



**Neutron Engineering Inc.**

# FCC/IC Radio Test Report

## FCC ID: QISAP6510DN-AGN

## IC: 6369A-AP6510DN

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

**Issued Date** : Jul. 18, 2012

**Project No.** : 1204C047B

**Equipment** : Outdoor Wireless LAN Access Point

**Model Name** : AP6510DN-AGN-US

**Applicant** : Huawei Technologies Co.,Ltd.

**Address for FCC** : Bantian, Longgang District, Shenzhen China

**Address for IC** : Bantian, Longgang District, Shenzhen, 518129 China

**Tested by:**

Neutron Engineering Inc. EMC Laboratory

**Date of Receipt:** Apr. 17, 2012

**Date of Test:**

Apr. 17, 2012 ~ Jul. 17, 2012

Testing Engineer :

David Mao  
(David Mao)

Technical Manager :

Leo Hung  
(Leo Hung)

Authorized Signatory :

Steven Lu  
(Steven Lu)

### **Neutron Engineering Inc.**

**No.3, Jinshagang 1st Road, ShiXia, Dalang  
Town, Dong Guan, China.**

**TEL : (0769) 8318-3000 FAX : (0769) 8319-6000**



**Declaration**

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

**Neutron's** reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

**Neutron's** reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **Neutron-self**, extracts from the test report shall not be reproduced except in full with **Neutron's** authorized written approval.

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

**Limitation**

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



<b>Table of Contents</b>	<b>Page</b>
<b>1 . CERTIFICATION</b>	<b>5</b>
<b>2 . SUMMARY OF TEST RESULTS</b>	<b>6</b>
2.1 TEST FACILITY	7
2.2 MEASUREMENT UNCERTAINTY	7
<b>3 . GENERAL INFORMATION</b>	<b>8</b>
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST ModeS	10
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	11
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	12
3.5 DESCRIPTION OF SUPPORT UNITS	13
<b>4 . EMC EMISSION TEST</b>	<b>14</b>
4.1 CONDUCTED EMISSION MEASUREMENT	14
4.1.1 POWER LINE CONDUCTED EMISSION	14
4.1.2 MEASUREMENT INSTRUMENTS LIST	14
4.1.3 TEST PROCEDURE	15
4.1.4 DEVIATION FROM TEST STANDARD	15
4.1.5 TEST SETUP	15
4.1.6 EUT OPERATING CONDITIONS	15
4.1.7 TEST RESULTS	16
4.2 RADIATED EMISSION MEASUREMENT	18
4.2.1 RADIATED EMISSION LIMITS	18
4.2.2 MEASUREMENT INSTRUMENTS LIST	20
4.2.3 TEST PROCEDURE	20
4.2.4 DEVIATION FROM TEST STANDARD	21
4.2.5 TEST SETUP	21
4.2.6 EUT OPERATING CONDITIONS	21
4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ	22
4.2.8 TEST RESULTS - ABOVE 1000MHZ	30
<b>5 . 26DB SPECTRUM BANDWIDTH</b>	<b>96</b>
5.1 APPLIED PROCEDURES / LIMIT	96
5.1.1 MEASUREMENT INSTRUMENTS LIST	96
5.1.2 TEST PROCEDURE	96
5.1.3 DEVIATION FROM STANDARD	96
5.1.4 TEST SETUP	96
5.1.5 EUT OPERATION CONDITIONS	97
5.1.6 TEST RESULTS	98
<b>6 . MAXIMUM CONDUCTED OUTPUT POWER</b>	<b>110</b>



<b>Table of Contents</b>	<b>Page</b>
<b>6.1 APPLIED PROCEDURES / LIMIT</b>	<b>110</b>
6.1.1 MEASUREMENT INSTRUMENTS LIST	110
6.1.2 TEST PROCEDURE	110
6.1.3 DEVIATION FROM STANDARD	111
6.1.4 TEST SETUP	111
6.1.5 EUT OPERATION CONDITIONS	111
6.1.6 TEST RESULTS	112
<b>7 . ANTENNA CONDUCTED SPURIOUS EMISSION</b>	<b>134</b>
7.1 APPLIED PROCEDURES / LIMIT	134
7.1.1 MEASUREMENT INSTRUMENTS LIST	134
7.1.2 TEST PROCEDURE	134
7.1.3 DEVIATION FROM STANDARD	134
7.1.4 TEST SETUP	134
7.1.5 EUT OPERATION CONDITIONS	134
7.1.6 TEST RESULTS	135
<b>8 . POWER SPECTRAL DENSITY TEST</b>	<b>181</b>
8.1 APPLIED PROCEDURES / LIMIT	181
8.1.1 MEASUREMENT INSTRUMENTS LIST	181
8.1.2 TEST PROCEDURE	181
8.1.3 DEVIATION FROM STANDARD	181
8.1.4 TEST SETUP	181
8.1.5 EUT OPERATION CONDITIONS	181
<b>9 . PEAK EXCURSION MEASUREMENT</b>	<b>200</b>
9.1 APPLIED PROCEDURES / LIMIT	200
9.1.1 MEASUREMENT INSTRUMENTS LIST	200
9.1.2 TEST PROCEDURE	200
9.1.3 DEVIATION FROM STANDARD	200
9.1.4 TEST SETUP	201
9.1.5 EUT OPERATION CONDITIONS	201
9.1.6 TEST RESULTS	202
<b>10 . FREQUENCY STABILITY MEASUREMENT</b>	<b>214</b>
10.1 APPLIED PROCEDURES / LIMIT	214
10.1.1 MEASUREMENT INSTRUMENTS LIST	214
10.1.2 TEST PROCEDURE	214
10.1.3 DEVIATION FROM STANDARD	214
10.1.4 TEST SETUP	215
10.1.5 EUT OPERATION CONDITIONS	215
10.1.6 TEST RESULTS	216
<b>11 . EUT TEST PHOTO</b>	<b>218</b>



## 1. CERTIFICATION

Equipment : Outdoor Wireless LAN Access Point  
Brand Name : HUAWEI  
Model Name : AP6510DN-AGN-US  
Applicant : Huawei Technologies Co.,Ltd.  
Date of Test : Apr. 17, 2012 ~ Jul. 17, 2012  
Test Item : ENGINEERING SAMPLE  
Standards : FCC Part15, Subpart E(15.407) / ANSI C63.4 : 2009; Canada RSS-210:2010  
FCC KDB 789033 D01 General UNII Test Procedures v01r01.

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FICP-3-1204C047B) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

**Test result included in this report is only for the 5250MHz~5350MHz; 5470MHz~5725MHz Mode part of the product.**



**2. SUMMARY OF TEST RESULTS**

Test procedures according to the technical standards:

<b>FCC Part15, Subpart E / RSS-210: 2010</b>				
Standard Section		Test Item	Judgment	Remark
RSS-GEN 7.2.2	15.207	AC Power Line Conducted Emissions	PASS	
RSS-210 A9.2(1)	15.407(a)	26dB Spectrum Bandwidth	PASS	
RSS-210 A9.2(1)	15.407(a)	Maximum Conducted Output Power	PASS	
RSS-210 A9.2(1)	15.407(a)	Power Spectral Density	PASS	
	15.407(a)	Peak Excursion	PASS	
RSS-210 Annex 8 (A8.5)	15.407(a)	Radiated Emissions	PASS	
RSS-210 A9.2(1)	15.407(b)	Band Edge Emissions	PASS	
RSS-210 A1.1.4	15.407(b)	Frequency Stability	PASS	
-	15.407(g) 15.203	Antenna Requirements	PASS	
-	1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS	

**NOTE:**

(1) "N/A" denotes test is not applicable in this test report



**2.1 TEST FACILITY**

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3,Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792  
 Neutron's test firm number for FCC 319330  
 Neutron's test firm number for IC 4428B-1

**2.2 MEASUREMENT UNCERTAINTY**

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

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U , (dB)	NOTE
DG-CB03	CISPR	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	



**3. GENERAL INFORMATION**

**3.1 GENERAL DESCRIPTION OF EUT**

Equipment	Outdoor Wireless LAN Access Point										
Brand Name	HUAWEI										
Model Name	AP6510DN-AGN-US										
OEM Brand/Model Name	N/A										
Model Difference	N/A										
Product Description	The EUT is a Outdoor Wireless LAN Access Point.										
	<table border="1"> <tr> <td>Operation Frequency:</td> <td>Band 2:5250MHz~5350MHz Band 3:5470MHz~5725MHz</td> </tr> <tr> <td>Modulation Type:</td> <td>OFDM</td> </tr> <tr> <td>Bit Rate of Transmitter:</td> <td>300Mbps</td> </tr> <tr> <td>Antenna Designation:</td> <td>Please see note 3.(Page 9)</td> </tr> <tr> <td>Antenna Gain(Peak):</td> <td>Please see note 3. (Page 9)</td> </tr> </table>	Operation Frequency:	Band 2:5250MHz~5350MHz Band 3:5470MHz~5725MHz	Modulation Type:	OFDM	Bit Rate of Transmitter:	300Mbps	Antenna Designation:	Please see note 3.(Page 9)	Antenna Gain(Peak):	Please see note 3. (Page 9)
	Operation Frequency:	Band 2:5250MHz~5350MHz Band 3:5470MHz~5725MHz									
	Modulation Type:	OFDM									
	Bit Rate of Transmitter:	300Mbps									
	Antenna Designation:	Please see note 3.(Page 9)									
	Antenna Gain(Peak):	Please see note 3. (Page 9)									
	Output Power: Band 2	802.11a: 21.05 dBm 802.11n 20M: 17.59 dBm (ANT 1) 802.11n 20M: 15.48 dBm (ANT 2) 802.11n 20M: 19.55 dBm (ANT 1+ANT 2) 802.11n 40M: 17.66dBm (ANT 1) 802.11n 40M: 16.16 dBm (ANT 2) 802.11n 40M: 20.28 dBm (ANT 1+ANT 2)									
	Output Power: Band 3	802.11a: 21.25 dBm 802.11n 20M: 17.96 dBm (ANT 1) 802.11n 20M: 16.33 dBm (ANT 2) 802.11n 20M: 19.98 dBm (ANT 1+ANT 2) 802.11n 40M: 17.96dBm (ANT 1) 802.11n 40M: 15.78 dBm (ANT 2) 802.11n 40M: 20.02 dBm (ANT 1+ANT 2)									
	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.										
Channel List	Please refer to the note 3. (Page 9)										
Power Source	Supplied from POE.										
Power Rating	AC 230V/50Hz										
Connecting I/O Port(s)	Please refer to the User's Manual										





**Note:**

- For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- Channel List:

802.11a / 802.11n 20M			
Band 2		Band 3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	100	5500
56	5280	104	5520
60	5300	108	5540
64	5320	112	5560
		136	5680
		140	5700

802.11n 40M			
Band 2		Band 3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	102	5510
62	5310	110	5550

**3. Antenna Specification:**

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type / Connector	function	Gain (dBi)
					5.2GHz
1	LARSEN ANTENNAS	W5030	N Male	TX/RX	6.4
2	LARSEN ANTENNAS	W5030	N Male	TX/RX	6.4

This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, **Direction gain = G<sub>ANT</sub>**, that is Directional gain=6.4; So, the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6

Operating Mode	1TX	2TX
	TX Mode	
802.11a	V (ANT1 or ANT2)	-
802.11n(20MHz)	-	V (ANT1 & ANT2)
802.11n(40MHz)	-	V (ANT1 & ANT2)



**3.2 DESCRIPTION OF TEST ModeS**

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

Pretest Test Mode	Description
Mode 1	TX A Mode / CH52, CH56, CH64(Band 2) TX A Mode / CH100, CH112, CH140(Band 3)
Mode 2	TX N20 Mode / CH52, CH56, CH64(Band 2) TX N20 Mode / CH100, CH112, CH140(Band 3)
Mode 3	TX N40 Mode / CH54, CH62 (Band 2) TX N40 Mode/CH102, CH110 (Band 3)
Mode 4	Normal Link

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

<b>For Conducted Test</b>	
Final Test Mode	Description
Mode 4	Normal Link

<b>For Radiated Test</b>	
Final Test Mode	Description
Mode 1	TX A Mode / CH52, CH56, CH64(Band 2) TX A Mode / CH100, CH112, CH140(Band 3)
Mode 2	TX N20 Mode / CH52, CH56, CH64(Band 2) TX N20 Mode / CH100, CH112, CH140(Band 3)
Mode 3	TX N40 Mode / CH54, CH62 (Band 2) TX N40 Mode / CH102, CH110 (Band 3)



**3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING**

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

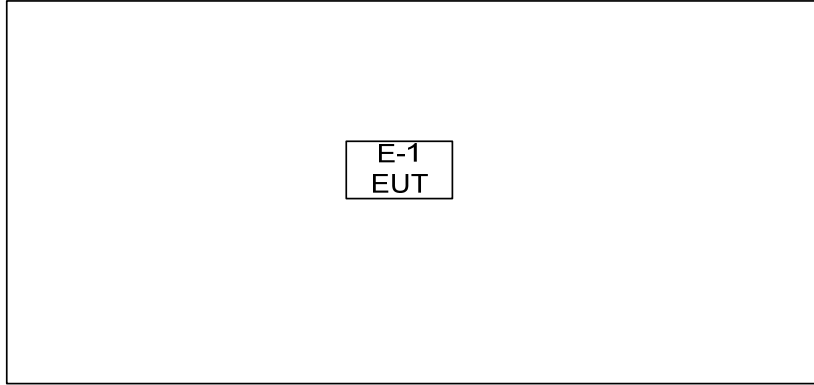
Test software Version	Test Program: CART		
Frequency	5260	5280	5320
A Mode	20	20	20
Frequency	5500	5560	5700
A Mode	20	20	20

Test software Version	Test Program: CART		
Frequency	5260	5280	5320
N20 Mode	17	17	17
Frequency	5500	5560	5700
N20 Mode	17	17	18

Test software Version	Test Program: CART		
Frequency	5270	5310	
N40 Mode	17	13	
Frequency	5510	5550	
N40M Mode	14	17	



**3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED**





**3.5 DESCRIPTION OF SUPPORT UNITS**

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Outdoor Wireless LAN Access Point	HUAWEI	AP6510DN-AG N-US	FCC ID:QISAP6510DN-AGN IC: 6369A-AP6510DN	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

Note:

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



**4. EMC EMISSION TEST**

**4.1 CONDUCTED EMISSION MEASUREMENT**

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

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

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

**4.1.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	LISN	EMCO	3816/2	00052765	May.26.2012	May.04.2013
2	LISN	R&S	ENV216	100087	May.26.2012	May.04.2013
3	Test Cable	N/A	C_17	N/A	Mar.18.2012	Mar.28.2013
4	EMI TEST RECEIVER	R&S	ESCS30	826547/02 2	May.26.2012	May.04.2013
5	50Ω Terminator	SHX	TF2-3G-A	08122902	May.26.2012	May.04.2013

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

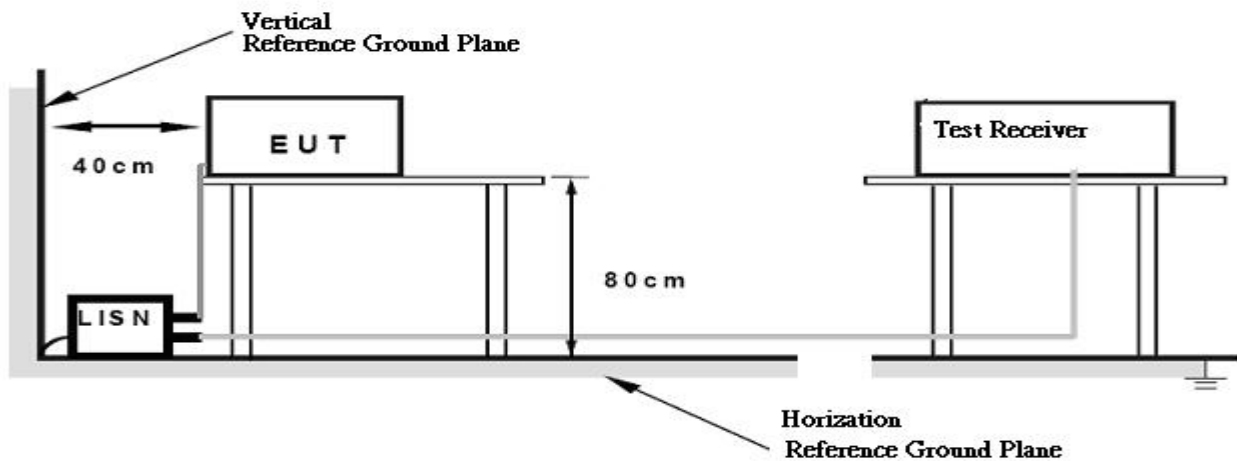
#### 4.1.3 TEST PROCEDURE

- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



#### 4.1.6 EUT OPERATING CONDITIONS

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

The EUT was programmed to be in continuously transmitting/Normal Link mode.



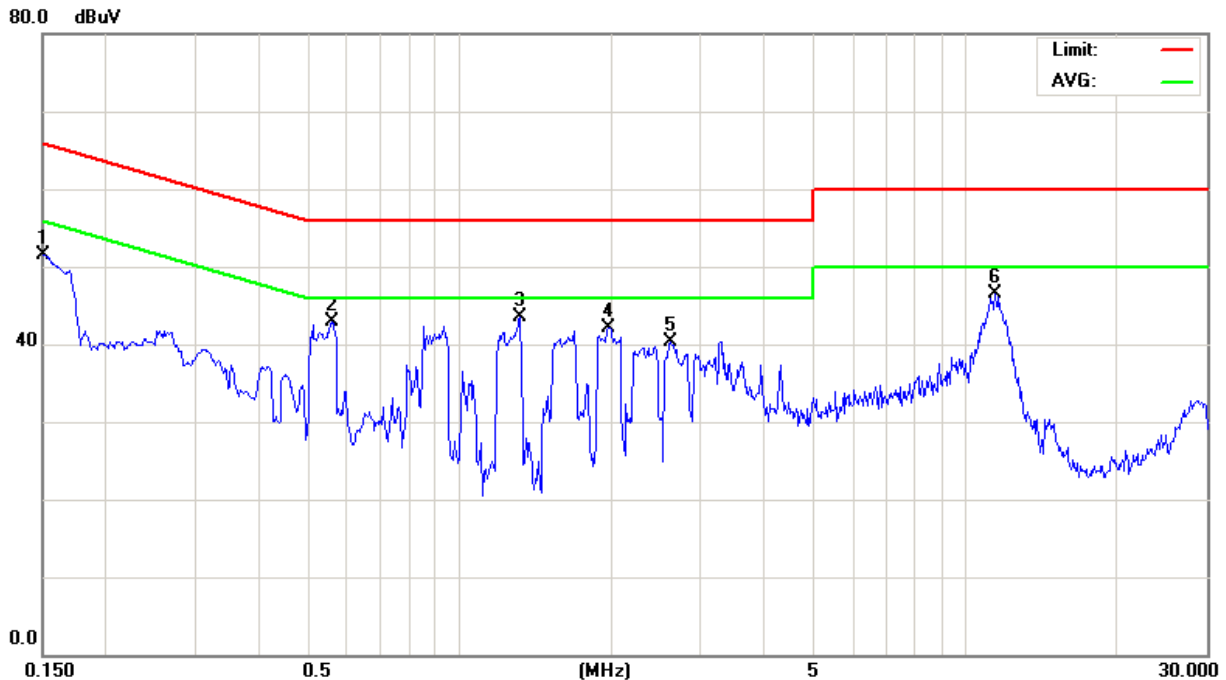
**4.1.7 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.15	Line	51.59	*	66.00	56.00	-14.41	(QP)
0.56	Line	42.94	*	56.00	46.00	-13.06	(QP)
1.32	Line	43.52	*	56.00	46.00	-12.48	(QP)
1.98	Line	42.17	*	56.00	46.00	-13.83	(QP)
2.62	Line	40.27	*	56.00	46.00	-15.73	(QP)
11.47	Line	46.47	*	60.00	50.00	-13.53	(QP)

**Remark**

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a "\*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.





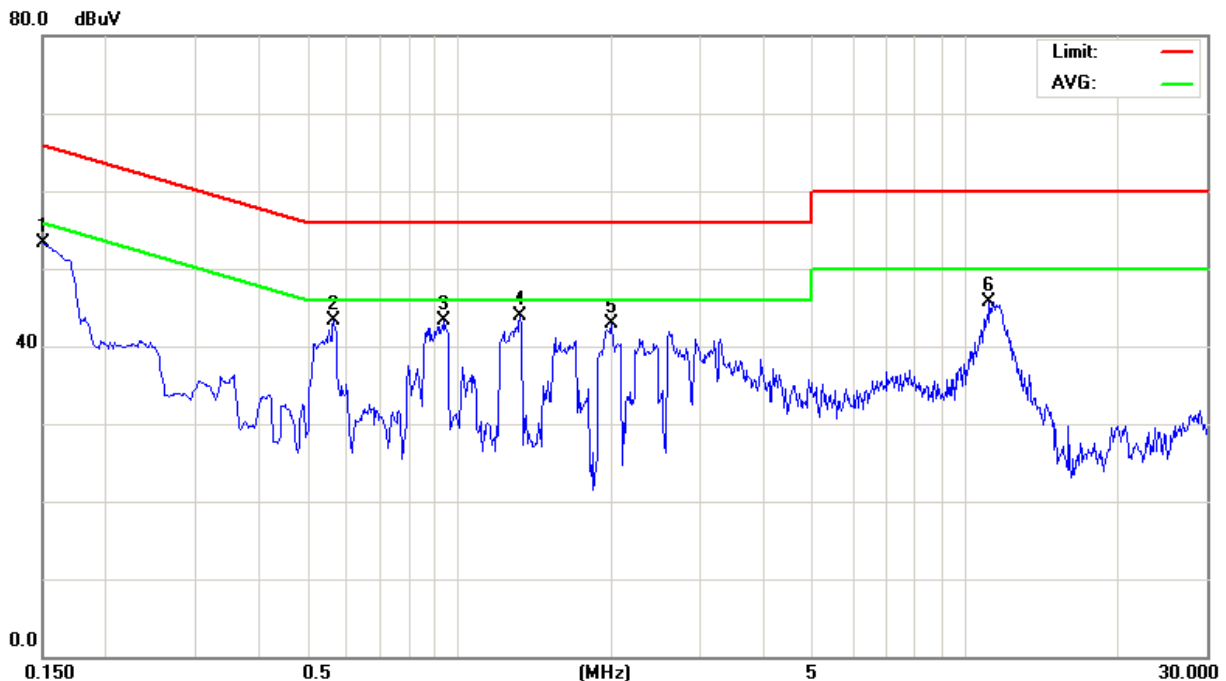


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Normal Link		

Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.15	Neutral	53.35	*	66.00	56.00	-12.65	(QP)
0.57	Neutral	43.27	*	56.00	46.00	-12.73	(QP)
0.93	Neutral	43.34	*	56.00	46.00	-12.66	(QP)
1.32	Neutral	43.92	*	56.00	46.00	-12.08	(QP)
1.99	Neutral	42.84	*	56.00	46.00	-13.16	(QP)
11.14	Neutral	45.73	*	60.00	50.00	-14.27	(QP)

**Remark**

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a "\*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.





**4.2 RADIATED EMISSION MEASUREMENT**

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

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 (micovolts/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)	(dBuV/m) (at 1.5m)	
	PEAK	AVERAGE
Above 1000	80	60

**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).  
 The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade from 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB
- (4) For the following data, measurements were performed at a separation distance of 1 meter.  
 The field strength was then converted to EIRP per KDB 789033:  
 $EIRP [dBm] = E[dBuV/m] + 20 \log(d[meters]) - 104.77$   
 EIRP is the equivalent isotropically radiated power in Watts  
 E is the field strength  
 D is the measurement distance



Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m)
5150~5250	-27	68.3
5250~5350	-27	68.3
5470~5725	-27	68.3
5725~5825	-27	68.3
	-17	78.3

NOTE: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000 \sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts)}$$



**4.2.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Antenna	Schwarbeck	VULB9160	9160-3232	Jun .04.2012	May.25.2013
2	Amplifier	HP	8447D	2944A09673	May.26.2012	May.04.2013
3	Test Receiver	R&S	ESCI	100382	May.26.2012	May.04.2013
4	Test Cable	N/A	C-01_CB03	N/A	Jul.01.2012	Jul.01.2013
5	Antenna	ETS	3115	00075789	May.26.2012	May.25.2013
6	Amplifier	Agilent	8449B	3008A02274	May.26.2012	May.04.2013
7	Spectrum	Agilent	E4408B	US39240143	Nov.25.2011	Nov.25.2012
8	Test Cable	HUBER+SUHNER	C-45	N/A	May.04.2012	May.02.2013
9	Controller	CT	SC100	N/A	N/A	N/A
10	Active Loop Antenna	R&S	HFH2-Z2	830749/020	May.26.2012	May.04.2013
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Oct.13.2011	Oct.13.2012
12	Horn Antenna	EMCO	3115	9605-4803	May.26.2012	May.25.2013

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

**4.2.3 TEST PROCEDURE**

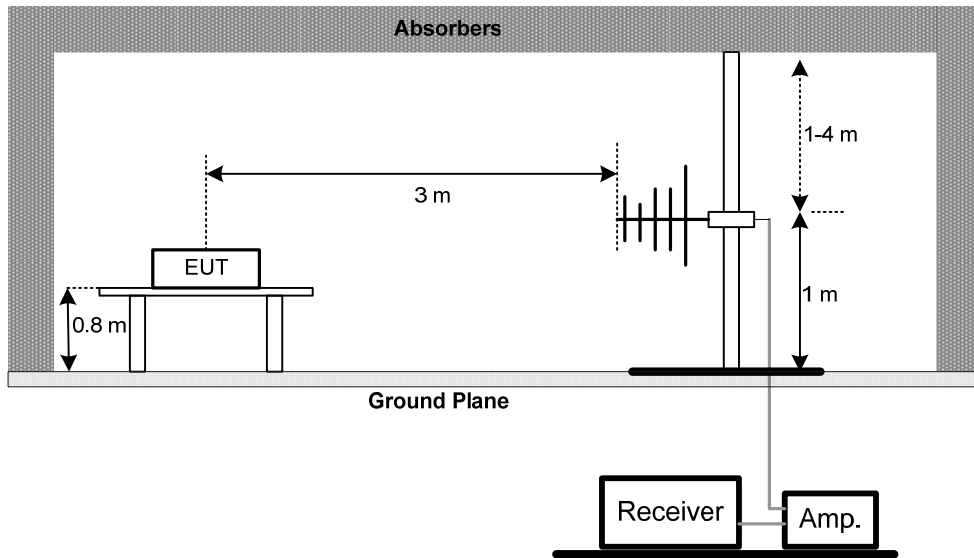
- a. The measuring distance of at 1.5 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was 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.

**4.2.4 DEVIATION FROM TEST STANDARD**

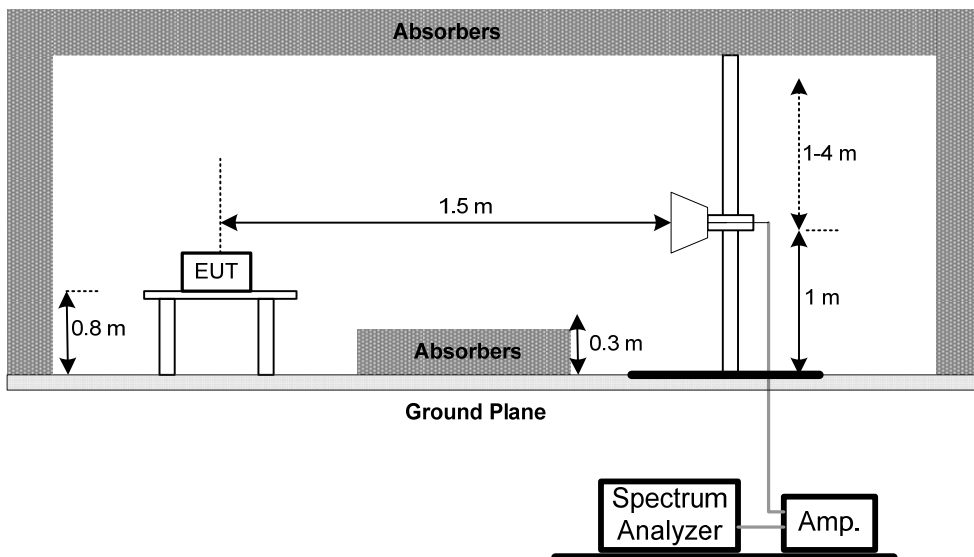
No deviation

**4.2.5 TEST SETUP**

**(A) Radiated Emission Test Set-Up Frequency 30 - 1000MHz**



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



**4.2.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



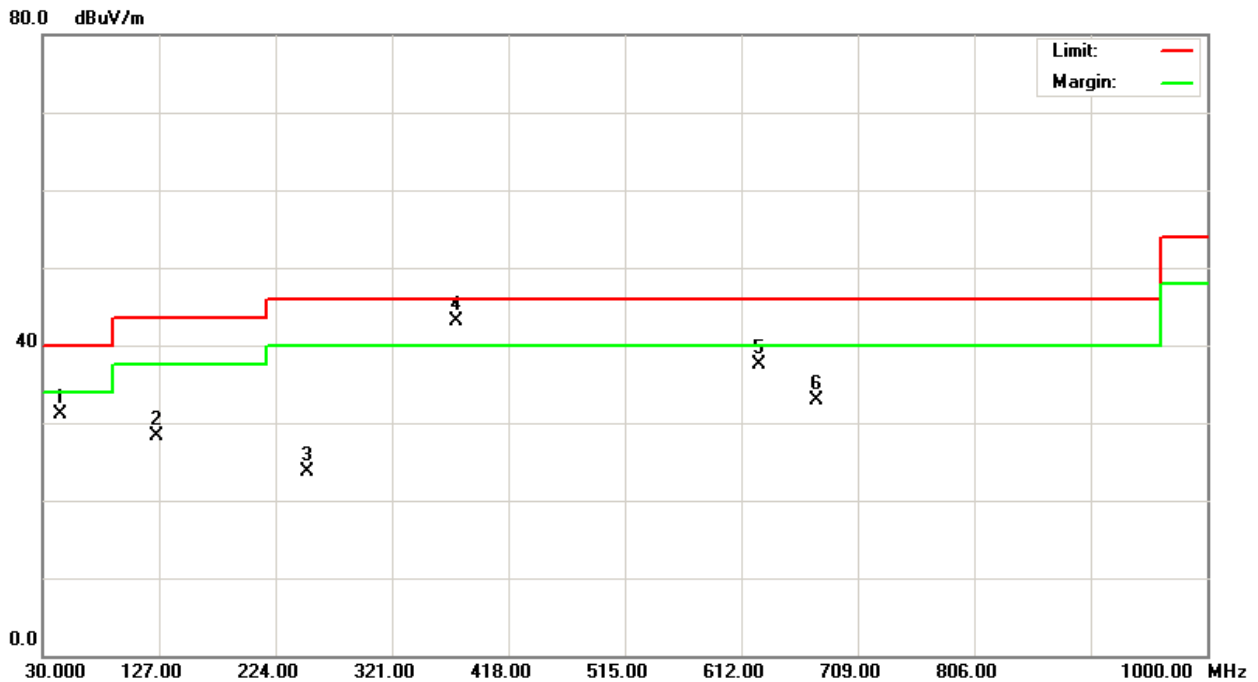
**4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode 5260MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
44.55	V	47.50	-16.49	31.01	40.00	- 8.99	
124.58	V	45.79	-17.58	28.21	43.50	- 15.29	
250.68	V	37.50	-13.78	23.72	46.00	- 22.28	
374.35	V	52.65	-9.55	43.10	46.00	- 2.90	QP
626.55	V	41.93	-4.35	37.58	46.00	- 8.42	
675.05	V	36.50	-3.55	32.95	46.00	- 13.05	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz .
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform .
- (3) Measuring frequency range from 30MHz to 1000MHz .
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table .



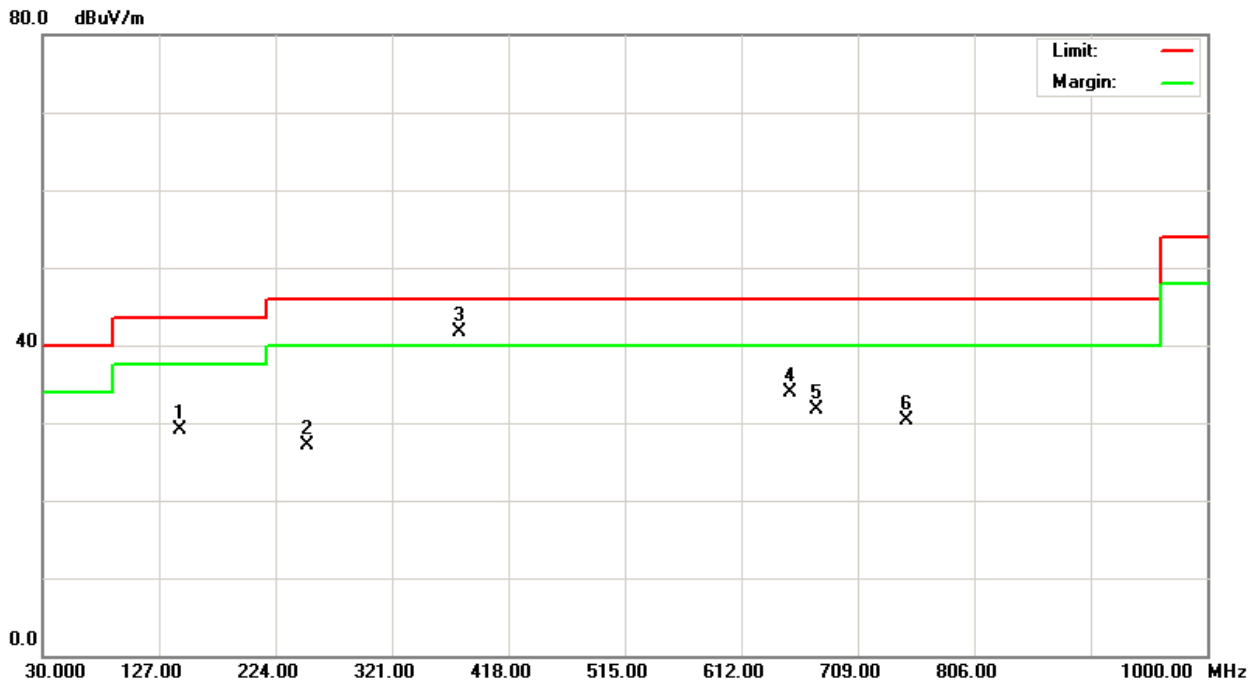


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode 5260MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
143.98	H	46.08	-17.03	29.05	43.50	- 14.45	
250.68	H	40.89	-13.78	27.11	46.00	- 18.89	
376.78	H	51.15	-9.47	41.68	46.00	- 4.32	
653.23	H	37.73	-3.76	33.97	46.00	- 12.03	
675.05	H	35.33	-3.55	31.78	46.00	- 14.22	
750.23	H	32.64	-2.42	30.22	46.00	- 15.78	

Remark :

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦



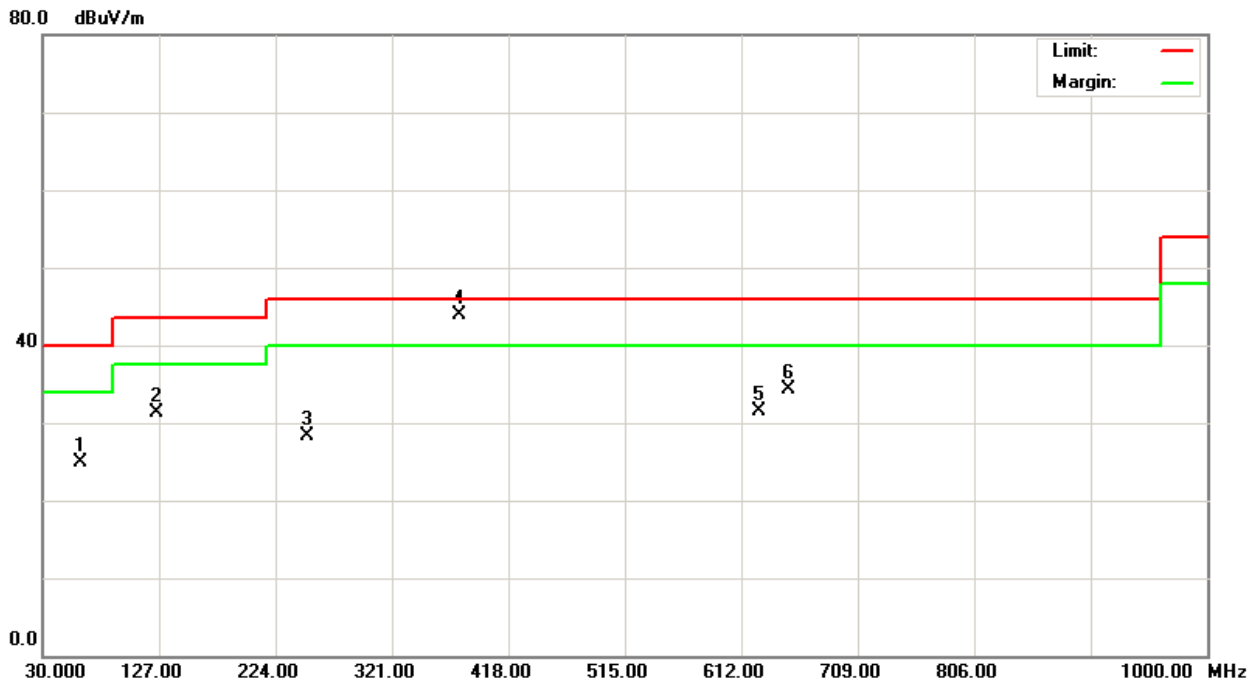


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode 5320MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
61.53	V	41.88	-16.97	24.91	40.00	- 15.09	
124.58	V	48.79	-17.58	31.21	43.50	- 12.29	
250.68	V	42.00	-13.78	28.22	46.00	- 17.78	
375.61	V	53.34	-9.52	43.82	46.00	- 2.18	QP
626.55	V	35.93	-4.35	31.58	46.00	- 14.42	
650.80	V	38.03	-3.78	34.25	46.00	- 11.75	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦





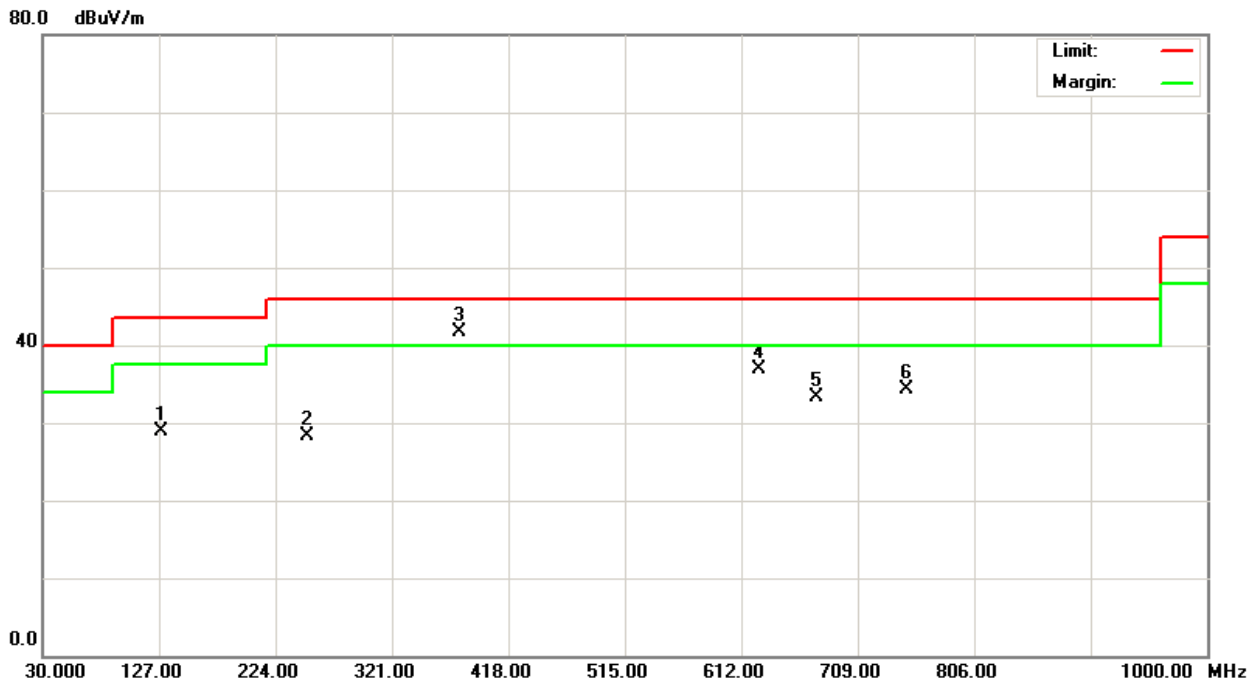


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode 5320MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
129.43	H	46.45	-17.50	28.95	43.50	- 14.55	
250.68	H	41.99	-13.78	28.21	46.00	- 17.79	
376.78	H	51.25	-9.47	41.78	46.00	- 4.22	
626.55	H	41.31	-4.35	36.96	46.00	- 9.04	
675.05	H	36.93	-3.55	33.38	46.00	- 12.62	
750.23	H	36.74	-2.42	34.32	46.00	- 11.68	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦



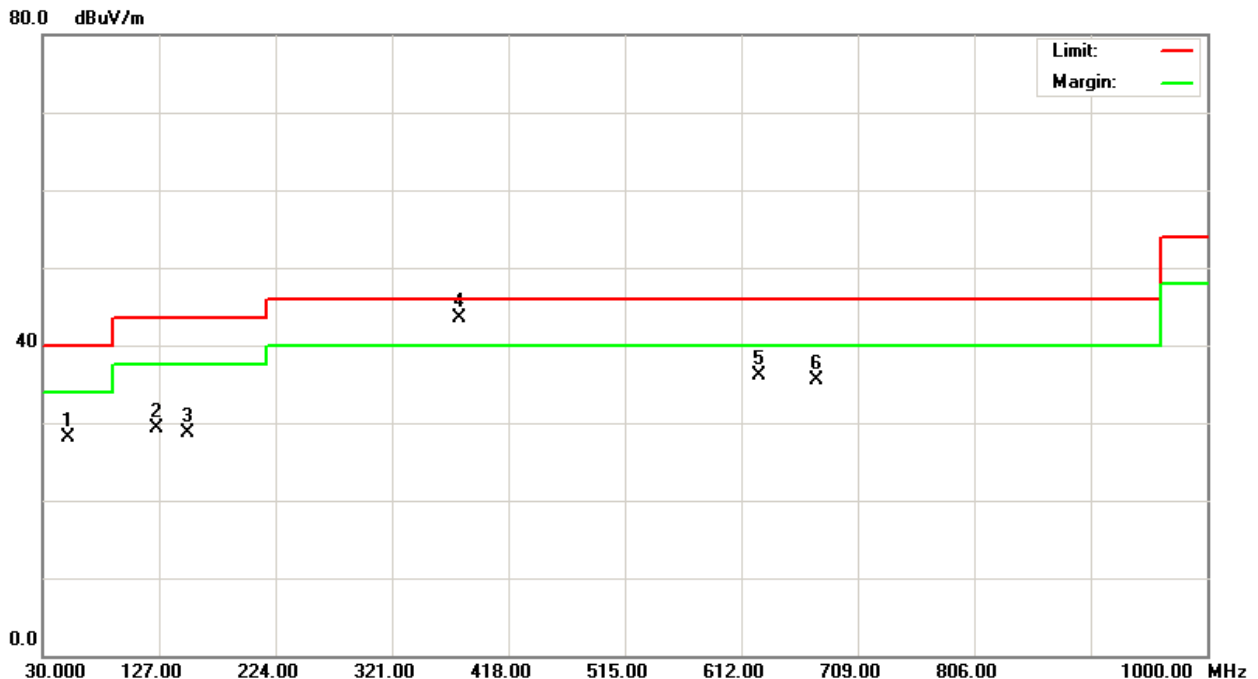


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode 5500MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
51.83	V	45.03	-17.00	28.03	40.00	- 11.97	
124.58	V	46.79	-17.58	29.21	43.50	- 14.29	
151.25	V	45.60	-16.93	28.67	46.00	- 17.33	
375.28	V	53.01	-9.53	43.48	46.00	- 2.52	QP
626.55	V	40.43	-4.35	36.08	46.00	- 9.92	
675.05	V	39.00	-3.55	35.45	46.00	- 10.55	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦



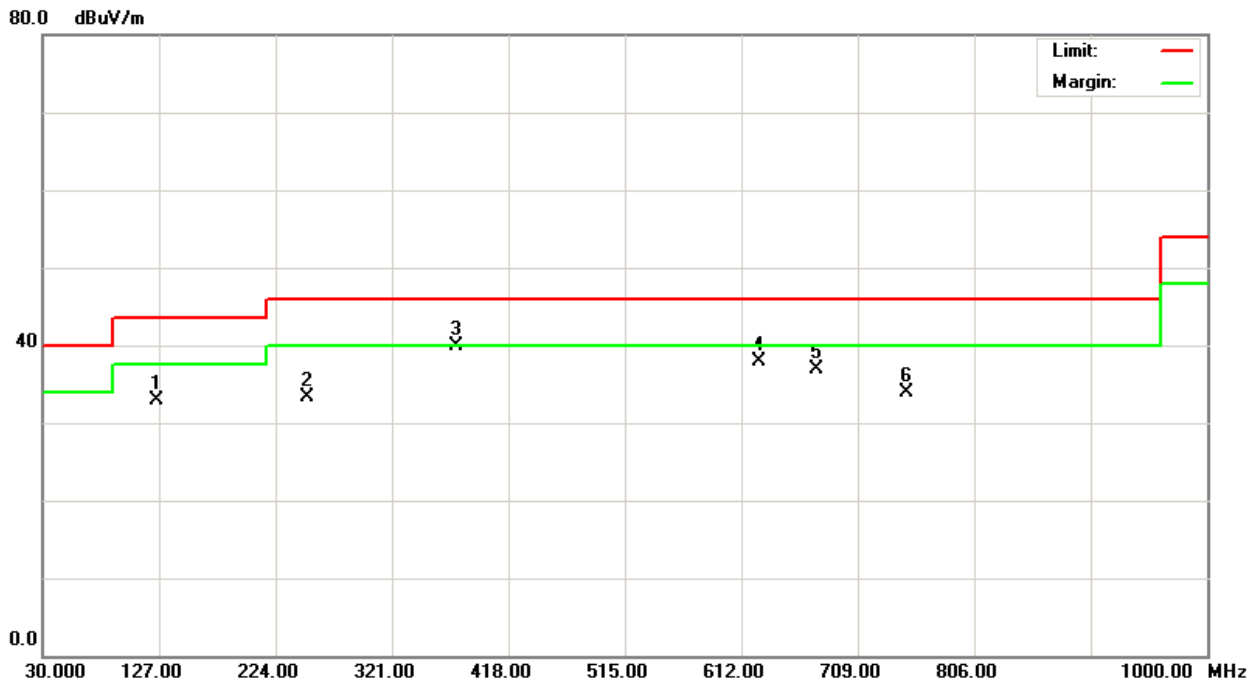


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode 5500MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
124.58	H	50.54	-17.58	32.96	43.50	- 10.54	
250.68	H	47.00	-13.78	33.22	46.00	- 12.78	
374.35	H	49.50	-9.55	39.95	46.00	- 6.05	
626.55	H	42.31	-4.35	37.96	46.00	- 8.04	
675.05	H	40.43	-3.55	36.88	46.00	- 9.12	
750.23	H	36.24	-2.42	33.82	46.00	- 12.18	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦



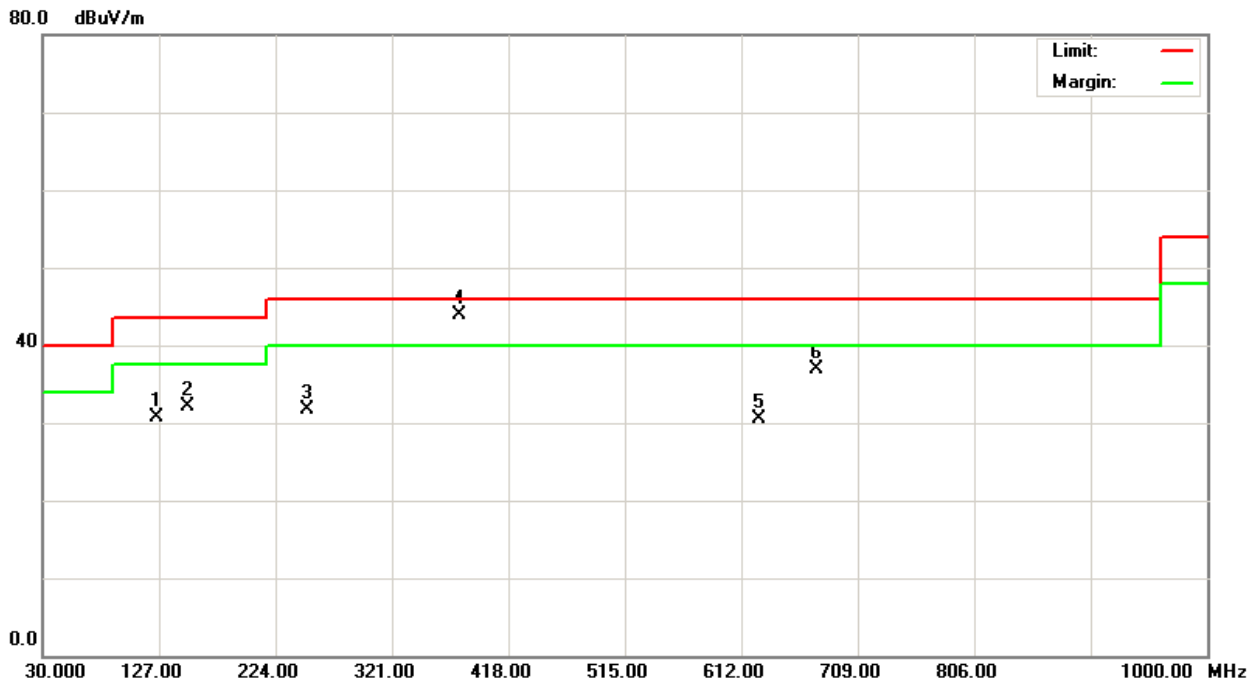


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	RX Mode		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
124.58	V	48.29	-17.58	30.71	43.50	- 12.79	
151.25	V	49.10	-16.93	32.17	43.50	- 11.33	
250.68	V	45.50	-13.78	31.72	46.00	- 14.28	
375.35	V	53.44	-9.53	43.91	46.00	- 2.09	QP
626.55	V	34.93	-4.35	30.58	46.00	- 15.42	
675.05	V	40.50	-3.55	36.95	46.00	- 9.05	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦



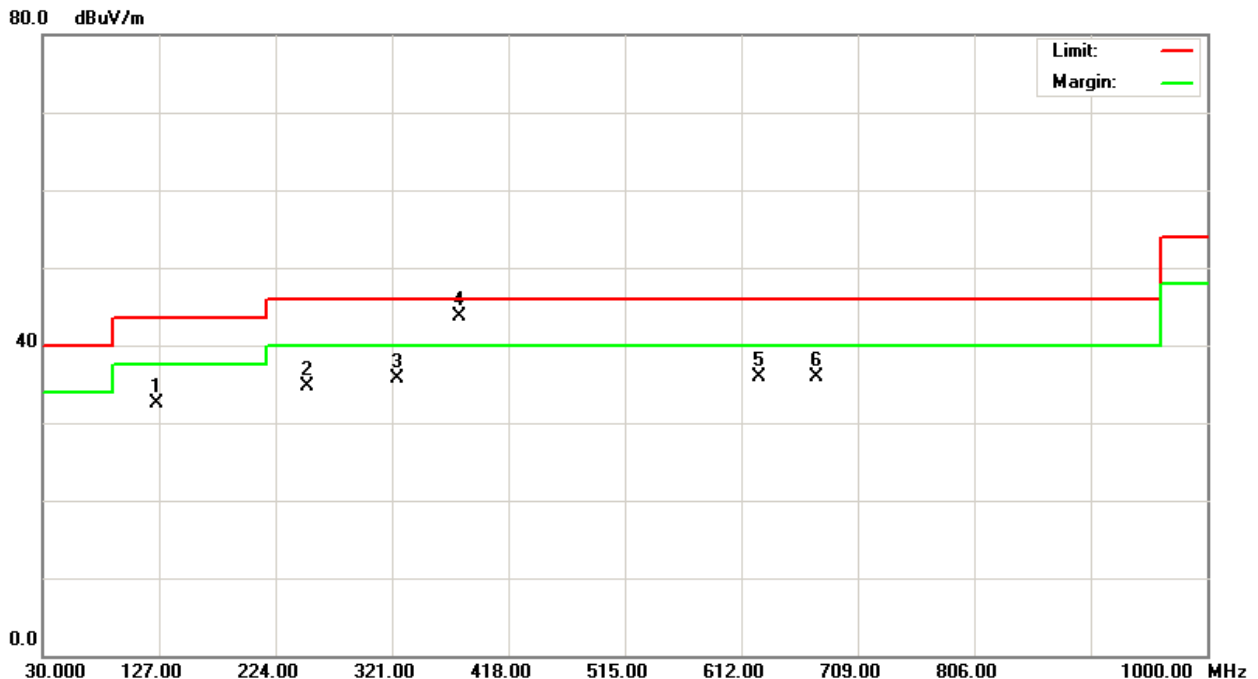


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25°C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	RX Mode		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
124.58	H	50.04	-17.58	32.46	43.50	- 11.04	
250.68	H	48.50	-13.78	34.72	46.00	- 11.28	
325.85	H	46.43	-10.79	35.64	46.00	- 10.36	
375.45	H	53.24	-9.53	43.71	46.00	- 2.29	QP
626.55	H	40.31	-4.35	35.96	46.00	- 10.04	
675.05	H	39.43	-3.55	35.88	46.00	- 10.12	

**Remark :**

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz ◦
- (2) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (3) Measuring frequency range from 30MHz to 1000MHz ◦
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table ◦





**4.2.8 TEST RESULTS - ABOVE 1000MHZ**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX A Mode 5260MHz		

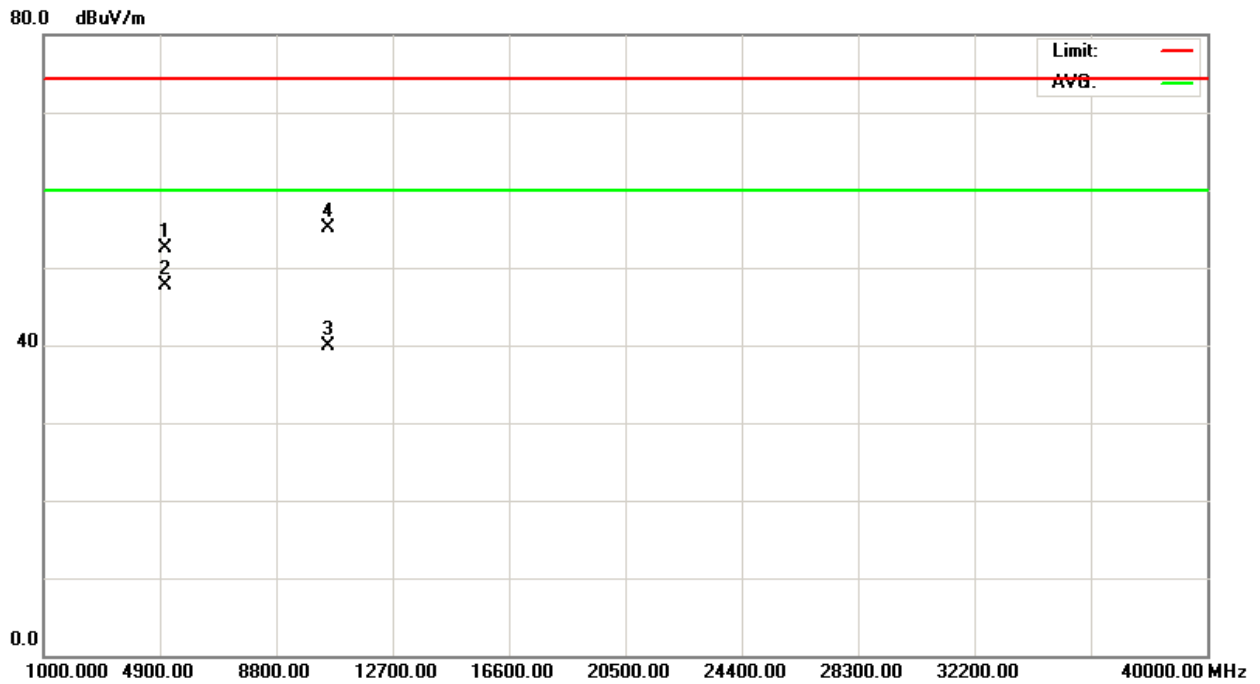
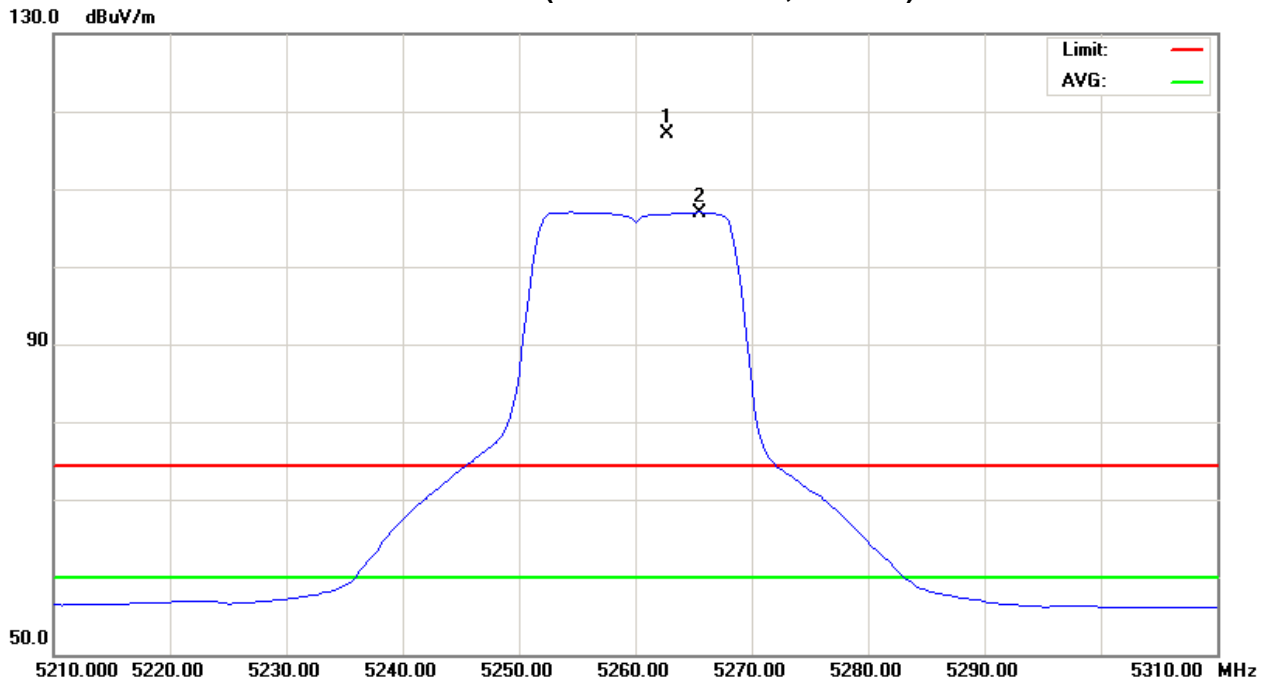
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5262.75	V	77.80	67.59	39.40	117.20	106.99	12.43	2.22					X/F
4999.86	V	46.56	41.76	5.93	52.49	47.69	-52.28	-57.08	80.00	60.00	-24.77	-44.77	X/H
10520.00	V	42.41	27.14	12.71	55.12	39.85	-49.65	-64.92	74.30		-27.00		X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency .“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH52(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX A Mode 5260MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5262.36	H	87.63	77.31	39.40	127.03	116.71	22.26	11.94					X/F
4999.99	H	50.78	46.23	5.93	56.71	52.16	-48.06	-52.61	80.00	60.00	-24.77	-44.77	X/H
10519.59	H	44.10	30.00	12.71	56.81	42.71	-47.96	-62.06	74.30		-27.00		X/H

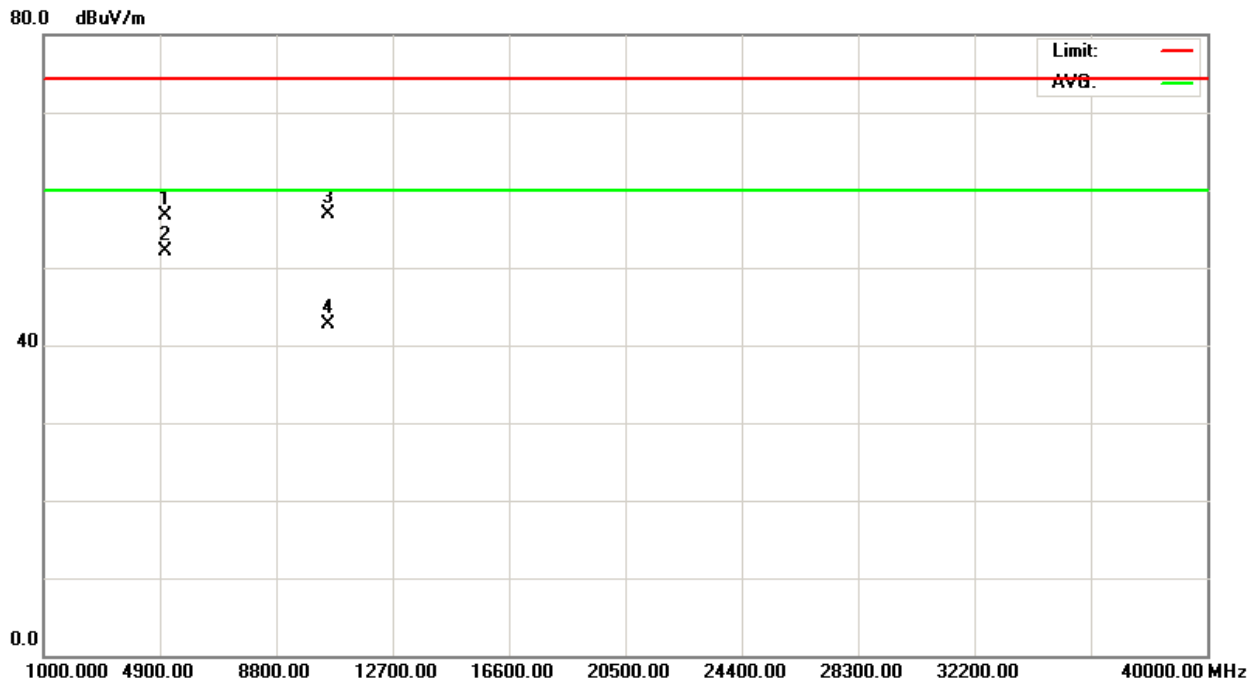
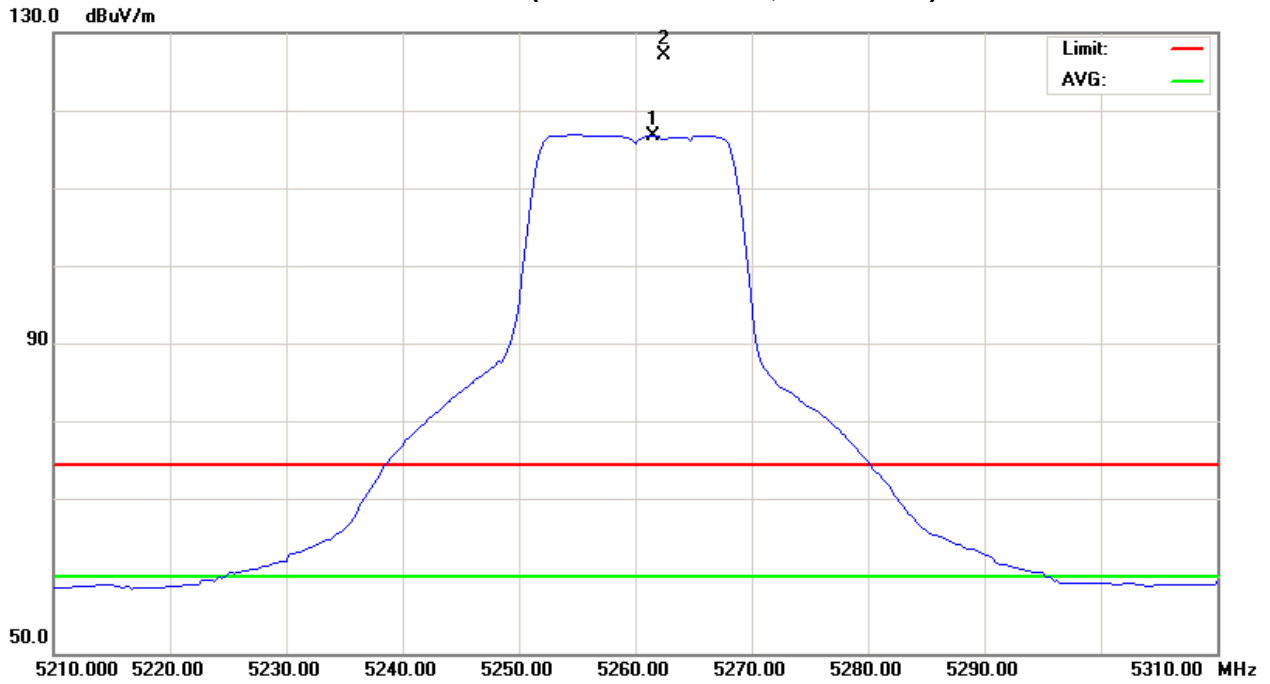
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 2/CH52 (Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX A Mode 5280MHz		

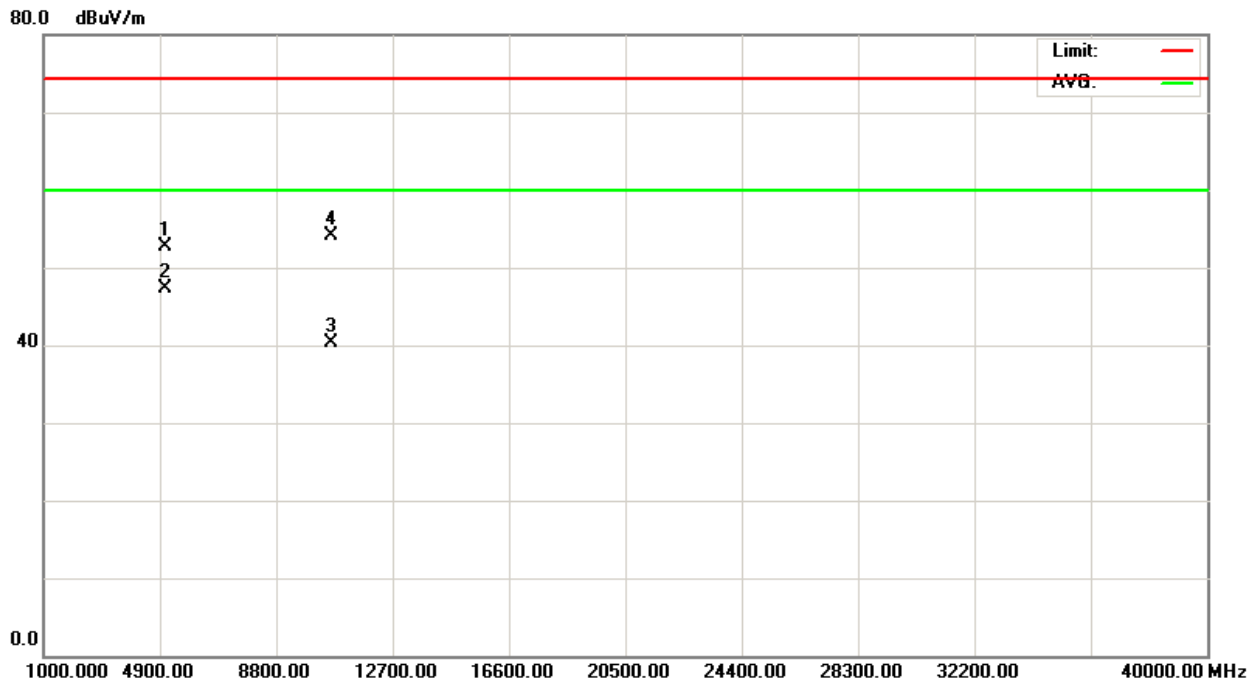
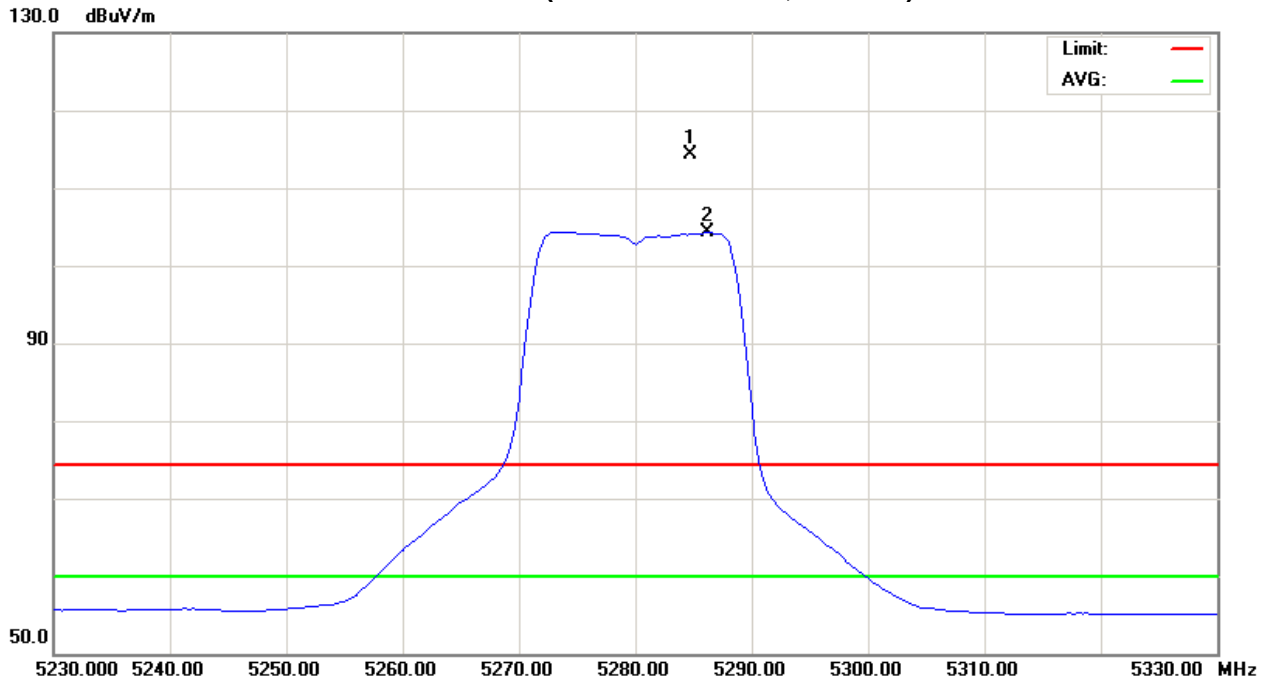
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5284.75	V	74.89	64.77	39.46	114.35	104.23	9.58	-0.54					X/F
5000.00	V	46.71	41.33	5.93	52.64	47.26	-52.13	-57.51	80.00	60.00	-24.77	-44.77	X/H
10560.26	V	41.43	27.62	12.73	54.16	40.35	-50.61	-64.42	74.30		-27.00		X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH56(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX A Mode 5280MHz		

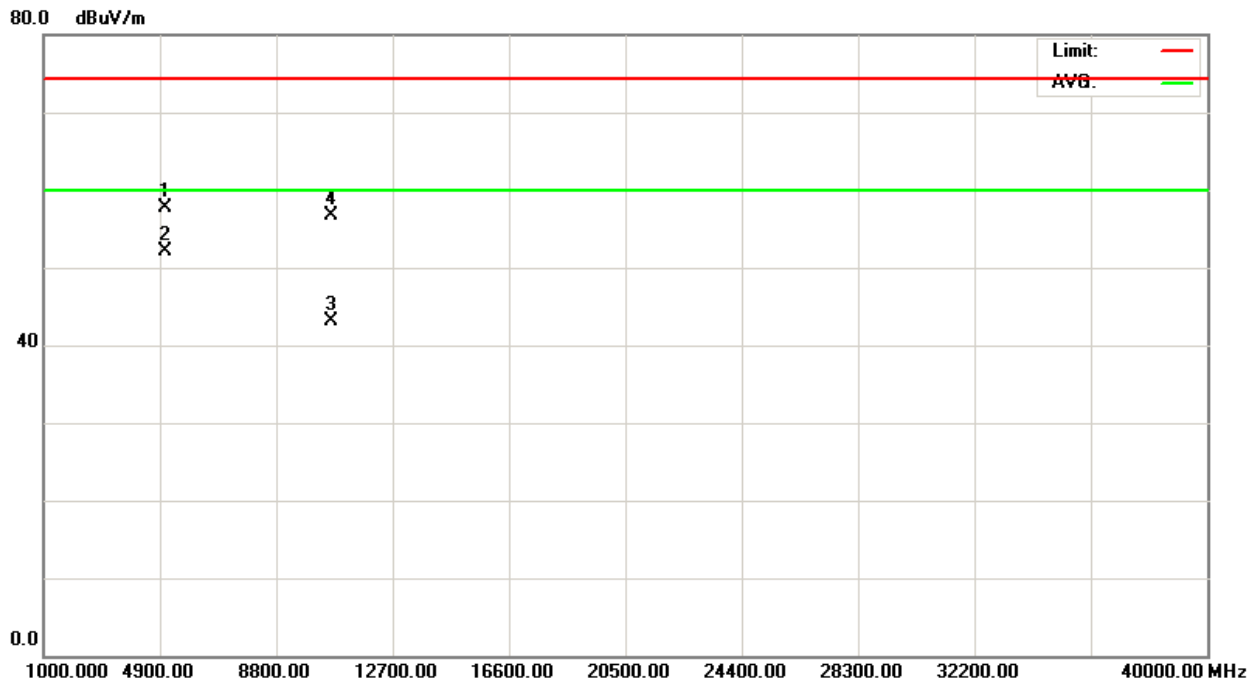
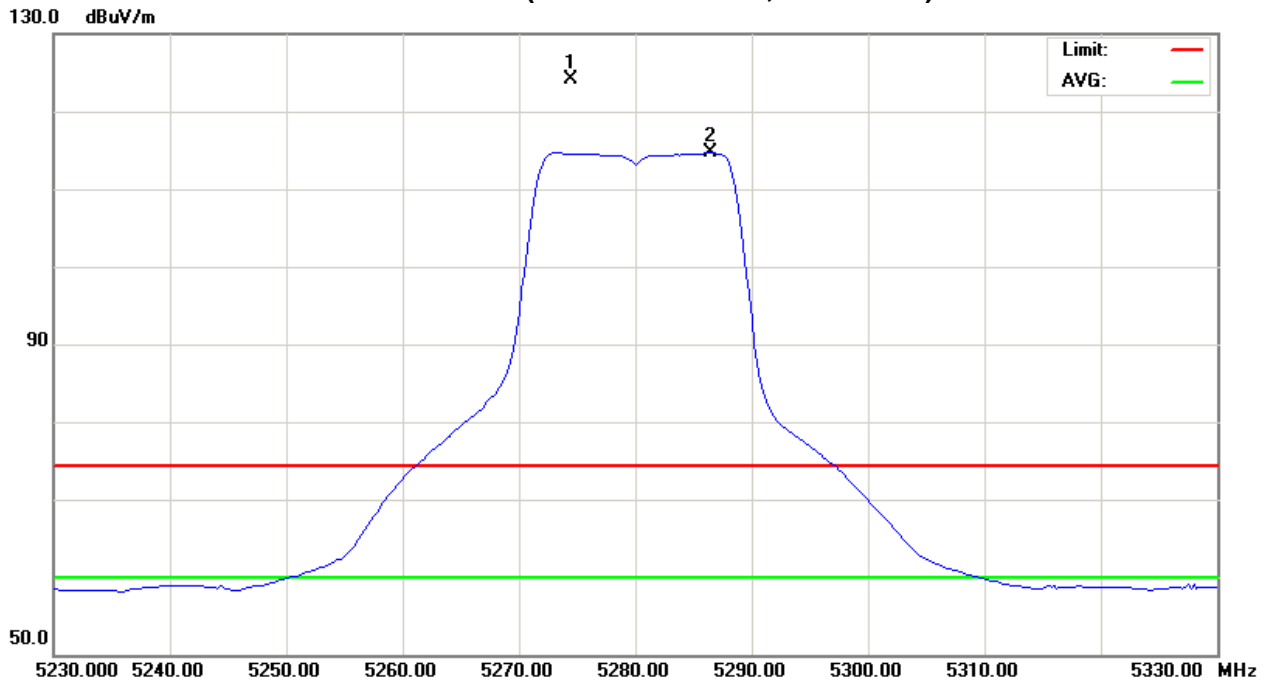
Freq. (MHz)	Ant. Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5274.58	H	84.77	75.21	39.43	124.20	114.64	19.43	9.87					X/F
5000.00	H	51.68	46.26	5.93	57.61	52.19	-47.16	-52.58	80.00	60.00	-24.77	-44.77	X/H
10560.39	H	43.99	30.43	12.73	56.72	43.16	-48.05	-61.61	74.30		-27.00		X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency °“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission °
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH56(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX A Mode 5320MHz		

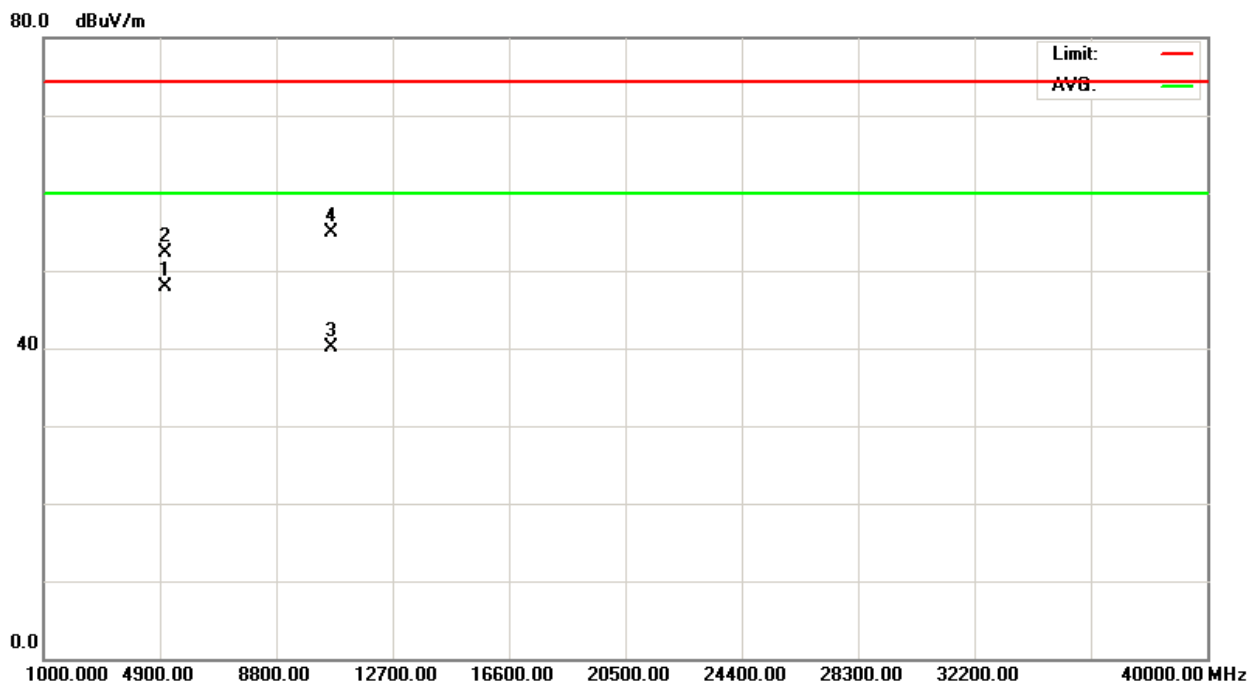
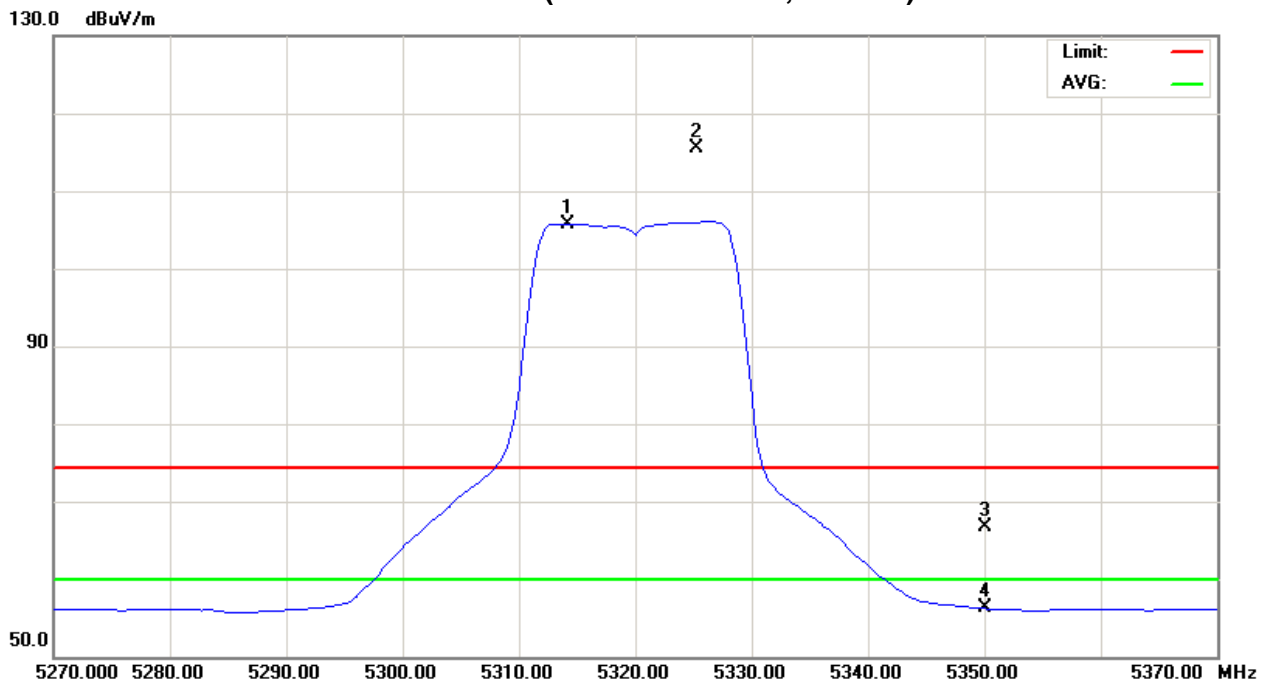
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5325.06	V	75.86	66.19	39.57	115.43	105.76	10.66	0.99					X/F
5350.00	V	27.11	16.69	39.63	66.74	56.32	-38.03	-48.45	80.00	60.00	-24.77	-44.77	X/E
4999.99	V	46.47	41.89	5.93	52.40	47.82	-52.37	-56.95	80.00	60.00	-24.77	-44.77	X/H
10640.47	V	42.05	27.40	12.77	54.82	40.17	-49.95	-64.60	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH64(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX A Mode 5320MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5322.41	H	86.04	74.26	39.56	125.60	113.82	20.83	9.05					X/F
5350.00	H	33.65	18.06	39.63	73.28	57.69	-31.49	-47.08	80.00	60.00	-24.77	-44.77	X/E
4999.99	H	51.43	46.17	5.93	57.36	52.10	-47.41	-52.67	80.00	60.00	-24.77	-44.77	X/H
10640.33	H	43.81	29.90	12.77	56.58	42.67	-48.19	-62.10	80.00	60.00	-24.77	-44.77	X/H

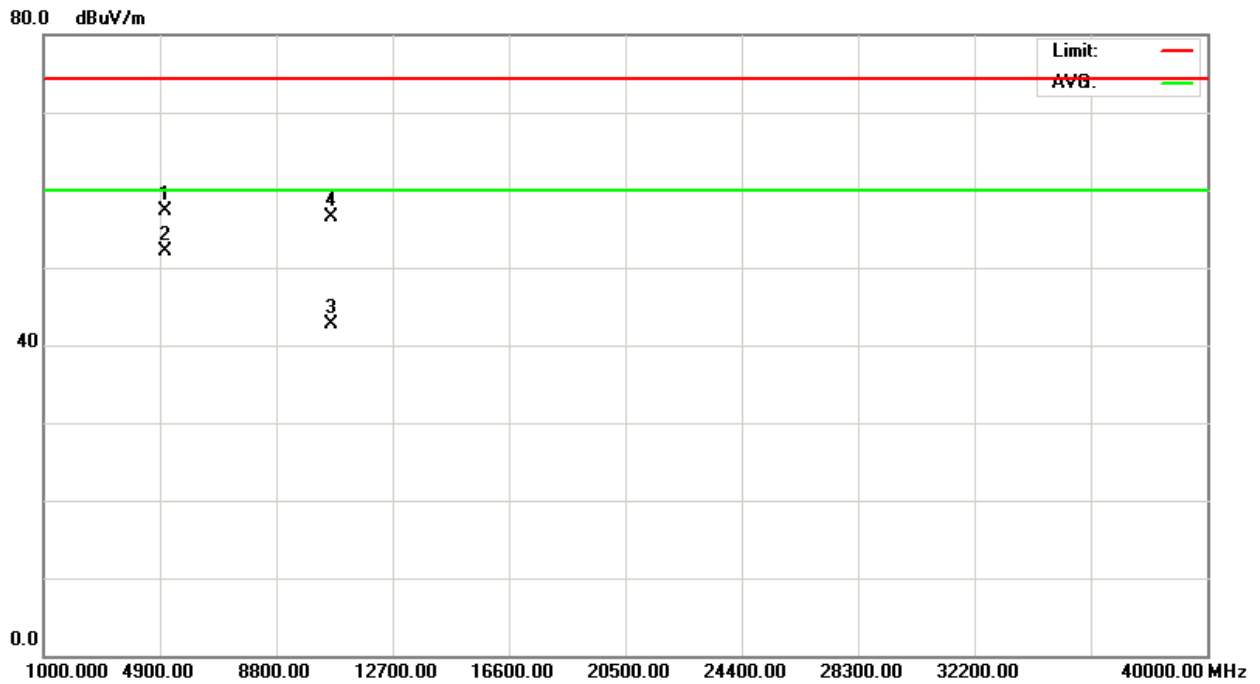
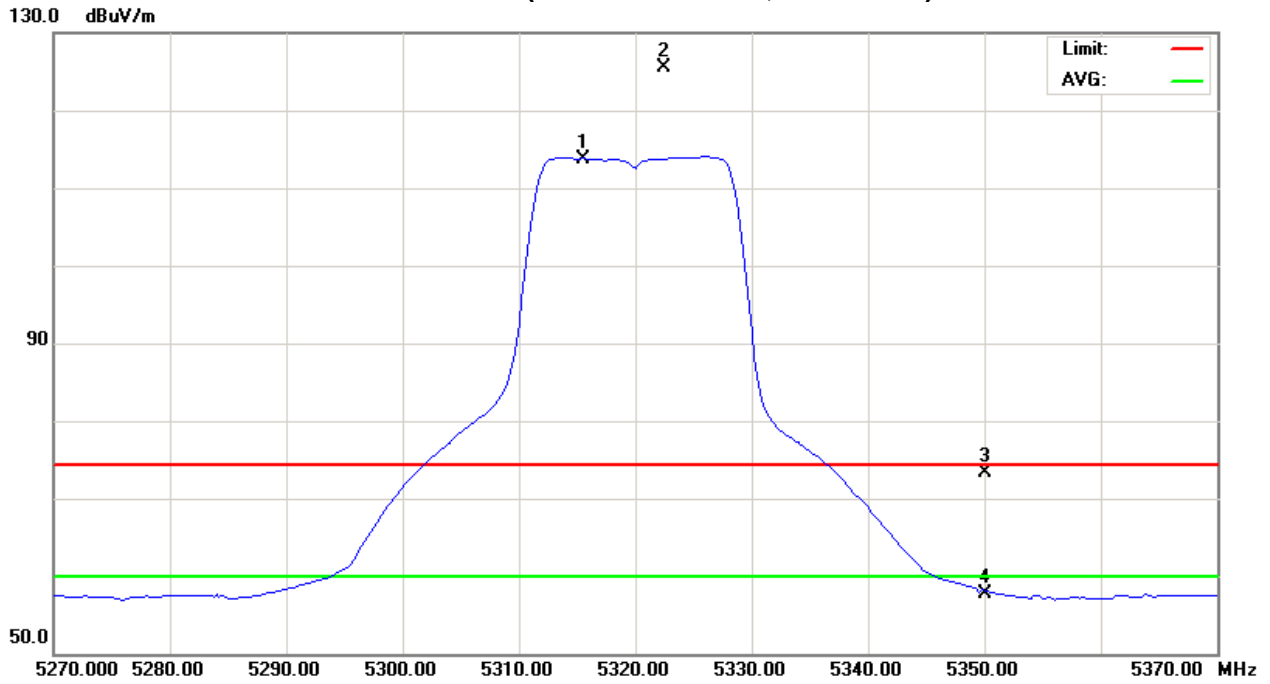
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 2/CH64(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N20 Mode 5260MHz		

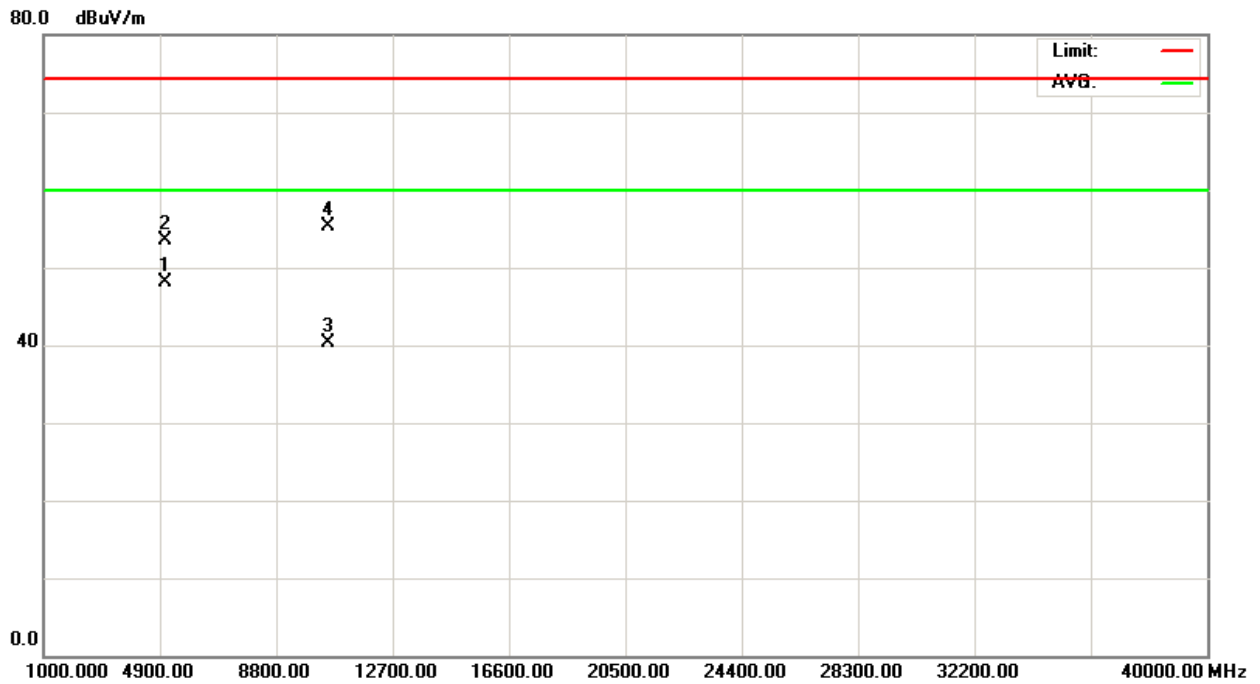
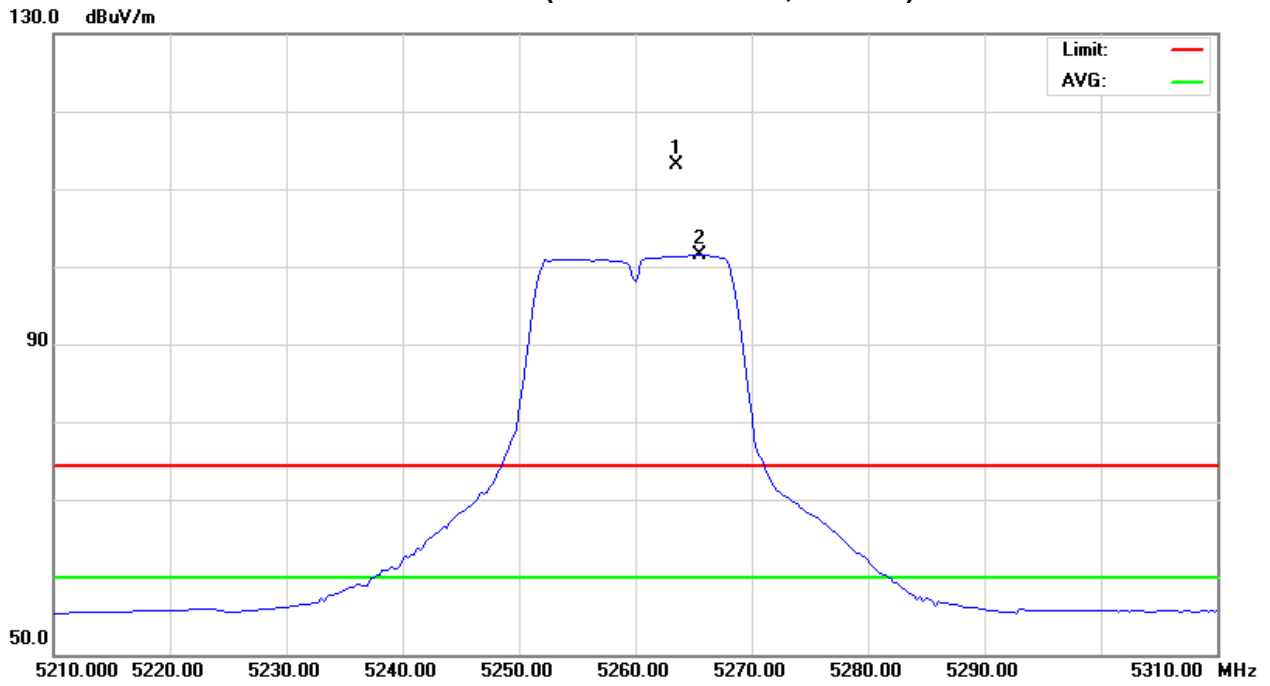
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5263.36	V	73.65	62.04	39.40	113.05	101.44	8.28	-3.33					X/F
5000.00	V	47.53	42.12	5.93	53.46	48.05	-51.31	-56.72	80.00	60.00	-24.77	-44.77	X/H
10520.45	V	42.50	27.60	12.71	55.21	40.31	-49.56	-64.46	74.30		-27.00		X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH52(Above 1000 MHz, Vertical)





## Neutron Engineering Inc.

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N20 Mode 5260MHz		

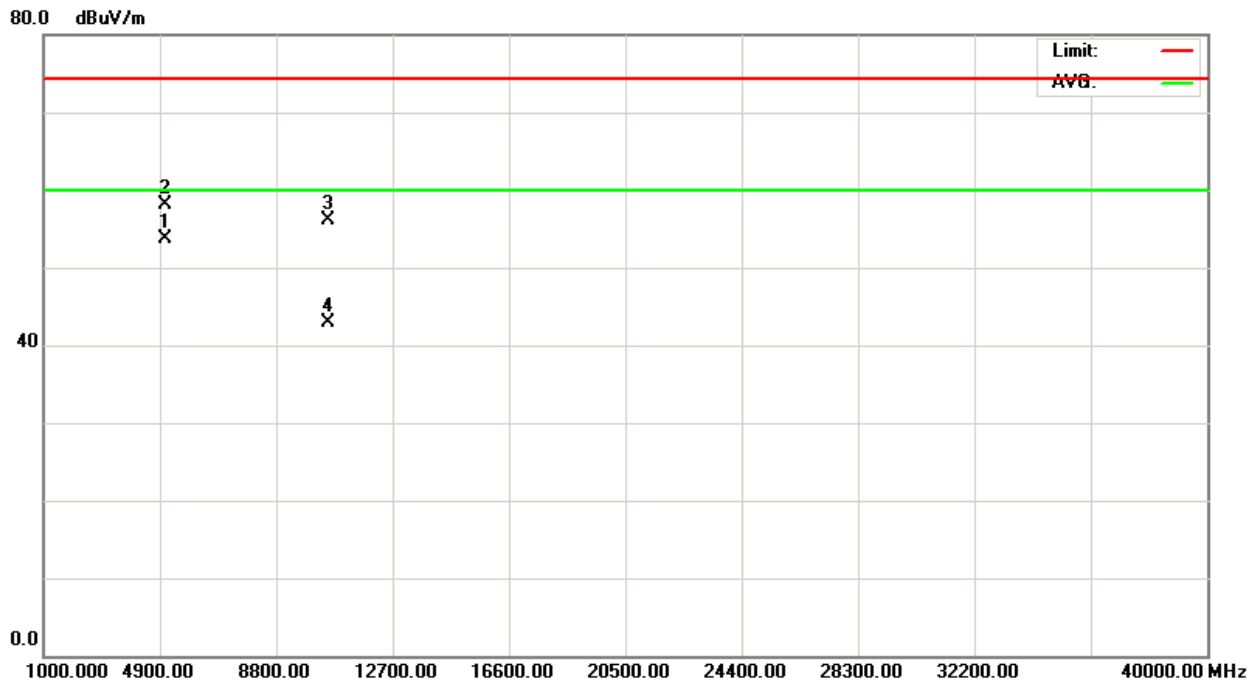
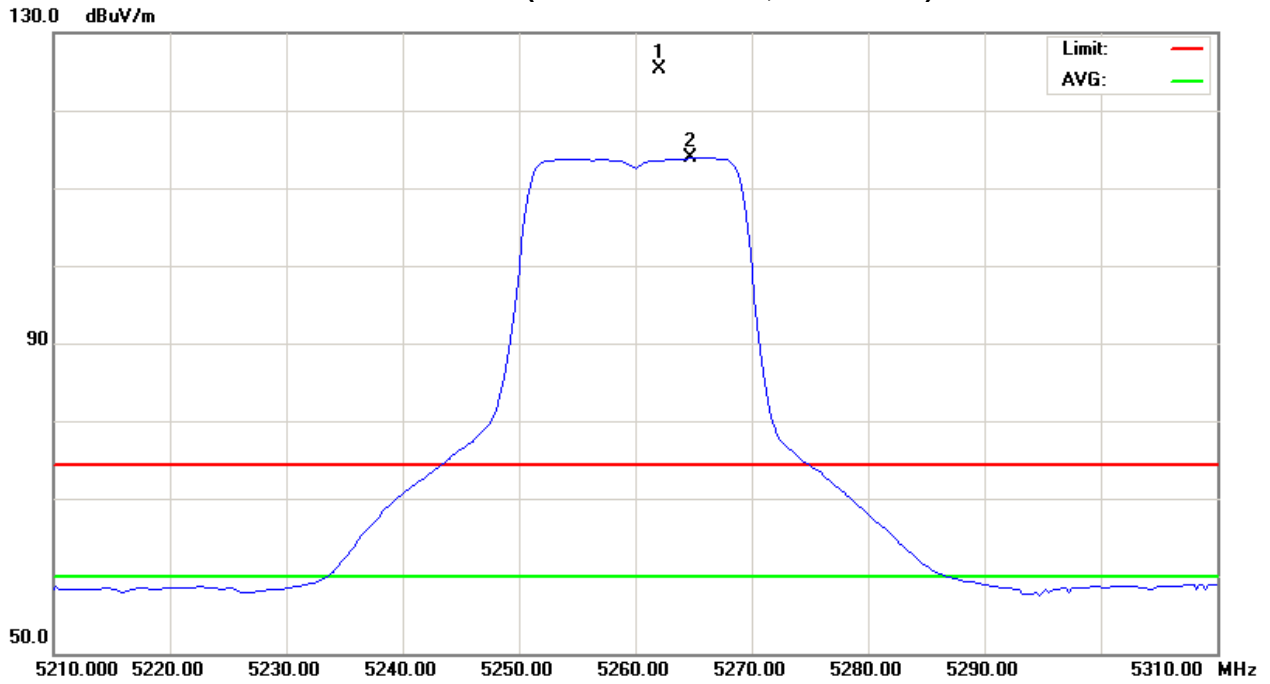
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5261.78	H	85.99	74.44	39.40	125.39	113.84	20.62	9.07					X/F
5000.00	H	52.17	47.76	5.93	58.10	53.69	-46.67	-51.08	80.00	60.00	-24.77	-44.77	X/H
10519.42	H	43.41	30.15	12.71	56.12	42.86	-48.65	-61.91	74.30		-27.00		X/H

### Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor =  $20 \log (3\text{m}/1.5\text{m})$  dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH52(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N20 Mode 5280MHz		

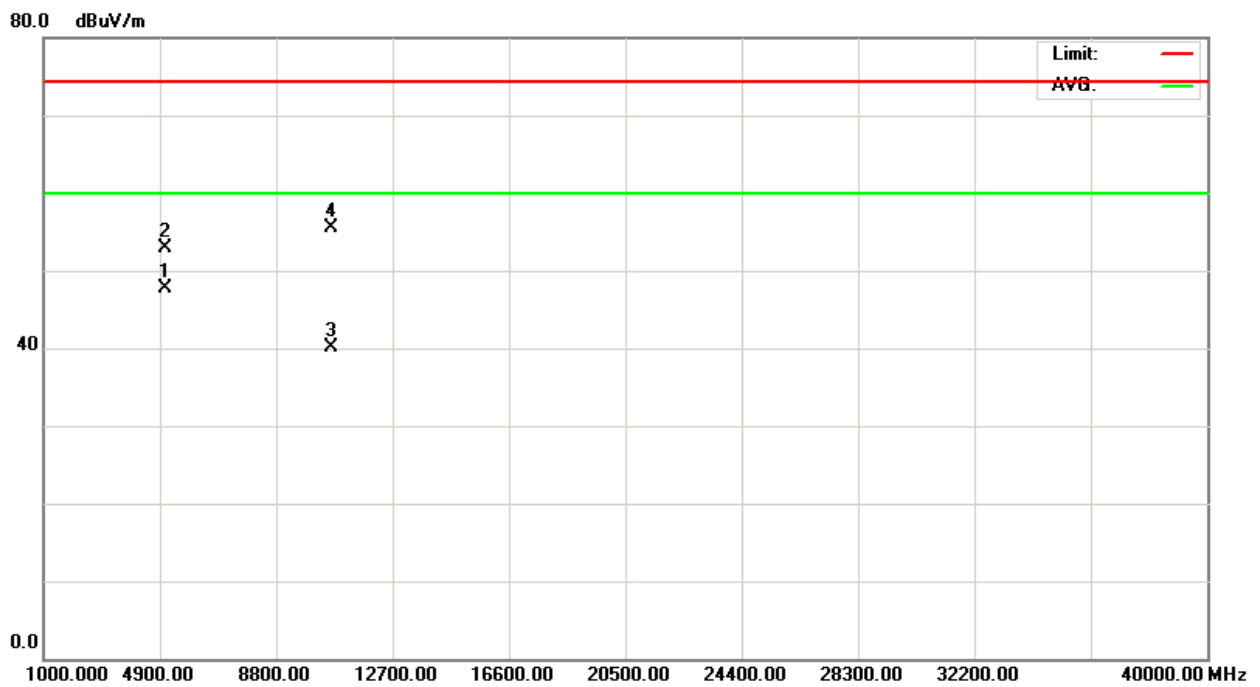
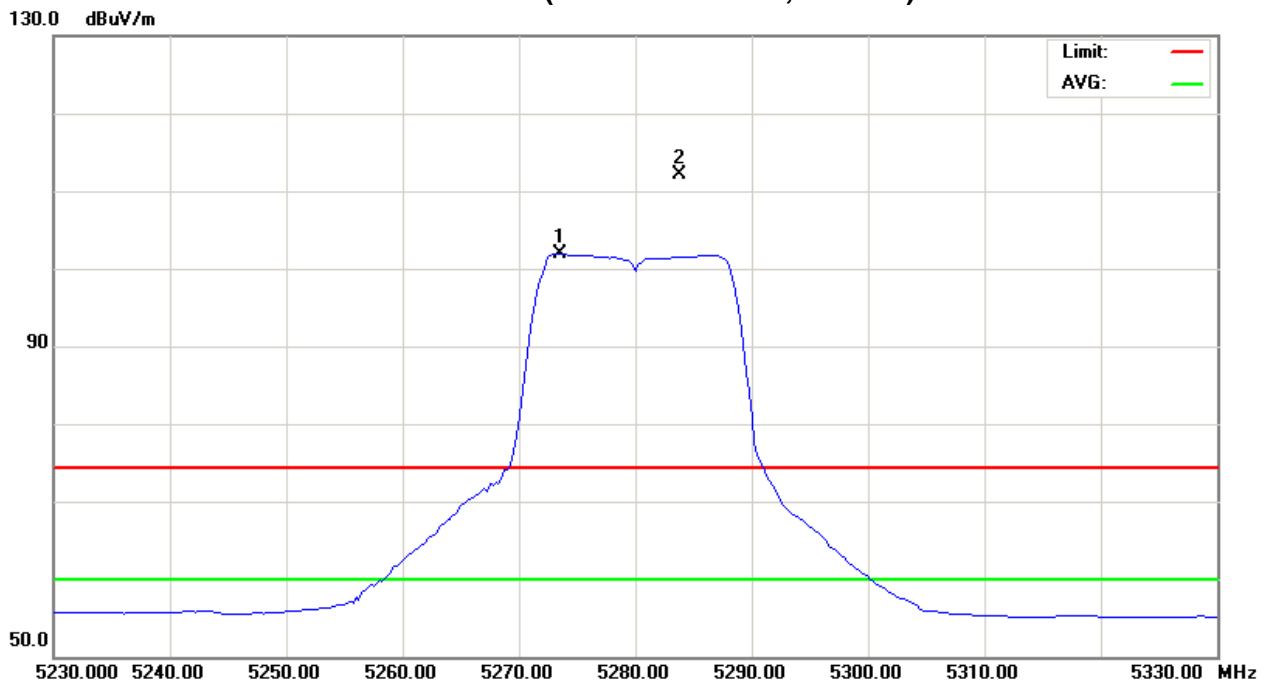
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5283.75	V	72.59	62.41	39.46	112.05	101.87	7.28	-2.90					X/F
5000.00	V	46.88	41.76	5.93	52.81	47.69	-51.96	-57.08	80.00	60.00	-24.77	-44.77	X/H
10560.61	V	42.81	27.30	12.73	55.54	40.03	-49.23	-64.74	74.30		-27.00		X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH56(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N20 Mode 5280MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5284.25	H	83.15	73.90	39.46	122.61	113.36	17.84	8.59					X/F
4999.99	H	52.48	46.91	5.93	58.41	52.84	-46.36	-51.93	80.00	60.00	-24.77	-44.77	X/H
10560.53	H	42.91	29.96	12.73	55.64	42.69	-49.13	-62.08	74.30		-27.00		X/H

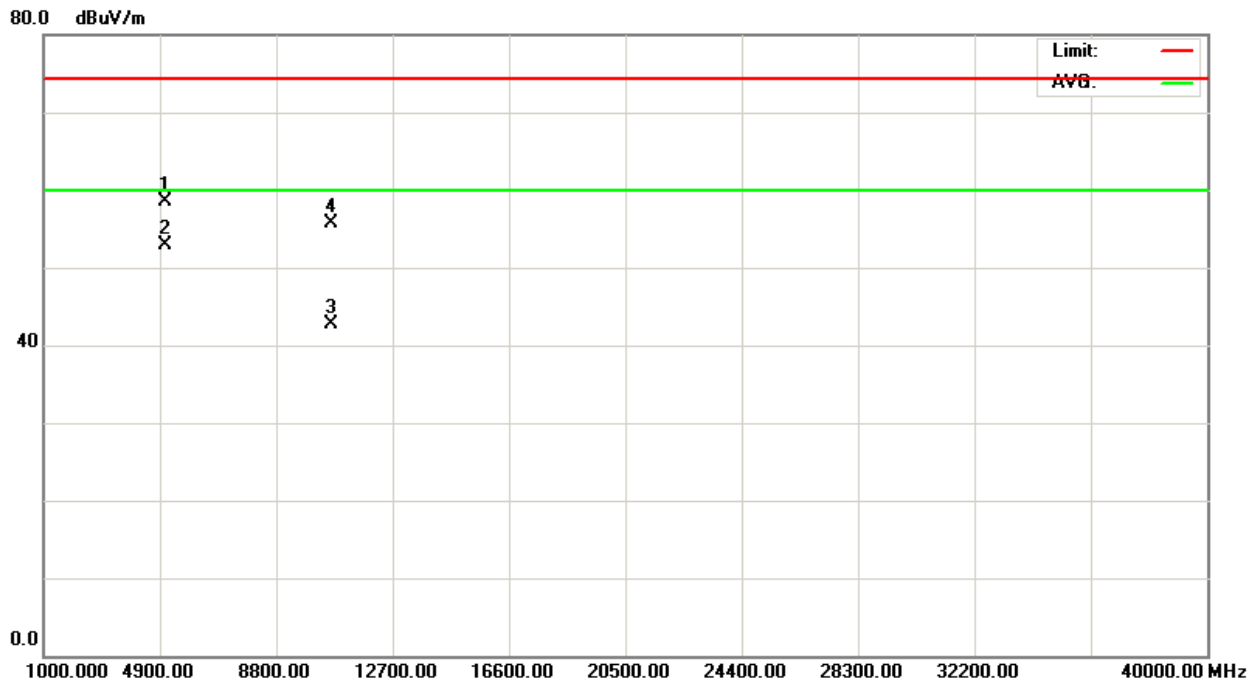
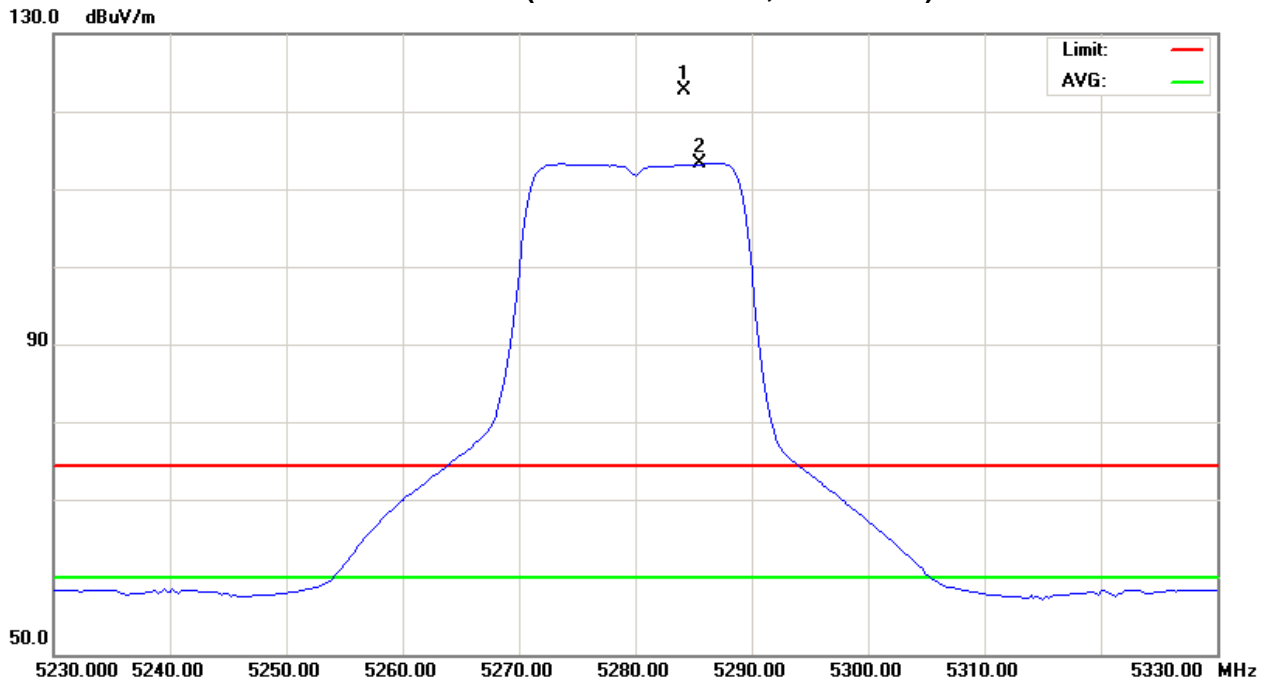
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 2/CH56(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N20 Mode 5320MHz		

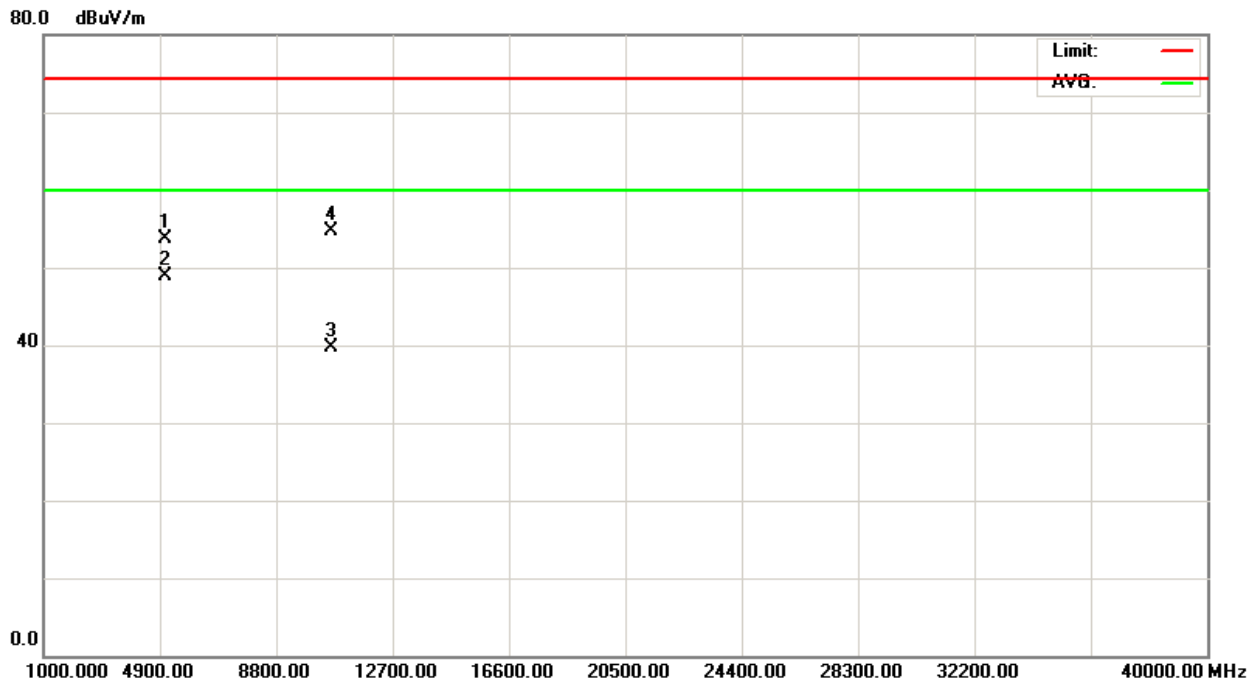
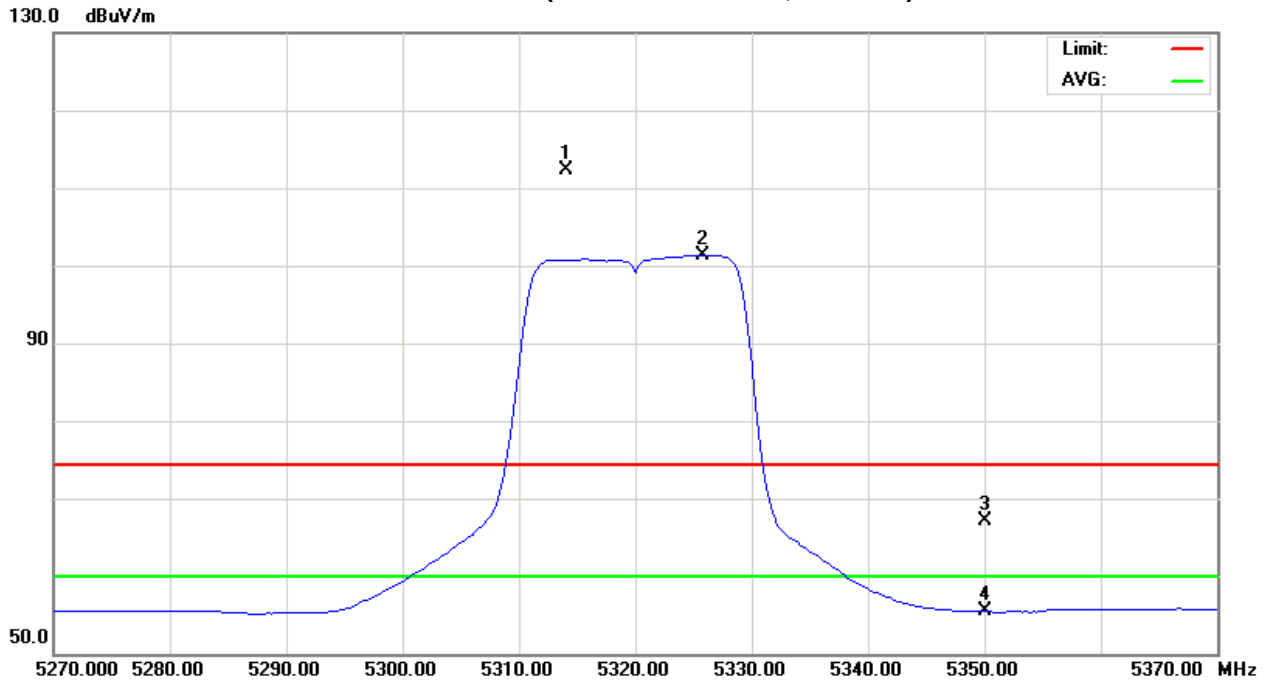
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5313.90	V	72.73	61.79	39.54	112.27	101.33	7.50	-3.44					X/F
5350.00	V	27.40	15.78	39.63	67.03	55.41	-37.74	-49.36	80.00	60.00	-24.77	-44.77	X/E
4999.99	V	47.82	42.96	5.93	53.75	48.89	-51.02	-55.88	80.00	60.00	-24.77	-44.77	X/H
10640.29	V	41.88	26.95	12.77	54.65	39.72	-50.12	-65.05	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency .“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH64(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N20 Mode 5320MHz		

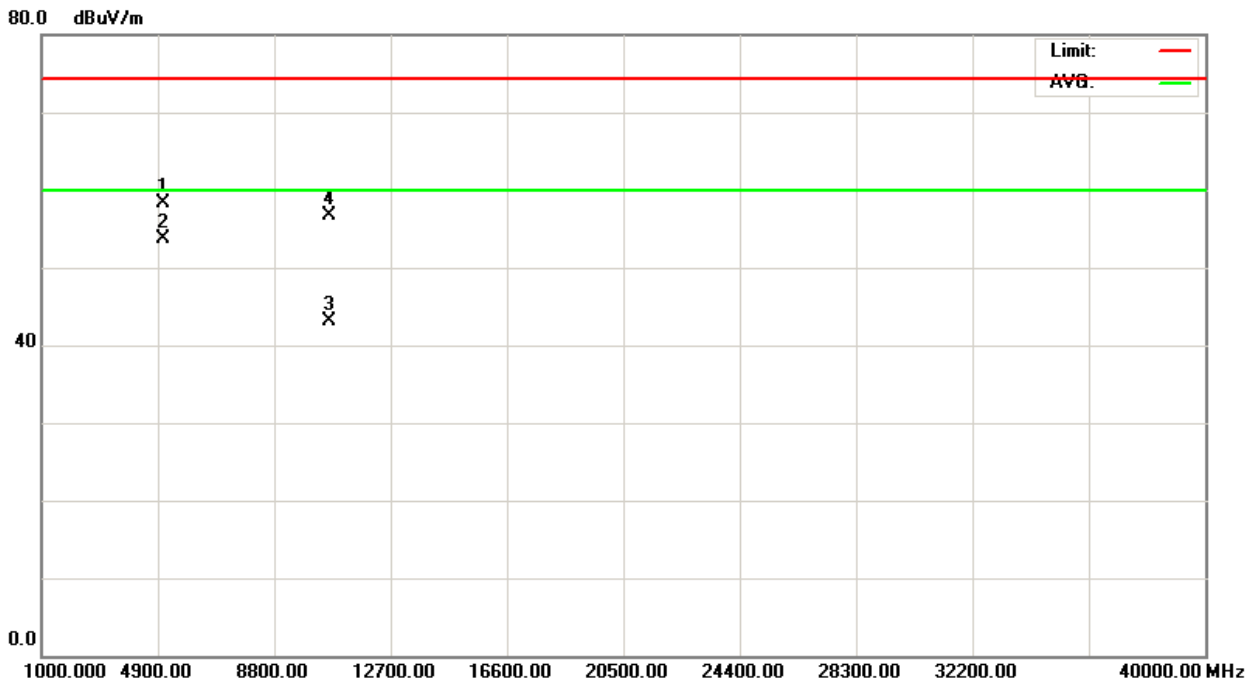
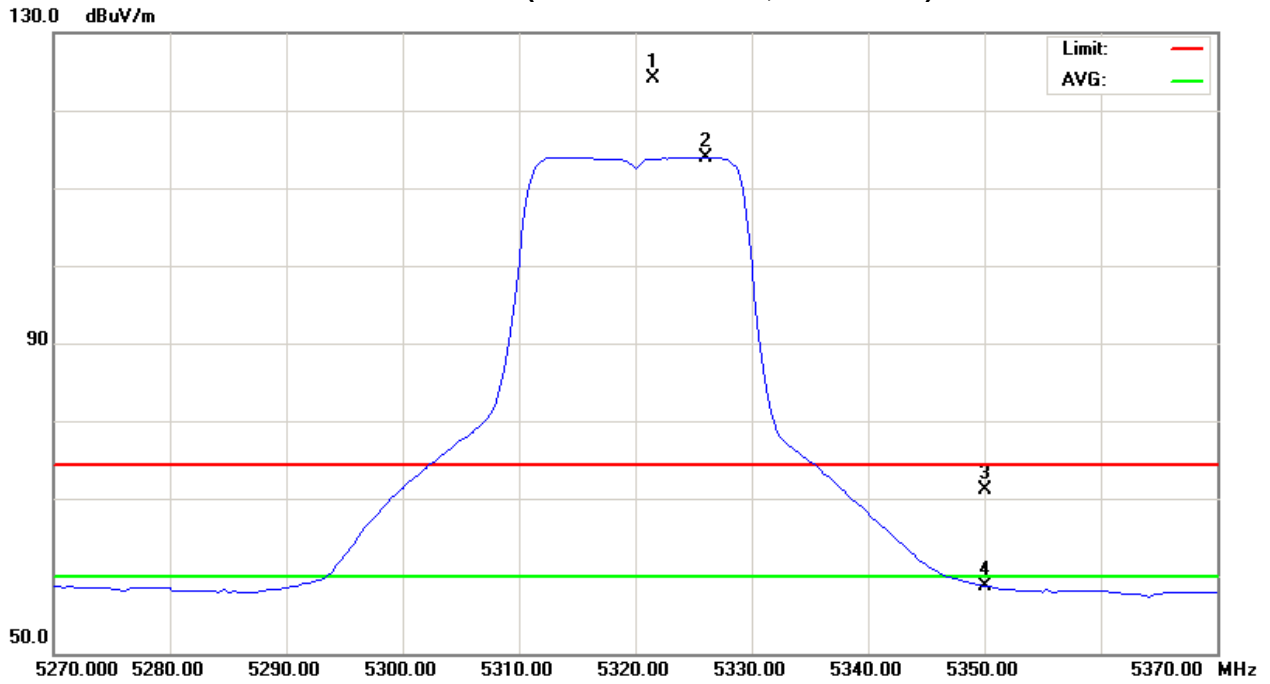
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5321.65	H	84.57	74.38	39.55	124.12	113.93	19.35	9.16					X/F
5350.00	H	31.46	19.14	39.63	71.09	58.77	-33.68	-46.00	80.00	60.00	-24.77	-44.77	X/E
4999.99	H	52.33	47.81	5.93	58.26	53.74	-46.51	-51.03	80.00	60.00	-24.77	-44.77	X/H
10640.46	H	43.84	30.43	12.77	56.61	43.20	-48.16	-61.57	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH64(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N40 Mode 5270MHz		

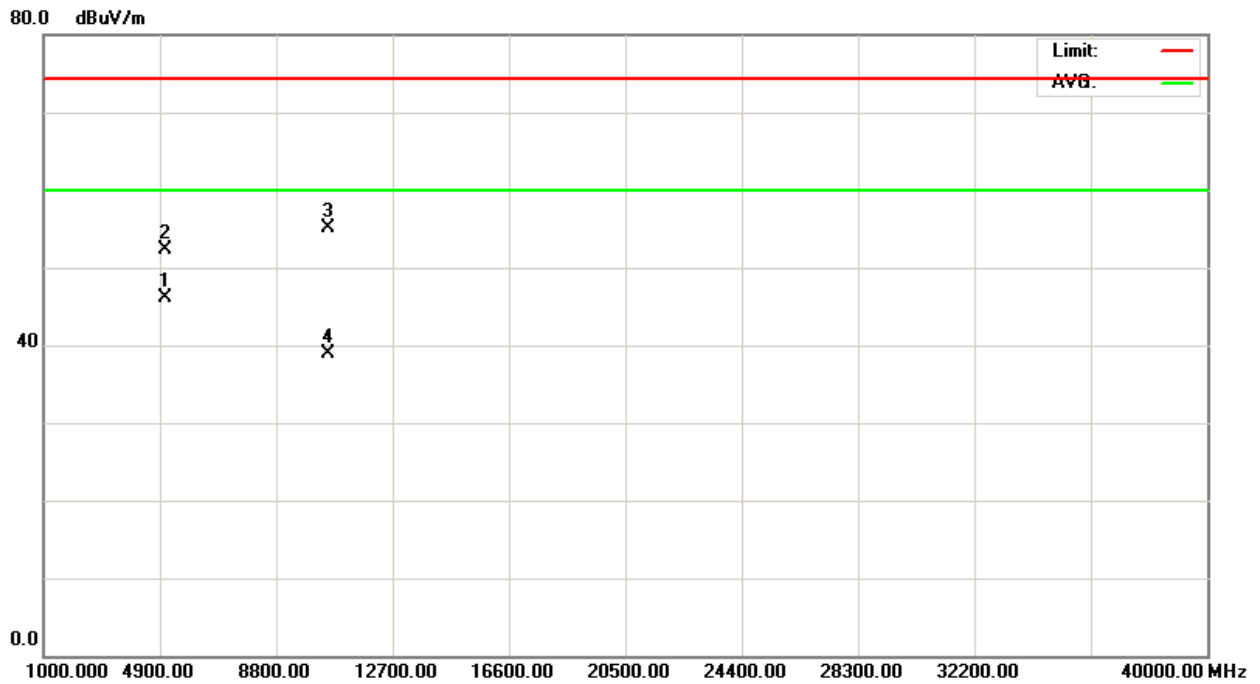
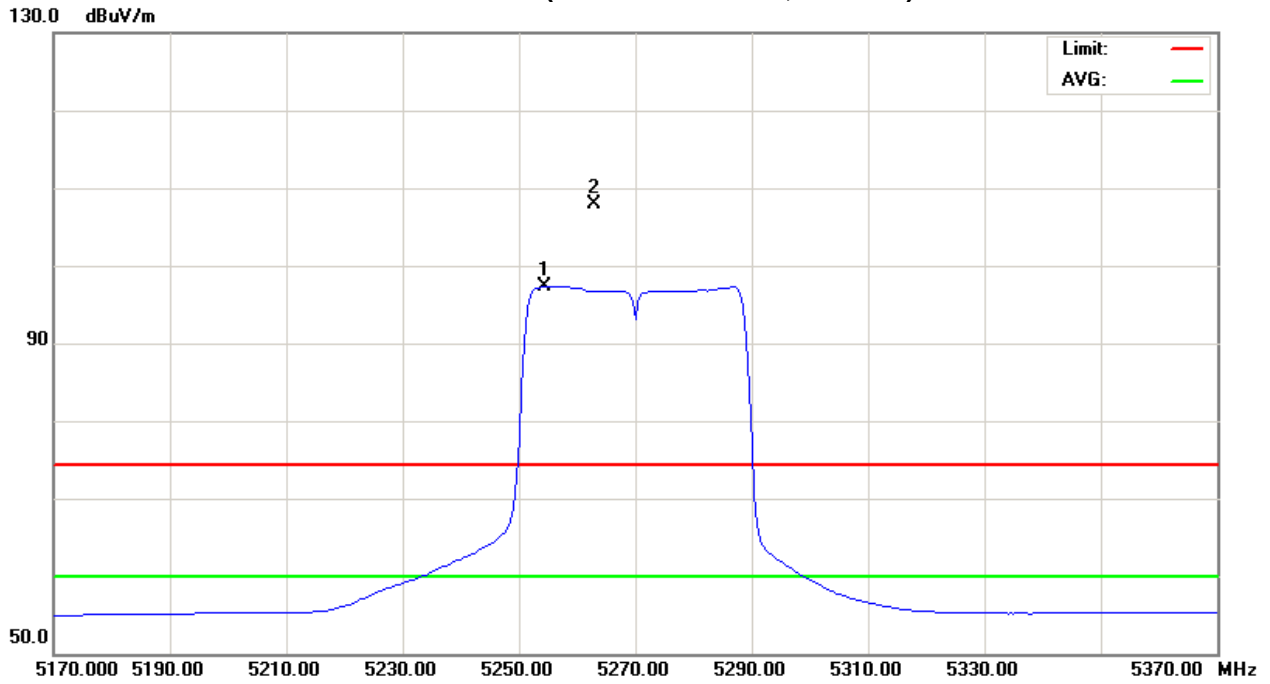
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5263.00	V	68.41	57.98	39.40	107.81	97.38	3.04	-7.39					X/F
5000.00	V	46.45	40.24	5.93	52.38	46.17	-52.39	-58.60	80.00	60.00	-24.77	-44.77	X/H
10540.32	V	42.31	26.13	12.72	55.03	38.85	-49.74	-65.92	74.30		-27.00		X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH54(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N40 Mode 5270MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBUV/m)		Act.(dBm)		Limit(dBUV/m)		Limit(dBm)		Note
		Peak (dBUV)	AV (dBUV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5286.50	H	83.29	71.52	39.47	122.76	110.99	17.99	6.22					X/F
4999.99	H	52.09	47.03	5.93	58.02	52.96	-46.75	-51.81	80.00	60.00	-24.77	-44.77	X/H
10540.54	H	43.00	29.99	12.72	55.72	42.71	-49.05	-62.06	74.30		-27.00		X/H

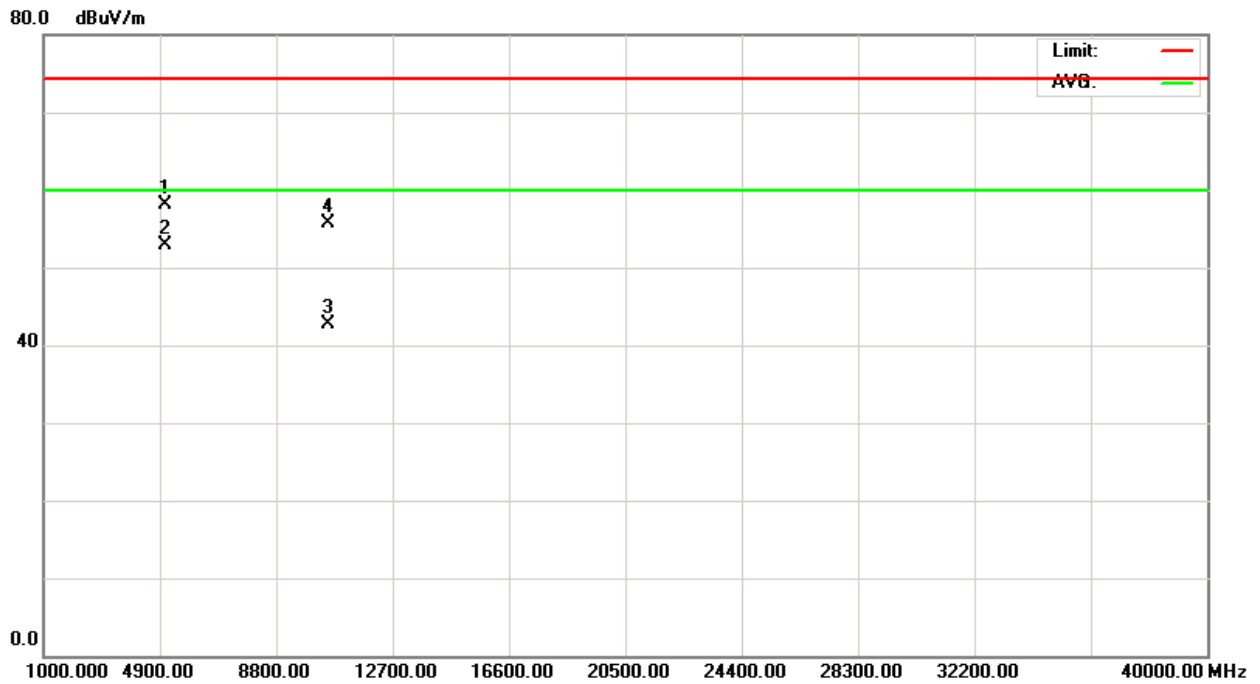
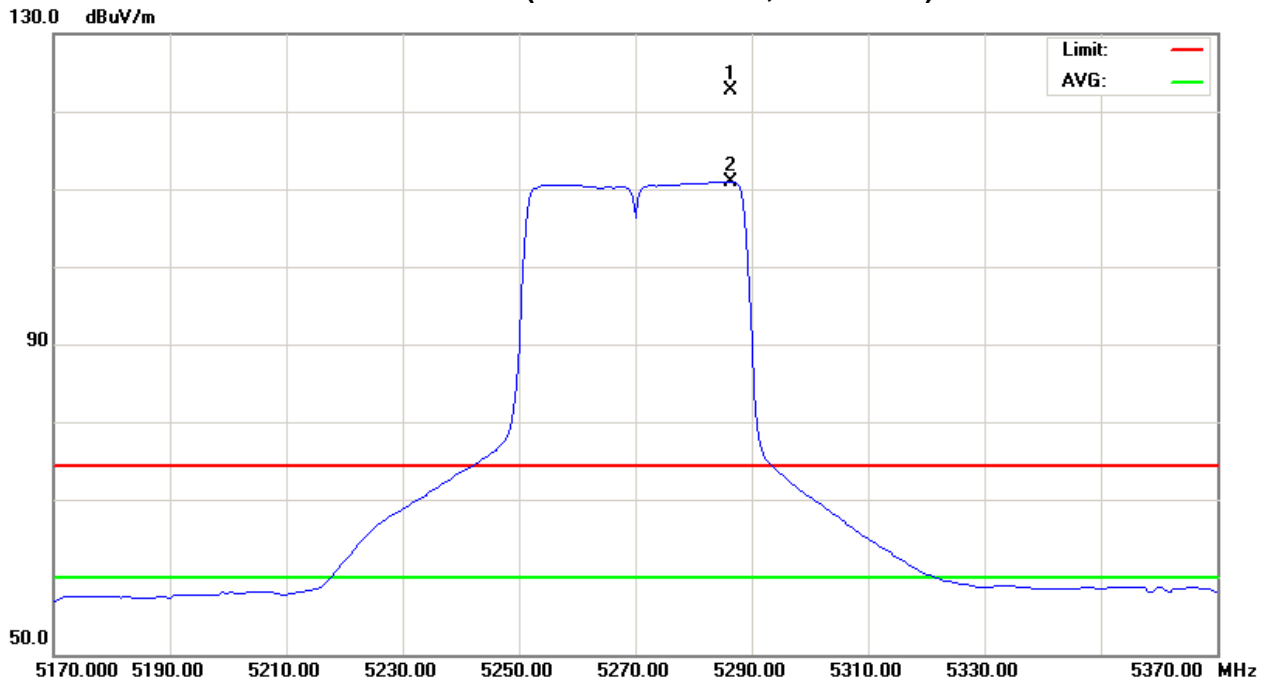
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBUV) + 6 dB





Orthogonal Axis : X  
Band 2/CH54(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N40 Mode 5310MHz		

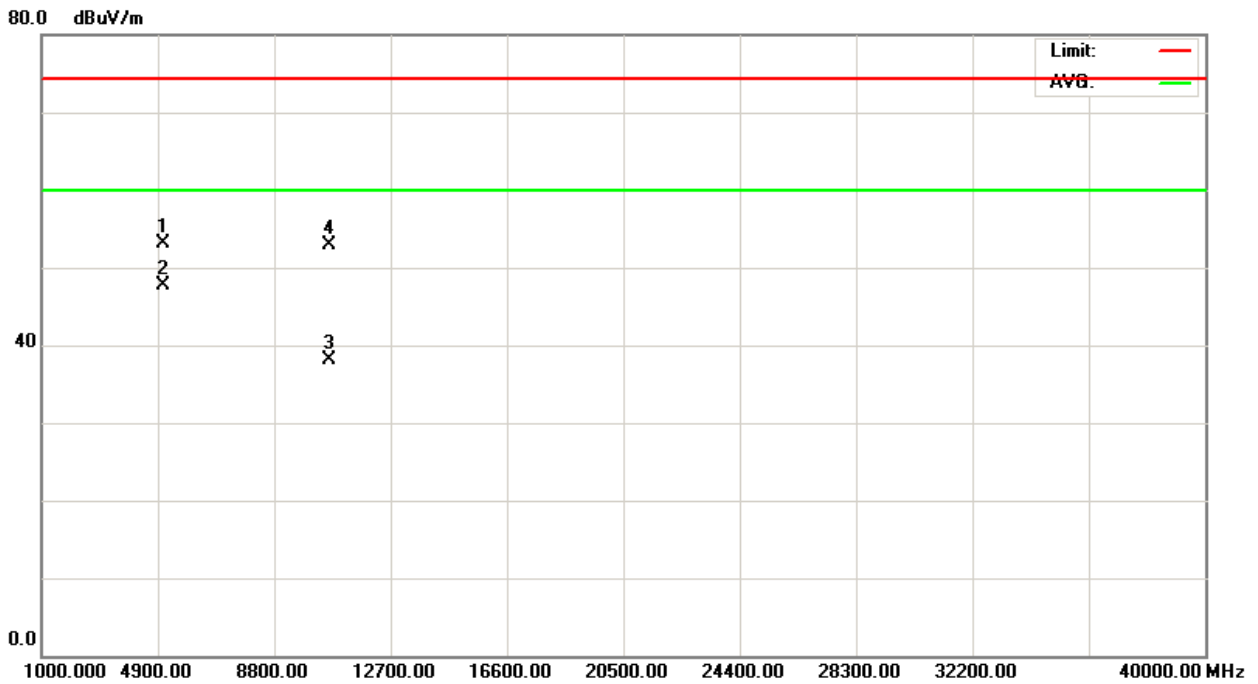
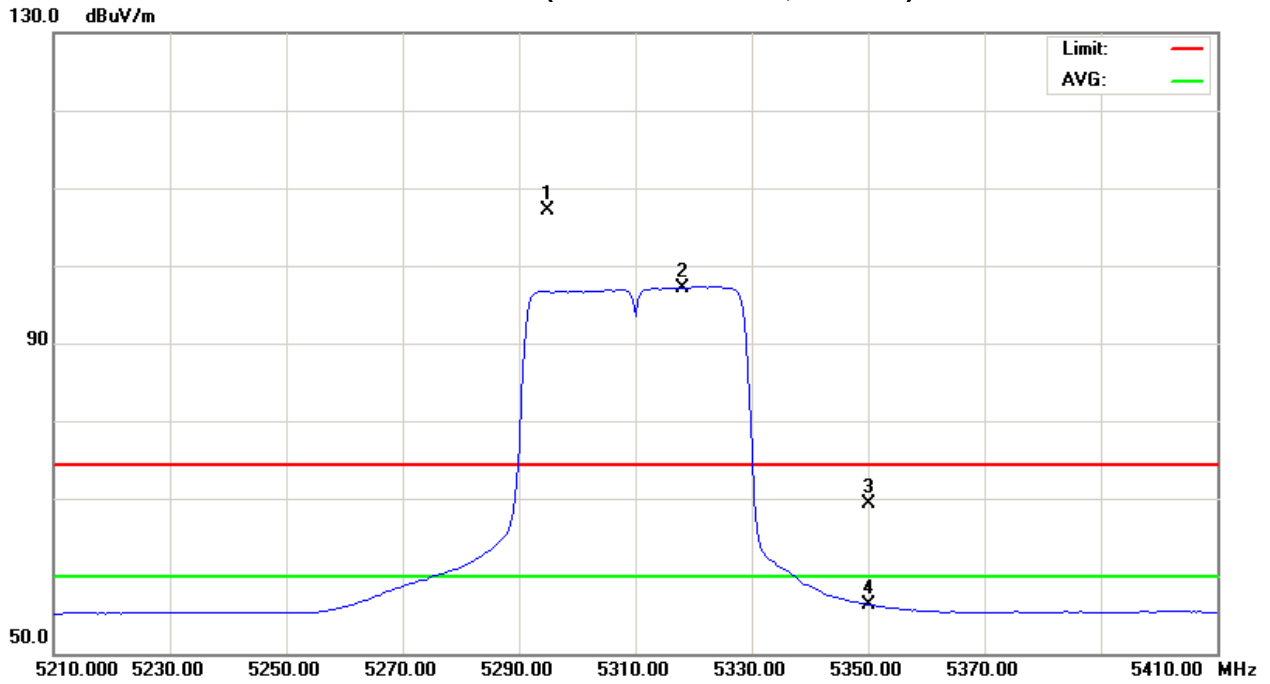
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5295.20	V	67.67	57.60	39.48	107.15	97.08	2.38	-7.69					X/F
5350.00	V	29.62	16.65	39.63	69.25	56.28	-35.52	-48.49	80.00	60.00	-24.77	-44.77	X/E
5000.00	V	47.13	41.75	5.93	53.06	47.68	-51.71	-57.09	80.00	60.00	-24.77	-44.77	X/H
10620.56	V	40.05	25.26	12.76	52.81	38.02	-51.96	-66.75	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency .“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 “X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH62(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/ TX N40 Mode 5310MHz		

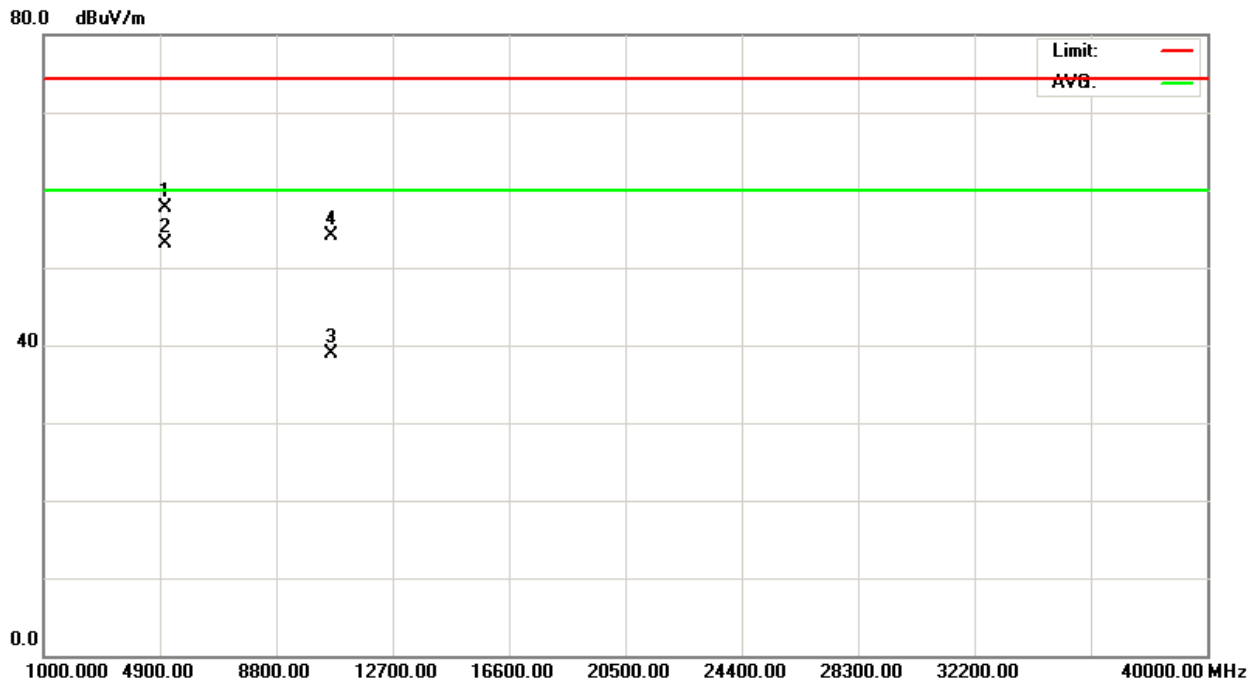
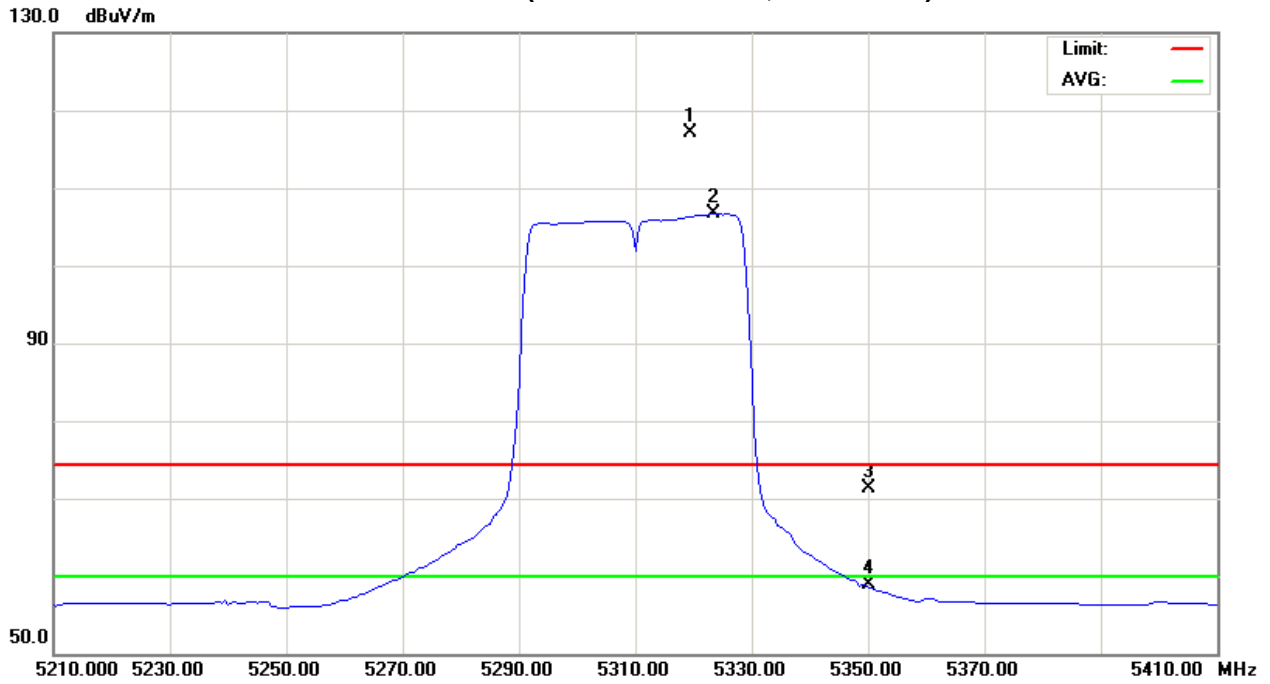
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5319.50	H	77.55	67.11	39.55	117.10	106.66	12.33	1.89					X/F
5350.00	H	31.58	19.35	39.63	71.21	58.98	-33.56	-45.79	80.00	60.00	-24.77	-44.77	X/E
5000.00	H	51.68	47.26	5.93	57.61	53.19	-47.16	-51.58	80.00	60.00	-24.77	-44.77	X/H
10620.39	H	41.40	26.20	12.76	54.16	38.96	-50.61	-65.81	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 2/CH62(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 ° C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX A Mode 5500MHz		

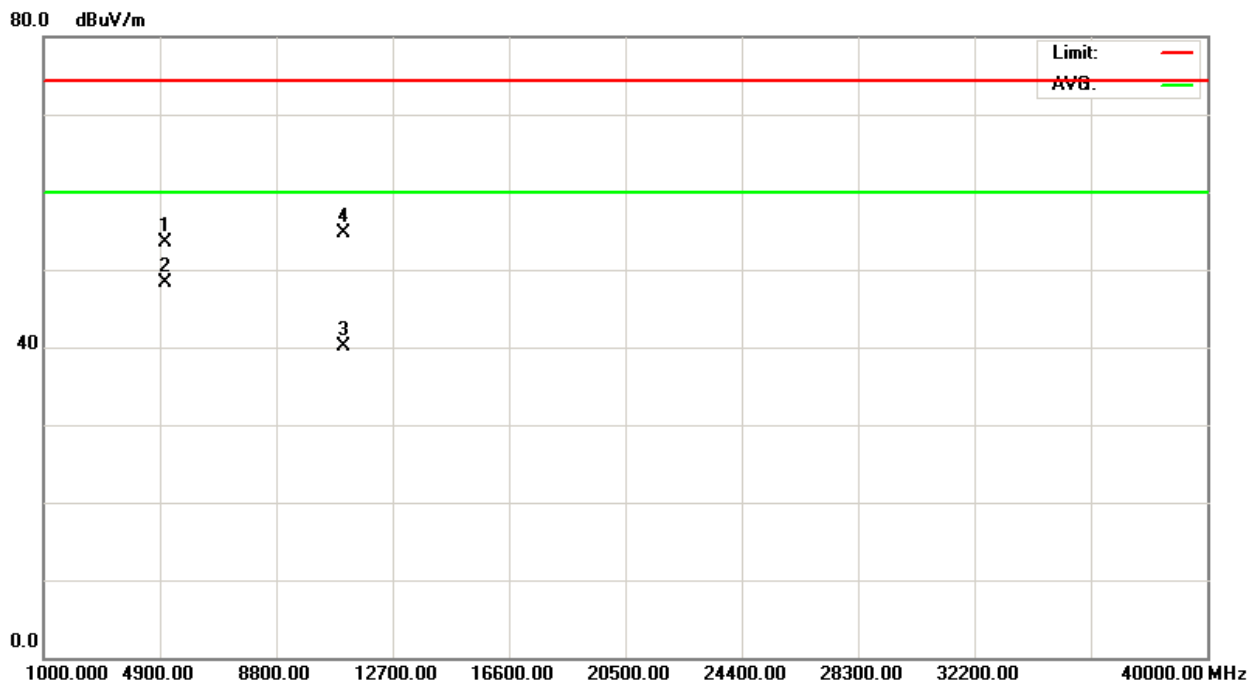
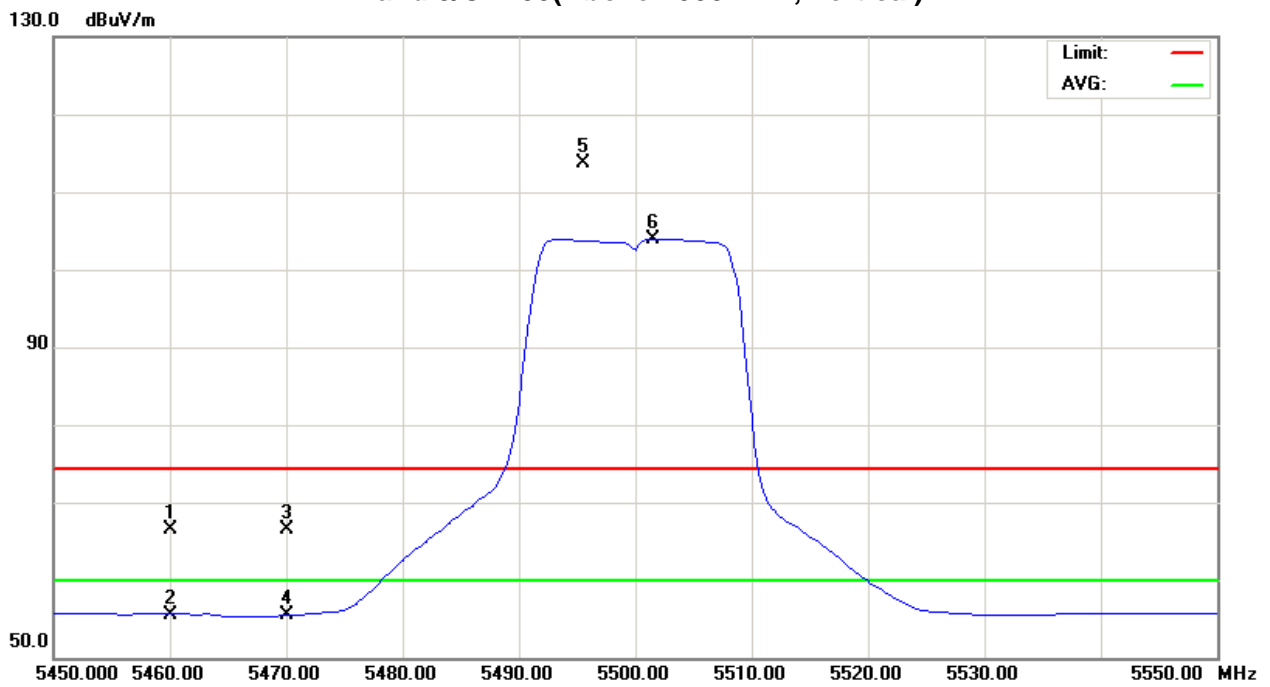
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBUV/m)		Act.(dBm)		Limit(dBUV/m)		Limit(dBm)		Note
		Peak (dBUV)	AV (dBUV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5460.00	V	26.57	15.65	39.91	66.48	55.56	-38.29	-49.21	80.00	60.00	-24.77	-44.77	X/E
5470.00	V	26.52	15.51	39.94	66.46	55.45	-38.31	-49.32	74.30		-27.00		X/E
5495.50	V	73.62	63.95	40.00	113.62	103.95	8.85	-0.82					X/F
4999.99	V	47.67	42.33	5.93	53.60	48.26	-51.17	-56.51	80.00	60.00	-24.77	-44.77	X/H
11000.36	V	41.66	27.08	12.97	54.63	40.05	-50.14	-64.72	80.00	60.00	-24.77	-44.77	X/H

Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency .“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBUV) + 6 dB



Orthogonal Axis : X  
Band 3/CH100(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX A Mode 5500MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5460.00	H	31.86	18.44	39.91	71.77	58.35	-33.00	-46.42	80.00	60.00	-24.77	-44.77	X/E
5470.00	H	32.77	19.29	39.94	72.71	59.23	-32.06	-45.54	74.30		-27.00		X/E
5506.30	H	86.22	76.23	40.03	126.25	116.26	21.48	11.49					X/F
4999.99	H	51.25	46.37	5.93	57.18	52.30	-47.59	-52.47	80.00	60.00	-24.77	-44.77	X/H
11000.48	H	43.85	29.79	12.97	56.82	42.76	-47.95	-62.01	80.00	60.00	-24.77	-44.77	X/H

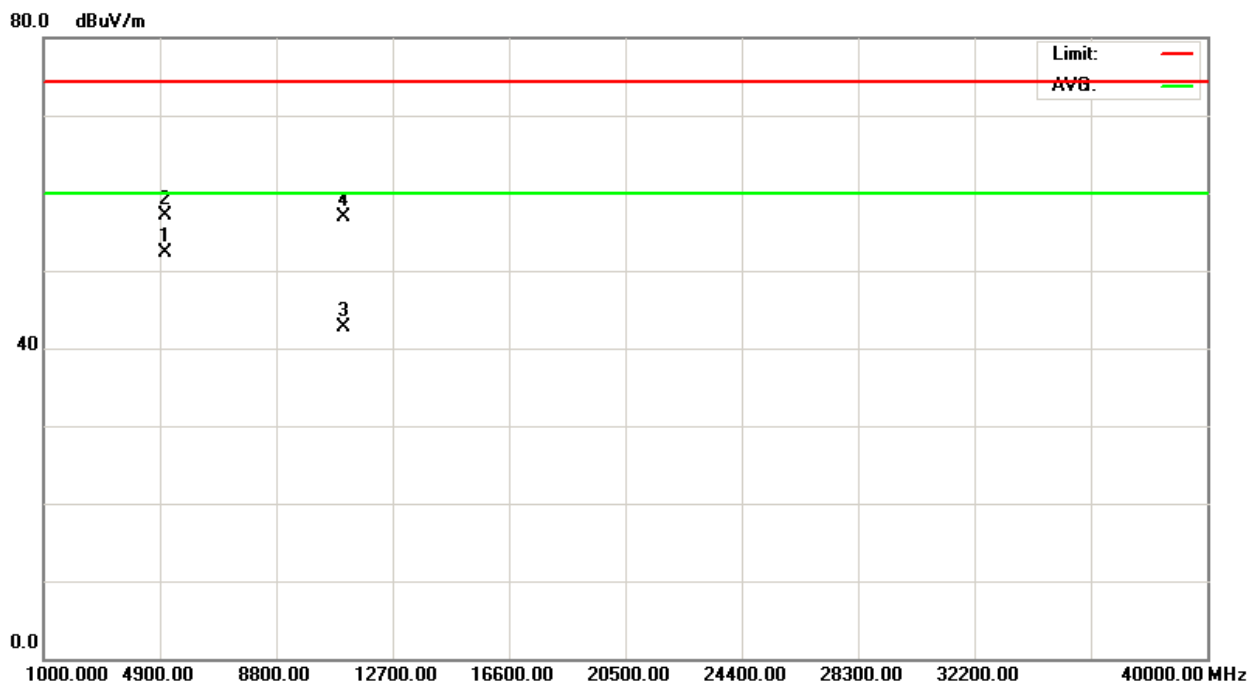
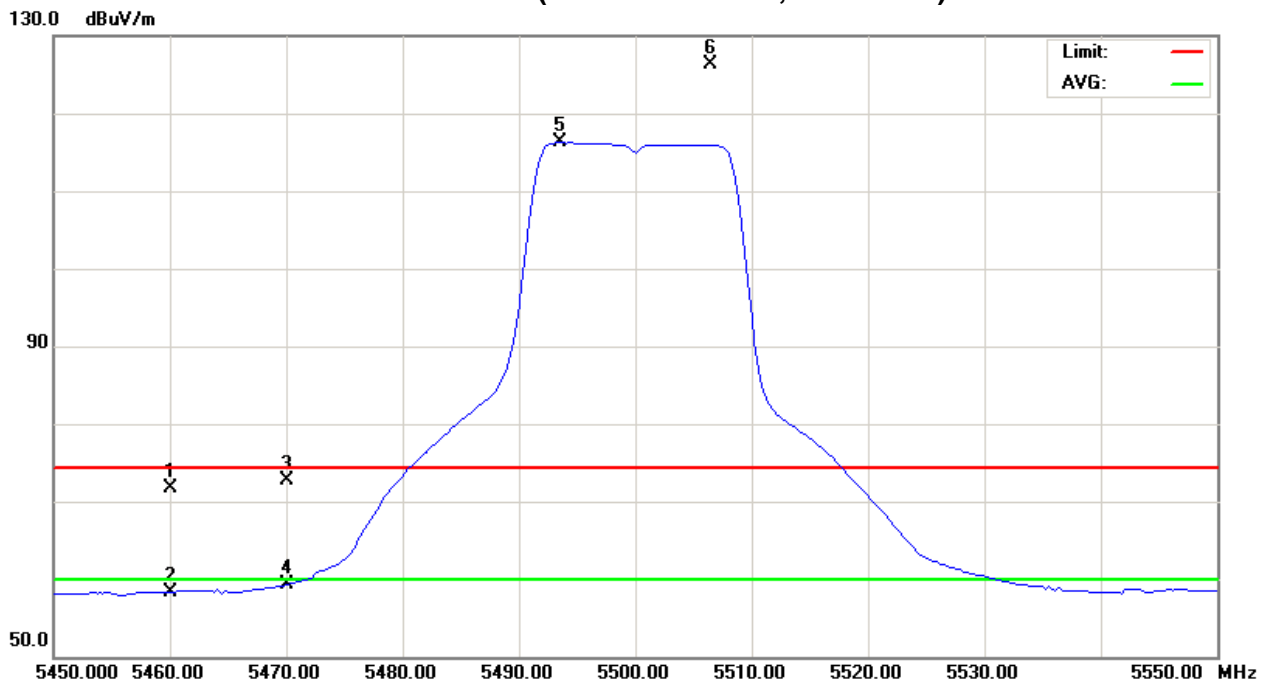
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 3/CH100 (Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX A Mode 5560MHz		

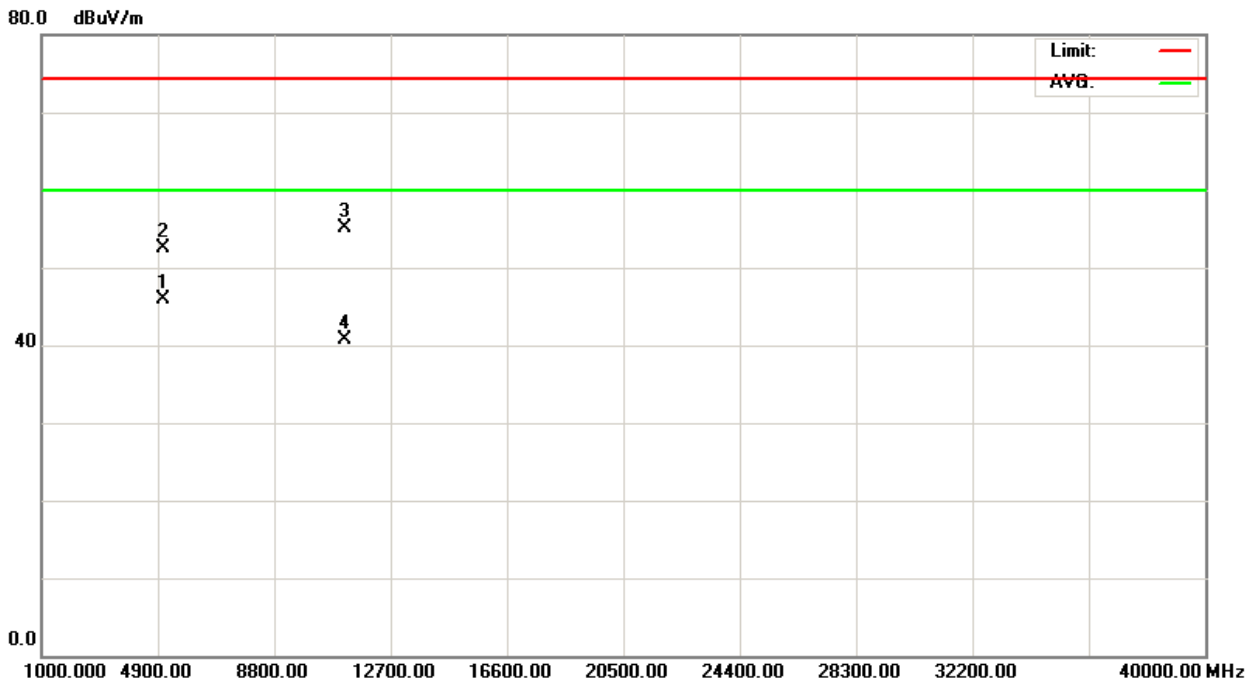
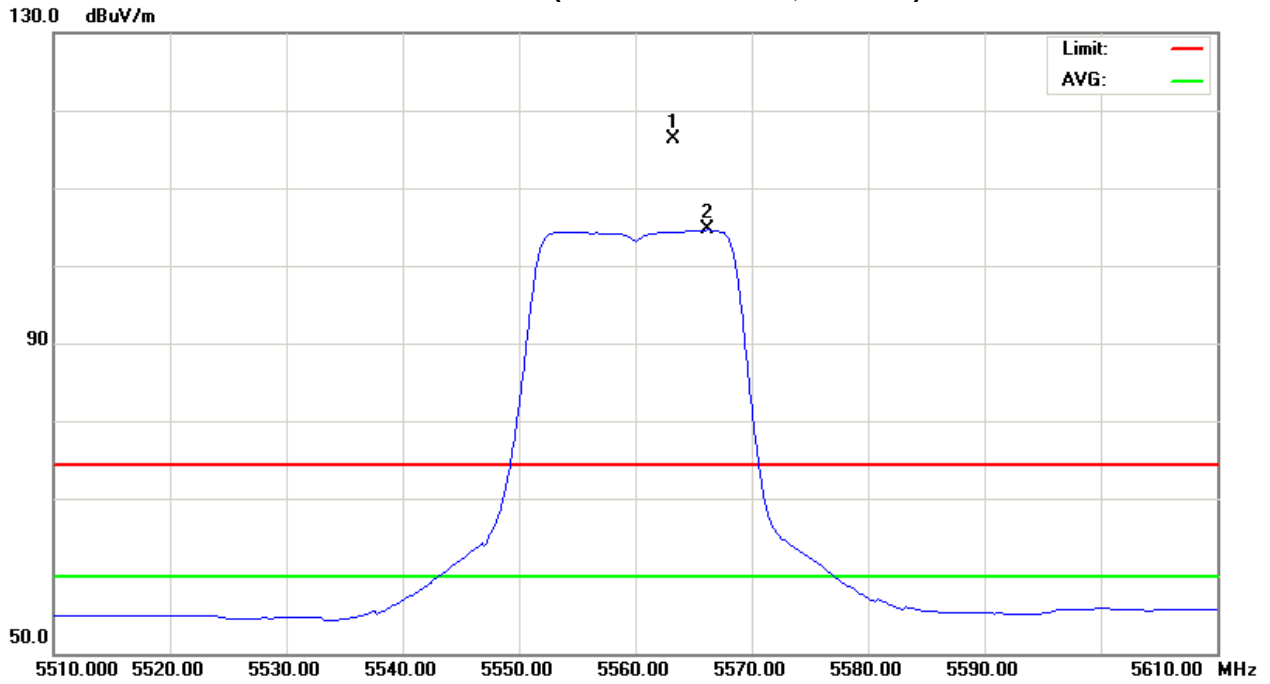
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5563.20	V	76.07	64.34	40.25	116.32	104.59	11.55	-0.18					X/F
4999.99	V	46.54	40.03	5.93	52.47	45.96	-52.30	-58.81	80.00	60.00	-24.77	-44.77	X/H
11120.52	V	41.96	27.59	13.05	55.01	40.64	-49.76	-64.13	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH112(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX A Mode 5560MHz		

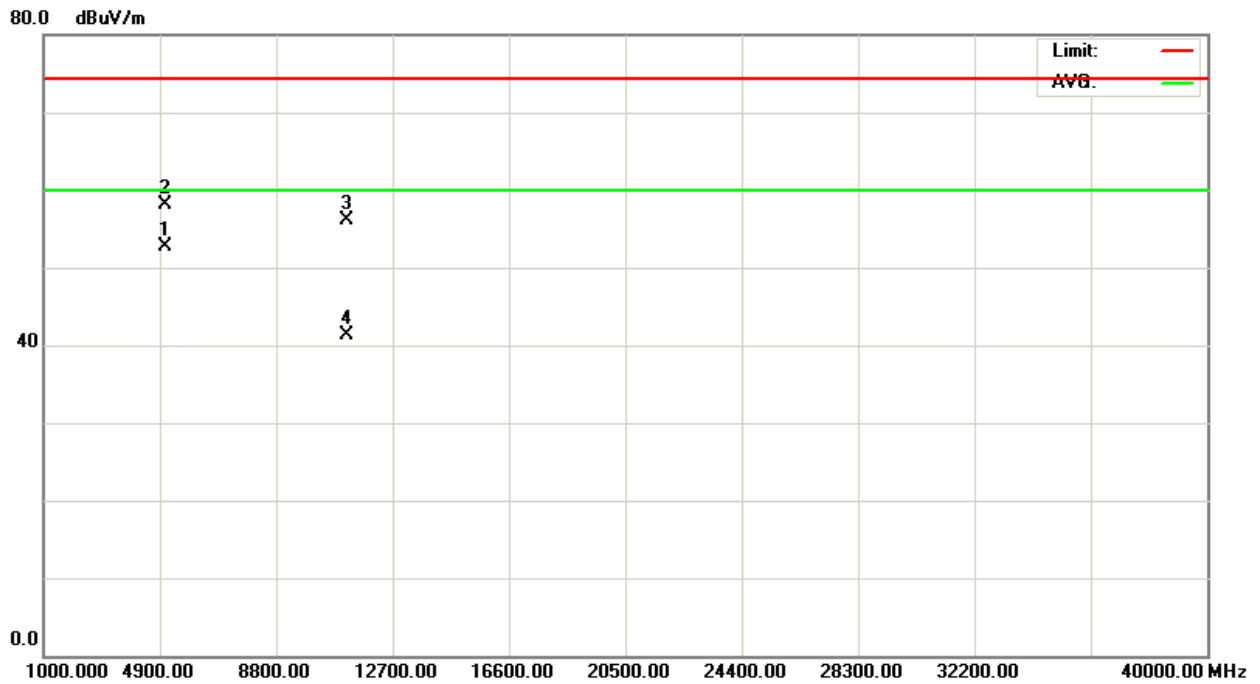
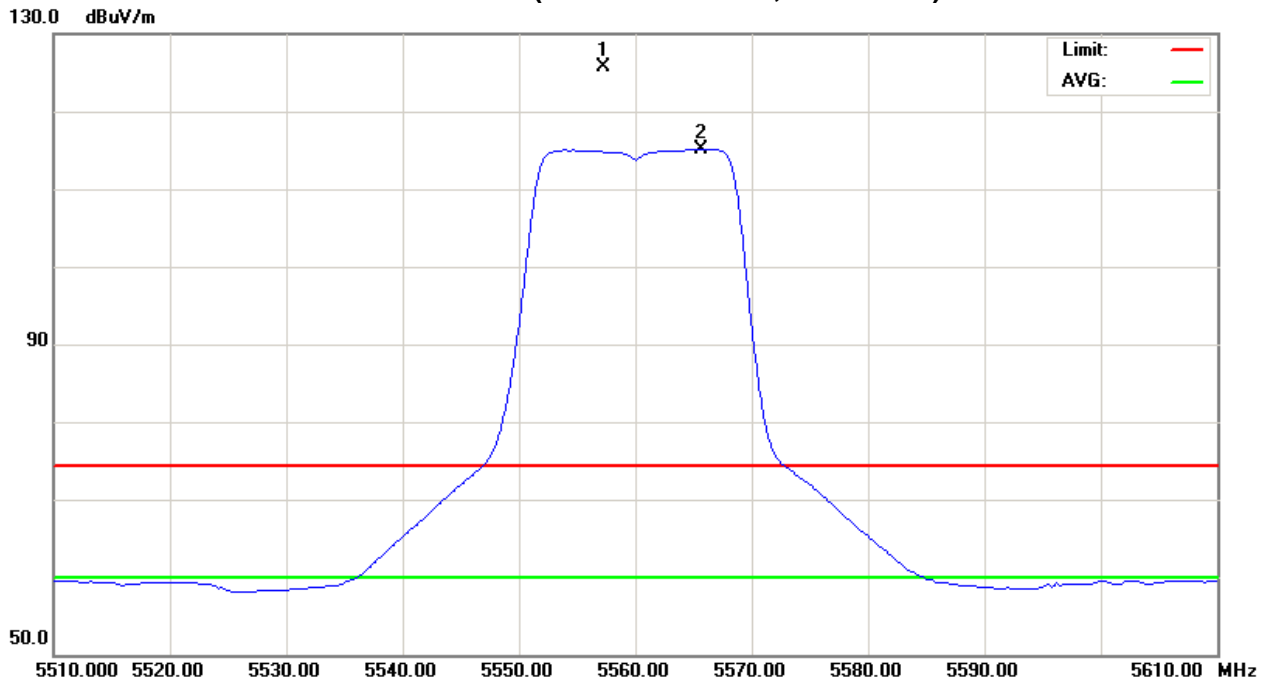
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5557.20	H	85.47	74.90	40.23	125.70	115.13	20.93	10.36					X/F
4999.99	H	52.10	46.71	5.93	58.03	52.64	-46.74	-52.13	80.00	60.00	-24.77	-44.77	X/H
11120.36	H	42.97	28.20	13.05	56.02	41.25	-48.75	-63.52	80.00	60.00	-24.77	-44.77	X/H

Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH112(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX A Mode 5700MHz		

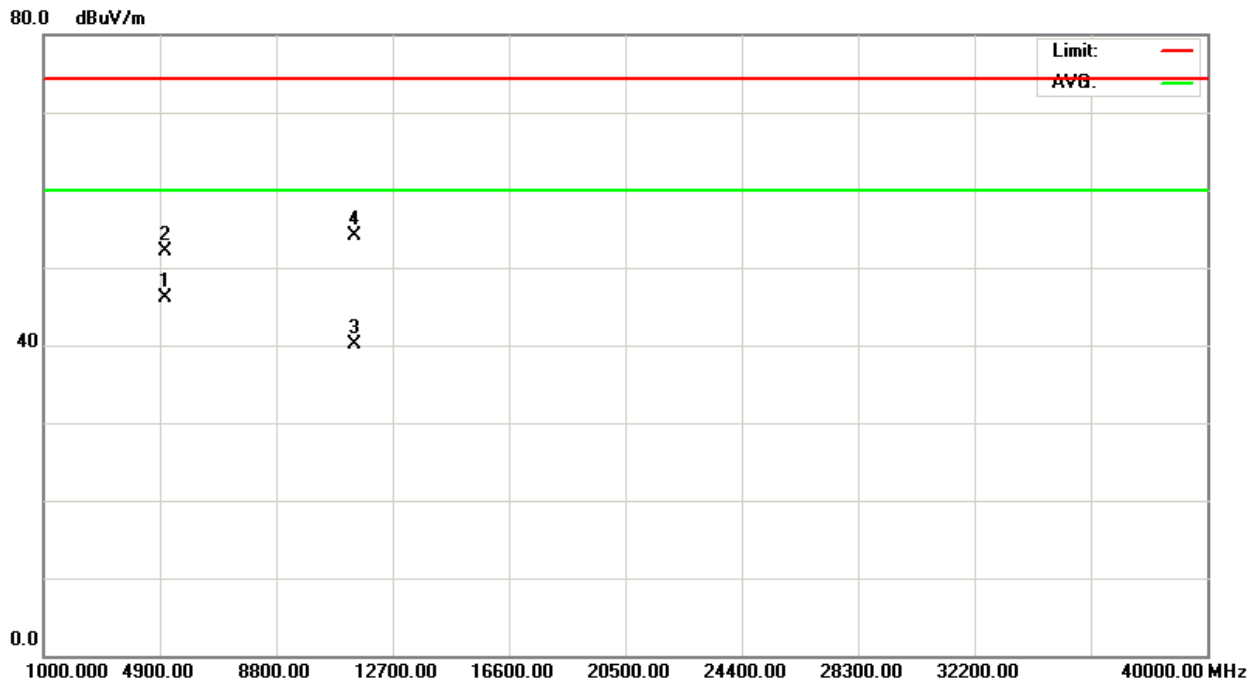
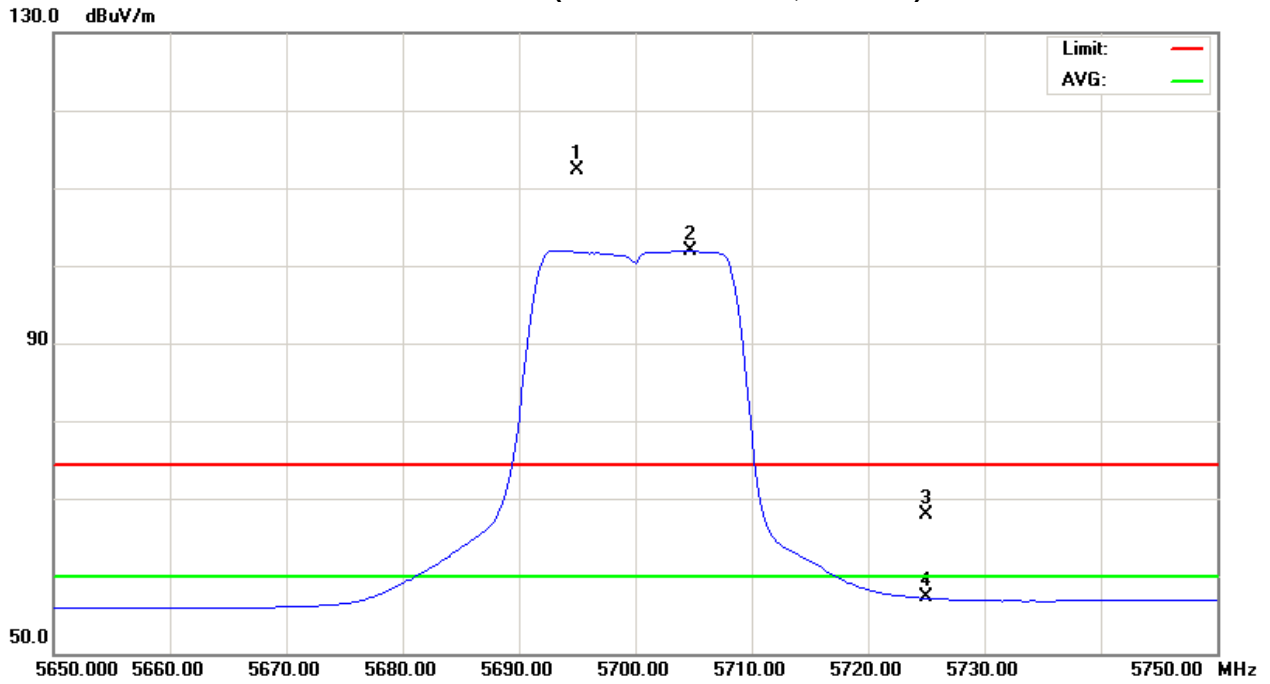
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5695.00	V	71.46	61.02	40.77	112.23	101.79	7.46	-2.98					X/F
5725.00	V	27.08	16.35	40.90	67.98	57.25	-36.79	-47.52	74.30		-27.00		X/E
4999.99	V	46.23	40.09	5.93	52.16	46.02	-52.61	-58.75	80.00	60.00	-24.77	-44.77	X/H
11400.36	V	40.94	26.79	13.22	54.16	40.01	-50.61	-64.76	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH140(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX A Mode 5700MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5694.26	H	84.38	75.07	40.77	125.15	115.84	20.38	11.07					X/F
5725.00	H	32.09	20.87	40.90	72.99	61.77	-31.78	-43.00	74.30		-27.00		X/E
4999.99	H	51.82	46.97	5.93	57.75	52.90	-47.02	-51.87	80.00	60.00	-24.77	-44.77	X/H
11400.41	H	42.34	29.60	13.22	55.56	42.82	-49.21	-61.95	80.00	60.00	-24.77	-44.77	X/H

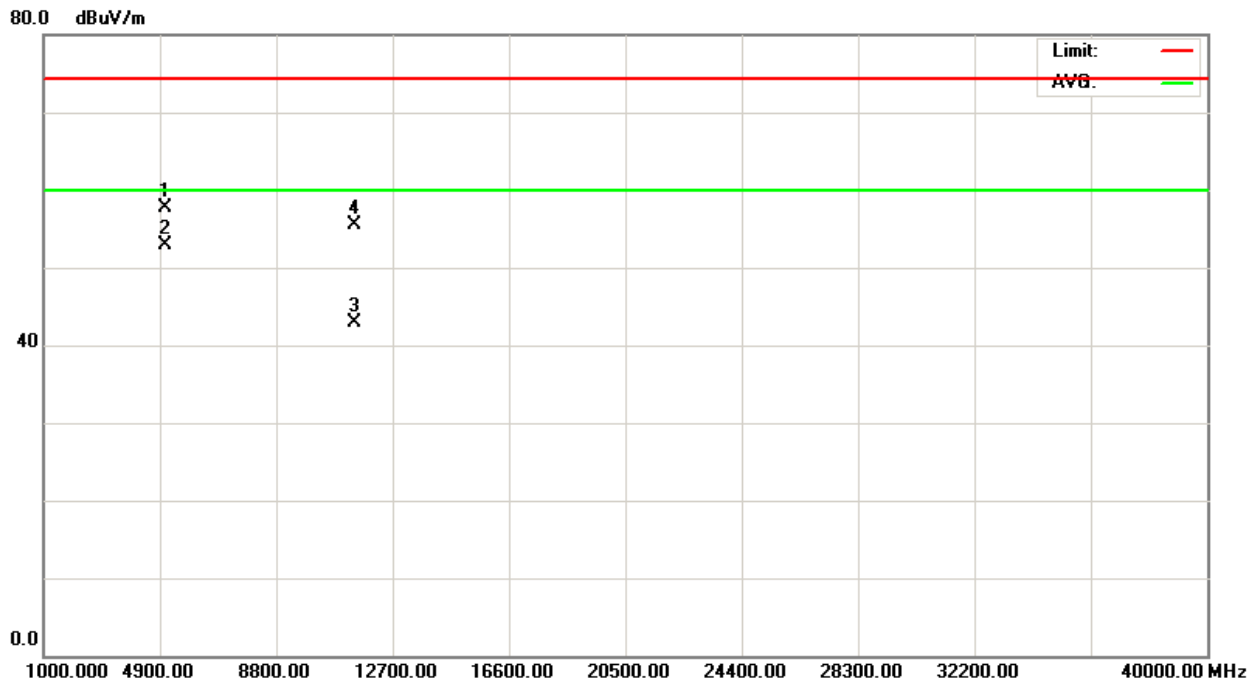
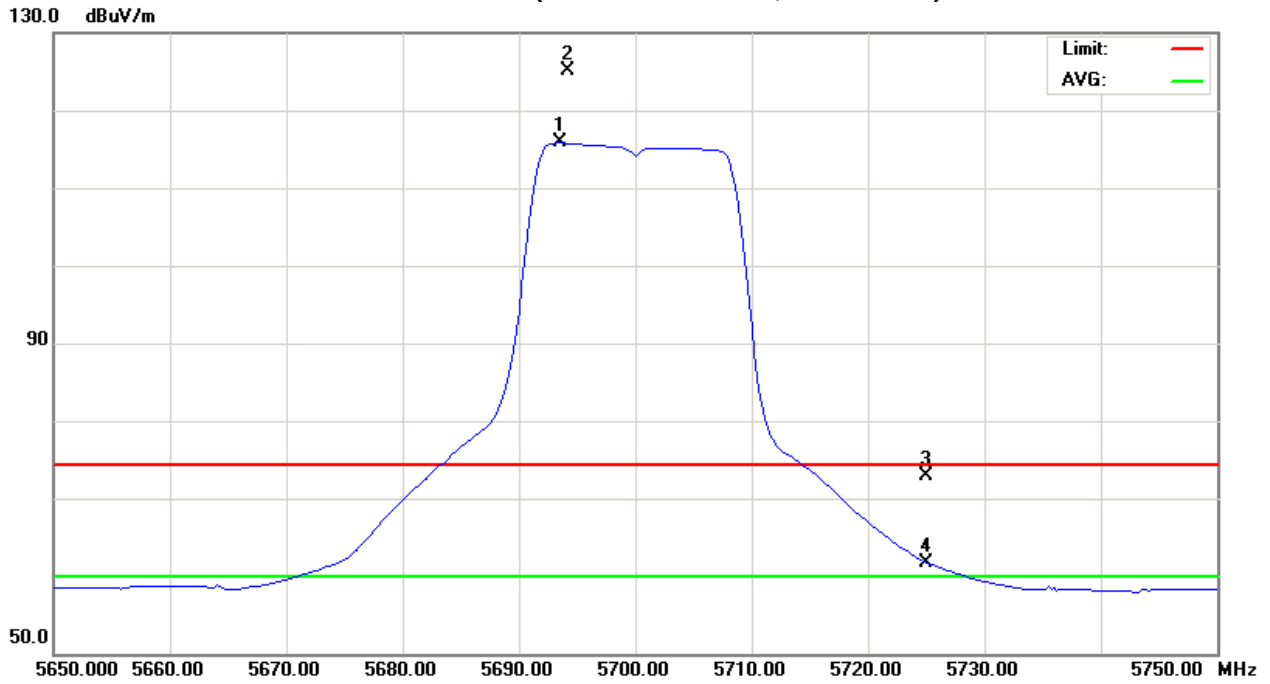
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 3/CH140(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N20 Mode 5500MHz		

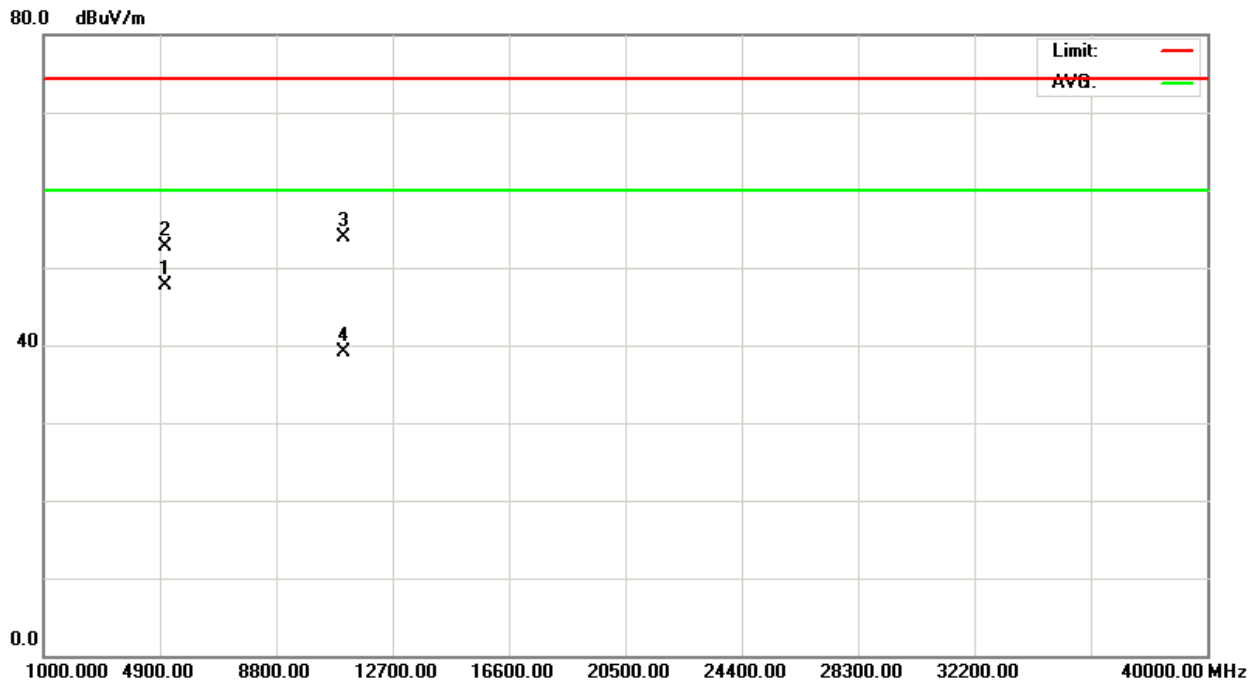
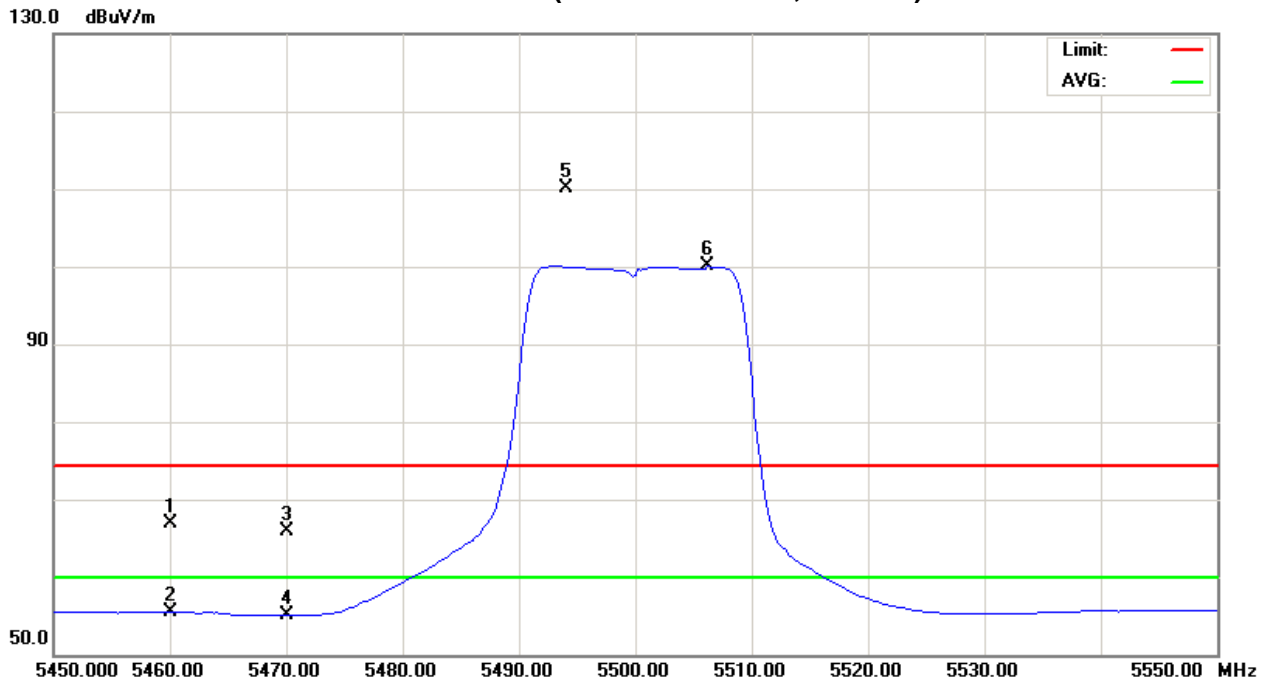
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5460.00	V	27.01	15.57	39.91	66.92	55.48	-37.85	-49.29	80.00	60.00	-24.77	-44.77	X/E
5470.00	V	26.00	15.18	39.94	65.94	55.12	-38.83	-49.65	74.30		-27.00		X/E
5494.15	V	70.16	60.01	40.00	110.16	100.01	5.39	-4.76					X/F
4999.99	V	46.75	41.69	5.93	52.68	47.62	-52.09	-57.15	80.00	60.00	-24.77	-44.77	X/H
11000.13	V	40.85	26.20	12.97	53.82	39.17	-50.95	-65.60	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH100(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N20 Mode 5500MHz		

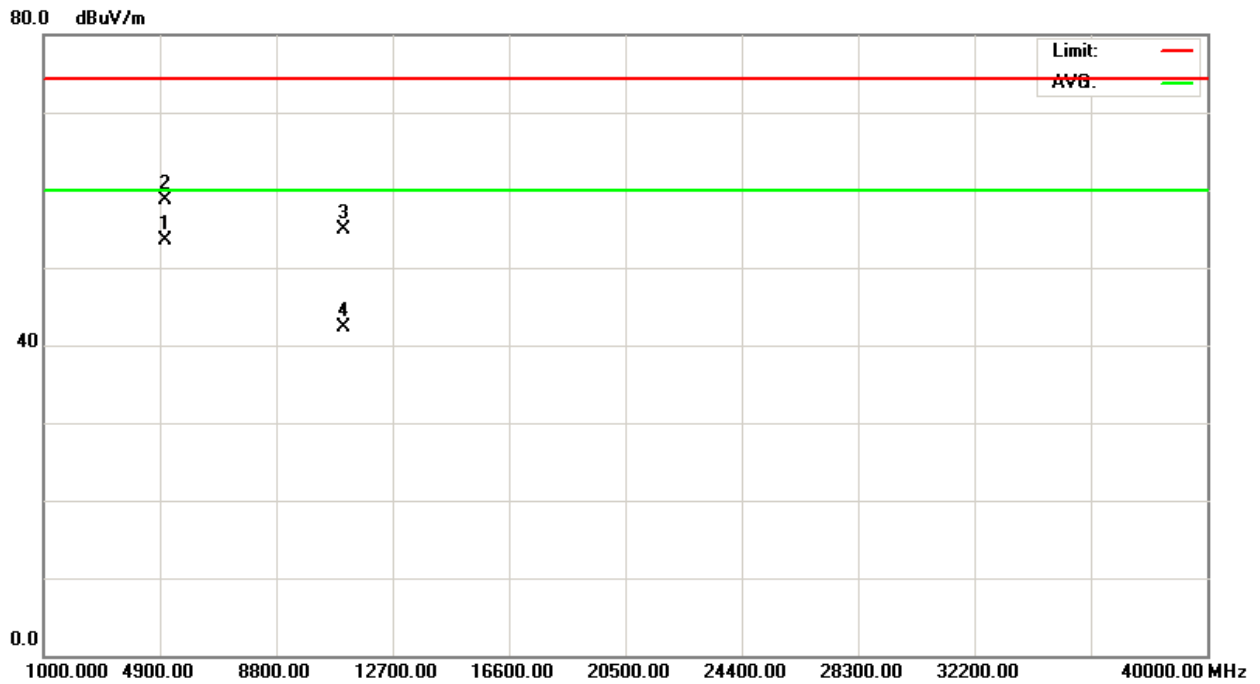
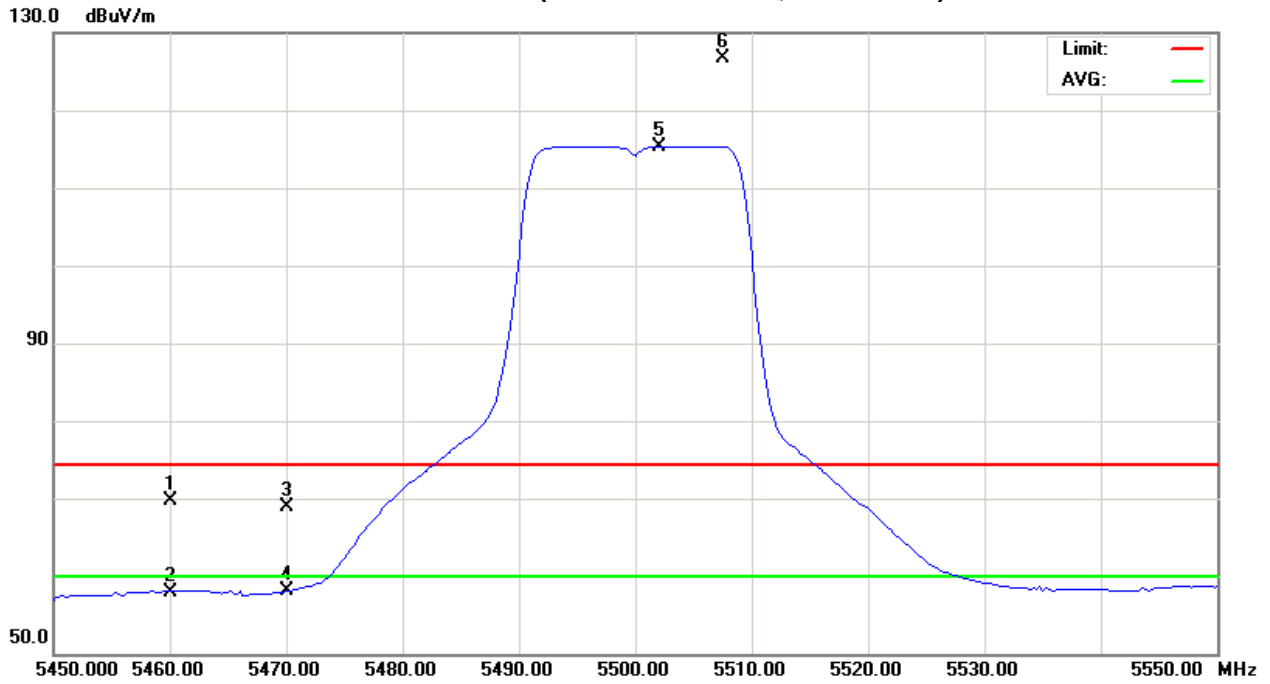
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5460.00	H	29.75	17.93	39.91	69.66	57.84	-35.11	-46.93	80.00	60.00	-24.77	-44.77	X/E
5470.00	H	28.93	18.09	39.94	68.87	58.03	-35.90	-46.74	74.30		-27.00		X/E
5507.50	H	86.73	75.36	40.04	126.77	115.40	22.00	10.63					X/F
4999.99	H	52.68	47.54	5.93	58.61	53.47	-46.16	-51.30	80.00	60.00	-24.77	-44.77	X/H
11000.21	H	41.99	29.35	12.97	54.96	42.32	-49.81	-62.45	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH100 (Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N20 Mode 5560MHz		

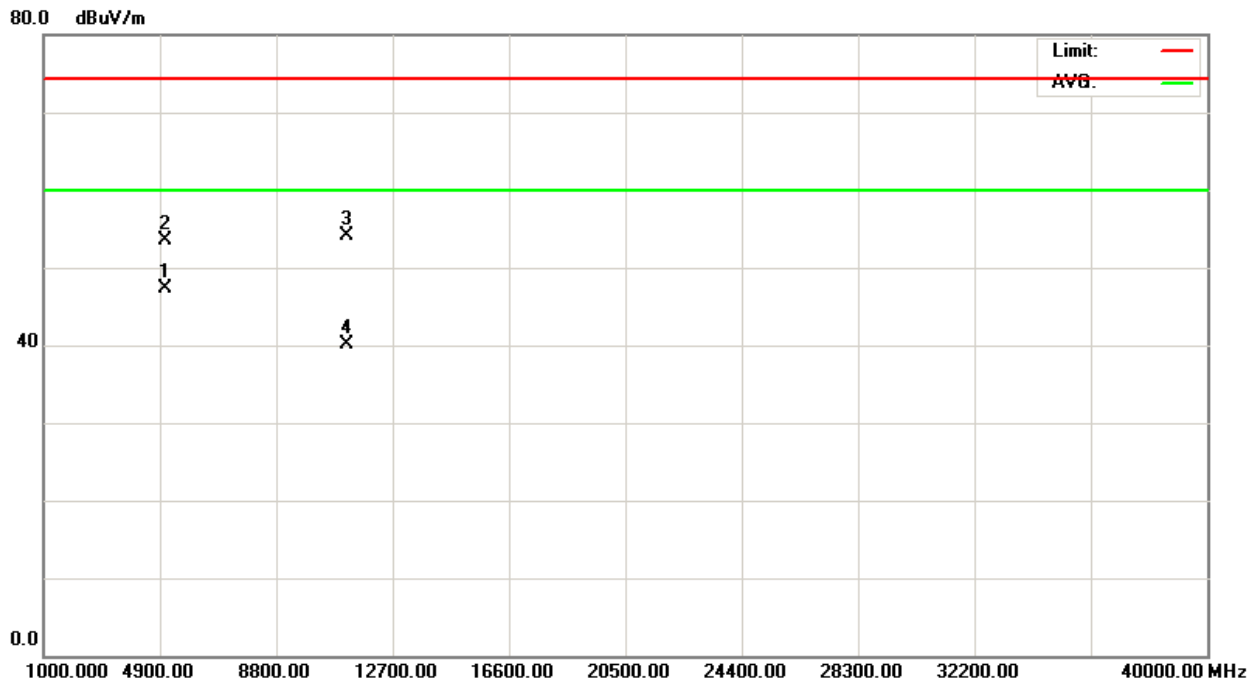
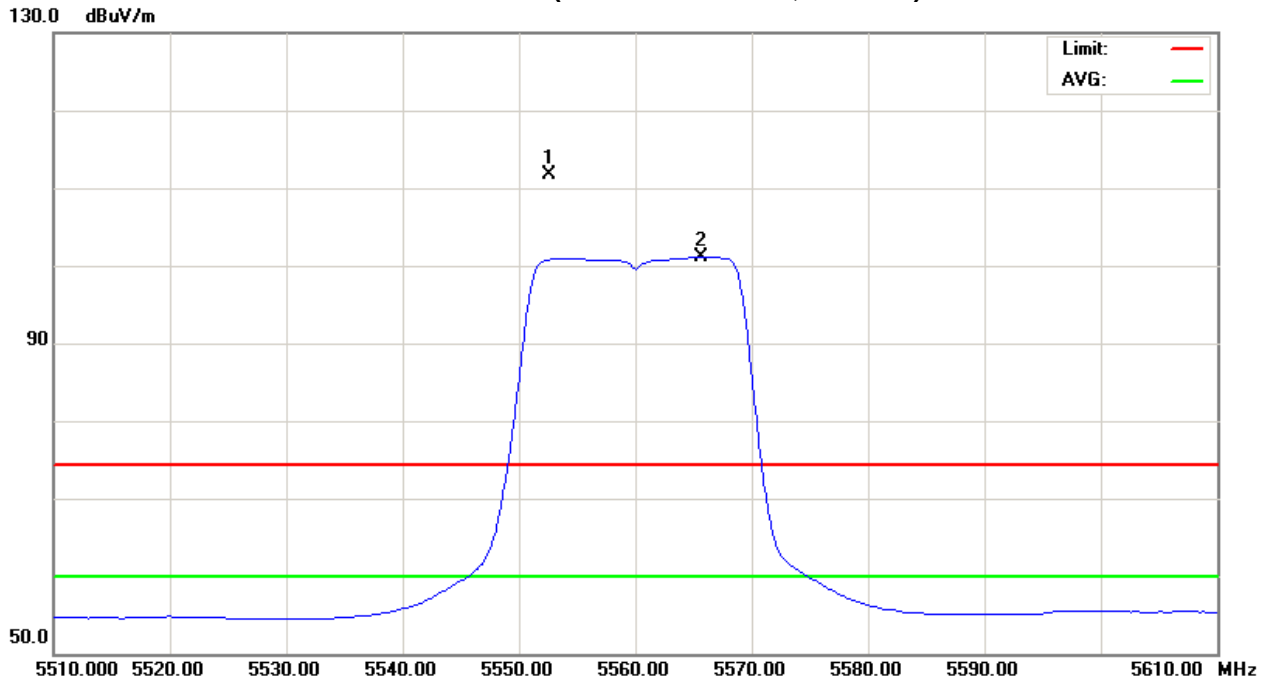
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5552.60	V	71.47	60.87	40.22	111.69	101.09	6.92	-3.68					X/F
4999.99	V	47.67	41.46	5.93	53.60	47.39	-51.17	-57.38	80.00	60.00	-24.77	-44.77	X/H
11119.81	V	41.03	27.08	13.05	54.08	40.13	-50.69	-64.64	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH112(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 ° C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N20 Mode 5560MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5553.20	H	83.62	72.60	40.22	123.84	112.82	19.07	8.05					X/F
4999.99	H	51.76	46.24	5.93	57.69	52.17	-47.08	-52.60	80.00	60.00	-24.77	-44.77	X/H
11119.48	H	43.42	29.21	13.05	56.47	42.26	-48.30	-62.51	80.00	60.00	-24.77	-44.77	X/H

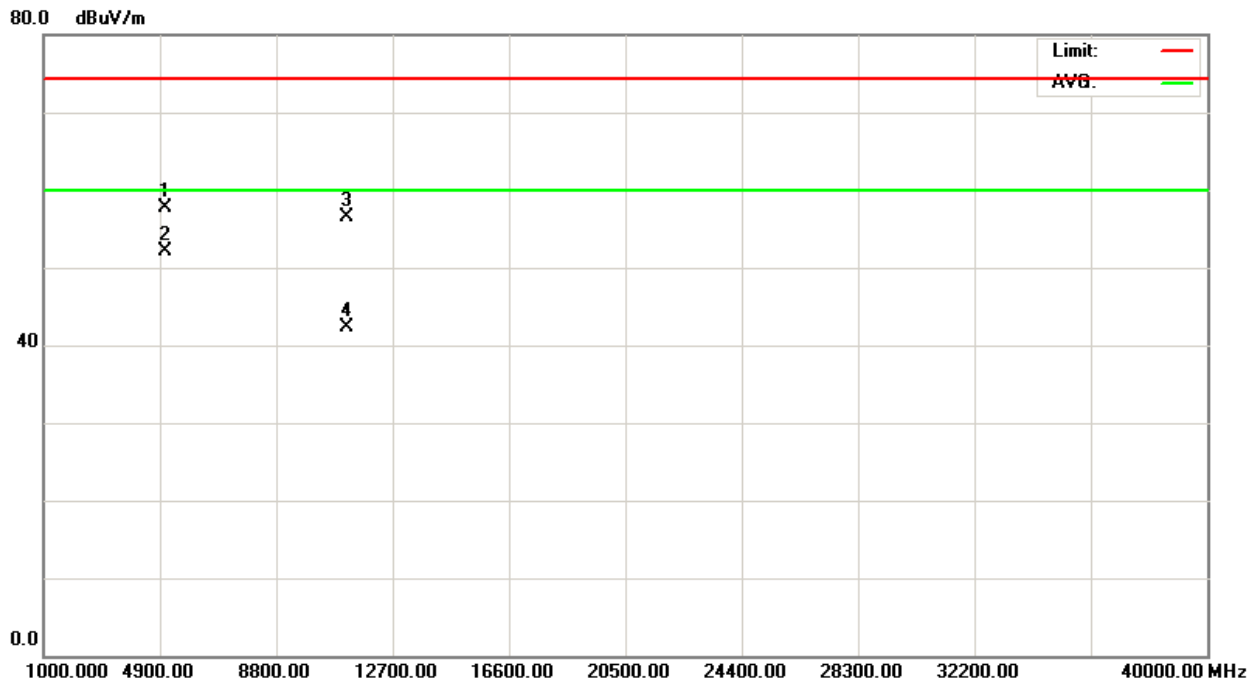
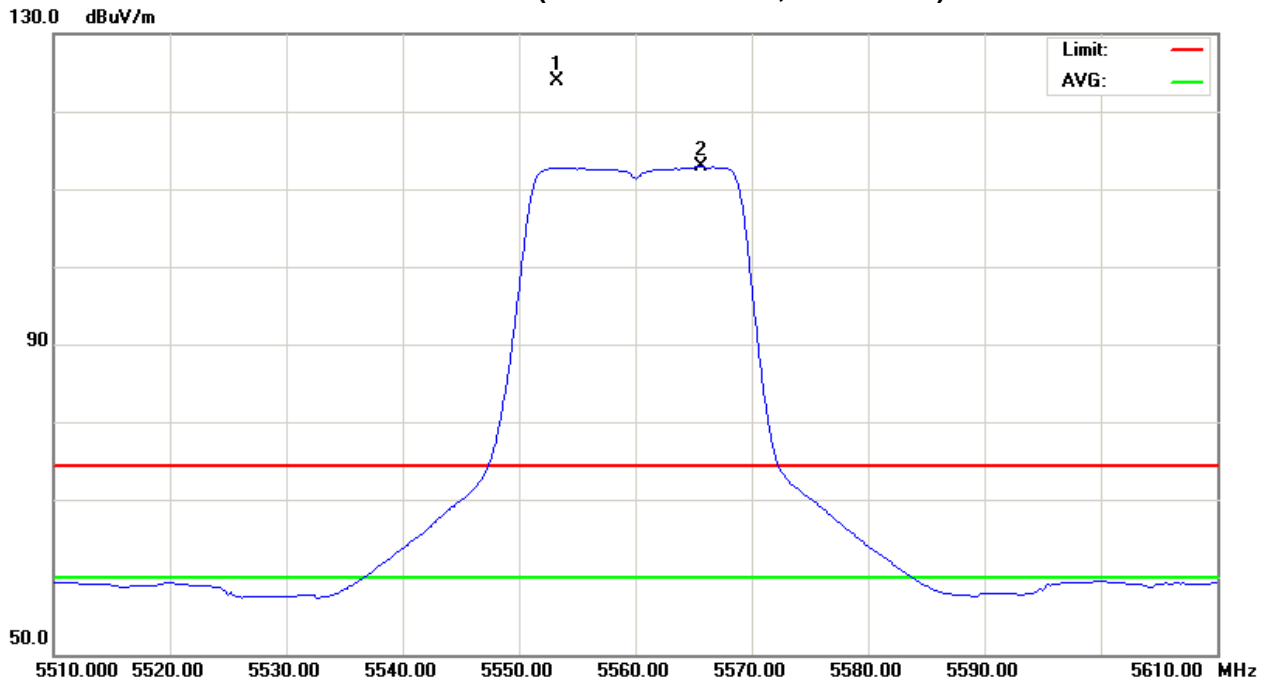
Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 3/CH112 (Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N20 Mode 5700MHz		

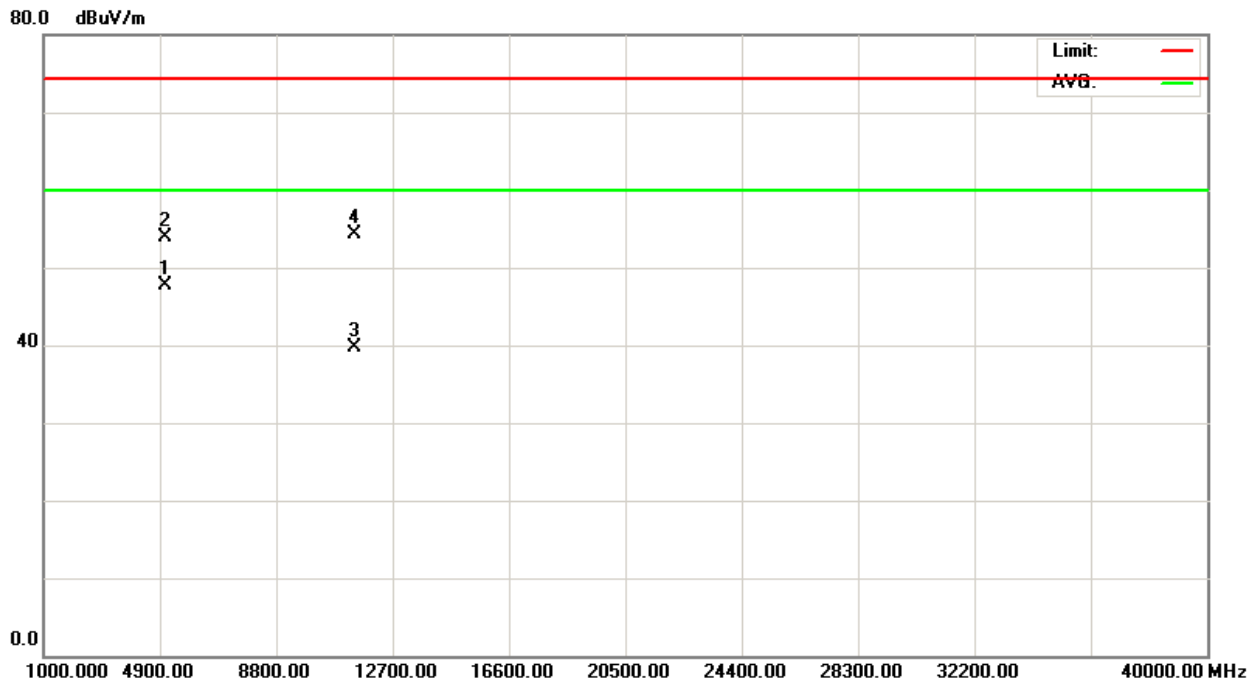
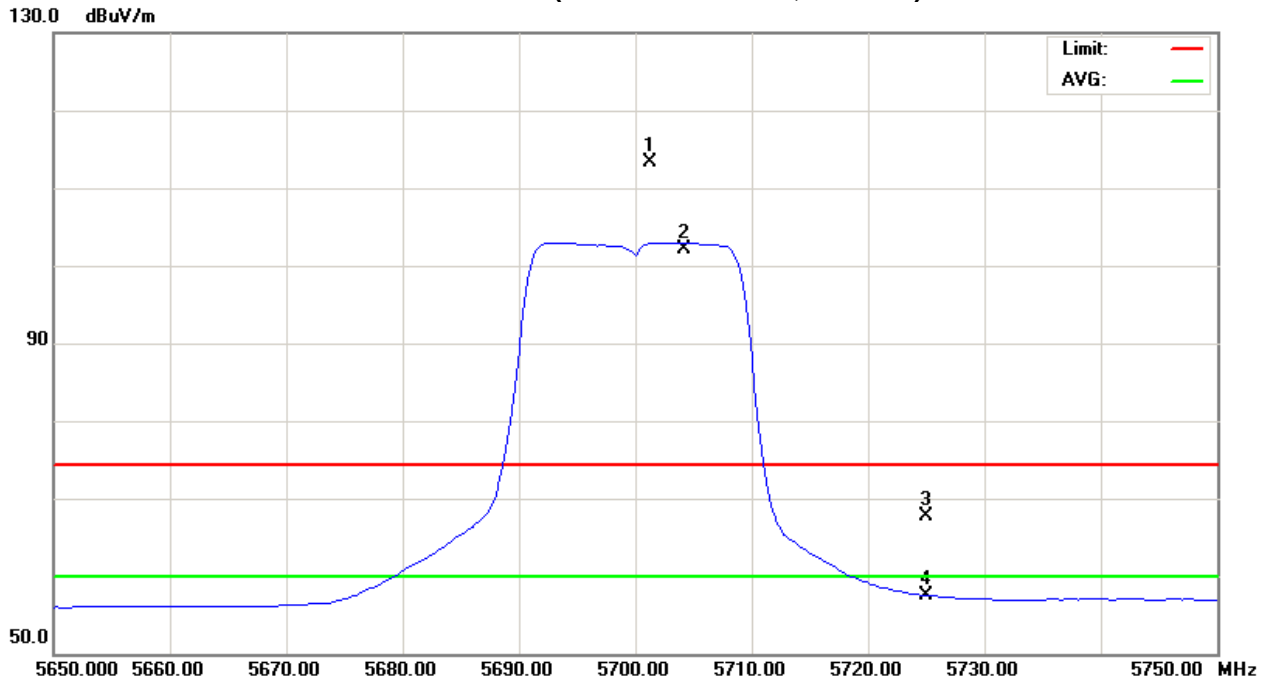
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5701.23	V	72.52	61.21	40.79	113.31	102.00	8.54	-2.77					X/F
5725.00	V	26.71	16.53	40.90	67.61	57.43	-37.16	-47.34	74.30		-27.00		X/H
5000.00	V	47.88	41.76	5.93	53.81	47.69	-50.96	-57.08	80.00	60.00	-24.77	-44.77	X/H
11400.19	V	41.01	26.46	13.22	54.23	39.68	-50.54	-65.09	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH140(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N20 Mode 5700MHz		

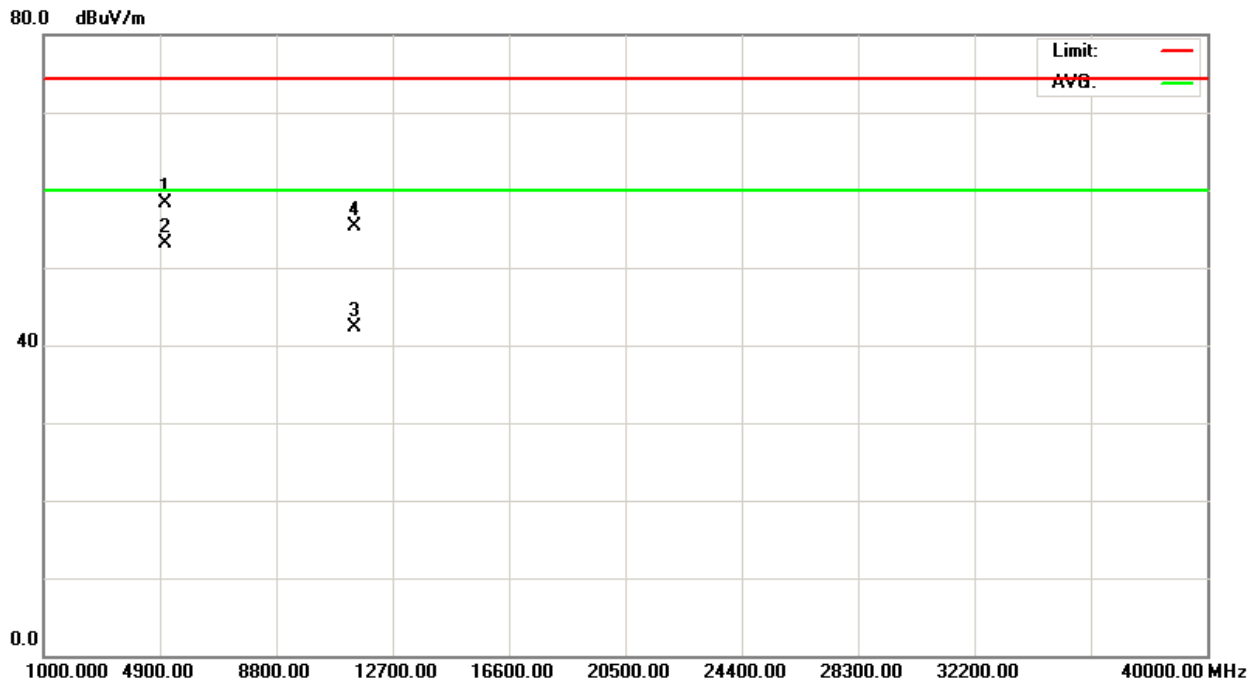
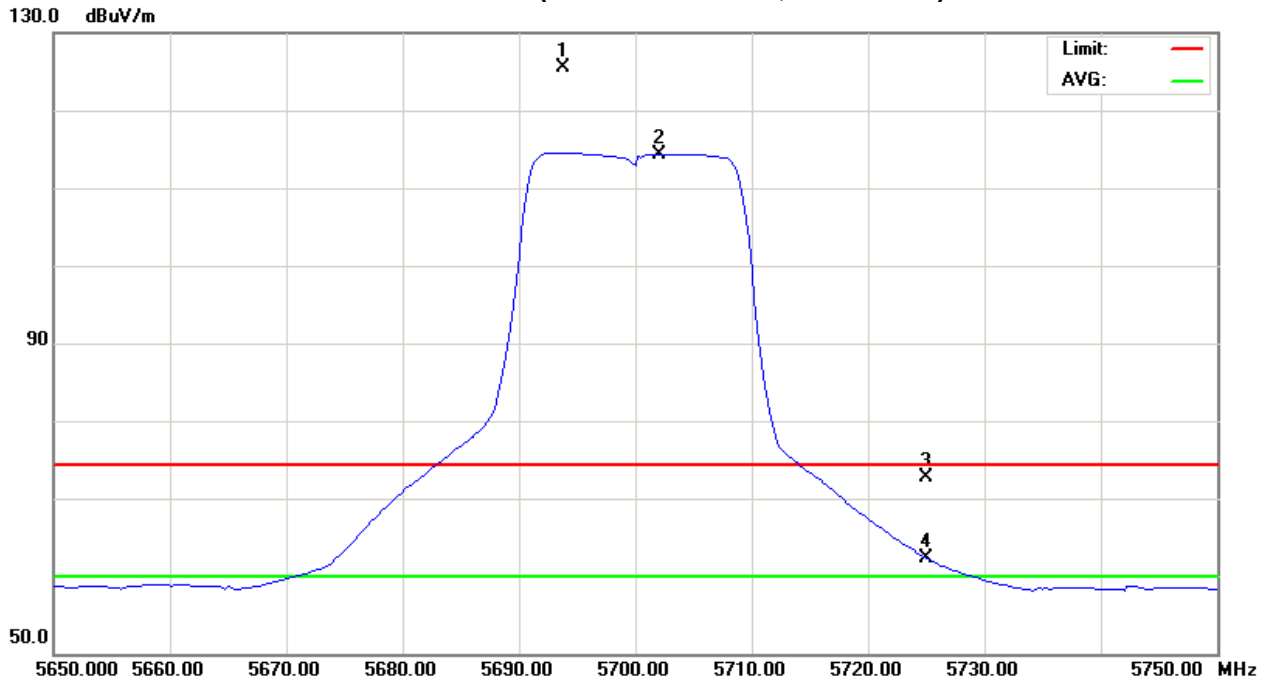
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5693.52	H	84.66	73.59	40.77	125.43	114.36	20.66	9.59					X/F
5725.00	H	31.74	21.47	40.90	72.64	62.37	-32.13	-42.40	74.30		-27.00		X/H
5000.00	H	52.33	47.24	5.93	58.26	53.17	-46.51	-51.60	80.00	60.00	-24.77	-44.77	X/H
11400.41	H	42.09	28.99	13.22	55.31	42.21	-49.46	-62.56	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH140 (Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 ° C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N40 Mode 5510MHz		

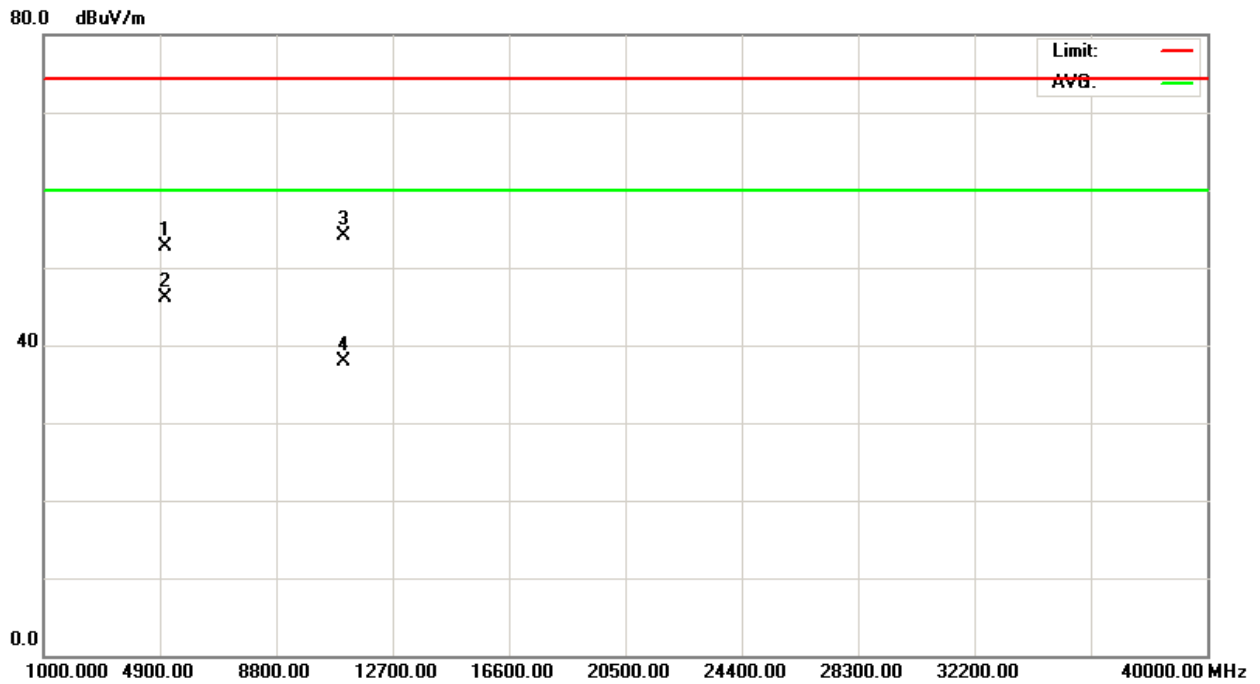
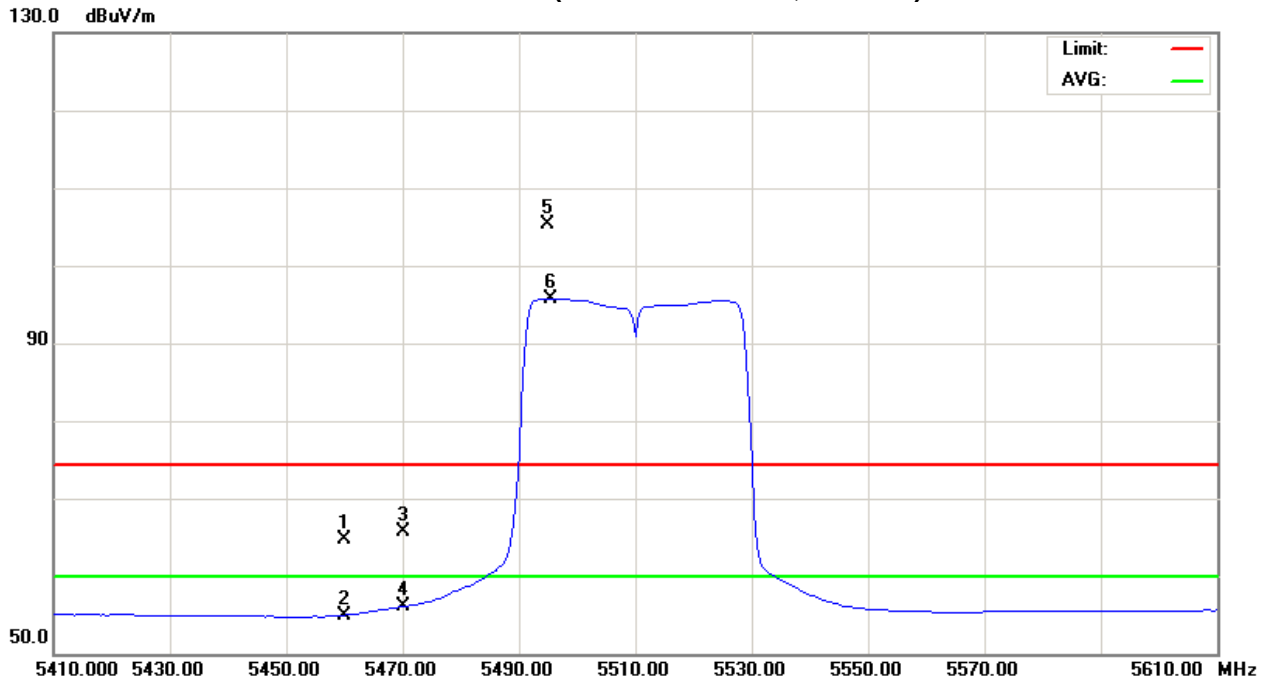
Freq. (MHz)	Ant. Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5460.00	V	24.75	15.06	39.91	64.66	54.97	-40.11	-49.80	80.00	60.00	-24.77	-44.77	X/E
5470.00	V	25.84	16.10	39.94	65.78	56.04	-38.99	-48.73	74.30		-27.00		X/E
5494.85	V	65.39	55.71	40.00	105.39	95.71	0.62	-9.06					X/F
5000.00	V	46.78	40.25	5.93	52.71	46.18	-52.06	-58.59	80.00	60.00	-24.77	-44.77	X/H
11019.81	V	41.18	24.98	12.98	54.16	37.96	-50.61	-66.81	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH102(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N40 Mode 5510MHz		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5460.00	H	29.07	17.66	39.91	68.98	57.57	-35.79	-47.20	80.00	60.00	-24.77	-44.77	X/E
5470.00	H	32.16	21.19	39.94	72.10	61.13	-32.67	-43.64	74.30		-27.00		X/E
5508.14	H	78.35	67.81	40.04	118.39	107.85	13.62	3.08					X/F
5000.00	H	52.71	47.17	5.93	58.64	53.10	-46.13	-51.67	80.00	60.00	-24.77	-44.77	X/H
11020.02	H	41.88	26.92	12.98	54.86	39.90	-49.91	-64.87	80.00	60.00	-24.77	-44.77	X/H

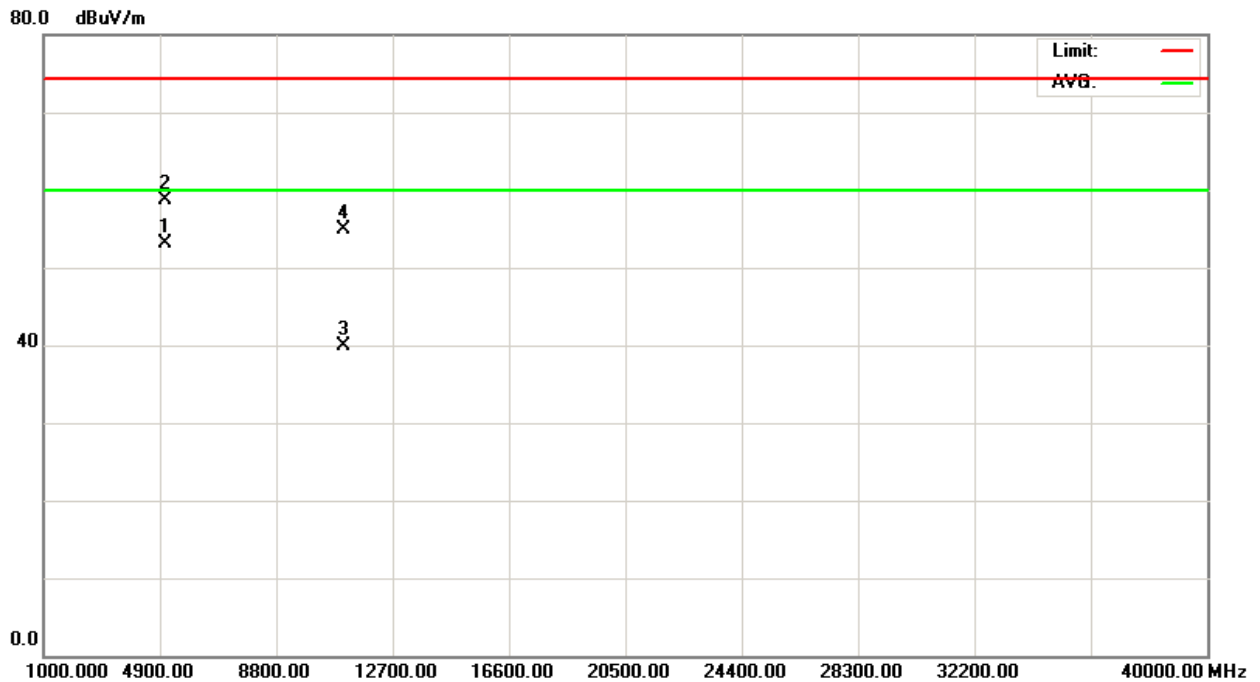
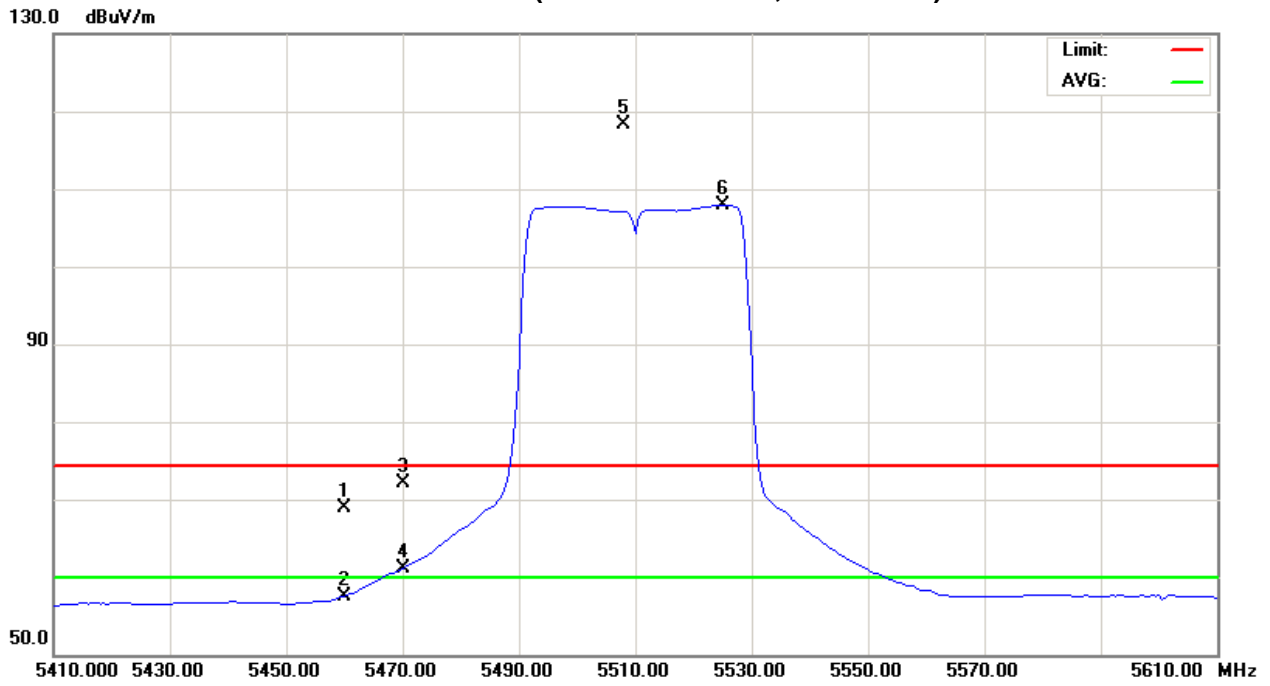
**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB





Orthogonal Axis : X  
Band 3/CH102(Above 1000 MHz, Horizontal)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N40 Mode 5550MHz		

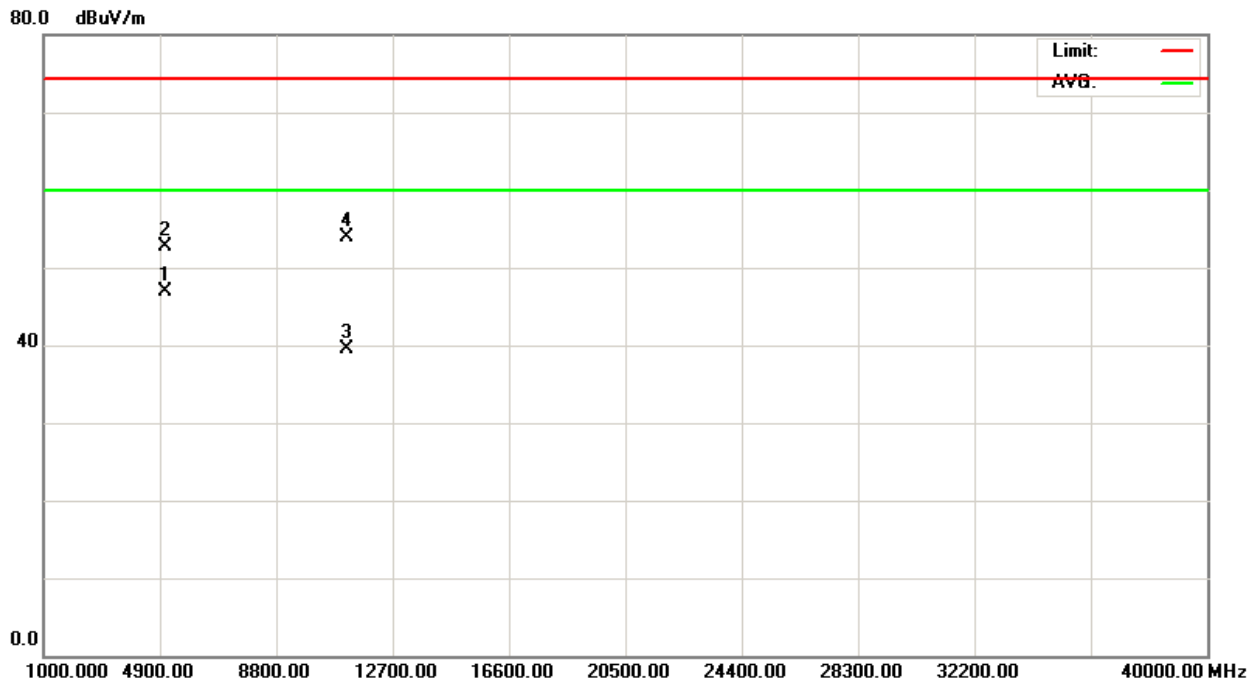
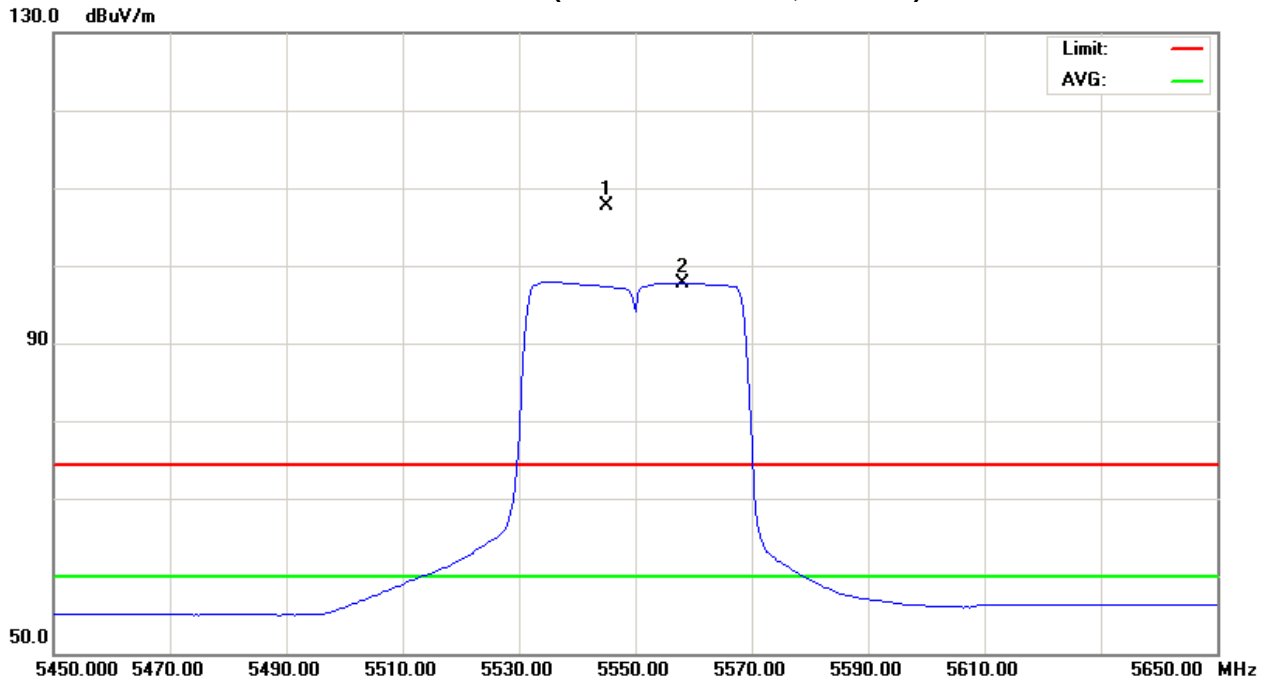
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5545.00	V	67.51	57.48	40.18	107.69	97.66	2.92	-7.11					X/F
4999.99	V	46.70	40.92	5.93	52.63	46.85	-52.14	-57.92	80.00	60.00	-24.77	-44.77	X/H
11100.58	V	40.88	26.38	13.04	53.92	39.42	-50.85	-65.35	80.00	60.00	-24.77	-44.77	X/H

**Remark :**

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
 Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
 Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH110(Above 1000 MHz, Vertical)





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	52 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/ TX N40 Mode 5550MHz		

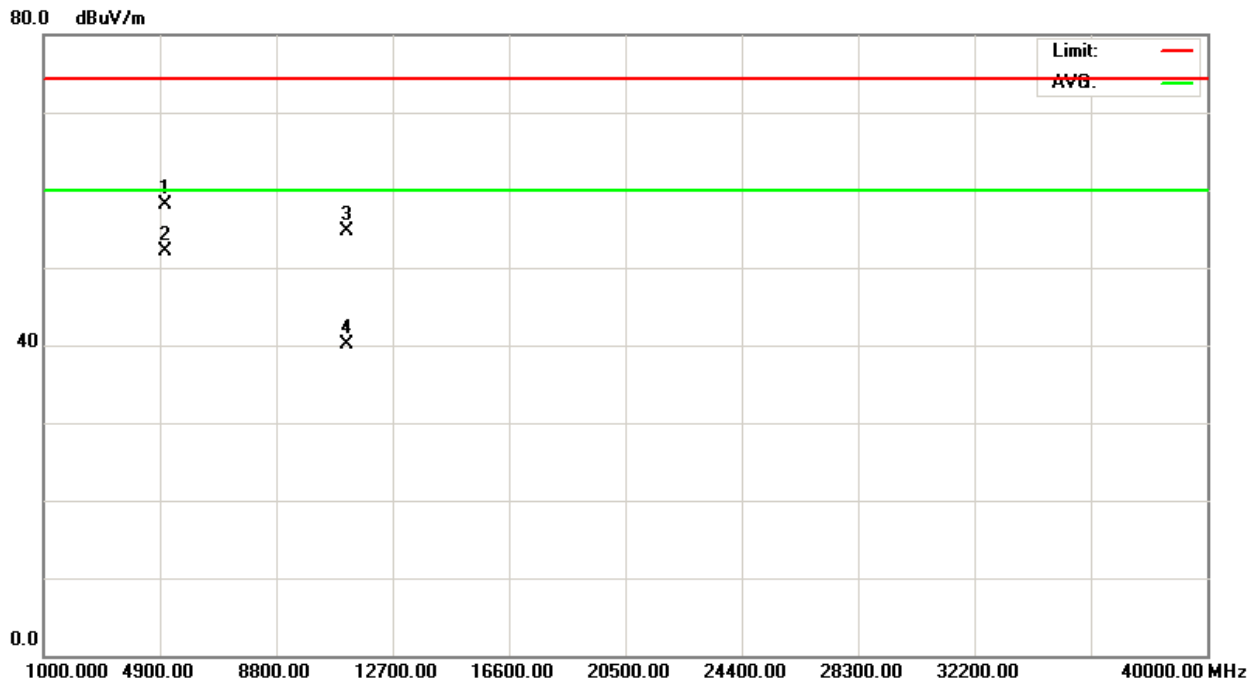
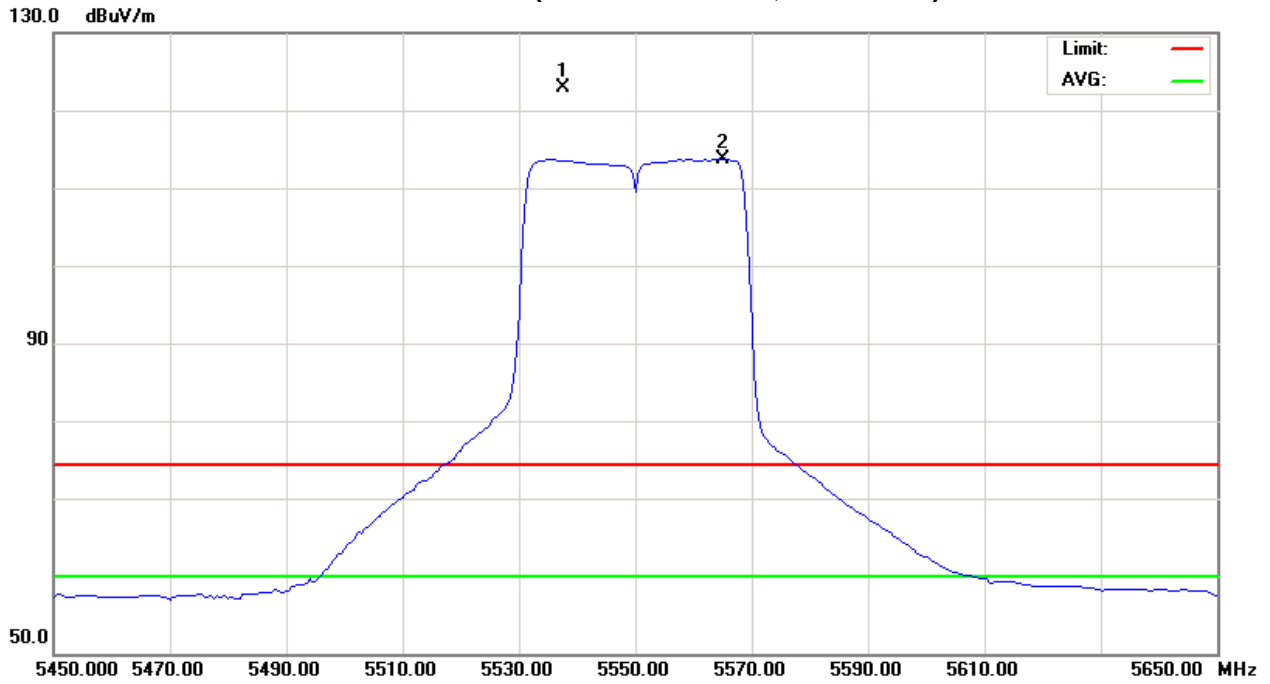
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.(dBuV/m)		Act.(dBm)		Limit(dBuV/m)		Limit(dBm)		Note
		Peak (dBuV)	AV (dBuV)		Peak	AV	Peak	AV	Peak	AV	Peak	AV	
5537.58	H	82.74	73.42	40.16	122.90	113.58	18.13	8.81					X/F
4999.99	H	52.12	46.26	5.93	58.05	52.19	-46.72	-52.58	80.00	60.00	-24.77	-44.77	X/H
11100.32	H	41.64	26.99	13.04	54.68	40.03	-50.09	-64.74	80.00	60.00	-24.77	-44.77	X/H

Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 40GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto
- (2) All readings are Peak unless otherwise stated AV in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (3) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (5) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (7) EUT Orthogonal Axes :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.
- (9) The limits above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20dB/decade form 3m to 1.5m  
Distance extrapolation factor = 20 log (3m/1.5m) dB ;  
Limit line = specific limits (dBuV) + 6 dB



Orthogonal Axis : X  
Band 3/CH110(Above 1000 MHz, Horizontal)



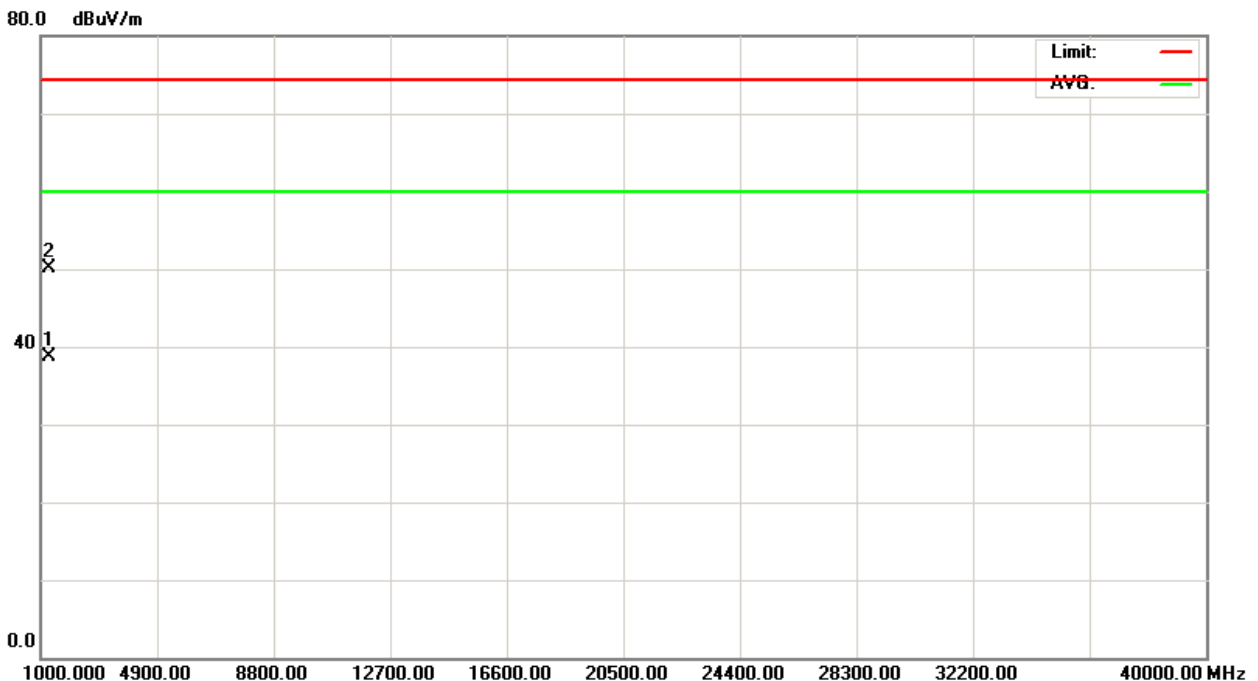


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1006hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	RX Mode		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1195.26	V	58.09	46.65	-8.04	50.05	38.61	80.00	60.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



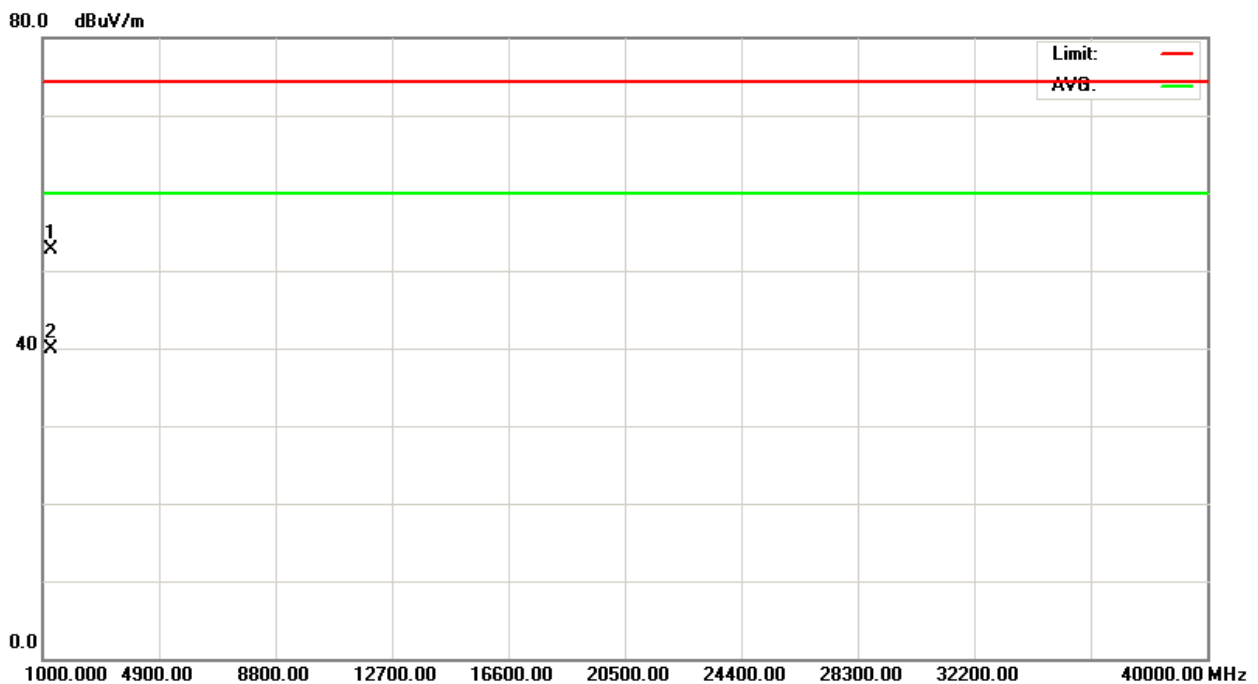


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1006hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	RX Mode		

Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
1200.45	H	60.63	47.84	-8.02	52.61	39.82	80.00	60.00	X/H

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『 Note 』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 1000MHz to 6000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand





**5. 26DB SPECTRUM BANDWIDTH**

**5.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
26 dB Bandwidth	-----	5250MHz~5350 5470MHz~5725	PASS

**5.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2011	Nov.26.2012

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

**5.1.2 TEST PROCEDURE**

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

b.

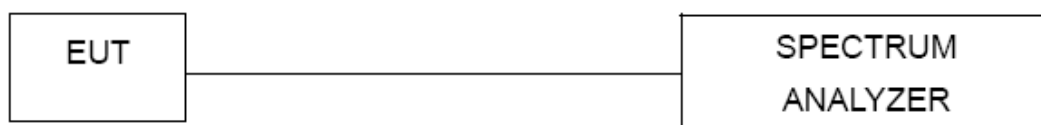
Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RB	300 kHz
VB	1000 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

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

**5.1.3 DEVIATION FROM STANDARD**

No deviation.

**5.1.4 TEST SETUP**







### **5.1.5 EUT OPERATION CONDITIONS**

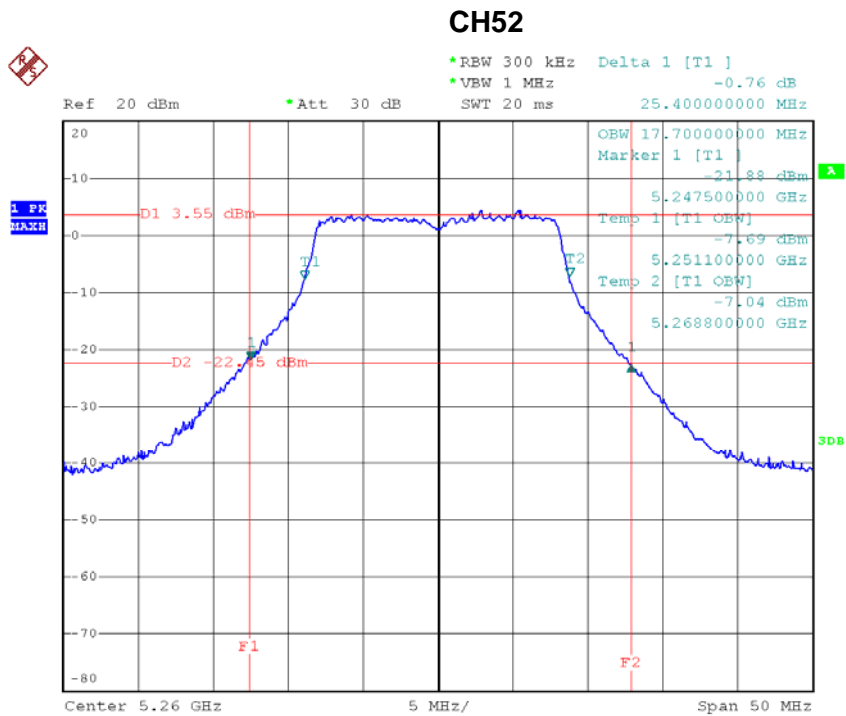
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**5.1.6 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX A Mode /CH52, CH56, CH64		

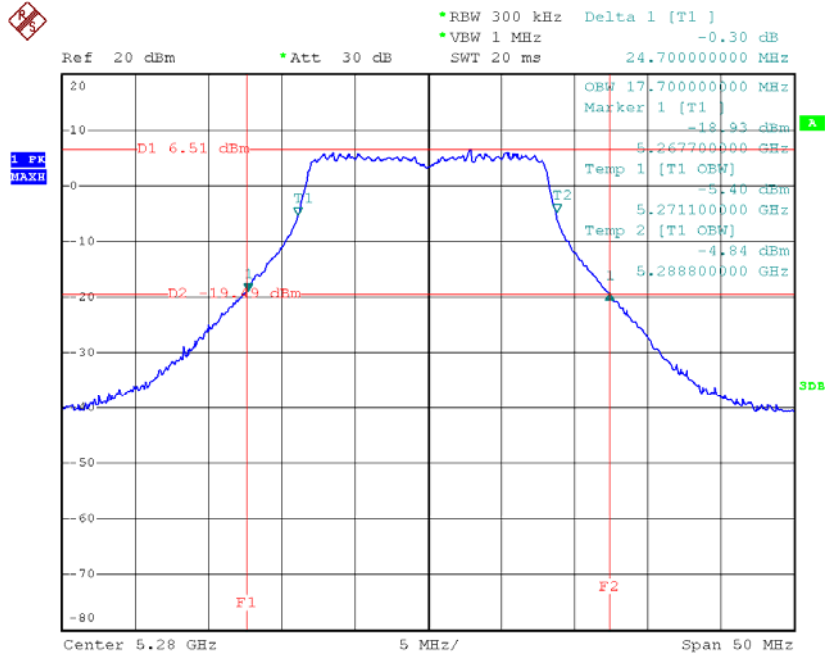
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH52	5260	25.40	17.70
CH56	5280	24.70	17.70
CH64	5320	25.00	17.70



Date: 18.APR.2012 11:00:36

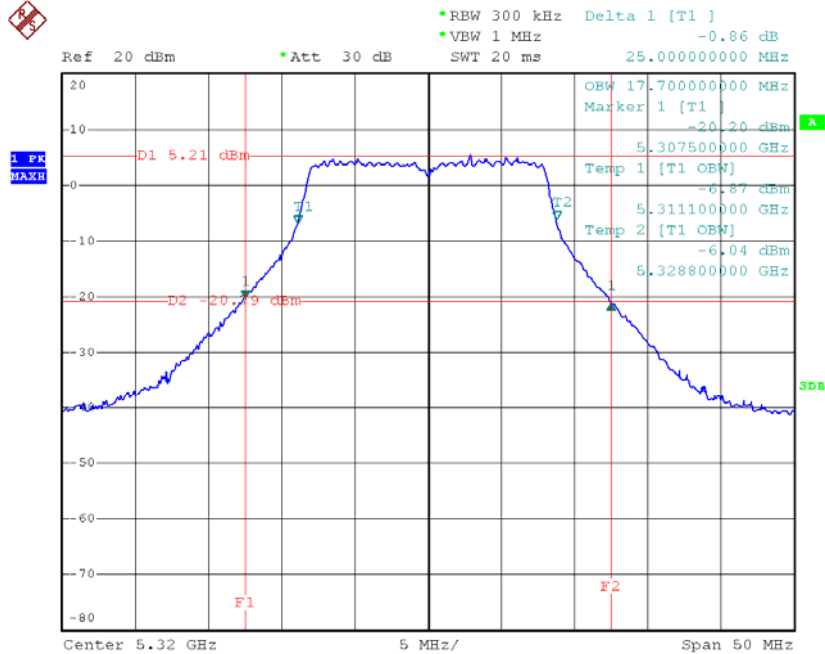


CH56



Date: 18.APR.2012 11:16:54

CH64

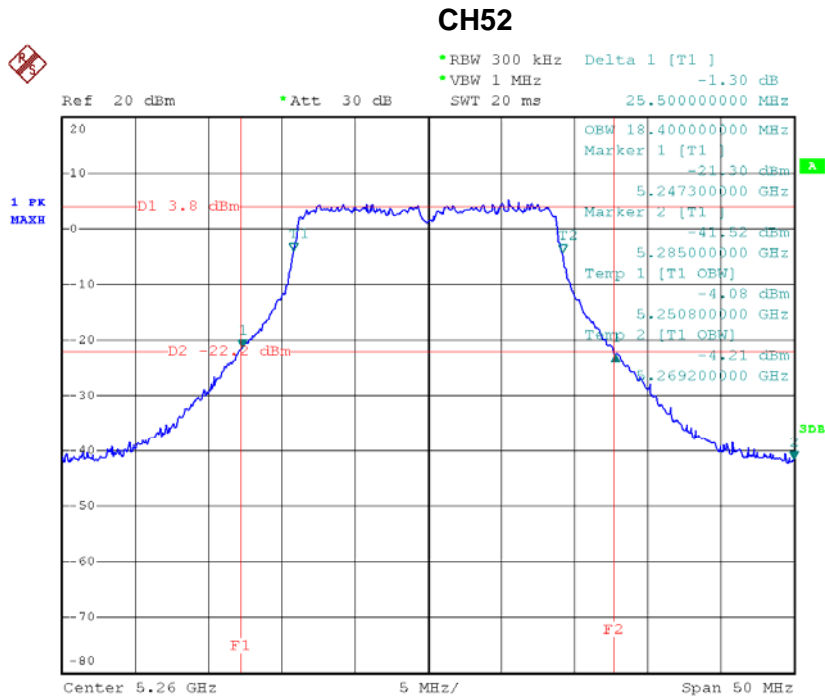


Date: 18.APR.2012 11:24:26



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode /CH52, CH56, CH64		

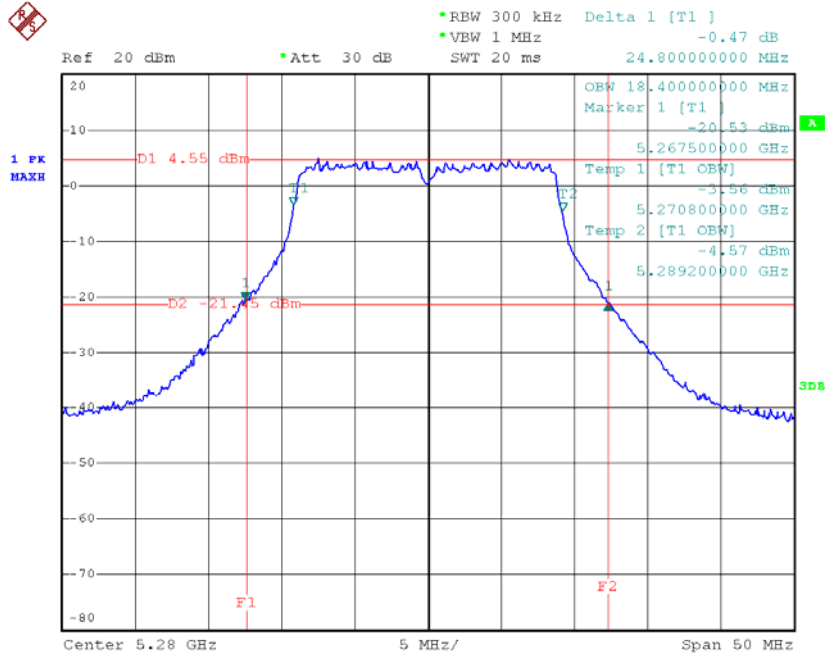
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH52	5260	25.50	18.40
CH56	5280	24.80	18.40
CH64	5320	24.80	18.40



Date: 18.APR.2012 13:53:58

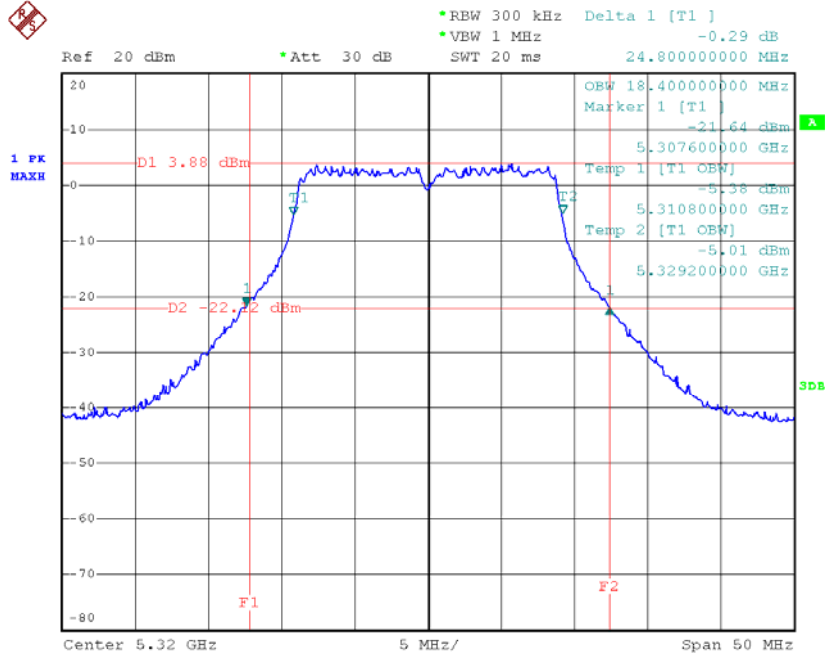


### CH56



Date: 18.APR.2012 13:57:37

### CH64

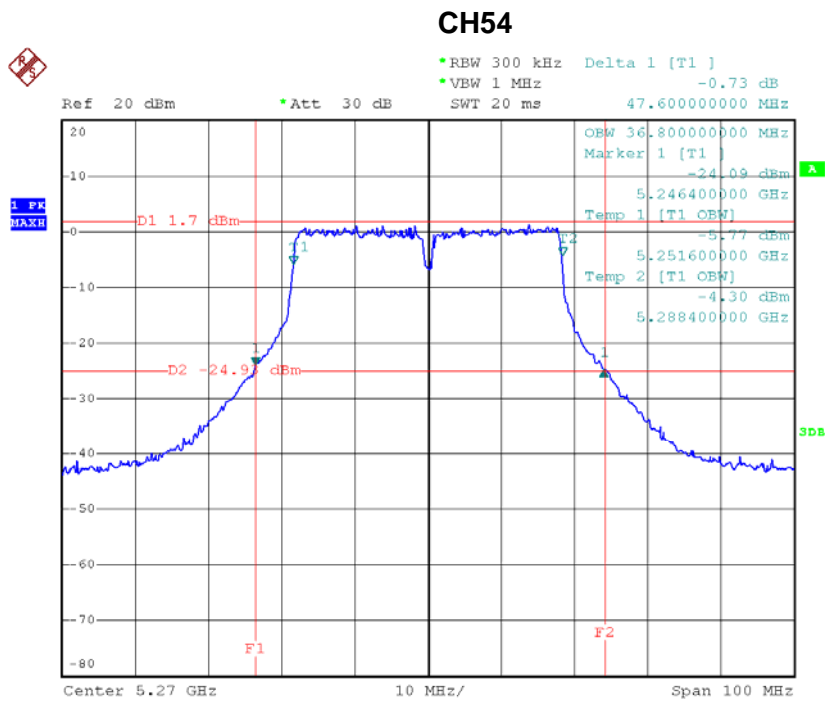


Date: 18.APR.2012 14:01:09



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode /CH54, CH62		

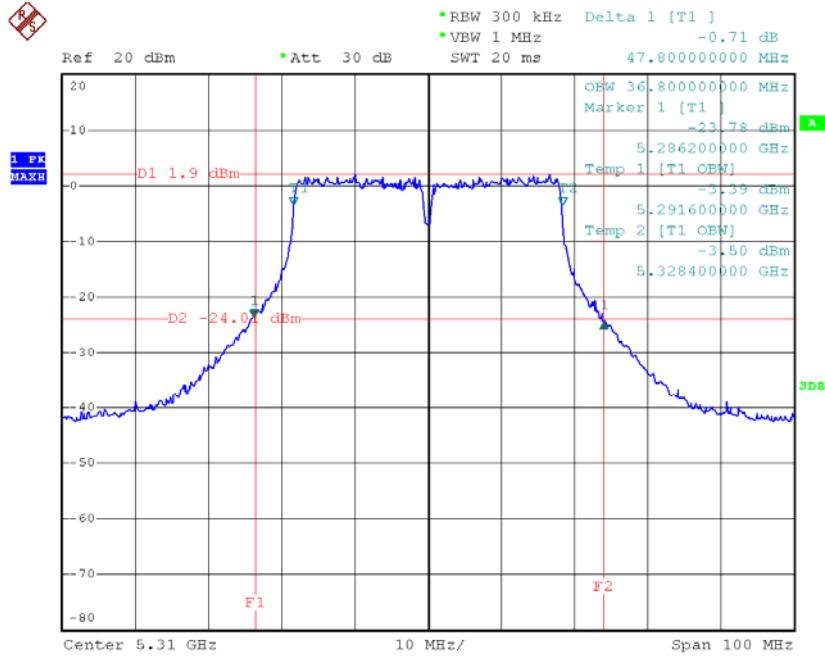
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH54	5270	47.60	36.80
CH62	5310	47.80	36.80



Date: 18.APR.2012 16:00:27



CH62

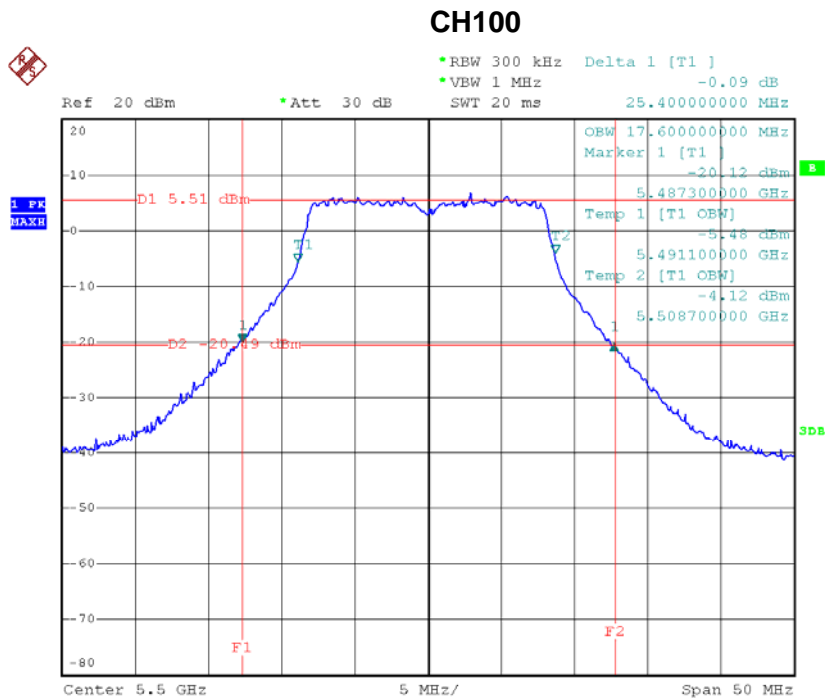


Date: 18.APR.2012 16:03:09



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX A Mode /CH100, CH112, CH140		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH100	5500	25.40	17.60
CH112	5560	25.60	17.70
CH140	5700	25.40	17.70

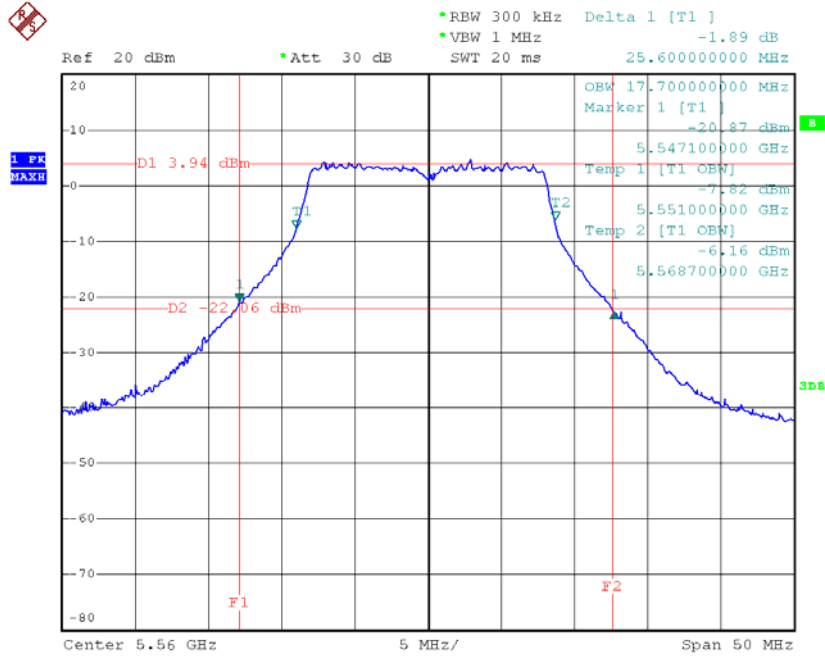


Date: 18.APR.2012 22:00:42



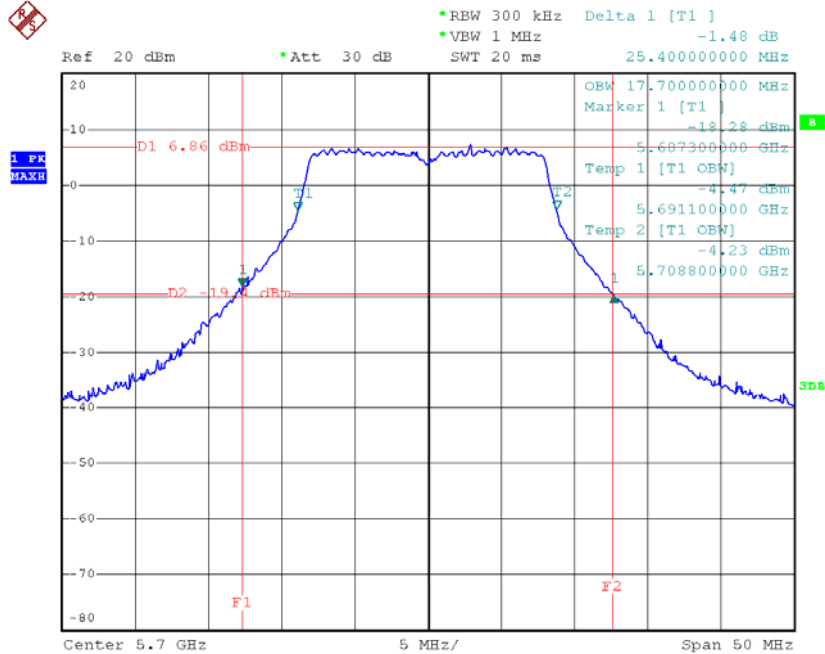


### CH116



Date: 18.APR.2012 22:02:53

### CH140



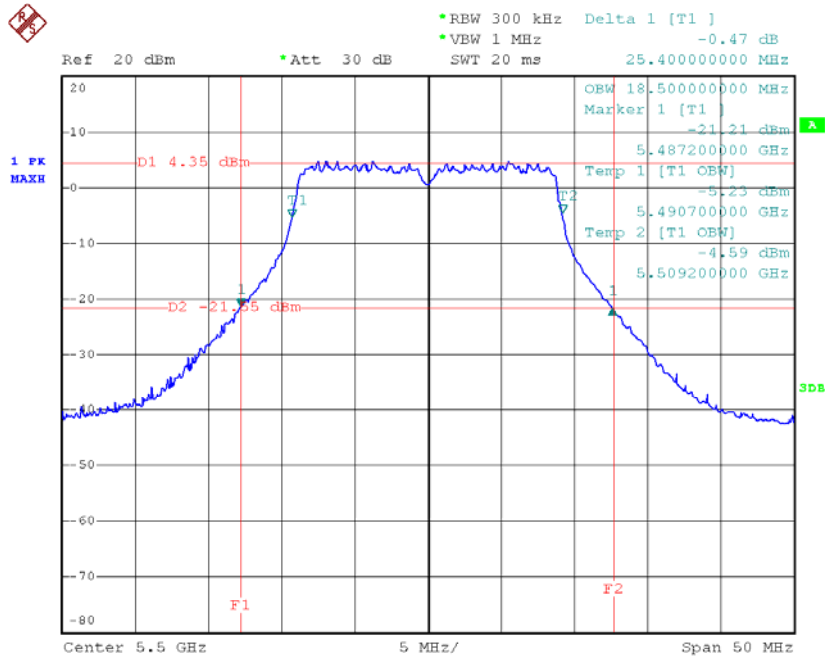
Date: 18.APR.2012 22:06:07



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode /CH100, CH112, CH140		

Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH100	5500	25.40	18.50
CH112	5560	25.10	18.40
CH140	5700	25.00	18.40

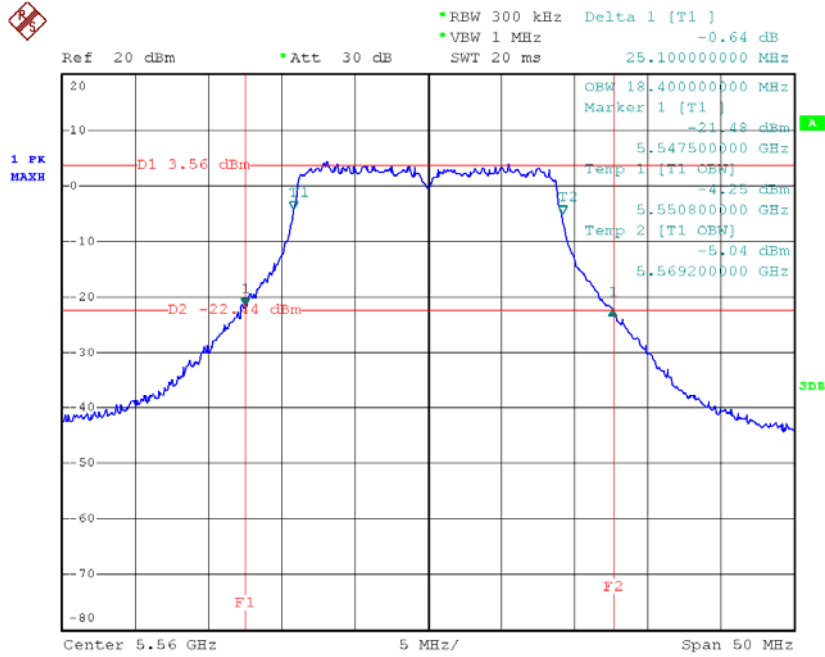
**CH100**



Date: 18.APR.2012 14:08:47

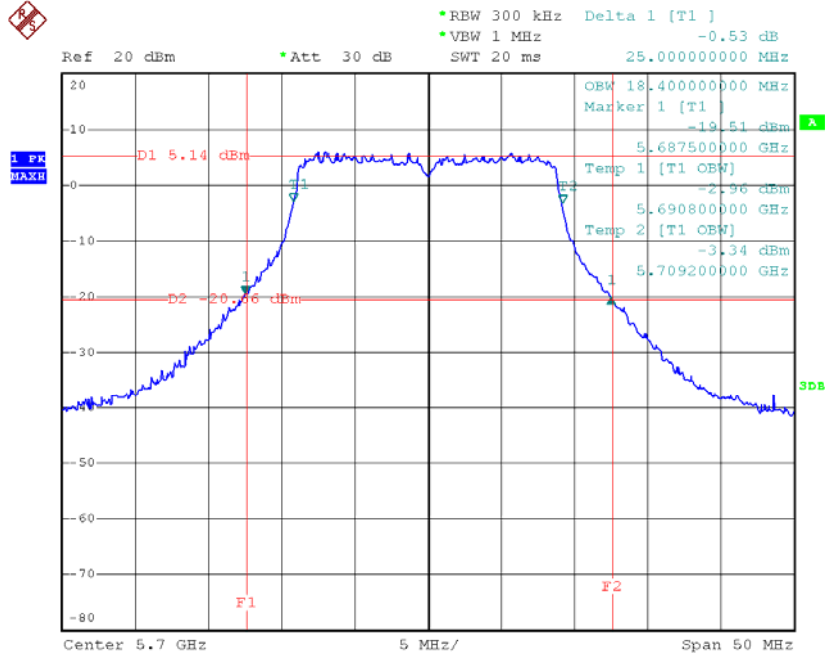


CH116



Date: 18.APR.2012 14:10:28

CH140

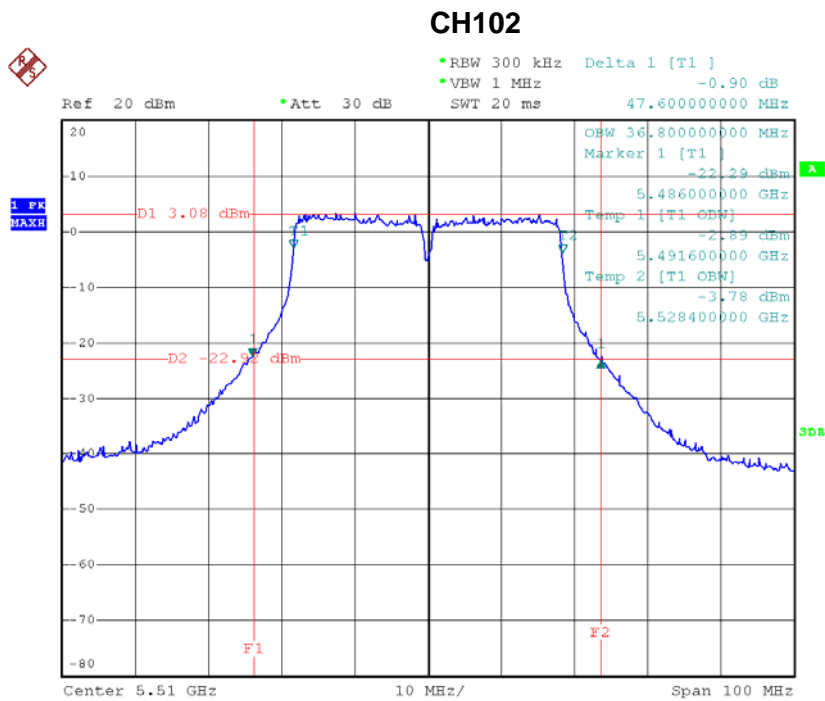


Date: 18.APR.2012 14:14:01



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode /CH102, CH110		

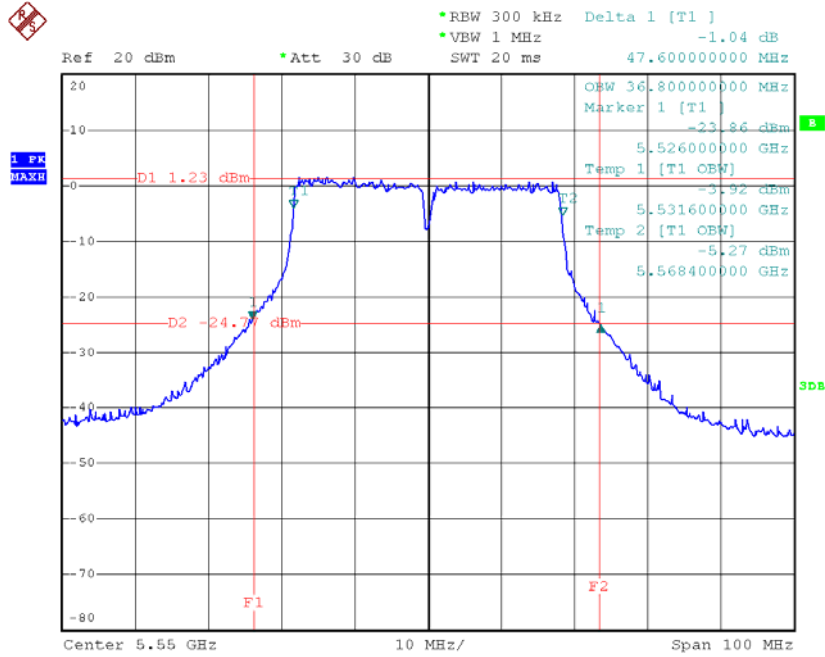
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
CH102	5510	47.60	36.80
CH110	5550	47.60	36.80



Date: 18.APR.2012 16:55:05



CH110



Date: 18.APR.2012 20:45:42



**6. MAXIMUM CONDUCTED OUTPUT POWER**

**6.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart E			
Test Item	Frequency Range (MHz)	Limit	Result
Peak Output Power	5150 - 5250	not exceed the lesser of 50 mW (17dBm) or 4 dBm + 10log B,	PASS
	5250 - 5350	not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B	PASS
	5470 - 5725	not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B	PASS

**Note:** where “B” is the 26 dB emissions bandwidth in MHz.

**6.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2011	Nov.26.2012

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

**6.1.2 TEST PROCEDURE**

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

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

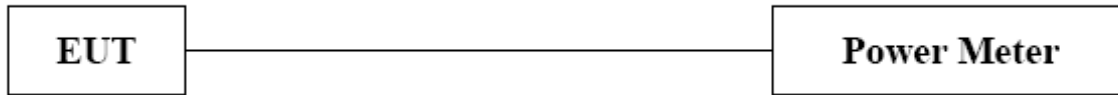
- b. Test was performed in accordance with method of KDB 789033 D01.



**6.1.3 DEVIATION FROM STANDARD**

No deviation.

**6.1.4 TEST SETUP**



**6.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

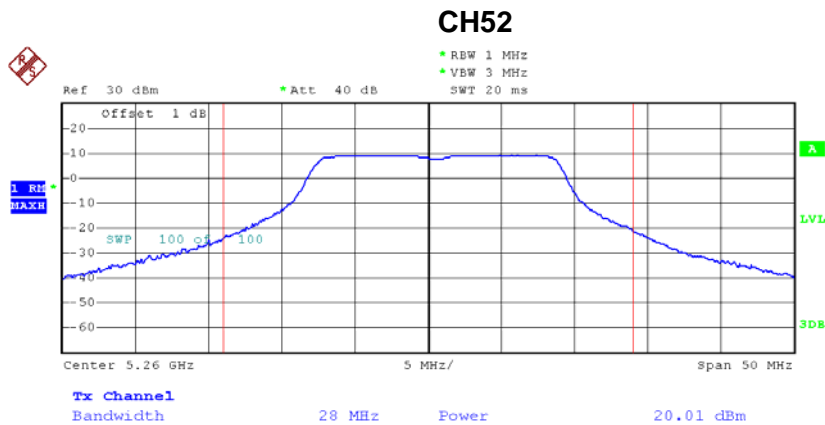


**6.1.6 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX A Mode/CH52, CH56, CH64		

**Peak Output Power**

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH52	5260	20.01	24	0.251
CH56	5280	19.66	24	0.251
CH64	5320	21.05	24	0.251

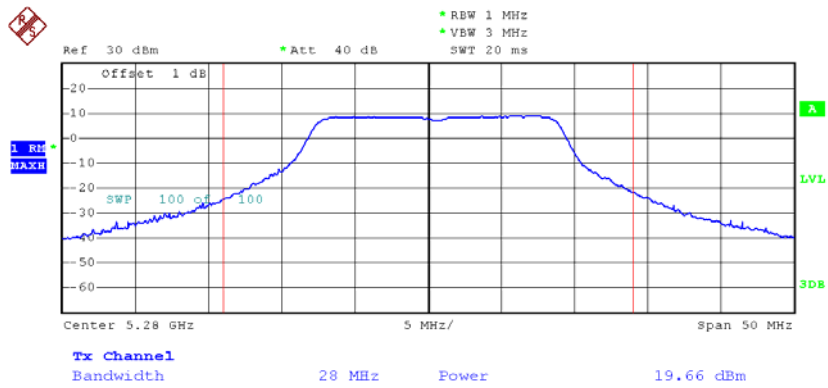


Date: 31.MAY.2012 20:04:06



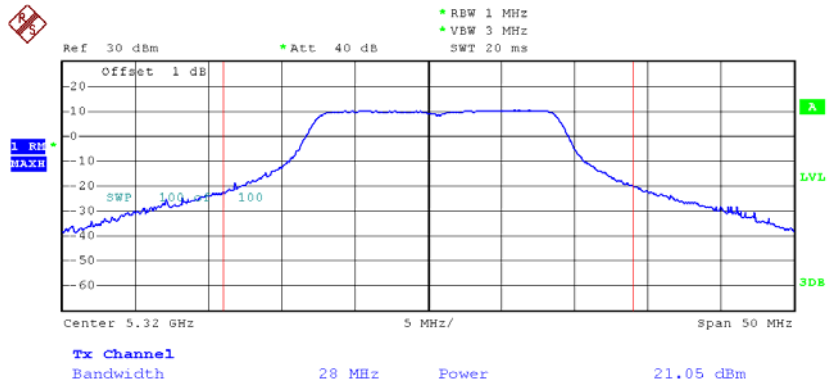


### CH56



Date: 31.MAY.2012 19:59:15

### CH64

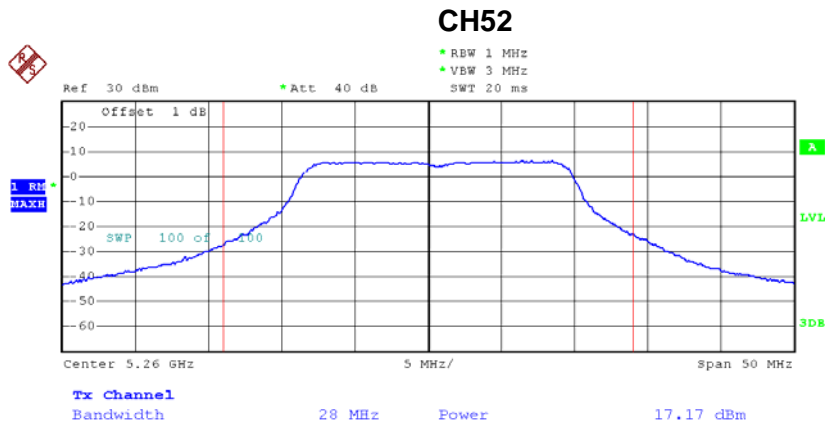


Date: 31.MAY.2012 20:04:42



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode/CH52, CH56, CH64(ANT 1)		

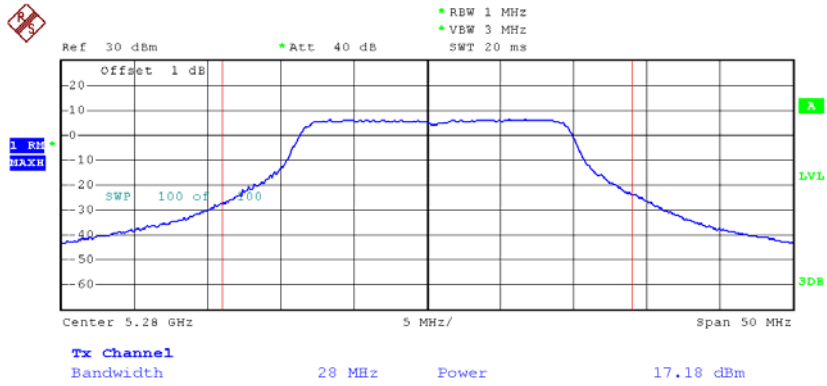
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH52	5260	17.17	24	0.251
CH56	5280	17.18	24	0.251
CH64	5320	17.59	24	0.251



Date: 31.MAY.2012 20:25:07

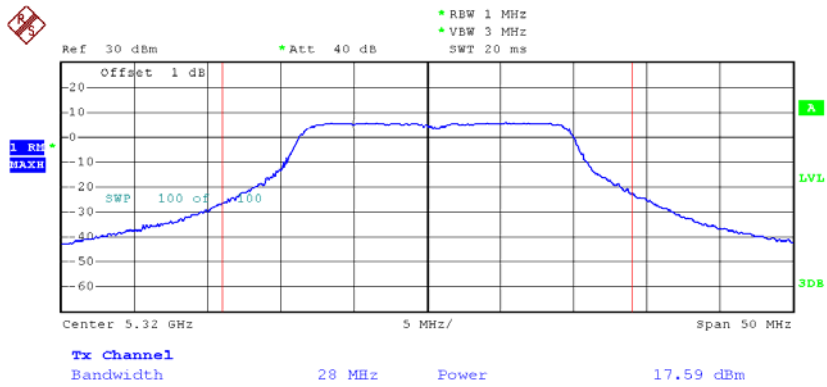


### CH56



Date: 31.MAY.2012 20:27:11

### CH64

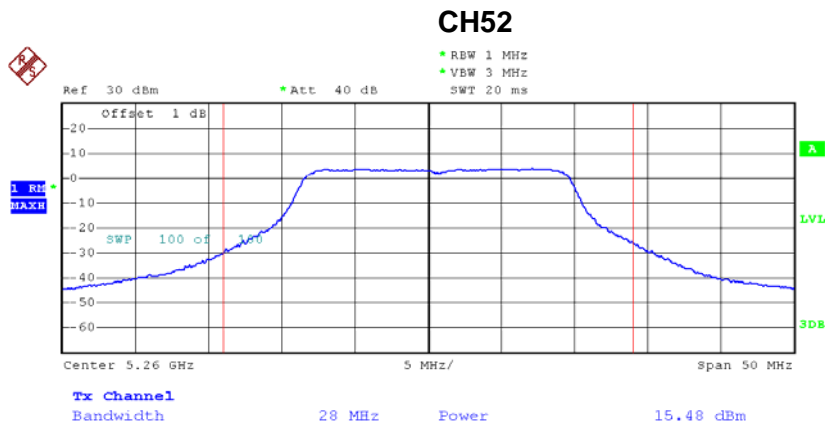


Date: 31.MAY.2012 20:27:36



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode/CH52, CH56, CH64(ANT 2)		

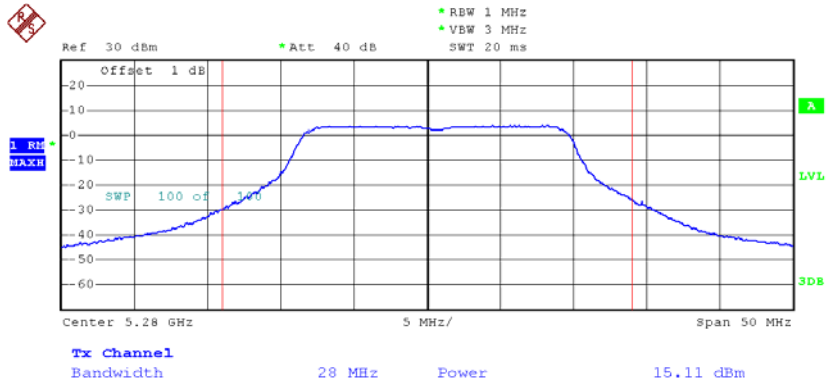
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH52	5260	15.48	24	0.251
CH56	5280	15.11	24	0.251
CH64	5320	15.16	24	0.251



Date: 31.MAY.2012 20:43:49

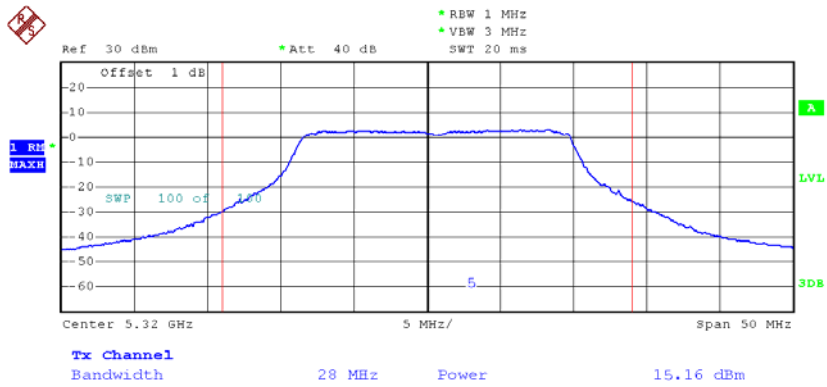


### CH56



Date: 31.MAY.2012 20:45:03

### CH64

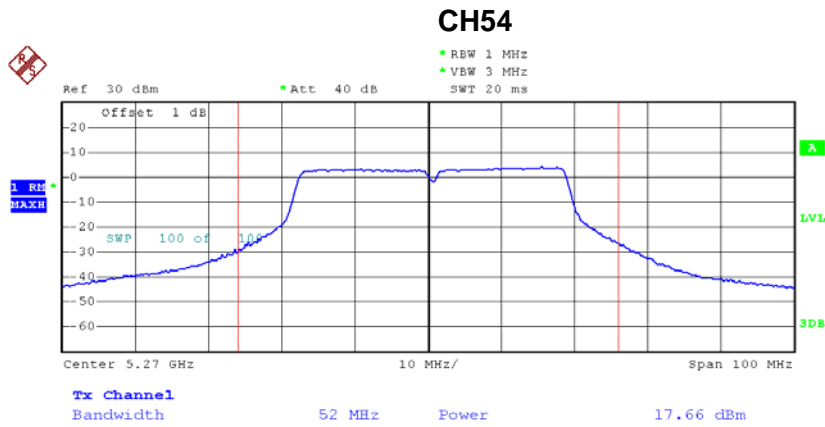


Date: 31.MAY.2012 20:46:55

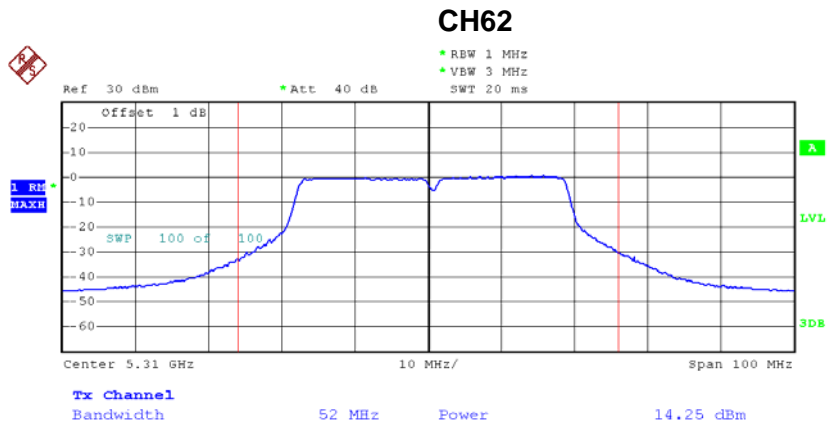


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode/CH54, CH62 (ANT 1)		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH54	5270	17.66	24	0.251
CH62	5310	14.25	24	0.251



Date: 31.MAY.2012 20:58:00

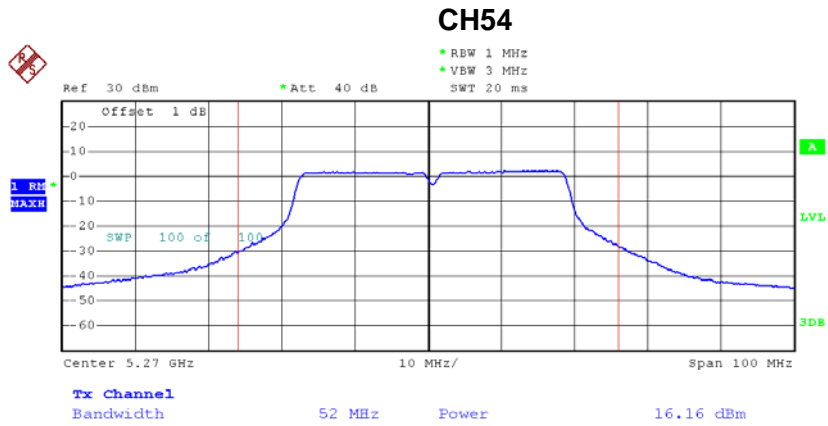


Date: 31.MAY.2012 21:00:07



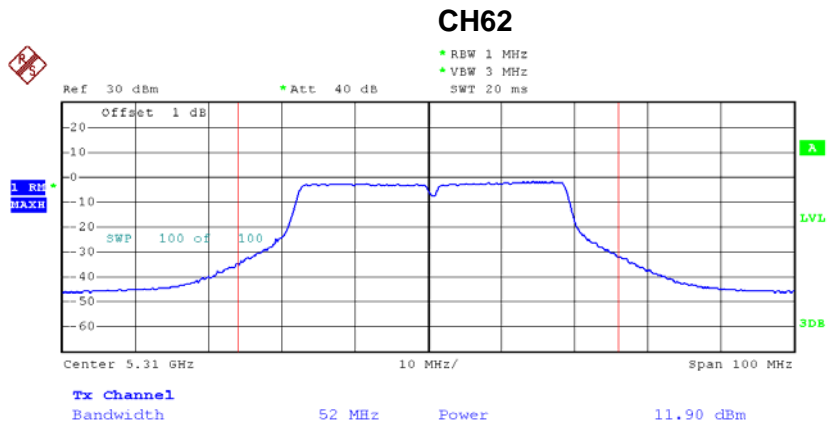
EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode/CH54, CH62 (ANT 2)		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH54	5270	16.16	24	0.251
CH62	5310	11.90	24	0.251



Date: 31.MAY.2012 21:18:30





Date: 31.MAY.2012 21:20:34



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 2/ TX N20 Mode /CH52, CH56, CH64 (ANT1+ANT2)		

Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH52	5260 MHz	19.42	23.6	0.1148
CH56	5280 MHz	19.28	23.6	0.1148
CH64	5320 MHz	19.55	23.6	0.1148

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 2/ TX N40 Mode /CH54, CH62 (ANT1+ANT2)		

Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH54	5270 MHz	19.98	23.6	0.1148
CH62	5310 MHz	16.24	23.6	0.1148

Remark :

- (1) **The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.**  
**And after obtain each individual transmitter chain power, then sum the output power by using the following formula:**  

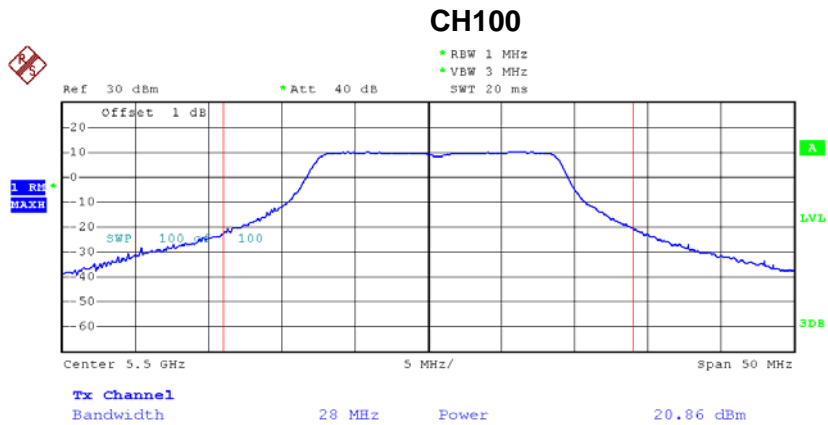
$$((\text{dBm}/\text{Chain 1})/10^{\wedge}\text{Log}) + ((\text{dBm}/\text{Chain 2})/10^{\wedge}\text{log}) + ((\text{dBm}/\text{ChainN})/10^{\wedge}\text{log}) =$$
**Combined peak output power in mW.**
- (2) **Antenna Gain 1=6.4 dBi**
- (3) **This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, Direction gain = G<sub>ANT</sub>, that is Directional gain=6.4; So,the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6**



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX A Mode/CH100, CH116, CH140		

**Peak Output Power**

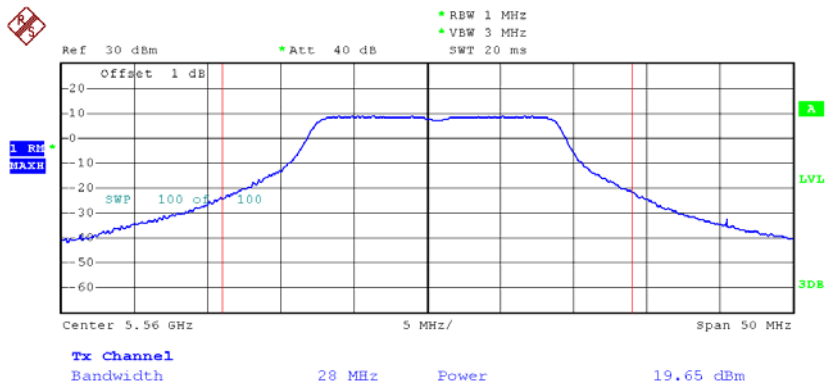
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH100	5500	20.86	24	0.251
CH116	5580	19.65	24	0.251
CH140	5700	21.25	24	0.251



Date: 31.MAY.2012 20:07:16

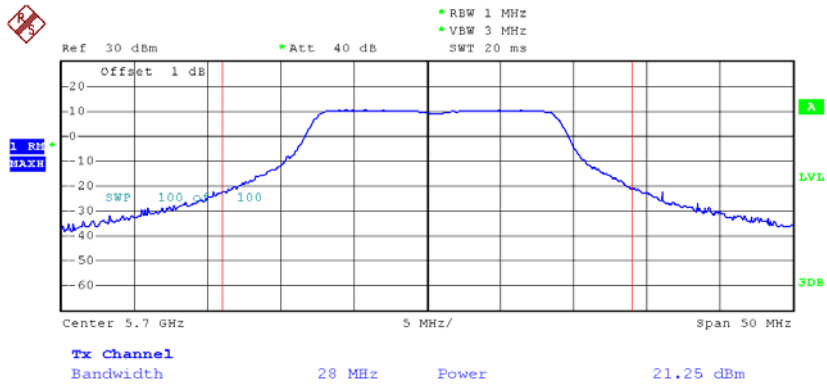


### CH116



Date: 31.MAY.2012 20:09:44

### CH140



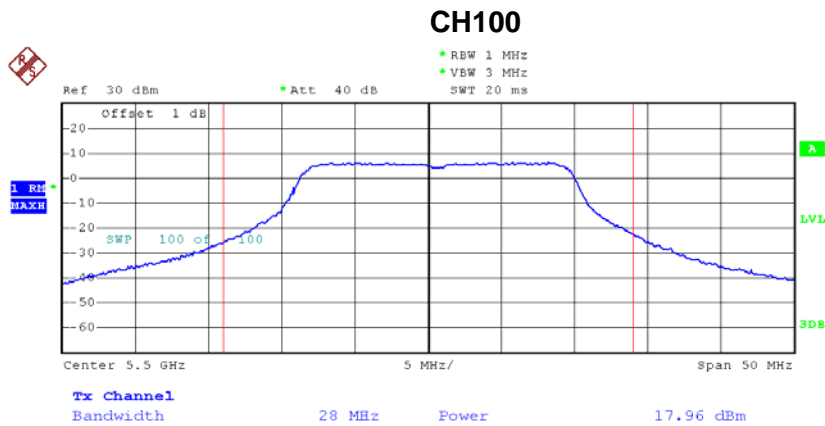
Date: 31.MAY.2012 20:10:19



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode/CH100, CH112, CH140(ANT 1)		

**Peak Output Power**

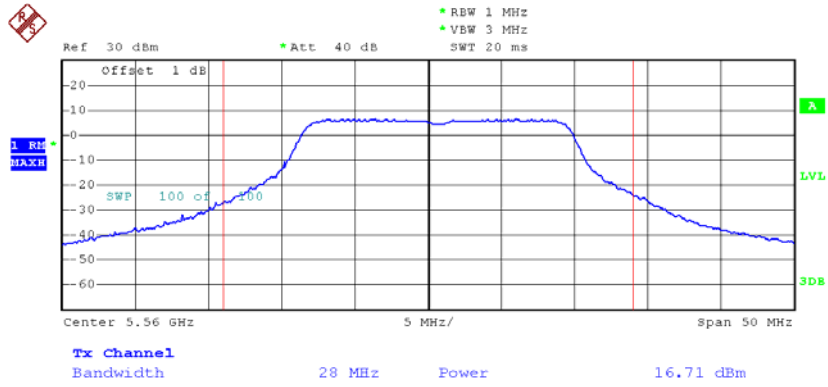
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH100	5500	17.96	24	0.251
CH112	5560	16.17	24	0.251
CH140	5700	17.37	24	0.251



Date: 31.MAY.2012 20:29:41

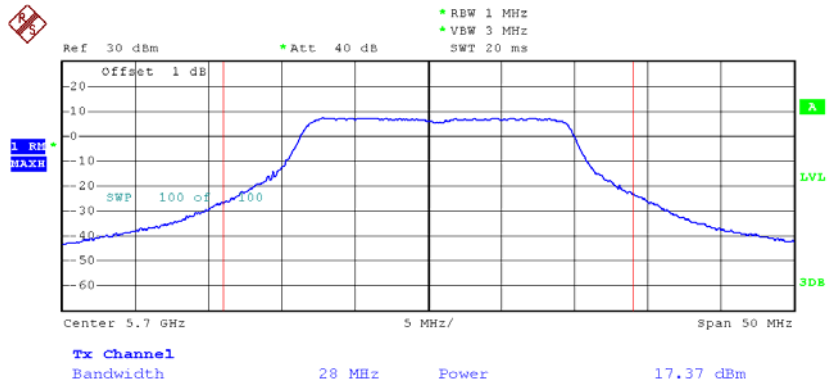


### CH116



Date: 31.MAY.2012 20:33:00

### CH140



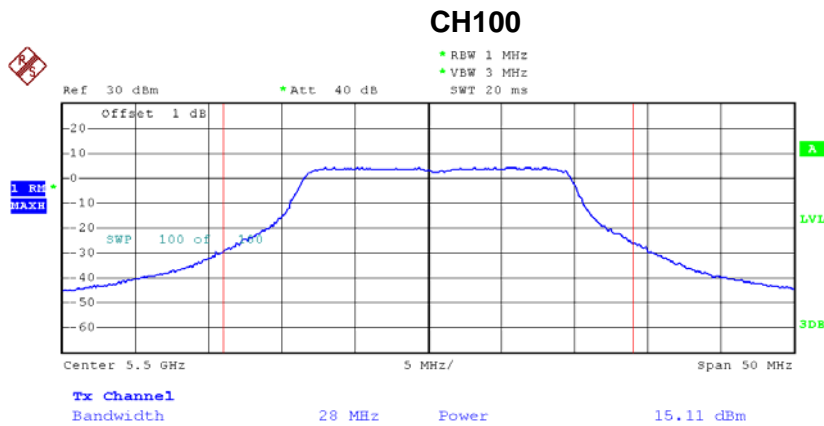
Date: 31.MAY.2012 20:33:25



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode/CH100, CH112, CH140(ANT 2)		

**Peak Output Power**

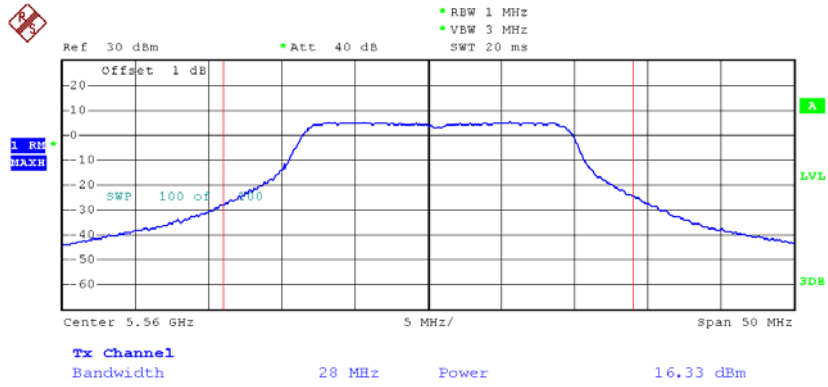
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH100	5500	15.11	24	0.251
CH112	5560	16.33	24	0.251
CH140	5700	16.22	24	0.251



Date: 31.MAY.2012 20:47:21

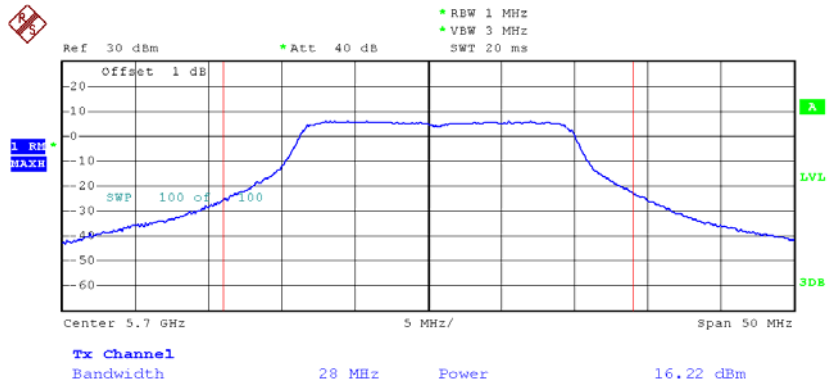


### CH116



Date: 31.MAY.2012 20:50:10

### CH140



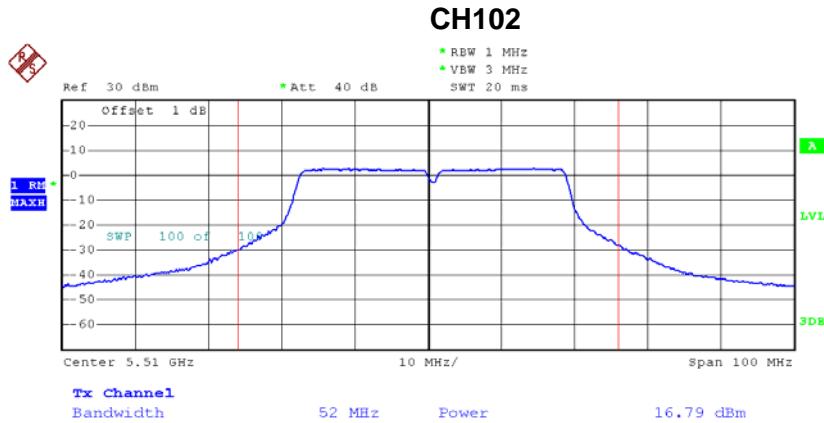
Date: 31.MAY.2012 20:50:45



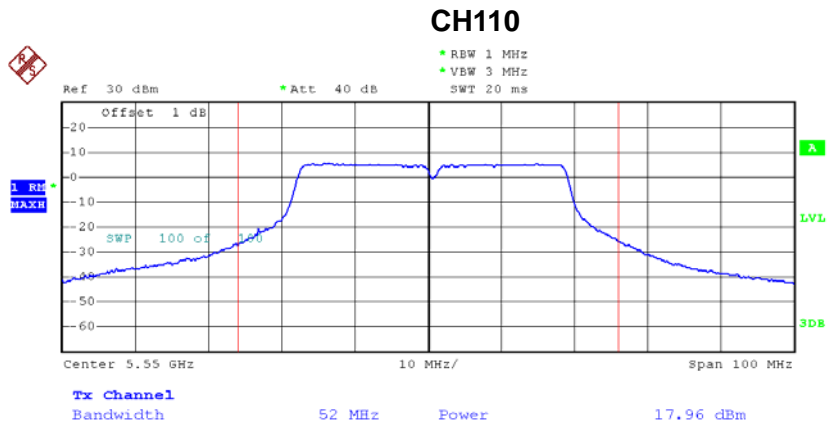


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode/CH102, CH110 (ANT 1)		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH102	5510	16.79	24	0.251
CH110	5550	17.96	24	0.251



Date: 31.MAY.2012 21:03:33

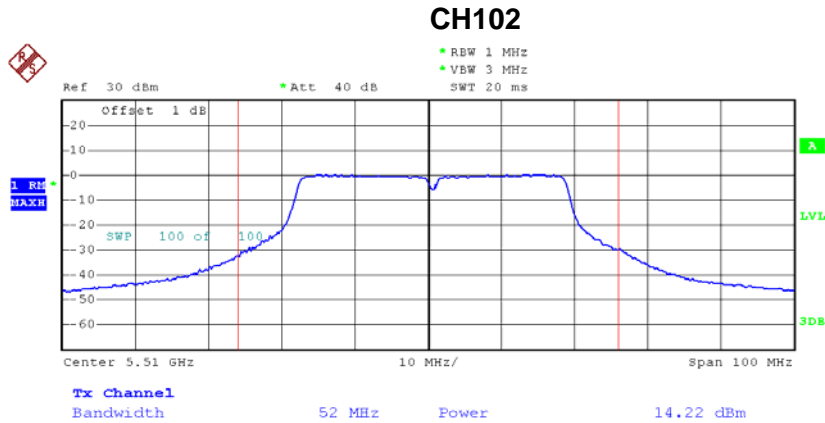


Date: 31.MAY.2012 21:08:14

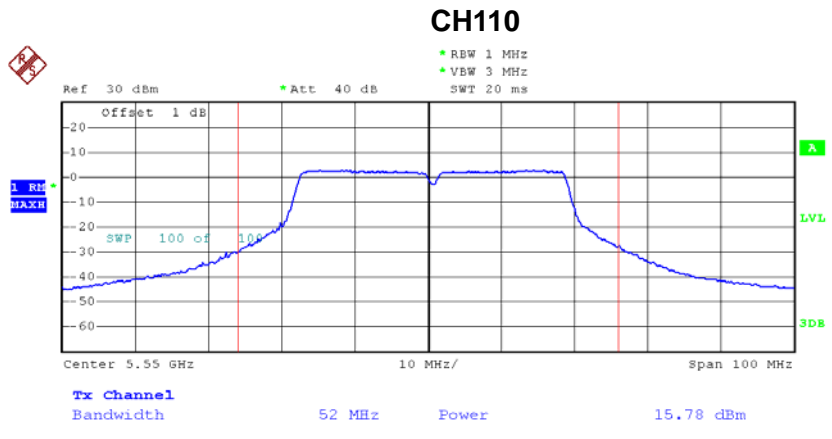


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode/CH102, CH110 (ANT 2)		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH102	5510	14.22	24	0.251
CH110	5550	15.78	24	0.251



Date: 31.MAY.2012 21:22:02



Date: 31.MAY.2012 21:28:56



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 3 TX N20 Mode /CH100, CH116, CH134 (ANT1+ANT2)		

Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH100	5500	19.78	23.6	0.1148
CH116	5580	19.53	23.6	0.1148
CH134	5700	19.84	23.6	0.1148

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Pressure :	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 3/ TX N40 Mode /CH54, CH62 (ANT1+ANT2)		

Test Channel	Frequency (MHz)	Maximum Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
CH102	5510	16.79	23.6	0.1148
CH110	5550	17.96	23.6	0.1148

**Remark :**

- (1) **The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method. And after obtain each individual transmitter chain power, then sum the output power by using the following formula:  

$$((\text{dBm}/\text{Chain 1})/10^{\wedge}\text{Log}) + ((\text{dBm}/\text{Chain 2})/10^{\wedge}\text{log}) + ((\text{dBm}/\text{ChainN})/10^{\wedge}\text{log}) =$$
**Combined peak output power in mW.****
- (2) **Antenna Gain 1=6.4 dBi**
- (3) **This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, Direction gain = G<sub>ANT</sub>, that is Directional gain=6.4; So,the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6**



**7. ANTENNA CONDUCTED SPURIOUS EMISSION**

**7.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Antenna conducted Spurious Emission	-27 dBm/1MHz	5150 - 5250	PASS

**7.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2011	Nov.26.2012

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

**7.1.2 TEST PROCEDURE**

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

b.

Spectrum Parameter	Setting
Attenuation	Auto
RB	1000 kHz
VB	1000 kHz
Trace	Max Hold
Sweep Time	Auto

**7.1.3 DEVIATION FROM STANDARD**

No deviation.

**7.1.4 TEST SETUP**



**7.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



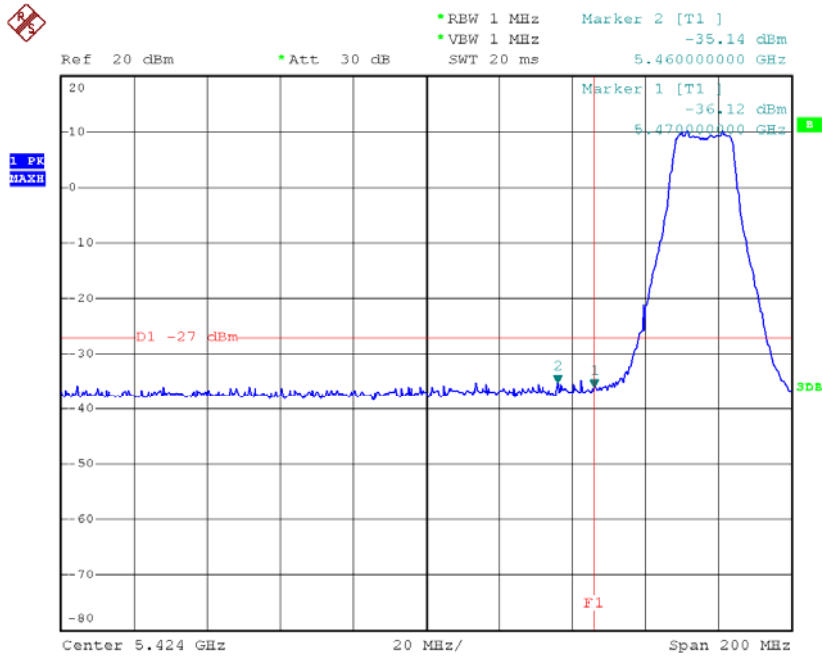
**7.1.6 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX A Mode/ CH52, CH56 , CH60		

Channel of Worst Data: CH60			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5139.60	-35.62	5389.20	-35.52
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

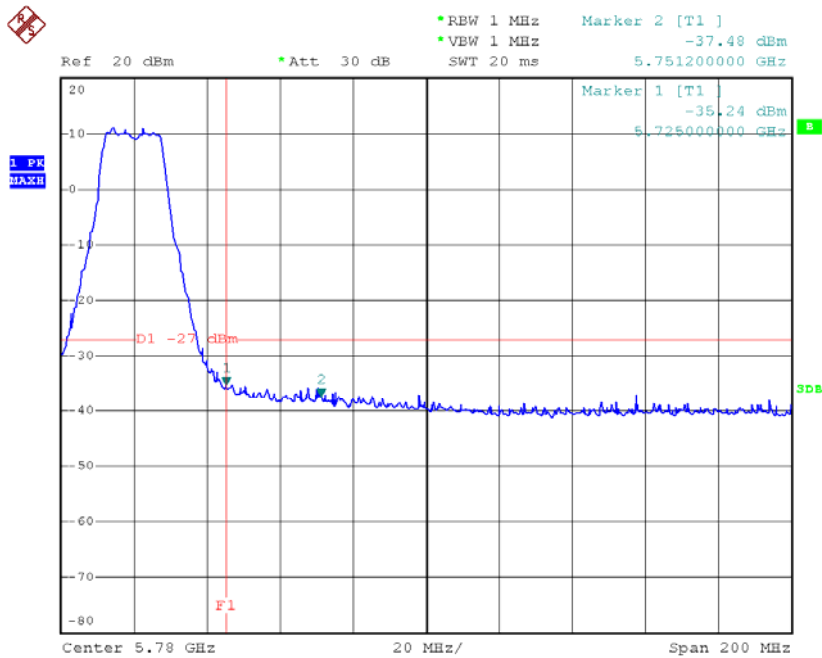


### TX mode CH52



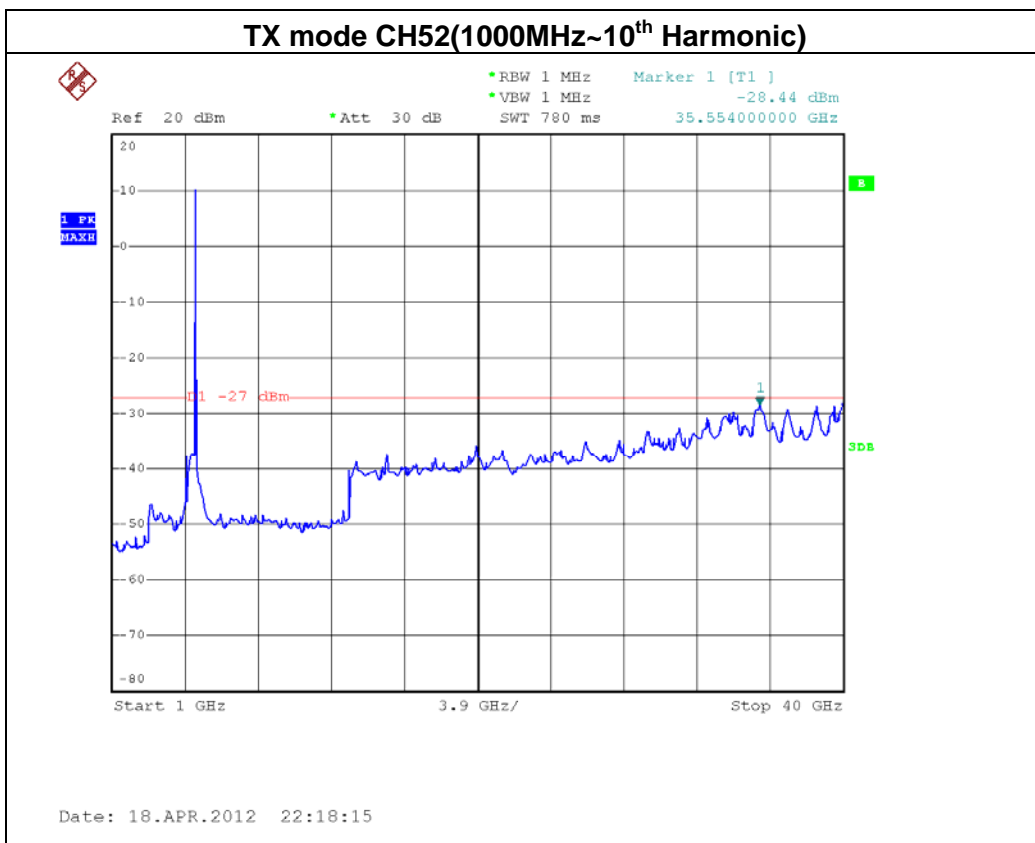
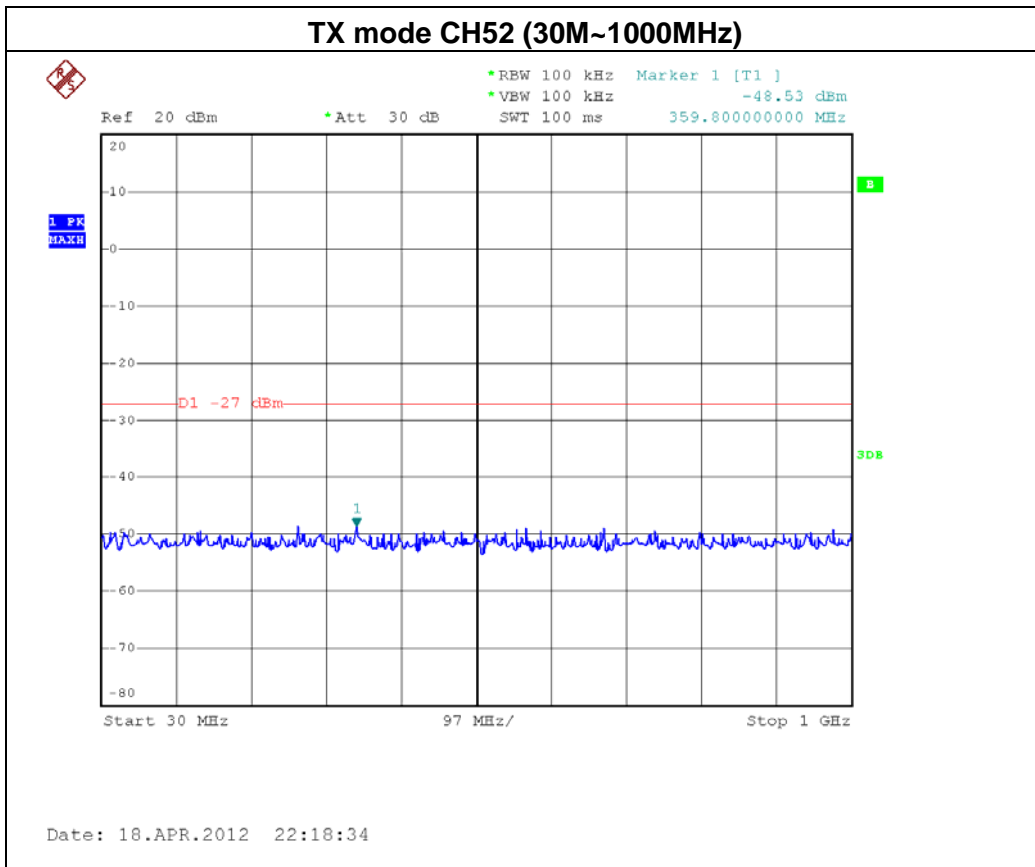
Date: 18.APR.2012 22:21:33

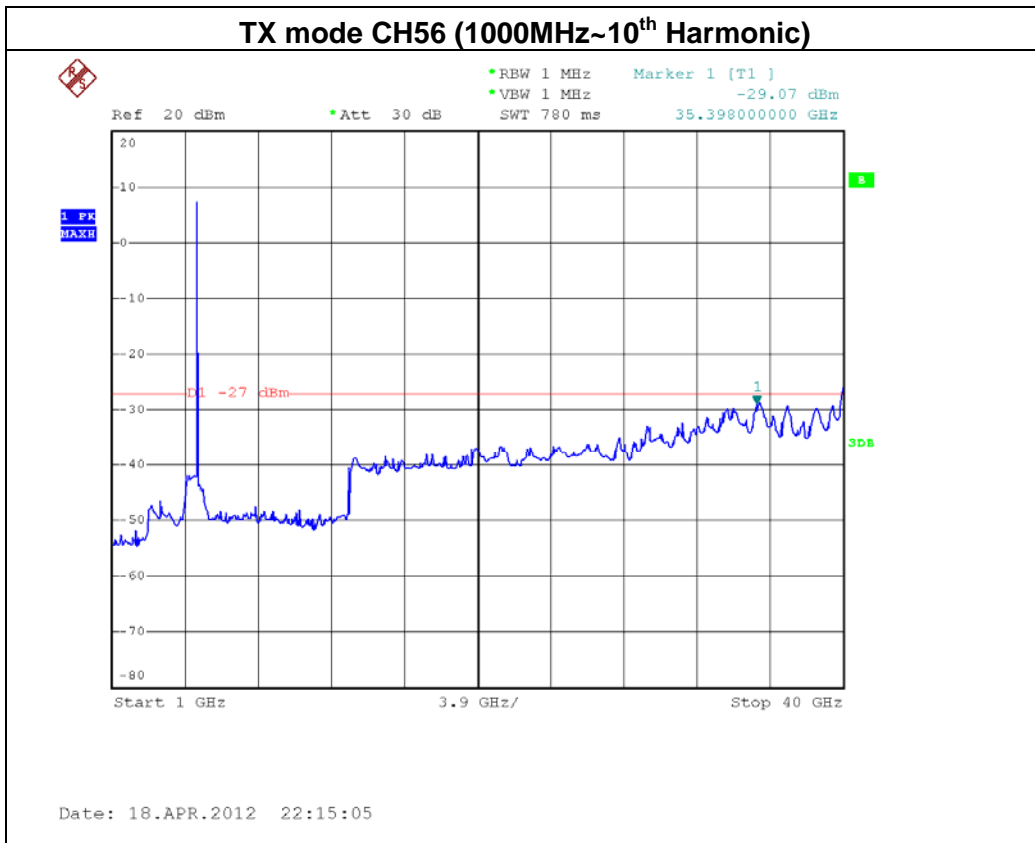
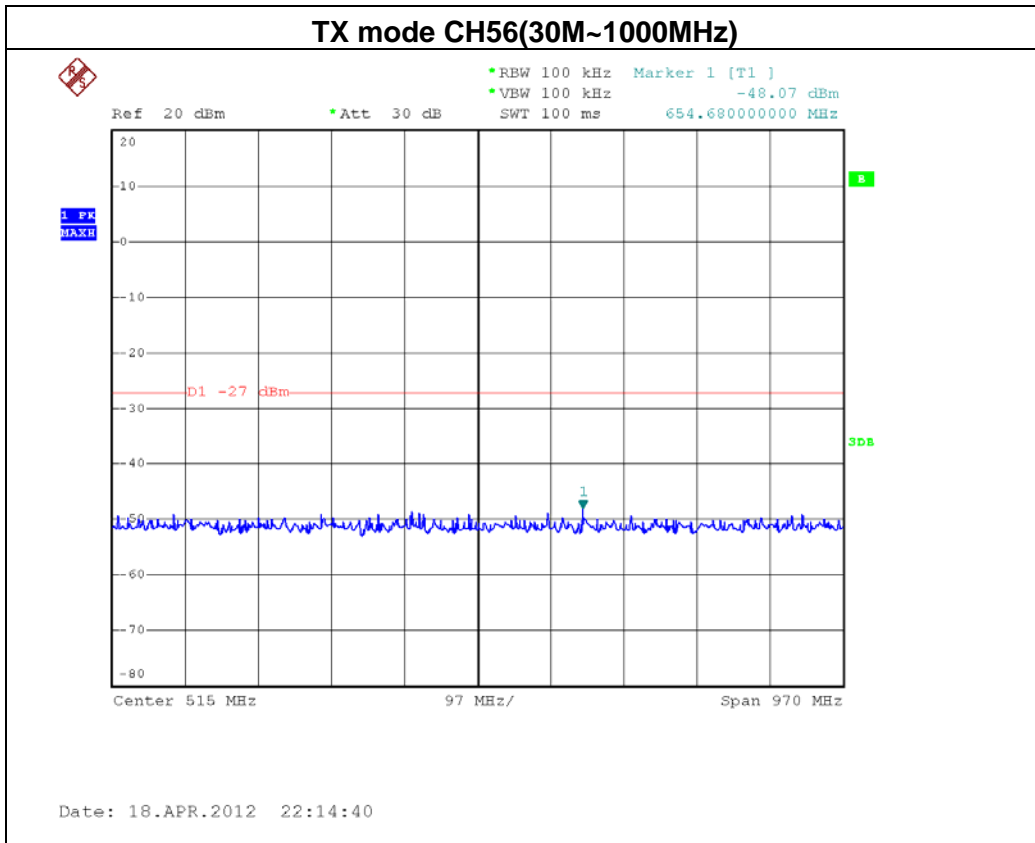
### TX mode CH64

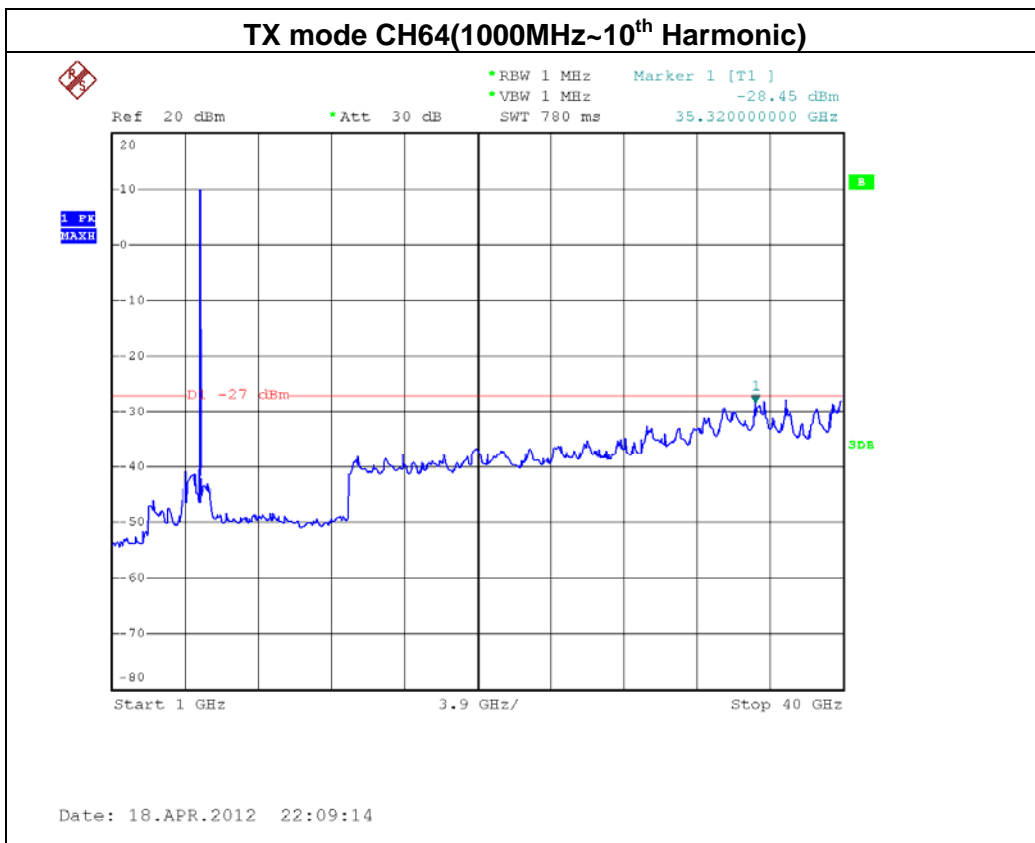
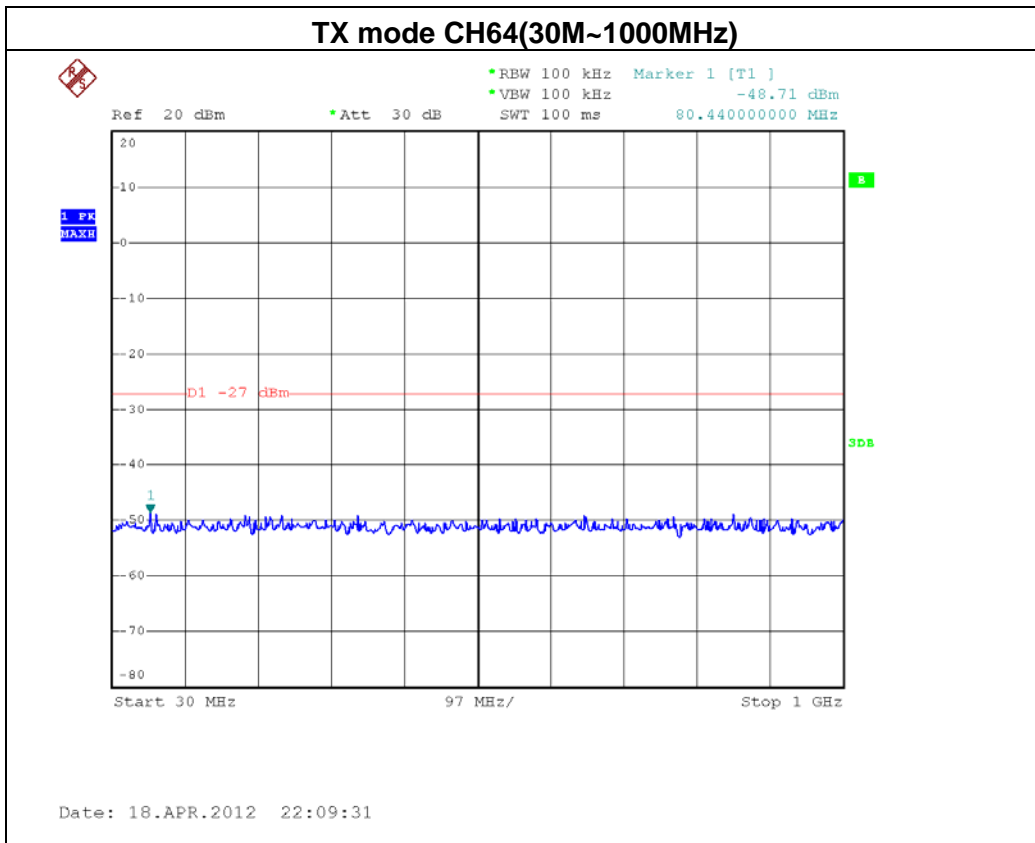


Date: 18.APR.2012 22:08:26









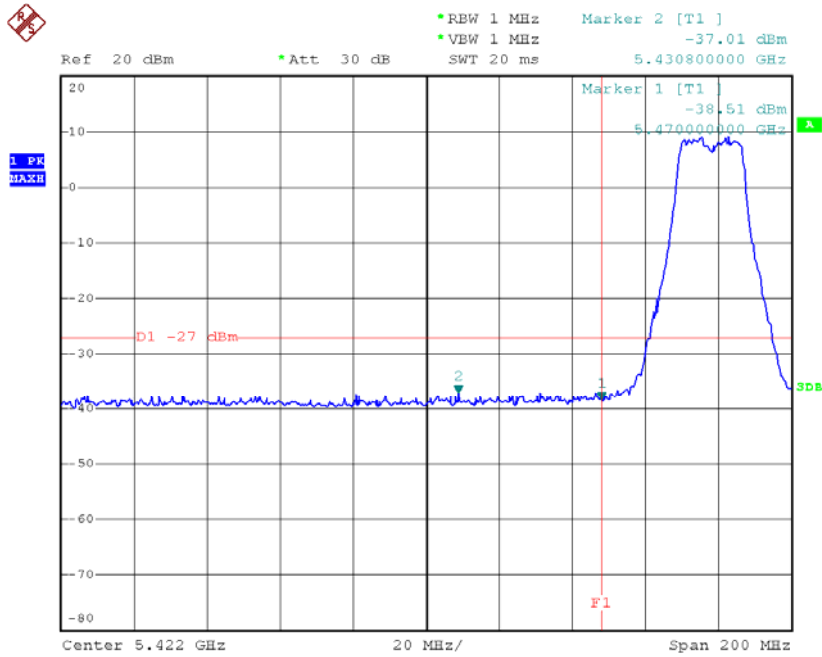


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode/ CH52, CH56 , CH64 (ANT 1)		

Channel of Worst Data: CH64			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5125.60	-38.42	5352.40	-37.14
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

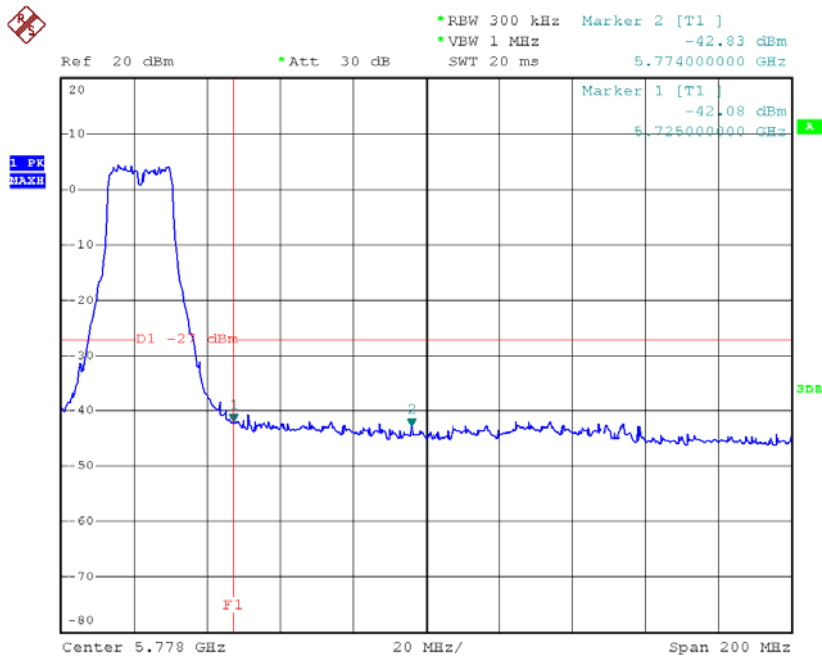


### TX mode CH52

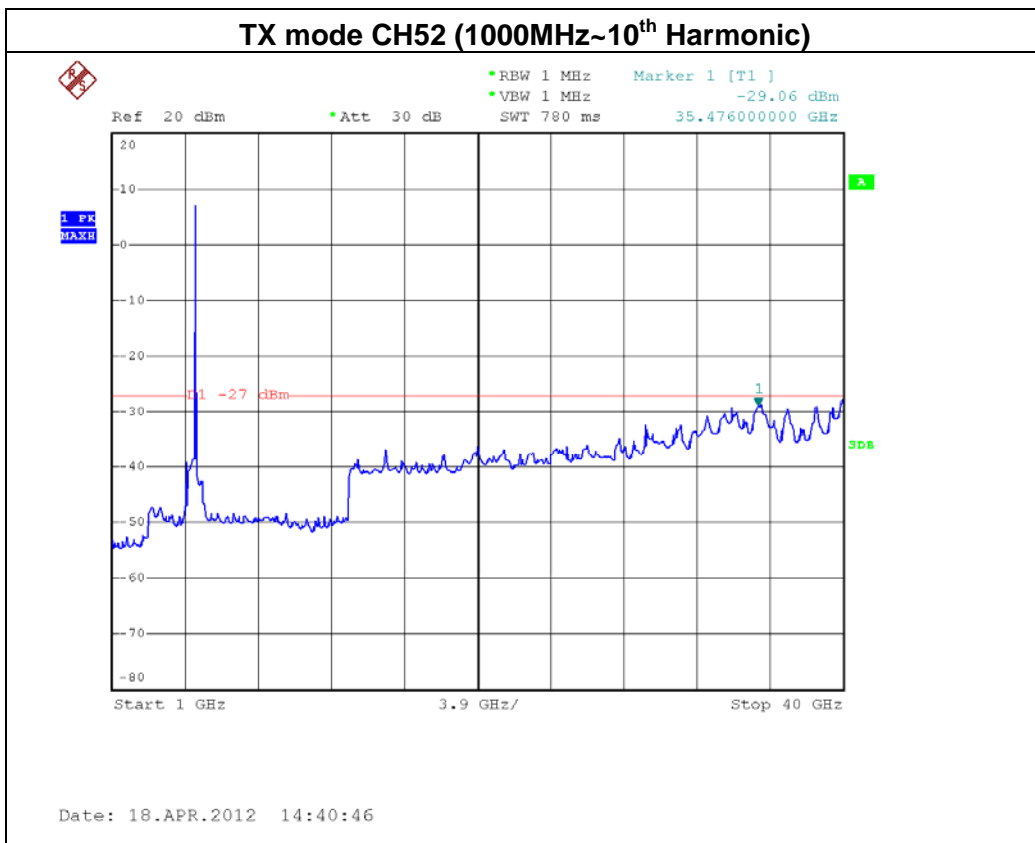
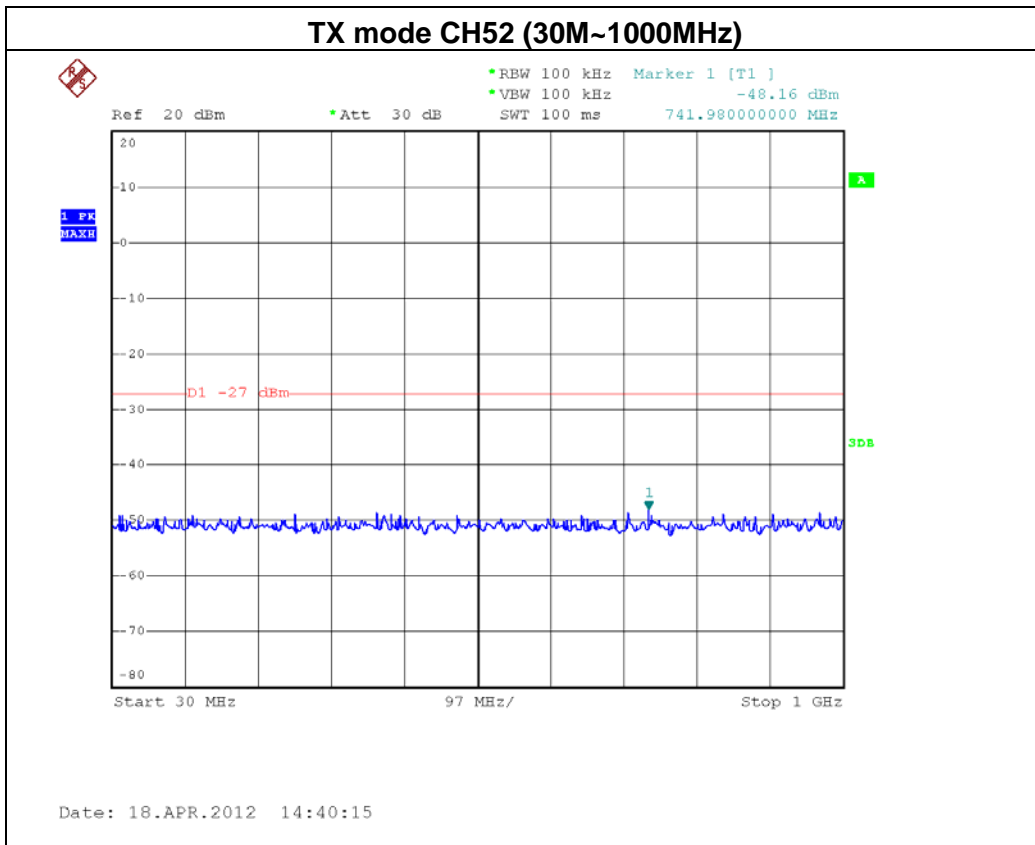


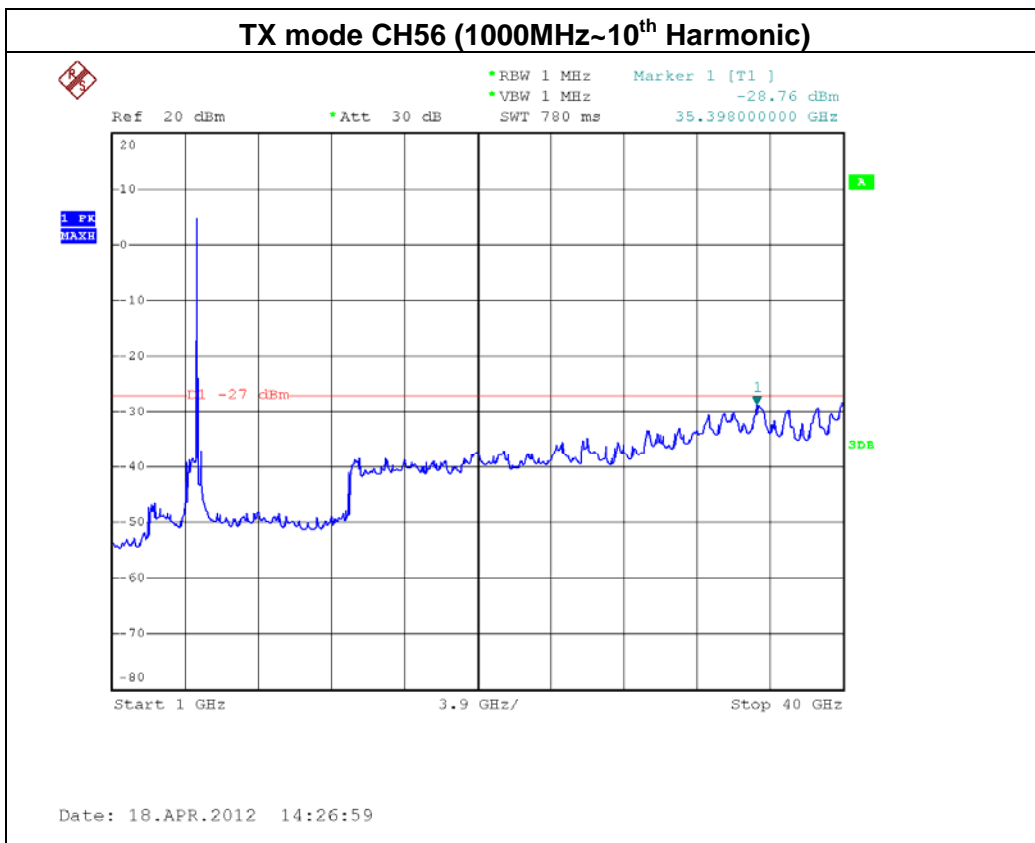
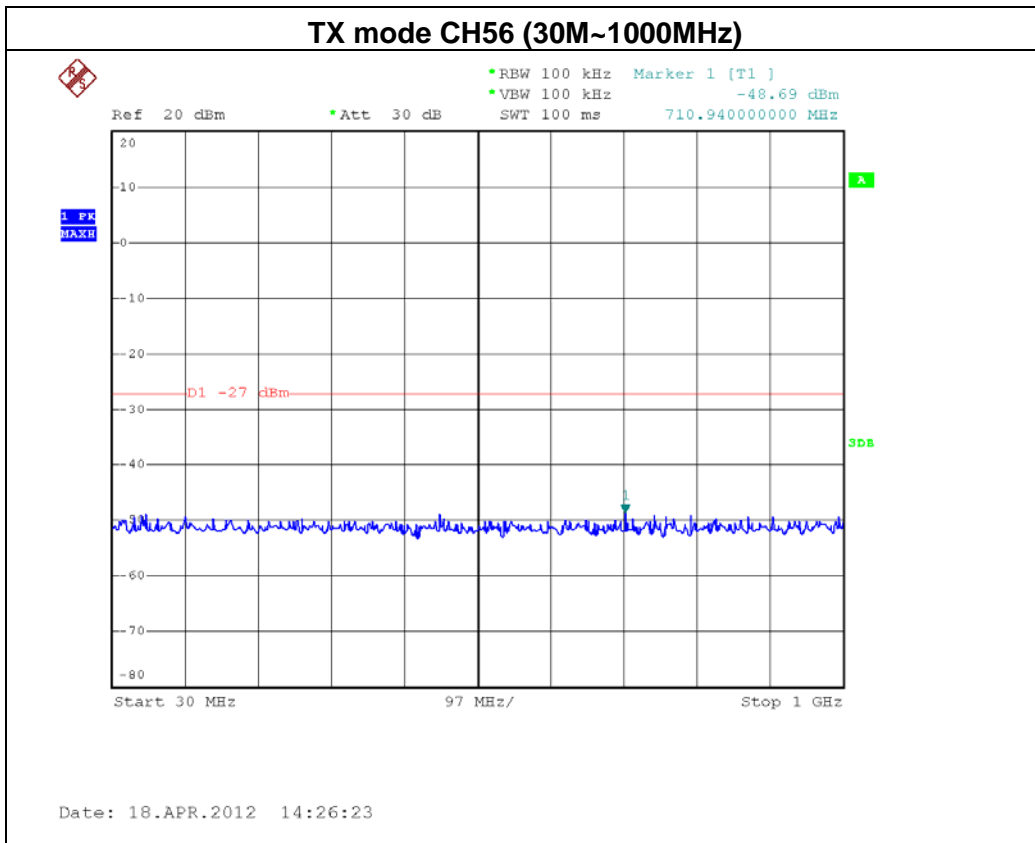
Date: 18.APR.2012 14:39:08

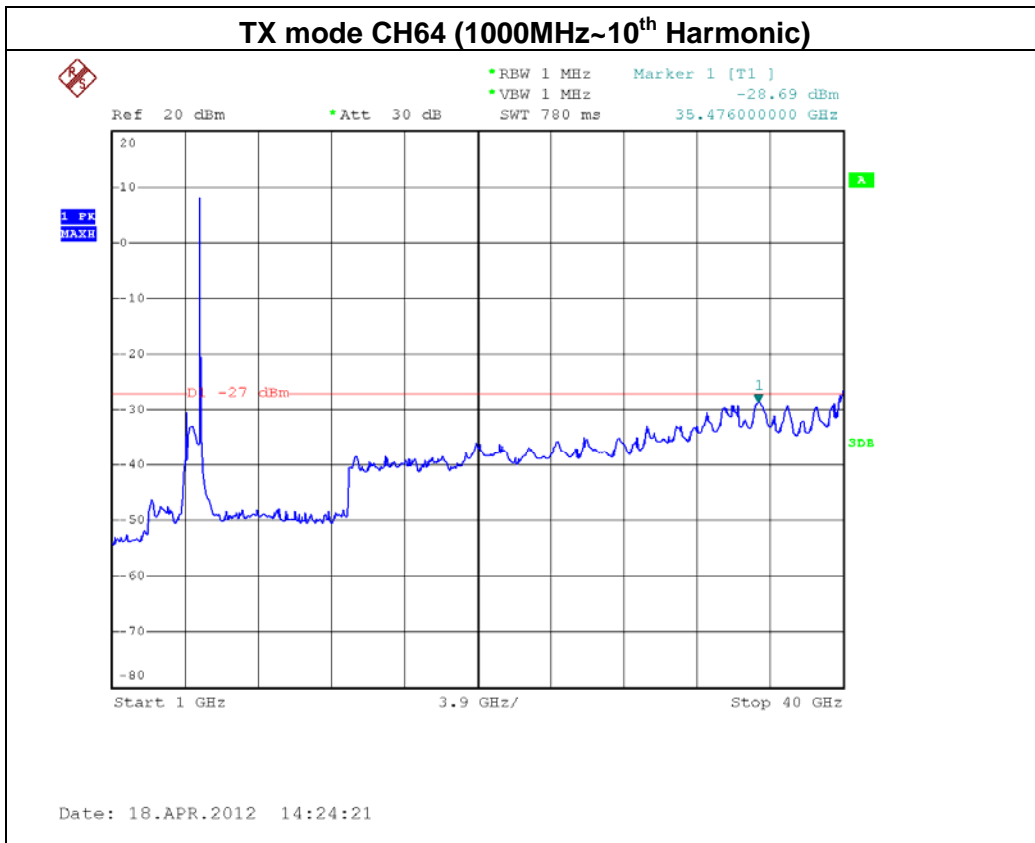
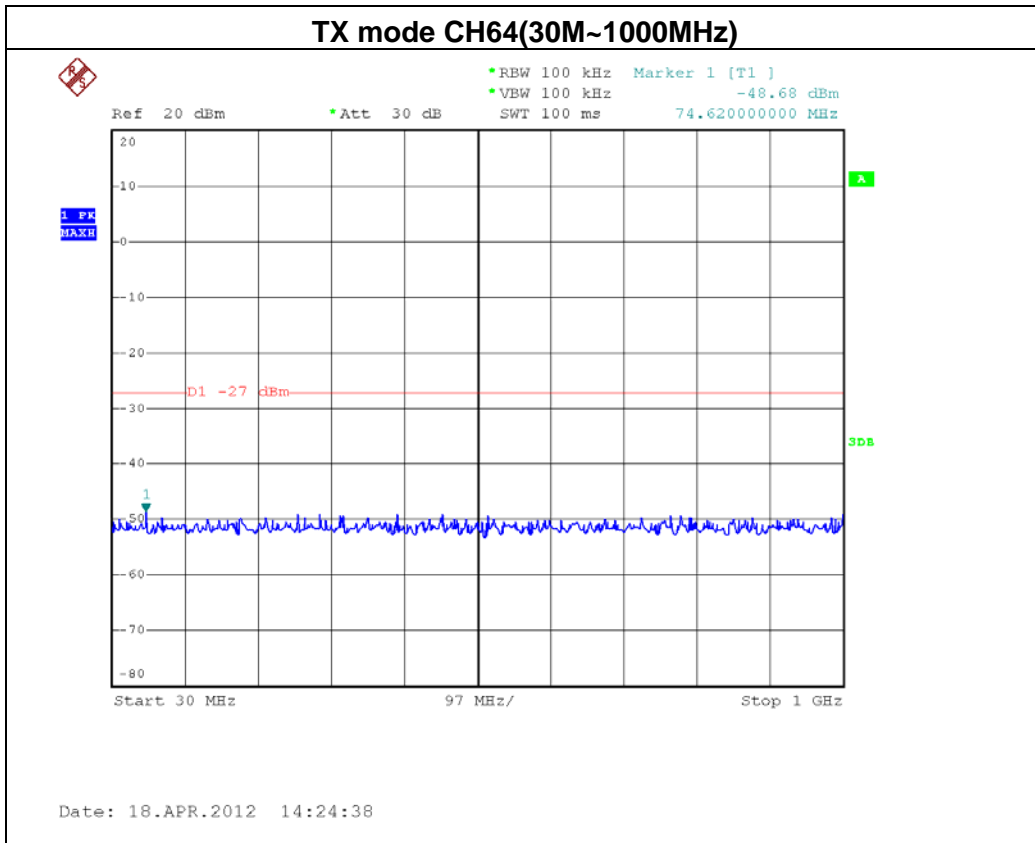
### TX mode CH64



Date: 18.APR.2012 14:19:10









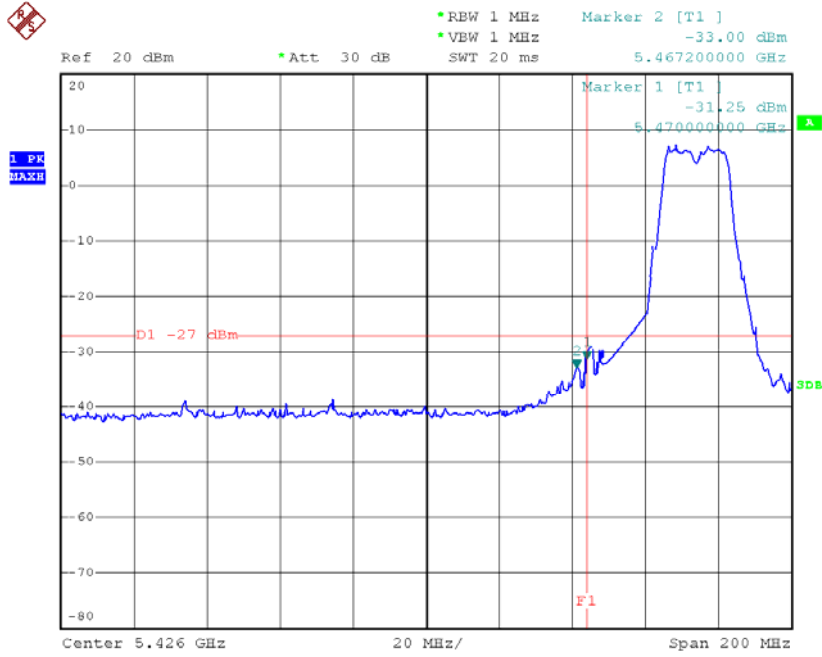


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 ° C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode/ CH52, CH56 , CH64 (ANT 2)		

Channel of Worst Data: CH64			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5120.40	-39.98	5451.20	-38.75
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

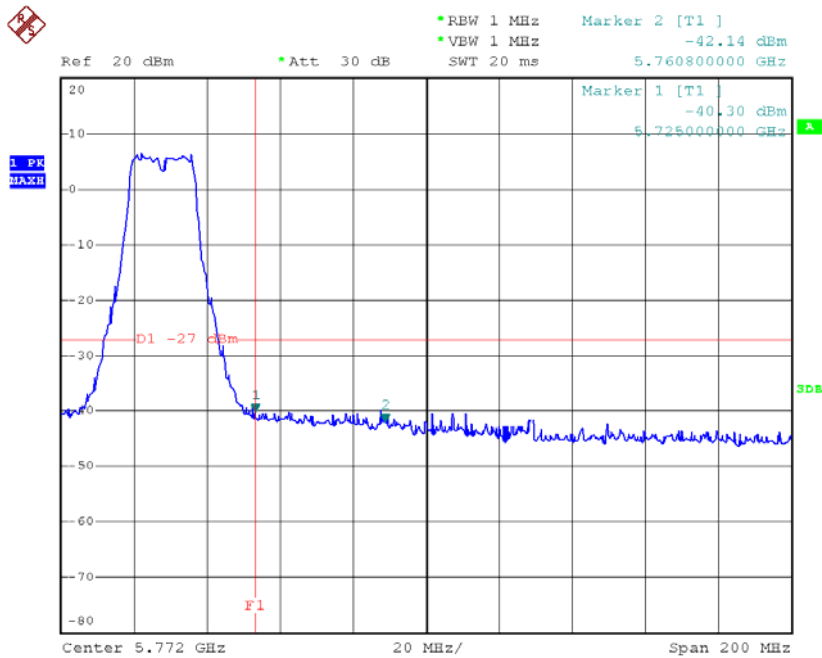


### TX mode CH52

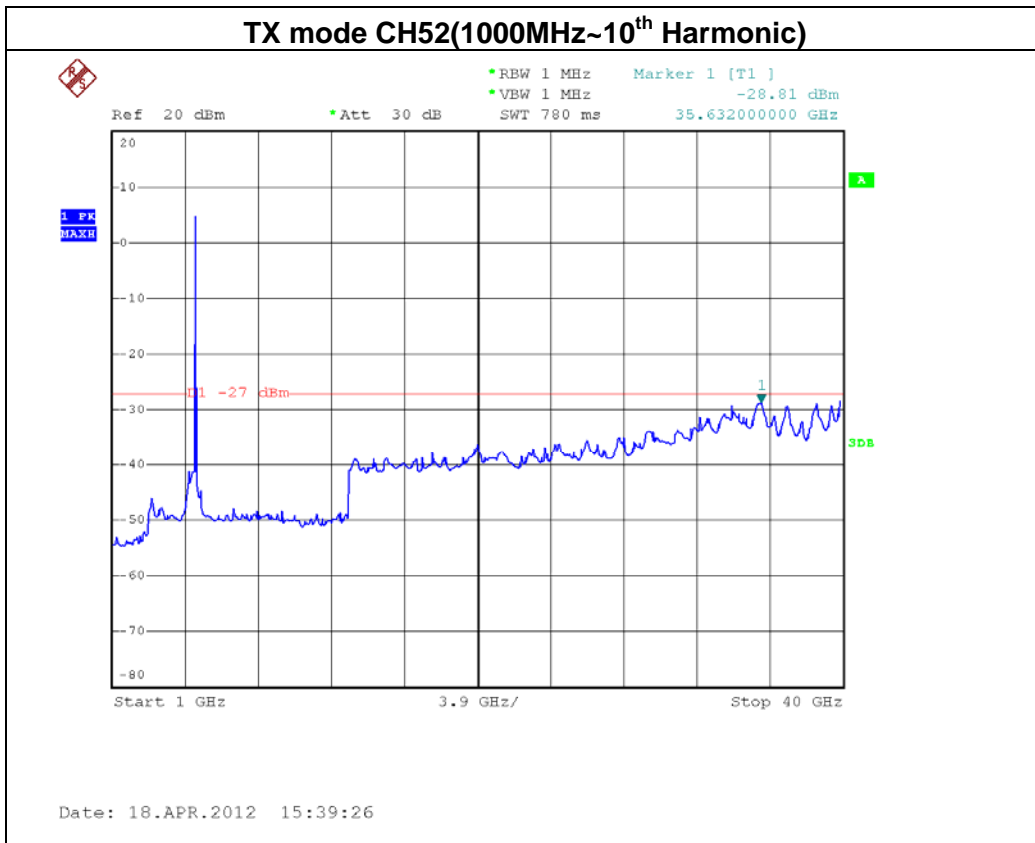
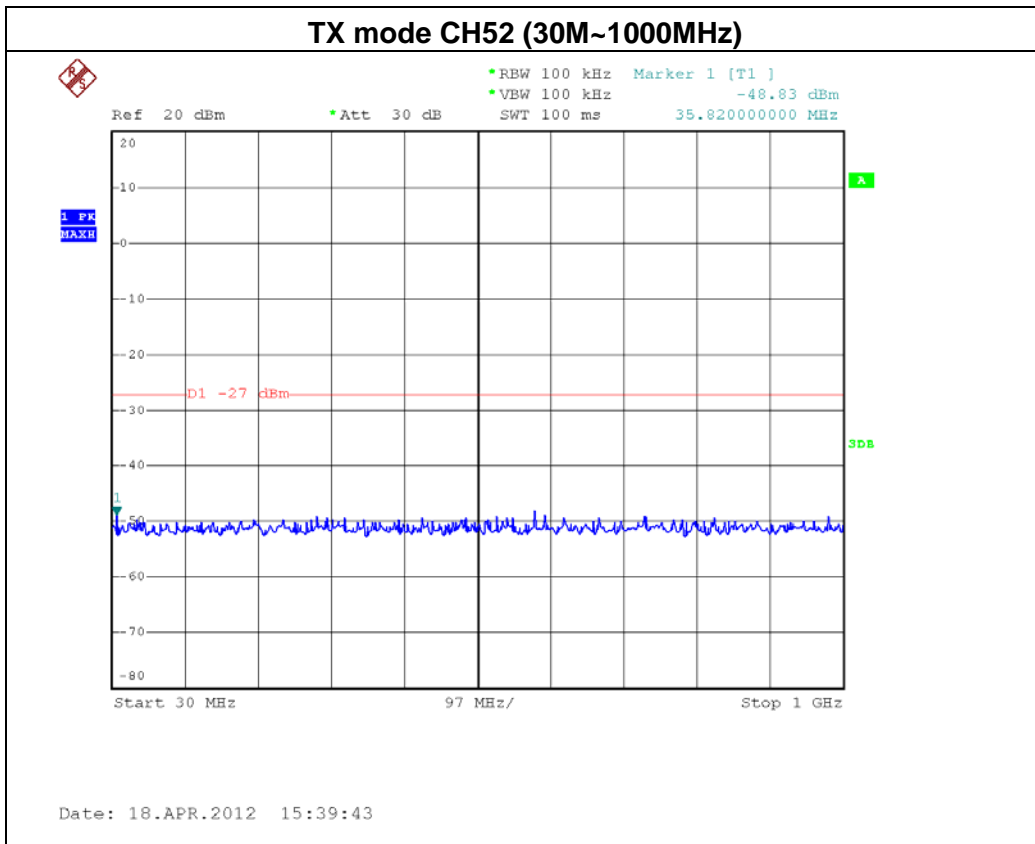


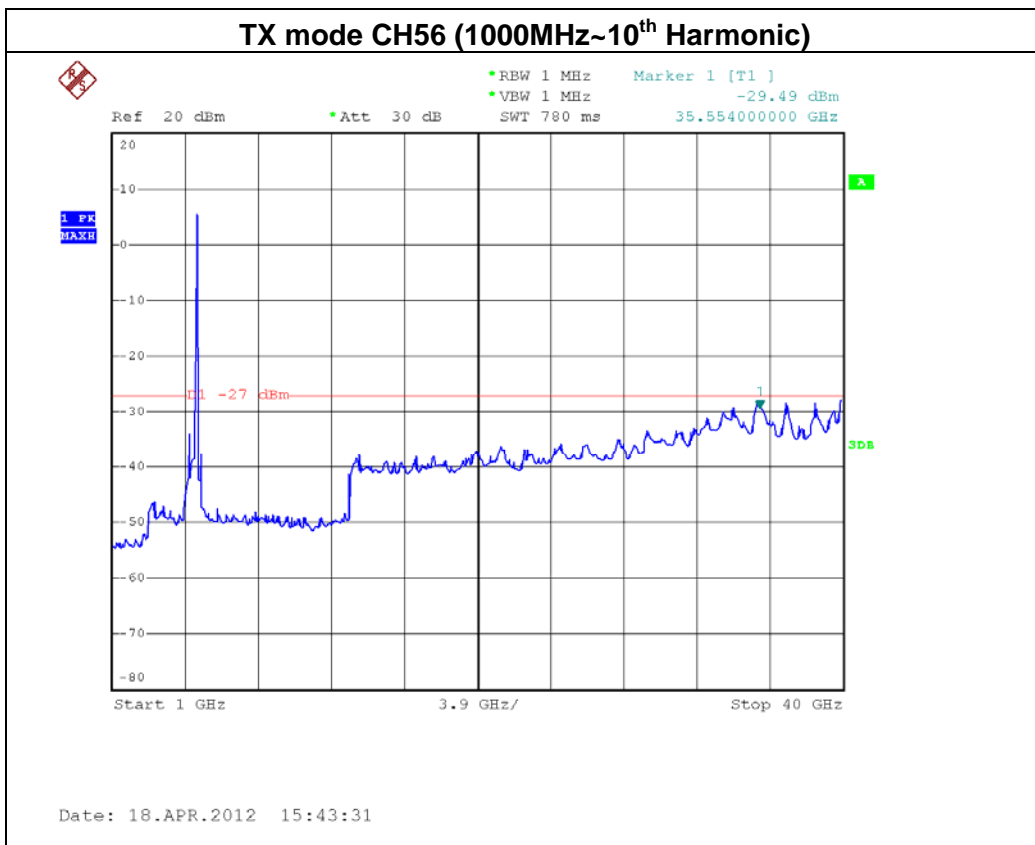
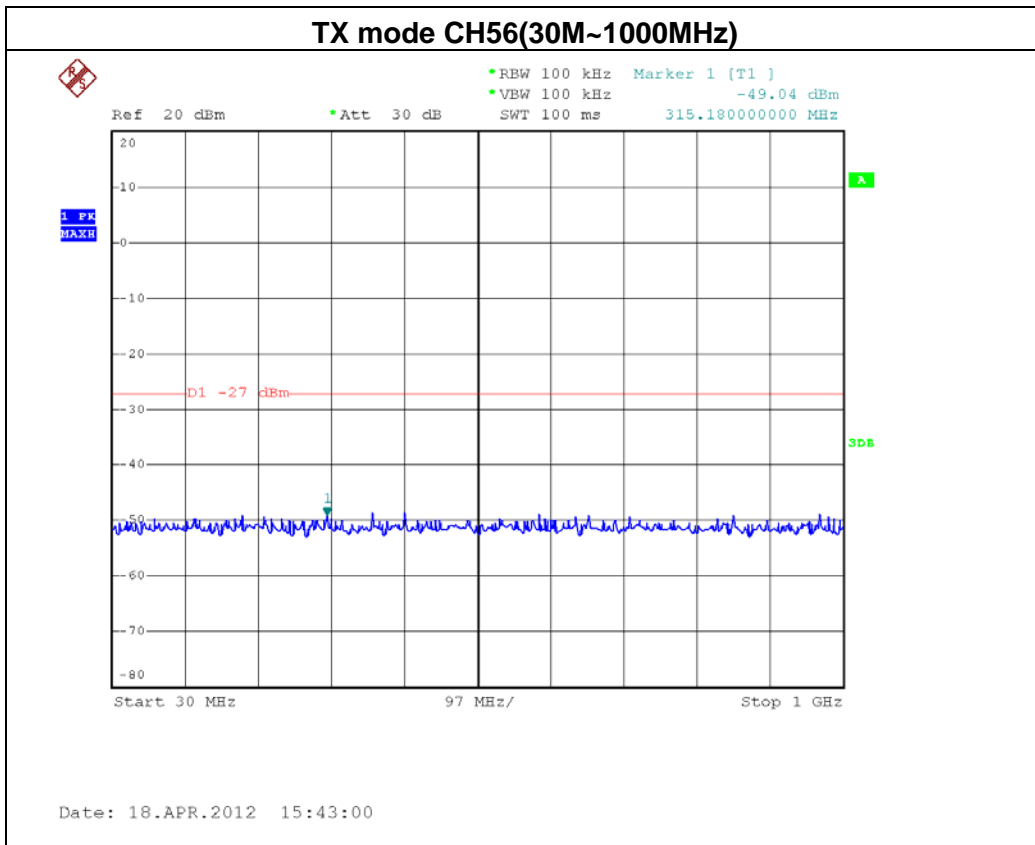
Date: 18.APR.2012 15:36:50

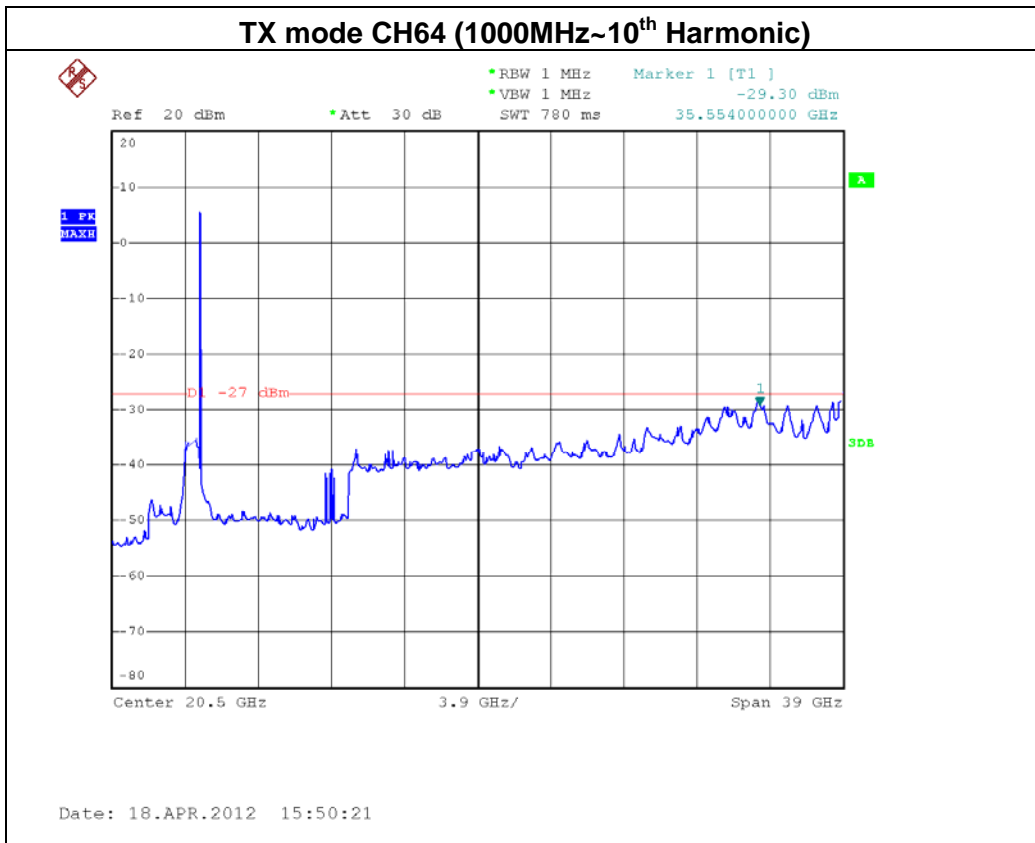
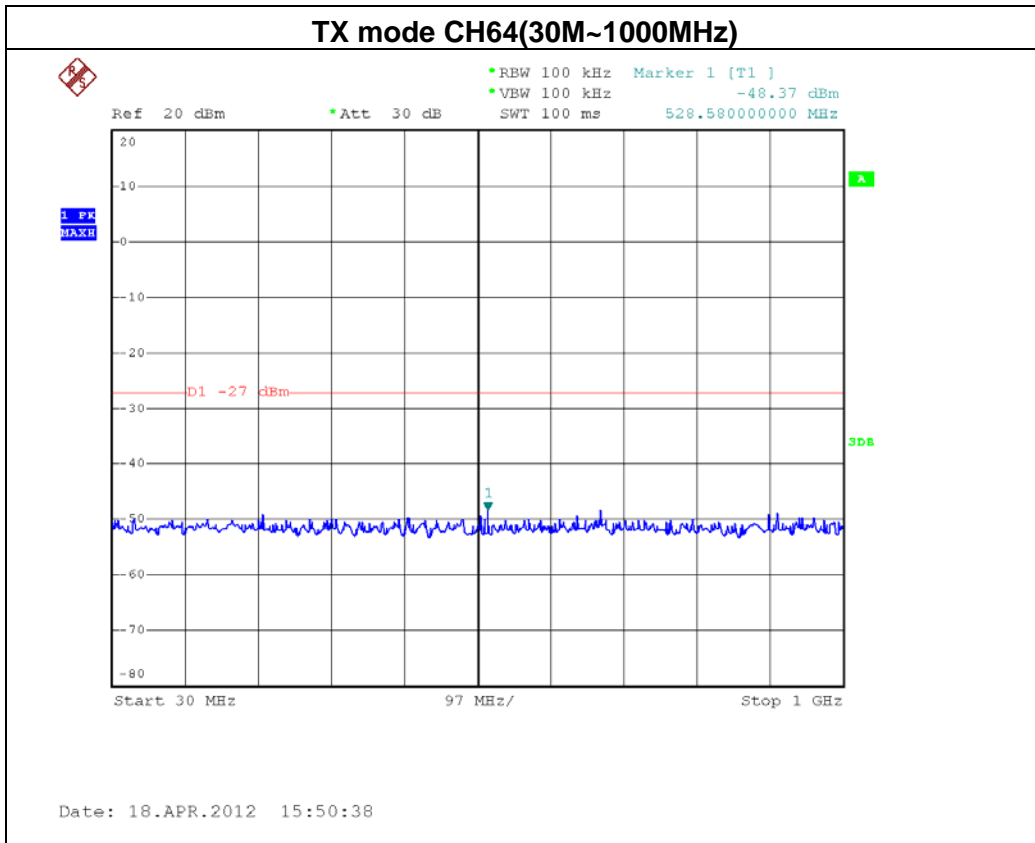
### TX mode CH64



Date: 18.APR.2012 15:52:23







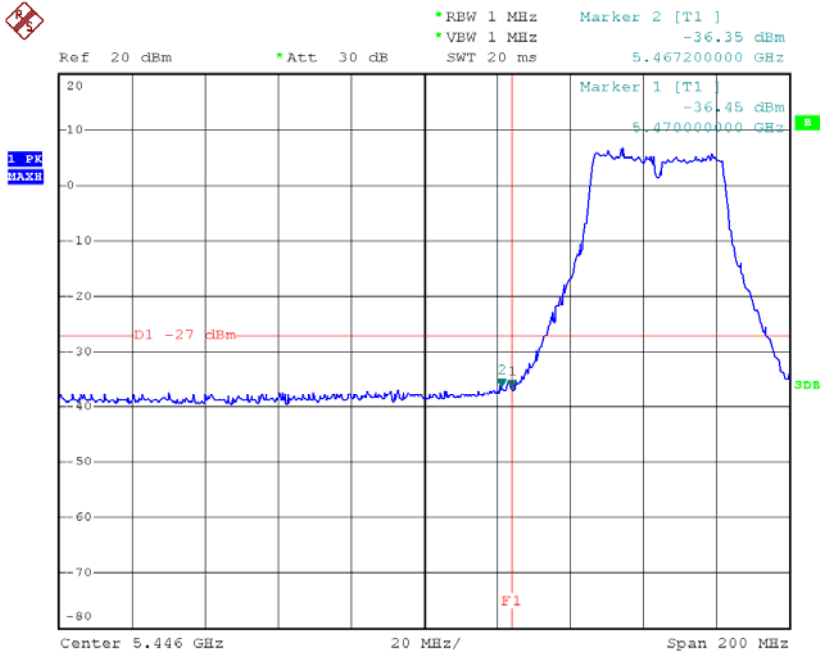


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode/ CH54, CH62 (ANT 1)		

Channel of Worst Data: CH54			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5142.80	-35.20	5350.00	-36.66
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

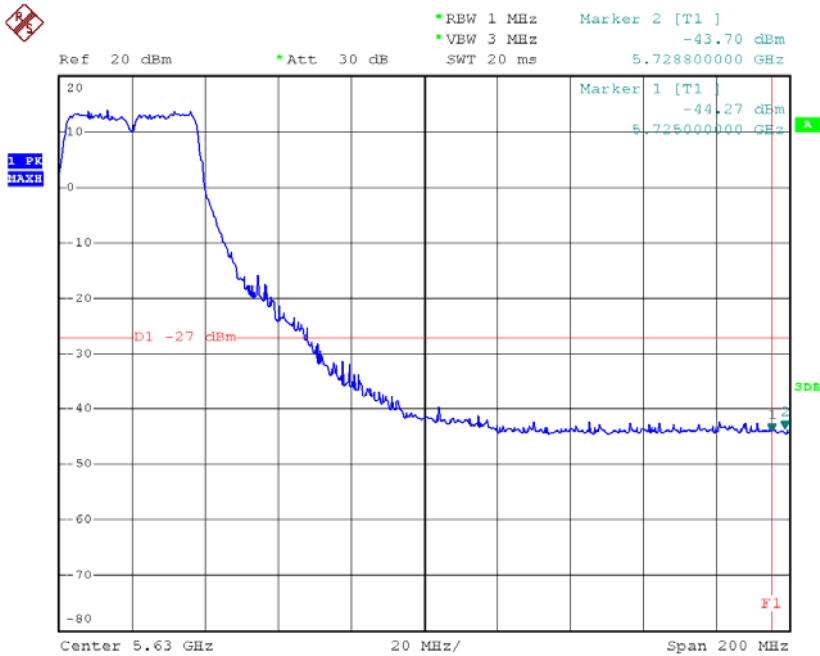


### TX mode CH54

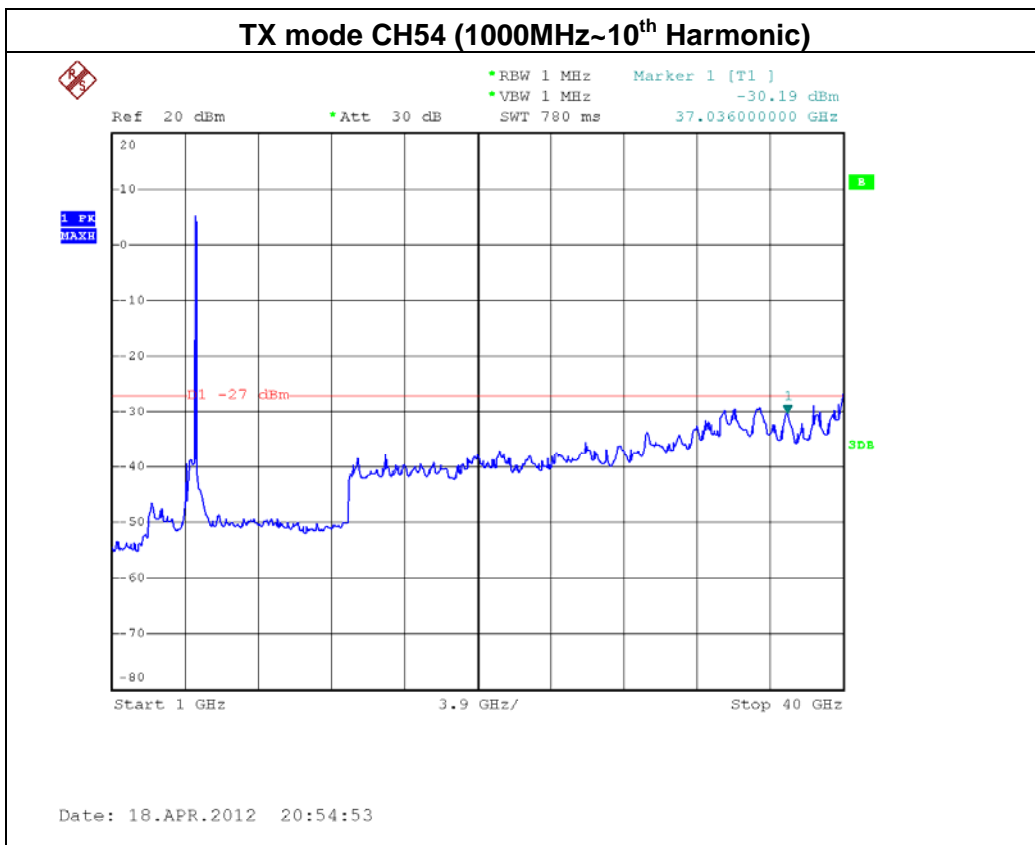
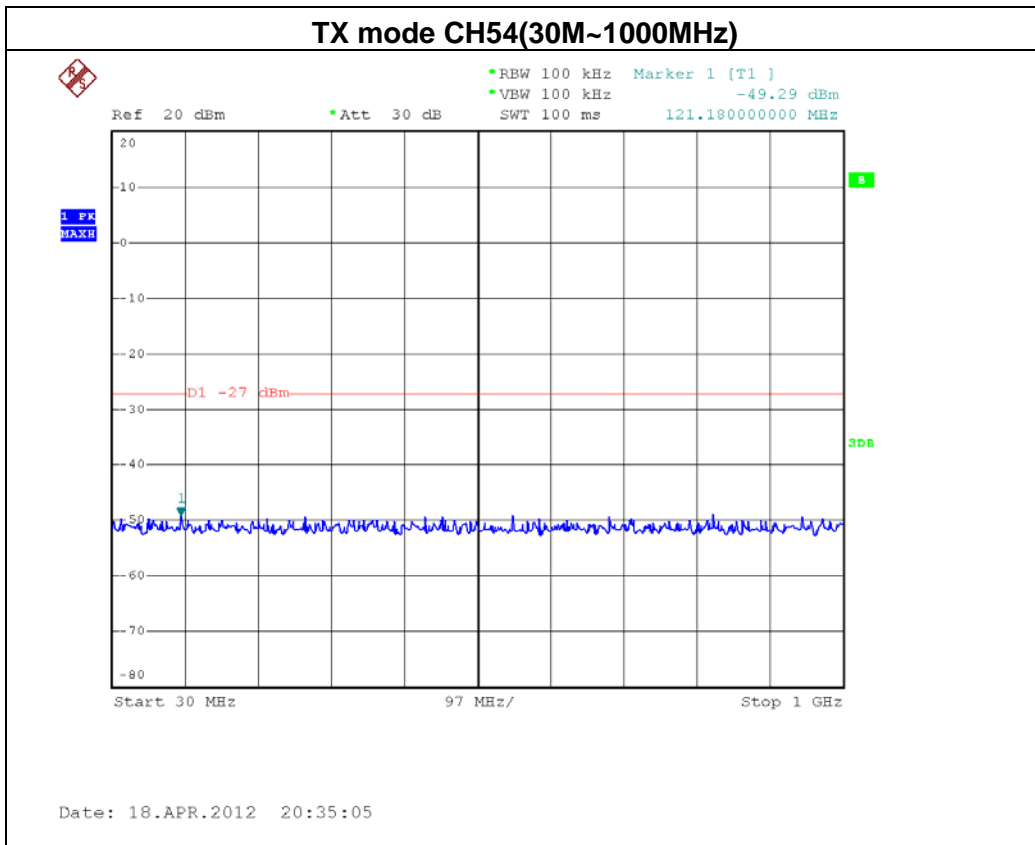


Date: 18.APR.2012 21:02:25

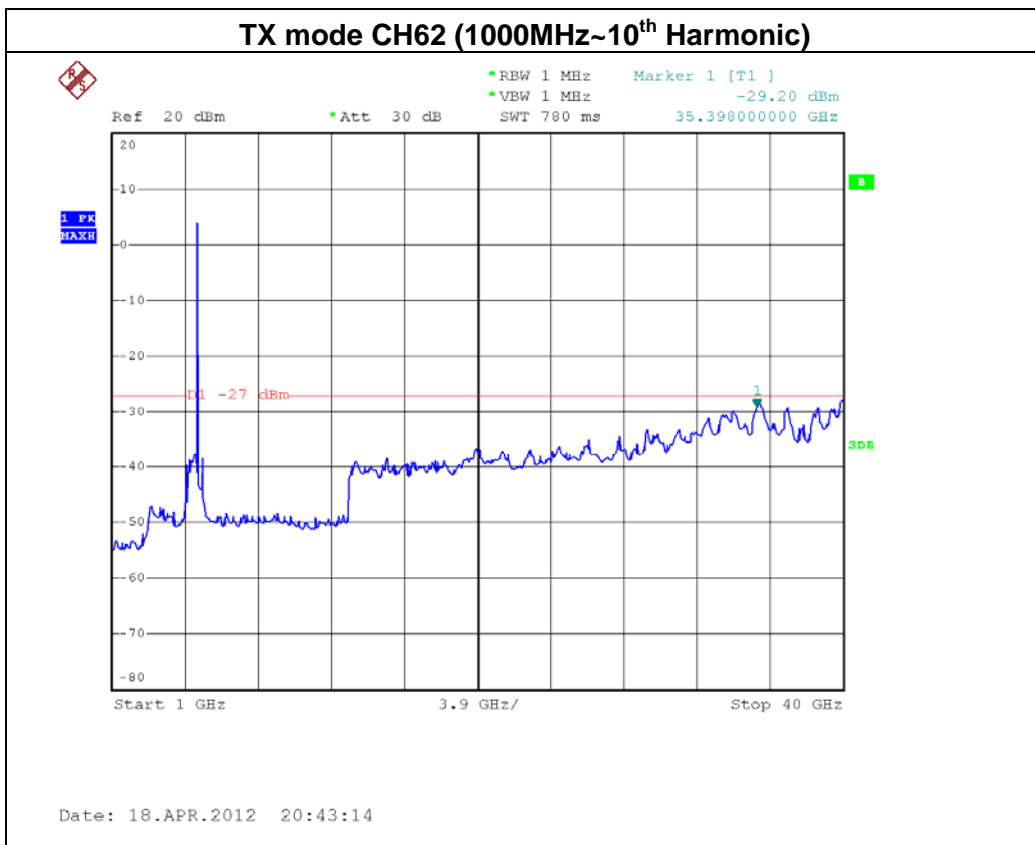
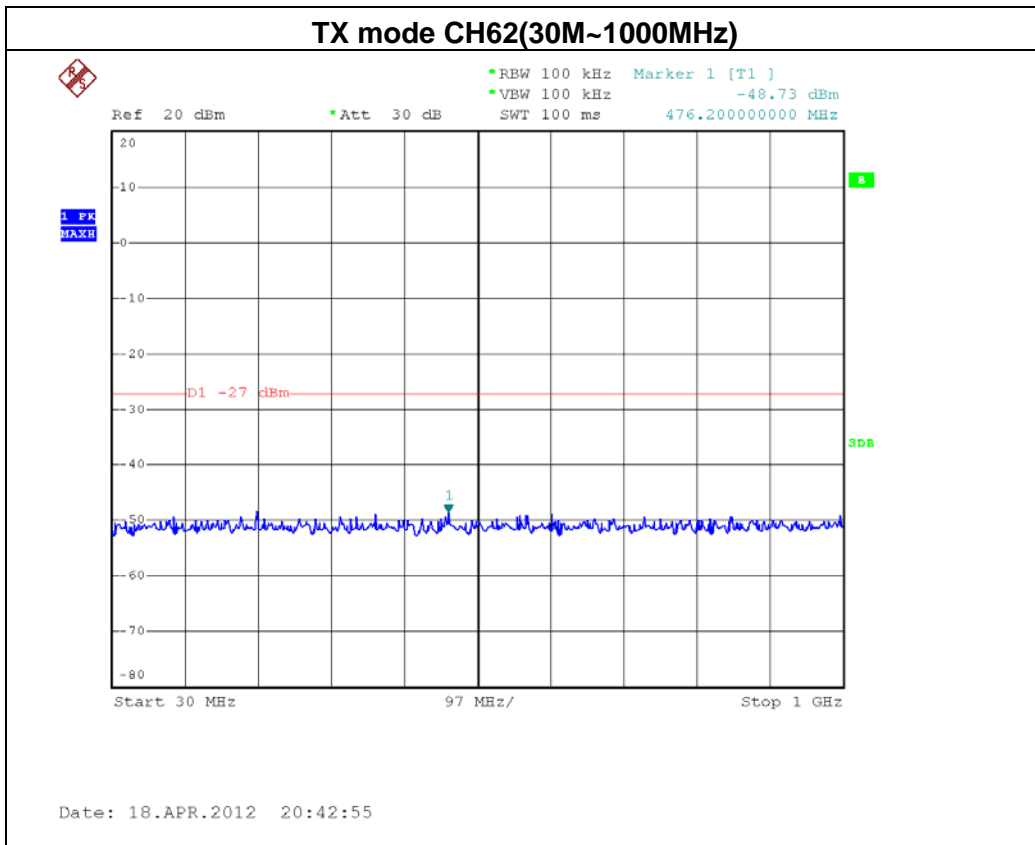
### TX mode CH62



Date: 22.JUN.2012 16:45:29







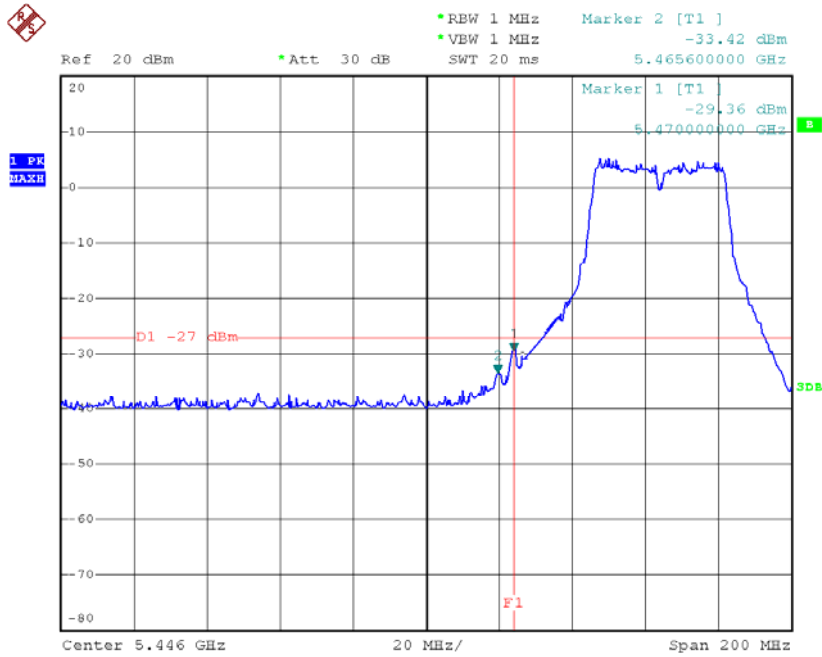


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode/ CH54, CH62 (ANT 2)		

Channel of Worst Data: CH62			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5150.00	-39.25	5400.00	-36.08
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

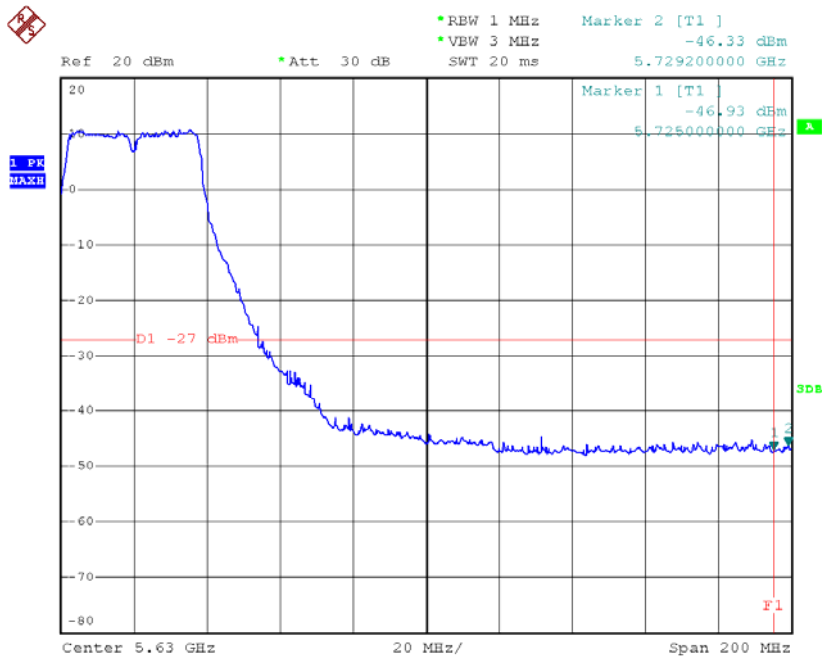


### TX mode CH54

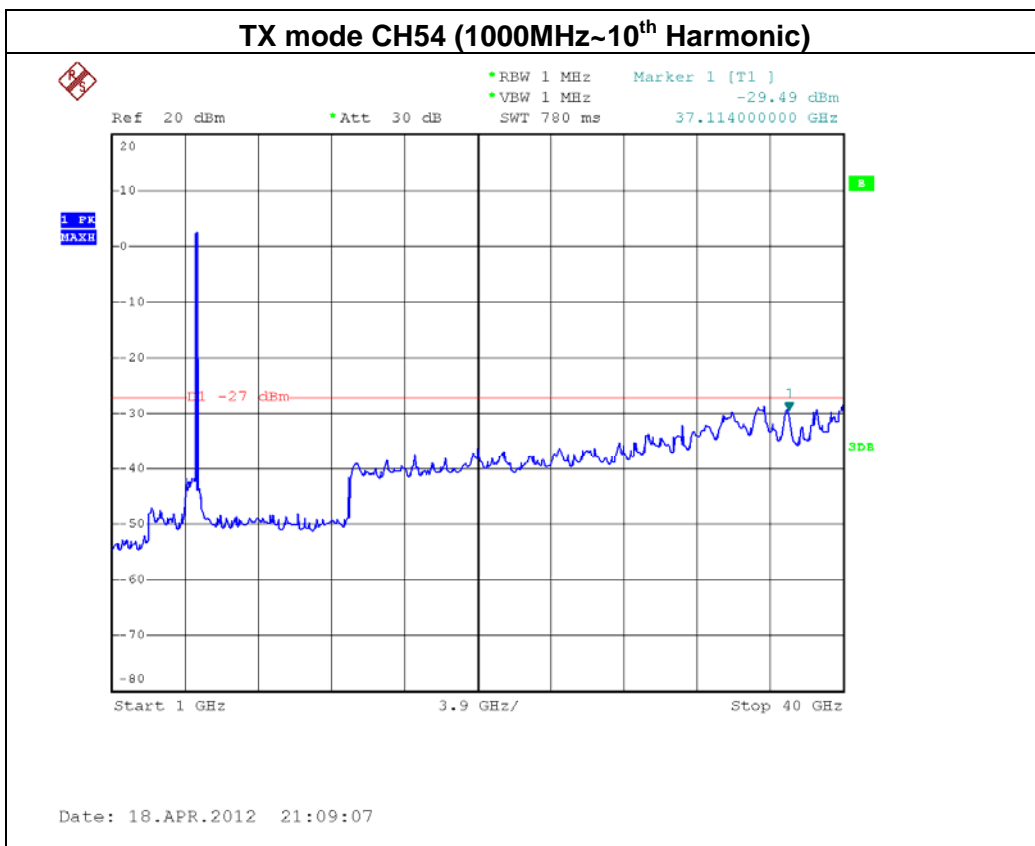
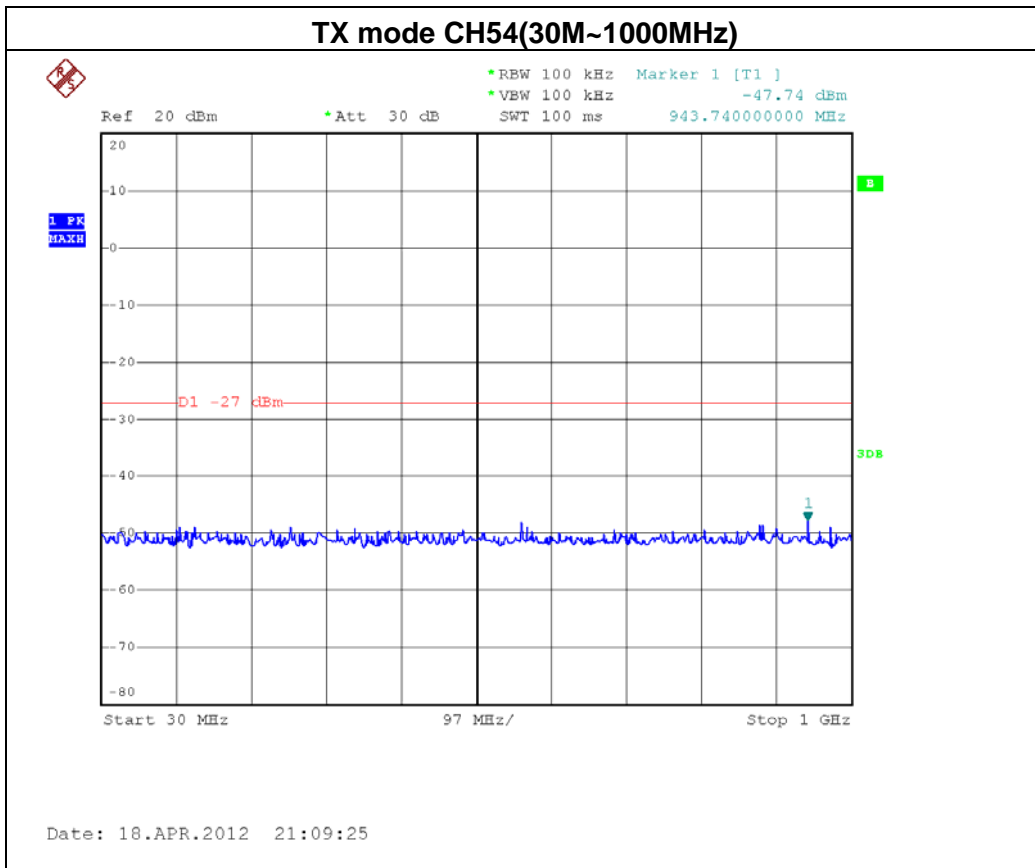


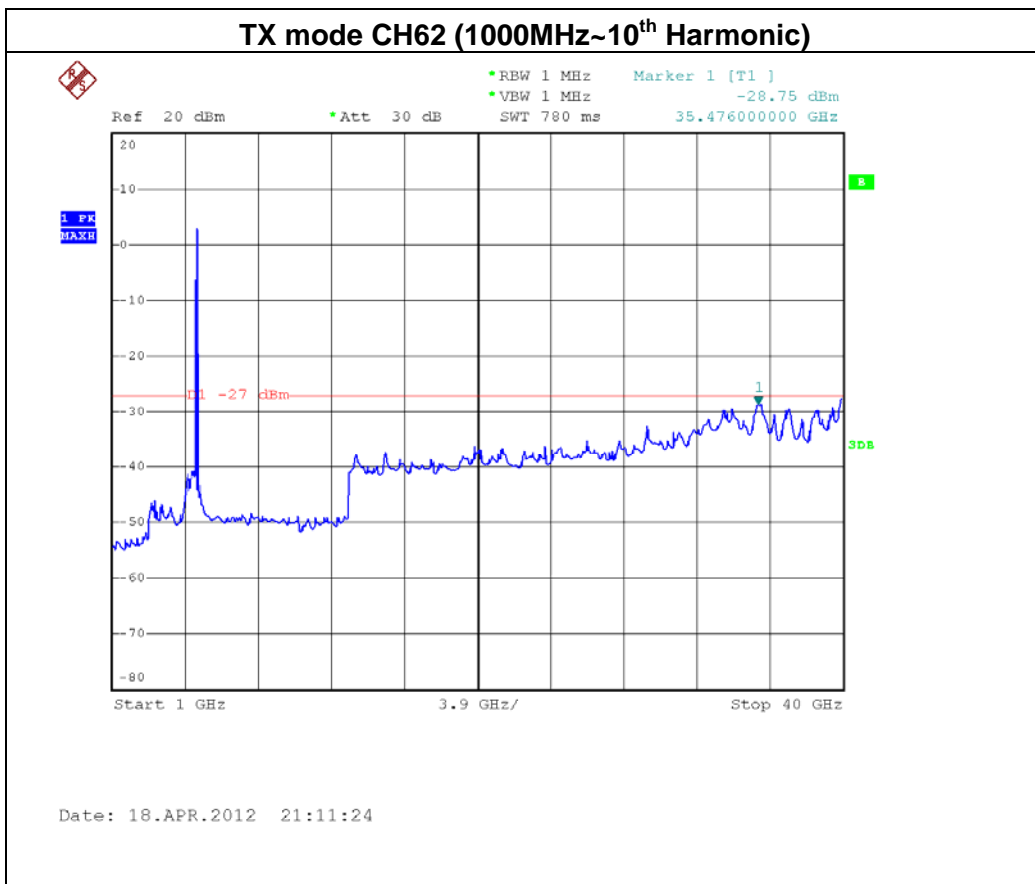
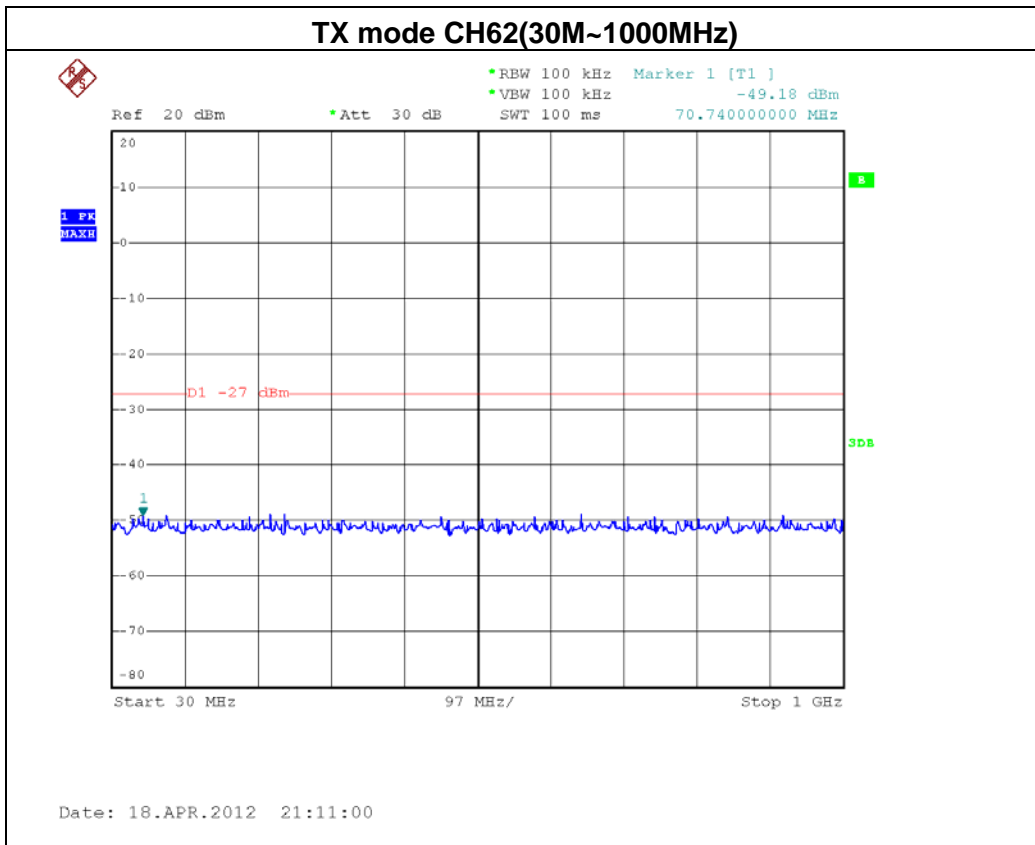
Date: 18.APR.2012 21:04:31

### TX mode CH62



Date: 22.JUN.2012 16:47:16





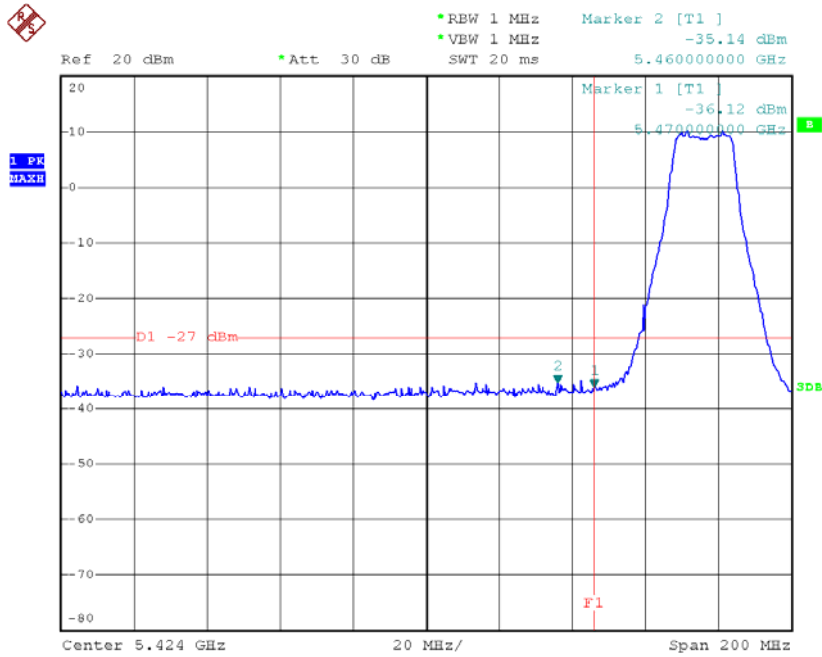


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX A Mode/ CH100, CH112 , CH140		

Channel of Worst Data: CH100			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5460.00	-35.14	5725.00	-35.24
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

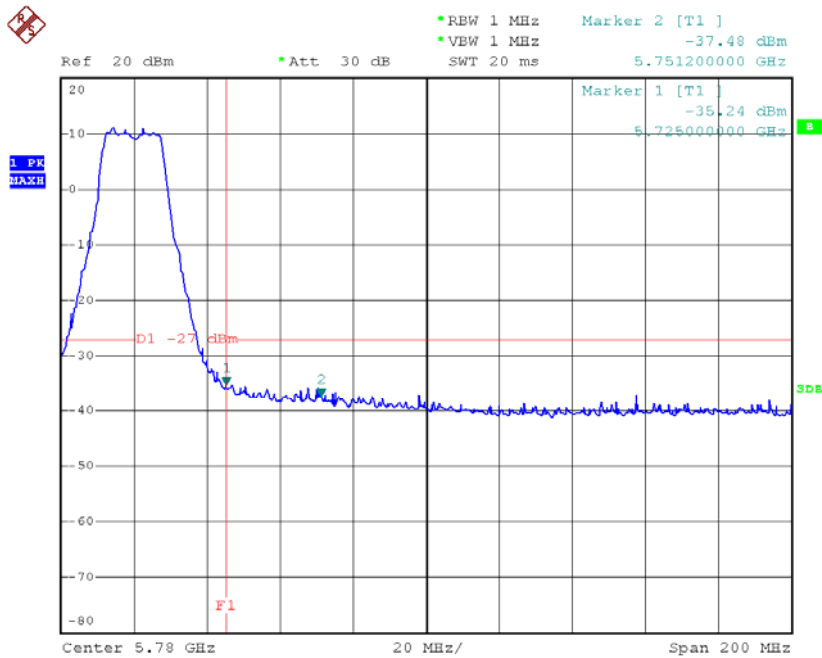


### TX mode CH100

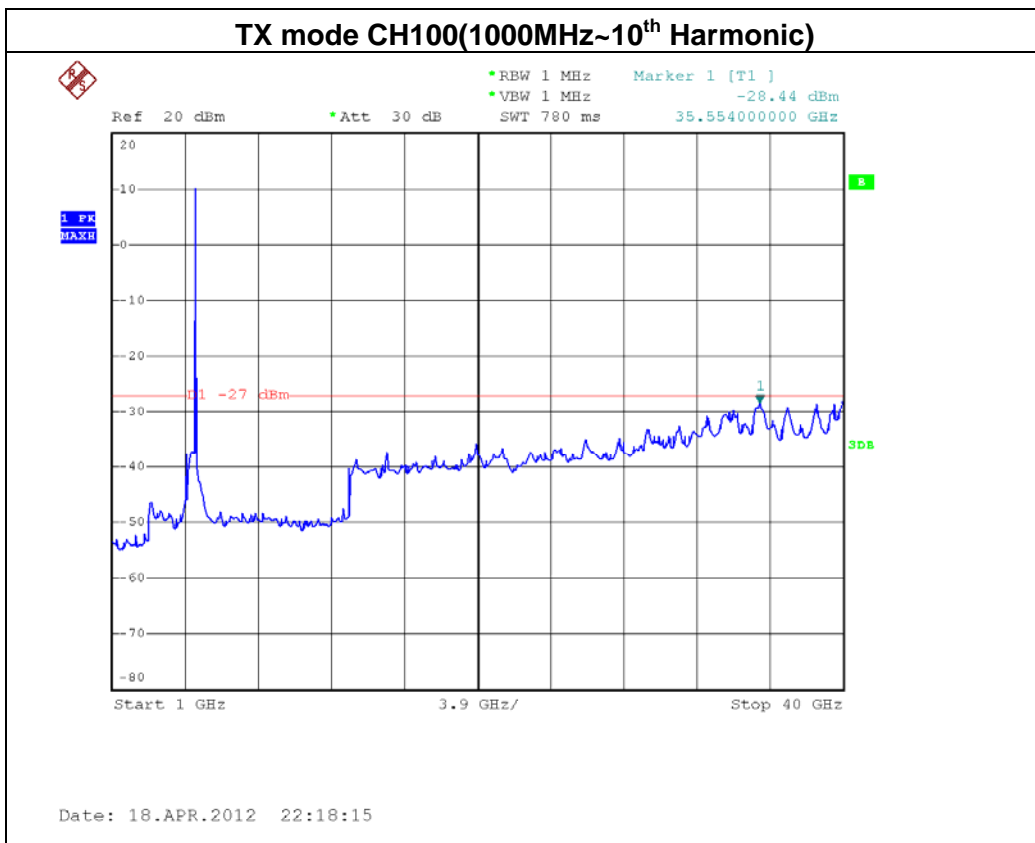
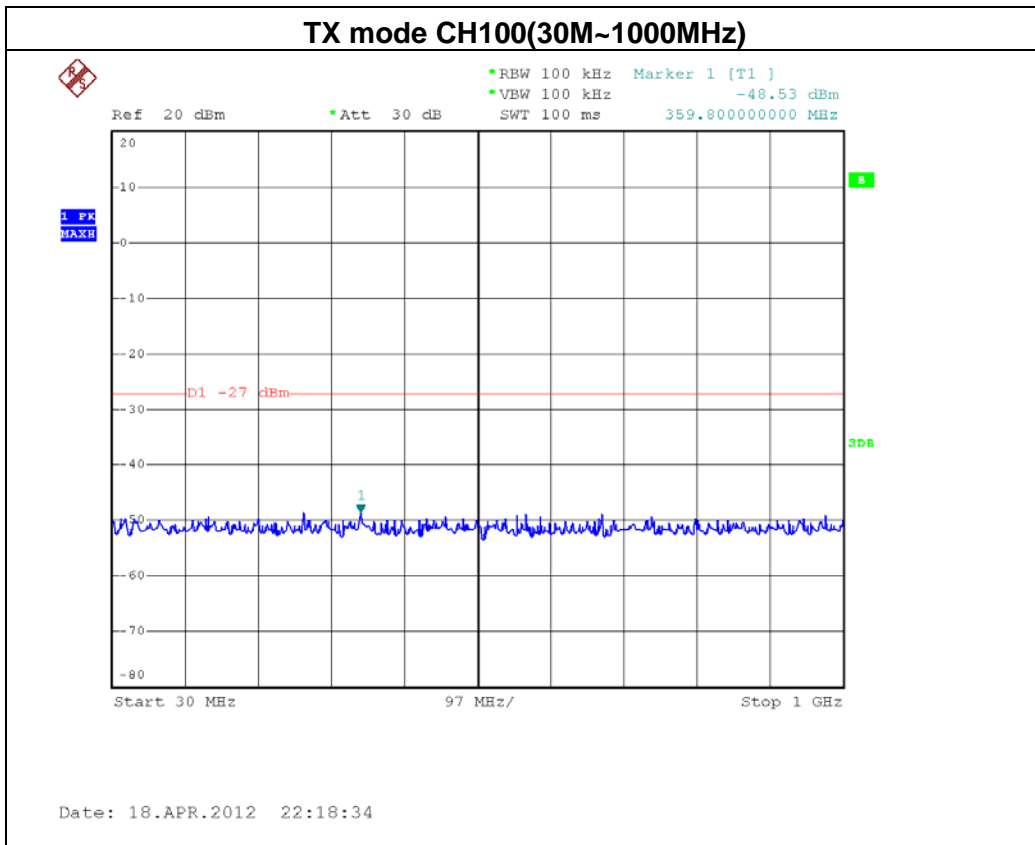


Date: 18.APR.2012 22:21:33

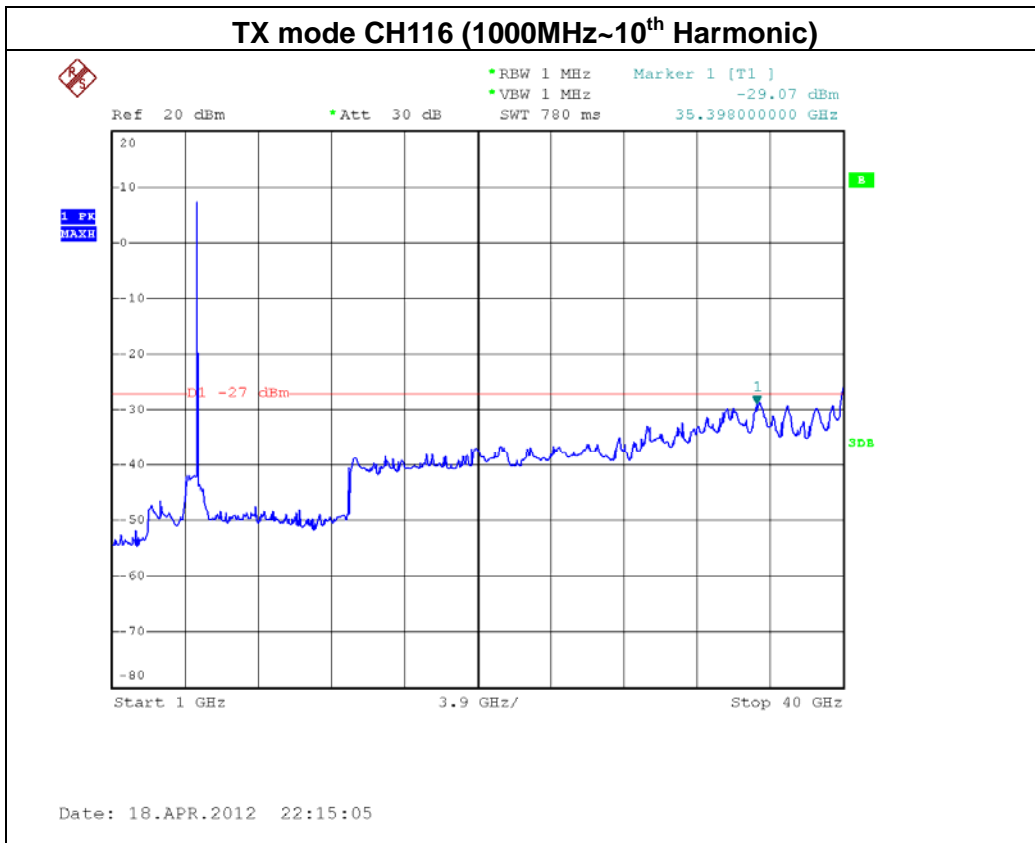
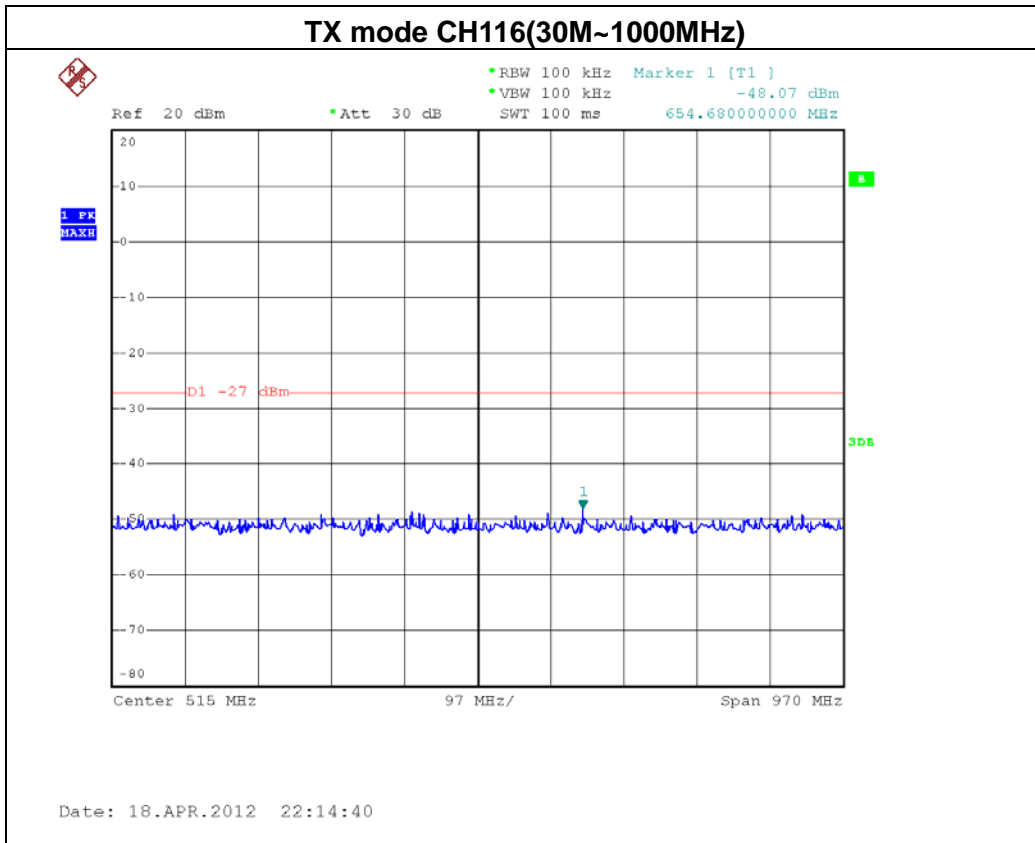
### TX mode CH140

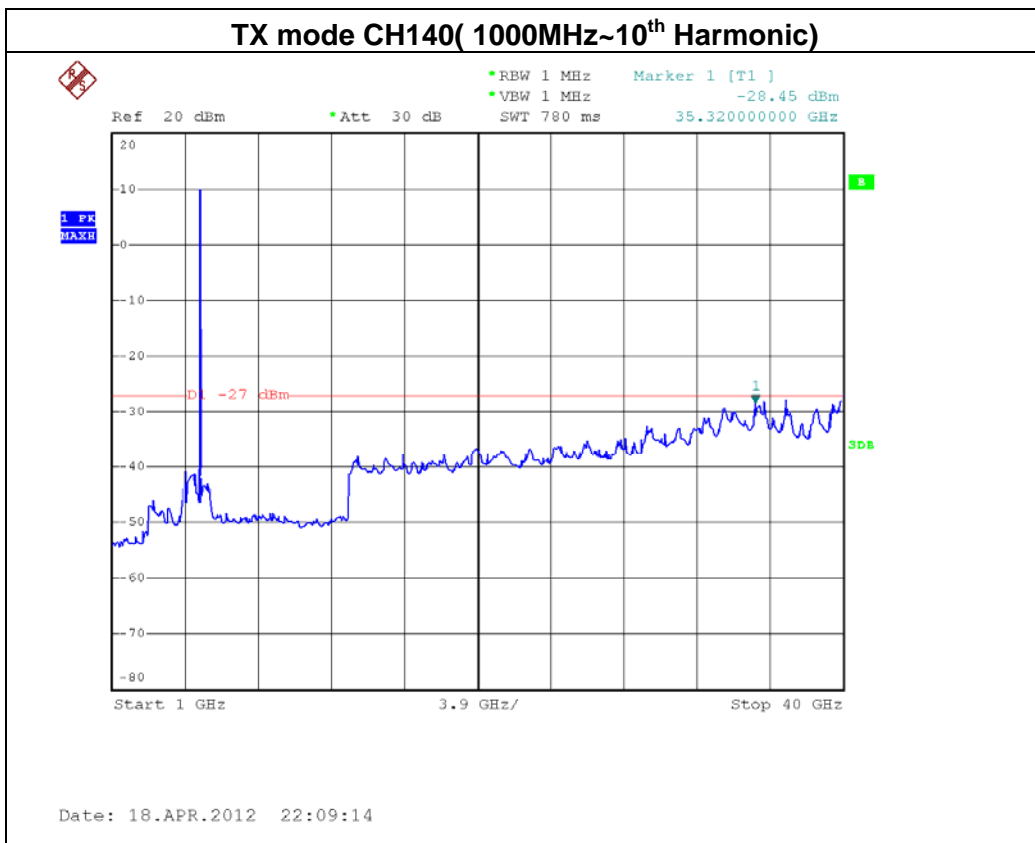
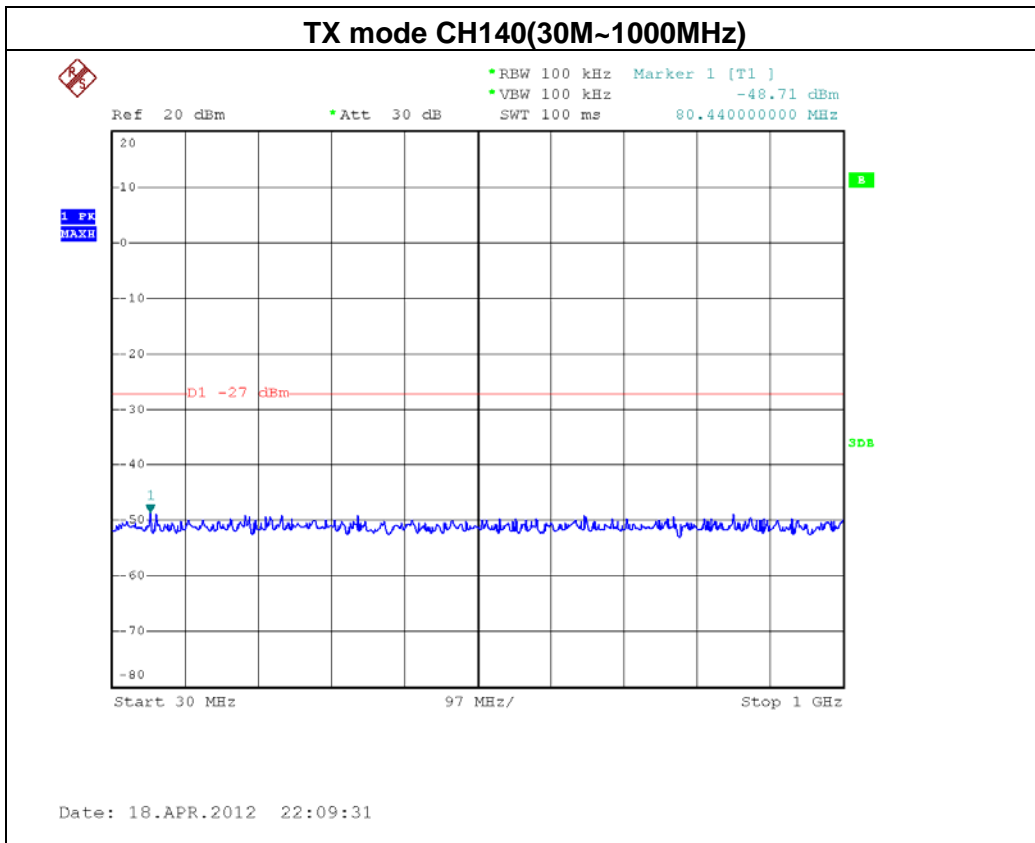


Date: 18.APR.2012 22:08:26









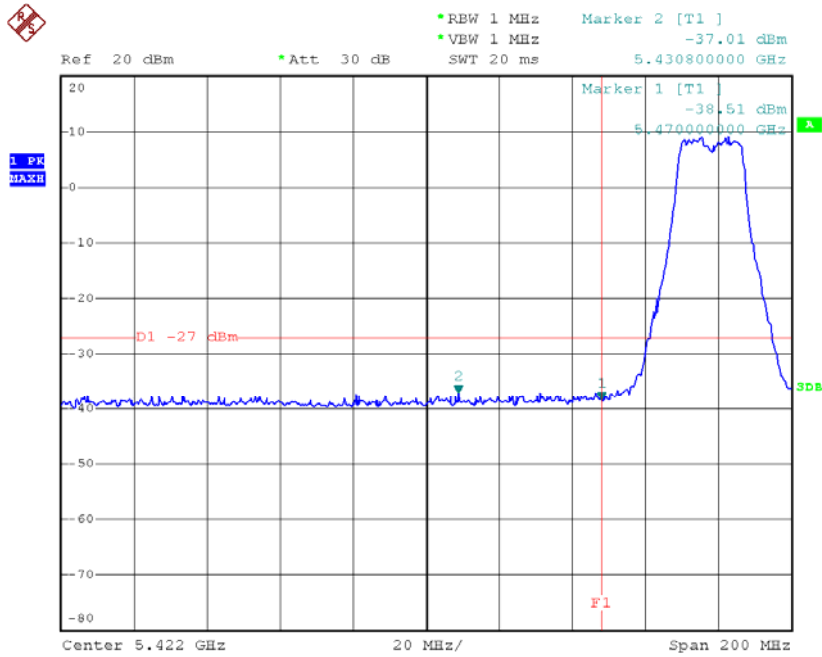


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode/ CH100, CH112 , CH140 (ANT 1)		

Channel of Worst Data: CH100			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5430.80	-37.01	5725.00	-42.08
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

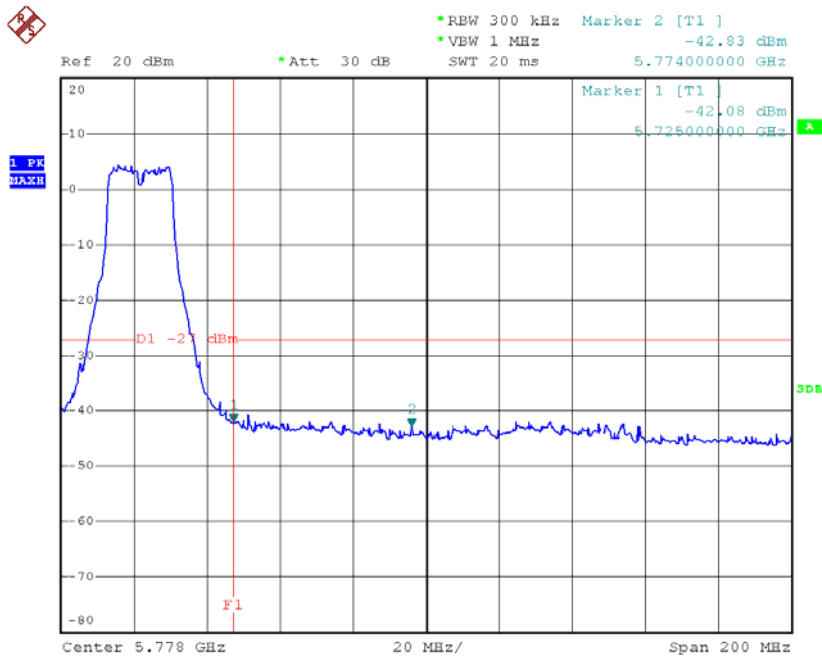


### TX mode CH100

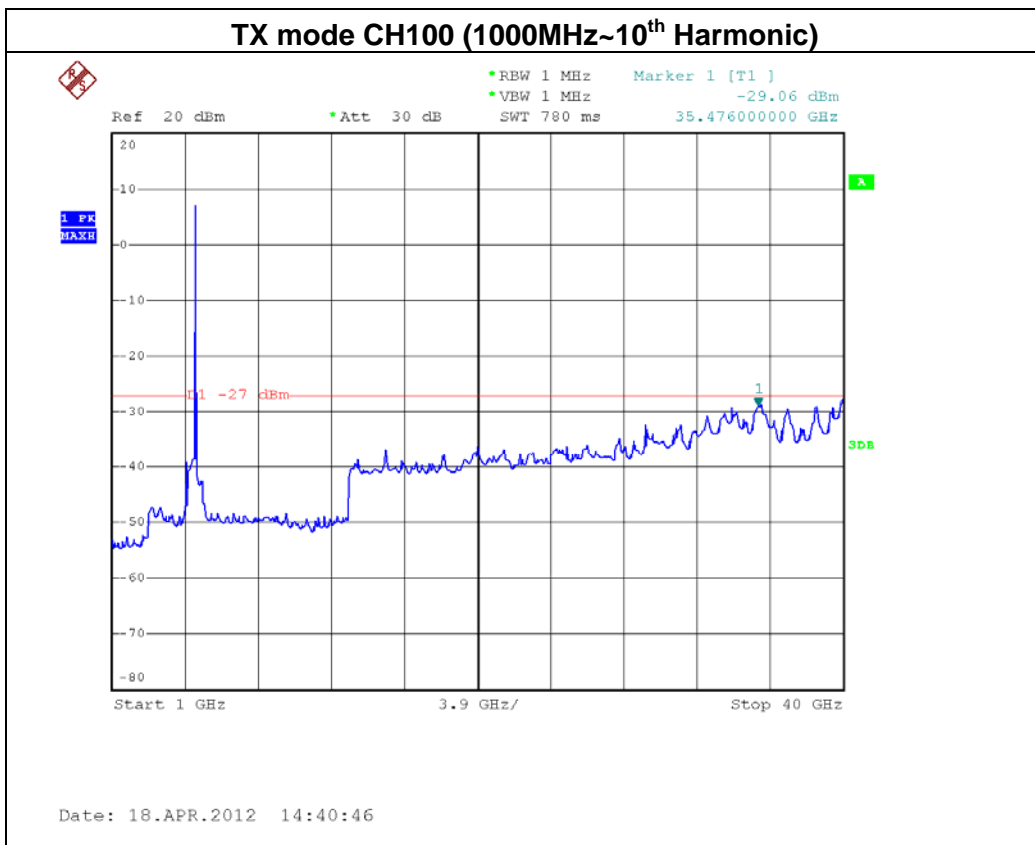
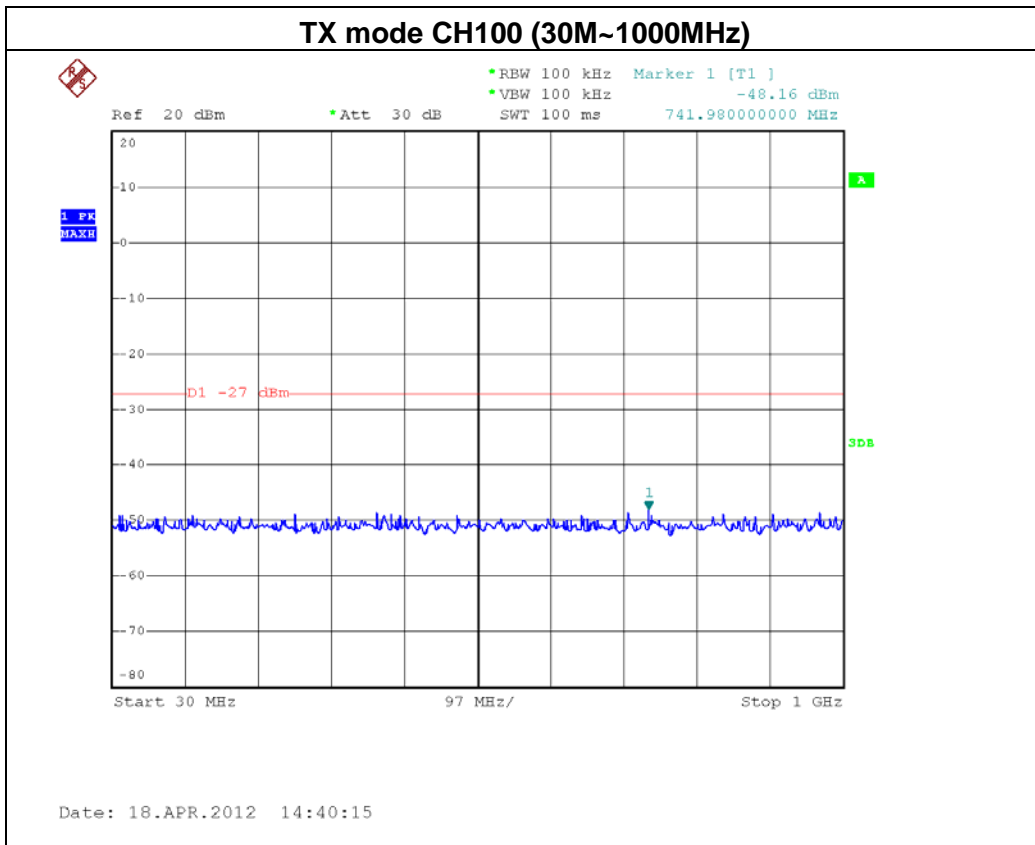


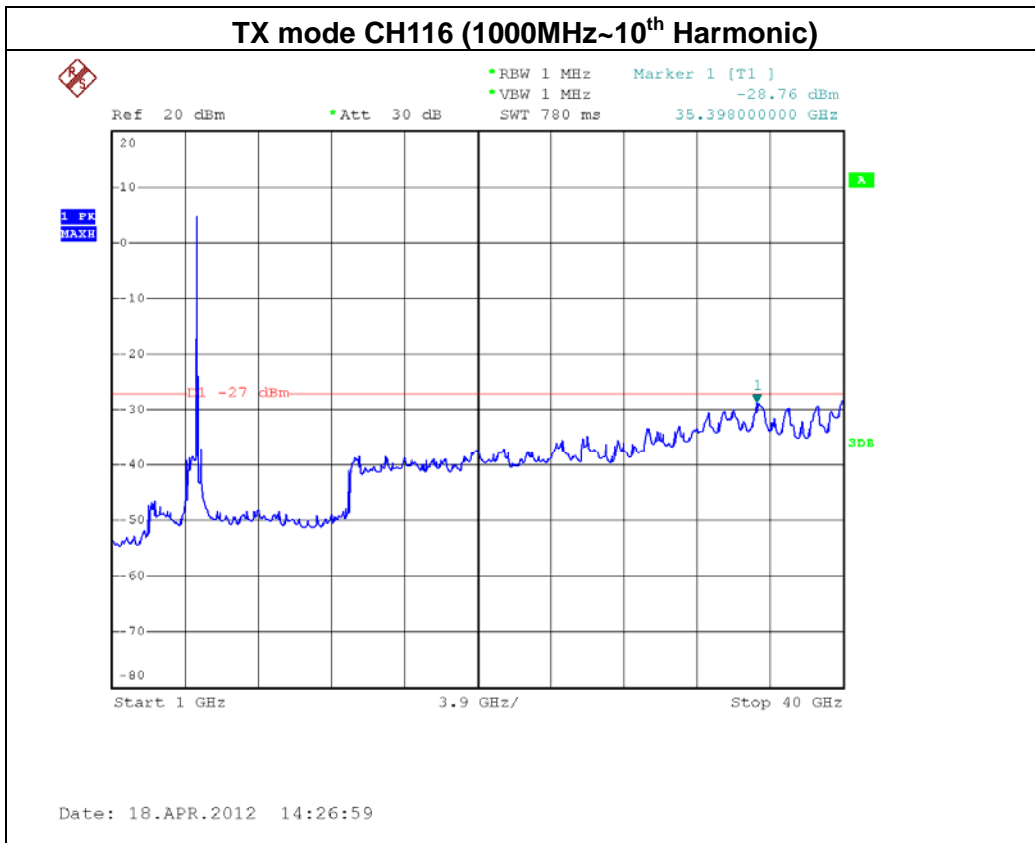
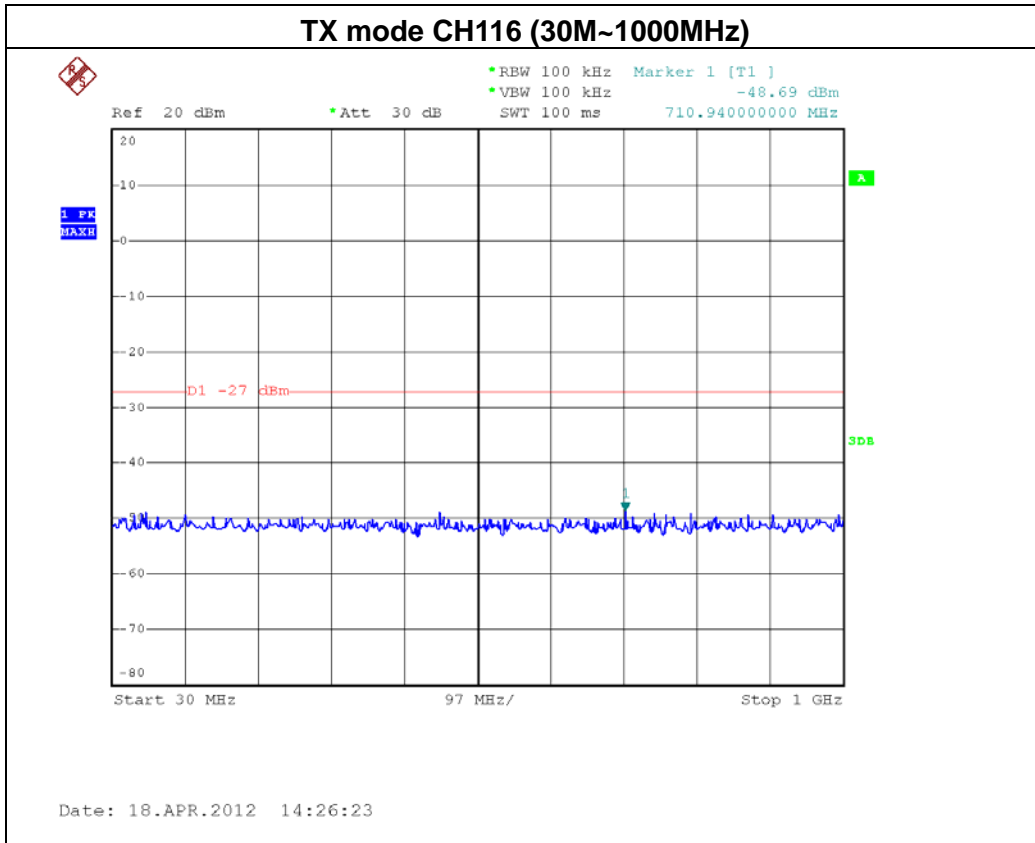
Date: 18.APR.2012 14:39:08

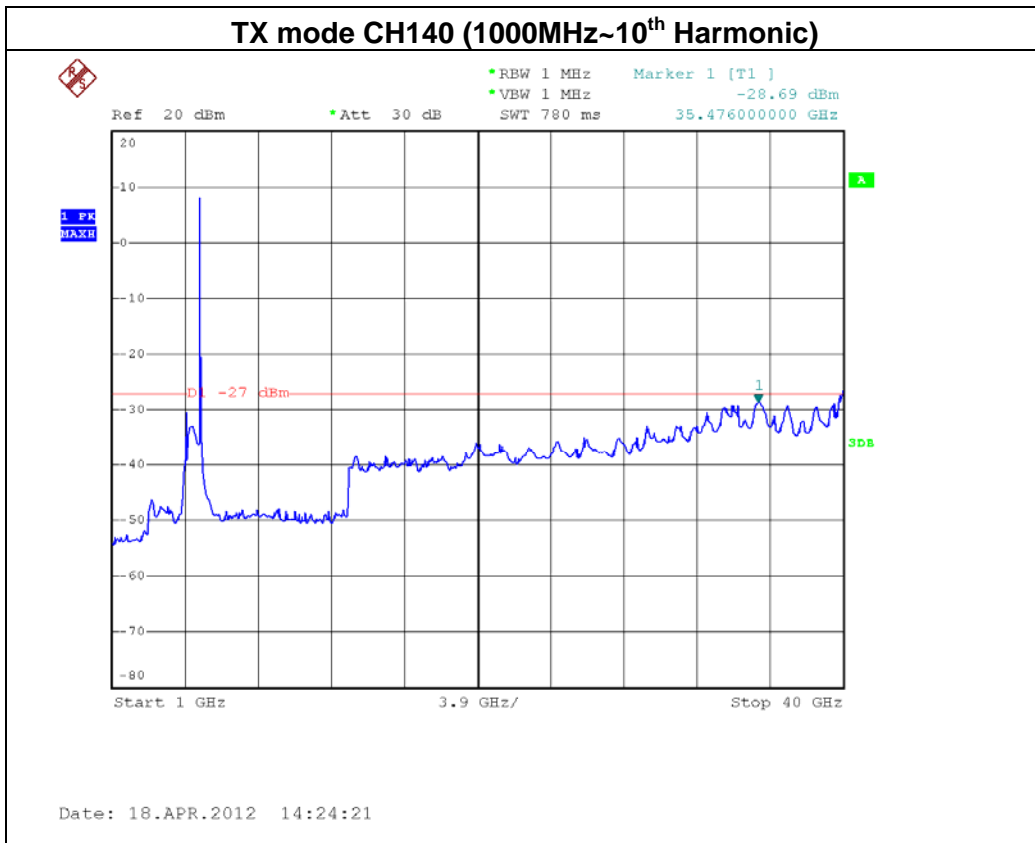
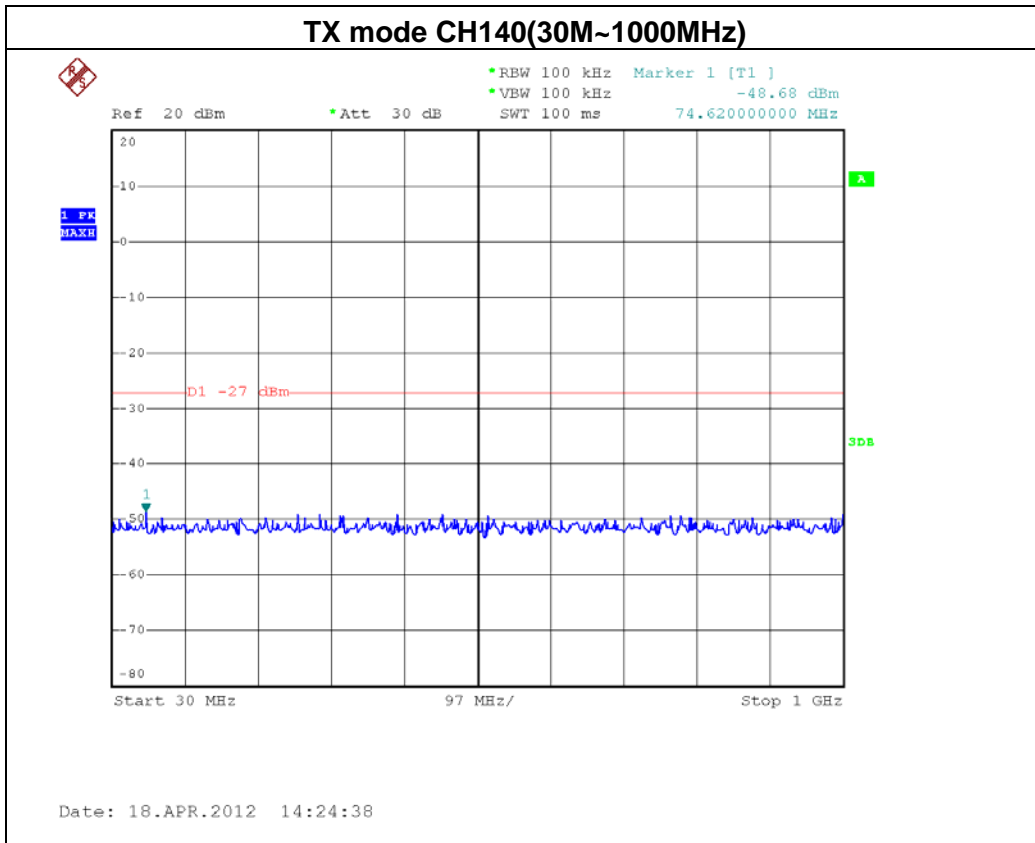
### TX mode CH140



Date: 18.APR.2012 14:19:10









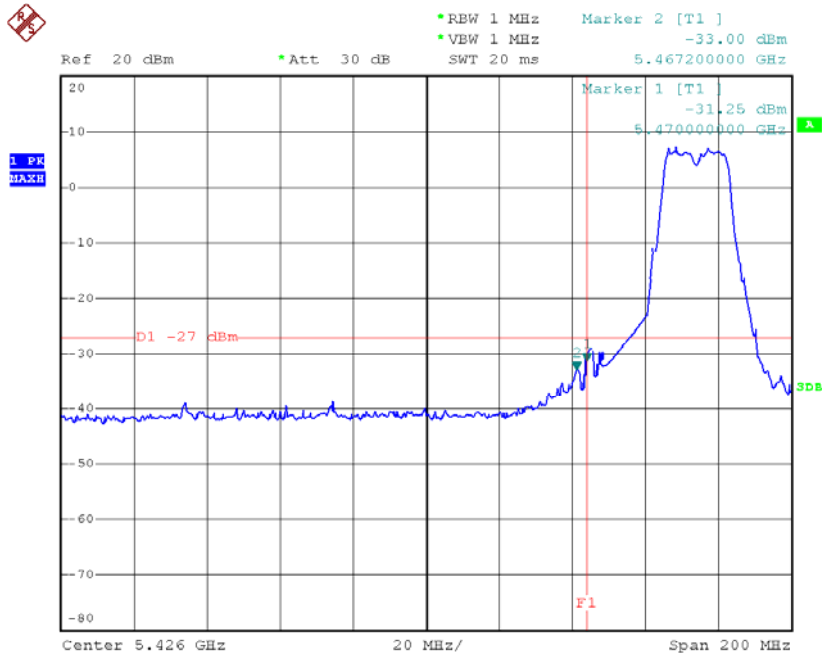
EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode/ CH100, CH112 , CH140 (ANT 2)		

Channel of Worst Data: CH100			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5470.00	-31.25	5725.00	-40.30
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			



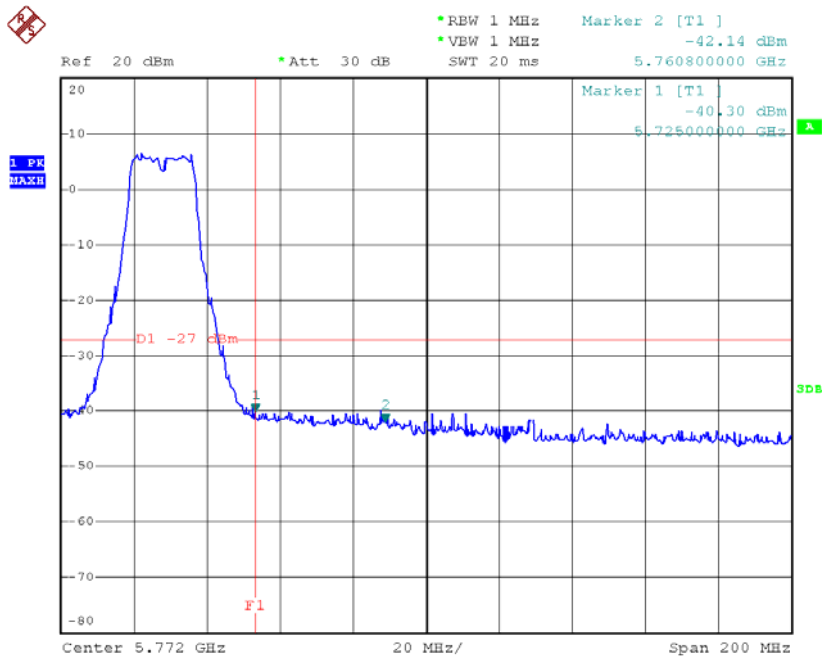


### TX mode CH100

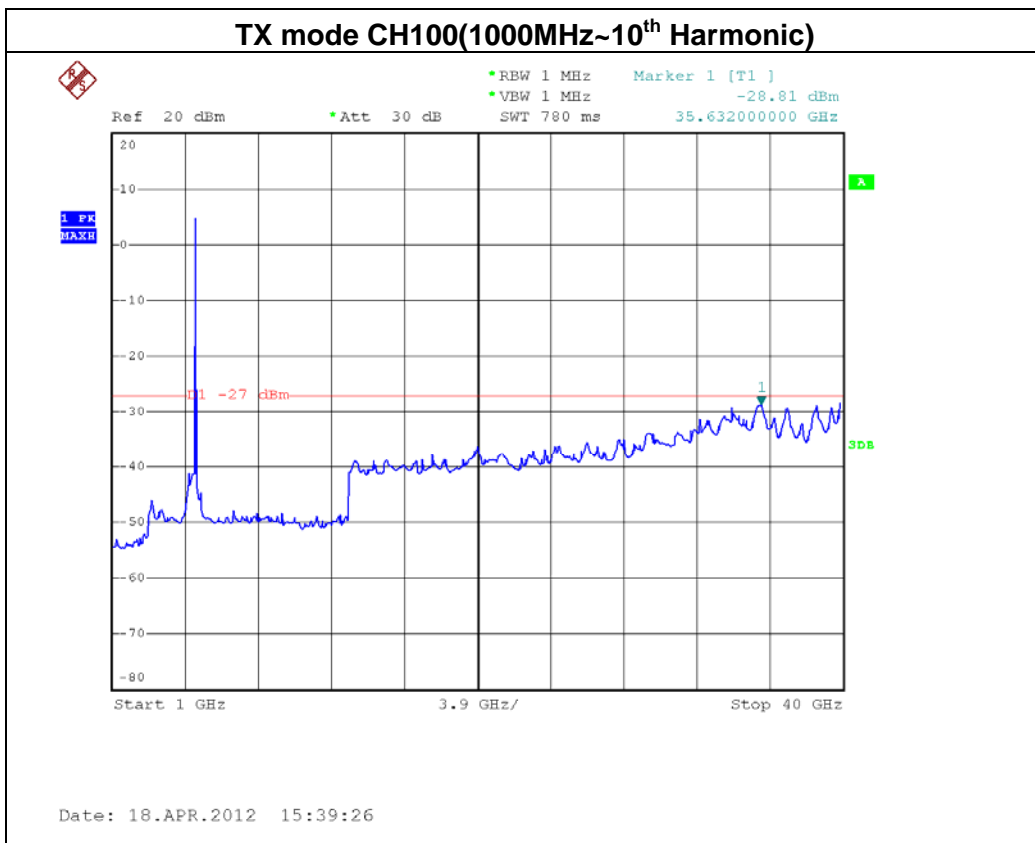
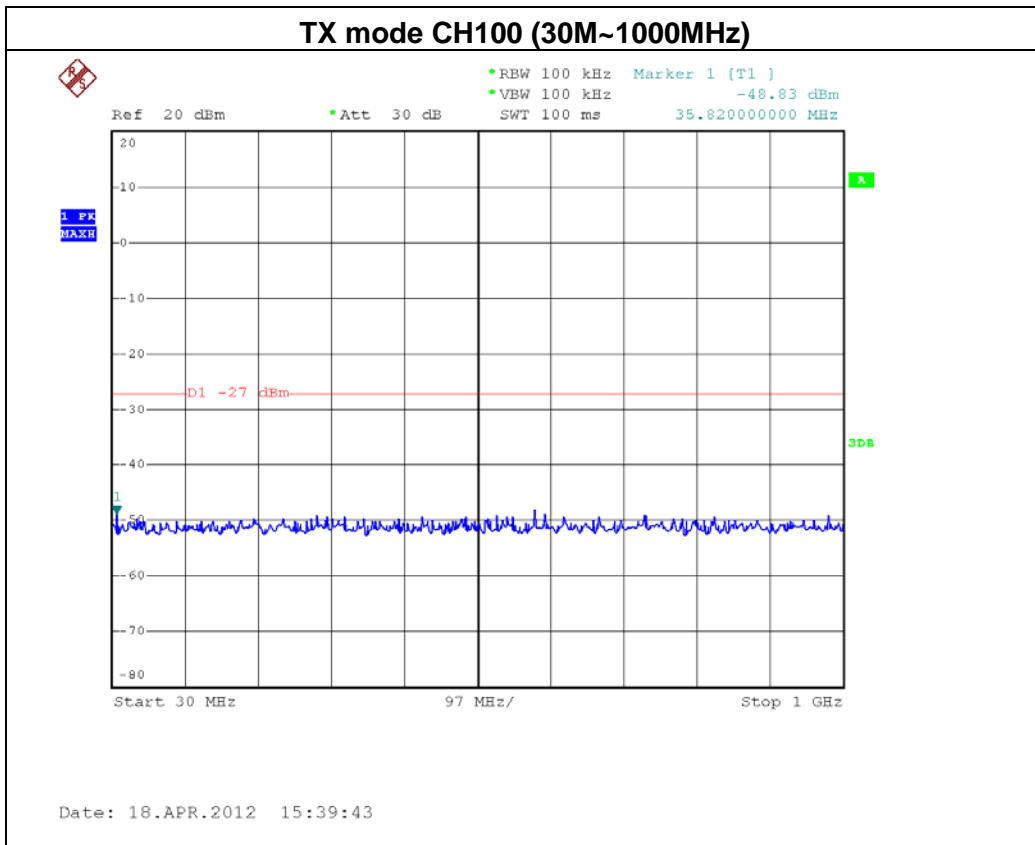


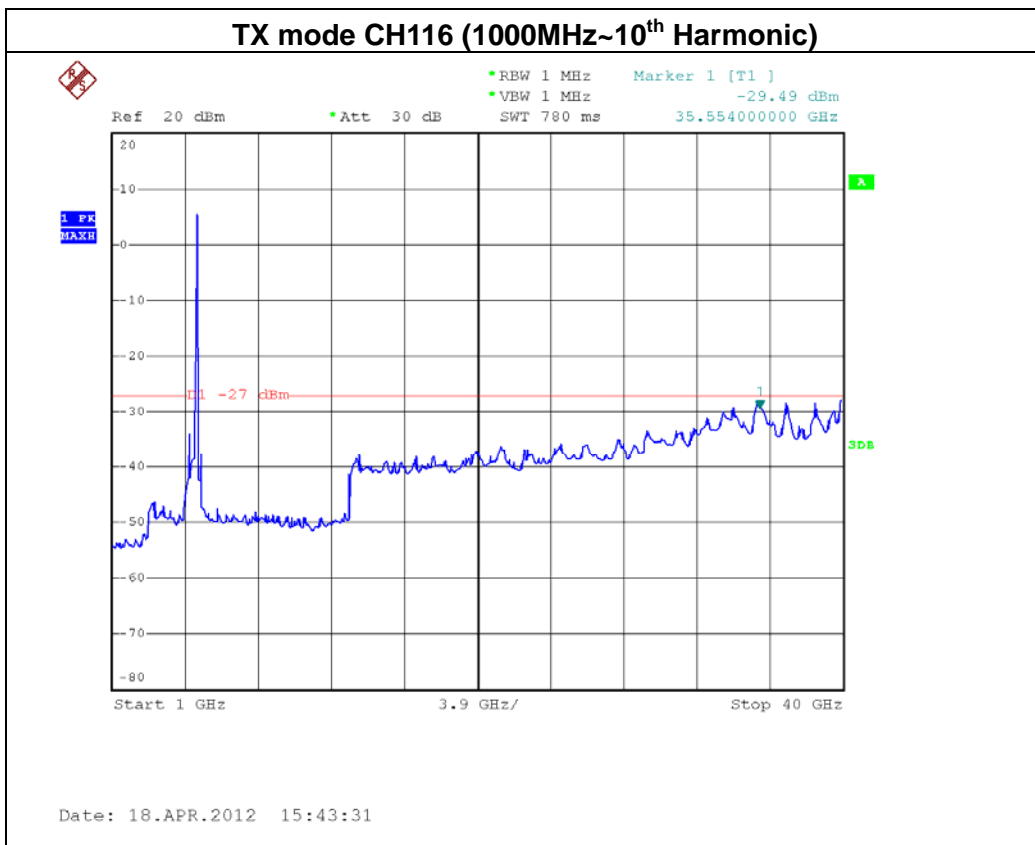
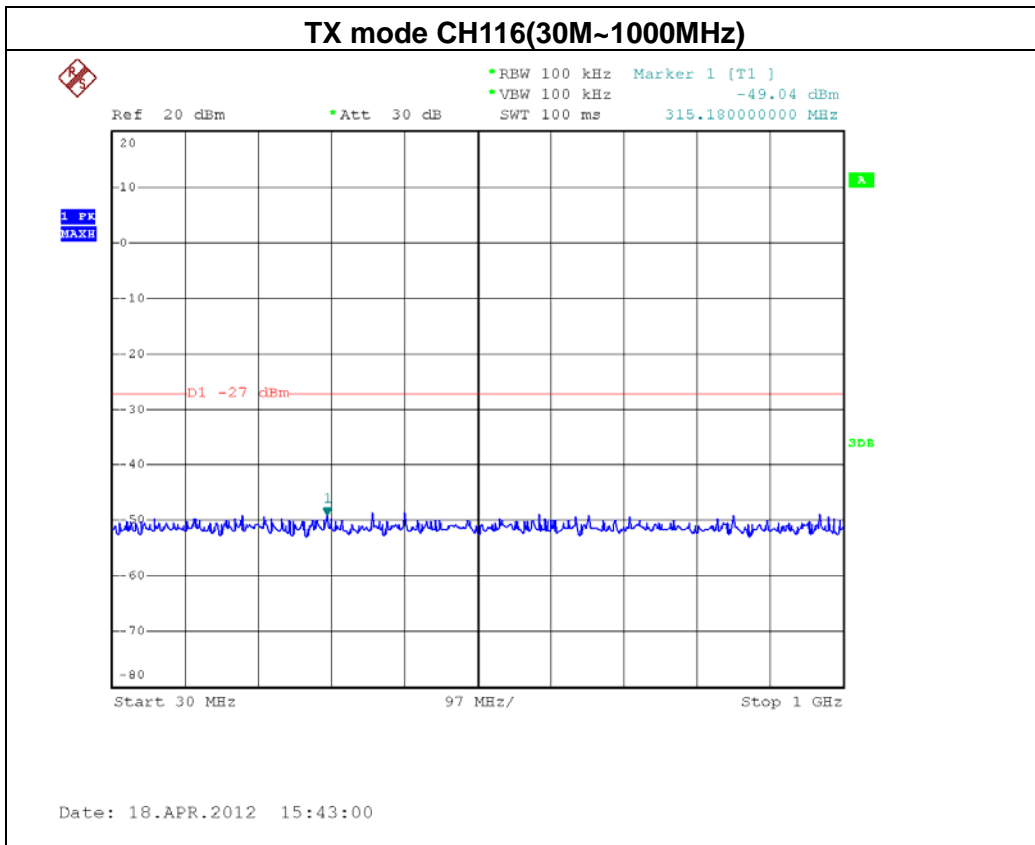
Date: 18.APR.2012 15:36:50

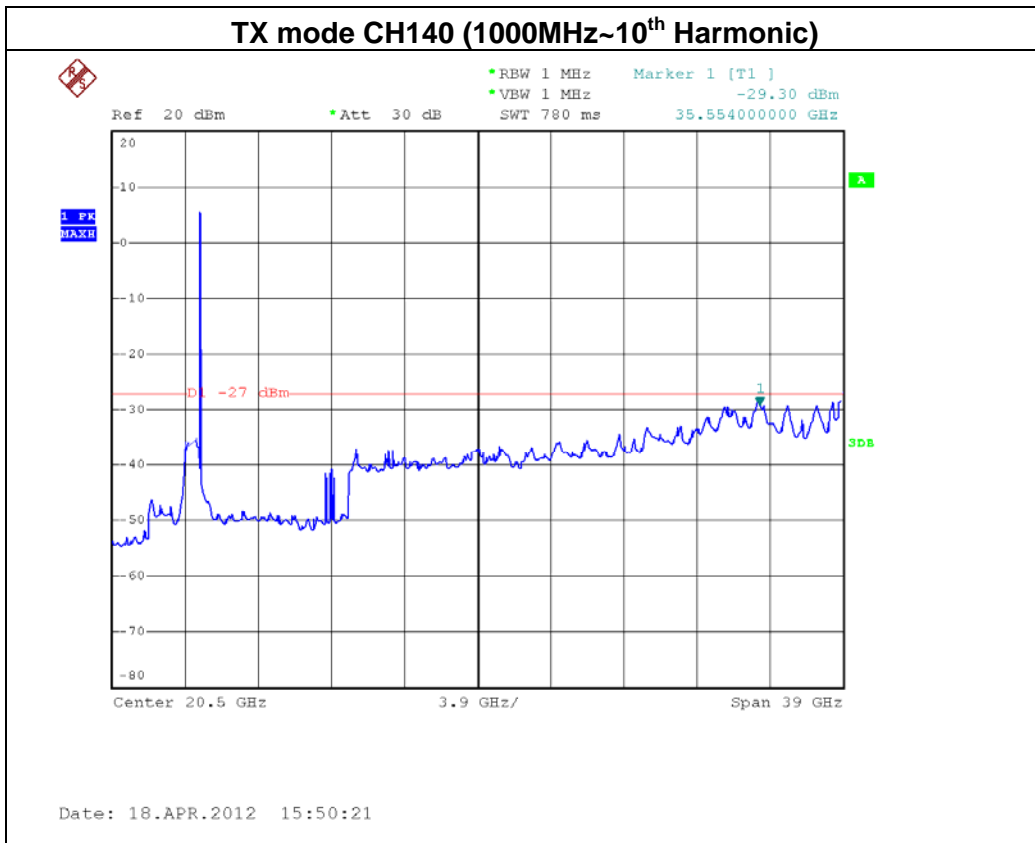
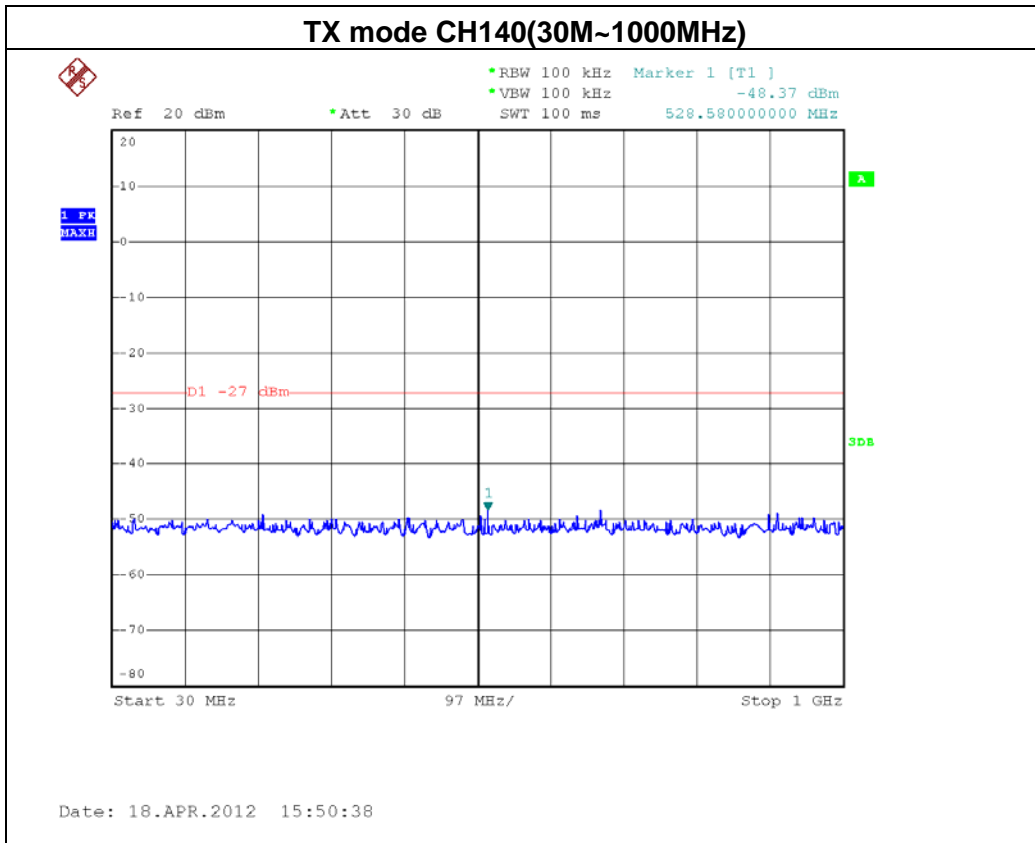
### TX mode CH140



Date: 18.APR.2012 15:52:23







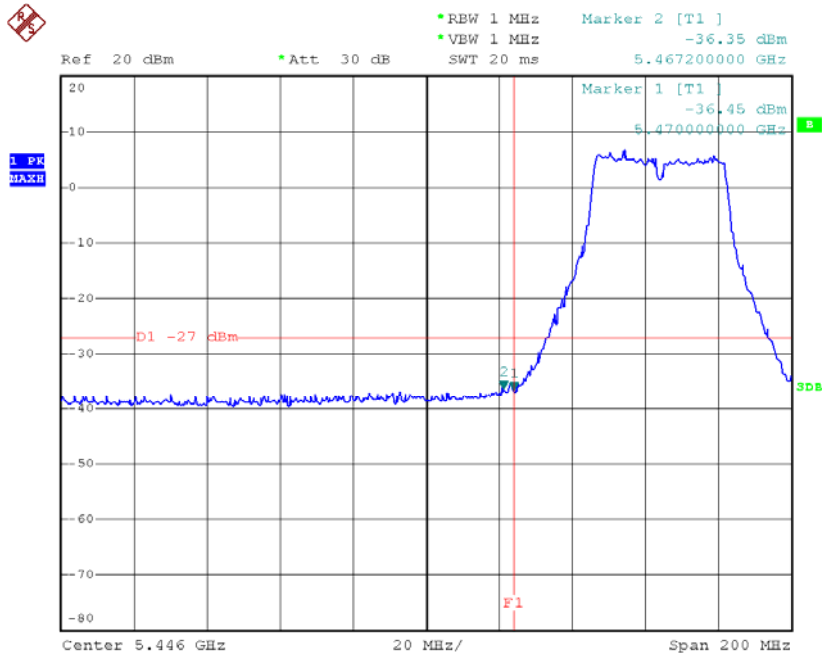


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode/ CH102, CH110 (ANT 1)		

Channel of Worst Data: CH102			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5467.20	-36.35	5728.80	-43.70
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

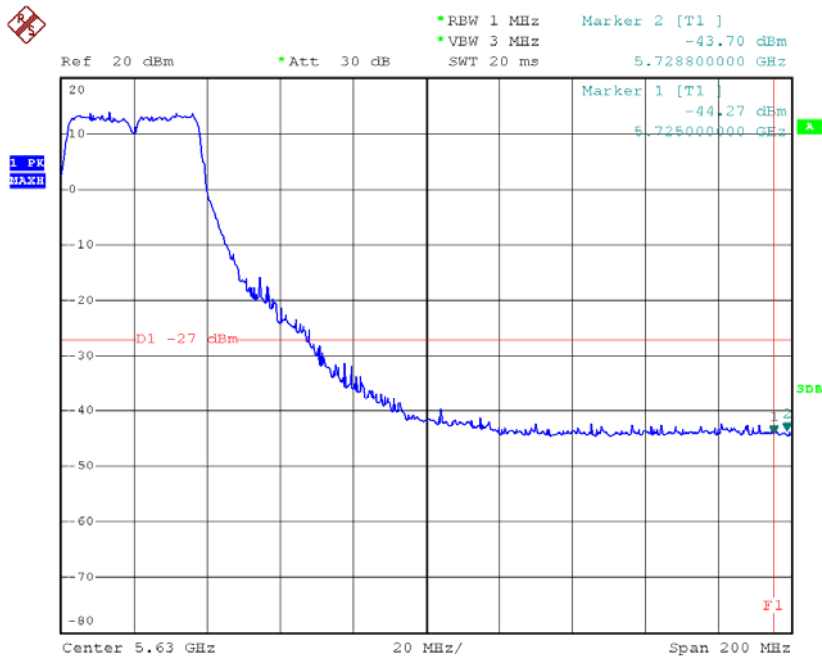


### TX mode CH102

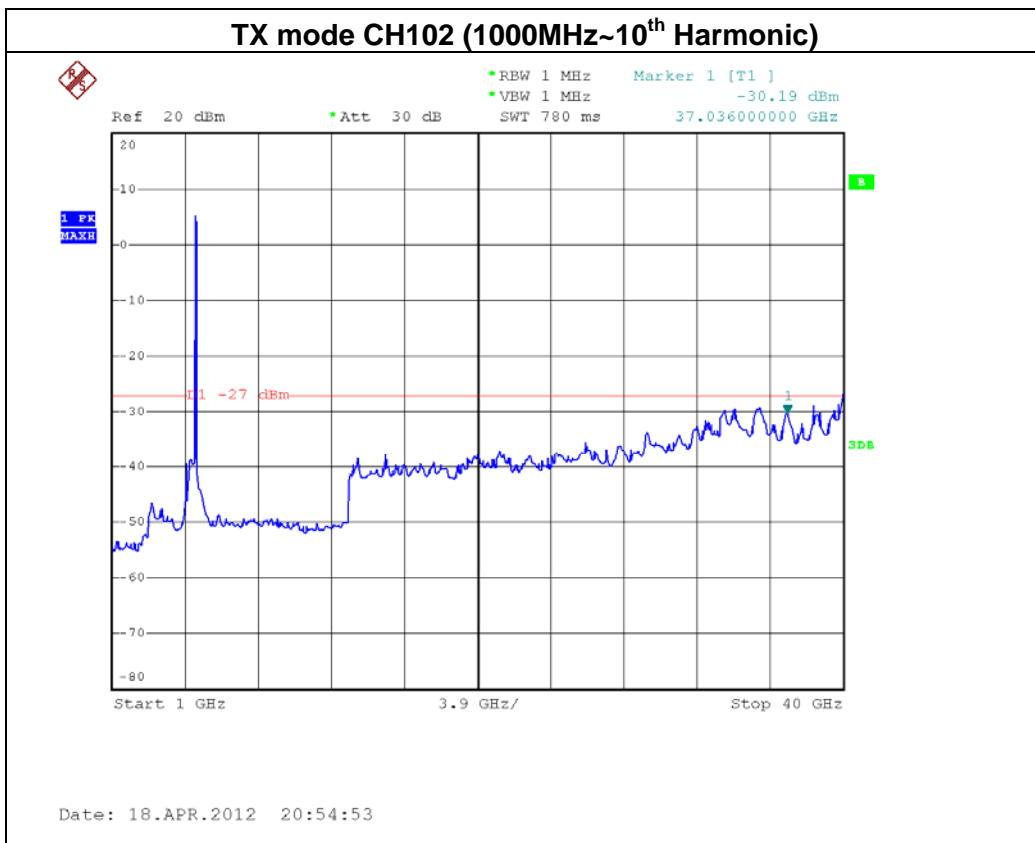
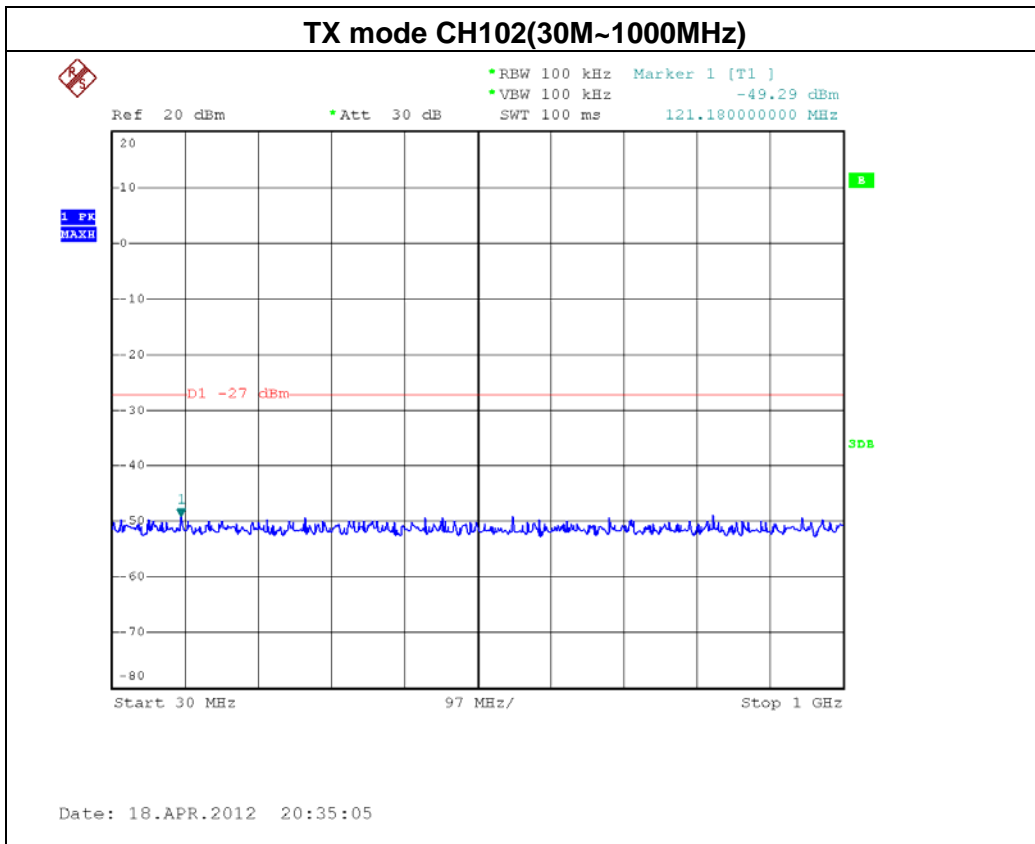


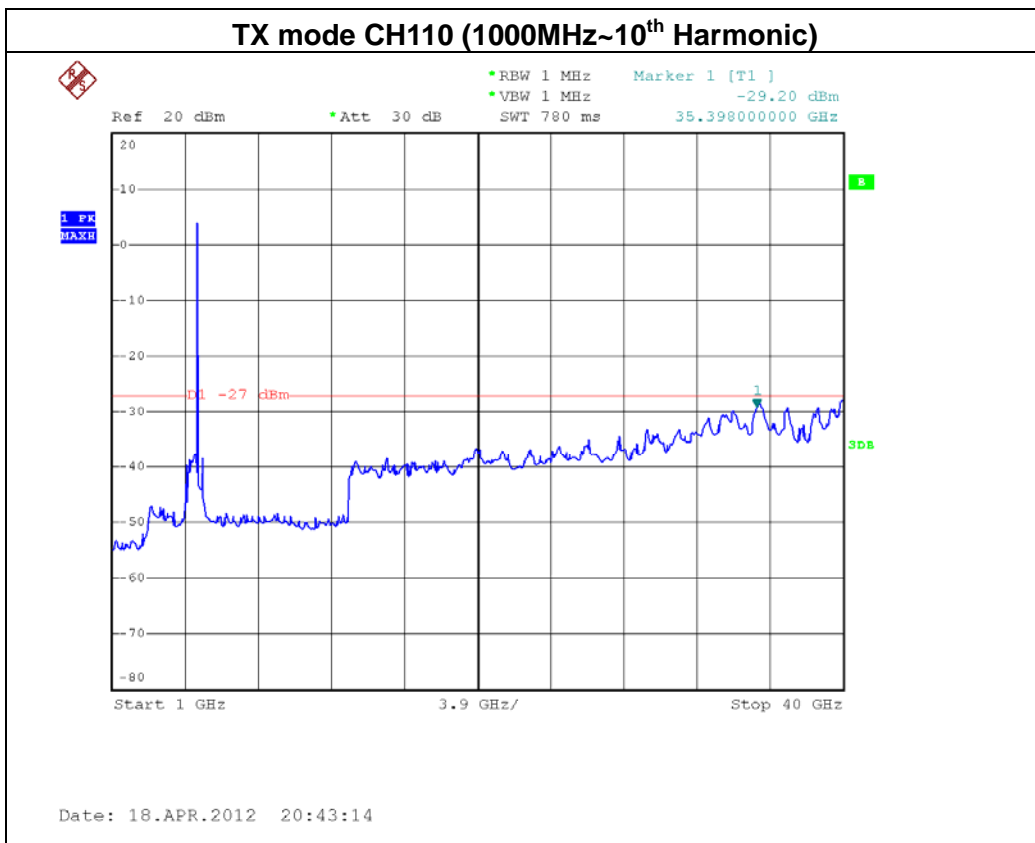
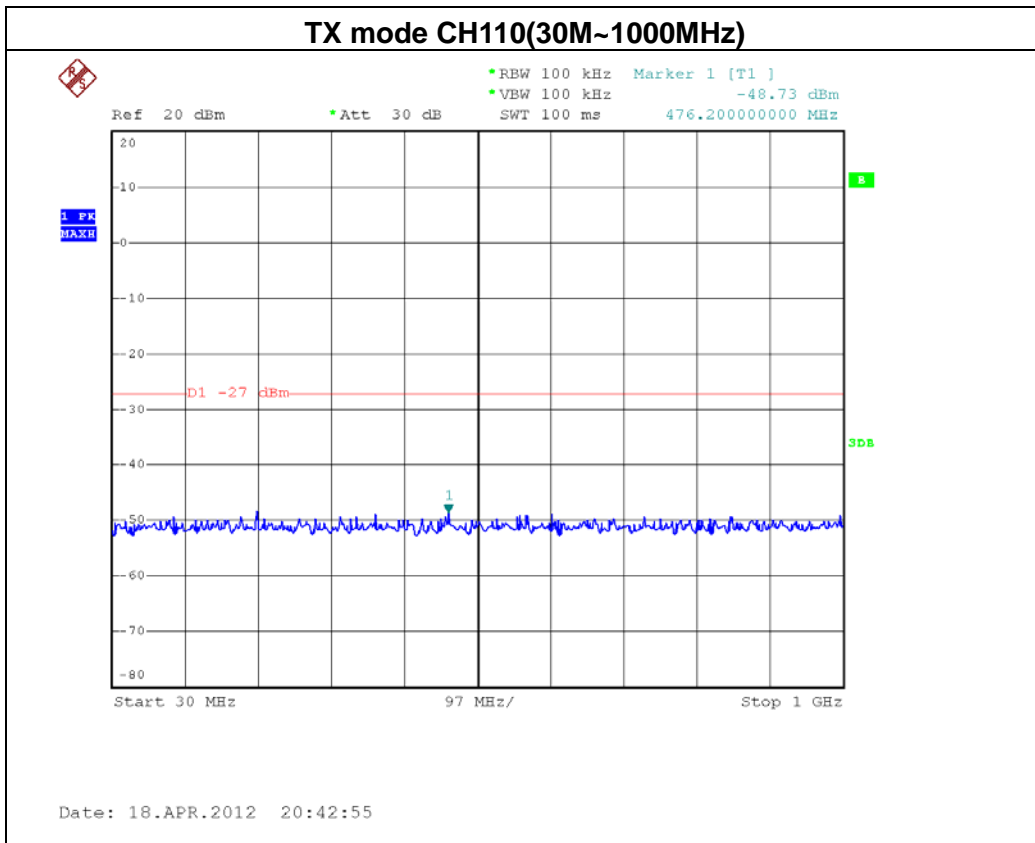
Date: 18.APR.2012 21:02:25

### TX mode CH110



Date: 22.JUN.2012 16:45:29







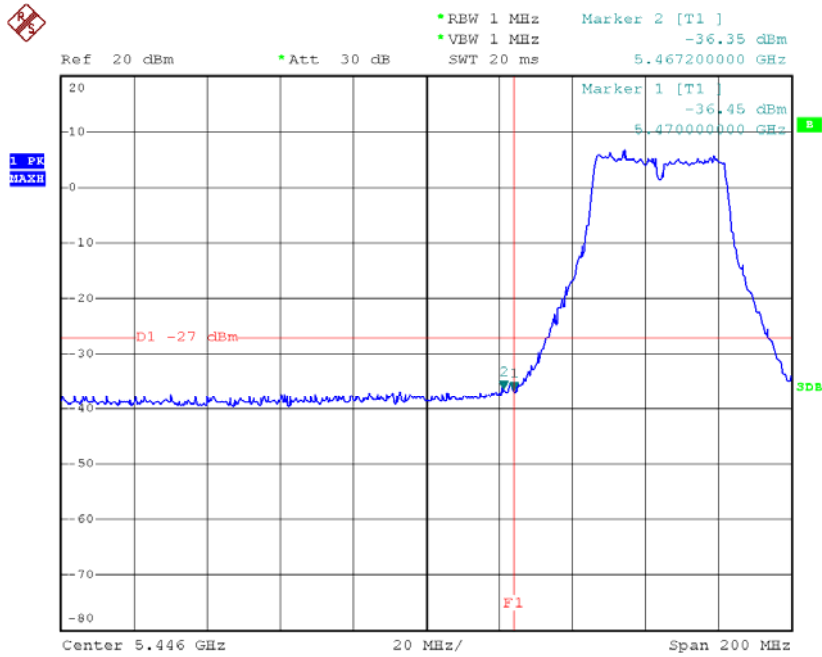


EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode/ CH102, CH110 (ANT 2)		

Channel of Worst Data: CH102			
The max. radio frequency power in any 1000kHz bandwidth outside the frequency band		The max. radio frequency power in any 1000kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5470.00	-29.36	5729.20	-46.33
Limit: -27 dBm/1MHz		Result:PASS	
Measurement method: S.A Read value+Ant gain+cable loss			

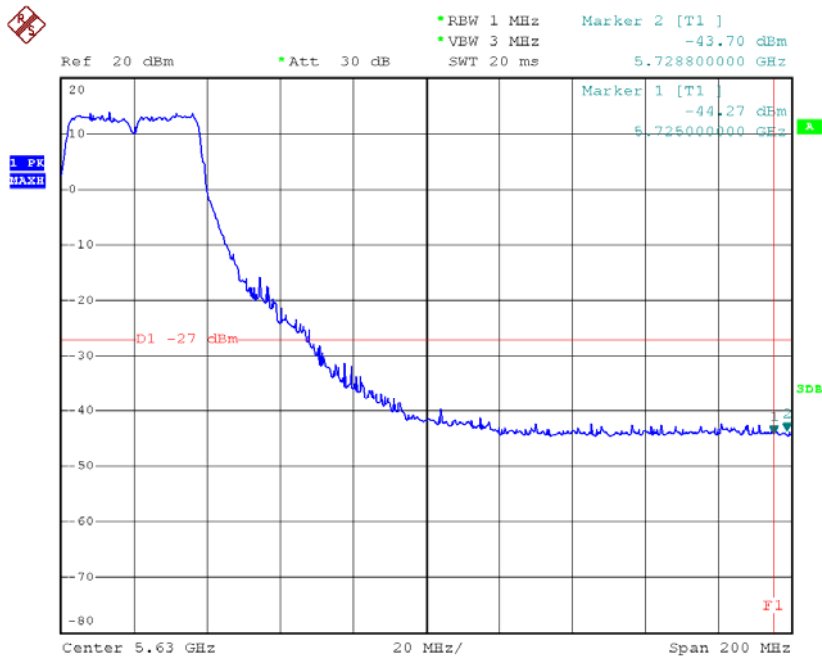


### TX mode CH102

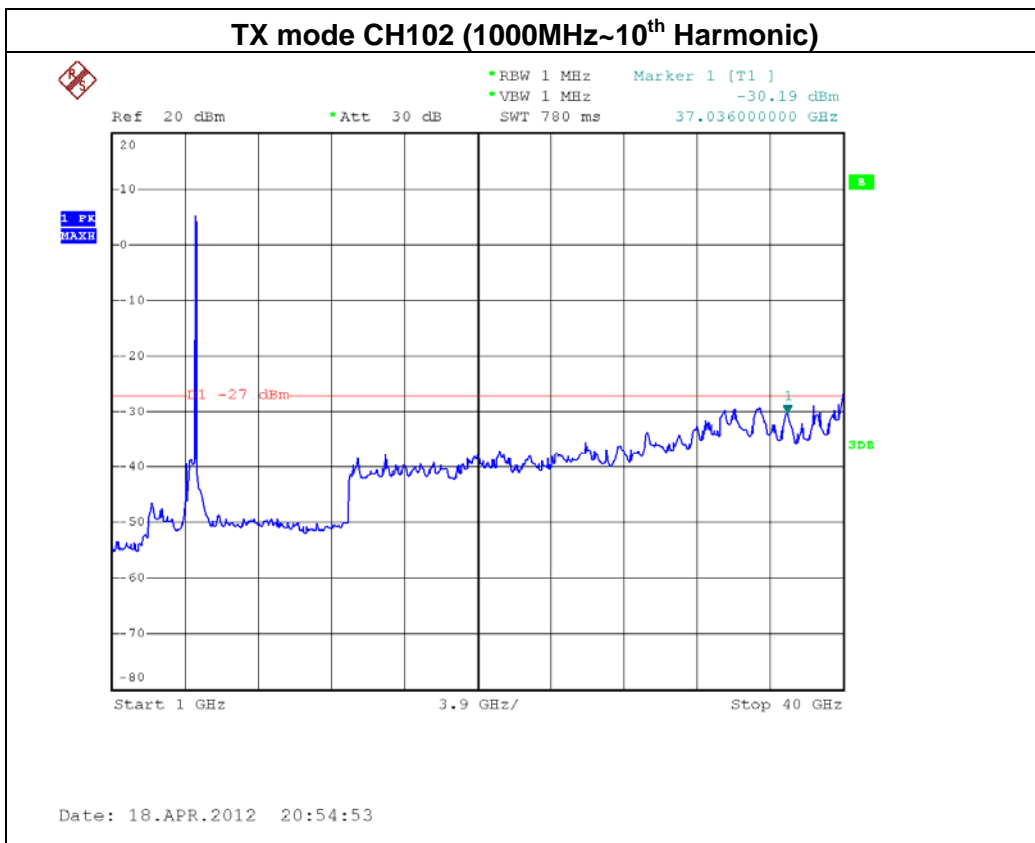
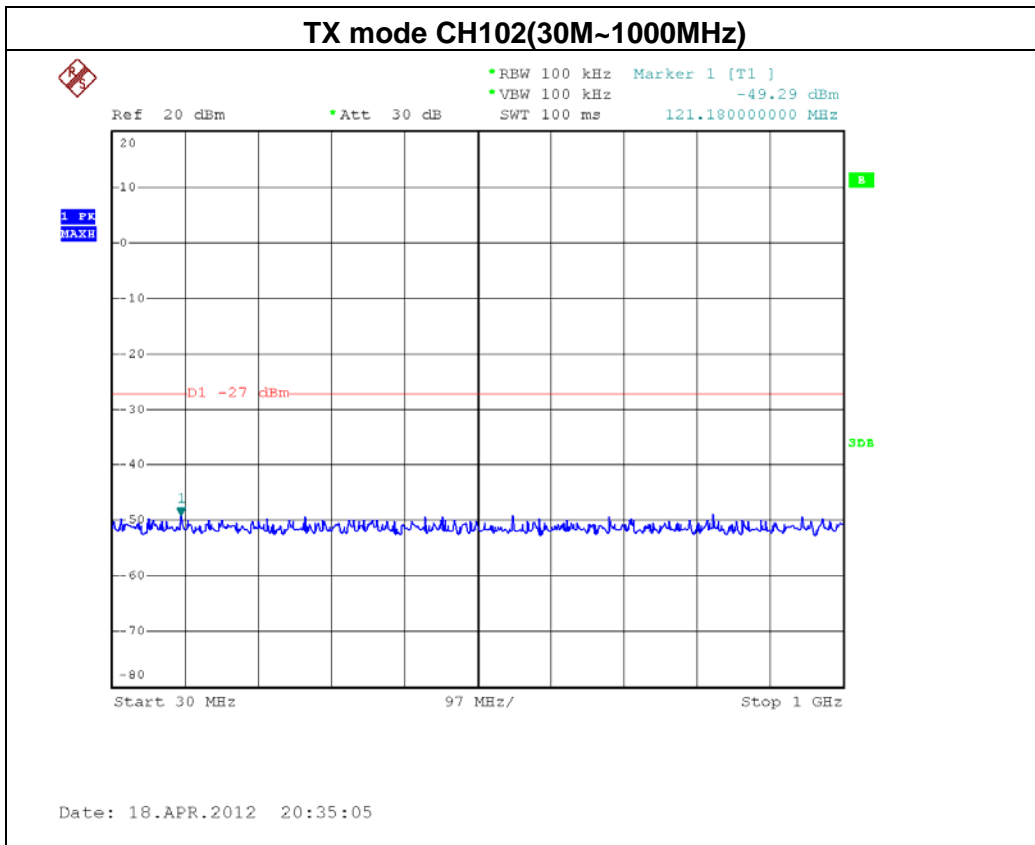


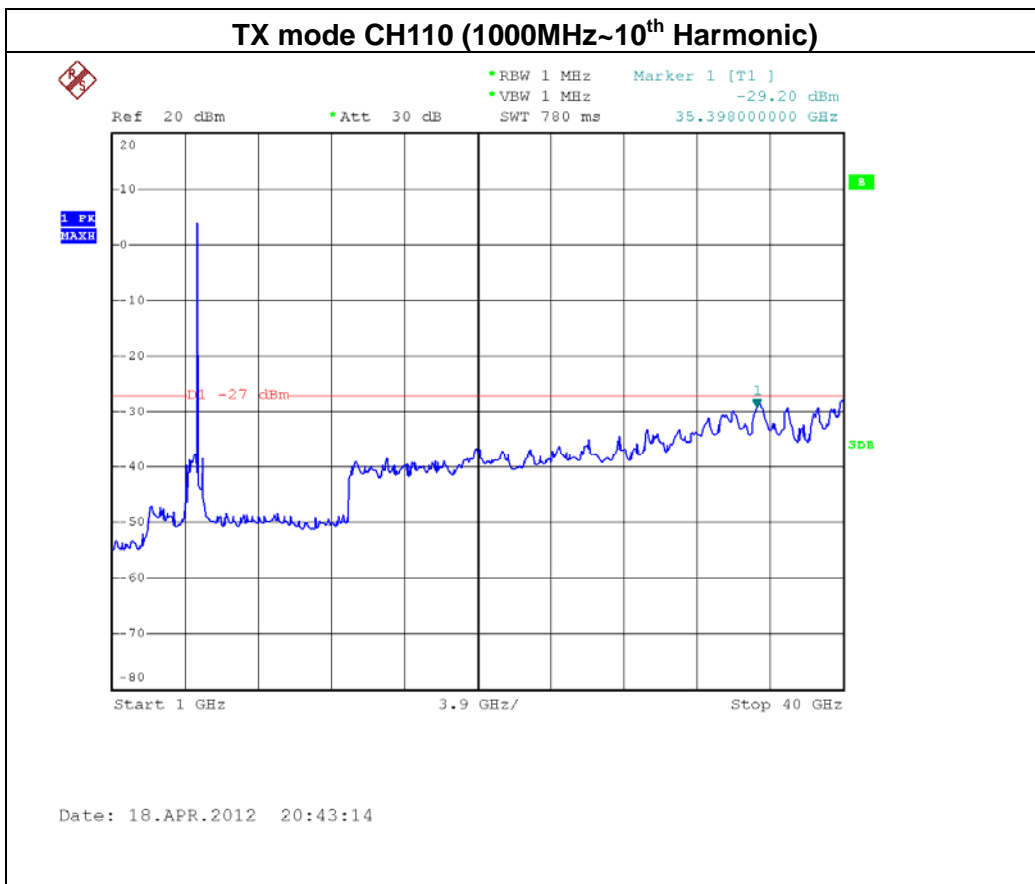
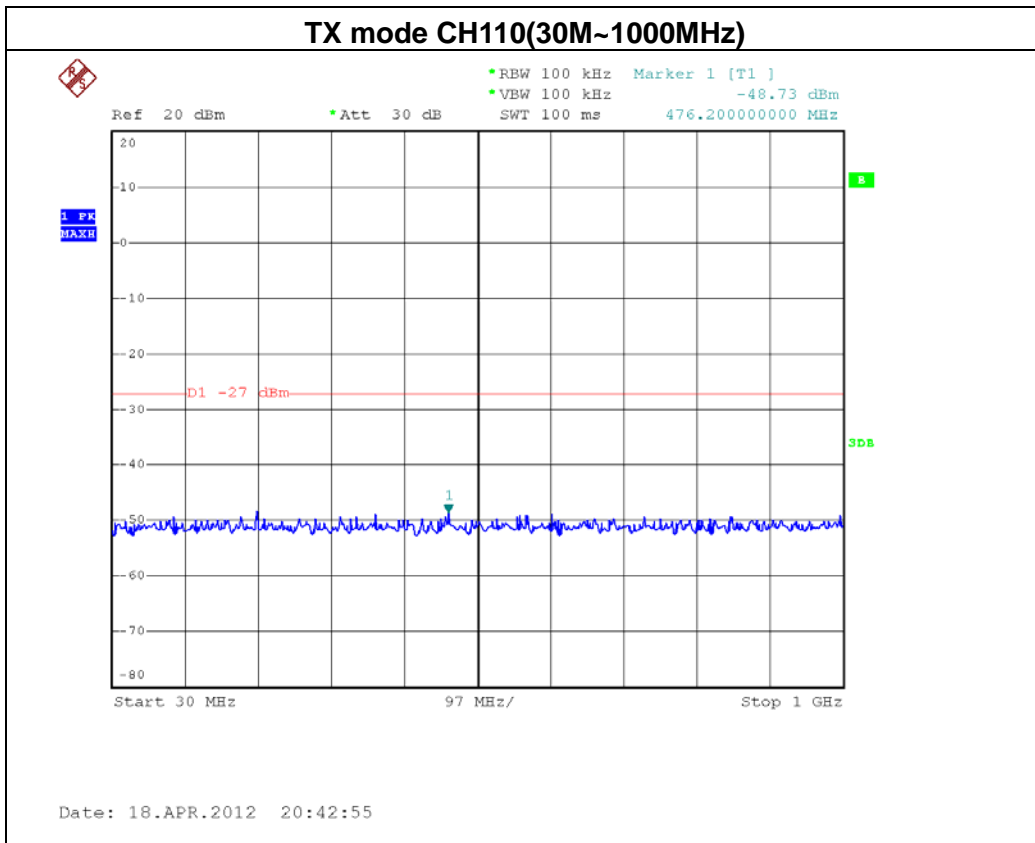
Date: 18.APR.2012 21:02:25

### TX mode CH110



Date: 22.JUN.2012 16:45:29







**8. POWER SPECTRAL DENSITY TEST**

**8.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Power Spectral Density	4 dBm	5150 - 5250	PASS
	11 dBm	5250 - 5350	PASS
	11 dBm	5470 - 5725	PASS

**8.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2011	Nov.26.2012

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

**8.1.2 TEST PROCEDURE**

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

b.

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

**8.1.3 DEVIATION FROM STANDARD**

No deviation.

**8.1.4 TEST SETUP**



**8.1.5 EUT OPERATION CONDITIONS**

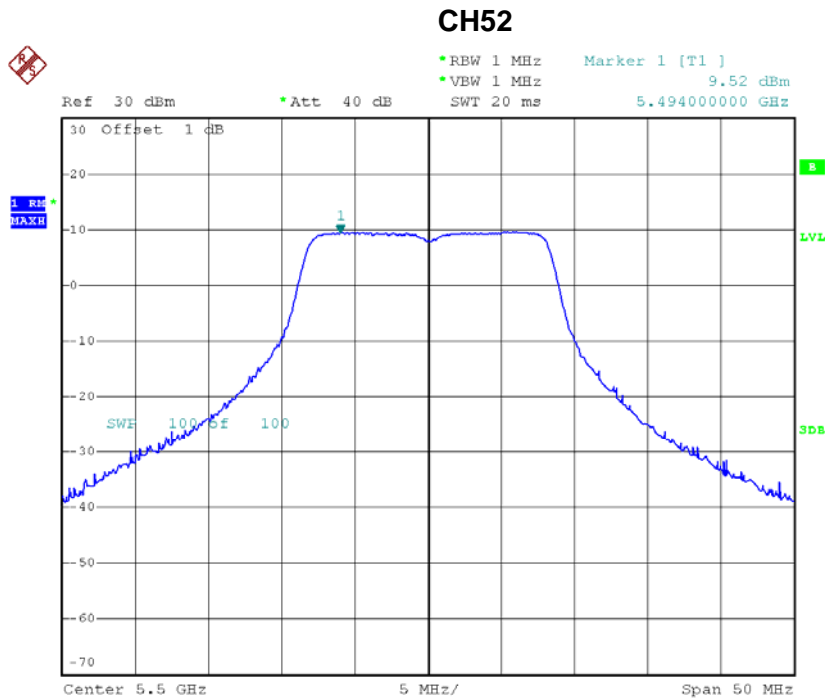
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**8.1.6 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX A Mode/CH52, CH56, CH64		

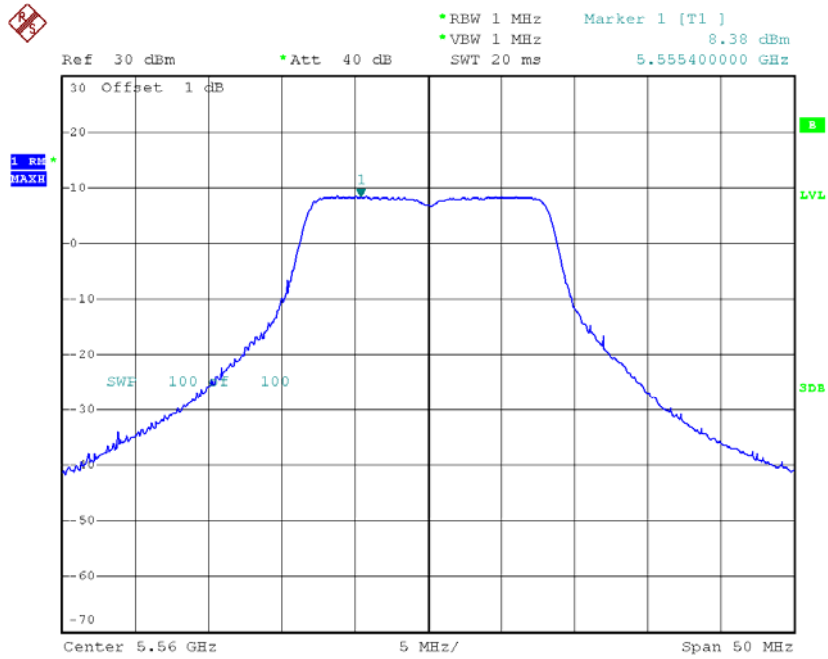
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH52	5260	9.52	11
CH56	5280	8.38	11
CH64	5320	9.82	11



Date: 31.MAY.2012 20:07:57

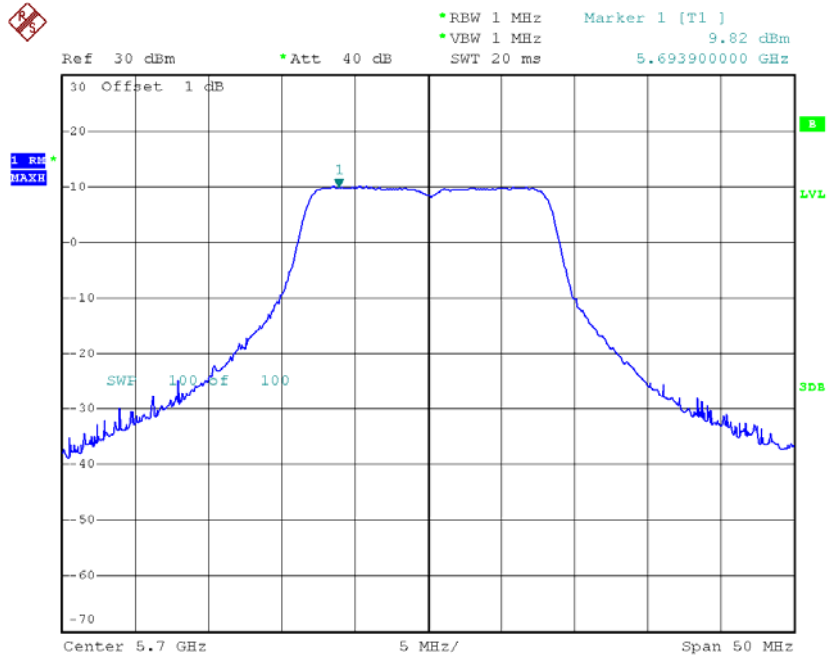


### CH56



Date: 31.MAY.2012 20:08:58

### CH64



Date: 31.MAY.2012 20:10:38



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode/CH52, CH56, CH64		

ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH52	5260	4.91	11
CH56	5280	5.05	11
CH64	5320	5.05	11

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH52	5260	3.29	11
CH56	5280	2.97	11
CH64	5320	2.94	11

(ANT 1+ANT 2)			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH52	5260	7.48	10.6
CH56	5280	7.21	10.6
CH64	5320	7.36	10.6

Remark :

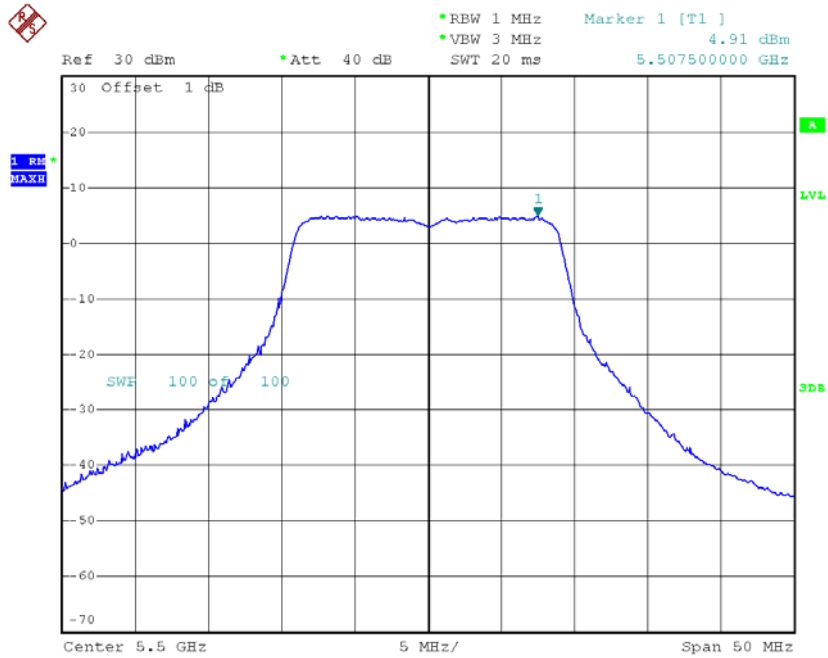
- (1) **The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method. And after obtain each individual transmitter chain power, then sum the output power by using the following formula:  

$$((\text{dBm}/\text{Chain 1})/10^{\wedge}\text{Log}) + ((\text{dBm}/\text{Chain 2})/10^{\wedge}\text{log}) + ((\text{dBm}/\text{ChainN})/10^{\wedge}\text{log}) =$$
**Combined peak output power in mW.****
- (2) **Antenna Gain 1=6.4 dBi**
- (3) **This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, Direction gain = G<sub>ANT</sub>, that is Directional gain=6.4; So,the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6**



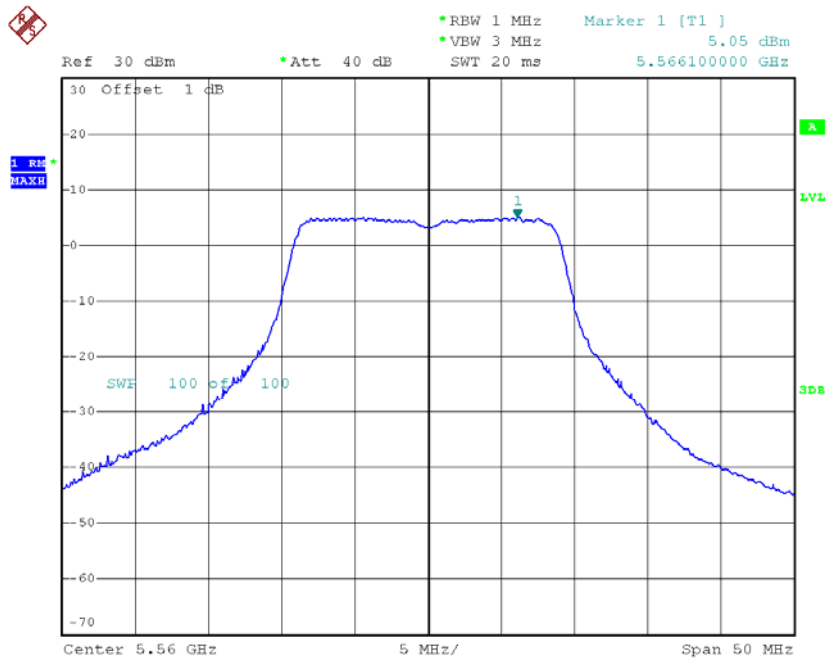


### CH52-ANT 1



Date: 15.JUL.2012 12:38:02

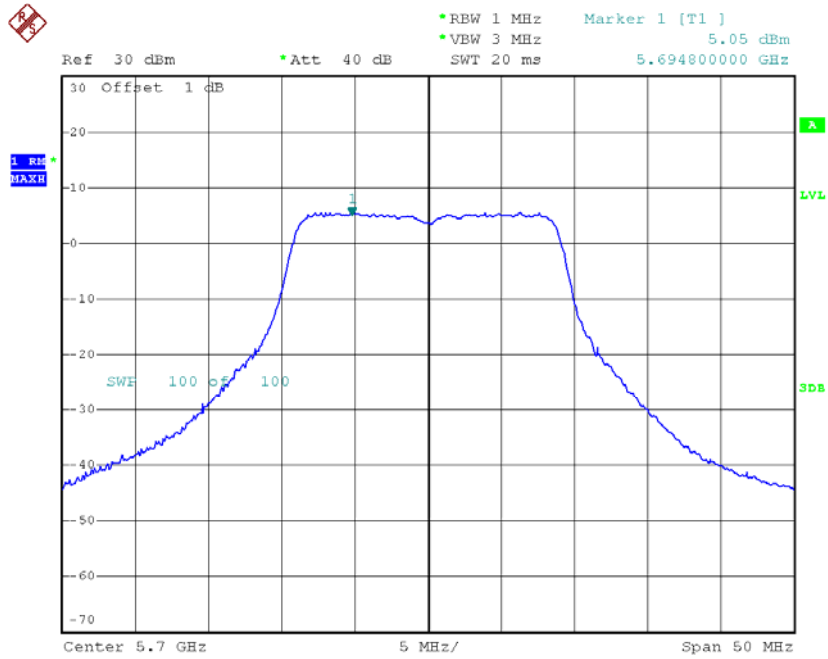
### CH56-ANT 1



Date: 15.JUL.2012 12:51:17

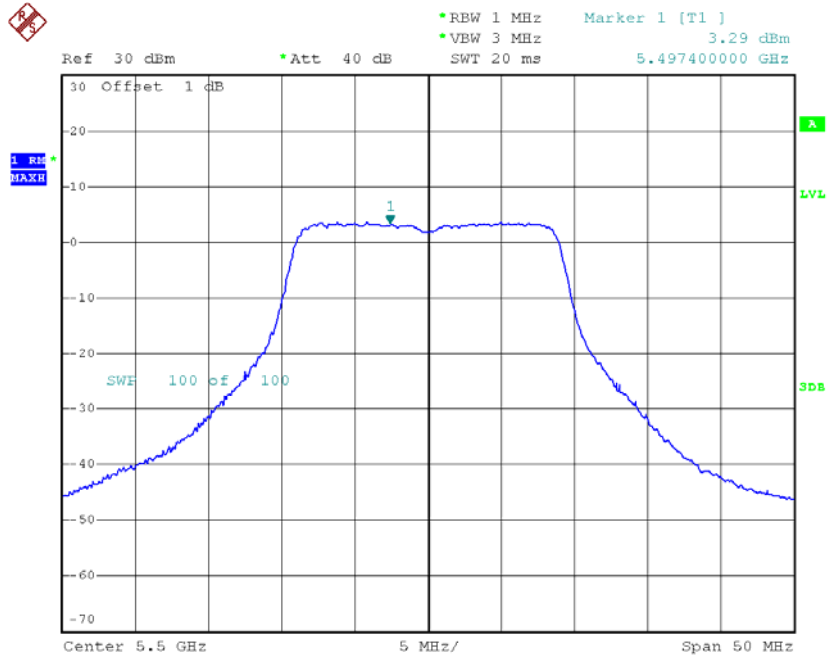


### CH64-ANT 1



Date: 15.JUL.2012 12:40:08

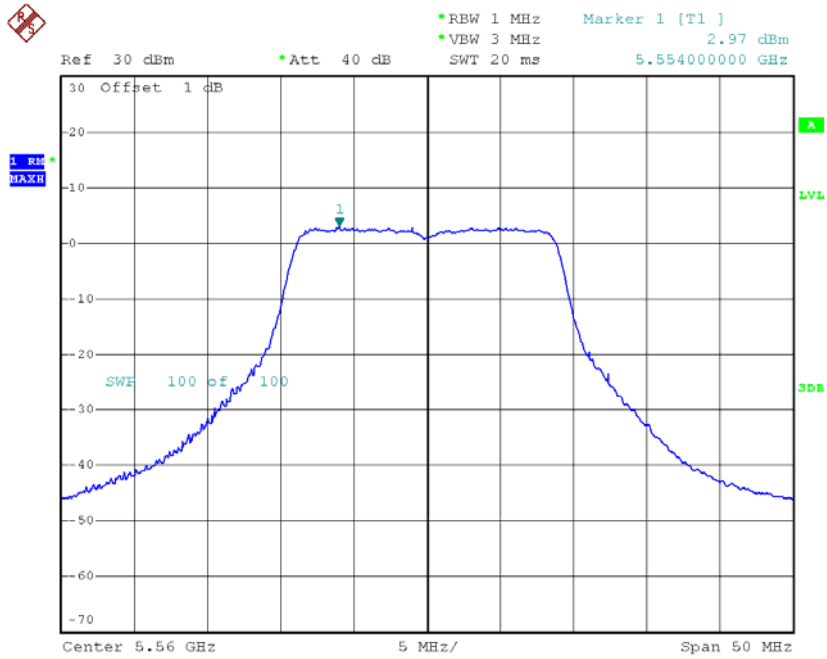
### CH52-ANT 2



Date: 15.JUL.2012 12:56:49

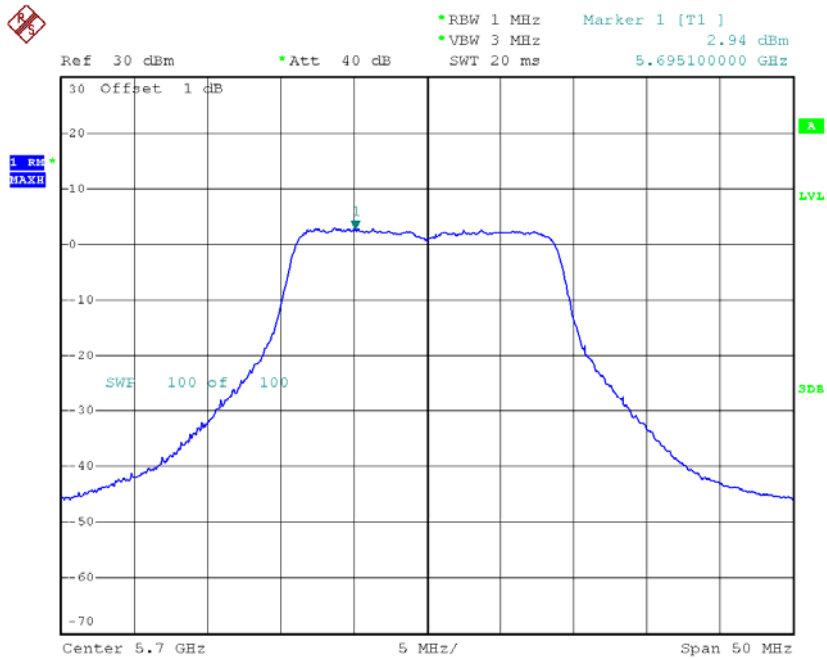


### CH56-ANT 2



Date: 15.JUL.2012 12:48:45

### CH64-ANT 2



Date: 15.JUL.2012 12:44:06



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode/CH54, CH62		

ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH54	5270	2.82	11
CH62	5310	4.82	11

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH54	5270	0.13	11
CH62	5310	1.96	11

(ANT 1+ANT 2)			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH54	5270	5.67	10.6
CH62	5310	1.96	10.6

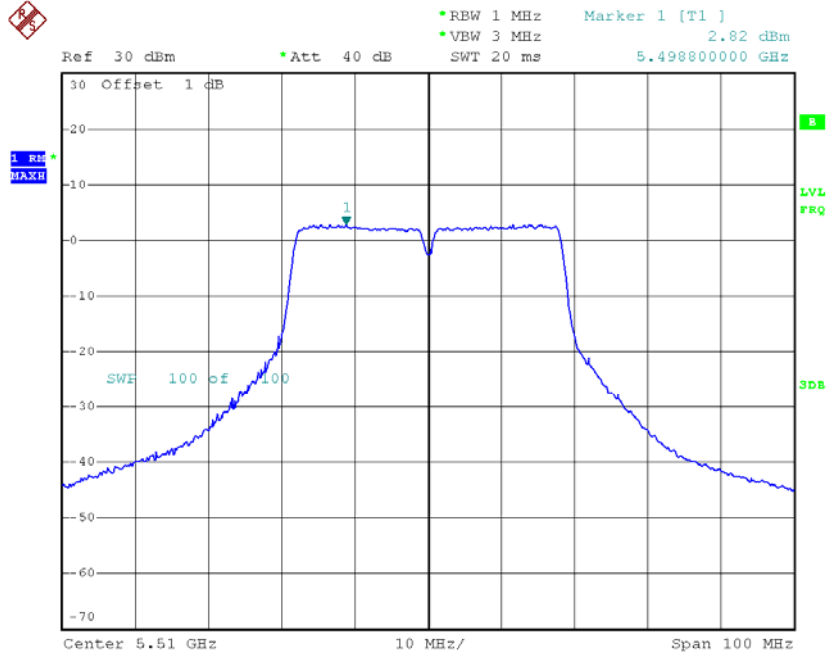
**Remark :**

- (1) **The MIMO test requirement, RF power density shall measure each transmitter chain by using channel power density method. And after obtain each individual transmitter chain power density, then sum the power density by using the following formula:  

$$((\text{dBm}/\text{Chain 1})/10^{\wedge}\text{Log}) + ((\text{dBm}/\text{Chain 2})/10^{\wedge}\text{log}) + ((\text{dBm}/\text{ChainN})/10^{\wedge}\text{log}) =$$
**Combined power density in mW.****
- (2) **Antenna Gain 1=6.4 dBi**
- (3) **This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, Direction gain = G<sub>ANT</sub>, that is Directional gain=6.4; So,the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6**

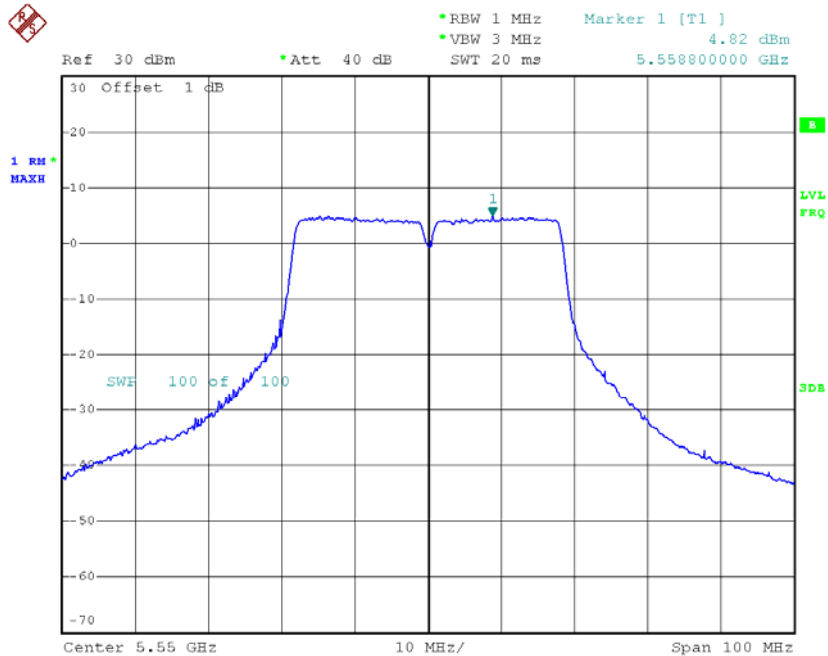


### CH54-ANT 1



Date: 31.MAY.2012 21:02:51

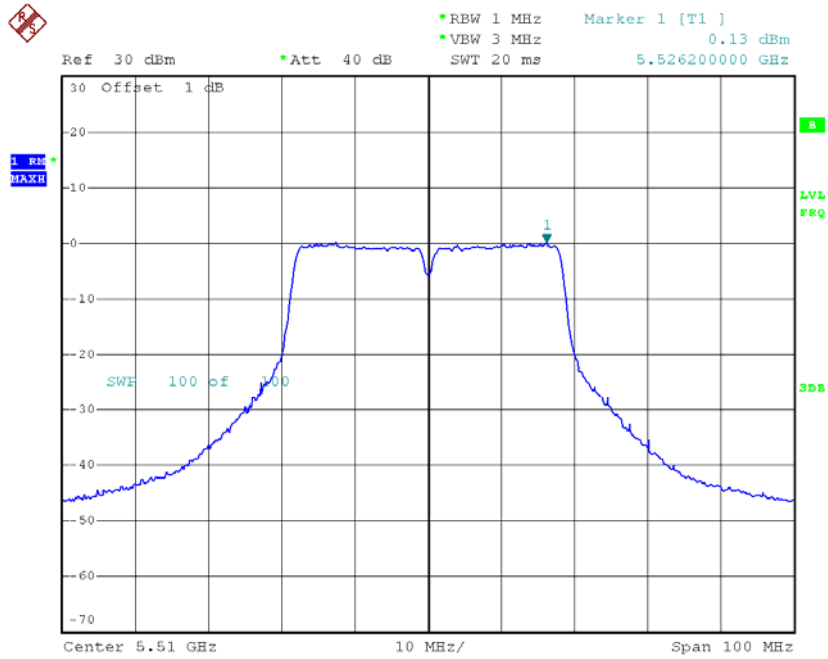
### CH62-ANT 1



Date: 31.MAY.2012 21:08:59

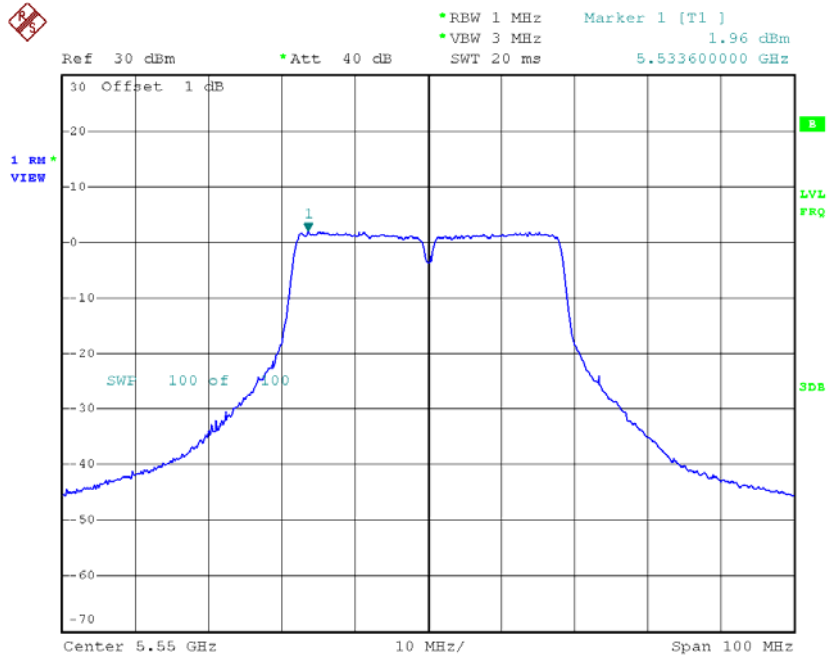


### CH54-ANT 2



Date: 31.MAY.2012 21:22:23

### CH62-ANT 2

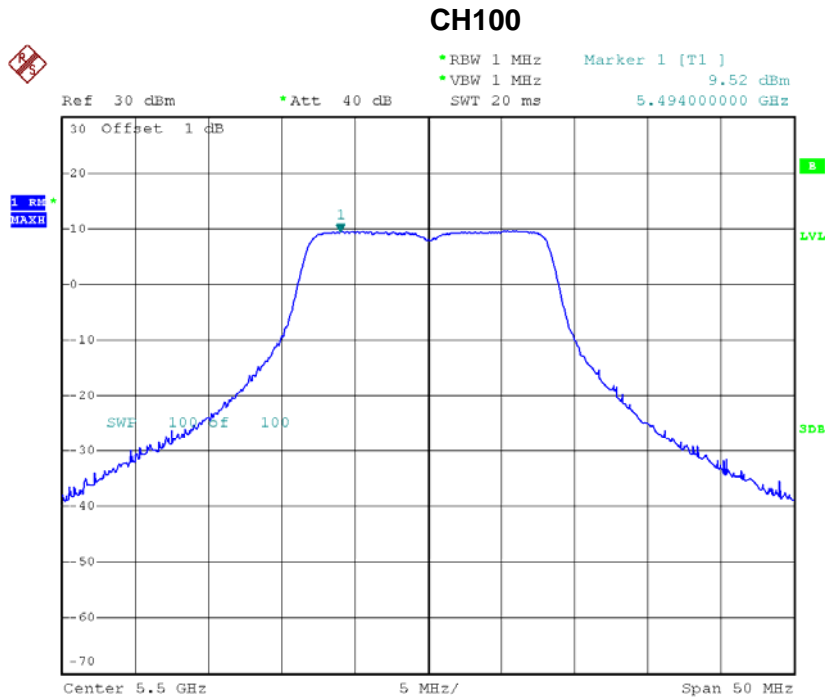


Date: 31.MAY.2012 21:30:15



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX A Mode/CH100, CH112, CH140		

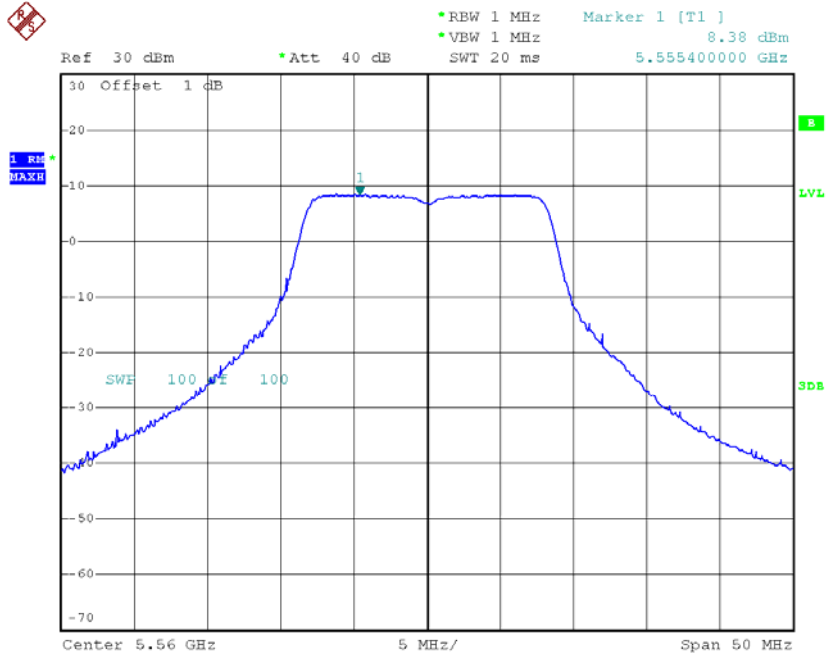
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH100	5500	9.52	11
CH112	5560	8.38	11
CH140	5700	9.82	11



Date: 31.MAY.2012 20:07:57

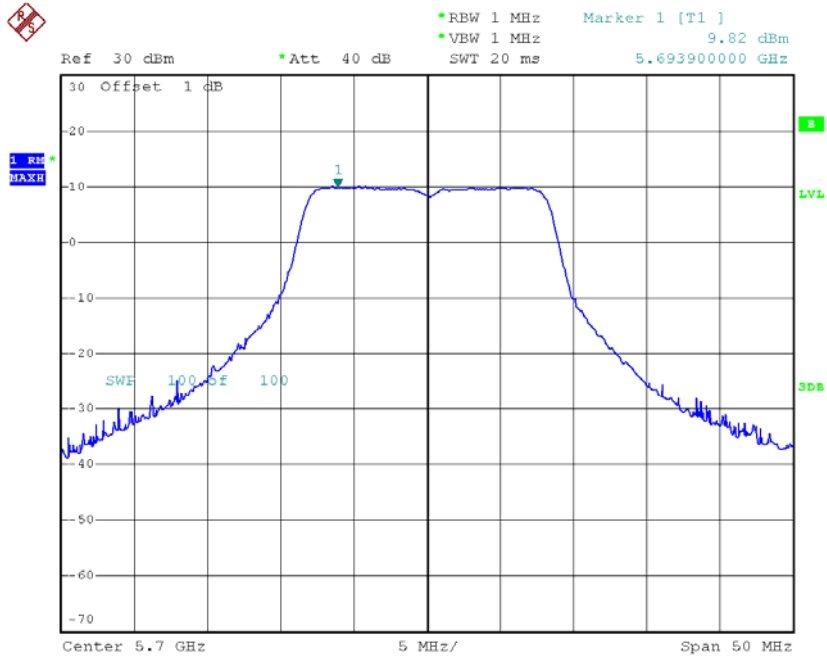


### CH112



Date: 31.MAY.2012 20:08:58

### CH140



Date: 31.MAY.2012 20:10:38





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode/CH100, CH112, CH140		

ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH100	5500	4.91	11
CH112	5560	5.05	11
CH140	5700	5.25	11

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH100	5500	3.29	11
CH112	5560	2.97	11
CH140	5700	2.94	11

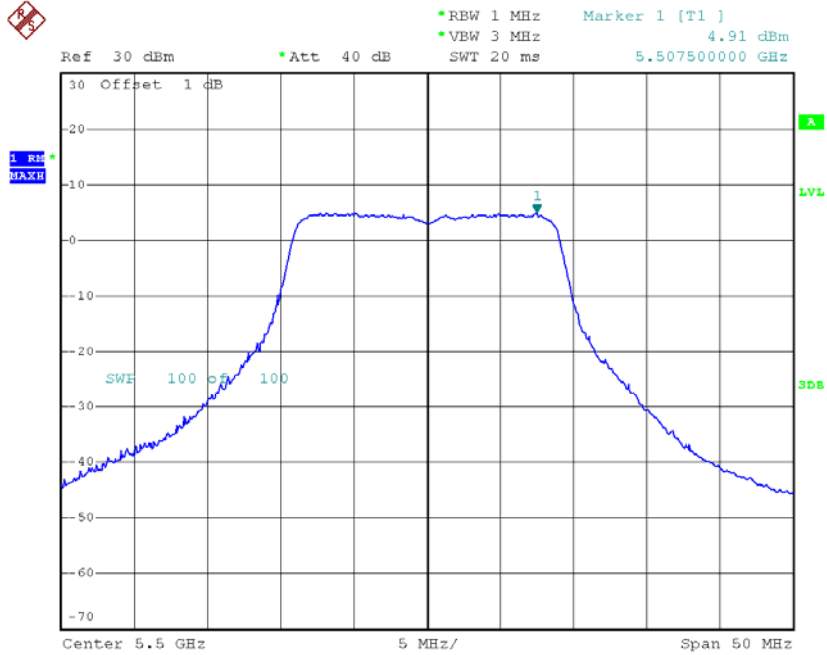
(ANT 1+ANT 2)			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH100	5500	7.19	10.6
CH112	5560	7.14	10.6
CH140	5700	7.13	10.6

Remark :

- (1) **The MIMO test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.  
And after obtain each individual transmitter chain power, then sum the output power by using the following formula:  
 $((\text{dBm}/\text{Chain 1})/10^{\wedge}\text{Log}) + ((\text{dBm}/\text{Chain 2})/10^{\wedge}\text{log}) + ((\text{dBm}/\text{ChainN})/10^{\wedge}\text{log}) =$   
Combined peak output power in mW.**
- (2) **Antenna Gain 1=6.4 dBi**
- (3) **This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, Direction gain = G<sub>ANT</sub>, that is Directional gain=6.4; So,the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6**

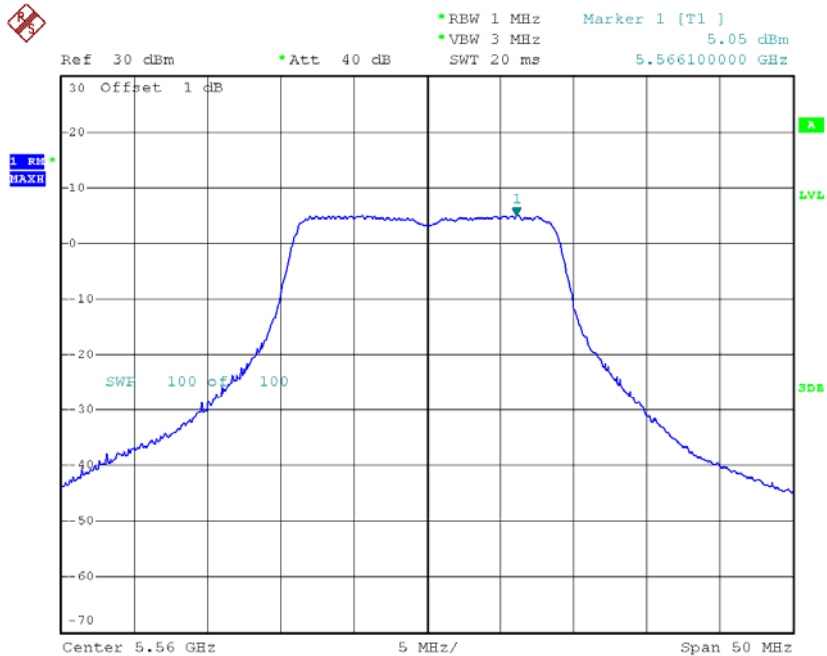


### CH100-ANT 1



Date: 15.JUL.2012 12:38:02

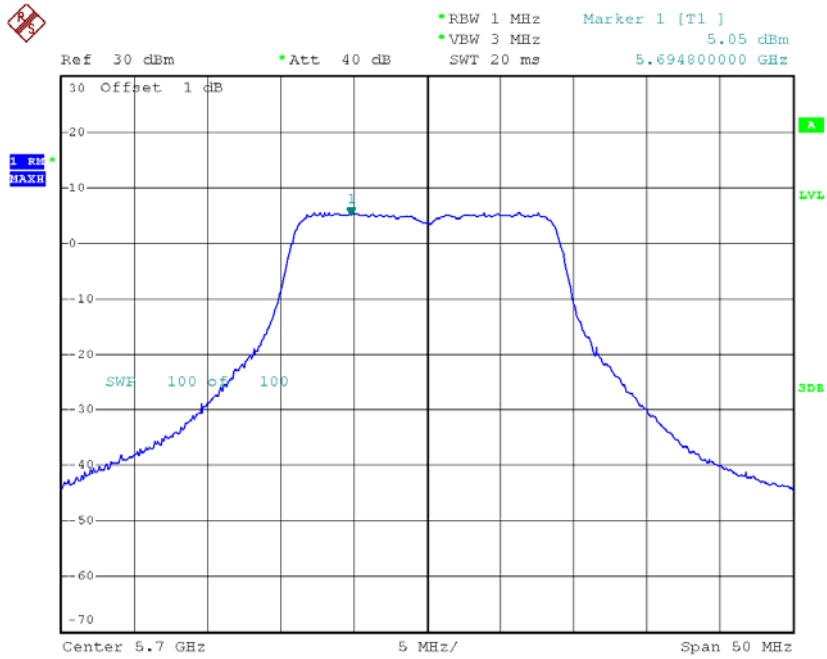
### CH112-ANT 1



Date: 15.JUL.2012 12:51:17

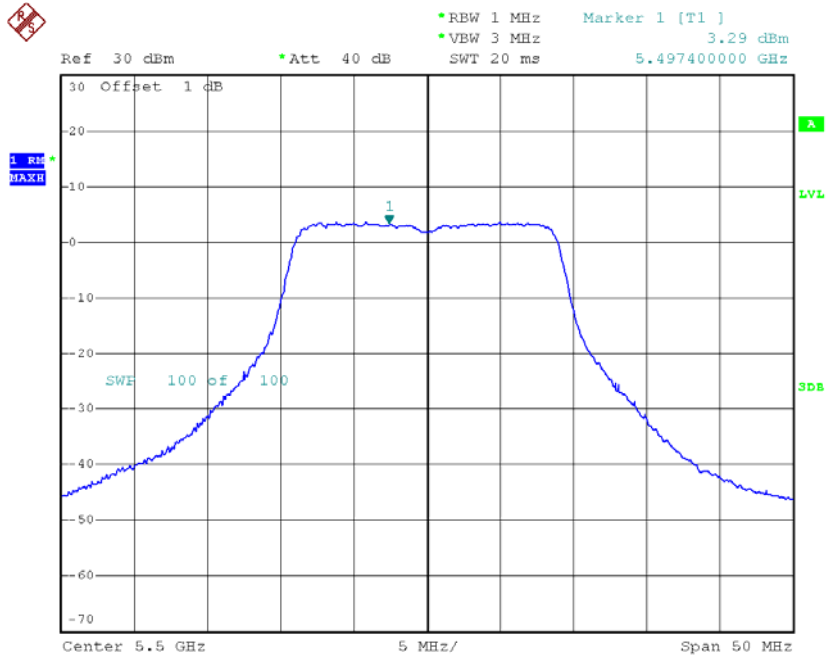


### CH140-ANT 1



Date: 15.JUL.2012 12:40:08

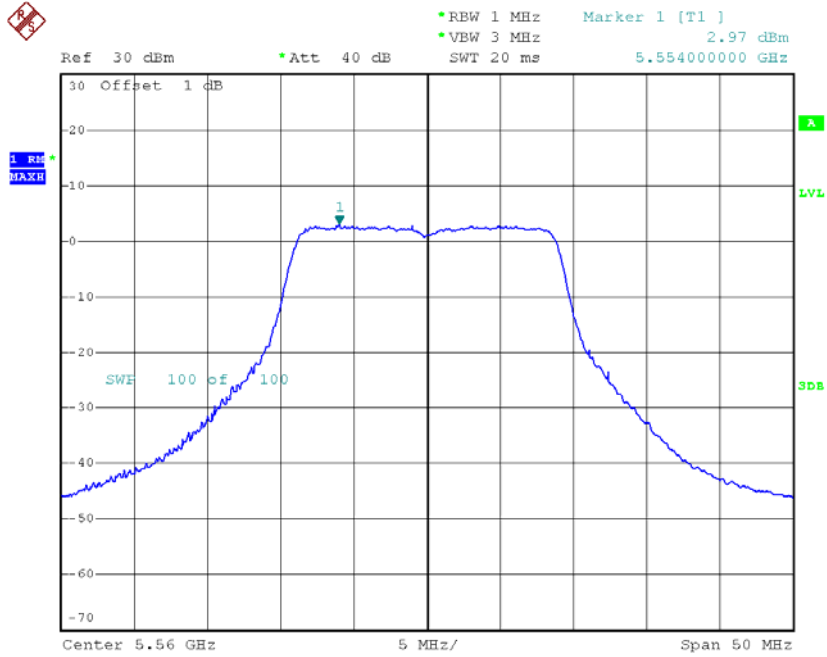
### CH100-ANT 2



Date: 15.JUL.2012 12:56:49

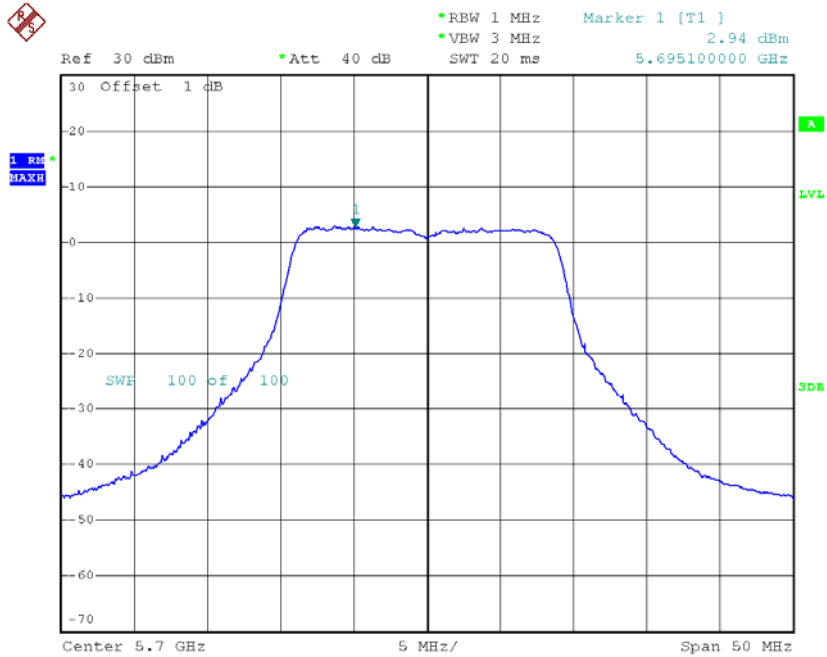


### CH112-ANT 2



Date: 15.JUL.2012 12:48:45

### CH140-ANT 2



Date: 15.JUL.2012 12:44:06



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode/CH102, CH110		

ANT 1			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH102	5510	2.82	11
CH110	5550	4.82	11

ANT 2			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH102	5510	0.13	11
CH110	5550	1.96	11

(ANT 1+ANT 2)			
Test Channel	Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)
CH102	5510	4.69	10.6
CH110	5550	6.63	10.6

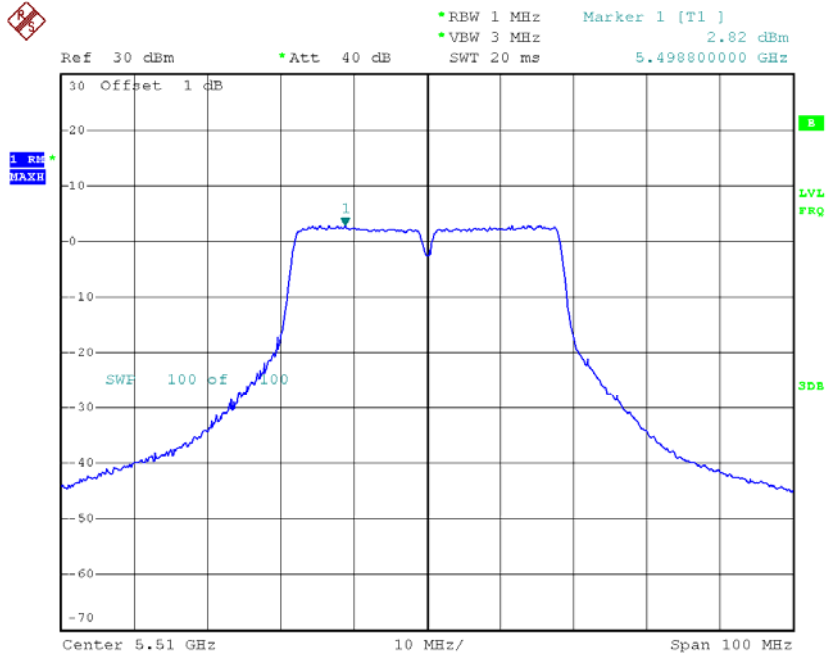
**Remark :**

- (1) **The MIMO test requirement, RF power density shall measure each transmitter chain by using channel power density method. And after obtain each individual transmitter chain power density, then sum the power density by using the following formula:  

$$((\text{dBm}/\text{Chain 1})/10^{\text{Log}}) + ((\text{dBm}/\text{Chain 2})/10^{\text{log}}) + ((\text{dBm}/\text{Chain N})/10^{\text{log}}) =$$
**Combined power density in mW.****
- (2) **Antenna Gain 1=6.4 dBi**
- (3) **This EUT supports MIMO 2T2R, all transmit signals are completely uncorrelated, then, Direction gain = G<sub>ANT</sub>, that is Directional gain=6.4; So,the out power limit is 24-6.4+6=23.6; and power density limit is 11-6.4+6=10.6**

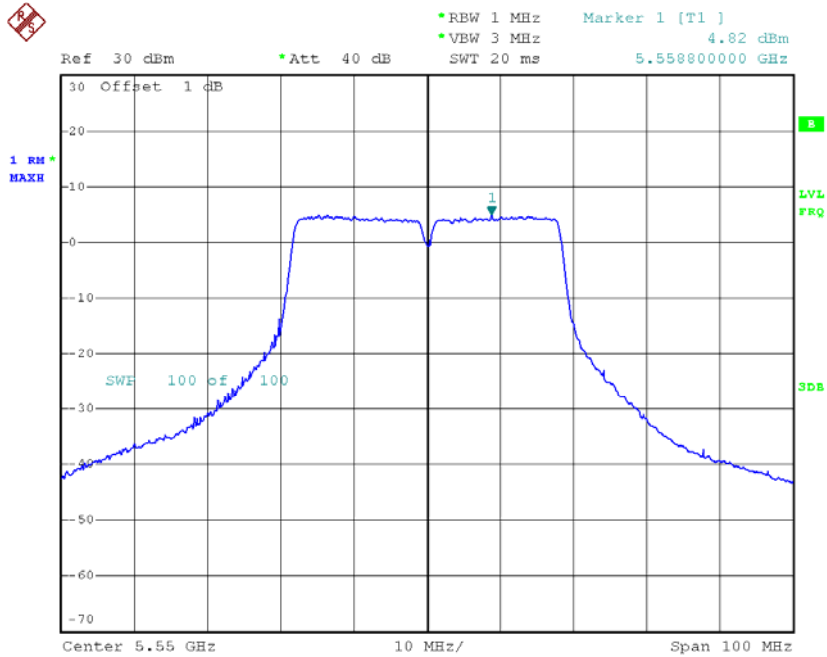


### CH102-ANT 1



Date: 31.MAY.2012 21:02:51

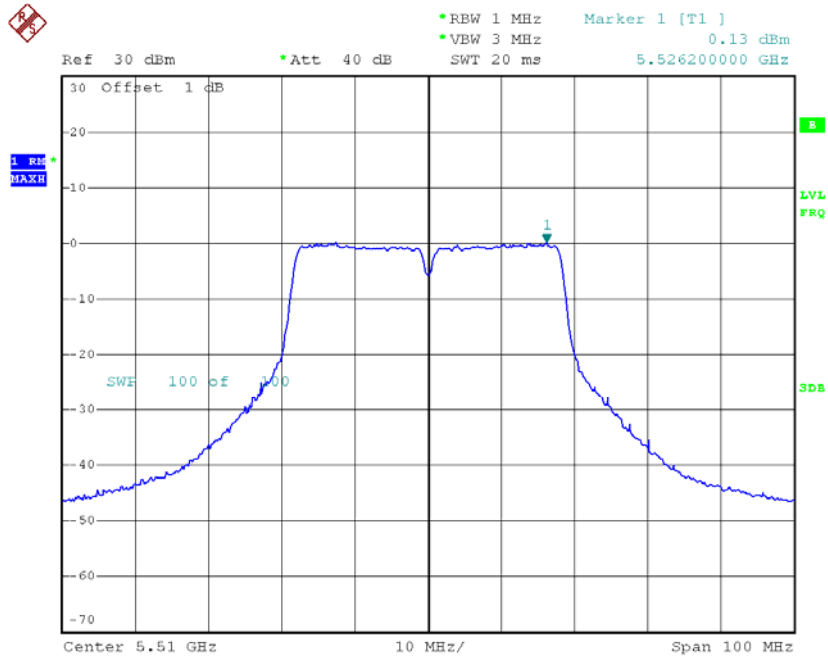
### CH110-ANT 1



Date: 31.MAY.2012 21:08:59

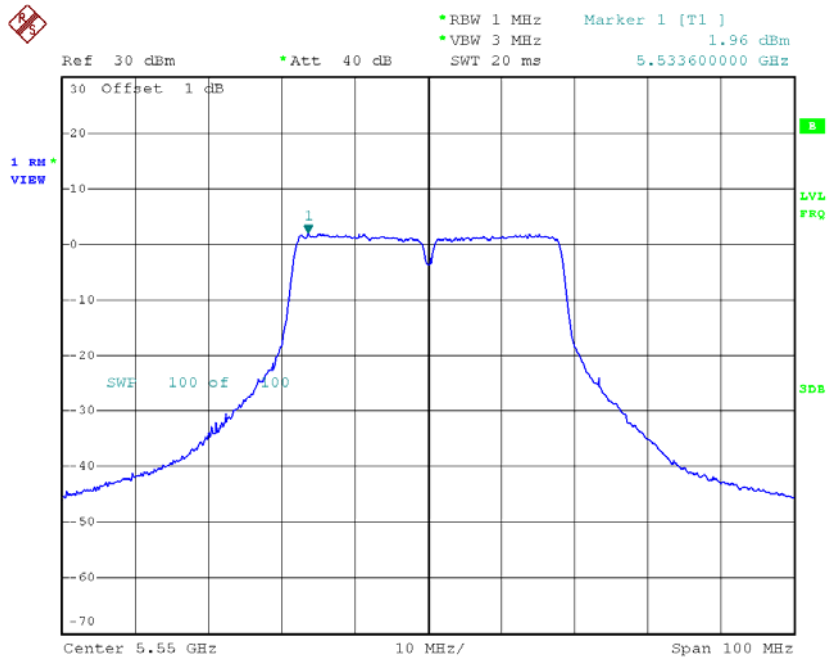


### CH102-ANT 2



Date: 31.MAY.2012 21:22:23

### CH110-ANT 2



Date: 31.MAY.2012 21:30:15



**9. PEAK EXCURSION MEASUREMENT**

**9.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart E			
Test Item	Limit	Frequency Range (MHz)	Result
Peak Excursion Measurement	13 dB	5150 - 5250	PASS
		5250 - 5350	PASS
		5470 - 5725	PASS

**9.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Next Calibration
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2011	Nov.26.2012

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

**9.1.2 TEST PROCEDURE**

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

b.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz (Peak Trace) / 1000 kHz (Average Trace)
VB	3000 kHz (Peak Trace) / 3000 kHz (Average Trace)
Detector	Peak (Peak Trace) / Sample (Average Trace)
Trace	Max Hold
Sweep Time	Auto

c. Peak Trace: Set RBW = 1 MHz, VBW ≥ 3 MHz with peak detector and maxhold settings.

d. Average Trace: set RBW = 1 MHz, VBW = 3 MHz with RMS detector and trace average across 100 traces in power averaging mode.

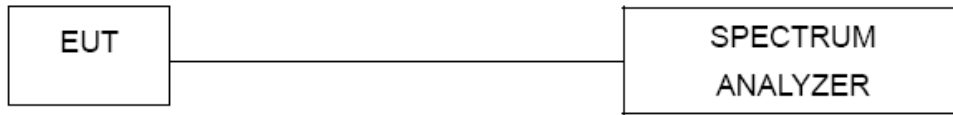
**9.1.3 DEVIATION FROM STANDARD**

No deviation.





**9.1.4 TEST SETUP**



**9.1.5 EUT OPERATION CONDITIONS**

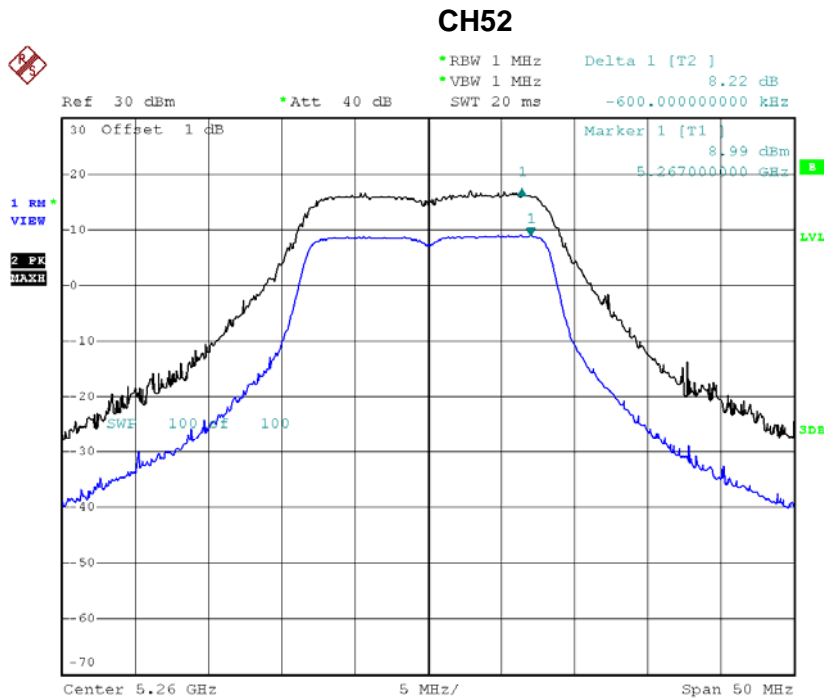
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**9.1.6 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX A Mode/CH52, CH56, CH64		

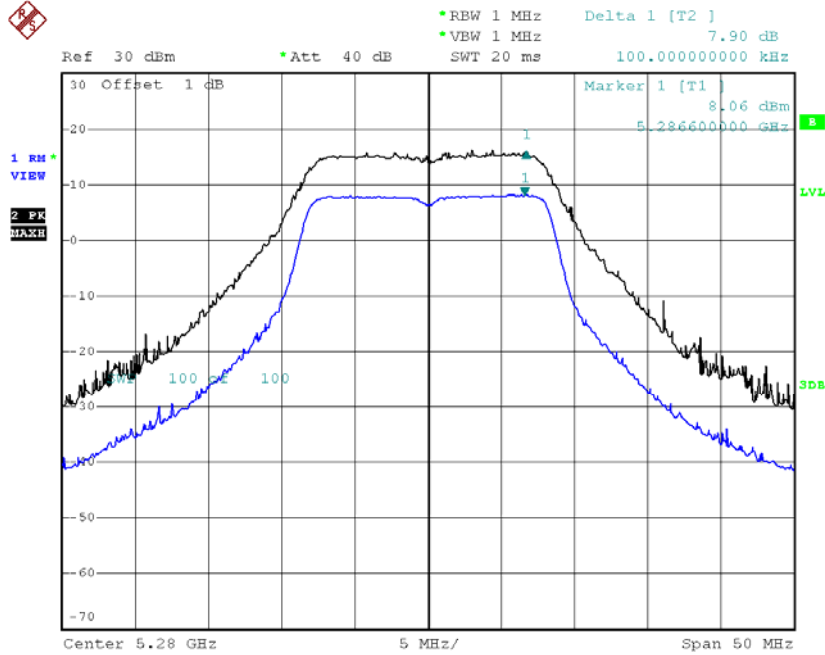
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH52	5260	8.22	13
CH56	5280	7.90	13
CH64	5320	8.43	13



Date: 31.MAY.2012 20:03:40

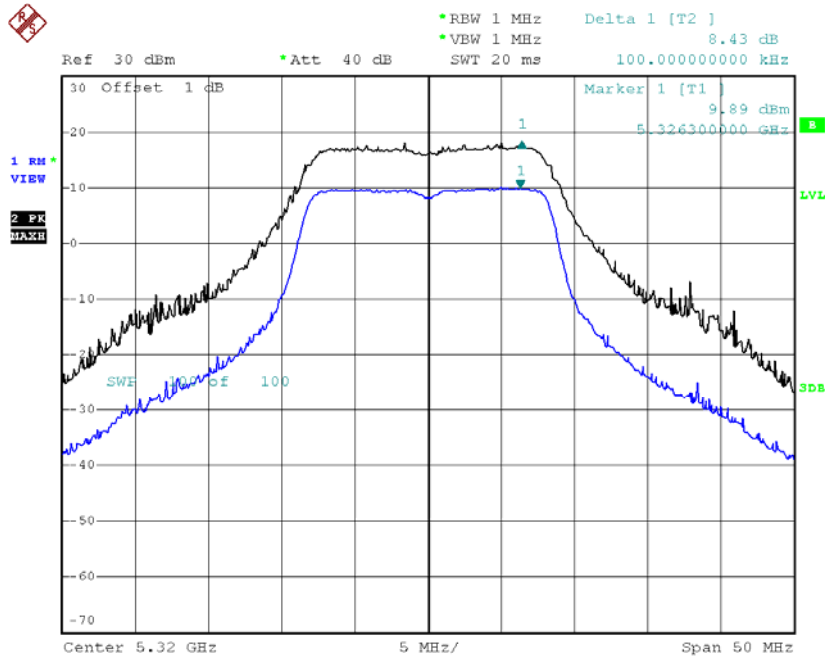


### CH56



Date: 31.MAY.2012 20:02:44

### CH64

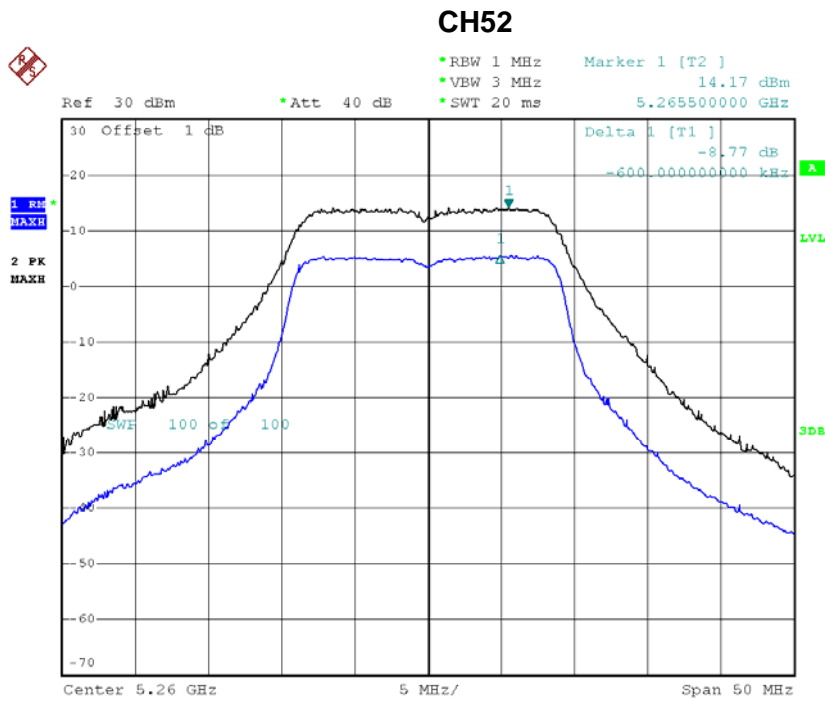


Date: 31.MAY.2012 20:05:18



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N20 Mode/CH52, CH56, CH64		

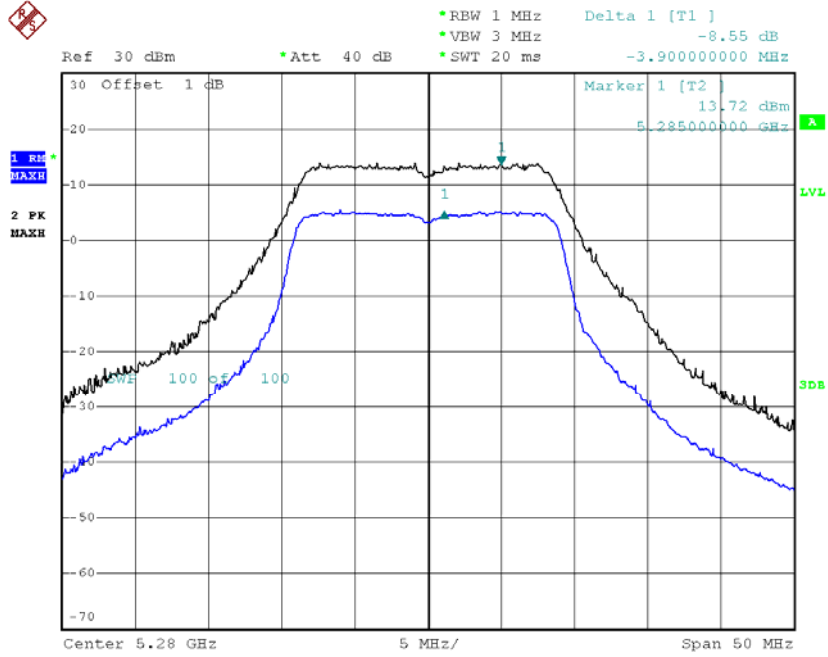
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH52	5260	8.77	13
CH56	5280	8.55	13
CH64	5320	8.71	13



Date: 17.JUL.2012 21:49:16

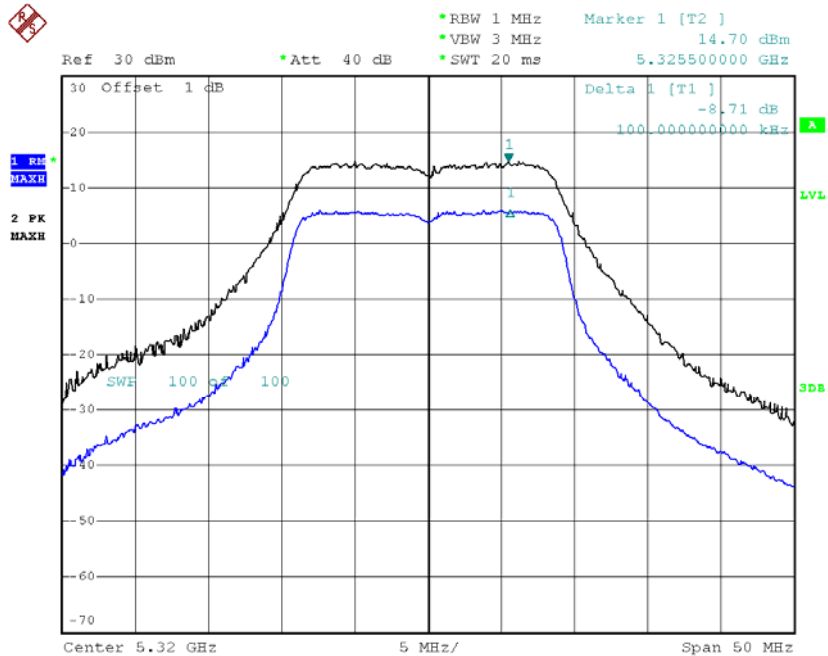


### CH56



Date: 17.JUL.2012 21:51:37

### CH64

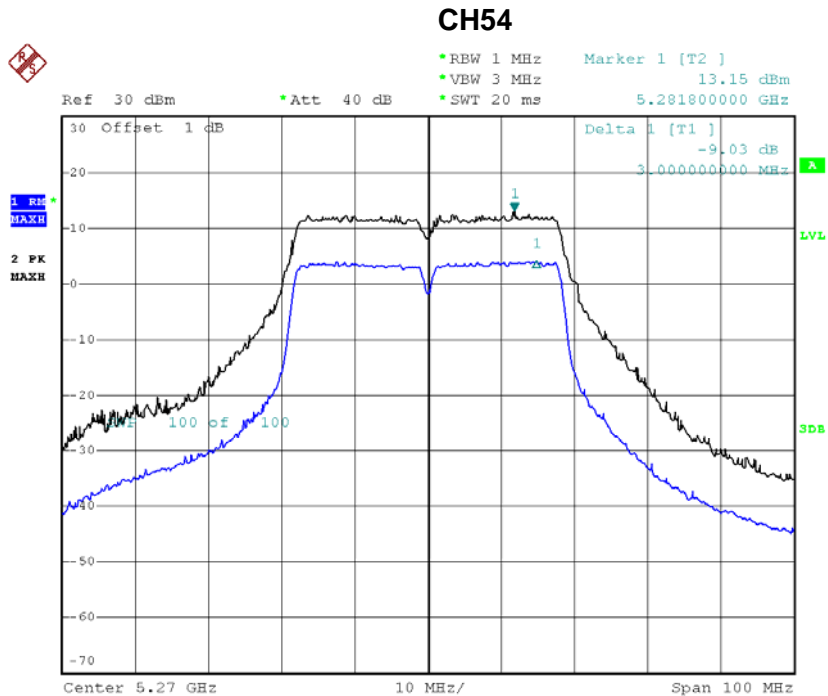


Date: 17.JUL.2012 21:52:27



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2/TX N40 Mode/CH54, CH62		

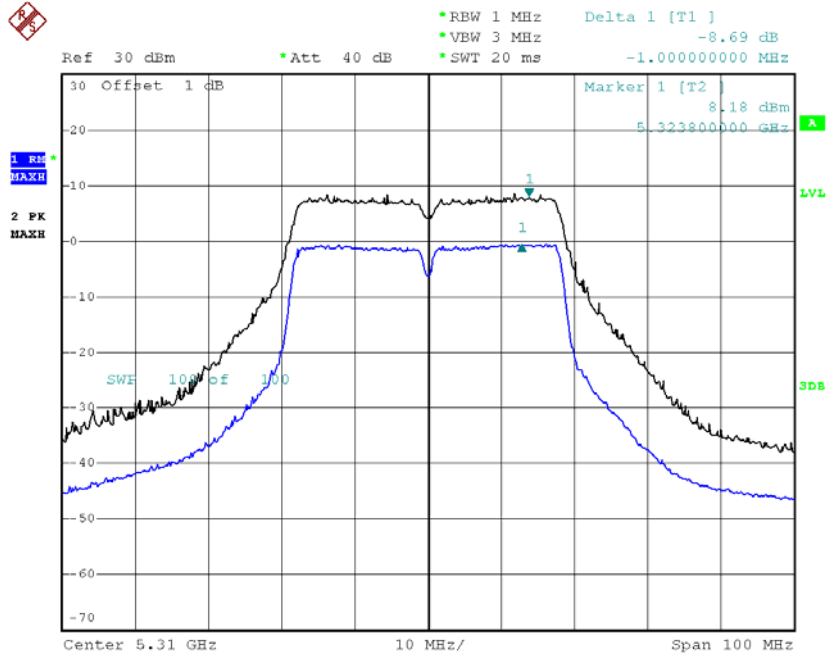
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH54	5270	9.03	13
CH62	5310	8.69	13



Date: 17.JUL.2012 21:59:54



CH62

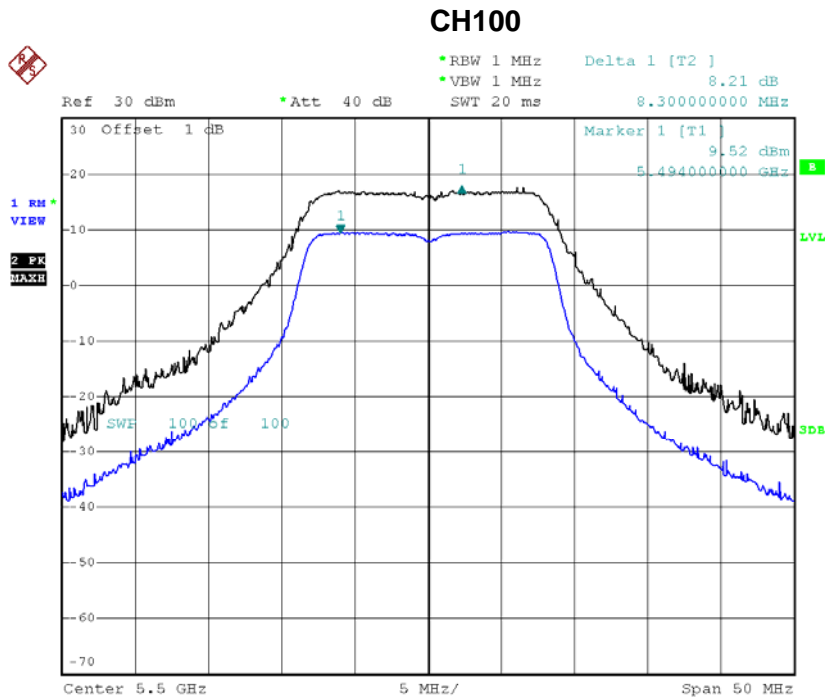


Date: 17.JUL.2012 22:00:58



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX A Mode/CH100, CH112, CH140		

Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH100	5500	8.21	13
CH112	5560	8.23	13
CH140	5700	8.69	13

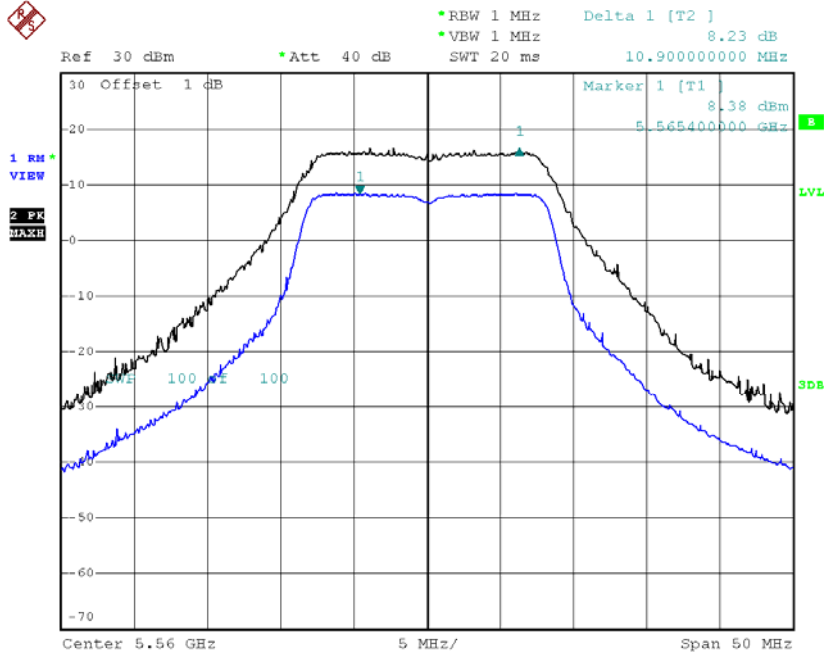


Date: 31.MAY.2012 20:08:16



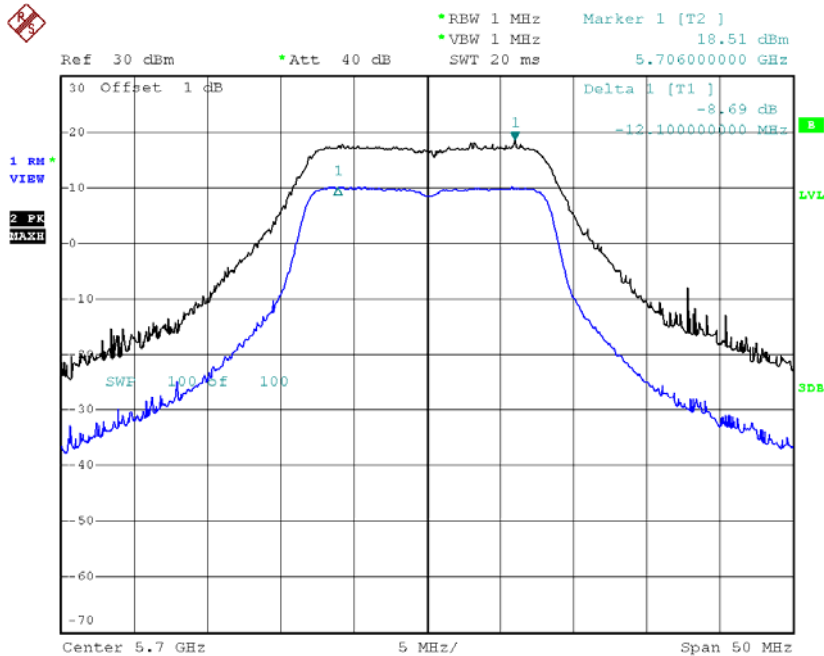


### CH112



Date: 31.MAY.2012 20:09:11

### CH140

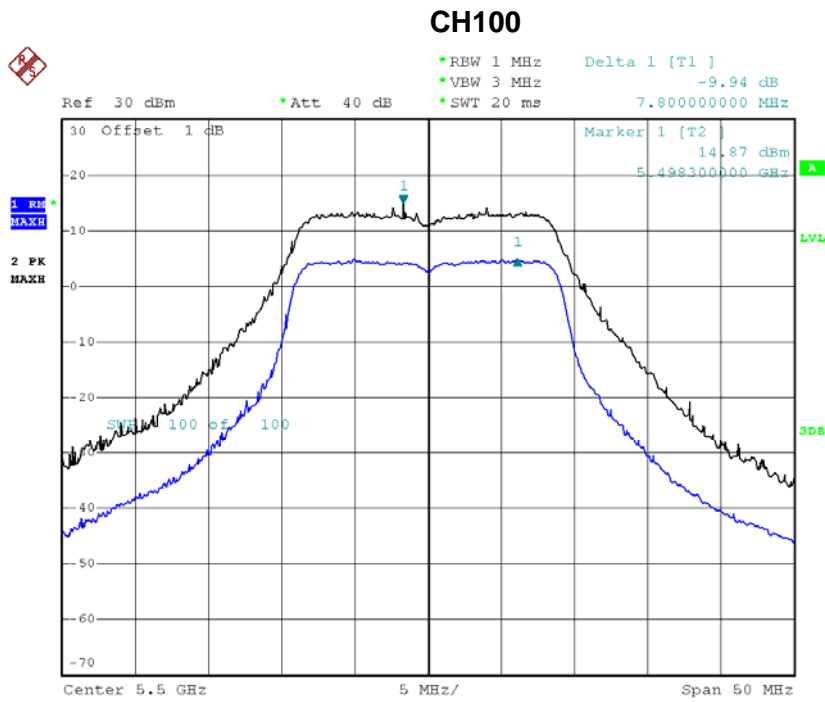


Date: 31.MAY.2012 20:11:14



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N20 Mode/ CH100, CH112, CH140		

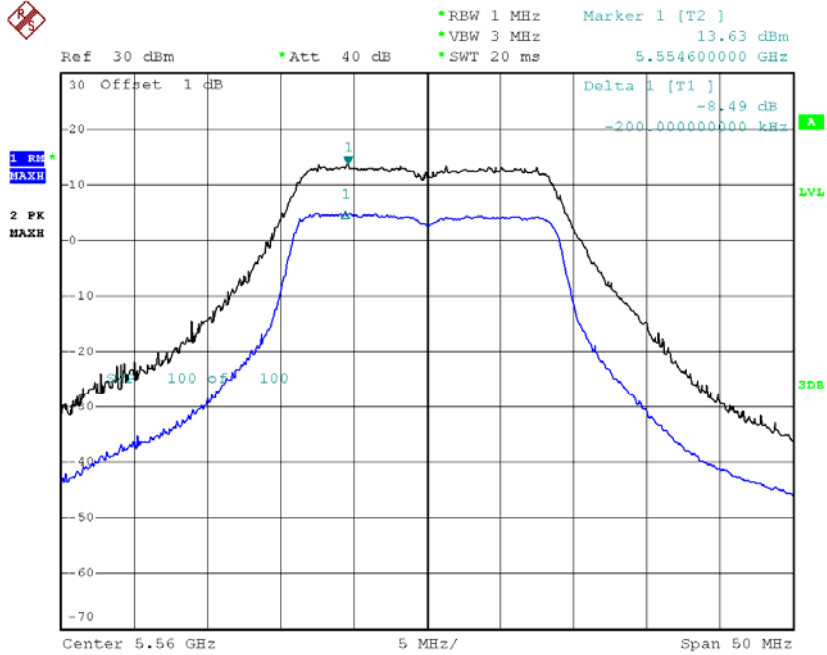
Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH100	5500	9.94	13
CH112	5560	8.49	13
CH140	5700	8.62	13



Date: 17.JUL.2012 21:54:28

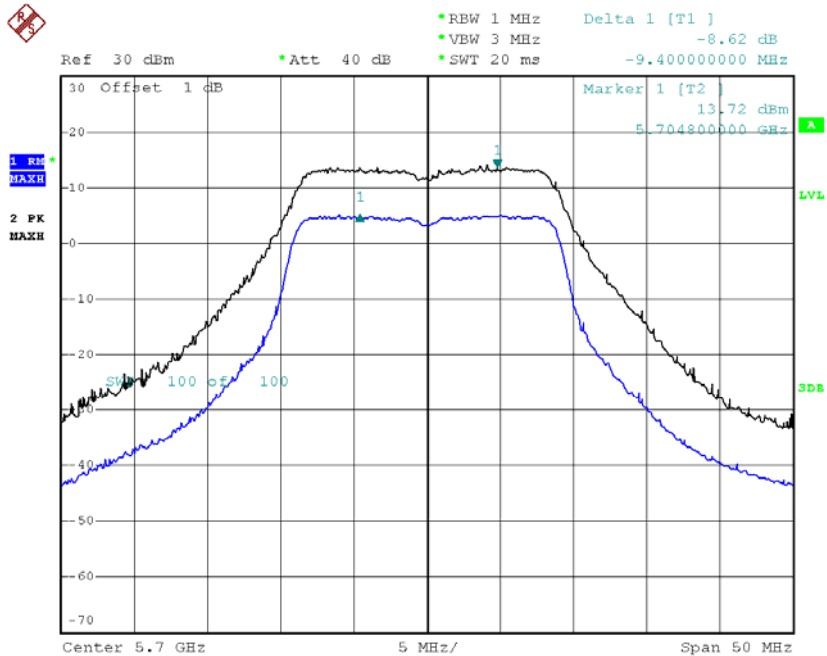


### CH112



Date: 17.JUL.2012 21:55:55

### CH140



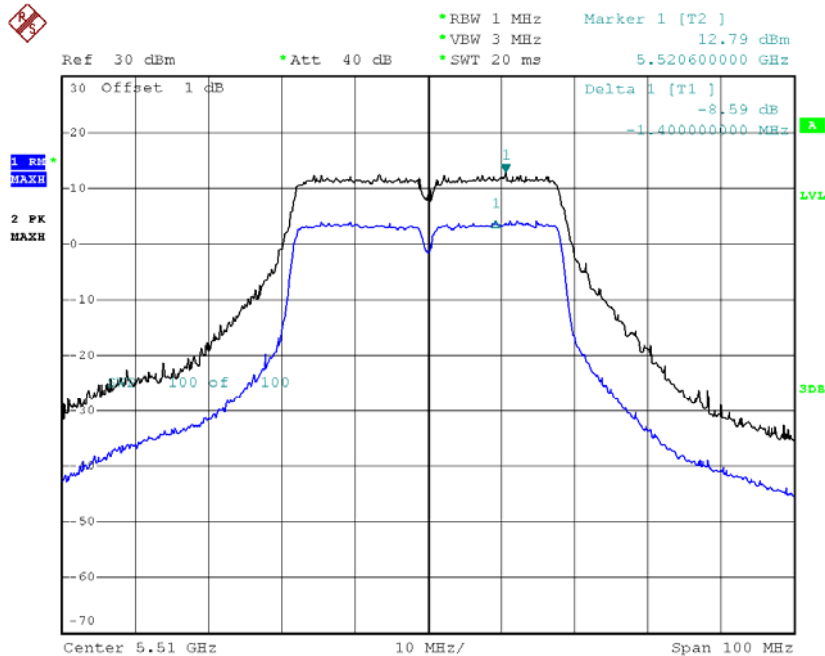
Date: 17.JUL.2012 21:57:31



EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 3/TX N40 Mode/CH102, CH110		

Test Channel	Frequency (MHz)	Peak Excursion (dB)	LIMIT (dB)
CH102	5510	8.59	13
CH110	5550	8.68	13

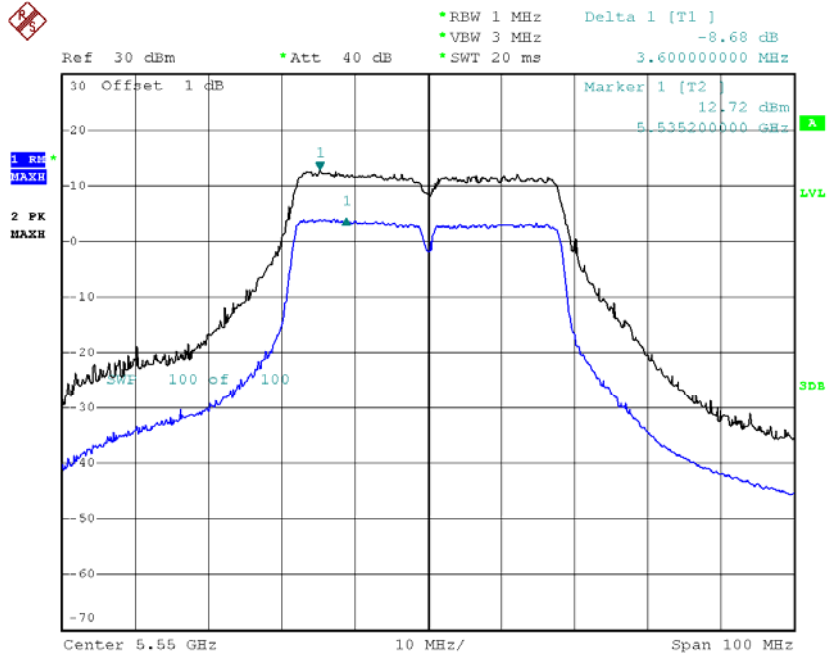
### CH102



Date: 17.JUL.2012 22:02:42



### CH110



Date: 17.JUL.2012 22:03:47



**10. FREQUENCY STABILITY MEASUREMENT**

**10.1 APPLIED PROCEDURES / LIMIT**

FCC Part15, Subpart E 15.407(g)			
Test Item	Limit	Frequency Range (MHz)	Result
Frequency Stability	specified in the user's manual	5150 - 5250	PASS
		5250 - 5350	N/A
		5470 - 5725	N/A

**10.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP_40	100129	Nov.26.2012
2	Precision Oven Tester	HOLINK	H-T-1F-D	BA03101701	May. 11, 2013

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

**10.1.2 TEST PROCEDURE**

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

b.

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

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

d. user manual temperature is 0°C~60°C.

**10.1.3 DEVIATION FROM STANDARD**

No deviation.



#### **10.1.4 TEST SETUP**



#### **10.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**10.1.6 TEST RESULTS**

EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2		

**Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)
(V)	5320
138	5319.986400
120	5319.986800
102	5319.987000
Max. Deviation (MHz)	0.013600
Max. Deviation (ppm)	2.56

**Temperature vs. Frequency Stability**

Temperature	Measurement Frequency (MHz)
(°C)	5320
-20	5319.986000
-10	5319.986200
0	5319.986400
10	5319.986500
20	5319.986800
30	5319.987000
40	5319.987100
50	5319.987200
Max. Deviation (MHz)	0.014000
Max. Deviation (ppm)	2.63





EUT :	Outdoor Wireless LAN Access Point	Model Name :	AP6510DN-AGN-US
Temperature :	25 °C	Relative Humidity :	58 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	Band 2		

**Voltage vs. Frequency Stability**

Voltage	Measurement Frequency (MHz)
138	5499.985300
120	5499.985600
102	5499.985700
Max. Deviation (MHz)	0.014700
Max. Deviation (ppm)	2.67
138	5699.985400

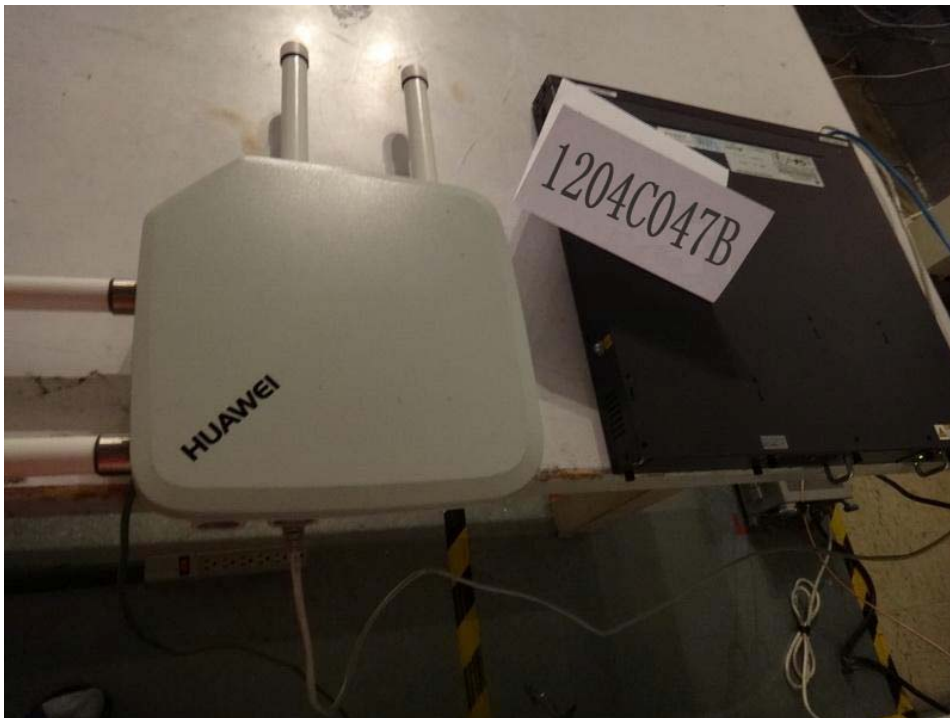
**Temperature vs. Frequency Stability**

Temperature	Measurement Frequency (MHz)
(°C)	5500
-20	5499.985000
-10	5499.985200
0	5499.985300
10	5499.985400
20	5499.985600
30	5499.985800
40	5499.986000
50	5499.986100
Max. Deviation (MHz)	0.015000
Max. Deviation (ppm)	2.73



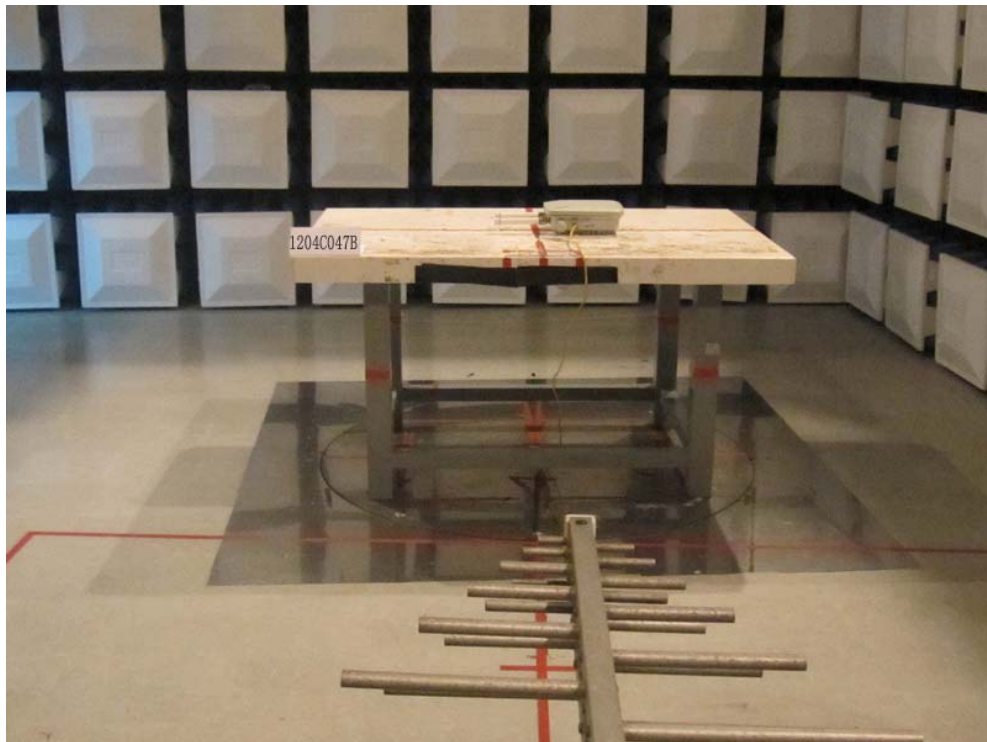
**11. EUT TEST PHOTO**

**Conducted Measurement Photos**





**Radiated Measurement Photos  
BELOW 1G**





**Radiated Measurement Photos  
ABOVE 1G**

