AUDIX Technology Corp.
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FCC 15.249
2.4 GHz Report

for

Chungear Industrial Co., Ltd

106 Kanho Rd., Taichung, Taiwan

Product Name	**:**	**CEILING FAN REMOTE CONTROLLER (TRANSMITTER)**
Model Name	**:**	**TR228A**
FCC ID	**:**	**KUJCE10405**

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TABLE OF CONTENTS

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TEST REPORT CERTIFICATION

Applicant	:	Chungear Industrial Co., Ltd
Manufacturer #1	:	Satellite Electronic (Zhongshan)., Ltd.
Manufacturer #2	:	Chungear Industrial Co., Ltd.
Manufacturer #3	:	Zhongshan Amity Electronic Ltd.
Product Name	:	CEILING FAN REMOTE CONTROLLER (TRANSMITTER)
Model No.	:	TR228A
Serial No.	:	N/A
Power Supply	:	AC 120V/60Hz

Rules of Compliance and Measurement Standards:

FCC CFR 47 Part 15 Subpart C/Oct. 2014
ANSI C63.10-2013

AUDIX Technology Corp. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report. ***AUDIX Technology Corp.*** does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Test: 2015. 11. 19 ~ 12. 01 Date of Report: 2016. 01. 27

Producer: _____
(Annie Yu/Administrator)

Signatory: _____
(Ben Cheng/Manager)

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1. REPORT HISTORY

Revision	Date	Revision Summary	Report Number
0	2016. 01. 27	Original Report.	EM-F150748

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2. SUMMARY OF TEST RESULTS

Rule	Description	Results
15.207	Conducted Emission	**PASS**
15.205/15.209/ 15.249(a)	Radiated Band Edge and Radiated Spurious Emission Fundamental Frequency	**PASS**
----	Occupied Bandwidth 99% Power	**Reference only**
15.203	Antenna Requirement	**PASS**

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3. GENERAL INFORMATION

3.1. Description of EUT

Product	CEILING FAN REMOTE CONTROLLER (TRANSMITTER)
Model Number	TR228A
Serial Number	N/A
Applicant	Chungear Industrial Co., Ltd 106 Kanho Rd., Taichung, Taiwan
Manufacture#1	Satellite Electronic (Zhongshan)., Ltd. 8 Chuang Ye Rd. Torch Development Zone.. Zhongshan. Guangdong. 528437 China
Manufacture#2	Chungear Industrial Co., Ltd. 106 Kanho Rd, Taichung ,Taiwan
Manufacture#3	Zhongshan Amity Electronic Ltd. No.16, Torch Hi-Tech Industrial Development Zone, Zhongshan City Guangdong Province China
RF Features	2.4G
Transmit Type	1T1R
Date of Receipt of Sample	2015. 05. 18

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3.2. EUT Specifications Assessed in Current Report

RF Features	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (Mbps)
2.4G	2410-2425	3	GFSK	0.25

Channel List			
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
01	2410	03	2425
02	2420		

3.3. Antenna Information

Antenna Part Number	Manufacture	Antenna Type	Frequency	Max Gain (dBi)
MD7105-A06	AMICCOM Electronics Corporation	Pattern Antenna	2400~2500MHz	-0.947487

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3.4. Test Configuration

Mode	Duty Cycle (x)	T (ms)	Duty Cycle Factor (dB)
2.4G	22	N/A	N/A

Note: When duty cycle is less than 98% (0.98) that duty cycle factor 10log(1/x) is needed to add in conducted test items measured in average detector.

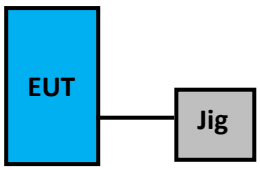
AC Conduction	
Test Case	Normal operation

Item		Test Channel
Radiated Test Case	Radiated Band Edge Note1	01/03
	Radiated Spurious Emission Note1	01/02/03
	Fundamental Frequency	01/02/03
	Occupied Bandwidth 99% Power	01/02/03

Note 1:
■Mobile Device
□Portable Device, and 3 axis were assessed. The worst scenario for Radiated Spurious Emission as follow:
☐ Lie
☐ Side
☐ Stand

3.5. Setup Configuration

3.5.1. EUT Configuration for Power Line and Radiated Emission



3.6. perating Condition of EUT

To set EUT RF function under continues transmitting and choosing channel.

3.7. Description of Test Facility

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Test Firm Name	:	**AUDIX Technology Corporation** **EMC Department** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
Test Location & Facility	:	**No. 8 Shielded Room** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan **Semi-Anechoic Chamber** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan **Fully Anechoic Chamber** No. 53-11, Dingfu, Linkou Dist., New Taipei City 244, Taiwan
NVLAP Lab. Code	:	200077-0
TAF Accreditation No	:	1724

3.8. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conduction Test	150kHz~30MHz	±3.5dB
Radiation Test (Distance: 3m)	30MHz~300MHz	± 3.64dB
	300MHz~1000MHz	± 4.70dB
	Above 1GHz	± 1.60dB

Remark：Uncertainty = $ku_c(y)$

Test Item	Uncertainty
Occupied Bandwidth 99% Power	± 1kHz

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4. MEASUREMENT EQUIPMENT LIST

4.1. Conducted Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESR3	101774	2015. 02. 06	1 Year
2.	A.M.N.	R&S	ENV4200	825358/003	2015. 04. 07	1 Year
3.	L.I.S.N.	Kyoritsu	KNW-407	8-855-9	2014. 12. 26	1 Year
4.	Pulse Limiter	R&S	ESH3-Z2	100354	2015. 01. 17	1 Year

4.2. Radiated Emission Measurement

4.2.1. Frequency Range 30MHz~1000MHz (Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2015. 09. 14	1 Year
2.	Test Receiver	R & S	ESCS30	100338	2015. 06. 24	1 Year
3.	Amplifier	HP	8447D	2944A06305	2015. 02. 12	1 Year
4.	Bilog Antenna	TESEQ	CBL6112D	33821	2015. 02. 27	1 Year

4.2.2. Above 1000MHz (Fully Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300366	2015. 08. 20	1 Year
2.	Amplifier	Sonoma	310N	187161	2015. 06. 17	1 Year
3.	2.4GHz Notch Filter	K&L	7NSL10-2441.5E130.5-00	1	2015. 07. 22	1 Year
4.	Horn Antenna	ETS-Lindgren	3117	00135902	2015. 03. 06	1 Year

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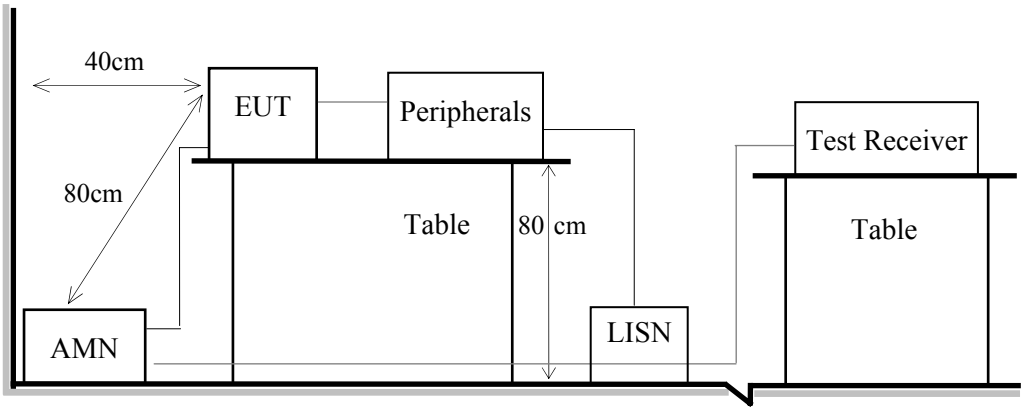
5. CONDUCTED EMISSION MEASUREMET

5.1. Block Diagram of Test Setup

Shielded Room Setup Diagram



Ground Plane

5.2. Power Line Conducted Emission Limit

Frequency	Conducted Limit	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dBμV	56 ~ 46 dBμV
500kHz ~ 5MHz	56 dBμV	46 dBμV
5MHz ~ 30MHz	60 dBμV	50 dBμV

Remark 1.: If the average limit is met when using a Quasi-Peak detector, the measurement using the average detector is not required.
2.: The lower limit applies to the band edges.

5.3. Test Procedure

5.3.1. To set up the EUT as indicated in ANSI C 63.10. The EUT was placed on the table which has 80 cm height to the ground and 40 cm distance to the conducting wall.

5.3.2. Power supplier of the EUT was connected to the AC mains through an Artificial Mains Network (A.M.N.).

5.3.3. The AC power supplies to all peripheral devices must be provided through line impedance stabilization network (L.I.S.N.)

5.3.4. Checking frequency range from 150 kHz to 30 MHz and record the emission which does not have 20 dB below limit.

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5.4. Conducted Emission Measurement Results

PASSED.

Test Date	2015/11/26	Temp./Hum.	26℃/55%
Test Voltage	AC 120V, 60Hz		

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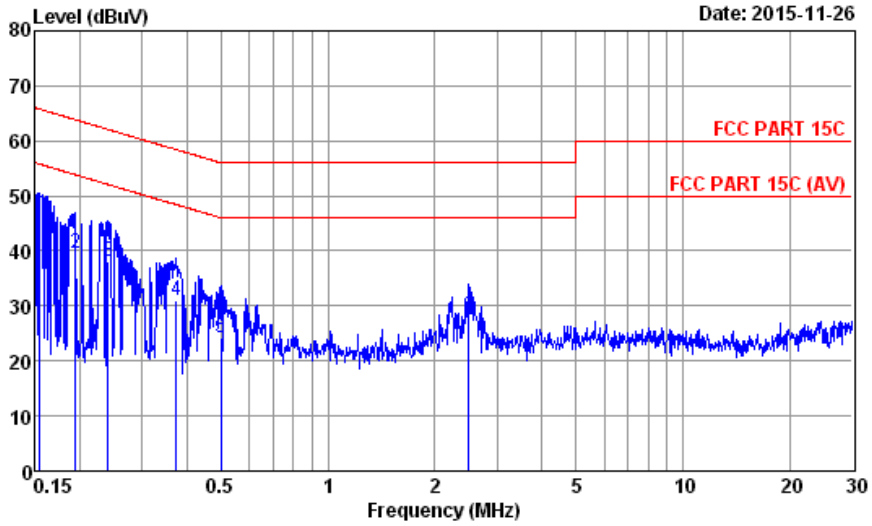
Data: 2 File: D:\test data\REPORT\2015\C1M1505XXX\C1M1505143-C-D-RF.EM6 (2)



Site no. : No.8 Shielded Room
Condition : ENV4200 358 (H)
Limit : FCC PART 15C
Env. / Ins. : 26*C / 55% ESR3 (1774)
EUT : TR228A
Power Rating : 120Vac/60Hz
Test Mode : Operating

Data no. : 2
Phase : NEUTRAL
Engineer : Tim

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.154	10.25	0.03	9.87	23.82	43.97	65.78	21.81	QP
2	0.194	10.27	0.03	9.87	19.50	39.67	63.84	24.17	QP
3	0.240	10.25	0.03	9.87	17.86	38.01	62.08	24.07	QP
4	0.373	10.22	0.03	9.87	10.73	30.85	58.43	27.58	QP
5	0.499	10.20	0.03	9.88	4.23	24.34	56.01	31.67	QP
6	2.487	10.19	0.10	9.88	7.87	28.04	56.00	27.96	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

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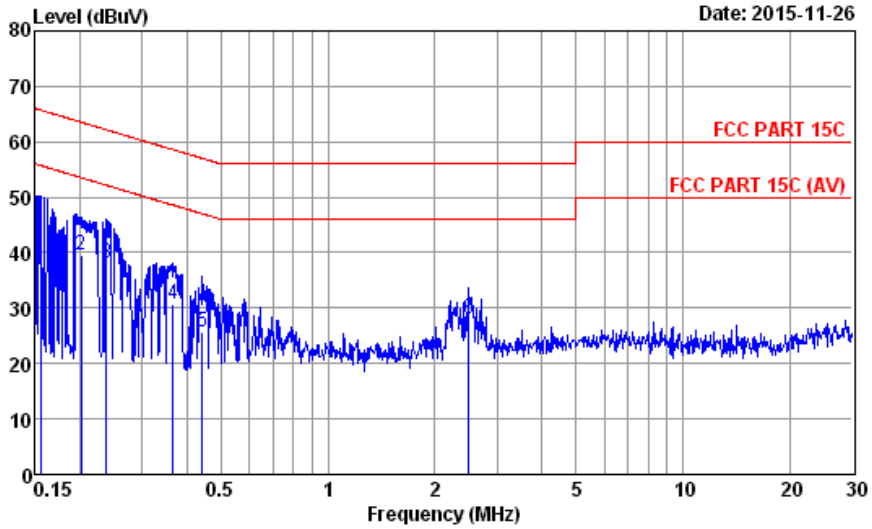

Site no. : No.8 Shielded Room
Data no. : 1
Condition : ENV4200 358 (H)
Phase : LINE
Limit : FCC PART 15C
Env. / Ins. : 26°C / 55% ESR3 (1774)
Engineer : Tim
EUT : TR228A
Power Rating : 120Vac/60Hz
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.155	10.25	0.03	9.87	23.74	43.89	65.74	21.85	QP
2	0.202	10.29	0.03	9.87	19.28	39.47	63.54	24.07	QP
3	0.238	10.27	0.03	9.87	18.00	38.17	62.17	24.00	QP
4	0.365	10.24	0.03	9.87	10.42	30.56	58.61	28.05	QP
5	0.442	10.23	0.03	9.87	5.64	25.77	57.02	31.25	QP
6	2.487	10.21	0.10	9.88	7.85	28.04	56.00	27.96	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

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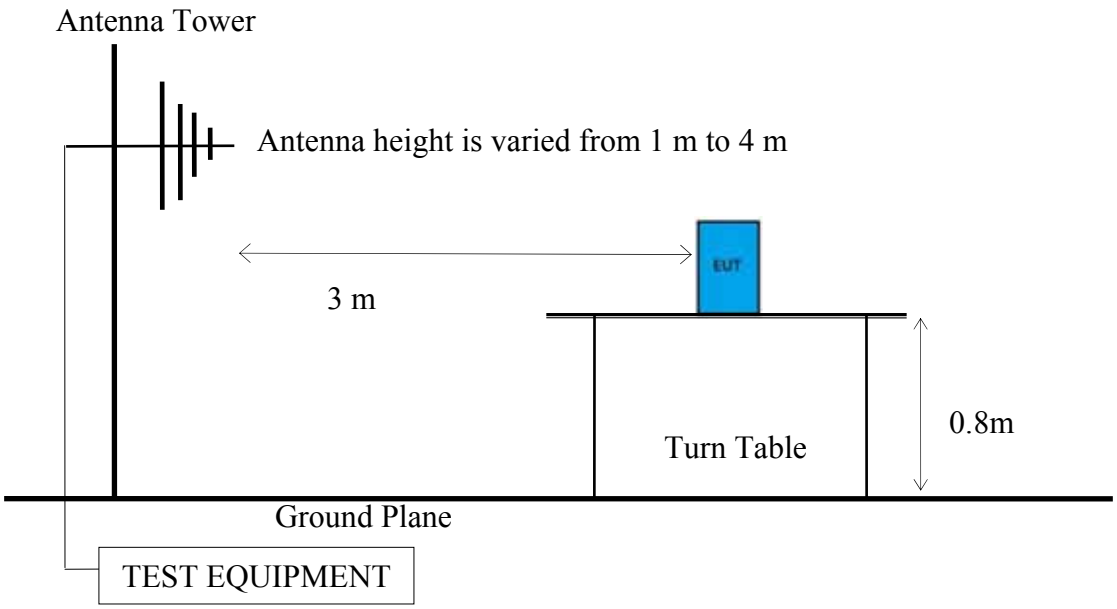
6. RADIATED EMISSION MEASUREMENT

6.1. Block Diagram of Test Setup

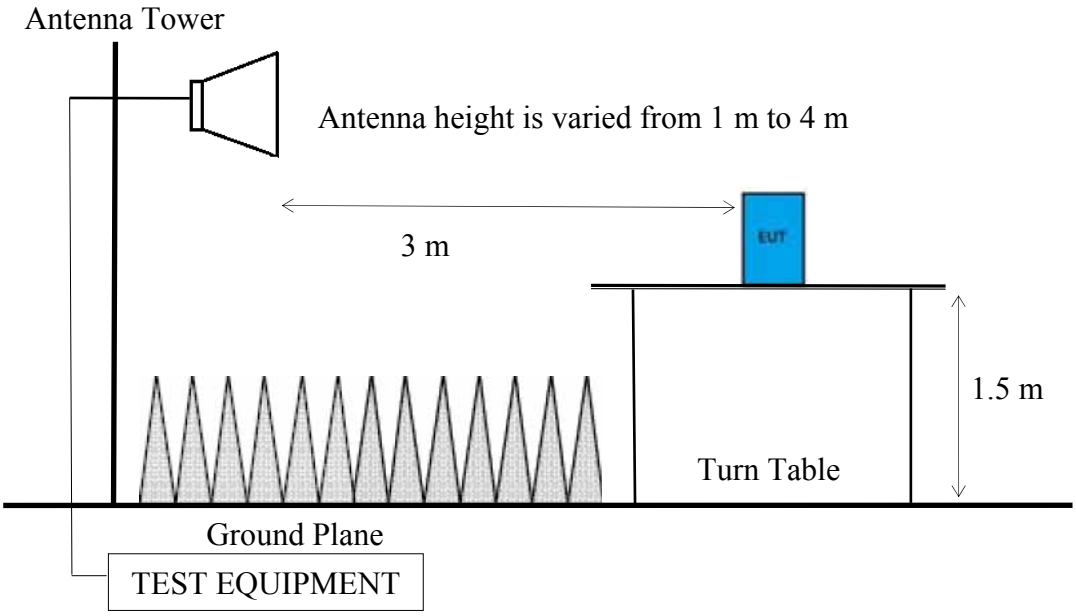
6.1.1. Block Diagram of EUT

Indicated as section 3.6

6.1.2. Semi-Anechoic Chamber (3m) Setup Diagram for 30-1000 MHz



6.1.3. Fully Anechoic Chamber (3m) Setup Diagram for above 1GHz



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6.2. Radiated Emission Limits

6.2.1. General Limit

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with section 6.2.2. 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 Section 15.209, whichever is the lesser attenuation.

Frequency (MHz)	Distance (m)	Field Strengths Limits	
		μV/m	dBμV/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0
Above 1000	3	74.0 dBμV/m (Peak) 54.0 dBμV/m (Average)	

Remark：(1) dBμV/m = 20 log (μV/m)
(2) The tighter limit applies to the edge between two frequency bands.
(3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
(4) Fundamental and emission fall within operation band are exempted from this section.
(5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

6.2.2. Limite for Fundamental & Harmonics Frequency

Fundamental Frequency	Field strength of fundamental		Field strength of harmonics	
	mV/m	dBμV/m	μV/m	dBμV/m
902-928MHz	50	114 (Peak)	500	74 (Peak)
		94 (Average)		54 (Average)
2400-2483.5MHz	50	114 (Peak)	500	74 (Peak)
		94 (Average)		54 (Average)
5725-5875MHz	50	114 (Peak)	500	74 (Peak)
		94 (Average)		54 (Average)
24.0-24.25GHz	250	128 (Peak)	2500	88 (Peak)
		108 (Average)		68 (Average)

Remark: mV/m=1000μV/m; dBμV/m = 20 log (μV/m)

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6.3. Test Procedure

The EUT setup on the turn table which has 1.5 m height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

Frequency below 1 GHz:
Spectrum Analyzer is used for pre-testing with following setting:

(1) RBW = 120KHz
(2) VBW ≥ 3 x RBW.
(3) Detector = Peak.
(4) Sweep time = auto.
(5) Trace mode = max hold.
(6) Allow sweeps to continue until the trace stabilizes.
(7) When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required. Otherwise using Q.P. for finally measurement.

Frequency above 1GHz to 10th harmonic:

Peak Detector:

(1) RBW = 1MHz
(2) VBW ≥ 3 x RBW.
(3) Detector = Peak.
(4) Sweep time = auto.
(5) Trace mode = max hold.
(6) Allow sweeps to continue until the trace stabilizes.
(7) When peak-detected value is lower than limit that the measurement using the average detector is not required. Otherwise using average for finally measurement.

Average Measurement:

■Option 1:

(1) RBW = 1 MHz
(2) VBW =1/T or 10Hz when duty cycle >98%.
(3) Detector = Peak.
(4) Sweep time = auto.
(5) Trace mode = max hold.
(6) Allow sweeps to continue until the trace stabilizes.

☐Option 2:

Average Emission Level= Peak Emission Level+ D.C.C.F.

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6.4. Measurement Result Explanation

■Peak Emission Level=Antenna Factor + Cable Loss + Meter Reading
■Average Emission Level l=Antenna Factor + Cable Loss + Meter Reading
☐Average Emission Level= Peak Emission Level+ DCCF
Duty Cycle Correction Factor (DCCF)= 20log (TX_{on}/TX_{on+off}) presented in section 3.4

6.5. Test Results

PASSED.

Test Date	2015/11/19	Temp./Hum.	24℃/56%
Test Voltage	AC 120V, 60Hz		

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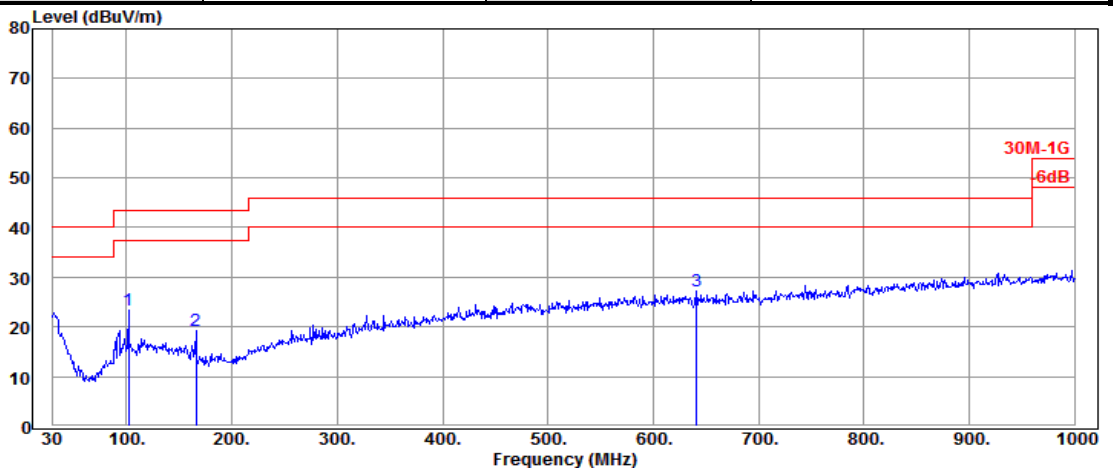
6.5.1. Emissions within Restricted Frequency Bands

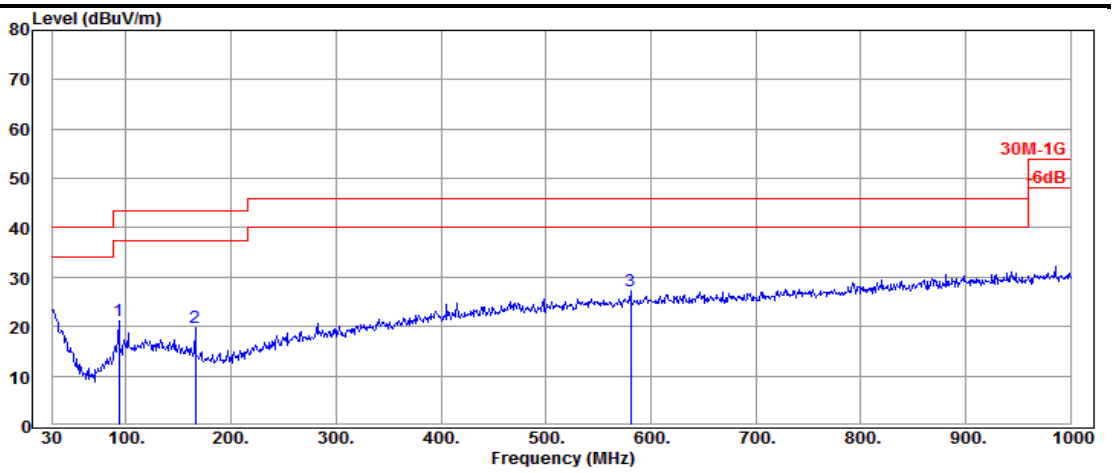
6.5.1.1. Frequency Below 1 GHz

Mode	GFSK	Frequency	TX 2410MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	11.03	3.23	9.06	23.32	43.50	20.18	Peak
165.80	9.65	3.73	5.87	19.25	43.50	24.25	Peak
641.10	18.50	6.59	2.01	27.10	46.00	18.90	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
93.05	9.67	3.17	8.46	21.30	43.50	22.20	Peak
165.80	9.65	3.73	6.55	19.93	43.50	23.57	Peak
580.96	18.08	6.49	2.62	27.19	46.00	18.81	Peak

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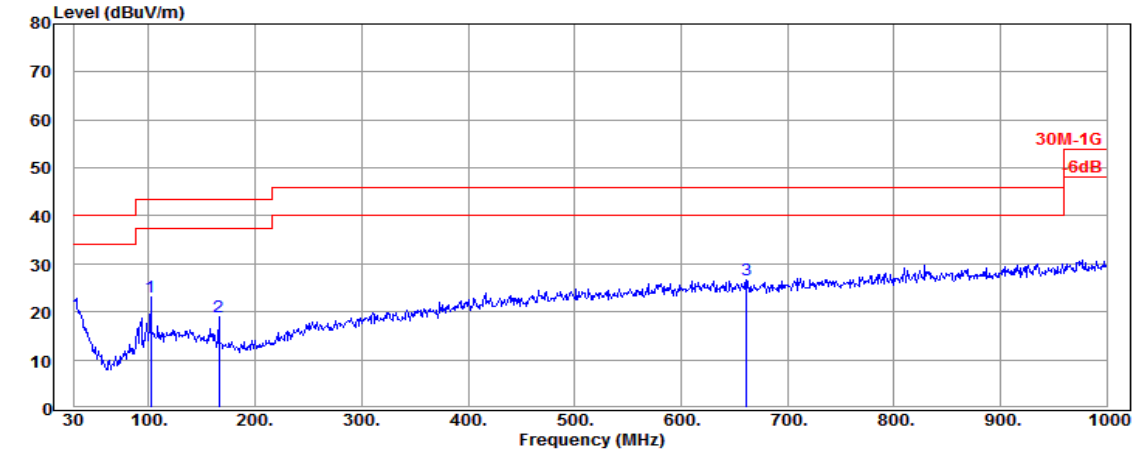
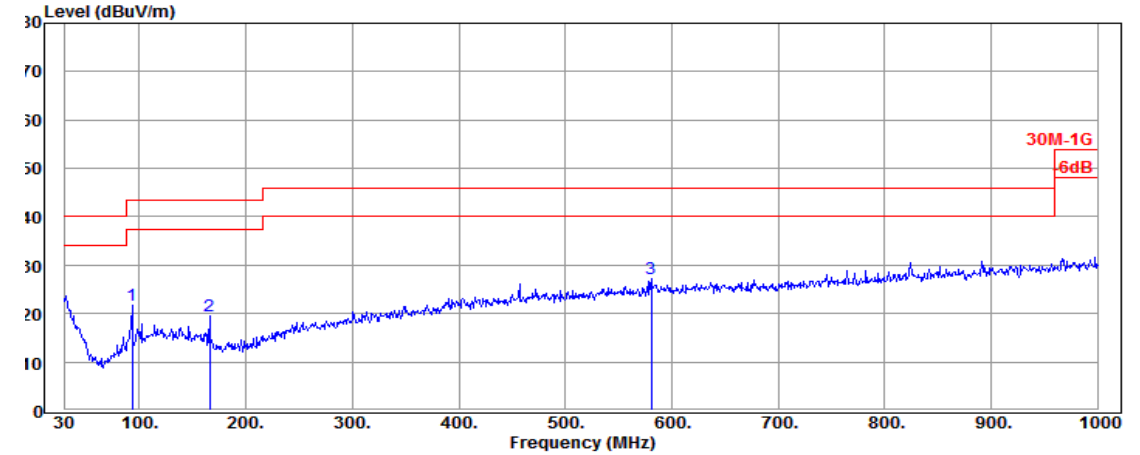
Mode	GFSK	Frequency	TX 2420MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	11.03	3.23	8.97	23.23	43.50	20.27	Peak
165.80	9.65	3.73	5.65	19.03	43.50	24.47	Peak
661.47	18.58	6.64	1.36	26.58	46.00	19.42	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
93.05	9.67	3.17	8.82	21.66	43.50	21.84	Peak
165.80	9.65	3.73	6.11	19.49	43.50	24.01	Peak
580.96	18.08	6.49	2.65	27.22	46.00	18.78	Peak

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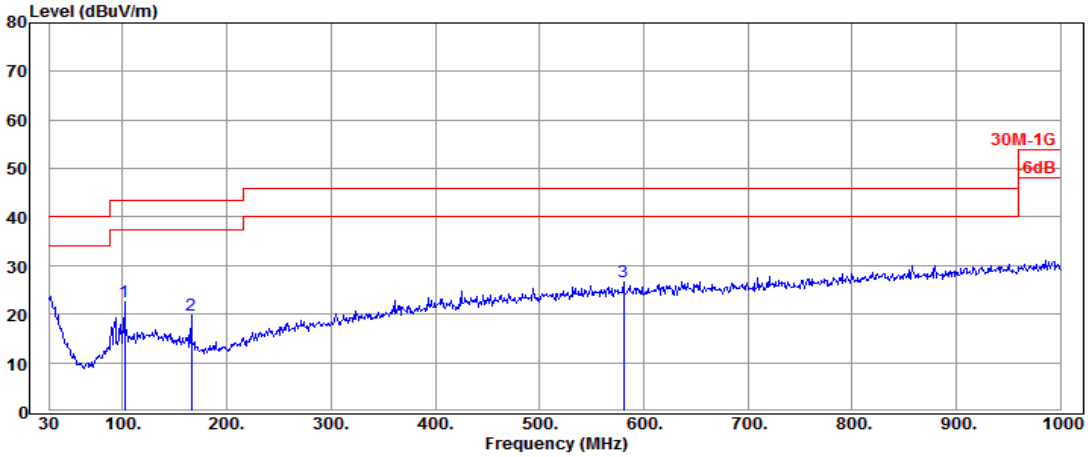
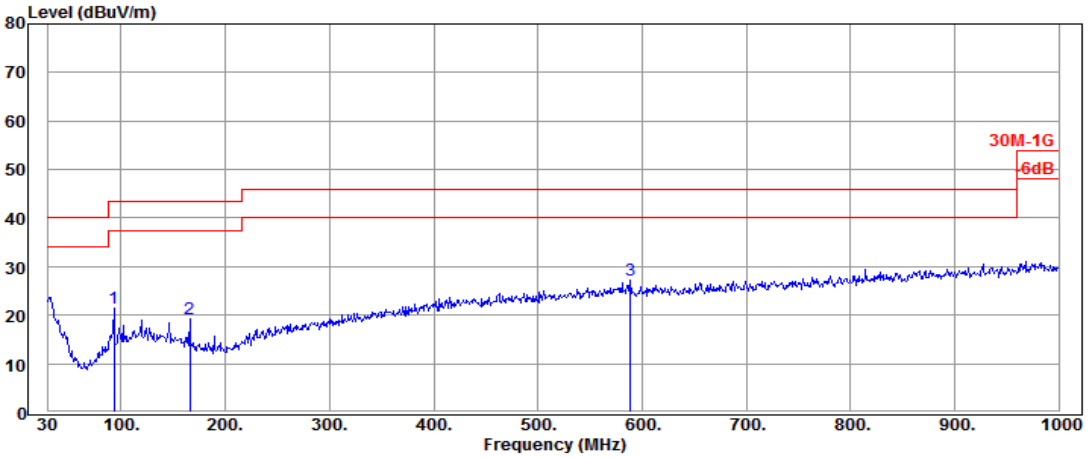
Mode	GFSK	Frequency	TX 2425MHz

Antenna at Horizontal Polarization



Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
101.78	11.03	3.23	8.28	22.54	43.50	20.96	Peak
165.80	9.65	3.73	6.30	19.68	43.50	23.82	Peak
580.96	18.08	6.49	2.14	26.71	46.00	19.29	Peak

Antenna at Vertical Polarization



Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
93.05	9.67	3.17	8.66	21.50	43.50	22.00	Peak
165.80	9.65	3.73	5.95	19.33	43.50	24.17	Peak
588.72	18.19	6.49	2.64	27.32	46.00	18.68	Peak

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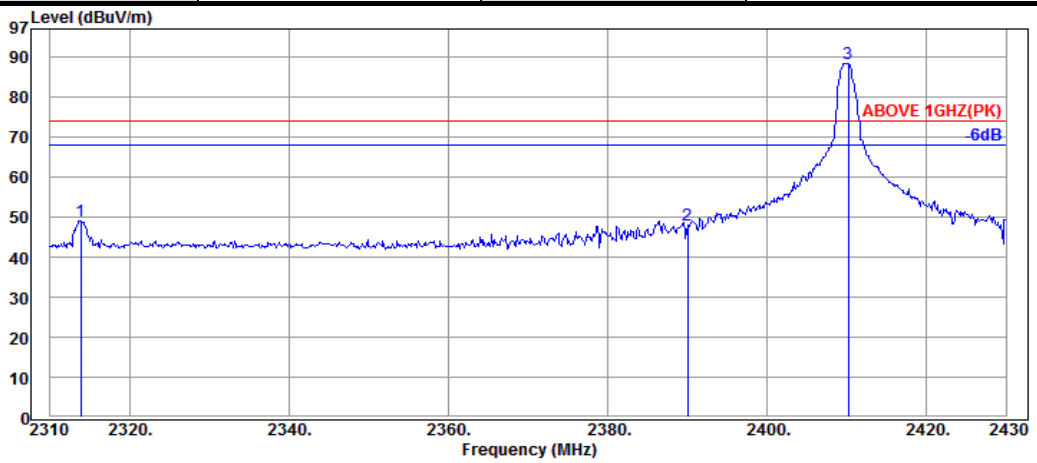
6.5.1.2. Frequency Above 1 GHz to 10th harmonics

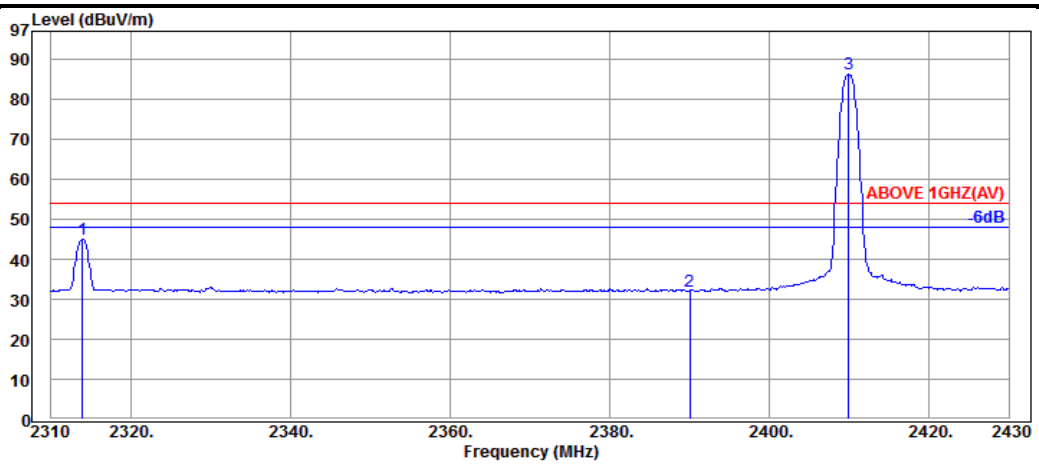
Band Edge:

Mode	GFSK	Frequency	TX 2410MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2313.84	32.03	5.65	11.31	48.99	74.00	25.01	Peak
2390.04	32.16	5.72	10.14	48.02	74.00	25.98	Peak
2410.20	32.18	5.74	50.39	88.31	---	---	Peak



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2313.96	32.03	5.65	7.37	45.05	54.00	8.95	Average
2390.04	32.16	5.72	-5.81	32.07	54.00	21.93	Average
2409.96	32.18	5.74	48.49	86.41	---	---	Average

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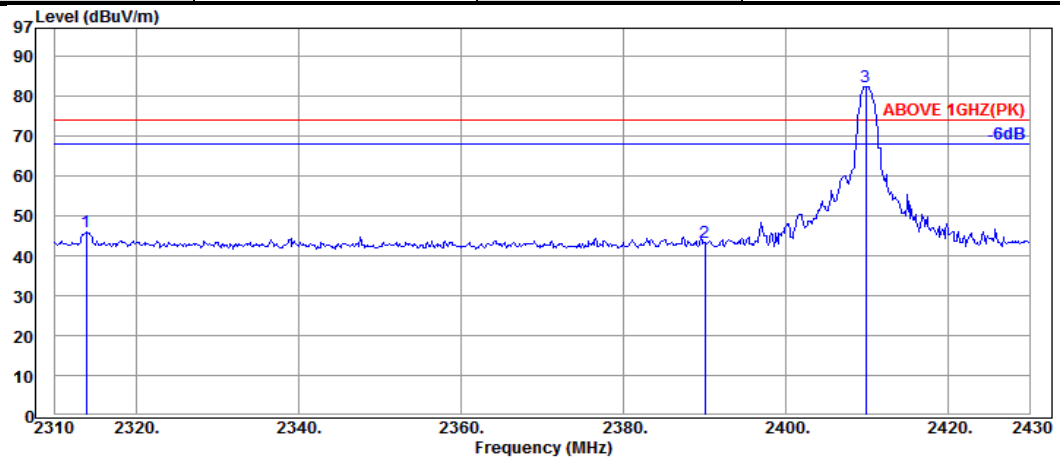
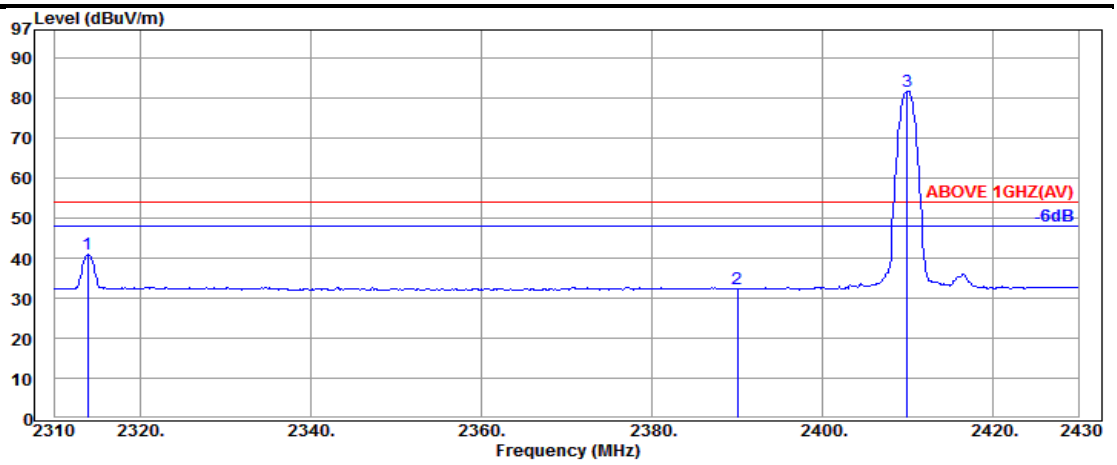
Mode	GFSK	Frequency	TX 2410MHz



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2313.84	32.03	5.65	8.27	45.95	74.00	28.05	Peak
2390.04	32.16	5.72	5.55	43.43	74.00	30.57	Peak
2409.84	32.18	5.74	44.40	82.32	---	---	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2313.84	32.03	5.65	3.40	41.08	54.00	12.92	Average
2390.04	32.16	5.72	-5.40	32.48	54.00	21.52	Average
2409.96	32.18	5.74	43.86	81.78	---	---	Average

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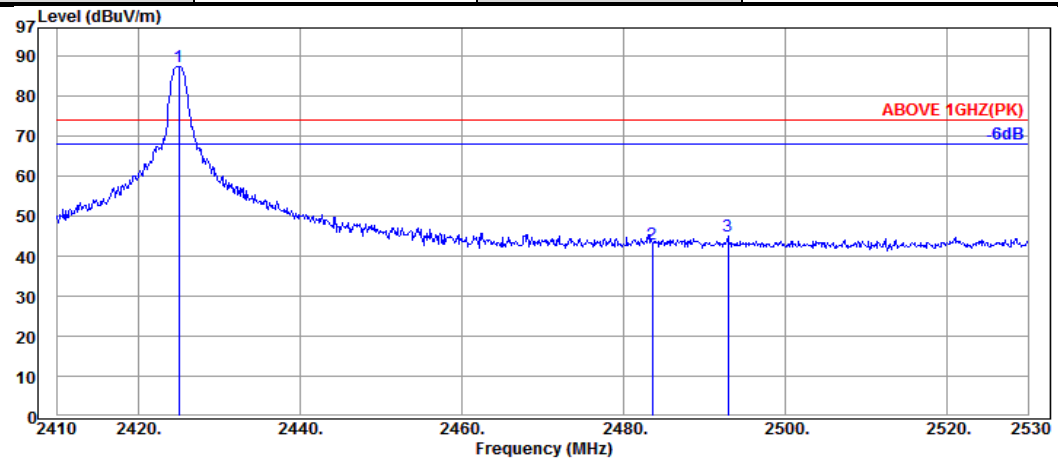
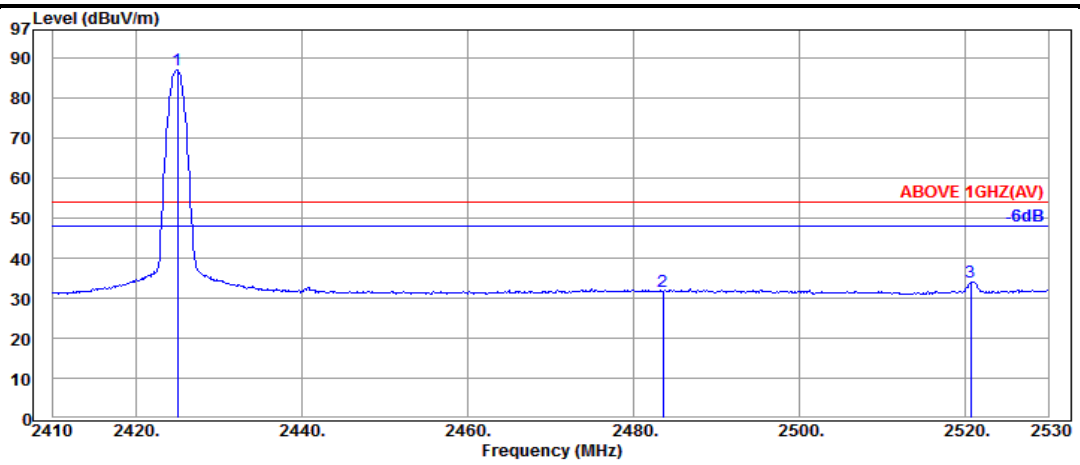
Mode	GFSK	Frequency	TX 2425MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector
2425.00	32.20	5.76	49.27	87.23	---	---	Peak
2483.56	32.28	5.82	4.75	42.85	74.00	31.15	Peak
2492.92	32.30	5.84	6.76	44.90	74.00	29.10	Peak



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector
2425.00	32.20	5.76	49.02	86.98	---	---	Average
2483.56	32.28	5.82	-6.41	31.69	54.00	22.31	Average
2520.64	32.32	5.87	-4.15	34.04	54.00	19.96	Average

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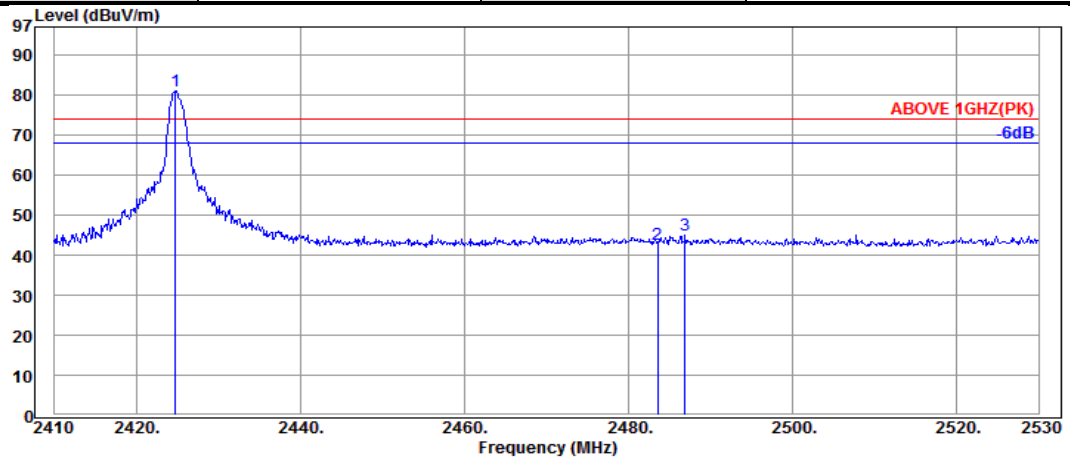
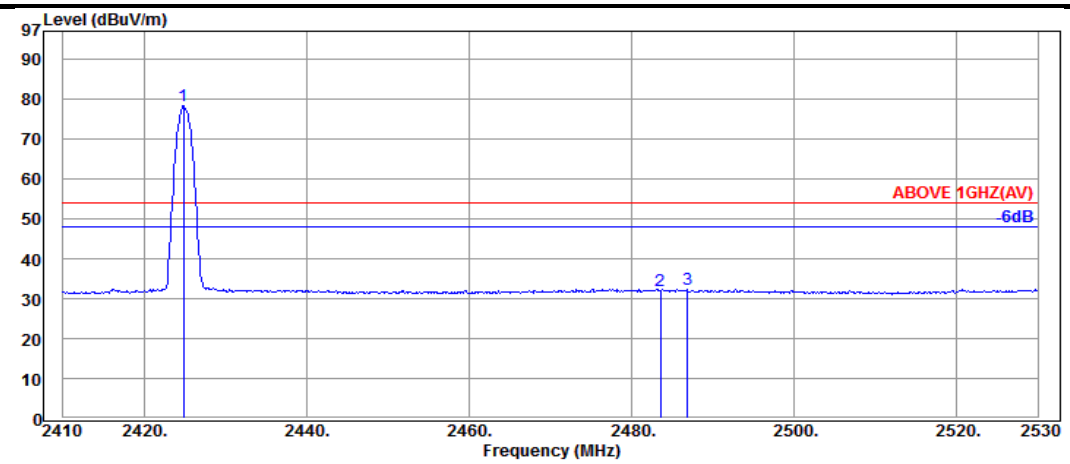
Mode	GFSK	Frequency	TX 2425MHz



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector
2424.76	32.20	5.76	43.01	80.97	---	---	Peak
2483.56	32.28	5.82	4.62	42.72	74.00	31.28	Peak
2486.92	32.28	5.82	6.89	44.99	74.00	29.01	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBµV)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector
2424.88	32.20	5.76	40.31	78.27	---	---	Average
2483.56	32.28	5.82	-6.14	31.96	54.00	22.04	Average
2486.92	32.28	5.82	-5.84	32.26	54.00	21.74	Average

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6.5.2. Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	GFSK	Frequency	TX 2410MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4815.00	34.22	7.86	8.65	50.73	54.00	3.27	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4815.00	34.22	7.86	10.58	52.66	54.00	1.34	Peak

Mode	GFSK	Frequency	TX 2420MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4840.00	34.24	8.10	7.05	49.39	54.00	4.61	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4840.00	34.24	8.10	9.98	52.32	54.00	1.68	Peak

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Mode	GFSK	Frequency	TX 2425MHz

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4850.00	34.24	8.10	9.31	51.65	54.00	2.35	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4850.00	34.24	8.10	10.50	52.84	54.00	1.16	Peak

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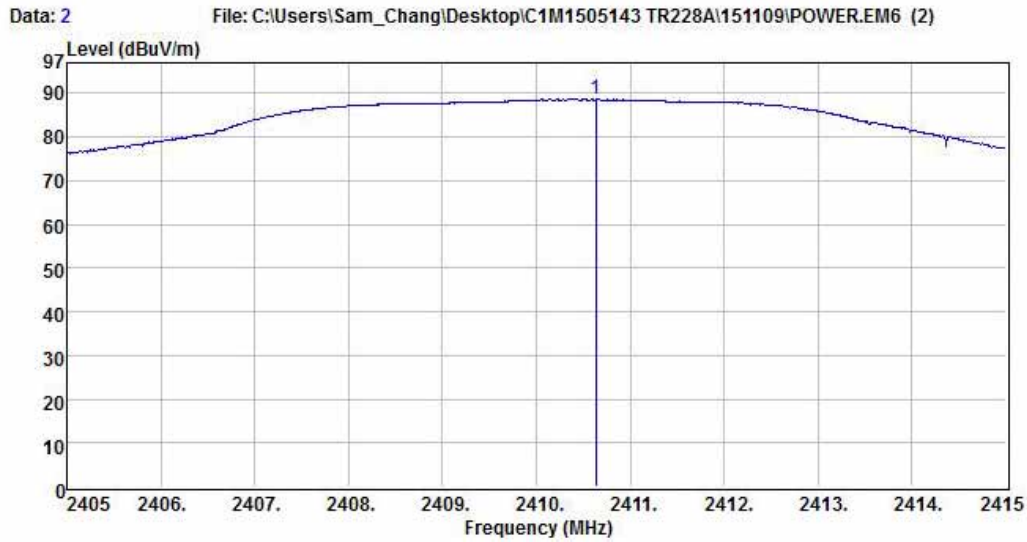
6.5.3. Fundamental Frequency:

Mode	GFSK	Frequency	TX 2410MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2410.63	32.18	5.74	55.70	88.62	94.00	5.38	Peak

Remark: Horizontal is the strongest polarization and peak value has complied with limit, so vertical won't be listed in test report.

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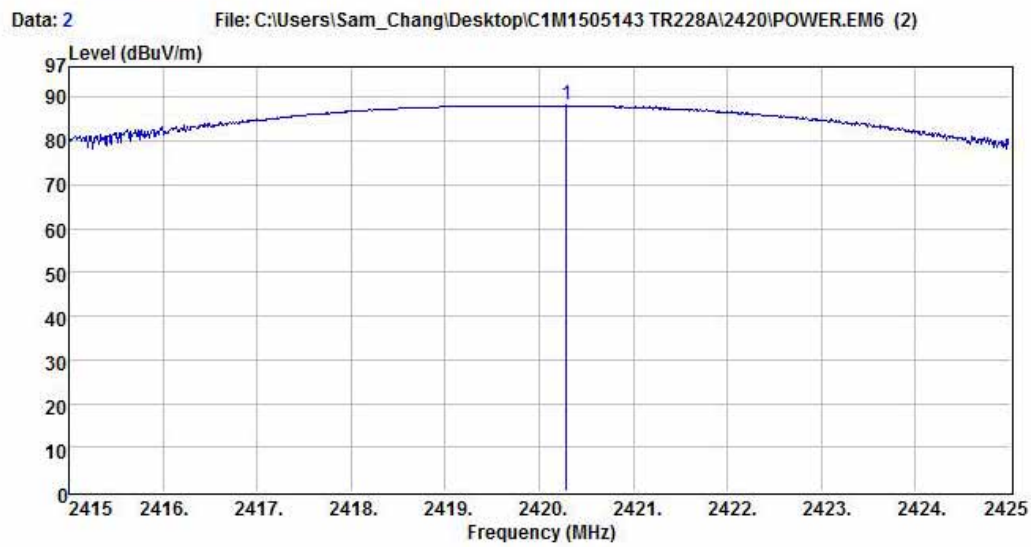
Mode	GFSK	Frequency	TX 2420MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2420.29	32.20	5.76.	50.30	88.26	94.00	5.74	Peak

Remark: Horizontal is the strongest polarization and peak value has complied with limit, so vertical won't be listed in test report.

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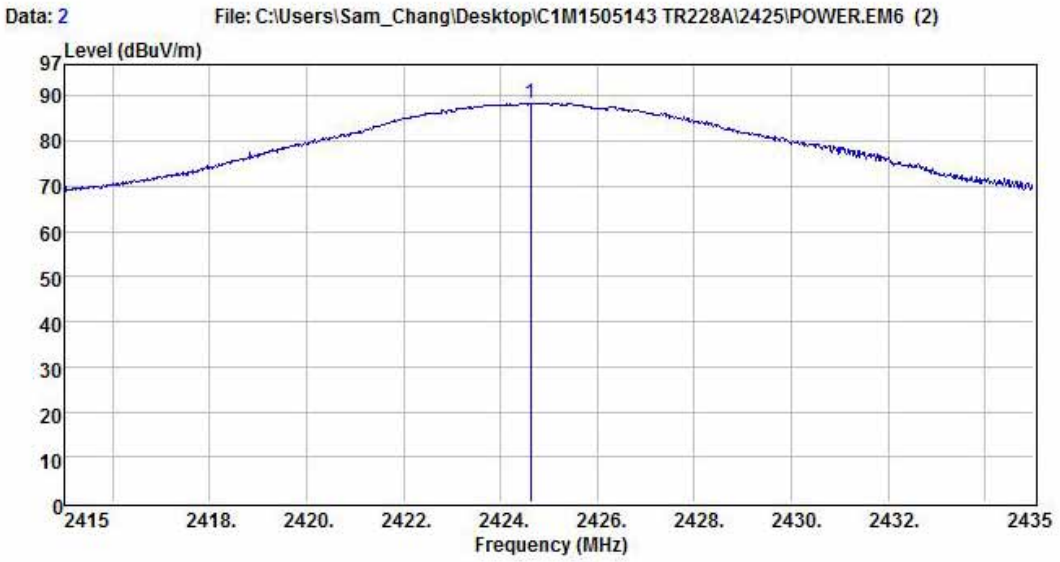
Mode	GFSK	Frequency	TX 2425MHz



Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2424.62	32.20	5.73	50.37	88.33	94.00	5.67	Peak

Remark: Horizontal is the strongest polarization and peak value has complied with limit, so vertical won't be listed in test report.

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7. OCCUPIED BANDWIDTH 99% POWER MEASUREMENT

Test Date	2015/11/20 ~ 12/01	Temp./Hum.	26℃/48%
Cable Loss	---	Test Voltage	AC 120V, 60Hz

7.1.1. Occupied Bandwidth 99% Power Result

Modulation Type	Centre Frequency (MHz)	Occupied Bandwidth 99% Power (MHz)
GFSK	2410	1.1252
	2420	1.0911
	2425	1.0521

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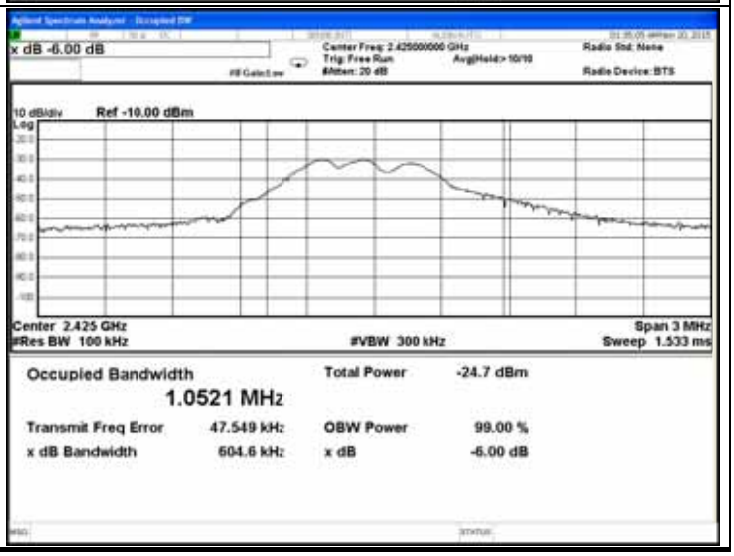
7.1.2. Measurement Plots

GFSK



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8. DEVIATION TO TEST SPECIFICATIONS

【NONE】