

FCC Radio Test Report

FCC ID: 2AGED-GISC2411

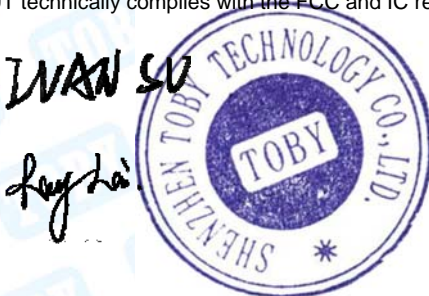
Original Grant

Report No. : TB-FCC145714
Applicant : GIS Corp.
Equipment Under Test (EUT)
EUT Name : Wireless smart control switch
Model No. : GIS-C-2411
Series No. : N/A
Brand Name : GIS
Receipt Date : 2015-10-16
Test Date : 2015-10-16 to 2015-11-03
Issue Date : 2015-11-04
Standards : FCC Part 15, Subpart C (15.247:2015)
Test Method : ANSI C63.10: 2013
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,
The EUT technically complies with the FCC and IC requirements

Test/Witness
Engineer :

Approved &
Authorized :



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

Contents

CONTENTS.....	2
1. GENERAL INFORMATION ABOUT EUT	4
1.1 Client Information.....	4
1.2 General Description of EUT (Equipment Under Test)	4
1.3 Block Diagram Showing the Configuration of System Tested.....	5
1.4 Description of Support Units	5
1.5 Description of Test Mode.....	6
1.6 Description of Test Software Setting	7
1.7 Measurement Uncertainty	7
1.8 Test Facility.....	8
2. TEST SUMMARY.....	9
3. TEST EQUIPMENT.....	10
4. CONDUCTED EMISSION TEST	11
4.1 Test Standard and Limit.....	11
4.2 Test Setup.....	11
4.3 Test Procedure.....	11
4.4 EUT Operating Mode	12
4.5 Test Data.....	12
5. RADIATED EMISSION TEST	17
5.1 Test Standard and Limit.....	17
5.2 Test Setup.....	18
5.3 Test Procedure.....	19
5.4 EUT Operating Condition	20
5.5 Test Data.....	20
6. RESTRICTED BANDS REQUIREMENT	47
6.1 Test Standard and Limit.....	47
6.2 Test Setup.....	47
6.3 Test Procedure.....	47
6.4 EUT Operating Condition	48
6.5 Test Data.....	48
7. BANDWIDTH TEST.....	64
7.1 Test Standard and Limit.....	64
7.2 Test Setup.....	64
7.3 Test Procedure.....	64
7.4 EUT Operating Condition	64
7.5 Test Data.....	65
8. PEAK OUTPUT POWER TEST.....	73
8.1 Test Standard and Limit.....	73
8.2 Test Setup.....	73

8.3 Test Procedure.....	73
8.4 EUT Operating Condition	73
8.5 Test Data.....	74
9. POWER SPECTRAL DENSITY TEST	80
9.1 Test Standard and Limit.....	80
9.2 Test Setup.....	80
9.3 Test Procedure.....	80
9.4 EUT Operating Condition	80
9.5 Test Data.....	80
10. ANTENNA REQUIREMENT.....	87
10.1 Standard Requirement.....	87
10.2 Antenna Connected Construction.....	87
10.3 Result.....	87

1. General Information about EUT

1.1 Client Information

Applicant : GIS Corp.
Address : 6139 168th Street Unit 1 Fresh Meadows, NY 11365 USA
Manufacturer : Suzhou GIS Electronic Technology Co., Ltd.
Address : Room 38, No. 21 Madun Road, Xuguan District, New & Hi-tech Industrial Development Zone(SND), Suzhou, China

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Wireless smart control switch	
Models No.	:	GIS-C-2411	
Model Difference	:	N/A	
Product Description	:	Operation Frequency: 2410MHz~2470MHz	
		Number of Channel:	61 channels see note(3)
		RF Output Power:	17.23 dBm (1Mbps)
		Antenna Gain:	1.5 dBi PCB Antenna
		Modulation Type:	GFSK
		Bit Rate of Transmitter:	1Mbps, 2Mbps, 250Kbps
Power Supply	:	AC power by Power Supply.	
Power Rating	:	Input: AC 90~240V 50/60Hz Output: AC 90~240V	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note:

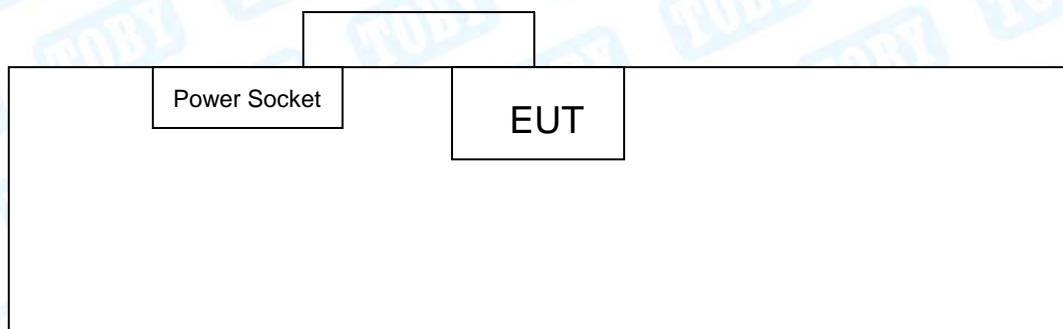
- (1) This Test Report is FCC Part 15.247 for 2.4G ISM, the test procedure follows the FCC KDB 558074 D01 DTS Meas Guidance v03r03.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- (3) Antenna information provided by the applicant.
- (4) Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2410	23	2432	45	2454
02	2411	24	2433	54	2455

03	2412	25	2434	55	2464
04	2413	26	2435	56	2465
05	2414	27	2436	57	2466
06	2415	28	2437	58	2467
07	2416	29	2438	59	2468
08	2417	30	2439	60	2469
09	2418	31	2440	54	2470
10	2419	32	2441	55	2464
11	2420	33	2442	56	2465
12	2421	34	2443	57	2466
13	2422	35	2444	58	2467
14	2423	36	2445	59	2468
15	2424	37	2446	60	2469
16	2425	38	2447	61	2470
17	2426	39	2448		
18	2427	40	2449		
19	2428	41	2450		
20	2429	42	2451		
21	2430	43	2452		
22	2431	44	2453		

1.3 Block Diagram Showing the Configuration of System Tested

TX Mode



1.4 Description of Support Units

The EUT has been tested as an independent unit.

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test	
Final Test Mode	Description
Mode 1	AC Power With TX Mode

For Radiated Test	
Final Test Mode	Description
Mode 1	AC Power With TX Mode
Mode 2	TX Mode(1Mbps) Channel 01/31/61
Mode 3	TX Mode(2Mbps) Channel 01/31/61
Mode 4	TX Mode(250Kbps) Channel 01/31/61

Note:

- (1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.
According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:
TX Mode: GFSK (1Mbps)
TX Mode:GFSK (2Mbps)
TX Mode: GFSK (250Kbps)
- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a mobile unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel& Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of RF setting.

Test Software Version	Sscom32.exe		
Channel	CH 01	CH 31	CH 61
TX Mode	DEF	DEF	DEF

1.7 Measurement Uncertainty

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

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz	± 3.42 dB
	150kHz to 30MHz	± 3.42 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	± 4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	± 4.40 dB
Radiated Emission	Level Accuracy: Above 1000MHz	± 4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.

May 22, 2014 certificated by TUV Rheinland(China) Co., Ltd. with TUV certificate No.: UA 50282953 0001 and report No.: 17026822 002. The certificate is valid until the next scheduled audit or up to 18 months, at the discretion of TUV Rhineland.

2. Test Summary

FCC Part 15 Subpart C(15.247)/RSS 247 Issue 1				
Standard Section		Test Item	Judgment	Remark
FCC	IC			
15.203	/	Antenna Requirement	PASS	N/A
15.207	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A
15.205	RSS-GEN 7.2.2	Restricted Bands	PASS	N/A
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A
15.247(b)	RSS 247 5.4 (4)	Peak Output Power	PASS	N/A
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A
15.247(d)	RSS 247 5.5	Transmitter Radiated Spurious Emission	PASS	N/A
Note: (1)“/” for no requirement for this test item. N/A is an abbreviation for Not Applicable.				

3. Test Equipment

Conducted Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Aug. 07, 2015	Aug. 06, 2016
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Aug. 07, 2015	Aug. 06, 2016
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Aug. 07, 2015	Aug. 06, 2016
LISN	Rohde & Schwarz	ENV216	101131	Aug. 07, 2015	Aug. 06, 2016
Radiation Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Aug. 29, 2015	Aug. 28, 2016
EMI Test Receiver	Rohde & Schwarz	ESCI	100010/007	Aug. 07, 2015	Aug. 06, 2016
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 28, 2015	Mar. 27, 2016
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 28, 2015	Mar. 27, 2016
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 28, 2015	Mar. 27, 2016
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 28, 2015	Mar. 27, 2016
Pre-amplifier	Sonoma	310N	185903	Mar. 28, 2015	Mar. 27, 2016
Pre-amplifier	HP	8447B	3008A00849	Mar. 28, 2015	Mar. 27, 2016
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 28, 2015	Mar. 27, 2016
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard
FCC Part 15.207

4.1.2 Test Limit

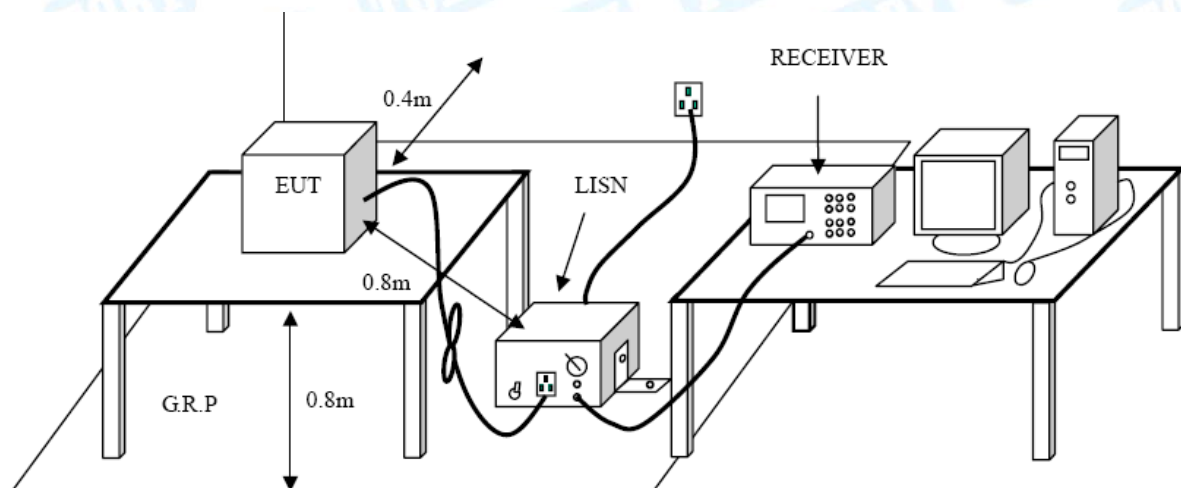
Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

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

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

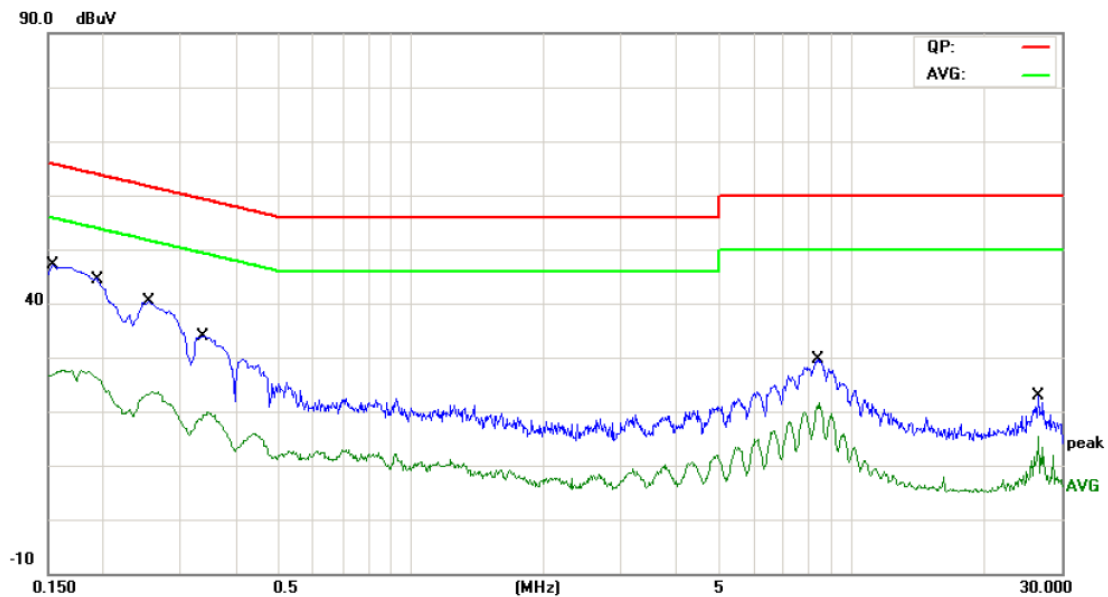
4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Data

Please see the next page.

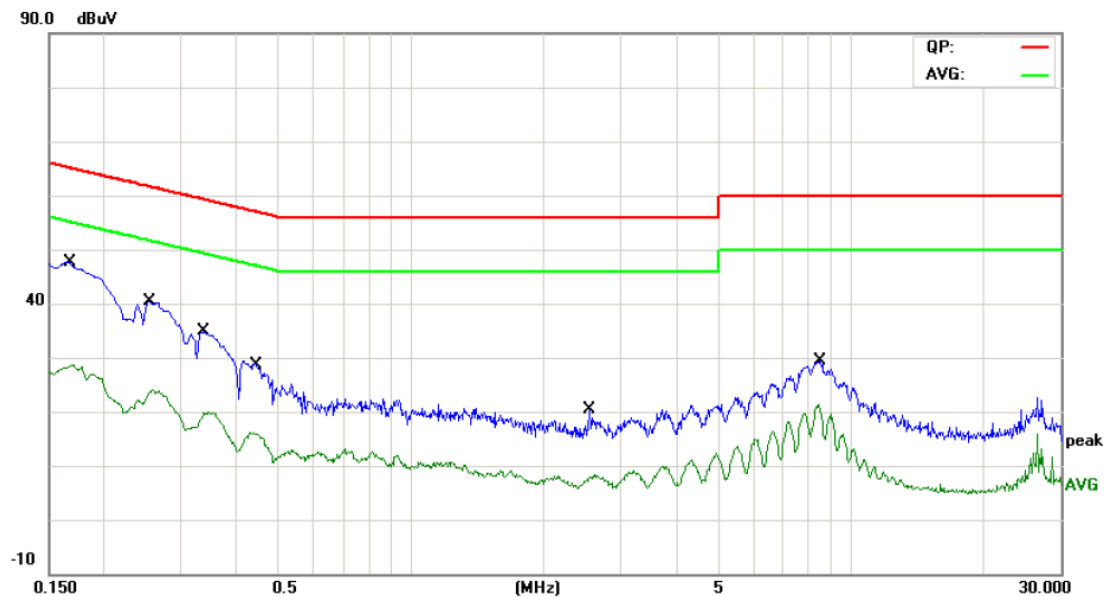
EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Terminal:	Line		
Test Mode:	Mode 1: AC Power with TX Mode		
Remark:	N/A		



No. Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1 *	0.1539	30.87	9.93	40.80	65.78	-24.98	QP
2	0.1539	15.90	9.93	25.83	55.78	-29.95	AVG
3	0.1965	28.59	10.01	38.60	63.75	-25.15	QP
4	0.1965	15.71	10.01	25.72	53.75	-28.03	AVG
5	0.2540	24.14	10.02	34.16	61.62	-27.46	QP
6	0.2540	12.54	10.02	22.56	51.62	-29.06	AVG
7	0.3379	18.47	10.02	28.49	59.25	-30.76	QP
8	0.3379	9.17	10.02	19.19	49.25	-30.06	AVG
9	8.3700	14.25	10.11	24.36	60.00	-35.64	QP
10	8.3700	10.29	10.11	20.40	50.00	-29.60	AVG
11	26.6100	10.16	10.19	20.35	60.00	-39.65	QP
12	26.6100	5.20	10.19	15.39	50.00	-34.61	AVG

Emission Level= Read Level+ Correct Factor

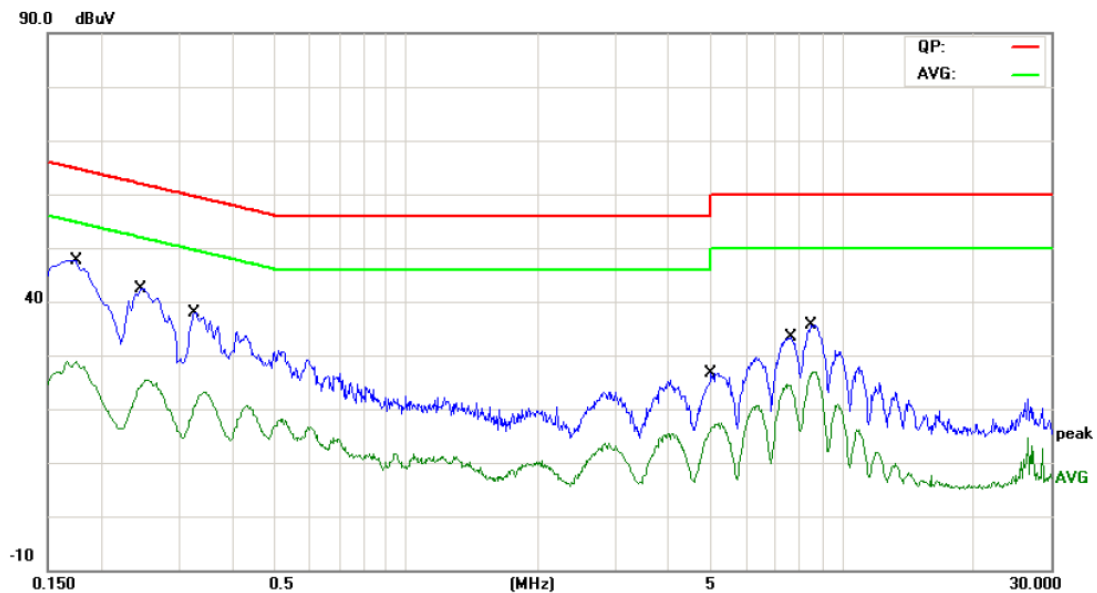
EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60 Hz		
Terminal:	Neutral		
Test Mode:	Mode 1: AC Power with TX Mode		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1685	32.21	10.12	42.33	65.03	-22.70	QP
2		0.1685	17.99	10.12	28.11	55.03	-26.92	AVG
3		0.2540	24.12	10.10	34.22	61.62	-27.40	QP
4		0.2540	12.71	10.10	22.81	51.62	-28.81	AVG
5		0.3379	18.49	10.07	28.56	59.25	-30.69	QP
6		0.3379	9.20	10.07	19.27	49.25	-29.98	AVG
7		0.4468	12.27	10.04	22.31	56.93	-34.62	QP
8		0.4468	5.47	10.04	15.51	46.93	-31.42	AVG
9		2.5500	1.39	10.06	11.45	56.00	-44.55	QP
10		2.5500	-3.16	10.06	6.90	46.00	-39.10	AVG
11		8.5380	14.24	10.11	24.35	60.00	-35.65	QP
12		8.5380	10.28	10.11	20.39	50.00	-29.61	AVG

Emission Level= Read Level+ Correct Factor

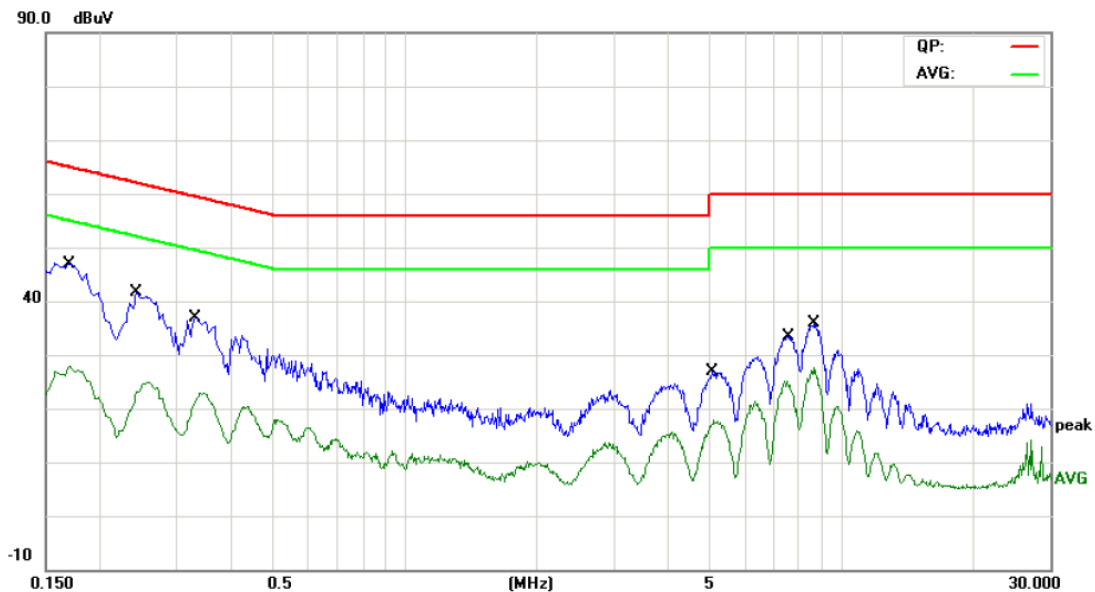
EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 240V/60 Hz		
Terminal:	Line		
Test Mode:	Mode 1: AC Power with TX Mode		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1	*	0.1740	31.16	9.97	41.13	64.76	-23.63	QP
2		0.1740	17.60	9.97	27.57	54.76	-27.19	AVG
3		0.2460	24.53	10.02	34.55	61.89	-27.34	QP
4		0.2460	13.57	10.02	23.59	51.89	-28.30	AVG
5		0.3260	19.02	10.02	29.04	59.55	-30.51	QP
6		0.3260	10.31	10.02	20.33	49.55	-29.22	AVG
7		4.9940	10.48	9.96	20.44	56.00	-35.56	QP
8		4.9940	6.16	9.96	16.12	46.00	-29.88	AVG
9		7.6460	17.36	10.08	27.44	60.00	-32.56	QP
10		7.6460	12.79	10.08	22.87	50.00	-27.13	AVG
11		8.4420	20.32	10.11	30.43	60.00	-29.57	QP
12		8.4420	15.77	10.11	25.88	50.00	-24.12	AVG

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 240V/60 Hz		
Terminal:	Neutral		
Test Mode:	Mode 1: AC Power with TX Mode		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1700	29.77	10.12	39.89	64.96	-25.07	QP
2		0.1700	16.48	10.12	26.60	54.96	-28.36	AVG
3		0.2420	22.67	10.11	32.78	62.02	-29.24	QP
4		0.2420	12.32	10.11	22.43	52.02	-29.59	AVG
5		0.3300	18.70	10.08	28.78	59.45	-30.67	QP
6		0.3300	10.83	10.08	20.91	49.45	-28.54	AVG
7		5.0380	10.72	10.06	20.78	60.00	-39.22	QP
8		5.0380	6.38	10.06	16.44	50.00	-33.56	AVG
9		7.5420	18.23	10.08	28.31	60.00	-31.69	QP
10		7.5420	13.34	10.08	23.42	50.00	-26.58	AVG
11		8.6380	20.36	10.11	30.47	60.00	-29.53	QP
12	*	8.6380	15.86	10.11	25.97	50.00	-24.03	AVG

Emission Level= Read Level+ Correct Factor

5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard

FCC Part 15.209

5.1.2 Test Limit

Radiated Emission Limits (9kHz~1000MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

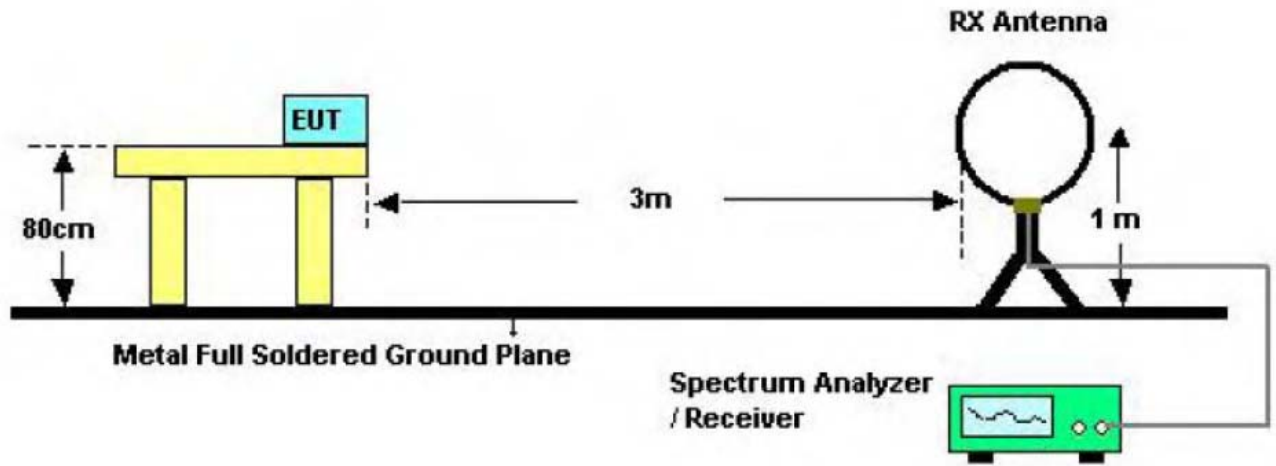
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Class A (dBuV/m)(at 3 M)		Class B (dBuV/m)(at 3 M)	
	Peak	Average	Peak	Average
Above 1000	80	60	74	54

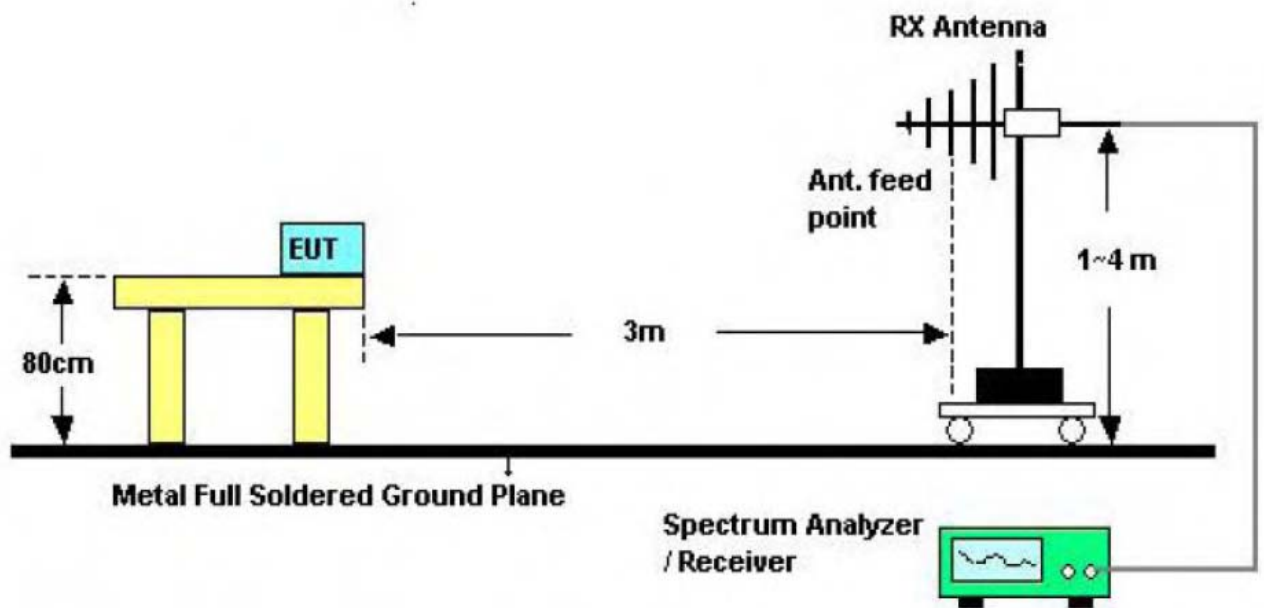
Note:

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

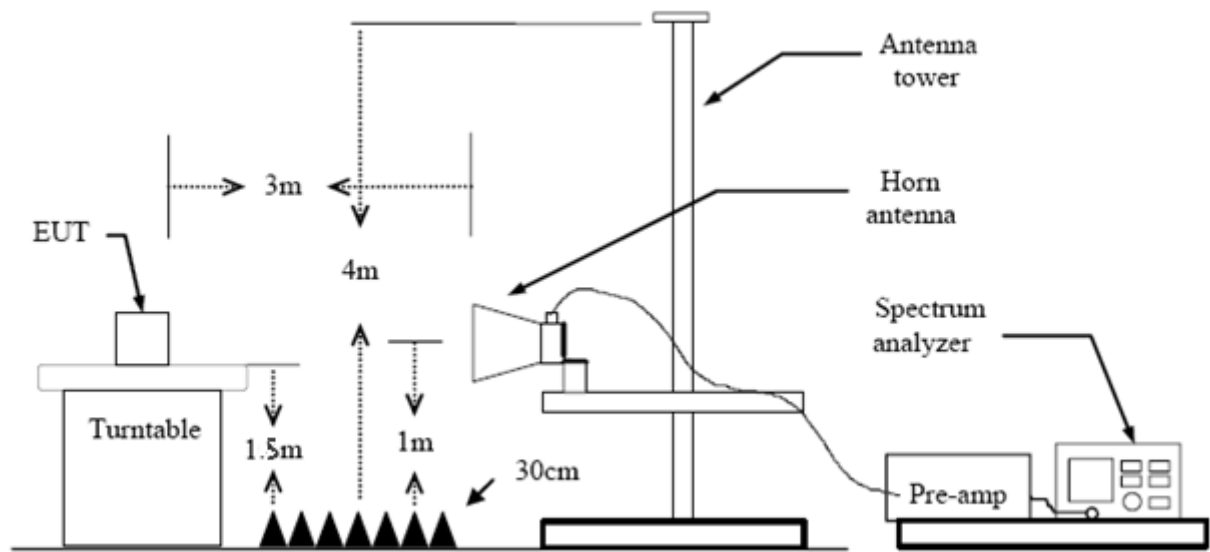
5.2 Test Setup



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values.
And Average Values= Peak Values+ 20log(dutycycle)
- (8) For the actual test configuration, please see the test setup photo.

5.4 EUT Operating Condition

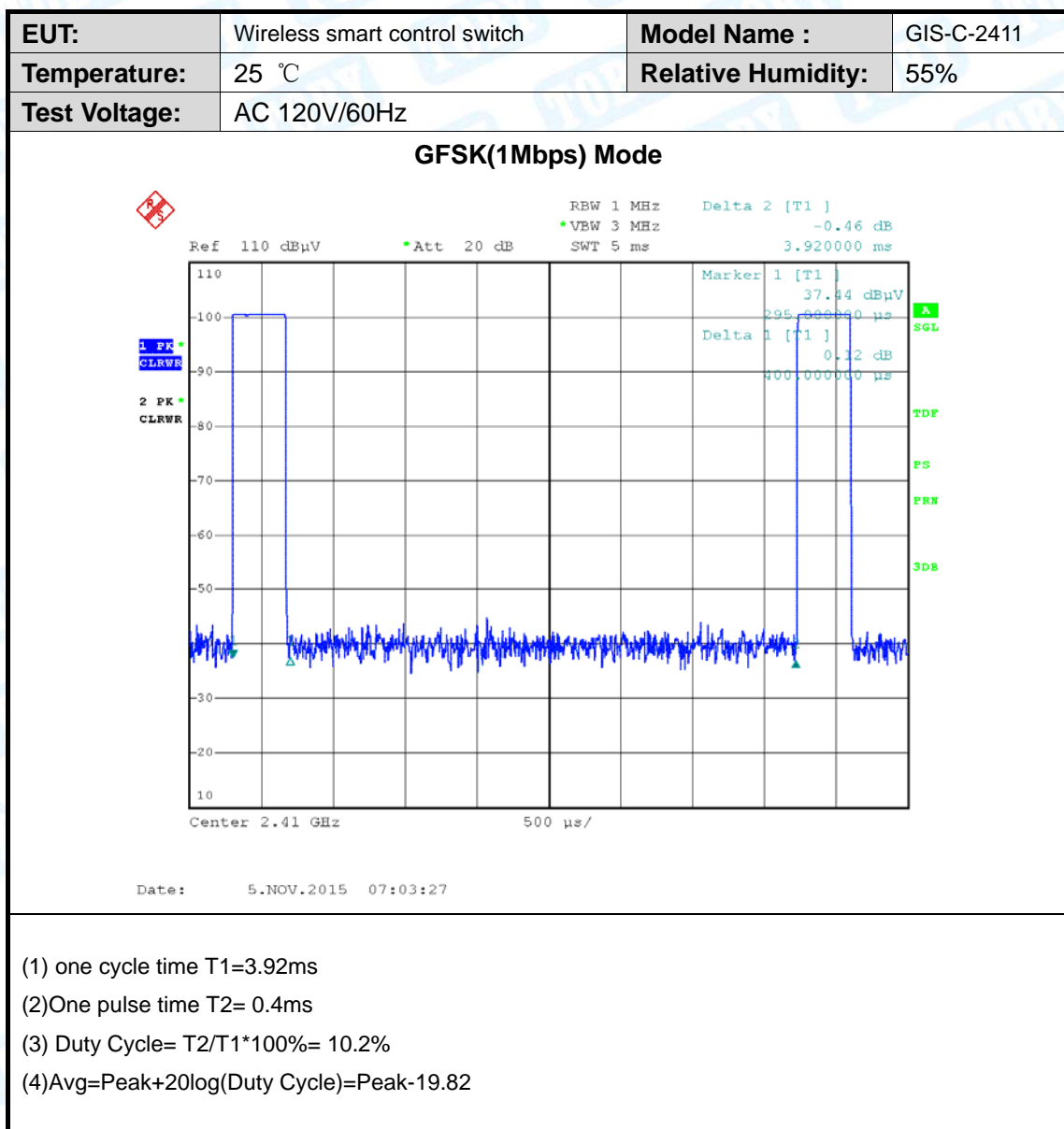
The Equipment Under Test was set to Continual Transmitting in maximum power.

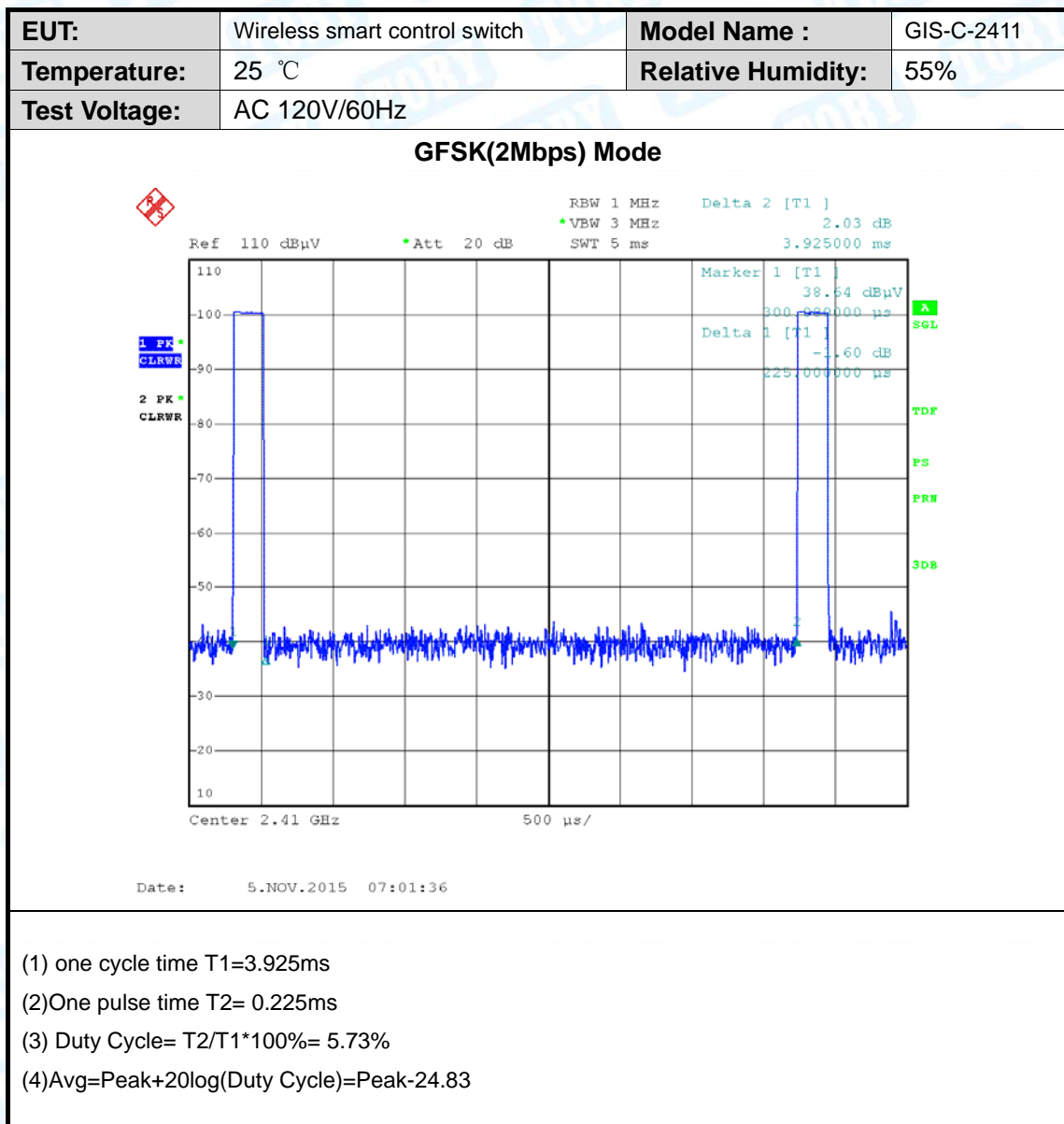
5.5 Test Data

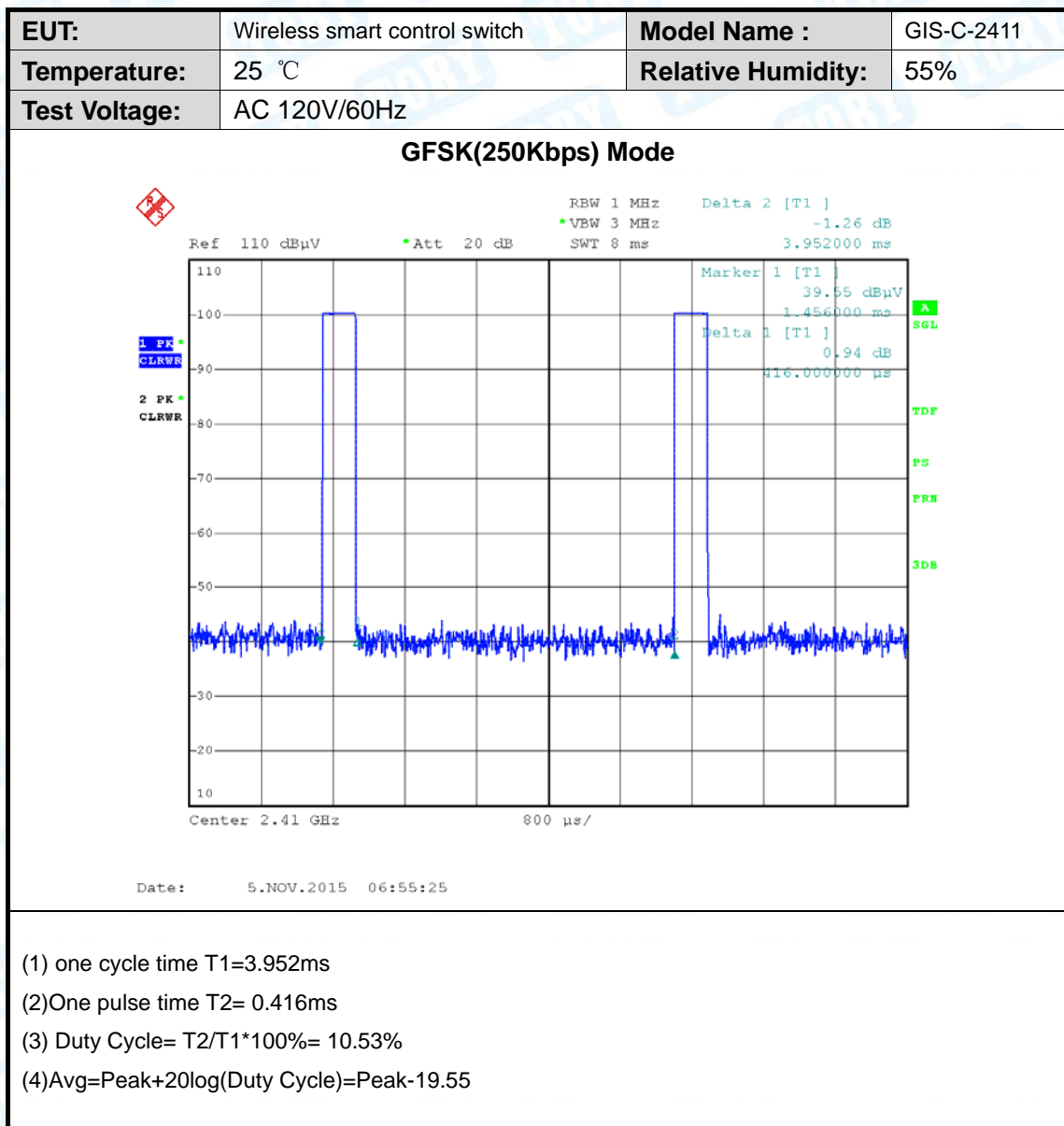
Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values.

Average Values= Peak Values+ 20log(dutycycle)

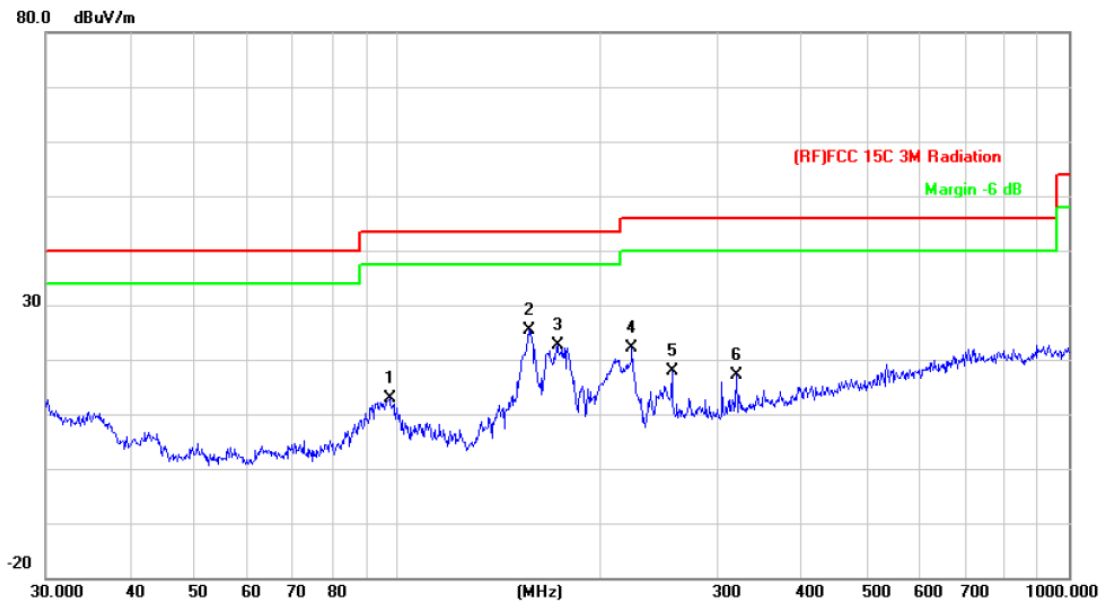
5.6 Duty Cycle







EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 2410 Mode(250Kbps)		
Remark:	Only worse case is reported		

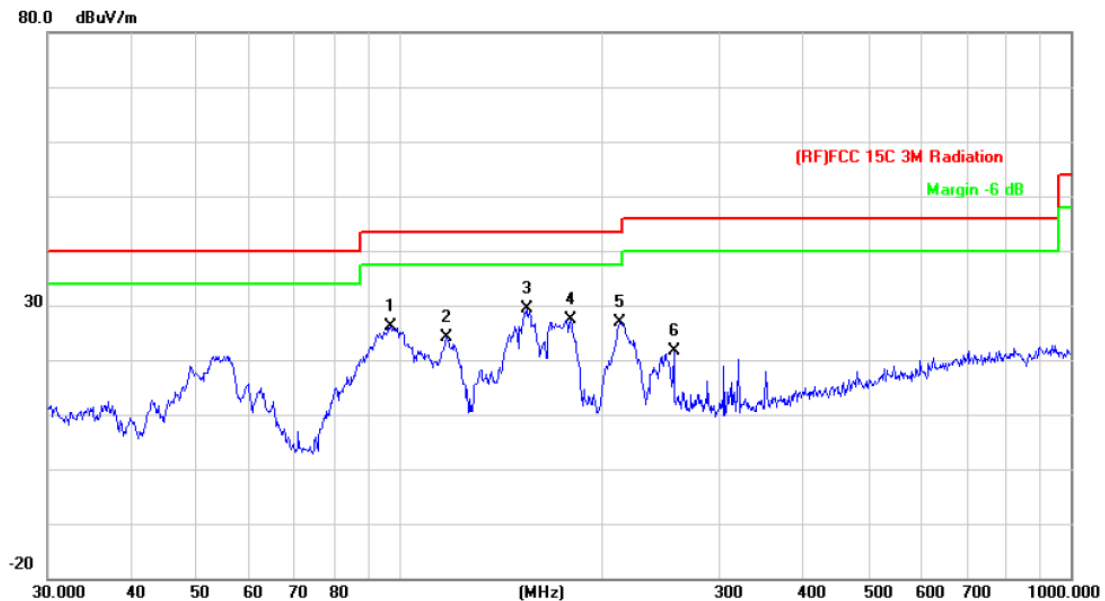


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		97.4560	35.00	-22.04	12.96	43.50	-30.54	peak
2	*	157.0074	46.11	-20.71	25.40	43.50	-18.10	peak
3		173.2051	43.57	-20.98	22.59	43.50	-20.91	peak
4		223.7334	41.54	-19.36	22.18	46.00	-23.82	peak
5		256.5211	35.80	-17.98	17.82	46.00	-28.18	peak
6		319.9370	33.51	-16.33	17.18	46.00	-28.82	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 2410 Mode(250Kbps)		
Remark:	Only worse case is reported		

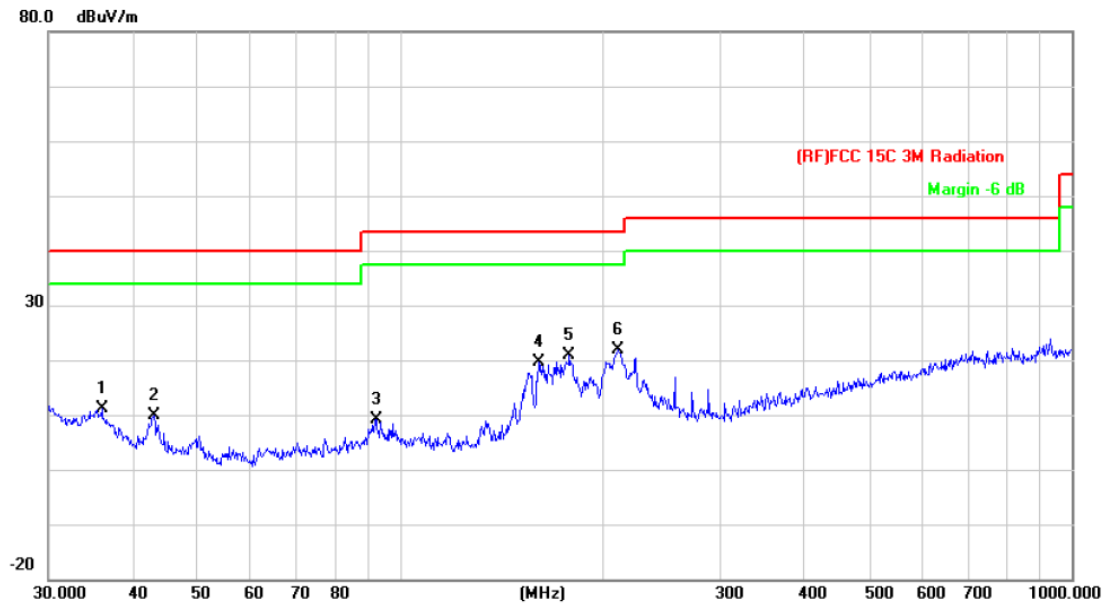


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		97.1148	48.19	-22.08	26.11	43.50	-17.39	peak
2		117.7725	46.47	-22.36	24.11	43.50	-19.39	peak
3	*	154.8204	50.25	-20.86	29.39	43.50	-14.11	peak
4		180.0165	47.86	-20.57	27.29	43.50	-16.21	peak
5		213.0151	46.62	-19.83	26.79	43.50	-16.71	peak
6		256.5211	39.61	-17.98	21.63	46.00	-24.37	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 2440 Mode(250Kbps)		
Remark:	Only worse case is reported		

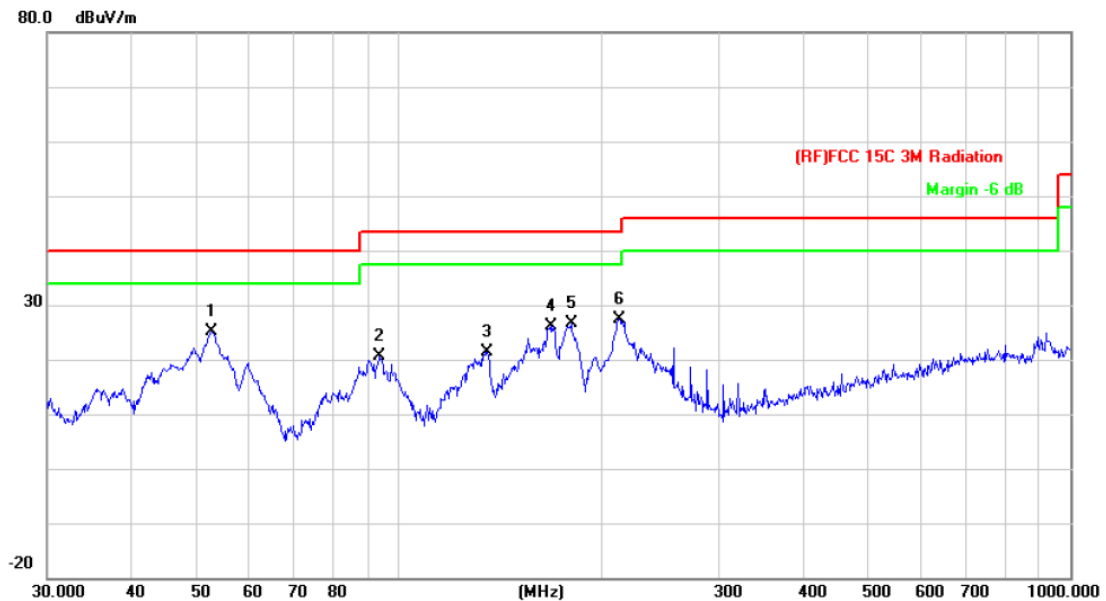


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		36.0007	28.70	-17.67	11.03	40.00	-28.97	peak
2		43.0505	31.21	-21.45	9.76	40.00	-30.24	peak
3		92.1388	31.63	-22.50	9.13	43.50	-34.37	peak
4		160.9089	40.25	-20.57	19.68	43.50	-23.82	peak
5		178.7584	41.60	-20.64	20.96	43.50	-22.54	peak
6	*	211.5265	41.77	-19.89	21.88	43.50	-21.62	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 2440 Mode(250Kbps)		
Remark:	Only worse case is reported		

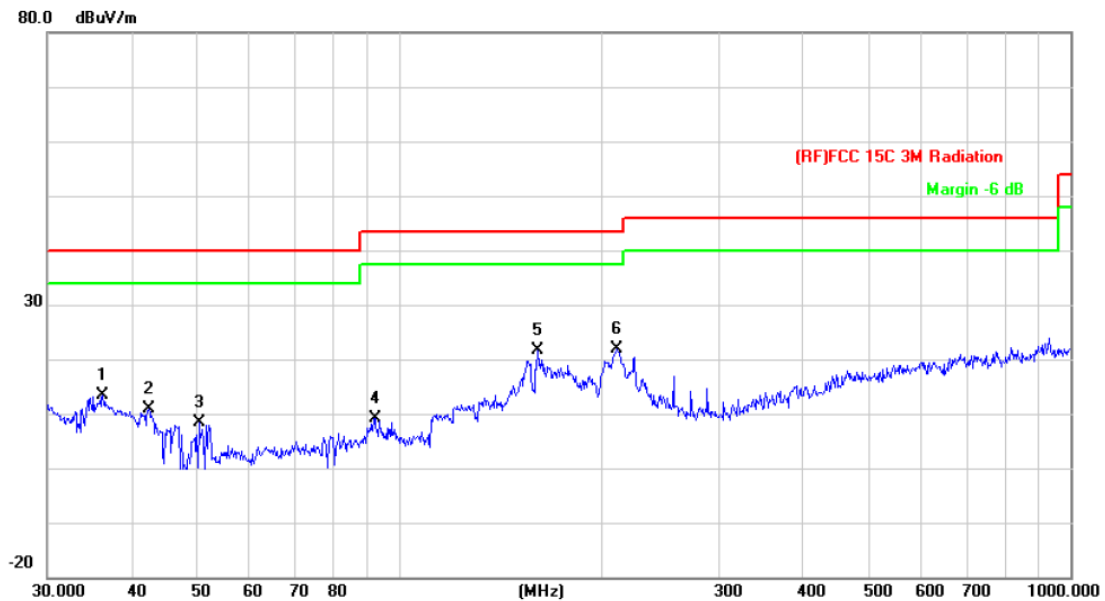


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	52.7600	49.68	-24.43	25.25	40.00	-14.75	peak
2		93.7685	42.99	-22.37	20.62	43.50	-22.88	peak
3		135.5062	43.52	-22.07	21.45	43.50	-22.05	peak
4		168.4138	47.32	-21.08	26.24	43.50	-17.26	peak
5		180.6488	47.11	-20.59	26.52	43.50	-16.98	peak
6		213.0151	47.19	-19.83	27.36	43.50	-16.14	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX 2470 Mode(250Kbps)		
Remark:	Only worse case is reported		

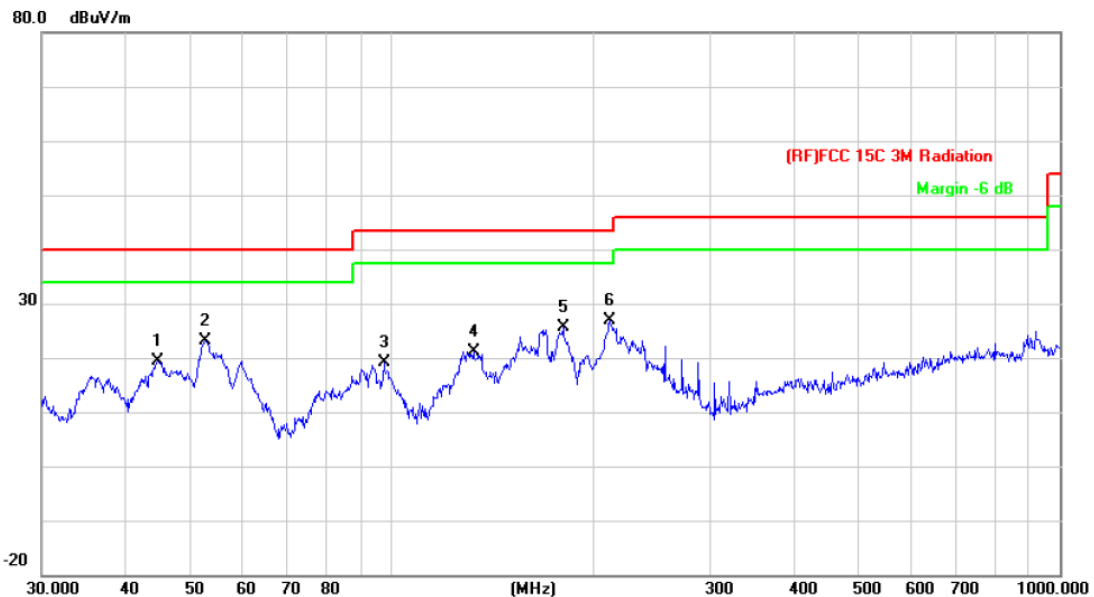


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		36.2541	31.12	-17.83	13.29	40.00	-26.71	peak
2		42.4508	32.12	-21.19	10.93	40.00	-29.07	peak
3		50.4089	32.77	-24.40	8.37	40.00	-31.63	peak
4		92.1388	31.63	-22.50	9.13	43.50	-34.37	peak
5		160.9088	42.25	-20.57	21.68	43.50	-21.82	peak
6	*	211.5263	41.77	-19.89	21.88	43.50	-21.62	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX 2470 Mode(250Kbps)		
Remark:	Only worse case is reported		

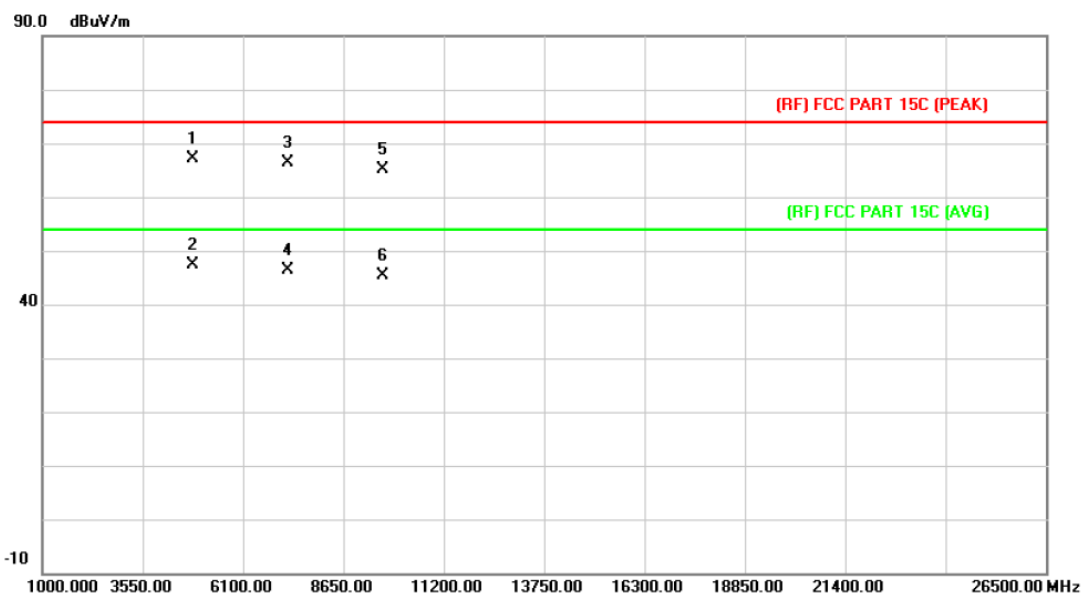


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		44.7433	41.53	-22.16	19.37	40.00	-20.63	peak
2		52.7599	47.68	-24.43	23.25	40.00	-16.75	peak
3		97.4560	41.14	-22.04	19.10	43.50	-24.40	peak
4		132.6850	43.38	-22.13	21.25	43.50	-22.25	peak
5		180.6486	46.11	-20.59	25.52	43.50	-17.98	peak
6	*	212.2693	46.71	-19.86	26.85	43.50	-16.65	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2410 MHz(1Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

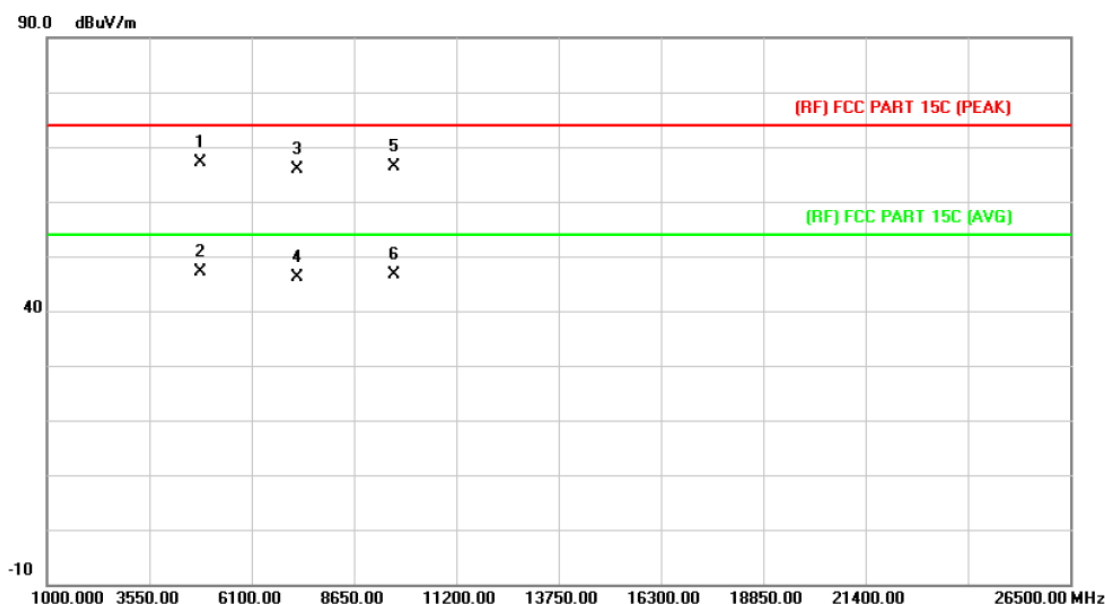


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4819.727	53.57	13.54	67.11	74.00	-6.89	peak
2	*	4819.727	33.75	13.54	47.29	54.00	-6.71	AVG
3		7229.273	90.90	-24.47	66.43	74.00	-7.57	peak
4		7229.273	70.78	-24.47	46.31	54.00	-7.69	AVG
5		9639.452	89.01	-23.88	65.13	74.00	-8.87	peak
6		9639.452	69.19	-23.88	45.31	54.00	-8.69	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2410 MHz(1Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

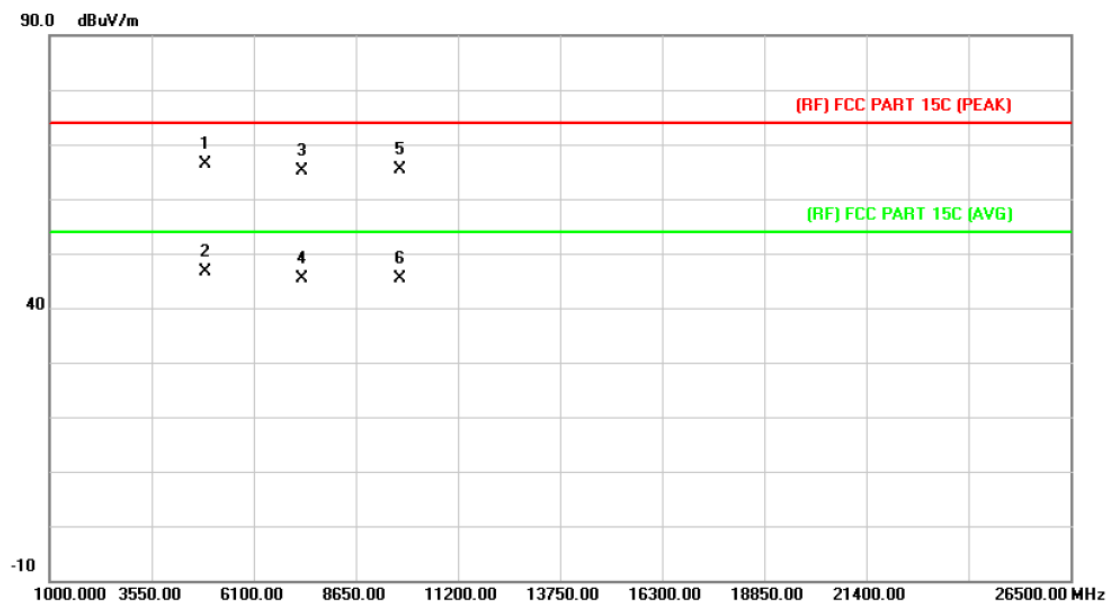


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4820.150	53.52	13.54	67.06	74.00	-6.94	peak
2	*	4820.150	33.70	13.54	47.24	54.00	-6.76	AVG
3		7229.483	90.45	-24.47	65.98	74.00	-8.02	peak
4		7229.483	70.63	-24.47	46.16	54.00	-7.84	AVG
5		9639.948	90.26	-23.88	66.38	74.00	-7.62	peak
6		9639.948	70.44	-23.88	46.56	54.00	-7.44	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2440 MHz(1Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

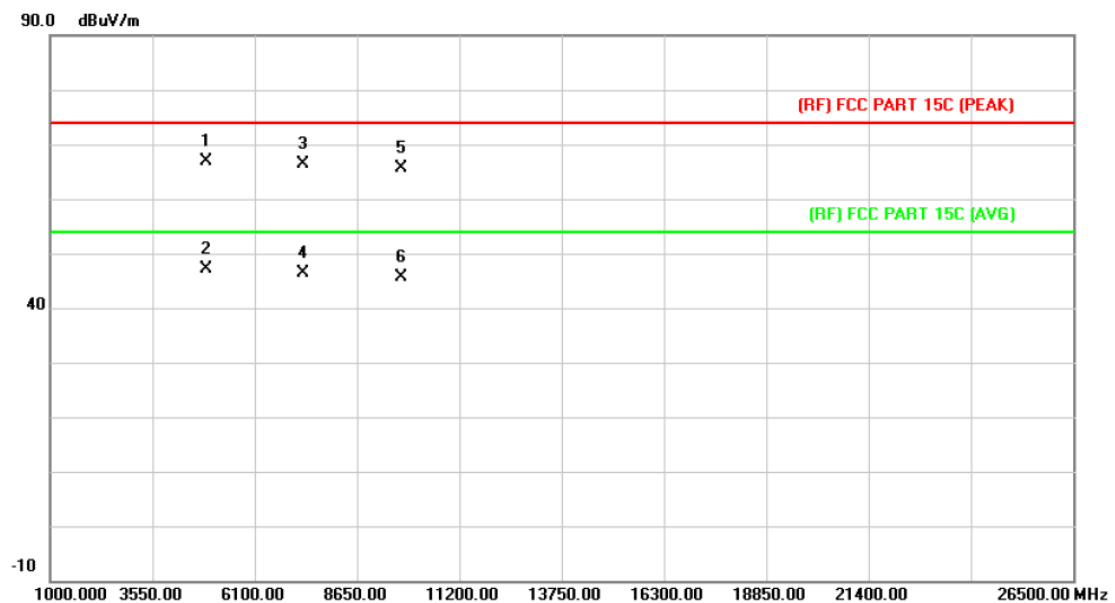


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4880.150	52.60	13.89	66.49	74.00	-7.51	peak
2	*	4880.150	32.78	13.89	46.67	54.00	-7.33	AVG
3		7320.557	89.69	-24.45	65.24	74.00	-8.76	peak
4		7320.557	69.87	-24.45	45.42	54.00	-8.58	AVG
5		9760.000	88.88	-23.57	65.31	74.00	-8.69	peak
6		9760.000	69.06	-23.57	45.49	54.00	-8.51	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2440 MHz(1Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

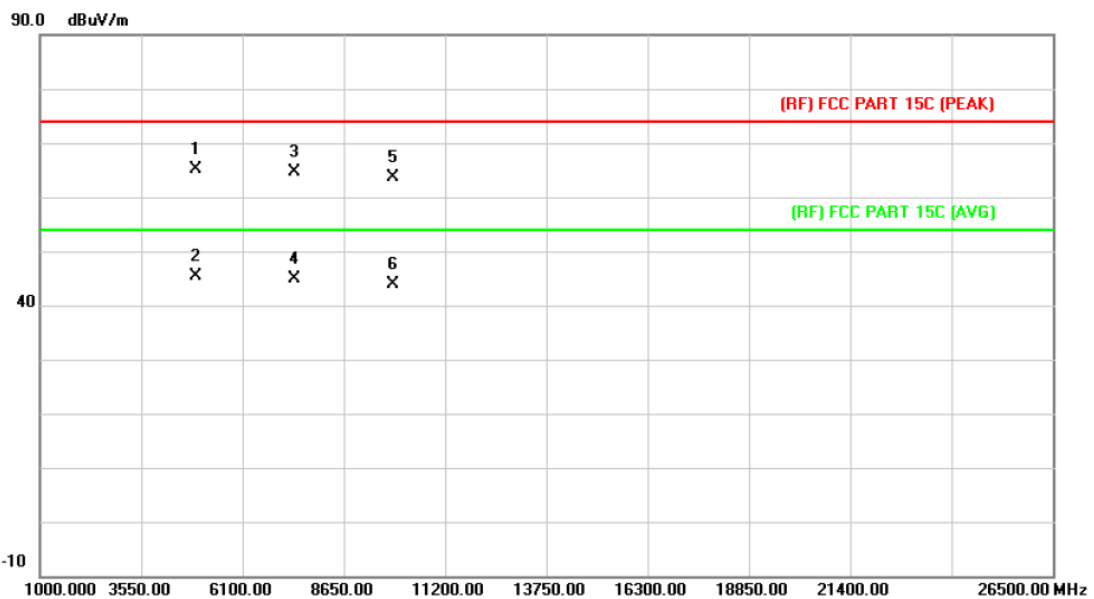


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4879.811	53.01	13.89	66.90	74.00	-7.10	peak
2	*	4879.811	33.19	13.89	47.08	54.00	-6.92	AVG
3		7320.030	90.71	-24.45	66.26	74.00	-7.74	peak
4		7320.030	70.89	-24.45	46.44	54.00	-7.56	AVG
5		9760.315	89.12	-23.57	65.55	74.00	-8.45	peak
6		9760.315	69.30	-23.57	45.73	54.00	-8.27	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2470 MHz(1Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

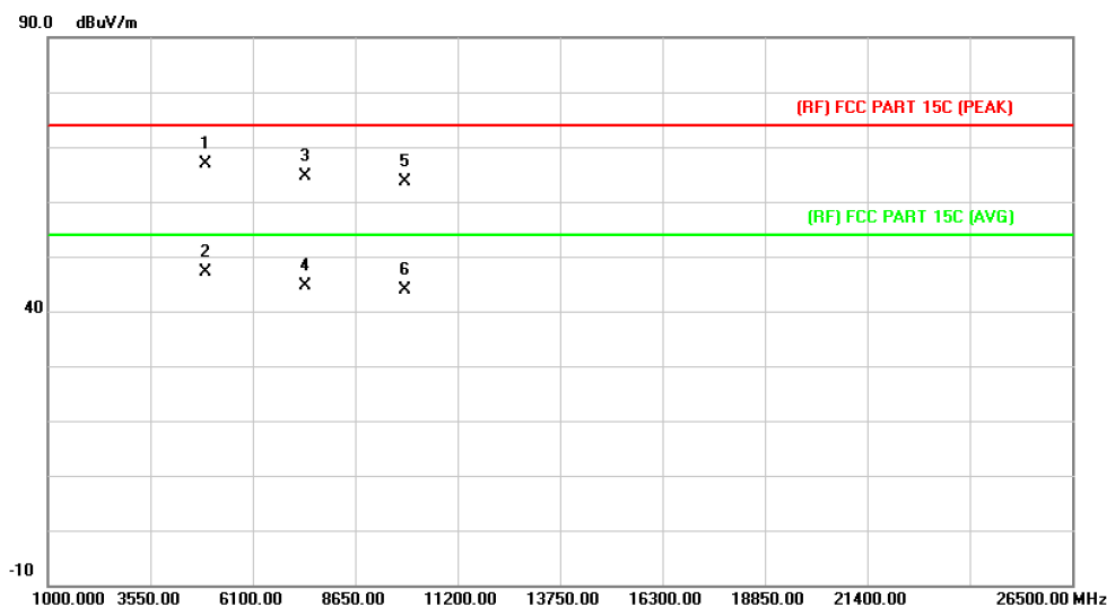


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4939.652	50.96	14.25	65.21	74.00	-8.79	peak
2	*	4939.652	31.14	14.25	45.39	54.00	-8.61	AVG
3		7408.807	89.01	-24.43	64.58	74.00	-9.42	peak
4		7408.807	69.19	-24.43	44.76	54.00	-9.24	AVG
5		9879.753	86.89	-23.25	63.64	74.00	-10.36	peak
6		9879.753	67.07	-23.25	43.82	54.00	-10.18	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2470 MHz(1Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

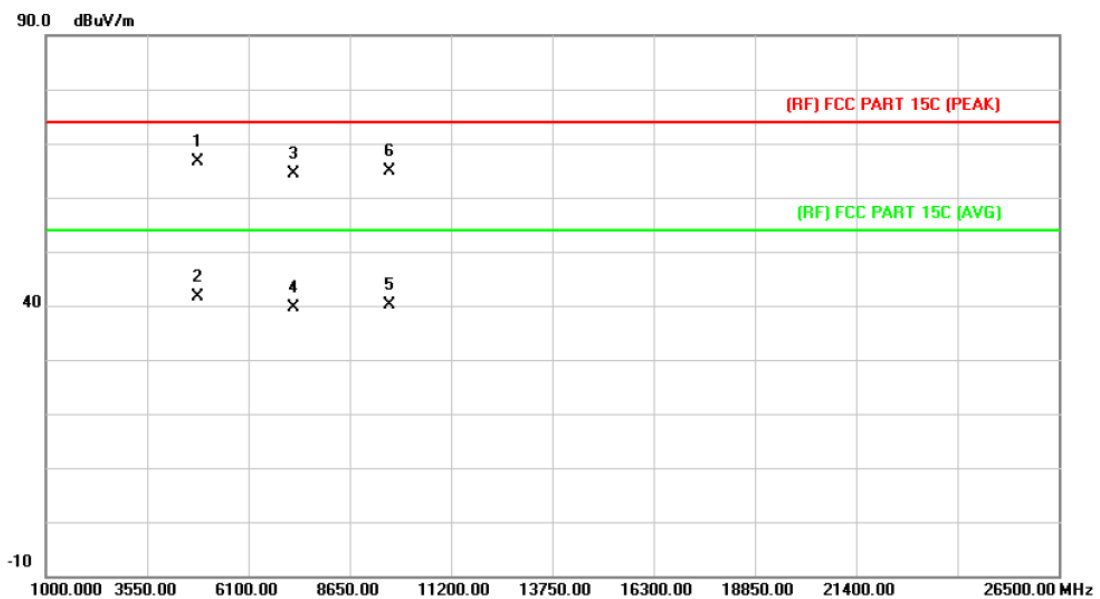


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4940.258	52.58	14.25	66.83	74.00	-7.17	peak
2	*	4940.258	32.76	14.25	47.01	54.00	-6.99	AVG
3		7409.932	89.00	-24.43	64.57	74.00	-9.43	peak
4		7409.932	69.18	-24.43	44.75	54.00	-9.25	AVG
5		9879.850	86.96	-23.25	63.71	74.00	-10.29	peak
6		9879.850	67.08	-23.25	43.83	54.00	-10.17	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2410 MHz(2Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

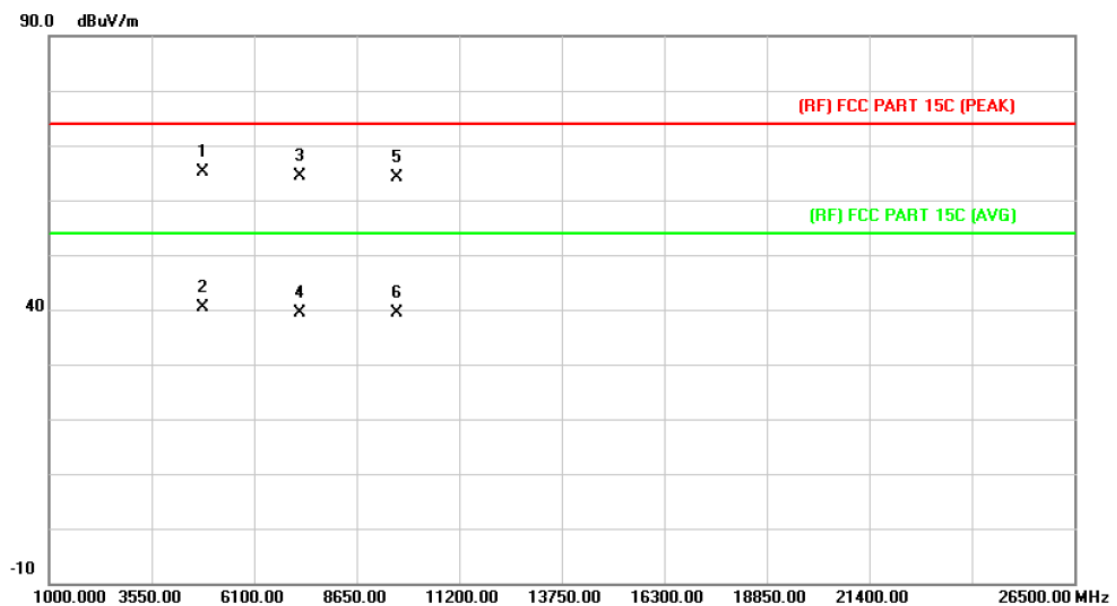


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	4819.857	53.03	13.54	66.57	74.00	-7.43	peak
2		4819.857	28.20	13.54	41.74	54.00	-12.26	AVG
3		7229.354	88.82	-24.47	64.35	74.00	-9.65	peak
4		7229.354	63.99	-24.47	39.52	54.00	-14.48	AVG
5		9639.651	63.92	-23.88	40.04	54.00	-13.96	AVG
6		9639.654	88.75	-23.88	64.87	74.00	-9.13	peak

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2410 MHz(2Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

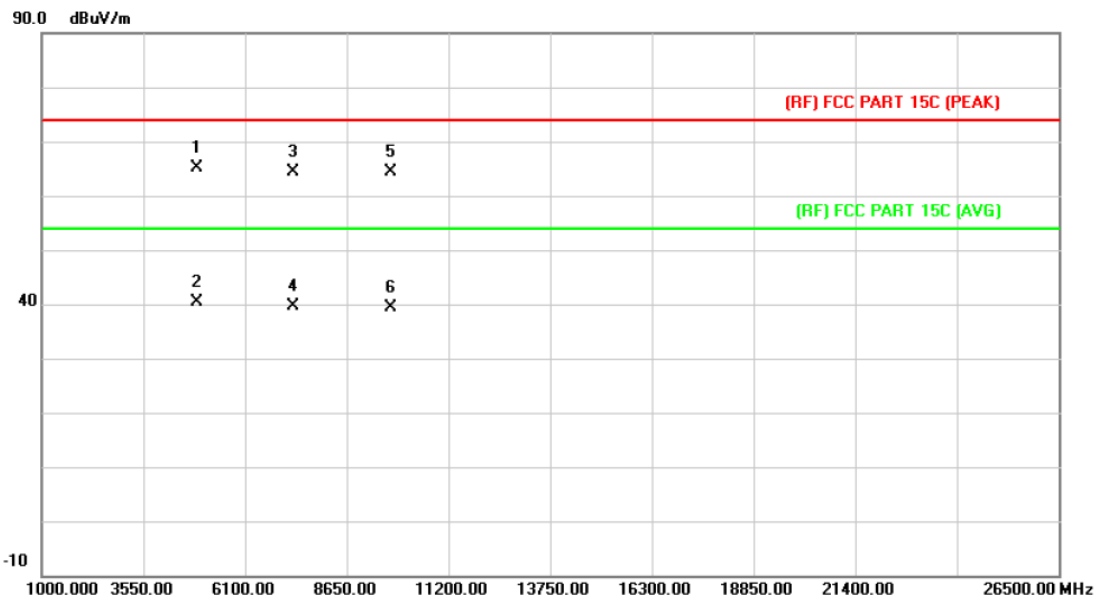


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	4820.210	51.58	13.54	65.12	74.00	-8.88	peak
2		4820.210	26.75	13.54	40.29	54.00	-13.71	AVG
3		7229.632	88.79	-24.47	64.32	74.00	-9.68	peak
4		7229.632	63.96	-24.47	39.49	54.00	-14.51	AVG
5		9639.895	88.00	-23.88	64.12	74.00	-9.88	peak
6		9639.895	63.17	-23.88	39.29	54.00	-14.71	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2440 MHz(2Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

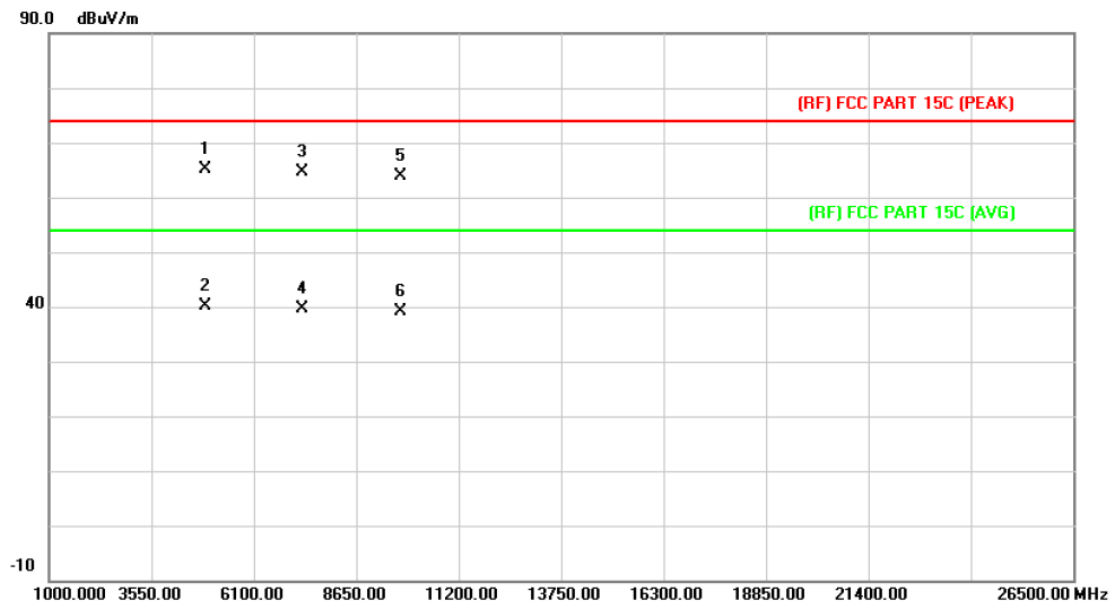


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4880.241	51.20	13.89	65.09	74.00	-8.91	peak
2		4880.241	26.37	13.89	40.26	54.00	-13.74	AVG
3		7320.141	88.90	-24.45	64.45	74.00	-9.55	peak
4		7320.141	64.07	-24.45	39.62	54.00	-14.38	AVG
5		9760.010	87.88	-23.57	64.31	74.00	-9.69	peak
6		9760.010	63.05	-23.57	39.48	54.00	-14.52	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2440 MHz(2Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

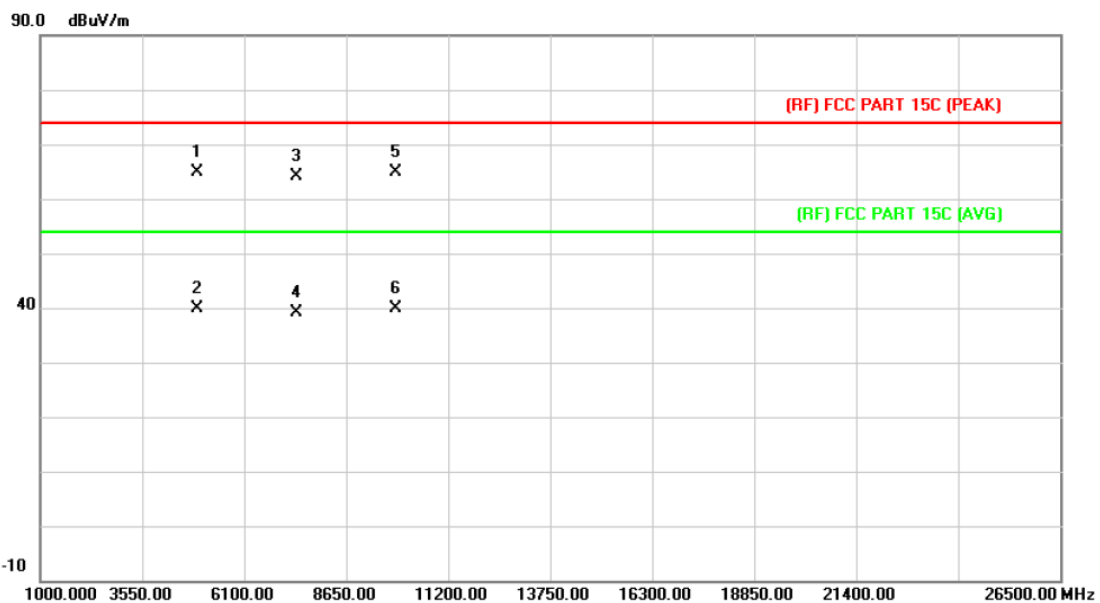


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4879.185	51.12	13.89	65.01	74.00	-8.99	peak
2		4879.185	26.29	13.89	40.18	54.00	-13.82	AVG
3		7320.024	88.98	-24.45	64.53	74.00	-9.47	peak
4		7320.024	64.15	-24.45	39.70	54.00	-14.30	AVG
5		9760.210	87.55	-23.57	63.98	74.00	-10.02	peak
6		9760.210	62.72	-23.57	39.15	54.00	-14.85	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2470 MHz(2Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

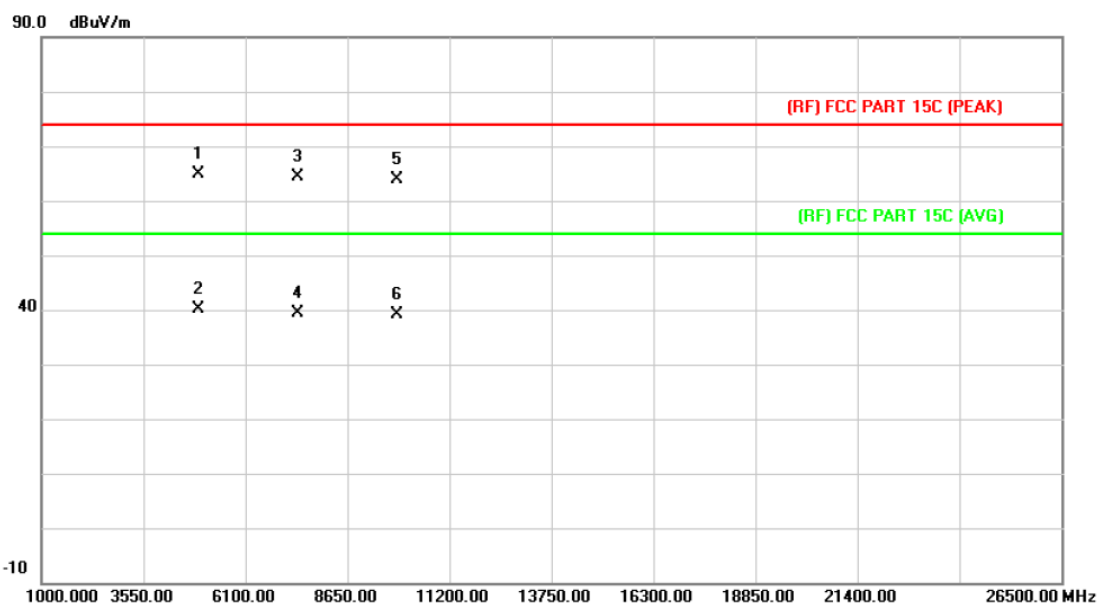


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	4939.678	50.57	14.25	64.82	74.00	-9.18	peak
2		4939.678	25.74	14.25	39.99	54.00	-14.01	AVG
3		7408.351	88.48	-24.43	64.05	74.00	-9.95	peak
4		7408.351	63.65	-24.43	39.22	54.00	-14.78	AVG
5		9879.845	88.06	-23.25	64.81	74.00	-9.19	peak
6		9879.845	63.23	-23.25	39.98	54.00	-14.02	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2470 MHz(2Mbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

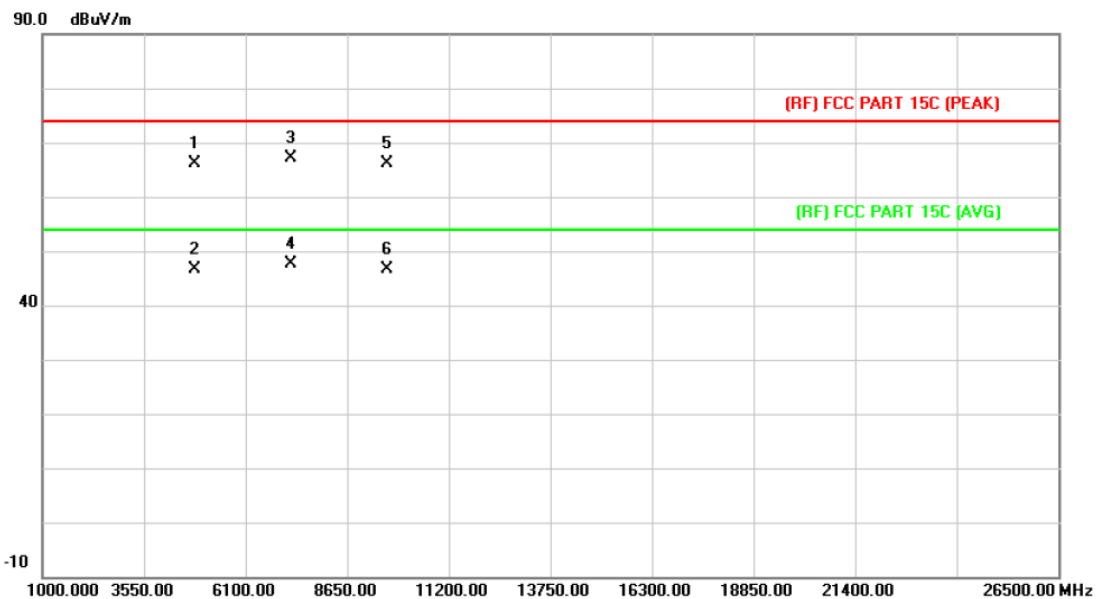


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4940.258	50.74	14.25	64.99	74.00	-9.01	peak
2		4940.258	25.91	14.25	40.16	54.00	-13.84	AVG
3		7409.357	88.69	-24.43	64.26	74.00	-9.74	peak
4		7409.357	63.86	-24.43	39.43	54.00	-14.57	AVG
5		9879.899	87.20	-23.25	63.95	74.00	-10.05	peak
6		9879.899	62.37	-23.25	39.12	54.00	-14.88	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2410 MHz(250Kbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

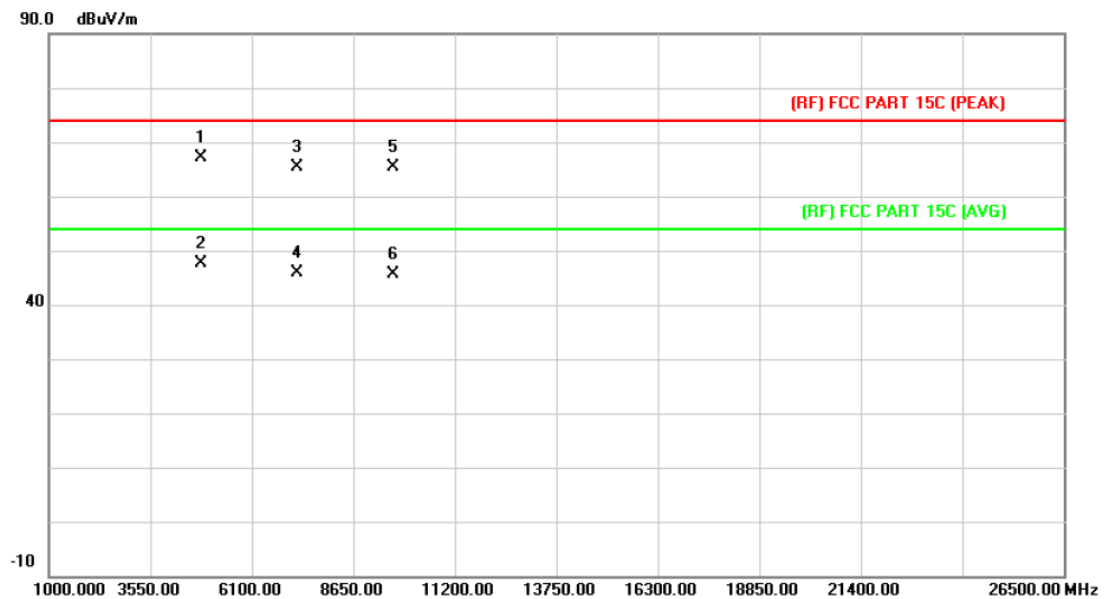


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4820.102	52.54	13.54	66.08	74.00	-7.92	peak
2		4820.102	32.99	13.54	46.53	54.00	-7.47	AVG
3		7229.642	91.55	-24.47	67.08	74.00	-6.92	peak
4	*	7229.642	72.00	-24.47	47.53	54.00	-6.47	AVG
5		9639.506	90.05	-23.88	66.17	74.00	-7.83	peak
6		9639.506	70.50	-23.88	46.62	54.00	-7.38	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2410 MHz(250Kbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

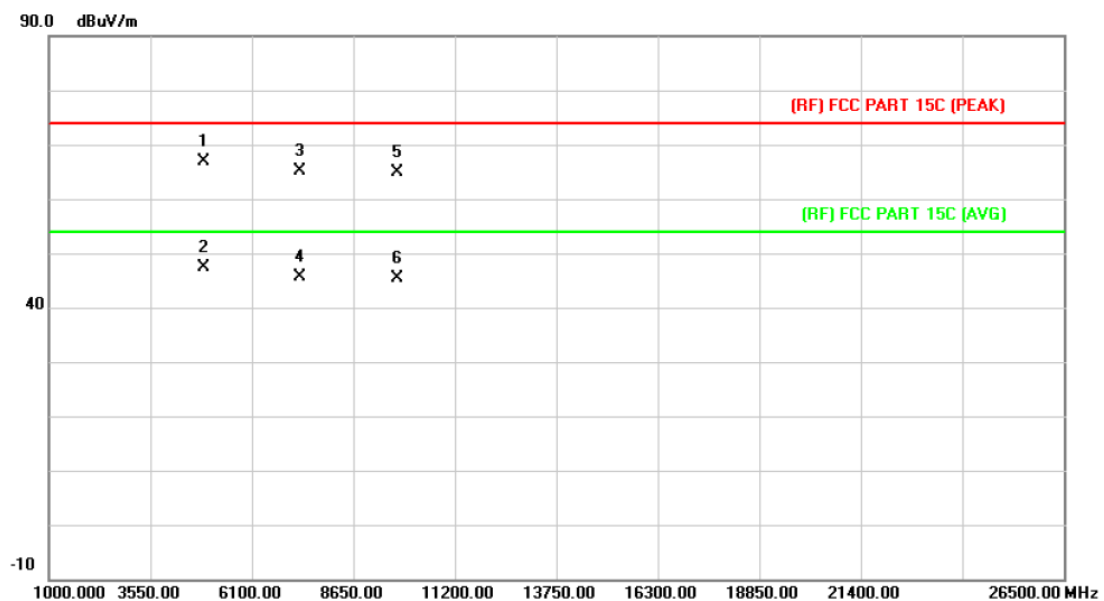


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4819.984	53.61	13.54	67.15	74.00	-6.85	peak
2	*	4819.984	34.06	13.54	47.60	54.00	-6.40	AVG
3		7229.612	89.81	-24.47	65.34	74.00	-8.66	peak
4		7229.612	70.26	-24.47	45.79	54.00	-8.21	AVG
5		9639.957	89.15	-23.88	65.27	74.00	-8.73	peak
6		9639.957	69.60	-23.88	45.72	54.00	-8.28	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2440 MHz(250Kbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

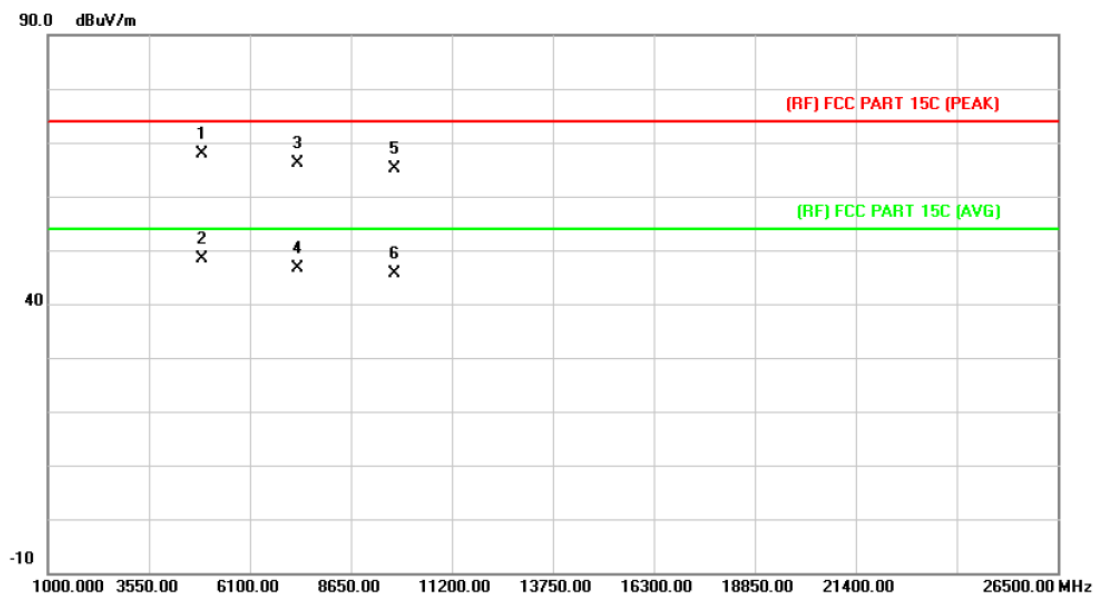


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4880.065	53.10	13.89	66.99	74.00	-7.01	peak
2	*	4880.065	33.55	13.89	47.44	54.00	-6.56	AVG
3		7320.174	89.63	-24.45	65.18	74.00	-8.82	peak
4		7320.174	70.08	-24.45	45.63	54.00	-8.37	AVG
5		9760.031	88.46	-23.57	64.89	74.00	-9.11	peak
6		9760.031	68.91	-23.57	45.34	54.00	-8.66	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2440 MHz(250Kbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

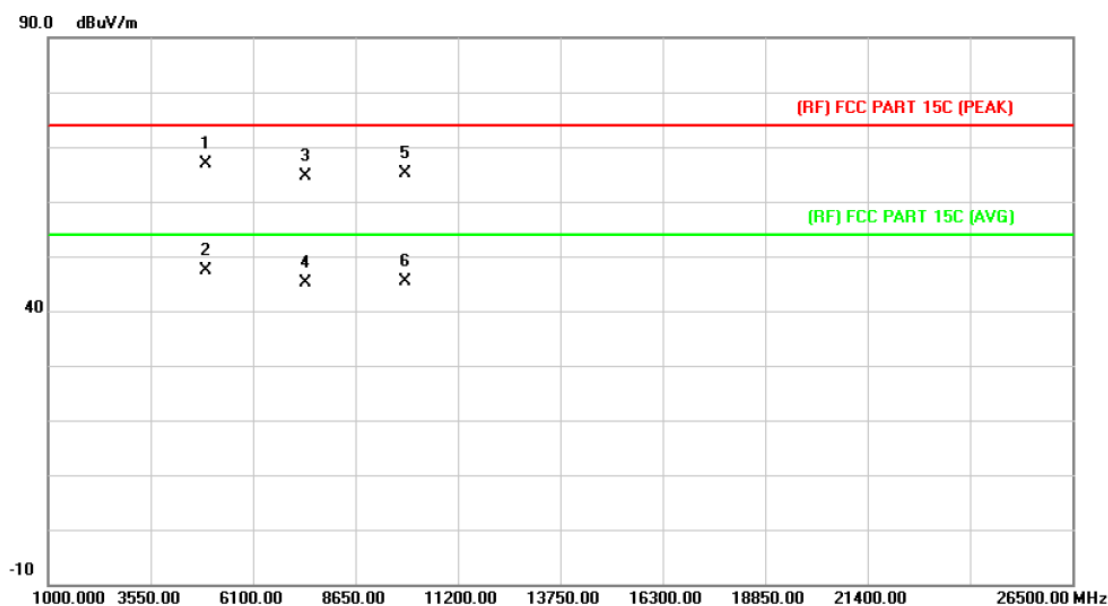


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4879.985	53.96	13.89	67.85	74.00	-6.15	peak
2	*	4879.985	34.41	13.89	48.30	54.00	-5.70	AVG
3		7320.000	90.57	-24.45	66.12	74.00	-7.88	peak
4		7320.000	71.02	-24.45	46.57	54.00	-7.43	AVG
5		9760.050	88.80	-23.57	65.23	74.00	-8.77	peak
6		9760.050	69.25	-23.57	45.68	54.00	-8.32	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2470 MHz(250Kbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		

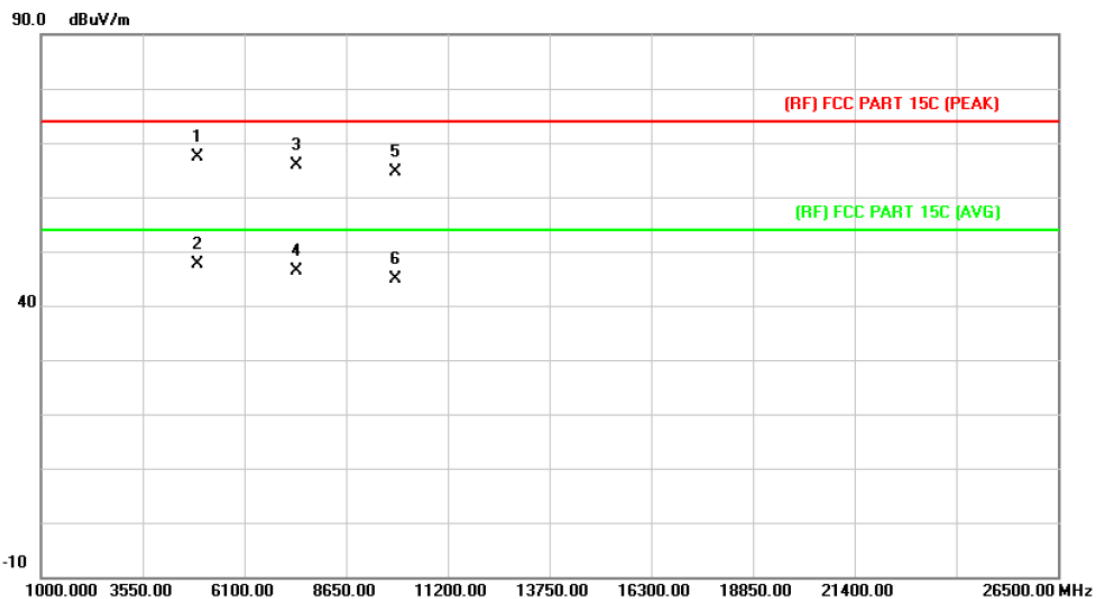


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4939.657	52.59	14.25	66.84	74.00	-7.16	peak
2	*	4939.657	33.04	14.25	47.29	54.00	-6.71	AVG
3		7409.614	89.01	-24.43	64.58	74.00	-9.42	peak
4		7409.614	69.46	-24.43	45.03	54.00	-8.97	AVG
5		9879.874	88.27	-23.25	65.02	74.00	-8.98	peak
6		9879.874	68.72	-23.25	45.47	54.00	-8.53	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2470 MHz(250Kbps)		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4940.214	53.01	14.25	67.26	74.00	-6.74	peak
2	*	4940.214	33.46	14.25	47.71	54.00	-6.29	AVG
3		7410.362	90.31	-24.43	65.88	74.00	-8.12	peak
4		7410.362	70.76	-24.43	46.33	54.00	-7.67	AVG
5		9879.877	87.77	-23.25	64.52	74.00	-9.48	peak
6		9879.877	68.22	-23.25	44.97	54.00	-9.03	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

6. Restricted Bands Requirement

6.1 Test Standard and Limit

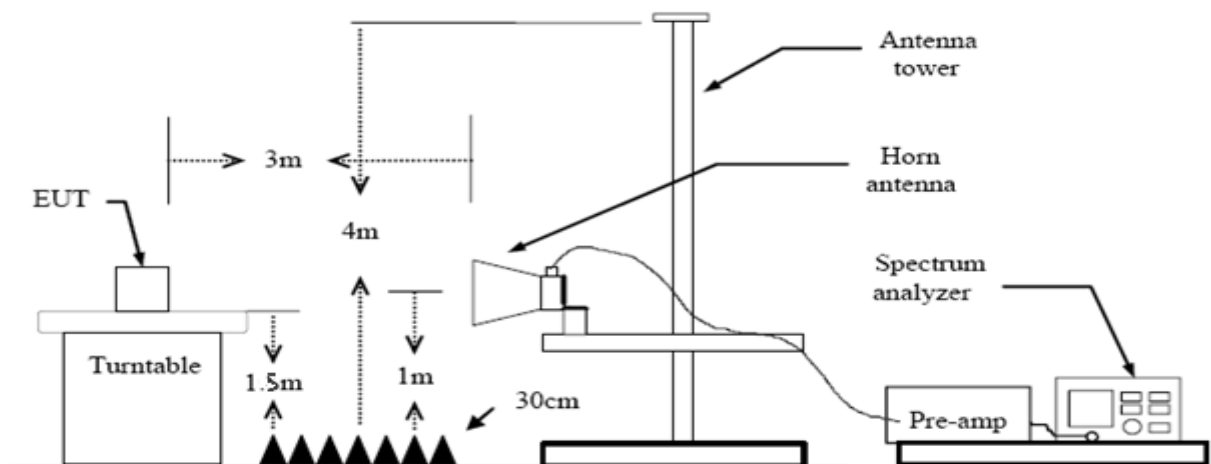
6.1.1 Test Standard

FCC Part 15.209 FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency Band (MHz)	Class B (dBuV/m)(at 3 M)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked

and then Quasi Peak detector mode re-measured.

- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 KHz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

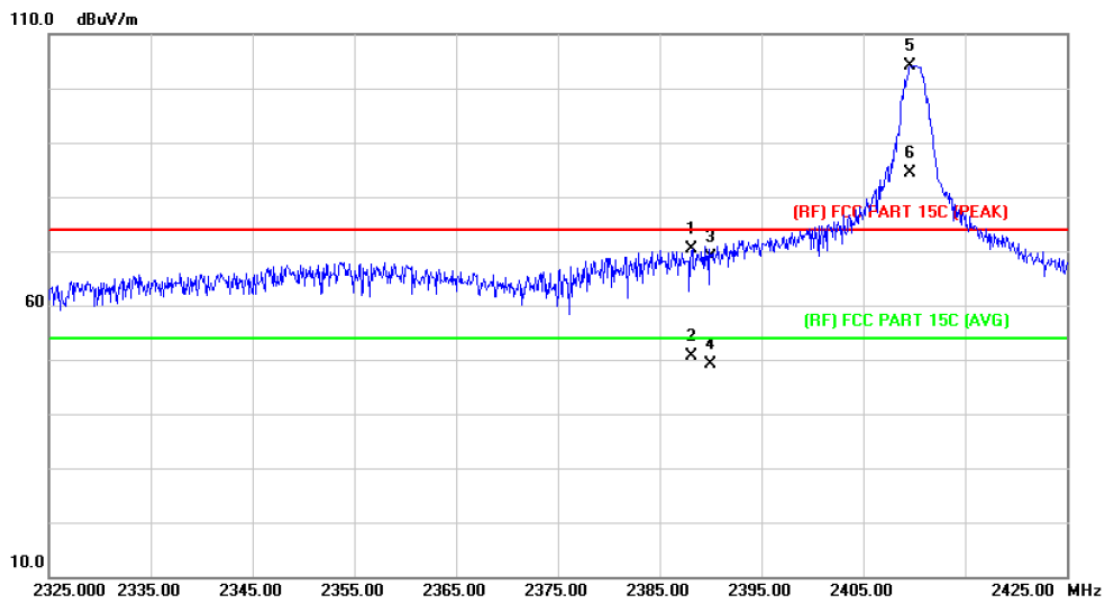
Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values.

And Average Values= Peak Values+ 20log(dutycycle)

Test data please refer the following pages.

(1) Radiation Test

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2410 MHz(1Mbps)		
Remark:	N/A		

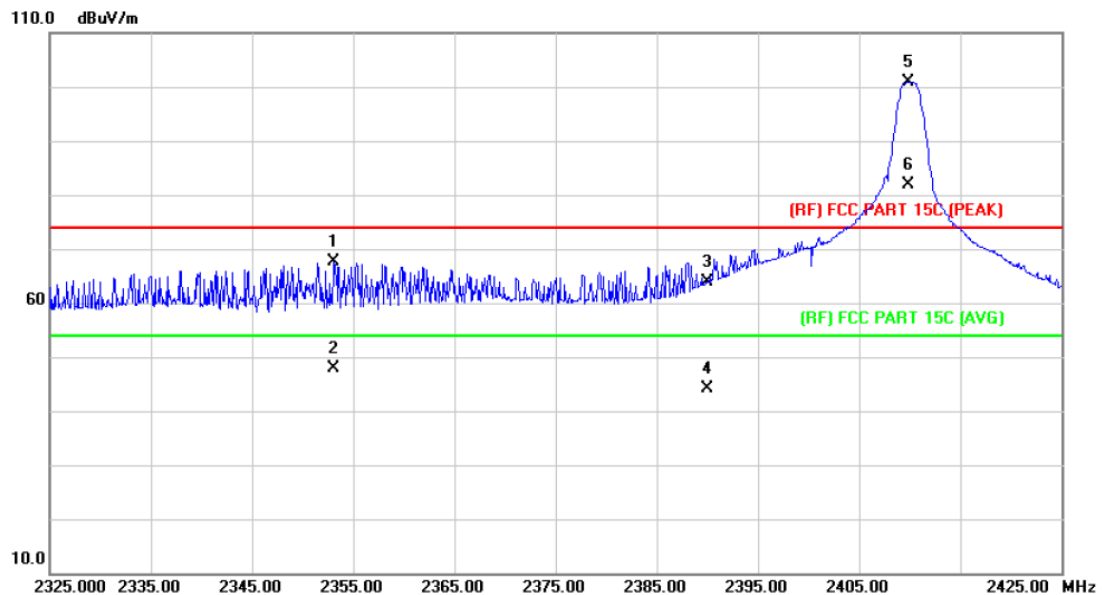


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2388.200	69.71	0.77	70.48	74.00	-3.52	peak
2		2388.200	49.89	0.77	50.66	54.00	-3.34	AVG
3		2390.000	68.22	0.77	68.99	74.00	-5.01	peak
4		2390.000	48.40	0.77	49.17	54.00	-4.83	AVG
5	X	2409.600	103.24	0.85	104.09	Fundamental Frequency		peak
6	*	2409.600	83.42	0.85	84.27	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2410 MHz(1Mbps)		
Remark:	N/A		

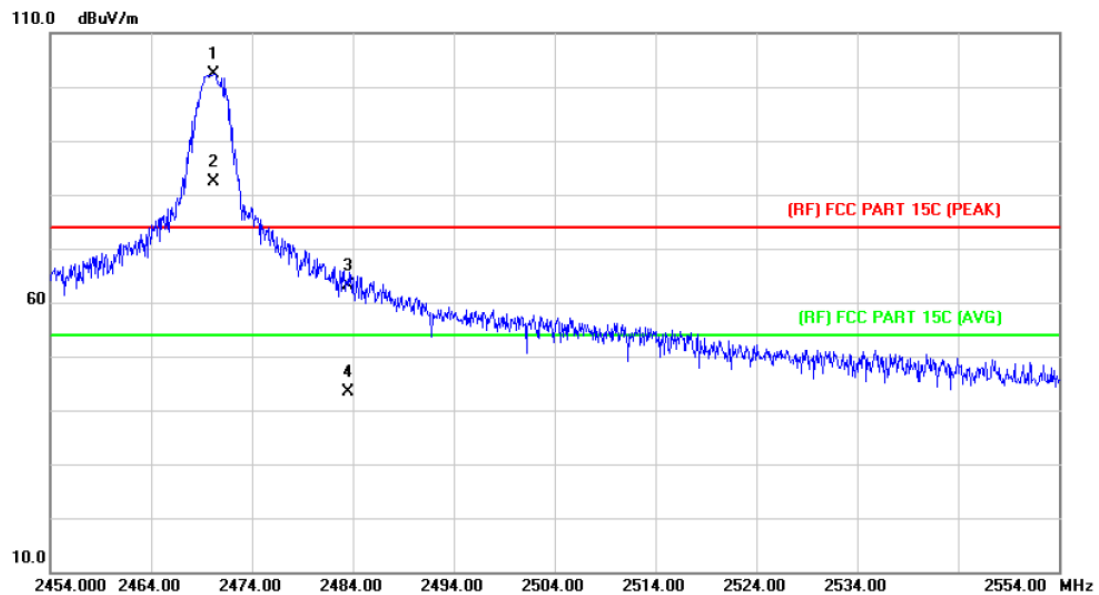


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2353.100	67.04	0.62	67.66	74.00	-6.34	peak
2		2353.100	47.22	0.62	47.84	54.00	-6.16	AVG
3		2390.000	63.11	0.77	63.88	74.00	-10.12	peak
4		2390.000	43.29	0.77	44.06	54.00	-9.94	AVG
5	X	2409.800	100.05	0.85	100.90	Fundamental Frequency		peak
6	*	2409.800	80.95	0.85	81.80	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2470 MHz(1Mbps)		
Remark:	N/A		

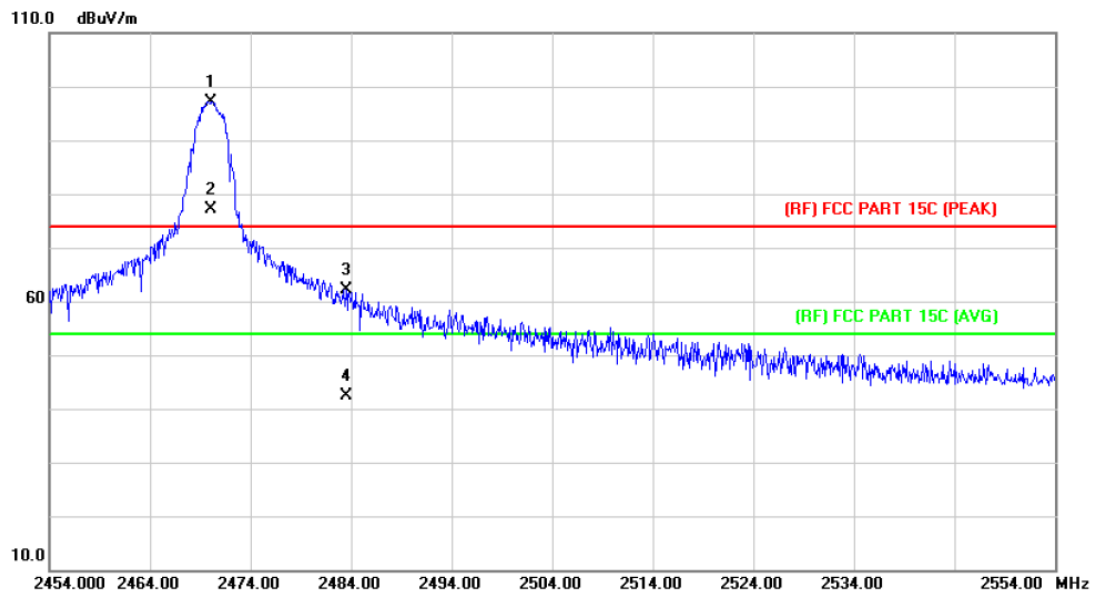


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2470.200	101.15	1.11	102.26	Fundamental Frequency		peak
2	*	2470.200	81.33	1.11	82.44	Fundamental Frequency		AVG
3		2483.500	61.92	1.17	63.09	74.00	-10.91	peak
4		2483.500	42.10	1.17	43.27	54.00	-10.73	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2470 MHz(1Mbps)		
Remark:	N/A		

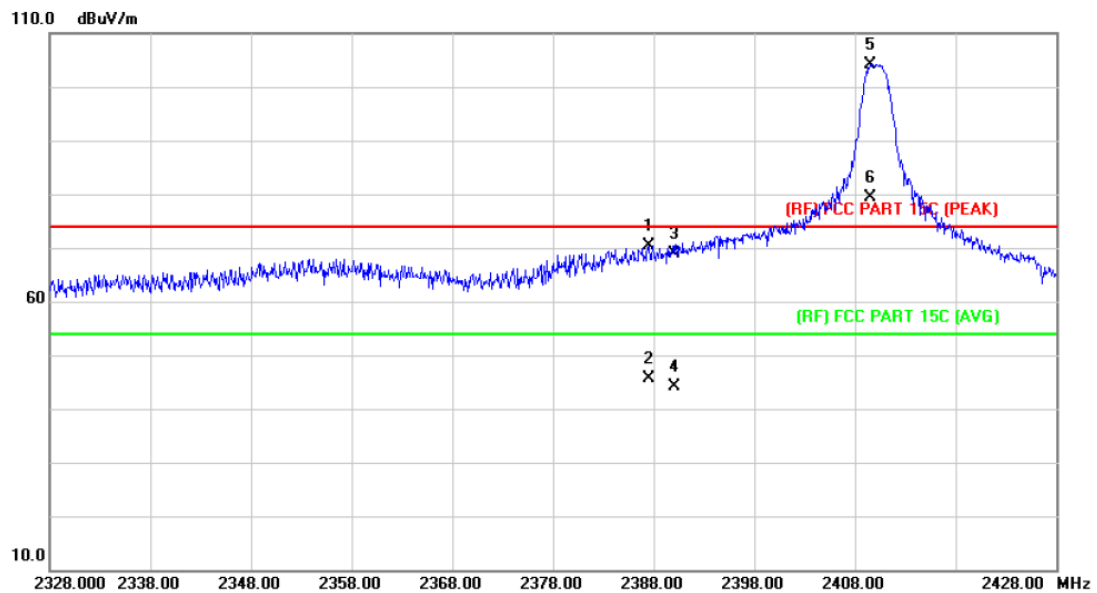


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2470.100	95.96	1.11	97.07	Fundamental Frequency		peak
2	*	2470.100	76.14	1.11	77.25	Fundamental Frequency		AVG
3		2483.500	61.01	1.17	62.18	74.00	-11.82	peak
4		2483.500	41.19	1.17	42.36	54.00	-11.64	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.82

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2410 MHz(2Mbps)		
Remark:	N/A		

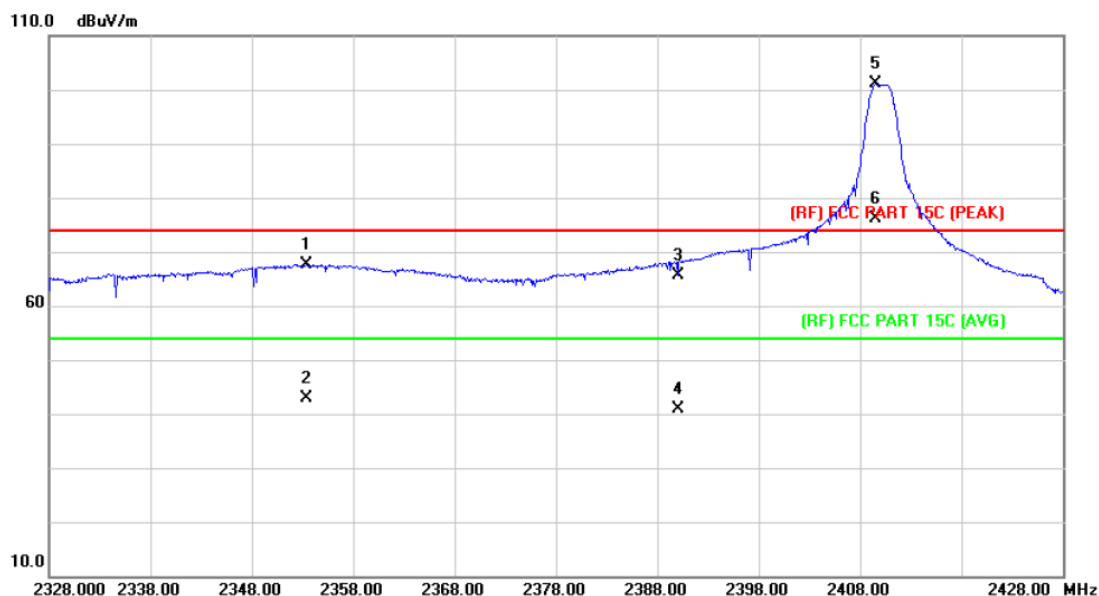


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2387.500	69.62	0.77	70.39	74.00	-3.61	peak
2		2387.500	44.79	0.77	45.56	54.00	-8.44	AVG
3		2390.000	68.11	0.77	68.88	74.00	-5.12	peak
4		2390.000	43.28	0.77	44.05	54.00	-9.95	AVG
5	*	2409.500	103.25	0.85	104.10	Fundamental Frequency		peak
6	X	2409.500	78.42	0.85	79.27	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2410 MHz(2Mbps)		
Remark:	N/A		

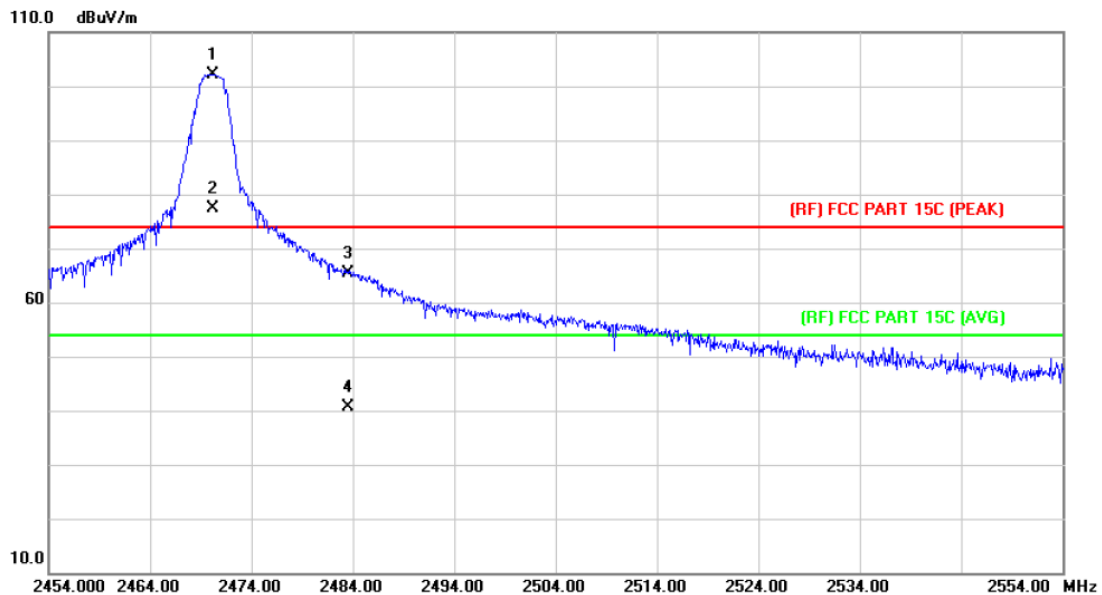


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2353.400	67.00	0.62	67.62	74.00	-6.38	peak
2		2353.400	42.17	0.62	42.79	54.00	-11.21	AVG
3		2390.000	64.91	0.77	65.68	74.00	-8.32	peak
4		2390.000	40.08	0.77	40.85	54.00	-13.15	AVG
5	*	2409.500	100.21	0.85	101.06	Fundamental Frequency		peak
6	X	2409.500	75.38	0.85	76.23	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2470 MHz(2Mbps)		
Remark:	N/A		

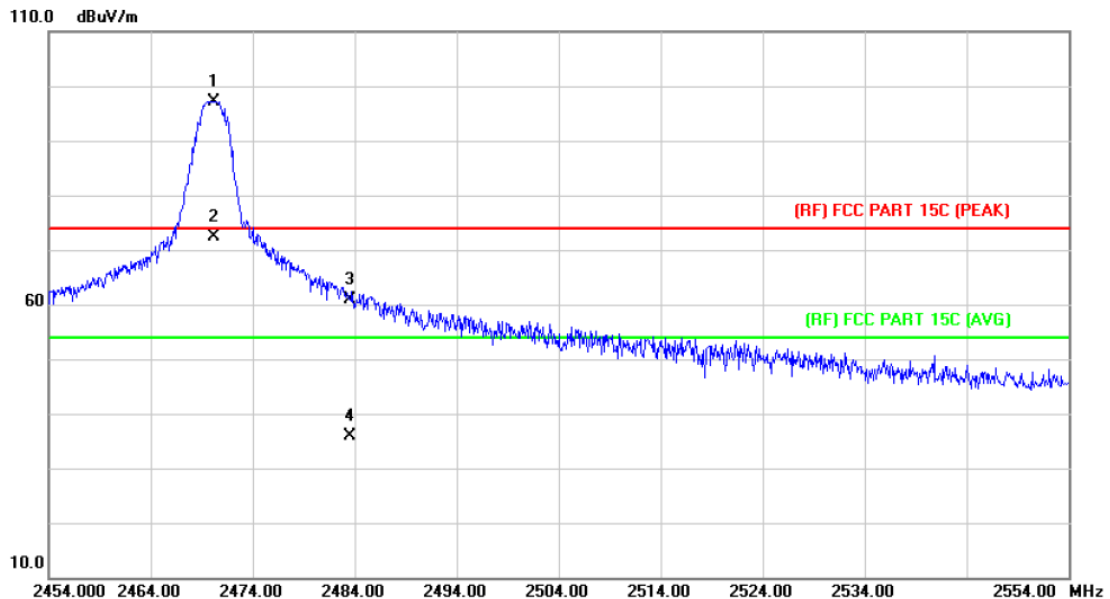


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2470.200	101.05	1.11	102.16	Fundamental Frequency		peak
2	X	2470.200	76.22	1.11	77.33	Fundamental Frequency		AVG
3		2483.500	64.21	1.17	65.38	74.00	-8.62	peak
4		2483.500	39.38	1.17	40.55	54.00	-13.45	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2470 MHz(2Mbps)		
Remark:	N/A		

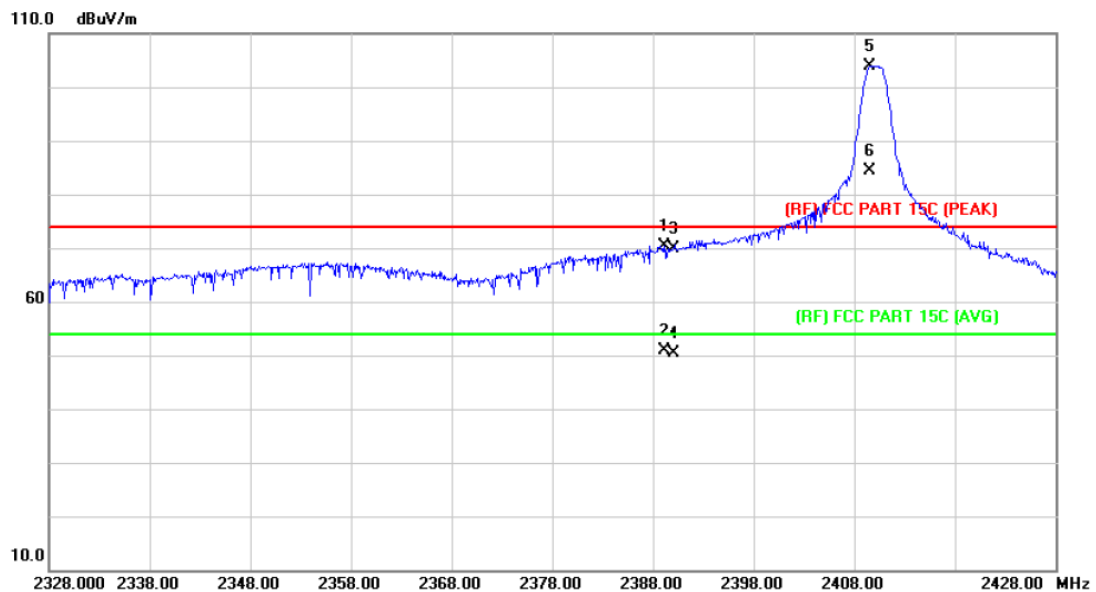


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2470.200	96.10	1.11	97.21	Fundamental Frequency		peak
2	X	2470.200	71.27	1.11	72.38	Fundamental Frequency		AVG
3		2483.500	59.61	1.17	60.78	74.00	-13.22	peak
4		2483.500	34.78	1.17	35.95	54.00	-18.05	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-24.83

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2410 MHz(250Kbps)		
Remark:	N/A		

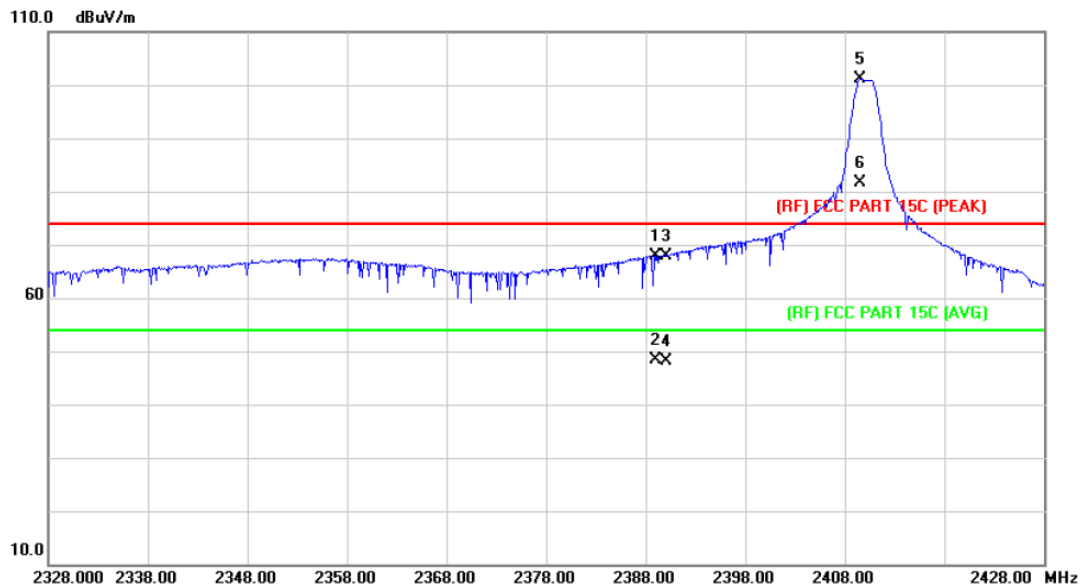


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2389.100	69.67	0.77	70.44	74.00	-3.56	peak
2		2389.100	50.12	0.77	50.89	54.00	-3.11	AVG
3		2390.000	69.09	0.77	69.86	74.00	-4.14	peak
4		2390.000	49.54	0.77	50.31	54.00	-3.69	AVG
5	X	2409.500	102.99	0.85	103.84	Fundamental Frequency		peak
6	*	2409.500	83.44	0.85	84.29	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2410 MHz(250Kbps)		
Remark:	N/A		

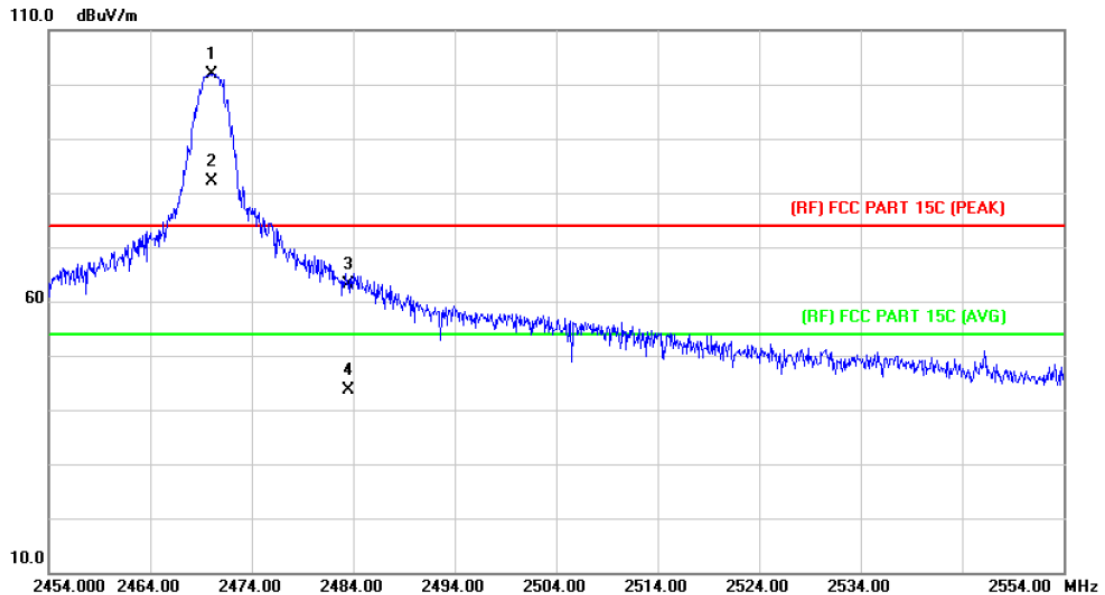


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2389.000	67.15	0.77	67.92	74.00	-6.08	peak
2		2389.000	47.60	0.77	48.37	54.00	-5.63	AVG
3		2390.000	67.02	0.77	67.79	74.00	-6.21	peak
4		2390.000	47.47	0.77	48.24	54.00	-5.76	AVG
5	X	2409.500	100.23	0.85	101.08	Fundamental Frequency		peak
6	*	2409.500	80.68	0.85	81.53	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	GFSK Mode TX 2470 MHz(250Kbps)		
Remark:	N/A		

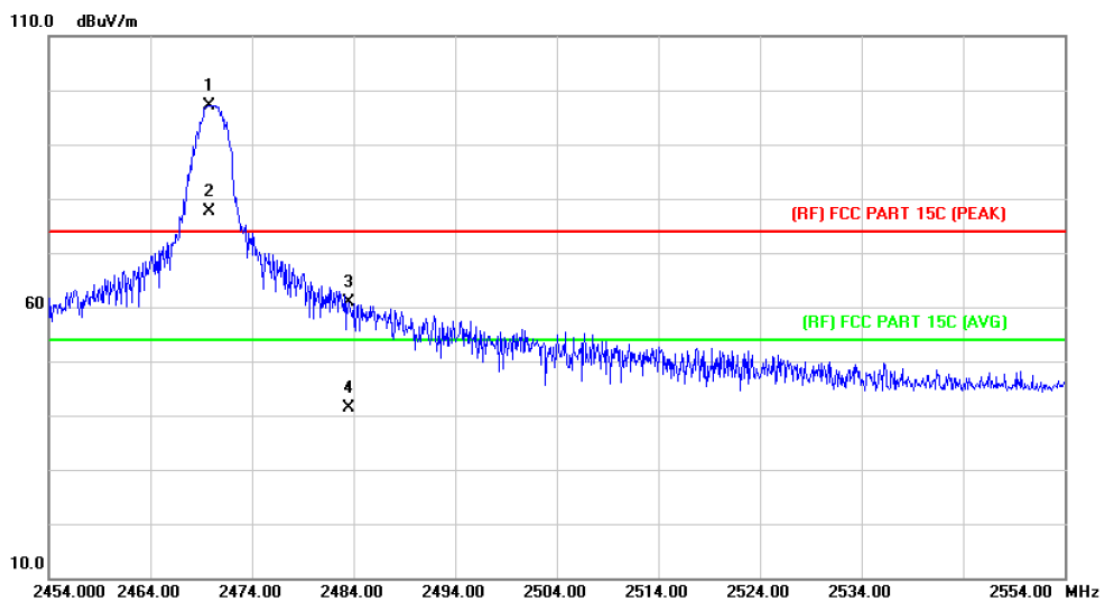


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2470.100	100.67	1.11	101.78	Fundamental Frequency		peak
2	*	2470.100	81.12	1.11	82.23	Fundamental Frequency		AVG
3		2483.500	61.94	1.17	63.11	74.00	-10.89	peak
4		2483.500	42.39	1.17	43.56	54.00	-10.44	AVG

Emission Level= Read Level+ Correct Factor

Note: Avg=Peak-19.55

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	GFSK Mode TX 2470 MHz(250Kbps)		
Remark:	N/A		



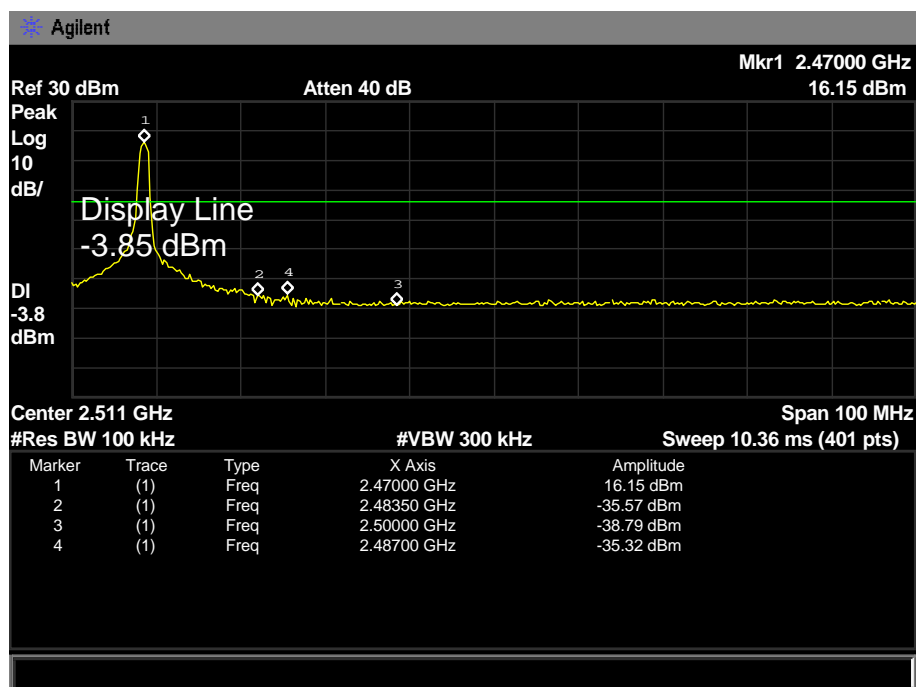
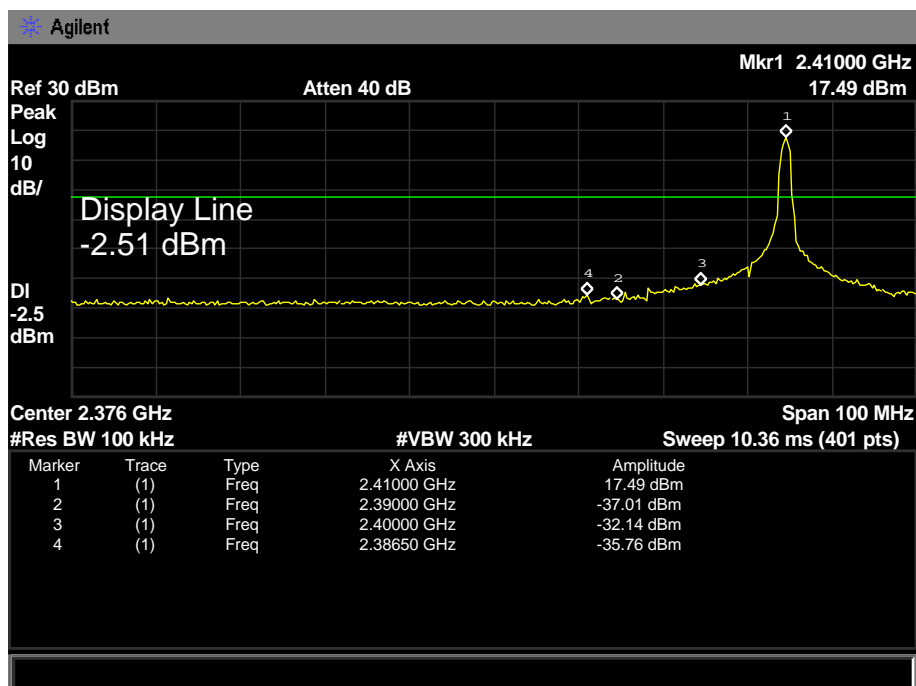
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2469.800	96.06	1.11	97.17	Fundamental Frequency		peak
2	*	2469.800	76.51	1.11	77.62	Fundamental Frequency		AVG
3		2483.500	59.78	1.17	60.95	74.00	-13.05	peak
4		2483.500	40.23	1.17	41.40	54.00	-12.60	AVG

Emission Level= Read Level+ Correct Factor

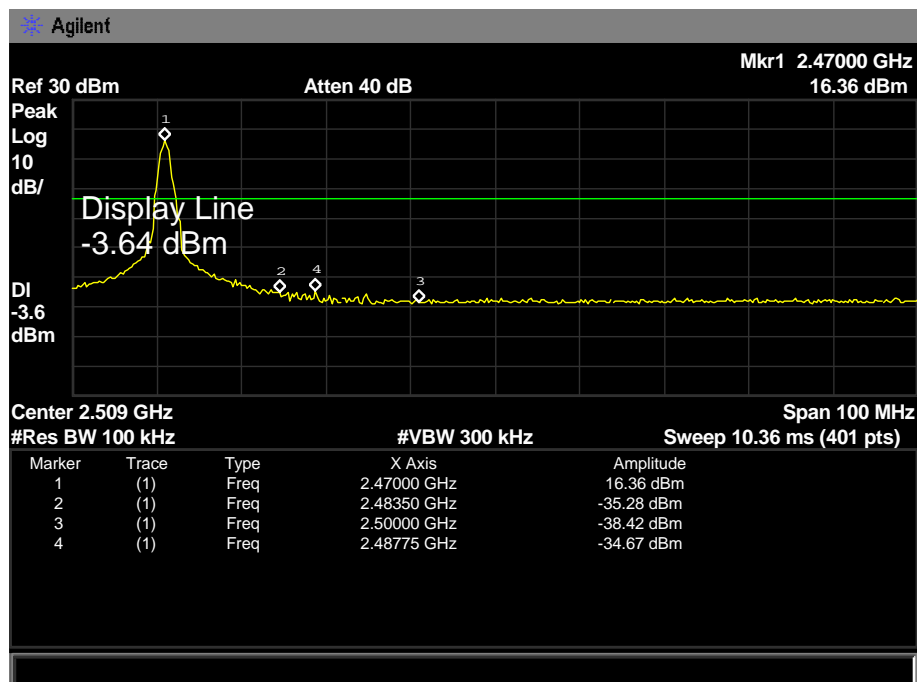
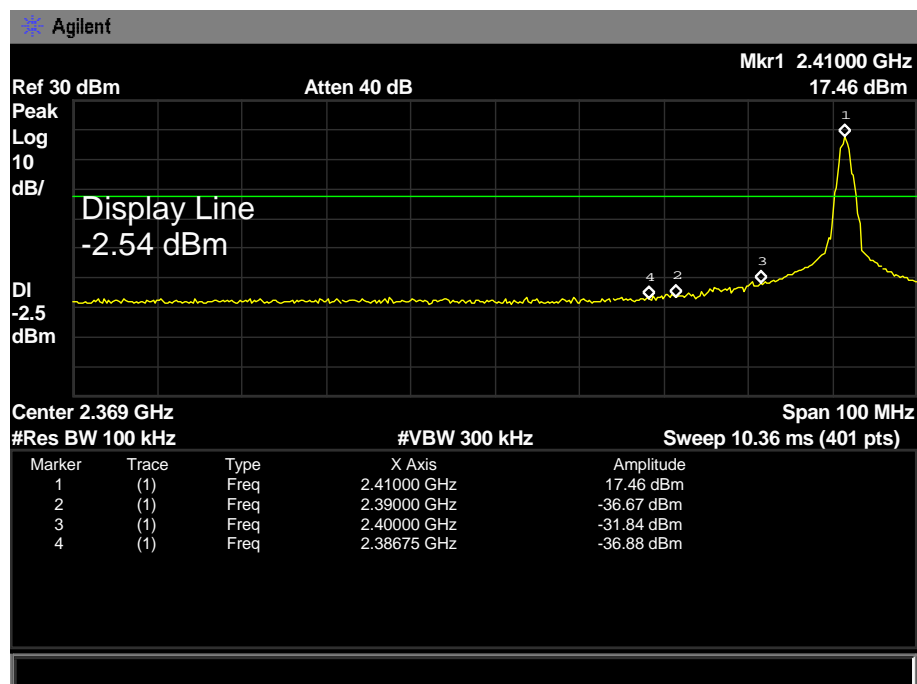
Note: Avg=Peak-19.55

(2) Conducted Test

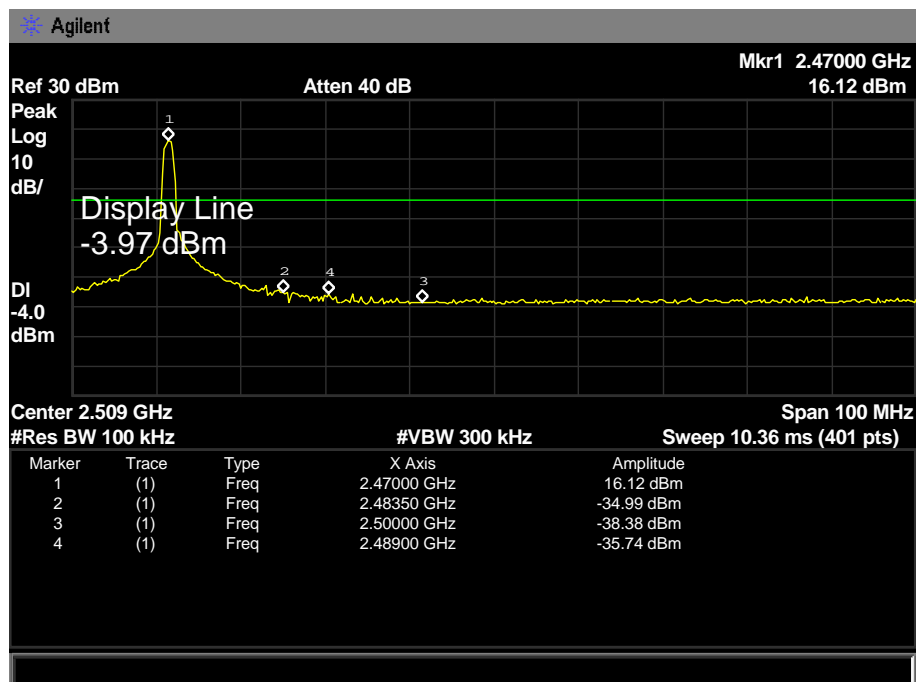
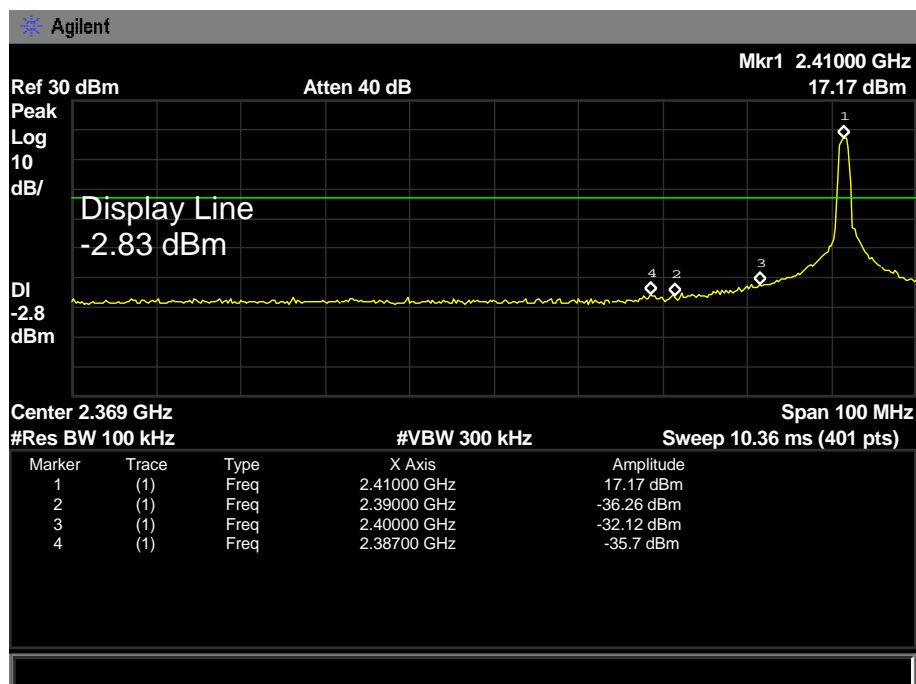
EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	GFSK Mode TX 2410MHz / GFSK Mode TX 2470MHz(1Mbps)		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	GFSK Mode TX 2410MHz / GFSK Mode TX 2470MHz(2Mbps)		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	GFSK Mode TX 2410MHz / GFSK Mode TX 2470MHz(250Kbps)		
Remark:	The EUT is programed in continuously transmitting mode		



7. Bandwidth Test

7.1 Test Standard and Limit

7.1.1 Test Standard

FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-247		
Test Item	Limit	Frequency Range(MHz)
Bandwidth	≥ 500 KHz (6dB bandwidth)	2400~2483.5

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst -case (i.e the widest) bandwidth.
- (3) Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

7.4 EUT Operating Condition

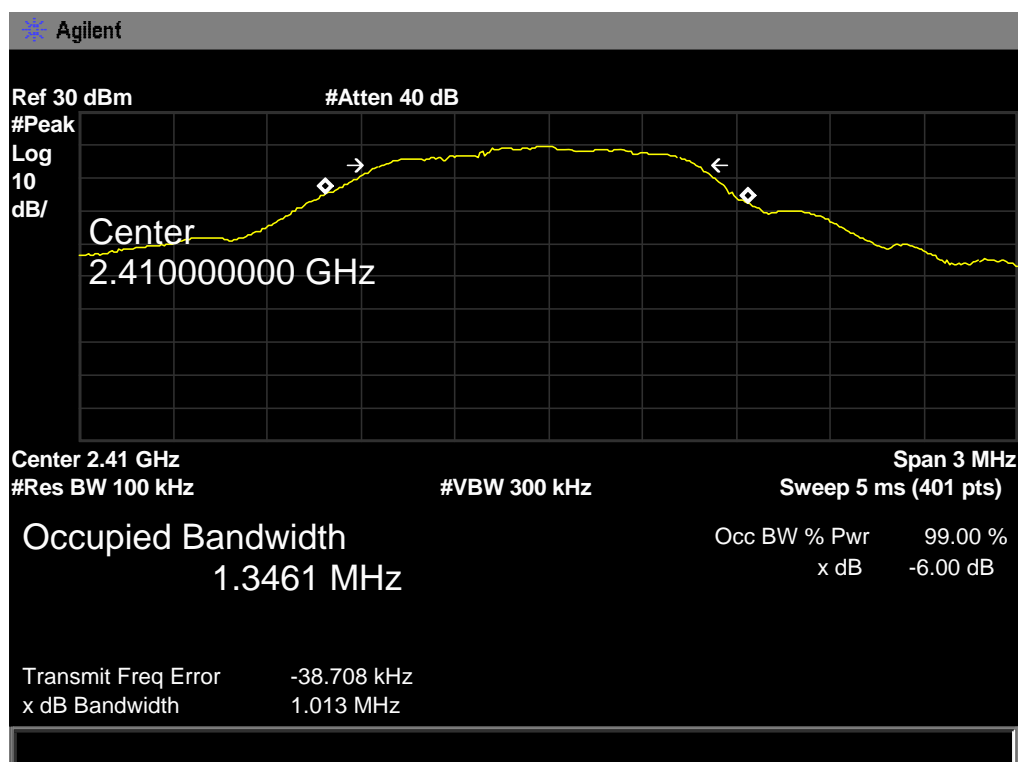
The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

7.5 Test Data

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 1Mbps		
Channel frequency (MHz)	6dB Bandwidth (kHz)	99% Bandwidth (kHz)	Limit (kHz)
2410	1013.00	1346.10	>=500
2440	1011.00	1332.00	
2470	1032.00	1346.10	

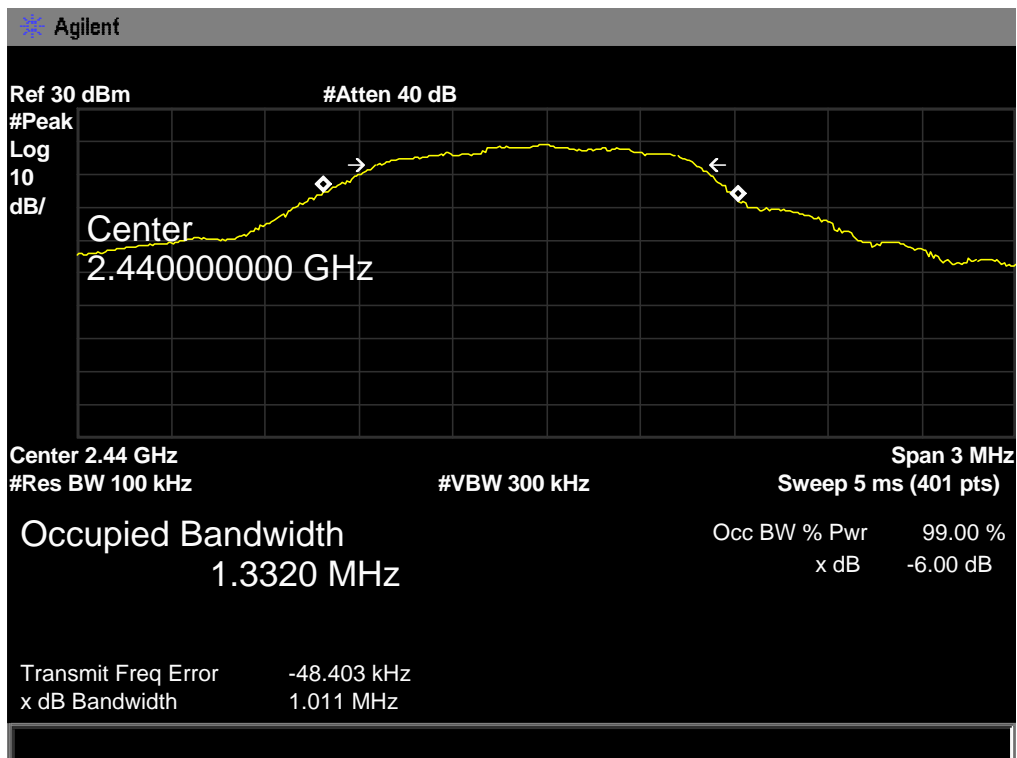
GFSK Mode

2410 MHz



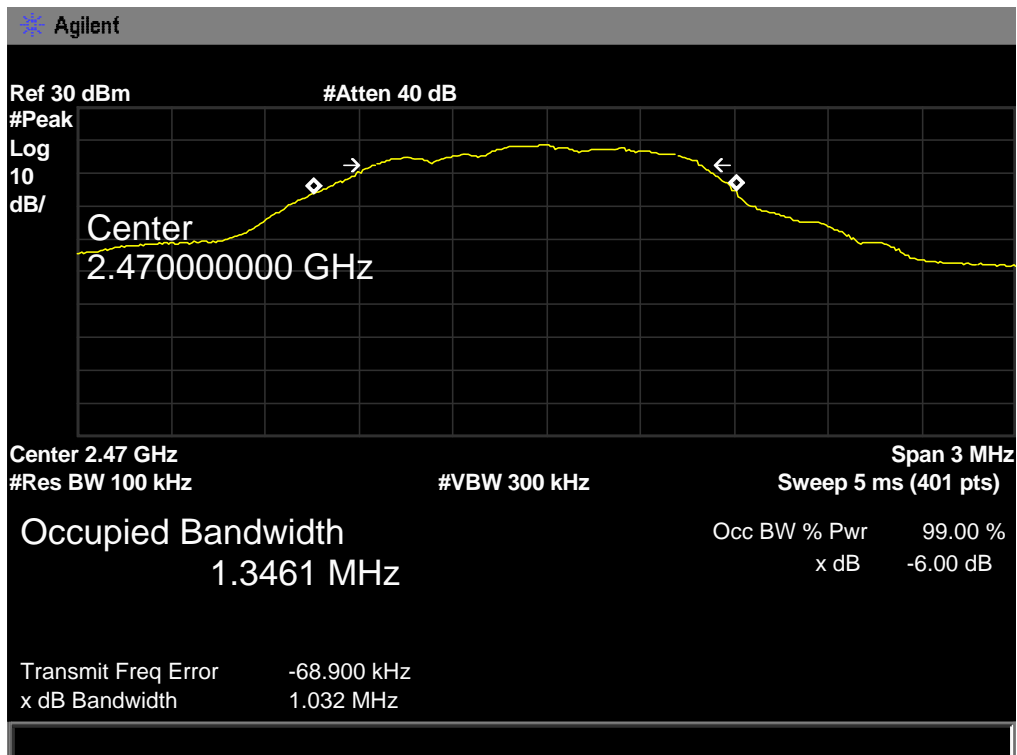
GFSK Mode

2440 MHz



GFSK Mode

2470 MHz



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 1Mbps		
Channel frequency (MHz)	6dB Bandwidth (kHz)	99% Bandwidth (kHz)	Limit (kHz)
2410	1013.00	1346.10	>=500
2440	1011.00	1332.00	
2470	1032.00	1346.10	

GFSK Mode 1Mbps

2410 MHz

Agilent

Ref 30 dBm

#Peak

Log

10

dB/

Center

2.41000000 GHz

Center 2.41 GHz

#Res BW 100 kHz

Occupied Bandwidth

1.3461 MHz

Transmit Freq Error

x dB Bandwidth

#Atten 40 dB

#VBW 300 kHz

Span 3 MHz

Sweep 5 ms (401 pts)

Occ BW % Pwr

x dB

99.00 %

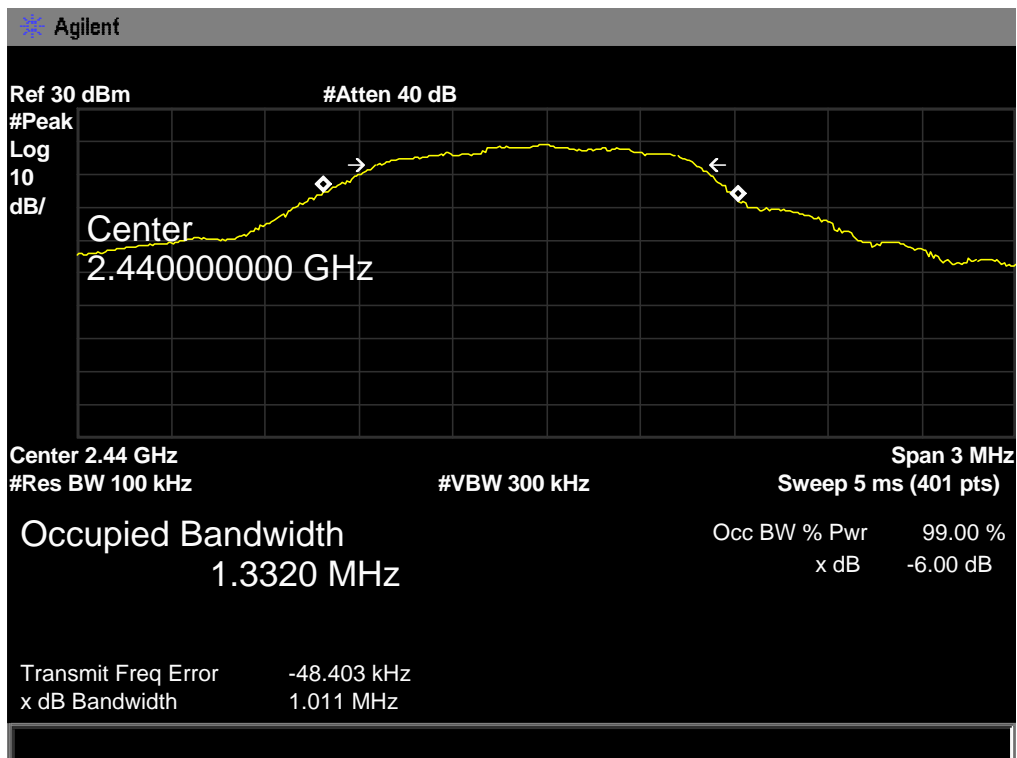
-6.00 dB

-38.708 kHz

1.013 MHz

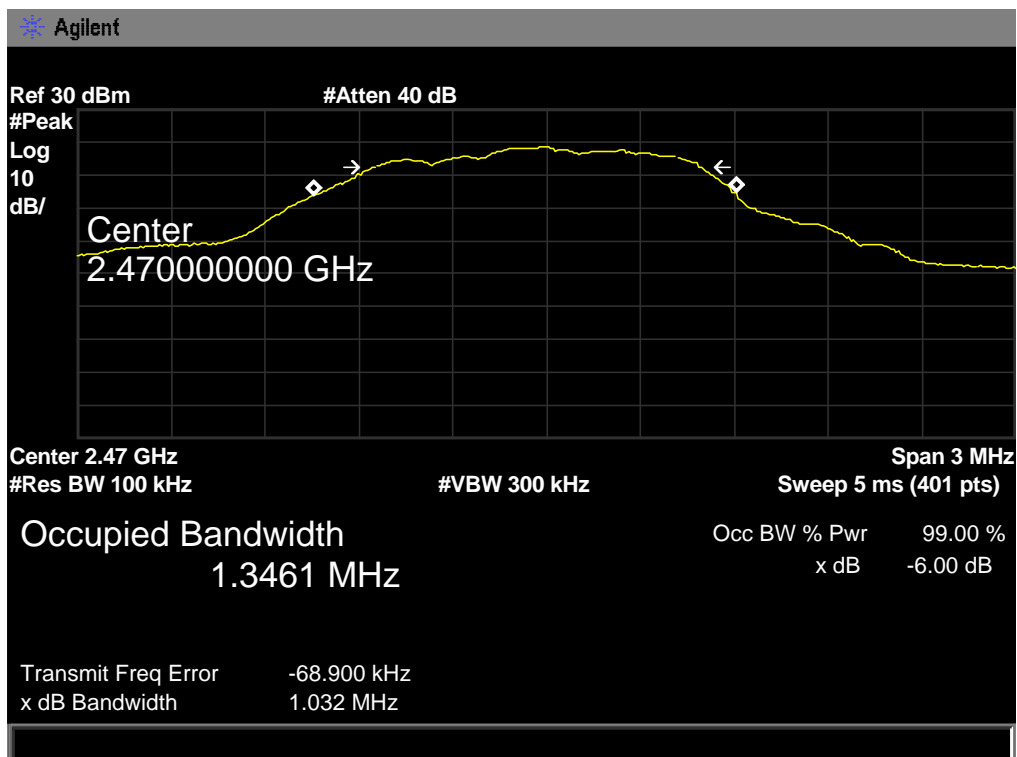
GFSK Mode 1Mbps

2440 MHz



GFSK Mode 1Mbps

2470 MHz



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 2Mbps		
Channel frequency (MHz)	6dB Bandwidth (kHz)	99% Bandwidth (kHz)	Limit (kHz)
2410	915.288	2081.50	>=500
2440	968.648	2105.60	
2470	915.203	2139.70	
GFSK Mode 2Mbps			
2410 MHz			

Agilent

Ref 30 dBm

#Peak

Log 10 dB/

Center 2.41000000 GHz

#Atten 40 dB

Center 2.41 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 3 MHz

Sweep 5 ms (401 pts)

Occupied Bandwidth 2.0815 MHz

Occ BW % Pwr 99.00 %

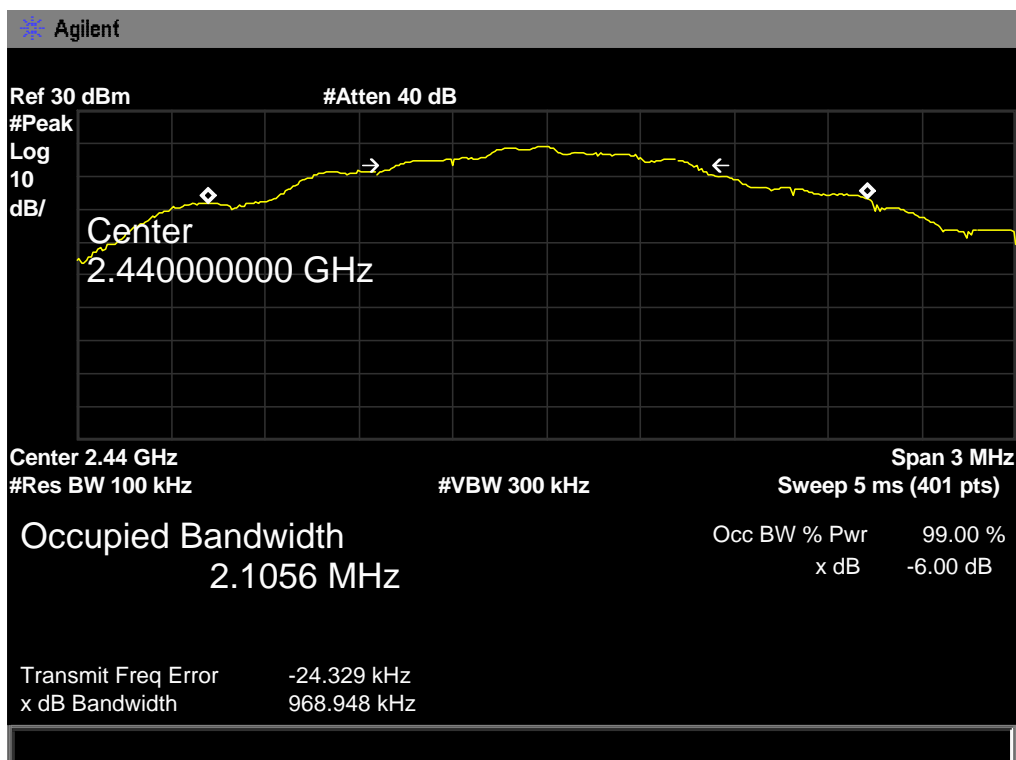
x dB -6.00 dB

Transmit Freq Error -34.284 kHz

x dB Bandwidth 915.288 kHz

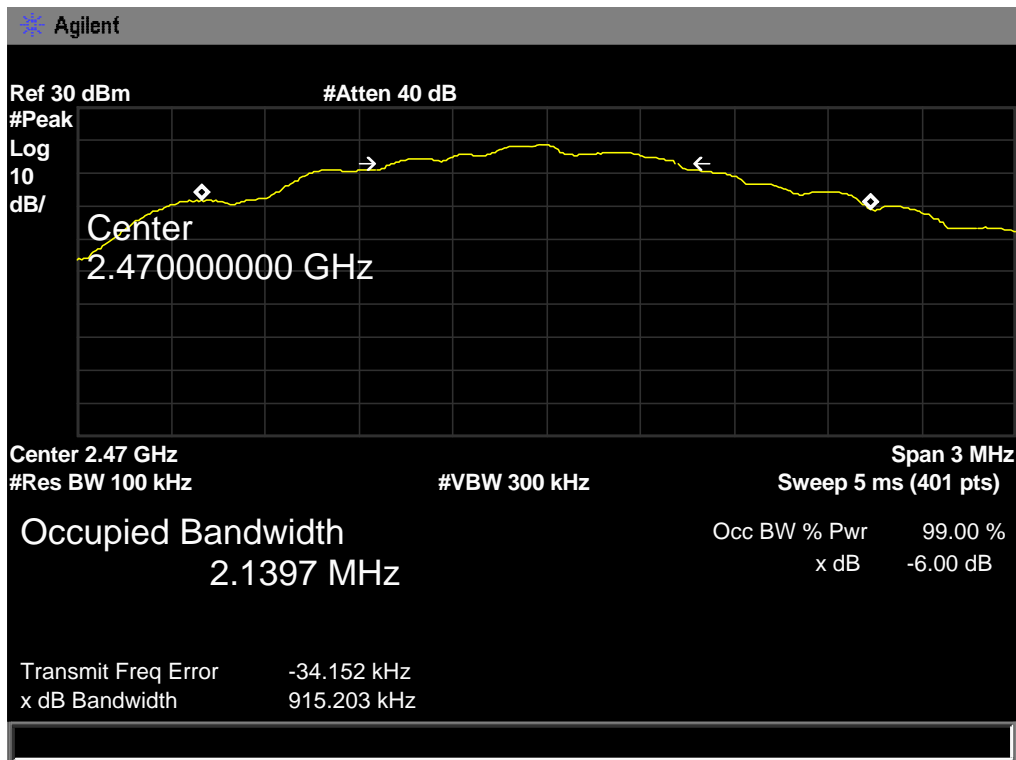
GFSK Mode 2Mbps

2440 MHz



GFSK Mode 2Mbps

2470 MHz



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 250Kbps		
Channel frequency (MHz)	6dB Bandwidth (kHz)	99% Bandwidth (kHz)	Limit (kHz)
2410	1143.00	1353.10	>=500
2440	1149.00	1359.60	
2470	1163.00	1364.50	
GFSK Mode 250Kbps			
2410 MHz			

Agilent

Ref 30 dBm

#Peak

Log

10

dB/

Center

2.410000000 GHz

Center 2.41 GHz

#Res BW 100 kHz

Occupied Bandwidth

1.3531 MHz

Transmit Freq Error

x dB Bandwidth

#Atten 40 dB

#VBW 300 kHz

Span 3 MHz

Sweep 5 ms (401 pts)

Occ BW % Pwr

x dB

99.00 %

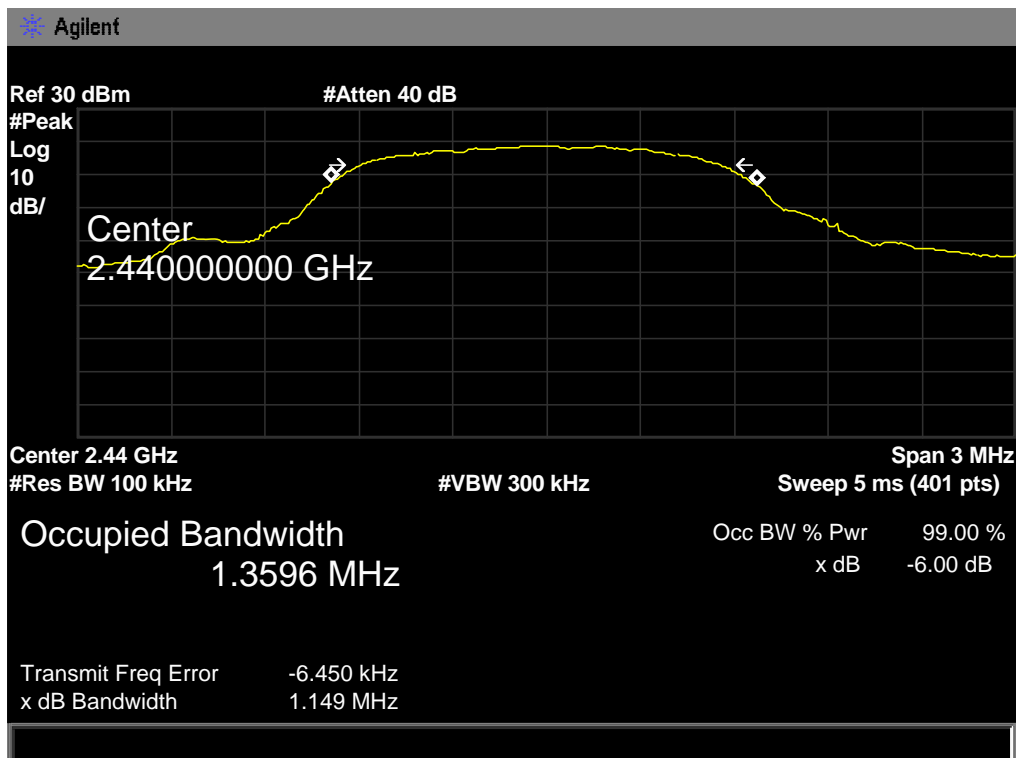
-6.00 dB

-6.686 kHz

1.143 MHz

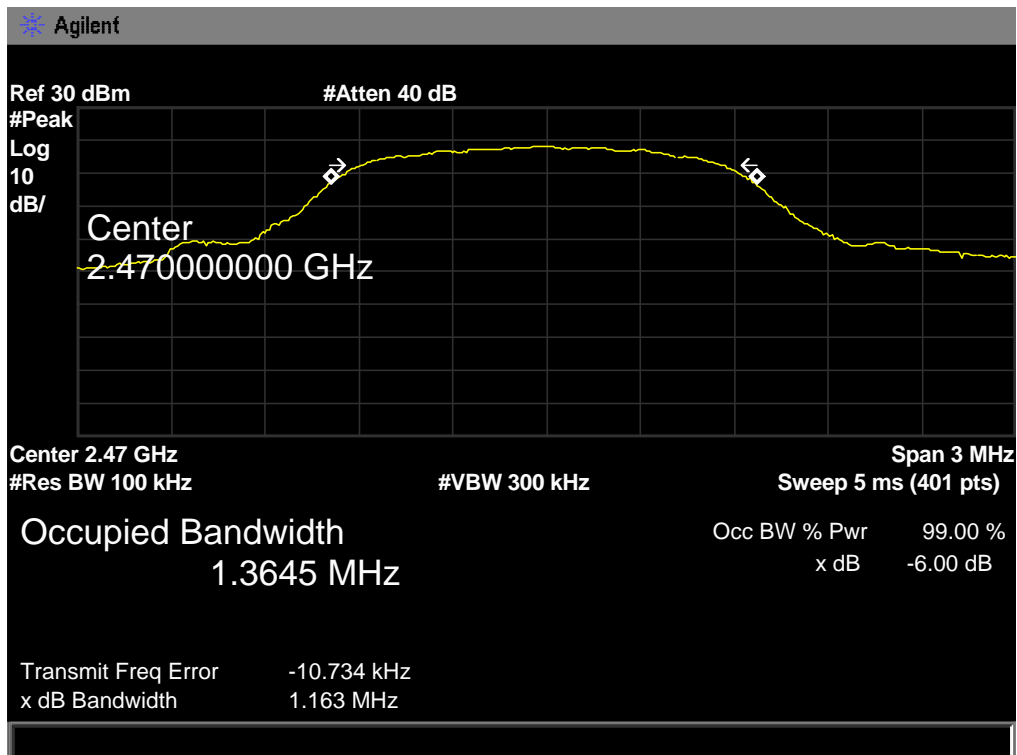
GFSK Mode 250Kbps

2440 MHz



GFSK Mode 250Kbps

2470 MHz



8. Peak Output Power Test

8.1 Test Standard and Limit

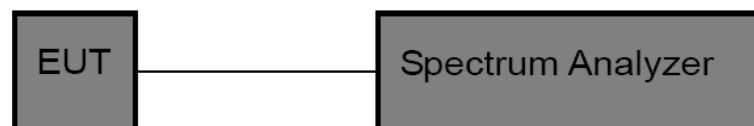
8.1.1 Test Standard

FCC Part 15.247 (b)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-247		
Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

8.2 Test Setup



8.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement is according to section 9.1.1 of KDB 558074 D01 DTS Meas Guidance v03r03.

- (1) Set the $RBW \geq DTS$ Bandwidth
- (2) Set $VBW \geq 3 * RBW$
- (3) Set $Span \geq 3 * RBW$
- (4) Sweep time=auto
- (5) Detector= peak
- (6) Trace mode= maxhold.
- (7) Allow trace to fully stabilize, and then use peak marker function to determine the peak amplitude level.

8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.

8.5 Test Data

EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 1Mbps		
Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)	
2410	17.23	30	
2440	16.76		
2470	16.11		
GFSK Mode 1Mbps			
2410 MHz			

Agilent

Ref 30 dBm

Atten 40 dB

Mkr1 2.4099750 GHz
17.23 dBm

Peak

Log

10

dB/

Marker

2.409975000 GHz

17.23 dBm

M1 S2

S3 FC

AA

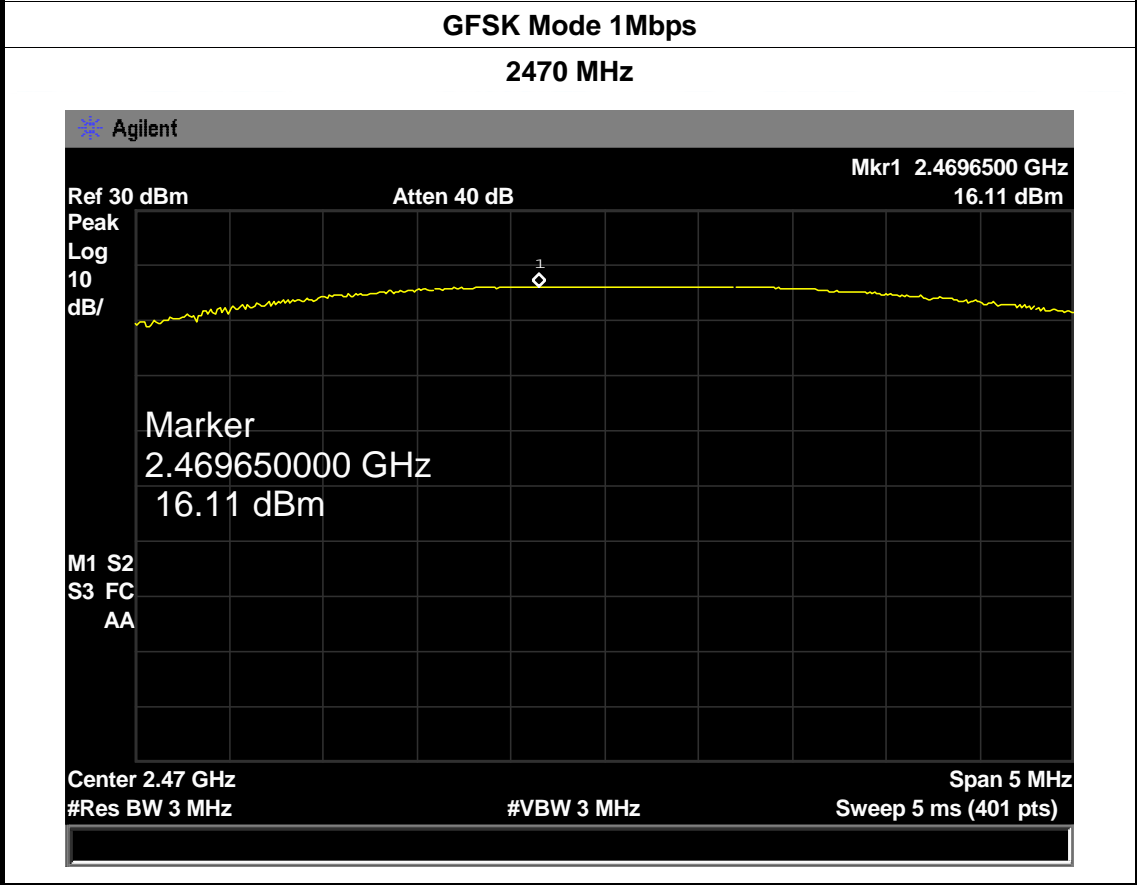
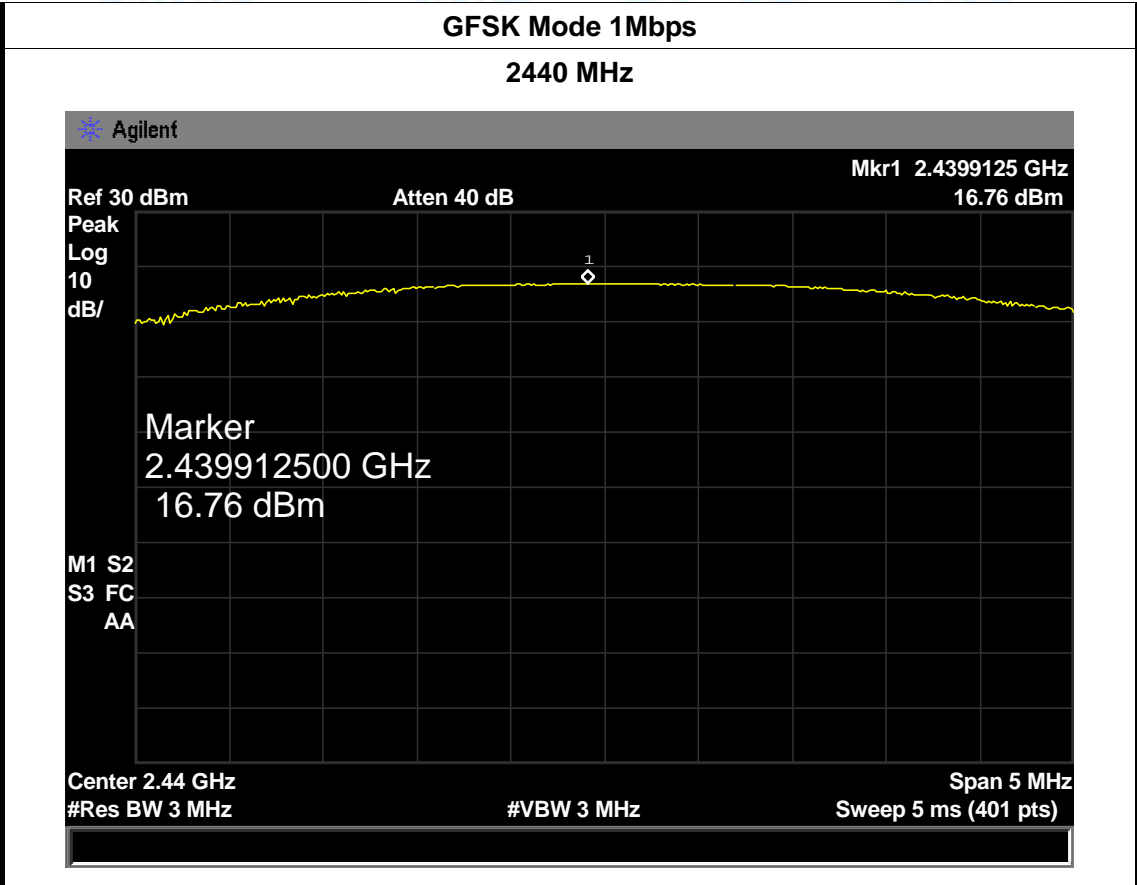
Center 2.41 GHz

#Res BW 3 MHz

#VBW 3 MHz

Span 5 MHz

Sweep 5 ms (401 pts)



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 2Mbps		
Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)	
2410	17.22	30	
2440	16.75		
2470	16.12		
GFSK Mode 2Mbps			
2410 MHz			

Agilent

Ref 30 dBm

Atten 40 dB

Mkr1 2.4100000 GHz
17.22 dBm

Peak

Log

10

dB/

Marker

2.41000000 GHz

17.22 dBm

M1 S2

S3 FC

AA

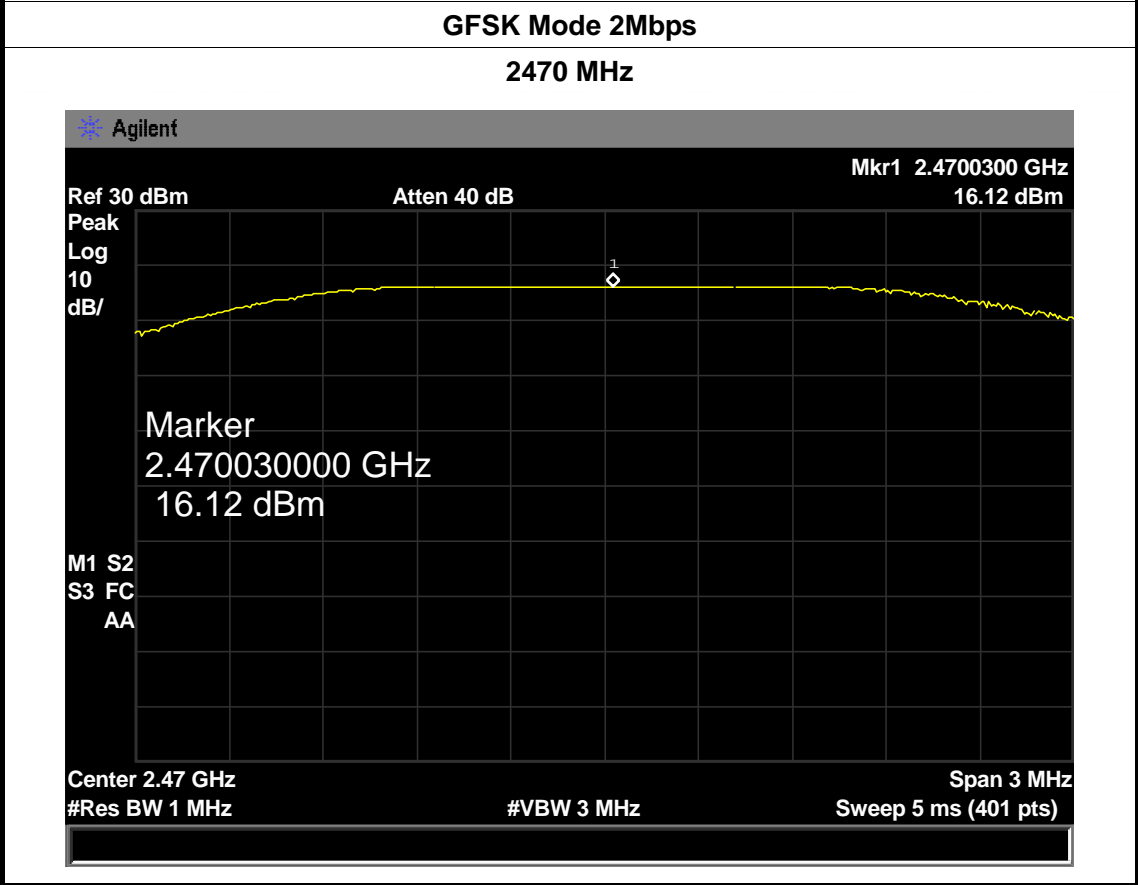
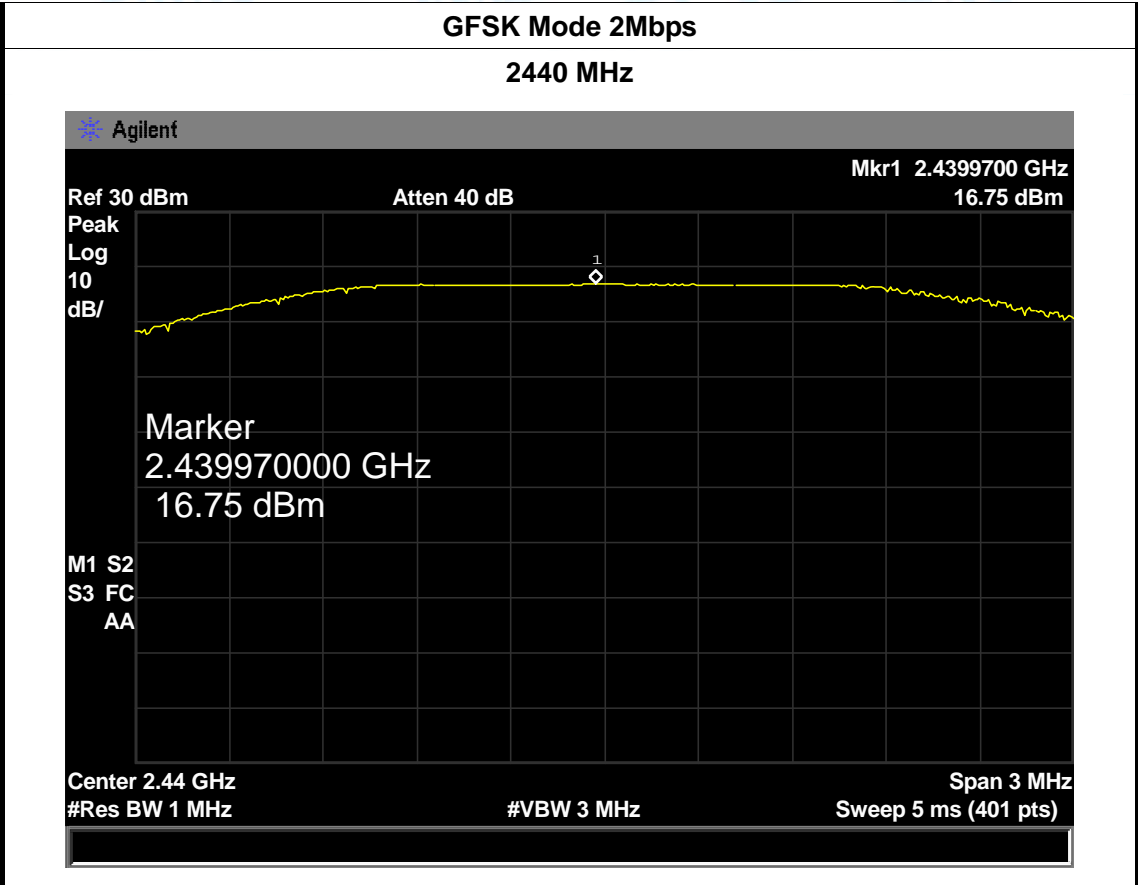
Center 2.41 GHz

#Res BW 1 MHz

#VBW 3 MHz

Span 3 MHz

Sweep 5 ms (401 pts)



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 250Kbps		
Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)	
2410	16.96	30	
2440	16.53		
2470	15.91		
GFSK Mode 250Kbps			
2410 MHz			

Agilent

Ref 30 dBm

Atten 40 dB

Mkr1 2.4101250 GHz
16.96 dBm

Peak

Log

10

dB/

Marker

2.410125000 GHz

16.96 dBm

M1 S2

S3 FC

AA

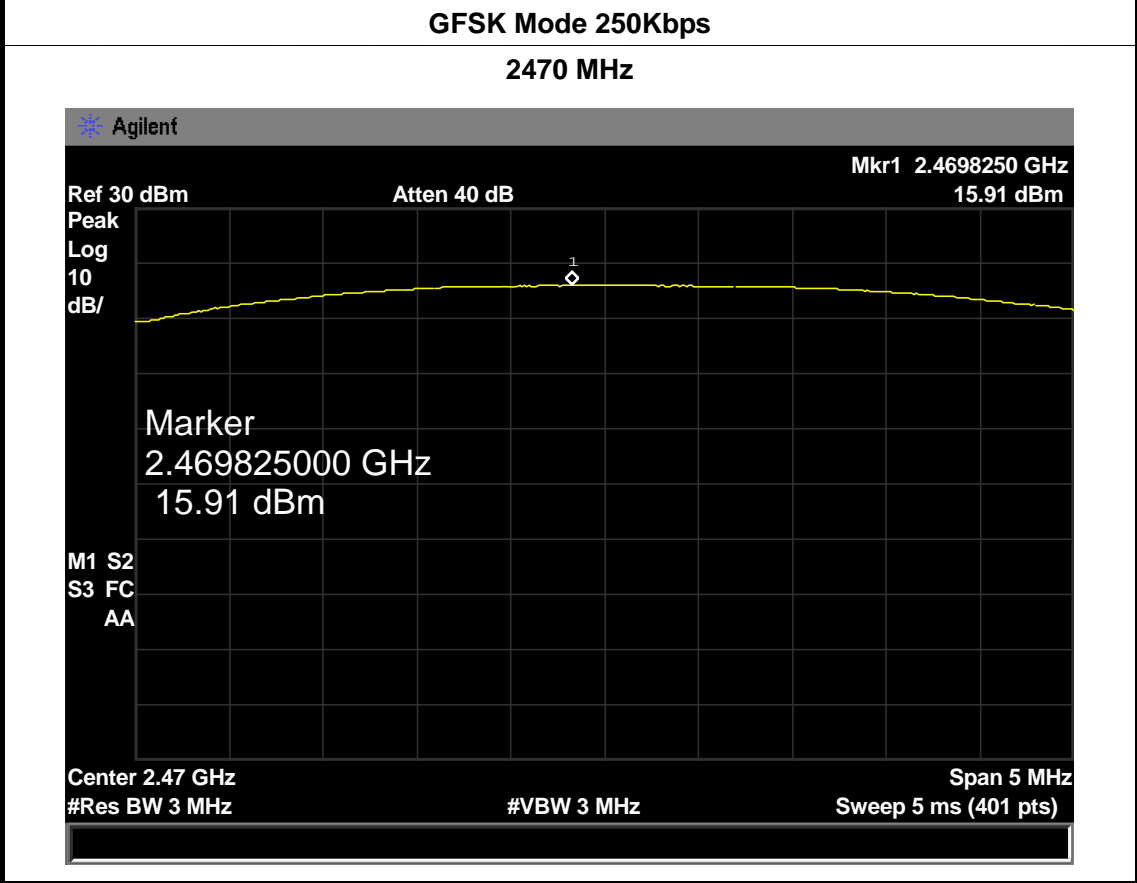
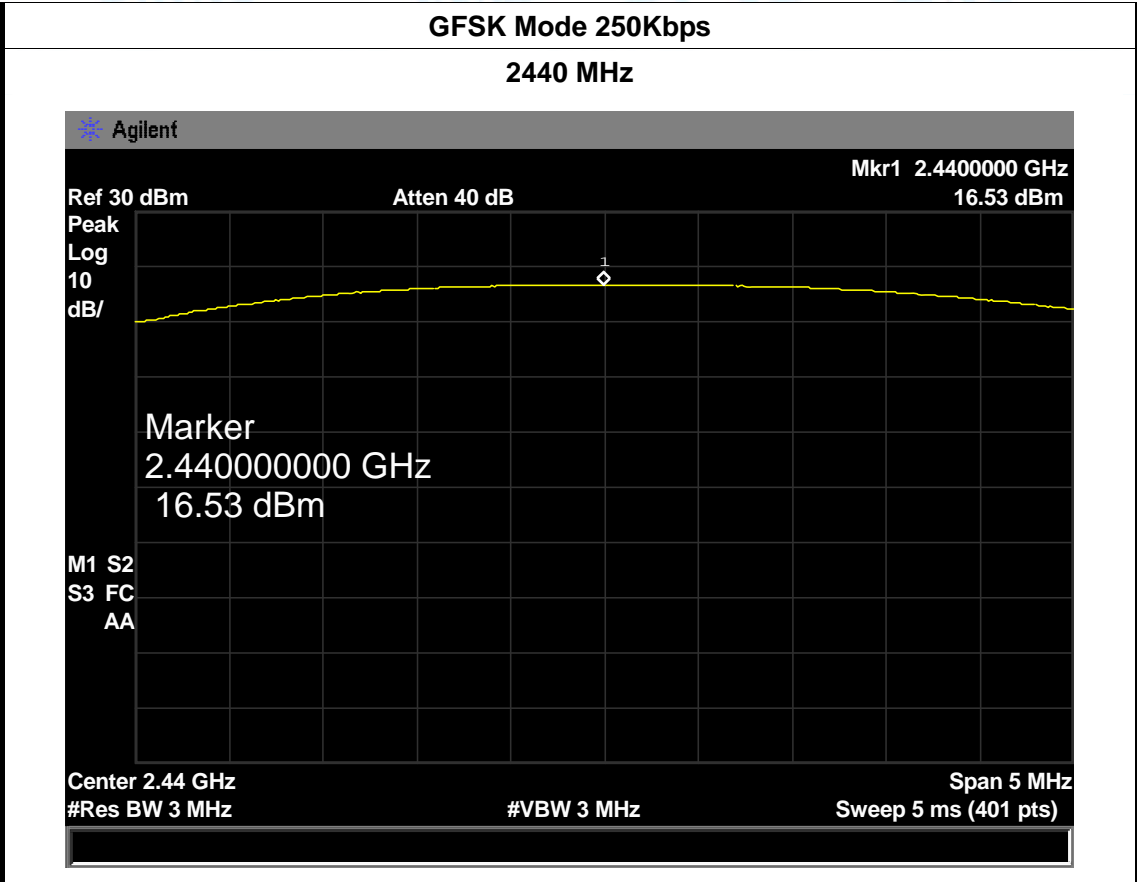
Center 2.41 GHz

#Res BW 3 MHz

#VBW 3 MHz

Span 5 MHz

Sweep 5 ms (401 pts)



9. Power Spectral Density Test

9.1 Test Standard and Limit

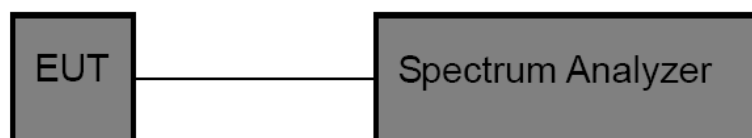
9.1.1 Test Standard

FCC Part 15.247 (e)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

9.2 Test Setup



9.3 Test Procedure

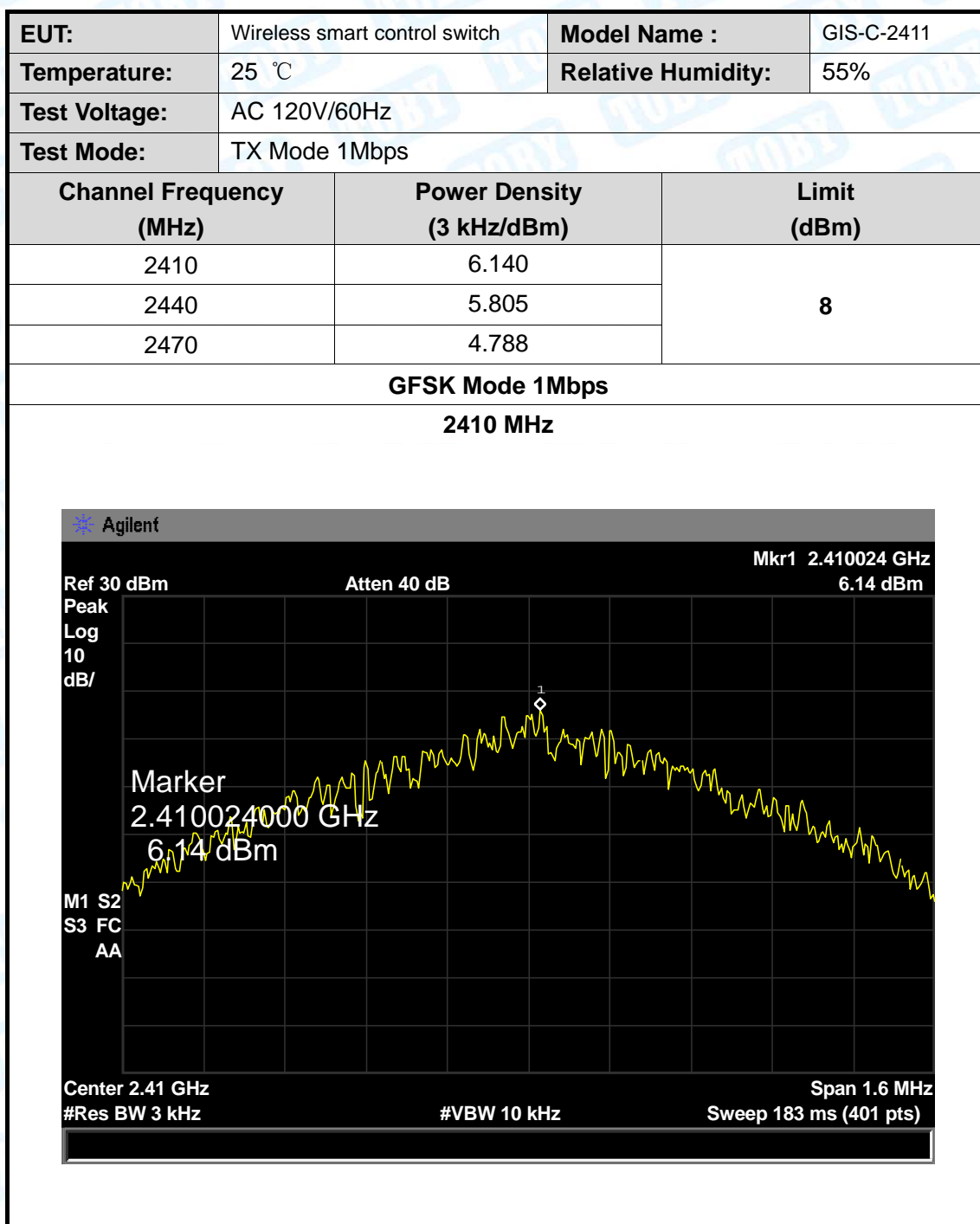
The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v03r03.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequencyc.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz
- (5) Set the VBW to: 10 kHz
- (6) Detector: peak
- (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

9.4 EUT Operating Condition

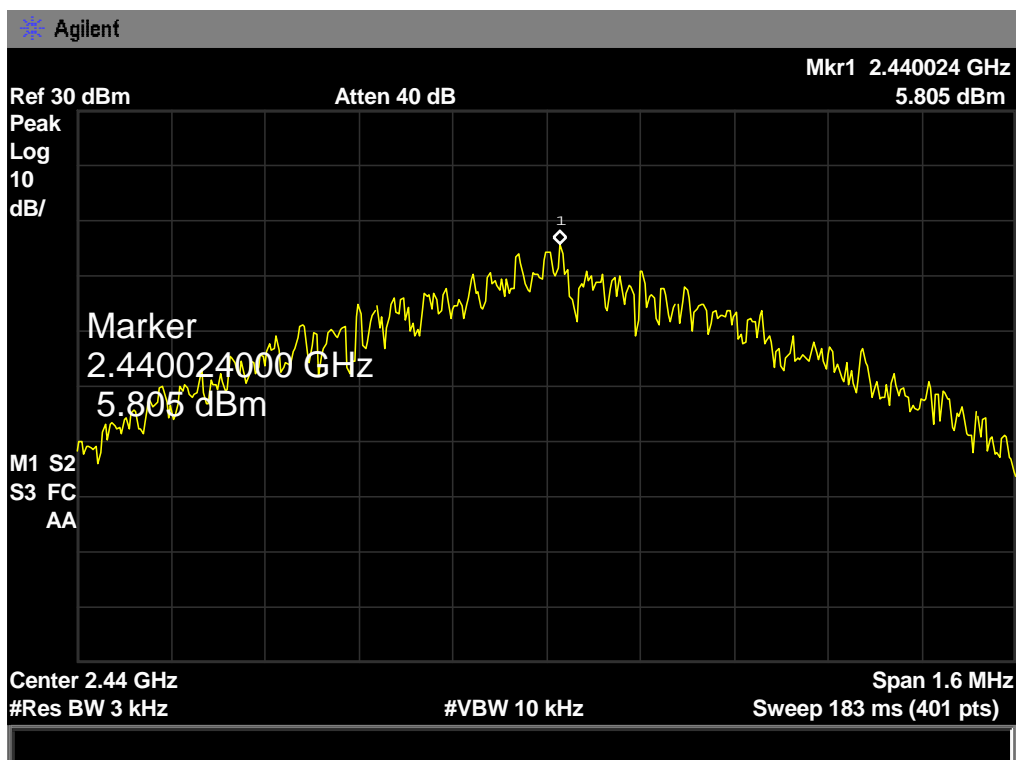
The EUT was set to continuously transmitting in each mode and low, Midle and high channel for the test.

8.5 Test Data



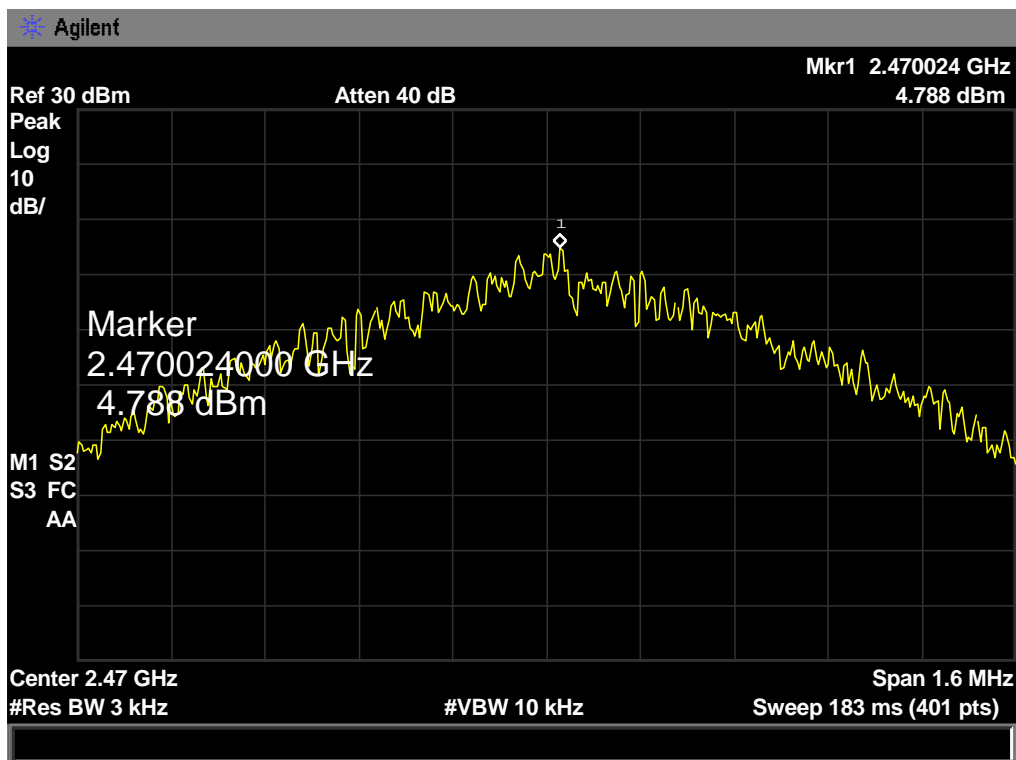
GFSK Mode 1Mbps

2440 MHz



GFSK Mode 1Mbps

2470 MHz



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 2Mbps		
Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)	
2410	4.632	8	
2440	4.341		
2470	3.696		
GFSK Mode 2Mbps			
2410 MHz			

Agilent

Ref 30 dBm

Atten 40 dB

Mkr1 2.41000000 GHz

4.632 dBm

Peak

Log

10

dB/

Marker

2.410000000 GHz

4.632 dBm

M1 S2

S3 FC

AA

Center 2.41 GHz

#Res BW 3 kHz

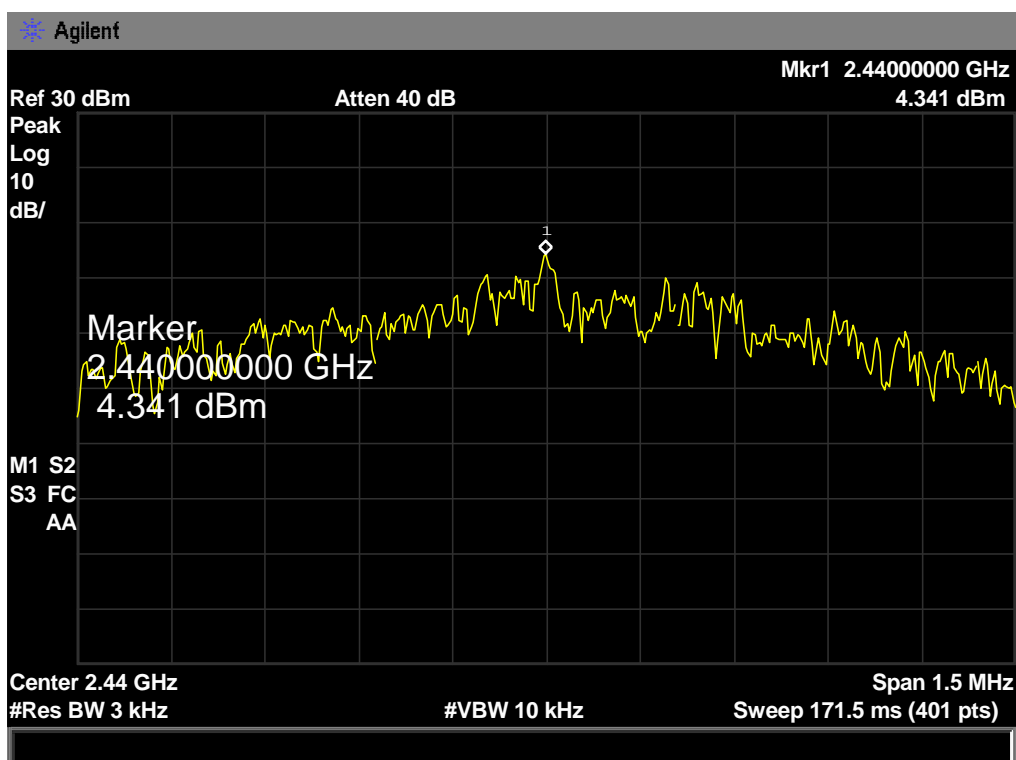
#VBW 10 kHz

Span 1.5 MHz

Sweep 171.5 ms (401 pts)

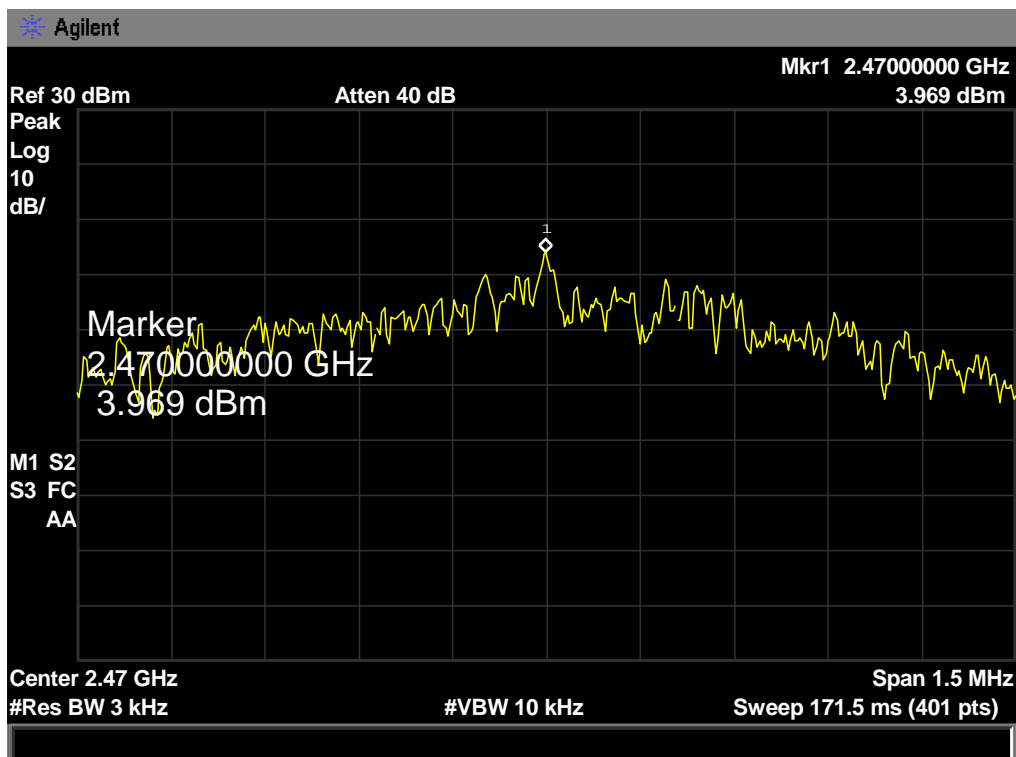
GFSK Mode 2Mbps

2440 MHz



GFSK Mode 2Mbps

2470 MHz



EUT:	Wireless smart control switch	Model Name :	GIS-C-2411
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX Mode 250Kbps		
Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)	
2410	5.748	8	
2440	6.924		
2470	6.997		
GFSK Mode 250Kbps			
2410 MHz			

Agilent

Ref 30 dBm

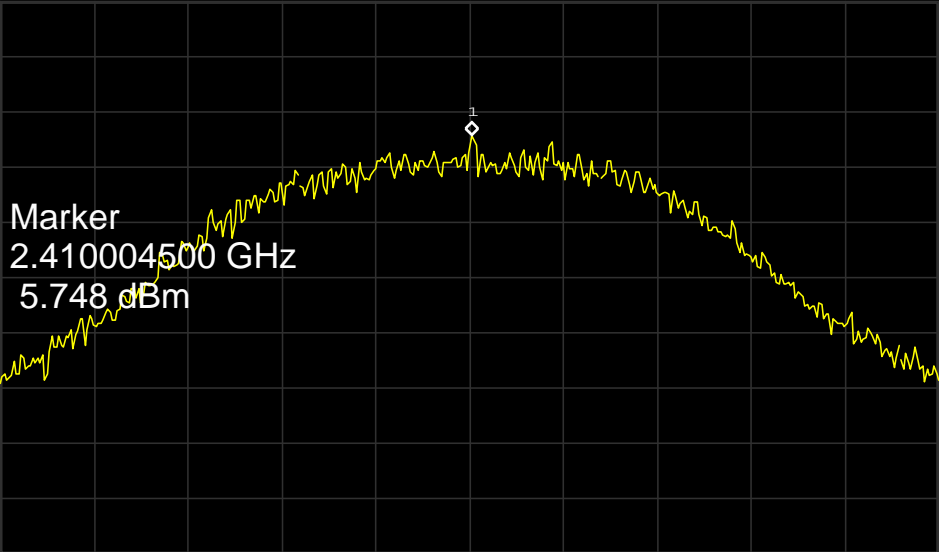
Atten 40 dB

Mkr1 2.4100045 GHz
5.748 dBm

Peak Log 10 dB/

Marker 2.410004500 GHz
5.748 dBm

M1 S2
S3 FC
AA



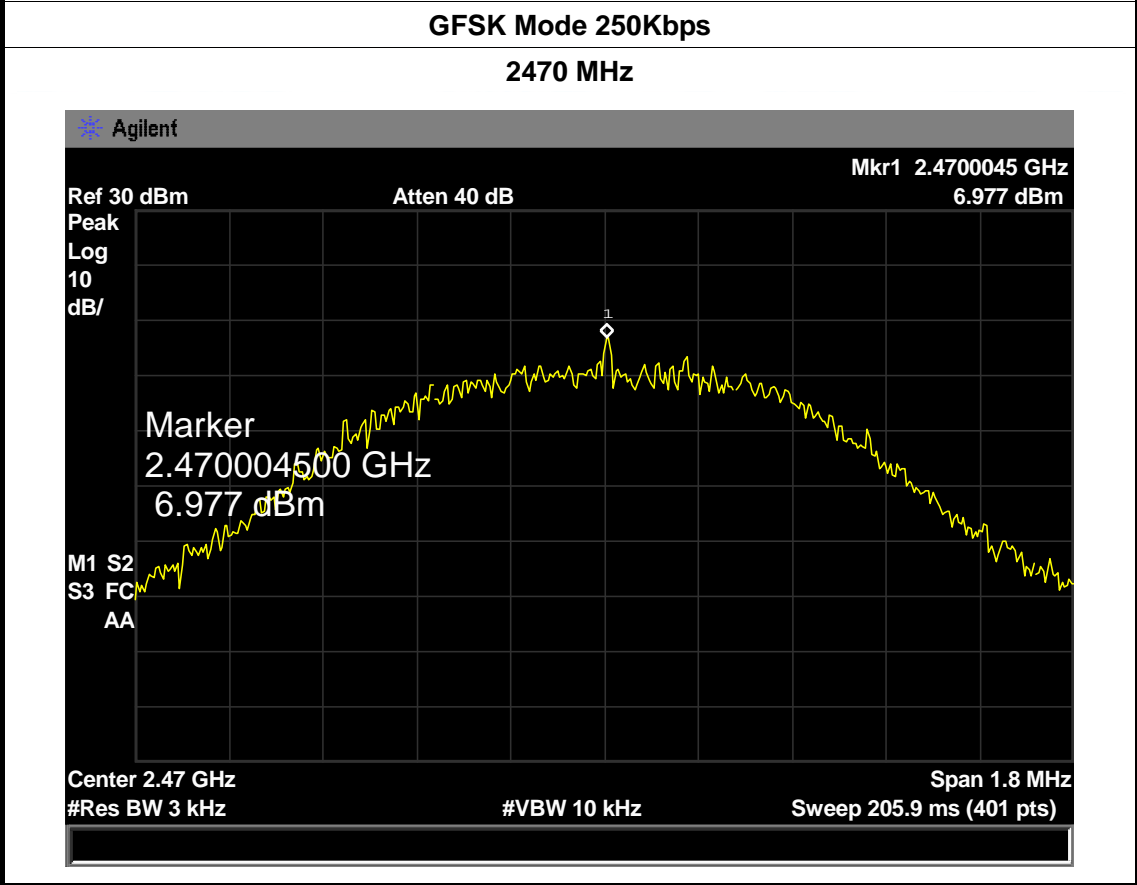
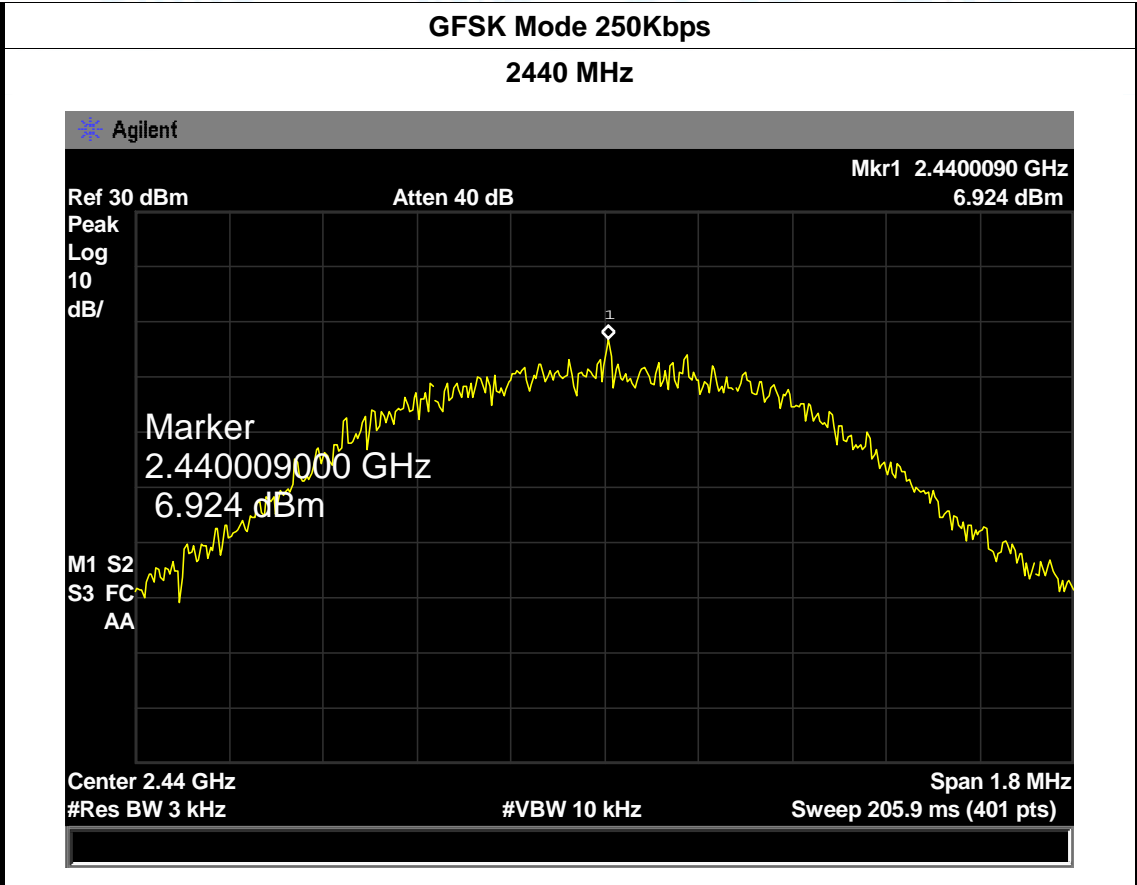
Center 2.41 GHz

#Res BW 3 kHz

#VBW 10 kHz

Span 1.8 MHz

Sweep 205.9 ms (401 pts)



10. Antenna Requirement

10.1 Standard Requirement

10.1.1 Standard

FCC Part 15.203

10.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 1.5 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

10.3 Result

The EUT antenna is a PCB Antenna. It complies with the standard requirement.

Antenna Type
<input checked="" type="checkbox"/> Permanent attached antenna
<input type="checkbox"/> Unique connector antenna
<input type="checkbox"/> Professional installation antenna