A.7 Conducted Emissions

Note [1]: The EUT is working in the Worst mode.
Note [2]: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.
Note [3]: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

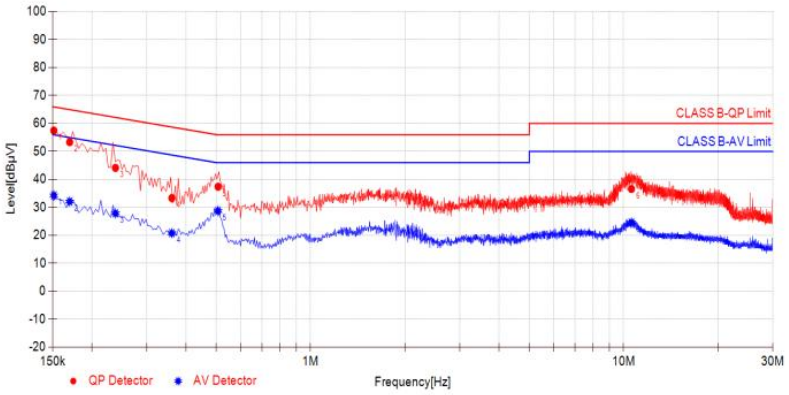
Test Data and Plots

PHASE L

Test Report

Project Information			
Customer:	Zhejiang Tianze	EUT:	T900-30-IPEX
Model:	NA	SN:	NA
Mode:	NA	Voltage:	AC120V60Hz
Environment:	Temp: 25℃; Humi:60%	Engineer	LJJ
Date:	2023-02-02 22:27:12	Note	NA
Remark	Value(dBuV)=Reading(dBuV)+Factor (dB),Margin(dB)=Limit(dBuV)-Value(dBuV)		
Test standard: FCC PART 15B			

Test Graph



Final Data List

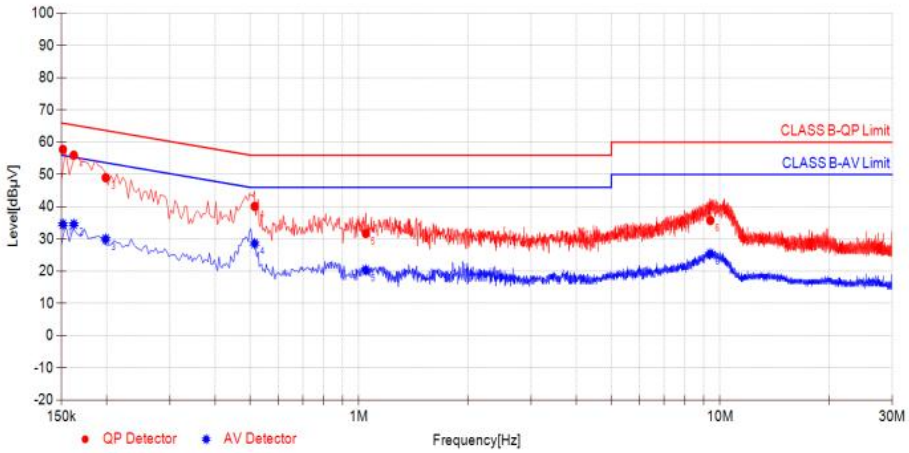
Final Data List												
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Result	Type
1	0.1514	20.36	37.09	57.45	65.92	8.47	13.90	34.26	55.92	21.66	PASS	L
2	0.1701	20.36	32.96	53.32	64.96	11.64	11.70	32.06	54.96	22.90	PASS	L
3	0.2382	20.35	23.77	44.12	62.16	18.04	7.50	27.85	52.16	24.31	PASS	L
4	0.3607	20.30	13.02	33.32	58.71	25.39	0.46	20.76	48.71	27.95	PASS	L
5	0.5067	20.25	17.11	37.36	56.00	18.64	8.41	28.66	46.00	17.34	PASS	L
6	10.5968	20.29	16.30	36.59	60.00	23.41	4.26	24.55	50.00	25.45	PASS	L

PHASE N

Test Report

Project Information			
Customer:	Zhejiang Tianze	EUT:	T900-30-IPEX
Model:	NA	SN:	NA
Mode:	NA	Voltage:	AC120V60Hz
Environment:	Temp: 25℃; Humi:60%	Engineer	LJJ
Date:	2023-02-02 22:21:02	Note	NA
Remark	Value(dBuV)=Reading(dBuV)+Factor (dB),Margin(dB)=Limit(dBuV)-Value(dBuV)		
Test standard: FCC PART 15B			

Test Graph



Final Data List

Final Data List												
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Result	Type
1	0.1516	20.30	37.47	57.77	65.91	8.14	14.26	34.56	55.91	21.35	PASS	N
2	0.1625	20.29	35.68	55.97	65.34	9.37	14.26	34.55	55.34	20.79	PASS	N
3	0.1991	20.26	28.77	49.03	63.65	14.62	9.70	29.96	53.65	23.69	PASS	N
4	0.5146	20.15	19.96	40.11	56.00	15.89	8.41	28.56	46.00	17.44	PASS	N
5	1.0450	19.90	11.82	31.72	56.00	24.28	0.46	20.36	46.00	25.64	PASS	N
6	9.3973	20.07	15.65	35.72	60.00	24.28	5.32	25.39	50.00	24.61	PASS	N

A.8 Radiated Spurious Emission

Test Data and Plots

Note [1]: The symbol of "--" in the table which means not application.

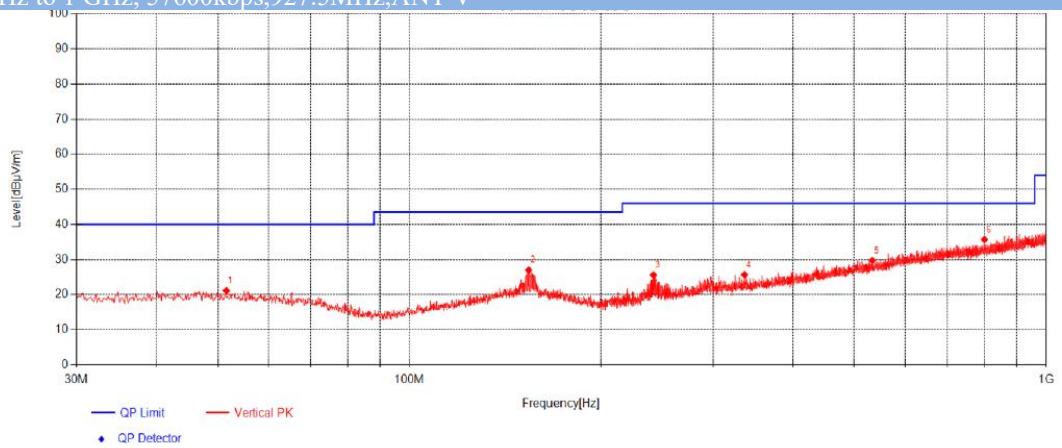
Note [2]: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note [3]: The EUT is working in the Normal link mode below 1 GHz.

Note [4]: Results (dBuV/m) = Original reading level of Spectrum Analyzer (dBuV/m) + Factor (dB)

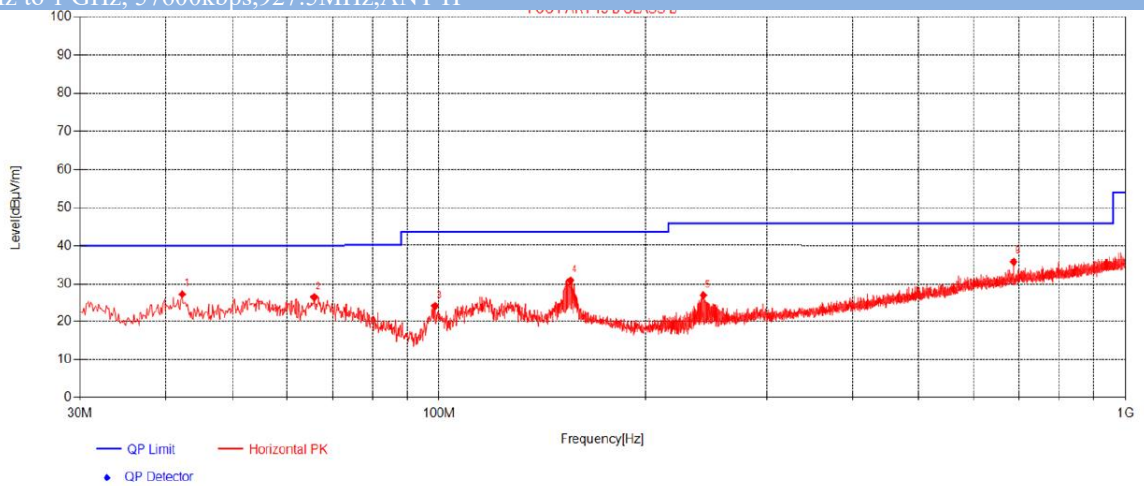
Note [5]: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

30 MHz to 1 GHz, 57600kbps,927.5MHz,ANT V



Suspected Data List									
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	51.5852	21.10	20.40	40.00	18.90	100	1	Vertical	PASS
2	153.933	27.01	20.46	43.50	16.49	100	197	Vertical	PASS
3	241.729	25.58	18.91	46.00	20.42	100	188	Vertical	PASS
4	335.952	25.64	22.29	46.00	20.36	100	197	Vertical	PASS
5	533.371	29.71	26.83	46.00	16.29	100	197	Vertical	PASS
6	800.033	35.69	31.83	46.00	10.31	100	43	Vertical	PASS

30 MHz to 1 GHz, 57600kbps,927.5MHz,ANT H



Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	42.2478	27.25	20.17	40.00	12.75	100	349	Horizontal	PASS
2	65.7732	26.53	18.96	40.00	13.47	100	360	Horizontal	PASS
3	98.6361	24.19	15.42	43.50	19.31	100	360	Horizontal	PASS
4	155.388	30.90	20.47	43.50	12.60	100	141	Horizontal	PASS
5	242.699	27.00	18.96	46.00	19.00	100	117	Horizontal	PASS
6	687.499	35.81	29.77	46.00	10.19	100	260	Horizontal	PASS

Test Data and Plots (1 GHz ~ 10th Harmonic)

57600Kbps, 902.3MHz,ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1991.10	-19.82	56.56	36.74	74.00	37.26	Peak
2	2412.70	-18.20	63.03	44.83	74.00	29.17	Peak
3	3187.90	-15.20	57.41	42.21	74.00	31.79	Peak

57600Kbps, 902.3MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1997.90	-19.81	57.53	37.72	74.00	36.28	Peak
2	2412.70	-18.20	62.96	44.75	74.00	29.25	Peak
3	2749.30	-15.61	53.97	38.36	74.00	35.64	Peak

57600Kbps, 914.9MHz,ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1795.60	-20.60	53.79	33.20	74.00	40.80	Peak
2	1989.40	-19.83	55.23	35.40	74.00	38.60	Peak
3	2409.30	-18.21	65.74	47.53	74.00	26.47	Peak

57600Kbps, 914.9MHz,ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1795.60	-20.60	54.40	33.80	74.00	40.20	Peak
2	2411.00	-18.21	63.04	44.83	74.00	29.17	Peak
3	3198.10	-15.20	56.78	41.58	74.00	32.42	Peak

57600Kbps, 927.5MHz,ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1885.70	-20.16	55.24	35.09	74.00	38.91	Peak
2	2409.30	-18.21	59.91	41.70	74.00	32.30	Peak
3	3199.80	-15.20	53.41	38.21	74.00	35.79	Peak

57600Kbps, 927.5MHz,ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1991.10	-19.82	52.31	32.48	74.00	41.52	Peak
2	2186.60	-19.05	53.50	34.45	74.00	39.55	Peak
3	2414.40	-18.20	62.69	44.50	74.00	29.50	Peak

172800Kbps, 902.3MHz, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1593.30	-21.20	54.65	33.45	74.00	40.55	Peak
2	1799.00	-20.60	56.11	35.51	74.00	38.49	Peak
3	3187.90	-15.20	53.43	38.23	74.00	35.77	Peak

172800Kbps, 902.3MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2237.60	-18.85	53.06	34.21	74.00	39.79	Peak
2	2412.70	-18.20	62.66	44.45	74.00	29.55	Peak
3	2706.80	-17.05	50.88	33.82	74.00	40.18	Peak

172800Kbps, 915.05MHz, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1197.20	-22.80	61.49	38.69	74.00	35.31	Peak
2	2157.70	-19.17	61.13	41.96	74.00	32.04	Peak
3	2412.70	-18.20	58.47	40.27	74.00	33.73	Peak

172800Kbps, 915.05MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1018.70	-23.53	59.02	35.48	74.00	38.52	Peak
2	1151.30	-22.92	54.52	31.60	74.00	42.40	Peak
3	2409.30	-18.21	62.97	44.76	74.00	29.24	Peak

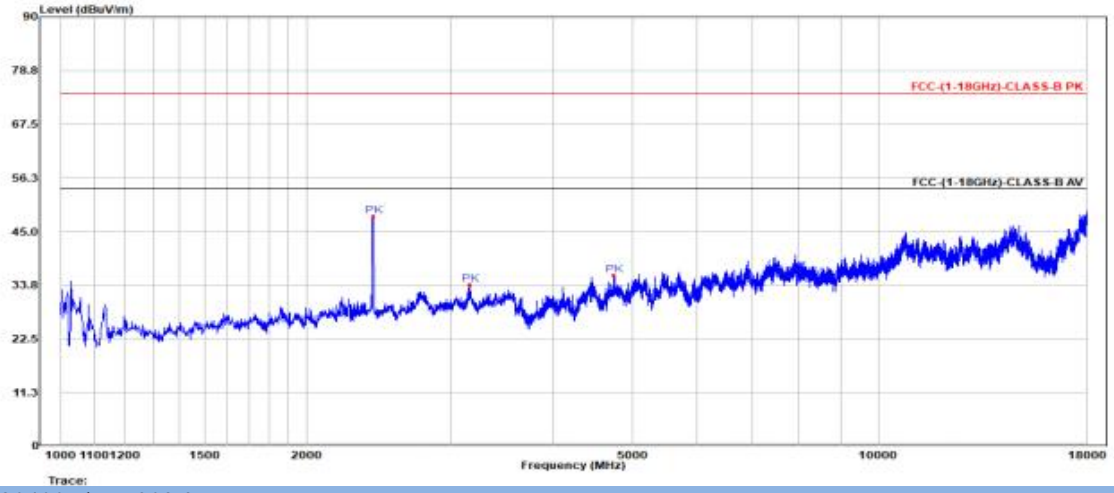
172800Kbps, 927.8MHz, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1992.80	-19.82	55.88	36.06	74.00	37.94	Peak
2	2411.00	-18.21	65.09	46.88	74.00	27.12	Peak
3	3198.10	-15.20	55.15	39.95	74.00	34.05	Peak

172800Kbps, 927.8MHz,ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2409.30	-18.21	66.45	48.24	74.00	25.76	Peak
2	3160.70	-15.19	49.14	33.95	74.00	40.05	Peak
3	4741.70	-10.36	46.28	35.92	74.00	38.08	Peak

Worst test data



230400Kbps, 902.3MHz, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1591.60	-21.21	41.63	20.42	74.00	53.58	Peak
2	1793.90	-20.60	46.07	25.47	74.00	48.53	Peak
3	2412.70	-18.20	55.04	36.83	74.00	37.17	Peak

230400Kbps, 902.3MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2409.30	-18.21	54.88	36.66	74.00	37.34	Peak
2	3556.80	-14.09	41.18	27.09	74.00	46.91	Peak
3	4767.20	-10.27	37.48	27.21	74.00	46.79	Peak

230400Kbps, 915.06MHz,ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1994.50	-19.82	47.13	27.32	74.00	46.68	Peak
2	3194.70	-15.20	46.83	31.64	74.00	42.36	Peak
3	5685.20	-7.64	38.07	30.43	74.00	43.57	Peak

230400Kbps, 915.06MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2414.40	-18.20	53.09	34.89	74.00	39.11	Peak
2	2744.20	-15.78	45.19	29.41	74.00	44.59	Peak
3	6302.30	-6.41	37.20	30.79	74.00	43.21	Peak

230400Kbps, 927.82MHz,ANT V

No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector

	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2234.20	-18.86	51.33	32.47	74.00	41.53	Peak
2	3196.40	-15.20	47.13	31.94	74.00	42.06	Peak
3	5683.50	-7.65	37.40	29.76	74.00	44.24	Peak

230400Kbps, 927.82MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1885.70	-20.16	54.84	34.68	74.00	39.32	Peak
2	2411.00	-18.21	54.00	35.79	74.00	38.21	Peak
3	3541.50	-14.08	39.16	25.08	74.00	48.92	Peak

276400Kbps, 902.3MHz, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2409.30	-18.21	60.23	42.01	74.00	31.99	Peak
2	3193.00	-15.20	44.94	29.75	74.00	44.25	Peak
3	3516.00	-14.08	42.20	28.12	74.00	45.88	Peak

276400Kbps, 902.3MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1902.70	-20.08	54.78	34.70	74.00	39.30	Peak
2	5063.00	-9.01	38.01	29.01	74.00	44.99	Peak
3	6307.40	-6.39	36.15	29.75	74.00	44.25	Peak

276400Kbps, 914.9MHz,ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1887.40	-20.15	44.90	24.75	74.00	49.25	Peak
2	2242.70	-18.83	51.34	32.51	74.00	41.49	Peak
3	3194.70	-15.20	46.93	31.73	74.00	42.27	Peak

276400Kbps, 914.9MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1885.70	-20.16	60.62	40.46	74.00	33.54	Peak
2	2411.00	-18.21	57.24	39.03	74.00	34.97	Peak
3	2744.20	-15.78	42.11	26.33	74.00	47.67	Peak

276400Kbps, 927.5MHz,ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2331.10	-18.50	50.79	32.29	74.00	41.71	Peak

2	2412.70	-18.20	62.04	43.83	74.00	30.17	Peak
3	3191.30	-15.20	43.54	28.34	74.00	45.66	Peak

276400Kbps, 927.5MHz, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1885.70	-20.16	51.29	31.13	74.00	42.87	Peak
2	2242.70	-18.83	44.48	25.65	74.00	48.35	Peak
3	2412.70	-18.20	59.99	41.79	74.00	32.21	Peak

TDT

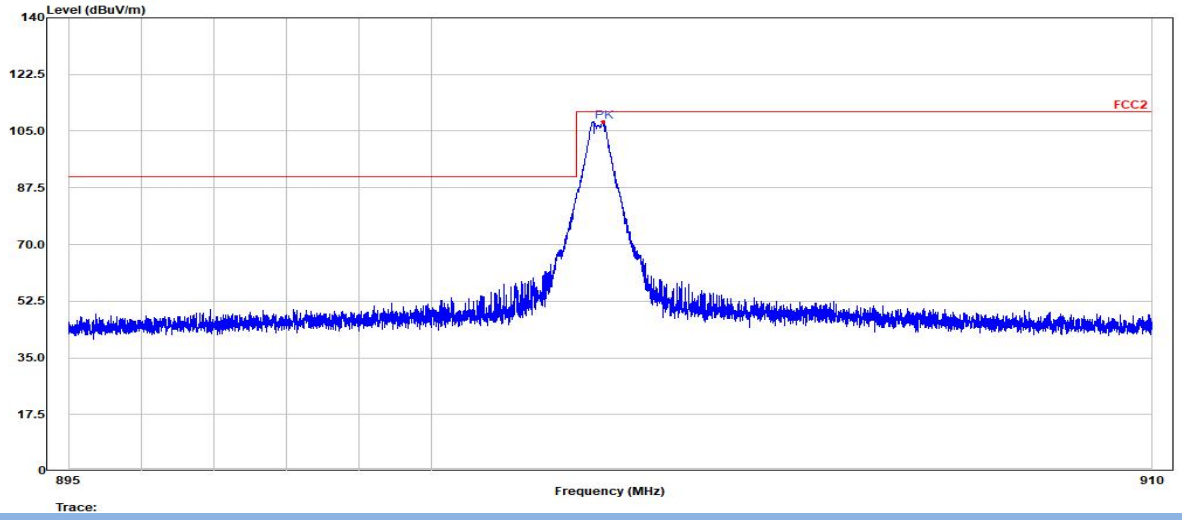
A.9 Band Edge (Restricted-band band-edge)

Note [1]: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.
Note [2]: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.
Note [3]: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.
Note [4]: The Level (dBuV/m) has been corrected by factor.

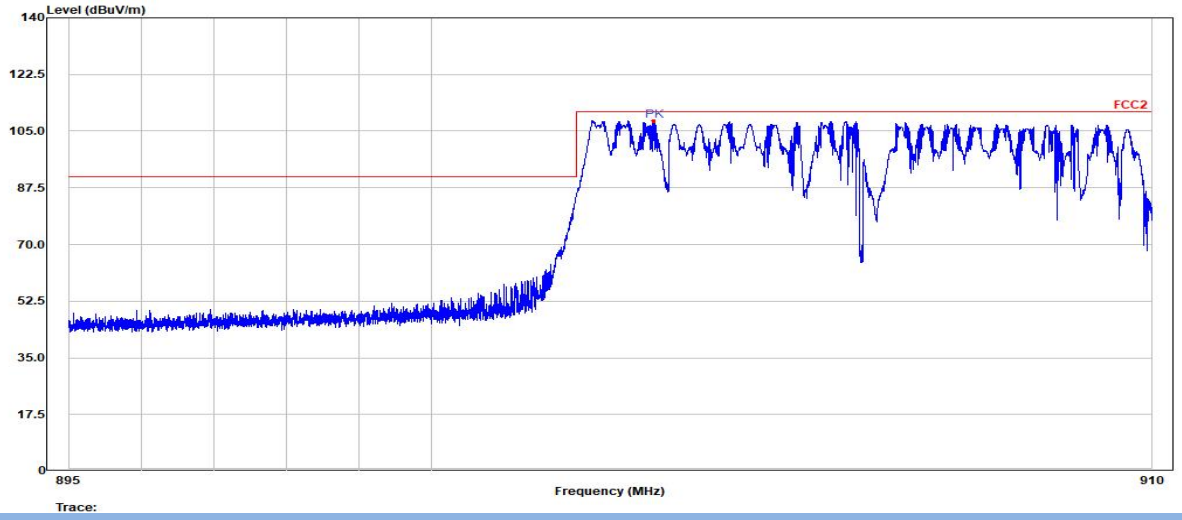
TDT

Test Plots

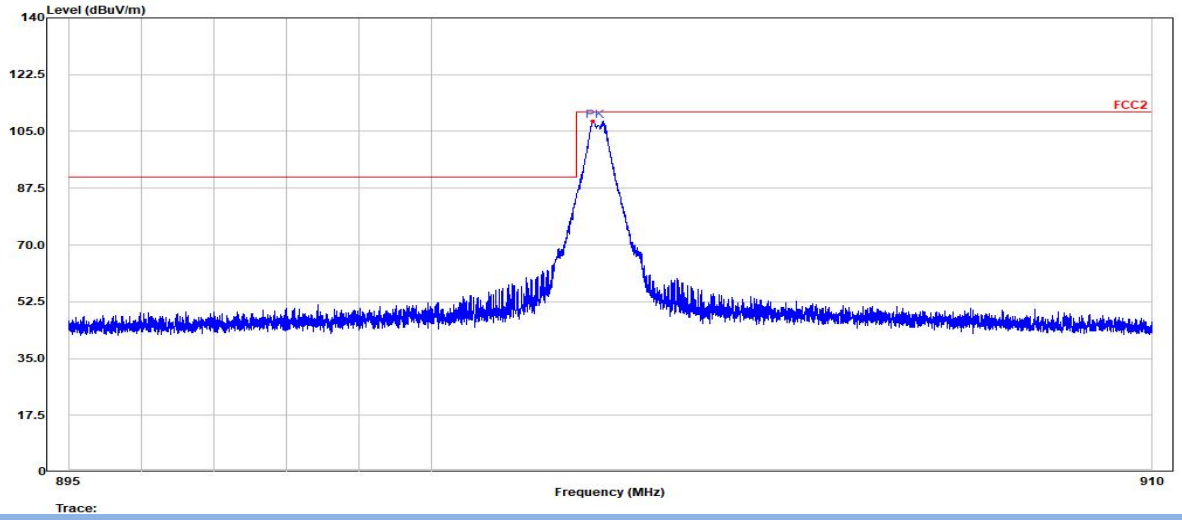
57600kbps，902.3MHz，Single Mode,Horizontal



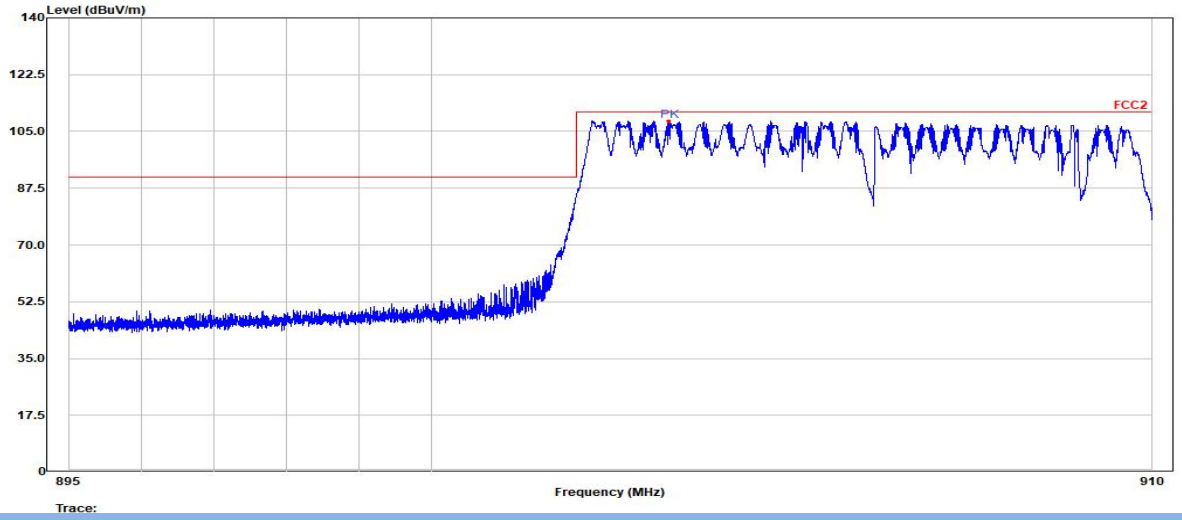
57600kbps，902.3MHz，Hopping Mode,Horizontal



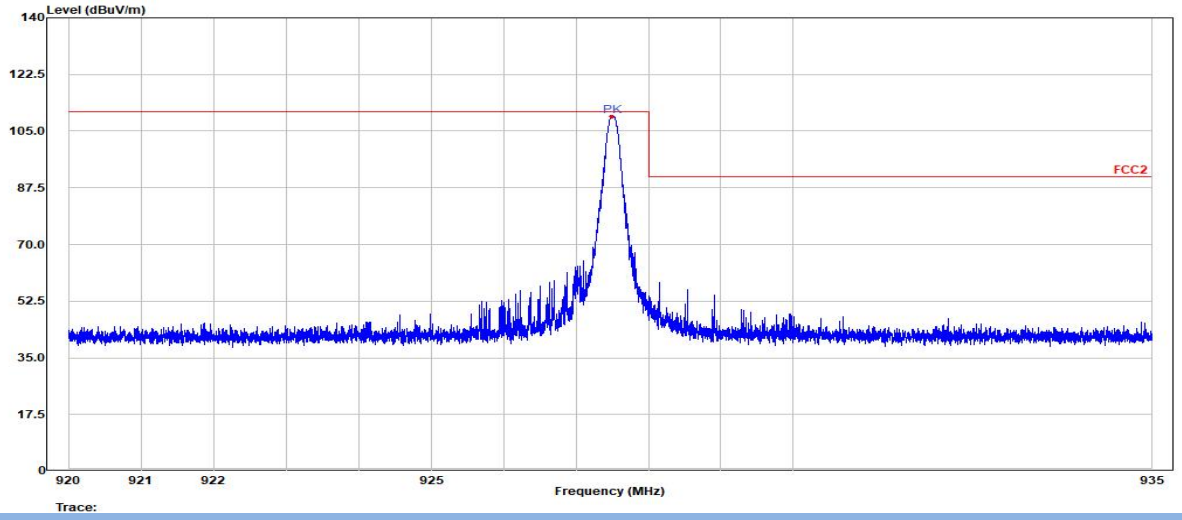
57600kbps，902.3MHz，Single Mode,Vertical



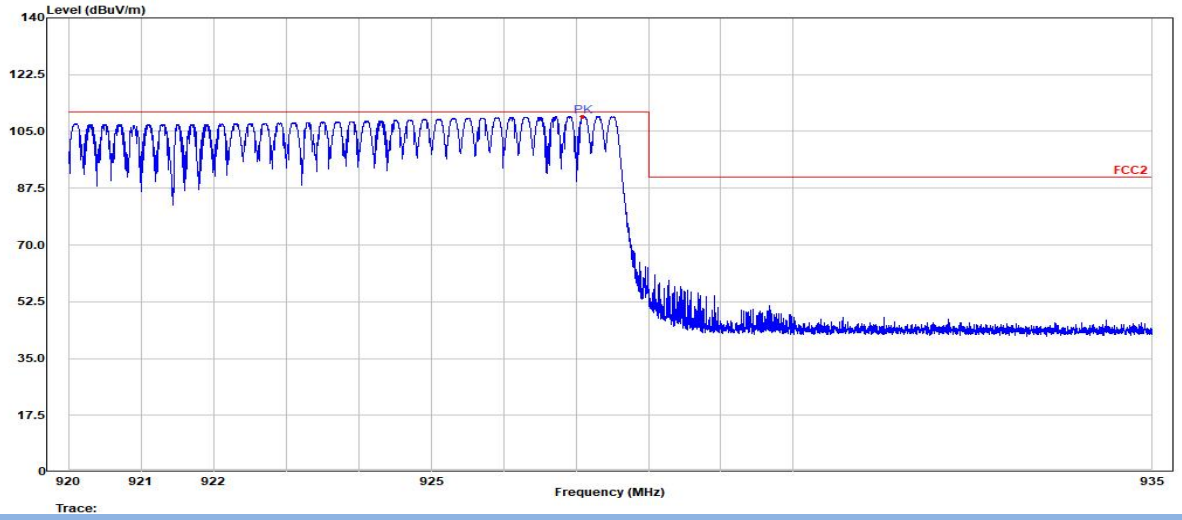
57600kbps，902.3MHz，Hopping Mode,Vertical



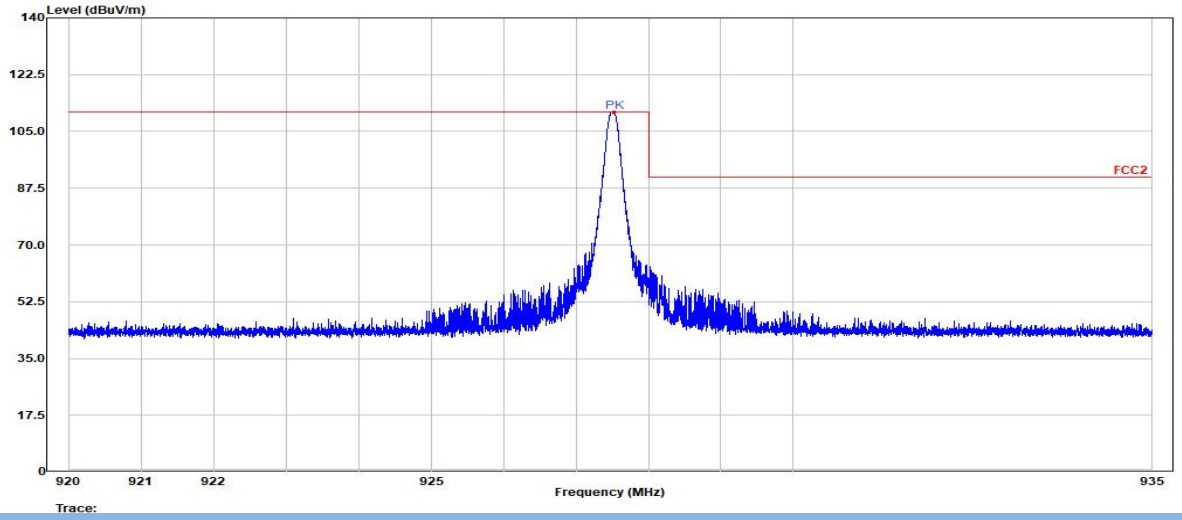
57600kbps，927.5MHz，Single Mode,Horizontal



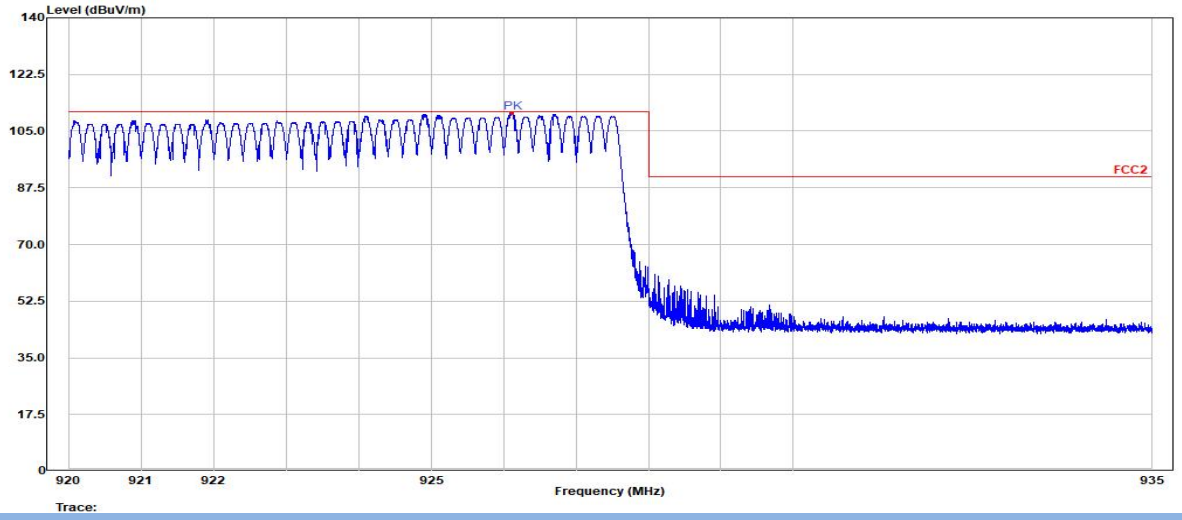
57600kbps，927.5MHz，Hopping Mode,Horizontal



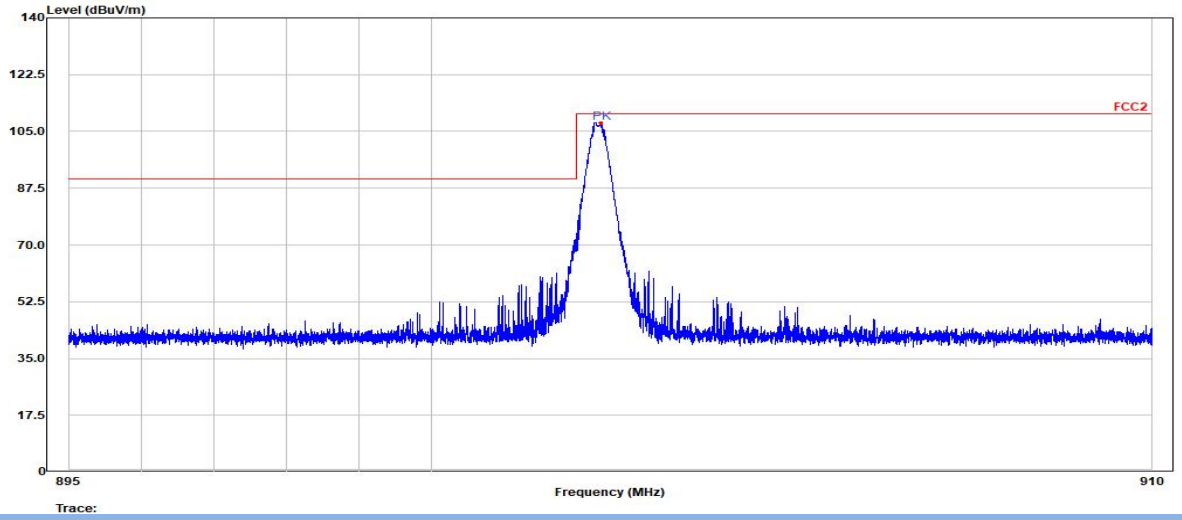
57600kbps，927.5MHz，Single Mode,Vertical



57600kbps，927.5MHz，Hopping Mode,Vertical



172800kbps，902.3MHz，Single Mode,Horizontal



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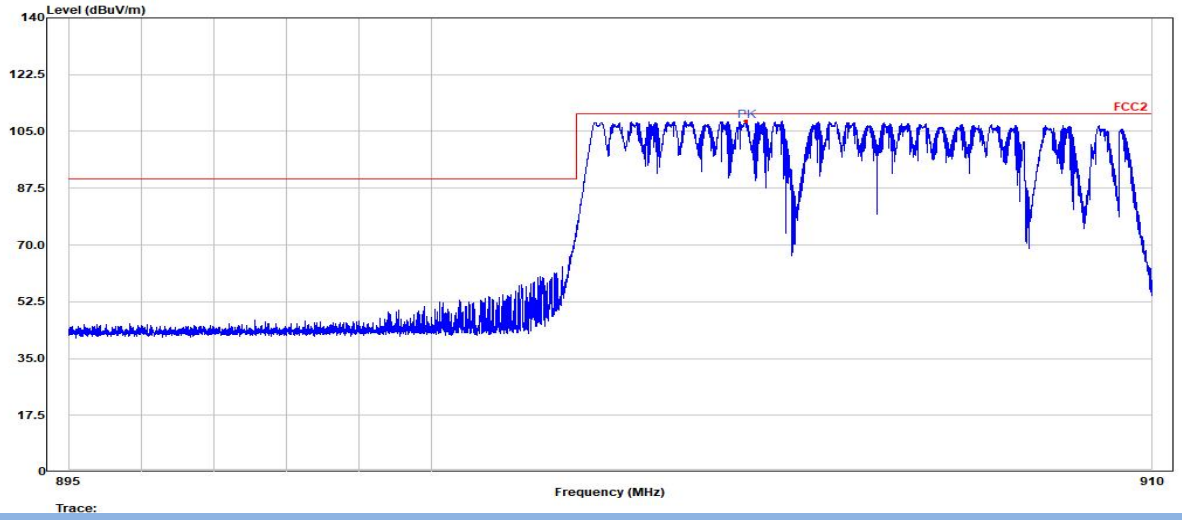
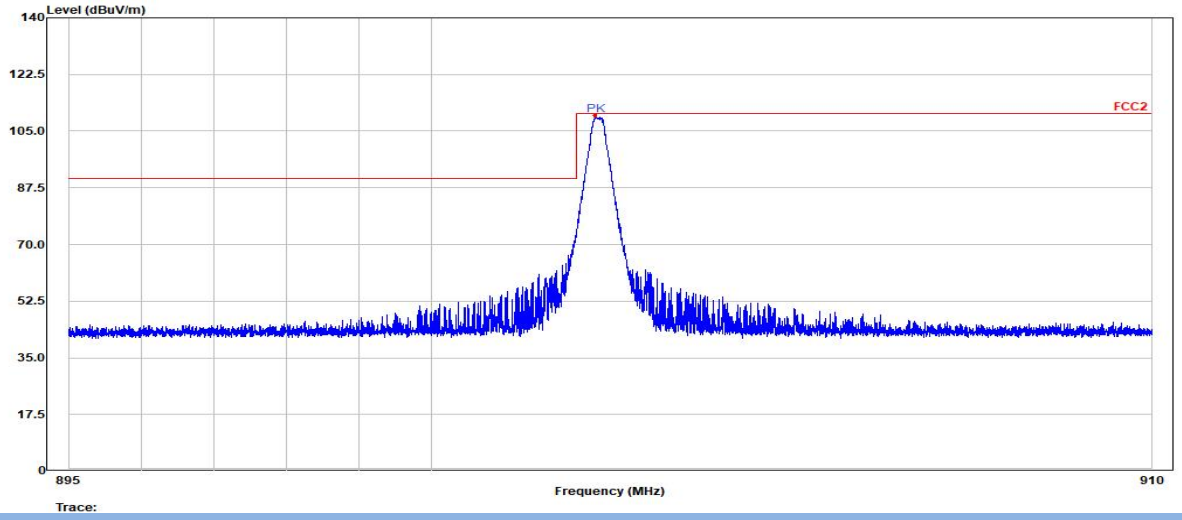


172800kbps，902.3MHz，Single Mode,Vertical



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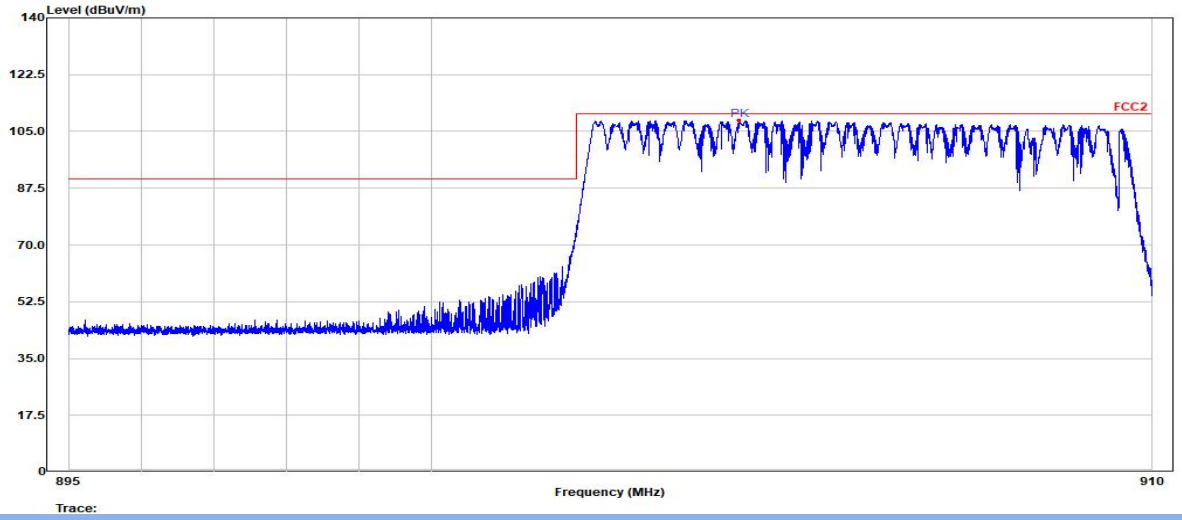

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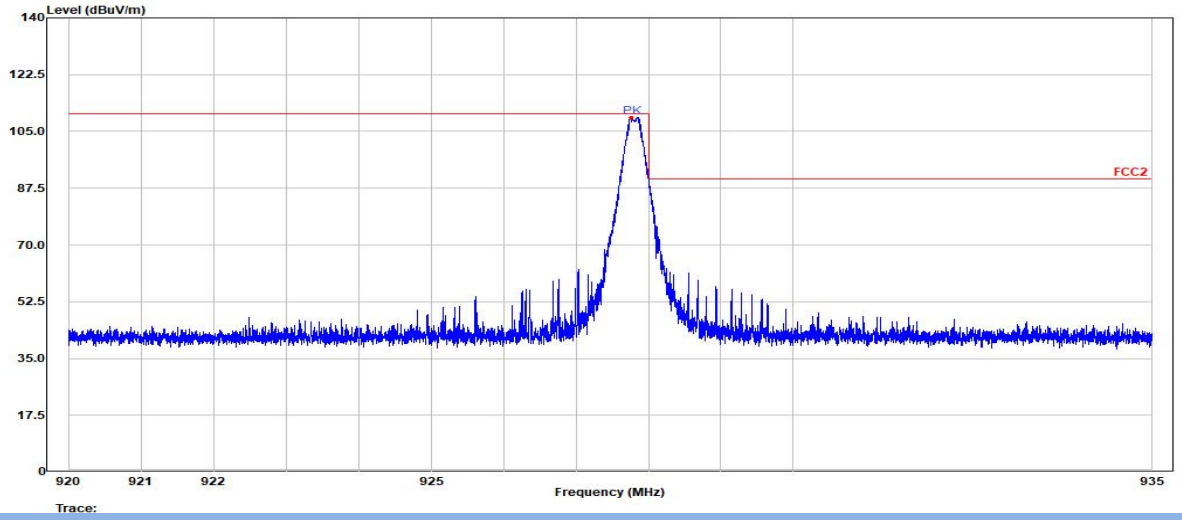

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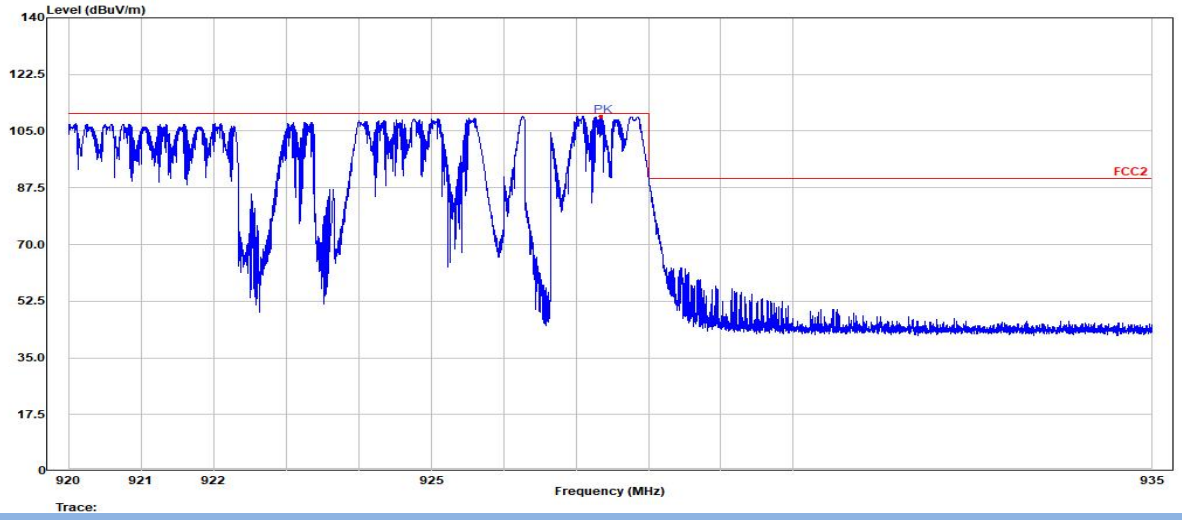

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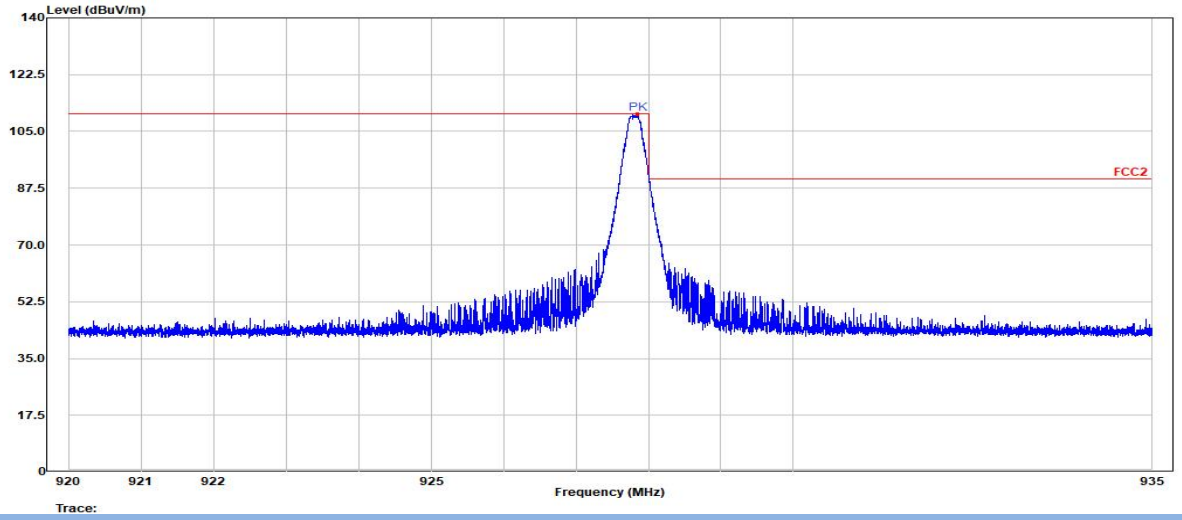

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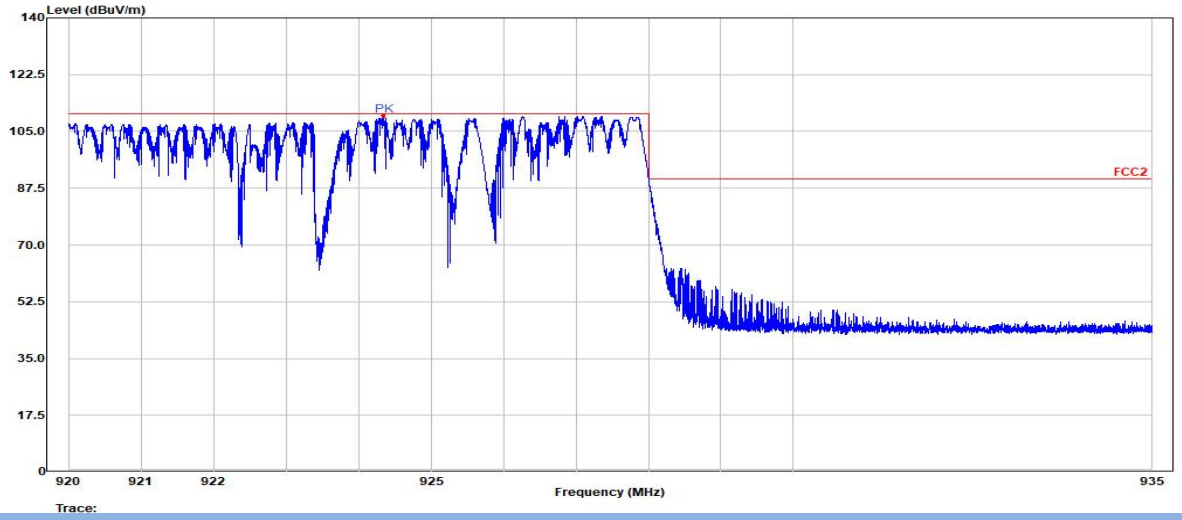

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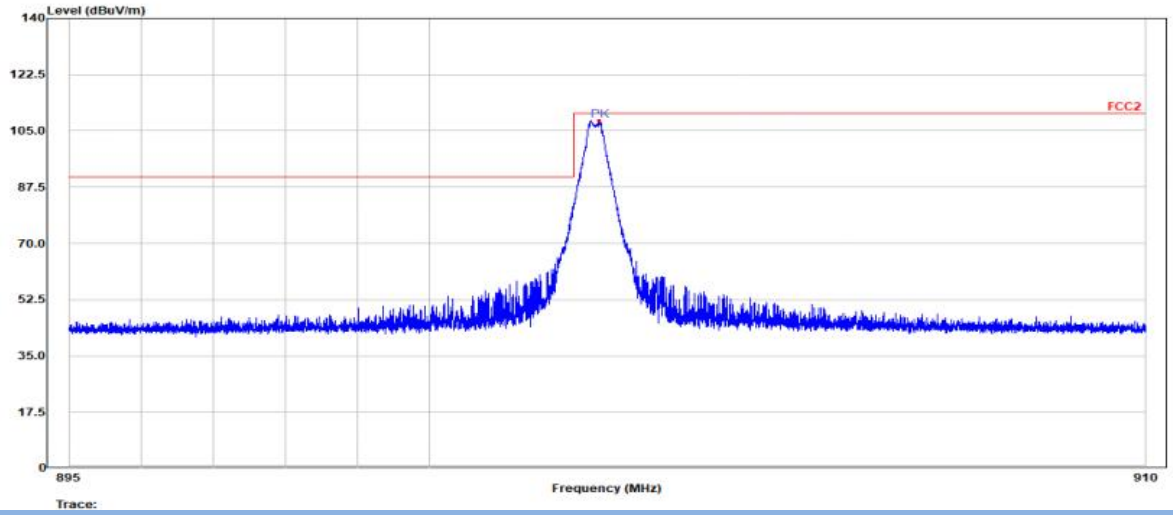

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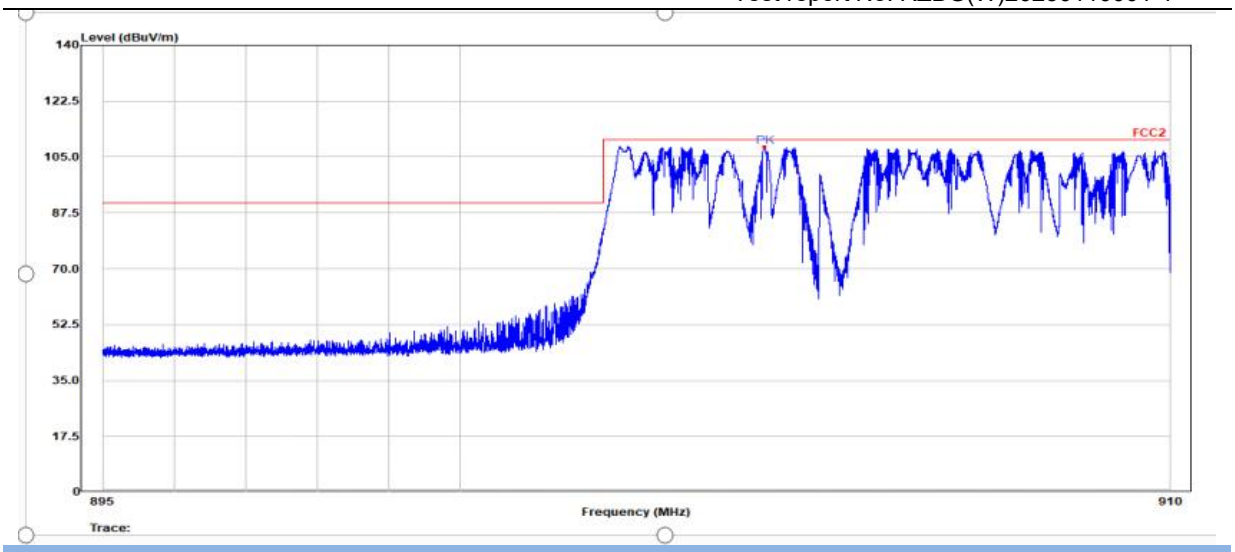

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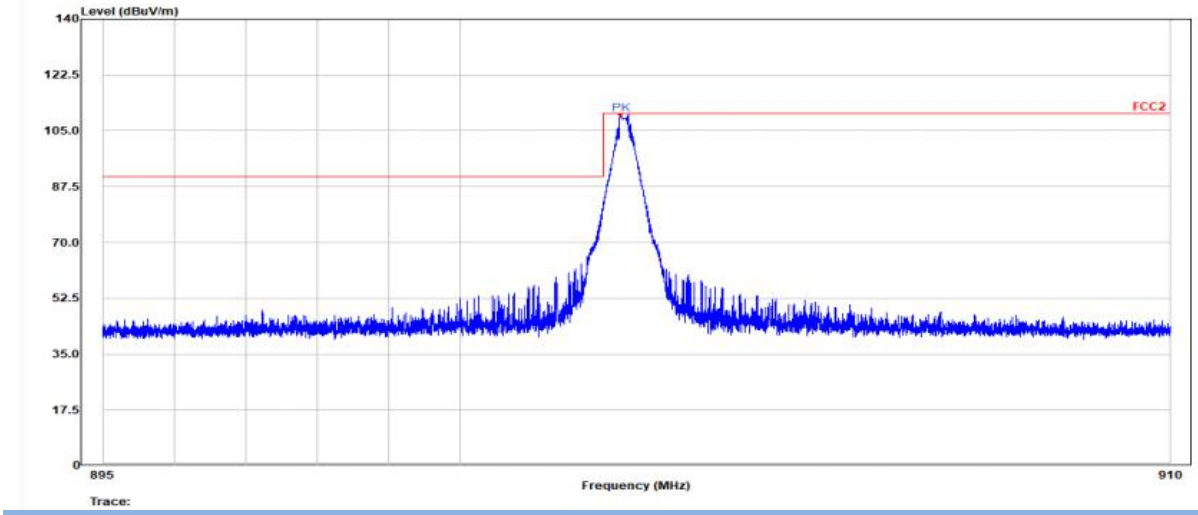
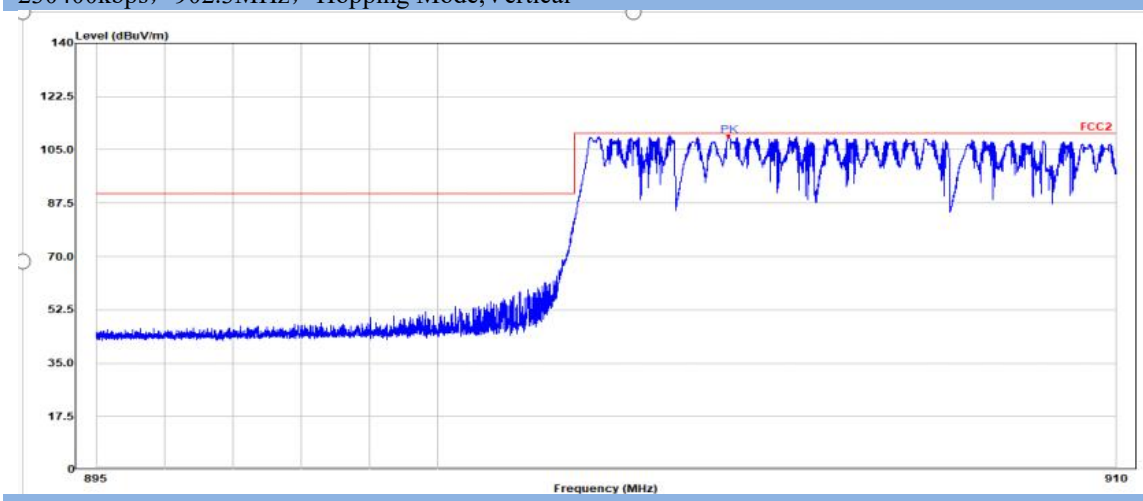
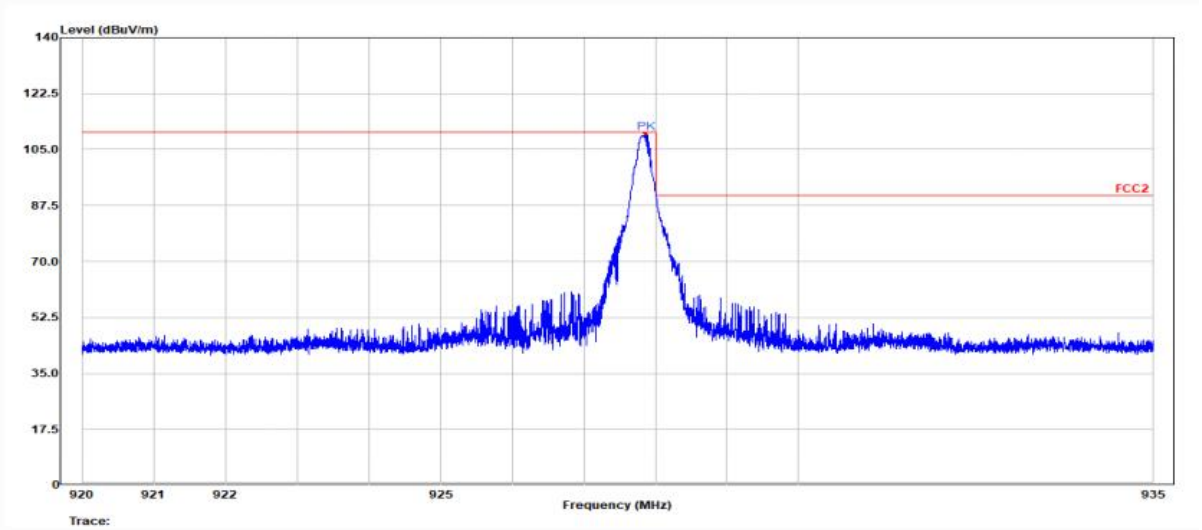


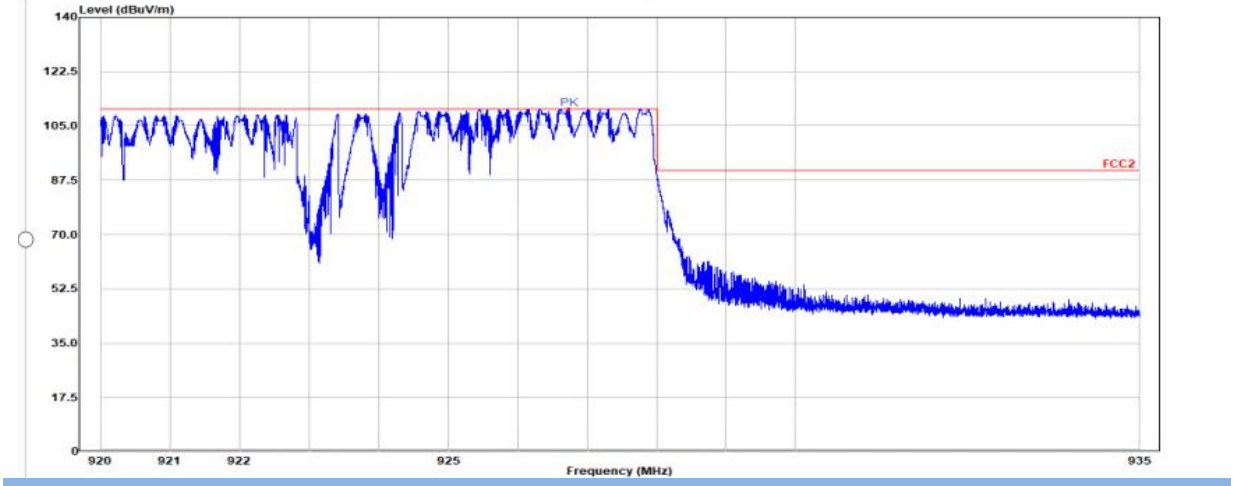
230400kbps，902.3MHz，Hopping Mode,Vertical



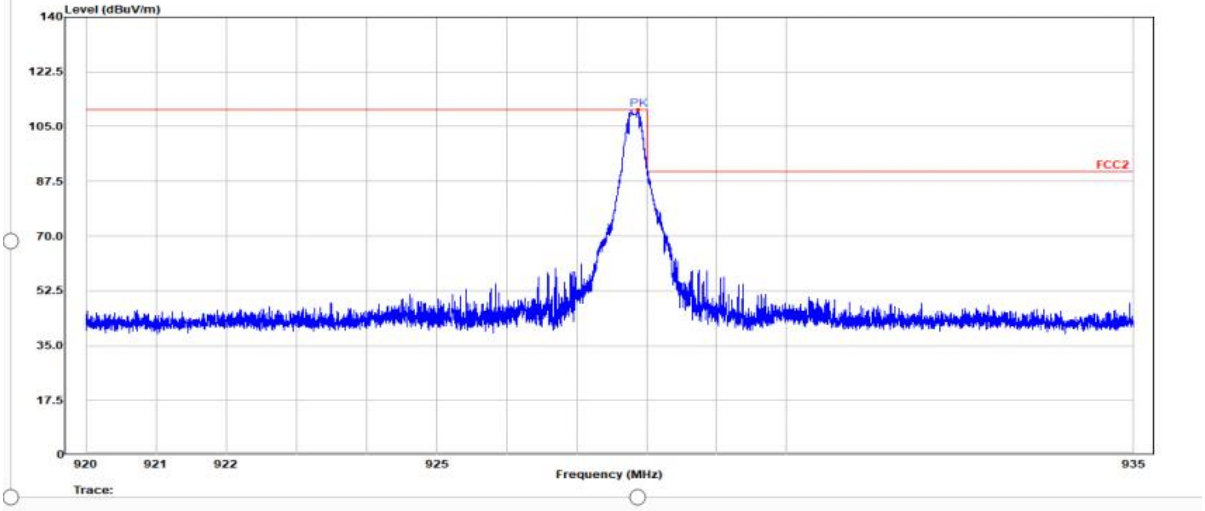
230400kbps，927.82MHz，Single Mode,Horizontal



230400kbps，927.82MHz，Hopping Mode,Horizontal



23040000kbps，927.82MHz，Single Mode,Vertical



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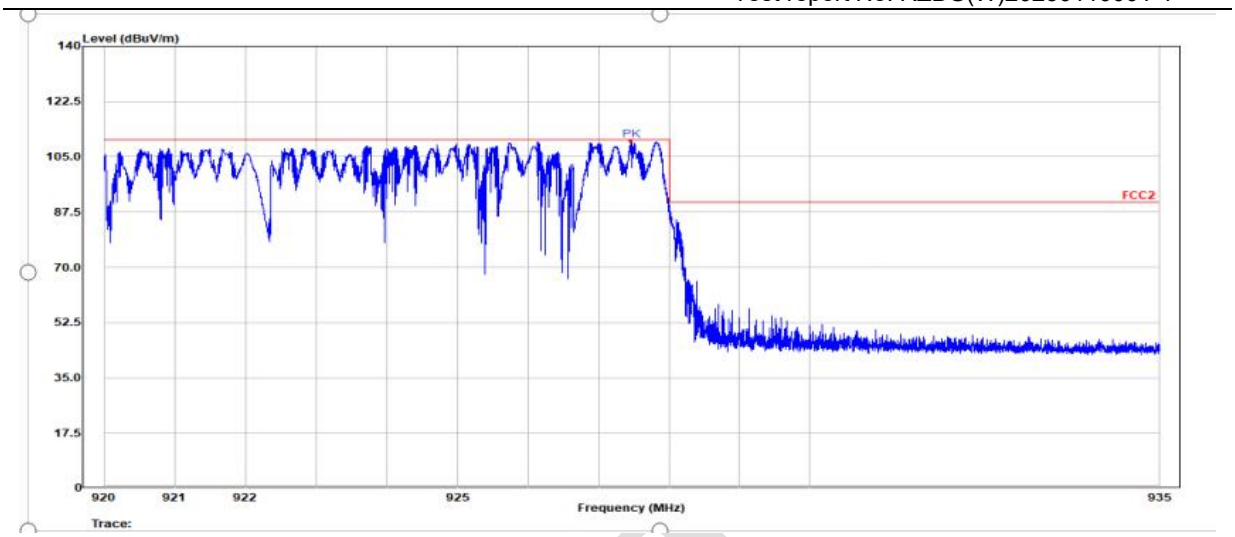
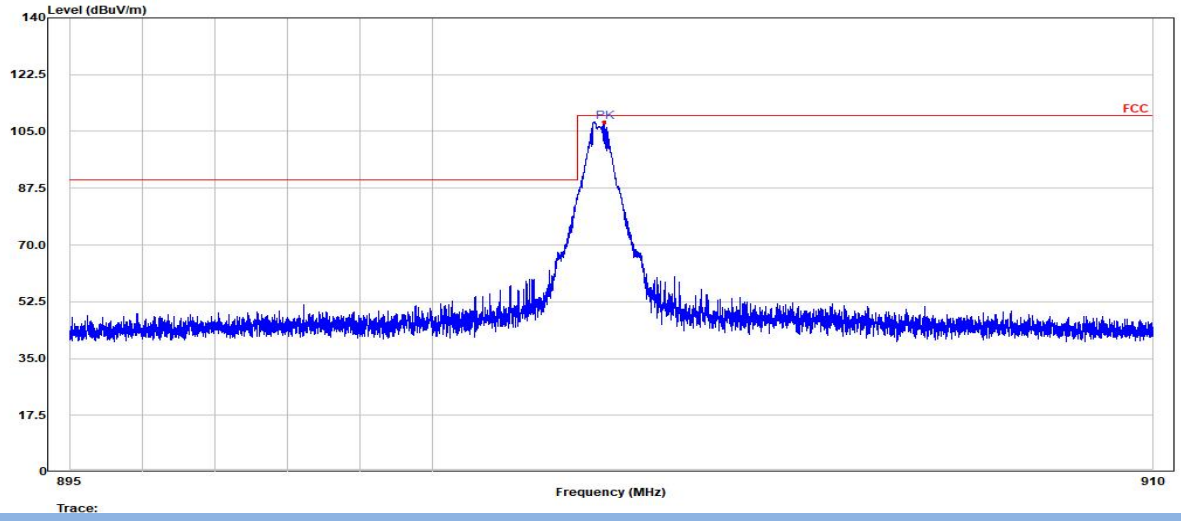
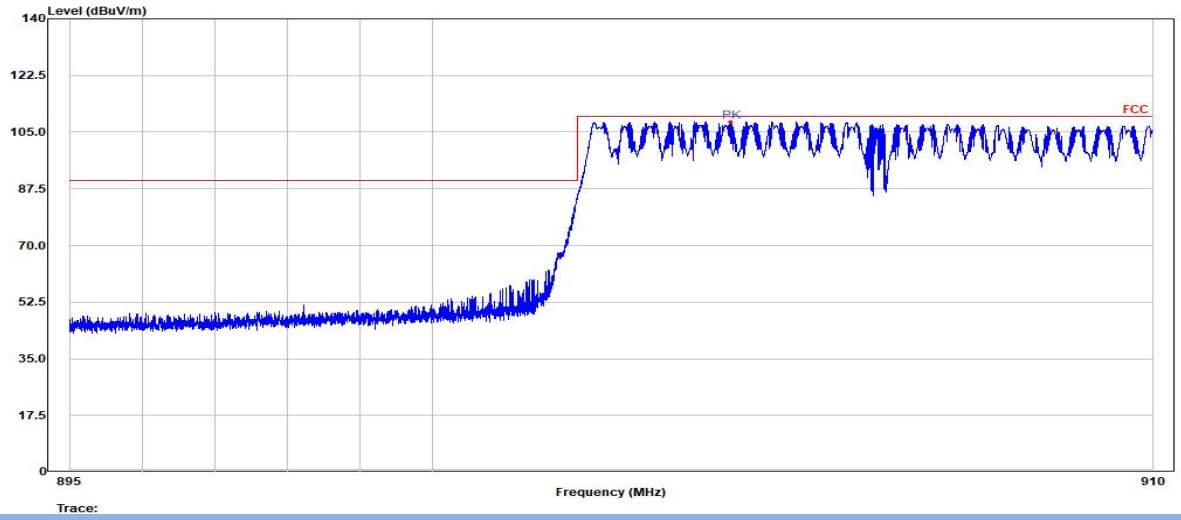


276400kbps，902.3MHz，Single Mode,Horizontal



27640000kbps，902.3MHz，Hopping Mode,Horizontal



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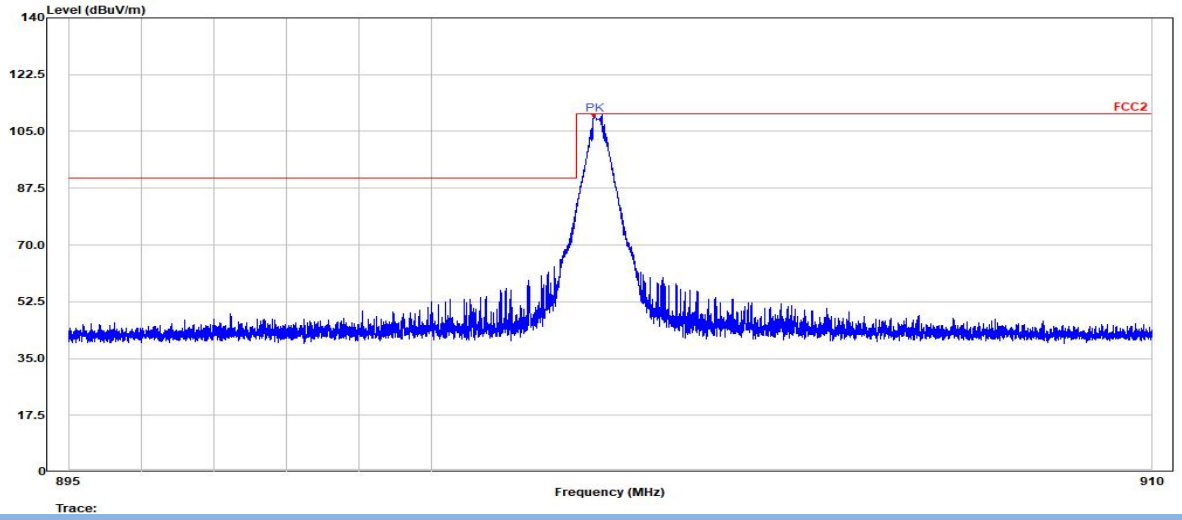

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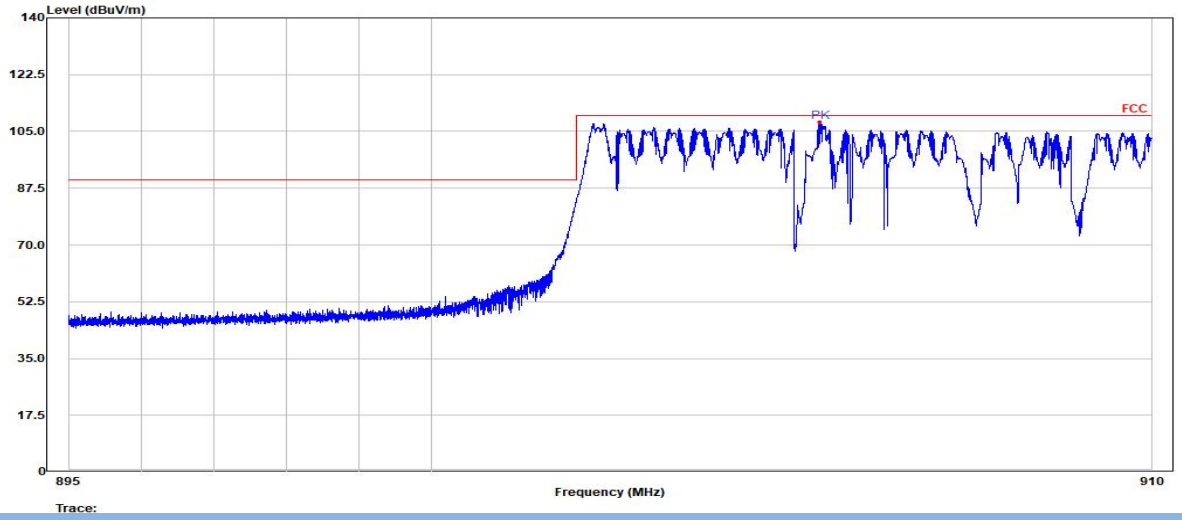

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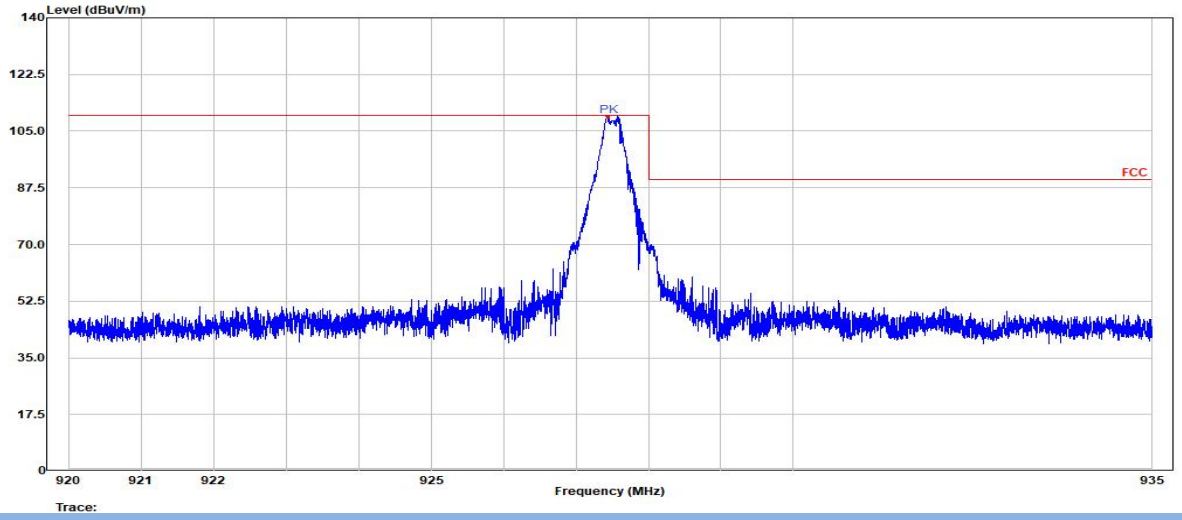
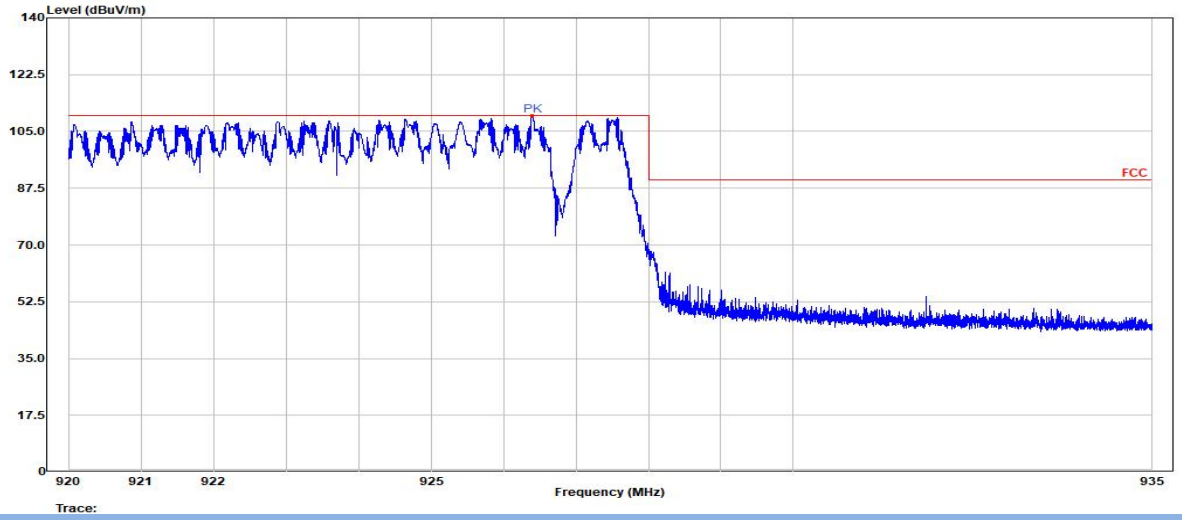


276400kbps，927.5MHz，Hopping Mode,Horizontal



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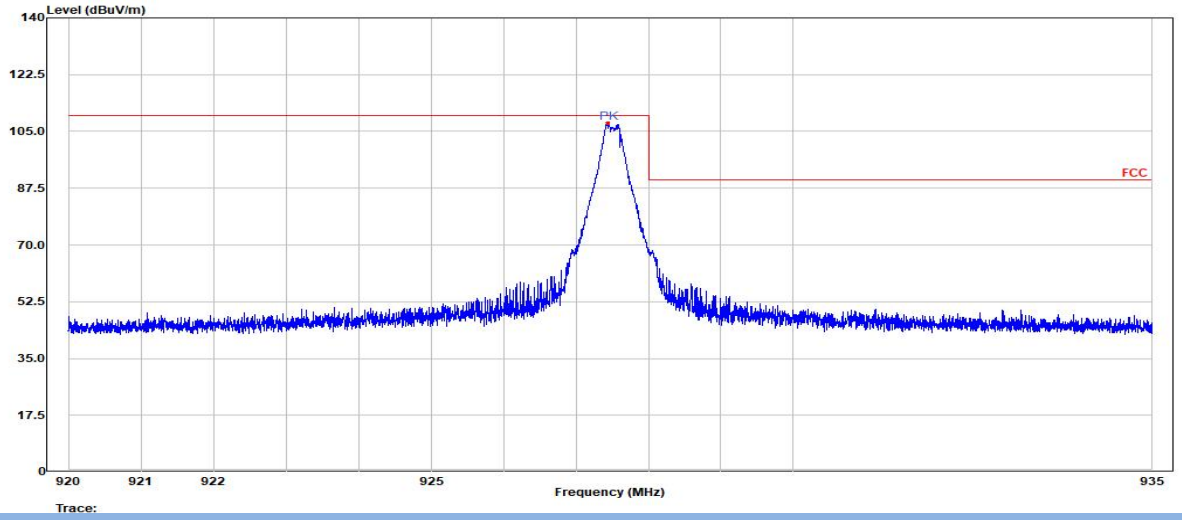
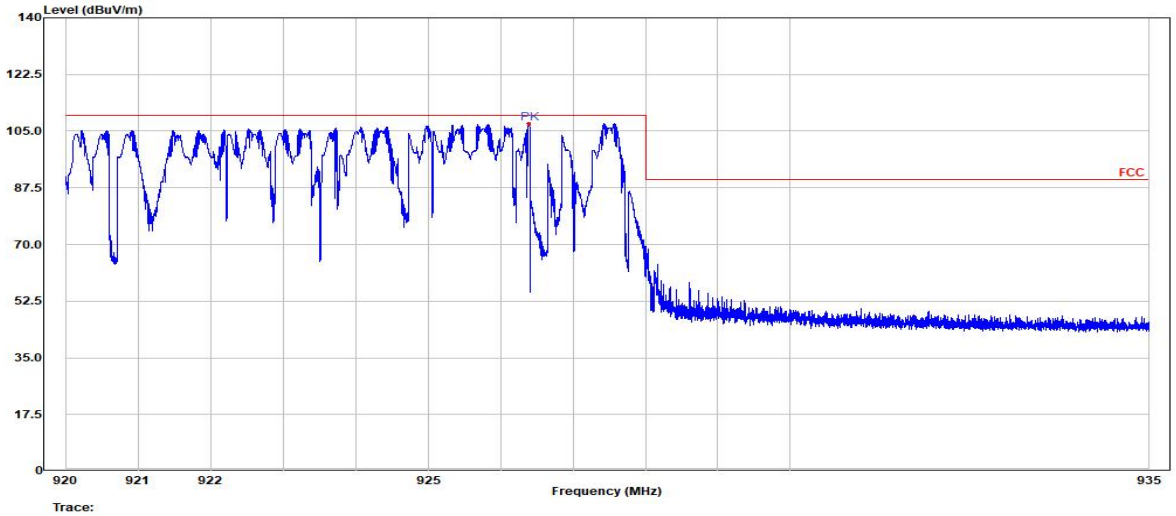


276400kbps，927.5MHz，Hopping Mode,Vertical



Annex B Test Setup Photograph

Please refer the document “RZBG(W)20230110001-2 RF Test Setup Photos”pdf

Annex C EUT Internal Photograph

Please refer the document “RZBG(W) 20230110001-3 EUT Internal Photos”pdf

Annex D EUT External Photograph

Please refer the document “RZBG(W) 20230110001-4 EUT External Photos”pdf

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Annex E Revision History

Version	Issue Date	Revisions Content
Rev.01	Mar.20.2023	Initial Issue

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