

FCC TEST REPORT

FCC ID:2A7LA-YI10P1

Report Number..... : ZKT-220601L3698E-1

Date of Test..... July 02 to July 08, 2024

Date of issue : July 08, 2024

Total number of pages 29

Test Result : PASS

Testing Laboratory..... : Shenzhen ZKT Technology Co., Ltd.

Address : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name : **Shenzhen Yijing Technology Co., LTD.**

Address : 201, No. 141-2, Furui Road, Xintian Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province,China

Manufacturer's name : **Shenzhen Yijing Technology Co., LTD.**

Address : 201, No. 141-2, Furui Road, Xintian Community, Fuhai Street, Bao'an District, Shenzhen City, Guangdong Province,China

Test specification:

Standard..... : FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10:2013

Test procedure..... : /

Non-standard test method : N/A

Test Report Form No. : TRF-EL-111_V0**Test Report Form(s) Originator** : ZKT Testing**Master TRF** : Dated: 2023-01-05

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Product name..... : Digital Photo Frame

Trademark : Model/Type reference : YI 10P1,YI 08X1,YI 09X1,YI 10X1,YI 11X1,YI 13X1,YI 15X1,
YI 14X1,YI 17X1,YI 18X1,YI 21X1,YI 27X1,YI 32X1,YI 10P2,
YI 08X2,YI 10X2,YI 07C1,YI 08C1,YI 10C1,YI 12C1

Battery..... : N/A

Ratings..... : AC100-240V,50/60Hz

Testing procedure and testing location:

Testing Laboratory: Shenzhen ZKT Technology Co., Ltd.

Address: 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature): Alen He



Reviewer (name + signature).....: Joe Liu



Approved (name + signature): Lake Xie



Table of Contents

Page

1.VERSION	4
2 SUMMARY OF TEST RESULTS	5
2.1 TEST FACILITY	6
2.2 MEASUREMENT UNCERTAINTY	6
3. GENERAL INFORMATION	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 DESCRIPTION OF TEST MODES	8
3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	8
3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)	9
3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	10
4. EMC EMISSION TEST	11
4.1 CONDUCTED EMISSION MEASUREMENT	11
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	11
4.1.2 TEST PROCEDURE	11
4.1.3 DEVIATION FROM TEST STANDARD	11
4.1.4 TEST SETUP	12
4.1.5 EUT OPERATING CONDITIONS	12
4.1.6 TEST RESULTS	13
4.2 RADIATED EMISSION MEASUREMENT	15
4.2.1 RADIATED EMISSION LIMITS	15
4.2.2 TEST PROCEDURE	16
4.2.3 DEVIATION FROM TEST STANDARD	16
4.2.4 TEST SETUP	16
4.2.5 EUT OPERATING CONDITIONS	17
5.ANTENNA REQUIREMENT	28
6. TEST SETUP PHOTO	29
7. EUT CONSTRUCTIONAL DETAILS	29

1.VERSION

Report No.	Version	Description	Approved
ZKT-220601L3698E	Rev.01	Initial issue of report	June 01, 2022
ZKT-220601L3698E-1	Rev.01	Update	July 08, 2024
Note: (Original report :ZKT-220601L3698E) Compared with the original report, except for the add a adapter, the rest are the same.			

2 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Result	Remark
FCC part 15.203	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.247 (b)(3)	Conducted Peak Output Power	PASS	
FCC part 15.247 (a)(2)	Channel Bandwidth	PASS	
FCC part 15.247 (e)	Power Spectral Density	PASS	
FCC part 15.247(d)	Spurious Emission (Conducted) / Band Edge	PASS	
FCC part 15.205/15.209	Spurious Emission	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.

Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225

Designation Number: CN1299

IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power conducted	$\pm 0.16\text{dB}$
3	Spurious emissions conducted	$\pm 0.21\text{dB}$
4	All emissions radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Digital Photo Frame
Model No.:	YI 10P1,YI 08X1,YI 09X1,YI 10X1,YI 11X1,YI 13X1,YI 15X1, YI 14X1,YI 17X1,YI 18X1,YI 21X1,YI 27X1,YI 32X1,YI 10P2, YI 08X2,YI 10X2,YI 07C1,YI 08C1,YI 10C1,YI 12C1
Model Different.:	Only for different model name.
Serial No.:	N/A
Hardware Version:	H1.0
Software Version:	S1.0
Sample(s) Status:	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20):11 802.11n(HT40):7
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum(DSSS) 802.11g/802.11n(YI 08X10)/802.11n(HT40): Orthogonal Frequency Division Multiplexing(OFDM)
Antenna Type:	FPCB Antenna
Antenna gain:	1.0dBi
Power supply:	AC 100-240V 50/60Hz
SWITCHING POWER ADAPTER:	Model: KDP-AC050200U Input: 100-240V~ 50-60Hz 0.5A Output: 5V $\overline{\text{---}}$ 2000mA
	Model: YTY-12F-01 05100US Input: 100-240V~ 50/60Hz 0.3A Max Output: 5V $\overline{\text{---}}$ 2000mA
Battery:	N/A

Operation Frequency each of channel							
Channel	Frequency	Chann el	Frequency	Chann el	Frequency	Chann el	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)	
	802.11b/802.11g/802.11n(HT20)	802.11n(HT40)
Lowest channel	2412MHz	2422MHz
Middle channel	2437MHz	2437MHz
Highest channel	2462MHz	2452MHz

3.2 DESCRIPTION OF TEST MODES

Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: During the test, the duty cycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

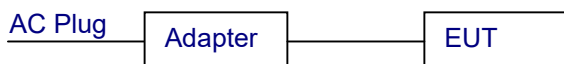
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:				
Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.				
Mode	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)
Data rate	1Mbps	6Mbps	6.5Mbps	13Mbps

Test Software	Realtek Test Tool
Power level setup	<8dBm

Test Software	BT Test Tool
Power level setup	<0dBm

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission



Radiated Emission



3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Digital Photo Frame	CIARA	CRIUS CO100-G1-01	N/A	EUT
E-2	Adapter	N/A	JHD-AP065U-BA-PD05		
E-3	Adapter	N/A	YTY-12F-01 05100US		

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2M	DC Line

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	A.17.05	Nov. 02, 2023	Nov. 01, 2024
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Nov. 02, 2023	Nov. 01, 2024
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	101169	4.32	Nov. 02, 2023	Nov. 01, 2024
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	N/A	Nov. 13, 2023	Nov. 12, 2024
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Nov. 13, 2023	Nov. 12, 2024
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Nov. 13, 2023	Nov. 12, 2024
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Nov. 16, 2023	Nov. 15, 2024
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	060747	N/A	Nov. 02, 2023	Nov. 01, 2024
9	Amplifier (1GHz-26.5GHz)	Agilent	8449B	3008A00315	N/A	Nov. 02, 2023	Nov. 01, 2024
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Nov. 02, 2023	Nov. 01, 2024
11	Test Cable	N/A	R-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
12	Test Cable	N/A	R-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
13	Test Cable	N/A	R-03	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802BS	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Nov. 14, 2023	Nov. 13, 2024
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Nov. 02, 2023	Nov. 01, 2024
3	Test Cable	N/A	C-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
4	Test Cable	N/A	C-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
5	Test Cable	N/A	C-03	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
6	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Nov. 02, 2023	Nov. 01, 2024
7	Triple-Loop Antenna	N/A	RF300	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
8	Absorbing Clamp	DZ	ZN23201	15034	N/A	Nov. 07, 2023	Nov. 06, 2024
9	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas -peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

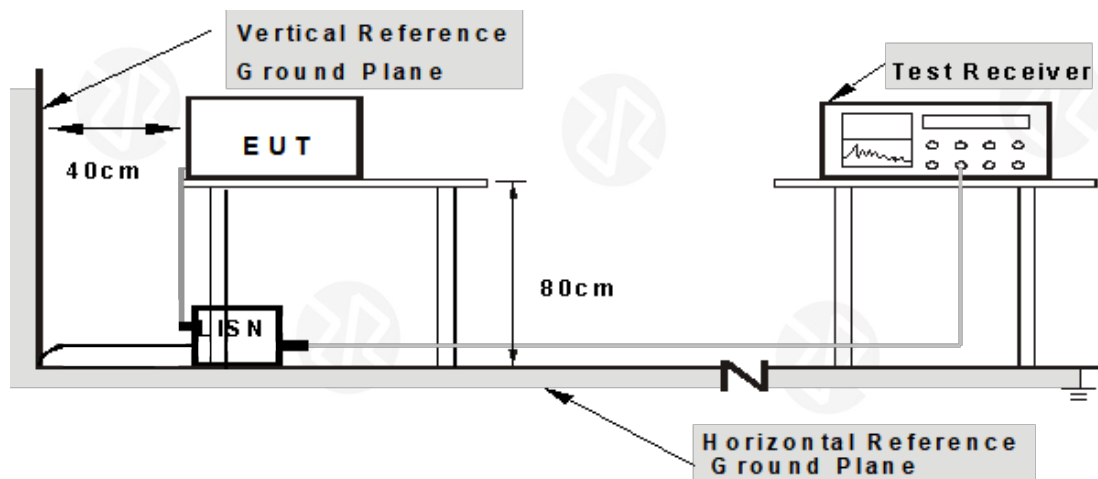
4.1.2 TEST PROCEDURE

- 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 equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



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

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

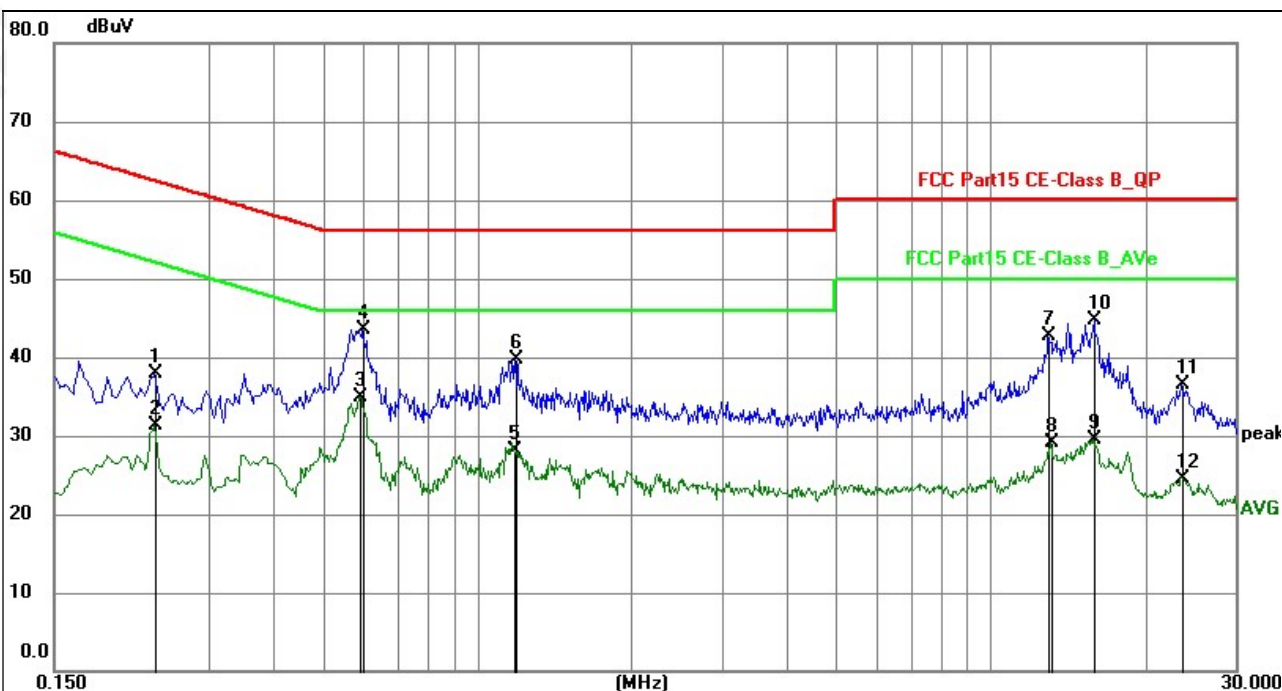
4.1.5 EUT OPERATING CONDITIONS

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.

We pretest AC 120V and AC 230V, the worst voltage was AC 120V and the data recording in the report.

4.1.6 TEST RESULTS

Temperature :	26℃	Relative Humidity:	54%
Pressure :	101kPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	TX GFSK-2402MHz

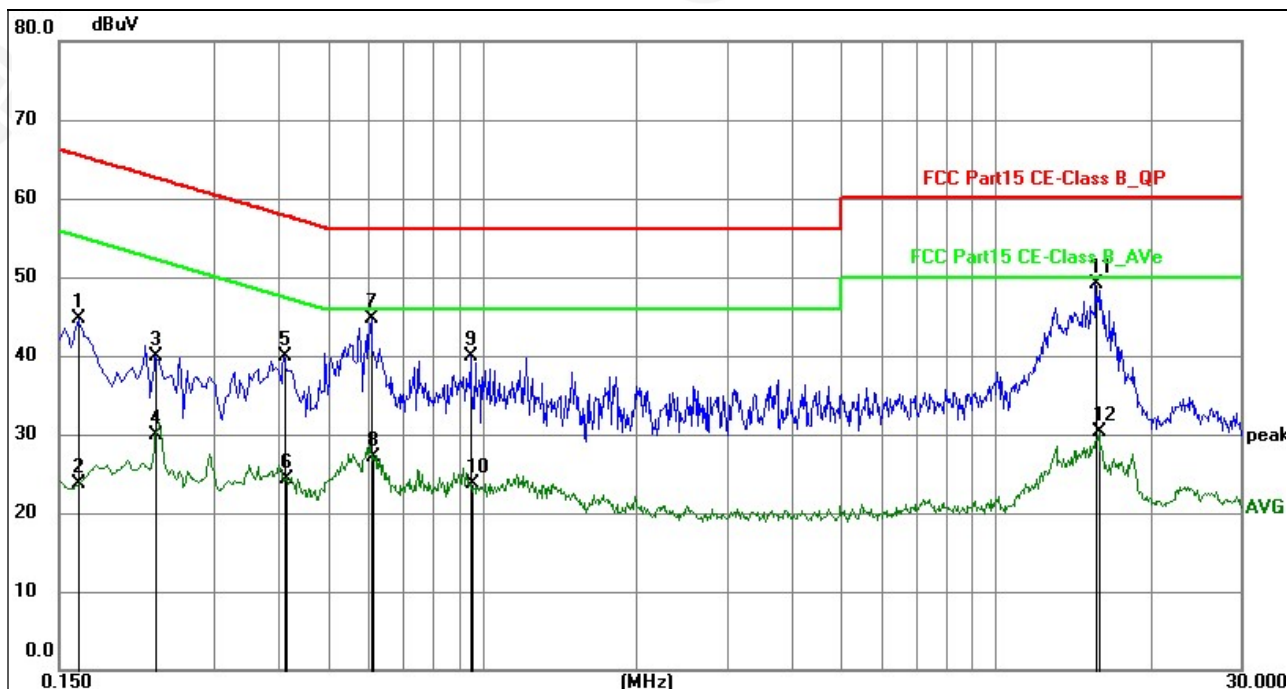


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2355	16.87	21.02	37.89	62.25	-24.36	QP	P
2	0.2355	10.29	21.02	31.31	52.25	-20.94	AVG	P
3	0.5909	14.08	20.83	34.91	46.00	-11.09	AVG	P
4	0.6000	22.68	20.83	43.51	56.00	-12.49	QP	P
5	1.1804	7.09	20.97	28.06	46.00	-17.94	AVG	P
6	1.1849	18.83	20.97	39.80	56.00	-16.20	QP	P
7	12.9750	20.21	22.53	42.74	60.00	-17.26	QP	P
8	13.0830	6.52	22.55	29.07	50.00	-20.93	AVG	P
9	15.8550	6.56	23.01	29.57	50.00	-20.43	AVG	P
10	15.8865	21.73	23.02	44.75	60.00	-15.25	QP	P
11	23.6310	12.13	24.30	36.43	60.00	-23.57	QP	P
12	23.6310	0.30	24.30	24.60	50.00	-25.40	AVG	P

Notes:

- 1.An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3.Measurement Level = Reading level + Correct Factor

Temperature :	26℃	Relative Humidity:	54%
Pressure :	101kPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	TX GFSK-2402MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1635	23.81	20.89	44.70	65.28	-20.58	QP	P
2	0.1641	2.88	20.89	23.77	55.25	-31.48	AVG	P
3	0.2310	19.01	20.99	40.00	62.41	-22.41	QP	P
4	0.2310	8.86	20.99	29.85	52.41	-22.56	AVG	P
5	0.4110	18.96	20.91	39.87	57.63	-17.76	QP	P
6	0.4127	3.38	20.91	24.29	47.59	-23.30	AVG	P
7	0.6090	23.81	20.87	44.68	56.00	-11.32	QP	P
8	0.6134	6.23	20.87	27.10	46.00	-18.90	AVG	P
9	0.9510	19.02	20.92	39.94	56.00	-16.06	QP	P
10	0.9555	2.87	20.92	23.79	46.00	-22.21	AVG	P
11	15.6975	26.02	23.03	49.05	60.00	-10.95	QP	P
12	15.8910	7.15	23.07	30.22	50.00	-19.78	AVG	P

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

Frequencies (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

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

LIMITS OF RADIATED EMISSION MEASUREMENT

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-chamber test. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- g. For the radiated emission test above 1GHz:
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

Note:

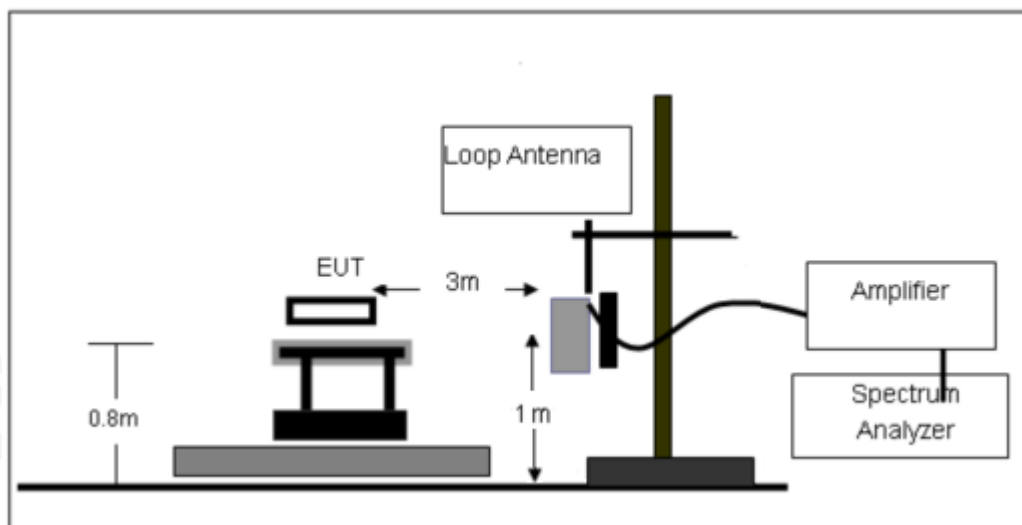
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

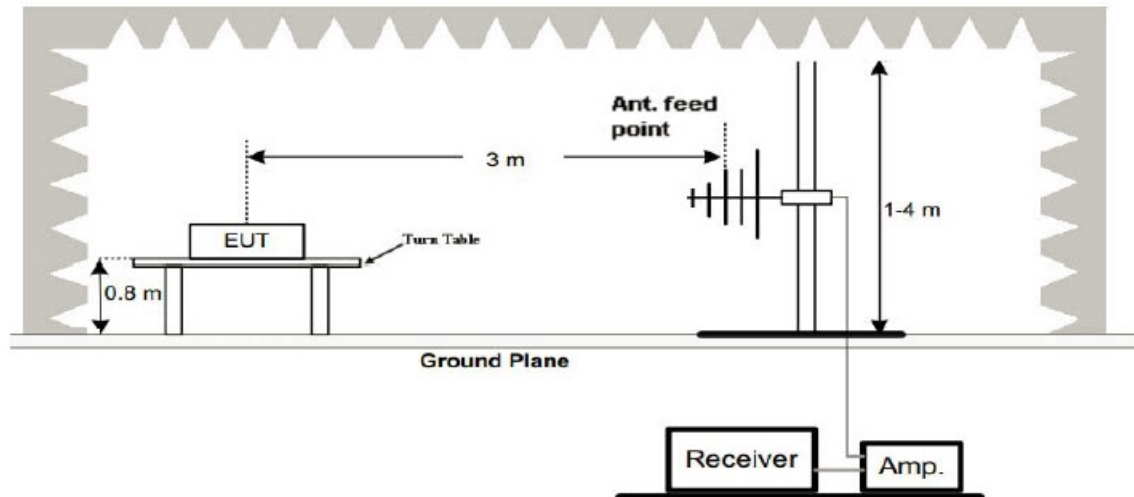
No deviation

4.2.4 TEST SETUP

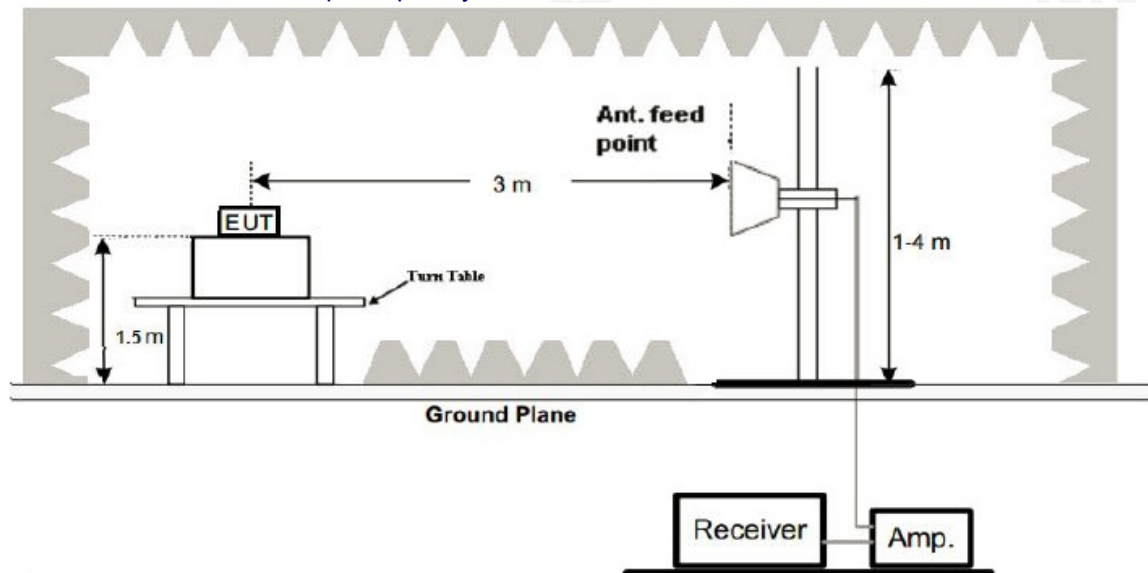
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.2.5 EUT OPERATING CONDITIONS

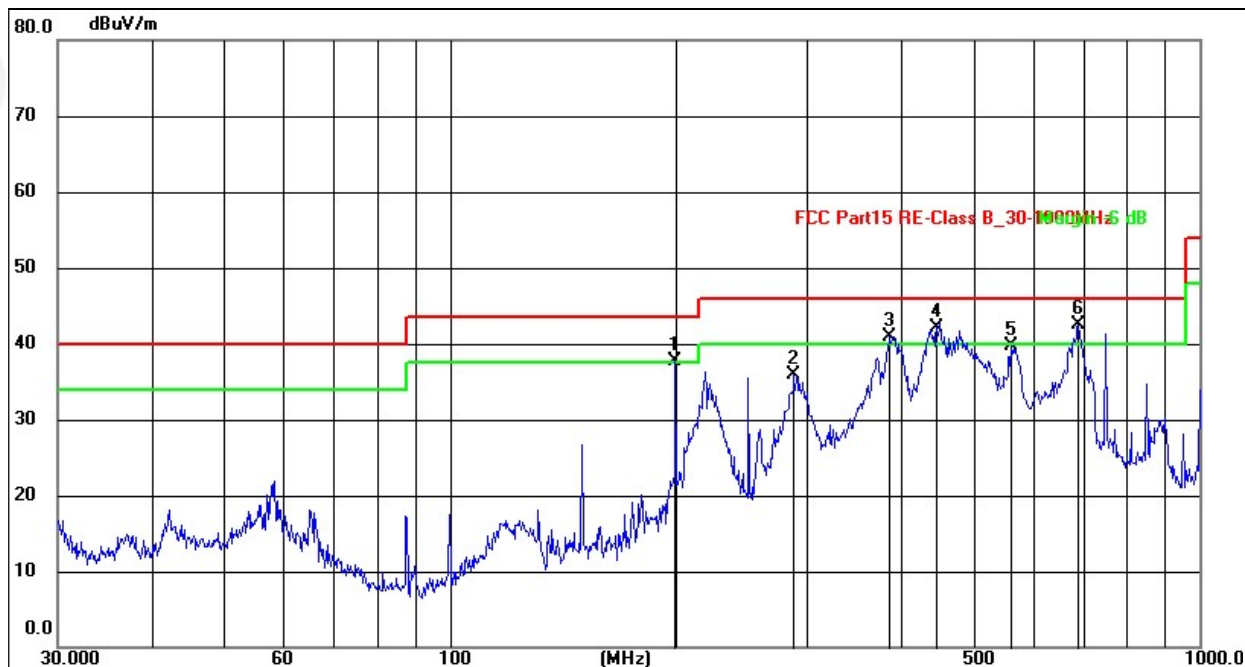
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.6 TEST RESULTS (Between 9KHz – 30 MHz)

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

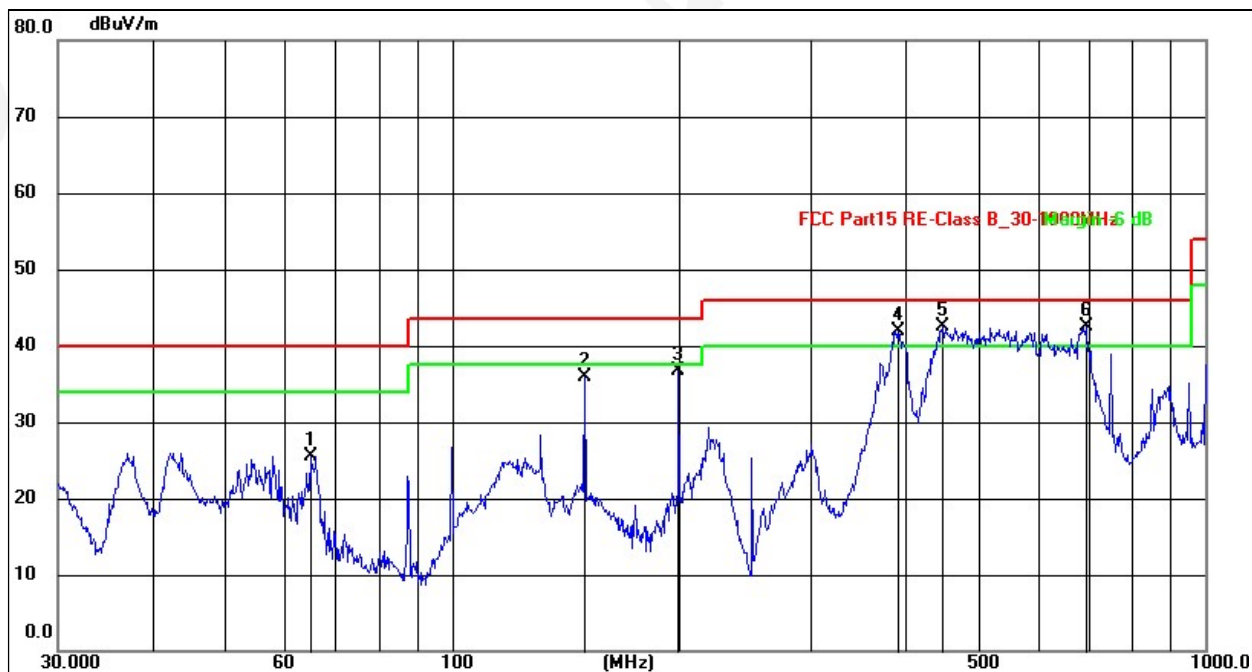
Between 30MHz – 1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	AC120V/50Hz	Test Mode:	TX GFSK-2402MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	199.9855	56.56	-18.80	37.76	43.50	-5.74	QP
2	287.9904	51.34	-15.40	35.94	46.00	-10.06	QP
3	386.6338	57.60	-16.62	40.98	46.00	-5.02	QP
4	446.4139	56.38	-14.27	42.11	46.00	-3.89	QP
5	560.6928	49.61	-9.92	39.69	46.00	-6.31	QP
6	689.5643	49.41	-6.93	42.48	46.00	-3.52	QP

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	AC120V/50Hz	Test Mode:	TX GFSK-2402MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	64.8864	44.42	-18.82	25.60	40.00	-14.40	QP
2	150.0107	56.52	-20.56	35.96	43.50	-7.54	QP
3	199.9855	57.39	-20.70	36.69	43.50	-6.81	QP
4	390.7225	57.17	-15.34	41.83	46.00	-4.17	QP
5	447.9821	55.84	-13.37	42.47	46.00	-3.53	QP
6	694.4174	50.06	-7.65	42.41	46.00	-3.59	QP

Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.

1GHz~25GHz

802.11b

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:2412MHz									
V	4824.00	51.31	30.55	5.77	31.12	57.65	74.00	-16.35	PK
V	4824.00	31.17	30.55	5.77	31.12	37.51	54.00	-16.49	AV
V	7236.00	49.40	30.33	6.32	36.00	61.39	74.00	-12.61	PK
V	7236.00	31.88	30.33	6.32	36.00	43.87	54.00	-10.13	AV
V	9648.00	49.90	30.85	7.45	37.14	63.64	74.00	-10.36	PK
V	9648.00	31.78	30.85	7.45	37.14	45.52	54.00	-8.48	AV
V	12060.00	45.00	31.02	8.99	39.10	62.07	74.00	-11.93	PK
V	12060.00	27.78	31.02	8.99	39.10	44.85	54.00	-9.15	AV
H	4824.00	51.65	30.55	5.77	31.12	57.99	74.00	-16.01	PK
H	4824.00	31.50	30.55	5.77	31.12	37.84	54.00	-16.16	AV
H	7236.00	50.29	30.33	6.32	36.00	62.28	74.00	-11.72	PK
H	7236.00	31.55	30.33	6.32	36.00	43.54	54.00	-10.46	AV
H	9648.00	50.29	30.85	7.45	37.14	64.03	74.00	-9.97	PK
H	9648.00	31.55	30.85	7.45	37.14	45.29	54.00	-8.71	AV
H	12060.00	45.29	31.02	8.99	39.10	62.36	74.00	-11.64	PK
H	12060.00	26.55	31.02	8.99	39.10	43.62	54.00	-10.38	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:2437MHz									
V	4874.00	48.97	30.55	5.77	31.45	55.64	74.00	-18.36	PK
V	4874.00	29.86	30.55	5.77	31.45	36.53	54.00	-17.47	AV
V	7311.00	47.50	30.33	6.32	36.10	59.59	74.00	-14.41	PK
V	7311.00	29.54	30.33	6.32	36.10	41.63	54.00	-12.37	AV
V	9748.00	47.57	30.85	7.45	36.50	60.67	74.00	-13.33	PK
V	9748.00	29.54	30.85	7.45	36.50	42.64	54.00	-11.36	AV
V	12185.00	42.47	31.02	8.99	39.11	59.55	74.00	-14.45	PK
V	12185.00	23.11	31.02	8.99	39.11	40.19	54.00	-13.81	AV
H	4874.00	50.33	30.55	5.77	31.45	57.00	74.00	-17.00	PK
H	4874.00	29.89	30.55	5.77	31.45	36.56	54.00	-17.44	AV
H	7311.00	51.04	30.33	6.32	36.10	63.13	74.00	-10.87	PK
H	7311.00	29.67	30.33	6.32	36.10	41.76	54.00	-12.24	AV
H	9748.00	51.04	30.85	7.45	36.50	64.14	74.00	-9.86	PK
H	9748.00	29.67	30.85	7.45	36.50	42.77	54.00	-11.23	AV
H	12185.00	44.52	31.02	8.99	39.11	61.60	74.00	-12.40	PK
H	12185.00	23.67	31.02	8.99	39.11	40.75	54.00	-13.25	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
High Channel:2462MHz									
V	4924.00	51.51	30.55	5.77	31.79	58.52	74.00	-15.48	PK
V	4924.00	33.05	30.55	5.77	31.79	40.06	54.00	-13.94	AV
V	7386.00	54.02	30.33	6.32	36.21	66.22	74.00	-7.78	PK
V	7386.00	33.37	30.33	6.32	36.21	45.57	54.00	-8.43	AV
V	9848.00	54.02	30.85	7.45	36.50	67.12	74.00	-6.88	PK
V	9848.00	33.86	30.85	7.45	36.50	46.96	54.00	-7.04	AV
V	12310.00	46.02	31.02	8.99	39.15	63.14	74.00	-10.86	PK
V	12310.00	28.26	31.02	8.99	39.15	45.38	54.00	-8.62	AV
H	4924.00	51.57	30.55	5.77	31.79	58.58	74.00	-15.42	PK
H	4924.00	33.21	30.55	5.77	31.79	40.22	54.00	-13.78	AV
H	7386.00	53.19	30.33	6.32	36.21	65.39	74.00	-8.61	PK
H	7386.00	33.53	30.33	6.32	36.21	45.73	54.00	-8.27	AV
H	9848.00	53.79	30.85	7.45	36.50	66.89	74.00	-7.11	PK
H	9848.00	33.23	30.85	7.45	36.50	46.33	54.00	-7.67	AV
H	12310.00	47.69	31.02	8.99	39.15	64.81	74.00	-9.19	PK
H	12310.00	26.62	31.02	8.99	39.15	43.74	54.00	-10.26	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11g

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:2412MHz									
V	4824.00	50.88	30.55	5.77	31.12	57.22	74.00	-16.78	PK
V	4824.00	30.64	30.55	5.77	31.12	36.98	54.00	-17.02	AV
V	7236.00	48.67	30.33	6.32	36.00	60.66	74.00	-13.34	PK
V	7236.00	31.59	30.33	6.32	36.00	43.58	54.00	-10.42	AV
V	9648.00	48.67	30.85	7.45	37.14	62.41	74.00	-11.59	PK
V	9648.00	31.15	30.85	7.45	37.14	44.89	54.00	-9.11	AV
V	12060.00	45.77	31.02	8.99	39.10	62.84	74.00	-11.16	PK
V	12060.00	27.05	31.02	8.99	39.10	44.12	54.00	-9.88	AV
H	4824.00	51.22	30.55	5.77	31.12	57.56	74.00	-16.44	PK
H	4824.00	31.07	30.55	5.77	31.12	37.41	54.00	-16.59	AV
H	7236.00	49.97	30.33	6.32	36.00	61.96	74.00	-12.04	PK
H	7236.00	31.28	30.33	6.32	36.00	43.27	54.00	-10.73	AV
H	9648.00	49.99	30.85	7.45	37.14	63.73	74.00	-10.27	PK
H	9648.00	31.30	30.85	7.45	37.14	45.04	54.00	-8.96	AV
H	12060.00	45.02	31.02	8.99	39.10	62.09	74.00	-11.91	PK
H	12060.00	24.31	31.02	8.99	39.10	41.38	54.00	-12.62	AV

Polar (H/V)	Frequency	Meter Reading	Pre-amp lifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:2437MHz									
V	4874.00	49.12	30.55	5.77	31.45	55.79	74.00	-18.21	PK
V	4874.00	29.97	30.55	5.77	31.45	36.64	54.00	-17.36	AV
V	7311.00	47.72	30.33	6.32	36.10	59.81	74.00	-14.19	PK
V	7311.00	29.83	30.33	6.32	36.10	41.92	54.00	-12.08	AV
V	9748.00	47.80	30.85	7.45	36.50	60.90	74.00	-13.10	PK
V	9748.00	29.06	30.85	7.45	36.50	42.16	54.00	-11.84	AV
V	12185.00	44.83	31.02	8.99	39.11	61.91	74.00	-12.09	PK
V	12185.00	23.17	31.02	8.99	39.11	40.25	54.00	-13.75	AV
H	4874.00	50.39	30.55	5.77	31.45	57.06	74.00	-16.94	PK
H	4874.00	30.34	30.55	5.77	31.45	37.01	54.00	-16.99	AV
H	7311.00	51.09	30.33	6.32	36.10	63.18	74.00	-10.82	PK
H	7311.00	29.91	30.33	6.32	36.10	42.00	54.00	-12.00	AV
H	9748.00	51.29	30.85	7.45	36.50	64.39	74.00	-9.61	PK
H	9748.00	29.72	30.85	7.45	36.50	42.82	54.00	-11.18	AV
H	12185.00	45.54	31.02	8.99	39.11	62.62	74.00	-11.38	PK
H	12185.00	24.85	31.02	8.99	39.11	41.93	54.00	-12.07	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
High Channel:2462MHz									
V	4924.00	48.45	30.55	5.77	31.79	55.46	74.00	-18.54	PK
V	4924.00	29.95	30.55	5.77	31.79	36.96	54.00	-17.04	AV
V	7386.00	50.79	30.33	6.32	36.21	62.99	74.00	-11.01	PK
V	7386.00	30.29	30.33	6.32	36.21	42.49	54.00	-11.51	AV
V	9848.00	50.79	30.85	7.45	36.50	63.89	74.00	-10.11	PK
V	9848.00	30.73	30.85	7.45	36.50	43.83	54.00	-10.17	AV
V	12310.00	43.89	31.02	8.99	39.15	61.01	74.00	-12.99	PK
V	12310.00	25.93	31.02	8.99	39.15	43.05	54.00	-10.95	AV
H	4924.00	48.47	30.55	5.77	31.79	55.48	74.00	-18.52	PK
H	4924.00	30.14	30.55	5.77	31.79	37.15	54.00	-16.85	AV
H	7386.00	49.96	30.33	6.32	36.21	62.16	74.00	-11.84	PK
H	7386.00	30.46	30.33	6.32	36.21	42.66	54.00	-11.34	AV
H	9848.00	50.66	30.85	7.45	36.50	63.76	74.00	-10.24	PK
H	9848.00	30.50	30.85	7.45	36.50	43.60	54.00	-10.40	AV
H	12310.00	44.56	31.02	8.99	39.15	61.68	74.00	-12.32	PK
H	12310.00	23.50	31.02	8.99	39.15	40.62	54.00	-13.38	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11n20

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:2412MHz									
V	4824.00	50.97	30.55	5.77	31.12	57.31	74.00	-16.69	PK
V	4824.00	30.77	30.55	5.77	31.12	37.11	54.00	-16.89	AV
V	7236.00	47.86	30.33	6.32	36.00	59.85	74.00	-14.15	PK
V	7236.00	31.77	30.33	6.32	36.00	43.76	54.00	-10.24	AV
V	9648.00	49.06	30.85	7.45	37.14	62.80	74.00	-11.20	PK
V	9648.00	31.14	30.85	7.45	37.14	44.88	54.00	-9.12	AV
V	12060.00	44.86	31.02	8.99	39.10	61.93	74.00	-12.07	PK
V	12060.00	26.21	31.02	8.99	39.10	43.28	54.00	-10.72	AV
H	4824.00	51.11	30.55	5.77	31.12	57.45	74.00	-16.55	PK
H	4824.00	30.96	30.55	5.77	31.12	37.30	54.00	-16.70	AV
H	7236.00	50.06	30.33	6.32	36.00	62.05	74.00	-11.95	PK
H	7236.00	31.27	30.33	6.32	36.00	43.26	54.00	-10.74	AV
H	9648.00	49.98	30.85	7.45	37.14	63.72	74.00	-10.28	PK
H	9648.00	31.19	30.85	7.45	37.14	44.93	54.00	-9.07	AV
H	12060.00	44.11	31.02	8.99	39.10	61.18	74.00	-12.82	PK
H	12060.00	30.97	31.02	8.99	39.10	48.04	54.00	-5.96	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:2437MHz									
V	4874.00	49.67	30.55	5.77	31.45	56.34	74.00	-17.66	PK
V	4874.00	30.56	30.55	5.77	31.45	37.23	54.00	-16.77	AV
V	7311.00	47.53	30.33	6.32	36.10	59.62	74.00	-14.38	PK
V	7311.00	30.39	30.33	6.32	36.10	42.48	54.00	-11.52	AV
V	9748.00	48.58	30.85	7.45	36.50	61.68	74.00	-12.32	PK
V	9748.00	30.56	30.85	7.45	36.50	43.66	54.00	-10.34	AV
V	12185.00	45.48	31.02	8.99	39.11	62.56	74.00	-11.44	PK
V	12185.00	24.49	31.02	8.99	39.11	41.57	54.00	-12.43	AV
H	4874.00	50.96	30.55	5.77	31.45	57.63	74.00	-16.37	PK
H	4874.00	30.69	30.55	5.77	31.45	37.36	54.00	-16.64	AV
H	7311.00	51.69	30.33	6.32	36.10	63.78	74.00	-10.22	PK
H	7311.00	30.47	30.33	6.32	36.10	42.56	54.00	-11.44	AV
H	9748.00	51.84	30.85	7.45	36.50	64.94	74.00	-9.06	PK
H	9748.00	30.47	30.85	7.45	36.50	43.57	54.00	-10.43	AV
H	12185.00	44.47	31.02	8.99	39.11	61.55	74.00	-12.45	PK
H	12185.00	25.55	31.02	8.99	39.11	42.63	54.00	-11.37	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampl ifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
High Channel:2462MHz									
V	4924.00	51.60	30.55	5.77	31.79	58.61	74.00	-15.39	PK
V	4924.00	32.80	30.55	5.77	31.79	39.81	54.00	-14.19	AV
V	7386.00	53.84	30.33	6.32	36.21	66.04	74.00	-7.96	PK
V	7386.00	33.52	30.33	6.32	36.21	45.72	54.00	-8.28	AV
V	9848.00	53.94	30.85	7.45	36.50	67.04	74.00	-6.96	PK
V	9848.00	33.94	30.85	7.45	36.50	47.04	54.00	-6.96	AV
V	12310.00	46.84	31.02	8.99	39.15	63.96	74.00	-10.04	PK
V	12310.00	26.08	31.02	8.99	39.15	43.20	54.00	-10.80	AV
H	4924.00	51.62	30.55	5.77	31.79	58.63	74.00	-15.37	PK
H	4924.00	33.29	30.55	5.77	31.79	40.30	54.00	-13.70	AV
H	7386.00	53.11	30.33	6.32	36.21	65.31	74.00	-8.69	PK
H	7386.00	33.75	30.33	6.32	36.21	45.95	54.00	-8.05	AV
H	9848.00	53.81	30.85	7.45	36.50	66.91	74.00	-7.09	PK
H	9848.00	33.74	30.85	7.45	36.50	46.84	54.00	-7.16	AV
H	12310.00	47.71	31.02	8.99	39.15	64.83	74.00	-9.17	PK
H	12310.00	26.65	31.02	8.99	39.15	43.77	54.00	-10.23	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

802.11n40

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Low Channel:2422MHz									
V	4844.00	50.20	30.55	5.77	31.14	56.56	74.00	-17.44	PK
V	4844.00	31.39	30.55	5.77	31.14	37.75	54.00	-16.25	AV
V	7266.00	52.44	30.33	6.32	36.09	64.52	74.00	-9.48	PK
V	7266.00	32.25	30.33	6.32	36.09	44.33	54.00	-9.67	AV
V	9688.00	52.52	30.85	7.45	37.16	66.28	74.00	-7.72	PK
V	9688.00	32.50	30.85	7.45	37.16	46.26	54.00	-7.74	AV
V	12110.00	45.07	31.02	8.99	39.15	62.19	74.00	-11.81	PK
V	12110.00	25.76	31.02	8.99	39.15	42.88	54.00	-11.12	AV
H	4844.00	50.45	30.55	5.77	31.14	56.81	74.00	-17.19	PK
H	4844.00	31.92	30.55	5.77	31.14	38.28	54.00	-15.72	AV
H	7266.00	51.72	30.33	6.32	36.09	63.80	74.00	-10.20	PK
H	7266.00	32.40	30.33	6.32	36.09	44.48	54.00	-9.52	AV
H	9688.00	52.39	30.85	7.45	37.16	66.15	74.00	-7.85	PK
H	9688.00	31.97	30.85	7.45	37.16	45.73	54.00	-8.27	AV
H	12110.00	44.44	31.02	8.99	39.15	61.56	74.00	-12.44	PK
H	12110.00	25.28	31.02	8.99	39.15	42.40	54.00	-11.60	AV

Polar (H/V)	Frequenc y	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
Middle Channel:2437MHz									
V	4874.00	49.88	30.55	5.77	31.45	56.55	74.00	-17.45	PK
V	4874.00	31.08	30.55	5.77	31.45	37.75	54.00	-16.25	AV
V	7311.00	52.12	30.33	6.32	36.10	64.21	74.00	-9.79	PK
V	7311.00	31.80	30.33	6.32	36.10	43.89	54.00	-10.11	AV
V	9748.00	52.22	30.85	7.45	36.50	65.32	74.00	-8.68	PK
V	9748.00	32.22	30.85	7.45	36.50	45.32	54.00	-8.68	AV
V	12185.00	45.12	31.02	8.99	39.11	62.20	74.00	-11.80	PK
V	12185.00	25.36	31.02	8.99	39.11	42.44	54.00	-11.56	AV
H	4874.00	49.90	30.55	5.77	31.45	56.57	74.00	-17.43	PK
H	4874.00	31.57	30.55	5.77	31.45	38.24	54.00	-15.76	AV
H	7311.00	51.39	30.33	6.32	36.10	63.48	74.00	-10.52	PK
H	7311.00	32.03	30.33	6.32	36.10	44.12	54.00	-9.88	AV
H	9748.00	52.09	30.85	7.45	36.50	65.19	74.00	-8.81	PK
H	9748.00	32.02	30.85	7.45	36.50	45.12	54.00	-8.88	AV
H	12185.00	46.99	31.02	8.99	39.11	64.07	74.00	-9.93	PK
H	12185.00	25.93	31.02	8.99	39.11	43.01	54.00	-10.99	AV

Page 27 of 29

Polar (H/V)	Frequency	Meter Reading	Pre-amp lifier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detect or Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	
High Channel:2452MHz									
V	4904.00	49.78	30.55	5.77	31.69	56.69	74.00	-17.31	PK
V	4904.00	30.72	30.55	5.77	31.69	37.63	54.00	-16.37	AV
V	7356.00	51.41	30.33	6.32	36.15	63.55	74.00	-10.45	PK
V	7356.00	31.35	30.33	6.32	36.15	43.49	54.00	-10.51	AV
V	9808.00	52.11	30.85	7.45	37.32	66.03	74.00	-7.97	PK
V	9808.00	31.77	30.85	7.45	37.32	45.69	54.00	-8.31	AV
V	12260.00	45.62	31.02	8.99	39.13	62.72	74.00	-11.28	PK
V	12260.00	24.70	31.02	8.99	39.13	41.80	54.00	-12.20	AV
H	4904.00	49.46	30.55	5.77	31.69	56.37	74.00	-17.63	PK
H	4904.00	31.86	30.55	5.77	31.69	38.77	54.00	-15.23	AV
H	7356.00	51.04	30.33	6.32	36.15	63.18	74.00	-10.82	PK
H	7356.00	32.12	30.33	6.32	36.15	44.26	54.00	-9.74	AV
H	9808.00	51.67	30.85	7.45	37.32	65.59	74.00	-8.41	PK
H	9808.00	31.51	30.85	7.45	37.32	45.43	54.00	-8.57	AV
H	12260.00	44.66	31.02	8.99	39.13	61.76	74.00	-12.24	PK
H	12260.00	26.52	31.02	8.99	39.13	43.62	54.00	-10.38	AV

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

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

5.ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antennas are FPCB antenna, the best case gain of the antennas are 1.0dBi, reference to the appendix II for details	

6. TEST SETUP PHOTO

Reference to the appendix I for details.

7. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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