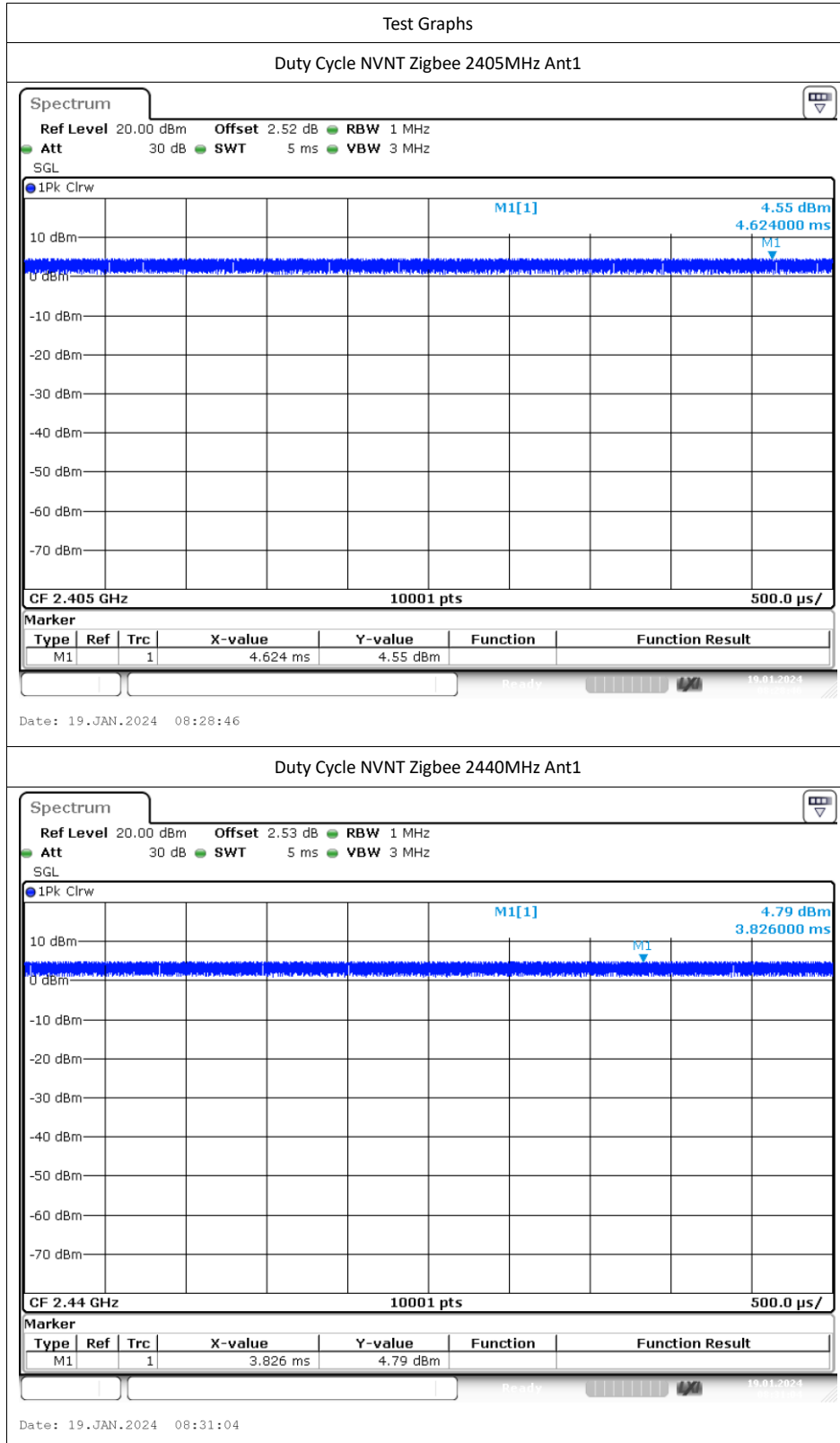
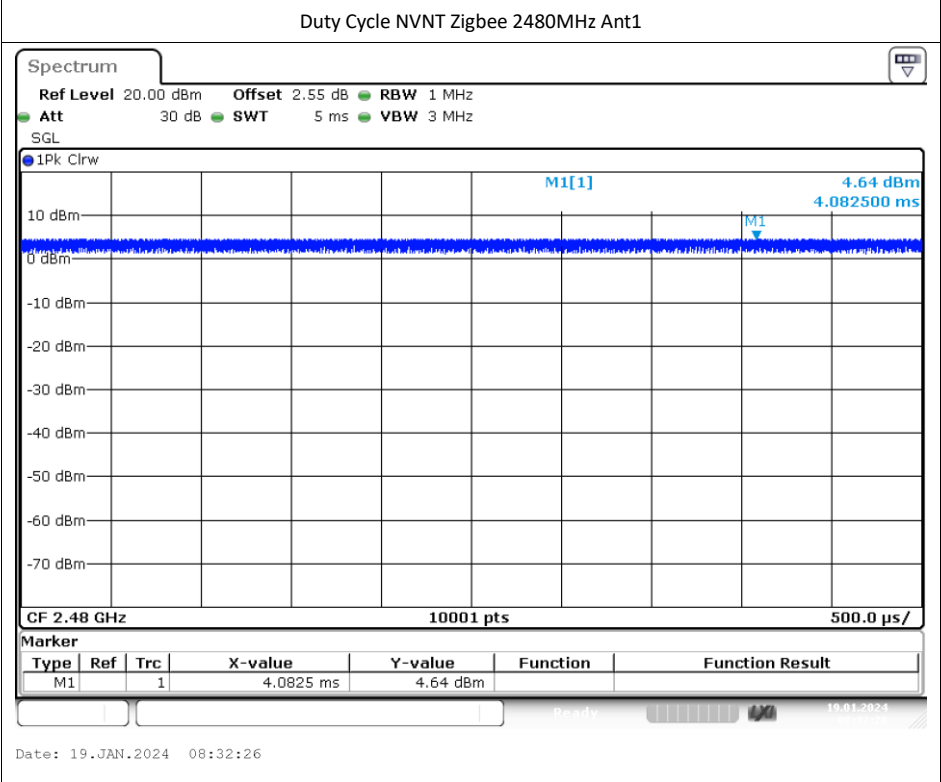


Appendix A

Duty Cycle

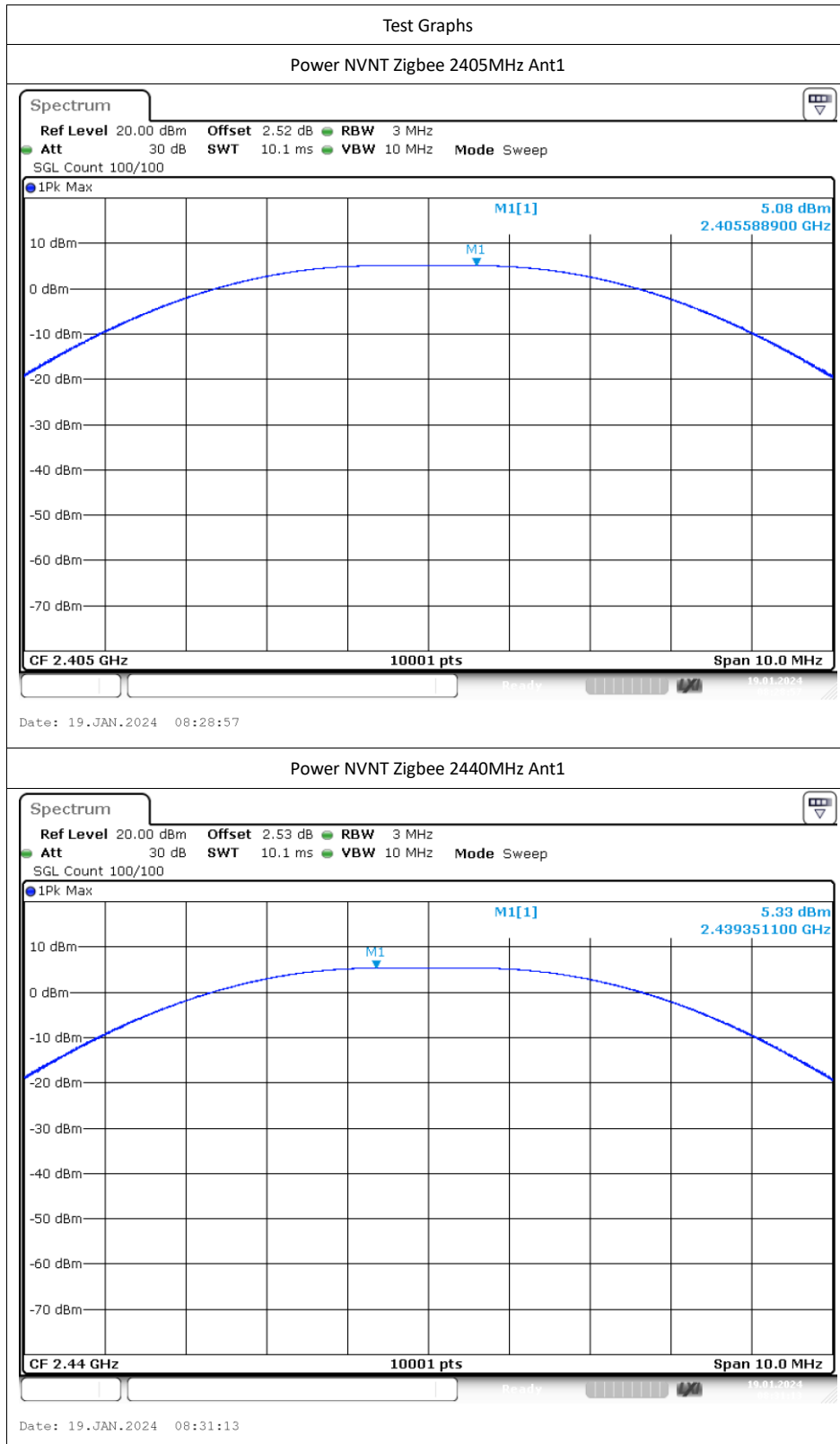
Condition	Mode	Frequency (MHz)	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)	Final settingFor VBW (kHz)
NVNT	Zigbee	2405	Ant1	0	0	100	0	0	1
NVNT	Zigbee	2440	Ant1	0	0	100	0	0	1
NVNT	Zigbee	2480	Ant1	0	0	100	0	0	1

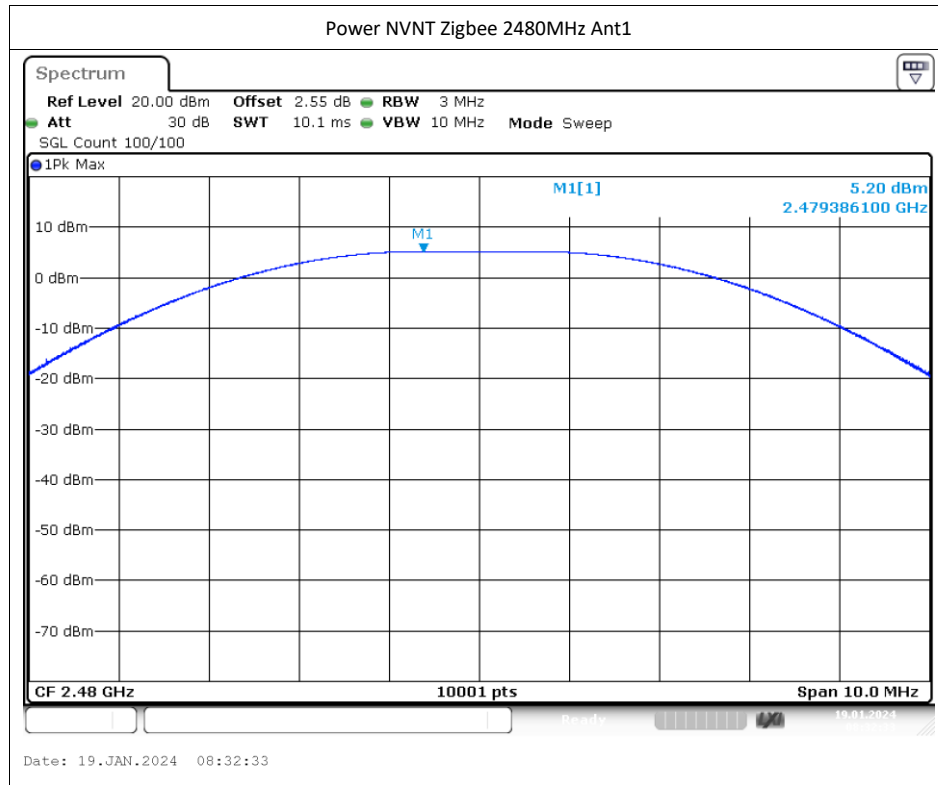




Maximum Conducted Output Power

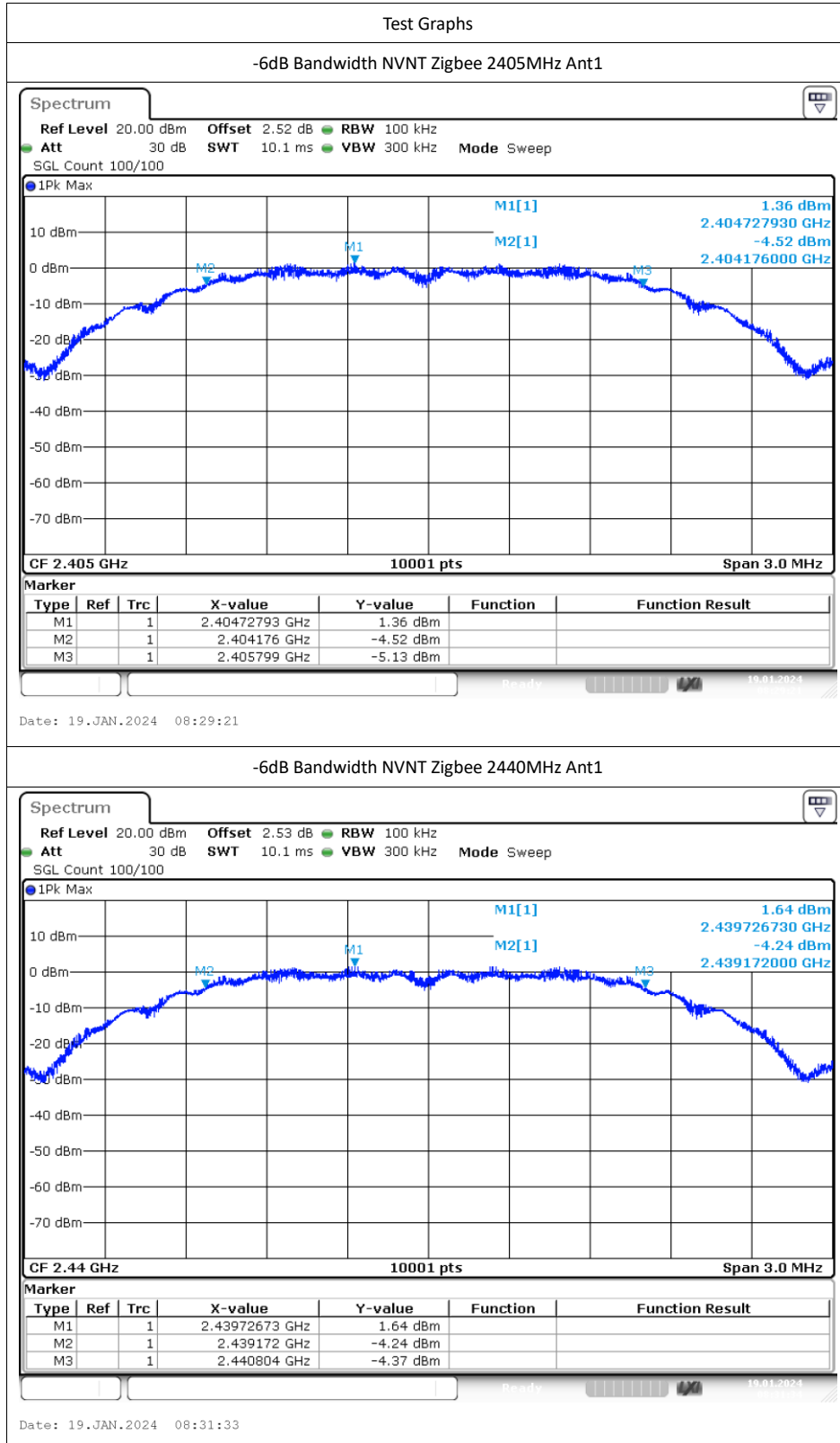
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	Zigbee	2405	Ant1	5.08	0	5.08	30	Pass
NVNT	Zigbee	2440	Ant1	5.33	0	5.33	30	Pass
NVNT	Zigbee	2480	Ant1	5.2	0	5.2	30	Pass

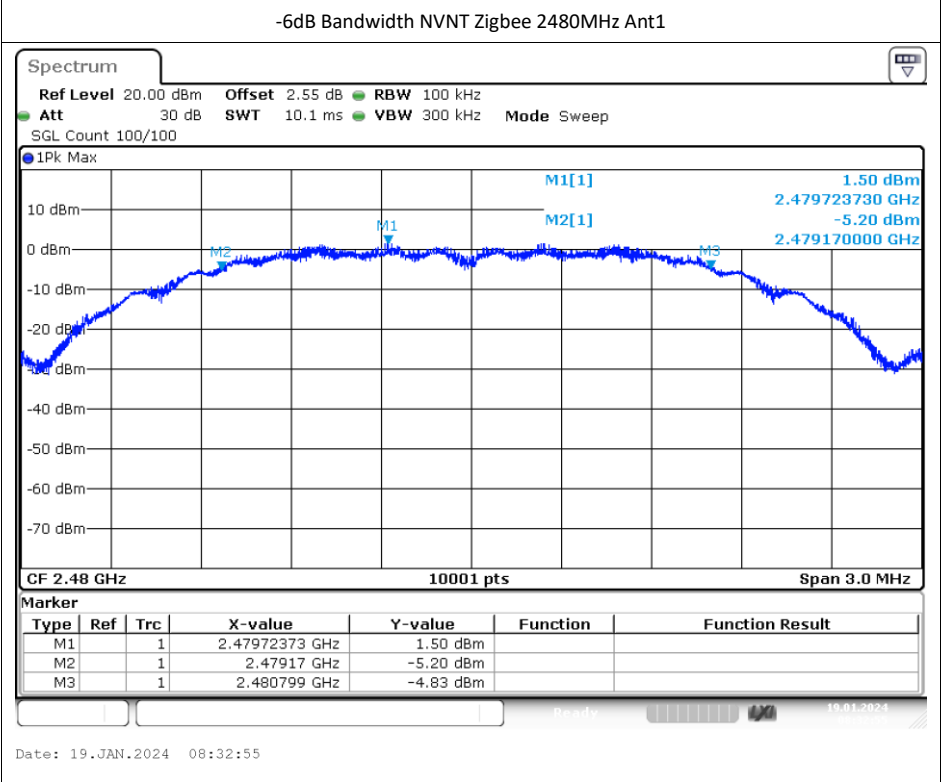




-6dB Bandwidth

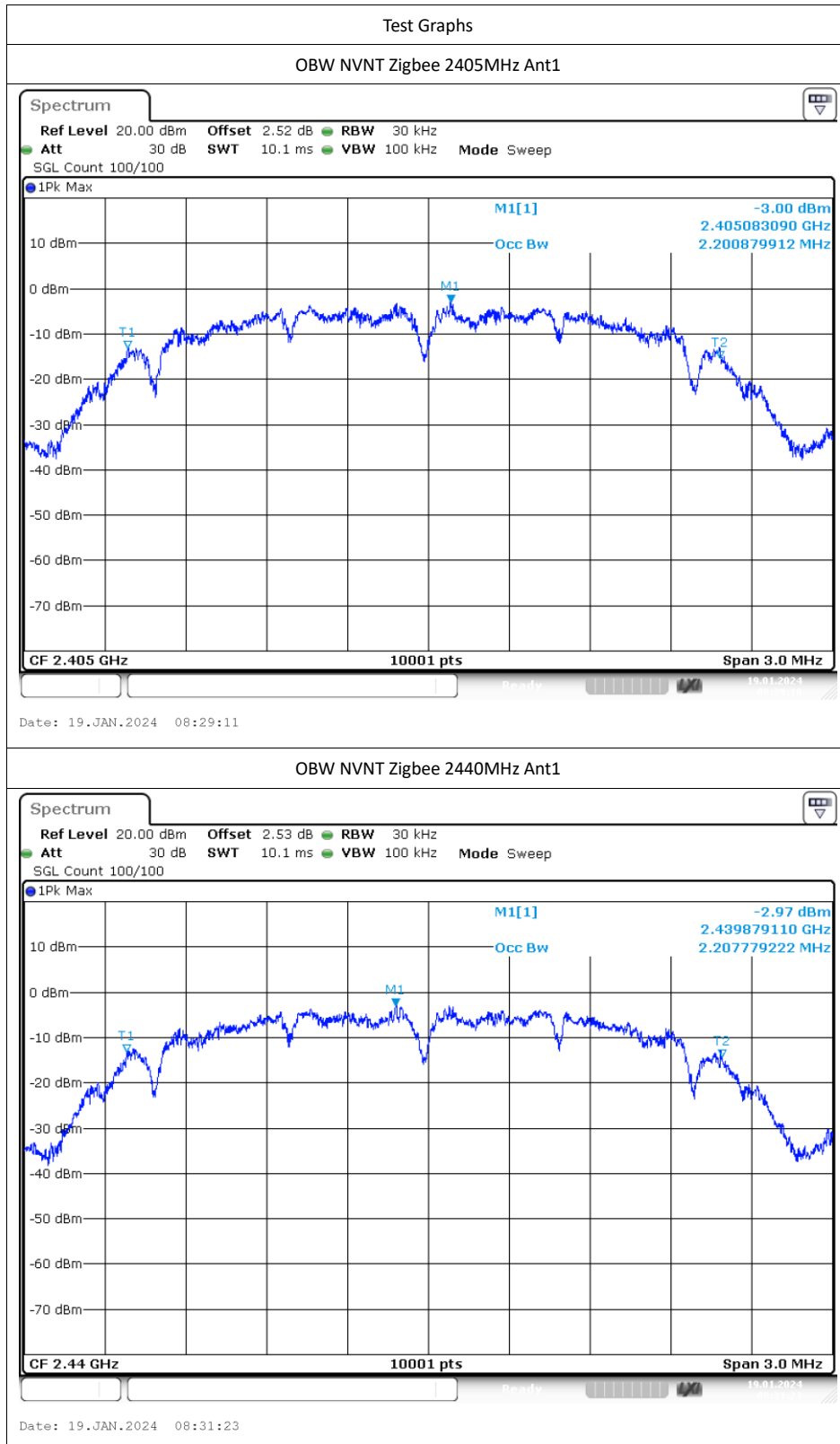
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	Zigbee	2405	Ant1	1.62	0.5	Pass
NVNT	Zigbee	2440	Ant1	1.63	0.5	Pass
NVNT	Zigbee	2480	Ant1	1.63	0.5	Pass

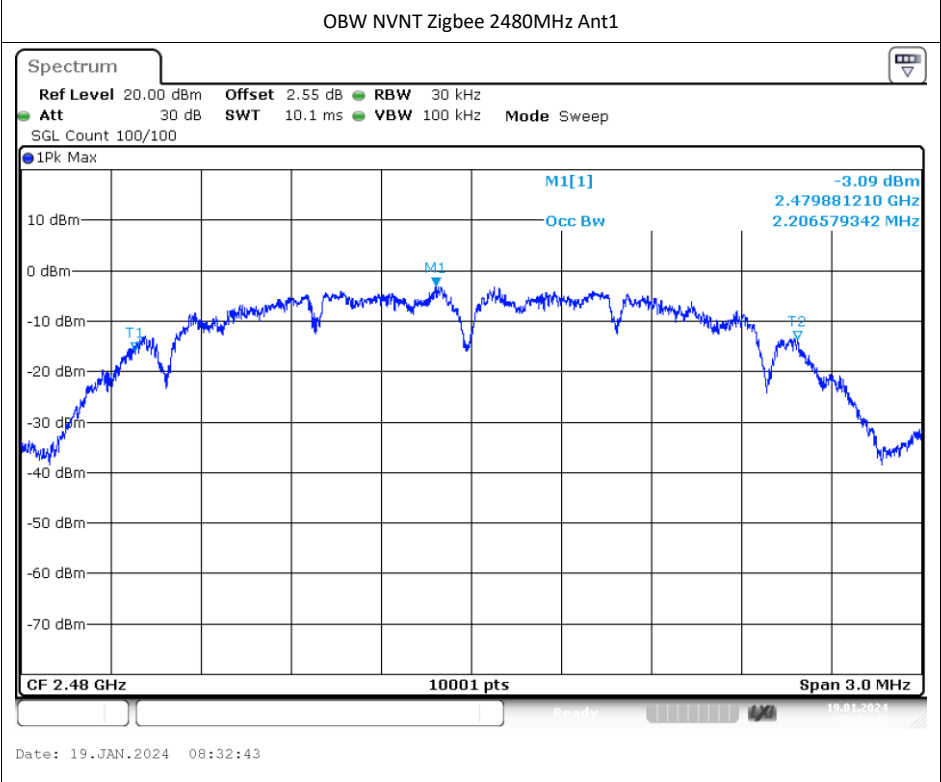




Occupied Channel Bandwidth

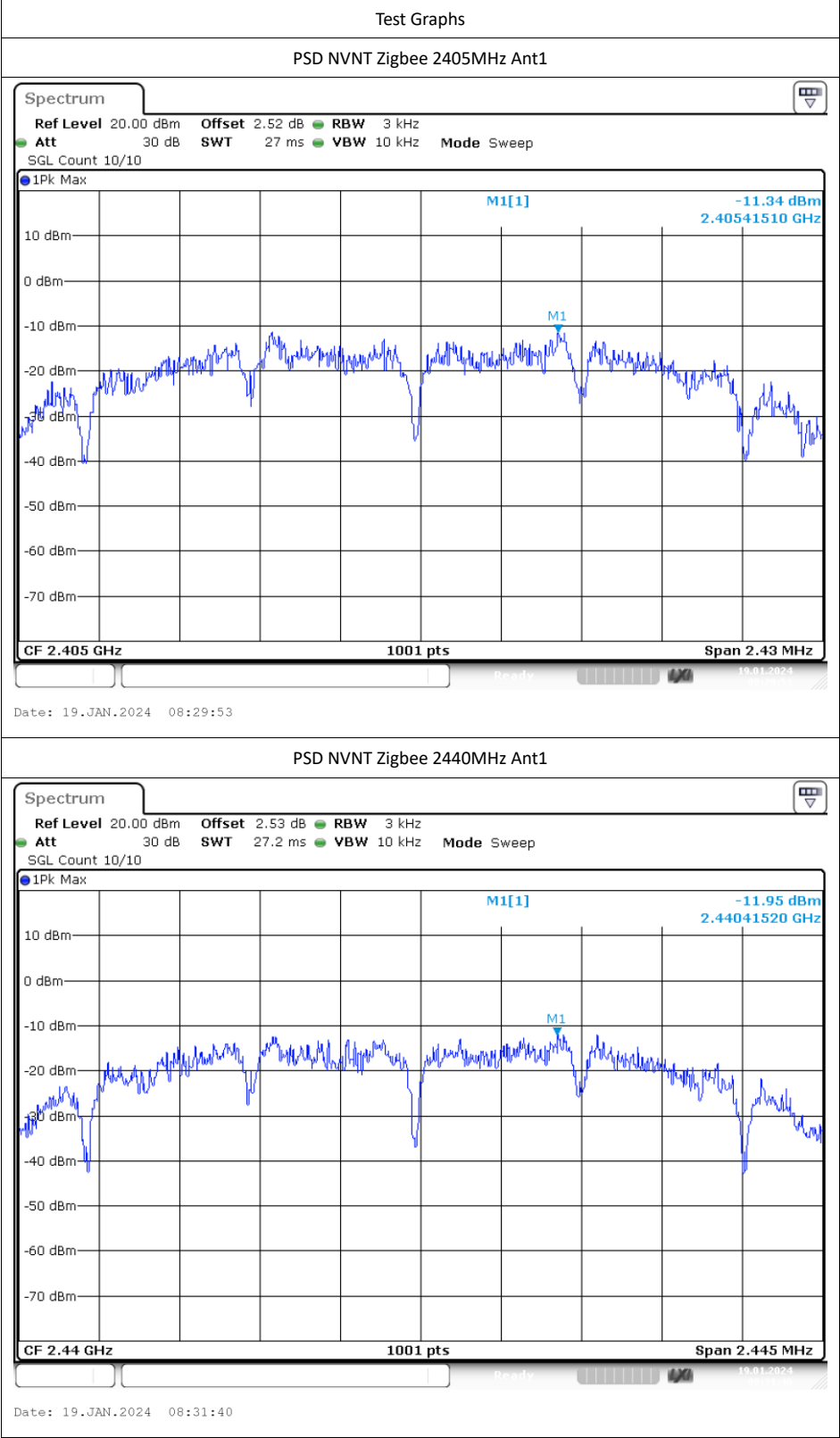
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	Zigbee	2405	Ant1	2.201
NVNT	Zigbee	2440	Ant1	2.208
NVNT	Zigbee	2480	Ant1	2.207

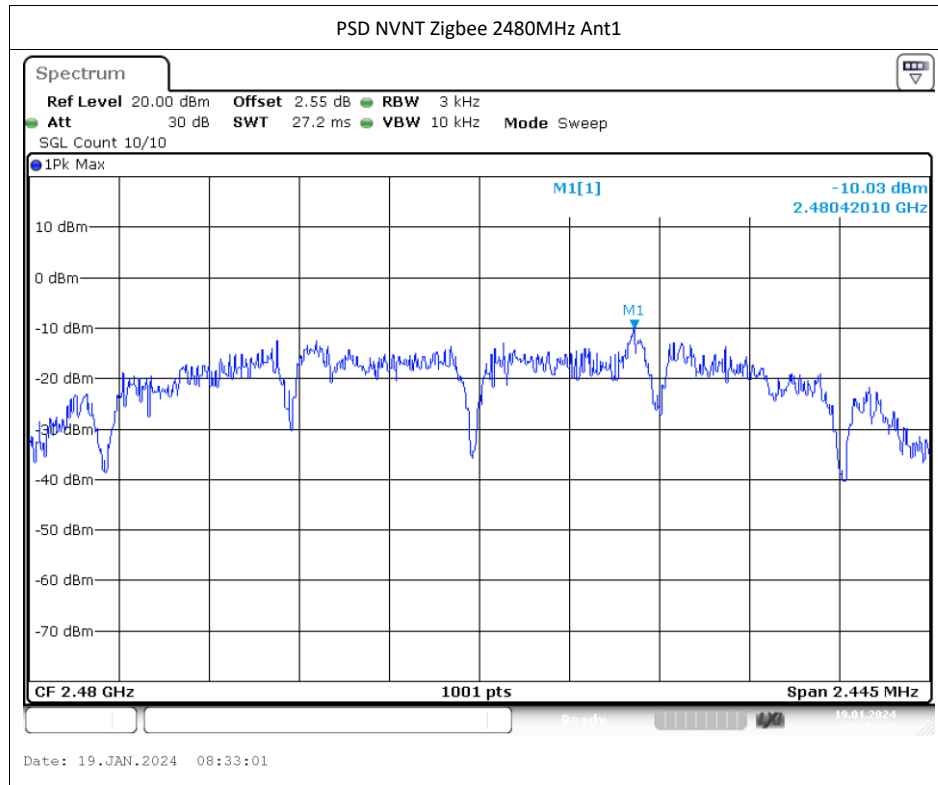




Maximum Power Spectral Density Level

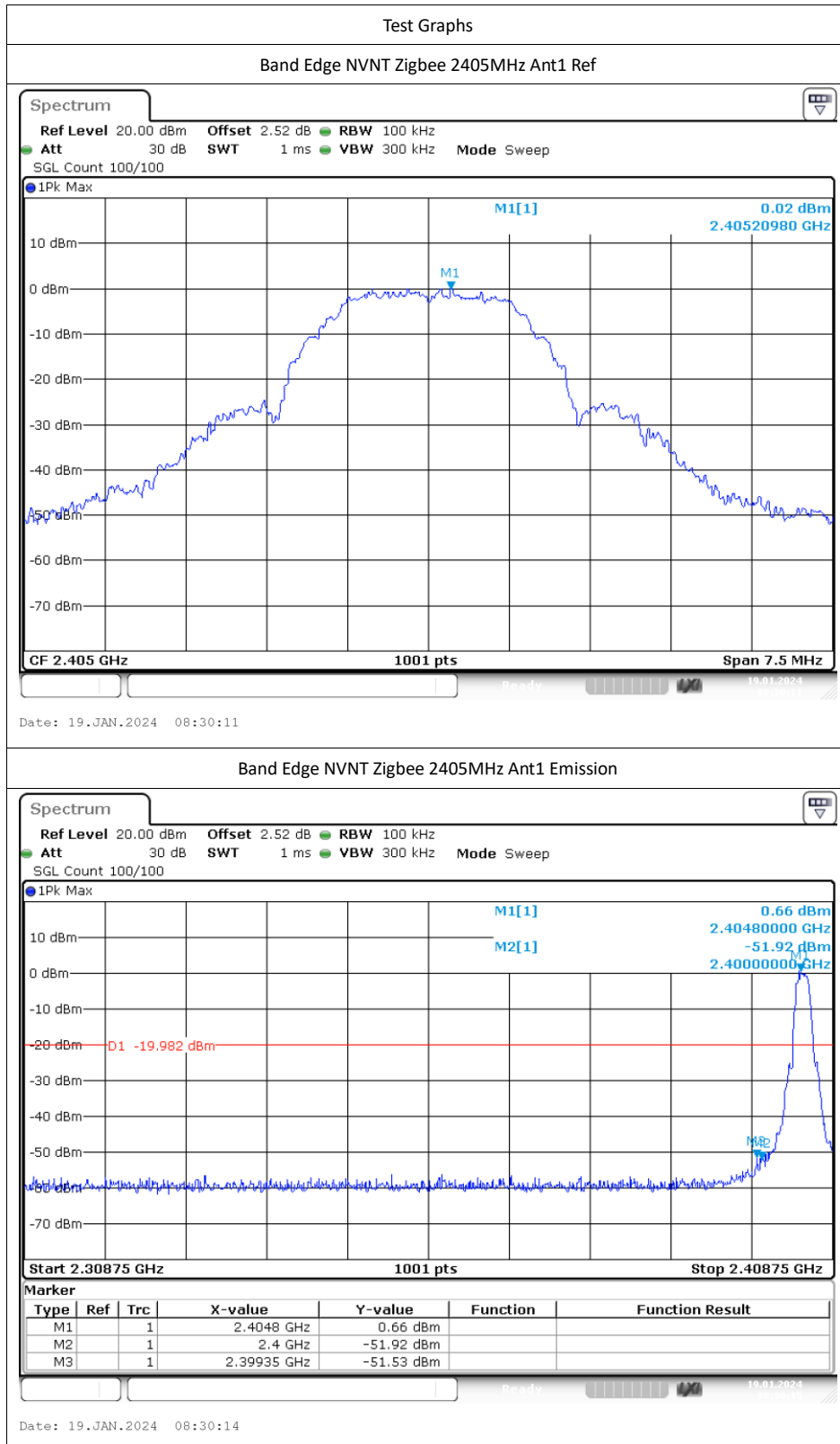
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	Zigbee	2405	Ant1	-11.34	0	-11.34	8	Pass
NVNT	Zigbee	2440	Ant1	-11.95	0	-11.95	8	Pass
NVNT	Zigbee	2480	Ant1	-10.03	0	-10.03	8	Pass

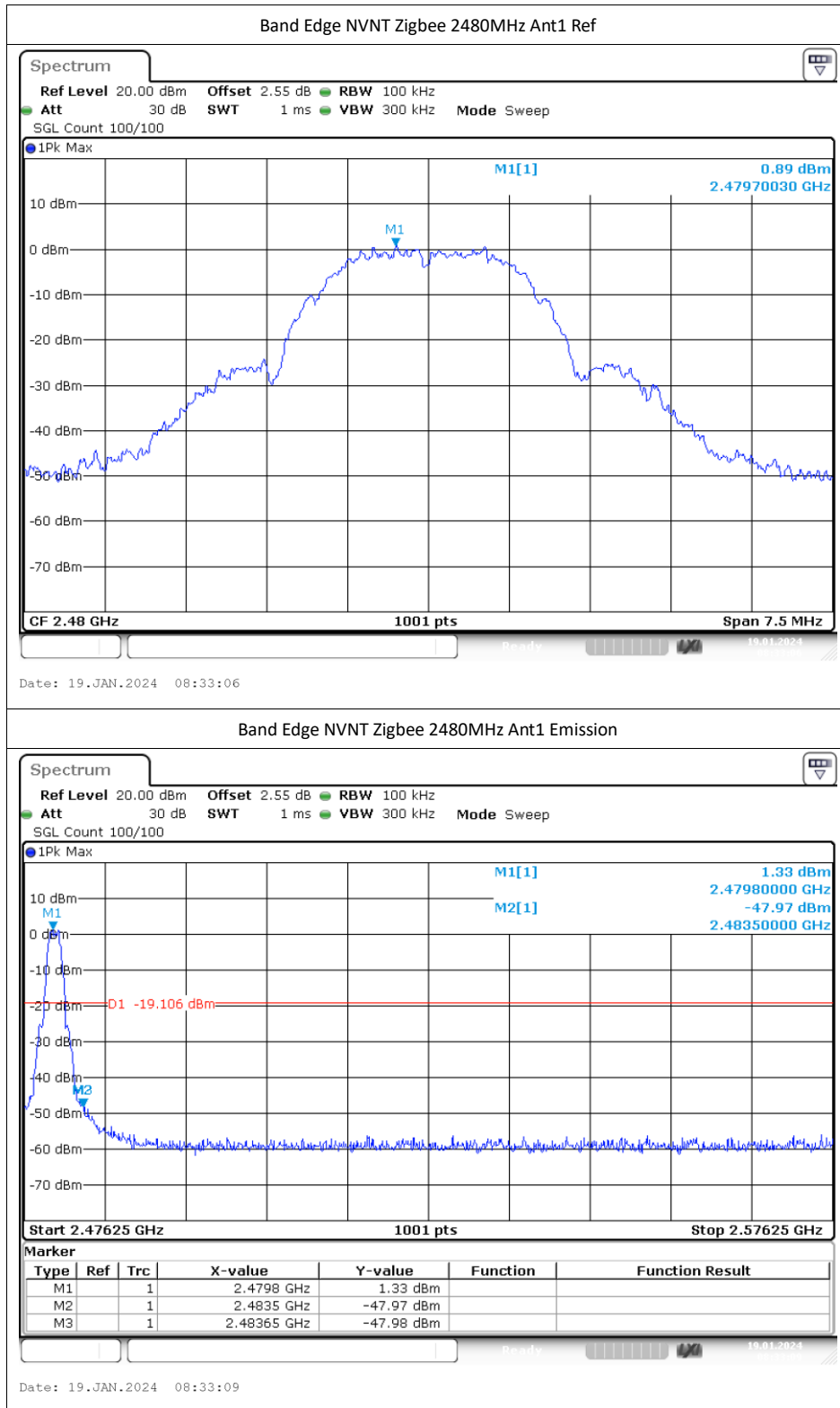




Band Edge

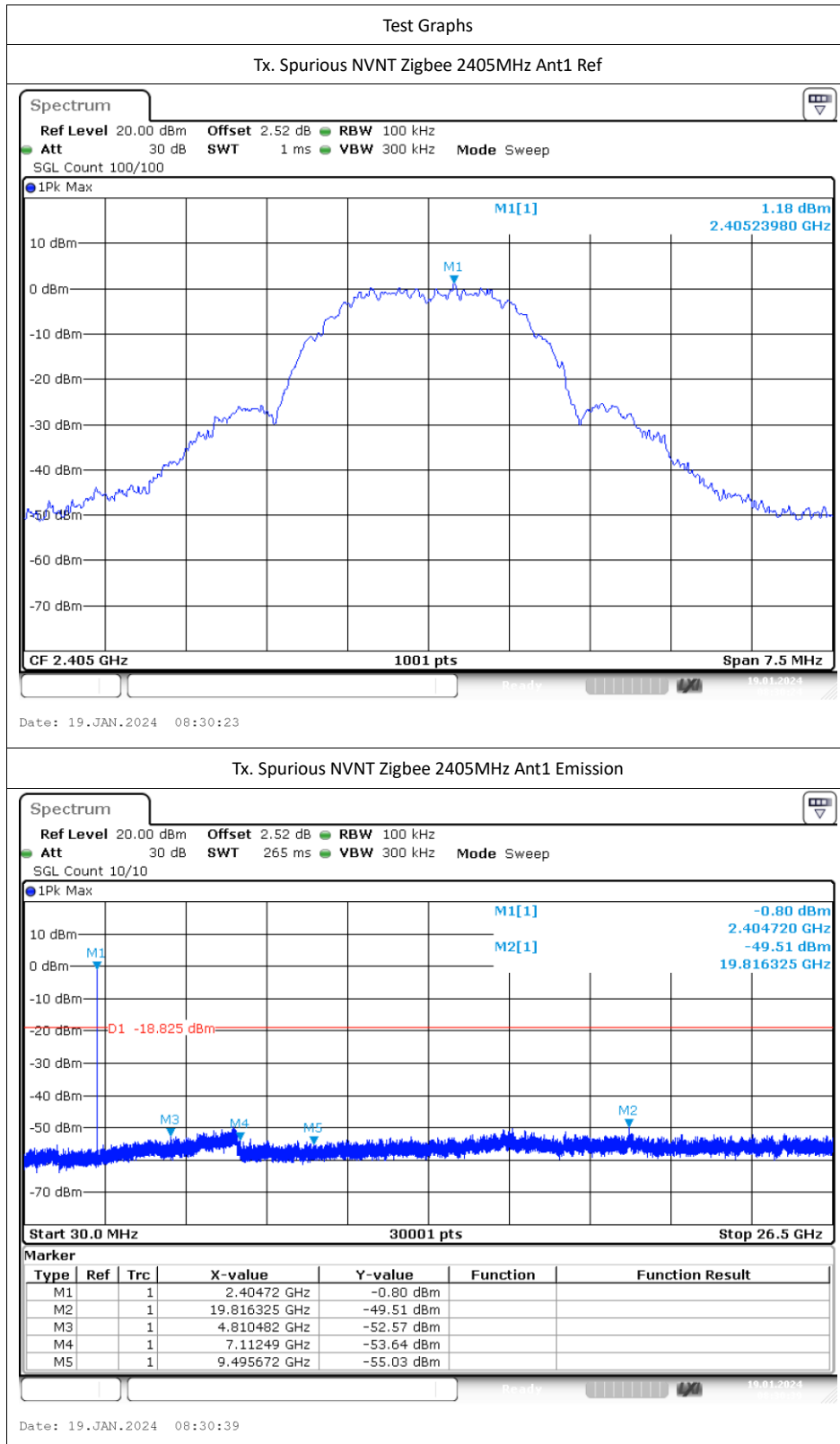
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Zigbee	2405	Ant1	-51.55	-20	Pass
NVNT	Zigbee	2480	Ant1	-48.86	-20	Pass

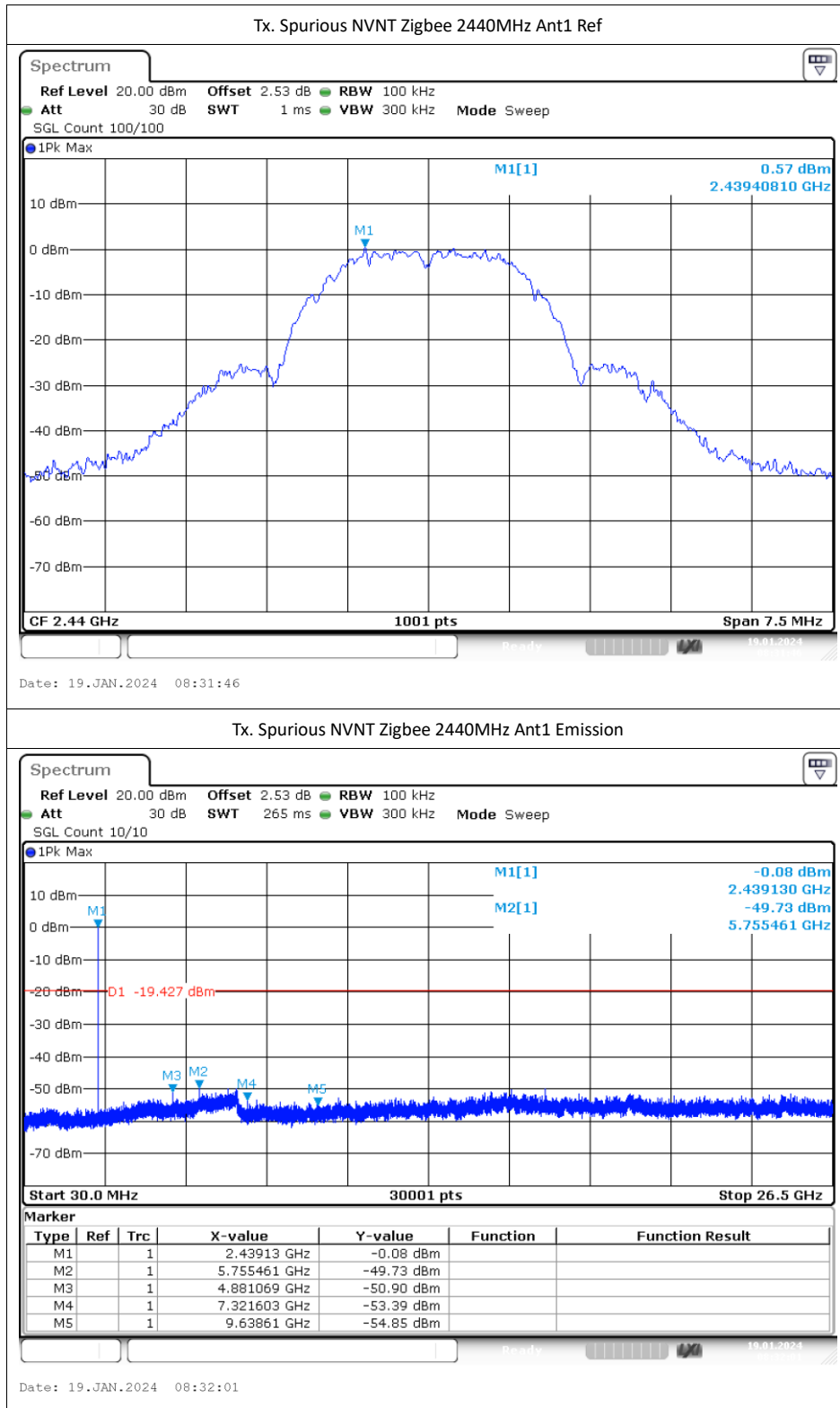


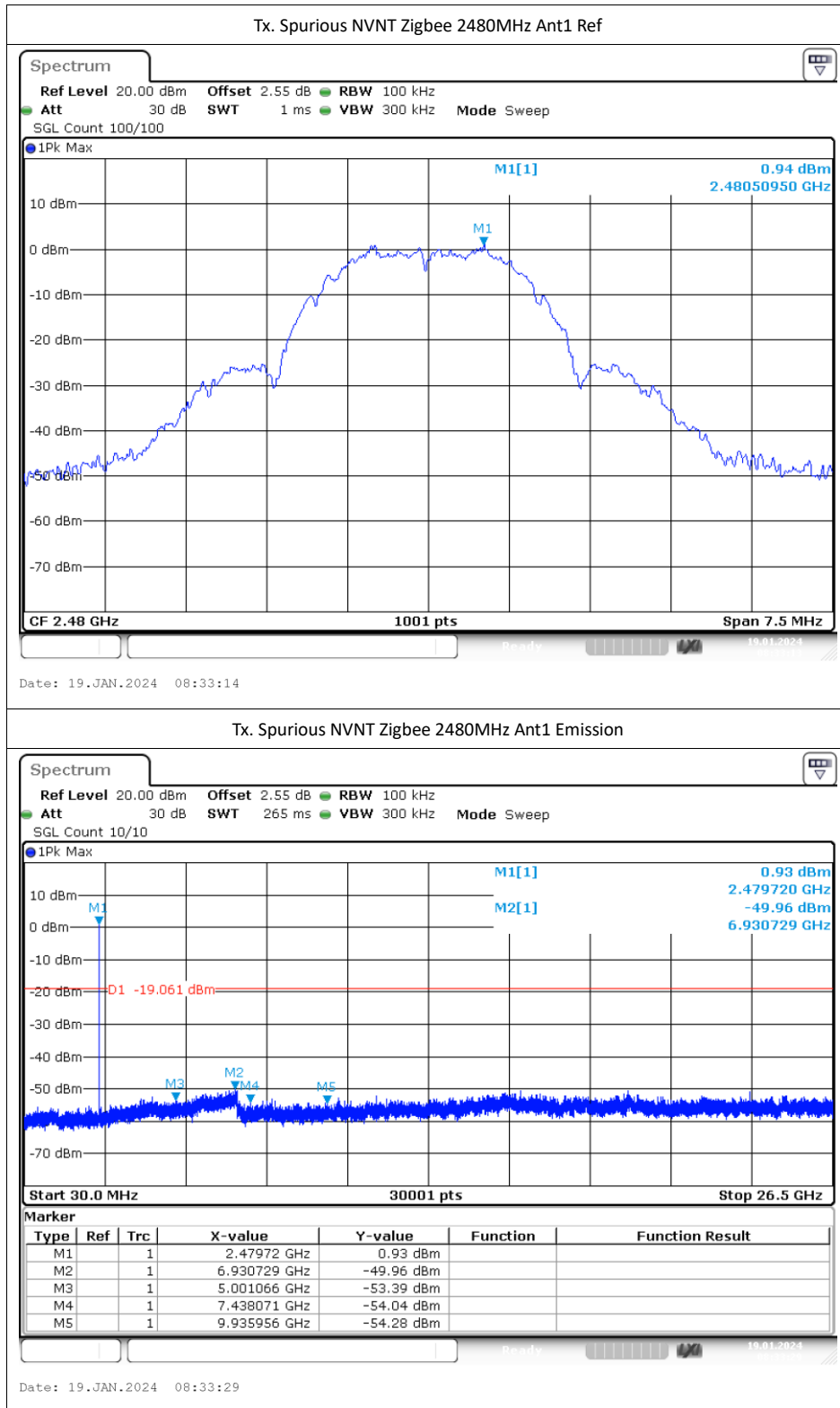


Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Zigbee	2405	Ant1	-50.69	-20	Pass
NVNT	Zigbee	2440	Ant1	-50.3	-20	Pass
NVNT	Zigbee	2480	Ant1	-50.9	-20	Pass





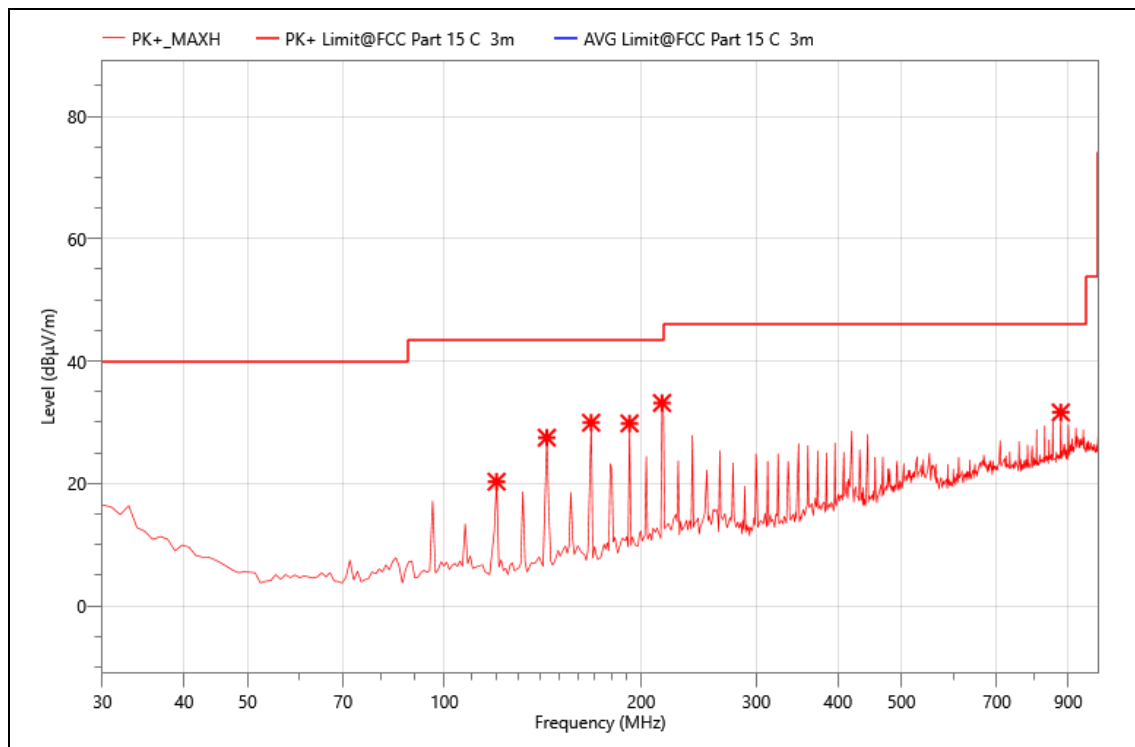


RADIATED TEST RESULTS

The data of the mode (2405MHz) are recorded in the following pages.

The worst result as bellow:

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2405
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa

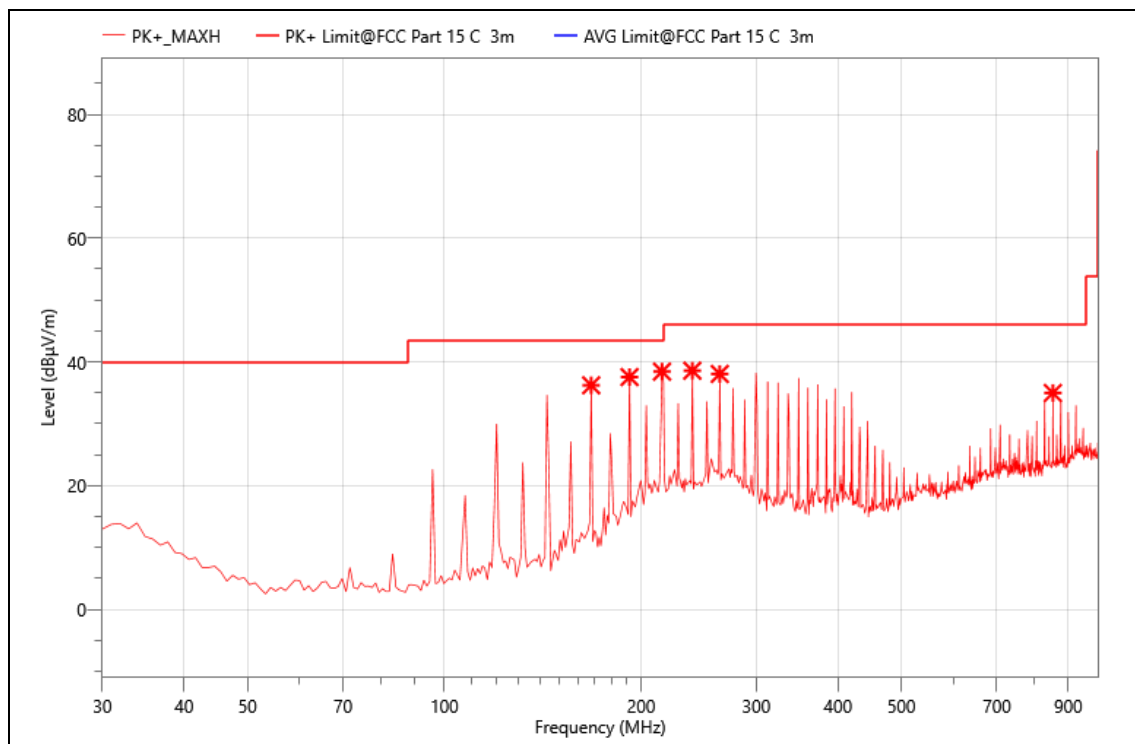


Critical_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	120.210	44.88	-24.59	20.29	43.50	23.21	PK+	V
2	143.490	51.00	-23.52	27.48	43.50	16.02	PK+	V
3	167.740	52.62	-22.7	29.92	43.50	13.58	PK+	V
4	191.990	52.39	-22.57	29.82	43.50	13.68	PK+	V
5	215.270	54.15	-21	33.15	43.50	10.35	PK+	V
6	876.810	37.04	-5.43	31.61	46.00	14.39	PK+	V

Note : [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2405
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



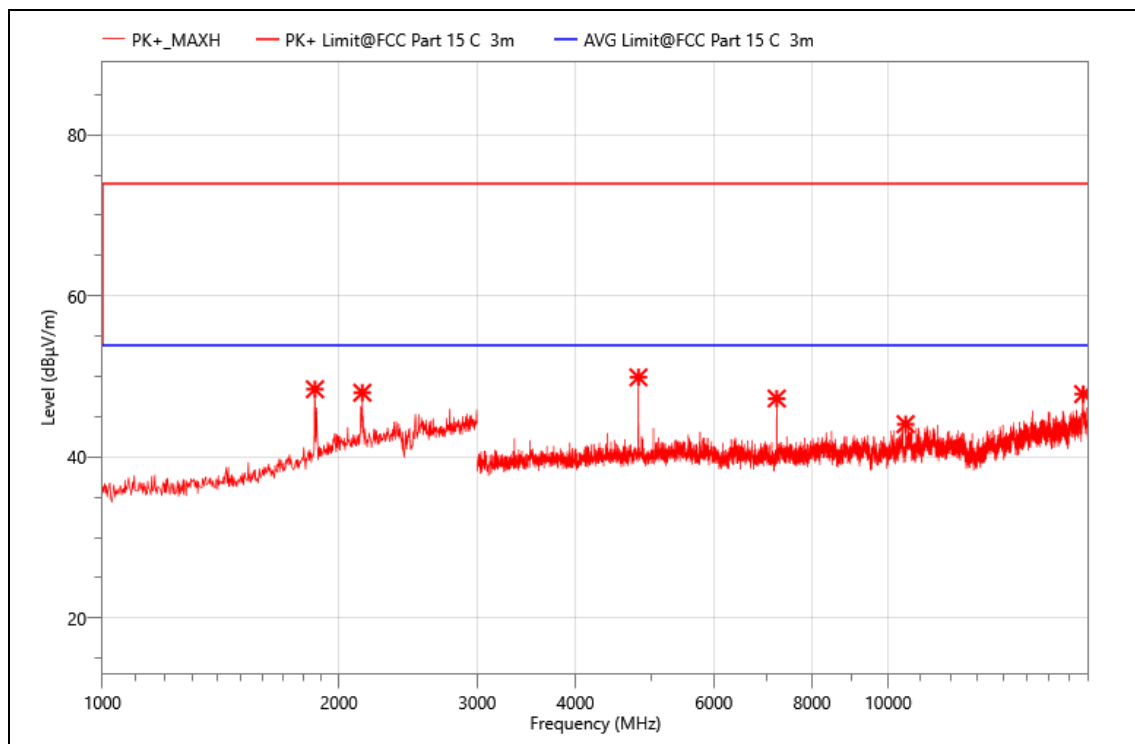
Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	167.740	58.91	-22.7	36.21	43.50	7.29	PK+	H
2	191.990	60.12	-22.57	37.55	43.50	5.95	PK+	H
3	215.270	59.43	-21	38.43	43.50	5.07	PK+	H
4	239.520	58.23	-19.66	38.57	46.00	7.43	PK+	H
5	263.770	56.37	-18.32	38.05	46.00	7.95	PK+	H
6	852.560	40.62	-5.64	34.98	46.00	11.02	PK+	H

Note : [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

Above 1000MHz~10th Harmonics:

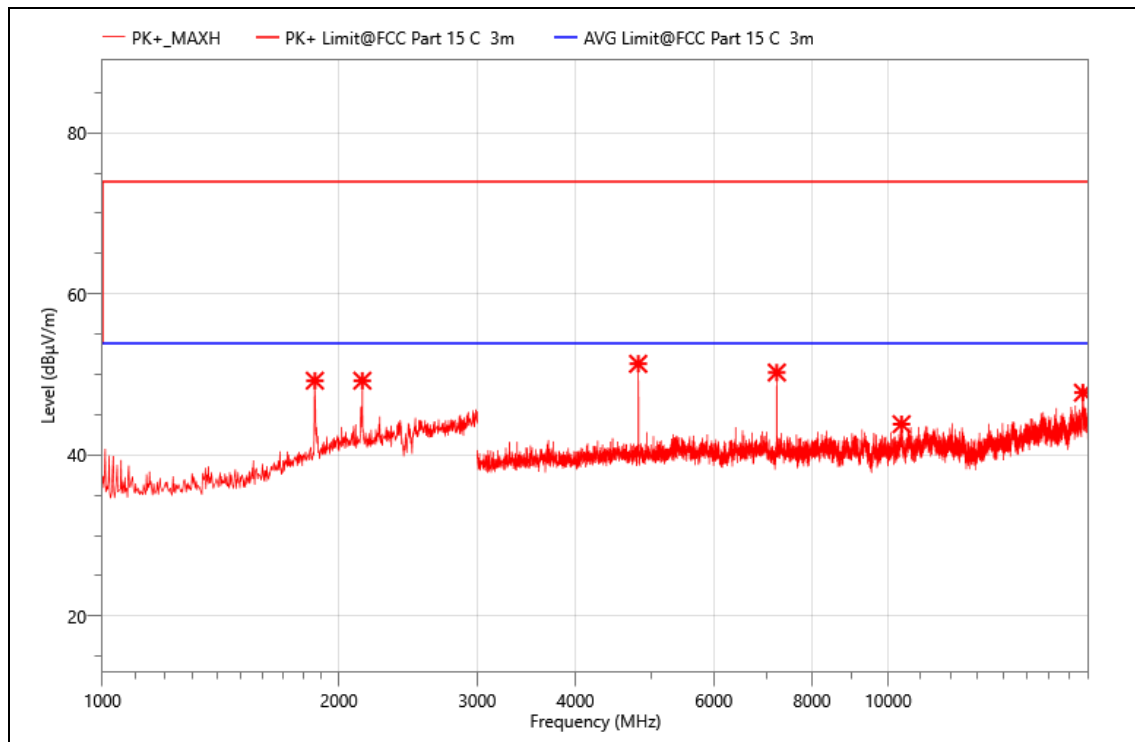
EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2405
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	1864.000	58.81	-10.4	48.41	74.00	25.59	PK+	V
2	2142.000	57.03	-9.05	47.98	74.00	26.02	PK+	V
3	4810.500	61.27	-11.38	49.89	74.00	24.11	PK+	V
4	7213.500	55.26	-8	47.26	74.00	26.74	PK+	V
5	10525.500	49.55	-5.47	44.08	74.00	29.92	PK+	V
6	17715.000	47.95	-0.14	47.81	74.00	26.19	PK+	V

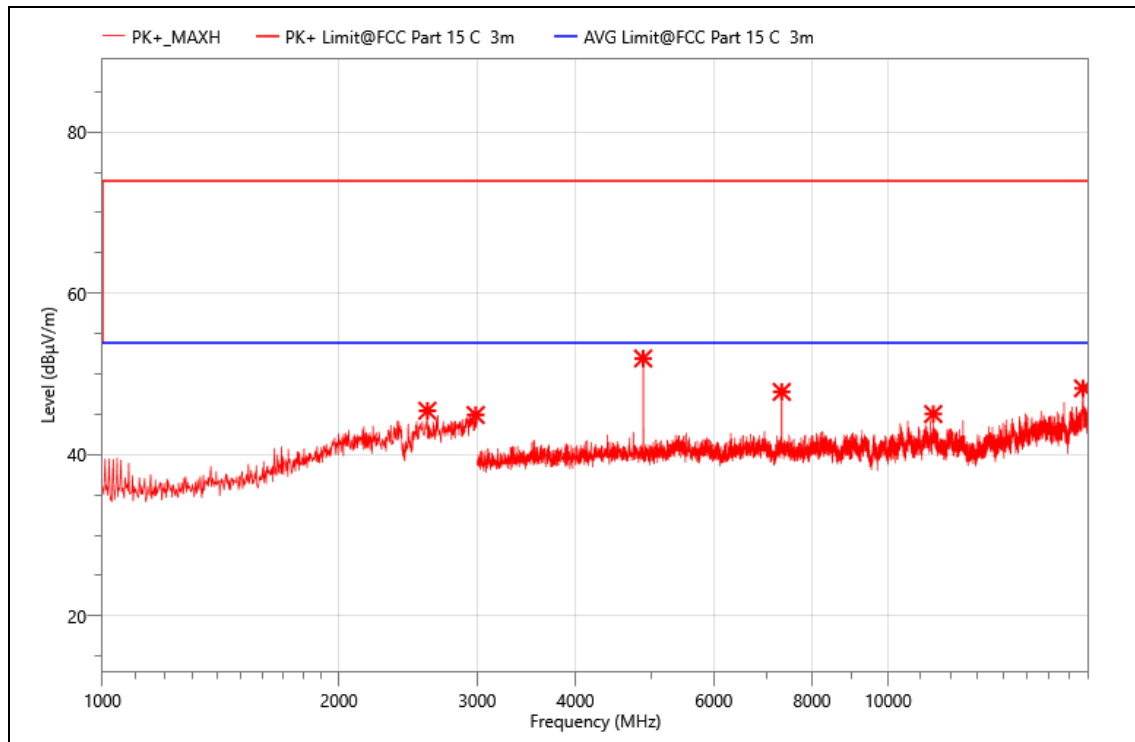
EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2405
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	1864.000	59.63	-10.4	49.23	74.00	24.77	PK+	H
2	2142.000	58.28	-9.05	49.23	74.00	24.77	PK+	H
3	4807.500	62.68	-11.36	51.32	74.00	22.68	PK+	H
4	7216.500	58.26	-8.02	50.24	74.00	23.76	PK+	H
5	10401.000	49.38	-5.55	43.83	74.00	30.17	PK+	H
6	17700.000	47.56	0.18	47.74	74.00	26.26	PK+	H

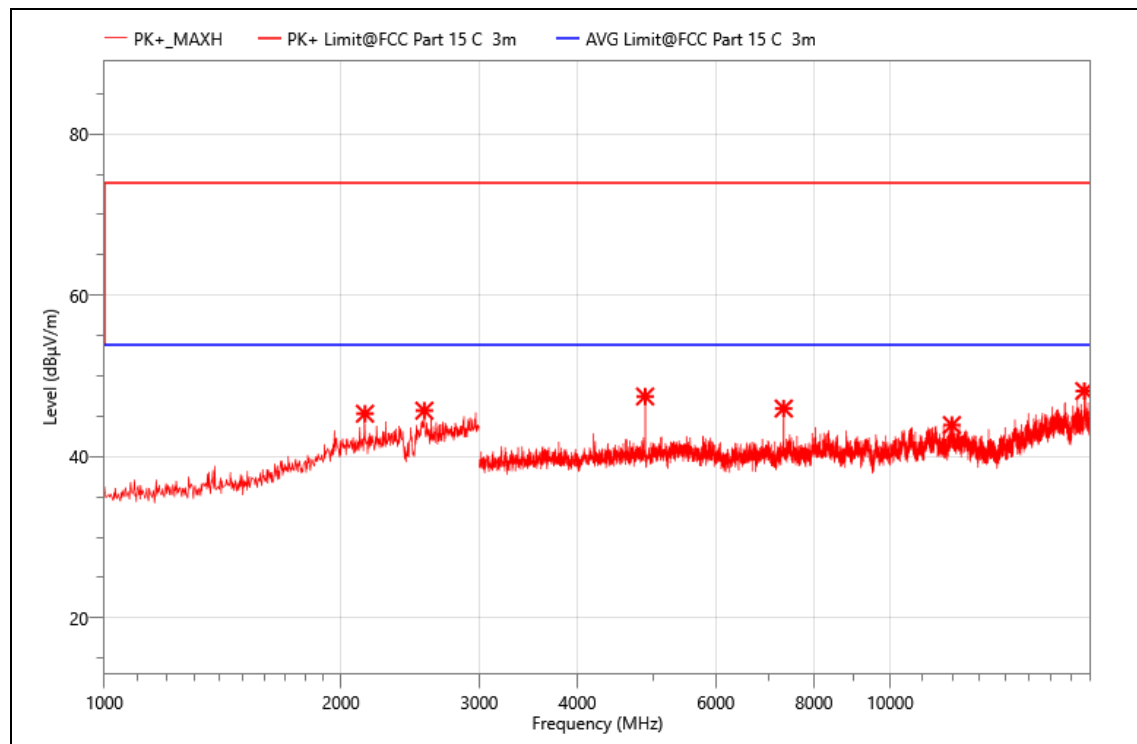
EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2440
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2592.000	53.55	-8.11	45.44	74.00	28.56	PK+	H
2	2986.000	51.88	-6.97	44.91	74.00	29.09	PK+	H
3	4878.000	63.06	-11.14	51.92	74.00	22.08	PK+	H
4	7321.500	55.69	-7.91	47.78	74.00	26.22	PK+	H
5	11415.000	49.54	-4.51	45.03	74.00	28.97	PK+	H
6	17704.500	48.14	0.08	48.22	74.00	25.78	PK+	H

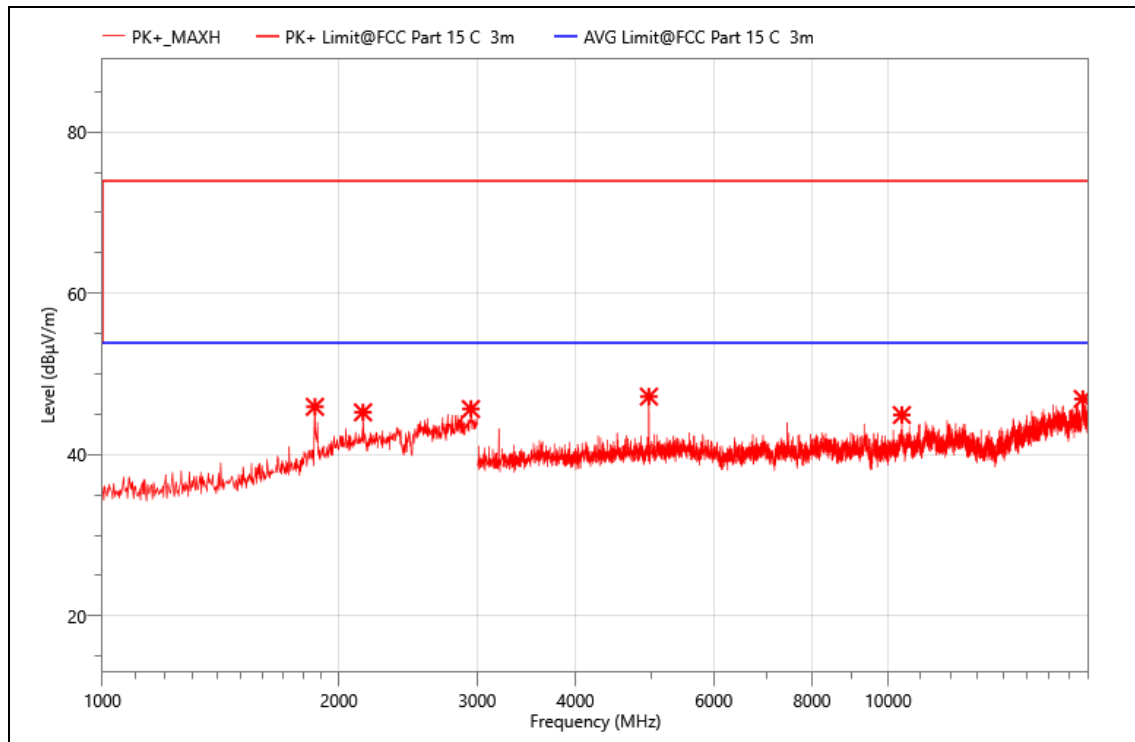
EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2440
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2146.000	54.37	-9.05	45.32	74.00	28.68	PK+	V
2	2554.000	53.77	-8.07	45.70	74.00	28.30	PK+	V
3	4878.000	58.60	-11.14	47.46	74.00	26.54	PK+	V
4	7321.500	53.87	-7.91	45.96	74.00	28.04	PK+	V
5	11985.000	48.22	-4.31	43.91	74.00	30.09	PK+	V
6	17668.500	47.89	0.24	48.13	74.00	25.87	PK+	V

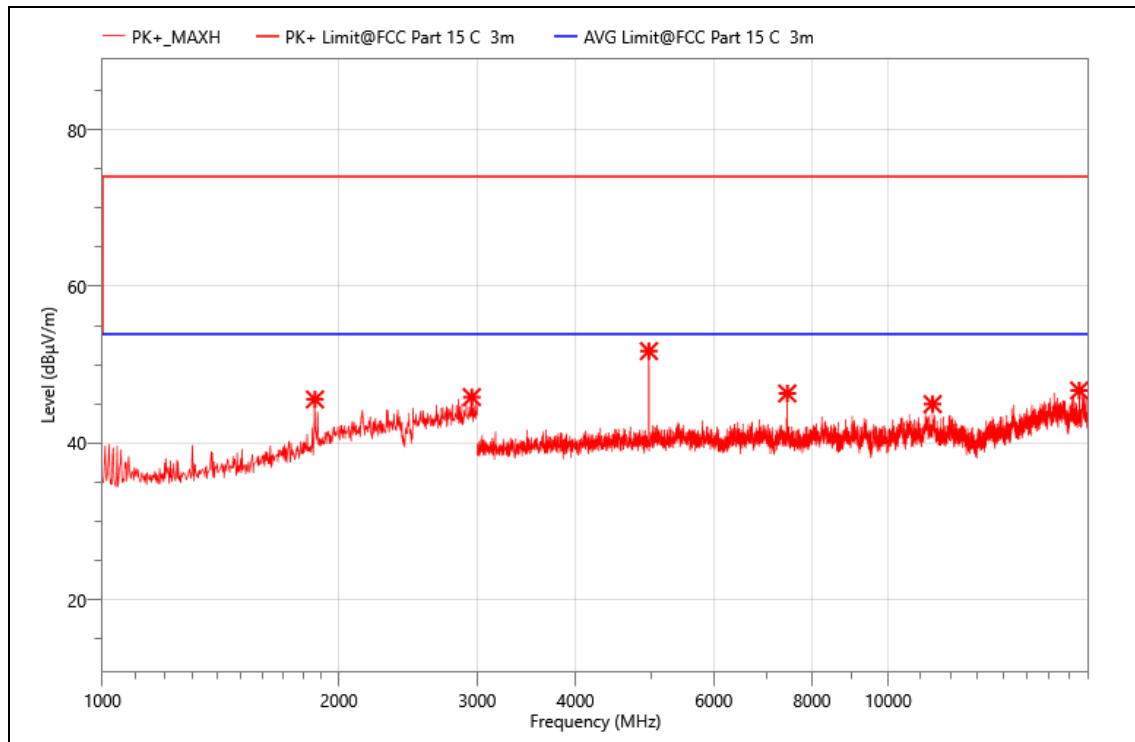
EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2480
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	1864.000	56.33	-10.4	45.93	74.00	28.07	PK+	V
2	2146.000	54.29	-9.05	45.24	74.00	28.76	PK+	V
3	2944.000	53.11	-7.46	45.65	74.00	28.35	PK+	V
4	4960.500	58.53	-11.34	47.19	74.00	26.81	PK+	V
5	10410.000	50.43	-5.52	44.91	74.00	29.09	PK+	V
6	17691.000	46.67	0.23	46.90	74.00	27.10	PK+	V

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2480
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	1864.000	55.97	-10.4	45.57	74.00	28.43	PK+	H
2	2952.000	53.28	-7.42	45.86	74.00	28.14	PK+	H
3	4960.500	63.08	-11.34	51.74	74.00	22.26	PK+	H
4	7441.500	54.32	-7.98	46.34	74.00	27.66	PK+	H
5	11392.500	49.21	-4.24	44.97	74.00	29.03	PK+	H
6	17506.500	47.30	-0.59	46.71	74.00	27.29	PK+	H

Other harmonics emissions are lower than 20dB below the allowable limit.

Note: (1) All Readings are Peak Value.

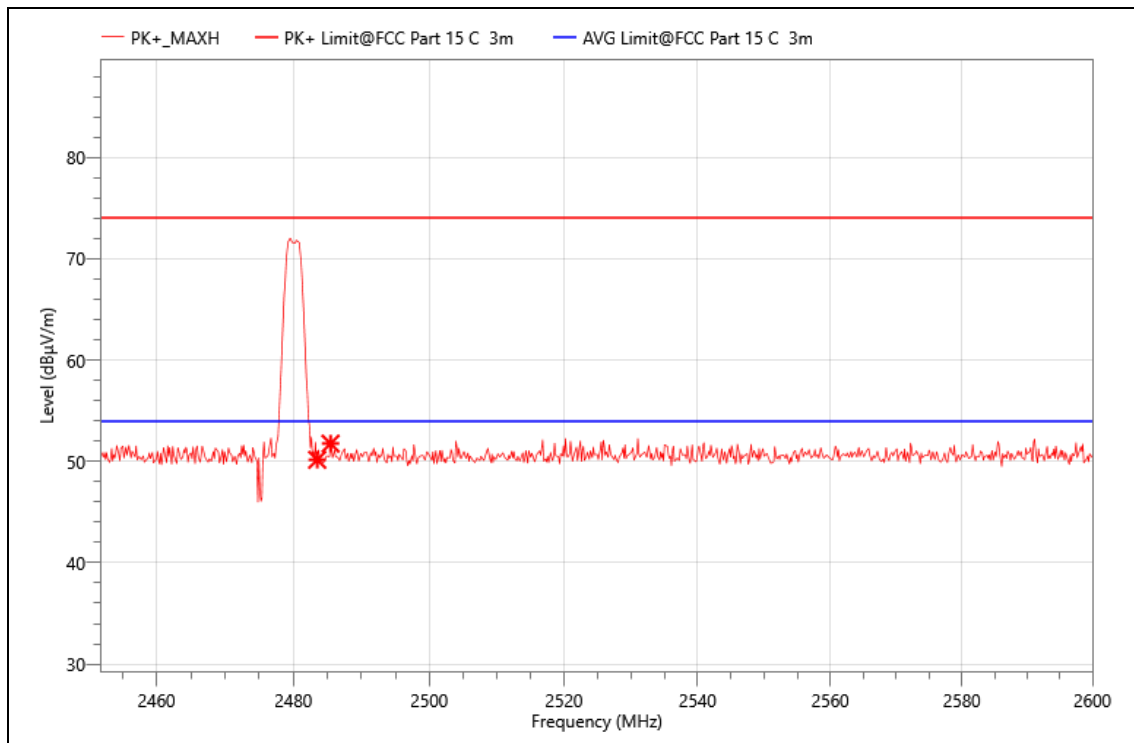
(2) [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

(3)The average measurement was not performed when the peak measured data under the limit of average detection.

(4) Measuring frequencies from 1GHz to 25GHz.

Band edge:

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2480
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa

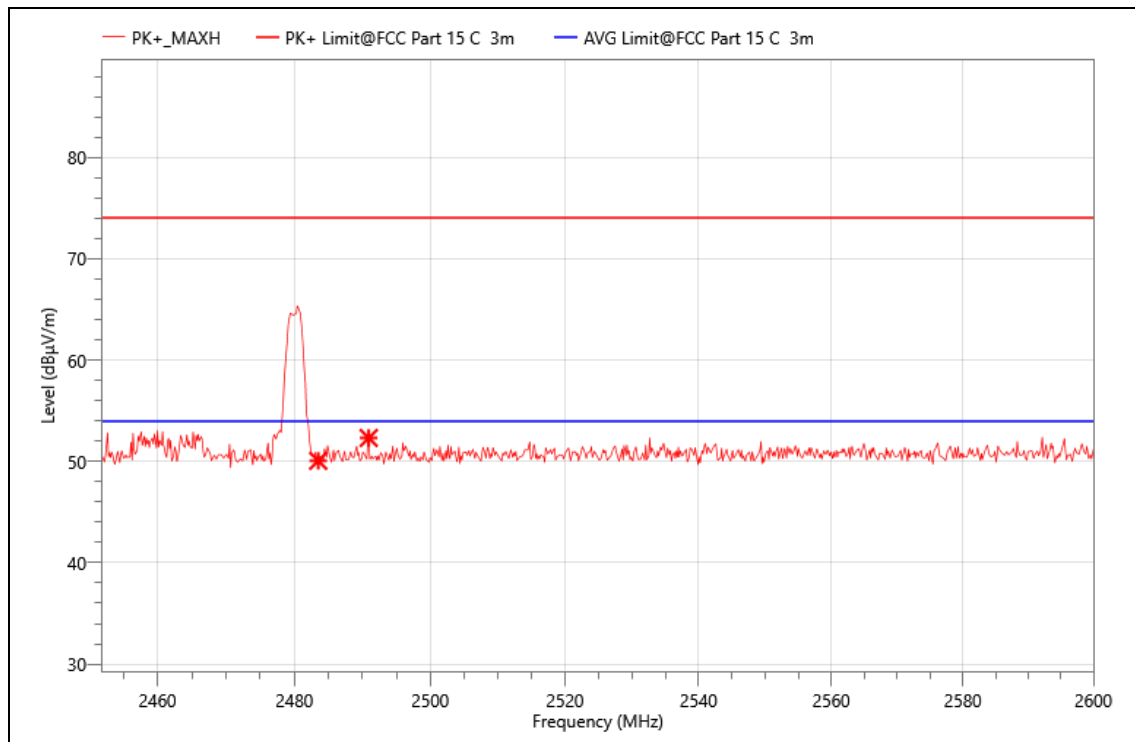


Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2483.500	24.45	25.71	50.16	74.00	23.84	PK+	H
2	2485.448	26.04	25.72	51.76	74.00	22.24	PK+	H

Note : [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2480
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa

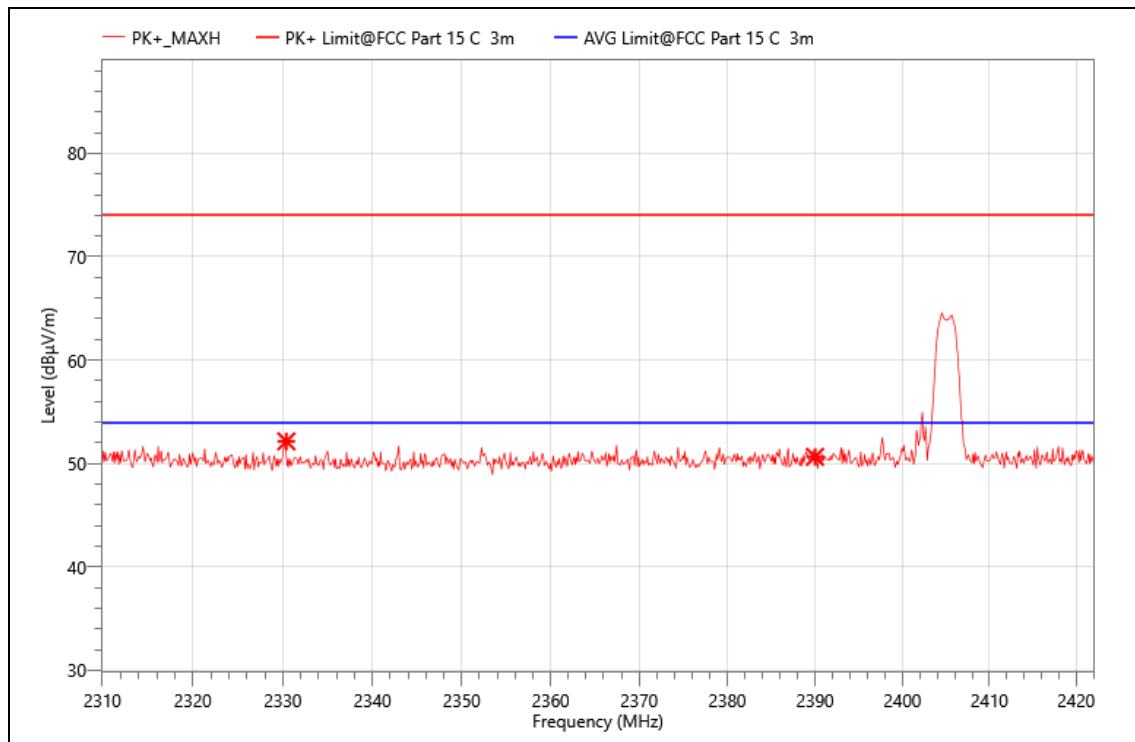


Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2483.500	24.35	25.71	50.06	74.00	23.94	PK+	V
2	2490.924	26.59	25.73	52.32	74.00	21.68	PK+	V

Note : [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2405
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa

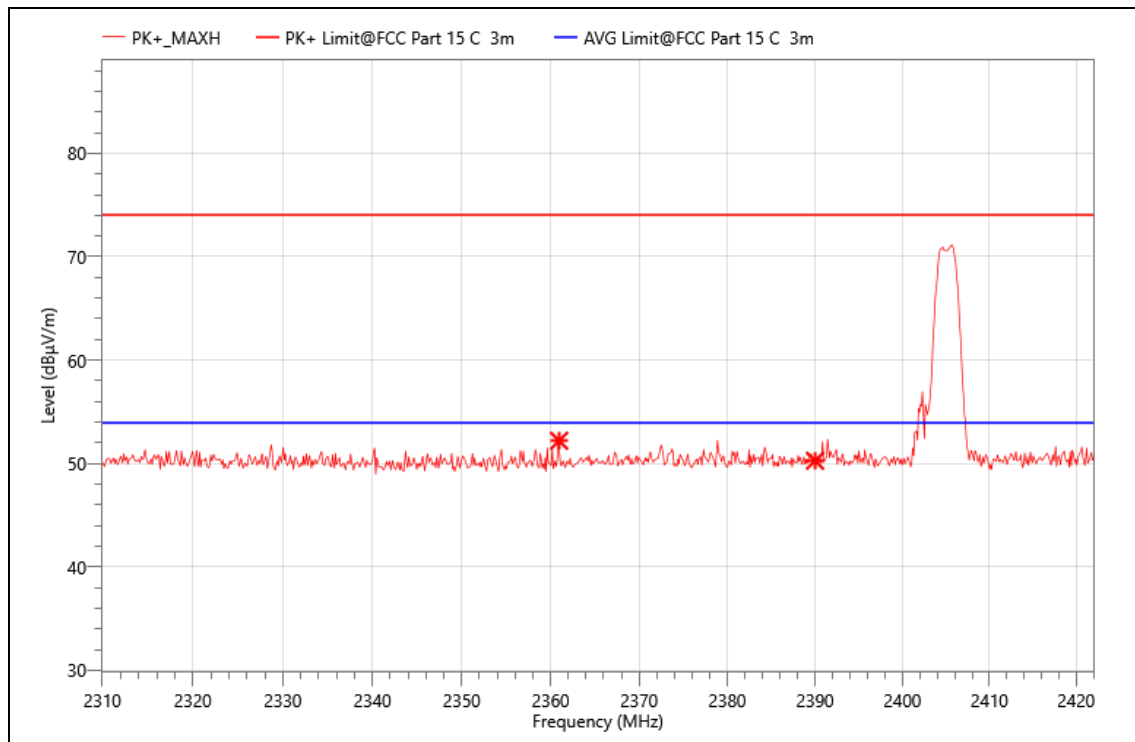


Critical_Freqs

No.	Freq. (MHz)	Reading (dBμV)	Corr. (dB)	Meas. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Det.	Pol.
1	2330.384	26.43	25.72	52.15	74.00	21.85	PK+	V
2	2390.000	24.69	25.96	50.65	74.00	23.35	PK+	V

Note : [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

EUT :	Water Sensor
MN:	HS2WL-EF
Mode:	Zigbee-2405
Power:	DC 3V
TE:	Berny
Date	2024/1/17
T/A/P	23.6°C/52.1%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2360.960	26.47	25.74	52.21	74.00	21.79	PK+	H
2	2390.000	24.31	25.96	50.27	74.00	23.73	PK+	H

Note : [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]