

Appendix D:

Test Results of Radiated Spurious Emissions & Mains Conducted

Emission Test for ANT 4 (UFL, ECC)

Band Edges, 2.31GHz ~ 2.9GHz

ZIGBEE 250kbps

CH11 (Horizontal) Peak

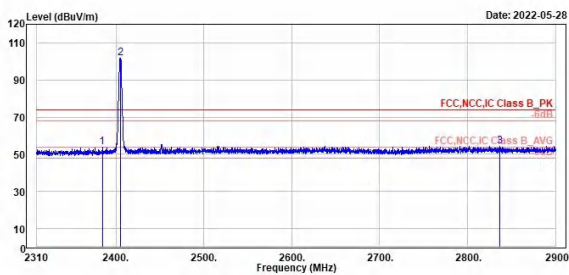
CH11 (Vertical) Peak



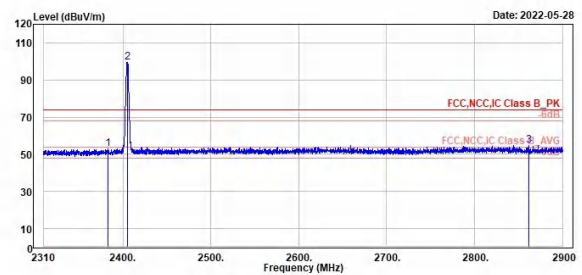
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	2384.50	53.63	16.00	37.55	74.00	-20.37	361	212	Peak	Horizontal	
2 *	2485.00	181.72	64.00	37.64	74.00	27.72	361	212	Peak	Horizontal	
3	2836.40	54.50	16.32	38.18	74.00	-19.50	361	212	Peak	Horizontal	



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	2383.40	53.07	15.53	37.54	74.00	-20.93	349	106	Peak	Vertical	
2 *	2485.00	99.62	61.98	37.64	74.00	25.62	349	106	Peak	Vertical	
3	2861.53	54.77	16.54	38.23	74.00	-19.23	349	106	Peak	Vertical	

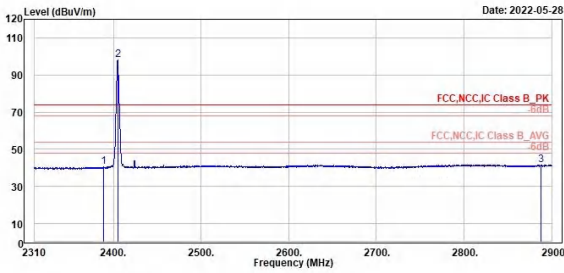
ZIGBEE 250kbps

CH11 (Horizontal) Average

CH11 (Vertical) Average



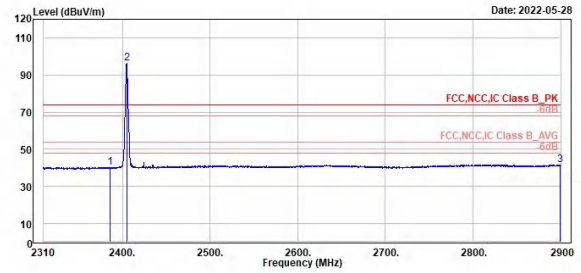
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2388.94	49.56	2.98	37.58	54.00	-13.44	361	212 Average	Horizontal
2 *	2485.00	98.23	60.59	37.64	54.00	44.23	361	212 Average	Horizontal
3	2887.49	41.65	3.29	38.36	54.00	-12.35	361	212 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	2386.23	49.33	2.77	37.56	54.00	-13.67	349	106 Average	Vertical
2 *	2485.00	96.21	56.57	37.64	54.00	42.21	349	106 Average	Vertical
3	2899.65	41.75	3.33	38.42	54.00	-12.25	349	106 Average	Vertical

ZIGBEE 250kbps

CH26 (Horizontal) Peak

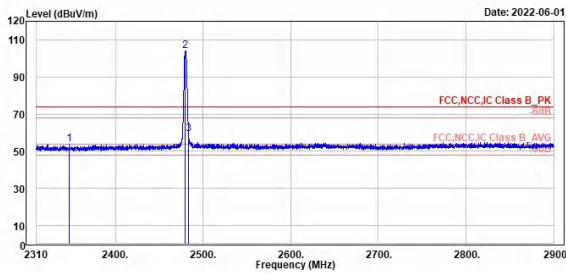
CH26 (Vertical) Peak



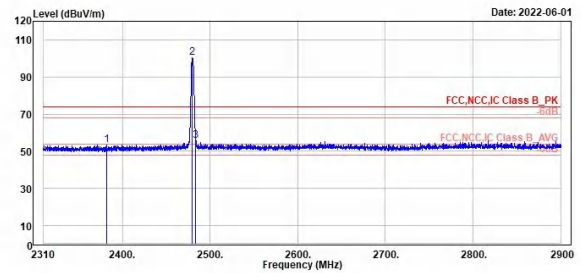
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Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2347.17	53.75	16.39	37.36	74.00	-20.25	341	187 Peak	Horizontal	
2 *	2480.00	103.93	66.14	37.79	74.00	29.93	341	187 Peak	Horizontal	
3	2483.46	59.29	21.49	37.80	74.00	-14.71	341	187 Peak	Horizontal	



Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2381.06	53.27	15.73	37.54	74.00	-20.73	330	98 Peak	Vertical	
2 *	2480.00	100.36	62.57	37.79	74.00	26.56	330	98 Peak	Vertical	
3	2483.46	55.89	18.09	37.80	74.00	-18.11	330	98 Peak	Vertical	

ZIGBEE 250kbps

CH26 (Horizontal) Average

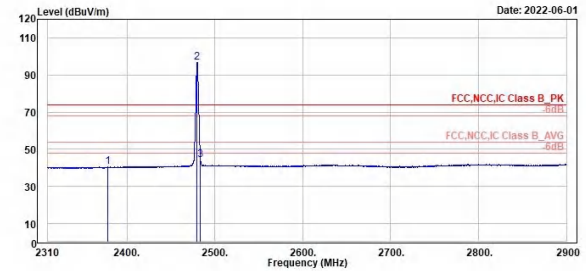
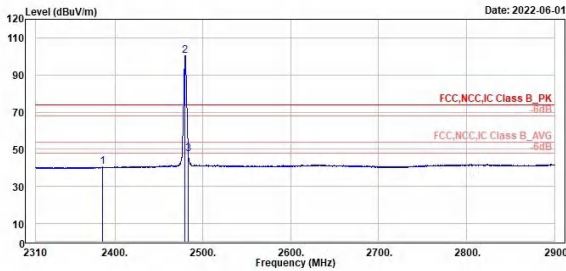
CH26 (Vertical) Average



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2386.35	40.29	2.82	37.57	54.00	-13.61	341	187	Average	Horizontal	
2 *	2480.00	109.47	62.66	37.79	54.00	46.47	341	187	Average	Horizontal	
3	2483.46	47.36	9.56	37.80	54.00	-6.64	341	187	Average	Horizontal	

Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2378.32	40.43	2.91	37.52	54.00	-13.57	330	98	Average	Vertical	
2 *	2480.00	96.86	59.87	37.79	54.00	42.86	330	98	Average	Vertical	
3	2483.46	44.35	6.55	37.80	54.00	-9.65	330	98	Average	Vertical	

ZIGBEE 2Mbps

CH11 (Horizontal) Peak

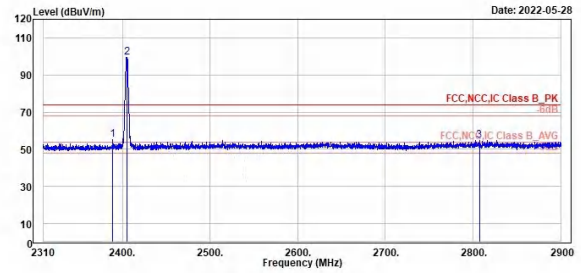
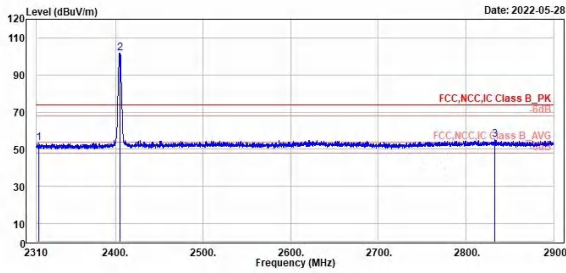
CH11 (Vertical) Peak



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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	2312.60	53.47	16.21	37.26	74.00	-20.53	361	215	Peak	Horizontal	
2 *	2405.00	181.68	64.04	37.64	74.00	27.68	361	215	Peak	Horizontal	
3	2832.74	55.24	17.07	38.17	74.00	-18.76	361	215	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	2389.18	55.21	17.63	37.58	74.00	-18.79	348	106	Peak	Vertical	
2 *	2405.00	99.53	61.89	37.64	74.00	25.53	348	106	Peak	Vertical	
3	2897.13	54.92	16.72	38.20	74.00	-19.08	348	106	Peak	Vertical	

ZIGBEE 2Mbps

CH11 (Horizontal) Average

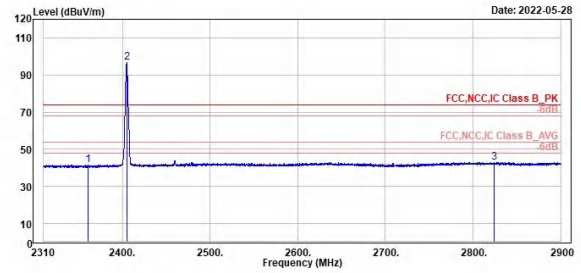
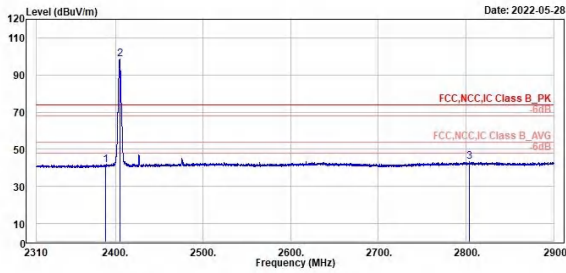
CH11 (Vertical) Average



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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	2389.18	41.64	4.06	37.58	54.00	-12.36	361	215 Average	Horizontal
2 *	2485.00	96.76	61.12	37.64	54.00	44.76	361	215 Average	Horizontal
3	2884.18	43.26	5.06	38.20	54.00	-10.74	361	215 Average	Horizontal

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2361.09	41.68	4.25	37.43	54.00	-12.32	348	106 Average	Vertical
2 *	2485.00	96.61	58.97	37.64	54.00	42.61	348	106 Average	Vertical
3	2823.89	43.09	4.91	38.18	54.00	-10.91	348	106 Average	Vertical

ZIGBEE 2Mbps

CH26 (Horizontal) Peak

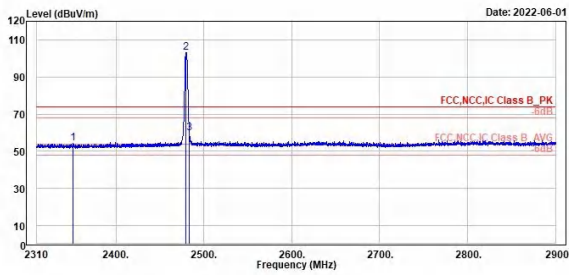
CH26 (Vertical) Peak



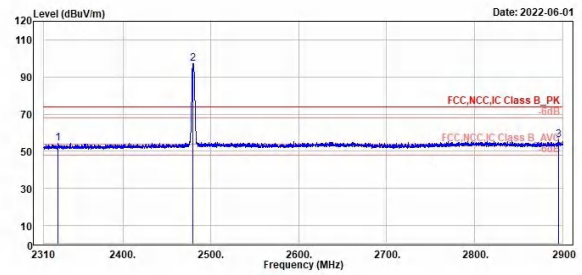
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2350.95	54.42	17.05	37.37	74.00	-19.58	342	197	Peak	Horizontal	
2 *	2488.00	103.31	65.52	37.79	74.00	29.31	342	197	Peak	Horizontal	
3	2483.46	59.88	22.08	37.80	74.00	-14.12	342	197	Peak	Horizontal	



Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	2326.64	54.40	17.10	37.30	74.00	-19.60	331	269	Peak	Vertical	
2 *	2488.00	97.05	59.26	37.79	74.00	23.05	331	269	Peak	Vertical	
3	2895.52	55.96	17.56	38.40	74.00	-18.04	331	269	Peak	Vertical	

ZIGBEE 2Mbps

CH26 (Horizontal) Average

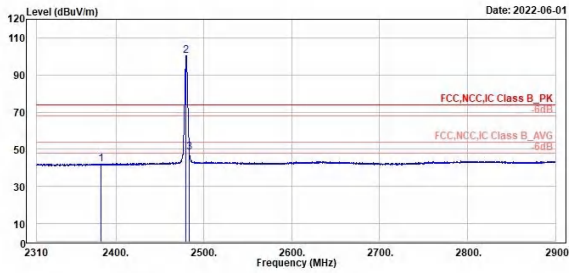
CH26 (Vertical) Average



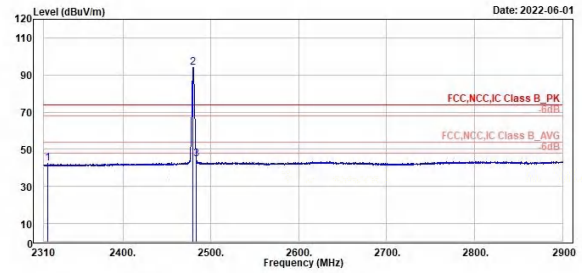
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1	2	3	4	5	6	7	8	9	10	11	12
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note		
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2383.40	42.19	4.65	37.54	54.00	-11.81	342	197 Average	Horizontal			
2488.00	100.40	62.61	37.79	54.00	46.40	342	197 Average	Horizontal			
2483.46	48.22	10.42	37.80	54.00	-5.78	342	197 Average	Horizontal			



1	2	3	4	5	6	7	8	9	10	11	12
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note		
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg				
2315.07	42.24	4.98	37.26	54.00	-11.76	331	269 Average	Vertical			
2488.00	94.13	56.34	37.79	54.00	40.13	331	269 Average	Vertical			
2483.81	44.57	6.77	37.80	54.00	-9.43	331	269 Average	Vertical			



Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

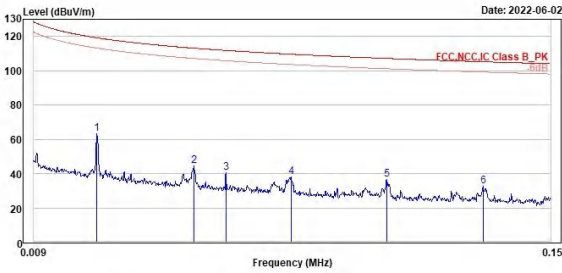
ZIGBEE 250kbps

CH11 (Open) 9kHz~150kHz

CH11 (Open) 150kHz~30MHz



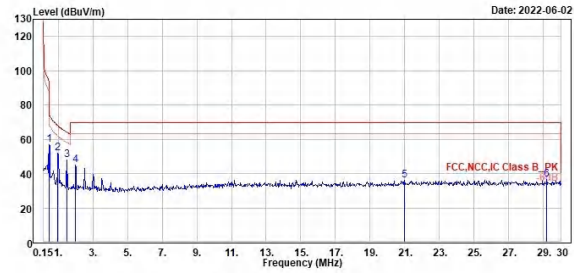
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Peak	Freq (MHz)	Level (dBuV/m)	Read Level (dBuV)	Factor (dB/m)	Limit Line (dBuV/m)	Over Limit (dB)	APos (cm)	TPos (deg)	Remark	Pol/Phase	Note
1	0.03	63.48	44.30	19.18	119.18	-55.70	100	319	QP	Open	
2	0.05	44.25	25.00	19.25	113.16	-68.91	100	299	QP	Open	
3	0.06	48.60	21.54	19.06	111.82	-71.22	100	235	QP	Open	
4	0.08	37.91	19.24	18.67	109.62	-71.71	100	142	QP	Open	
5	0.11	36.40	18.16	18.24	107.15	-70.75	100	165	QP	Open	
6	0.13	32.53	14.20	18.33	105.22	-72.69	100	145	QP	Open	



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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	0.48	56.98	38.03	18.95	94.01	-37.03	100	154	Peak	Vertical	
2	0.99	51.85	32.59	19.26	67.73	-15.88	100	147	Peak	Vertical	
3	1.49	47.91	28.57	19.34	64.12	-16.21	100	156	Peak	Vertical	
4	2.00	44.95	25.54	19.41	69.50	-24.55	100	146	Peak	Vertical	
5	20.99	36.23	13.99	22.24	69.50	-33.27	100	208	Peak	Vertical	
6	29.19	36.62	14.00	22.62	69.50	-32.88	100	113	Peak	Vertical	

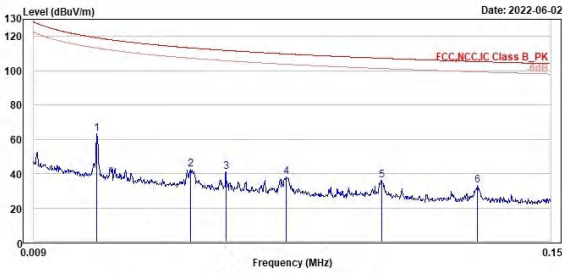
ZIGBEE 2Mbps

CH11 (Open) 9kHz~150kHz

CH11 (Open) 150kHz~30MHz



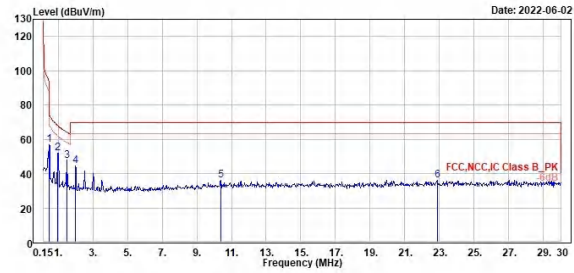
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.03	63.13	43.95	19.18	119.18	-56.05	100	96 QP	Open
2	0.05	42.57	23.30	19.27	113.30	-70.73	100	304 QP	Open
3	0.06	48.94	21.88	19.06	111.82	-70.88	100	25 QP	Open
4	0.08	38.25	19.55	18.70	109.77	-71.52	100	307 QP	Open
5	0.10	36.29	18.06	18.23	107.26	-70.97	100	164 QP	Open
6	0.13	32.93	14.61	18.32	105.32	-72.39	100	164 QP	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	0.48	56.78	37.83	18.95	94.01	-37.23	100	160 QP	Open
2	0.99	51.82	32.56	19.26	67.73	-15.01	100	148 QP	Open
3	1.52	47.61	28.27	19.34	63.95	-16.34	100	148 QP	Open
4	2.00	44.59	25.18	19.41	69.50	-24.91	100	157 QP	Open
5	10.39	36.09	14.57	21.52	69.50	-33.41	100	192 QP	Open
6	22.87	36.23	13.90	22.33	69.50	-33.27	100	249 QP	Open

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

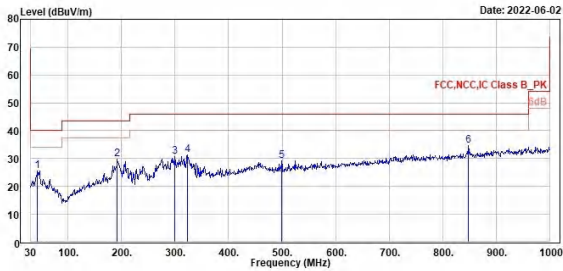
ZIGBEE 250kbps

CH11 (Horizontal)

CH11 (Vertical)



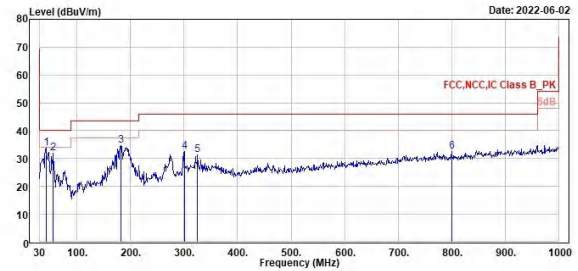
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1	2	3	4	5	6
Freq	Level	Read	Limit	Over	APos
MHz	dBuV/m	Level	Line	Limit	cm
		Factor			
		dB/m	dBuV/m	dB	
42.61	25.56	31.63	-6.07	40.00	-14.44
191.99	29.82	38.32	-8.50	43.50	-13.68
299.66	30.87	35.60	-4.73	46.00	-15.13
322.94	31.19	35.46	-4.27	46.00	-14.81
499.48	29.32	31.09	-1.77	46.00	-16.68
848.68	34.65	30.90	3.75	46.00	-11.35



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1	2	3	4	5	6
Freq	Level	Read	Limit	Over	APos
MHz	dBuV/m	Level	Line	Limit	cm
		Factor			
		dB/m	dBuV/m	dB	
41.64	33.81	39.93	-6.12	40.00	-6.19
55.22	32.81	38.53	-6.52	40.00	-7.99
182.29	34.62	42.33	-7.71	43.50	-8.88
300.63	32.67	37.39	-4.72	46.00	-13.33
324.88	31.24	35.40	-4.16	46.00	-14.76
800.18	32.65	29.47	3.18	46.00	-13.35

ZIGBEE 2Mbps

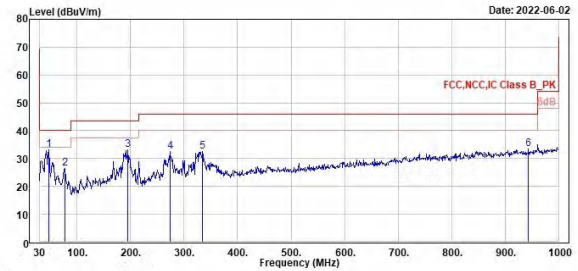
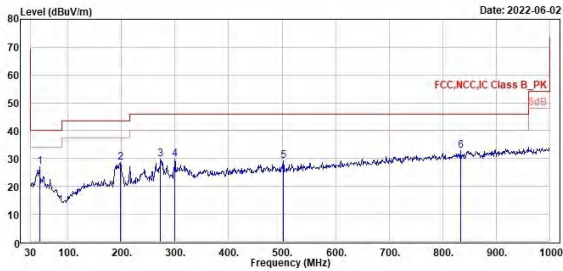
CH11 (Horizontal)

CH11 (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	46.49	26.95	32.02	-5.07	40.00	-13.05	300	80	QP	Horizontal	
2	197.81	28.49	37.04	-8.55	43.50	-15.01	300	295	QP	Horizontal	
3	272.50	29.89	35.50	-5.61	46.00	-16.11	100	290	QP	Horizontal	
4	299.66	29.96	34.69	-4.73	46.00	-16.04	300	146	QP	Horizontal	
5	502.39	29.34	31.10	-1.76	46.00	-16.66	100	311	QP	Horizontal	
6	833.16	32.67	29.23	3.64	46.00	-13.13	200	267	QP	Horizontal	

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	47.46	33.18	39.13	-5.95	40.00	-6.82	100	116	QP	Vertical	
2	76.56	26.36	36.14	-9.78	40.00	-13.64	300	73	QP	Vertical	
3	194.90	33.23	41.81	-8.58	43.50	-10.27	100	211	QP	Vertical	
4	273.47	32.45	38.00	-5.55	46.00	-13.55	100	140	QP	Vertical	
5	334.58	32.61	36.52	-3.91	46.00	-13.39	100	186	QP	Vertical	
6	943.74	33.57	28.30	5.27	46.00	-12.43	290	360	QP	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

ZIGBEE 250kbps

CH11 (Horizontal)

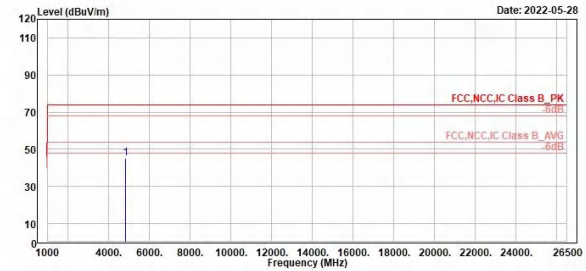
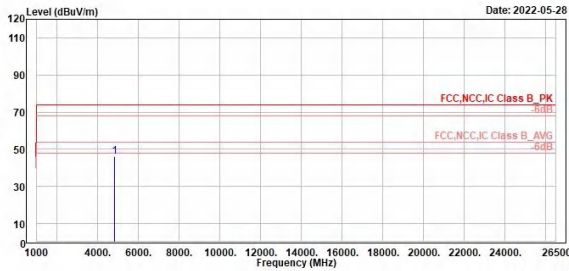
CH11 (Vertical)



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Freq	Level	Read	Level	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4810.00	46.31	56.16	-9.85	74.00	-27.69	122	358 Peak	Horizontal	

Freq	Level	Read	Level	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4810.00	45.05	54.90	-9.85	74.00	-28.95	300	312 Peak	Vertical	

ZIGBEE 250kbps

CH17 (Horizontal)

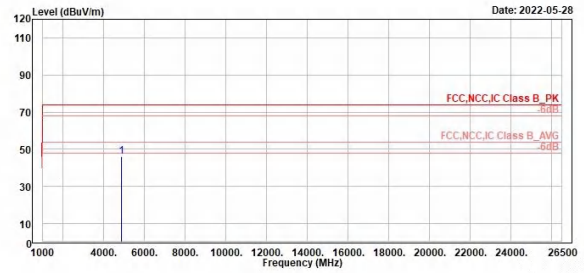
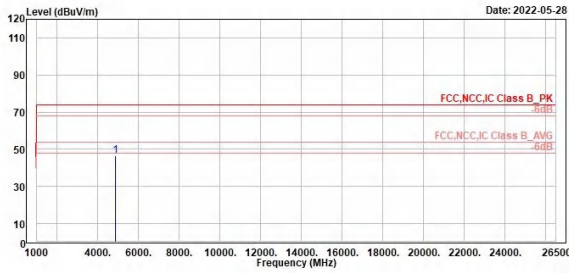
CH17 (Vertical)



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Freq	Level	Read	Level	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	Level	Factor	Line	Limit	cm	deg			
1	4870.00	46.35	56.11	-9.76	74.00	-27.65	122	360 Peak	Horizontal	

Freq	Level	Read	Level	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	Level	Factor	Line	Limit	cm	deg			
1	4870.00	46.11	55.87	-9.76	74.00	-27.89	400	286 Peak	Vertical	

ZIGBEE 250kbps

CH26 (Horizontal)

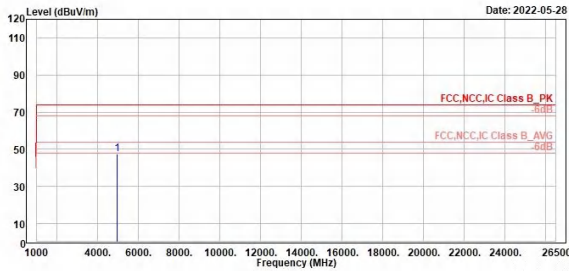
CH26 (Vertical)



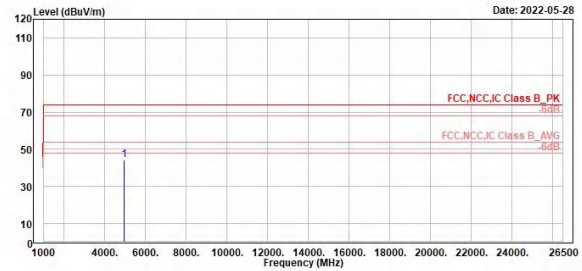
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1	4960.00	47.49	57.03	-9.54	74.00	-26.51	100	348	Peak	Horizontal
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1	4960.00	44.36	53.90	-9.54	74.00	-29.64	333	360	Peak	Vertical
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ZIGBEE 2Mbps

CH11 (Horizontal)

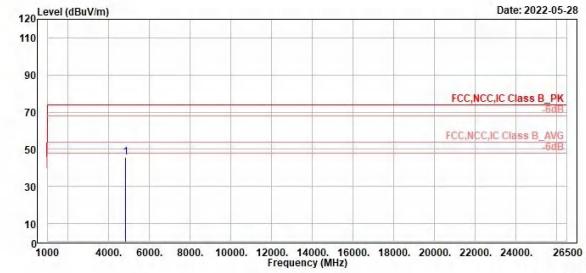
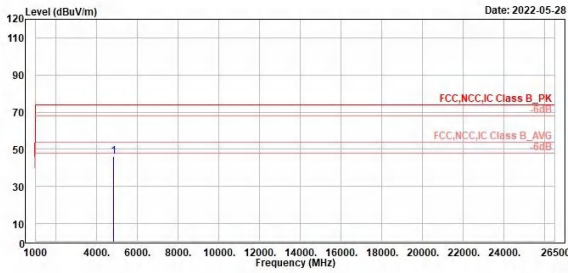
CH11 (Vertical)



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Freq	Level	Read	Level	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4810.00	46.06	55.91	-9.85	74.00	-27.94	113	360 Peak	Horizontal	

Freq	Level	Read	Level	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4810.00	45.68	55.53	-9.85	74.00	-28.32	300	312 Peak	Vertical	



ZIGBEE 2Mbps

CH17 (Horizontal)

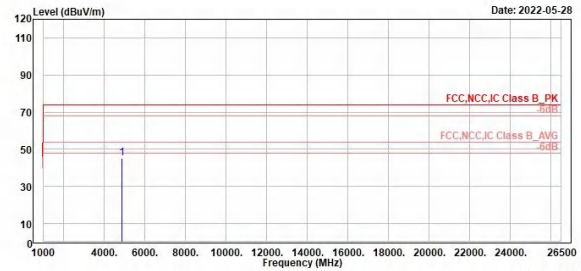
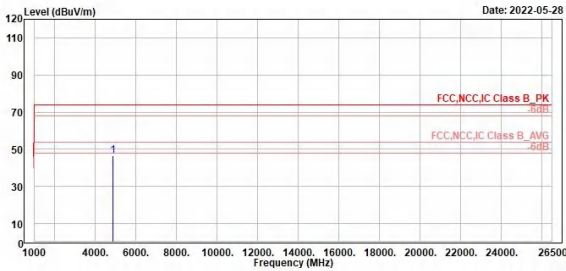
CH17 (Vertical)



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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 4870.00	46.75	56.51	-9.76	74.00	-27.25	129	360	Peak	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 4870.00	44.98	54.74	-9.76	74.00	-29.02	400	276	Peak	Vertical	

ZIGBEE 2Mbps

CH26 (Horizontal)

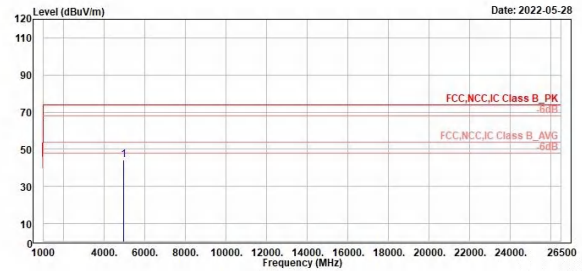
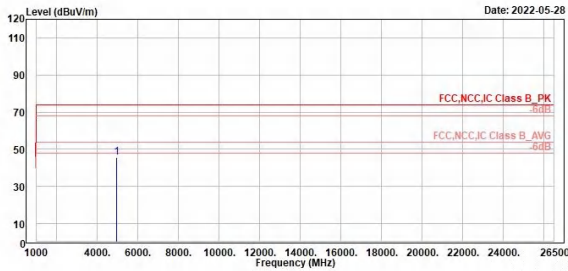
CH26 (Vertical)



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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 4960.00	45.48	55.02	-9.54	74.00	-28.52	100	358	Peak	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	44.22	53.76	-9.54	74.00	-29.78	300	342	Peak	Vertical	

# Test Results of Radiated Spurious Emissions & Mains Conducted

## Emission Test for ANT 4 (UFL, ECC, Buck PWM On)

### Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

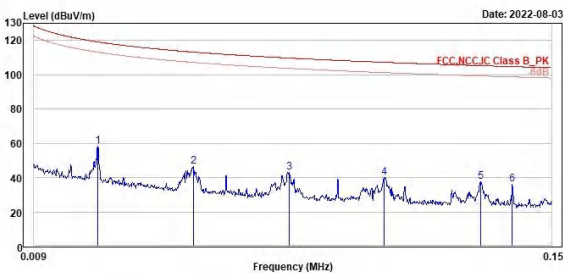
#### ZIGBEE 2Mbps

##### CH17 (Open) 9kHz~150kHz

##### CH17 (Open) 150kHz~30MHz



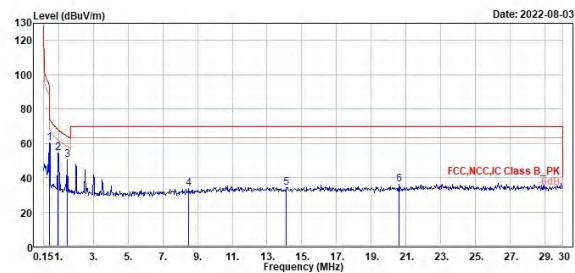
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.03	50.23	39.04	19.19	119.13	-60.90	100	59 QP	Open
2	0.05	46.40	27.14	19.26	113.20	-66.80	100	197 QP	Open
3	0.08	43.19	24.51	18.68	109.70	-66.51	100	217 QP	Open
4	0.10	40.00	21.76	18.24	107.23	-67.23	100	194 QP	Open
5	0.13	37.48	19.15	18.33	105.27	-67.79	100	213 QP	Open
6	0.14	36.23	17.87	18.36	104.72	-68.49	100	144 QP	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	0.48	60.20	41.25	18.95	94.01	-33.81	100	130 QP	Open
2	0.99	54.60	35.34	19.26	67.73	-13.13	100	144 QP	Open
3	1.49	50.55	31.21	19.34	64.12	-13.57	100	141 QP	Open
4	8.51	33.67	12.86	20.81	69.50	-35.83	100	278 QP	Open
5	14.12	34.20	12.41	21.79	69.50	-35.30	100	134 QP	Open
6	20.60	36.04	13.81	22.23	69.50	-33.46	100	212 QP	Open

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

ZIGBEE 2Mbps

CH17 (Horizontal)

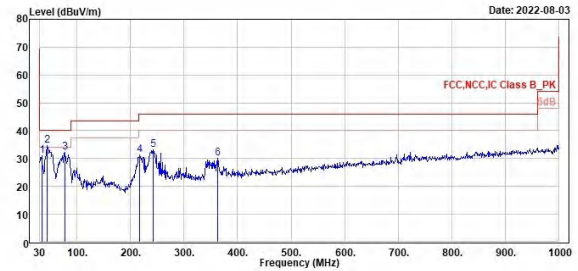
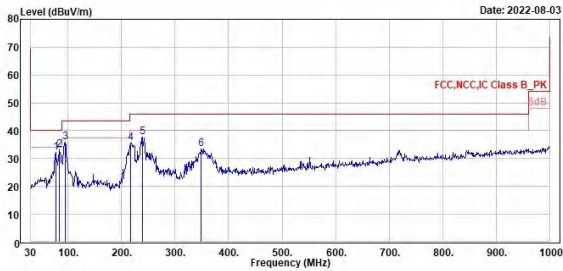
CH17 (Vertical)



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Peak	Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level	dB/m	Line	Limit	cm	deg			
1	76.56	32.10	41.88	-9.78	40.00	-7.90	300	208	QP	Horizontal	
2	84.32	33.03	44.49	-11.46	40.00	-6.97	400	230	QP	Horizontal	
3	94.02	35.83	48.33	-12.50	43.50	-7.67	400	226	QP	Horizontal	
4	216.24	35.52	43.65	-8.13	46.00	-10.48	200	54	QP	Horizontal	
5	239.52	37.85	44.59	-6.74	46.00	-8.15	100	259	QP	Horizontal	
6	349.13	33.35	37.26	-3.91	46.00	-12.65	200	266	QP	Horizontal	

Peak	Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	Level	dB/m	Line	Limit	cm	deg			
1	33.88	30.98	38.24	-7.26	40.00	-9.02	100	350	QP	Vertical	
2	44.55	34.65	40.60	-5.95	40.00	-5.35	100	124	QP	Vertical	
3	76.56	32.10	41.88	-9.78	40.00	-7.90	101	360	QP	Vertical	
4	217.21	31.26	39.36	-8.10	46.00	-14.74	100	302	QP	Vertical	
5	241.46	33.04	39.76	-6.72	46.00	-12.96	100	164	QP	Vertical	
6	362.71	29.97	33.62	-3.65	46.00	-16.03	200	213	QP	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

ZIGBEE 2Mbps

CH17 (Horizontal)

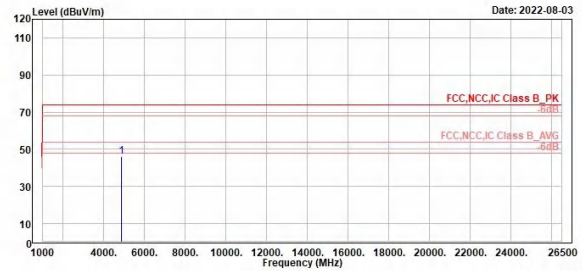
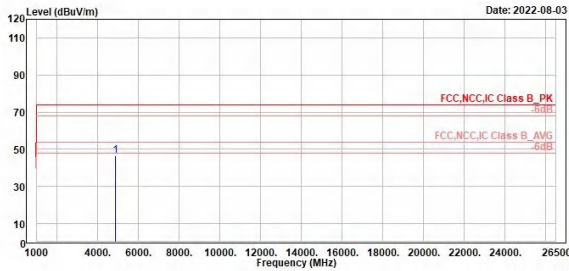
CH17 (Vertical)



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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	4870.00	46.41	56.17	-9.76	74.00	-27.59	300	7	Peak	Horizontal	

Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg			
1	4870.00	46.31	56.07	-9.76	74.00	-27.69	300	233	Peak	Vertical	

# Test Results of Radiated Spurious Emissions for ANT 4(ECC)\_2<sup>nd</sup> Source Band Edges, 2.31GHz ~ 2.9GHz

## ZIGBEE 250kbps

### CH11 (Horizontal) Peak

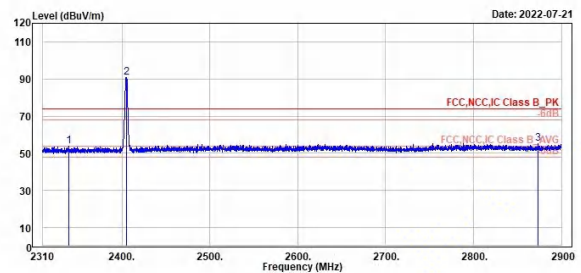
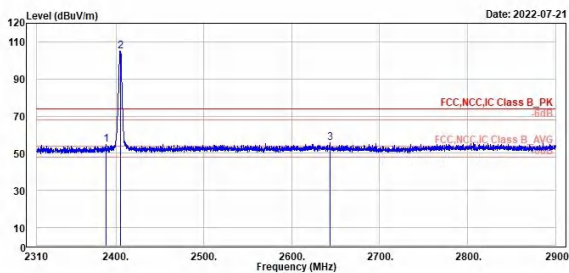
### CH11 (Vertical) Peak



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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	2388.59	54.71	17.14	37.57	74.00	-19.29	224	188 Peak	Horizontal
2 *	2485.00	104.78	67.14	37.64	74.00	30.78	224	188 Peak	Horizontal
3	2643.59	55.65	17.63	38.02	74.00	-18.35	224	188 Peak	Horizontal

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2339.50	53.66	16.32	37.34	74.00	-20.34	349	82 Peak	Vertical
2 *	2485.00	90.89	53.25	37.64	74.00	16.89	349	82 Peak	Vertical
3	2873.69	55.35	17.07	38.28	74.00	-18.65	349	82 Peak	Vertical

ZIGBEE 250kbps

CH11 (Horizontal) Average

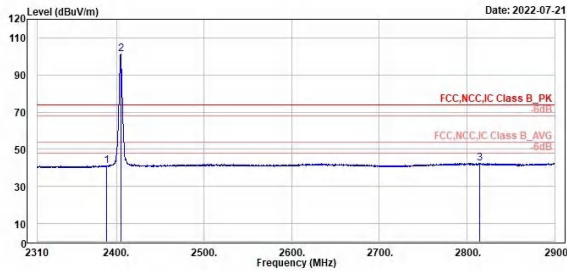
CH11 (Vertical) Average



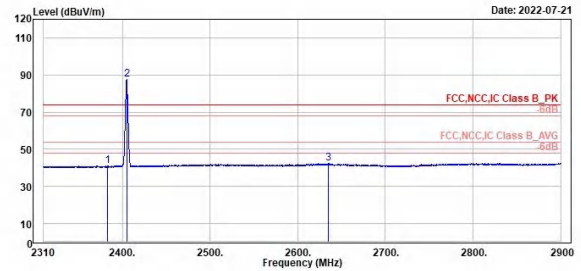
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2388.82	41.28	3.78	37.58	54.00	-12.72	224	188 Average	Horizontal
2 *	2485.00	181.48	63.76	37.64	54.00	47.48	224	188 Average	Horizontal
3	2814.45	42.42	4.23	38.19	54.00	-11.58	224	188 Average	Horizontal



Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	2383.04	41.82	3.48	37.54	54.00	-12.98	349	82 Average	Vertical
2 *	2485.00	87.48	49.85	37.64	54.00	33.49	349	82 Average	Vertical
3	2634.85	42.32	4.31	38.01	54.00	-11.68	349	82 Average	Vertical

ZIGBEE 250kbps

CH26 (Horizontal) Peak

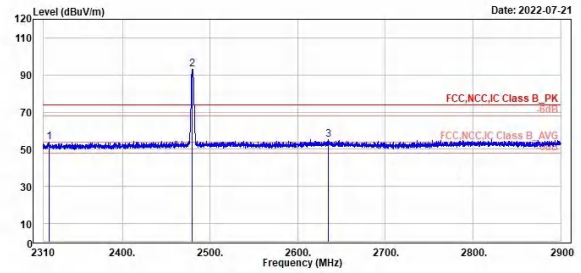
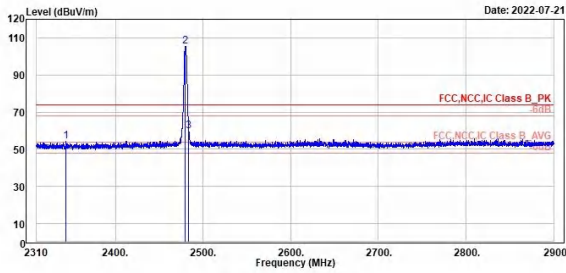
CH26 (Vertical) Peak



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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	2343.51	54.48	17.12	37.36	74.00	-19.52	299	20	Peak	Horizontal	
2 *	2480.00	185.37	67.56	37.79	74.00	31.37	299	20	Peak	Horizontal	
3	2483.46	59.92	22.12	37.80	74.00	-14.08	299	20	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	2316.25	53.72	16.46	37.26	74.00	-20.28	400	100	Peak	Vertical	
2 *	2480.00	93.30	55.51	37.79	74.00	19.30	400	100	Peak	Vertical	
3	2634.50	55.39	17.38	38.01	74.00	-18.61	400	100	Peak	Vertical	



ZIGBEE 250kbps

CH26 (Horizontal) Average

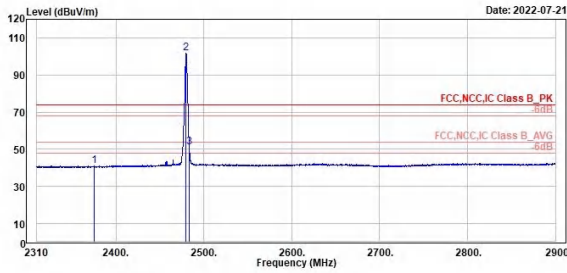
CH26 (Vertical) Average



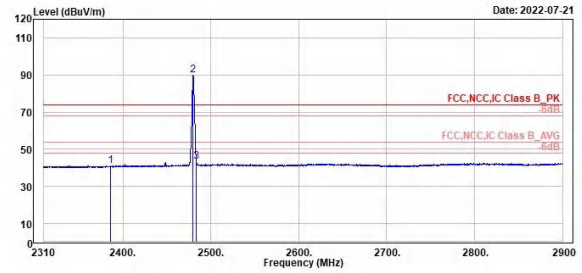
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1	2	3	4	5	6	7	8	9	10	11	12
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg				
2375.82	41.07	3.57	37.50	54.00	-12.93	299	20	Average	Horizontal		
2488.00	101.92	64.13	37.79	54.00	47.92	299	20	Average	Horizontal		
2483.46	50.93	13.13	37.80	54.00	-3.07	299	20	Average	Horizontal		



1	2	3	4	5	6	7	8	9	10	11	12
MHz	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
dBuV/m	dBuV	dB/m	dBuV/m	dB	dB	cm	deg				
2386.46	40.95	3.38	37.57	54.00	-13.05	400	100	Average	Vertical		
2488.00	89.85	52.06	37.79	54.00	35.85	400	100	Average	Vertical		
2483.46	43.42	5.62	37.80	54.00	-10.58	400	100	Average	Vertical		

ZIGBEE 2Mbps

CH11 (Horizontal) Peak

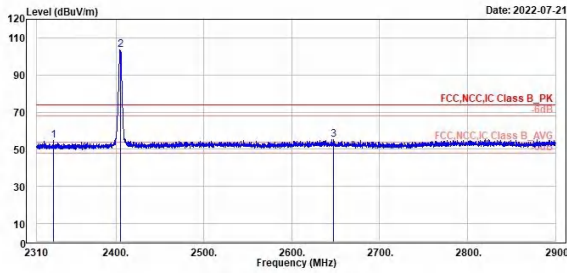
CH11 (Vertical) Peak



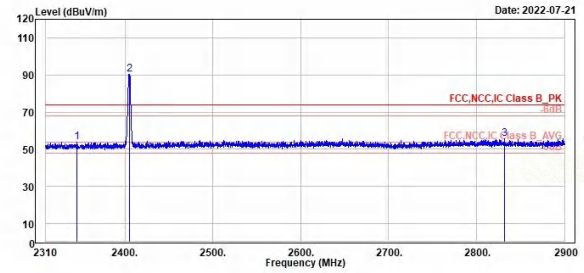
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Peak	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	2329.12	54.53	17.22	37.31	74.00	-19.47	249		0 Peak	Horizontal	
2 *	2485.00	103.36	65.72	37.64	74.00	29.36	249		0 Peak	Horizontal	
3	2647.83	55.38	17.36	38.02	74.00	-18.62	249		0 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	2345.16	53.75	16.39	37.36	74.00	-20.25	349	79	Peak	Vertical	
2 *	2485.00	90.44	52.00	37.64	74.00	16.44	349	79	Peak	Vertical	
3	2831.56	55.56	17.38	38.18	74.00	-18.44	349	79	Peak	Vertical	

ZIGBEE 2Mbps

CH11 (Horizontal) Average

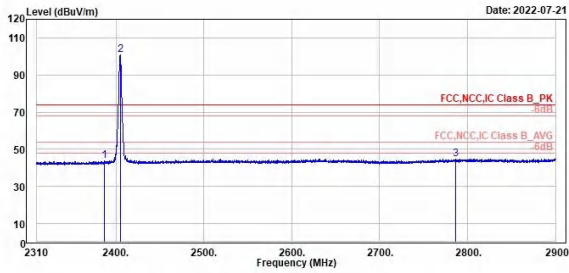
CH11 (Vertical) Average



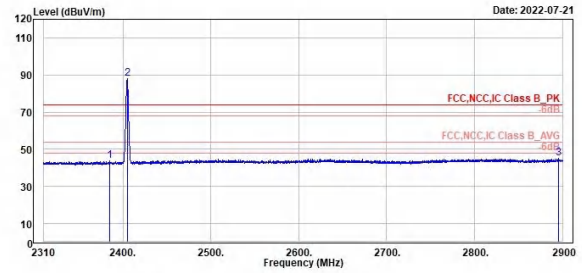
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1	2	3
2386.94	2485.00	2786.01
43.66	100.86	44.92
6.09	63.22	6.73
37.57	37.64	38.19
54.00	54.00	54.00
-10.34	46.86	-9.08
249	249	249
0	0	0
Average	Average	Average
Horizontal	Horizontal	Horizontal



1	2	3
2384.69	2485.00	2895.40
43.05	87.86	45.03
6.30	50.22	6.63
37.55	37.64	38.40
54.00	54.00	54.00
-10.15	33.86	-8.97
349	349	349
79	79	79
Average	average	Average
Vertical	Vertical	Vertical

ZIGBEE 2Mbps

CH26 (Horizontal) Peak

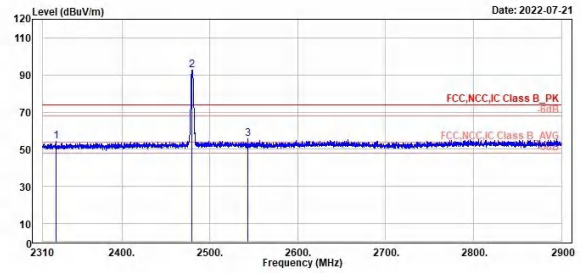
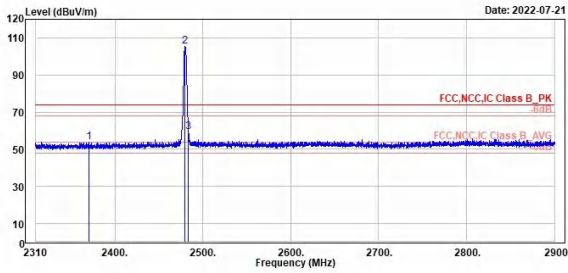
CH26 (Vertical) Peak



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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	2370.53	53.83	16.35	37.48	74.00	-20.17	300	198	Peak	Horizontal	
2 *	2488.00	105.20	67.41	37.79	74.00	31.20	300	198	Peak	Horizontal	
3	2483.46	59.10	21.30	37.80	74.00	-14.90	300	198	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	2324.07	54.29	17.00	37.29	74.00	-19.71	400	282	Peak	Vertical	
2 *	2488.00	92.85	55.06	37.79	74.00	18.85	400	282	Peak	Vertical	
3	2543.05	55.73	17.83	37.90	74.00	-18.27	400	282	Peak	Vertical	

ZIGBEE 2Mbps

CH26 (Horizontal) Average

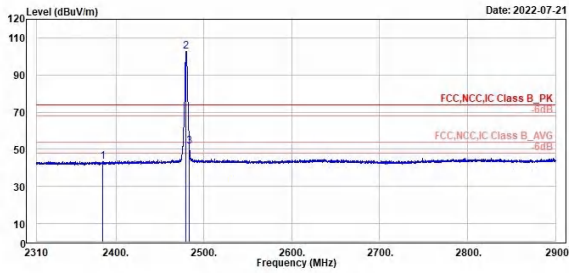
CH26 (Vertical) Average



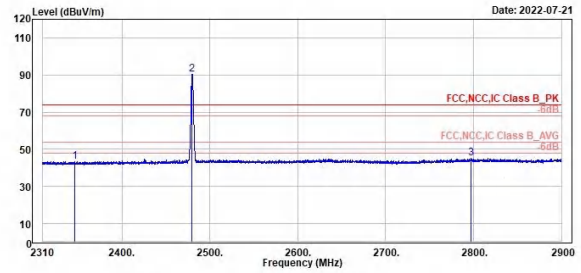
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Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dB/m	dBuV/m	dB	cm	deg			
1	2385.17	43.36	5.81	37.55	54.00	-10.64	300	198	Average	Horizontal	
2 *	2488.00	102.67	64.88	37.79	54.00	48.67	300	198	Average	Horizontal	
3 !	2483.46	51.40	13.60	37.80	54.00	-2.60	300	198	Average	Horizontal	



Freq	Level	Read	Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dB/m	dBuV/m	dB	cm	deg			
1	2346.11	43.49	6.13	37.36	54.00	-10.51	400	282	Average	Vertical	
2 *	2488.00	98.24	52.45	37.79	54.00	36.24	400	282	Average	Vertical	
3	2797.18	45.09	6.89	38.20	54.00	-8.91	400	282	Average	Vertical	

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

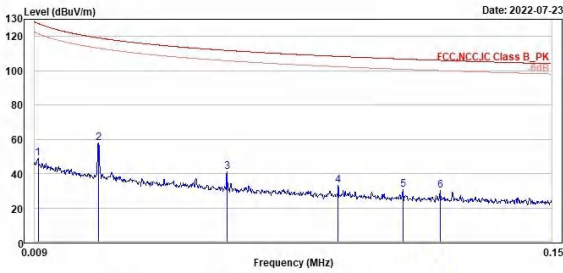
ZIGBEE 2Mbps

CH17 (Open) 9kHz~150kHz

CH17 (Open) 150kHz~30MHz



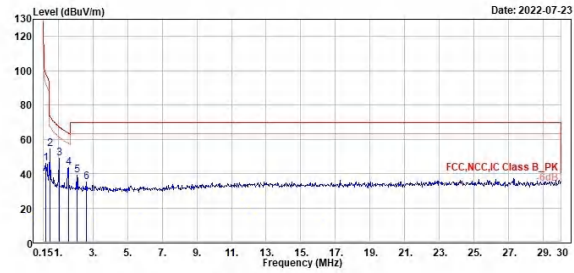
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.01	48.78	31.07	17.71	127.68	-78.82	100	118 QP	Open
2	0.03	57.78	38.51	19.19	119.13	-61.43	100	348 QP	Open
3	0.06	41.10	22.04	19.06	111.82	-70.72	100	183 QP	Open
4	0.09	33.34	14.95	18.39	108.34	-75.00	100	156 QP	Open
5	0.11	30.51	12.26	18.25	106.82	-76.31	100	190 QP	Open
6	0.12	30.19	11.90	18.29	106.05	-75.86	100	164 QP	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	0.27	45.88	27.06	18.82	98.99	-53.11	100	170 QP	Open
2	0.51	54.59	35.64	18.95	73.48	-18.89	100	164 QP	Open
3	1.05	48.98	29.63	19.27	67.22	-18.32	100	166 QP	Open
4	1.58	43.44	24.09	19.35	63.62	-20.18	100	177 QP	Open
5	2.09	39.27	19.85	19.42	69.58	-30.23	100	177 QP	Open
6	2.63	35.08	15.52	19.48	69.58	-34.50	100	163 QP	Open

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

ZIGBEE 2Mbps

CH17 (Horizontal)

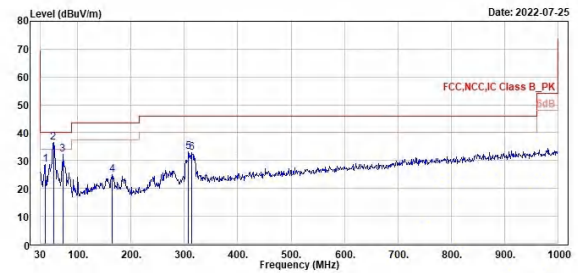
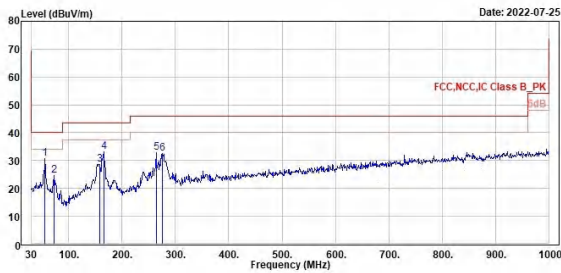
CH17 (Vertical)



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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	55.22	30.76	37.28	-6.52	40.00	-9.24	100	113	QP	Horizontal	
2	72.68	24.61	33.63	-9.02	40.00	-15.39	100	266	QP	Horizontal	
3	158.04	28.74	34.81	-6.07	43.50	-14.76	200	90	QP	Horizontal	
4	165.80	33.86	39.05	-5.99	43.50	-10.44	200	256	QP	Horizontal	
5	263.77	32.72	38.88	-6.16	46.00	-13.28	100	258	QP	Horizontal	
6	275.41	32.46	37.89	-5.43	46.00	-13.54	100	273	QP	Horizontal	

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	38.73	28.63	34.98	-6.35	40.00	-11.37	100	19	QP	Vertical	
2	54.25	36.45	42.85	-6.40	40.00	-3.55	100	282	QP	Vertical	
3	71.71	32.13	41.04	-8.91	40.00	-7.87	100	141	QP	Vertical	
4	164.83	25.03	30.95	-5.92	43.50	-18.47	200	12	QP	Vertical	
5	307.42	33.10	37.81	-4.71	46.00	-12.90	100	216	QP	Vertical	
6	314.21	33.00	37.61	-4.61	46.00	-13.00	100	216	QP	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

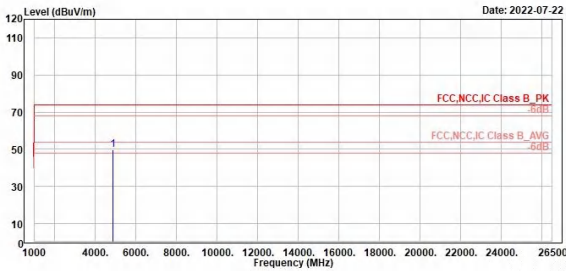
ZIGBEE 250kbps

CH17 (Horizontal)

CH17 (Vertical)



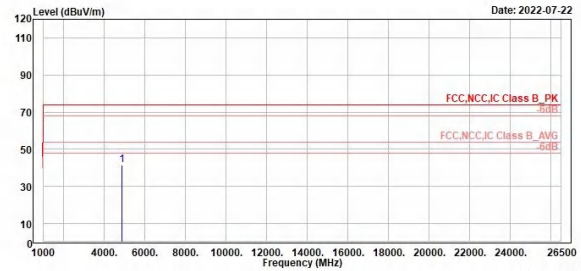
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1	4870.00	49.94	59.78	-9.76	74.00	-24.06	100	325	Peak	Horizontal
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1	4870.00	41.39	51.15	-9.76	74.00	-32.61	275	237	Peak	Vertical
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ZIGBEE 2Mbps

CH17 (Horizontal)

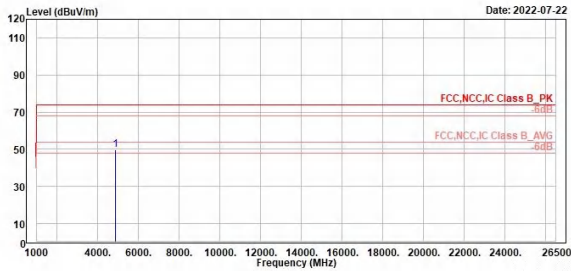
CH17 (Vertical)



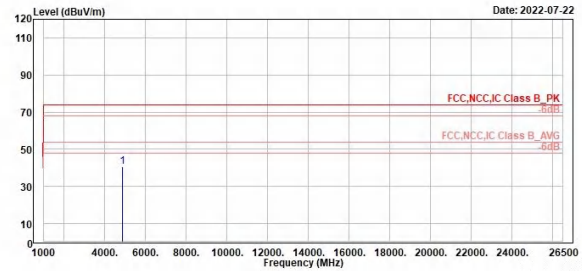
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1	4870.00	49.89	59.65	-9.76	74.00	-24.11	100	317	Peak	Horizontal
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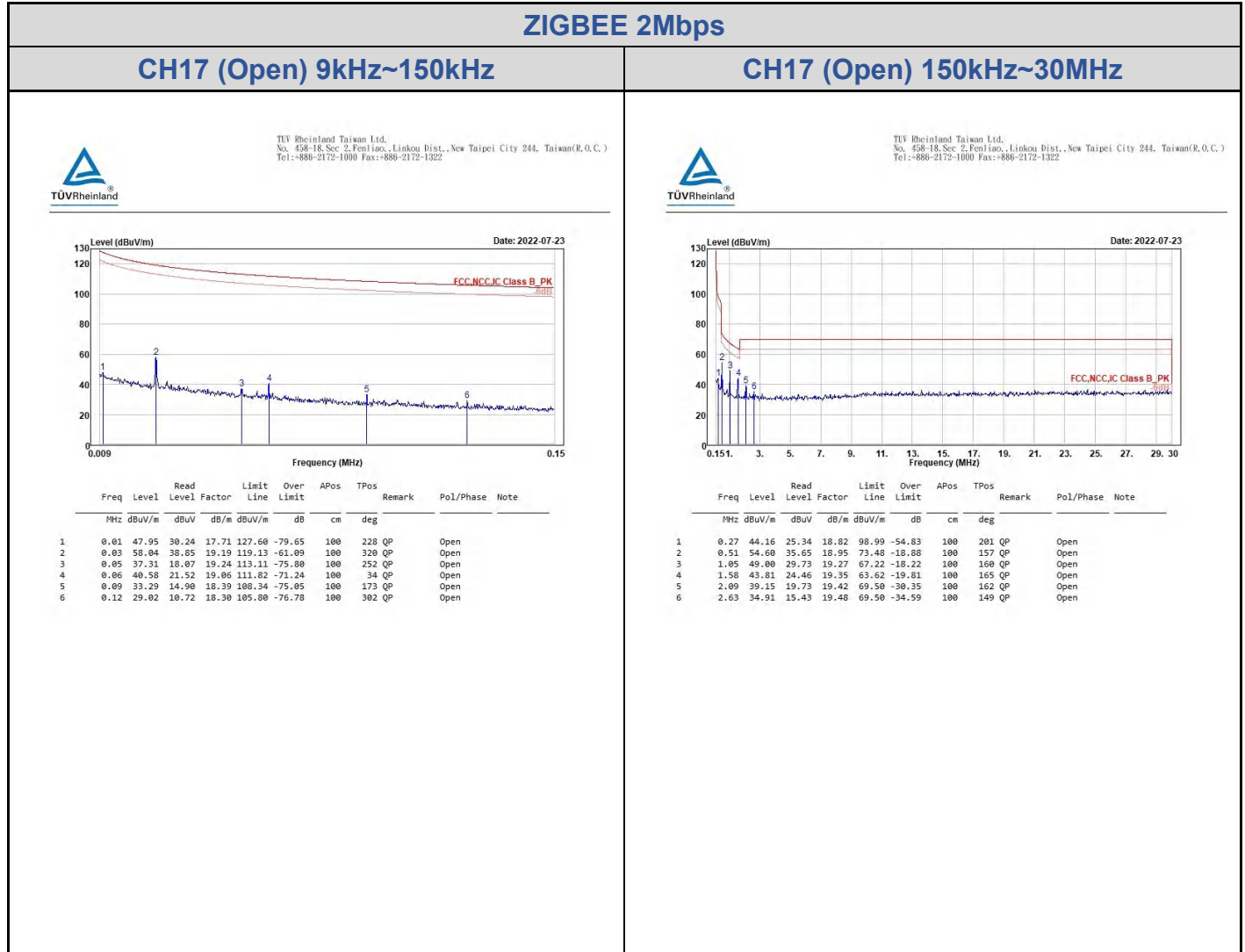


1	4870.00	40.61	50.37	-9.76	74.00	-33.39	400	23	Peak	Vertical
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# Test Results of Radiated Spurious Emissions & Mains Conducted

## Emission Test for ANT 4 (UFL, ECC, 2 Source, Buck PWM On)

### Spurious Emissions, Tx Mode, 9kHz ~ 30MHz



Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

ZIGBEE 2Mbps

CH17 (Horizontal)

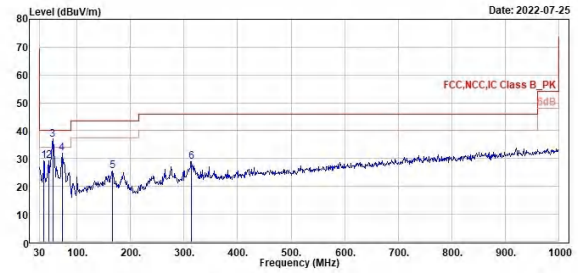
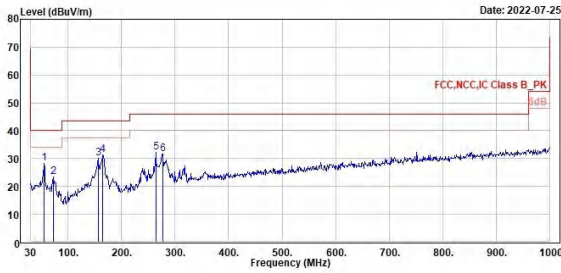
CH17 (Vertical)



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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	55.22	28.41	34.93	-6.52	40.00	-11.59	200	47 QP	Horizontal
2	72.68	23.42	32.44	-9.02	40.00	-16.58	100	277 QP	Horizontal
3	156.10	30.13	36.21	-6.08	43.50	-13.37	200	106 QP	Horizontal
4	164.83	31.37	37.29	-5.92	43.50	-12.13	200	291 QP	Horizontal
5	263.77	32.36	38.52	-6.16	46.00	-13.64	100	181 QP	Horizontal
6	276.38	31.53	36.94	-5.41	46.00	-14.47	100	308 QP	Horizontal

Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	37.76	29.18	35.75	-6.57	40.00	-18.82	100	112 QP	Vertical
2	46.49	29.29	35.16	-5.87	40.00	-18.71	100	282 QP	Vertical
3	54.25	36.85	43.25	-6.40	40.00	-3.15	100	28 QP	Vertical
4	71.71	32.03	40.94	-8.91	40.00	-7.97	100	58 QP	Vertical
5	165.80	25.49	31.48	-5.99	43.50	-18.01	200	201 QP	Vertical
6	313.24	28.88	33.51	-4.63	46.00	-17.12	100	207 QP	Vertical

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

ZIGBEE 2Mbps

CH17 (Horizontal)

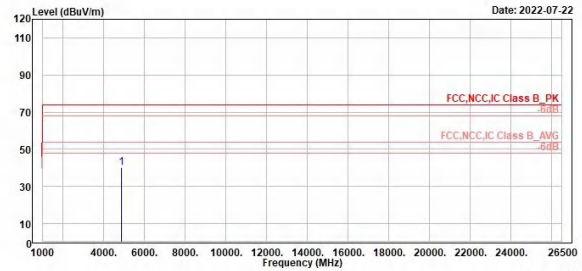
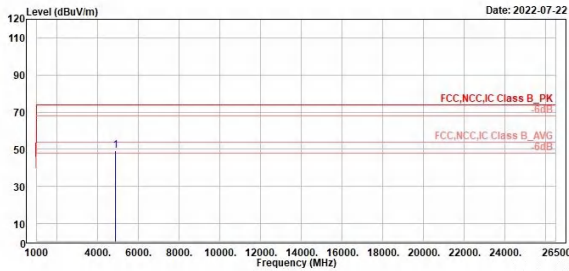
CH17 (Vertical)



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Freq	Level	Read Level	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	4870.00	49.23	58.99	-9.76	74.00	-24.77	266	0 Peak	Horizontal	

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	4870.00	48.15	49.91	-9.76	74.00	-33.85	400	160 Peak	Vertical	

# Test Results of Radiated Spurious Emissions & Mains Conducted

## Emission Test for ANT 4 (UFL, Non-ECC)

### Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

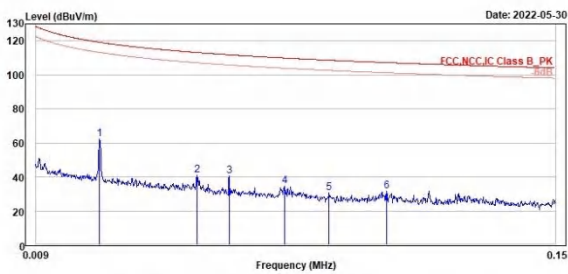
#### ZIGBEE 250kbps

##### CH11 (Open) 9kHz~150kHz

##### CH11 (Open) 150kHz~30MHz



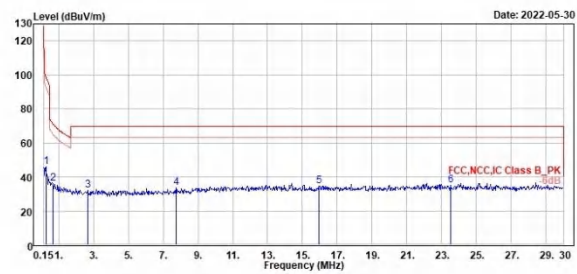
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Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.03	62.12	42.94	19.18	119.18	-57.06	100	42 QP	Open	
2	0.05	41.21	21.96	19.25	113.16	-71.95	100	85 QP	Open	
3	0.06	40.56	21.50	19.06	111.82	-71.26	100	385 QP	Open	
4	0.08	34.52	15.79	18.73	109.93	-75.41	100	32 QP	Open	
5	0.09	30.54	12.08	18.46	108.65	-78.11	100	11 QP	Open	
6	0.10	31.61	13.38	18.23	107.24	-75.63	100	18 QP	Open	



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Freq	Level	Read	Factor	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.27	45.86	27.04	18.82	98.99	-53.13	100	164 QP	Open	
2	0.66	36.07	17.03	19.04	71.25	-35.18	100	164 QP	Open	
3	2.66	32.21	12.72	19.49	69.50	-37.29	100	21 QP	Open	
4	7.73	33.61	13.12	20.49	69.50	-35.89	100	34 QP	Open	
5	15.97	34.75	12.83	21.92	69.50	-34.75	100	275 QP	Open	
6	23.52	35.09	12.73	22.36	69.50	-34.41	100	81 QP	Open	

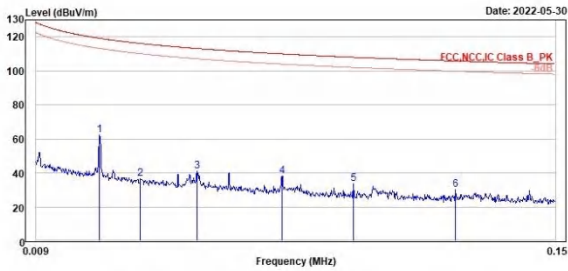
ZIGBEE 250kbps

CH11 (Close) 9kHz~150kHz

CH11 (Close) 150kHz~30MHz



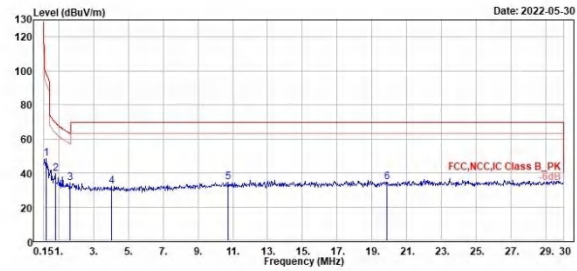
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.03	62.05	42.07	19.18	119.18	-57.13	100	335 QP	Close
2	0.04	36.36	16.92	19.44	116.15	-79.79	100	101 QP	Close
3	0.05	40.97	21.72	19.25	113.13	-72.16	100	156 QP	Close
4	0.08	38.26	19.52	18.74	110.00	-71.74	100	115 QP	Close
5	0.10	33.46	15.13	18.33	108.03	-74.57	100	155 QP	Close
6	0.12	29.91	11.61	18.30	105.80	-75.89	100	152 QP	Close



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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	0.30	48.68	29.74	18.94	98.08	-49.40	100	61 QP	Close
2	0.81	39.46	20.32	19.14	69.47	-30.01	100	360 QP	Close
3	1.64	34.09	14.73	19.36	63.29	-29.20	100	360 QP	Close
4	4.03	32.09	12.64	19.45	69.50	-37.41	100	153 QP	Close
5	10.75	34.84	13.29	21.55	69.50	-34.66	100	24 QP	Close
6	19.85	34.75	12.56	22.19	69.50	-34.75	100	31 QP	Close

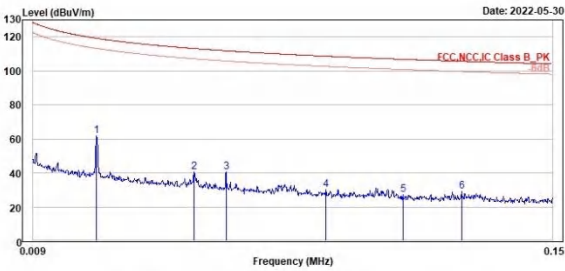
ZIGBEE 2Mbps

CH11 (Open) 9kHz~150kHz

CH11 (Open) 150kHz~30MHz



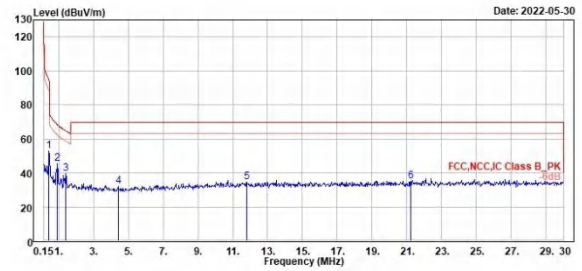
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.03	61.06	42.68	19.18	119.18	-57.32	100	39 QP	Open
2	0.05	40.70	21.45	19.25	113.13	-72.43	100	4 QP	Open
3	0.06	40.67	21.61	19.06	111.82	-71.15	100	120 QP	Open
4	0.09	30.17	11.71	18.46	108.65	-78.48	100	280 QP	Open
5	0.11	27.13	8.88	18.25	106.82	-79.69	100	125 QP	Open
6	0.13	20.95	10.64	18.31	105.64	-76.69	100	146 QP	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	52.01	33.06	18.95	94.57	-41.76	100	126 QP	Open
2	0.93	45.41	26.18	19.23	68.27	-22.86	100	126 QP	Open
3	1.40	39.73	20.40	19.33	64.66	-24.93	100	126 QP	Open
4	4.42	31.96	12.55	19.41	69.50	-37.54	100	360 QP	Open
5	11.79	34.36	12.73	21.63	69.50	-35.14	100	110 QP	Open
6	21.22	35.13	12.87	22.26	69.50	-34.37	100	334 QP	Open

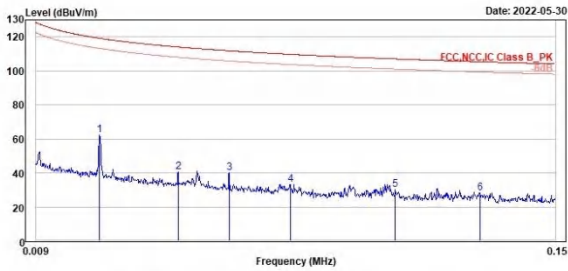
ZIGBEE 2Mbps

CH11 (Close) 9kHz~150kHz

CH11 (Close) 150kHz~30MHz



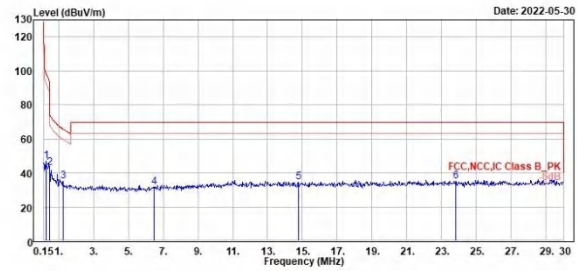
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Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	0.03	62.06	42.08	19.18	119.18	-57.12	100	113 QP	Close
2	0.05	48.33	21.00	19.33	114.03	-73.70	100	139 QP	Close
3	0.06	39.82	20.76	19.06	111.82	-72.00	100	231 QP	Close
4	0.08	33.35	14.66	18.69	109.74	-76.39	100	155 QP	Close
5	0.11	30.34	12.10	18.24	107.04	-76.70	100	150 QP	Close
6	0.13	28.28	9.96	18.32	105.35	-77.07	100	155 QP	Close



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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	0.27	46.82	28.00	18.82	98.99	-52.17	100	146 QP	Close
2	0.48	42.76	23.81	18.95	94.81	-51.25	100	322 QP	Close
3	1.25	35.00	15.69	19.31	65.64	-30.64	100	62 QP	Close
4	6.48	31.88	11.91	19.97	69.50	-37.62	100	29 QP	Close
5	14.78	34.52	12.68	21.84	69.50	-34.98	100	53 QP	Close
6	23.79	35.22	12.85	22.37	69.50	-34.28	100	249 QP	Close



Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

ZIGBEE 250kbps

CH11 (Horizontal)

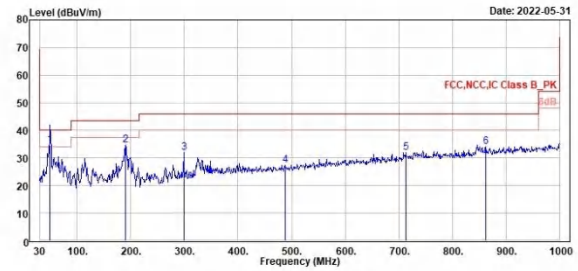
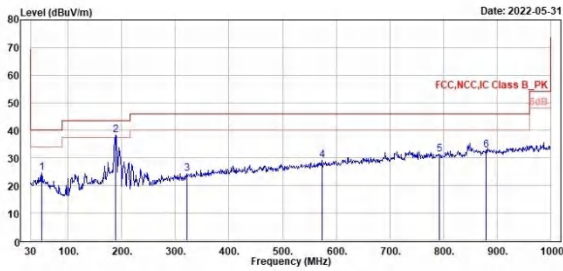
CH11 (Vertical)



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1	2	3	4	5	6						
Freq	Level	Read	Limit	Over	APos						
MHz	dBuV/m	Level	Line	Limit	cm						
		Factor									
		dB/m	dB/m	dB							
					TPos						
					deg						
					Remark						
					Pol/Phase						
					Note						
1	50.37	24.58	30.78	-6.12	40.00	-15.42	147	360	QP	Horizontal	
2	188.11	38.26	46.58	-8.24	43.50	-5.24	200	287	QP	Horizontal	
3	321.00	24.30	28.67	-4.37	46.00	-21.70	200	152	QP	Horizontal	
4	573.20	29.22	29.55	-0.33	46.00	-16.78	200	44	QP	Horizontal	
5	792.42	31.38	28.26	3.12	46.00	-14.62	200	96	QP	Horizontal	
6	879.72	32.97	28.73	4.24	46.00	-13.03	200	34	QP	Horizontal	

1	2	3	4	5	6						
Freq	Level	Read	Limit	Over	APos						
MHz	dBuV/m	Level	Line	Limit	cm						
		Factor									
		dB/m	dB/m	dB							
					TPos						
					deg						
					Remark						
					Pol/Phase						
					Note						
1	49.48	34.61	40.70	-6.09	40.00	-5.39	200	200	QP	Vertical	
2	190.05	34.53	42.94	-8.41	43.50	-8.97	200	117	QP	Vertical	
3	298.69	32.05	36.80	-4.75	46.00	-13.95	172	360	QP	Vertical	
4	487.84	27.25	29.15	-1.90	46.00	-18.75	200	6	QP	Vertical	
5	712.88	31.95	30.21	1.74	46.00	-14.05	100	2	QP	Vertical	
6	862.26	34.22	30.05	4.17	46.00	-11.78	200	332	QP	Vertical	

ZIGBEE 2Mbps

CH11 (Horizontal)

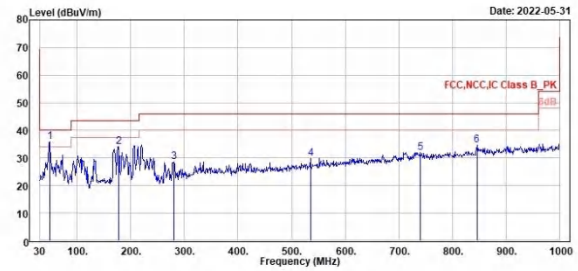
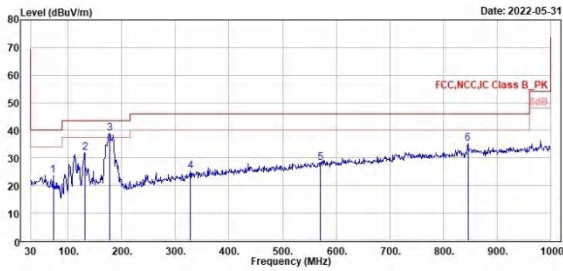
CH11 (Vertical)



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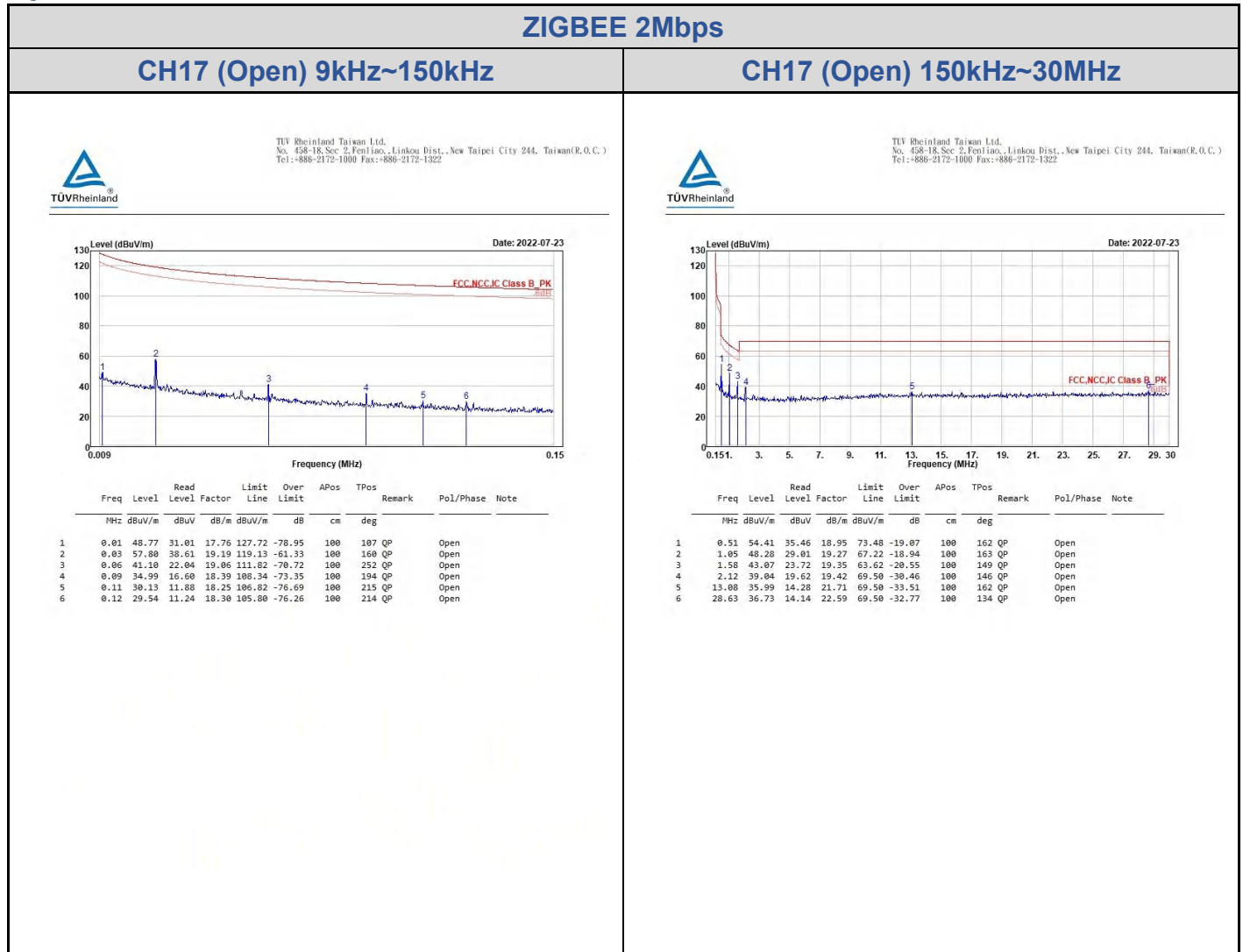
	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	71.71	23.76	32.67	-8.91	46.00	-16.24	200	263 QP	Horizontal	
2	130.88	31.92	39.13	-7.21	43.50	-11.58	200	263 QP	Horizontal	
3	176.47	38.80	45.72	-6.92	43.50	-4.70	200	263 QP	Horizontal	
4	327.79	25.20	29.26	-4.06	46.00	-20.80	100	58 QP	Horizontal	
5	570.29	28.31	28.68	-0.37	46.00	-17.69	100	310 QP	Horizontal	
6	845.77	35.21	31.48	3.73	46.00	-10.79	101	360 QP	Horizontal	

	Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
1	48.43	35.76	41.85	-6.09	46.00	-4.24	200	204 QP	Vertical	
2	176.47	34.21	41.13	-6.92	43.50	-9.29	100	332 QP	Vertical	
3	280.26	28.62	33.93	-5.31	46.00	-17.38	100	199 QP	Vertical	
4	535.37	29.85	31.02	-1.17	46.00	-16.15	200	106 QP	Vertical	
5	741.01	31.92	29.48	2.44	46.00	-14.00	100	283 QP	Vertical	
6	845.77	34.58	30.85	3.73	46.00	-11.42	200	177 QP	Vertical	

# Test Results of Radiated Spurious Emissions for ANT 4

## (Non-ECC)\_2<sup>nd</sup> Source

### Spurious Emissions, Tx Mode, 9kHz ~ 30MHz



Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

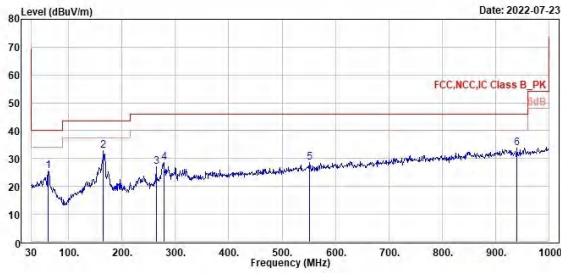
ZIGBEE 2Mbps

CH17 (Horizontal)

CH17 (Vertical)



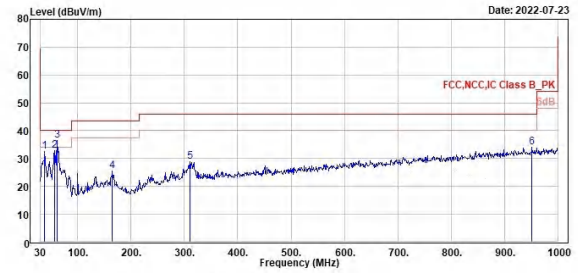
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1	2	3	4	5	6				
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
61.04	25.68	32.85	-7.17	40.00	-14.32	400	90 QP	Horizontal	
164.83	32.79	38.71	-5.92	43.50	-10.71	200	276 QP	Horizontal	
263.77	27.01	33.17	-6.16	46.00	-18.99	100	77 QP	Horizontal	
278.32	28.49	33.86	-5.37	46.00	-17.51	100	72 QP	Horizontal	
550.89	28.69	29.47	-0.78	46.00	-17.31	100	296 QP	Horizontal	
940.83	33.63	28.38	5.25	46.00	-12.37	100	302 QP	Horizontal	



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1	2	3	4	5	6				
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
37.76	32.40	39.05	-6.57	40.00	-7.52	100	182 QP	Vertical	
57.16	32.86	39.57	-6.71	40.00	-7.14	100	351 QP	Vertical	
62.01	36.36	43.82	-7.46	40.00	-3.64	200	351 QP	Vertical	
164.83	25.67	31.59	-5.92	43.50	-17.83	300	198 QP	Vertical	
310.33	28.77	33.44	-4.67	46.00	-17.23	100	360 QP	Vertical	
951.50	34.04	28.52	5.52	46.00	-11.96	200	72 QP	Vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 26.5GHz

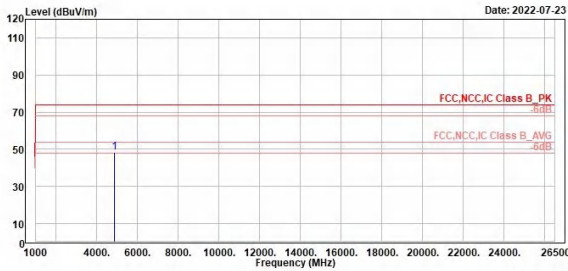
ZIGBEE

CH17 (Horizontal)

CH17 (Vertical)



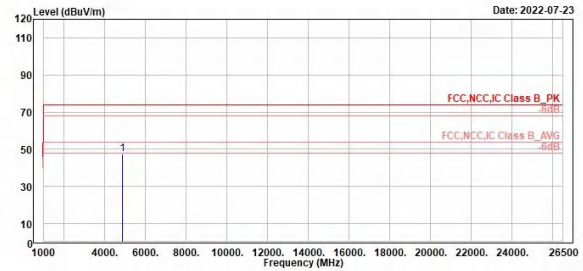
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1	4870.00	48.32	58.08	-9.76	74.00	-25.68	100	330	Peak	Horizontal
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1	4870.00	47.49	57.25	-9.76	74.00	-26.51	400	207	Peak	Vertical
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Mains Conducted Emission for Ant 4, 150kHz ~ 30MHz

Worst Band (ECC)

(Line)

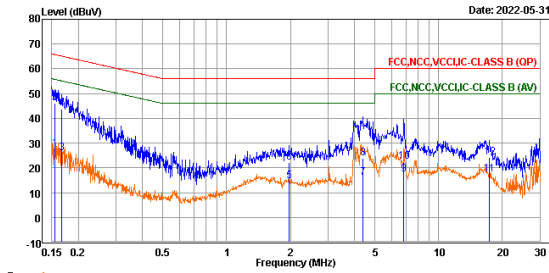
(Neutral)



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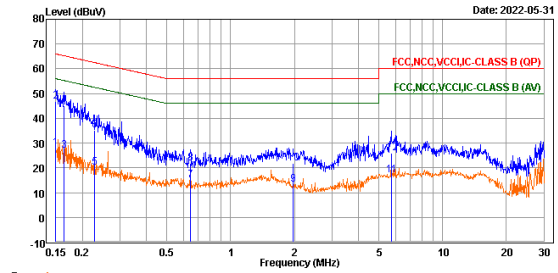


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Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor	Limit (dB)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.15	27.50	17.89	9.61	55.75	-28.25	Average	line1	
2	0.15	46.23	36.62	9.61	65.75	-19.52	QP	line1	
3	0.17	26.06	16.45	9.61	55.13	-29.07	Average	line1	
4	0.17	43.68	34.07	9.61	65.13	-21.45	QP	line1	
5	1.96	14.66	5.01	9.65	46.00	-31.34	Average	line1	
6	1.96	22.15	12.50	9.65	56.00	-33.85	QP	line1	
7	4.40	15.97	6.29	9.68	46.00	-30.03	Average	line1	
8	4.40	23.88	14.20	9.68	56.00	-32.12	QP	line1	
9	6.86	17.29	7.58	9.71	50.00	-32.71	Average	line1	
10	6.86	22.44	12.73	9.71	60.00	-37.56	QP	line1	
11	17.34	17.26	7.54	9.72	50.00	-32.74	Average	line1	
12	17.34	24.22	14.50	9.72	60.00	-35.78	QP	line1	



Trace: 1

Line	Freq (MHz)	Level (dBuV)	Read Level (dBuV)	Factor	Limit (dB)	Over Limit (dB)	Remark	Pol/Phase	Note
1	0.15	28.01	18.42	9.59	56.00	-27.99	Average	neutral	
2	0.15	46.64	37.05	9.59	66.00	-19.36	QP	neutral	
3	0.16	27.12	17.53	9.59	55.30	-28.18	Average	neutral	
4	0.16	45.25	35.66	9.59	65.30	-20.05	QP	neutral	
5	0.23	20.16	10.57	9.59	52.52	-32.36	Average	neutral	
6	0.23	35.25	25.66	9.59	62.52	-27.27	QP	neutral	
7	0.65	14.90	5.30	9.60	46.00	-31.10	Average	neutral	
8	0.65	21.69	12.09	9.60	56.00	-34.31	QP	neutral	
9	1.97	13.26	3.63	9.63	46.00	-32.74	Average	neutral	
10	1.97	21.76	12.13	9.63	56.00	-34.24	QP	neutral	
11	5.73	17.17	7.48	9.69	50.00	-32.83	Average	neutral	
12	5.73	25.92	16.23	9.69	60.00	-34.08	QP	neutral	

Worst Band (Non-ECC)

(Line)

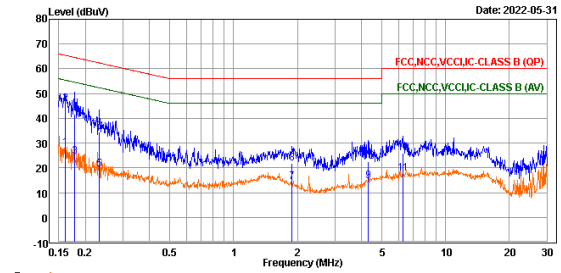
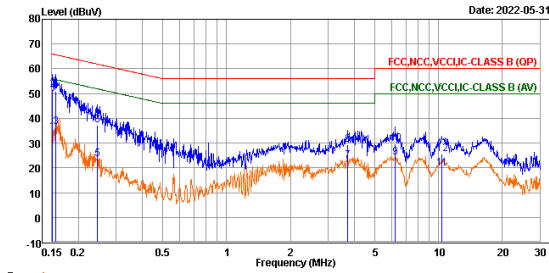
(Neutral)



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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	0.15	34.37	24.76	9.61	55.96	-21.59	Average	line1	
2	0.15	51.52	41.91	9.61	65.96	-14.44	QP	line1	
3	0.16	36.56	26.95	9.61	55.67	-19.11	Average	line1	
4	0.16	50.75	41.14	9.61	65.67	-14.92	QP	line1	
5	0.25	23.48	13.87	9.61	51.90	-28.42	Average	line1	
6	0.25	37.17	27.56	9.61	61.90	-24.73	QP	line1	
7	3.74	22.84	13.17	9.67	46.00	-23.16	Average	line1	
8	3.74	29.35	19.68	9.67	56.00	-26.65	QP	line1	
9	6.24	24.09	14.40	9.69	50.00	-25.91	Average	line1	
10	6.24	29.67	19.98	9.69	60.00	-30.33	QP	line1	
11	10.32	19.86	10.13	9.73	50.00	-30.14	Average	line1	
12	10.32	25.46	15.73	9.73	60.00	-34.54	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	27.98	18.39	9.59	55.42	-27.44	Average	neutral	
2	0.16	45.67	36.08	9.59	65.42	-19.75	QP	neutral	
3	0.18	24.56	14.97	9.59	54.59	-30.03	Average	neutral	
4	0.18	41.73	32.14	9.59	64.59	-22.86	QP	neutral	
5	0.23	19.53	9.94	9.59	52.36	-32.83	Average	neutral	
6	0.23	34.34	24.75	9.59	62.36	-28.02	QP	neutral	
7	1.89	14.34	4.71	9.63	46.00	-31.66	Average	neutral	
8	1.89	21.75	12.12	9.63	56.00	-34.25	QP	neutral	
9	4.32	14.78	5.11	9.67	46.00	-31.22	Average	neutral	
10	4.32	22.60	12.93	9.67	56.00	-33.40	QP	neutral	
11	6.27	17.70	8.00	9.70	50.00	-32.30	Average	neutral	
12	6.27	25.85	16.15	9.70	60.00	-34.15	QP	neutral	

# Test Results of Radiated Spurious Emissions & Mains Conducted

## Emission Test for ANT 5 (ECC)

### Band Edges, 2.31GHz ~ 2.9GHz

#### ZIGBEE 250kbps

##### CH11 (Horizontal) Peak

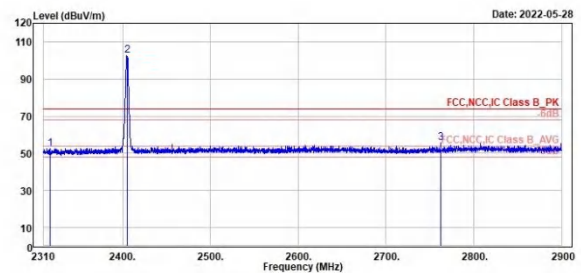
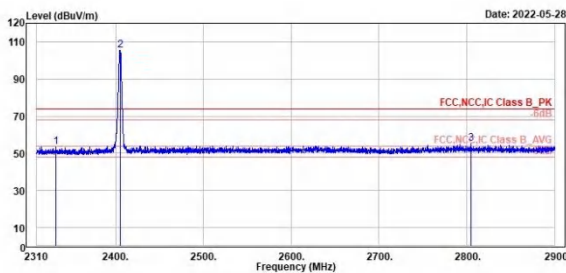
##### CH11 (Vertical) Peak



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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	2331.83	53.44	16.13	37.31	74.00	-20.56	277	70	Peak	Horizontal	
2 *	2485.00	185.46	67.82	37.64	74.00	31.46	277	70	Peak	Horizontal	
3	2804.30	55.01	16.81	38.20	74.00	-18.99	277	70	Peak	Horizontal	

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	2317.79	52.69	15.42	37.27	74.00	-21.31	315	165	Peak	Vertical	
2 *	2485.00	102.44	64.80	37.64	74.00	28.44	315	165	Peak	Vertical	
3	2762.53	55.58	17.42	38.16	74.00	-18.42	315	165	Peak	Vertical	



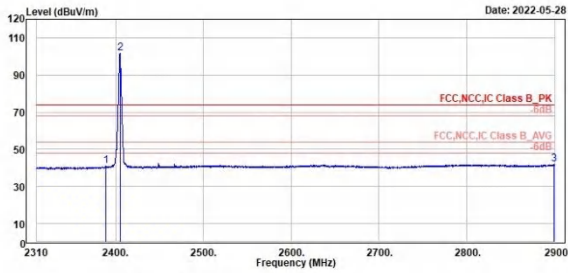
ZIGBEE 250kbps

CH11 (Horizontal) Average

CH11 (Vertical) Average



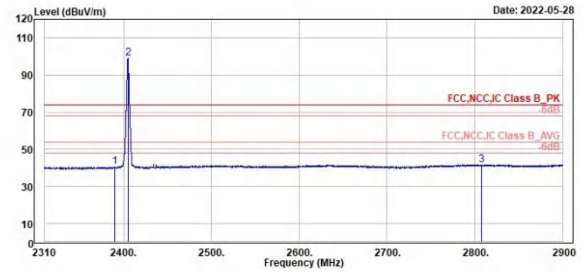
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1	2	3							
Freq	Level	Read	Limit	Over	APos	TPos	Remark	Pol/Phase	Note
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg		
2389.30	41.06	3.48	37.58	54.00	-12.94	277	70 Average	Horizontal	
2485.00	181.77	64.13	37.64	54.00	47.77	277	70 Average	Horizontal	*
2899.29	41.81	3.39	38.42	54.00	-12.19	277	70 Average	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		
2389.65	49.60	3.02	37.58	54.00	-13.40	315	165 Average	Vertical	
2485.00	98.99	61.35	37.64	54.00	44.99	315	165 Average	Vertical	*
2897.25	41.74	3.54	38.20	54.00	-12.26	315	165 Average	Vertical	

ZIGBEE 250kbps

CH26 (Horizontal) Peak

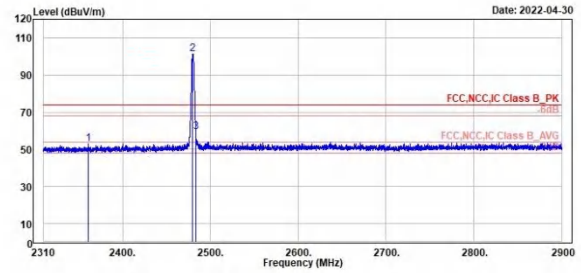
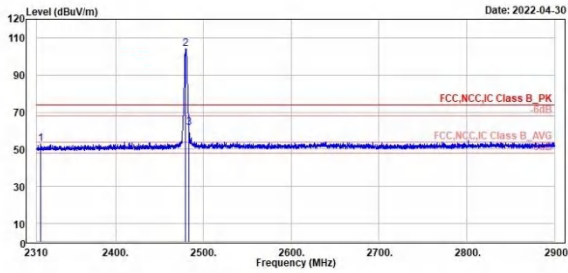
CH26 (Vertical) Peak



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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	2314.48	52.87	15.61	37.26	74.00	-21.13	233	70	Peak	Horizontal	
2 *	2480.00	104.03	66.24	37.79	74.00	30.03	233	70	Peak	Horizontal	
3	2483.46	61.68	23.88	37.80	74.00	-12.32	233	70	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	2368.62	52.76	15.33	37.43	74.00	-21.24	324	180	Peak	Vertical	
2 *	2480.00	101.17	63.38	37.79	74.00	27.17	324	180	Peak	Vertical	
3	2483.46	59.13	21.33	37.80	74.00	-14.87	324	180	Peak	Vertical	