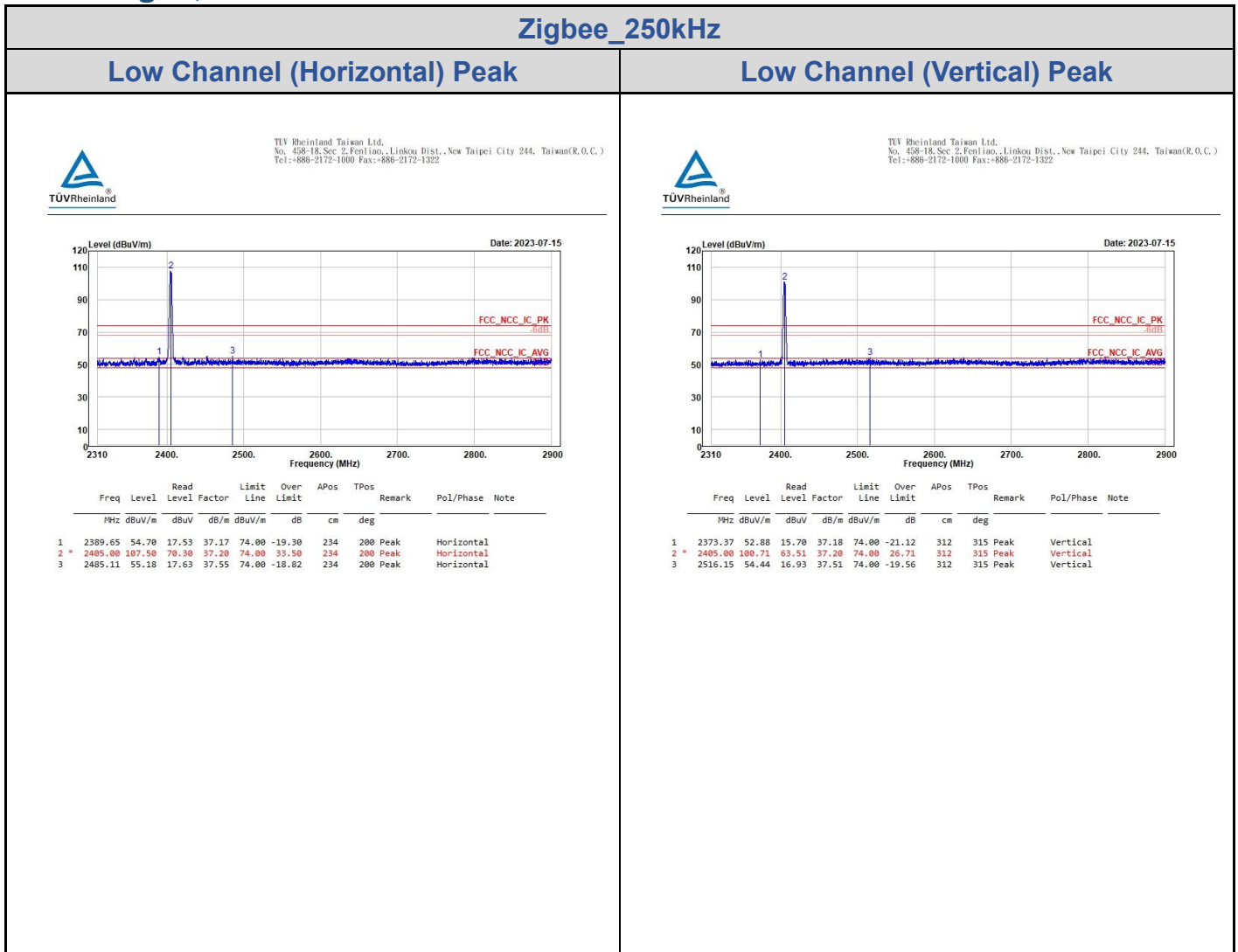


Appendix B: Test Results of Radiated Spurious Emissions & Mains

Conducted Emission Test for PCB Antenna

Main Source, ECC Mode

Band Edges, 2.31GHz ~ 2.9GHz



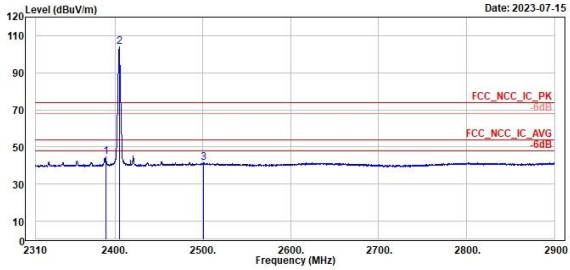
Zigbee_250kHz

Low Channel (Horizontal) Average

Low Channel (Vertical) Average



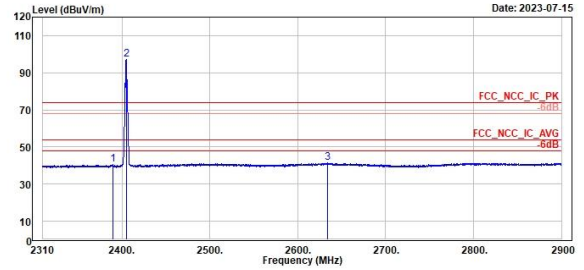
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1	2	3	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2389.77	44.79	7.62	37.17	54.00	-9.21	334	200	Average	Horizontal		
2405.00	103.99	66.79	37.20	54.00	49.99	334	200	Average	Horizontal		
2501.28	41.73	4.18	37.55	54.00	-12.27	334	200	Average	Horizontal		



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1	2	3	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2389.77	40.73	3.56	37.17	54.00	-13.27	312	315	Average	Vertical		
2405.00	97.02	59.82	37.20	54.00	43.02	312	315	Average	Vertical		
2633.79	41.32	3.71	37.61	54.00	-12.68	312	315	Average	Vertical		

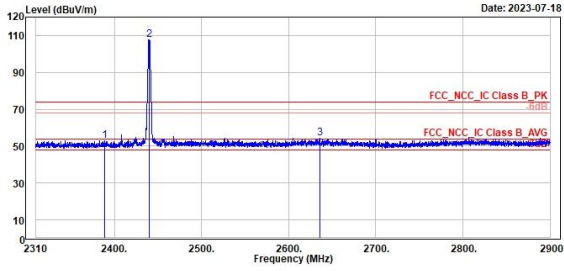
Zigbee_250kHz

Middle Channel (Horizontal) Peak

Middle Channel (Vertical) Peak



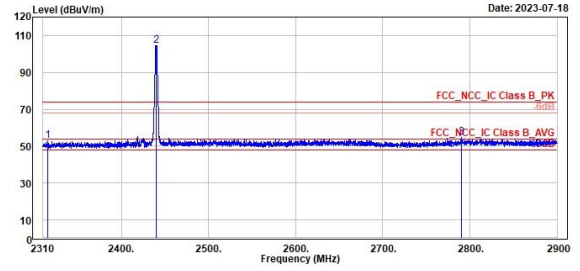
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2388.59	53.09	15.92	37.17	74.00	-20.91	309	146	Peak	Horizontal	
2 *	2448.00	107.47	70.03	37.44	74.00	33.47	309	146	Peak	Horizontal	
3	2636.03	54.58	16.88	37.62	74.00	-19.50	309	146	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2315.19	52.98	16.08	36.90	74.00	-21.02	340	329	Peak	Vertical	
2 *	2448.00	104.60	67.16	37.44	74.00	30.60	340	329	Peak	Vertical	
3	2789.91	54.78	17.13	37.65	74.00	-19.22	340	329	Peak	Vertical	

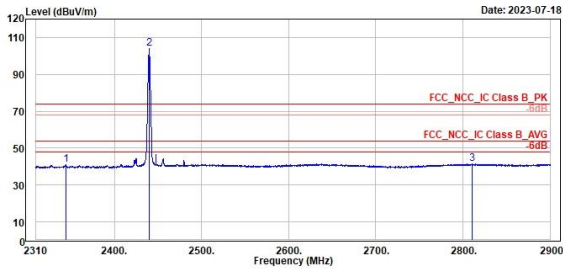
Zigbee_250kHz

Middle Channel (Horizontal) Average

Middle Channel (Vertical) Average



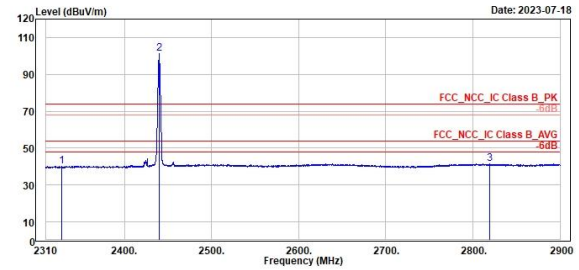
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1	2	3
Level	Level	Level
Factor	Factor	Factor
Limit	Limit	Limit
Over	Over	Over
Limit	Limit	Limit
APos	APos	APos
TPos	TPos	TPos
Remark	Remark	Remark
Pol/Phase	Pol/Phase	Pol/Phase
Note	Note	Note
2344.22	2448.00	2818.79
40.94	104.17	41.47
3.79	66.73	3.72
37.15	37.44	37.75
54.00	54.00	54.00
-13.06	50.17	-12.53
309	309	309
146	146	146
Average	Average	Average
Horizontal	Horizontal	Horizontal



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1	2	3
Level	Level	Level
Factor	Factor	Factor
Limit	Limit	Limit
Over	Over	Over
Limit	Limit	Limit
APos	APos	APos
TPos	TPos	TPos
Remark	Remark	Remark
Pol/Phase	Pol/Phase	Pol/Phase
Note	Note	Note
2327.94	2448.00	2819.64
40.27	101.45	41.46
3.26	64.01	3.71
37.01	37.44	37.75
54.00	54.00	54.00
-13.73	47.45	-12.54
340	340	340
329	329	329
Average	Average	Average
Vertical	Vertical	Vertical

Zigbee_250kHz

High Channel (Horizontal) Peak

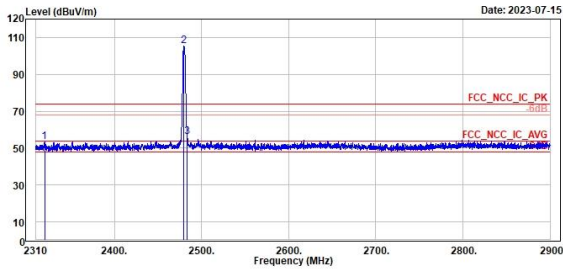
High Channel (Vertical) Peak



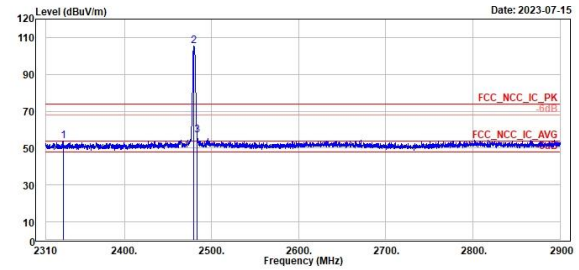
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2319.91	53.45	16.51	36.94	74.00	-20.55	149	205 Peak	Horizontal											
2480.00	105.21	67.67	37.54	74.00	31.21	149	205 Peak	Horizontal											
2483.81	56.24	18.70	37.54	74.00	-17.76	149	205 Peak	Horizontal											



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												
2330.18	53.66	16.63	37.03	74.00	-20.34	373	186 Peak	Vertical											
2480.00	105.17	67.63	37.54	74.00	31.17	373	186 Peak	Vertical											
2483.58	57.09	19.55	37.54	74.00	-16.91	373	186 Peak	Vertical											

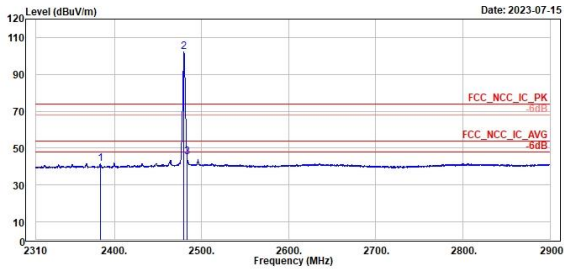
Zigbee_250kHz

High Channel (Horizontal) Average

High Channel (Vertical) Average



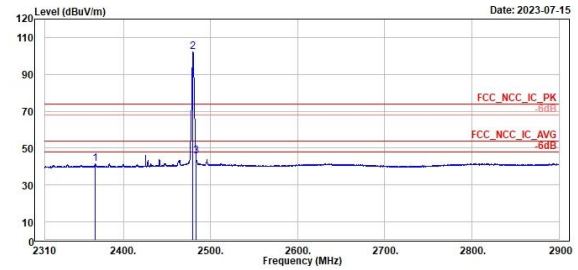
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1	2	3							
MHz	Level	Read Level Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2383.87	41.64	4.47	37.17	54.00	-12.36	149	205 Average	Horizontal	
2488.00	102.20	64.66	37.54	54.00	48.20	149	205 Average	Horizontal	
2483.46	45.06	7.52	37.54	54.00	-8.94	149	205 Average	Horizontal	



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1	2	3							
MHz	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		
2367.58	41.53	4.34	37.19	54.00	-12.47	373	186 Average	Vertical	
2488.00	102.18	64.64	37.54	54.00	48.18	373	186 Average	Vertical	
2483.46	45.41	7.87	37.54	54.00	-8.59	373	186 Average	Vertical	

Zigbee_1M

Low Channel (Horizontal) Peak

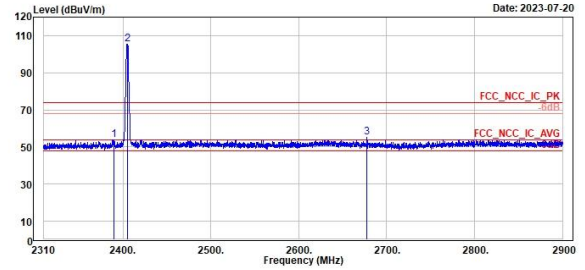
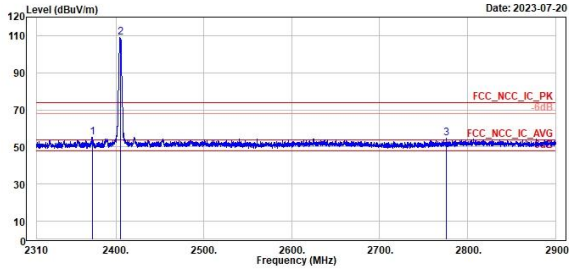
Low Channel (Vertical) Peak



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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	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note									
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2373.84	55.02	17.84	37.18	74.00	-18.98	100	205	Peak	Horizontal										
2405.00	108.88	71.68	37.20	74.00	34.88	100	205	Peak	Horizontal										
2775.98	54.89	17.37	37.52	74.00	-19.11	100	205	Peak	Horizontal										

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	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note									
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
2389.89	53.76	16.59	37.17	74.00	-20.24	288	158	Peak	Vertical										
2405.00	105.56	68.36	37.20	74.00	31.56	288	158	Peak	Vertical										
2677.10	55.40	17.89	37.51	74.00	-18.60	288	158	Peak	Vertical										

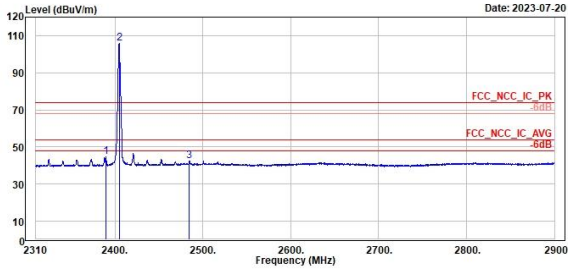
Zigbee_1M

Low Channel (Horizontal) Average

Low Channel (Vertical) Average



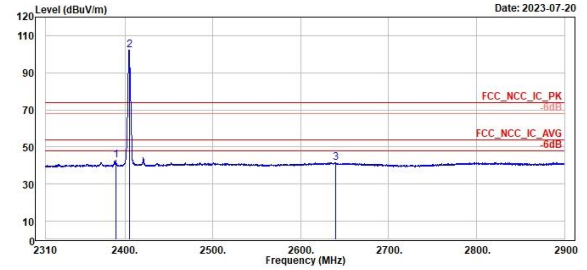
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1	2	3	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2389.77	44.76	7.59	37.17	54.00	-9.24	100	205	Average	Horizontal		
2405.00	105.73	68.53	37.20	54.00	51.73	100	205	Average	Horizontal		
2484.76	42.58	5.04	37.54	54.00	-11.42	100	205	Average	Horizontal		



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1	2	3	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2389.89	42.78	5.61	37.17	54.00	-11.22	288	158	Average	Vertical		
2405.00	102.32	65.12	37.20	54.00	48.32	288	158	Average	Vertical		
2639.46	41.57	3.96	37.61	54.00	-12.43	288	158	Average	Vertical		

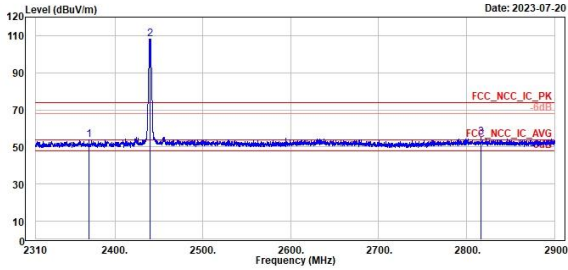
Zigbee_1M

Middle Channel (Horizontal) Peak

Middle Channel (Vertical) Peak



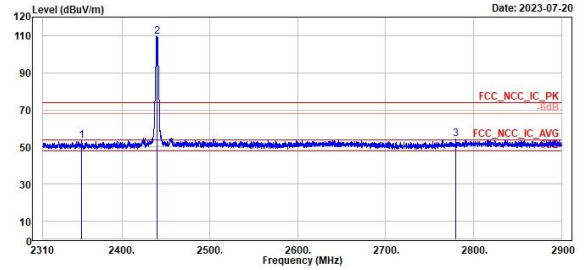
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1	2	3								
Level	Level	Level								
Factor	Factor	Factor								
Limit	Limit	Limit								
Over	Over	Over								
Line	Line	Line								
Limit	Limit	Limit								
APos	APos	APos								
TPos	TPos	TPos								
Remark	Remark	Remark								
Pol/Phase	Pol/Phase	Pol/Phase								
Note	Note	Note								
MHz	dBuV/m	dBuV								
dB/m	dBuV/m	dB								
cm	deg									
2370.65	53.67	16.48	37.19	74.00	-20.33	211	200	Peak	Horizontal	
2448.00	108.30	70.86	37.44	74.00	34.30	211	200	Peak	Horizontal	
2816.46	54.99	17.24	37.75	74.00	-19.01	211	200	Peak	Horizontal	



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1	2	3								
Level	Level	Level								
Factor	Factor	Factor								
Limit	Limit	Limit								
Over	Over	Over								
Line	Line	Line								
Limit	Limit	Limit								
APos	APos	APos								
TPos	TPos	TPos								
Remark	Remark	Remark								
Pol/Phase	Pol/Phase	Pol/Phase								
Note	Note	Note								
MHz	dBuV/m	dBuV								
dB/m	dBuV/m	dB								
cm	deg									
2353.78	53.18	15.98	37.20	74.00	-20.82	342	185	Peak	Vertical	
2448.00	109.33	71.89	37.44	74.00	35.33	342	185	Peak	Vertical	
2779.76	54.31	16.75	37.56	74.00	-19.69	342	185	Peak	Vertical	

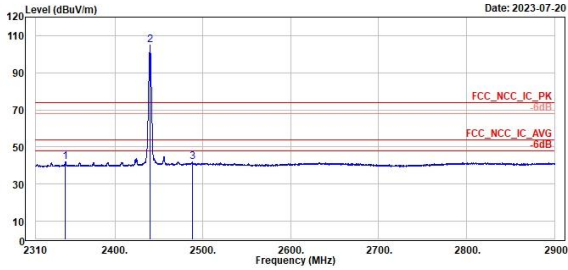
Zigbee_1M

Middle Channel (Horizontal) Average

Middle Channel (Vertical) Average



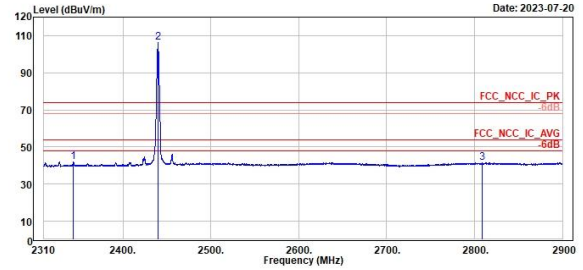
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1	2	3
Level	Level	Level
Factor	Factor	Factor
Limit	Limit	Limit
Over	Over	Over
Limit	Limit	Limit
APos	APos	APos
TPos	TPos	TPos
Remark	Remark	Remark
Pol/Phase	Pol/Phase	Pol/Phase
Note	Note	Note
Freq	Freq	Freq
MHz	MHz	MHz
Level	Level	Level
dBuV/m	dBuV/m	dBuV/m
Factor	Factor	Factor
dB	dB	dB
Limit	Limit	Limit
dB	dB	dB
APos	APos	APos
cm	cm	cm
TPos	TPos	TPos
deg	deg	deg
2343.98	2448.00	2488.30
41.80	185.15	41.80
4.65	67.71	4.25
37.15	37.44	37.55
54.00	54.00	54.00
-12.20	51.15	-12.20
211	211	211
200	200	200
Average	Average	Average
Horizontal	Horizontal	Horizontal



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1	2	3
Level	Level	Level
Factor	Factor	Factor
Limit	Limit	Limit
Over	Over	Over
Limit	Limit	Limit
APos	APos	APos
TPos	TPos	TPos
Remark	Remark	Remark
Pol/Phase	Pol/Phase	Pol/Phase
Note	Note	Note
Freq	Freq	Freq
MHz	MHz	MHz
Level	Level	Level
dBuV/m	dBuV/m	dBuV/m
Factor	Factor	Factor
dB	dB	dB
Limit	Limit	Limit
dB	dB	dB
APos	APos	APos
cm	cm	cm
TPos	TPos	TPos
deg	deg	deg
2343.98	2448.00	2888.79
41.89	186.28	41.61
4.74	68.84	3.87
37.15	37.44	37.74
54.00	54.00	54.00
-12.11	52.28	-12.39
342	342	342
185	185	185
Average	Average	Average
Vertical	Vertical	Vertical

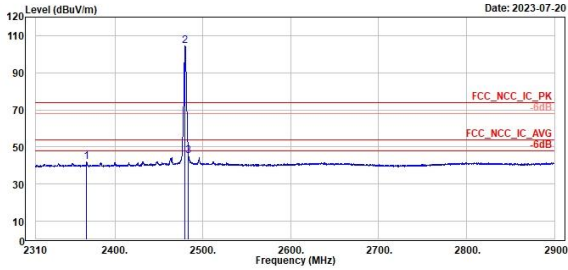
Zigbee_1M

High Channel (Horizontal) Average

High Channel (Vertical) Average



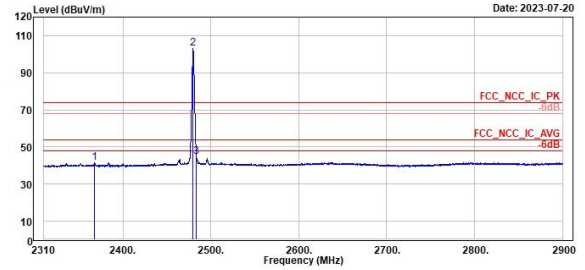
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1	2	3	Read Level	Level Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2367.82	42.15	4.96	37.19	54.00	-11.85	100	285	Average	Horizontal		
2488.00	104.51	66.97	37.54	54.00	50.51	100	285	Average	Horizontal		
2483.46	45.23	7.69	37.54	54.00	-8.77	100	285	Average	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				
2367.94	41.50	4.31	37.19	54.00	-12.50	364	197	Average	Vertical		
2488.00	103.07	65.53	37.54	54.00	49.07	364	197	Average	Vertical		
2483.46	44.64	7.10	37.54	54.00	-9.36	364	197	Average	Vertical		

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

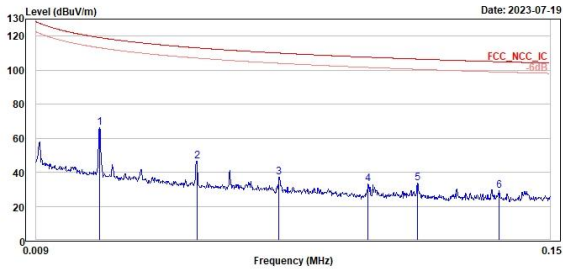
Zigbee_250kHz

High Channel (Open) 9kHz~150kHz

High Channel (Open) 150kHz~30MHz



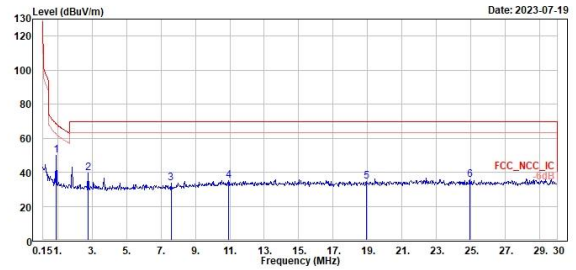
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Level Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.03	66.09	47.14	18.95	119.13	-53.04	100	114	Peak	Open	
2	0.05	46.36	27.32	19.04	113.09	-66.73	100	131	Peak	Open	
3	0.08	37.21	18.71	18.50	110.01	-72.80	100	360	Peak	Open	
4	0.10	32.97	15.05	17.92	107.59	-74.62	100	160	Peak	Open	
5	0.11	33.42	15.45	17.97	106.49	-73.07	100	274	Peak	Open	
6	0.14	29.25	11.19	18.06	104.92	-75.67	100	21	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	0.93	49.82	30.79	19.03	68.27	-18.45	100	123	Peak	Open	
2	2.78	39.39	19.84	19.55	69.50	-30.11	100	123	Peak	Open	
3	7.58	33.67	13.17	20.50	69.50	-35.83	100	162	Peak	Open	
4	10.93	35.16	13.00	21.56	69.50	-34.34	100	327	Peak	Open	
5	10.93	34.70	12.60	22.10	69.50	-34.80	100	168	Peak	Open	
6	24.93	35.76	13.56	22.20	69.50	-33.74	100	275	Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

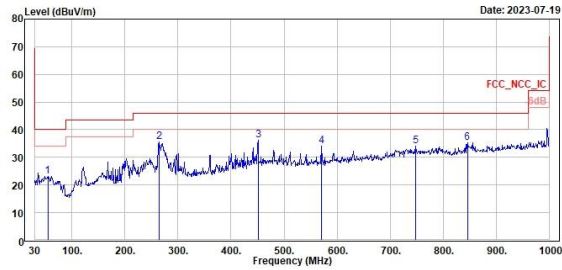
Zigbee_250kHz

High Channel (Horizontal)

High Channel (Vertical)



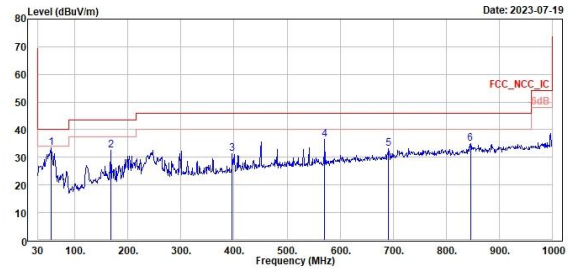
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Over (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	54.25	23.25	28.99	-5.74	40.00	-16.75	200	87	Peak	Horizontal	
2	263.77	35.46	41.45	-5.99	46.00	-10.54	200	133	Peak	Horizontal	
3	458.98	36.15	38.17	-2.02	46.00	-9.85	200	102	Peak	Horizontal	
4	578.29	34.07	34.60	-0.53	46.00	-11.93	100	109	Peak	Horizontal	
5	748.77	34.10	31.04	3.06	46.00	-11.90	100	121	Peak	Horizontal	
6	845.77	35.39	31.29	4.10	46.00	-10.61	200	134	Peak	Horizontal	



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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit (dBuV/m)	Over (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	55.22	33.42	39.36	-5.94	40.00	-6.58	100	143	Peak	Vertical	
2	167.74	32.63	38.35	-5.72	43.50	-10.87	100	37	Peak	Vertical	
3	396.66	31.38	34.25	-2.87	46.00	-14.62	100	80	Peak	Vertical	
4	571.26	36.42	36.95	-0.53	46.00	-9.58	100	182	Peak	Vertical	
5	691.54	33.17	31.37	1.80	46.00	-12.83	200	176	Peak	Vertical	
6	845.77	35.00	30.90	4.10	46.00	-11.00	182	360	Peak	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

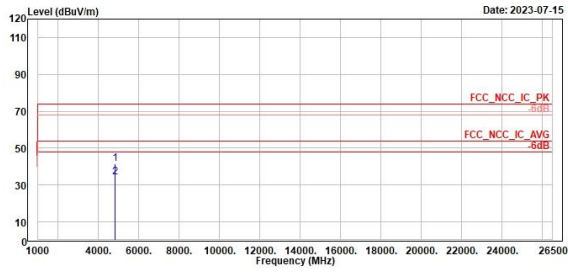
Zigbee_250kHz

Low Channel (Horizontal)

Low Channel (Vertical)



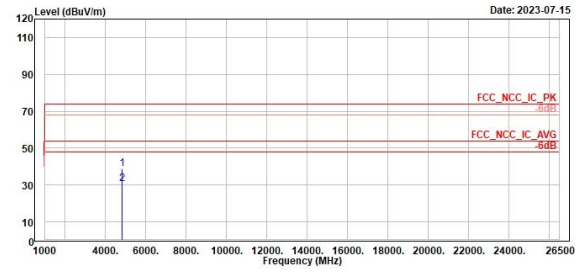
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4818.00	41.52	50.54	-9.02	74.00	-32.48	297	360 Peak	Horizontal	
2	4818.00	34.30	43.32	-9.02	54.00	-19.70	297	360 Average	Horizontal	



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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	4818.00	38.86	47.88	-9.02	74.00	-35.14	400	203 Peak	Vertical	
2	4818.00	30.56	39.58	-9.02	54.00	-23.44	400	203 Average	Vertical	

Zigbee_250kHz

Middle Channel (Horizontal)

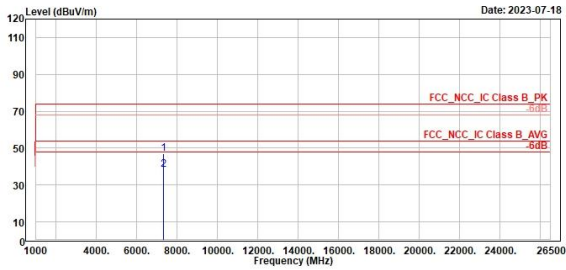
Middle Channel (Vertical)



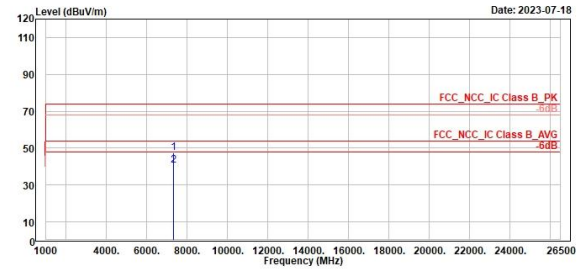
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1	2
7320.00	7320.00
46.89	38.28
53.97	45.36
-7.08	-7.08
74.00	54.00
-27.11	-15.72
100	100
350	350
Peak	Average
Horizontal	Horizontal



1	2
7320.00	7320.00
47.50	40.54
54.58	47.62
-7.08	-7.08
74.00	54.00
-26.50	-13.46
300	300
147	147
Peak	Average
Vertical	Vertical

Zigbee_250kHz

High Channel (Horizontal)

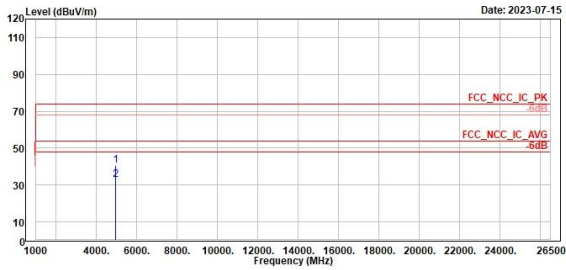
High Channel (Vertical)



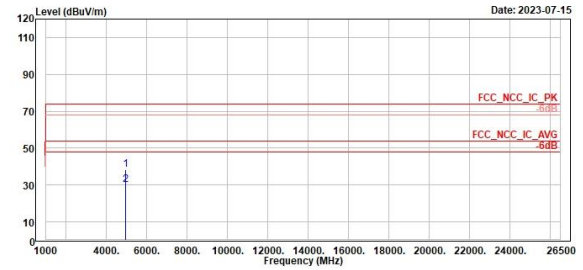
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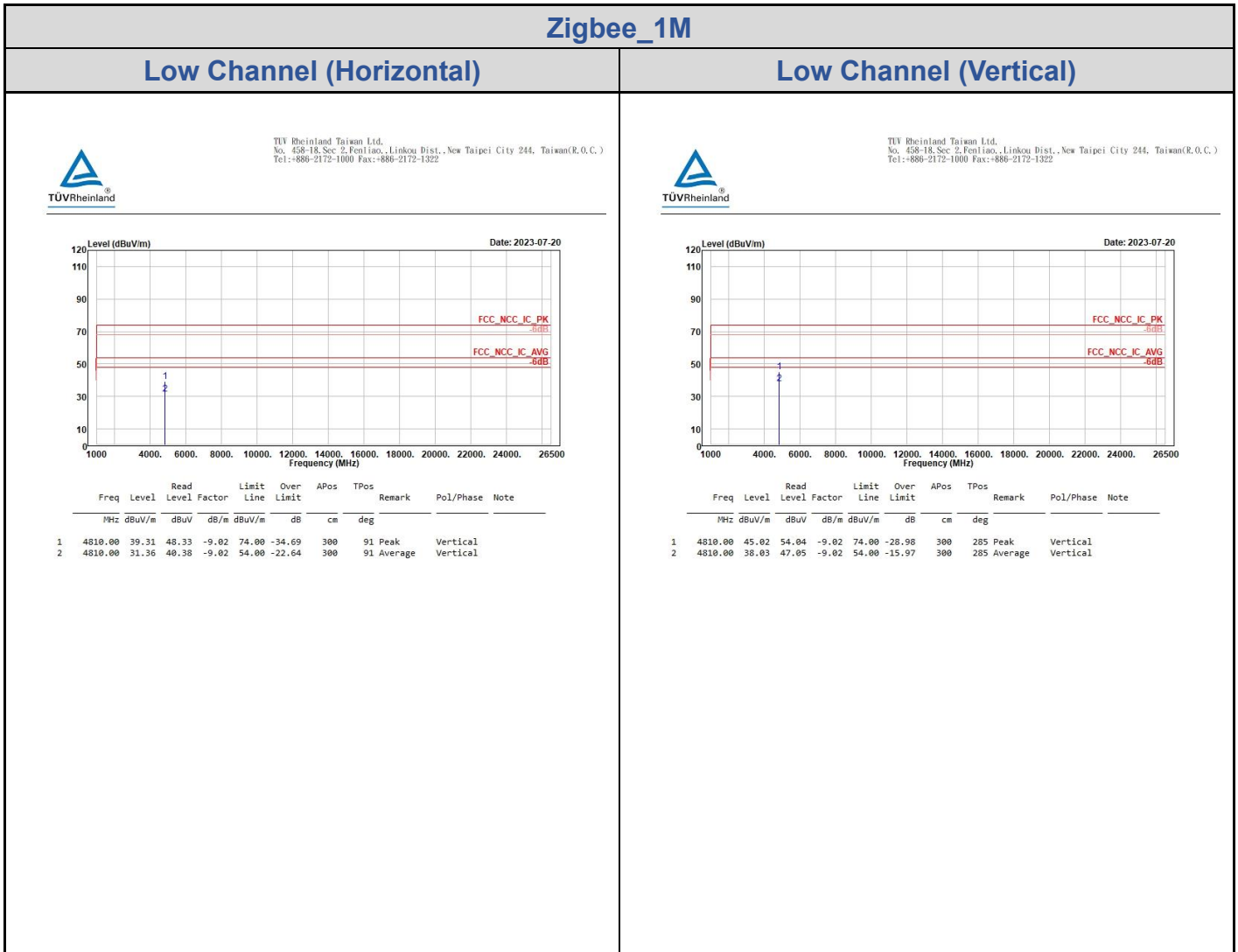
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Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4960.00	40.45	49.29	-8.84	74.00	-33.55	300	31 Peak	Horizontal	
2	4960.00	33.02	41.86	-8.84	54.00	-20.98	300	31 Average	Horizontal	



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	4960.00	38.38	47.22	-8.84	74.00	-35.62	200	360 Peak	Vertical	
2	4960.00	30.32	39.16	-8.84	54.00	-23.68	200	360 Average	Vertical	



Zigbee_1M

Middle Channel (Horizontal)

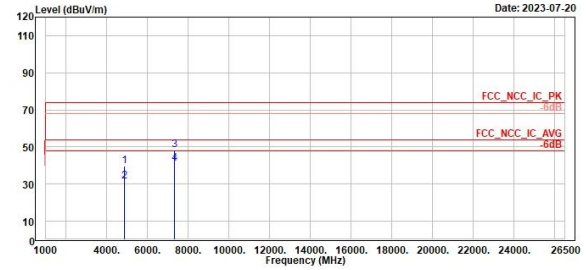
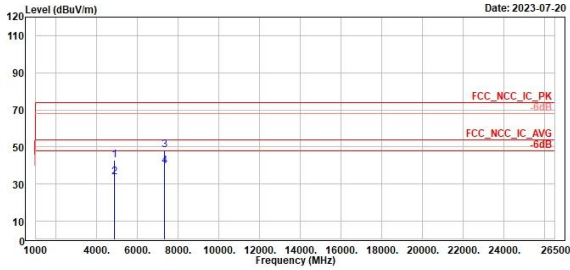
Middle Channel (Vertical)



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Line	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	4880.00	42.73	51.77	-9.04	74.00	-31.27	200	292	Peak	Horizontal	
2	4880.00	33.56	42.60	-9.04	54.00	-20.44	200	292	Average	Horizontal	
3	7320.00	48.42	55.50	-7.08	74.00	-25.58	100	30	Peak	Horizontal	
4	7320.00	39.79	46.87	-7.08	54.00	-14.21	100	30	Average	Horizontal	

Line	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	4880.00	39.59	48.63	-9.04	74.00	-34.41	200	293	Peak	Vertical	
2	4880.00	31.38	40.42	-9.04	54.00	-22.62	200	293	Average	Vertical	
3	7320.00	48.28	55.36	-7.08	74.00	-25.72	300	141	Peak	Vertical	
4	7320.00	40.94	48.02	-7.08	54.00	-13.06	300	141	Average	Vertical	

Zigbee_1M

High Channel (Horizontal)

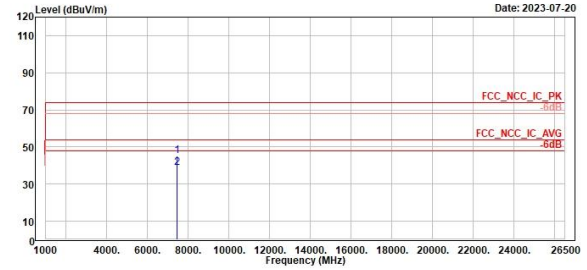
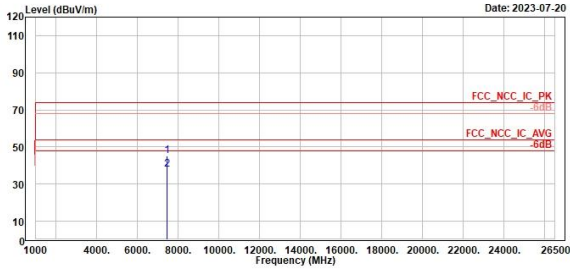
High Channel (Vertical)



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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	7448.00	45.22	52.40	-7.18	74.00	-28.78	300	31 Peak	Horizontal	
2	7448.00	37.74	44.92	-7.18	54.00	-16.26	300	31 Average	Horizontal	

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	7448.00	45.29	52.47	-7.18	74.00	-28.71	300	129 Peak	Vertical	
2	7448.00	38.81	45.99	-7.18	54.00	-15.19	300	129 Average	Vertical	

Mains Conducted Emission, 150kHz ~ 30MHz

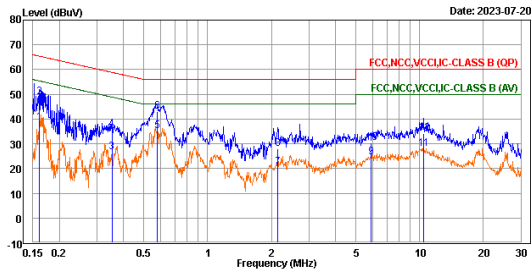
Worst Band

(Line)

(Neutral)



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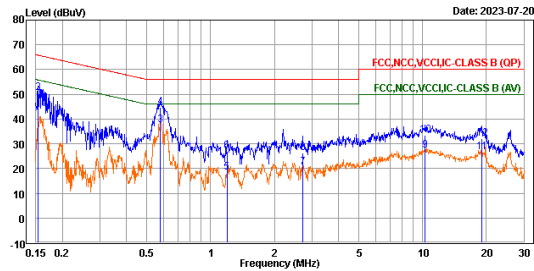


Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.16	38.75	29.13	9.62	55.42	-16.67	Average	line1	
2	0.16	49.00	39.38	9.62	65.42	-16.42	QP	line1	
3	0.35	26.49	16.86	9.63	48.88	-22.39	Average	line1	
4	0.35	35.87	26.24	9.63	58.88	-23.01	QP	line1	
5	0.58	35.26	25.63	9.63	46.00	-10.74	Average	line1	
6	0.58	43.08	33.45	9.63	56.00	-12.92	QP	line1	
7	2.15	20.54	10.88	9.66	46.00	-25.46	Average	line1	
8	2.15	28.07	18.41	9.66	56.00	-27.93	QP	line1	
9	5.88	24.68	14.96	9.72	50.00	-25.32	Average	line1	
10	5.88	30.41	20.69	9.72	60.00	-29.59	QP	line1	
11	10.43	28.01	18.25	9.76	50.00	-21.99	Average	line1	
12	10.43	34.15	24.39	9.76	60.00	-25.85	QP	line1	



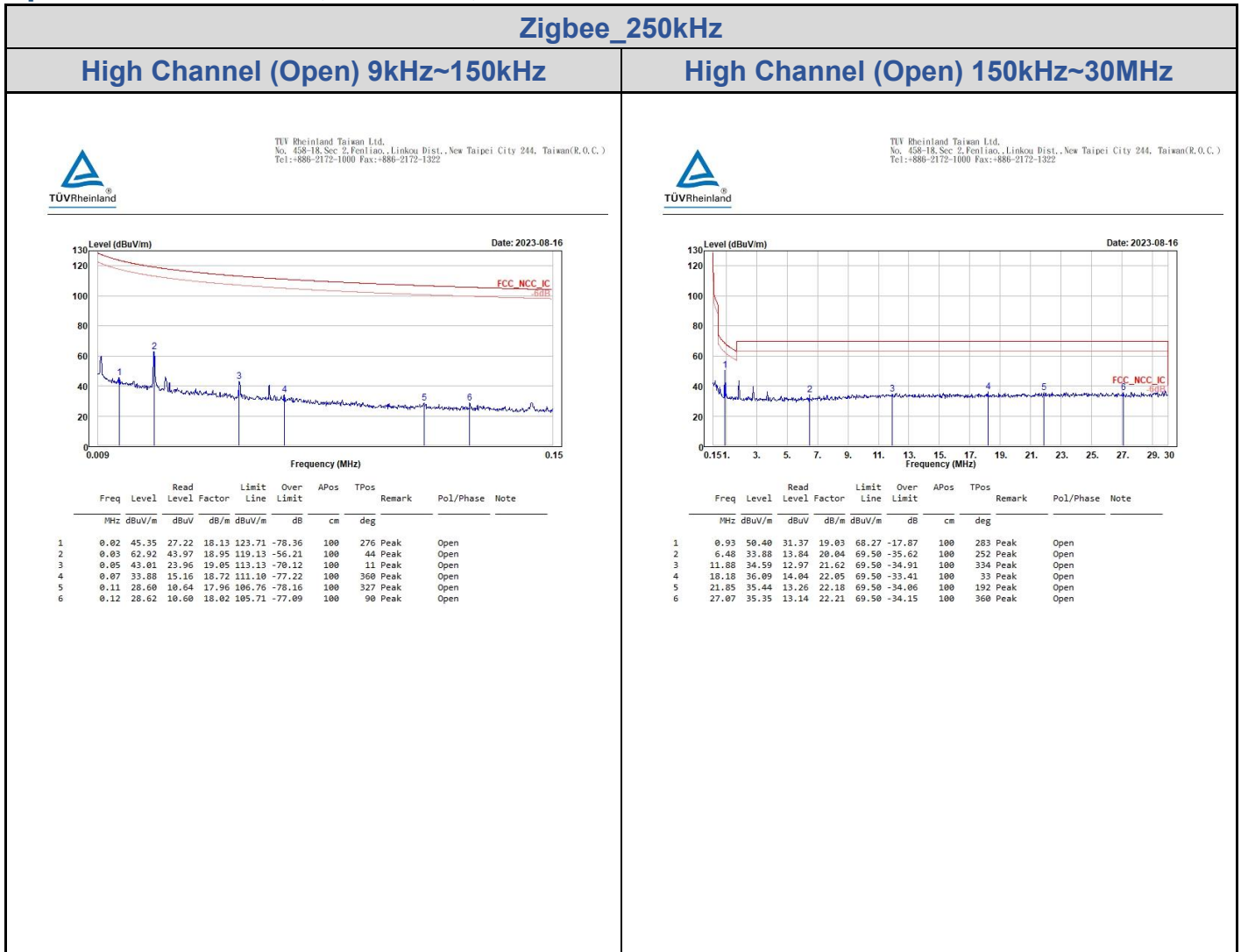
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Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor (dB)	Limit Line (dBuV)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.15	40.36	30.74	9.62	55.79	-15.43	Average	neutral	
2	0.15	50.61	40.99	9.62	65.79	-15.18	QP	neutral	
3	0.58	37.65	28.02	9.63	46.00	-8.35	Average	neutral	
4	0.58	44.74	35.11	9.63	56.00	-11.26	QP	neutral	
5	1.19	18.51	8.87	9.64	46.00	-27.49	Average	neutral	
6	1.19	27.10	17.46	9.64	56.00	-28.90	QP	neutral	
7	2.71	20.59	10.92	9.67	46.00	-25.41	Average	neutral	
8	2.71	26.14	16.47	9.67	56.00	-29.86	QP	neutral	
9	10.27	27.33	17.54	9.79	50.00	-22.67	Average	neutral	
10	10.27	33.31	23.52	9.79	60.00	-26.69	QP	neutral	
11	18.97	26.55	16.69	9.86	50.00	-23.45	Average	neutral	
12	18.97	31.93	22.07	9.86	60.00	-28.07	QP	neutral	

Main Source, Non-ECC Mode
Spurious Emissions, Tx Mode, 9kHz ~ 30MHz



Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

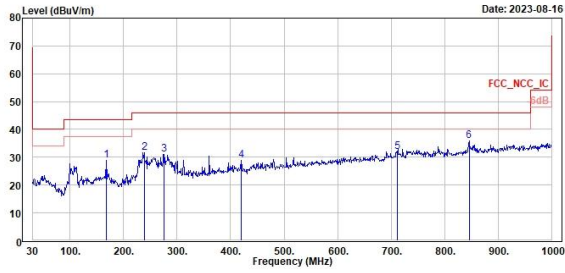
Zigbee_250kHz

High Channel (Horizontal)

High Channel (Vertical)



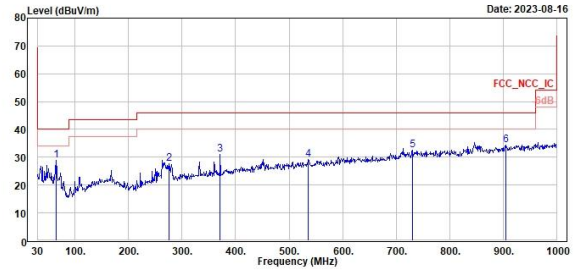
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1	2	3	4	5	6
MHz	Level	Read Level	Factor	Limit	Over
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm
167.74	28.84	34.56	-5.72	43.50	-14.66
238.55	31.74	38.40	-6.66	46.00	-14.26
275.41	31.00	36.55	-5.55	46.00	-15.00
419.94	28.81	31.46	-2.65	46.00	-17.19
711.91	32.06	29.90	2.16	46.00	-13.94
845.77	35.88	31.78	4.10	46.00	-10.12

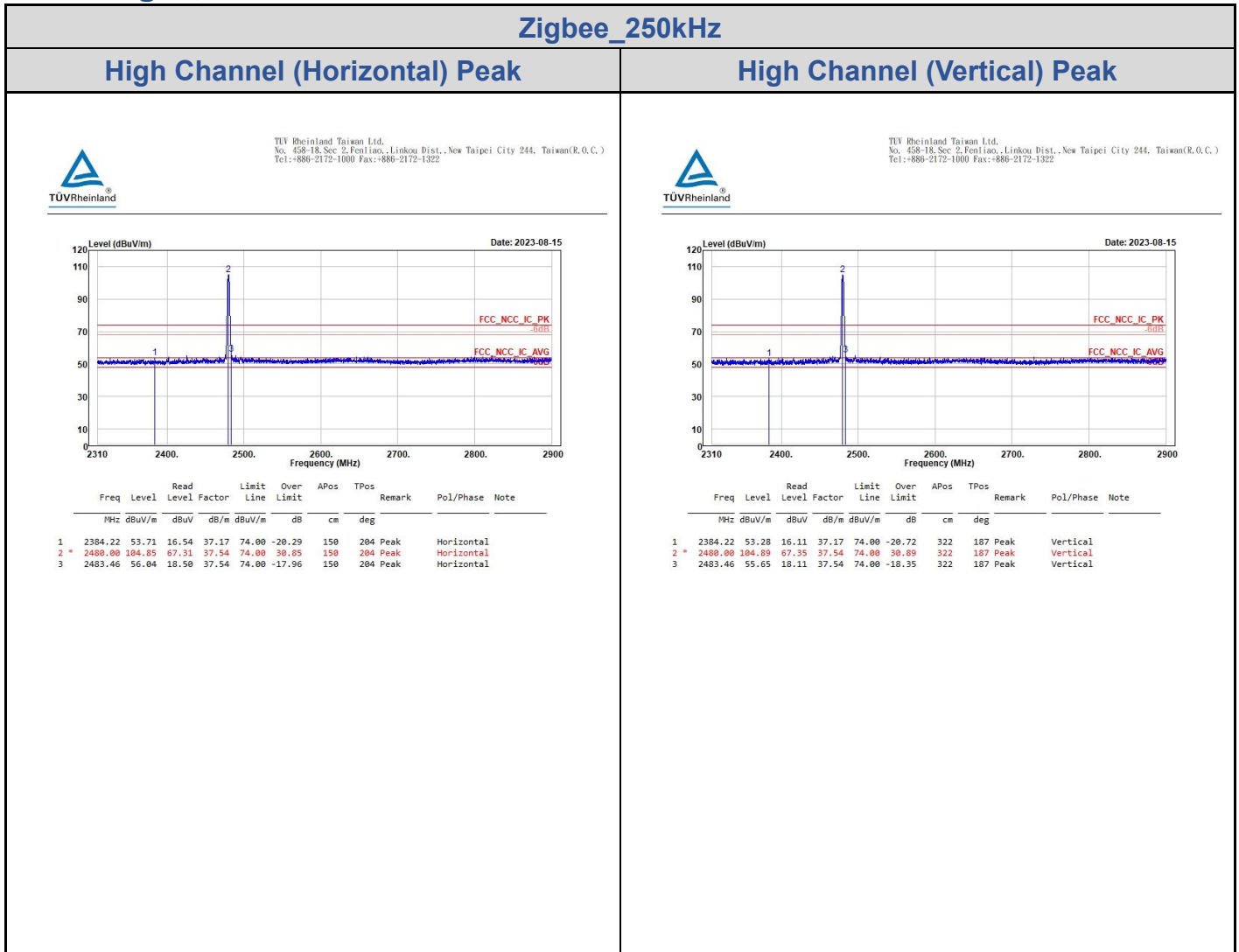


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1	2	3	4	5	6
MHz	Level	Read Level	Factor	Limit	Over
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm
63.95	28.88	36.14	-7.26	40.00	-11.12
275.41	27.59	33.14	-5.55	46.00	-18.41
371.44	30.89	34.26	-3.37	46.00	-15.11
536.34	29.06	30.82	-0.96	46.00	-16.94
730.34	32.00	30.43	2.17	46.00	-13.40
904.94	34.27	29.55	4.72	46.00	-11.73

2nd Source, ECC Mode
Band Edges, 2.31GHz ~ 2.9GHz



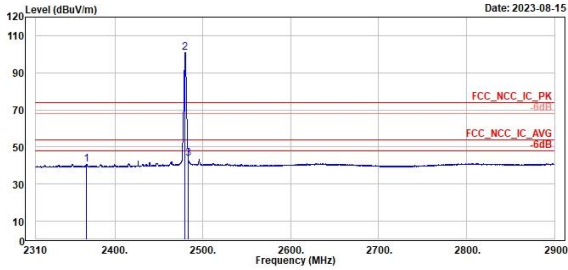
Zigbee_250kHz

High Channel (Horizontal) Average

High Channel (Vertical) Average



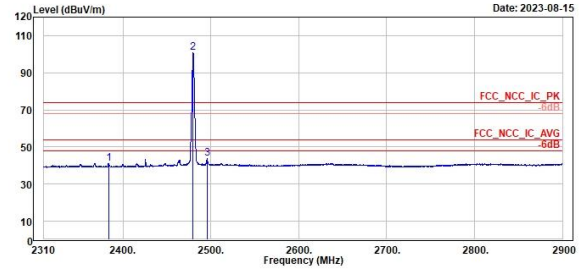
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1	2	3	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg					
2367.94	40.84	3.65	37.19	54.00	-13.16	150	284	Average	Horizontal			
2488.00	101.03	63.49	37.54	54.00	47.03	150	284	Average	Horizontal			
2483.46	43.74	6.20	37.54	54.00	-10.26	150	284	Average	Horizontal			



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1	2	3	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg					
2383.87	41.10	3.93	37.17	54.00	-12.90	322	187	Average	Vertical			
2488.00	101.06	63.52	37.54	54.00	47.06	322	187	Average	Vertical			
2495.97	43.74	6.18	37.56	54.00	-10.26	322	187	Average	Vertical			

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

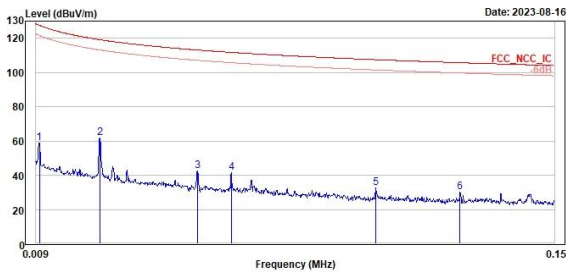
Zigbee_250kHz

High Channel (Open) 9kHz~150kHz

High Channel (Open) 150kHz~30MHz



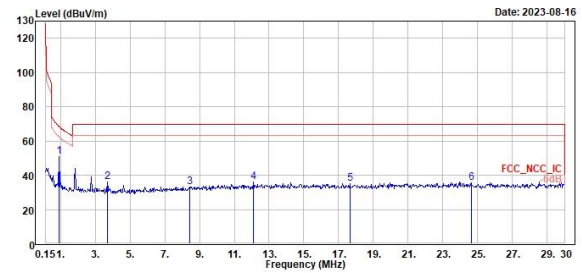
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	PoI/Phase	Note
1	0.01	58.92	41.20	17.72	127.60	-68.68	100	119	Peak	Open	
2	0.03	61.69	42.74	18.95	119.13	-57.44	100	103	Peak	Open	
3	0.05	42.56	23.51	19.05	113.11	-70.55	100	218	Peak	Open	
4	0.06	41.39	22.56	18.83	111.72	-70.33	100	283	Peak	Open	
5	0.10	32.76	14.83	17.93	107.47	-74.71	100	287	Peak	Open	
6	0.12	29.95	11.93	18.02	105.71	-75.76	100	174	Peak	Open	



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Tel: +886-2172-1000 Fax: +886-2172-1322



Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	PoI/Phase	Note
1	0.93	50.82	31.79	19.03	68.27	-17.45	100	247	Peak	Open	
2	3.70	35.93	16.38	19.55	69.50	-33.57	100	279	Peak	Open	
3	8.42	33.17	12.33	20.84	69.50	-36.33	100	236	Peak	Open	
4	12.12	36.27	14.63	21.64	69.50	-33.23	100	43	Peak	Open	
5	17.64	34.09	12.88	22.01	69.50	-34.61	100	61	Peak	Open	
6	24.63	35.62	13.42	22.20	69.50	-33.88	100	214	Peak	Open	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

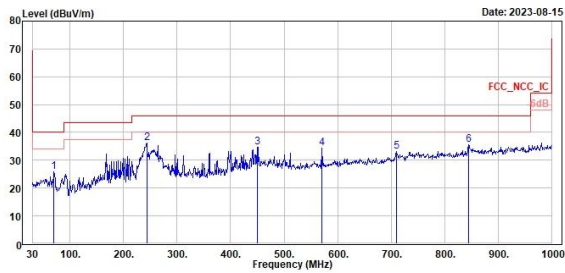
Zigbee_250kHz

High Channel (Horizontal)

High Channel (Vertical)



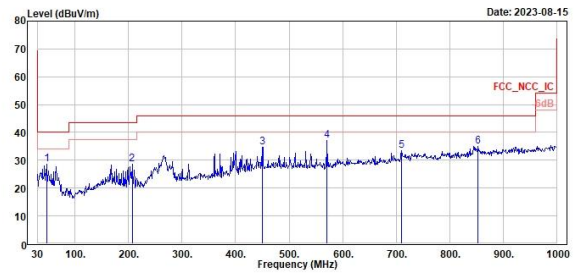
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1	2	3	4	5	6
MHz	Level	Read Level	Factor	Limit	Over
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm
69.77	25.95	34.59	-8.64	40.00	-14.05
243.40	36.20	42.75	-6.55	46.00	-9.80
450.01	34.65	36.64	-1.99	46.00	-11.35
571.26	34.38	34.91	-0.53	46.00	-11.62
709.97	33.03	30.04	2.19	46.00	-12.97
844.80	35.47	31.35	4.12	46.00	-10.53



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1	2	3	4	5	6
MHz	Level	Read Level	Factor	Limit	Over
dBuV/m	dBuV	dB/m	dBuV/m	dB	cm
46.49	28.47	34.34	-5.87	40.00	-11.53
206.54	28.45	37.17	-8.72	43.50	-15.05
450.01	34.70	36.69	-1.99	46.00	-11.30
571.26	37.11	37.64	-0.53	46.00	-8.89
709.97	33.99	31.20	2.19	46.00	-12.61
853.53	34.93	30.88	4.05	46.00	-11.07

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

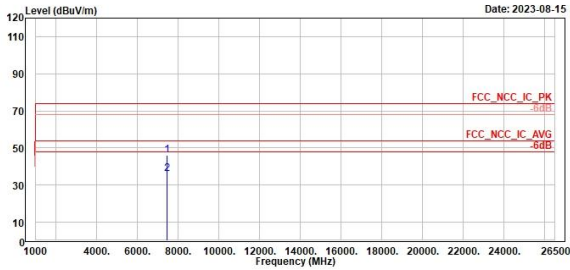
Zigbee_250kHz

High Channel (Horizontal)

High Channel (Vertical)



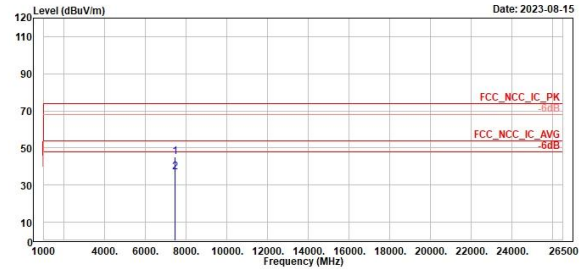
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MHz	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note									
	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
1	7448.00	46.01	53.19	-7.18	74.00	-27.99	100	292 Peak	Horizontal										
2	7448.00	36.16	43.34	-7.18	54.00	-17.84	100	292 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
MHz	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note									
	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg												
1	7448.00	45.14	52.32	-7.18	74.00	-28.86	300	148 Peak	Vertical										
2	7448.00	36.93	44.11	-7.18	54.00	-17.07	300	148 Average	Vertical										