FCC Radio Test Report

FCC ID: M82-FWA1012VC

This report concerns: Original Grant

Project No.	:	1807T071
Equipment	:	Network Security Platform
Test Model	:	FWA-1012VC
Series Model	:	FWA-1012VCXXXXXXXXXXXXXXXX (where X may be any alphanumeric character , blank or "-".)
Applicant	:	Advantech Co., Ltd.
Address	:	No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 11491, Taiwan, R.O.C.

Date of Receipt	:	Aug. 02, 2018
Date of Test	:	Aug. 02, 2018 ~ Sep. 04, 2018
Issued Date	:	Sep. 05, 2018
Tested by	:	BTL Inc.

Testing Engineer : (Kay Wu)

Technical Manager : (James Chiu)

Authorized Signatory : (Andy Chiu)

BTL INC.

No.18, Ln. 171, Sec. 2, Jiuzong Rd.,
Neihu Dist., Taipei City 114, Taiwan (R.O.C.)
TEL: +886-2-2657-3299 FAX: +886-2-2657-3331

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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

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

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

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

Limitation

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

CONTENTS

REPORT ISSUED HISTORY

Issue No.	Description	Issued Date
BTL-FCCP-2-1807T071	Original Issue.	Sep. 05, 2018

1 CERTIFICATION

Equipment	:	Network Security Platform
Brand Name	:	ADVANTECH
Test Model	:	FWA-1012VC
Series Model	:	FWA-1012VCXXXXXXXXXXXXXXXX (where X may be any alphanumeric character , blank or "-".)
Applicant	:	Advantech Co., Ltd.
Manufacturer	:	Advantech Co., Ltd.
Address	:	No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 11491, Taiwan, R.O.C.
Date of Test	:	Aug. 02, 2018 ~ Sep. 04, 2018
Test Sample	:	Production Unit
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-2-1807T071) 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).

Test results included in this report is only for the RLAN 5GHz UNII-1 & UNII-3 part.

2 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

FCC Part15, Subpart E (§15.407)				
FCC Clause No	**Description**	**Test Result**	**Judgement**	**Remark**
§15.207 §15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	Pass	------
§15.205 §15.209 §15.407(b)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	Pass	------
§15.407(a)	Bandwidth	APPENDIX E	Pass	------
§15.407(a)	Peak Output Power	APPENDIX F	Pass	------
§15.407(a)	Power Spectral Density	APPENDIX G	Pass	------
§15.407(g)	Frequency Stability	APPENDIX H	Pass	------
§15.203	Antenna Requirement	------	Pass	------
§15.407(c)	Automatically Discontinue Transmission	------	Pass	**NOTE (2)**

NOTE:
(1) ”N/A” denotes test is not applicable in this Test Report.
(2) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving.
The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

CB05: (FCC RN:674415; FCC DN:TW0659)
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

CB15: (VCCI RN: R-20020; FCC RN:674415; FCC DN:TW0659; ISED Assigned Code:20088-5)
No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

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. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
C05	CISPR	150 kHz ~ 30MHz	2.68	C05

B. Radiated emissions below 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB15 (3m)	CISPR	30 MHz ~ 200 MHz	V	4.20
		30 MHz ~ 200 MHz	H	3.64
		200 MHz ~ 1,000 MHz	V	4.56
		200 MHz ~ 1,000 MHz	H	3.90

C. Radiated emissions above 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
CB15 (3m)	CISPR	1 GHz ~ 6 GHz	V	4.46
		1 GHz ~ 6 GHz	H	4.40
		6 GHz ~18 GHz	V	3.88
		6 GHz ~18 GHz	H	4.00

Test Site	Method	Measurement Frequency Range	U (dB)
CB15 (1m)	CISPR	18 GHz ~ 26.5 GHz	4.62
		26.5 GHz ~ 40 GHz	5.12

D. Conducted tests:

Item	Method	U
Bandwidth	ANSI	3.8 %
Output Power	ANSI	0.95 dB
Power Spectral Density	ANSI	0.86 dB
Conducted Spurious Emissions	ANSI	2.71 dB

NOTE:
Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.
Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.
Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB
Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

3 GENERAL INFORMATION

3.1 DESCRIPTION OF EUT

Equipment	Network Security Platform
Brand Name	ADVANTECH
Test Model	FWA-1012VC
Series Model	FWA-1012VCXXXXXXXXXXXXXXX (where X may be any alphanumeric character , blank or “-”.)
Model Difference	Different model distribute to different area.
Power Source	DC Voltage supplied from AC/DC adapter.
Power Rating	I/P: 100-240V~, 1.5A, 50-60Hz O/P: 12.0V⎓ 5.0A MAX
Operation Frequency	UNII-1: 5150 MHz to 5250 MHz UNII-3: 5725 MHz to 5850 MHz
Modulation Type	OFDM
Bit Rate of Transmitter	up to 866 Mbps
Maximum Output Power for UNII-1	IEEE 802.11a: 16.32 dBm (0.0429 W) IEEE 802.11n (HT20): 15.85 dBm (0.0384 W) IEEE 802.11n (HT40): 15.35 dBm (0.0343 W) IEEE 802.11ac (HT20): 14.87 dBm (0.0307 W) IEEE 802.11ac (HT40): 14.41 dBm (0.0276 W) IEEE 802.11ac (VHT80): 12.22 dBm (0.0167 W)
Maximum Output Power for UNII-3	IEEE 802.11a: 16.29 dBm (0.0426 W) IEEE 802.11n (HT20): 15.52 dBm (0.0356 W) IEEE 802.11n (HT40): 15.33 dBm (0.0341 W) IEEE 802.11ac (HT20): 14.61 dBm (0.0289 W) IEEE 802.11ac (HT40): 14.47 dBm (0.0280 W) IEEE 802.11ac (VHT80): 13.89 dBm (0.0245 W)
Product Covered	1 * CPU: Intel/C3858 2.00GHz 1 * MB: NAMB-1012VCMB 2 * Memory: DDR4 2400 16GB 1 * HDD: SEAGATE/ST1000LM035 (1TB) 1 * SSD: LITE-ON/CV1-8B64 (64GB) 1 * Adapter: FSP/FSP060-DIBAN2 1 * Wifi module: Senao/PCE4302AN 1 * LTE module: Sierra/EM7455

NOTE:

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

(2) Channel List:

UNII-1					
IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (HT20)		IEEE 802.11n (HT40) IEEE 802.11ac (HT40)		IEEE 802.11ac (VHT80)	
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					
IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (HT20)		IEEE 802.11n (HT40) IEEE 802.11ac (HT40)		IEEE 802.11ac (VHT80)	
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				

(3) Table for Filed Antenna:

UNII-1:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
1	Walsin	RFDPA131000SBLB808	Dipole	SMA	3.44
2	Invax	AN2450-92K02BRS	Dipole	SMA	3.11

UNII-3:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
1	Walsin	RFDPA131000SBLB808	Dipole	SMA	3.95
2	Invax	AN2450-92K02BRS	Dipole	SMA	3.79

NOTE:

(a) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R). 2.4 GHz and 5GHz can't transmit simultaneously.

(b) For Power Spectral Density(CDD mode):
Directional Gain = 10log $[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{Gn/20})^2/N_{ANT}]$ = 6.71 dBi.
The Direction gain exceeds 6 dBi, so the reduced power spectral density limits = Limit - (Directional Gain - 6 dBi) = 17 - (6.71 - 6) = 16.29 dBm/MHz.
.

(c) For Conducted Output Power (CDD mode)
For UNII-1:
For N_{ANT} = 2 < 5,
Direction gain = G_{ANT} + 0 = 3.44 + 0 = 3.44 dBi.
The Direction gain is less than 6 dBi, so conducted power limits will not be reduced.
For UNII-3:
For N_{ANT} = 2 < 5,
Direction gain = G_{ANT} + 0 = 3.95 + 0 = 3.95 dBi.
The Direction gain is less than 6 dBi, so conducted power limits will not be reduced.

Operating Mode / TX Mode	2TX
802.11a	V (ANT 1+ANT 2)
802.11n (HT20)	V (ANT 1+ANT 2)
802.11n (HT40)	V (ANT 1+ANT 2)
802.11ac (HT20)	V (ANT 1+ANT 2)
802.11ac (HT40)	V (ANT 1+ANT 2)
802.11ac (VHT80)	V (ANT 1+ANT 2)

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.
Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Test Mode	Description
3	UNII-1_TX N (HT40) MODE CHANNEL 38
9	UNII-3_TX N (HT40) MODE CHANNEL 151

Radiated emissions test	
Test Mode	Description
1	UNII-1_TX A MODE CHANNEL 36/40/48
2	UNII-1_TX N (HT20) MODE CHANNEL 36/40/48
3	UNII-1_TX N (HT40) MODE CHANNEL 38/46
6	UNII-1_TX AC (VHT80) MODE CHANNEL 42
7	UNII-3_TX A MODE CHANNEL 149/157/165
8	UNII-3_TX N (HT20) MODE CHANNEL 149/157/165
9	UNII-3_TX N (HT40) MODE CHANNEL 151/159
10	UNII-3_TX AC (VHT80) MODE CHANNEL 155

Conducted test	
Test Mode	Description
1	UNII-1_TX A MODE CHANNEL 36/40/48
2	UNII-1_TX N (HT20) MODE CHANNEL 36/40/48
3	UNII-1_TX N (HT40) MODE CHANNEL 38/46
6	UNII-1_TX AC (VHT80) MODE CHANNEL 42
7	UNII-3_TX A MODE CHANNEL 149/157/165
8	UNII-3_TX N (HT20) MODE CHANNEL 149/157/165
9	UNII-3_TX N (HT40) MODE CHANNEL 151/159
10	UNII-3_TX AC (VHT80) MODE CHANNEL 155

NOTE:
(1) The measurements are performed at the low, middle and high available channels.
(2) For radiated emission tests, the highest output powers were set for final test.
(3) For radiated emission below 1 GHz test, the IEEE 802.11n (HT40) was found to be the worst case and recorded.

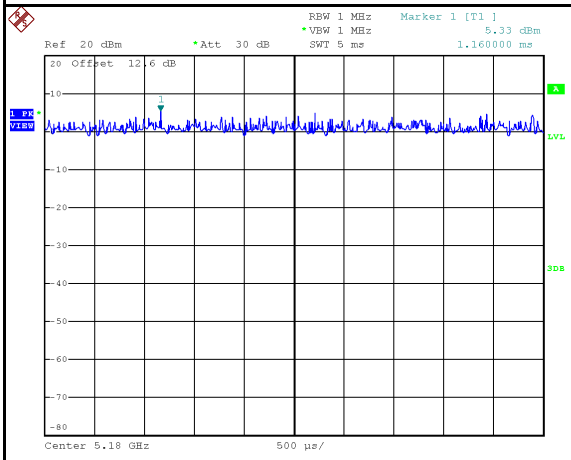
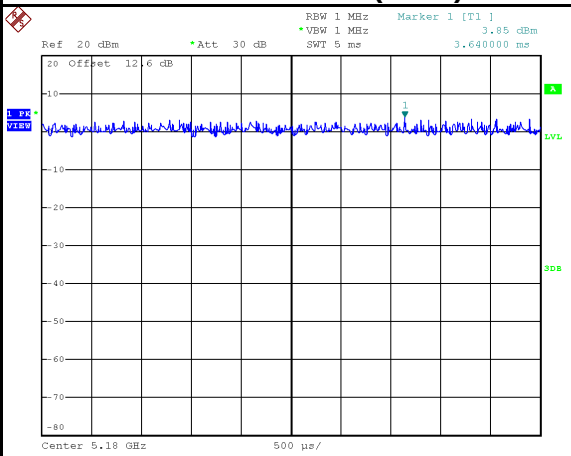
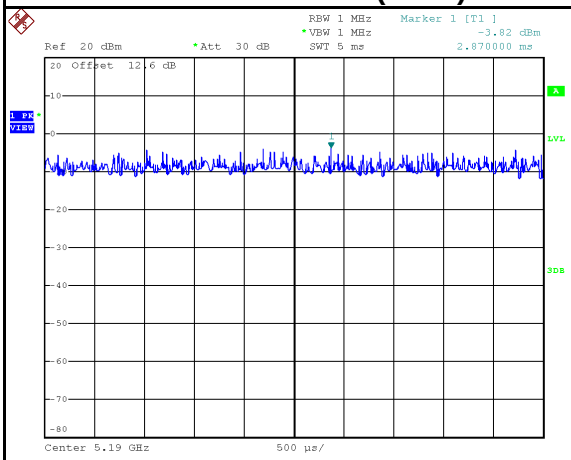
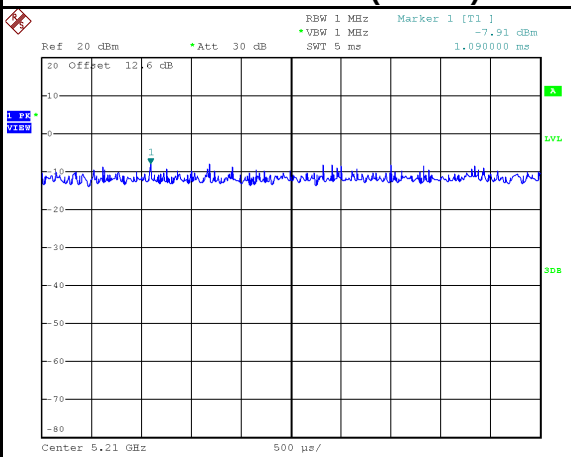
3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software	ART2 V2.3		
Mode	5180 MHz	5200 MHz	5240 MHz
IEEE 802.11a	14.5	14	14.5
IEEE 802.11n (HT20)	14	14	14
IEEE 802.11ac (HT20)	13.5	13.5	13
Mode	5190 MHz	5230 MHz	
IEEE 802.11n (HT40)	12	14	
IEEE 802.11ac (HT40)	12	13	
Mode	5210 MHz		
IEEE 802.11ac (VHT80)	11		

UNII-3			
Test Software	ART2 V2.3		
Mode	5745 MHz	5785 MHz	5825 MHz
IEEE 802.11a	16.5	16.5	16.5
IEEE 802.11n (HT20)	16	15.5	15.5
IEEE 802.11ac (HT20)	14.5	14.5	14
Mode	5755 MHz	5795 MHz	
IEEE 802.11n (HT40)	15.5	15.5	
IEEE 802.11ac (HT40)	14.5	14.5	
Mode	5775 MHz		
IEEE 802.11ac (VHT80)	14.5		

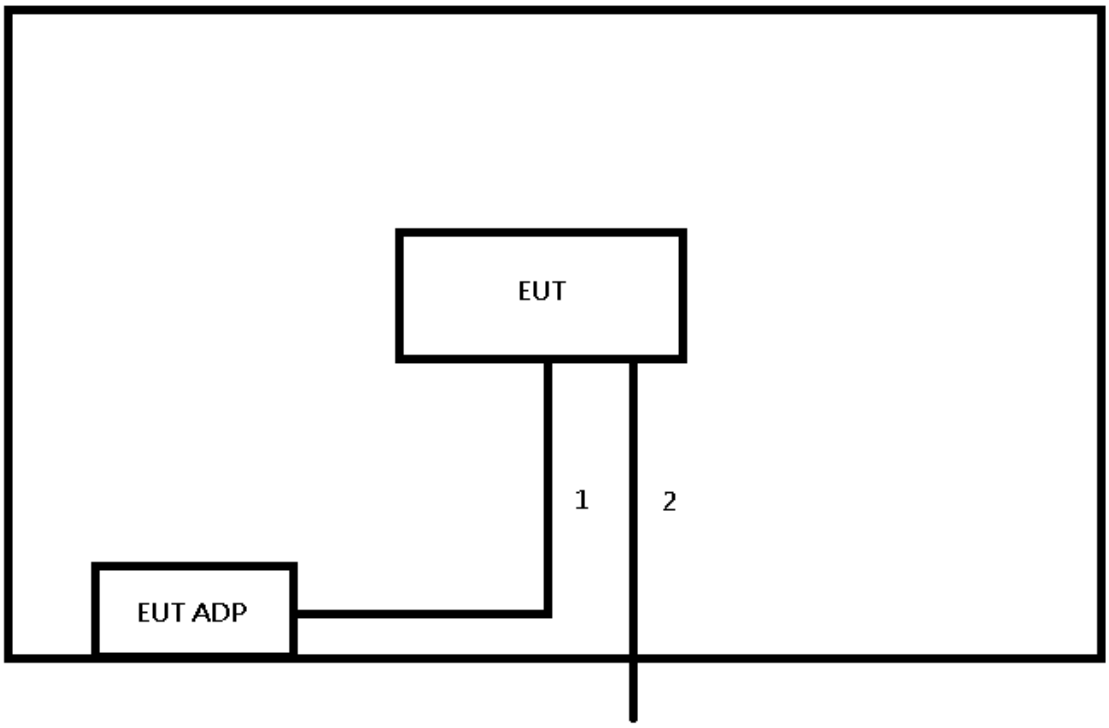
3.4 DUTY CYCLE

If duty cycle is ≥ 98 %, duty factor is not required.
If duty cycle is < 98 %, duty factor shall be considered.

IEEE 802.11a	IEEE 802.11n (HT20)
	
Duty cycle = 100 % Duty Factor = 10 * log(1 / 1) = 0	Duty cycle = 100 % Duty Factor = 10 * log(1 / 1) = 0
IEEE 802.11n (HT40)	**IEEE 802.11ac (VHT80)**
	
Duty cycle = 100 % Duty Factor = 10 * log(1 / 1) = 0	Duty cycle = 100 % Duty Factor = 10 * log(1 / 1) = 0

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 3.6.



3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
-	-	-	-	-	-

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	YES	NO	1.5 m	Power Cable	Furnished at test lab
2	NO	NO	3.0 m	LAN Cable	Furnished at test lab

4 AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56 *	56 - 46 *
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

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

The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.2 TEST PROCEDURE

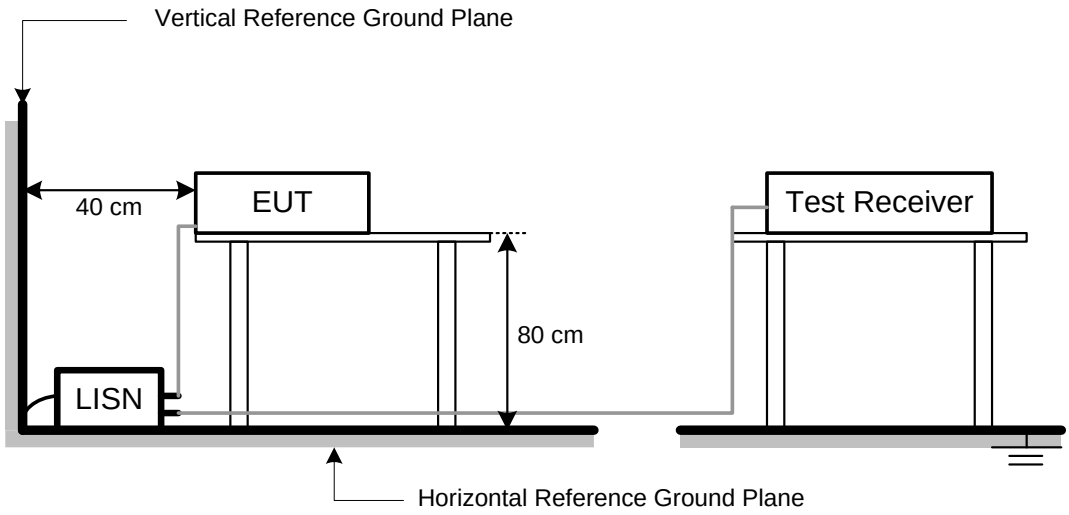
a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
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 to keep the cable above 40 cm.
c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
e. For the actual test configuration, please refer to the related Item - EUT Test Photos.

NOTE:
1. In the results, each reading is marked as Peak, QP or AVG per the detector used.
BW=9 kHz (6 dB Bandwidth)
2. All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in normal link mode.

4.6 TEST RESULT

Temperature: 25 °C Relative Humidity: 45 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX A.

5 RADIATED EMISSIONS TEST

5.1 LIMIT

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

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

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 UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequency (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m)
5150-5250	-27	68.3
5250-5350	-27	68.3
5470-5725	-27	68.3
5725-5850	-27 (NOTE 2)	68.3
	10 (NOTE 2)	105.3
	15.6 (NOTE 2)	110.9
	27 (NOTE 2)	122.3

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 the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

5.2 TEST PROCEDURE

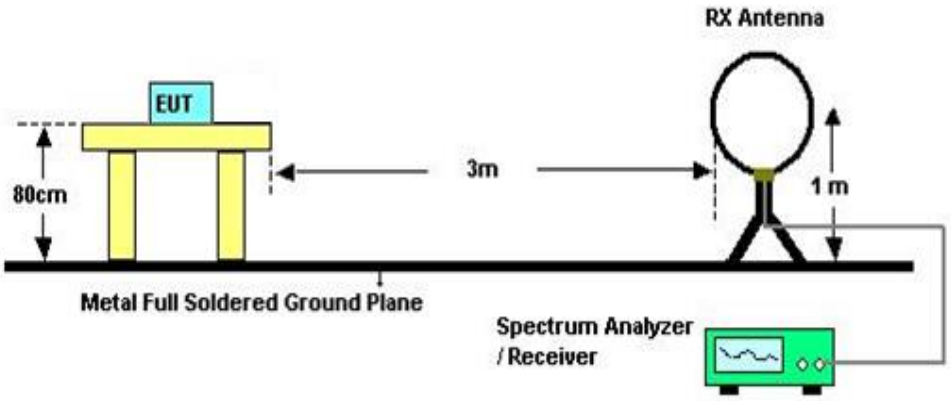
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance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

5.3 DEVIATION FROM TEST STANDARD

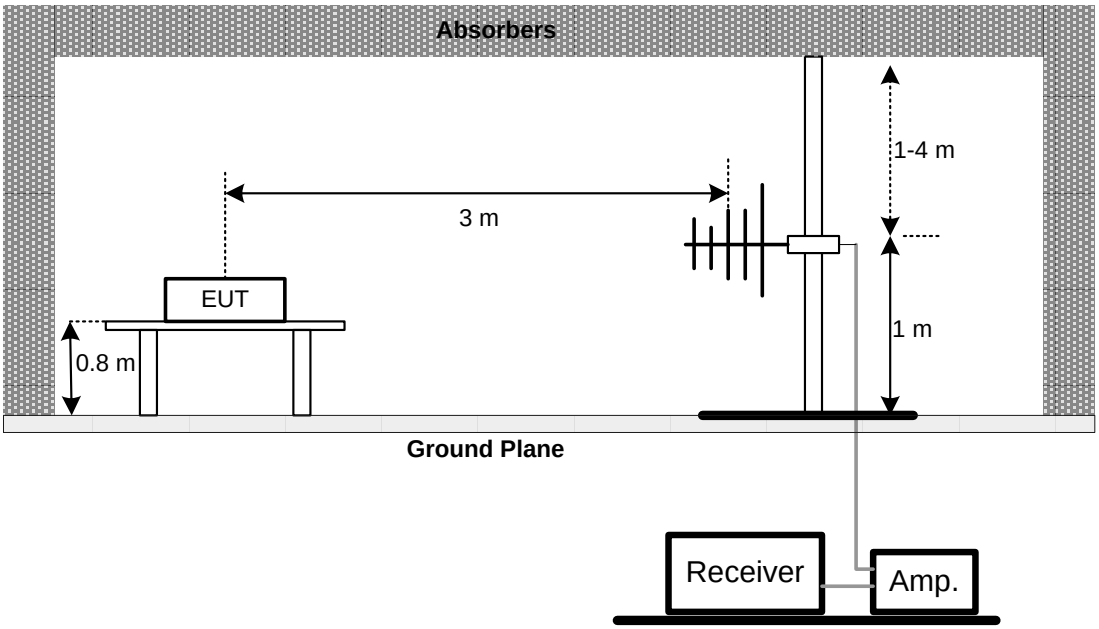
No deviation.

5.4 TEST SETUP

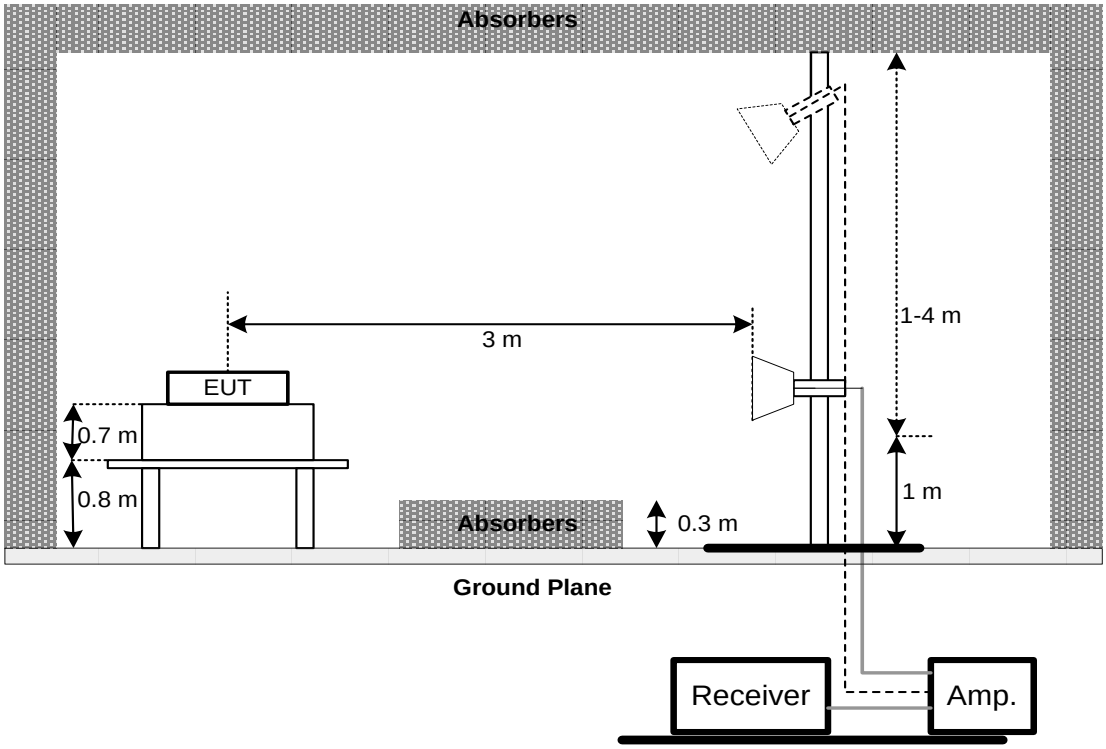
Below 30 MHz



30 MHz to 1 GHz



Above 1 GHz



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT – 9 KHZ TO 30 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX B.

NOTE:

(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.

5.7 TEST RESULT – 30MHZ TO 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX C.

5.8 TEST RESULT – ABOVE 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX D.

NOTE:

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

6 BANDWIDTH TEST

6.1 LIMIT

FCC Part15, Subpart E (§15.407)		
Section	Test Item	Frequency Range (MHz)
§15.407(a)	26 dB Bandwidth	5150-5250
	Minimum 500 kHz 6 dB Bandwidth	5725-5850

6.2 TEST PROCEDURE

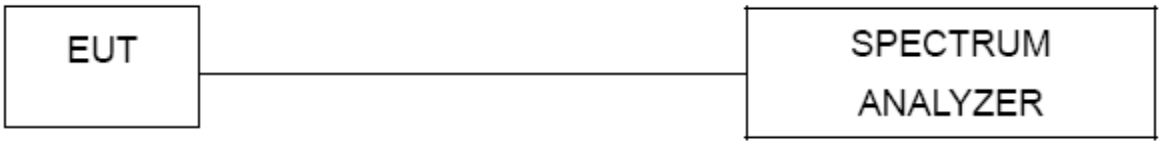
a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting:

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

6.3 DEVIATION FROM TEST STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULT

Please refer to the APPENDIX E.

7 PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15, Subpart E (§15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
§15.407(a)	Maximum Output Power	Fixed:1 Watt (30 dBm) Mobile and portable: 250 mW (24 dBm)	5150-5250
		1 Watt (30dBm)	5725-5850
Note: The maximum e.i.r.p at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW(21 dBm).			

7.2 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 Setting:

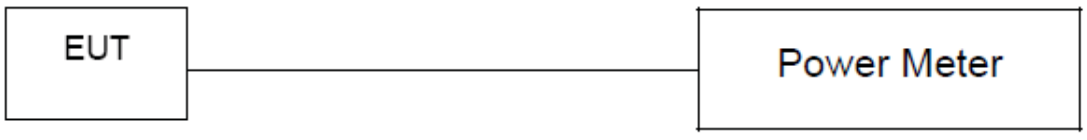
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1 MHz
VBW	≥ 3 MHz
Detector	RMS
Trace	Max Hold
Sweep Time	auto

c. The maximum peak conducted output power was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX F.

8 POWER SPECTRAL DENSITY

8.1 LIMIT

FCC Part15, Subpart E (§15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
§15.407(a)	Power Spectral Density	Other than Mobile and portable: 17 dBm/MHz Mobile and portable: 11 dBm/MHz	5150-5250
		30 dBm/500 kHz	5725-5850

8.2 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:

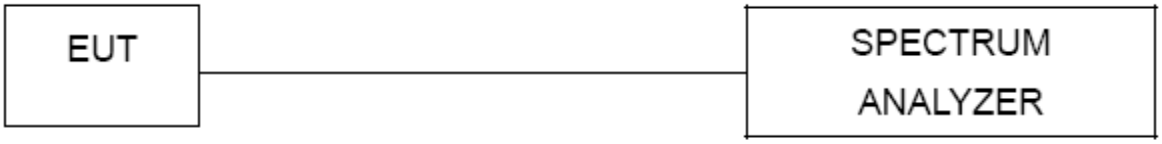
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1 MHz
VBW	≥ 3 MHz
Detector	RMS
Trace	Max Hold
Sweep Time	Auto

NOTE:
1. For UNII-3, according to FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01, it is acceptable to set RBW at 1 MHz and VBW at 3 MHz if the spectrum analyzer does not have 500 kHz RBW.
2. The value measured with RBW = 1 MHz is to be added with 10log(500 kHz/1 MHz) which is -3 dB. For example, if the measured value is +10 dBm using RBW = 1 MHz (that is +10 dBm/MHz), then the converted value will be +7 dBm/500 kHz.

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULT

Please refer to the APPENDIX G.

9 FREQUENCY STABILITY

9.1 LIMIT

FCC Part15, Subpart E (§15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(g)	Frequency Stability	Specified in the user's manual	5150-5250
			5725-5850

9.2 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:

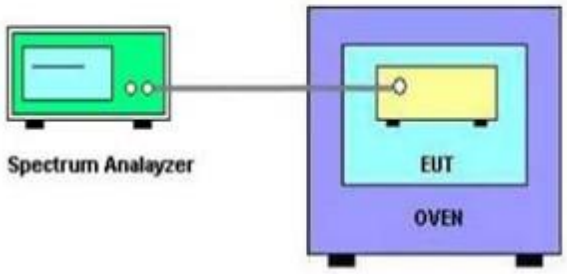
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

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.

9.3 DEVIATION FROM TEST STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULT

Please refer to the APPENDIX H.

10 LIST OF MEASURING EQUIPMENTS

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Mar. 08, 2019
2	Test Cable	EMCI	EMCCFD300-BM-BMR-6000	170715	Aug. 07, 2019
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 10, 2018
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A

Radiated Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Preamplifier	EMCI	012645B	980267	Feb. 27, 2019
2	Preamplifier	EMCI	EMC02325	980217	Dec. 27, 2018
3	Preamplifier	EMCI	EMC2654045	980030	Feb. 13, 2019
4	Test Cable	EMCI	EMC104-SM-SM-8000	8m	Jan. 03, 2019
5	Test Cable	EMCI	EMC104-SM-SM-800	150207	Jan. 03, 2019
6	Test Cable	EMCI	EEMC104-SM-SM-3000	151205	Jan. 03, 2019
7	MXE EMI Receiver	Agilent	N9038A	MY55420127	Jan. 08, 2019
8	Signal Analyzer	Agilent	N9010A	MY52220990	Feb. 21, 2019
9	Loop Ant	EMCI	LPA600	274	May 03, 2019
10	Horm Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	Feb. 27, 2019
11	Horm Ant	Schwarzbeck	BBHA 9170	187	Dec. 05, 2018
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-548	Jan. 15, 2019
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0623	Jan. 15, 2019

26 dB Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854(E-208)	May 25, 2019

Peak Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2495A	6K00004714	Sep.09, 2019
2	Power Sensor	Anritsu	MA2411B	1126001	Aug. 15, 2019

Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854(E-208)	May 25, 2019

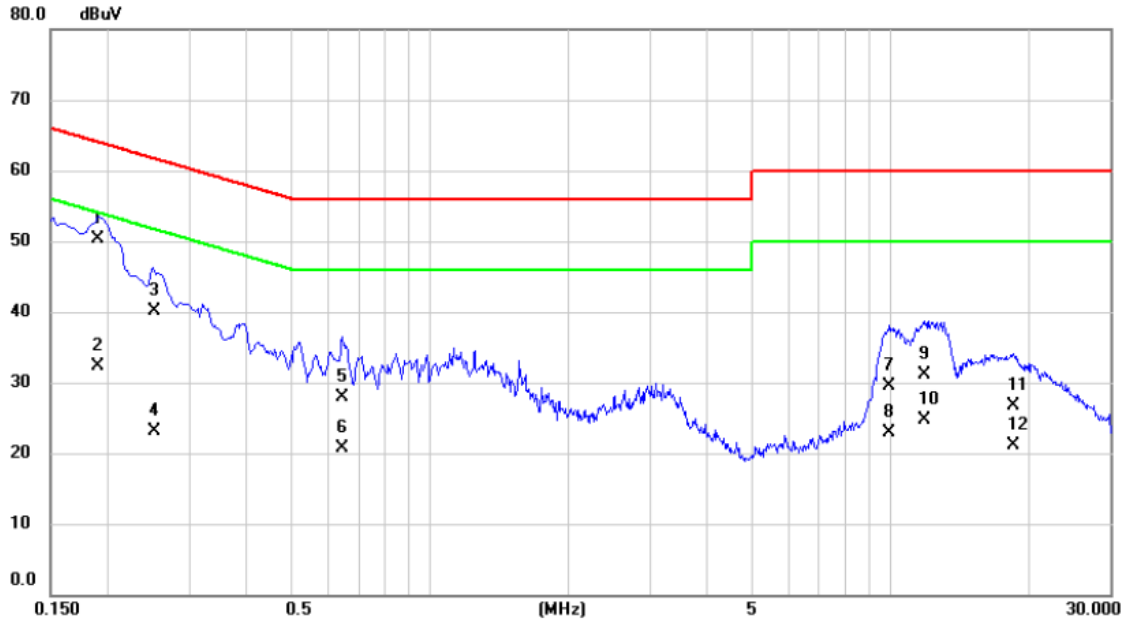
Frequency Stability					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	R&S/FSP30	100854(E-208)	May 25, 2019

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

APPENDIX A AC POWER LINE CONDUCTED EMISSIONS

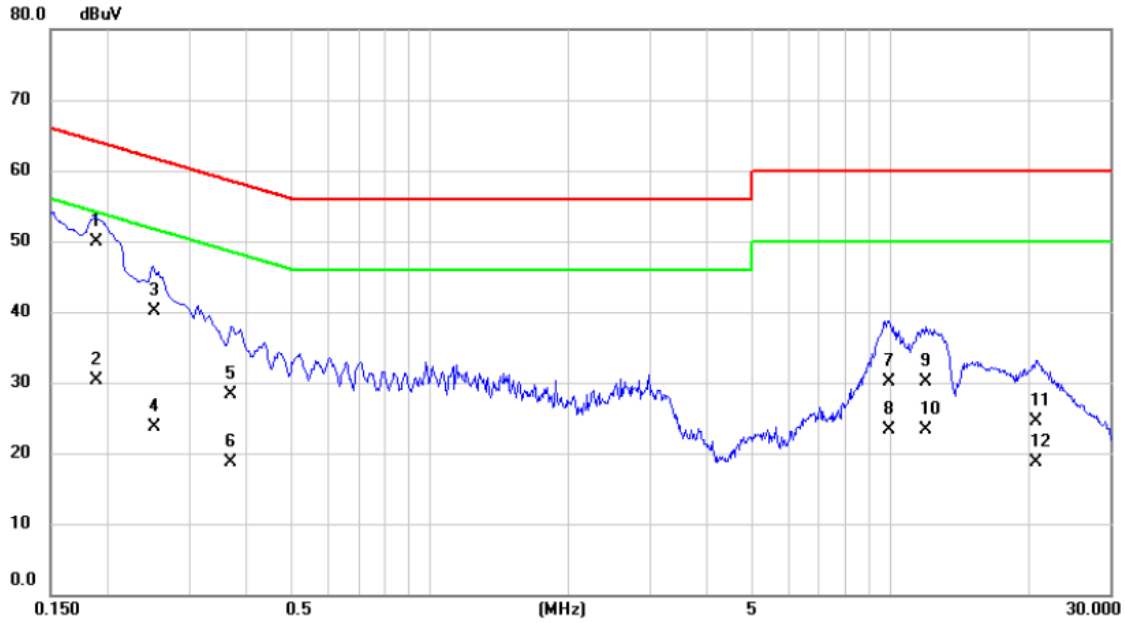
CONTINUE ON NEXT PAGE

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Phase	Line



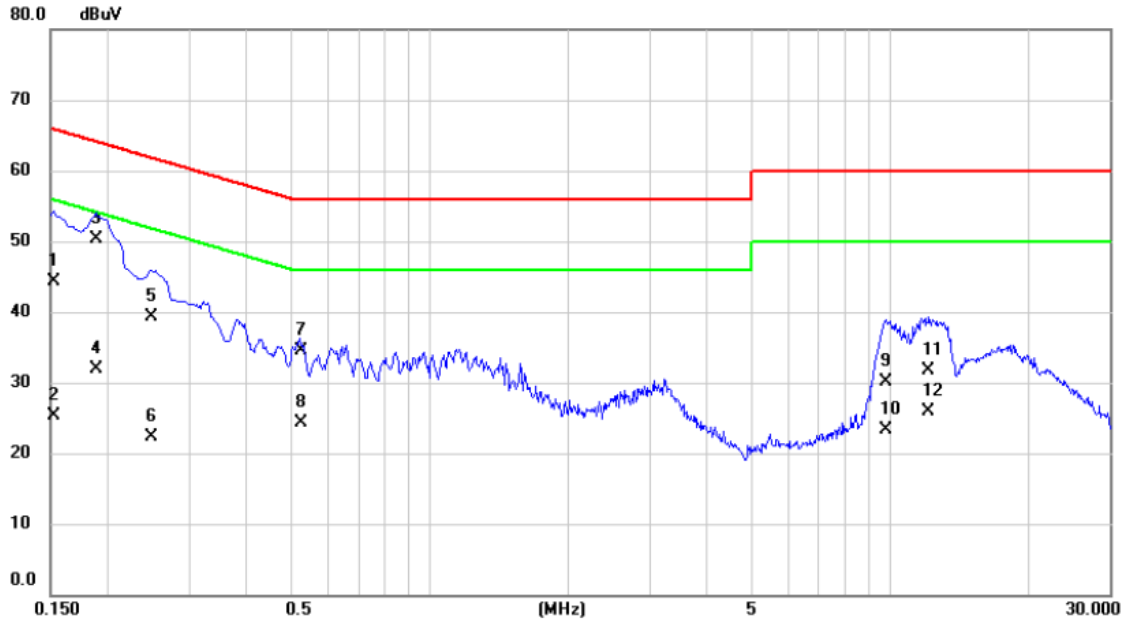
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1905	40.60	9.63	50.23	64.01	-13.78	QP	
2		0.1905	22.70	9.63	32.33	54.01	-21.68	AVG	
3		0.2513	30.40	9.65	40.05	61.71	-21.66	QP	
4		0.2513	13.40	9.65	23.05	51.71	-28.66	AVG	
5		0.6450	18.30	9.66	27.96	56.00	-28.04	QP	
6		0.6450	11.10	9.66	20.76	46.00	-25.24	AVG	
7		9.9308	19.60	9.92	29.52	60.00	-30.48	QP	
8		9.9308	12.90	9.92	22.82	50.00	-27.18	AVG	
9		11.8703	21.10	9.93	31.03	60.00	-28.97	QP	
10		11.8703	14.70	9.93	24.63	50.00	-25.37	AVG	
11		18.5078	16.80	9.97	26.77	60.00	-33.23	QP	
12		18.5078	11.10	9.97	21.07	50.00	-28.93	AVG	

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Phase	Neutral



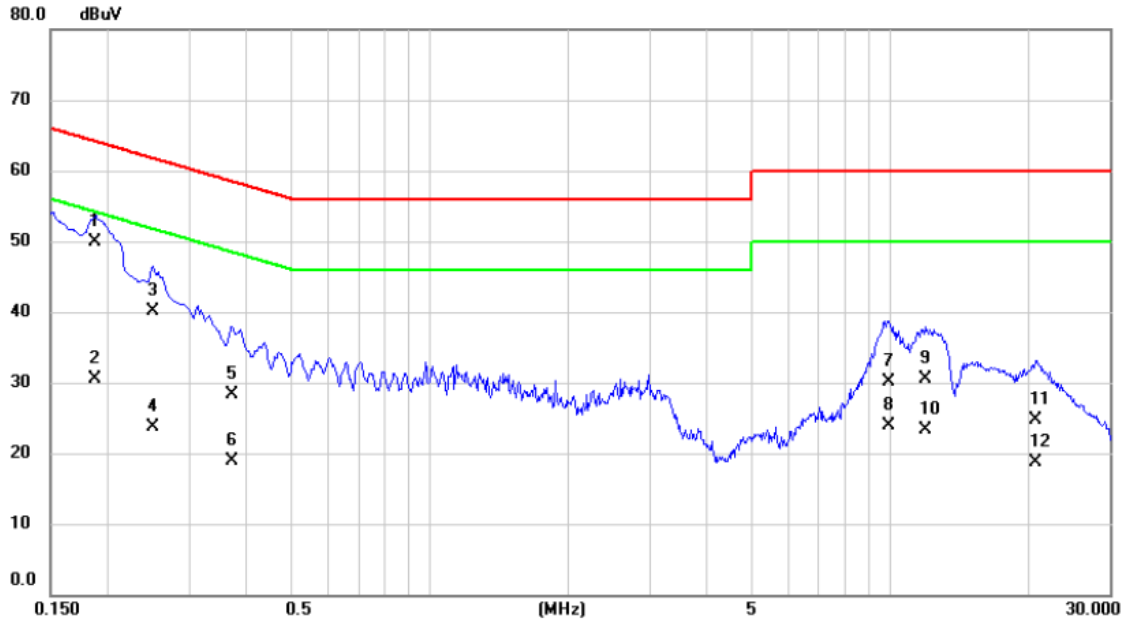
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1883	40.30	9.61	49.91	64.11	-14.20	QP	
2		0.1883	20.70	9.61	30.31	54.11	-23.80	AVG	
3		0.2513	30.40	9.63	40.03	61.71	-21.68	QP	
4		0.2513	14.00	9.63	23.63	51.71	-28.08	AVG	
5		0.3704	18.60	9.64	28.24	58.49	-30.25	QP	
6		0.3704	9.10	9.64	18.74	48.49	-29.75	AVG	
7		9.9240	20.20	9.92	30.12	60.00	-29.88	QP	
8		9.9240	13.30	9.92	23.22	50.00	-26.78	AVG	
9		11.9310	20.10	9.93	30.03	60.00	-29.97	QP	
10		11.9310	13.30	9.93	23.23	50.00	-26.77	AVG	
11		20.6633	14.50	9.98	24.48	60.00	-35.52	QP	
12		20.6633	8.70	9.98	18.68	50.00	-31.32	AVG	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1522	34.70	9.63	44.33	65.88	-21.55	QP	
2		0.1522	15.60	9.63	25.23	55.88	-30.65	AVG	
3	*	0.1881	40.72	9.63	50.35	64.12	-13.77	QP	
4		0.1881	22.19	9.63	31.82	54.12	-22.30	AVG	
5		0.2492	29.60	9.64	39.24	61.78	-22.54	QP	
6		0.2492	12.70	9.64	22.34	51.78	-29.44	AVG	
7		0.5240	24.90	9.66	34.56	56.00	-21.44	QP	
8		0.5240	14.72	9.66	24.38	46.00	-21.62	AVG	
9		9.7911	20.21	9.91	30.12	60.00	-29.88	QP	
10		9.7911	13.42	9.91	23.33	50.00	-26.67	AVG	
11		12.1246	21.71	9.93	31.64	60.00	-28.36	QP	
12		12.1246	15.90	9.93	25.83	50.00	-24.17	AVG	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Phase	Neutral

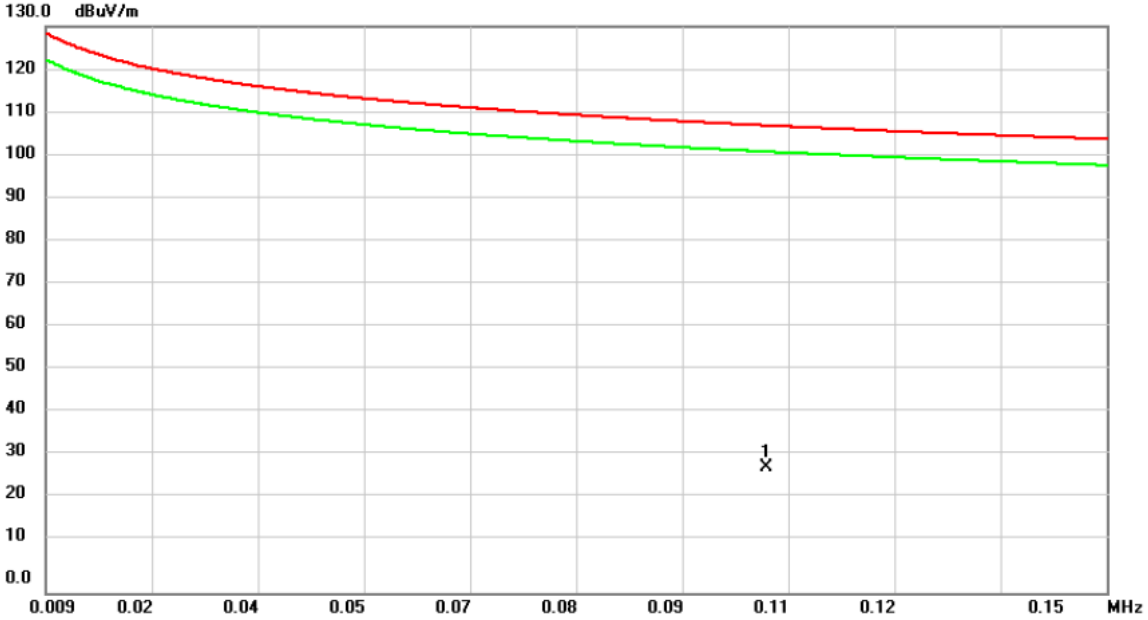


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1880	40.35	9.61	49.96	64.12	-14.16	QP	
2		0.1880	20.92	9.61	30.53	54.12	-23.59	AVG	
3		0.2510	30.41	9.63	40.04	61.72	-21.68	QP	
4		0.2510	14.03	9.63	23.66	51.72	-28.06	AVG	
5		0.3706	18.69	9.64	28.33	58.49	-30.16	QP	
6		0.3706	9.23	9.64	18.87	48.49	-29.62	AVG	
7		9.9241	20.22	9.92	30.14	60.00	-29.86	QP	
8		9.9241	13.90	9.92	23.82	50.00	-26.18	AVG	
9		11.9315	20.52	9.93	30.45	60.00	-29.55	QP	
10		11.9315	13.43	9.93	23.36	50.00	-26.64	AVG	
11		20.6640	14.81	9.98	24.79	60.00	-35.21	QP	
12		20.6640	8.76	9.98	18.74	50.00	-31.26	AVG	

APPENDIX B RADIATED EMISSIONS - 9 KHZ TO 30 MHZ

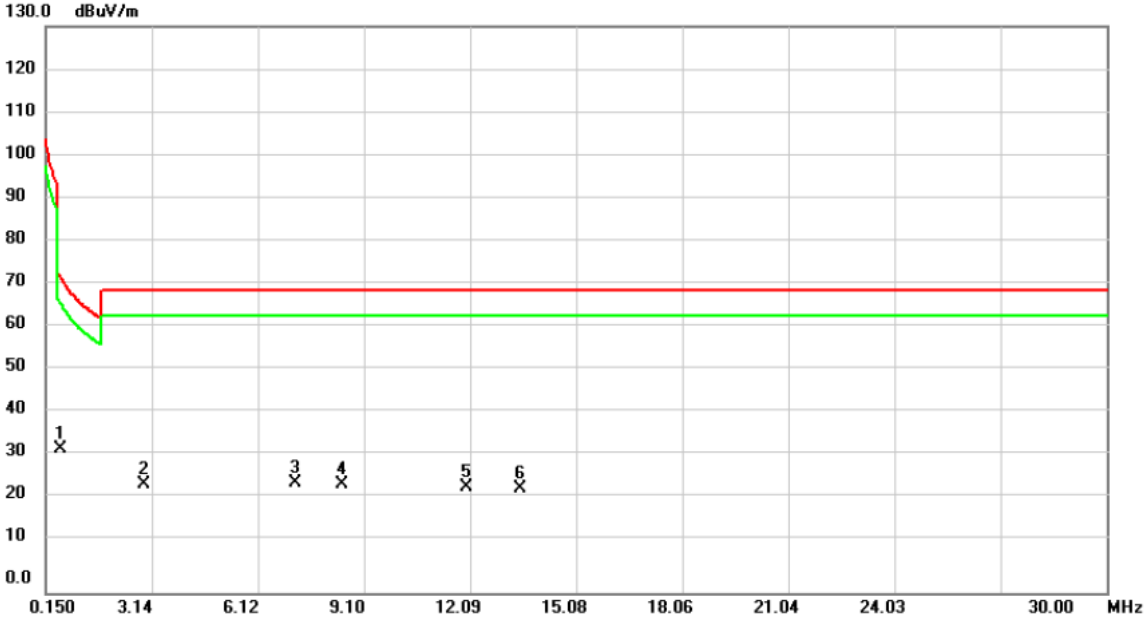
CONTINUE ON NEXT PAGE

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Azimuth Angle	90°



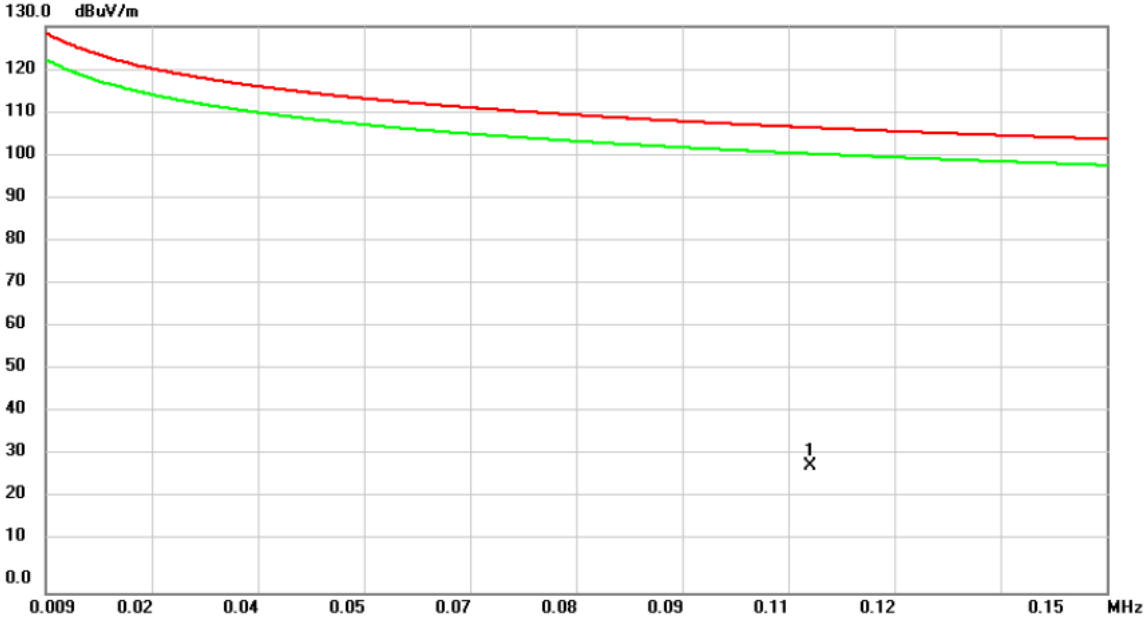
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.1047	12.87	15.77	28.64	107.21	-78.57	peak	

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Azimuth Angle	90°



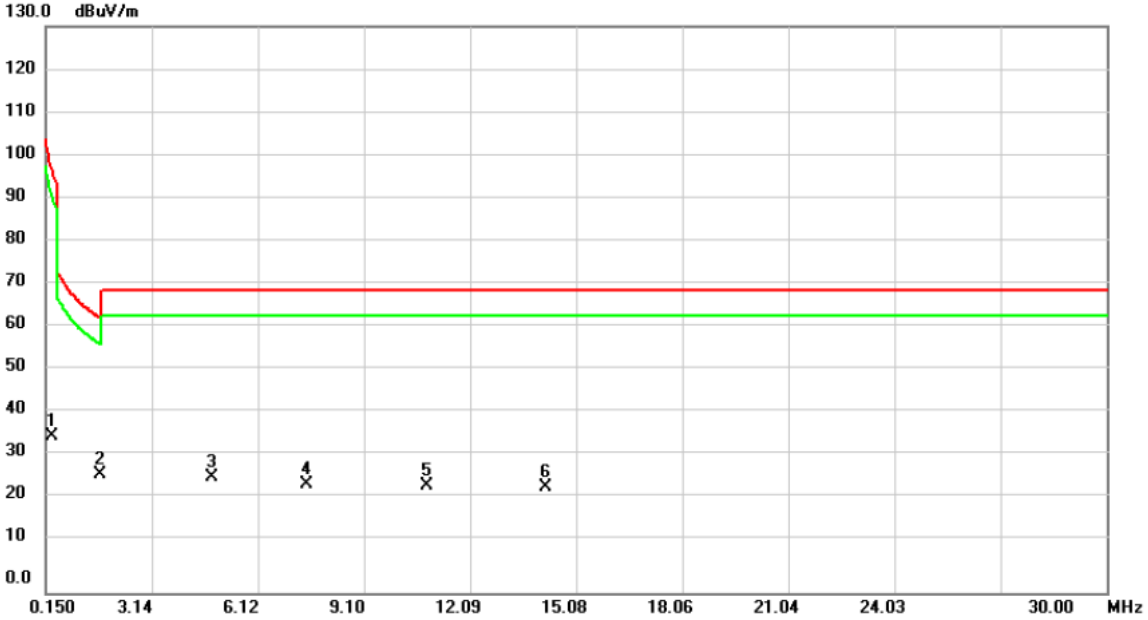
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.5480	29.95	3.07	33.02	72.83	-39.81	peak	
2		2.8962	28.50	-3.59	24.91	69.54	-44.63	peak	
3		7.1548	29.37	-4.16	25.21	69.54	-44.33	peak	
4		8.4682	29.39	-4.50	24.89	69.54	-44.65	peak	
5		11.9706	29.09	-4.82	24.27	69.54	-45.27	peak	
6		13.4830	28.57	-4.82	23.75	69.54	-45.79	peak	

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Azimuth Angle	0°



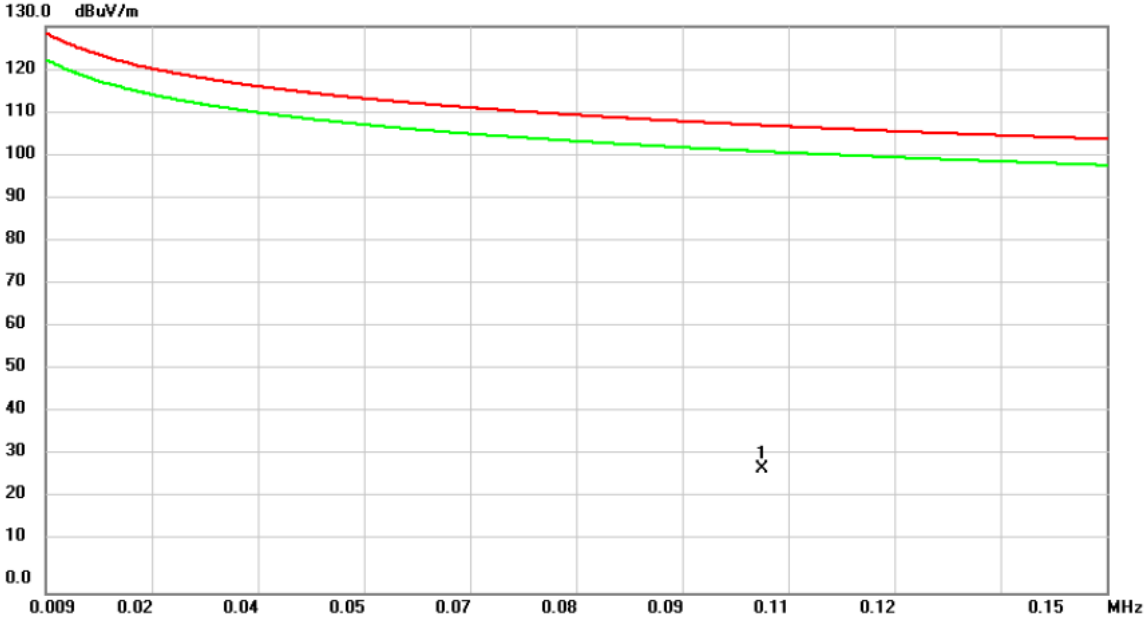
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.1107	13.58	15.42	29.00	106.72	-77.72	peak	

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Azimuth Angle	0°



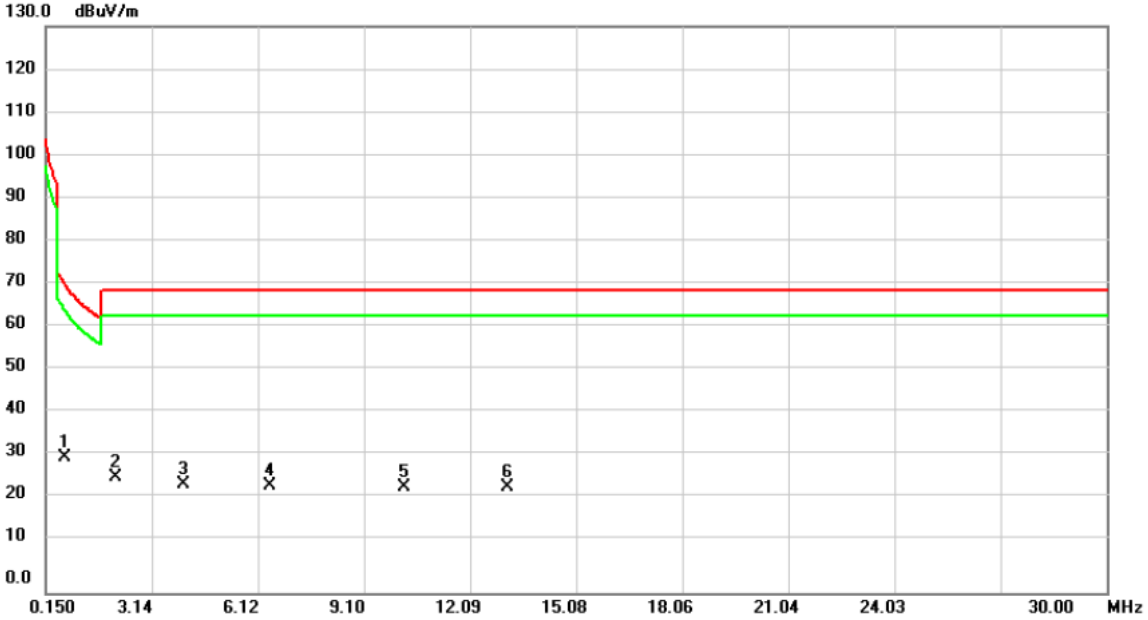
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3092	29.16	6.81	35.97	97.80	-61.83	peak	
2	*	1.6624	29.18	-2.07	27.11	63.19	-36.08	peak	
3		4.8066	30.26	-3.90	26.36	69.54	-43.18	peak	
4		7.4732	29.11	-4.22	24.89	69.54	-44.65	peak	
5		10.8562	29.18	-4.80	24.38	69.54	-45.16	peak	
6		14.1994	28.98	-4.86	24.12	69.54	-45.42	peak	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Azimuth Angle	90°



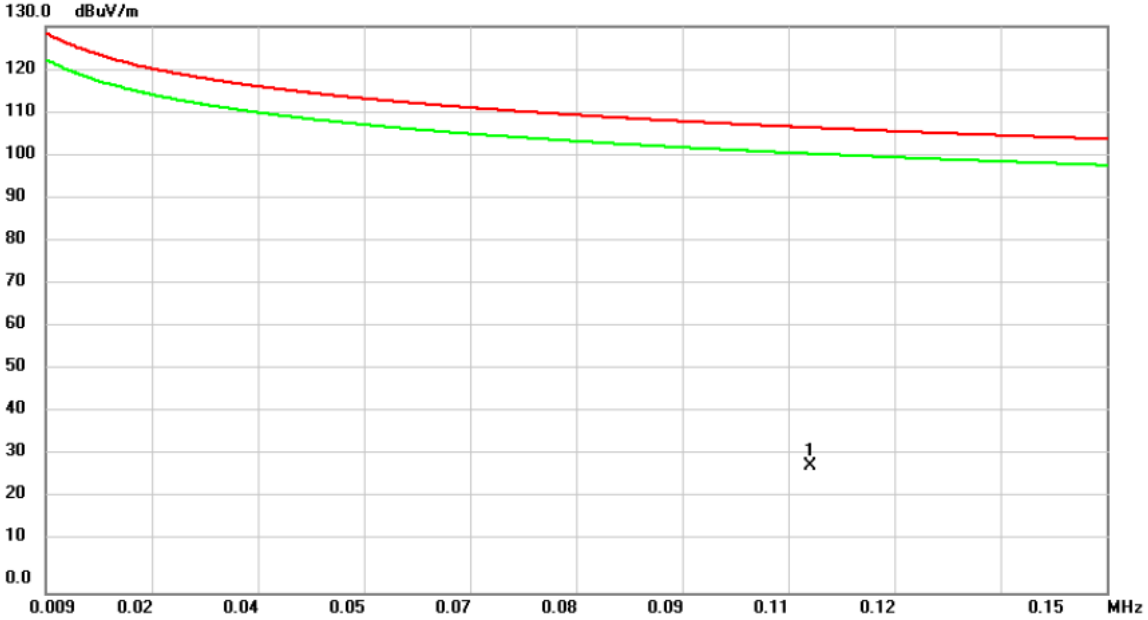
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.1043	12.68	15.78	28.46	107.24	-78.78	peak	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Azimuth Angle	90°



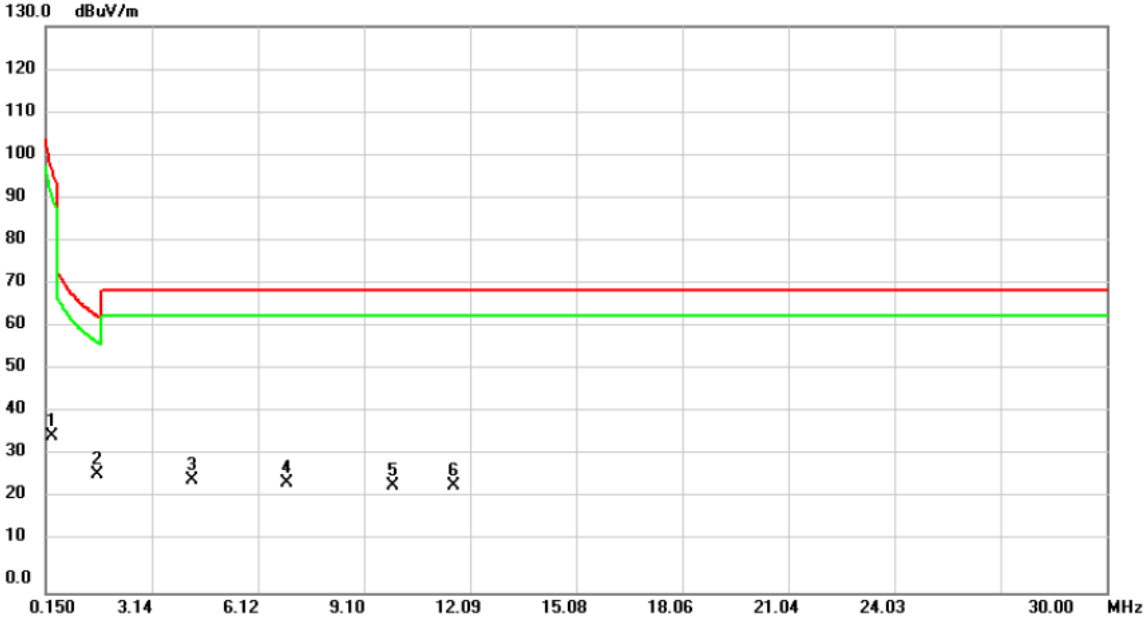
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.6674	29.37	1.74	31.11	71.12	-40.01	peak	
2		2.1002	29.63	-3.01	26.62	69.54	-42.92	peak	
3		4.0106	28.71	-3.80	24.91	69.54	-44.63	peak	
4		6.4384	28.60	-4.07	24.53	69.54	-45.01	peak	
5		10.2194	28.91	-4.73	24.18	69.54	-45.36	peak	
6		13.1248	28.95	-4.82	24.13	69.54	-45.41	peak	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Azimuth Angle	0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.1107	13.58	15.42	29.00	106.72	-77.72	peak	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Azimuth Angle	0°

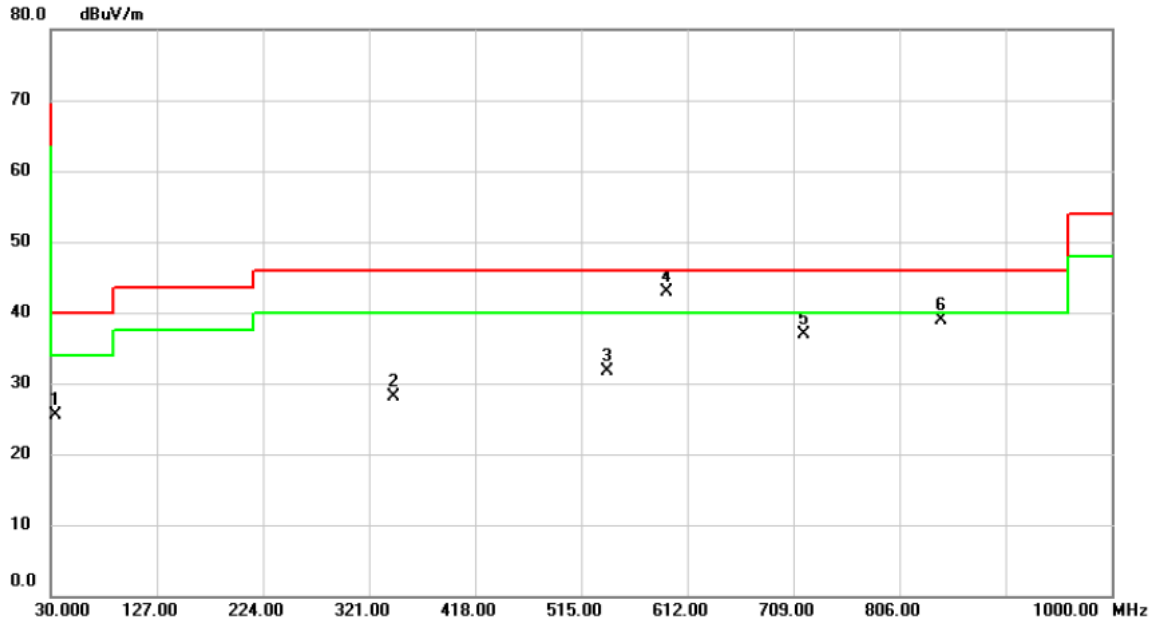


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3092	29.16	6.81	35.97	97.80	-61.83	peak	
2	*	1.5828	29.07	-1.86	27.21	63.61	-36.40	peak	
3		4.2494	29.79	-3.82	25.97	69.54	-43.57	peak	
4		6.9160	29.27	-4.11	25.16	69.54	-44.38	peak	
5		9.9010	29.23	-4.71	24.52	69.54	-45.02	peak	
6		11.6124	29.27	-4.81	24.46	69.54	-45.08	peak	

APPENDIX C RADIATED EMISSIONS - 30 MHZ TO 1000 MHZ

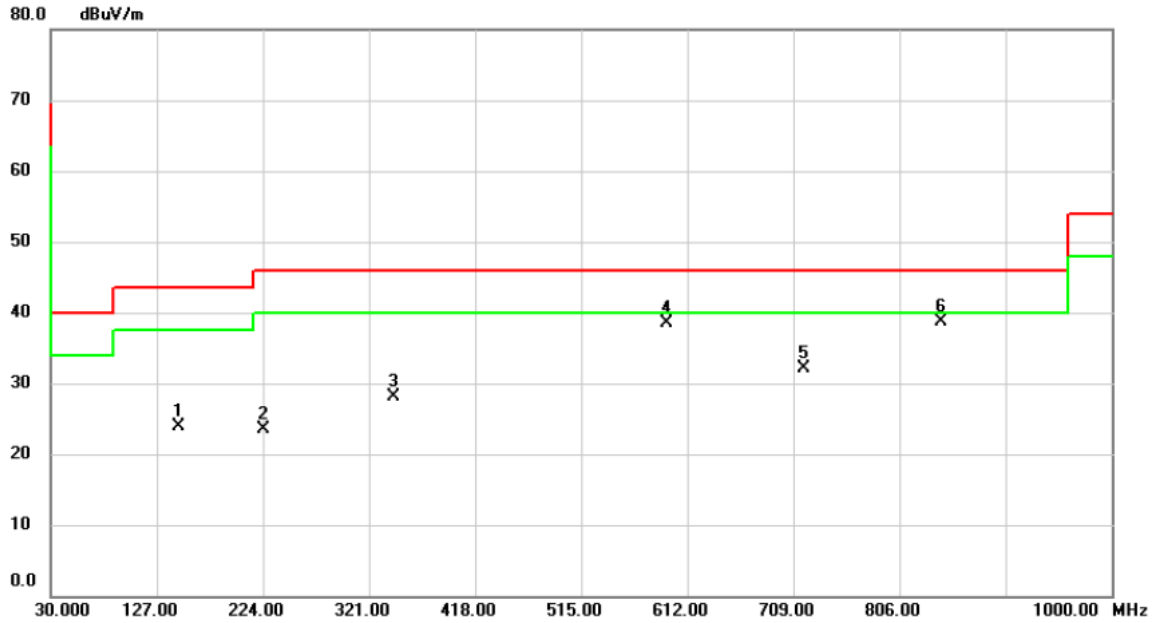
CONTINUE ON NEXT PAGE

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Polarization	Vertical



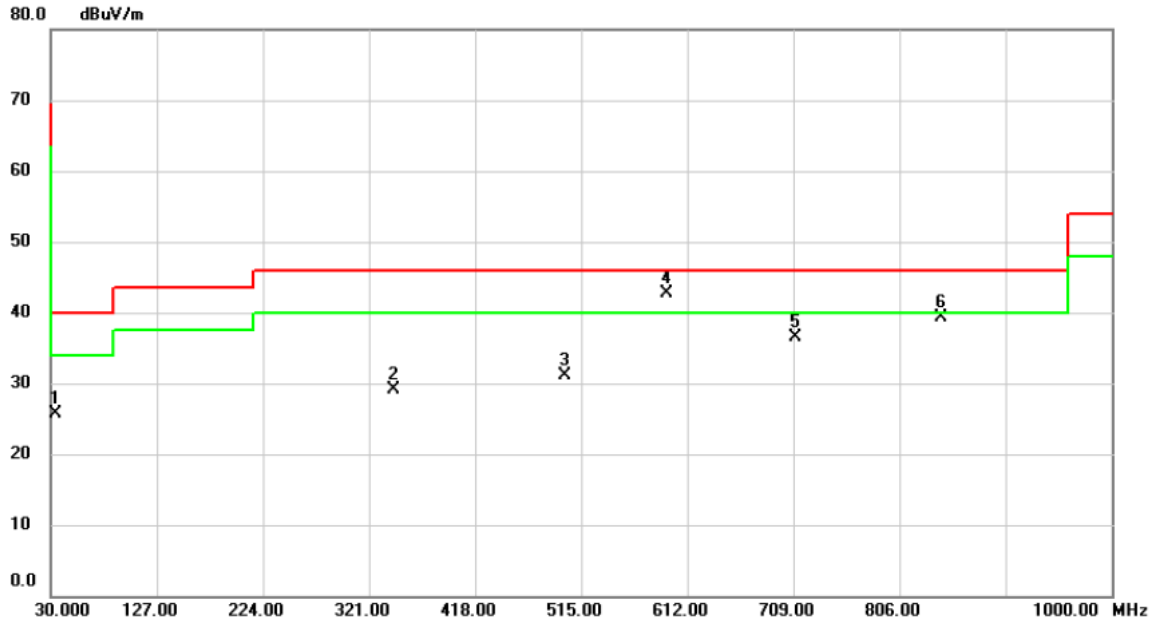
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		33.8800	34.53	-9.02	25.51	40.00	-14.49	peak	
2		343.3100	34.45	-6.37	28.08	46.00	-17.92	peak	
3		539.2500	33.82	-2.21	31.61	46.00	-14.39	peak	
4	*	593.5700	43.50	-0.61	42.89	46.00	-3.11	peak	
5		718.7000	35.28	1.67	36.95	46.00	-9.05	peak	
6		843.8300	35.15	3.85	39.00	46.00	-7.00	peak	

Test Mode	UNII-1_TX N (HT40) MODE 5190 MHz	Polarization	Horizontal



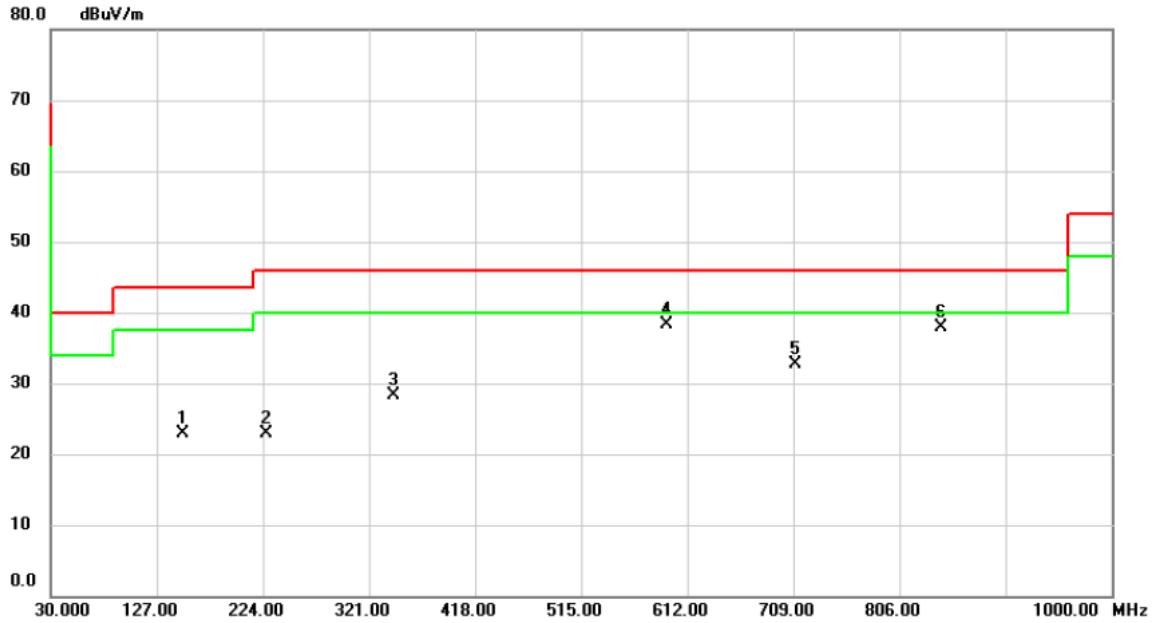
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		147.3700	32.53	-8.67	23.86	43.50	-19.64	peak	
2		224.9700	33.49	-10.06	23.43	46.00	-22.57	peak	
3		343.3100	34.57	-6.37	28.20	46.00	-17.80	peak	
4		593.5700	39.03	-0.61	38.42	46.00	-7.58	peak	
5		718.7000	30.52	1.67	32.19	46.00	-13.81	peak	
6	*	843.8300	34.85	3.85	38.70	46.00	-7.30	peak	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		34.8500	34.65	-9.01	25.64	40.00	-14.36	peak	
2		343.3100	35.48	-6.37	29.11	46.00	-16.89	peak	
3		500.4500	33.93	-2.91	31.02	46.00	-14.98	peak	
4	*	593.5700	43.30	-0.61	42.69	46.00	-3.31	peak	
5		710.9400	35.03	1.51	36.54	46.00	-9.46	peak	
6		843.8300	35.50	3.85	39.35	46.00	-6.65	peak	

Test Mode	UNII-3_TX N (HT40) MODE 5755 MHz	Polarization	Horizontal

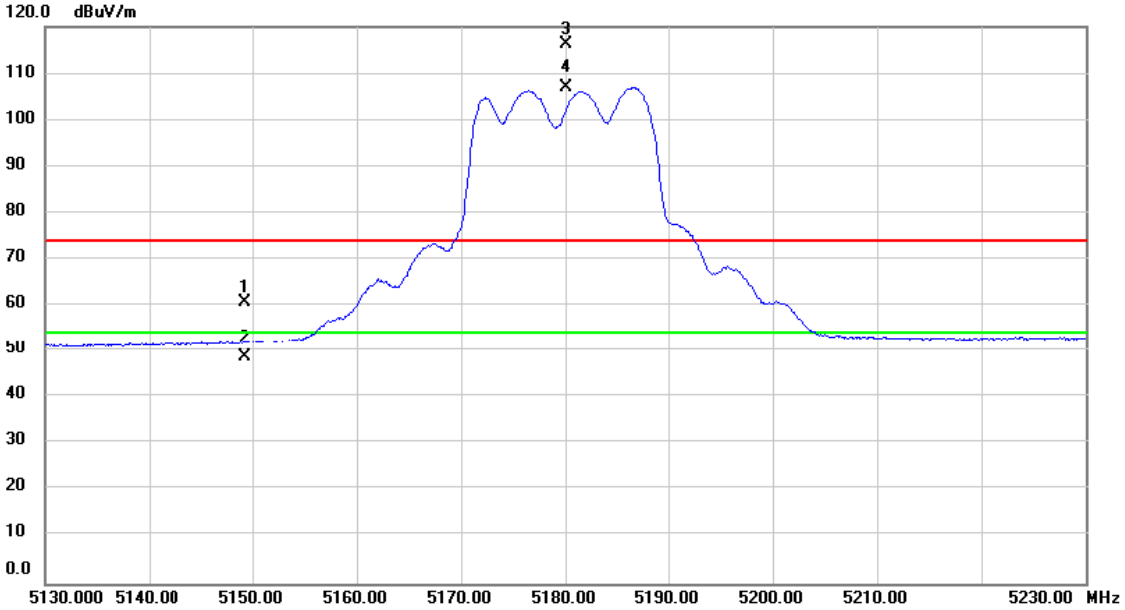


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		151.2500	31.48	-8.61	22.87	43.50	-20.63	peak	
2		226.9100	32.76	-9.86	22.90	46.00	-23.10	peak	
3		343.3100	34.66	-6.37	28.29	46.00	-17.71	peak	
4	*	593.5700	38.91	-0.61	38.30	46.00	-7.70	peak	
5		710.9400	31.13	1.51	32.64	46.00	-13.36	peak	
6		843.8300	34.15	3.85	38.00	46.00	-8.00	peak	

APPENDIX D RADIATED EMISSIONS - ABOVE 1000 MHZ

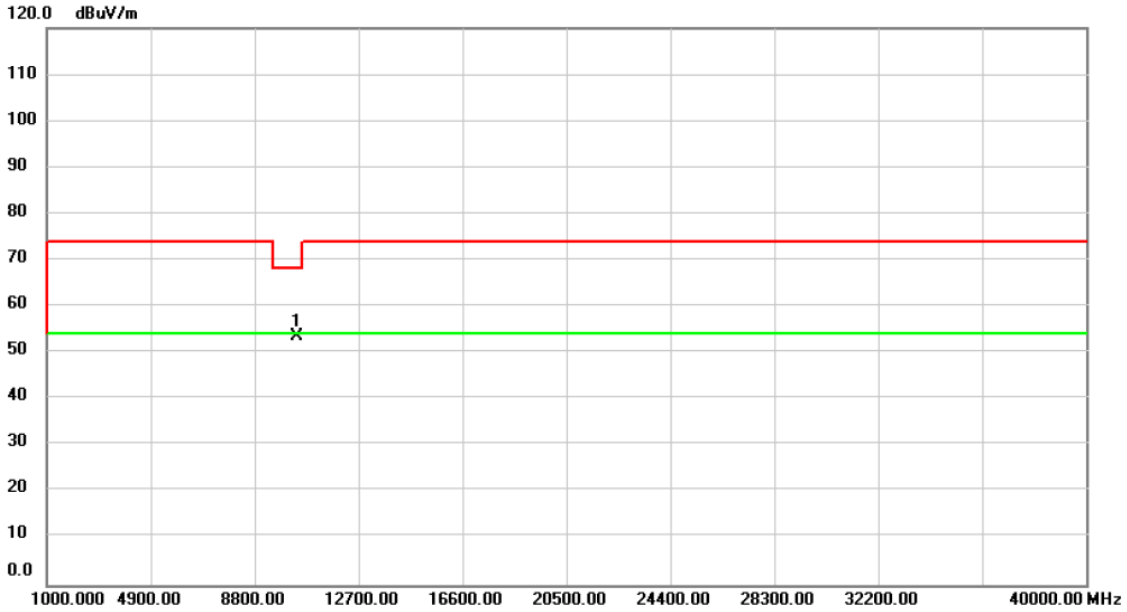
CONTINUE ON NEXT PAGE

Test MODE	UNII-1_ TX A MODE 5180MHz	Polarization	Vertical



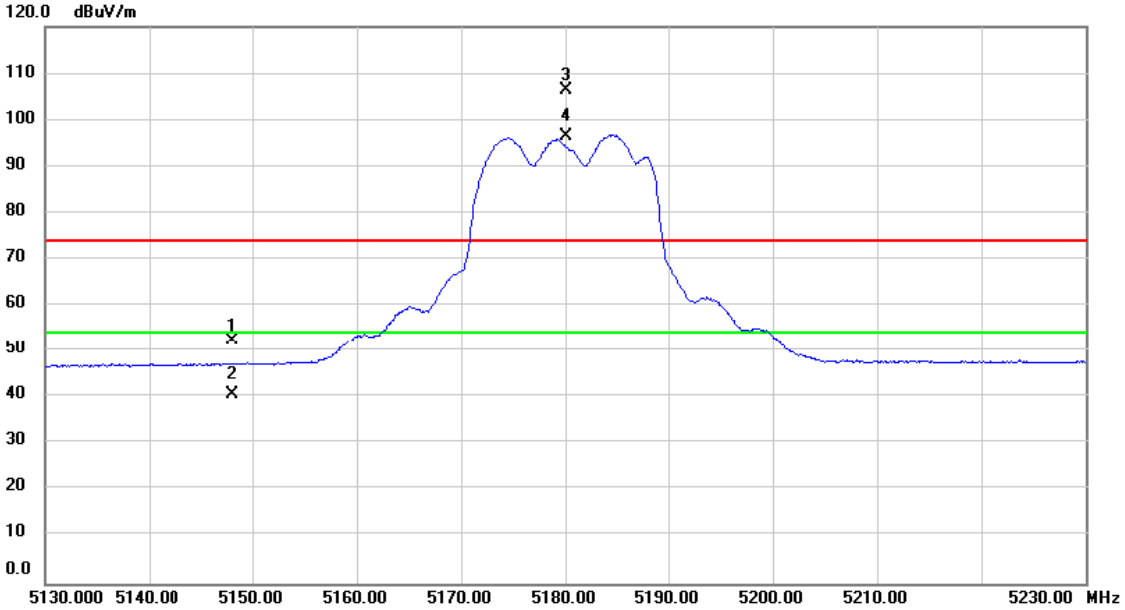
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.320	23.42	37.30	60.72	74.00	-13.28	peak	
2		5149.320	11.50	37.30	48.80	54.00	-5.20	AVG	
3	X	5180.000	79.00	37.34	116.34	74.00	42.34	peak	No Limit
4	*	5180.000	69.75	37.34	107.09	54.00	53.09	AVG	No Limit

Test MODE	UNII-1_ TX A MODE 5180MHz	Polarization	Vertical



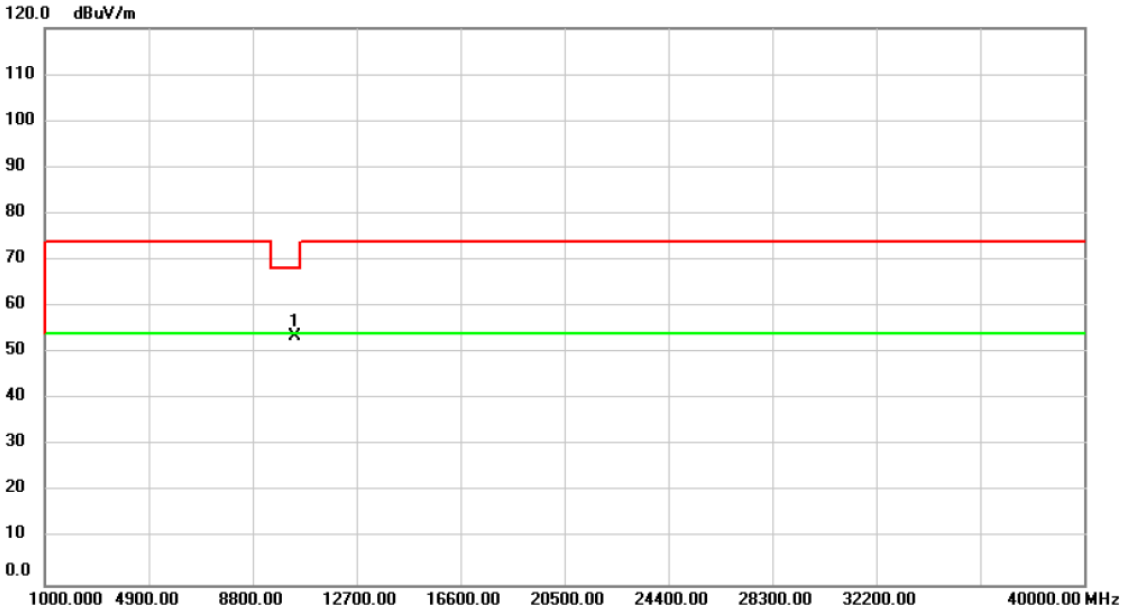
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	52.02	1.57	53.59	68.20	-14.61	peak	

Test MODE	UNII-1_ TX A MODE 5180MHz	Polarization	Horizontal



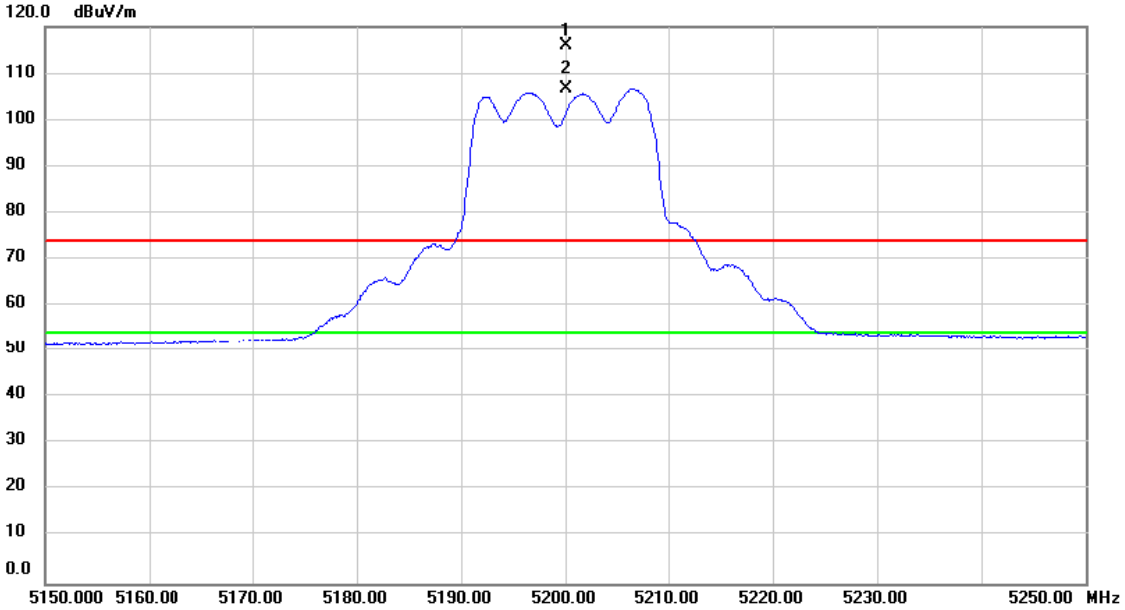
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5148.100	14.91	37.30	52.21	74.00	-21.79	peak	
2		5148.100	3.29	37.30	40.59	54.00	-13.41	AVG	
3	X	5180.000	69.06	37.34	106.40	74.00	32.40	peak	No Limit
4	*	5180.000	59.18	37.34	96.52	54.00	42.52	AVG	No Limit

Test MODE	UNII-1_ TX A MODE 5180MHz	Polarization	Horizontal



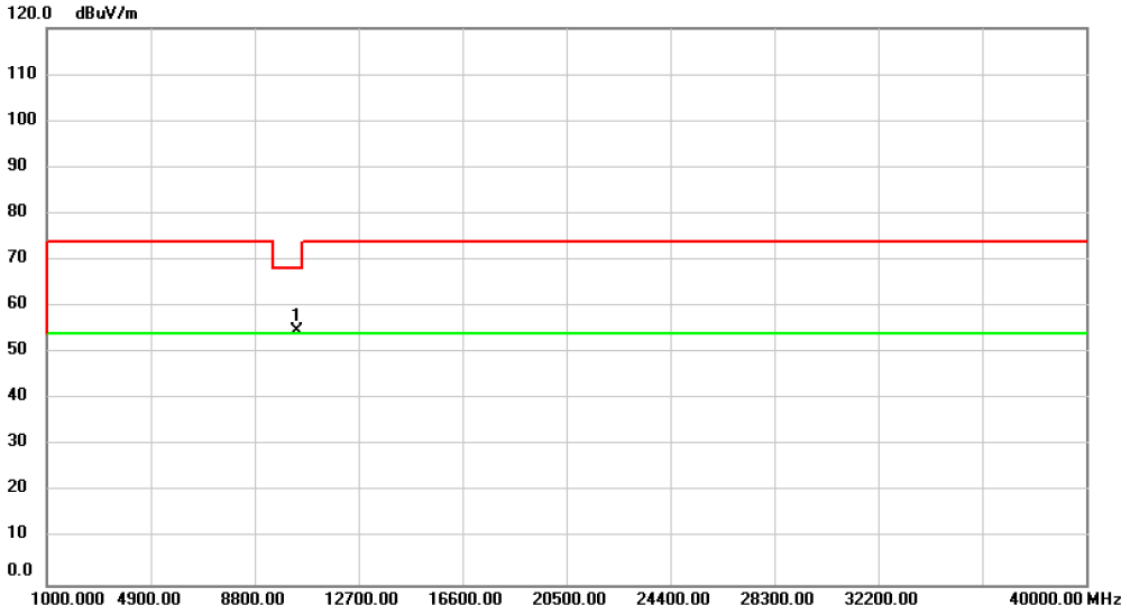
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	51.95	1.57	53.52	68.20	-14.68	peak	

Test MODE	UNII-1_ TX A MODE 5200MHz	Polarization	Vertical



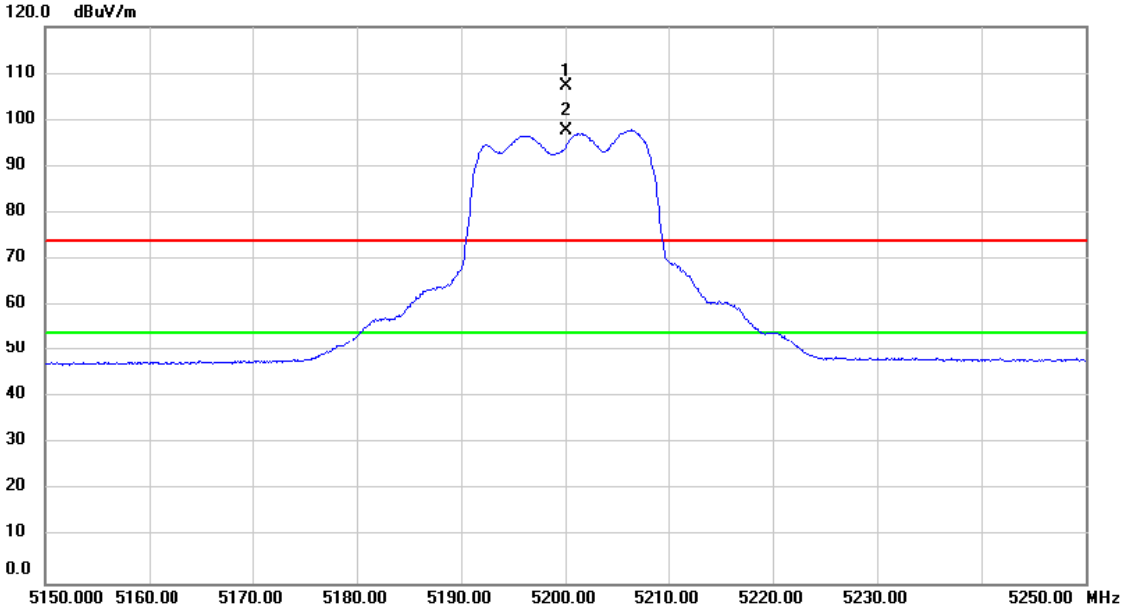
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	78.62	37.36	115.98	74.00	41.98	peak	No Limit
2	*	5200.000	69.19	37.36	106.55	54.00	52.55	AVG	No Limit

Test MODE	UNII-1_ TX A MODE 5200MHz	Polarization	Vertical



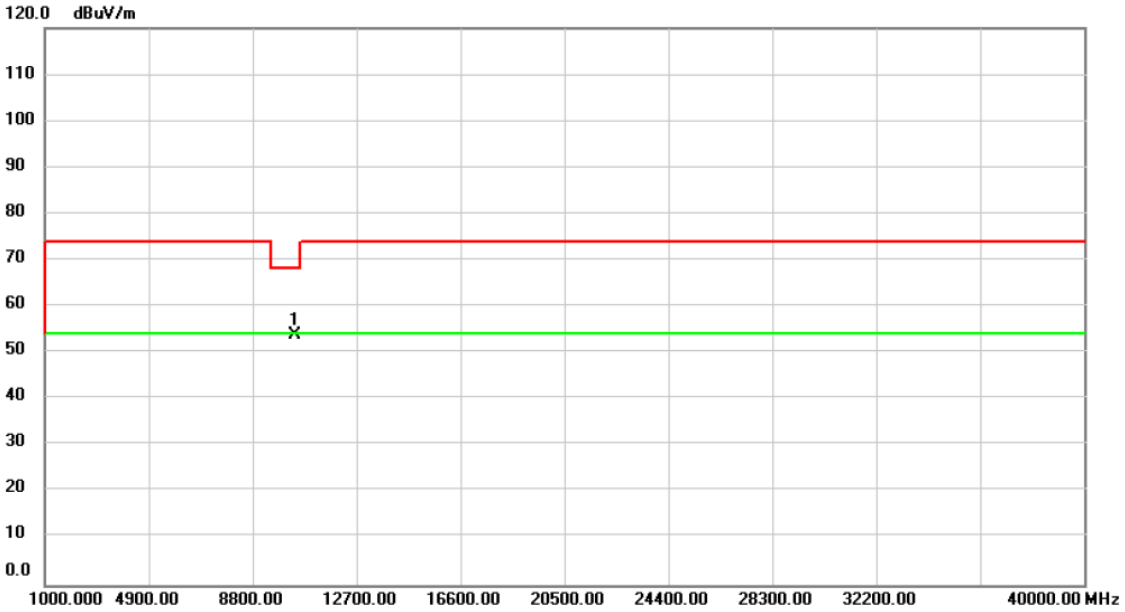
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	53.27	1.62	54.89	68.20	-13.31	peak	

Test MODE	UNII-1_ TX A MODE 5200MHz	Polarization	Horizontal



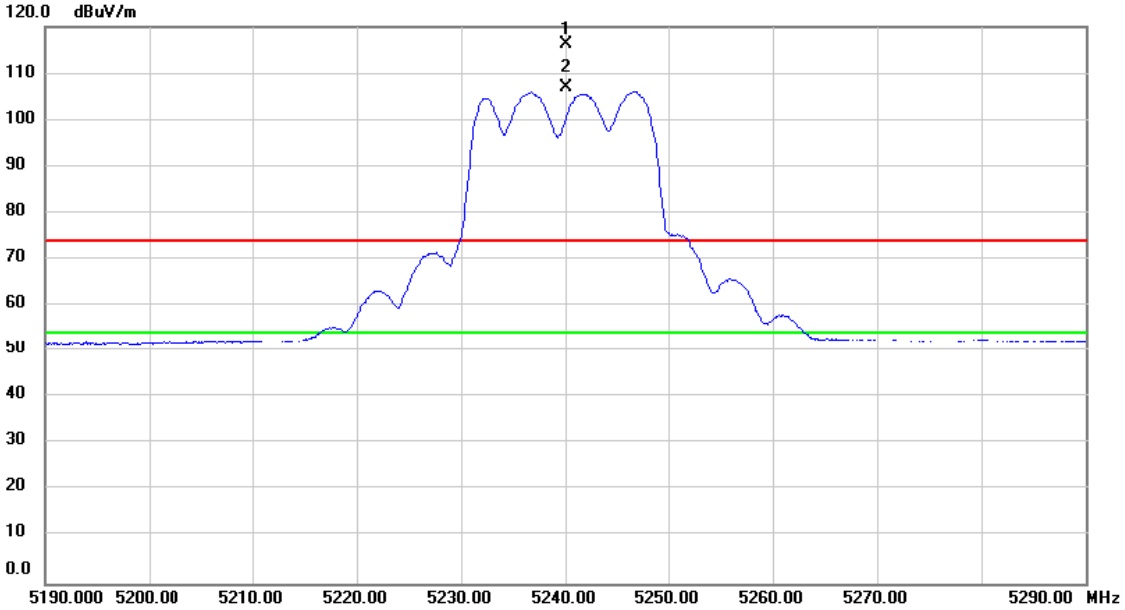
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	69.81	37.36	107.17	74.00	33.17	peak	No Limit
2	*	5200.000	60.36	37.36	97.72	54.00	43.72	AVG	No Limit

Test MODE	UNII-1_ TX A MODE 5200MHz	Polarization	Horizontal



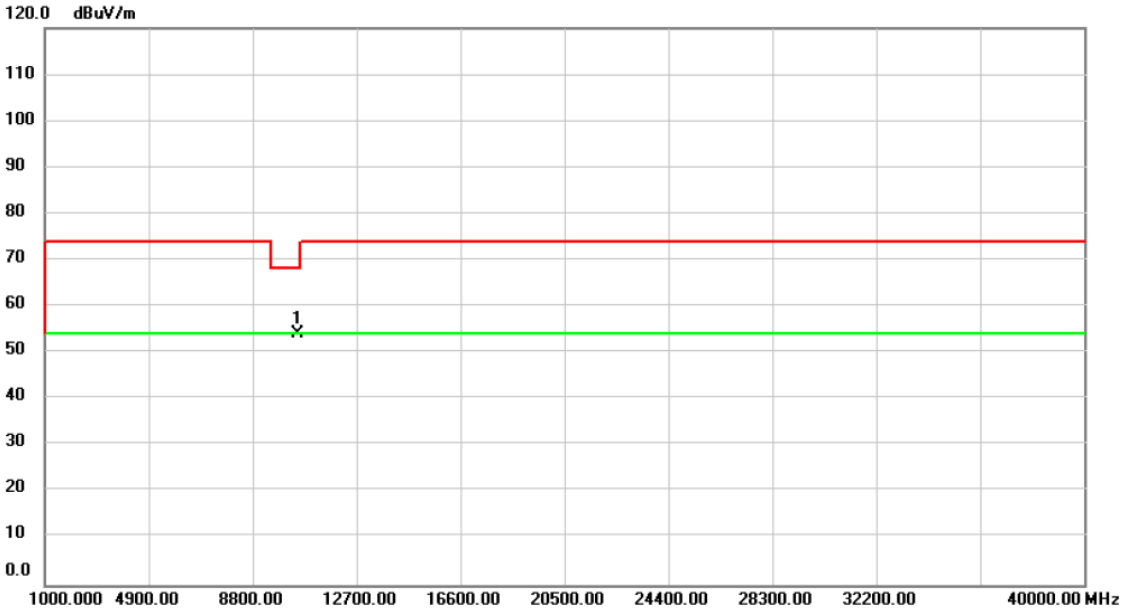
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	52.36	1.62	53.98	68.20	-14.22	peak	

Test MODE	UNII-1_ TX A MODE 5240MHz	Polarization	Vertical



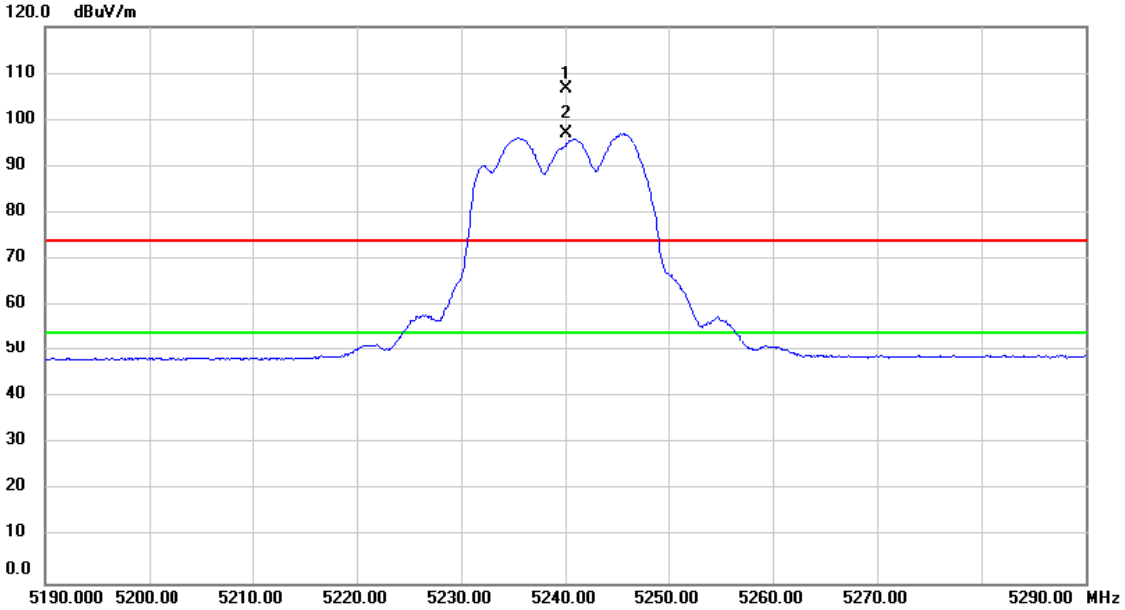
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	78.95	37.40	116.35	74.00	42.35	peak	No Limit
2	*	5240.000	69.43	37.40	106.83	54.00	52.83	AVG	No Limit

Test MODE	UNII-1_ TX A MODE 5240MHz	Polarization	Vertical



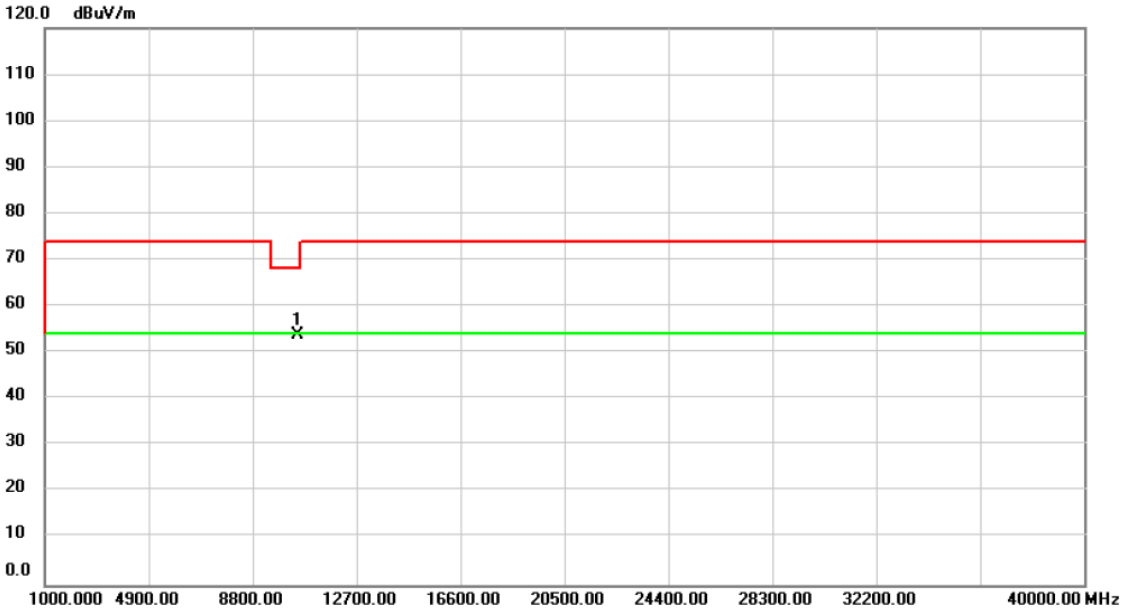
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	52.43	1.69	54.12	68.20	-14.08	peak	

Test MODE	UNII-1_ TX A MODE 5240MHz	Polarization	Horizontal



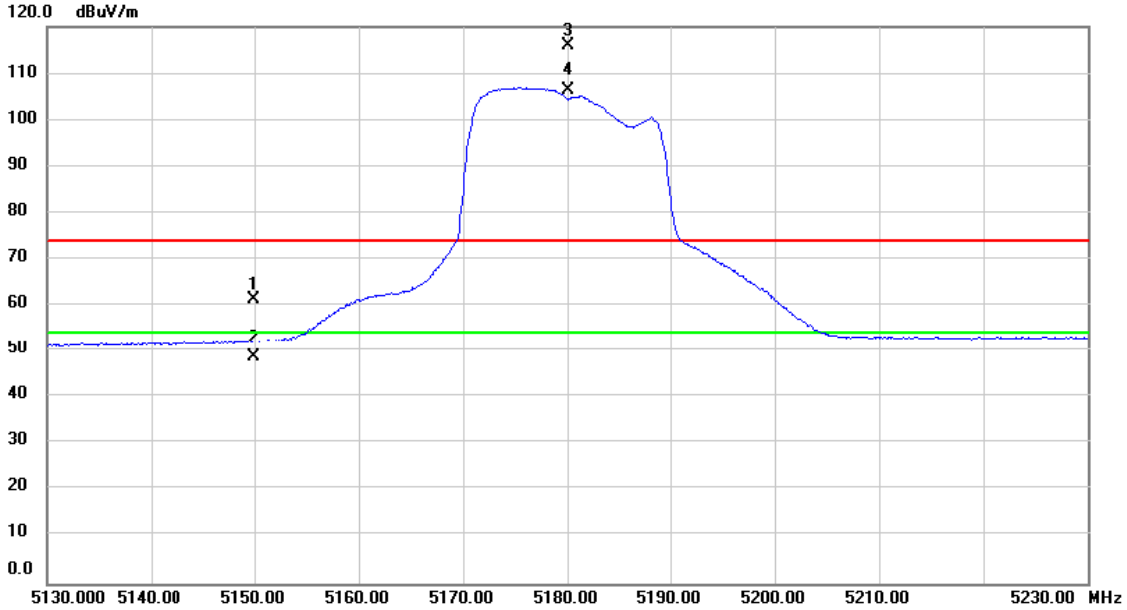
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	69.16	37.40	106.56	74.00	32.56	peak	No Limit
2	*	5240.000	59.50	37.40	96.90	54.00	42.90	AVG	No Limit

Test MODE	UNII-1_ TX A MODE 5240MHz	Polarization	Horizontal



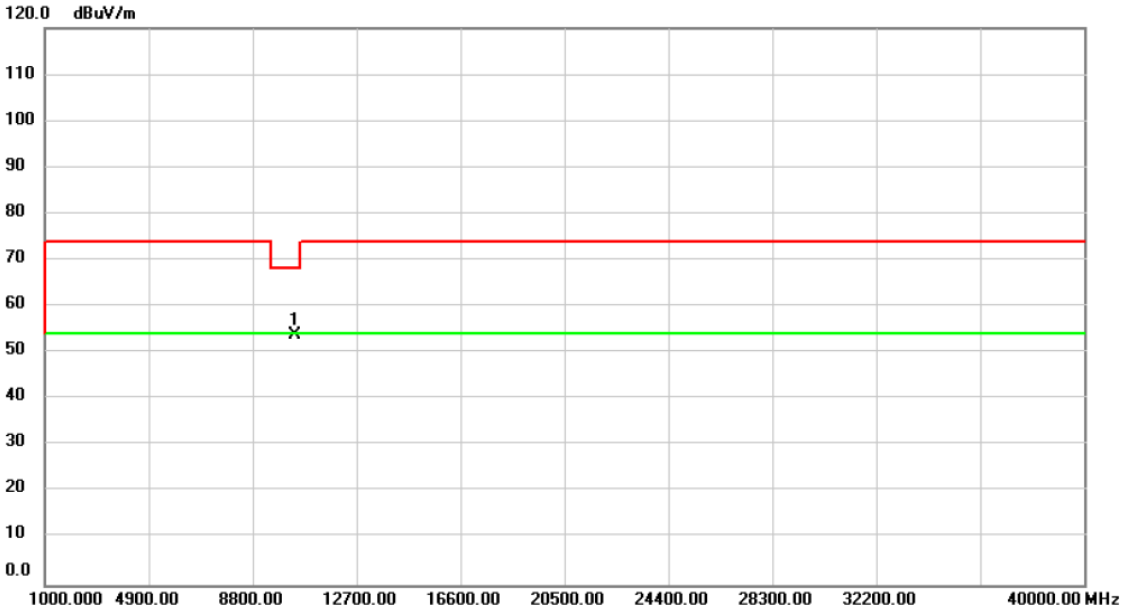
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	52.31	1.69	54.00	68.20	-14.20	peak	

Test MODE	UNII-1_ TX N (HT20) MODE 5180MHz	Polarization	Vertical



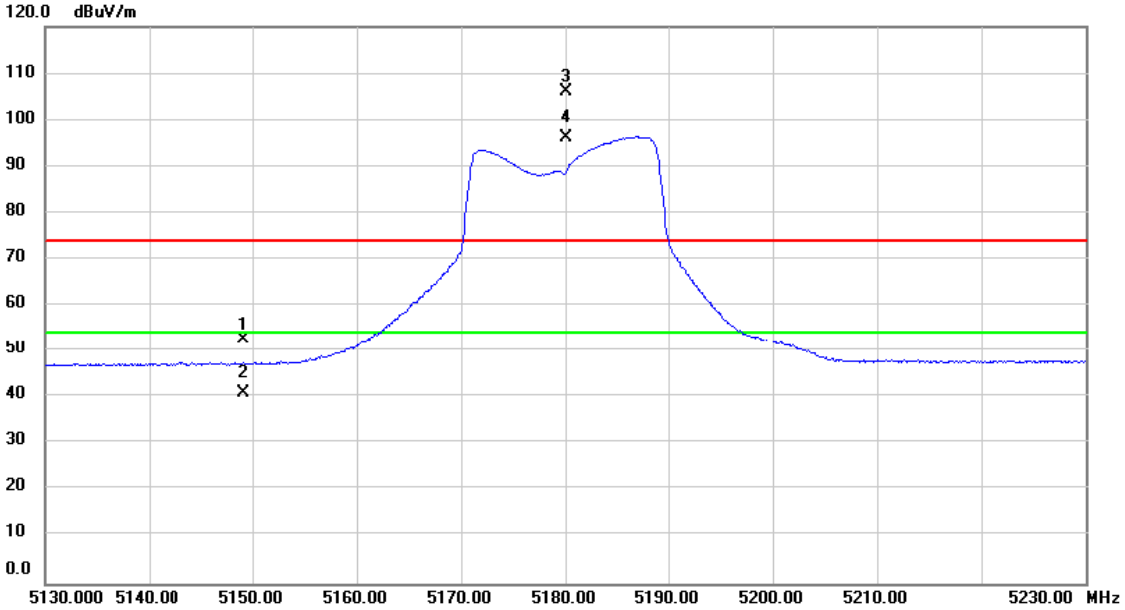
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.960	23.90	37.30	61.20	74.00	-12.80	peak	
2		5149.960	11.39	37.30	48.69	54.00	-5.31	AVG	
3	X	5180.000	78.54	37.34	115.88	74.00	41.88	peak	No Limit
4	*	5180.000	69.15	37.34	106.49	54.00	52.49	AVG	No Limit

Test MODE	UNII-1_ TX N (HT20) MODE 5180MHz	Polarization	Vertical



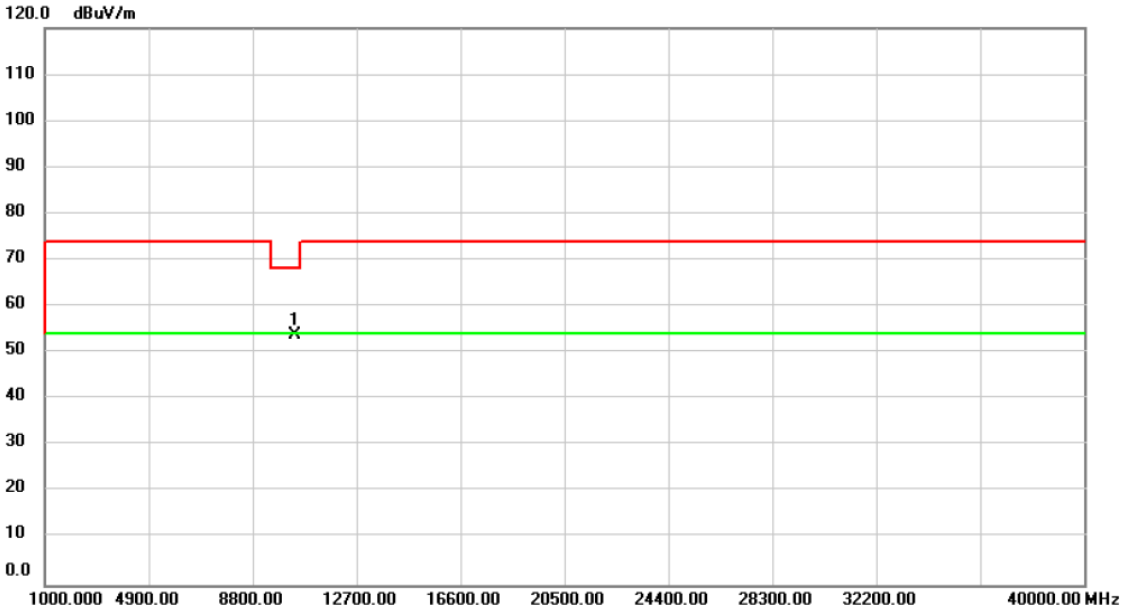
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	52.26	1.57	53.83	68.20	-14.37	peak	

Test MODE	UNII-1_ TX N (HT20) MODE 5180MHz	Polarization	Horizontal



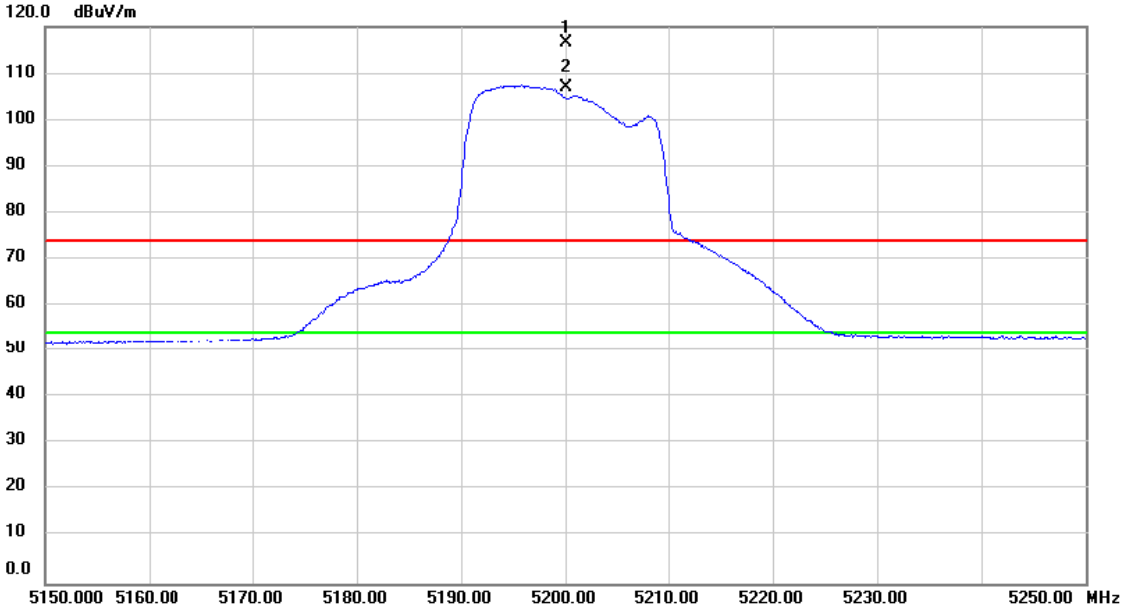
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.100	15.29	37.30	52.59	74.00	-21.41	peak	
2		5149.100	3.62	37.30	40.92	54.00	-13.08	AVG	
3	X	5180.000	68.71	37.34	106.05	74.00	32.05	peak	No Limit
4	*	5180.000	58.95	37.34	96.29	54.00	42.29	AVG	No Limit

Test MODE	UNII-1_ TX N (HT20) MODE 5180MHz	Polarization	Horizontal



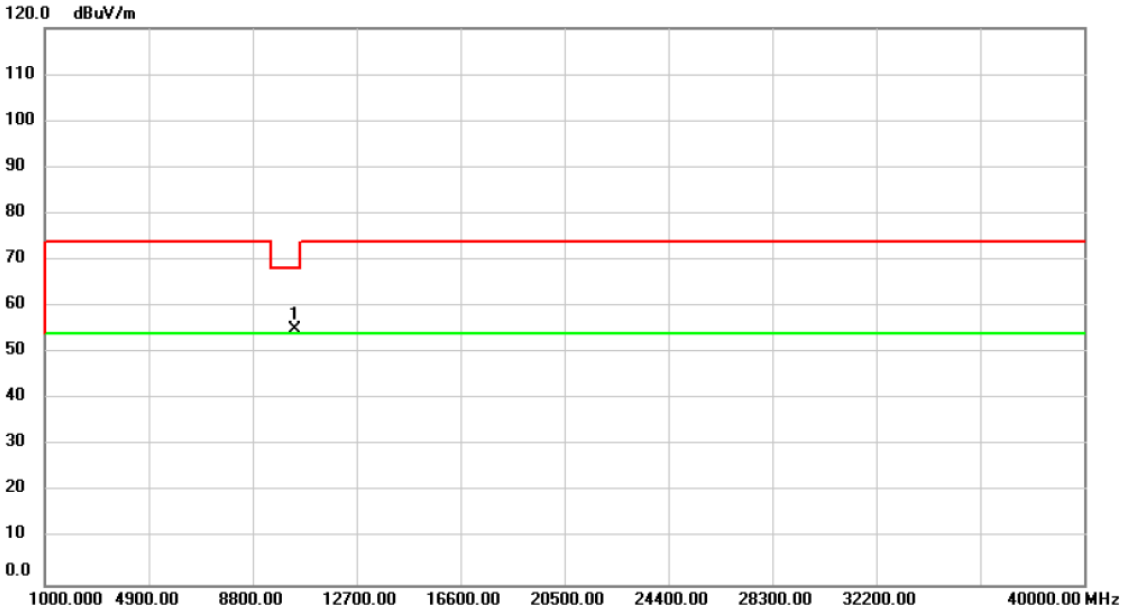
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.00	52.19	1.57	53.76	68.20	-14.44	peak	

Test MODE	UNII-1_ TX N (HT20) MODE 5200MHz	Polarization	Vertical



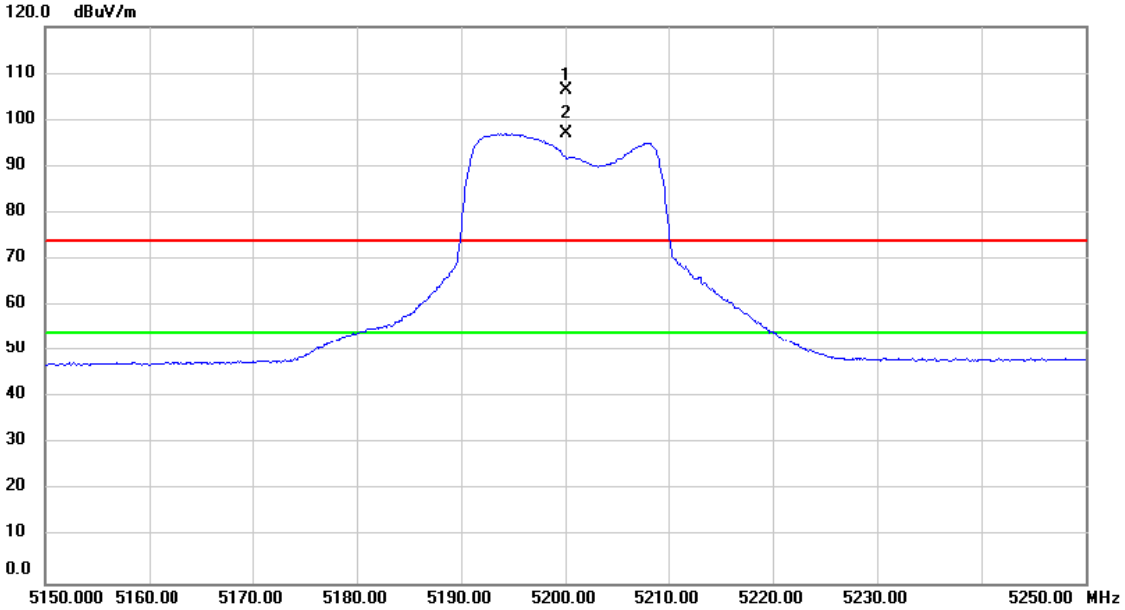
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	79.04	37.36	116.40	74.00	42.40	peak	No Limit
2	*	5200.000	69.52	37.36	106.88	54.00	52.88	AVG	No Limit

Test MODE	UNII-1_ TX N (HT20) MODE 5200MHz	Polarization	Vertical



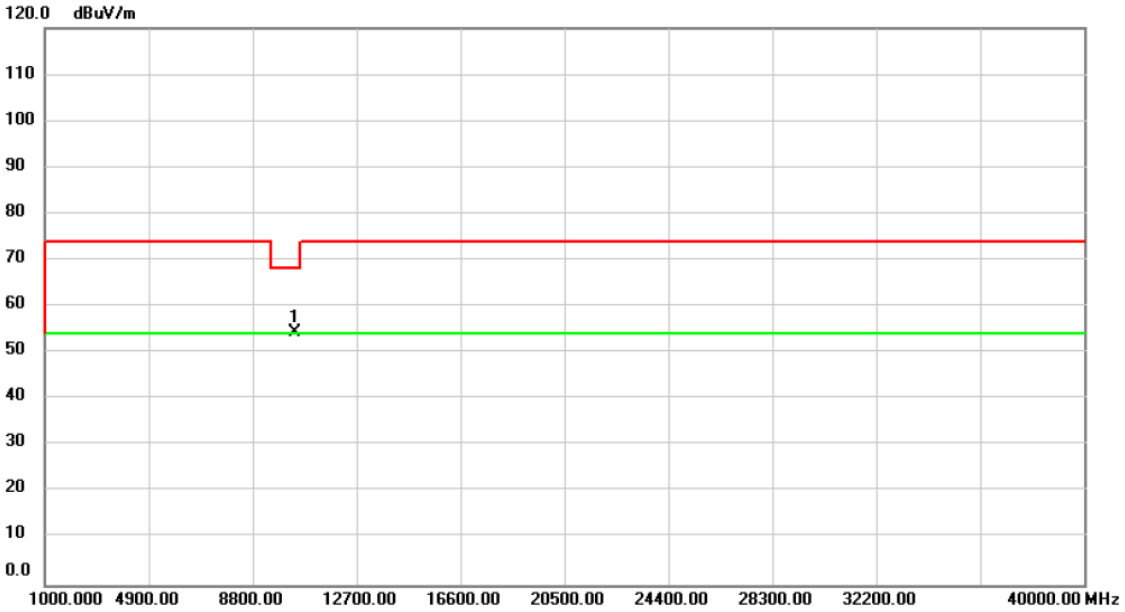
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	53.56	1.62	55.18	68.20	-13.02	peak	

Test MODE	UNII-1_ TX N (HT20) MODE 5200MHz	Polarization	Horizontal



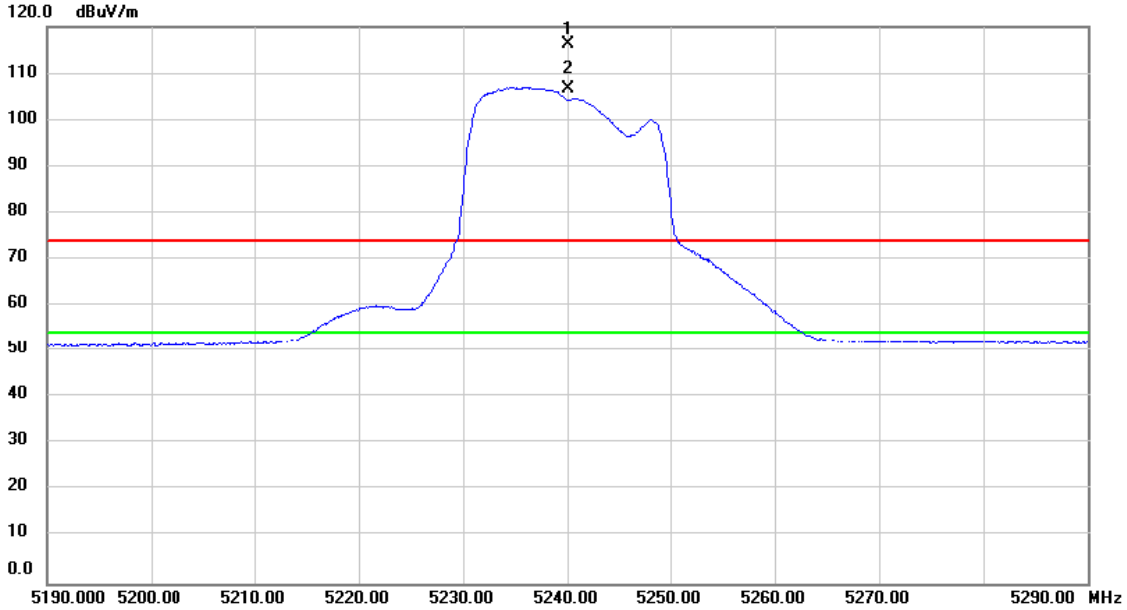
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5200.000	69.03	37.36	106.39	74.00	32.39	peak	No Limit
2	*	5200.000	59.54	37.36	96.90	54.00	42.90	AVG	No Limit

Test MODE	UNII-1_ TX N (HT20) MODE 5200MHz	Polarization	Horizontal



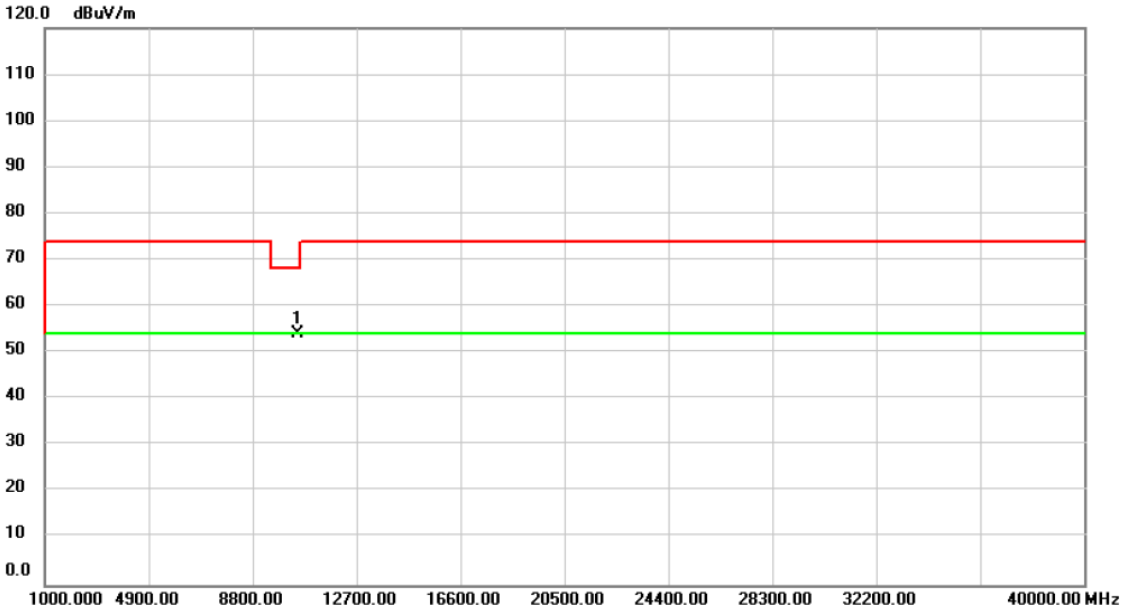
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10400.00	52.90	1.62	54.52	68.20	-13.68	peak	

Test MODE	UNII-1_ TX N (HT20) MODE 5240MHz	Polarization	Vertical



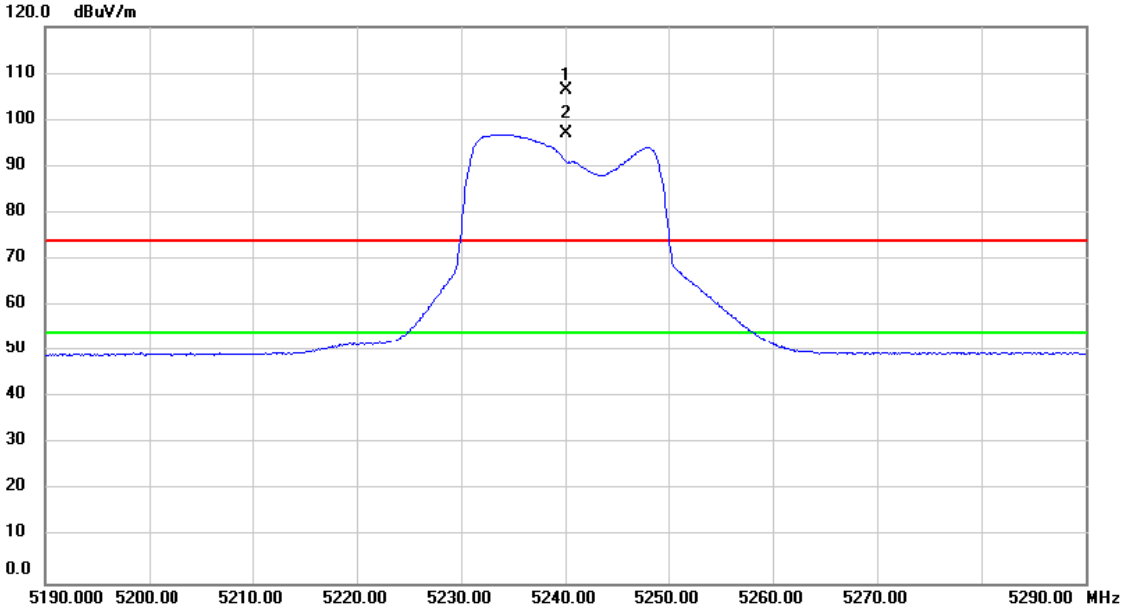
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	78.80	37.40	116.20	74.00	42.20	peak	No Limit
2	*	5240.000	69.33	37.40	106.73	54.00	52.73	AVG	No Limit

Test MODE	UNII-1_ TX N (HT20) MODE 5240MHz	Polarization	Vertical



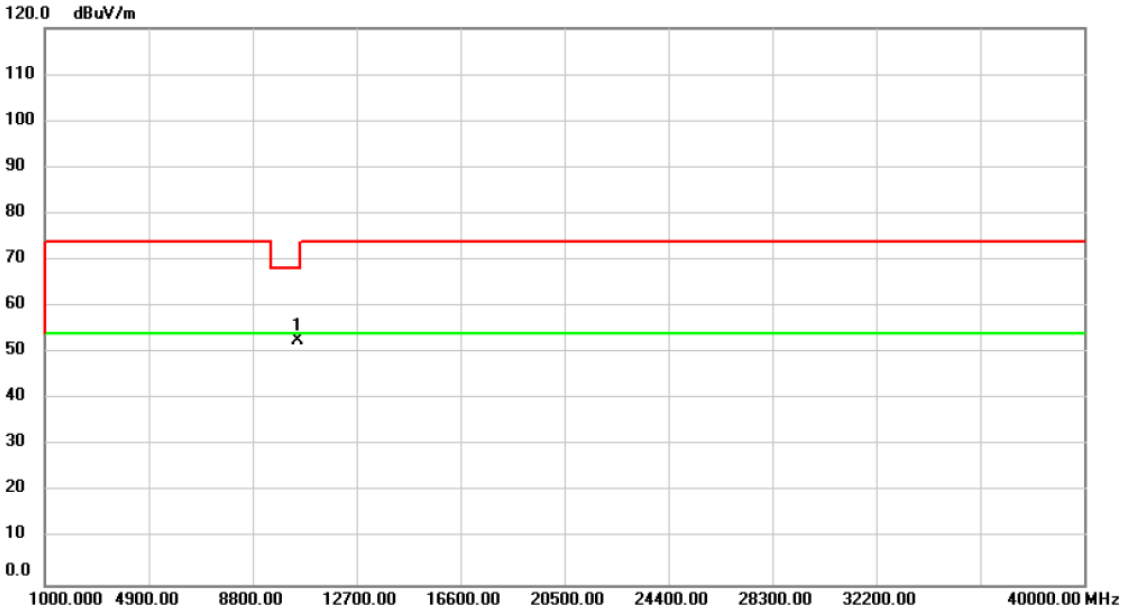
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	52.43	1.69	54.12	68.20	-14.08	peak	

Test MODE	UNII-1_ TX N (HT20) MODE 5240MHz	Polarization	Horizontal



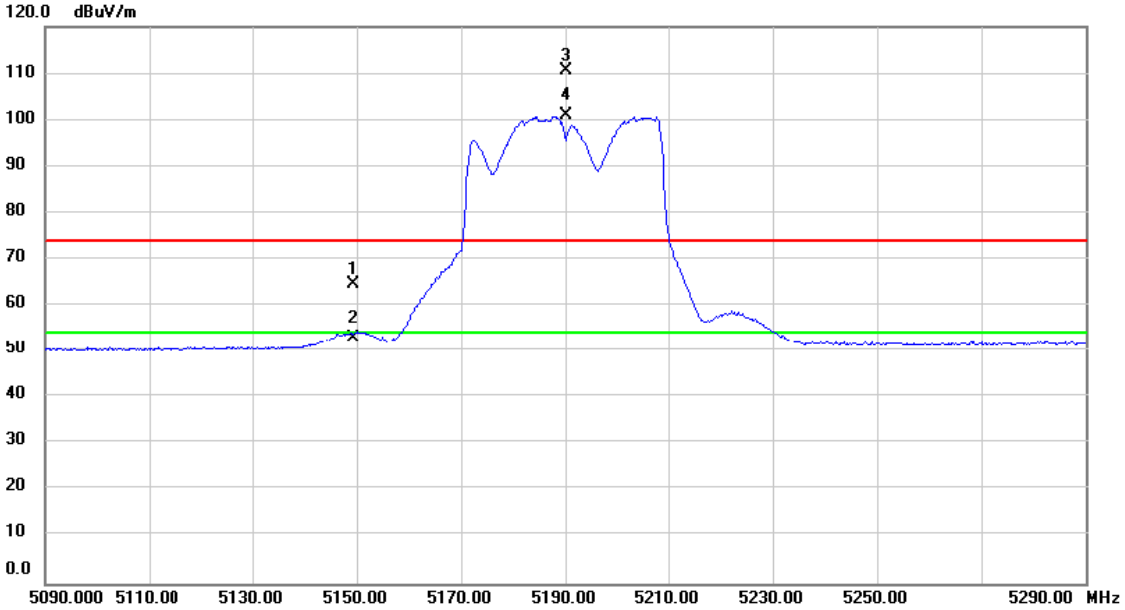
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5240.000	68.97	37.40	106.37	74.00	32.37	peak	No Limit
2	*	5240.000	59.53	37.40	96.93	54.00	42.93	AVG	No Limit

Test MODE	UNII-1_ TX N (HT20) MODE 5240MHz	Polarization	Horizontal



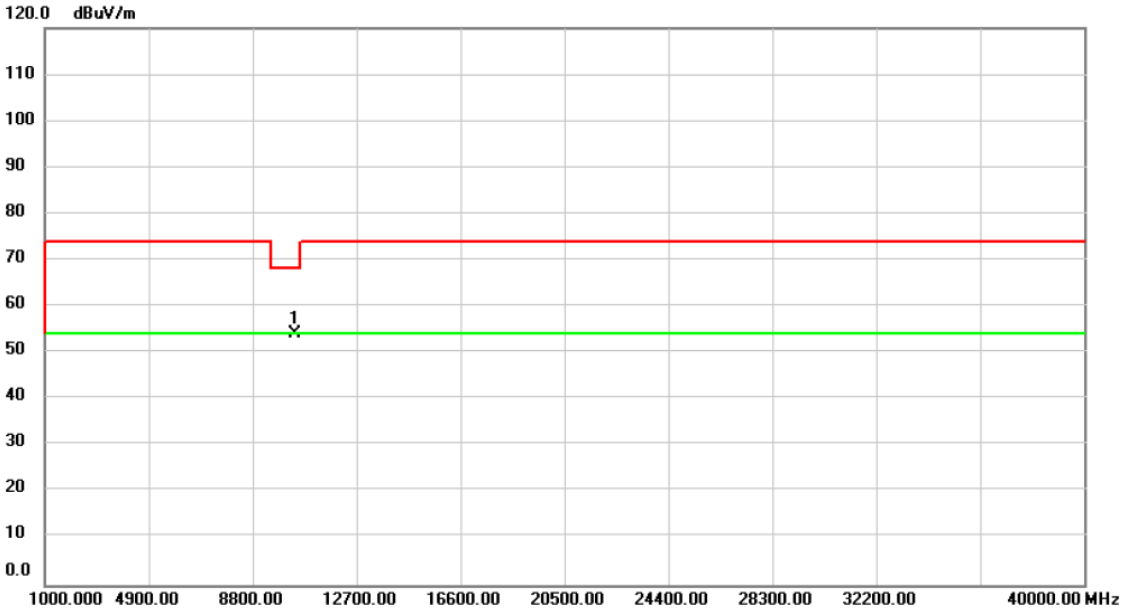
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10480.00	51.01	1.69	52.70	68.20	-15.50	peak	

Test MODE	UNII-1_ TX N (HT40) MODE 5190MHz	Polarization	Vertical



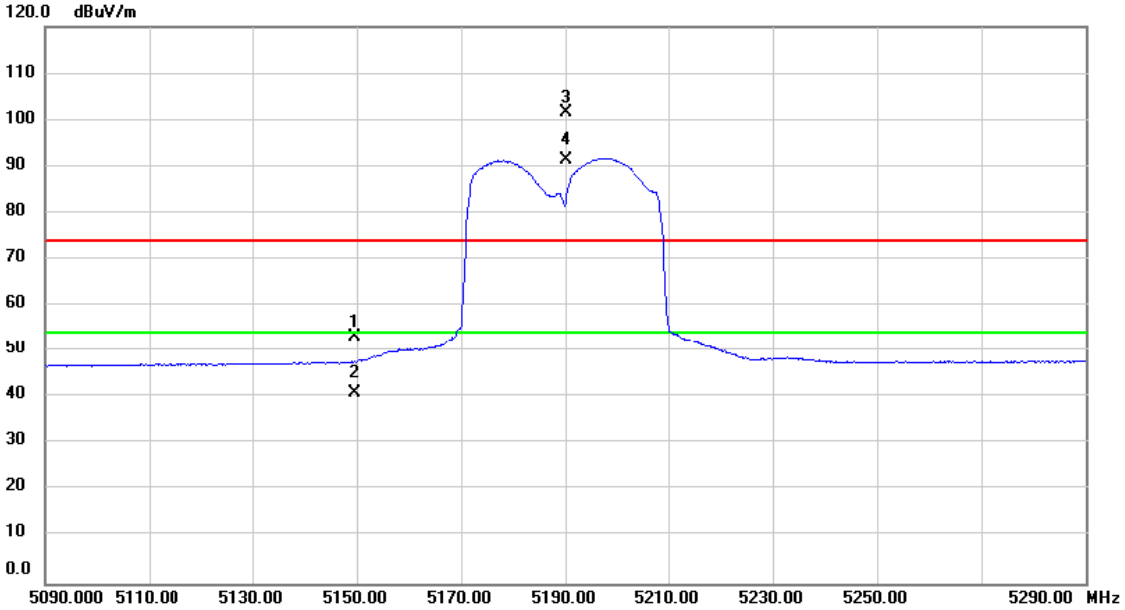
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.400	27.35	37.30	64.65	74.00	-9.35	peak	
2		5149.400	15.61	37.30	52.91	54.00	-1.09	AVG	
3	X	5190.000	73.24	37.34	110.58	74.00	36.58	peak	No Limit
4	*	5190.000	63.69	37.34	101.03	54.00	47.03	AVG	No Limit

Test MODE	UNII-1_ TX N (HT40) MODE 5190MHz	Polarization	Vertical



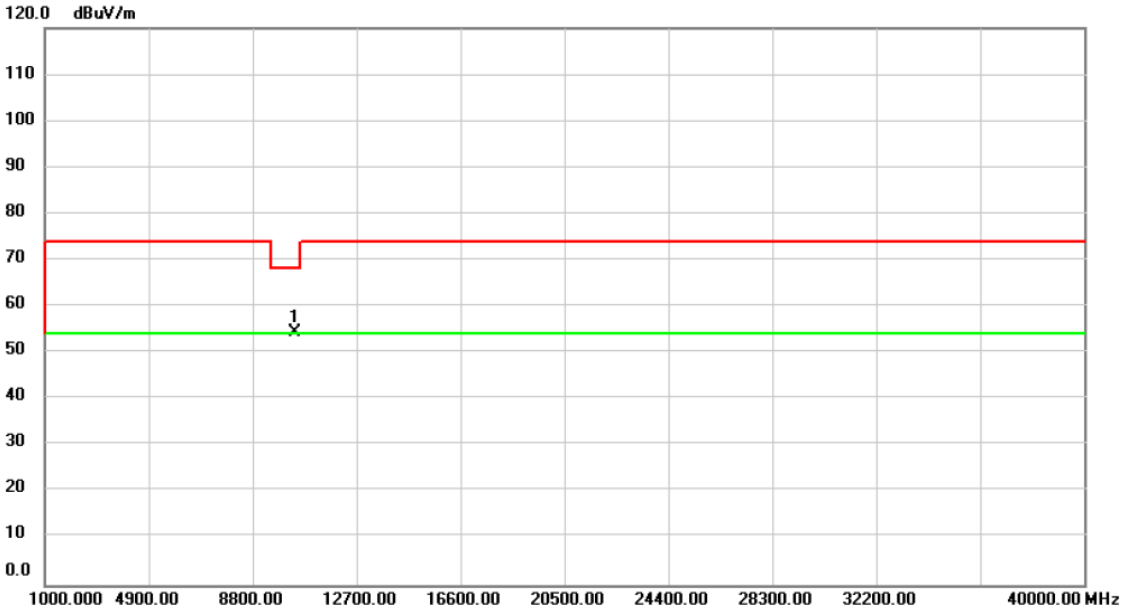
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10380.00	52.43	1.59	54.02	68.20	-14.18	peak	

Test MODE	UNII-1_ TX N (HT40) MODE 5190MHz	Polarization	Horizontal



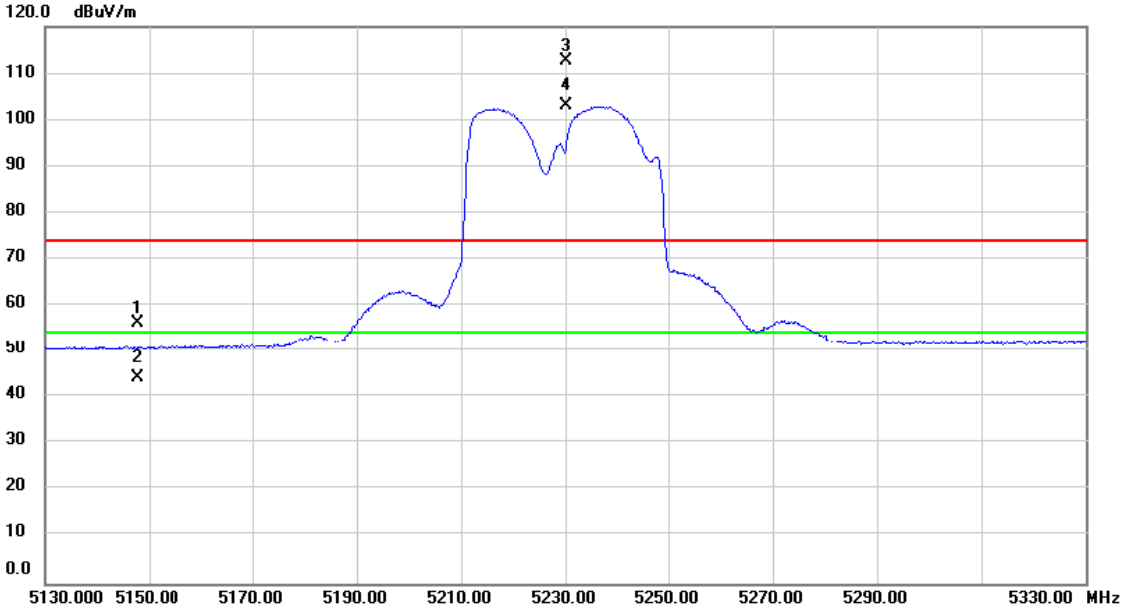
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.700	16.06	37.30	53.36	74.00	-20.64	peak	
2		5149.700	3.77	37.30	41.07	54.00	-12.93	AVG	
3	X	5190.000	64.09	37.34	101.43	74.00	27.43	peak	No Limit
4	*	5190.000	54.12	37.34	91.46	54.00	37.46	AVG	No Limit

Test MODE	UNII-1_ TX N (HT40) MODE 5190MHz	Polarization	Horizontal



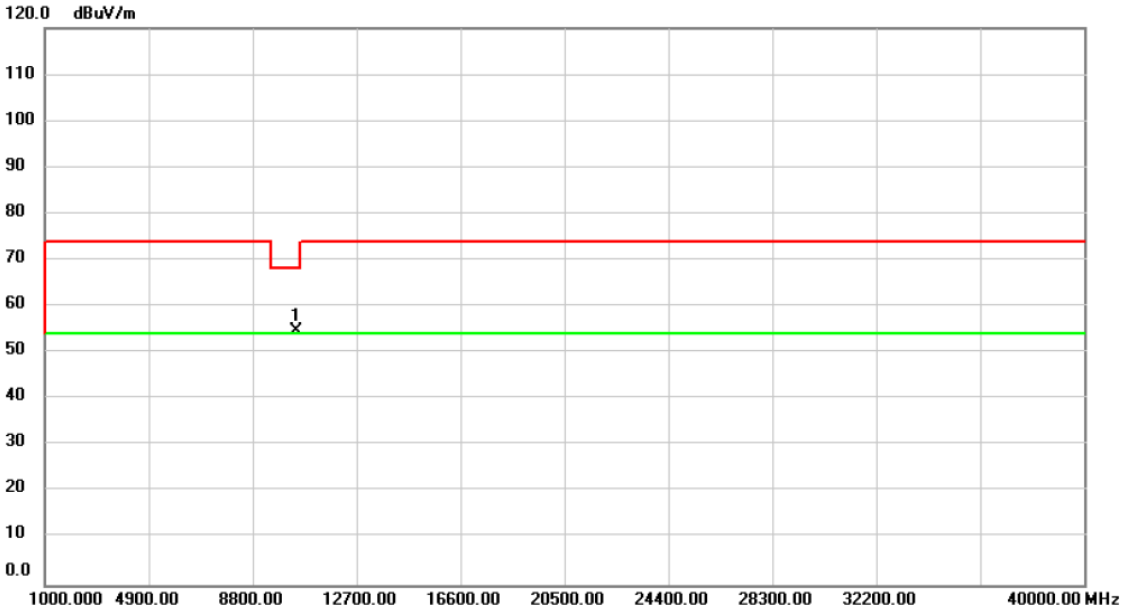
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10380.00	52.86	1.59	54.45	68.20	-13.75	peak	

Test MODE	UNII-1_ TX N (HT40) MODE 5230MHz	Polarization	Vertical



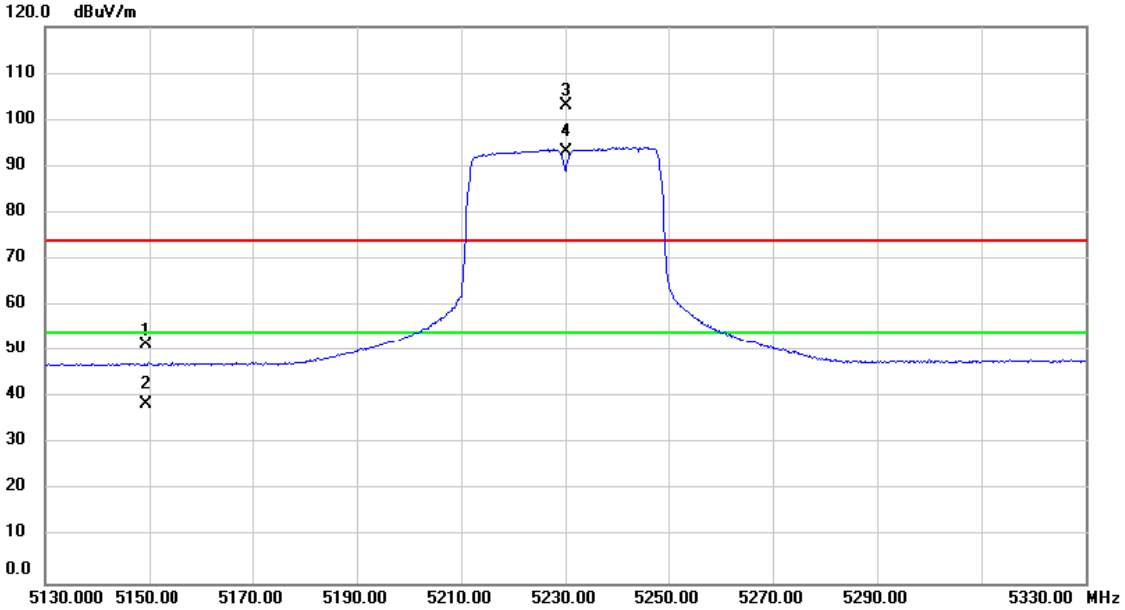
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5147.820	19.02	37.30	56.32	74.00	-17.68	peak	
2		5147.820	6.92	37.30	44.22	54.00	-9.78	AVG	
3	X	5230.000	75.33	37.40	112.73	74.00	38.73	peak	No Limit
4	*	5230.000	65.58	37.40	102.98	54.00	48.98	AVG	No Limit

Test MODE	UNII-1_ TX N (HT40) MODE 5230MHz	Polarization	Vertical



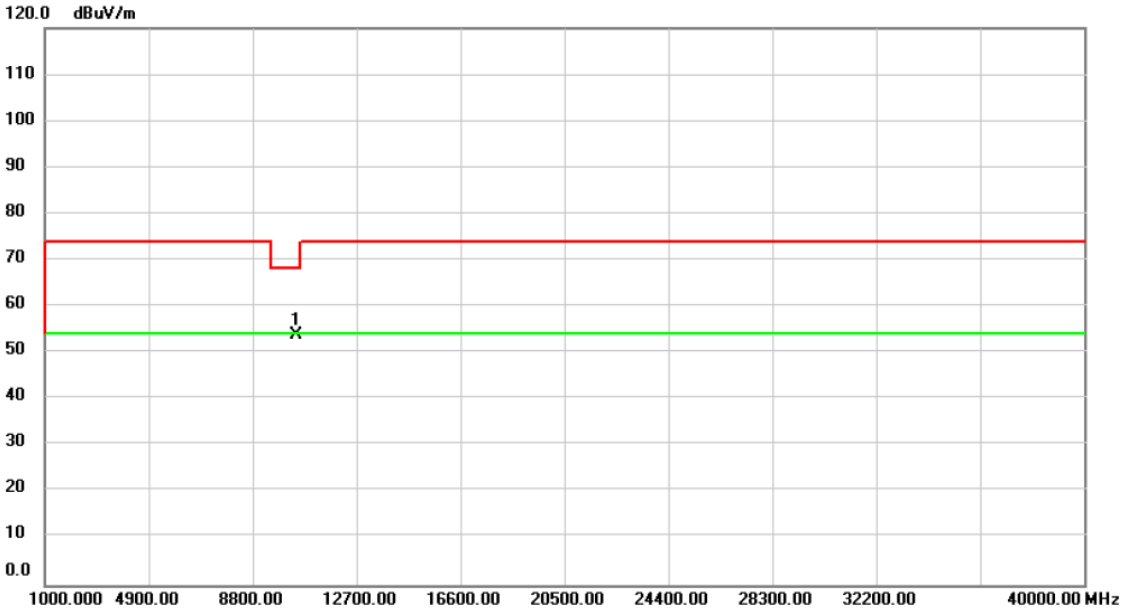
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10460.00	52.99	1.68	54.67	68.20	-13.53	peak	

Test MODE	UNII-1_ TX N (HT40) MODE 5230MHz	Polarization	Horizontal



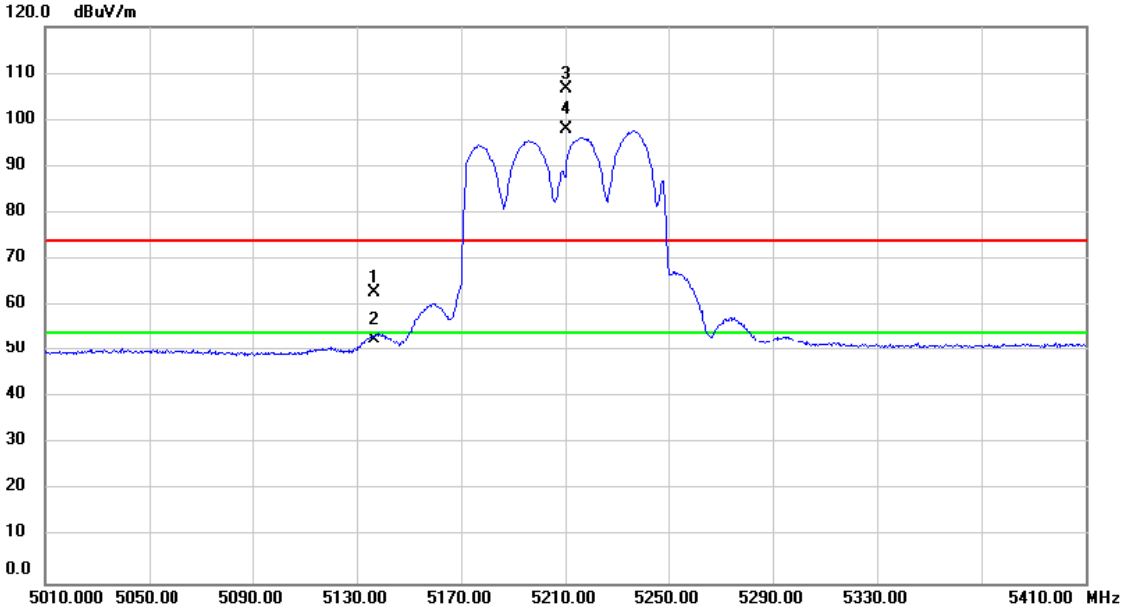
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5149.320	14.05	37.30	51.35	74.00	-22.65	peak	
2		5149.320	1.17	37.30	38.47	54.00	-15.53	AVG	
3	X	5230.000	65.79	37.40	103.19	74.00	29.19	peak	No Limit
4	*	5230.000	55.78	37.40	93.18	54.00	39.18	AVG	No Limit

Test MODE	UNII-1_ TX N (HT40) MODE 5230MHz	Polarization	Horizontal



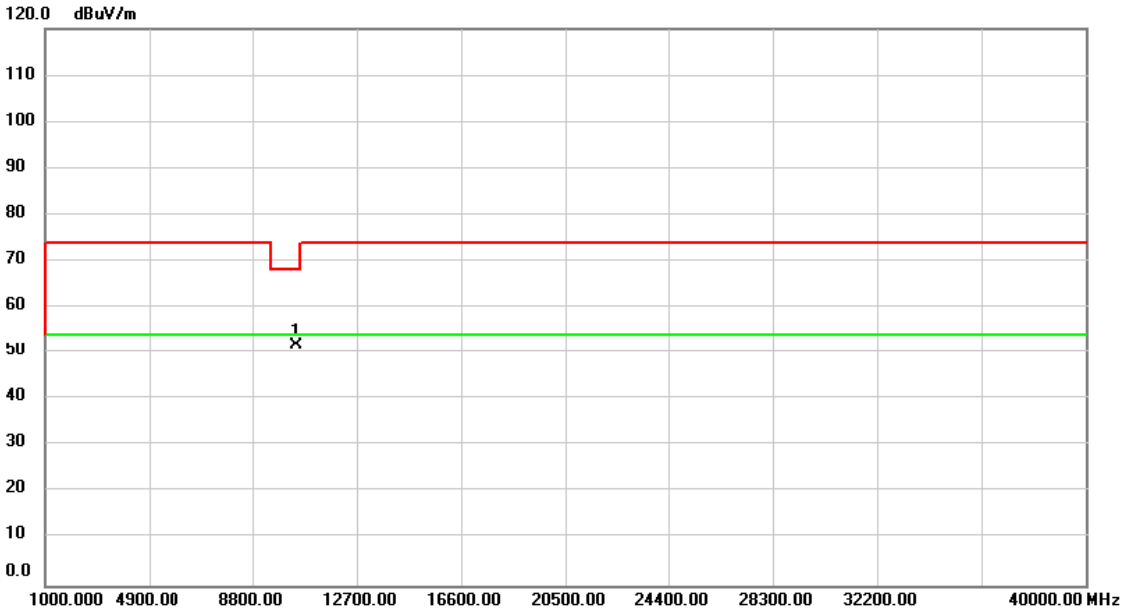
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10460.00	52.32	1.68	54.00	68.20	-14.20	peak	

Test MODE	UNII-1_ TX AC (VHT80) MODE 5210MHz	Polarization	Vertical



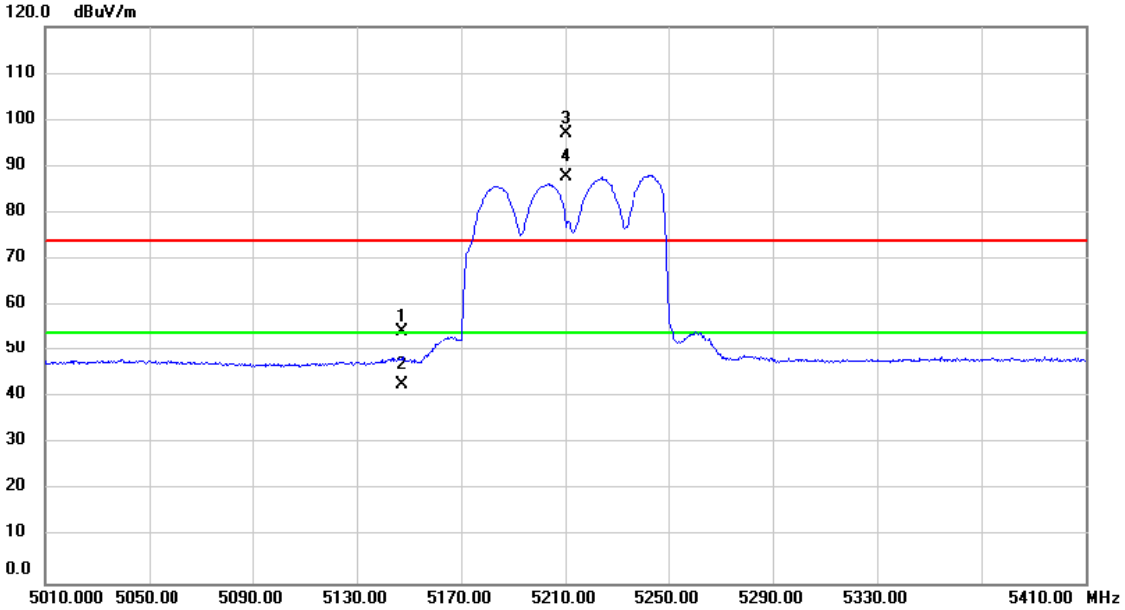
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5136.840	25.70	37.29	62.99	74.00	-11.01	peak	
2		5136.840	15.39	37.29	52.68	54.00	-1.32	AVG	
3	X	5210.000	69.24	37.38	106.62	74.00	32.62	peak	No Limit
4	*	5210.000	60.43	37.38	97.81	54.00	43.81	AVG	No Limit

Test MODE	UNII-1_ TX AC (VHT80) MODE 5210MHz	Polarization	Vertical



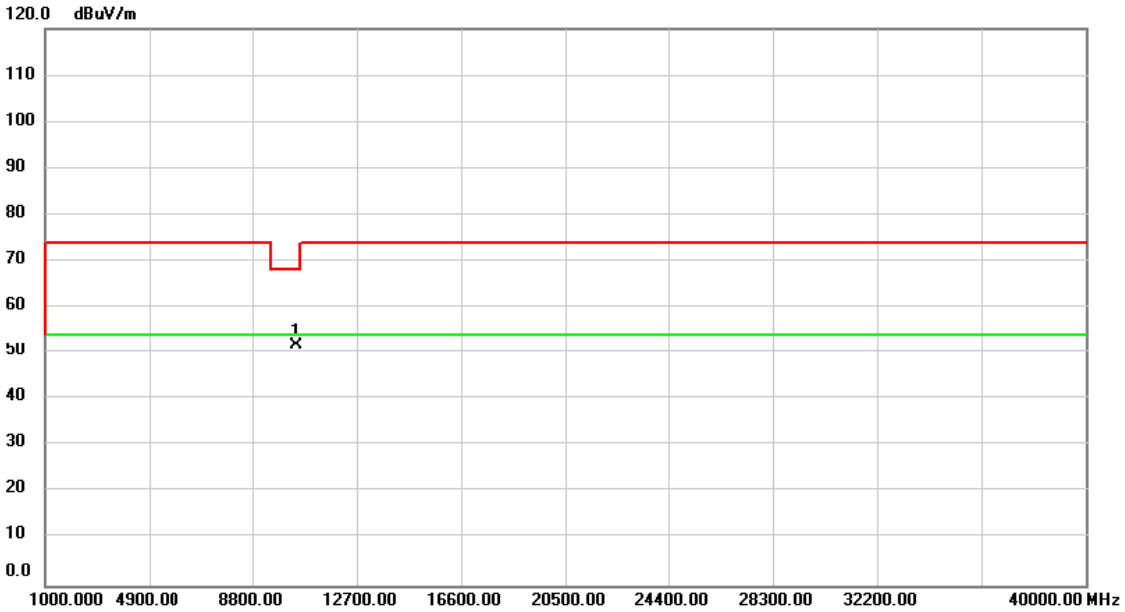
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10420.00	50.04	1.64	51.68	68.20	-16.52	peak	

Test MODE	UNII-1_ TX AC (VHT80) MODE 5210MHz	Polarization	Horizontal



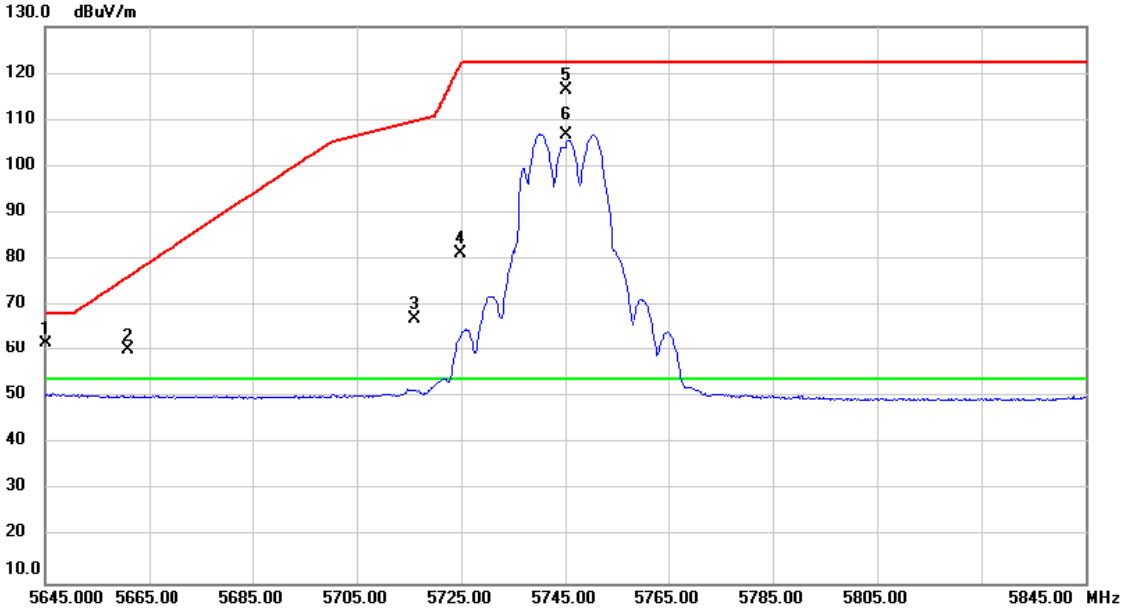
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5147.150	17.28	37.30	54.58	74.00	-19.42	peak	
2		5147.150	5.55	37.30	42.85	54.00	-11.15	AVG	
3	X	5210.000	59.57	37.38	96.95	74.00	22.95	peak	No Limit
4	*	5210.000	50.50	37.38	87.88	54.00	33.88	AVG	No Limit

Test MODE	UNII-1_ TX AC (VHT80) MODE 5210MHz	Polarization	Horizontal



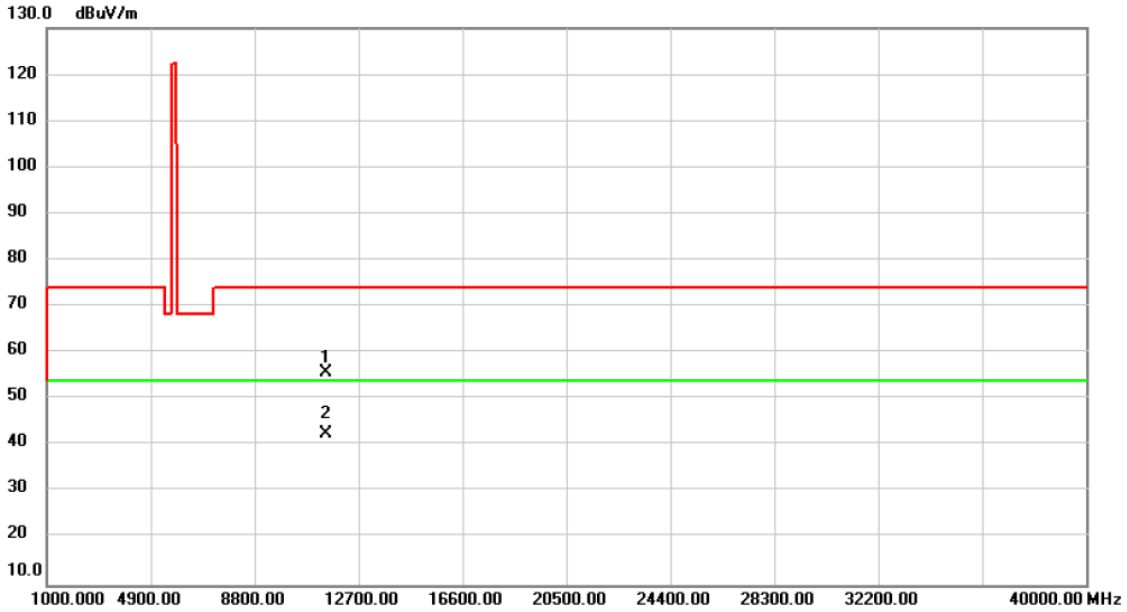
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10420.00	50.04	1.64	51.68	68.20	-16.52	peak	

Test MODE	UNII-3_ TX A MODE 5745MHz	Polarization	Vertical



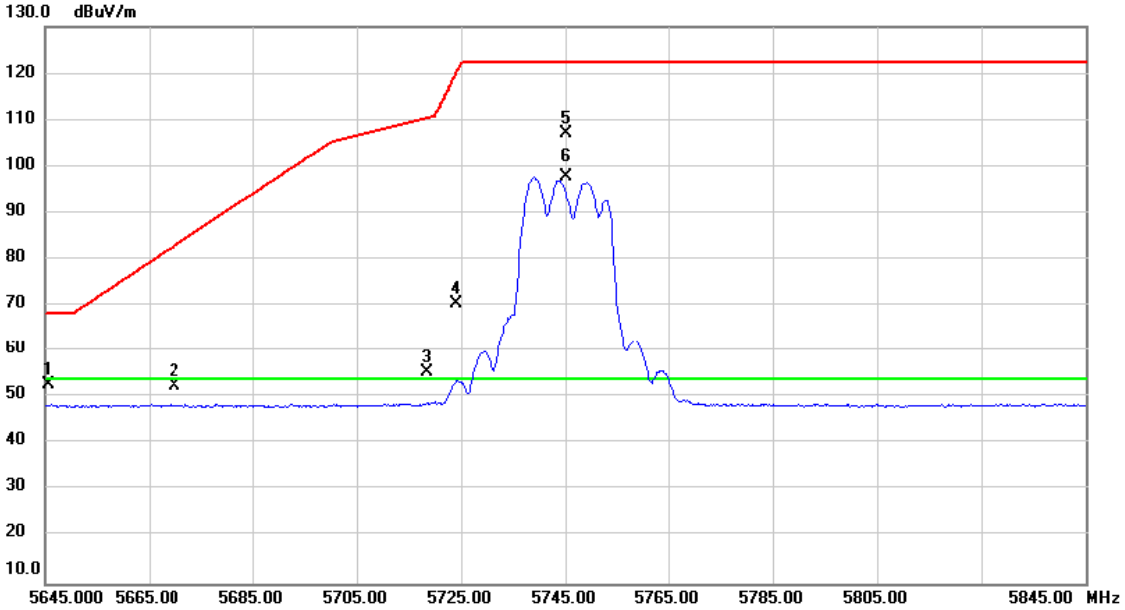
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5645.095	23.87	37.99	61.86	68.20	-6.34	peak	
2		5660.900	22.22	38.02	60.24	76.29	-16.05	peak	
3		5716.180	28.91	38.14	67.05	109.73	-42.68	peak	
4		5724.980	43.22	38.15	81.37	122.15	-40.78	peak	
5		5745.000	78.09	38.19	116.28	122.20	-5.92	peak	No Limit
6	*	5745.000	68.55	38.19	106.74	54.00	52.74	AVG	No Limit

Test MODE	UNII-3_ TX A MODE 5745MHz	Polarization	Vertical



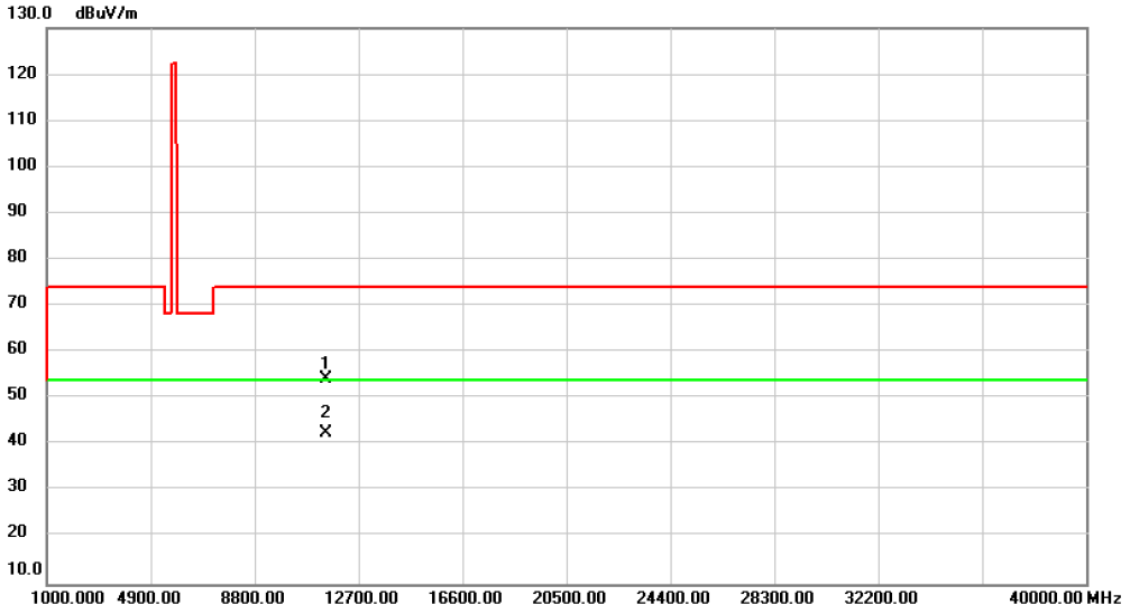
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.00	52.92	2.89	55.81	74.00	-18.19	peak	
2	*	11490.00	39.53	2.89	42.42	54.00	-11.58	AVG	

Test MODE	UNII-3_ TX A MODE 5745MHz	Polarization	Horizontal



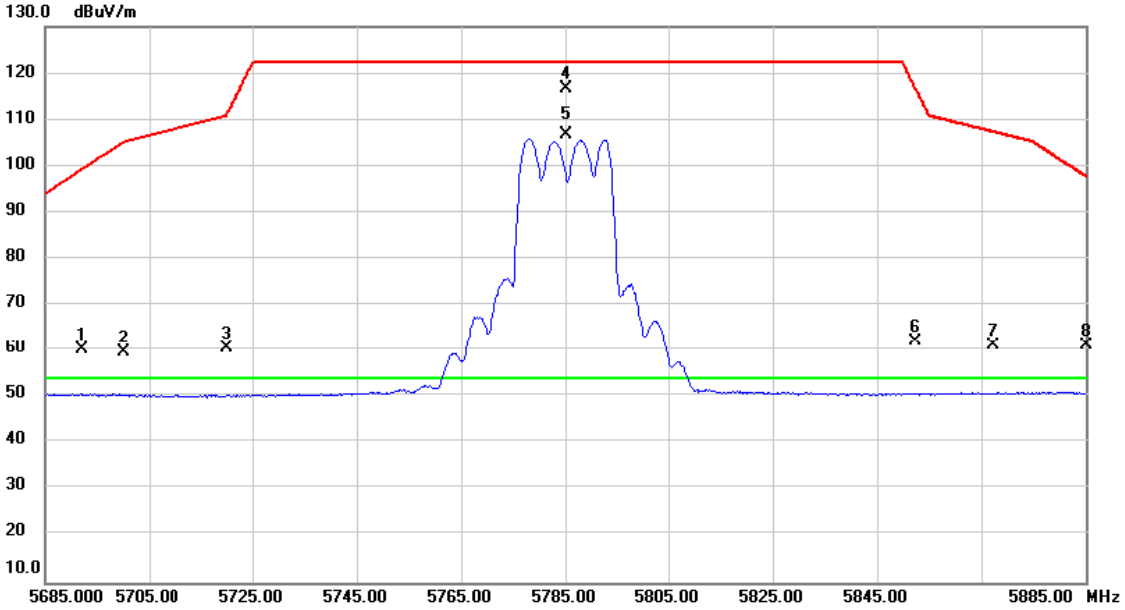
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5645.665	14.82	37.99	52.81	68.20	-15.39	peak	
2		5670.000	14.51	38.04	52.55	83.04	-30.49	peak	
3		5718.460	17.21	38.14	55.35	110.37	-55.02	peak	
4		5724.185	32.30	38.15	70.45	120.34	-49.89	peak	
5		5745.000	68.84	38.19	107.03	122.20	-15.17	peak	No Limit
6	*	5745.000	59.54	38.19	97.73	54.00	43.73	AVG	No Limit

Test MODE	UNII-3_ TX A MODE 5745MHz	Polarization	Horizontal



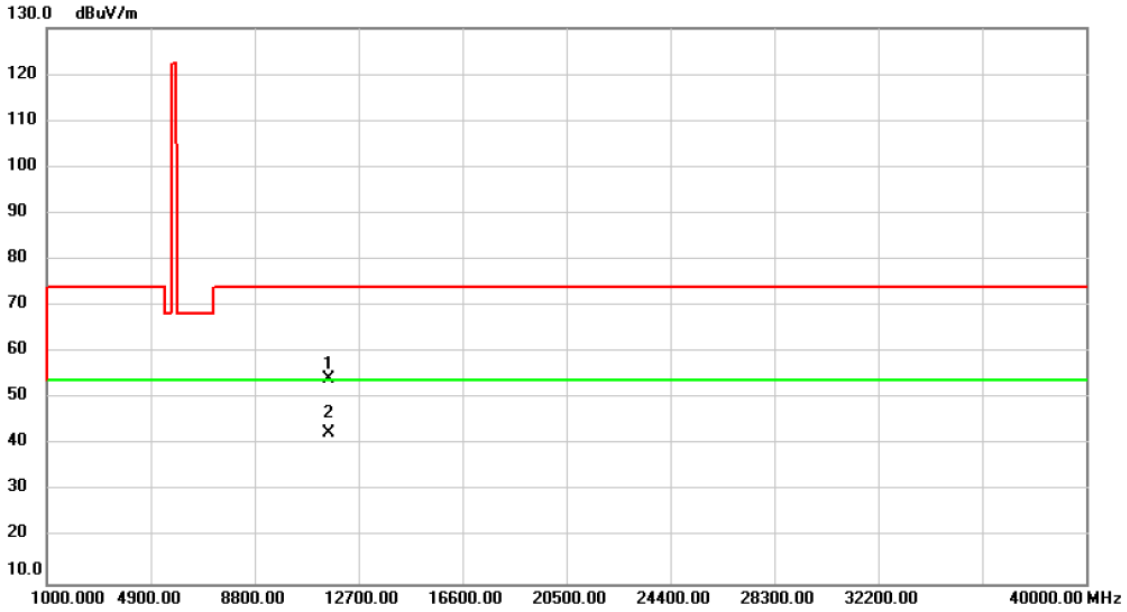
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.00	51.42	2.89	54.31	74.00	-19.69	peak	
2	*	11490.00	39.56	2.89	42.45	54.00	-11.55	AVG	

Test MODE	UNII-3_ TX A MODE 5785MHz	Polarization	Vertical



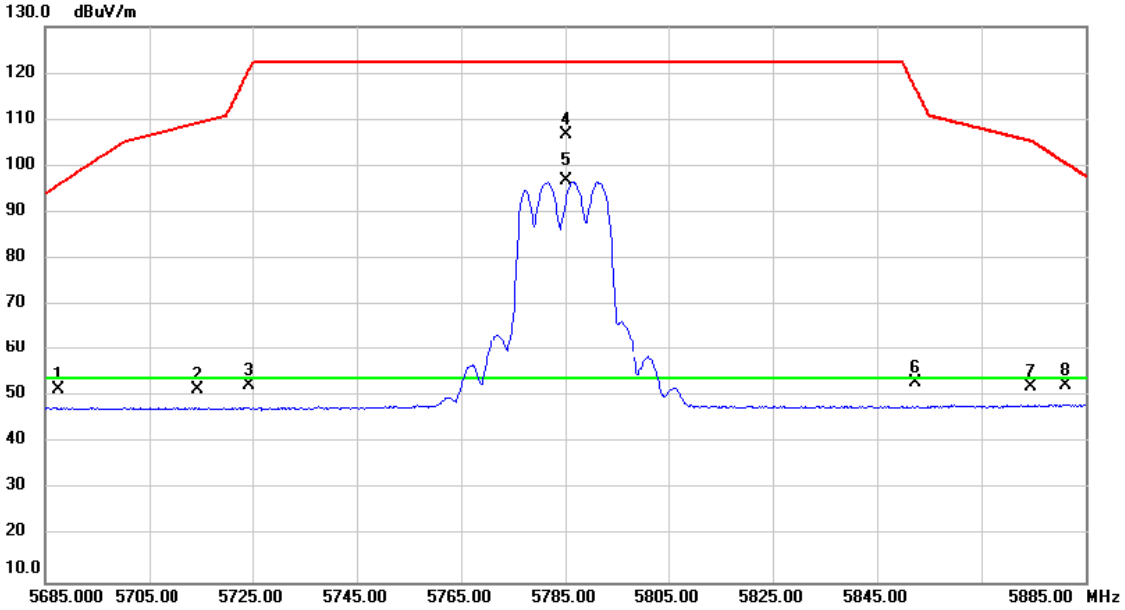
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5692.035	22.22	38.09	60.31	99.33	-39.02	peak	
2		5700.120	21.68	38.10	59.78	105.23	-45.45	peak	
3		5720.085	22.43	38.14	60.57	110.99	-50.42	peak	
4		5785.000	78.28	38.28	116.56	122.20	-5.64	peak	No Limit
5	*	5785.000	68.40	38.28	106.68	54.00	52.68	AVG	No Limit
6		5852.225	23.67	38.41	62.08	117.13	-55.05	peak	
7		5867.200	22.59	38.45	61.04	107.38	-46.34	peak	
8		5885.000	22.56	38.49	61.05	97.77	-36.72	peak	

Test MODE	UNII-3_ TX A MODE 5785MHz	Polarization	Vertical



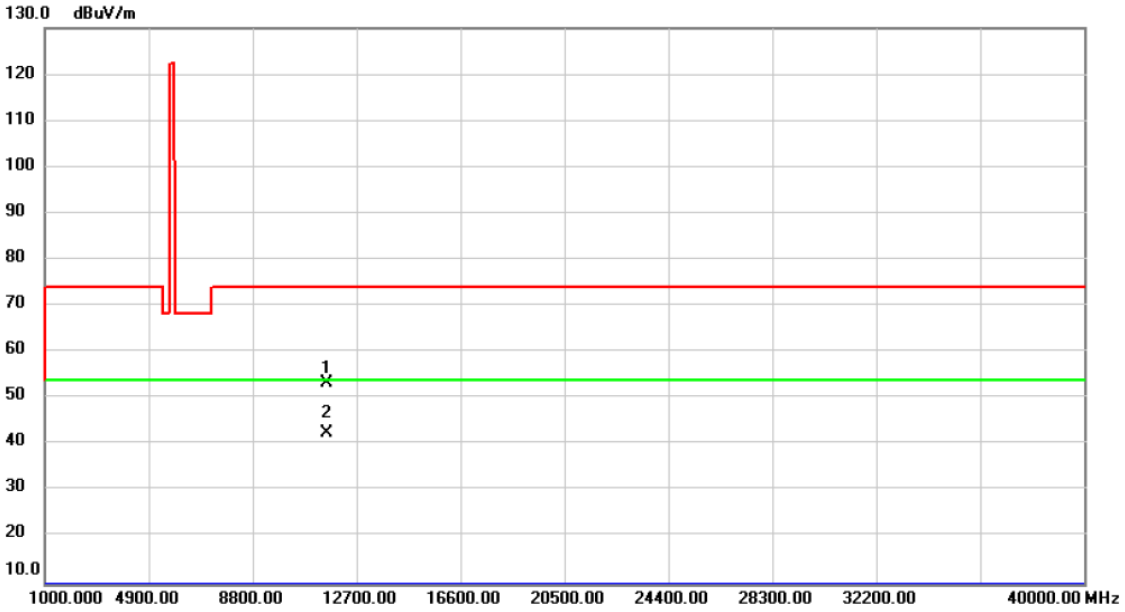
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.00	51.52	2.72	54.24	74.00	-19.76	peak	
2	*	11570.00	39.86	2.72	42.58	54.00	-11.42	AVG	

Test MODE	UNII-3_ TX A MODE 5785MHz	Polarization	Horizontal



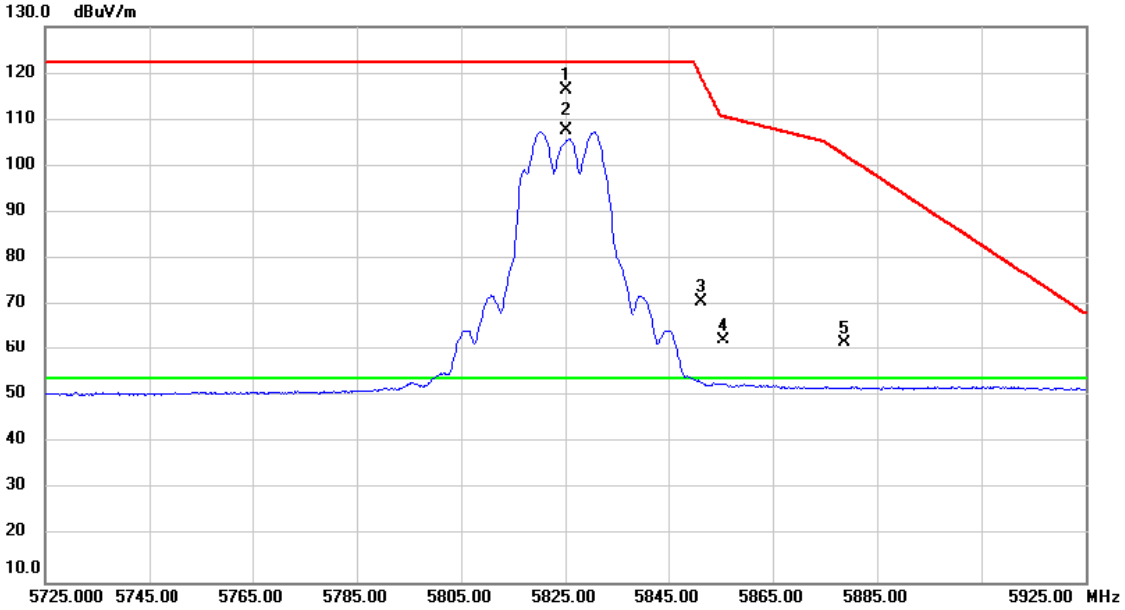
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5687.625	13.37	38.08	51.45	96.07	-44.62	peak	
2		5714.460	13.33	38.13	51.46	109.25	-57.79	peak	
3		5724.305	14.40	38.15	52.55	120.62	-68.07	peak	
4		5785.000	68.37	38.28	106.65	122.20	-15.55	peak	No Limit
5	*	5785.000	58.63	38.28	96.91	54.00	42.91	AVG	No Limit
6		5852.380	14.66	38.41	53.07	116.77	-63.70	peak	
7		5874.400	13.80	38.46	52.26	105.37	-53.11	peak	
8		5881.240	13.83	38.48	52.31	100.57	-48.26	peak	

Test MODE	UNII-3_ TX A MODE 5785MHz	Polarization	Horizontal



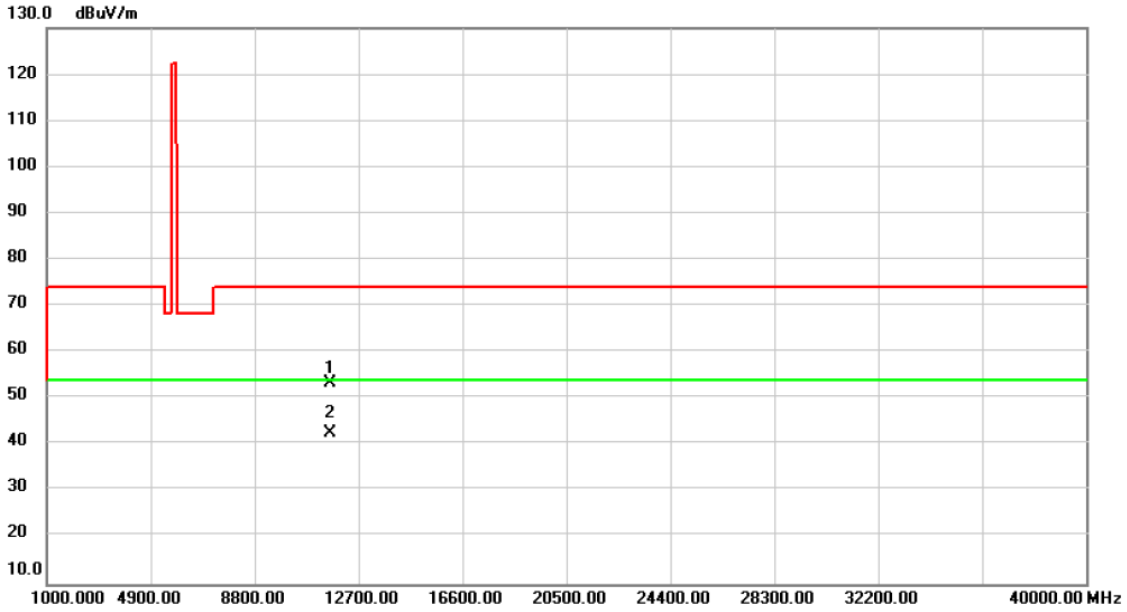
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.00	50.75	2.72	53.47	74.00	-20.53	peak	
2	*	11570.00	39.73	2.72	42.45	54.00	-11.55	AVG	

Test MODE	UNII-3_ TX A MODE 5825MHz	Polarization	Vertical



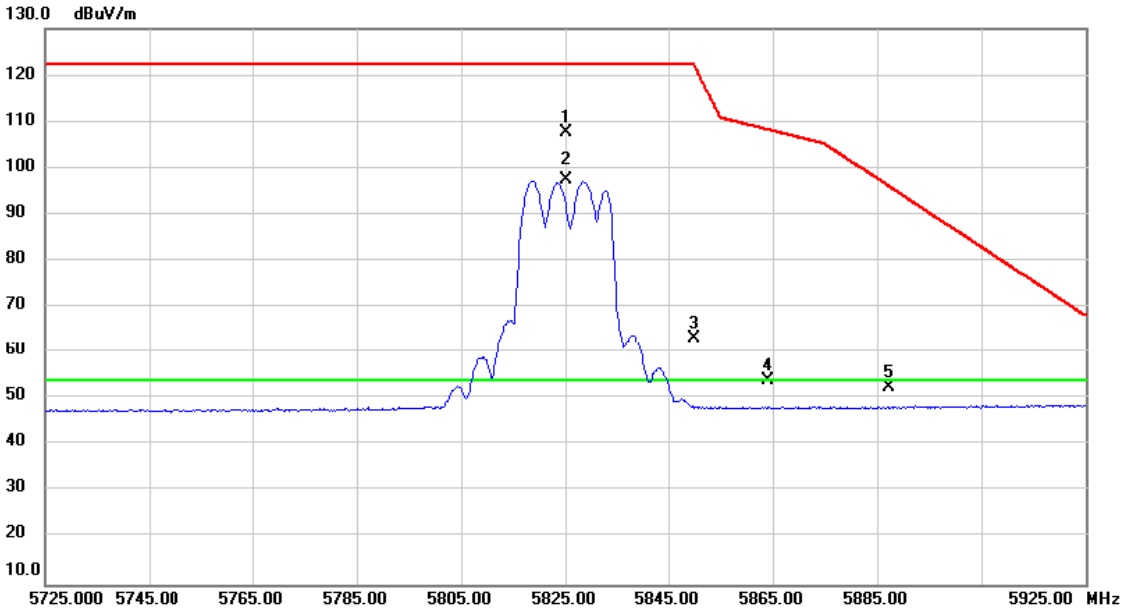
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5825.000	78.12	38.36	116.48	122.20	-5.72	peak	No Limit
2	*	5825.000	69.16	38.36	107.52	54.00	53.52	AVG	No Limit
3		5851.180	32.26	38.41	70.67	119.51	-48.84	peak	
4		5855.440	24.04	38.42	62.46	110.68	-48.22	peak	
5		5878.700	23.23	38.47	61.70	102.45	-40.75	peak	

Test MODE	UNII-3_ TX A MODE 5825MHz	Polarization	Vertical



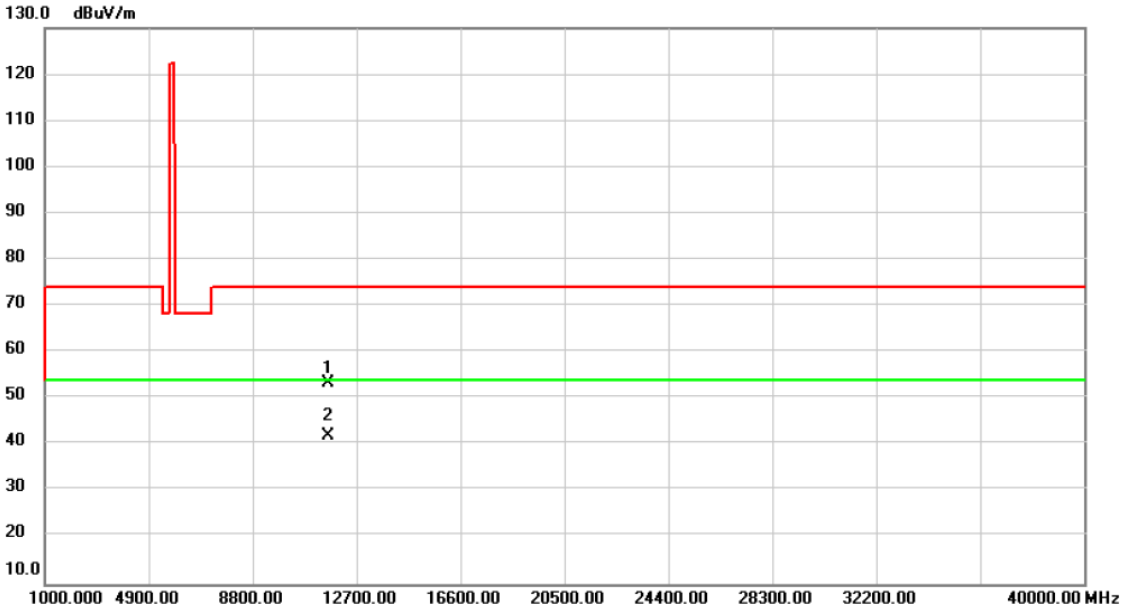
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.00	50.91	2.50	53.41	74.00	-20.59	peak	
2	*	11650.00	40.08	2.50	42.58	54.00	-11.42	AVG	

Test MODE	UNII-3_ TX A MODE 5825MHz	Polarization	Horizontal



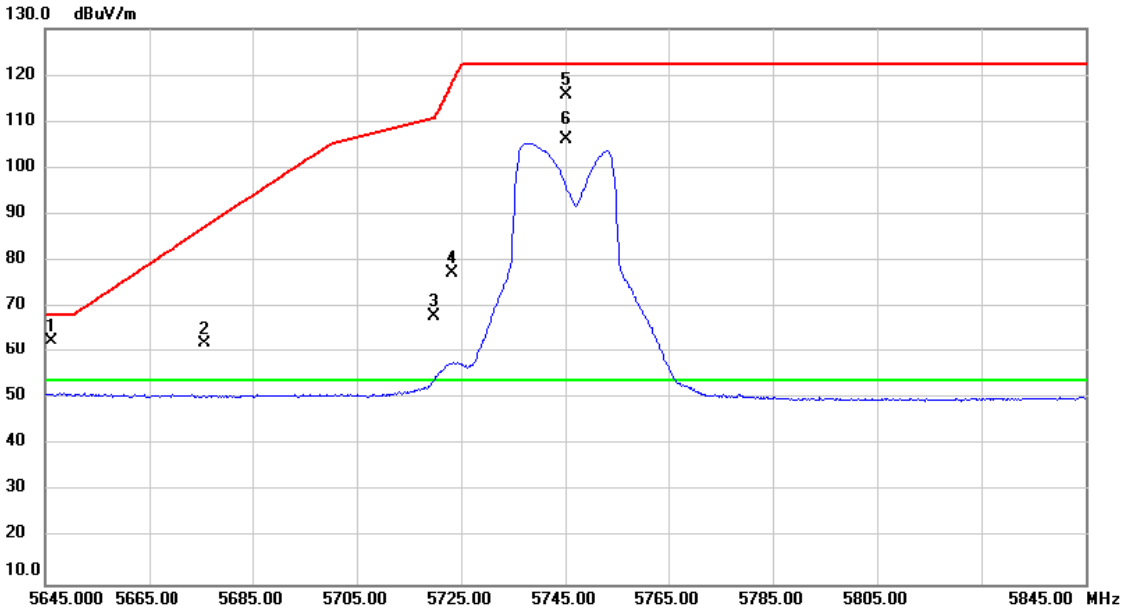
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5825.000	69.28	38.36	107.64	122.20	-14.56	peak	No Limit
2	*	5825.000	59.12	38.36	97.48	54.00	43.48	AVG	No Limit
3		5850.050	24.76	38.41	63.17	122.09	-58.92	peak	
4		5864.180	15.51	38.44	53.95	108.23	-54.28	peak	
5		5887.150	13.84	38.49	52.33	96.18	-43.85	peak	

Test MODE	UNII-3_ TX A MODE 5825MHz	Polarization	Horizontal



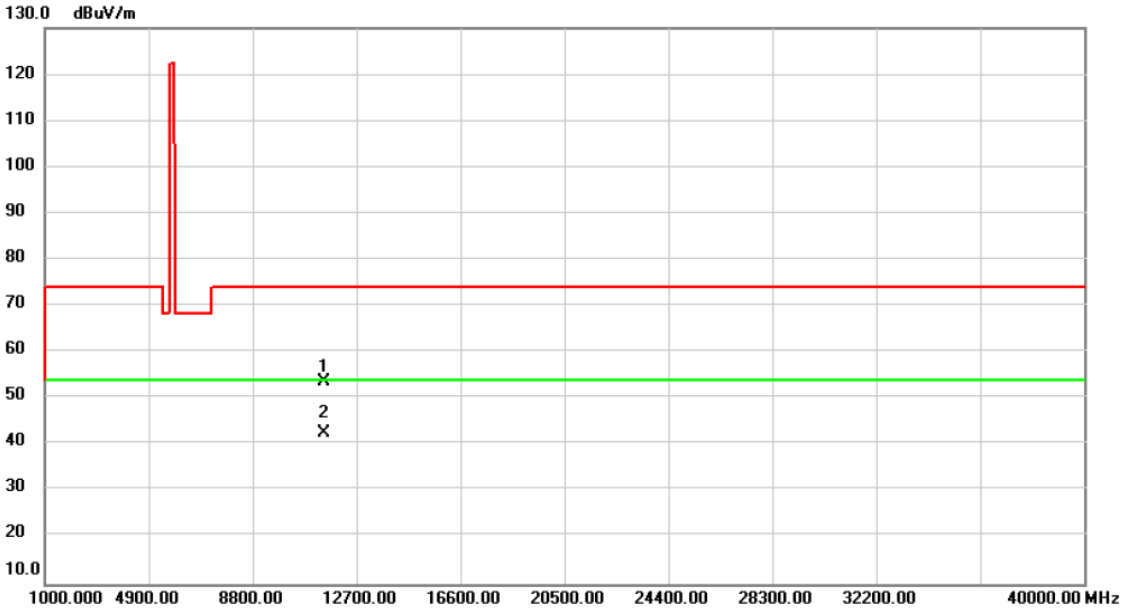
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.00	50.80	2.50	53.30	74.00	-20.70	peak	
2	*	11650.00	39.59	2.50	42.09	54.00	-11.91	AVG	

Test MODE	UNII-3_ TX N (HT20) MODE 5745MHz	Polarization	Vertical



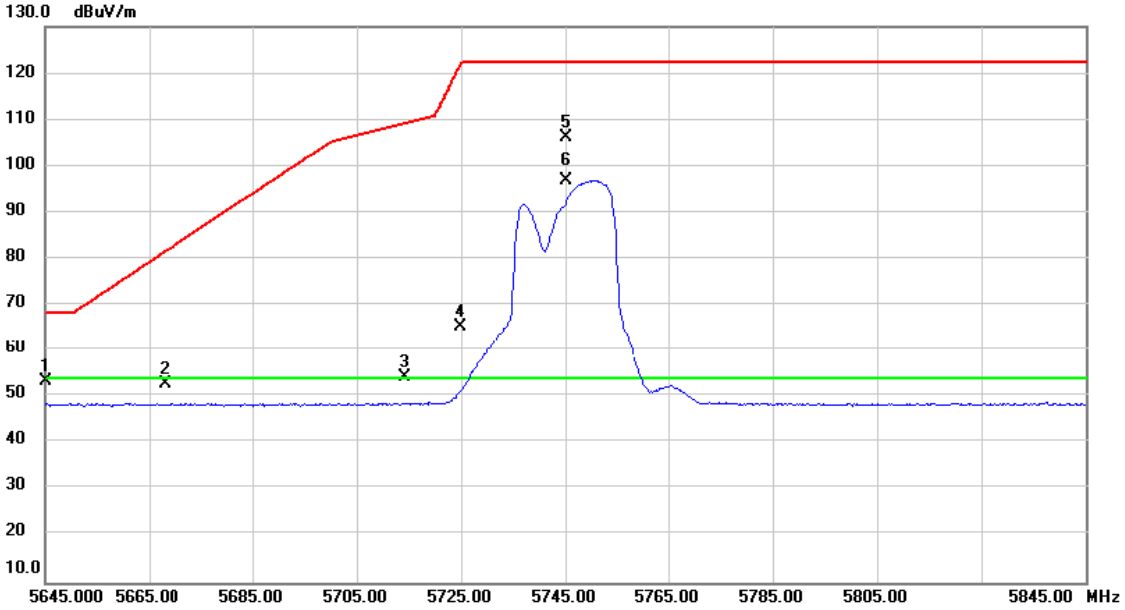
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5646.275	24.63	37.99	62.62	68.20	-5.58	peak	
2		5675.700	24.11	38.05	62.16	87.26	-25.10	peak	
3		5719.760	29.80	38.14	67.94	110.73	-42.79	peak	
4		5723.325	39.13	38.15	77.28	118.38	-41.10	peak	
5		5745.000	77.63	38.19	115.82	122.20	-6.38	peak	No Limit
6	*	5745.000	68.05	38.19	106.24	54.00	52.24	AVG	No Limit

Test MODE	UNII-3_ TX N (HT20) MODE 5745MHz	Polarization	Vertical



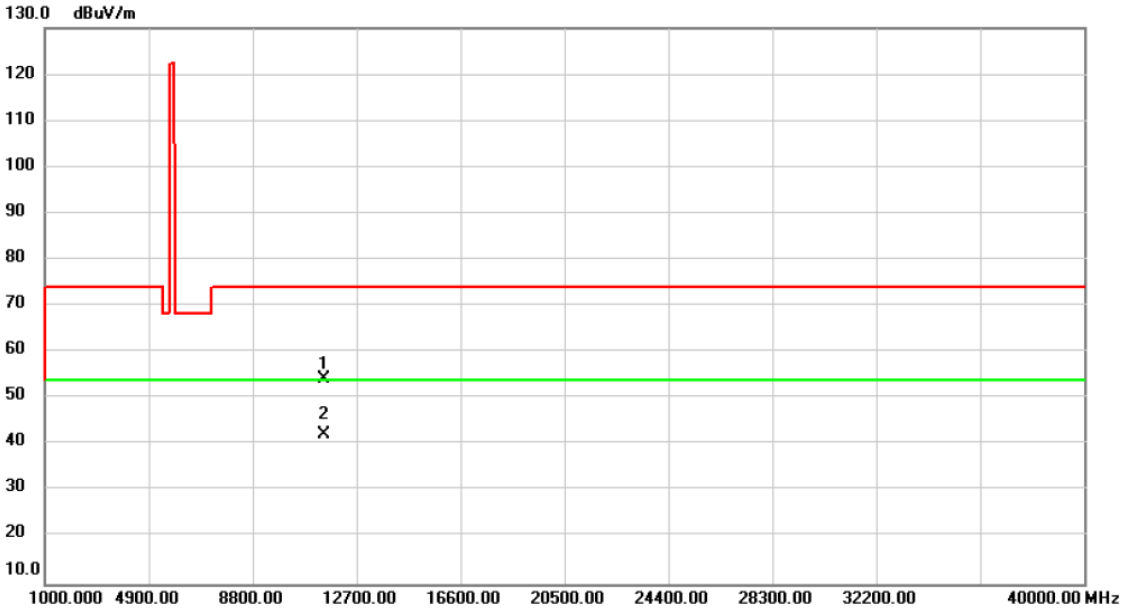
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.00	50.72	2.89	53.61	74.00	-20.39	peak	
2	*	11490.00	39.59	2.89	42.48	54.00	-11.52	AVG	

Test MODE	UNII-3_ TX N (HT20) MODE 5745MHz	Polarization	Horizontal



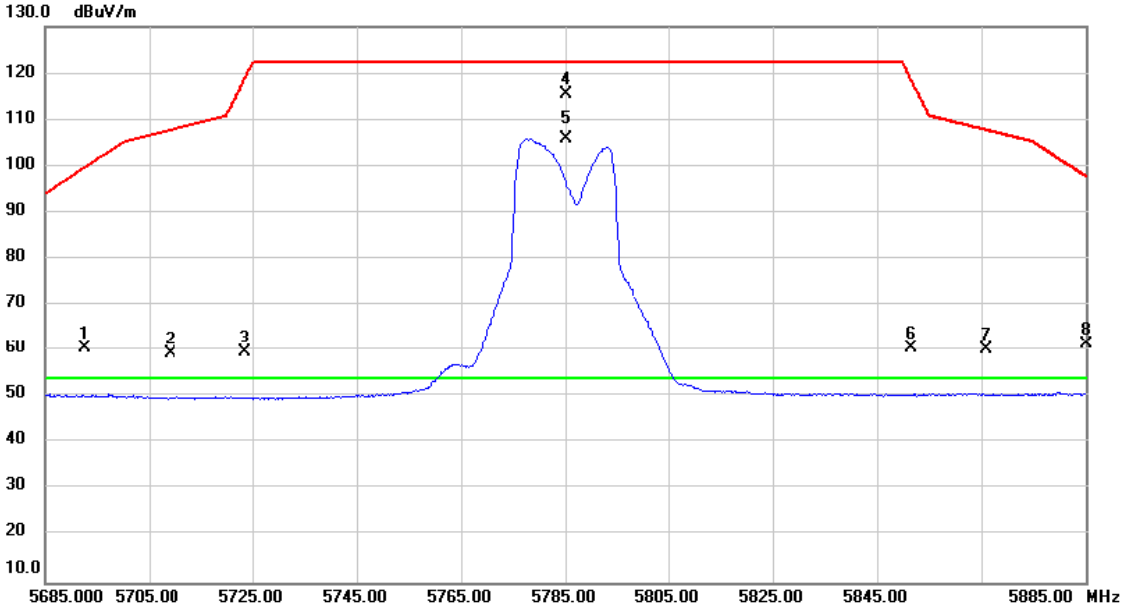
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5645.110	15.26	37.99	53.25	68.20	-14.95	peak	
2		5668.050	14.60	38.04	52.64	81.59	-28.95	peak	
3		5714.180	16.11	38.13	54.24	109.17	-54.93	peak	
4		5724.860	27.13	38.15	65.28	121.88	-56.60	peak	
5		5745.000	67.93	38.19	106.12	122.20	-16.08	peak	No Limit
6	*	5745.000	58.81	38.19	97.00	54.00	43.00	AVG	No Limit

Test MODE	UNII-3_ TX N (HT20) MODE 5745MHz	Polarization	Horizontal



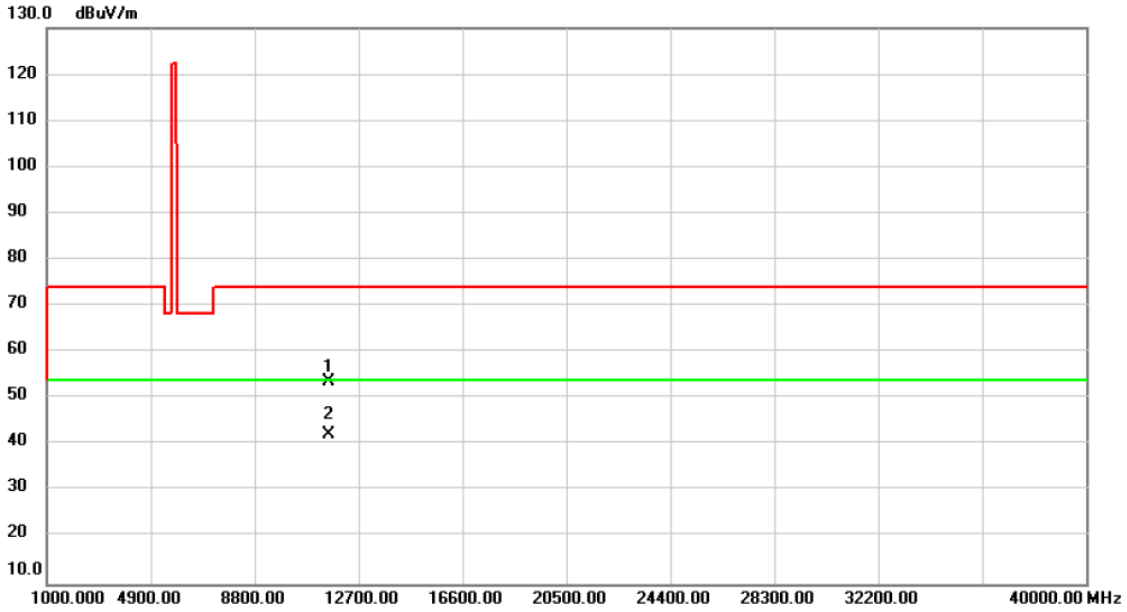
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.00	51.28	2.89	54.17	74.00	-19.83	peak	
2	*	11490.00	39.44	2.89	42.33	54.00	-11.67	AVG	

Test MODE	UNII-3_ TX N (HT20) MODE 5785MHz	Polarization	Vertical



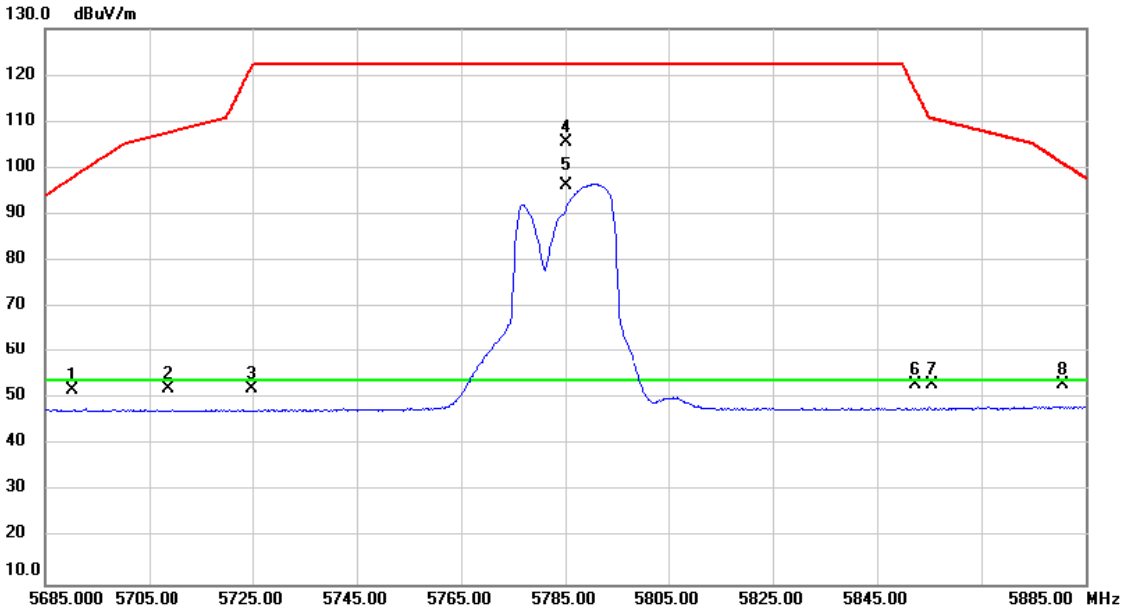
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5692.485	22.39	38.09	60.48	99.66	-39.18	peak	
2		5709.160	21.23	38.12	59.35	107.77	-48.42	peak	
3		5723.490	21.60	38.15	59.75	118.76	-59.01	peak	
4		5785.000	77.28	38.28	115.56	122.20	-6.64	peak	No Limit
5	*	5785.000	67.51	38.28	105.79	54.00	51.79	AVG	No Limit
6		5851.525	22.04	38.41	60.45	118.72	-58.27	peak	
7		5866.000	21.72	38.45	60.17	107.72	-47.55	peak	
8		5885.000	23.07	38.49	61.56	97.77	-36.21	peak	

Test MODE	UNII-3_ TX N (HT20) MODE 5785MHz	Polarization	Vertical



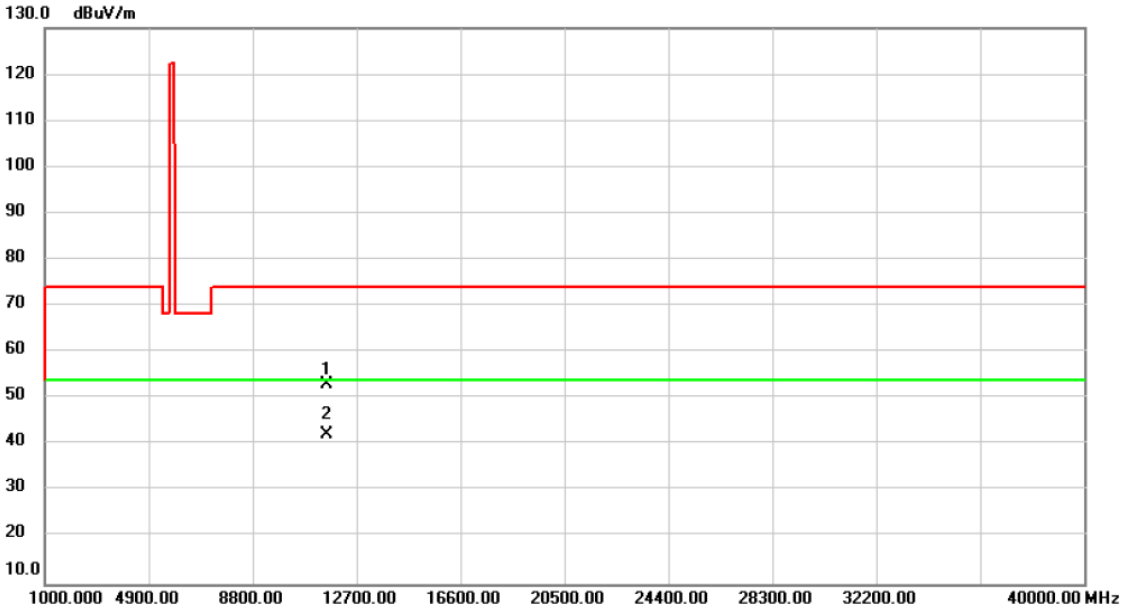
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.00	50.91	2.72	53.63	74.00	-20.37	peak	
2	*	11570.00	39.56	2.72	42.28	54.00	-11.72	AVG	

Test MODE	UNII-3_ TX N (HT20) MODE 5785MHz	Polarization	Horizontal



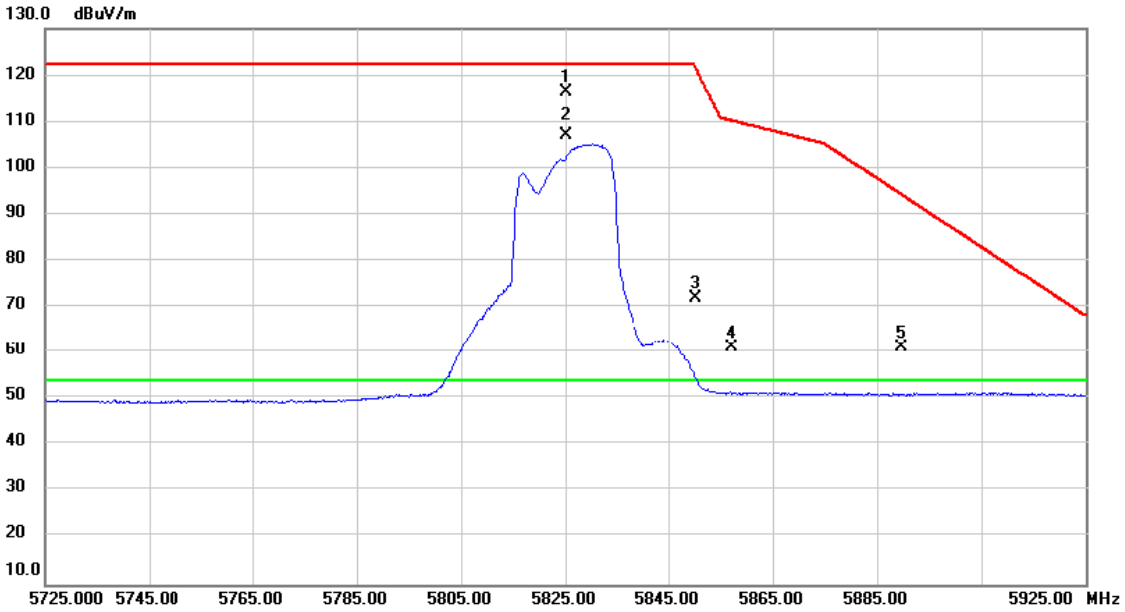
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5690.085	13.84	38.08	51.92	97.89	-45.97	peak	
2		5708.520	14.13	38.12	52.25	107.59	-55.34	peak	
3		5724.920	13.95	38.15	52.10	122.02	-69.92	peak	
4		5785.000	67.28	38.28	105.56	122.20	-16.64	peak	No Limit
5	*	5785.000	57.83	38.28	96.11	54.00	42.11	AVG	No Limit
6		5852.235	14.50	38.41	52.91	117.10	-64.19	peak	
7		5855.420	14.53	38.42	52.95	110.68	-57.73	peak	
8		5880.510	14.47	38.48	52.95	101.11	-48.16	peak	

Test MODE	UNII-3_ TX N (HT20) MODE 5785MHz	Polarization	Horizontal



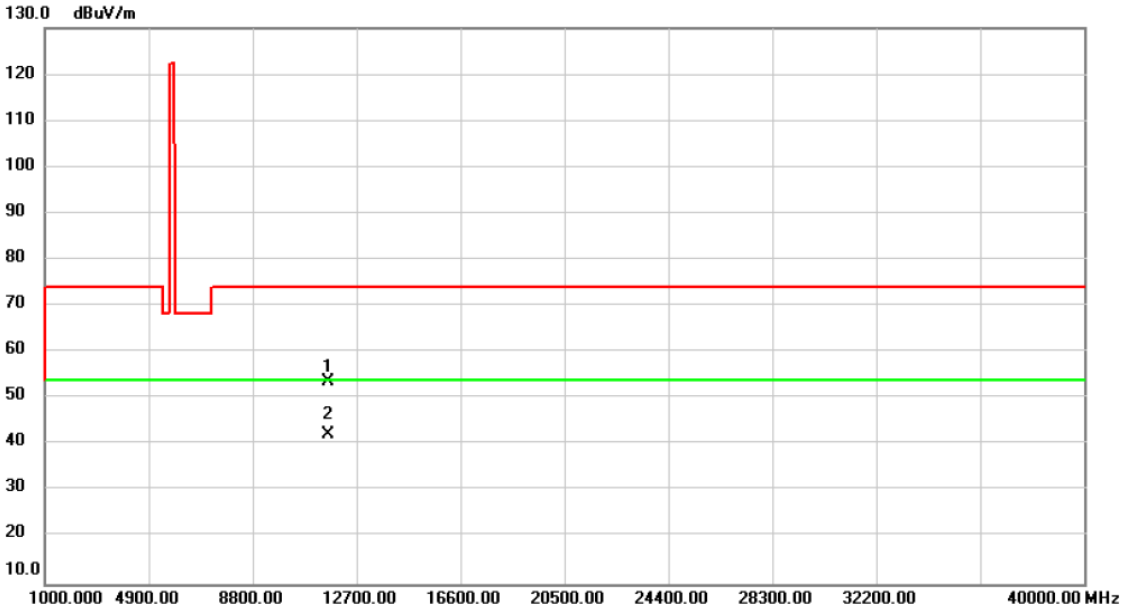
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.00	50.37	2.72	53.09	74.00	-20.91	peak	
2	*	11570.00	39.62	2.72	42.34	54.00	-11.66	AVG	

Test MODE	UNII-3_ TX N (HT20) MODE 5825MHz	Polarization	Vertical



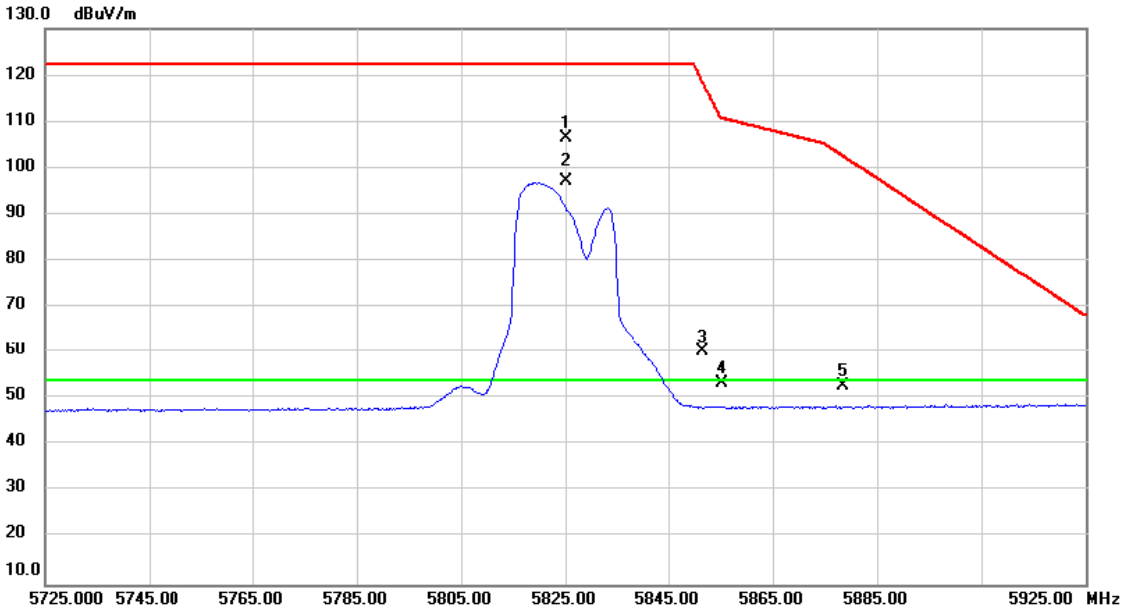
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5825.000	77.95	38.36	116.31	122.20	-5.89	peak	No Limit
2	*	5825.000	68.55	38.36	106.91	54.00	52.91	AVG	No Limit
3		5850.085	33.56	38.41	71.97	122.01	-50.04	peak	
4		5857.140	22.78	38.42	61.20	110.20	-49.00	peak	
5		5889.650	22.60	38.49	61.09	94.33	-33.24	peak	

Test MODE	UNII-3_ TX N (HT20) MODE 5825MHz	Polarization	Vertical



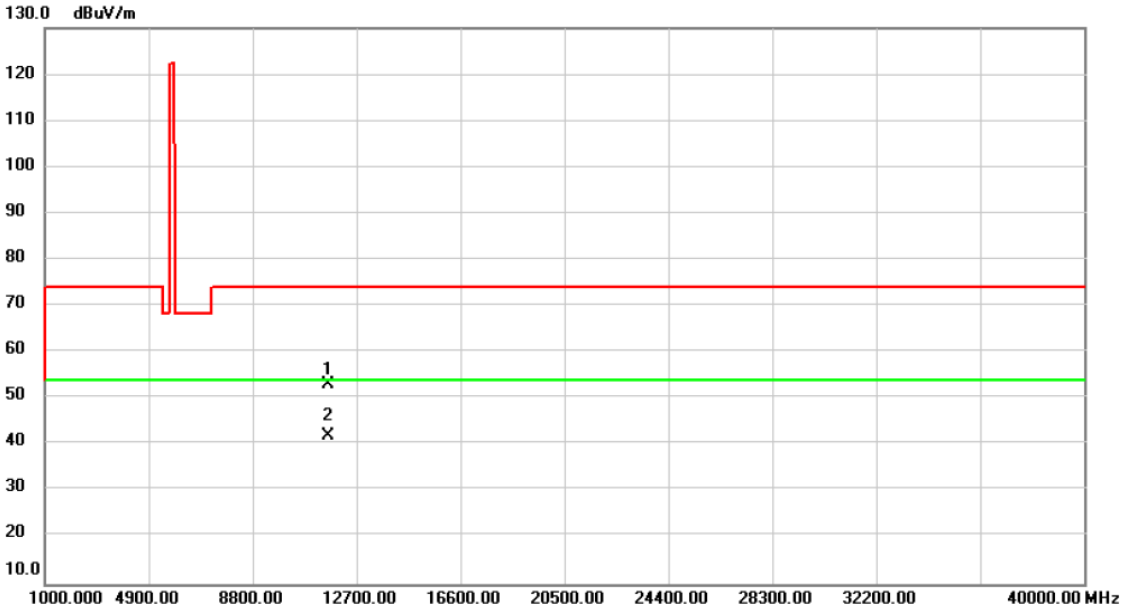
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.00	51.24	2.50	53.74	74.00	-20.26	peak	
2	*	11650.00	39.60	2.50	42.10	54.00	-11.90	AVG	

Test MODE	UNII-3_ TX N (HT20) MODE 5825MHz	Polarization	Horizontal



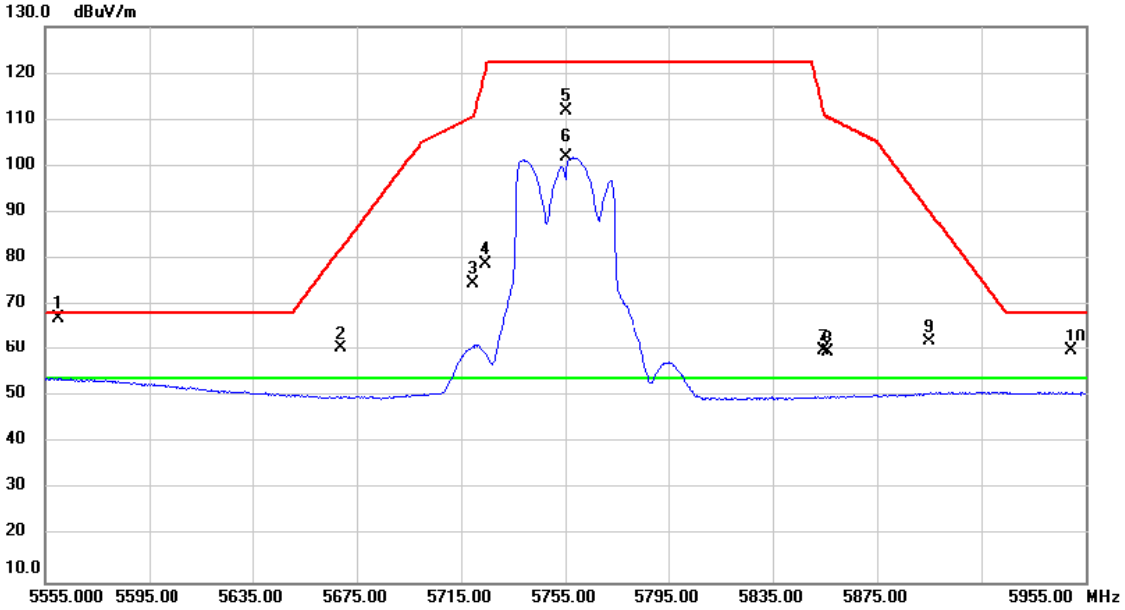
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5825.000	68.16	38.36	106.52	122.20	-15.68	peak	No Limit
2	*	5825.000	58.82	38.36	97.18	54.00	43.18	AVG	No Limit
3		5851.505	21.70	38.41	60.11	118.77	-58.66	peak	
4		5855.200	14.85	38.42	53.27	110.74	-57.47	peak	
5		5878.350	14.32	38.47	52.79	102.71	-49.92	peak	

Test MODE	UNII-3_ TX N (HT20) MODE 5825MHz	Polarization	Horizontal



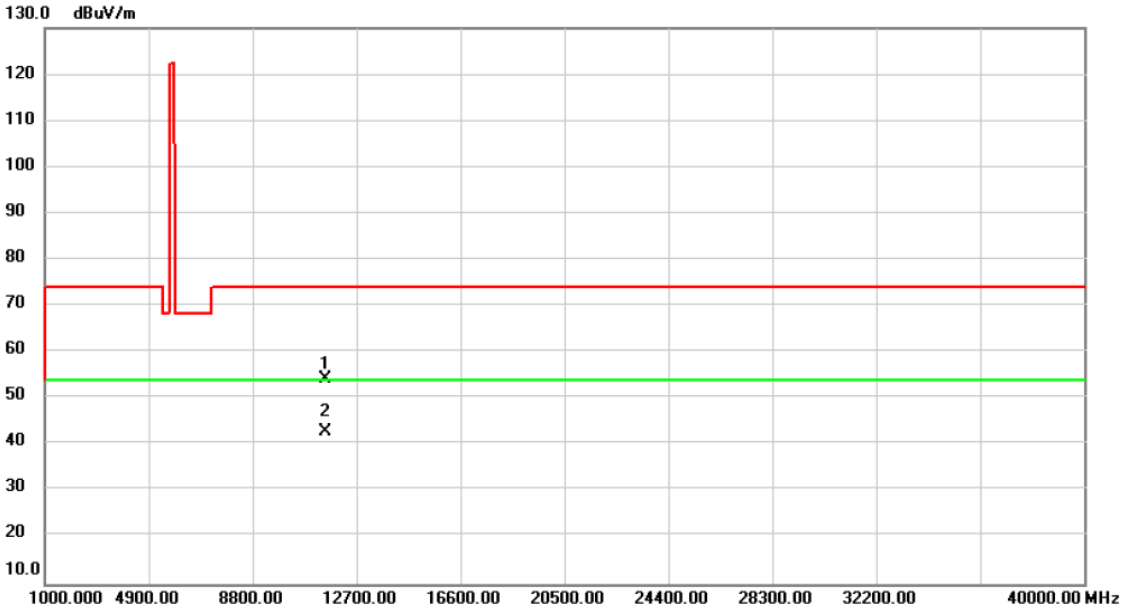
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.00	50.48	2.50	52.98	74.00	-21.02	peak	
2	*	11650.00	39.56	2.50	42.06	54.00	-11.94	AVG	

Test MODE	UNII-3_ TX N (HT40) MODE 5755MHz	Polarization	Vertical



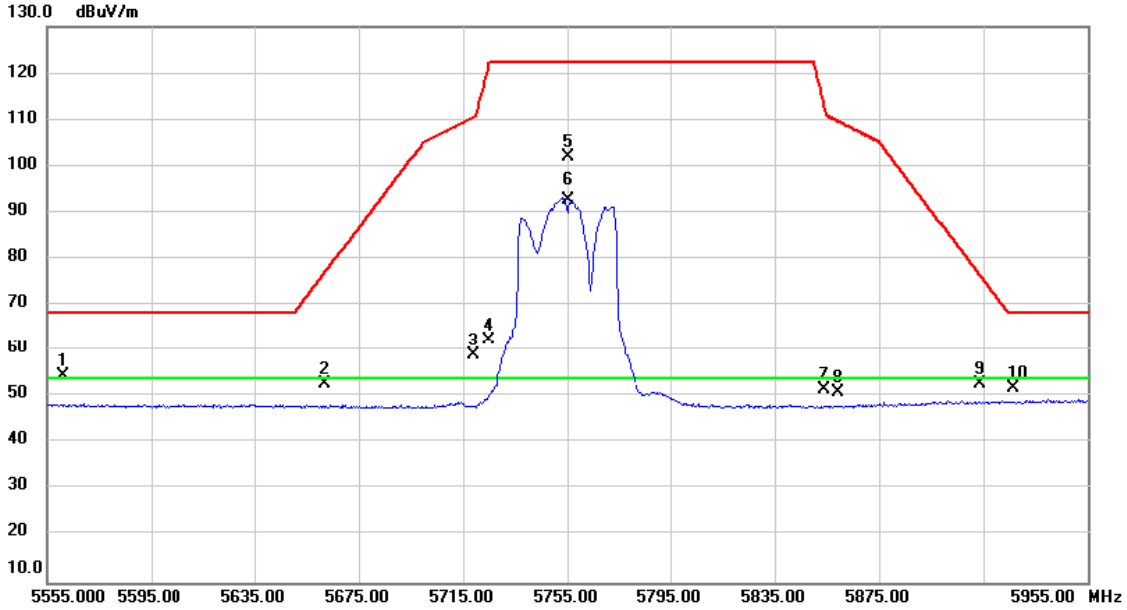
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5560.320	29.20	37.82	67.02	68.20	-1.18	peak	
2		5668.600	22.43	38.04	60.47	82.00	-21.53	peak	
3		5719.660	36.40	38.14	74.54	110.70	-36.16	peak	
4		5724.275	40.60	38.15	78.75	120.55	-41.80	peak	
5		5755.000	73.63	38.22	111.85	122.20	-10.35	peak	No Limit
6	*	5755.000	63.82	38.22	102.04	54.00	48.04	AVG	No Limit
7		5854.550	21.47	38.42	59.89	111.83	-51.94	peak	
8		5856.020	21.37	38.42	59.79	110.51	-50.72	peak	
9		5895.000	23.52	38.50	62.02	90.36	-28.34	peak	
10		5949.630	21.29	38.62	59.91	68.20	-8.29	peak	

Test MODE	UNII-3_ TX N (HT40) MODE 5755MHz	Polarization	Vertical



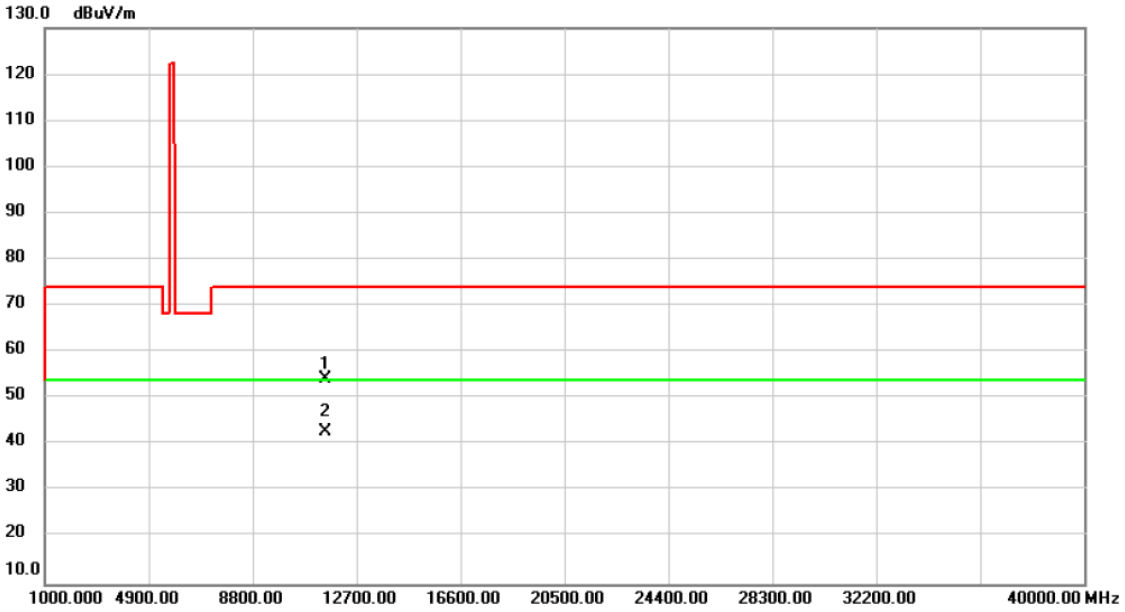
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11510.00	51.31	2.88	54.19	74.00	-19.81	peak	
2	*	11510.00	40.07	2.88	42.95	54.00	-11.05	AVG	

Test MODE	UNII-3_ TX N (HT40) MODE 5755MHz	Polarization	Horizontal



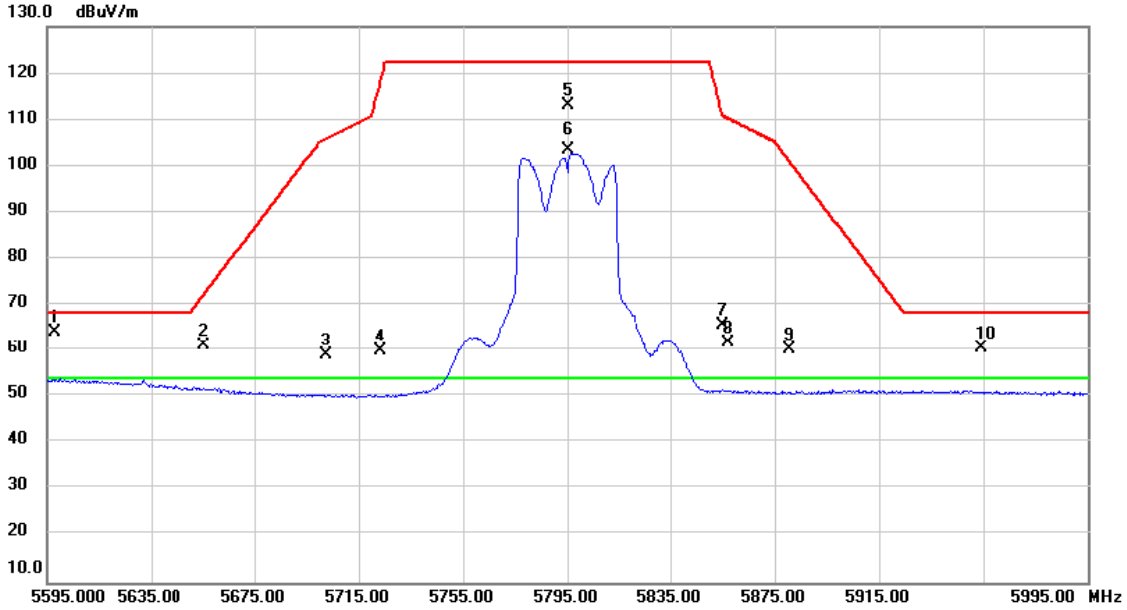
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5561.080	16.75	37.82	54.57	68.20	-13.63	peak	
2		5662.000	14.75	38.02	52.77	77.11	-24.34	peak	
3		5718.820	20.97	38.14	59.11	110.47	-51.36	peak	
4		5724.630	24.06	38.15	62.21	121.36	-59.15	peak	
5		5755.000	63.69	38.22	101.91	122.20	-20.29	peak	No Limit
6	*	5755.000	54.47	38.22	92.69	54.00	38.69	AVG	No Limit
7		5853.975	13.15	38.42	51.57	113.14	-61.57	peak	
8		5859.480	12.41	38.44	50.85	109.54	-58.69	peak	
9		5913.850	14.26	38.54	52.80	76.42	-23.62	peak	
10		5926.260	13.16	38.57	51.73	68.20	-16.47	peak	

Test MODE	UNII-3_ TX N (HT40) MODE 5755MHz	Polarization	Horizontal



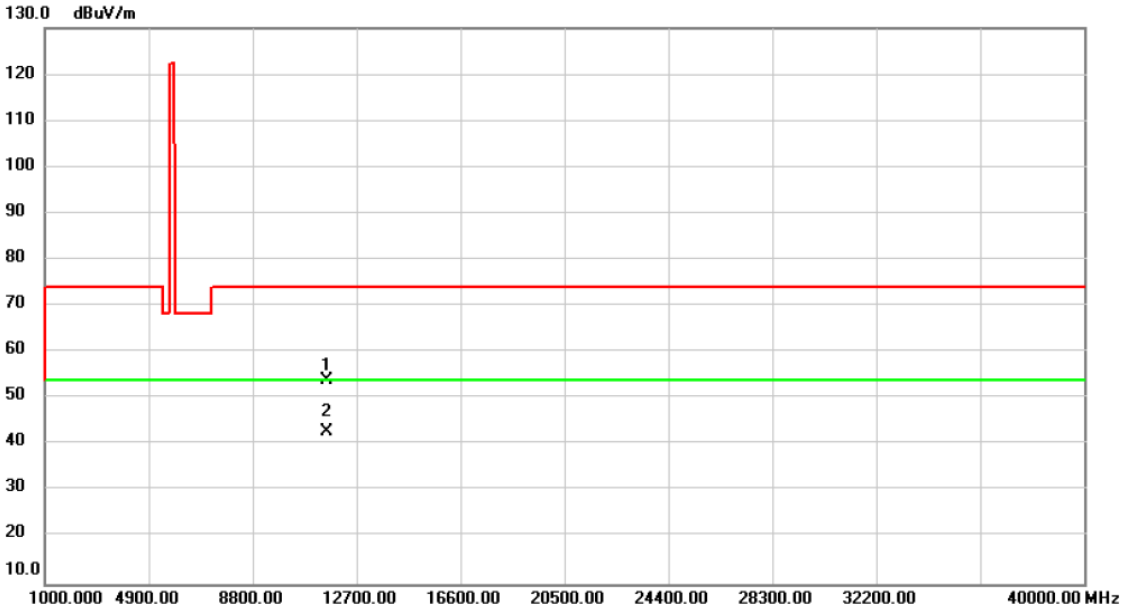
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11510.00	51.43	2.88	54.31	74.00	-19.69	peak	
2	*	11510.00	39.93	2.88	42.81	54.00	-11.19	AVG	

Test MODE	UNII-3_ TX N (HT40) MODE 5795MHz	Polarization	Vertical



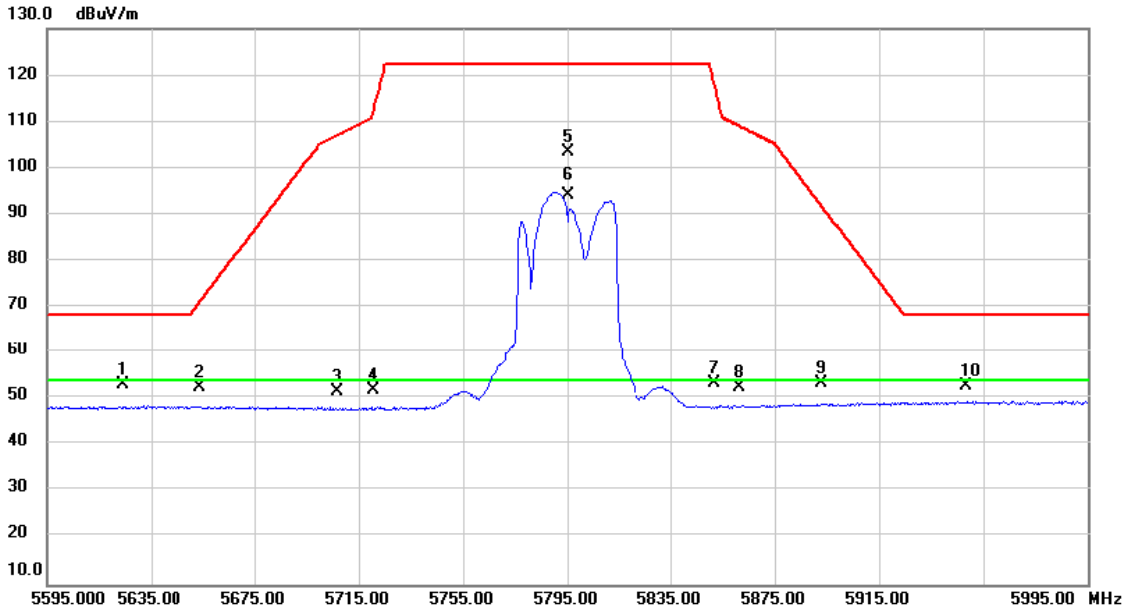
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5597.970	26.30	37.90	64.20	68.20	-4.00	peak	
2		5655.350	23.15	38.01	61.16	72.17	-11.01	peak	
3		5702.380	20.88	38.10	58.98	105.87	-46.89	peak	
4		5723.275	21.90	38.15	60.05	118.27	-58.22	peak	
5		5795.000	74.71	38.30	113.01	122.20	-9.19	peak	No Limit
6	*	5795.000	65.07	38.30	103.37	54.00	49.37	AVG	No Limit
7		5854.960	27.13	38.42	65.55	110.89	-45.34	peak	
8		5857.360	23.19	38.42	61.61	110.14	-48.53	peak	
9		5880.750	21.84	38.48	60.32	100.93	-40.61	peak	
10		5954.190	21.82	38.63	60.45	68.20	-7.75	peak	

Test MODE	UNII-3_ TX N (HT40) MODE 5795MHz	Polarization	Vertical



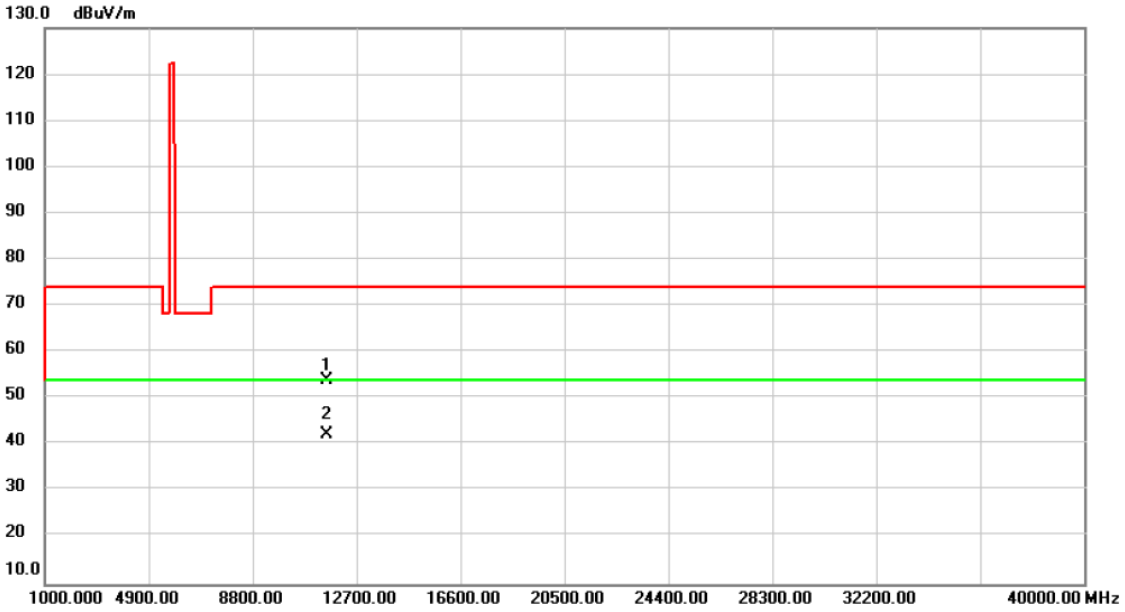
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11590.00	51.21	2.67	53.88	74.00	-20.12	peak	
2	*	11590.00	40.10	2.67	42.77	54.00	-11.23	AVG	

Test MODE	UNII-3_ TX N (HT40) MODE 5795MHz	Polarization	Horizontal



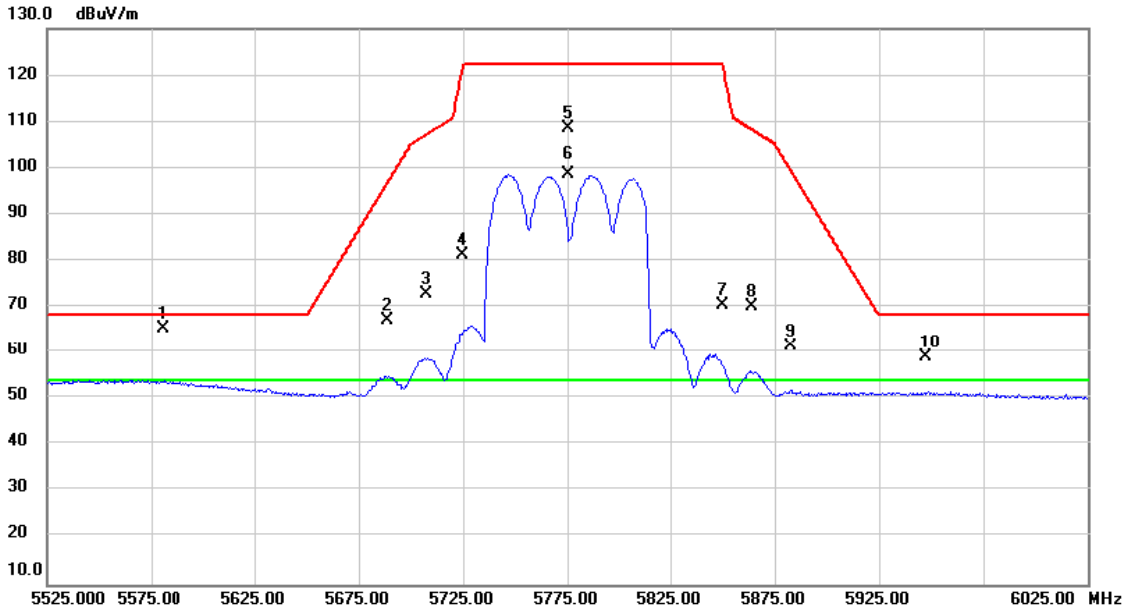
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5623.875	15.21	37.95	53.16	68.20	-15.04	peak	
2		5653.700	14.46	38.01	52.47	70.95	-18.48	peak	
3		5706.760	13.37	38.12	51.49	107.09	-55.60	peak	
4		5720.395	13.56	38.14	51.70	111.70	-60.00	peak	
5		5795.000	65.03	38.30	103.33	122.20	-18.87	peak	No Limit
6	*	5795.000	55.92	38.30	94.22	54.00	40.22	AVG	No Limit
7		5851.545	14.92	38.41	53.33	118.68	-65.35	peak	
8		5861.300	14.03	38.44	52.47	109.03	-56.56	peak	
9		5893.000	14.88	38.50	53.38	91.84	-38.46	peak	
10		5948.520	14.01	38.62	52.63	68.20	-15.57	peak	

Test MODE	UNII-3_ TX N (HT40) MODE 5795MHz	Polarization	Horizontal



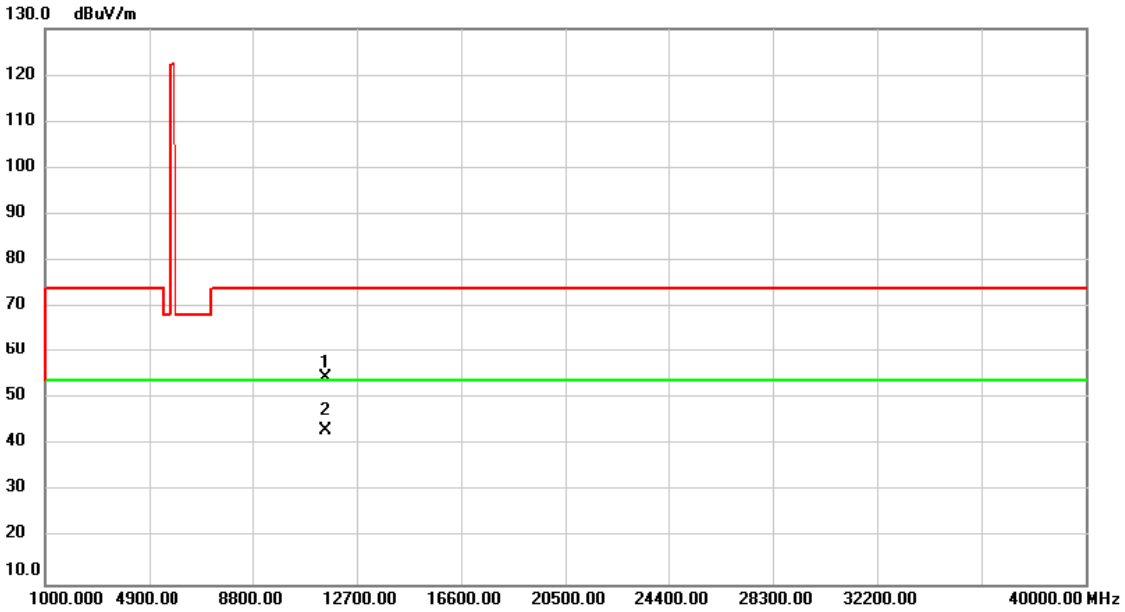
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11590.00	51.29	2.67	53.96	74.00	-20.04	peak	
2	*	11590.00	39.72	2.67	42.39	54.00	-11.61	AVG	

Test MODE	UNII-3_ TX AC (VHT80) MODE 5775MHz	Polarization	Vertical



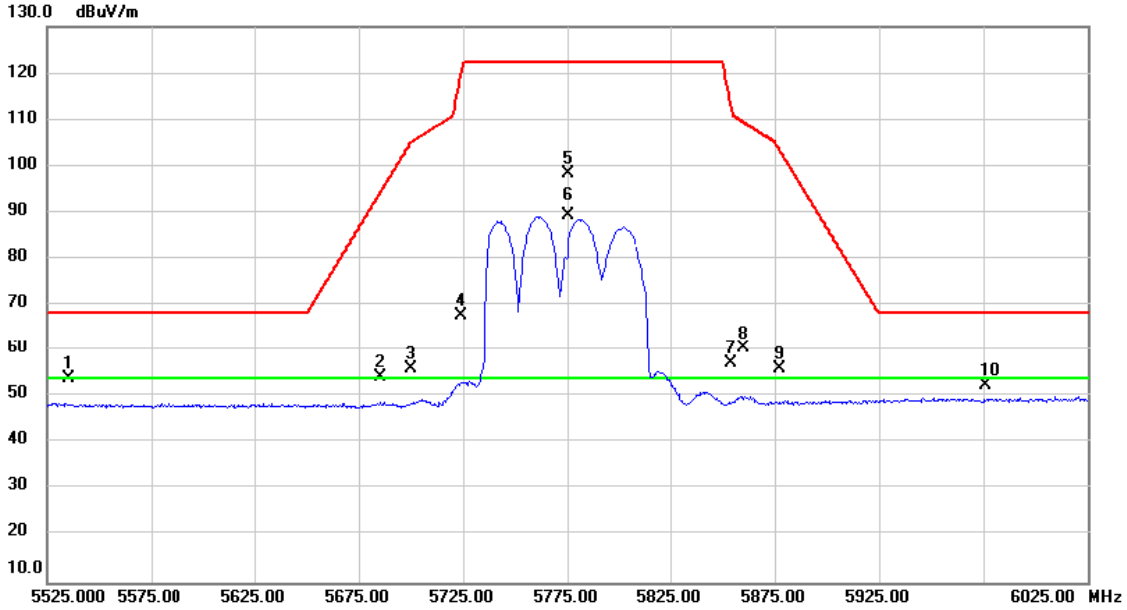
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5580.875	27.43	37.86	65.29	68.20	-2.91	peak	
2		5688.950	29.13	38.08	67.21	97.05	-29.84	peak	
3		5707.040	34.58	38.12	72.70	107.17	-34.47	peak	
4		5724.585	43.17	38.15	81.32	121.25	-39.93	peak	
5		5775.000	70.44	38.26	108.70	122.20	-13.50	peak	No Limit
6	*	5775.000	60.32	38.26	98.58	54.00	44.58	AVG	No Limit
7		5850.020	31.99	38.41	70.40	122.15	-51.75	peak	
8		5863.900	31.66	38.44	70.10	108.31	-38.21	peak	
9		5882.800	23.04	38.48	61.52	99.41	-37.89	peak	
10		5947.500	20.37	38.62	58.99	68.20	-9.21	peak	

Test MODE	UNII-3_ TX AC (VHT80) MODE 5775MHz	Polarization	Vertical



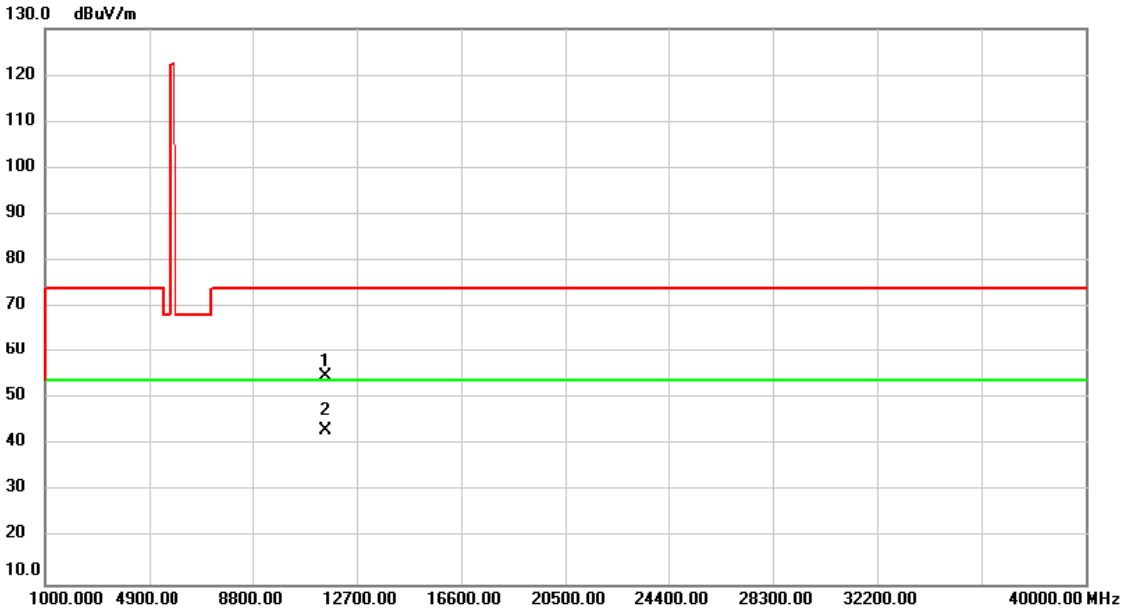
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11550.00	51.80	2.77	54.57	74.00	-19.43	peak	
2	*	11550.00	40.47	2.77	43.24	54.00	-10.76	AVG	

Test MODE	UNII-3_ TX AC (VHT80) MODE 5775MHz	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5535.375	16.04	37.77	53.81	68.20	-14.39	peak	
2		5685.250	16.27	38.08	54.35	94.32	-39.97	peak	
3		5700.000	18.09	38.10	56.19	105.20	-49.01	peak	
4		5723.975	29.70	38.15	67.85	119.86	-52.01	peak	
5		5775.000	59.99	38.26	98.25	122.20	-23.95	peak	No Limit
6	*	5775.000	51.13	38.26	89.39	54.00	35.39	AVG	No Limit
7		5854.145	18.78	38.42	57.20	112.75	-55.55	peak	
8		5860.240	22.17	38.44	60.61	109.33	-48.72	peak	
9		5877.150	17.67	38.46	56.13	103.60	-47.47	peak	
10		5976.200	13.88	38.67	52.55	68.20	-15.65	peak	

Test MODE	UNII-3_ TX AC (VHT80) MODE 5775MHz	Polarization	Horizontal



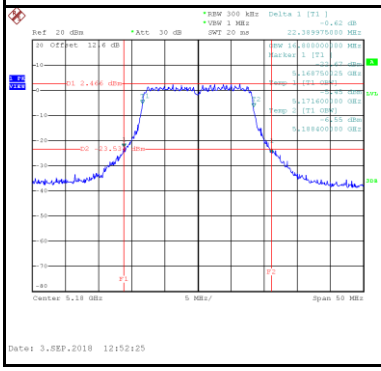
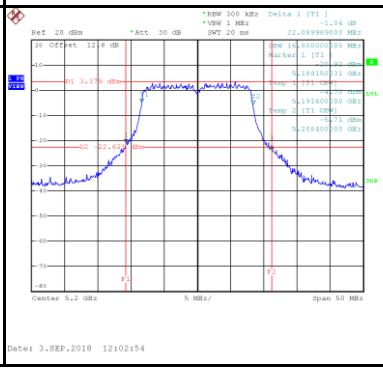
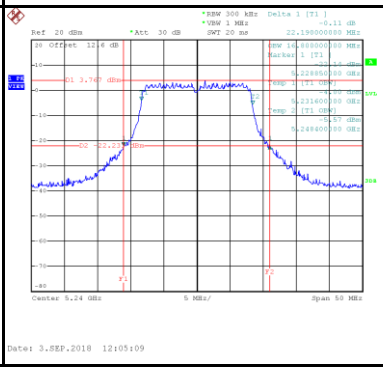
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11550.00	52.19	2.77	54.96	74.00	-19.04	peak	
2	*	11550.00	40.40	2.77	43.17	54.00	-10.83	AVG	

APPENDIX E BANDWIDTH

CONTINUE ON NEXT PAGE

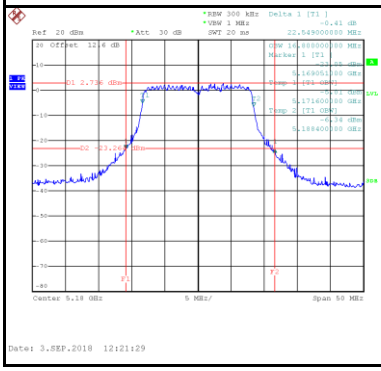
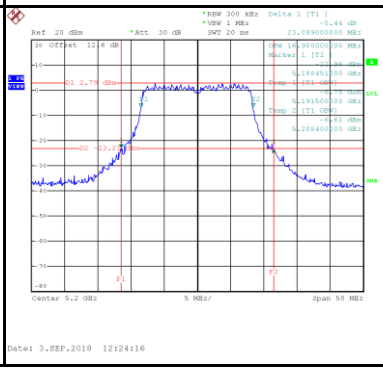
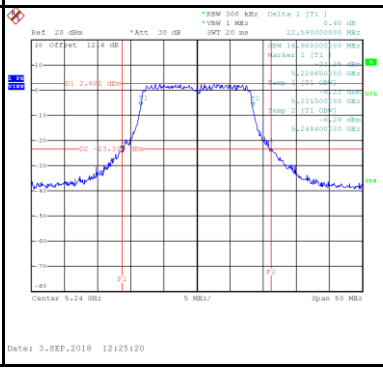
Test Mode	UNII-1_IEEE 802.11a

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	22.39	16.80
5200	22.09	16.80
5240	22.19	16.80

5180 MHz	5200 MHz	5240 MHz
		

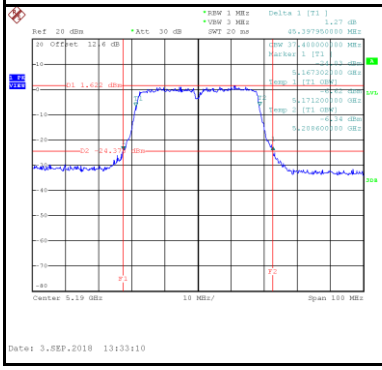
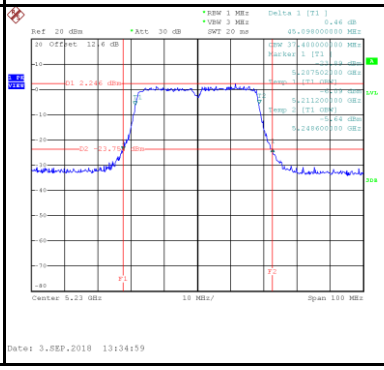
Test Mode	UNII-1_IEEE 802.11n (HT20)

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5180	22.55	16.80
5200	22.09	16.90
5240	22.59	16.90

5180 MHz	5200 MHz	5240 MHz
		

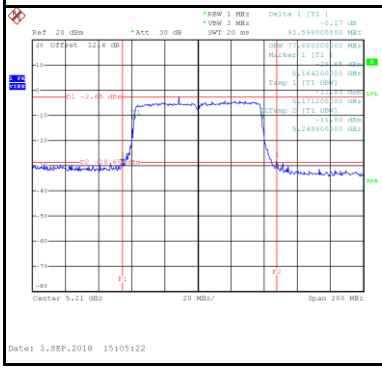
Test Mode	UNII-1_IEEE 802.11n (HT40)

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5190	45.40	37.40
5230	45.10	37.40

5190 MHz	5230 MHz	
		

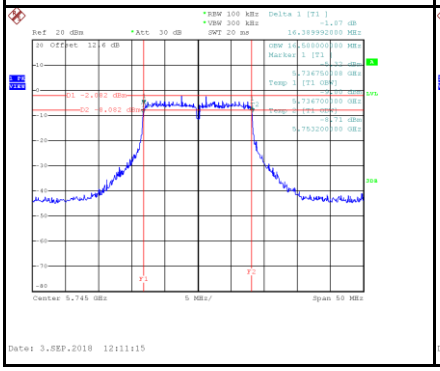
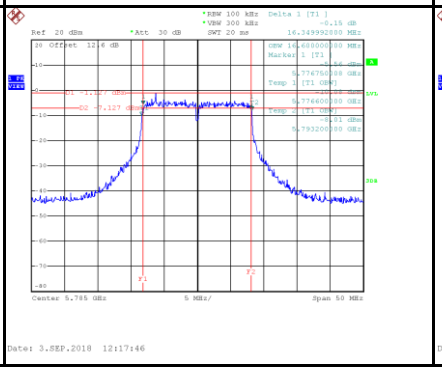
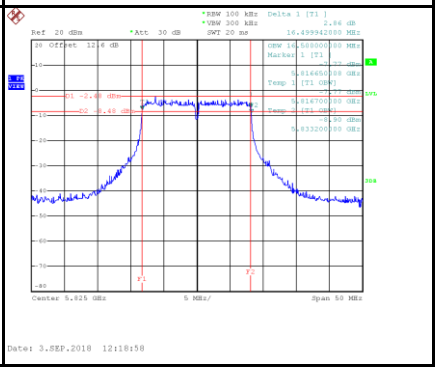
Test Mode	UNII-1_IEEE 802.11ac (VHT80)

Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5210	77.60	93.60

5210 MHz		
		

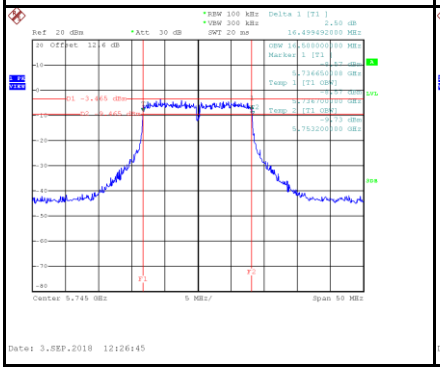
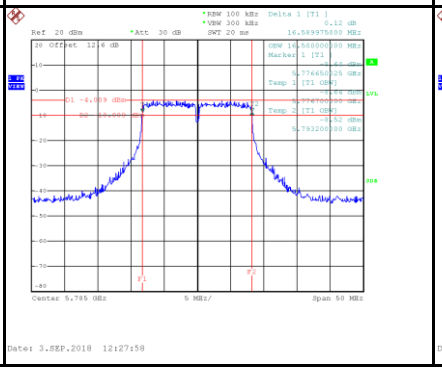
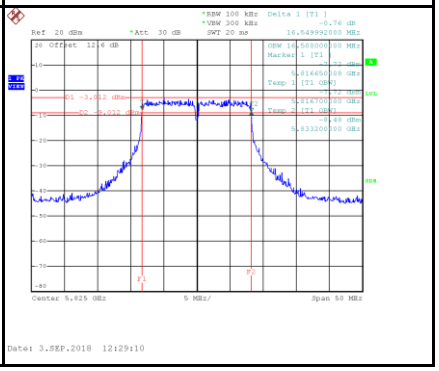
Test Mode	UNII-3_IEEE 802.11a

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5745	16.39	16.50
5785	16.35	16.60
5825	16.50	16.50

5745 MHz	5785 MHz	5825 MHz
		

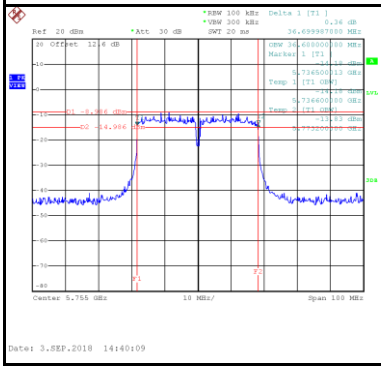
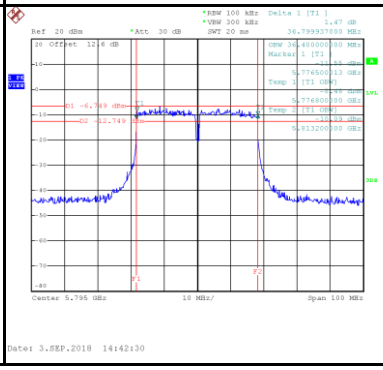
Test Mode	UNII-3_IEEE 802.11n (HT20)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5745	16.50	16.50
5785	16.59	16.50
5825	16.55	16.50

5745 MHz	5785 MHz	5825 MHz
		

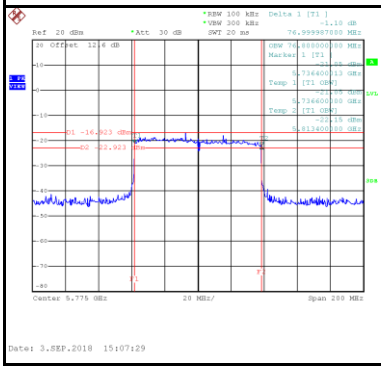
Test Mode	UNII-3_IEEE 802.11n (HT40)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5755	36.70	36.60
5795	36.80	36.40

5755 MHz	5795 MHz	
		

Test Mode	UNII-3_IEEE 802.11ac (VHT80)

Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
5775	77.00	76.80

5775 MHz		
		

APPENDIX F PEAK OUTPUT POWER

CONTINUE ON NEXT PAGE

Test Mode	UNII-1_IEEE 802.11a_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	13.98	0.0250	30.00	1.0000	Complies
5200	12.31	0.0170	30.00	1.0000	Complies
5240	13.46	0.0222	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11a_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	12.51	0.0178	30.00	1.0000	Complies
5200	12.28	0.0169	30.00	1.0000	Complies
5240	13.16	0.0207	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11a_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	16.32	0.0428	30.00	1.0000	Complies
5200	15.31	0.0339	30.00	1.0000	Complies
5240	16.32	0.0429	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11n (HT20)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	11.99	0.0158	30.00	1.0000	Complies
5200	12.75	0.0188	30.00	1.0000	Complies
5240	12.91	0.0195	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11n (HT20)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	11.75	0.0150	30.00	1.0000	Complies
5200	12.40	0.0174	30.00	1.0000	Complies
5240	12.76	0.0189	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11n (HT20)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	14.88	0.0308	30.00	1.0000	Complies
5200	15.59	0.0362	30.00	1.0000	Complies
5240	15.85	0.0384	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (HT20)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	11.61	0.0145	30.00	1.0000	Complies
5200	11.98	0.0158	30.00	1.0000	Complies
5240	11.94	0.0156	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (HT20)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	11.26	0.0134	30.00	1.0000	Complies
5200	11.74	0.0149	30.00	1.0000	Complies
5240	11.76	0.0150	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (HT20)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5180	14.45	0.0279	30.00	1.0000	Complies
5200	14.87	0.0307	30.00	1.0000	Complies
5240	14.86	0.0306	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11n (HT40)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	10.38	0.0109	30.00	1.0000	Complies
5230	12.63	0.0183	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11n (HT40)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	9.67	0.0093	30.00	1.0000	Complies
5230	12.03	0.0160	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11n (HT40)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	13.05	0.0202	30.00	1.0000	Complies
5230	15.35	0.0343	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (HT40)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	10.31	0.0107	30.00	1.0000	Complies
5230	11.64	0.0146	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (HT40)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	9.66	0.0092	30.00	1.0000	Complies
5230	11.14	0.0130	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (HT40)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5190	13.01	0.0200	30.00	1.0000	Complies
5230	14.41	0.0276	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (VHT80)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	9.44	0.0088	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (VHT80)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	8.97	0.0079	30.00	1.0000	Complies

Test Mode	UNII-1_IEEE 802.11ac (VHT80)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5210	12.22	0.0167	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11a_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	13.65	0.0232	30.00	1.0000	Complies
5785	13.95	0.0248	30.00	1.0000	Complies
5825	13.92	0.0247	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11a_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	11.83	0.0152	30.00	1.0000	Complies
5785	12.49	0.0177	30.00	1.0000	Complies
5825	12.14	0.0164	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11a_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	15.84	0.0384	30.00	1.0000	Complies
5785	16.29	0.0426	30.00	1.0000	Complies
5825	16.13	0.0410	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11n (HT20)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	12.97	0.0198	30.00	1.0000	Complies
5785	12.94	0.0197	30.00	1.0000	Complies
5825	12.91	0.0195	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11n (HT20)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	11.99	0.0158	30.00	1.0000	Complies
5785	11.41	0.0138	30.00	1.0000	Complies
5825	12.05	0.0160	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11n (HT20)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	15.52	0.0356	30.00	1.0000	Complies
5785	15.25	0.0335	30.00	1.0000	Complies
5825	15.51	0.0356	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (HT20)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	11.66	0.0147	30.00	1.0000	Complies
5785	11.92	0.0156	30.00	1.0000	Complies
5825	11.84	0.0153	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (HT20)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	10.93	0.0124	30.00	1.0000	Complies
5785	11.26	0.0134	30.00	1.0000	Complies
5825	10.52	0.0113	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (HT20)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5745	14.32	0.0270	30.00	1.0000	Complies
5785	14.61	0.0289	30.00	1.0000	Complies
5825	14.24	0.0265	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11n (HT40)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5755	12.96	0.0198	30.00	1.0000	Complies
5795	12.52	0.0179	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11n (HT40)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5755	11.50	0.0141	30.00	1.0000	Complies
5795	12.11	0.0163	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11n (HT40)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5755	15.30	0.0339	30.00	1.0000	Complies
5795	15.33	0.0341	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (HT40)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5755	11.91	0.0155	30.00	1.0000	Complies
5795	11.56	0.0143	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (HT40)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5755	10.76	0.0119	30.00	1.0000	Complies
5795	11.36	0.0137	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (HT40)_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5755	14.38	0.0274	30.00	1.0000	Complies
5795	14.47	0.0280	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (VHT80)_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5775	10.98	0.0125	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (VHT80)_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5775	10.78	0.0120	30.00	1.0000	Complies

Test Mode	UNII-3_IEEE 802.11ac (VHT80)_Total

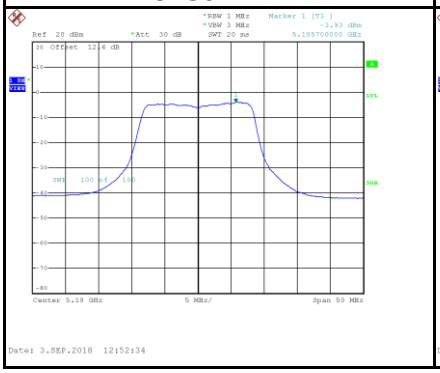
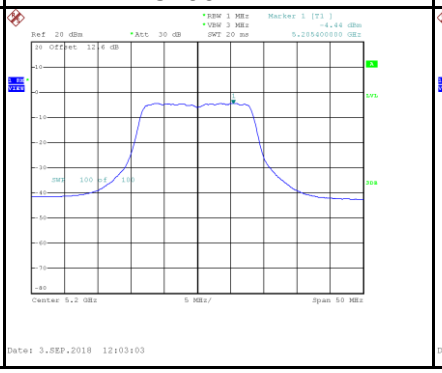
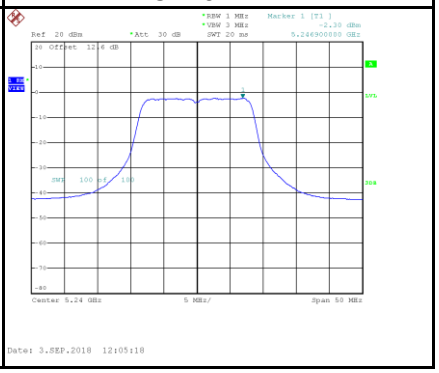
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
5775	13.89	0.0245	30.00	1.0000	Complies

APPENDIX G POWER SPECTRAL DENSITY

CONTINUE ON NEXT PAGE

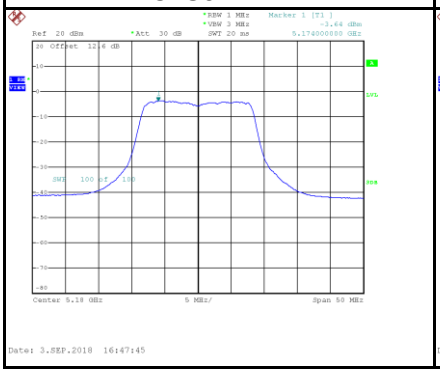
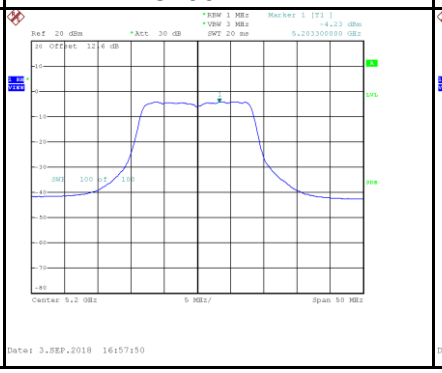
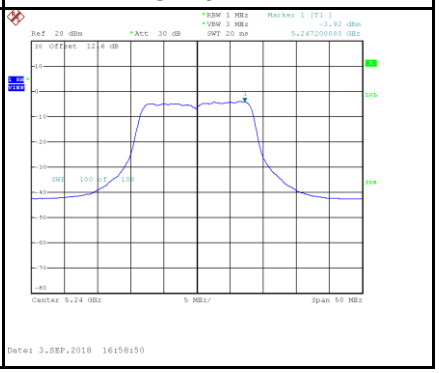
Test Mode	UNII-1_IEEE 802.11a_ANT 1

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5180	-3.93	0.00	-3.93	16.29	Complies
5200	-4.44	0.00	-4.44	16.29	Complies
5240	-2.30	0.00	-2.30	16.29	Complies

5180 MHz	5200 MHz	5240 MHz
		

Test Mode	UNII-1_IEEE 802.11a_ANT 2

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5180	-3.64	0.00	-3.64	16.29	Complies
5200	-4.23	0.00	-4.23	16.29	Complies
5240	-3.92	0.00	-3.92	16.29	Complies

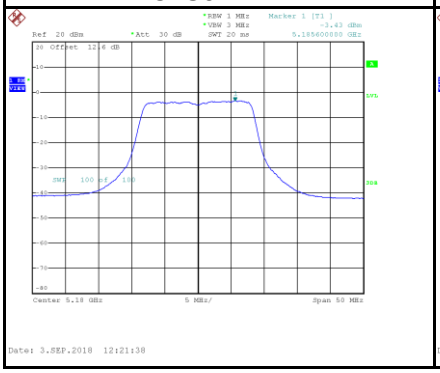
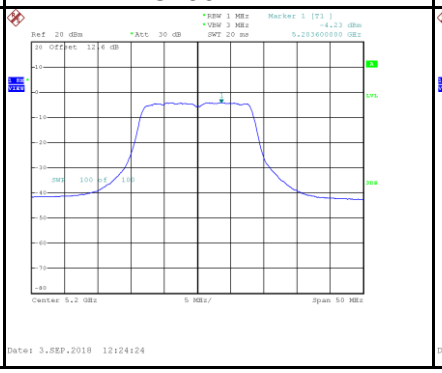
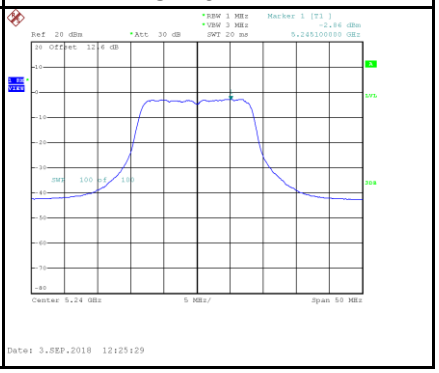
5180 MHz	5200 MHz	5240 MHz
		

Test Mode	UNII-1_IEEE 802.11a_Total

Frequency	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5180	-0.77	16.29	Complies
5200	-1.32	16.29	Complies
5240	-0.02	16.29	Complies

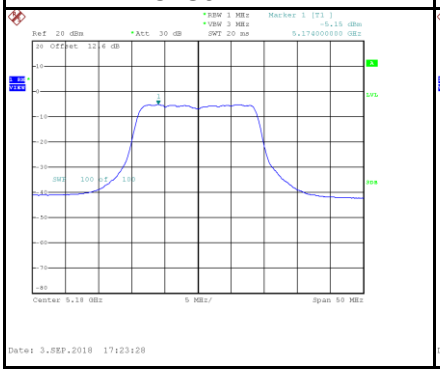
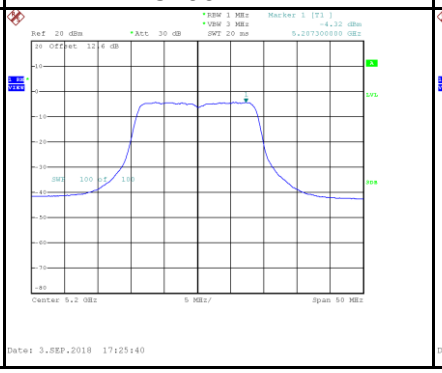
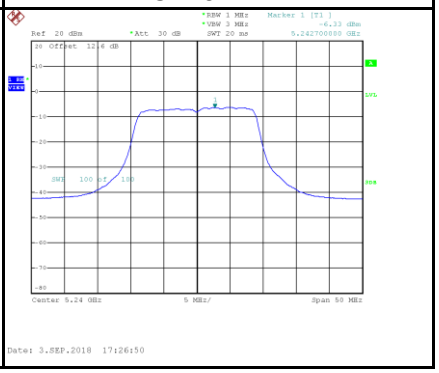
Test Mode	UNII-1_IEEE 802.11n (HT20)_ANT 1

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5180	-3.43	0.00	-3.43	16.29	Complies
5200	-4.23	0.00	-4.23	16.29	Complies
5240	-2.86	0.00	-2.86	16.29	Complies

5180 MHz	5200 MHz	5240 MHz
		

Test Mode	UNII-1_IEEE 802.11n (HT20)_ANT 2

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5180	-5.15	0.00	-5.15	16.29	Complies
5200	-4.32	0.00	-4.32	16.29	Complies
5240	-6.33	0.00	-6.33	16.29	Complies

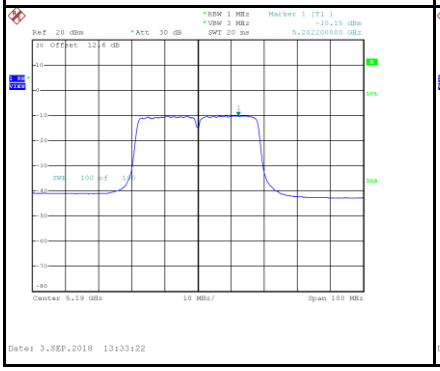
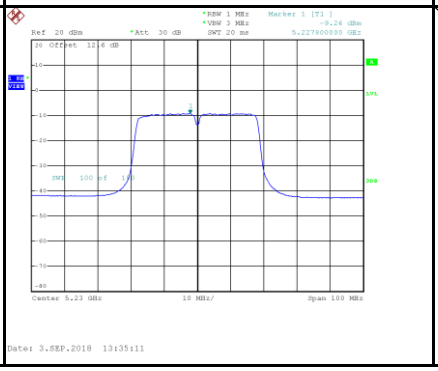
5180 MHz	5200 MHz	5240 MHz
		

Test Mode	UNII-1_IEEE 802.11n (HT20)_Total

Frequency	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5180	-1.20	16.29	Complies
5200	-1.26	16.29	Complies
5240	-1.25	16.29	Complies

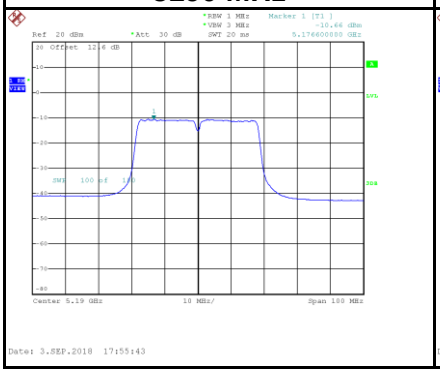
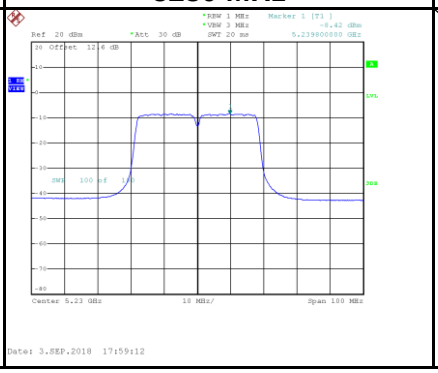
Test Mode	UNII-1_IEEE 802.11n (HT40)_ANT 1

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5190	-10.15	0.00	-10.15	16.29	Complies
5230	-9.26	0.00	-9.26	16.29	Complies

5190 MHz	5230 MHz	
		

Test Mode	UNII-1_IEEE 802.11n (HT40)_ANT 2

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5190	-10.66	0.00	-10.66	16.29	Complies
5230	-8.42	0.00	-8.42	16.29	Complies

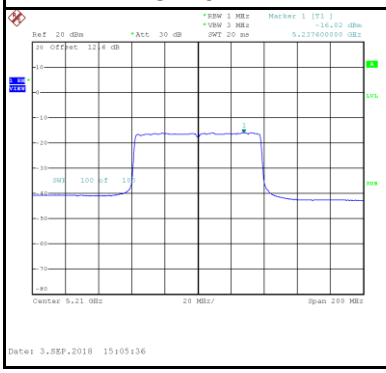
5190 MHz	5230 MHz	
		

Test Mode	UNII-1_IEEE 802.11n (HT40)_Total

Frequency	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5190	-7.39	16.29	Complies
5230	-5.81	16.29	Complies

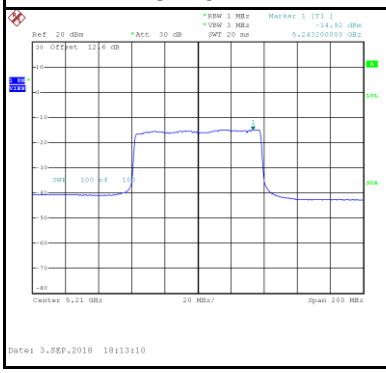
Test Mode	UNII-1_IEEE 802.11ac (VHT80)_ANT 1

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5210	-16.02	0.00	-16.02	16.29	Complies

5210 MHz		
		

Test Mode	UNII-1_IEEE 802.11ac (VHT80)_ANT 2

Frequency	Power Density (dBm/MHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5210	-14.92	0.00	-14.92	16.29	Complies

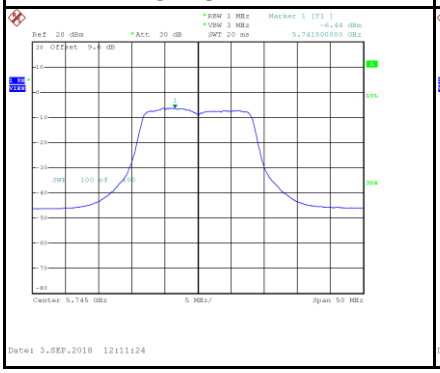
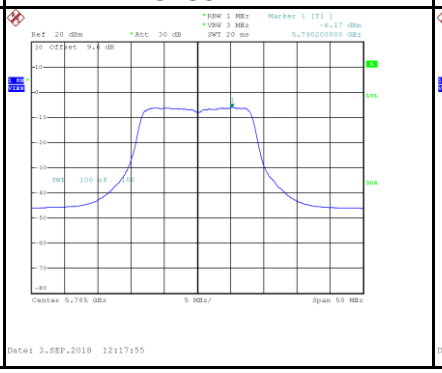
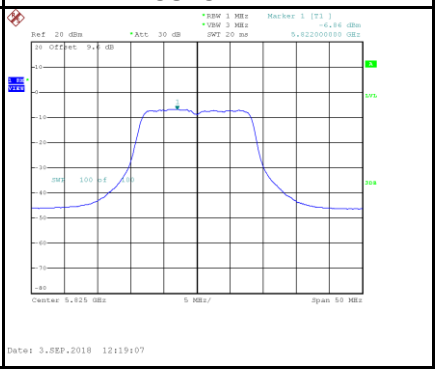
5210 MHz		
		

Test Mode	UNII-1_IEEE 802.11ac (VHT80)_Total

Frequency	Power Density + Duty Factor (dBm/MHz)	Max. Limit (dBm)	Result
5210	-12.42	16.29	Complies

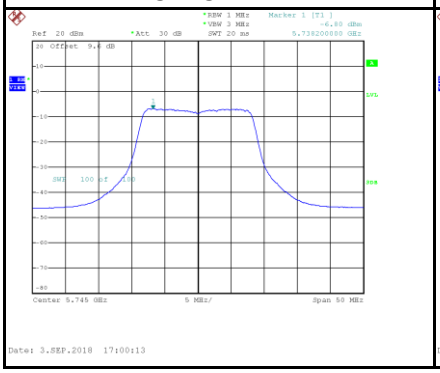
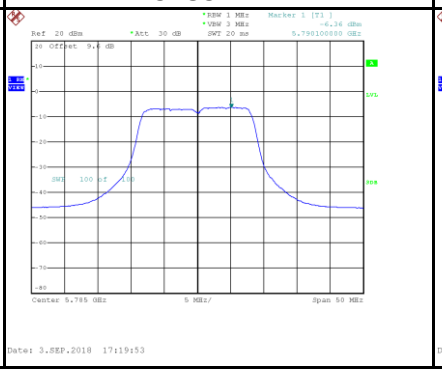
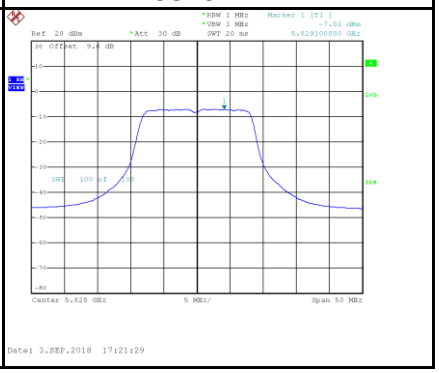
Test Mode	UNII-3_IEEE 802.11a_ANT 1

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5745	-6.44	0.00	-6.44	29.29	Complies
5785	-6.17	0.00	-6.17	29.29	Complies
5825	-6.86	0.00	-6.86	29.29	Complies

5745 MHz	5785 MHz	5825 MHz
		

Test Mode	UNII-3_IEEE 802.11a_ANT 2

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5745	-6.80	0.00	-6.80	29.29	Complies
5785	-6.36	0.00	-6.36	29.29	Complies
5825	-7.02	0.00	-7.02	29.29	Complies

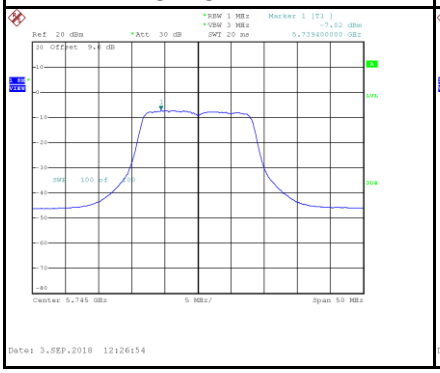
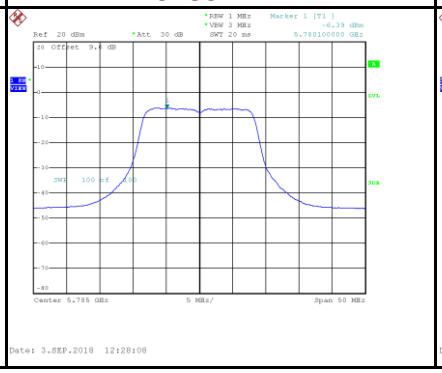
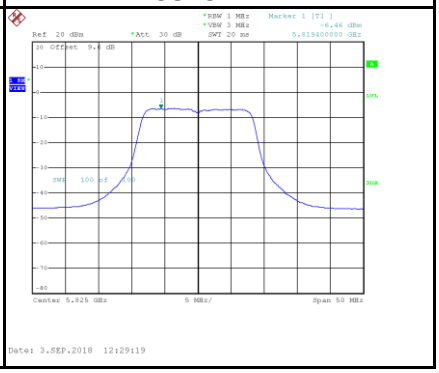
5745 MHz	5785 MHz	5825 MHz
		

Test Mode	UNII-3_IEEE 802.11a_Total

Frequency	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5745	-3.61	29.29	Complies
5785	-3.25	29.29	Complies
5825	-3.93	29.29	Complies

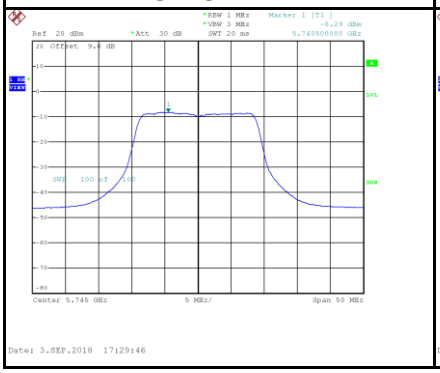
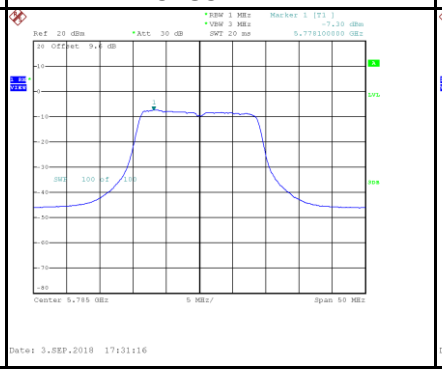
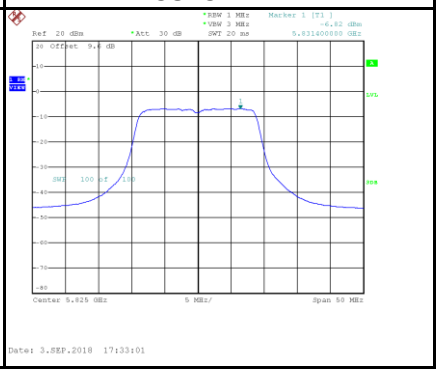
Test Mode	UNII-3_IEEE 802.11n (HT20)_ANT 1

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5745	-7.02	0.00	-7.02	29.29	Complies
5785	-6.39	0.00	-6.39	29.29	Complies
5825	-6.46	0.00	-6.46	29.29	Complies

5745 MHz	5785 MHz	5825 MHz
		

Test Mode	UNII-3_IEEE 802.11n (HT20)_ANT 2

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5745	-8.29	0.00	-8.29	29.29	Complies
5785	-7.30	0.00	-7.30	29.29	Complies
5825	-6.82	0.00	-6.82	29.29	Complies

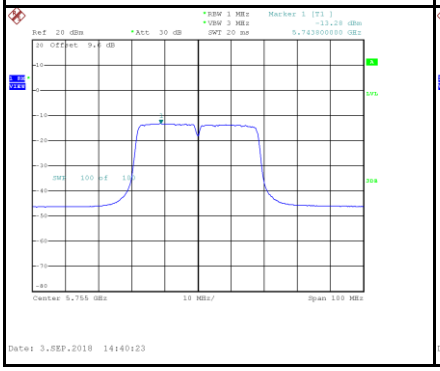
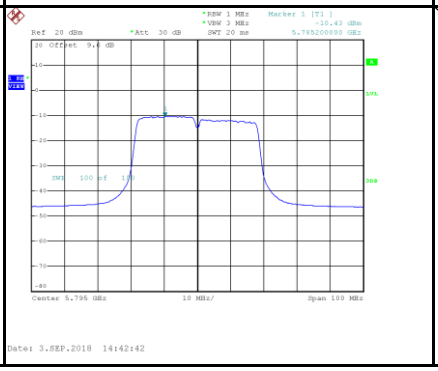
5745 MHz	5785 MHz	5825 MHz
		

Test Mode	UNII-3_IEEE 802.11n (HT20)_Total

Frequency	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5745	-4.60	29.29	Complies
5785	-3.81	29.29	Complies
5825	-3.63	29.29	Complies

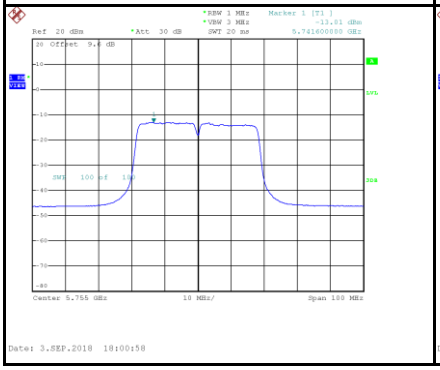
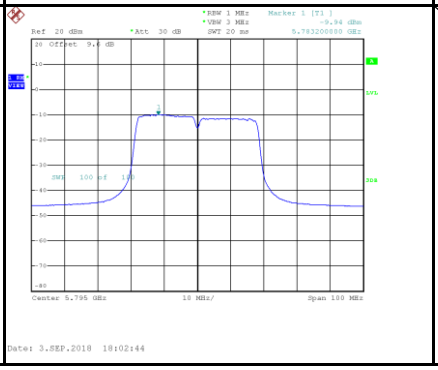
Test Mode	UNII-3_IEEE 802.11n (HT40)_ANT 1

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5755	-13.28	0.00	-13.28	29.29	Complies
5795	-10.43	0.00	-10.43	29.29	Complies

5755 MHz	5795 MHz	
		

Test Mode	UNII-3_IEEE 802.11n (HT40)_ANT 2

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5755	-13.01	0.00	-13.01	29.29	Complies
5795	-9.94	0.00	-9.94	29.29	Complies

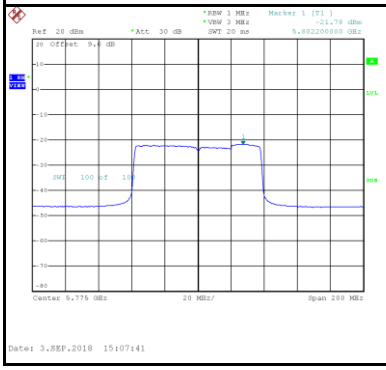
5755 MHz	5795 MHz	
		

Test Mode	UNII-3_IEEE 802.11n (HT40)_Total

Frequency	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5755	-10.13	29.29	Complies
5795	-7.17	29.29	Complies

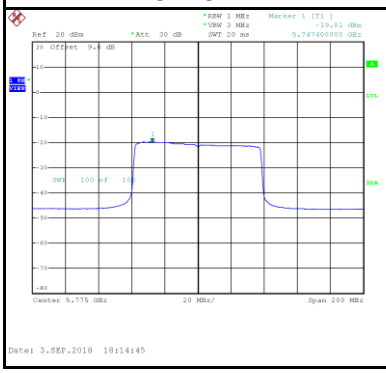
Test Mode	UNII-3_IEEE 802.11ac (VHT80)_ANT 1

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5775	-21.78	0.00	-21.78	29.29	Complies

5775 MHz		
		

Test Mode	UNII-3_IEEE 802.11ac (VHT80)_ANT 2

Frequency	Power Density (dBm/500 kHz)	Duty Factor (dB)	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5775	-19.81	0.00	-19.81	29.29	Complies

5775 MHz		
		

Test Mode	UNII-3_IEEE 802.11ac (VHT80)_Total

Frequency	Power Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm)	Result
5775	-17.67	29.29	Complies

APPENDIX H FREQUENCY STABILITY

CONTINUE ON NEXT PAGE

Test Mode	UNII-1

Voltage vs. Frequency Stability

Operating Frequency	5180
Voltage (V)	Measurement Frequency (MHz)
132	5179.9480
120	5179.9484
108	5179.9496
Maximum Deviation (MHz)	0.0520
Maximum Deviation (ppm)	10.0386

Temperature vs. Frequency Stability

Operating Frequency	5180
Temperature (°C)	Measurement Frequency (MHz)
0	5179.9528
10	5179.9532
20	5179.9540
30	5179.9536
40	5179.9544
50	5179.9540
55	5179.9508
Maximum Deviation (MHz)	0.0492
Maximum Deviation (ppm)	9.4981

Test Mode	UNII-3

Voltage vs. Frequency Stability

Operating Frequency	5745
Voltage (V)	Measurement Frequency (MHz)
132	5745.0000
120	5744.9420
108	5744.9480
Maximum Deviation (MHz)	5744.9480
Maximum Deviation (ppm)	0.0580

Temperature vs. Frequency Stability

Operating Frequency	5745
Temperature (°C)	Measurement Frequency (MHz)
0	5744.9484
10	5744.9492
20	5744.9492
30	5744.9496
40	5744.9496
50	5744.9496
55	5744.9488
Maximum Deviation (MHz)	0.0516
Maximum Deviation (ppm)	8.9817

End of Test Report