FCC Radio Test Report

FCC ID: TE7HS105V3

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

Project No.	:	1806C056
Equipment	:	Smart Wi-Fi Plug Mini
Test Model	:	HS105 V3
Series Model	:	HS105
Applicant	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China

Date of Receipt	:	Jun. 12, 2018
Date of Test	:	Jun. 15, 2018 ~ Jun. 27, 2018
Issued Date	:	Jul. 12, 2018
Tested by	:	BTL Inc.

Testing Engineer : Welly Zhou
(Welly Zhou)

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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-1-1806C056	Original Issue.	Jul. 12, 2018

1. CERTIFICATION

Equipment	:	Smart Wi-Fi Plug Mini
Brand Name	:	tp-link
Test Model	:	HS105 V3
Series Model	:	HS105
Applicant	:	TP-Link Technologies Co., Ltd.
Manufacturer	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Factory	:	TP-Link Technologies Co., Ltd.
Address	:	Building 24(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Date of Test	:	Jun. 15, 2018 ~ Jun. 27, 2018
Test Sample	:	Engineering Sample NO.: D180604994
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-1-1806C056) 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)	Average 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 in this test report.

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. 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	Smart Wi-Fi Plug Mini	
Brand Name	tp-link	
Test Model	HS105 V3	
Series Model	HS105	
Model Difference	Model HS105 and HS105 V3 are identical to each other, except for model name.	
Product Description	Operation Frequency	2412~2462 MHz
	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 72.2 Mbps
	Average Power (Max.)	802.11b:18.88dBm 802.11g:19.34dBm 802.11n(20MHz):19.79dBm
Power Source	AC Mains.	
Power Rating	AC 120V/60Hz	

Note:

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

CH01 - CH11 for 802.11b, 802.11g, 802.11n(20MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	tp-link	N/A	PIFA	N/A	2

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 B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11
Mode 4	Normal Link

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 5	Normal Link

For Radiated Test	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

For Band Edge Test	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

6dB Spectrum Bandwidth	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

Maximum Average Output Power	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

Power Spectral Density	
Final Test Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11

Note:

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

(2) 802.11b mode: DBPSK (1Mbps)
802.11g mode: OFDM (6Mbps)
802.11n HT20 mode : BPSK (6.5Mbps)
For radiated emission tests, the highest output powers were set for final test.

(3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.

(4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.

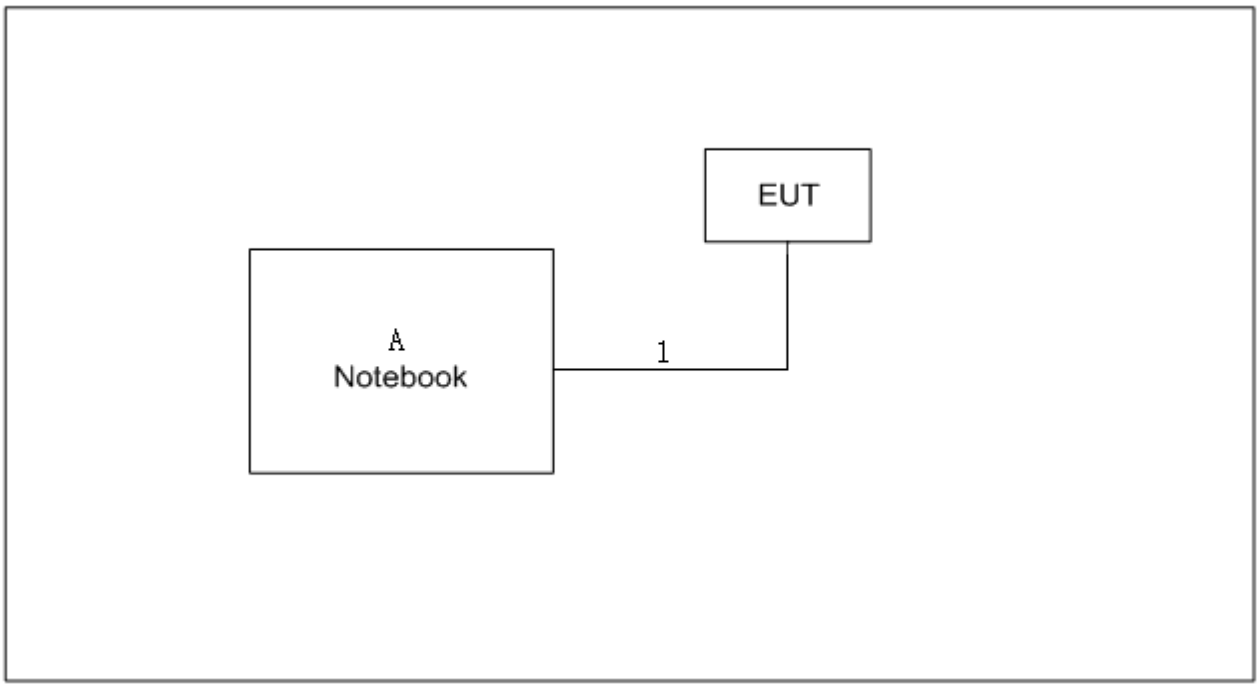
(5) For radiated, it was pre-tested on the positioned of each 2 axis. The worst case was found positioned on Normal-plane. Therefore only the test data of this Normal-plane was used for radiated emission measurement test.

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 of WLAN

Test software version	QATool_Dbg		
Frequency (MHz)	2412	2437	2462
802.11b	15	17	19
802.11g	11	1C	1D
802.11n (20MHz)	12	20	1D

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.
A	Notebook	Lenovo	INSPIRON 1420	DOC	JX193A01SDC2

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	0.8m	PL2303 USB 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 -0.50	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

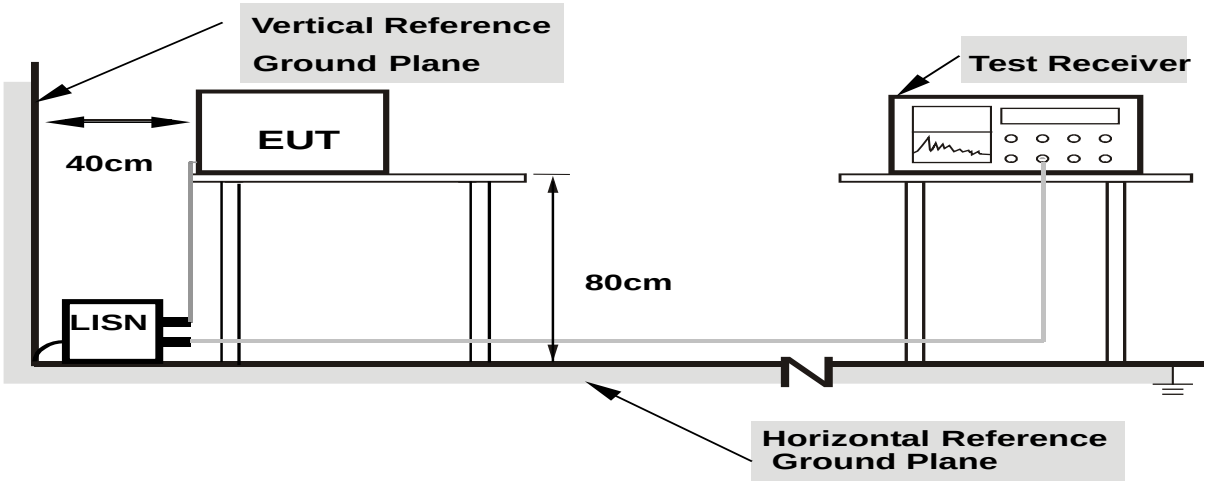
4.1.2 TEST PROCEDURE

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 placed on the test table and programmed in normal function.

4.1.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Appendix A.

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)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

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

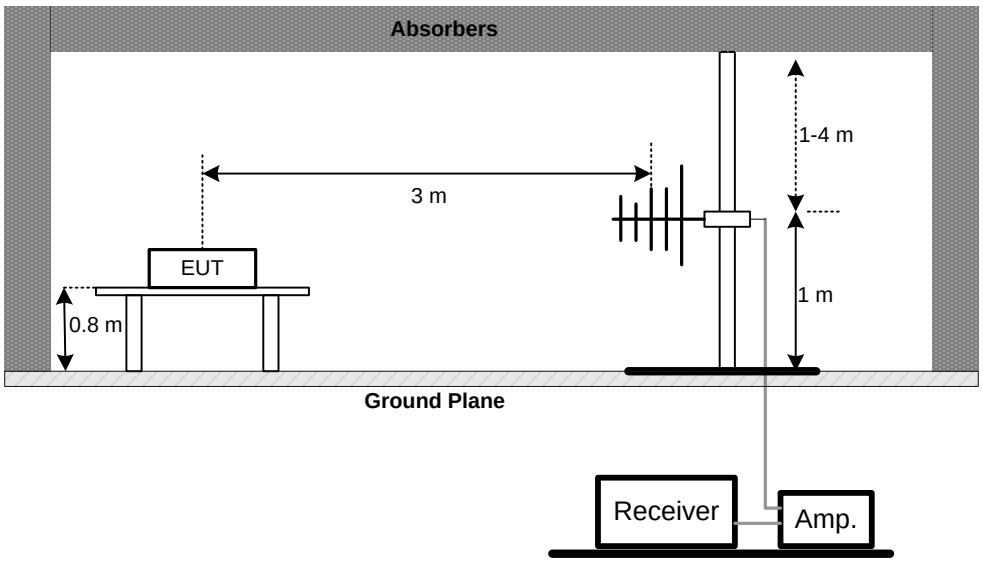
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance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

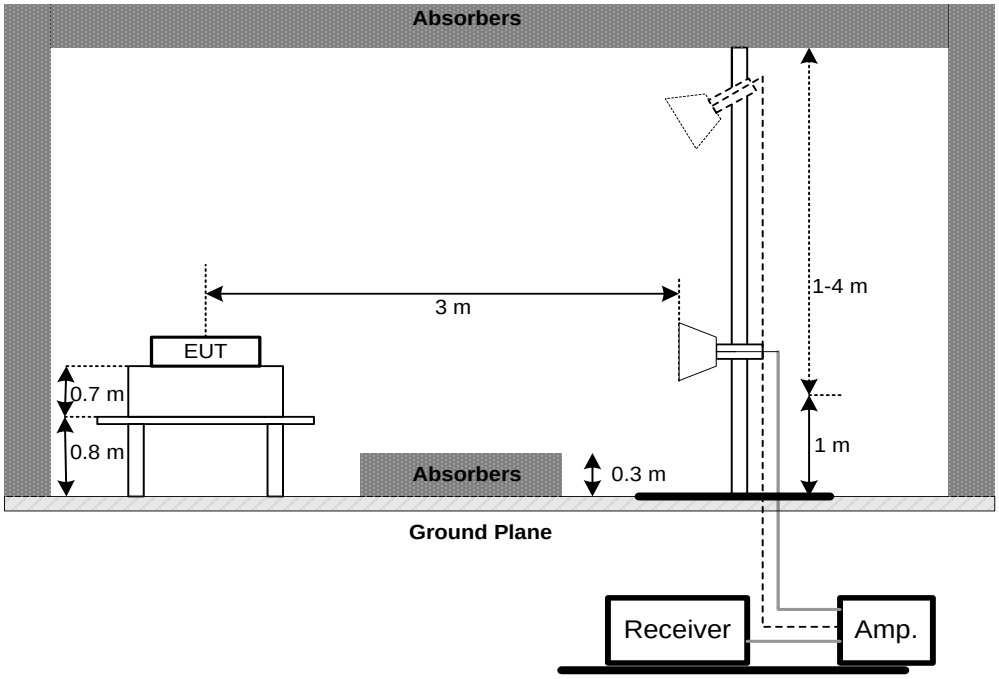
No deviation

4.2.4 TEST SETUP

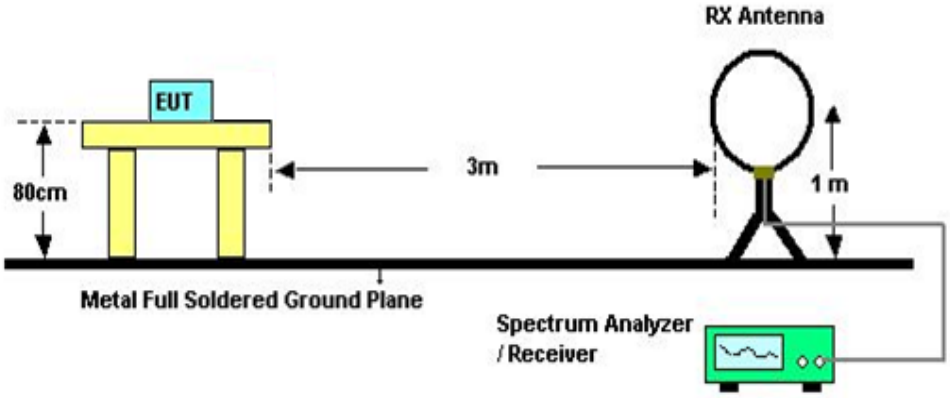
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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: 25°C Relative Humidity: 55% Test Voltage: DC 5V

4.2.7 TEST 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.

4.2.8 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix C.

4.2.9 TEST 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

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	2400-2483.5	PASS

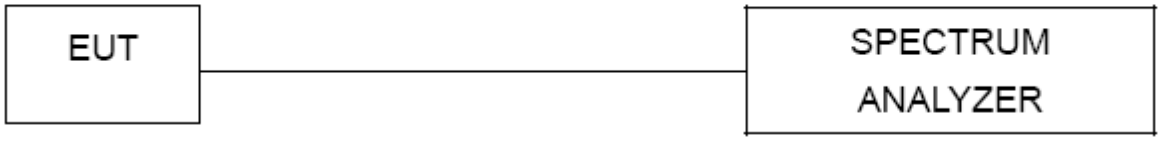
5.1.1 TEST PROCEDURE

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 was programmed to be in continuously transmitting mode.

5.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 5V

5.1.6 TEST RESULTS

Please refer to the Appendix E.

6. MAXIMUM AVERAGE CONDUCTED 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

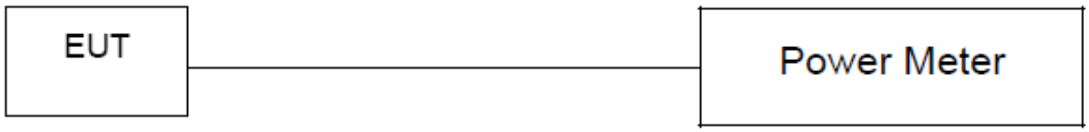
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
b. The maximum average conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 v04 DTS Meas Guidance and FCC KDB 662911 D01 Multiple Transmitter Output.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 5V

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.

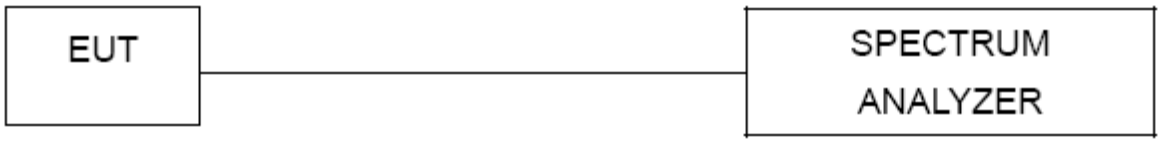
7.1.1 TEST PROCEDURE

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 = Auto.

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 5V

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

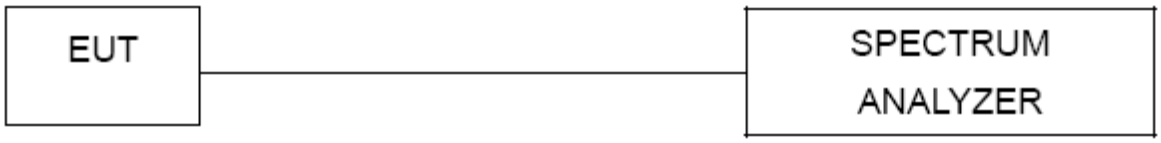
8.1.1 TEST PROCEDURE

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=10KHz, Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: DC 5V

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. 20, 2019
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. 20, 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. 30, 2018
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

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

Average Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	ANRITSU	ML2495A	1128009	Mar. 11, 2019
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 11, 2019

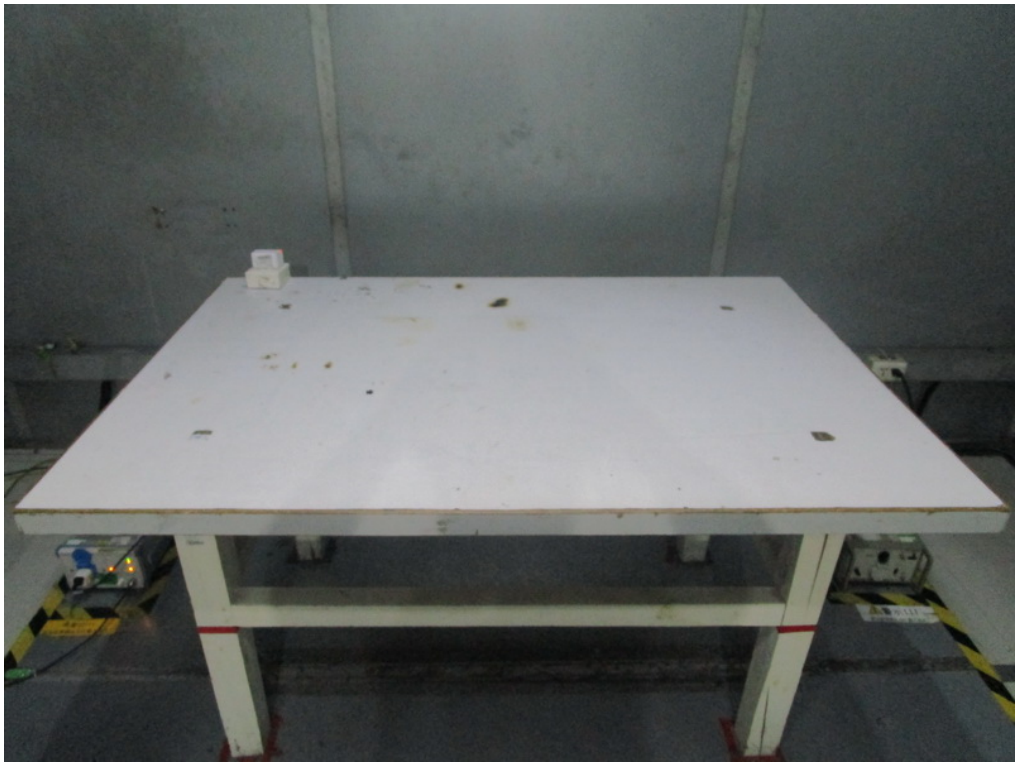
Antenna Conducted Spurious Emission					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018

Power Spectral Density					
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.

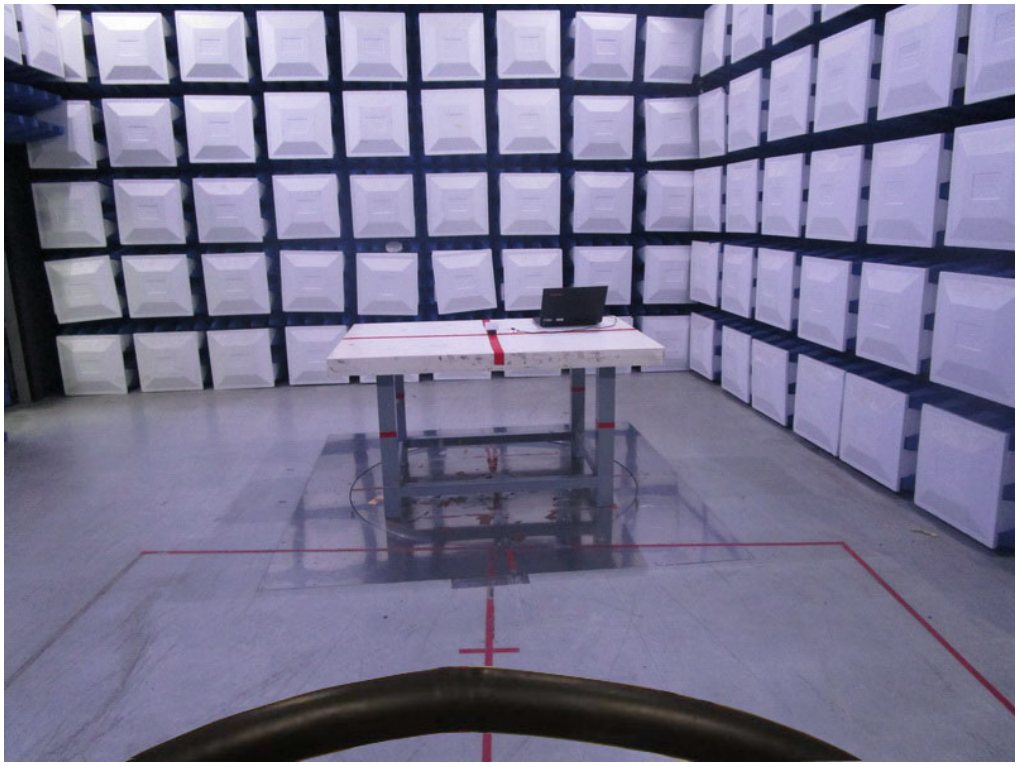
10. EUT TEST PHOTO

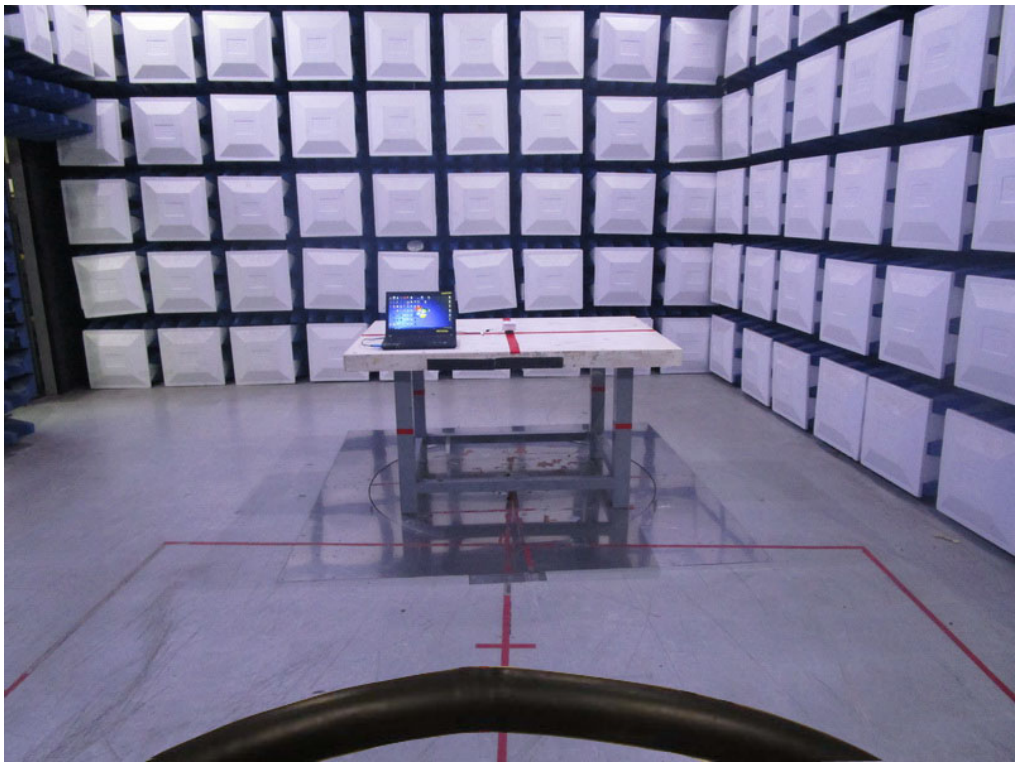
Conducted Measurement Photos



Radiated Measurement Photos

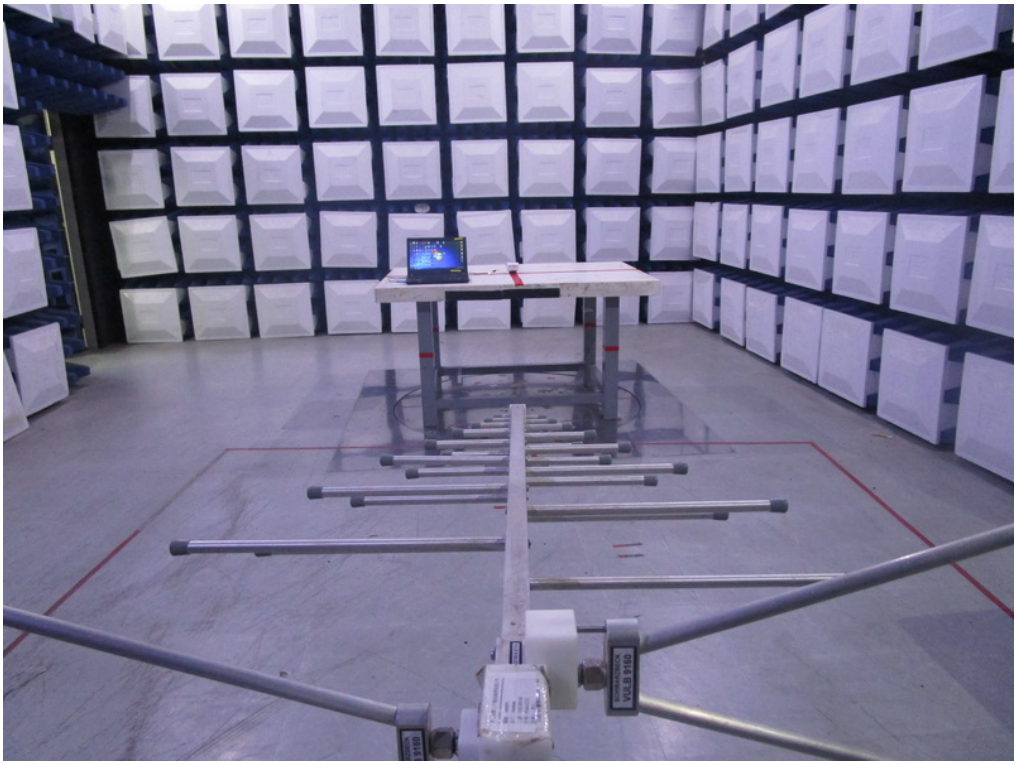
9KHz to 30MHz

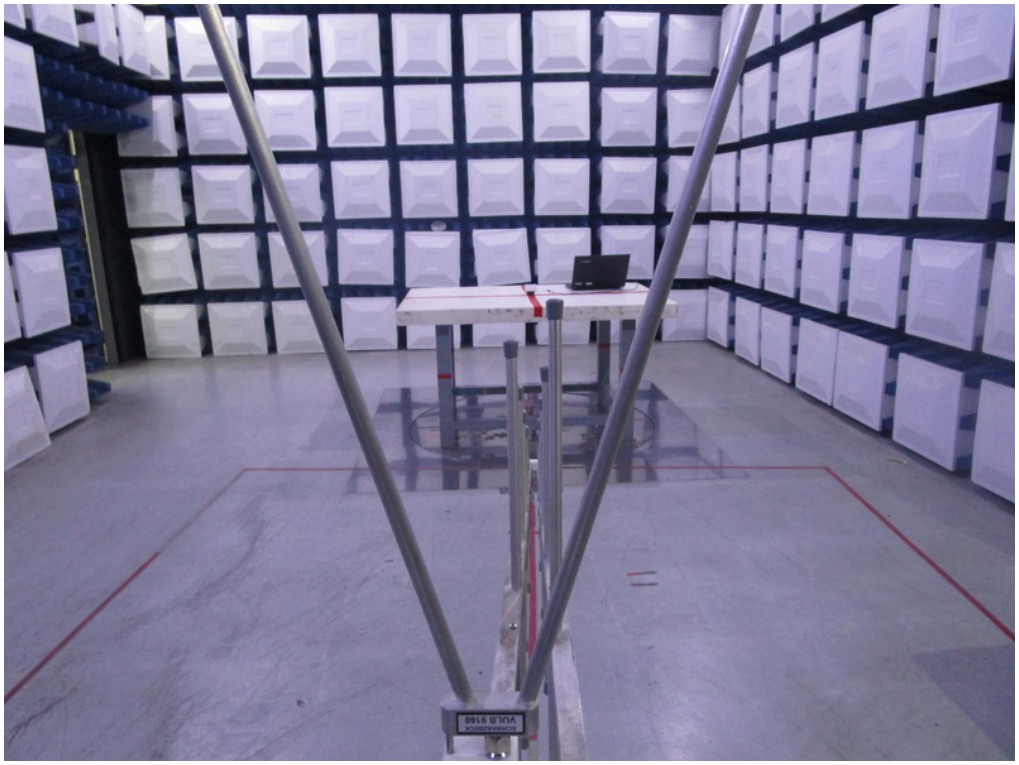




Radiated Measurement Photos

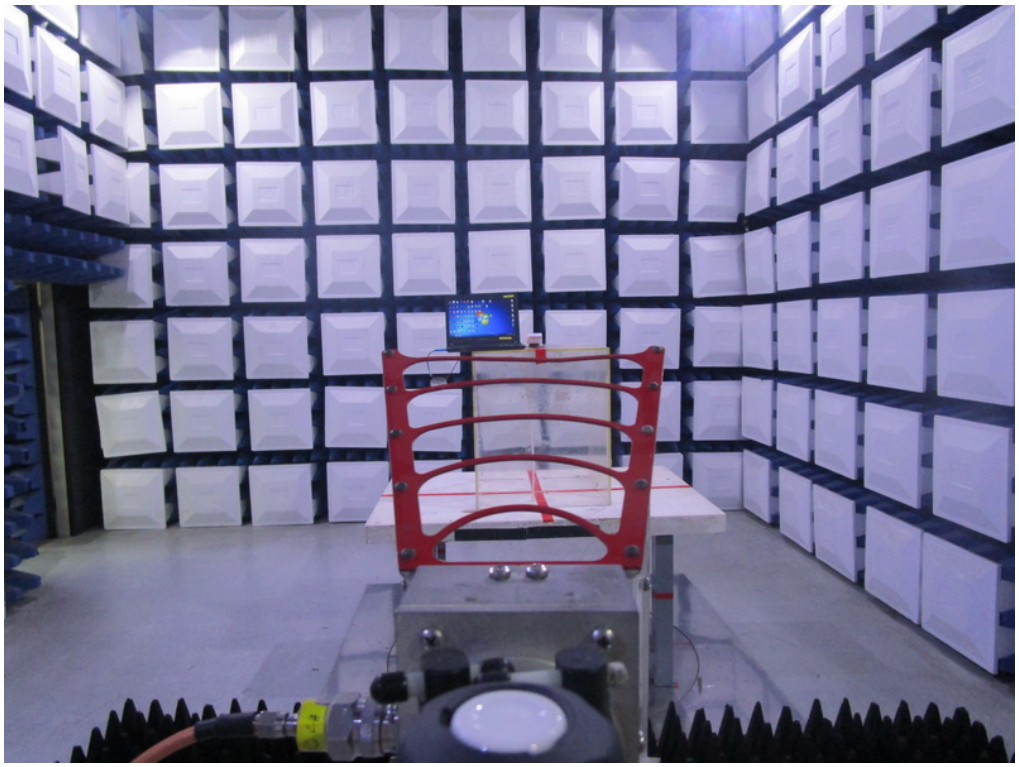
30MHz to 1000MHz

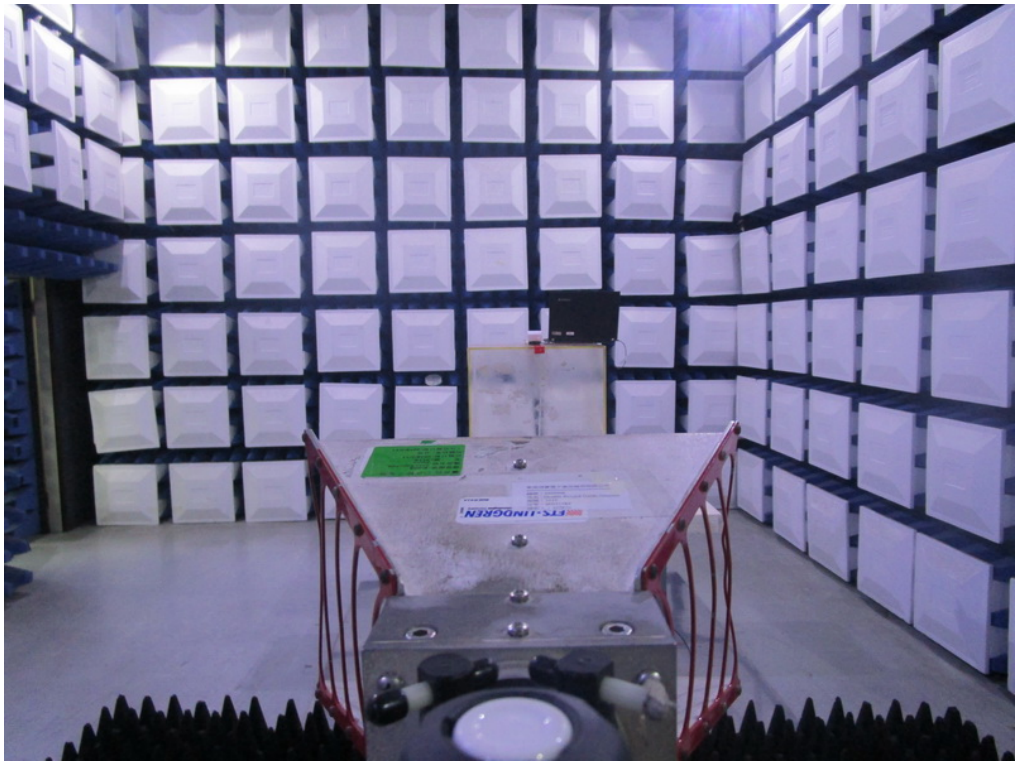




Radiated Measurement Photos

Above 1000MHz

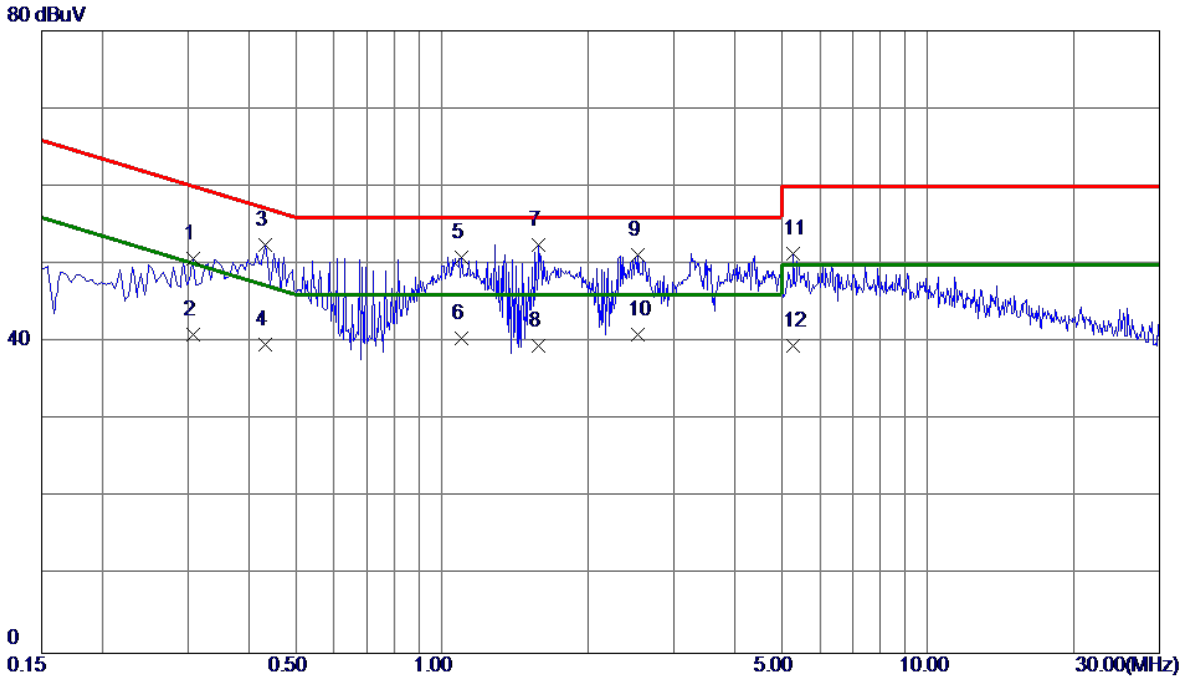




APPENDIX A - CONDUCTED EMISSION

Test Mode :	Normal Link

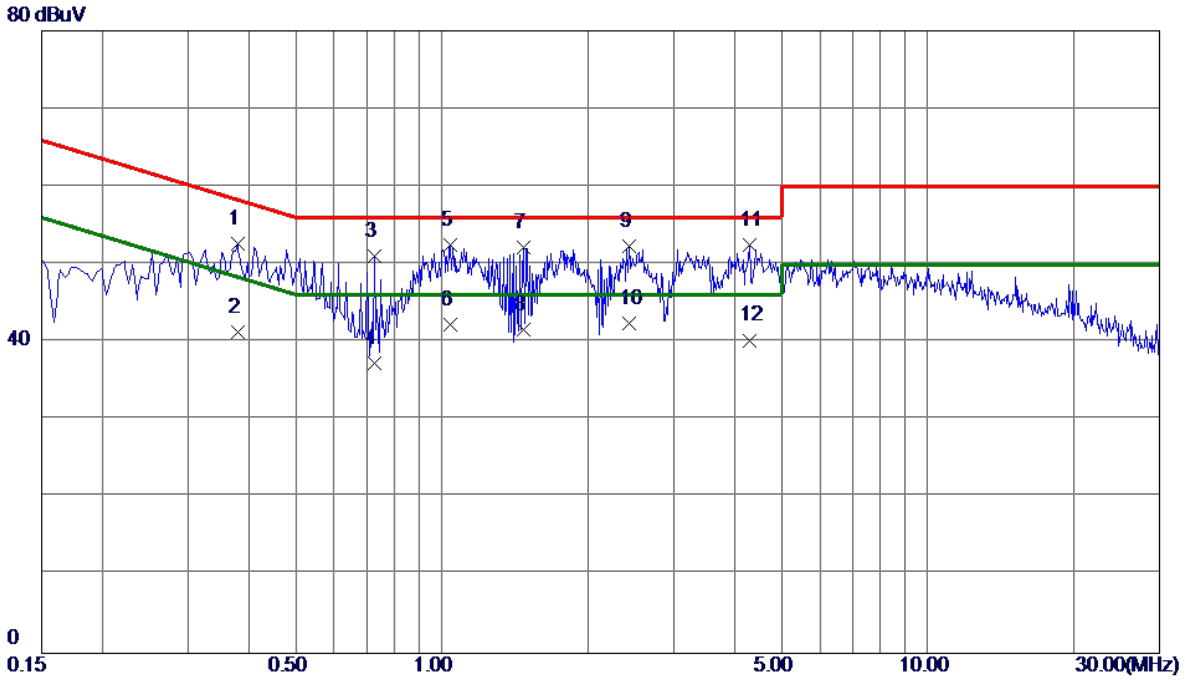
Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.3075	40.83	9.82	50.65	60.04	-9.39	Peak	
2	0.3075	31.10	9.82	40.92	50.04	-9.12	AVG	
3	0.4335	42.63	9.80	52.43	57.19	-4.76	Peak	
4	0.4335	29.90	9.80	39.70	47.19	-7.49	AVG	
5	1.0995	40.91	9.93	50.84	56.00	-5.16	Peak	
6	1.0995	30.60	9.93	40.53	46.00	-5.47	AVG	
7 *	1.5809	42.50	9.96	52.46	56.00	-3.54	Peak	
8	1.5809	29.60	9.96	39.56	46.00	-6.44	AVG	
9	2.5305	41.20	10.02	51.22	56.00	-4.78	Peak	
10	2.5305	30.90	10.02	40.92	46.00	-5.08	AVG	
11	5.2890	41.19	10.21	51.40	60.00	-8.60	Peak	
12	5.2890	29.30	10.21	39.51	50.00	-10.49	AVG	

Test Mode :	Normal Link

Neutral

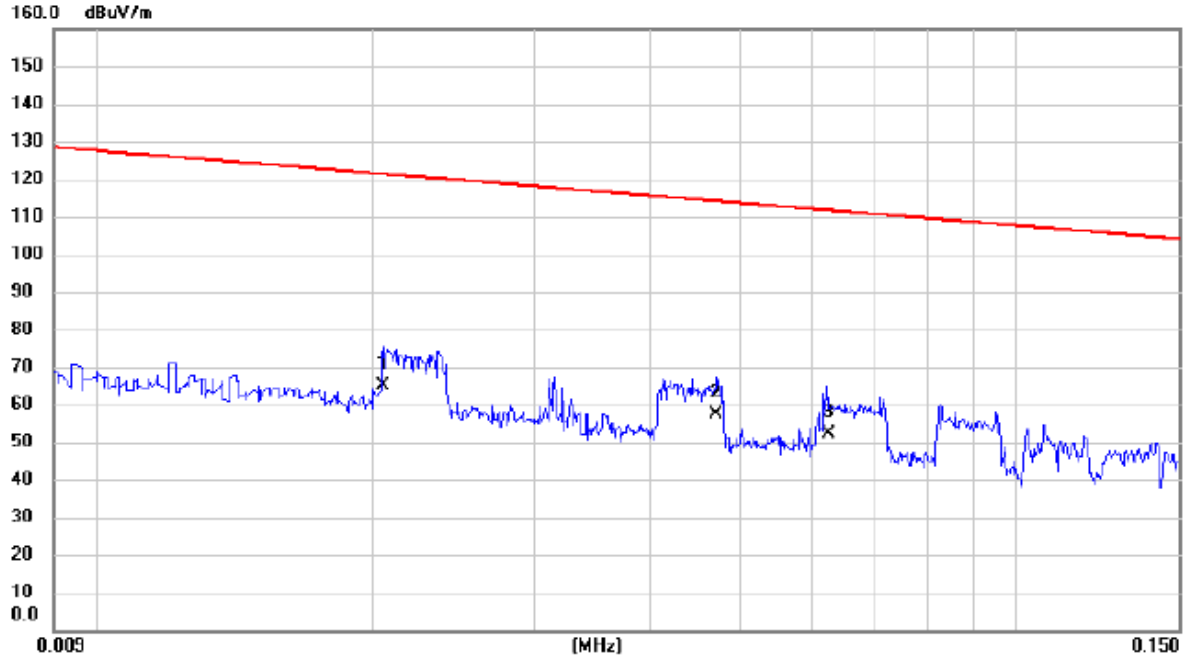


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.3795	42.62	9.95	52.57	58.29	-5.72	Peak	
2	0.3795	31.40	9.95	41.35	48.29	-6.94	AVG	
3	0.7260	40.92	10.05	50.97	56.00	-5.03	Peak	
4	0.7260	27.30	10.05	37.35	46.00	-8.65	AVG	
5	1.0410	42.29	10.12	52.41	56.00	-3.59	Peak	
6	1.0410	32.10	10.12	42.22	46.00	-3.78	AVG	
7	1.4685	42.05	10.15	52.20	56.00	-3.80	Peak	
8	1.4685	31.50	10.15	41.65	46.00	-4.35	AVG	
9	2.4270	42.10	10.21	52.31	56.00	-3.69	Peak	
10	2.4270	32.20	10.21	42.41	46.00	-3.59	AVG	
11 *	4.2900	42.17	10.34	52.51	56.00	-3.49	Peak	
12	4.2900	29.90	10.34	40.24	46.00	-5.76	AVG	

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

Test Mode:	TX MODE

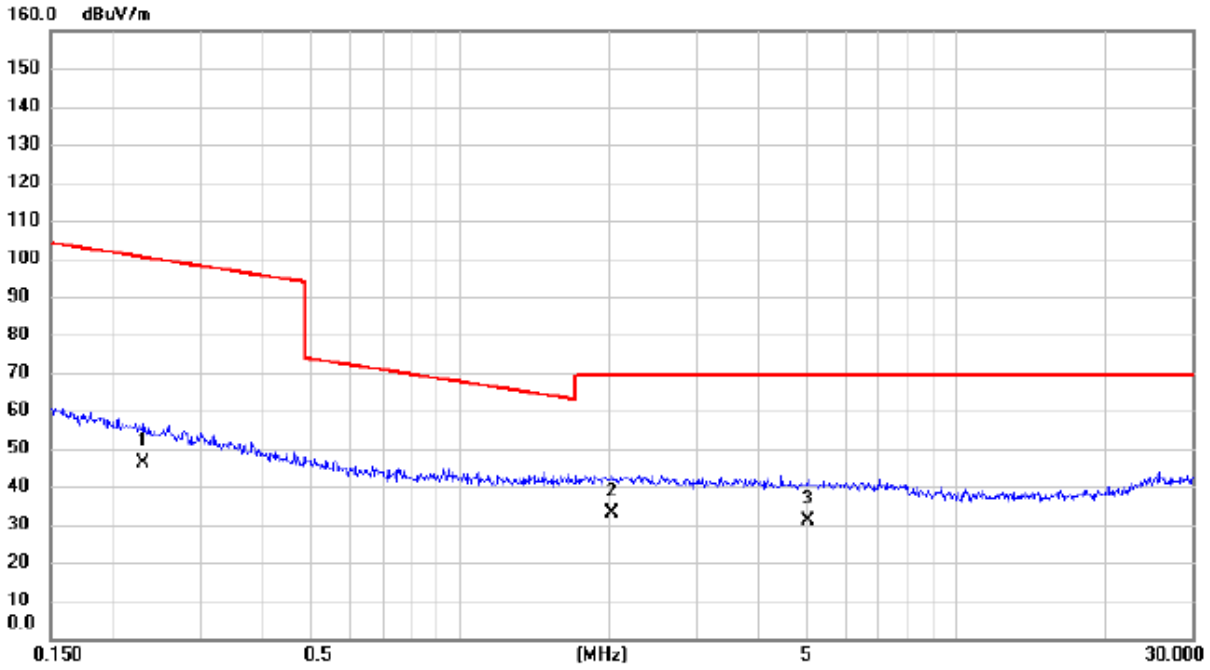
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0205	45.50	19.61	65.11	121.37	-56.26	AVG	
2		0.0472	38.70	18.80	57.50	114.13	-56.63	AVG	
3		0.0624	33.80	18.48	52.28	111.70	-59.42	AVG	

Test Mode:	TX MODE

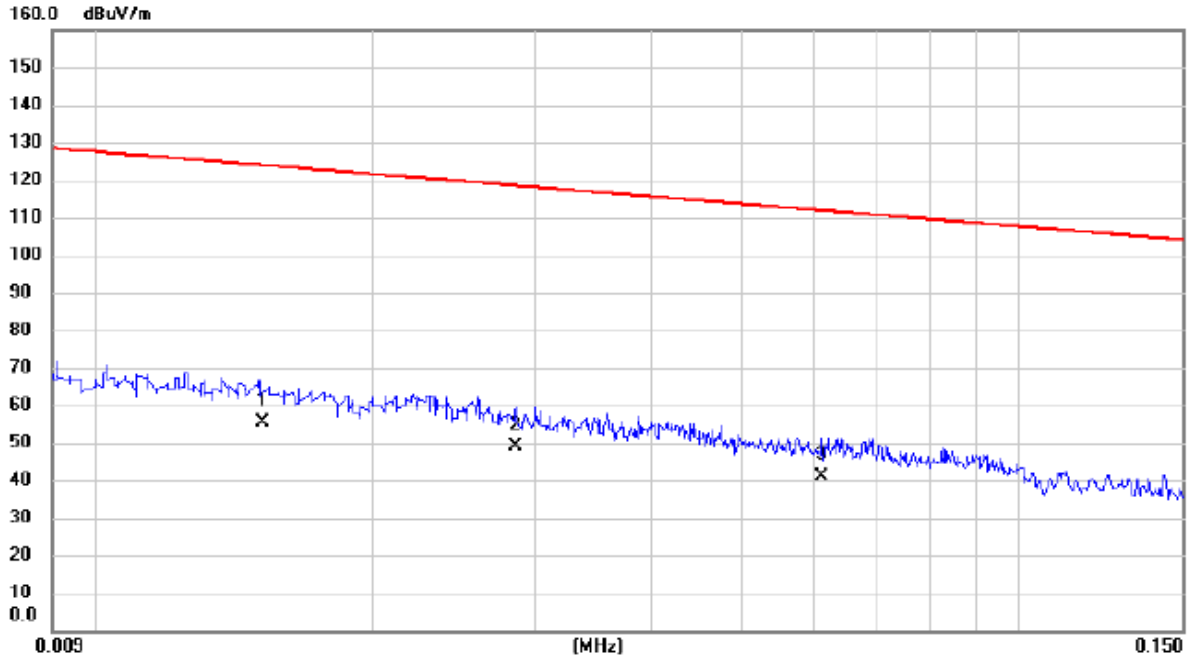
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2304	29.60	16.71	46.31	100.36	-54.05	AVG	
2	*	2.0225	17.40	15.50	32.90	69.54	-36.64	QP	
3		5.0312	16.60	14.37	30.97	69.54	-38.57	QP	

Test Mode:	TX MODE

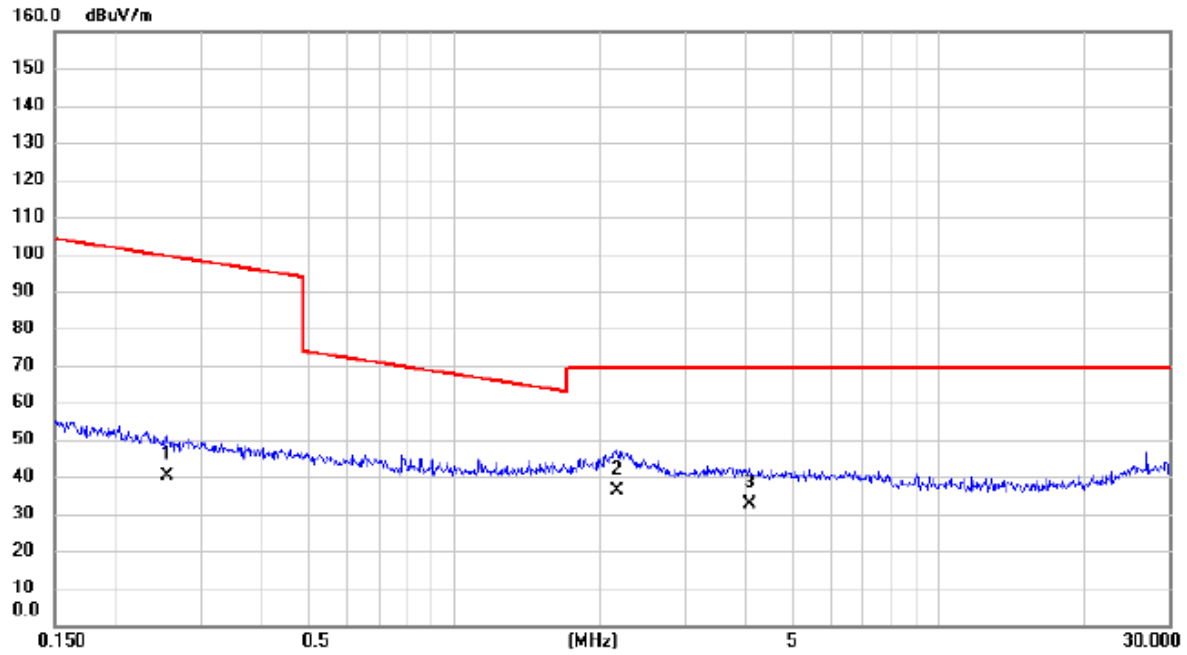
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0152	35.30	20.24	55.54	123.97	-68.43	AVG	
2		0.0285	29.50	19.37	48.87	118.51	-69.64	AVG	
3		0.0610	22.40	18.51	40.91	111.90	-70.99	AVG	

Test Mode:	TX MODE

Ant 90°

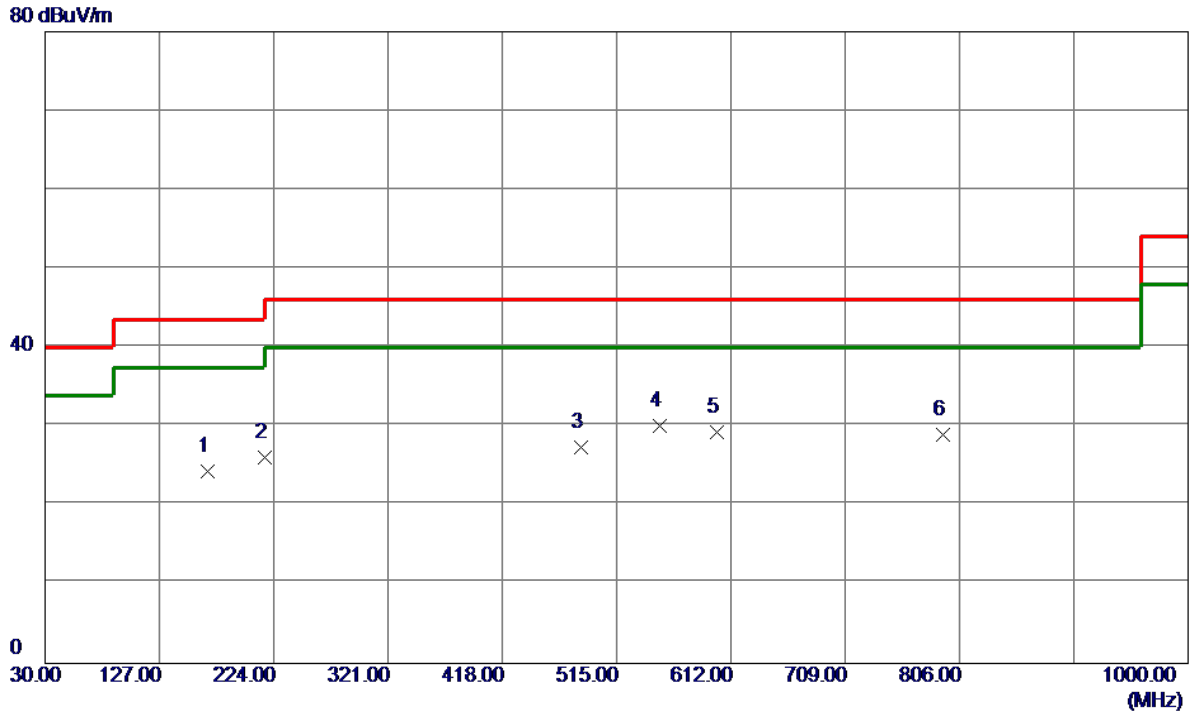


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2562	23.50	16.66	40.16	99.43	-59.27	AVG	
2	*	2.1783	20.60	15.46	36.06	69.54	-33.48	QP	
3		4.0704	17.70	14.91	32.61	69.54	-36.93	QP	

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

Test Mode:	TX B MODE CHANNEL 01

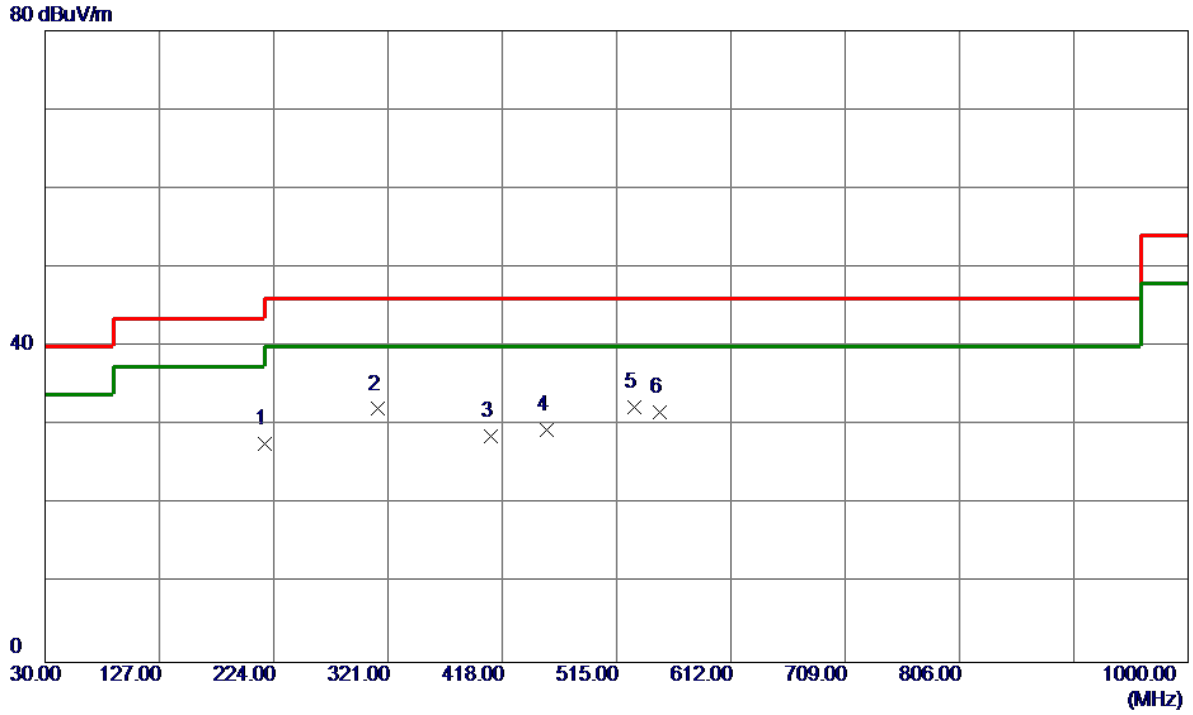
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	167.7400	35.78	-11.40	24.38	43.50	-19.12	Peak	
2	216.2400	41.40	-15.36	26.04	46.00	-19.96	Peak	
3	484.9300	36.21	-8.78	27.43	46.00	-18.57	Peak	
4 *	551.8600	36.24	-6.13	30.11	46.00	-15.89	Peak	
5	600.3600	36.29	-6.96	29.33	46.00	-16.67	Peak	
6	792.4200	31.21	-2.28	28.93	46.00	-17.07	Peak	

Test Mode:	TX B MODE CHANNEL 01

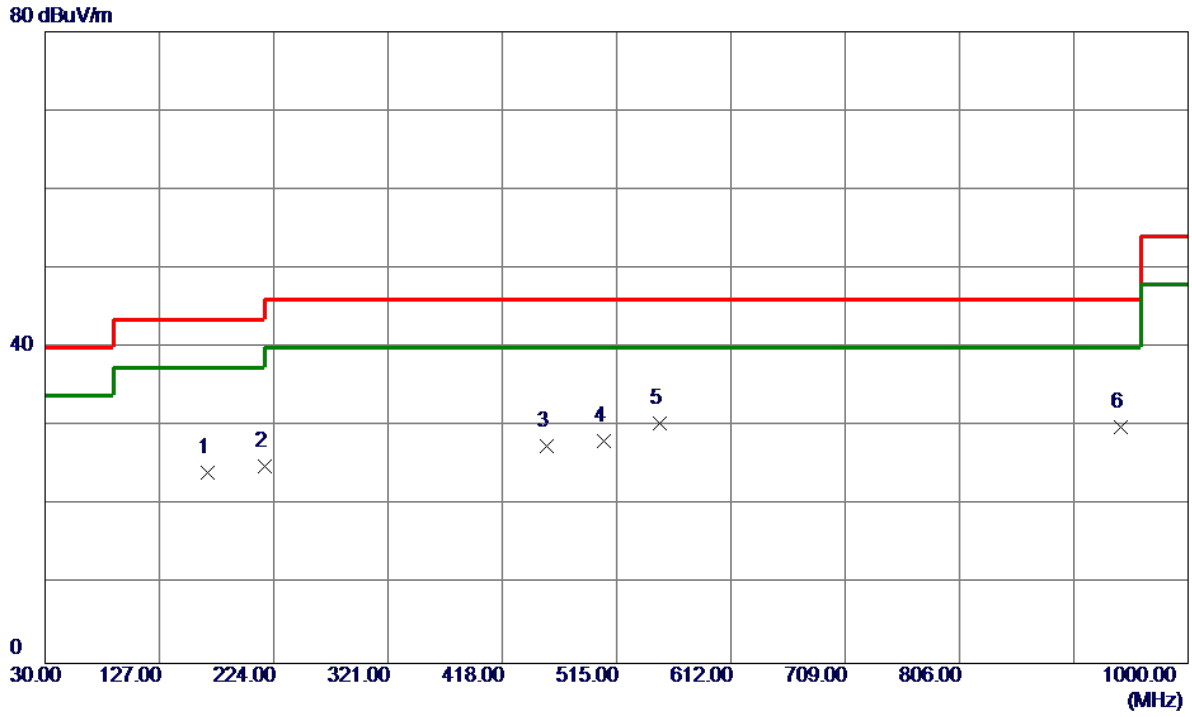
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	216.2400	43.06	-15.36	27.70	46.00	-18.30	Peak	
2	312.2700	43.07	-10.99	32.08	46.00	-13.92	Peak	
3	408.3000	38.23	-9.57	28.66	46.00	-17.34	Peak	
4	455.8300	37.51	-8.10	29.41	46.00	-16.59	Peak	
5 *	530.5200	39.53	-7.28	32.25	46.00	-13.75	Peak	
6	551.8600	37.88	-6.13	31.75	46.00	-14.25	Peak	

Test Mode:	TX B MODE CHANNEL 06

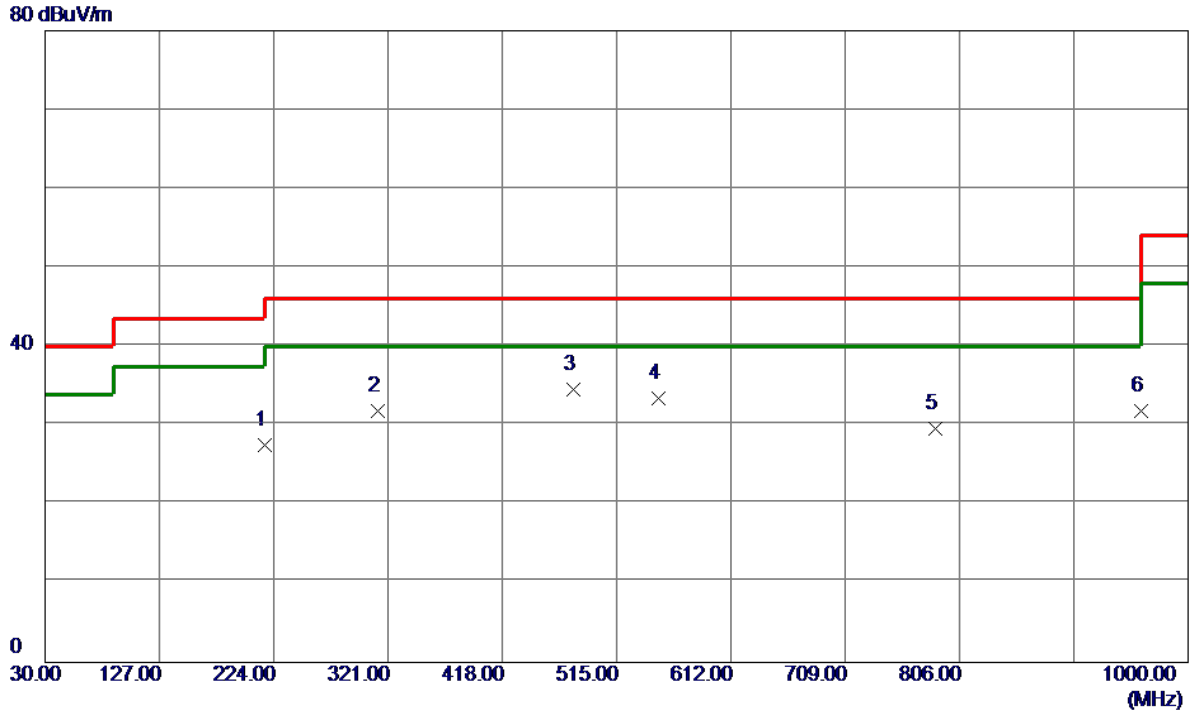
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	167.7400	35.62	-11.40	24.22	43.50	-19.28	Peak	
2	216.2400	40.36	-15.36	25.00	46.00	-21.00	Peak	
3	455.8300	35.60	-8.10	27.50	46.00	-18.50	Peak	
4	504.3300	37.01	-8.86	28.15	46.00	-17.85	Peak	
5 *	551.8600	36.59	-6.13	30.46	46.00	-15.54	Peak	
6	942.7700	29.68	0.21	29.89	46.00	-16.11	Peak	

Test Mode:	TX B MODE CHANNEL 06

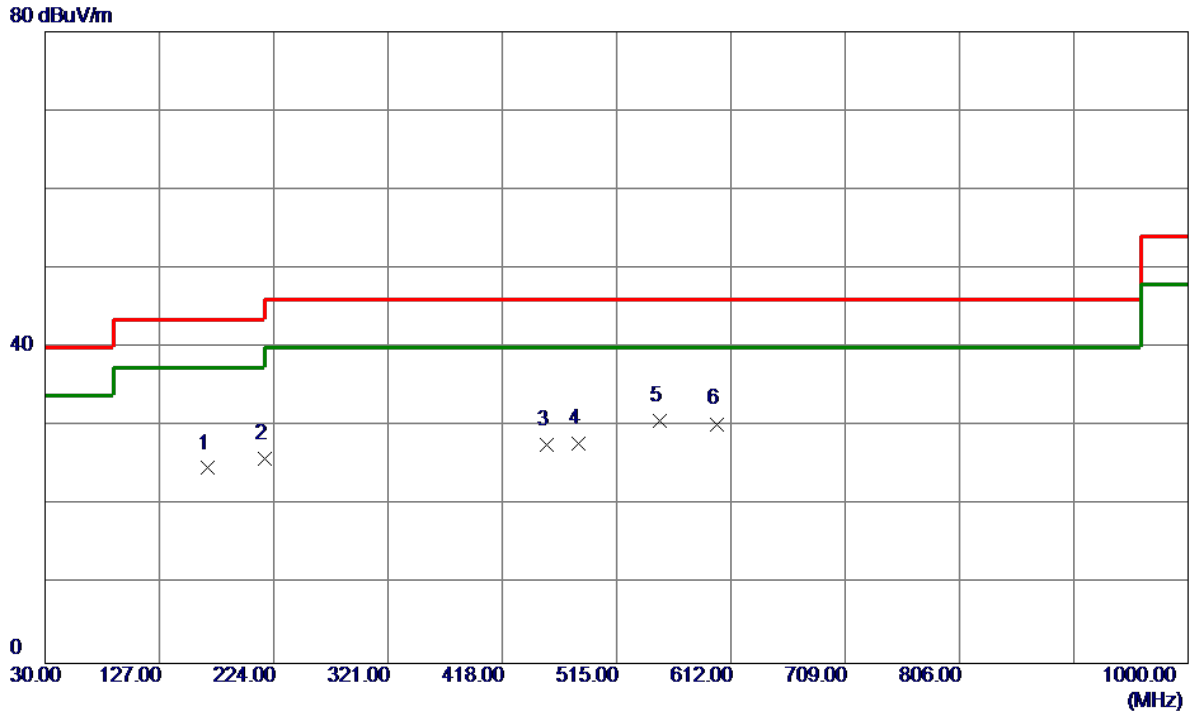
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	216.2400	42.83	-15.36	27.47	46.00	-18.53	Peak	
2	312.2700	42.78	-10.99	31.79	46.00	-14.21	Peak	
3 *	478.1400	43.15	-8.62	34.53	46.00	-11.47	Peak	
4	550.8900	39.48	-6.11	33.37	46.00	-12.63	Peak	
5	785.6300	32.26	-2.69	29.57	46.00	-16.43	Peak	
6	960.2300	31.66	0.25	31.91	54.00	-22.09	Peak	

Test Mode:	TX B MODE CHANNEL 11

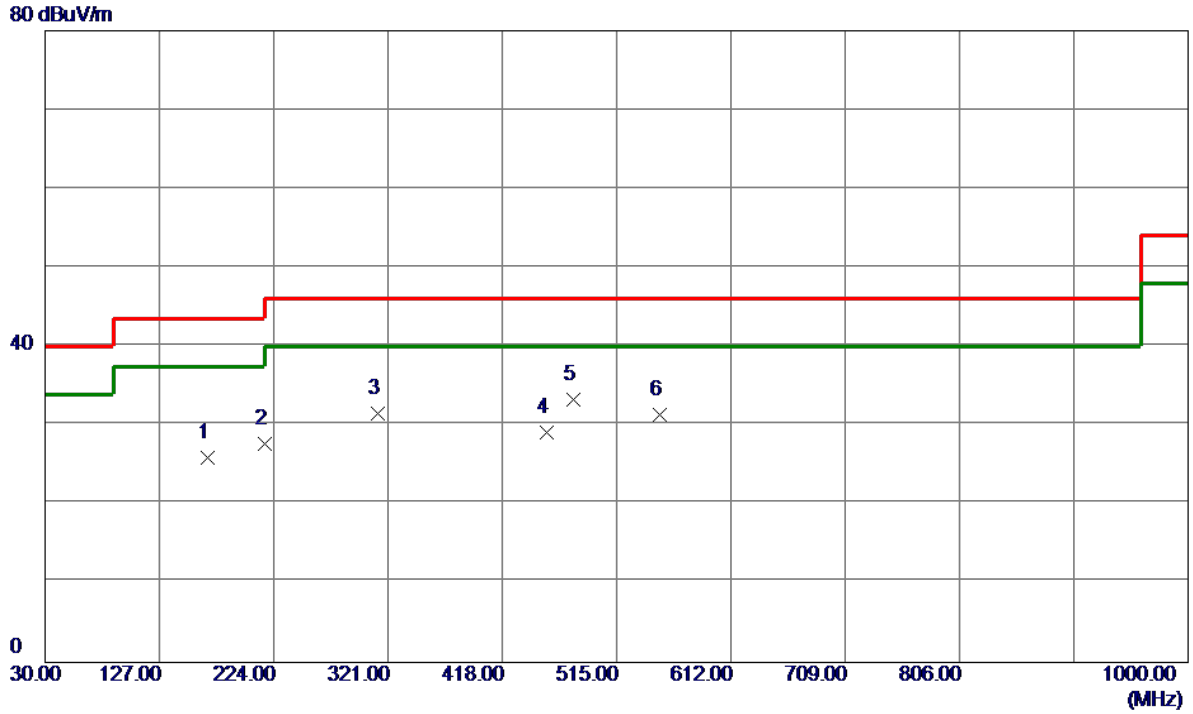
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	167.7400	36.12	-11.40	24.72	43.50	-18.78	Peak	
2	216.2400	41.27	-15.36	25.91	46.00	-20.09	Peak	
3	455.8300	35.73	-8.10	27.63	46.00	-18.37	Peak	
4	482.9900	36.61	-8.73	27.88	46.00	-18.12	Peak	
5 *	551.8600	36.88	-6.13	30.75	46.00	-15.25	Peak	
6	600.3600	37.28	-6.96	30.32	46.00	-15.68	Peak	

Test Mode:	TX B MODE CHANNEL 11

Horizontal

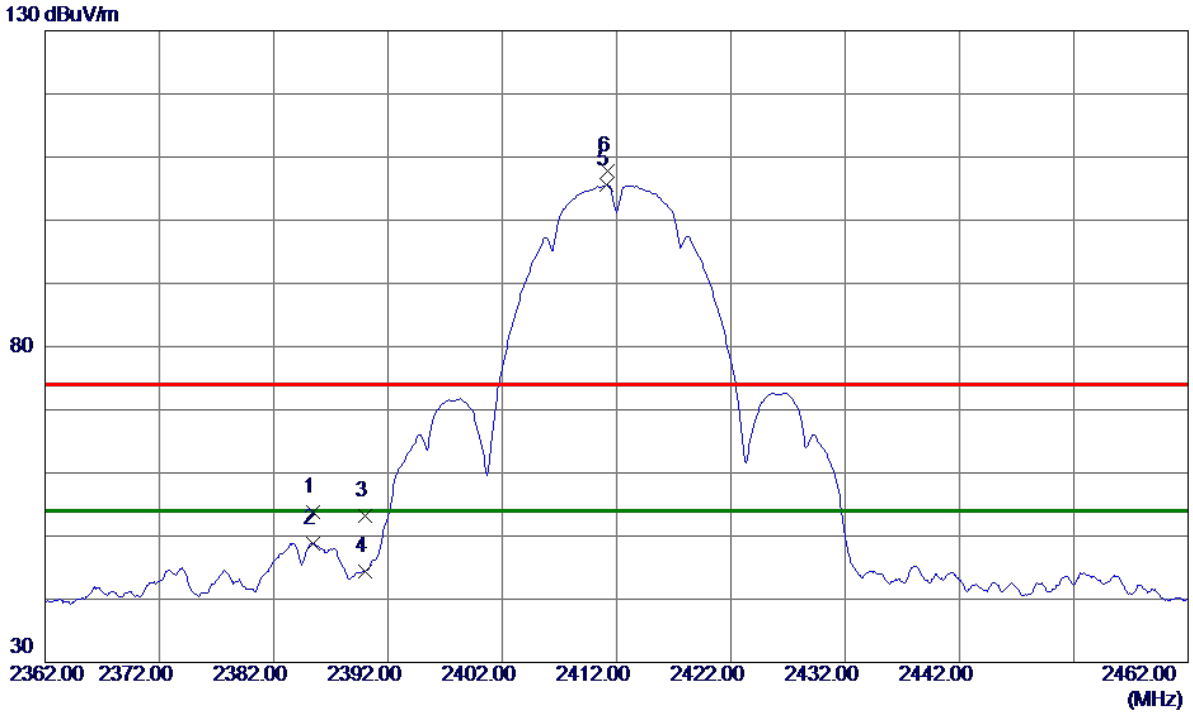


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	167.7400	37.25	-11.40	25.85	43.50	-17.65	Peak	
2	216.2400	42.99	-15.36	27.63	46.00	-18.37	Peak	
3	312.2700	42.48	-10.99	31.49	46.00	-14.51	Peak	
4	455.8300	37.26	-8.10	29.16	46.00	-16.84	Peak	
5 *	478.1400	41.96	-8.62	33.34	46.00	-12.66	Peak	
6	551.8600	37.55	-6.13	31.42	46.00	-14.58	Peak	

APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

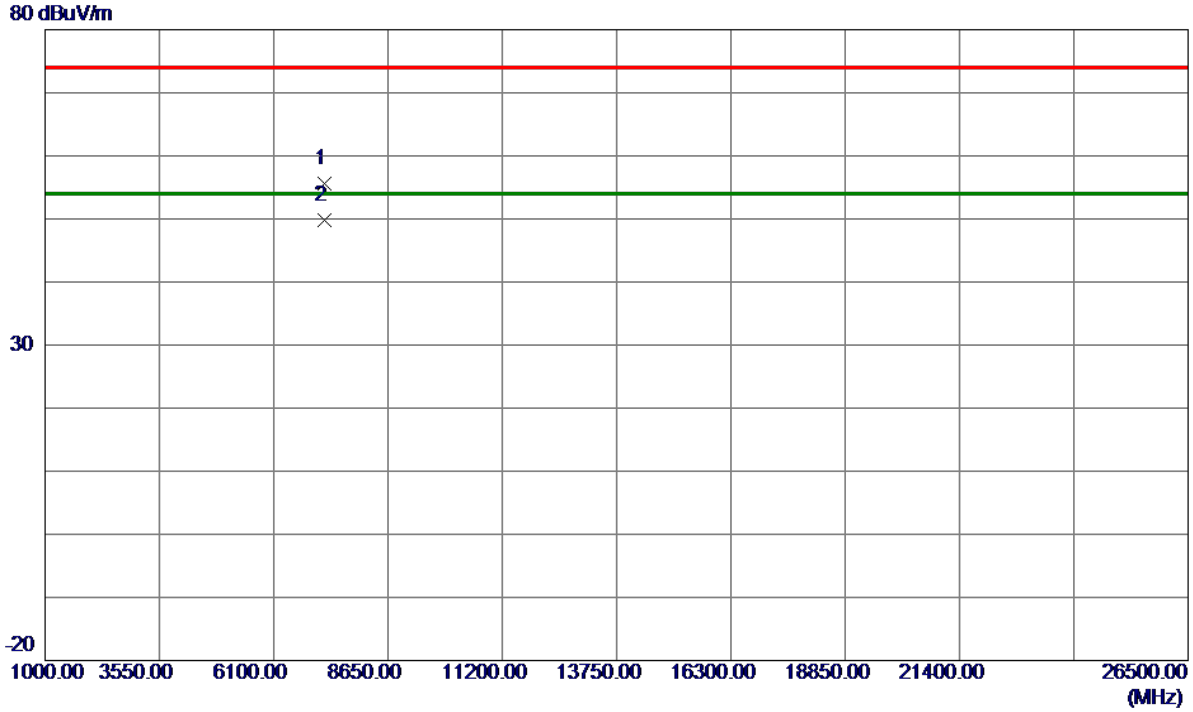
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2385.4000	44.85	9.01	53.86	74.00	-20.14	Peak	
2	2385.4000	39.80	9.01	48.81	54.00	-5.19	AVG	
3	2390.0000	44.21	9.00	53.21	74.00	-20.79	Peak	
4	2390.0000	35.35	9.00	44.35	54.00	-9.65	AVG	
5 *	2411.1000	96.53	9.00	105.53	54.00	51.53	AVG	No Limit
6	2411.2000	98.82	9.00	107.82	74.00	33.82	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

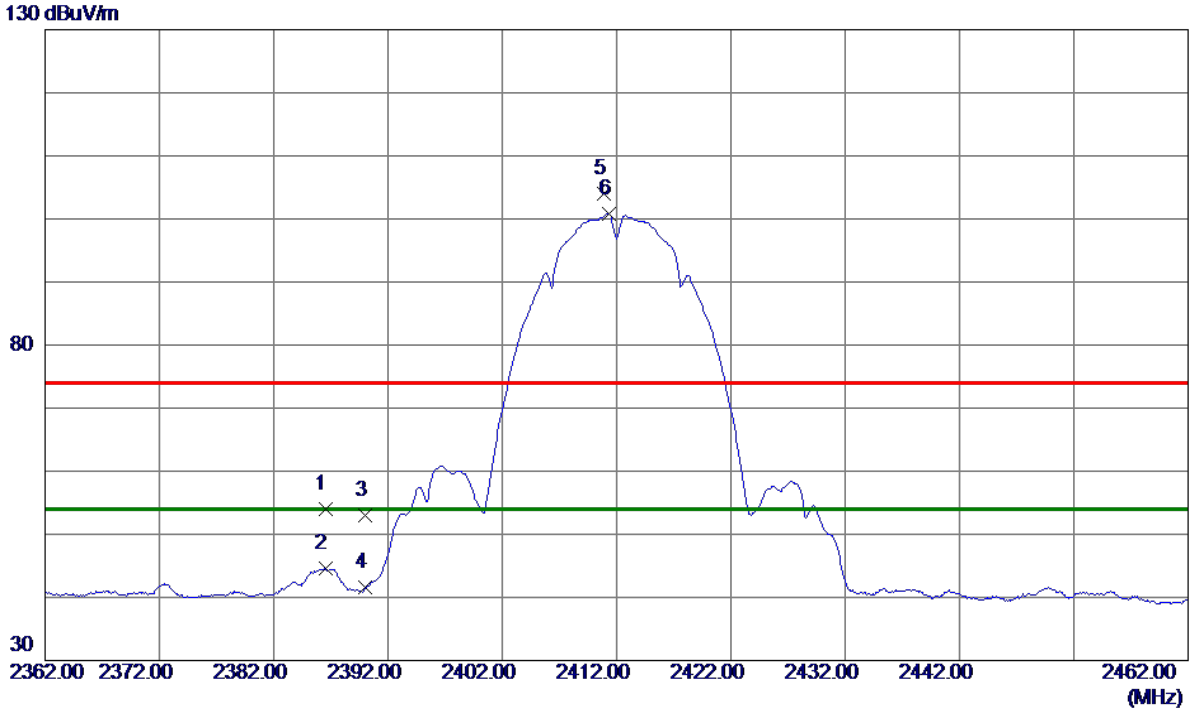
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7234.8000	43.75	11.80	55.55	74.00	-18.45	Peak	
2 *	7236.6400	38.02	11.80	49.82	54.00	-4.18	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

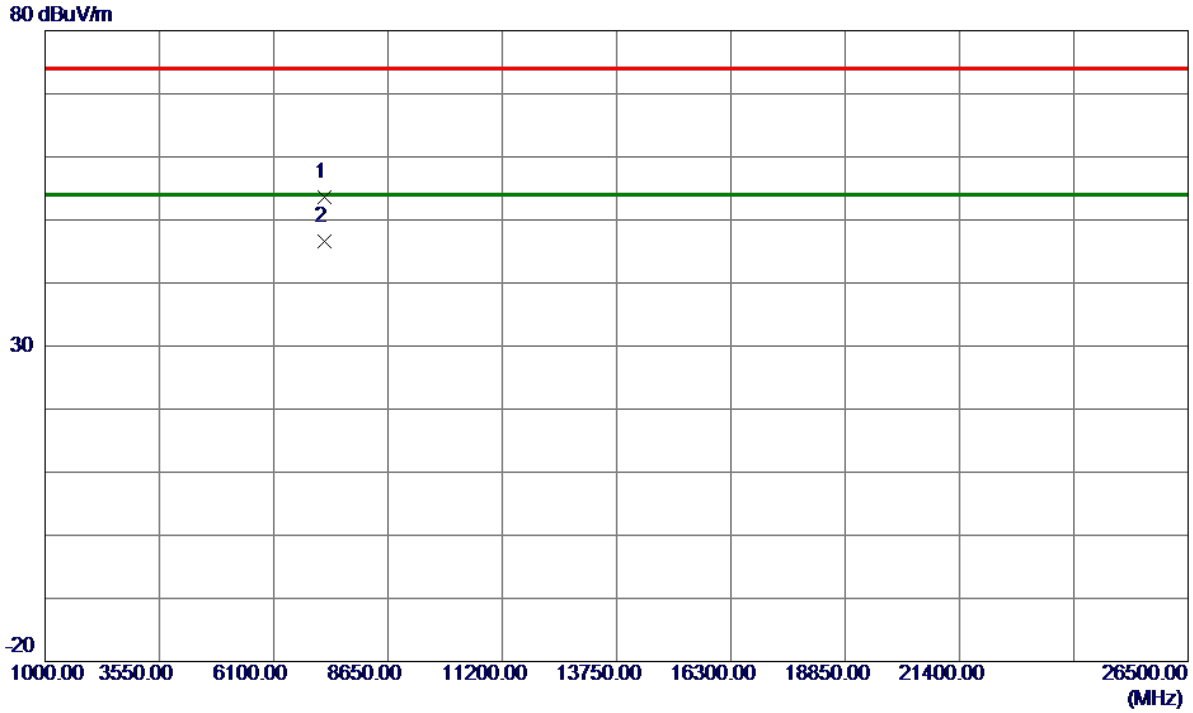
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2386.5000	44.90	9.01	53.91	74.00	-20.09	Peak	
2	2386.5000	35.54	9.01	44.55	54.00	-9.45	AVG	
3	2390.0000	43.94	9.00	52.94	74.00	-21.06	Peak	
4	2390.0000	32.53	9.00	41.53	54.00	-12.47	AVG	
5	2410.9000	94.94	9.00	103.94	74.00	29.94	Peak	No Limit
6 *	2411.3000	91.77	9.00	100.77	54.00	46.77	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2412MHz

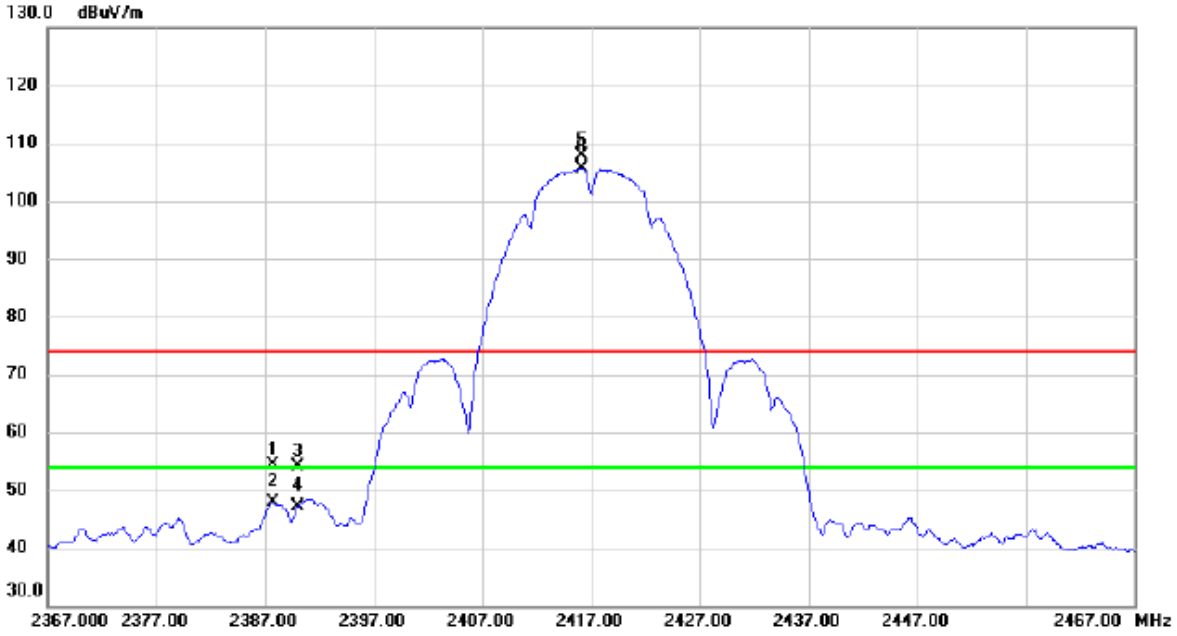
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7234.6600	41.88	11.79	53.67	74.00	-20.33	Peak	
2 *	7235.2400	34.77	11.80	46.57	54.00	-7.43	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2417MHz

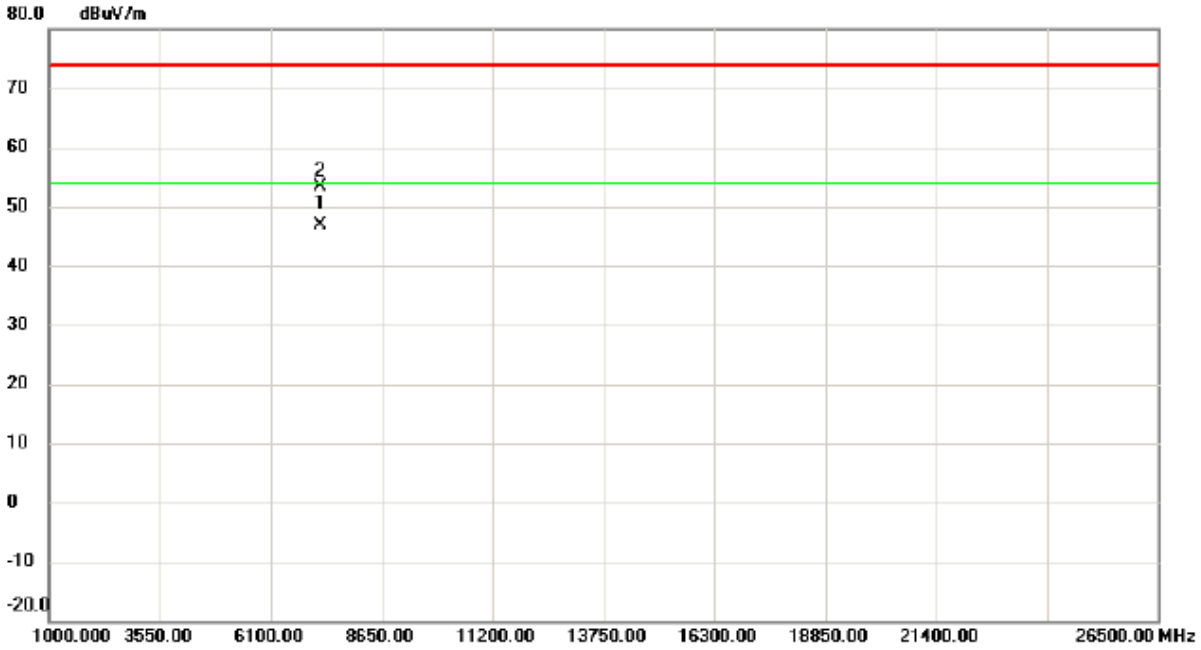
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2387.700	45.43	9.01	54.44	74.00	-19.56	peak	
2		2387.700	38.92	9.01	47.93	54.00	-6.07	AVG	
3		2390.000	45.17	9.00	54.17	74.00	-19.83	peak	
4		2390.000	38.02	9.00	47.02	54.00	-6.98	AVG	
5	X	2416.200	98.91	9.00	107.91	74.00	33.91	peak	No Limit
6	*	2416.200	96.63	9.00	105.63	54.00	51.63	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2417MHz

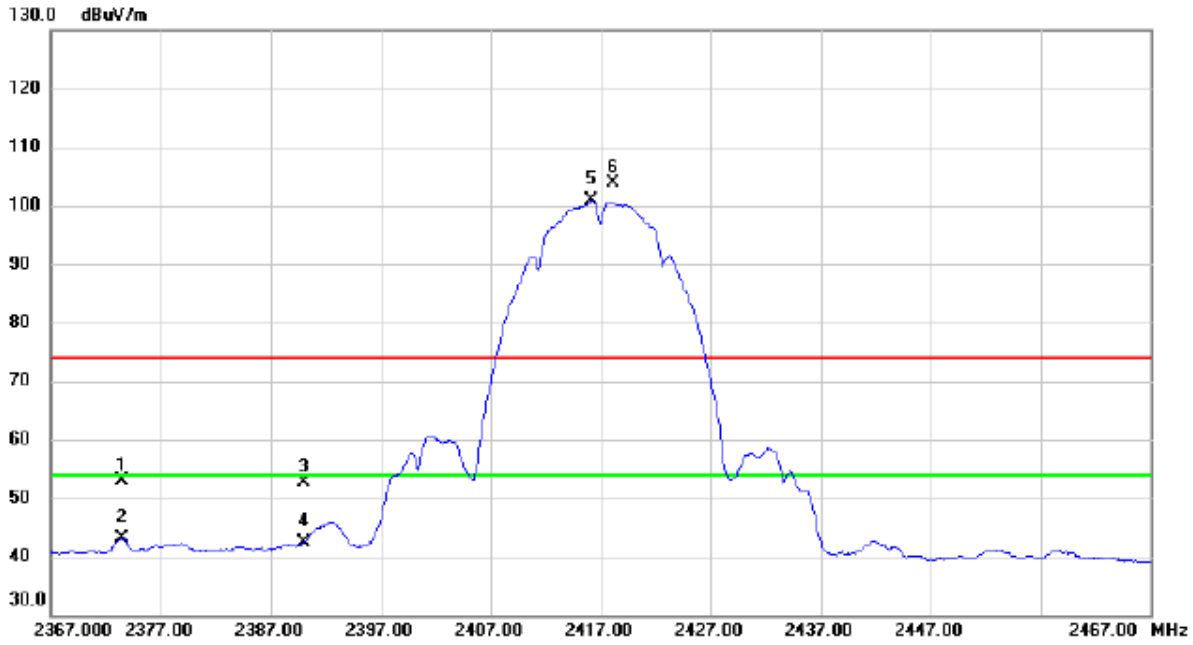
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7250.200	35.05	11.83	46.88	54.00	-7.12	AVG	
2		7250.960	41.64	11.83	53.47	74.00	-20.53	peak	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2417MHz

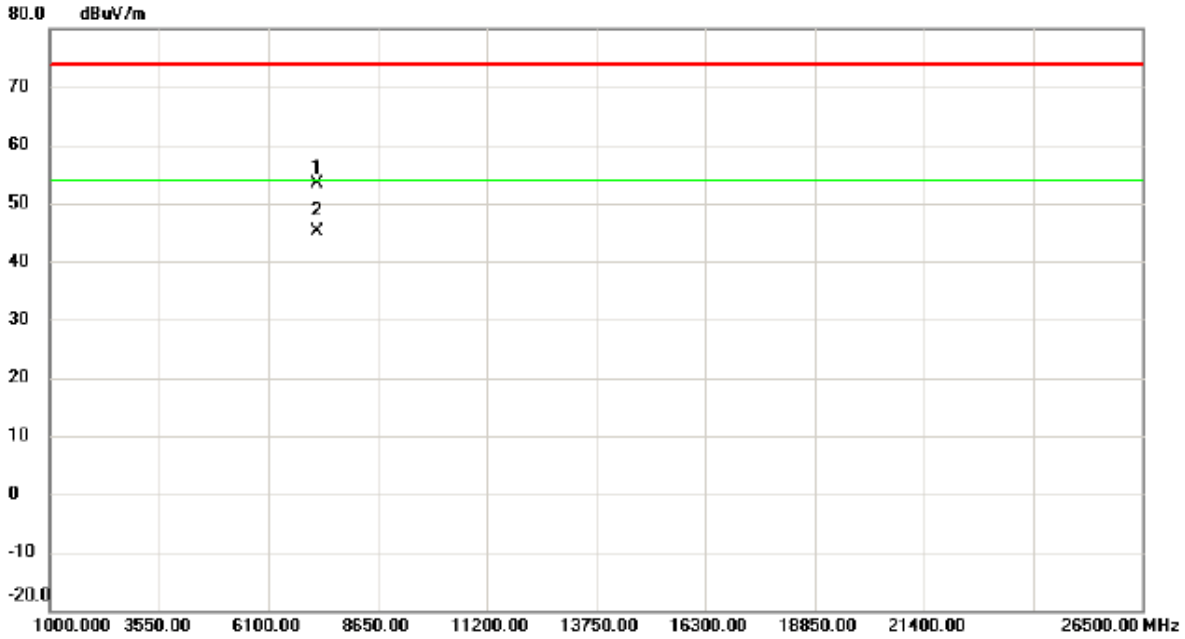
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2373.500	43.83	9.01	52.84	74.00	-21.16	peak	
2		2373.500	34.03	9.01	43.04	54.00	-10.96	AVG	
3		2390.000	43.60	9.00	52.60	74.00	-21.40	peak	
4		2390.000	33.47	9.00	42.47	54.00	-11.53	AVG	
5	*	2416.200	91.80	9.00	100.80	54.00	46.80	AVG	No Limit
6	X	2418.200	94.98	8.99	103.97	74.00	29.97	peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2417MHz

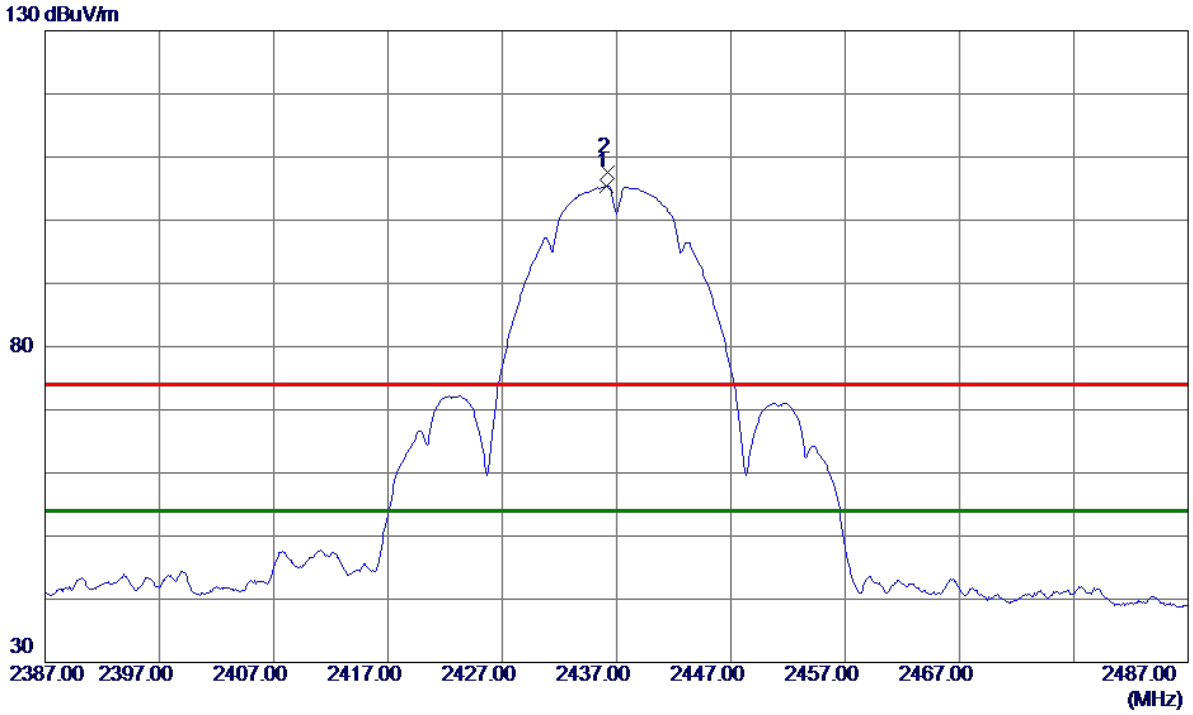
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7250.200	41.44	11.83	53.27	74.00	-20.73	peak	
2	*	7250.250	33.18	11.83	45.01	54.00	-8.99	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

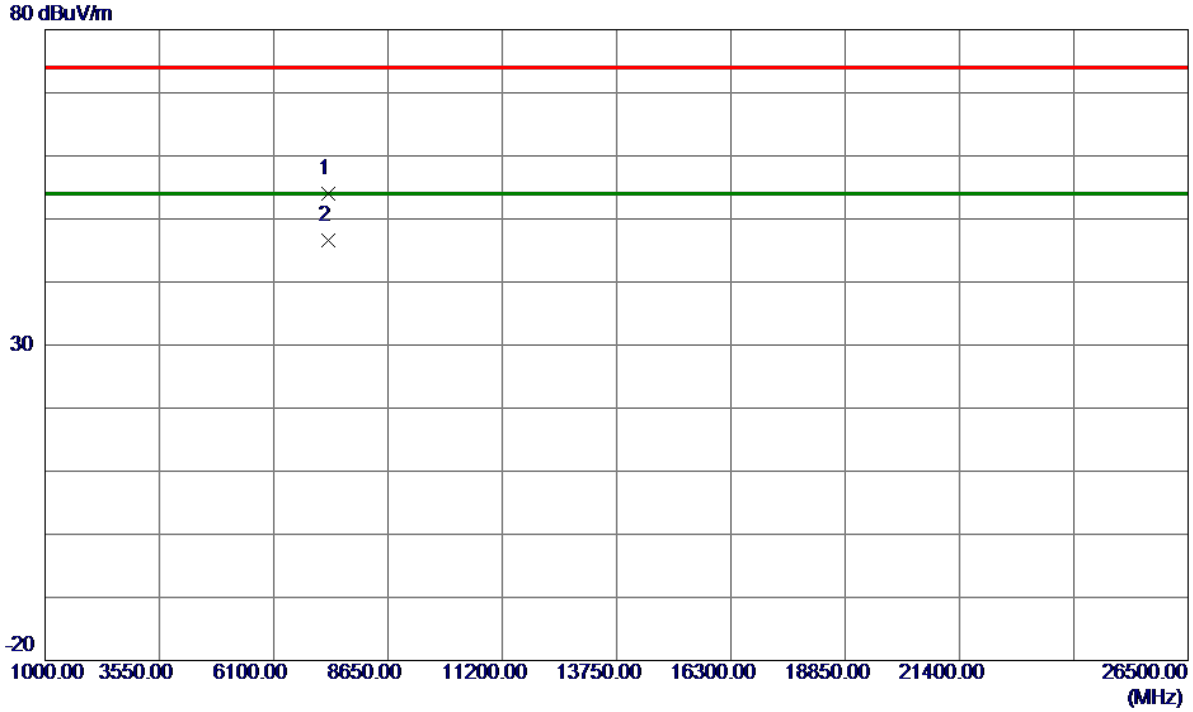
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436.1000	96.38	8.99	105.37	54.00	51.37	AVG	No Limit
2	2436.2000	98.63	8.99	107.62	74.00	33.62	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

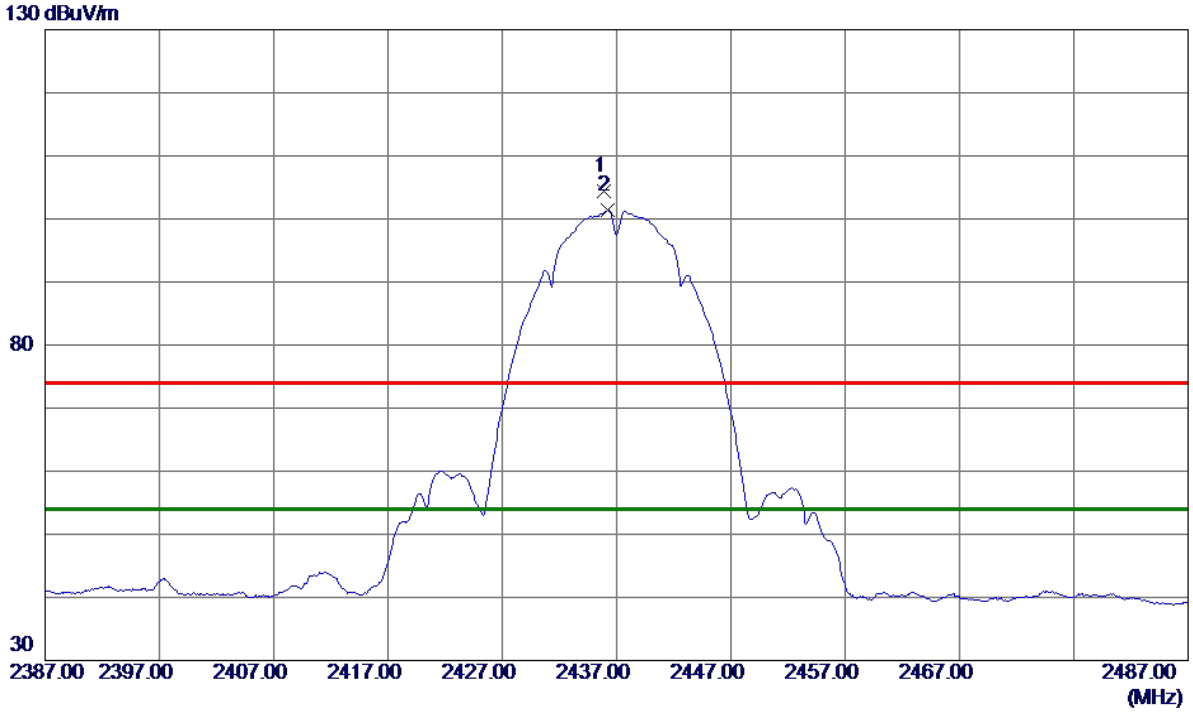
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7310.8400	42.00	11.98	53.98	74.00	-20.02	Peak	
2 *	7311.7400	34.69	11.98	46.67	54.00	-7.33	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

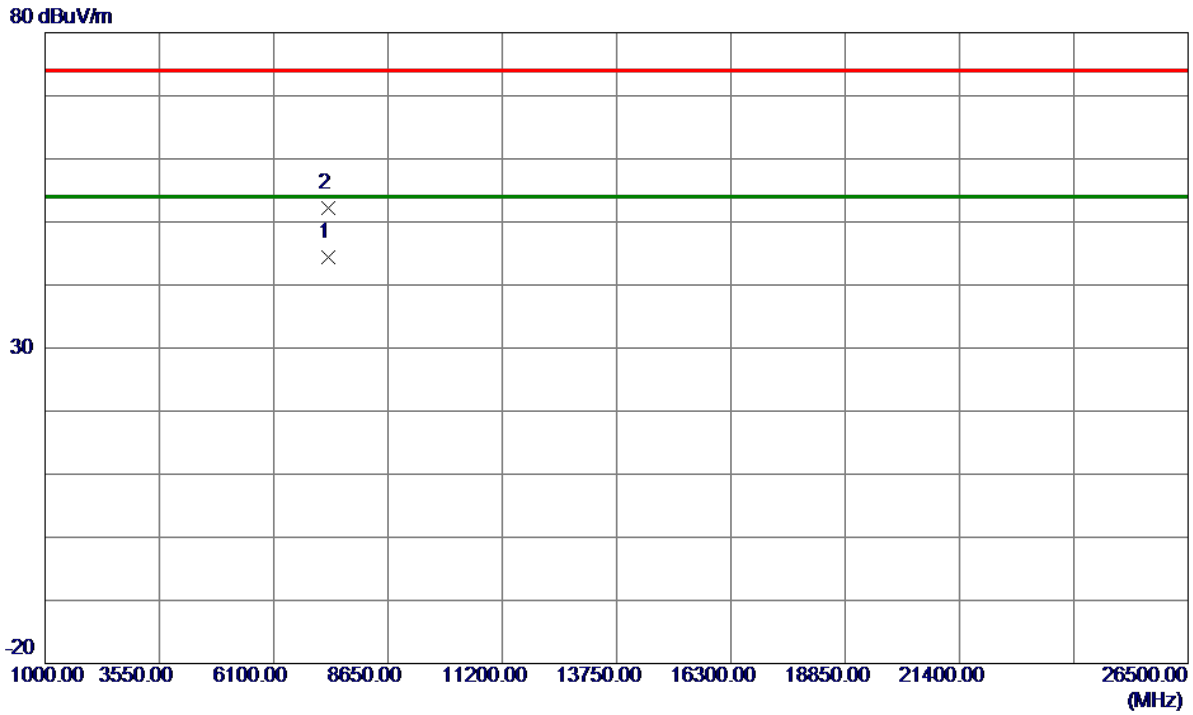
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2435.9000	95.34	8.99	104.33	74.00	30.33	Peak	No Limit
2 *	2436.2000	92.41	8.99	101.40	54.00	47.40	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX B MODE 2437MHz

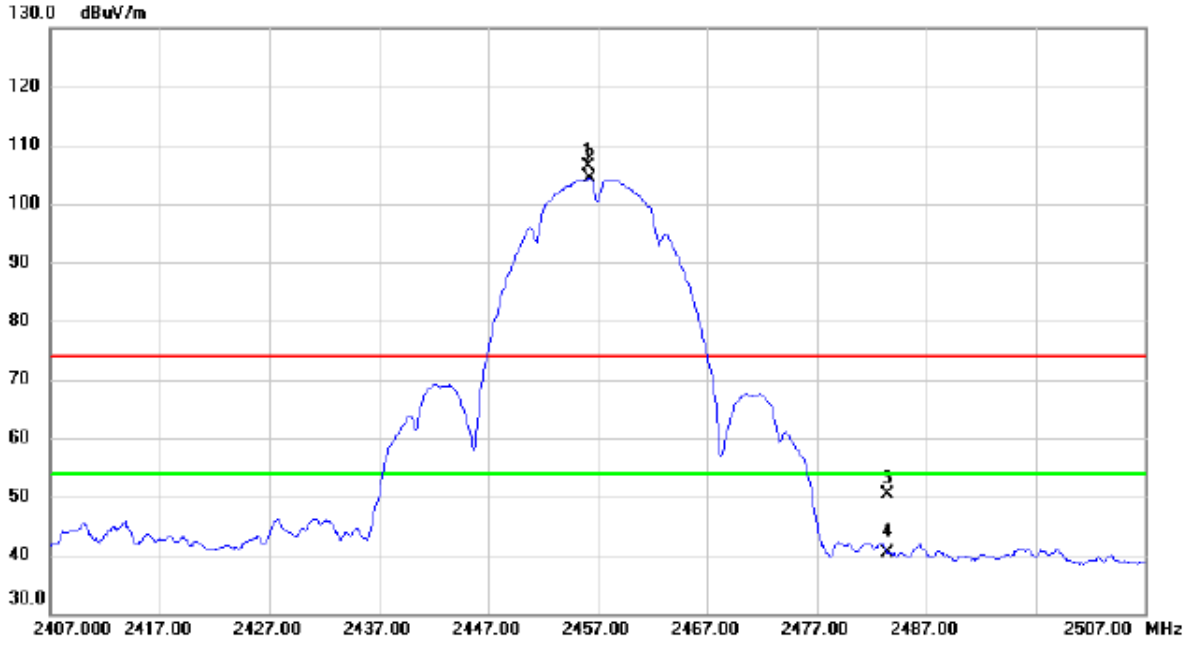
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7311.6000	32.50	11.98	44.48	54.00	-9.52	AVG	
2	7311.9500	40.25	11.98	52.23	74.00	-21.77	Peak	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2457MHz

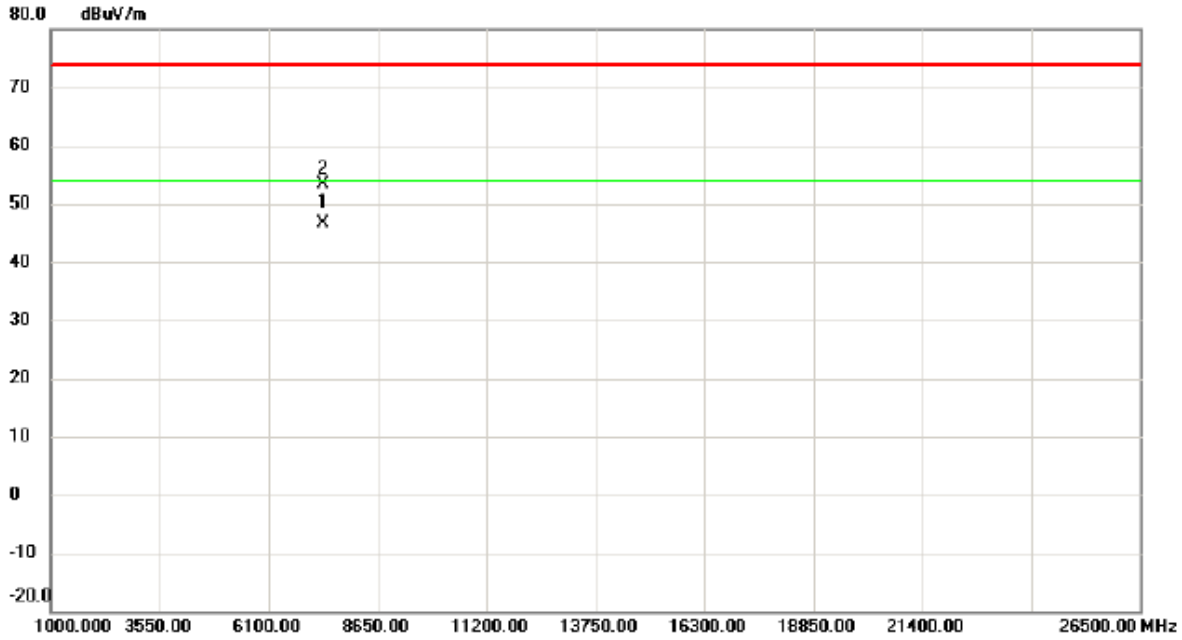
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2456.100	97.29	8.97	106.26	74.00	32.26	peak	No Limit
2	*	2456.300	95.33	8.97	104.30	54.00	50.30	AVG	No Limit
3		2483.500	41.32	8.96	50.28	74.00	-23.72	peak	
4		2483.500	31.45	8.96	40.41	54.00	-13.59	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2457MHz

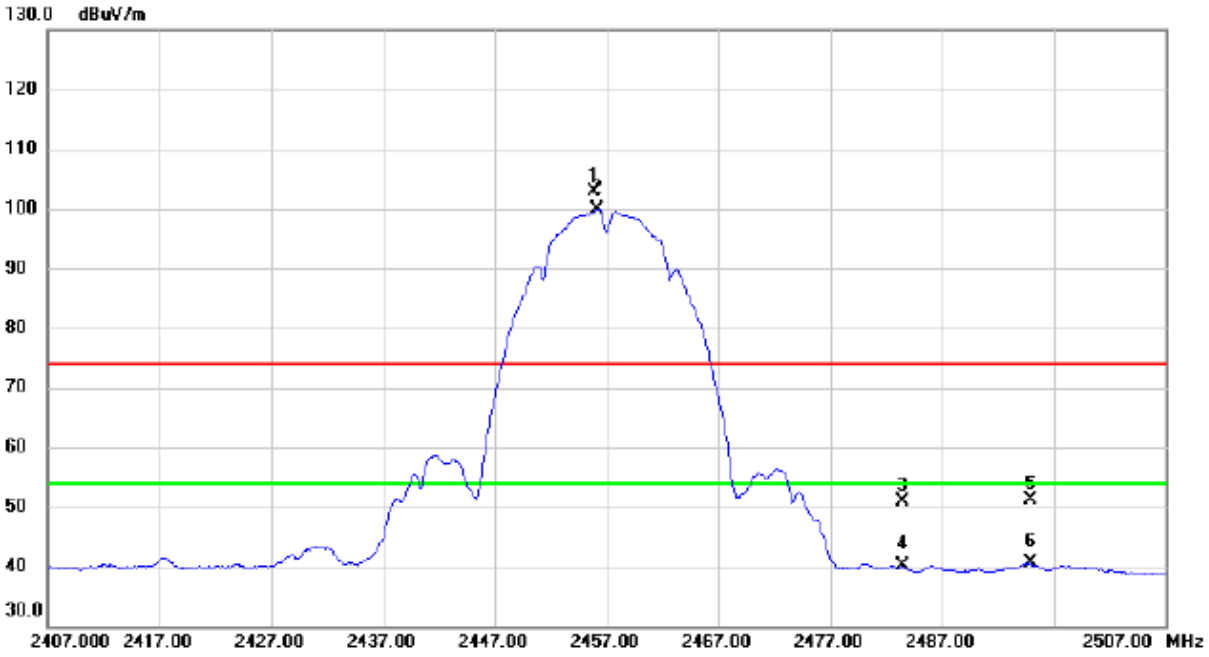
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7370.140	34.39	12.13	46.52	54.00	-7.48	AVG	
2		7372.020	41.15	12.13	53.28	74.00	-20.72	peak	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2457MHz

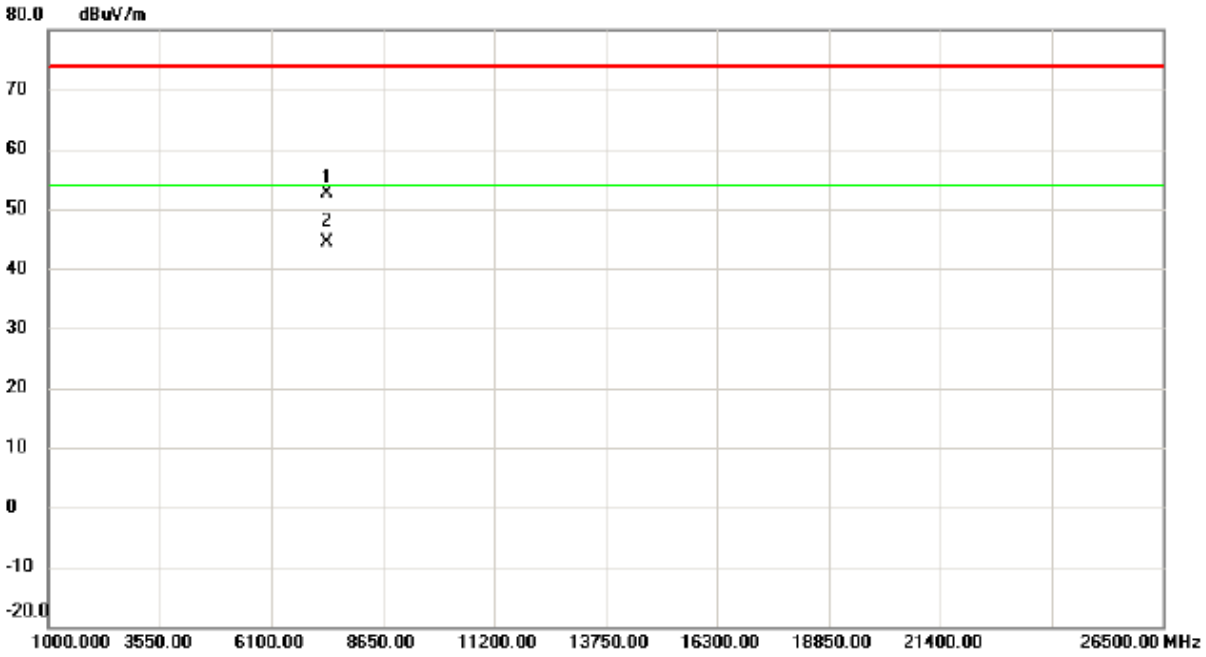
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2455.900	94.01	8.97	102.98	74.00	28.98	peak	No Limit
2	*	2456.200	90.91	8.97	99.88	54.00	45.88	AVG	No Limit
3		2483.500	41.97	8.96	50.93	74.00	-23.07	peak	
4		2483.500	31.06	8.96	40.02	54.00	-13.98	AVG	
5		2494.900	42.24	8.96	51.20	74.00	-22.80	peak	
6		2494.900	31.62	8.96	40.58	54.00	-13.42	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2457MHz

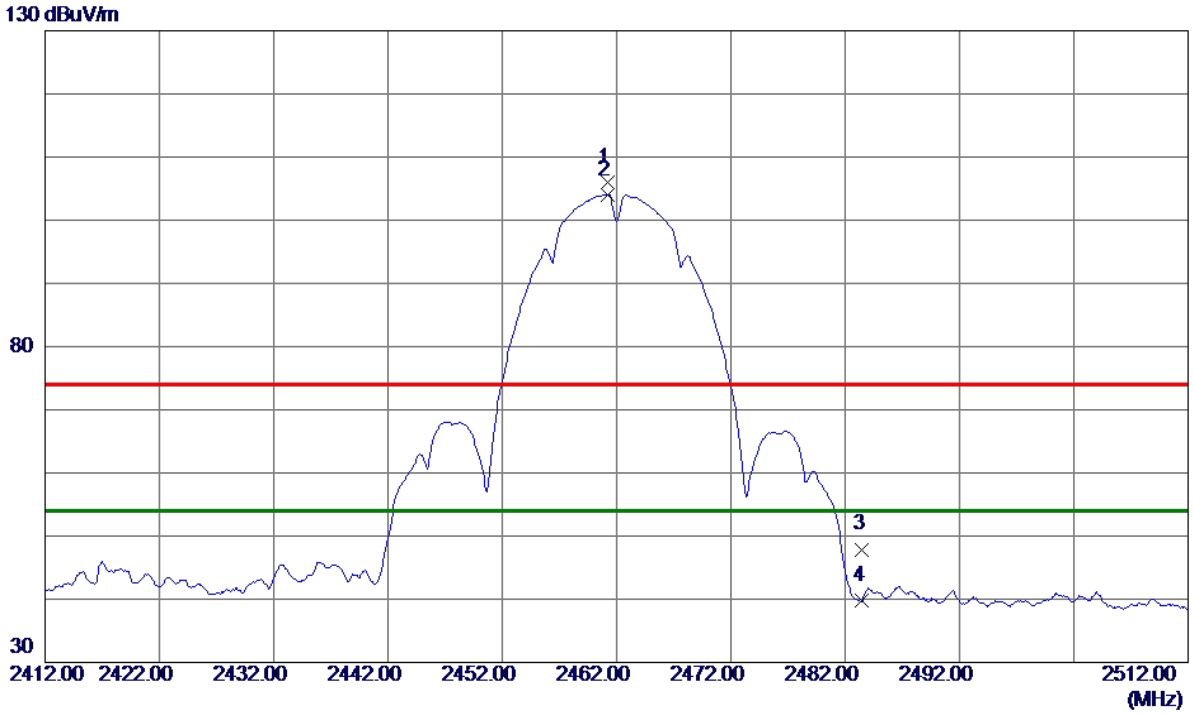
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7369.500	40.52	12.13	52.65	74.00	-21.35	peak	
2	*	7371.750	32.29	12.13	44.42	54.00	-9.58	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

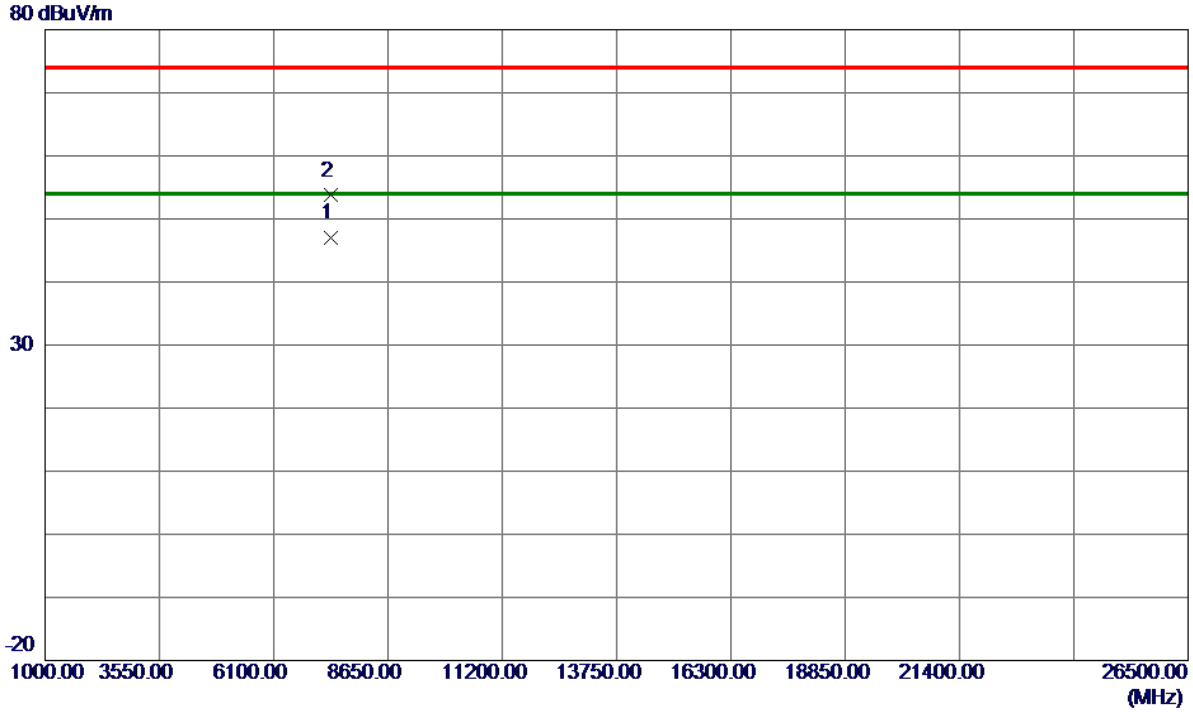
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461.2000	97.02	8.98	106.00	74.00	32.00	Peak	No Limit
2 *	2461.2000	95.10	8.98	104.08	54.00	50.08	AVG	No Limit
3	2483.5000	38.93	8.97	47.90	74.00	-26.10	Peak	
4	2483.5000	30.89	8.97	39.86	54.00	-14.14	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

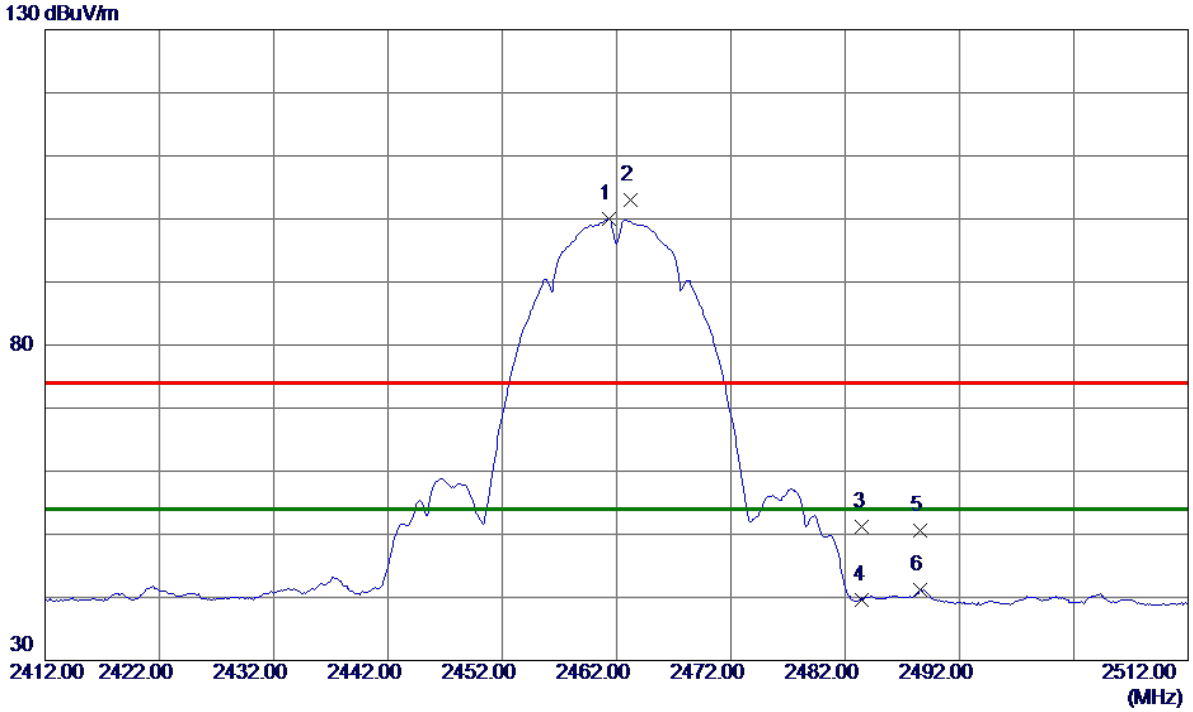
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7386.7400	34.81	12.17	46.98	54.00	-7.02	AVG	
2	7387.3800	41.53	12.17	53.70	74.00	-20.30	Peak	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

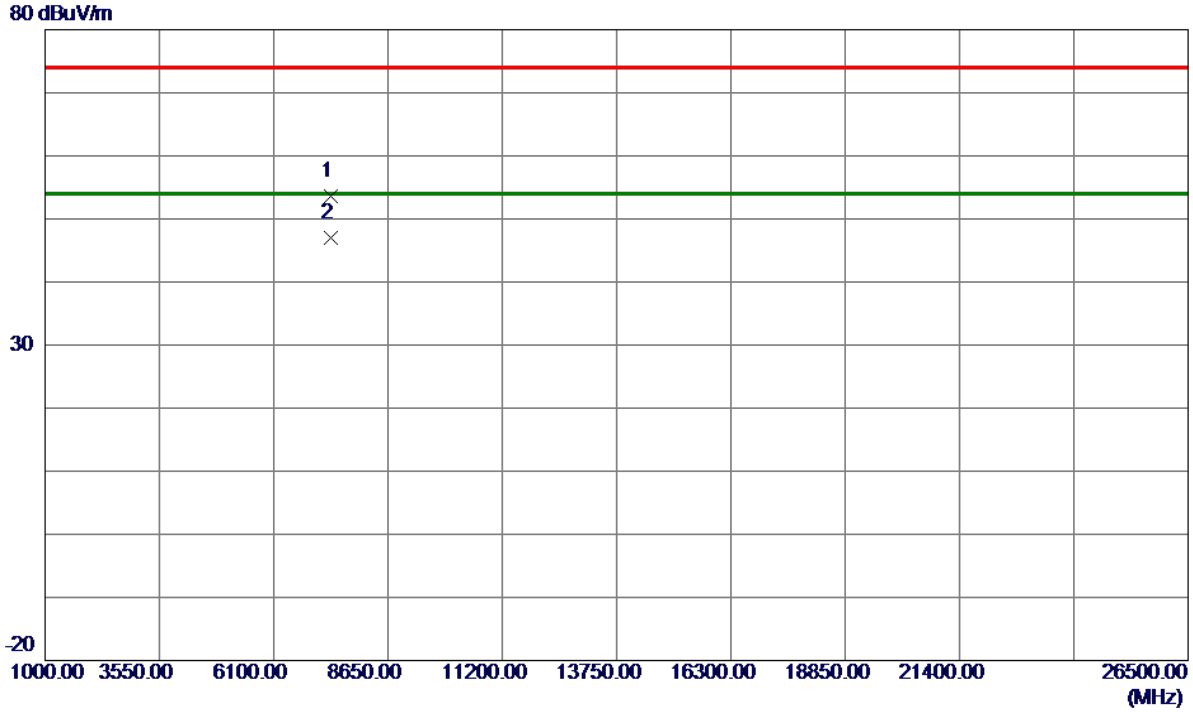
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461.3000	91.04	8.98	100.02	54.00	46.02	AVG	No Limit
2	2463.2000	94.08	8.97	103.05	74.00	29.05	Peak	No Limit
3	2483.5000	42.14	8.97	51.11	74.00	-22.89	Peak	
4	2483.5000	30.64	8.97	39.61	54.00	-14.39	AVG	
5	2488.6000	41.66	8.96	50.62	74.00	-23.38	Peak	
6	2488.6000	32.20	8.96	41.16	54.00	-12.84	AVG	

Orthogonal Axis :	X
Test Mode :	TX B MODE 2462MHz

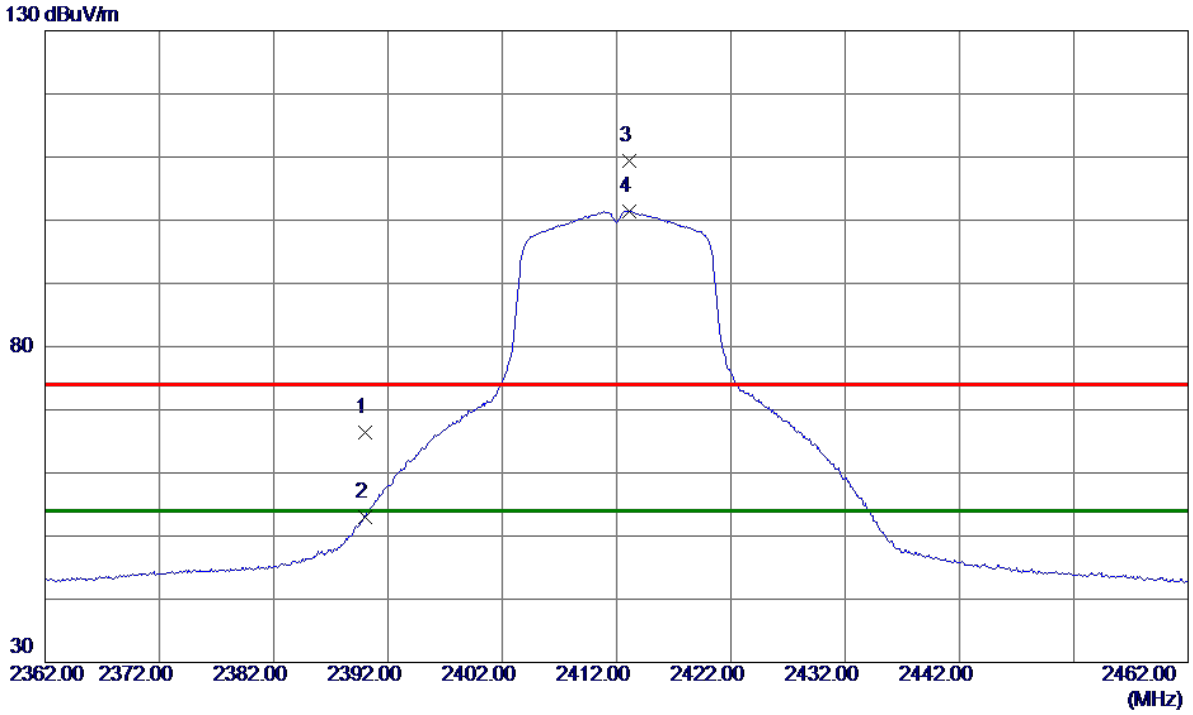
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7385.0000	41.53	12.16	53.69	74.00	-20.31	Peak	
2 *	7386.7000	34.91	12.17	47.08	54.00	-6.92	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

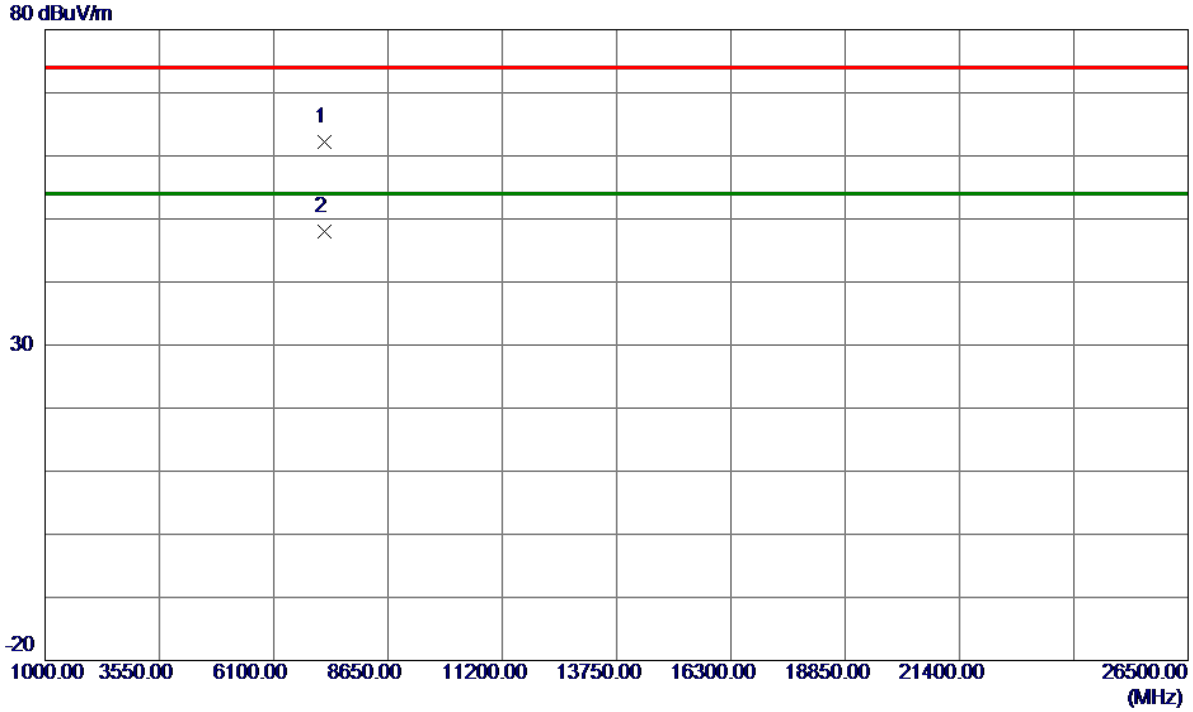
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	57.31	9.00	66.31	74.00	-7.69	Peak	
2	2390.0000	43.99	9.00	52.99	54.00	-1.01	AVG	
3	2413.1000	100.47	8.99	109.46	74.00	35.46	Peak	No Limit
4 *	2413.1000	92.42	8.99	101.41	54.00	47.41	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

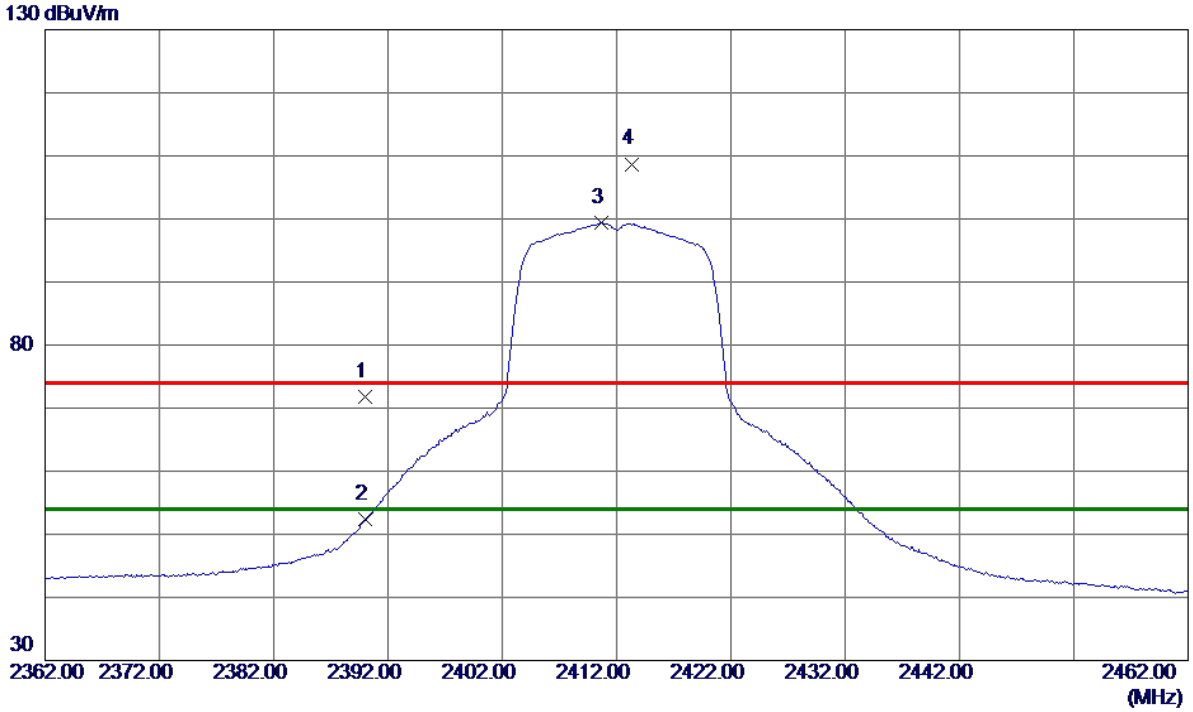
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7233.2500	50.45	11.79	62.24	74.00	-11.76	Peak	
2 *	7236.5000	36.20	11.80	48.00	54.00	-6.00	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

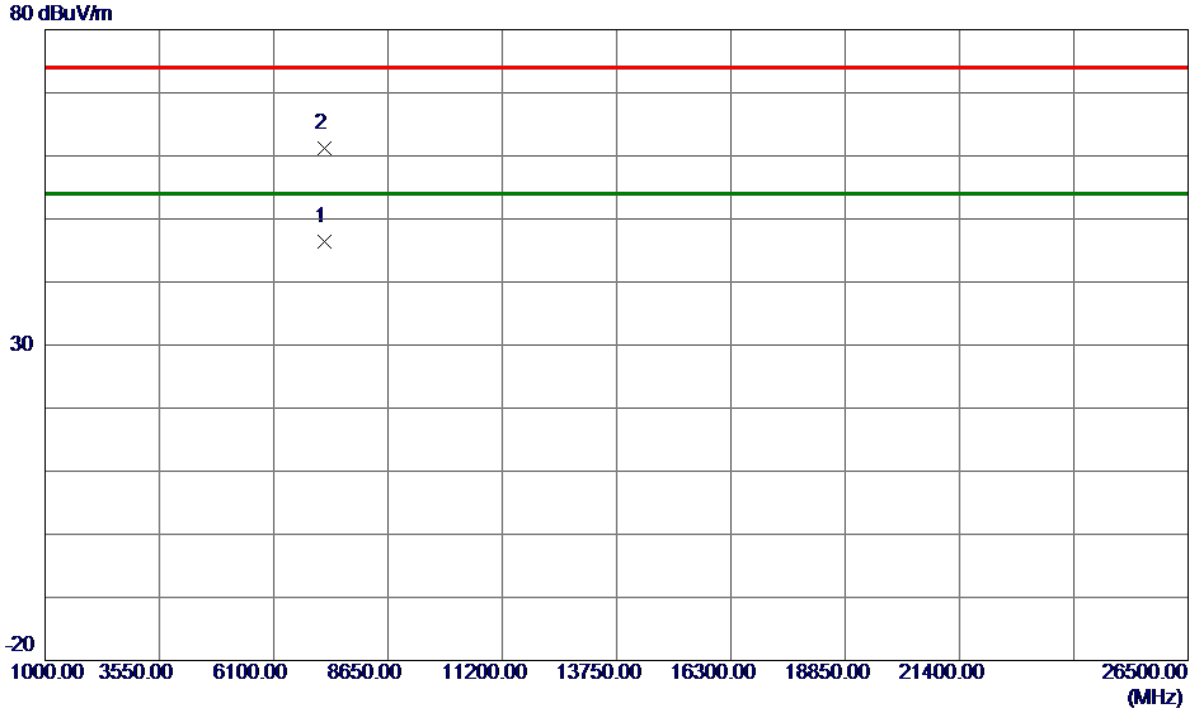
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	62.88	9.00	71.88	74.00	-2.12	Peak	
2	2390.0000	43.33	9.00	52.33	54.00	-1.67	AVG	
3 *	2410.7000	90.43	9.00	99.43	54.00	45.43	AVG	No Limit
4	2413.3000	99.71	8.99	108.70	74.00	34.70	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2412MHz

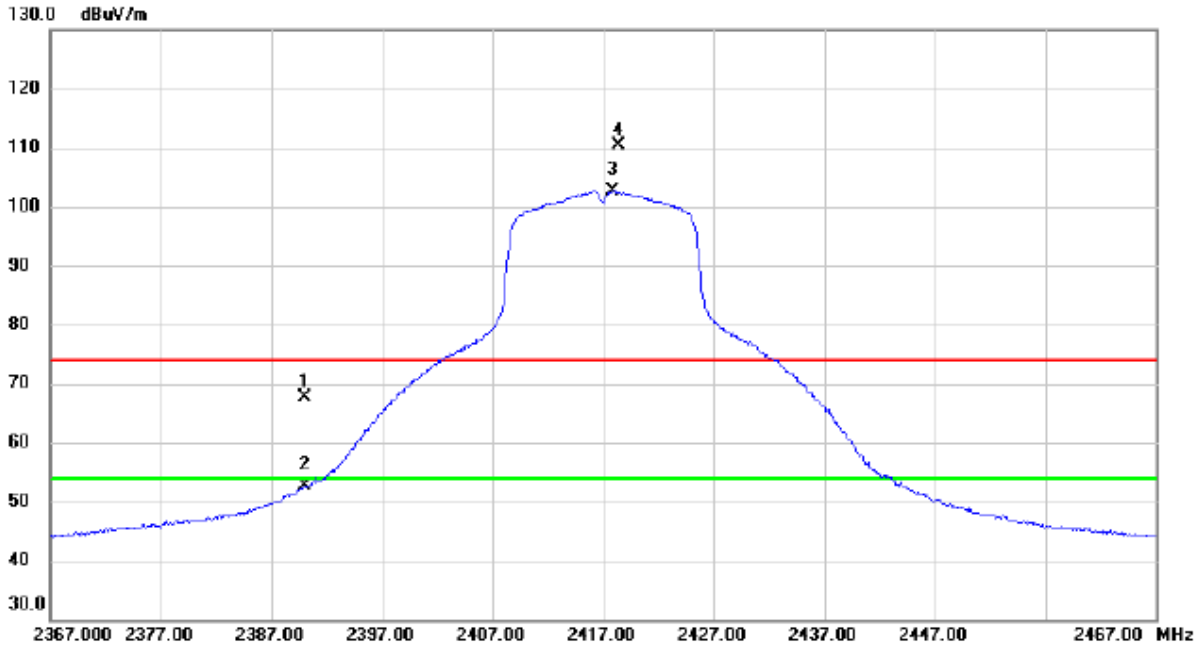
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7235.7500	34.68	11.80	46.48	54.00	-7.52	AVG	
2	7241.1500	49.40	11.81	61.21	74.00	-12.79	Peak	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2417MHz

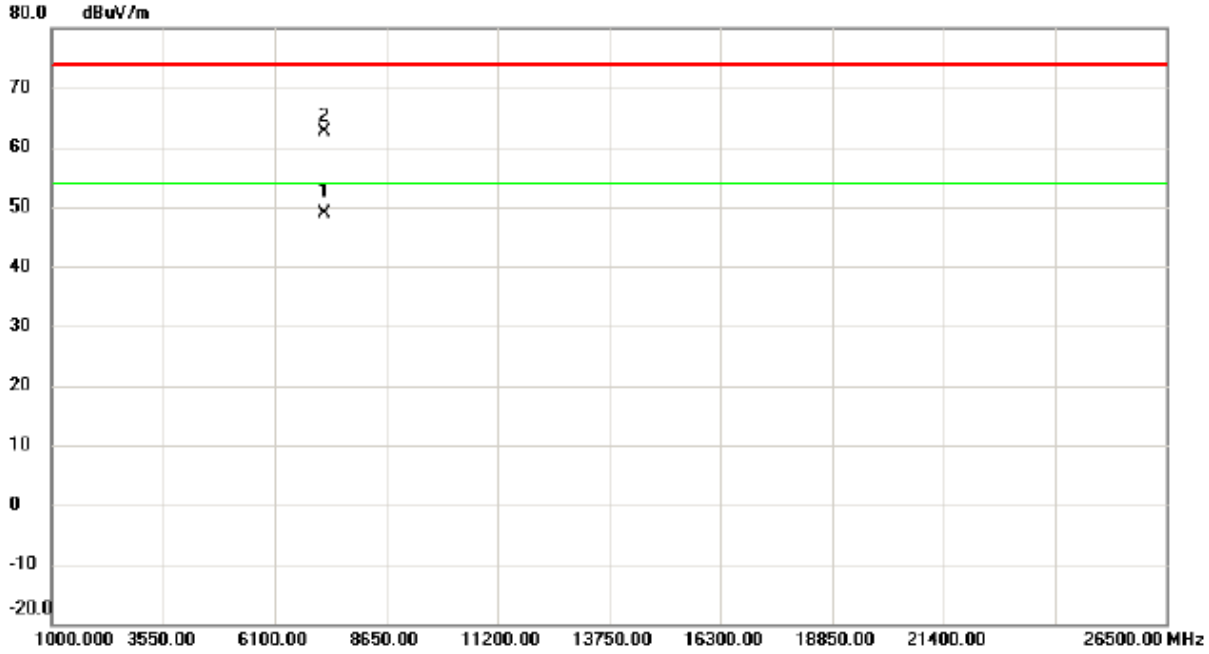
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	58.62	9.00	67.62	74.00	-6.38	peak	
2		2390.000	43.63	9.00	52.63	54.00	-1.37	AVG	
3	*	2417.800	93.60	9.00	102.60	54.00	48.60	AVG	No Limit
4	X	2418.400	101.50	8.99	110.49	74.00	36.49	peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2417MHz

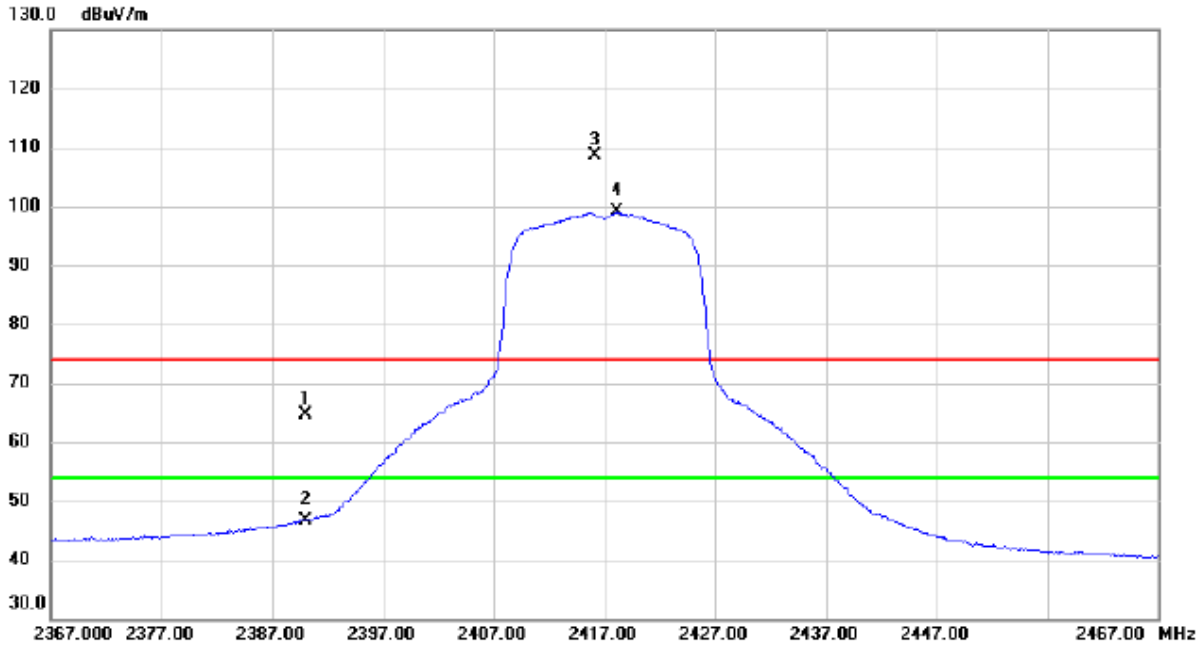
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7251.700	36.95	11.83	48.78	54.00	-5.22	AVG	
2		7252.950	50.73	11.84	62.57	74.00	-11.43	peak	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2417MHz

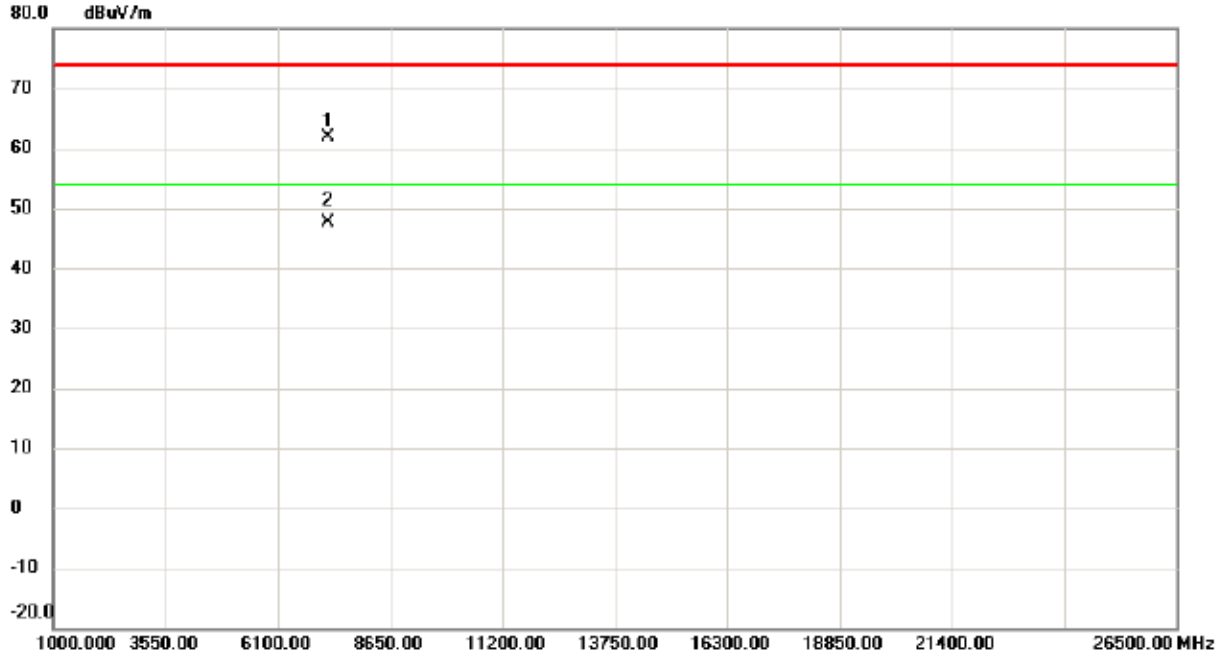
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	55.56	9.00	64.56	74.00	-9.44	peak	
2		2390.000	37.59	9.00	46.59	54.00	-7.41	AVG	
3	X	2416.100	99.58	9.00	108.58	74.00	34.58	peak	No Limit
4	*	2418.200	90.03	8.99	99.02	54.00	45.02	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2417MHz

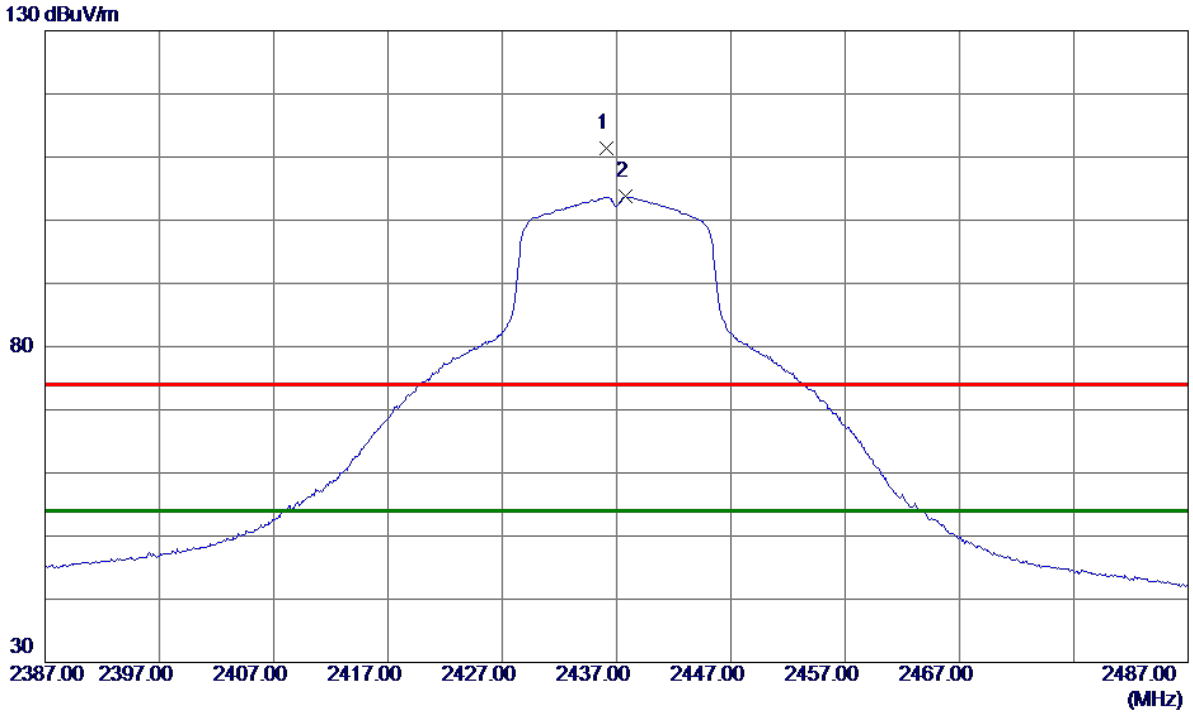
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7247.250	50.09	11.83	61.92	74.00	-12.08	peak	
2	*	7250.150	35.70	11.83	47.53	54.00	-6.47	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

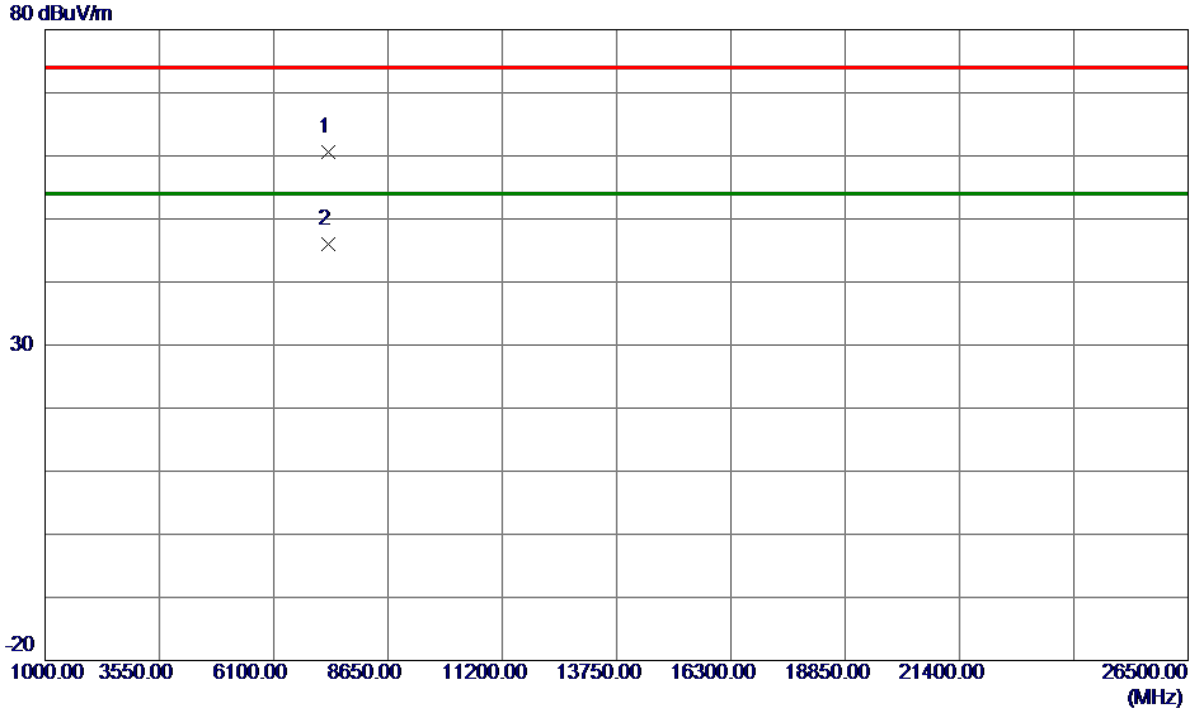
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2436.1000	102.34	8.99	111.33	74.00	37.33	Peak	No Limit
2 *	2437.8000	94.75	8.98	103.73	54.00	49.73	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

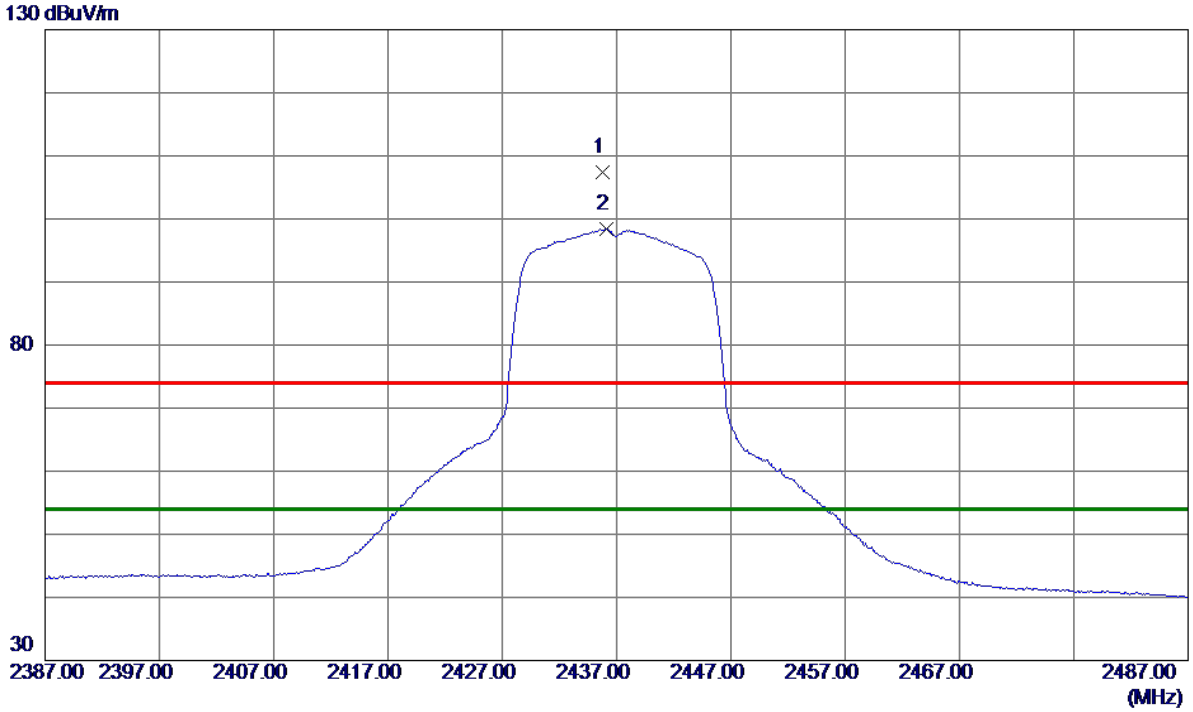
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7309.5500	48.65	11.98	60.63	74.00	-13.37	Peak	
2 *	7310.7500	33.97	11.98	45.95	54.00	-8.05	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

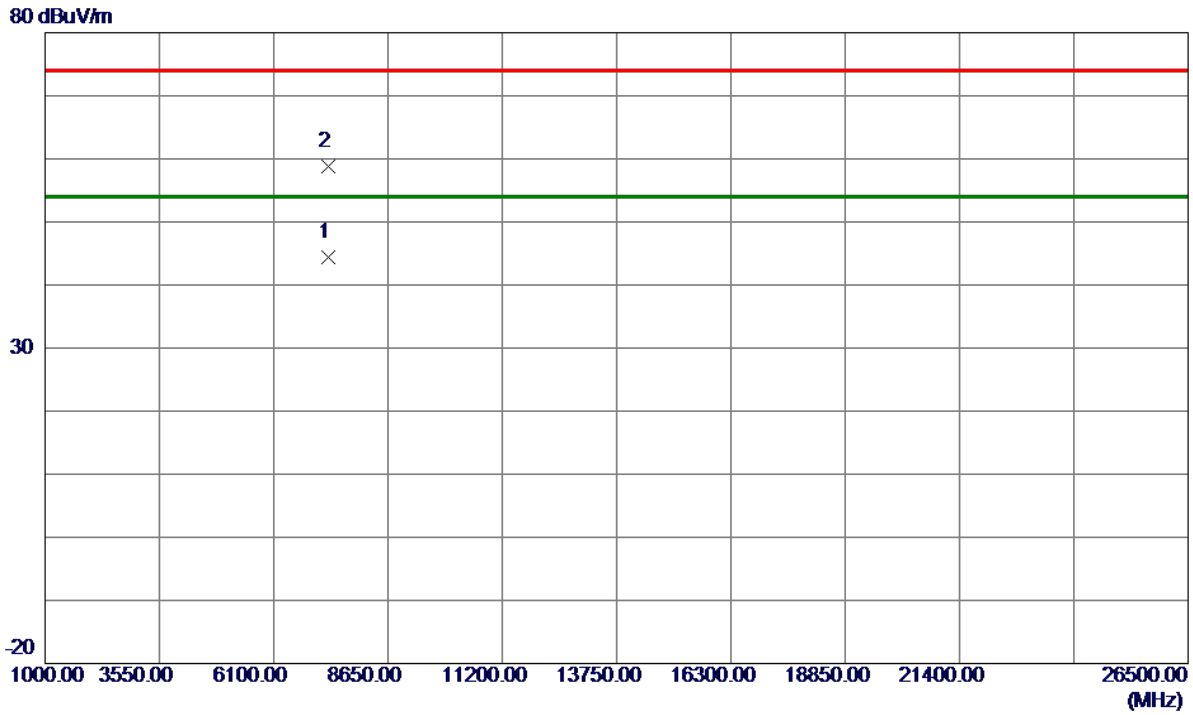
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2435.8000	98.32	8.99	107.31	74.00	33.31	Peak	No Limit
2 *	2436.1000	89.38	8.99	98.37	54.00	44.37	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX G MODE 2437MHz

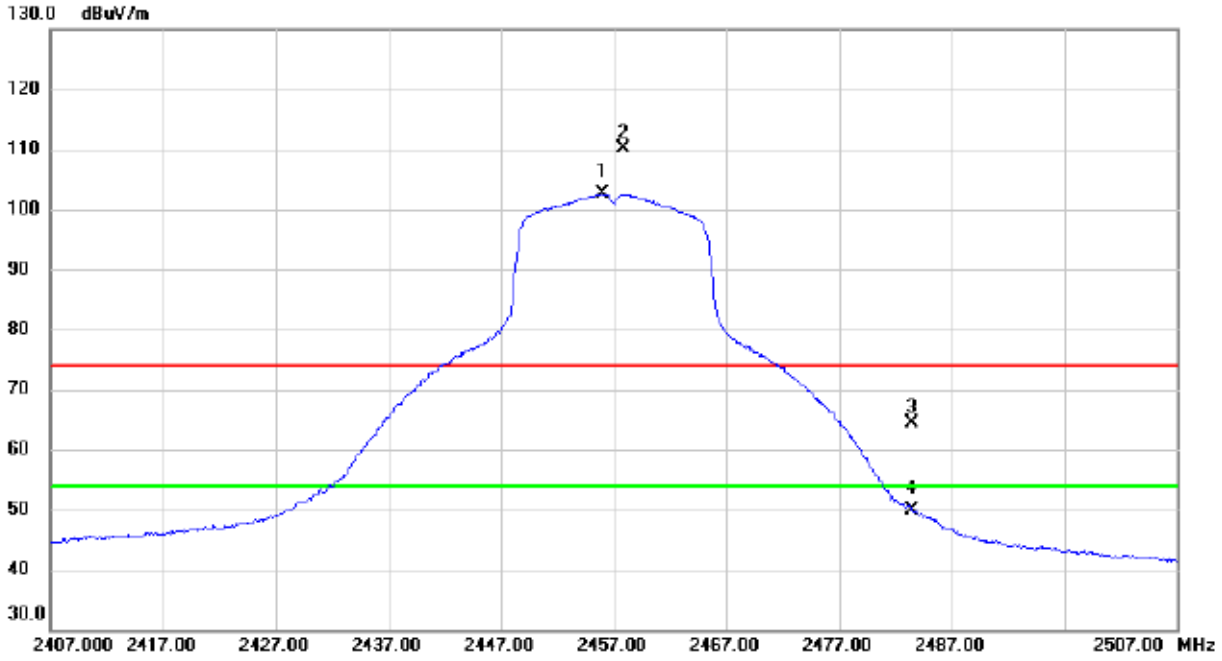
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7311.3000	32.37	11.98	44.35	54.00	-9.65	AVG	
2	7311.4500	46.77	11.98	58.75	74.00	-15.25	Peak	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2457MHz

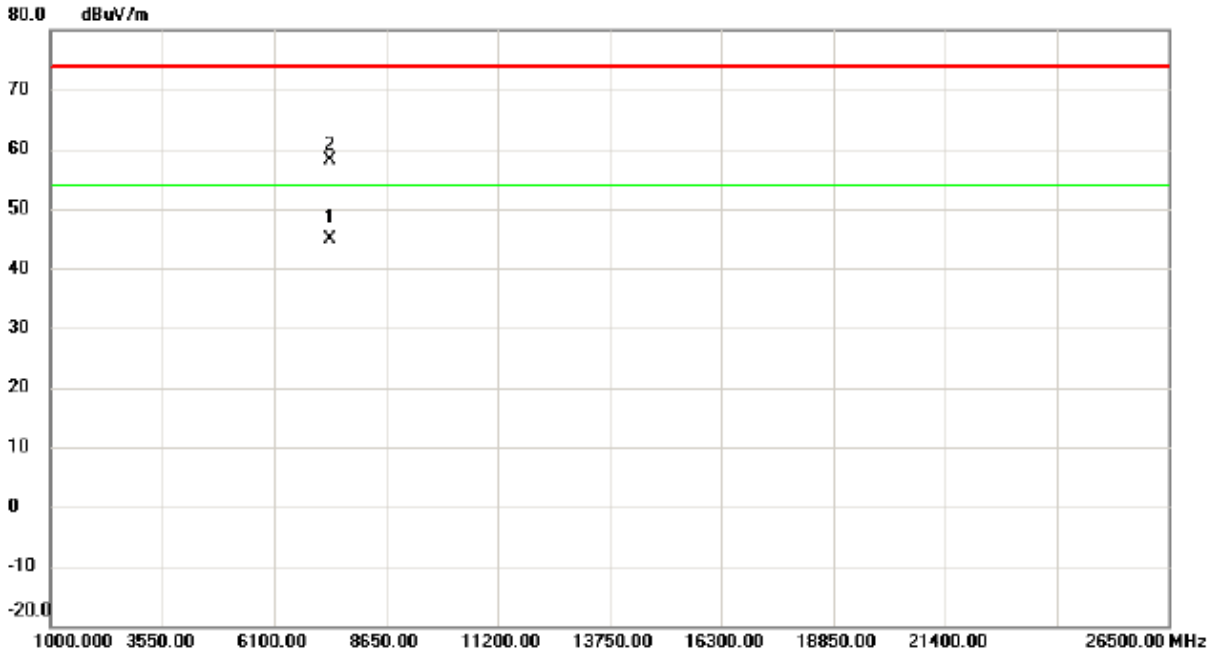
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2456.000	93.67	8.97	102.64	54.00	48.64	AVG	No Limit
2	X	2457.800	101.17	8.97	110.14	74.00	36.14	peak	No Limit
3		2483.500	55.36	8.96	64.32	74.00	-9.68	peak	
4		2483.500	40.94	8.96	49.90	54.00	-4.10	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2457MHz

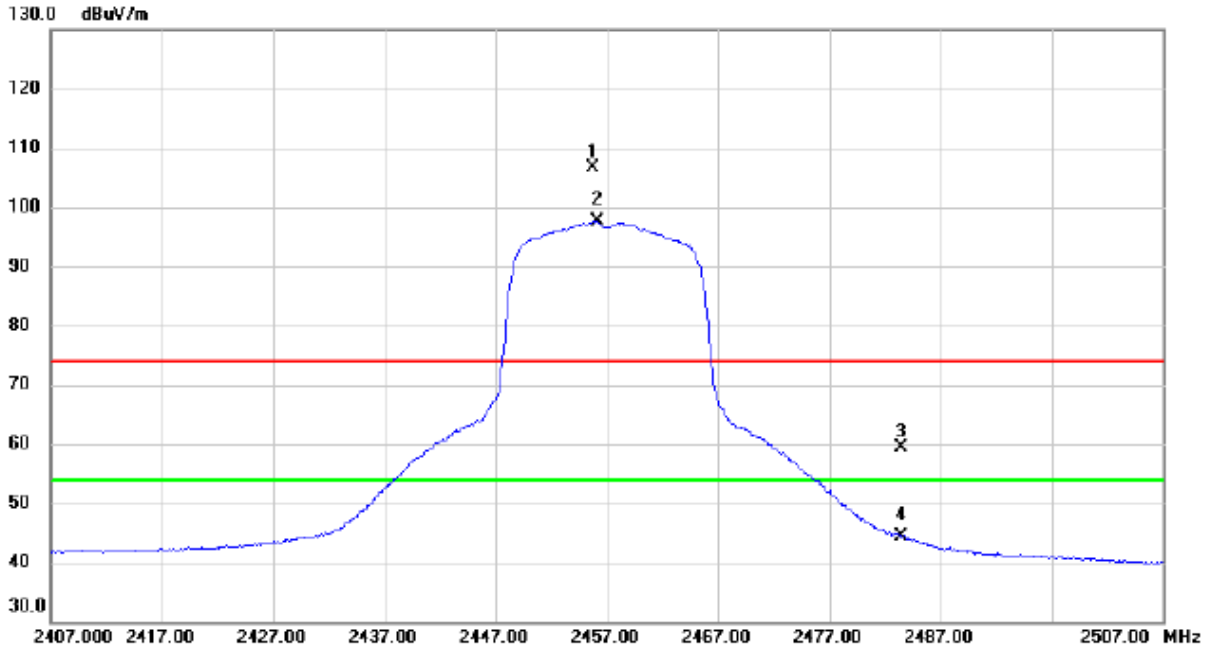
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7369.000	32.72	12.12	44.84	54.00	-9.16	AVG	
2		7372.000	45.92	12.13	58.05	74.00	-15.95	peak	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2457MHz

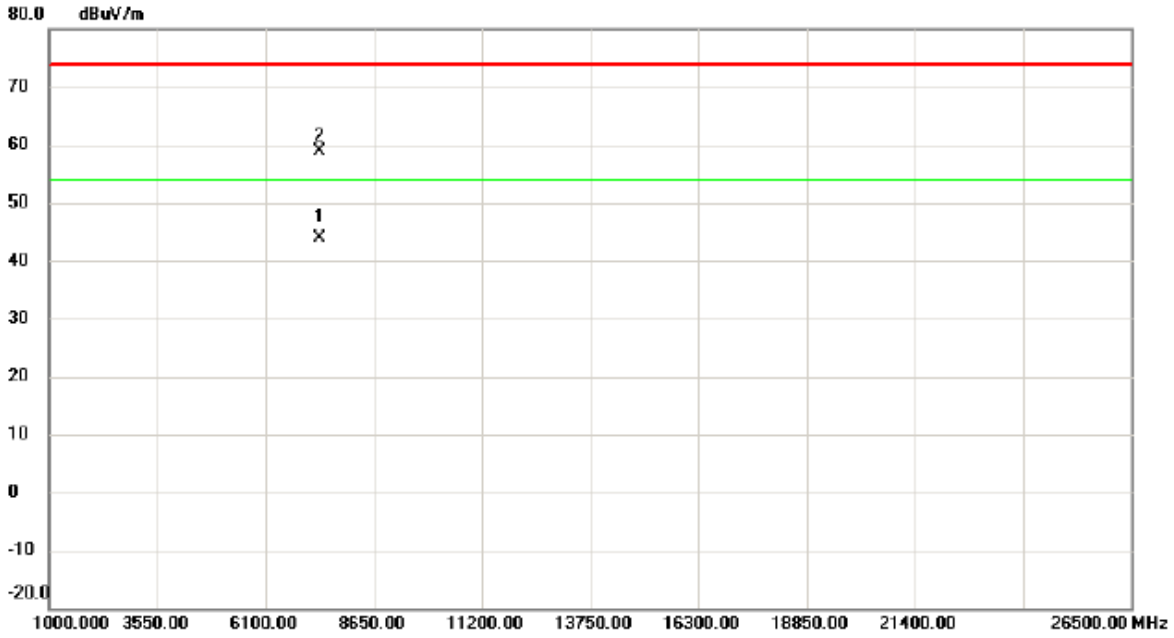
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2455.700	97.72	8.97	106.69	74.00	32.69	peak	No Limit
2	*	2456.100	88.68	8.97	97.65	54.00	43.65	AVG	No Limit
3		2483.500	50.54	8.96	59.50	74.00	-14.50	peak	
4		2483.500	35.48	8.96	44.44	54.00	-9.56	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2457MHz

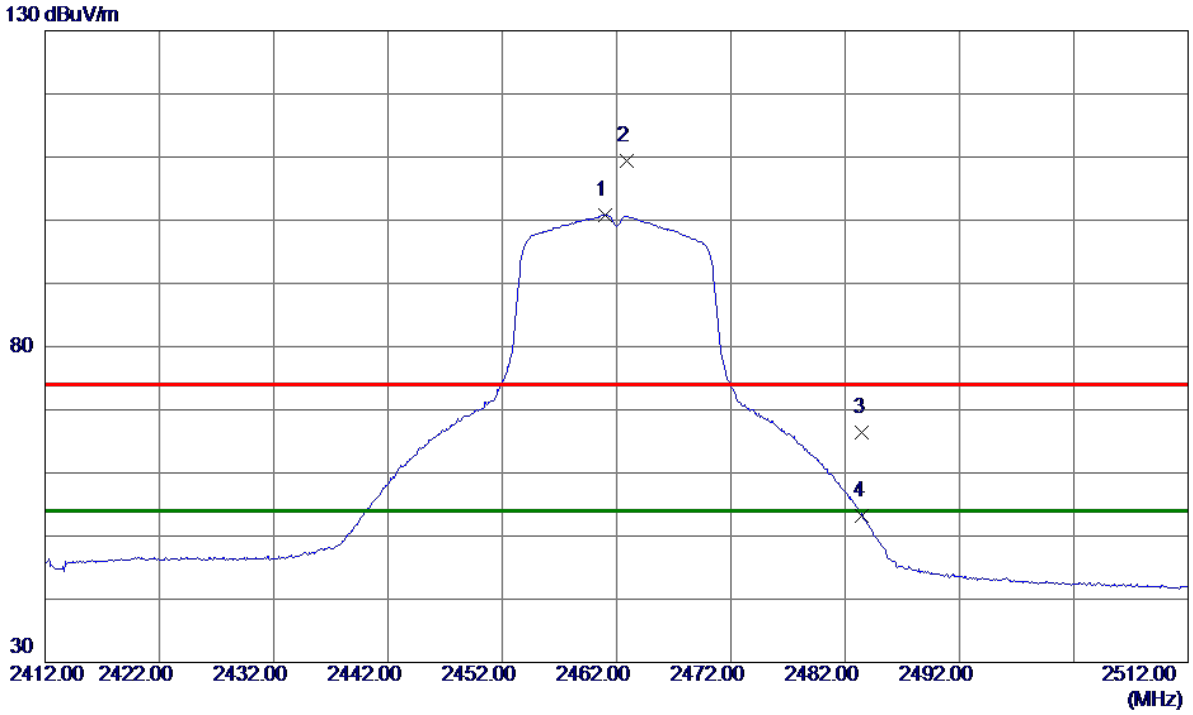
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7369.750	31.77	12.13	43.90	54.00	-10.10	AVG	
2		7373.300	46.76	12.13	58.89	74.00	-15.11	peak	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

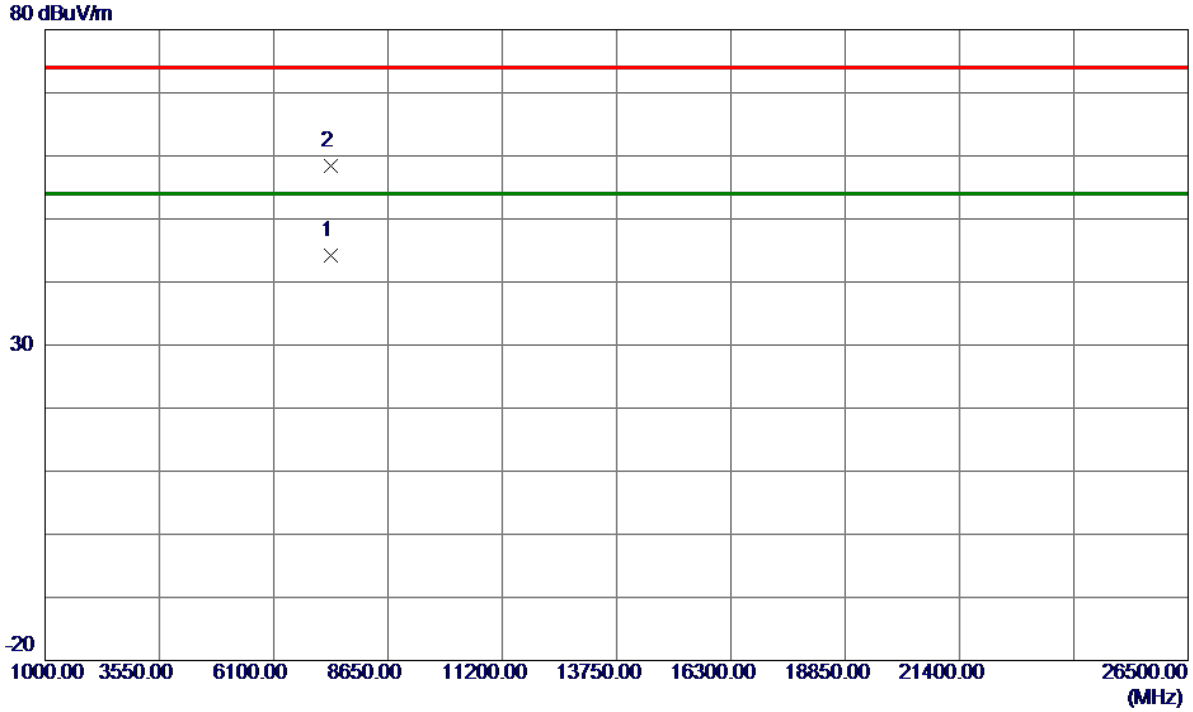
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461.0000	91.82	8.98	100.80	54.00	46.80	AVG	No Limit
2	2462.9000	100.42	8.97	109.39	74.00	35.39	Peak	No Limit
3	2483.5000	57.52	8.97	66.49	74.00	-7.51	Peak	
4	2483.5000	44.16	8.97	53.13	54.00	-0.87	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

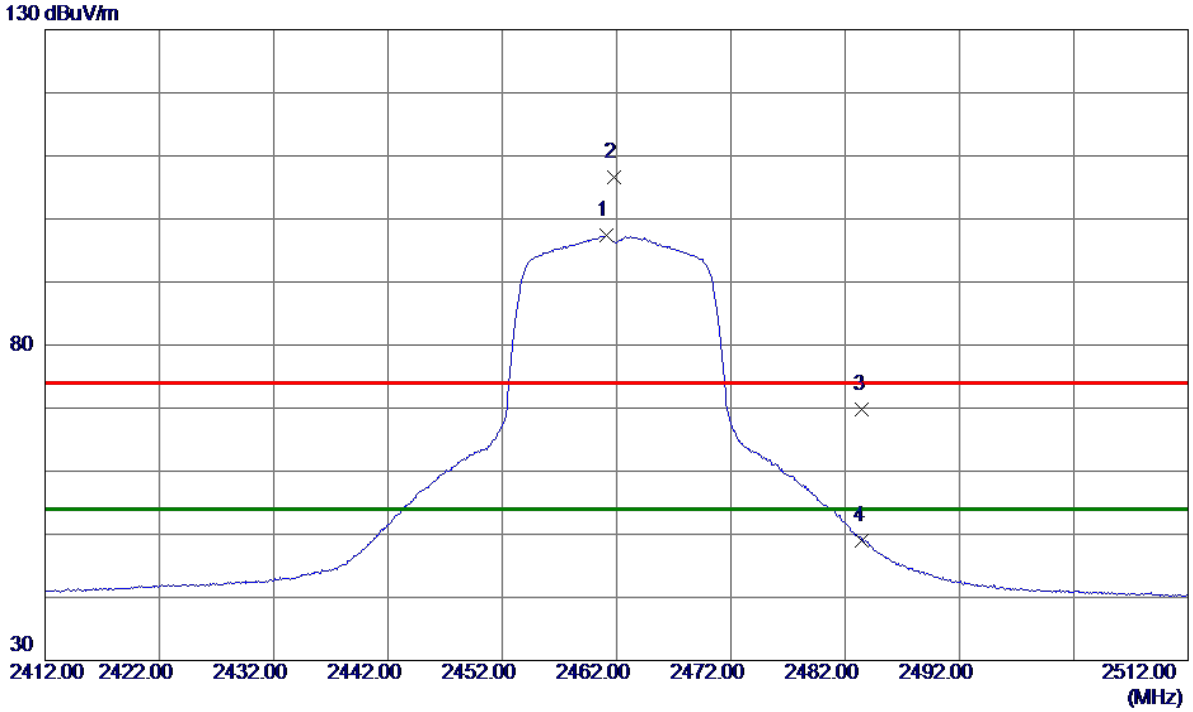
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7385.9000	31.96	12.17	44.13	54.00	-9.87	AVG	
2	7389.0000	46.30	12.17	58.47	74.00	-15.53	Peak	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

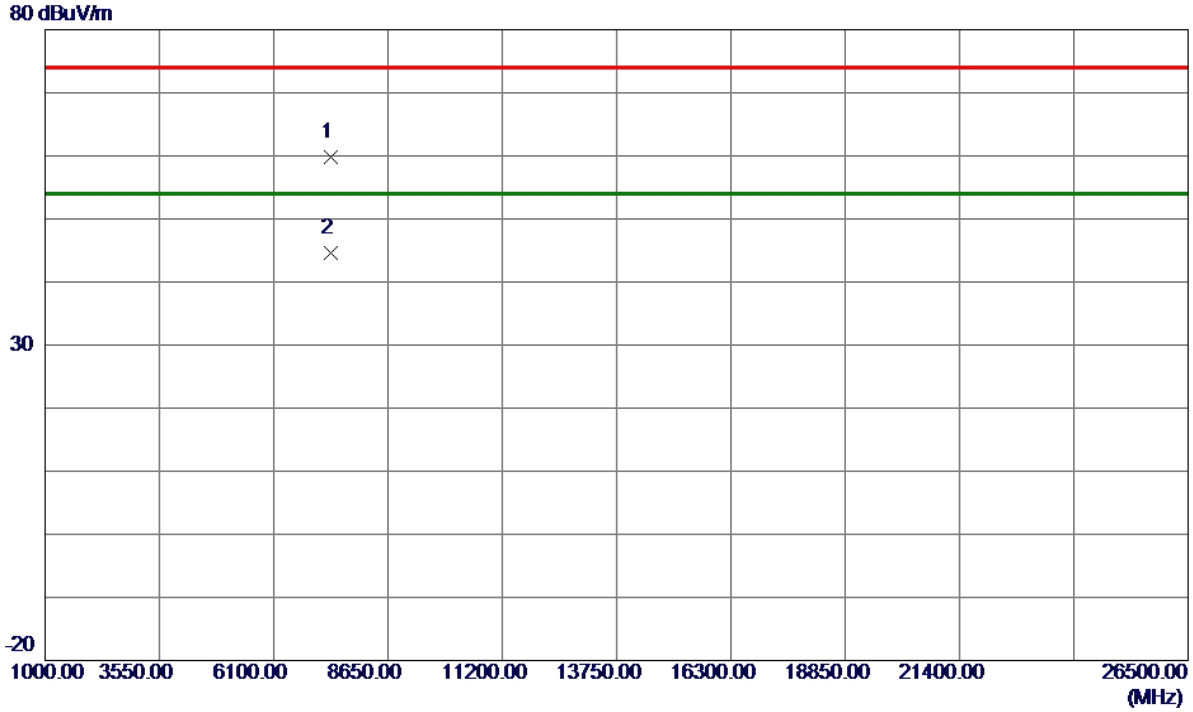
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461.1000	88.36	8.98	97.34	54.00	43.34	AVG	No Limit
2	2461.8000	97.68	8.98	106.66	74.00	32.66	Peak	No Limit
3	2483.5000	60.74	8.97	69.71	74.00	-4.29	Peak	
4	2483.5000	39.99	8.97	48.96	54.00	-5.04	AVG	

Orthogonal Axis :	X
Test Mode :	TX G MODE 2462MHz

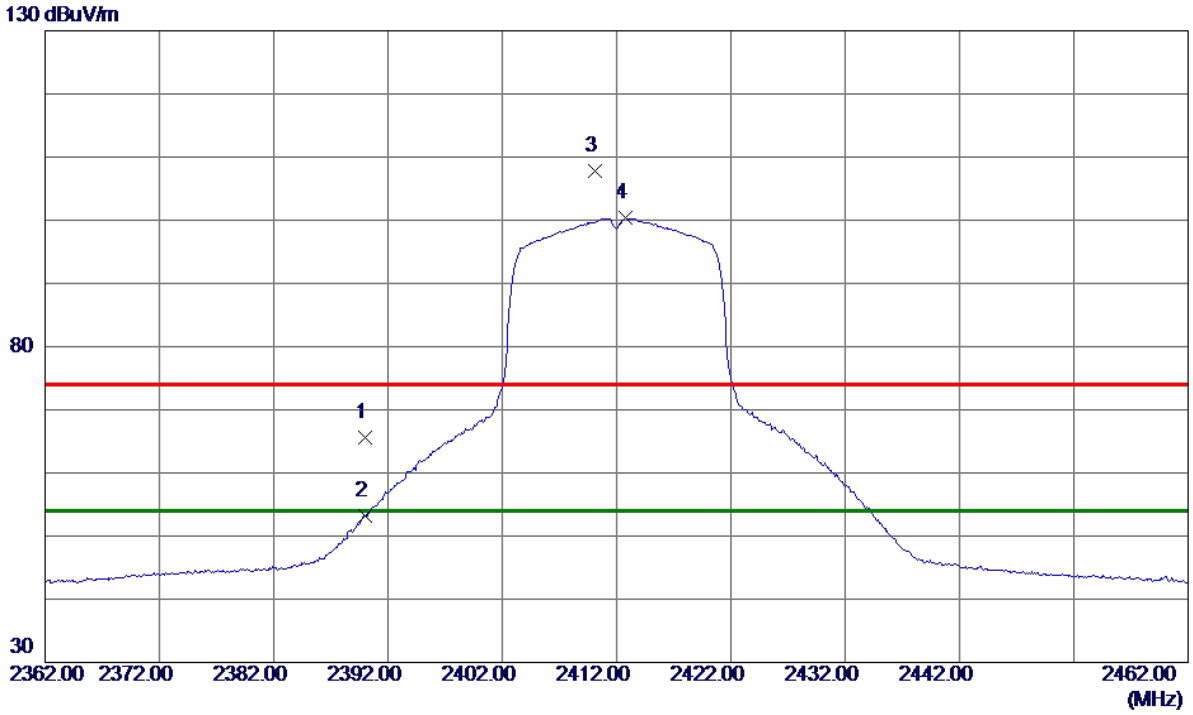
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7384.4500	47.71	12.16	59.87	74.00	-14.13	Peak	
2 *	7386.3000	32.46	12.17	44.63	54.00	-9.37	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz

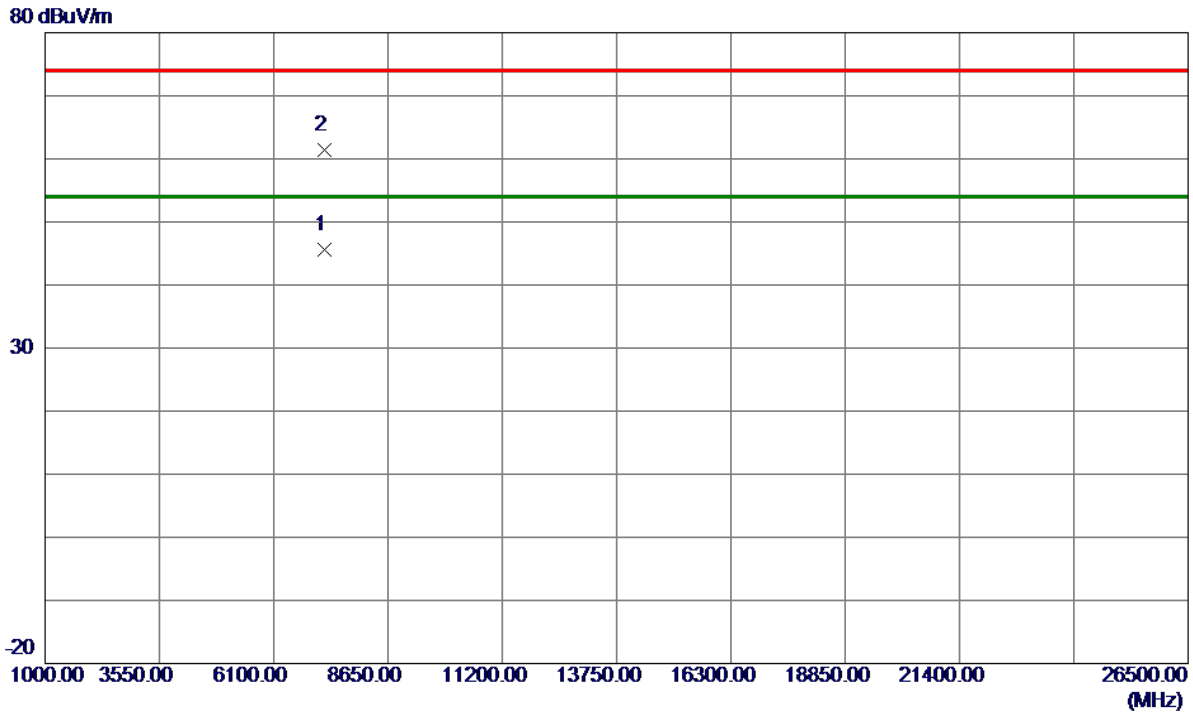
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	56.55	9.00	65.55	74.00	-8.45	Peak	
2	2390.0000	44.15	9.00	53.15	54.00	-0.85	AVG	
3	2410.1000	98.88	9.00	107.88	74.00	33.88	Peak	No Limit
4 *	2412.8000	91.37	8.99	100.36	54.00	46.36	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz

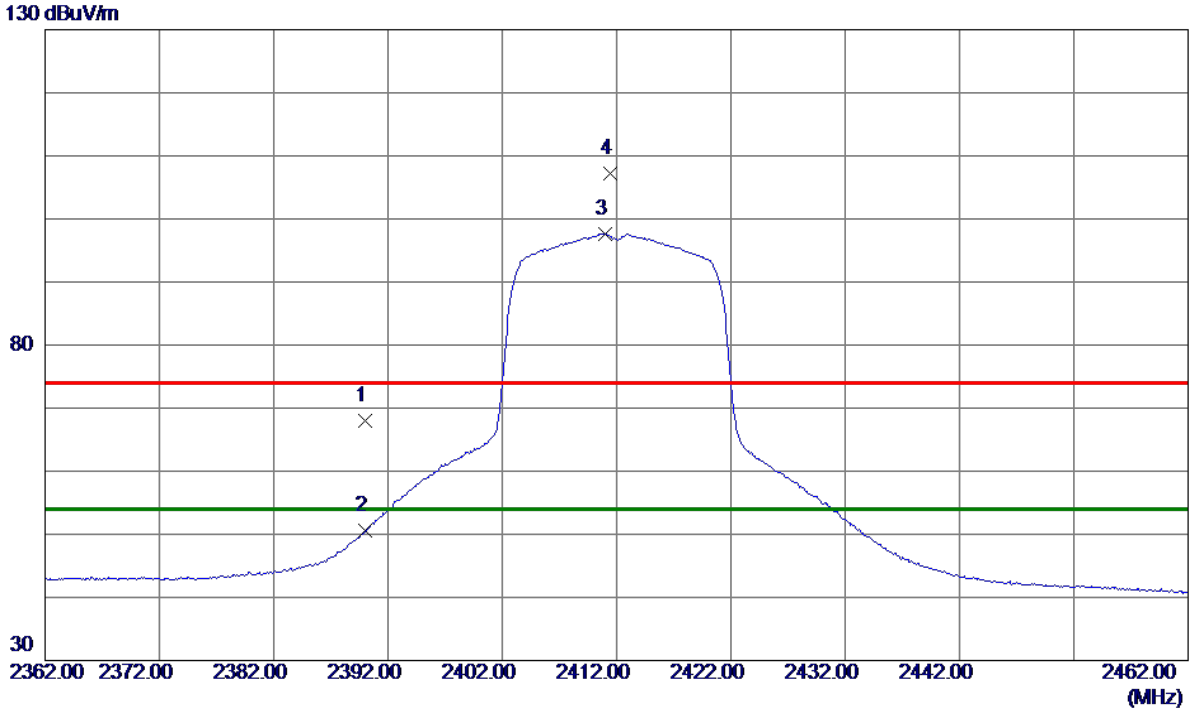
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7232.4000	33.73	11.79	45.52	54.00	-8.48	AVG	
2	7235.6500	49.66	11.80	61.46	74.00	-12.54	Peak	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz

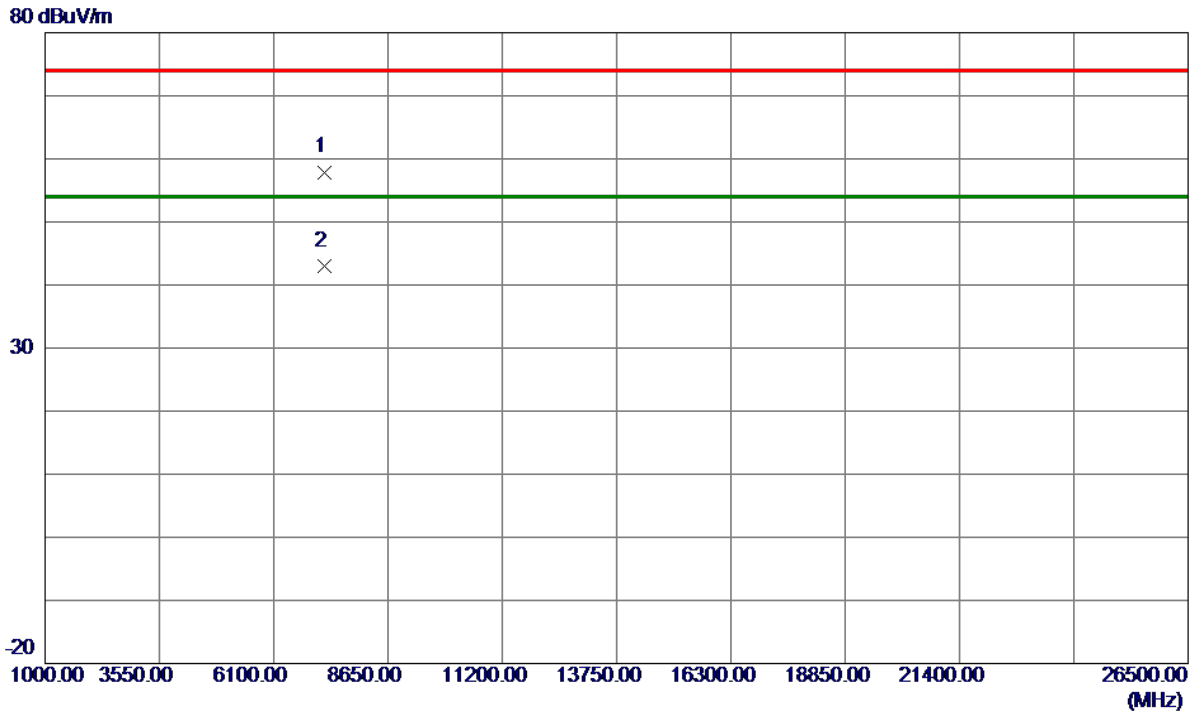
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	58.91	9.00	67.91	74.00	-6.09	Peak	
2	2390.0000	41.57	9.00	50.57	54.00	-3.43	AVG	
3 *	2411.0000	88.63	9.00	97.63	54.00	43.63	AVG	No Limit
4	2411.4000	98.13	9.00	107.13	74.00	33.13	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2412MHz

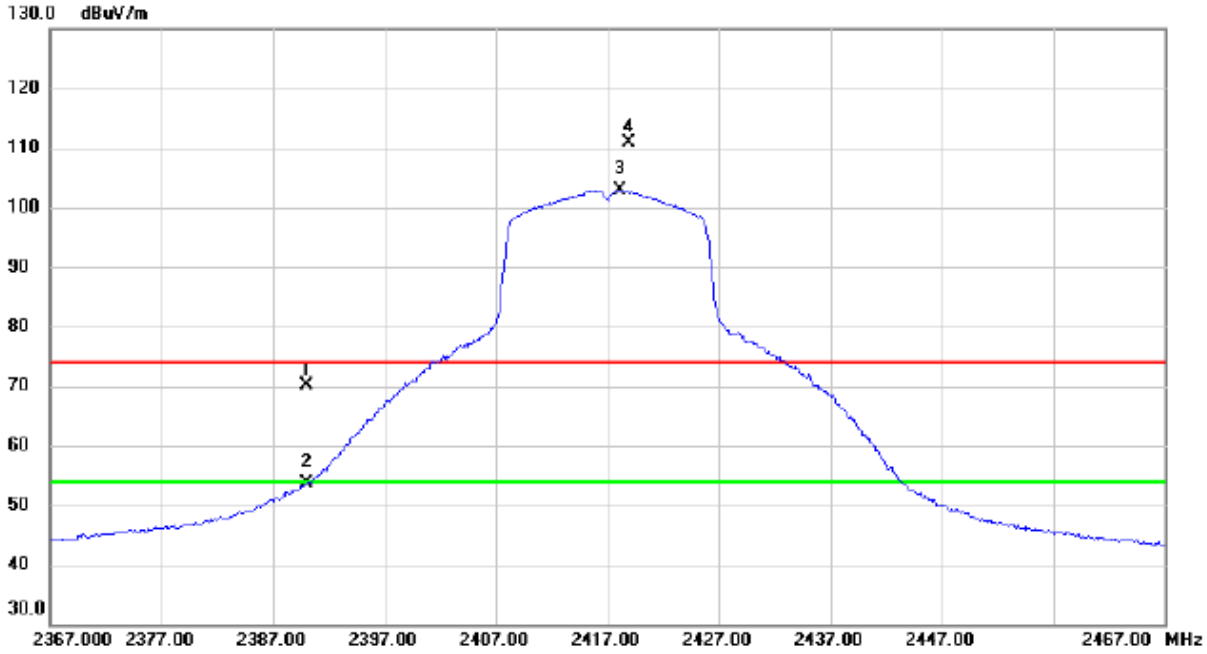
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7233.7500	46.11	11.79	57.90	74.00	-16.10	Peak	
2 *	7234.1500	31.15	11.79	42.94	54.00	-11.06	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2417MHz

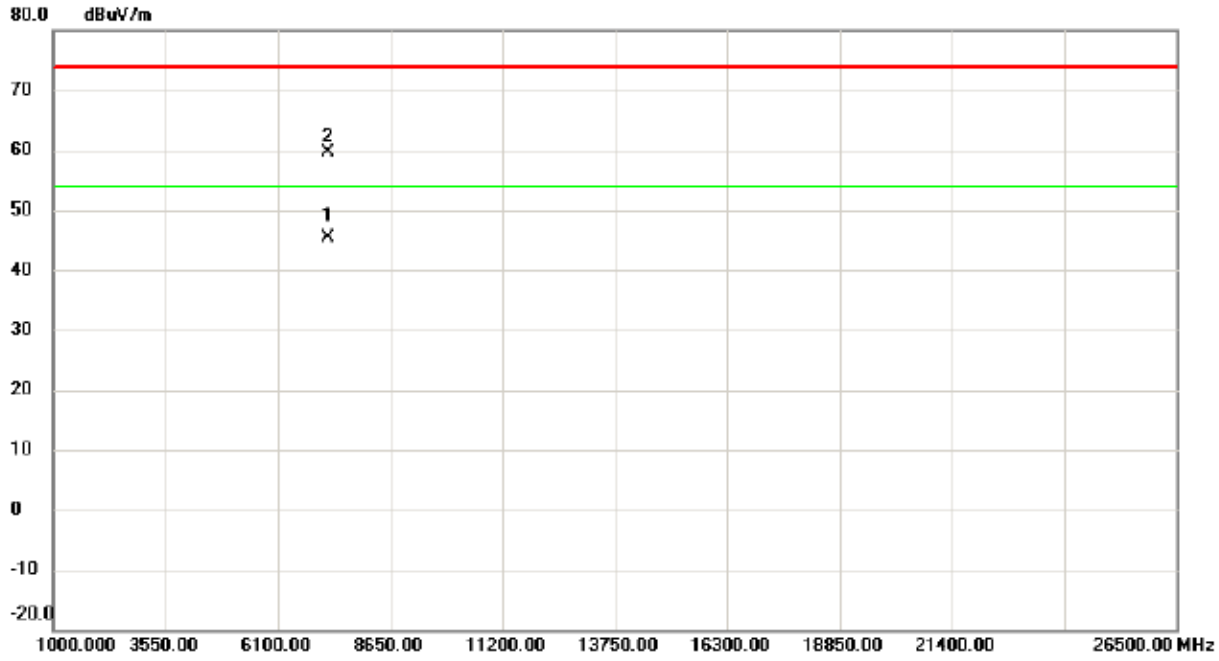
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	61.02	9.00	70.02	74.00	-3.98	peak	
2		2390.000	44.52	9.00	53.52	54.00	-0.48	AVG	
3	*	2418.200	93.97	8.99	102.96	54.00	48.96	AVG	No Limit
4	X	2418.900	101.86	8.99	110.85	74.00	36.85	peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2417MHz

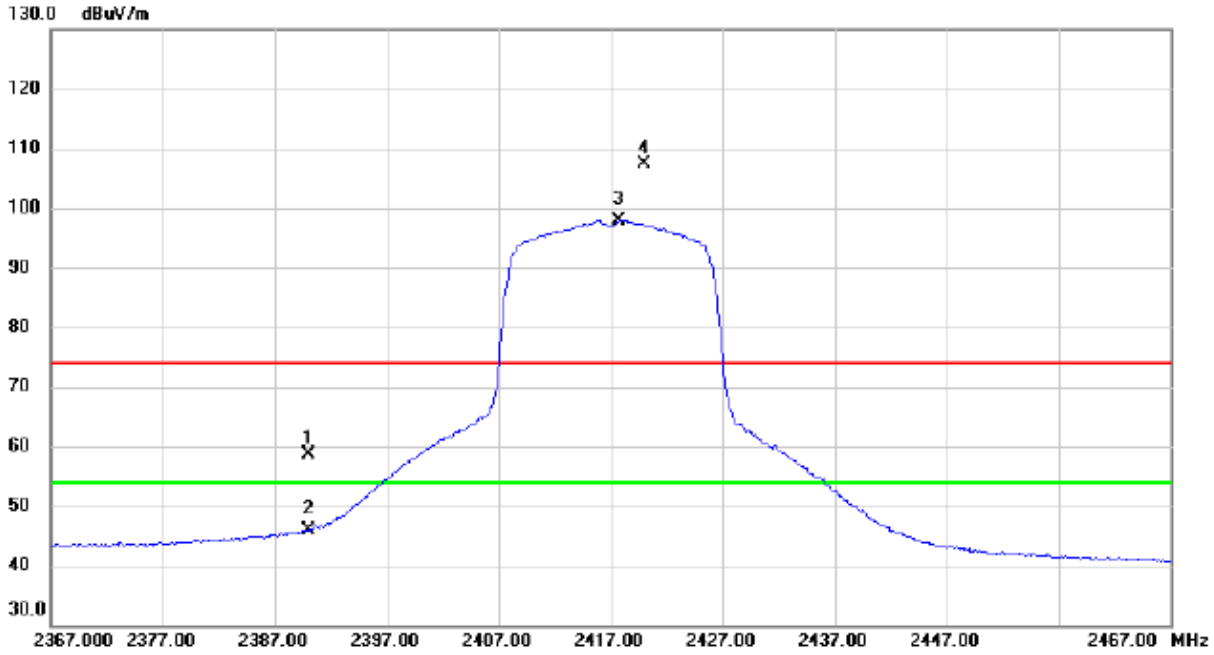
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7251.850	33.52	11.83	45.35	54.00	-8.65	AVG	
2		7254.100	47.70	11.84	59.54	74.00	-14.46	peak	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2417MHz

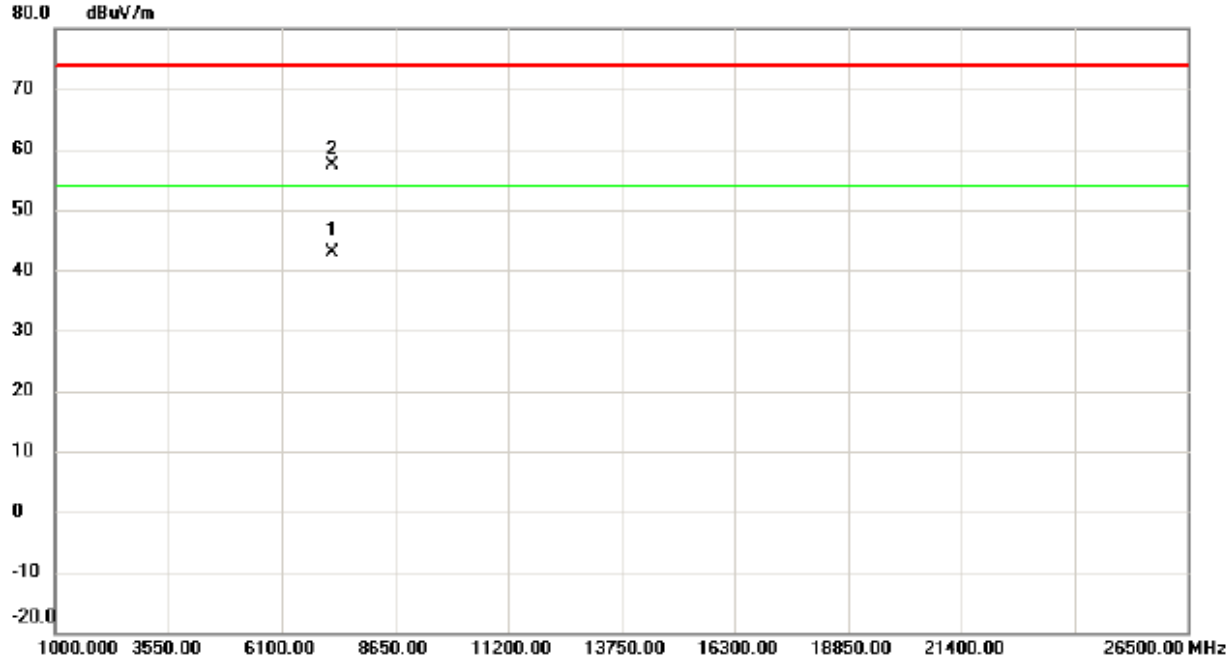
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	49.60	9.00	58.60	74.00	-15.40	peak	
2		2390.000	36.92	9.00	45.92	54.00	-8.08	AVG	
3	*	2417.700	88.98	9.00	97.98	54.00	43.98	AVG	No Limit
4	X	2420.000	98.35	8.99	107.34	74.00	33.34	peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2417MHz

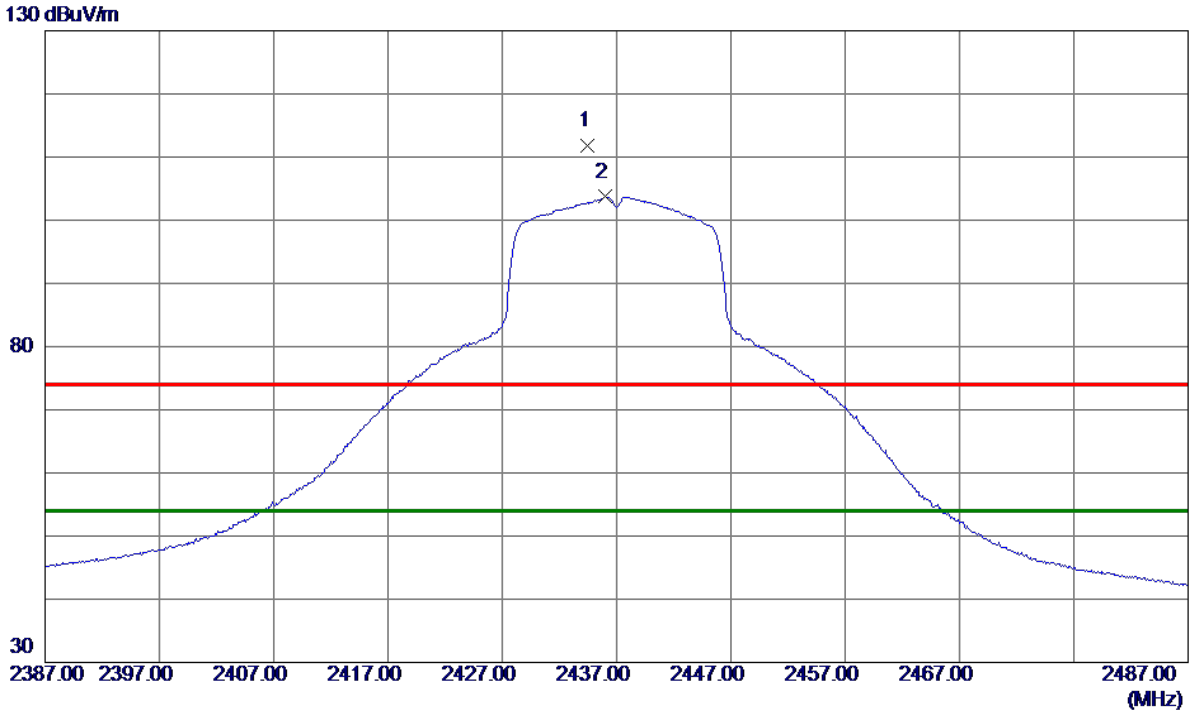
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7251.200	31.11	11.83	42.94	54.00	-11.06	AVG	
2		7253.150	45.43	11.84	57.27	74.00	-16.73	peak	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2437MHz

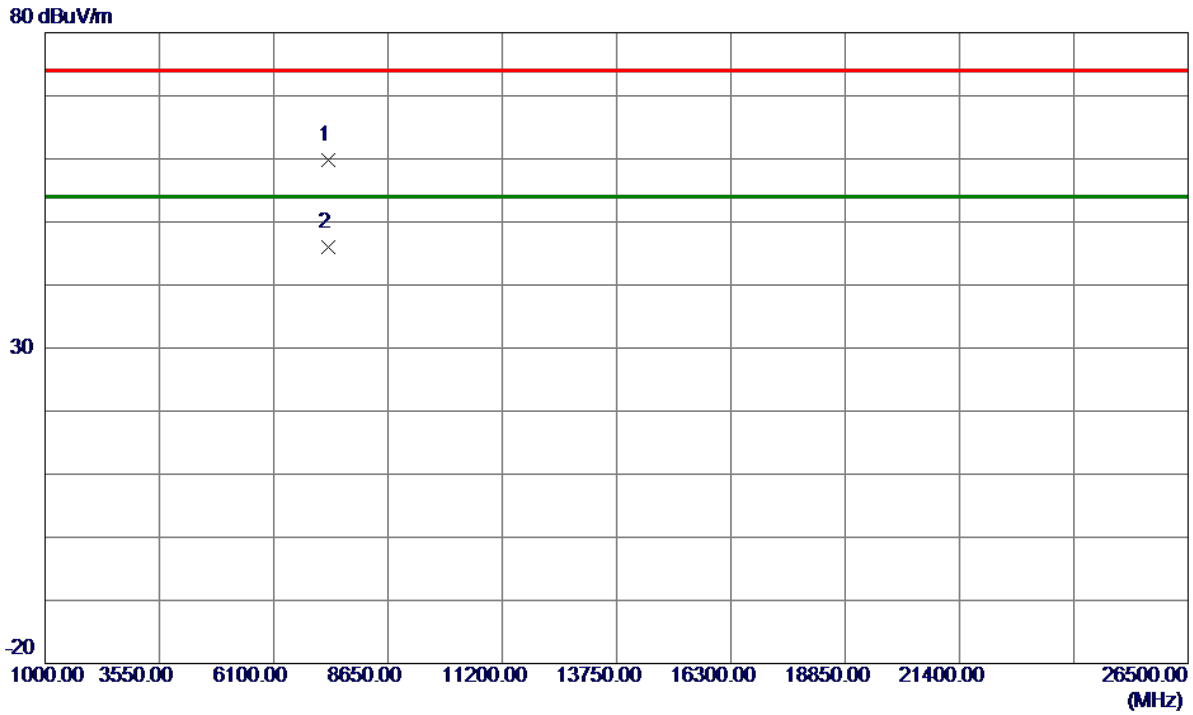
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2434.5000	102.84	8.99	111.83	74.00	37.83	Peak	No Limit
2 *	2436.0000	94.71	8.99	103.70	54.00	49.70	AVG	No Limit

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2437MHz

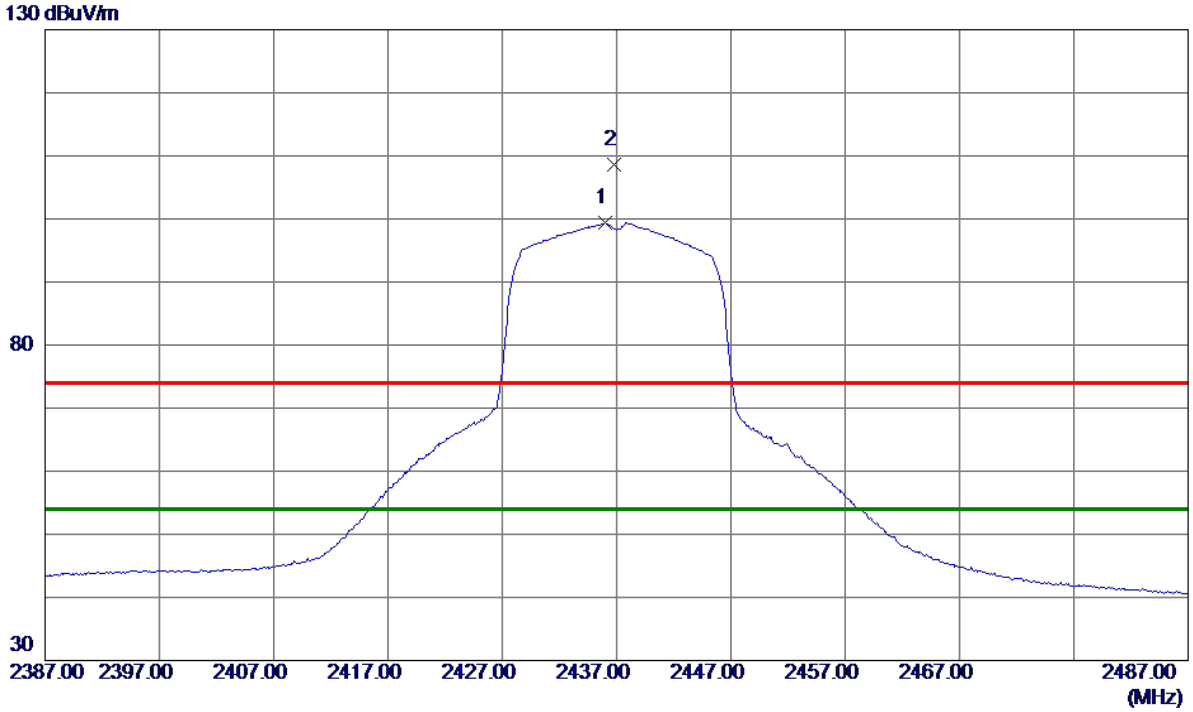
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7309.6500	47.88	11.98	59.86	74.00	-14.14	Peak	
2 *	7311.3000	34.03	11.98	46.01	54.00	-7.99	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2437MHz

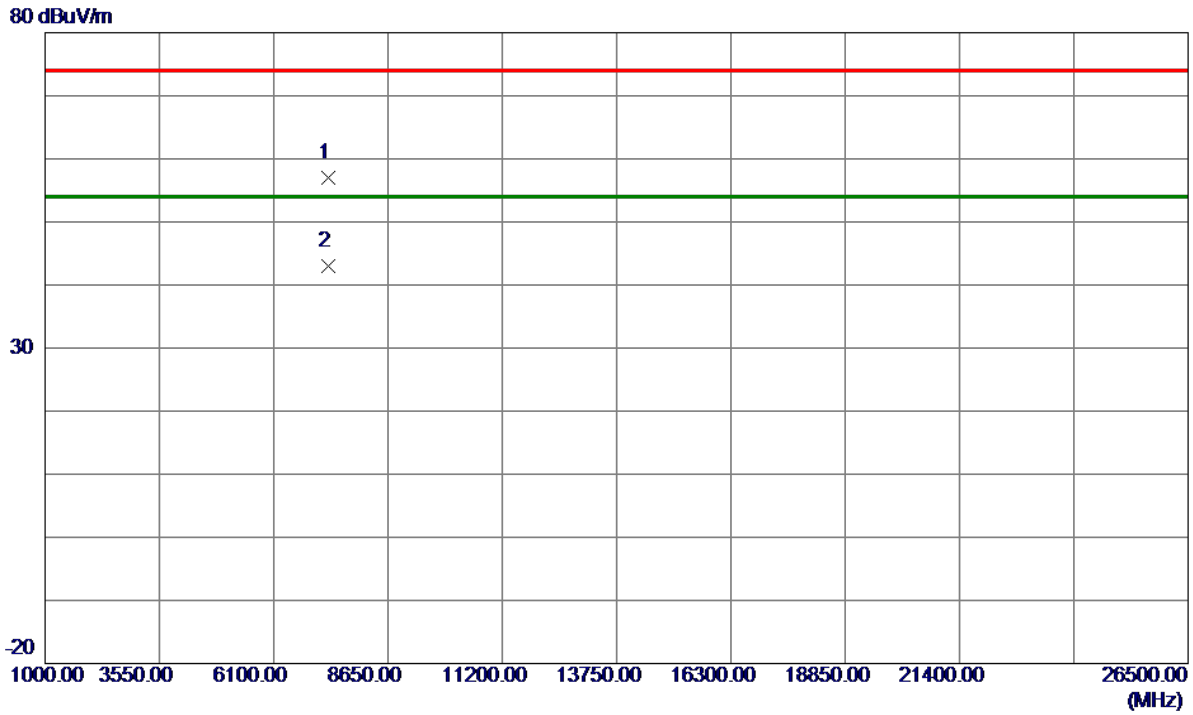
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436.0000	90.36	8.99	99.35	54.00	45.35	AVG	No Limit
2	2436.8000	99.57	8.99	108.56	74.00	34.56	Peak	No Limit

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2437MHz

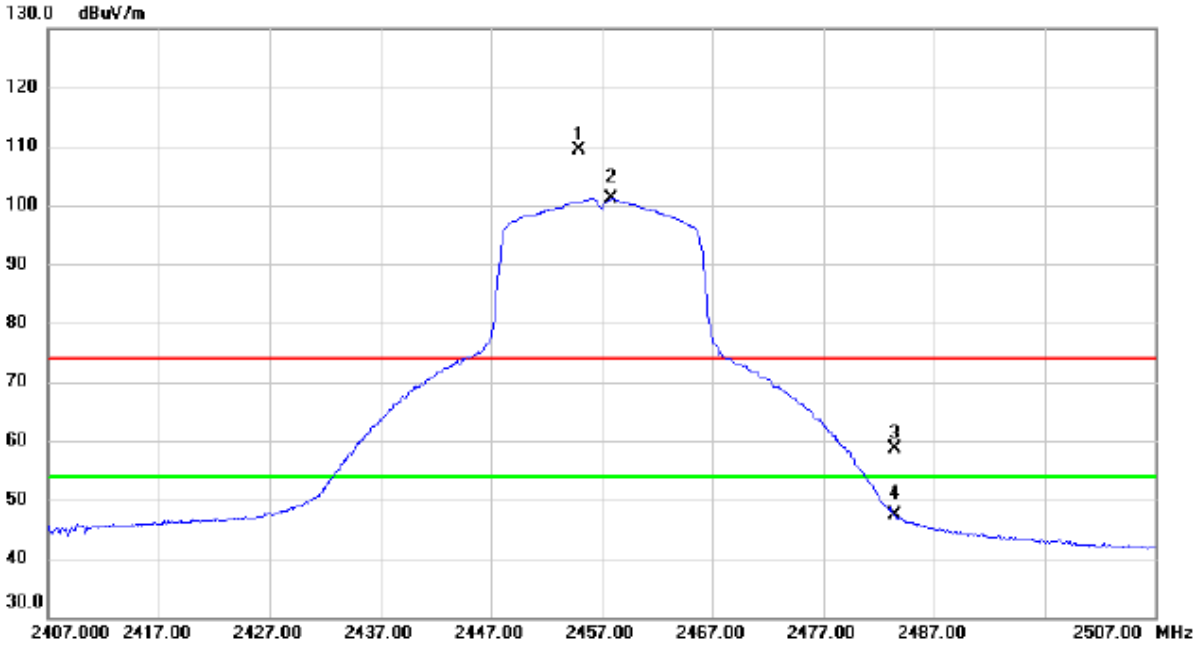
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7305.9500	45.05	11.97	57.02	74.00	-16.98	Peak	
2 *	7312.0000	31.11	11.98	43.09	54.00	-10.91	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2457MHz

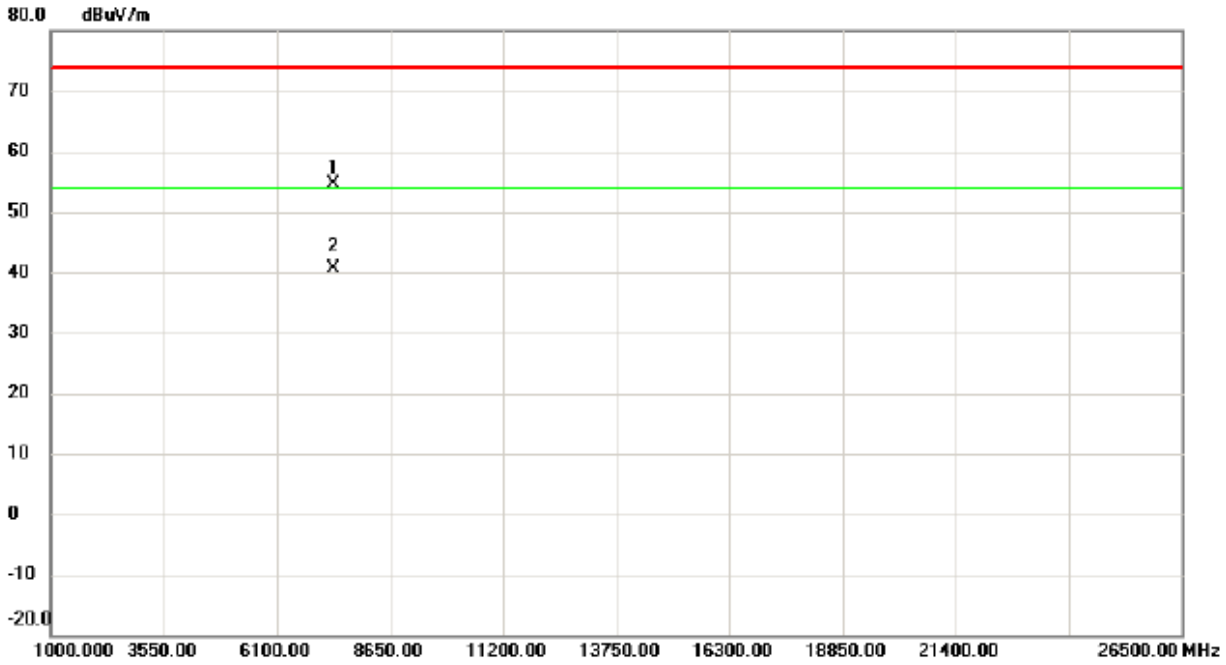
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2454.900	100.31	8.97	109.28	74.00	35.28	peak	No Limit
2	*	2457.900	92.17	8.97	101.14	54.00	47.14	AVG	No Limit
3		2483.500	49.71	8.96	58.67	74.00	-15.33	peak	
4		2483.500	38.43	8.96	47.39	54.00	-6.61	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2457MHz

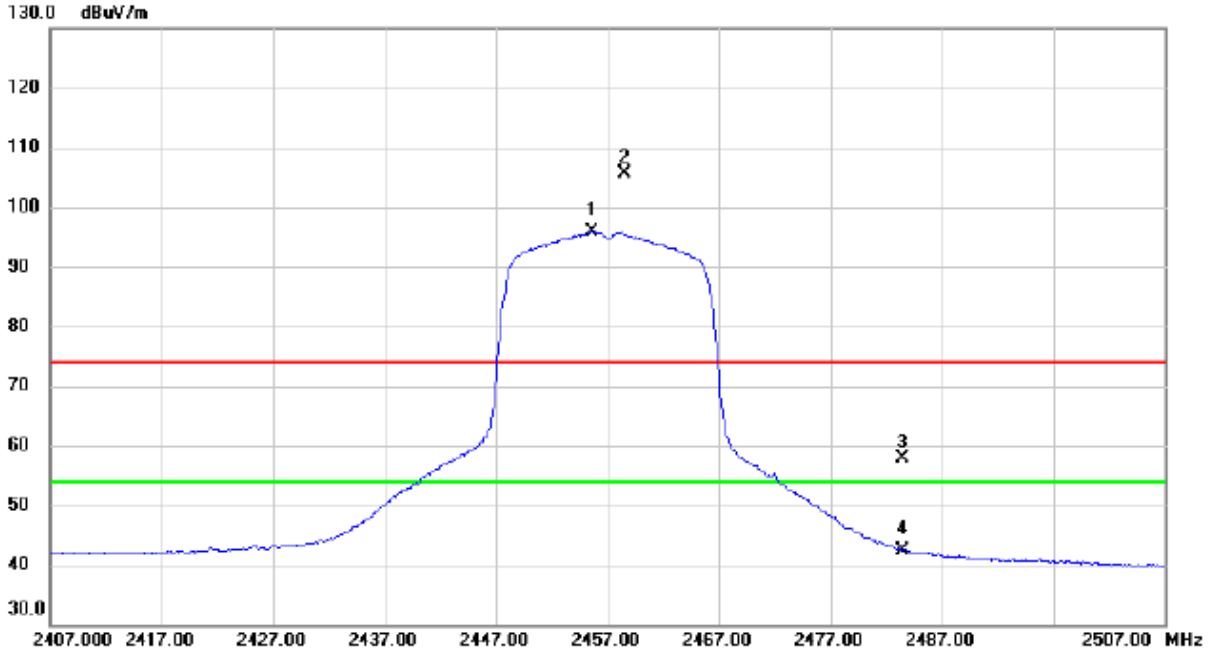
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		7367.050	42.56	12.11	54.67	74.00	-19.33	peak	
2	*	7367.850	28.62	12.11	40.73	54.00	-13.27	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2457MHz

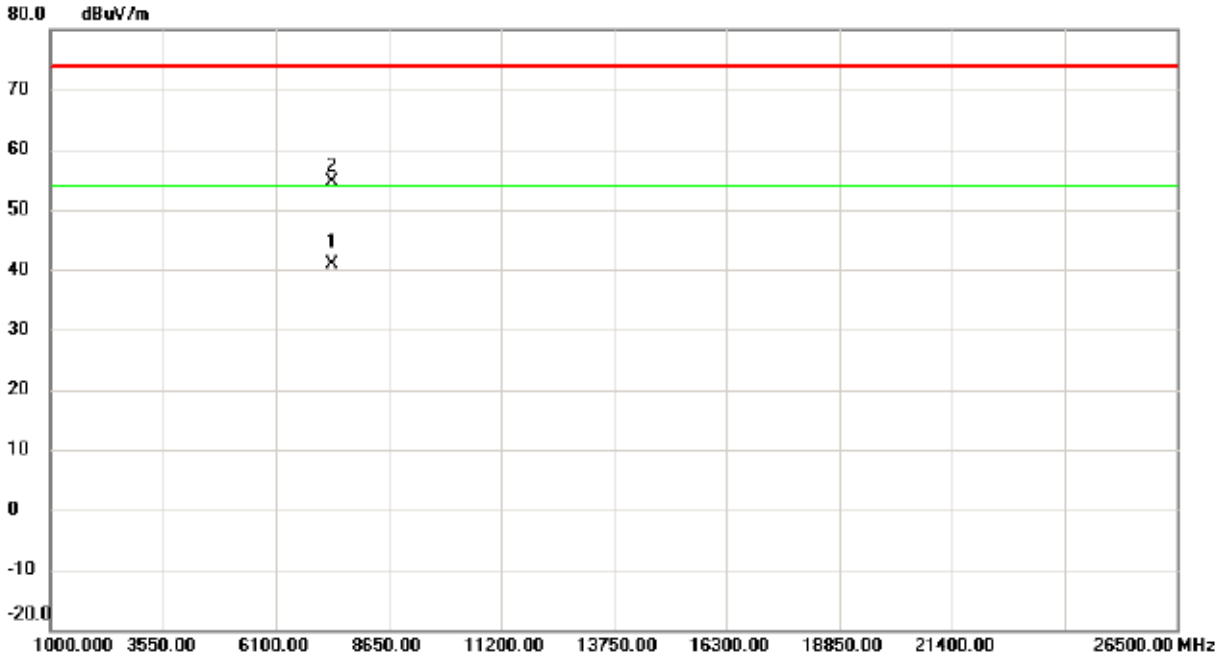
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2455.600	86.84	8.97	95.81	54.00	41.81	AVG	No Limit
2	X	2458.600	96.58	8.97	105.55	74.00	31.55	peak	No Limit
3		2483.500	48.88	8.96	57.84	74.00	-16.16	peak	
4		2483.500	33.51	8.96	42.47	54.00	-11.53	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2457MHz

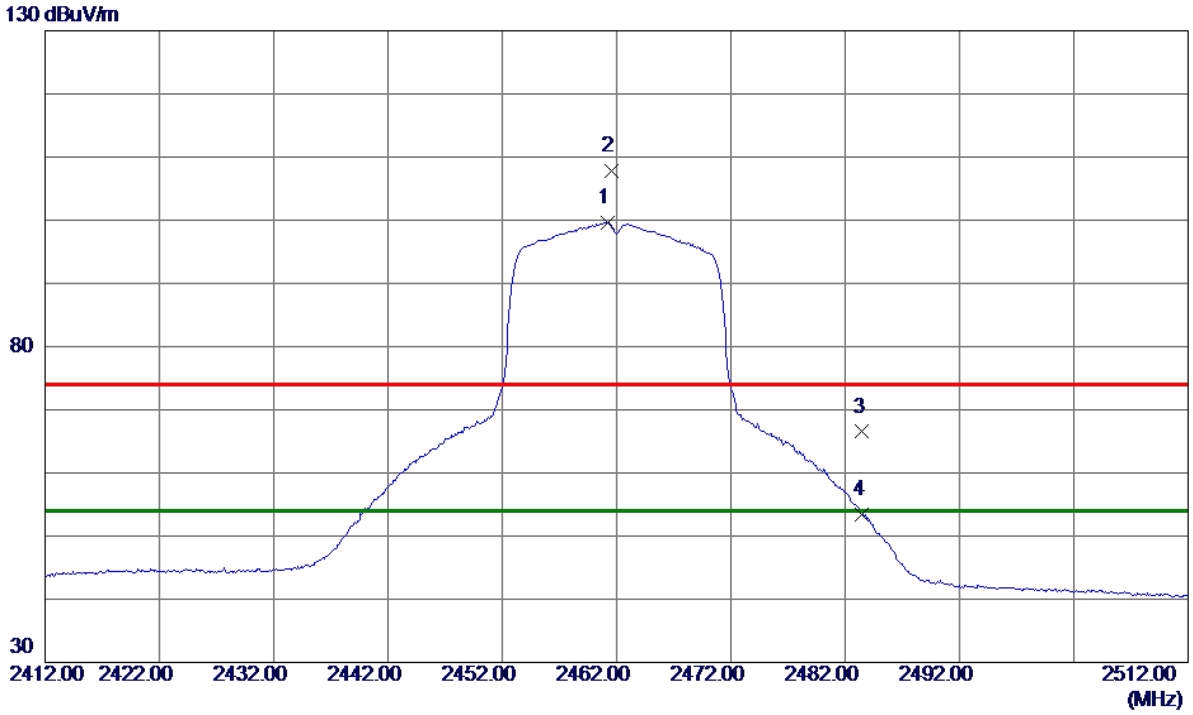
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7373.000	28.74	12.13	40.87	54.00	-13.13	AVG	
2		7374.450	42.54	12.13	54.67	74.00	-19.33	peak	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2462MHz

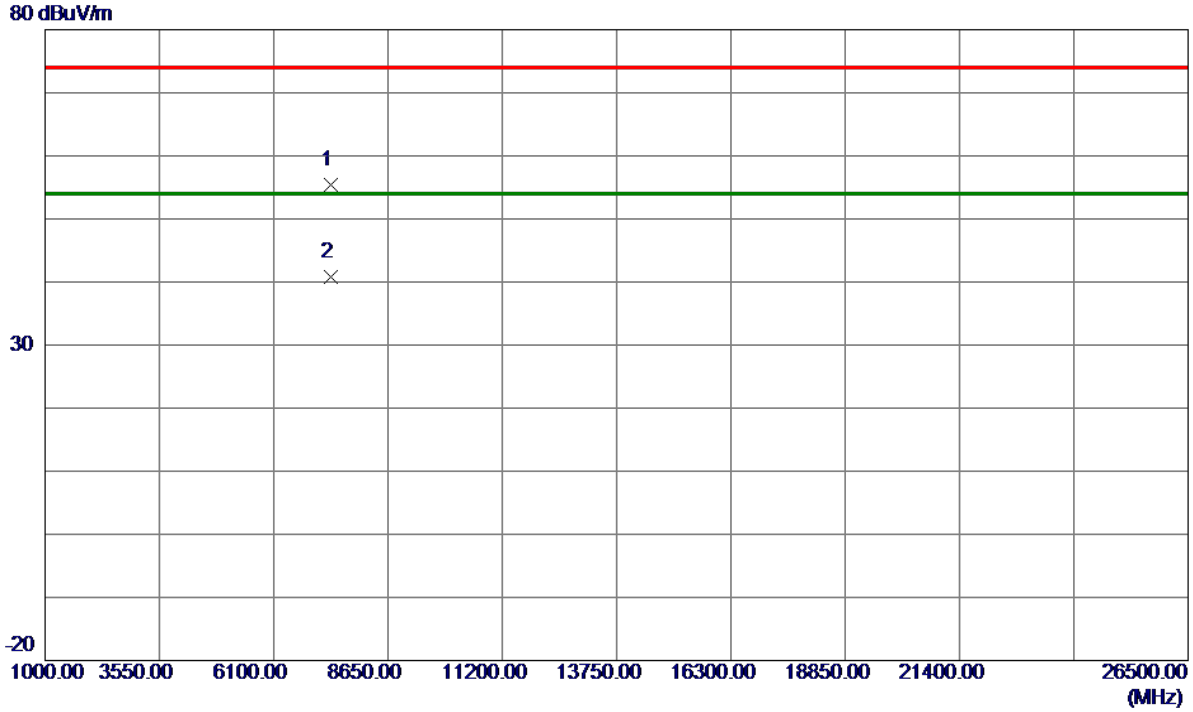
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461.2000	90.71	8.98	99.69	54.00	45.69	AVG	No Limit
2	2461.6000	98.73	8.98	107.71	74.00	33.71	Peak	No Limit
3	2483.5000	57.53	8.97	66.50	74.00	-7.50	Peak	
4	2483.5000	44.43	8.97	53.40	54.00	-0.60	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2462MHz

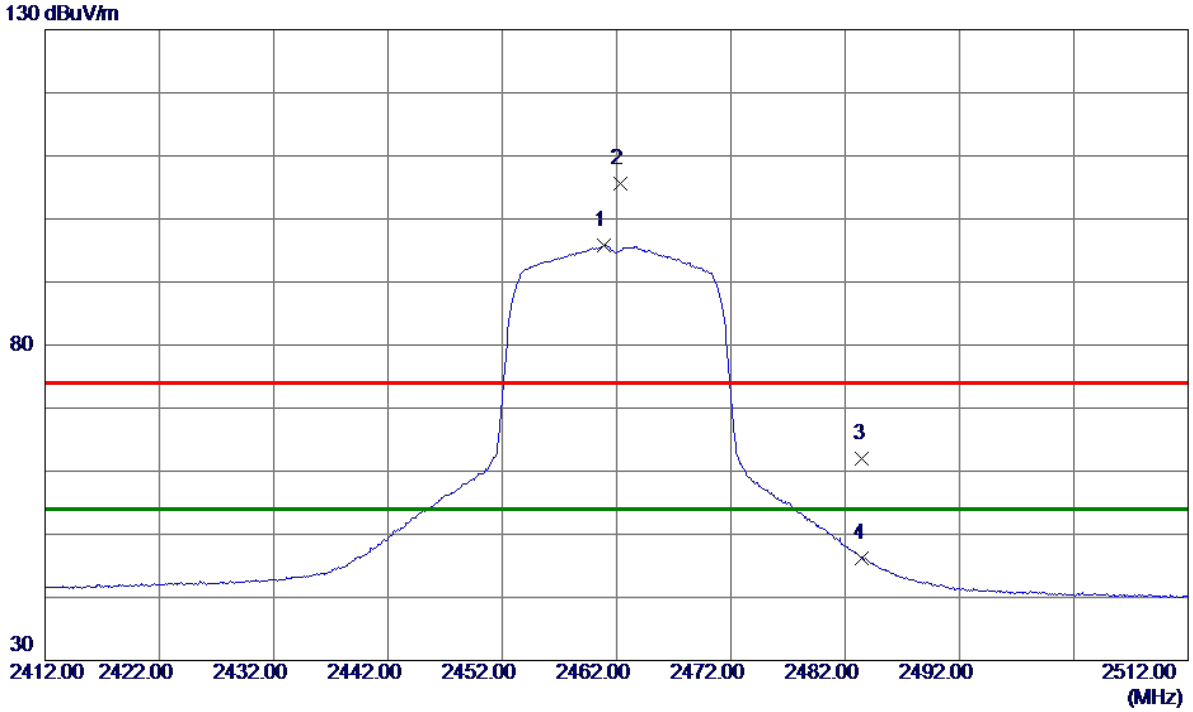
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	7381.5000	43.31	12.15	55.46	74.00	-18.54	Peak	
2 *	7385.2000	28.59	12.16	40.75	54.00	-13.25	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2462MHz

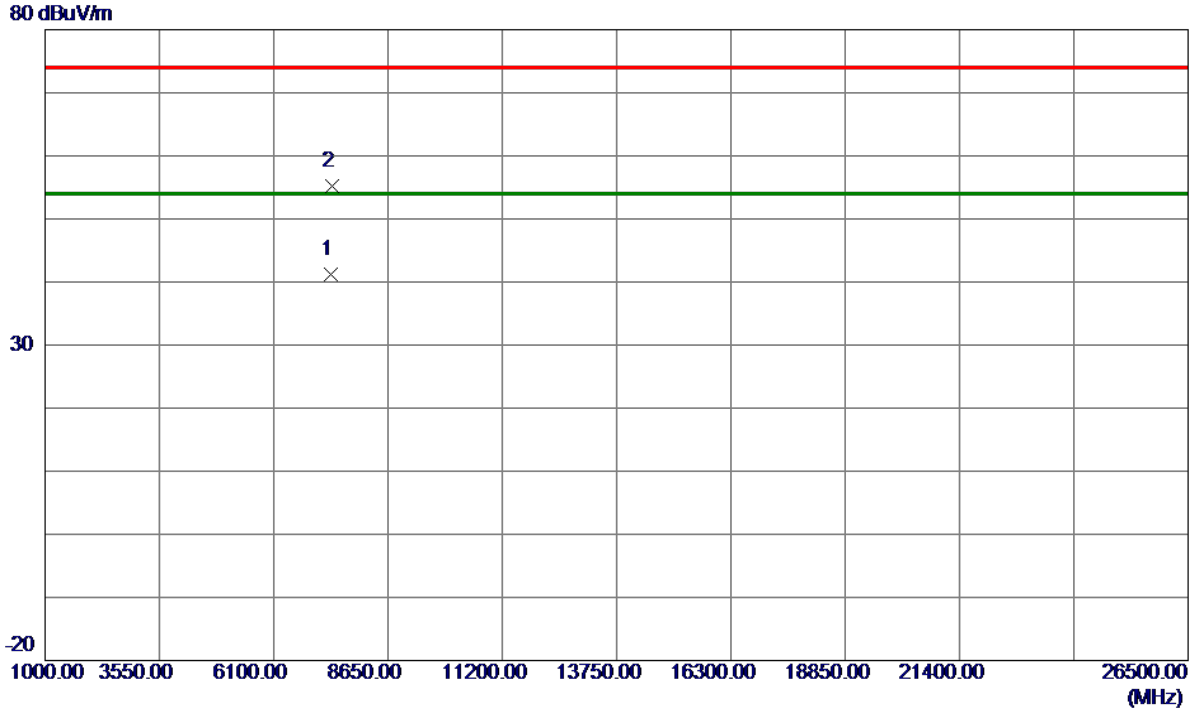
Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2460.9000	86.77	8.98	95.75	54.00	41.75	AVG	No Limit
2	2462.3000	96.67	8.98	105.65	74.00	31.65	Peak	No Limit
3	2483.5000	53.11	8.97	62.08	74.00	-11.92	Peak	
4	2483.5000	37.14	8.97	46.11	54.00	-7.89	AVG	

Orthogonal Axis :	X
Test Mode :	TX N-20M MODE 2462MHz

Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	7385.7500	29.04	12.17	41.21	54.00	-12.79	AVG	
2	7398.0000	43.03	12.20	55.23	74.00	-18.77	Peak	

APPENDIX E - BANDWIDTH