FCC Radio Test Report

FCC ID:QWHDW20T

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

Project No.	:	1712C210
Equipment	:	Wireless Systems
Test Model	:	DW 20T
Series Model	:	N/A
Applicant	:	MUSIC Tribe Manufacturing PH Ltd.
Address	:	17A Brunswick Street Hamilton HM 10 Bermuda

Date of Receipt	:	Dec. 26, 2017
Date of Test	:	Jan. 17, 2017 ~Apr. 11, 2018
Issued Date	:	May 16, 2018
Tested by	:	BTL Inc.

Testing Engineer : Chay cai
(Chay Cai)

Technical Manager : Shawn xiao
(Shawn Xiao)

Authorized Signatory : David Mao
(David Mao)

BTL INC.

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

NVLAP TESTING NVLAP LAB CODE 200788-0

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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-1-1712C210	Original report.	May 11, 2018
MDG1805035	Changed applicant and Manufacturer MUSIC Group Manufacturing PH Ltd. to MUSIC Tribe Manufacturing PH Ltd.	May 16, 2018

1. CERTIFICATION

Equipment	:	Wireless Systems
Brand Name	:	KLARK TEKNIK
Test Model	:	DW 20T
Series Model	:	N/A
Applicant	:	MUSIC Tribe Manufacturing PH Ltd.
Manufacturer	:	MUSIC Tribe Manufacturing PH Ltd.
Address	:	17A Brunswick Street Hamilton HM 10 Bermuda
Factory	:	ZhongshanEurotec Electronics Ltd.
Address	:	No.10 Wanmei Road, South China Modern Chinese Medicine Park, Nanlang Town, Zhongshan City, Guangdong Province, P.R. China
Date of Test	:	Jan. 17, 2017 ~Apr. 11, 2018
Test Sample	:	Engineering Sample NO. D180100514.
Standard(s)	:	FCC Part15, Subpart C(15.247) 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-1-1712C210) 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 (15.247) , Subpart C			
Standard(s) Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247(d)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	6dB Bandwidth	PASS	
15.247(b)(3)	Peak Output Power	PASS	
15.247(e)	Power Spectral Density	PASS	
15.203	Antenna Requirement	PASS	
15.247(d)/ 15.205/ 15.209	Transmitter Radiated Emissions	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
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. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150 KHz ~ 30MHz	2.32

B. 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 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Systems	
Brand Name	KLARK TEKNIK	
Test Model	DW 20T	
Series Model	N/A	
Model Difference	N/A	
Product Description	Operation Frequency	2406~2475 MHz
	Modulation Technology	GFSK(3Mbps)
	Bit Rate of Transmitter	
	Output Power (Max.)	11.75dBm (3Mbps)
Power Source	DC Voltage supplied from AC/DC adapter. 1# Model: S008ACM1200040 2# Model: GPE053A-V120040-Z	
Power Rating	1# I/P: 100-240V~50/60Hz 300mA O/P: 12V⎓400mA 2# I/P: 100-240V~50/60Hz 0.2A O/P: 12V⎓400mA 4.8W	

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)
00	2406	12	2442
01	2409	13	2445
02	2412	14	2448
03	2415	15	2451
04	2418	16	2454
05	2421	17	2457
06	2424	18	2460
07	2427	19	2463
08	2430	20	2466
09	2433	21	2469
10	2436	22	2472
11	2439	23	2475

3. Table for Filed Antenna:

Group 1

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Zhigaoda	323032-25532-1R	Dipole	N/A	5

Group 2

Ant.	Mfr/Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	ALEAD technology	AT-02-5-A80617H 1-190	Dipole	N/A	5

Note:

1. Equipment has 2 group antennas, group 1 and group 2 are same type antenna, only differ in brand/model name. Only transmitter and Receiver spurious emissions recorded the test results for two group antennas.

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 **NOTE (1)**

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

For Conducted Test	
Final Test Mode	Description
Mode 1	TX Mode

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

Note:

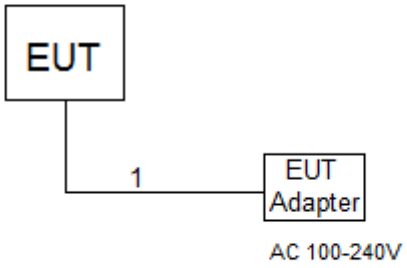
(1) The measurements are performed at the high, middle, low available channels.

3.3 TABLE OF PARAMETERS OF TEXT 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.

Test Software Version	N/A		
Frequency (MHz)	2406	2442	2475
Parameters	N/A	N/A	N/A

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
1	NO	NO	1.5m	DC Cable

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

(1) The limit of " * " decreases with the logarithm of the frequency

(2) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

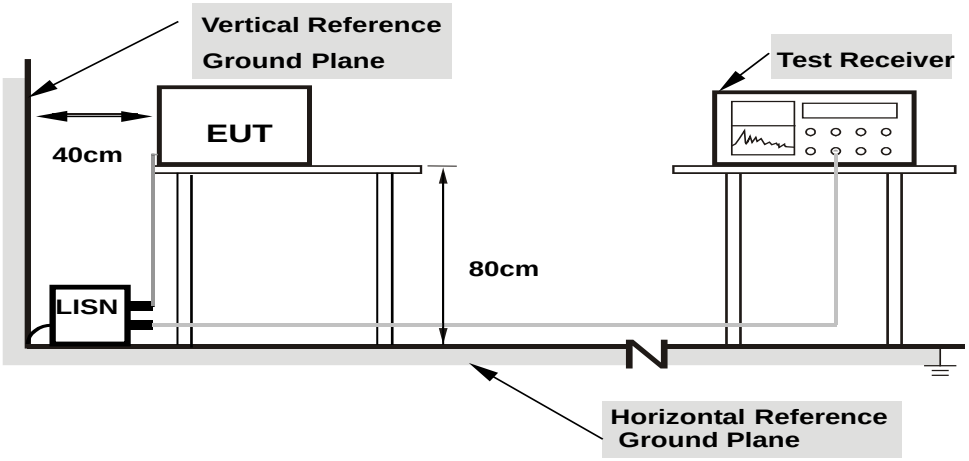
4.1.2 TEST PROCEDURE

a. 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 equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. 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.
c. 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.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



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

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Appendix A.

Remark:

(1) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform.In this case, a " * " marked in AVG Mode column of Interference Voltage Measured.
(2) Measuring frequency range from 150KHz to 30MHz.
(3) " N/A" denotes test is not applicable to this device.

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency (MHz)	Field Strength (microvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

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

Notes:

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

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

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

(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
Margin Level = Measurement Value - Limit Value

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	RBW 1MHz VBW 3MHz peak detector for Pk value RMS detector for AV value

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

4.2.2 TEST PROCEDURE

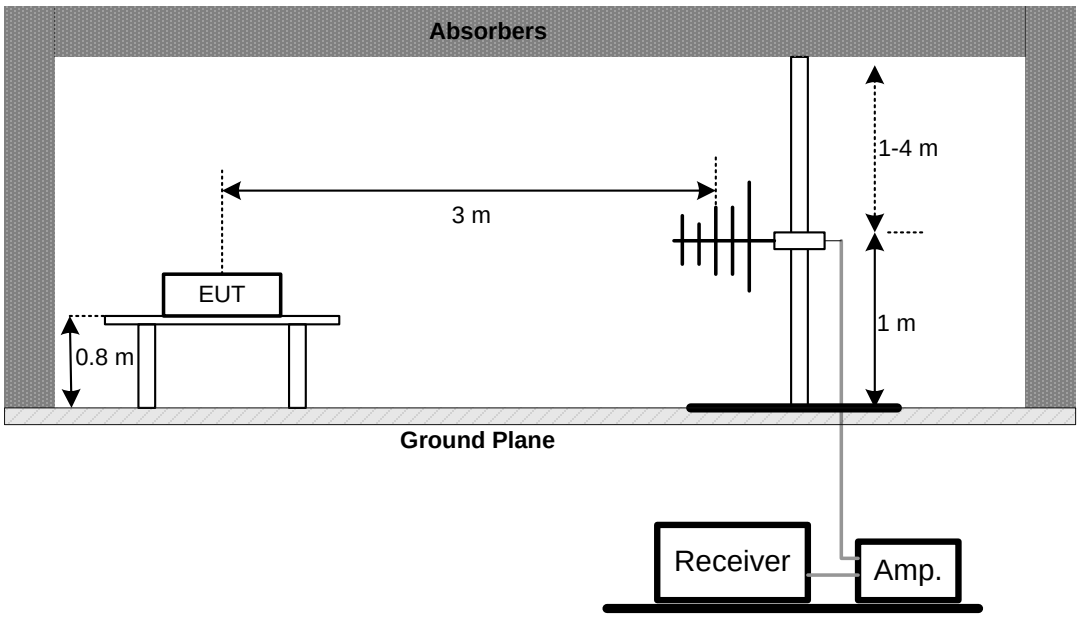
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance 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 0.8m 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.

4.2.3 DEVIATION FROM TEST STANDARD

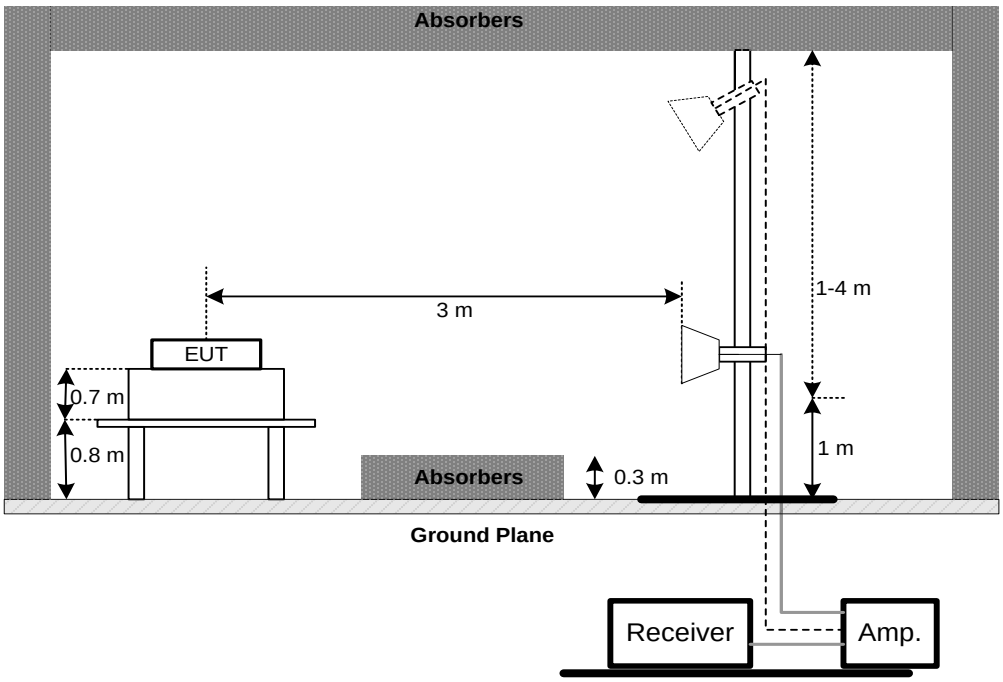
No deviation

4.2.4 TEST SETUP

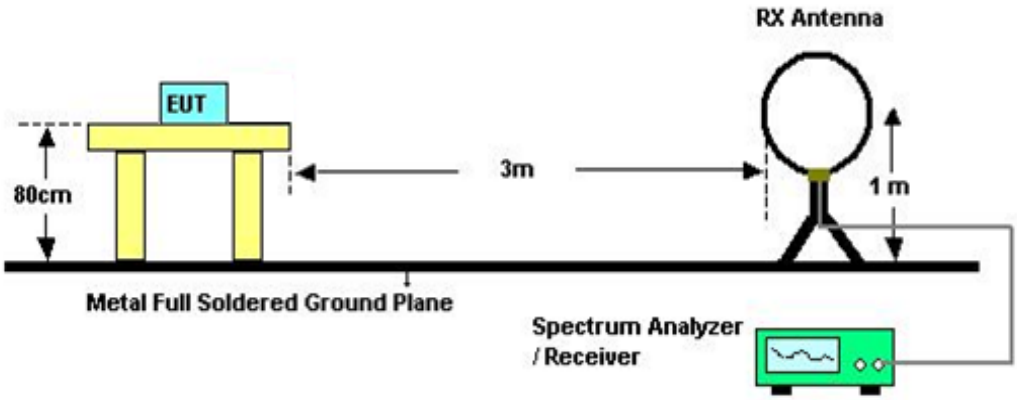
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 22°C Relative Humidity: 56% Test Voltage: AC 120V/60Hz

4.2.7TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix B

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.

4.2.8TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix C.

4.2.9TEST RESULTS (ABOVE 1000MHZ)

Please refer to the Appendix D.

Remark:

(1) 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 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

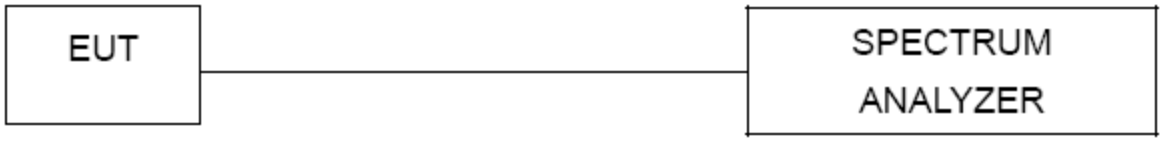
5.1.1 TEST PROCEDURE

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=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION 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.

5.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Appendix E.

6. MAXIMUM OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Maximum Output Power	1 watt or 30dBm	2400-2483.5	PASS

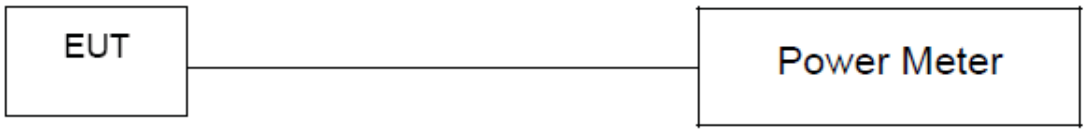
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
b. The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION 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.

6.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Appendix F.

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

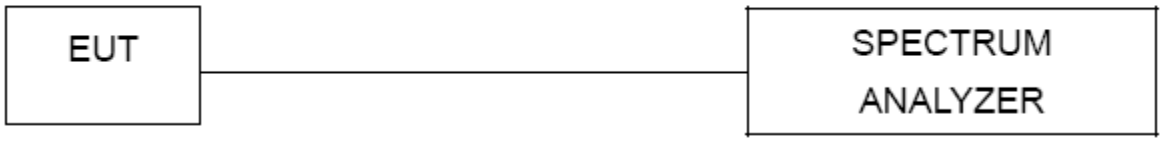
7.1.1 TEST PROCEDURE

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=300KHz, Sweep time = 10 ms.
c. Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION 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.

7.1.5 EUT OPERATION CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Appendix G.

8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

8.1.1 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=3KHz, VBW=10 KHz, Sweep time = auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP

8.1.4 EUT OPERATION 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.

8.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

8.1.6 TEST RESULTS

Please refer to the Appendix H.

9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 11, 2019
2	LISN	EMCO	3816/2	52765	Mar. 11, 2019
3	50Ω Terminator	SHX	TF2-3G-A	8122901	Mar. 11, 2019
4	TWO-LINE V-NETWORK	R&S	ENV216	101447	Mar. 11, 2019
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Oct. 19, 2018

Radiated Emission Measurement - 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	Feb. 07, 2019

Radiated Emission Measurement - 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	Jun. 08, 2018
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	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	emci	EMC104-SM-SM-1 2000(12m)	N/A	Jun. 26, 2018
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	ANRITSU	ML2495A	1128009	Mar. 25, 2019
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 25, 2019

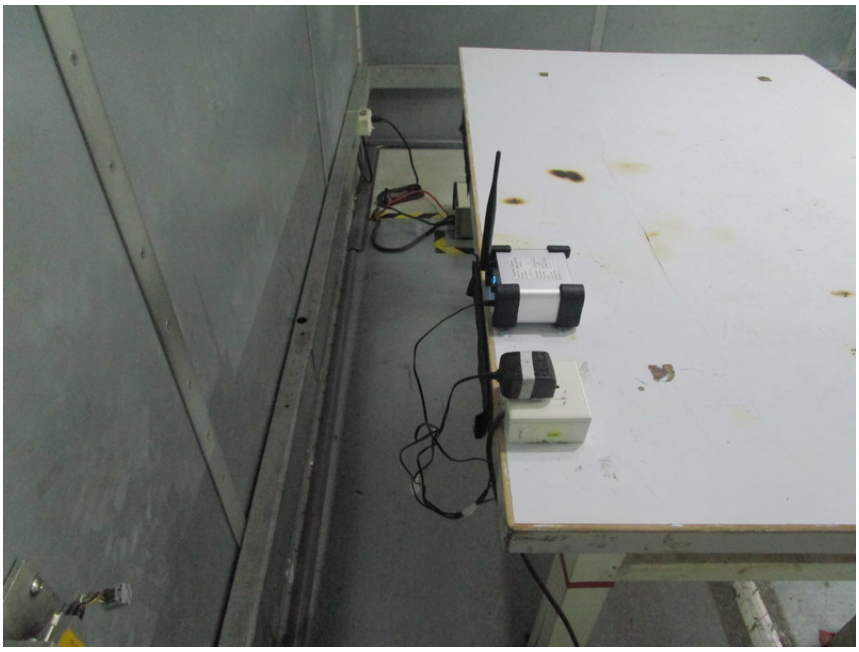
Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

Power Spectral Density 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.

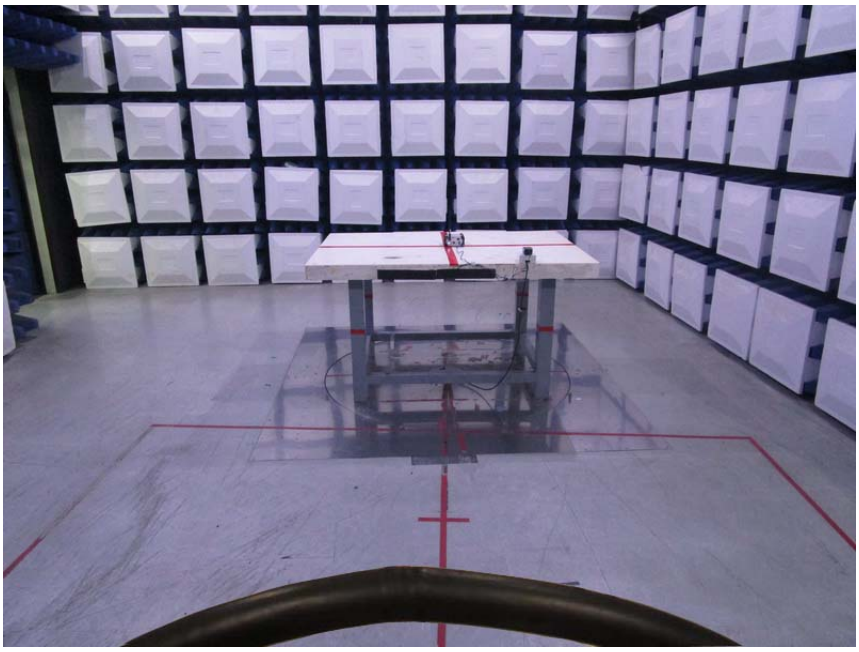
10. EUT TEST PHOTO

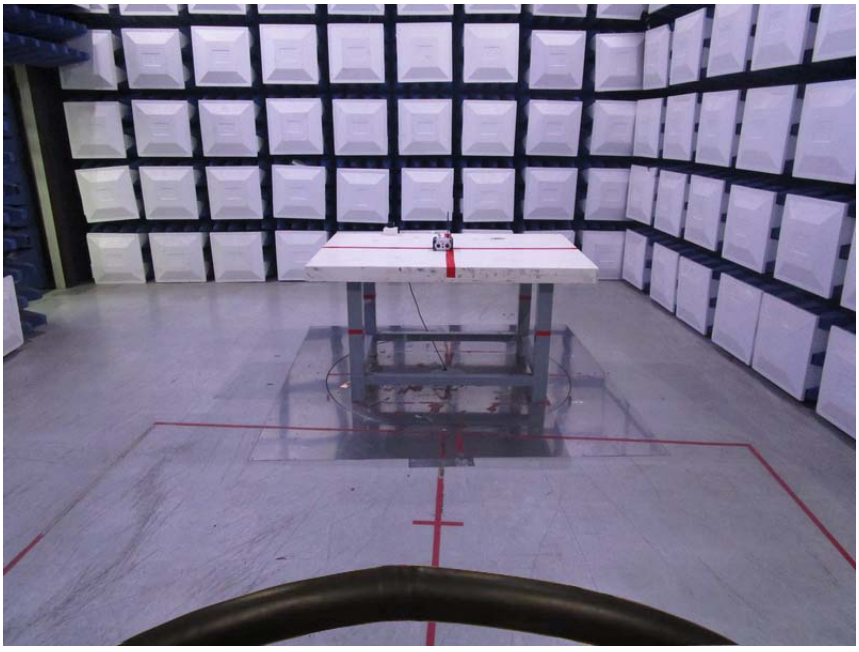
Conducted Measurement Photos



Radiated Measurement Photos

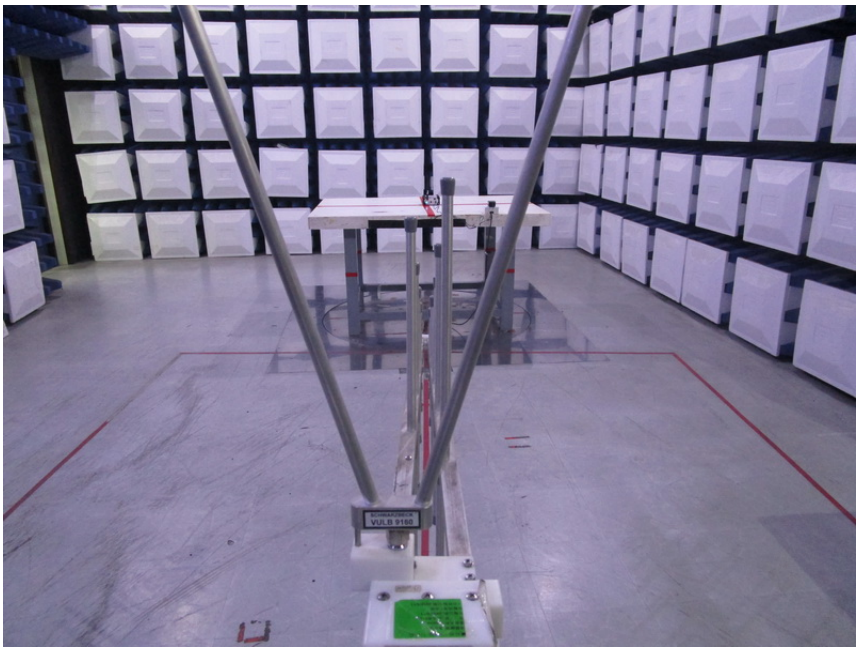
9KHz to 30MHz

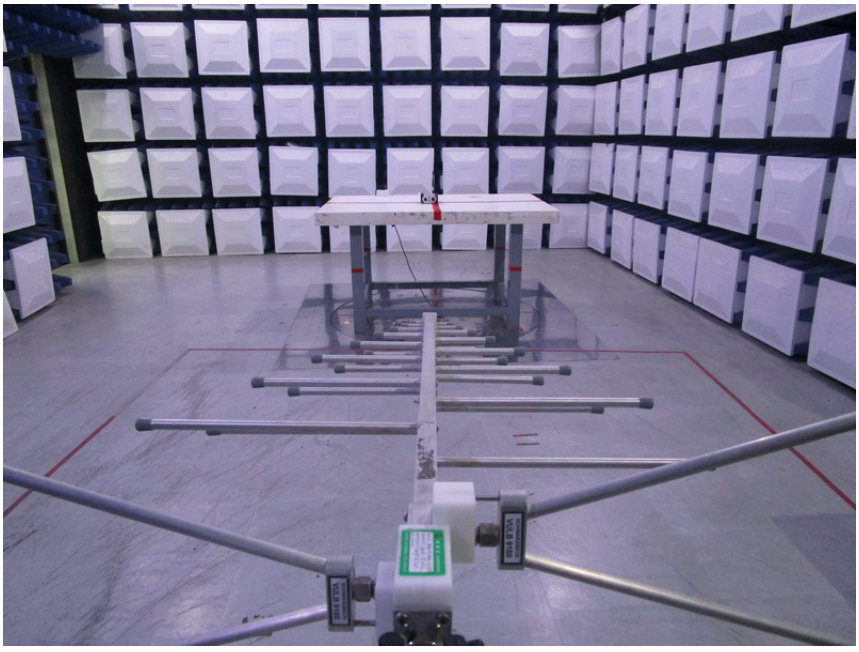




Radiated Measurement Photos

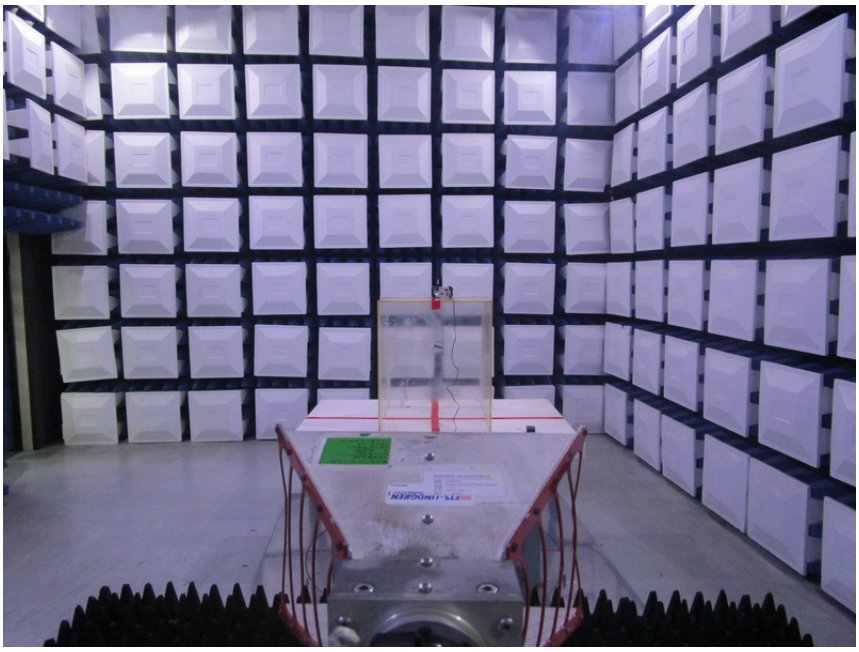
30MHz to 1000MHz

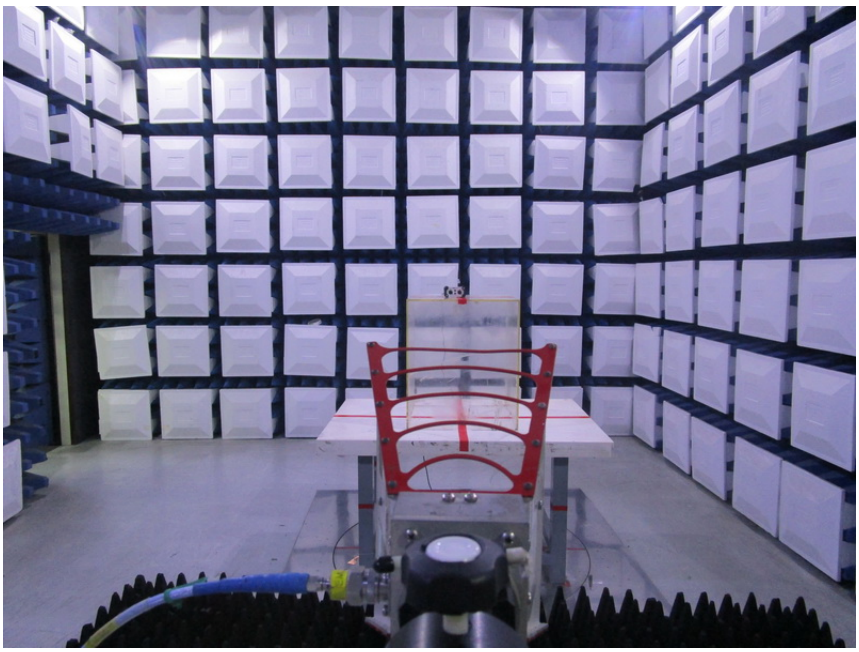




Radiated Measurement Photos

Above 1000MHz

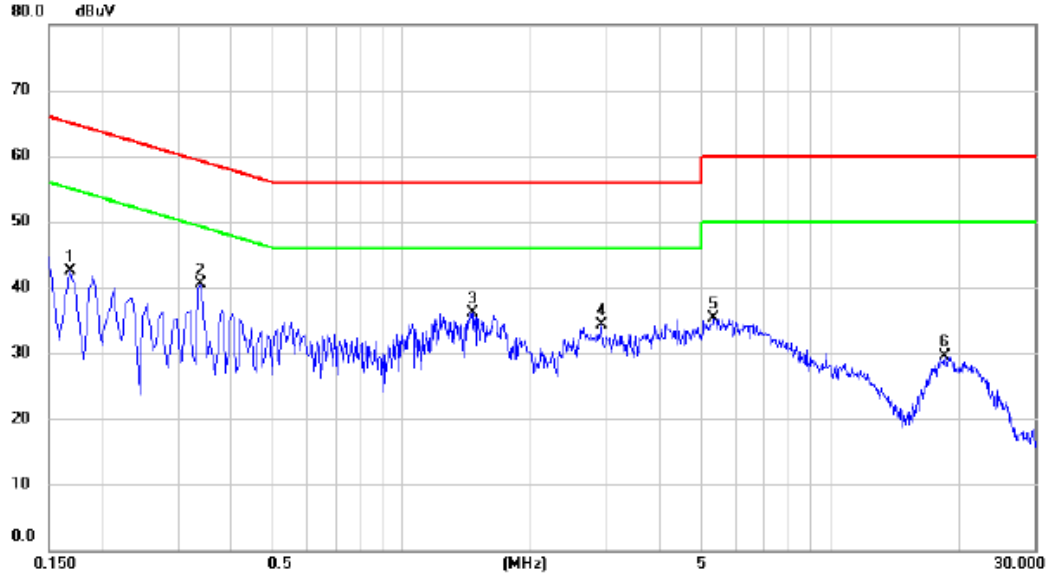




APPENDIX A - CONDUCTED EMISSION

Test Mode:	TX Mode_ Adapter:S008ACM1200040

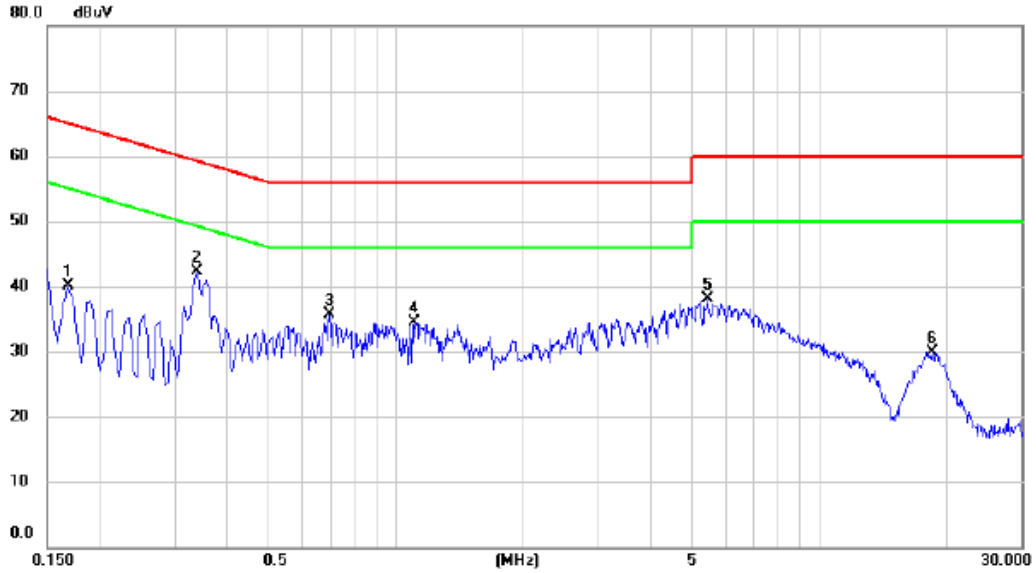
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.168	32.77	9.78	42.55	65.06	-22.51	peak	
2	*	0.339	30.78	9.78	40.56	59.23	-18.67	peak	
3		1.460	26.11	9.90	36.01	56.00	-19.99	peak	
4		2.927	24.23	10.00	34.23	56.00	-21.77	peak	
5		5.352	25.20	10.10	35.30	60.00	-24.70	peak	
6		18.465	18.84	10.64	29.48	60.00	-30.52	peak	

Test Mode:	TX Mode_ Adapter:S008ACM1200040

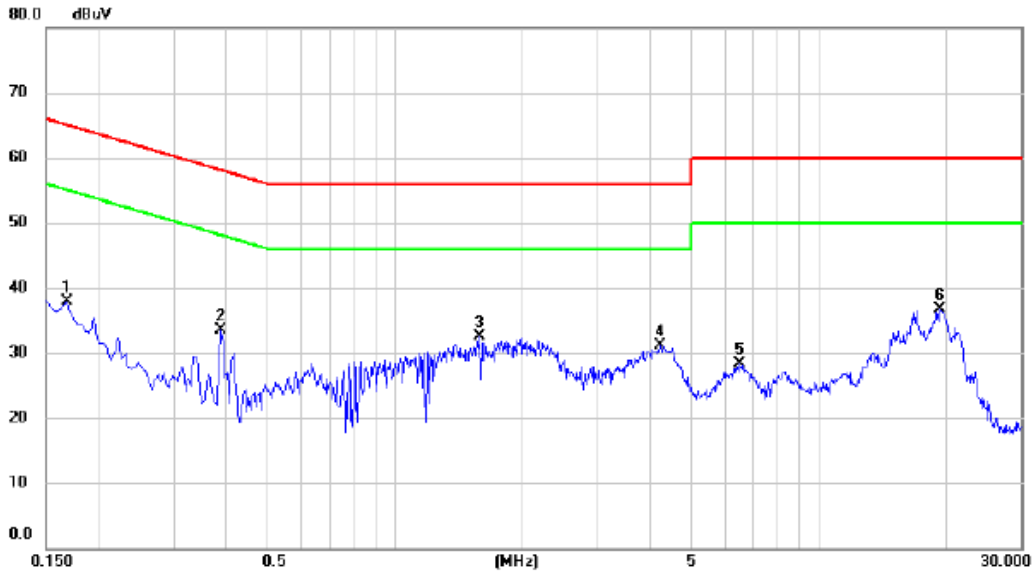
Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.168	30.38	9.68	40.06	65.06	-25.00	peak	
2	*	0.339	32.59	9.70	42.29	59.23	-16.94	peak	
3		0.699	25.97	9.72	35.69	56.00	-20.31	peak	
4		1.104	24.81	9.75	34.56	56.00	-21.44	peak	
5		5.442	28.05	10.04	38.09	60.00	-21.91	peak	
6		18.470	19.20	10.71	29.91	60.00	-30.09	peak	

Test Mode:	TX Mode_ Adapter: GPE053A-V120040-Z

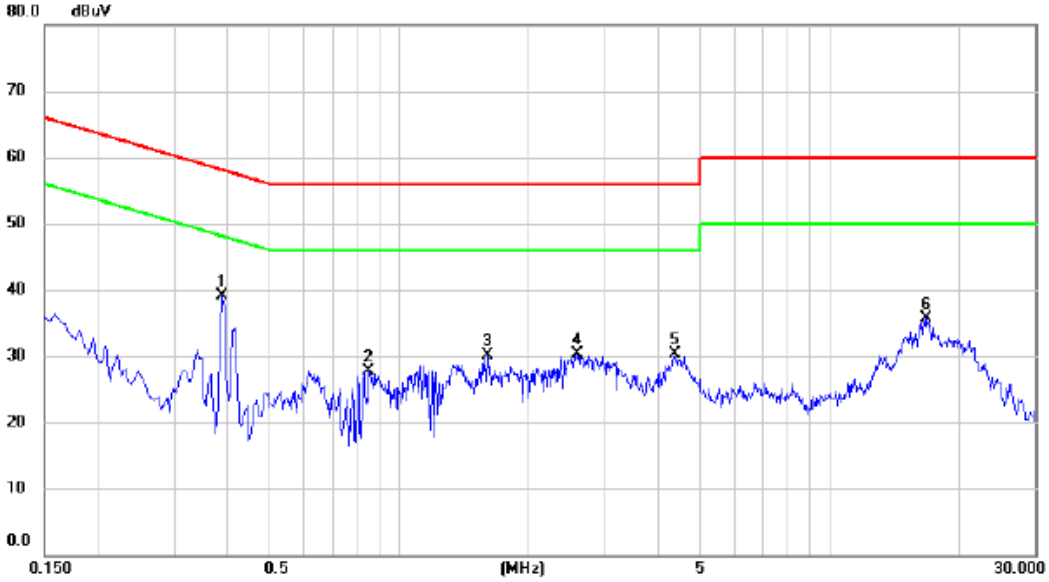
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.168	28.21	9.78	37.99	65.06	-27.07	peak	
2		0.389	23.70	9.79	33.49	58.10	-24.61	peak	
3		1.585	22.64	9.91	32.55	56.00	-23.45	peak	
4		4.218	21.09	10.03	31.12	56.00	-24.88	peak	
5		6.500	18.08	10.16	28.24	60.00	-31.76	peak	
6	*	19.356	26.07	10.65	36.72	60.00	-23.28	peak	

Test Mode:	TX Mode_ Adapter: GPE053A-V120040-Z

Neutral



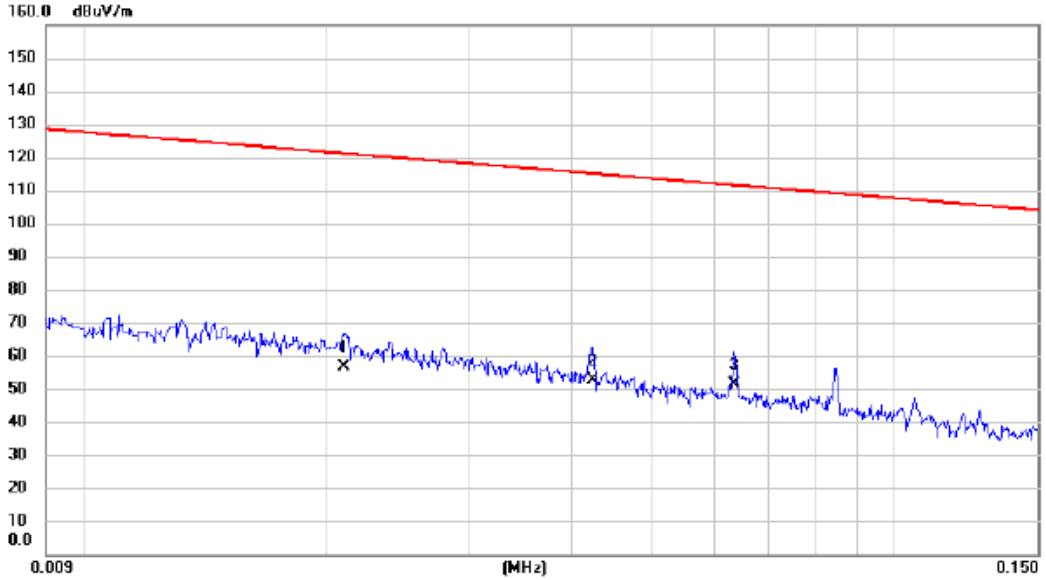
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.389	29.37	9.68	39.05	58.10	-19.05	peak	
2		0.852	18.01	9.74	27.75	56.00	-28.25	peak	
3		1.608	20.22	9.80	30.02	56.00	-25.98	peak	
4		2.603	20.48	9.87	30.35	56.00	-25.65	peak	
5		4.367	20.29	9.97	30.26	56.00	-25.74	peak	
6		16.746	25.13	10.67	35.80	60.00	-24.20	peak	

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

For Group 1 Antenna

Test Mode:	TX Mode

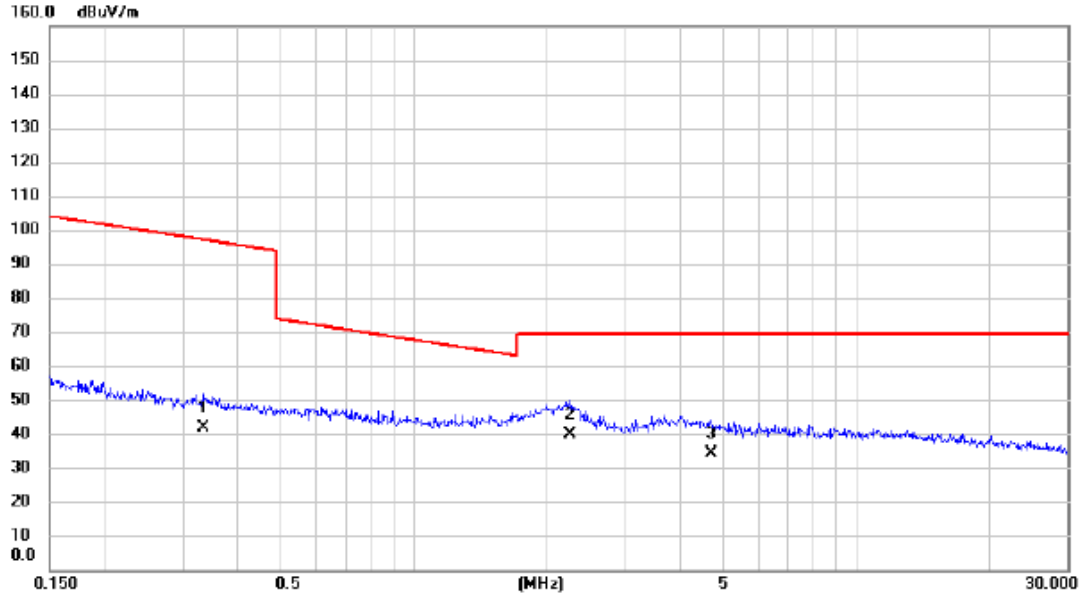
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0210	33.24	23.40	56.64	121.16	-64.52	AVG	
2		0.0424	31.81	20.76	52.57	115.06	-62.49	AVG	
3	*	0.0634	31.60	19.67	51.27	111.56	-60.29	AVG	

Test Mode:	TX Mode

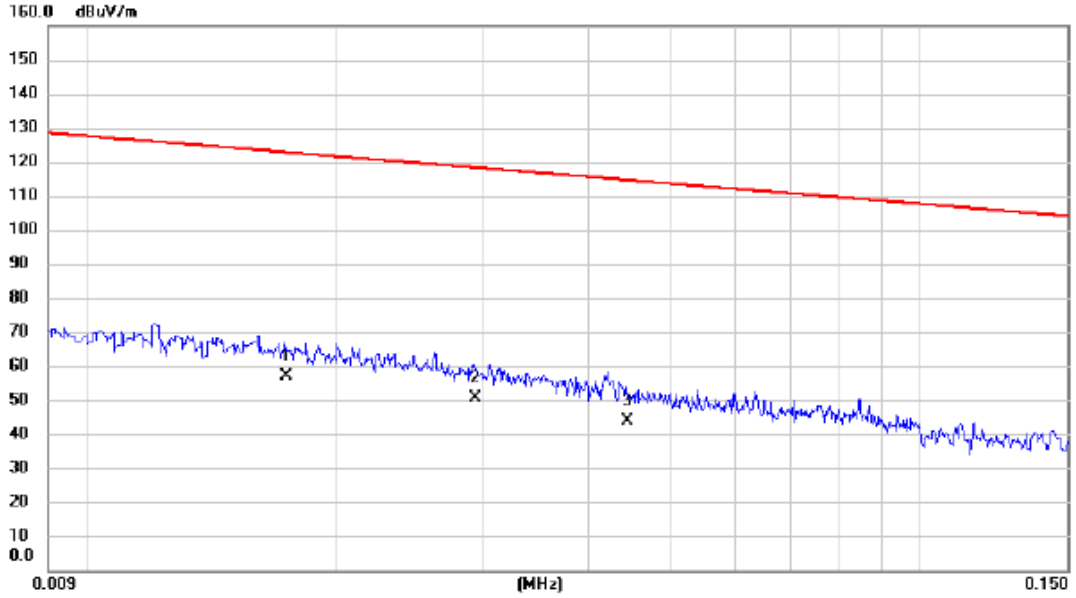
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3356	23.18	18.56	41.74	97.09	-55.35	AVG	
2	*	2.2486	22.20	17.59	39.79	69.54	-29.75	QP	
3		4.6964	16.83	17.31	34.14	69.54	-35.40	QP	

Test Mode:	TX Mode

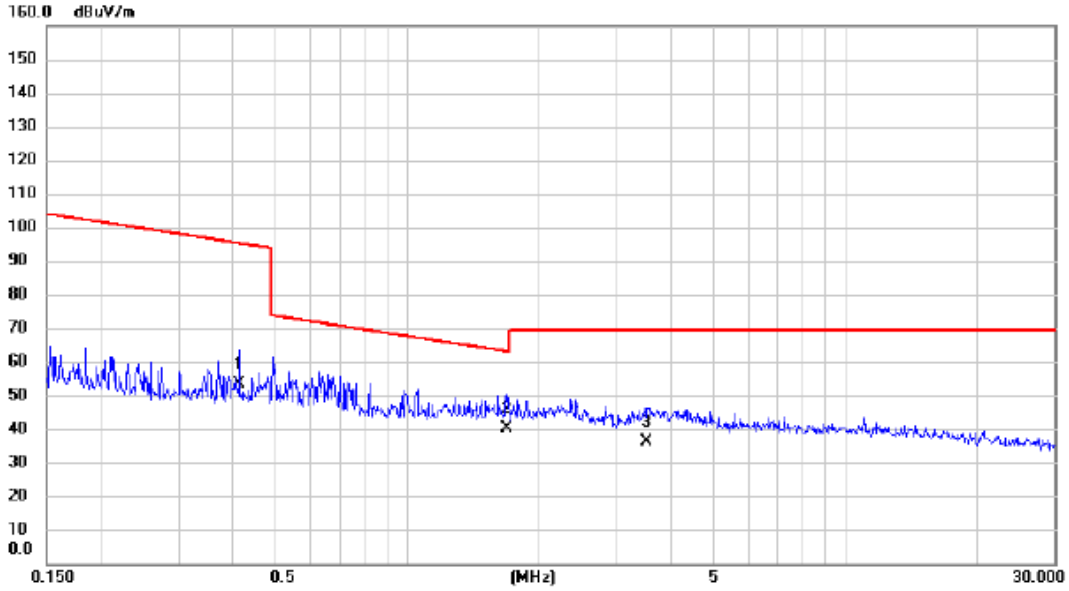
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0174	33.22	23.68	56.90	122.79	-65.89	AVG	
2		0.0293	28.22	22.37	50.59	118.27	-67.68	AVG	
3		0.0445	23.25	20.50	43.75	114.64	-70.89	AVG	

Test Mode:	TX Mode

Ant 90°

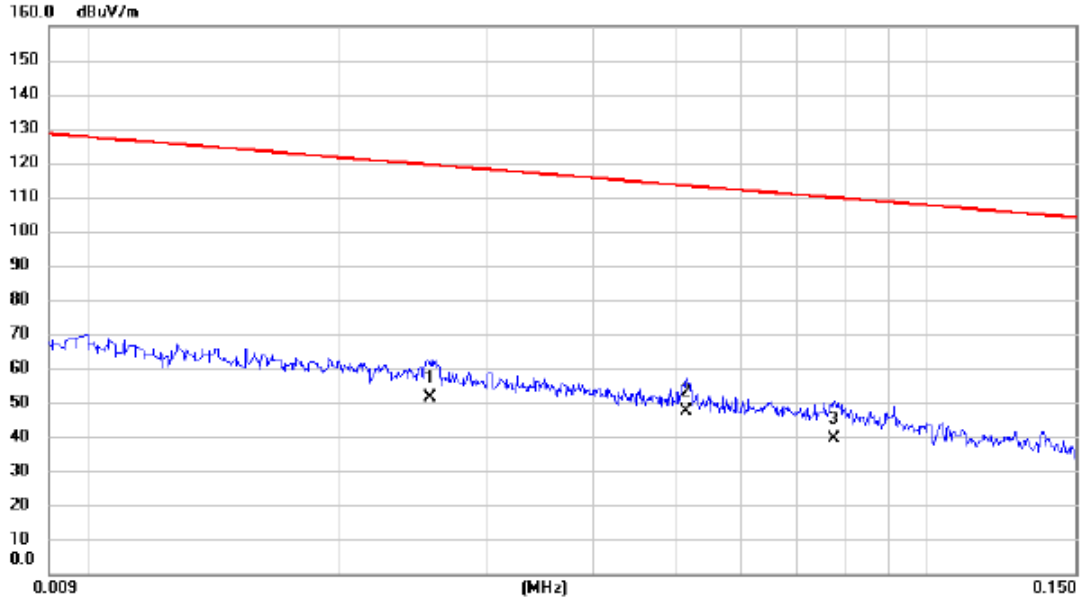


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.4127	35.07	18.46	53.53	95.29	-41.76	AVG	
2	*	1.6891	22.30	17.84	40.14	63.05	-22.91	QP	
3		3.5278	18.52	17.75	36.27	69.54	-33.27	QP	

For Group 2 Antenna

Test Mode:	TX Mode

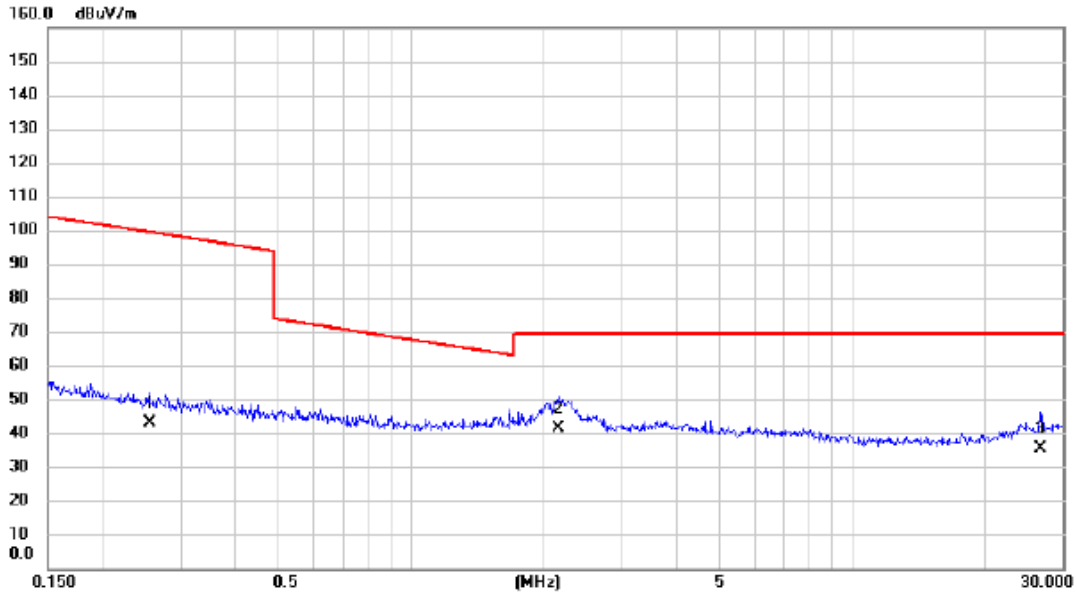
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.0256	31.88	19.45	51.33	119.44	-68.11	AVG	
2	*	0.0516	28.65	18.69	47.34	113.35	-66.01	AVG	
3		0.0774	21.36	18.17	39.53	109.83	-70.30	AVG	

Test Mode:	TX Mode

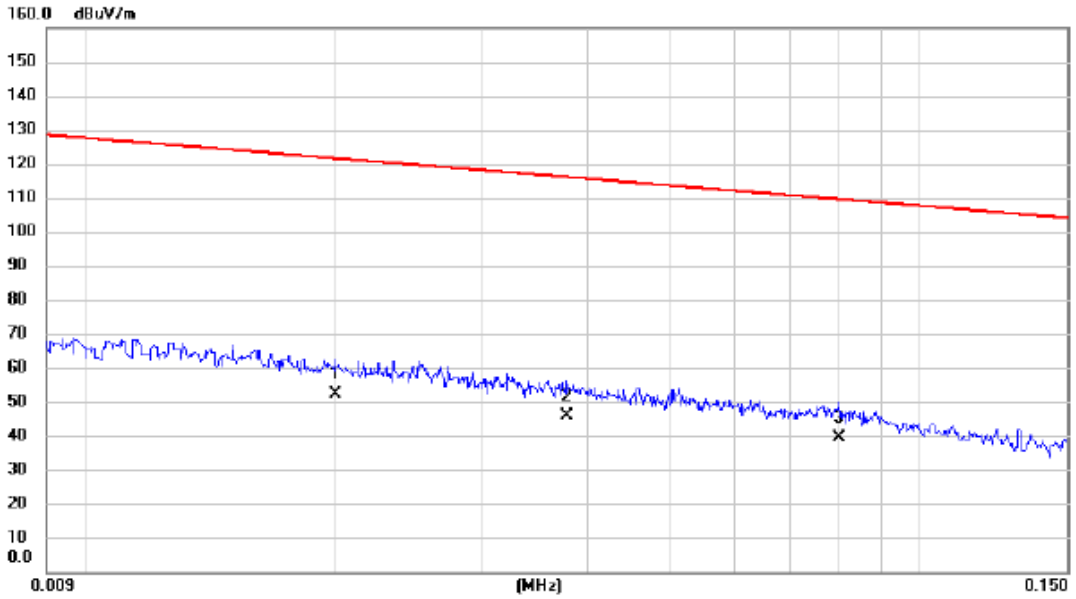
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2548	26.38	16.66	43.04	99.48	-56.44	AVG	
2	*	2.1552	25.96	15.46	41.42	69.54	-28.12	QP	
3		26.6992	15.36	20.17	35.53	69.54	-34.01	QP	

Test Mode:	TX Mode

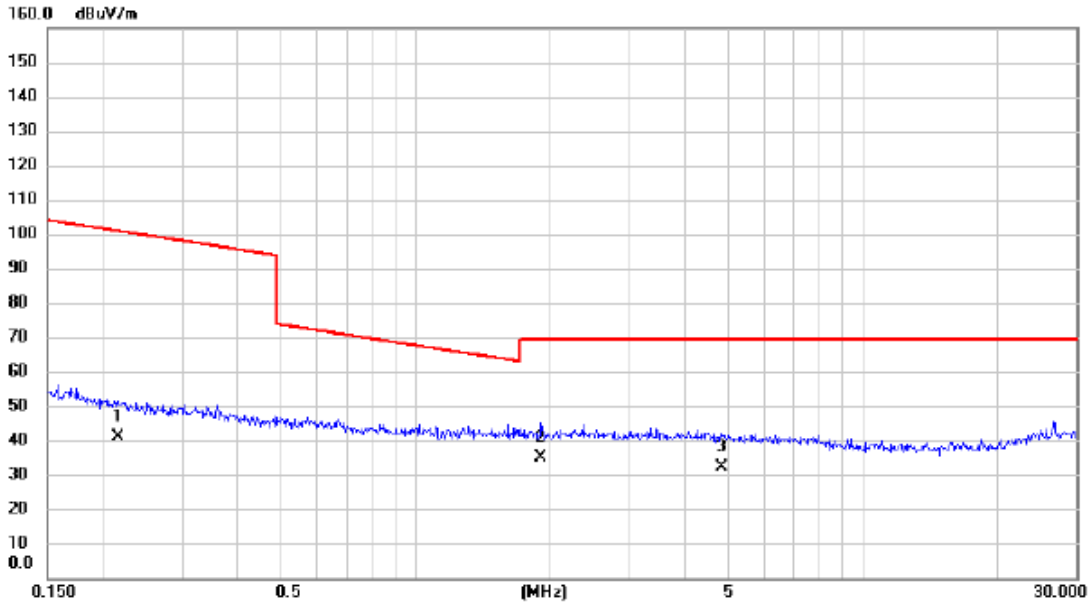
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0200	32.63	19.62	52.25	121.58	-69.33	AVG	
2		0.0378	26.89	19.09	45.98	116.06	-70.08	AVG	
3		0.0801	21.39	18.11	39.50	109.53	-70.03	AVG	

Test Mode:	TX Mode

Ant 90°



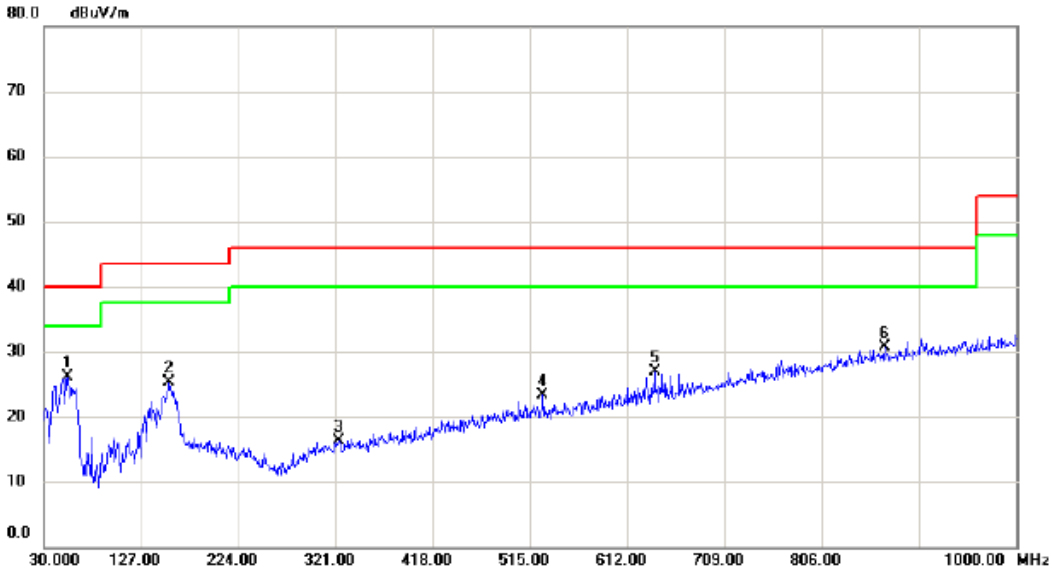
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2151	24.36	16.75	41.11	100.95	-59.84	AVG	
2	*	1.9080	19.58	15.55	35.13	69.54	-34.41	QP	
3		4.8224	17.64	14.48	32.12	69.54	-37.42	QP	

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

For Group 1 Antenna

Test Mode:	TX 2406MHz _CH00_ Adapter:S008ACM1200040

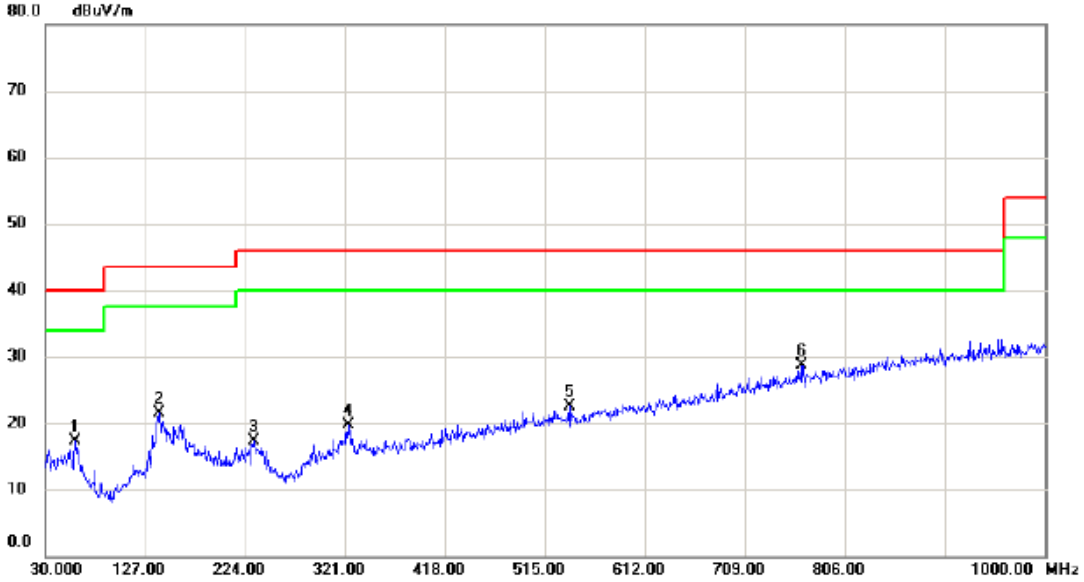
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	53.280	39.98	-13.88	26.10	40.00	-13.90	peak	
2		155.130	38.47	-13.21	25.26	43.50	-18.24	peak	
3		323.910	28.63	-12.41	16.22	46.00	-29.78	peak	
4		527.610	31.37	-8.16	23.21	46.00	-22.79	peak	
5		639.160	32.59	-5.68	26.91	46.00	-19.09	peak	
6		868.080	30.25	0.37	30.62	46.00	-15.38	peak	

Test Mode:	TX 2406MHz _CH00_ Adapter:S008ACM1200040

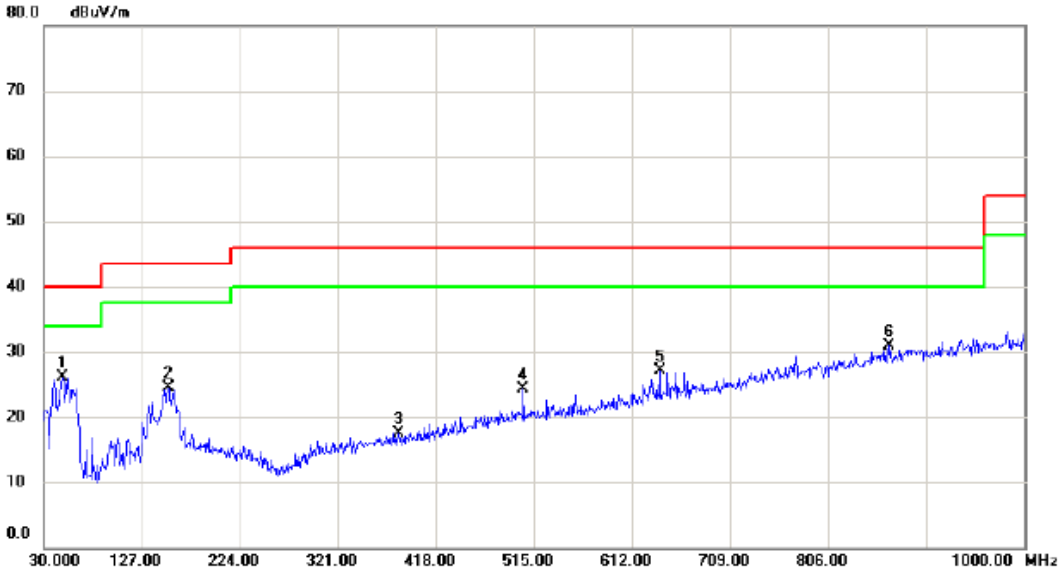
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		59.100	31.58	-14.22	17.36	40.00	-22.64	peak	
2		140.580	35.69	-14.18	21.51	43.50	-21.99	peak	
3		232.730	31.47	-14.19	17.28	46.00	-28.72	peak	
4		323.910	32.02	-12.41	19.61	46.00	-26.39	peak	
5		539.250	30.34	-7.93	22.41	46.00	-23.59	peak	
6	*	763.320	30.90	-2.16	28.74	46.00	-17.26	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter:S008ACM1200040

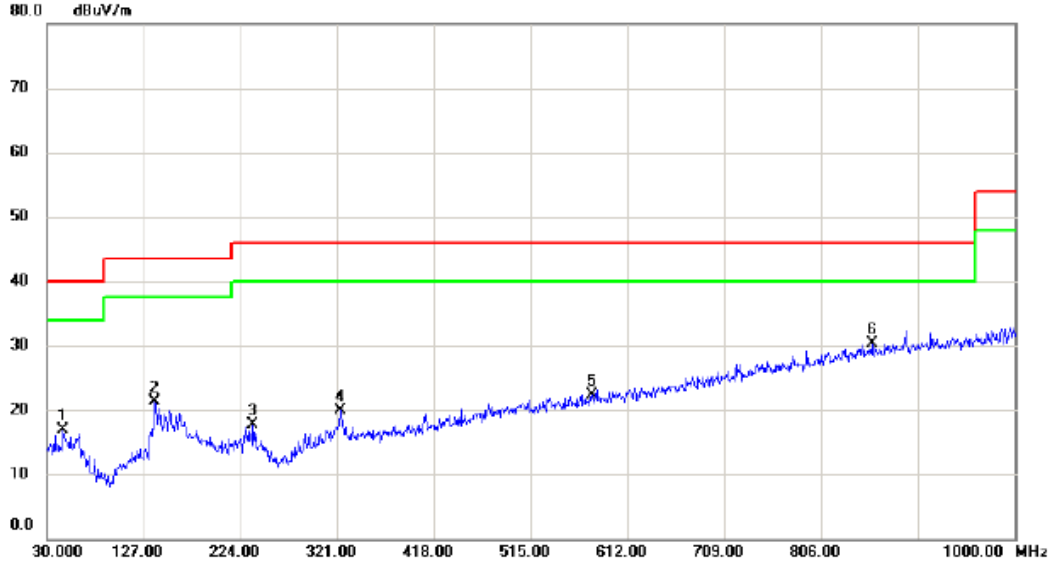
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	48.430	39.32	-13.28	26.04	40.00	-13.96	peak	
2		153.190	37.82	-13.33	24.49	43.50	-19.01	peak	
3		381.140	29.15	-11.58	17.57	46.00	-28.43	peak	
4		504.330	33.00	-8.63	24.37	46.00	-21.63	peak	
5		639.160	32.85	-5.68	27.17	46.00	-18.83	peak	
6		866.140	30.49	0.34	30.83	46.00	-15.17	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter:S008ACM1200040

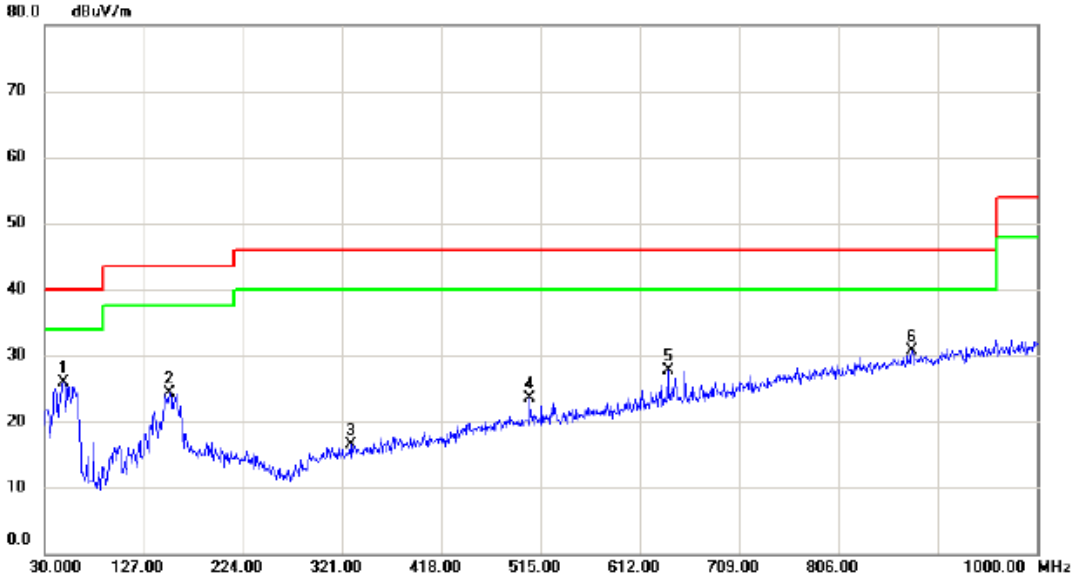
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		46.490	29.96	-12.98	16.98	40.00	-23.02	peak	
2		138.640	35.58	-14.28	21.30	43.50	-22.20	peak	
3		236.610	31.97	-14.28	17.69	46.00	-28.31	peak	
4		323.910	32.28	-12.41	19.87	46.00	-26.13	peak	
5		576.110	29.34	-7.04	22.30	46.00	-23.70	peak	
6	*	856.440	30.09	0.14	30.23	46.00	-15.77	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter:S008ACM1200040

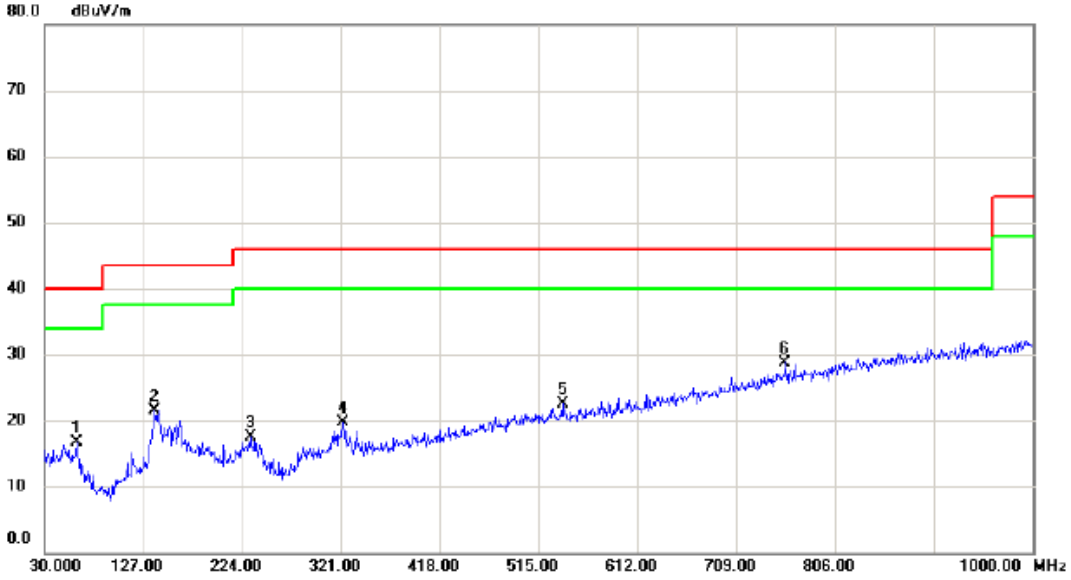
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	48.430	39.24	-13.28	25.96	40.00	-14.04	peak	
2		152.220	37.64	-13.40	24.24	43.50	-19.26	peak	
3		328.760	28.81	-12.33	16.48	46.00	-29.52	peak	
4		504.330	32.22	-8.63	23.59	46.00	-22.41	peak	
5		639.160	33.34	-5.68	27.66	46.00	-18.34	peak	
6		877.780	30.13	0.58	30.71	46.00	-15.29	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter:S008ACM1200040

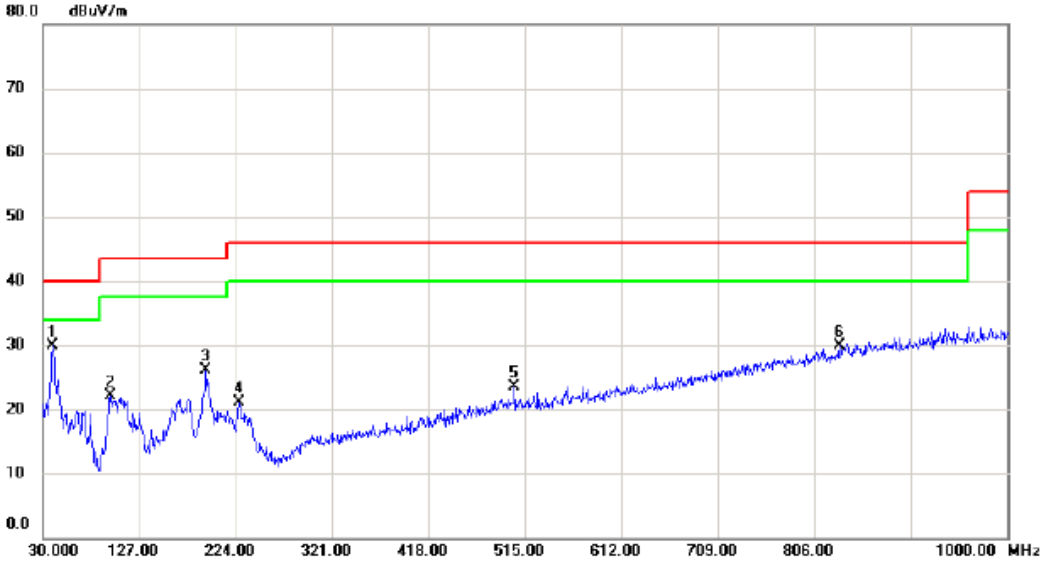
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		61.040	31.15	-14.48	16.67	40.00	-23.33	peak	
2		138.640	35.79	-14.28	21.51	43.50	-21.99	peak	
3		231.760	31.68	-14.17	17.51	46.00	-28.49	peak	
4		322.940	32.16	-12.43	19.73	46.00	-26.27	peak	
5		538.280	30.39	-7.95	22.44	46.00	-23.56	peak	
6	*	756.530	31.11	-2.31	28.80	46.00	-17.20	peak	

Test Mode:	TX 2406MHz _CH00_ Adapter: GPE053A-V120040-Z

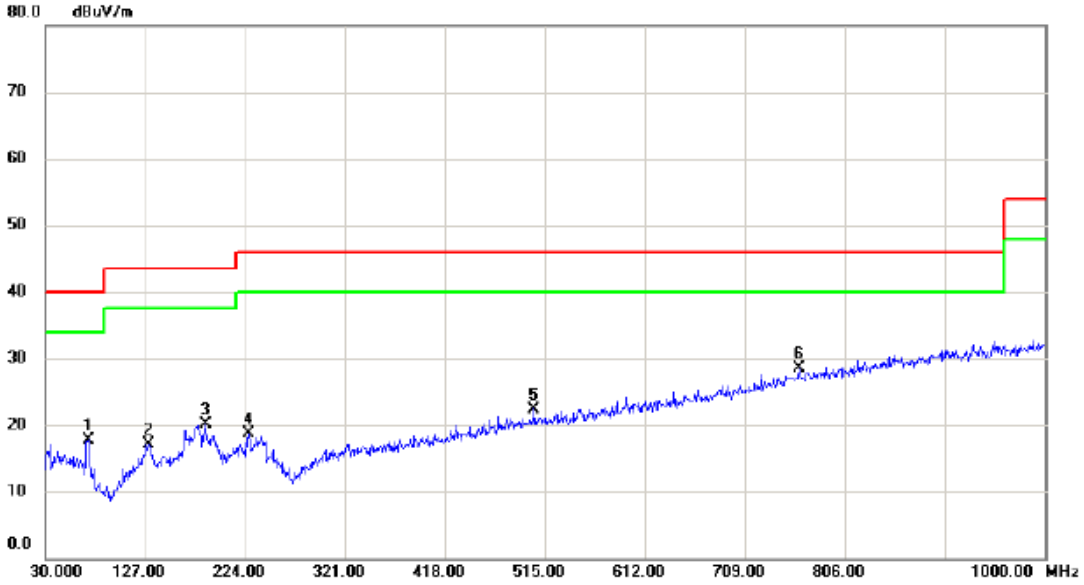
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	39.700	43.86	-14.00	29.86	40.00	-10.14	peak	
2		97.900	40.16	-18.05	22.11	43.50	-21.39	peak	
3		193.930	39.26	-13.19	26.07	43.50	-17.43	peak	
4		226.910	35.12	-14.06	21.06	46.00	-24.94	peak	
5		504.330	32.16	-8.63	23.53	46.00	-22.47	peak	
6		831.220	30.36	-0.52	29.84	46.00	-16.16	peak	

Test Mode:	TX 2406MHz _CH00_ Adapter: GPE053A-V120040-Z

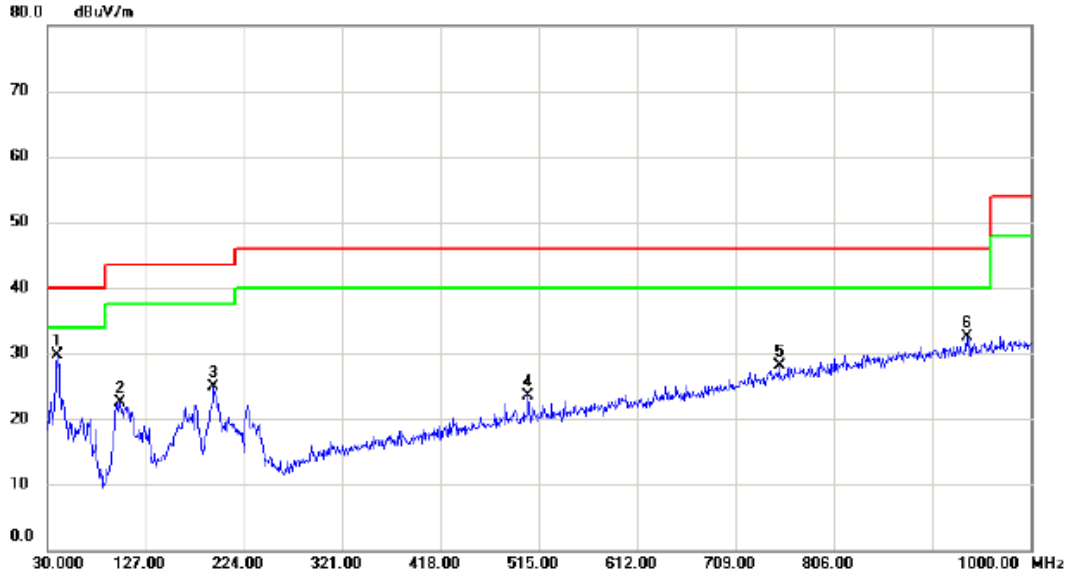
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		71.710	34.52	-16.72	17.80	40.00	-22.20	peak	
2		129.910	31.90	-14.71	17.19	43.50	-26.31	peak	
3		185.200	32.60	-12.46	20.14	43.50	-23.36	peak	
4		226.910	32.80	-14.06	18.74	46.00	-27.26	peak	
5		504.330	31.03	-8.63	22.40	46.00	-23.60	peak	
6	*	761.380	30.67	-2.20	28.47	46.00	-17.53	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter: GPE053A-V120040-Z

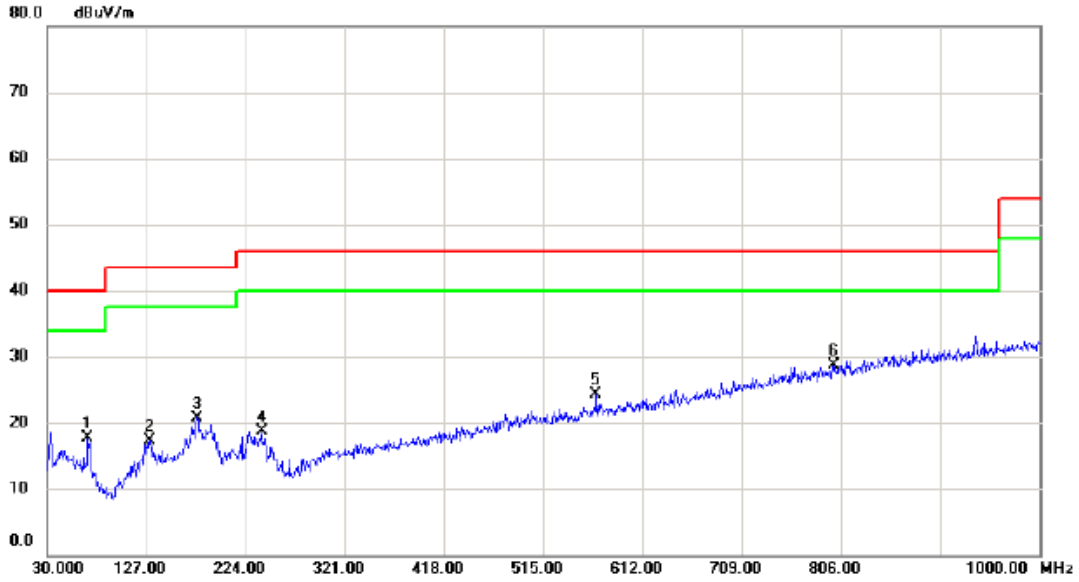
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	39.700	43.80	-14.00	29.80	40.00	-10.20	peak	
2		101.780	39.73	-17.25	22.48	43.50	-21.02	peak	
3		193.930	38.19	-13.19	25.00	43.50	-18.50	peak	
4		504.330	32.20	-8.63	23.57	46.00	-22.43	peak	
5		751.680	30.55	-2.40	28.15	46.00	-17.85	peak	
6		936.950	30.78	1.74	32.52	46.00	-13.48	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter: GPE053A-V120040-Z

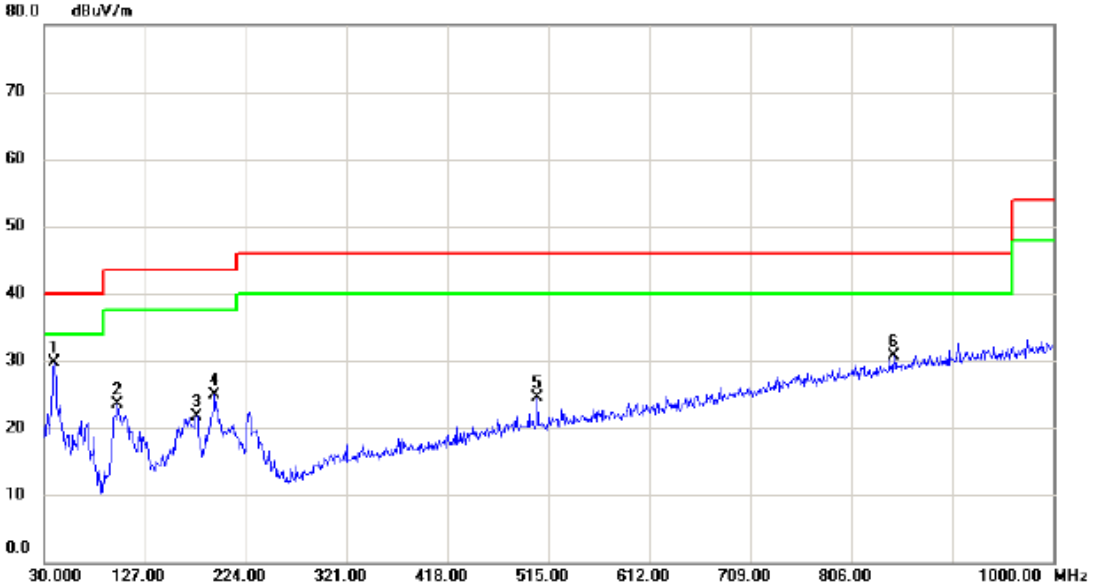
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		69.770	34.09	-16.46	17.63	40.00	-22.37	peak	
2		129.910	31.98	-14.71	17.27	43.50	-26.23	peak	
3		176.470	32.94	-12.14	20.80	43.50	-22.70	peak	
4		239.520	33.15	-14.35	18.80	46.00	-27.20	peak	
5		566.410	31.53	-7.29	24.24	46.00	-21.76	peak	
6	*	798.240	30.04	-1.40	28.64	46.00	-17.36	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter: GPE053A-V120040-Z

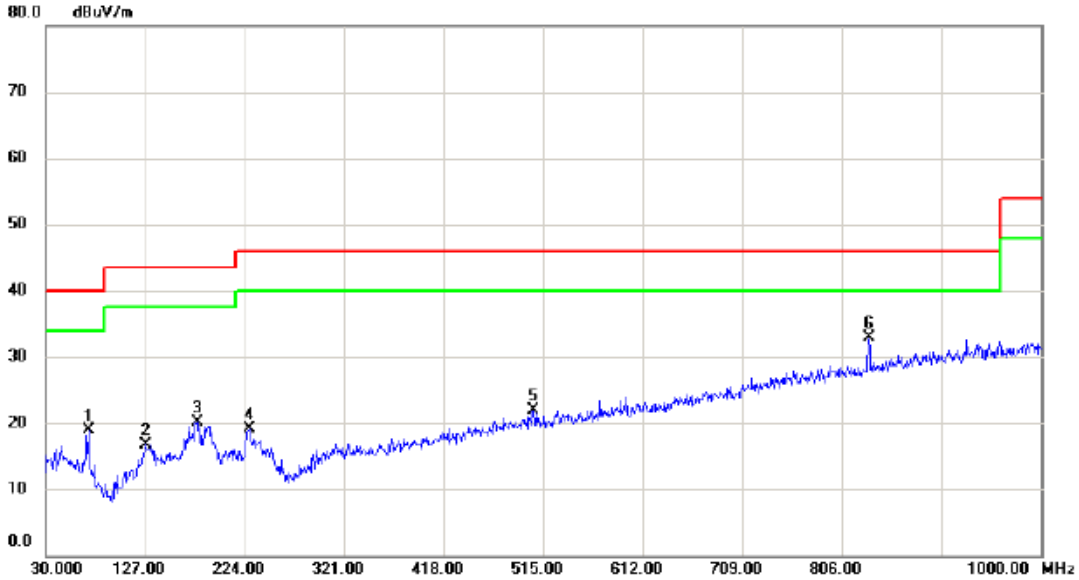
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	39.700	43.76	-14.00	29.76	40.00	-10.24	peak	
2		100.810	40.82	-17.38	23.44	43.50	-20.06	peak	
3		176.470	33.88	-12.14	21.74	43.50	-21.76	peak	
4		193.930	38.07	-13.19	24.88	43.50	-18.62	peak	
5		504.330	33.10	-8.63	24.47	46.00	-21.53	peak	
6		846.740	30.84	-0.10	30.74	46.00	-15.26	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter: GPE053A-V120040-Z

Horizontal

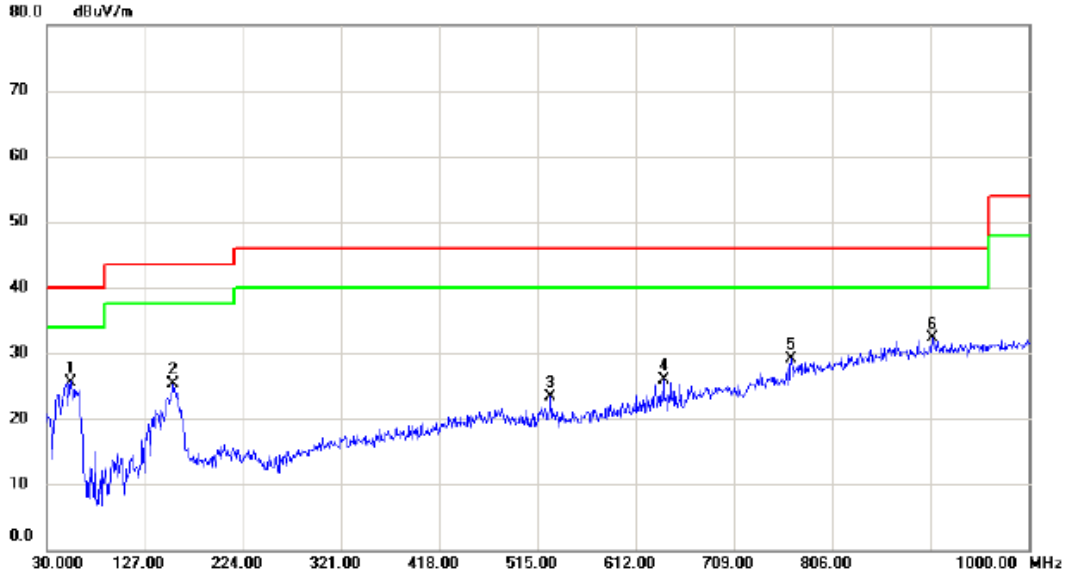


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		71.710	35.59	-16.72	18.87	40.00	-21.13	peak	
2		127.000	31.71	-14.91	16.80	43.50	-26.70	peak	
3		177.440	32.27	-12.12	20.15	43.50	-23.35	peak	
4		227.880	33.28	-14.09	19.19	46.00	-26.81	peak	
5		505.300	30.43	-8.61	21.82	46.00	-24.18	peak	
6	*	832.190	33.43	-0.49	32.94	46.00	-13.06	peak	

For Group 2 Antenna

Test Mode:	TX 2406MHz _CH00_ Adapter:S008ACM1200040

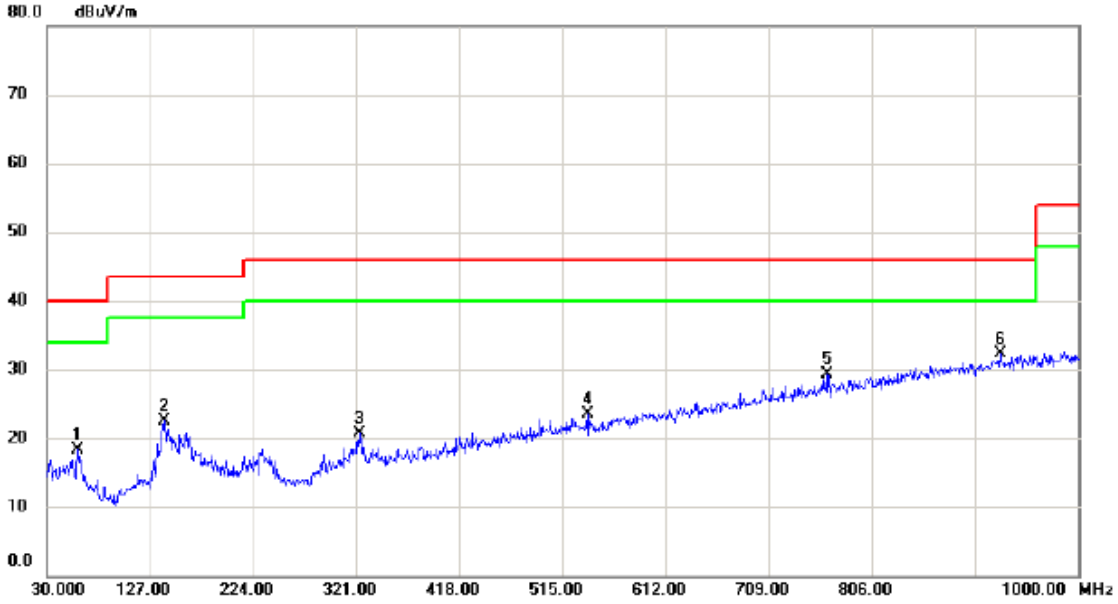
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		53.280	39.48	-13.88	25.60	40.00	-14.40	peak	
2		155.130	38.47	-13.21	25.26	43.50	-18.24	peak	
3		527.610	31.37	-8.16	23.21	46.00	-22.79	peak	
4		639.160	31.59	-5.68	25.91	46.00	-20.09	peak	
5		765.260	31.23	-2.12	29.11	46.00	-16.89	peak	
6	*	904.940	31.18	1.12	32.30	46.00	-13.70	peak	

Test Mode:	TX 2406MHz _CH00_ Adapter:S008ACM1200040

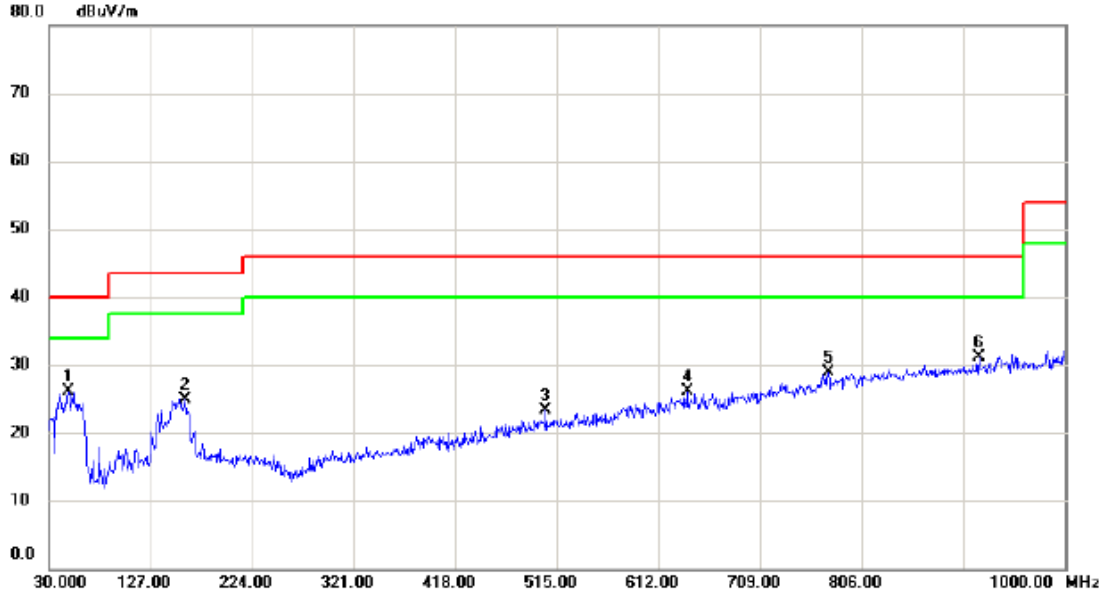
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		59.100	32.58	-14.22	18.36	40.00	-21.64	peak	
2		140.580	36.69	-14.18	22.51	43.50	-20.99	peak	
3		323.910	33.02	-12.41	20.61	46.00	-25.39	peak	
4		539.250	31.34	-7.93	23.41	46.00	-22.59	peak	
5		763.320	31.40	-2.16	29.24	46.00	-16.76	peak	
6	*	926.280	30.85	1.55	32.40	46.00	-13.60	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter:S008ACM1200040

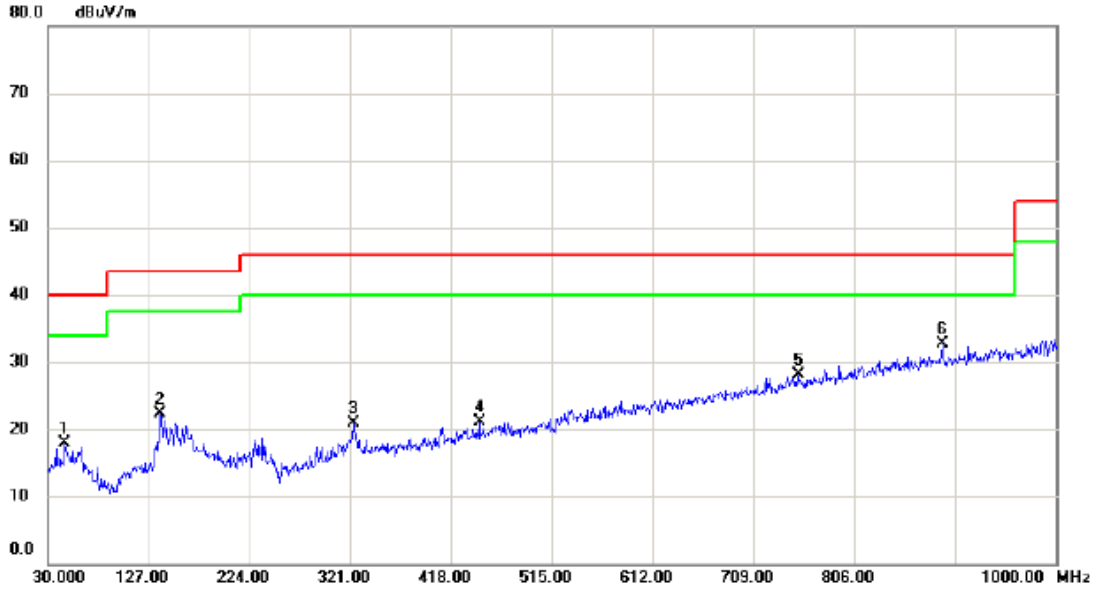
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	48.430	39.32	-13.28	26.04	40.00	-13.96	peak	
2		159.980	37.89	-12.93	24.96	43.50	-18.54	peak	
3		504.330	32.00	-8.63	23.37	46.00	-22.63	peak	
4		639.160	31.85	-5.68	26.17	46.00	-19.83	peak	
5		773.990	30.76	-1.92	28.84	46.00	-17.16	peak	
6		917.550	29.72	1.37	31.09	46.00	-14.91	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter:S008ACM1200040

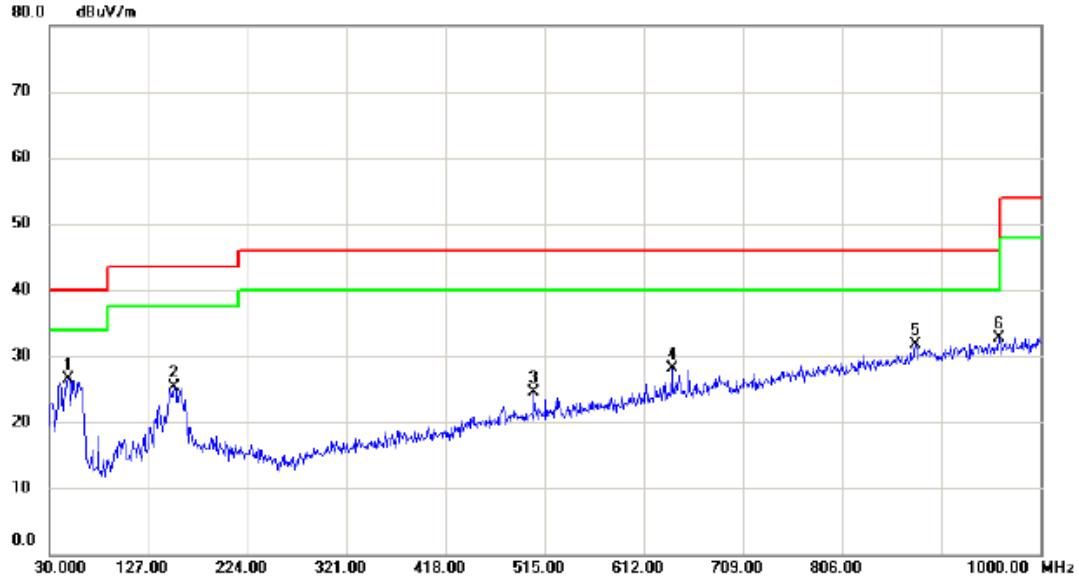
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		46.490	30.96	-12.98	17.98	40.00	-22.02	peak	
2		138.640	36.58	-14.28	22.30	43.50	-21.20	peak	
3		323.910	33.28	-12.41	20.87	46.00	-25.13	peak	
4		445.160	31.19	-10.08	21.11	46.00	-24.89	peak	
5		751.680	30.45	-2.40	28.05	46.00	-17.95	peak	
6	*	890.390	31.86	0.84	32.70	46.00	-13.30	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter:S008ACM1200040

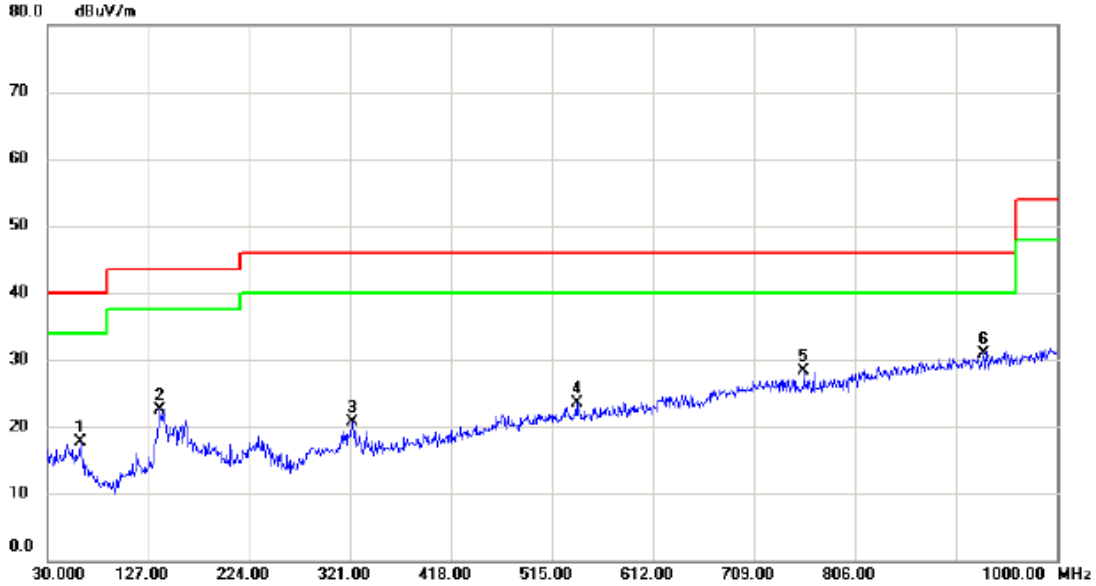
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		48.430	39.74	-13.28	26.46	40.00	-13.54	peak	
2		152.220	38.64	-13.40	25.24	43.50	-18.26	peak	
3		504.330	33.22	-8.63	24.59	46.00	-21.41	peak	
4		639.160	33.84	-5.68	28.16	46.00	-17.84	peak	
5		877.780	31.13	0.58	31.71	46.00	-14.29	peak	
6	*	959.260	30.54	2.17	32.71	46.00	-13.29	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter:S008ACM1200040

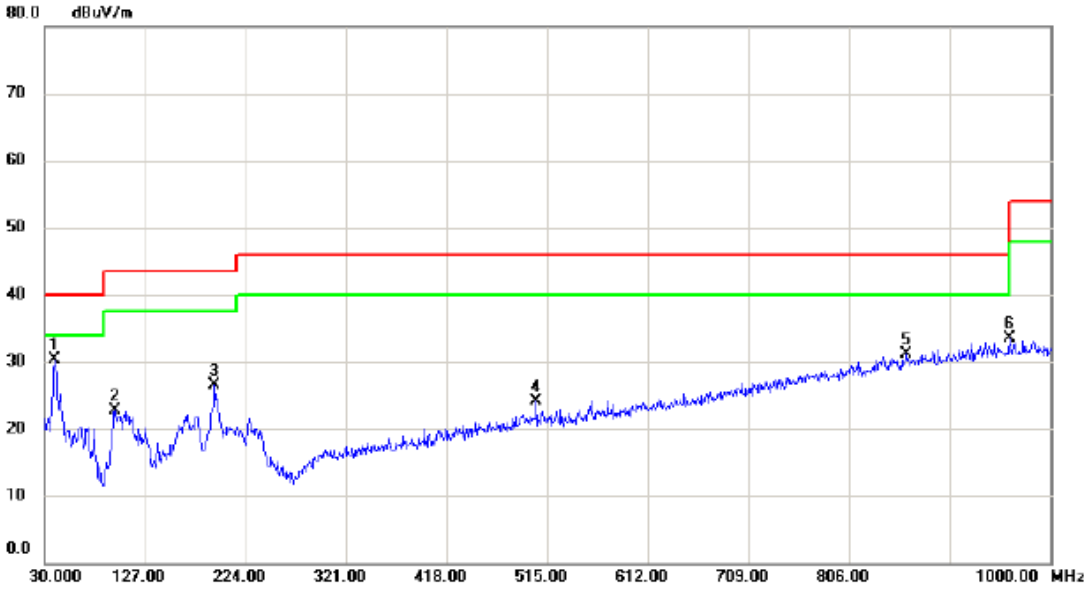
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		61.040	32.15	-14.48	17.67	40.00	-22.33	peak	
2		138.640	36.79	-14.28	22.51	43.50	-20.99	peak	
3		322.940	33.16	-12.43	20.73	46.00	-25.27	peak	
4		538.280	31.39	-7.95	23.44	46.00	-22.56	peak	
5		756.530	30.61	-2.31	28.30	46.00	-17.70	peak	
6	*	929.190	29.35	1.59	30.94	46.00	-15.06	peak	

Test Mode:	TX 2406MHz _CH00_ Adapter: GPE053A-V120040-Z

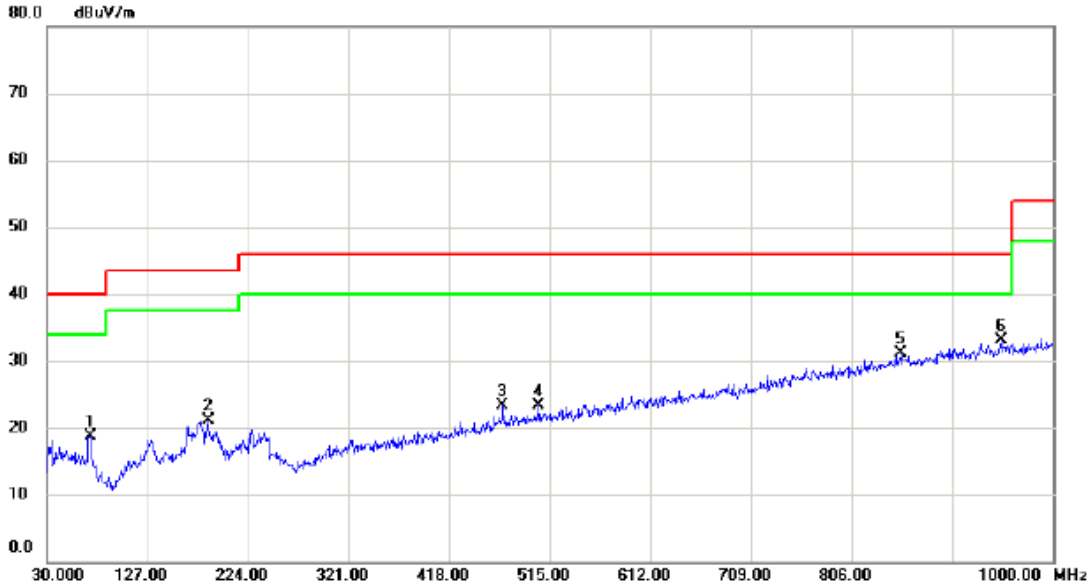
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	39.700	44.36	-14.00	30.36	40.00	-9.64	peak	
2		97.900	40.66	-18.05	22.61	43.50	-20.89	peak	
3		193.930	39.76	-13.19	26.57	43.50	-16.93	peak	
4		504.330	32.66	-8.63	24.03	46.00	-21.97	peak	
5		861.290	30.84	0.24	31.08	46.00	-14.92	peak	
6		960.230	31.22	2.19	33.41	54.00	-20.59	peak	

Test Mode:	TX 2406MHz _CH00_ Adapter: GPE053A-V120040-Z

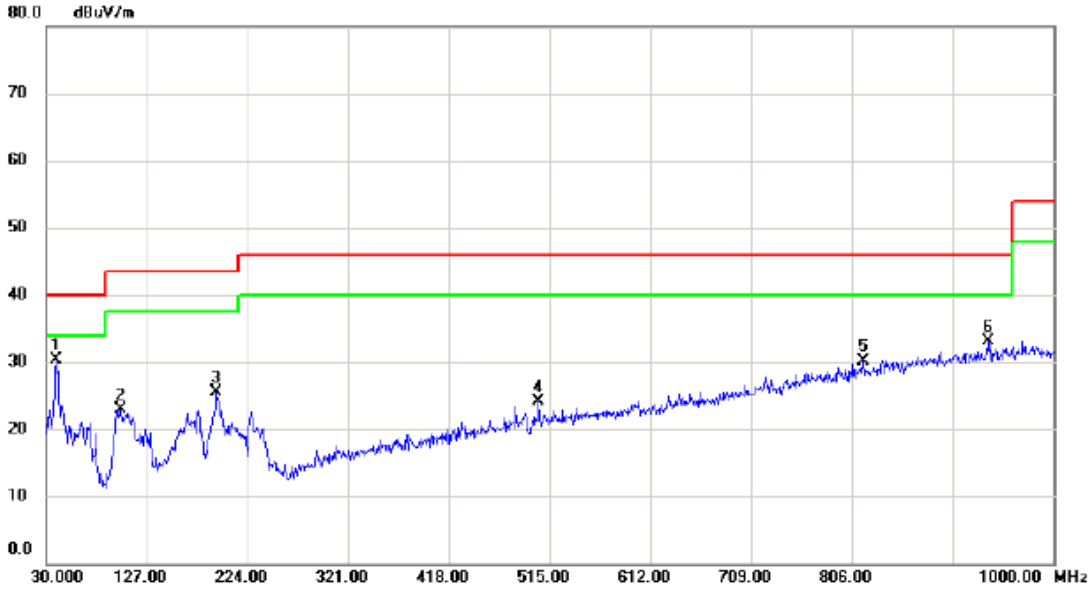
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		71.710	35.52	-16.72	18.80	40.00	-21.20	peak	
2		185.200	33.60	-12.46	21.14	43.50	-22.36	peak	
3		469.410	32.75	-9.47	23.28	46.00	-22.72	peak	
4		504.330	32.03	-8.63	23.40	46.00	-22.60	peak	
5		853.530	31.01	0.07	31.08	46.00	-14.92	peak	
6	*	950.530	31.06	2.01	33.07	46.00	-12.93	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter: GPE053A-V120040-Z

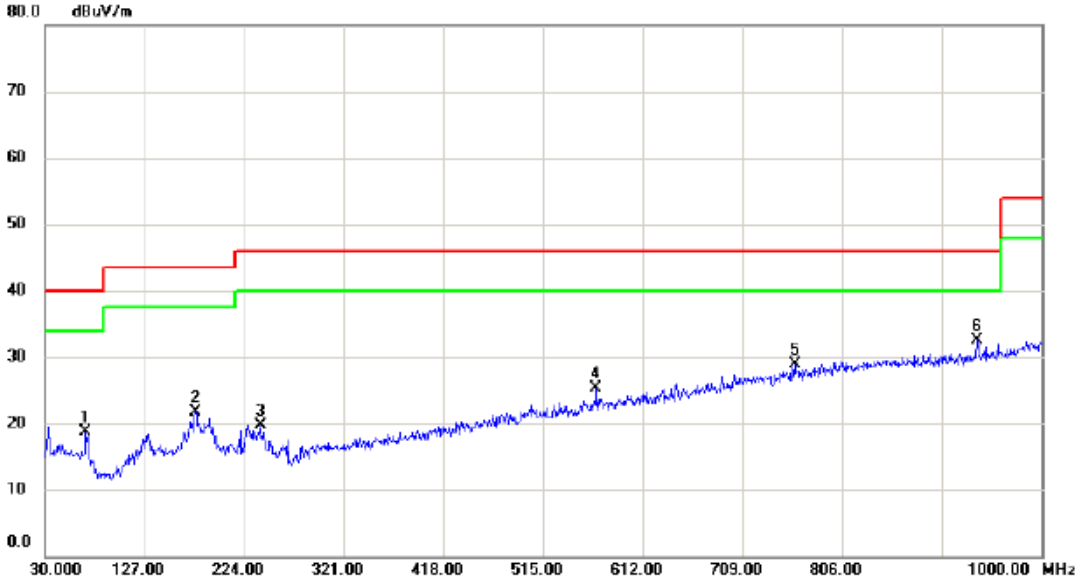
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	39.700	44.30	-14.00	30.30	40.00	-9.70	peak	
2		101.780	40.23	-17.25	22.98	43.50	-20.52	peak	
3		193.930	38.69	-13.19	25.50	43.50	-18.00	peak	
4		504.330	32.70	-8.63	24.07	46.00	-21.93	peak	
5		816.670	31.06	-0.91	30.15	46.00	-15.85	peak	
6		936.950	31.28	1.74	33.02	46.00	-12.98	peak	

Test Mode:	TX 2442MHz _CH12_ Adapter: GPE053A-V120040-Z

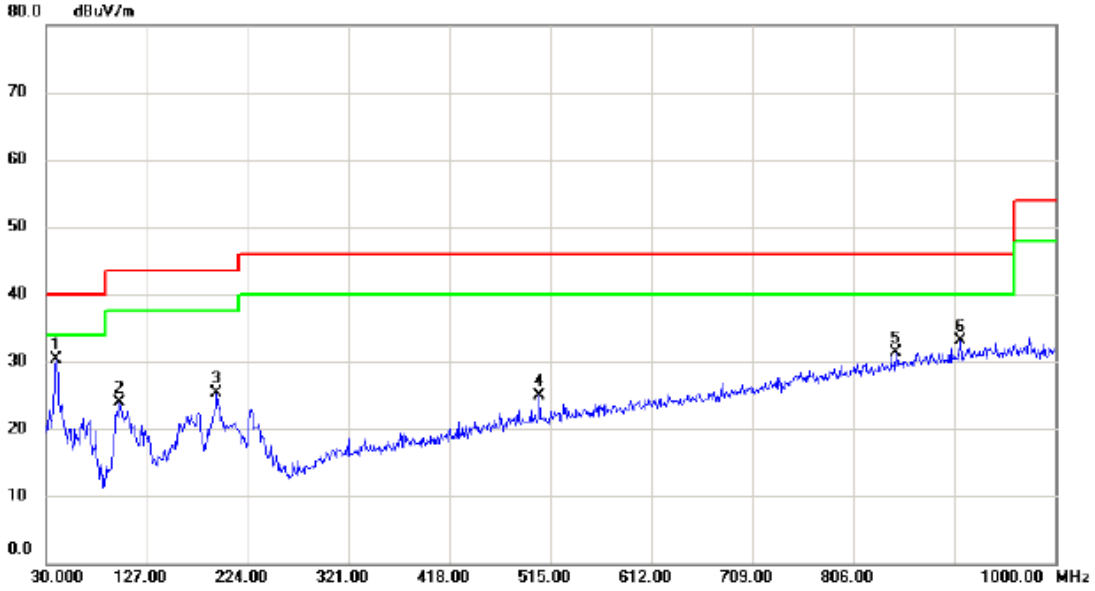
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		69.770	35.09	-16.46	18.63	40.00	-21.37	peak	
2		176.470	33.94	-12.14	21.80	43.50	-21.70	peak	
3		239.520	34.15	-14.35	19.80	46.00	-26.20	peak	
4		566.410	32.53	-7.29	25.24	46.00	-20.76	peak	
5		759.440	31.13	-2.24	28.89	46.00	-17.11	peak	
6	*	936.950	30.80	1.74	32.54	46.00	-13.46	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter: GPE053A-V120040-Z

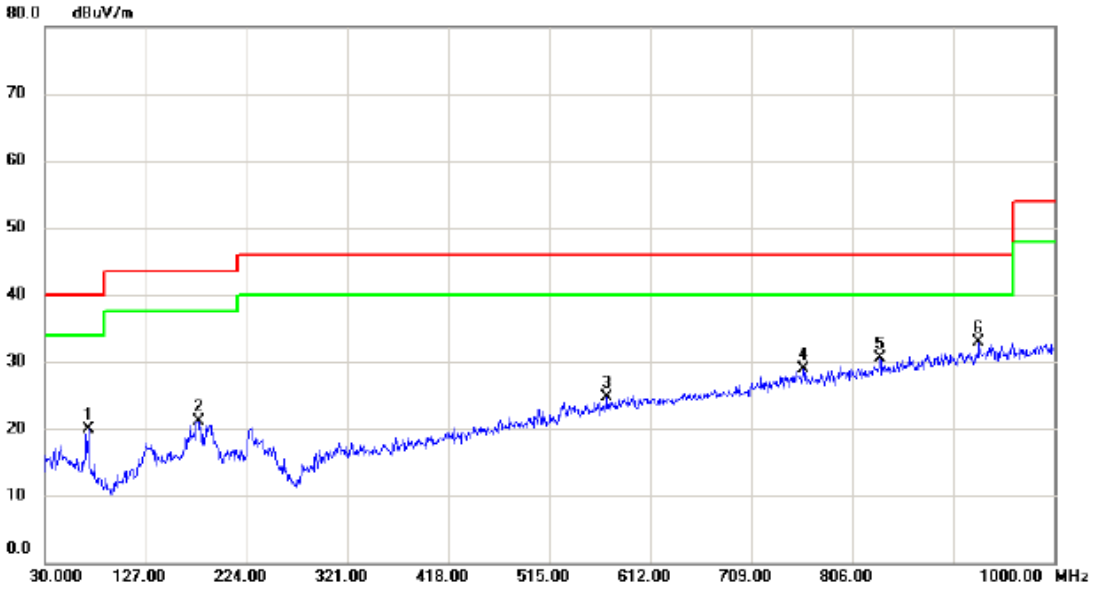
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	39.700	44.26	-14.00	30.26	40.00	-9.74	peak	
2		100.810	41.32	-17.38	23.94	43.50	-19.56	peak	
3		193.930	38.57	-13.19	25.38	43.50	-18.12	peak	
4		504.330	33.60	-8.63	24.97	46.00	-21.03	peak	
5		846.740	31.35	-0.10	31.25	46.00	-14.75	peak	
6		908.820	31.87	1.21	33.08	46.00	-12.92	peak	

Test Mode:	TX 2475MHz _CH23_ Adapter: GPE053A-V120040-Z

Horizontal



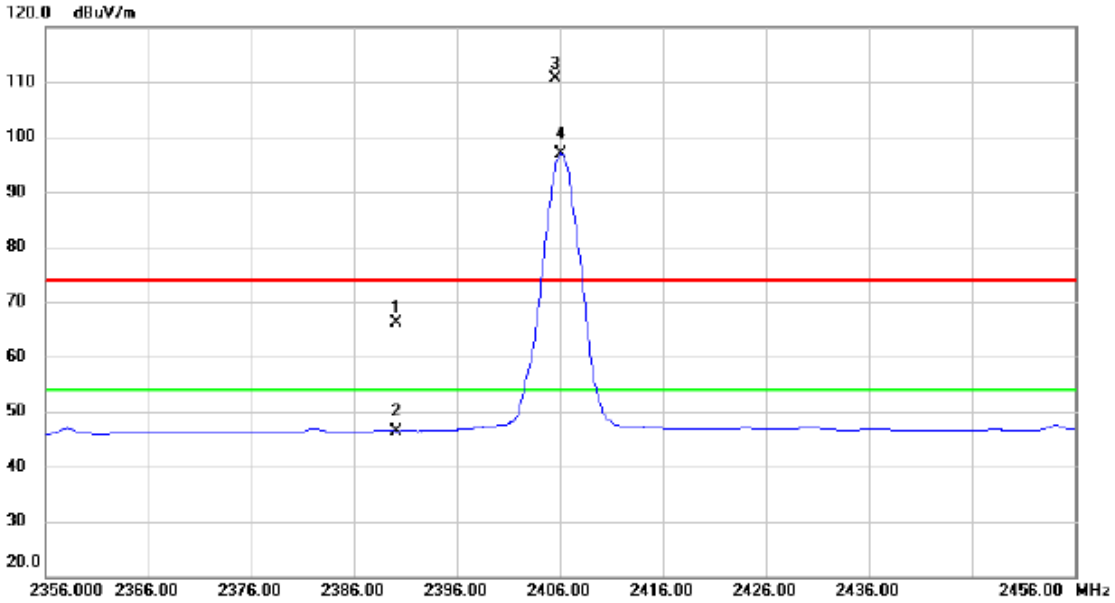
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		71.710	36.59	-16.72	19.87	40.00	-20.13	peak	
2		177.440	33.27	-12.12	21.15	43.50	-22.35	peak	
3		570.290	31.92	-7.18	24.74	46.00	-21.26	peak	
4		758.470	31.15	-2.25	28.90	46.00	-17.10	peak	
5		832.190	30.93	-0.49	30.44	46.00	-15.56	peak	
6	*	927.250	31.39	1.56	32.95	46.00	-13.05	peak	

APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

For Group 1 Antenna

Test Mode :	TX 2406MHz _CH00

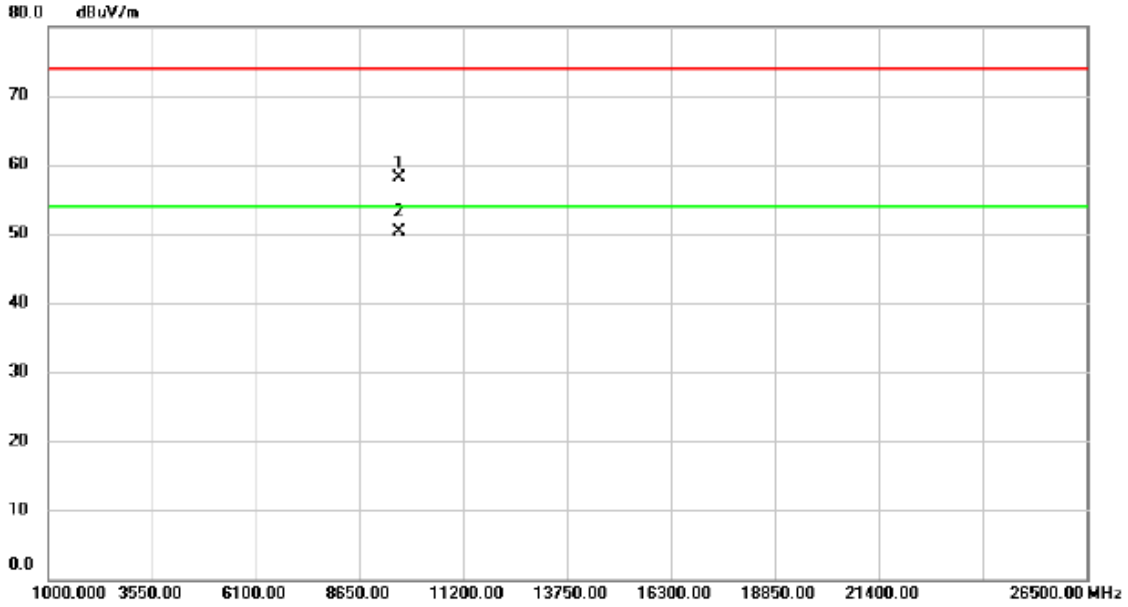
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	67.06	-0.87	66.19	74.00	-7.81	peak	
2		2390.000	47.36	-0.87	46.49	54.00	-7.51	AVG	
3	X	2405.600	111.51	-0.81	110.70	74.00	36.70	peak	No Limit
4	*	2406.100	97.80	-0.80	97.00	54.00	43.00	AVG	No Limit

Test Mode :	TX 2406MHz _CH00

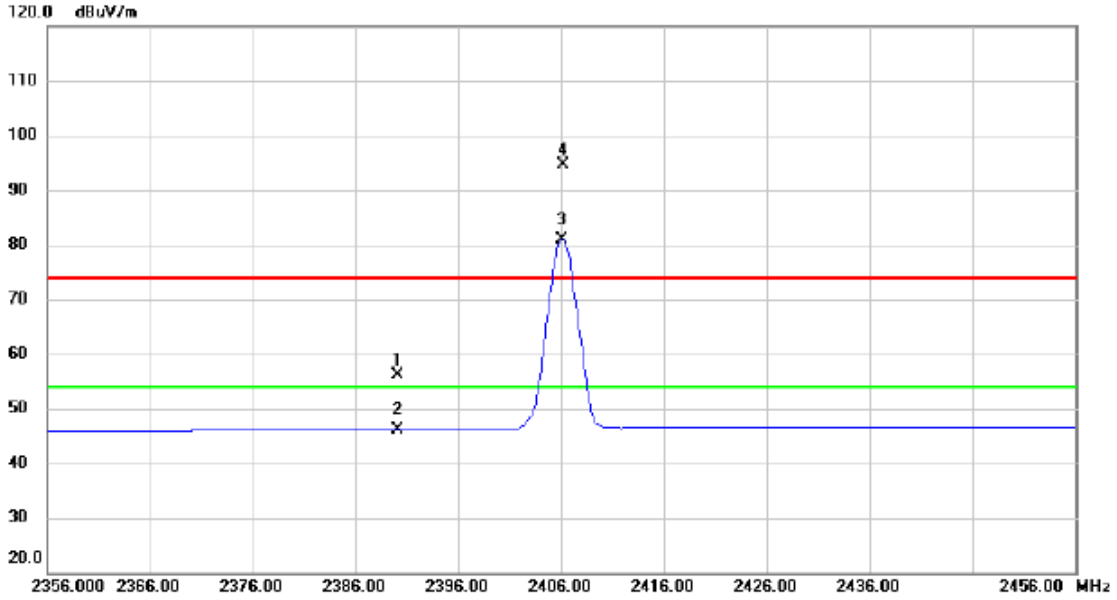
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9621.960	43.07	15.07	58.14	74.00	-15.86	peak	
2	*	9625.860	35.22	15.08	50.30	54.00	-3.70	AVG	

Test Mode :	TX 2406MHz _CH00

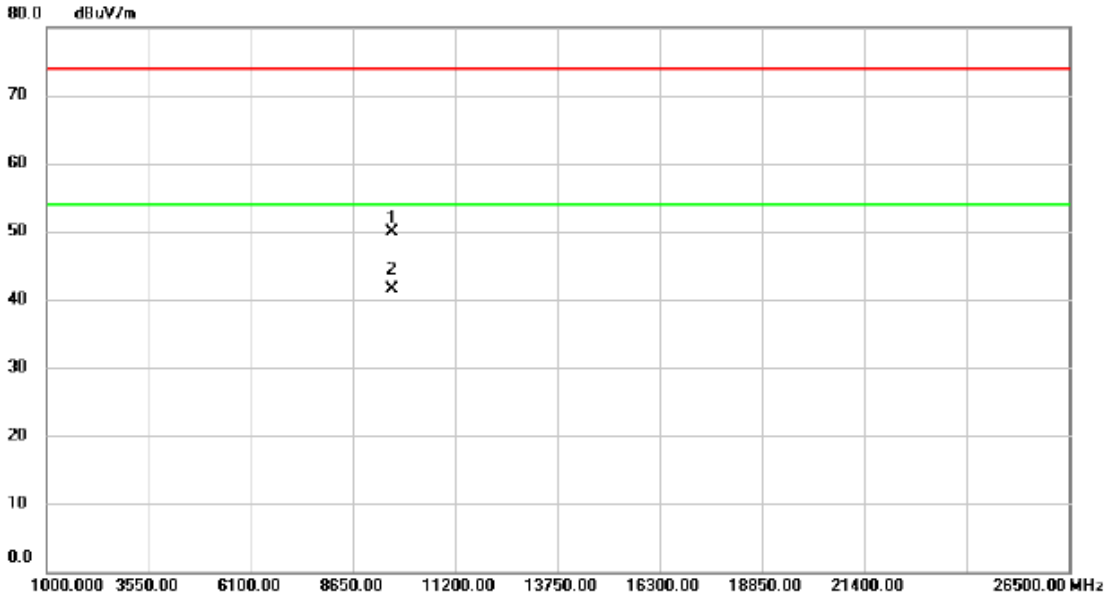
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	57.02	-0.87	56.15	74.00	-17.85	peak	
2		2390.000	47.09	-0.87	46.22	54.00	-7.78	AVG	
3	*	2406.100	81.80	-0.80	81.00	54.00	27.00	AVG	No Limit
4	X	2406.200	95.35	-0.80	94.55	74.00	20.55	peak	No Limit

Test Mode :	TX 2406MHz _CH00

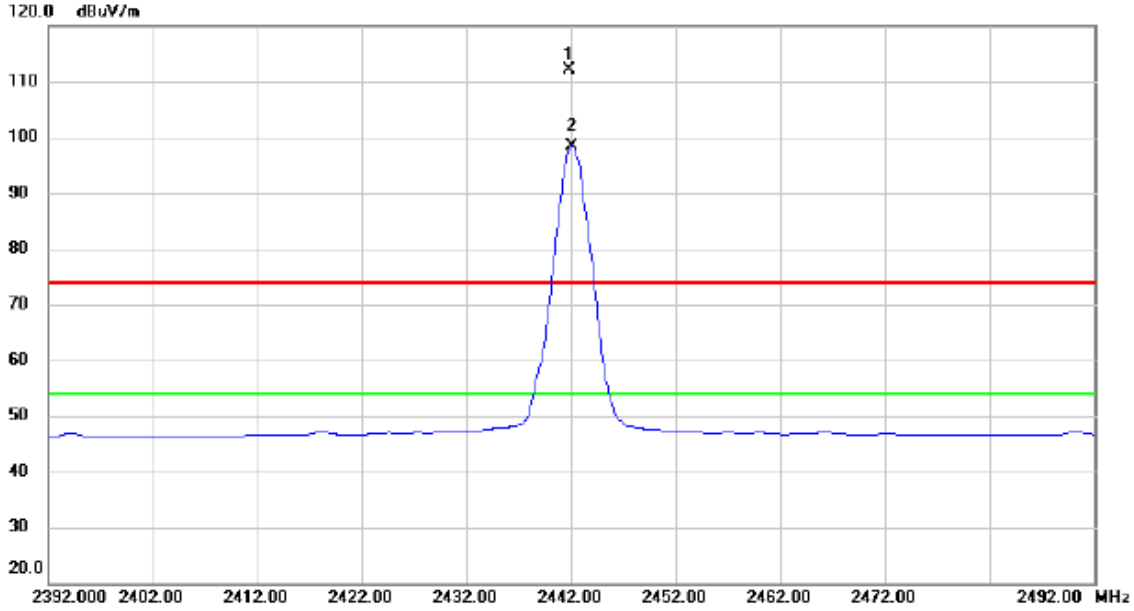
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9621.080	34.93	15.07	50.00	74.00	-24.00	peak	
2	*	9625.780	26.47	15.08	41.55	54.00	-12.45	AVG	

Test Mode :	TX 2442MHz _CH12

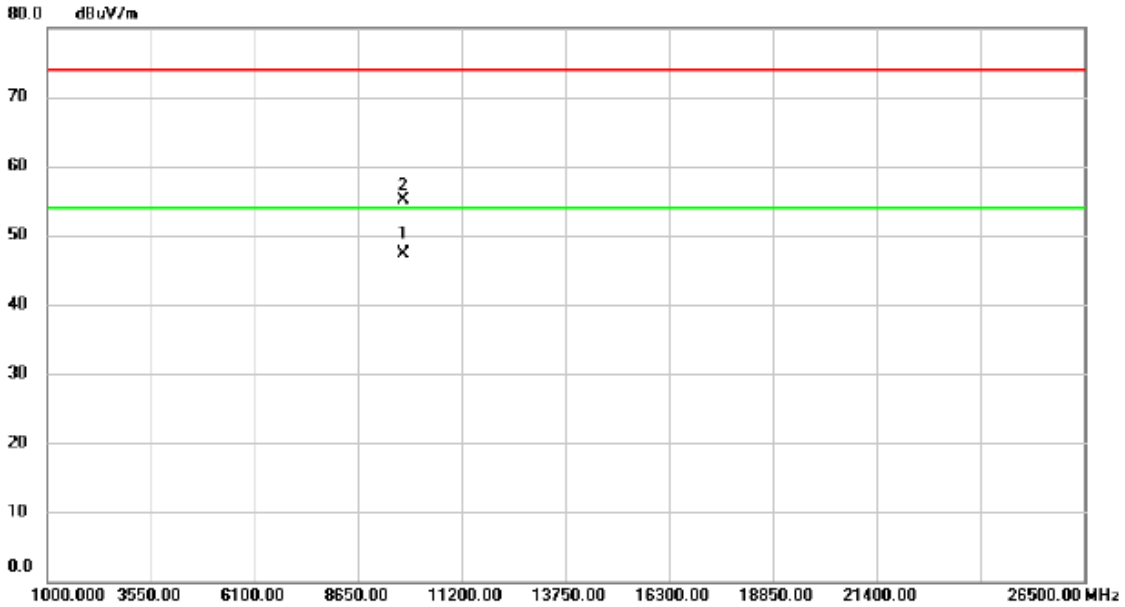
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2441.800	112.82	-0.67	112.15	74.00	38.15	peak	No Limit
2	*	2442.100	99.12	-0.67	98.45	54.00	44.45	AVG	No Limit

Test Mode :	TX 2442MHz _CH12

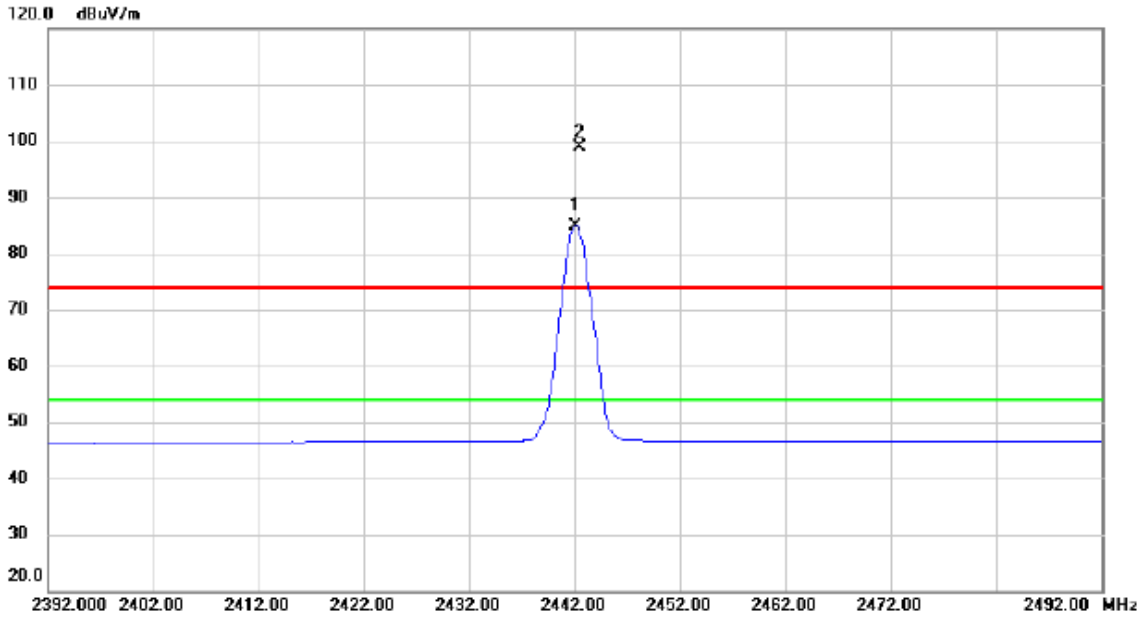
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	9766.580	32.18	15.19	47.37	54.00	-6.63	AVG	
2		9768.000	39.90	15.19	55.09	74.00	-18.91	peak	

Test Mode :	TX 2442MHz _CH12

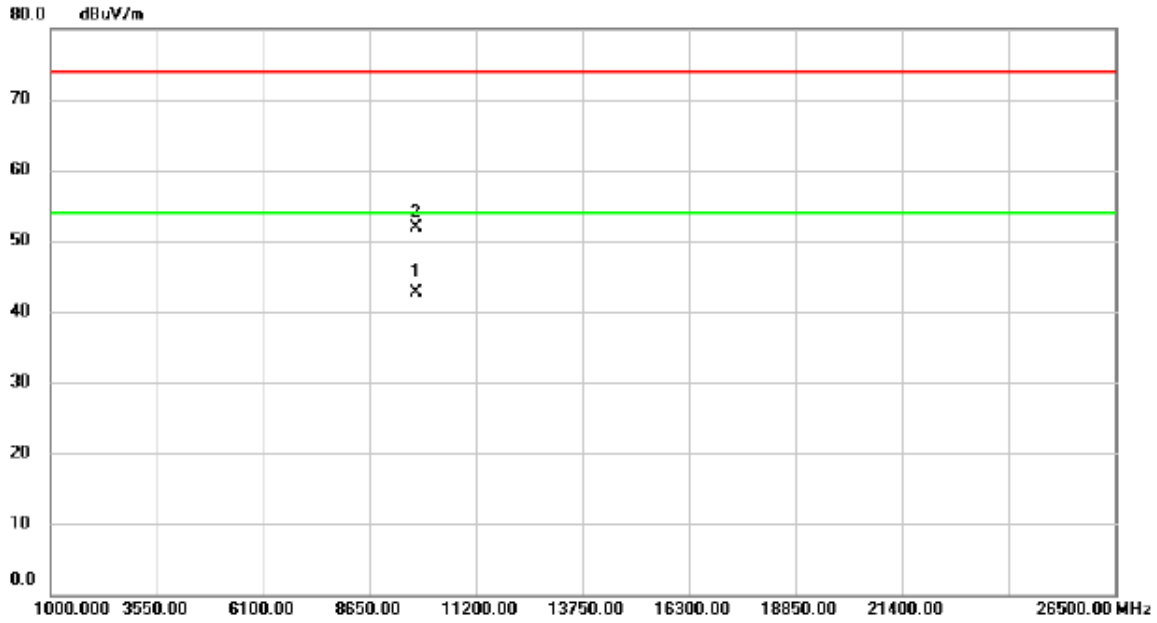
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2442.100	85.64	-0.67	84.97	54.00	30.97	AVG	No Limit
2	X	2442.500	99.46	-0.67	98.79	74.00	24.79	peak	No Limit

Test Mode :	TX 2442MHz _CH12

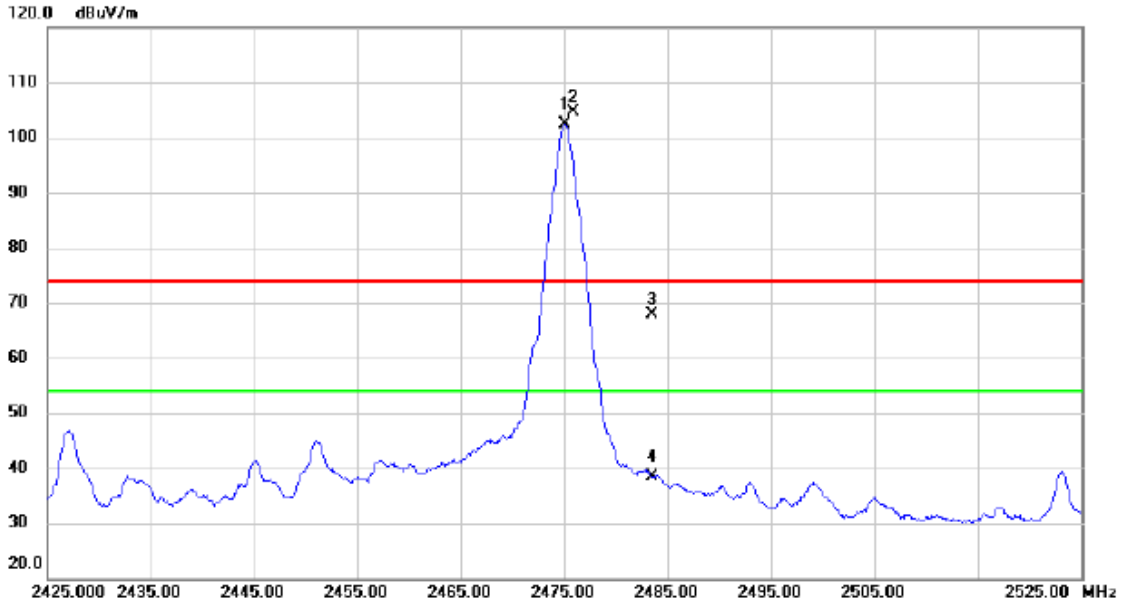
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	9766.520	27.53	15.19	42.72	54.00	-11.28	AVG	
2		9768.020	36.65	15.19	51.84	74.00	-22.16	peak	

Test Mode :	TX 2475MHz _CH23

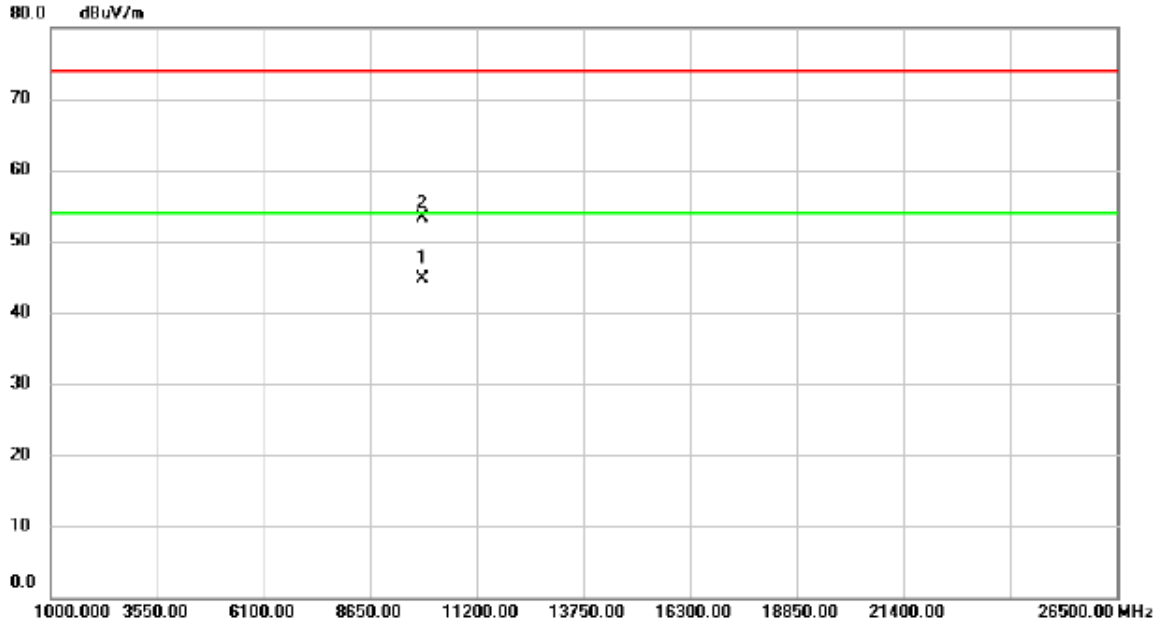
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2475.100	103.25	-0.90	102.35	54.00	48.35	AVG	No Limit
2	X	2475.800	105.52	-0.90	104.62	74.00	30.62	peak	No Limit
3		2483.500	68.71	-0.87	67.84	74.00	-6.16	peak	
4		2483.500	39.13	-0.87	38.26	54.00	-15.74	AVG	

Test Mode :	TX 2475MHz _CH23

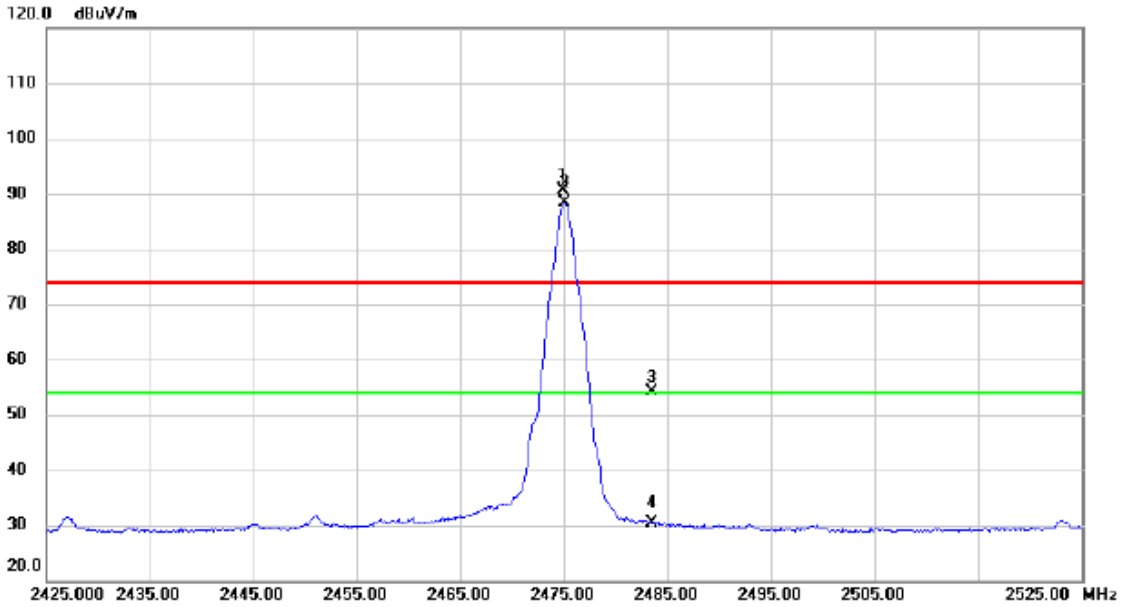
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	9901.880	30.75	13.98	44.73	54.00	-9.27	AVG	
2		9901.970	39.25	13.98	53.23	74.00	-20.77	peak	

Test Mode :	TX 2475MHz _CH23

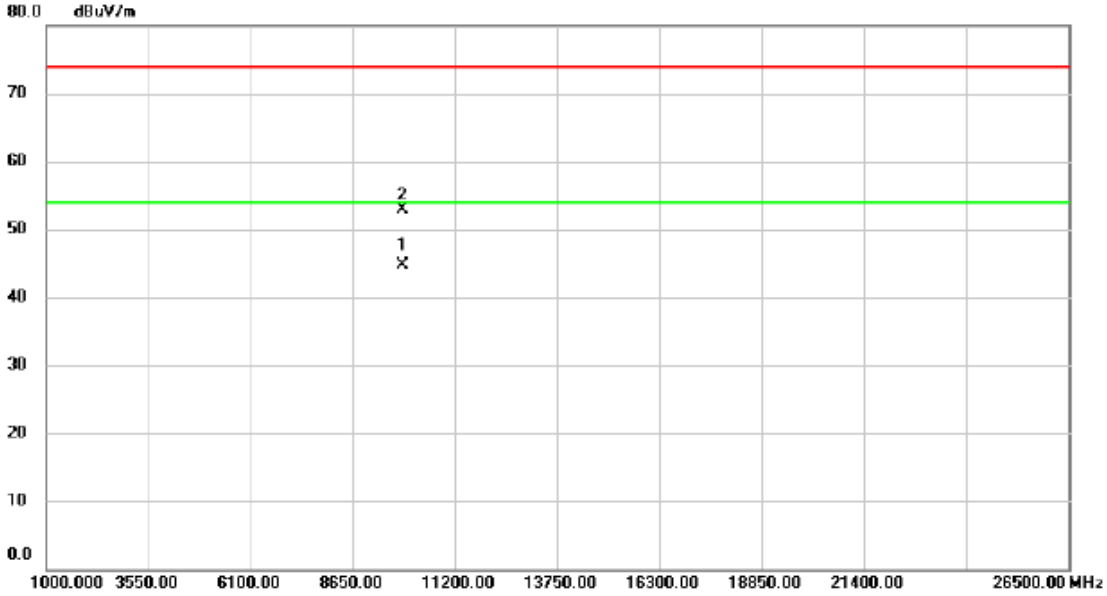
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2474.900	91.60	-0.91	90.69	74.00	16.69	peak	No Limit
2	*	2475.100	89.27	-0.90	88.37	54.00	34.37	AVG	No Limit
3		2483.500	54.96	-0.87	54.09	74.00	-19.91	peak	
4		2483.500	31.21	-0.87	30.34	54.00	-23.66	AVG	

Test Mode :	TX 2475MHz _CH23

Horizontal

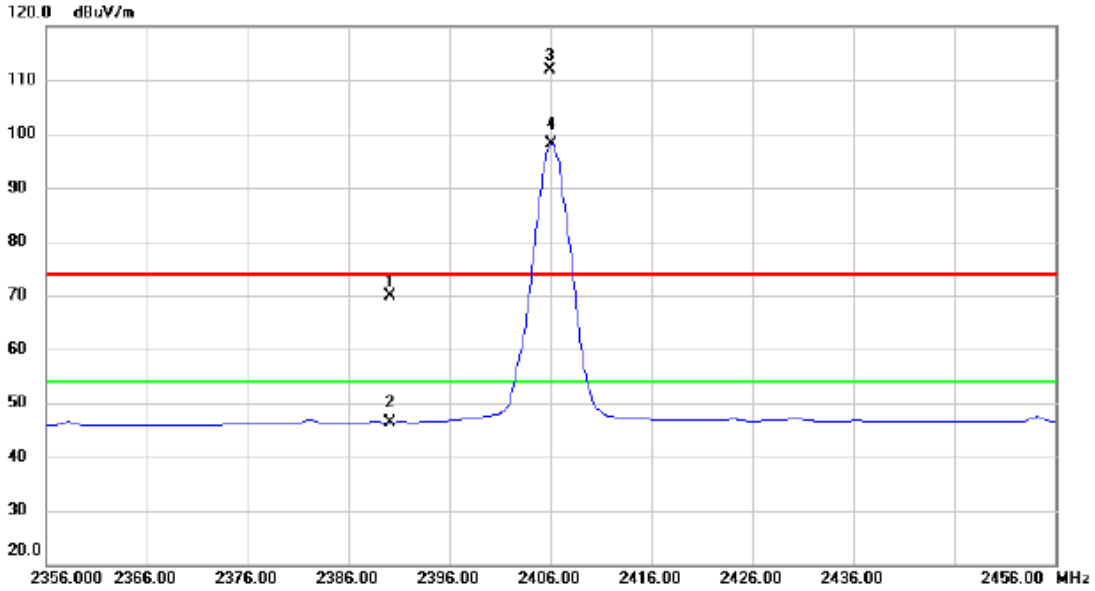


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	9901.815	30.65	13.98	44.63	54.00	-9.37	AVG	
2		9901.965	38.88	13.98	52.86	74.00	-21.14	peak	

For Group 2 Antenna

Test Mode :	TX 2406MHz _CH00

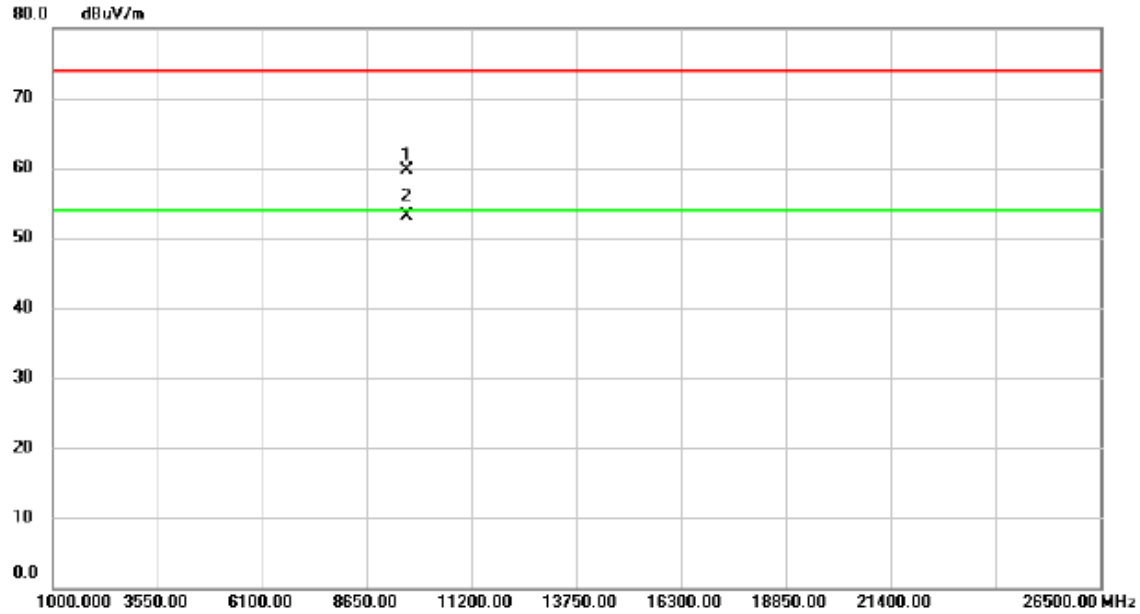
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	70.84	-0.87	69.97	74.00	-4.03	peak	
2		2390.000	47.34	-0.87	46.47	54.00	-7.53	AVG	
3	X	2405.900	112.71	-0.80	111.91	74.00	37.91	peak	No Limit
4	*	2406.100	98.99	-0.80	98.19	54.00	44.19	AVG	No Limit

Test Mode :	TX 2406MHz _CH00

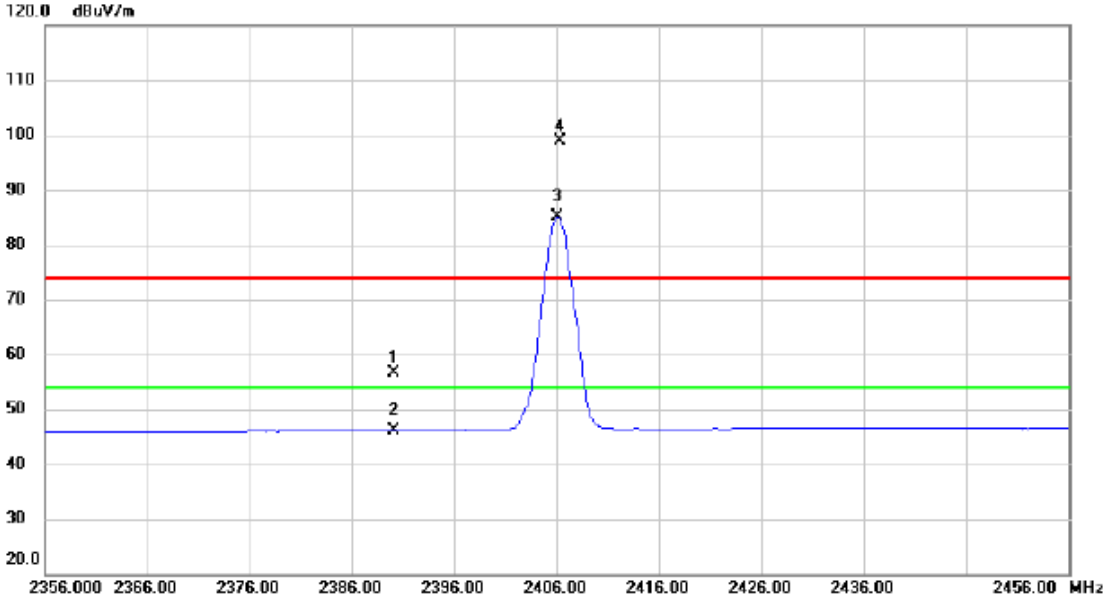
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9624.000	44.45	15.17	59.62	74.00	-14.38	peak	
2	*	9625.840	37.97	15.18	53.15	54.00	-0.85	AVG	

Test Mode :	TX 2406MHz _CH00

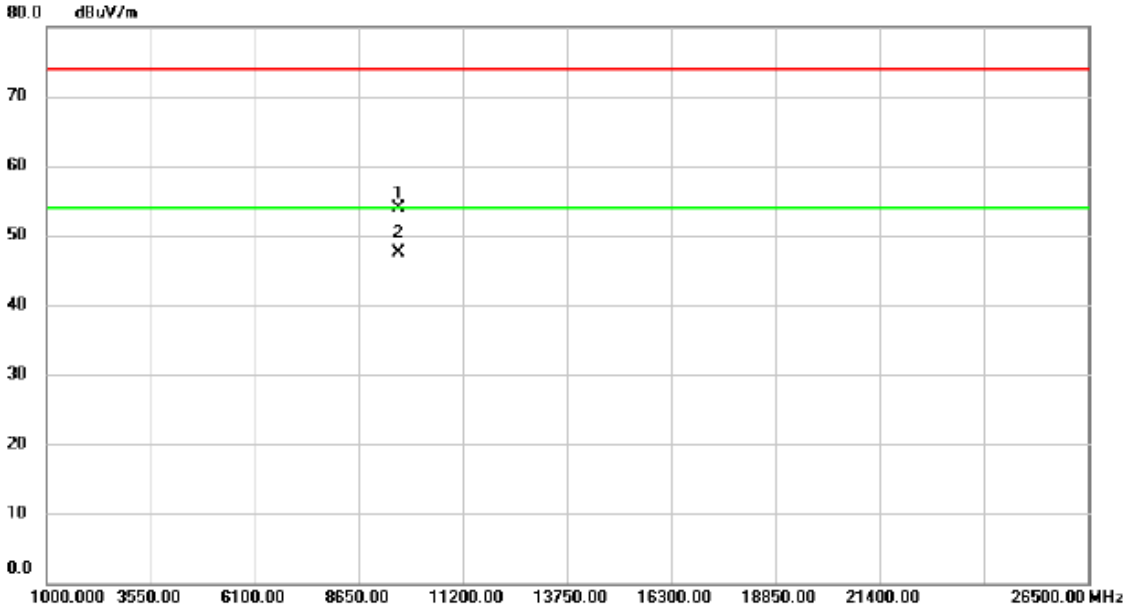
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	57.57	-0.87	56.70	74.00	-17.30	peak	
2		2390.000	47.01	-0.87	46.14	54.00	-7.86	AVG	
3	*	2406.100	85.81	-0.80	85.01	54.00	31.01	AVG	No Limit
4	X	2406.300	99.58	-0.80	98.78	74.00	24.78	peak	No Limit

Test Mode :	TX 2406MHz _CH00

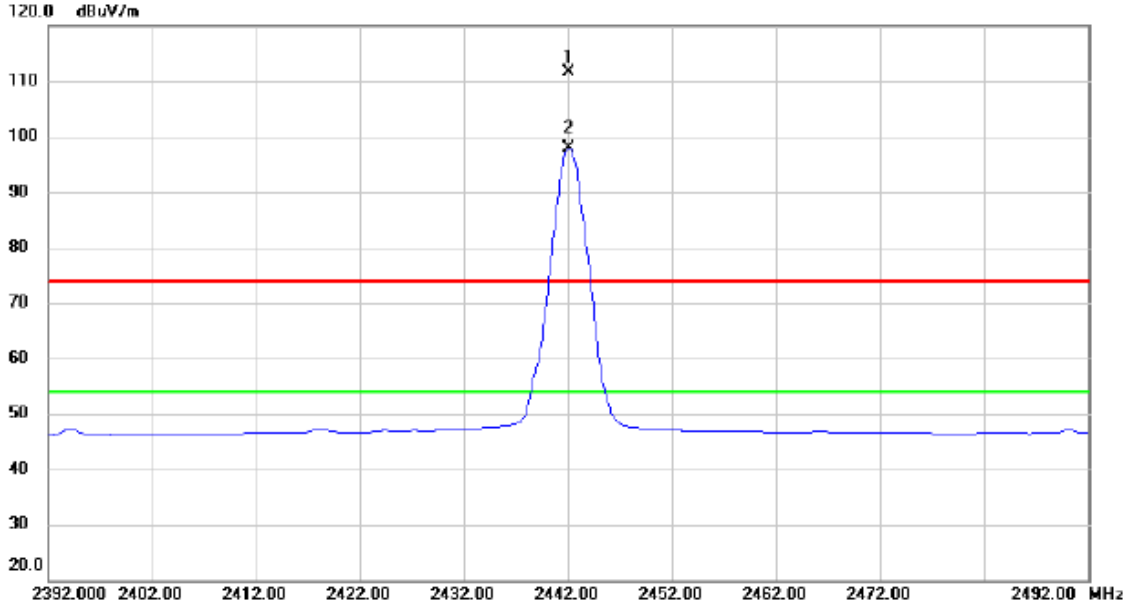
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9625.500	38.80	15.18	53.98	74.00	-20.02	peak	
2	*	9625.780	32.38	15.18	47.56	54.00	-6.44	AVG	

Test Mode :	TX 2442MHz _CH12

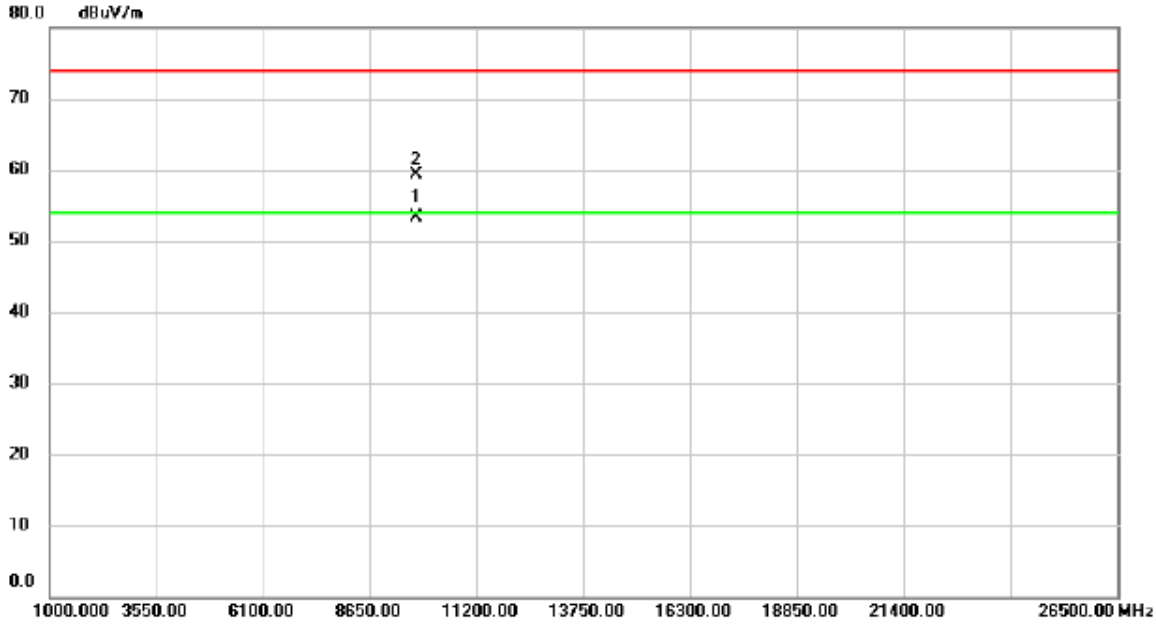
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2442.100	112.22	-0.67	111.55	74.00	37.55	peak	No Limit
2	*	2442.100	98.65	-0.67	97.98	54.00	43.98	AVG	No Limit

Test Mode :	TX 2442MHz _CH12

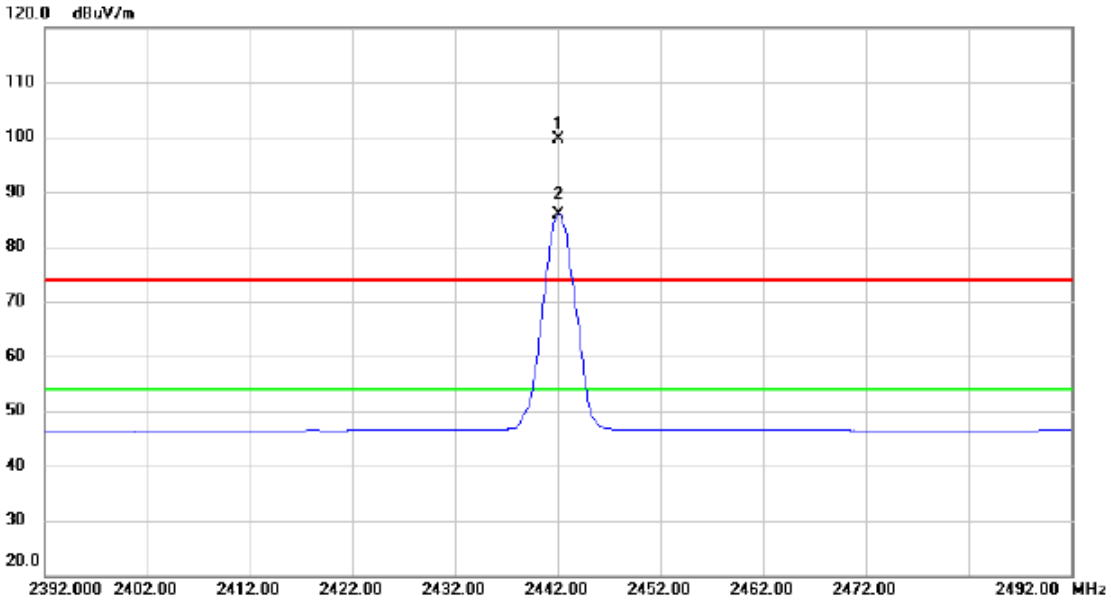
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	9769.760	37.93	15.35	53.28	54.00	-0.72	AVG	
2		9770.020	43.96	15.35	59.31	74.00	-14.69	peak	

Test Mode :	TX 2442MHz _CH12

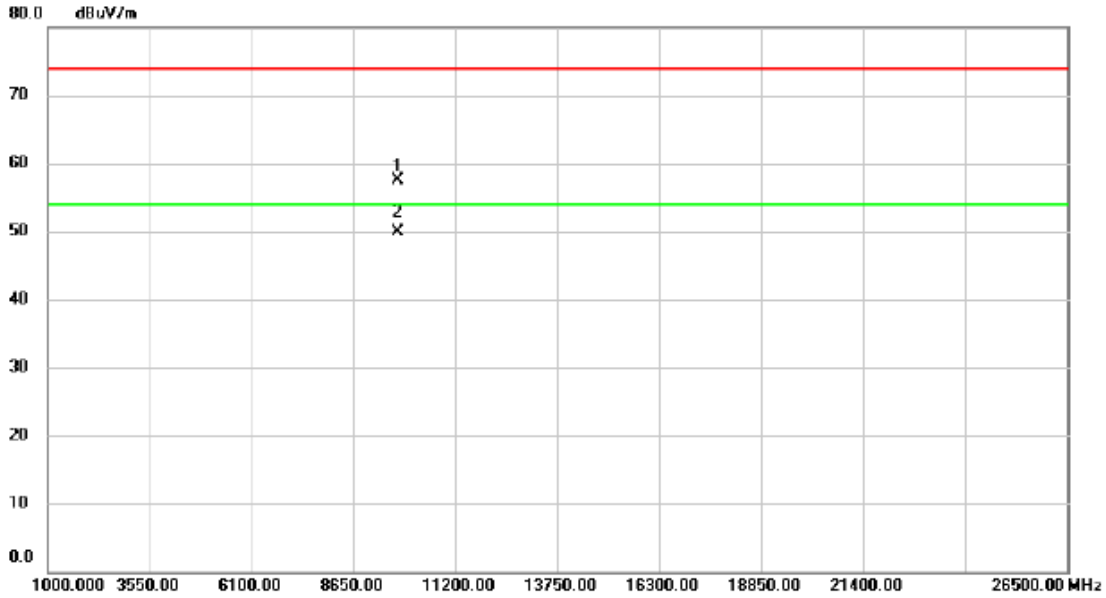
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2442.000	100.18	-0.67	99.51	74.00	25.51	peak	No Limit
2	*	2442.100	86.65	-0.67	85.98	54.00	31.98	AVG	No Limit

Test Mode :	TX 2442MHz _CH12

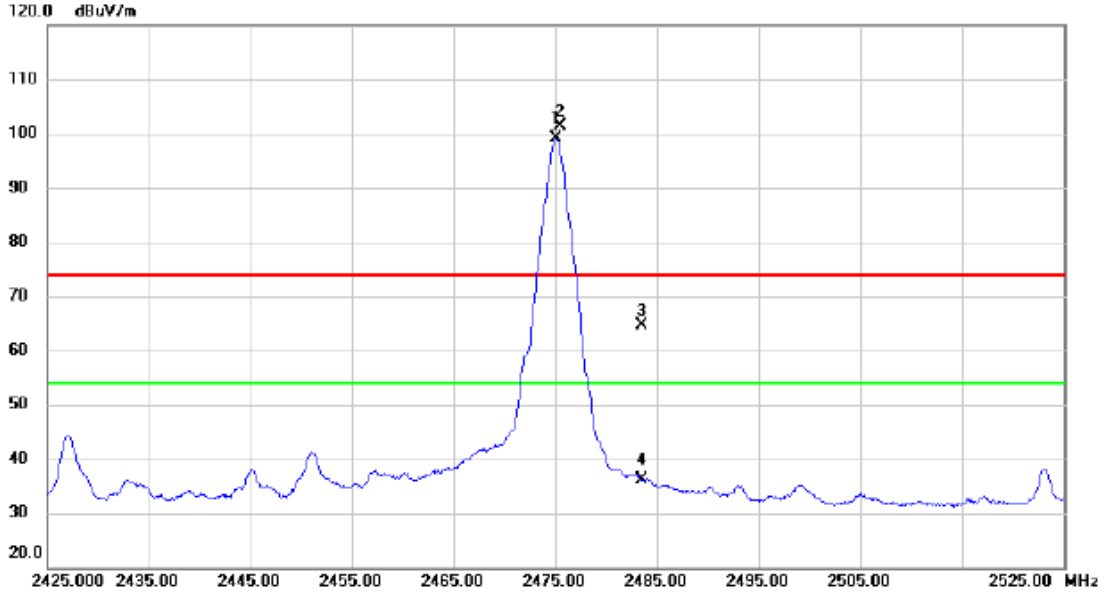
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9766.200	42.16	15.34	57.50	74.00	-16.50	peak	
2	*	9769.760	34.57	15.35	49.92	54.00	-4.08	AVG	

Test Mode :	TX 2475MHz _CH23

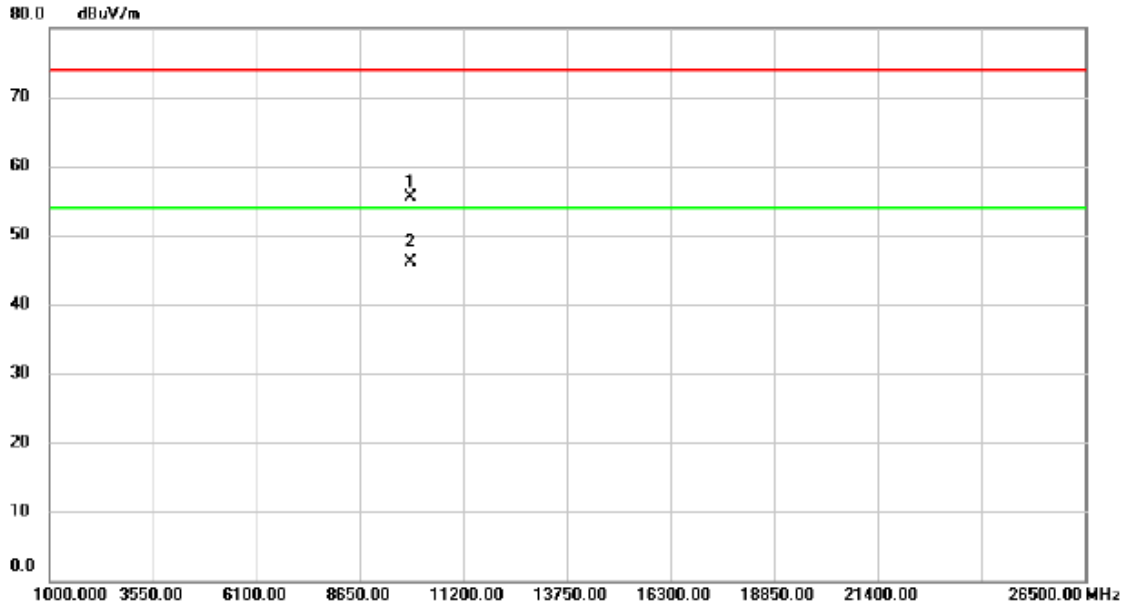
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2475.100	100.01	-0.90	99.11	54.00	45.11	AVG	No Limit
2	X	2475.500	102.19	-0.90	101.29	74.00	27.29	peak	No Limit
3		2483.500	65.56	-0.87	64.69	74.00	-9.31	peak	
4		2483.500	36.96	-0.87	36.09	54.00	-17.91	AVG	

Test Mode :	TX 2475MHz _CH23

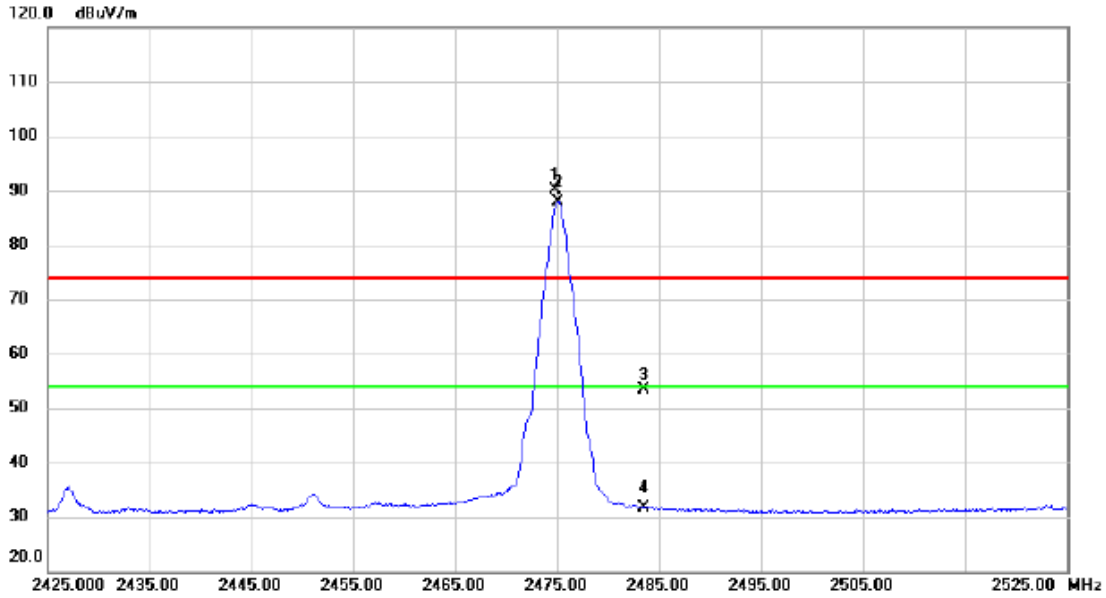
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9899.740	41.49	13.98	55.47	74.00	-18.53	peak	
2	*	9901.785	32.18	13.98	46.16	54.00	-7.84	AVG	

Test Mode :	TX 2475MHz _CH23

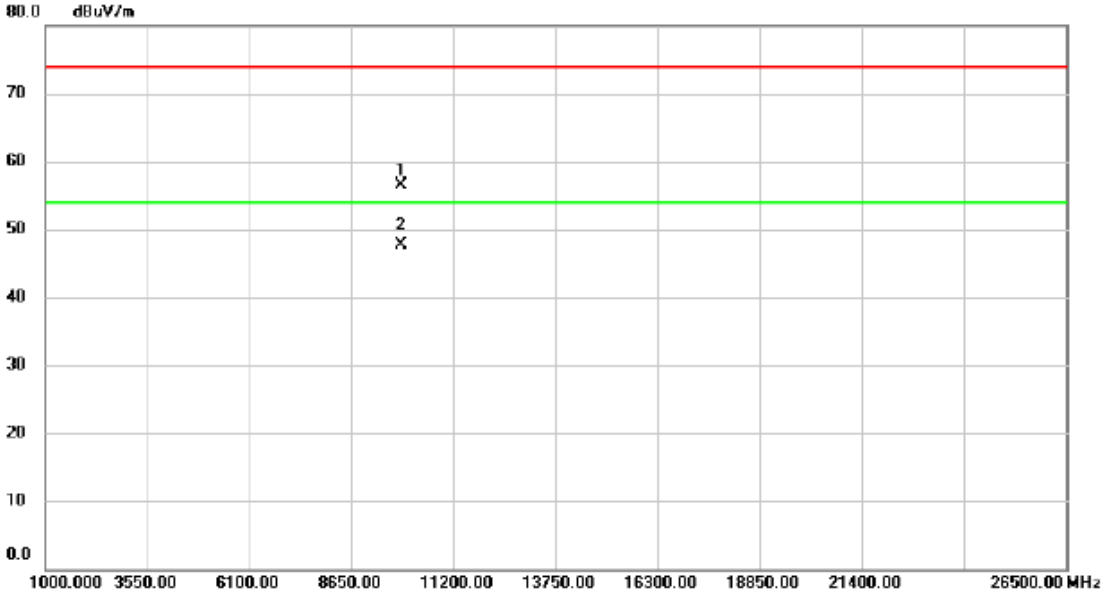
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2474.800	90.98	-0.91	90.07	74.00	16.07	peak	No Limit
2	*	2475.100	88.89	-0.90	87.99	54.00	33.99	AVG	No Limit
3		2483.500	54.32	-0.87	53.45	74.00	-20.55	peak	
4		2483.500	32.45	-0.87	31.58	54.00	-22.42	AVG	

Test Mode :	TX 2475MHz _CH23

Horizontal



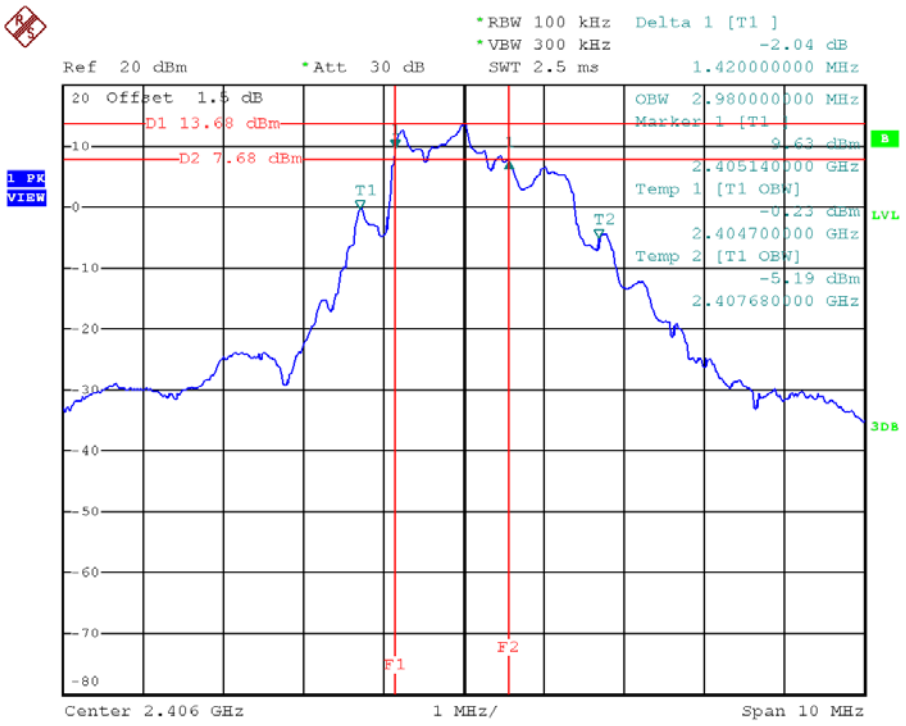
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		9899.700	42.52	13.98	56.50	74.00	-17.50	peak	
2	*	9901.730	33.74	13.98	47.72	54.00	-6.28	AVG	

APPENDIX E - BANDWIDTH

Test Mode:	TX Mode

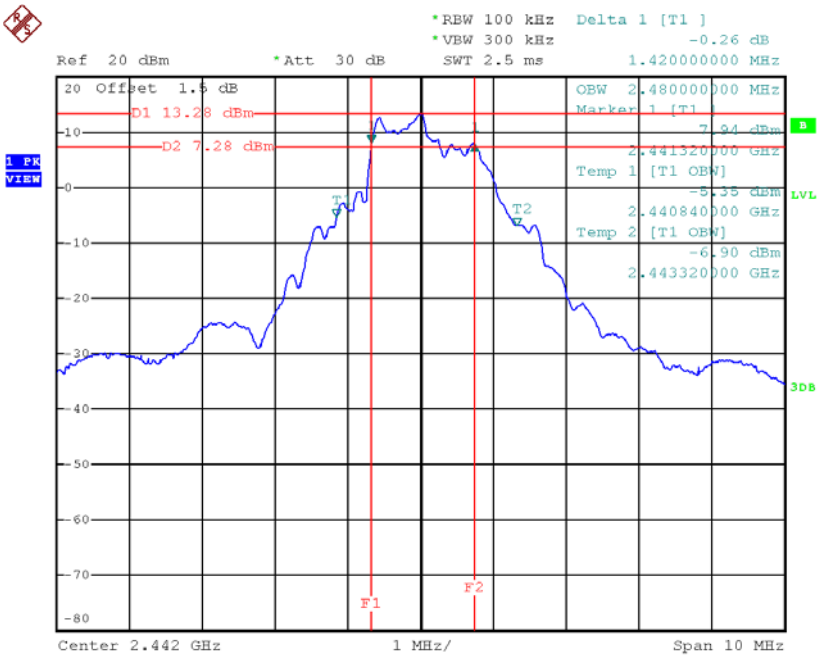
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2406	1.42	2.98	500	Pass
2442	1.42	2.48	500	Pass
2475	1.22	2.42	500	Pass

TX CH00



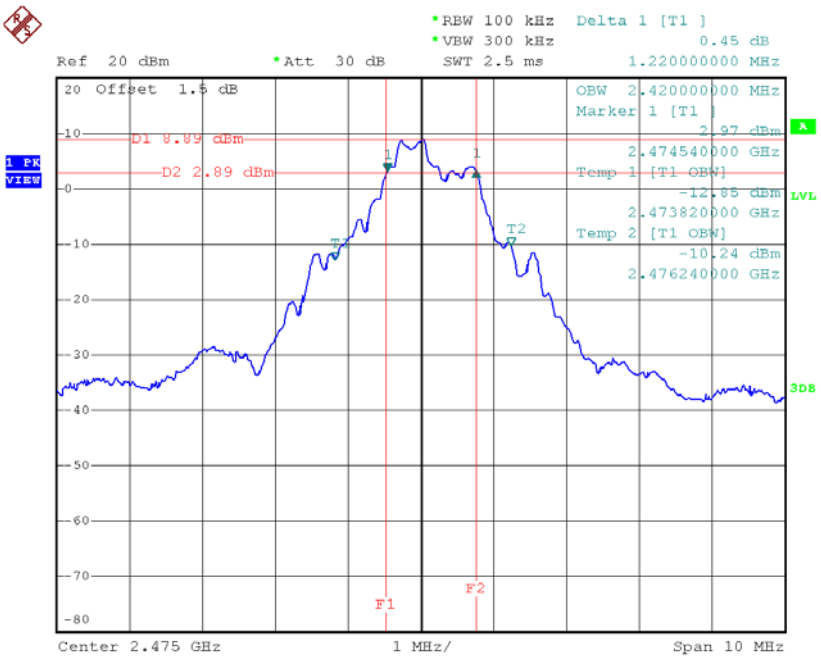
Date: 16.MAR.2018 09:20:27

TX CH12



Date: 16.MAR.2018 09:25:47

TX CH23



Date: 8.APR.2018 17:58:21

APPENDIX F - MAXIMUM OUTPUT POWER TEST

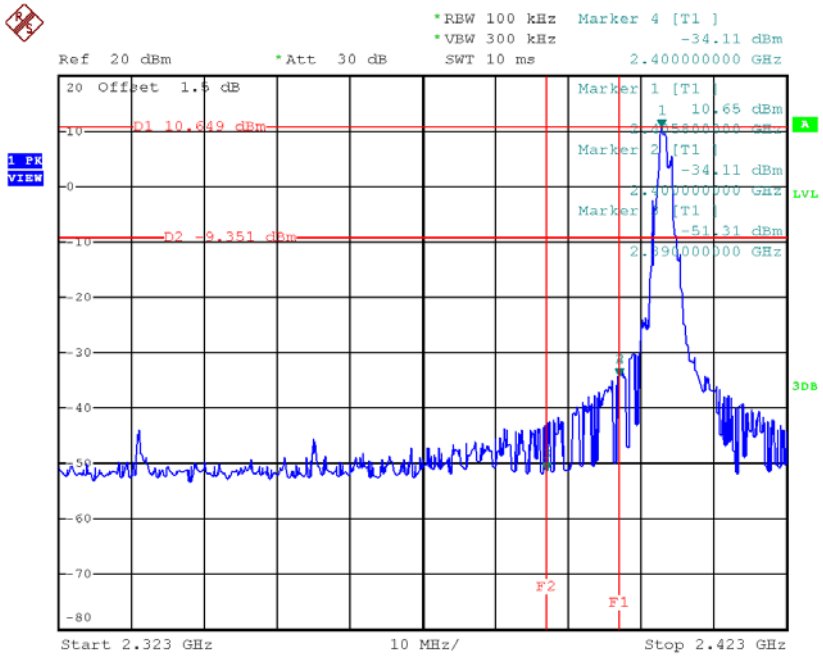
Test Mode :	CH00, CH12 , CH23

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2406	11.75	0.0150	30.00	1.00	Pass
2442	11.00	0.0126	30.00	1.00	Pass
2475	10.72	0.0118	30.00	1.00	Pass

APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION

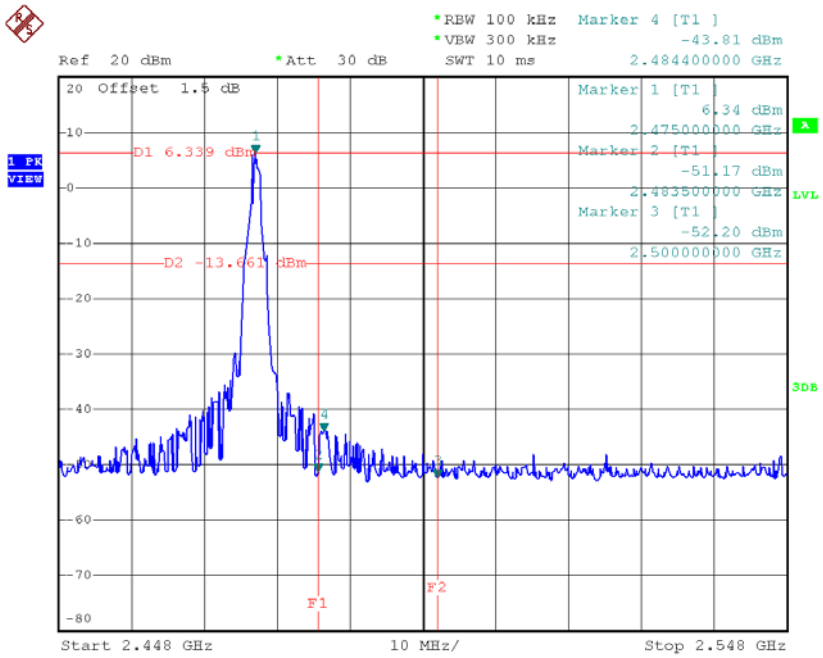
Test Mode :	CH00, CH12 , CH23

CH00 (Lower)



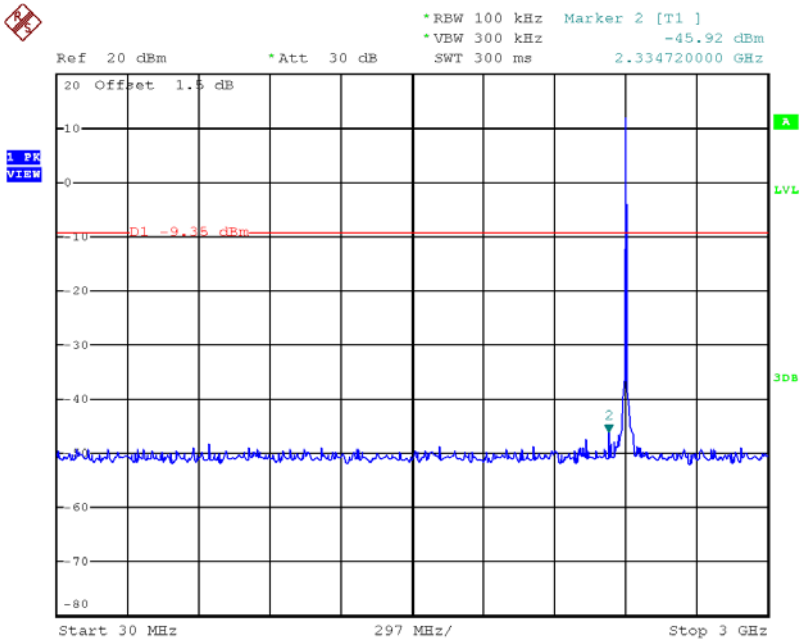
Date: 16.MAR.2018 10:15:18

CH23 (upper)



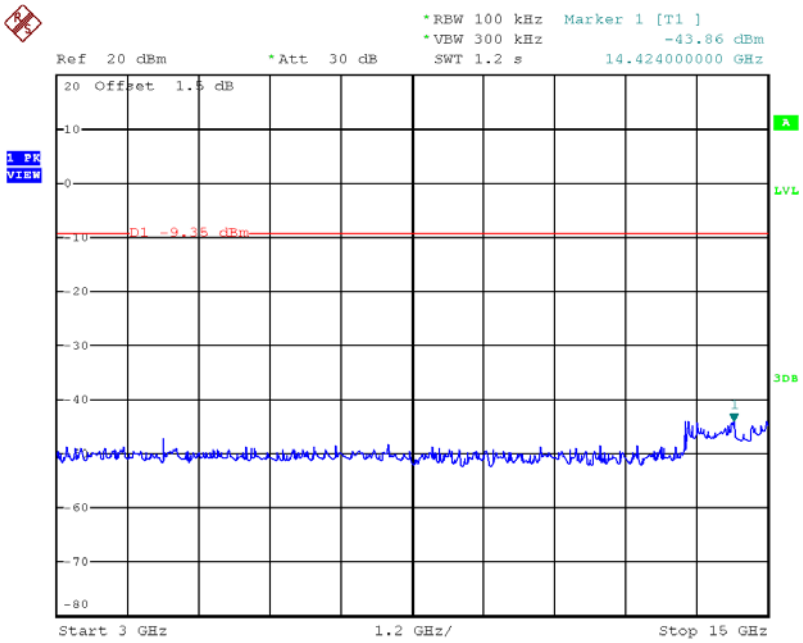
Date: 8.APR.2018 17:59:36

CH00 (10 Harmonic of the frequency) 1



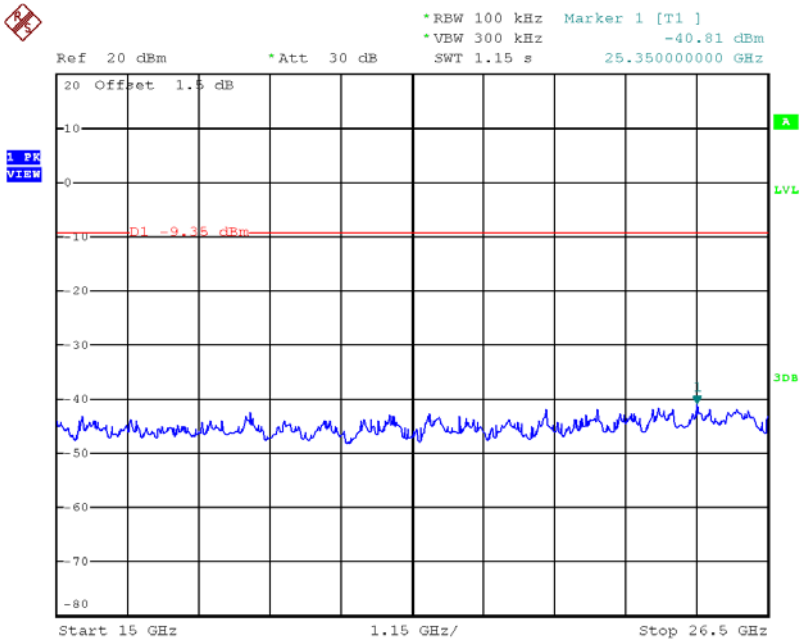
Date: 16.MAR.2018 10:15:31

CH00 (10 Harmonic of the frequency) 2



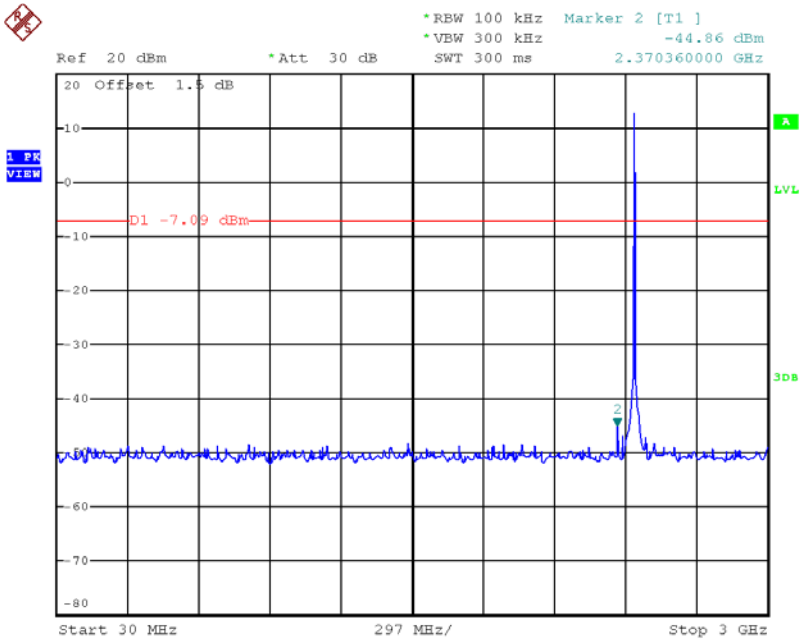
Date: 16.MAR.2018 10:15:37

CH00 (10 Harmonic of the frequency) 3



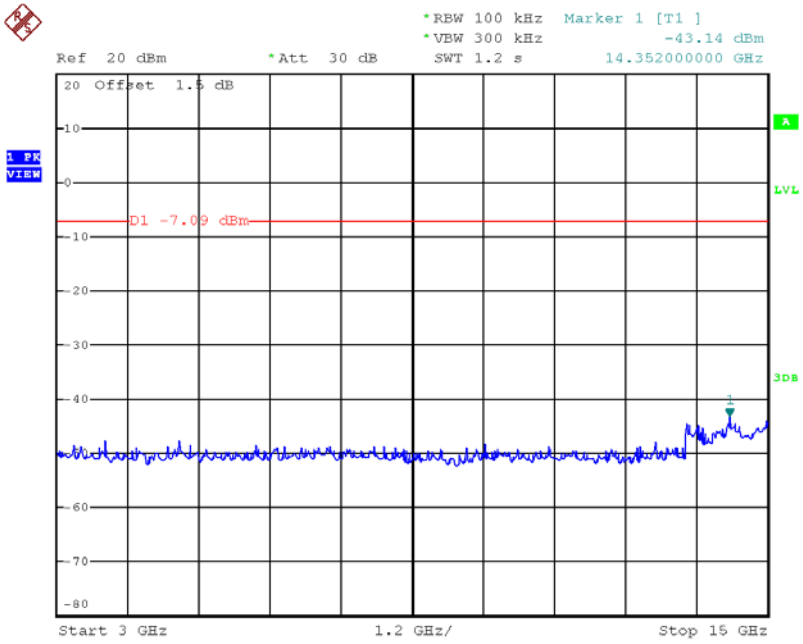
Date: 16.MAR.2018 10:15:44

CH12 (10 Harmonic of the frequency) 1



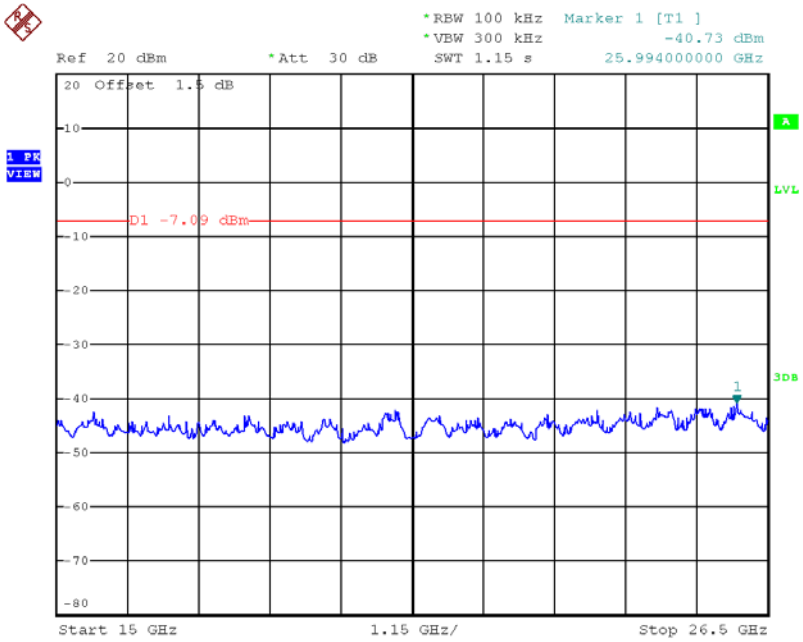
Date: 16.MAR.2018 10:16:19

CH12 (10 Harmonic of the frequency) 2



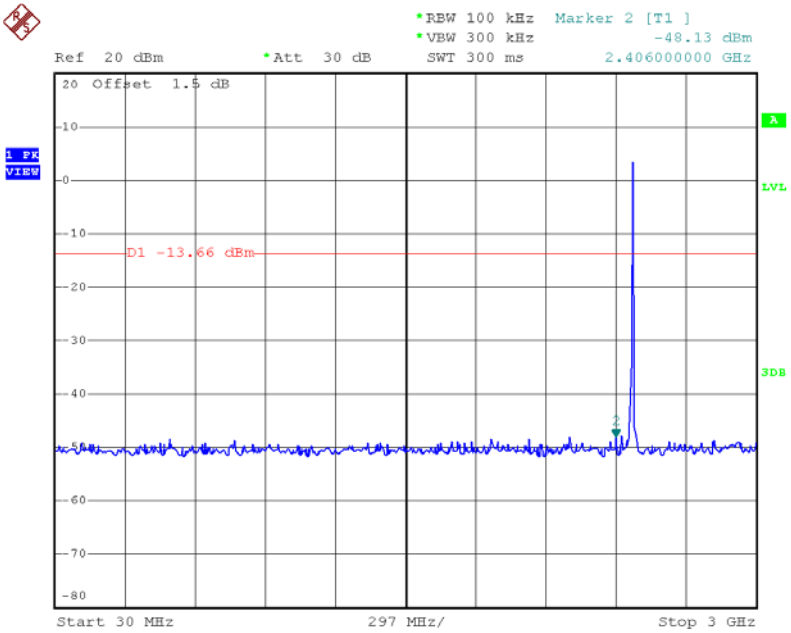
Date: 16.MAR.2018 10:16:26

CH12 (10 Harmonic of the frequency) 3



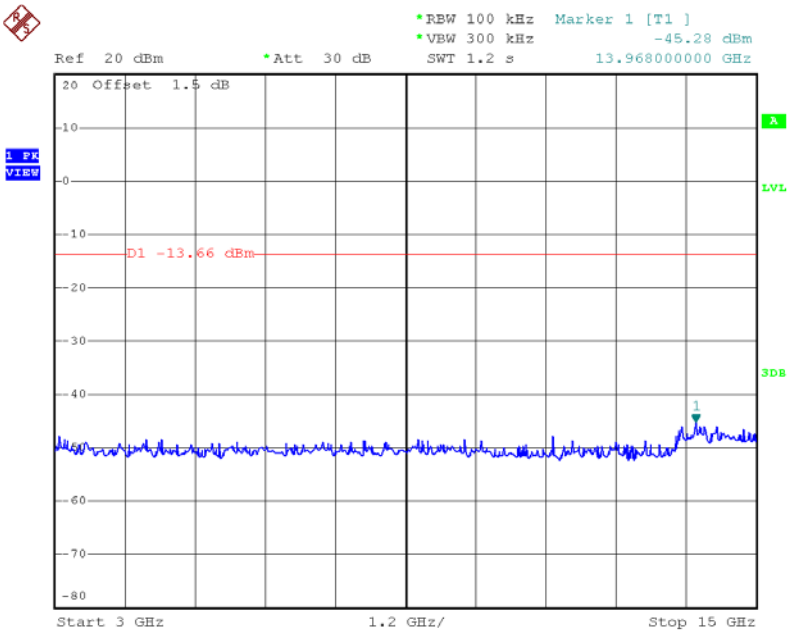
Date: 16.MAR.2018 10:16:33

CH23 (10 Harmonic of the frequency) 1



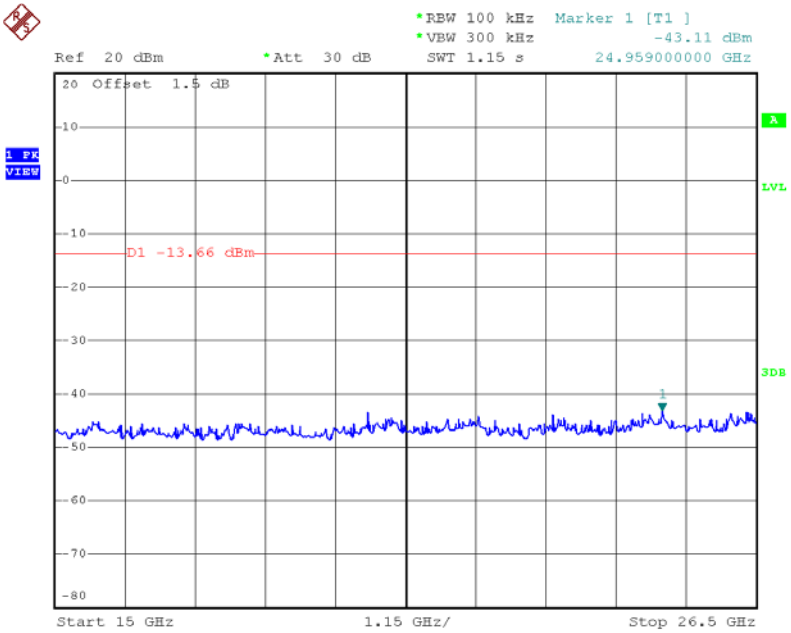
Date: 8.APR.2018 17:59:51

CH23 (10 Harmonic of the frequency) 2



Date: 8.APR.2018 18:00:00

CH23 (10 Harmonic of the frequency) 3



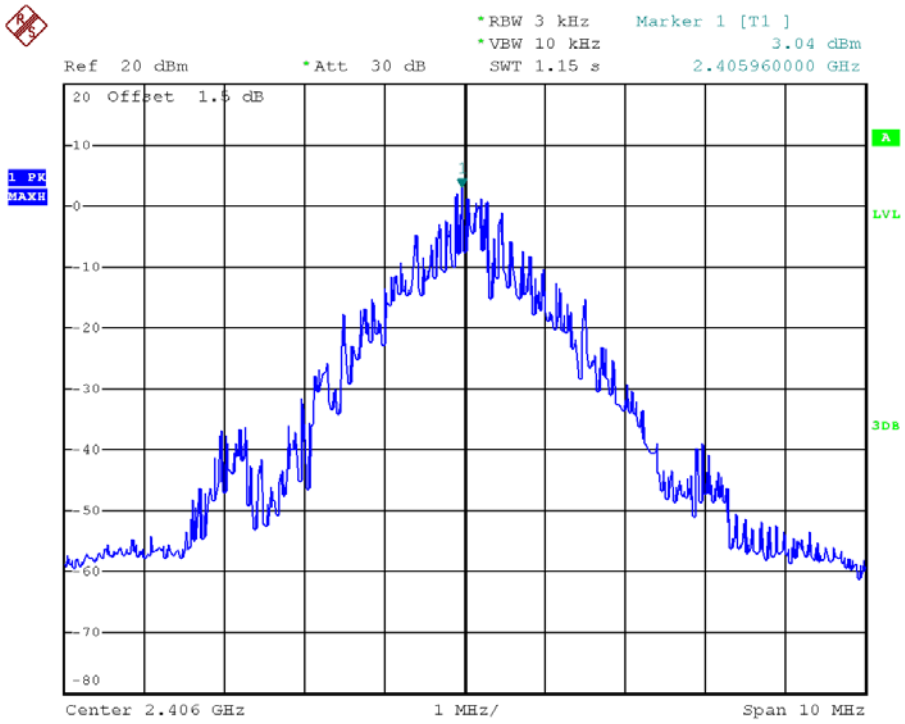
Date: 8.APR.2018 18:00:10

APPENDIX H - POWER SPECTRAL DENSITY TEST

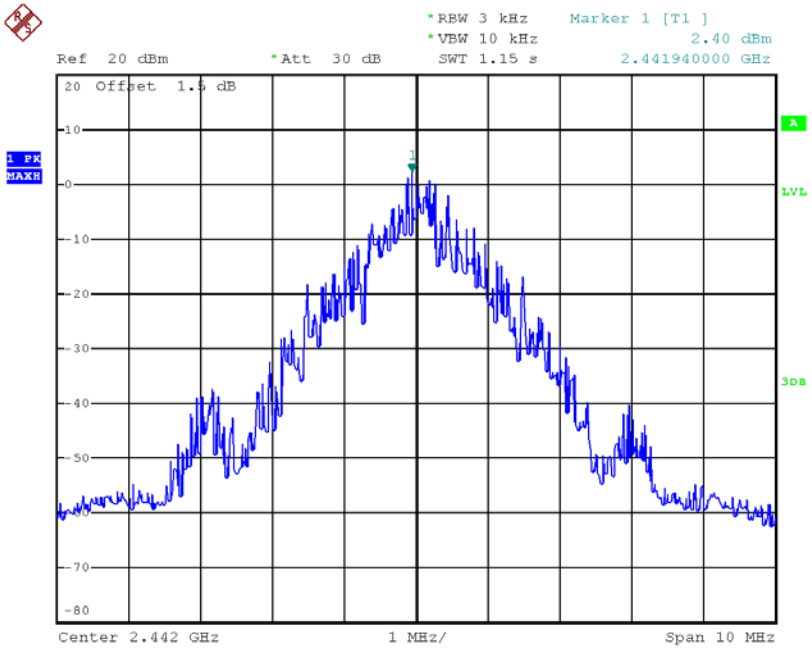
Test Mode:	CH00, CH12 , CH23

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Test Result
2406	3.04	2.0	8.00	Pass
2442	2.40	1.7	8.00	Pass
2475	-2.18	0.6	8.00	Pass

TX CH00

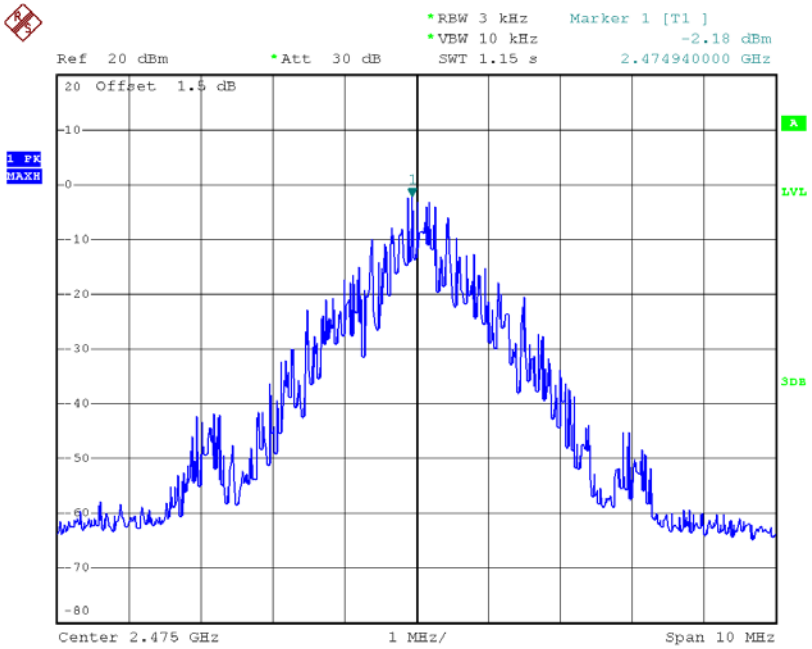


TX CH12



Date: 16.MAR.2018 09:22:17

TX CH23



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