



FCC Part 15C Test Report

FCC ID:2BWRP-PT806A-TX

Report Number..... : ZKT-260805L0259E

Date of Test..... June 16, 2026 ~ June 29, 2026

Date of issue..... June 29, 2026

Total number of pages 43

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 : Guangzhou Tanjing Auto Accessories Co.,Ltd

Address Building 4, Zone 13, Xinghua Road, Tanbu Town, Huadu District, Guangzhou City, Guangdong Province, China

Manufacturer's name : Guangzhou Tanjing Auto Accessories Co.,Ltd

Address Building 4, Zone 13, Xinghua Road, Tanbu Town, Huadu District, Guangzhou City, Guangdong Province, China

Test specification:

Standard FCC CFR Title 47 Part 15 Subpart C Section 15.249
ANSI C63.10-2020+Cor 1-2023

Test procedure /

Non-standard test method N/A

Test Report Form No. : TRF-EL-112_V0

Test Report Form(s) Originator : ZKT Testing

Master TRF : Dated: 2021-04-22

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..... : Multi-channel Wireless Controller

Trademark N/A

Model/Type reference..... PT806A-TX

Ratings..... Input: DC 5V 500mA
Battery:3.7V, 500mAh



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): Jim Liu

Reviewer (name + signature).....: Jackson Fang

Approved (name + signature): Lake Xie





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1.VERSION

Report No.	Version	Description	Approved
ZKT-260805L0259E	Rev.01	Initial issue of report	June 29, 2026



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.249) , Subpart C			
Standard Section	Test Item	Judgment	Remark
FCC part 15.203	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part15.249(a)	Field Strength of Fundamental	PASS	
FCC part 15.249	Fundamental &Radiated Spurious Emission Measurement	PASS	
FCC part 15.215 (c)	20dB Channel Bandwidth	PASS	
FCC part 15.205	Band Edge	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: 927491
Designation Number: CN1431

IC Registered No.: 27033
CAB identifier: CN0110

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$ · where expended 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	$\pm 2\%$
8	RF Occupied Bandwidth	$\pm 1.8\text{dB}$



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Multi-channel Wireless Controller
Model No.:	PT806A-TX
Model Different.:	N/A
Serial No.:	N/A
Hardware Version:	V1.6
Software Version:	SV1.3
Sample(s) Status:	Engineer sample
Operation Frequency:	2405MHz-2480MHz
Channel Numbers:	16
Modulation Type:	GFSK
Antenna Type:	PCB Antenna
Antenna gain:	3 dBi
Power supply:	Input: DC 5V 500mA Battery:3.7V, 500mAh

Channel List			
Channel	Frequency (MHz)	Channel	Frequency (MHz)
11	2405	19	2445
12	2410	20	2450
13	2415	21	2455
14	2420	22	2460
15	2425	23	2465
16	2430	24	2470
17	2435	25	2475
18	2440	26	2480

Channel	Frequency
The lowest channel	2405MHz
The middle channel	2440MHz
The Highest channel	2480MHz



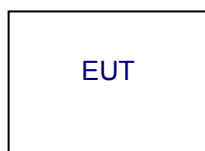
3.2 DESCRIPTION OF TEST MODES

Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: During the test, 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.	

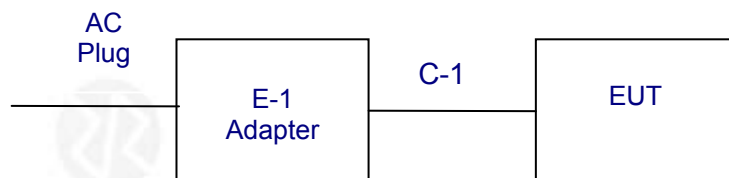
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
2.4G	2.4G	GFSK	3	Default	The EUT has signal transmission when it is powered on

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test





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	AC Adapter	UGREEN	X569		
C-1	USB-cable	UGREEN	A88E6		

Item	Shielded Type	Ferrite Core	Length	Note
C-1	Shielded	NO	150cm	/

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

Conduction Emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Sep. 23, 2025	Sep. 22, 2026
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Sep. 19, 2025	Sep. 18, 2026
3	Test Cable	N/A	C-01	N/A	N/A	May 25, 2026	May 24, 2027
4	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Oct. 24, 2025	Oct. 23, 2026
5	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Emissions & Radiation Spurious Emissions Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Oct. 24, 2025	Oct. 23, 2026
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	00877	N/A	Sep. 20, 2025	Sep. 19, 2026
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Sep. 20, 2025	Sep. 19, 2026
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Sep. 30, 2025	Sep. 29, 2026
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Sep. 20, 2025	Sep. 19, 2026
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Sep. 19, 2025	Sep. 18, 2026
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Sep. 19, 2025	Sep. 18, 2026
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Oct. 24, 2025	Oct. 23, 2026
11	Test Cable	N/A	R-01	N/A	N/A	May 25, 2026	May 24, 2027
12	Test Cable	N/A	R-02	N/A	N/A	May 25, 2026	May 24, 2027
13	Test Cable	N/A	R-03	N/A	N/A	May 26, 2026	May 25, 2027
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	\	\



RF Conducted Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	Test Cable	N/A	RF-01	N/A	N/A	May 25, 2026	May 24, 2027
4	Test Cable	N/A	RF-02	N/A	N/A	May 25, 2026	May 24, 2027
5	Test Cable	N/A	RF-03	N/A	N/A	May 25, 2026	May 24, 2027
6	ESG Signal Generator	Agilent	E4421B	N/A	B.03.84	Sep. 19, 2025	Sep. 18, 2026
7	Signal Generator	Agilent	N5182A	N/A	A.01.87	Sep. 20, 2025	Sep. 19, 2026
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344/M-1752	N/A	Sep. 25, 2025	Sep. 24, 2026
9	SHIELD BOX	TESCOM	TC-5970C	5970C015553	N/A	Dec. 18, 2025	Dec. 17, 2026
10	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Sep. 28, 2025	Sep. 27, 2026
11	MWRF Power Meter Test system	MW	MW100-RF CB	N/A	N/A	Sep. 19, 2025	Sep. 18, 2026
12	D.C. Power Supply	LongWei	TPR-6405 D	N/A	N/A	\	\
13	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020+Cor 1-2023
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 1POWER 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

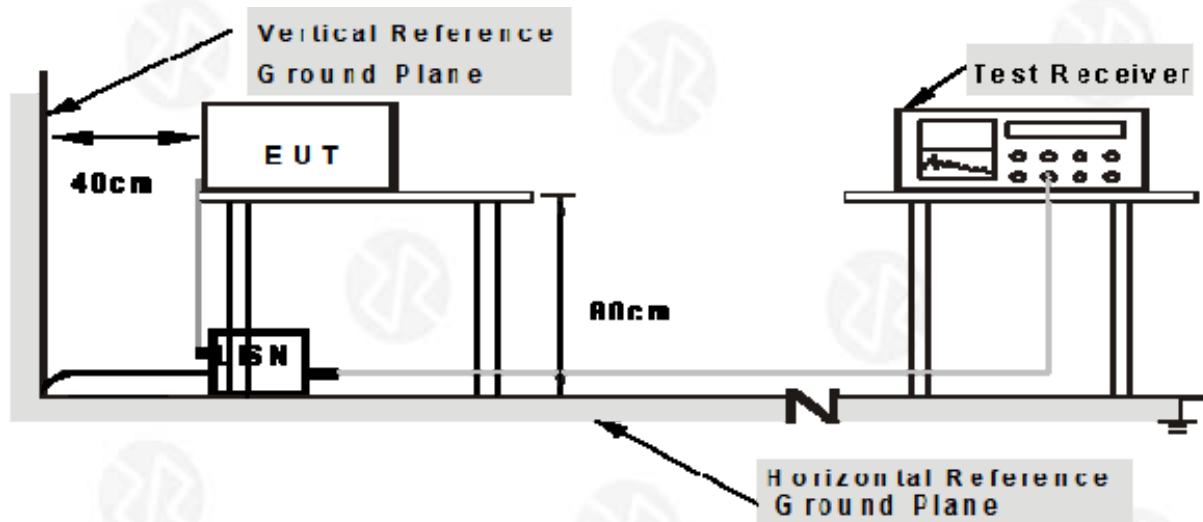
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.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

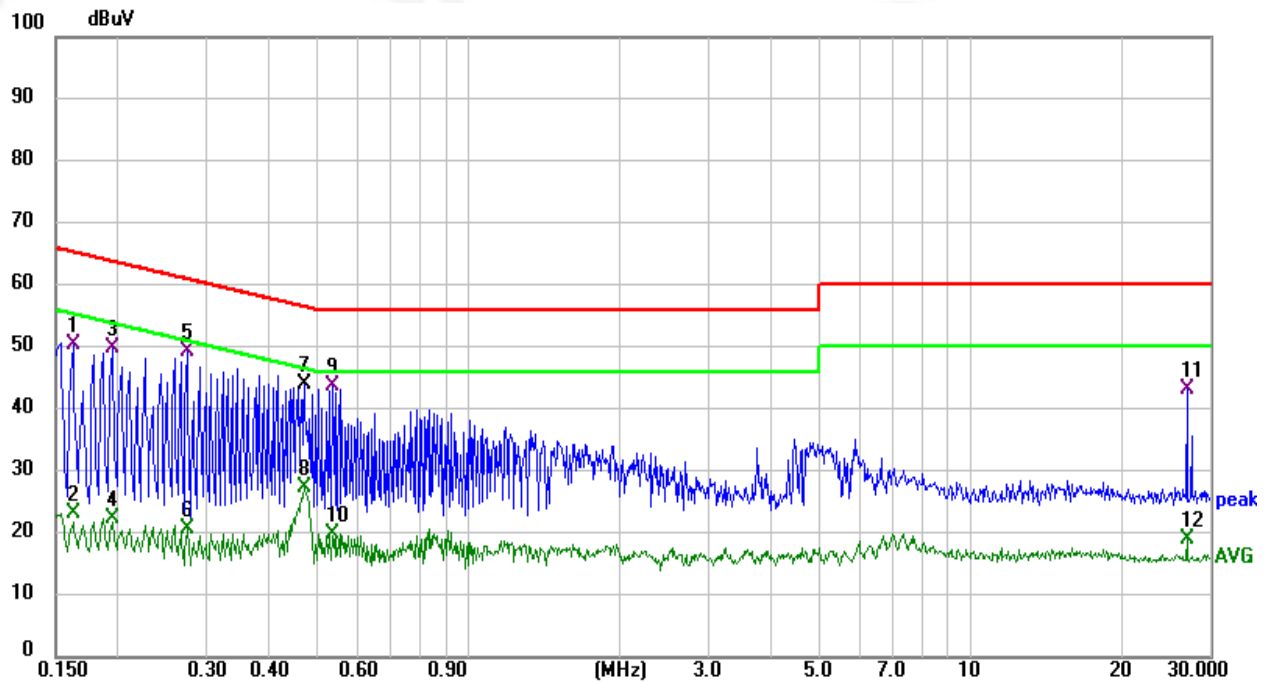
4.1.5 EUT OPERATING CONDITIONS

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.



4.1.6 Test Result

Temperature:	25.4℃	Relative Humidity:	61.6%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	DC 5V from Adapter	Test Mode:	TX



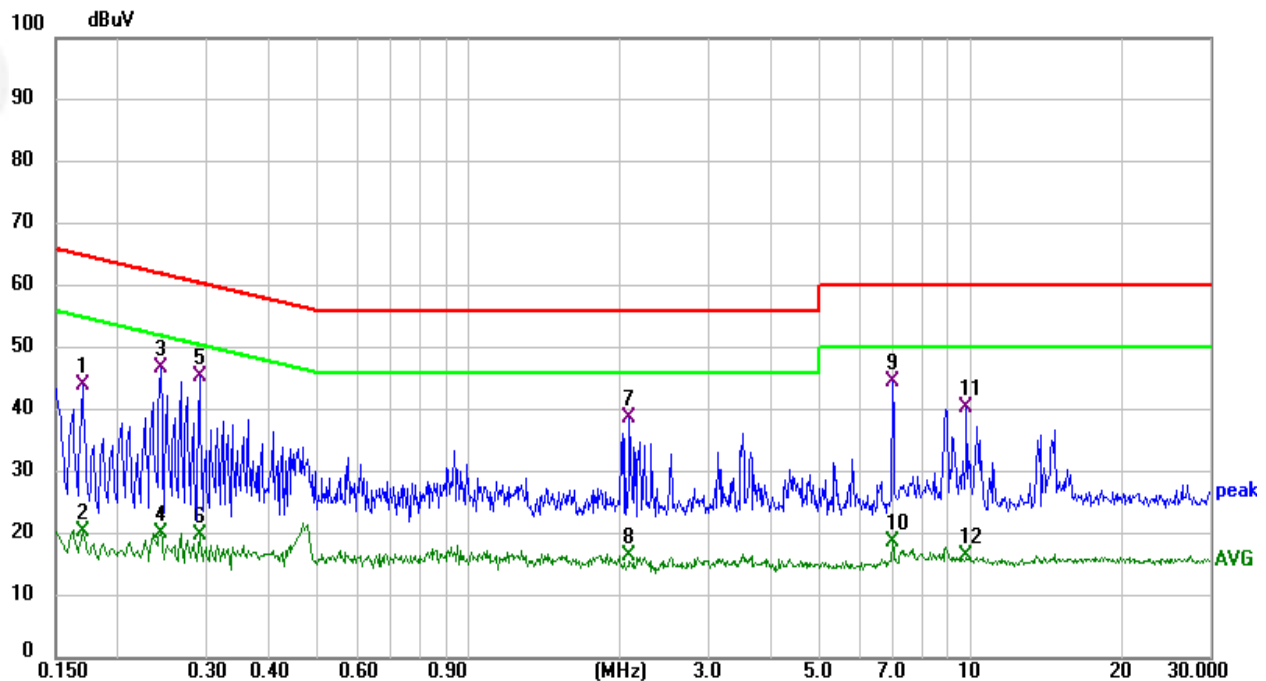
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1620	31.12	19.37	50.49	65.36	-14.87	QP
2	0.1620	3.87	19.37	23.24	55.36	-32.12	AVG
3	0.1940	30.43	19.39	49.82	63.86	-14.04	QP
4	0.1940	3.08	19.39	22.47	53.86	-31.39	AVG
5	0.2740	29.89	19.37	49.26	61.00	-11.74	QP
6	0.2740	1.43	19.37	20.80	51.00	-30.20	AVG
7	0.4700	24.53	19.39	43.92	56.51	-12.59	QP
8	0.4700	7.90	19.39	27.29	46.51	-19.22	AVG
9	0.5340	24.36	19.39	43.75	56.00	-12.25	QP
10	0.5340	0.55	19.39	19.94	46.00	-26.06	AVG
11	26.8740	23.48	19.66	43.14	60.00	-16.86	QP
12	26.8740	-0.58	19.66	19.08	50.00	-30.92	AVG

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.Final Level = Reading level + Correct Factor.
- 4.Correct Factor = Liss factor+ Cable loss factor + limiter factor.
- 5.Margin = Measurement Level-Limit.
- 6.The test data shows only the worst case TX GFSK - 2480MHz.



Temperature:	25.4℃	Relative Humidity:	61.6%
Pressure:	101 kPa	Polarization:	N
Test Voltage:	DC 5V from Adapter	Test Mode:	TX



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1700	24.77	19.39	44.16	64.96	-20.80	QP
2	0.1700	1.02	19.39	20.41	54.96	-34.55	AVG
3	0.2420	27.49	19.38	46.87	62.03	-15.16	QP
4	0.2420	0.83	19.38	20.21	52.03	-31.82	AVG
5	0.2900	26.02	19.38	45.40	60.52	-15.12	QP
6	0.2900	0.46	19.38	19.84	50.52	-30.68	AVG
7	2.0820	19.32	19.38	38.70	56.00	-17.30	QP
8	2.0820	-2.90	19.38	16.48	46.00	-29.52	AVG
9	6.9660	25.26	19.46	44.72	60.00	-15.28	QP
10	6.9660	-0.69	19.46	18.77	50.00	-31.23	AVG
11	9.7660	20.70	19.65	40.35	60.00	-19.65	QP
12	9.7660	-3.07	19.65	16.58	50.00	-33.42	AVG

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. Final Level = Reading level + Correct Factor.
4. Correct Factor = Liss factor+ Cable loss factor + limiter factor.
5. Margin = Measurement Level-Limit.
6. The test data shows only the worst case TX GFSK - 2480MHz.



4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10-2020+Cor 1-2023				
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

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:

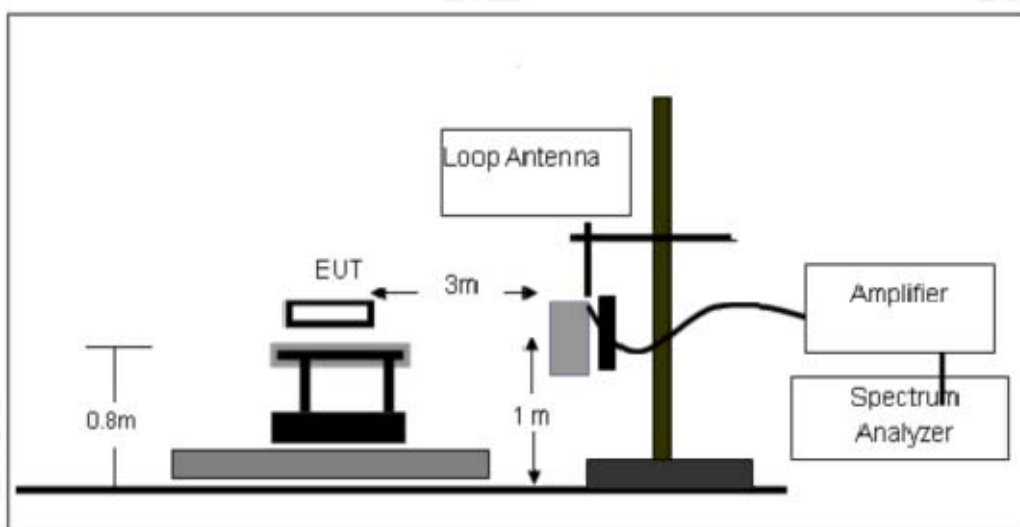
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

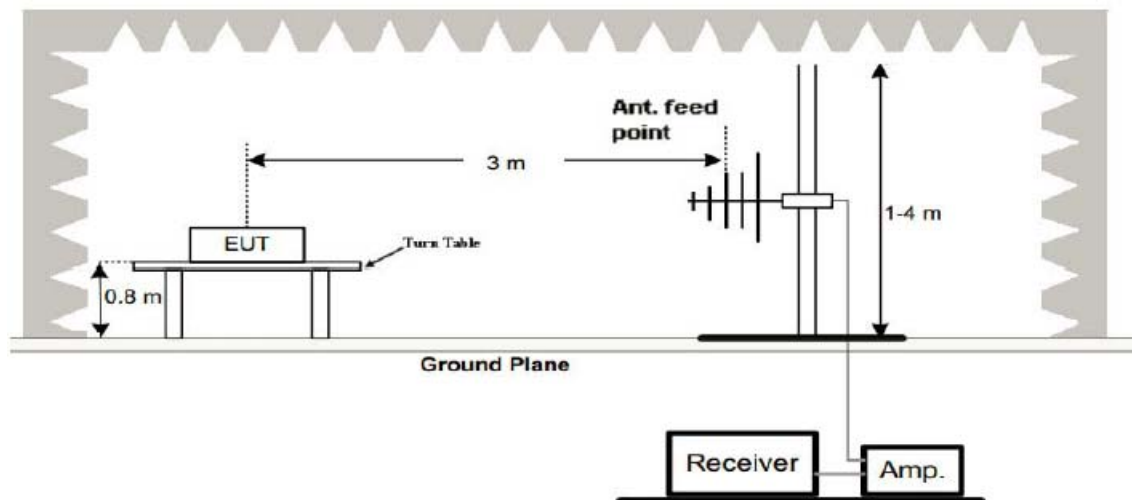
4.2.4 TEST SETUP

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

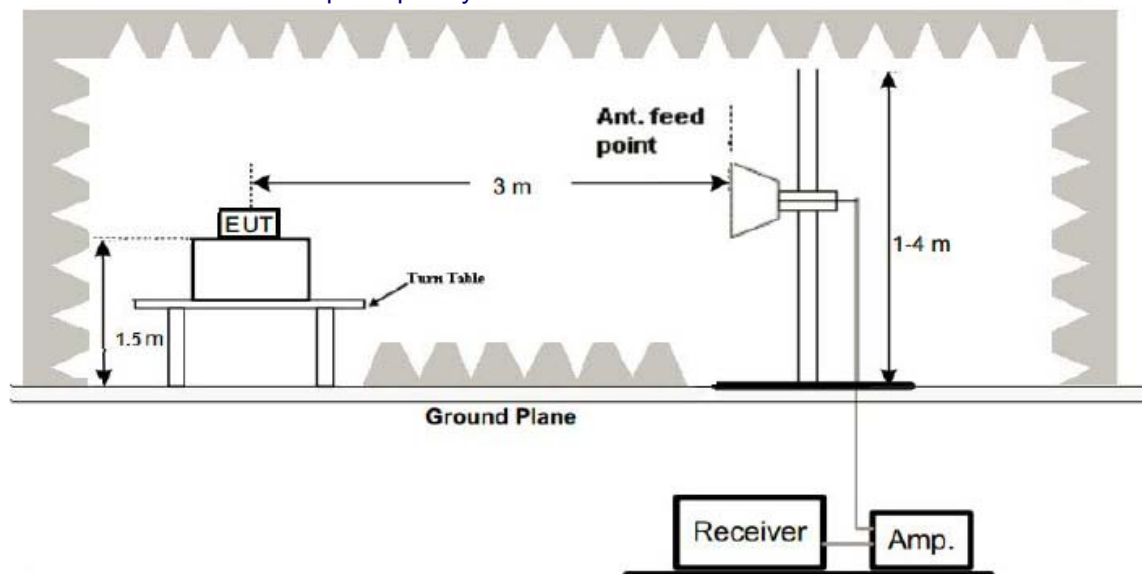




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(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.

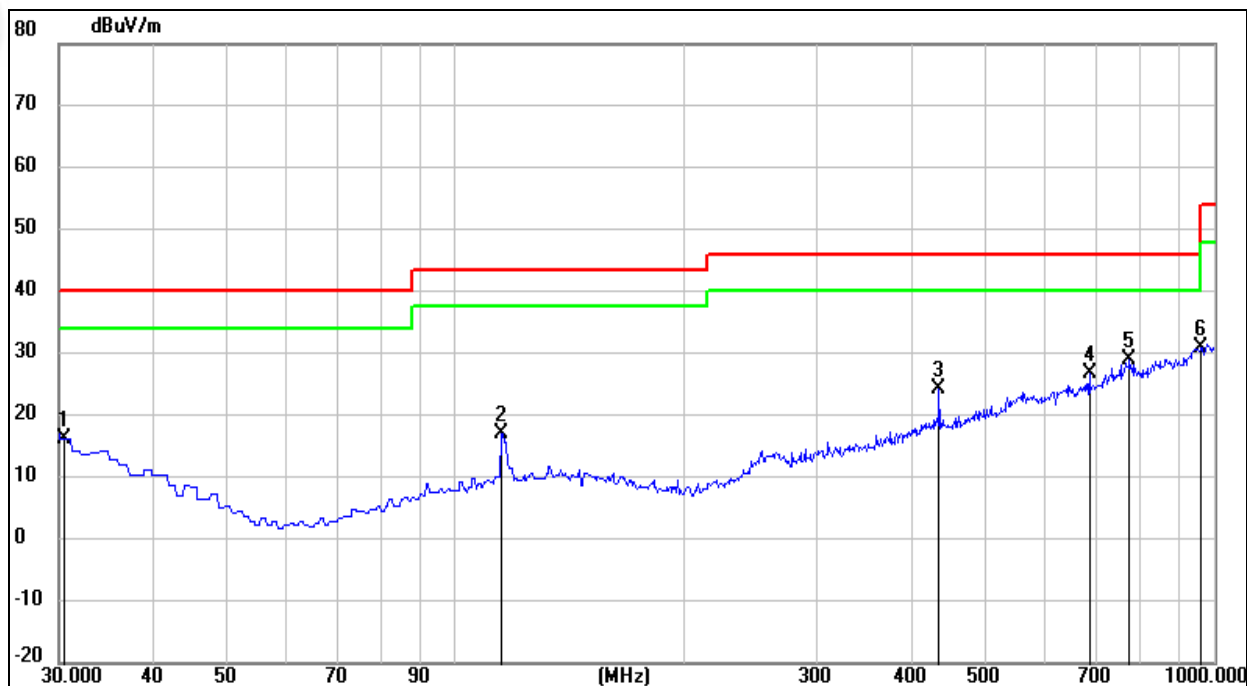
4.2.6 TEST RESULTS (Between 9KHz – 30 MHz)

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

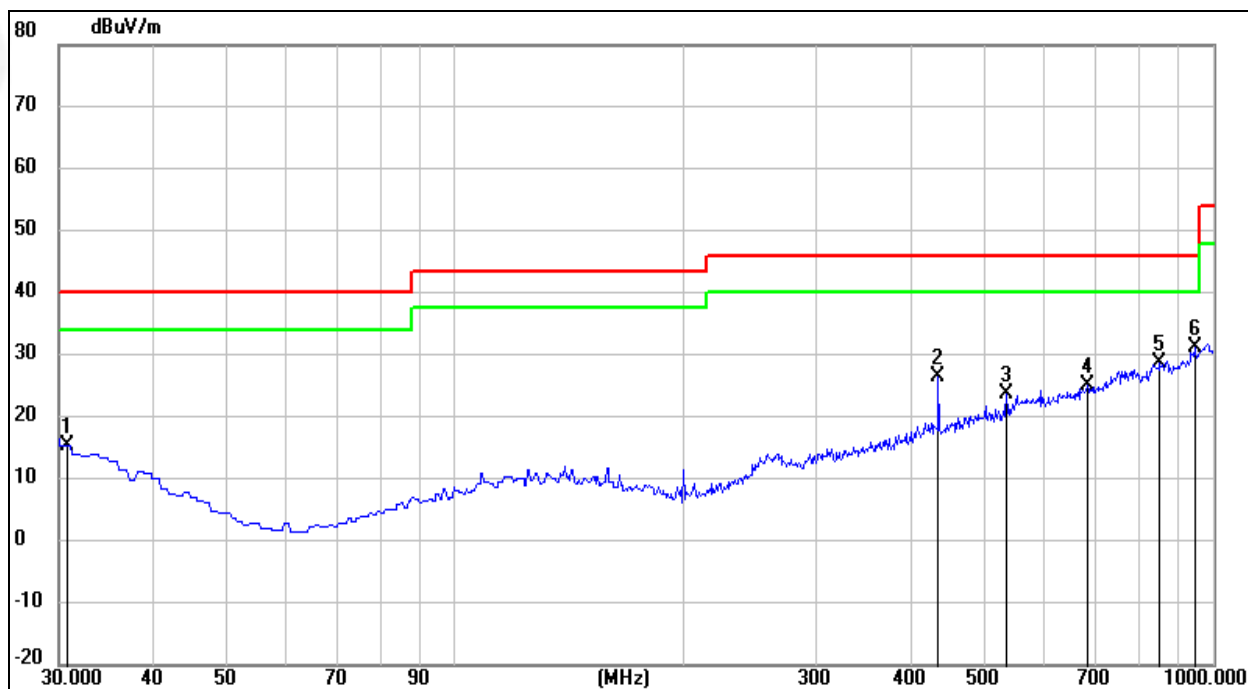
Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Model	GFSK 2480 MHz



No	Frequenc y (MHz)	Reading Level()	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margi n (dB)	Detector	Pass/Fail
1	30.5306	29.37	-13.12	16.25	40.00	-23.75	QP	Pass
2	114.9169	35.70	-18.57	17.13	43.50	-26.37	QP	Pass
3	433.5200	34.44	-10.13	24.31	46.00	-21.69	QP	Pass
4	683.7800	30.98	-4.31	26.67	46.00	-19.33	QP	Pass
5	772.0500	31.32	-2.31	29.01	46.00	-16.99	QP	Pass
6 *	959.2600	29.32	1.75	31.07	46.00	-14.93	QP	Pass



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Model	GFSK 2480 MHz



No.	Frequency (MHz)	Reading Level()	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	30.8535	28.62	-13.29	15.33	40.00	-24.67	QP	Pass
2	433.5200	36.79	-10.13	26.66	46.00	-19.34	QP	Pass
3	533.4300	30.92	-7.25	23.67	46.00	-22.33	QP	Pass
4	681.8400	29.43	-4.29	25.14	46.00	-20.86	QP	Pass
5	849.6500	29.37	-0.73	28.64	46.00	-17.36	QP	Pass
6 *	943.7400	29.73	1.46	31.19	46.00	-14.81	QP	Pass

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.



GFSK 1GHz~25GHz

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel:2405MHz									
V	4810.00	54.13	30.55	5.77	24.66	54.01	74.00	-19.99	Pk
V	4810.00	43.04	30.55	5.77	24.66	42.92	54.00	-11.08	AV
V	7215.00	53.31	30.33	6.32	24.55	53.85	74.00	-20.15	Pk
V	7215.00	43.80	30.33	6.32	24.55	44.34	54.00	-9.66	AV
V	9620.00	53.78	30.85	7.45	24.69	55.07	74.00	-18.93	Pk
V	9620.00	43.60	30.85	7.45	24.69	44.89	54.00	-9.11	AV
V	12025.00	50.97	31.02	8.99	25.57	54.51	74.00	-19.49	Pk
V	12025.00	43.05	31.02	8.99	25.57	46.59	54.00	-7.41	AV
H	4810.00	54.51	30.55	5.77	24.66	54.39	74.00	-19.61	Pk
H	4810.00	43.66	30.55	5.77	24.66	43.54	54.00	-10.46	AV
H	7215.00	54.03	30.33	6.32	24.55	54.57	74.00	-19.43	Pk
H	7215.00	43.01	30.33	6.32	24.55	43.55	54.00	-10.45	AV
H	9620.00	51.40	30.85	7.45	24.69	52.69	74.00	-21.31	Pk
H	9620.00	43.98	30.85	7.45	24.69	45.27	54.00	-8.73	AV
H	12025.00	53.52	31.02	8.99	25.57	57.06	74.00	-16.94	Pk
H	12025.00	43.33	31.02	8.99	25.57	46.87	54.00	-7.13	AV

Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Middle Channel:2440MHz									
V	4880.00	51.14	30.55	5.77	24.66	51.02	74.00	-22.98	Pk
V	4880.00	43.36	30.55	5.77	24.66	43.24	54.00	-10.76	AV
V	7320.00	53.67	30.33	6.32	24.55	54.21	74.00	-19.79	Pk
V	7320.00	43.33	30.33	6.32	24.55	43.87	54.00	-10.13	AV
V	9760.00	54.38	30.85	7.45	24.69	55.67	74.00	-18.33	Pk
V	9760.00	43.16	30.85	7.45	24.69	44.45	54.00	-9.55	AV
V	12200.00	51.76	31.02	8.99	25.57	55.30	74.00	-18.70	Pk
V	12200.00	43.24	31.02	8.99	25.57	46.78	54.00	-7.22	AV
H	4880.00	54.21	30.55	5.77	24.66	54.09	74.00	-19.91	Pk
H	4880.00	43.46	30.55	5.77	24.66	43.34	54.00	-10.66	AV
H	7320.00	54.52	30.33	6.32	24.55	55.06	74.00	-18.94	Pk
H	7320.00	43.23	30.33	6.32	24.55	43.77	54.00	-10.23	AV
H	9760.00	50.39	30.85	7.45	24.69	51.68	74.00	-22.32	Pk
H	9760.00	43.76	30.85	7.45	24.69	45.05	54.00	-8.95	AV
H	12200.00	53.81	31.02	8.99	25.57	57.35	74.00	-16.65	Pk
H	12200.00	43.47	31.02	8.99	25.57	47.01	54.00	-6.99	AV



Polar (H/V)	Frequency	Meter Reading	Pre-ampli fier	Cable Loss	Antenna Factor	Emission Level	Limits	Margin	Detector Type
	(MHz)	(dBuV)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
High Channel:2480MHz									
V	4960.00	53.60	30.55	5.77	24.66	53.48	74.00	-20.52	Pk
V	4960.00	43.55	30.55	5.77	24.66	43.43	54.00	-10.57	AV
V	7440.00	51.36	30.33	6.32	24.55	51.90	74.00	-22.10	Pk
V	7440.00	43.06	30.33	6.32	24.55	43.60	54.00	-10.40	AV
V	9920.00	52.77	30.85	7.45	24.69	54.06	74.00	-19.94	Pk
V	9920.00	43.88	30.85	7.45	24.69	45.17	54.00	-8.83	AV
V	12400.00	54.49	31.02	8.99	25.57	58.03	74.00	-15.97	Pk
V	12400.00	43.70	31.02	8.99	25.57	47.24	54.00	-6.76	AV
H	4960.00	54.77	30.55	5.77	24.66	54.65	74.00	-19.35	Pk
H	4960.00	43.80	30.55	5.77	24.66	43.68	54.00	-10.32	AV
H	7440.00	54.41	30.33	6.32	24.55	54.95	74.00	-19.05	Pk
H	7440.00	43.58	30.33	6.32	24.55	44.12	54.00	-9.88	AV
H	9920.00	53.52	30.85	7.45	24.69	54.81	74.00	-19.19	Pk
H	9920.00	43.34	30.85	7.45	24.69	44.63	54.00	-9.37	AV
H	12400.00	54.01	31.02	8.99	25.57	57.55	74.00	-16.45	Pk
H	12400.00	43.82	31.02	8.99	25.57	47.36	54.00	-6.64	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. Field strength of fundamental

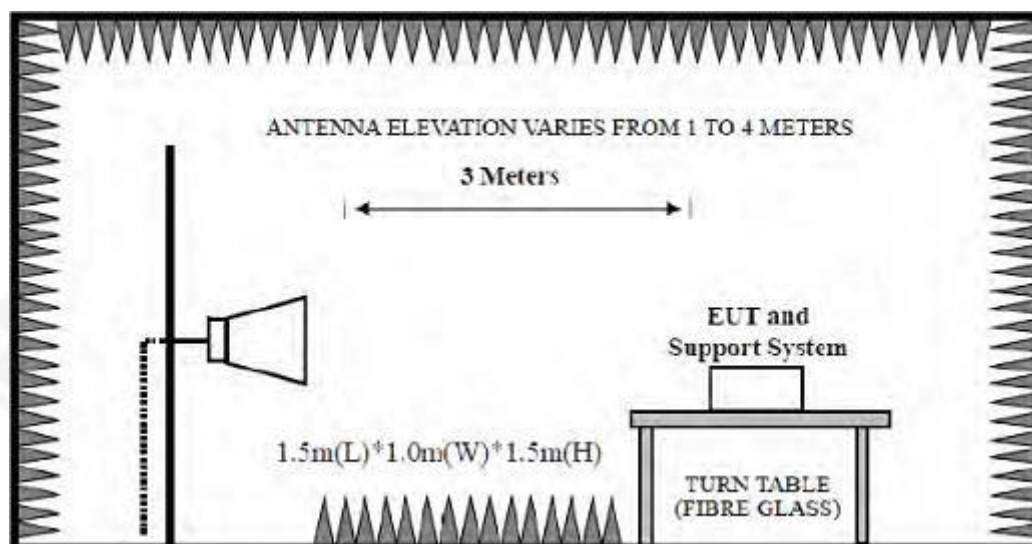
5.1 LIMIT

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

Note :

1. Average Limit (dB μ V/m)=20 $\times$ log[1000 $\times$ Field Strength (mV/m)].
2. Peak Limit (dB μ V/m)= Average Limit (dB μ V/m)+20dB

5.2 TEST SETUP



Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	$\geq$ OBW
VBW	3xRBW
Start frequency	2400.0MHz
Stop frequency	2483.5MHz
Sweep Time	Auto
Detector	PEAK/AVG



5.3 TEST PROCEDURE

- EUT was placed on a turn table, which is 1.5 meter high above the ground.
- EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
- Spectrum analyzer setting parameters in accordance with section 3.3.
- Set the EUT transmit continuously with maximum output power.
- The turn table can rotate 360 degrees to determine the position of the maximum emission level.
- The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test, record the average and peak value.
- Repeat above procedures until all channels were measured.
- Record the results in the test report.

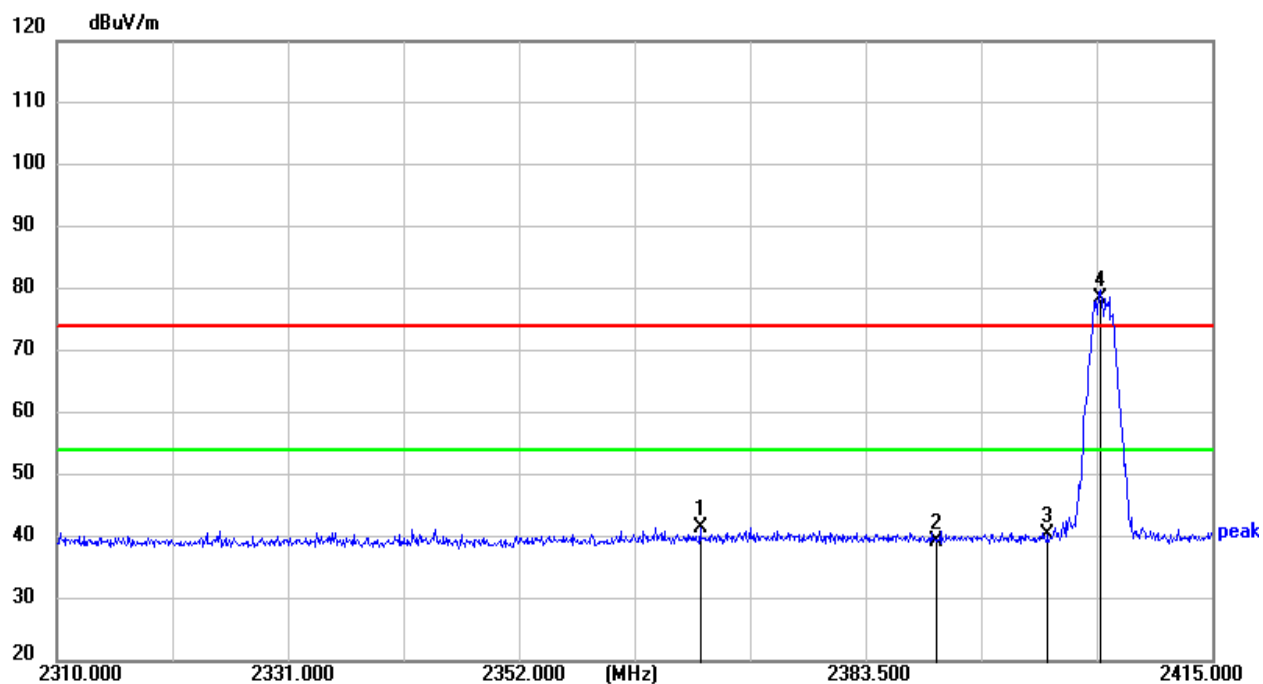
5.4 TEST RESULT

Test frequency (MHz)	Fundamental Frequency (MHz)	Field strength of fundamental level (dB μ V/m)		Limit (dBuV)		Result	Antenna Pole (H/V)
		AVG	Peak	AVG	Peak		
2405	2405	47.67	78.55	94	114	Pass	H
	2405	50.15	81.03	94	114	Pass	V
2440	2440	53.15	84.03	94	114	Pass	H
	2440	51.03	81.91	94	114	Pass	V
2480	2480	53.24	84.12	94	114	Pass	H
	2480	50.00	80.88	94	114	Pass	V



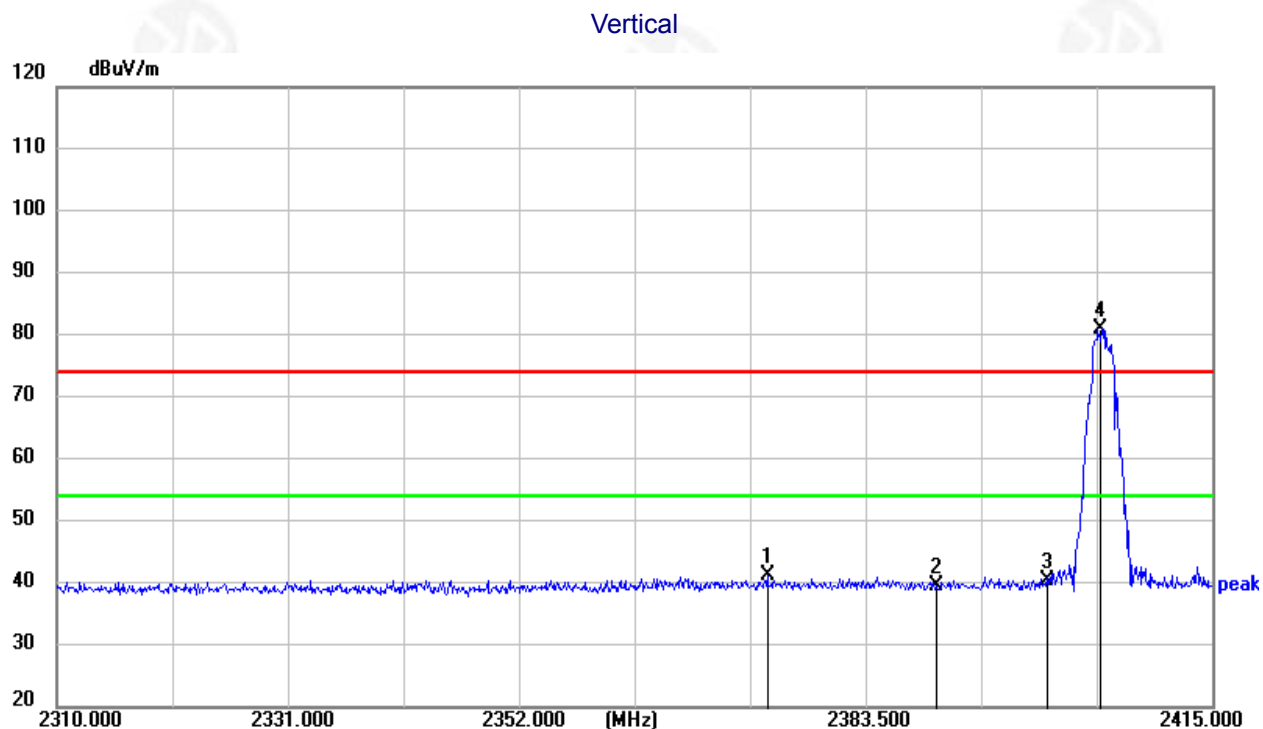
2405MHz

Horizontal



Fundamental Frequency

No.	Frequency	Reading	Correct	Duty cycle	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
4	2405.0000	77.66	0.89	-	78.55	114	-35.45	peak
4	2405.0000	77.66	0.89	-30.88	47.67	94	-46.33	AVG



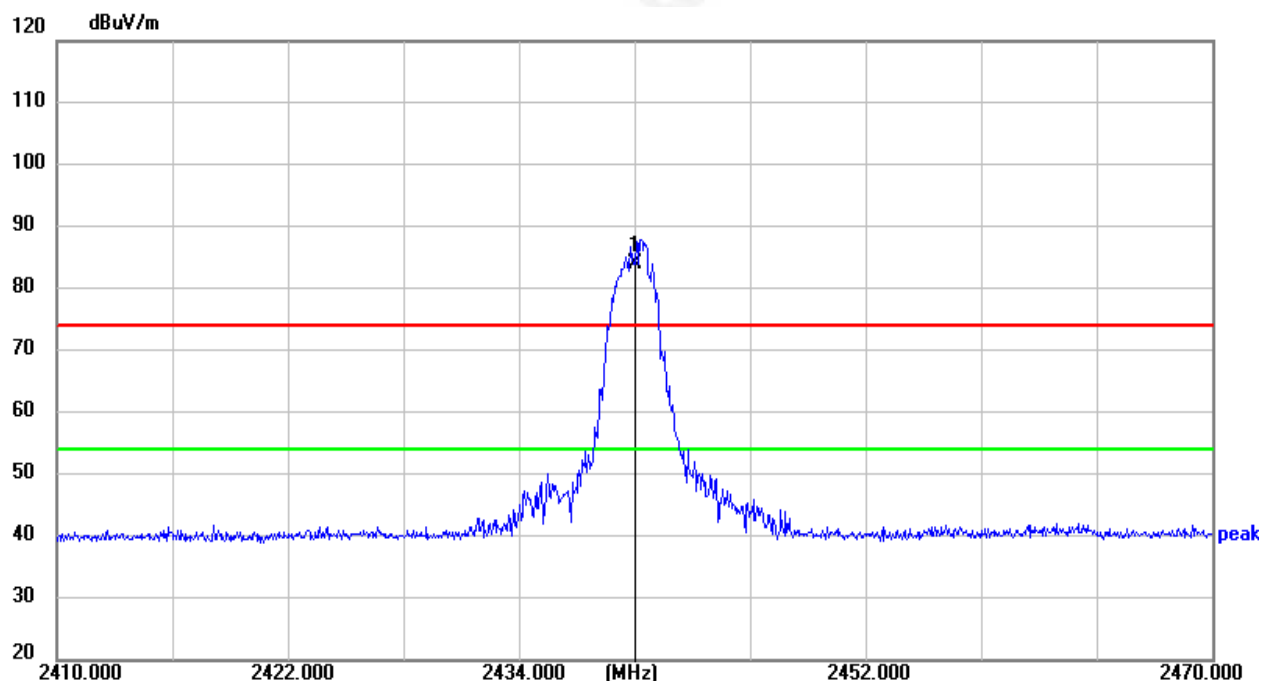
Fundamental Frequency

No.	Frequency	Reading	Correct	Duty cycle	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
4 *	2405.0000	80.14	0.89	-	81.03	114	-32.97	peak
4 *	2405.0000	80.14	0.89	-30.88	50.15	94	-43.85	AVG



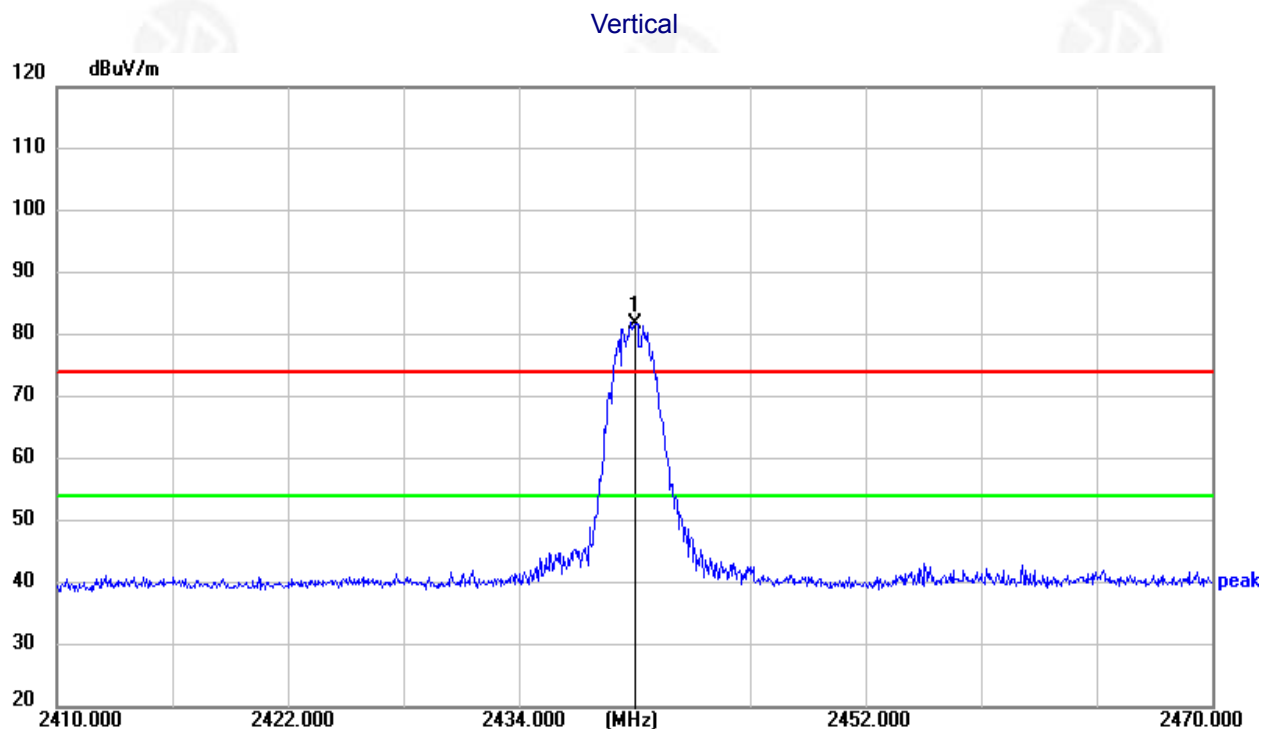
2440MHz

Horizontal



Fundamental Frequency

No.	Frequency	Reading	Correct	Duty cycle	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1 *	2440.0000	83.08	0.95	-	84.03	114	-29.97	peak
1 *	2440.0000	83.08	0.95	-30.88	53.15	94	-40.85	AVG



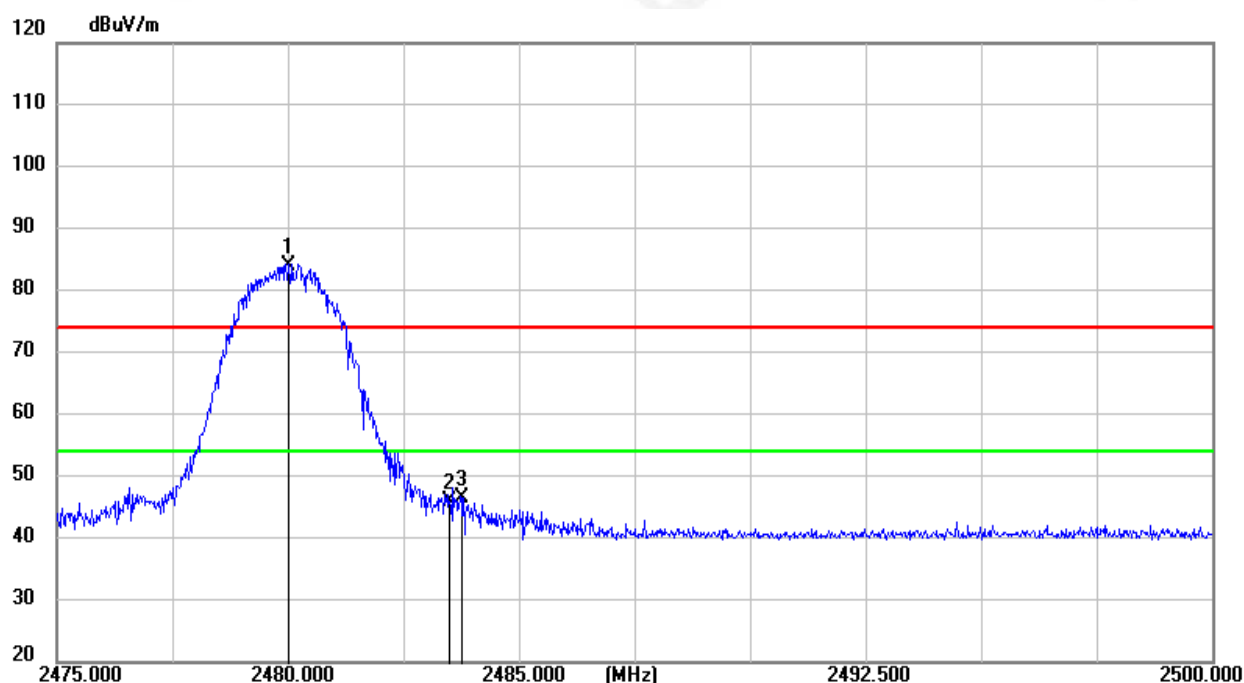
Fundamental Frequency

No.	Frequency	Reading	Correct	Duty cycle	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1 *	2440.0000	80.96	0.95	-	81.91	114	-32.09	peak
1 *	2440.0000	80.96	0.95	-30.88	51.03	94	-42.97	AVG



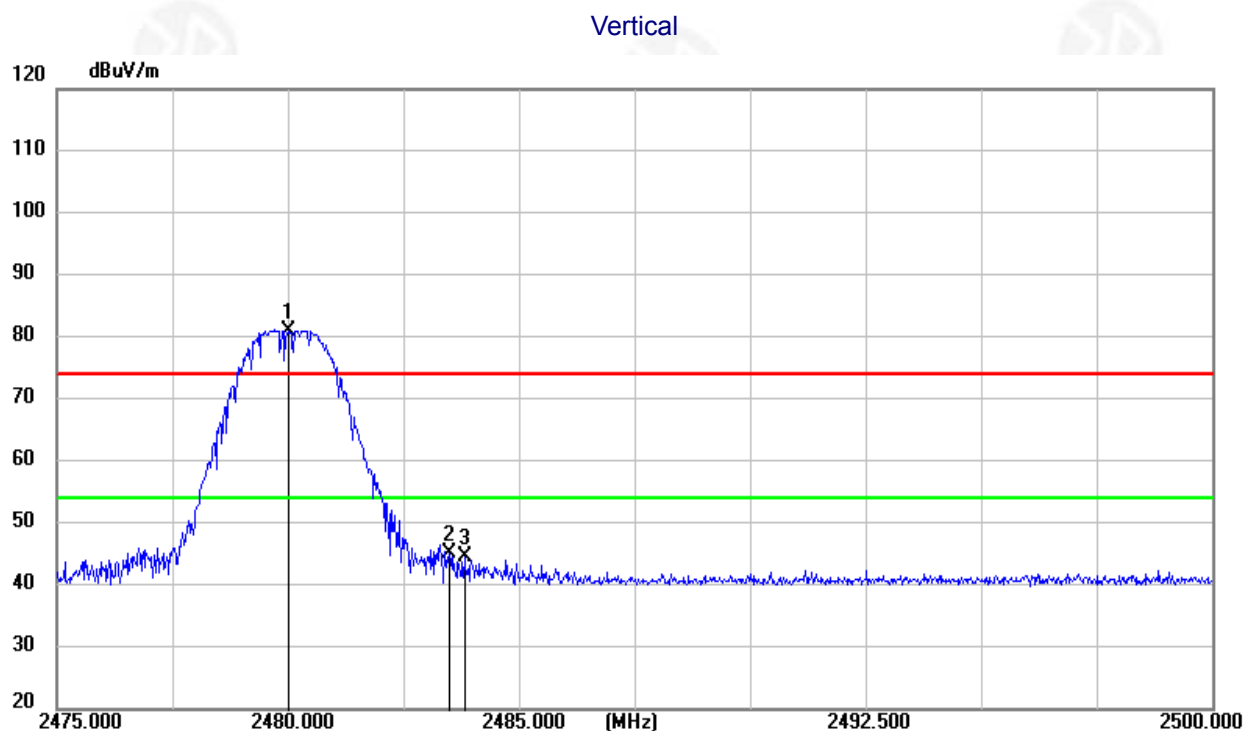
2480MHz

Horizontal



Fundamental Frequency

No.	Frequency	Reading	Correct	Duty cycle	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1 *	2480.0000	83.11	1.01	-	84.12	114	-29.88	peak
1 *	2480.0000	83.11	1.01	-30.88	53.24	94	-40.76	AVG



Fundamental Frequency

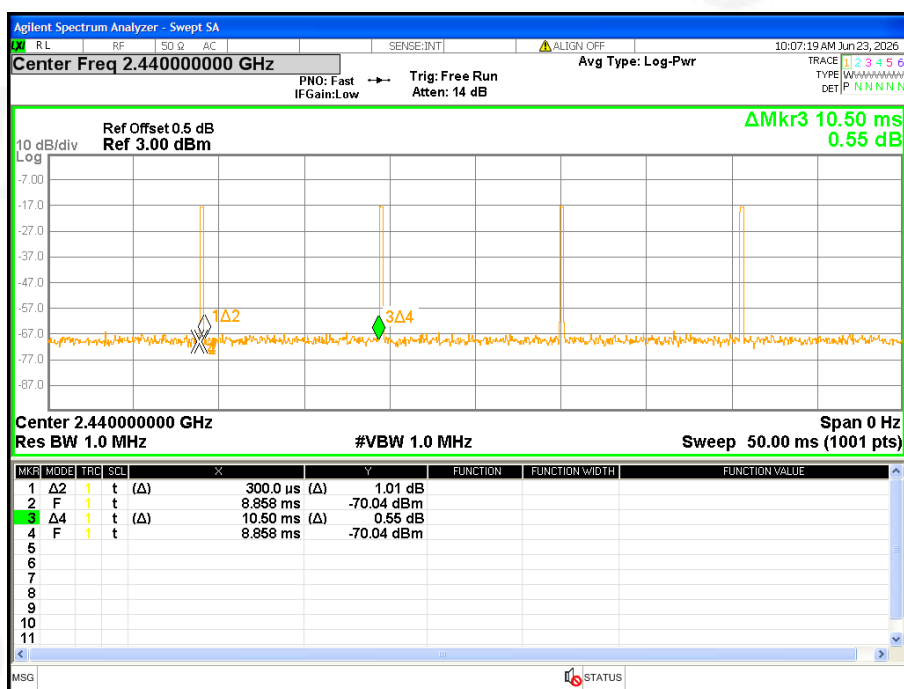
No.	Frequency	Reading	Correct	Duty cycle	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1 *	2480.0000	79.87	1.01	-	80.88	114	-33.12	peak
1 *	2480.0000	79.87	1.01	-30.88	50	94	-44	AVG



Duty cycle

Ton (ms)	Tp (ms)	Duty cycle(%)	Duty Factor
0.3	10.5	2.86	-30.88

Note: Duty Factor=20*LOG10((Ton/Tp))





6. BANDWIDTH OF FREQUENCY BAND EDGE

6.1 TEST REQUIREMENT:

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10-2020+Cor 1-2023				
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	Above	Peak	1MHz	3MHz	Peak
	1GHz	Average	1MHz	3MHz	Average

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation

6.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees 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.
- The antenna height 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.
- 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the Highest channel

Note:

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

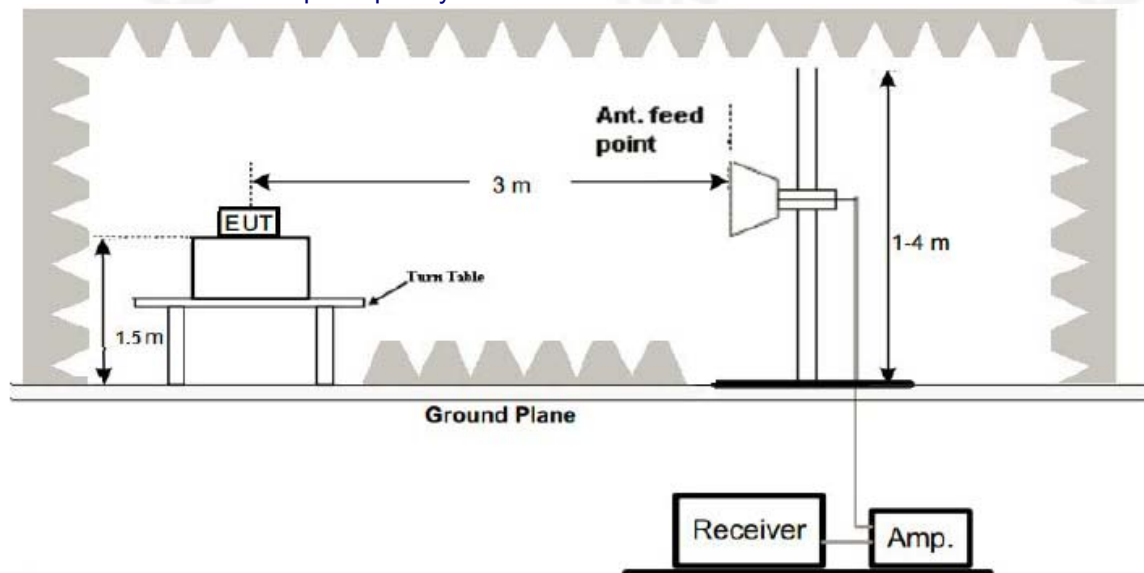
6.3 DEVIATION FROM TEST STANDARD

No deviation



6.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



6.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



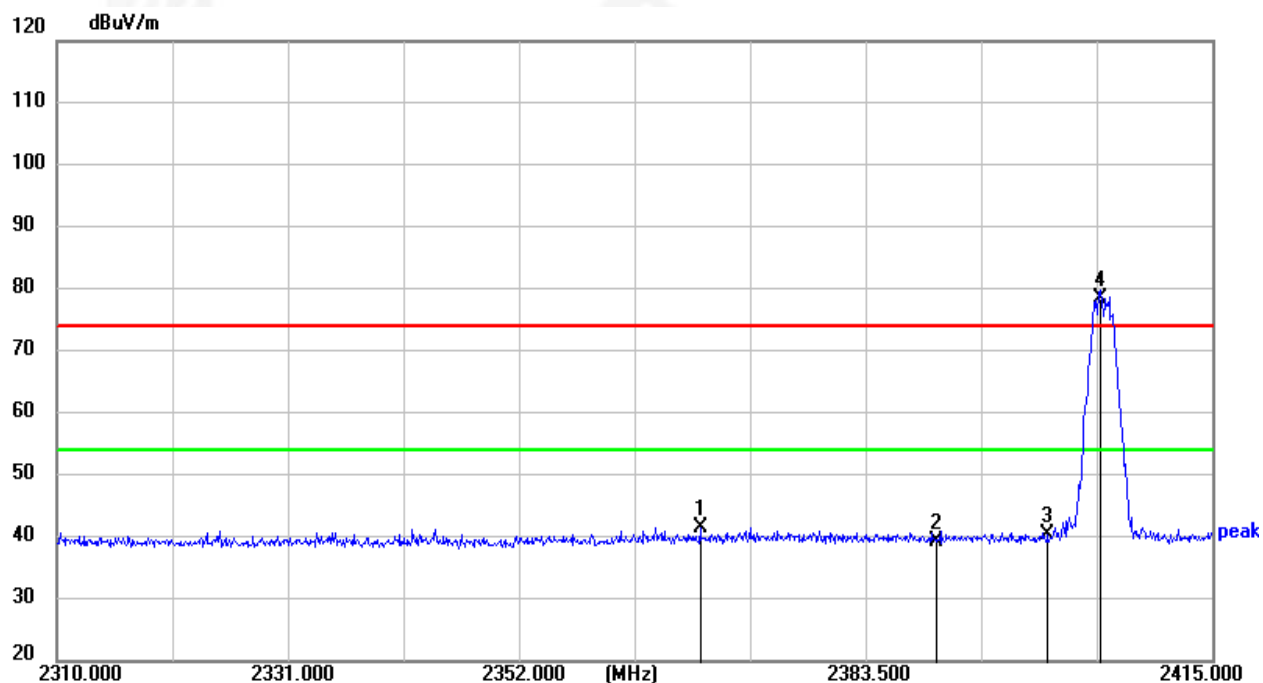
6.6 TEST RESULT

Temperature :	26 °C	Relative Humidity :	54%
Pressure :	101 kPa	Test Voltage :	DC 3.7V
Test Mode :	TX Mode		

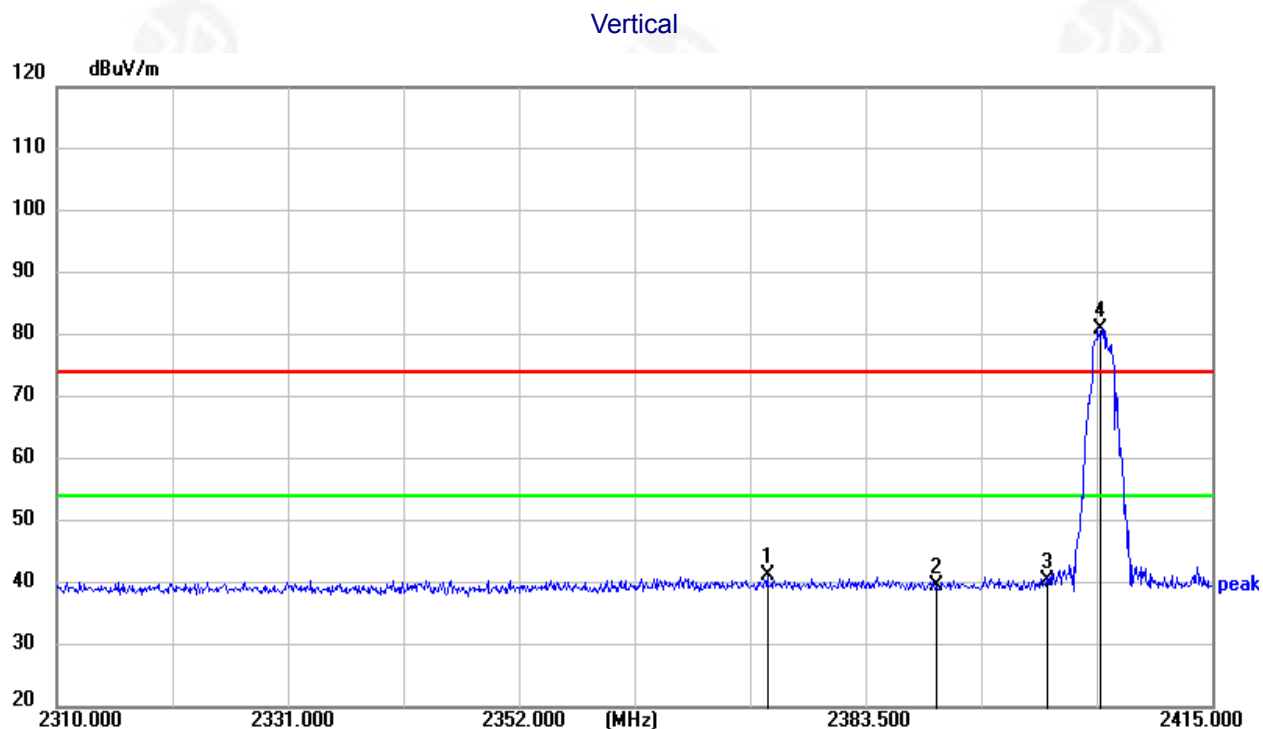
(Radiation Band edge)

2405MHz

Horizontal



No.	Frequency (MHz)	Reading Level	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	2368.4850	40.97	0.65	41.62	74.00	-32.38	peak	Pass
2	2390.0000	38.59	0.81	39.40	74.00	-34.60	peak	Pass
3	2400.0000	39.50	0.88	40.38	74.00	-33.62	peak	Pass

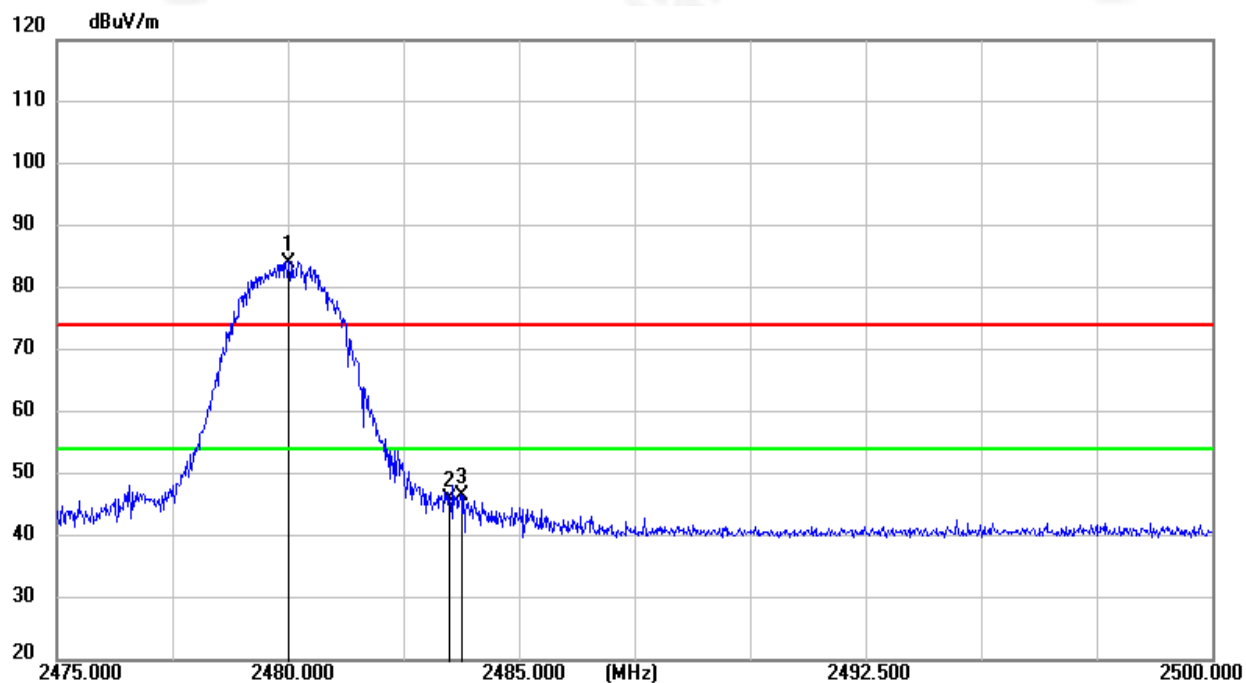


No.	Frequency (MHz)	Reading Level()	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	2374.5750	40.69	0.69	41.38	74.00	-32.62	peak	Pass
2	2390.0000	38.73	0.81	39.54	74.00	-34.46	peak	Pass
3	2400.0000	39.55	0.88	40.43	74.00	-33.57	peak	Pass

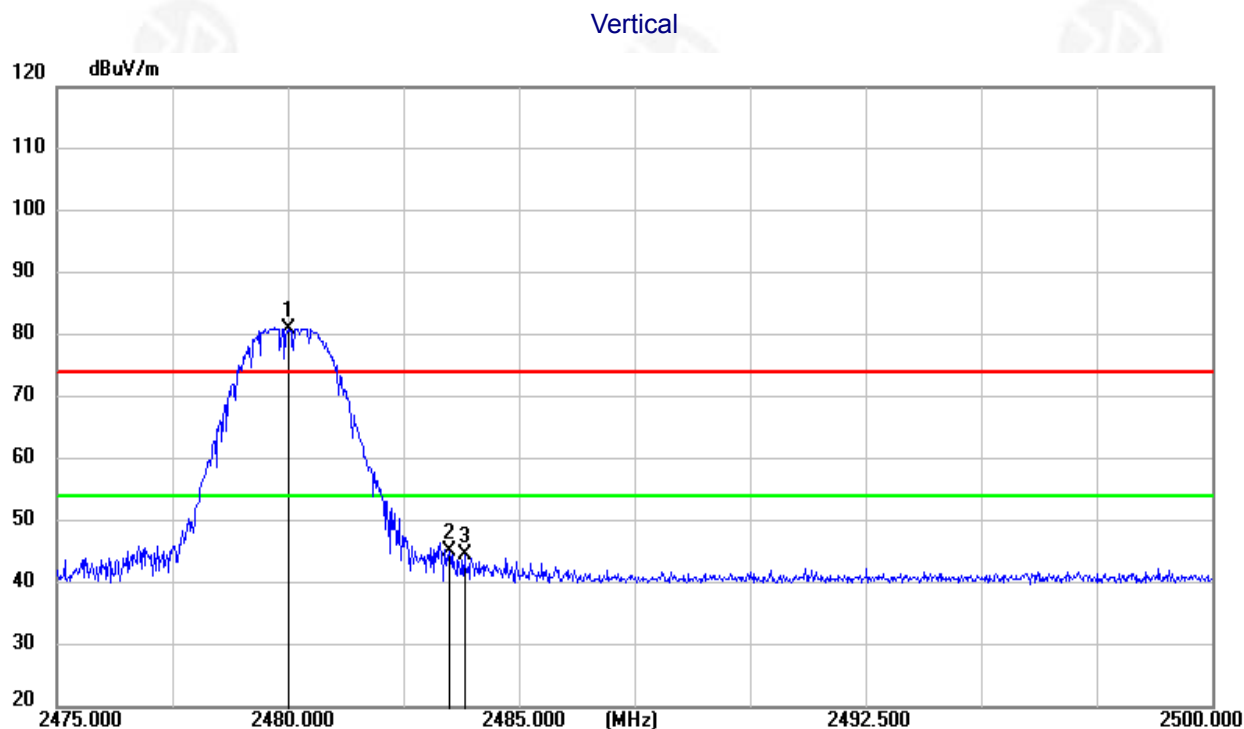


2480MHz

Horizontal



No.	Frequency (MHz)	Reading Level()	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
2	2483.5000	44.95	1.02	45.97	74.00	-28.03	peak	Pass
3	2483.7500	45.60	1.02	46.62	74.00	-27.38	peak	Pass



No.	Frequency (MHz)	Reading Level()	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
2	2483.5000	44.08	1.02	45.10	74.00	-28.90	peak	Pass
3	2483.8250	43.70	1.02	44.72	74.00	-29.28	peak	Pass



7. CHANNEL BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.249/15.215
Test Method:	ANSI C63.10-2020+Cor 1-2023

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.249) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.249(c)	Bandwidth	2400-2483.5	PASS

7.2 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = 1-5% of OBW
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION 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.

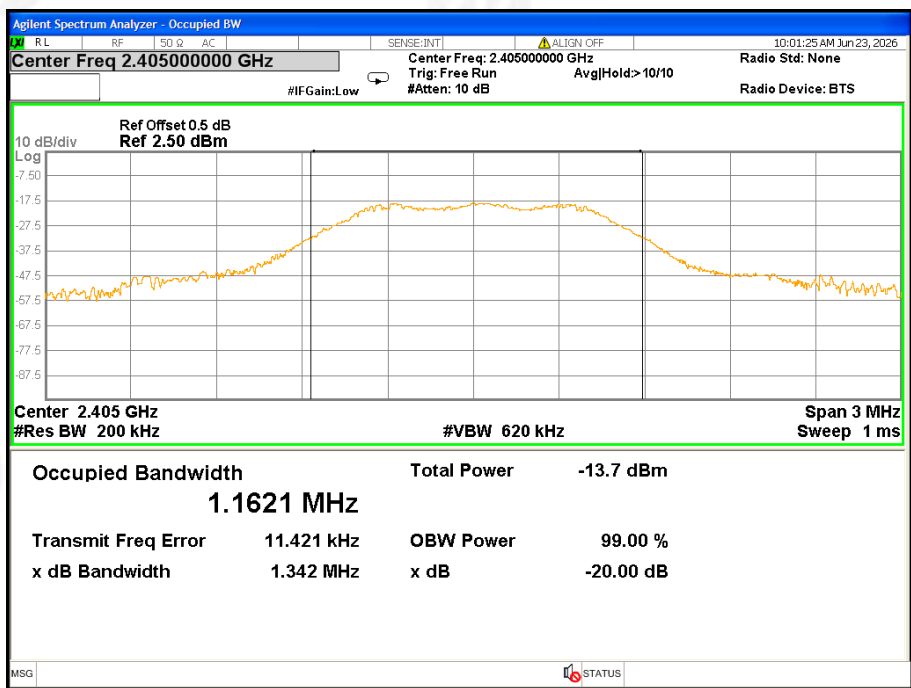


7.6 TEST RESULT

Temperature :	26℃	Relative Humidity :	54%
Test Mode :	GFSK	Test Voltage :	DC 3.7V

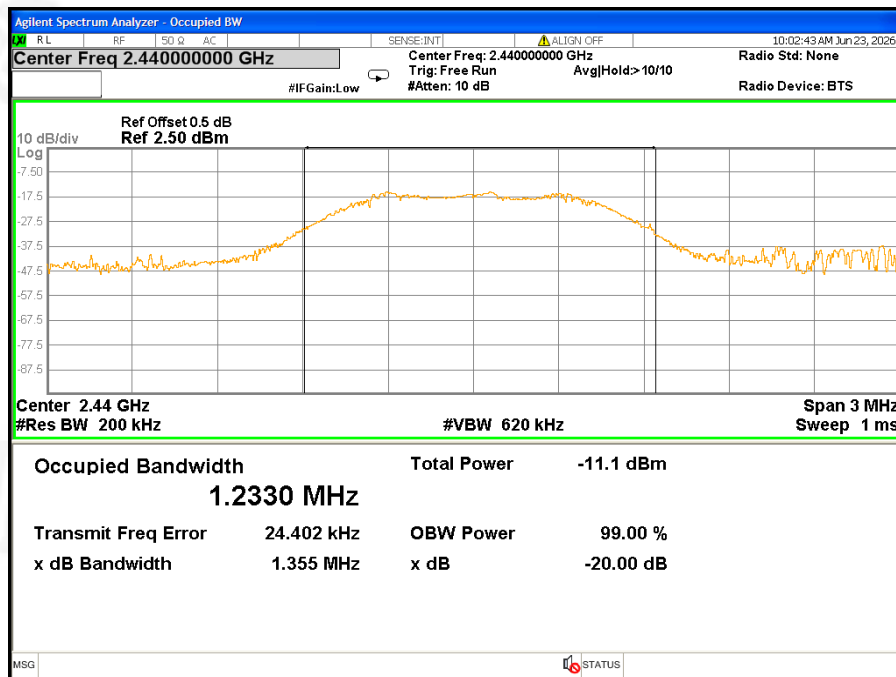
Mode	Test channel	20dB Emission Bandwidth (KHz)	Result
GFSK	CH 11	1342	Pass
GFSK	CH 18	1355	Pass
GFSK	CH 26	1355	Pass

CH11

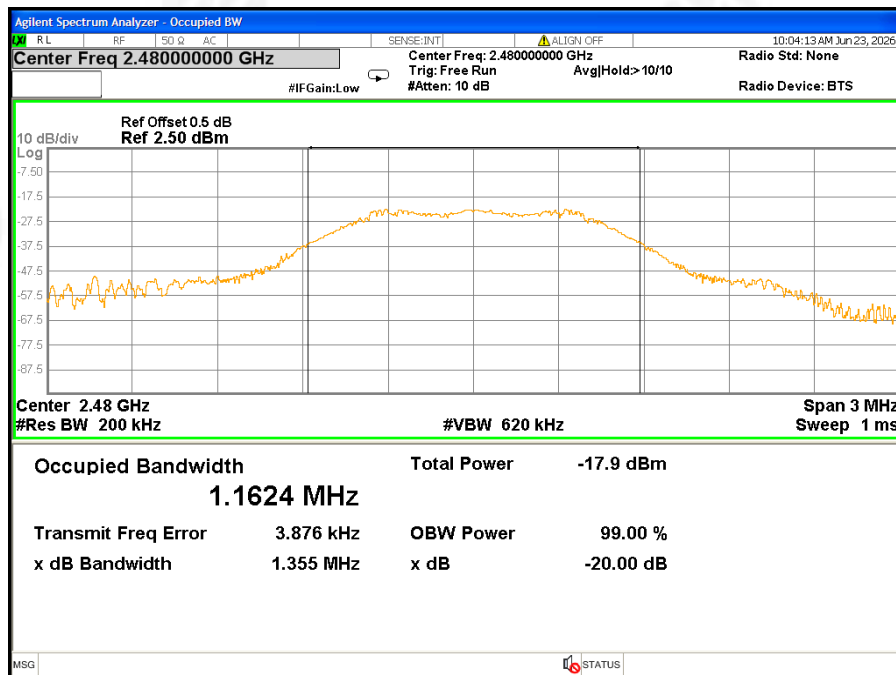




CH18



CH26





8.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 PCB antenna, the best case gain of the antennas are 3 dBi, reference to the appendix II for details.	



9. TEST SETUP PHOTO

Reference to the appendix I for details.

10. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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