FCC Radio Test Report

FCC ID: NDD9564881702

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

Project No.	:	1703214
Equipment	:	Dualband WiFi Router
Test Model	:	BR-6488ACL
Series Model	:	BR-6488AC, RG12S, EW-7488AC, EW-7488WAP, RG12, RE12S, RE12, RG15S, RG15, RE15S, RE15
Applicant	:	EDIMAX TECHNOLOGY CO., LTD.
Address	:	No.278, Xinhu 1st Rd., Neihu Dist., Taipei City, Taiwan

Date of Receipt	:	Apr. 28, 2017
Date of Test	:	Apr. 28, 2017 ~ Nov. 28, 2017
Issued Date	:	Nov. 29, 2017
Tested by	:	BTL Inc.

Testing Engineer : _____ (Kenji Lin)

Technical Manager : _____ (James Chiu)

Authorized Signatory : _____ (Andy Chiu)

BTL INC.

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Testing Laboratory
0659

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.

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-2-1703214	Original Issue.	Nov. 29, 2017

1. CERTIFICATION

Equipment	:	Dualband WiFi Router
Brand Name	:	EDIMAX
Test Model	:	BR-6488ACL
Series Model	:	BR-6488AC, RG12S, EW-7488AC, EW-7488WAP, RG12, RE12S, RE12, RG15S, RG15, RE15S, RE15
Applicant	:	EDIMAX TECHNOLOGY CO., LTD.
Manufacturer	:	EDIMAX TECHNOLOGY CO., LTD.
Address	:	No.278, Xinhu 1st Rd., Neihu Dist., Taipei City, Taiwan
Date of Test	:	Apr. 28, 2017 ~ Nov. 28, 2017
Test Sample	:	ENGINEERING SAMPLE
Standard(s)	:	FCC Part15, Subpart E(15.407) / ANSI C63.10-2013

The above equipment has been tested and found in 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-2-1703214) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF 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):

FCC Part15, Subpart E(15.407)			
Standard(s) Section	Test Item	Judgment	Remark
15.207	AC Power Line Conducted Emissions	PASS	
15.407(a)	26dB Spectrum Bandwidth	PASS	
15.407(a)	Maximum Conducted Output Power	PASS	
15.407(a)	Power Spectral Density	PASS	
15.407(a)	Radiated Emissions	PASS	
15.407(b)	Band Edge Emissions	PASS	
15.407(g)	Frequency Stability	PASS	
15.203	Antenna Requirements	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:

Conducted emission Test:

C05: (VCCI RN: C-4742; FCC RN:965108; FCC DN:TW1082)
No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Below 1 GHz):

CB15: (FCC RN:674415; FCC DN:TW0659)
No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

Radiated emission Test (Above 1 GHz):

CB15: (FCC RN:674415; FCC DN:TW0659)
No. 68-1, Ln. 169, Sec.2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

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 BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement y ± 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 emission test:

Test Site	Method	Measurement Frequency Range	U,(dB)
C05	CISPR	150 kHz ~ 30MHz	3.06

B. Radiated emission test:

Test Site	Method	Measurement Frequency Range	U,(dB)
CB15 (3m)	CISPR	9kHz ~ 150kHz	2.96
		150kHz ~ 30MHz	2.74

Test Site	Method	Measurement Frequency Range	Ant.	U,(dB)
CB15 (3m)	CISPR	30MHz ~ 200MHz	V	4.76
		30MHz ~ 200MHz	H	4.28
		200MHz ~ 1,000MHz	V	5.08
		200MHz ~ 1,000MHz	H	4.50

Test Site	Method	Measurement Frequency Range	Ant.	U,(dB)
CB15 (3m)	CISPR	1GHz ~ 6GHz	V	4.48
		1GHz ~ 6GHz	H	4.50
		6GHz ~ 18GHz	V	4.30
		6GHz ~ 18GHz	H	4.14

Test Site	Method	Measurement Frequency Range	U,(dB)
CB15 (1m)	CISPR	18 ~ 26.5 GHz	4.72
		26.5 ~ 40 GHz	5.20

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Dualband WiFi Router	
Brand Name	EDIMAX	
Test Model	BR-6488ACL	
Series Model	BR-6488AC, RG12S, EW-7488AC, EW-7488WAP, RG12, RE12S, RE12, RG15S, RG15, RE15S, RE15	
Model Difference	Different model distribute to different area.	
Product Description	Operation Frequency	UNII-1: 5150-5250MHz UNII-3: 5725-5850MHz
	Modulation Type	OFDM
	Bit Rate of Transmitter	866.7Mbps
Power Source	DC Voltage supplied from AC/DC adapter. APD/WB-18D12FU	
Power Rating	I/P:100-240V~50-60Hz 0.9A Max. O/P: DC 12V⎓1.5A	
Output Power	Output Power (Max.)for UNII-1 (2TX) Non-Beamforming	802.11a: 25.00dBm 802.11n (20M): 24.93dBm 802.11n (40M): 24.93dBm 802.11ac (80M): 19.35dBm
	Output Power (Max.)for UNII-3 (2TX) Non-Beamforming	802.11a: 22.16dBm 802.11n (20M): 22.78dBm 802.11n (40M): 21.62dBm 802.11ac (80M): 21.71dBm
	Output Power (Max.)for UNII-1 (2TX) Beamforming	802.11n (20M): 25.00dBm 802.11n (40M): 22.79dBm 802.11ac (80M): 24.13dBm
	Output Power (Max.)for UNII-3 (2TX) Beamforming	802.11n (20M): 22.16dBm 802.11n (40M): 23.88dBm 802.11ac (80M): 22.81dBm

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. It contains 8M and 16M flash.
3. Channel List:

UNII-1					
a/n20		n40		ac80	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

UNII-3					
a/n20		n40		ac80	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

4. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		Note
					Band 1	Band 4	
1	Master Wave	98202PIPF000	Dipole	IPEX	4.4	4.18	NA
2	Master Wave	98202PIPF001	Dipole	IPEX	4.38	4.13	NA

Note:
(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R) and employs Cyclic Delay Diversity (CDD).
In CDD mode,
For power spectral density:
5150 MHz to 5250 MHz :
Directional gain =
10*log{[10^(G1/20)+10^(G2/20)+…+10^(Gn/20)]^2/NANT} = 7.40 dBi > 6dBi.
The reduced power spectral density limits (dBm/MHz) = 17 - (7.40-6) = 15.60

For conducted power:
For N_{ANT} = 2 < 5,
Directional gain (dBi) = G_{ANT} + 0 = 4.4 + 0 = 4.4
The Directional gain is less than 6, so conducted power limits will not be reduced.

5725 MHz to 5850 MHz :
Directional gain =
10*log{[10^(G1/20)+10^(G2/20)+…+10^(Gn/20)]^2/NANT} = 7.17 dBi > 6dBi.
The reduced power spectral density limits (dBm/MHz) = 30 - (7.17-6) = 28.83

For conducted power:
For N_{ANT} = 2 < 5,
Directional gain (dBi) = G_{ANT} + 0 = 4.18+ 0 = 4.18
The Directional gain is less than 6, so conducted power limits will not be reduced.

(2) In Beamforming mode,
For conducted power:
5150 MHz to 5250 MHz :
Directional gain(dBi) = GANT MAX + 10 log(NANT/NSS) =4.4 + 3.01 = 7.41 dBi > 6dBi
The reduced power limit(dBm) = 30 – (7.41-6) = 28.59
5725 MHz to 5850 MHz :
Directional gain(dBi) = GANT MAX + 10 log(NANT/NSS) =4.18 + 3.01 = 7.19 dBi > 6dBi
The reduced power limit(dBm) = 30 – (7.19-6) = 28.81
(3) The EUT(N mode & AC mode) with beamforming function.

5.

Operating Mode / TX Mode	2TX
802.11a	V (ANT 1+ANT 2)
802.11n (20MHz)	V (ANT 1+ANT 2)
802.11n (40MHz)	V (ANT 1+ANT 2)
802.11ac (80MHz)	V (ANT 1+ANT 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 A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC80 Mode / CH42 (UNII-1)
Mode 5	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 6	TX N20 Mode / CH149,CH157,CH165 (UNII-3)
Mode 7	TX N40 Mode / CH151,CH159 (UNII-3)
Mode 8	TX AC80 Mode / CH155 (UNII-3)
Mode 9	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 9	Normal Link

For Radiated Test	
Final Test Mode	Description
Mode 1	TX A Mode / CH36, CH40, CH48 (UNII-1)
Mode 2	TX N20 Mode / CH36, CH40, CH48 (UNII-1)
Mode 3	TX N40 Mode / CH38, CH46 (UNII-1)
Mode 4	TX AC80 Mode / CH42 (UNII-1)
Mode 5	TX A Mode / CH149,CH157,CH165 (UNII-3)
Mode 6	TX N20 Mode / CH149,CH157,CH165 (UNII-3)
Mode 7	TX N40 Mode / CH151,CH159 (UNII-3)
Mode 8	TX AC80 Mode / CH155 (UNII-3)

Note:
(1) For radiated below 1GHz test, the 802.11a(UNII-1) & 802.11ac(UNII-3) mode is found to be the worst case and recorded.

3.3 TABLE OF PARAMETERS OF TEST SOFTWARE SETTING

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

Non-Beamforming & Beamforming

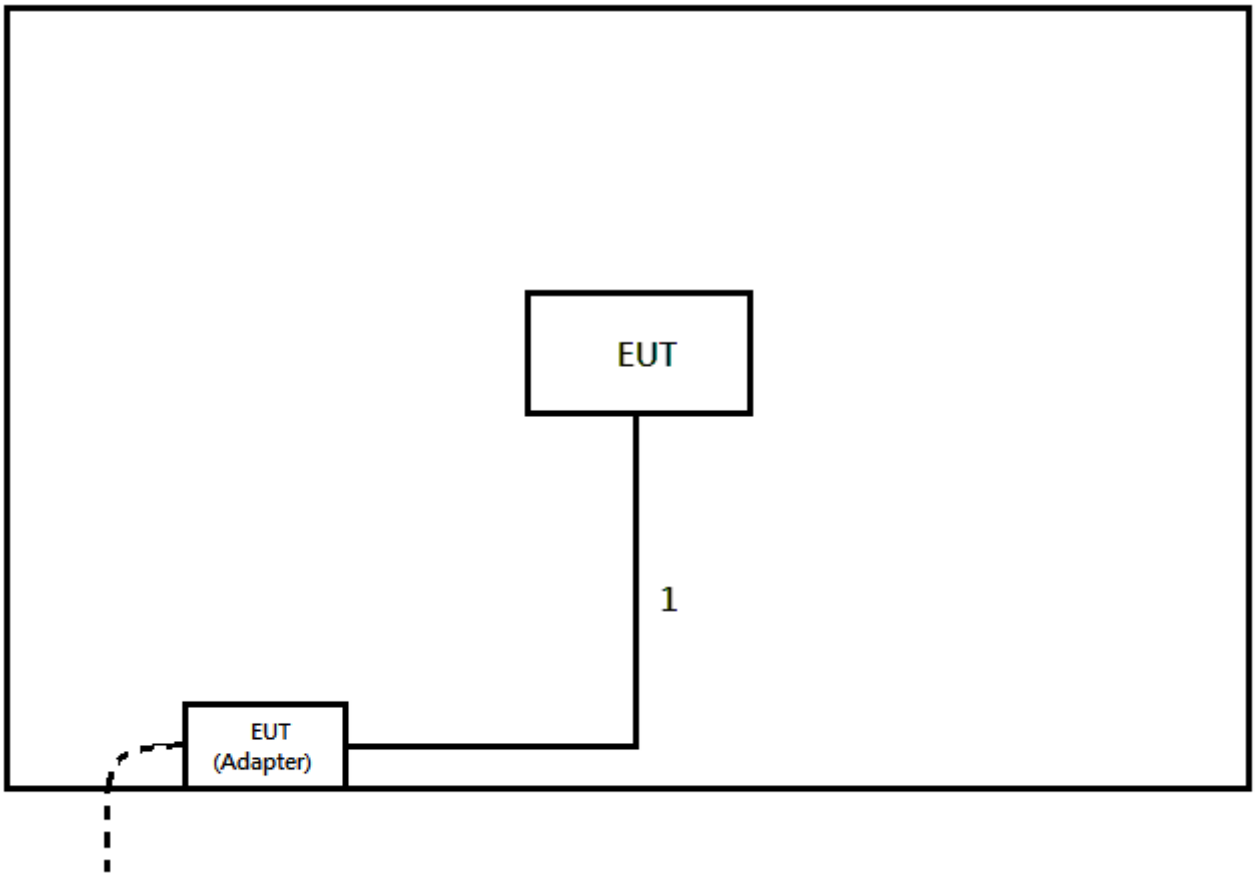
UNII-1 - 2TX			
Test Software Version	RTL819X 3.4		
Frequency (MHz)	5180	5200	5240
A Mode	38,38	45,45	45,45
Frequency (MHz)	5180	5200	5240
N20 Mode	38,38	45,45	45,45
Frequency (MHz)	5190	5230	
N40 Mode	31,31	45,45	

UNII-3 - 2TX			
Test Software Version	RTL819X 3.4		
Frequency (MHz)	5745	5785	5825
A Mode	45,45	45,45	45,45
Frequency (MHz)	5745	5785	5825
N20 Mode	45,45	45,45	45,45
Frequency (MHz)	5755	5795	
N40 Mode	45,45	45,45	

UNII-1 - 2TX			
Test Software Version	RTL819X 3.4		
Frequency (MHz)	5210		
AC80 Mode	32,32		

UNII-3 - 2TX			
Test Software Version	RTL819X 3.4		
Frequency (MHz)	5775		
AC80 Mode	45,45		

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.	Note
-	-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	N0	No	1.2m	Power Cable

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

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

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

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 equipments 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.

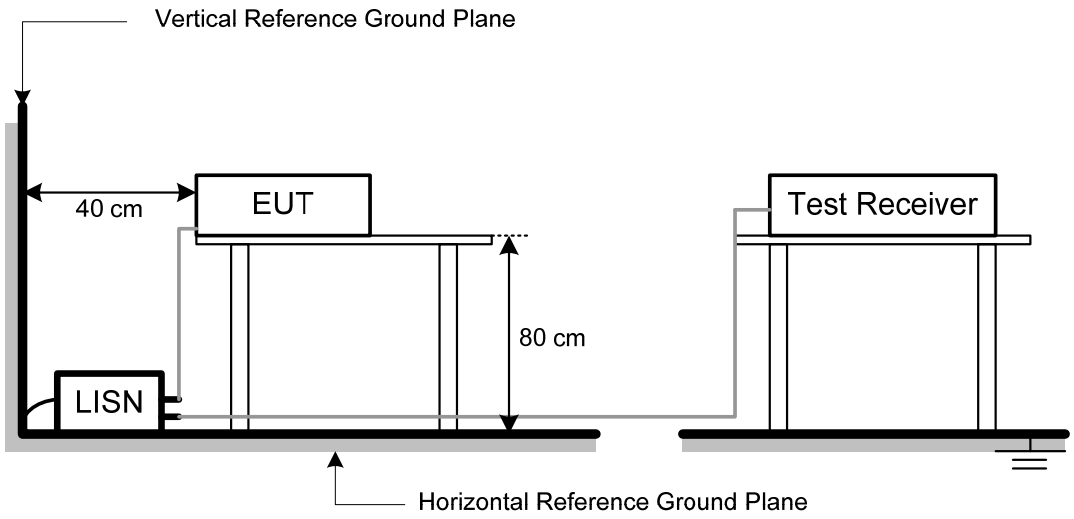
d. LISN at least 80 cm from nearest part of EUT chassis.

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



4.1.5 EUT OPERATING CONDITIONS

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

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.

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

Frequencies (MHz)	EIRP Limit (dBm)	Band edge at 3m (dBμV/m)	Harmonic at 1.5m (dBμV/m)
5150-5250	-27	68.3	74.3 (Note 3)
5250-5350	-27	68.3	74.3 (Note 3)
5470-5725	-27	68.3	74.3 (Note 3)
5725-5850	-27(Note 2)	68.3	74.3 (Note 3)
	10(Note 2)	105.3	111.3(Note 3)
	15.6(Note 2)	110.9	116.9(Note 3)
	27(Note 2)	122.3	128.3(Note 3)

Note:

1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength: $E = \frac{1000000\sqrt{30P}}{3}$ μV/m, where P is the eirp (Watts)
2. According to FCC 16-24,All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below theband edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above orbelow the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.
3. $FS_{\text{limit}} = FS_{\max} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$ 20log d limit/d measure=20log 3/1.5=6dB.

4.2.2 TEST PROCEDURE

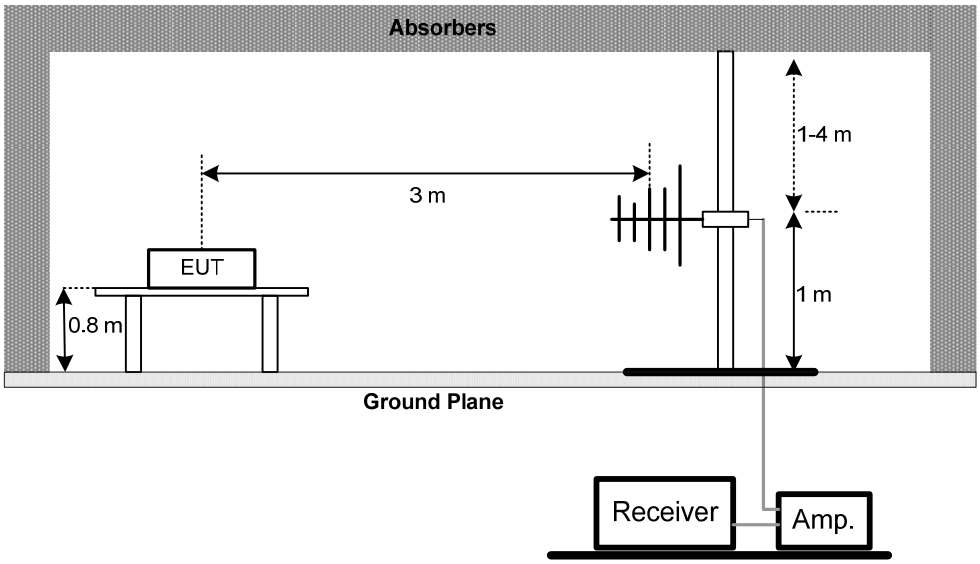
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m or 1.5m 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

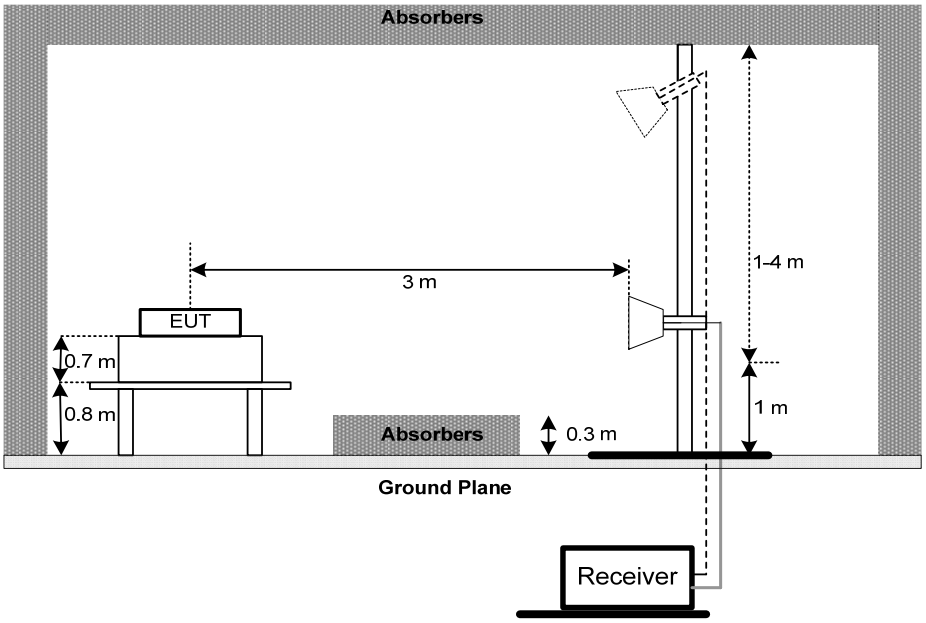
4.2.4 TEST SETUP

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

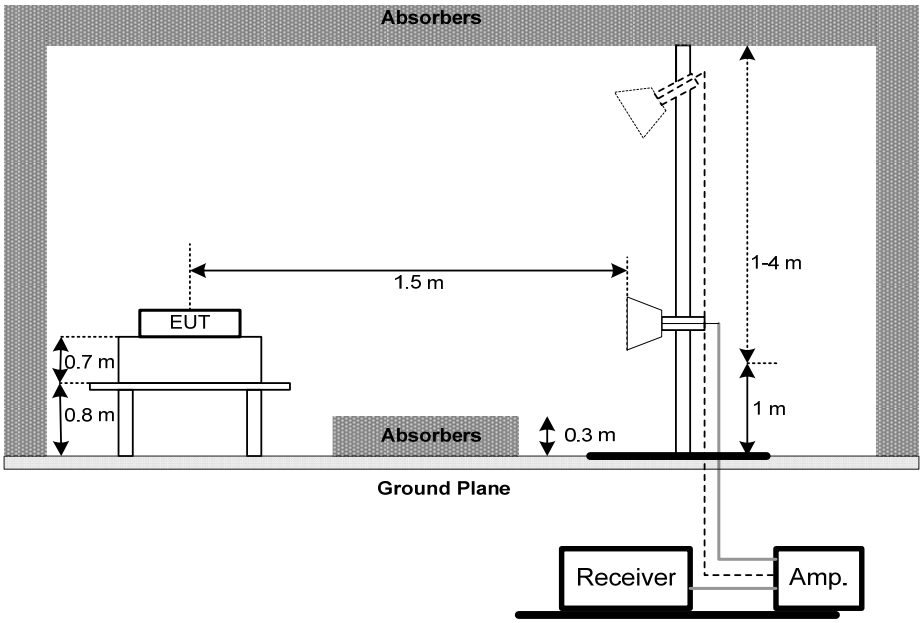


(B) Radiated Emission Test Set-Up Frequency Above 1 GHz

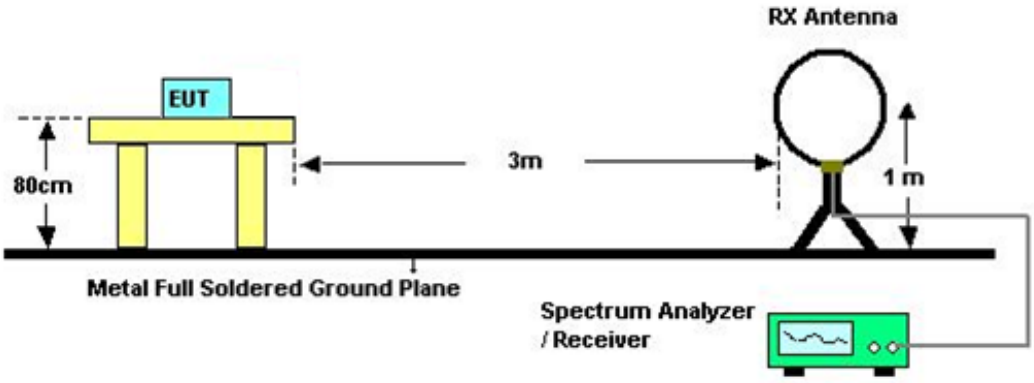
Band edge



Harmonic



(C) Radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

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

4.2.6 EUT TEST CONDITIONS

Temperature: 23°C Relative Humidity: 70% Test Voltage: AC 120V/60Hz

4.2.7 TEST RESULTS (9K TO 30MHz)

Please refer to the Attachment 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 (BETWEEN 30 TO 1000 MHz)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHz)

Please refer to the Attachment 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. 26dB SPECTRUM BANDWIDTH

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Bandwidth	26 dB Bandwidth	5150-5250	PASS
	Minimum 500kHz 6dB Bandwidth	5725-5850	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.

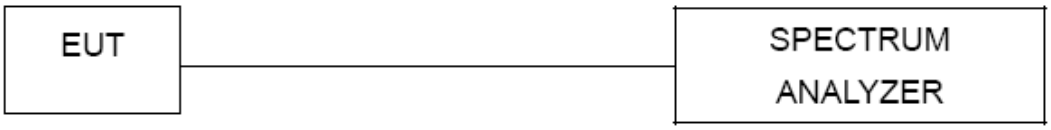
Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RBW	300 kHz(Bandwidth 20MHz) 1MHz(Bandwidth 40MHz and 80MHz)
VBW	1MHz(Bandwidth 20MHz) 3MHz(Bandwidth 40MHz and 80MHz)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

c. Measured the spectrum width with power higher than 26dB below carrier

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 Attachment E.

6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Conducted Output Power	Fixed:1 Watt (30dBm) Mobile and portable: 250mW (24dBm)	5150-5250	PASS
	1 Watt (30dBm)	5725-5850	PASS
Note: The maximum e.i.r.p at anyelevation angle above 30 degrees as measured from the horizon must not exceed 125mW(21dBm)			

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.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1MHz.
VBW	≥ 3MHz.
Detector	RMS
Trace	Max Hold
Sweep Time	auto

c. Test was performed in accordance with method of KDB 789033 D02.

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 Attachment F.

7. POWER SPECTRAL DENSITY TEST

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Power Spectral Density	Other then Mobile and portable:17dBm/MHz Mobile and portable:11dBm/MHz	5150-5250	PASS
	30dBm/500kHz	5725-5850	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 Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1MHz.
VBW	≥ 3MHz.
Detector	RMS
Trace average	100 trace
Sweep Time	Auto

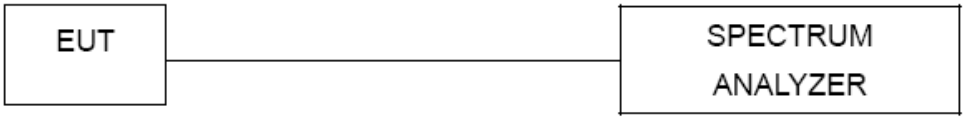
Note:

1. For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v01r02, section II.F.5., it is acceptable to set RBW at 1MHz and VBW at 3MHz if the spectrum analyzer does not have 500kHz RBW.
2. The value measured with RBW=1MHz is to be added with 10log(500kHz/1MHz) which is -3dB. For example, if the measured value is +10dBm using RBW=1MHz (that is +10dBm/MHz), then the converted value will be +7dBm/500kHz.

7.1.1 DEVIATION FROM STANDARD

No deviation.

7.1.2 TEST SETUP



7.1.3 EUT OPERATION CONDITIONS

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

7.1.4 EUT TEST CONDITIONS

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

7.1.5 TEST RESULTS

Please refer to the Attachment H.

8. FREQUENCY STABILITY MEASUREMENT

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Frequency Stability	Specified in the user's manual	5150-5250	PASS
		5725-5850	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 Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

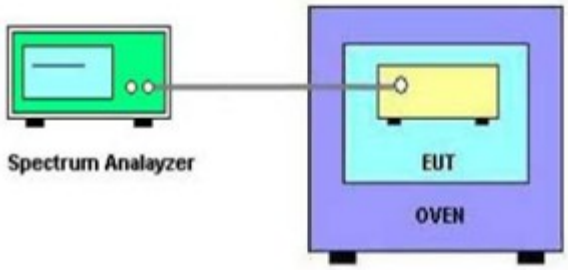
c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

d. User manual temperature is 0°C~40°C.

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 Attachment I.

9. MEASUREMENT INSTRUMENTS LIST

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Jan. 25, 2018
2	Test Cable	TIMES	CFD300-NL	C02	Jun. 15, 2017
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 09, 2017
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Preamplifier	EMCI	012645B	980267	Feb. 28, 2018
2	Preamplifier	EMCI	EMC02325	980217	Dec. 29, 2017
3	Preamplifier	EMCI	EMC2654045	980030	Feb.14, 2018
4	Test Cable	EMCI	EMC104-SM-SM-8000	8m	Jan. 04, 2018
5	Test Cable	EMCI	EMC104-SM-SM-800	150207	Jan. 04, 2018
6	Test Cable	EMCI	EEMC104-SM-SM-3000	151205	Jan. 04, 2018
7	MXE EMI Receiver	Agilent	N9038A	MY55420127	Jan. 09, 2018
8	Signal Analyzer	Agilent	N9010A	MY52220990	Feb. 22, 2018
9	Loop Ant	EMCO	6502	42960	Nov. 24, 2017
10	Horm Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	Feb. 28, 2018
11	Horm Ant	Schwarzbeck	BBHA 9170	187	May 11, 2018
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-548	Jan. 16, 2018
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0623	Jan. 16, 2018

Spectrum Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 26, 2017

Maximum Conducted Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 25, 2018
2	Power Meter	Anritsu	ML2495A	1128008	Aug. 17, 2017
ˇ	Power Sensor	Anritsu	MA2411B	1126001	Aug. 17, 2017

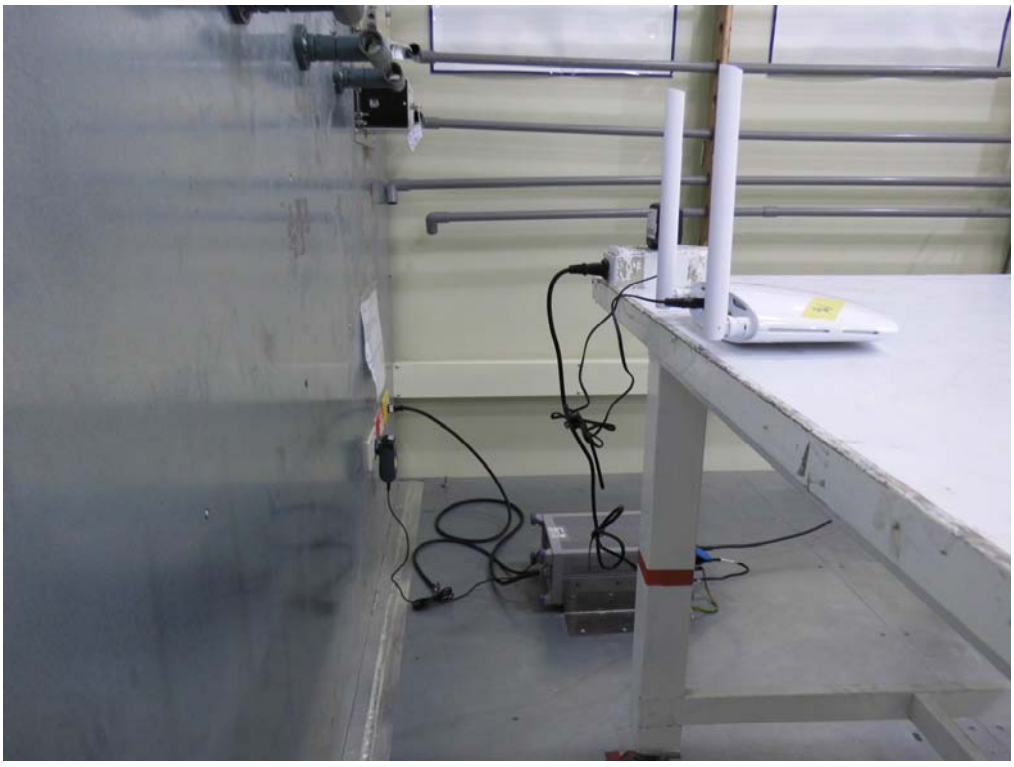
Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 26, 2017

Frequency Stability Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 26, 2017

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

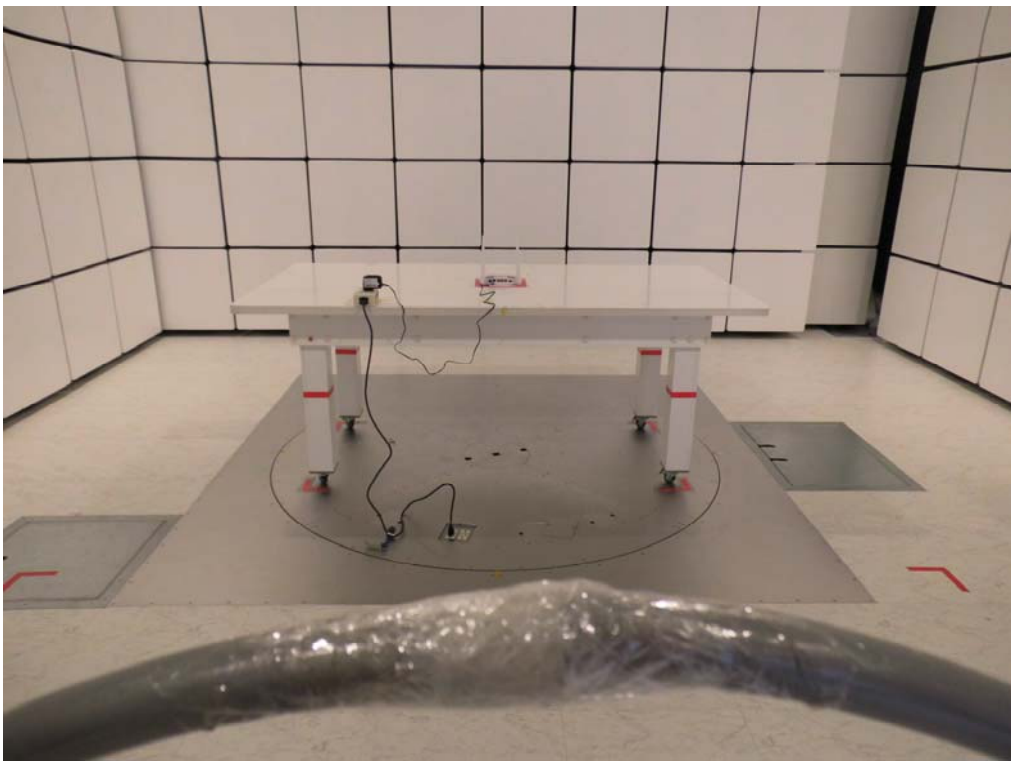
10. EUT TEST PHOTOS

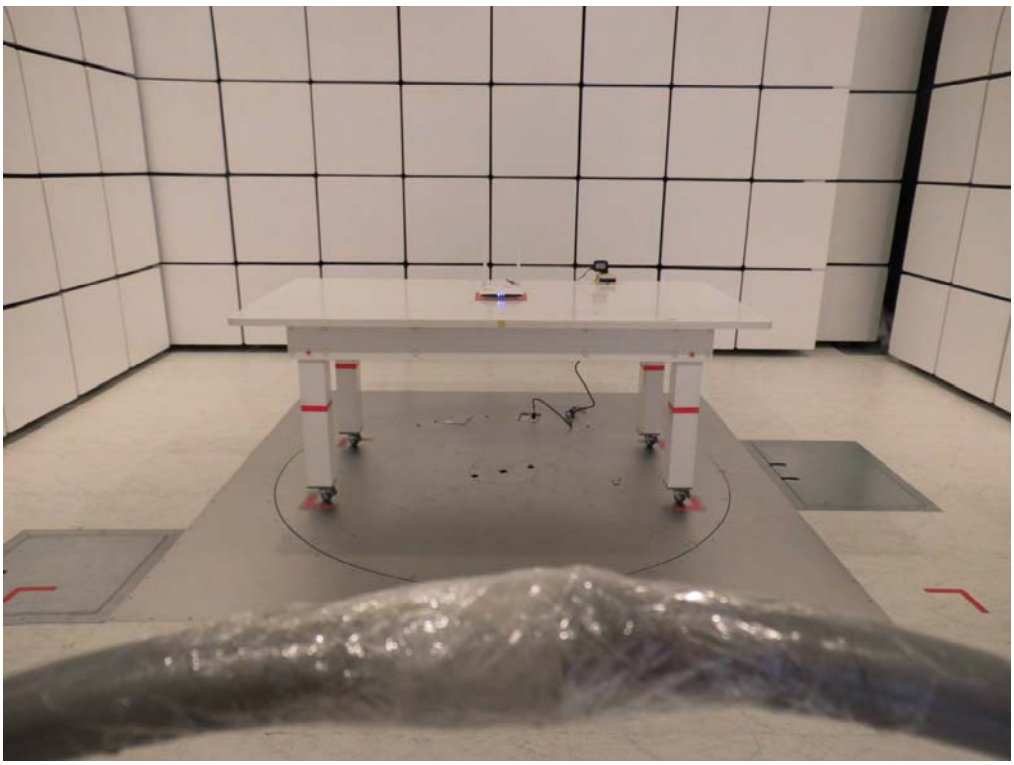
Conducted Measurement Photos



Radiated Measurement Photos

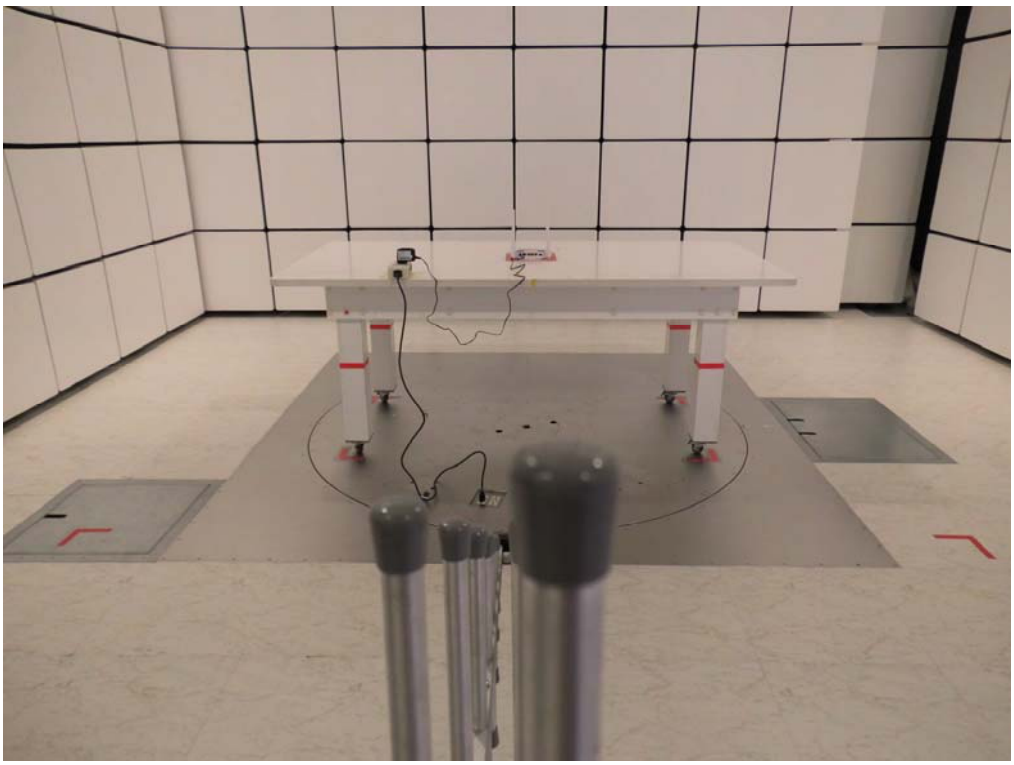
9kHz to 30MHz

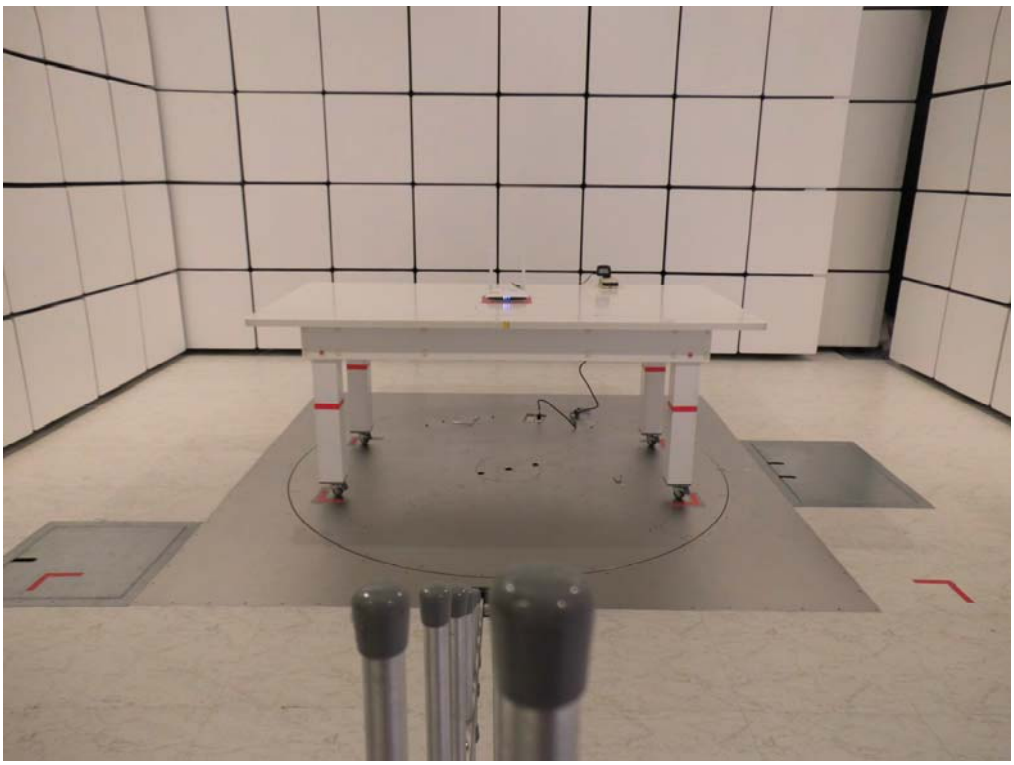




Radiated Measurement Photos

30MHz to 1000MHz





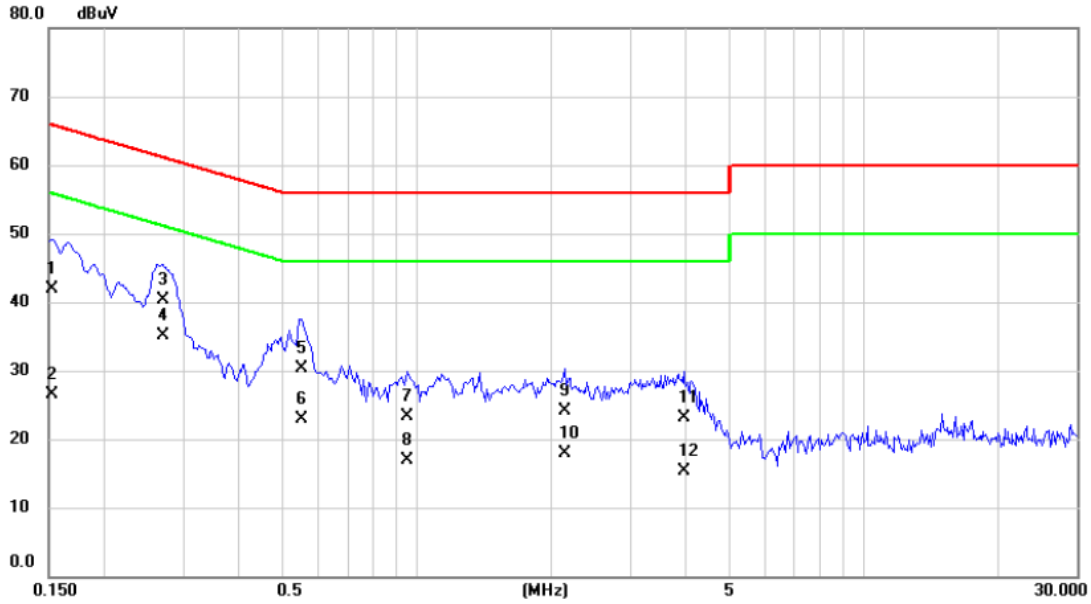
Radiated Measurement Photos

Above 1000MHz

ATTACHMENT A - CONDUCTED EMISSION

Test Mode:	UNII-1/ Normal Link

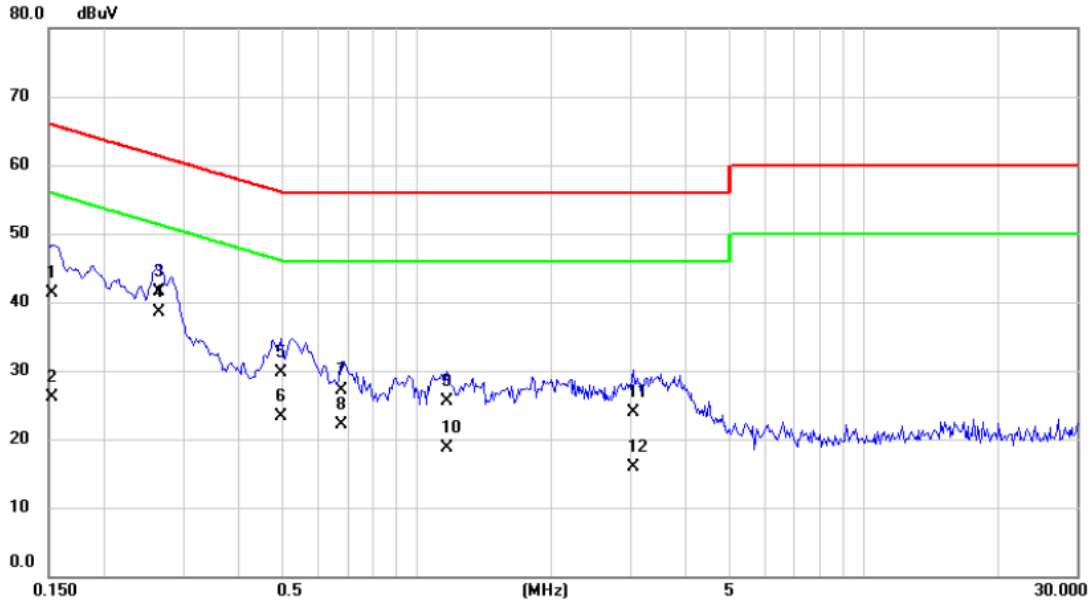
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1528	32.20	9.76	41.96	65.85	-23.89	QP	
2		0.1528	16.80	9.76	26.56	55.85	-29.29	AVG	
3		0.2697	30.50	9.75	40.25	61.13	-20.88	QP	
4	*	0.2697	25.30	9.75	35.05	51.13	-16.08	AVG	
5		0.5540	20.50	9.76	30.26	56.00	-25.74	QP	
6		0.5540	13.10	9.76	22.86	46.00	-23.14	AVG	
7		0.9500	13.50	9.80	23.30	56.00	-32.70	QP	
8		0.9500	7.10	9.80	16.90	46.00	-29.10	AVG	
9		2.1380	14.20	9.83	24.03	56.00	-31.97	QP	
10		2.1380	8.10	9.83	17.93	46.00	-28.07	AVG	
11		3.9560	13.30	9.86	23.16	56.00	-32.84	QP	
12		3.9560	5.40	9.86	15.26	46.00	-30.74	AVG	

Test Mode:	UNII-1/ Normal Link

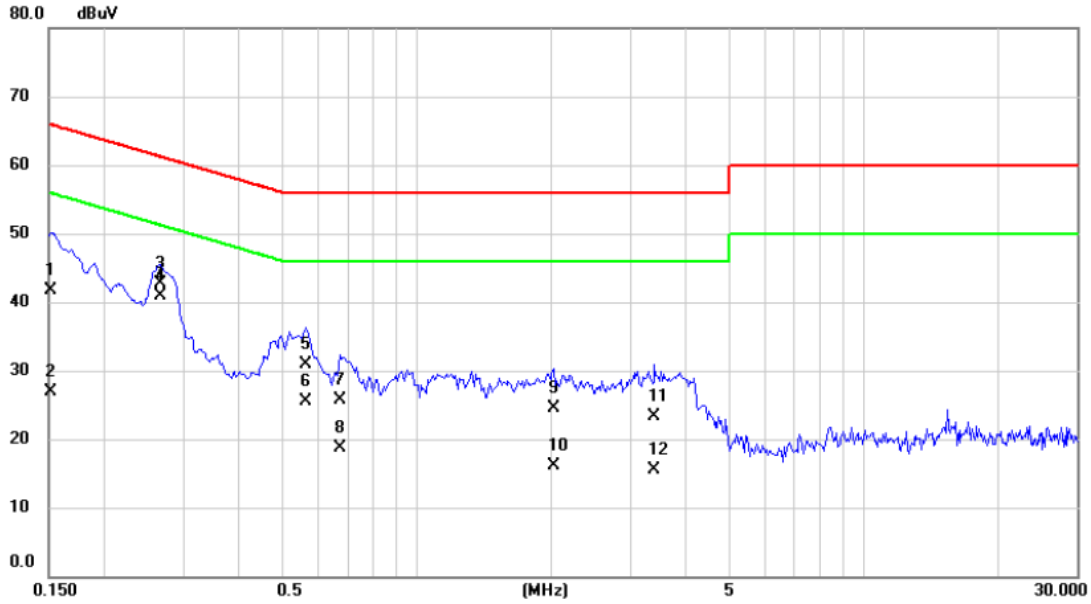
Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1528	31.70	9.68	41.38	65.85	-24.47	QP	
2		0.1528	16.50	9.68	26.18	55.85	-29.67	AVG	
3		0.2641	31.90	9.69	41.59	61.30	-19.71	QP	
4	*	0.2641	28.90	9.69	38.59	51.30	-12.71	AVG	
5		0.4972	20.10	9.70	29.80	56.05	-26.25	QP	
6		0.4972	13.70	9.70	23.40	46.05	-22.65	AVG	
7		0.6800	17.40	9.71	27.11	56.00	-28.89	QP	
8		0.6800	12.30	9.71	22.01	46.00	-23.99	AVG	
9		1.1660	15.70	9.75	25.45	56.00	-30.55	QP	
10		1.1660	8.90	9.75	18.65	46.00	-27.35	AVG	
11		3.0560	14.20	9.80	24.00	56.00	-32.00	QP	
12		3.0560	6.20	9.80	16.00	46.00	-30.00	AVG	

Test Mode:	UNII-3/ Normal Link

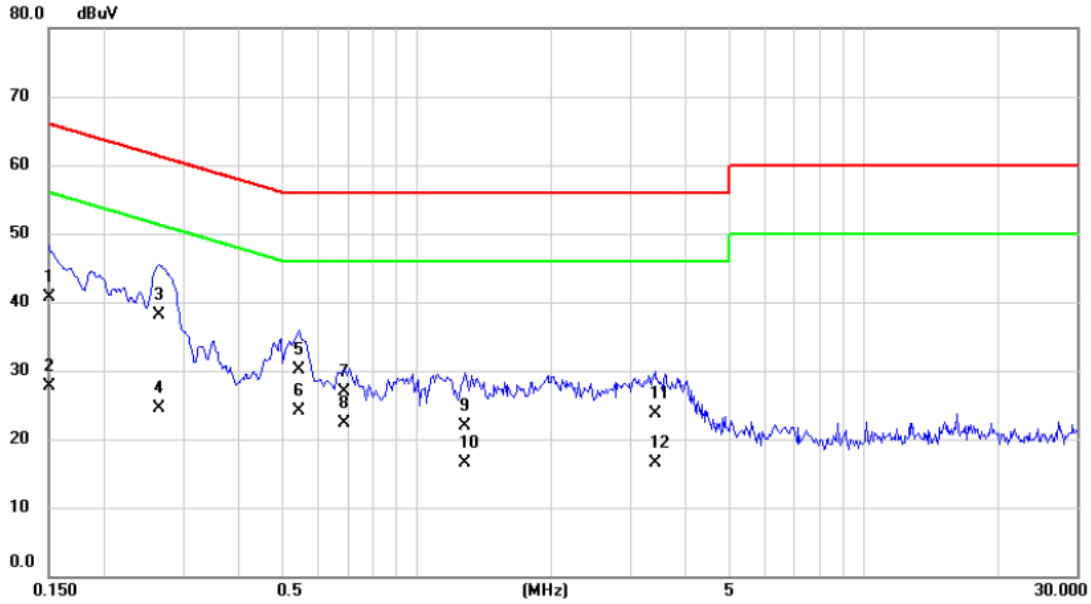
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1521	32.00	9.76	41.76	65.88	-24.12	QP	
2		0.1521	17.10	9.76	26.86	55.88	-29.02	AVG	
3		0.2662	32.90	9.75	42.65	61.24	-18.59	QP	
4	*	0.2662	31.20	9.75	40.95	51.24	-10.29	AVG	
5		0.5630	21.20	9.77	30.97	56.00	-25.03	QP	
6		0.5630	15.70	9.77	25.47	46.00	-20.53	AVG	
7		0.6710	15.90	9.77	25.67	56.00	-30.33	QP	
8		0.6710	9.00	9.77	18.77	46.00	-27.23	AVG	
9		2.0300	14.70	9.83	24.53	56.00	-31.47	QP	
10		2.0300	6.30	9.83	16.13	46.00	-29.87	AVG	
11		3.3980	13.50	9.85	23.35	56.00	-32.65	QP	
12		3.3980	5.70	9.85	15.55	46.00	-30.45	AVG	

Test Mode:	UNII-3/ Normal Link

Neutral

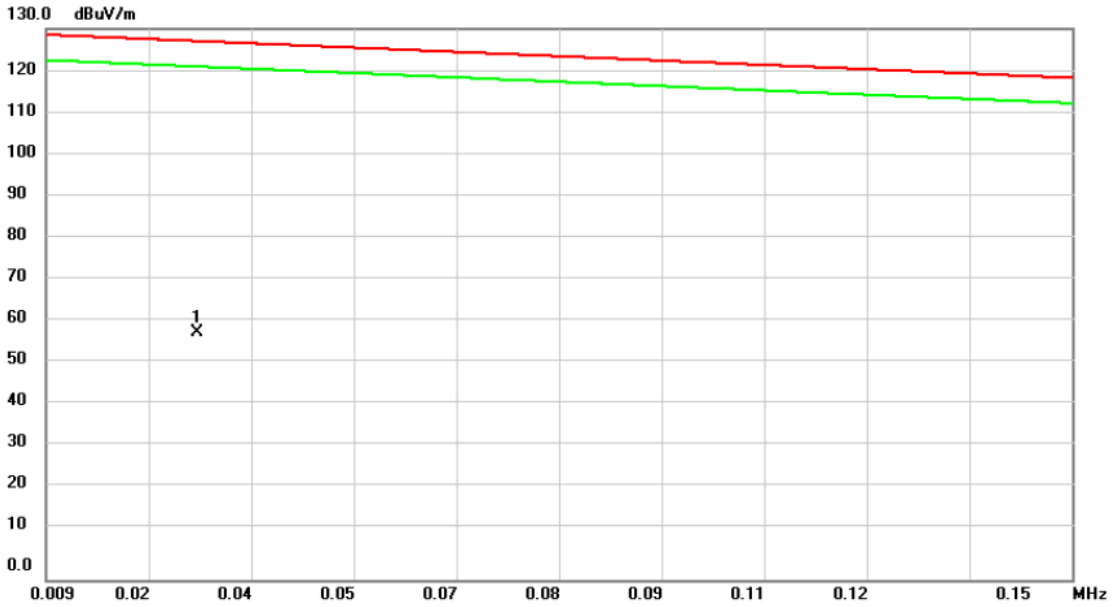


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	31.10	9.68	40.78	66.00	-25.22	QP	
2		0.1500	18.10	9.68	27.78	56.00	-28.22	AVG	
3		0.2641	28.50	9.69	38.19	61.30	-23.11	QP	
4		0.2641	14.80	9.69	24.49	51.30	-26.81	AVG	
5		0.5450	20.50	9.70	30.20	56.00	-25.80	QP	
6	*	0.5450	14.50	9.70	24.20	46.00	-21.80	AVG	
7		0.6890	17.20	9.72	26.92	56.00	-29.08	QP	
8		0.6890	12.60	9.72	22.32	46.00	-23.68	AVG	
9		1.2830	12.20	9.75	21.95	56.00	-34.05	QP	
10		1.2830	6.70	9.75	16.45	46.00	-29.55	AVG	
11		3.4160	13.90	9.80	23.70	56.00	-32.30	QP	
12		3.4160	6.70	9.80	16.50	46.00	-29.50	AVG	

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

Test Mode:	UNII-1/TX MODE

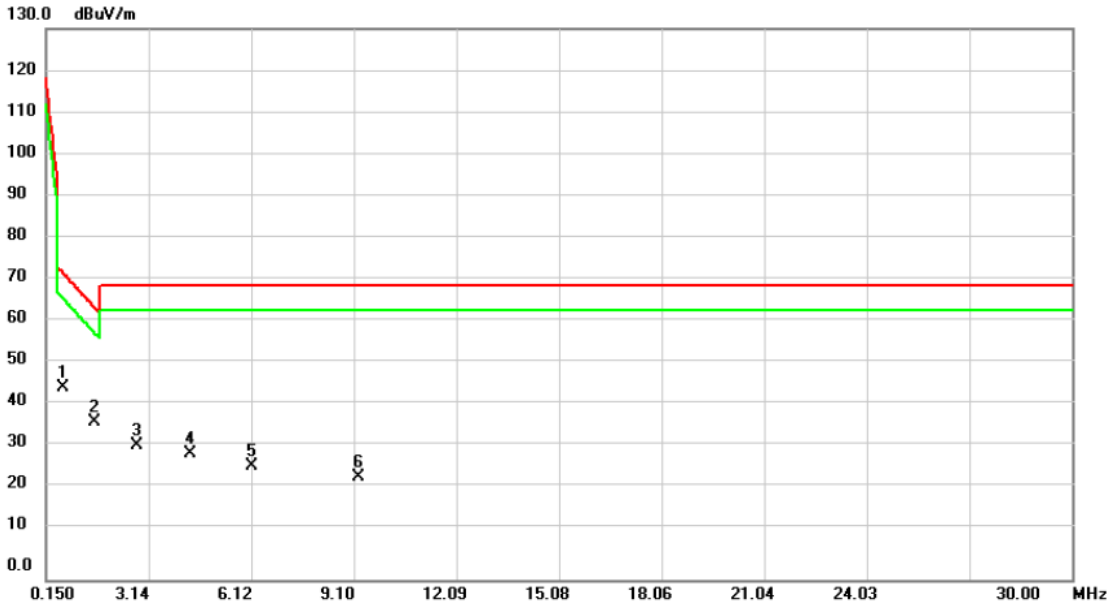
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0298	43.13	15.05	58.18	127.02	-68.84	peak	

Test Mode:	UNII-1/TX MODE

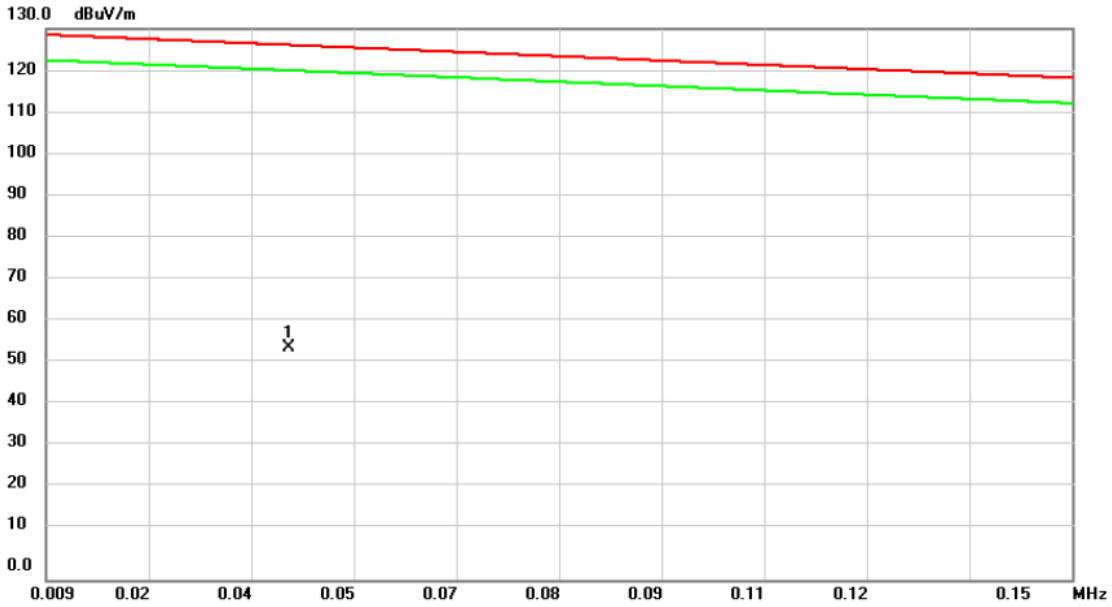
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.6276	33.55	11.85	45.40	72.57	-27.17	peak	
2	*	1.5530	25.58	11.75	37.33	64.32	-26.99	peak	
3		2.8065	20.46	11.19	31.65	69.54	-37.89	peak	
4		4.3290	18.38	11.30	29.68	69.54	-39.86	peak	
5		6.1497	15.55	11.38	26.93	69.54	-42.61	peak	
6		9.2543	12.76	11.31	24.07	69.54	-45.47	peak	

Test Mode:	UNII-1/TX MODE

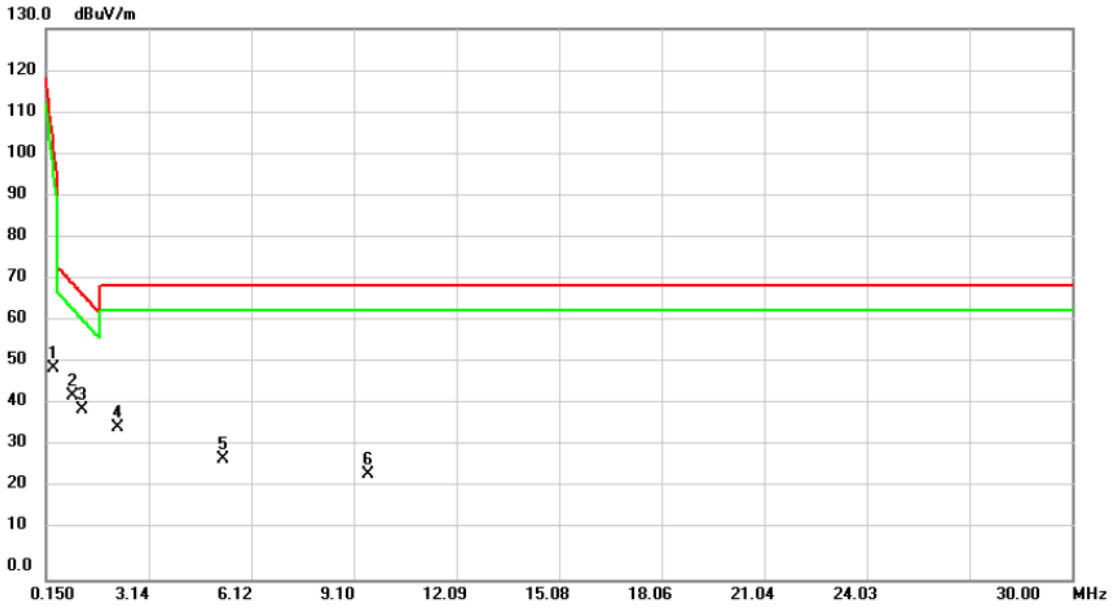
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0424	41.10	13.76	54.86	126.11	-71.25	peak	

Test Mode:	UNII-1/TX MODE

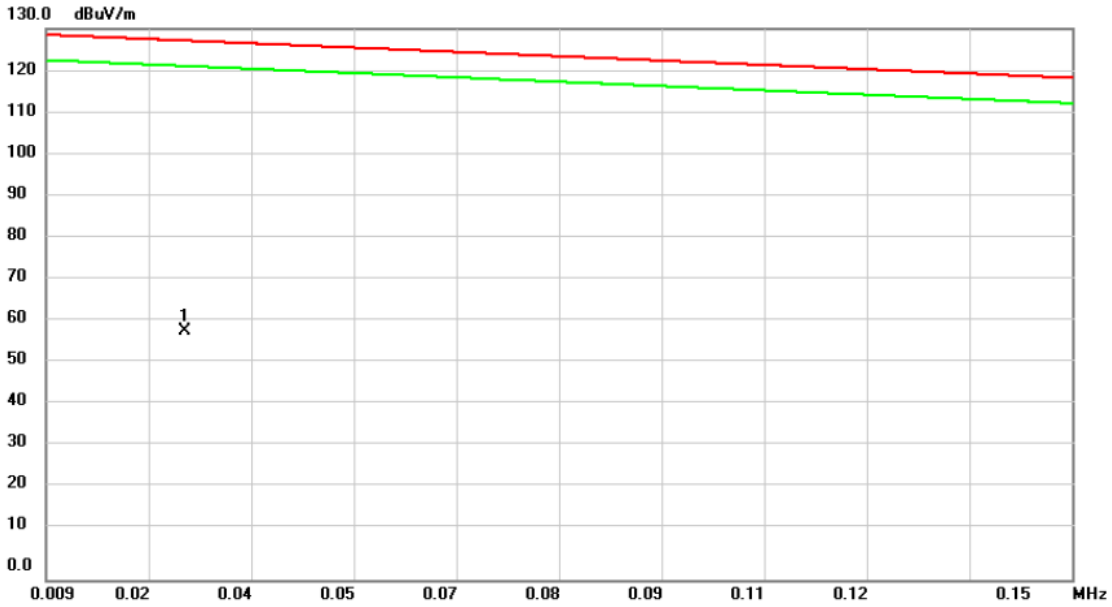
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3886	38.05	11.80	49.85	101.12	-51.27	peak	
2	*	0.9261	31.48	11.97	43.45	69.91	-26.46	peak	
3		1.2240	28.18	11.90	40.08	67.26	-27.18	peak	
4		2.2395	24.62	11.44	36.06	69.54	-33.48	peak	
5		5.2842	16.97	11.39	28.36	69.54	-41.18	peak	
6		9.5228	13.44	11.31	24.75	69.54	-44.79	peak	

Test Mode:	UNII-3/TX MODE

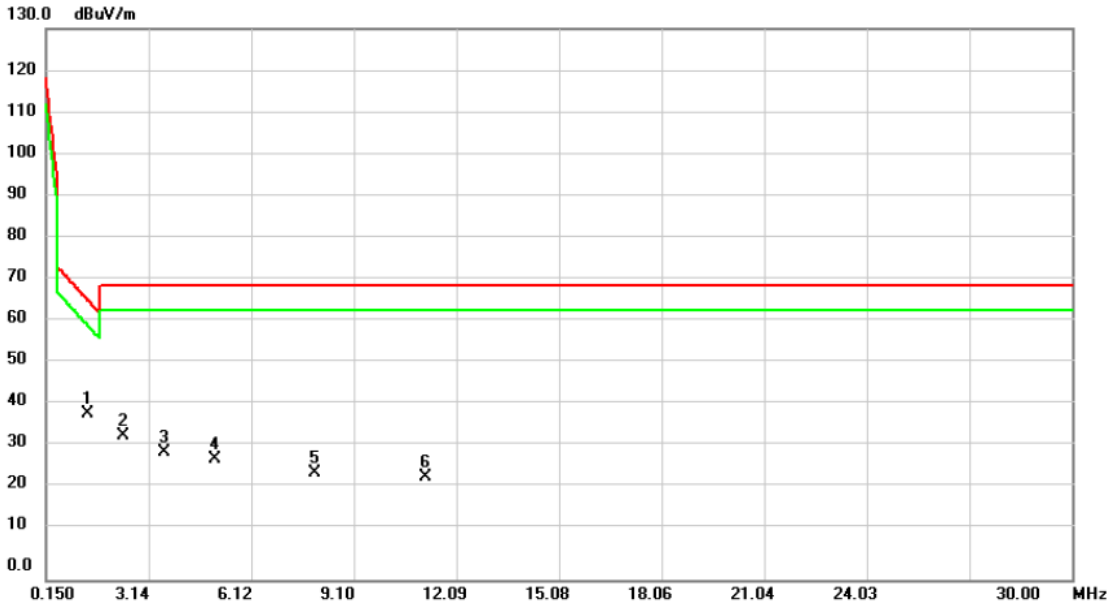
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0280	43.17	15.55	58.72	127.15	-68.43	peak	

Test Mode:	UNII-3/TX MODE

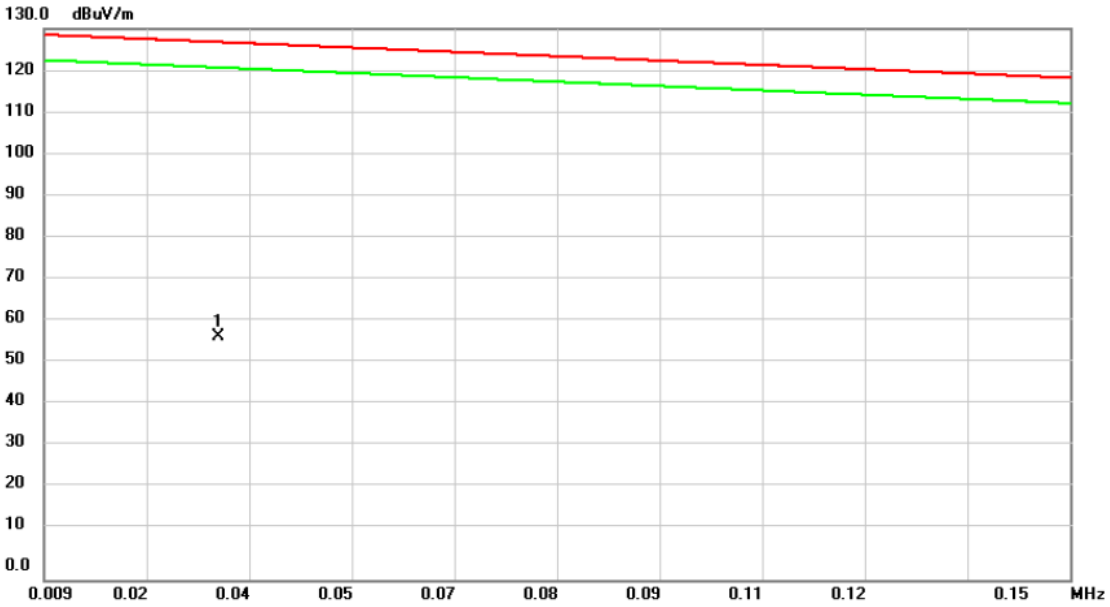
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1.3440	27.36	11.85	39.21	66.19	-26.98	peak	
2		2.3887	22.56	11.38	33.94	69.54	-35.60	peak	
3		3.5825	18.91	11.19	30.10	69.54	-39.44	peak	
4		5.0750	16.98	11.40	28.38	69.54	-41.16	peak	
5		7.9706	13.82	11.34	25.16	69.54	-44.38	peak	
6		11.1942	12.82	11.26	24.08	69.54	-45.46	peak	

Test Mode:	UNII-3/TX MODE

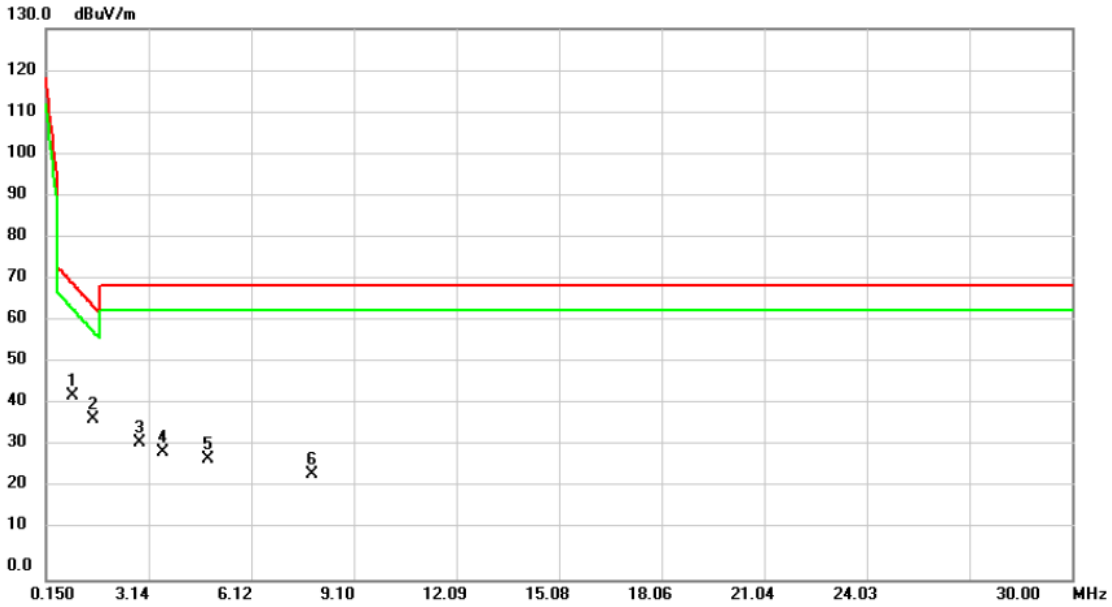
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0330	42.59	14.70	57.29	126.79	-69.50	peak	

Test Mode:	UNII-3/TX MODE

Ant 90°



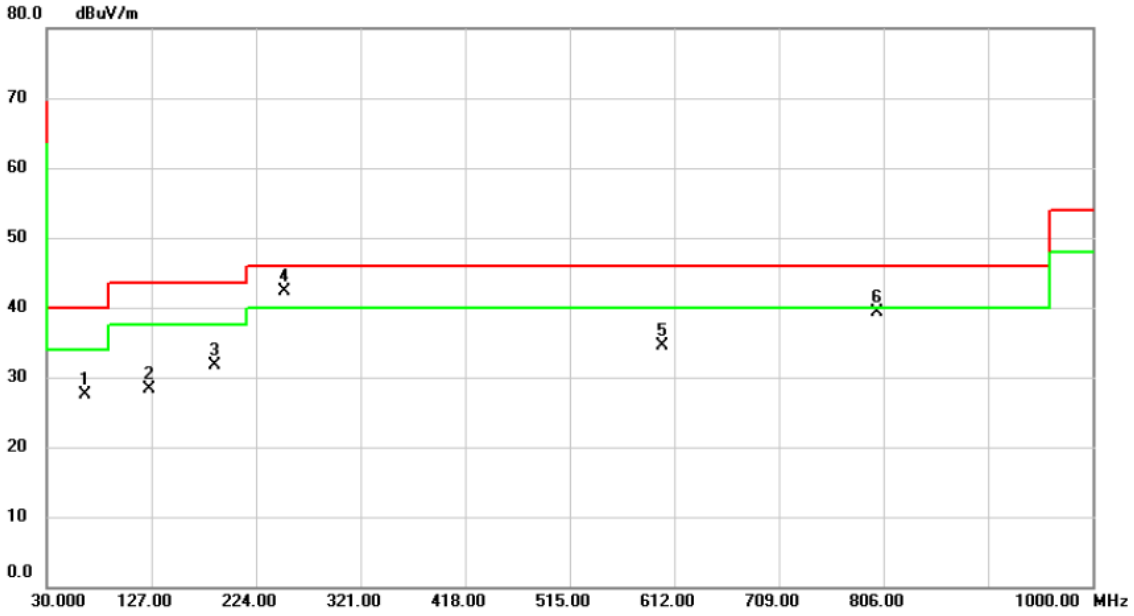
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.9261	31.48	11.97	43.45	69.91	-26.46	peak	
2		1.5230	26.24	11.76	38.00	64.59	-26.59	peak	
3		2.8664	21.25	11.16	32.41	69.54	-37.13	peak	
4		3.5530	18.85	11.18	30.03	69.54	-39.51	peak	
5		4.8662	16.94	11.38	28.32	69.54	-41.22	peak	
6		7.8810	13.41	11.34	24.75	69.54	-44.79	peak	

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

Non-Beamforming

Test Mode:	UNII-1/TX A Mode 5180MHz

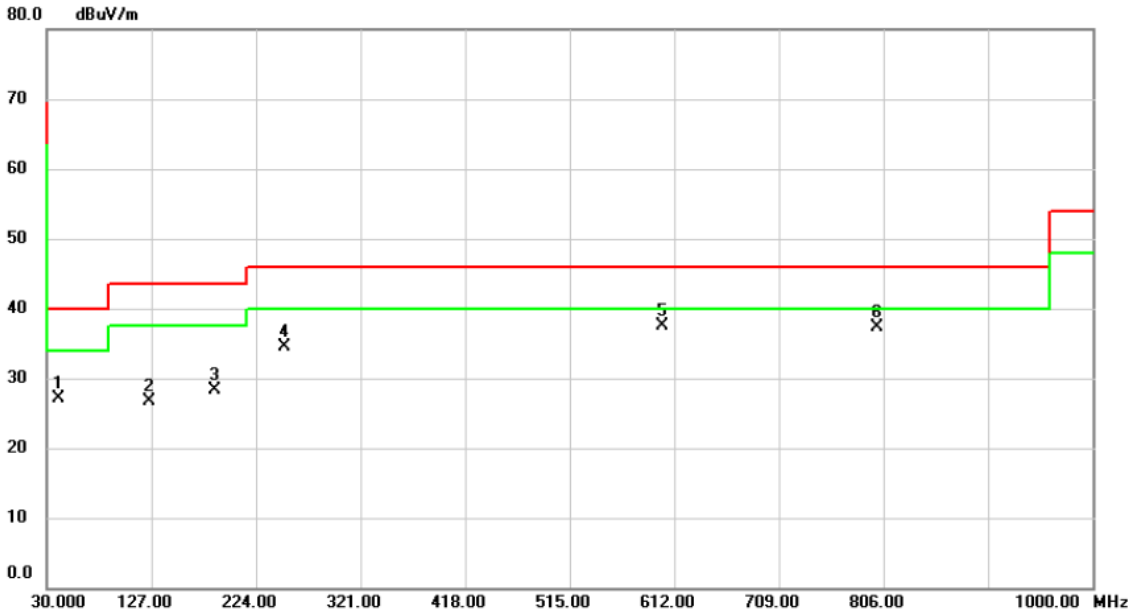
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		64.9200	36.97	-9.37	27.60	40.00	-12.40	peak	
2		125.0600	38.19	-9.87	28.32	43.50	-15.18	peak	
3		186.1700	41.84	-10.06	31.78	43.50	-11.72	peak	
4	*	250.1900	51.46	-9.07	42.39	46.00	-3.61	peak	
5		600.3600	34.83	-0.42	34.41	46.00	-11.59	peak	
6		800.1800	36.71	2.62	39.33	46.00	-6.67	peak	

Test Mode:	UNII-1/TX A Mode 5180MHz

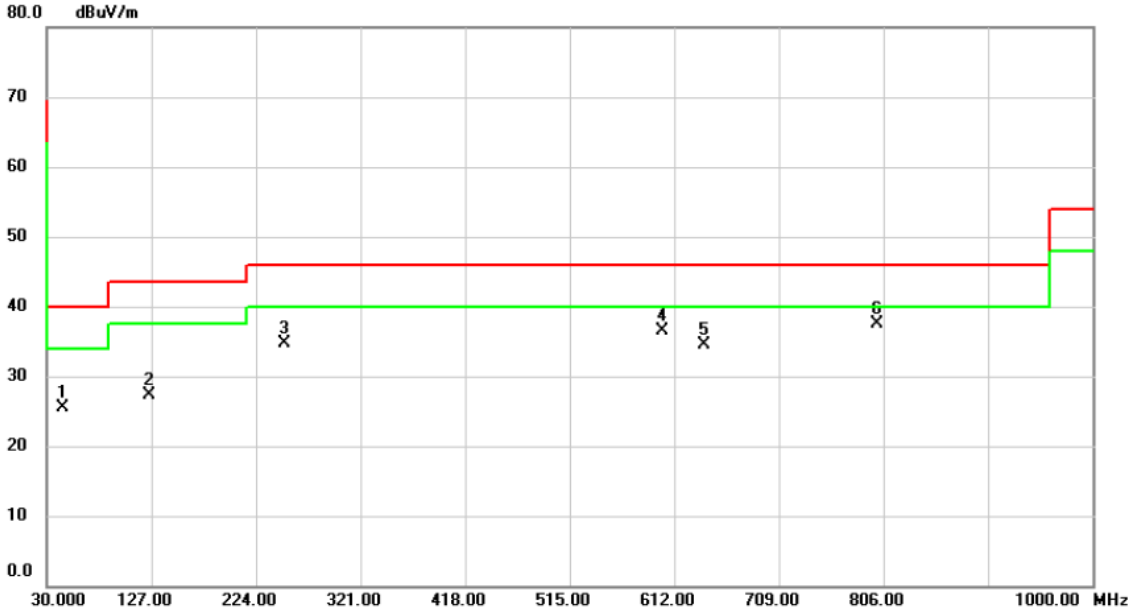
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		40.6700	35.62	-8.51	27.11	40.00	-12.89	peak	
2		125.0600	36.59	-9.87	26.72	43.50	-16.78	peak	
3		186.1700	38.31	-10.06	28.25	43.50	-15.25	peak	
4		250.1900	43.55	-9.07	34.48	46.00	-11.52	peak	
5	*	600.3600	38.01	-0.42	37.59	46.00	-8.41	peak	
6		800.1800	34.72	2.62	37.34	46.00	-8.66	peak	

Test Mode:	UNII-3/TX A Mode 5785MHz

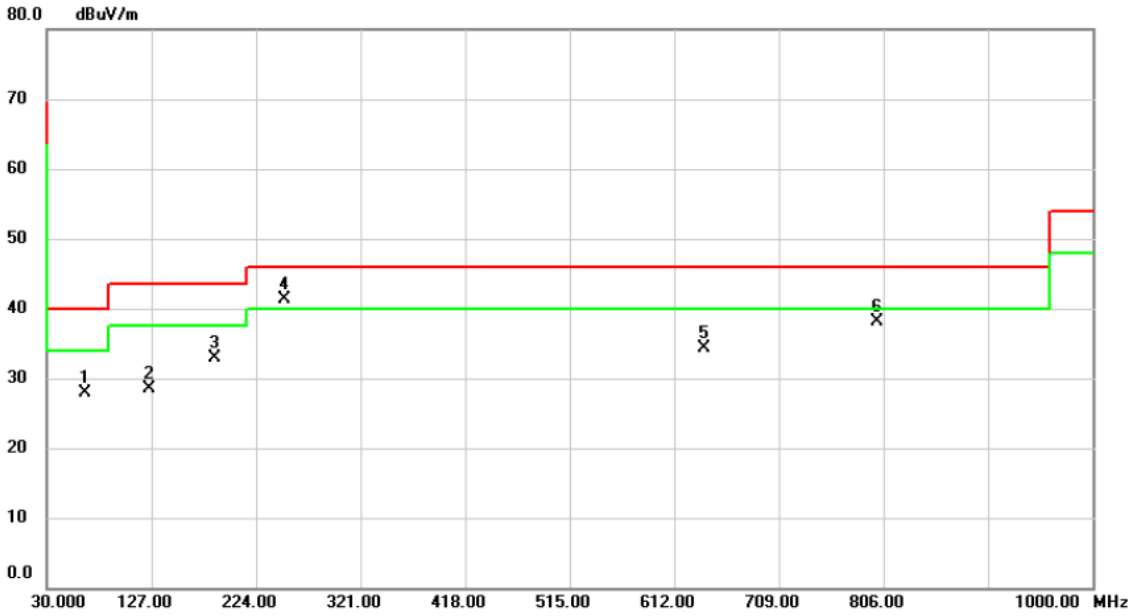
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		44.5500	34.15	-8.58	25.57	40.00	-14.43	peak	
2		125.0600	37.15	-9.87	27.28	43.50	-16.22	peak	
3		250.1900	43.83	-9.07	34.76	46.00	-11.24	peak	
4		600.3600	36.98	-0.42	36.56	46.00	-9.44	peak	
5		640.1300	34.54	-0.11	34.43	46.00	-11.57	peak	
6	*	800.1800	34.93	2.62	37.55	46.00	-8.45	peak	

Test Mode:	UNII-3/TX A Mode 5785MHz

Horizontal



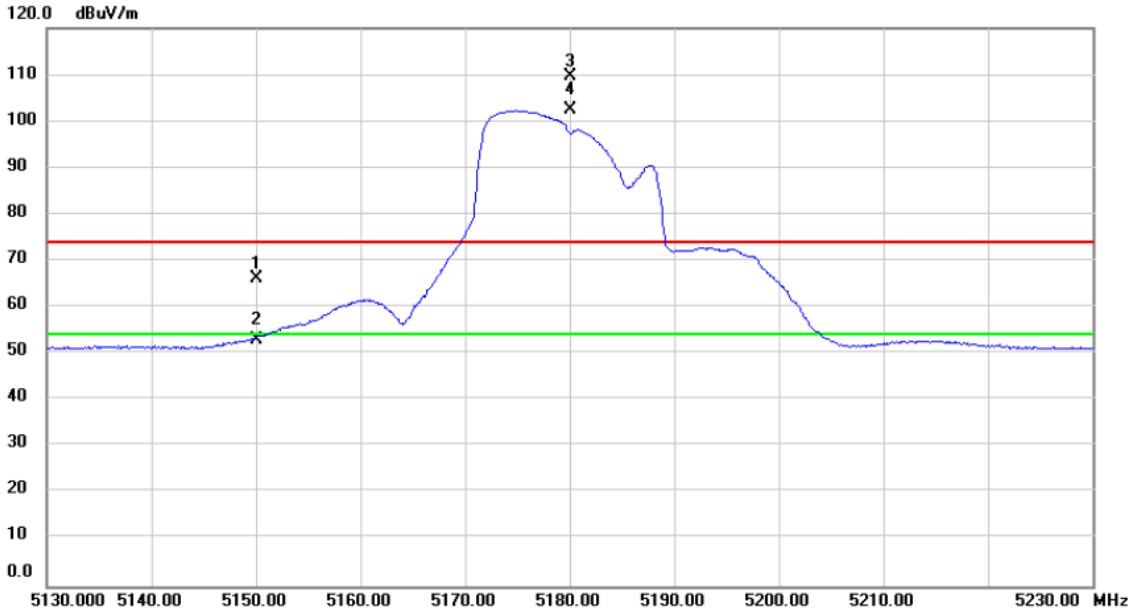
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		64.9200	37.25	-9.37	27.88	40.00	-12.12	peak	
2		125.0600	38.46	-9.87	28.59	43.50	-14.91	peak	
3		186.1700	42.90	-10.06	32.84	43.50	-10.66	peak	
4	*	250.1900	50.43	-9.07	41.36	46.00	-4.64	peak	
5		640.1300	34.44	-0.11	34.33	46.00	-11.67	peak	
6		800.1800	35.47	2.62	38.09	46.00	-7.91	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

Non-Beamforming

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5180MHz

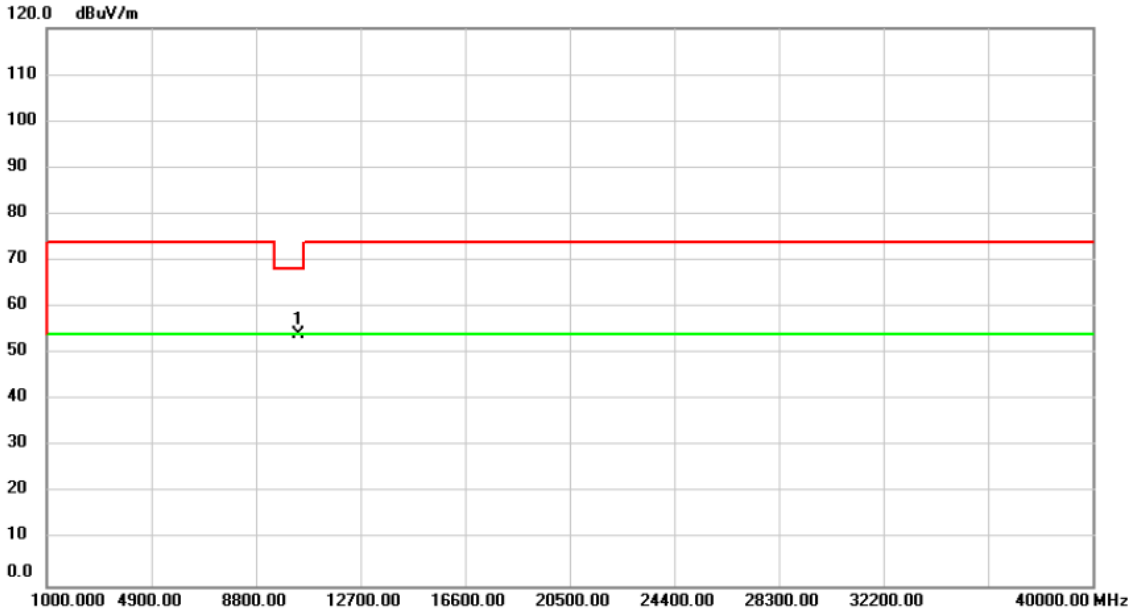
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	28.60	37.54	66.14	74.00	-7.86	peak	
2		5150.000	15.28	37.54	52.82	54.00	-1.18	AVG	
3	X	5180.000	71.93	37.58	109.51	74.00	35.51	peak	No Limit
4	*	5180.000	64.95	37.58	102.53	54.00	48.53	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5180MHz

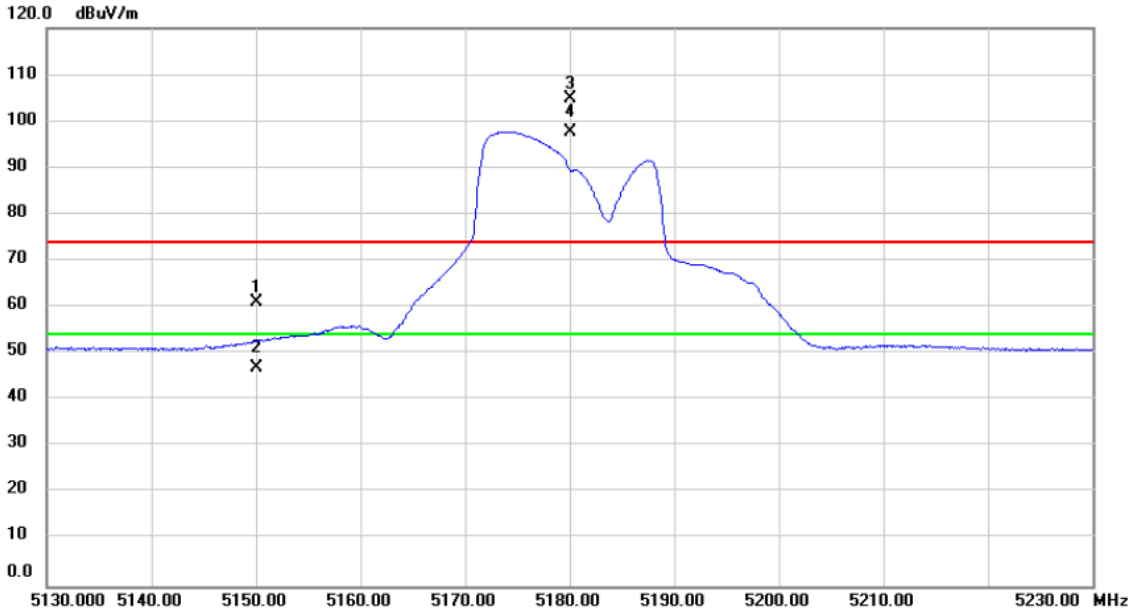
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	52.19	1.92	54.11	68.20	-14.09	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5180MHz

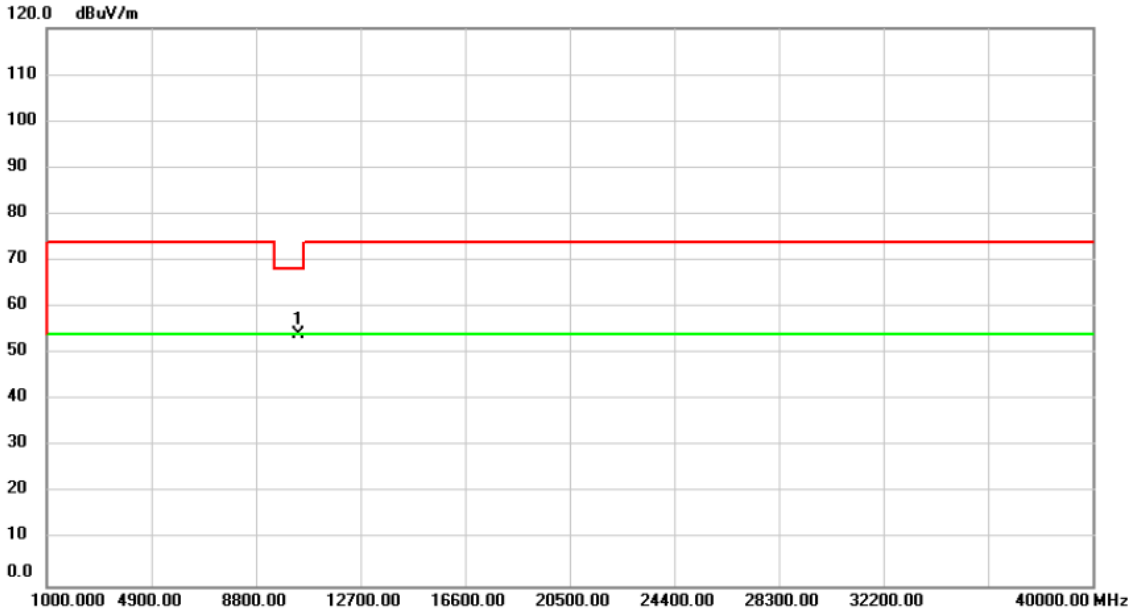
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	23.42	37.54	60.96	74.00	-13.04	peak	
2		5150.000	9.56	37.54	47.10	54.00	-6.90	AVG	
3	X	5180.000	67.32	37.58	104.90	74.00	30.90	peak	No Limit
4	*	5180.000	60.11	37.58	97.69	54.00	43.69	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5180MHz

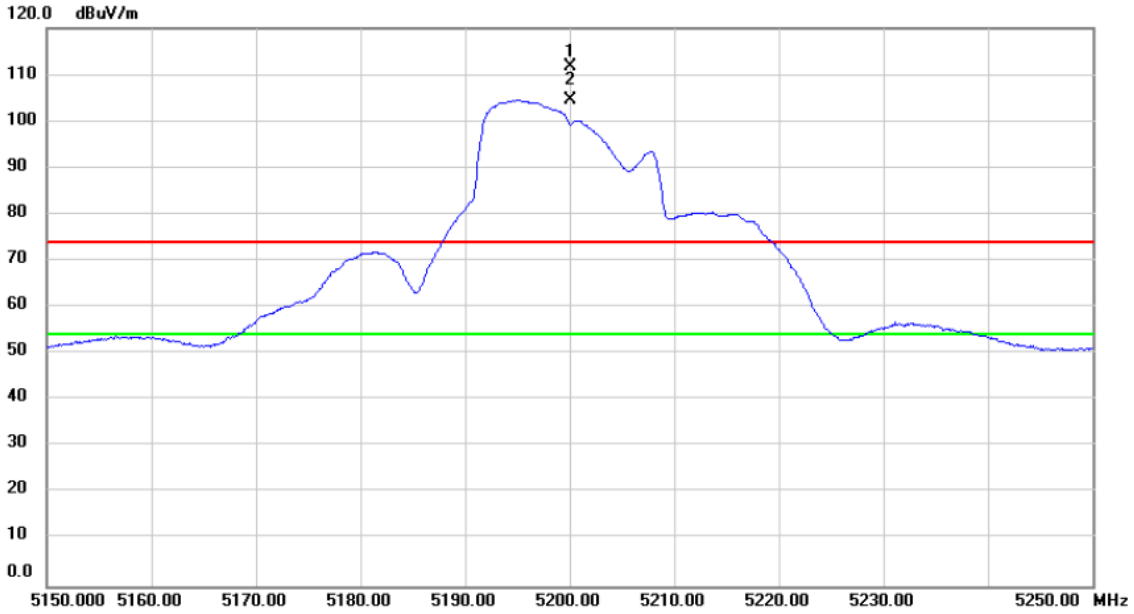
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	52.30	1.92	54.22	68.20	-13.98	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5200MHz

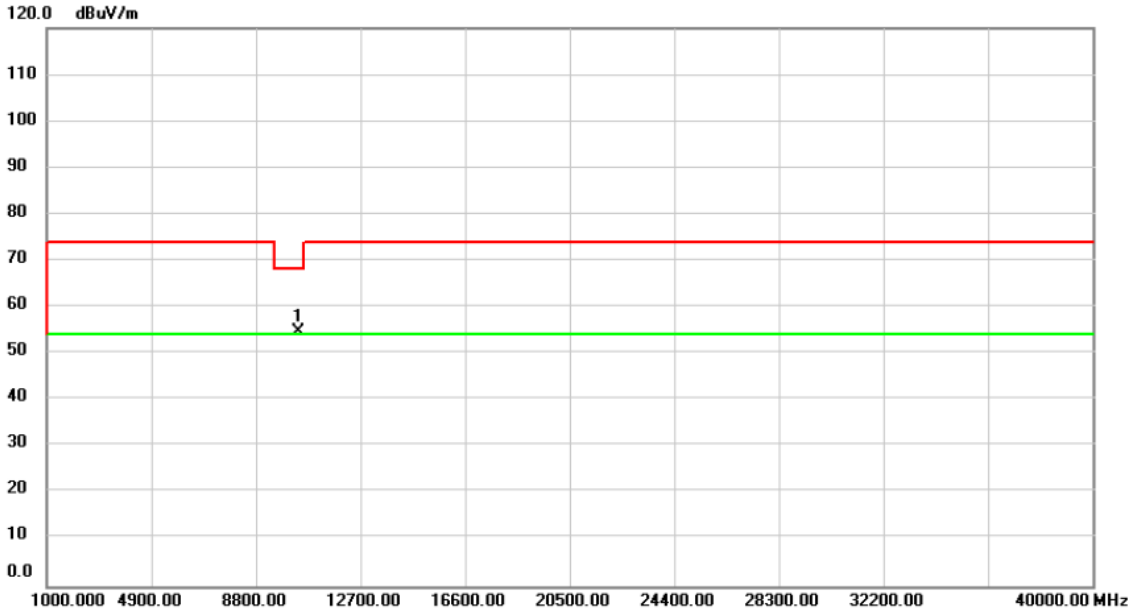
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	74.20	37.60	111.80	74.00	37.80	peak	No Limit
2	*	5200.000	66.95	37.60	104.55	54.00	50.55	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5200MHz

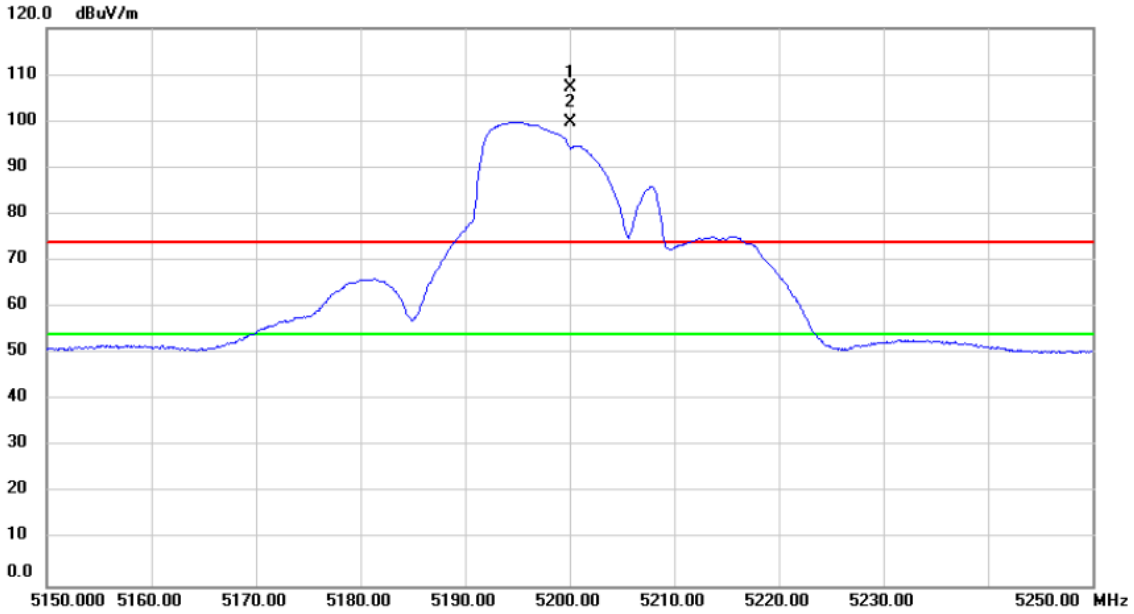
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	52.66	1.95	54.61	68.20	-13.59	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5200MHz

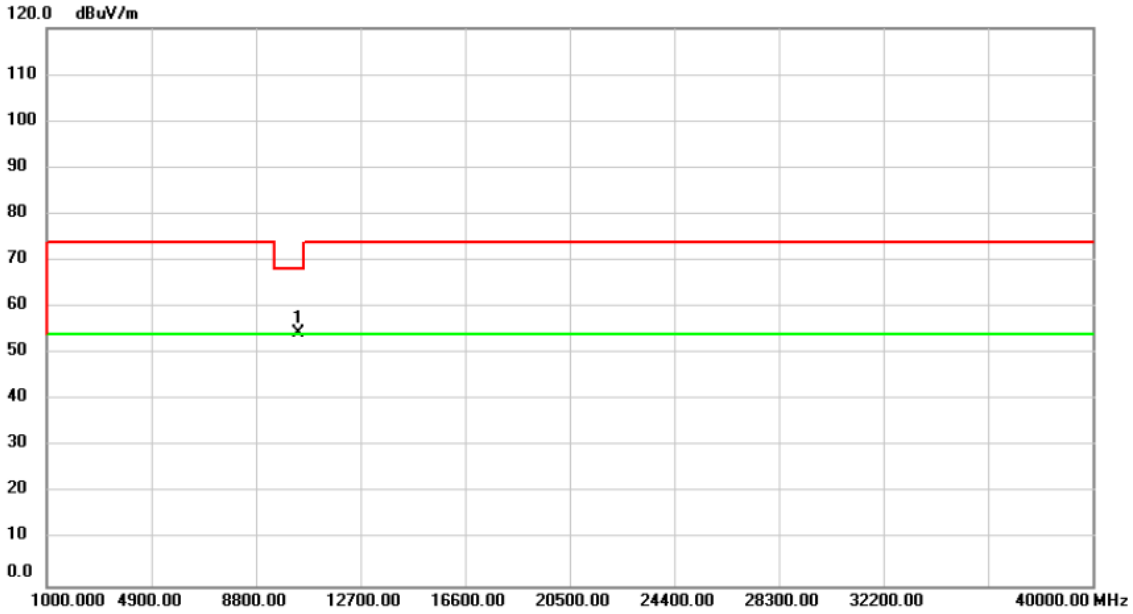
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	69.63	37.60	107.23	74.00	33.23	peak	No Limit
2	*	5200.000	62.29	37.60	99.89	54.00	45.89	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5200MHz

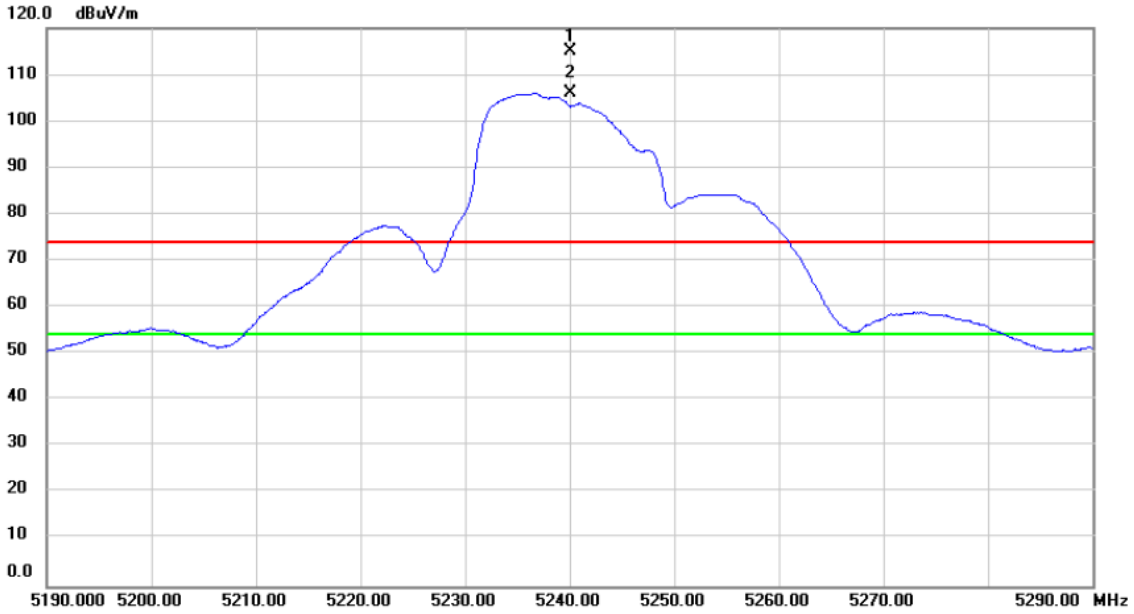
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	52.53	1.95	54.48	68.20	-13.72	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5240MHz

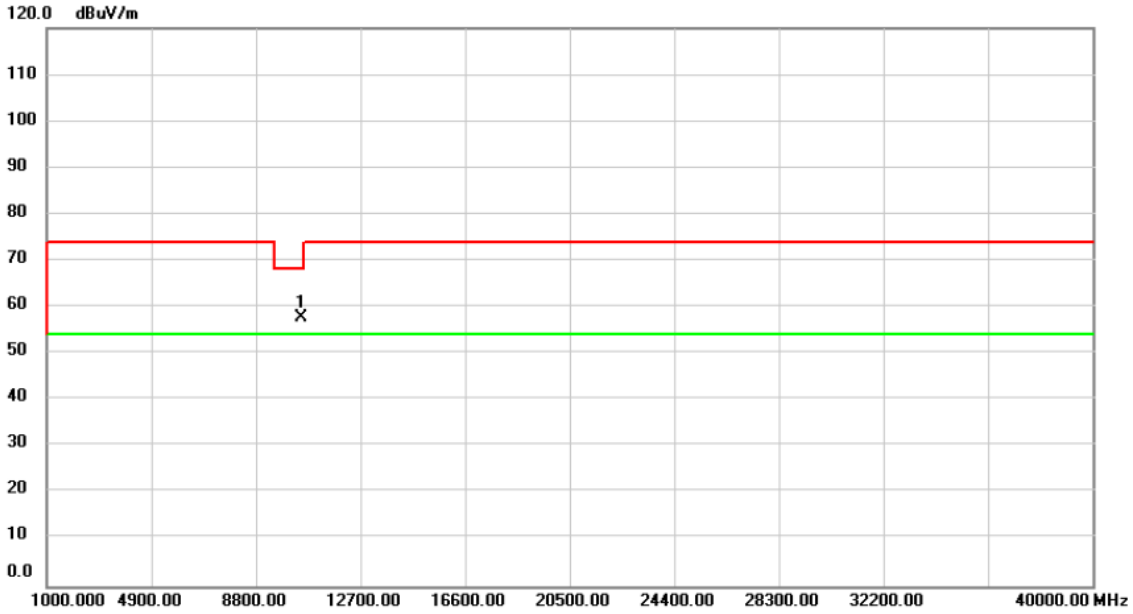
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	77.55	37.64	115.19	74.00	41.19	peak	No Limit
2	*	5240.000	68.46	37.64	106.10	54.00	52.10	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5240MHz

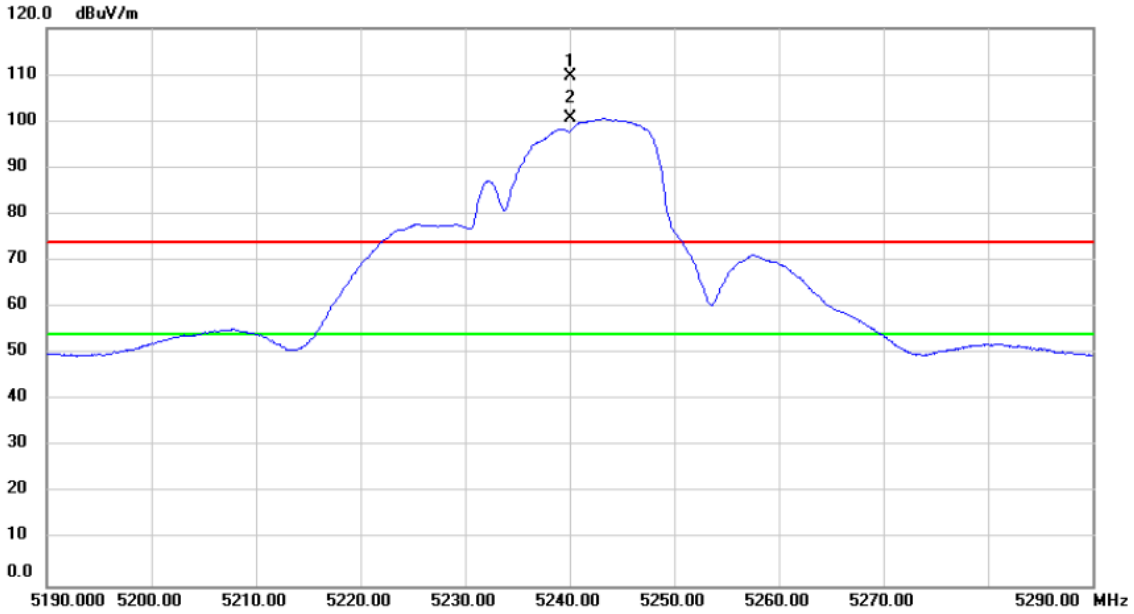
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	55.77	1.96	57.73	68.20	-10.47	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5240MHz

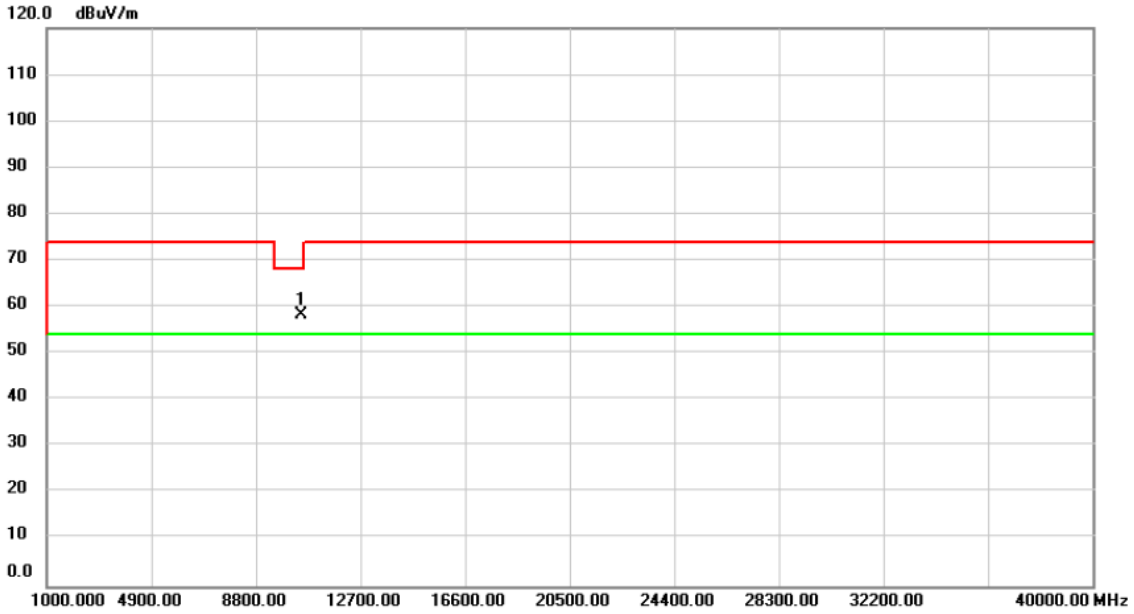
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	71.90	37.64	109.54	74.00	35.54	peak	No Limit
2	*	5240.000	62.96	37.64	100.60	54.00	46.60	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX A Mode 5240MHz

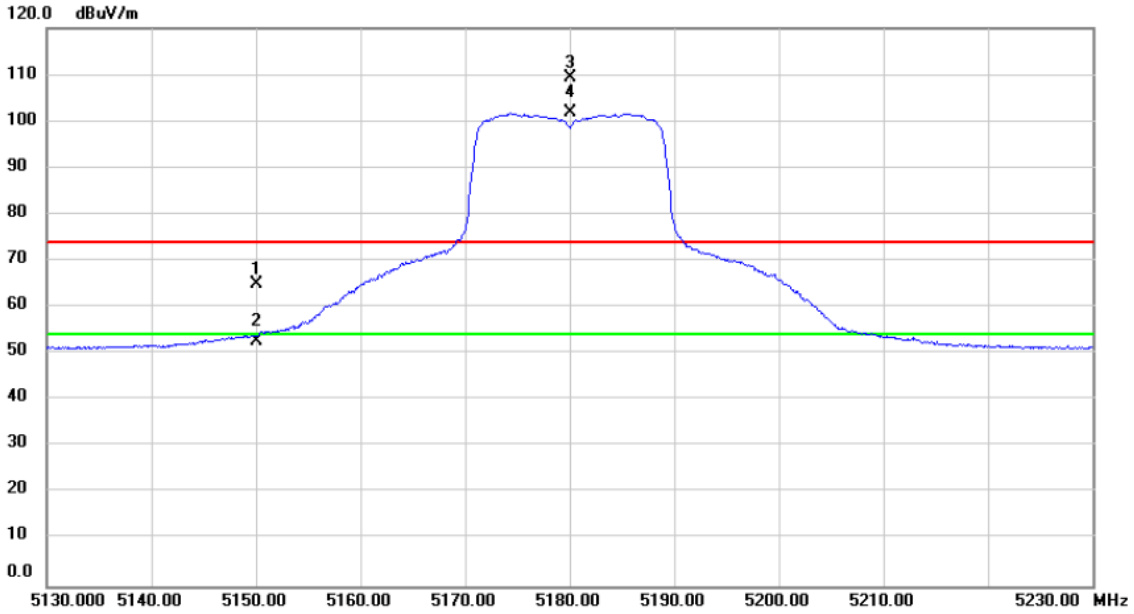
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	56.47	1.96	58.43	68.20	-9.77	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5180MHz

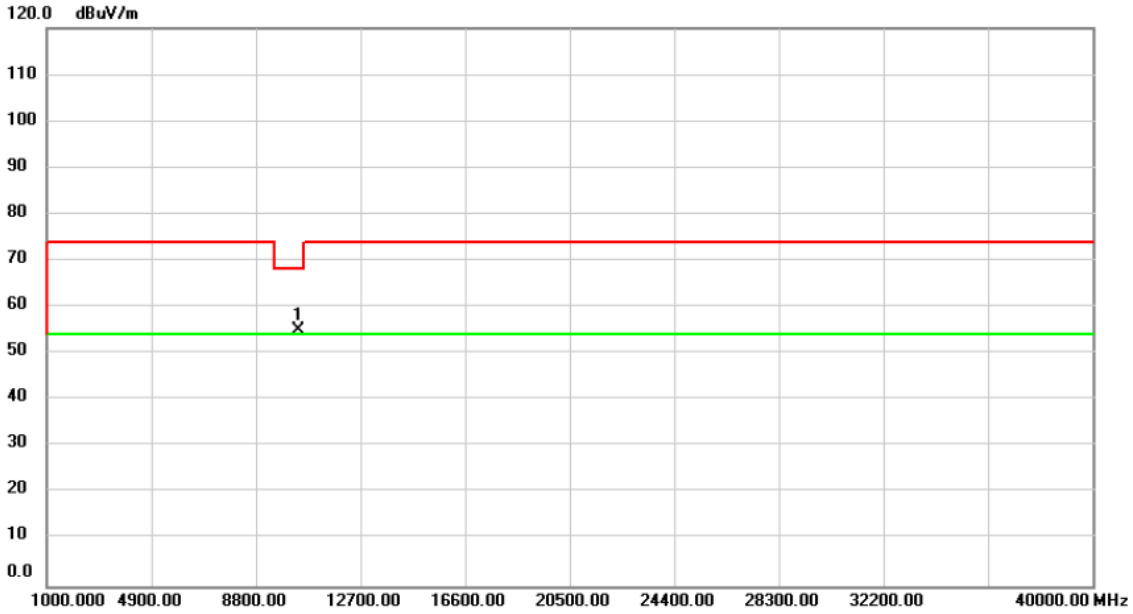
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	27.49	37.54	65.03	74.00	-8.97	peak	
2		5150.000	15.23	37.54	52.77	54.00	-1.23	AVG	
3	X	5180.000	71.63	37.58	109.21	74.00	35.21	peak	No Limit
4	*	5180.000	64.13	37.58	101.71	54.00	47.71	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5180MHz

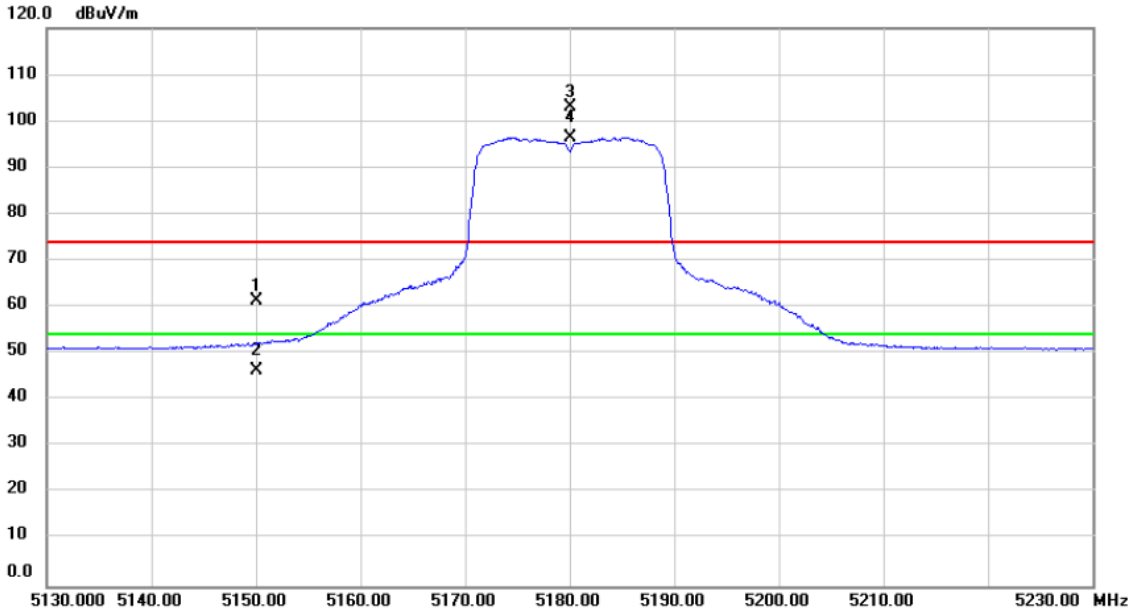
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	53.13	1.92	55.05	68.20	-13.15	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5180MHz

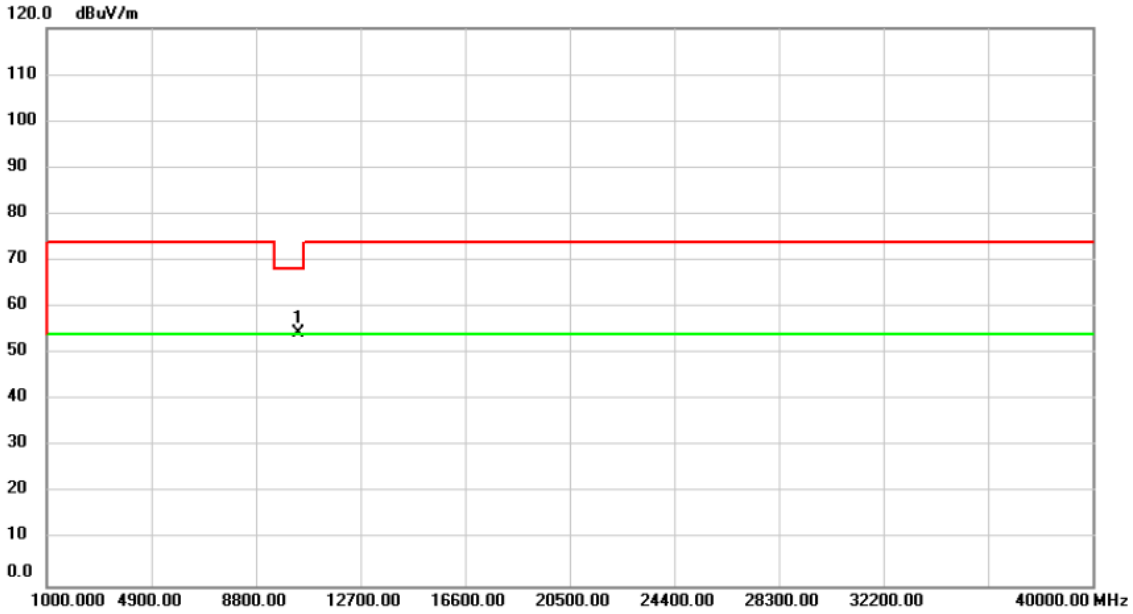
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	23.67	37.54	61.21	74.00	-12.79	peak	
2		5150.000	8.92	37.54	46.46	54.00	-7.54	AVG	
3	X	5180.000	65.36	37.58	102.94	74.00	28.94	peak	No Limit
4	*	5180.000	58.95	37.58	96.53	54.00	42.53	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5180MHz

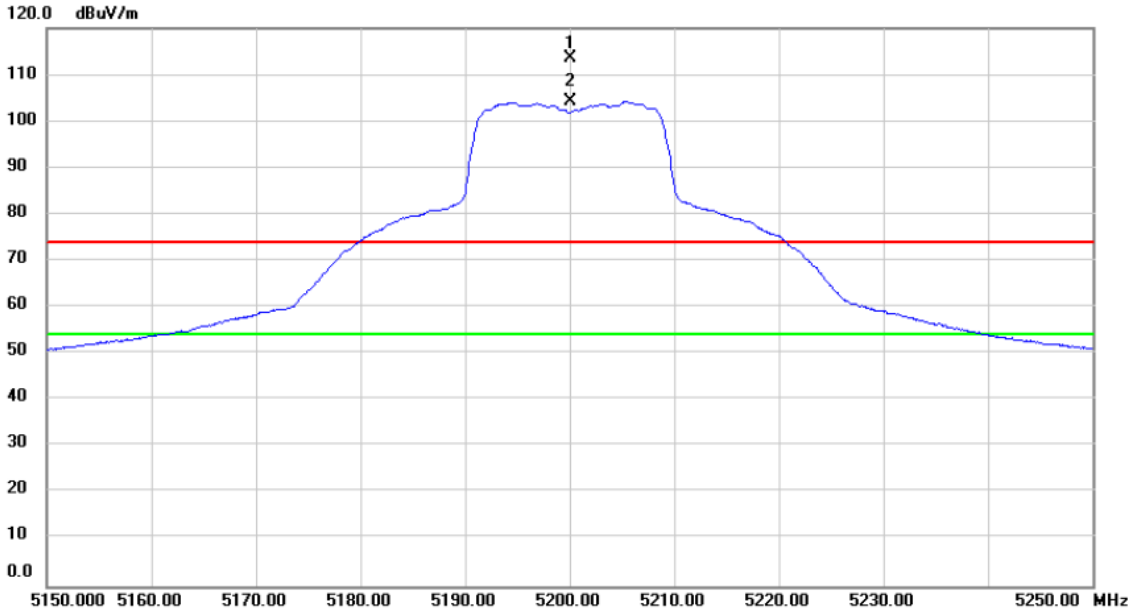
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	52.47	1.92	54.39	68.20	-13.81	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5200MHz

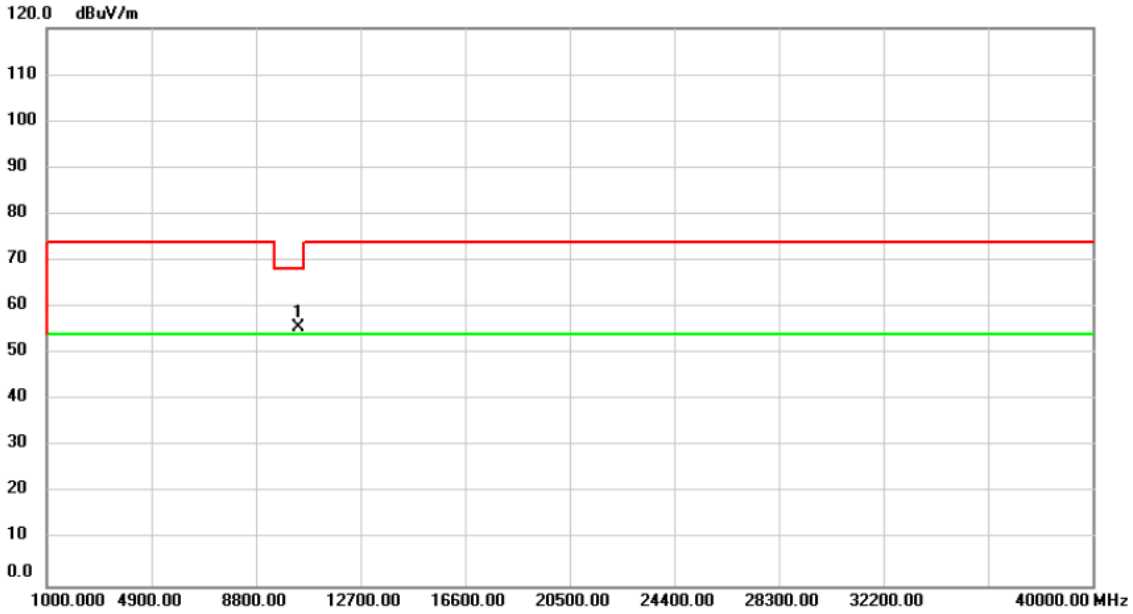
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	75.89	37.60	113.49	74.00	39.49	peak	No Limit
2	*	5200.000	66.58	37.60	104.18	54.00	50.18	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5200MHz

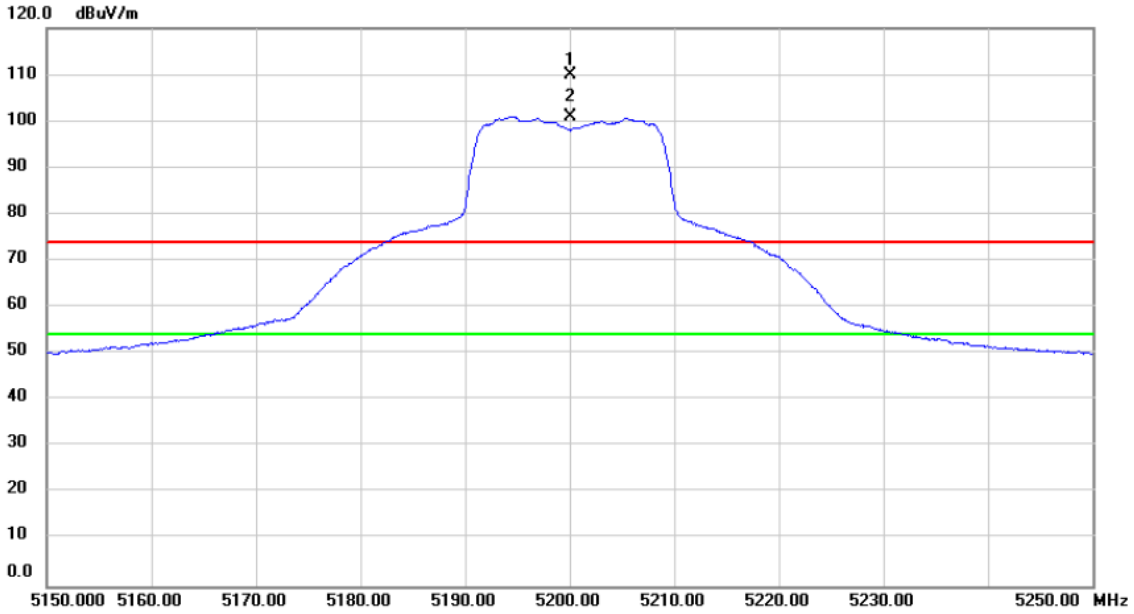
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	53.56	1.95	55.51	68.20	-12.69	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5200MHz

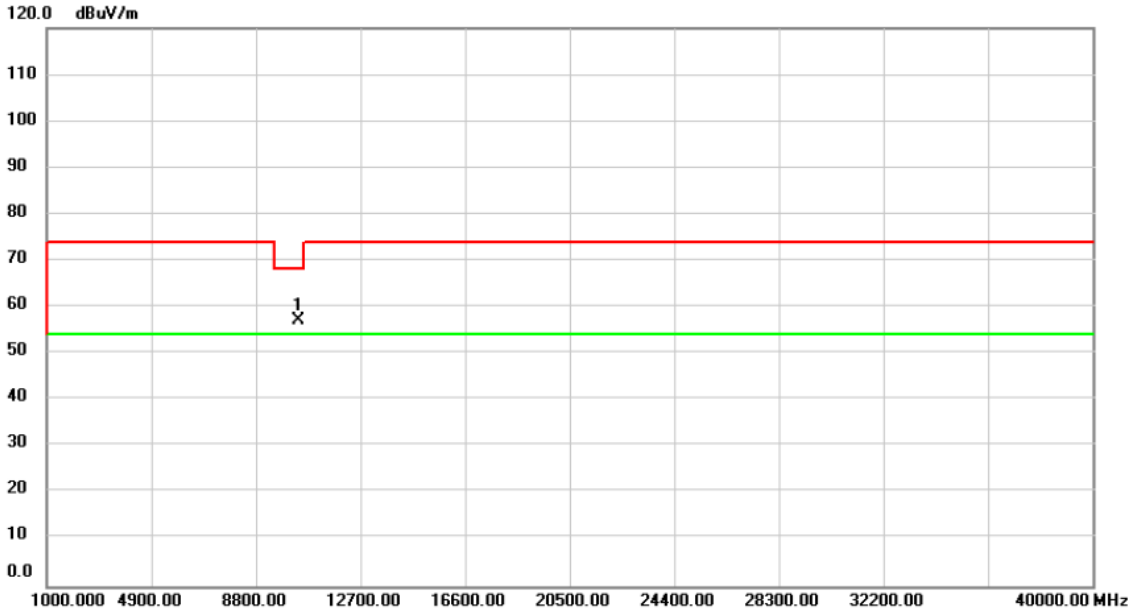
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	72.38	37.60	109.98	74.00	35.98	peak	No Limit
2	*	5200.000	63.36	37.60	100.96	54.00	46.96	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5200MHz

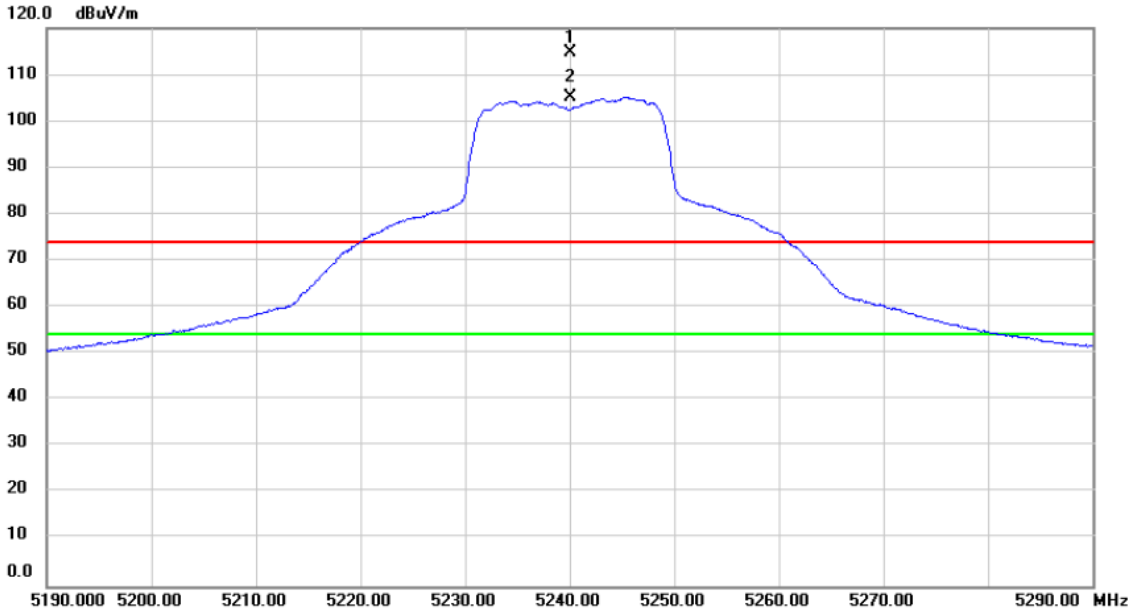
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	55.28	1.95	57.23	68.20	-10.97	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5240MHz

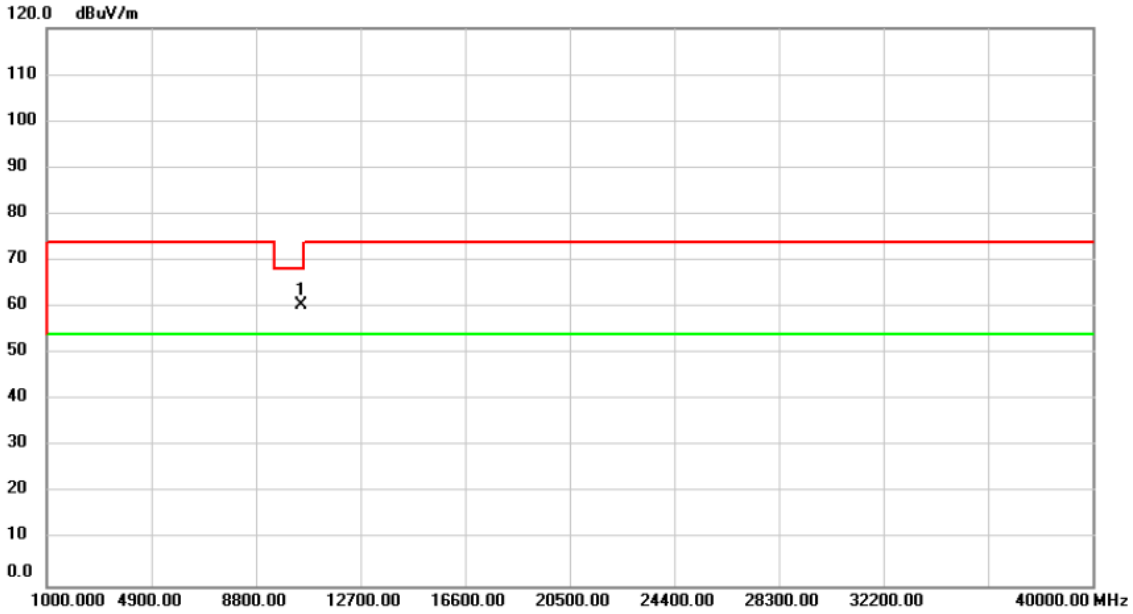
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	77.12	37.64	114.76	74.00	40.76	peak	No Limit
2	*	5240.000	67.63	37.64	105.27	54.00	51.27	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5240MHz

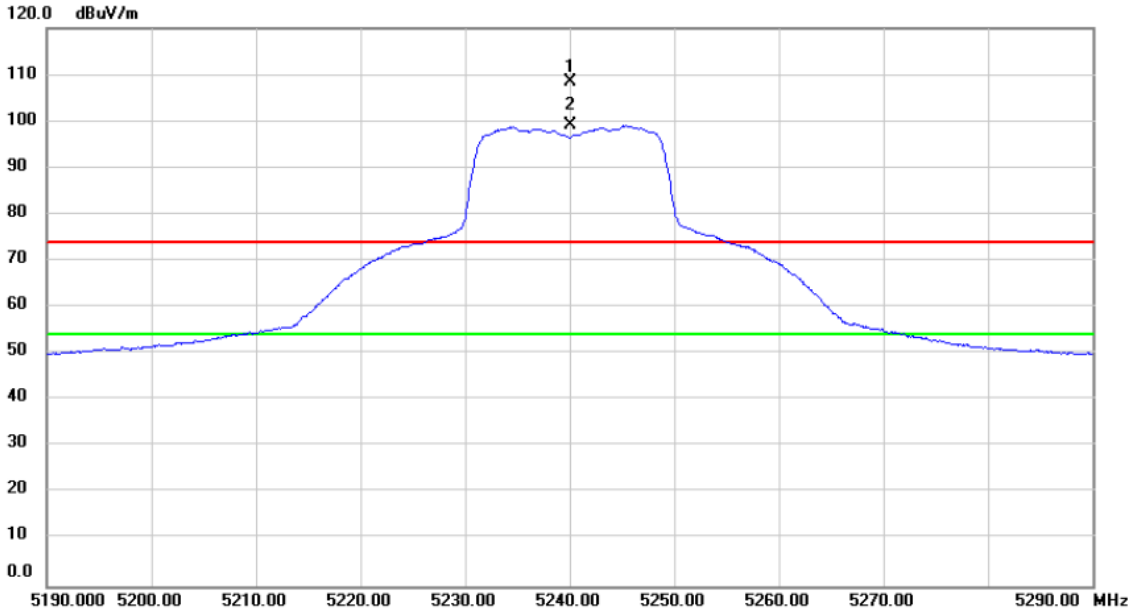
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	58.39	1.96	60.35	68.20	-7.85	peak	

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5240MHz

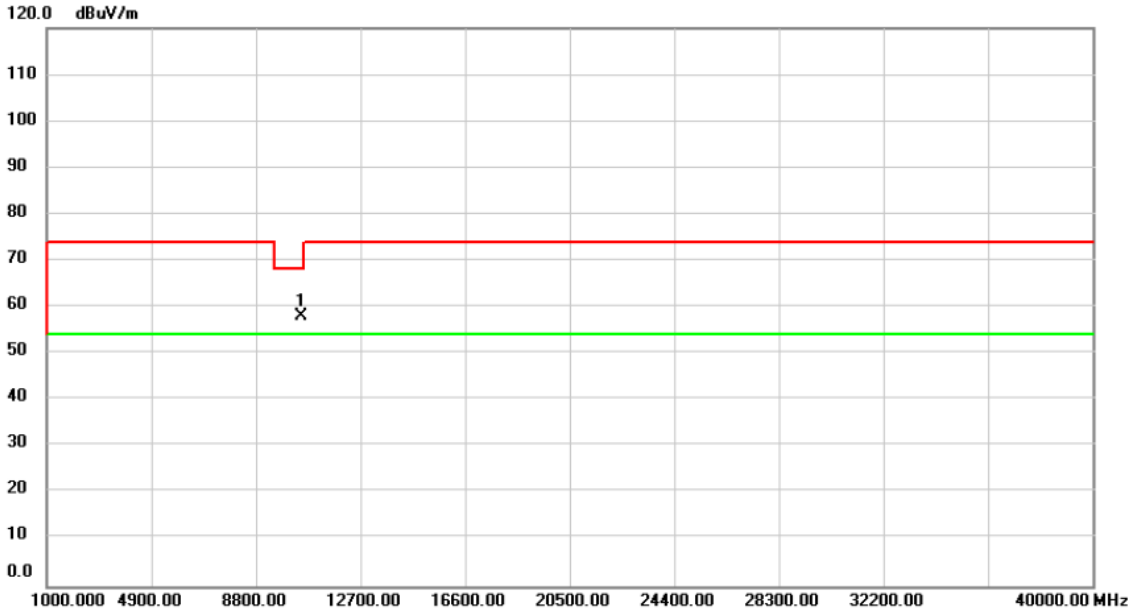
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	70.70	37.64	108.34	74.00	34.34	peak	No Limit
2	*	5240.000	61.41	37.64	99.05	54.00	45.05	AVG	No Limit

Orthogonal Axis:	X
Test Mode:	UNII-1/ TX N20 Mode 5240MHz

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	56.03	1.96	57.99	68.20	-10.21	peak	