

FCC Radio Test Report

FCC ID: QWHDW20BR

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

Project No. : 1708C215
Equipment : Wireless Systems
Test Model : DW 20BR
Series Model : N/A
Applicant : MUSIC Group Manufacturing PH Ltd.
Address : 17A Brunswick Street Hamilton HM 10 Bermuda

Date of Receipt : Aug. 18, 2017
Date of Test : Aug. 18, 2017 ~ Sep. 15, 2017
Issued Date : Sep. 18, 2017
Tested by : BTL Inc.

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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-1-1708C215	Original Issue.	Sep. 18, 2017

1. CERTIFICATION

Equipment : Wireless Systems
Brand Name : KLARK TEKNIK
Test Model : DW 20BR
Series Model : N/A
Applicant : MUSIC Group Manufacturing PH Ltd.
Manufacturer : MUSIC Group 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 : Aug. 18, 2017 ~ Sep. 15, 2017
Test Sample : Engineering Sample
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-1-1708C215) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15, Subpart C (15.247)			
Standard(s) Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247(d)	Antenna conducted Spurious Emission	PASS	
15.247 (a)(1)	Hopping Channel Separation	PASS	
15.247(a)(1)	Bandwidth	PASS	
15.247 (b)(1)	Peak Output Power	PASS	
15.247(d) 15.209	Radiated Spurious Emission	PASS	
15.247 (a)(1)(iii)	Number of Hopping Frequency	PASS	
15.247 (a)(1)(iii)	Dwell Time	PASS	
15.205	Restricted Bands	PASS	
15.203	Antenna Requirement	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

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

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

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

C. Other Measurement:

Test Item	Uncertainty
Conducted Spurious Emission	2.67dB
Hopping Channel Separation	53.46MHz
Peak Output Power	0.95dB
Number of Hopping Frequency	53.46MHz
Temperature	0.08°C
Humidity	1.5%

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 20BR	
Series Model	N/A	
Model Difference	N/A	
Output Power (Max.)	Operation Frequency	2402~2480 MHz
	Modulation Technology	GFSK(1Mbps) $\pi/4$ -DQPSK(2Mbps) 8-DPSK(3Mbps)
	Bit Rate of Transmitter	
	Output Power Max.	4.24 dBm(1Mbps) 4.06 dBm(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)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

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 1-150	Dipole	N/A	5

Note:

- Equipment has 2 group antennas, group 1 and group 2 are same type antenna, only differ in brand/model name. Only Transmitter spurious emissions (30MHz to 1GHz and Above 1GHz) 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 Emission	
Final Test Mode	Description
Mode 1	TX Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	TX Mode Note (1)

Note:

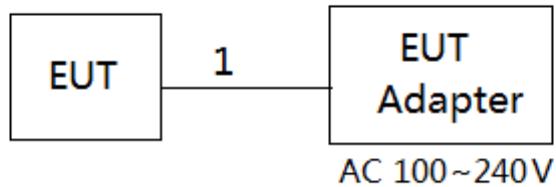
- (1) The measurements are performed at the high, middle, low available channels.
- (2) The measurements for Hopping Channel Separation, Bandwidth and Peak Output Power were tested during 1Mbps, 2Mbps and 3Mbps, the worst case are 1Mbps and 3Mbps, only worst case was documented.

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 FHSS

Test Software Version	Blue test 3		
Frequency	2402 MHz	2441 MHz	2480 MHz
Parameters(1Mbps)	30	0	0
Parameters(3Mbps)	45	20	20

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	1.8m	AC Cable

Note:

(1) For detachable type I/O cable should be specified the length in m in 『Length』 column.

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 (dB μ V)	
	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:

$$\text{Measurement Value} = \text{Reading Level} + \text{Correct Factor}$$

$$\text{Correct Factor} = \text{Insertion Loss} + \text{Cable Loss} + \text{Attenuator Factor(if use)}$$

$$\text{Margin Level} = \text{Measurement Value} - \text{Limit Value}$$

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

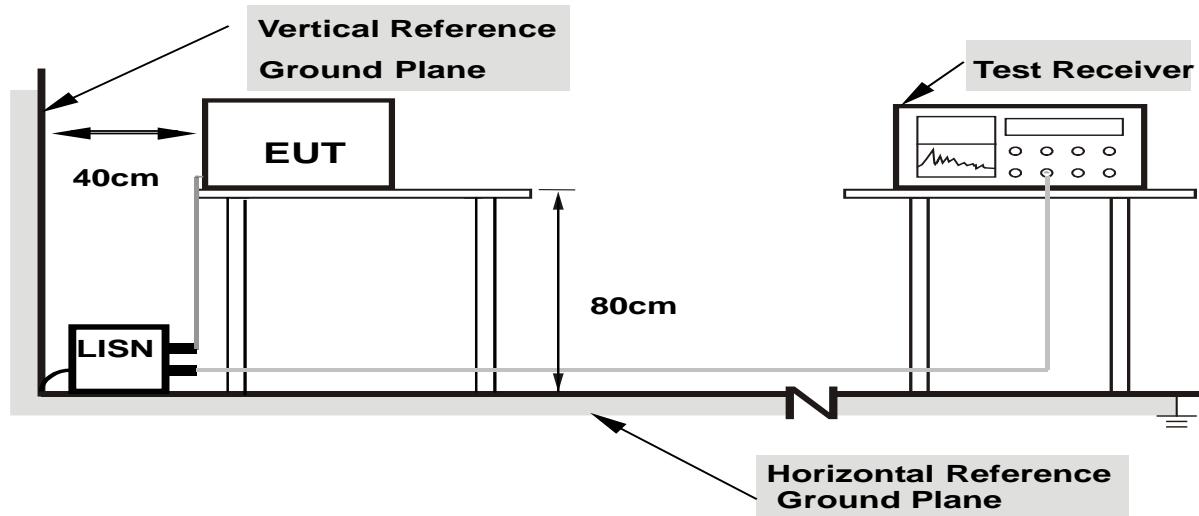
4.1.2 TEST PROCEDURE

- 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 cm from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting/receiving data or hopping on mode.

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.

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.

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9KHz -1000MHz)

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.

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/RSS-247.
- (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)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Spectrum 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

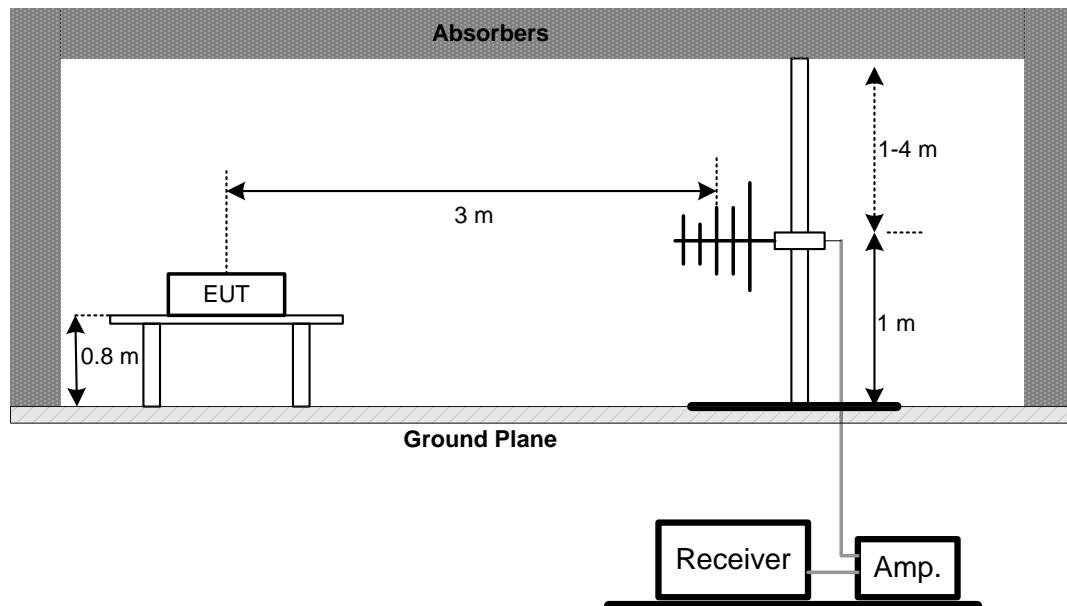
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- The measuring distance of 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)
- 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.
- 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).
- 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.
- 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.
- 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)
- 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)
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

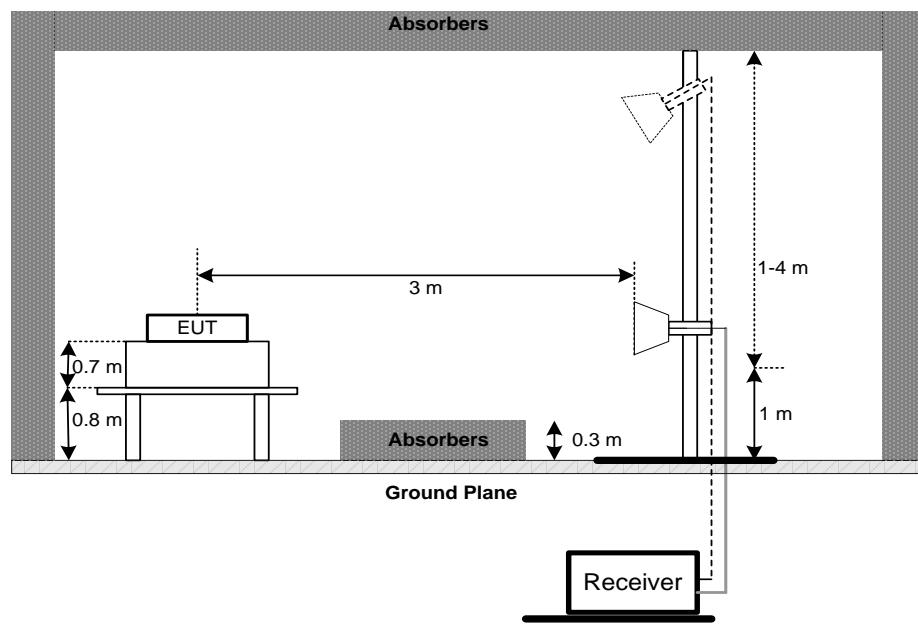
No deviation

4.2.4 TEST SETUP

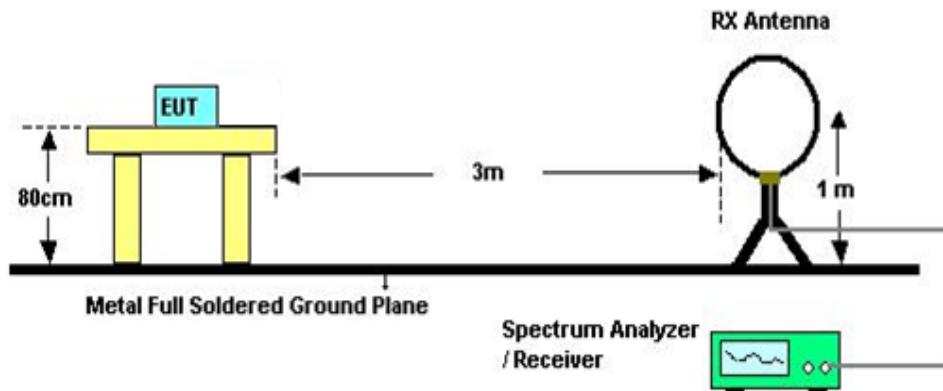
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(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: AC 120V/60Hz

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 = $40 \log (\text{specific distance} / \text{test distance})$ (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. NUMBER OF HOPPING CHANNEL

5.1 APPLIED PROCEDURES

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247(a)(1)(iii)	Number of Hopping Channel	2400-2483.5	PASS

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RBW	100 KHz
VBW	100 KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

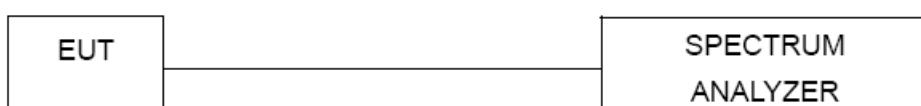
5.1.1 TEST PROCEDURE

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

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: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Appendix E

6. AVERAGE TIME OF OCCUPANCY

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(1)(iii)	Average Time of Occupancy	0.4sec	2400-2483.5	PASS

6.1.1 TEST PROCEDURE

- a. The transmitter output (antenna port) was connected to the spectrum analyzer
- b. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- e. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- f. Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- h. Measure the maximum time duration of one single pulse.
- i. DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel (5 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $3.37 \times 31.6 = 106.6$ within 31.6 seconds.
- j. DH3 Packet permit maximum $1600 / 79 / 4 = 5.06$ hops per second in each channel (3 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $5.06 \times 31.6 = 160$ within 31.6 seconds.
- k. DH1 Packet permit maximum $1600 / 79 / 2 = 10.12$ hops per second in each channel (1 time slot TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $10.12 \times 31.6 = 320$ within 31.6 seconds.

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: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Appendix F

7. HOPPING CHANNEL SEPARATION MEASUREMENT

7.1 APPLIED PROCEDURES / LIMIT

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 KHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RBW	30 KHz
VBW	100 KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

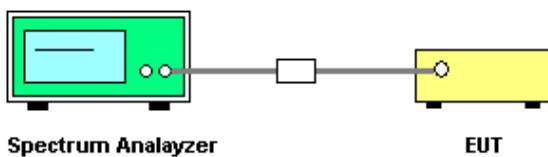
7.1.1 TEST PROCEDURE

- The EUT must have its hopping function enabled
- Span = wide enough to capture the peaks of two adjacent channels
 Resolution (or IF) Bandwidth (RBW) \geq 1% of the span
 Video (or Average) Bandwidth (VBW) \geq RBW
 Sweep = Auto
 Detector function = Peak
 Trace = Max Hold

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT TEST CONDITIONS

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

7.1.5 TEST RESULTS

Please refer to the Appendix G

8. BANDWIDTH TEST

8.1 APPLIED PROCEDURES

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

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RBW	30 KHz (20dB Bandwidth) / 30 KHz (Channel Separation)
VBW	100 KHz (20dB Bandwidth) / 100 KHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW= 30KHz, VBW=100KHz, 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: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

8.1.6 TEST RESULTS

Please refer to the Appendix H

9. PEAK OUTPUT POWER TEST

9.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(1)	Peak Output Power	1 Watt or 30dBm (hopping channel >75) 0.125Watt or 21dBm (hopping channel <75)	2400-2483.5	PASS

9.1.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting: RBW= 1MHz/3MHz, VBW= 1MHz/3MHz, Sweep time = Auto.

9.1.2 DEVIATION FROM STANDARD

No deviation.

9.1.3 TEST SETUP



9.1.4 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.

9.1.5 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

9.1.6 TEST RESULTS

Please refer to the Appendix I

10. ANTENNA CONDUCTED SPURIOUS EMISSION

10.1 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.

10.1.1 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=100KHz, Sweep time = Auto.
- c. Offset=antenna gain+cable loss

10.1.2 DEVIATION FROM STANDARD

No deviation.

10.1.3 TEST SETUP



10.1.4 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.

10.1.5 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: AC 120V/60Hz

10.1.6 TEST RESULTS

Please refer to the Appendix J

11. 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. 26, 2018
2	LISN	EMCO	3816/2	52765	Mar. 26, 2018
3	50Ω Terminator	SHX	TF2-3G-A	8122901	Mar. 26, 2018
4	TWO-LINE V-NETWORK	R&S	ENV216	101447	Mar. 26, 2018
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Oct. 20, 2017

Radiated Emission Measurement - Below 1GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 26, 2018
2	Amplifier	HP	8447D	2944A09673	Oct. 20, 2017
3	Receiver	Agilent	N9038A	MY52130039	Sep. 03, 2018
4	Cable	emci	LMR-400(30MHz-1GHz)(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	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Sep. 05, 2018

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. 26, 2018
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 08, 2018
3	Amplifier	Agilent	8449B	3008A02274	May. 16, 2018
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 26, 2018
5	Receiver	Agilent	N9038A	MY52130039	Sep. 03, 2018
6	Antenna	EM	EM-6876-1	230	Jul. 07, 2018
7	Controller	CT	SC100	N/A	N/A
8	Controller	MF	MF-7802	MF780208416	N/A
9	Cable	emci	EMC104-SM-SM-1 2000(12m)	N/A	Jun. 26, 2018
10	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Number of Hopping Channel

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 03, 2018

Average Time of Occupancy

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 03, 2018

Hopping Channel Separation Measurement

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 03, 2018

Bandwidth

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 03, 2018

Peak Output Power

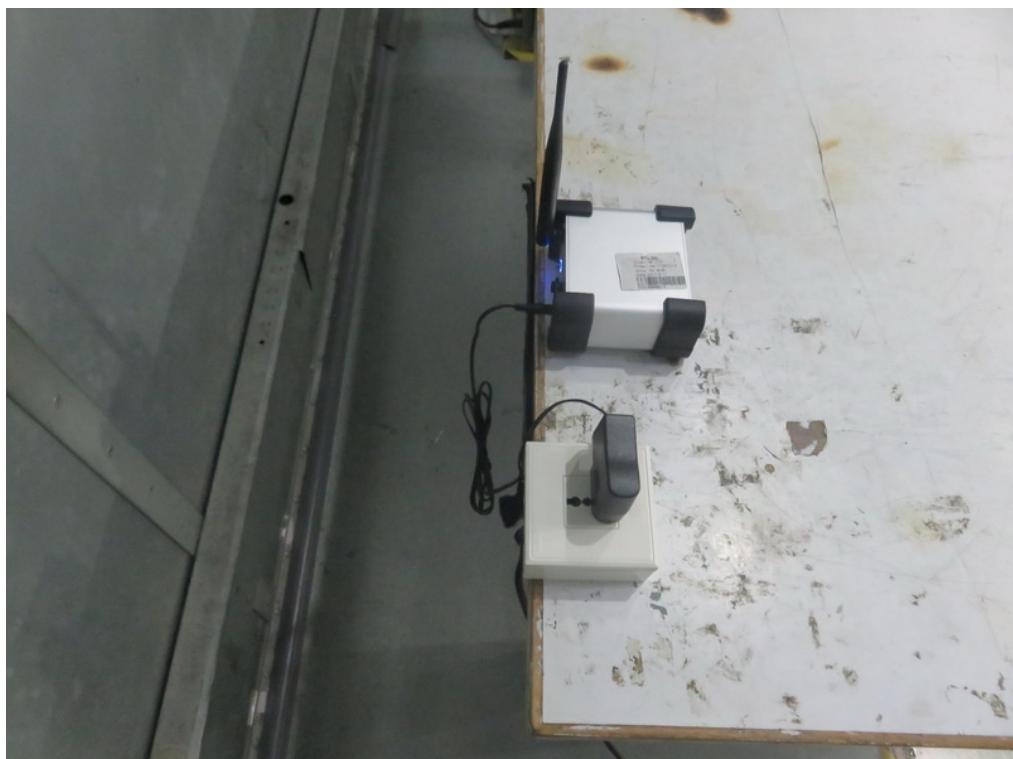
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 03, 2018

Antenna Conducted Spurious Emission

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Sep. 03, 2018

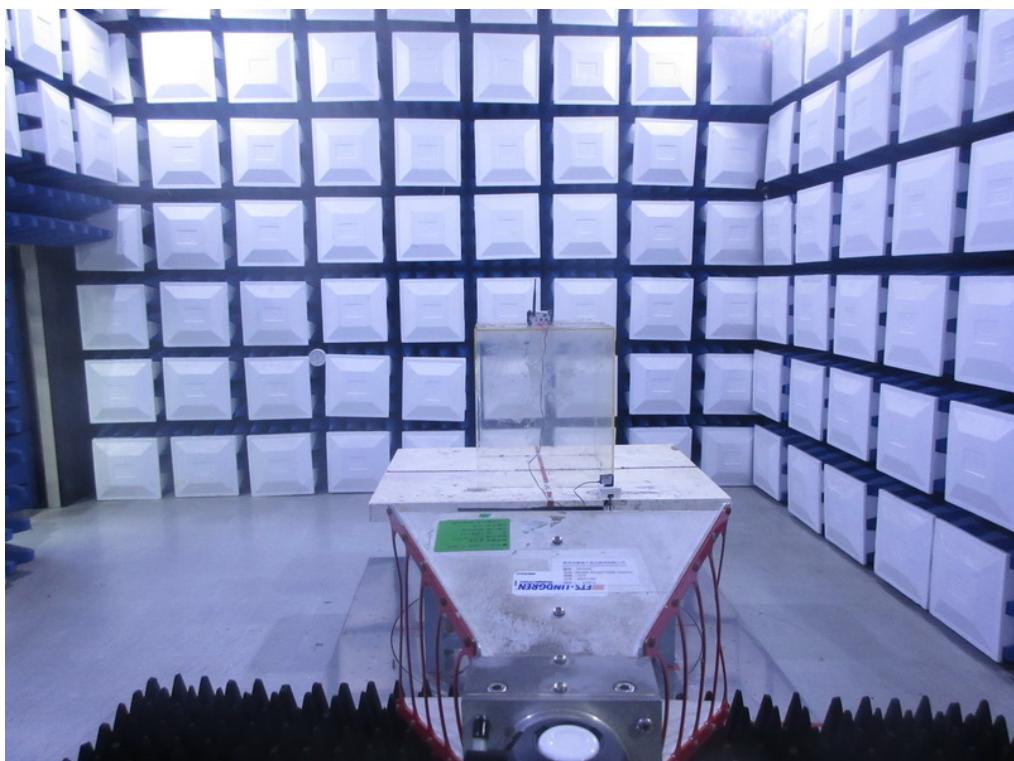
Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

12. EUT TEST PHOTO**Conducted Measurement Photos**

Radiated Measurement Photos**9KHz to 30MHz**

Radiated Measurement Photos_Group 1 Antenna**30MHz to 1000MHz**

Radiated Measurement Photos_Group 1 Antenna**Above 1GHz**

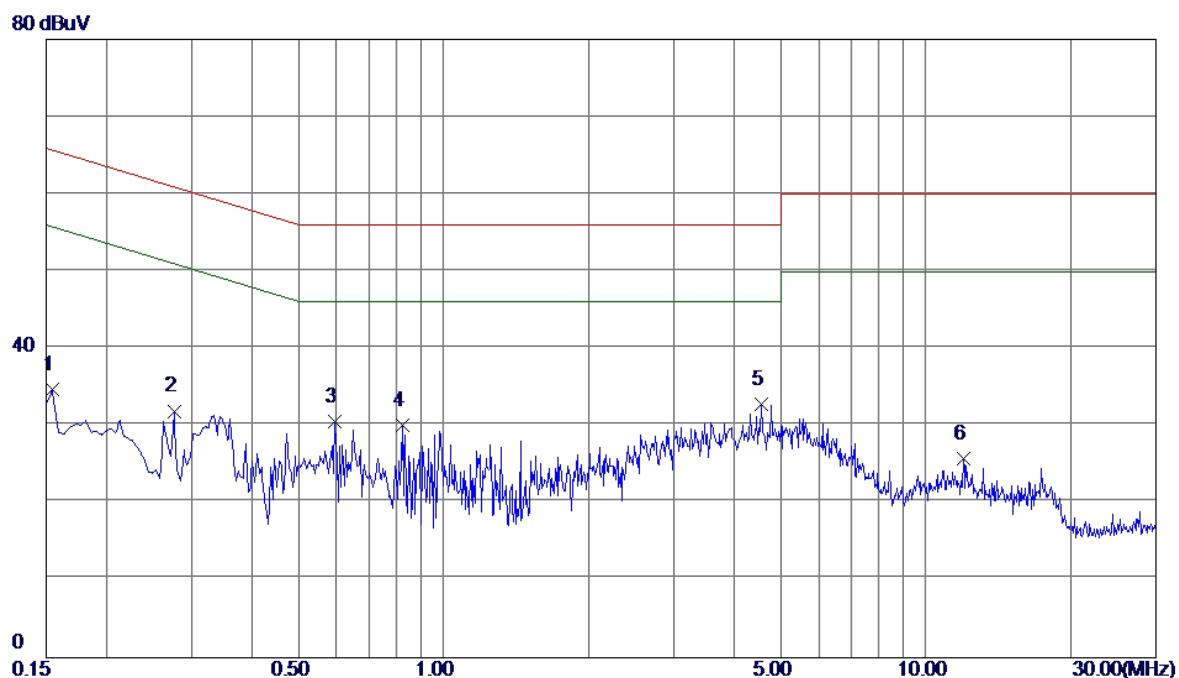
Radiated Measurement Photos_Group 2 Antenna**30MHz to 1000MHz**

Radiated Measurement Photos_Group 2 Antenna**Above 1000MHz**

APPENDIX A - CONDUCTED EMISSION

Test Mode: TX Mode_Adapter: S008ACM1200040

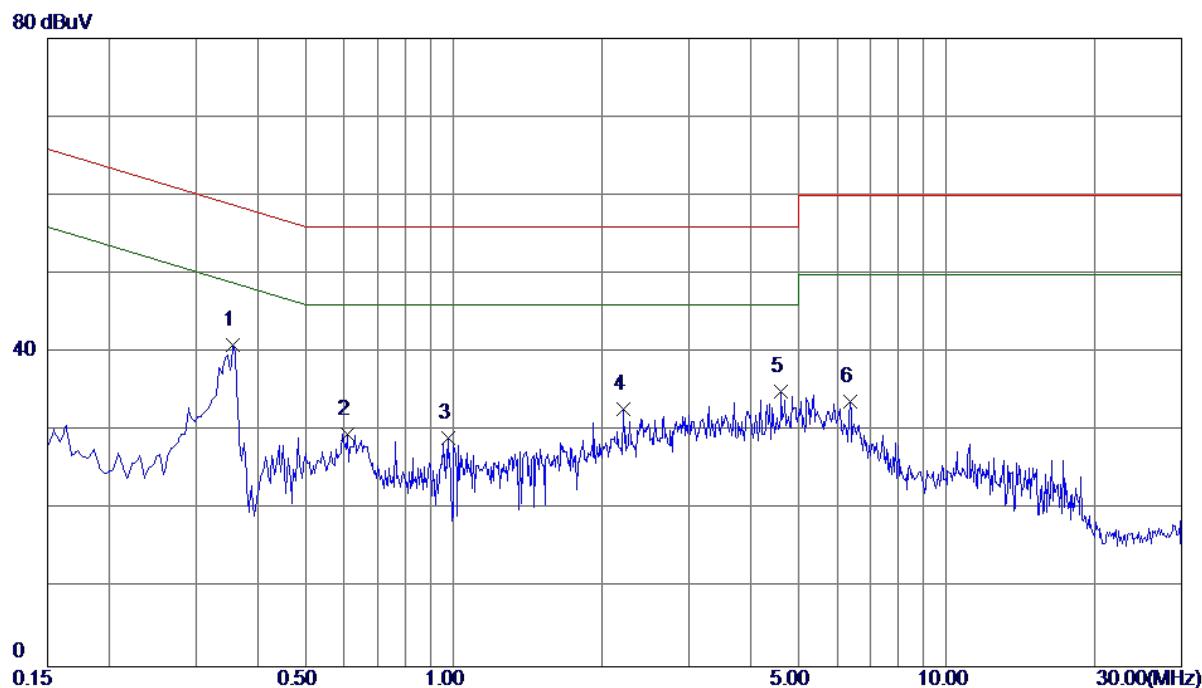
Line



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1545	24.98	9.79	34.77	65.75	-30.98	Peak	
2	0.2760	22.16	9.76	31.92	60.94	-29.02	Peak	
3	0.5955	20.80	9.81	30.61	56.00	-25.39	Peak	
4	0.8205	20.32	9.83	30.15	56.00	-25.85	Peak	
5 *	4.5555	22.81	10.05	32.86	56.00	-23.14	Peak	
6	11.9625	15.29	10.43	25.72	60.00	-34.28	Peak	

Test Mode: TX Mode_Adapter: S008ACM1200040

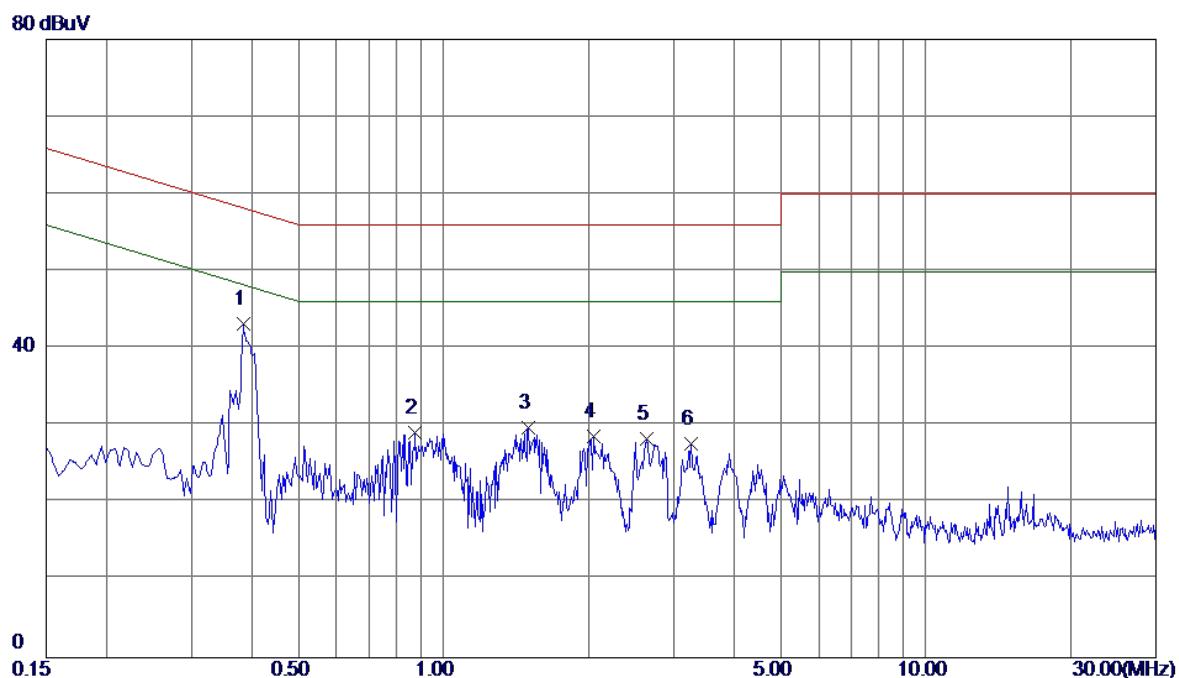
Neutral



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector		Comment
							Detector	Comment	
1 *	0.3570	31.29	9.70	40.99	58.80	-17.81	Peak		
2	0.6090	19.91	9.71	29.62	56.00	-26.38	Peak		
3	0.9735	19.36	9.75	29.11	56.00	-26.89	Peak		
4	2.2065	23.00	9.86	32.86	56.00	-23.14	Peak		
5	4.6275	25.07	9.99	35.06	56.00	-20.94	Peak		
6	6.3645	23.75	10.08	33.83	60.00	-26.17	Peak		

Test Mode: TX Mode _Adapter: GPE053A-V120040-Z

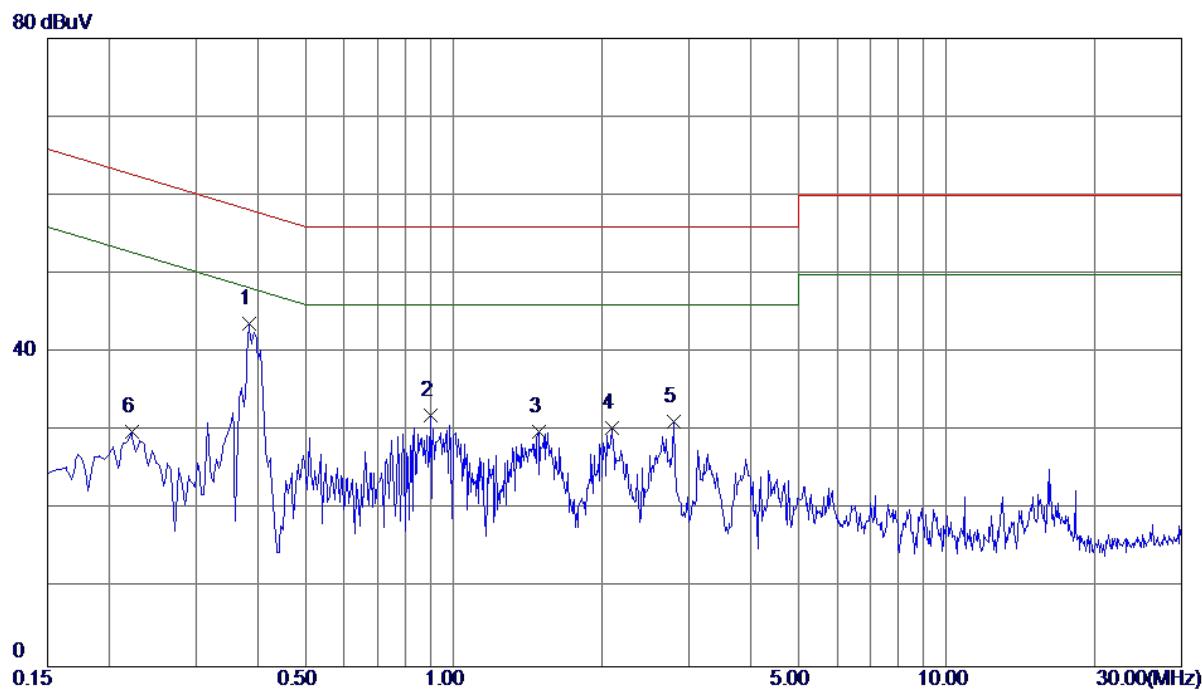
Line



No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector		Comment
							Detector	Comment	
1 *	0.3840	33.34	9.79	43.13	58.19	-15.06	Peak		
2	0.8745	19.21	9.84	29.05	56.00	-26.95	Peak		
3	1.4955	19.80	9.90	29.70	56.00	-26.30	Peak		
4	2.0445	18.78	9.92	28.70	56.00	-27.30	Peak		
5	2.6430	18.39	9.97	28.36	56.00	-27.64	Peak		
6	3.2640	17.65	10.01	27.66	56.00	-28.34	Peak		

Test Mode: TX Mode _Adapter: GPE053A-V120040-Z

Neutral

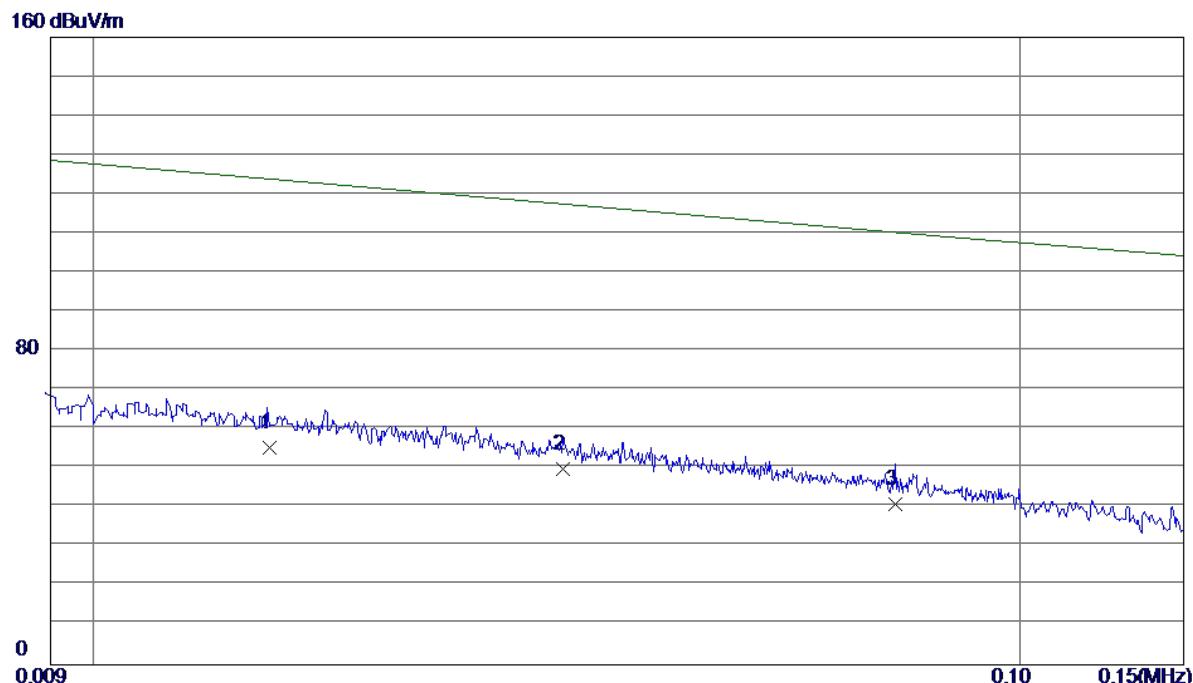


No.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure ment dBuV	Limit dBuV	Margin dB	Detector		Comment
							Detector		
1 *	0.3840	34.08	9.65	43.73	58.19	-14.46	Peak		
2	0.8970	22.27	9.67	31.94	56.00	-24.06	Peak		
3	1.4865	20.20	9.69	29.89	56.00	-26.11	Peak		
4	2.0940	20.70	9.74	30.44	56.00	-25.56	Peak		
5	2.7960	21.42	9.76	31.18	56.00	-24.82	Peak		
6	0.2220	20.28	9.64	29.92	62.74	-32.82	Peak		

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

Test Mode: TX Mode_Adapter: S008ACM1200040

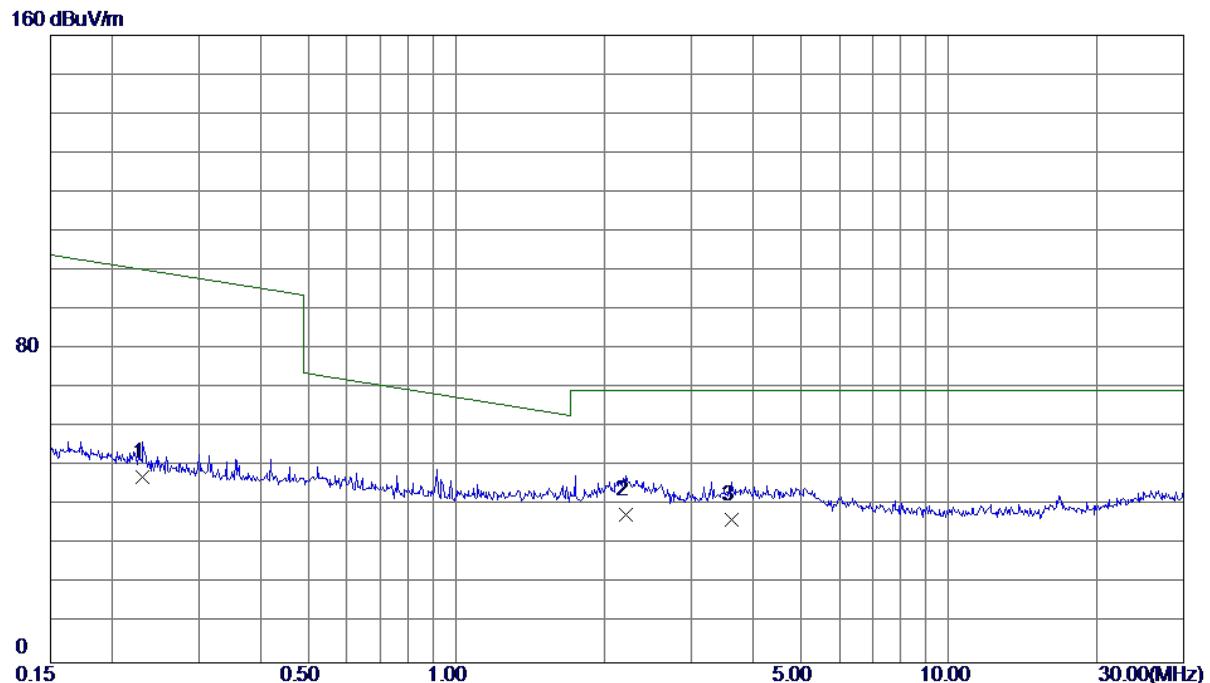
Ant 0°



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1 *	0.0155	35.24	20.21	55.45	126.89	-71.44	AVG
2	0.0321	30.64	19.26	49.90	122.79	-72.89	AVG
3	0.0734	22.79	18.26	41.05	112.59	-71.54	AVG

Test Mode: TX Mode_Adapter: S008ACM1200040

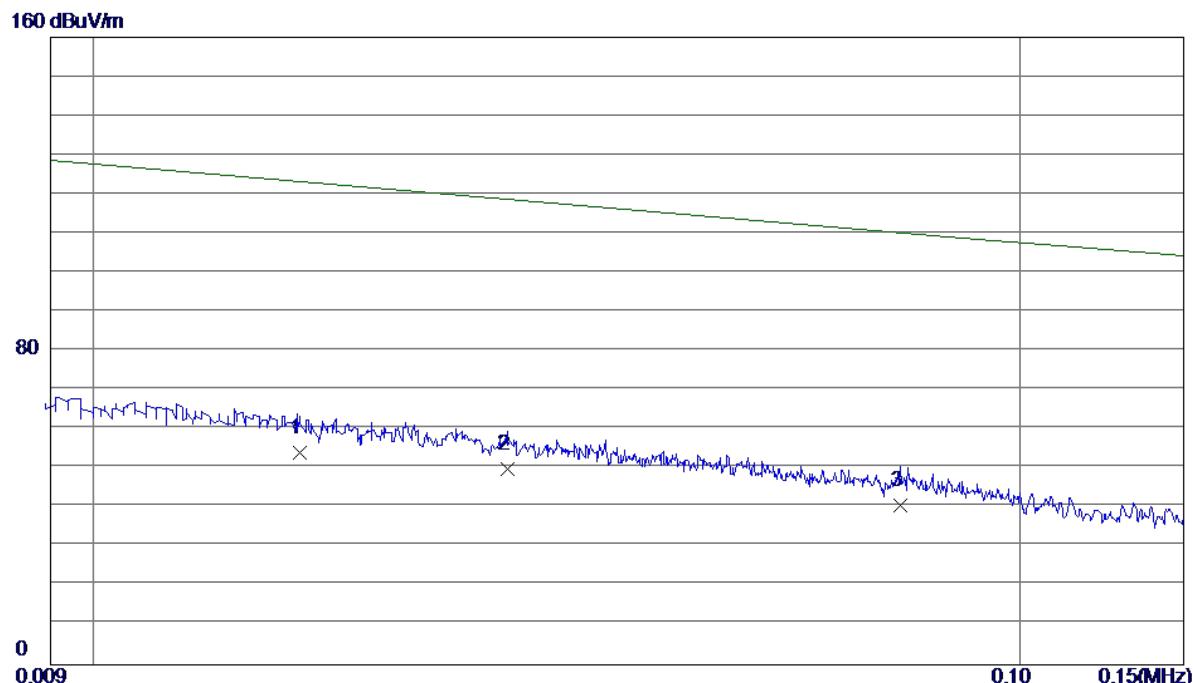
Ant 0°



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	0.2304	30.58	16.71	47.29	102.67	-55.38	AVG	
2 *	2.2132	22.34	15.45	37.79	69.54	-31.75	QP	
3	3.6225	21.46	15.06	36.52	69.54	-33.02	QP	

Test Mode: TX Mode_Adapter: S008ACM1200040

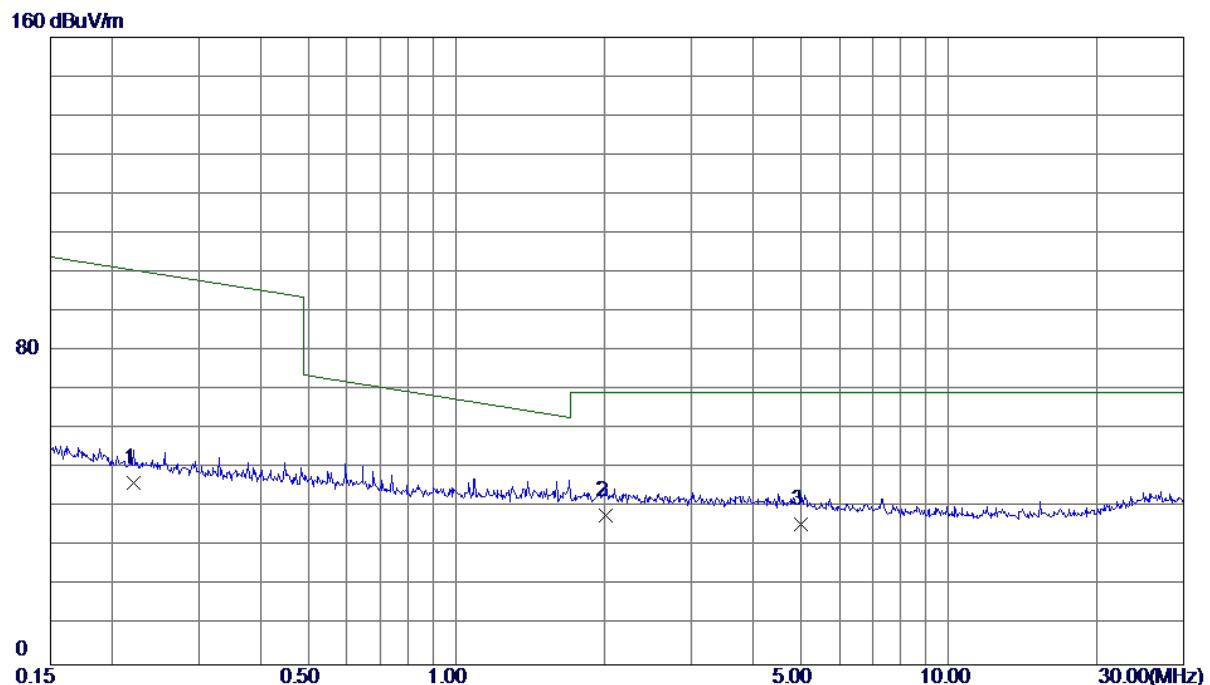
Ant 90°



No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dB			
1	0.0167	34.15	20.05	54.20	126.59	-72.39	AVG	
2	0.0280	30.48	19.38	49.86	123.80	-73.94	AVG	
3 *	0.0742	22.50	18.24	40.74	112.40	-71.66	AVG	

Test Mode: TX Mode_Adapter: S008ACM1200040

Ant 90°

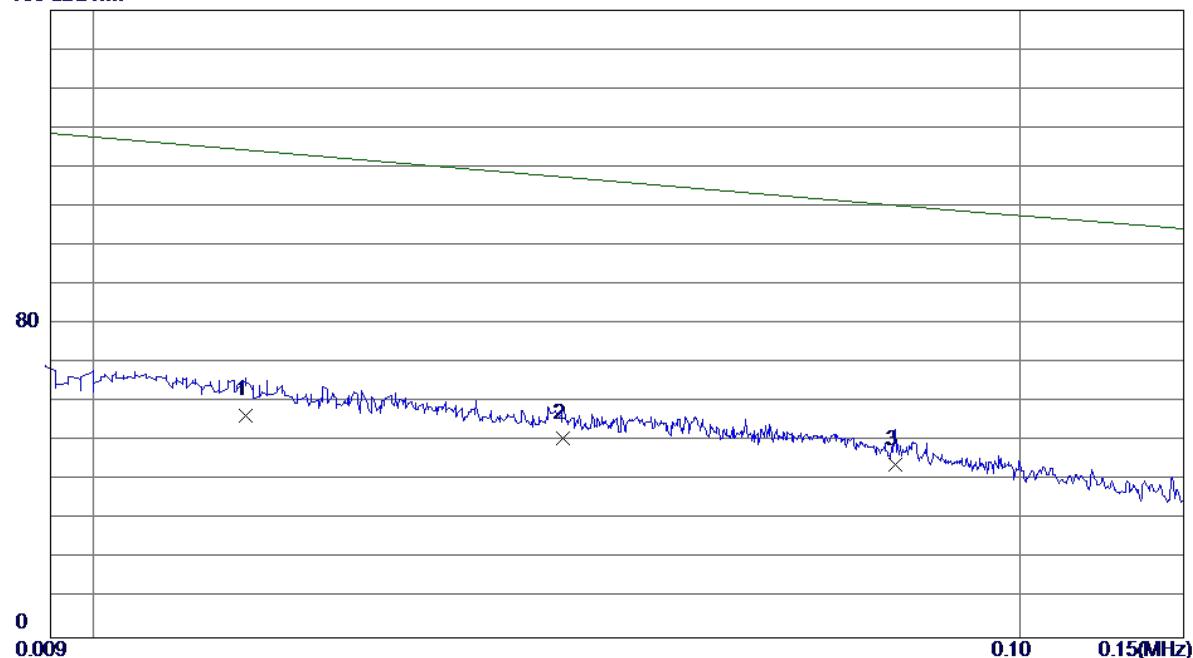


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	0.2208	29.78	16.74	46.52	102.99	-56.47	AVG	
2 *	2.0120	22.46	15.51	37.97	69.54	-31.57	QP	
3	5.0046	21.37	14.37	35.74	69.54	-33.80	QP	

Test Mode: TX Mode _Adapter: GPE053A-V120040-Z

Ant 0°

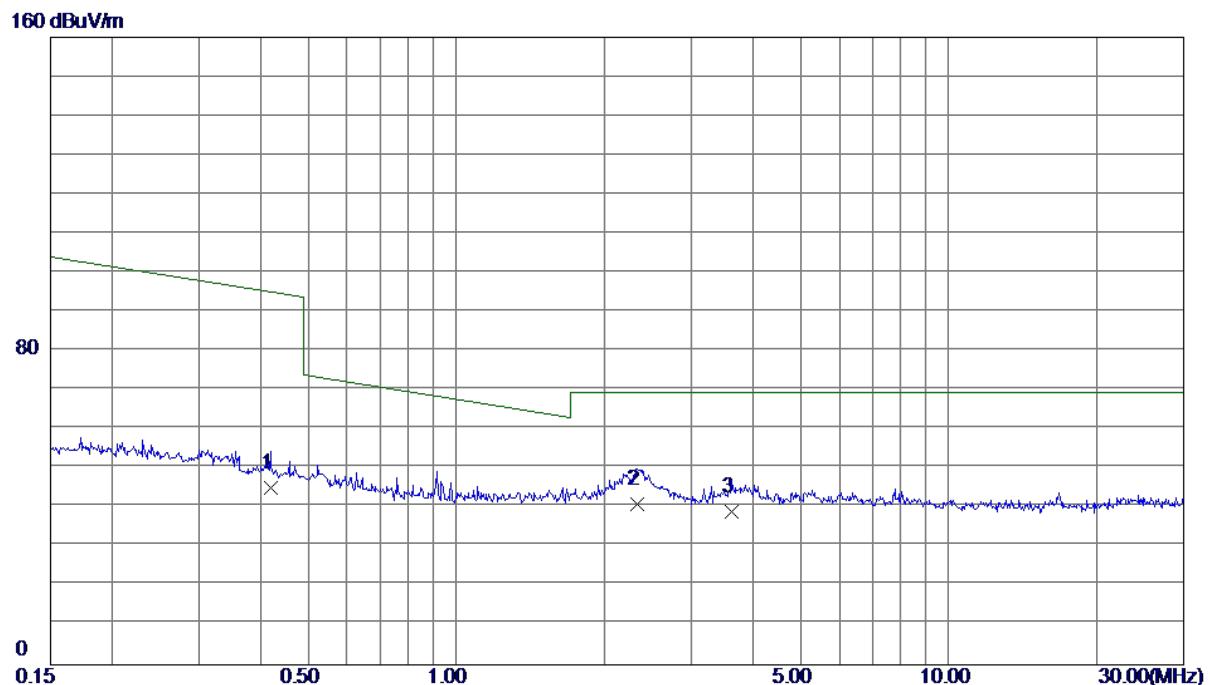
160 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1	0.0146	36.48	20.32	56.80	127.11	-70.31	AVG
2	0.0321	31.64	19.26	50.90	122.79	-71.89	AVG
3 *	0.0734	25.87	18.26	44.13	112.59	-68.46	AVG

Test Mode: TX Mode _Adapter: GPE053A-V120040-Z

Ant 0°

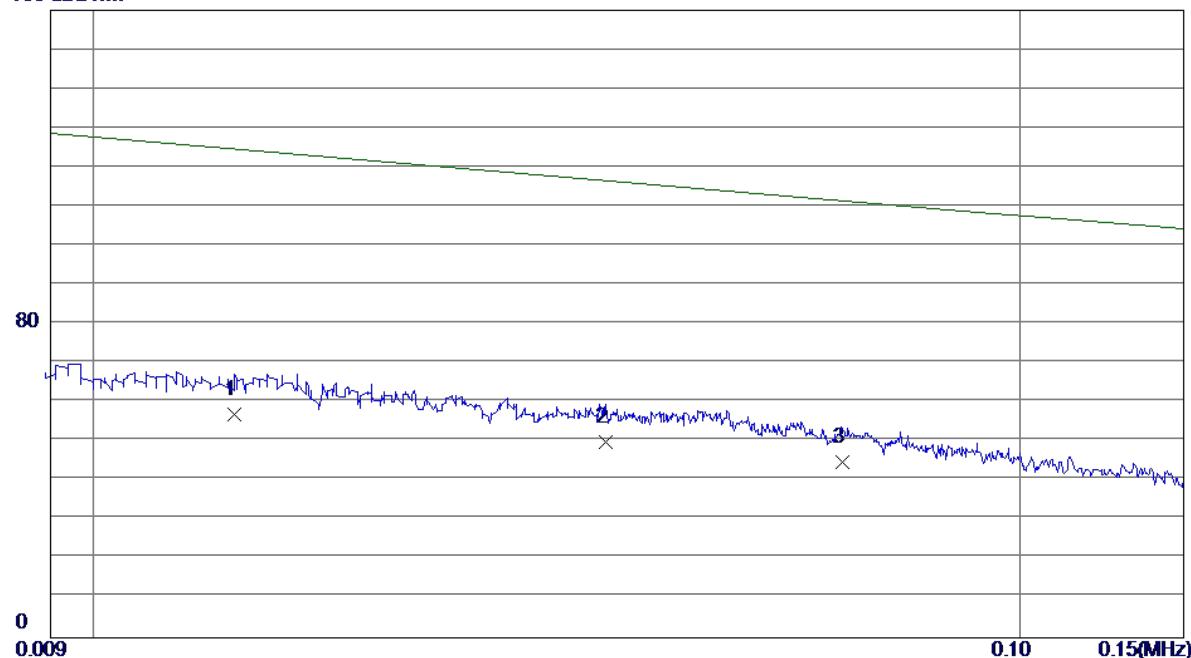


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1	0.4192	28.47	16.53	45.00	96.22	-51.22	AVG
2 *	2.3334	25.64	15.42	41.06	69.54	-28.48	QP
3	3.6225	23.95	15.06	39.01	69.54	-30.53	QP

Test Mode: TX Mode _Adapter: GPE053A-V120040-Z

Ant 90°

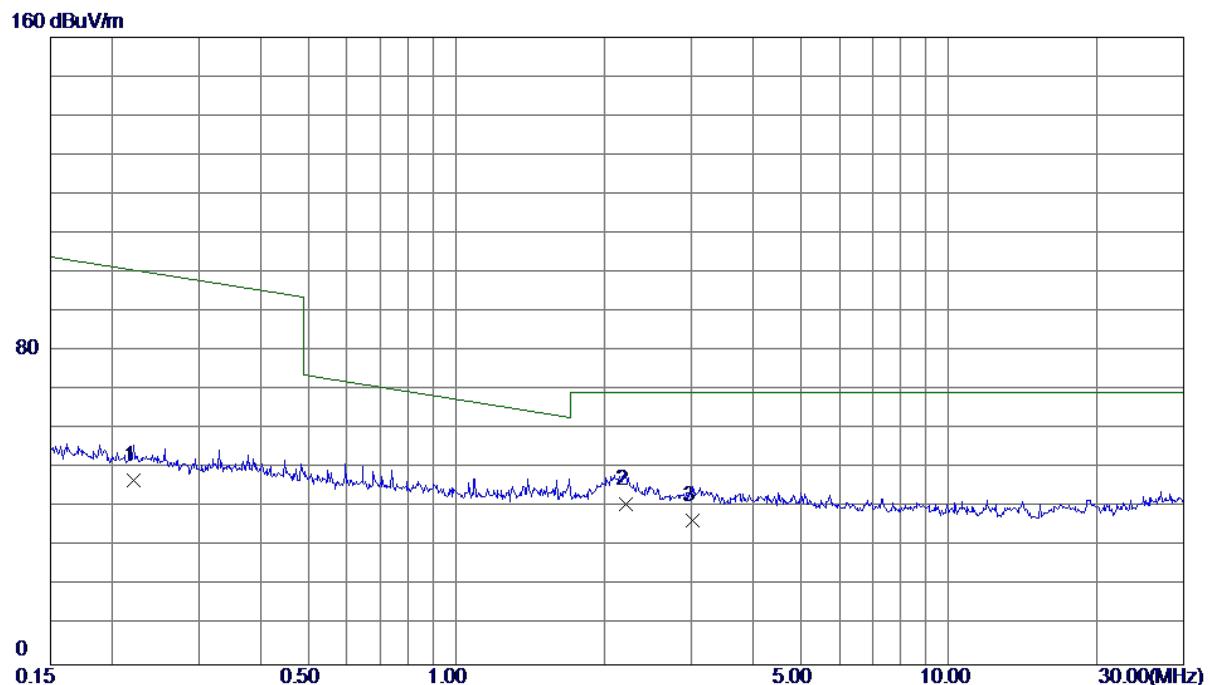
160 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1	0.0142	36.48	20.37	56.85	127.21	-70.36	AVG
2	0.0357	30.69	19.15	49.84	121.90	-72.06	AVG
3 *	0.0642	26.48	18.44	44.92	114.87	-69.95	AVG

Test Mode: TX Mode _Adapter: GPE053A-V120040-Z

Ant 90°



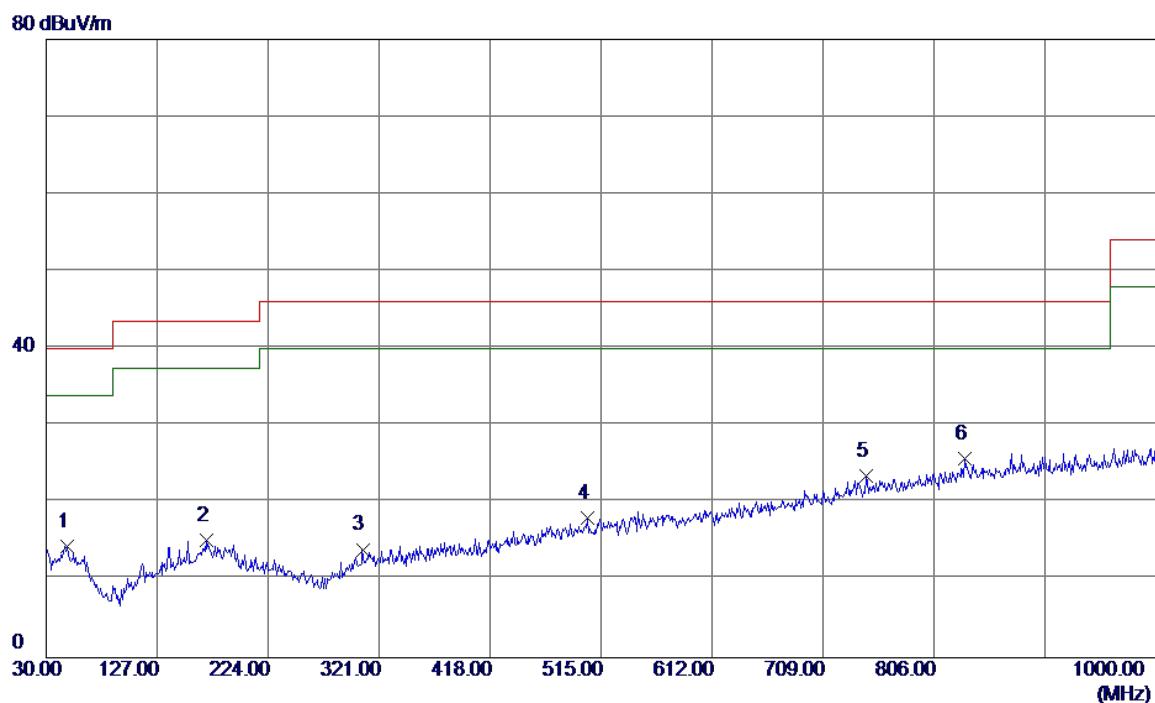
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	0.2207	30.37	16.74	47.11	103.00	-55.89	AVG	
2 *	2.2132	25.64	15.45	41.09	69.54	-28.45	QP	
3	3.0253	21.67	15.22	36.89	69.54	-32.65	QP	

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

For Group 1 Antenna

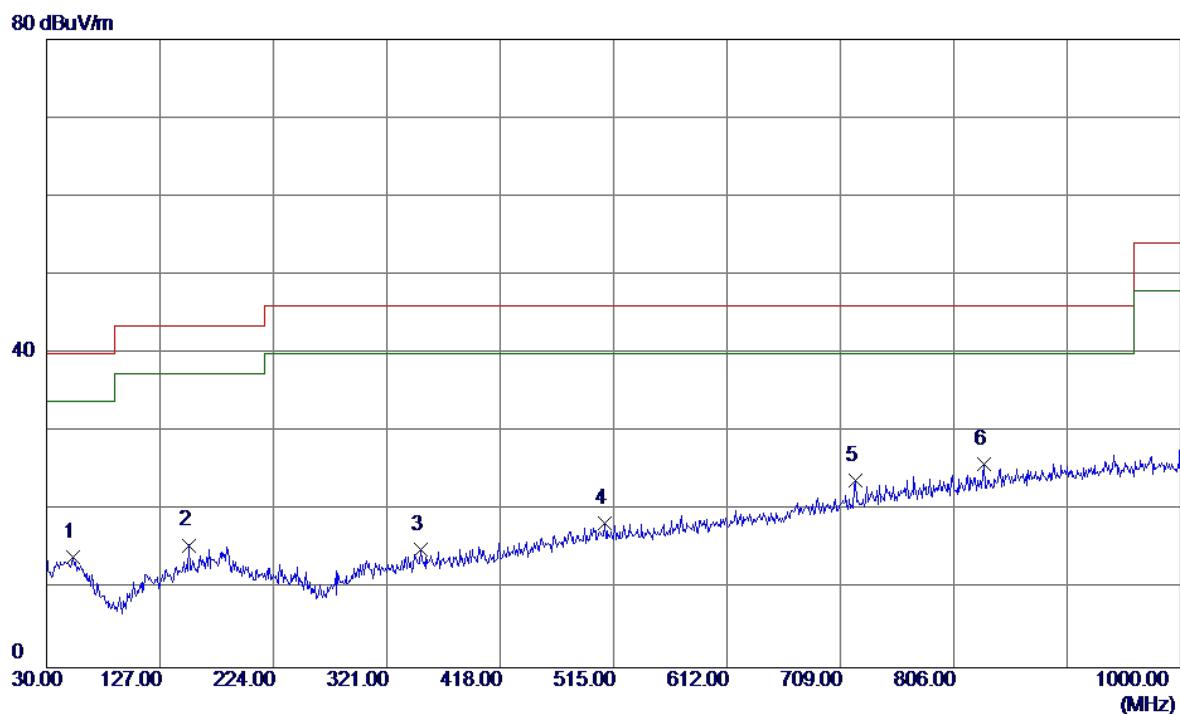
Test Mode: TX 2402MHz _CH00_1Mbps_Adapter: S008ACM1200040

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin dB	Detector		Comment
							Detector	Comment	
1	48.4300	28.29	-13.92	14.37	40.00	-25.63	Peak		
2	169.6799	28.84	-13.65	15.19	43.50	-28.31	Peak		
3	306.4500	28.75	-14.75	14.00	46.00	-32.00	Peak		
4	503.3600	29.72	-11.65	18.07	46.00	-27.93	Peak		
5	746.8300	30.18	-6.62	23.56	46.00	-22.44	Peak		
6 *	833.1599	30.72	-4.93	25.79	46.00	-20.21	Peak		

Test Mode: TX 2402MHz_CH00_1Mbps_Adapter: S008ACM1200040

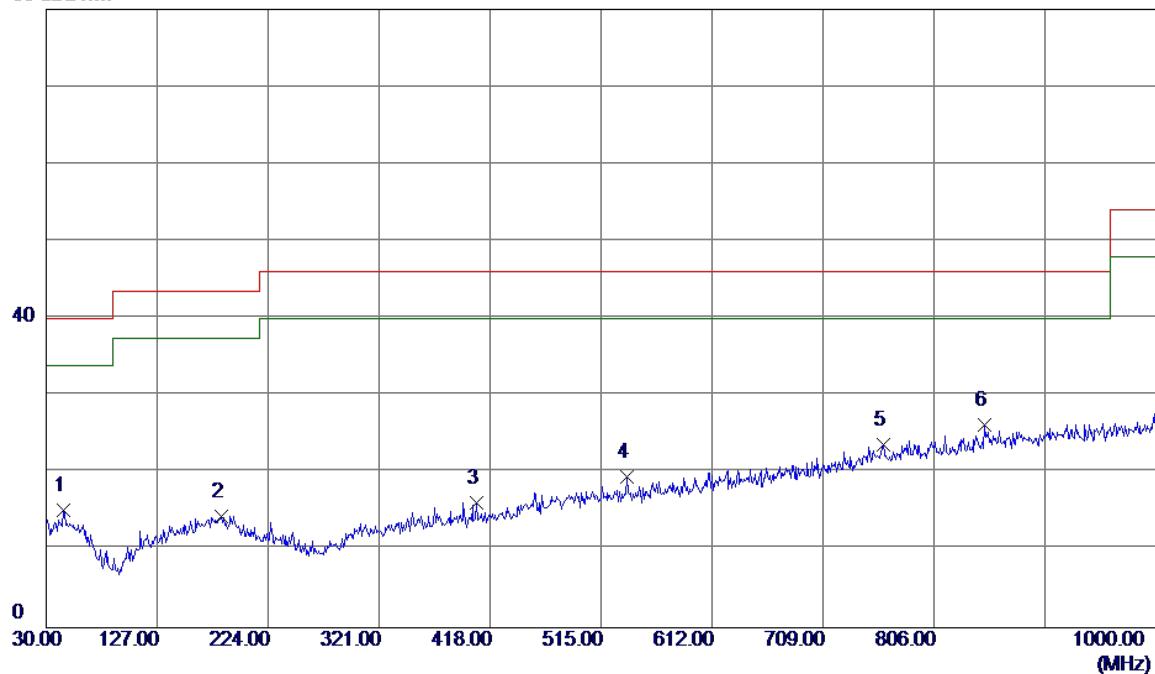
Horizontal

No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector		Comment
							Detector		
1	52.3100	28.47	-14.46	14.01	40.00	-25.99	Peak		
2	152.2200	30.20	-14.60	15.60	43.50	-27.90	Peak		
3	350.1000	29.18	-14.20	14.98	46.00	-31.02	Peak		
4	507.2400	29.96	-11.59	18.37	46.00	-27.63	Peak		
5	721.6100	31.16	-7.25	23.91	46.00	-22.09	Peak		
6 *	832.1900	30.91	-4.95	25.96	46.00	-20.04	Peak		

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: S008ACM1200040

Vertical

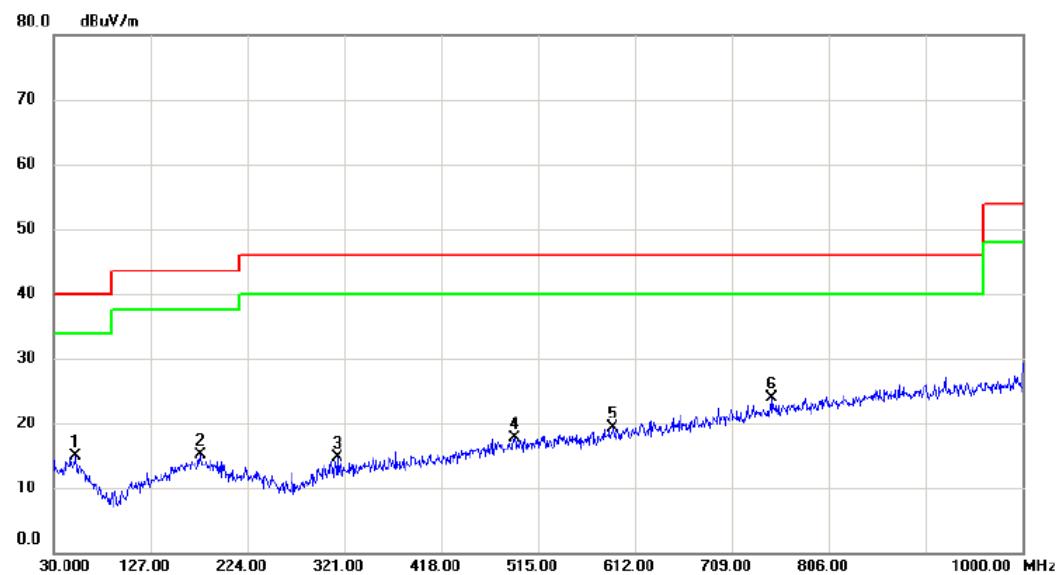
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	45.5200	28.81	-13.68	15.13	40.00	-24.87	Peak	
2	183.2600	28.12	-13.68	14.44	43.50	-29.06	Peak	
3	406.3599	29.91	-13.73	16.18	46.00	-29.82	Peak	
4	537.3100	30.62	-11.11	19.51	46.00	-26.49	Peak	
5	761.3800	30.00	-6.34	23.66	46.00	-22.34	Peak	
6 *	850.6200	30.77	-4.54	26.23	46.00	-19.77	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: S008ACM1200040

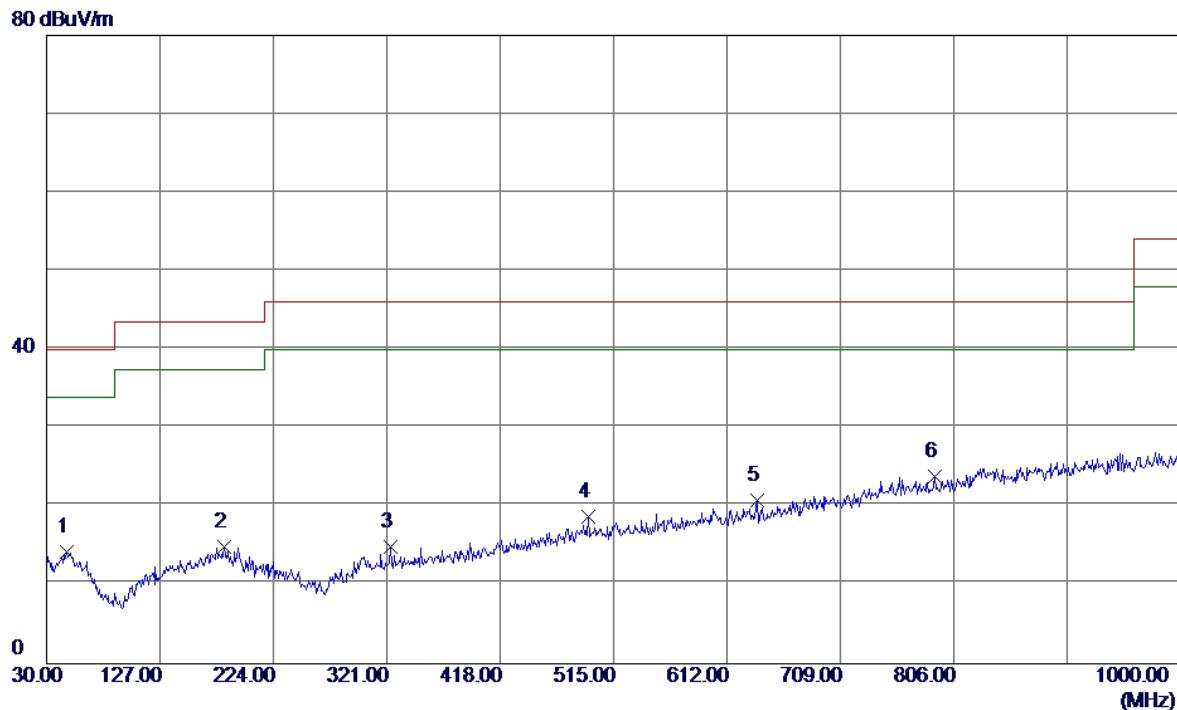
Horizontal



No. Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Comment
		dBuV	dB	dBuV/m	dBuV/m	dB	
1	51.340	29.31	-14.36	14.95	40.00	-25.05	peak
2	176.470	28.54	-13.48	15.06	43.50	-28.44	peak
3	313.240	29.30	-14.67	14.63	46.00	-31.37	peak
4	490.750	29.49	-11.88	17.61	46.00	-28.39	peak
5	589.690	29.28	-10.06	19.22	46.00	-26.78	peak
6 *	748.770	30.48	-6.57	23.91	46.00	-22.09	peak

Test Mode: TX 2480MHz _CH78_1Mbps _Adapter: S008ACM1200040

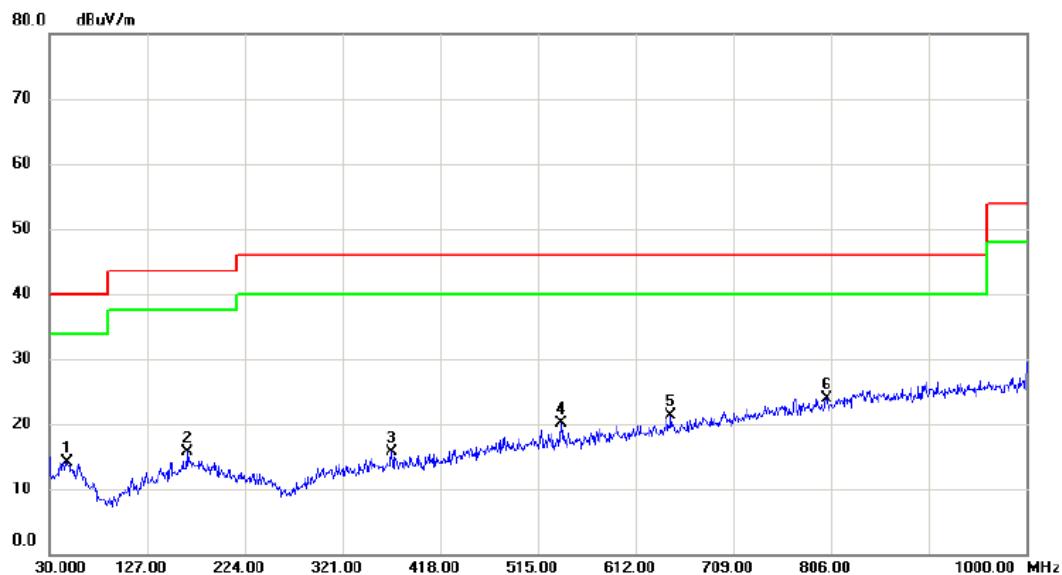
Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	47.4600	28.03	-13.75	14.28	40.00	-25.72	Peak	
2	182.2899	28.45	-13.60	14.85	43.50	-28.65	Peak	
3	323.9100	29.40	-14.53	14.87	46.00	-31.13	Peak	
4	493.6600	30.56	-11.83	18.73	46.00	-27.27	Peak	
5	638.1900	30.03	-9.28	20.75	46.00	-25.25	Peak	
6 *	789.5100	29.64	-5.85	23.79	46.00	-22.21	Peak	

Test Mode: TX 2480MHz _CH78_1Mbps _Adapter: S008ACM1200040

Horizontal

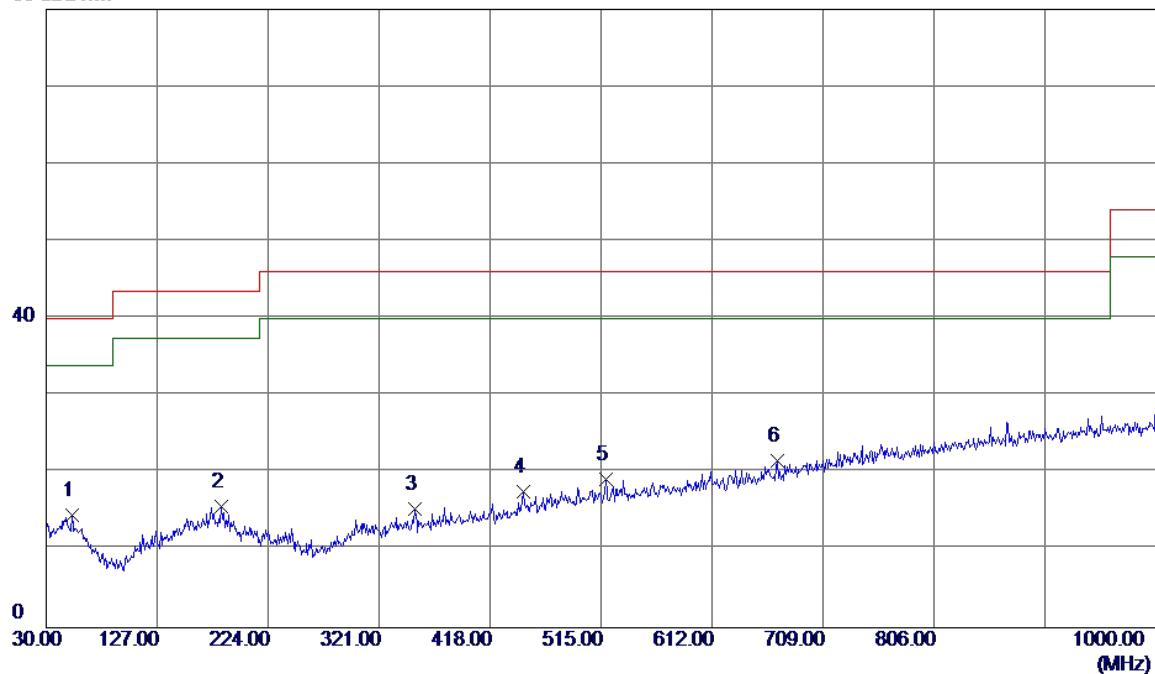


No.	Mk.	Freq. MHz	Reading	Correct	Measure-	Limit dBuV/m	Margin dB	Detector	Comment
			Level dBuV	Factor	ment dBuV/m				
1		47.460	27.90	-13.75	14.15	40.00	-25.85	peak	
2		165.800	29.48	-13.86	15.62	43.50	-27.88	peak	
3		369.500	29.73	-14.08	15.65	46.00	-30.35	peak	
4		537.310	31.24	-11.12	20.12	46.00	-25.88	peak	
5		646.920	30.49	-9.16	21.33	46.00	-24.67	peak	
6 *		801.150	29.64	-5.65	23.99	46.00	-22.01	peak	

Test Mode: TX 2402MHz_CH00_1Mbps_Adapter: GPE053A-V120040-Z

Vertical

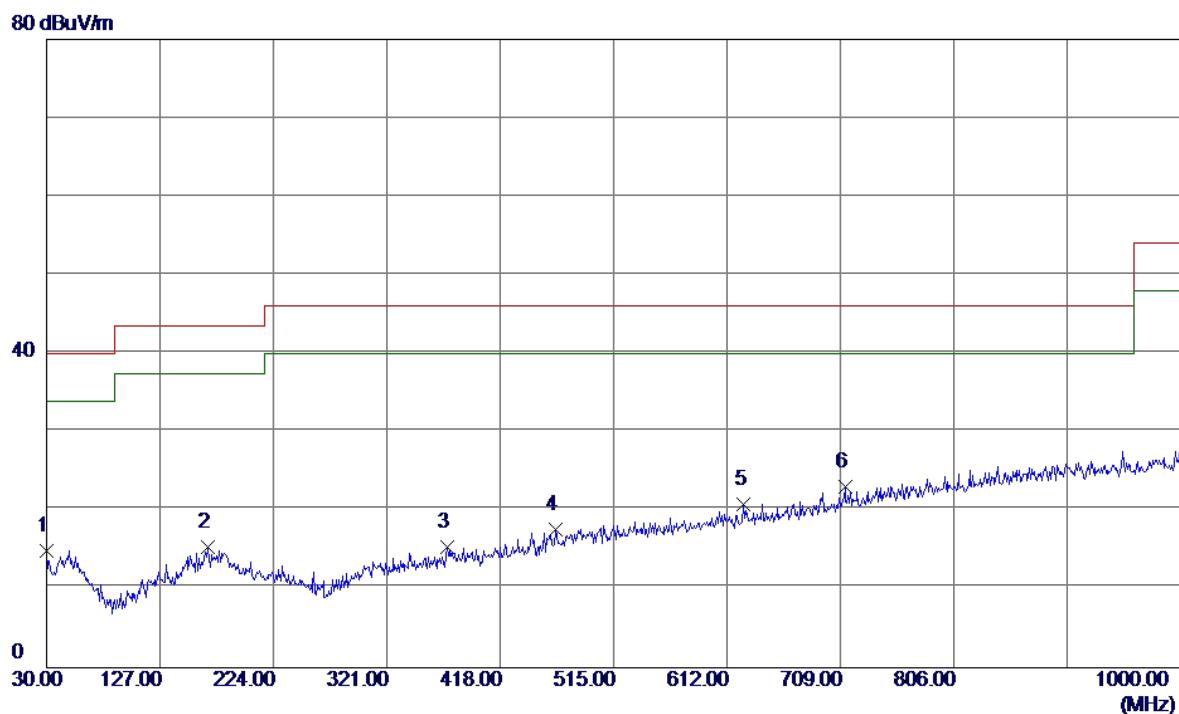
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
								Comment
1	52.3100	29.07	-14.46	14.61	40.00	-25.39	Peak	
2	183.2600	29.29	-13.68	15.61	43.50	-27.89	Peak	
3	352.0400	29.50	-14.19	15.31	46.00	-30.69	Peak	
4	447.1000	30.41	-12.76	17.65	46.00	-28.35	Peak	
5	518.8800	30.65	-11.40	19.25	46.00	-26.75	Peak	
6 *	669.2300	30.15	-8.61	21.54	46.00	-24.46	Peak	

Test Mode: TX 2402MHz_CH00_1Mbps_Adapter: GPE053A-V120040-Z

Horizontal

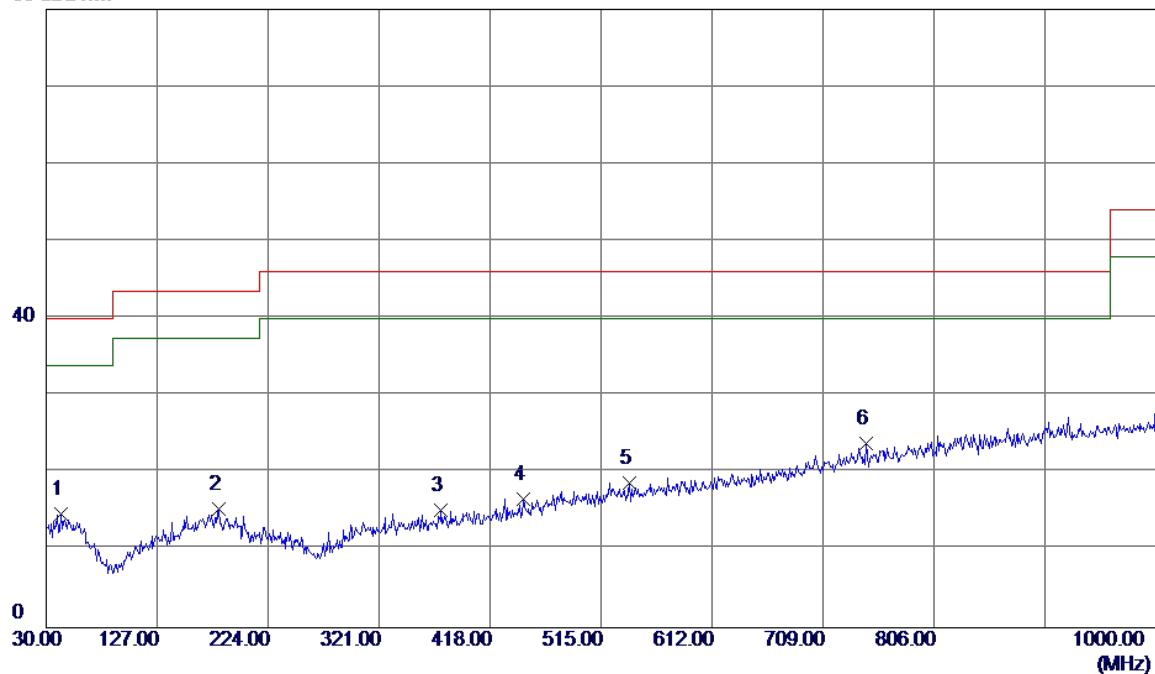


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	30.0000	30.70	-15.76	14.94	40.00	-25.06	Peak	
2	167.7400	29.07	-13.76	15.31	43.50	-28.19	Peak	
3	372.4100	29.35	-14.06	15.29	46.00	-30.71	Peak	
4	465.5300	29.93	-12.38	17.55	46.00	-28.45	Peak	
5	626.5500	30.33	-9.45	20.88	46.00	-25.12	Peak	
6 *	712.8800	30.49	-7.47	23.02	46.00	-22.98	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: GPE053A-V120040-Z

Vertical

80 dBuV/m

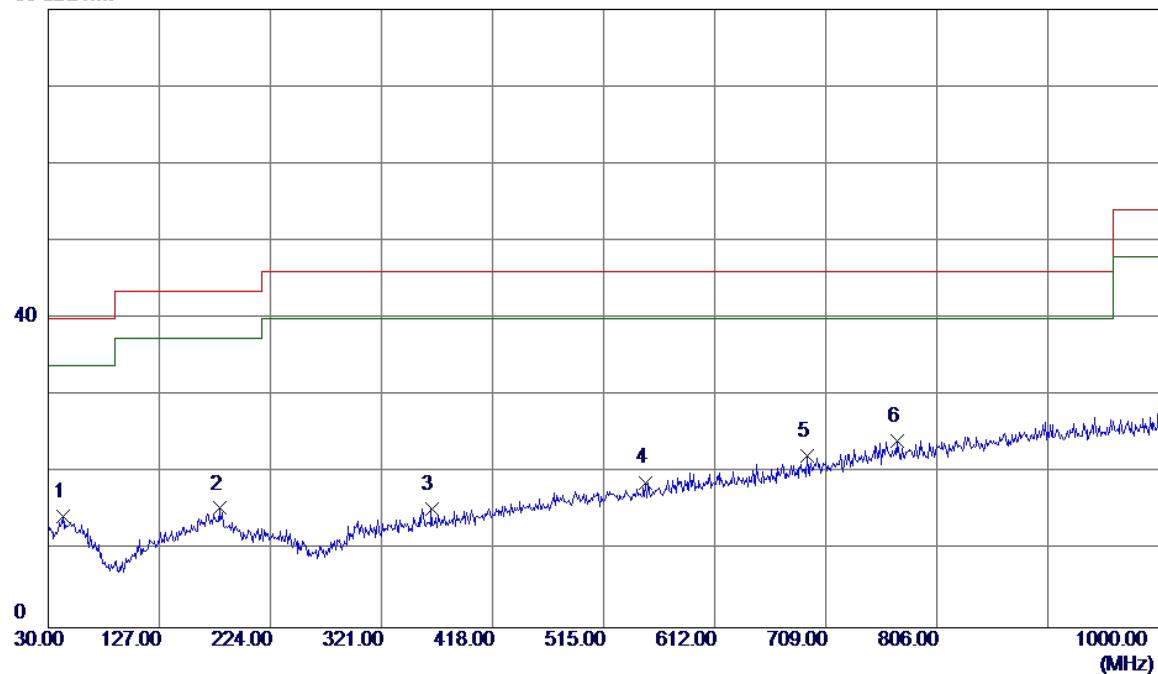


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	42.6100	28.90	-14.21	14.69	40.00	-25.31	Peak	
2	181.3200	28.83	-13.51	15.32	43.50	-28.18	Peak	
3	375.3200	29.27	-14.04	15.23	46.00	-30.77	Peak	
4	447.1000	29.46	-12.76	16.70	46.00	-29.30	Peak	
5	540.2199	29.82	-11.07	18.75	46.00	-27.25	Peak	
6 *	746.8300	30.47	-6.62	23.85	46.00	-22.15	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: GPE053A-V120040-Z

Horizontal

80 dBuV/m

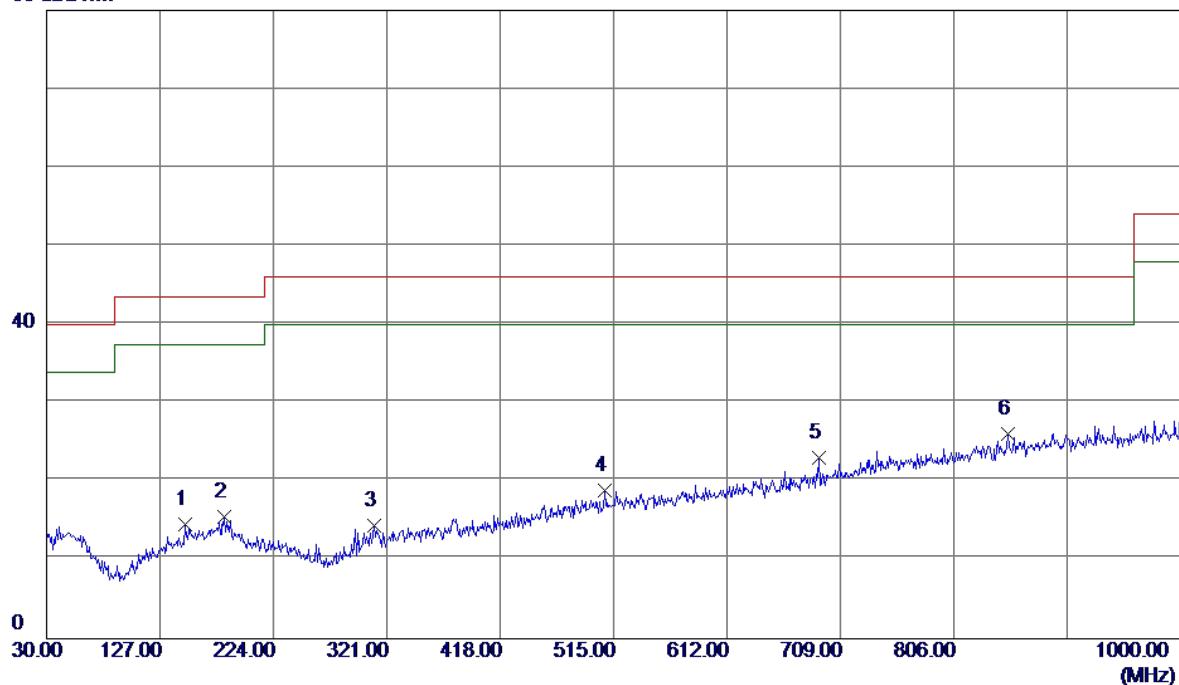


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	42.6100	28.64	-14.21	14.43	40.00	-25.57	Peak	
2	179.3800	28.85	-13.41	15.44	43.50	-28.06	Peak	
3	364.6500	29.49	-14.11	15.38	46.00	-30.62	Peak	
4	551.8600	29.67	-10.87	18.80	46.00	-27.20	Peak	
5	692.5100	30.26	-8.00	22.26	46.00	-23.74	Peak	
6 *	771.0800	30.30	-6.17	24.13	46.00	-21.87	Peak	

Test Mode: TX 2480MHz_CH78_1Mbps_Adapter: GPE053A-V120040-Z

Vertical

80 dBuV/m

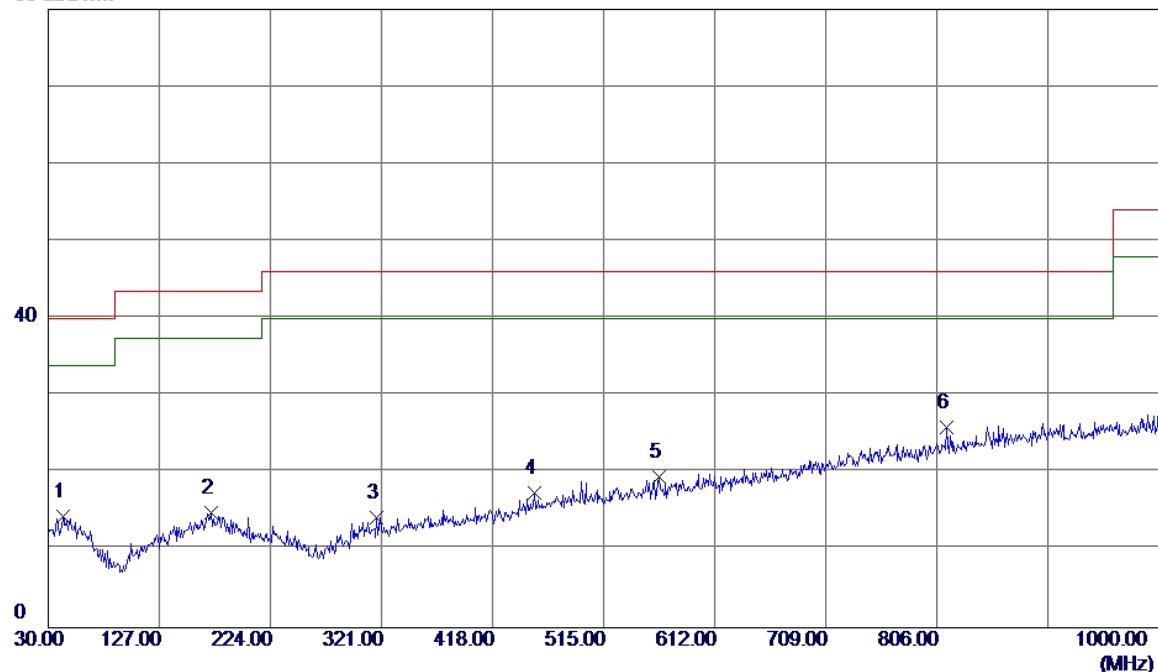


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	148.3400	29.31	-14.82	14.49	43.50	-29.01	Peak	
2	182.2899	29.15	-13.60	15.55	43.50	-27.95	Peak	
3	310.3299	29.13	-14.70	14.43	46.00	-31.57	Peak	
4	507.2400	30.40	-11.59	18.81	46.00	-27.19	Peak	
5	690.5700	31.04	-8.05	22.99	46.00	-23.01	Peak	
6 *	852.5600	30.52	-4.51	26.01	46.00	-19.99	Peak	

Test Mode: TX 2480MHz_CH78_1Mbps_Adapter: GPE053A-V120040-Z

Horizontal

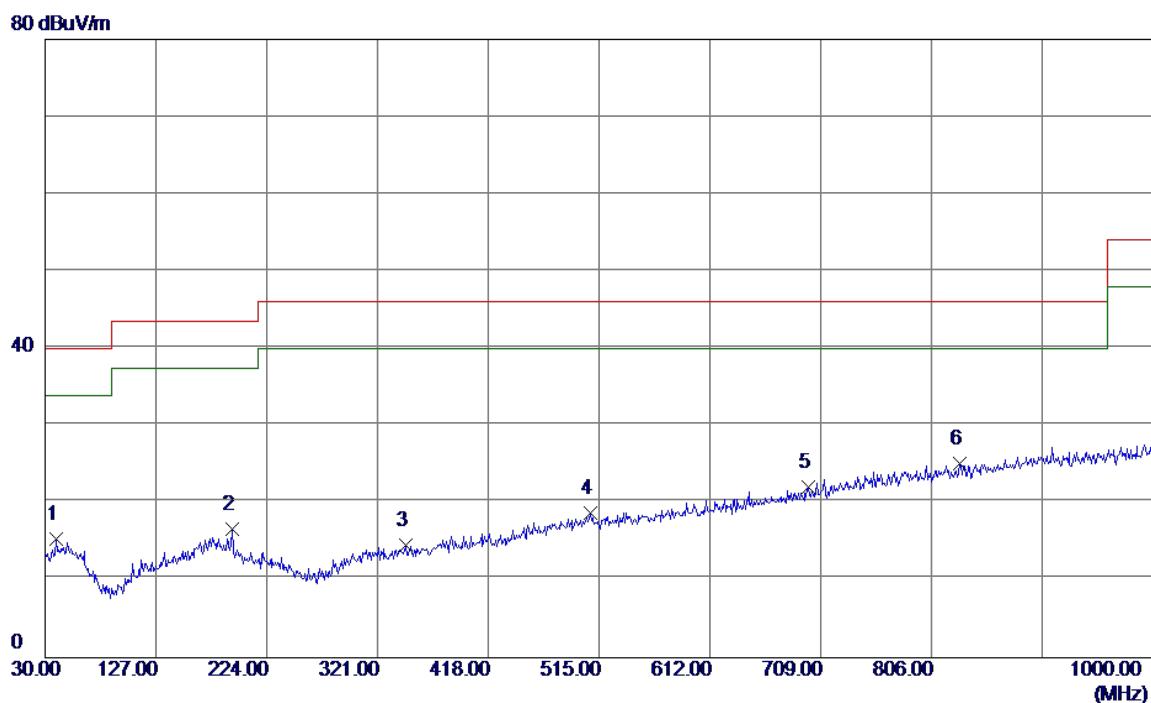
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	42.6100	28.54	-14.21	14.33	40.00	-25.67	Peak	
2	172.5900	28.46	-13.58	14.88	43.50	-28.62	Peak	
3	317.1200	28.86	-14.62	14.24	46.00	-31.76	Peak	
4	454.8600	30.02	-12.59	17.43	46.00	-28.57	Peak	
5	563.5000	30.09	-10.62	19.47	46.00	-26.53	Peak	
6 *	814.7300	31.20	-5.34	25.86	46.00	-20.14	Peak	

For Group 2 Antenna

Test Mode: TX 2402MHz _CH00_1Mbps_Adapter: S008ACM1200040

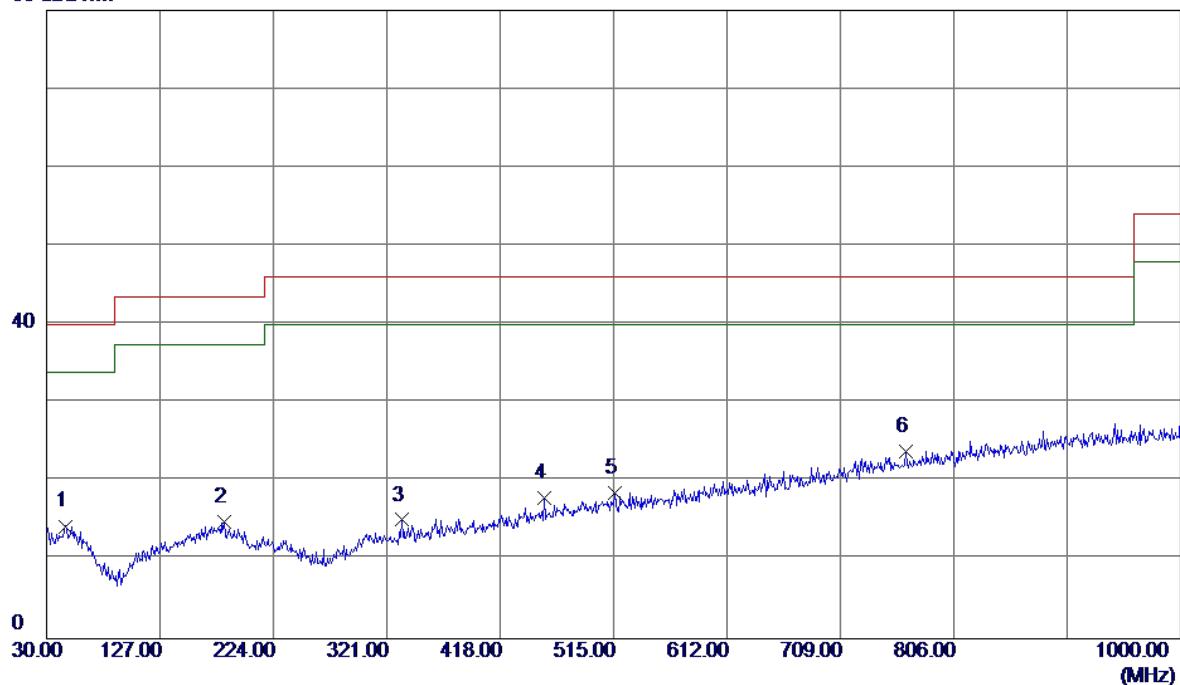
Vertical

No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin	Comment	
							Detector	
1	39.7000	29.90	-14.59	15.31	40.00	-24.69	Peak	
2	193.9299	31.22	-14.64	16.58	43.50	-26.92	Peak	
3	346.2200	28.83	-14.25	14.58	46.00	-31.42	Peak	
4	507.2400	30.25	-11.59	18.66	46.00	-27.34	Peak	
5	698.3300	29.91	-7.84	22.07	46.00	-23.93	Peak	
6 *	831.2199	30.13	-4.97	25.16	46.00	-20.84	Peak	

Test Mode: TX 2402MHz_CH00_1Mbps_Adapter: S008ACM1200040

Horizontal

80 dBuV/m

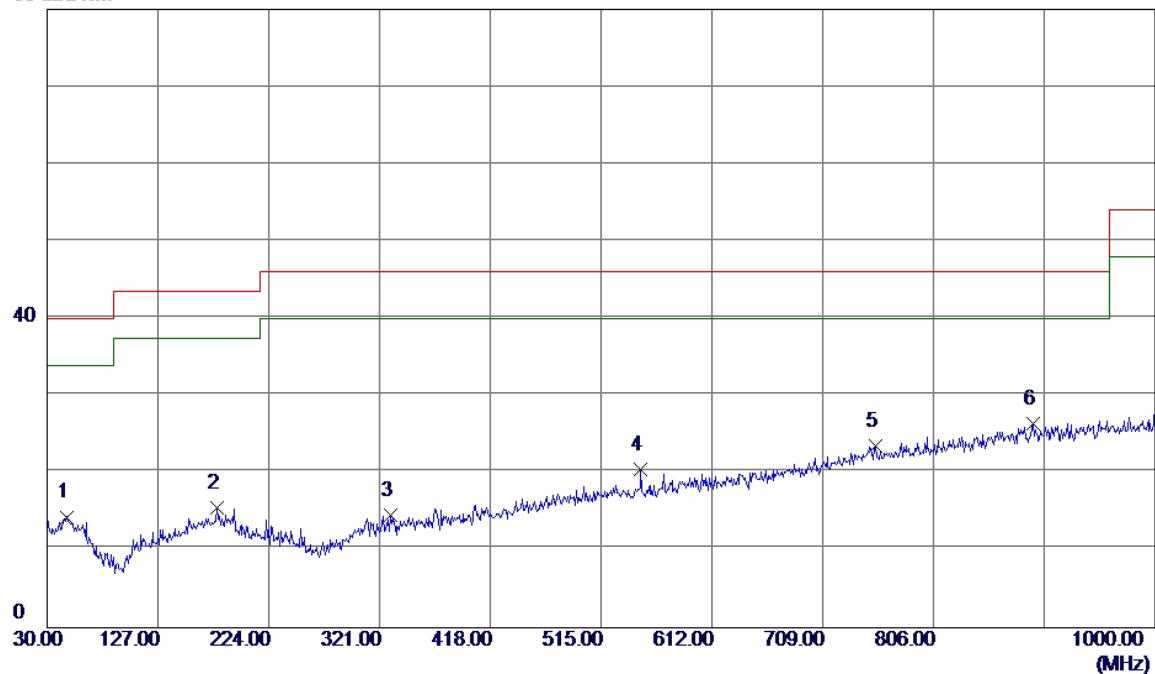


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	46.4900	27.93	-13.61	14.32	40.00	-25.68	Peak	
2	182.2899	28.42	-13.60	14.82	43.50	-28.68	Peak	
3	333.6099	29.53	-14.41	15.12	46.00	-30.88	Peak	
4	455.8300	30.46	-12.57	17.89	46.00	-28.11	Peak	
5	515.9699	30.08	-11.45	18.63	46.00	-27.37	Peak	
6 *	765.2600	30.14	-6.27	23.87	46.00	-22.13	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: S008ACM1200040

Vertical

80 dBuV/m

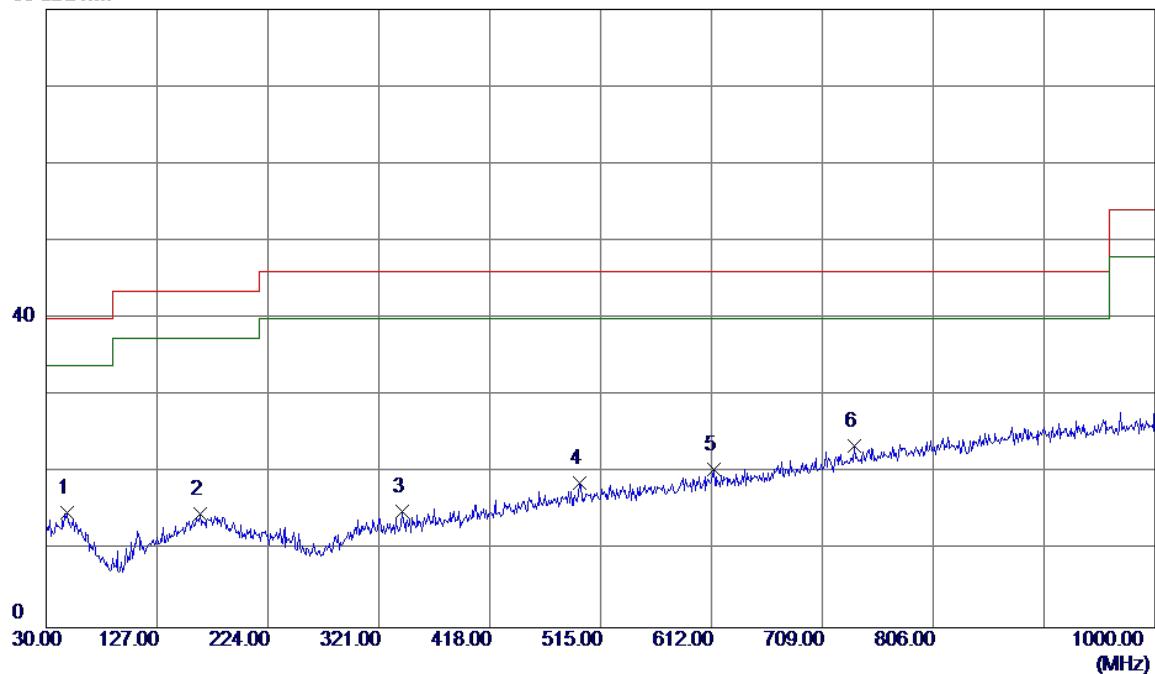


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
								Comment
1	47.4600	28.07	-13.75	14.32	40.00	-25.68	Peak	
2	178.4100	28.96	-13.44	15.52	43.50	-27.98	Peak	
3	330.7000	28.96	-14.45	14.51	46.00	-31.49	Peak	
4	549.9200	31.40	-10.92	20.48	46.00	-25.52	Peak	
5	755.5600	29.89	-6.44	23.45	46.00	-22.55	Peak	
6 *	893.3000	30.18	-3.84	26.34	46.00	-19.66	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: S008ACM1200040

Horizontal

80 dBuV/m

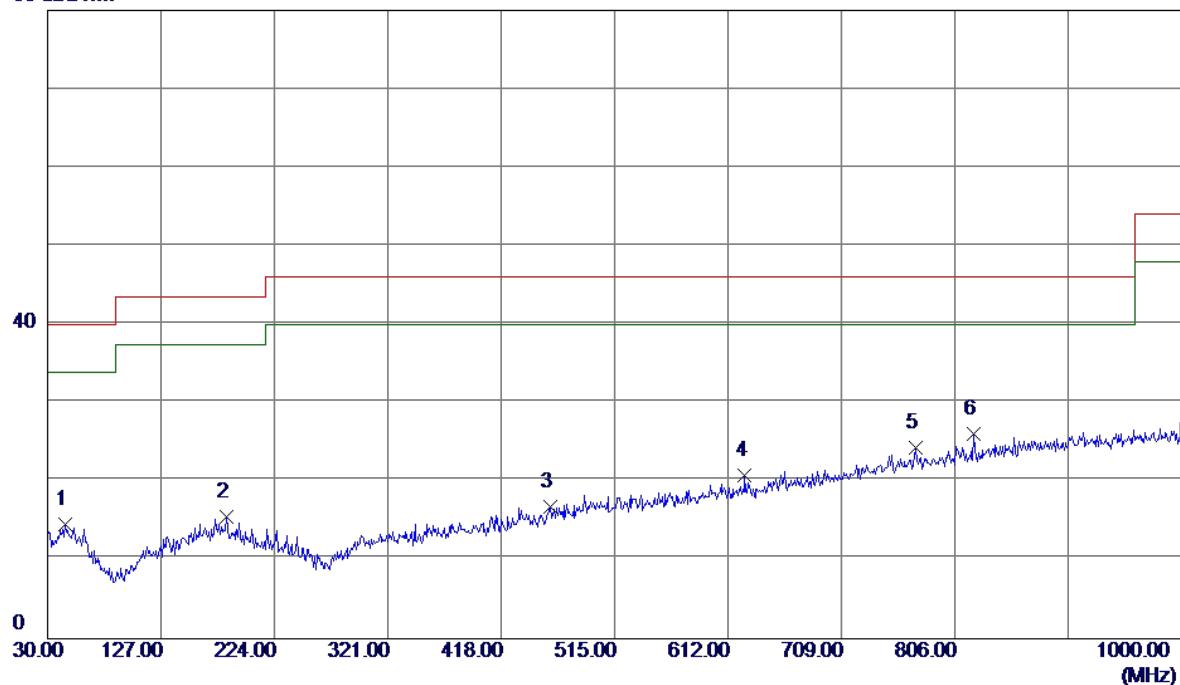


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	48.4300	28.75	-13.92	14.83	40.00	-25.17	Peak	
2	164.8300	28.71	-13.92	14.79	43.50	-28.71	Peak	
3	341.3700	29.32	-14.31	15.01	46.00	-30.99	Peak	
4	496.5700	30.47	-11.77	18.70	46.00	-27.30	Peak	
5	613.9400	30.14	-9.63	20.51	46.00	-25.49	Peak	
6 *	737.1300	30.38	-6.86	23.52	46.00	-22.48	Peak	

Test Mode: TX 2480MHz_CH78_1Mbps_Adapter: S008ACM1200040

Vertical

80 dBuV/m

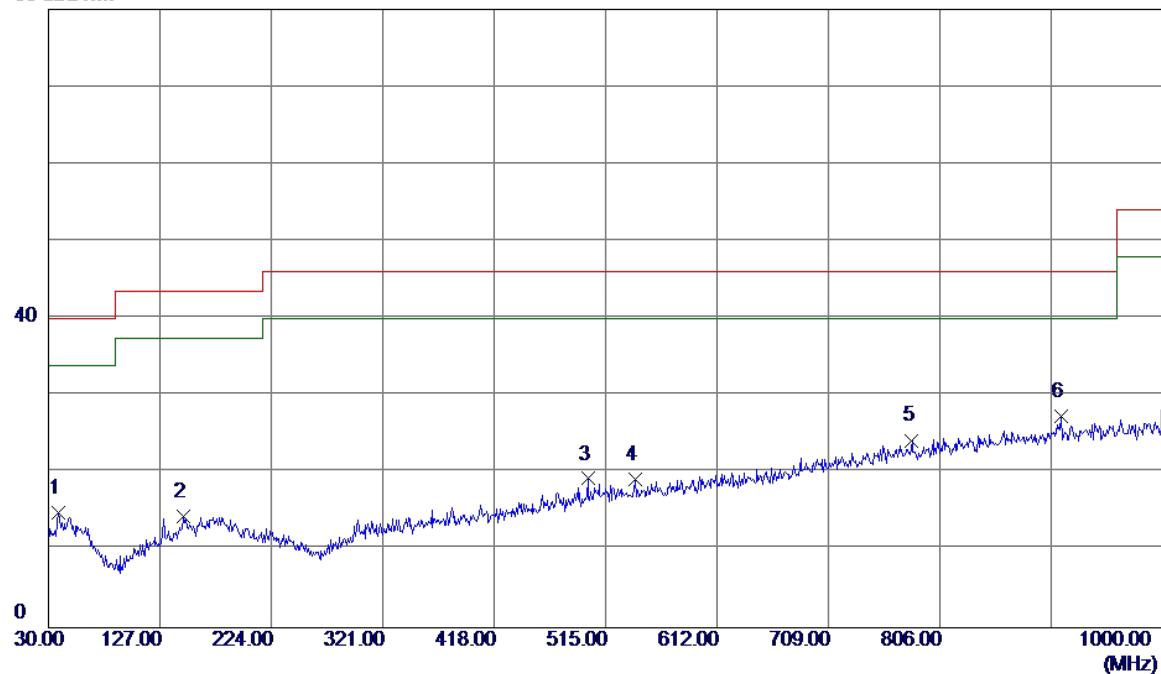


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	45.5200	28.29	-13.68	14.61	40.00	-25.39	Peak	
2	183.2600	29.27	-13.68	15.59	43.50	-27.91	Peak	
3	459.7100	29.23	-12.50	16.73	46.00	-29.27	Peak	
4	626.5500	30.22	-9.45	20.77	46.00	-25.23	Peak	
5	773.0200	30.42	-6.14	24.28	46.00	-21.72	Peak	
6 *	822.4900	31.18	-5.17	26.01	46.00	-19.99	Peak	

Test Mode: TX 2480MHz _CH78_1Mbps _Adapter: S008ACM1200040

Horizontal

80 dBuV/m

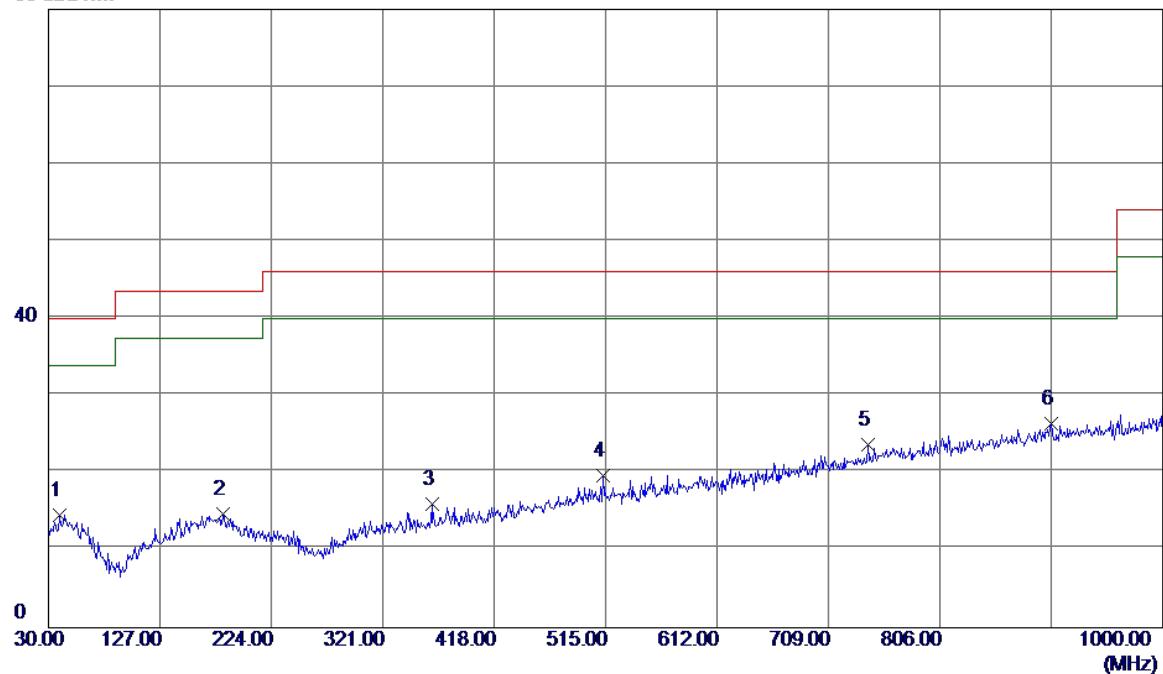


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	38.7300	29.56	-14.74	14.82	40.00	-25.18	Peak	
2	147.3700	29.33	-14.88	14.45	43.50	-29.05	Peak	
3	499.4800	30.99	-11.71	19.28	46.00	-26.72	Peak	
4	541.1900	30.27	-11.05	19.22	46.00	-26.78	Peak	
5	781.7500	30.23	-5.99	24.24	46.00	-21.76	Peak	
6 *	911.7300	30.93	-3.56	27.37	46.00	-18.63	Peak	

Test Mode: TX 2402MHz_CH00_1Mbps_Adapter: GPE053A-V120040-Z

Vertical

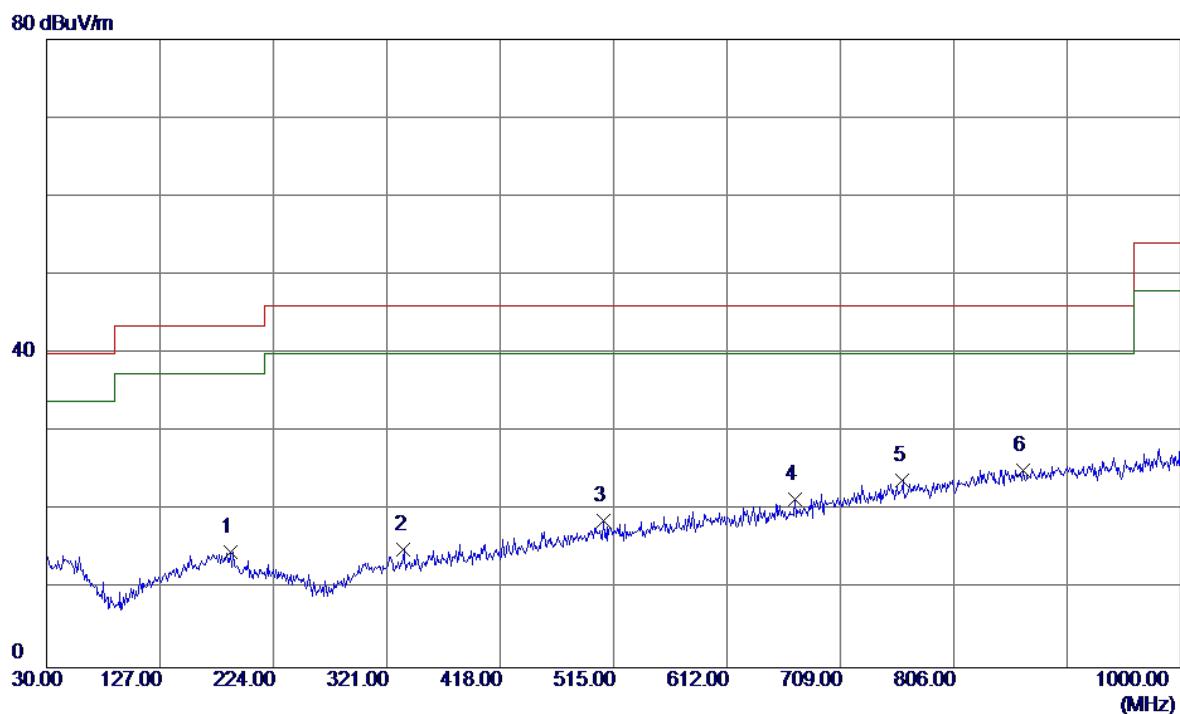
80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	39.7000	29.22	-14.59	14.63	40.00	-25.37	Peak	
2	182.2899	28.38	-13.60	14.78	43.50	-28.72	Peak	
3	363.6800	30.19	-14.12	16.07	46.00	-29.93	Peak	
4	513.0600	31.22	-11.49	19.73	46.00	-26.27	Peak	
5	743.9200	30.32	-6.69	23.63	46.00	-22.37	Peak	
6 *	903.0000	30.06	-3.69	26.37	46.00	-19.63	Peak	

Test Mode: TX 2402MHz_CH00_1Mbps_Adapter: GPE053A-V120040-Z

Horizontal

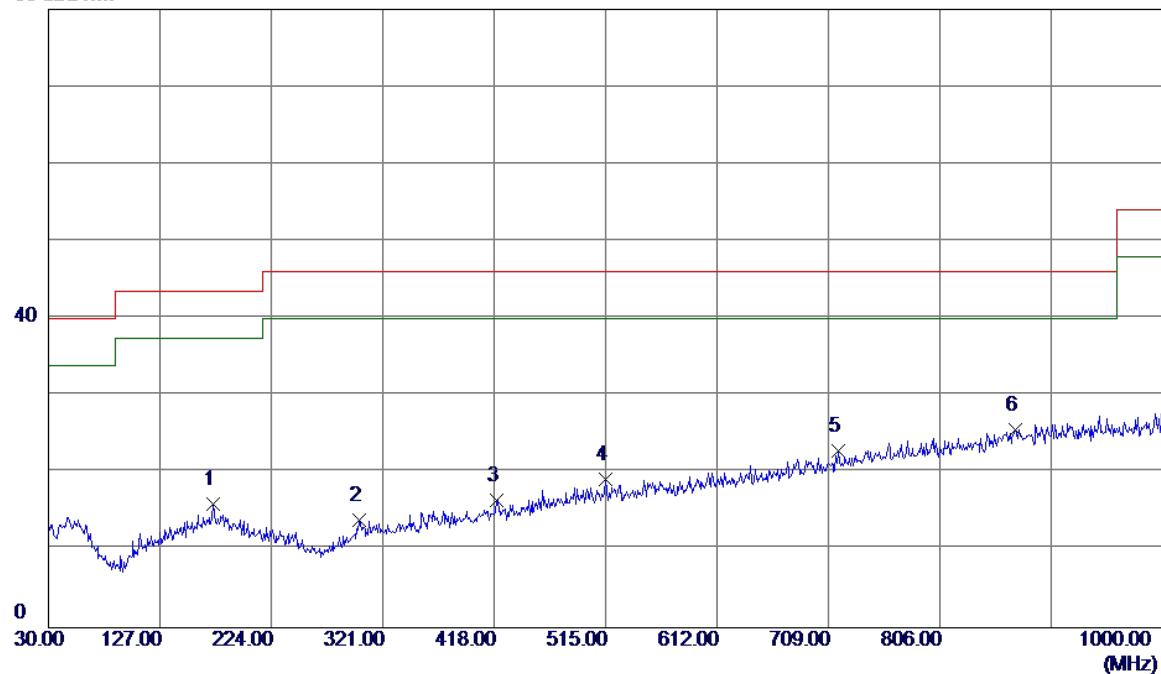


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	187.1400	28.75	-14.01	14.74	43.50	-28.76	Peak	
2	335.5500	29.39	-14.39	15.00	46.00	-31.00	Peak	
3	506.2700	30.29	-11.60	18.69	46.00	-27.31	Peak	
4	670.2000	29.98	-8.58	21.40	46.00	-24.60	Peak	
5	762.3500	30.14	-6.32	23.82	46.00	-22.18	Peak	
6 *	865.1700	29.46	-4.30	25.16	46.00	-20.84	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: GPE053A-V120040-Z

Vertical

80 dBuV/m

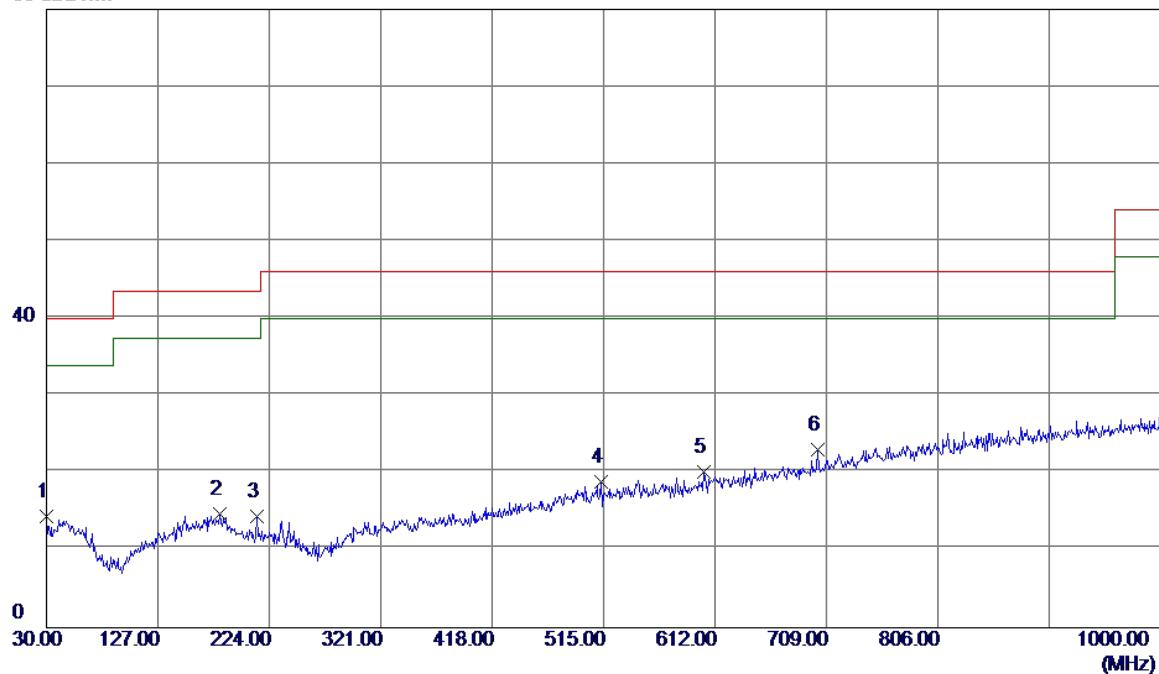


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
								Peak
1	173.5600	29.54	-13.55	15.99	43.50	-27.51	Peak	
2	300.6300	28.71	-14.82	13.89	46.00	-32.11	Peak	
3	419.9400	29.93	-13.41	16.52	46.00	-29.48	Peak	
4	515.0000	30.71	-11.46	19.25	46.00	-26.75	Peak	
5	717.7300	30.19	-7.35	22.84	46.00	-23.16	Peak	
6 *	871.9600	29.82	-4.19	25.63	46.00	-20.37	Peak	

Test Mode: TX 2441MHz_CH39_1Mbps_Adapter: GPE053A-V120040-Z

Horizontal

80 dBuV/m

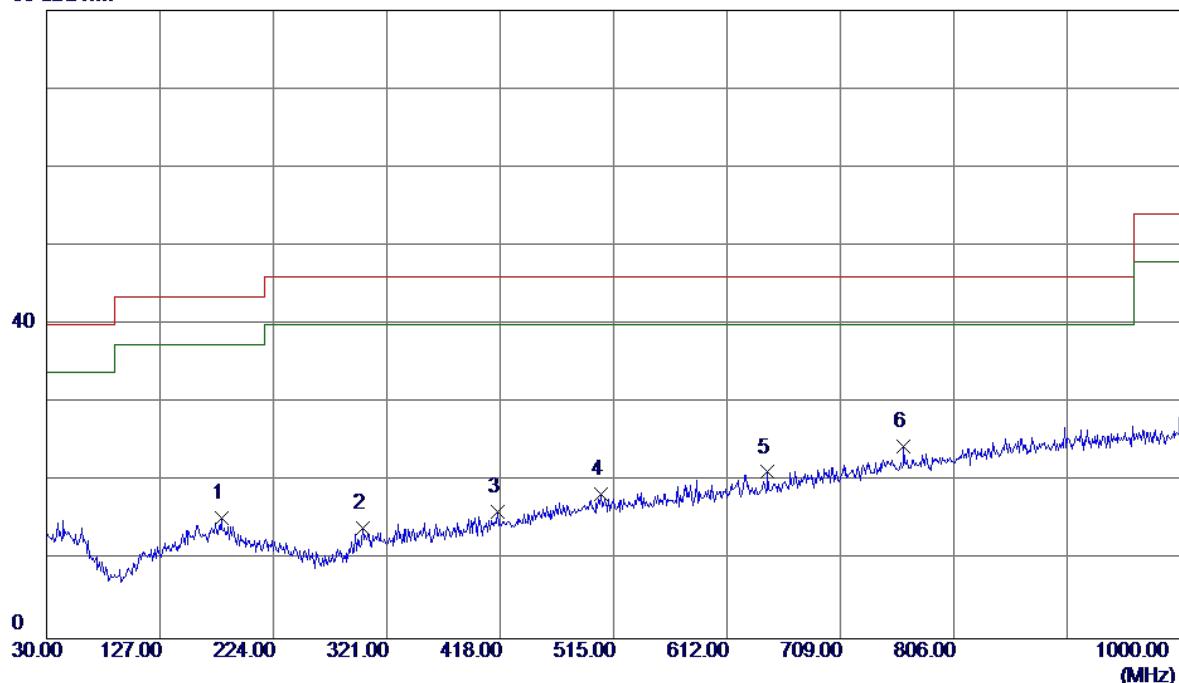


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	30.0000	30.18	-15.76	14.42	40.00	-25.58	Peak	
2	181.3200	28.24	-13.51	14.73	43.50	-28.77	Peak	
3	213.3300	29.85	-15.49	14.36	43.50	-29.14	Peak	
4	513.0600	30.35	-11.49	18.86	46.00	-27.14	Peak	
5	602.3000	29.93	-9.80	20.13	46.00	-25.87	Peak	
6 *	701.2400	30.74	-7.77	22.97	46.00	-23.03	Peak	

Test Mode: TX 2480MHz_CH78_1Mbps_Adapter: GPE053A-V120040-Z

Vertical

80 dBuV/m

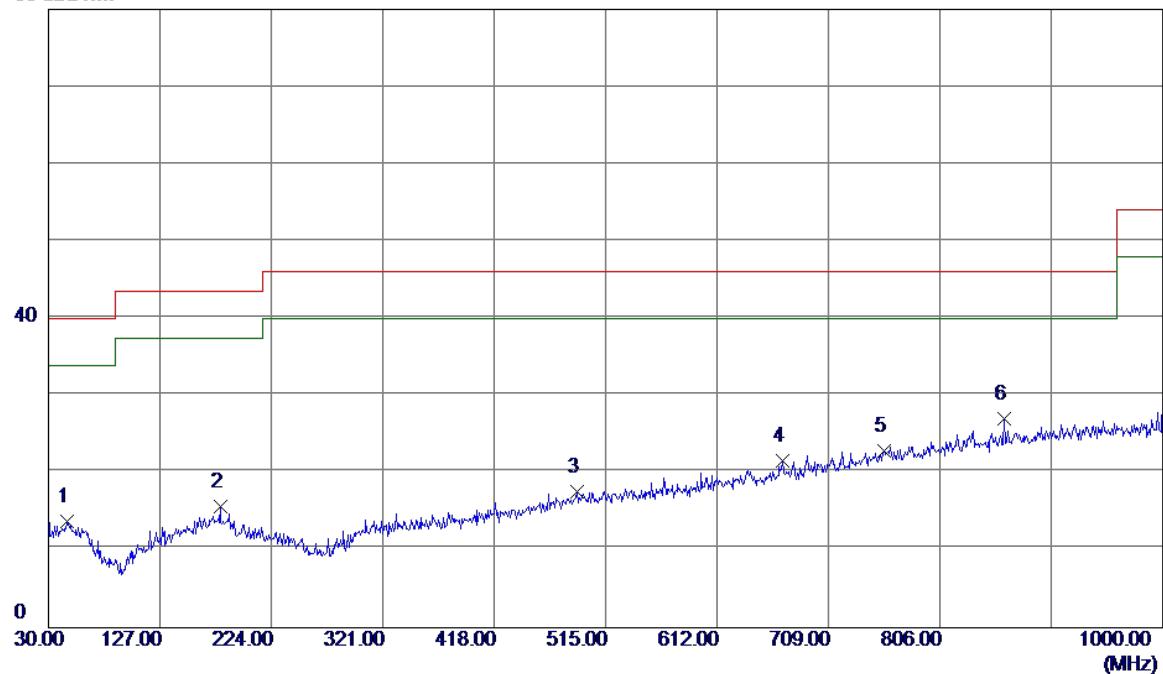


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	179.3800	28.74	-13.41	15.33	43.50	-28.17	Peak	
2	300.6300	28.87	-14.82	14.05	46.00	-31.95	Peak	
3	416.0600	29.70	-13.50	16.20	46.00	-29.80	Peak	
4	504.3300	30.08	-11.63	18.45	46.00	-27.55	Peak	
5	646.9200	30.36	-9.16	21.20	46.00	-24.80	Peak	
6 *	763.3200	30.73	-6.30	24.43	46.00	-21.57	Peak	

Test Mode: TX 2480MHz_CH78_1Mbps_Adapter: GPE053A-V120040-Z

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	46.4900	27.34	-13.61	13.73	40.00	-26.27	Peak	
2	179.3800	29.14	-13.41	15.73	43.50	-27.77	Peak	
3	489.7800	29.47	-11.90	17.57	46.00	-28.43	Peak	
4	669.2300	30.22	-8.61	21.61	46.00	-24.39	Peak	
5	757.5000	29.29	-6.41	22.88	46.00	-23.12	Peak	
6 *	862.2600	31.37	-4.35	27.02	46.00	-18.98	Peak	

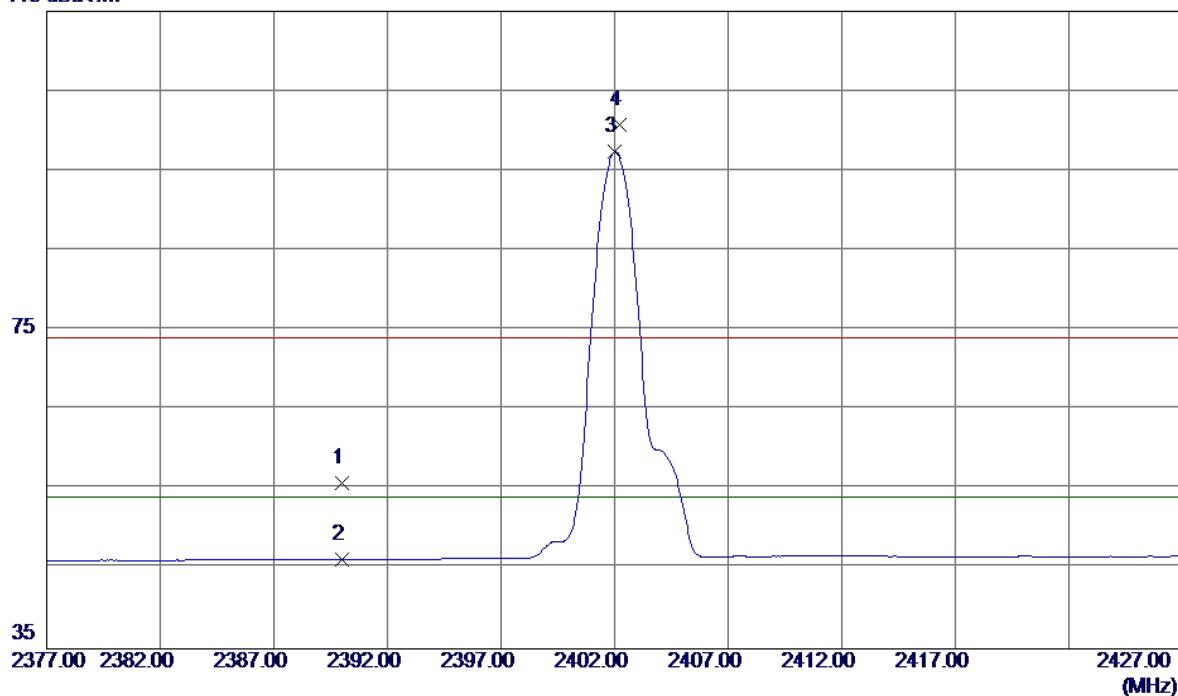
APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

For Group 1 Antenna

Test Mode : TX 2402MHz _CH00_1Mbps

Vertical

115 dBuV/m

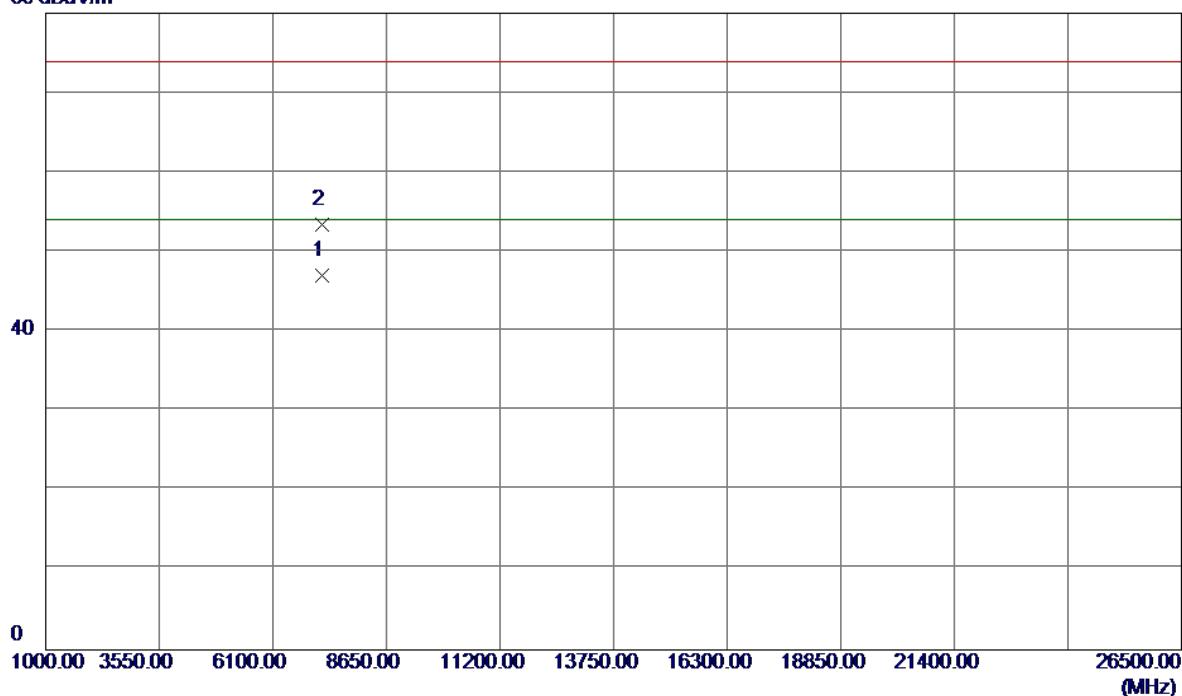


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin	Detector	Comment
1	2390.0000	22.69	33.06	55.75	74.00	-18.25	Peak	
2	2390.0000	13.11	33.06	46.17	54.00	-7.83	AVG	
3 *	2402.0000	64.25	33.10	97.35	54.00	43.35	AVG	No Limit
4	2402.2000	67.72	33.10	100.82	74.00	26.82	Peak	No Limit

Test Mode : TX 2402MHz _CH00_1Mbps

Vertical

80 dBuV/m

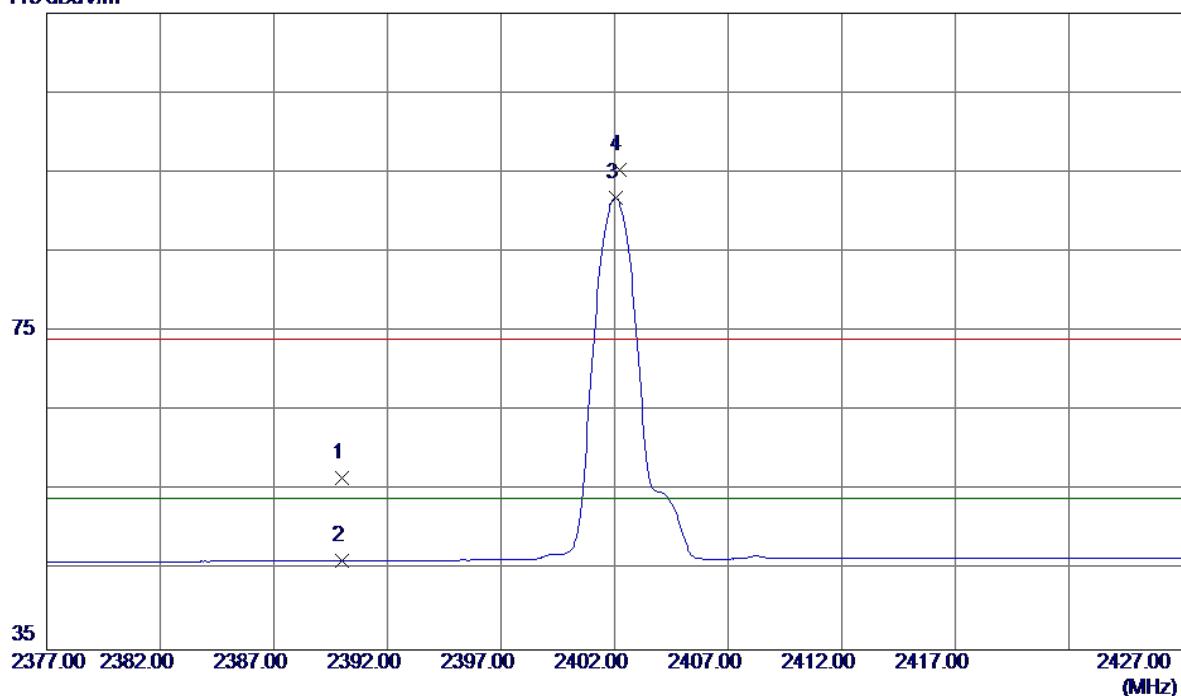


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin Detector	Comment
1 *	7206.0540	33.81	13.20	47.01	54.00	-6.99	AVG
2	7206.4040	40.20	13.20	53.40	74.00	-20.60	Peak

Test Mode : TX 2402MHz _CH00_1Mbps

Horizontal

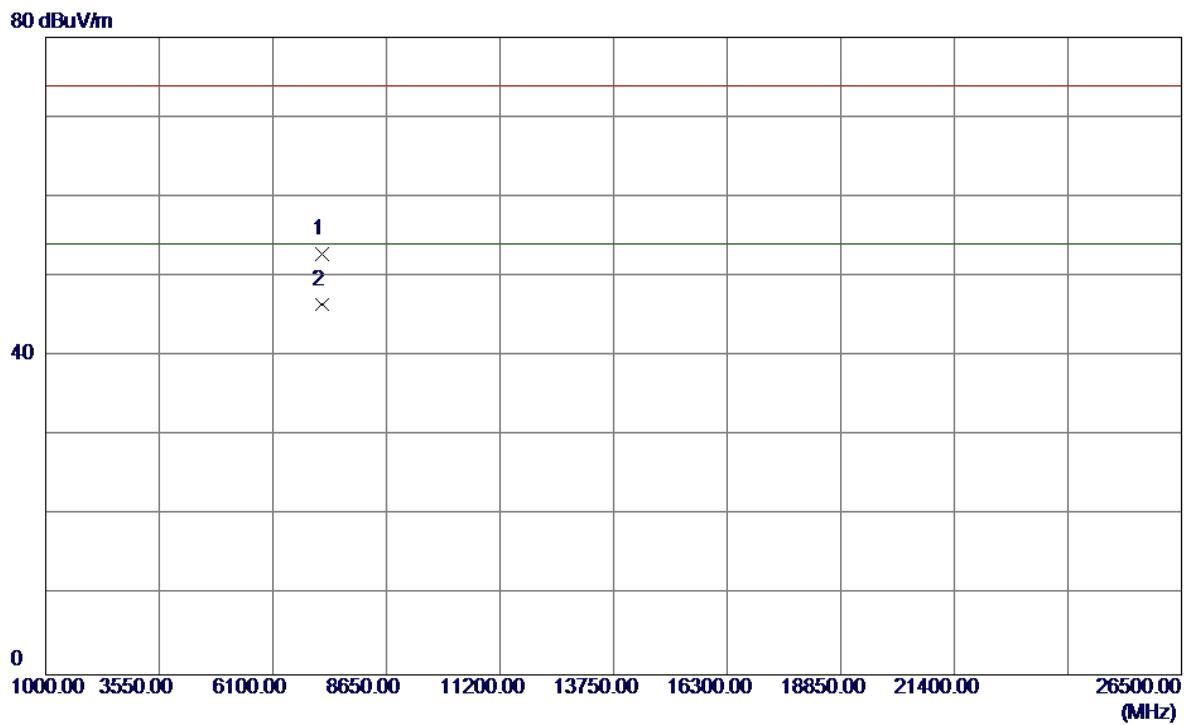
115 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dB			
1	2390.0000	23.56	33.06	56.62	74.00	-17.38	Peak	
2	2390.0000	13.11	33.06	46.17	54.00	-7.83	AVG	
3 *	2402.0500	58.67	33.10	91.77	54.00	37.77	AVG	No Limit
4	2402.2000	62.15	33.10	95.25	74.00	21.25	Peak	No Limit

Test Mode : TX 2402MHz _CH00_1Mbps

Horizontal

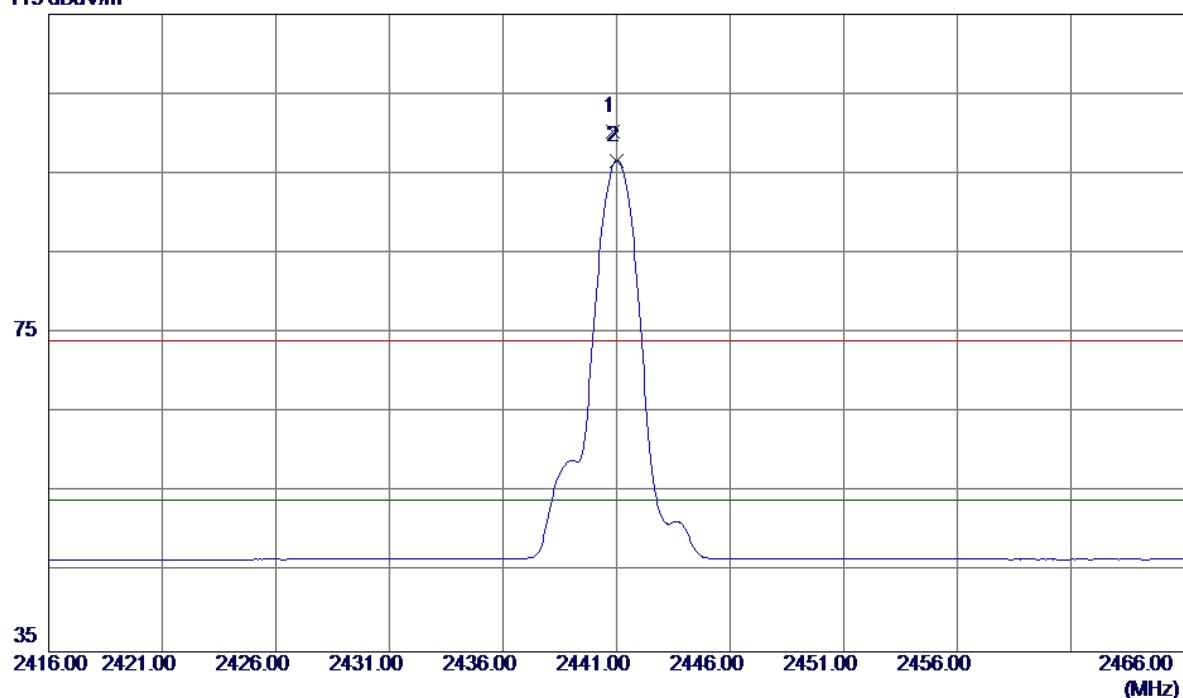


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	7205.4800	39.60	13.20	52.80	74.00	-21.20	Peak	
2 *	7205.9200	33.28	13.20	46.48	54.00	-7.52	AVG	

Test Mode : TX 2441MHz _CH39_1Mbps

Vertical

115 dBuV/m

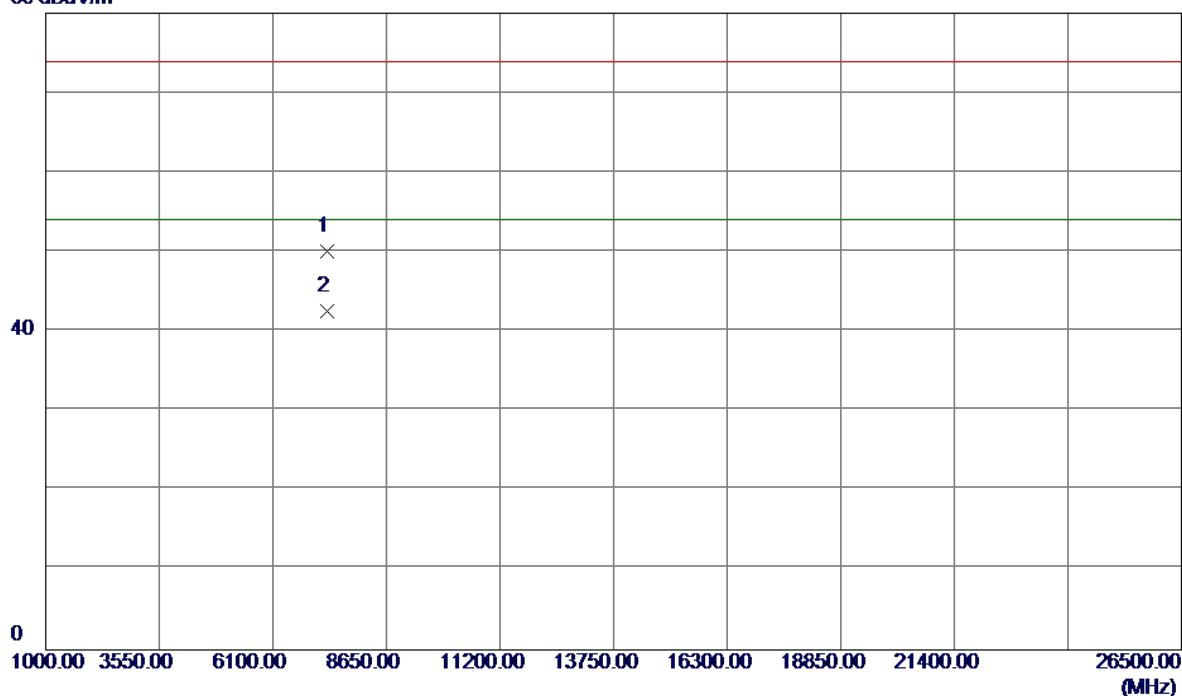


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin Detector	Comment
1	2440.8500	67.00	33.25	100.25	74.00	26.25	Peak No Limit
2 *	2441.0000	63.42	33.25	96.67	54.00	42.67	AVG No Limit

Test Mode :	TX 2441MHz _CH39_1Mbps
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Vertical

80 dBuV/m

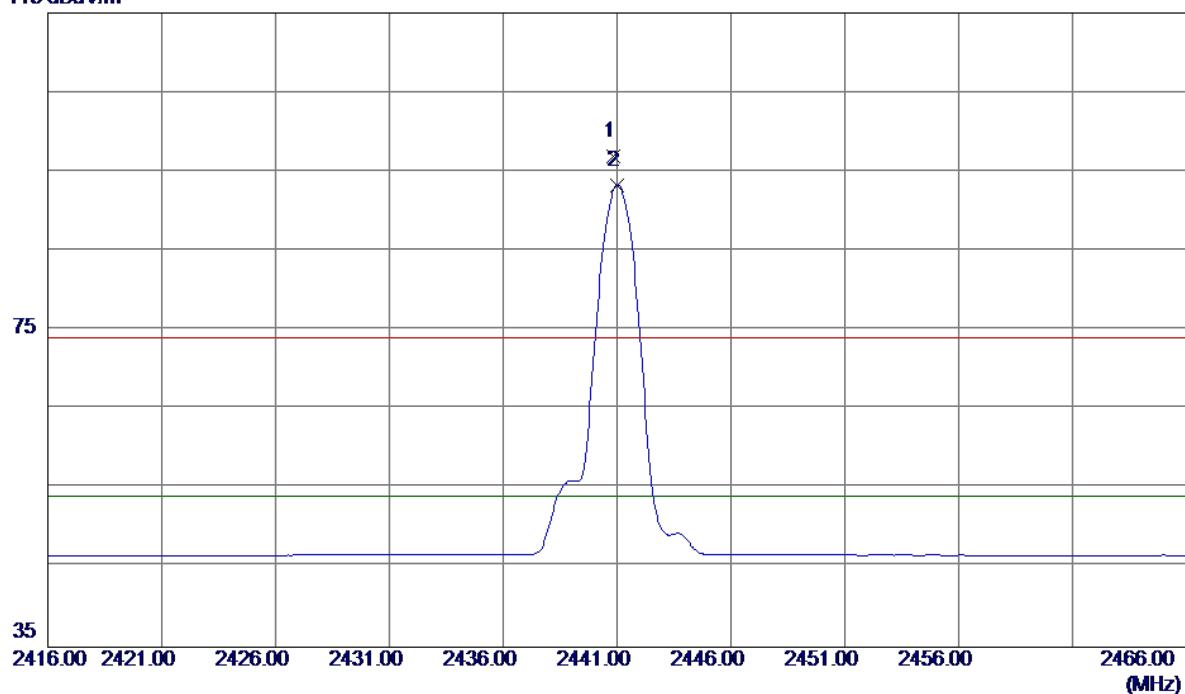


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin Detector	Comment
1	7322.7320	36.64	13.39	50.03	74.00	-23.97	Peak
2 *	7323.0180	29.24	13.39	42.63	54.00	-11.37	AVG

Test Mode : TX 2441MHz _CH39_1Mbps

Horizontal

115 dBuV/m

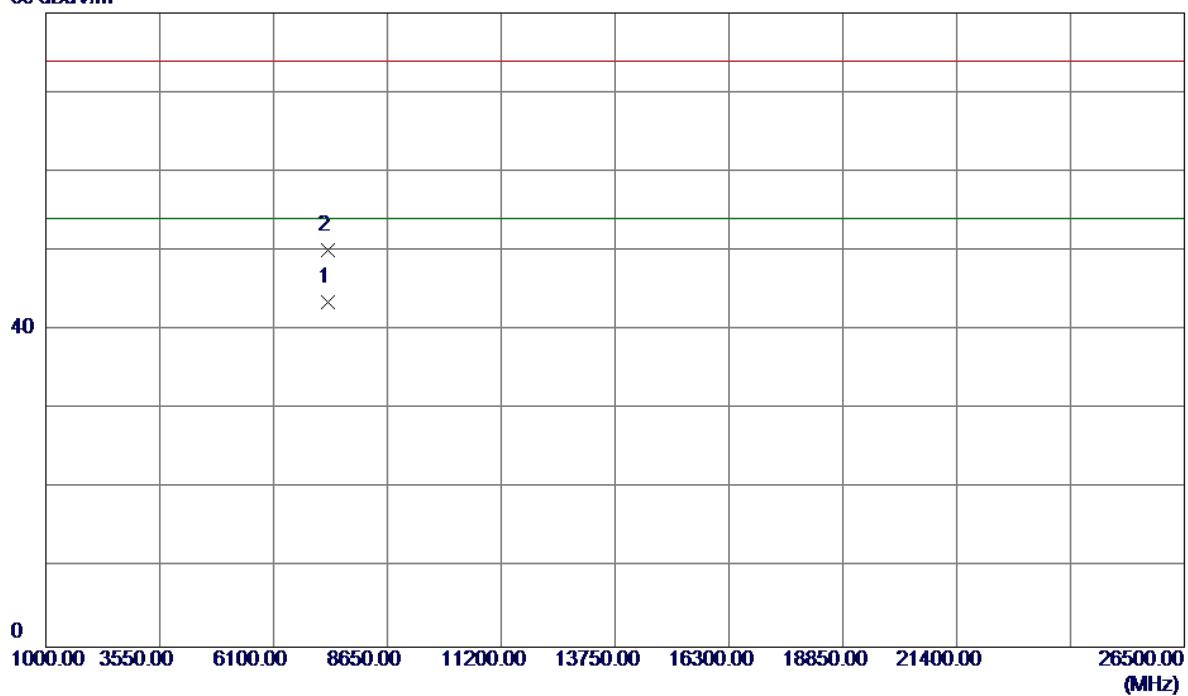


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2440.8500	63.60	33.25	96.85	74.00	22.85	Peak	No Limit
2 *	2441.0000	60.00	33.25	93.25	54.00	39.25	AVG	No Limit

Test Mode : TX 2441MHz _CH39_1Mbps

Horizontal

80 dBuV/m

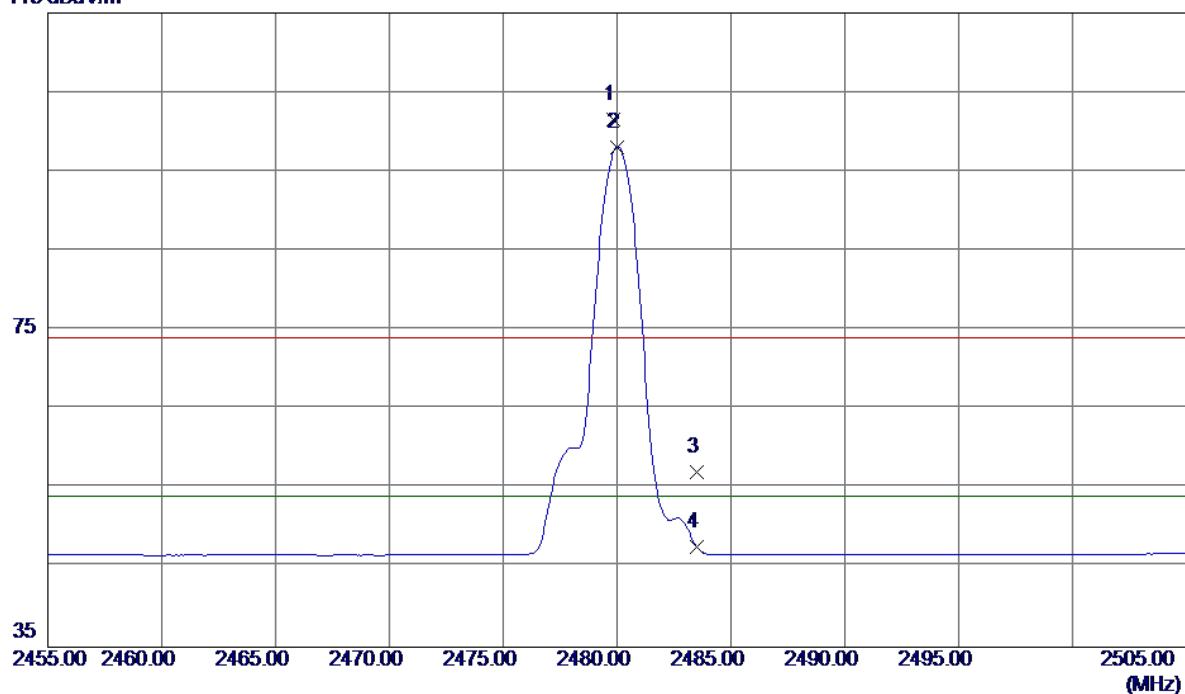


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1 *	7322.9000	30.19	13.39	43.58	54.00	-10.42	AVG	
2	7323.4750	36.71	13.39	50.10	74.00	-23.90	Peak	

Test Mode : TX 2480MHz _CH78_1Mbps

Vertical

115 dBuV/m

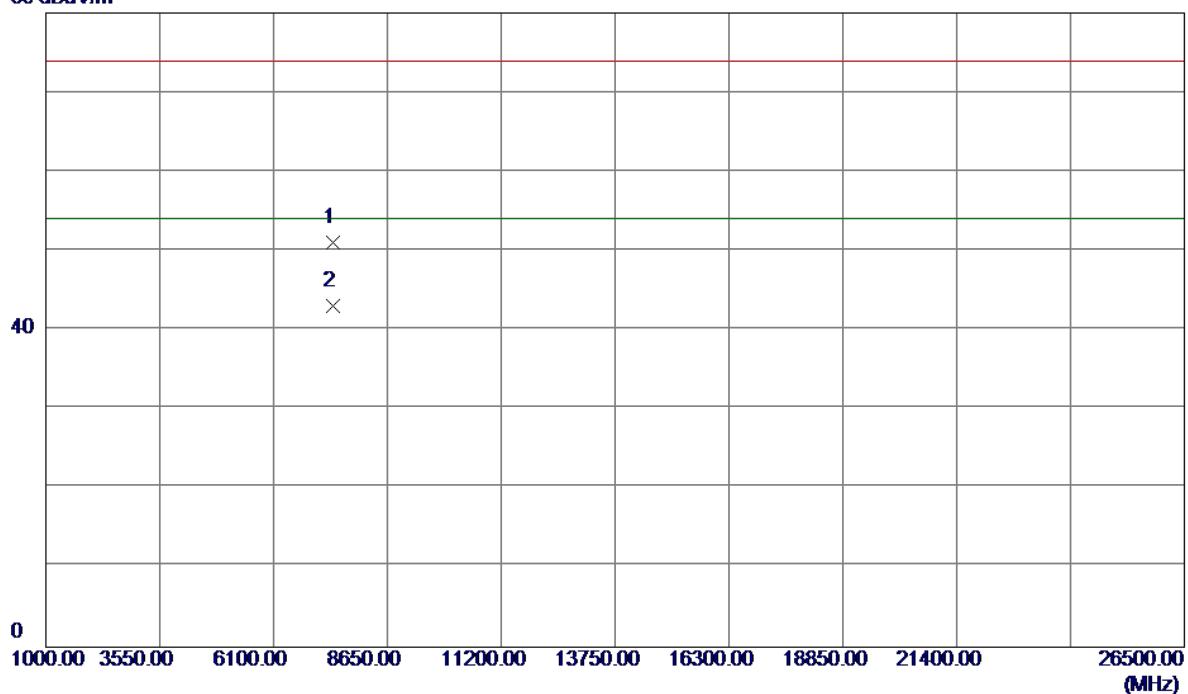


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2479.8500	68.19	33.39	101.58	74.00	27.58	Peak	No Limit
2 *	2480.0000	64.67	33.39	98.06	54.00	44.06	AVG	No Limit
3	2483.5000	23.61	33.41	57.02	74.00	-16.98	Peak	
4	2483.5000	14.24	33.41	47.65	54.00	-6.35	AVG	

Test Mode : TX 2480MHz _CH78_1Mbps

Vertical

80 dBuV/m

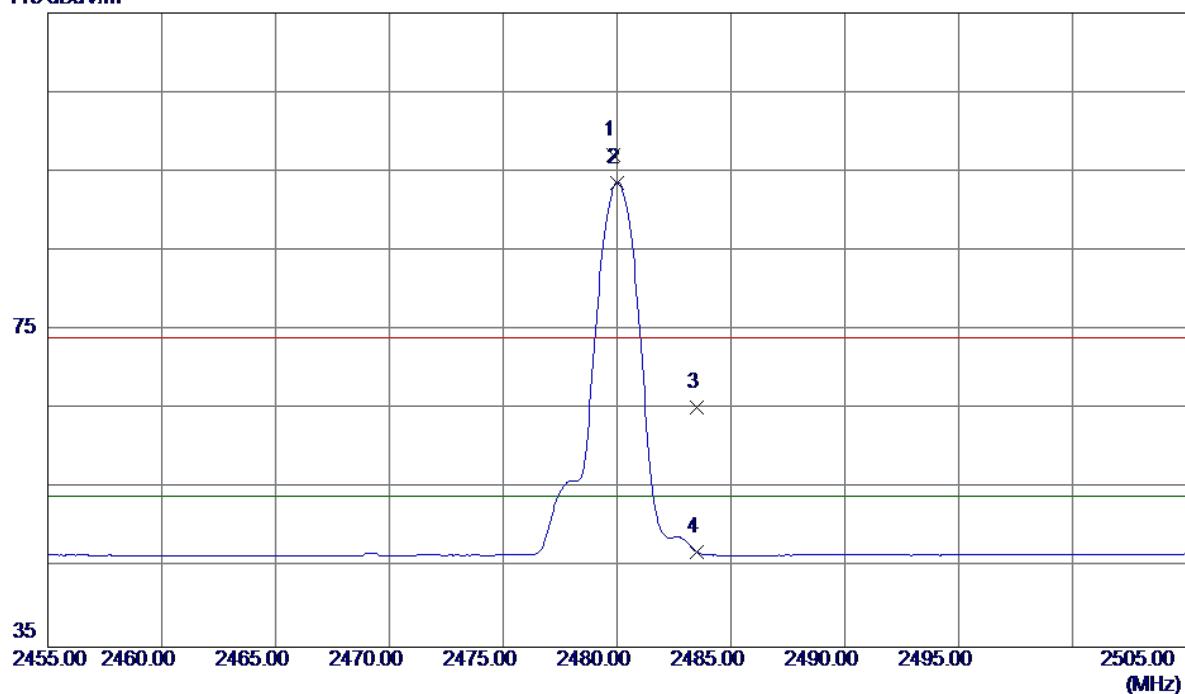


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	7439.6300	37.50	13.59	51.09	74.00	-22.91	Peak	
2 *	7439.9260	29.43	13.59	43.02	54.00	-10.98	AVG	

Test Mode : TX 2480MHz _CH78_1Mbps

Horizontal

115 dBuV/m

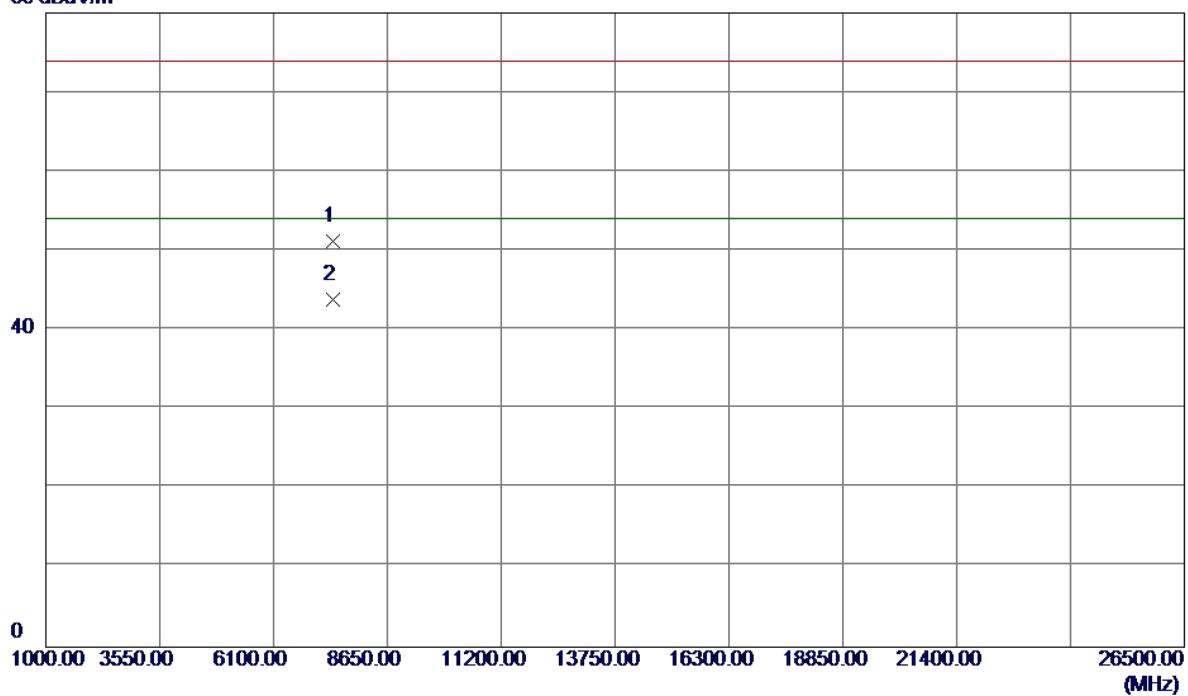


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	2479.8500	63.73	33.39	97.12	74.00	23.12	Peak	No Limit
2 *	2480.0000	60.18	33.39	93.57	54.00	39.57	AVG	No Limit
3	2483.5000	31.90	33.41	65.31	74.00	-8.69	Peak	
4	2483.5000	13.58	33.41	46.99	54.00	-7.01	AVG	

Test Mode :	TX 2480MHz _CH78_1Mbps
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Horizontal

80 dBuV/m

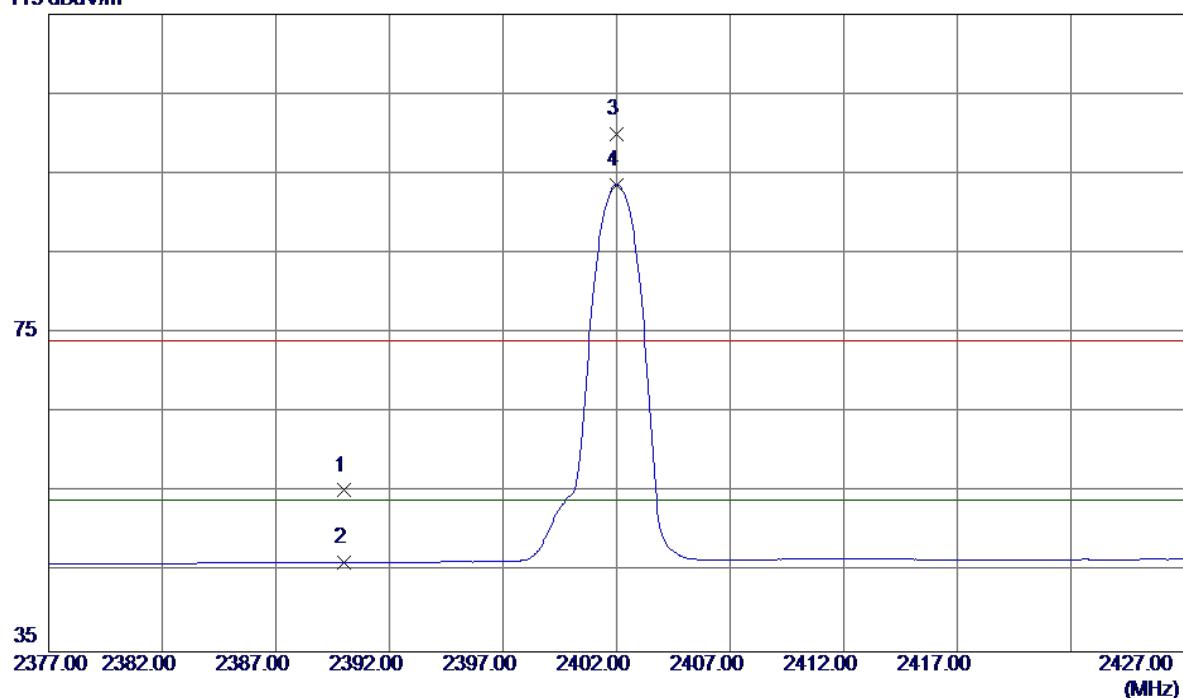


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	7439.3250	37.65	13.58	51.23	74.00	-22.77	Peak	
2 *	7440.0200	30.33	13.59	43.92	54.00	-10.08	AVG	

Test Mode : TX 2402MHz _CH00_3Mbps

Vertical

115 dBuV/m

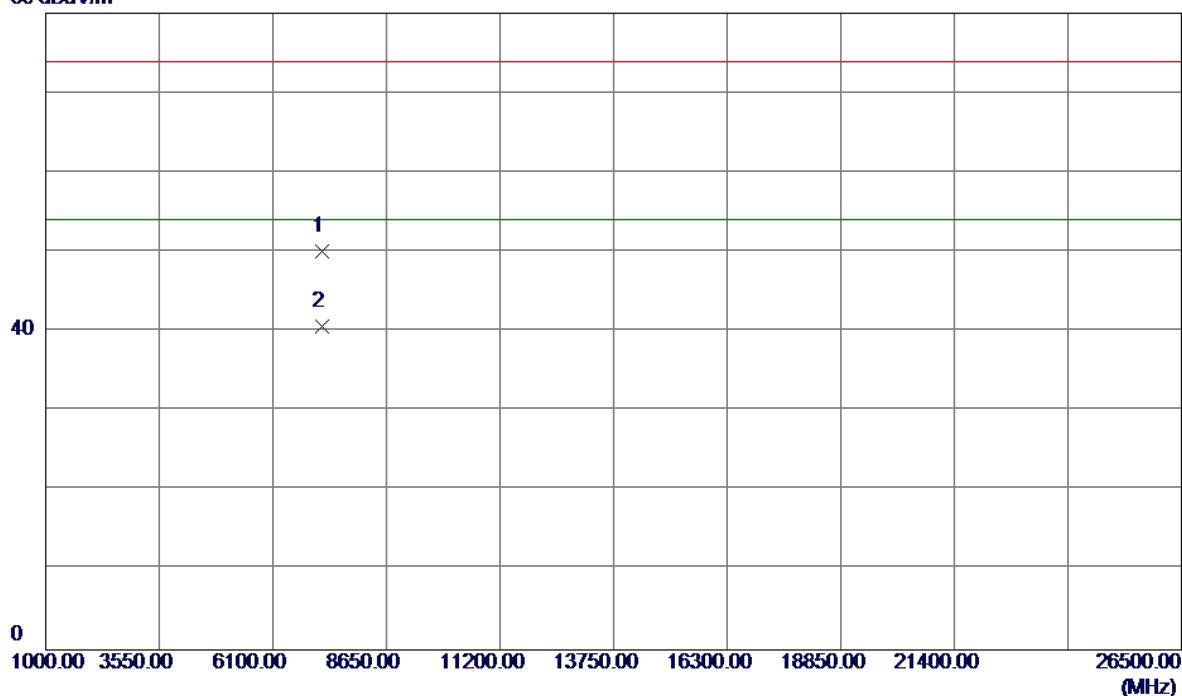


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dB			
1	2390.0000	22.18	33.06	55.24	74.00	-18.76	Peak	
2	2390.0000	13.13	33.06	46.19	54.00	-7.81	AVG	
3	2402.0000	66.80	33.10	99.90	74.00	25.90	Peak	No Limit
4 *	2402.0000	60.49	33.10	93.59	54.00	39.59	AVG	No Limit

Test Mode : TX 2402MHz _CH00_3Mbps

Vertical

80 dBuV/m

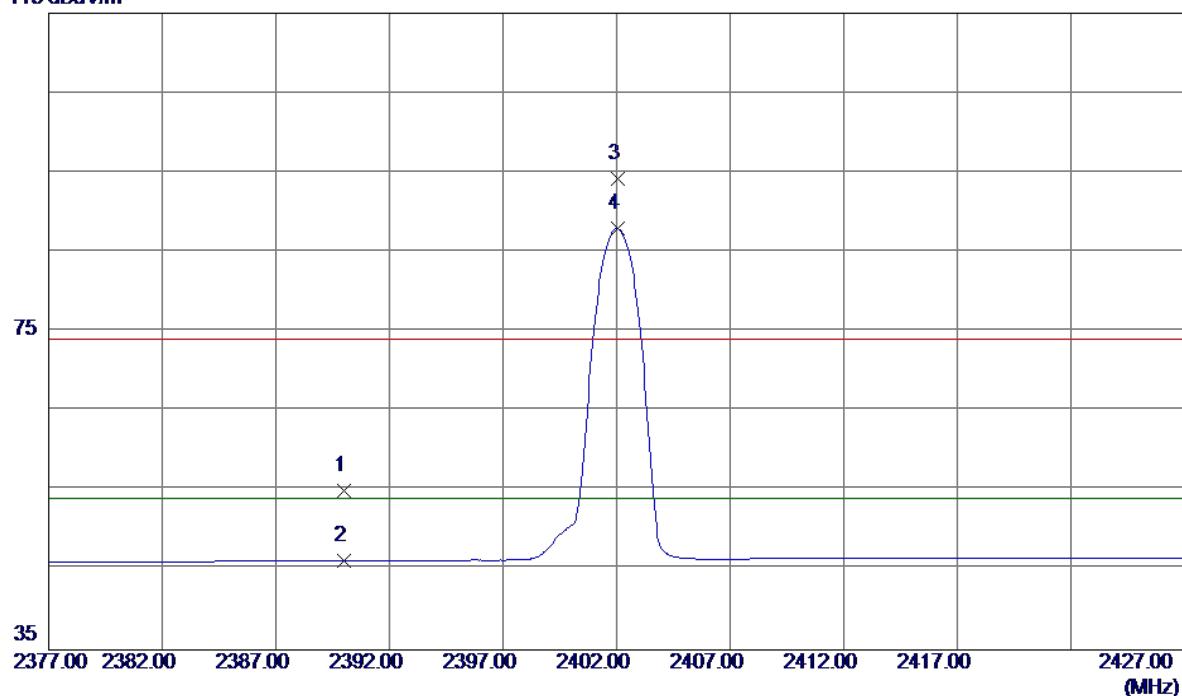


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7204.8600	36.87	13.20	50.07	74.00	-23.93	Peak	
2 *	7206.1050	27.37	13.20	40.57	54.00	-13.43	AVG	

Test Mode : TX 2402MHz _CH00_3Mbps

Horizontal

115 dBuV/m

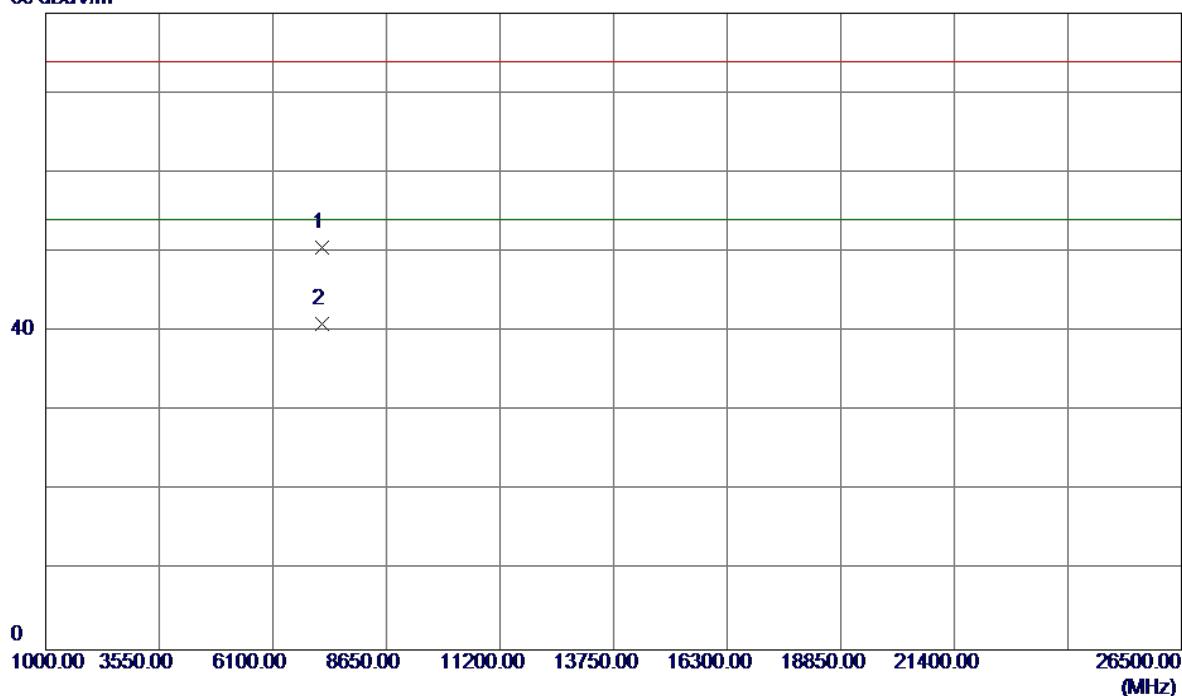


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2390.000	21.99	33.06	55.05	74.00	-18.95	Peak	
2	2390.000	13.12	33.06	46.18	54.00	-7.82	AVG	
3	2402.050	61.07	33.10	94.17	74.00	20.17	Peak	No Limit
4 *	2402.050	54.82	33.10	87.92	54.00	33.92	AVG	No Limit

Test Mode : TX 2402MHz _CH00_3Mbps

Horizontal

80 dBuV/m

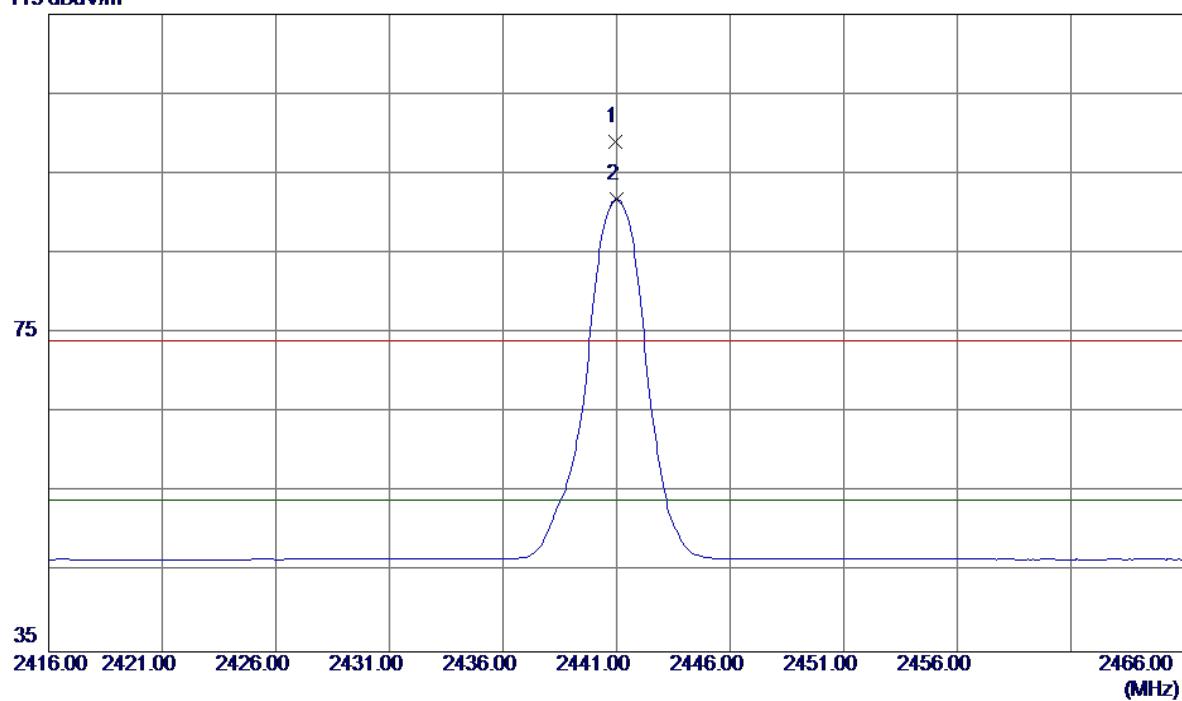


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	7205.1550	37.29	13.20	50.49	74.00	-23.51	Peak	
2 *	7205.7400	27.71	13.20	40.91	54.00	-13.09	AVG	

Test Mode : TX 2441MHz _CH39_3Mbps

Vertical

115 dBuV/m

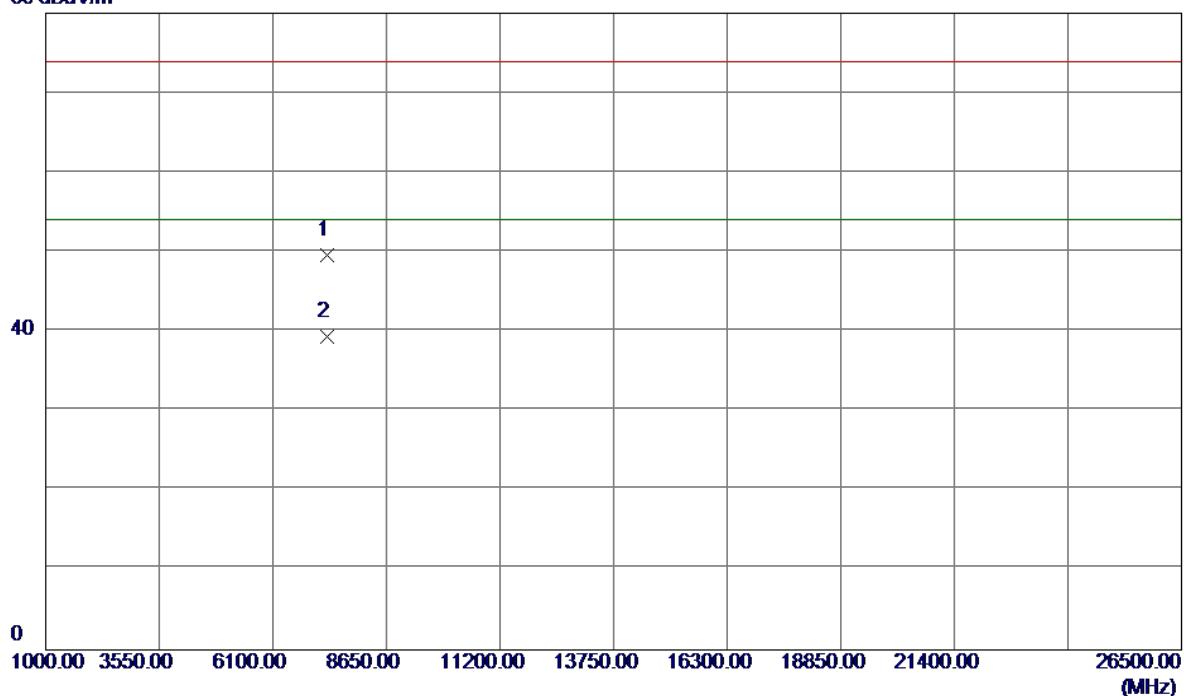


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dB	Margin Detector	Comment
1	2440.9500	65.68	33.25	98.93	74.00	24.93	Peak No Limit
2 *	2441.0000	58.52	33.25	91.77	54.00	37.77	AVG No Limit

Test Mode : TX 2441MHz _CH39_3Mbps

Vertical

80 dBuV/m

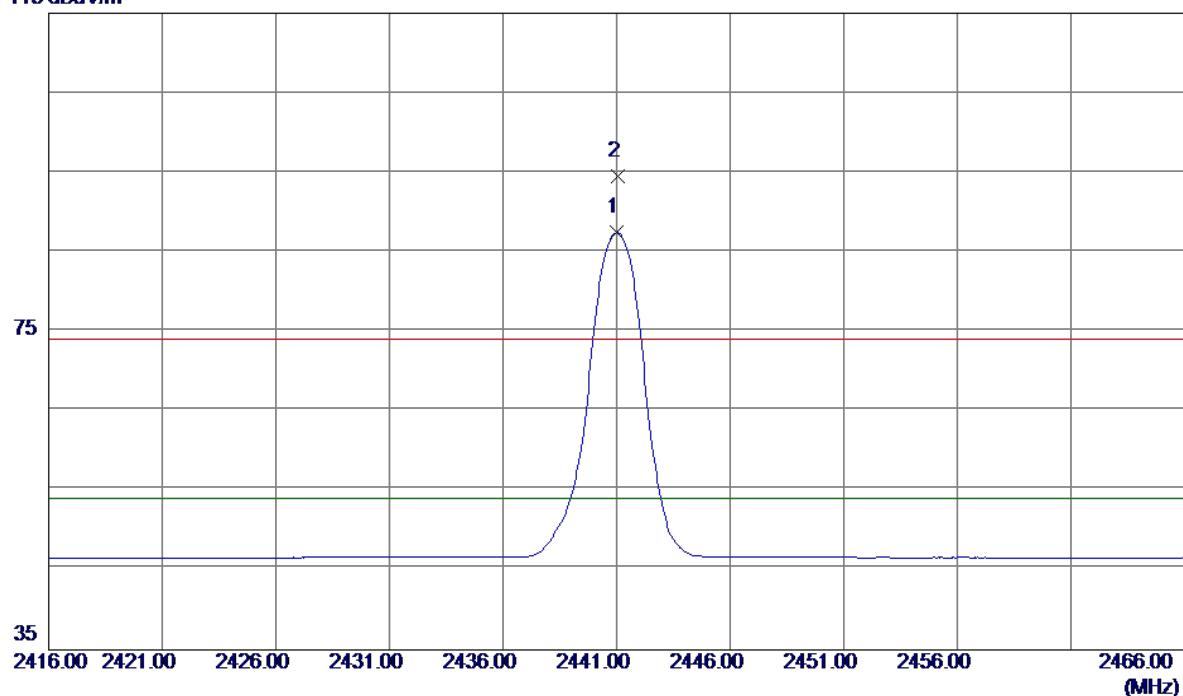


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin Detector	Comment
1	7322.4800	36.16	13.39	49.55	74.00	-24.45	Peak
2 *	7322.7600	25.91	13.39	39.30	54.00	-14.70	AVG

Test Mode : TX 2441MHz _CH39_3Mbps

Horizontal

115 dBuV/m

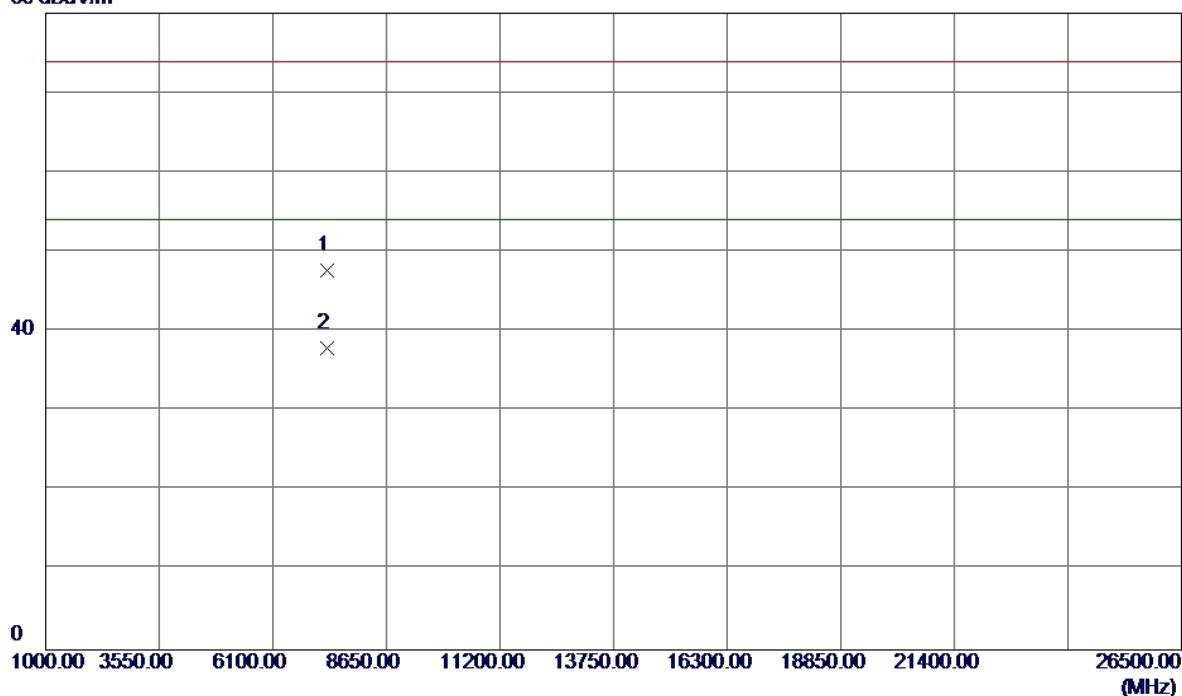


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dB	Detector	Comment
1 *	2441.0000	54.16	33.25	87.41	54.00	33.41	AVG No Limit
2	2441.0500	61.33	33.25	94.58	74.00	20.58	Peak No Limit

Test Mode : TX 2441MHz _CH39_3Mbps

Horizontal

80 dBuV/m

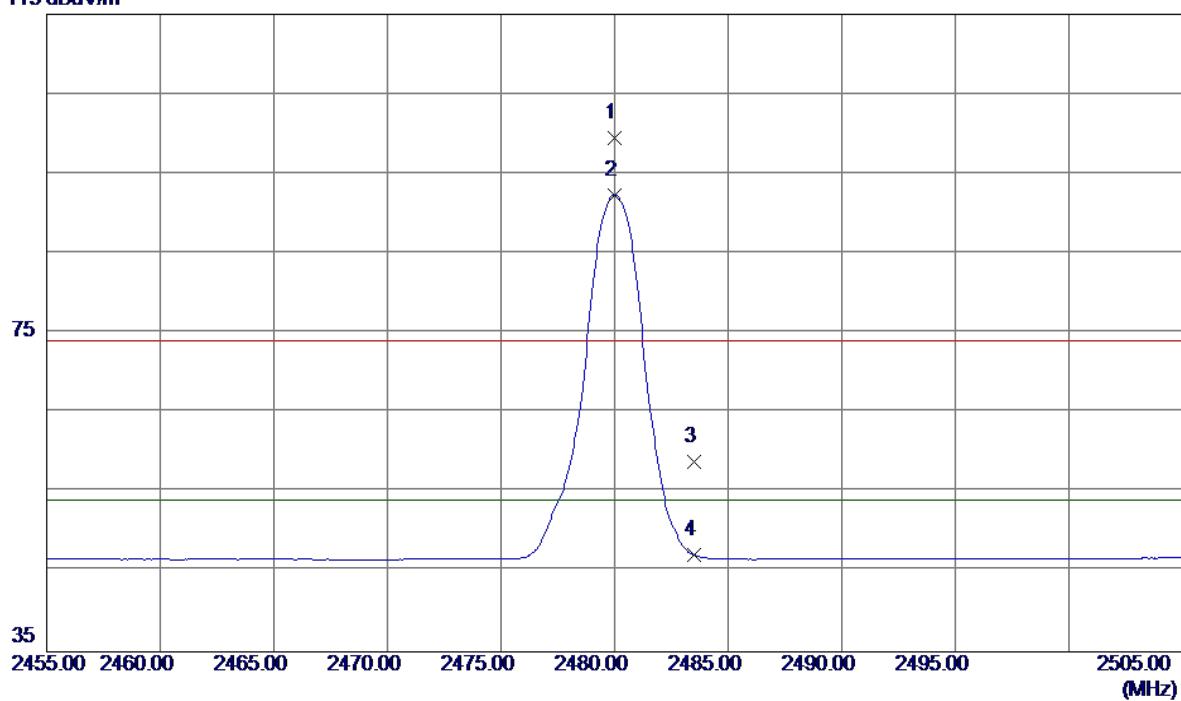


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	7322.2550	34.32	13.39	47.71	74.00	-26.29	Peak	
2 *	7323.1600	24.59	13.39	37.98	54.00	-16.02	AVG	

Test Mode : TX 2480MHz _CH78_3Mbps

Vertical

115 dBuV/m

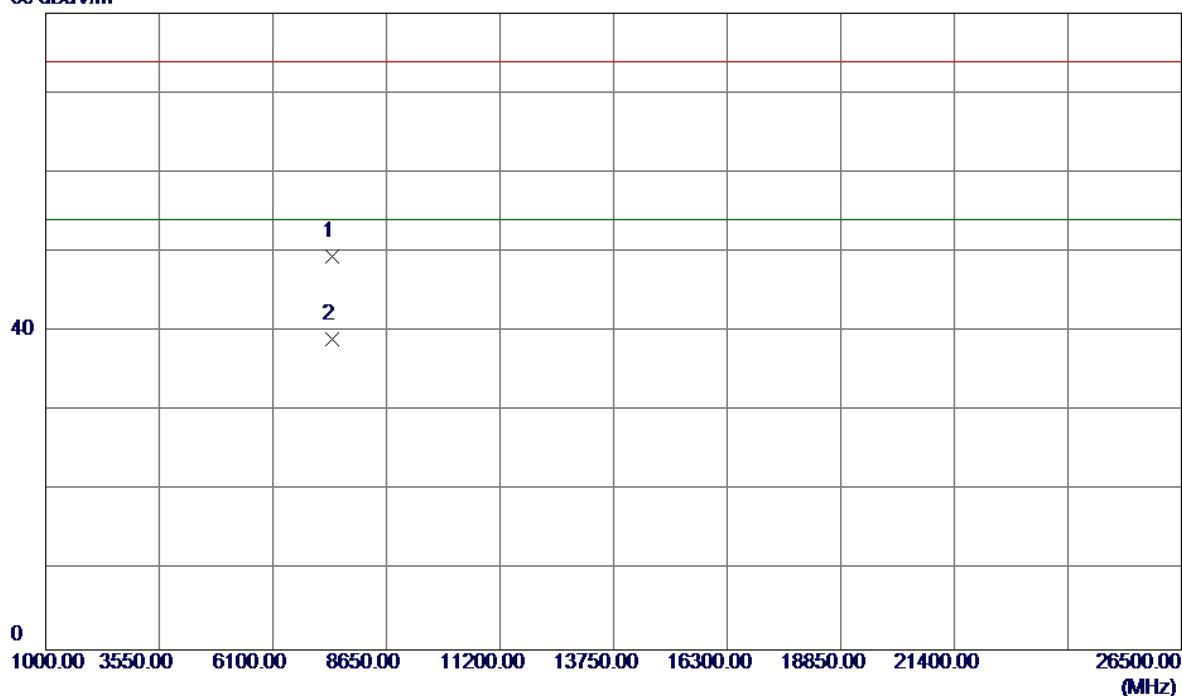


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dB	Margin Detector	Comment
1	2480.0000	66.15	33.39	99.54	74.00	25.54	Peak No Limit
2 *	2480.0000	58.93	33.39	92.32	54.00	38.32	AVG No Limit
3	2483.5000	25.39	33.41	58.80	74.00	-15.20	Peak
4	2483.5000	13.71	33.41	47.12	54.00	-6.88	AVG

Test Mode : TX 2480MHz _CH78_3Mbps

Vertical

80 dBuV/m

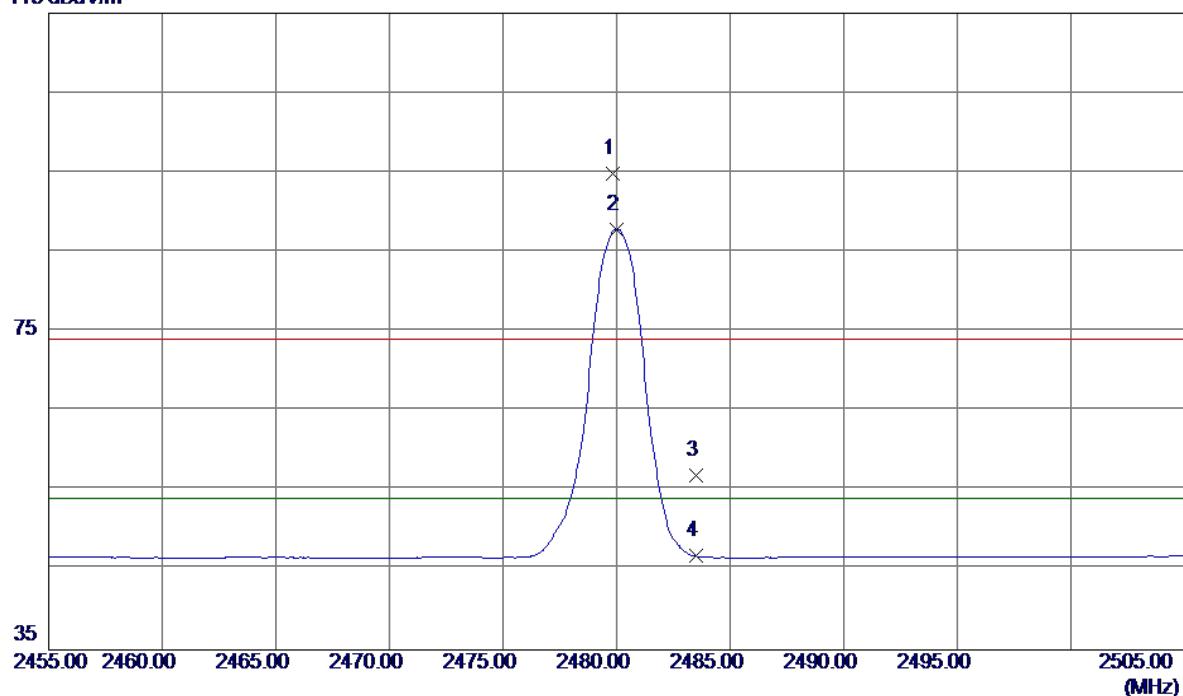


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	7439.3450	35.83	13.58	49.41	74.00	-24.59	Peak	
2 *	7439.6700	25.46	13.59	39.05	54.00	-14.95	AVG	

Test Mode : TX 2480MHz _CH78_3Mbps

Horizontal

115 dBuV/m

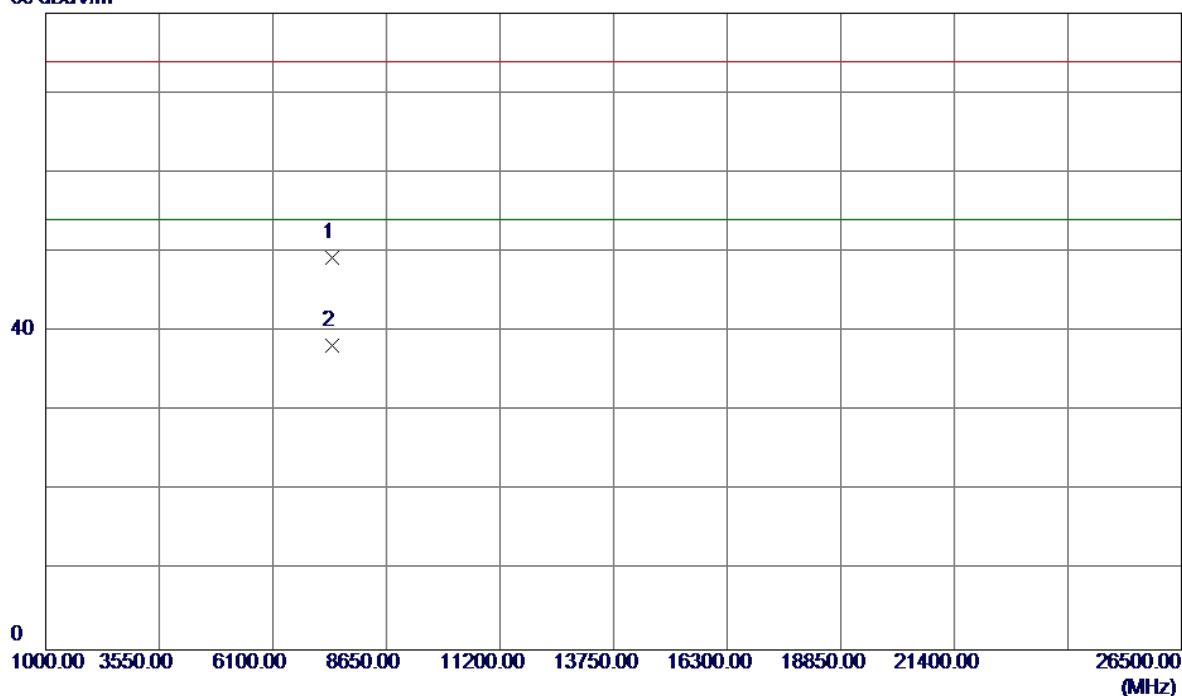


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dB	Margin Detector	Comment
1	2479.8500	61.47	33.39	94.86	74.00	20.86	Peak No Limit
2 *	2480.0000	54.46	33.39	87.85	54.00	33.85	AVG No Limit
3	2483.5000	23.55	33.41	56.96	74.00	-17.04	Peak
4	2483.5000	13.36	33.41	46.77	54.00	-7.23	AVG

Test Mode : TX 2480MHz _CH78_3Mbps

Horizontal

80 dBuV/m



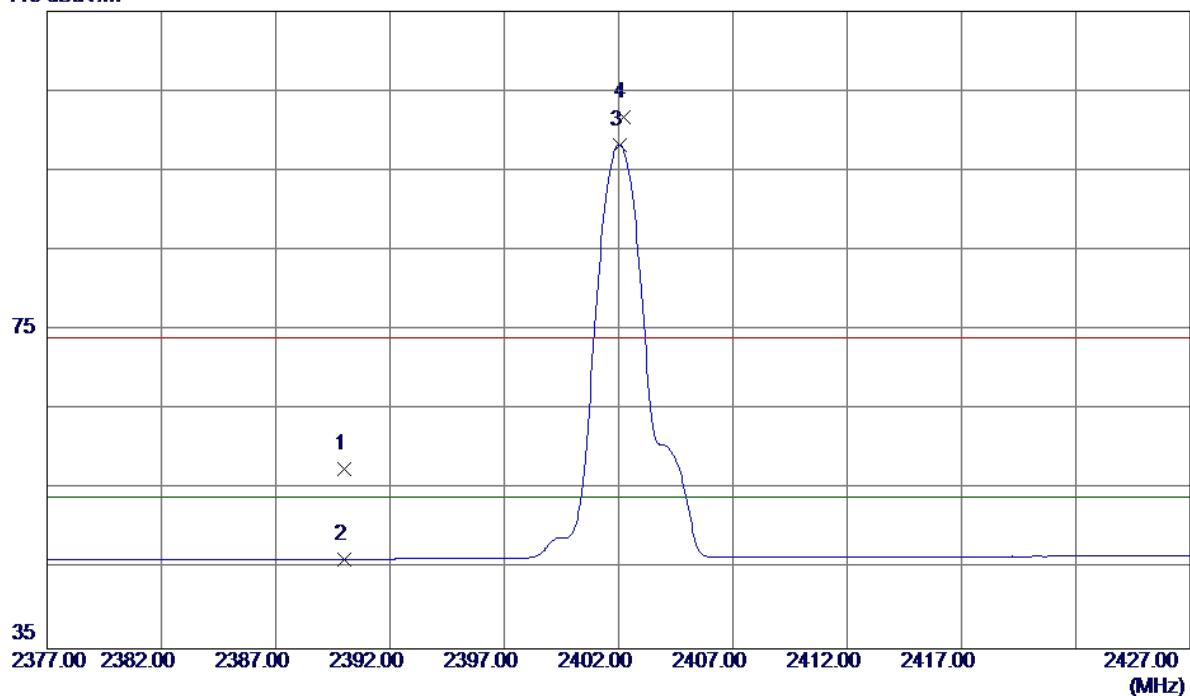
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dB	Margin Detector	Comment
1	7439.7950	35.61	13.59	49.20	74.00	-24.80	Peak
2 *	7439.9350	24.60	13.59	38.19	54.00	-15.81	AVG

For Group 2 Antenna

Test Mode : TX 2402MHz _CH00_1Mbps

Vertical

115 dBuV/m

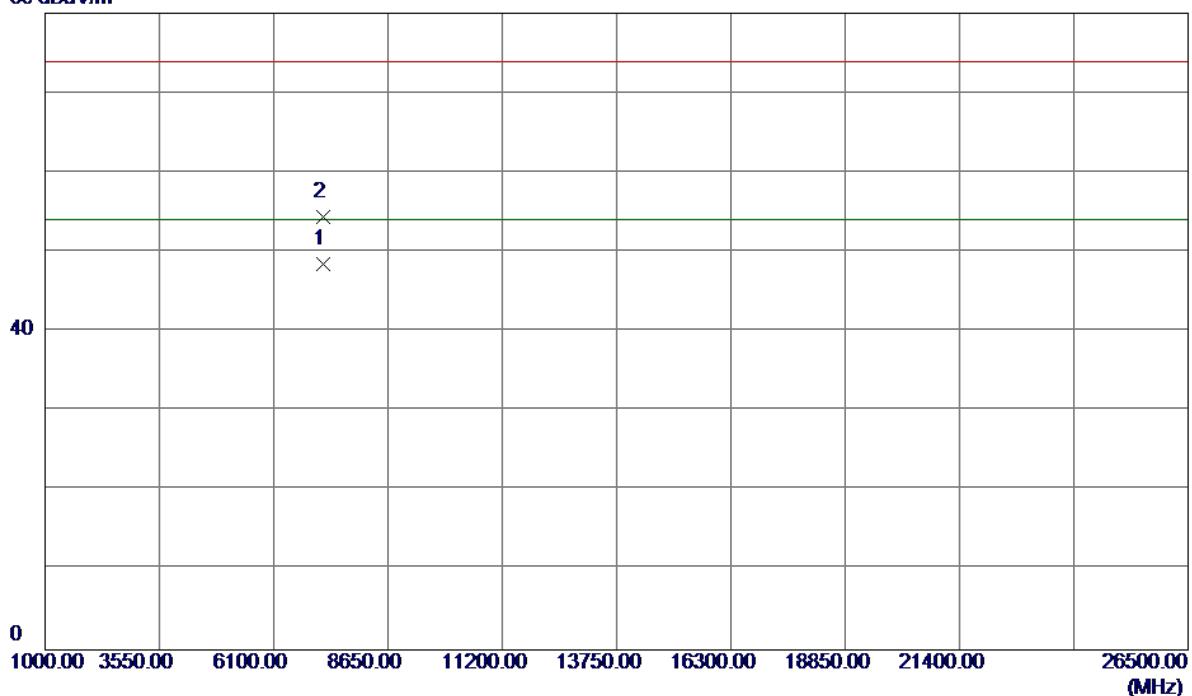


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector		Comment
							Detector	Comment	
1	2390.0000	24.45	33.06	57.51	74.00	-16.49	Peak		
2	2390.0000	13.17	33.06	46.23	54.00	-7.77	AVG		
3 *	2402.0500	65.16	33.10	98.26	54.00	44.26	AVG	No Limit	
4	2402.2000	68.63	33.10	101.73	74.00	27.73	Peak	No Limit	

Test Mode :	TX 2402MHz _CH00_1Mbps
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Vertical

80 dBuV/m

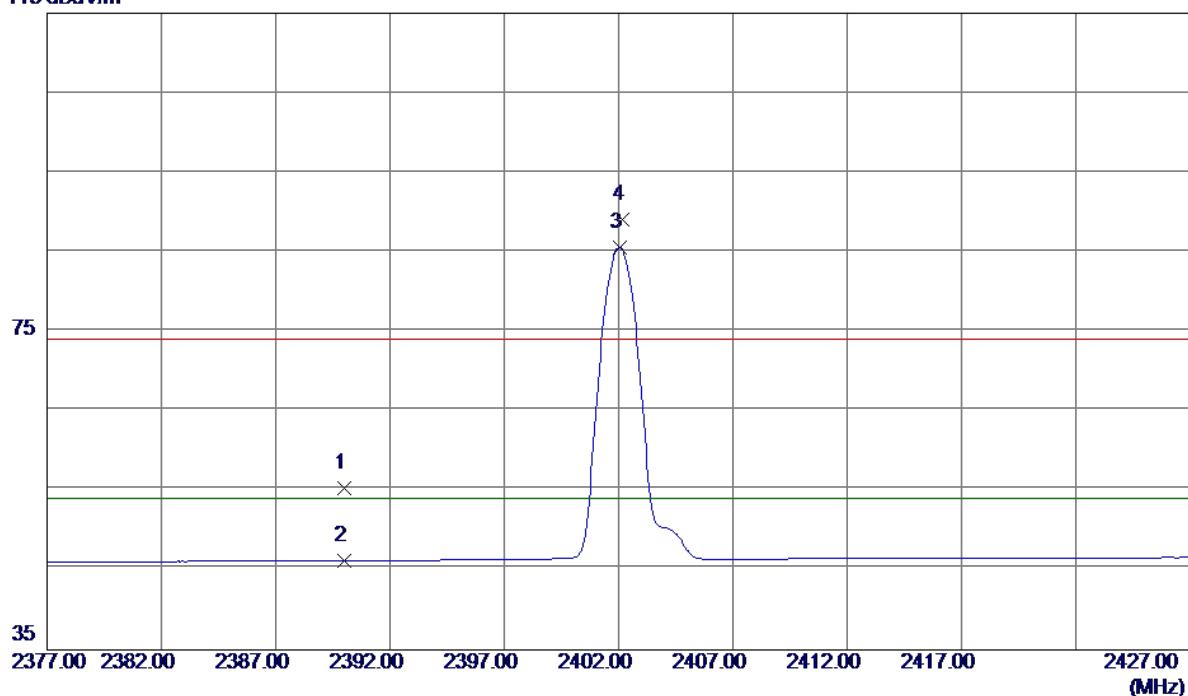


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	7205.9860	35.23	13.20	48.43	54.00	-5.57	AVG	
2	7206.2980	41.28	13.20	54.48	74.00	-19.52	Peak	

Test Mode : TX 2402MHz _CH00_1Mbps

Horizontal

115 dBuV/m

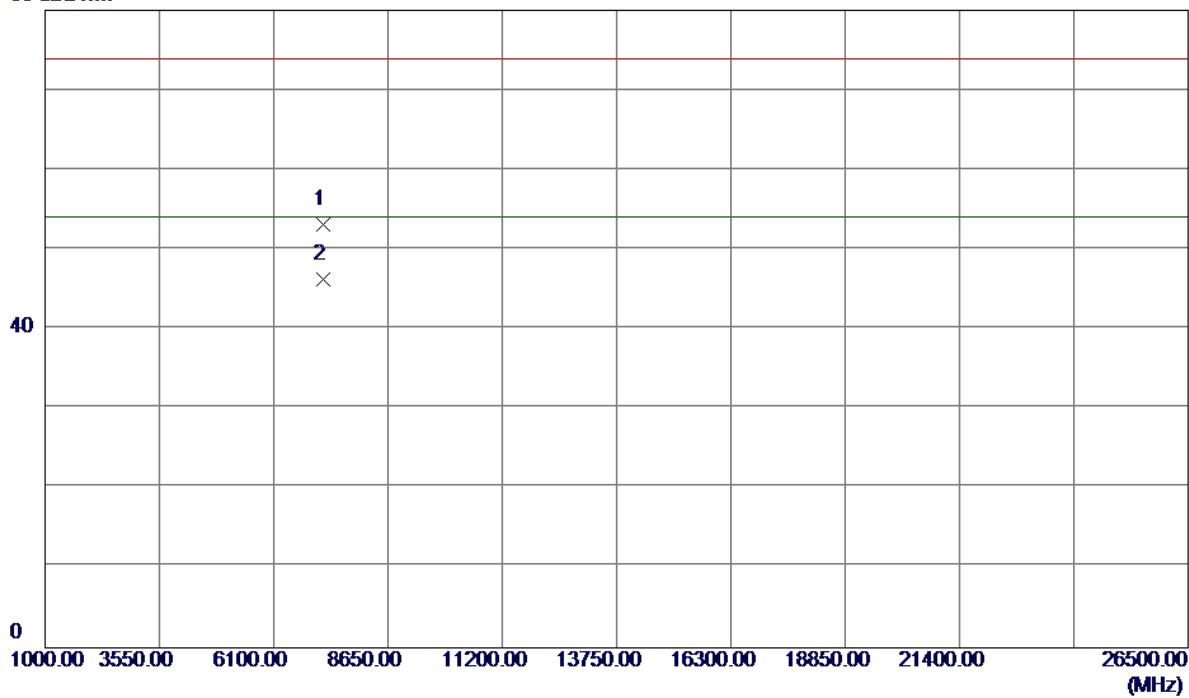


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dB	Margin	Detector	Comment
1	2390.0000	22.29	33.06	55.35	74.00	-18.65	Peak	
2	2390.0000	13.11	33.06	46.17	54.00	-7.83	AVG	
3 *	2402.0500	52.47	33.10	85.57	54.00	31.57	AVG	No Limit
4	2402.1500	56.02	33.10	89.12	74.00	15.12	Peak	No Limit

Test Mode : TX 2402MHz _CH00_1Mbps

Horizontal

80 dBuV/m

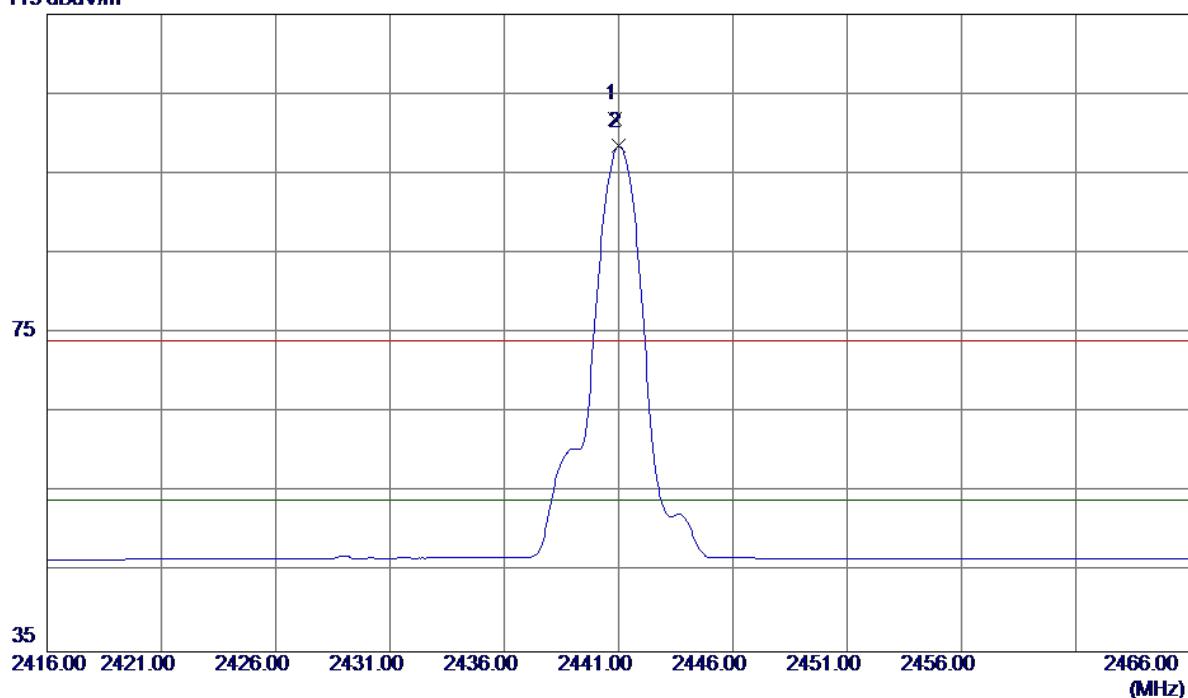


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7205.8800	39.85	13.20	53.05	74.00	-20.95	Peak	
2 *	7205.9820	33.00	13.20	46.20	54.00	-7.80	AVG	

Test Mode : TX 2441MHz _CH39_1Mbps

Vertical

115 dBuV/m

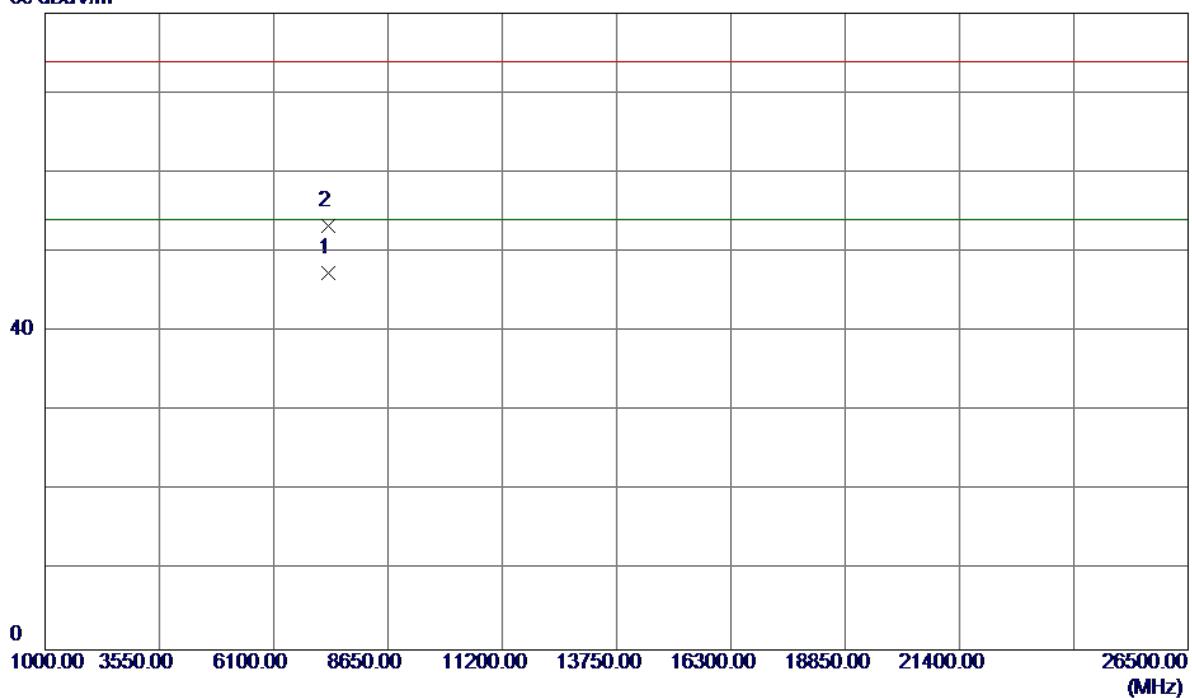


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2440.8500	68.70	33.25	101.95	74.00	27.95	Peak	No Limit
2 *	2441.0000	65.19	33.25	98.44	54.00	44.44	AVG	No Limit

Test Mode : TX 2441MHz _CH39_1Mbps

Vertical

80 dBuV/m

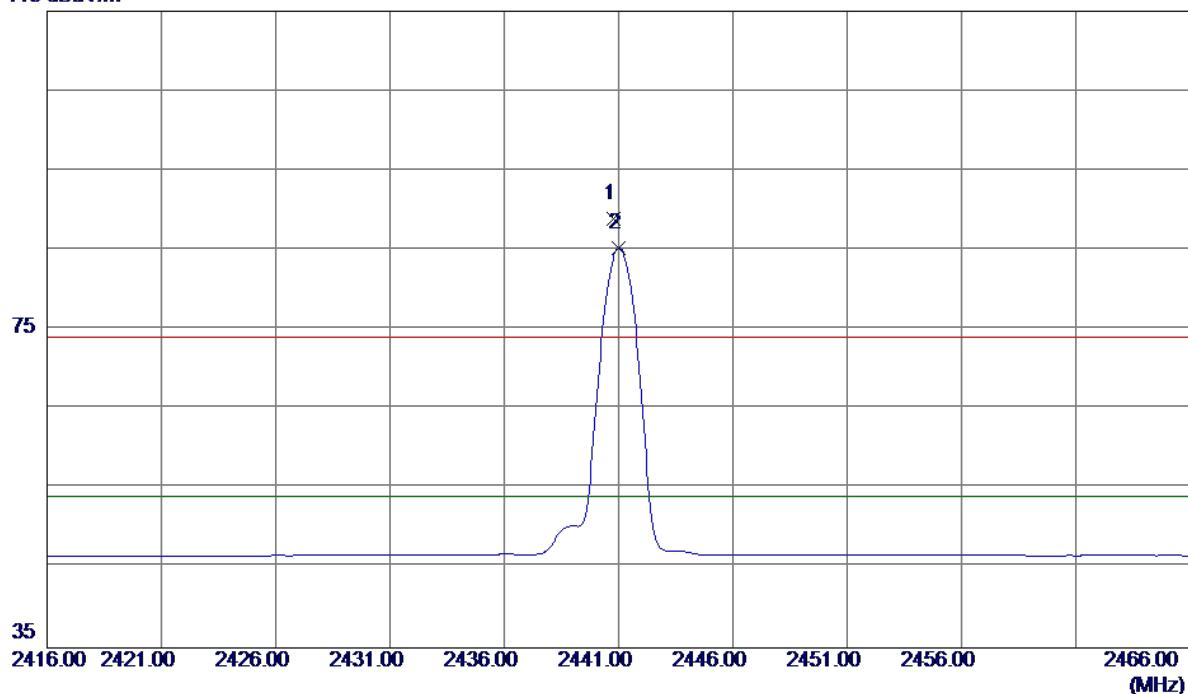


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	7322.9350	33.99	13.39	47.38	54.00	-6.62	AVG	
2	7323.5670	39.90	13.39	53.29	74.00	-20.71	Peak	

Test Mode : TX 2441MHz _CH39_1Mbps

Horizontal

115 dBuV/m

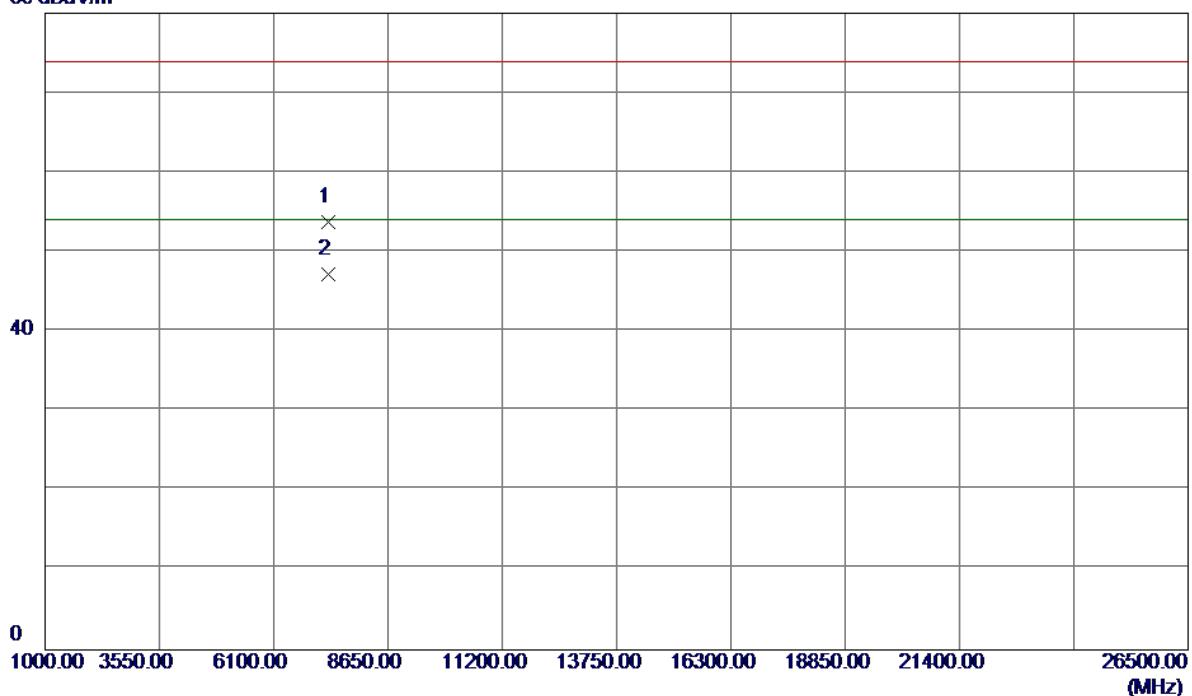


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin Detector	Comment
1	2440.8000	55.62	33.25	88.87	74.00	14.87	Peak No Limit
2 *	2441.0000	51.97	33.25	85.22	54.00	31.22	AVG No Limit

Test Mode : TX 2441MHz _CH39_1Mbps

Horizontal

80 dBuV/m

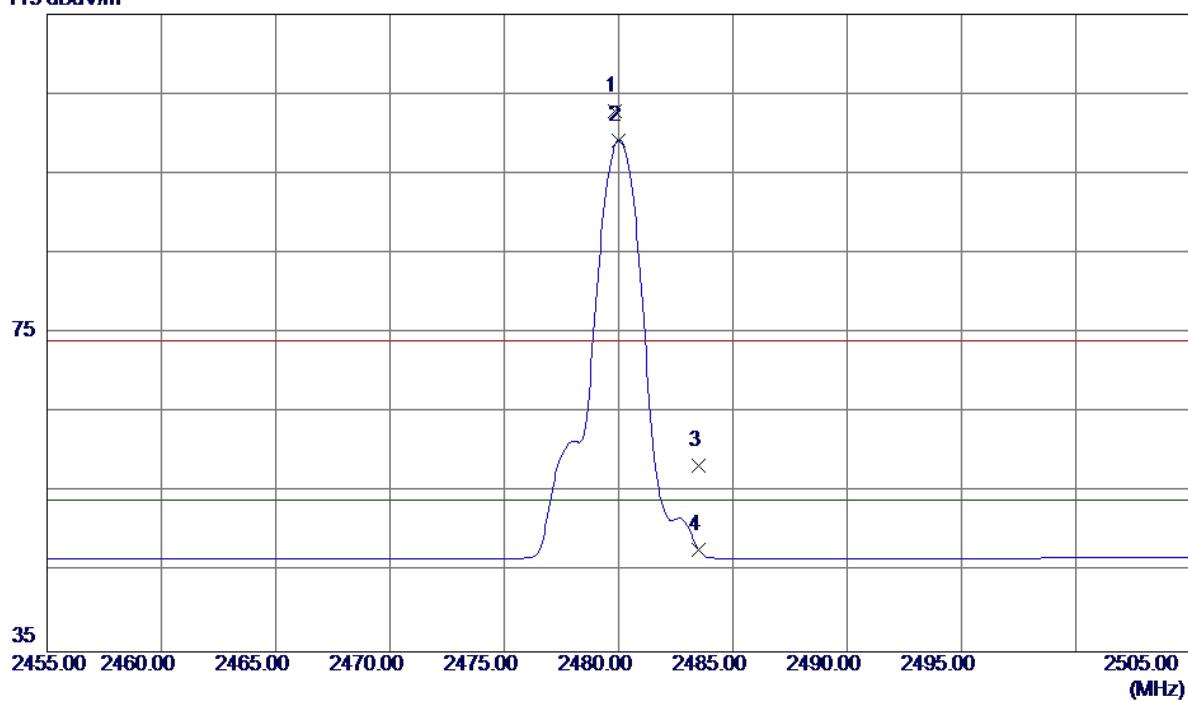


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7322.5680	40.37	13.39	53.76	74.00	-20.24	Peak	
2 *	7322.9820	33.84	13.39	47.23	54.00	-6.77	AVG	

Test Mode : TX 2480MHz _CH78_1Mbps

Vertical

115 dBuV/m

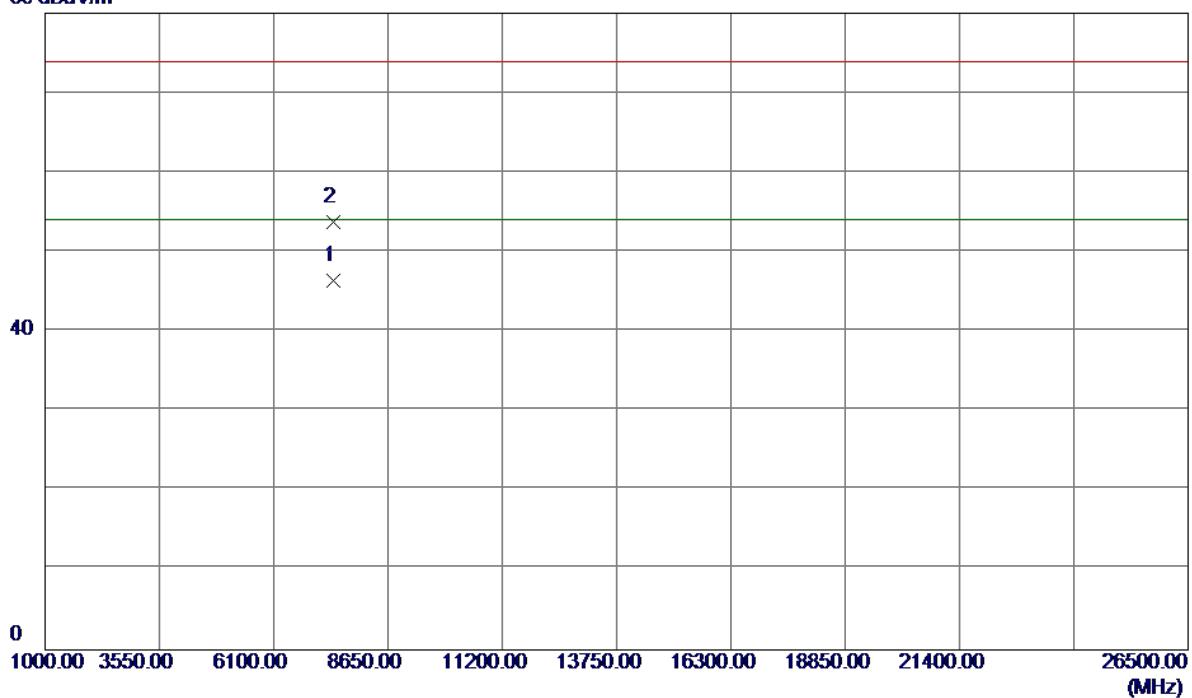


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2479.8500	69.38	33.39	102.77	74.00	28.77	Peak	No Limit
2 *	2480.0000	65.83	33.39	99.22	54.00	45.22	AVG	No Limit
3	2483.5000	24.90	33.41	58.31	74.00	-15.69	Peak	
4	2483.5000	14.43	33.41	47.84	54.00	-6.16	AVG	

Test Mode : TX 2480MHz _CH78_1Mbps

Vertical

80 dBuV/m

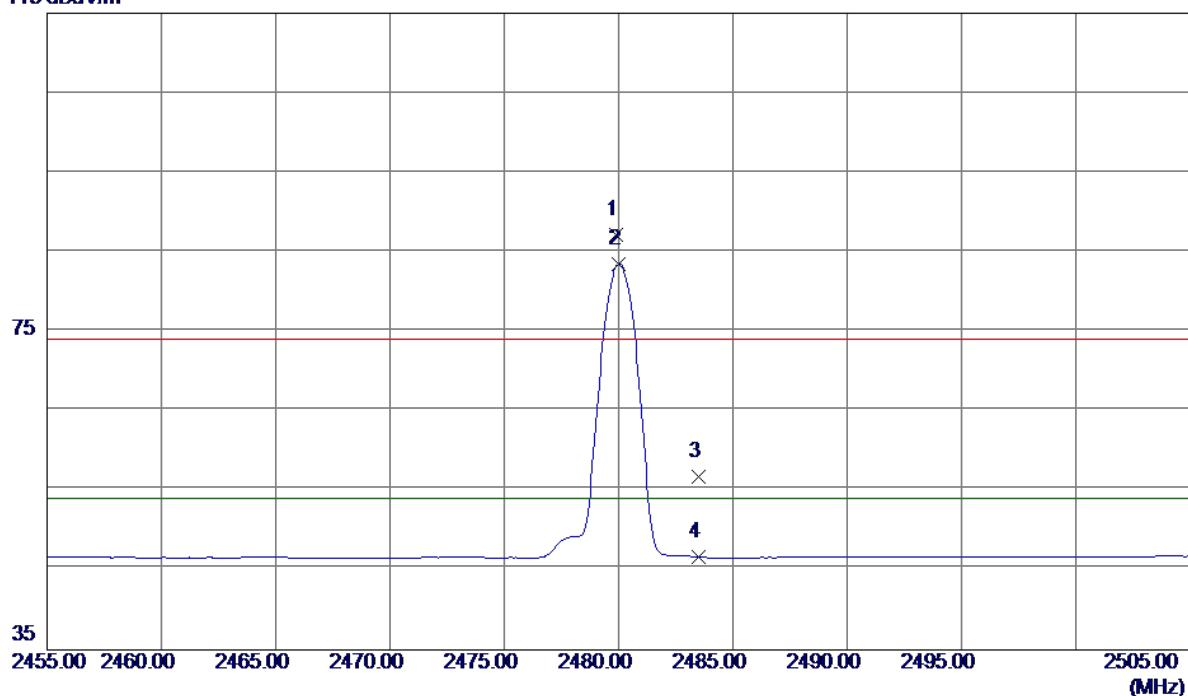


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	7439.9710	32.85	13.59	46.44	54.00	-7.56	AVG	
2	7440.5340	40.19	13.59	53.78	74.00	-20.22	Peak	

Test Mode : TX 2480MHz _CH78_1Mbps

Horizontal

115 dBuV/m

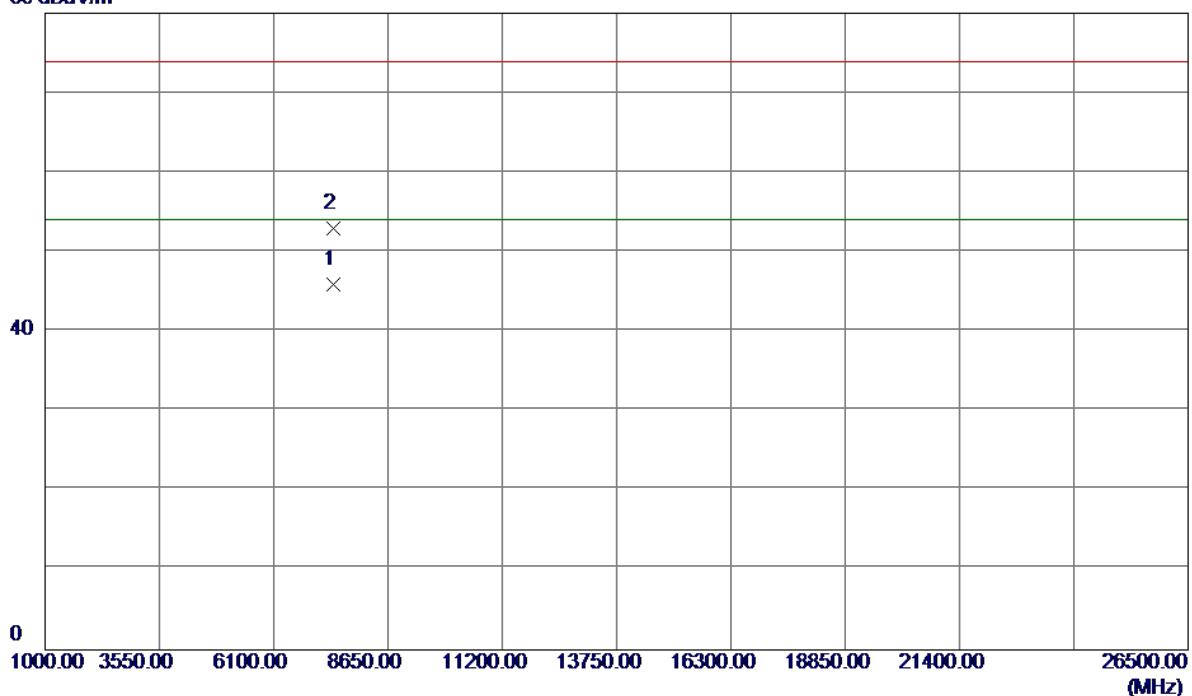


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dB			
1	2479.9000	53.75	33.39	87.14	74.00	13.14	Peak	No Limit
2 *	2480.0000	50.08	33.39	83.47	54.00	29.47	AVG	No Limit
3	2483.5000	23.30	33.41	56.71	74.00	-17.29	Peak	
4	2483.5000	13.23	33.41	46.64	54.00	-7.36	AVG	

Test Mode : TX 2480MHz _CH78_1Mbps

Horizontal

80 dBuV/m

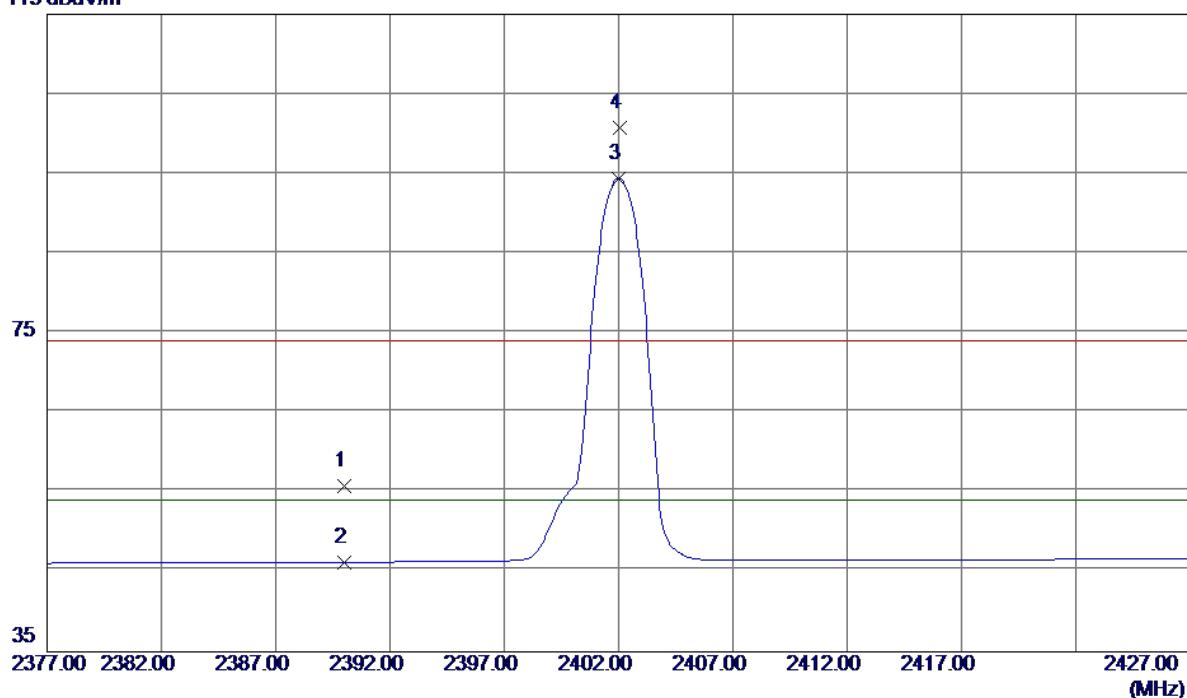


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	7439.9160	32.27	13.59	45.86	54.00	-8.14	AVG	
2	7440.4710	39.38	13.59	52.97	74.00	-21.03	Peak	

Test Mode : TX 2402MHz _CH00_3Mbps

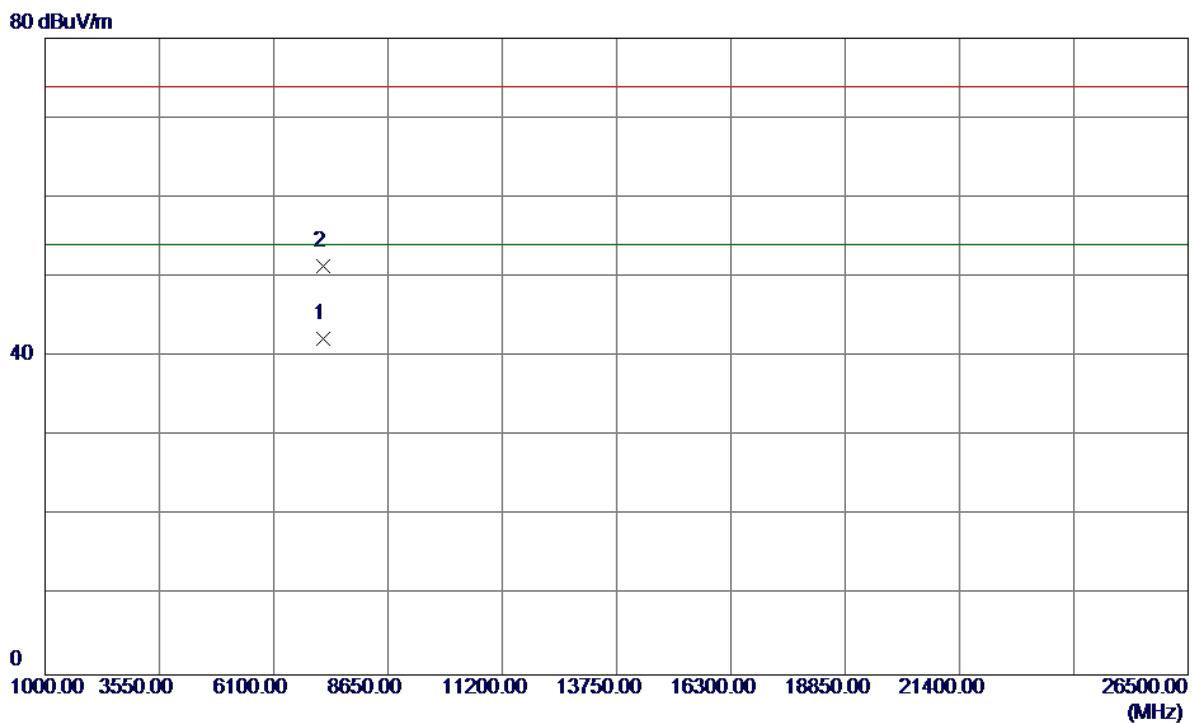
Vertical

115 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2390.0000	22.76	33.06	55.82	74.00	-18.18	Peak	
2	2390.0000	13.18	33.06	46.24	54.00	-7.76	AVG	
3 *	2402.0000	61.30	33.10	94.40	54.00	40.40	AVG	No Limit
4	2402.0500	67.58	33.10	100.68	74.00	26.68	Peak	No Limit

Test Mode :	TX 2402MHz _CH00_3Mbps
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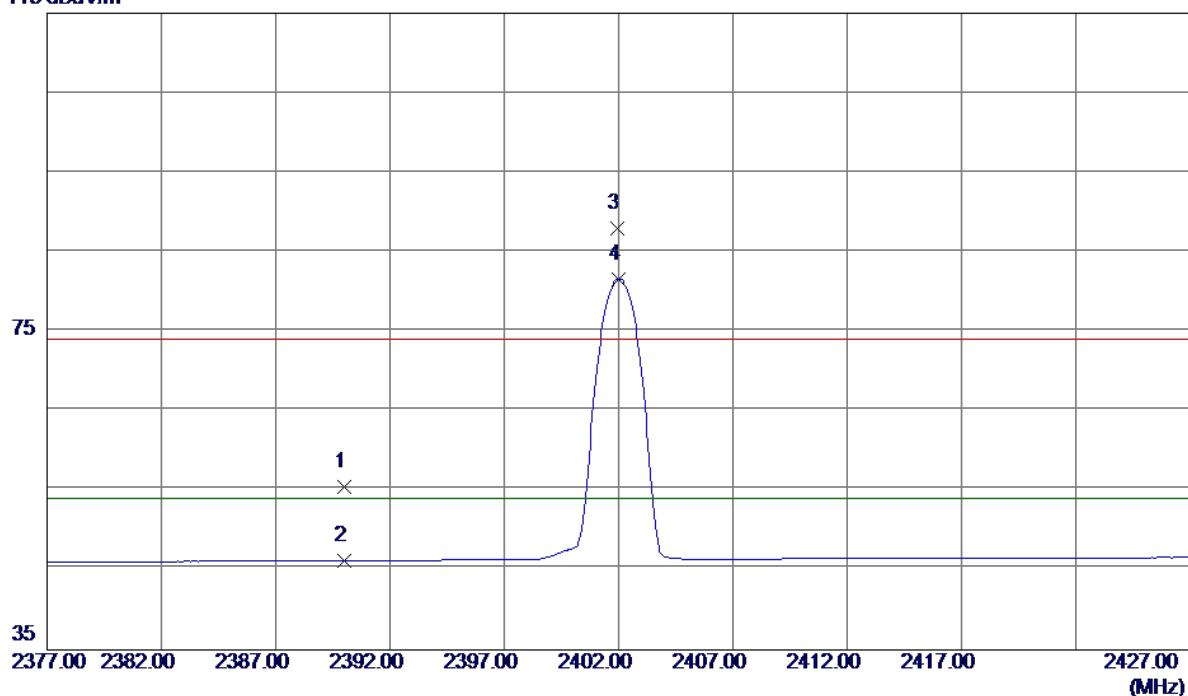
Vertical

No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	7205.8800	28.98	13.20	42.18	54.00	-11.82	AVG	
2	7206.3690	38.10	13.20	51.30	74.00	-22.70	Peak	

Test Mode : TX 2402MHz _CH00_3Mbps

Horizontal

115 dBuV/m

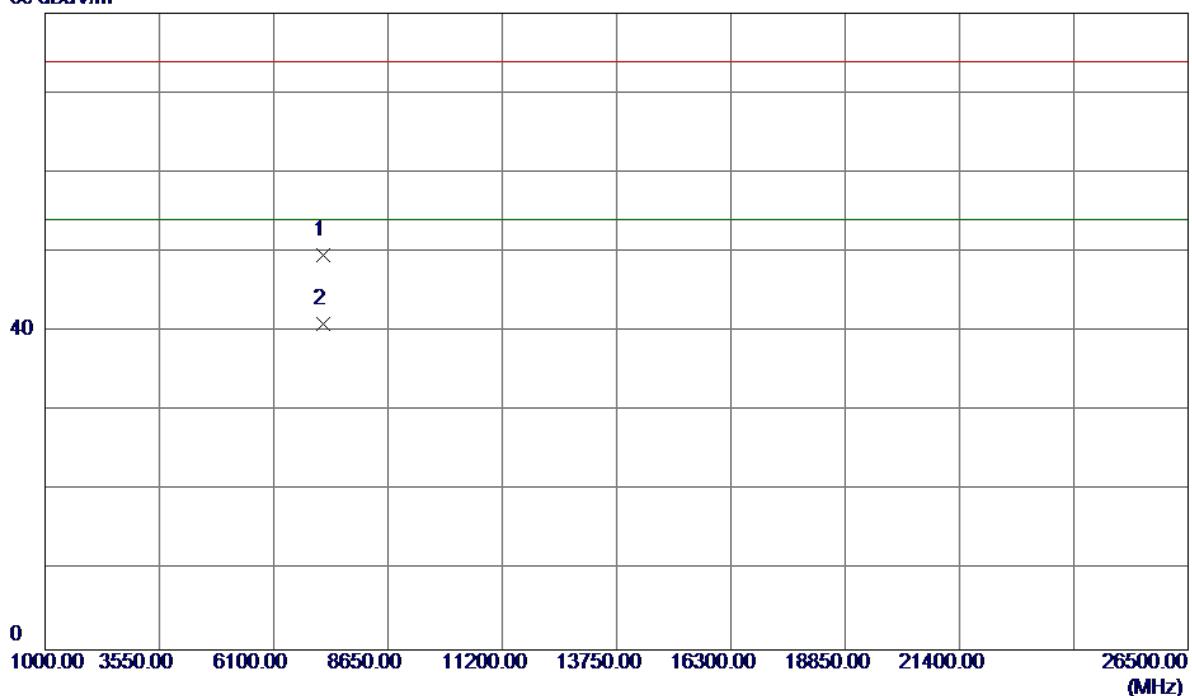


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2390.0000	22.35	33.06	55.41	74.00	-18.59	Peak	
2	2390.0000	13.13	33.06	46.19	54.00	-7.81	AVG	
3	2401.9500	54.79	33.10	87.89	74.00	13.89	Peak	No Limit
4 *	2402.0000	48.53	33.10	81.63	54.00	27.63	AVG	No Limit

Test Mode :	TX 2402MHz _CH00_3Mbps
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Horizontal

80 dBuV/m

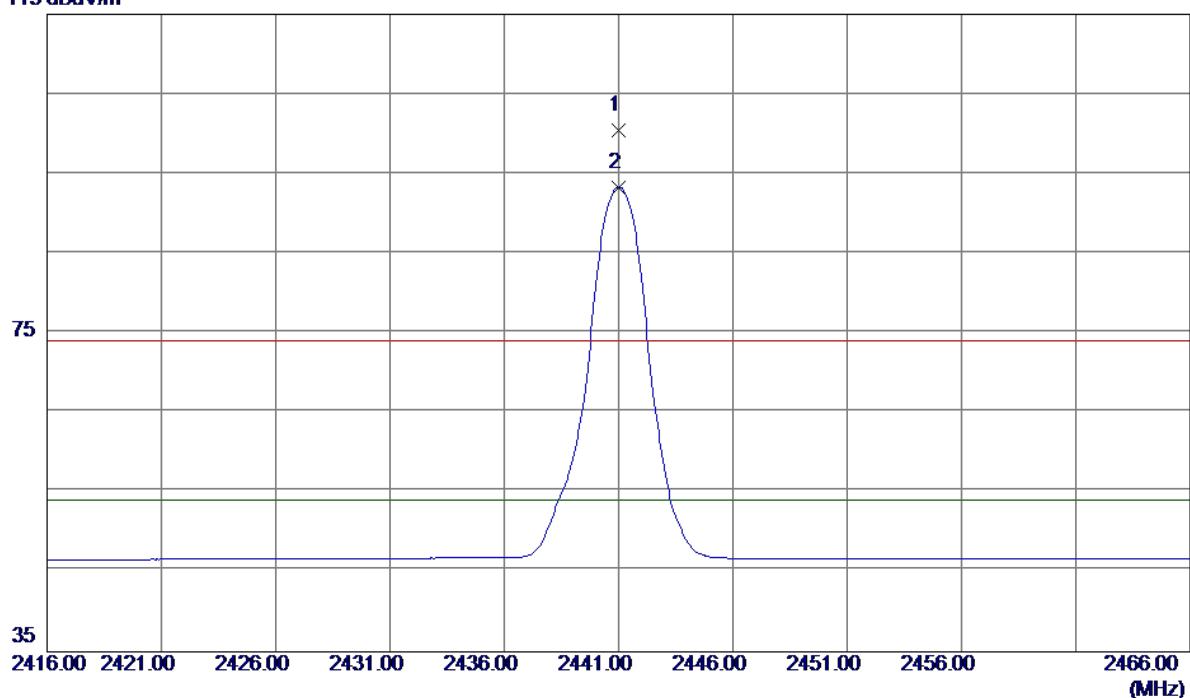


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	7205.6160	36.45	13.20	49.65	74.00	-24.35	Peak	
2 *	7205.9840	27.72	13.20	40.92	54.00	-13.08	AVG	

Test Mode : TX 2441MHz _CH39_3Mbps

Vertical

115 dBuV/m

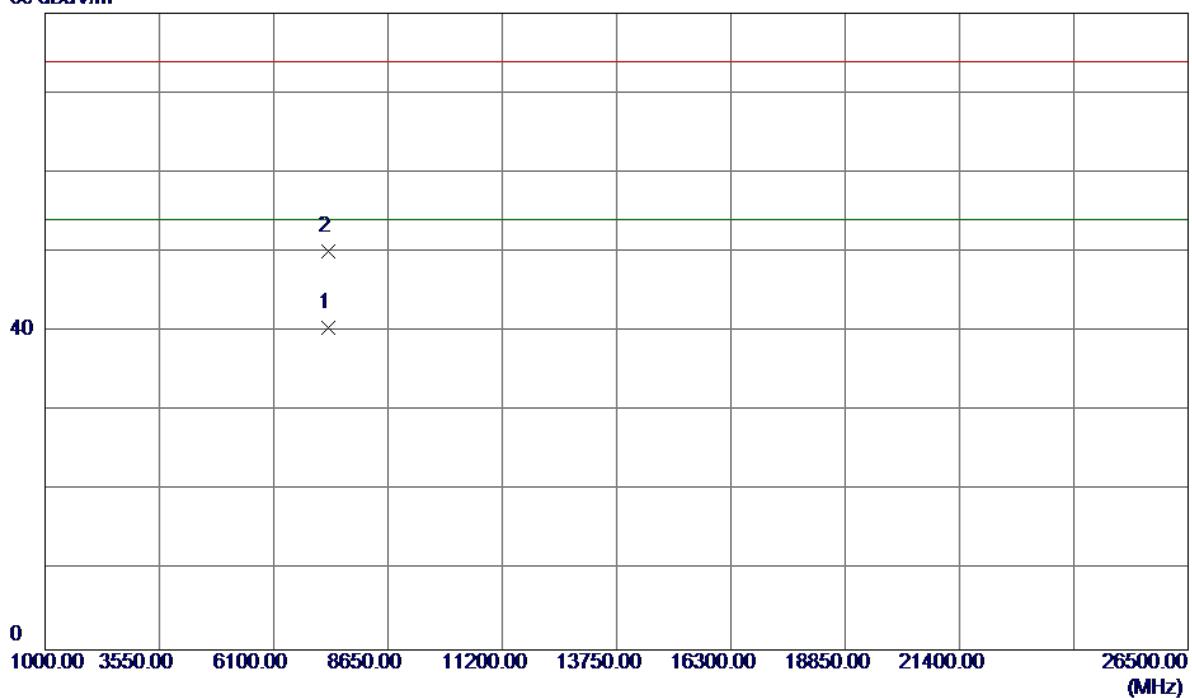


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1	2441.0000	67.27	33.25	100.52	74.00	26.52	Peak
2 *	2441.0000	60.05	33.25	93.30	54.00	39.30	AVG

Test Mode : TX 2441MHz _CH39_3Mbps

Vertical

80 dBuV/m

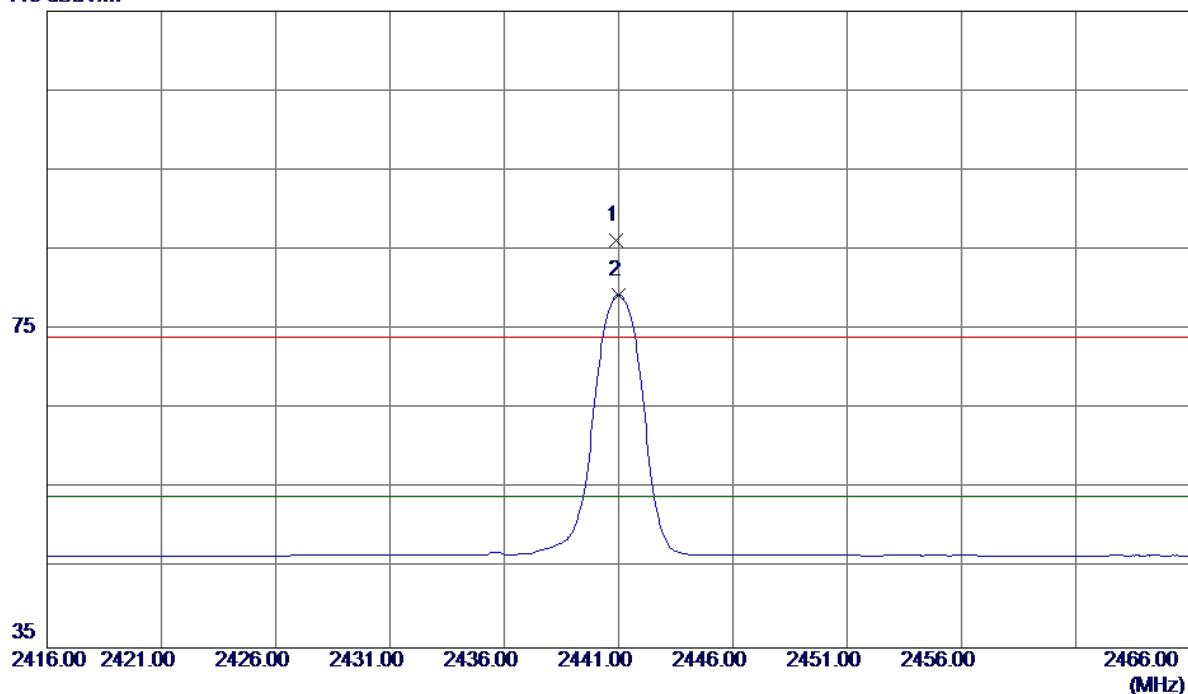


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	7322.7040	27.08	13.39	40.47	54.00	-13.53	AVG	
2	7323.1800	36.74	13.39	50.13	74.00	-23.87	Peak	

Test Mode : TX 2441MHz _CH39_3Mbps

Horizontal

115 dBuV/m

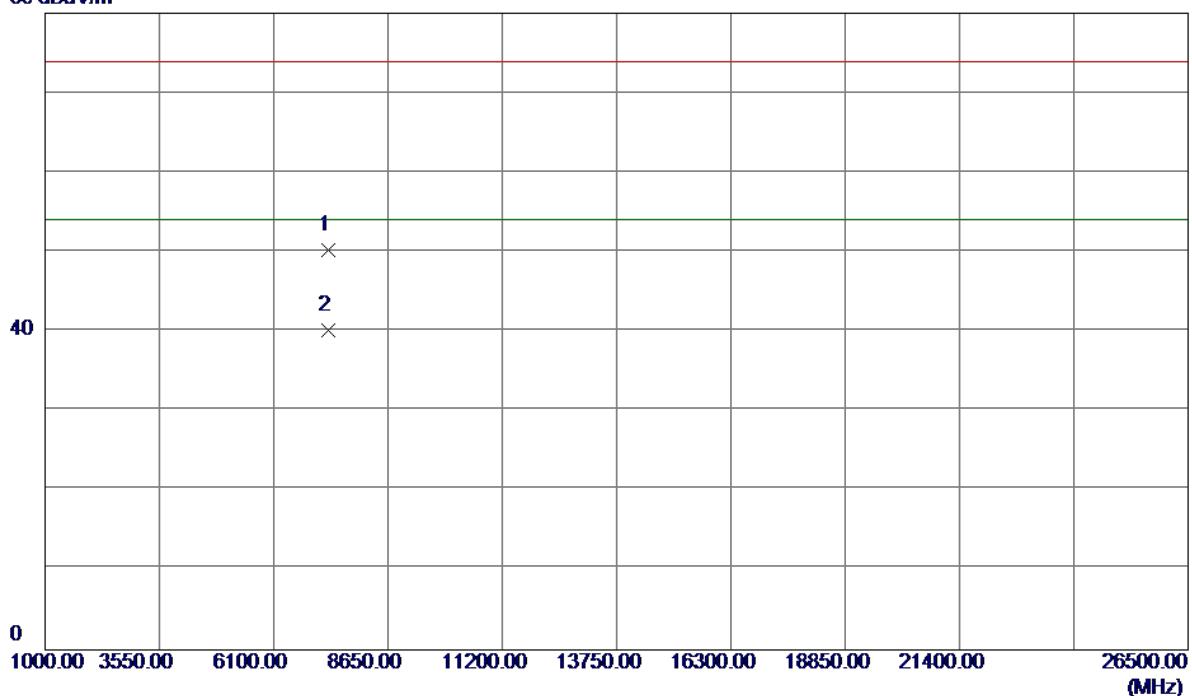


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dB	Margin Detector	Comment
1	2440.9000	53.00	33.25	86.25	74.00	12.25	Peak No Limit
2 *	2441.0000	46.10	33.25	79.35	54.00	25.35	AVG No Limit

Test Mode : TX 2441MHz _CH39_3Mbps

Horizontal

80 dBuV/m

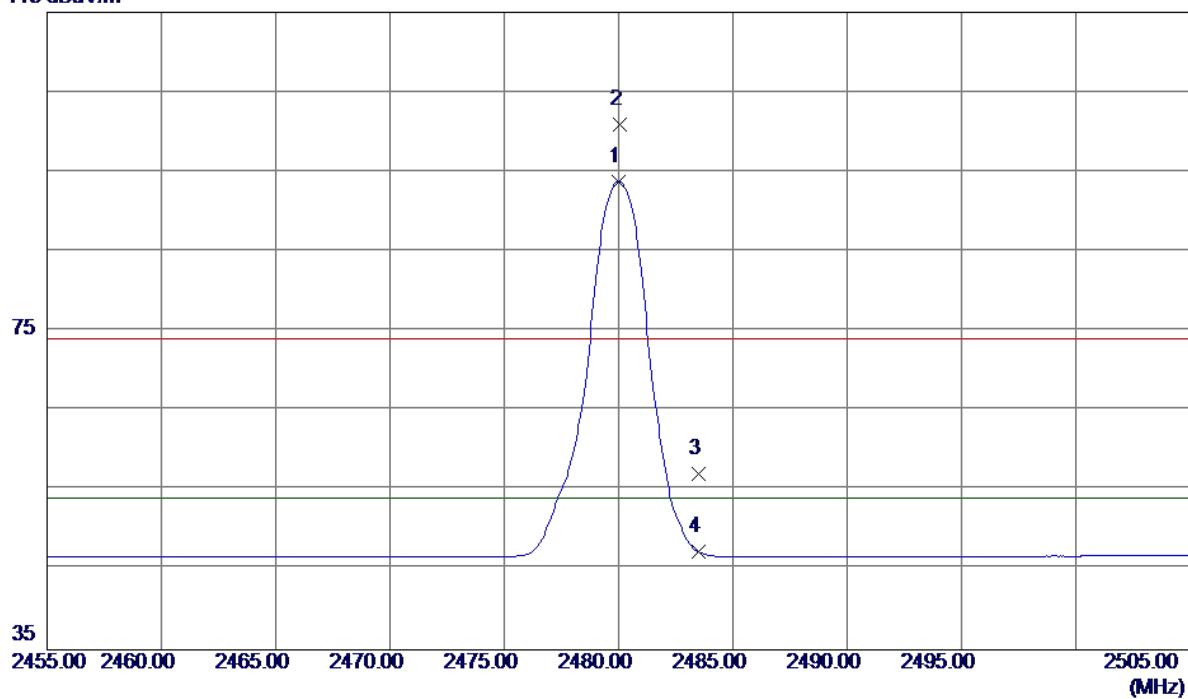


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7322.7160	36.90	13.39	50.29	74.00	-23.71	Peak	
2 *	7322.8450	26.83	13.39	40.22	54.00	-13.78	AVG	

Test Mode : TX 2480MHz _CH78_3Mbps

Vertical

115 dBuV/m

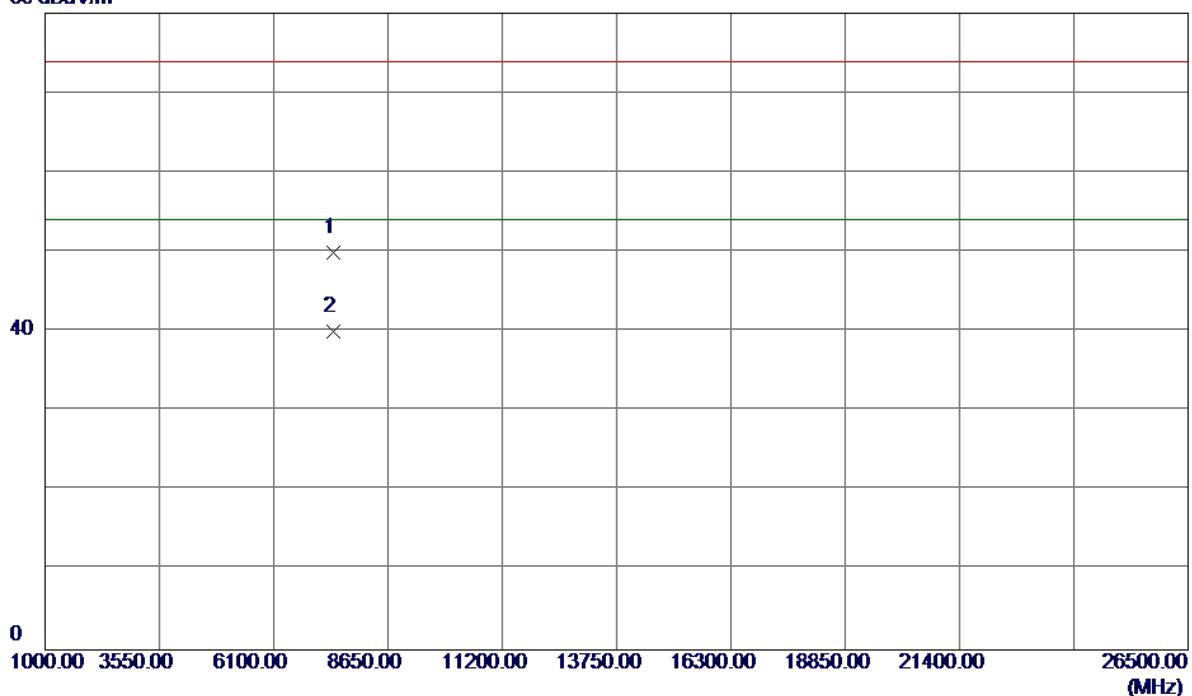


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	2480.0000	60.35	33.39	93.74	54.00	39.74	AVG	No Limit
2	2480.0500	67.55	33.39	100.94	74.00	26.94	Peak	No Limit
3	2483.5000	23.73	33.41	57.14	74.00	-16.86	Peak	
4	2483.5000	13.86	33.41	47.27	54.00	-6.73	AVG	

Test Mode : TX 2480MHz _CH78_3Mbps

Vertical

80 dBuV/m

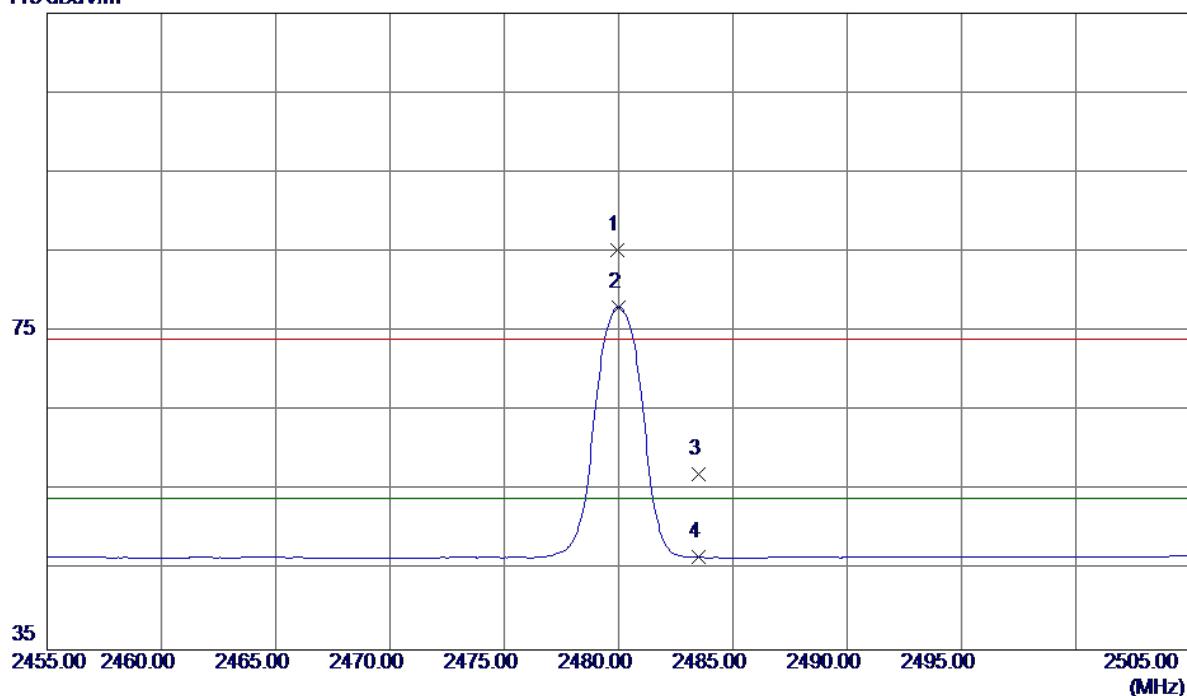


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	7439.3150	36.38	13.58	49.96	74.00	-24.04	Peak	
2 *	7440.0060	26.38	13.59	39.97	54.00	-14.03	AVG	

Test Mode : TX 2480MHz _CH78_3Mbps

Horizontal

115 dBuV/m

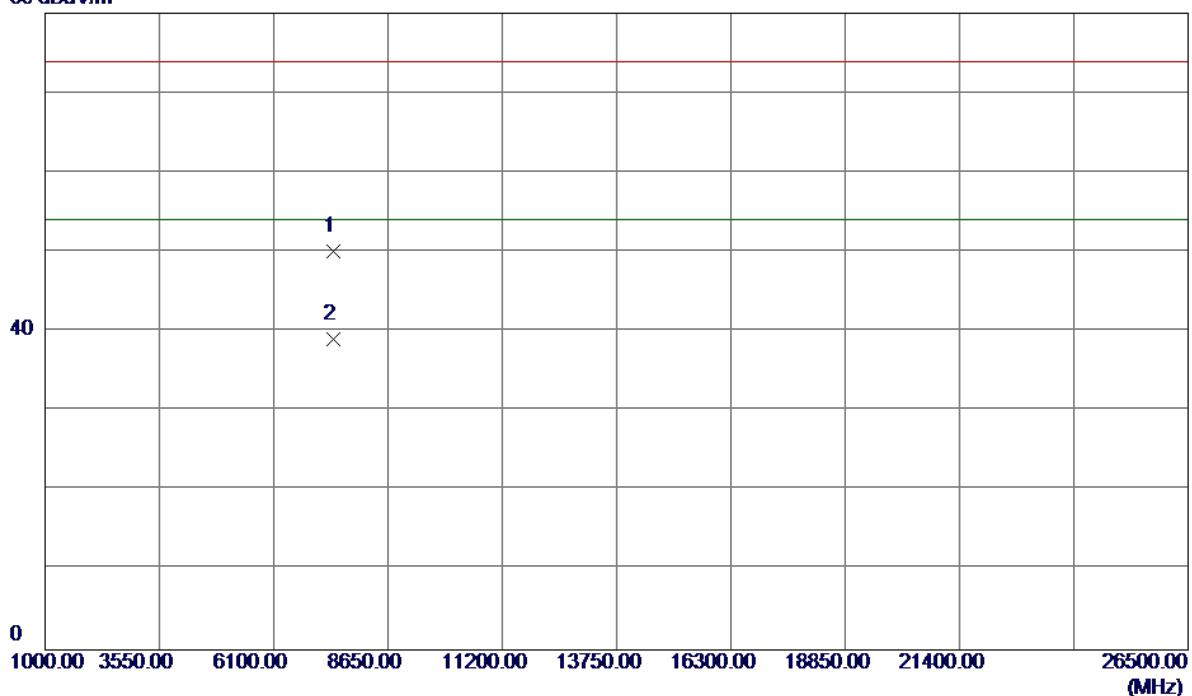


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dB	Margin	Detector	Comment
1	2479.9500	51.82	33.39	85.21	74.00	11.21	Peak	No Limit
2 *	2480.0000	44.68	33.39	78.07	54.00	24.07	AVG	No Limit
3	2483.5000	23.66	33.41	57.07	74.00	-16.93	Peak	
4	2483.5000	13.20	33.41	46.61	54.00	-7.39	AVG	

Test Mode :	TX 2480MHz _CH78_3Mbps
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Horizontal

80 dBuV/m



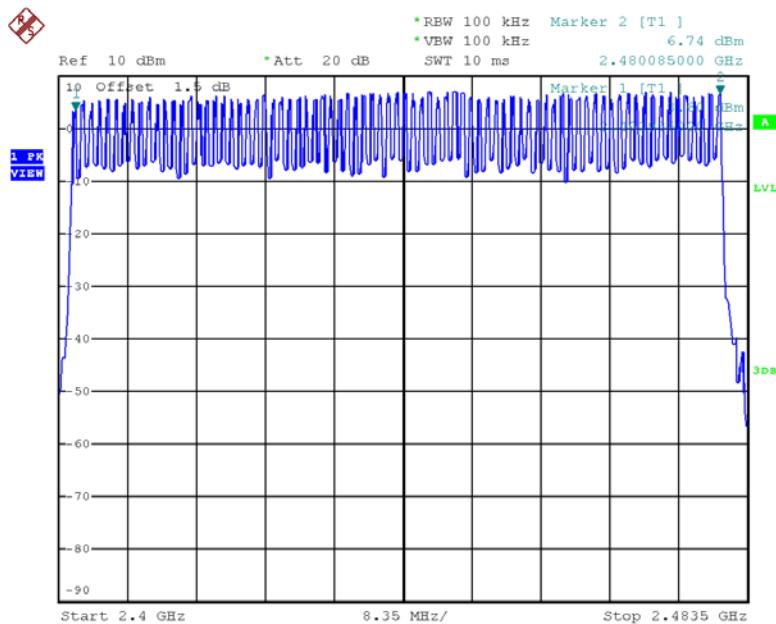
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	7439.4490	36.48	13.59	50.07	74.00	-23.93	Peak	
2 *	7439.7330	25.44	13.59	39.03	54.00	-14.97	AVG	

APPENDIX E - NUMBER OF HOPPING CHANNEL

Test Mode**Hopping Mode_1Mbps**

Number of Hopping Channel

79

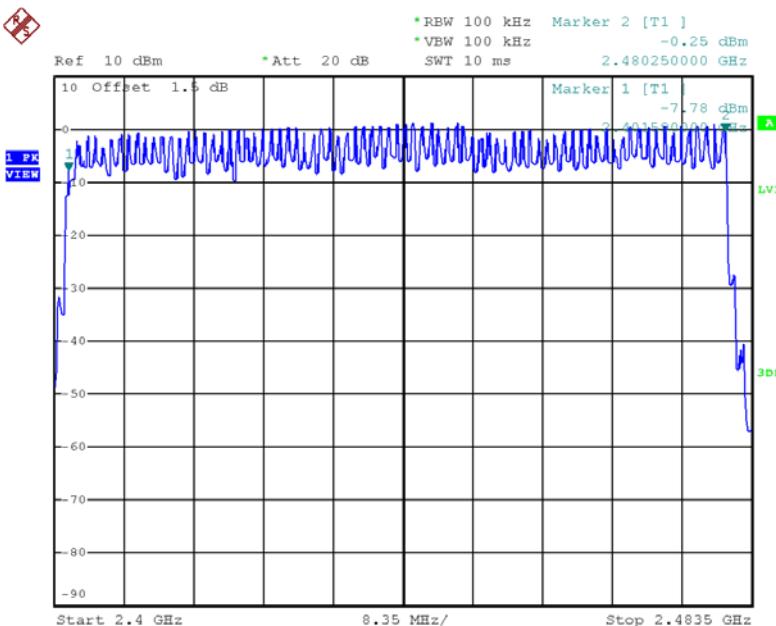


Date: 8.SEP.2017 12:30:49

Test Mode**Hopping Mode_3Mbps**

Number of Hopping Channel

79



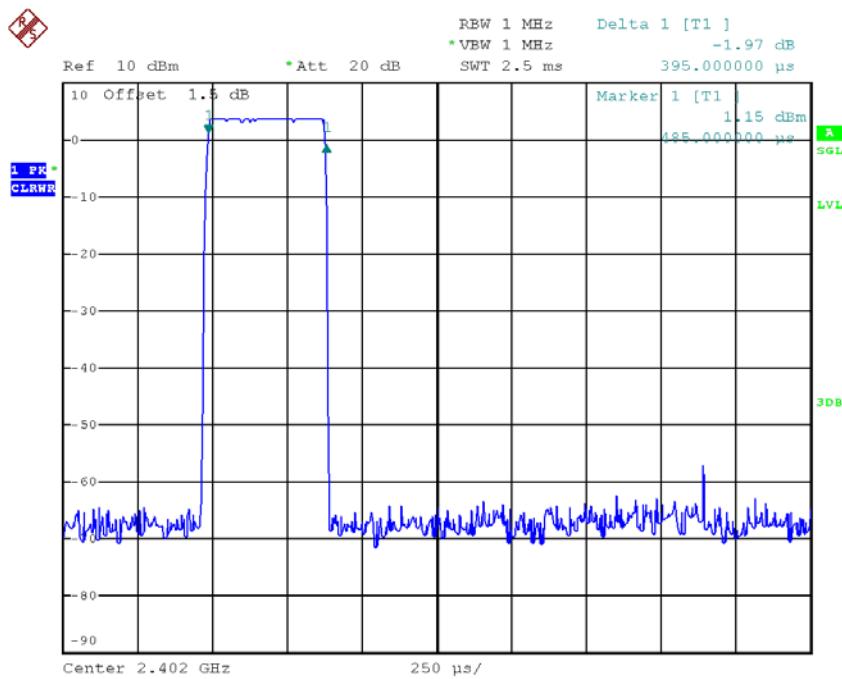
Date: 8.SEP.2017 12:01:50

APPENDIX F - AVERAGE TIME OF OCCUPANCY

Test Mode :	TX Mode_1Mbps
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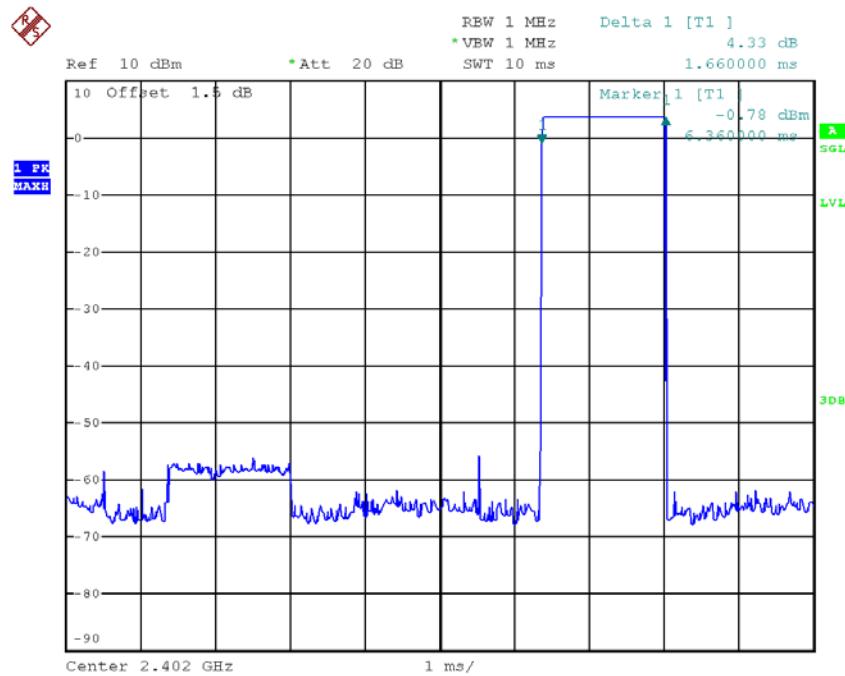
Data Packet	Frequency (MHz)	Pulse Duration (ms)	Dwell Time (s)	Limits (s)	Test Result
DH5	2402	2.9200	0.3115	0.4000	Pass
DH3	2402	1.6600	0.2656	0.4000	Pass
DH1	2402	0.3950	0.1264	0.4000	Pass
DH5	2441	2.8800	0.3072	0.4000	Pass
DH3	2441	1.6600	0.2656	0.4000	Pass
DH1	2441	0.3950	0.1264	0.4000	Pass
DH5	2480	2.8800	0.3072	0.4000	Pass
DH3	2480	1.6400	0.2624	0.4000	Pass
DH1	2480	0.3950	0.1264	0.4000	Pass

CH00-DH1



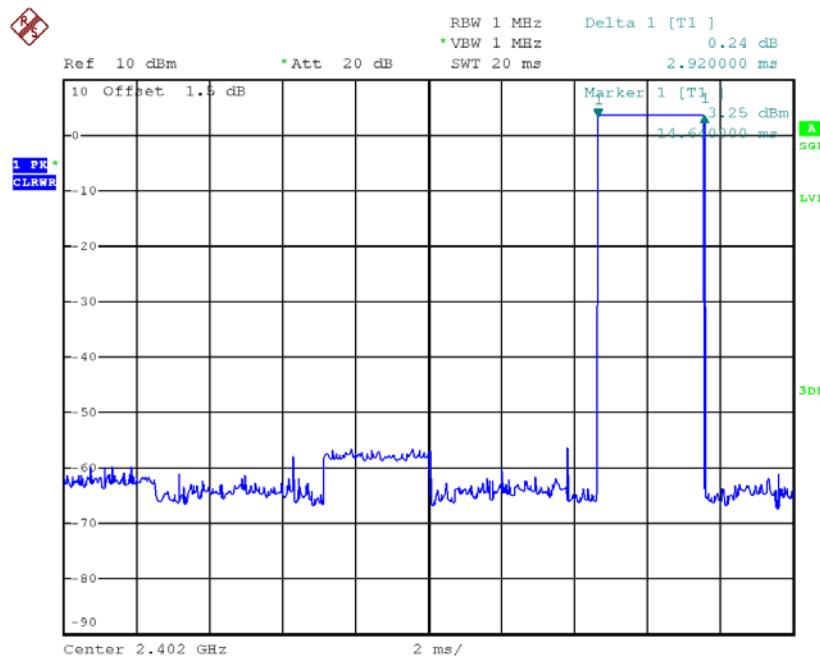
Date: 8.SEP.2017 12:51:30

CH00-DH3



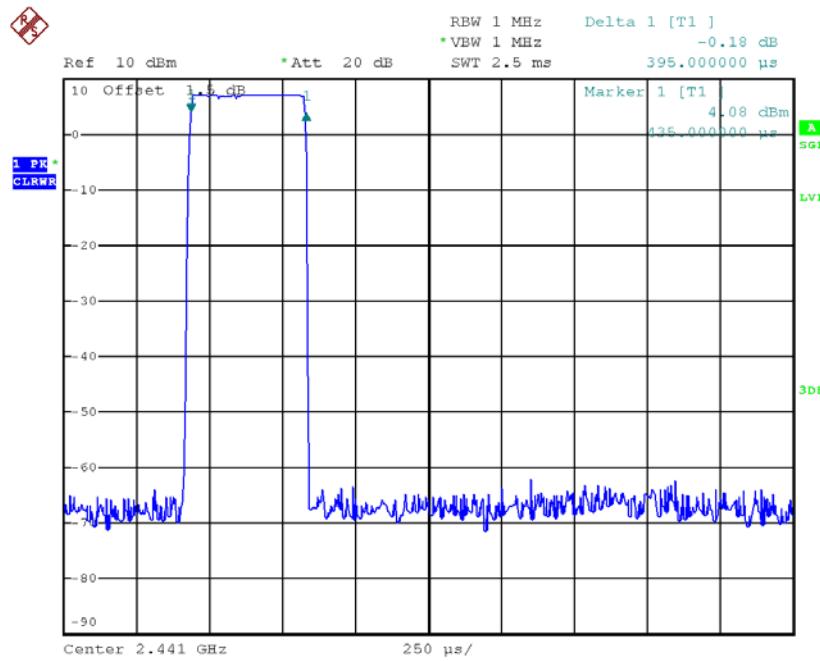
Date: 8.SEP.2017 12:35:36

CH00-DH5



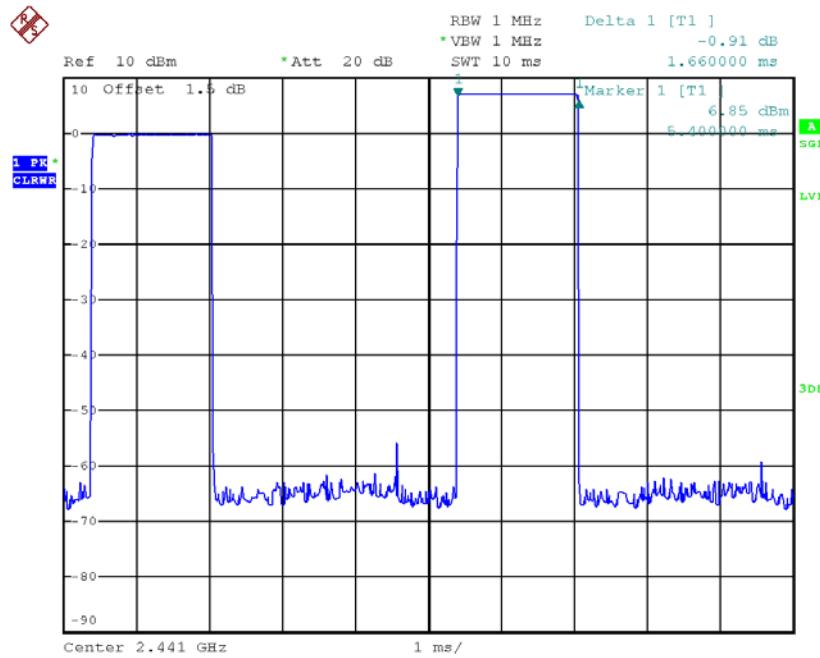
Date: 8.SEP.2017 12:55:44

CH39-DH1



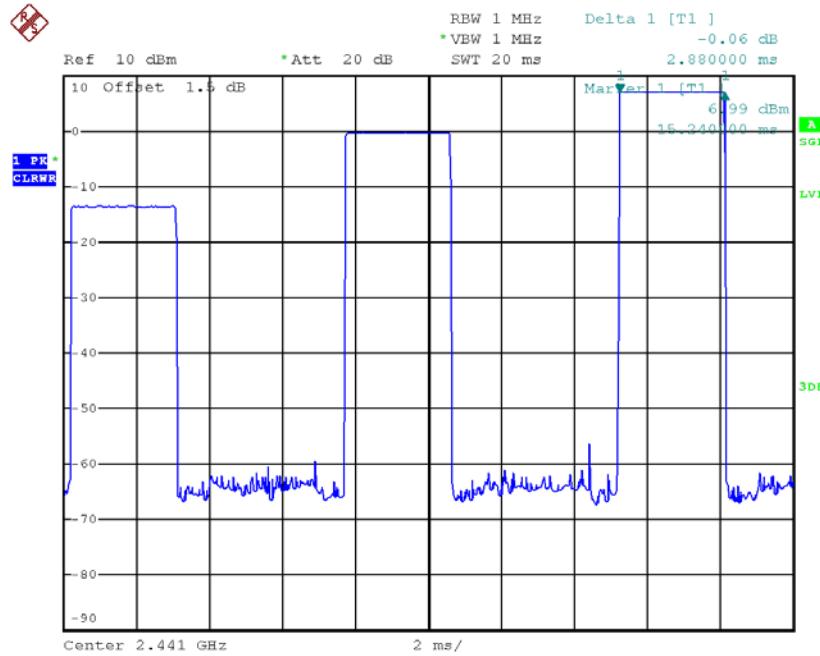
Date: 8.SEP.2017 12:51:34

CH39-DH3



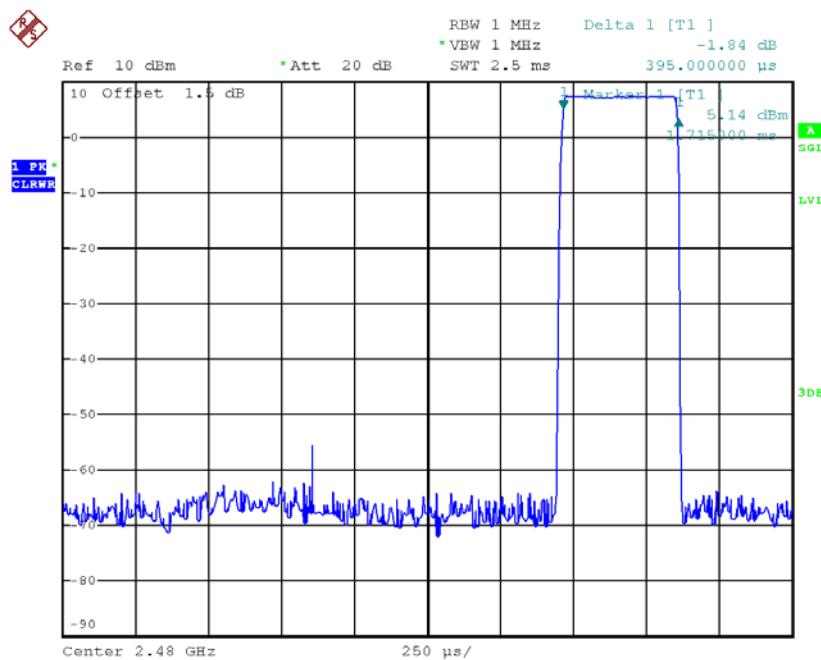
Date: 8.SEP.2017 12:35:41

CH39-DH5



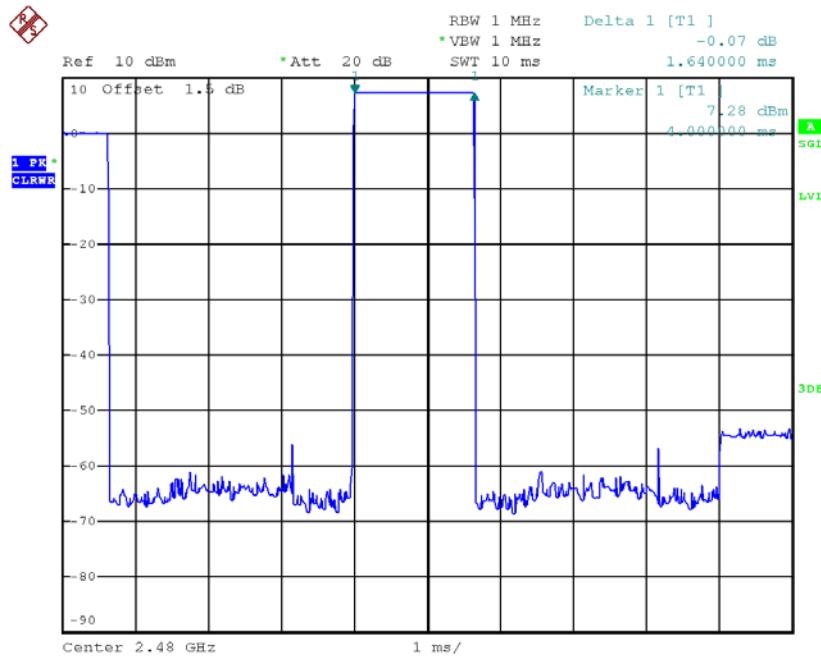
Date: 8.SEP.2017 12:54:50

CH78-DH1



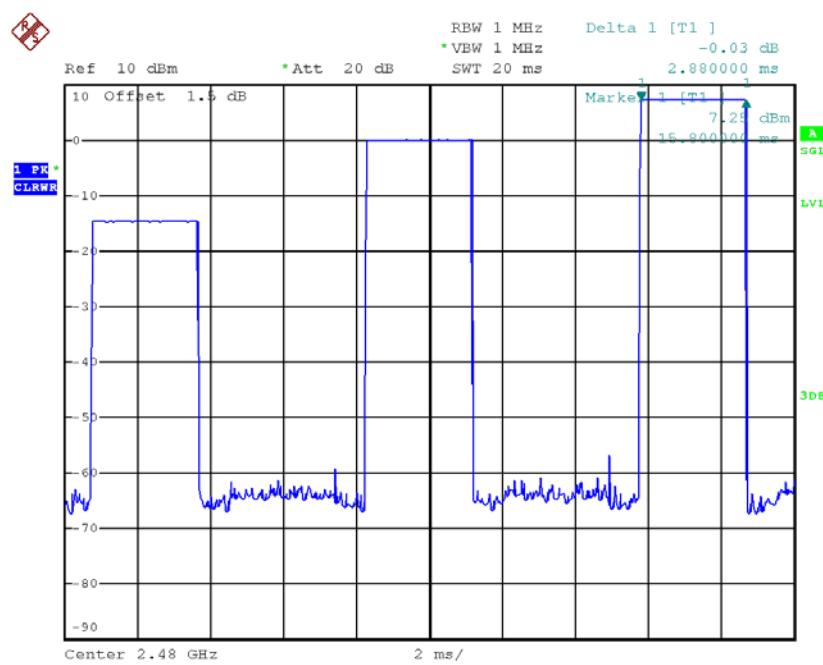
Date: 8.SEP.2017 12:51:53

CH78-DH3



Date: 8.SEP.2017 12:35:44

CH78-DH5

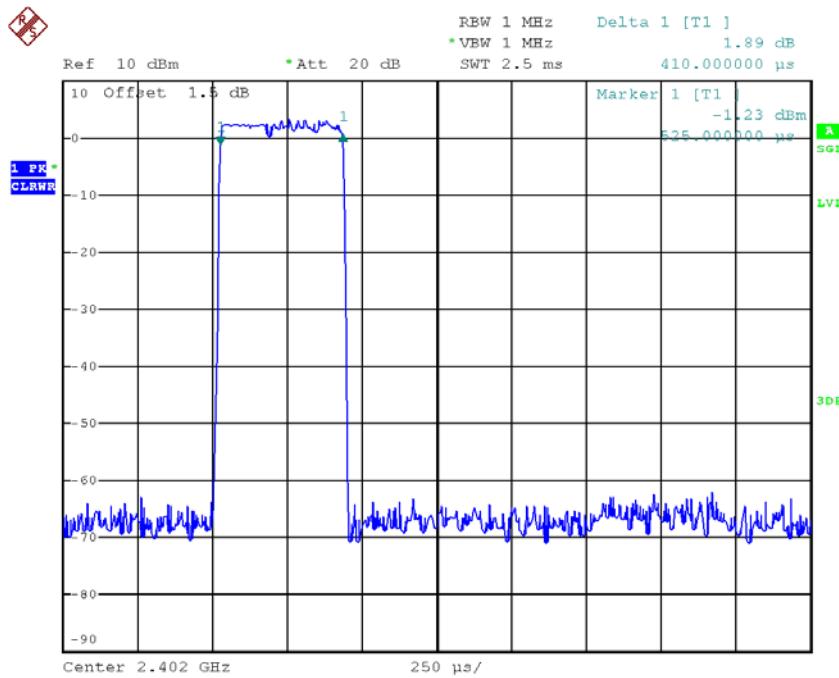


Date: 8.SEP.2017 12:54:55

Test Mode : TX Mode_3Mbps

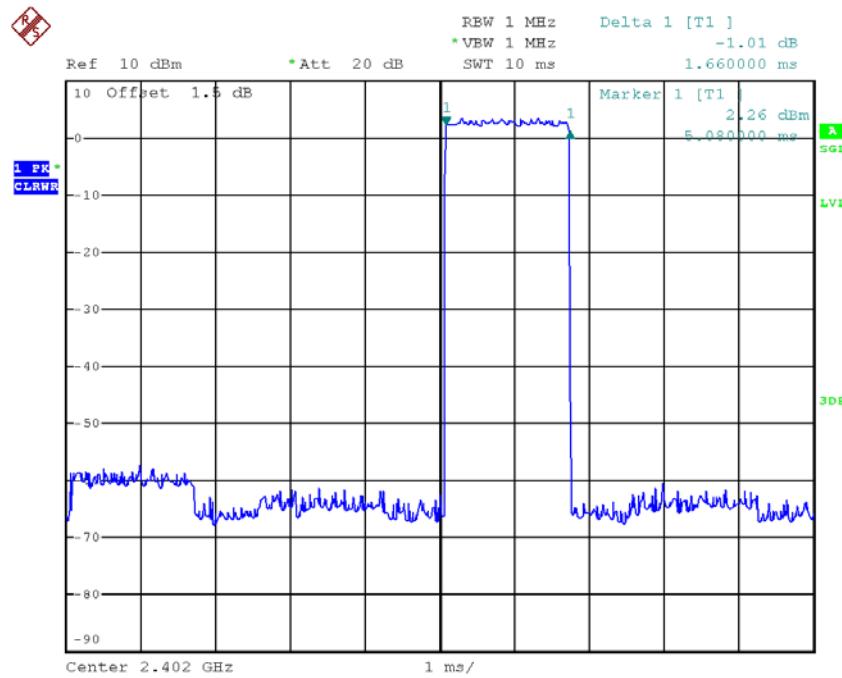
Data Packet	Frequency	Pulse Duration(ms)	Dwell Time(s)	Limits(s)	Test Result
DH5	2402	2.9200	0.3115	0.4000	Pass
DH3	2402	1.6600	0.2656	0.4000	Pass
DH1	2402	0.4100	0.1312	0.4000	Pass
DH5	2441	2.9200	0.3115	0.4000	Pass
DH3	2441	1.6600	0.2656	0.4000	Pass
DH1	2441	0.4050	0.1296	0.4000	Pass
DH5	2480	2.9200	0.3115	0.4000	Pass
DH3	2480	1.6600	0.2656	0.4000	Pass
DH1	2480	0.4000	0.1280	0.4000	Pass

CH00-DH1



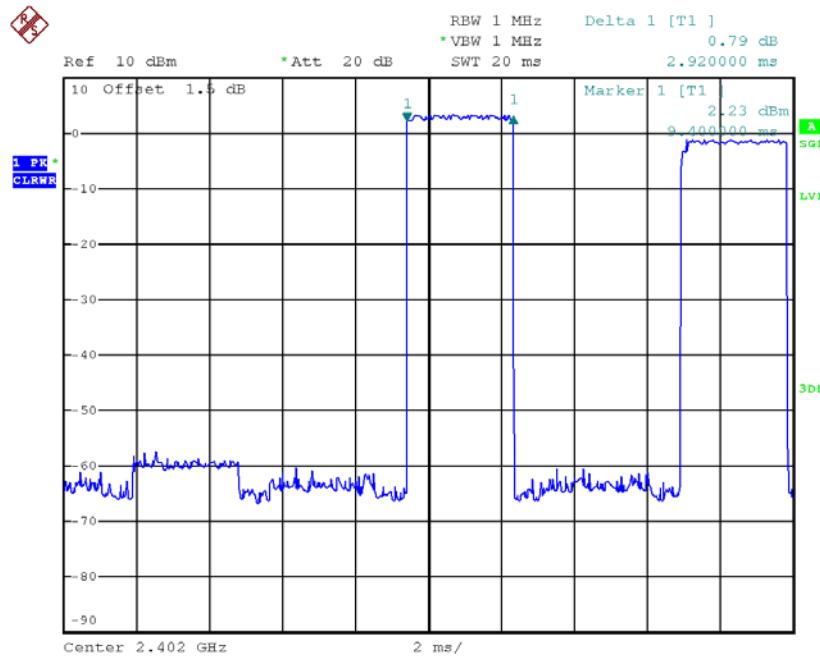
Date: 8.SEP.2017 12:11:52

CH00-DH3



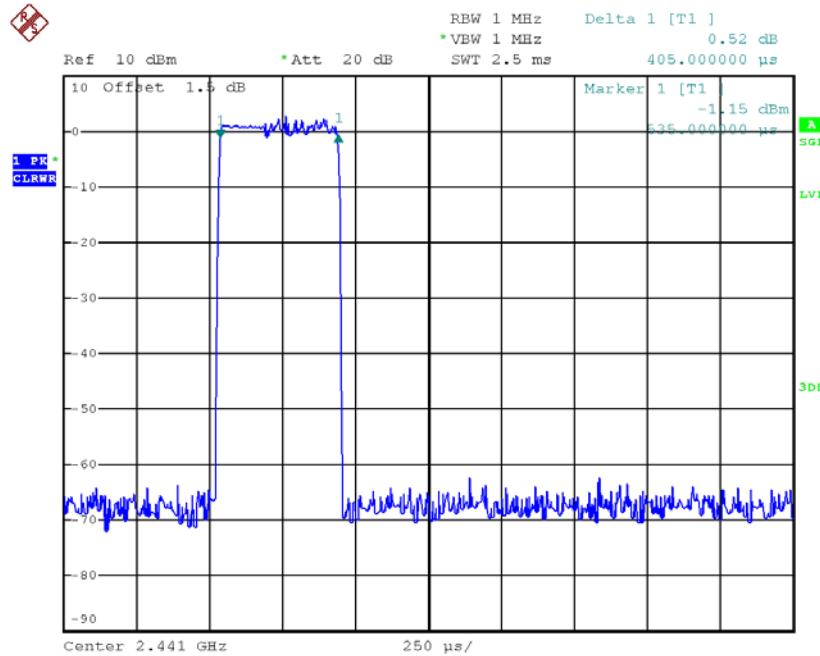
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CH00-DH5



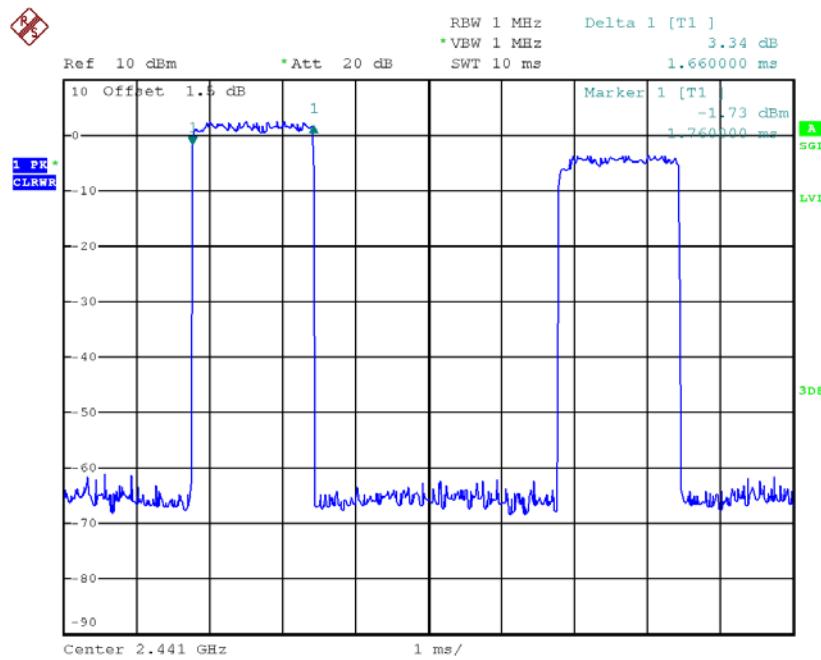
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CH39-DH1



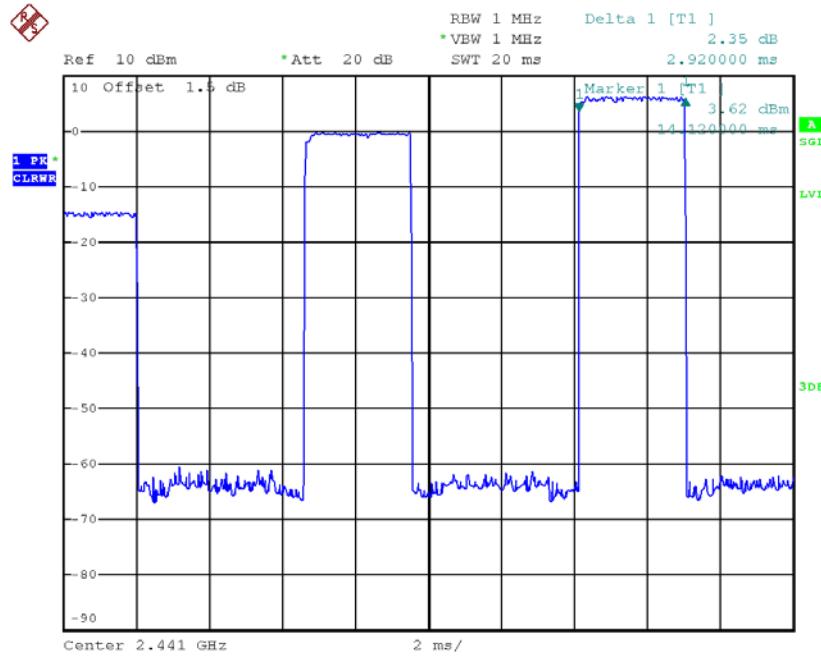
Date: 8.SEP.2017 12:10:19

CH39-DH3



Date: 8.SEP.2017 12:07:31

CH39-DH5



Date: 8.SEP.2017 12:16:12