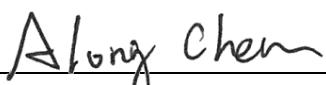


FCC Test Report

FCC ID : IE3GYM4400R16
Equipment : Air Mouse Presenter Receiver
Model No. : GYM4400R
Brand Name : SMK-Link
Applicant : SMK-Link Electronics
Address : 3601-B Calle Tecate, Camarillo, CA 93012, USA
Standard : 47 CFR FCC Part 15.249
Received Date : Jan. 25, 2017
Tested Date : Apr. 26 ~ Apr. 28, 2017

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:



Along Chen / Assistant Manager

Approved by:



Gary Chang / Manager



Table of Contents

1	GENERAL DESCRIPTION	5
1.2	Local Support Equipment List	7
1.3	Test Setup Chart	7
1.4	The Equipment List	8
1.5	Test Standards	9
1.6	Measurement Uncertainty	9
2	TEST CONFIGURATION.....	10
2.1	Testing Condition	10
2.2	The Worst Test Modes and Channel Details	10
3	TRANSMITTER TEST RESULTS.....	11
3.1	Conducted Emissions.....	11
3.2	Radiated Emission	14
3.3	20dB and Occupied Bandwidth	26
4	TEST LABORATORY INFORMATION	27

Release Record

Report No.	Version	Description	Issued Date
FR712503	Rev. 01	Initial issue	May 24, 2017

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emissions	[dBuV]: 21.260MHz, 34.82 (Margin -15.18dB) - AV	Pass
15.249(a)	Field Strength of Fundamental	Meet the requirement of limit	Pass
15.249(a)(d)	Field Strength of Harmonics and Emissions Radiated outside of the Specified Frequency Bands	Meet the requirement of limit	Pass
15.215(c)	20dB bandwidth	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information				
Frequency Range (MHz)	Modulation	Ch. Freq. (MHz)	Channel Number	Data Rate
2400-2483.5	FSK	2402-2480	0-78 [79]	1 Mbps

1.1.2 Antenna Details

Ant. No.	Type	Gain (dBi)	Connector	Remark
1	monopole	-5	N/A	---

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	5Vdc from Host.
-------------------	-----------------

1.1.4 Accessories

N/A

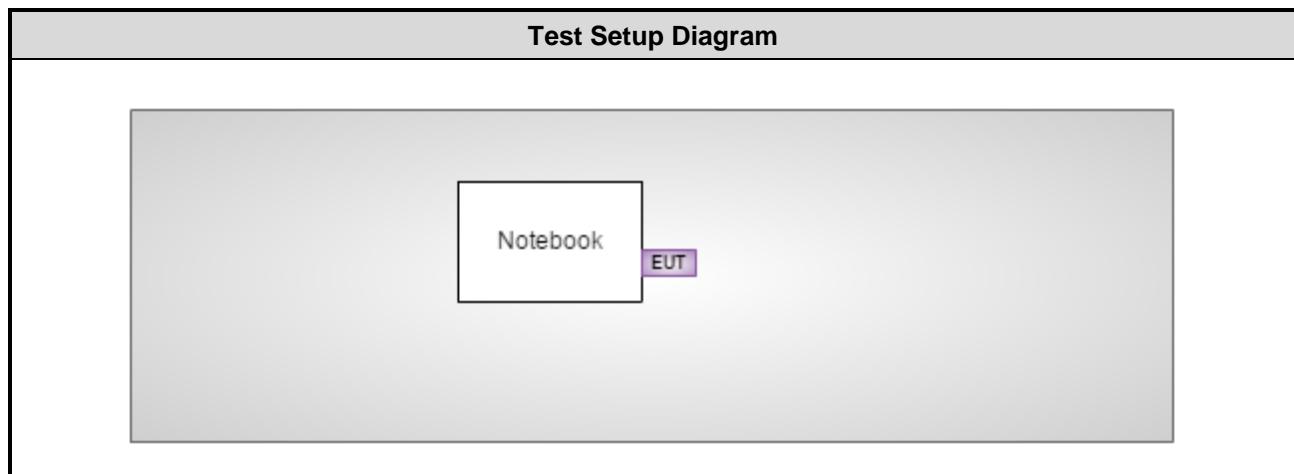
1.1.5 Channel List

Frequency band (MHz)				2400~2483.5			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	---	---

1.2 Local Support Equipment List

Support Equipment List						
No.	Equipment	Brand	Model	S/N	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	E6430	9ZFB4X1	DoC	---

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Dec. 21, 2016	Dec. 20, 2017
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 08, 2016	Nov. 07, 2017
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Nov. 25, 2016	Nov. 24, 2017
RF Cable-CON	EMC	EMCCFD300-BM-B M-6000	50821	Dec. 20, 2016	Dec. 19, 2017
50 ohm terminal (Support Unit)	NA	50	02	Apr. 07, 2017	Apr. 06, 2018
Measurement Software	AUDIX	e3	6.120210k	NA	NA

Note: Calibration Interval of instruments listed above is one year.

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Nov. 25, 2016	Nov. 24, 2017
Receiver	R&S	ESR3	101658	Nov. 24, 2016	Nov. 23, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 21, 2016	Dec. 20, 2017
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Oct. 25, 2016	Oct. 24, 2017
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 10, 2016	Nov. 09, 2017
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 09, 2016	Dec. 08, 2017
Preamplifier	EMC	EMC02325	980225	Aug. 05, 2016	Aug. 04, 2017
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2016	Oct. 05, 2017
Preamplifier	EMC	EMC184045B	980192	Aug. 24, 2016	Aug. 23, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 09, 2016	Dec. 08, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 09, 2016	Dec. 08, 2017
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 09, 2016	Dec. 08, 2017
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	16052	Dec. 09, 2016	Dec. 08, 2017
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 09, 2016	Dec. 08, 2017
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 09, 2016	Dec. 08, 2017
Measurement Software	AUDIX	e3	6.120210g	NA	NA

Note: Calibration Interval of instruments listed above is one year.

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101063	Mar. 15, 2017	Mar. 14, 2018
Power Meter	Anritsu	ML2495A	1241002	Oct. 06, 2016	Oct. 05, 2017
Power Sensor	Anritsu	MA2411B	1207366	Oct. 06, 2016	Oct. 05, 2017
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 20, 2016	Oct. 19, 2017
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.249

ANSI C63.10-2013

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	±34.134 Hz
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.63 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	18°C / 55%	Alex Tsai
Radiated Emissions	03CH01-WS	24°C / 62-66%	Ask Huang Kevin Lee
RF Conducted	TH01-WS	24°C / 66%	Ask Huang

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

Test item	Mode	Test Frequency (MHz)	Data Rate	Test Configuration
AC Power Line Conducted Emissions	FSK	2402	1 Mbps	---
Field Strength of Fundamental	FSK	2402, 2445, 2480	1 Mbps	---
Radiated Emissions ≤ 1GHz	FSK	2402	1 Mbps	---
Radiated Emissions > 1GHz	FSK	2402, 2445, 2480	1 Mbps	---
20dB bandwidth	FSK	2402, 2445, 2480	1 Mbps	---

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

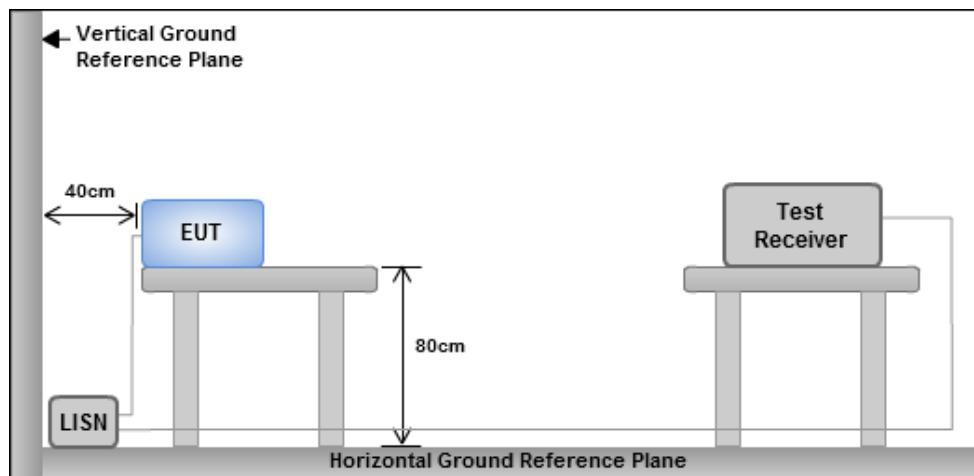
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Test Procedures

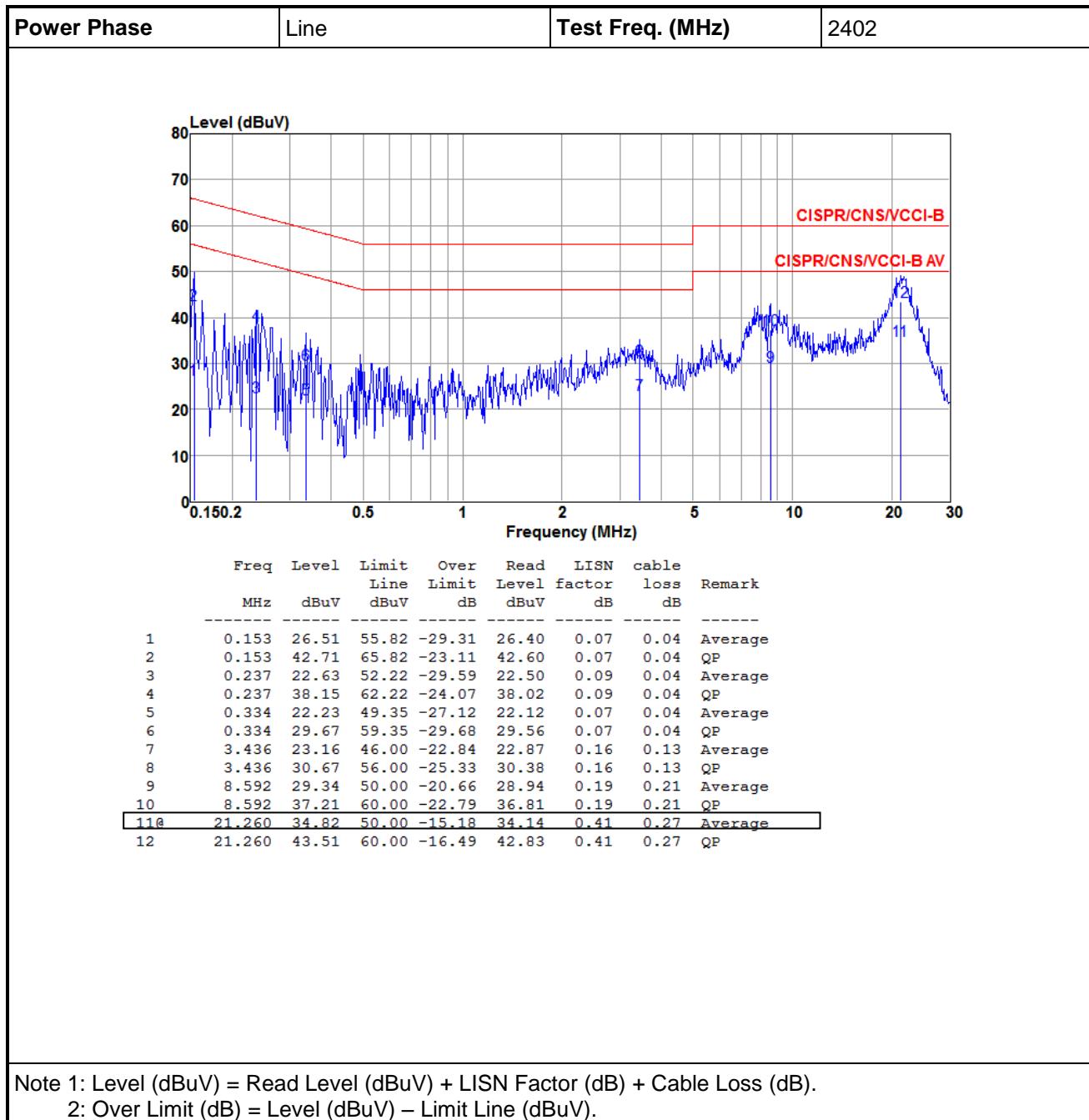
1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

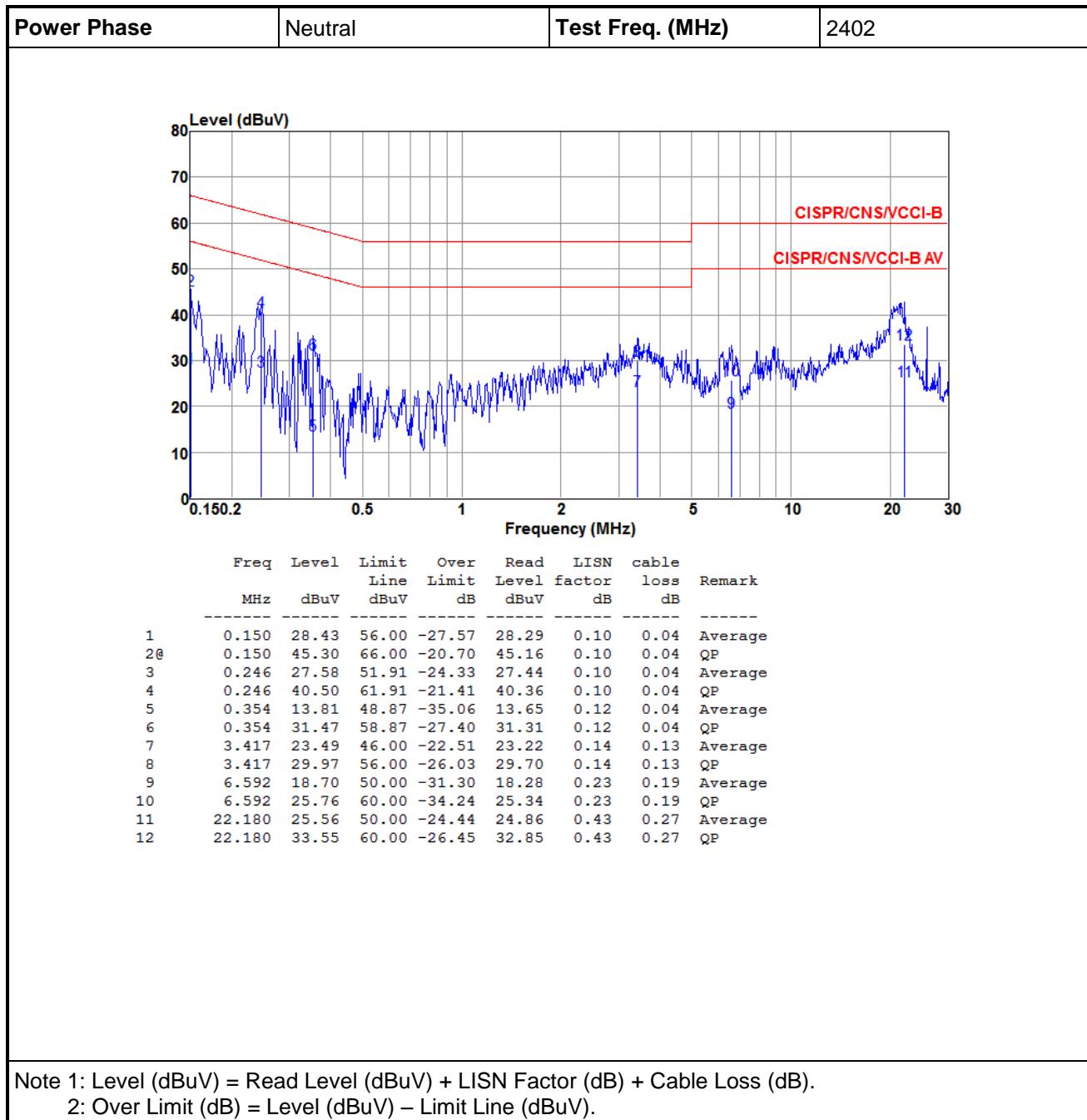
3.1.3 Test Setup



Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions





3.2 Radiated Emission

This section includes field strength of fundamental, field strength of harmonics and emissions radiated outside of the operating frequency bands.

3.2.1 Limit of field strength of fundamental and field strength of harmonics

Fundamental Frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
2400–2483.5 MHz	50	500

3.2.2 Limit of Unwanted Emissions

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 below table, whichever is the lesser attenuation.

Radiated emission limits			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:

Quasi-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:

Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.2.3 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

1. Radiated emission below 1GHz
120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission
2. Radiated emission above 1GHz / Peak value except fundamental
RBW=1MHz, VBW=3MHz and Peak detector

Radiated emission above 1GHz / Average value for field strength of fundamental and harmonics

The average value is: Average = Peak value + 20log(Duty cycle) Where the duty factor is calculated from following formula:

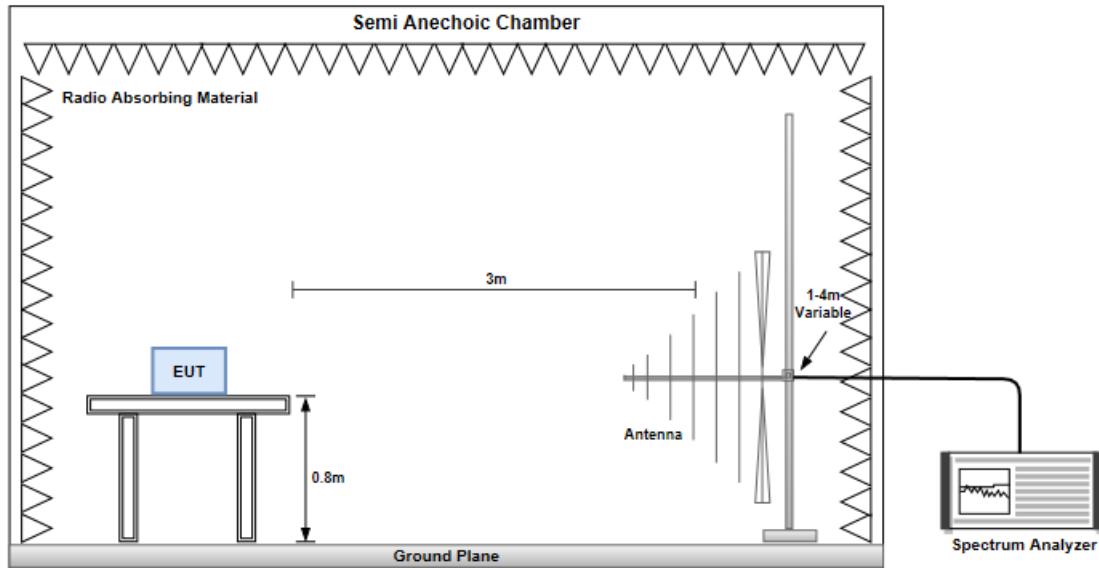
3.
$$20\log (\text{Duty cycle}) = 20\log \frac{10 * 0.18 \text{ ms}}{100 \text{ ms}} = -34.89 \text{ dB}$$

Please see page 25 for plotted duty

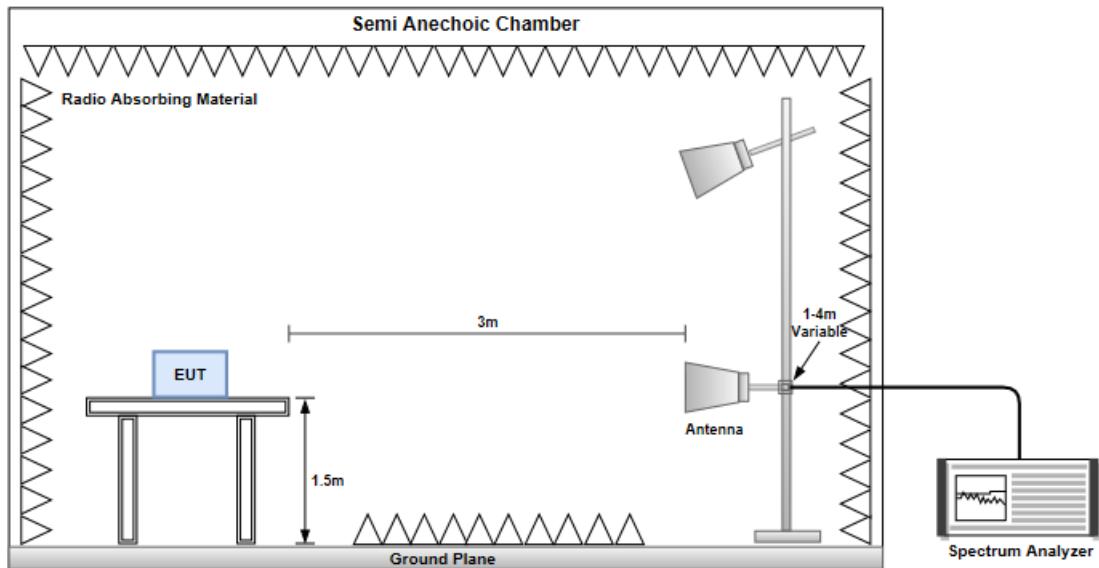
4. Radiated emission above 1GHz / Average value for other emissions
RBW=1MHz, VBW=10Hz and Peak detector
5. Radiated emission Peak value for fundamental
RBW=10MHz, VBW=10MHz and Peak detector

3.2.4 Test Setup

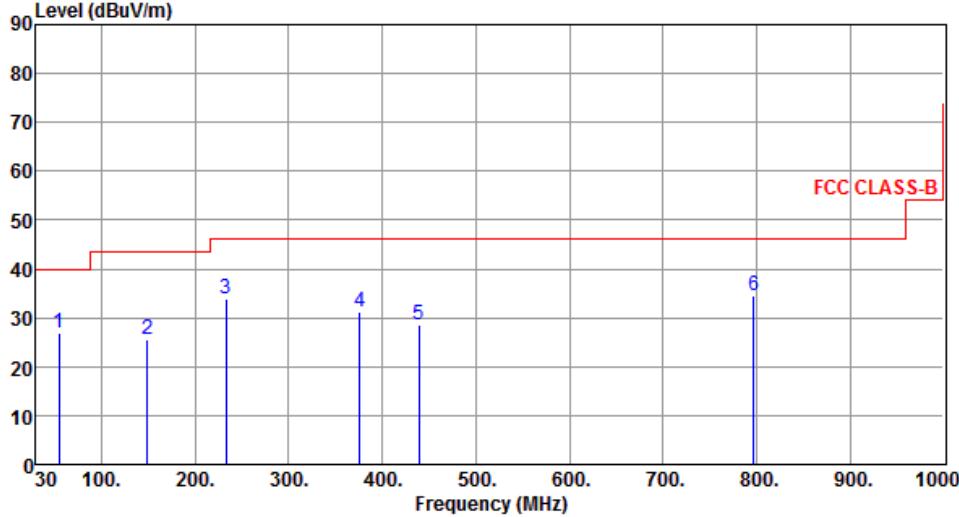
Radiated Emissions below 1 GHz

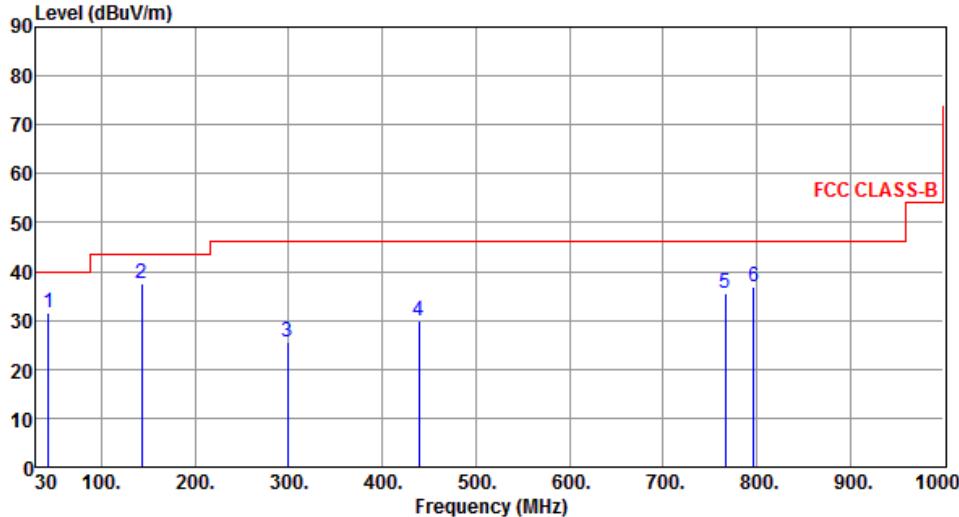


Radiated Emissions above 1 GHz

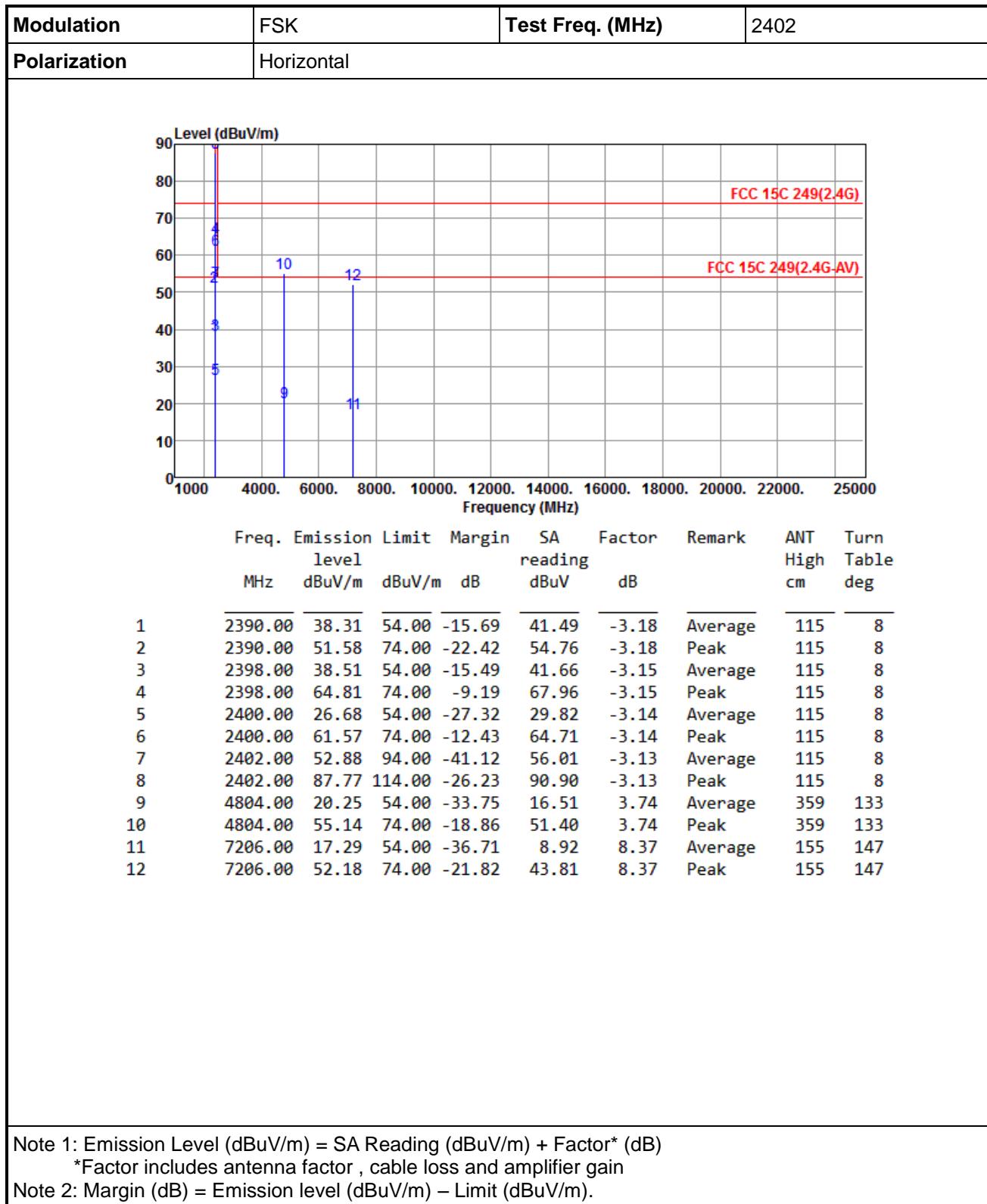


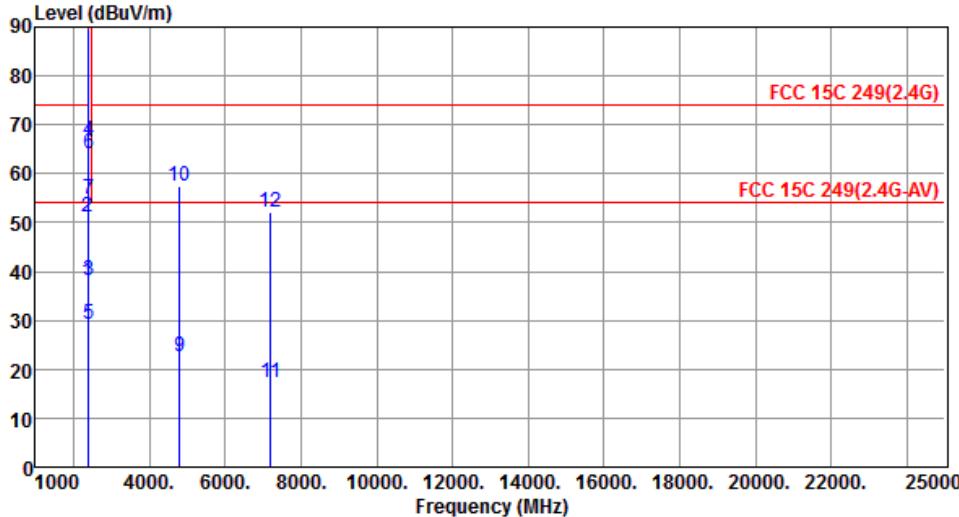
3.2.5 Transmitter Radiated Unwanted Emissions (Below 1GHz)

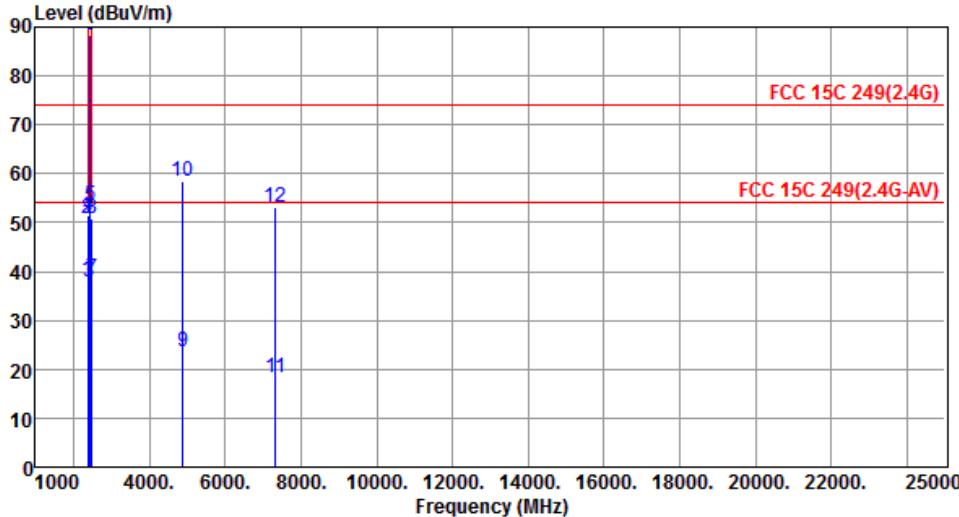
Modulation	FSK	Test Freq. (MHz)	2402																																																																												
Polarization	Horizontal																																																																														
 FCC CLASS-B																																																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Freq.</th> <th style="text-align: left;">Emission Limit</th> <th style="text-align: left;">Margin</th> <th style="text-align: left;">SA</th> <th style="text-align: left;">Factor</th> <th style="text-align: left;">Remark</th> <th style="text-align: left;">ANT</th> <th style="text-align: left;">Turn</th> </tr> <tr> <th style="text-align: left;">MHz</th> <th style="text-align: left;">level</th> <th style="text-align: left;">dB</th> <th style="text-align: left;">reading</th> <th style="text-align: left;">dBiV</th> <th style="text-align: left;">dB</th> <th style="text-align: left;">High</th> <th style="text-align: left;">Table</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>54.25</td> <td>26.94</td> <td>40.00</td> <td>-13.06</td> <td>35.12</td> <td>-8.18</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>2</td> <td>149.31</td> <td>25.49</td> <td>43.50</td> <td>-18.01</td> <td>33.69</td> <td>-8.20</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>3</td> <td>232.73</td> <td>33.86</td> <td>46.00</td> <td>-12.14</td> <td>43.24</td> <td>-9.38</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>4</td> <td>376.29</td> <td>31.23</td> <td>46.00</td> <td>-14.77</td> <td>36.82</td> <td>-5.59</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>5</td> <td>439.34</td> <td>28.43</td> <td>46.00</td> <td>-17.57</td> <td>32.44</td> <td>-4.01</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> <tr> <td>6</td> <td>797.27</td> <td>34.52</td> <td>46.00</td> <td>-11.48</td> <td>32.15</td> <td>2.37</td> <td>Peak</td> <td>---</td> <td>---</td> </tr> </tbody> </table>				Freq.	Emission Limit	Margin	SA	Factor	Remark	ANT	Turn	MHz	level	dB	reading	dBiV	dB	High	Table	1	54.25	26.94	40.00	-13.06	35.12	-8.18	Peak	---	---	2	149.31	25.49	43.50	-18.01	33.69	-8.20	Peak	---	---	3	232.73	33.86	46.00	-12.14	43.24	-9.38	Peak	---	---	4	376.29	31.23	46.00	-14.77	36.82	-5.59	Peak	---	---	5	439.34	28.43	46.00	-17.57	32.44	-4.01	Peak	---	---	6	797.27	34.52	46.00	-11.48	32.15	2.37	Peak	---	---
Freq.	Emission Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																								
MHz	level	dB	reading	dBiV	dB	High	Table																																																																								
1	54.25	26.94	40.00	-13.06	35.12	-8.18	Peak	---	---																																																																						
2	149.31	25.49	43.50	-18.01	33.69	-8.20	Peak	---	---																																																																						
3	232.73	33.86	46.00	-12.14	43.24	-9.38	Peak	---	---																																																																						
4	376.29	31.23	46.00	-14.77	36.82	-5.59	Peak	---	---																																																																						
5	439.34	28.43	46.00	-17.57	32.44	-4.01	Peak	---	---																																																																						
6	797.27	34.52	46.00	-11.48	32.15	2.37	Peak	---	---																																																																						
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor, cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m). Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.																																																																															

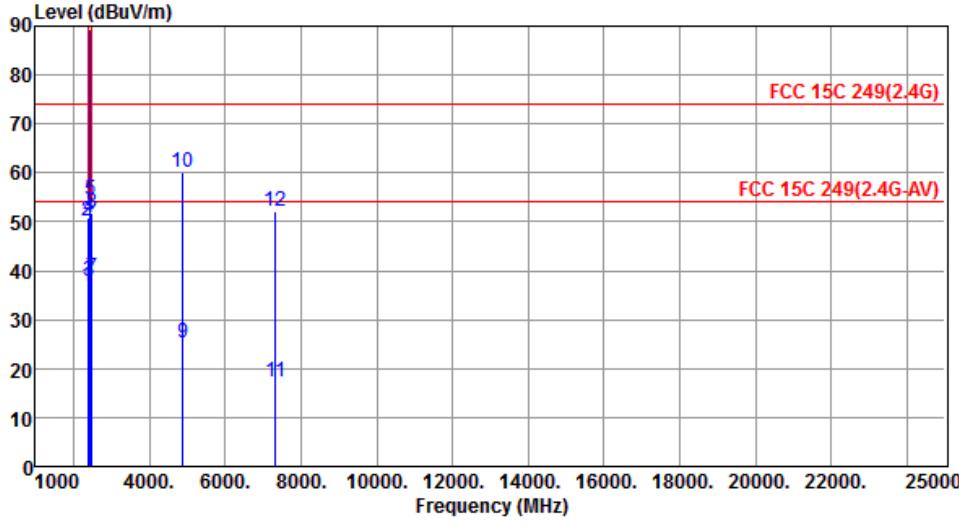
Modulation	FSK	Test Freq. (MHz)	2402																																																																								
Polarization	Vertical																																																																										
																																																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Freq.</th> <th style="text-align: left;">Emission</th> <th style="text-align: left;">Margin</th> <th style="text-align: left;">SA</th> <th style="text-align: left;">Factor</th> <th style="text-align: left;">Remark</th> <th style="text-align: left;">ANT</th> <th style="text-align: left;">Turn</th> </tr> <tr> <th style="text-align: left;">MHz</th> <th style="text-align: left;">Limit</th> <th style="text-align: left;">Margin</th> <th style="text-align: left;">reading</th> <th style="text-align: left;">Factor</th> <th style="text-align: left;">Peak</th> <th style="text-align: left;">High</th> <th style="text-align: left;">Table</th> </tr> <tr> <th></th> <th style="text-align: left;">level</th> <th style="text-align: left;">dBuV/m</th> <th style="text-align: left;">dB</th> <th style="text-align: left;">dBuV</th> <th></th> <th style="text-align: left;">cm</th> <th style="text-align: left;">deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>43.58</td> <td>31.54</td> <td>40.00</td> <td>-8.46</td> <td>39.17</td> <td>-7.63</td> <td>---</td> </tr> <tr> <td>2</td> <td>142.52</td> <td>37.62</td> <td>43.50</td> <td>-5.88</td> <td>45.89</td> <td>-8.27</td> <td>---</td> </tr> <tr> <td>3</td> <td>298.69</td> <td>25.69</td> <td>46.00</td> <td>-20.31</td> <td>33.23</td> <td>-7.54</td> <td>---</td> </tr> <tr> <td>4</td> <td>439.34</td> <td>29.81</td> <td>46.00</td> <td>-16.19</td> <td>33.82</td> <td>-4.01</td> <td>---</td> </tr> <tr> <td>5</td> <td>766.23</td> <td>35.43</td> <td>46.00</td> <td>-10.57</td> <td>33.42</td> <td>2.01</td> <td>---</td> </tr> <tr> <td>6</td> <td>797.27</td> <td>36.83</td> <td>46.00</td> <td>-9.17</td> <td>34.46</td> <td>2.37</td> <td>---</td> </tr> </tbody> </table>				Freq.	Emission	Margin	SA	Factor	Remark	ANT	Turn	MHz	Limit	Margin	reading	Factor	Peak	High	Table		level	dBuV/m	dB	dBuV		cm	deg	1	43.58	31.54	40.00	-8.46	39.17	-7.63	---	2	142.52	37.62	43.50	-5.88	45.89	-8.27	---	3	298.69	25.69	46.00	-20.31	33.23	-7.54	---	4	439.34	29.81	46.00	-16.19	33.82	-4.01	---	5	766.23	35.43	46.00	-10.57	33.42	2.01	---	6	797.27	36.83	46.00	-9.17	34.46	2.37	---
Freq.	Emission	Margin	SA	Factor	Remark	ANT	Turn																																																																				
MHz	Limit	Margin	reading	Factor	Peak	High	Table																																																																				
	level	dBuV/m	dB	dBuV		cm	deg																																																																				
1	43.58	31.54	40.00	-8.46	39.17	-7.63	---																																																																				
2	142.52	37.62	43.50	-5.88	45.89	-8.27	---																																																																				
3	298.69	25.69	46.00	-20.31	33.23	-7.54	---																																																																				
4	439.34	29.81	46.00	-16.19	33.82	-4.01	---																																																																				
5	766.23	35.43	46.00	-10.57	33.42	2.01	---																																																																				
6	797.27	36.83	46.00	-9.17	34.46	2.37	---																																																																				
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m). Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.																																																																											

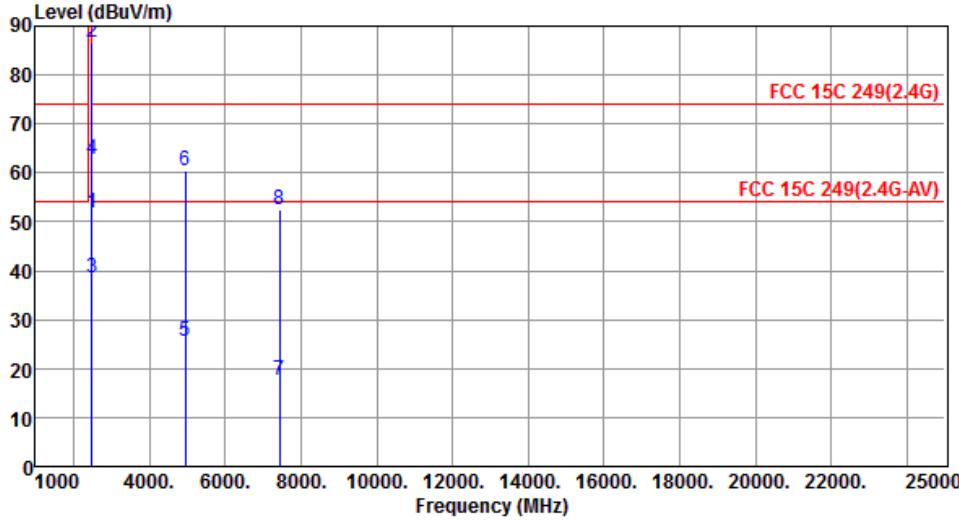
3.2.6 Transmitter Radiated Unwanted Emissions (Above 1GHz)

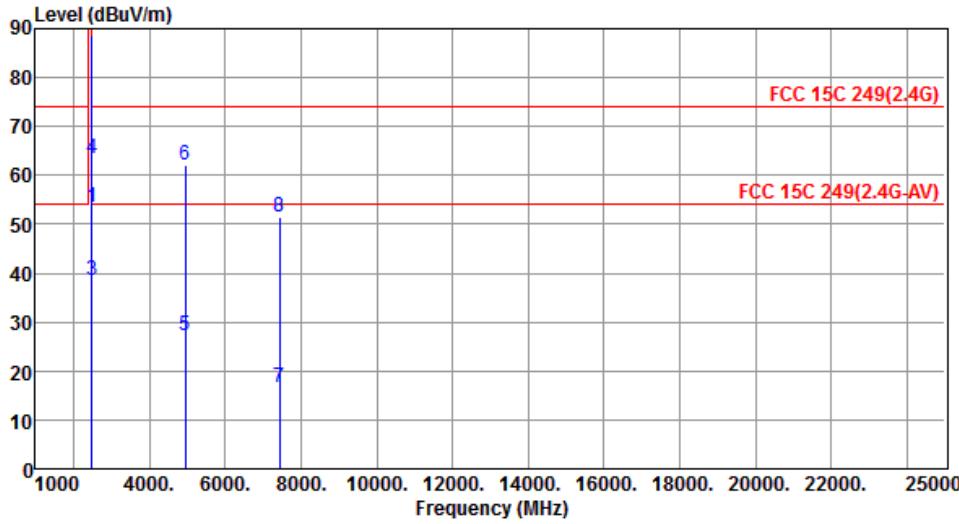


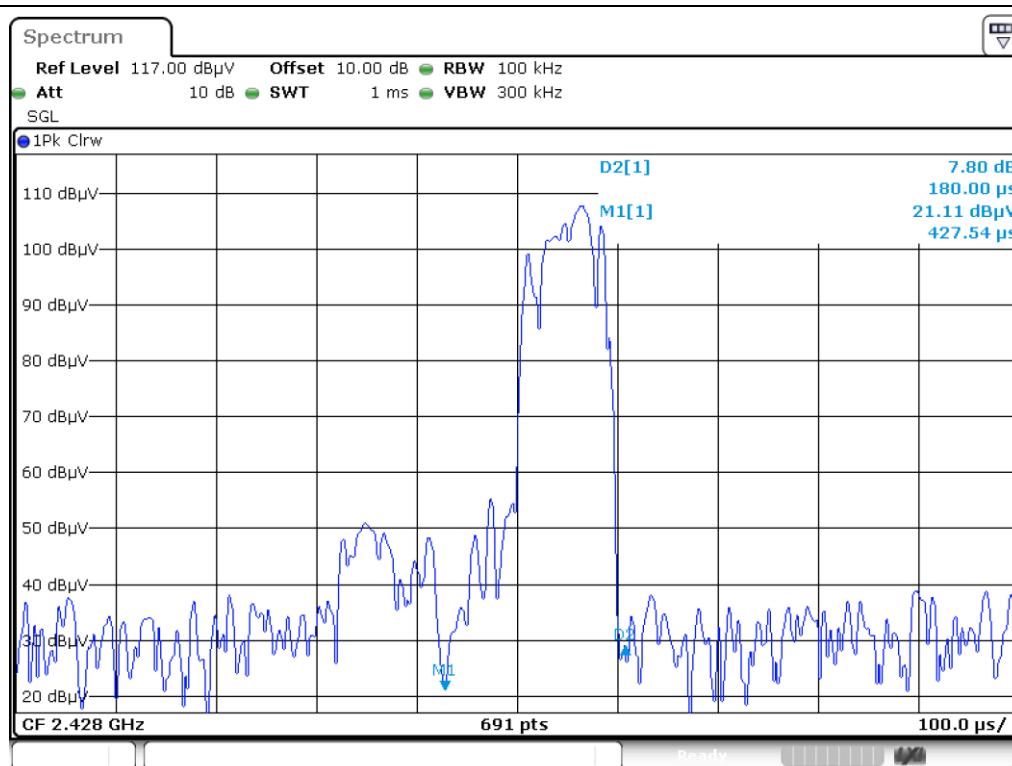
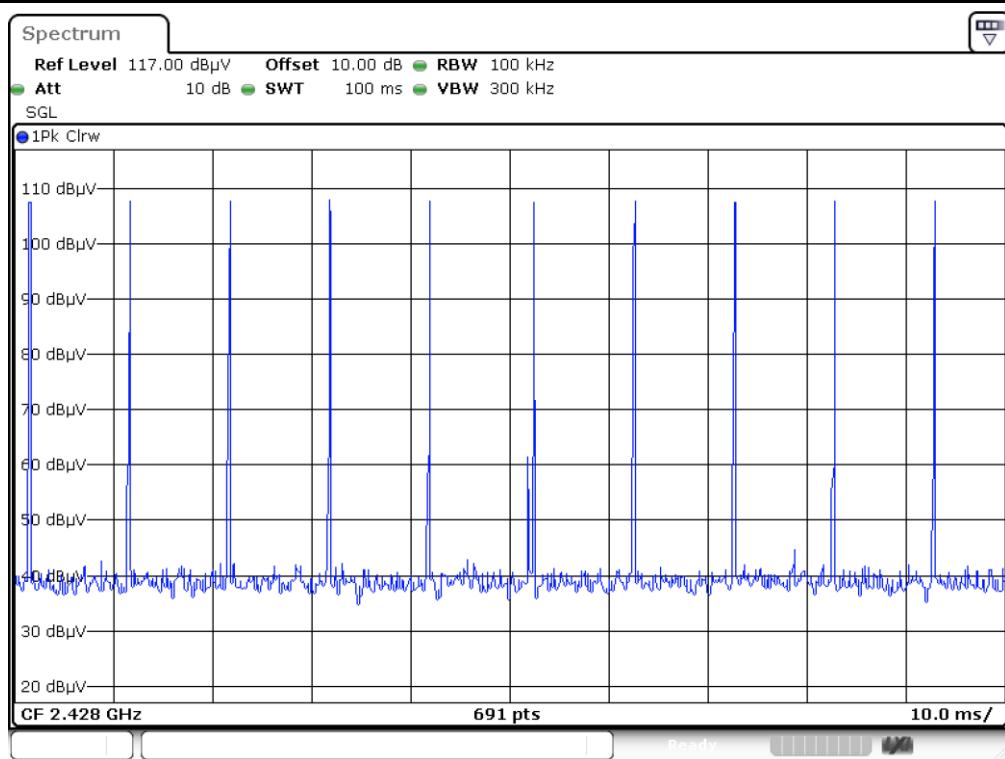
Modulation	FSK	Test Freq. (MHz)	2402																																																																																																																																																			
Polarization	Vertical																																																																																																																																																					
																																																																																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding-bottom: 2px;">Freq.</th> <th style="text-align: left; padding-bottom: 2px;">Emission</th> <th style="text-align: left; padding-bottom: 2px;">Limit</th> <th style="text-align: left; padding-bottom: 2px;">Margin</th> <th style="text-align: left; padding-bottom: 2px;">SA</th> <th style="text-align: left; padding-bottom: 2px;">Factor</th> <th style="text-align: left; padding-bottom: 2px;">Remark</th> <th style="text-align: left; padding-bottom: 2px;">ANT</th> <th style="text-align: left; padding-bottom: 2px;">Turn</th> </tr> <tr> <th style="text-align: left;">MHz</th> <th style="text-align: left;">level</th> <th style="text-align: left;">dBuV/m</th> <th style="text-align: left;">dBuV/m</th> <th style="text-align: left;">dB</th> <th style="text-align: left;">reading</th> <th style="text-align: left;">reading</th> <th style="text-align: left;">High</th> <th style="text-align: left;">Table</th> </tr> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th style="text-align: left;">dBuV</th> <th style="text-align: left;">dB</th> <th style="text-align: left;">cm</th> <th style="text-align: left;">deg</th> </tr> </thead> <tbody> <tr> <td>1</td><td>2390.00</td><td>38.00</td><td>54.00</td><td>-16.00</td><td>41.18</td><td>-3.18</td><td>Average</td><td>278</td><td>226</td></tr> <tr> <td>2</td><td>2390.00</td><td>51.07</td><td>74.00</td><td>-22.93</td><td>54.25</td><td>-3.18</td><td>Peak</td><td>278</td><td>226</td></tr> <tr> <td>3</td><td>2398.00</td><td>38.16</td><td>54.00</td><td>-15.84</td><td>41.31</td><td>-3.15</td><td>Average</td><td>278</td><td>226</td></tr> <tr> <td>4</td><td>2398.00</td><td>66.82</td><td>74.00</td><td>-7.18</td><td>69.97</td><td>-3.15</td><td>Peak</td><td>278</td><td>226</td></tr> <tr> <td>5</td><td>2400.00</td><td>29.08</td><td>54.00</td><td>-24.92</td><td>32.22</td><td>-3.14</td><td>Average</td><td>278</td><td>226</td></tr> <tr> <td>6</td><td>2400.00</td><td>63.97</td><td>74.00</td><td>-10.03</td><td>67.11</td><td>-3.14</td><td>Peak</td><td>278</td><td>226</td></tr> <tr> <td>7</td><td>2402.00</td><td>54.90</td><td>94.00</td><td>-39.10</td><td>58.03</td><td>-3.13</td><td>Average</td><td>278</td><td>226</td></tr> <tr> <td>8</td><td>2402.00</td><td>89.79</td><td>114.00</td><td>-24.21</td><td>92.92</td><td>-3.13</td><td>Peak</td><td>278</td><td>226</td></tr> <tr> <td>9</td><td>4804.00</td><td>22.73</td><td>54.00</td><td>-31.27</td><td>18.99</td><td>3.74</td><td>Average</td><td>262</td><td>93</td></tr> <tr> <td>10</td><td>4804.00</td><td>57.62</td><td>74.00</td><td>-16.38</td><td>53.88</td><td>3.74</td><td>Peak</td><td>262</td><td>93</td></tr> <tr> <td>11</td><td>7206.00</td><td>17.17</td><td>54.00</td><td>-36.83</td><td>8.80</td><td>8.37</td><td>Average</td><td>100</td><td>140</td></tr> <tr> <td>12</td><td>7206.00</td><td>52.06</td><td>74.00</td><td>-21.94</td><td>43.69</td><td>8.37</td><td>Peak</td><td>100</td><td>140</td></tr> </tbody> </table>				Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn	MHz	level	dBuV/m	dBuV/m	dB	reading	reading	High	Table						dBuV	dB	cm	deg	1	2390.00	38.00	54.00	-16.00	41.18	-3.18	Average	278	226	2	2390.00	51.07	74.00	-22.93	54.25	-3.18	Peak	278	226	3	2398.00	38.16	54.00	-15.84	41.31	-3.15	Average	278	226	4	2398.00	66.82	74.00	-7.18	69.97	-3.15	Peak	278	226	5	2400.00	29.08	54.00	-24.92	32.22	-3.14	Average	278	226	6	2400.00	63.97	74.00	-10.03	67.11	-3.14	Peak	278	226	7	2402.00	54.90	94.00	-39.10	58.03	-3.13	Average	278	226	8	2402.00	89.79	114.00	-24.21	92.92	-3.13	Peak	278	226	9	4804.00	22.73	54.00	-31.27	18.99	3.74	Average	262	93	10	4804.00	57.62	74.00	-16.38	53.88	3.74	Peak	262	93	11	7206.00	17.17	54.00	-36.83	8.80	8.37	Average	100	140	12	7206.00	52.06	74.00	-21.94	43.69	8.37	Peak	100	140
Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																																																																																														
MHz	level	dBuV/m	dBuV/m	dB	reading	reading	High	Table																																																																																																																																														
					dBuV	dB	cm	deg																																																																																																																																														
1	2390.00	38.00	54.00	-16.00	41.18	-3.18	Average	278	226																																																																																																																																													
2	2390.00	51.07	74.00	-22.93	54.25	-3.18	Peak	278	226																																																																																																																																													
3	2398.00	38.16	54.00	-15.84	41.31	-3.15	Average	278	226																																																																																																																																													
4	2398.00	66.82	74.00	-7.18	69.97	-3.15	Peak	278	226																																																																																																																																													
5	2400.00	29.08	54.00	-24.92	32.22	-3.14	Average	278	226																																																																																																																																													
6	2400.00	63.97	74.00	-10.03	67.11	-3.14	Peak	278	226																																																																																																																																													
7	2402.00	54.90	94.00	-39.10	58.03	-3.13	Average	278	226																																																																																																																																													
8	2402.00	89.79	114.00	-24.21	92.92	-3.13	Peak	278	226																																																																																																																																													
9	4804.00	22.73	54.00	-31.27	18.99	3.74	Average	262	93																																																																																																																																													
10	4804.00	57.62	74.00	-16.38	53.88	3.74	Peak	262	93																																																																																																																																													
11	7206.00	17.17	54.00	-36.83	8.80	8.37	Average	100	140																																																																																																																																													
12	7206.00	52.06	74.00	-21.94	43.69	8.37	Peak	100	140																																																																																																																																													
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																																																																																																						

Modulation	FSK	Test Freq. (MHz)	2445																																																																																																																																		
Polarization	Horizontal																																																																																																																																				
 <p>The graph plots Level (dBuV/m) on the y-axis (0 to 90) against Frequency (MHz) on the x-axis (1000 to 25000). Two horizontal red lines represent FCC 15C 249(2.4G) limits at approximately 54 dBuV/m and 76 dBuV/m. Blue vertical lines indicate measured emission levels for 12 frequency points (1-12) across the 2.4 GHz band. Points 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11 are clustered between 2.390 GHz and 2.483 GHz, while point 12 is at 7.335 GHz.</p>																																																																																																																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Freq. MHz</th> <th style="text-align: center;">Emission level dBuV/m</th> <th style="text-align: center;">Limit dBuV/m</th> <th style="text-align: center;">Margin dB</th> <th style="text-align: center;">SA reading dBuV</th> <th style="text-align: center;">Factor dB</th> <th style="text-align: center;">Remark</th> <th style="text-align: center;">ANT High cm</th> <th style="text-align: center;">Turn Table deg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td style="text-align: center;">2390.00</td> <td style="text-align: center;">38.10</td> <td style="text-align: center;">54.00</td> <td style="text-align: center;">-15.90</td> <td style="text-align: center;">41.28</td> <td style="text-align: center;">-3.18</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>2</td> <td style="text-align: center;">2390.00</td> <td style="text-align: center;">50.67</td> <td style="text-align: center;">74.00</td> <td style="text-align: center;">-23.33</td> <td style="text-align: center;">53.85</td> <td style="text-align: center;">-3.18</td> <td style="text-align: center;">Peak</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>3</td> <td style="text-align: center;">2400.00</td> <td style="text-align: center;">37.99</td> <td style="text-align: center;">54.00</td> <td style="text-align: center;">-16.01</td> <td style="text-align: center;">41.13</td> <td style="text-align: center;">-3.14</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>4</td> <td style="text-align: center;">2400.00</td> <td style="text-align: center;">51.46</td> <td style="text-align: center;">74.00</td> <td style="text-align: center;">-22.54</td> <td style="text-align: center;">54.60</td> <td style="text-align: center;">-3.14</td> <td style="text-align: center;">Peak</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>5</td> <td style="text-align: center;">2445.00</td> <td style="text-align: center;">53.38</td> <td style="text-align: center;">94.00</td> <td style="text-align: center;">-40.62</td> <td style="text-align: center;">56.34</td> <td style="text-align: center;">-2.96</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>6</td> <td style="text-align: center;">2445.00</td> <td style="text-align: center;">88.27</td> <td style="text-align: center;">114.00</td> <td style="text-align: center;">-25.73</td> <td style="text-align: center;">91.23</td> <td style="text-align: center;">-2.96</td> <td style="text-align: center;">Peak</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>7</td> <td style="text-align: center;">2483.50</td> <td style="text-align: center;">38.36</td> <td style="text-align: center;">54.00</td> <td style="text-align: center;">-15.64</td> <td style="text-align: center;">41.16</td> <td style="text-align: center;">-2.80</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>8</td> <td style="text-align: center;">2483.50</td> <td style="text-align: center;">50.90</td> <td style="text-align: center;">74.00</td> <td style="text-align: center;">-23.10</td> <td style="text-align: center;">53.70</td> <td style="text-align: center;">-2.80</td> <td style="text-align: center;">Peak</td> <td style="text-align: center;">114</td> <td style="text-align: center;">11</td> </tr> <tr> <td>9</td> <td style="text-align: center;">4890.00</td> <td style="text-align: center;">23.61</td> <td style="text-align: center;">54.00</td> <td style="text-align: center;">-30.39</td> <td style="text-align: center;">19.61</td> <td style="text-align: center;">4.00</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">326</td> <td style="text-align: center;">129</td> </tr> <tr> <td>10</td> <td style="text-align: center;">4890.00</td> <td style="text-align: center;">58.50</td> <td style="text-align: center;">74.00</td> <td style="text-align: center;">-15.50</td> <td style="text-align: center;">54.50</td> <td style="text-align: center;">4.00</td> <td style="text-align: center;">Peak</td> <td style="text-align: center;">326</td> <td style="text-align: center;">129</td> </tr> <tr> <td>11</td> <td style="text-align: center;">7335.00</td> <td style="text-align: center;">18.37</td> <td style="text-align: center;">54.00</td> <td style="text-align: center;">-35.63</td> <td style="text-align: center;">9.95</td> <td style="text-align: center;">8.42</td> <td style="text-align: center;">Average</td> <td style="text-align: center;">100</td> <td style="text-align: center;">145</td> </tr> <tr> <td>12</td> <td style="text-align: center;">7335.00</td> <td style="text-align: center;">53.26</td> <td style="text-align: center;">74.00</td> <td style="text-align: center;">-20.74</td> <td style="text-align: center;">44.84</td> <td style="text-align: center;">8.42</td> <td style="text-align: center;">Peak</td> <td style="text-align: center;">100</td> <td style="text-align: center;">145</td> </tr> </tbody> </table>					Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg	1	2390.00	38.10	54.00	-15.90	41.28	-3.18	Average	114	11	2	2390.00	50.67	74.00	-23.33	53.85	-3.18	Peak	114	11	3	2400.00	37.99	54.00	-16.01	41.13	-3.14	Average	114	11	4	2400.00	51.46	74.00	-22.54	54.60	-3.14	Peak	114	11	5	2445.00	53.38	94.00	-40.62	56.34	-2.96	Average	114	11	6	2445.00	88.27	114.00	-25.73	91.23	-2.96	Peak	114	11	7	2483.50	38.36	54.00	-15.64	41.16	-2.80	Average	114	11	8	2483.50	50.90	74.00	-23.10	53.70	-2.80	Peak	114	11	9	4890.00	23.61	54.00	-30.39	19.61	4.00	Average	326	129	10	4890.00	58.50	74.00	-15.50	54.50	4.00	Peak	326	129	11	7335.00	18.37	54.00	-35.63	9.95	8.42	Average	100	145	12	7335.00	53.26	74.00	-20.74	44.84	8.42	Peak	100	145
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg																																																																																																																												
1	2390.00	38.10	54.00	-15.90	41.28	-3.18	Average	114	11																																																																																																																												
2	2390.00	50.67	74.00	-23.33	53.85	-3.18	Peak	114	11																																																																																																																												
3	2400.00	37.99	54.00	-16.01	41.13	-3.14	Average	114	11																																																																																																																												
4	2400.00	51.46	74.00	-22.54	54.60	-3.14	Peak	114	11																																																																																																																												
5	2445.00	53.38	94.00	-40.62	56.34	-2.96	Average	114	11																																																																																																																												
6	2445.00	88.27	114.00	-25.73	91.23	-2.96	Peak	114	11																																																																																																																												
7	2483.50	38.36	54.00	-15.64	41.16	-2.80	Average	114	11																																																																																																																												
8	2483.50	50.90	74.00	-23.10	53.70	-2.80	Peak	114	11																																																																																																																												
9	4890.00	23.61	54.00	-30.39	19.61	4.00	Average	326	129																																																																																																																												
10	4890.00	58.50	74.00	-15.50	54.50	4.00	Peak	326	129																																																																																																																												
11	7335.00	18.37	54.00	-35.63	9.95	8.42	Average	100	145																																																																																																																												
12	7335.00	53.26	74.00	-20.74	44.84	8.42	Peak	100	145																																																																																																																												
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																																																																																					

Modulation	FSK	Test Freq. (MHz)	2445																																																																																																																																										
Polarization	Vertical																																																																																																																																												
																																																																																																																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding-bottom: 2px;">Freq.</th> <th style="text-align: left; padding-bottom: 2px;">Emission</th> <th style="text-align: left; padding-bottom: 2px;">Limit</th> <th style="text-align: left; padding-bottom: 2px;">Margin</th> <th style="text-align: left; padding-bottom: 2px;">SA</th> <th style="text-align: left; padding-bottom: 2px;">Factor</th> <th style="text-align: left; padding-bottom: 2px;">Remark</th> <th style="text-align: left; padding-bottom: 2px;">ANT</th> <th style="text-align: left; padding-bottom: 2px;">Turn</th> </tr> <tr> <th style="text-align: left; padding-top: 2px;">MHz</th> <th style="text-align: left; padding-top: 2px;">level</th> <th style="text-align: left; padding-top: 2px;">dBuV/m</th> <th style="text-align: left; padding-top: 2px;">dBuV/m</th> <th style="text-align: left; padding-top: 2px;">dB</th> <th style="text-align: left; padding-top: 2px;">reading</th> <th style="text-align: left; padding-top: 2px;">dB</th> <th style="text-align: left; padding-top: 2px;">High</th> <th style="text-align: left; padding-top: 2px;">Table</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">1</td> <td style="text-align: left;">2390.00</td> <td style="text-align: left;">36.89</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-17.11</td> <td style="text-align: left;">40.07</td> <td style="text-align: left;">-3.18</td> <td style="text-align: left;">Average</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">2</td> <td style="text-align: left;">2390.00</td> <td style="text-align: left;">50.08</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-23.92</td> <td style="text-align: left;">53.26</td> <td style="text-align: left;">-3.18</td> <td style="text-align: left;">Peak</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">3</td> <td style="text-align: left;">2400.00</td> <td style="text-align: left;">37.97</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-16.03</td> <td style="text-align: left;">41.11</td> <td style="text-align: left;">-3.14</td> <td style="text-align: left;">Average</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">4</td> <td style="text-align: left;">2400.00</td> <td style="text-align: left;">50.97</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-23.03</td> <td style="text-align: left;">54.11</td> <td style="text-align: left;">-3.14</td> <td style="text-align: left;">Peak</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">5</td> <td style="text-align: left;">2445.00</td> <td style="text-align: left;">54.39</td> <td style="text-align: left;">94.00</td> <td style="text-align: left;">-39.61</td> <td style="text-align: left;">57.35</td> <td style="text-align: left;">-2.96</td> <td style="text-align: left;">Average</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">6</td> <td style="text-align: left;">2445.00</td> <td style="text-align: left;">89.28</td> <td style="text-align: left;">114.00</td> <td style="text-align: left;">-24.72</td> <td style="text-align: left;">92.24</td> <td style="text-align: left;">-2.96</td> <td style="text-align: left;">Peak</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">7</td> <td style="text-align: left;">2483.50</td> <td style="text-align: left;">38.36</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-15.64</td> <td style="text-align: left;">41.16</td> <td style="text-align: left;">-2.80</td> <td style="text-align: left;">Average</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">8</td> <td style="text-align: left;">2483.50</td> <td style="text-align: left;">51.80</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-22.20</td> <td style="text-align: left;">54.60</td> <td style="text-align: left;">-2.80</td> <td style="text-align: left;">Peak</td> <td style="text-align: left;">264</td> <td style="text-align: left;">229</td> </tr> <tr> <td style="text-align: left;">9</td> <td style="text-align: left;">4890.00</td> <td style="text-align: left;">25.30</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-28.70</td> <td style="text-align: left;">21.30</td> <td style="text-align: left;">4.00</td> <td style="text-align: left;">Average</td> <td style="text-align: left;">260</td> <td style="text-align: left;">94</td> </tr> <tr> <td style="text-align: left;">10</td> <td style="text-align: left;">4890.00</td> <td style="text-align: left;">60.19</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-13.81</td> <td style="text-align: left;">56.19</td> <td style="text-align: left;">4.00</td> <td style="text-align: left;">Peak</td> <td style="text-align: left;">260</td> <td style="text-align: left;">94</td> </tr> <tr> <td style="text-align: left;">11</td> <td style="text-align: left;">7335.00</td> <td style="text-align: left;">17.39</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-36.61</td> <td style="text-align: left;">8.97</td> <td style="text-align: left;">8.42</td> <td style="text-align: left;">Average</td> <td style="text-align: left;">100</td> <td style="text-align: left;">153</td> </tr> <tr> <td style="text-align: left;">12</td> <td style="text-align: left;">7335.00</td> <td style="text-align: left;">52.28</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-21.72</td> <td style="text-align: left;">43.86</td> <td style="text-align: left;">8.42</td> <td style="text-align: left;">Peak</td> <td style="text-align: left;">100</td> <td style="text-align: left;">153</td> </tr> </tbody> </table>				Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn	MHz	level	dBuV/m	dBuV/m	dB	reading	dB	High	Table	1	2390.00	36.89	54.00	-17.11	40.07	-3.18	Average	264	229	2	2390.00	50.08	74.00	-23.92	53.26	-3.18	Peak	264	229	3	2400.00	37.97	54.00	-16.03	41.11	-3.14	Average	264	229	4	2400.00	50.97	74.00	-23.03	54.11	-3.14	Peak	264	229	5	2445.00	54.39	94.00	-39.61	57.35	-2.96	Average	264	229	6	2445.00	89.28	114.00	-24.72	92.24	-2.96	Peak	264	229	7	2483.50	38.36	54.00	-15.64	41.16	-2.80	Average	264	229	8	2483.50	51.80	74.00	-22.20	54.60	-2.80	Peak	264	229	9	4890.00	25.30	54.00	-28.70	21.30	4.00	Average	260	94	10	4890.00	60.19	74.00	-13.81	56.19	4.00	Peak	260	94	11	7335.00	17.39	54.00	-36.61	8.97	8.42	Average	100	153	12	7335.00	52.28	74.00	-21.72	43.86	8.42	Peak	100	153
Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																																																																																					
MHz	level	dBuV/m	dBuV/m	dB	reading	dB	High	Table																																																																																																																																					
1	2390.00	36.89	54.00	-17.11	40.07	-3.18	Average	264	229																																																																																																																																				
2	2390.00	50.08	74.00	-23.92	53.26	-3.18	Peak	264	229																																																																																																																																				
3	2400.00	37.97	54.00	-16.03	41.11	-3.14	Average	264	229																																																																																																																																				
4	2400.00	50.97	74.00	-23.03	54.11	-3.14	Peak	264	229																																																																																																																																				
5	2445.00	54.39	94.00	-39.61	57.35	-2.96	Average	264	229																																																																																																																																				
6	2445.00	89.28	114.00	-24.72	92.24	-2.96	Peak	264	229																																																																																																																																				
7	2483.50	38.36	54.00	-15.64	41.16	-2.80	Average	264	229																																																																																																																																				
8	2483.50	51.80	74.00	-22.20	54.60	-2.80	Peak	264	229																																																																																																																																				
9	4890.00	25.30	54.00	-28.70	21.30	4.00	Average	260	94																																																																																																																																				
10	4890.00	60.19	74.00	-13.81	56.19	4.00	Peak	260	94																																																																																																																																				
11	7335.00	17.39	54.00	-36.61	8.97	8.42	Average	100	153																																																																																																																																				
12	7335.00	52.28	74.00	-21.72	43.86	8.42	Peak	100	153																																																																																																																																				
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																																																																																													

Modulation	FSK	Test Freq. (MHz)	2480																																																																																																		
Polarization	Horizontal																																																																																																				
																																																																																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Freq.</th> <th style="text-align: left;">Emission</th> <th style="text-align: left;">Limit</th> <th style="text-align: left;">Margin</th> <th style="text-align: left;">SA</th> <th style="text-align: left;">Factor</th> <th style="text-align: left;">Remark</th> <th style="text-align: left;">ANT</th> <th style="text-align: left;">Turn</th> </tr> <tr> <th style="text-align: left;">MHz</th> <th style="text-align: left;">level</th> <th style="text-align: left;">dBuV/m</th> <th style="text-align: left;">dB</th> <th style="text-align: left;">reading</th> <th style="text-align: left;">dB</th> <th></th> <th style="text-align: left;">High</th> <th style="text-align: left;">Table</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2480.00</td> <td>51.83</td> <td>94.00</td> <td>-42.17</td> <td>54.64</td> <td>-2.81</td> <td>Average</td> <td>110</td> <td>14</td> </tr> <tr> <td>2</td> <td>2480.00</td> <td>86.72</td> <td>114.00</td> <td>-27.28</td> <td>89.53</td> <td>-2.81</td> <td>Peak</td> <td>110</td> <td>14</td> </tr> <tr> <td>3</td> <td>2483.50</td> <td>38.39</td> <td>54.00</td> <td>-15.61</td> <td>41.19</td> <td>-2.80</td> <td>Average</td> <td>110</td> <td>14</td> </tr> <tr> <td>4</td> <td>2483.50</td> <td>62.80</td> <td>74.00</td> <td>-11.20</td> <td>65.60</td> <td>-2.80</td> <td>Peak</td> <td>110</td> <td>14</td> </tr> <tr> <td>5</td> <td>4960.00</td> <td>25.68</td> <td>54.00</td> <td>-28.32</td> <td>21.47</td> <td>4.21</td> <td>Average</td> <td>355</td> <td>133</td> </tr> <tr> <td>6</td> <td>4960.00</td> <td>60.57</td> <td>74.00</td> <td>-13.43</td> <td>56.36</td> <td>4.21</td> <td>Peak</td> <td>355</td> <td>133</td> </tr> <tr> <td>7</td> <td>7440.00</td> <td>17.67</td> <td>54.00</td> <td>-36.33</td> <td>9.14</td> <td>8.53</td> <td>Average</td> <td>100</td> <td>148</td> </tr> <tr> <td>8</td> <td>7440.00</td> <td>52.56</td> <td>74.00</td> <td>-21.44</td> <td>44.03</td> <td>8.53</td> <td>Peak</td> <td>100</td> <td>148</td> </tr> </tbody> </table>				Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn	MHz	level	dBuV/m	dB	reading	dB		High	Table	1	2480.00	51.83	94.00	-42.17	54.64	-2.81	Average	110	14	2	2480.00	86.72	114.00	-27.28	89.53	-2.81	Peak	110	14	3	2483.50	38.39	54.00	-15.61	41.19	-2.80	Average	110	14	4	2483.50	62.80	74.00	-11.20	65.60	-2.80	Peak	110	14	5	4960.00	25.68	54.00	-28.32	21.47	4.21	Average	355	133	6	4960.00	60.57	74.00	-13.43	56.36	4.21	Peak	355	133	7	7440.00	17.67	54.00	-36.33	9.14	8.53	Average	100	148	8	7440.00	52.56	74.00	-21.44	44.03	8.53	Peak	100	148
Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																																													
MHz	level	dBuV/m	dB	reading	dB		High	Table																																																																																													
1	2480.00	51.83	94.00	-42.17	54.64	-2.81	Average	110	14																																																																																												
2	2480.00	86.72	114.00	-27.28	89.53	-2.81	Peak	110	14																																																																																												
3	2483.50	38.39	54.00	-15.61	41.19	-2.80	Average	110	14																																																																																												
4	2483.50	62.80	74.00	-11.20	65.60	-2.80	Peak	110	14																																																																																												
5	4960.00	25.68	54.00	-28.32	21.47	4.21	Average	355	133																																																																																												
6	4960.00	60.57	74.00	-13.43	56.36	4.21	Peak	355	133																																																																																												
7	7440.00	17.67	54.00	-36.33	9.14	8.53	Average	100	148																																																																																												
8	7440.00	52.56	74.00	-21.44	44.03	8.53	Peak	100	148																																																																																												
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																																																					

Modulation	FSK	Test Freq. (MHz)	2480																																																																																
Polarization	Vertical																																																																																		
																																																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding-bottom: 2px;">Freq.</th> <th style="text-align: left; padding-bottom: 2px;">Emission</th> <th style="text-align: left; padding-bottom: 2px;">Margin</th> <th style="text-align: left; padding-bottom: 2px;">SA</th> <th style="text-align: left; padding-bottom: 2px;">Factor</th> <th style="text-align: left; padding-bottom: 2px;">Remark</th> <th style="text-align: left; padding-bottom: 2px;">ANT</th> <th style="text-align: left; padding-bottom: 2px;">Turn</th> </tr> <tr> <th style="text-align: left; padding-top: 2px;">MHz</th> <th style="text-align: left; padding-top: 2px;">level</th> <th style="text-align: left; padding-top: 2px;">dBuV/m</th> <th style="text-align: left; padding-top: 2px;">dBuV/m</th> <th style="text-align: left; padding-top: 2px;">dB</th> <th style="text-align: left; padding-top: 2px;">reading</th> <th style="text-align: left; padding-top: 2px;">dBuV</th> <th style="text-align: left; padding-top: 2px;">deg</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">1</td> <td style="text-align: left;">2480.00</td> <td style="text-align: left;">53.62</td> <td style="text-align: left;">94.00</td> <td style="text-align: left;">-40.38</td> <td style="text-align: left;">56.43</td> <td style="text-align: left;">-2.81</td> <td style="text-align: left;">Average</td> </tr> <tr> <td style="text-align: left;">2</td> <td style="text-align: left;">2480.00</td> <td style="text-align: left;">88.51</td> <td style="text-align: left;">114.00</td> <td style="text-align: left;">-25.49</td> <td style="text-align: left;">91.32</td> <td style="text-align: left;">-2.81</td> <td style="text-align: left;">Peak</td> </tr> <tr> <td style="text-align: left;">3</td> <td style="text-align: left;">2483.50</td> <td style="text-align: left;">38.37</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-15.63</td> <td style="text-align: left;">41.17</td> <td style="text-align: left;">-2.80</td> <td style="text-align: left;">Average</td> </tr> <tr> <td style="text-align: left;">4</td> <td style="text-align: left;">2483.50</td> <td style="text-align: left;">63.52</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-10.48</td> <td style="text-align: left;">66.32</td> <td style="text-align: left;">-2.80</td> <td style="text-align: left;">Peak</td> </tr> <tr> <td style="text-align: left;">5</td> <td style="text-align: left;">4960.00</td> <td style="text-align: left;">27.31</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-26.69</td> <td style="text-align: left;">23.10</td> <td style="text-align: left;">4.21</td> <td style="text-align: left;">Average</td> </tr> <tr> <td style="text-align: left;">6</td> <td style="text-align: left;">4960.00</td> <td style="text-align: left;">62.20</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-11.80</td> <td style="text-align: left;">57.99</td> <td style="text-align: left;">4.21</td> <td style="text-align: left;">Peak</td> </tr> <tr> <td style="text-align: left;">7</td> <td style="text-align: left;">7440.00</td> <td style="text-align: left;">16.51</td> <td style="text-align: left;">54.00</td> <td style="text-align: left;">-37.49</td> <td style="text-align: left;">7.98</td> <td style="text-align: left;">8.53</td> <td style="text-align: left;">Average</td> </tr> <tr> <td style="text-align: left;">8</td> <td style="text-align: left;">7440.00</td> <td style="text-align: left;">51.40</td> <td style="text-align: left;">74.00</td> <td style="text-align: left;">-22.60</td> <td style="text-align: left;">42.87</td> <td style="text-align: left;">8.53</td> <td style="text-align: left;">Peak</td> </tr> </tbody> </table>				Freq.	Emission	Margin	SA	Factor	Remark	ANT	Turn	MHz	level	dBuV/m	dBuV/m	dB	reading	dBuV	deg	1	2480.00	53.62	94.00	-40.38	56.43	-2.81	Average	2	2480.00	88.51	114.00	-25.49	91.32	-2.81	Peak	3	2483.50	38.37	54.00	-15.63	41.17	-2.80	Average	4	2483.50	63.52	74.00	-10.48	66.32	-2.80	Peak	5	4960.00	27.31	54.00	-26.69	23.10	4.21	Average	6	4960.00	62.20	74.00	-11.80	57.99	4.21	Peak	7	7440.00	16.51	54.00	-37.49	7.98	8.53	Average	8	7440.00	51.40	74.00	-22.60	42.87	8.53	Peak
Freq.	Emission	Margin	SA	Factor	Remark	ANT	Turn																																																																												
MHz	level	dBuV/m	dBuV/m	dB	reading	dBuV	deg																																																																												
1	2480.00	53.62	94.00	-40.38	56.43	-2.81	Average																																																																												
2	2480.00	88.51	114.00	-25.49	91.32	-2.81	Peak																																																																												
3	2483.50	38.37	54.00	-15.63	41.17	-2.80	Average																																																																												
4	2483.50	63.52	74.00	-10.48	66.32	-2.80	Peak																																																																												
5	4960.00	27.31	54.00	-26.69	23.10	4.21	Average																																																																												
6	4960.00	62.20	74.00	-11.80	57.99	4.21	Peak																																																																												
7	7440.00	16.51	54.00	-37.49	7.98	8.53	Average																																																																												
8	7440.00	51.40	74.00	-22.60	42.87	8.53	Peak																																																																												
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).																																																																																			



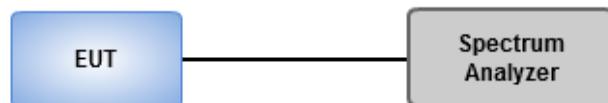
$$20\log (\text{Duty cycle}) = 20\log \frac{10 * 0.18 \text{ ms}}{100 \text{ ms}} = -34.89 \text{ dB}$$

3.3 20dB and Occupied Bandwidth

3.3.1 Test Procedures

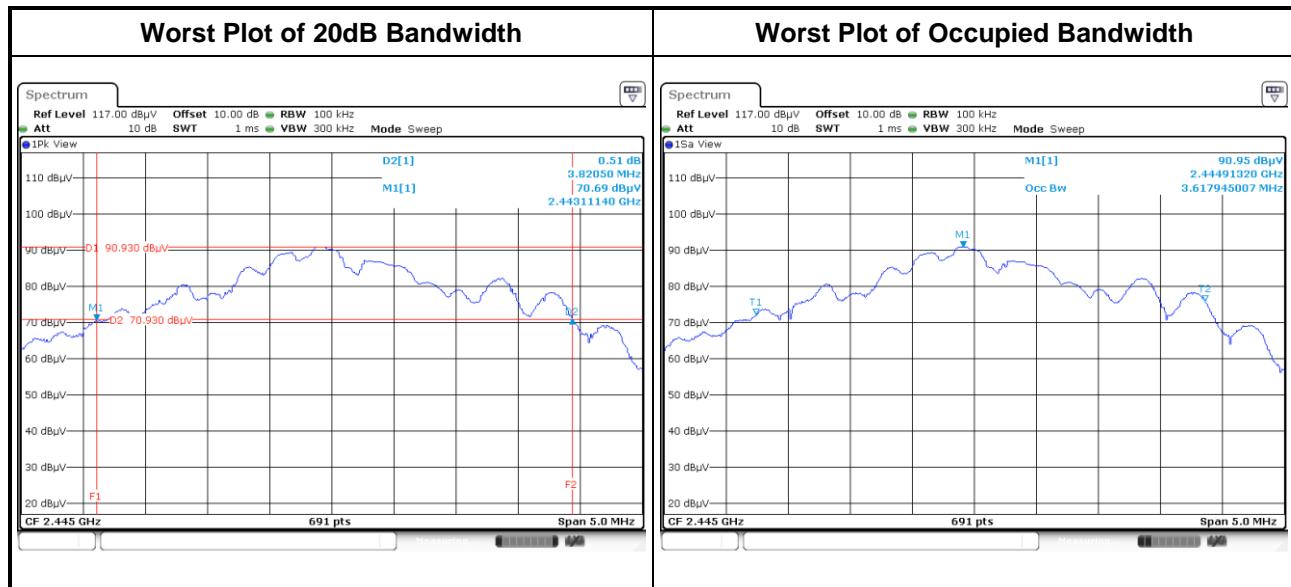
1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak(20 dB bandwidth) / Sample(Occupied bandwidth), Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 20dB relative to the maximum level measured in the fundamental emission.
5. Use the occupied measurement function of spectrum analyzer to measure 99% occupied bandwidth

3.3.2 Test Setup



3.3.3 20dB and Occupied Bandwidth

Freq. (MHz)	20dB Bandwidth (MHz)	Occupied Bandwidth (MHz)
2402	3.52	3.29
2445	3.82	3.62
2480	3.21	3.19



4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin
Kou District, New Taipei City,
Taiwan, R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd St.,
Kwei Shan District, Tao Yuan City
333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan District, Tao Yuan
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

—END—