FCC Radio Test Report

FCC ID: 2APR6-M712W

This report concerns (check one): ☒Original Grant ☐Class II Change

Project No.	: 1805C013
Equipment	: Wireless Optical Mouse
Test Model	: M712
Series Model	: N/A
Applicant	: Shenzhen Doking Technology Co.,Ltd
Address	: 21FJiayu Building Songgang Town Baoan District Shenzhen

Date of Receipt	: May 10, 2018
Date of Test	: May 10, 2018 ~ Jun. 11, 2018
Issued Date	: Jun. 28, 2018
Tested by	: BTL Inc.

Testing Engineer : Vincent. Tan
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NVLAP® TESTING NVLAP LAB CODE 200788-0

Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1805C013	Original Issue.	Jun. 28, 2018

1. CERTIFICATION

Equipment	:	Wireless Optical Mouse
Brand Name	:	Doking
Test Model	:	M712
Series Model	:	N/A
Applicant	:	Shenzhen Doking Technology Co.,Ltd
Manufacturer	:	Shenzhen Doking Technology Co.,Ltd
Address	:	21FJiayu Building Songgang Town Baoan District Shenzhen
Factory Address		Shenzhen Doking Technology Co.,Ltd 2/F, 3/F,BulidingA&3/F,BulidingB, Dingfeng Hi-Tech Park,Shapuwei Industrial Zone,Songgang -Town,Baoan District Shenzhen, Guangdong,China
Date of Test	:	May 10, 2018 ~ Jun. 11, 2018
Test Sample	:	Engineering Sample NO.: D180503642
Standard(s)	:	FCC Part15, Subpart C (15.249) / ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1805C013) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15, Subpart C (15.249)			
Standard(s) Section	Test Item	Judgment	Remark
15.209 15.249	Radiated Spurious Emissions	PASS	
-	Bandwidth	PASS	

NOTE:

(1)" N/A" denotes test is not applicable to this device.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's test firm number for FCC: 854385
BTL's designation number for FCC: CN5020

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty figures shall be calculated according the methods described in the ETSI TR 100 028 and shall correspond to an expansion factor (coverage factor) k=1.96 or k=2(which provide confidence levels of respectively 90% and 95.45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)). Measurement Uncertainty for a Level of Confidence of 95 %, U=2xUc(y).

The BTL measurement uncertainty as below table:

A. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9KHz~30MHz	V	3.79
		9KHz~30MHz	H	3.57
		30MHz ~ 200MHz	V	3.82
		30MHz ~ 200MHz	H	3.78
		200MHz ~ 1,000MHz	V	4.10
		200MHz ~ 1,000MHz	H	4.06
		1GHz~18GHz	V	3.12
		1GHz~18GHz	H	3.68
		18GHz~40GHz	V	4.15
		18GHz~40GHz	H	4.14

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 DESCRIPTION OF EUT

Equipment	Wireless Optical Mouse	
Brand Name	Doking	
Test Model	M712	
Series Model	N/A	
Model Difference	N/A	
Product Description	Operation Frequency	2410 ~ 2473 MHz
	Modulation Technology	GFSK
	Bit Rate of Transmitter	1 Mbps
	Field Strength	92.71 dBuV/m (Peak Max) 76.51 dBuV/m (AVG Max)
Power Source	Supplied from 2*AAA batteries.	
EUT Power Rating	DC 3V	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2410	01	2442	02	2473

3. Table for Filed Antenna

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PCB	N/A	0

3.2 DESCRIPTION OF TEST MODES

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 above was evaluated respectively.

Pretest Mode	Description
Mode 1	TX Mode

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Radiated Test	
Final Test Mode	Description
Mode 1	TX Mode **NOTE (1)**

Note:

(1) The measurements are performed at the high, middle, low available channels.

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

3.5 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	-

Note:
(1) The support equipment was authorized by Declaration of Conformity (DOC).

4. EMC EMISSION TEST

4.1 RADIATED EMISSION MEASUREMENT

4.1.1 RADIATED EMISSION LIMITS (FCC 15.209)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other 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 comply with the radiated emissions limits specified in section15.209(a) limit in the table below has to be followed.

Note:

(1) The tighter limit applies at the band edges.

(2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.209)

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

Notes:

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

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC Part 15.249)

FCC Part15 (15.249) , Subpart C	
Limit	Frequency Range(MHz)
Field strength of fundamental 50000 μV/m (94 dBμV/m) @ 3 m	2400-2483.5
Field strength of harmonics 500 μV/m (54 dBμV/m) @ 3 m	Above 2483.5

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.1.2 TEST PROCEDURE

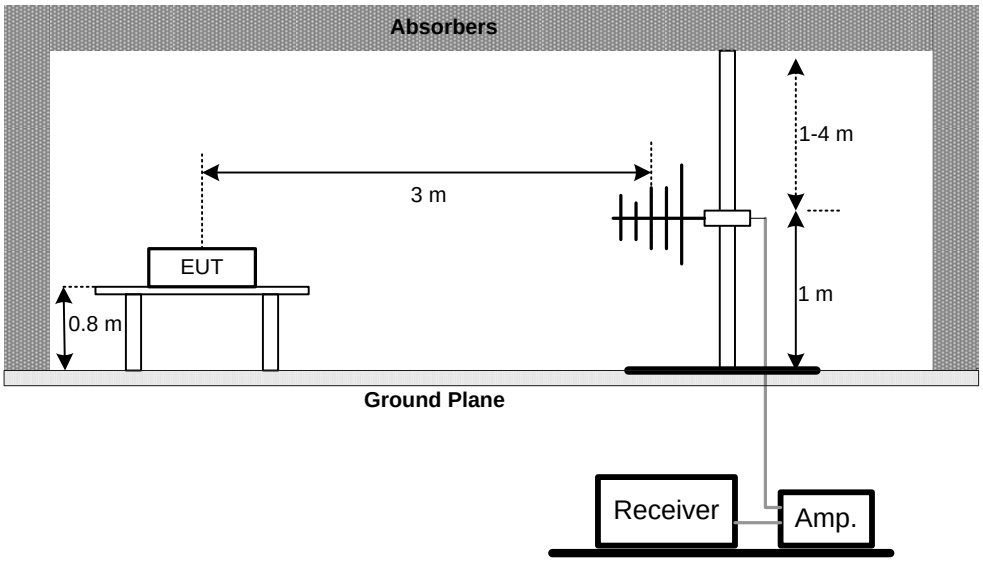
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

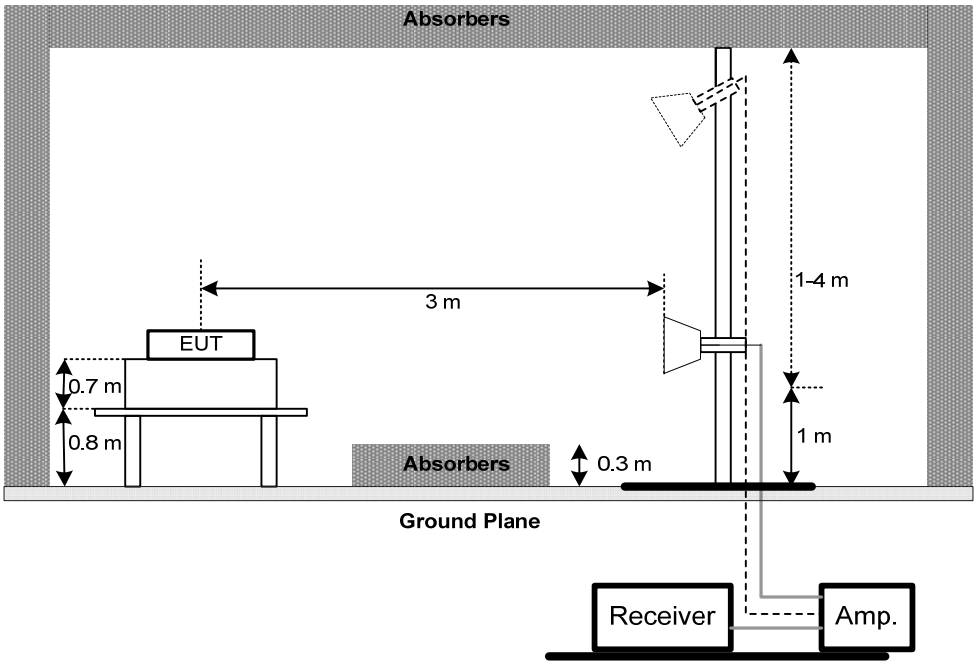
No deviation

4.1.4 TEST SETUP

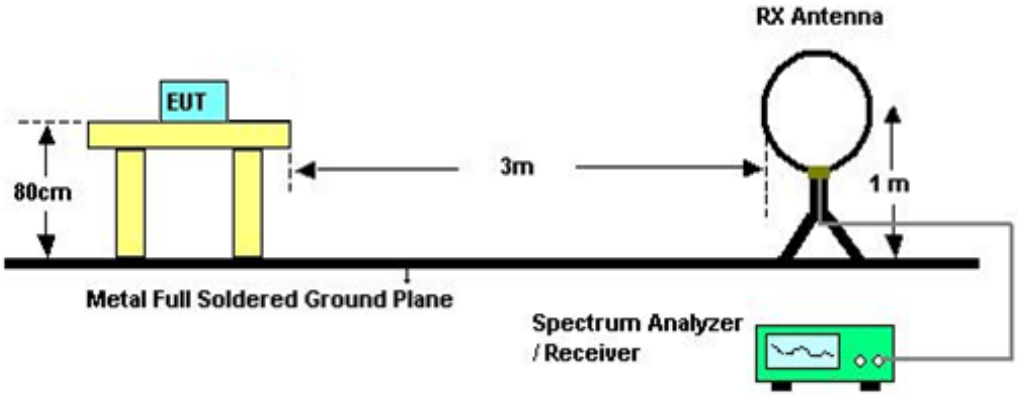
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



(C) For radiated emissions below 30MHz



4.1.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.5** unless otherwise a special operating condition is specified in the follows during the testing.

4.1.6 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 60%
Test Voltage: DC 3V

4.1.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix A.

Remark:

(1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
(2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.1.8 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix B.

Remark:

(1) Measuring frequency range from 30MHz to 1000MHz.
(2) If the peak scan value lower limit more than 20dB, then this signal data does not show in table.

4.1.9TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Appendix D.

Remark:

(1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission

(2) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(3) EUT Orthogonal Axis:
”X” - denotes Laid on Table, ”Y” - denotes Vertical Stand, ”Z” - denotes Side Stand

(4) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

(5) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

5. BANDWIDTH TEST

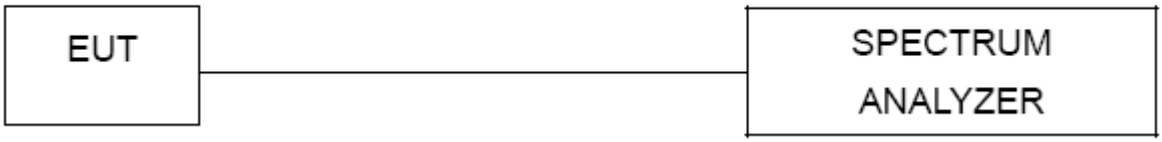
5.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

5.2 DEVIATION FROM STANDARD

No deviation.

5.3 TEST SETUP



5.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.5 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 60%
Test Voltage: DC 3V

5.6 TEST RESULTS

Please refer to the Appendix C.

6. MEASUREMENT INSTRUMENTS LIST

Radiated Emission Below 1GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 11, 2019
2	Amplifier	HP	8447D	2944A09673	Oct. 19, 2018
3	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	Jun. 26, 2018
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
8	Antenna	EM	EM-6876-1	230	Mar. 11, 2019

Radiated Emission Above 1GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 11, 2019
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Mar. 11, 2019
3	Amplifier	Agilent	8449B	3008A02274	Mar. 11, 2019
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 11, 2019
5	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018
6	Antenna	EM	EM-6876-1	230	Mar. 11, 2019
7	Controller	CT	SC100	N/A	N/A
8	Controller	MF	MF-7802	MF780208416	N/A
9	Cable	emci	EMC104-SM-SM-1 2000(12m)	N/A	Jun. 26, 2018
10	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

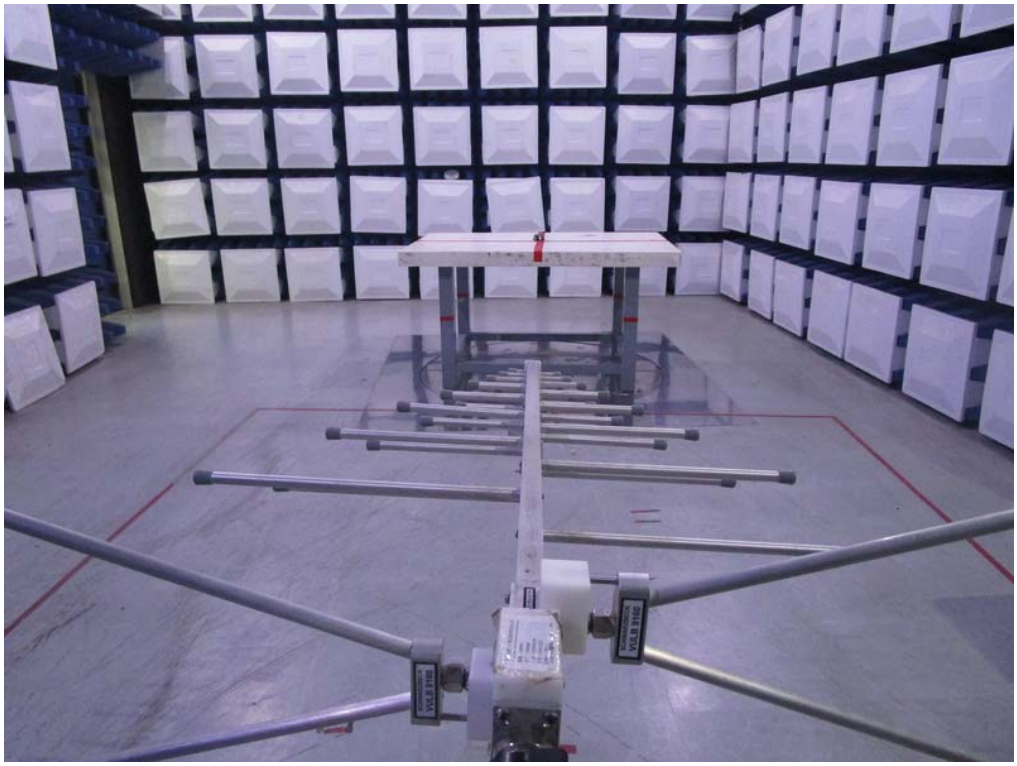
7. EUT TEST PHOTO

Radiated Measurement Photos

9KHz to 30MHz

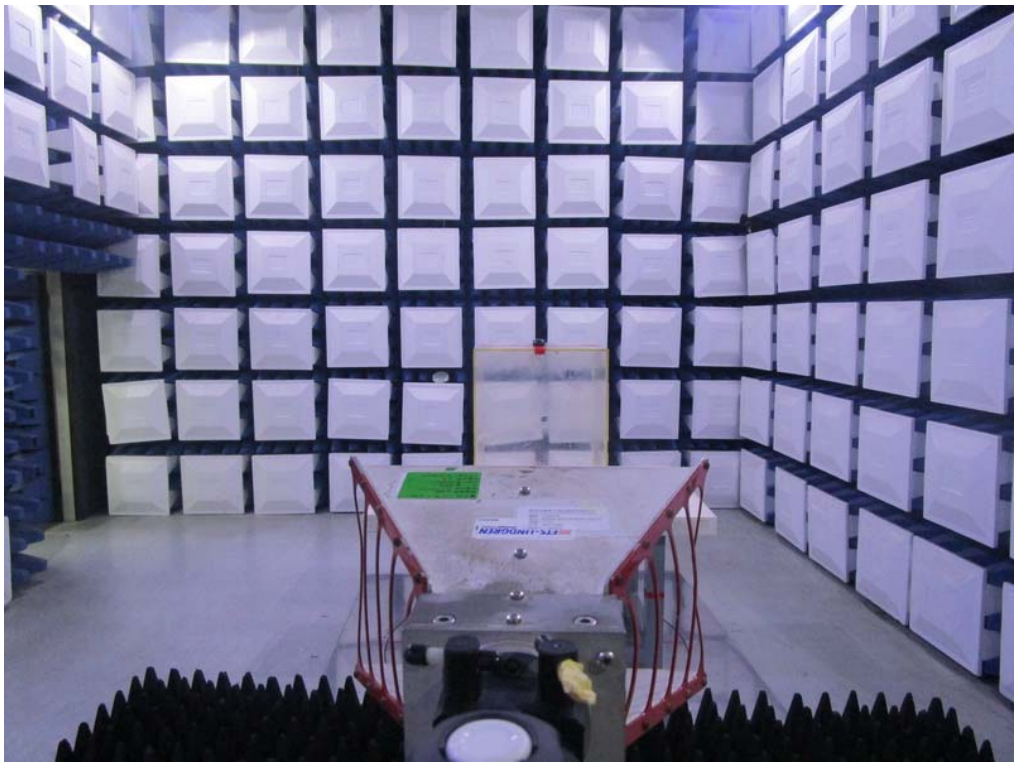
Radiated Measurement Photos

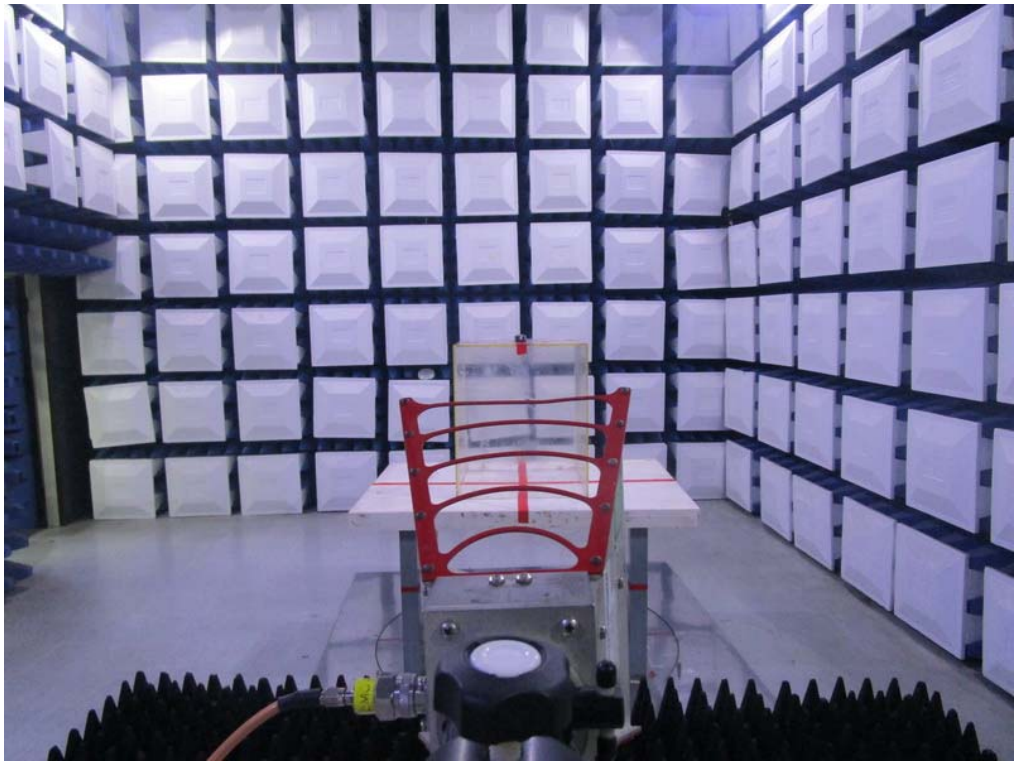
30MHz to 1000MHz



Radiated Measurement Photos

Above 1000MHz

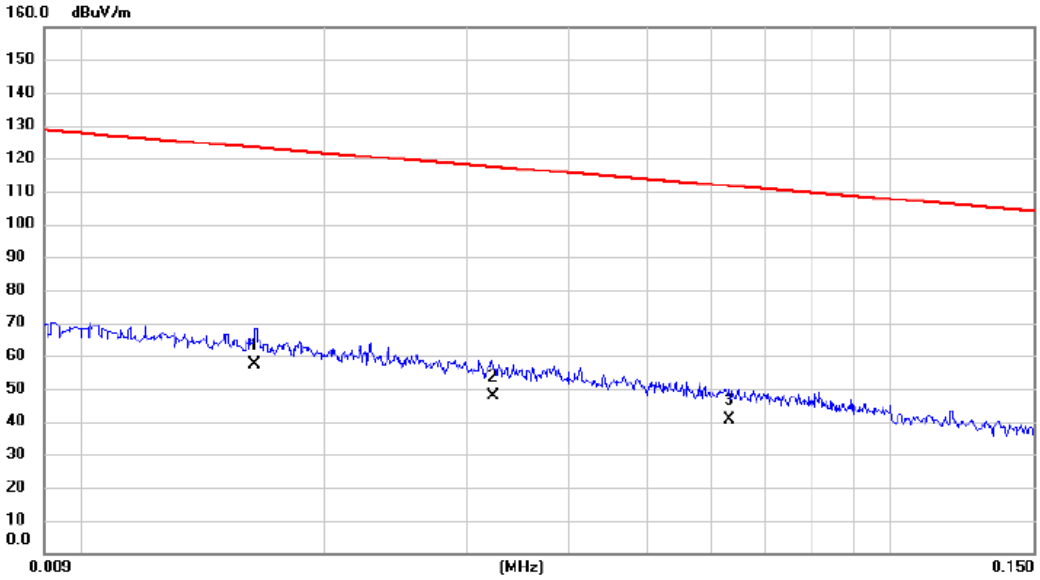




APPENDIX A - RADIATED EMISSION (9KHZ TO 30MHZ)

Test Mode:	TX MODE

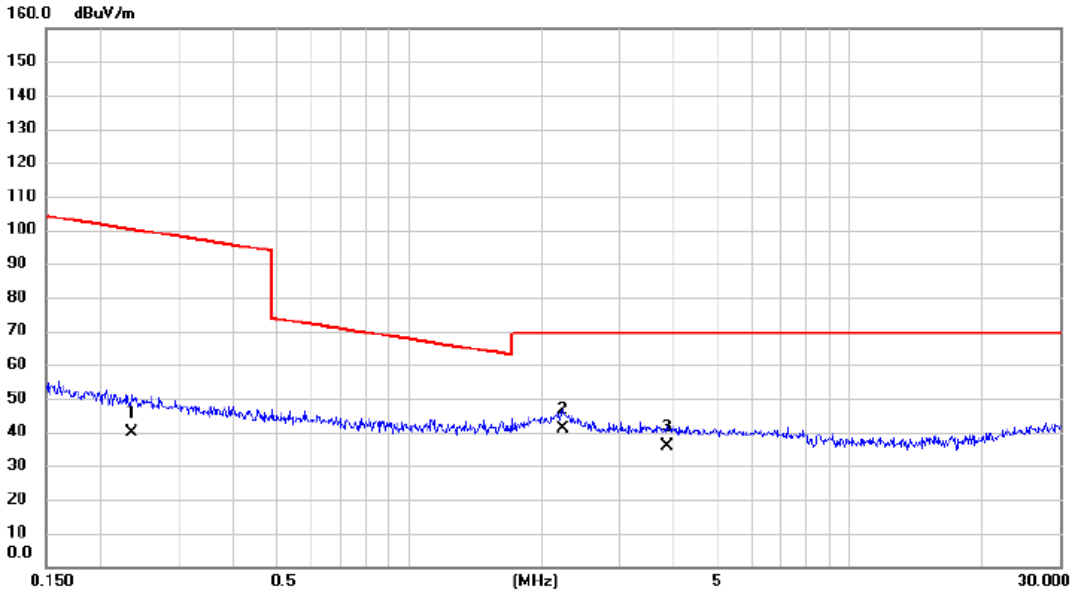
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.016	37.20	20.09	57.29	123.31	-66.02	AVG	
2		0.032	28.60	19.25	47.85	117.42	-69.57	AVG	
3		0.063	22.10	18.47	40.57	111.59	-71.02	AVG	

Test Mode:	TX MODE

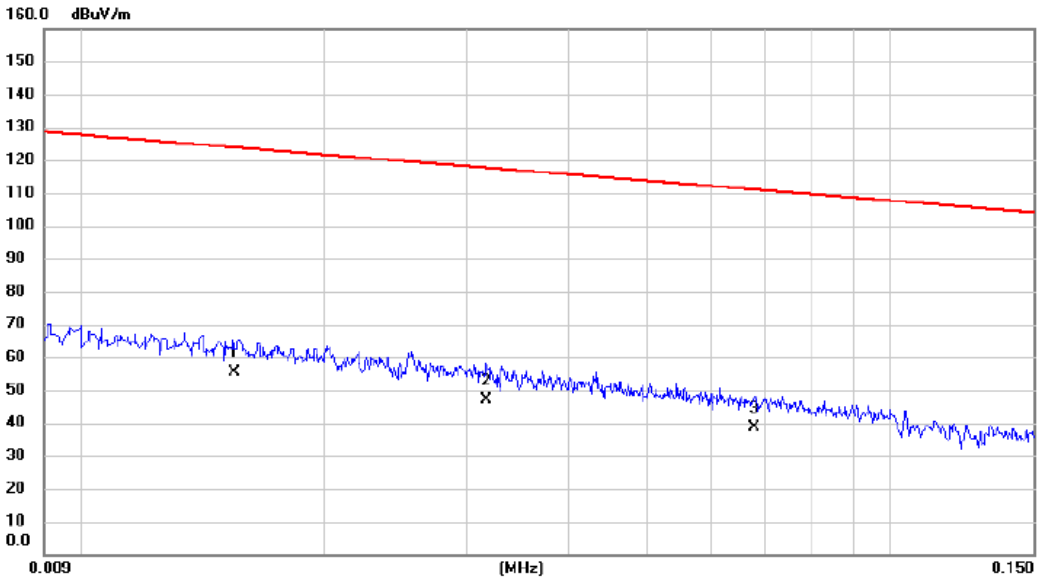
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.235	23.20	16.69	39.89	100.17	-60.28	AVG	
2	*	2.237	25.50	15.44	40.94	69.54	-28.60	QP	
3		3.840	20.70	15.00	35.70	69.54	-33.84	QP	

Test Mode:	TX MODE

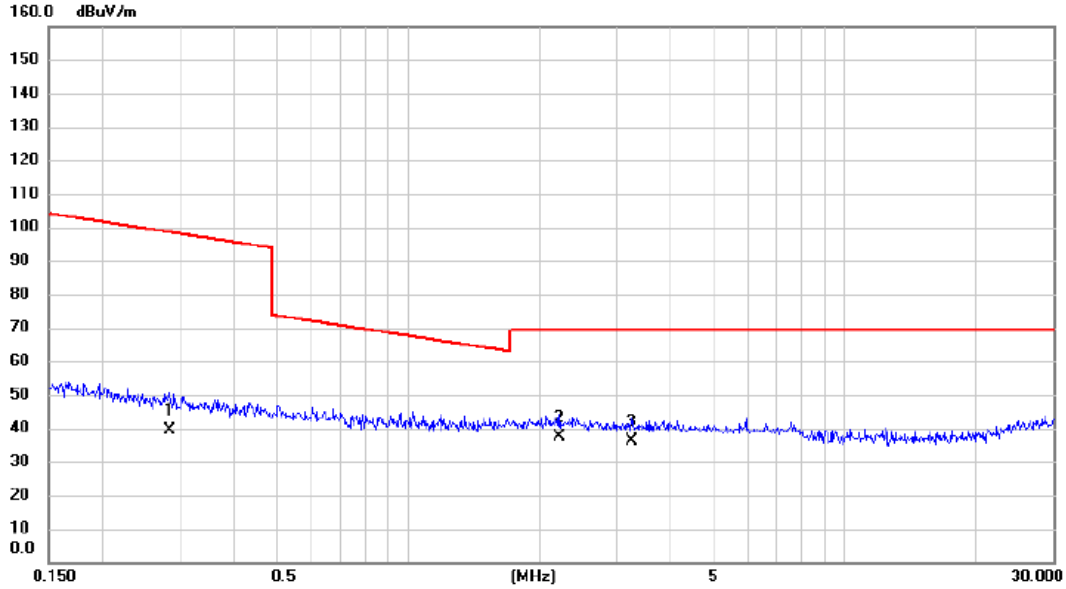
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.015	35.10	20.20	55.30	123.80	-68.50	AVG	
2		0.032	27.80	19.27	47.07	117.58	-70.51	AVG	
3		0.068	20.10	18.37	38.47	110.98	-72.51	AVG	

Test Mode:	TX MODE

Ant 90°

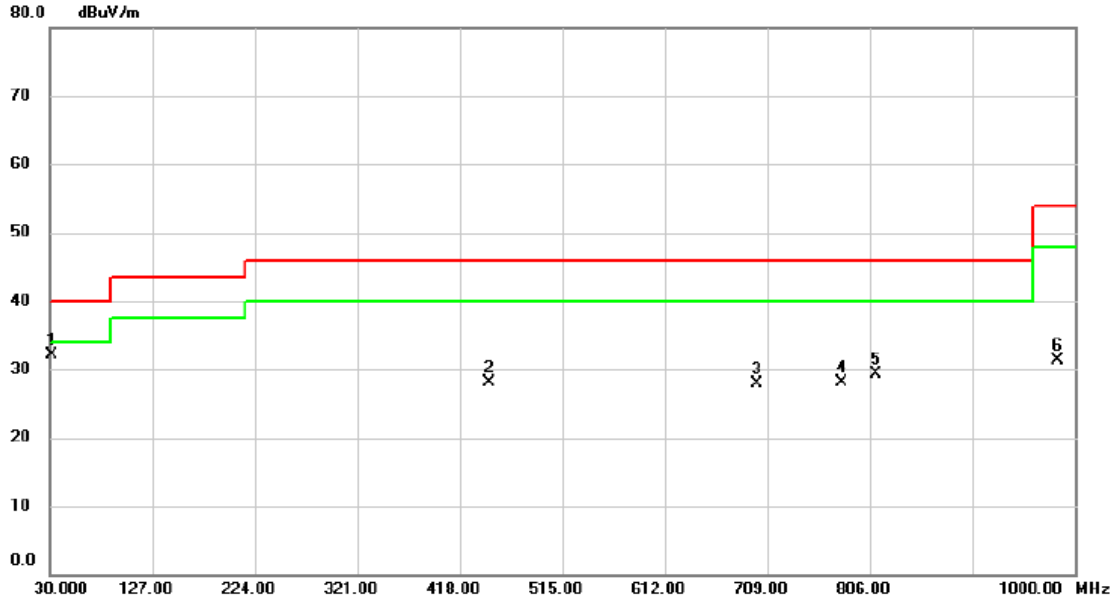


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.285	22.70	16.63	39.33	98.52	-59.19	AVG	
2	*	2.225	21.80	15.44	37.24	69.54	-32.30	QP	
3		3.258	21.10	15.16	36.26	69.54	-33.28	QP	

APPENDIX C - RADIATED EMISSION (30MHZ TO 1000MHZ)

Test Mode:	TX 2410MHz

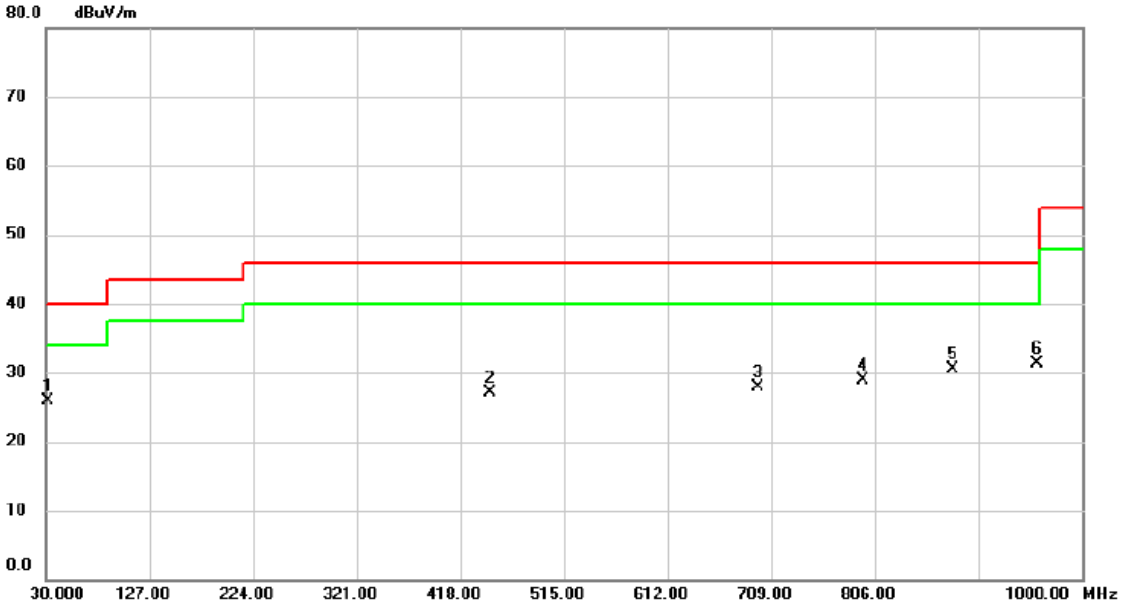
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	31.455	45.75	-13.56	32.19	40.00	-7.81	peak	
2		445.160	34.56	-6.55	28.01	46.00	-17.99	peak	
3		699.785	28.80	-0.93	27.87	46.00	-18.13	peak	
4		778.840	28.78	-0.68	28.10	46.00	-17.90	peak	
5		812.305	29.04	0.32	29.36	46.00	-16.64	peak	
6		983.510	29.43	1.89	31.32	54.00	-22.68	peak	

Test Mode:	TX 2410MHz

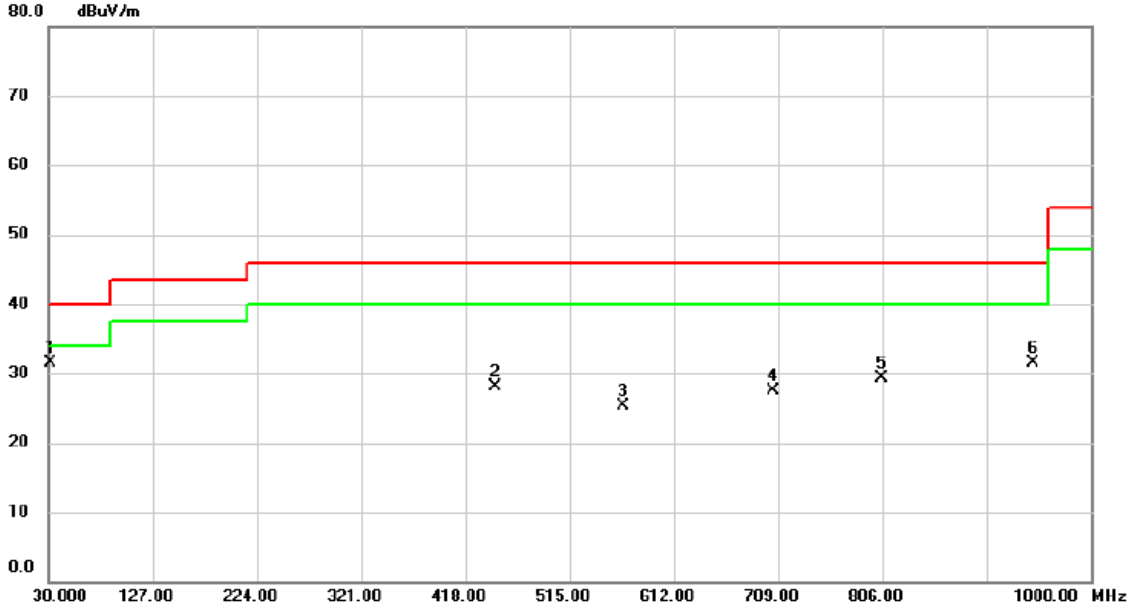
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	31.940	39.42	-13.59	25.83	40.00	-14.17	peak	
2		445.645	33.70	-6.53	27.17	46.00	-18.83	peak	
3		696.875	28.99	-1.07	27.92	46.00	-18.08	peak	
4		794.845	28.73	0.21	28.94	46.00	-17.06	peak	
5		879.235	30.31	0.21	30.52	46.00	-15.48	peak	
6		958.290	28.87	2.41	31.28	46.00	-14.72	peak	

Test Mode:	TX 2442MHz

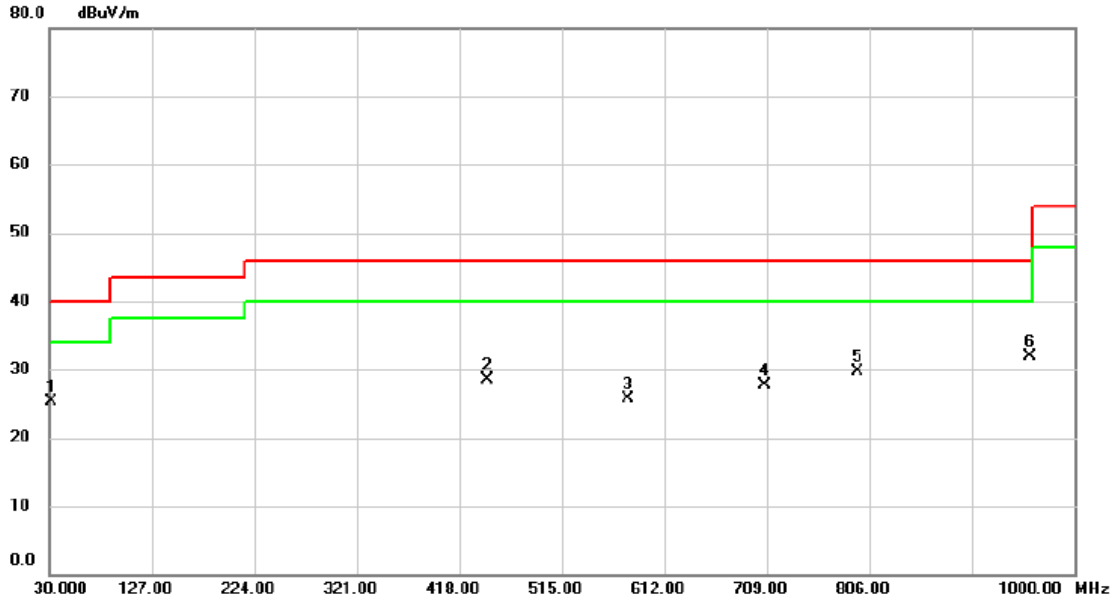
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	31.455	45.07	-13.56	31.51	40.00	-8.49	peak	
2		445.160	34.62	-6.55	28.07	46.00	-17.93	peak	
3		564.955	29.47	-4.21	25.26	46.00	-20.74	peak	
4		704.635	28.47	-1.05	27.42	46.00	-18.58	peak	
5		805.515	28.94	0.42	29.36	46.00	-16.64	peak	
6		946.650	29.10	2.44	31.54	46.00	-14.46	peak	

Test Mode:	TX 2442MHz

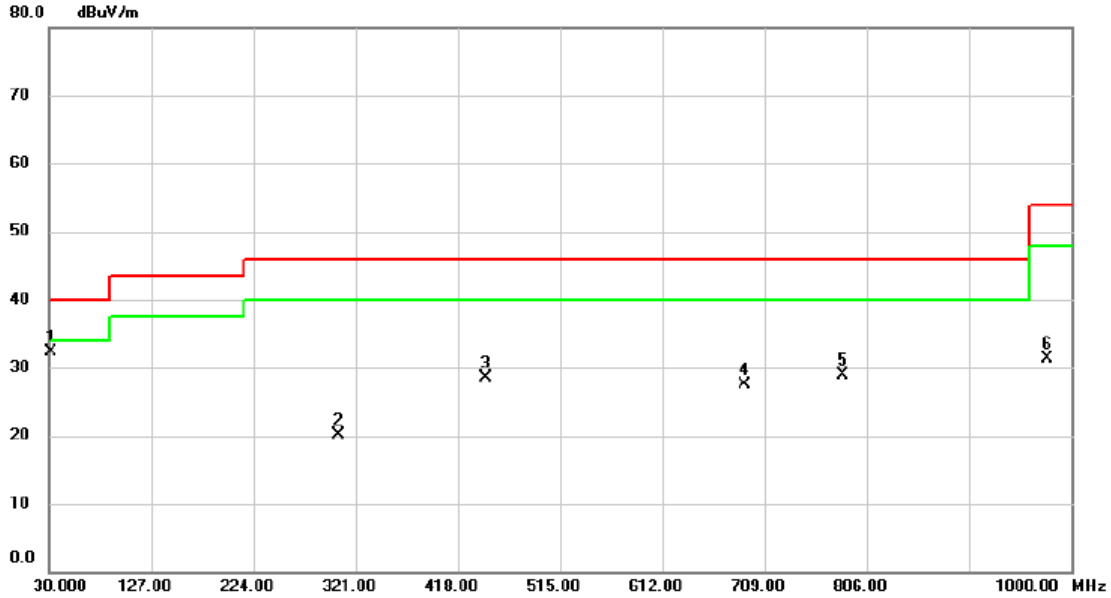
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		31.940	38.83	-13.59	25.24	40.00	-14.76	peak	
2		444.675	35.02	-6.57	28.45	46.00	-17.55	peak	
3		577.565	30.00	-4.23	25.77	46.00	-20.23	peak	
4		706.575	28.81	-1.10	27.71	46.00	-18.29	peak	
5		794.845	29.49	0.21	29.70	46.00	-16.30	peak	
6	*	958.290	29.50	2.41	31.91	46.00	-14.09	peak	

Test Mode:	TX 2473MHz

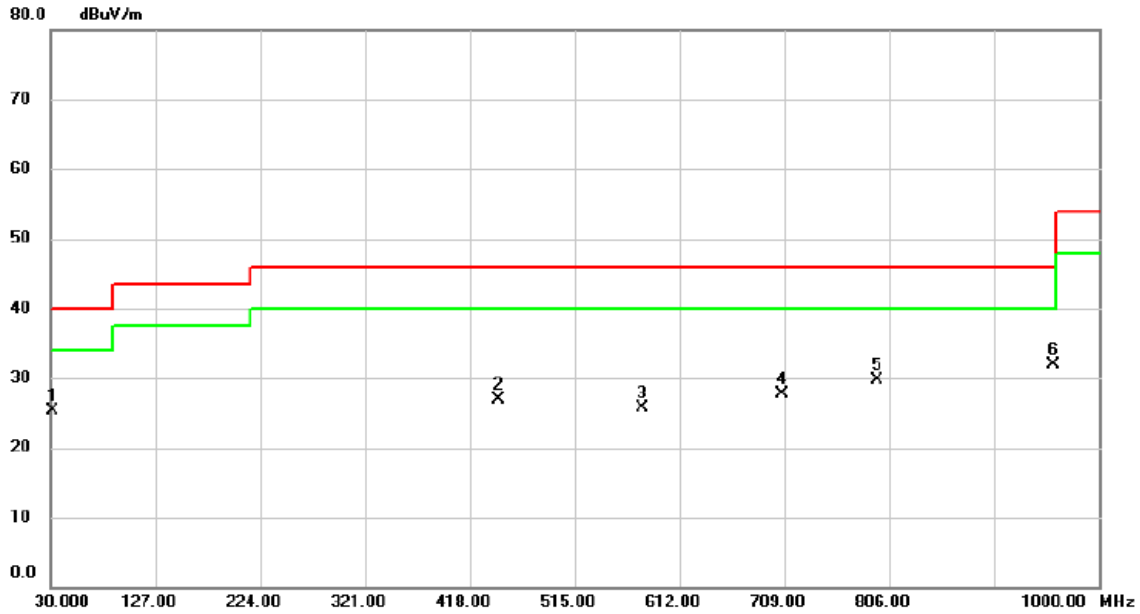
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	31.455	45.89	-13.56	32.33	40.00	-7.67	peak	
2		304.995	30.70	-10.56	20.14	46.00	-25.86	peak	
3		444.675	35.05	-6.57	28.48	46.00	-17.52	peak	
4		690.570	28.87	-1.37	27.50	46.00	-18.50	peak	
5		783.690	29.40	-0.42	28.98	46.00	-17.02	peak	
6		976.720	29.28	2.03	31.31	54.00	-22.69	peak	

Test Mode:	TX 2473MHz

Horizontal

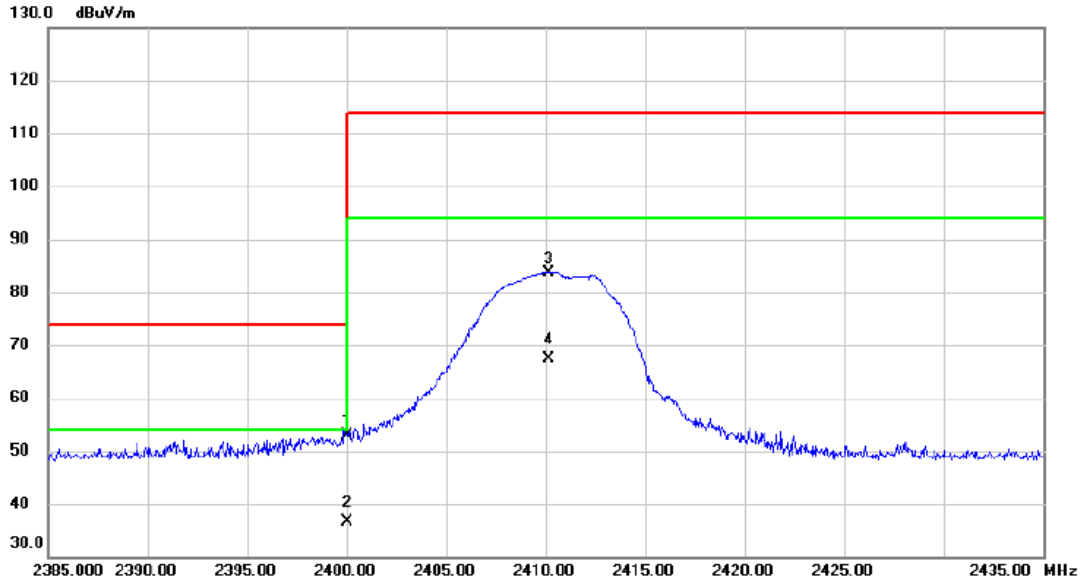


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		31.940	38.83	-13.59	25.24	40.00	-14.76	peak	
2		444.190	33.59	-6.59	27.00	46.00	-19.00	peak	
3		577.565	30.00	-4.23	25.77	46.00	-20.23	peak	
4		706.575	28.81	-1.10	27.71	46.00	-18.29	peak	
5		794.845	29.49	0.21	29.70	46.00	-16.30	peak	
6	*	958.290	29.50	2.41	31.91	46.00	-14.09	peak	

APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

Test Mode	TX Mode_2410 MHz

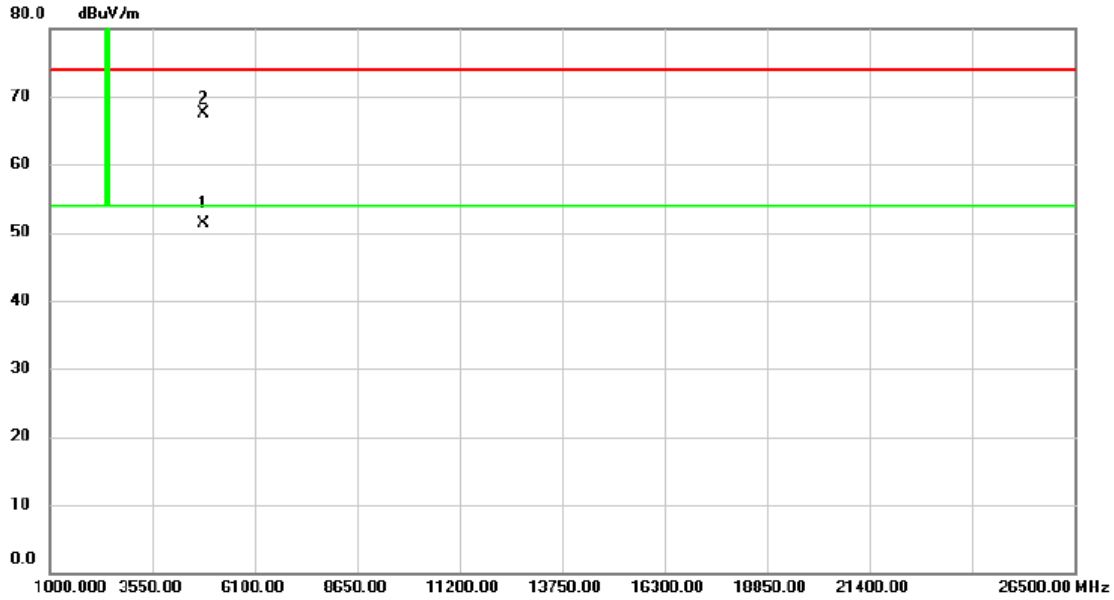
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2400.000	43.88	9.00	52.88	74.00	-21.12	peak	
2	*	2400.000	27.68	9.00	36.68	54.00	-17.32	AVG	
3		2410.200	74.63	9.00	83.63	114.00	-30.37	peak	
4		2410.200	58.43	9.00	67.43	94.00	-26.57	AVG	

Test Mode	TX Mode_2410 MHz

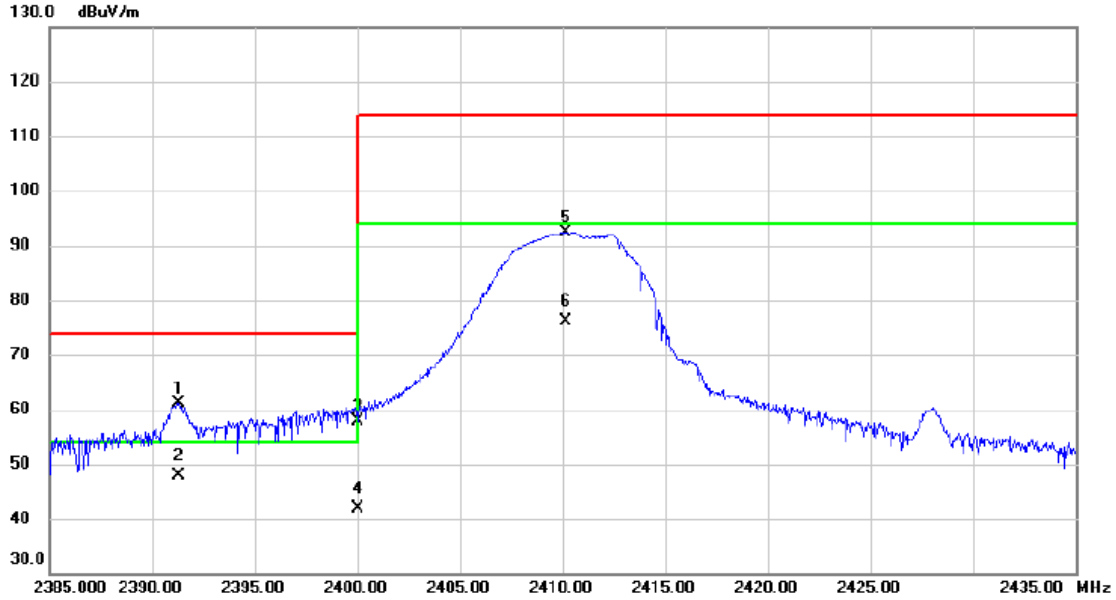
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4820.036	45.45	5.77	51.22	54.00	-2.78	AVG	
2		4820.360	61.65	5.77	67.42	74.00	-6.58	peak	

Test Mode	TX Mode_2410 MHz

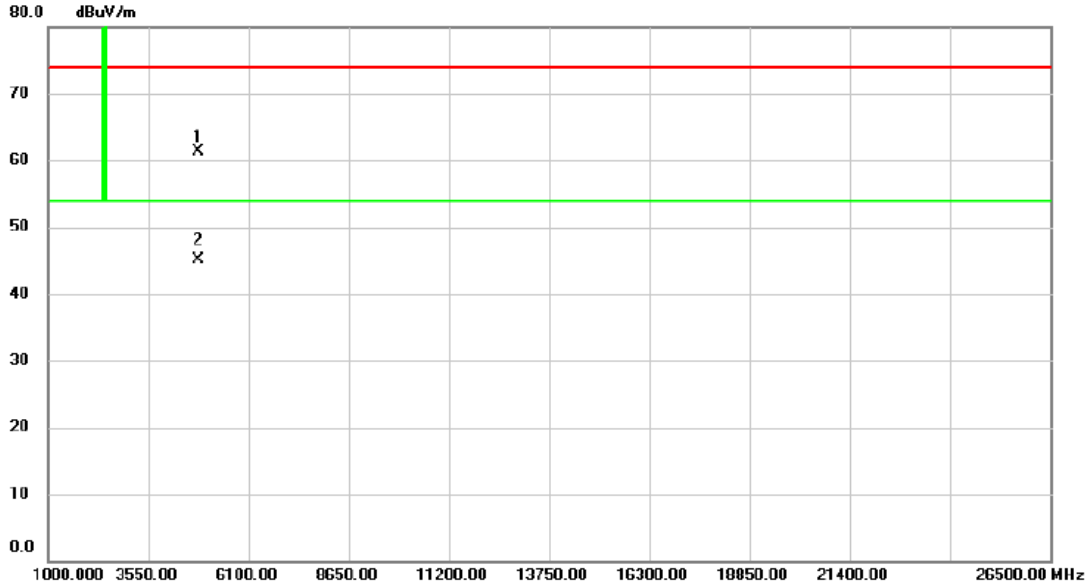
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2391.300	52.07	9.00	61.07	74.00	-12.93	peak	
2	*	2391.300	38.87	9.00	47.87	54.00	-6.13	AVG	
3		2400.000	49.00	9.00	58.00	74.00	-16.00	peak	
4		2400.000	32.80	9.00	41.80	54.00	-12.20	AVG	
5		2410.200	83.35	9.00	92.35	114.00	-21.65	peak	
6		2410.200	67.15	9.00	76.15	94.00	-17.85	AVG	

Test Mode	TX Mode_2410 MHz

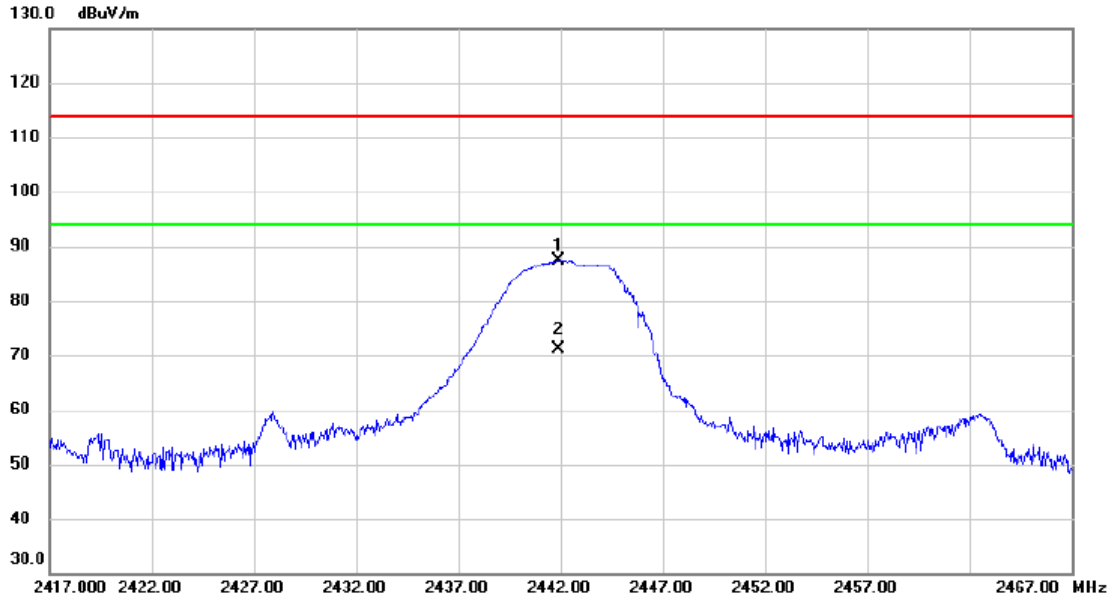
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4820.440	55.62	5.77	61.39	74.00	-12.61	peak	
2	*	4820.463	39.42	5.77	45.19	54.00	-8.81	AVG	

Test Mode	TX Mode_2442 MHz

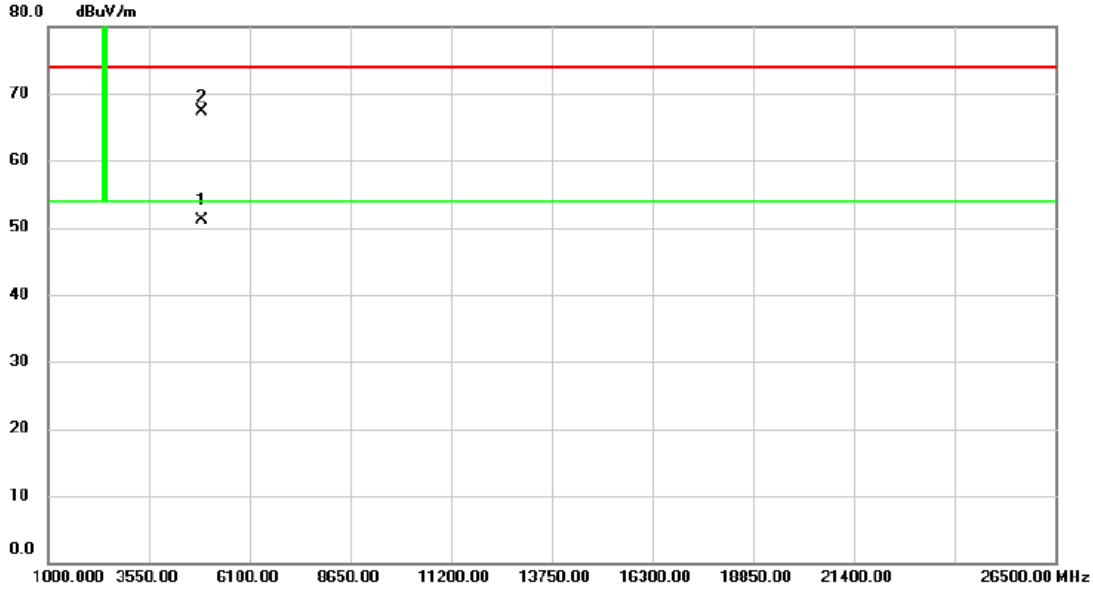
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2441.900	78.36	8.99	87.35	114.00	-26.65	peak	
2	*	2441.900	62.16	8.99	71.15	94.00	-22.85	AVG	

Test Mode	TX Mode_2442 MHz

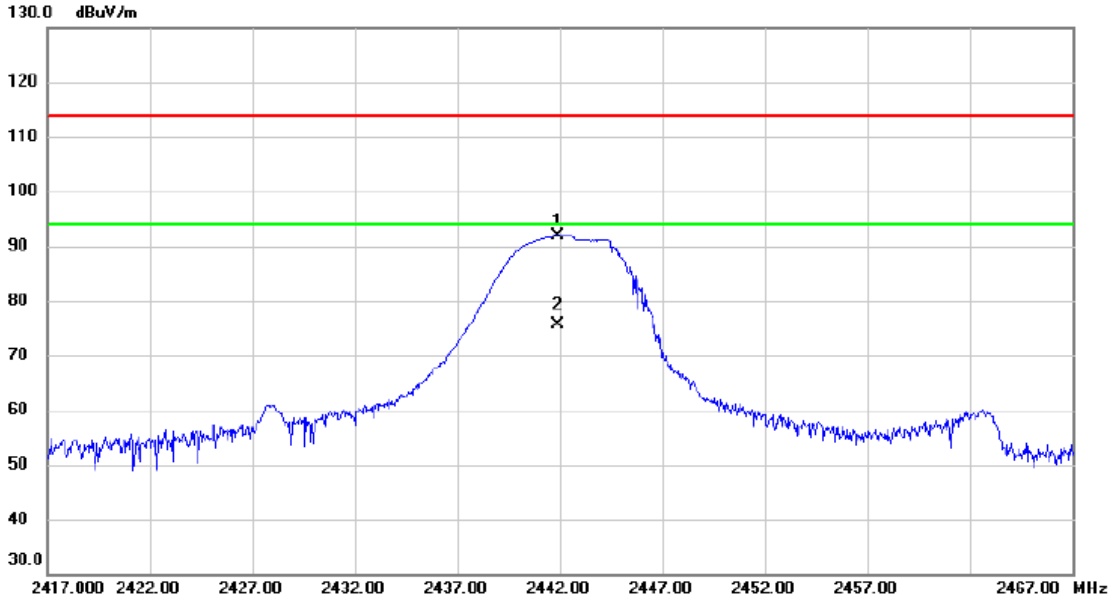
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4884.340	45.22	5.93	51.15	54.00	-2.85	AVG	
2		4884.400	61.42	5.93	67.35	74.00	-6.65	peak	

Test Mode	TX Mode_2442 MHz

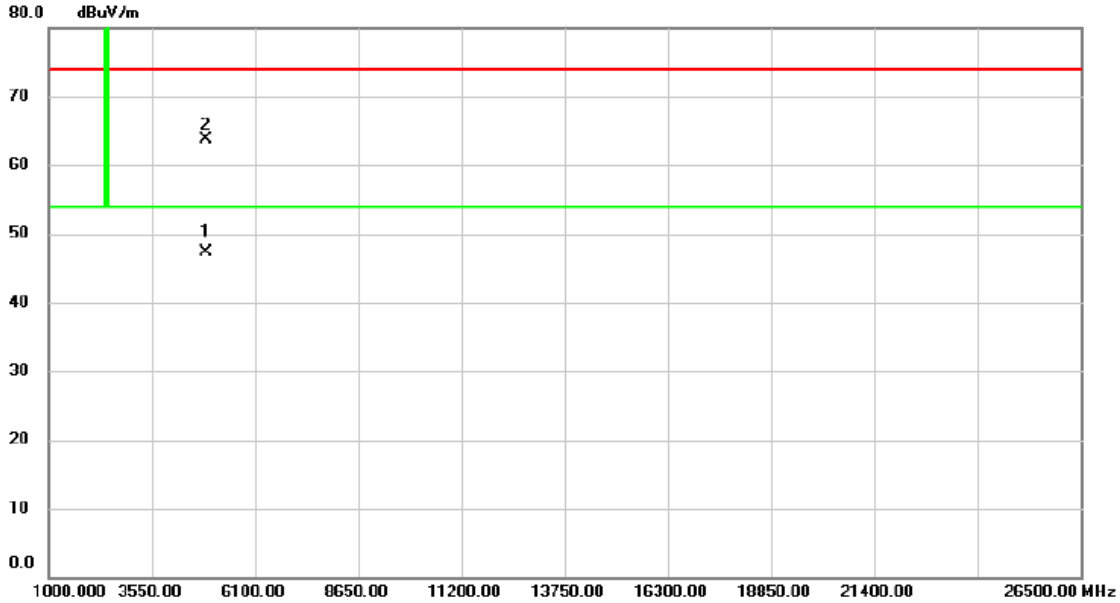
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2441.900	82.91	8.99	91.90	114.00	-22.10	peak	
2	*	2441.900	66.67	8.99	75.66	94.00	-18.34	AVG	

Test Mode	TX Mode_2442 MHz

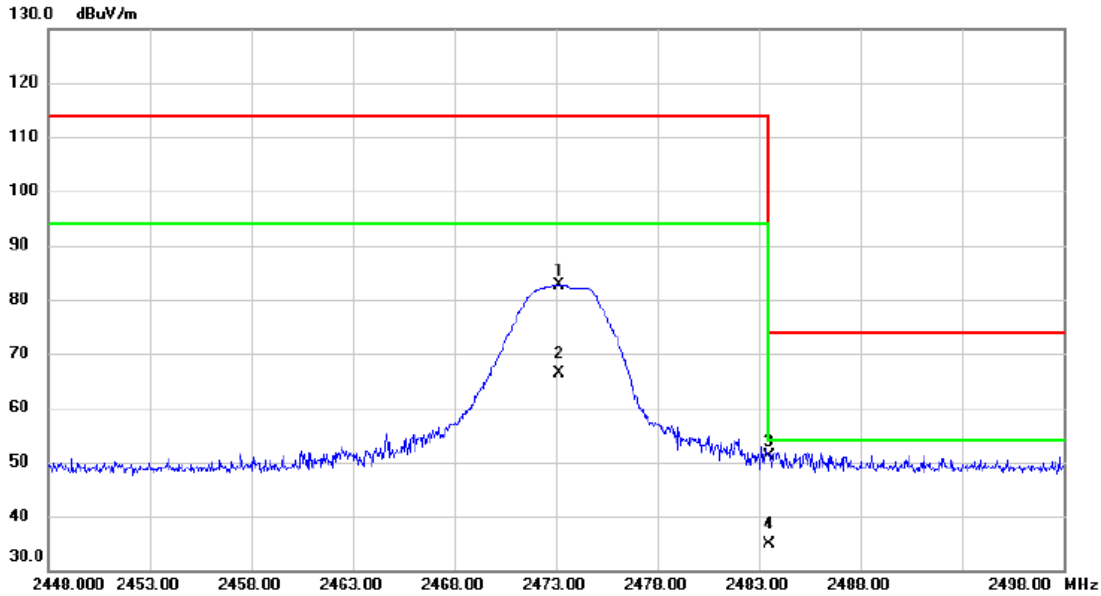
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4884.328	41.43	5.93	47.36	54.00	-6.64	AVG	
2		4884.412	57.76	5.93	63.69	74.00	-10.31	peak	

Test Mode	TX Mode_2473 MHz

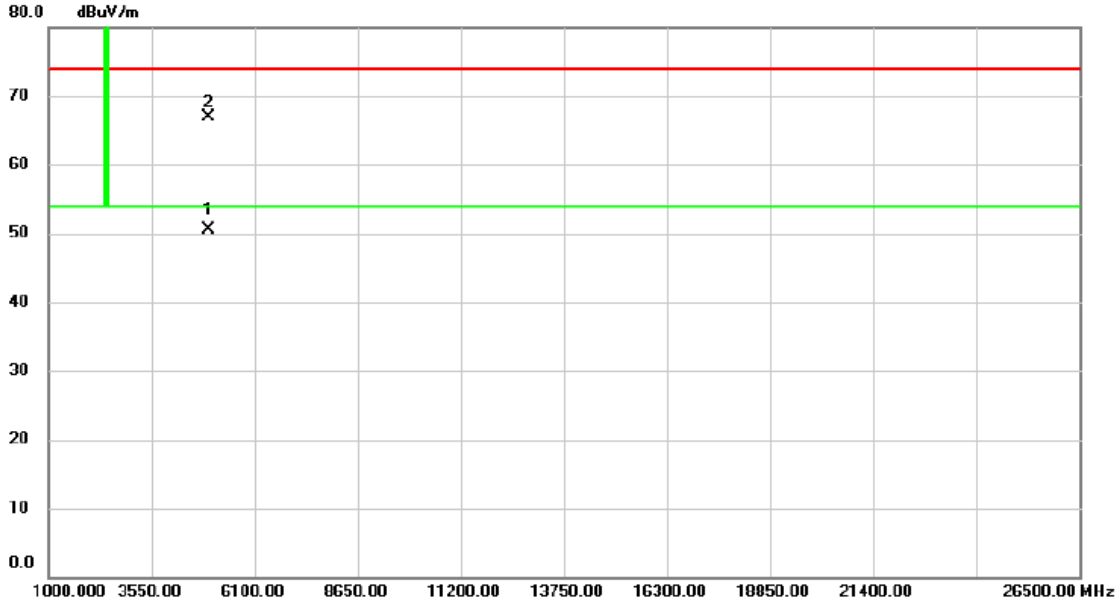
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2473.200	73.66	8.97	82.63	114.00	-31.37	peak	
2		2473.200	57.46	8.97	66.43	94.00	-27.57	AVG	
3		2483.500	42.15	8.96	51.11	74.00	-22.89	peak	
4	*	2483.500	25.95	8.96	34.91	54.00	-19.09	AVG	

Test Mode	TX Mode_2473 MHz

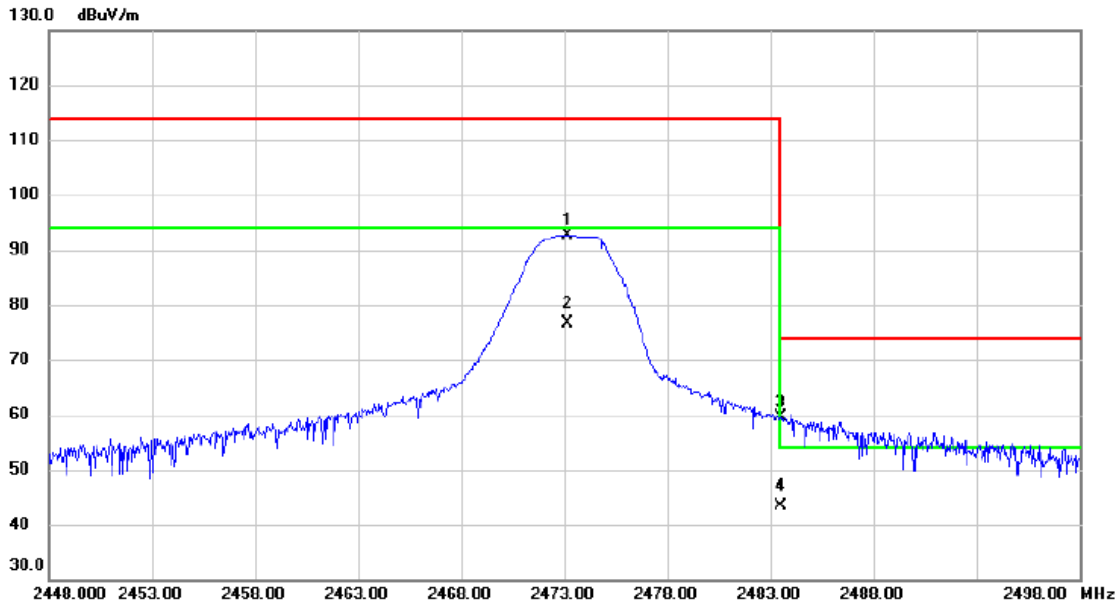
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4946.398	44.47	6.08	50.55	54.00	-3.45	AVG	
2		4946.844	60.76	6.08	66.84	74.00	-7.16	peak	

Test Mode	TX Mode_2473 MHz

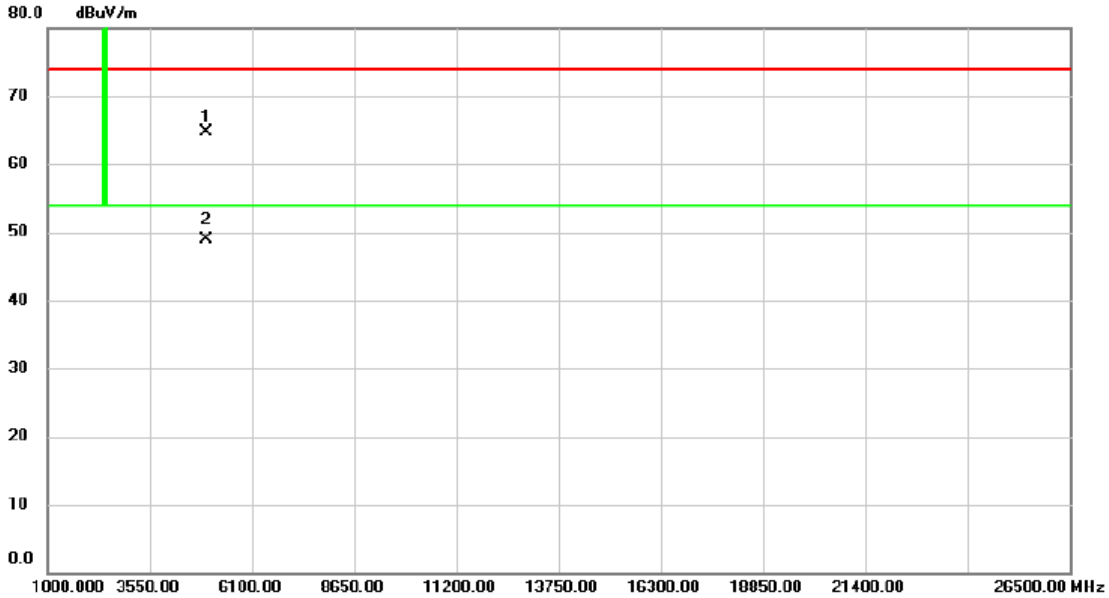
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2473.200	83.74	8.97	92.71	114.00	-21.29	peak	
2		2473.200	67.54	8.97	76.51	94.00	-17.49	AVG	
3		2483.500	50.61	8.96	59.57	74.00	-14.43	peak	
4	*	2483.500	34.41	8.96	43.37	54.00	-10.63	AVG	

Test Mode	TX Mode_2473 MHz

Horizontal



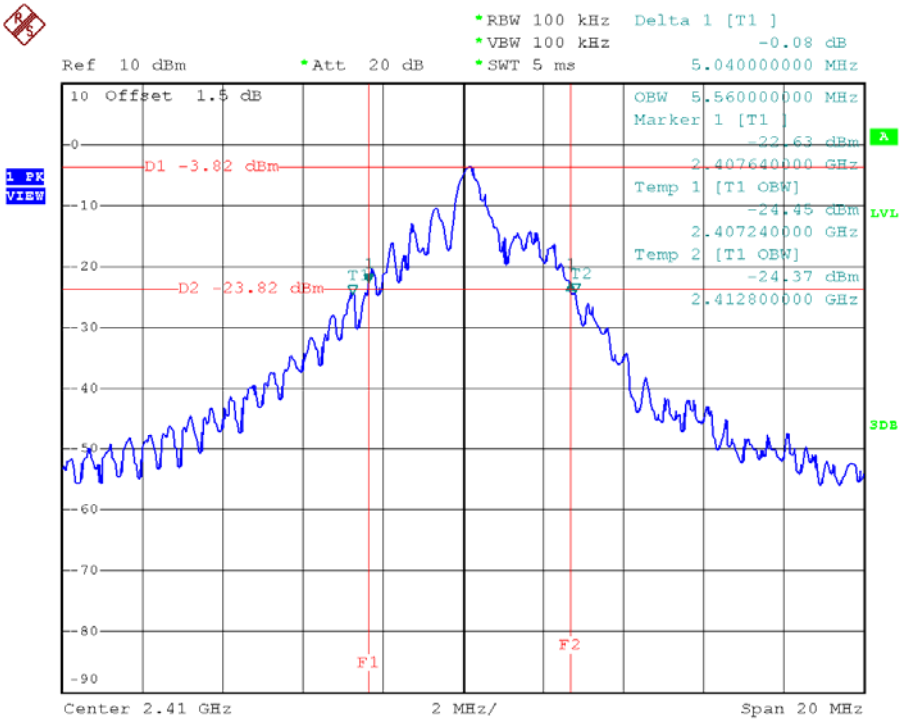
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4946.412	58.60	6.08	64.68	74.00	-9.32	peak	
2	*	4946.438	42.76	6.08	48.84	54.00	-5.16	AVG	

APPENDIX E - BANDWIDTH

Test Mode:	TX Mode_2410 MHz/2442 MHz/2473 MHz

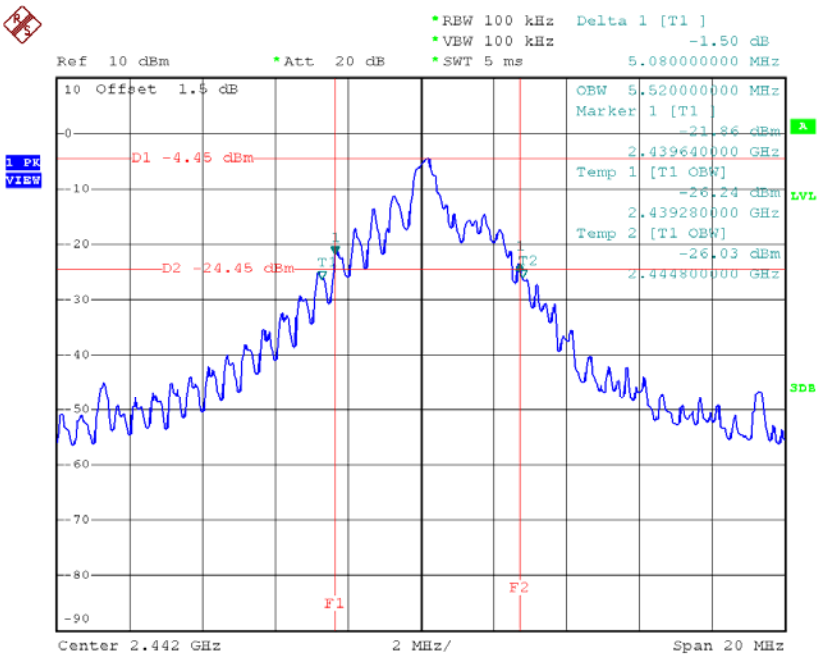
Frequency (MHz)	20dB Bandwidth (MHz)	99% Occupied BW (MHz)
2410	5.04	5.56
2442	5.08	5.52
2473	4.00	4.44

TX Mode_2410 MHz



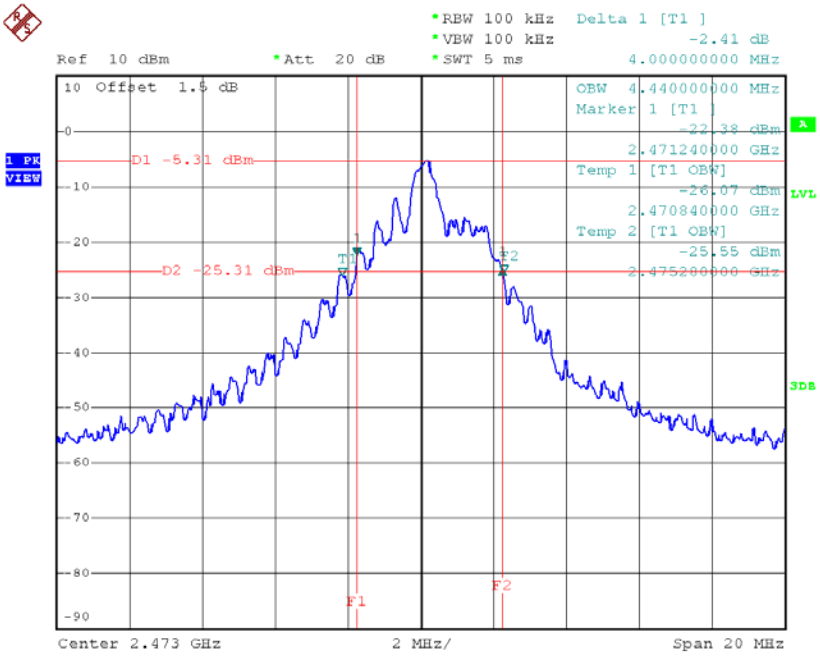
Date: 11.JUN.2018 14:56:06

TX Mode_2442 MHz



Date: 11.JUN.2018 15:02:29

TX Mode_2473 MHz



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