FCC TEST REPORT

FCC ID: 2BNMC-TPB14

Report No.	:	SSP25010145-1E
Prepared For	:	Orijinal Teknoloji Dis Tic. Ltd. Sti
Product Name	:	Power Bank
Model Name	:	TPB14
FCC Rule	:	FCC Part 15 Subpart C
Date of Issue	:	2025-01-23

Shenzhen CCUT Quality Technology Co., Ltd.
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This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen CCUT Quality Technology Co., Ltd.

Test Report Basic Information

Applicant.....:	Orijinal Teknoloji Dis Tic. Ltd. Sti
Address of Applicant.....:	Murat Cesme Mah. E5 Londra Asfalti Cad. No: 122A Buyukcekmece Istanbul Turkey
Manufacturer.....:	Dongguan X-Power Intelligent Technology Co.,LTD
Address of Manufacturer.....:	Room 1002, Building 25, Tianan Shenchuang Valley, No. 179, Dongshen Road, Fenggang Town, Dongguan City, Guangdong Province, China
Product Name.....:	Power Bank
Brand Name.....:	BIX
Main Model.....:	TPB14
Series Models.....:	-
Test Standard.....:	FCC Part 15 Subpart C ANSI C63.10-2013
Date of Test .....:	2025-01-14 to 2025-01-23
Test Result.....:	PASS
Tested By .....:	Lorzix Luo (Lorzix Luo)
Reviewed By.....:	Lieber Ouyang (Lieber Ouyang)
Authorized Signatory.....:	Lahm Peng (Lahm Peng)

Shenzhen CCUT Quality Technology Co., Ltd. APPROVED

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Revision History

Revision	Issue Date	Description	Revised By
V1.0	2025-01-23	Initial Release	Lahm Peng

1. General Information

1.1 Product Information

Product Name:	Power Bank
Trade Name:	BIX
Main Model:	TPB14
Series Models:	-
Rated Voltage:	Type-C Input: 5V⎓3A, 9V⎓2A Type-C Output: 5V⎓3A, 9V⎓2.22A, 12V⎓1.5A Wireless charging: 5W, 7.5W, 10W, 15W
Battery:	DC 3.85V, 5000mAh, 19.25Wh
Hardware Version:	V1.0
Software Version:	V1.0
Note 1: The test data is gathered from a production sample, provided by the manufacturer.	

Wireless Specification	
Wireless Standard:	Wireless charging
Operating Frequency:	Wireless charging Output:110.5kHz-205kHz,
Modulation:	FSK
Antenna Gain:	0dBi
Type of Antenna:	Coil Antenna
Type of Device:	☒ Portable Device ☐ Mobile Device ☐ Modular Device

1.2 Test Setup Information

List of Test Modes		
Test Mode	Description	Remark
TM1	Wireless charging 15W	-
TM2	Wireless charging 10W	-
TM3	Wireless charging 7.5W	-
TM4	Wireless charging 5W	-
TM5	Wireless charging 5W+Charging	-
Note: All modes have been tested and only the worst mode Wireless charging 15W and Wireless charging 5W+Chargiing.		

List and Details of Auxiliary Cable			
Description	Length (cm)	Shielded/Unshielded	With/Without Ferrite
USB Cable	100	Unshielded	Without Ferrite
-	-	-	-

List and Details of Auxiliary Equipment			
Description	Manufacturer	Model	Serial Number
Dummy load	YBZ	YBZ-001	N/A
Adapter	UGREEN	CD289	90324

1.3 Compliance Standards

Compliance Standards	
FCC Part 15 Subpart C	FEDERAL COMMUNICATIONS COMMISSION, RADIO FREQUENCY DEVICES, Intentional Radiators
All measurements contained in this report were conducted with all above standards	
According to standards for test methodology	
FCC Part 15 Subpart C	FEDERAL COMMUNICATIONS COMMISSION, RADIO FREQUENCY DEVICES, Intentional Radiators
ANSI C63.4-2014	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.
ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Maintenance of compliance is the responsibility of the manufacturer or applicant. Any modification of the product, which result is lowering the emission, should be checked to ensure compliance has been maintained.	

1.4 Test Facilities

Laboratory Name:	**Shenzhen CCUT Quality Technology Co., Ltd.** 1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China
CNAS Laboratory No.:	L18863
A2LA Certificate No.:	6893.01
FCC Registration No:	583813
ISED Registration No.:	CN0164
All measurement facilities used to collect the measurement data are located at 1F, Building 35, Changxing Technology Industrial Park, Yutang Street, Guangming District, Shenzhen, Guangdong, China.	

1.5 List of Measurement Instruments

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Conducted Emissions					
AMN	ROHDE&SCHWARZ	ENV216	101097	2024-08-07	2025-08-06
EMI Test Receiver	ROHDE&SCHWARZ	ESPI	100242	2024-08-07	2025-08-06
Test Cable	N/A	Cable 5	N/A	2024-08-07	2025-08-06
EMI Test Software	FARA	EZ-EMC	EMEC-3A1+	N/A	N/A
Radiated Emissions					
EMI Test Receiver	ROHDE&SCHWARZ	ESPI	100154	2024-08-07	2025-08-06
Spectrum Analyzer	KEYSIGHT	N9020A	MY48030972	2024-08-07	2025-08-06
Amplifier	SCHWARZBECK	BBV 9743B	00251	2024-08-07	2025-08-06
Amplifier	HUABO	YXL0518-2.5-45	--	2024-08-07	2025-08-06
Loop Antenna	DAZE	ZN30900C	21104	2024-08-03	2025-08-02
Broadband Antenna	SCHWARZBECK	VULB 9168	01320	2024-08-03	2025-08-02
Horn Antenna	SCHWARZBECK	BBHA 9120D	02553	2024-08-03	2025-08-02
Attenuator	QUANJUDA	6dB	220731	2024-08-07	2025-08-06
Test Cable	N/A	Cable 1	N/A	2024-08-07	2025-08-06
Test Cable	N/A	Cable 2	N/A	2024-08-07	2025-08-06
Test Cable	N/A	Cable 3	N/A	2024-08-07	2025-08-06
Test Cable	N/A	Cable 4	N/A	2024-08-07	2025-08-06
EMI Test Software	FARA	EZ-EMC	FA-03A2 RE+	N/A	N/A
Conducted RF Testing					
RF Test System	MWRFTest	MW100-RFCB	220418SQS-37	2024-08-07	2025-08-06
Spectrum Analyzer	KEYSIGHT	N9020A	ATO-90521	2024-08-07	2025-08-06

1.6 Measurement Uncertainty

Test Item	Conditions	Uncertainty
Conducted Emissions	9kHz ~ 30MHz	±1.64 dB
Radiated Emissions	9kHz ~ 30MHz	±2.88 dB
	30MHz ~ 1GHz	±3.32 dB
	1GHz ~ 18GHz	±3.50 dB
	18GHz ~ 40GHz	±3.66 dB
Occupied Bandwidth	9kHz ~ 26GHz	±4.0 %

2. Summary of Test Results

FCC Rule	Description of Test Item	Result
FCC Part 15.203	Antenna Requirement	Passed
FCC Part 15.207	Conducted Emissions	Passed
FCC Part 15.209	Radiated Emissions	Passed
FCC Part 15.215(c)	Occupied Bandwidth	Passed
Passed: The EUT complies with the essential requirements in the standard Failed: The EUT does not comply with the essential requirements in the standard N/A: Not applicable		

3. Antenna Requirement

3.1 Standard and Limit

According to FCC Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.2 Test Result

This product has an Coil antenna, fulfill the requirement of this section.

4. Conducted Emissions

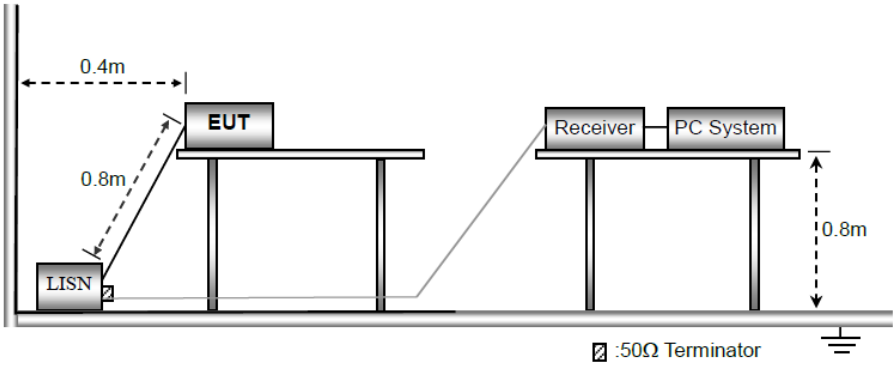
4.1 Standard and Limit

According to the rule FCC Part 15.207, Conducted emissions limit, the limit for a wireless device as below:

Frequency of Emission (MHz)	Conducted emissions (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Note 1: Decreases with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz Note 2: The lower limit applies at the band edges		

4.2 Test Procedure

Test is conducting under the description of ANSI C63.10 - 2013 section 6.2.



Test Setup Block Diagram

a) The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

b) The following is the setting of the receiver
Attenuation: 10dB
Start Frequency: 0.15MHz
Stop Frequency: 30MHz
IF Bandwidth: 9kHz

c) The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

d) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
e) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

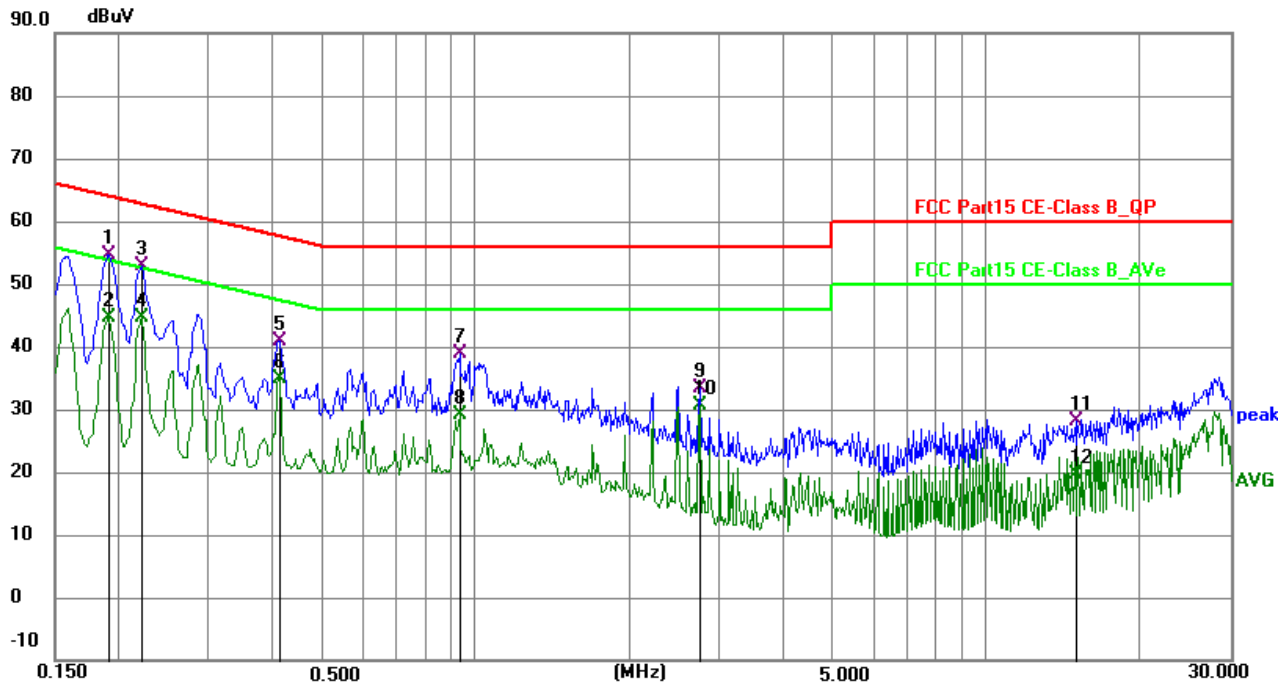
f) LISN is at least 80 cm from nearest part of EUT chassis.

g) For the actual test configuration, please refer to the related Item - photographs of the test setup.

4.3 Test Data and Results

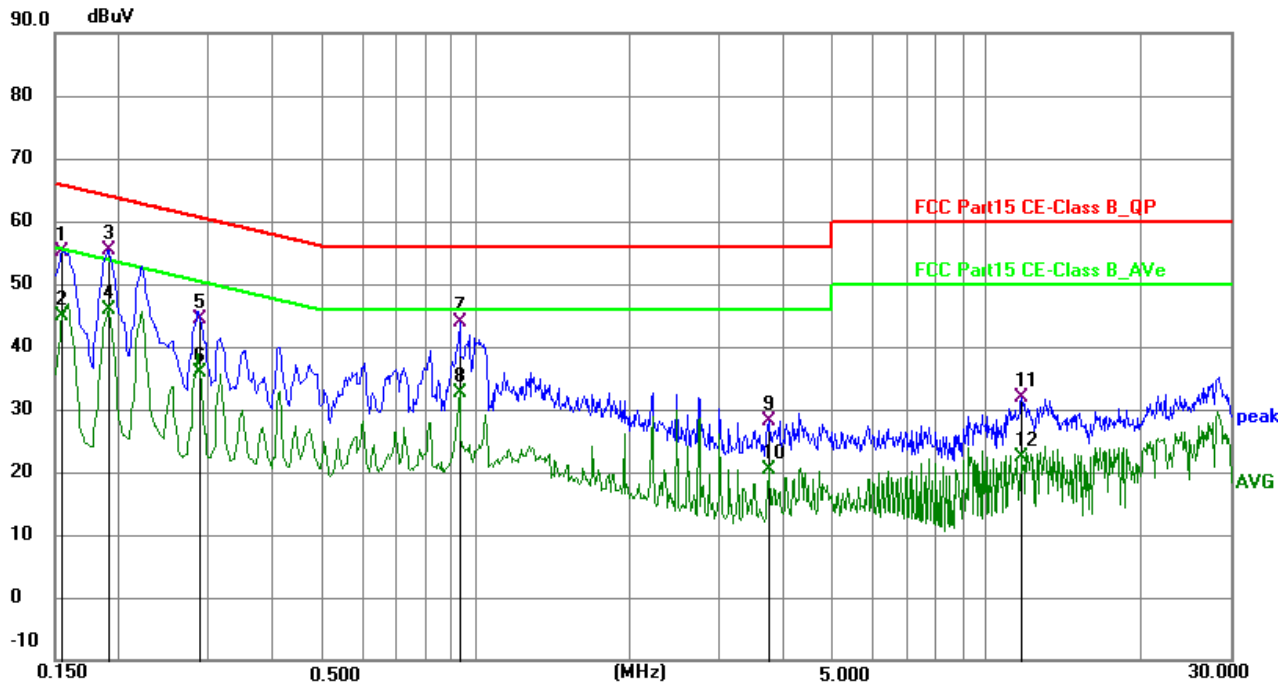
Based on all tested mode data, the EUT complied with the FCC Part 15.207 standard limit for a wireless device, and with the worst case as below:
Remark: Level = Reading + Factor, Margin = Level - Limit

Test Plots and Data of Conducted Emissions	
Tested Mode:	TM5
Test Voltage:	AC 120V/60Hz
Test Power Line:	Neutral
Remark:	



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1905	45.46	9.21	54.67	64.01	-9.34	QP	P	
2	0.1905	35.50	9.21	44.71	54.01	-9.30	AVG	P	
3	0.2220	43.74	9.25	52.99	62.74	-9.75	QP	P	
4 *	0.2220	35.28	9.25	44.53	52.74	-8.21	AVG	P	
5	0.4110	31.40	9.38	40.78	57.63	-16.85	QP	P	
6	0.4110	25.62	9.38	35.00	47.63	-12.63	AVG	P	
7	0.9285	29.61	9.39	39.00	56.00	-17.00	QP	P	
8	0.9285	19.77	9.39	29.16	46.00	-16.84	AVG	P	
9	2.7510	23.81	9.48	33.29	56.00	-22.71	QP	P	
10	2.7510	21.15	9.48	30.63	46.00	-15.37	AVG	P	
11	14.9955	18.59	9.53	28.12	60.00	-31.88	QP	P	
12	14.9955	10.02	9.53	19.55	50.00	-30.45	AVG	P	

Test Plots and Data of Conducted Emissions	
Tested Mode:	TM5
Test Voltage:	AC 120V/60Hz
Test Power Line:	Live
Remark:	



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1545	45.72	9.41	55.13	65.75	-10.62	QP	P	
2	0.1545	35.36	9.41	44.77	55.75	-10.98	AVG	P	
3	0.1905	45.96	9.39	55.35	64.01	-8.66	QP	P	
4 *	0.1905	36.43	9.39	45.82	54.01	-8.19	AVG	P	
5	0.2878	34.91	9.57	44.48	60.59	-16.11	QP	P	
6	0.2878	26.36	9.57	35.93	50.59	-14.66	AVG	P	
7	0.9285	34.39	9.58	43.97	56.00	-12.03	QP	P	
8	0.9285	23.16	9.58	32.74	46.00	-13.26	AVG	P	
9	3.7545	18.32	9.72	28.04	56.00	-27.96	QP	P	
10	3.7545	10.76	9.72	20.48	46.00	-25.52	AVG	P	
11	11.7060	22.06	9.75	31.81	60.00	-28.19	QP	P	
12	11.7060	12.67	9.75	22.42	50.00	-27.58	AVG	P	

5. Radiated Emissions

5.1 Standard and Limit

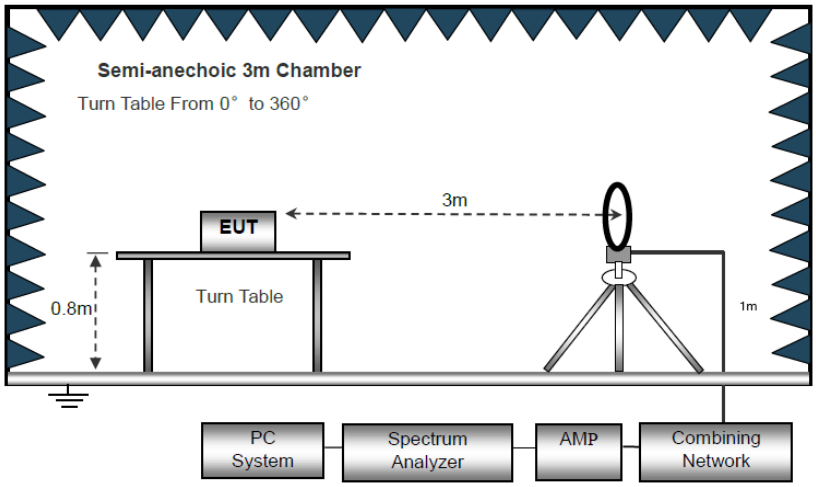
According to the rule FCC Part 15.209, Radiated emission limit for a wireless device as below:

Frequency of Emission (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3
Note: The more stringent limit applies at transition frequencies.		

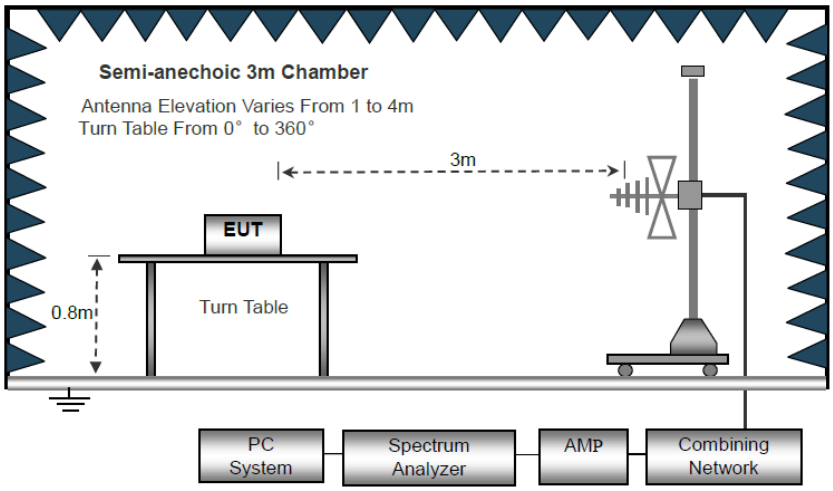
Note: Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

5.2 Test Procedure

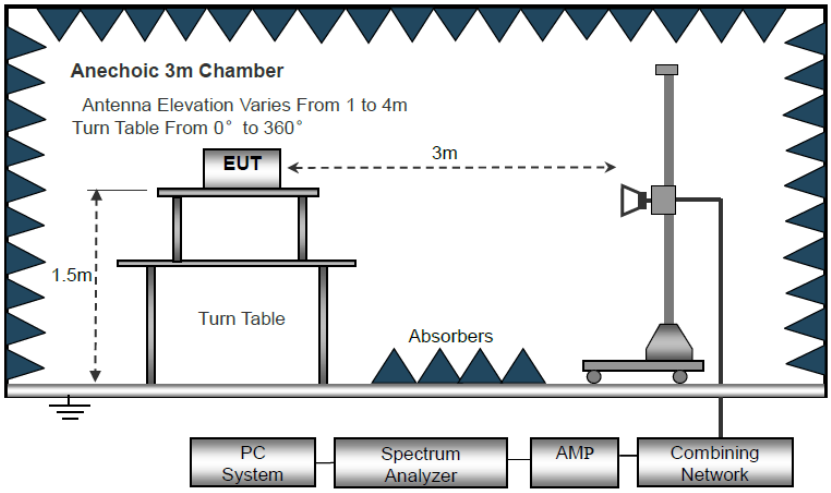
Test is conducting under the description of ANSI C63.10 - 2013 section 6.3 to 6.6.



Block Diagram of Radiated Emission Below 30MHz



Block Diagram of Radiated Emission From 30MHz to 1GHz



Block Diagram of Radiated Emission Above 1GHz

a) The EUT is placed on a turntable, which is 0.8m above ground plane for test frequency range below 1GHz, and 1.5m above ground plane for test frequency range above 1GHz.

b) EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.

c) Use the following spectrum analyzer settings:
Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1GHz, 100 kHz for f < 1 GHz, 10kHz for f < 30MHz
VBW ≥ RBW, Sweep = auto
Detector function = peak
Trace = max hold

d) Follow the guidelines in ANSI C63.4-2014 with respect to maximizing the emission by rotating the EUT, adjusting the measurement antenna height and polarization, etc. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, submit this data. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

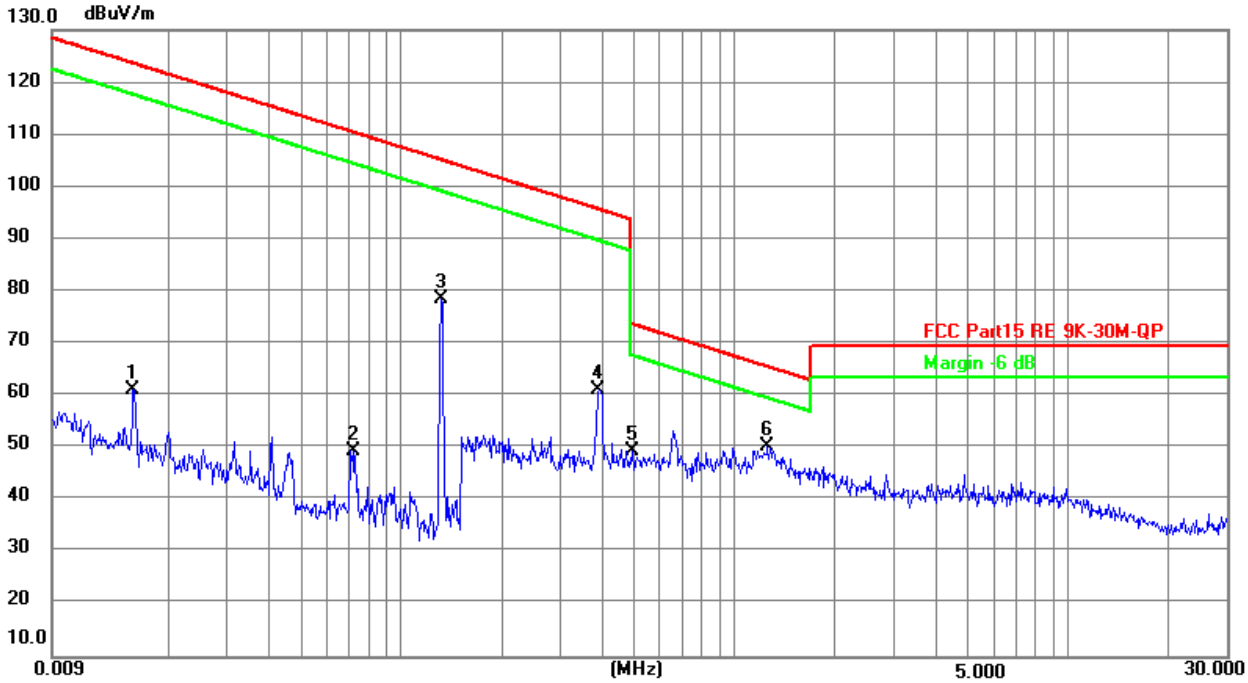
e) The peak level, once corrected, must comply with the limit specified in Section 15.209. Set the RBW = 1MHz, VBW = 10Hz, Detector = PK for AV value, while maintaining all of the other instrument settings.

f) For the actual test configuration, please refer to the related item - EUT test photos.

5.3 Test Data and Results

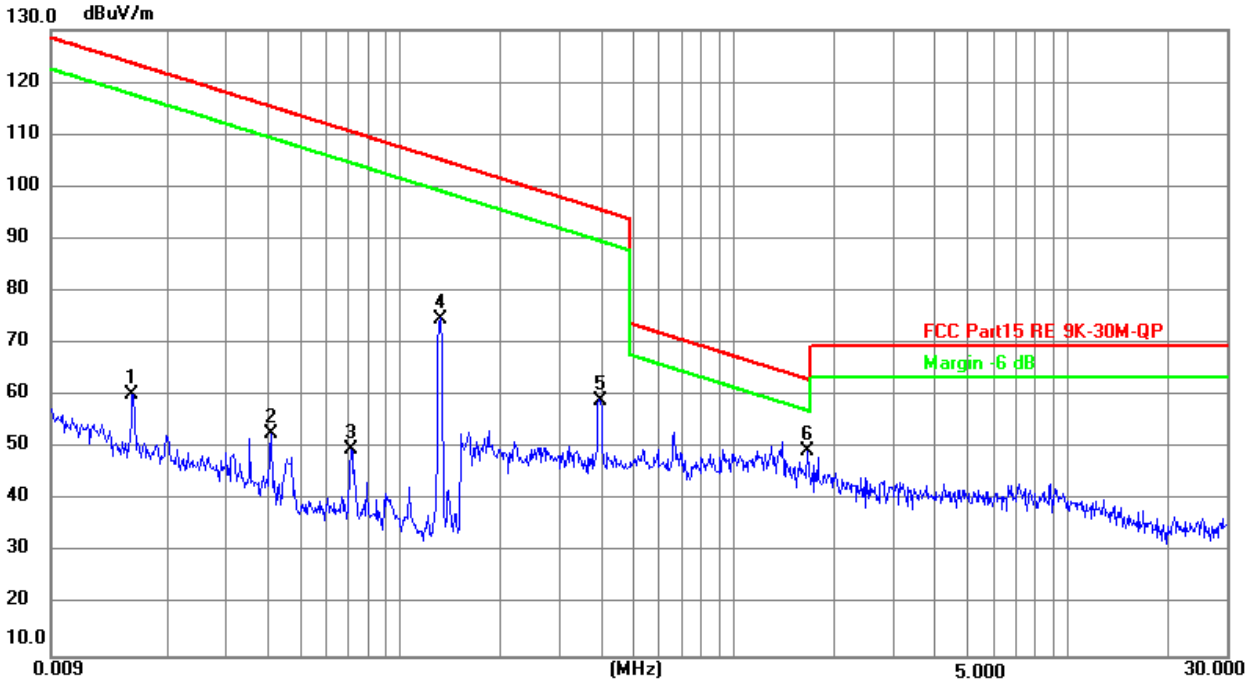
Based on all mode tested data, the EUT complied with the FCC Part 15.209 standard limit for a wireless device, and with the worst case TM1 and TM5 as below:

Test Data of Radiated Emissions from9kHz to 30MHz			
Test Mode:	TM1	Phase:	Coplaner
Test Voltage:	DC 3.85V from battery		
Remark:	Wireless charging 15W		



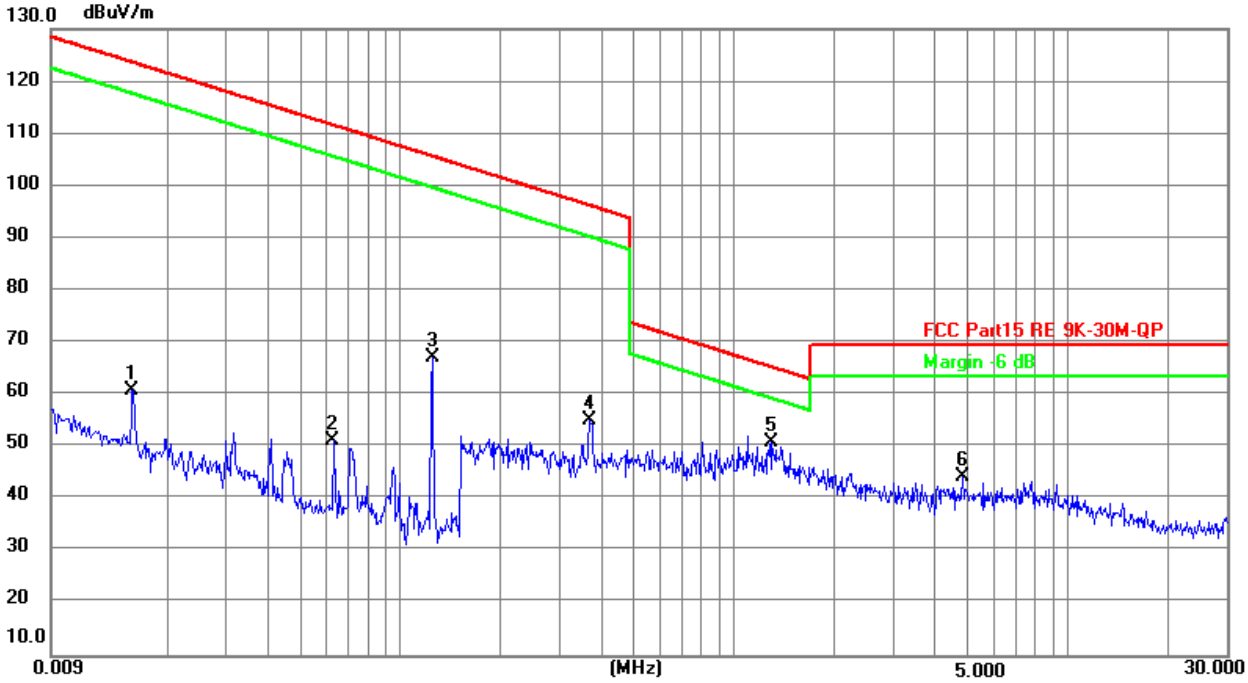
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.0157	25.86	35.37	61.23	123.67	-62.44	QP	100	328	P	
2	0.0713	23.34	26.22	49.56	110.53	-60.97	QP	100	196	P	
3	0.1317	53.05	25.37	78.42	105.21	-26.79	QP	100	348	P	
4	0.3933	35.40	25.76	61.16	95.71	-34.55	QP	100	136	P	
5	0.4914	23.87	25.64	49.51	73.78	-24.27	QP	100	166	P	
6 *	1.2488	24.44	25.96	50.40	65.67	-15.27	QP	100	226	P	

Test Mode:	TM1	Phase:	Coaxial
Test Voltage:	DC 3.85V from battery		
Remark:	Wireless charging 15W		



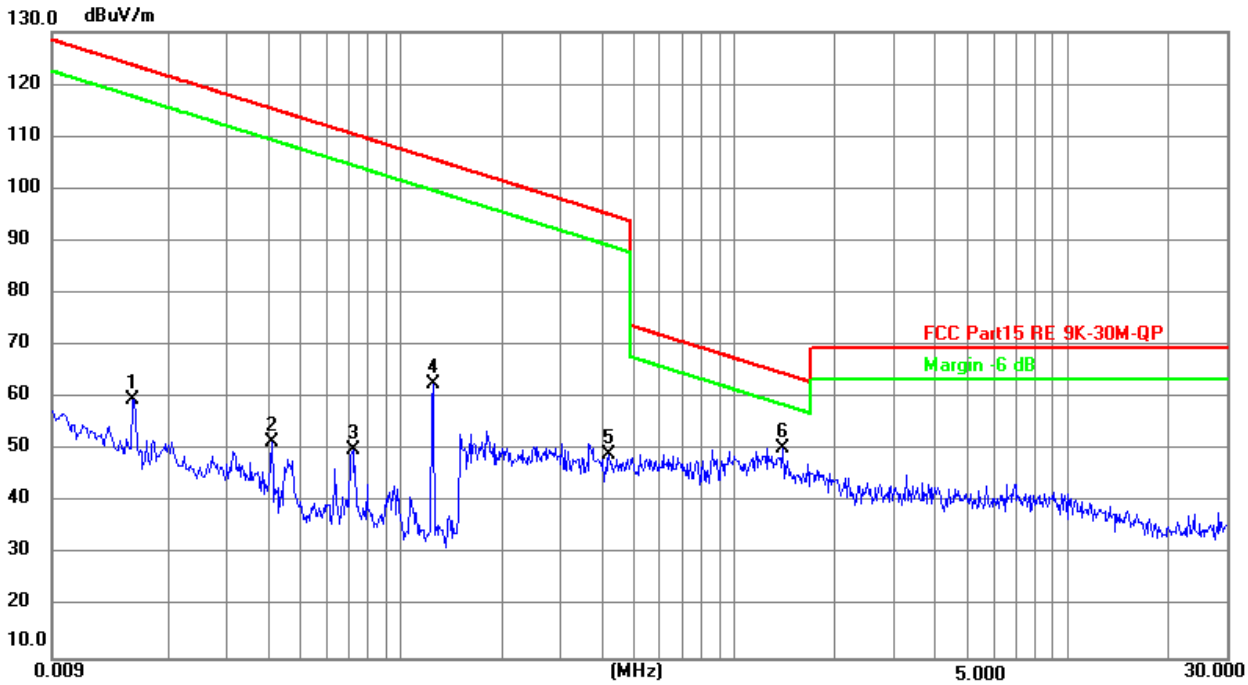
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.0157	25.03	35.36	60.39	123.67	-63.28	QP	100	318	P	
2	0.0407	21.87	30.80	52.67	115.40	-62.73	QP	100	156	P	
3	0.0707	23.62	26.24	49.86	110.61	-60.75	QP	100	332	P	
4	0.1310	49.44	25.36	74.80	105.25	-30.45	QP	100	126	P	
5	0.3955	33.37	25.76	59.13	95.66	-36.53	QP	100	156	P	
6 *	1.6450	23.39	26.03	49.42	63.27	-13.85	QP	100	126	P	

Test Data of Radiated Emissions from9kHz to 30MHz			
Test Mode:	TM5	Phase:	Coplaner
Test Voltage:	AC 120V/60Hz		
Remark:	Wireless charging 5W+Chargiing		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.0157	25.40	35.37	60.77	123.67	-62.90	QP	100	138	P	
2	0.0629	24.42	26.93	51.35	111.62	-60.27	QP	100	256	P	
3	0.1242	41.74	25.43	67.17	105.71	-38.54	QP	100	238	P	
4	0.3691	29.29	25.77	55.06	96.26	-41.20	QP	100	246	P	
5 *	1.2890	25.07	25.98	51.05	65.39	-14.34	QP	100	216	P	
6	4.7970	17.77	26.59	44.36	69.50	-25.14	QP	100	166	P	

Test Mode:	TM5	Phase:	Coaxial
Test Voltage:	AC 120V/60Hz		
Remark:	Wireless charging 5W+Chargiing		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	0.0156	24.39	35.38	59.77	123.72	-63.95	QP	100	322	P	
2	0.0407	20.84	30.82	51.66	115.40	-63.74	QP	100	134	P	
3	0.0714	23.86	26.22	50.08	110.52	-60.44	QP	100	321	P	
4	0.1242	37.25	25.43	62.68	105.71	-43.03	QP	100	142	P	
5	0.4192	23.49	25.72	49.21	95.15	-45.94	QP	100	121	P	
6 *	1.3958	24.45	25.99	50.44	64.70	-14.26	QP	100	212	P	

Note:

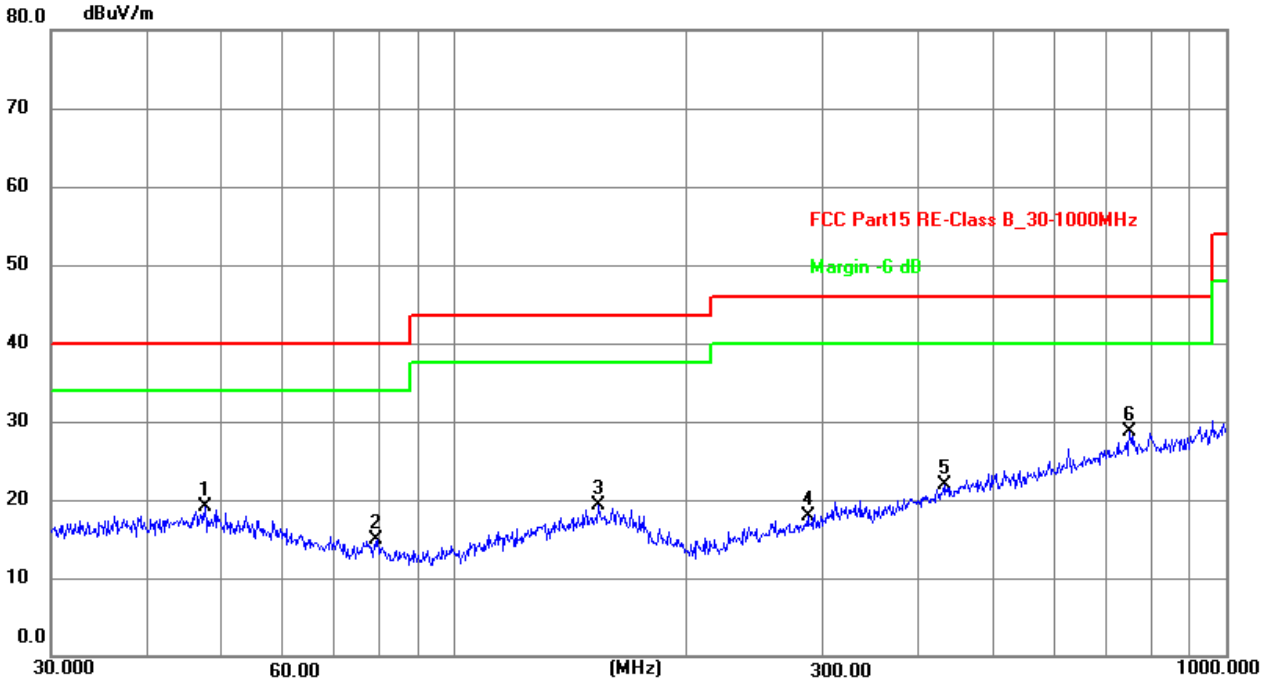
Pre-scan in the all of mode, the worst case in of was recorded.

Limit dBuV/m @3m = Limit dBuV/m @300m+ 80

Limit dBuV/m @3m = Limit dBuV/m @30m + 40

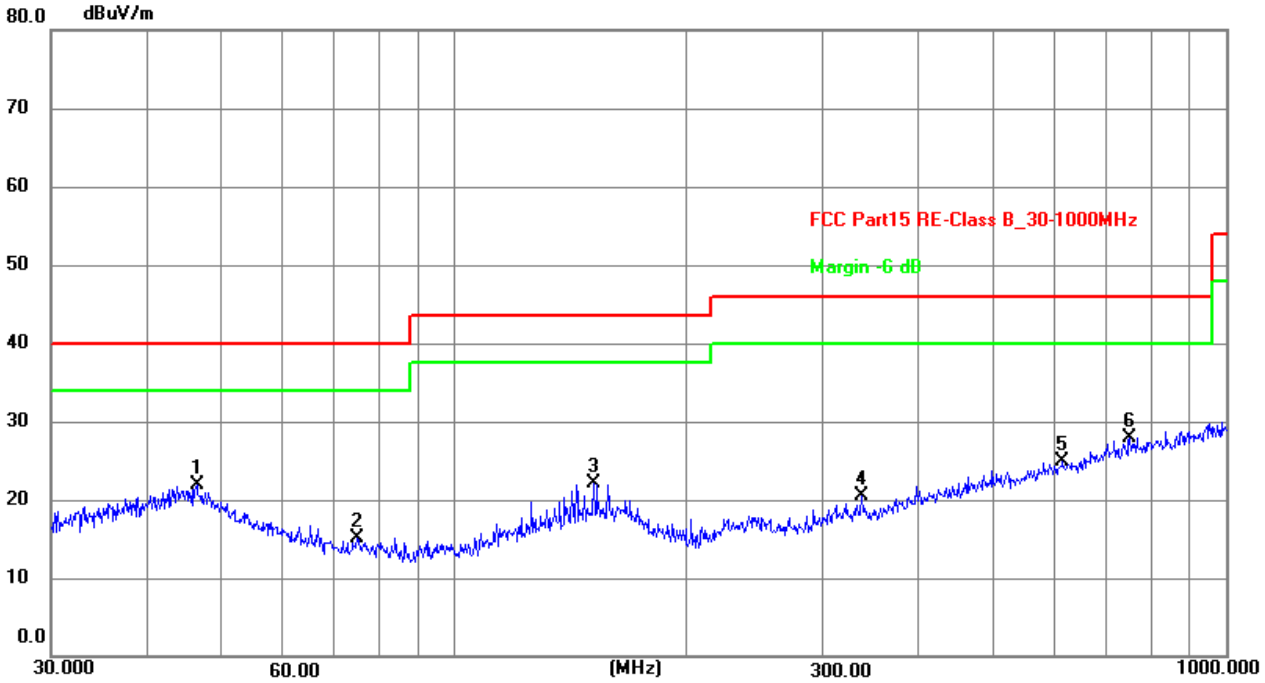
Margin = Reading - Limit.

Test Plots and Data of Radiated Emissions from30MHz to 1GHz	
Tested Mode:	TM1
Test Antenna Polarization:	Horizontal
Remark:	



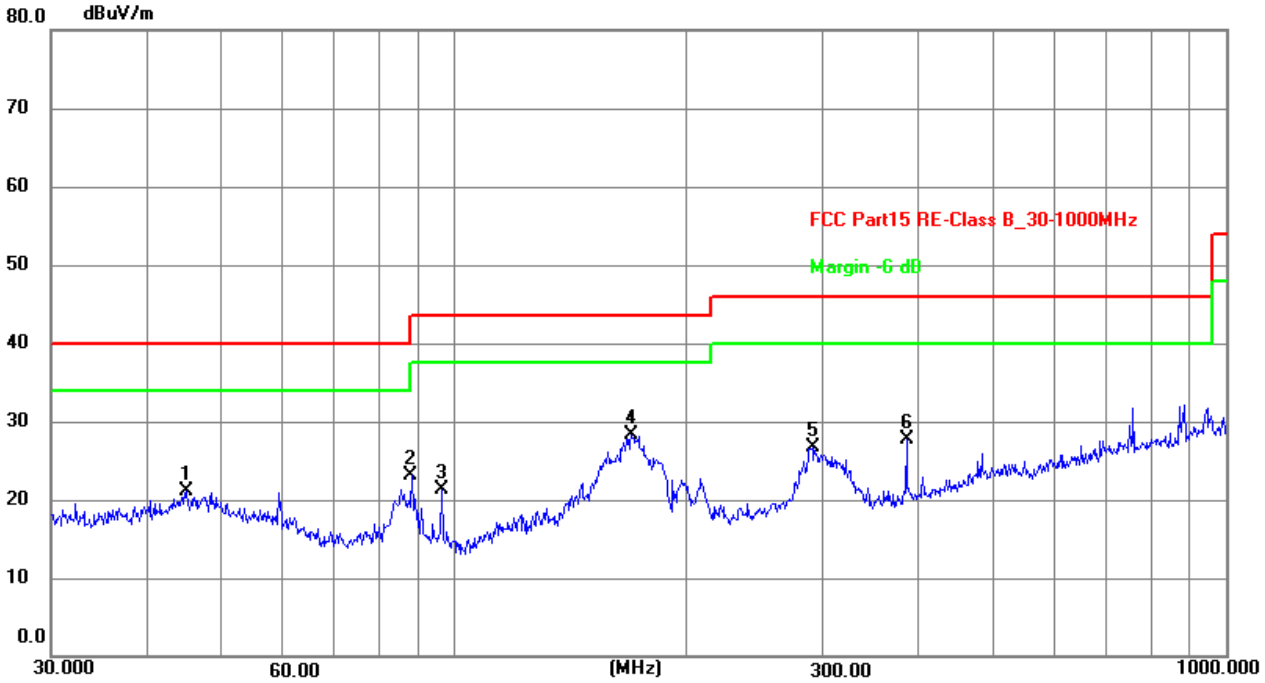
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	47.4918	27.48	-8.33	19.15	40.00	-20.85	QP	100	306	P	
2	79.5209	27.69	-12.79	14.90	40.00	-25.10	QP	100	266	P	
3	153.7385	27.04	-7.79	19.25	43.50	-24.25	QP	100	1	P	
4	286.9823	26.58	-8.71	17.87	46.00	-28.13	QP	100	256	P	
5	431.0316	26.84	-4.91	21.93	46.00	-24.07	QP	100	101	P	
6 *	750.1083	27.82	0.87	28.69	46.00	-17.31	QP	100	185	P	

Test Plots and Data of Radiated Emissions from30MHz to 1GHz	
Tested Mode:	TM1
Test Antenna Polarization:	Vertical
Remark:	



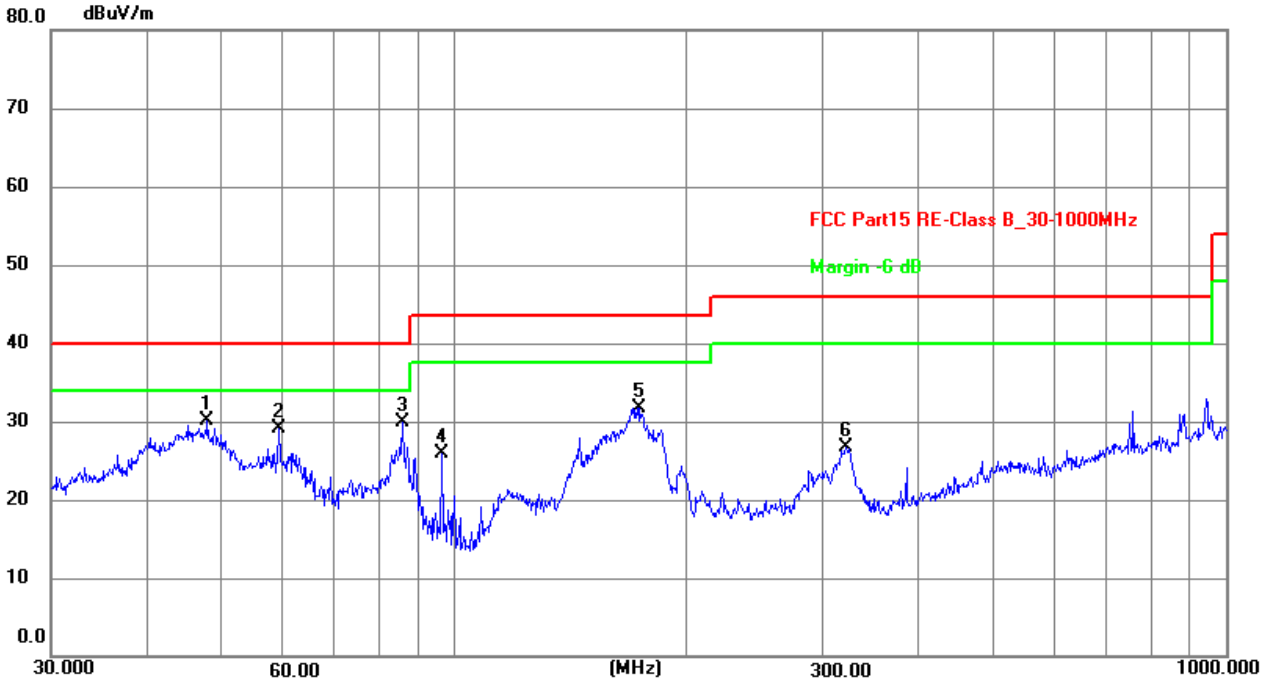
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	46.3402	30.16	-8.28	21.88	40.00	-18.12	QP	100	323	P	
2	74.6569	27.36	-12.25	15.11	40.00	-24.89	QP	100	359	P	
3	151.5972	29.90	-7.75	22.15	43.50	-21.35	QP	100	22	P	
4	337.2155	27.69	-7.25	20.44	46.00	-25.56	QP	100	342	P	
5	614.2142	26.24	-1.39	24.85	46.00	-21.15	QP	100	85	P	
6	750.1083	26.97	0.87	27.84	46.00	-18.16	QP	100	360	P	

Test Plots and Data of Radiated Emissions from30MHz to 1GHz	
Tested Mode:	TM5
Test Antenna Polarization:	Horizontal
Remark:	



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	44.9006	29.25	-8.24	21.01	40.00	-18.99	QP	100	183	P	
2	88.0329	36.18	-13.03	23.15	43.50	-20.35	QP	200	11	P	
3	96.4362	33.79	-12.51	21.28	43.50	-22.22	QP	200	332	P	
4 *	169.5990	37.02	-8.73	28.29	43.50	-15.21	QP	200	84	P	
5	291.0360	35.19	-8.51	26.68	46.00	-19.32	QP	100	246	P	
6	385.2805	33.76	-6.08	27.68	46.00	-18.32	QP	100	29	P	

Test Plots and Data of Radiated Emissions from30MHz to 1GHz	
Tested Mode:	TM5
Test Antenna Polarization:	Vertical
Remark:	



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	47.8260	38.48	-8.33	30.15	40.00	-9.85	QP	100	226	P	
2	59.2325	38.94	-9.84	29.10	40.00	-10.90	QP	100	195	P	
3	85.5977	42.89	-12.97	29.92	40.00	-10.08	QP	100	11	P	
4	96.4362	38.33	-12.51	25.82	43.50	-17.68	QP	100	32	P	
5	173.8135	41.24	-9.45	31.79	43.50	-11.71	QP	100	359	P	
6	322.1886	33.88	-7.18	26.70	46.00	-19.30	QP	100	360	P	

Note : Level = Reading + Factor, Margin = Level – Limit.

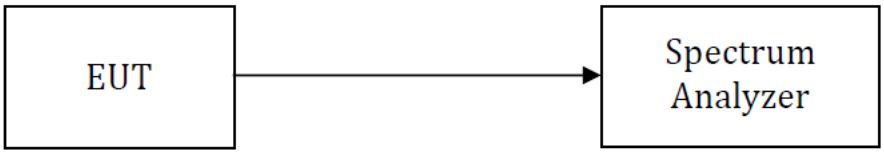
6. Occupied Bandwidth

6.1 Standard and Limit

According to 15.215 (c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

6.2 Test Procedure

According to the ANSI 63.10-2013, section 6.9, the emission bandwidth test method as follows.
1) Remove the antenna from the EUT and connect to the spectrum analyzer via a low loss RF cable.
2) Set the spectrum analyzer to any one measured frequency within its operating range.
3) Set RBW = 1%~5% of the 20 dB bandwidth, VBW ≥ RBW.
4) Set Sweep = Auto, Detector function = peak, Trace = max hold.
5) Set a reference level on the measuring instrument equal to the highest peak value.
6) Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
All the trace to stabilize, use the marker-to-peak function to set the marker to the peak of the emission, use the marker-delta function to measure and record the 20dB down and 99% bandwidth of the emission.

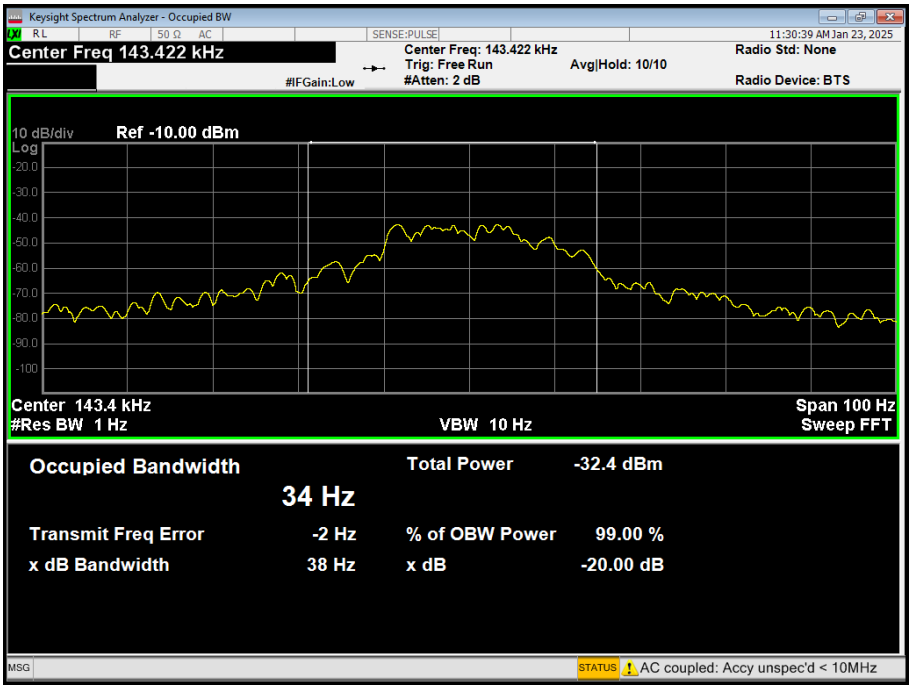


Test Setup Block Diagram

6.3 Test Data and Results

Test Frequency	20dB Bandwidth	99% Bandwidth
143.4Hz	38Hz	34Hz

Test Plots of Occupied Bandwidth



******* END OF REPORT *******