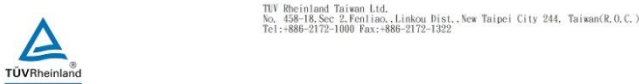


Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2344.20	43.91	6.89	37.02	54.00	-10.09	194	175 Average	Vertical
2 *	2448.00	103.62	65.11	38.51	54.00	49.62	194	175 Average	Vertical
3	2488.55	44.41	5.80	38.61	54.00	-9.59	194	175 Average	Vertical

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High Channel (Horizontal) Peak

High Channel (Vertical) Peak



Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2373.32	54.65	16.59	38.06	74.00	-19.35	270	46	Peak	Horizontal	
2 *	2480.00	110.30	71.70	38.60	74.00	36.30	270	46	Peak	Horizontal	
3	2483.61	60.47	21.87	38.60	74.00	-13.53	270	46	Peak	Horizontal	

Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2389.56	54.86	16.65	38.21	74.00	-19.14	180	289	Peak	Vertical	
2 *	2480.00	106.34	67.74	38.60	74.00	32.34	180	289	Peak	Vertical	
3	2483.76	58.23	19.63	38.60	74.00	-15.77	180	289	Peak	Vertical	

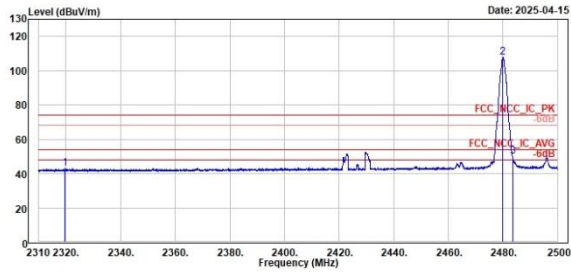
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High Channel (Horizontal) Average

High Channel (Vertical) Average



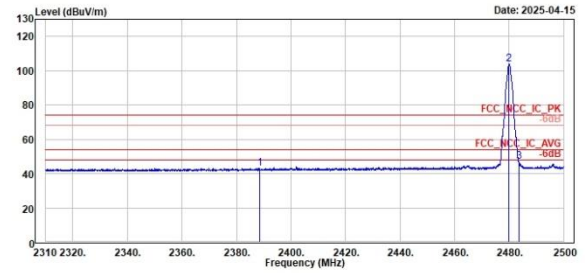
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2319.45	43.04	5.30	37.74	54.00	-10.96	270	46 Average	Horizontal
2 *	2488.00	107.78	69.18	38.60	54.00	53.78	270	46 Average	Horizontal
3 !	2483.50	50.08	11.48	38.60	54.00	-3.92	270	46 Average	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	2388.47	43.07	4.07	38.20	54.00	-10.93	180	289 Average	Vertical
2 *	2488.00	103.00	65.20	38.60	54.00	49.80	180	289 Average	Vertical
3	2483.50	46.90	8.30	38.60	54.00	-7.10	180	289 Average	Vertical

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

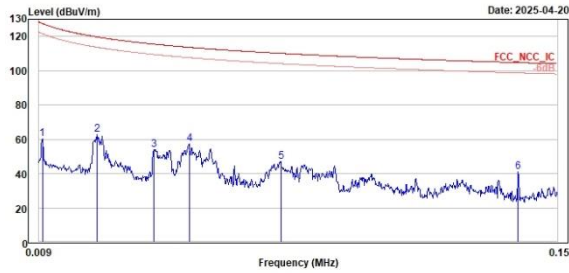
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Low Channel (Open) 9kHz~150kHz

Low Channel (Open) 150kHz~30MHz



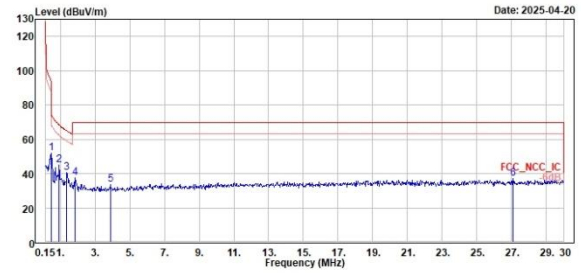
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.01	60.12	42.01	18.11	127.60	-67.48	100	88	Peak	Open	
2	0.02	62.91	43.15	19.76	119.65	-56.74	100	292	Peak	Open	
3	0.04	54.12	35.11	19.01	115.49	-61.37	100	309	Peak	Open	
4	0.05	57.20	38.18	19.02	113.63	-56.43	100	292	Peak	Open	
5	0.07	47.19	28.82	18.37	110.11	-62.92	100	292	Peak	Open	
6	0.14	41.14	22.87	18.27	104.72	-63.58	100	209	Peak	Open	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.40	51.72	32.98	18.74	94.01	-42.29	100	333	Peak	Open	
2	0.93	45.01	26.16	18.85	68.27	-23.26	100	180	Peak	Open	
3	1.37	40.44	21.63	18.81	64.85	-24.41	100	180	Peak	Open	
4	1.85	37.80	18.97	18.83	69.50	-31.70	100	180	Peak	Open	
5	3.88	33.83	14.48	19.35	69.50	-35.67	100	187	Peak	Open	
6	27.07	36.99	13.97	23.02	69.50	-32.51	100	2	Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

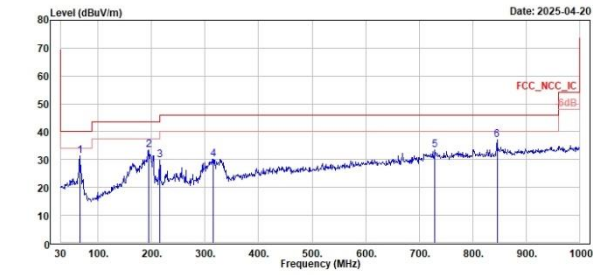
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Low Channel (Horizontal)

Low Channel (Vertical)



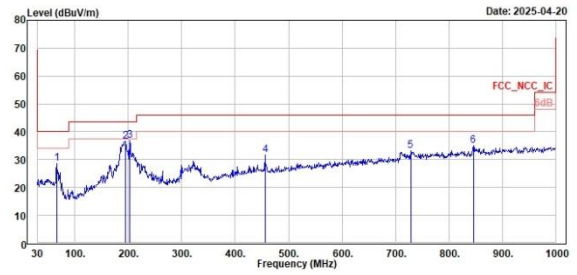
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	65.89	31.18	38.75	-7.57	40.00	-8.82	200	171	Peak	Horizontal	
2	193.93	33.41	41.52	-8.11	43.50	-10.09	200	353	Peak	Horizontal	
3	215.27	29.93	38.23	-8.30	43.50	-13.57	100	274	Peak	Horizontal	
4	315.18	30.21	35.09	-4.88	46.00	-15.79	100	259	Peak	Horizontal	
5	729.37	33.60	30.82	2.78	46.00	-12.40	100	341	Peak	Horizontal	
6	845.77	36.97	32.88	4.09	46.00	-9.03	252	0	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	65.89	28.70	36.27	-7.57	40.00	-11.30	100	71	Peak	Vertical	
2	193.93	36.64	44.75	-8.11	43.50	-6.86	100	237	Peak	Vertical	
3	202.66	36.88	45.05	-8.17	43.50	-6.62	100	71	Peak	Vertical	
4	455.83	31.53	33.55	-2.02	46.00	-14.47	100	206	Peak	Vertical	
5	728.40	33.11	30.33	2.78	46.00	-12.89	200	60	Peak	Vertical	
6	845.77	34.97	30.88	4.09	46.00	-11.03	300	60	Peak	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

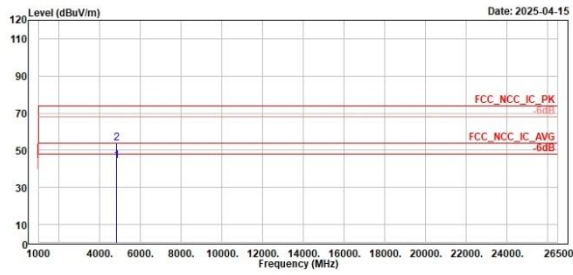
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Low Channel (Horizontal)

Low Channel (Vertical)



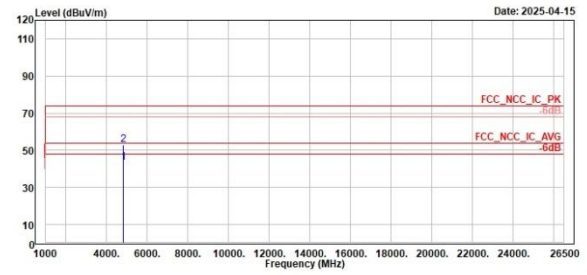
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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor							
dB/m	dBuV/m	dB	cm	deg			
53.20	54.00	-9.87	100	31	Average	Horizontal	
62.90	74.00	-20.17	100	31	Peak	Horizontal	



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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor							
dB/m	dBuV/m	dB	cm	deg			
52.33	54.00	-10.74	233	178	Average	Vertical	
62.03	74.00	-21.04	233	178	Peak	Vertical	

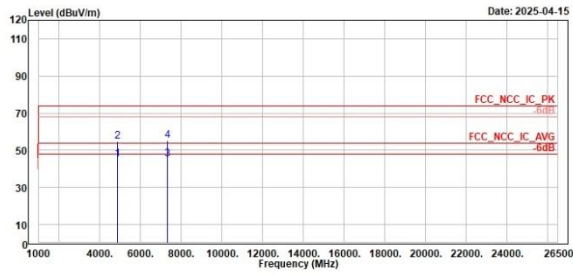
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Middle Channel (Horizontal)

Middle Channel (Vertical)



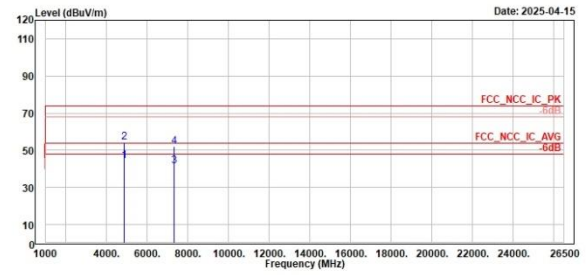
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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor	dB/m	dB	cm	deg			
dB/m	dB/m	dB	cm	deg			
53.84	-8.87	54.00	-9.03	180	34 Average	Horizontal	
63.43	-8.87	74.00	-19.44	180	34 Peak	Horizontal	
52.05	-6.67	54.00	-8.62	242	286 Average	Horizontal	
61.97	-6.67	74.00	-18.70	242	286 Peak	Horizontal	



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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor	dB/m	dB	cm	deg			
dB/m	dB/m	dB	cm	deg			
53.26	-8.87	54.00	-9.61	267	180 Average	Vertical	
62.94	-8.87	74.00	-19.93	267	180 Peak	Vertical	
48.29	-6.67	54.00	-12.38	100	300 Average	Vertical	
58.54	-6.67	74.00	-22.13	100	300 Peak	Vertical	



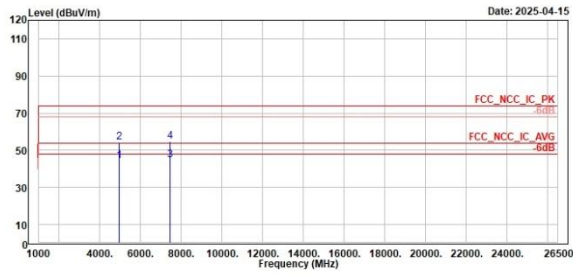
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High Channel (Horizontal)

High Channel (Vertical)



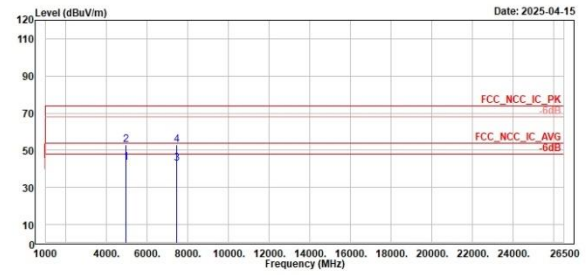
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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor	Factor	Factor					
dB/m	dB/m	dB	cm	deg			
44.43	53.12	-8.69	54.00	-9.57	103	40 Average	Horizontal
54.35	63.04	-8.69	74.00	-19.65	103	40 Peak	Horizontal
44.61	51.35	-6.74	54.00	-9.39	100	336 Average	Horizontal
54.71	61.45	-6.74	74.00	-19.29	100	336 Peak	Horizontal



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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor	Factor	Factor					
dB/m	dB/m	dB	cm	deg			
43.14	51.03	-8.69	54.00	-10.86	233	180 Average	Vertical
53.10	61.79	-8.69	74.00	-20.90	233	180 Peak	Vertical
42.96	49.70	-6.74	54.00	-11.04	100	298 Average	Vertical
52.91	59.65	-6.74	74.00	-21.09	100	298 Peak	Vertical

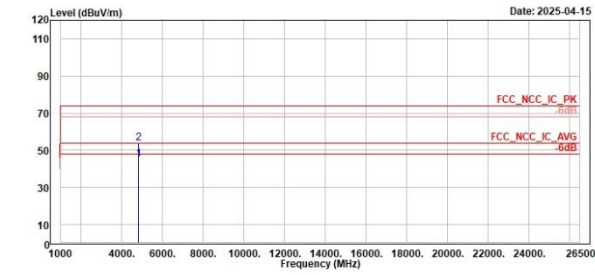
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Low Channel (Horizontal)

Low Channel (Vertical)



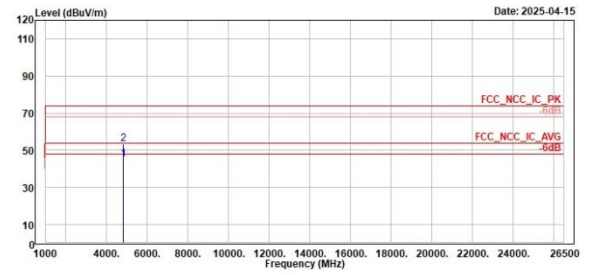
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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit	cm	deg			
Factor	dB/m	dB					
dB/m	dB/m	dB	cm	deg			
54.35	54.00	-8.72	180	32	Average	Horizontal	
62.63	74.00	-20.24	180	32	Peak	Horizontal	



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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit	cm	deg			
Factor	dB/m	dB					
dB/m	dB/m	dB	cm	deg			
54.04	54.00	-9.83	258	179	Average	Vertical	
62.37	74.00	-20.70	258	179	Peak	Vertical	

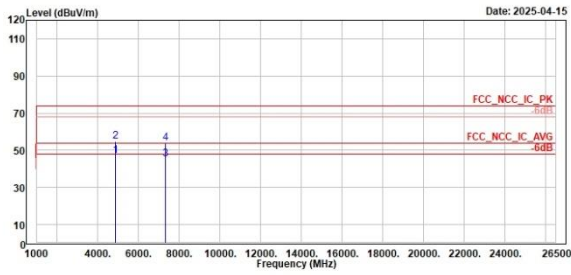
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Middle Channel (Horizontal)

Middle Channel (Vertical)



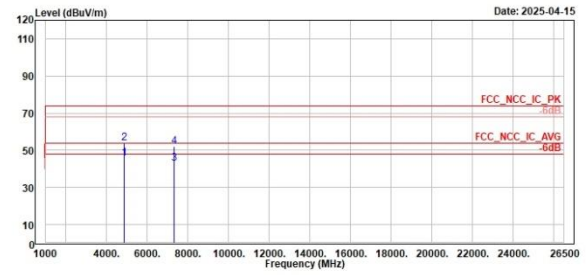
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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor							
dB/m	dB/m	dB	cm	deg			
55.64	74.00	-7.23	194	30	Average	Horizontal	
63.70	74.00	-19.17	194	30	Peak	Horizontal	
51.87	54.00	-8.80	100	292	Average	Horizontal	
60.70	74.00	-19.97	100	292	Peak	Horizontal	



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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit					
Factor							
dB/m	dB/m	dB	cm	deg			
54.47	74.00	-8.40	227	181	Average	Vertical	
62.82	74.00	-20.05	227	181	Peak	Vertical	
49.54	54.00	-11.13	100	300	Average	Vertical	
58.61	74.00	-22.06	100	300	Peak	Vertical	

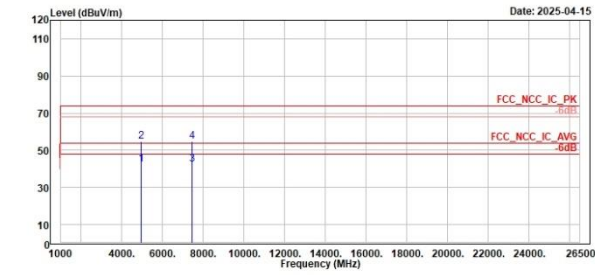
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High Channel (Horizontal)

High Channel (Vertical)



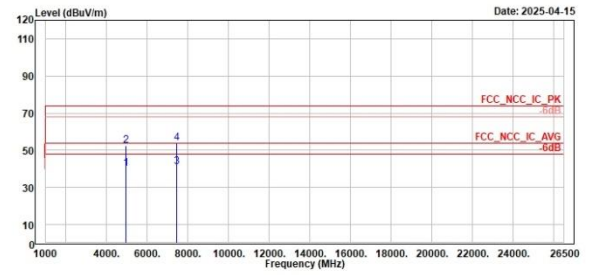
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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit	cm	deg			
Factor	dB/m	dB					
dB/m	dB/m	dB	cm	deg			
58.91	54.00	-11.78	199	38	Average	Horizontal	
63.44	74.00	-19.25	189	38	Peak	Horizontal	
49.28	54.00	-11.46	100	331	Average	Horizontal	
61.56	74.00	-19.18	100	331	Peak	Horizontal	



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Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
Level	Line	Limit	cm	deg			
Factor	dB/m	dB					
dB/m	dB/m	dB	cm	deg			
48.69	54.00	-14.00	280	182	Average	Vertical	
61.86	74.00	-21.63	280	182	Peak	Vertical	
47.97	54.00	-12.77	111	294	Average	Vertical	
60.46	74.00	-20.28	111	294	Peak	Vertical	

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

Worst Band

(Line)

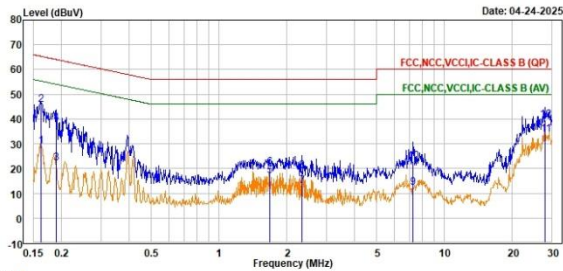
(Neutral)



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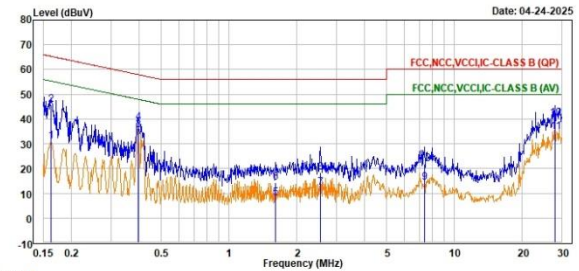


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Trace: 1

Line	Freq	Level	Read Level	Factor	Limit	Over	Remark	Pol/Phase	Note
	MHz	dBuV	dBuV	dB	dBuV	dB			
1	0.16	28.97	19.34	9.63	55.38	-26.41	Average	line1	
2	0.16	45.83	36.20	9.63	65.38	-19.55	QP	line1	
3	0.19	22.33	12.70	9.63	54.10	-31.77	Average	line1	
4	0.19	38.23	28.60	9.63	64.10	-25.87	QP	line1	
5	1.68	17.06	7.40	9.66	46.00	-28.94	Average	line1	
6	1.68	20.38	10.72	9.66	56.00	-35.62	QP	line1	
7	2.33	12.95	3.29	9.66	46.00	-33.05	Average	line1	
8	2.33	19.33	9.57	9.66	56.00	-36.77	QP	line1	
9	7.25	12.41	2.69	9.72	50.00	-37.59	Average	line1	
10	7.25	22.70	12.98	9.72	60.00	-37.30	QP	line1	
11	28.12	33.71	24.02	9.69	50.00	-16.29	Average	line1	
12	28.12	39.52	29.83	9.69	60.00	-20.48	QP	line1	



Trace: 1

Line	Freq	Level	Read Level	Factor	Limit	Over	Remark	Pol/Phase	Note
	MHz	dBuV	dBuV	dB	dBuV	dB			
1	0.16	30.93	21.29	9.64	55.34	-24.41	Average	neutral	
2	0.16	45.94	36.30	9.64	65.34	-19.40	QP	neutral	
3	0.39	35.37	25.74	9.63	47.97	-12.60	Average	neutral	
4	0.39	38.43	28.80	9.63	57.97	-19.54	QP	neutral	
5	1.61	8.16	-1.50	9.66	46.00	-37.84	Average	neutral	
6	1.61	14.34	4.68	9.66	56.00	-41.66	QP	neutral	
7	2.54	12.31	2.64	9.67	46.00	-33.69	Average	neutral	
8	2.54	18.34	8.67	9.67	56.00	-37.66	QP	neutral	
9	7.39	14.33	4.59	9.74	50.00	-35.67	Average	neutral	
10	7.39	21.99	12.25	9.74	60.00	-38.01	QP	neutral	
11	28.12	34.67	24.82	9.85	50.00	-15.33	Average	neutral	
12	28.12	40.25	30.40	9.85	60.00	-19.75	QP	neutral	

ANT 11, 2<sup>nd</sup> Source, ECC, PIC32WM-BZ6204UC  
Band Edges, 2.31GHz ~ 2.5GHz

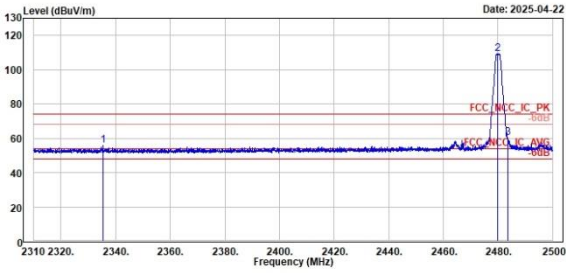
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High Channel (Horizontal) Peak

High Channel (Vertical) Peak



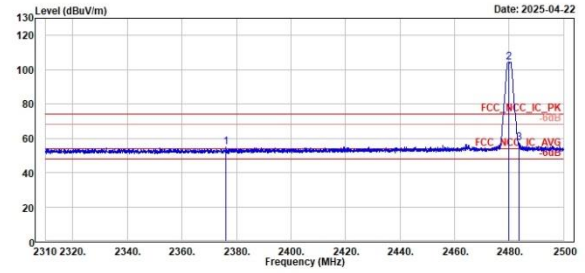
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2335.41	55.71	18.04	37.67	74.00	-18.29	271	62	Peak	Horizontal	
2 *	2480.00	109.20	70.73	38.47	74.00	35.20	271	62	Peak	Horizontal	
3	2483.52	60.12	21.64	38.48	74.00	-13.88	271	62	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2376.07	54.64	16.68	37.96	74.00	-19.36	128	270	Peak	Vertical	
2 *	2480.00	104.40	65.93	38.47	74.00	30.40	128	270	Peak	Vertical	
3	2483.61	57.17	18.69	38.48	74.00	-16.83	128	270	Peak	Vertical	

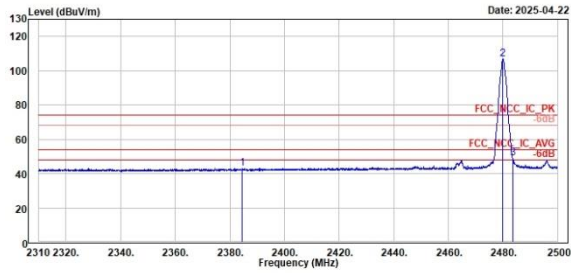
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High Channel (Horizontal) Average

High Channel (Vertical) Average



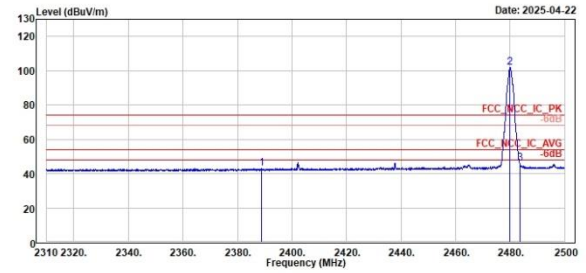
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2384.62	43.08	5.04	38.04	54.00	-10.92	271	62	Average	Horizontal										
2480.00	106.72	68.25	38.47	54.00	52.72	271	62	Average	Horizontal										
2483.50	49.15	10.67	38.48	54.00	-4.85	271	62	Average	Horizontal										



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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2388.00	43.06	4.99	38.07	54.00	-10.94	128	270	Average	Vertical										
2480.00	101.96	63.49	38.47	54.00	47.96	128	270	Average	Vertical										
2483.52	45.00	7.32	38.48	54.00	-8.20	128	270	Average	Vertical										

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

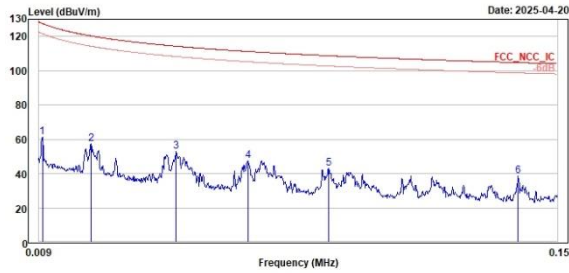
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Low Channel (Open) 9kHz~150kHz

Low Channel (Open) 150kHz~30MHz



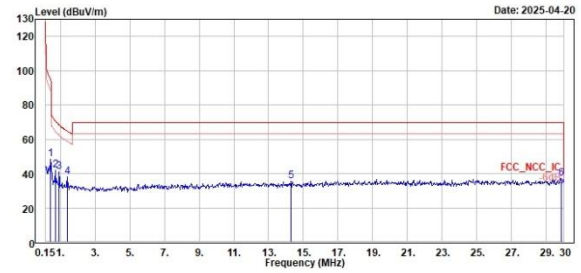
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.01	61.28	43.17	18.11	127.60	-66.32	100	103	Peak	Open	
2	0.02	57.25	37.58	19.67	120.26	-63.01	100	250	Peak	Open	
3	0.05	52.70	33.68	19.02	114.27	-61.57	100	250	Peak	Open	
4	0.07	47.68	29.41	18.27	111.23	-63.55	100	302	Peak	Open	
5	0.09	42.80	24.74	18.06	108.72	-65.92	100	302	Peak	Open	
6	0.14	38.66	20.39	18.27	104.72	-66.06	100	298	Peak	Open	



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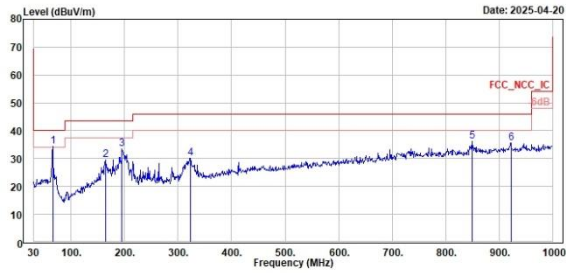


Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.45	48.41	29.71	18.70	94.57	-46.16	100	344	Peak	Open	
2	0.72	42.12	23.32	18.80	70.49	-28.37	100	360	Peak	Open	
3	0.93	40.83	21.98	18.85	68.27	-27.44	100	274	Peak	Open	
4	1.40	37.89	19.08	18.81	64.66	-26.77	100	274	Peak	Open	
5	14.30	35.74	14.16	21.58	69.50	-33.76	100	40	Peak	Open	
6	29.85	37.01	13.76	23.25	69.50	-32.49	100	172	Peak	Open	



**Spurious Emissions, Tx Mode, 30MHz ~ 1GHz**
**IEEE® 802.15.4\_250k**
**Low Channel (Horizontal)**
**Low Channel (Vertical)**

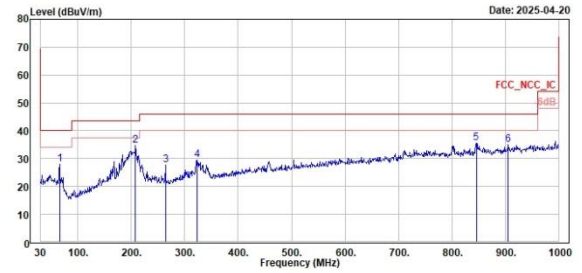

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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	65.89	34.36	41.93	-7.57	40.00	-5.64	200	140 Peak	Horizontal	
2	163.86	29.61	35.32	-5.71	43.50	-13.89	200	192 Peak	Horizontal	
3	194.90	33.37	41.48	-8.11	43.50	-10.13	191	0 Peak	Horizontal	
4	322.94	30.10	34.79	-4.69	46.00	-15.90	100	214 Peak	Horizontal	
5	849.65	36.05	31.88	4.17	46.00	-9.95	200	220 Peak	Horizontal	
6	922.40	35.54	30.38	5.16	46.00	-10.46	300	347 Peak	Horizontal	



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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	65.89	28.09	35.66	-7.57	40.00	-11.91	300	31 Peak	Vertical	
2	207.51	34.59	42.07	-8.28	43.50	-8.91	200	223 Peak	Vertical	
3	263.77	27.58	34.04	-6.46	46.00	-18.42	200	182 Peak	Vertical	
4	322.94	29.45	34.14	-4.69	46.00	-16.55	200	91 Peak	Vertical	
5	845.77	35.60	31.51	4.09	46.00	-10.40	300	304 Peak	Vertical	
6	905.91	34.93	29.77	5.16	46.00	-11.07	109	0 Peak	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

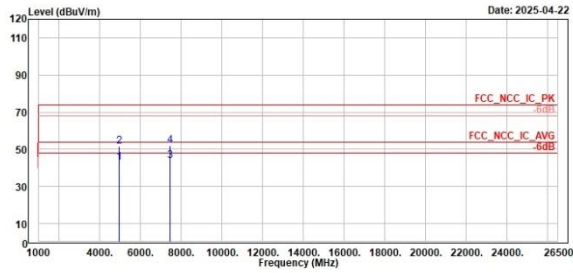
IEEE® 802.15.4\_2M

High Channel (Horizontal)

High Channel (Vertical)



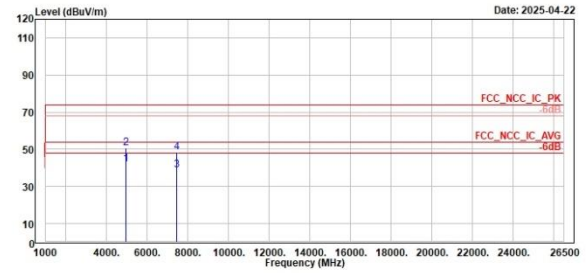
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Line	Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
1	4968.00	42.97	51.79	-8.82	54.00	-11.03	100	97	Average	Horizontal		
2	4968.00	51.75	60.57	-8.82	74.00	-22.25	100	97	Peak	Horizontal		
3	7448.00	43.69	50.52	-6.83	54.00	-10.31	100	292	Average	Horizontal		
4	7448.00	52.23	59.06	-6.83	74.00	-21.77	100	292	Peak	Horizontal		



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Line	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	4968.00	41.95	50.77	-8.82	54.00	-12.05	358	169	Average	Vertical		
2	4968.00	50.71	59.53	-8.82	74.00	-23.29	358	169	Peak	Vertical		
3	7448.00	38.98	45.81	-6.83	54.00	-15.02	100	301	Average	Vertical		
4	7448.00	48.56	55.39	-6.83	74.00	-25.44	100	301	Peak	Vertical		

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

Worst Band

(Line)

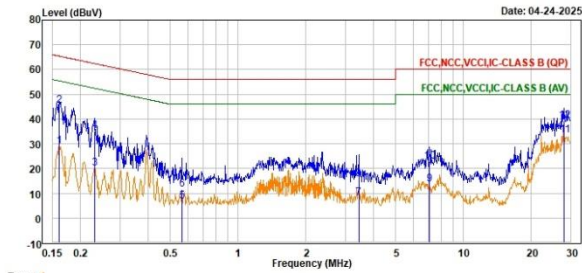
(Neutral)



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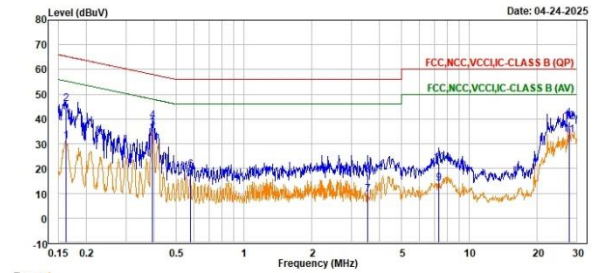


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Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.16	28.89	19.26	9.63	55.42	-26.53	Average	line1	
2	0.16	45.59	35.96	9.63	65.42	-19.83	QP	line1	
3	0.23	20.61	10.38	9.63	52.44	-32.43	Average	line1	
4	0.23	35.08	25.45	9.63	62.44	-27.36	QP	line1	
5	0.56	6.74	-2.89	9.63	46.00	-39.26	Average	line1	
6	0.56	11.61	1.98	9.63	56.00	-44.39	QP	line1	
7	3.43	7.97	-1.71	9.68	46.00	-38.03	Average	line1	
8	3.43	15.58	5.90	9.68	56.00	-40.42	QP	line1	
9	7.07	13.61	3.89	9.72	50.00	-36.39	Average	line1	
10	7.07	22.76	13.04	9.72	60.00	-37.24	QP	line1	
11	28.12	33.63	23.94	9.69	50.00	-16.37	Average	line1	
12	28.12	39.37	29.68	9.69	60.00	-20.63	QP	line1	



Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.16	31.10	21.46	9.64	55.38	-24.28	Average	neutral	
2	0.16	46.14	36.50	9.64	65.38	-19.24	QP	neutral	
3	0.39	36.24	26.61	9.63	48.01	-11.77	Average	neutral	
4	0.39	39.33	29.70	9.63	58.01	-18.68	QP	neutral	
5	0.58	16.28	6.65	9.63	46.00	-29.72	Average	neutral	
6	0.58	19.36	9.73	9.63	56.00	-36.64	QP	neutral	
7	3.54	9.64	-0.85	9.69	46.00	-36.36	Average	neutral	
8	3.54	17.54	7.65	9.69	56.00	-38.46	QP	neutral	
9	7.32	13.85	4.11	9.74	50.00	-36.15	Average	neutral	
10	7.32	22.09	12.35	9.74	60.00	-37.91	QP	neutral	
11	27.70	33.47	23.62	9.85	50.00	-16.53	Average	neutral	
12	27.70	38.86	29.01	9.85	60.00	-21.14	QP	neutral	

ANT 11, Main Source, Non-ECC, PIC32WM-BZ6204UE  
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

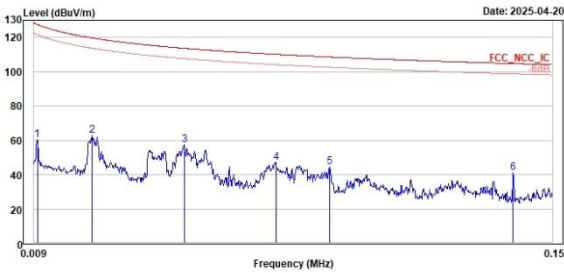
IEEE® 802.15.4\_250k

Low Channel (Open) 9kHz~150kHz

Low Channel (Open) 150kHz~30MHz



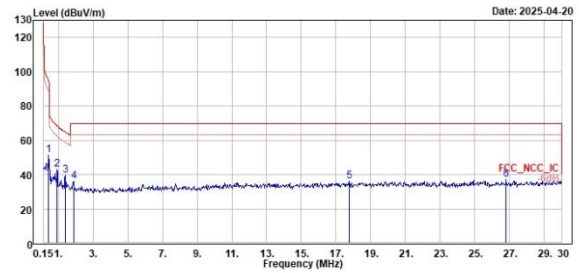
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	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	60.12	42.01	10.11	127.60	-67.48	100	88 Peak	Open	
2	0.02	62.91	43.15	19.76	119.65	-56.74	100	292 Peak	Open	
3	0.05	57.20	38.18	19.02	113.63	-56.43	100	292 Peak	Open	
4	0.07	47.19	28.82	18.37	110.11	-62.92	100	292 Peak	Open	
5	0.09	44.38	26.35	18.03	108.57	-64.19	100	248 Peak	Open	
6	0.14	41.14	22.87	18.27	104.72	-63.58	100	209 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	0.45	51.26	32.56	18.70	94.57	-43.31	100	196 Peak	Open	
2	0.93	43.00	24.15	18.85	68.27	-25.27	100	196 Peak	Open	
3	1.40	39.43	20.62	18.81	64.66	-25.23	100	288 Peak	Open	
4	1.88	35.94	17.11	18.83	69.50	-33.56	100	288 Peak	Open	
5	17.76	36.14	13.58	22.56	69.50	-33.36	100	6 Peak	Open	
6	26.81	36.99	14.01	22.98	69.50	-32.51	100	326 Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

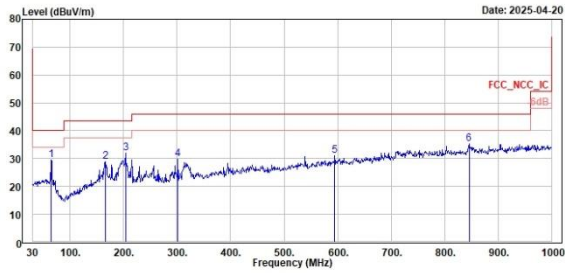
IEEE® 802.15.4\_250k

Low Channel (Horizontal)

Low Channel (Vertical)



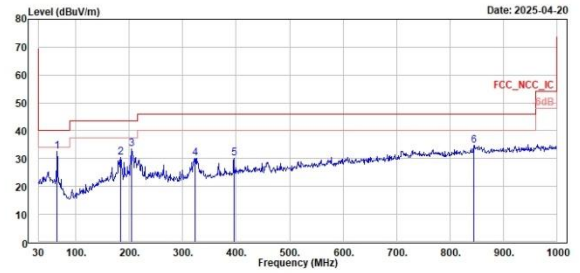
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	64.92	29.49	36.69	-7.20	40.00	-10.51	100	167	Peak	Horizontal	
2	165.80	28.85	34.57	-5.72	43.50	-14.65	100	228	Peak	Horizontal	
3	203.63	31.95	40.12	-8.17	43.50	-11.55	200	238	Peak	Horizontal	
4	301.60	29.84	35.18	-5.34	46.00	-16.16	100	189	Peak	Horizontal	
5	594.54	31.08	30.56	0.52	46.00	-14.92	300	0	Peak	Horizontal	
6	845.77	35.39	31.30	4.09	46.00	-10.61	257	0	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	64.92	32.41	39.61	-7.20	40.00	-7.59	300	29	Peak	Vertical	
2	184.23	30.47	37.89	-7.42	43.50	-13.03	100	222	Peak	Vertical	
3	204.60	33.49	41.67	-8.18	43.50	-10.01	100	360	Peak	Vertical	
4	322.94	30.03	34.72	-4.69	46.00	-15.97	237	0	Peak	Vertical	
5	395.69	30.01	33.30	-3.29	46.00	-15.99	100	224	Peak	Vertical	
6	844.80	34.88	30.73	4.07	46.00	-11.20	200	358	Peak	Vertical	

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

Worst Band

(Line)

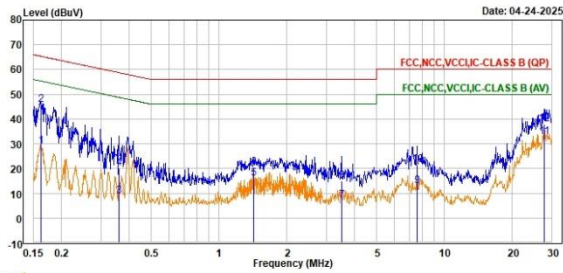
(Neutral)



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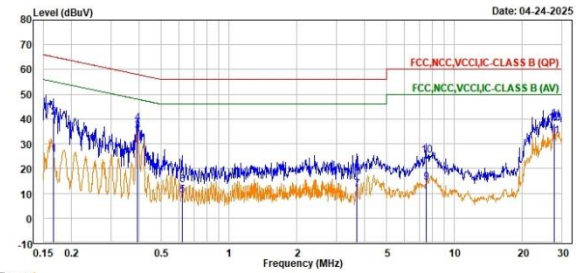


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Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.16	29.01	19.38	9.63	55.34	-26.33	Average	line1	
2	0.16	45.89	36.26	9.63	65.34	-19.45	QP	line1	
3	0.36	8.78	-0.85	9.63	40.76	-39.98	Average	line1	
4	0.36	20.12	10.49	9.63	58.76	-38.64	QP	line1	
5	1.43	15.99	6.34	9.65	46.00	-30.01	Average	line1	
6	1.43	20.40	10.75	9.65	56.00	-35.60	QP	line1	
7	3.50	7.26	-2.42	9.68	46.00	-38.74	Average	line1	
8	3.50	15.11	5.43	9.68	56.00	-40.89	QP	line1	
9	7.58	12.90	3.17	9.73	50.00	-37.10	Average	line1	
10	7.58	21.46	11.73	9.73	60.00	-38.54	QP	line1	
11	27.70	32.80	23.11	9.69	50.00	-17.20	Average	line1	
12	27.70	38.04	28.35	9.69	60.00	-21.96	QP	line1	



Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.17	25.61	15.97	9.64	55.13	-29.52	Average	neutral	
2	0.17	40.55	30.91	9.64	65.13	-24.58	QP	neutral	
3	0.39	35.33	25.70	9.63	48.05	-12.72	Average	neutral	
4	0.39	38.25	28.62	9.63	58.05	-19.80	QP	neutral	
5	0.62	9.32	-0.31	9.63	46.00	-36.68	Average	neutral	
6	0.62	13.17	3.54	9.63	56.00	-42.83	QP	neutral	
7	3.70	11.68	1.99	9.69	46.00	-34.32	Average	neutral	
8	3.70	18.00	0.31	9.69	56.00	-38.00	QP	neutral	
9	7.50	14.41	4.66	9.75	50.00	-35.59	Average	neutral	
10	7.50	25.22	15.47	9.75	60.00	-34.78	QP	neutral	
11	27.70	33.07	23.22	9.85	50.00	-16.93	Average	neutral	
12	27.70	38.37	28.52	9.85	60.00	-21.63	QP	neutral	

ANT 11, 2<sup>nd</sup> Source, Non-ECC, PIC32WM-BZ6204UE  
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

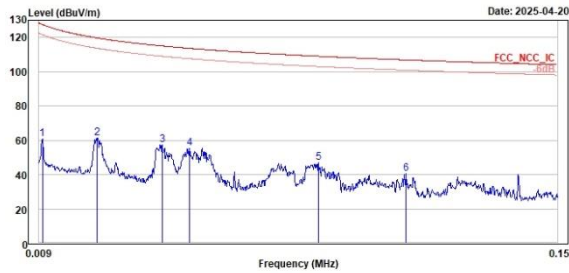
IEEE® 802.15.4\_250k

Low Channel (Open) 9kHz~150kHz

Low Channel (Open) 150kHz~30MHz



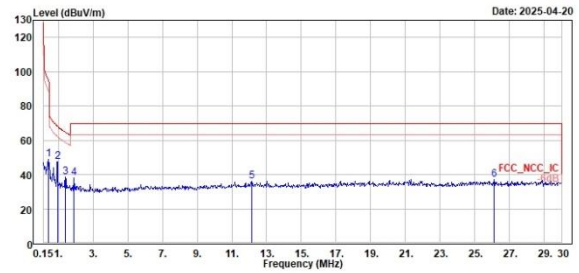
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.01	60.61	42.50	18.11	127.60	-66.99	100	296	Peak	Open	
2	0.02	61.50	41.74	19.76	119.65	-58.15	100	23	Peak	Open	
3	0.04	57.49	38.48	19.01	115.01	-57.52	100	257	Peak	Open	
4	0.05	55.47	36.45	19.02	113.63	-58.16	100	311	Peak	Open	
5	0.08	47.13	29.01	18.12	109.01	-61.88	100	257	Peak	Open	
6	0.11	40.37	22.29	18.08	106.87	-66.50	100	230	Peak	Open	



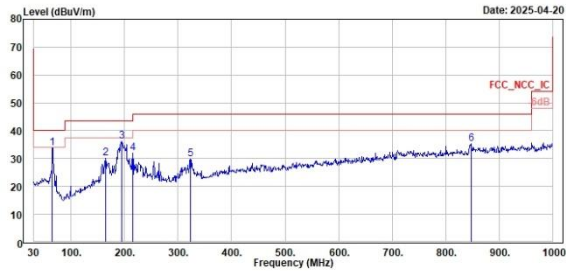
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.45	48.98	30.28	18.70	94.57	-45.59	100	328	Peak	Open	
2	0.96	47.56	28.73	18.83	68.00	-20.44	100	277	Peak	Open	
3	1.40	38.31	19.50	18.81	64.66	-26.35	100	328	Peak	Open	
4	1.91	38.24	19.40	18.84	69.50	-31.26	100	277	Peak	Open	
5	12.15	36.30	14.58	21.72	69.50	-33.20	100	40	Peak	Open	
6	26.12	37.02	14.18	22.84	69.50	-32.48	100	14	Peak	Open	

**Spurious Emissions, Tx Mode, 30MHz ~ 1GHz**
**IEEE® 802.15.4\_250k**
**Low Channel (Horizontal)**
**Low Channel (Vertical)**

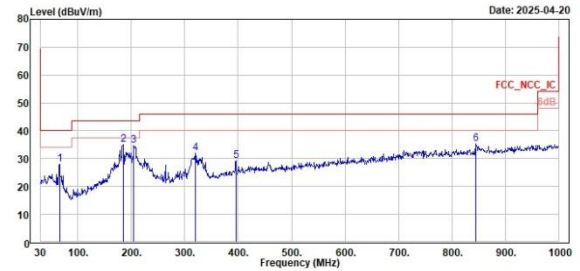

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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	64.92	33.07	41.07	-7.20	40.00	-6.13	300	160 Peak	Horizontal	
2	164.83	30.00	35.78	-5.78	43.50	-13.50	100	235 Peak	Horizontal	
3	193.93	36.31	44.42	-8.11	43.50	-7.19	100	204 Peak	Horizontal	
4	215.27	32.08	40.38	-8.30	43.50	-11.42	100	184 Peak	Horizontal	
5	322.94	29.78	34.47	-4.69	46.00	-16.22	100	243 Peak	Horizontal	
6	847.71	35.21	31.08	4.13	46.00	-10.79	300	112 Peak	Horizontal	



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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	65.89	27.98	35.55	-7.57	40.00	-12.02	170	360 Peak	Vertical	
2	185.20	34.84	42.28	-7.44	43.50	-8.66	100	182 Peak	Vertical	
3	204.60	34.67	42.85	-8.18	43.50	-8.83	100	166 Peak	Vertical	
4	320.03	31.80	36.49	-4.69	46.00	-14.20	200	125 Peak	Vertical	
5	395.69	29.28	32.57	-3.29	46.00	-16.72	100	220 Peak	Vertical	
6	844.80	35.43	31.36	4.07	46.00	-10.57	178	360 Peak	Vertical	



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

Worst Band

(Line)

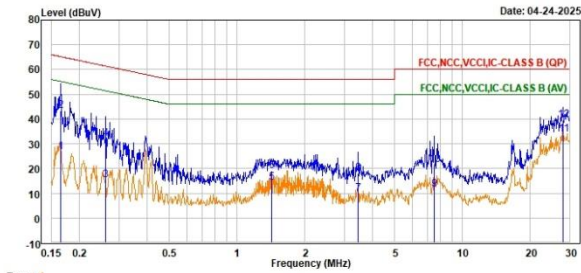
(Neutral)



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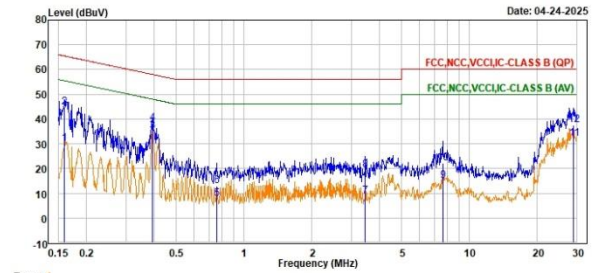


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Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.16	26.78	17.15	9.63	55.21	-28.43	Average	line1	
2	0.16	43.27	33.64	9.63	65.21	-21.94	QP	line1	
3	0.26	15.39	5.76	9.63	51.40	-36.01	Average	line1	
4	0.26	32.10	22.47	9.63	61.40	-29.30	QP	line1	
5	1.42	14.35	4.70	9.65	46.00	-31.65	Average	line1	
6	1.42	19.13	9.48	9.65	56.00	-36.87	QP	line1	
7	3.45	9.79	0.11	9.68	46.00	-36.21	Average	line1	
8	3.45	17.90	8.22	9.68	56.00	-38.10	QP	line1	
9	7.50	11.47	1.74	9.73	50.00	-38.53	Average	line1	
10	7.50	21.54	11.81	9.73	60.00	-38.46	QP	line1	
11	28.12	33.89	24.20	9.69	50.00	-16.11	Average	line1	
12	28.12	39.50	29.81	9.69	60.00	-20.50	QP	line1	



Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.16	29.89	20.25	9.64	55.50	-25.61	Average	neutral	
2	0.16	44.70	35.06	9.64	65.50	-20.80	QP	neutral	
3	0.39	35.29	25.66	9.63	48.05	-12.76	Average	neutral	
4	0.39	38.27	28.64	9.63	58.05	-19.78	QP	neutral	
5	0.75	7.65	-1.99	9.64	46.00	-38.35	Average	neutral	
6	0.75	12.92	3.28	9.64	56.00	-43.00	QP	neutral	
7	3.45	8.75	-0.94	9.69	46.00	-37.25	Average	neutral	
8	3.45	19.30	9.69	9.69	56.00	-36.62	QP	neutral	
9	7.62	15.13	5.37	9.76	50.00	-34.87	Average	neutral	
10	7.62	22.30	12.54	9.76	60.00	-37.70	QP	neutral	
11	29.12	32.22	22.38	9.84	50.00	-17.78	Average	neutral	
12	29.12	37.61	27.77	9.84	60.00	-22.39	QP	neutral	

ANT 12, Main Source, ECC, PIC32WM-BZ6204UC  
Band Edges, 2.31GHz ~ 2.5GHz

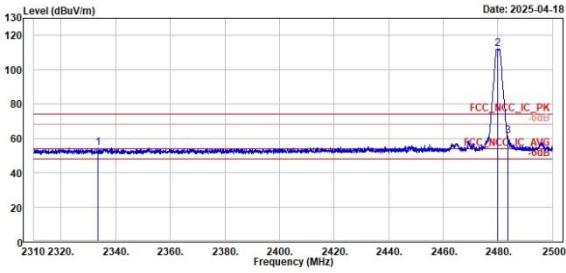
IEEE® 802.15.4\_2M

High Channel (Horizontal) Peak

High Channel (Vertical) Peak



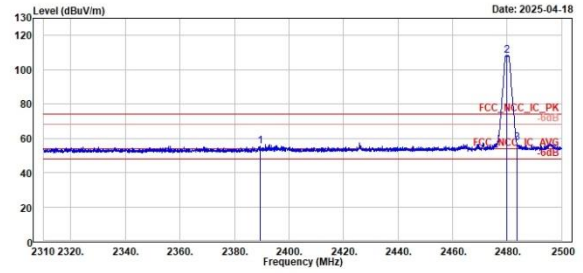
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2333.47	54.53	16.74	37.79	74.00	-19.47	244	0	Peak	Horizontal	
2 *	2488.00	112.11	75.51	38.60	74.00	38.11	244	0	Peak	Horizontal	
3	2483.50	61.49	22.89	38.60	74.00	-12.51	244	0	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2389.33	55.31	17.11	38.20	74.00	-18.69	324	75	Peak	Vertical	
2 *	2488.00	188.19	69.59	38.60	74.00	34.19	324	75	Peak	Vertical	
3	2483.66	57.47	18.87	38.60	74.00	-16.53	324	75	Peak	Vertical	

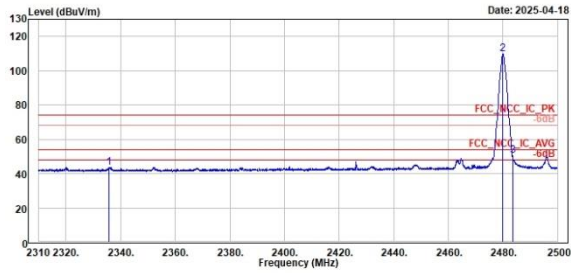
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High Channel (Horizontal) Average

High Channel (Vertical) Average



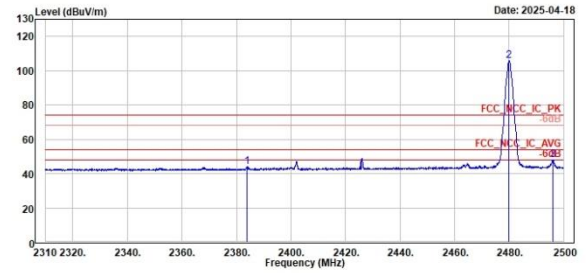
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2335.84	43.72	5.93	37.79	54.00	-10.28	244	0	Average Horizontal
2 *	2480.00	109.55	70.95	38.60	54.00	55.55	244	0	average Horizontal
3 !	2483.52	50.27	11.67	38.60	54.00	-3.73	244	0	Average 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	2383.91	44.05	5.90	38.15	54.00	-9.95	324	75	Average Vertical
2 *	2480.00	109.75	67.15	38.60	54.00	51.75	324	75	Average Vertical
3 !	2496.15	48.19	9.57	38.62	54.00	-5.81	324	75	Average Vertical

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

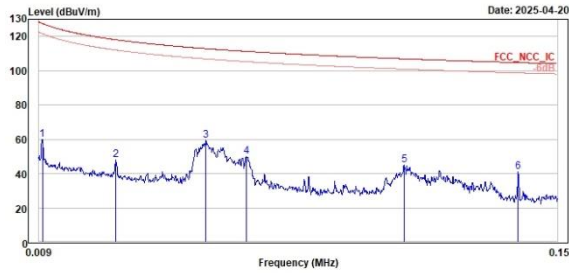
IEEE® 802.15.4\_250k

Low Channel (Open) 9kHz~150kHz

Low Channel (Open) 150kHz~30MHz



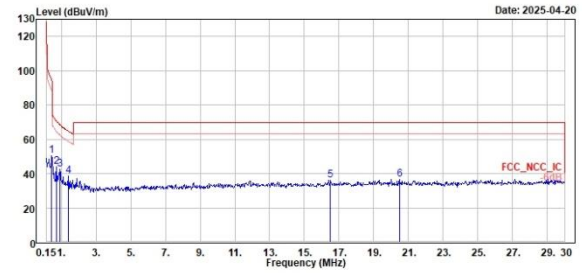
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.01	59.98	41.87	18.11	127.68	-67.62	100		49 Peak	Open	
2	0.03	48.02	28.01	20.01	118.05	-70.03	100		349 Peak	Open	
3	0.05	59.13	40.59	18.54	112.88	-53.75	100		255 Peak	Open	
4	0.07	50.06	31.81	18.25	111.26	-61.20	100		276 Peak	Open	
5	0.11	44.78	26.70	18.08	106.91	-62.13	100		238 Peak	Open	
6	0.14	41.11	22.84	18.27	104.72	-63.61	100		213 Peak	Open	



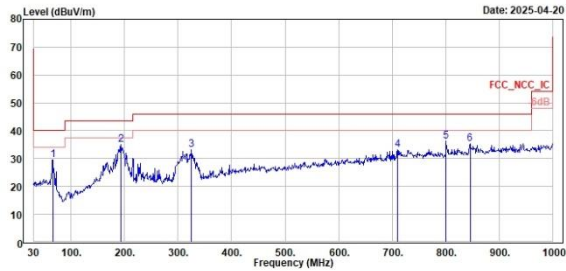
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.45	50.66	31.96	18.70	94.57	-43.91	100		213 Peak	Open	
2	0.72	44.12	25.32	18.80	78.49	-26.37	100		325 Peak	Open	
3	0.93	42.33	23.48	18.85	68.27	-25.94	100		213 Peak	Open	
4	1.40	38.45	19.64	18.81	64.66	-26.21	100		213 Peak	Open	
5	16.51	36.28	14.17	22.11	69.50	-33.22	100		180 Peak	Open	
6	28.48	36.63	13.87	22.76	69.50	-32.87	100		317 Peak	Open	

**Spurious Emissions, Tx Mode, 30MHz ~ 1GHz**
**IEEE® 802.15.4\_250k**
**Low Channel (Horizontal)**
**Low Channel (Vertical)**

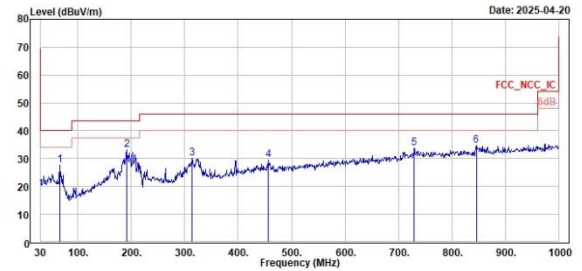

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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	65.89	29.65	37.22	-7.57	40.00	-10.35	219	0	Peak	Horizontal	
2	192.96	35.00	43.11	-8.03	43.50	-8.42	201	0	Peak	Horizontal	
3	324.88	33.25	37.95	-4.70	46.00	-12.75	100	176	Peak	Horizontal	
4	709.97	33.02	30.69	2.33	46.00	-12.98	300	19	Peak	Horizontal	
5	801.15	36.23	32.55	3.68	46.00	-9.77	100	230	Peak	Horizontal	
6	845.77	35.41	31.32	4.09	46.00	-10.59	300	126	Peak	Horizontal	



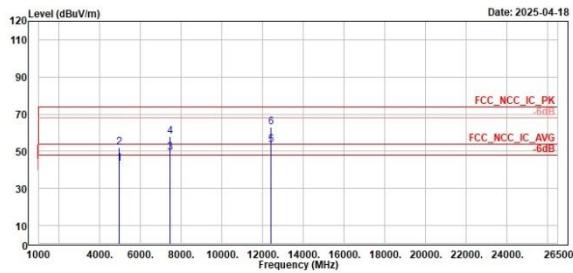
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	65.86	27.71	35.49	-7.78	40.00	-12.29	300	25	Peak	Vertical	
2	191.02	33.03	40.98	-7.95	43.50	-10.47	100	248	Peak	Vertical	
3	314.21	30.03	34.96	-4.93	46.00	-15.97	200	208	Peak	Vertical	
4	455.83	29.54	31.56	-2.02	46.00	-16.46	100	215	Peak	Vertical	
5	729.37	33.66	30.88	2.78	46.00	-12.34	200	33	Peak	Vertical	
6	845.77	34.00	30.71	4.09	46.00	-11.20	100	30	Peak	Vertical	

**Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz**
**IEEE® 802.15.4\_2M**
**High Channel (Horizontal)**
**High Channel (Vertical)**

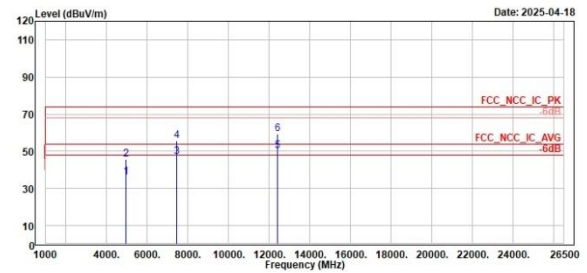

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1	2	3	4	5	6
Level	Level	Factor	Limit	Over	Apos
dBuV/m	dBuV	dB/m	dBuV/m	Limit	cm
MHz	dBuV/m	dB/m	dBuV/m	dB	deg
4968.00	43.20	51.89	-8.69	54.00	-10.80
4968.00	51.90	60.59	-8.69	74.00	-22.10
7448.00	49.46	56.20	-6.74	54.00	-4.54
7448.00	57.80	64.54	-6.74	74.00	-16.20
12400.00	53.53	52.45	1.08	54.00	-0.47
12400.00	62.84	61.76	1.08	74.00	-11.16



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1	2	3	4	5	6
Level	Level	Factor	Limit	Over	Apos
dBuV/m	dBuV	dB/m	dBuV/m	Limit	cm
MHz	dBuV/m	dB/m	dBuV/m	dB	deg
4968.00	35.86	44.55	-8.69	54.00	-18.14
4968.00	45.43	54.12	-8.69	74.00	-28.57
7448.00	47.17	53.91	-6.74	54.00	-6.83
7448.00	55.79	62.53	-6.74	74.00	-18.21
12400.00	50.40	49.32	1.08	54.00	-3.60
12400.00	59.25	58.17	1.08	74.00	-14.75

ANT 13, Main Source, ECC, PIC32WM-BZ6204UC  
Band Edges, 2.31GHz ~ 2.5GHz

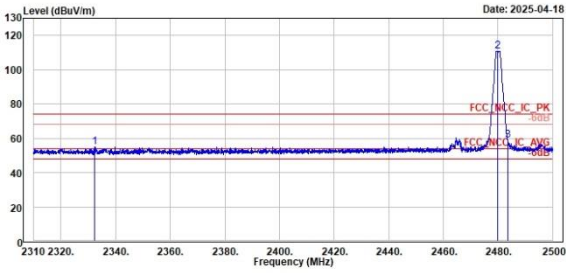
IEEE® 802.15.4\_2M

High Channel (Horizontal) Peak

High Channel (Vertical) Peak



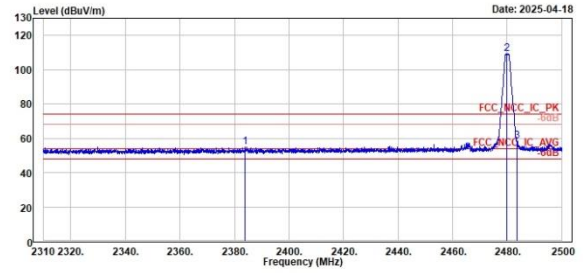
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2332.42	54.72	16.94	37.78	74.00	-19.28	300	17	Peak	Horizontal	
2 *	2480.00	110.93	72.33	38.60	74.00	36.93	300	17	Peak	Horizontal	
3	2483.50	58.67	20.07	38.60	74.00	-15.33	300	17	Peak	Horizontal	



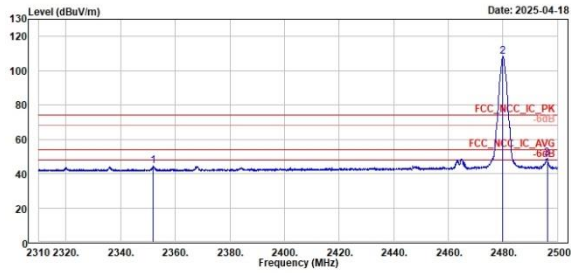
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2383.82	54.92	16.77	38.15	74.00	-19.08	292	271	Peak	Vertical	
2 *	2480.00	109.06	70.46	38.60	74.00	35.06	292	271	Peak	Vertical	
3	2483.52	58.44	19.84	38.60	74.00	-15.56	292	271	Peak	Vertical	

**IEEE® 802.15.4\_2M**
**High Channel (Horizontal) Average**
**High Channel (Vertical) Average**

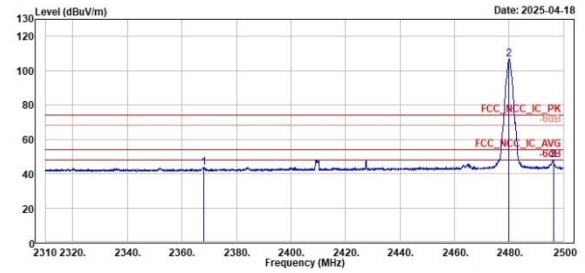

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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2351.00	44.39	6.54	37.85	54.00	-9.61	300	17 Average	Horizontal
2 *	2480.00	108.49	69.89	38.60	54.00	54.49	300	17 Average	Horizontal
3 !	2496.20	48.70	10.08	38.62	54.00	-5.30	300	17 Average	Horizontal



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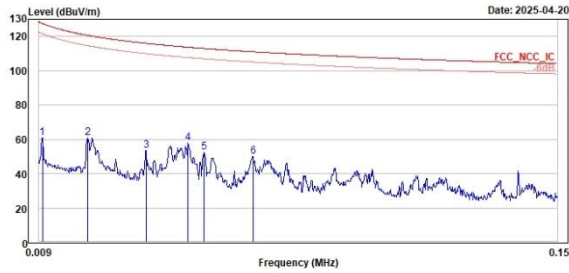


Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2368.00	43.73	5.73	38.00	54.00	-10.27	292	271 Average	Vertical
2 *	2480.00	106.63	68.03	38.60	54.00	52.63	292	271 Average	Vertical
3 !	2496.20	48.12	9.50	38.62	54.00	-5.88	292	271 Average	Vertical



**Spurious Emissions, Tx Mode, 9kHz ~ 30MHz**
**IEEE® 802.15.4\_250k**
**Low Channel (Open) 9kHz~150kHz**
**Low Channel (Open) 150kHz~30MHz**

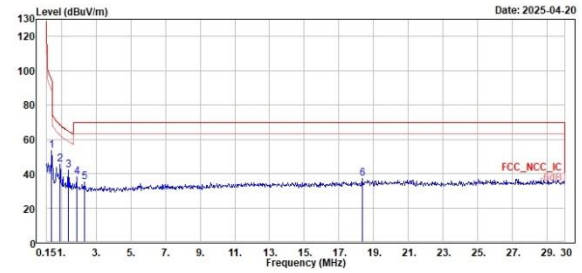

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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.01	60.76	42.65	18.11	127.60	-66.84	100	298	Peak	Open	
2	0.02	60.83	41.20	19.63	120.59	-59.76	100	283	Peak	Open	
3	0.04	53.39	34.20	19.19	115.95	-62.56	100	236	Peak	Open	
4	0.05	57.59	38.57	19.02	113.68	-56.09	100	299	Peak	Open	
5	0.05	52.55	33.97	18.58	112.95	-60.40	100	286	Peak	Open	
6	0.07	50.14	31.79	18.35	111.04	-60.90	100	247	Peak	Open	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.45	53.19	34.49	18.70	94.57	-41.38	100	195	Peak	Open	
2	0.93	45.24	26.39	18.85	68.27	-23.03	100	189	Peak	Open	
3	1.40	41.95	23.14	18.81	64.66	-22.71	100	189	Peak	Open	
4	1.88	38.31	19.48	18.83	69.50	-31.19	100	189	Peak	Open	
5	2.36	35.08	16.19	18.89	69.50	-34.42	100	228	Peak	Open	
6	18.33	36.89	14.22	22.67	69.50	-32.61	100	44	Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

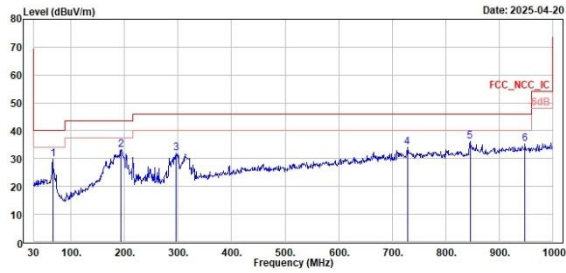
IEEE® 802.15.4\_250k

Low Channel (Horizontal)

Low Channel (Vertical)



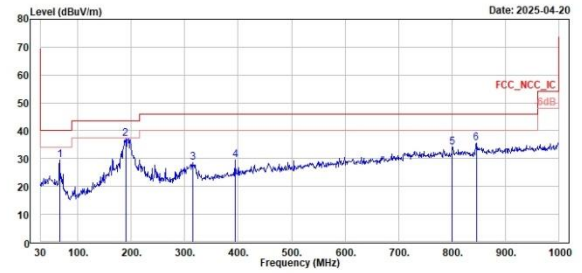
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Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	65.89	29.74	37.31	-7.57	40.00	-10.26	100	354 Peak	Horizontal	
2	192.96	33.21	41.24	-8.03	43.50	-10.29	200	145 Peak	Horizontal	
3	296.75	31.87	37.22	-5.35	46.00	-14.13	100	231 Peak	Horizontal	
4	728.40	34.21	31.43	2.78	46.00	-11.79	100	168 Peak	Horizontal	
5	845.77	36.13	32.04	4.09	46.00	-9.87	300	51 Peak	Horizontal	
6	948.59	35.41	29.69	5.72	46.00	-10.59	200	247 Peak	Horizontal	

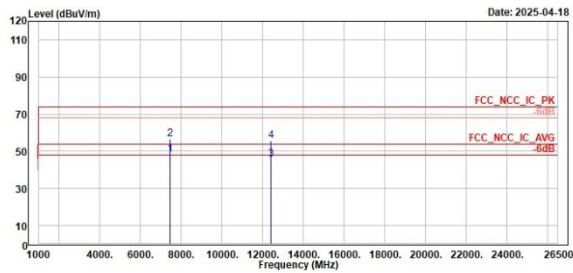


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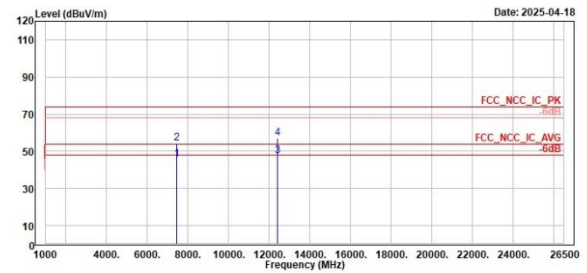


Peak	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	65.89	29.58	37.15	-7.57	40.00	-10.42	300	75 Peak	Vertical	
2	189.08	37.14	44.92	-7.78	43.50	-6.36	100	228 Peak	Vertical	
3	315.18	28.68	33.56	-4.88	46.00	-17.32	100	210 Peak	Vertical	
4	393.75	29.44	32.76	-3.32	46.00	-16.56	100	231 Peak	Vertical	
5	801.15	34.07	30.39	3.68	46.00	-11.93	100	248 Peak	Vertical	
6	845.77	35.59	31.50	4.09	46.00	-10.41	199	360 Peak	Vertical	

**Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz**
**IEEE® 802.15.4\_2M**
**High Channel (Horizontal)**
**High Channel (Vertical)**

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Level	Read	Level	Factor	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note								
1	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg											
1	7440.00	48.17	54.91	-6.74	54.00	-5.83	100	297	Average	Horizontal									
2	7440.00	56.71	63.45	-6.74	74.00	-17.29	100	297	Peak	Horizontal									
3	12400.00	45.66	44.58	1.08	54.00	-8.34	100	16	Average	Horizontal									
4	12400.00	55.79	54.71	1.08	74.00	-18.21	100	16	Peak	Horizontal									


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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Level	Read	Level	Factor	Limit	Over	Apos	TPos	Remark	Pol/Phase	Note								
1	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg											
1	7440.00	45.48	52.22	-6.74	54.00	-8.52	306	297	Average	Vertical									
2	7440.00	54.36	61.10	-6.74	74.00	-19.64	306	297	Peak	Vertical									
3	12400.00	47.46	46.38	1.08	54.00	-6.54	187	288	Average	Vertical									
4	12400.00	57.13	56.05	1.08	74.00	-16.87	187	288	Peak	Vertical									