FCC Radio Test Report

FCC ID: TX2-RTL8822CE

This report concerns: ☒**Class II Change**

Project No.	:	1812C003B
Equipment	:	802.11a/b/g/n/ac RTL8822CE Combo module
Test Model	:	RTL8822CE
Series Model	:	N/A
Applicant	:	Realtek Semiconductor Corp.
Address	:	No.2,Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan

Date of Receipt	:	Jul. 01, 2019
Date of Test	:	Jul. 03, 2019 ~ Aug. 02, 2019
Issued Date	:	Aug. 02, 2019
Tested by	:	BTL Inc.

Testing Engineer : Welly Zhou
(Welly Zhou)

Technical Manager : Steven Lu
(Steven Lu)

Authorized Signatory : Ethan Ma
(Ethan Ma)

BTL INC.

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

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

Certificate #5123.02

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 NIST, A2LA, 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/IEC 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 which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and 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.
Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

Table of Contents

Page

REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Aug. 02, 2019

1. GENERAL SUMMARY

Equipment	:	802.11a/b/g/n/ac RTL8822CE Combo module
Brand Name	:	Realtek
Test Model	:	RTL8822CE
Series Model	:	N/A
Applicant	:	Realtek Semiconductor Corp.
Manufacturer	:	Realtek Semiconductor Corp.
Address	:	No.2,Innovation Road II, Hsinchu Science Park, Hsinchu 300,Taiwan
Date of Test	:	Jul. 03, 2019 ~ Aug. 02, 2019
Test Sample	:	Engineering Sample No.: DG190701138
Standard(s)	:	FCC Part15, Subpart E(15.407) ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc..
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-4-1812C003B) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of A2LA according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

Test results included in this report are only for the UNII-1, UNII-2A, UNII-2C and UNII-3 part.

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart E(15.407)				
Standard(s) Section	**Test Item**	**Test Result**	**Judgement**	**Remark**
15.207 15.407(b)	AC Power Line Conducted Emissions	------	PASS	------
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	Appendix A Appendix B	PASS	------
15.407(a) 15.407(e)	Spectrum Bandwidth	------	PASS	------
15.407(a)	Maximum Output Power	------	PASS	------
15.407(a)	Power Spectral Density	------	PASS	------
15.407(g)	Frequency Stability	------	PASS	------
15.203	Antenna Requirements	------	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.

(3) For UNII-1 this device was functioned as a
☐ Access point device ☒ Client device

(4) In this report only the radiated spurious emissions were evaluated and recorded. For the test results of all other test items please refer to module test report.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	30MHz ~ 200MHz	V	4.88
		30MHz ~ 200MHz	H	4.14
		200MHz ~ 1,000MHz	V	4.62
		200MHz ~ 1,000MHz	H	4.80
		1GHz ~ 6GHz	-	4.58
		6GHz ~ 18GHz	-	5.18
		18 ~ 26.5 GHz	-	3.80
		26.5 ~ 40 GHz	-	4.30

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	802.11a/b/g/n/ac RTL8822CE Combo module
Brand Name	Realtek
Test Model	RTL8822CE
Series Model	N/A
Model Difference(s)	N/A
Power Source	1# DC voltage supplied from AC/DC adapter. 1) Manufacturer / Model: Chicony / ADLX65CCGE2A 2) Manufacturer / Model: Delta / ADLX65CDGE2A 3) Manufacturer / Model: Lite-ON / ADLX65CLGE2A 4) Manufacturer / Model: Chicony / ADLX65NCC3A 5) Manufacturer / Model: Delta / ADLX65NDC3A 6) Manufacturer / Model: Lite-ON / ADLX65NLC3A 2# Rechargeable Li-ion Battery supplied. 1) Manufacturer / Model: Simplo / L18M4PF5 2) Manufacturer / Model: Simplo / L18M3PF8 3) Manufacturer / Model: LGC / L18L4PF0 4) Manufacturer / Model: LGC / L18L3PF4
Power Rating	1# For adapter: I/P: 100-240V~1.8A/1.5A/1.7A/1.8A max. 50-60Hz O/P: 20V⎓3.25A 2# For battery: 1) 15.2V⎓Typical Capacity 4610mAh / 70Wh, Rated Capacity 4480mAh / 68 Wh 2) 11.4V⎓ Typical Capacity 4610mAh / 52.5Wh, Rated Capacity 4480mAh / 51 Wh 3) 15.12V⎓ Typical Capacity 4630mAh / 70Wh, Rated Capacity 4497mAh / 68 Wh 4) 11.34V⎓ Typical Capacity 4630mAh / 52.5Wh, Rated Capacity 4498mAh / 51 Wh
Operation Frequency	UNII-1: 5150 MHz~5250 MHz UNII-2A: 5250 MHz~5350 MHz UNII-2C: 5470 MHz~5725 MHz UNII-3: 5725 MHz~5850 MHz
Modulation Type	OFDM
Bit Rate of Transmitter	Up to 866.7 Mbps

Note:

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

2. Channel List:

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
UNII-1		UNII-1		UNII-1	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
UNII-2A		UNII-2A		UNII-2A	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
UNII-2C		UNII-2C		UNII-2C	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
UNII-3		UNII-3		UNII-3	
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:

Ant. Part Number (main & aux parts)	Type	Antenna Mfr.	Antenna Gain(dBi)				
			2.4G	5.15G-5.25G	5.25G-5.35G	5.47G-5.725G	5.725G-5.85G
NB8606	PIFA	South Star	3.31 3.81	3.14 2.13	3.11 2.21	2.74 2.42	2.35 2.23
N/A	PIFA	INPAQ	1.26 1.42	0.39 0.57	0.01 1.25	2.27 1.24	2.45 1.00

Note:

(1) Both groups of antennas were evaluated, the worst was the South Star, and recorded in the test report.

3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

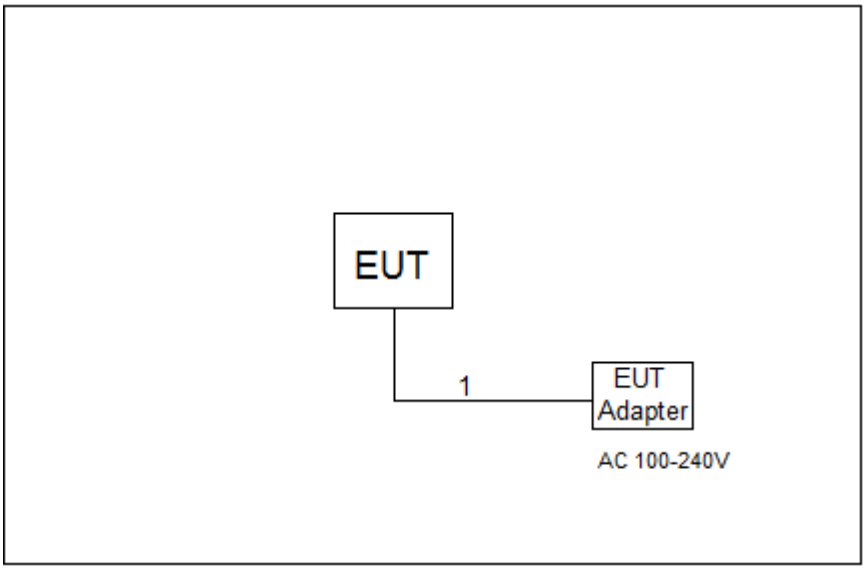
Pretest Mode	Description
Mode 1	TX A Mode / CH36 (UNII-1)
Mode 2	TX AC (VHT20) Mode / CH64 (UNII-2A)
Mode 3	TX AC (VHT40) Mode / CH102 (UNII-2C)
Mode 4	TX AC (VHT80) Mode / CH155 (UNII-3)

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

Radiated emissions test – Below 1G	
Final Test Mode	Description
Mode 1	TX A Mode / CH36 (UNII-1)

Radiated emissions test – Above 1G	
Final Test Mode	Description
Mode 1	TX A Mode / CH36 (UNII-1)
Mode 2	TX AC (VHT20) Mode / CH64 (UNII-2A)
Mode 3	TX AC (VHT40) Mode / CH102 (UNII-2C)
Mode 4	TX AC (VHT80) Mode / CH155 (UNII-3)

3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.4 SUPPORT UNITS

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	2.0m

4. RADIATED EMISSIONS TEST

4.1 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
Above 960	500	3

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequency (MHz)	EIRP Limit (dBm/MHz)	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 15.407(b)(4)(i), 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.

4.2 TEST PROCEDURE

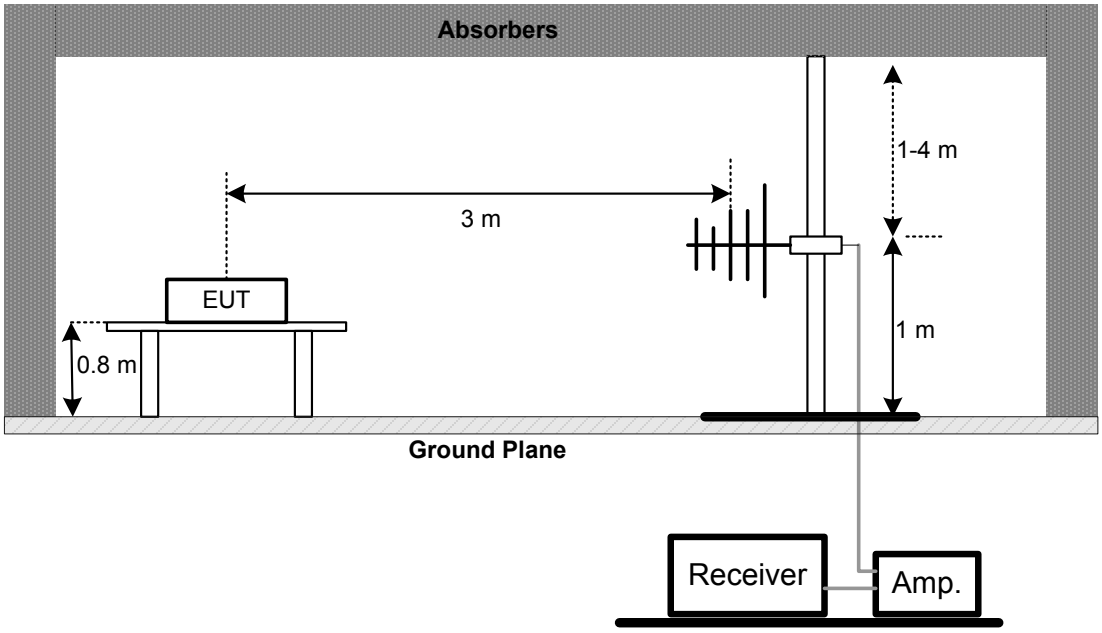
a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
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 1 GHz)
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 1 GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.3 DEVIATION FROM TEST STANDARD

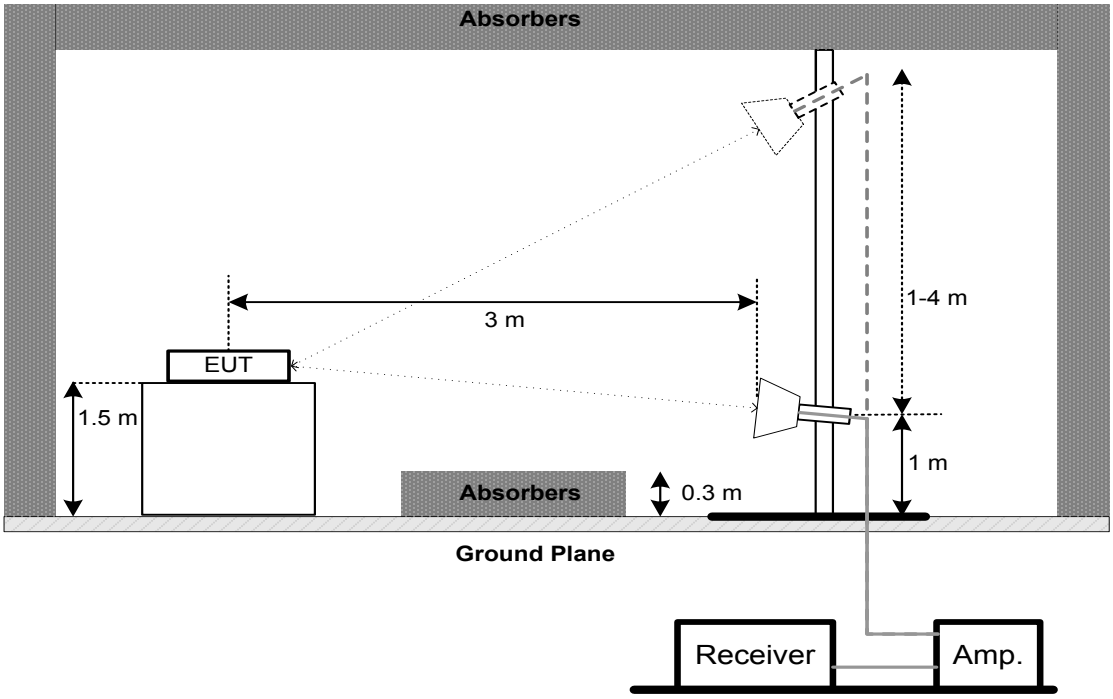
No deviation

4.4 TEST SETUP

30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

4.6 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 68% Test Voltage: AC 120V/60Hz

4.7 TEST RESULTS - 30 MHz TO 1000 MHz

Please refer to the APPENDIX A.

4.8 TEST RESULTS - ABOVE 1000 MHz

Please refer to the APPENDIX B.

Remark:

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

5. MEASUREMENT INSTRUMENTS LIST

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 09, 2020
2	Amplifier	HP	8447D	2944A09673	Aug. 11, 2019
3	Receiver	Agilent	N9038A	MY52130039	Aug. 11, 2019
4	Cable	emci	LMR-400(30MHz-1GHz)(8m+5m)	N/A	May 24, 2020
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

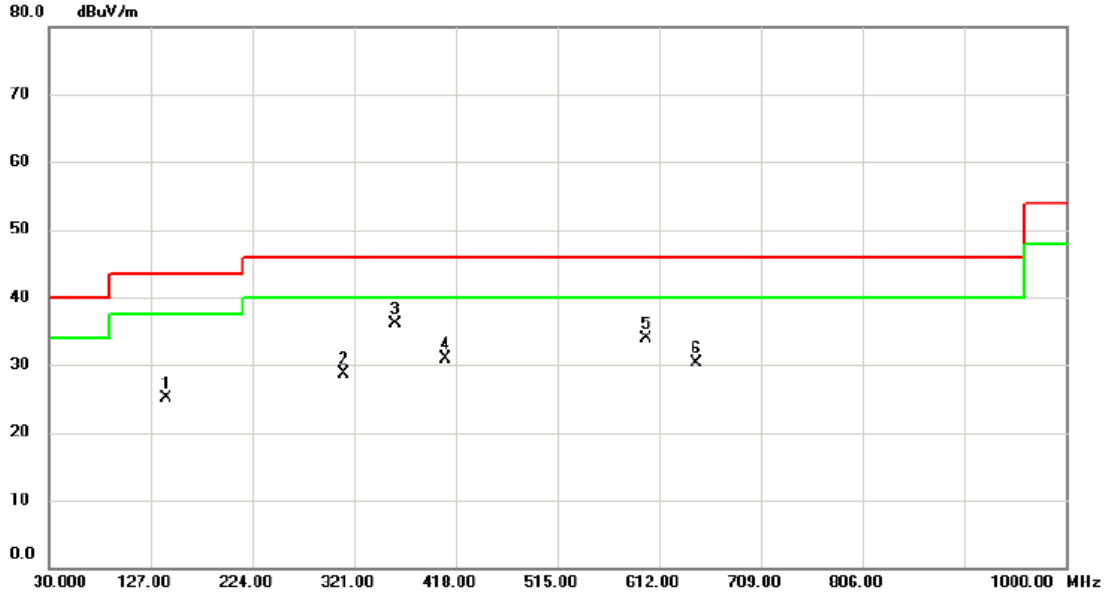
Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 09, 2020
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 23, 2020
3	Amplifier	Agilent	8449B	3008A02333	Mar. 10, 2020
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 10, 2020
5	Receiver	Agilent	N9038A	MY52130039	Aug. 11, 2019
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	mitron	B10-01-01-12M	18072744	Jun. 29, 2020
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

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

APPENDIX A - RADIATED EMISSION - 30 MHZ TO 1 GHZ

Test Mode:	TX A Mode Channel 36

Vertical

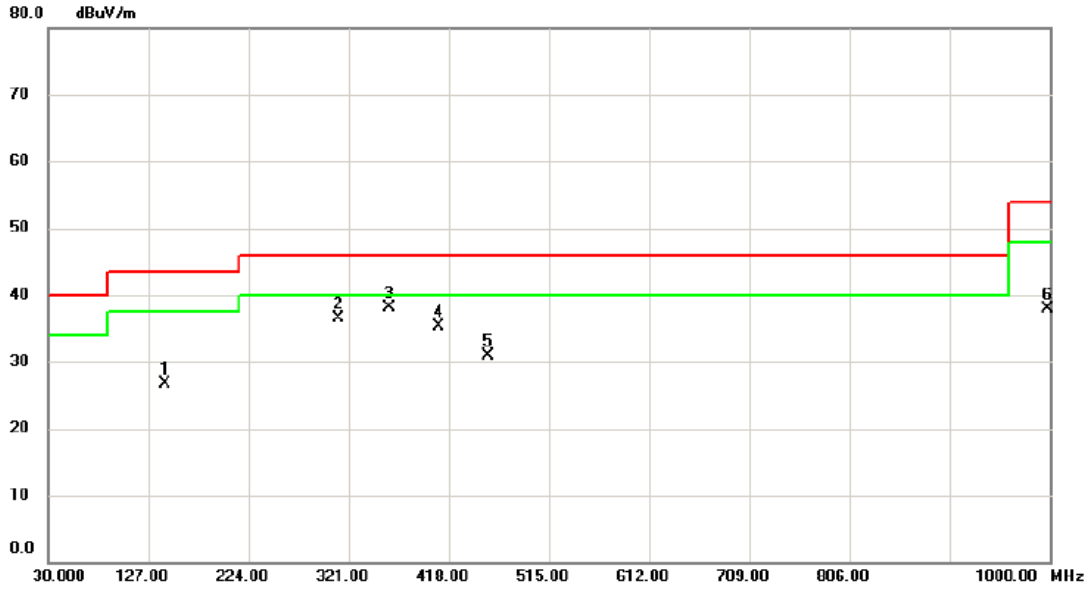


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		141.550	37.94	-12.78	25.16	43.50	-18.34	peak	
2		311.785	39.95	-11.29	28.66	46.00	-17.34	peak	
3	*	359.800	46.52	-10.42	36.10	46.00	-9.90	peak	
4		407.815	40.16	-9.24	30.92	46.00	-15.08	peak	
5		599.875	39.68	-5.74	33.94	46.00	-12.06	peak	
6		647.890	34.95	-4.72	30.23	46.00	-15.77	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Test Mode:	TX A Mode Channel 36

Horizontal



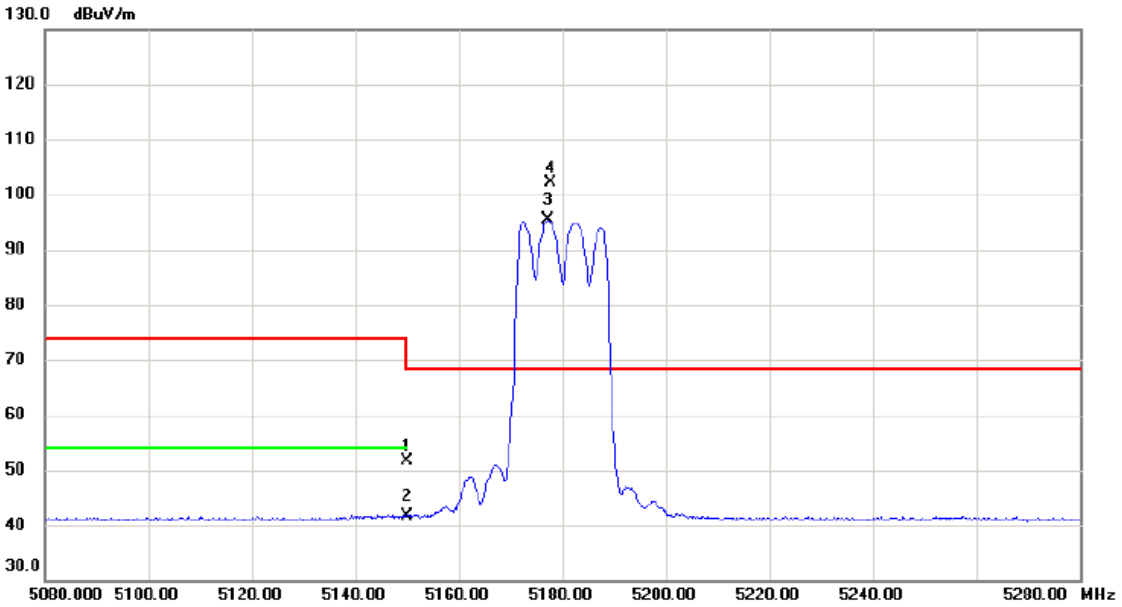
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		143.490	39.32	-12.67	26.65	43.50	-16.85	peak	
2		311.785	47.75	-11.29	36.46	46.00	-9.54	peak	
3	*	359.800	48.53	-10.42	38.11	46.00	-7.89	peak	
4		407.815	44.46	-9.24	35.22	46.00	-10.78	peak	
5		455.830	38.89	-8.03	30.86	46.00	-15.14	peak	
6		998.060	37.85	0.03	37.88	54.00	-16.12	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX B - RADIATED EMISSION - ABOVE 1000 MHZ

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5180 MHz

Vertical

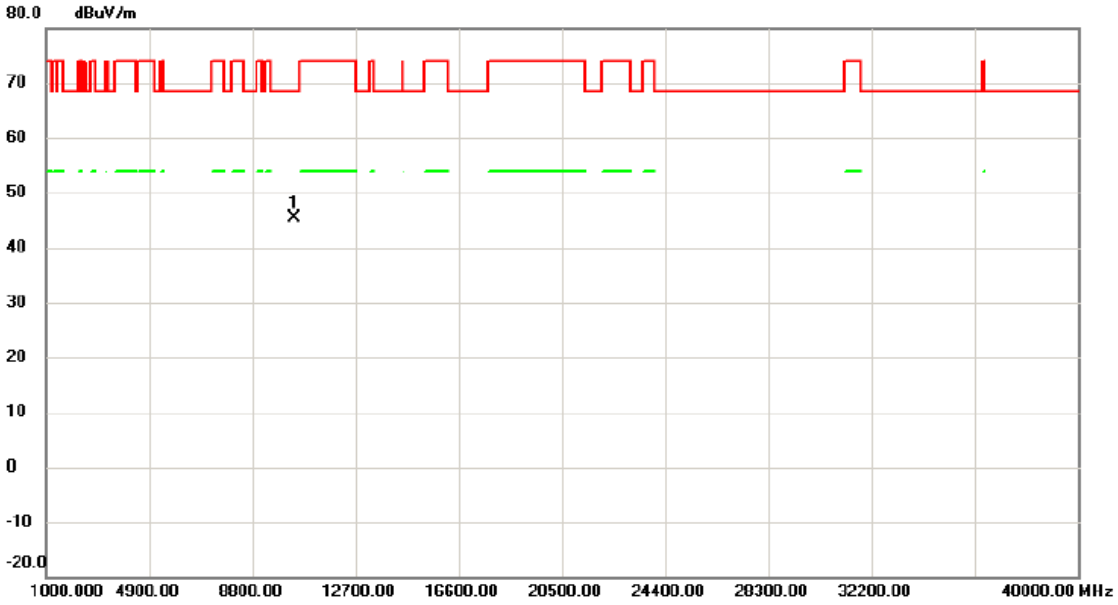


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	37.34	14.31	51.65	74.00	-22.35	peak	
2		5150.000	27.35	14.31	41.66	54.00	-12.34	AVG	
3	X	5177.100	80.89	14.38	95.27	68.30	26.97	AVG	No Limit
4	*	5177.600	87.82	14.38	102.20	68.30	33.90	peak	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5180 MHz

Vertical

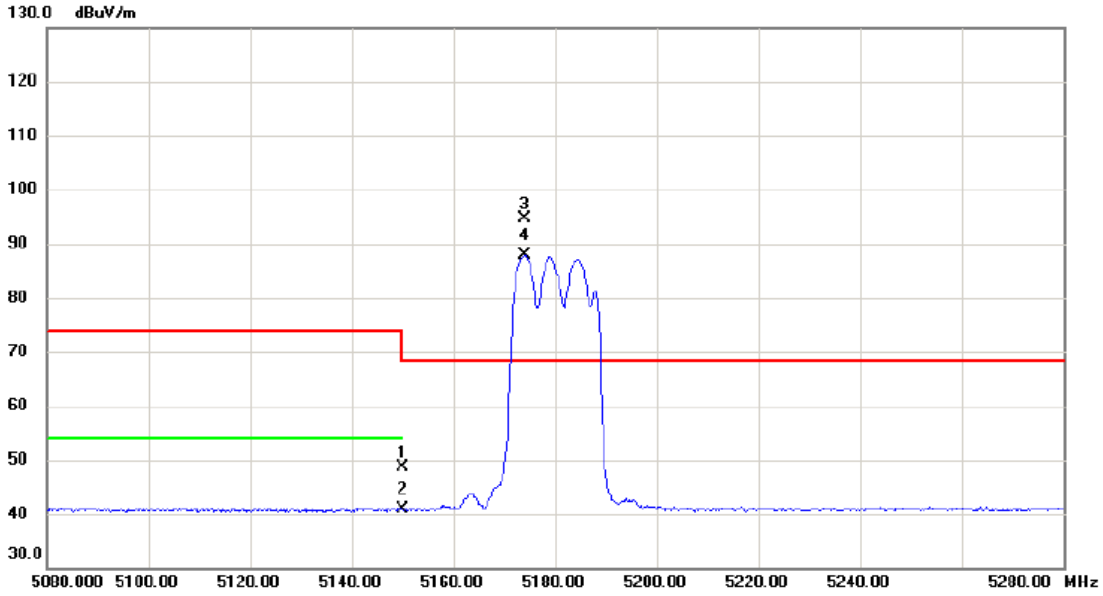


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10369.860	34.11	11.32	45.43	68.30	-22.87	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5180 MHz

Horizontal

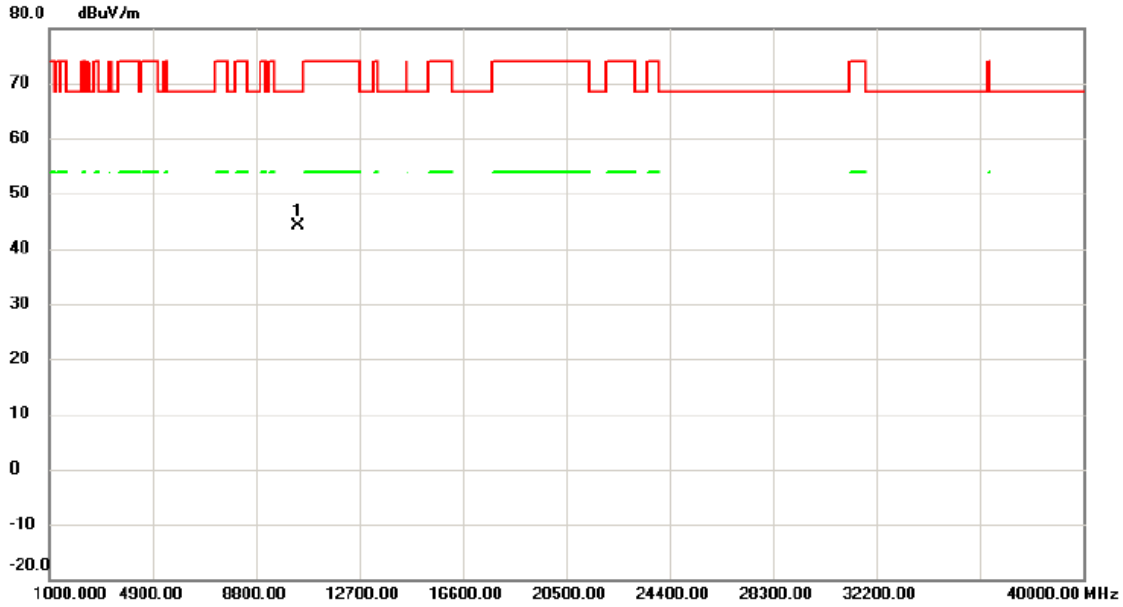


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5150.000	34.31	14.31	48.62	74.00	-25.38	peak	
2		5150.000	26.50	14.31	40.81	54.00	-13.19	AVG	
3	*	5174.000	80.31	14.37	94.68	68.30	26.38	peak	No Limit
4	X	5174.000	73.47	14.37	87.84	68.30	19.54	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-1_TX A Mode 5180 MHz

Horizontal

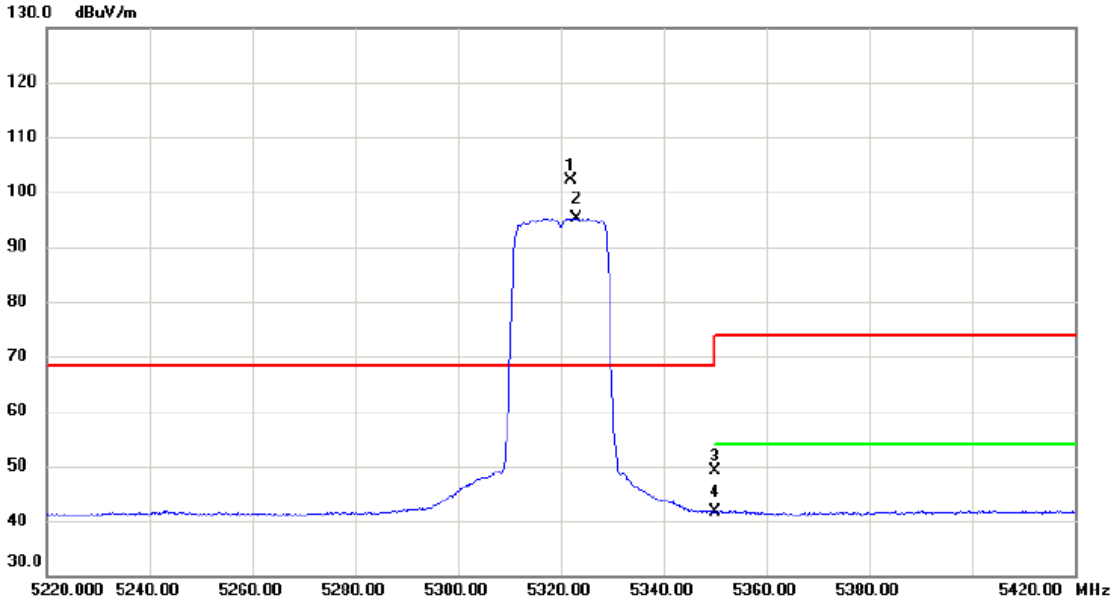


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10360.750	32.90	11.29	44.19	68.30	-24.11	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2A _TX AC (VHT20) Mode 5320 MHz

Vertical

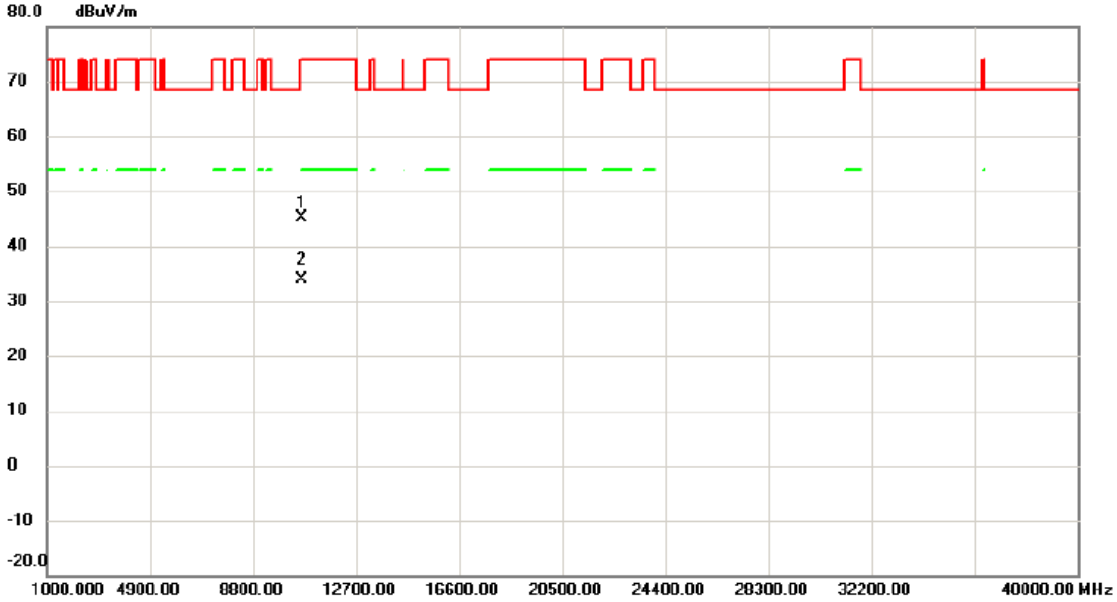


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	5321.900	87.32	14.72	102.04	68.30	33.74	peak	No Limit
2	X	5323.100	80.50	14.72	95.22	68.30	26.92	AVG	No Limit
3		5350.000	34.32	14.79	49.11	74.00	-24.89	peak	
4		5350.000	26.88	14.79	41.67	54.00	-12.33	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2A _TX AC (VHT20) Mode 5320 MHz

Vertical

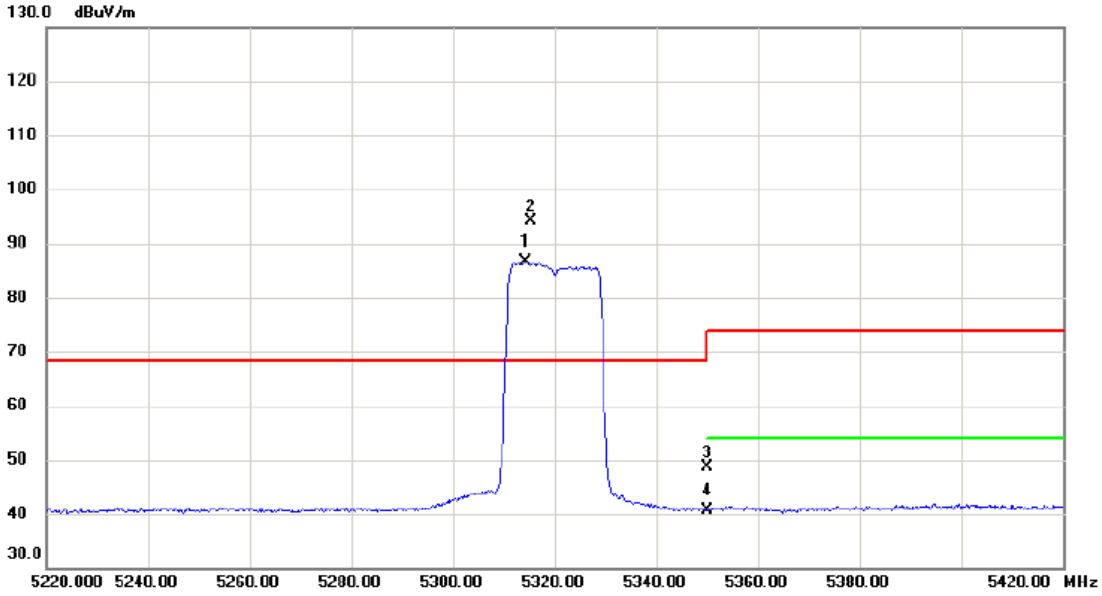


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		10634.340	33.54	11.56	45.10	74.00	-28.90	peak	
2	*	10638.840	22.42	11.56	33.98	54.00	-20.02	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2A _TX AC (VHT20) Mode 5320 MHz

Horizontal

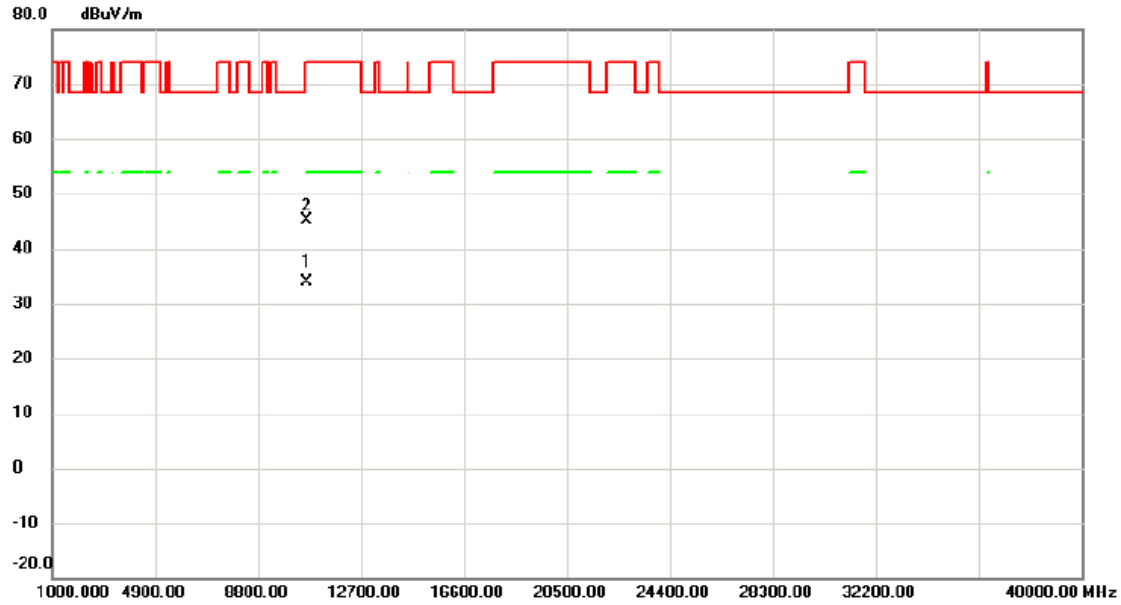


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5314.400	71.85	14.70	86.55	68.30	18.25	AVG	No Limit
2	*	5315.300	79.50	14.71	94.21	68.30	25.91	peak	No Limit
3		5350.000	33.73	14.79	48.52	74.00	-25.48	peak	
4		5350.000	25.91	14.79	40.70	54.00	-13.30	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2A _TX AC (VHT20) Mode 5320 MHz

Horizontal

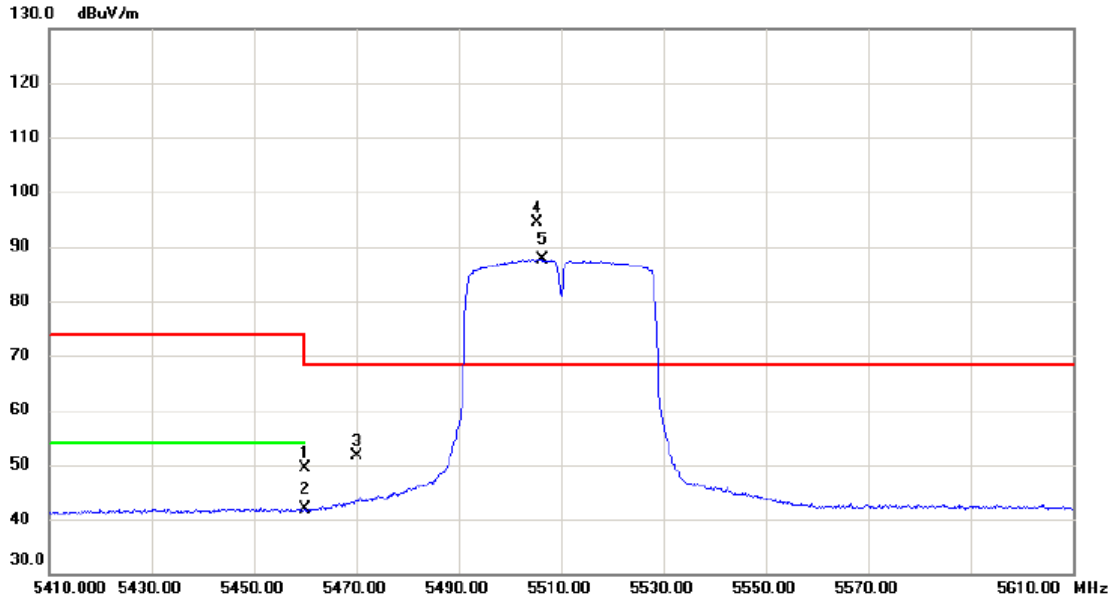


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	10638.290	22.34	11.56	33.90	54.00	-20.10	AVG	
2		10643.700	33.45	11.56	45.01	74.00	-28.99	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2C _TX AC (VHT40) Mode 5510 MHz

Vertical

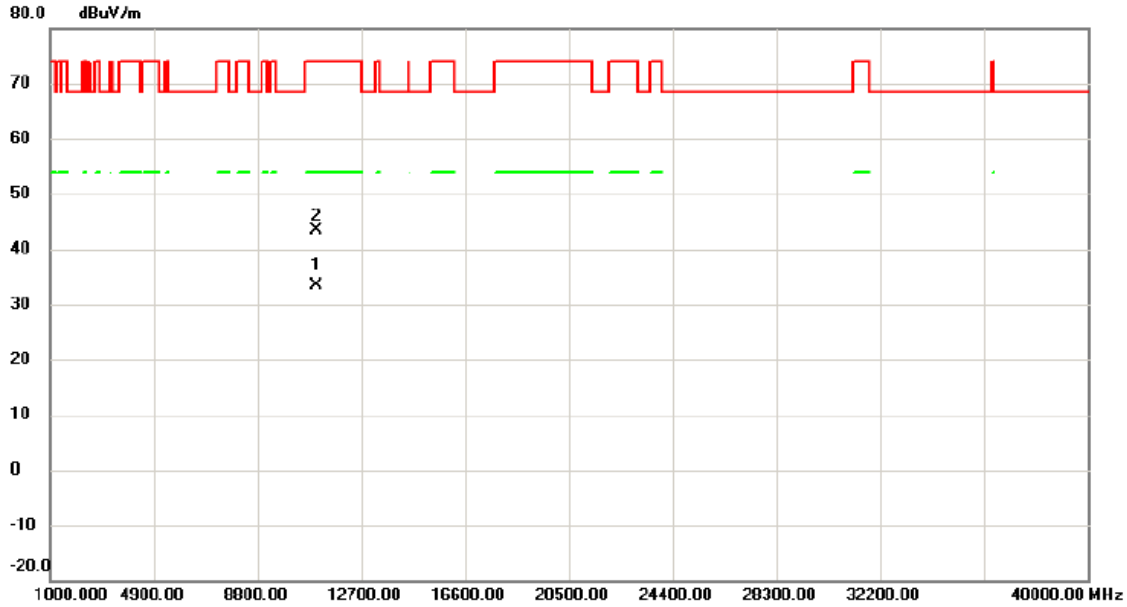


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5460.000	34.22	15.06	49.28	74.00	-24.72	peak	
2		5460.000	26.74	15.06	41.80	54.00	-12.20	AVG	
3		5470.000	36.51	15.08	51.59	68.30	-16.71	peak	
4	*	5505.400	79.23	15.15	94.38	68.30	26.08	peak	No Limit
5	X	5506.500	72.49	15.15	87.64	68.30	19.34	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2C _TX AC (VHT40) Mode 5510 MHz

Vertical

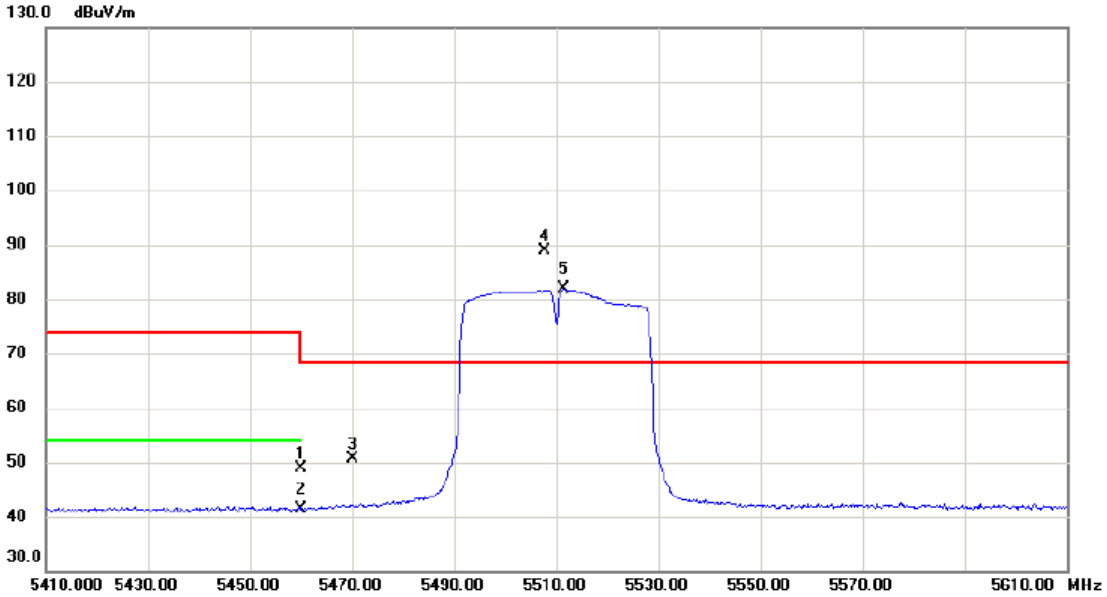


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11017.210	21.65	11.63	33.28	54.00	-20.72	AVG	
2		11027.890	31.82	11.64	43.46	74.00	-30.54	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2C _TX AC (VHT40) Mode 5510 MHz

Horizontal

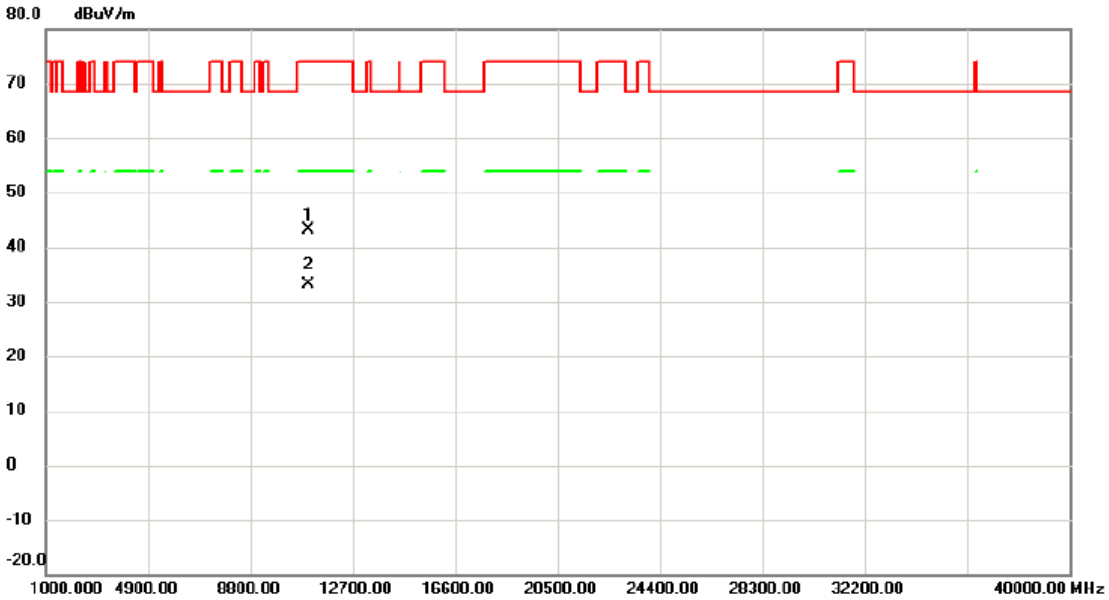


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5460.000	33.70	15.06	48.76	74.00	-25.24	peak	
2		5460.000	26.43	15.06	41.49	54.00	-12.51	AVG	
3		5470.000	35.58	15.08	50.66	68.30	-17.64	peak	
4	*	5507.800	73.72	15.16	88.88	68.30	20.58	peak	No Limit
5	X	5511.500	66.64	15.16	81.80	68.30	13.50	AVG	No Limit

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-2C _TX AC (VHT40) Mode 5510 MHz

Horizontal

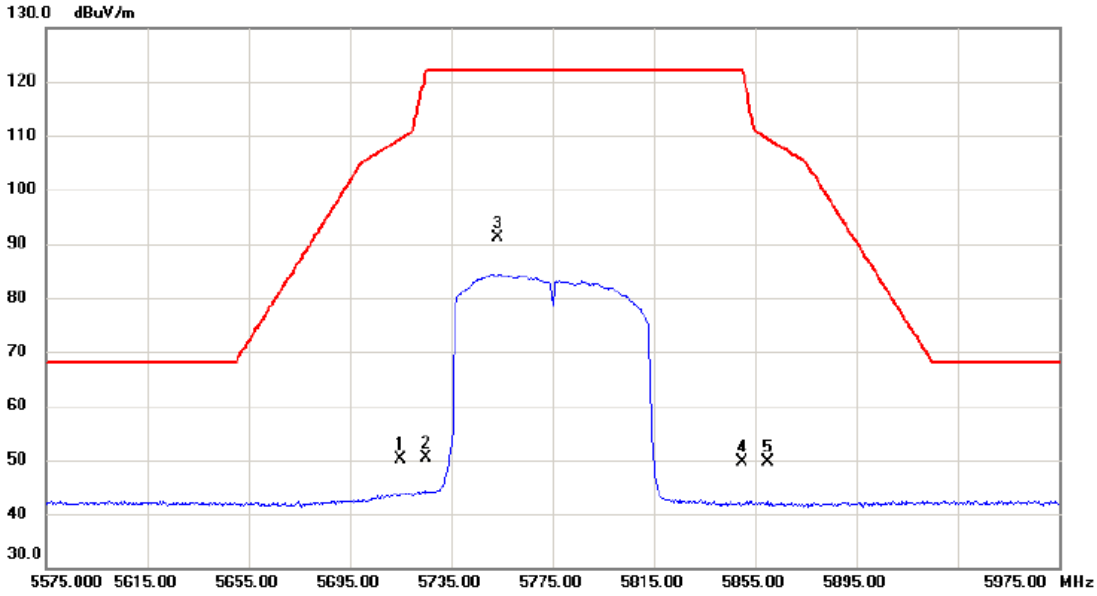


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11021.330	31.61	11.63	43.24	74.00	-30.76	peak	
2	*	11025.800	21.41	11.64	33.05	54.00	-20.95	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3 _TX AC (VHT80) Mode 5775 MHz

Vertical

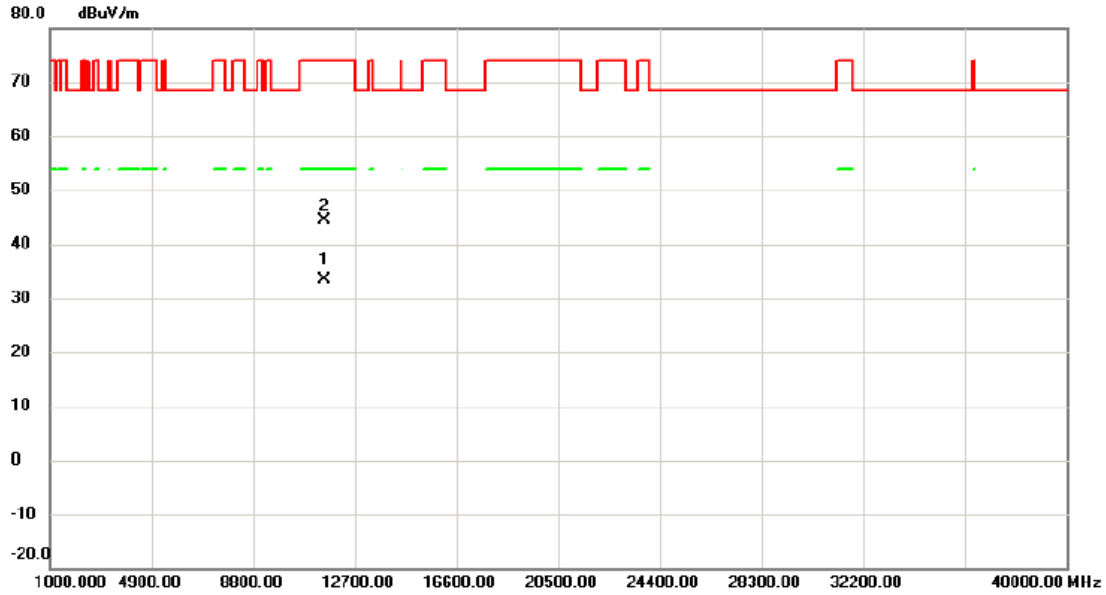


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5715.000	34.45	15.65	50.10	109.40	-59.30	peak	
2		5725.000	34.67	15.67	50.34	122.20	-71.86	peak	
3	*	5753.200	75.39	15.75	91.14	122.20	-31.06	peak	No Limit
4		5850.000	33.63	15.98	49.61	122.20	-72.59	peak	
5		5860.000	33.69	16.00	49.69	109.40	-59.71	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3 _TX AC (VHT80) Mode 5775 MHz

Vertical

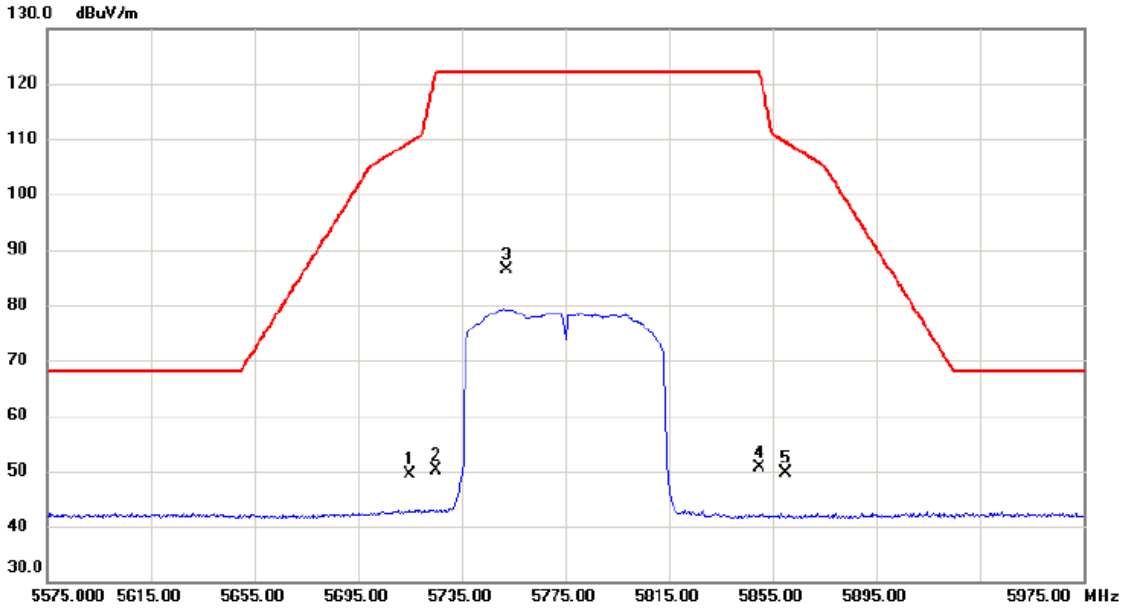


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	11542.600	21.21	12.12	33.33	54.00	-20.67	AVG	
2		11551.030	32.30	12.12	44.42	74.00	-29.58	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3 _TX AC (VHT80) Mode 5775 MHz

Horizontal

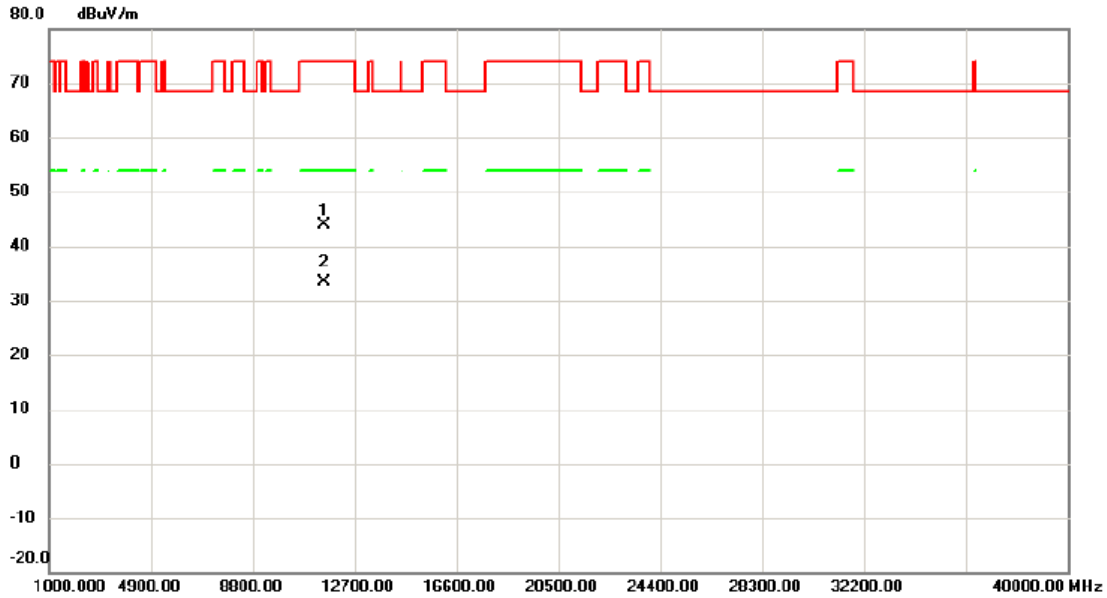


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5715.000	33.66	15.65	49.31	109.40	-60.09	peak	
2		5725.000	34.49	15.67	50.16	122.20	-72.04	peak	
3	*	5752.200	70.73	15.74	86.47	122.20	-35.73	peak	No Limit
4		5850.000	34.69	15.98	50.67	122.20	-71.53	peak	
5		5860.000	33.72	16.00	49.72	109.40	-59.68	peak	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

Orthogonal Axis	X
Test Mode	UNII-3 _TX AC (VHT80) Mode 5775 MHz

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11544.790	31.66	12.12	43.78	74.00	-30.22	peak	
2	*	11547.760	21.38	12.12	33.50	54.00	-20.50	AVG	

REMARKS:
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

End of Test Report