FCC RADIO TEST REPORT
FCC ID: 2ADK2R8192EU5

Product： WIFI Modular

Trade Name： N/A

Model Name： HL-R8192EU5

Serial Model： N/A

Report No.： BZT-2014NT1101331F

Prepared for

Shenzhen Shun Yuan Sheng Electronic Technology Co., Ltd.

No. 78　Longsheng Road West Longsheng community　Dalang street Longhua District　Shenzhen City

Prepared by

BZT Testing Technology Co., Ltd

Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

TEST RESULT CERTIFICATION

Applicant's name	Shenzhen Shun Yuan Sheng Electronic Technology Co., Ltd.
Address	No. 78 Longsheng Road West Longsheng community Dalang stree Longhua District Shenzhen City
Manufacture's Name	Shenzhen Shun Yuan Sheng Electronic Technology Co., Ltd.
Address	No. 78 Longsheng Road West Longsheng community Dalang stree Longhua District Shenzhen City

Product description

Product name	WIFI Modular
Model and/or type reference	HL-R8192EU5
Serial Model	N/A
DIFF	N/A
Standards	FCC Part15.247
Test procedure	ANSI C63.4-2003

This device described above has been tested by BZT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Date (s) of performance of tests	02 November. 2014 ~09 November. 2014
Date of Issue	11 November. 2014
Test Result	**Pass**

Testing Engineer : Lynn Chen

(Lynn Chen)

Technical Manager : Carlen

(Carlen Liu)

Authorized Signatory : Tommy zhang

(Tommy zhang)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (a)(2)	6dB Bandwidth	PASS	
15.247 (b)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (d)	Power Spectral Density	PASS	
15.205	Band Edge Emission	PASS	
15.203	Antenna Requirement	PASS	

NOTE:

(1)” N/A” denotes test is not applicable in this Test Report

1.1 TEST FACILITY

BZT Testing Technology Co., Ltd
Add.:1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC Registration No.: 701733

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>WIFI Modular</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>HL-R8192EU5</td></tr>
<tr><td>Serial Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a WIFI Modular
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n 20:2412~2462 MHz
802.11n 40: 2422~2452MHz</td></tr>
<tr><td>Modulation Type:</td><td>CCK/OFDM/DBPSK/DAPSK</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>802.11b:11/5.5/2/1 Mbps
802.11g:54/48/36/24/18/12/9/6Mbps
802.11n(20/40MHz):300/150/144.44/130/117/115.56/104/86.67/78/52/6.5 Mbps</td></tr>
<tr><td>Number Of Channel</td><td>802.11b/g/n20: 11CH
802.11n 40: 7CH</td></tr>
<tr><td>Antenna Designation:</td><td>Please see Note 3.</td></tr>
<tr><td>Peak Output Power(Conducted):</td><td>802.11b: 15.69 dBm (Max.)
802.11g: 14.92 dBm (Max.)
802.11n(20MHz): 17.09 dBm (Max.)
802.11n(40MHz): 15.33 dBm (Max.)</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>Antenna A gain:1 dbi
Antenna B gain:1 dbi</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Ratings</td><td>DC 5V for PC with AC 120V/60Hz</td></tr>
<tr><td>Adapter</td><td>N/A</td></tr>
<tr><td>Battery</td><td>N/A</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.

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

Channel List for 802.11n(40MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	06	2437	09	2452		
04	2427	07	2442				
05	2432	08	2447				

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	Integral Antenna	N/A	1	N/A
B	N/A	N/A	Integral Antenna	N/A	1	N/A

EUT has two antenna, port 1 and port2,port 1 and port 2 has simultaneously transmit WIFI, for simultaneously transmit WIFI only transmitter IEEE 802.11n HT20 and IEEE 802.11n HT40, simultaneously transmit WIFI only simultaneously the same model and same frequency, not support other simultaneously transmitter. Port 1 antenna and port 2 antenna see the EUT photo.

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n(20)CH1/ CH6/ CH11
Mode 4	802.11n(40) CH3/ CH6/ CH9
Mode 5	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11b CH1/ CH6/ CH11
Mode 2	802.11g CH1/ CH6/ CH11
Mode 3	802.11n CH1/ CH6/ CH11
Mode 4	802.11n(40) CH3/ CH6/ CH9
Mode 5	Link Mode

Note:

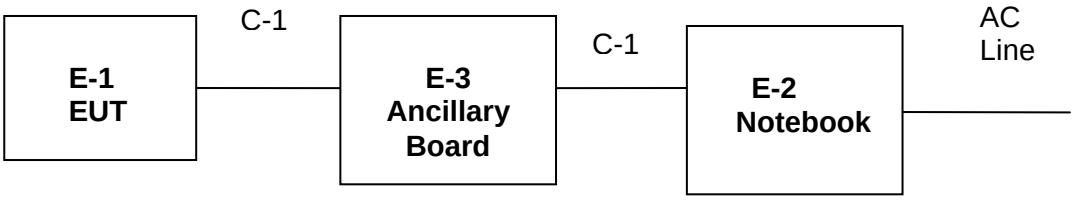
(1) The measurements are performed at the highest, middle, lowest available channels.

(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

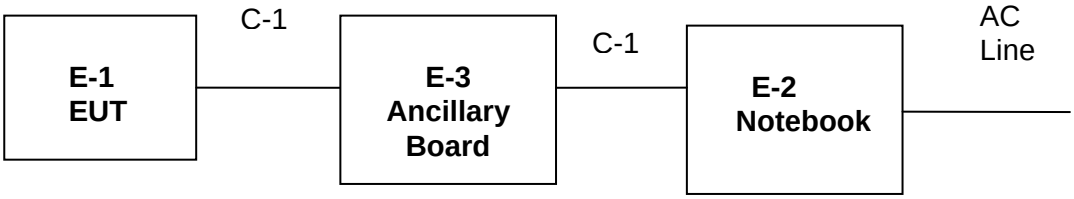
(3) According exploratory test, EUT will have maximum output power in those data rate. so those data rate were used for all test.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Measurement:



Radiated Measurement:



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	WIFI Modular	N/A	HL-R8192EU5	N/A	EUT
E-2	Notebook	Acer	4552G	N/A	
E-3	Ancillary Board	N/A	N/A	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	N/A	USB port
C-2	NO	NO	0.1m	Connect cable

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2014.07.05	2015.07.04	1 year
2	Test Receiver	R&S	ESPI	101318	2014.07.05	2015.07.04	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2014.07.22	2015.07.21	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2014.07.05	2015.07.04	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2014.07.05	2015.07.04	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2014.07.22	2015.07.21	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2014.07.22	2015.07.21	1 year
8	Amplifier	EM	EM-30180	060538	2014.07.05	2015.07.04	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2014.07.22	2015.07.21	1 year
10	Power Meter	R&S	NRVS	100696	2014.07.05	2015.07.04	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2014.06.20	2015.06.19	1 year
12	Cable	Resenberger	SUCOFLEX 104	314683/2	2014.07.05	2015.07.04	1 year
13	Cable	Resenberger	SUCOFLEX 104	325762/2	2014.07.05	2015.07.04	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2014.07.05	2015.07.04	1 year
2	LISN	R&S	ENV216	101313	2014.07.05	2015.07.04	1 year
3	LISN	EMCO	3816/2	00042990	2014.07.05	2015.07.04	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2014.07.05	2015.07.04	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2014.07.05	2015.07.04	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2014.07.05	2015.07.04	1 year
7	Cable	Resenberger	SUCOFLEX 104	314296/2	2014.07.05	2015.07.04	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

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

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

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.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

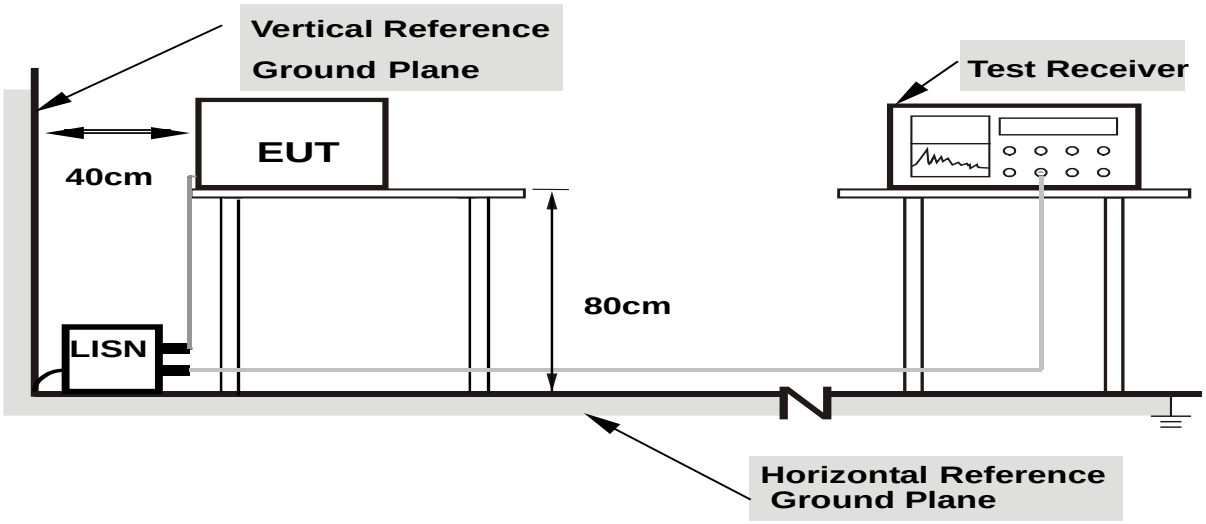
3.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



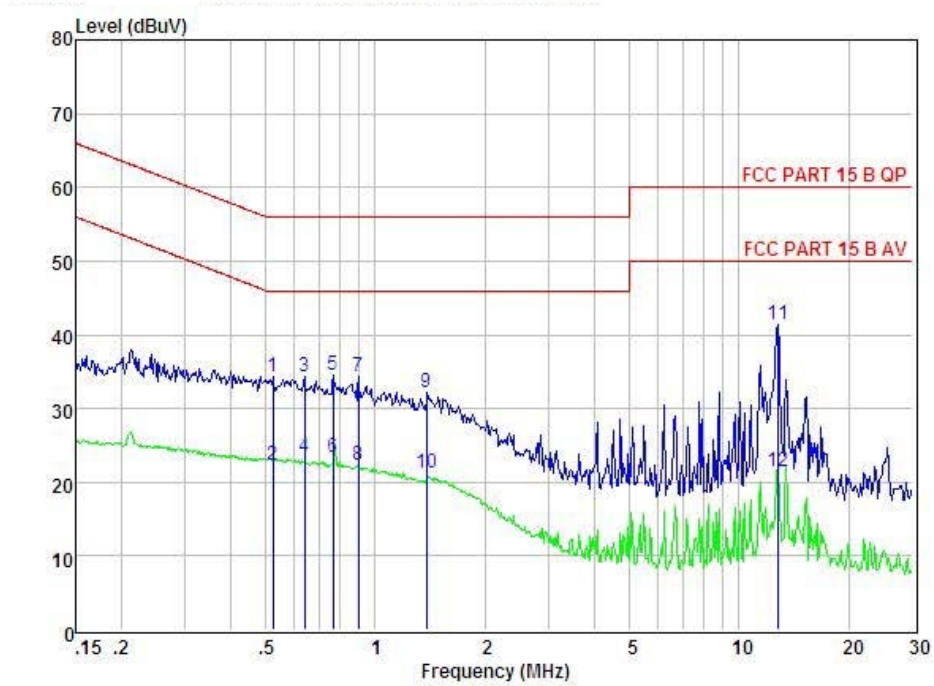
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

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

3.1.6 TEST RESULTS

EUT：	WIFI Modular	Model Name. ：	HL-R8192EU5
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5V for PC with AC 120V/60Hz	Test Mode：	Mode 5

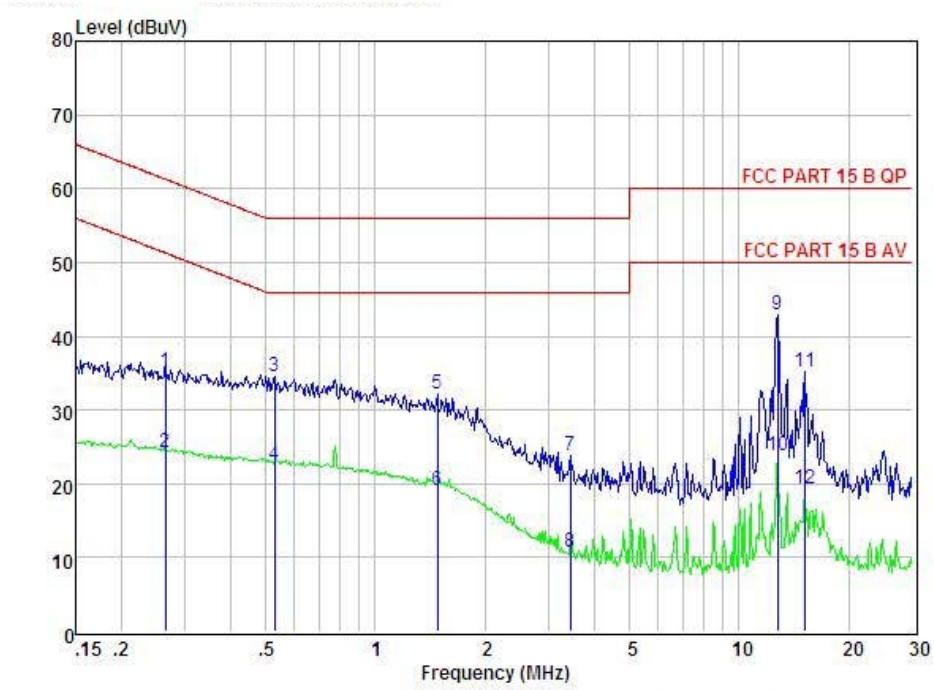


Condition : FCC PART 15 B QP POL: LINE Temp:24 ℃ Hum:56 %

Item	Freq	Read	LISN Factor	Preamp Factor	Cable Lose	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.524	24.54	0.03	-9.72	0.10	34.39	56.00	-21.61	QP
2	0.524	12.54	0.03	-9.72	0.10	22.39	46.00	-23.61	Average
3	0.640	24.45	0.03	-9.72	0.10	34.30	56.00	-21.70	QP
4	0.640	13.45	0.03	-9.72	0.10	23.30	46.00	-22.70	Average
5	0.765	24.62	0.04	-9.71	0.10	34.47	56.00	-21.53	QP
6	0.765	13.62	0.04	-9.71	0.10	23.47	46.00	-22.53	Average
7	0.900	24.47	0.04	-9.71	0.10	34.32	56.00	-21.68	QP
8	0.900	12.47	0.04	-9.71	0.10	22.32	46.00	-23.68	Average
9	1.386	22.38	0.05	-9.71	0.10	32.24	56.00	-23.76	QP
10	1.386	11.38	0.05	-9.71	0.10	21.24	46.00	-24.76	Average
11	12.799	31.52	0.24	-9.44	0.22	41.42	60.00	-18.58	QP
12	12.799	11.52	0.24	-9.44	0.22	21.42	50.00	-28.58	Average

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

EUT：	WIFI Modular	Model Name. ：	HL-R8192EU5
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 5V for PC with AC 120V/60Hz	Test Mode：	Mode 5



Condition : FCC PART 15 B QP POL: NEUTRAL Temp:24 ℃ Hum:56 %

Item	Freq	Read	LISN Factor	Preamp Factor	Cable Lose	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.264	25.41	0.03	-9.72	0.10	35.26	61.29	-26.03	QP
2	0.264	14.41	0.03	-9.72	0.10	24.26	51.29	-27.03	Average
3	0.529	24.58	0.03	-9.72	0.10	34.43	56.00	-21.57	QP
4	0.529	12.58	0.03	-9.72	0.10	22.43	46.00	-23.57	Average
5	1.480	22.28	0.05	-9.71	0.10	32.14	56.00	-23.86	QP
6	1.480	9.28	0.05	-9.71	0.10	19.14	46.00	-26.86	Average
7	3.436	13.94	0.08	-9.69	0.12	23.83	56.00	-32.17	QP
8	3.436	0.94	0.08	-9.69	0.12	10.83	46.00	-35.17	Average
9	12.784	32.89	0.24	-9.44	0.22	42.79	60.00	-17.21	QP
10	12.784	13.89	0.24	-9.44	0.22	23.79	50.00	-26.21	Average
11	15.146	25.37	0.24	-9.38	0.24	35.23	60.00	-24.77	QP
12	15.146	9.37	0.24	-9.38	0.24	19.23	50.00	-30.77	Average

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

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

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / *10Hz* for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 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. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

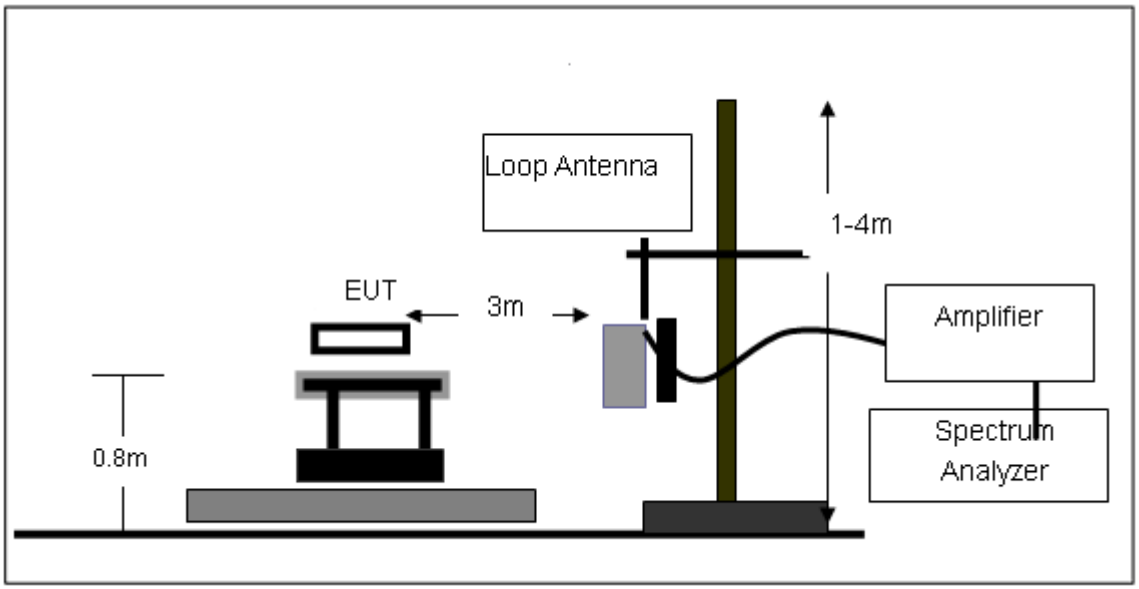
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

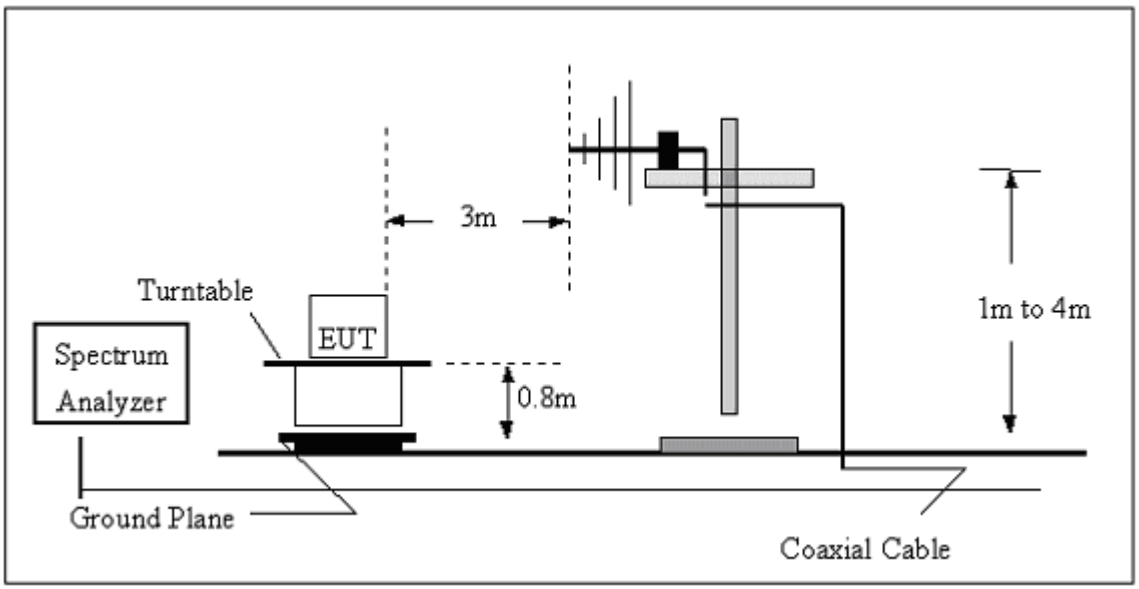
No deviation

3.2.4 TEST SETUP

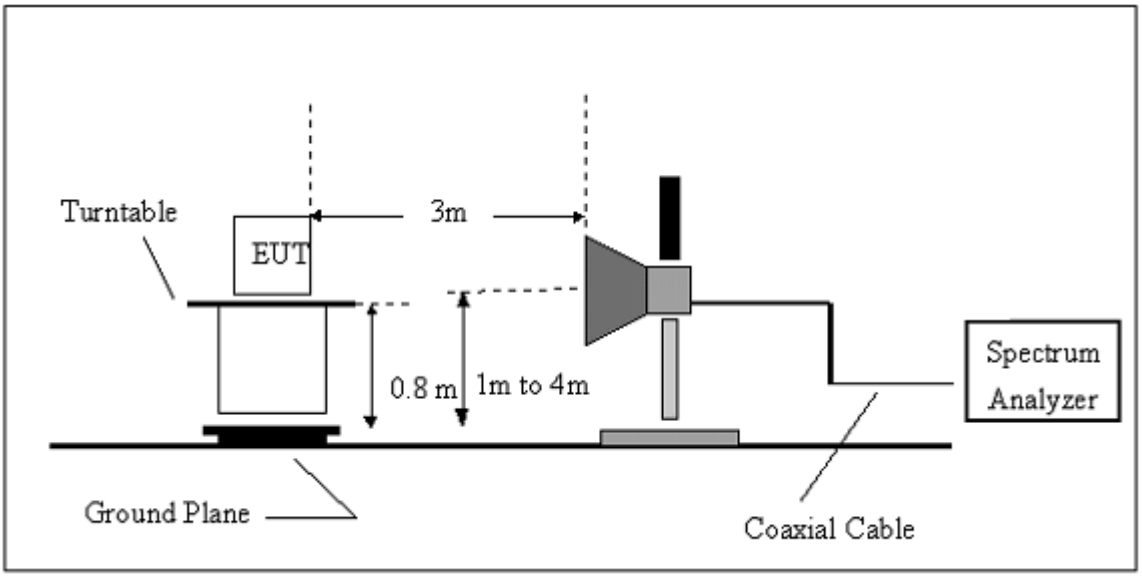
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

EUT：	WIFI Modular	Model Name. ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	Link mode	Polarization :	--

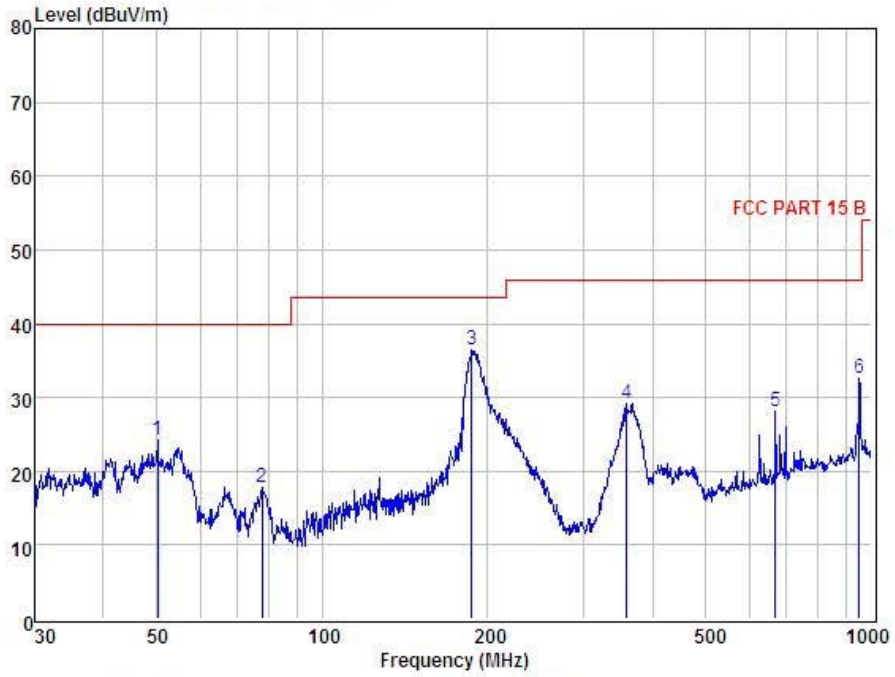
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	Link mode	Polarization :	Horizontal

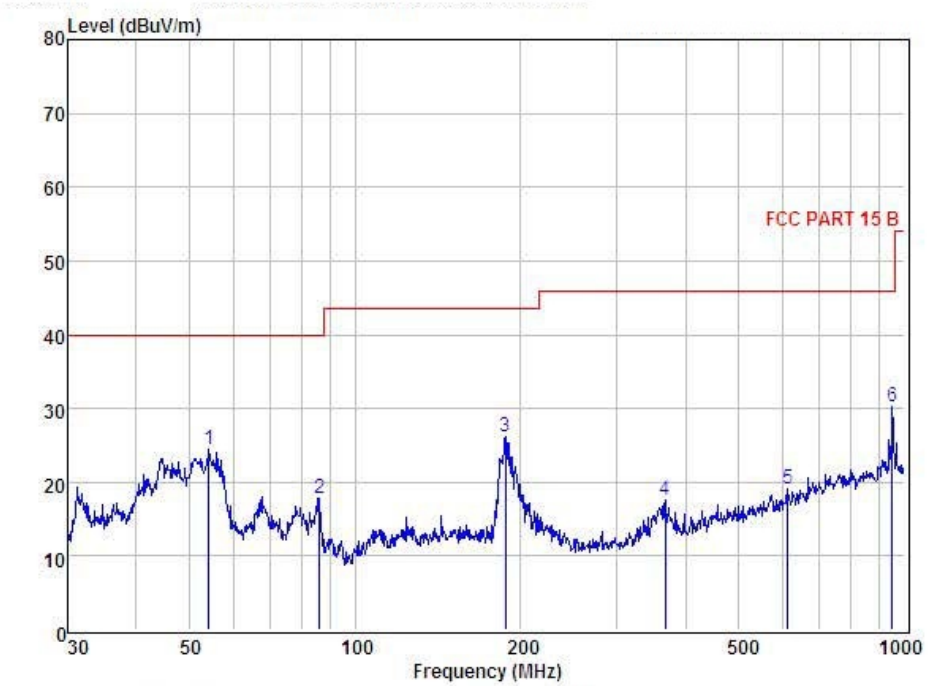


Condition : FCC PART 15 B 3m POL: HORIZONTAL

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	50.23	38.24	13.54	27.82	0.18	24.14	40.00	-15.86	QP
2	77.87	34.66	9.60	26.78	0.29	17.77	40.00	-22.23	QP
3	187.10	51.80	10.95	26.94	0.60	36.41	43.50	-7.09	QP
4	357.93	41.77	13.99	27.29	0.67	29.14	46.00	-16.86	QP
5	668.14	35.60	19.30	27.78	1.01	28.13	46.00	-17.87	QP
6	948.76	36.81	22.13	27.62	1.35	32.67	46.00	-13.33	QP

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	Link mode	Polarization :	Vertical



Condition : FCC PART 15 B 3m POL: VERTICAL

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	54.26	38.84	13.22	27.84	0.21	24.43	40.00	-15.57	QP
2	86.20	34.95	9.38	26.81	0.32	17.84	40.00	-22.16	QP
3	187.75	41.78	10.71	26.95	0.55	26.09	43.50	-17.41	QP
4	366.82	29.88	14.16	27.32	0.87	17.59	46.00	-28.41	QP
5	614.21	27.11	18.58	27.81	1.16	19.04	46.00	-26.96	QP
6	948.76	34.44	22.13	27.62	1.35	30.30	46.00	-15.70	QP

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11b Mode)/2412 with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.15	46.11	10.44	56.55	74	-17.45	peak
4824.15	31.73	10.44	42.17	54	-11.83	AVG
7236.149	42.4	12.39	54.79	74	-19.21	peak
7236.149	28.95	12.39	41.34	54	-12.66	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11b Mode)/2412 with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.15	45.25	10.4	55.65	74	-18.35	peak
4824.15	31.68	10.4	42.08	54	-11.92	AVG
7236.149	43.68	12.75	56.43	74	-17.57	peak
7236.149	30.28	12.75	43.03	54	-10.97	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11b Mode)/2437 with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.159	44.56	10.4	54.96	74	-19.04	peak
4874.159	32.01	10.4	42.41	54	-11.59	AVG
7311.136	42.82	12.75	55.57	74	-18.43	peak
7311.136	29.99	12.75	42.74	54	-11.26	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11b Mode)/2437 with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.159	42.09	10.39	52.48	74	-21.52	peak
4874.159	28.58	10.44	39.02	54	-14.98	AVG
7311.136	41.54	12.68	54.22	74	-19.78	peak
7311.136	28.96	12.68	41.64	54	-12.36	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. No emission detected above 18GHz

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11 (802.11b Mode)/2462 with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.145	44.89	10.39	55.28	74	-18.72	peak
4924.145	30.89	10.39	41.28	54	-12.72	AVG
7386.142	42.25	12.68	54.93	74	-19.07	peak
7386.142	28.14	12.68	40.82	54	-13.18	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11 (802.11b Mode)/2462 with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.122	42.34	10.39	52.73	74	-21.27	peak
4924.122	30.02	10.39	40.41	54	-13.59	AVG
7386.143	42.89	12.68	55.57	74	-18.43	peak
7386.143	29.37	12.68	42.05	54	-11.95	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11g Mode)/2412 with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.17	43.99	10.44	54.43	74	-19.57	peak
4824.17	30.38	10.44	40.82	54	-13.18	AVG
7236.224	43.07	12.39	55.46	74	-18.54	peak
7236.224	29.35	12.39	41.74	54	-12.26	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11g Mode)/2412 with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.155	44.15	10.44	54.59	74	-19.41	peak
4824.155	30.19	10.44	40.63	54	-13.37	AVG
7236.142	42.82	12.39	55.21	74	-18.79	peak
7236.142	29.98	12.39	42.37	54	-11.63	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11g Mode)/2437 with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.14	43.03	10.4	53.43	74	-20.57	peak
4874.14	29.47	10.4	39.87	54	-14.13	AVG
7311.17	41.89	12.75	54.64	74	-19.36	peak
7311.17	27.74	12.75	40.49	54	-13.51	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11g Mode)/2437 with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.158	43.86	10.4	54.26	74	-19.74	peak
4874.158	30.31	10.4	40.71	54	-13.29	AVG
7311.137	41.82	12.75	54.57	74	-19.43	peak
7311.137	28.31	12.75	41.06	54	-12.94	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11 (802.11g Mode)/2462 with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.138	42.08	10.39	52.47	74	-21.53	peak
4924.138	28.98	10.39	39.37	54	-14.63	AVG
7386.149	42.14	12.68	54.82	74	-19.18	peak
7386.149	28.88	12.68	41.56	54	-12.44	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11g Mode)/2462 with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.148	44.15	10.39	54.54	74	-19.46	peak
4924.148	30.50	10.39	40.89	54	-13.11	AVG
7386.13	44.80	12.68	57.48	74	-16.52	peak
7386.13	32.84	12.68	45.52	54	-8.48	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1(802.11n Mode)/20MHz with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.14	43.73	10.44	54.17	74	-19.83	peak
4824.14	31.07	10.44	41.51	54	-12.49	AVG
7236.122	44.06	12.39	56.45	74	-17.55	peak
7236.122	30.47	12.39	42.86	54	-11.14	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1(802.11n Mode)/20MHz with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.141	43.39	10.44	53.83	74	-20.17	peak
4824.141	29.33	10.44	39.77	54	-14.23	AVG
7236.145	41.97	12.39	54.36	74	-19.64	peak
7236.145	27.86	12.39	40.25	54	-13.75	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/20MHz with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.16	42.13	10.4	52.53	74	-21.47	peak
4874.16	29.22	10.4	39.62	54	-14.38	AVG
7311.128	42.96	12.75	55.71	74	-18.29	peak
7311.128	28.72	12.75	41.47	54	-12.53	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/20MHz with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.161	42.08	10.4	52.48	74	-21.52	peak
4874.161	29.65	10.4	40.05	54	-13.95	AVG
7311.166	42.62	12.75	55.37	74	-18.63	peak
7311.166	28.27	12.75	41.02	54	-12.98	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11n Mode)/20MHz with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.14	44.08	10.39	54.47	74	-19.53	peak
4924.14	29.79	10.39	40.18	54	-13.82	AVG
7386.183	42.86	12.68	55.54	74	-18.46	peak
7386.183	30.15	12.68	42.83	54	-11.17	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11n Mode)/20MHz with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	44.23	10.39	54.62	74	-19.38	peak
4924.15	30.16	10.39	40.55	54	-13.45	AVG
7386.167	42.83	12.68	55.51	74	-18.49	peak
7386.167	29.05	12.68	41.73	54	-12.27	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH3(802.11n Mode)/40MHz with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.156	43.97	10.5	54.47	74	-19.53	peak
4844.156	29.96	10.5	40.46	54	-13.54	AVG
7266.319	43.21	12.5	55.71	74	-18.29	peak
7266.319	30.45	12.5	42.95	54	-11.05	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH3(802.11n Mode)/40MHz with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.325	43.12	10.5	53.62	74	-20.38	peak
4844.325	29.76	10.5	40.26	54	-13.74	AVG
7266.258	43.28	12.5	55.78	74	-18.22	peak
7266.258	28.97	12.5	41.47	54	-12.53	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/40MHz with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.238	41.12	10.4	51.52	74	-22.48	peak
4874.238	28.78	10.4	39.18	54	-14.82	AVG
7311.159	41.87	12.75	54.62	74	-19.38	peak
7311.159	28.19	12.75	40.94	54	-13.06	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/40MHz with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.535	42.04	10.4	52.44	74	-21.56	peak
4874.535	29.17	10.4	39.57	54	-14.43	AVG
7311.633	41.53	12.75	54.28	74	-19.72	peak
7311.633	27.89	12.75	40.64	54	-13.36	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH9(802.11n Mode)/40MHz with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.345	45.32	10.29	55.61	74	-18.39	peak
4904.345	32.48	10.29	42.77	54	-11.23	AVG
7356.247	44.67	12.79	57.46	74	-16.54	peak
7356.247	31.18	12.79	43.97	54	-10.03	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH9(802.11n Mode)/40MHz with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.16	43.95	10.29	54.24	74	-19.76	peak
4904.16	30.77	10.29	41.06	54	-12.94	AVG
7356.423	43.63	12.79	56.42	74	-17.58	peak
7356.423	29.84	12.79	42.63	54	-11.37	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11b Mode)/2412 with antenna B	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.15	45.35	10.44	55.79	74	-18.21	peak
4824.15	31.30	10.44	41.74	54	-12.26	AVG
7236.149	43.92	12.39	56.31	74	-17.69	peak
7236.149	28.03	12.39	40.42	54	-13.58	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11b Mode)/2412 with antenna B	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4824.15	45.95	10.4	56.35	74	-17.65	peak
4824.15	31.46	10.4	41.86	54	-12.14	AVG
7236.149	43.04	12.75	55.79	74	-18.21	peak
7236.149	28.48	12.75	41.23	54	-12.77	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11b Mode)/2437 with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.159	44.24	10.4	54.64	74	-19.36	peak
4874.159	30.08	10.4	40.48	54	-13.52	AVG
7311.136	42.21	12.75	54.96	74	-19.04	peak
7311.136	28.48	12.75	41.23	54	-12.77	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11b Mode)/2437 with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.159	43.35	10.39	53.74	74	-20.26	peak
4874.159	28.28	10.44	38.72	54	-15.28	AVG
7311.136	42.61	12.68	55.29	74	-18.71	peak
7311.136	26.64	12.68	39.32	54	-14.68	AVG

Remark:
3. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
4. No emission detected above 18GHz

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11 (802.11b Mode)/2462 with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.145	44.08	10.39	54.47	74	-19.53	peak
4924.145	30.34	10.39	40.73	54	-13.27	AVG
7386.142	42.86	12.68	55.54	74	-18.46	peak
7386.142	29.53	12.68	42.21	54	-11.79	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11 (802.11b Mode)/2462 with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.122	43.04	10.39	53.43	74	-20.57	peak
4924.122	29.38	10.39	39.77	54	-14.23	AVG
7386.143	42.28	12.68	54.96	74	-19.04	peak
7386.143	28.97	12.68	41.65	54	-12.35	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11g Mode)/2412 with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.17	44.82	10.44	55.26	74	-18.74	peak
4824.17	28.88	10.44	39.32	54	-14.68	AVG
7236.224	43.9	12.39	56.29	74	-17.71	peak
7236.224	30.35	12.39	42.74	54	-11.26	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1 (802.11g Mode)/2412 with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.155	45.02	10.44	55.46	74	-18.54	peak
4824.155	30.65	10.44	41.09	54	-12.91	AVG
7236.142	44.18	12.39	56.57	74	-17.43	peak
7236.142	28.03	12.39	40.42	54	-13.58	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11g Mode)/2437 with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.14	41.95	10.4	52.35	74	-21.65	peak
4874.14	27.83	10.4	38.23	54	-15.77	AVG
7311.17	43.23	12.75	55.98	74	-18.02	peak
7311.17	26.62	12.75	39.37	54	-14.63	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6 (802.11g Mode)/2437 with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.158	45.08	10.4	55.48	74	-18.52	peak
4874.158	31.47	10.4	41.87	54	-12.13	AVG
7311.137	43.20	12.75	55.95	74	-18.05	peak
7311.137	27.83	12.75	40.58	54	-13.42	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11 (802.11g Mode)/2462 with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.138	42.86	10.39	53.25	74	-20.75	peak
4924.138	29.76	10.39	40.15	54	-13.85	AVG
7386.149	43.39	12.68	56.07	74	-17.93	peak
7386.149	29.95	12.68	42.63	54	-11.37	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11g Mode)/2462 with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.148	45.09	10.39	55.48	74	-18.52	peak
4924.148	31.14	10.39	41.53	54	-12.47	AVG
7386.13	43.39	12.68	56.07	74	-17.93	peak
7386.13	30.25	12.68	42.93	54	-11.07	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1(802.11n Mode)/20MHz with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.14	45.02	10.44	55.46	74	-18.54	peak
4824.14	29.81	10.44	40.25	54	-13.75	AVG
7236.122	43.4	12.39	55.79	74	-18.21	peak
7236.122	29.08	12.39	41.47	54	-12.53	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1(802.11n Mode)/20MHz with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.141	42.08	10.44	52.52	74	-21.48	peak
4824.141	30.62	10.44	41.06	54	-12.94	AVG
7236.145	43.04	12.39	55.43	74	-18.57	peak
7236.145	29.69	12.39	42.08	54	-11.92	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/20MHz with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.16	43.54	10.4	53.94	74	-20.06	peak
4874.16	28.22	10.4	38.62	54	-15.38	AVG
7311.128	43.56	12.75	56.31	74	-17.69	peak
7311.128	29.82	12.75	42.57	54	-11.43	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/20MHz with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.161	43.17	10.4	53.57	74	-20.43	peak
4874.161	28.94	10.4	39.34	54	-14.66	AVG
7311.166	43.97	12.75	56.72	74	-17.28	peak
7311.166	29.66	12.75	42.41	54	-11.59	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11n Mode)/20MHz with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.14	43.97	10.39	54.36	74	-19.64	peak
4924.14	31.48	10.39	41.87	54	-12.13	AVG
7386.183	43.23	12.68	55.91	74	-18.09	peak
7386.183	30.8	12.68	43.48	54	-10.52	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11n Mode)/20MHz with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	45.35	10.39	55.74	74	-18.26	peak
4924.15	31.14	10.39	41.53	54	-12.47	AVG
7386.167	41.94	12.68	54.62	74	-19.38	peak
7386.167	29.75	12.68	42.43	54	-11.57	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH3(802.11n Mode)/40MHz with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.156	44.84	10.5	55.34	74	-18.66	peak
4844.156	29.08	10.5	39.58	54	-14.42	AVG
7266.319	41.79	12.5	54.29	74	-19.71	peak
7266.319	29.2	12.5	41.70	54	-12.30	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH3(802.11n Mode)/40MHz with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.325	42.02	10.5	52.52	74	-21.48	peak
4844.325	28.85	10.5	39.35	54	-14.65	AVG
7266.258	44.08	12.5	56.58	74	-17.42	peak
7266.258	22.59	12.5	35.09	54	-18.91	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/40MHz with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.238	42.07	10.4	52.47	74	-21.53	peak
4874.238	30.24	10.4	40.64	54	-13.36	AVG
7311.159	42.78	12.75	55.53	74	-18.47	peak
7311.159	29.14	12.75	41.89	54	-12.11	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/40MHz with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.535	42.67	10.4	53.07	74	-20.93	peak
4874.535	29.86	10.4	40.26	54	-13.74	AVG
7311.633	41.30	12.75	54.05	74	-19.95	peak
7311.633	26.96	12.75	39.71	54	-14.29	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH9(802.11n Mode)/40MHz with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.345	44.03	10.29	54.32	74	-19.68	peak
4904.345	31.25	10.29	41.54	54	-12.46	AVG
7356.247	43.68	12.79	56.47	74	-17.53	peak
7356.247	29.87	12.79	42.66	54	-11.34	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH9(802.11n Mode)/40MHz with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.16	43.02	10.29	53.31	74	-20.69	peak
4904.16	29.36	10.29	39.65	54	-14.35	AVG
7356.423	42.05	12.79	54.84	74	-19.16	peak
7356.423	27.77	12.79	40.56	54	-13.44	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1(802.11n Mode)/20MHz with antenna A+B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.14	44.08	10.44	54.52	74	-19.48	peak
4824.14	28.91	10.44	39.35	54	-14.65	AVG
7236.122	42.24	12.39	54.63	74	-19.37	peak
7236.122	30.08	12.39	42.47	54	-11.53	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH1(802.11n Mode)/20MHz with antenna A+B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.141	42.82	10.44	53.26	74	-20.74	peak
4824.141	31.90	10.44	42.34	54	-11.66	AVG
7236.145	42.24	12.39	54.63	74	-19.37	peak
7236.145	28.72	12.39	41.11	54	-12.89	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/20MHz with antenna A+B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.16	43.86	10.4	54.26	74	-19.74	peak
4874.16	31.11	10.4	41.51	54	-12.49	AVG
7311.128	42.92	12.75	55.67	74	-18.33	peak
7311.128	30.11	12.75	42.86	54	-11.14	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/20MHz with antenna A+B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.161	43.97	10.4	54.37	74	-19.63	peak
4874.161	31.45	10.4	41.85	54	-12.15	AVG
7311.166	42.3	12.75	55.05	74	-18.95	peak
7311.166	29.18	12.75	41.93	54	-12.07	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11n Mode)/20MHz with antenna A+B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.14	44.89	10.39	55.28	74	-18.72	peak
4924.14	32.08	10.39	42.47	54	-11.53	AVG
7386.183	41.64	12.68	54.32	74	-19.68	peak
7386.183	28.85	12.68	41.53	54	-12.47	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH11(802.11n Mode)/20MHz with antenna A+B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.15	44.07	10.39	54.46	74	-19.54	peak
4924.15	31.78	10.39	42.17	54	-11.83	AVG
7386.167	42.66	12.68	55.34	74	-18.66	peak
7386.167	28.61	12.68	41.29	54	-12.71	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH3(802.11n Mode)/40MHz with antenna A+B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.156	43.77	10.5	54.27	74	-19.73	peak
4844.156	28.22	10.5	38.72	54	-15.28	AVG
7266.319	43.03	12.5	55.53	74	-18.47	peak
7266.319	30.11	12.5	42.61	54	-11.39	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH3(802.11n Mode)/40MHz with antenna A+B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.325	42.92	10.5	53.42	74	-20.58	peak
4844.325	29.84	10.5	40.34	54	-13.66	AVG
7266.258	44.78	12.5	57.28	74	-16.72	peak
7266.258	30.97	12.5	43.47	54	-10.53	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/40MHz with antenna A+B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.238	40.71	10.4	51.11	74	-22.89	peak
4874.238	28.88	10.4	39.28	54	-14.72	AVG
7311.159	41.63	12.75	54.38	74	-19.62	peak
7311.159	29.41	12.75	42.16	54	-11.84	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH6(802.11n Mode)/40MHz with antenna A+B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.535	42.03	10.4	52.43	74	-21.57	peak
4874.535	29.02	10.4	39.42	54	-14.58	AVG
7311.633	42.98	12.75	55.73	74	-18.27	peak
7311.633	27.89	12.75	40.64	54	-13.36	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH9(802.11n Mode)/40MHz with antenna A+B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.345	45.19	10.29	55.48	74	-18.52	peak
4904.345	32.28	10.29	42.57	54	-11.43	AVG
7356.247	42.14	12.79	54.93	74	-19.07	peak
7356.247	30.62	12.79	43.41	54	-10.59	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	CH9(802.11n Mode)/40MHz with antenna A+B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.16	43.67	10.29	53.96	74	-20.04	peak
4904.16	31.12	10.29	41.41	54	-12.59	AVG
7356.423	41.83	12.79	54.62	74	-19.38	peak
7356.423	29.44	12.79	42.23	54	-11.77	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

3.2.9 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11b Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	34.29	4.95	39.24	74	-34.76	peak
2390	49.05	4.95	54.00	54	/	AVG
2400	49.39	5.08	54.47	74	-19.53	peak
2400	40.25	5.08	45.33	54	-8.67	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11b Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	43.67	4.95	53.96	74	-33.59	peak
2390	/	4.95	/	54	/	AVG
2400	41.83	5.08	54.62	74	-21.15	peak
2400	/	5.08	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11b Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.07	5.17	40.24	74	-33.76	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11b Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.07	5.17	40.24	74	-32.84	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11g Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	43.67	4.95	53.96	74	-32.57	peak
2390	/	4.95	/	54	/	AVG
2400	41.83	5.08	54.62	74	-20.57	peak
2400	/	5.08	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11g Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	43.67	4.95	53.96	74	-34.12	peak
2390	/	4.95	/	54	/	AVG
2400	41.83	5.08	54.62	74	-22.13	peak
2400	/	5.08	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11g Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.07	5.17	40.24	74	-34.15	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11g Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.07	5.17	40.24	74	-32.86	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11n20 Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.3	4.95	40.25	74	-33.75	peak
2390	/	4.95	/	54	/	AVG
2400	50.55	5.08	55.63	74	-18.37	peak
2400	40.39	5.08	45.47	54	-8.53	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11n20 Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	34.87	4.95	39.82	74	-34.18	peak
2390	/	4.95	/	54	/	AVG
2400	47.75	5.08	52.83	74	-21.17	peak
2400	/	5.08	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11 (802.11n20 Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	33.91	5.17	39.08	74	-34.92	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11n20 Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	34.98	5.17	40.15	74	-33.85	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH3(802.11n40 Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.07	4.95	40.02	74	-33.98	peak
2390	/	4.95	/	54	/	AVG
2400	50.29	5.08	55.37	74	-18.63	peak
2400	39.35	5.08	44.43	54	-9.57	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH3(802.11n40 Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.52	4.95	40.47	74	-33.53	peak
2390	/	4.95	/	54	/	AVG
2400	51.74	5.08	56.82	74	-17.18	peak
2400	40.75	5.08	45.83	54	-8.17	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH9 (802.11n40 Mode) with antenna A	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	36.08	5.17	41.25	74	-32.75	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH9 (802.11n40 Mode) with antenna A	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	37.16	5.17	42.33	74	-31.67	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11b Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.16	4.95	40.11	74	-33.89	peak
2390	49.05	4.95	54.00	54	/	AVG
2400	50.17	5.08	55.25	74	-18.75	peak
2400	39.49	5.08	44.57	54	-9.43	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11b Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	34.84	4.95	39.79	74	-34.21	peak
2390	/	4.95	/	54	/	AVG
2400	46.34	5.08	51.42	74	-22.58	peak
2400	/	5.08	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11b Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	33.91	5.17	39.08	74	-34.92	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11b Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.65	5.17	40.82	74	-33.18	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11g Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.33	4.95	40.28	74	-33.72	peak
2390	/	4.95	/	54	/	AVG
2400	46.84	5.08	51.92	74	-22.08	peak
2400	/	5.08	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11g Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.13	4.95	40.08	74	-33.92	peak
2390	/	4.95	/	54	/	AVG
2400	47.46	5.08	52.54	74	-21.46	peak
2400	/	5.08	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11g Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	34.36	5.17	39.53	74	-34.47	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11g Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.47	5.17	40.64	74	-33.36	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11n20 Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	34.84	4.95	39.79	74	-34.21	peak
2390	/	4.95	/	54	/	AVG
2400	49.99	5.08	55.07	74	-18.93	peak
2400	40.67	5.08	45.75	54	-8.25	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH1(802.11n20 Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	35.33	4.95	40.28	74	-33.72	peak
2390	/	4.95	/	54	/	AVG
2400	47.94	5.08	53.02	74	-20.98	peak
2400	/	5.08	/	54	/	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11 (802.11n20 Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	33.76	5.17	38.93	74	-35.07	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH11(802.11n20 Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	34.55	5.17	39.72	74	-34.28	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH3(802.11n40 Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	34.42	4.95	39.37	74	-34.63	peak
2390	/	4.95	/	54	/	AVG
2400	51.38	5.08	56.46	74	-17.54	peak
2400	40.27	5.08	45.35	54	-8.65	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH3(802.11n40 Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2390	34.84	4.95	39.79	74	-34.21	peak
2390	/	4.95	/	54	/	AVG
2400	50.05	5.08	55.13	74	-18.87	peak
2400	39.40	5.08	44.48	54	-9.52	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH9 (802.11n40 Mode) with antenna B	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	35.14	5.17	40.31	74	-33.69	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V FOR PC WITH AC 120V/60HZ
Test Mode ：	CH9 (802.11n40 Mode) with antenna B	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	36.38	5.17	41.55	74	-32.45	peak
2483.5	/	5.17	/	54	/	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

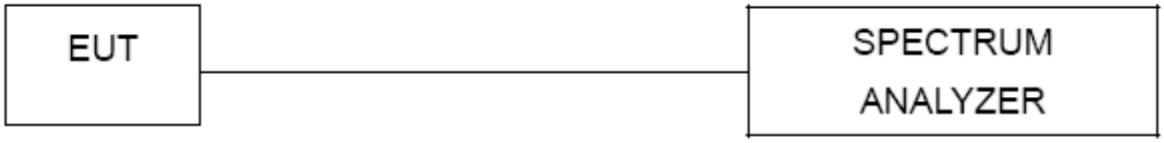
4.1.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW ≥ 3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

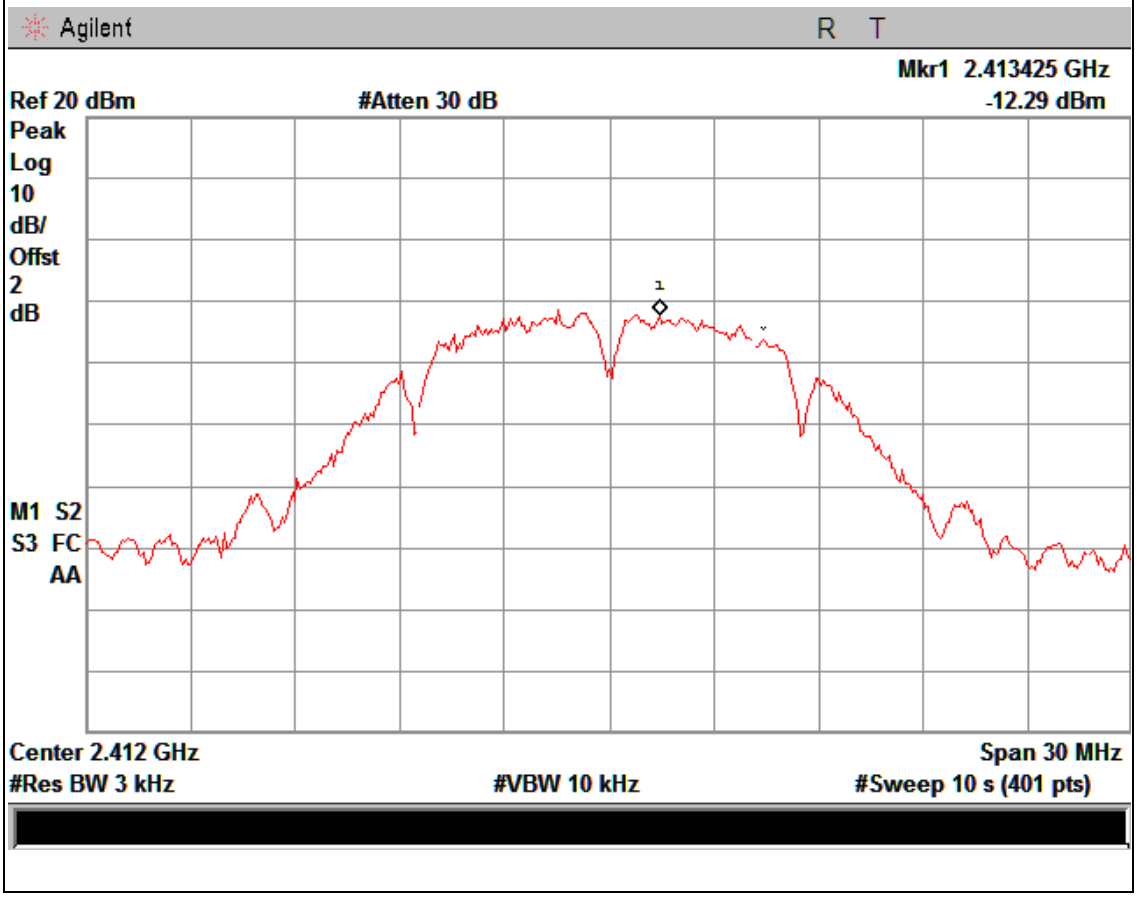
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

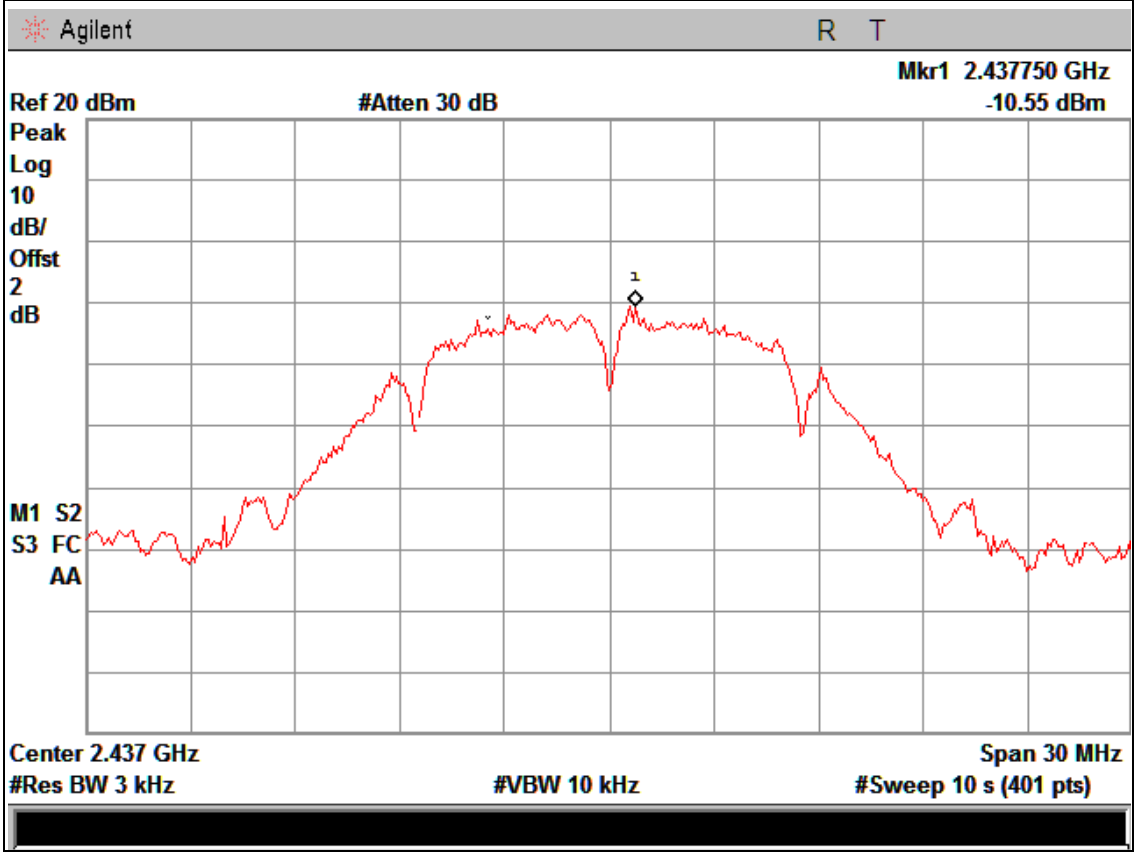
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11 with antenna A		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-12.29	8	**PASS**
2437 MHz	-10.55	8	**PASS**
2462 MHz	-11.17	8	**PASS**

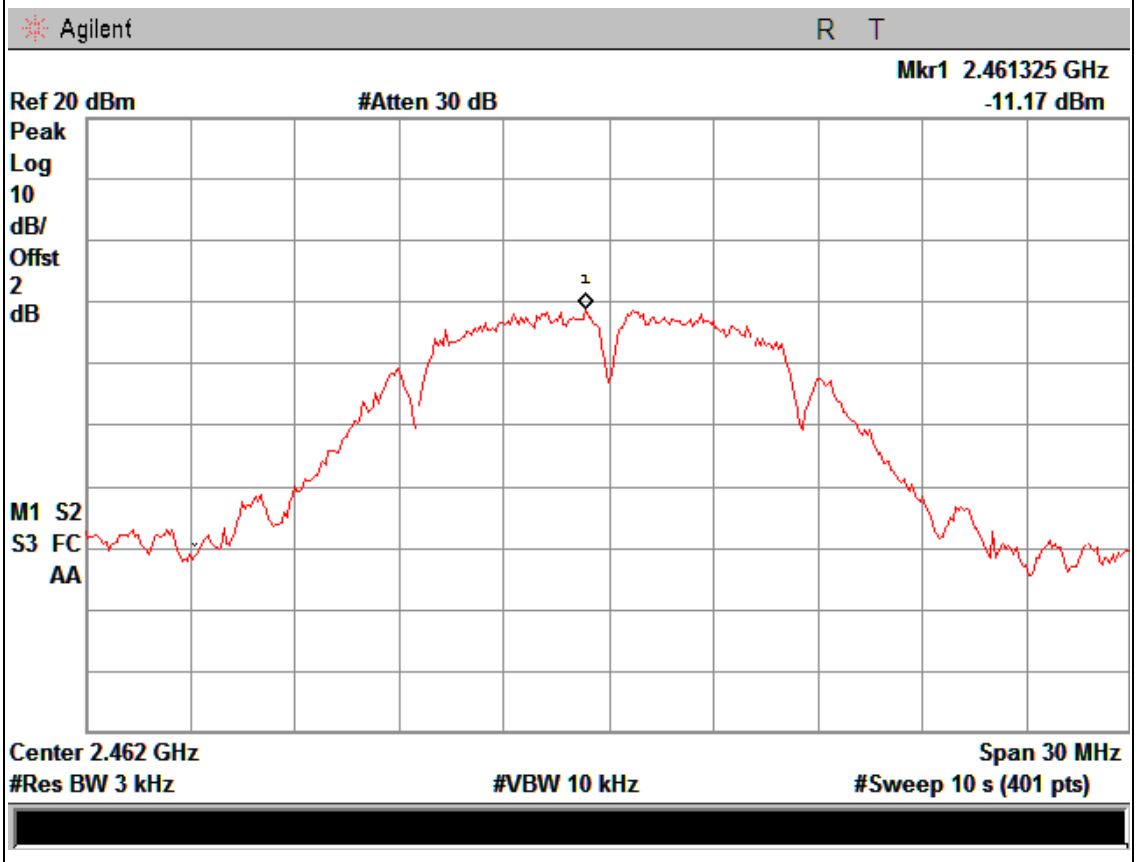
TX CH01



TX CH06



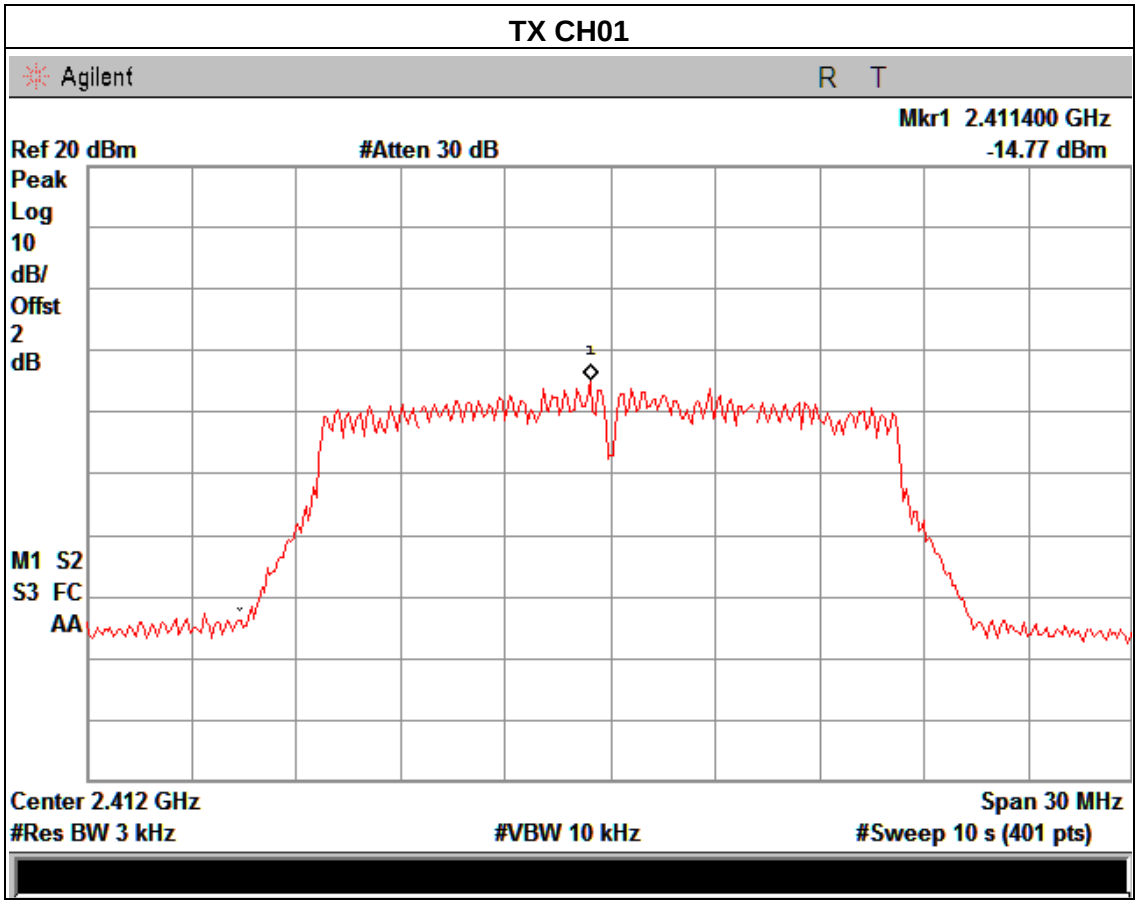
TX CH11



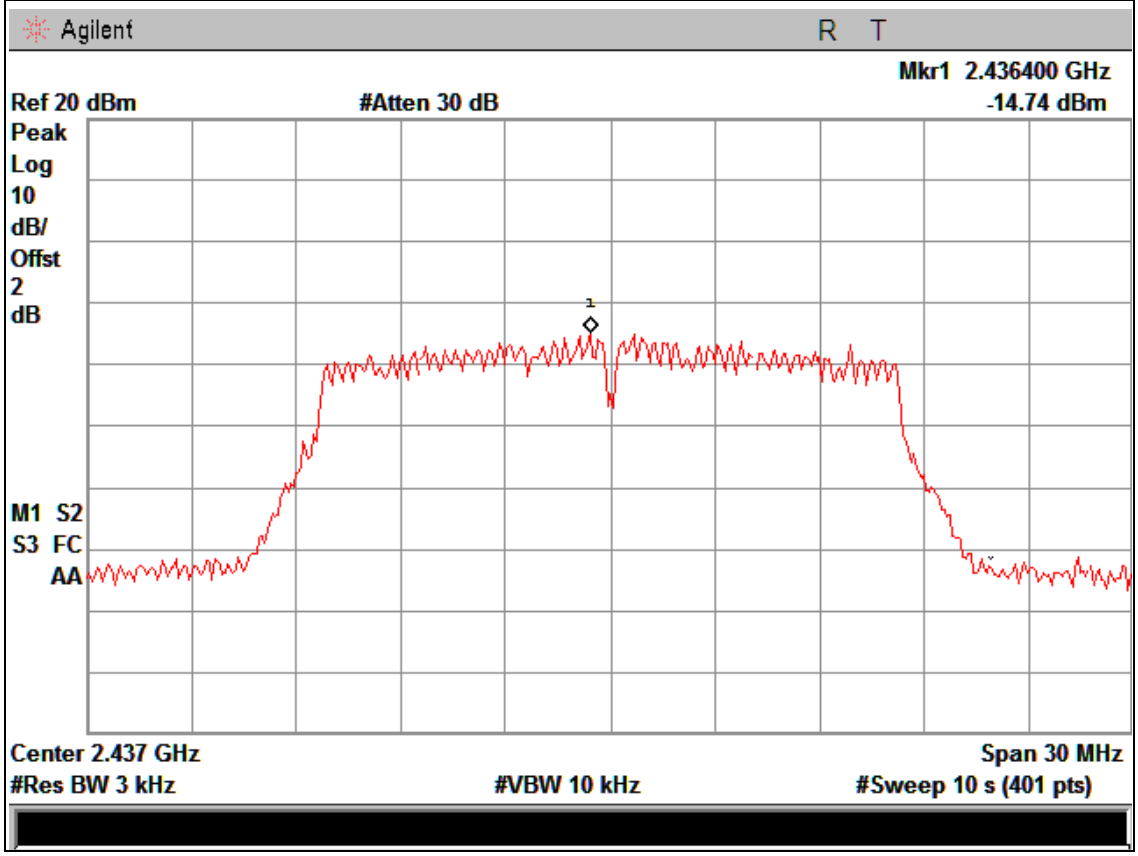
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11 with antenna A		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-14.77	**8**	**PASS**
2437 MHz	-14.74	8	**PASS**
2462 MHz	-16.14	8	**PASS**

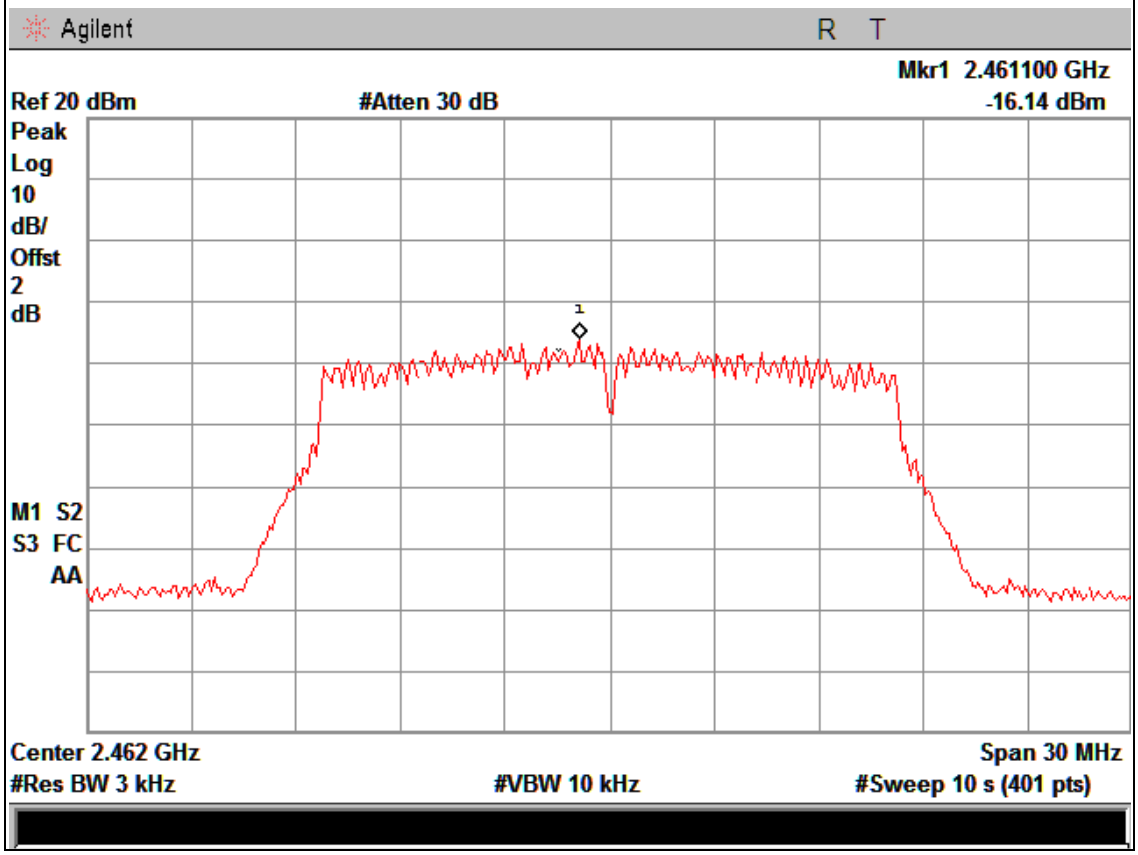
TX CH01



TX CH06



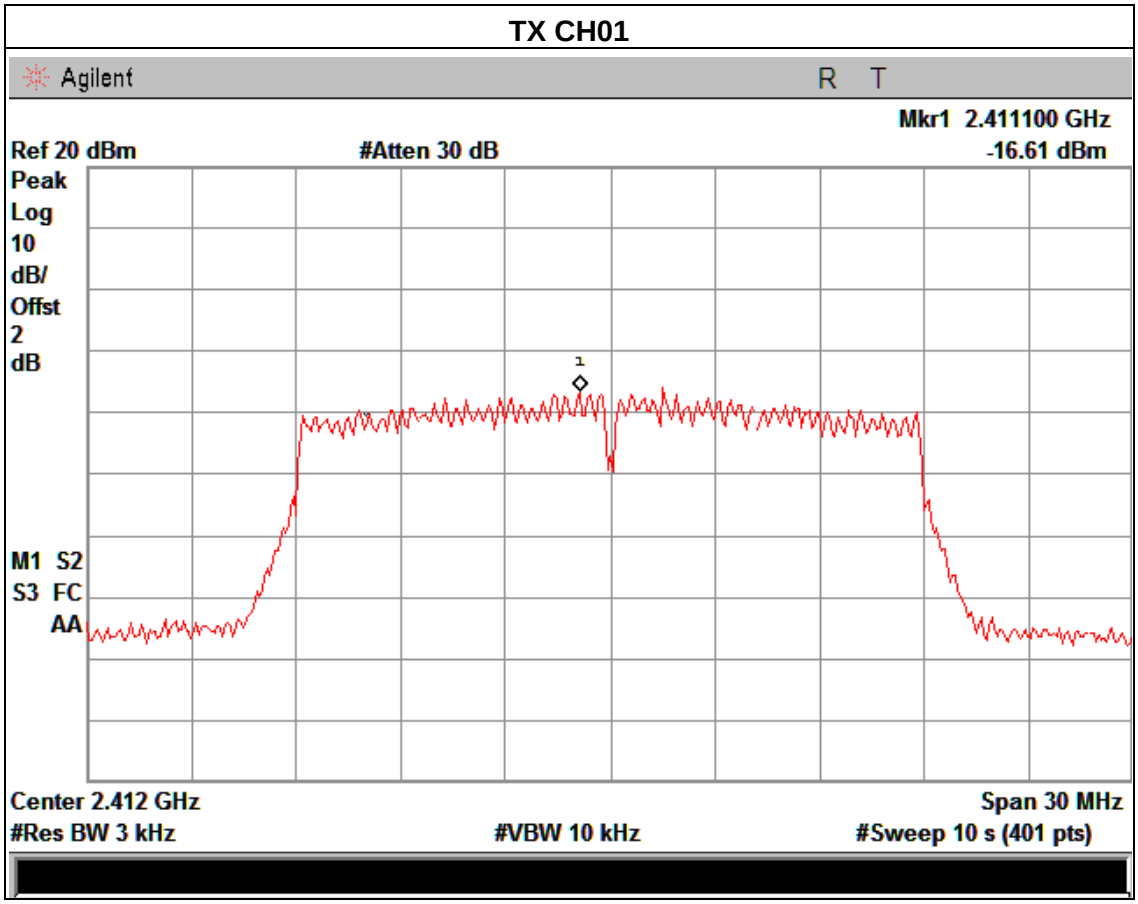
TX CH11



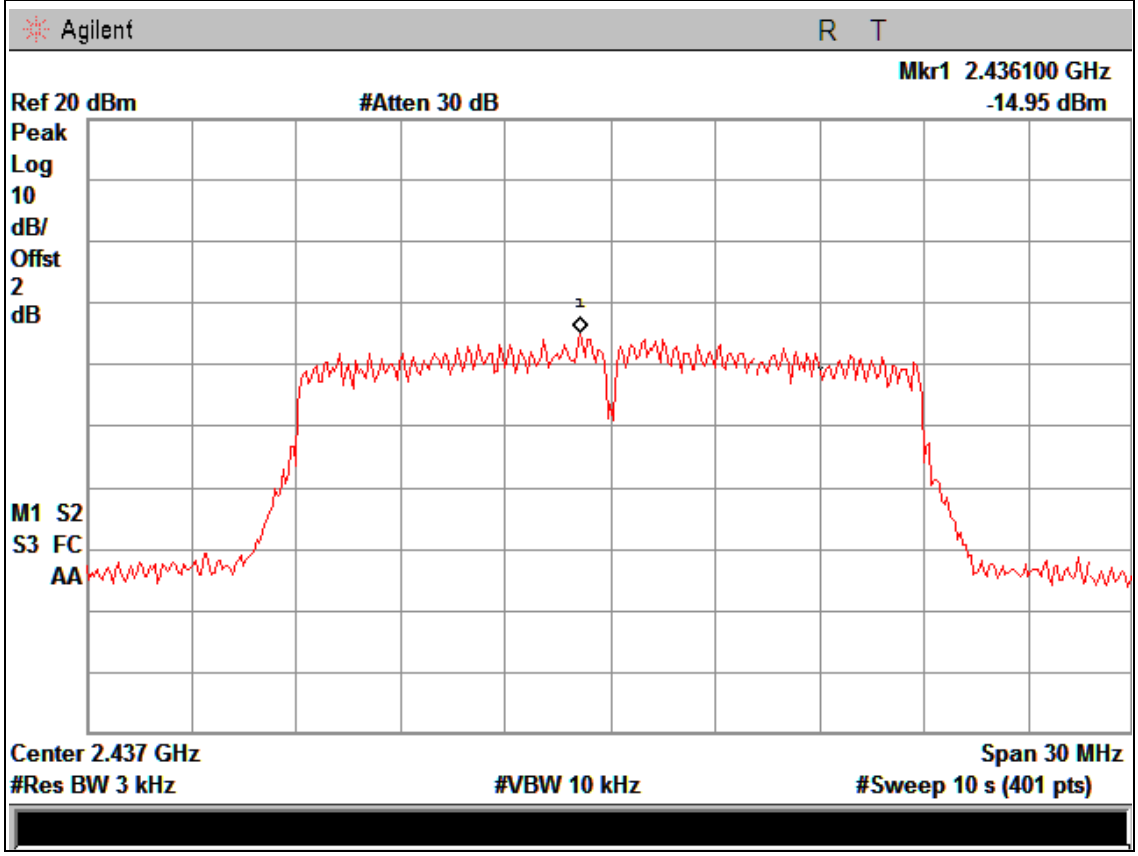
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11 with antenna A		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-16.61	**8**	**PASS**
2437 MHz	-14.95	8	**PASS**
2462 MHz	-15.28	8	**PASS**

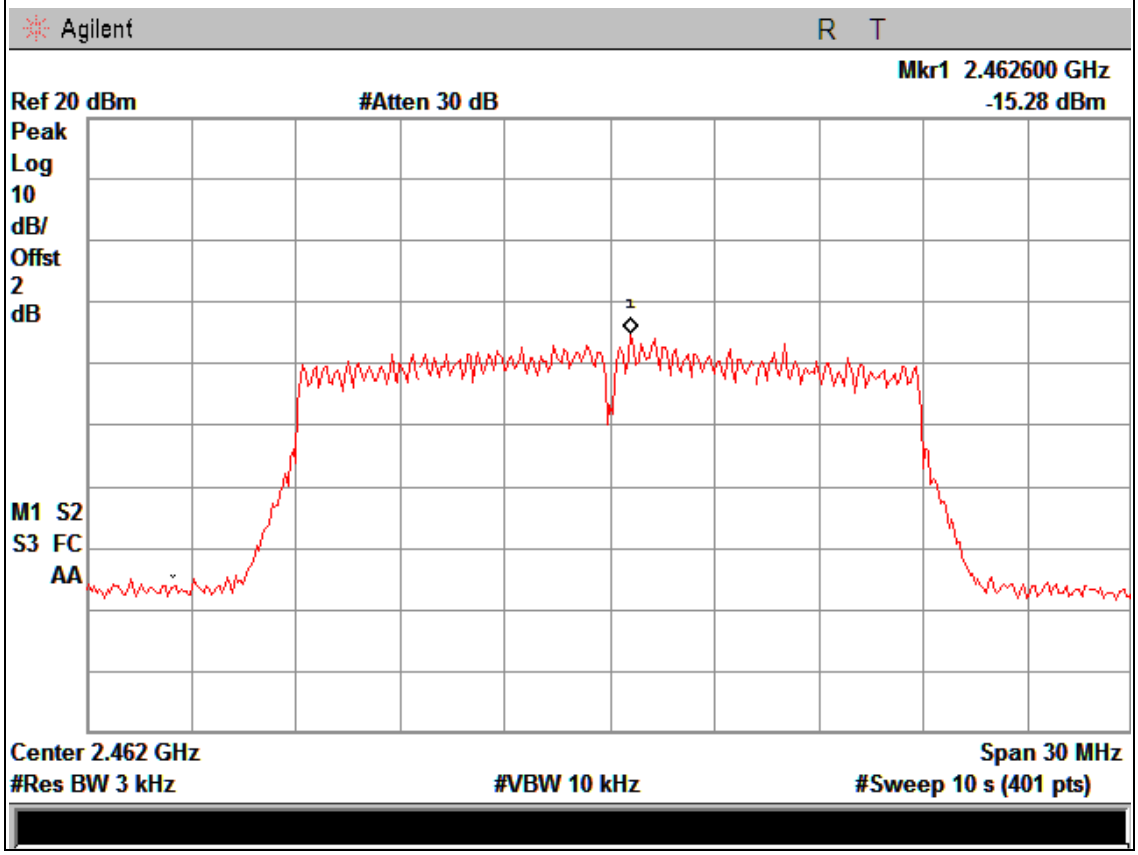
TX CH01



TX CH06



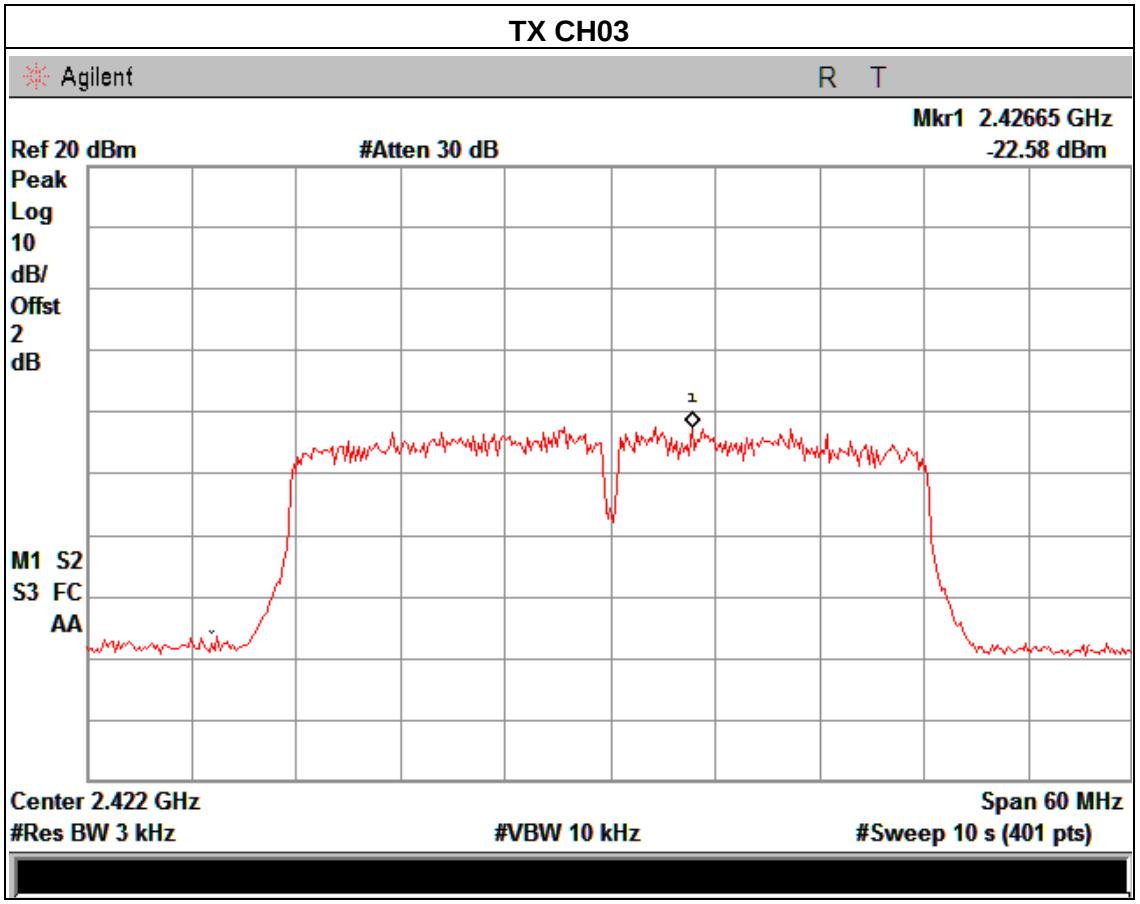
TX CH11



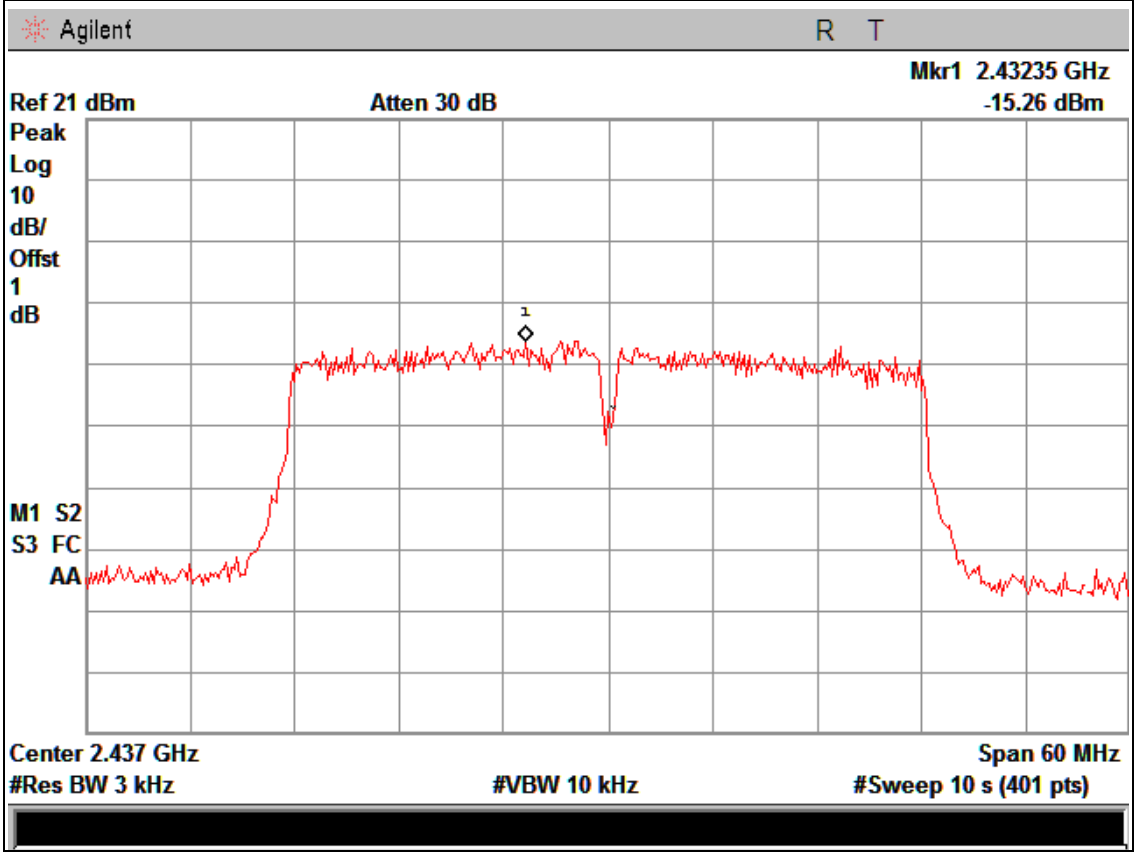
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09 with antenna A		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-22.58	8	PASS
2437 MHz	-15.26	8	PASS
2452 MHz	-19.57	8	PASS

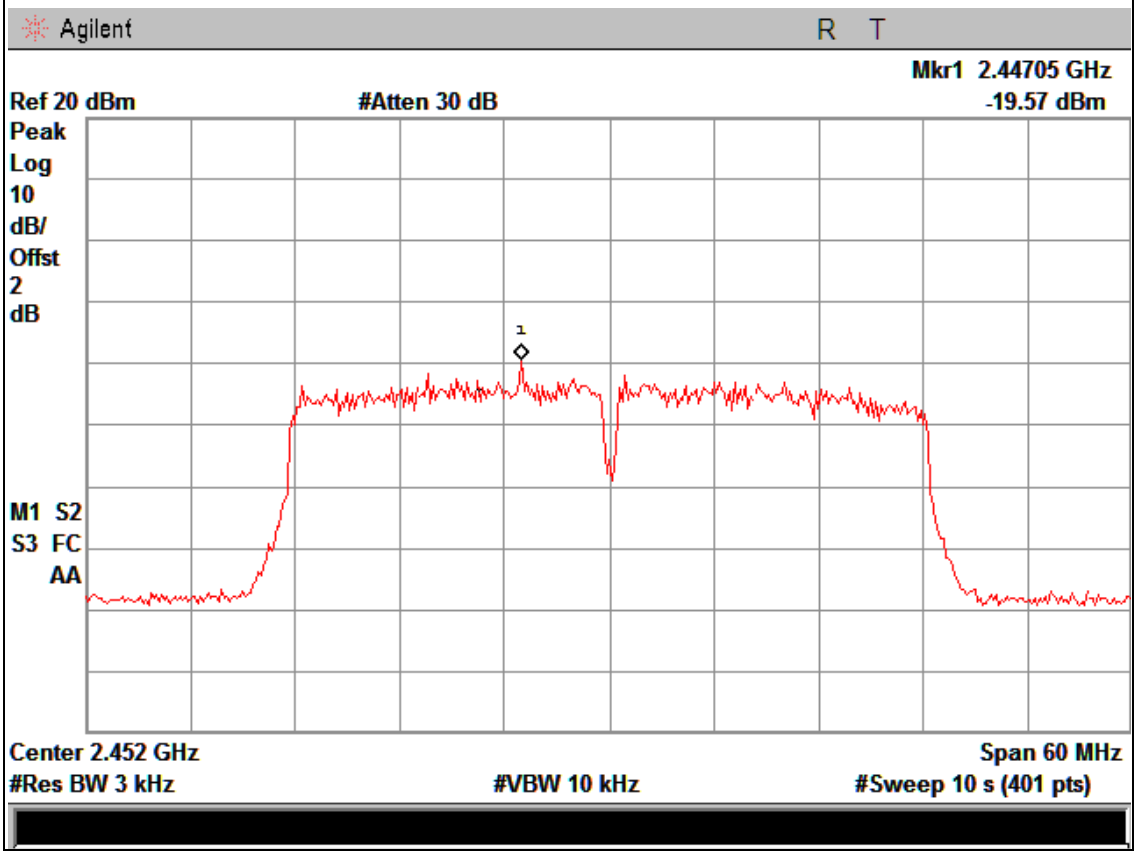
TX CH03



TX CH06



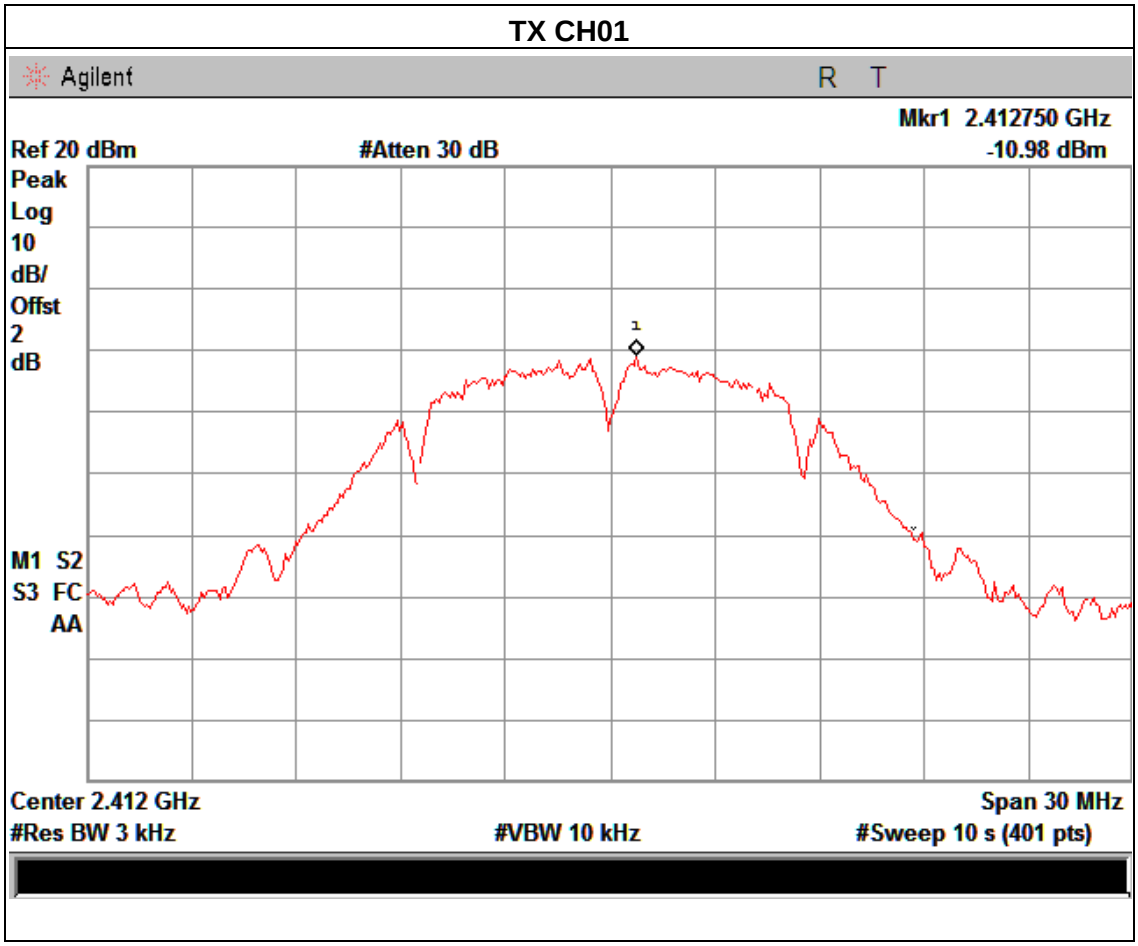
TX CH09



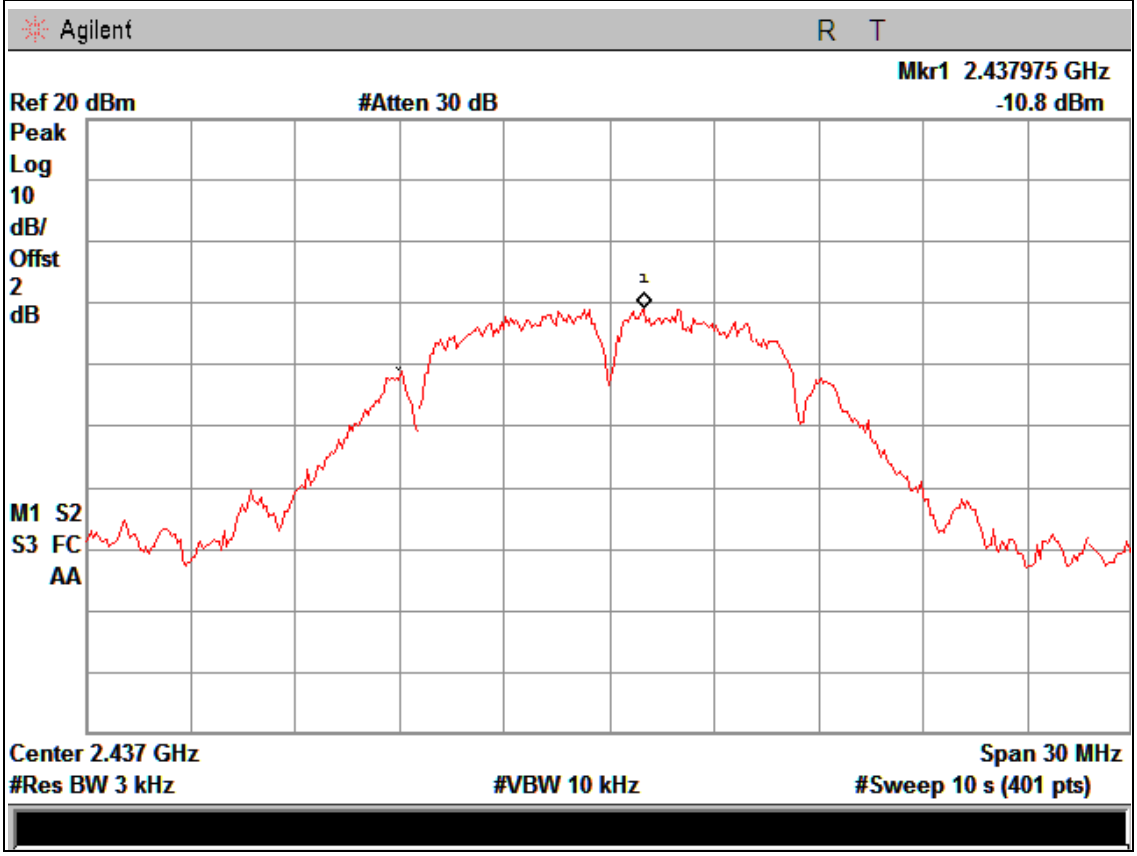
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11 with antenna B		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-10.98	8	**PASS**
2437 MHz	-10.08	8	**PASS**
2462 MHz	-11.31	8	**PASS**

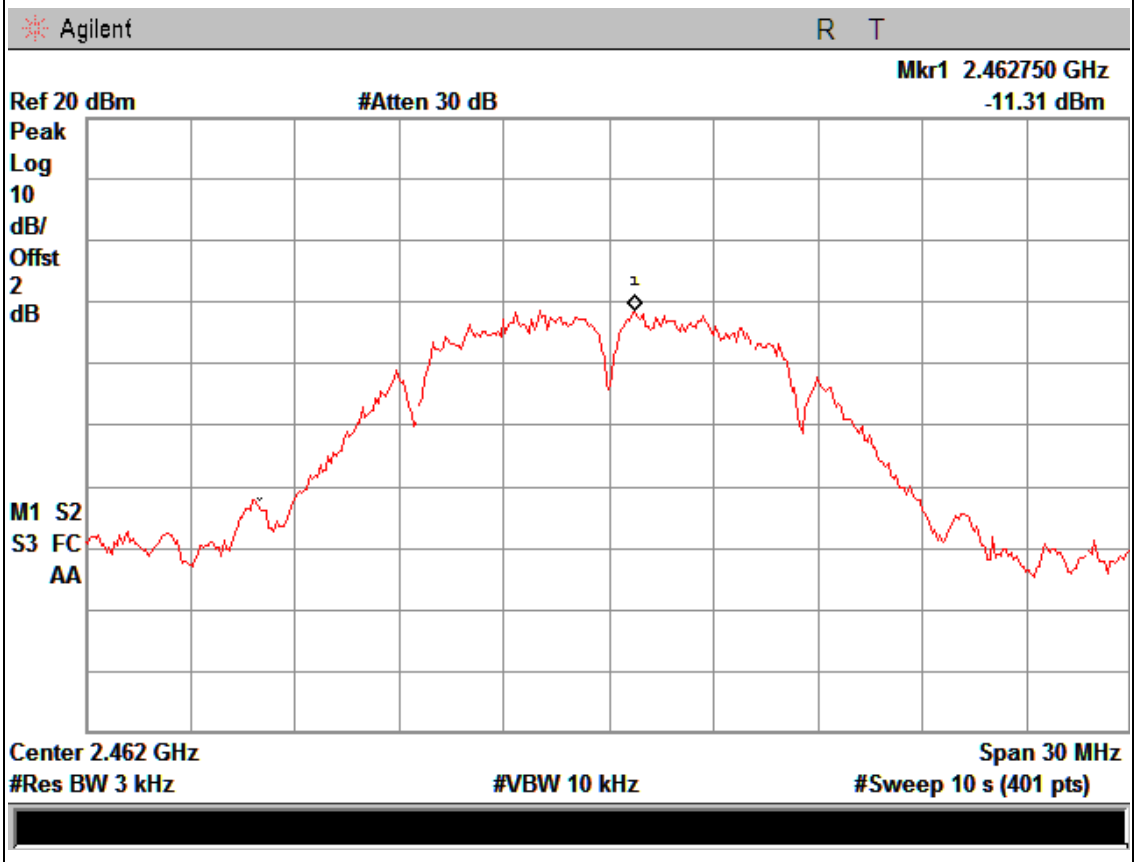
TX CH01



TX CH06



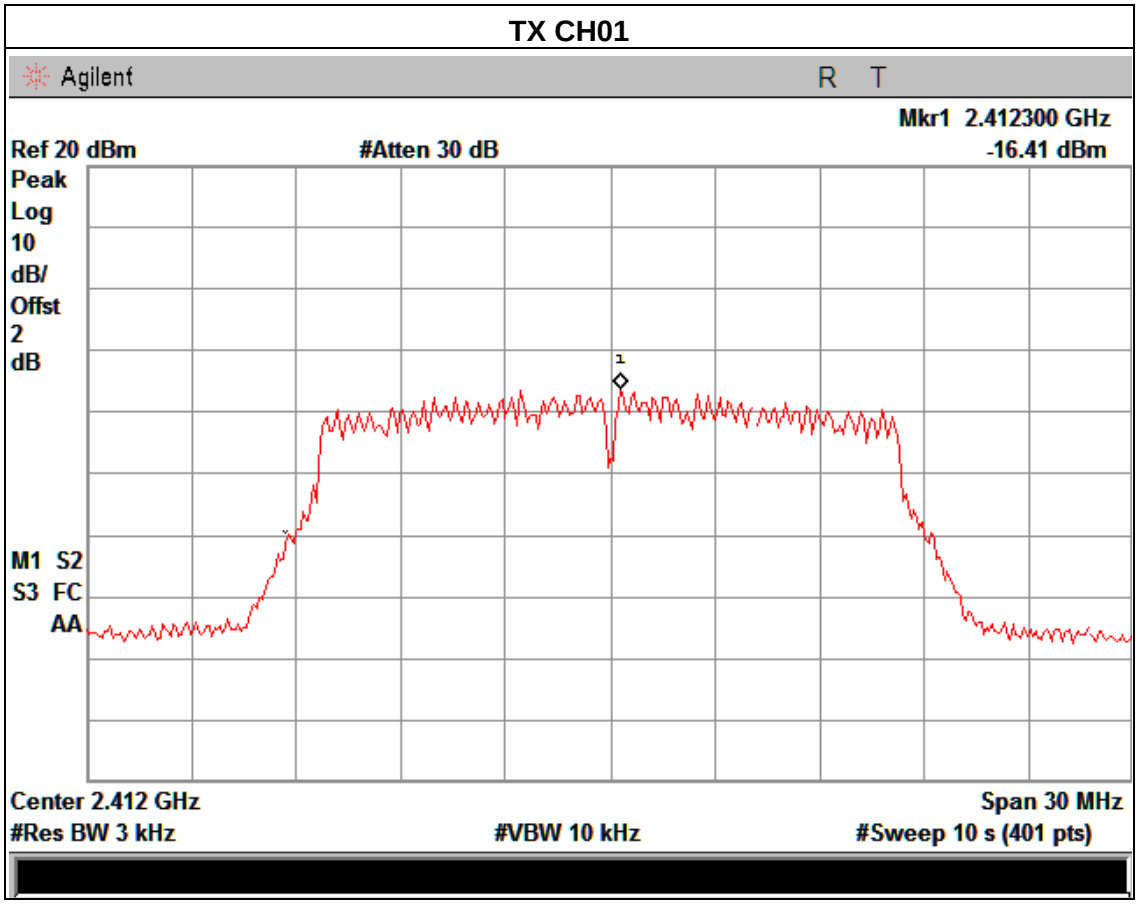
TX CH11



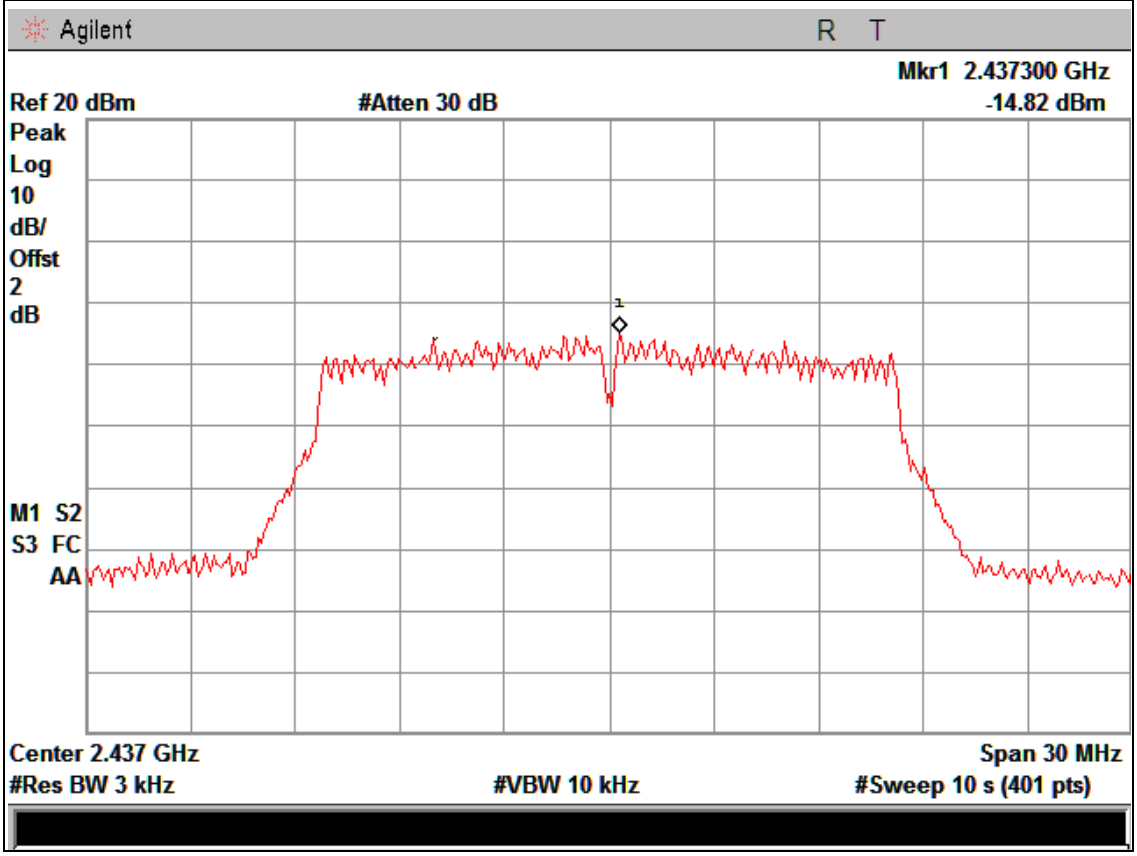
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11 with antenna B		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-16.41	**8**	**PASS**
2437 MHz	-14.82	8	**PASS**
2462 MHz	-15.43	8	**PASS**

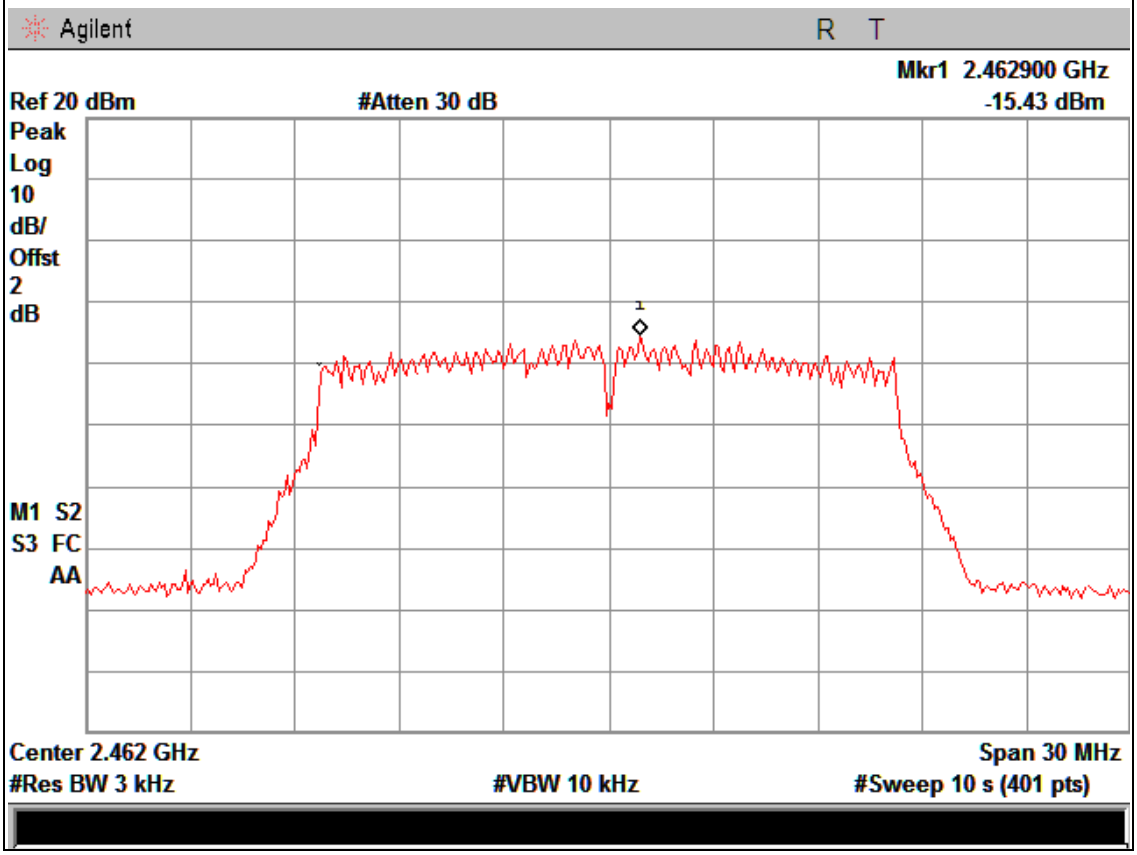
TX CH01



TX CH06



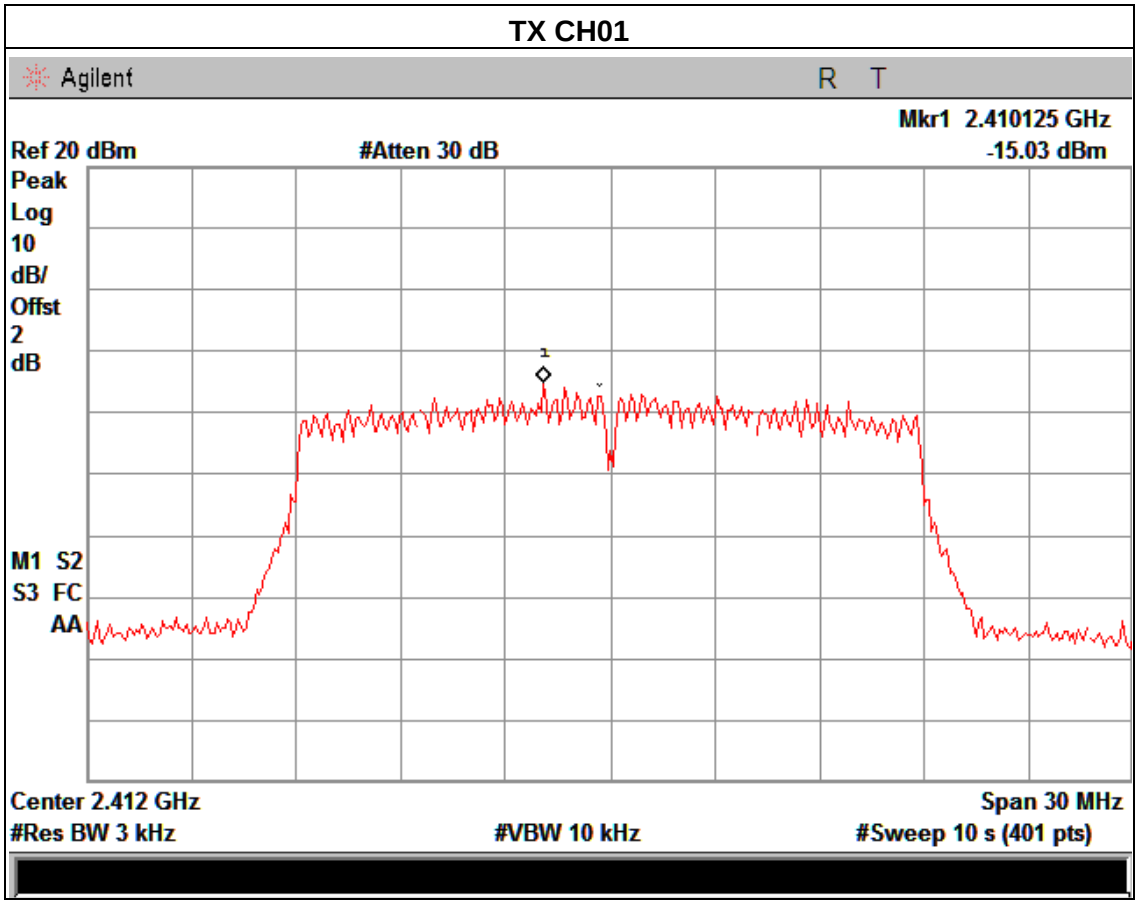
TX CH11



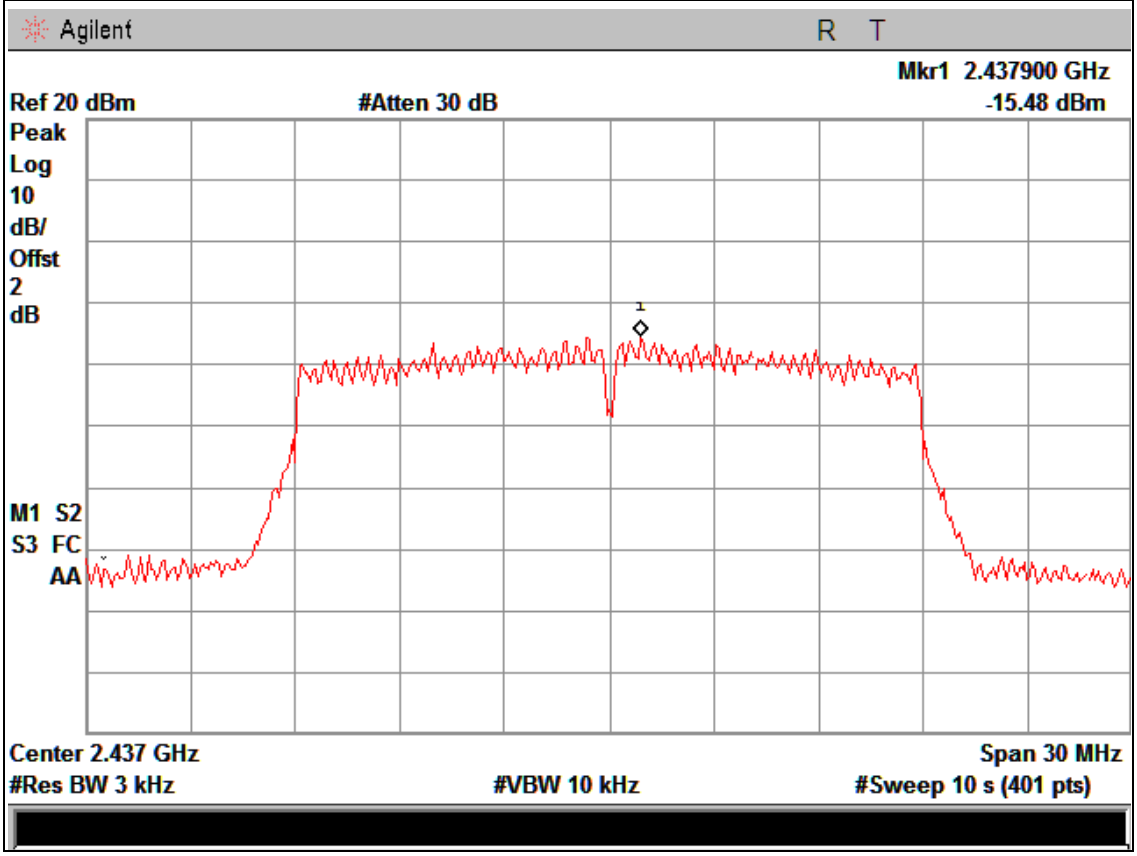
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11 with antenna B		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-15.03	**8**	**PASS**
2437 MHz	-15.48	8	**PASS**
2462 MHz	-16.58	8	**PASS**

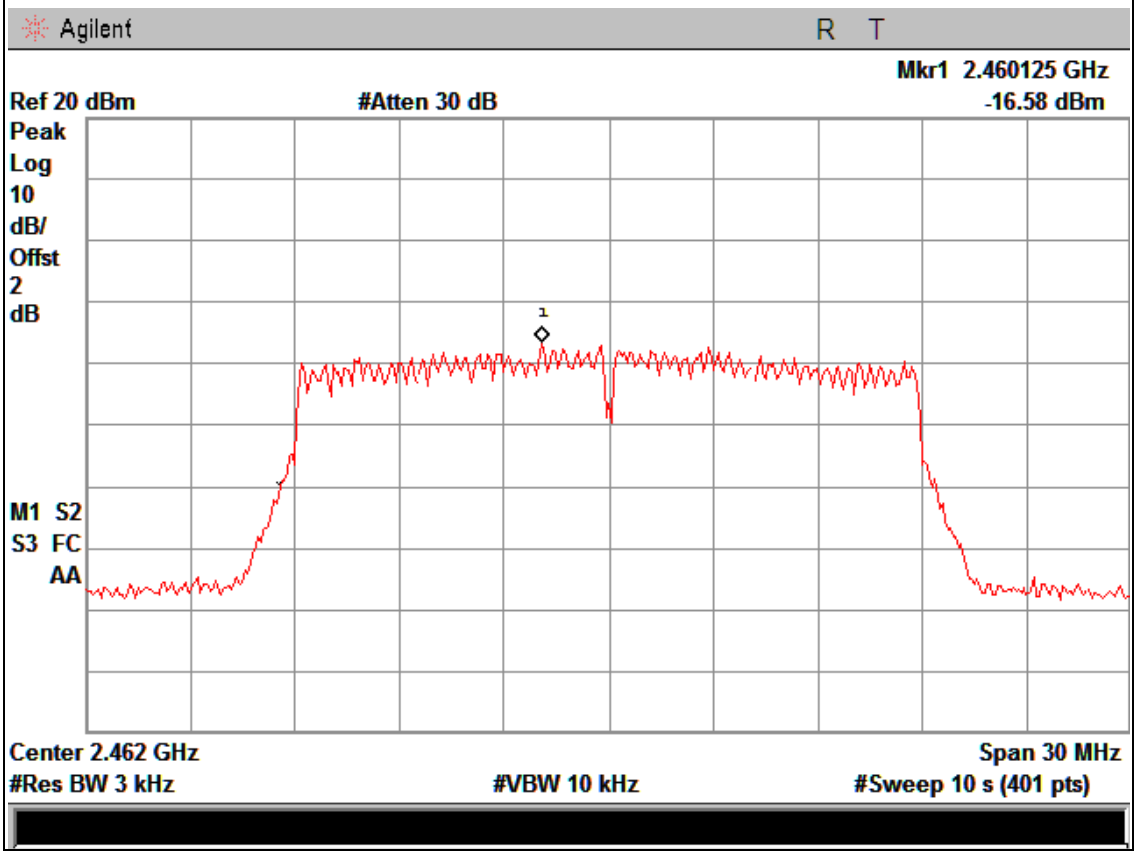
TX CH01



TX CH06



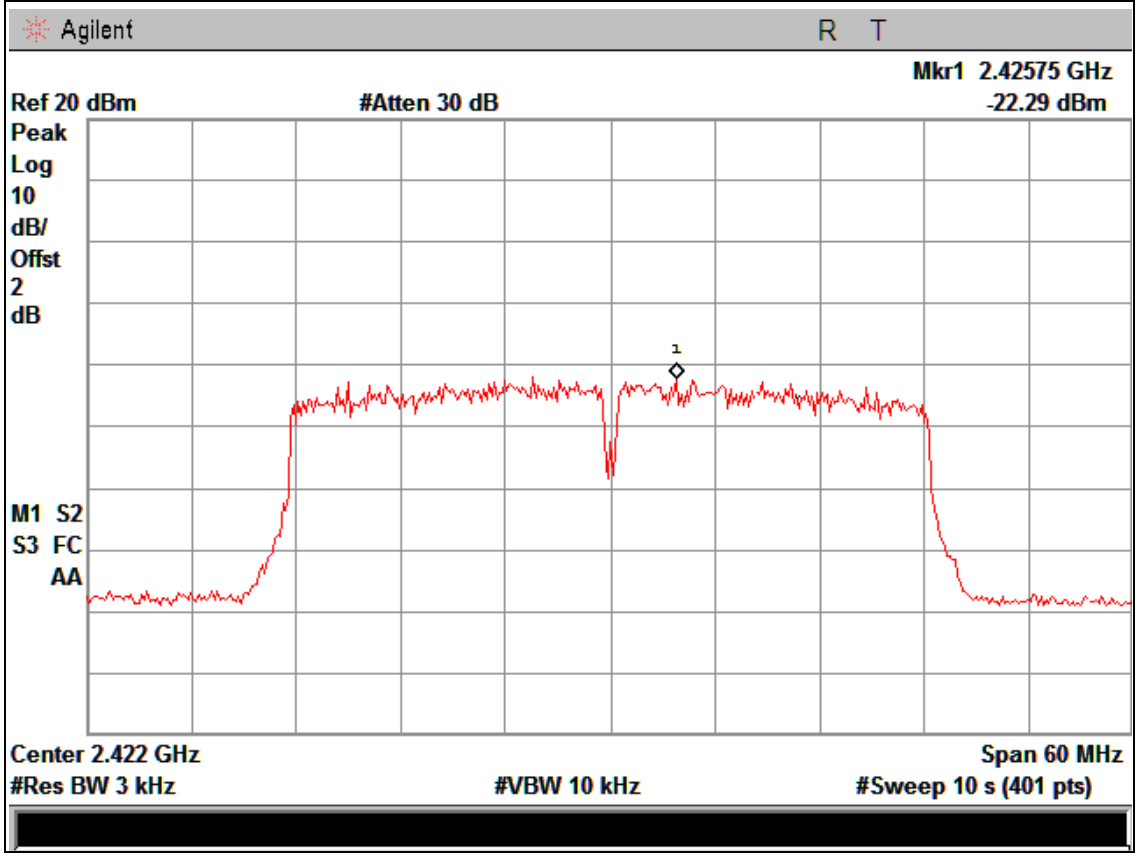
TX CH11



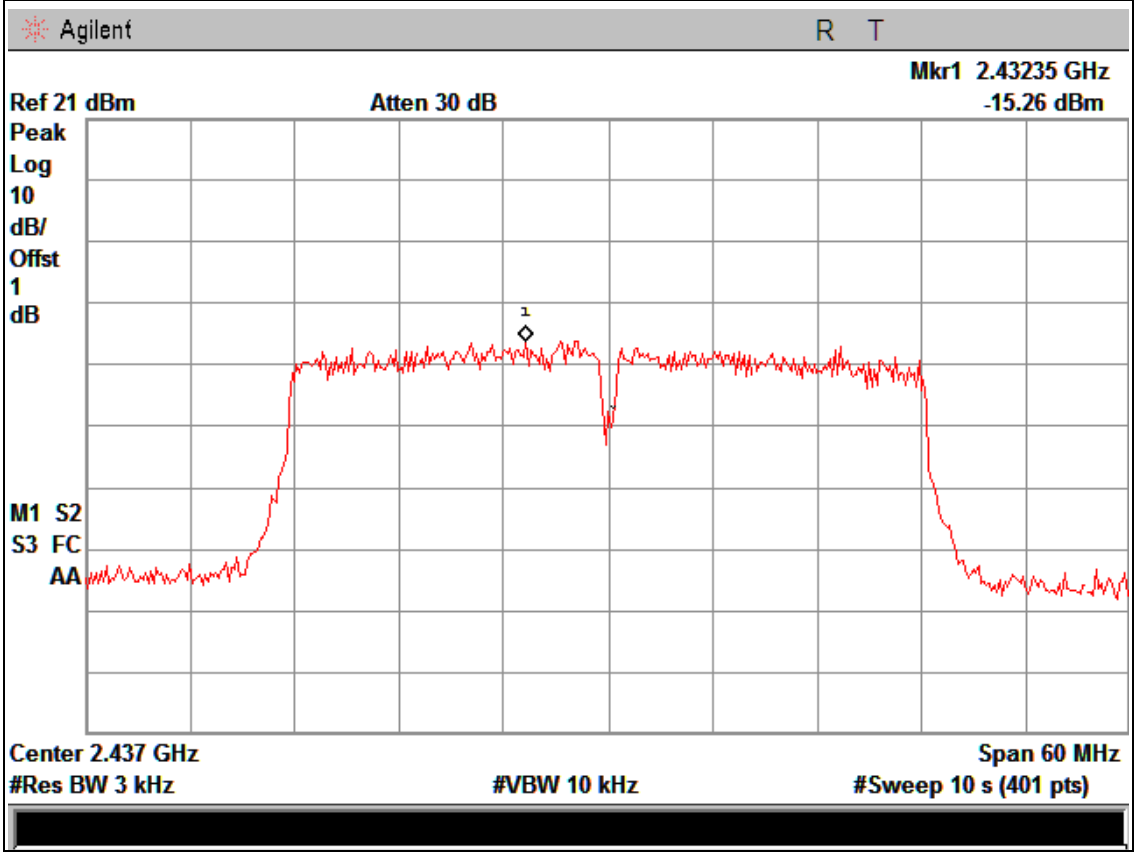
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09 with antenna B		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-22.29	8	PASS
2437 MHz	-15.26	8	PASS
2452 MHz	-20.92	8	PASS

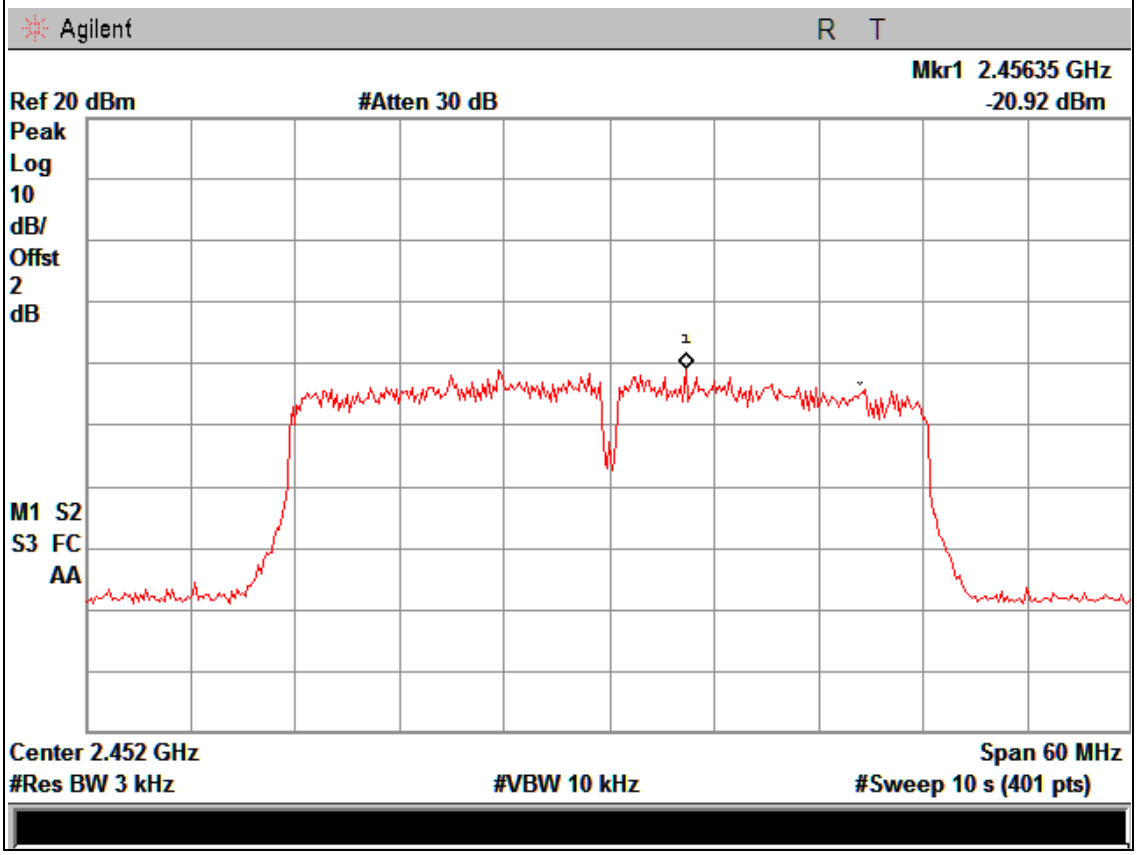
TX CH03



TX CH06



TX CH09



EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11 with antenna A+B		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-12.74	**8**	**PASS**
2437 MHz	-12.20	8	**PASS**
2462 MHz	-12.87	8	**PASS**

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09 with antenna B with antenna A+B		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2422 MHz	-19.42	8	PASS
2437 MHz	-12.25	8	PASS
2452 MHz	-17.18	8	PASS

Note:1 According to KDB 662911, Result power = $10\log(10^{(ant1/10)}+10^{(ant2/10)})$

2 Result unit: W, The end Power Spectral Density result is converted to units of dBm

5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

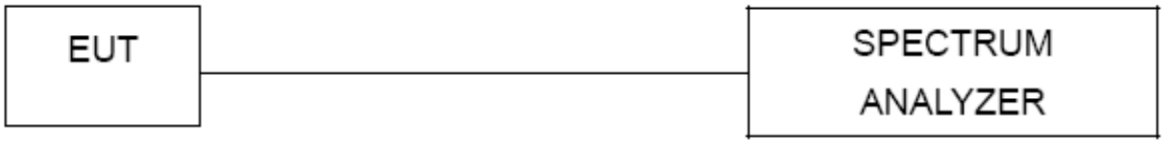
5.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 ´ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7.Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 d B relative to the maximum level measured in the fundamental emission.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

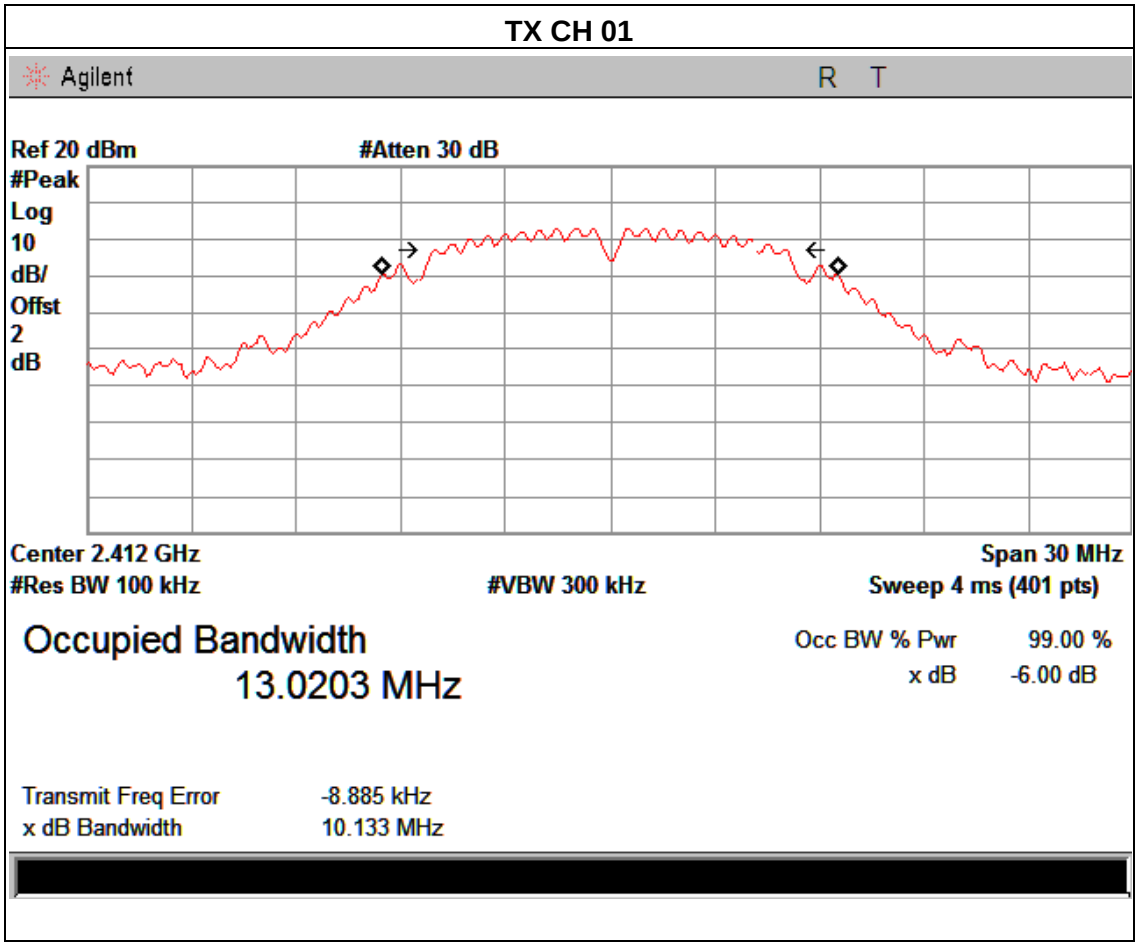
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

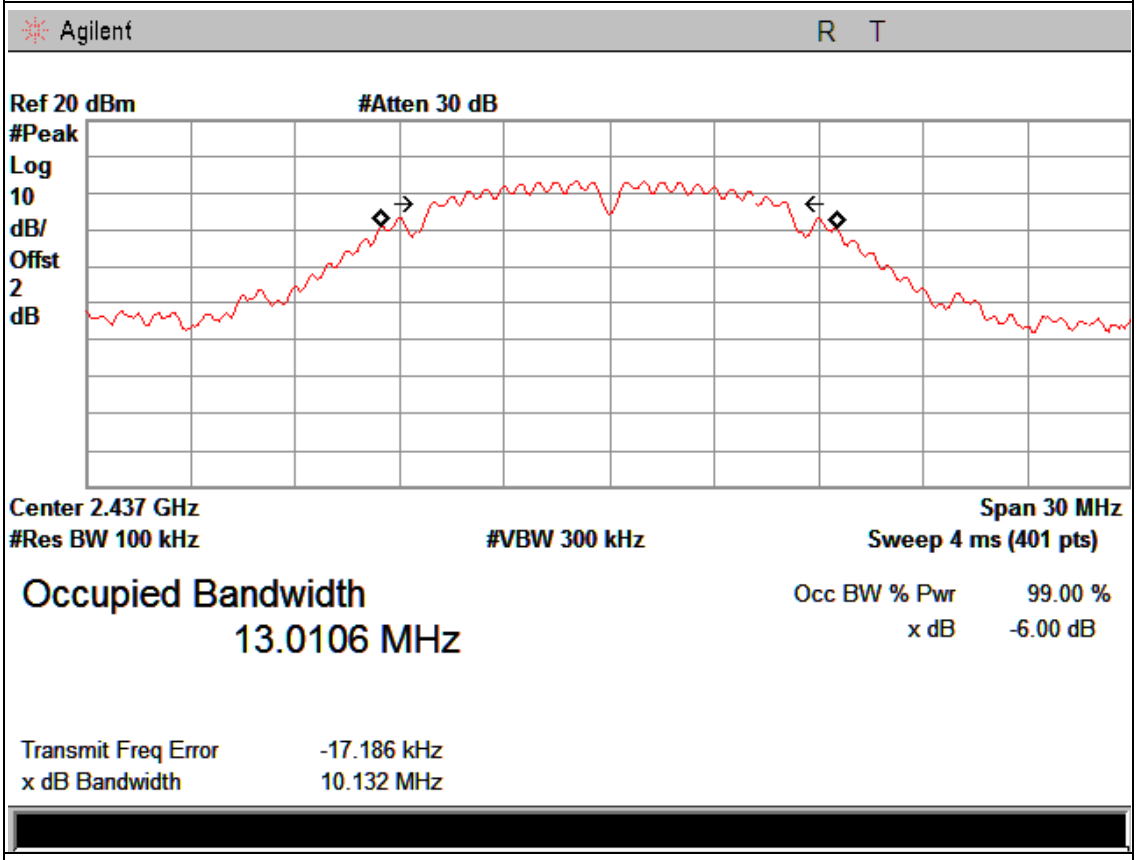
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11 with Antenna A.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	10.133	>=500KHz	**PASS**
2437 MHz	10.132	>=500KHz	**PASS**
2462 MHz	10.123	>=500KHz	**PASS**

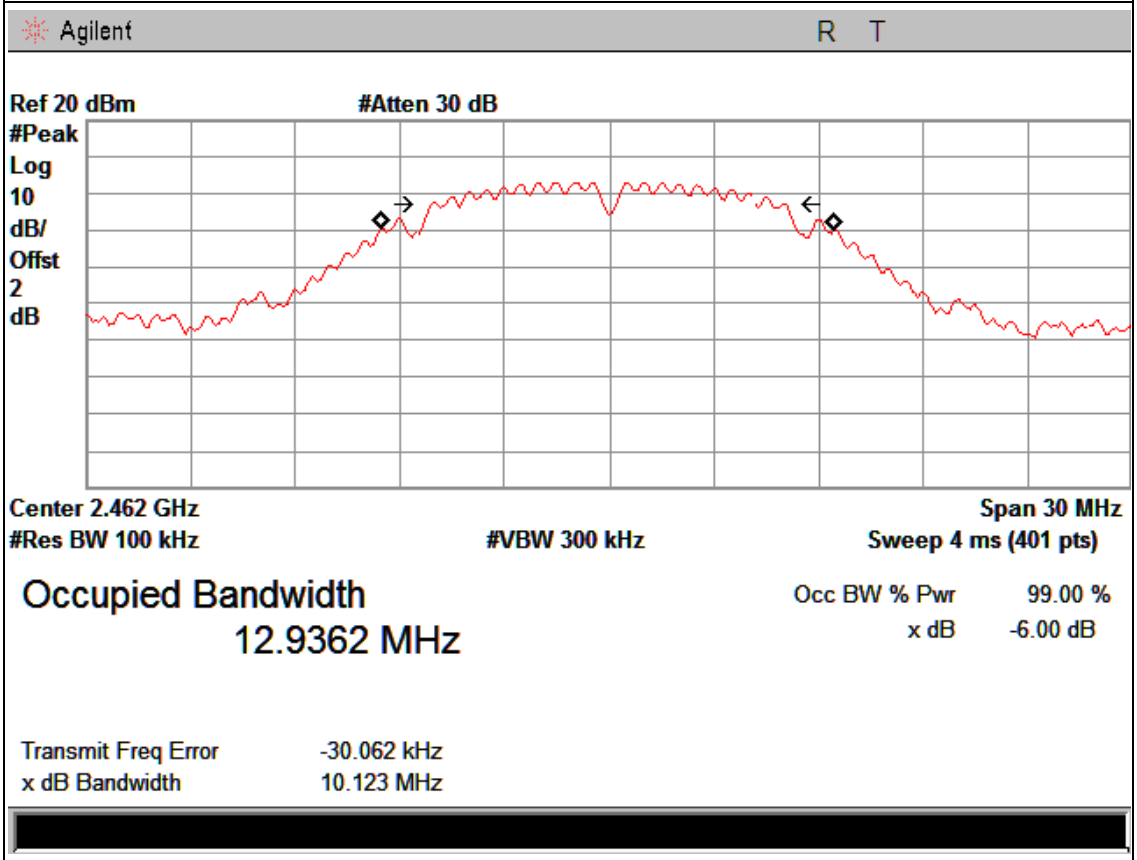
TX CH 01



TX CH 06



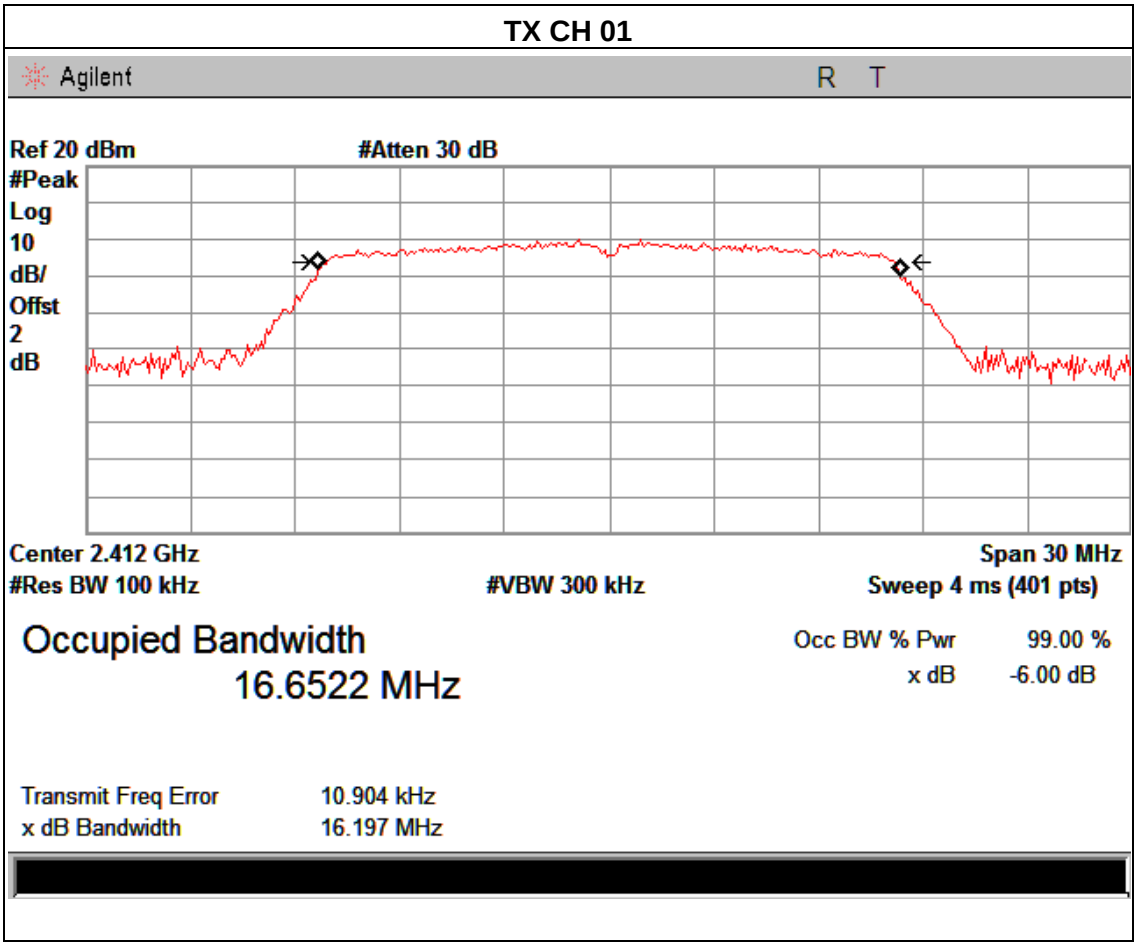
TX CH 11



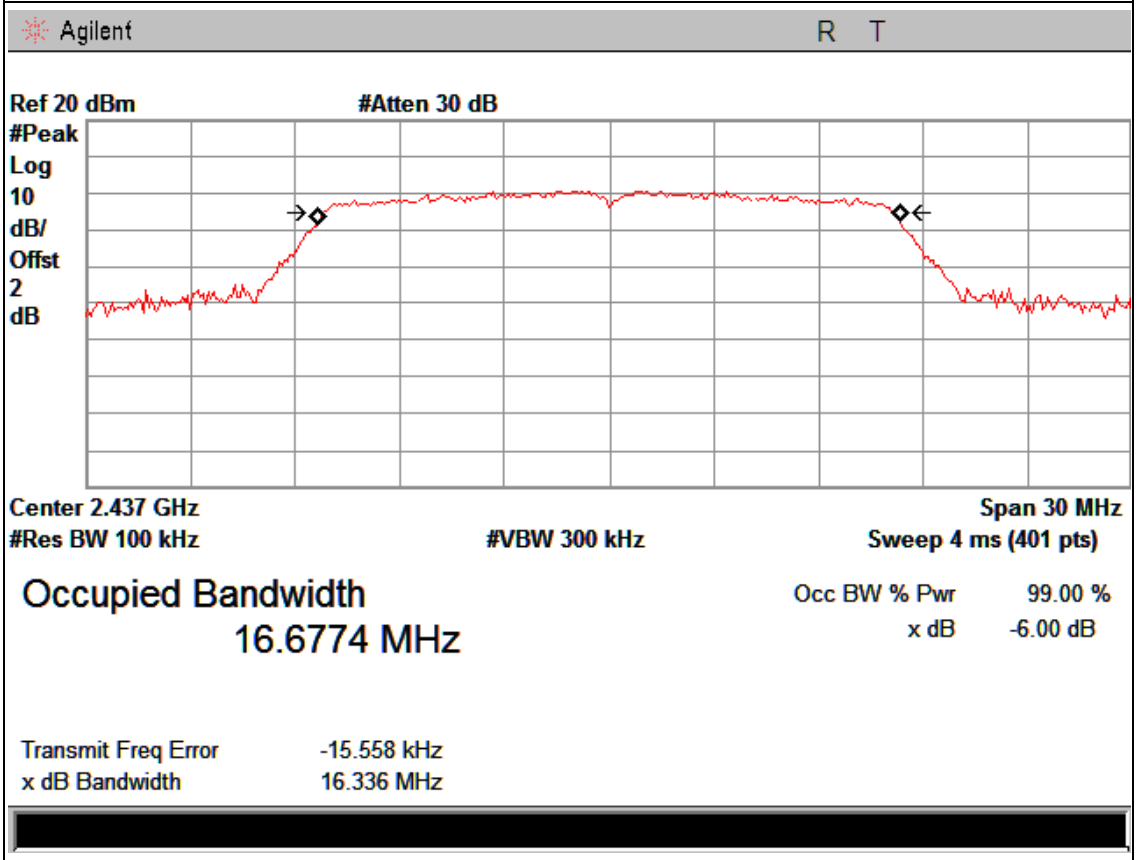
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11 with Antenna A.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.197	>=500KHz	**PASS**
2437 MHz	16.336	>=500KHz	**PASS**
2462 MHz	16.284	>=500KHz	**PASS**

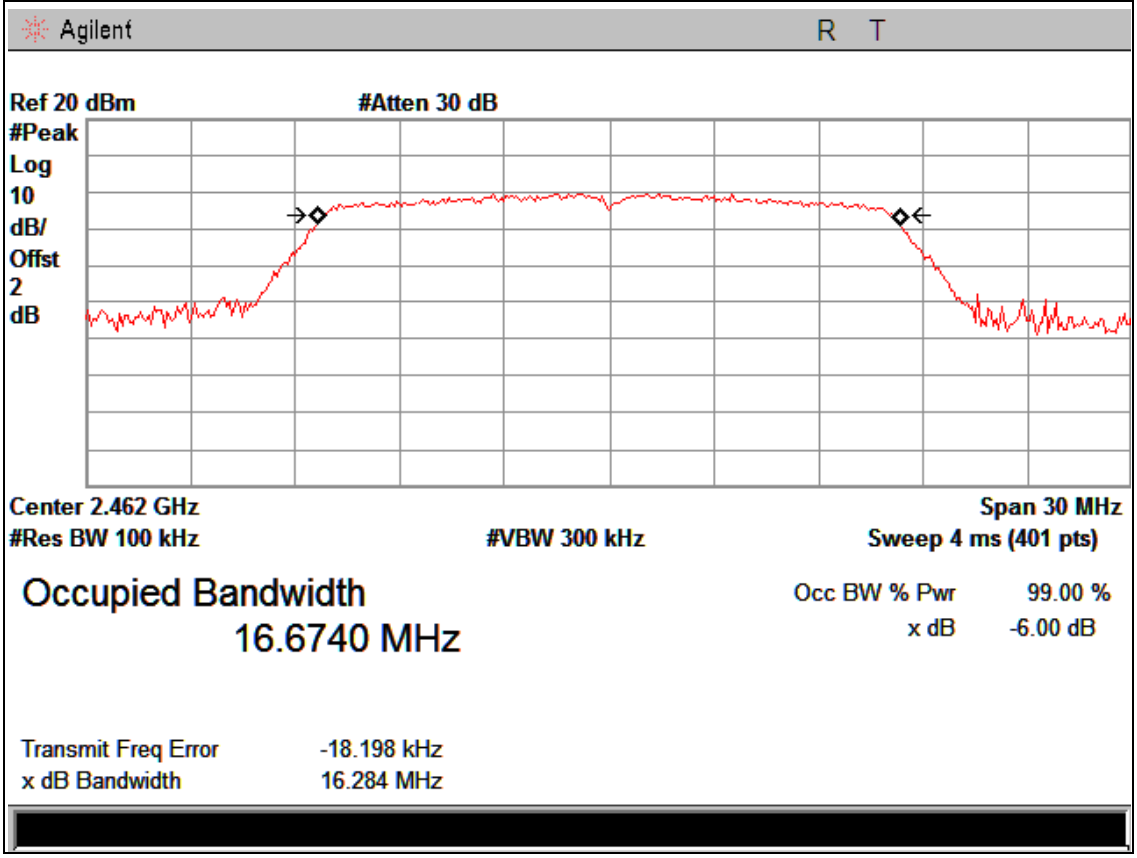
TX CH 01



TX CH 06



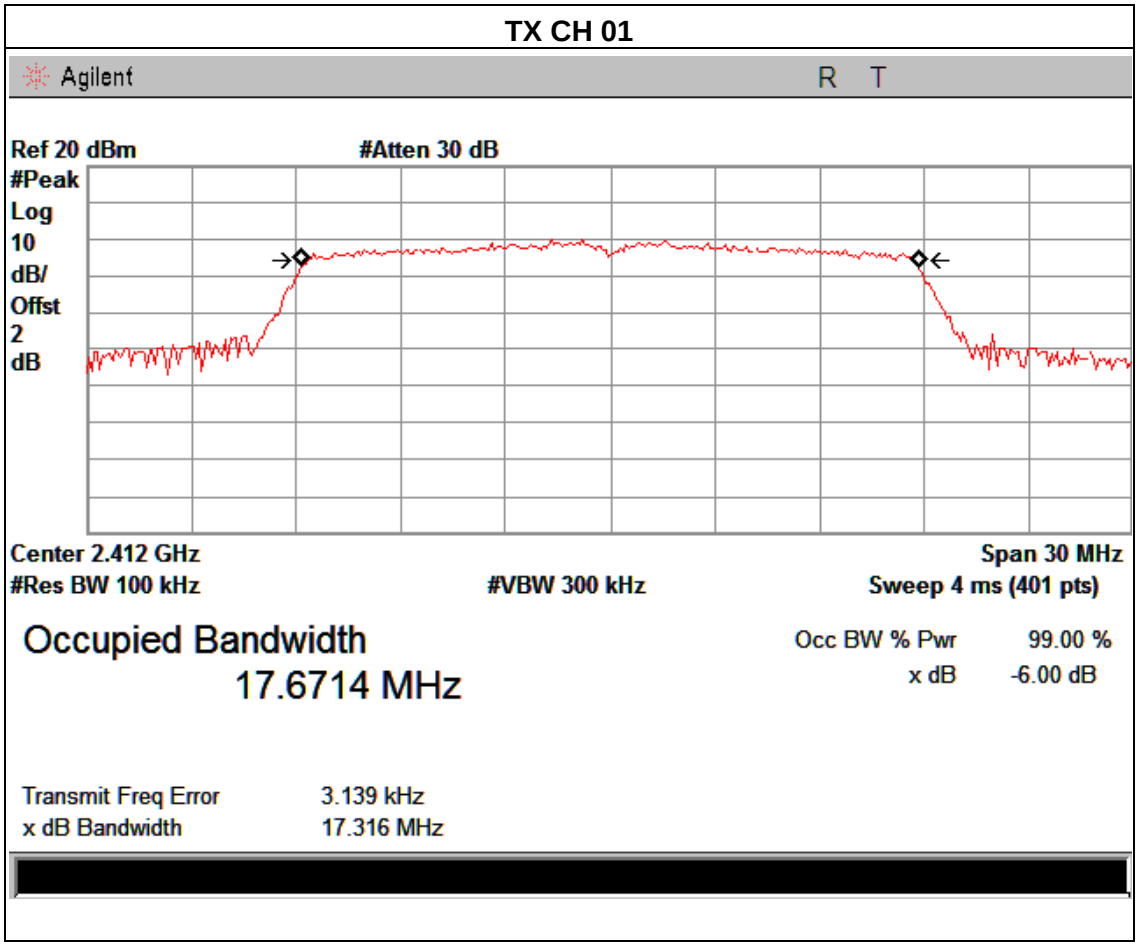
TX CH 11



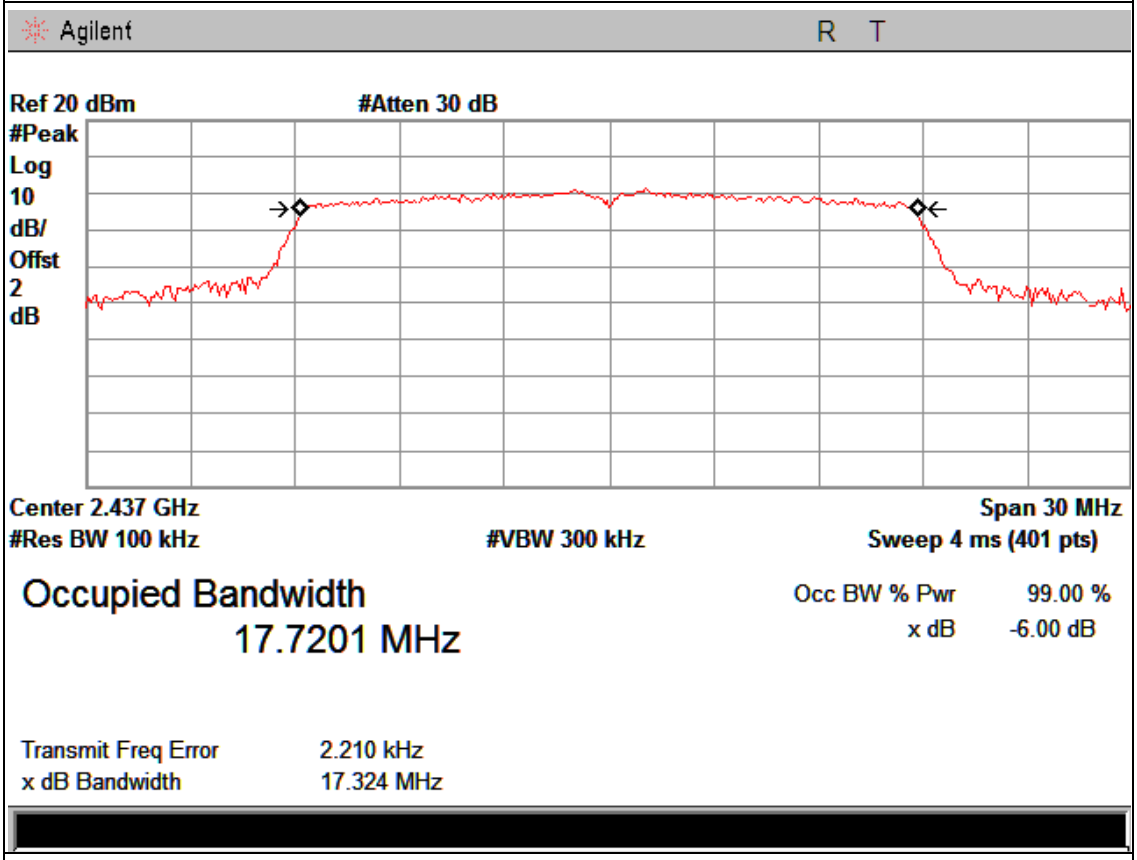
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11 with Antenna A.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	17.316	>=500KHz	**PASS**
2437 MHz	17.324	>=500KHz	**PASS**
2462 MHz	17.395	>=500KHz	**PASS**

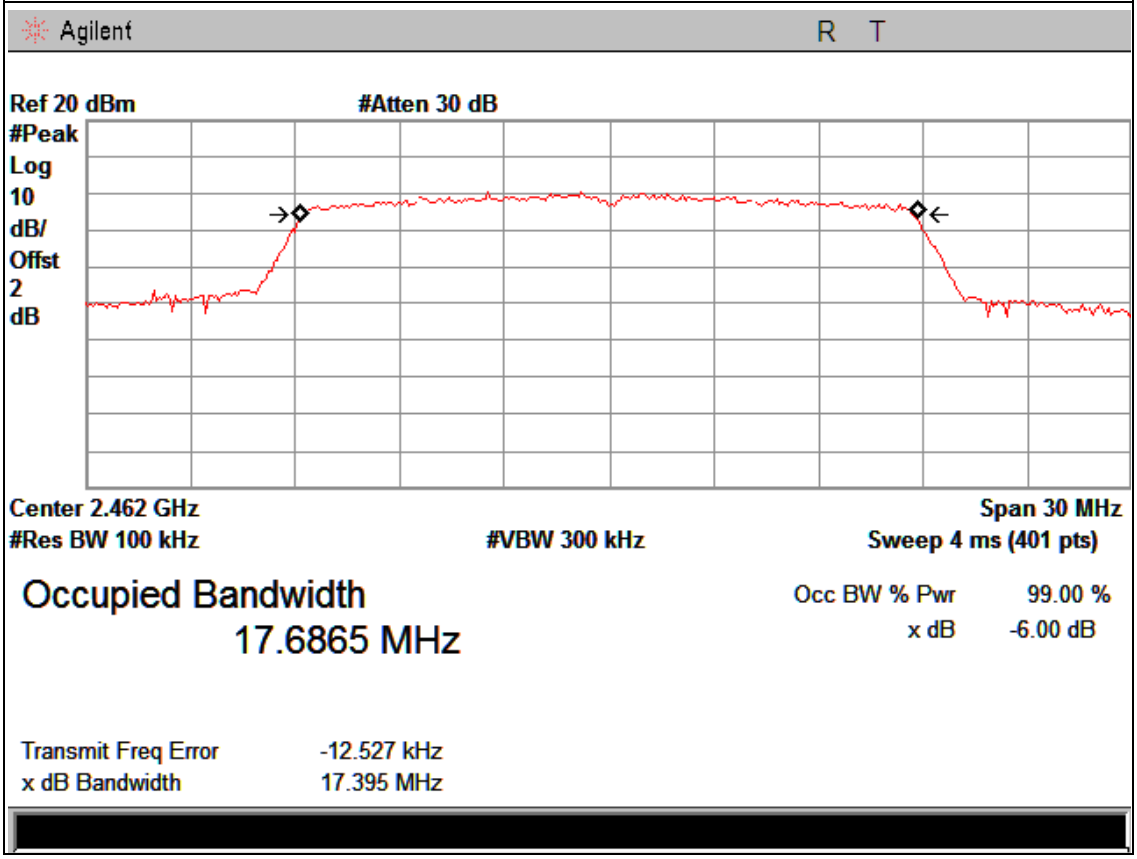
TX CH 01



TX CH 06



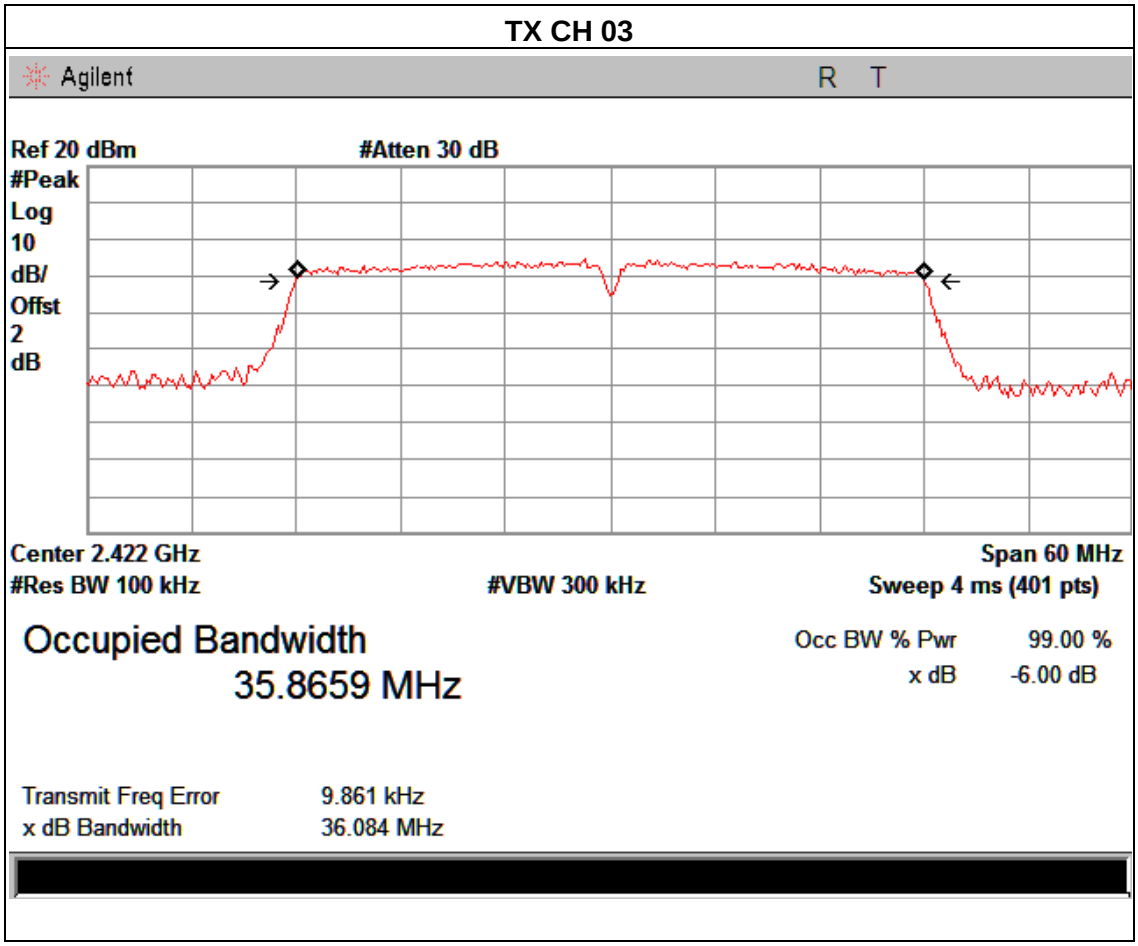
TX CH 11



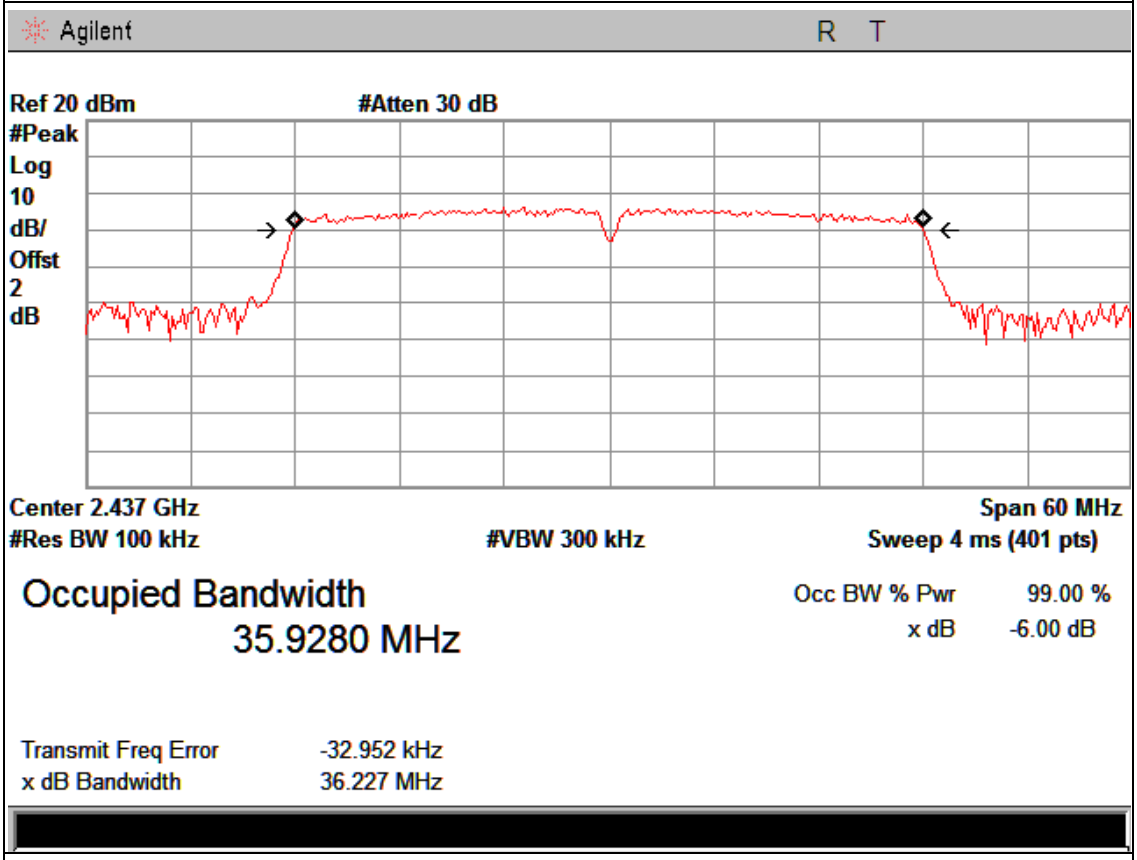
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09 with Antenna A.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2422 MHz	36.084	>=500KHz	**PASS**
2437 MHz	36.227	>=500KHz	**PASS**
2452 MHz	36.175	>=500KHz	**PASS**

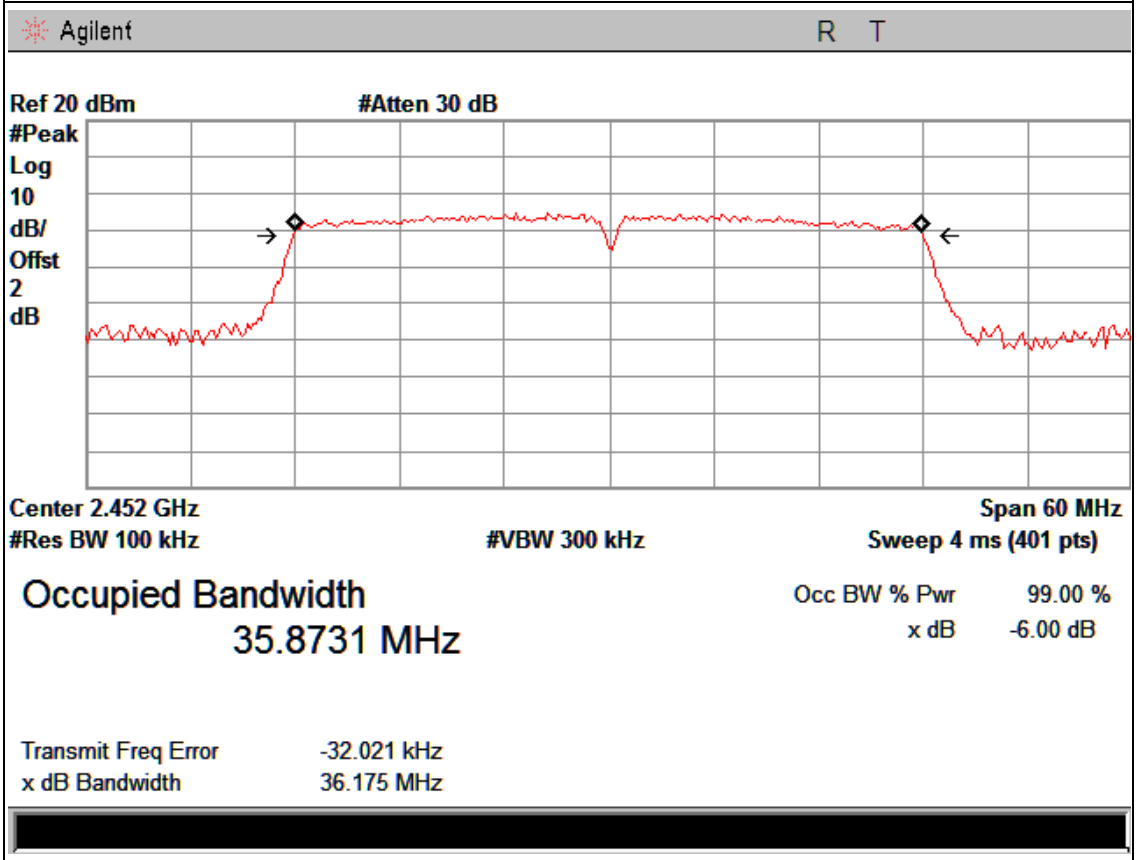
TX CH 03



TX CH 06



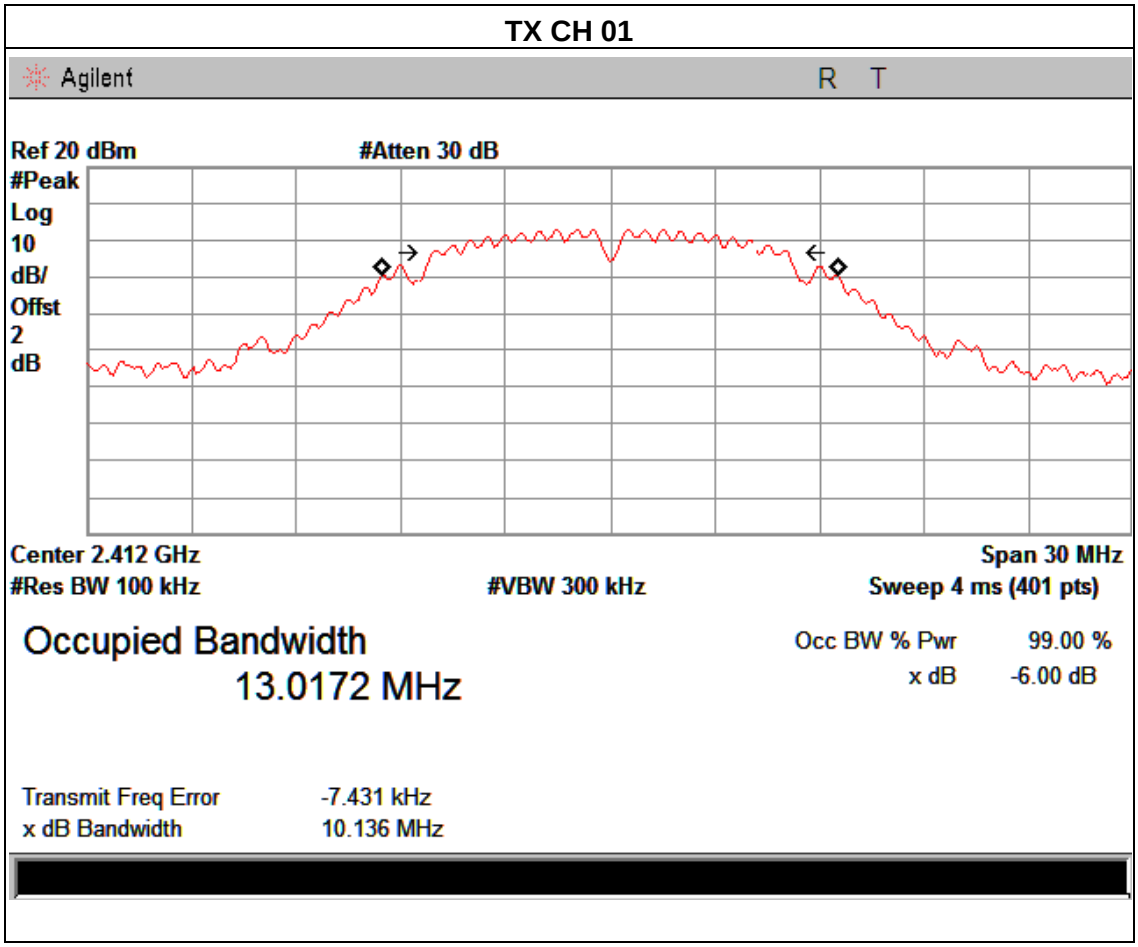
TX CH 09



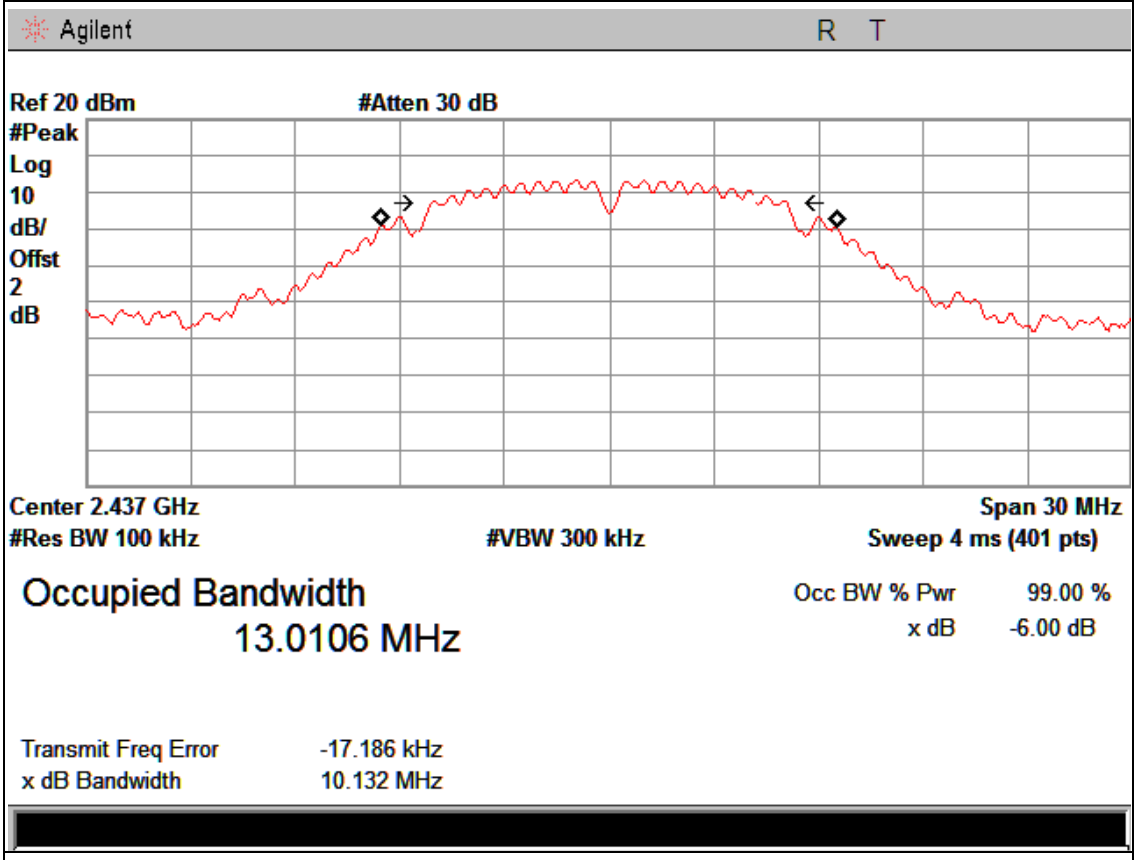
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX b Mode /CH01, CH06, CH11 with Antenna B.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	10.136	>=500KHz	**PASS**
2437 MHz	10.132	>=500KHz	**PASS**
2462 MHz	10.123	>=500KHz	**PASS**

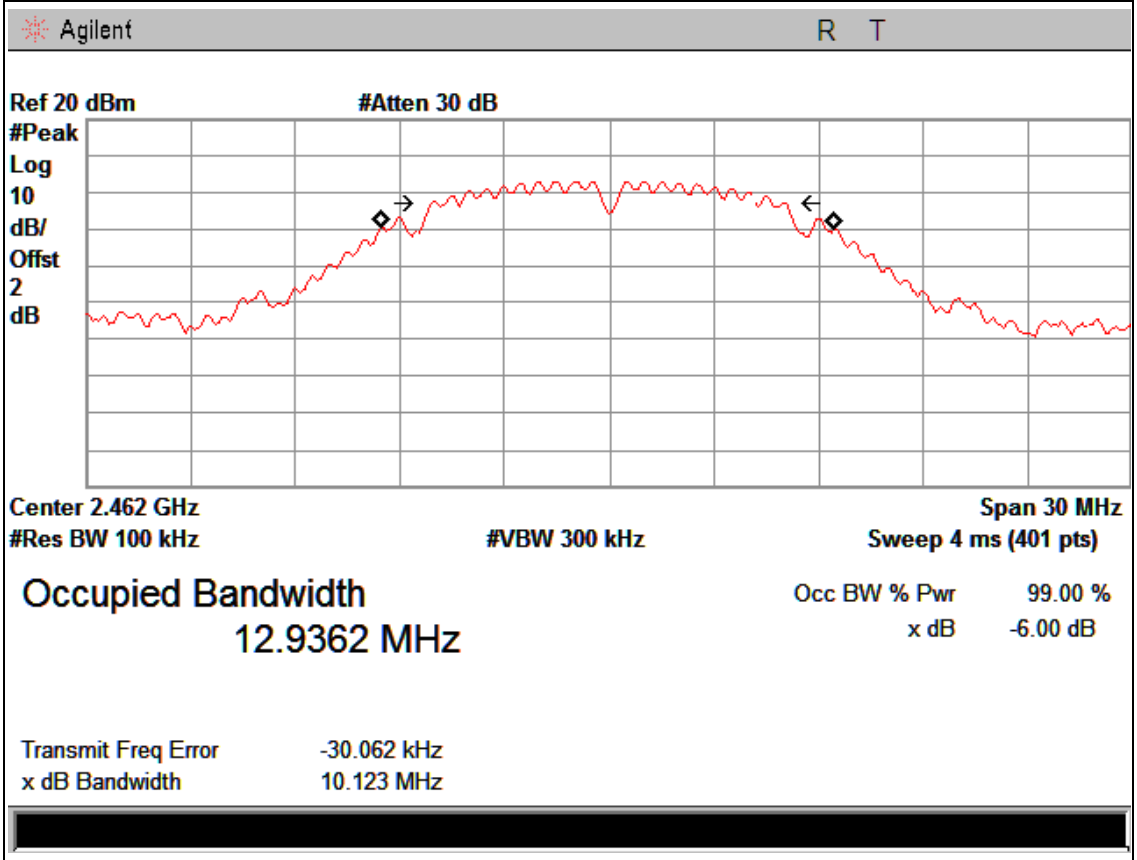
TX CH 01



TX CH 06



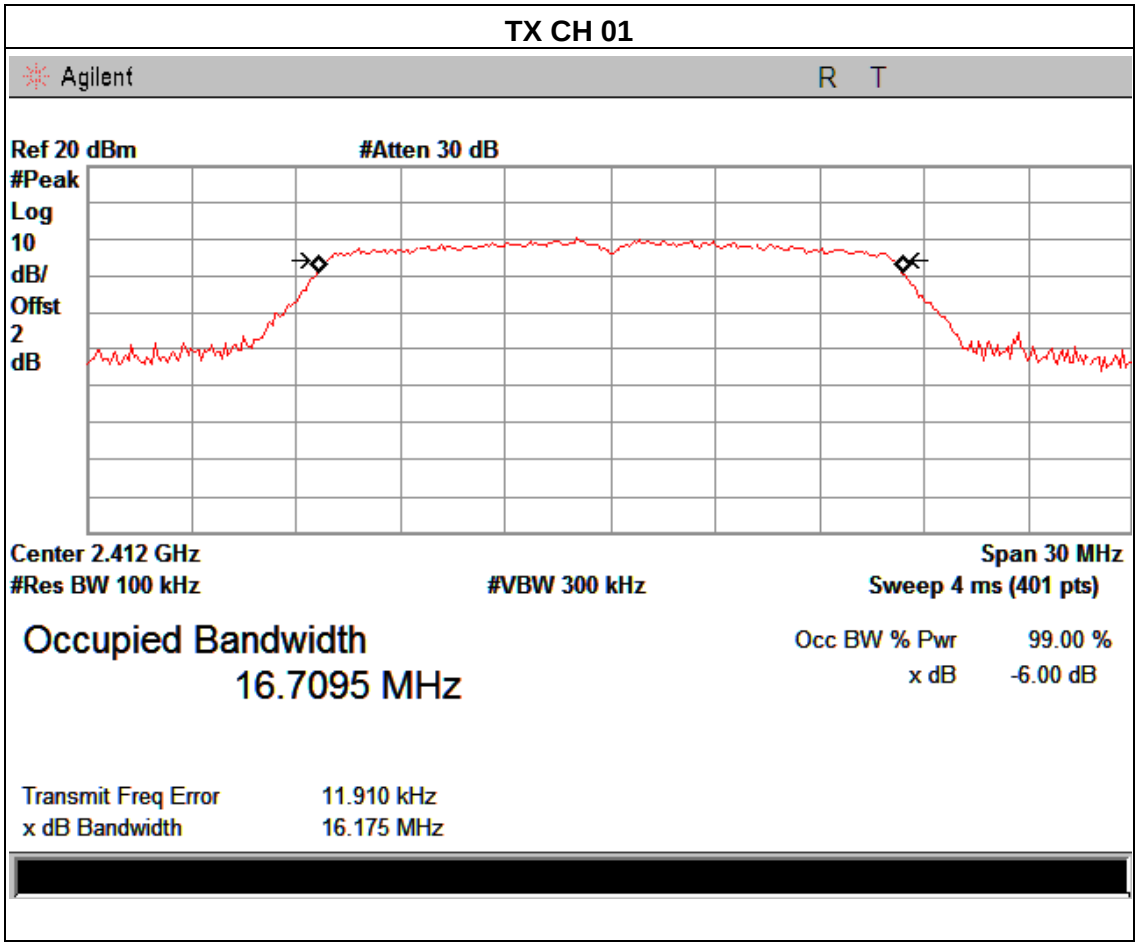
TX CH 11



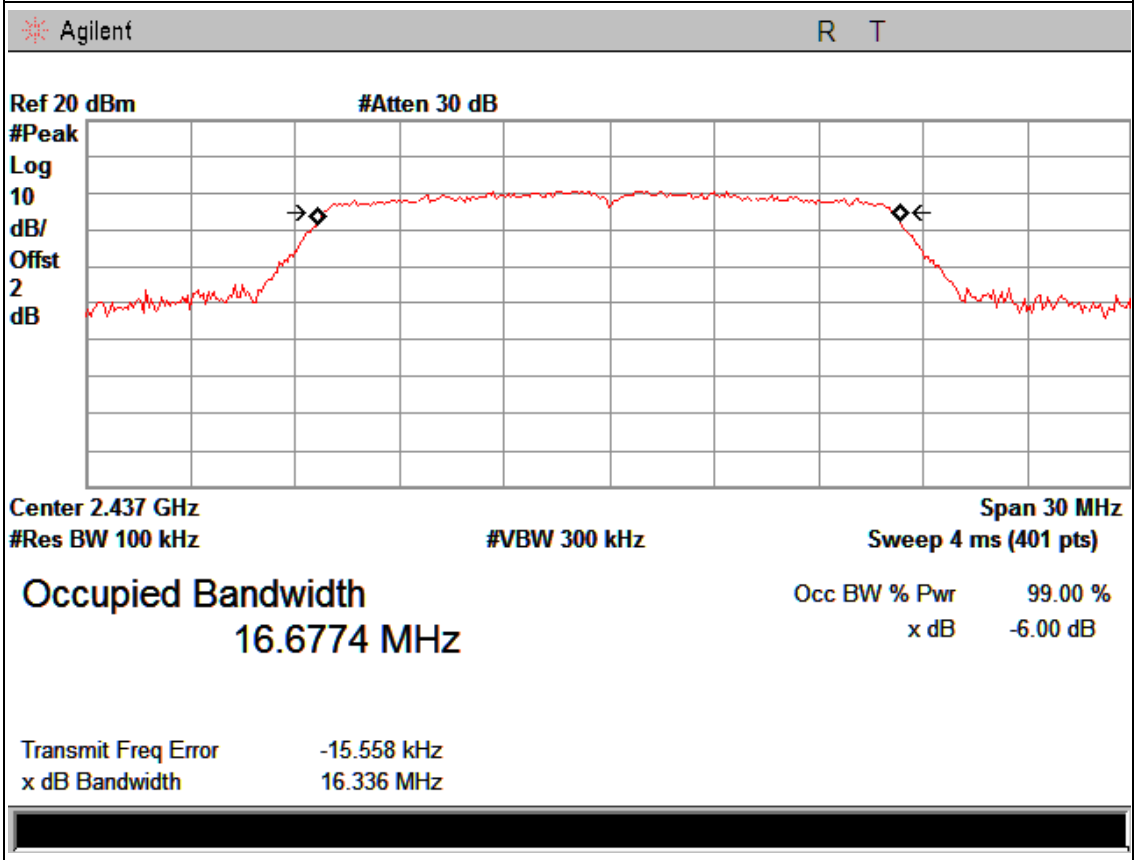
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX g Mode /CH01, CH06, CH11 with Antenna B.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	16.175	>=500KHz	**PASS**
2437 MHz	16.336	>=500KHz	**PASS**
2462 MHz	16.297	>=500KHz	**PASS**

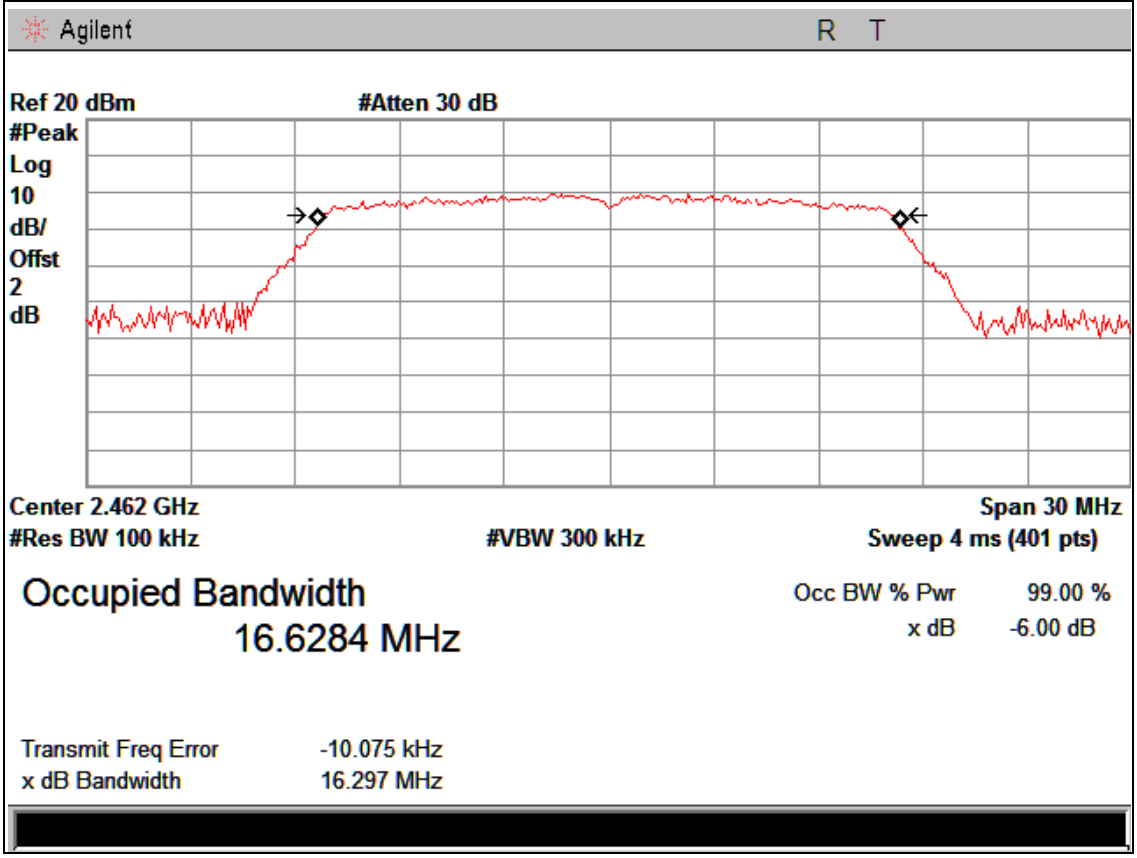
TX CH 01



TX CH 06



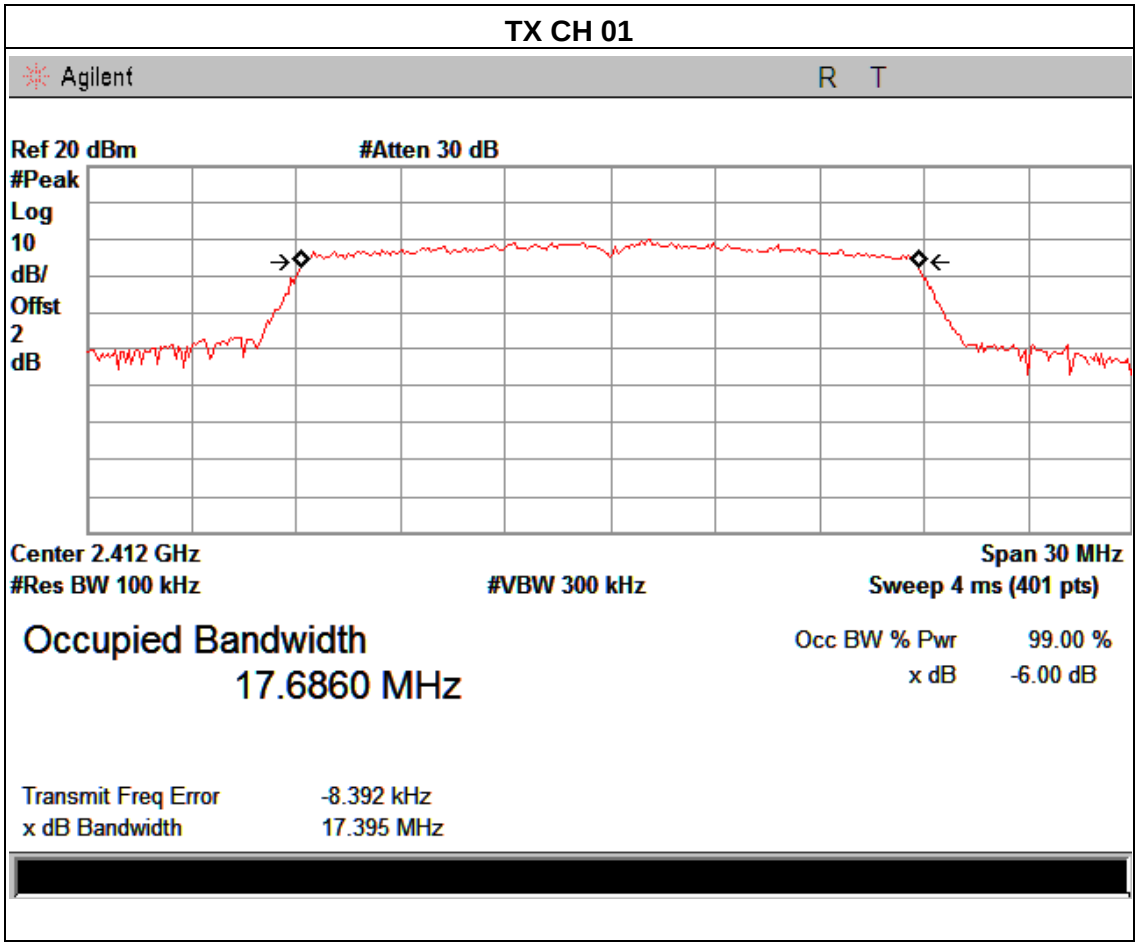
TX CH 11



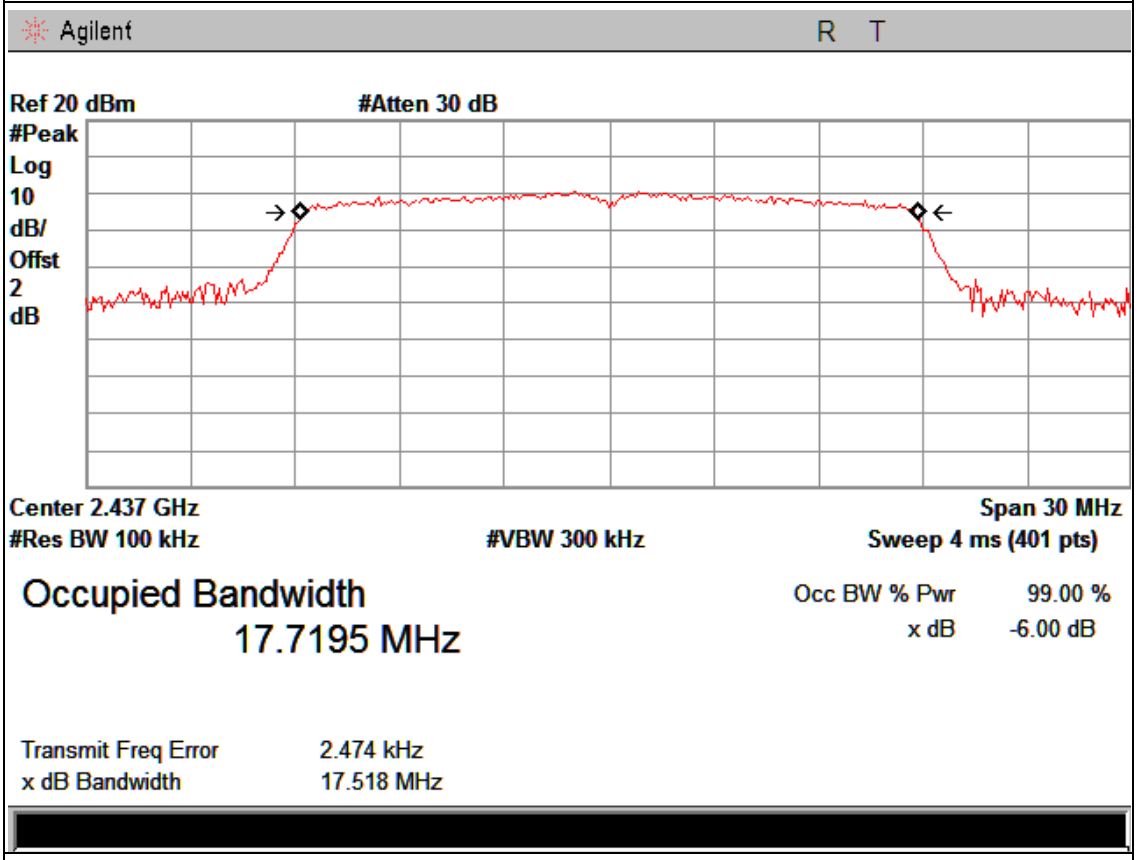
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(20M) /CH01, CH06, CH11 with Antenna B.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2412 MHz	17.395	>=500KHz	**PASS**
2437 MHz	17.518	>=500KHz	**PASS**
2462 MHz	17.366	>=500KHz	**PASS**

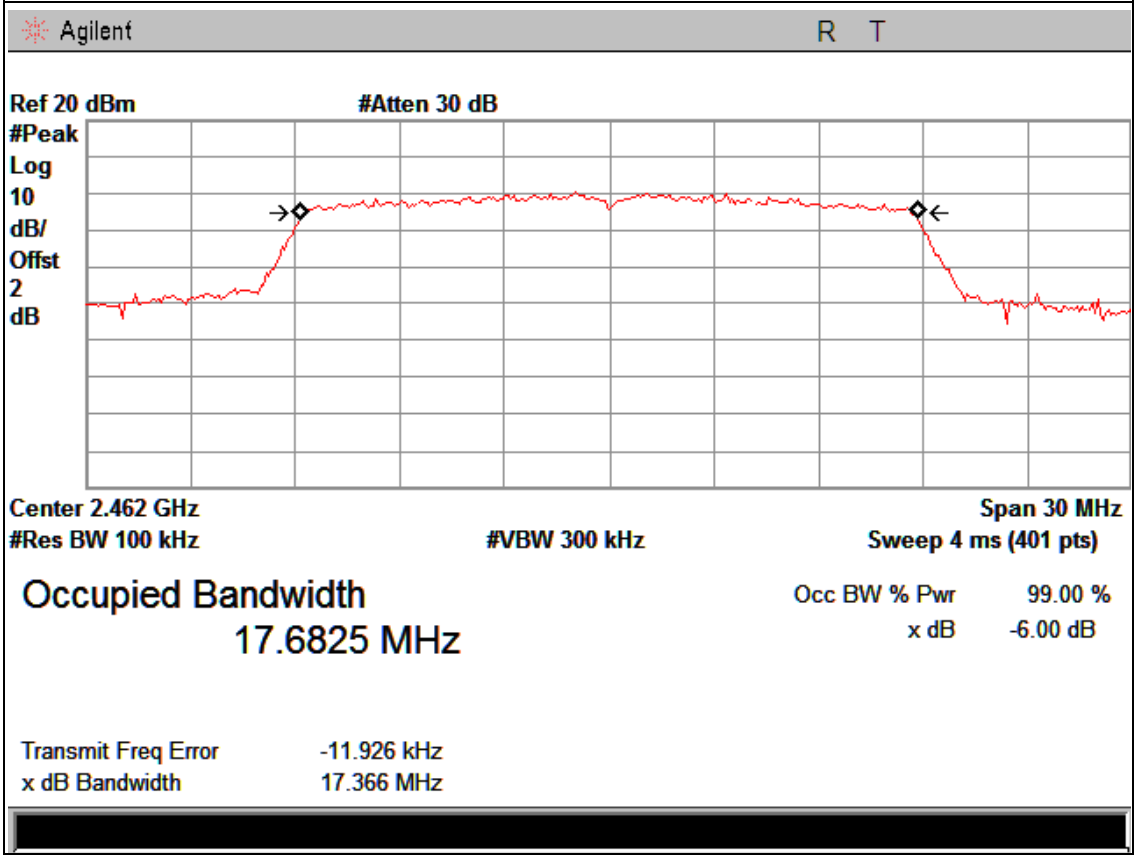
TX CH 01



TX CH 06



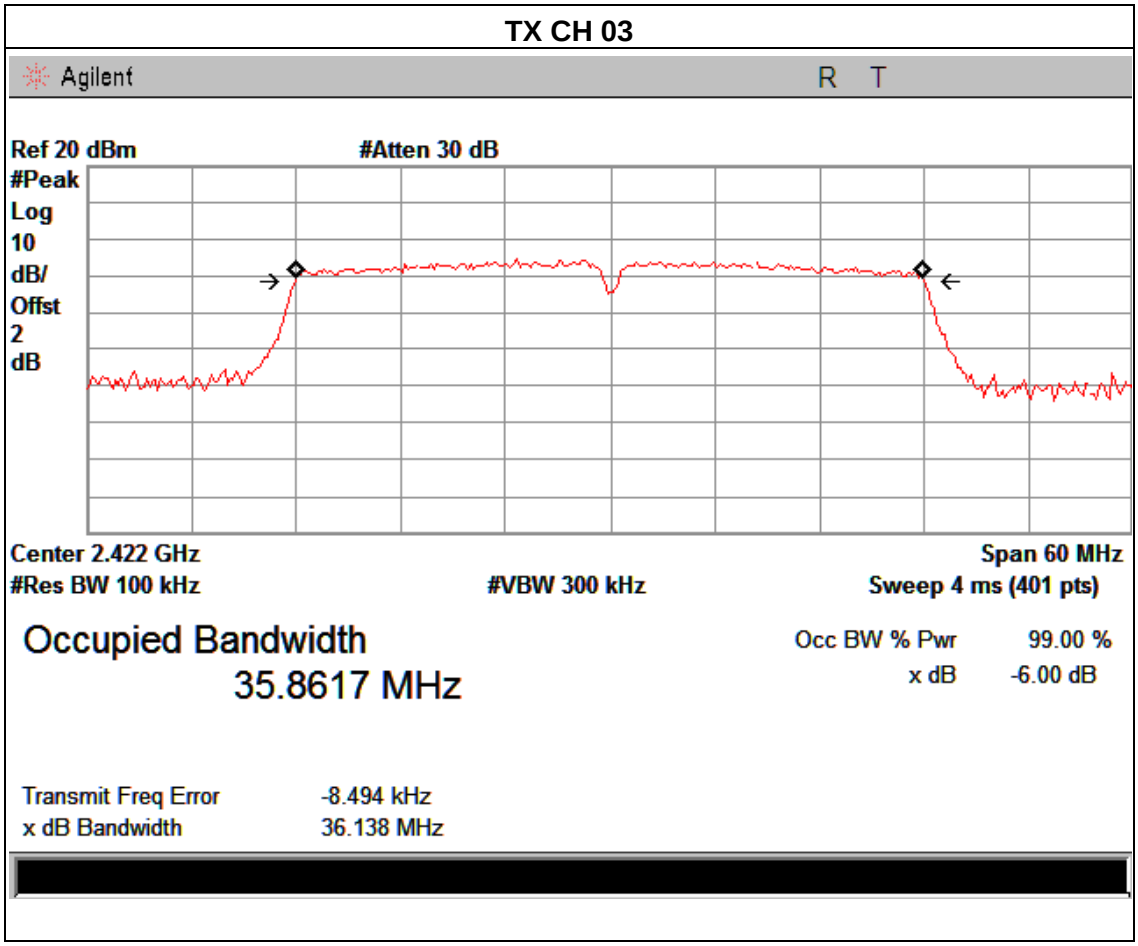
TX CH 11



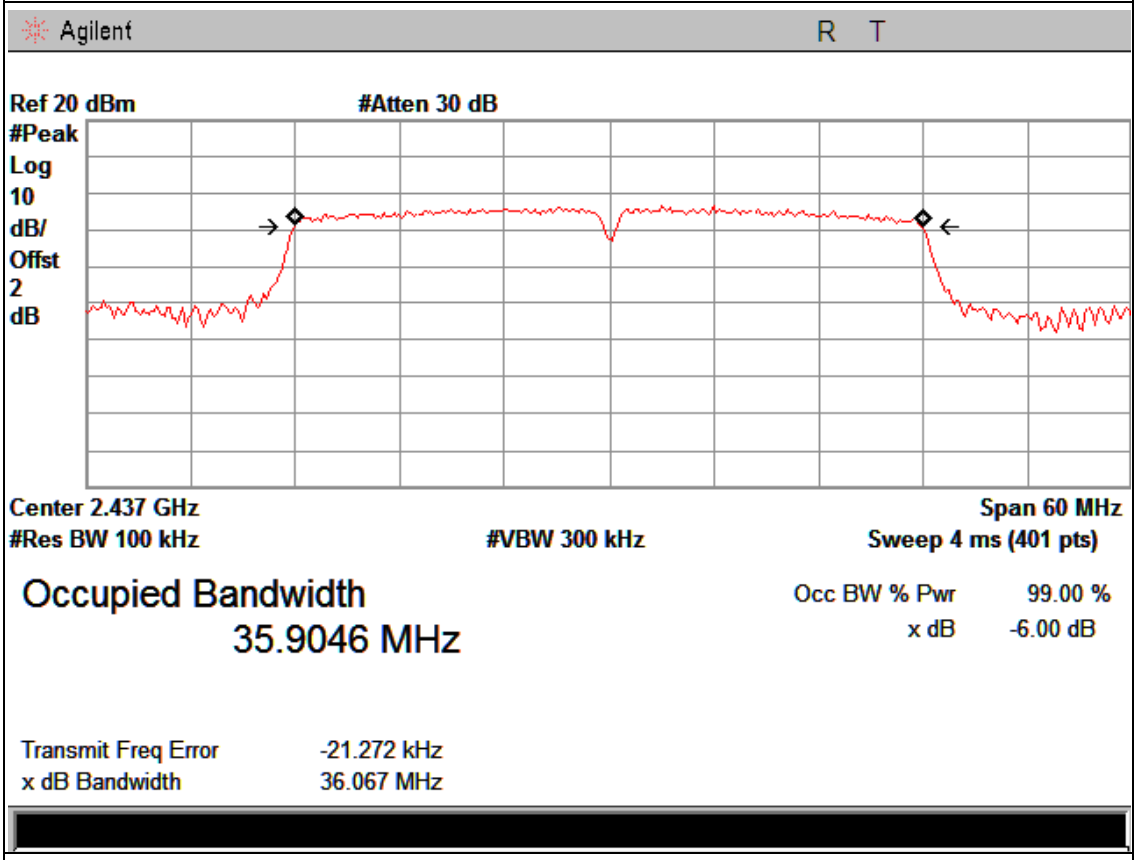
EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX n Mode(40M) /CH03, CH06, CH09 with Antenna B.		

Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2422 MHz	36.138	>=500KHz	**PASS**
2437 MHz	36.067	>=500KHz	**PASS**
2452 MHz	36.132	>=500KHz	**PASS**

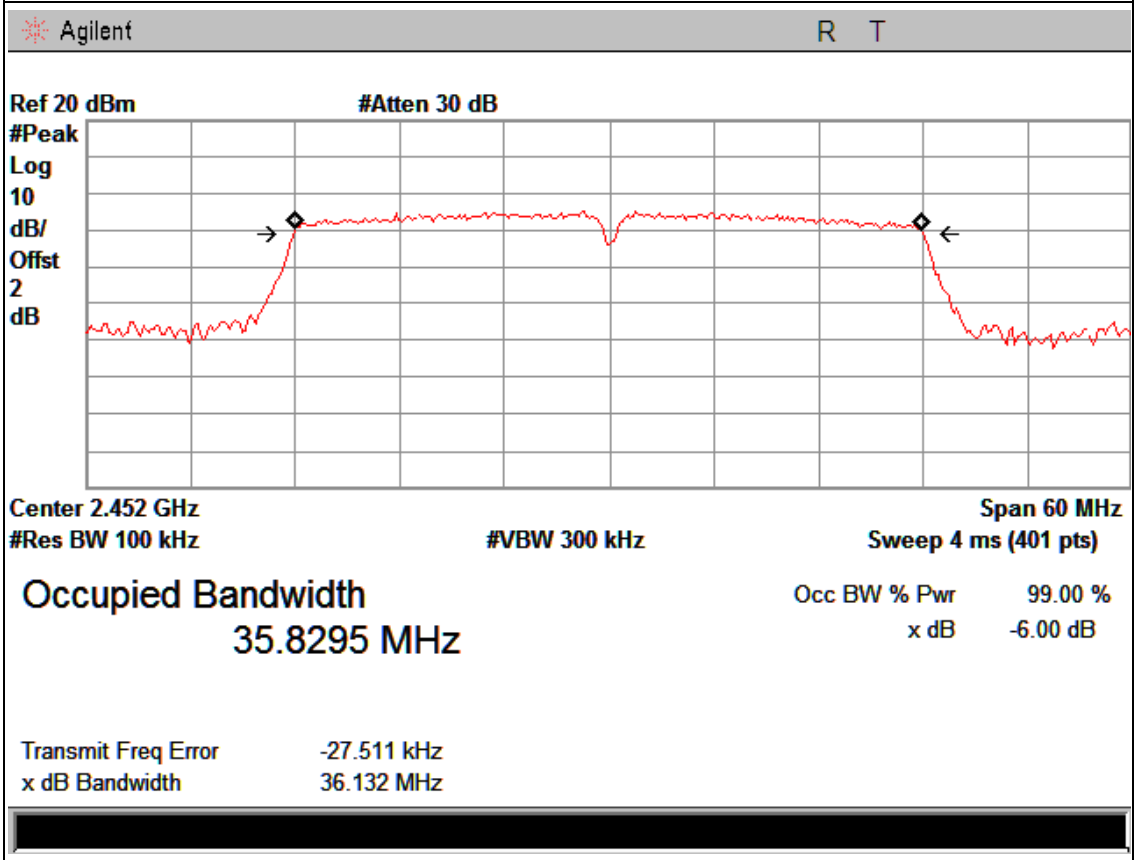
TX CH 03



TX CH 06



TX CH 09



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

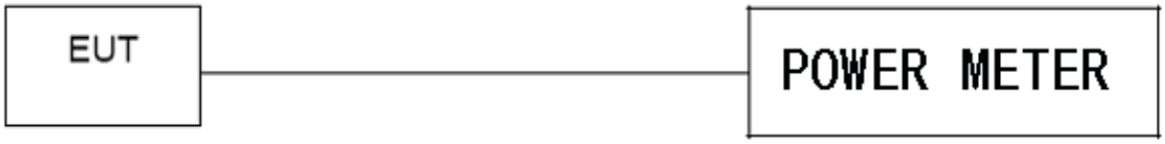
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT：	WIFI Modular	Model Name ：	HL-R8192EU5
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V for PC with AC 120V/60Hz
Test Mode ：	TX b/g/n(20M,40M) Mode /CH01, CH06, CH11		

TX 802.11b Mode with antenna A			
Test Channe	Frequency (MHz)	Peak Conducted Output Power (dBm)	LIMIT dBm
CH01	2412	15.48	30
CH06	2437	15.31	30
CH11	2462	15.69	30
TX 802.11g Mode with antenna A			
CH01	2412	14.72	30
CH06	2437	14.58	30
CH11	2462	14.37	30
TX 802.11n20 Mode with antenna A			
CH01	2412	14.22	30
CH06	2437	14.19	30
CH11	2462	14.21	30
TX 802.11n40 Mode with antenna A			
CH03	2422	12.82	30
CH06	2437	12.75	30
CH09	2452	12.69	30
TX 802.11b Mode with antenna B			
Test Channe	Frequency (MHz)	Peak Conducted Output Power (dBm)	LIMIT dBm
CH01	2412	14.72	30
CH06	2437	14.69	30
CH11	2462	14.37	30
TX 802.11g Mode with antenna B			
CH01	2412	14.43	30
CH06	2437	14.29	30
CH11	2462	14.22	30
TX 802.11n20 Mode with antenna B			
CH01	2412	13.89	30
CH06	2437	13.96	30
CH11	2462	13.89	30
TX 802.11n40 Mode with antenna B			
CH03	2422	11.75	30
CH06	2437	11.83	30
CH09	2452	11.75	30

TX 802.11n20 Mode with antenna A+B			
CH01	2412	17.07	30
CH06	2437	17.09	30
CH11	2462	17.06	30
TX 802.11n40 Mode with antenna A+B			
CH03	2422	15.33	30
CH06	2437	15.32	30
CH09	2452	15.26	30
Note:1 According to KDB 662911, Result power = $10\log(10^{(ant1/10)}+10^{(ant2/10)})$ 2 Result unit: W, The end PK Output power result is converted to units of dBm			

7. ANTENNA REQUIREMENT

7.1 STANDARD REQUIREMENT

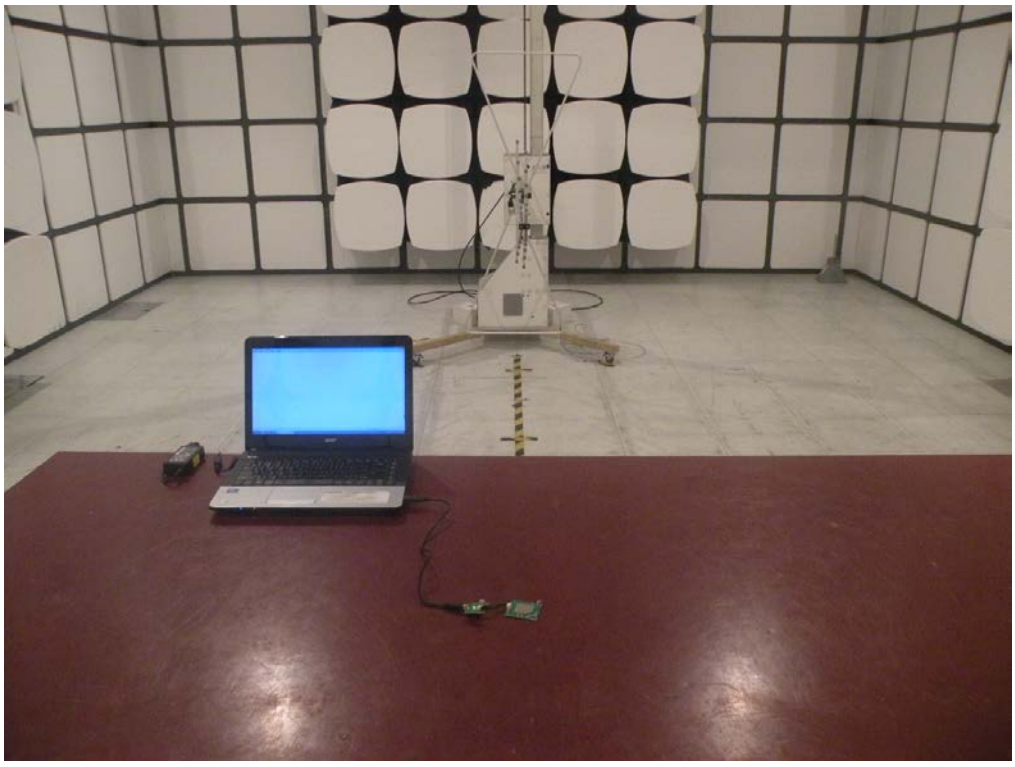
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

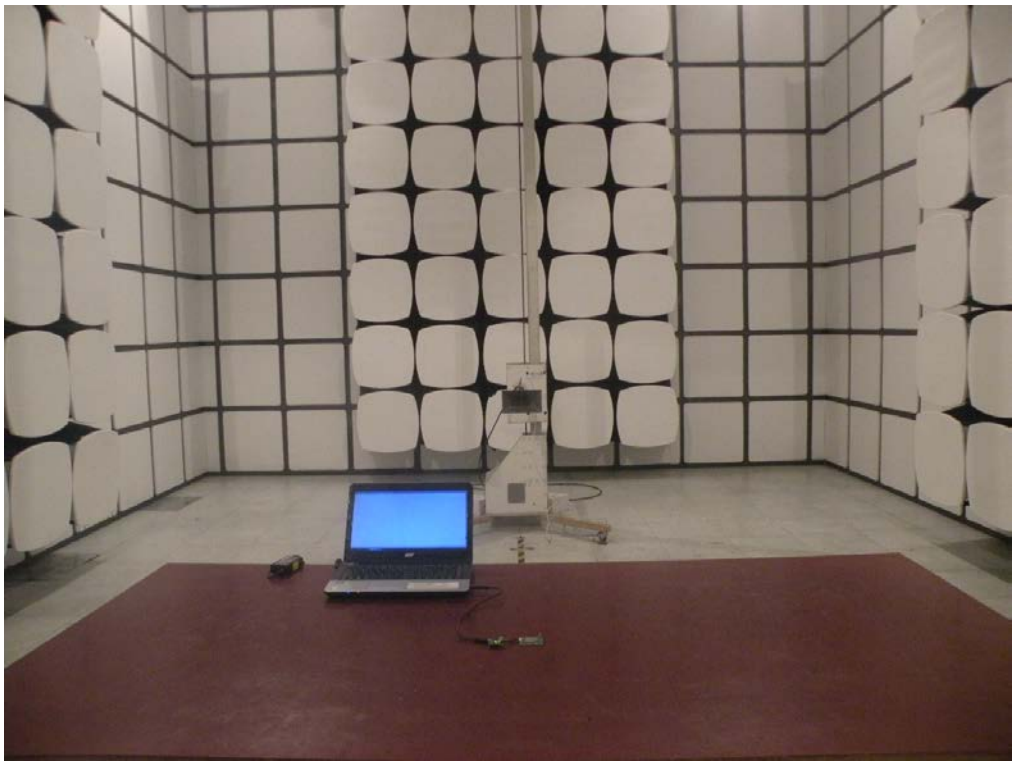
7.2 EUT ANTENNA

The EUT antenna has two antenna , this is Integral antenna . It comply with the standard requirement.

8. EUT TEST PHOTO

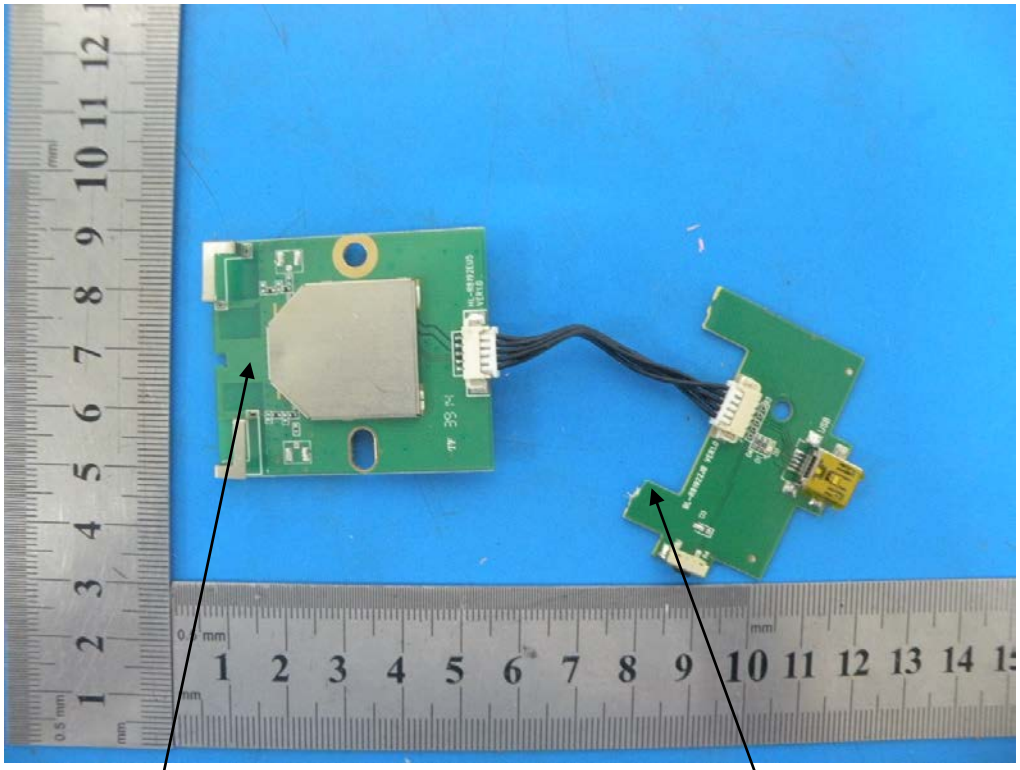
Radiated Measurement Photos



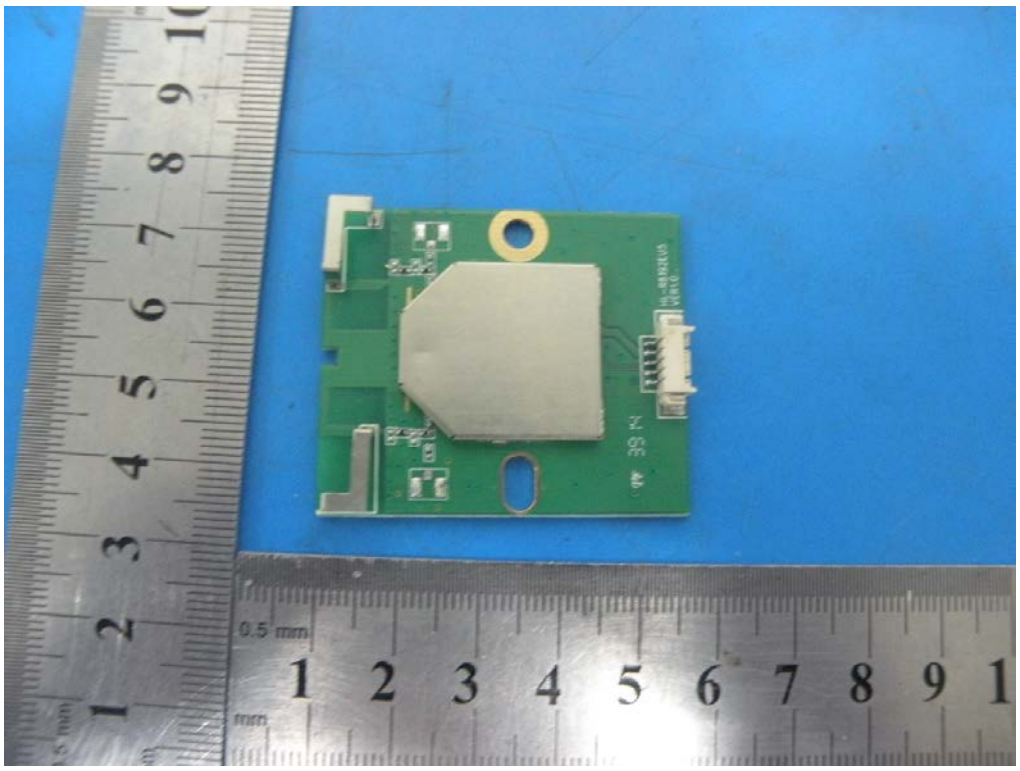


Conducted Measurement Photos

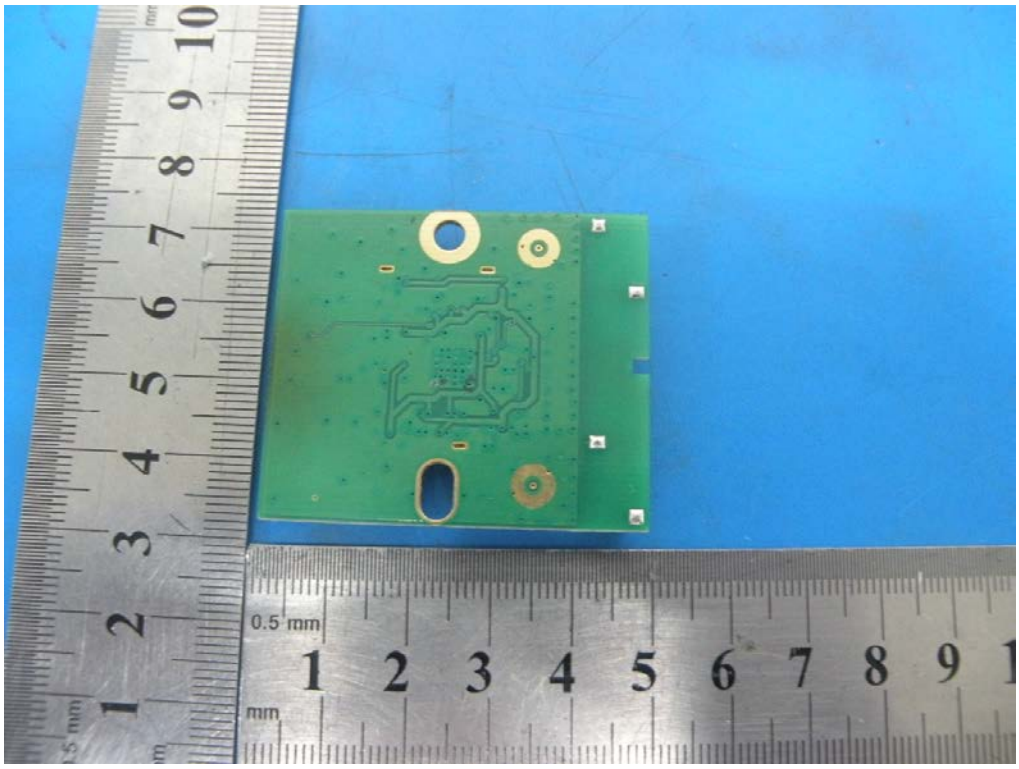
9. EUT PHOTO



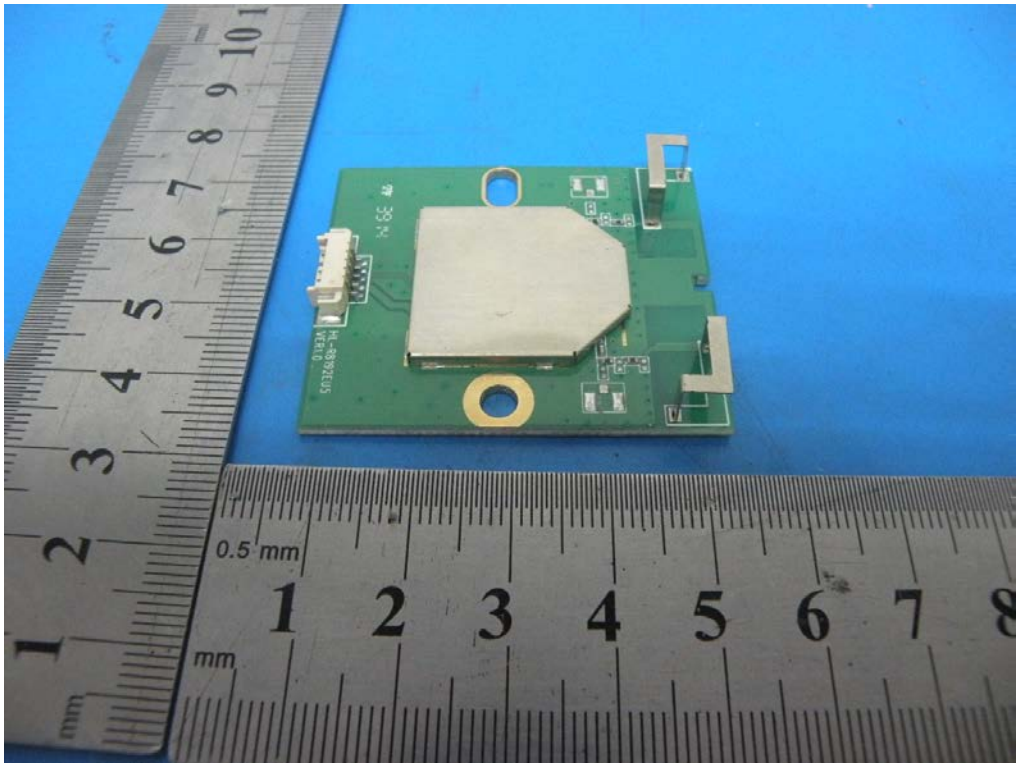
Full View



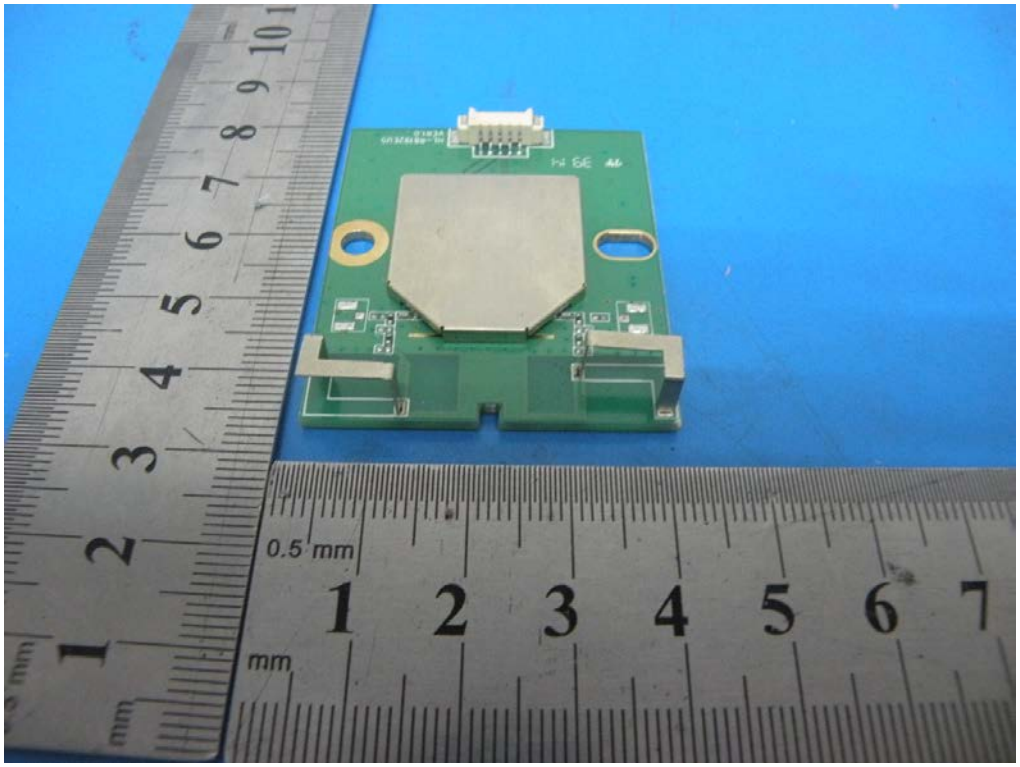
Top View



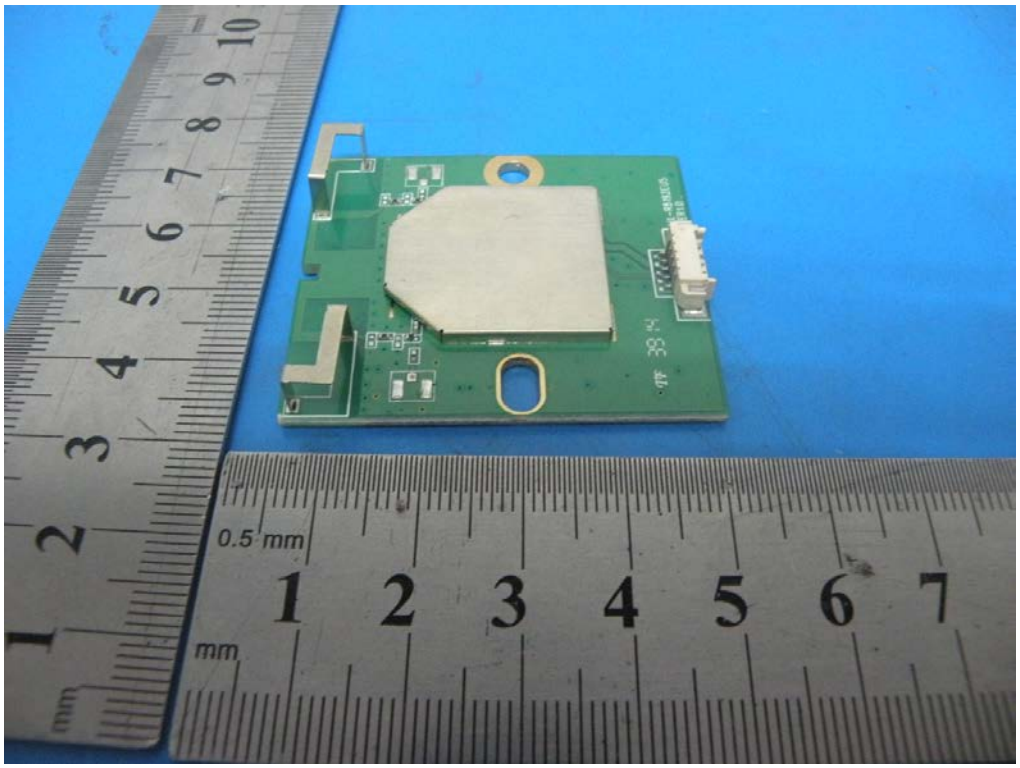
Bottom View



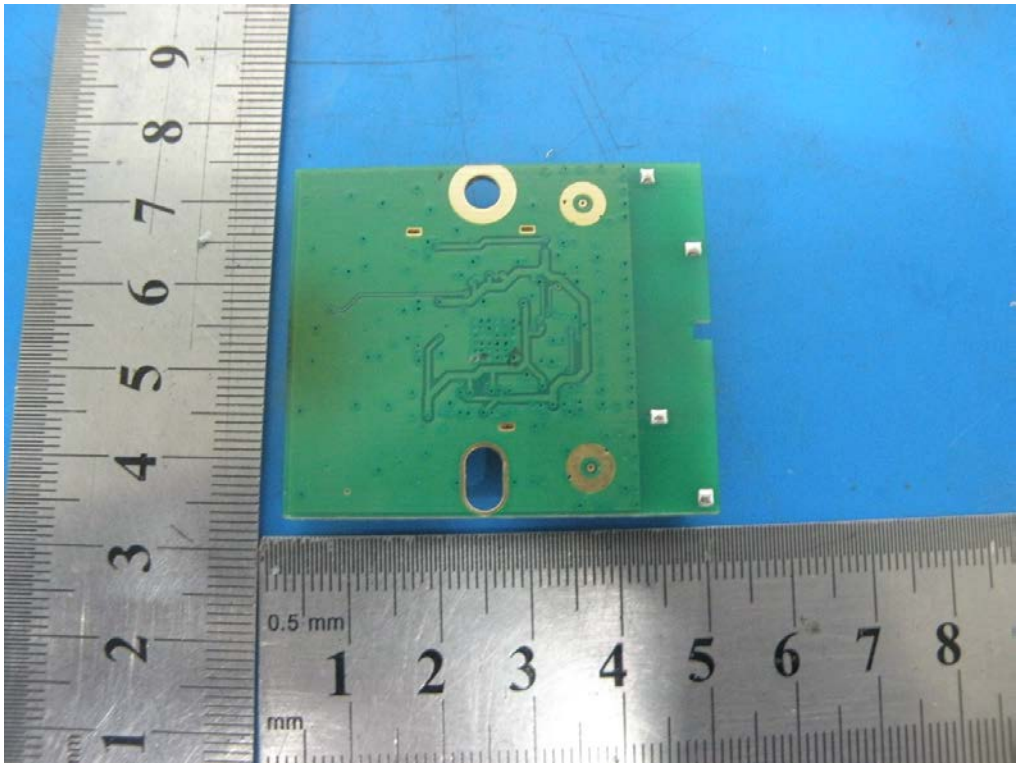
Rear View



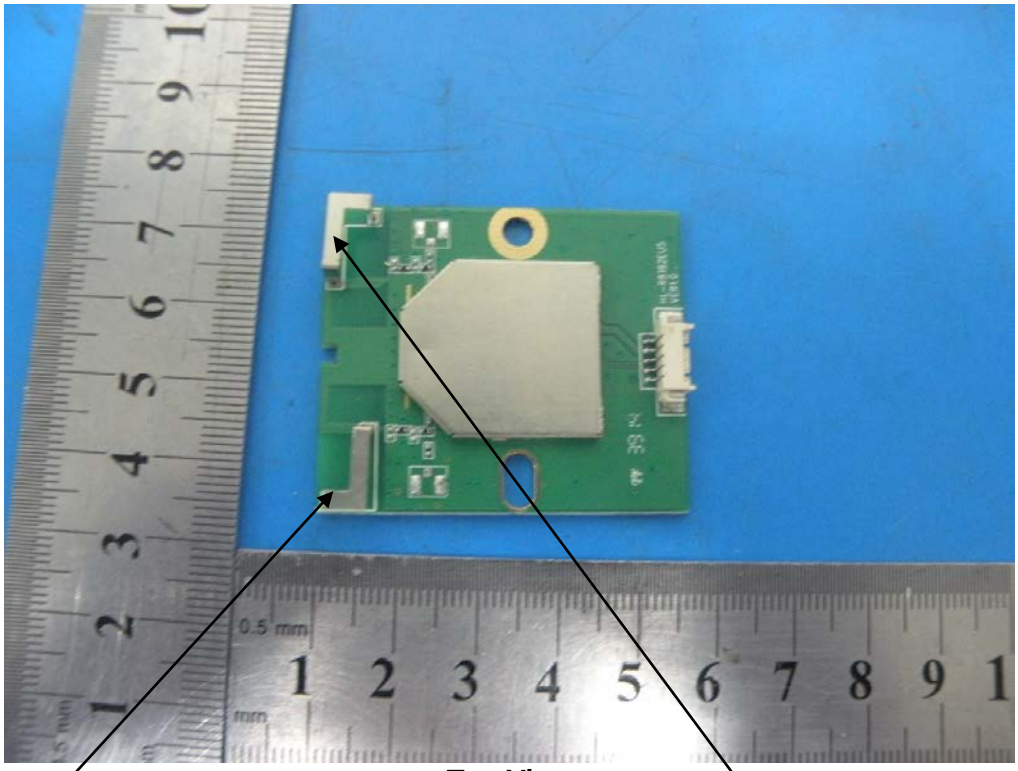
Left View



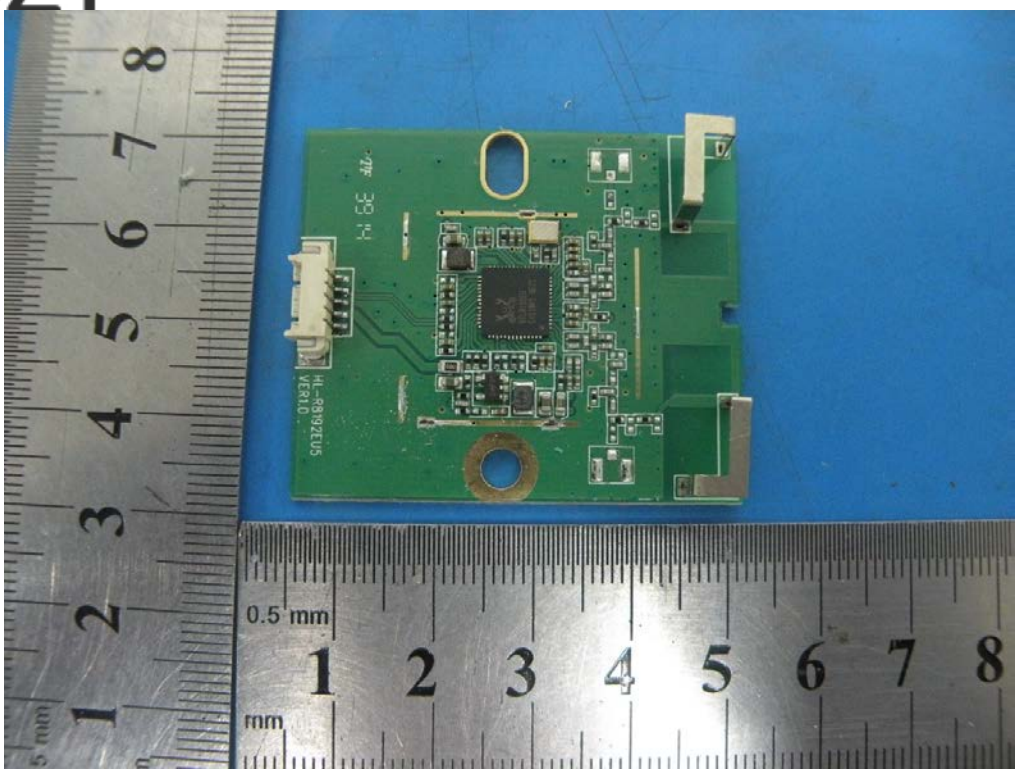
Right View



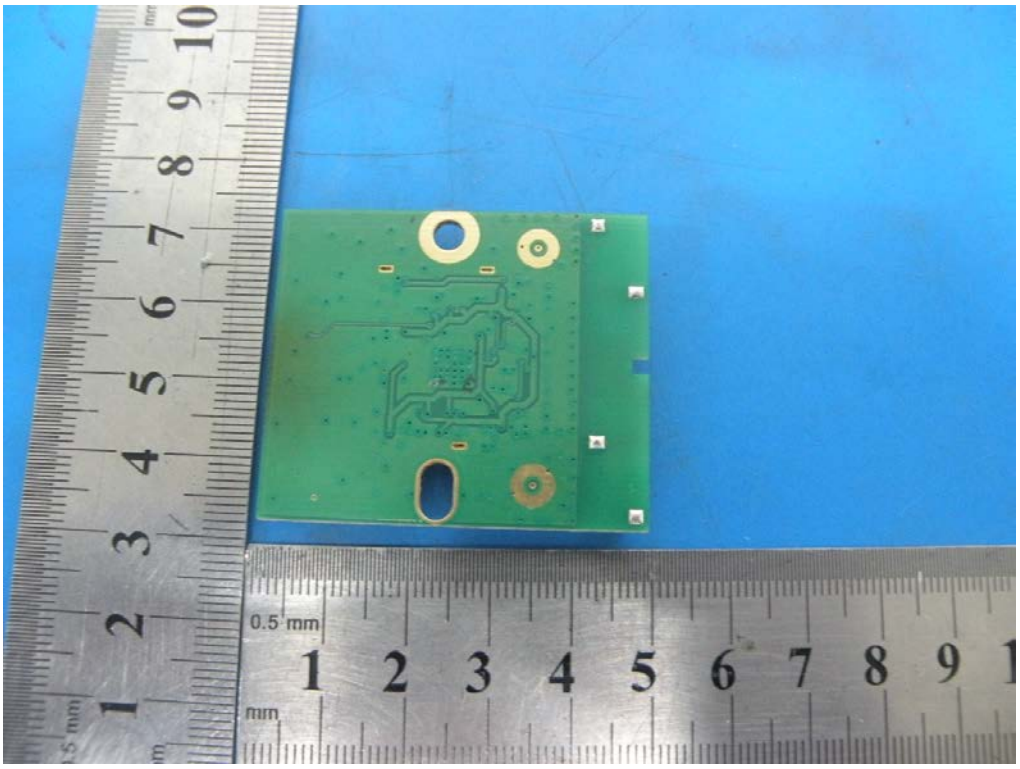
Front View



Top View



Top View



Bottom View

END OF REPORT