

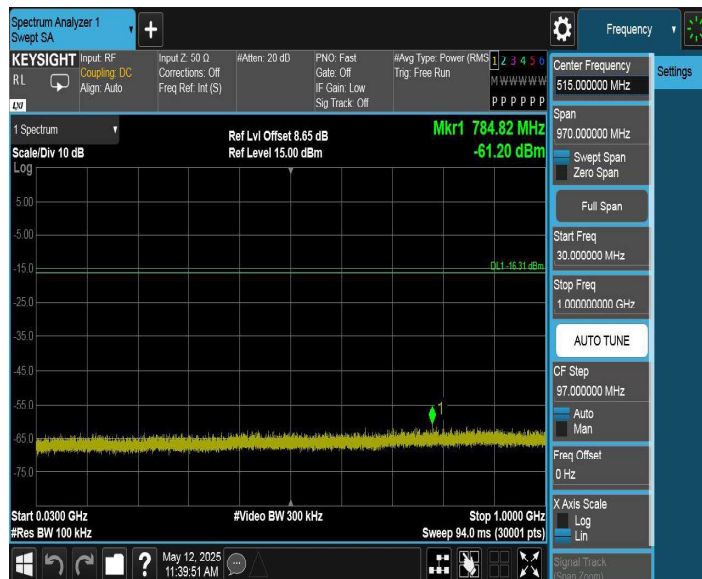
Zigbee_Ant1_2475_1000~26500



Zigbee_Ant1_2480_0~Reference



Zigbee_Ant1_2480_30~1000



Zigbee_Ant1_2480_1000~26500



7.6. Radiated Spurious Emission Measurement

7.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.6.2. Test Procedure Used

ANSI C63.10-2013 – Section 6.6.4.3

7.6.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold

- Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

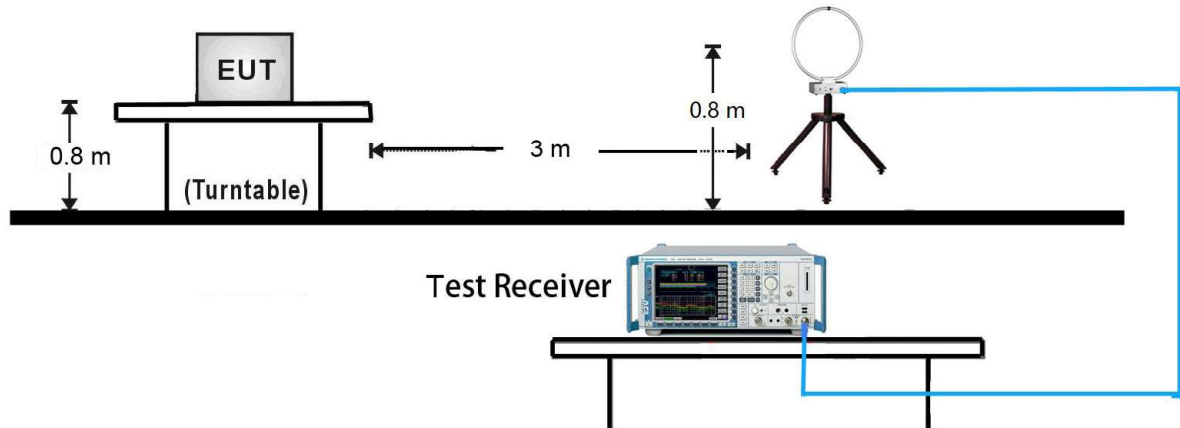
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

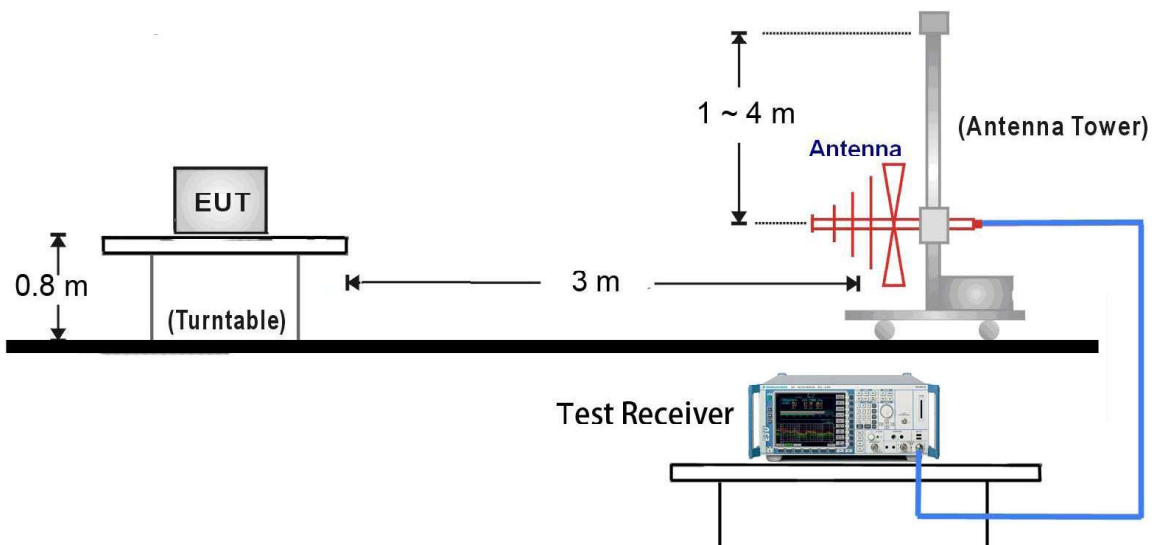
- Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- RBW = 1MHz
- VBW = 3MHz
- Detector = Power Average (RMS)
- Number of sweep point = 2001 (Number of sweep points must be $\geq 2 \times \text{span} / \text{RBW}$)
- Sweep time = auto
- Trace (RMS) averaging was performed over at least 100 traces.

7.6.4. Test Setup

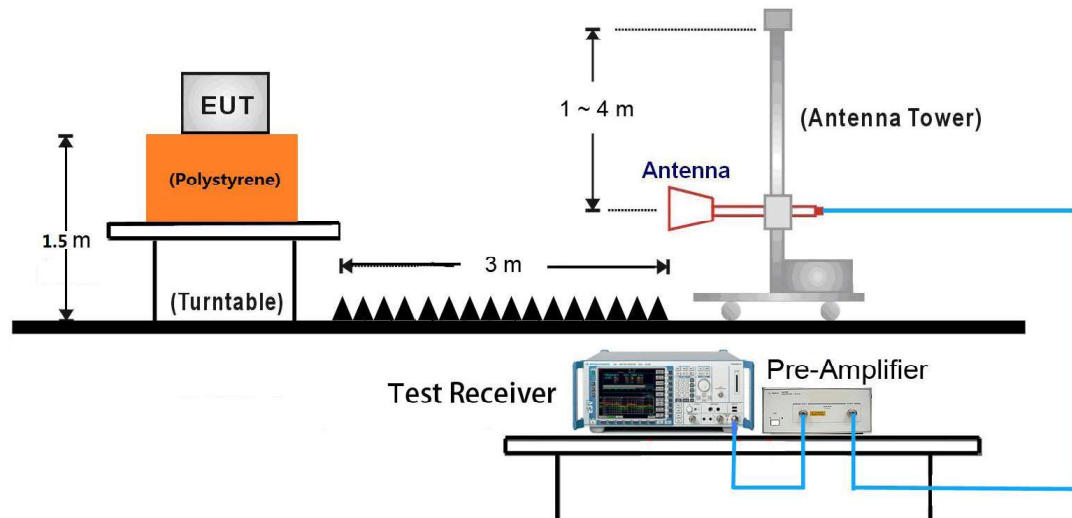
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 26.5GHz Test Setup:

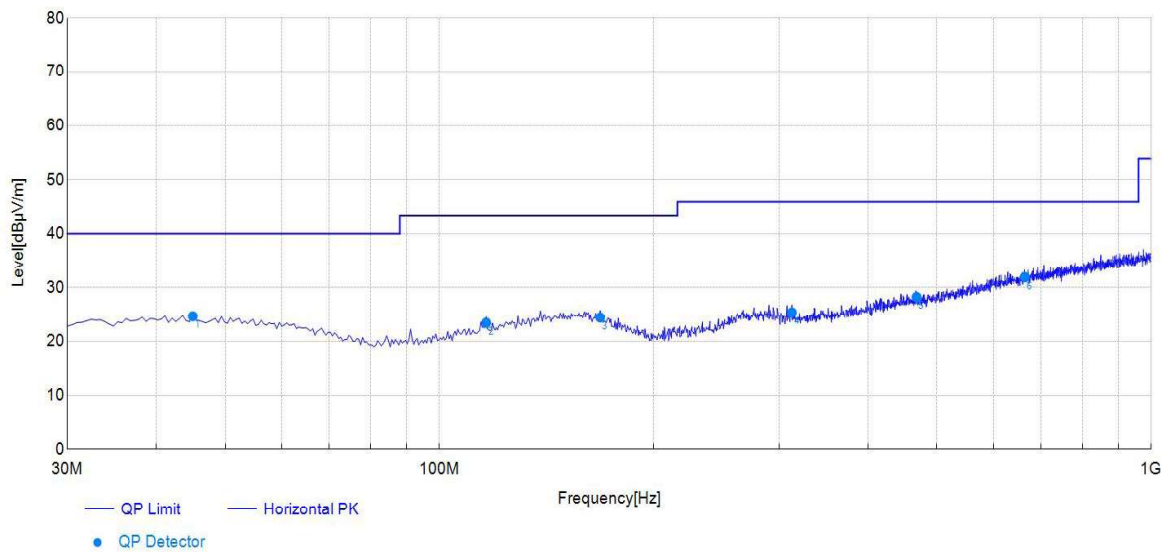


7.6.5. Test Result

The worst case of Radiated Emission below 1GHz:

30MHz – 1GHz Test Data

EUT:	Smart Hub WZ3	Polarity:	Horizontal
Model:	3RSH06027BWZ	Test Date:	2025-05-16
Mode:	Transmit at Zigbee Channel 11	Voltage:	AC 120V 60Hz
Environment:	Temp: 22.7°C; Humi:37%	Engineer:	Stone Zhang



Final Data List										
NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	45.04	14.58	10.11	24.69	40.00	15.31	100	11	Horizontal	PASS
2	116.33	13.35	10.09	23.44	43.50	20.06	100	225	Horizontal	PASS
3	168.23	14.88	9.57	24.45	43.50	19.05	150	139	Horizontal	PASS
4	312.76	15.50	9.89	25.39	46.00	20.61	150	353	Horizontal	PASS
5	467.96	19.08	9.18	28.26	46.00	17.74	100	0	Horizontal	PASS
6	664.38	22.68	9.26	31.94	46.00	14.06	150	68	Horizontal	PASS

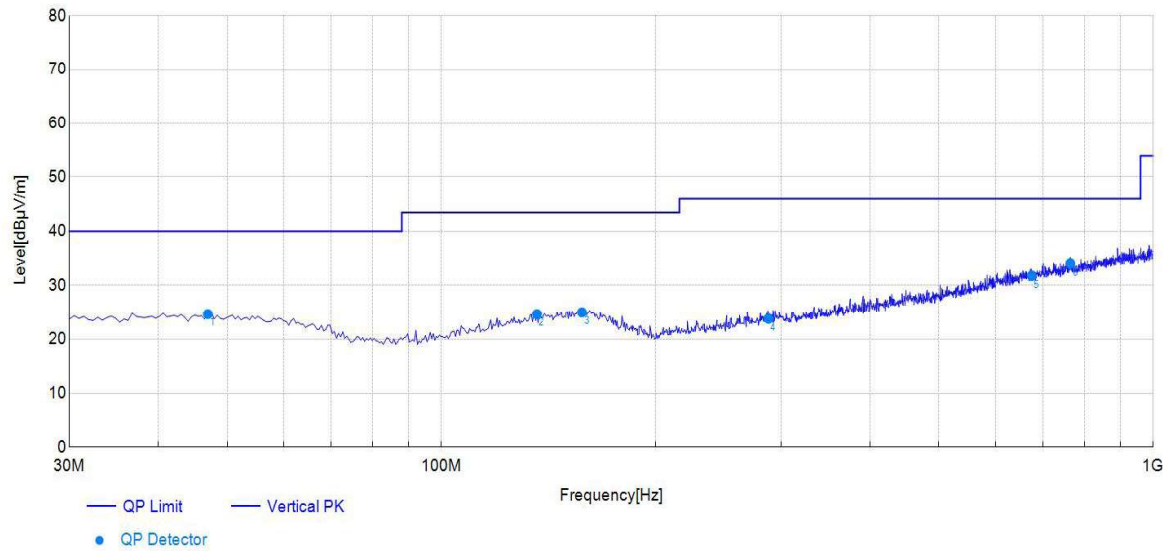
Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

(3) The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

EUT:	Smart Hub WZ3	Polarity:	Vertical
Model:	3RSH06027BWZ	Test Date:	2025-05-16
Mode:	Transmit at Zigbee Channel 11	Voltage:	AC 120V 60Hz
Environment:	Temp: 22.7°C; Humi:37%	Engineer:	Stone Zhang



Final Data List										
NO.	Frequency [MHz]	Factor [dB/m]	QP Reading [dBμV]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pol	Verdict
1	46.98	14.56	10.13	24.69	40.00	15.31	100	35	Vertical	PASS
2	136.22	14.87	9.82	24.69	43.50	18.81	150	211	Vertical	PASS
3	157.56	15.75	9.27	25.02	43.50	18.48	150	260	Vertical	PASS
4	288.02	14.75	9.08	23.83	46.00	22.17	100	152	Vertical	PASS
5	675.05	22.84	8.96	31.80	46.00	14.20	100	251	Vertical	PASS
6	764.78	24.06	9.97	34.03	46.00	11.97	150	162	Vertical	PASS

Note:

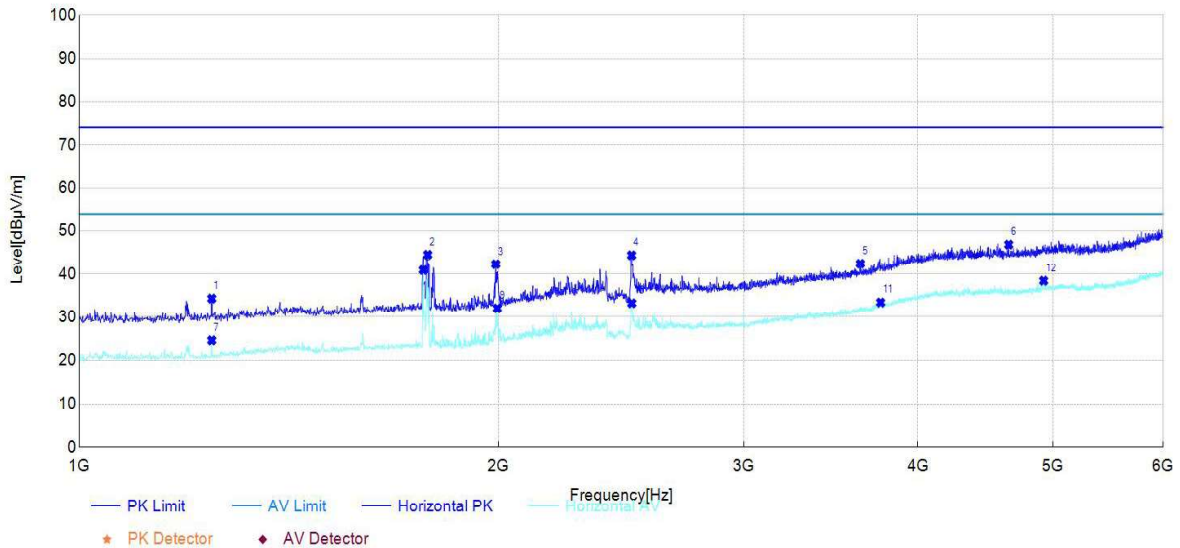
(1) Level=Reading + Factor

(2) Margin=Limit-Level

(3) The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

1GHz-6GHz

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	11	Test Engineer:	Stone Zhang



Suspected Data List

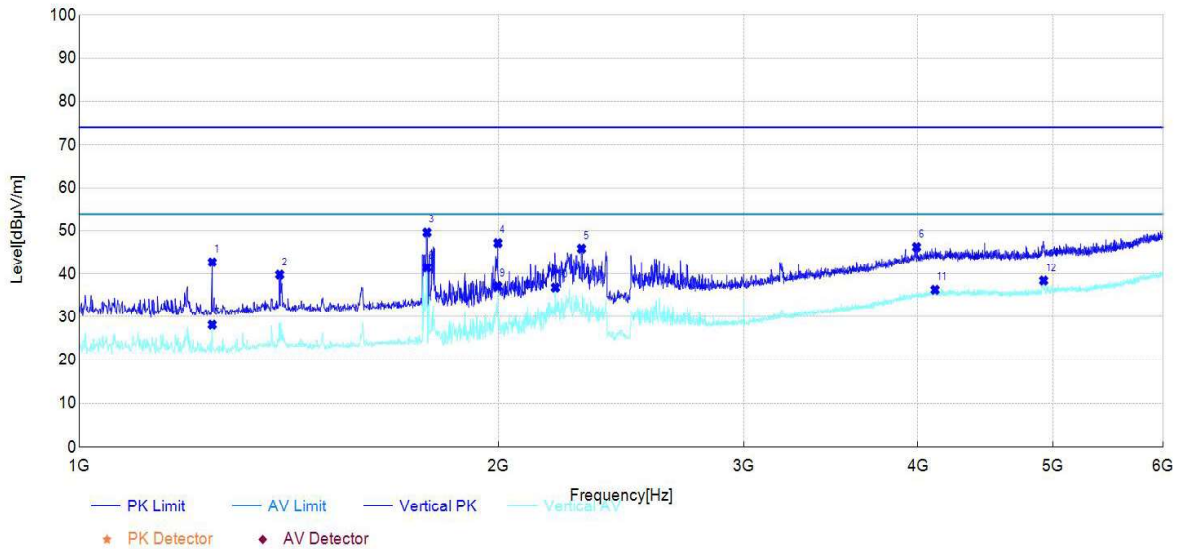
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1245.00	57.49	34.29	-23.20	74.00	39.71	150	284	PK	Horizontal	PASS
2	1779.00	64.14	44.48	-19.66	74.00	29.52	150	179	PK	Horizontal	PASS
3	1991.00	60.51	42.27	-18.24	74.00	31.73	150	84	PK	Horizontal	PASS
4	2492.00	60.19	44.35	-15.84	74.00	29.65	150	0	PK	Horizontal	PASS
5	3637.00	53.72	42.38	-11.34	74.00	31.62	150	40	PK	Horizontal	PASS
6	4648.00	53.83	46.82	-7.01	74.00	27.18	150	0	PK	Horizontal	PASS
7	1245.00	47.78	24.58	-23.20	54.00	29.42	150	284	AV	Horizontal	PASS
8	1766.00	60.66	40.89	-19.77	54.00	13.11	150	237	AV	Horizontal	PASS
9	1996.00	50.21	32.02	-18.19	54.00	21.98	150	84	AV	Horizontal	PASS
10	2493.00	49.05	33.21	-15.84	54.00	20.79	150	11	AV	Horizontal	PASS
11	3761.00	43.91	33.39	-10.52	54.00	20.61	150	309	AV	Horizontal	PASS
12	4924.00	44.78	38.39	-6.39	54.00	15.61	150	152	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	11	Test Engineer:	Stone Zhang



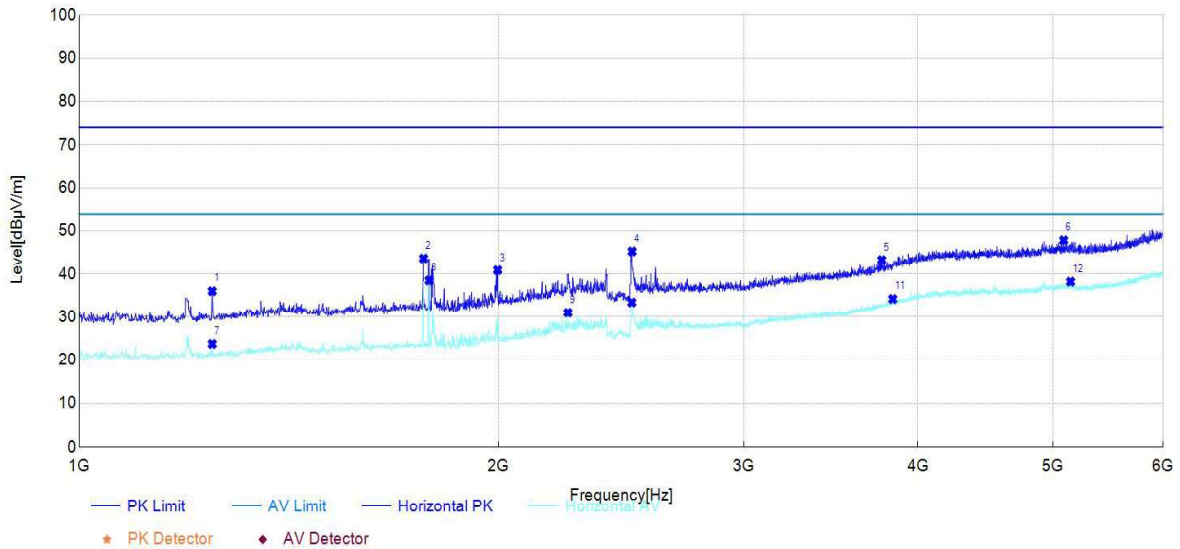
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1246.00	64.99	42.75	-22.24	74.00	31.25	150	73	PK	Vertical	PASS
2	1393.00	61.16	39.78	-21.38	74.00	34.22	150	121	PK	Vertical	PASS
3	1777.00	68.69	49.59	-19.10	74.00	24.41	150	22	PK	Vertical	PASS
4	1998.00	64.95	47.17	-17.78	74.00	26.83	150	91	PK	Vertical	PASS
5	2294.00	62.78	45.90	-16.88	74.00	28.10	150	287	PK	Vertical	PASS
6	3991.00	54.59	46.26	-8.33	74.00	27.74	150	121	PK	Vertical	PASS
7	1246.00	50.39	28.15	-22.24	54.00	25.85	150	73	AV	Vertical	PASS
8	1777.00	60.53	41.43	-19.10	54.00	12.57	150	22	AV	Vertical	PASS
9	1998.00	54.88	37.10	-17.78	54.00	16.90	150	91	AV	Vertical	PASS
10	2197.00	53.92	36.82	-17.10	54.00	17.18	150	303	AV	Vertical	PASS
11	4115.00	44.21	36.30	-7.91	54.00	17.70	150	61	AV	Vertical	PASS
12	4924.00	45.45	38.42	-7.03	54.00	15.58	150	360	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	18	Test Engineer:	Stone Zhang



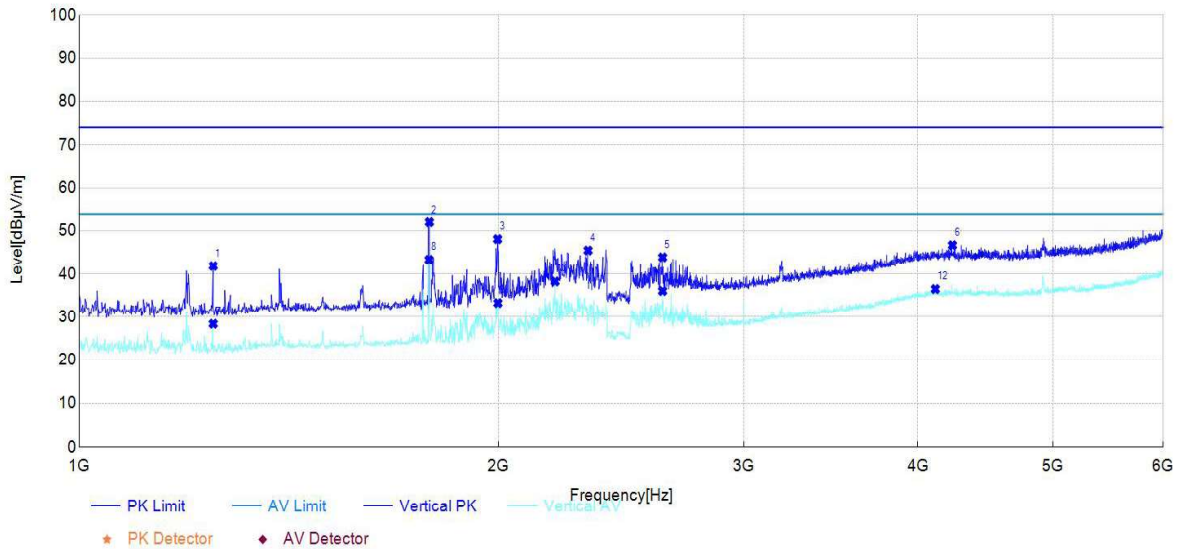
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1246.00	59.18	35.99	-23.19	74.00	38.01	150	313	PK	Horizontal	PASS
2	1767.00	63.37	43.61	-19.76	74.00	30.39	150	353	PK	Horizontal	PASS
3	1997.00	59.05	40.86	-18.19	74.00	33.14	150	160	PK	Horizontal	PASS
4	2494.00	61.09	45.26	-15.83	74.00	28.74	150	156	PK	Horizontal	PASS
5	3768.00	53.72	43.26	-10.46	74.00	30.74	150	360	PK	Horizontal	PASS
6	5090.00	53.89	47.82	-6.07	74.00	26.18	150	347	PK	Horizontal	PASS
7	1246.00	46.93	23.74	-23.19	54.00	30.26	150	313	AV	Horizontal	PASS
8	1783.00	58.08	38.46	-19.62	54.00	15.54	150	185	AV	Horizontal	PASS
9	2243.00	48.04	30.99	-17.05	54.00	23.01	150	28	AV	Horizontal	PASS
10	2493.00	49.23	33.39	-15.84	54.00	20.61	150	17	AV	Horizontal	PASS
11	3837.00	44.03	34.19	-9.84	54.00	19.81	150	83	AV	Horizontal	PASS
12	5148.00	44.34	38.18	-6.16	54.00	15.82	150	119	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	18	Test Engineer:	Stone Zhang



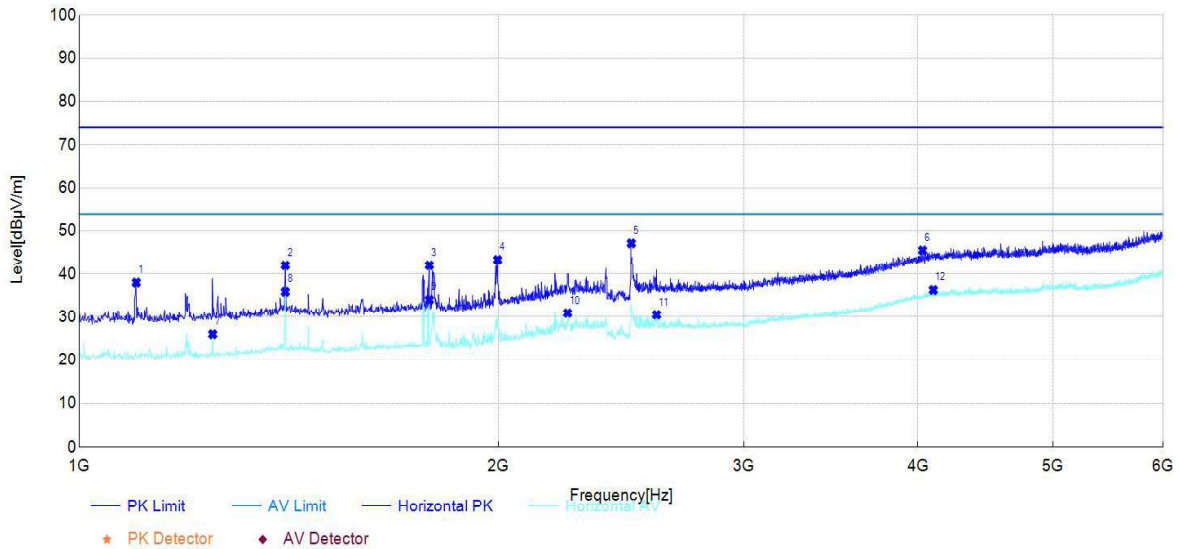
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1248.00	64.07	41.84	-22.23	74.00	32.16	150	57	PK	Vertical	PASS
2	1784.00	71.03	51.99	-19.04	74.00	22.01	150	116	PK	Vertical	PASS
3	1997.00	65.87	48.08	-17.79	74.00	25.92	150	116	PK	Vertical	PASS
4	2319.00	62.24	45.46	-16.78	74.00	28.54	150	280	PK	Vertical	PASS
5	2623.00	59.51	43.88	-15.63	74.00	30.12	150	266	PK	Vertical	PASS
6	4235.00	54.52	46.68	-7.84	74.00	27.32	150	168	PK	Vertical	PASS
7	1248.00	50.61	28.38	-22.23	54.00	25.62	150	57	AV	Vertical	PASS
8	1783.00	62.36	43.31	-19.05	54.00	10.69	150	116	AV	Vertical	PASS
9	1998.00	51.04	33.26	-17.78	54.00	20.74	150	91	AV	Vertical	PASS
10	2196.00	55.34	38.24	-17.10	54.00	15.76	150	102	AV	Vertical	PASS
11	2623.00	51.66	36.03	-15.63	54.00	17.97	150	266	AV	Vertical	PASS
12	4117.00	44.39	36.48	-7.91	54.00	17.52	150	43	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	25	Test Engineer:	Stone Zhang



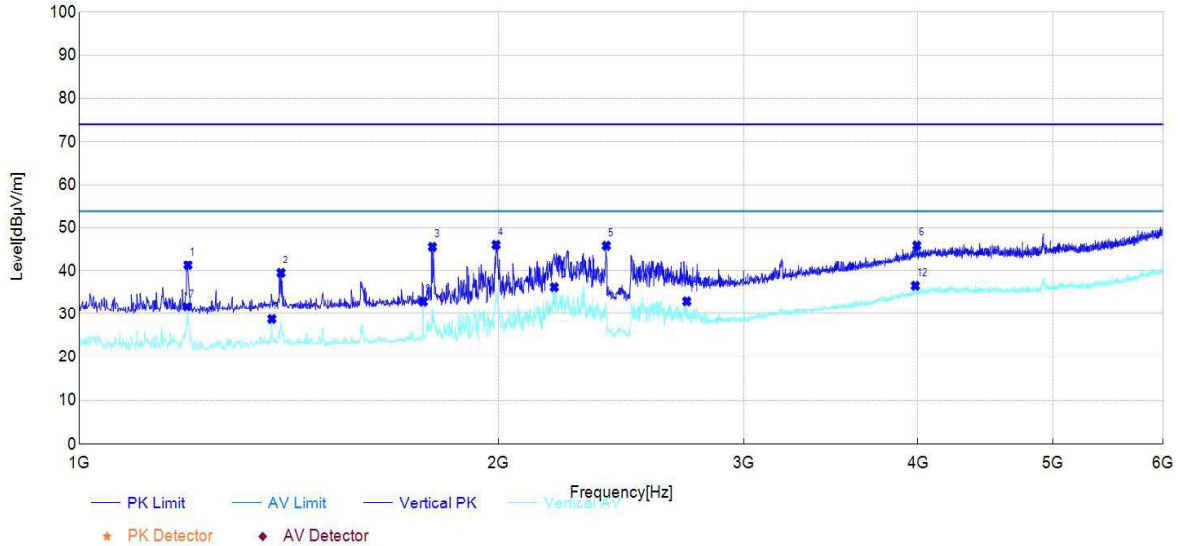
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1099.00	61.80	37.96	-23.84	74.00	36.04	150	11	PK	Horizontal	PASS
2	1406.00	64.15	41.99	-22.16	74.00	32.01	150	314	PK	Horizontal	PASS
3	1784.00	61.61	41.99	-19.62	74.00	32.01	150	359	PK	Horizontal	PASS
4	1997.00	61.49	43.30	-18.19	74.00	30.70	150	94	PK	Horizontal	PASS
5	2491.00	62.97	47.13	-15.84	74.00	26.87	150	146	PK	Horizontal	PASS
6	4031.00	53.94	45.51	-8.43	74.00	28.49	150	146	PK	Horizontal	PASS
7	1247.00	49.14	25.96	-23.18	54.00	28.04	150	110	AV	Horizontal	PASS
8	1406.00	58.00	35.84	-22.16	54.00	18.16	150	314	AV	Horizontal	PASS
9	1784.00	53.62	34.00	-19.62	54.00	20.00	150	359	AV	Horizontal	PASS
10	2242.00	47.95	30.89	-17.06	54.00	23.11	150	87	AV	Horizontal	PASS
11	2597.00	46.03	30.50	-15.53	54.00	23.50	150	351	AV	Horizontal	PASS
12	4103.00	44.35	36.26	-8.09	54.00	17.74	150	190	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	25	Test Engineer:	Stone Zhang



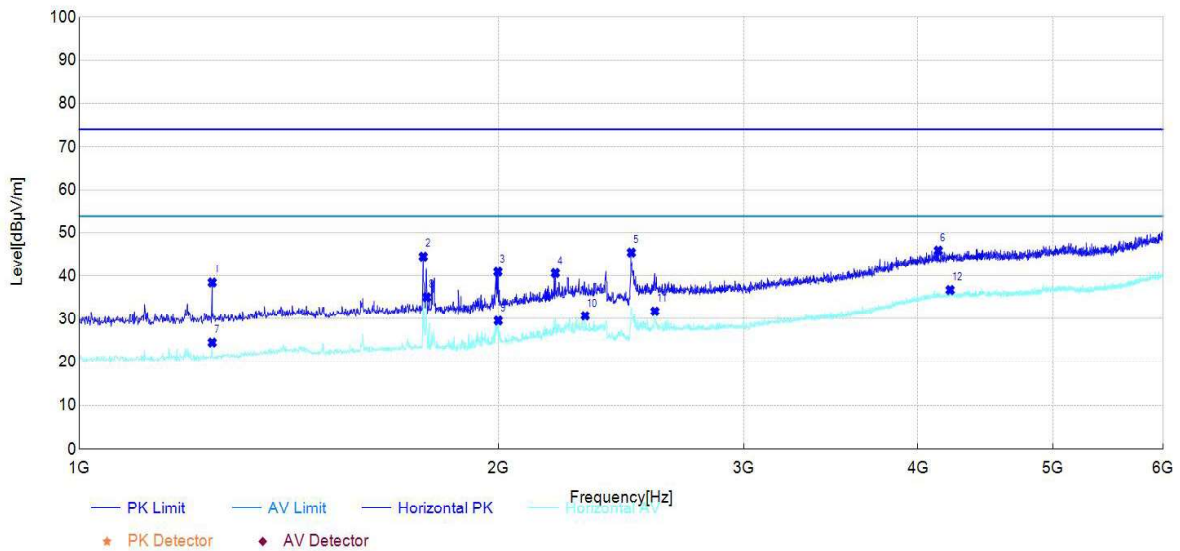
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1197.00	63.77	41.29	-22.48	74.00	32.71	150	109	PK	Vertical	PASS
2	1396.00	60.84	39.48	-21.36	74.00	34.52	150	82	PK	Vertical	PASS
3	1793.00	64.63	45.65	-18.98	74.00	28.35	150	93	PK	Vertical	PASS
4	1992.00	63.92	46.10	-17.82	74.00	27.90	150	71	PK	Vertical	PASS
5	2390.00	62.40	45.90	-16.50	74.00	28.10	150	53	PK	Vertical	PASS
6	3993.00	54.27	45.95	-8.32	74.00	28.05	150	100	PK	Vertical	PASS
7	1195.00	54.14	31.65	-22.49	54.00	22.35	150	93	AV	Vertical	PASS
8	1375.00	50.25	28.76	-21.49	54.00	25.24	150	291	AV	Vertical	PASS
9	1766.00	52.12	32.93	-19.19	54.00	21.07	150	273	AV	Vertical	PASS
10	2193.00	53.34	36.23	-17.11	54.00	17.77	150	97	AV	Vertical	PASS
11	2730.00	48.26	33.01	-15.25	54.00	20.99	150	255	AV	Vertical	PASS
12	3983.00	44.92	36.55	-8.37	54.00	17.45	150	120	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	26	Test Engineer:	Stone Zhang



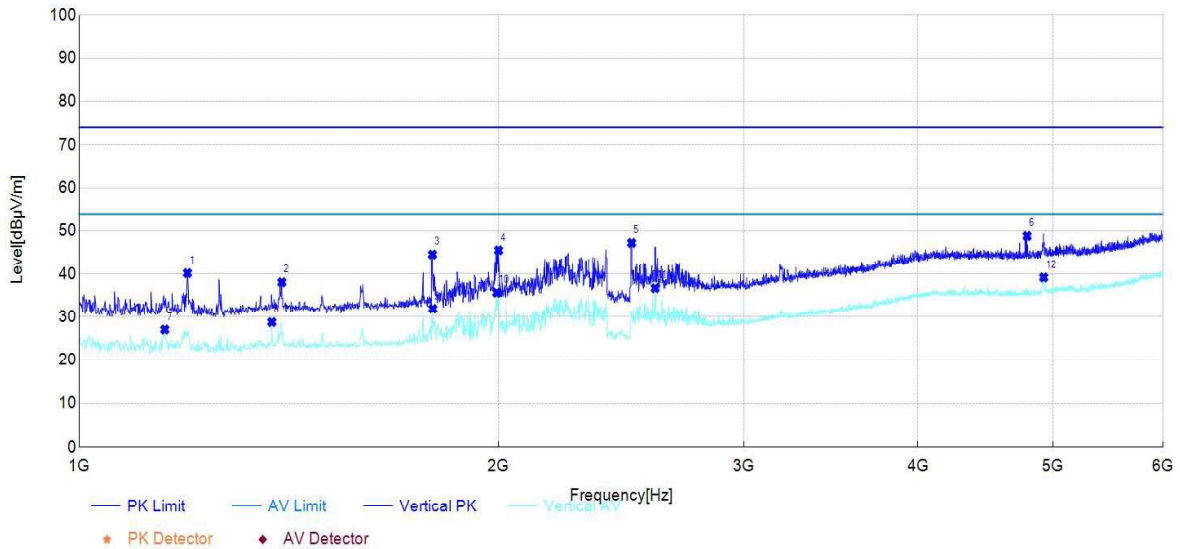
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1246.00	61.62	38.43	-23.19	74.00	35.57	150	58	PK	Horizontal	PASS
2	1766.00	64.30	44.53	-19.77	74.00	29.47	150	328	PK	Horizontal	PASS
3	1998.00	59.08	40.90	-18.18	74.00	33.10	150	360	PK	Horizontal	PASS
4	2197.00	57.84	40.61	-17.23	74.00	33.39	150	91	PK	Horizontal	PASS
5	2491.00	61.30	45.46	-15.84	74.00	28.54	150	149	PK	Horizontal	PASS
6	4137.00	53.97	45.92	-8.05	74.00	28.08	150	36	PK	Horizontal	PASS
7	1246.00	47.71	24.52	-23.19	54.00	29.48	150	58	AV	Horizontal	PASS
8	1776.00	54.74	35.06	-19.68	54.00	18.94	150	233	AV	Horizontal	PASS
9	1999.00	47.74	29.57	-18.17	54.00	24.43	150	98	AV	Horizontal	PASS
10	2308.00	47.51	30.71	-16.80	54.00	23.29	150	87	AV	Horizontal	PASS
11	2590.00	47.34	31.78	-15.56	54.00	22.22	150	80	AV	Horizontal	PASS
12	4219.00	44.64	36.72	-7.92	54.00	17.28	150	274	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	26	Test Engineer:	Stone Zhang



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	1196.00	62.65	40.16	-22.49	74.00	33.84	150	62	PK	Vertical	PASS
2	1398.00	59.38	38.04	-21.34	74.00	35.96	150	98	PK	Vertical	PASS
3	1793.00	63.51	44.53	-18.98	74.00	29.47	150	284	PK	Vertical	PASS
4	2000.00	63.27	45.51	-17.76	74.00	28.49	150	81	PK	Vertical	PASS
5	2492.00	63.35	47.22	-16.13	74.00	26.78	150	303	PK	Vertical	PASS
6	4791.00	56.16	48.81	-7.35	74.00	25.19	150	281	PK	Vertical	PASS
7	1152.00	49.67	27.04	-22.63	54.00	26.96	150	303	AV	Vertical	PASS
8	1375.00	50.25	28.76	-21.49	54.00	25.24	150	292	AV	Vertical	PASS
9	1794.00	50.89	31.92	-18.97	54.00	22.08	150	94	AV	Vertical	PASS
10	1994.00	53.46	35.65	-17.81	54.00	18.35	150	81	AV	Vertical	PASS
11	2591.00	52.44	36.68	-15.76	54.00	17.32	150	266	AV	Vertical	PASS
12	4925.00	46.17	39.15	-7.02	54.00	14.85	150	5	AV	Vertical	PASS

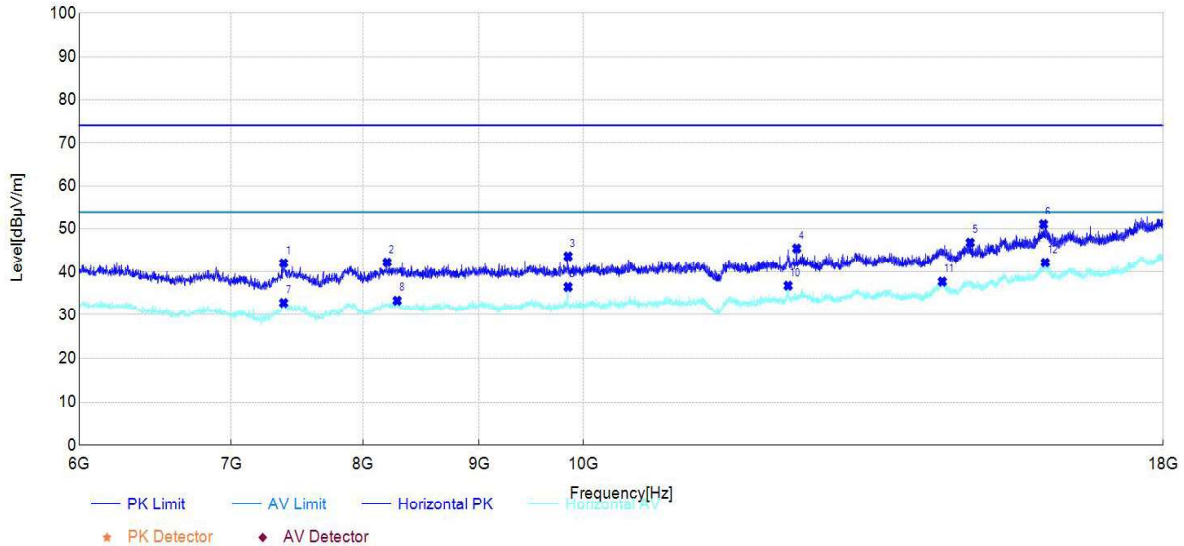
Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

6GHz-18GHz

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	11	Test Engineer:	Stone Zhang



Suspected Data List

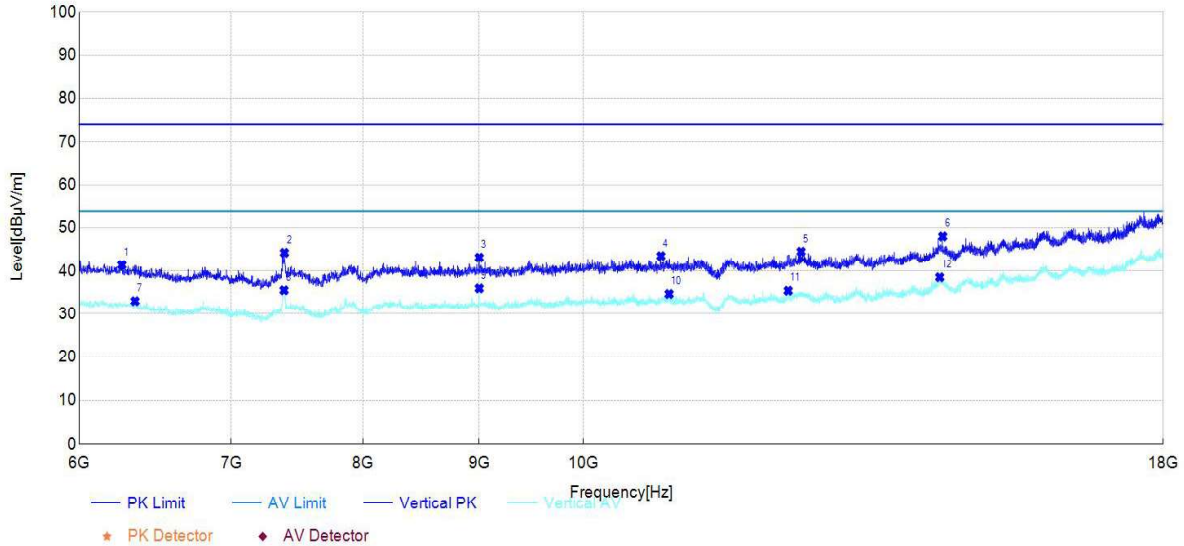
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	7381.50	44.91	42.05	-2.86	74.00	31.95	150	175	PK	Horizontal	PASS
2	8197.50	43.67	42.22	-1.45	74.00	31.78	150	38	PK	Horizontal	PASS
3	9847.50	43.99	43.66	-0.33	74.00	30.34	150	252	PK	Horizontal	PASS
4	12415.50	43.17	45.48	2.31	74.00	28.52	150	360	PK	Horizontal	PASS
5	14802.00	41.36	46.80	5.44	74.00	27.20	150	229	PK	Horizontal	PASS
6	15943.50	41.24	51.02	9.78	74.00	22.98	150	354	PK	Horizontal	PASS
7	7381.50	35.70	32.84	-2.86	54.00	21.16	150	225	AV	Horizontal	PASS
8	8281.50	34.59	33.36	-1.23	54.00	20.64	150	131	AV	Horizontal	PASS
9	9847.50	36.83	36.50	-0.33	54.00	17.50	150	252	AV	Horizontal	PASS
10	12307.50	35.16	36.79	1.63	54.00	17.21	150	340	AV	Horizontal	PASS
11	14389.50	32.61	37.73	5.12	54.00	16.27	150	305	AV	Horizontal	PASS
12	15972.00	32.39	42.17	9.78	54.00	11.83	150	202	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	11	Test Engineer:	Stone Zhang



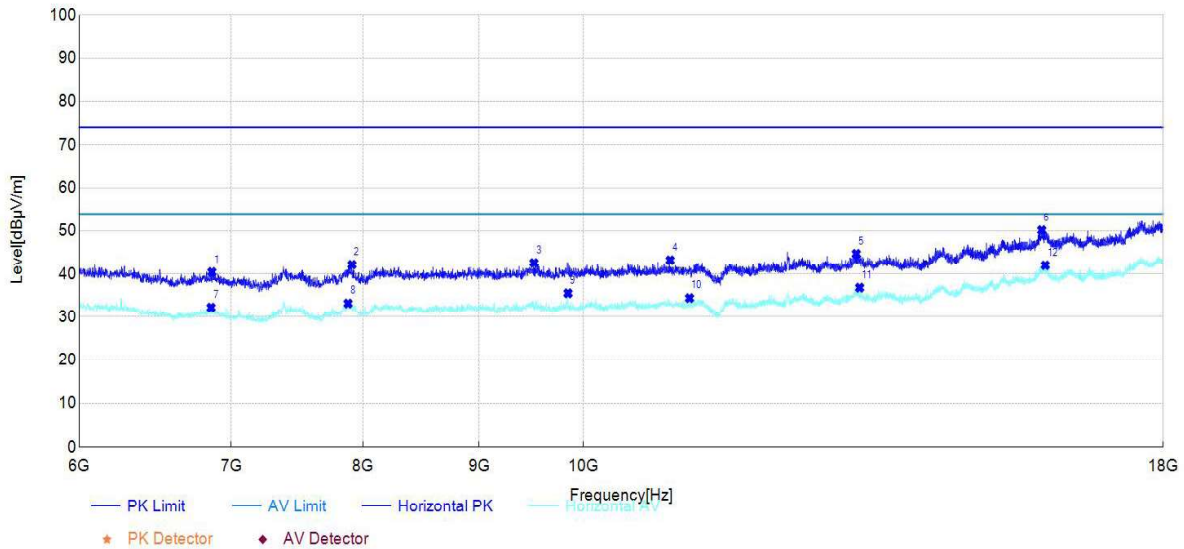
Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	6265.50	45.43	41.36	-4.07	74.00	32.64	150	269	PK	Vertical	PASS
2	7387.50	47.07	44.25	-2.82	74.00	29.75	150	154	PK	Vertical	PASS
3	9000.00	43.90	43.12	-0.78	74.00	30.88	150	81	PK	Vertical	PASS
4	10819.50	42.68	43.49	0.81	74.00	30.51	150	32	PK	Vertical	PASS
5	12471.00	42.02	44.51	2.49	74.00	29.49	150	173	PK	Vertical	PASS
6	14395.50	42.43	48.02	5.59	74.00	25.98	150	265	PK	Vertical	PASS
7	6349.50	37.44	33.01	-4.43	54.00	20.99	150	204	AV	Vertical	PASS
8	7384.50	38.36	35.52	-2.84	54.00	18.48	150	204	AV	Vertical	PASS
9	9000.00	36.74	35.96	-0.78	54.00	18.04	150	116	AV	Vertical	PASS
10	10909.50	33.53	34.66	1.13	54.00	19.34	150	88	AV	Vertical	PASS
11	12309.00	33.71	35.41	1.70	54.00	18.59	150	6	AV	Vertical	PASS
12	14352.00	33.03	38.50	5.47	54.00	15.50	150	27	AV	Vertical	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level

Test Mode:	Zigbee	Test Date:	2025-05-19
Test Channel:	18	Test Engineer:	Stone Zhang



Suspected Data List											
NO.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	6864.00	44.99	40.41	-4.58	74.00	33.59	150	360	PK	Horizontal	PASS
2	7911.00	43.17	42.15	-1.02	74.00	31.85	150	121	PK	Horizontal	PASS
3	9513.00	42.55	42.57	0.02	74.00	31.43	150	86	PK	Horizontal	PASS
4	10921.50	42.16	43.20	1.04	74.00	30.80	150	0	PK	Horizontal	PASS
5	13188.00	41.32	44.70	3.38	74.00	29.30	150	24	PK	Horizontal	PASS
6	15915.00	40.36	50.14	9.78	74.00	23.86	150	282	PK	Horizontal	PASS
7	6858.00	36.81	32.20	-4.61	54.00	21.80	150	70	AV	Horizontal	PASS
8	7879.50	34.56	33.16	-1.40	54.00	20.84	150	344	AV	Horizontal	PASS
9	9847.50	35.84	35.51	-0.33	54.00	18.49	150	258	AV	Horizontal	PASS
10	11137.50	33.70	34.40	0.70	54.00	19.60	150	186	AV	Horizontal	PASS
11	13233.00	33.61	36.80	3.19	54.00	17.20	150	236	AV	Horizontal	PASS
12	15972.00	32.22	42.00	9.78	54.00	12.00	150	128	AV	Horizontal	PASS

Note:

(1) Level=Reading + Factor

(2) Margin=Limit-Level