



Certificate #2343.01

TEST REPORT N°: CRWJ-ESH-P25120941B-4

FCC Test Report

Applicant:	Zhejiang Lingzhu Technology Co., Ltd.
Address:	Room 302, No 1 Building Huace Center, Xihu District, Hangzhou City, Zhejiang Province, China
Manufacturer:	Zhejiang Lingzhu Technology Co., Ltd.
Address:	Room 302, No 1 Building Huace Center, Xihu District, Hangzhou City, Zhejiang Province, China
Factory:	Hangzhou Xizhi Electronics Co., Ltd.
Address:	2nd Floor, Building 3, No. 8, Yuyang Road, Lushan Street, Fuyang District, Hangzhou City, Zhejiang Province, China
This document includes 36 pages	

Product Name:	Smart Battery Doorbell	
Test Model:	SC162-WCD3A	
Serial Models:	SC162-WCxyz (The main differences between models lie in appearance, color, camera resolution, and sensors or lenses. Apart from these, the PCB, software and hardware versions, antennas, etc., are all the same.)	
Brand Name:	--	
FCC ID:	2BEWXSC162A	
Rated Voltage/Power:	AC 8-24V~ 50/60Hz 200mA or 5V== 1.5A	
Received Date:	Dec. 12, 2025	
Test Date:	Dec. 15, 2025 to Jan. 09, 2026	
Applicable Standards:	47 CFR Part 15 Subpart C (Section 15.231) ANSI C63.10-2020	
Clause Examined:	All Clauses Relevant	

CONCLUSION : The submitted sample was found to **COMPLY** with the test requirement.**Test done by:***Ghost Li*Name: Ghost Li
Title: Project Engineer
Date: Jan. 16, 2026**Approved by:***Sean Yu*Name: Sean YU
Title: RF Supervisor
Date: Jan. 16, 2026

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Release Control Record

Issue No.	Description	Date Issued
CRWJ-ESH-P25120941B-4	Original release	Jan. 16, 2026



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1 Summary of Test Results

The EUT has been tested according to the following specifications:

47 CFR FCC Part 15, Subpart C			
FCC Clause	Test Item	Result	Remarks
15.203	Antenna Requirement	PASS	No antenna connector is used.
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.231(c)	20dB Spectrum Bandwidth	PASS	Meet the requirement of limit.
15.231(a)	Dwell Time	PASS	Meet the requirement of limit.
15.231(e)	Field Strength of Fundamental Emissions	PASS	Meet the requirement of limit.
15.225 / 15.209 /	Radiated Emissions Measurement	PASS	Meet the requirement of limit.

**LCIE****TEST REPORT N°: CRWJ-ESH-P25120941B-4****1.1 Test Instruments**

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Hybrid Antenna(25MHz-1.5GHz)	Schwarzbeck	VULB9168	E1A1012	Jul.29, 25	Jul.28, 26
Horn Antenna(1GHz -18GHz)	Schwarzbeck	BBHA9120D	E1A1017	Aug.25, 25	Aug.24, 26
Double Ridge Horn Antenna(18G-40G)	COM-POWER	AH-840	E1A1040	Jul.15, 25	Jul.14, 26
Pre-Amplifier(100kHz-1.3GHz)	Agilent	8447D	E1A2001	Apr.19, 25	Apr.18, 26
Pre-Amplifier(0.5GHz-18GHz)	EMCI	EMC184045SE	E1A2009	Jul.05, 25	Jul.04, 26
Pre-Amplifier(18GHz-40GHz)	EMCI	EMC051845SE	E1A2008	Jul.05, 25	Jul.04, 26
EMI test receiver	R&S	ESR7	E1R1005	Apr.19, 25	Apr.18, 26
Spectrum Analyzer	Keysight	N9030B	E1S1003	Jul.22, 25	Jul.21, 26
Spectrum Analyzer	Keysight	N9020A	E1S1004	Mar.02, 25	Mar.01, 26
EMI test receiver	R&S	ESCS30	E1R1001	May.11, 25	May.10, 26
LISN	R&S	ENV216	E1L1011	May.11, 25	May.10, 26
Humidity&Temp Tester	Baolima	WS508	E1H1011	Apr. 02, 25	Apr. 01, 26
RF Control Unit	Toscend	JS0806-2	E1C5003	N/A	N/A
Test Software	ADT	ADT_COND_V7 .3.1	N/A	N/A	N/A
Test Software	Toscend	JS32-RE	N/A	N/A	N/A
Test Software	Toscend	JS1120	N/A	N/A	N/A
Test Software	Toscend	JS1120-3	N/A	N/A	N/A



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1.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Measurement	Frequency	Expanded Uncertainty ($k=2$) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.36 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.47 dB
	6GHz ~ 18GHz	3.75 dB
	18GHz ~ 40GHz	3.30 dB

1.3 Modification Record

There were no modifications required for compliance.



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2 General Information

2.1 General Description of EUT

Product	Smart Battery Doorbell
Brand	--
Test Model	SC162-WCD3A
Serial Models	SC162-WCxyz (The main differences between models lie in appearance, color, camera resolution, and sensors or lenses. Apart from these, the PCB, software and hardware versions, antennas, etc., are all the same.)
Power Rating	8-24V~ 50/60Hz 200mA or 5V= 1.5A
Modulation Type	ASK
Operating Frequency	433.92MHz
Antenna Gain	-19.72 dBi
Number of Channel	1
Antenna Type	Monopole Antenna
Antenna Connector	--

Note:

1. For more details, please refer to the User's manual of the EUT.



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2.2 Description of Test Modes

CHANNEL	FREQUENCY	MODULATION TYPE
1	433.92 MHz	ASK



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2.2.1 Test Mode Applicability:

EUT Configure Mode	Applicable to					Description
	RE (9 kHz~30MHz)	RE (30MHz~1GHz)	PLC	BW	DW	
-	√	√	-	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE< 1G**: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission **BW**: 20dB Spectrum Bandwidth

DW: Dwell Time

NOTE:

Pre-scanned tests, X, Y, Z in three orthogonal panels to determine the final configuration (Z plane as worst plane) from all possible combinations.

Radiated Emission Test RE (9 kHz~30MHz):

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
-	TX	433.92 MHz	433.92 MHz	ASK

Radiated Emission Test RE (30MHz~1GHz):

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
-	TX	433.92 MHz	433.92 MHz	ASK

Power Line Conducted Emission Test:

☐ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
-	TX	433.92 MHz	433.92 MHz	ASK



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20dB Spectrum Bandwidth

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
-	TX	433.92 MHz	433.92 MHz	ASK

Dwell Time

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE
-	TX	433.92 MHz	433.92 MHz	ASK

2.2.2 Test Condition:

Applicable to	Normal Environmental Conditions	Normal Input Power
RE (9 kHz~30MHz)	23deg. C, 58%RH	Battery
RE (30MHz~1GHz)	23deg. C, 58%RH	Battery
PLC	--	Battery
BW	25deg. C, 60%RH	Battery
DW	25deg. C, 60%RH	Battery

2.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units.

NO.	PRODUCT	BRAND/ Manufacturer	MODEL NO.
1.	AC/DC Adapter	--	KA06E-0501000US
2.	Laptop	Lenovo	L470
3.	Indoor Chime 1	SC162-DDJ	100-240V~50/60Hz 20mA
4.	Indoor Chime 2	SC162-DDJ-USB	DC5V 1A
5.	Adaptor	VC54GBCH	100-240V~50/60Hz 600mA



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2.4 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standard:

47 CFR Part 15 Subpart C, § 15.231

ANSI C63.10-2020

All relaxed test items have been performed and recorded as per the above standard.



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3 Test Procedure and Results

3.1 AC Power Conducted Emission

3.1.1 Limits

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.1.2 Test Procedures

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

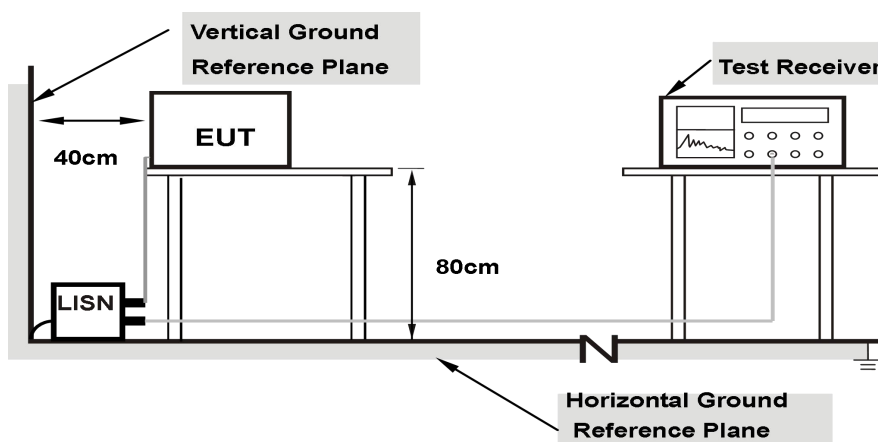
NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

3.1.3 Deviation from Test Standard

No deviation.

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3.1.4 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

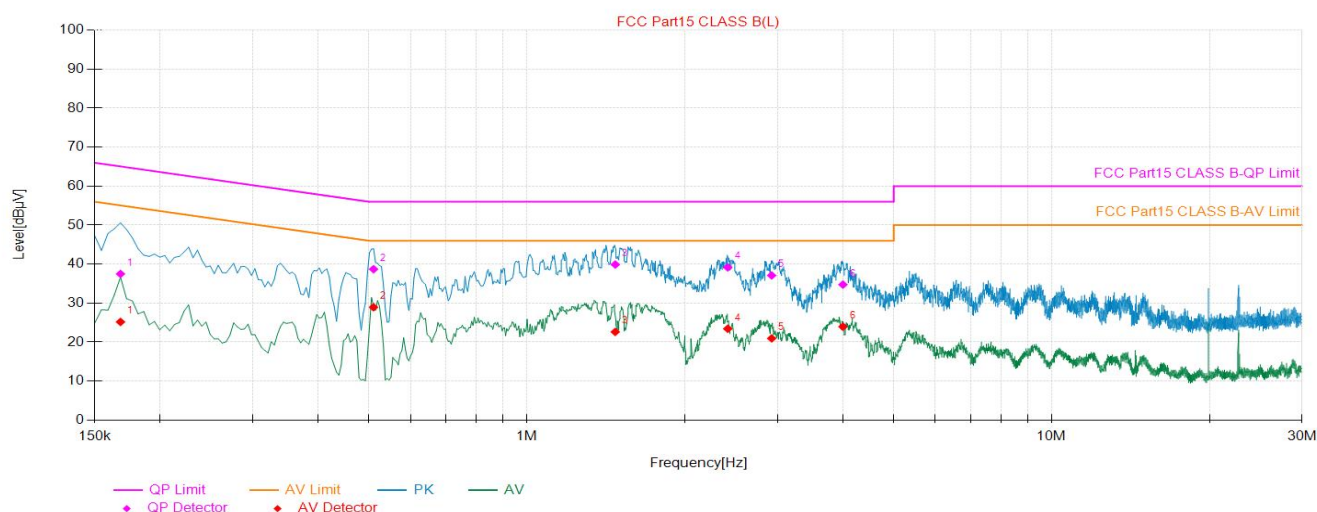
3.1.5 EUT Operating Conditions

Same as 3.1.6.

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3.1.6 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Power supply	Adaptor: AC 120V, 60Hz EUT Rated Power: AC 8-24V~ 50/60Hz 200mA or 5V= 1.5A		
Test Mode	Charging (By adaptor) + Bluetooth link + WiFi link + 433MHz link with indoor chime 1		



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]
1	0.17	19.89	17.60	37.49	65.06	27.57	5.29	25.18	55.06	29.88
2	0.51	19.66	19.04	38.70	56.00	17.30	9.28	28.94	46.00	17.06
3	1.47	19.68	20.21	39.89	56.00	16.11	2.93	22.61	46.00	23.39
4	2.41	19.77	19.40	39.17	56.00	16.83	3.65	23.42	46.00	22.58
5	2.93	19.83	17.27	37.10	56.00	18.90	1.12	20.95	46.00	25.05
6	4.00	19.87	14.88	34.75	56.00	21.25	4.09	23.96	46.00	22.04

REMARKS:

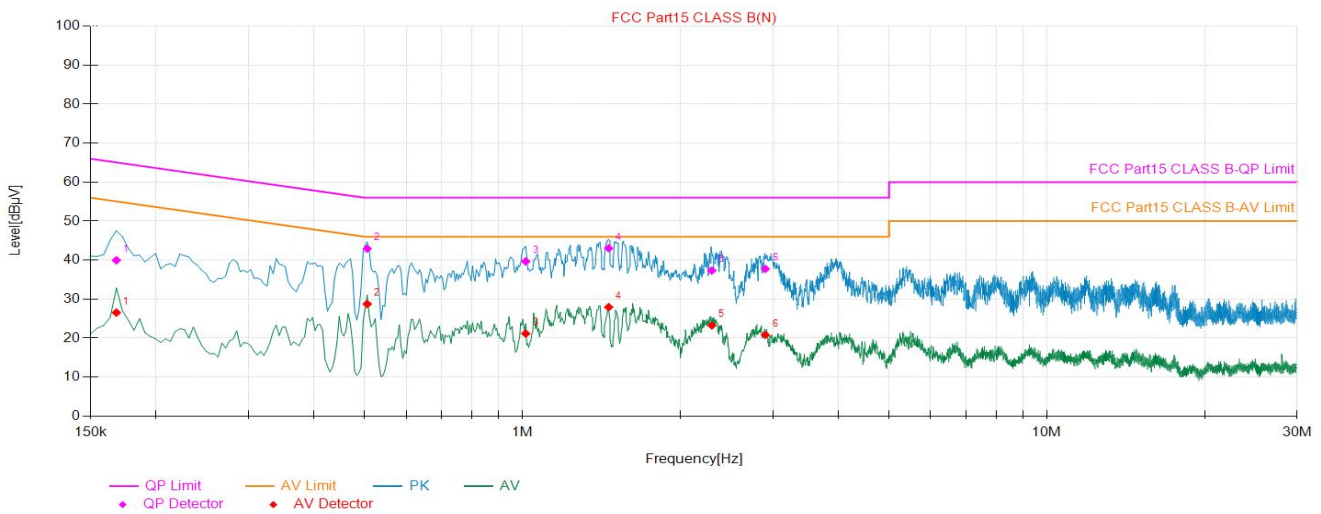
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss



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Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Power supply	Adaptor: AC 120V, 60Hz EUT Rated Power: AC 8-24V~ 50/60Hz 200mA or 5V= 1.5A		
Test Mode	Charging (By adaptor) + Bluetooth link + WiFi link + 433MHz link with indoor chime 1		



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]
1	0.17	19.87	20.10	39.97	65.06	25.09	6.67	26.54	55.06	28.52
2	0.51	19.64	23.31	42.95	56.00	13.05	9.11	28.75	46.00	17.25
3	1.01	19.63	20.04	39.67	56.00	16.33	1.52	21.15	46.00	24.85
4	1.46	19.69	23.35	43.04	56.00	12.96	8.26	27.95	46.00	18.05
5	2.30	19.78	17.54	37.32	56.00	18.68	3.47	23.25	46.00	22.75
6	2.90	19.82	17.92	37.74	56.00	18.26	1.01	20.83	46.00	25.17

REMARKS:

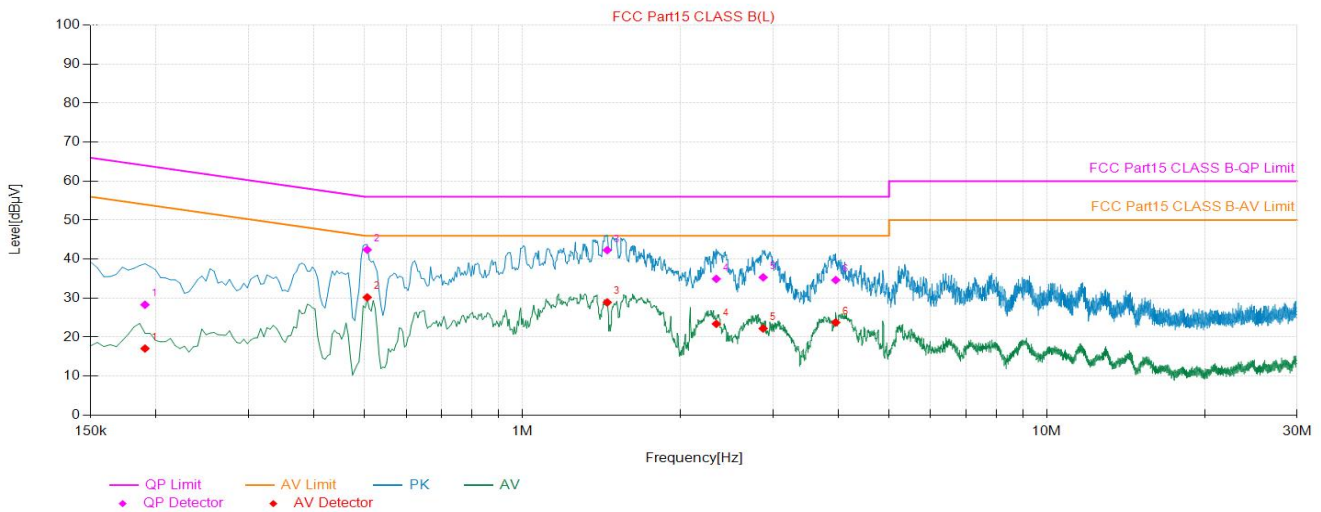
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss



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Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Power supply	Adaptor: AC 120V, 60Hz EUT Rated Power: AC 8-24V~ 50/60Hz 200mA or 5V= 1.5A		
Test Mode	Charging (By adaptor) + Bluetooth link + WiFi link + 433MHz link with indoor chime 2		



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBuV]	QP Value [dBuV]	QP Limit [dBuV]	QP Margin [dB]	AV Reading [dBuV]	AV Value [dBuV]	AV Limit [dBuV]	AV Margin [dB]
1	0.19	19.87	8.43	28.30	64.01	35.71	-2.80	17.07	54.01	36.94
2	0.51	19.66	22.74	42.40	56.00	13.60	10.53	30.19	46.00	15.81
3	1.45	19.68	22.61	42.29	56.00	13.71	9.22	28.90	46.00	17.10
4	2.34	19.76	15.18	34.94	56.00	21.06	3.63	23.39	46.00	22.61
5	2.88	19.83	15.49	35.32	56.00	20.68	2.37	22.20	46.00	23.80
6	3.96	19.87	14.76	34.63	56.00	21.37	3.88	23.75	46.00	22.25

REMARKS:

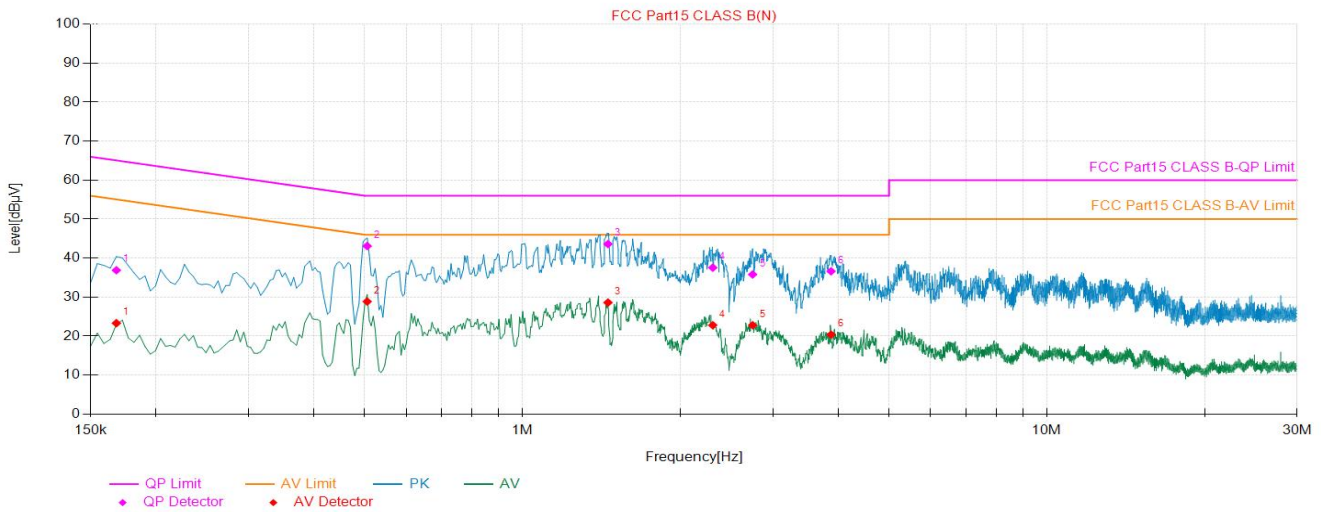
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss



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Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Power supply	Adaptor: AC 120V, 60Hz EUT Rated Power: AC 8-24V~ 50/60Hz 200mA or 5V= 1.5A		
Test Mode	Charging (By adaptor) + Bluetooth link + WiFi link + 433MHz link with indoor chime 2		



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]
1	0.17	19.87	17.02	36.89	65.06	28.17	3.44	23.31	55.06	31.75
2	0.51	19.64	23.45	43.09	56.00	12.91	9.22	28.86	46.00	17.14
3	1.46	19.69	23.92	43.61	56.00	12.39	8.91	28.60	46.00	17.40
4	2.31	19.79	17.77	37.56	56.00	18.44	3.01	22.80	46.00	23.20
5	2.75	19.81	16.00	35.81	56.00	20.19	2.99	22.80	46.00	23.20
6	3.88	19.82	16.80	36.62	56.00	19.38	0.56	20.38	46.00	25.62

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss

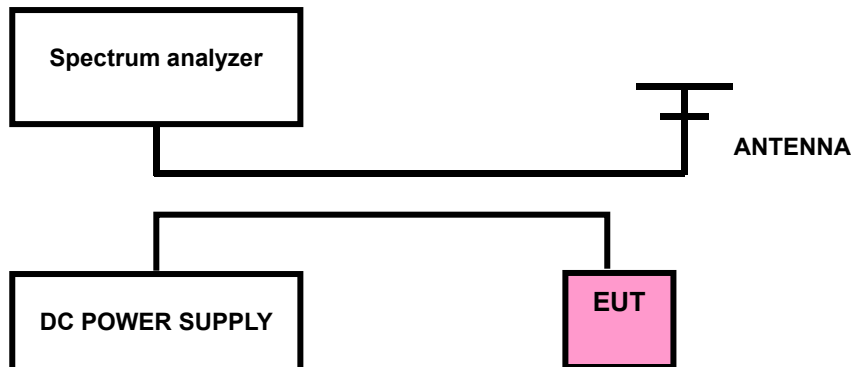
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3.2 20dB Spectrum Bandwidth Measurement

3.2.1 Limit

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

3.2.2 Test Setup



3.2.3 Test Procedures

1. The resolution bandwidth of 10 kHz and the video bandwidth of 30 kHz were used.
2. EUT in peak Max hold mode.
3. Measured the spectrum width with power higher than 20dB below carrier.

3.2.4 Deviation of Test Standard

No deviation.

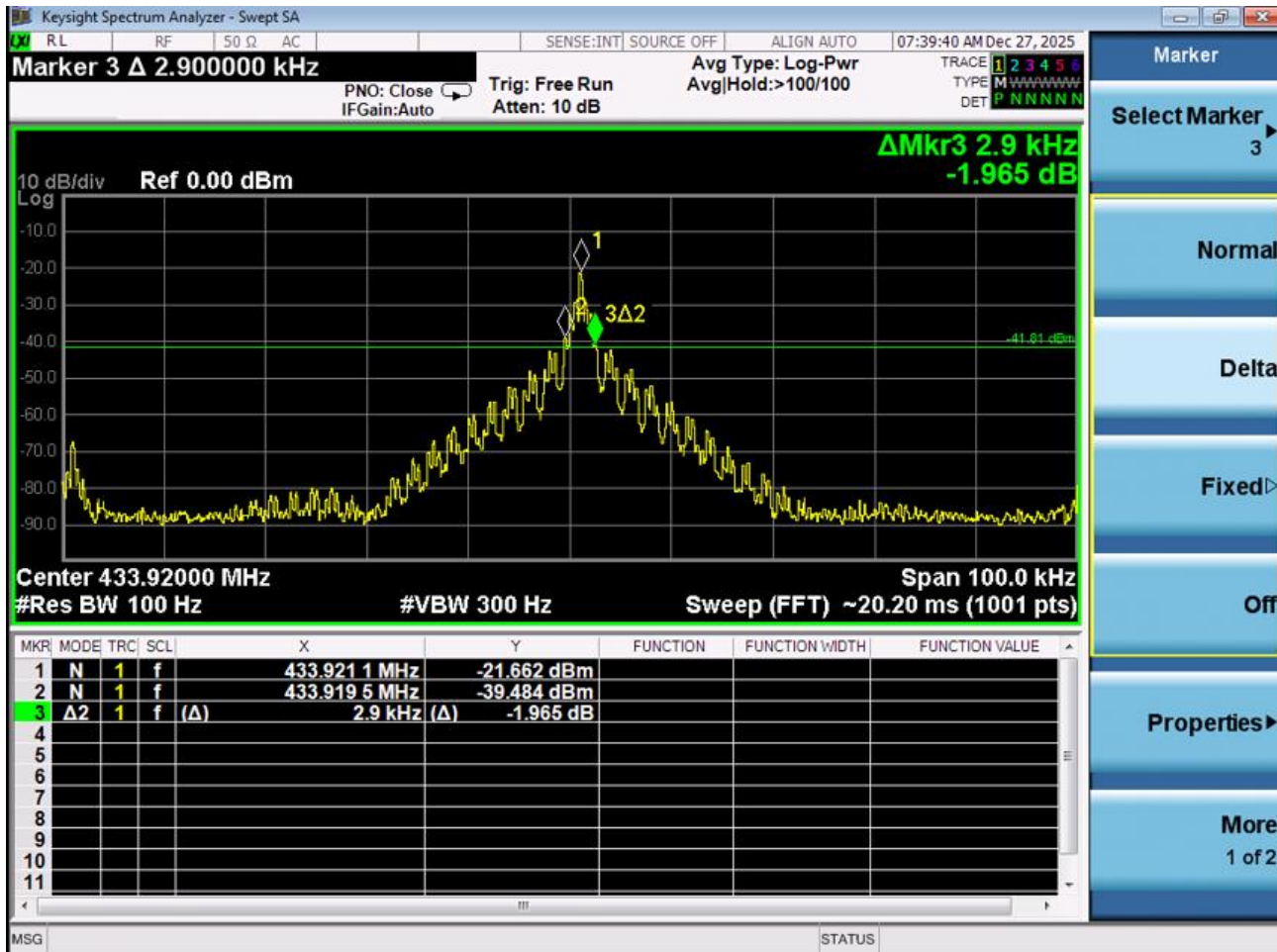


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3.2.5 Test Results

Center Frequency (MHz)	20dB bandwidth (kHz)	Limit(MHz)	Result
433.92	2.9	1084.80	Pass



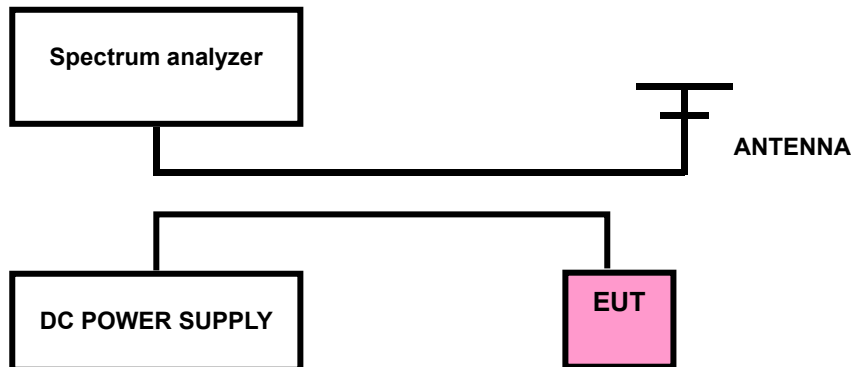
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3.3 Dwell Time Measurement

3.3.1 Limit

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

3.3.2 Test Setup



3.3.3 Test Procedures

1. The resolution bandwidth of 1 MHz and the video bandwidth of 1 MHz were used.
2. EUT in peak Max hold mode.
3. Measured the spectrum width with power higher than 20dB below carrier.

3.3.4 Deviation of Test Standard

No deviation.

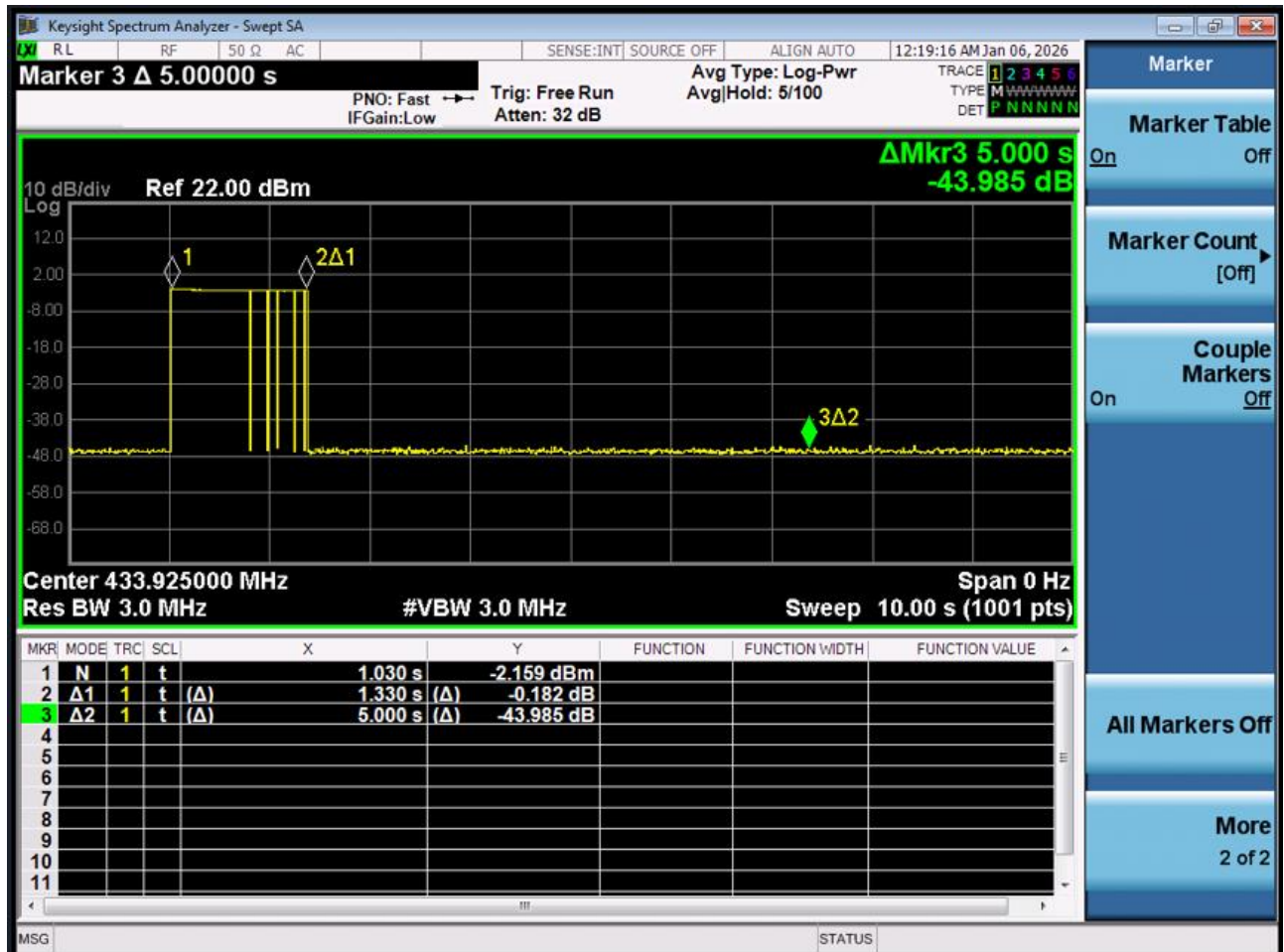


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3.3.5 Test Results

Frequency(MHz)	Transmission Time(s)	Limit(s)	Results
433.92	1.33	≤5	Pass





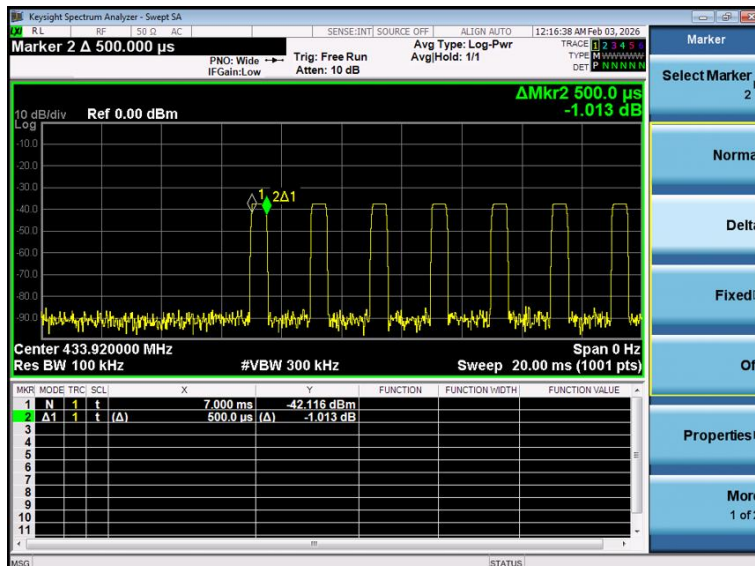
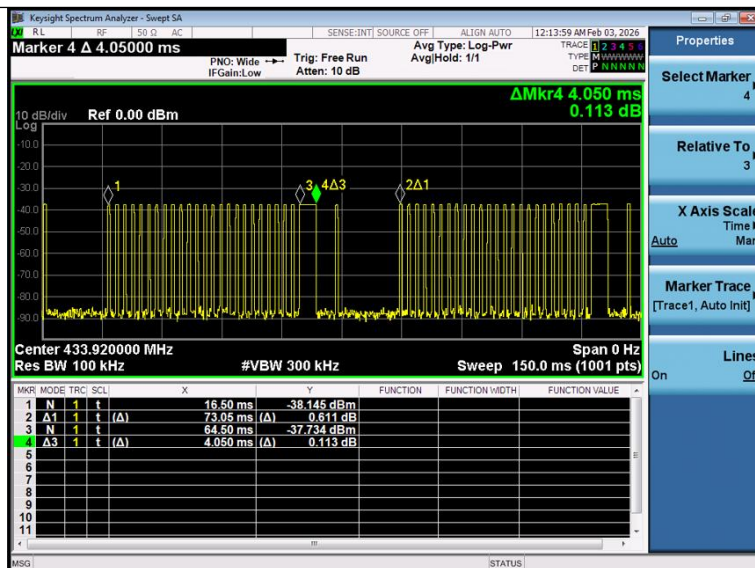
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Type of Pulse	Width of Pulse (ms)	Quantity of Pulse	Transmission Time (ms)	Total Time (Ton) (ms)
Pulse 1	0.5	25	12.5	16.55
Pulse 2	4.05	1	4.05	

Transmission Time(ms)	Total Time(ms)	Duty Cycle(%)	Duty Cycle Factory(dB)
16.55	73.05	22.66	-12.90

Duty Cycle Factor=20*log(Duty Cycle)



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3.4 Field Strength of Fundamental Emissions and Mask Measurement

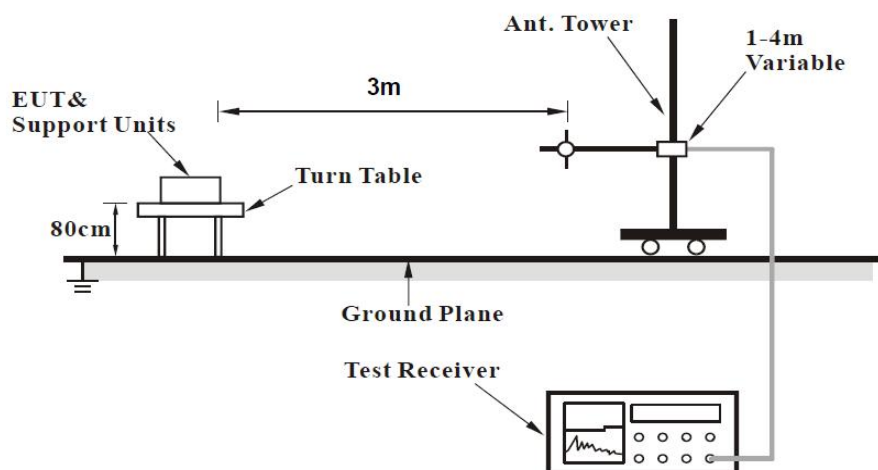
3.4.1 Test Limit

Rules and specifications	FCC CFR 47 Part 15 section 15.231	
Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emissions (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	¹ 1,250 to 3,750	¹ 125 to 375
174-260	3,750	375
260-470	¹ 3,750 to 12,500	¹ 375 to 1,250
Above 470	12,500	1,250

¹ Linear interpolations.

3.4.2 Test Setup

For Radiated emission 30MHz to 1GHz



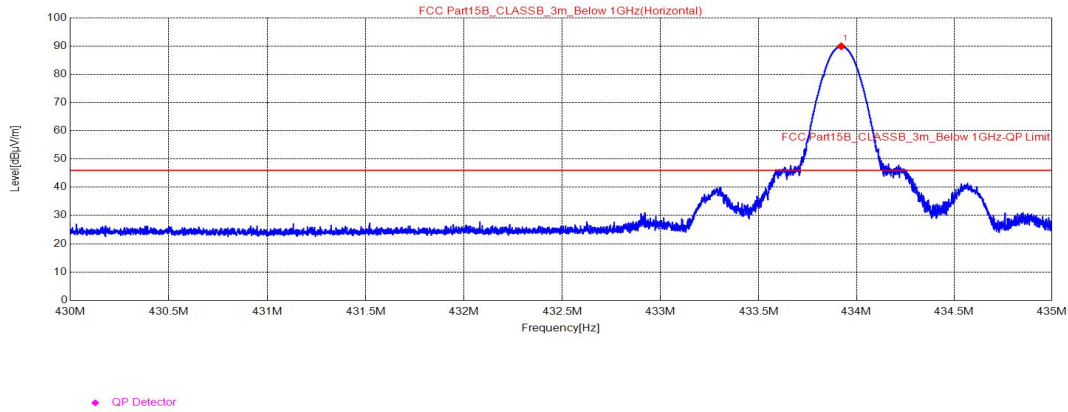


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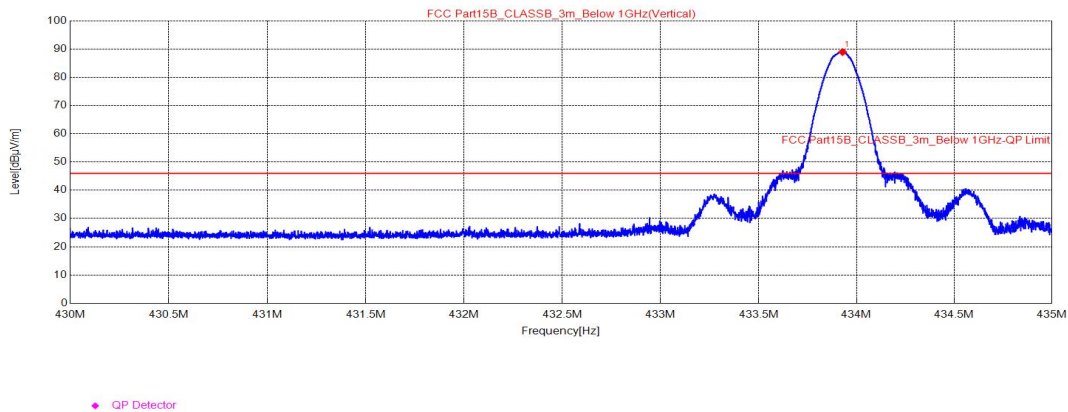
3.4.3 Test Results

Position: Horizontal



NO.	Freq. [MHz]	Factor [dB]	Duty Cycle Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	433.92	-5.47	-	89.93	100.82	-10.89	PK	Horizontal
2	433.92	-	-12.90	77.03	80.82	-3.79	AV	Horizontal

Position: Vertical



NO.	Freq. [MHz]	Factor [dB]	Duty Cycle Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	433.92	-5.47	-	88.97	100.82	-11.85	PK	Vertical
2	433.92	-	-12.90	76.07	80.82	-4.75	AV	Vertical

Margin [dB] = Limit [dBμV/m] – Level [dBμV/m]



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3.5 Radiated Emissions Measurement

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
1 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.



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FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.1 Test Procedure Reference

ANSI C63.10 Section 6.3 (General Requirements)

3.5.2 Test Procedures

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

Receiver Parameter	Setting
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

For Radiated emission below 30MHz

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degree to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Both X and Y axes of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and the rotate table was turned from 0 degree to 360 degree to find the maximum reading.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



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For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

3.5.3 Deviation from Test Standard

No deviation.

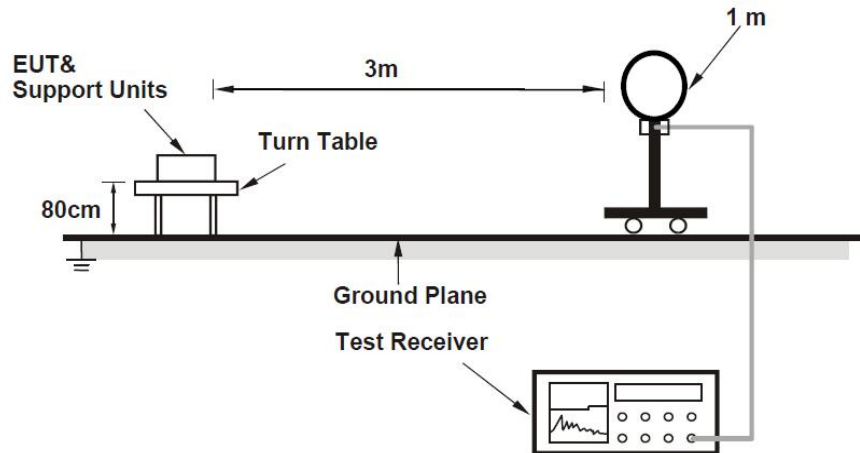


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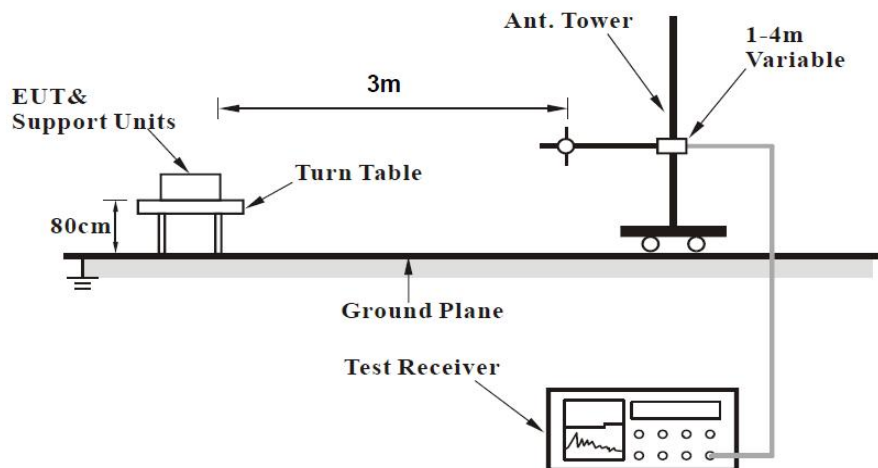
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3.5.4 Test Setup

For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).



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3.5.5 Test Results

Radiated Emissions Range 9kHz~30MHz

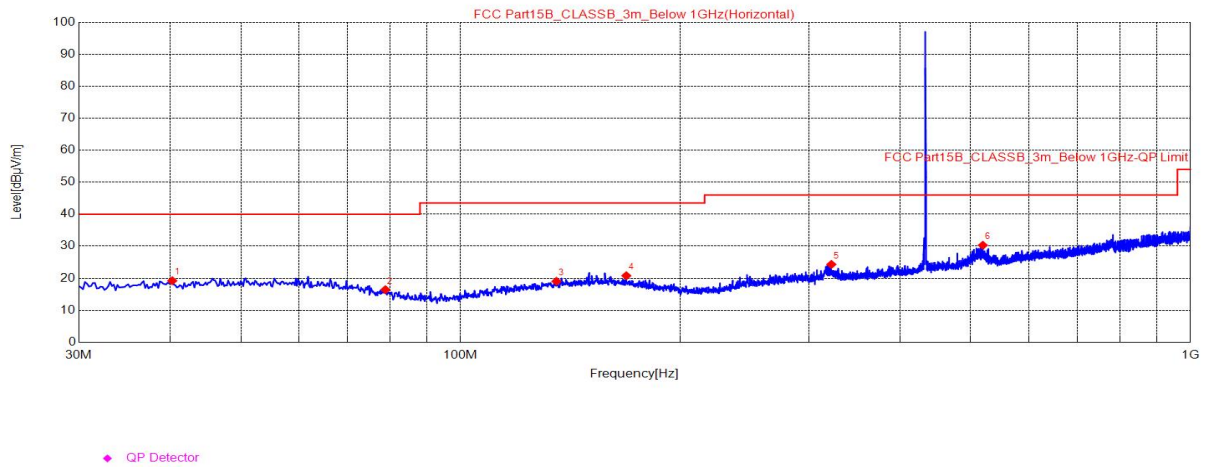
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.



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Radiated Emissions Range 30MHz~1GHz



Suspected Data List

NO.	Freq. [MHz]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle[°]	Polarity
1	40.28	-11.23	19.19	40.00	20.81	PK	100	286	Horizontal
2	78.89	-13.80	16.40	40.00	23.60	PK	100	81	Horizontal
3	135.34	-10.92	19.02	43.50	24.48	PK	100	170	Horizontal
4	168.71	-9.97	20.77	43.50	22.73	PK	100	132	Horizontal
5	322.16	-7.65	24.31	46.00	21.69	PK	200	303	Horizontal
6	519.46	-3.84	30.29	46.00	15.71	PK	100	87	Horizontal

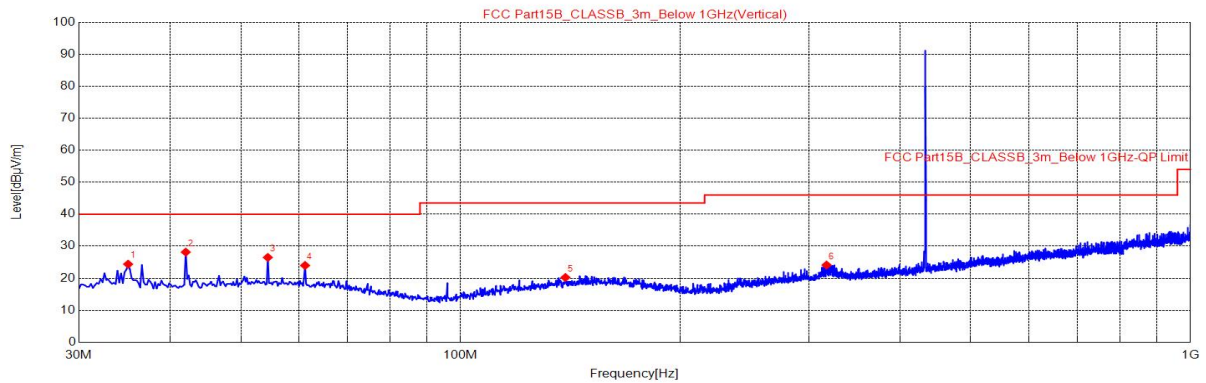
REMARKS:

1. Emission Level(dBuV/m) = Spectrum reading (dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Limit value – Emission Level



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◆ QP Detector

Suspected Data List

NO.	Freq. [MHz]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle[°]	Polarity
1	35.04	-11.57	24.38	40.00	15.62	PK	100	30	Vertical
2	42.03	-11.06	28.14	40.00	11.86	PK	200	82	Vertical
3	54.44	-10.35	26.48	40.00	13.52	PK	200	82	Vertical
4	61.23	-10.74	23.98	40.00	16.02	PK	100	49	Vertical
5	139.22	-10.66	20.21	43.50	23.29	PK	200	0	Vertical
6	317.31	-7.81	24.10	46.00	21.90	PK	100	42	Vertical

REMARKS:

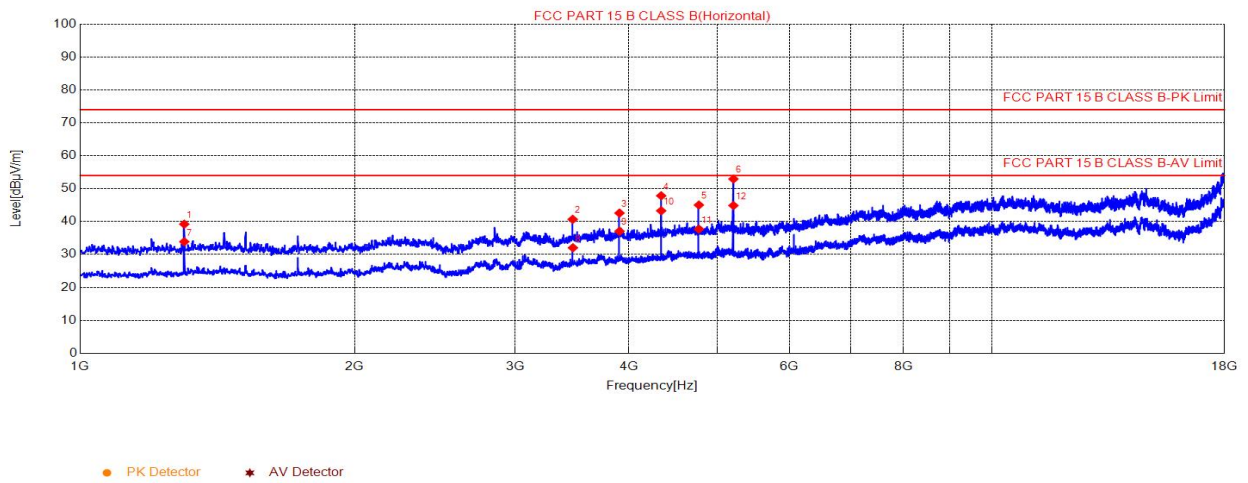
- Emission Level(dBuV/m) = Original Spectrum reading (dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Limit value – Emission Level



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Radiated Emission Range above 1GHz



Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle [°]	Polarity
1	1300.90	53.55	-14.33	39.22	74.00	34.78	PK	100	113	Horizontal
2	3470.10	48.11	-7.42	40.69	74.00	33.31	PK	100	142	Horizontal
3	3905.30	48.14	-5.55	42.59	74.00	31.41	PK	100	142	Horizontal
4	4338.80	52.28	-4.44	47.84	74.00	26.16	PK	200	145	Horizontal
5	4772.30	48.00	-2.96	45.04	74.00	28.96	PK	100	157	Horizontal
6	5207.50	54.96	-2.01	52.95	74.00	21.05	PK	100	75	Horizontal
7	1300.90	48.21	-14.33	33.88	54.00	20.12	AV	100	113	Horizontal
8	3471.80	39.45	-7.40	32.05	54.00	21.95	AV	200	174	Horizontal
9	3905.30	42.61	-5.55	37.06	54.00	16.94	AV	100	149	Horizontal
10	4338.80	47.73	-4.44	43.29	54.00	10.71	AV	200	174	Horizontal
11	4772.30	40.65	-2.96	37.69	54.00	16.31	AV	100	157	Horizontal
12	5207.50	46.89	-2.01	44.88	54.00	9.12	AV	100	75	Horizontal

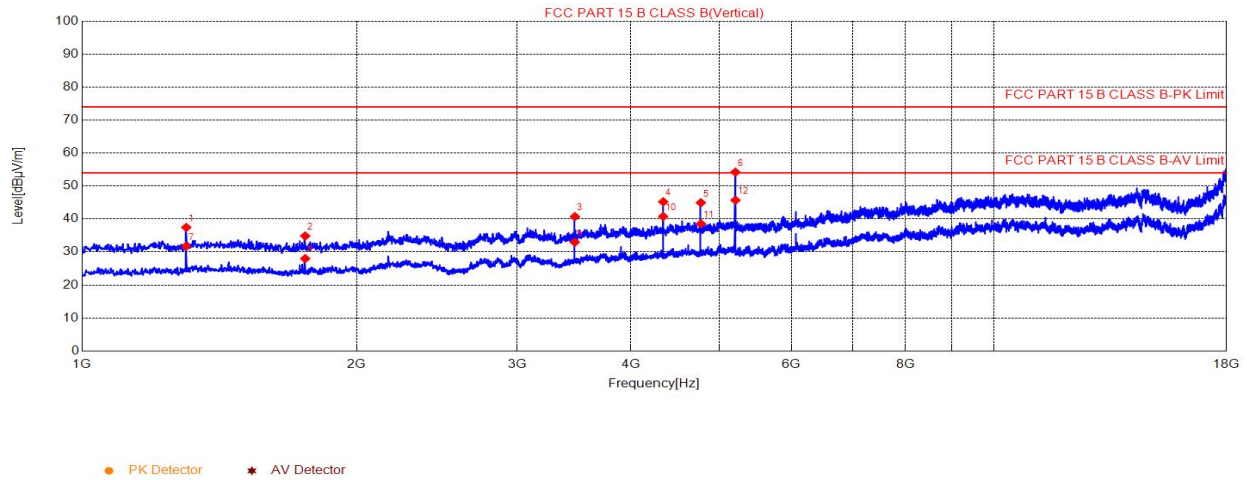
Remarks:

1. Margin = Limit - Final Value, Final Value = Reading + Factor.
2. Factor = Antenna Factor + Cable Loss - Preamp Gain.



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Suspected List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle [°]	Polarity
1	1300.90	51.79	-14.33	37.46	74.00	36.54	PK	100	269	Vertical
2	1756.50	48.64	-13.78	34.86	74.00	39.14	PK	100	291	Vertical
3	3471.80	48.15	-7.40	40.75	74.00	33.25	PK	200	179	Vertical
4	4338.80	49.68	-4.44	45.24	74.00	28.76	PK	200	157	Vertical
5	4772.30	47.92	-2.96	44.96	74.00	29.04	PK	200	171	Vertical
6	5207.50	56.24	-2.01	54.23	74.00	19.77	PK	200	179	Vertical
7	1300.90	46.07	-14.33	31.74	54.00	22.26	AV	100	269	Vertical
8	1756.50	41.79	-13.78	28.01	54.00	25.99	AV	100	291	Vertical
9	3470.10	40.38	-7.42	32.96	54.00	21.04	AV	200	179	Vertical
10	4338.80	45.21	-4.44	40.77	54.00	13.23	AV	200	157	Vertical
11	4772.30	41.53	-2.96	38.57	54.00	15.43	AV	200	171	Vertical
12	5207.50	47.72	-2.01	45.71	54.00	8.29	AV	200	201	Vertical

Remarks:

- Margin=Limit-Final Value, Final Value=Reading + Factor.
- Factor=Antenna Factor + Cable Loss-Preamp Gain.

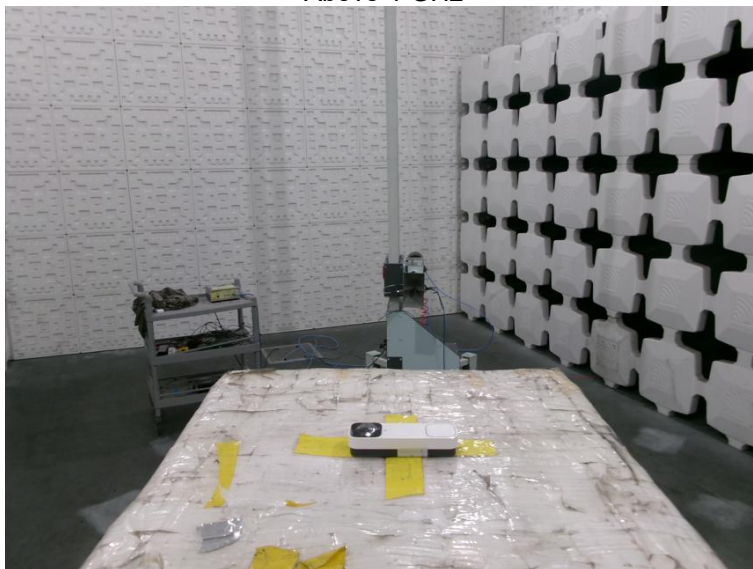
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4 Pictures of Test Arrangements

Below 1 GHz



Above 1 GHz





AC Power Line Conducted Emission



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