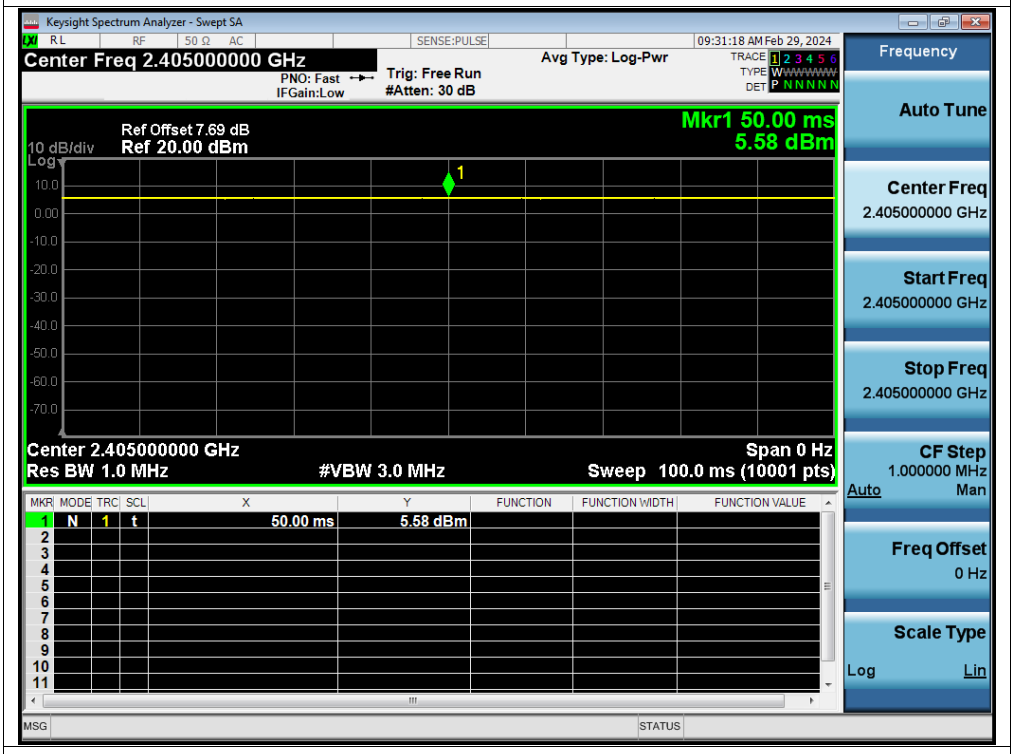
Appendix A

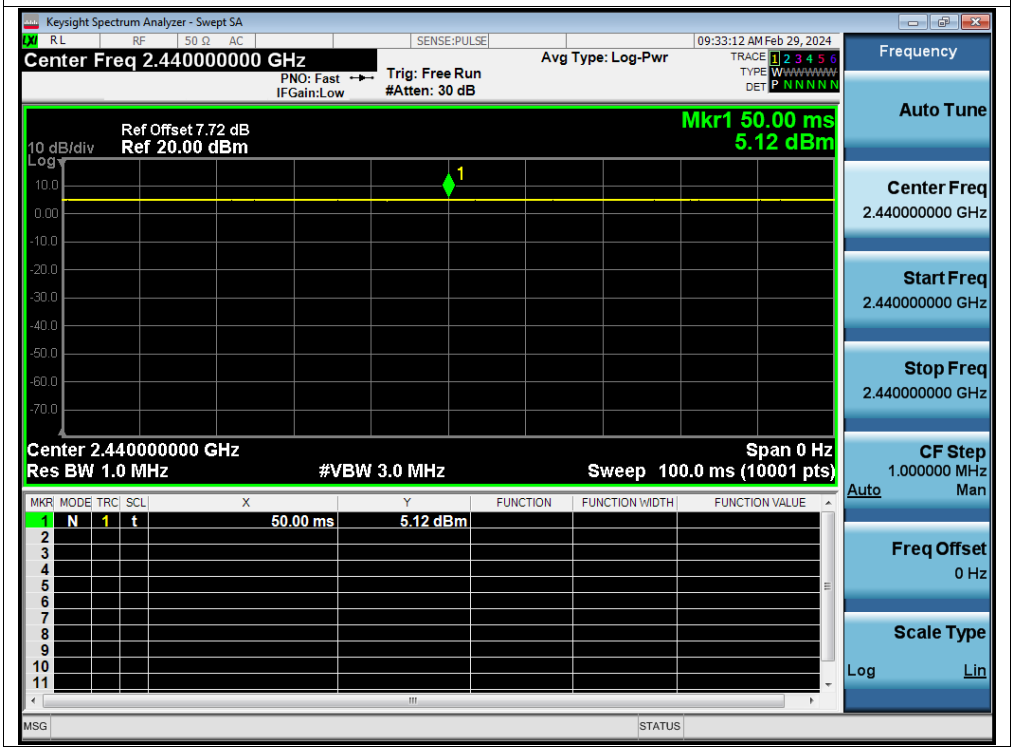
Duty Cycle

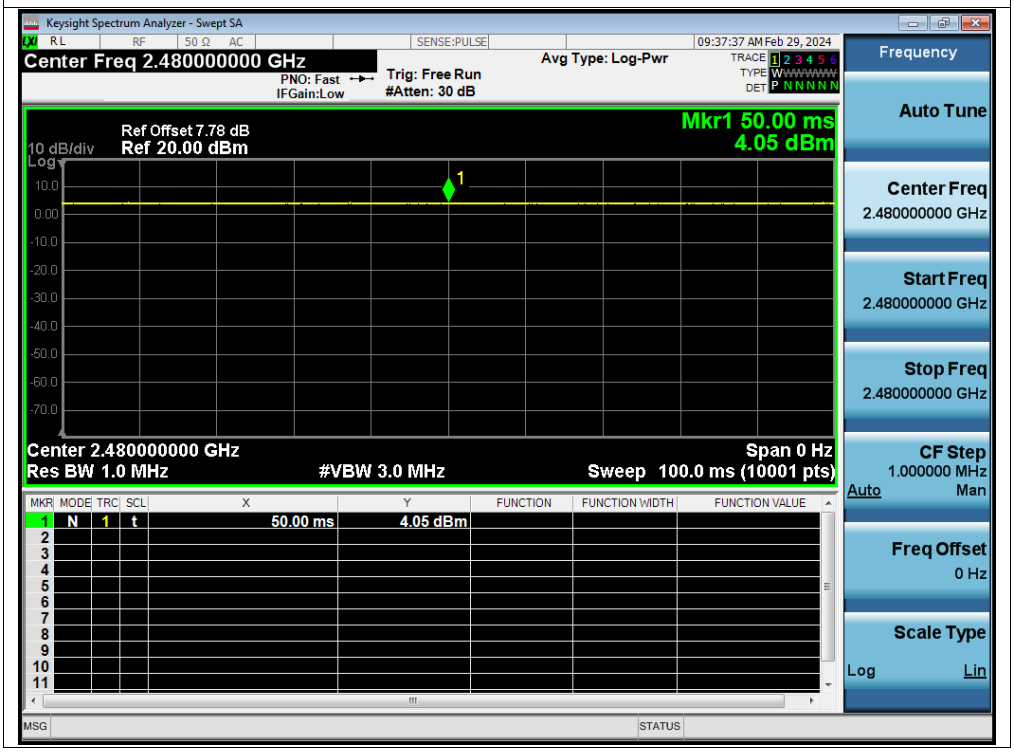
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	Zigbee	2405	Ant1	100	0	0
NVNT	Zigbee	2440	Ant1	100	0	0
NVNT	Zigbee	2480	Ant1	100	0	0

Test Graphs
Duty Cycle NVNT Zigbee 2405MHz Ant1



Duty Cycle NVNT Zigbee 2440MHz Ant1

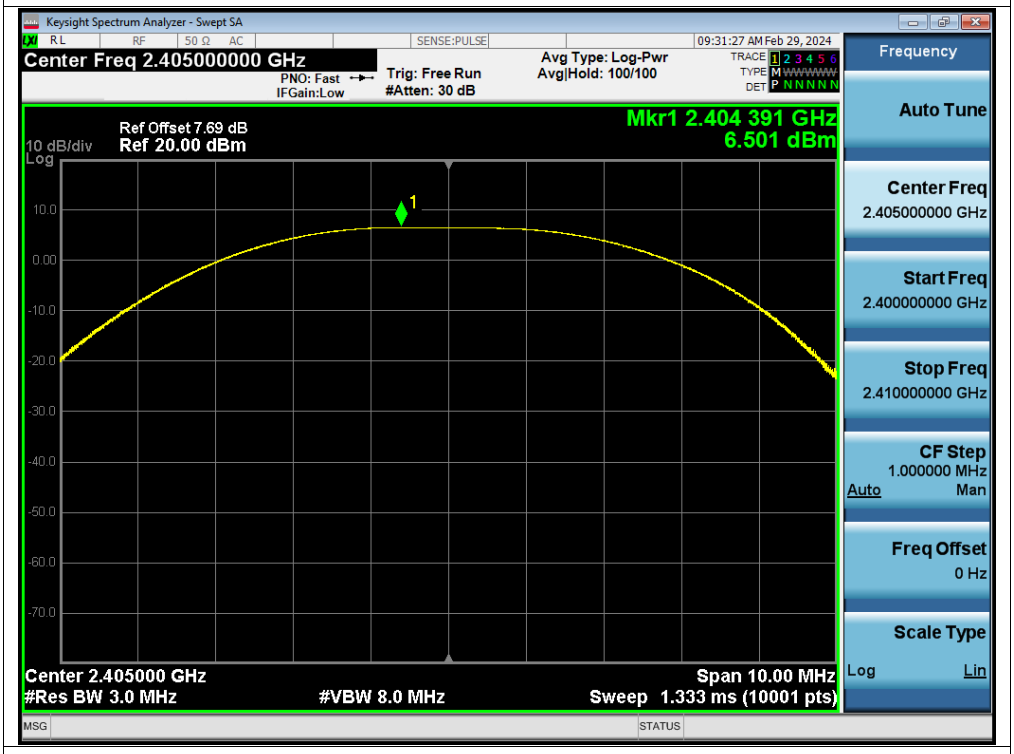


Duty Cycle NVNT Zigbee 2480MHz Ant1


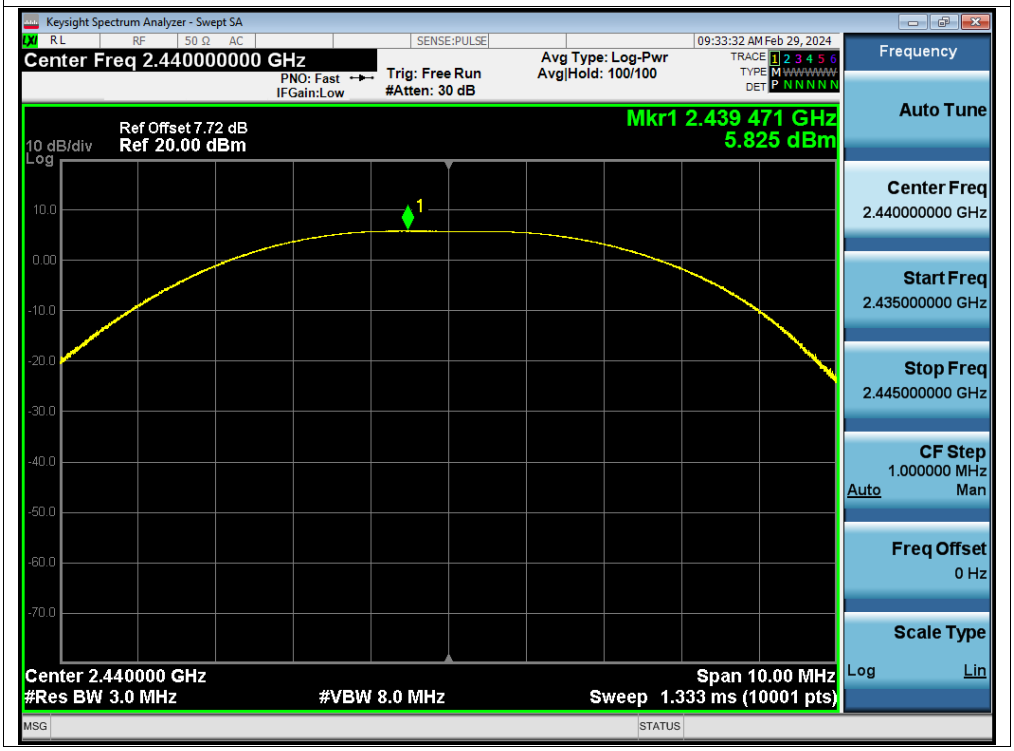
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	Zigbee	2405	Ant1	6.5	0	6.5	30	Pass
NVNT	Zigbee	2440	Ant1	5.83	0	5.83	30	Pass
NVNT	Zigbee	2480	Ant1	4.87	0	4.87	30	Pass

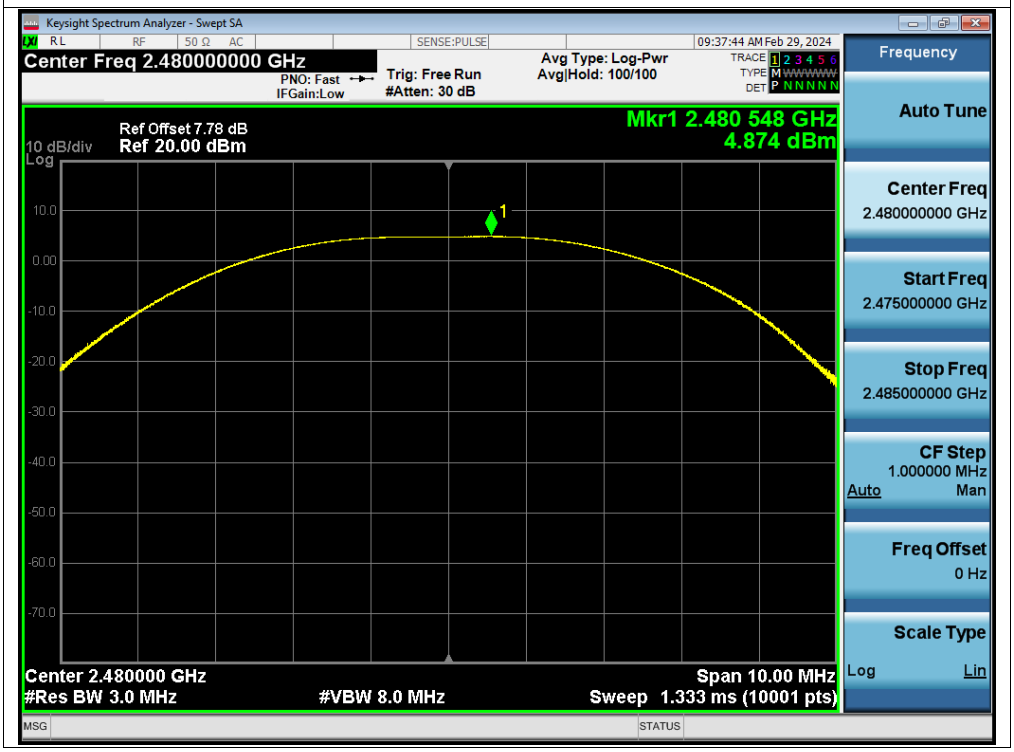
Test Graphs
Power NVNT Zigbee 2405MHz Ant1



Power NVNT Zigbee 2440MHz Ant1



Power NVNT Zigbee 2480MHz Ant1



-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	1.62	0.5	Pass
NVNT	Zigbee	2480	Ant1	1.61	0.5	Pass

Test Graphs
-6dB Bandwidth NVNT Zigbee 2405MHz Ant1

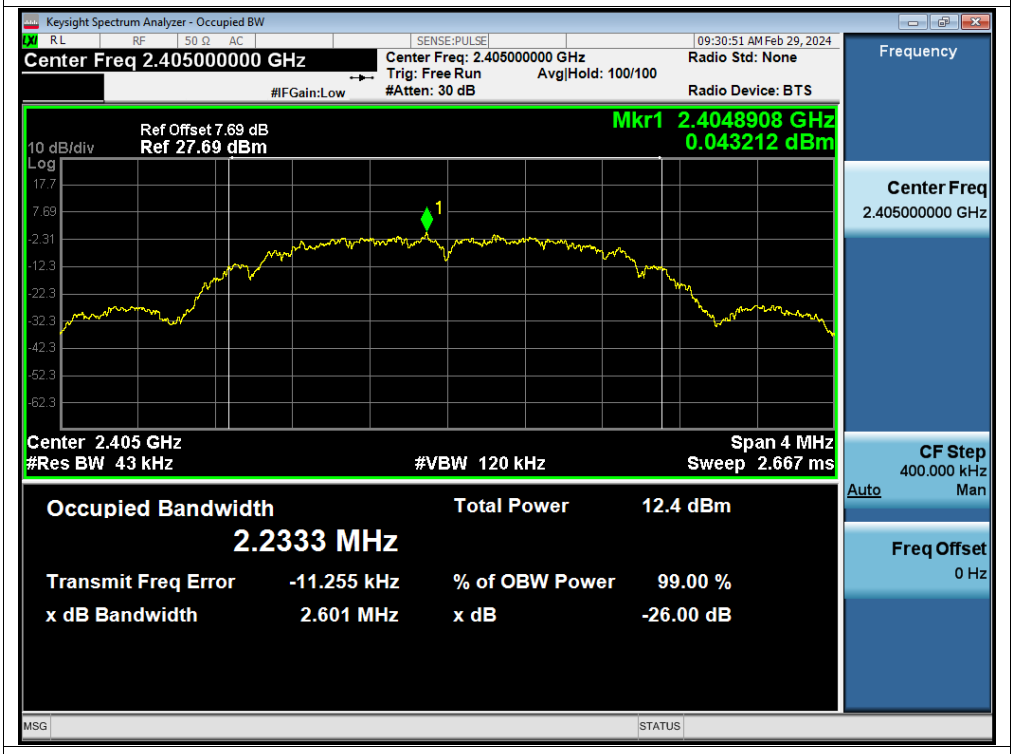
-6dB Bandwidth NVNT Zigbee 2440MHz Ant1

-6dB Bandwidth NVNT Zigbee 2480MHz Ant1

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	Zigbee	2405	Ant1	2.233
NVNT	Zigbee	2440	Ant1	2.23
NVNT	Zigbee	2480	Ant1	2.234

Test Graphs
OBW NVNT Zigbee 2405MHz Ant1



OBW NVNT Zigbee 2440MHz Ant1

OBW NVNT Zigbee 2480MHz Ant1

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	-9.2	0	-9.2	8	Pass
NVNT	Zigbee	2440	Ant1	-9.47	0	-9.47	8	Pass
NVNT	Zigbee	2480	Ant1	-10.15	0	-10.15	8	Pass

Test Graphs
PSD NVNT Zigbee 2405MHz Ant1

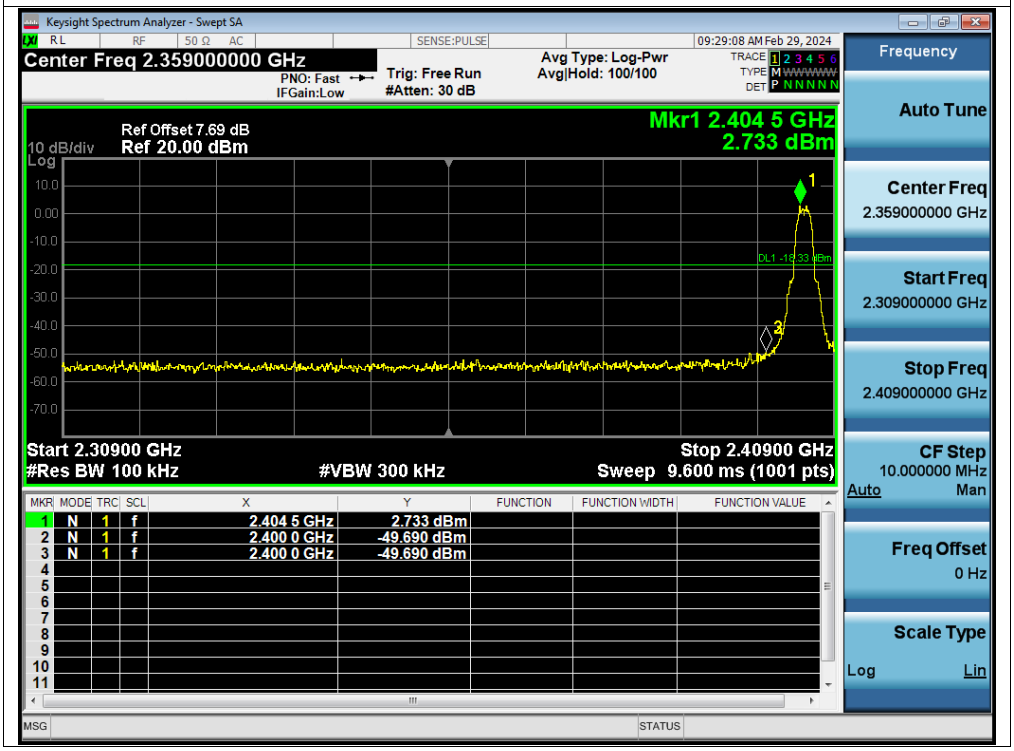
PSD NVNT Zigbee 2440MHz Ant1

PSD NVNT Zigbee 2480MHz Ant1

Band Edge

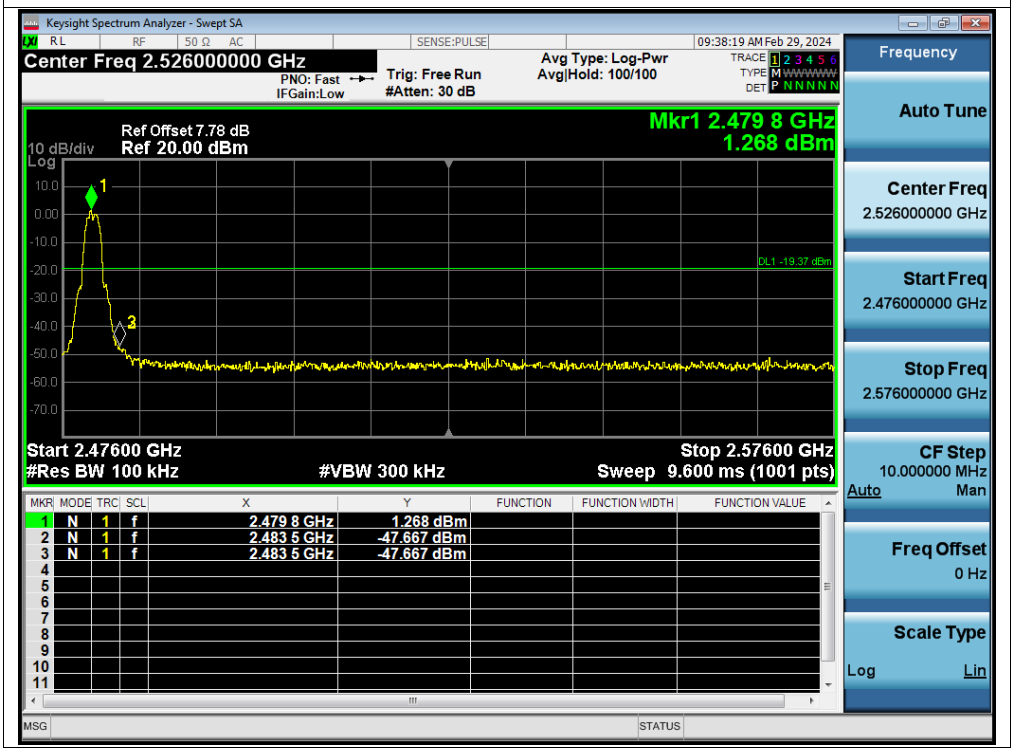
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Zigbee	2405	Ant1	-51.365	-20	Pass
NVNT	Zigbee	2480	Ant1	-48.303	-20	Pass

Test Graphs
Band Edge NVNT Zigbee 2405MHz Ant1 Ref

Band Edge NVNT Zigbee 2405MHz Ant1 Emission


Band Edge NVNT Zigbee 2480MHz Ant1 Ref

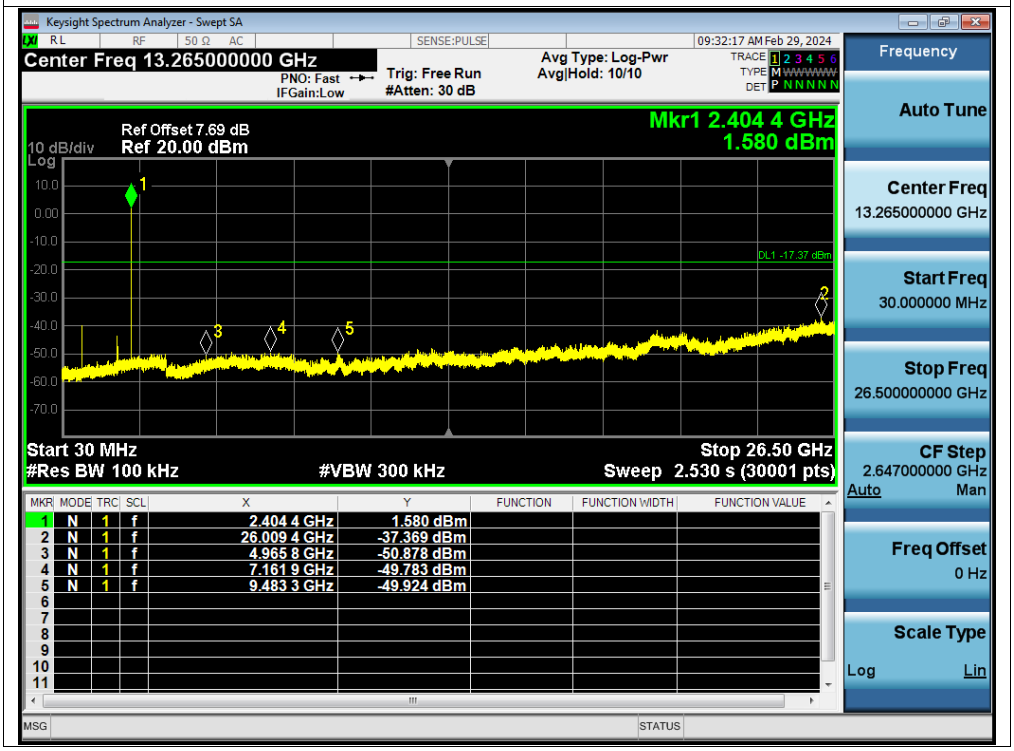
Band Edge NVNT Zigbee 2480MHz Ant1 Emission



Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Zigbee	2405	Ant1	-40	-20	Pass
NVNT	Zigbee	2440	Ant1	-38.84	-20	Pass
NVNT	Zigbee	2480	Ant1	-37.7	-20	Pass

Test Graphs
Tx. Spurious NVNT Zigbee 2405MHz Ant1 Ref

Tx. Spurious NVNT Zigbee 2405MHz Ant1 Emission


Tx. Spurious NVNT Zigbee 2440MHz Ant1 Ref

Tx. Spurious NVNT Zigbee 2440MHz Ant1 Emission

Tx. Spurious NVNT Zigbee 2480MHz Ant1 Ref

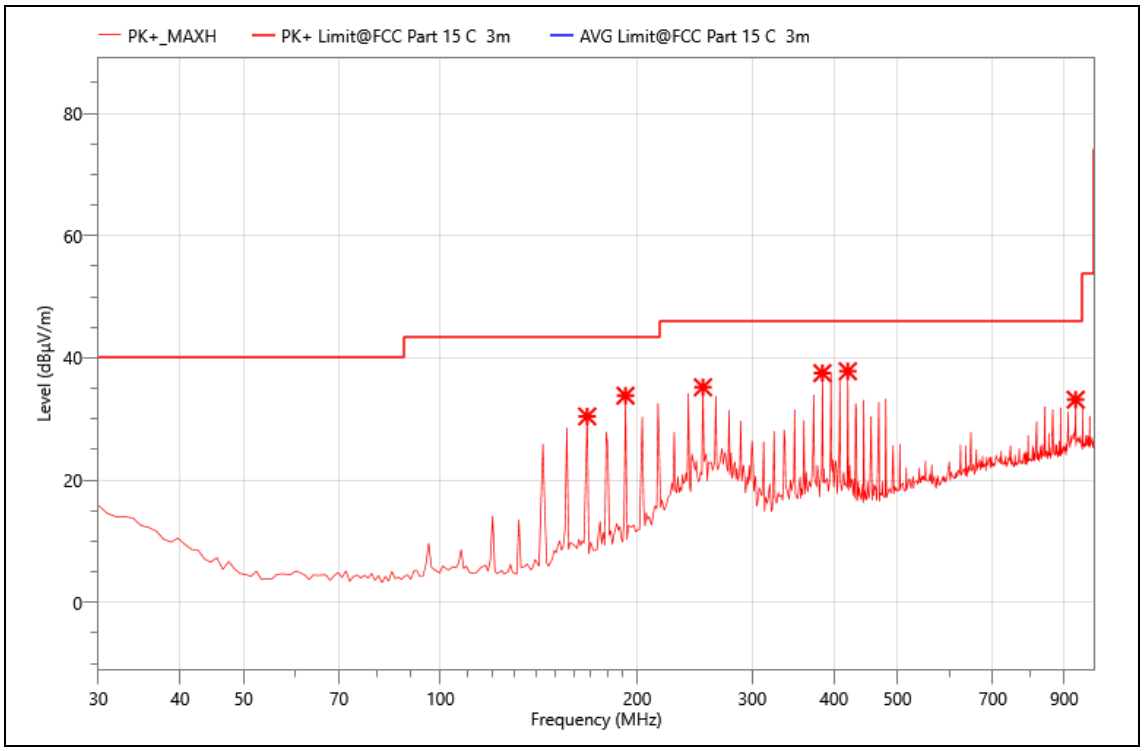
Tx. Spurious NVNT Zigbee 2480MHz Ant1 Emission

RADIATED TEST RESULTS

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

The worst result as bellow:

EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2405
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa

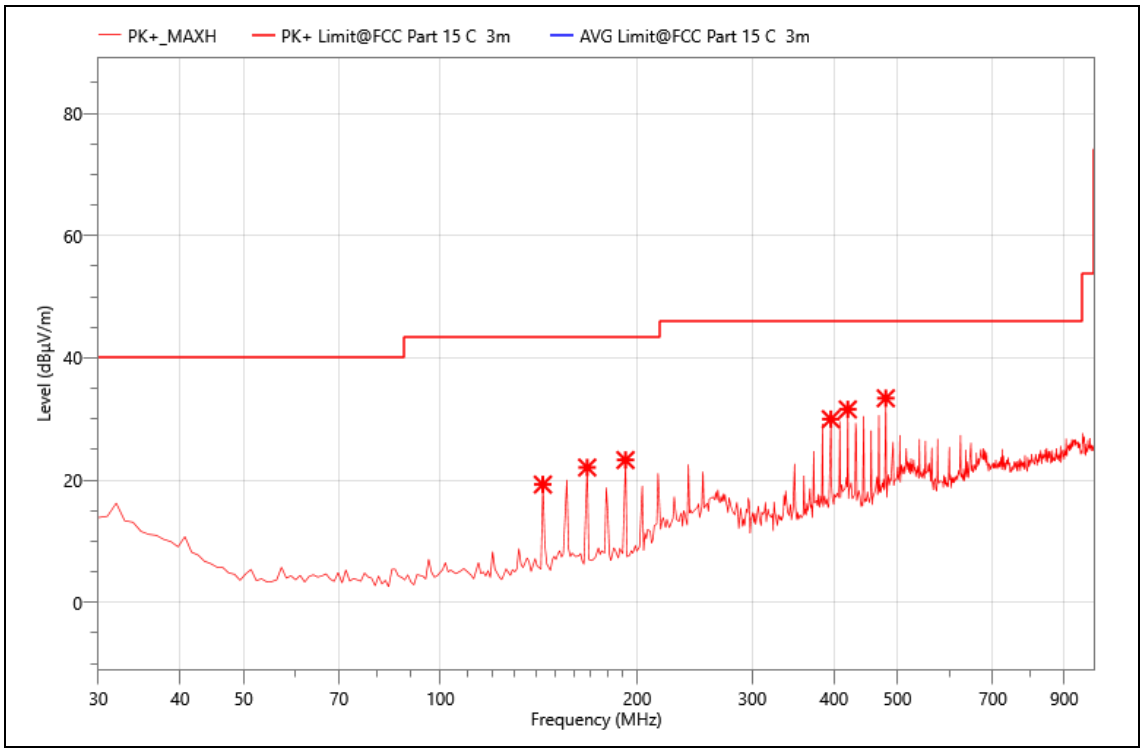


Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	167.740	53.13	-22.7	30.43	43.50	13.07	PK+	H
2	191.990	56.39	-22.57	33.82	43.50	9.68	PK+	H
3	252.130	54.19	-18.99	35.20	46.00	10.80	PK+	H
4	384.050	52.19	-14.68	37.51	46.00	8.49	PK+	H
5	419.940	51.71	-13.89	37.82	46.00	8.18	PK+	H
6	936.950	36.34	-3.17	33.17	46.00	12.83	PK+	H

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

EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2405
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



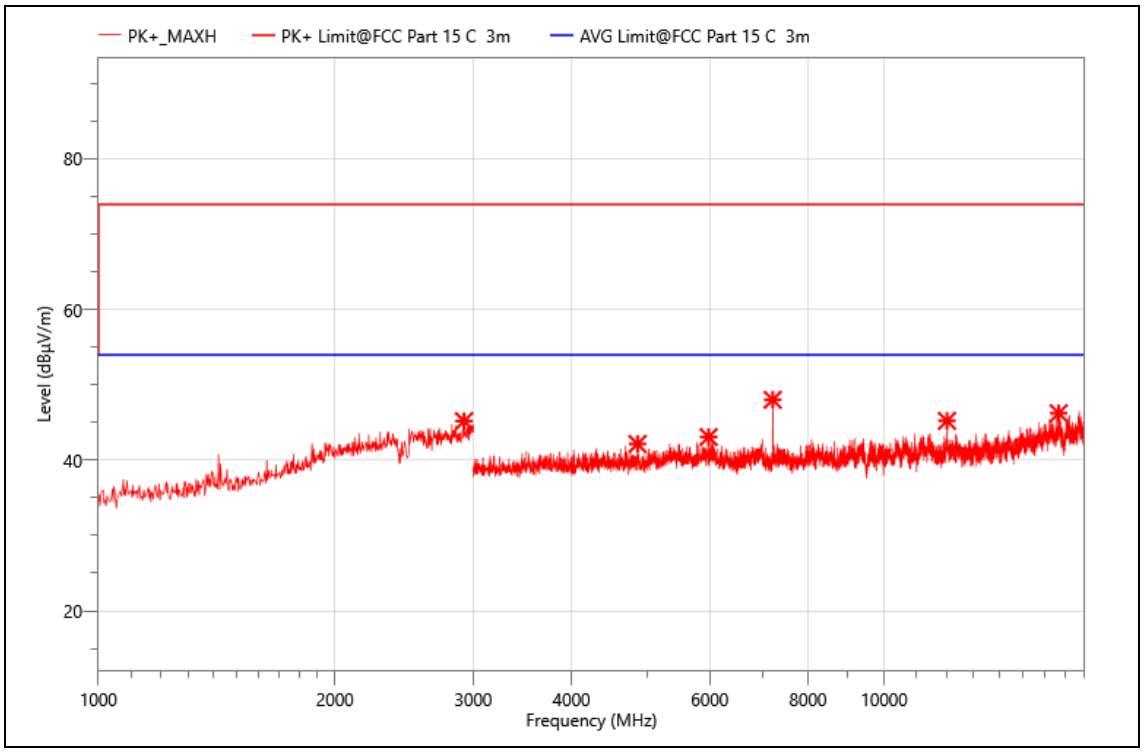
Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	143.490	42.81	-23.52	19.29	43.50	24.21	PK+	V
2	167.740	44.78	-22.7	22.08	43.50	21.42	PK+	V
3	191.990	45.87	-22.57	23.30	43.50	20.20	PK+	V
4	395.690	44.12	-14.14	29.98	46.00	16.02	PK+	V
5	419.940	45.47	-13.89	31.58	46.00	14.42	PK+	V
6	480.080	46.41	-13.01	33.40	46.00	12.60	PK+	V

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

Above 1000MHz~10th Harmonics:

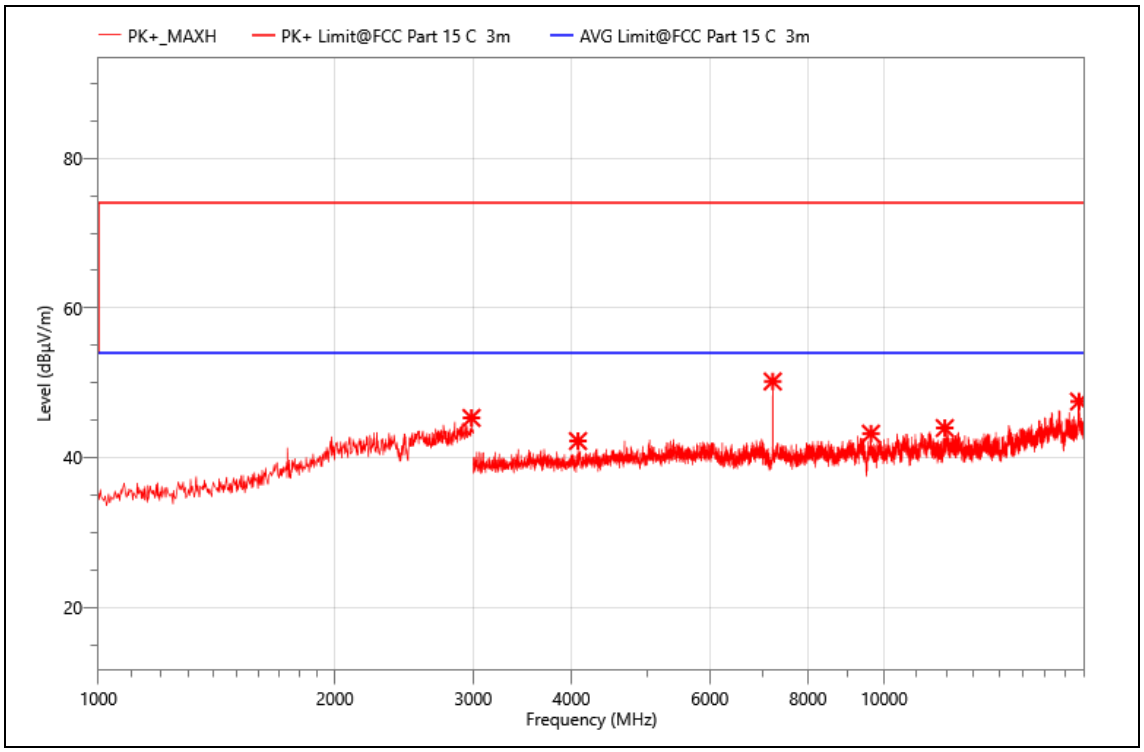
EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2405
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2920.000	52.80	-7.61	45.19	74.00	28.81	PK+	V
2	4854.000	53.39	-11.23	42.16	74.00	31.84	PK+	V
3	5979.000	52.06	-8.98	43.08	74.00	30.92	PK+	V
4	7213.500	56.02	-8	48.02	74.00	25.98	PK+	V
5	12021.000	50.07	-4.84	45.23	74.00	28.77	PK+	V
6	16677.000	46.74	-0.49	46.25	74.00	27.75	PK+	V

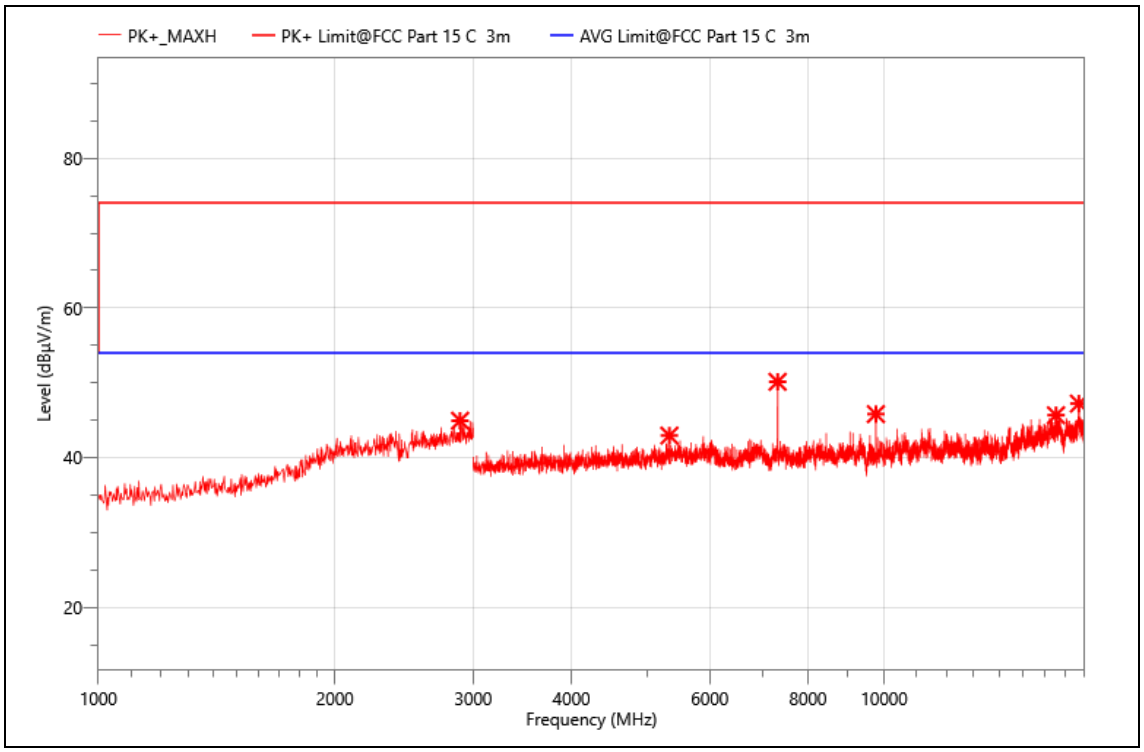
EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2405
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2984.000	52.27	-6.96	45.31	74.00	28.69	PK+	H
2	4077.000	54.99	-12.78	42.21	74.00	31.79	PK+	H
3	7213.500	58.18	-8	50.18	74.00	23.82	PK+	H
4	9621.000	50.29	-7.09	43.20	74.00	30.80	PK+	H
5	11946.000	48.49	-4.54	43.95	74.00	30.05	PK+	H
6	17703.000	47.38	0.11	47.49	74.00	26.51	PK+	H

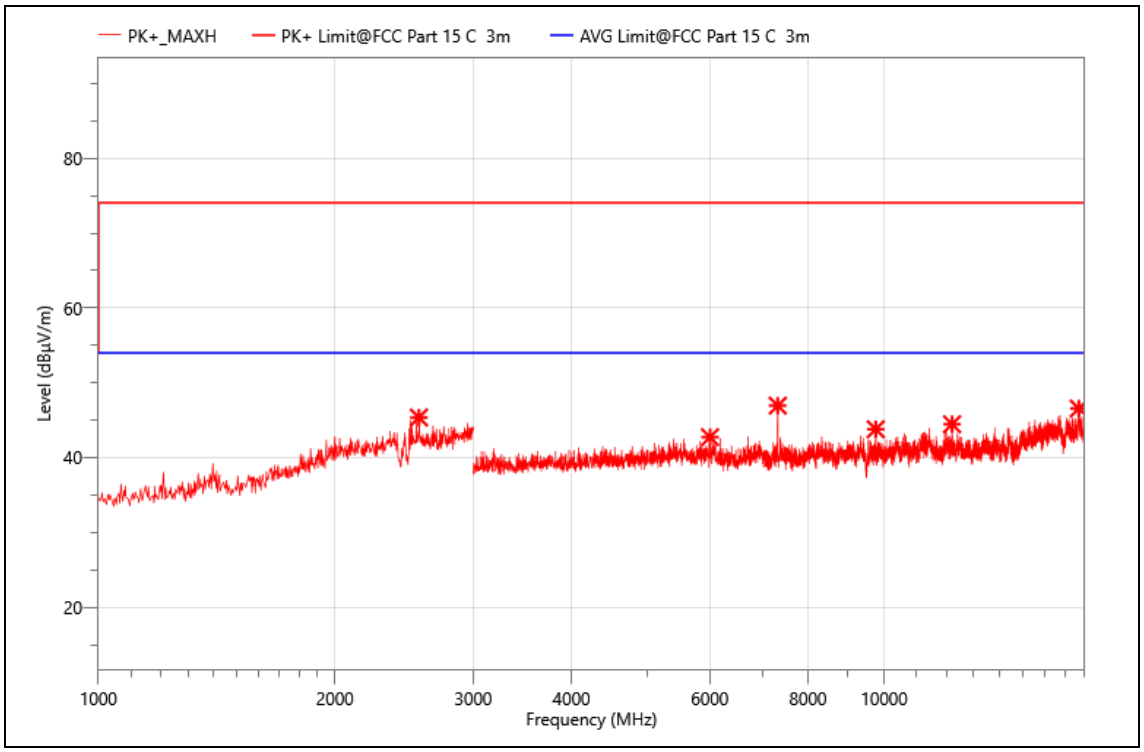
EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2440
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2886.000	53.12	-8.19	44.93	74.00	29.07	PK+	H
2	5329.500	53.01	-10.07	42.94	74.00	31.06	PK+	H
3	7318.500	57.95	-7.82	50.13	74.00	23.87	PK+	H
4	9762.000	52.76	-6.95	45.81	74.00	28.19	PK+	H
5	16548.000	46.91	-1.24	45.67	74.00	28.33	PK+	H
6	17700.000	47.04	0.18	47.22	74.00	26.78	PK+	H

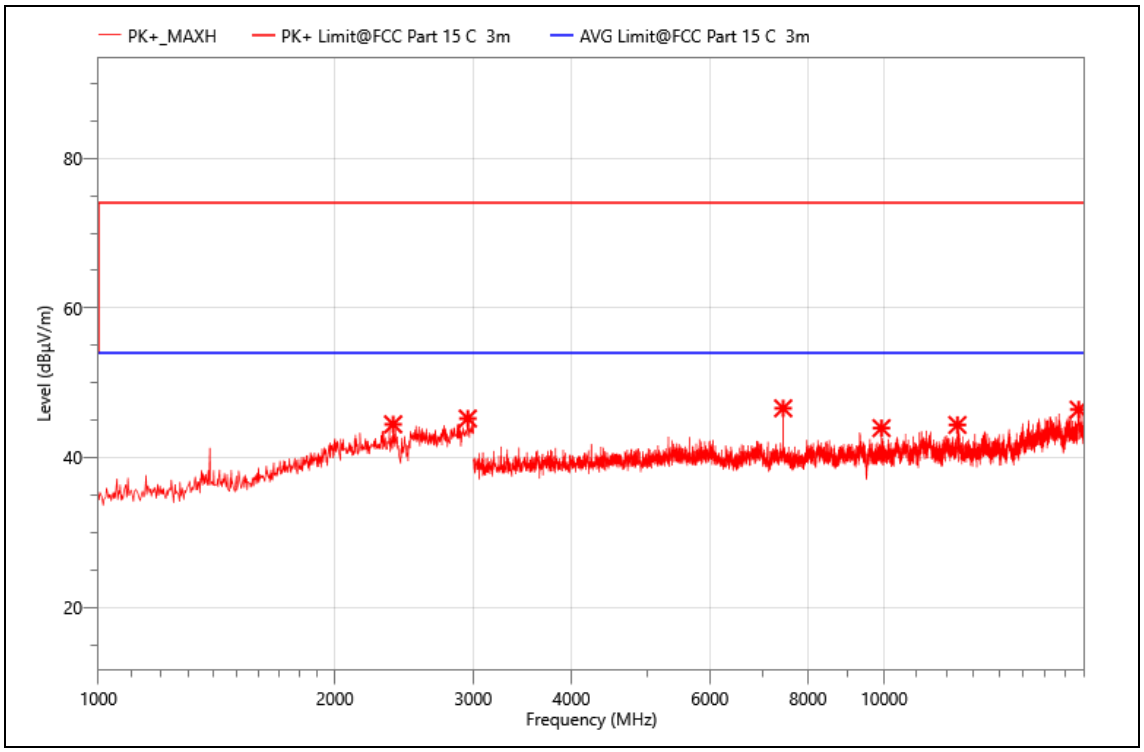
EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2440
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2558.000	53.40	-8.04	45.36	74.00	28.64	PK+	V
2	6003.000	51.57	-8.84	42.73	74.00	31.27	PK+	V
3	7321.500	54.86	-7.91	46.95	74.00	27.05	PK+	V
4	9757.500	50.62	-6.83	43.79	74.00	30.21	PK+	V
5	12202.500	49.14	-4.68	44.46	74.00	29.54	PK+	V
6	17691.000	46.32	0.23	46.55	74.00	27.45	PK+	V

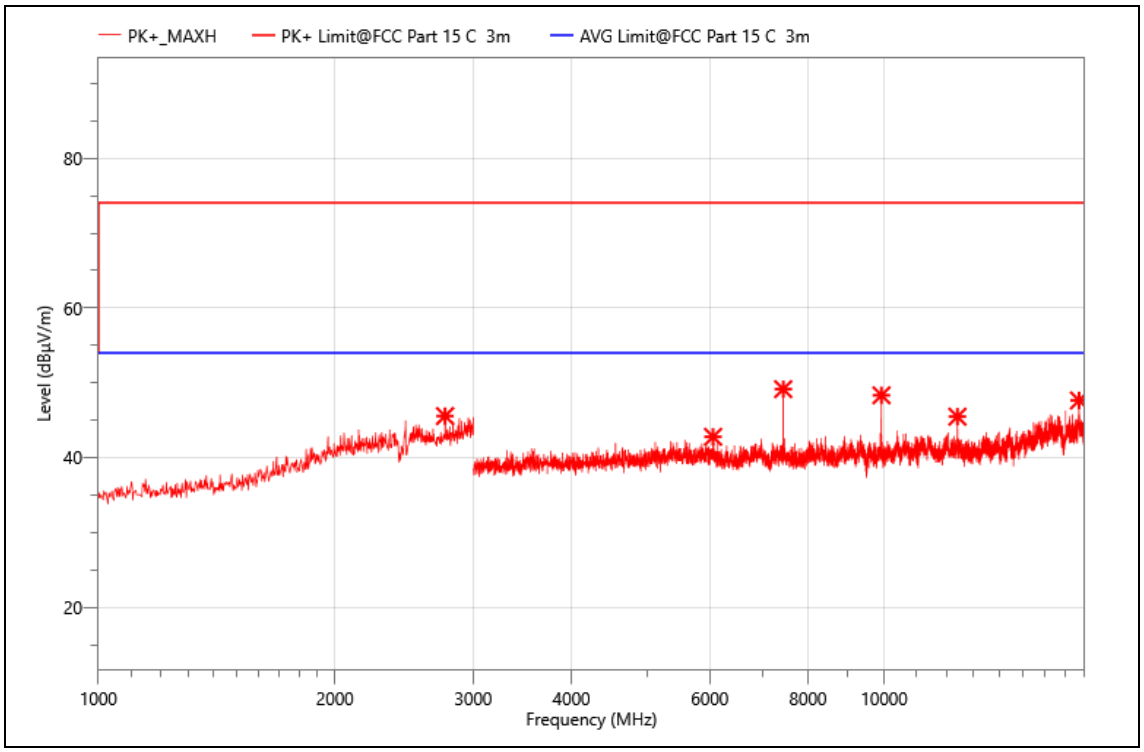
EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2480
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2372.000	52.92	-8.47	44.45	74.00	29.55	PK+	V
2	2952.000	52.64	-7.42	45.22	74.00	28.78	PK+	V
3	7440.000	54.55	-7.96	46.59	74.00	27.41	PK+	V
4	9922.500	50.27	-6.33	43.94	74.00	30.06	PK+	V
5	12397.500	49.01	-4.65	44.36	74.00	29.64	PK+	V
6	17683.500	46.15	0.27	46.42	74.00	27.58	PK+	V

EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2480
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2762.000	53.65	-8.09	45.56	74.00	28.44	PK+	H
2	6057.000	50.72	-7.94	42.78	74.00	31.22	PK+	H
3	7441.500	57.13	-7.98	49.15	74.00	24.85	PK+	H
4	9922.500	54.66	-6.33	48.33	74.00	25.67	PK+	H
5	12396.000	50.11	-4.64	45.47	74.00	28.53	PK+	H
6	17704.500	47.56	0.08	47.64	74.00	26.36	PK+	H

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

Note: (1) All Readings are Peak Value.

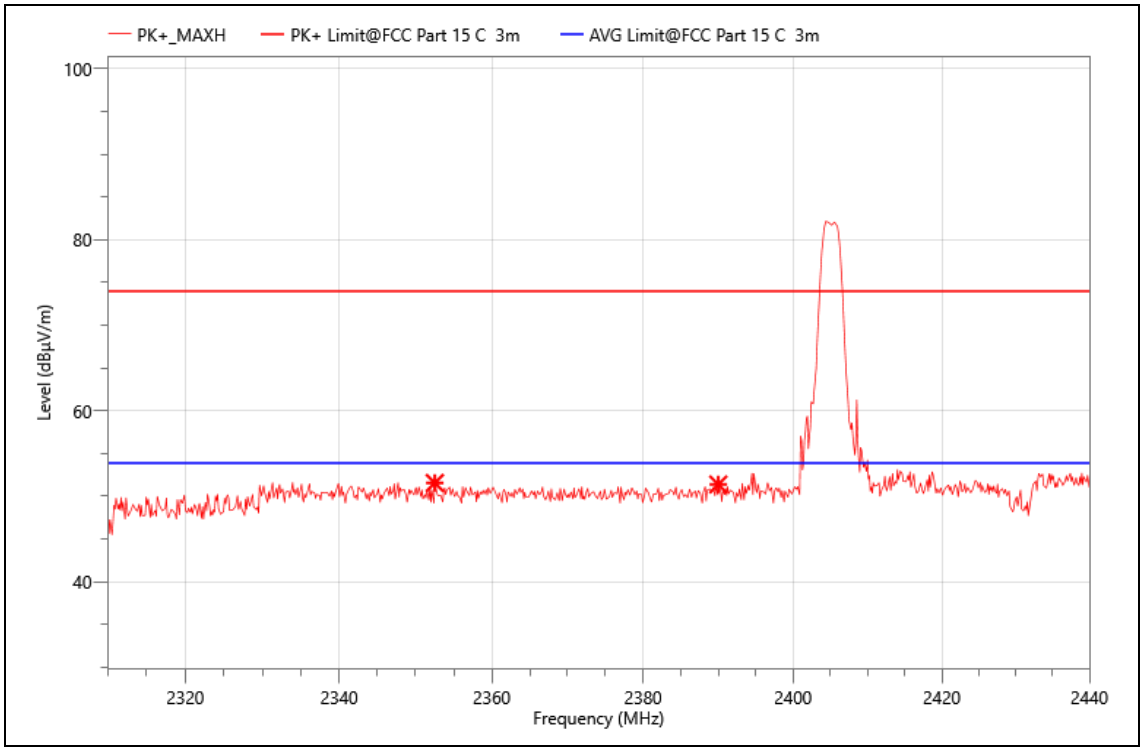
(2) [Margin=Limit-Meas.]; [Meas.=Reading+Corr.]

(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 :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2405
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa

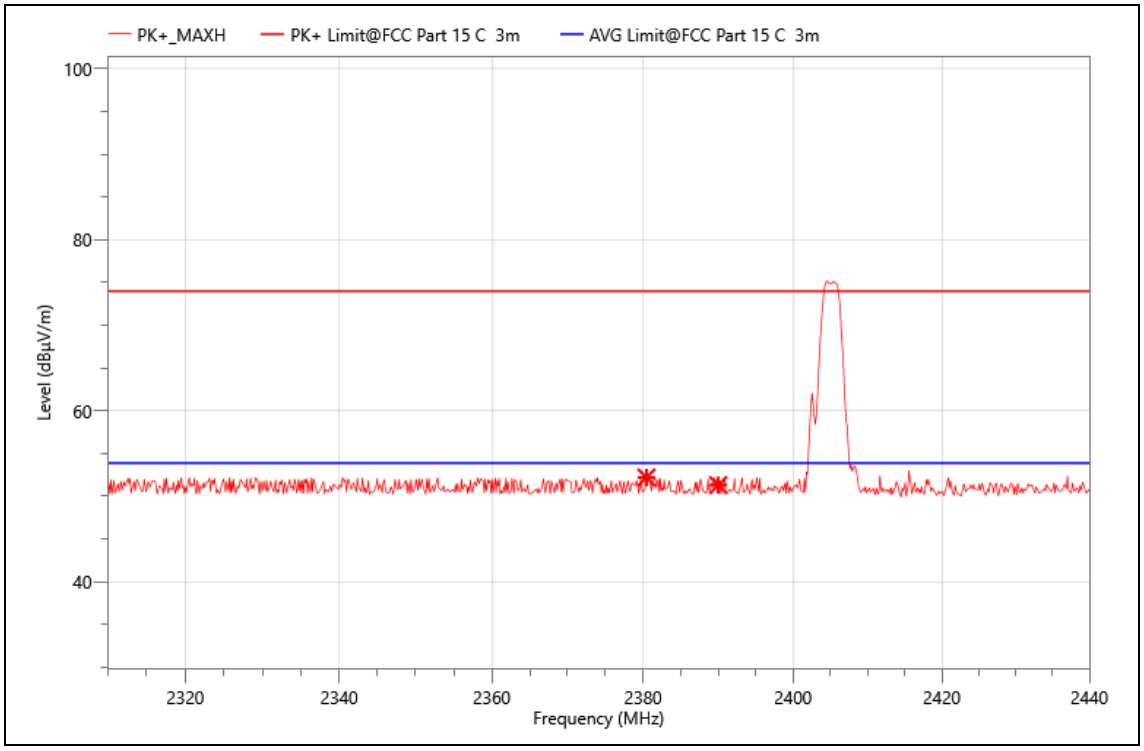


Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2352.510	19.06	32.49	51.55	74.00	22.45	PK+	H
2	2390.000	18.91	32.46	51.37	74.00	22.63	PK+	H

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

EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2405
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa

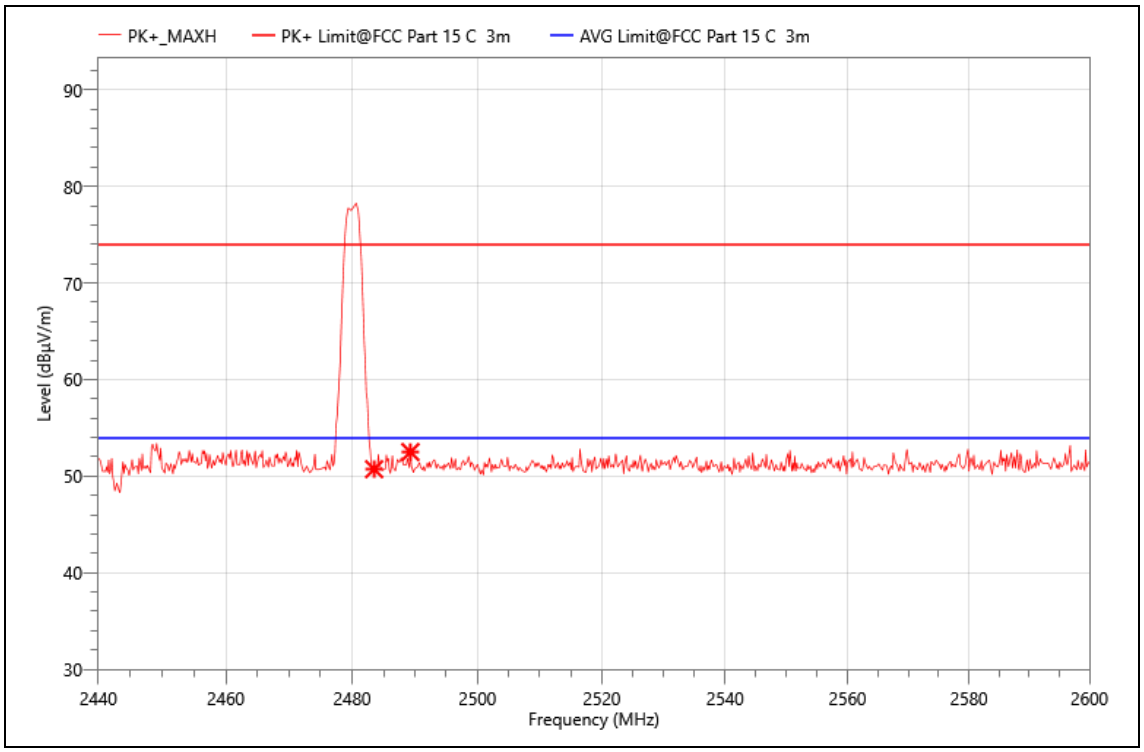


Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2380.460	19.89	32.29	52.18	74.00	21.82	PK+	V
2	2390.000	18.83	32.46	51.29	74.00	22.71	PK+	V

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

EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2480
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa

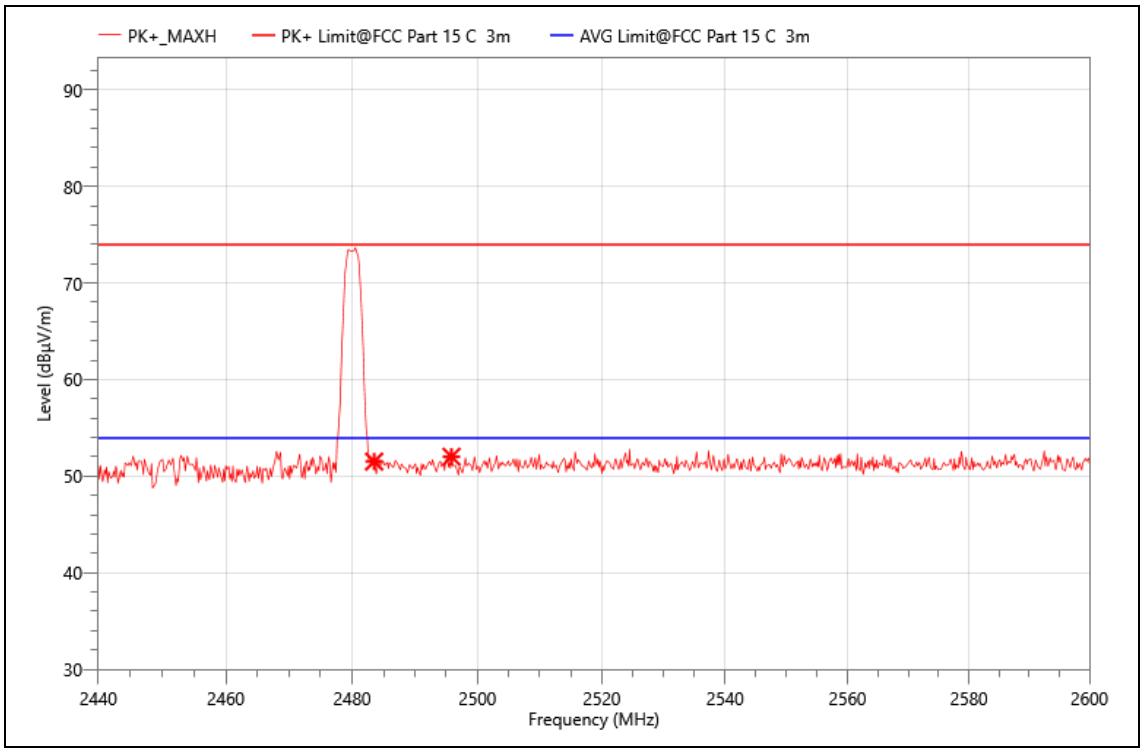


Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2483.500	25.01	25.71	50.72	74.00	23.28	PK+	H
2	2489.280	26.77	25.73	52.50	74.00	21.50	PK+	H

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

EUT :	Smart Temperature & Humidity Sensor
MN:	H1-E
Mode:	Zigbee -2480
Power:	DC 3V
TE:	Berny
Date	2024/3/4
T/A/P	21.9℃/55.7%/101.5Kpa



Critical_Freqs

No.	Freq. (MHz)	Reading (dBµV)	Corr. (dB)	Meas. (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Det.	Pol.
1	2483.500	25.80	25.71	51.51	74.00	22.49	PK+	V
2	2495.840	26.27	25.75	52.02	74.00	21.98	PK+	V

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