

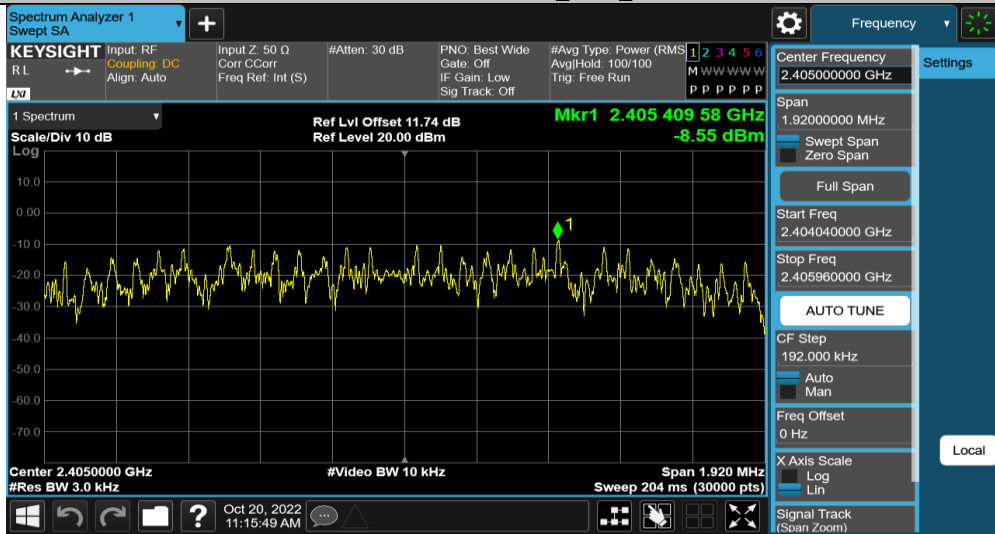
Appendix A: Test Results

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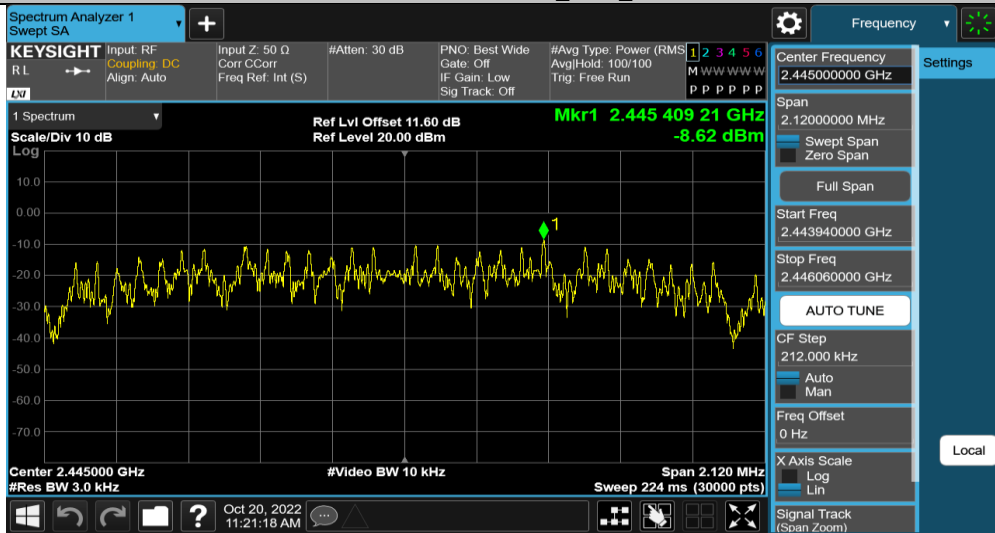
Appendix A.1: Test Results of Conducted Power Spectral Density

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
Zigbee	Ant1	2405	-8.55	≤8.00	PASS
		2445	-8.62	≤8.00	PASS
		2480	-8.88	≤8.00	PASS

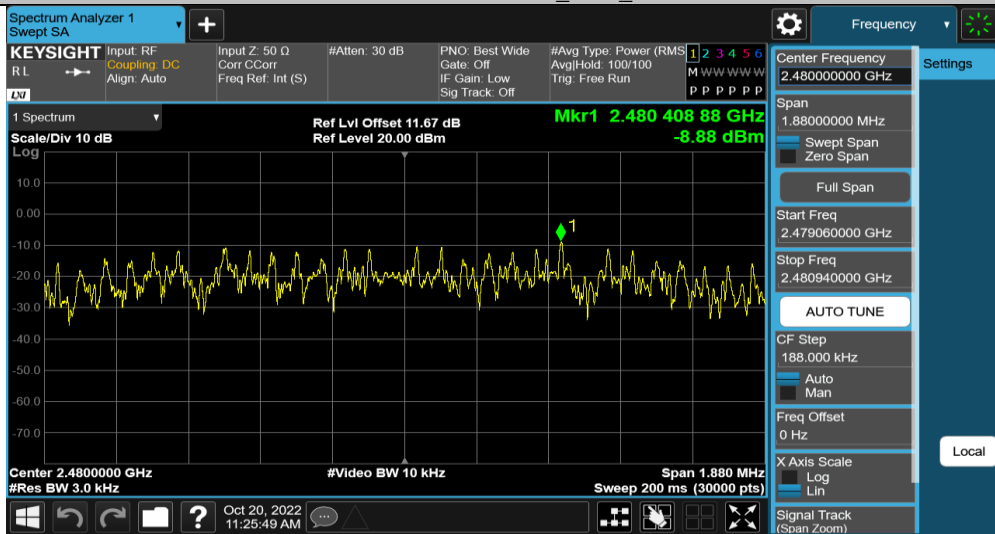
ZIGBEE OPERATING_Ant1_2405



ZIGBEE OPERATING_Ant1_2445



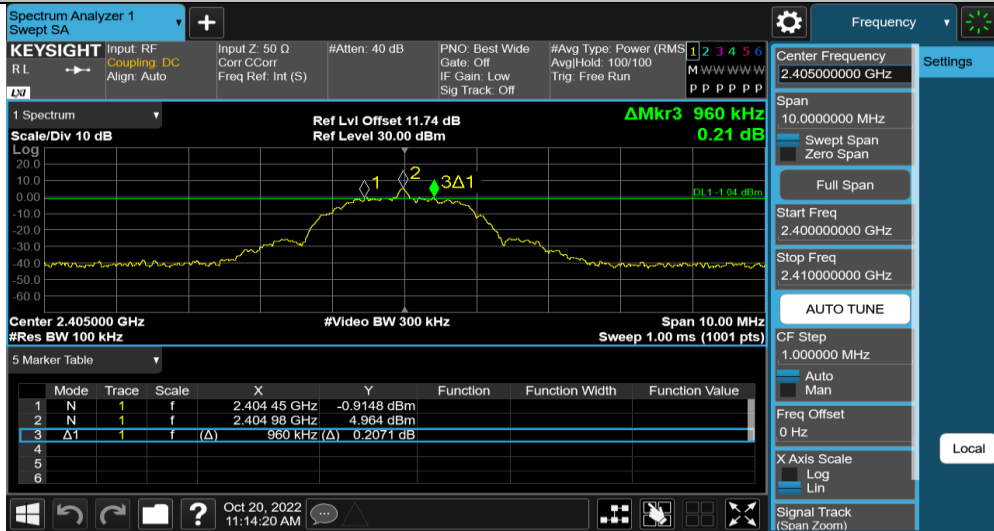
ZIGBEE OPERATING_Ant1_2480



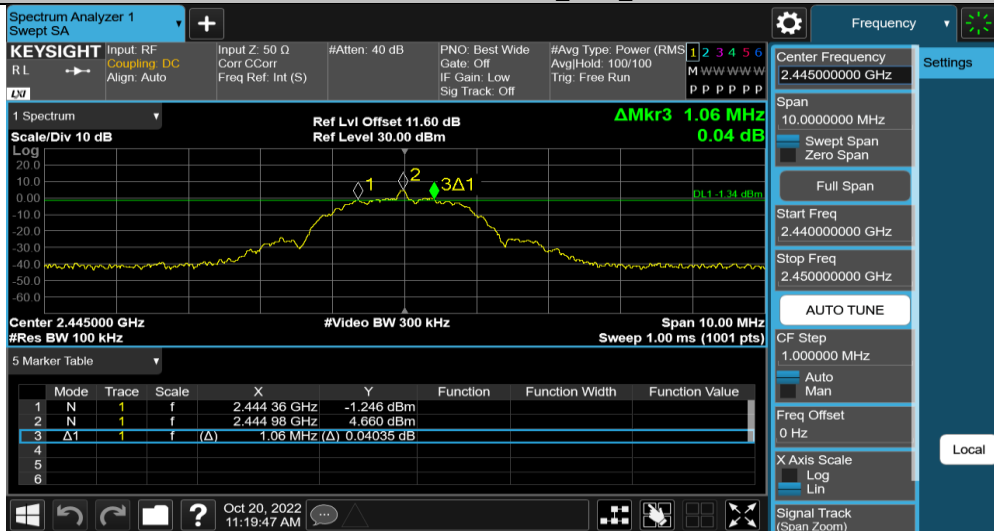
Appendix A.2: Test Results of 6dB Bandwidth

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
Zigbee	Ant1	2405	0.960	2404.450	2405.410	>0.5	PASS
		2445	1.060	2444.360	2445.420	>0.5	PASS
		2480	0.940	2479.480	2480.420	>0.5	PASS

ZIGBEE OPERATING_Ant1_2405



ZIGBEE OPERATING_Ant1_2445



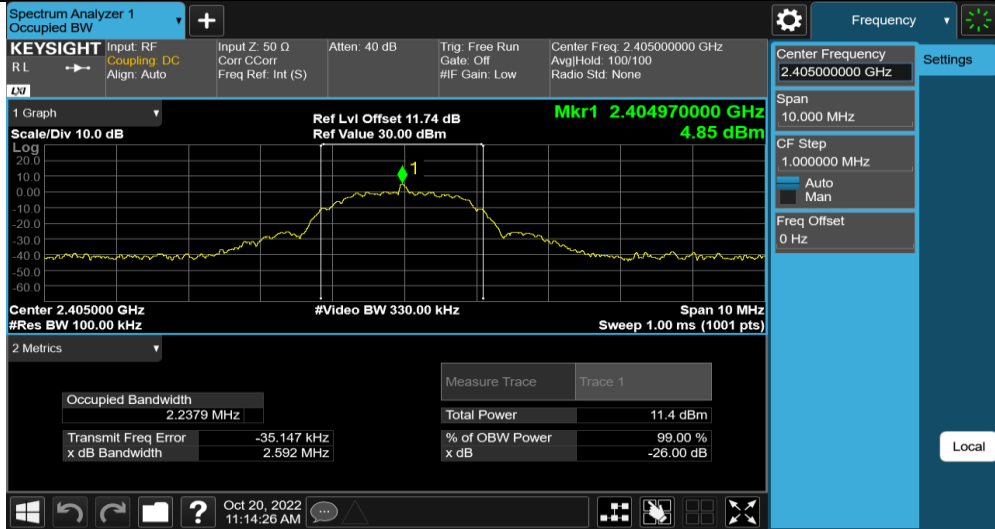
ZIGBEE OPERATING_Ant1_2480



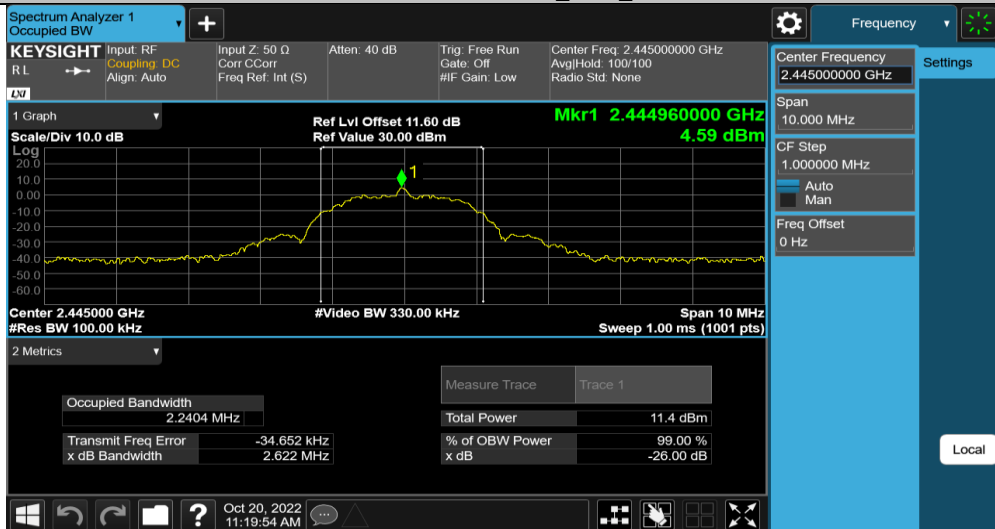
Appendix A.3: Test Results of 99% Bandwidth

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
Zigbee	Ant1	2405	2.2379	2403.8459	2406.0838	---	PASS
		2445	2.2404	2443.8452	2446.0856	---	PASS
		2480	2.2455	2478.8423	2481.0878	---	PASS

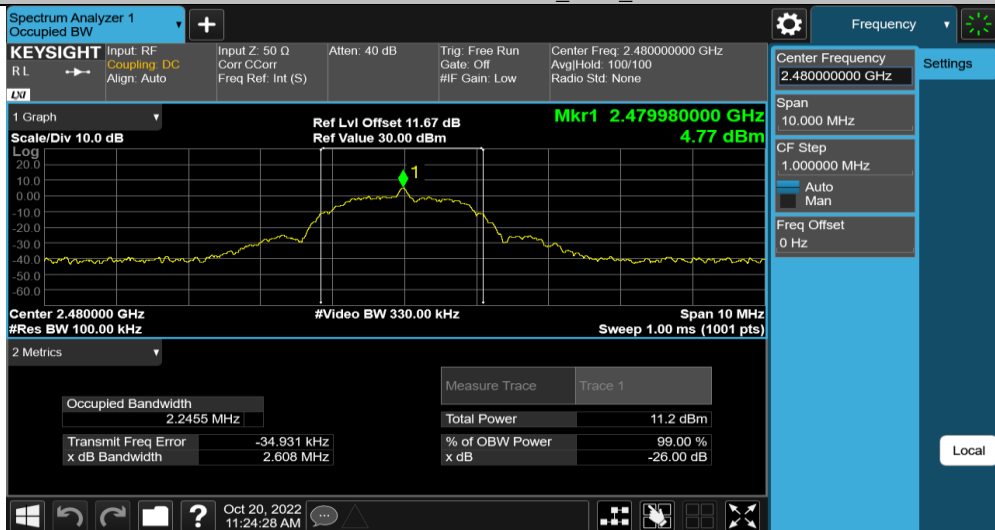
ZIGBEE OPERATING_Ant1_2405



ZIGBEE OPERATING_Ant1_2445



ZIGBEE OPERATING_Ant1_2480



Appendix A.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

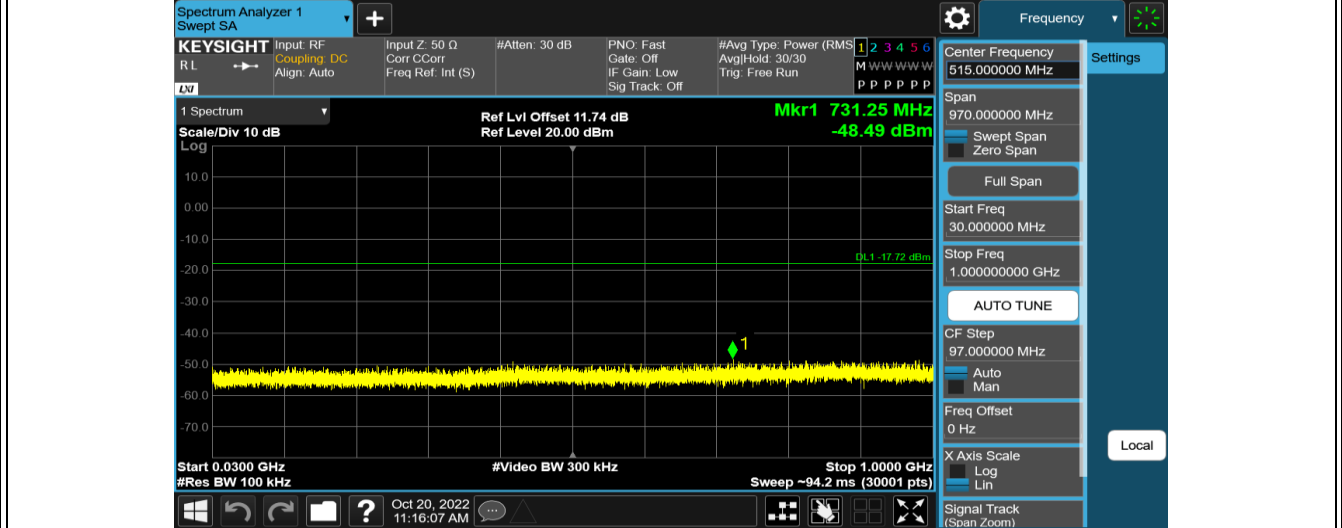
Conducted Spurious Emission

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
Zigbee	Ant1	2405	Reference	2.28	2.28	---	PASS
			30~1000	2.28	-48.5	≤-17.72	PASS
			1000~26500	2.28	-38.88	≤-17.72	PASS
		2445	Reference	-0.75	-0.75	---	PASS
			30~1000	-0.75	-47.89	≤-20.75	PASS
			1000~26500	-0.75	-39.12	≤-20.75	PASS
		2480	Reference	-0.58	-0.58	---	PASS
			30~1000	-0.58	-48.4	≤-20.58	PASS
			1000~26500	-0.58	-39.37	≤-20.58	PASS

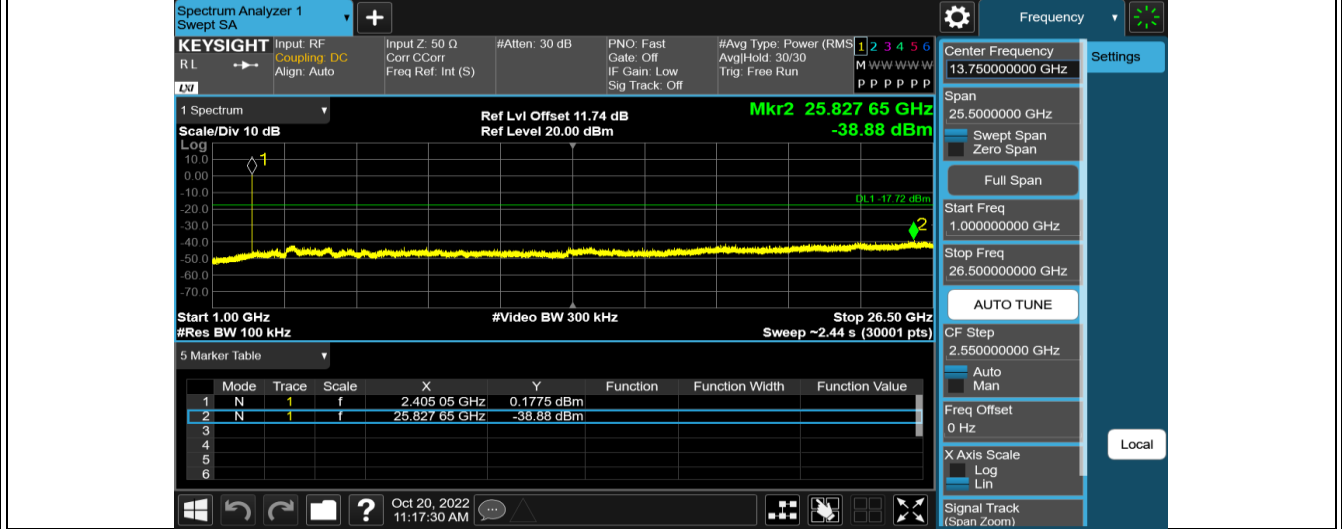
ZIGBEE OPERATING_Ant1_2405_0-Reference



ZIGBEE OPERATING_Ant1_2405_30-1000



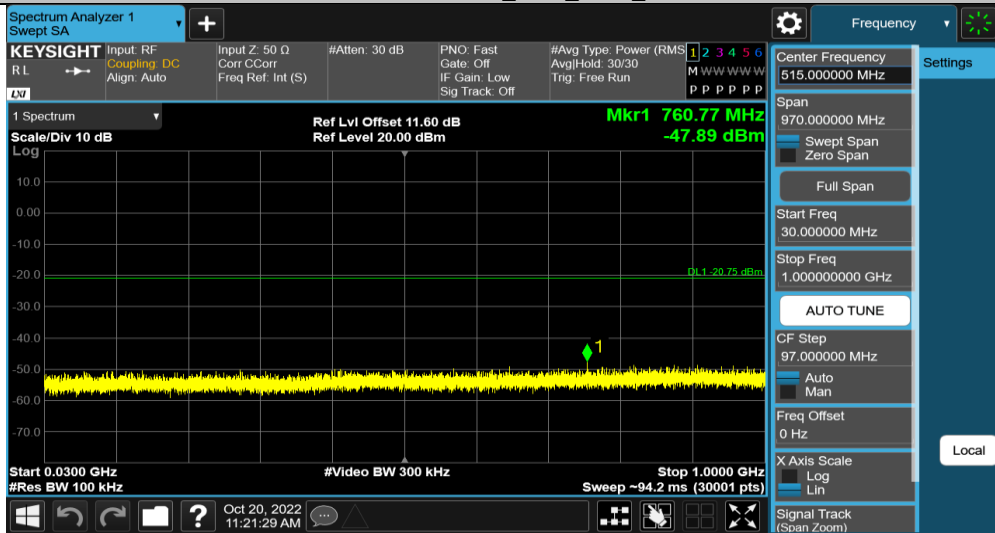
ZIGBEE OPERATING_Ant1_2405_1000-26500



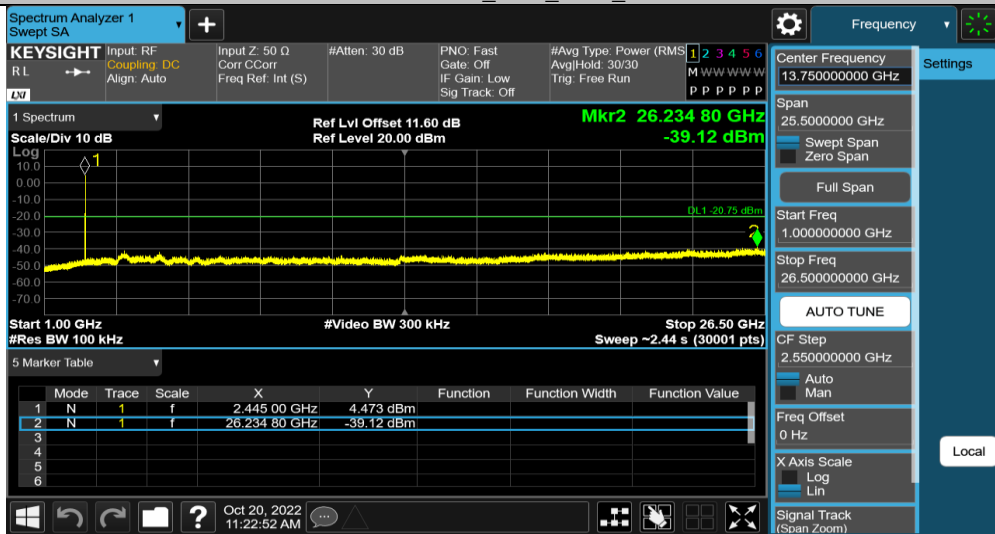
ZIGBEE OPERATING_Ant1_2445_0-Reference



ZIGBEE OPERATING Ant1_2445_30~1000



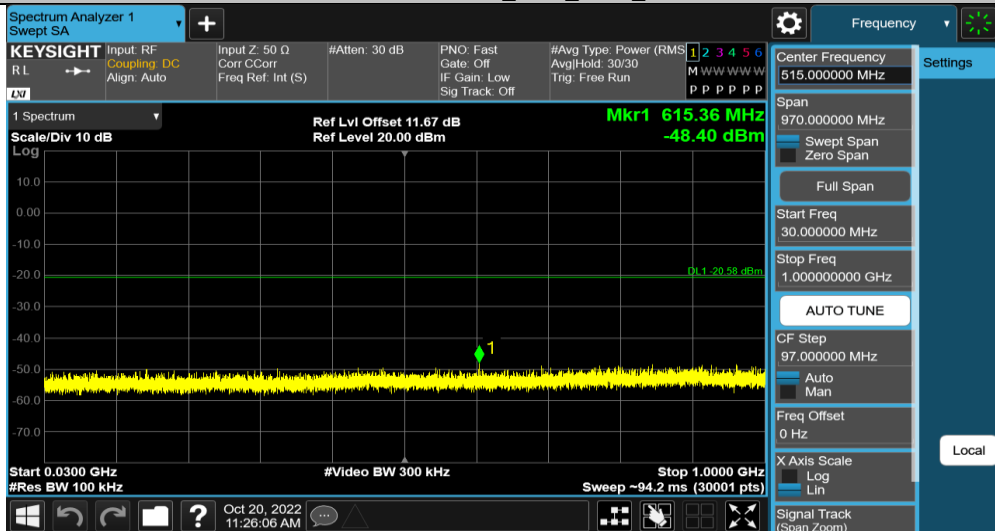
ZIGBEE OPERATING Ant1_2445_1000~26500



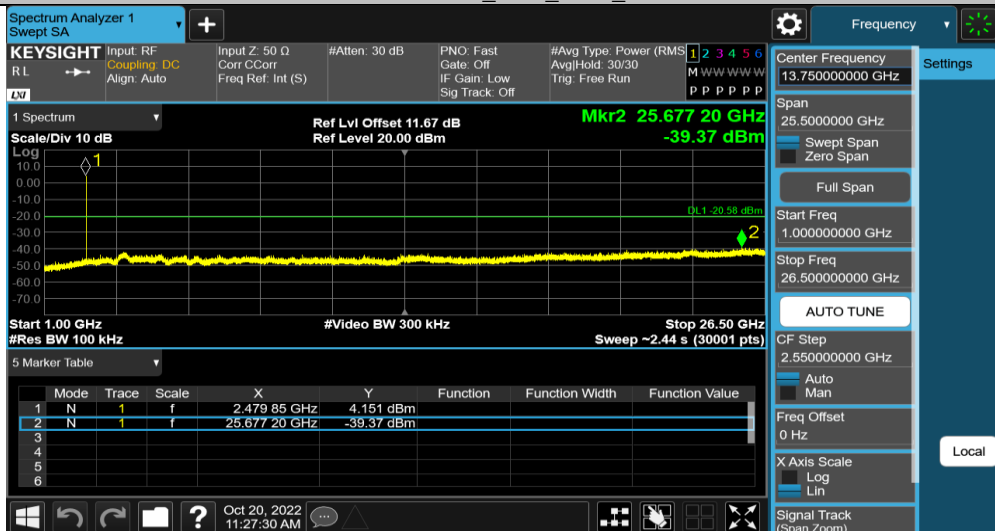
ZIGBEE OPERATING Ant1_2480_0~Reference



ZIGBEE OPERATING Ant1_2480_30~1000

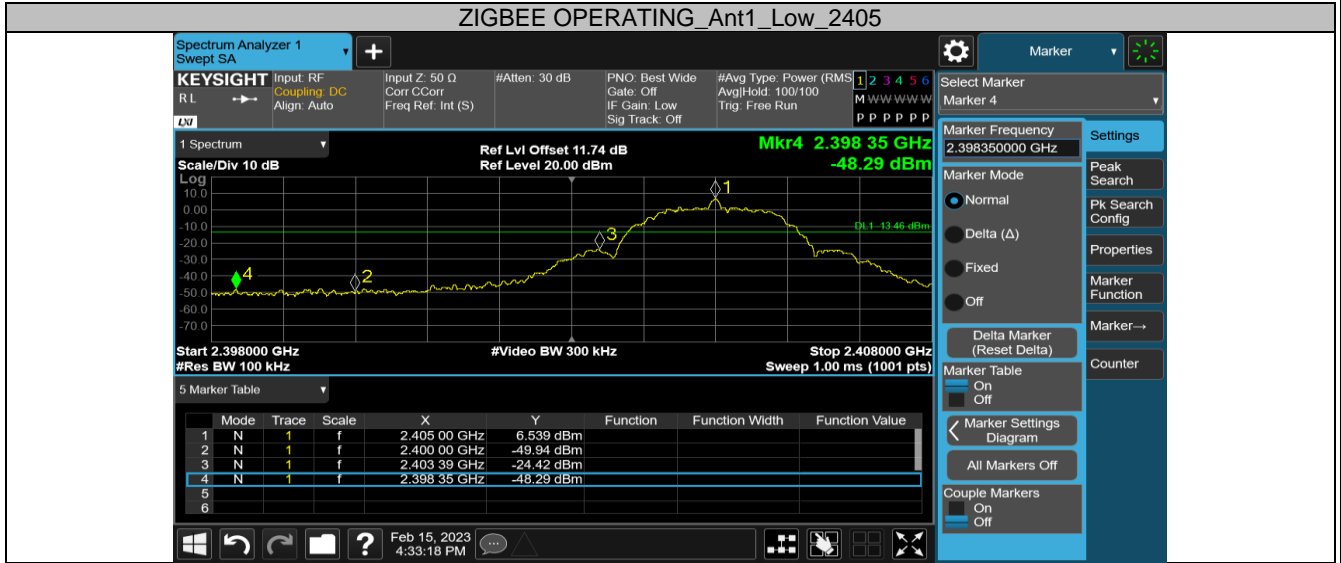


ZIGBEE OPERATING Ant1_2480_1000~26500



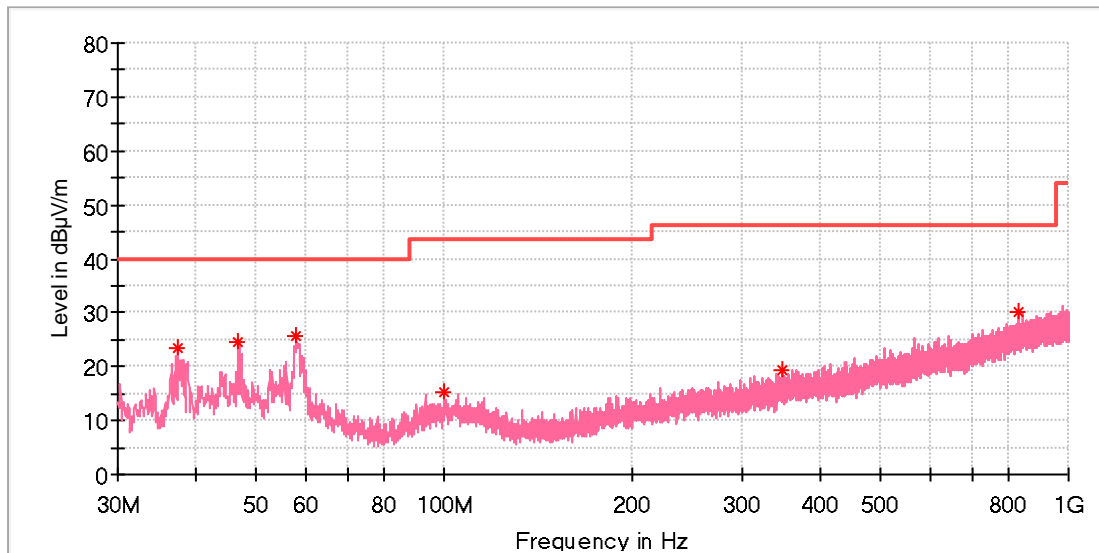
Band Edge

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
Zigbee	Ant1	Low	2405	6.53	-48.29	≤-13.46	PASS
		High	2480	6.54	-47.95	≤-13.45	PASS



EUT Information

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Mid channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



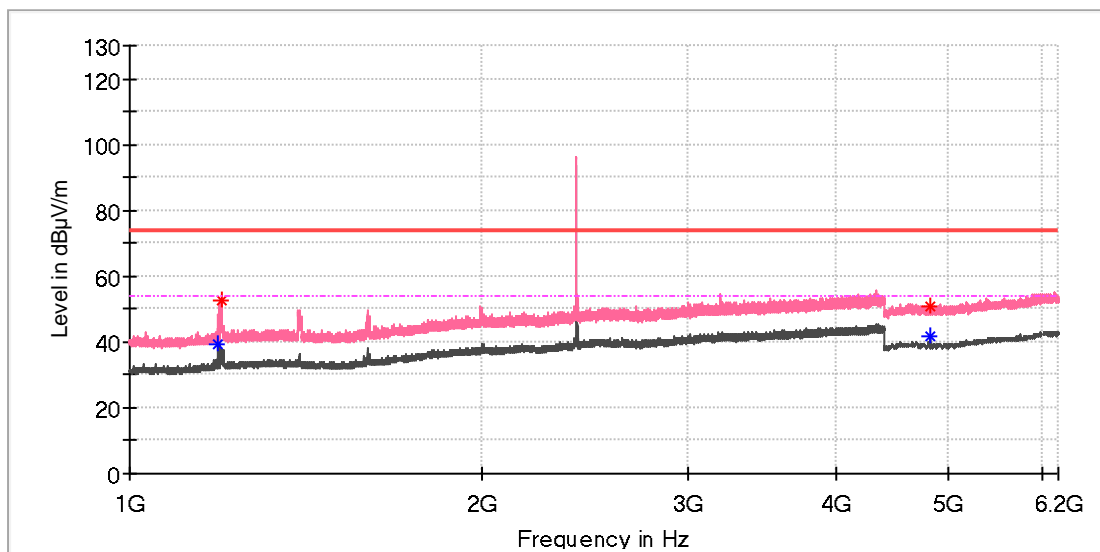
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
37.469000	23.45	40.00	16.55	100.0	V	98.0	-21.0
46.878000	24.48	40.00	15.52	100.0	V	42.0	-18.5
57.887500	25.66	40.00	14.34	100.0	V	193.0	-18.8
100.131000	15.29	43.50	28.21	100.0	V	156.0	-19.0
348.790500	19.35	46.00	26.65	100.0	V	15.0	-14.8
831.074500	29.98	46.00	16.02	100.0	V	28.0	-5.8

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Low channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



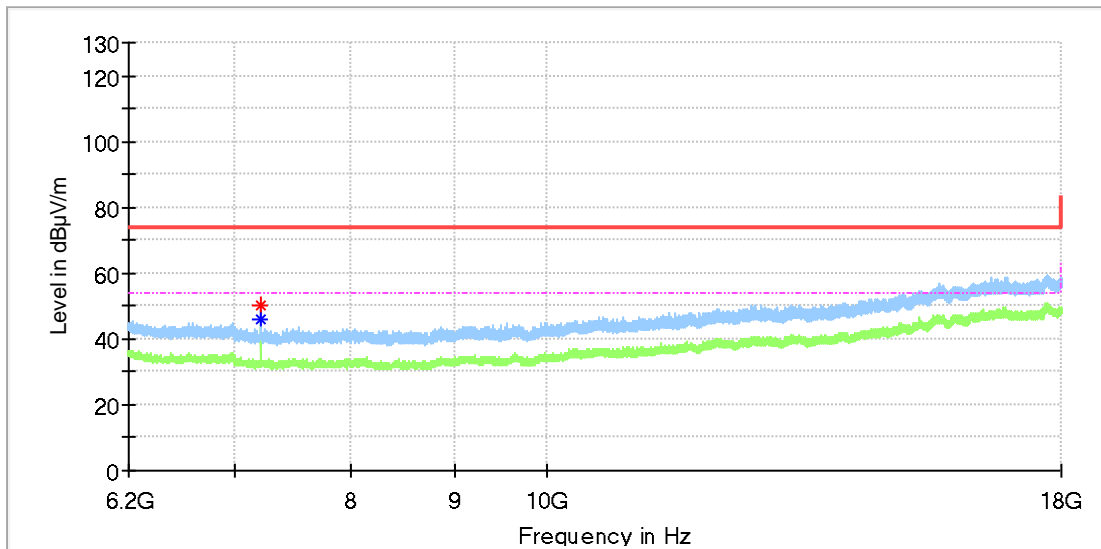
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1191.080000	---	39.29	54.00	14.71	100.0	V	280.0	1.1
1196.350000	52.90	---	74.00	21.10	100.0	V	280.0	1.1
4812.500000	---	41.61	54.00	12.39	100.0	V	90.0	11.8
4812.500000	50.52	---	74.00	23.48	100.0	V	90.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Low channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



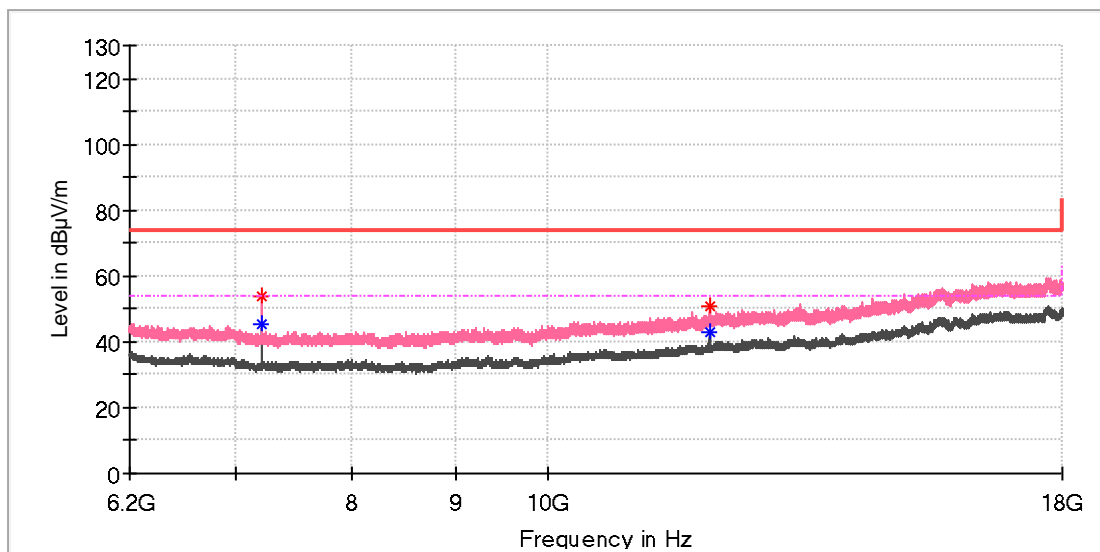
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7214.308333	---	45.77	54.00	8.23	100.0	H	133.0	8.7
7216.766667	50.02	---	74.00	23.98	100.0	H	133.0	8.7

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Low channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



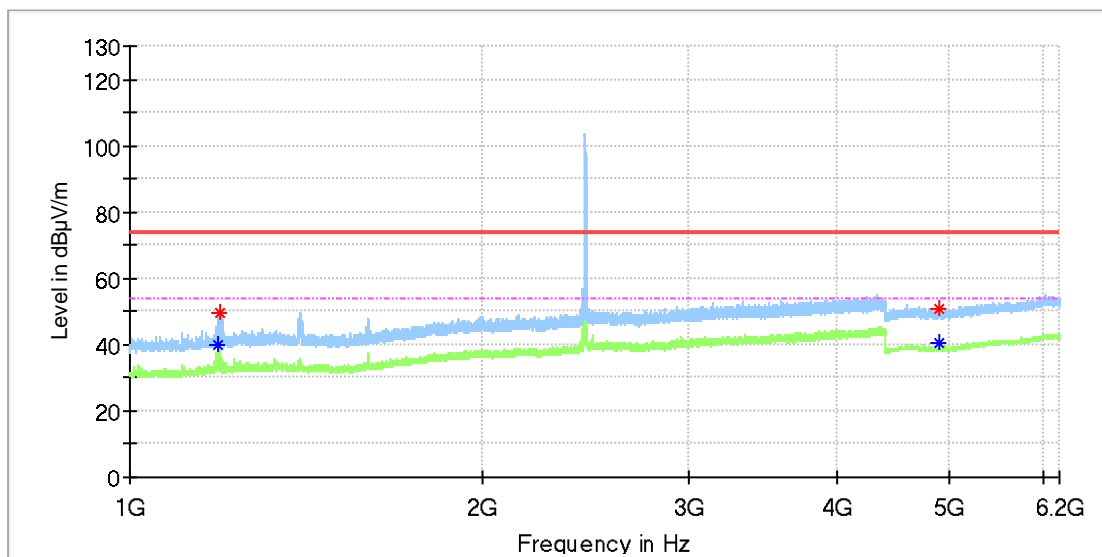
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7215.783333	---	45.12	54.00	8.88	100.0	V	247.0	8.7
7216.275000	53.61	---	74.00	20.39	100.0	V	247.0	8.7
12021.825000	50.67	---	74.00	23.33	100.0	V	71.0	14.0
12021.825000	---	42.88	54.00	11.12	100.0	V	71.0	14.0

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Mid channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



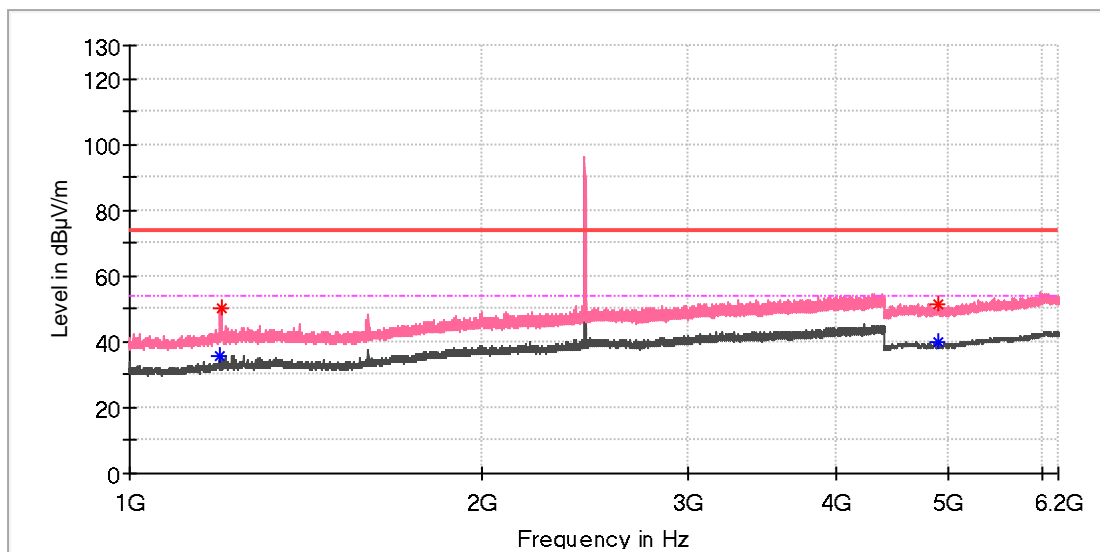
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1190.570000	---	40.06	54.00	13.94	100.0	H	243.0	1.1
1194.650000	49.40	---	74.00	24.60	100.0	H	243.0	1.1
4890.000000	---	40.27	54.00	13.73	100.0	H	277.0	11.8
4890.500000	50.93	---	74.00	23.07	100.0	H	91.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Mid channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



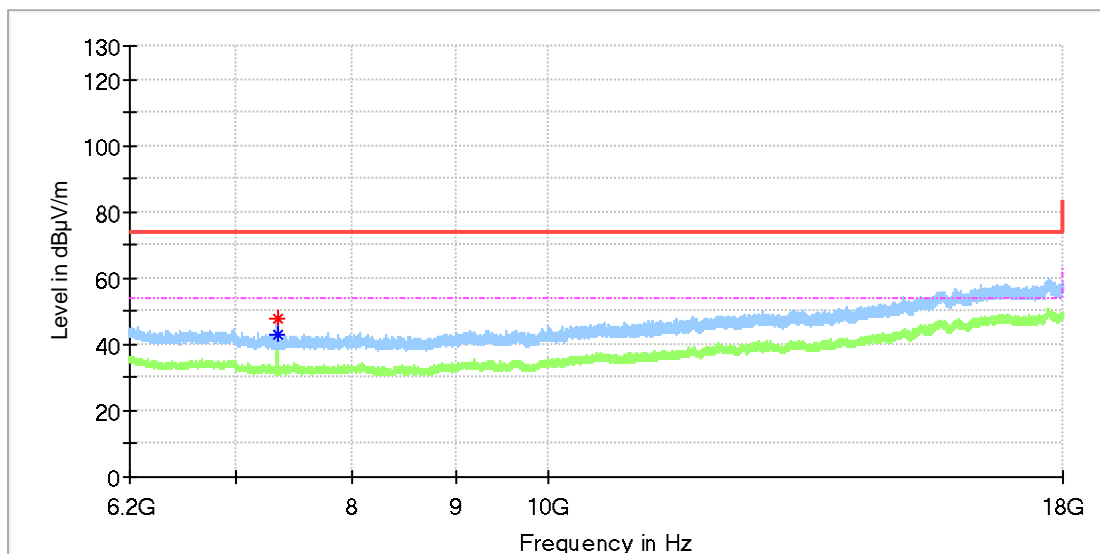
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1195.840000	---	35.53	54.00	18.47	100.0	V	240.0	1.1
1198.730000	49.92	---	74.00	24.08	100.0	V	240.0	1.1
4889.000000	---	39.69	54.00	14.31	100.0	V	282.0	11.8
4891.500000	51.28	---	74.00	22.72	100.0	V	68.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Mid channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



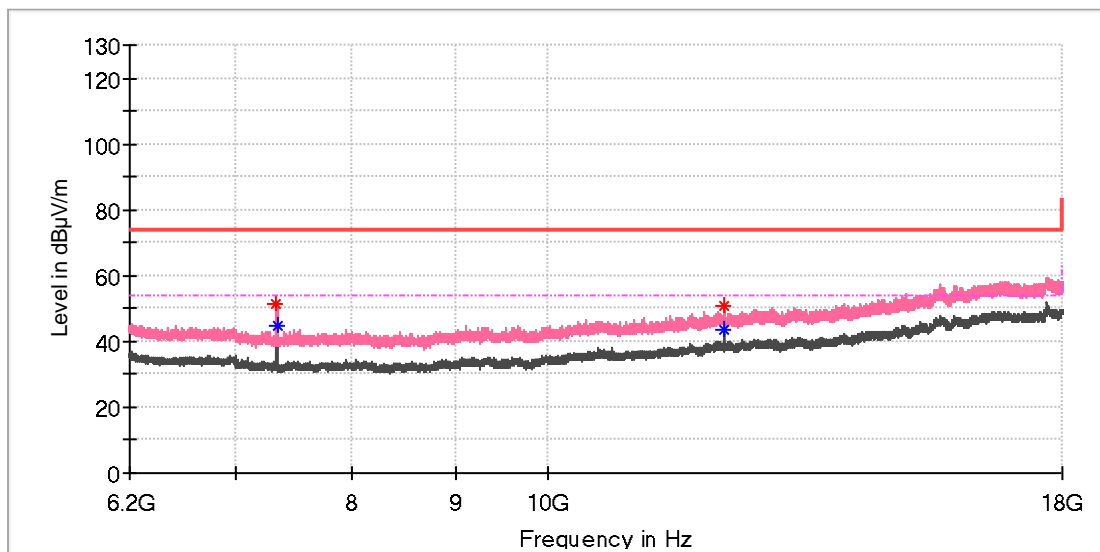
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7335.258333	---	42.96	54.00	11.04	100.0	H	135.0	8.1
7336.241667	48.00	---	74.00	26.00	100.0	H	135.0	8.1

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name: Sensor
 Model: 9290035639
 Test Mode: Zigbee_Mid channel
 Order No/Sample No: 168394207/A003349095-005
 Test Voltage:: Battery
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



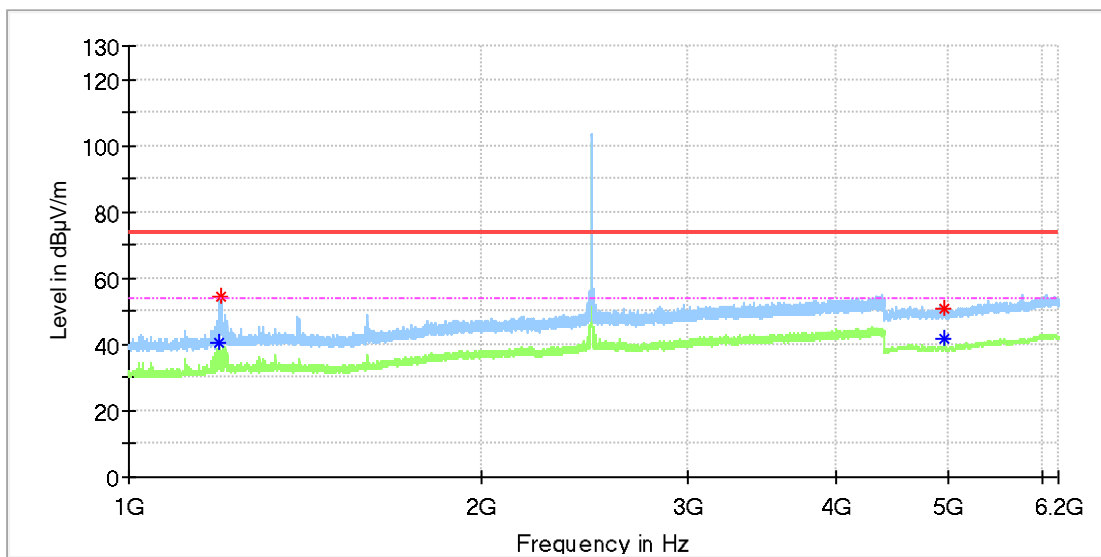
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7333.291667	51.15	---	74.00	22.85	100.0	V	1.0	8.1
7336.241667	---	44.51	54.00	9.49	100.0	V	262.0	8.1
12221.933333	50.90	---	74.00	23.10	100.0	V	69.0	14.7
12222.425000	---	43.67	54.00	10.33	100.0	V	80.0	14.7

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name: Sensor
 Model: 9290035639
 Test Mode: Zigbee_High channel
 Order No/Sample No: 168394207/A003349095-005
 Test Voltage:: Battery
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



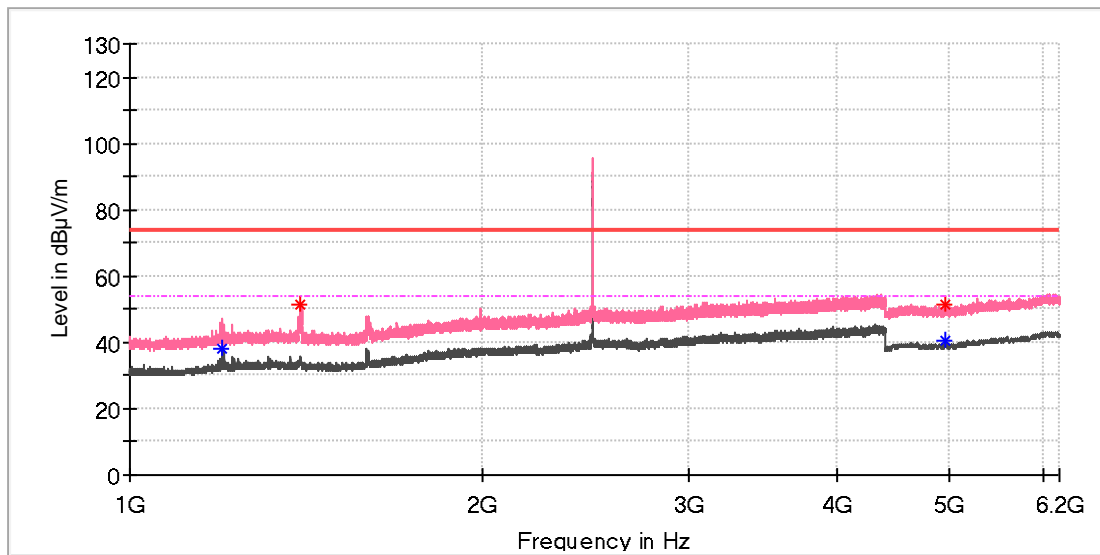
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1193.970000	---	40.42	54.00	13.58	100.0	H	295.0	1.1
1199.410000	54.48	---	74.00	19.52	100.0	H	251.0	1.1
4959.000000	50.67	---	74.00	23.33	100.0	H	85.0	11.8
4962.500000	---	41.70	54.00	12.30	100.0	H	105.0	11.8

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name: Sensor
 Model: 9290035639
 Test Mode: Zigbee_High channel
 Order No/Sample No: 168394207/A003349095-005
 Test Voltage:: Battery
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



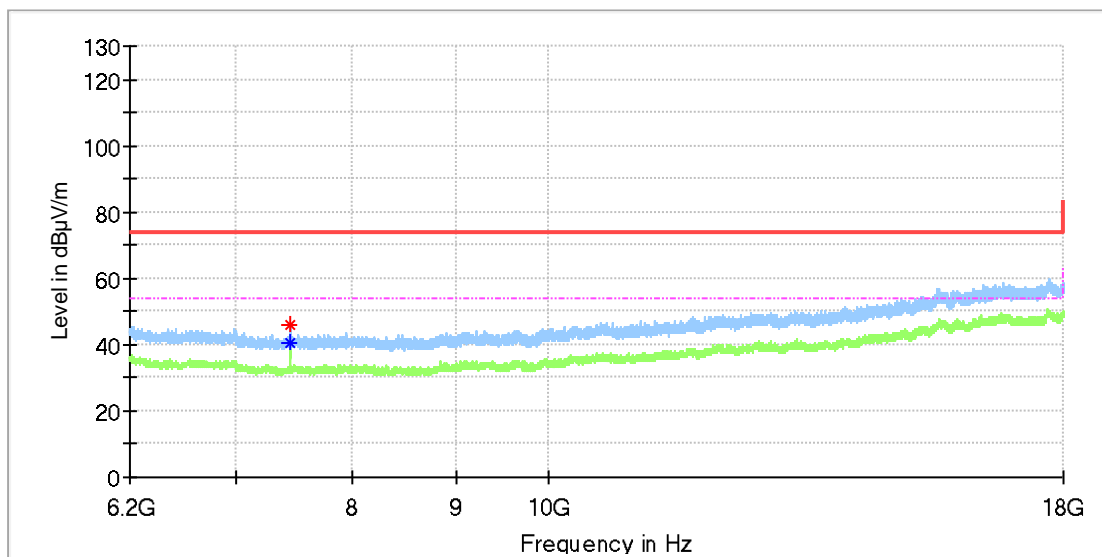
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1198.220000	---	38.18	54.00	15.82	100.0	V	215.0	1.1
1395.420000	51.13	---	74.00	22.87	100.0	V	261.0	1.7
4952.500000	51.19	---	74.00	22.81	100.0	V	112.0	11.8
4959.500000	---	40.41	54.00	13.59	100.0	V	84.0	11.8

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_High channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



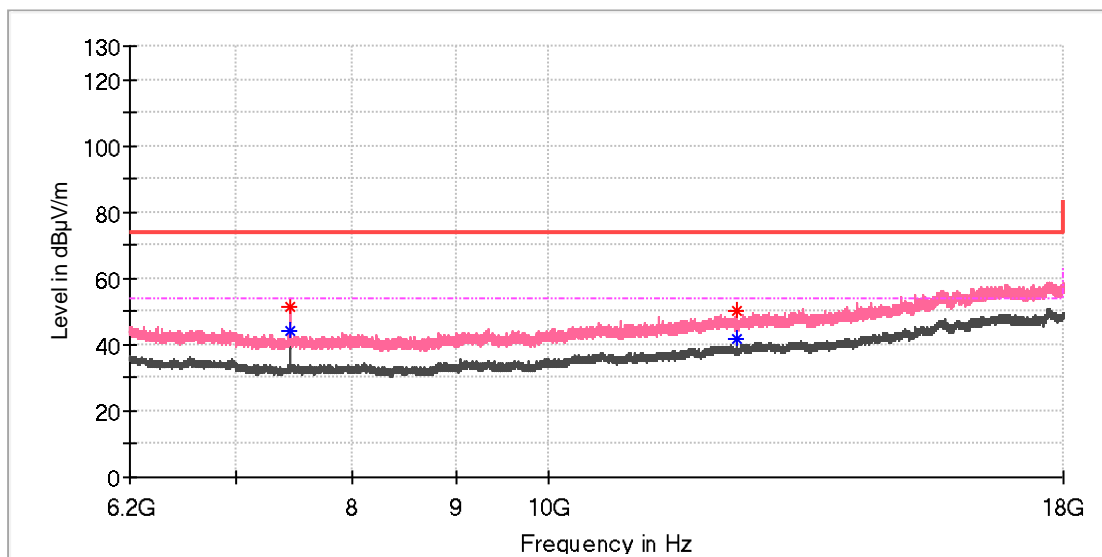
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.983333	---	40.44	54.00	13.56	100.0	H	280.0	8.4
7440.966667	46.01	---	74.00	27.99	100.0	H	70.0	8.4

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name: Sensor
 Model: 9290035639
 Test Mode: Zigbee_High channel
 Order No/Sample No: 168394207/A003349095-005
 Test Voltage:: Battery
 Remark: Temp 23 Humi:56%
 Test Standard: FCC 15.247
 Tested By: Kei Zhang
 Reviewed By: Terry Yin



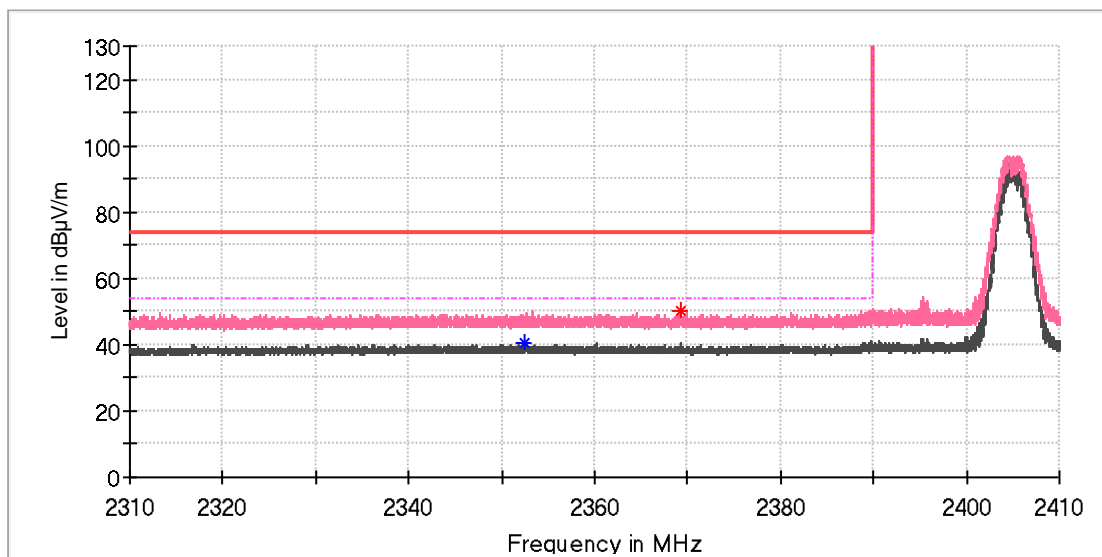
Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7438.016667	---	44.30	54.00	9.70	100.0	V	253.0	8.4
7440.966667	51.30	---	74.00	22.70	100.0	V	253.0	8.4
12397.458333	---	41.87	54.00	12.13	100.0	V	82.0	14.7
12401.883333	50.32	---	74.00	23.68	100.0	V	82.0	14.7

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_Low channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

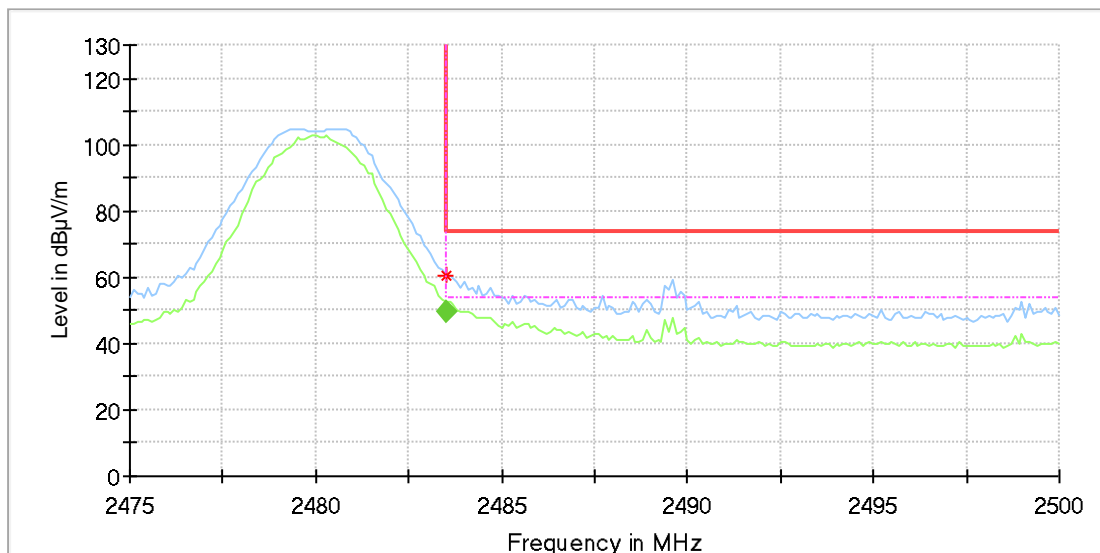
Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2352.545000	---	40.23	54.00	13.77	100.0	V	136.0	6.9
2369.285000	50.22	---	74.00	23.78	100.0	V	35.0	6.9

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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EUT Information

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_High channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



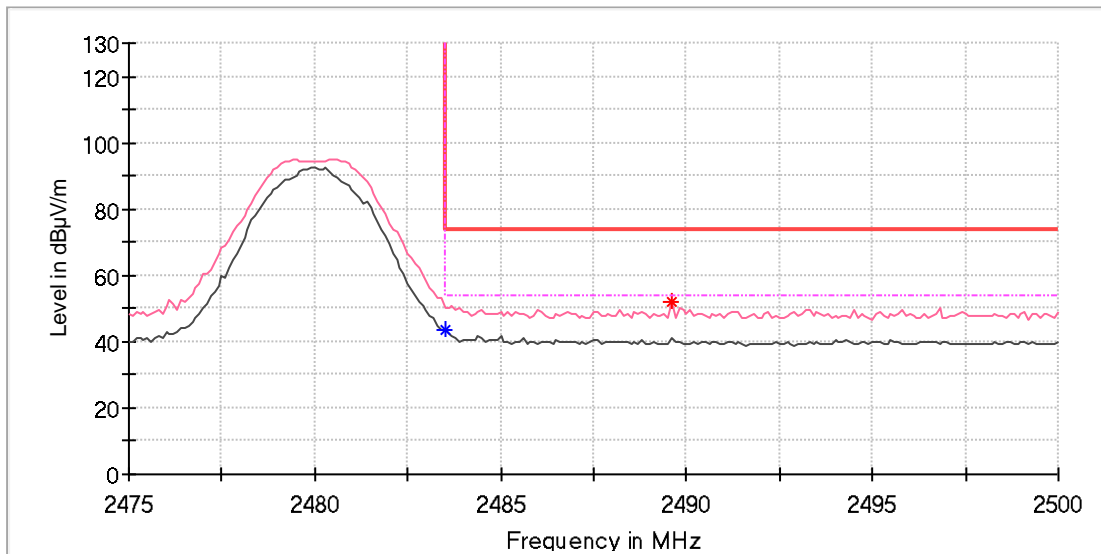
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.500000	60.70	---	74.00	13.30	100.0	H	159.0	7.4

Final_Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.501750	49.71	54.00	4.29	100.0	H	149.0	7.4

EUT Name:	Sensor
Model:	9290035639
Test Mode:	Zigbee_High channel
Order No/Sample No:	168394207/A003349095-005
Test Voltage::	Battery
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.500000	---	43.82	54.00	10.18	100.0	V	283.0	7.4
2489.600000	51.81	---	74.00	22.19	100.0	V	275.0	7.4

Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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