

MIC TEST REPORT

(WIFI 5G)

Product: Head Mounted Tablet

Brand Name: realwear

Model Name: T1100G

Applicant: RealWear, Inc.

Address: 600 Hatheway Road, Vancouver, WA, 98661

Manufacturer: Shanghai Sunrise Simcom Limited

Address: No.888, Shengli Road, Qingpu Industrial Park, Shanghai, P.R.China

Prepared by: BV 7Layers Communications Technology (Shenzhen) Co. Ltd

Lab Location: No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

TEL: +86 755 8869 6566

FAX: +86 755 8869 6577

E-MAIL: customerservice.dg@cn.bureauveritas.com

Report No.: RJ180411W011-3

Received Date: Apr. 11, 2018

Test Date: Apr. 12, 2018 ~ Apr. 22, 2018

Issued Date: Apr. 23, 2018

This report should not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.

TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1 CERTIFICATION	5
2 SUMMARY OF TEST RESULTS.....	6
2.1 SUMMARY OF 802.11a/n/ac TEST RESULTS.....	6
2.2 MEASUREMENT UNCERTAINTY	7
3 GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST CHANNELS.....	10
3.3 TEST CONDITIONS	11
3.4 ASSEMBLY	12
3.5 ANTENNA SPECIFICATIONS	12
3.5.1 ANTENNA GAIN.....	12
3.5.2 ANTENNA PATTERN	12
4 TEST RESULTS OF 802.11a/ 802.11n(20MHz)/ 802.11n(40MHz)/ 802.11ac(80MHz)	13
4.1 FREQUENCY TOLERANCE MEASUREMENT	13
4.1.1 LIMITS OF FREQUENCY TOLERANCE MEASUREMENT	13
4.1.2 TEST RESULTS.....	13
4.2 OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH).....	15
4.2.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT.....	15
4.2.2 TEST RESULTS.....	16
4.3 SPREADING BANDWIDTH MEASUREMENT (90% POWER BANDWIDTH).....	27
4.3.1 LIMITS OF SPREADING BANDWIDTH.....	27
4.3.2 TEST RESULTS.....	27
4.4 SPURIOUS EMISSIONS FOR TRANSMITTER MEASUREMENT.....	38
4.4.1 LIMITS OF SPURIOUS EMISSIONS.....	38
4.4.2 TEST RESULTS.....	40
4.5 OUT-BAND LEAKAGE POWER	77
4.5.1 LIMITS OF LEAKAGE POWER (EIRP)	77
4.5.2 TEST RESULTS.....	80
4.6 ADJACENT CHANNEL POWER TOLERANCE	97
4.6.1 LIMITS OF POWER TOLERANCE	97
4.6.2 TEST SETUP	97
4.6.3 TEST RESULTS.....	98
4.7 ANTENNA POWER MEASUREMENT	101
4.7.1 LIMITS OF ANTENNA POWER	101
4.7.2 TEST SETUP	101
4.7.3 TEST RESULTS.....	102
4.8 SPURIOUS EMISSIONS FOR RECEIVER	114
4.8.1 LIMITS OF SPURIOUS EMISSIONS FOR RECEIVER.....	114
4.8.2 TEST SETUP	114
4.8.3 TEST RESULTS.....	115
4.9 BURST LENGTH	119
4.9.1 LIMITS OF BURST LENGTH.....	119
4.9.2 TEST SETUP	119
4.9.3 TEST RESULTS.....	120



4.10 CARRIER SENSE CAPABILITY 131

 4.10.1 MEASURING SYSTEM BLOCK DIAGRAM 131

 4.10.2 MEASURING OPERATION PROCEDURES 131

 4.10.3 LEVEL OF THE AMBIENT CARRIER 132

4.11 INTERFERENCE PREVENTION FUNCTION 136

 4.11.1 LIMITS OF INTERFERENCE PREVENTION FUNCTION 136

 4.11.2 TEST SETUP 136

 4.11.3 TEST RESULTS 136

5 TEST INSTRUMENTS..... 137

6 PHOTOGRAPHS OF THE TEST CONFIGURATION..... 138

7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB 139



Test Report No.: RJ180411W011-3

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RJ180411W011-3	Original release	Apr. 23, 2018

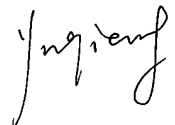


Test Report No.: RJ180411W011-3

1 CERTIFICATION

PRODUCT: Head Mounted Tablet
BRAND NAME: realwear
MODEL NAME: T1100G
APPLICANT: RealWear, Inc.
TESTED: Apr. 12, 2018 ~ Apr. 22, 2018
TEST SAMPLE: Identical Prototype
STANDARDS : ARIB STD-T71, MIC notice 88 Appendix 45

The above equipment has been tested by **BV 7Layers Communications Technology (Shenzhen) Co. Ltd**, and found compliance with the requirement of the above standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions herein specified.

PREPARED BY :  , **DATE:** Apr. 23, 2018
(Yuqiang Yin/ Engineer)

APPROVED BY :  , **DATE:** Apr. 23, 2018
(Sam Tung / Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

2.1 SUMMARY OF 802.11a/n/ac TEST RESULTS

Notice 88 Appendix 45	ARIB STD-T71 REF.	REPORT REFERENCE	PARAMETER	TEST RESULT (NOTE)
GENERAL PROVISIONS				
C	3.1.2 (4)	4.1	Frequency tolerance	C
D	3.1.2 (11)	4.2	Occupied bandwidth	C
E	3.1.2 (8)	4.4	Spurious emissions	C
TRANSMITTING EQUIPMENT				
F	3.1.2 (2)	4.7	Tolerance of antenna power	C
--	--	--	SAR	NA
TRANSMITTING ANTENNA				
--	--	3.5	Type, configuration, etc. of transmitting antenna	C
--	--	3.5	Direction pattern of transmitting antenna	C
RECEIVING EQUIPMENT				
H	3.1.3 (1)	4.8	Spurious emissions of receiver	C
--	--	3.5	Refer to all articles for transmitting antenna	C
OPERATING FREQUENCY				
--	3.1.8 (1)	3.2	High frequency	C
--	3.1.8 (1)	3.4	Modulation section can not be opened easily	C
--	3.1.1(1)	3.1	Communication method	C
--	3.1.2 (1)	3.1	Modulation method	C
--	3.1.2 (6)	3.1	Signal transmission rate	C
--	3.1.2 (7)	0	Burst length	C
--	3.1.2 (2)	4.7	Antenna power	C
--	3.1.2 (5)	4.6	Isotropically radiated power	C
--	3.1.2 (1)	4.2	Number of carriers	C
--	--	4.3	Spreading factor	C
--	3.1.2 (10)	4.5	Out-band leakage power	C
--	3.1.2 (9)	4.6	Adjacent channel power tolerance	C
--	--	--	Comply with the technical conditions	C
--	3.1.5	4.10	Carrier sense capability	C
--	--	--	Dynamic frequency selection	NA
NOTE: C = Conform NC = Not Conform NT = Not Tested NA = Not Applicable				



2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

ITEM	UNCERTAINTY
Occupied Bandwidth	491.896Hz
Spurious emissions	3.508dB
Output power density	2.889dB
Adjacent Channel Leakage Power	1.35dB
Out of band radiated power	3.93dB
Frequency Tolerance	6805.18Hz
Burst length	0.01%

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Head Mounted Tablet
BRAND NAME	realwear
MODEL NAME	T1100G
TYPE OF EQUIPMENT	Data transmission equipment operating in the 5GHz ISM band using spread spectrum techniques
MODULATION TYPE	CCK, QPSK, BPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
TRANSFER RATE	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to MCS7 802.11ac: up to V9
OPERATING FREQUENCY	5180.0MHz ~ 5240.0MHz 5240.0 MHz ~ 5320.0MHz 5470.0 MHz ~ 5725.0MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5240 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5700MHz: 6 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz) 2 for 802.11ac (80MHz)
RATED RF OUTPUT POWER DENSITY (mW/MHz)	Refer to NOTE
CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)	Refer to NOTE
RADIATED RF OUTPUT POWER DENSITY (mW/MHz)	Refer to NOTE
HW-RELEASE NO.	A
SW-RELEASE NO.	HMT-1.G.0-6.0.1-03.00-T

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT matched the following USB cable:

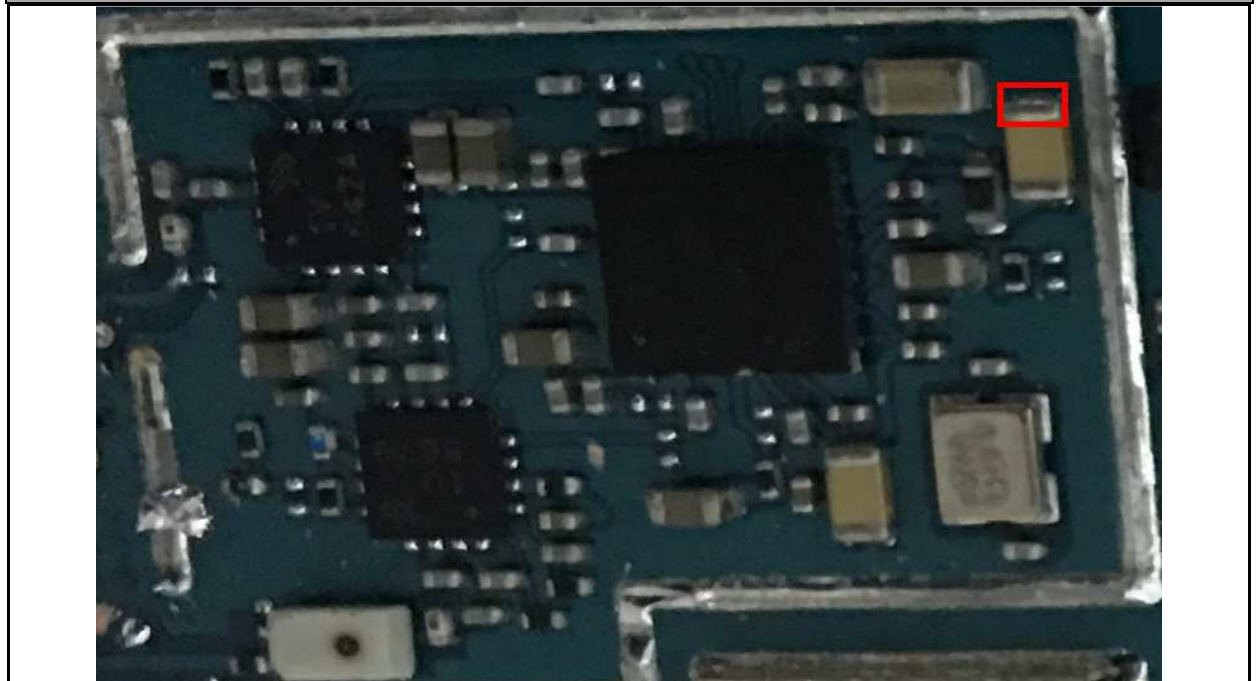
USB CABLE	
BRAND:	KELI
MODEL:	KLC-2551
SIGNAL LINE:	2.0 METER

3. The power table as below:

	Rated Power (mW/MHz)	Total Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
W52			
802.11a	1.8	1.734	2.748
802.11n (20MHz)	0.85	0.797	1.263
802.11n (40MHz)	0.5	0.445	0.705
802.11ac (80MHz)	0.3	0.285	0.452
W53			
802.11a	1.8	1.786	2.703
802.11n (20MHz)	0.85	0.792	1.199
802.11n (40MHz)	0.5	0.451	0.683
802.11ac (80MHz)	0.3	0.293	0.443
W56			
802.11a	1.8	1.777	2.690
802.11n (20MHz)	0.85	0.803	1.215
802.11n (40MHz)	0.5	0.428	0.648
802.11ac (80MHz)	0.3	0.289	0.437

4. When EUT be operated at $\pm 10\%$ from the normal supply voltage, the supply voltage of RF part was varied within $\pm 1\%$. All test cases were done under the normal supply voltage.

Power supply voltage 3.8Vdc (Normal)	Power supply voltage 4.235Vdc (+10%)	Power supply voltage 3.465Vdc (-10%)
1.29	1.29	1.29
Measurement point		



5. For the test results, the EUT had been tested with normal supply voltage condition.

3.2 DESCRIPTION OF TEST CHANNELS

802.11a/ 802.11n (20MHz) (W52 & W53)

CHANNEL	TRANSMITTER	RECEIVER
36	5180MHz	5180MHz
48	5240MHz	5240MHz
52	5260MHz	5260MHz
64	5320MHz	5320MHz

802.11n (40MHz) (W52 & W53):

CHANNEL	TRANSMITTER	RECEIVER
38	5190MHz	5190MHz
46	5230MHz	5230MHz
54	5270MHz	5270MHz
62	5310MHz	5310MHz

802.11ac (80MHz) (W52 & W53):

CHANNEL	TRANSMITTER	RECEIVER
42	5210MHz	5210MHz
58	5290MHz	5290MHz

802.11a/ 802.11n (20MHz) (W56):

CHANNEL	TRANSMITTER	RECEIVER
100	5500MHz	5500MHz
120	5600MHz	5600MHz
140	5700MHz	5700MHz

802.11n (40MHz) (W56):

CHANNEL	TRANSMITTER	RECEIVER
102	5510MHz	5510MHz
118	5590MHz	5590MHz
134	5670MHz	5670MHz

802.11ac (80MHz) (W56):

CHANNEL	TRANSMITTER	RECEIVER
106	5530MHz	5530MHz
122	5610MHz	5610MHz

NOTE: By means of test software (RF TEST) provided by manufacture, the power levels during the tests were set according to the following codes:



(W52 & W53):

802.11a		802.11n (20MHz)		802.11n (40MHz)		802.11ac (80MHz)	
CHANNEL	POWER SETTING	CHANNEL	CHANNEL	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING
36	15.0	36	12.0	38	12.5	42	12.5
48	15.0	48	12.0	46	12.5	58	12.5
52	15.0	52	12.0	54	12.5		
64	15.0	64	12.0	62	12.5		

(W56):

802.11a		802.11n (20MHz)		802.11n (40MHz)		802.11ac (80MHz)	
CHANNEL	POWER SETTING	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING	CHANNEL	POWER SETTING
100	15.0	100	12.0	102	12.5	106	12.5
120	15.0	120	12.0	118	12.5	122	12.5
140	15.0	140	12.0	134	12.5		

3.3 TEST CONDITIONS

TEST CONDITIONS	VOLTAGE (Vdc)
V_{normal}	3.8
$V_{+10\%}$	4.18
$V_{-10\%}$	3.42

3.4 ASSEMBLY

The RF circuits are located inside of the EUT. The RF circuit was covered by metal shielding case, Also it won't be easy to be opened. Frequency Band, channels and Modulation parameters are fixed inside the module. They cannot be edited or modified by end-user.

3.5 ANTENNA SPECIFICATIONS

3.5.1 ANTENNA GAIN

	ANTENNA TYPE	GAIN (dBi)
WLAN: 5.0GHz	PCB	W52: 2 W53: 1.8 W56: 1.8

3.5.2 ANTENNA PATTERN

Please refer to the attached file (Antenna report).

4 TEST RESULTS OF 802.11a/ 802.11n(20MHz)/ 802.11n(40MHz)/ 802.11ac(80MHz)

4.1 FREQUENCY TOLERANCE MEASUREMENT

4.1.1 LIMITS OF FREQUENCY TOLERANCE MEASUREMENT

Tolerance of frequency shall be +/- 20ppm

4.1.2 TEST RESULTS

802.11a / 802.11a 802.11n (20MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH	
CHANNEL	FREQUENCY (MHz)	V _{normal}	
		CARRIER FREQUENCY (MHz)	FREQUENCY TOLERANCE (ppm)
36	5180	5180.01081	2.087
48	5240	5240.011472	2.189
52	5260	5260.012157	2.311
64	5320	5320.010365	1.948
100	5500	5500.012141	2.207
120	5600	5600.013025	2.326
140	5700	5700.011512	2.020

802.11a 802.11n (40MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH	
CHANNEL	FREQUENCY (MHz)	V _{normal}	
		CARRIER FREQUENCY (MHz)	FREQUENCY TOLERANCE (ppm)
38	5190	5190.010000	1.927
46	5230	5230.010341	1.977
54	5270	5270.010752	2.040
62	5310	5310.010634	2.003
102	5510	5510.010585	1.815
118	5590	5590.014573	2.607
134	5670	5670.012385	2.184

802.11ac (80MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH	
CHANNEL	FREQUENCY (MHz)	V_{normal}	
		CARRIER FREQUENCY (MHz)	FREQUENCY TOLERANCE (ppm)
42	5210	5210.012156	2.333
58	5290	5290.014216	2.687
106	5530	5530.010872	1.966
122	5610	5610.010698	1.907

4.2 OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH)

4.2.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

ITEM	Operating Band	Limit	REMARK
Occupied bandwidth	W52 & W53	<19MHz	802.11a/n(HT20)/ac(VHT20)
Occupied bandwidth	W56	<19.7MHz	802.11a/n(HT20)/ac(VHT20)
Occupied bandwidth	W52 & W53 & W56	<38MHz	802.11n(HT40)/ac(VHT40)

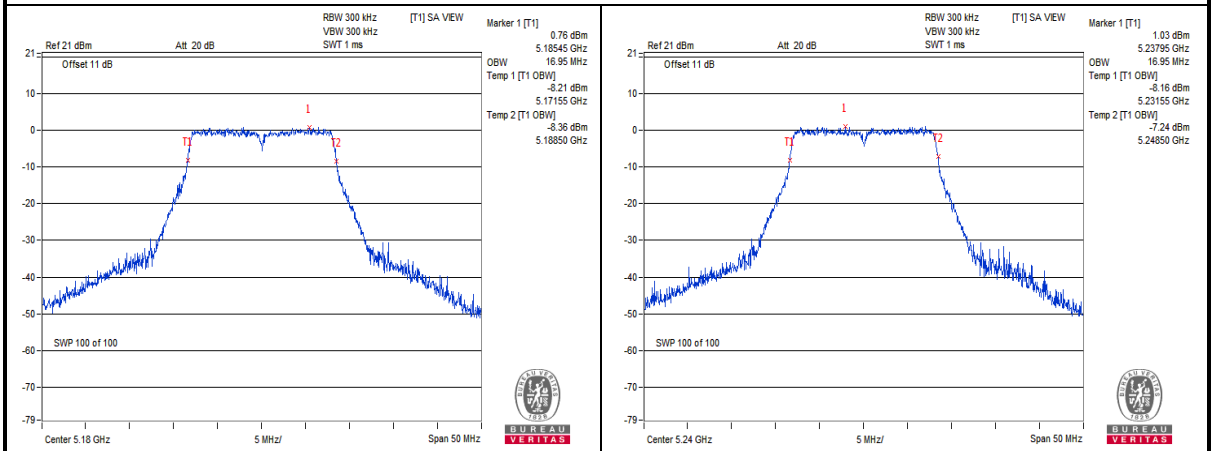
4.2.2 TEST RESULTS

802.11a

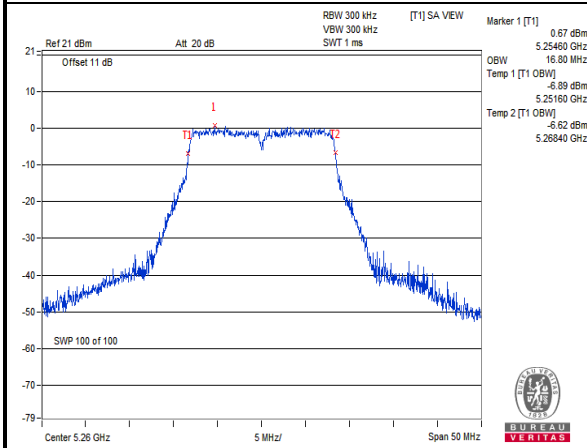
ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V_{normal}
		OCCUPIED BANDWIDTH (MHz)
36	5180	16.95
48	5240	16.95
52	5260	16.80
64	5320	16.80
100	5500	16.75
120	5600	16.85
140	5700	16.80
MEASUREMENT UNCERTAINTY		$\pm 206.50\text{Hz}$

NOTE: For the test plots please refer to the below pages.

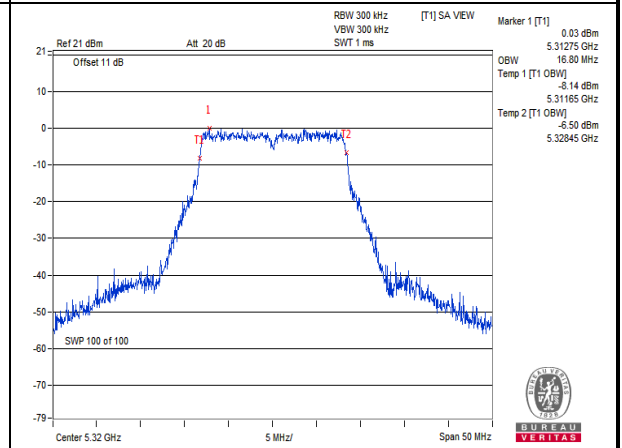
Vnormal



Channel 36



Channel 48

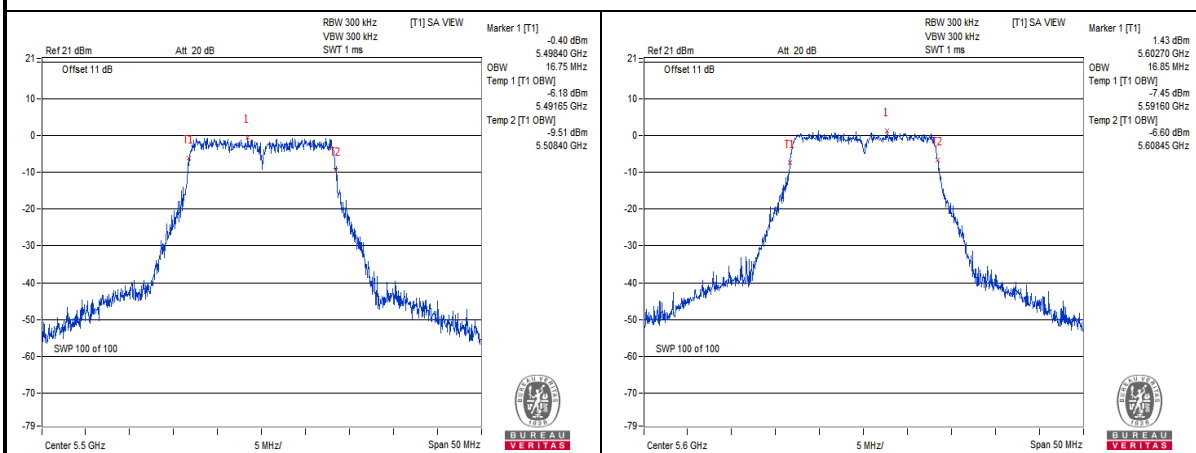


Channel 52

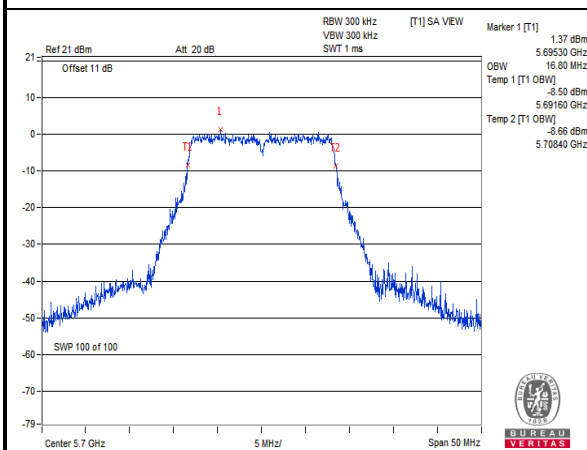
Channel 64

Measurement uncertainty: ± 206.50 Hz

Vnormal



Channel 100



Channel 120

Channel 140

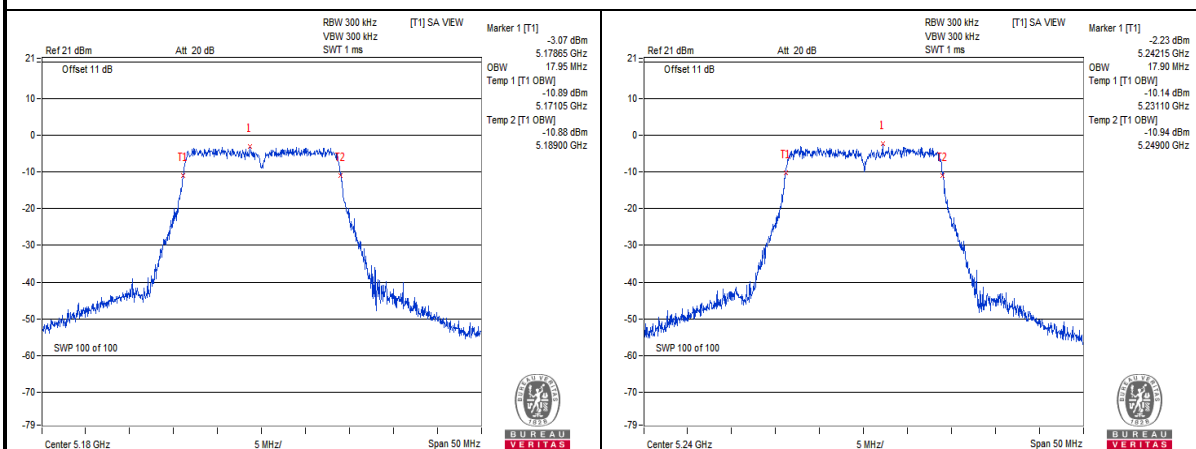
Measurement uncertainty: ± 206.50 Hz

802.11n (20MHz)

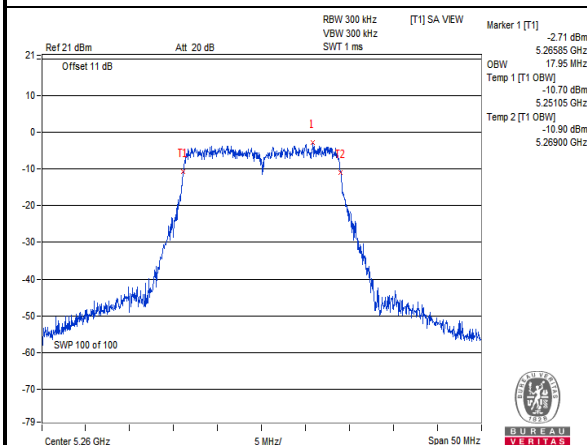
ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V_{normal}
		OCCUPIED BANDWIDTH (MHz)
36	5180	17.95
48	5240	17.90
52	5260	17.95
64	5320	17.85
100	5500	17.85
120	5600	17.90
140	5700	17.85
MEASUREMENT UNCERTAINTY		$\pm 206.50\text{Hz}$

NOTE: For the test plots please refer to the below pages.

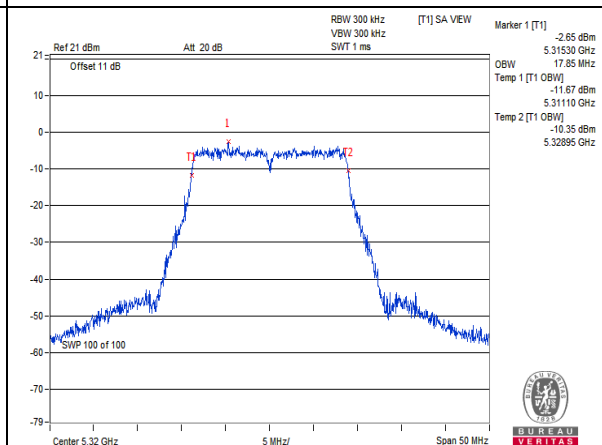
Vnormal



Channel 36



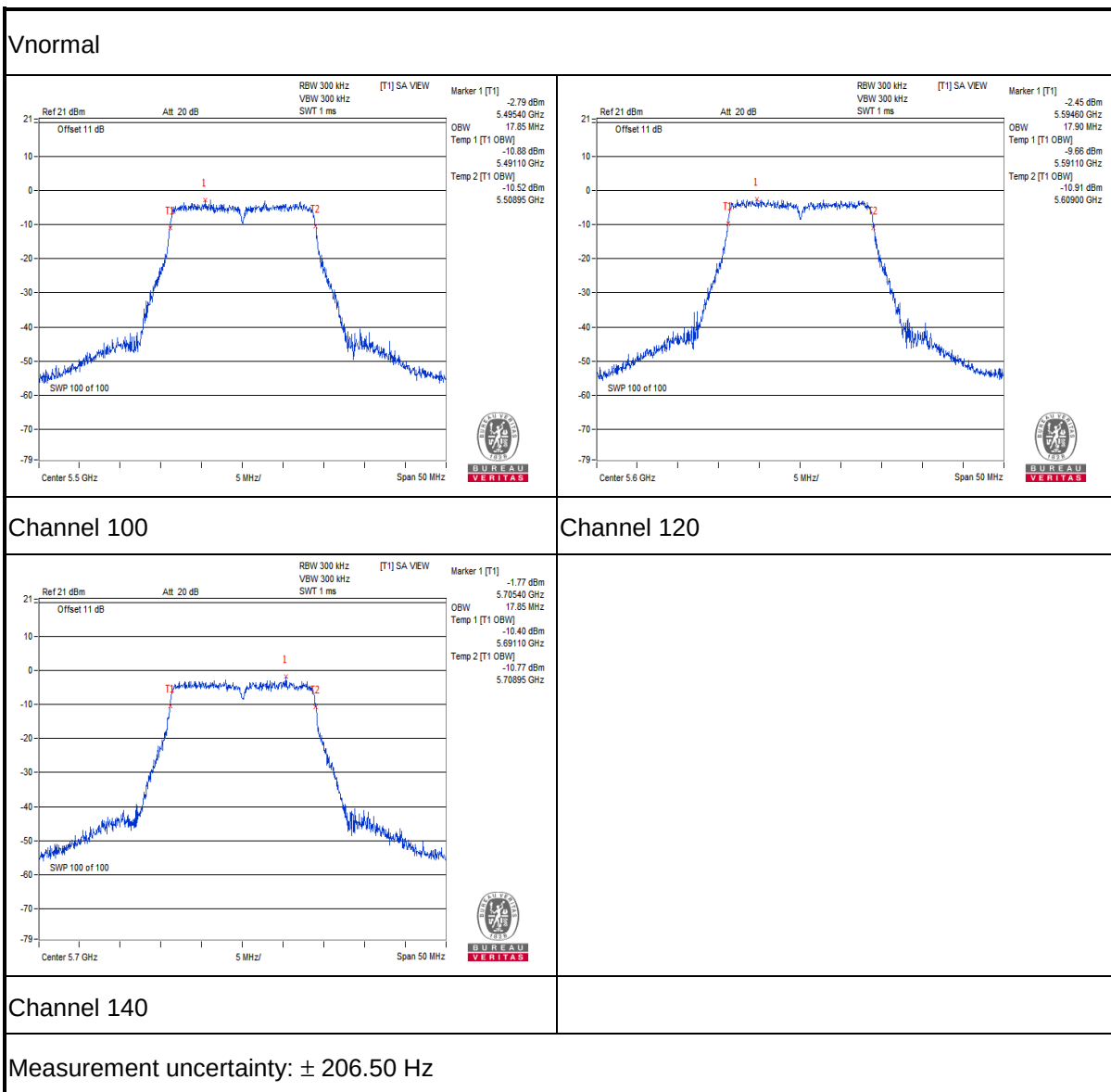
Channel 48



Channel 52

Channel 64

Measurement uncertainty: ± 206.50 Hz

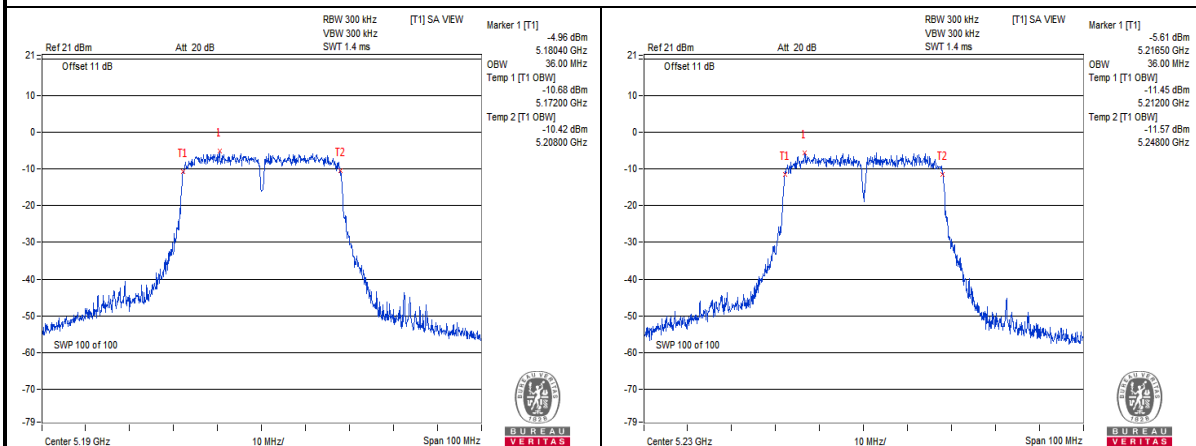


802.11a 802.11n (40MHz)

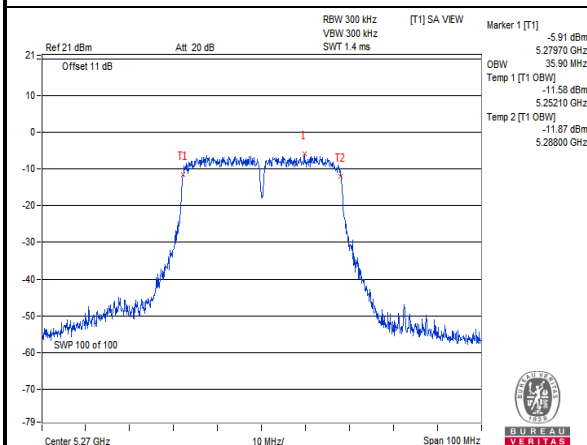
ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V _{normal}
		OCCUPIED BANDWIDTH (MHz)
38	5190	36.00
46	5230	36.00
54	5270	35.90
62	5310	35.90
102	5510	35.90
118	5590	36.00
134	5670	36.00
MEASUREMENT UNCERTAINTY		± 206.50Hz

NOTE: For the test plots please refer to the below pages.

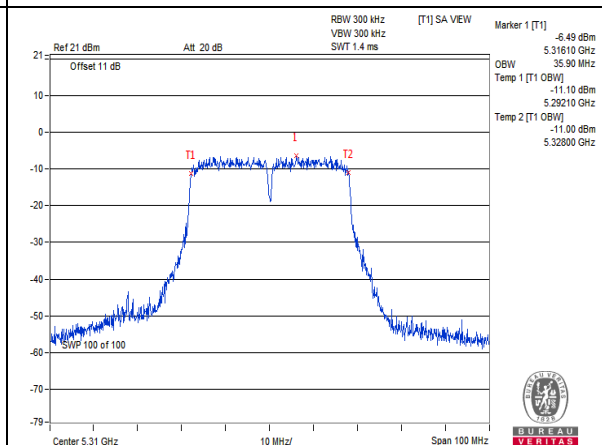
Vnormal



Channel 38



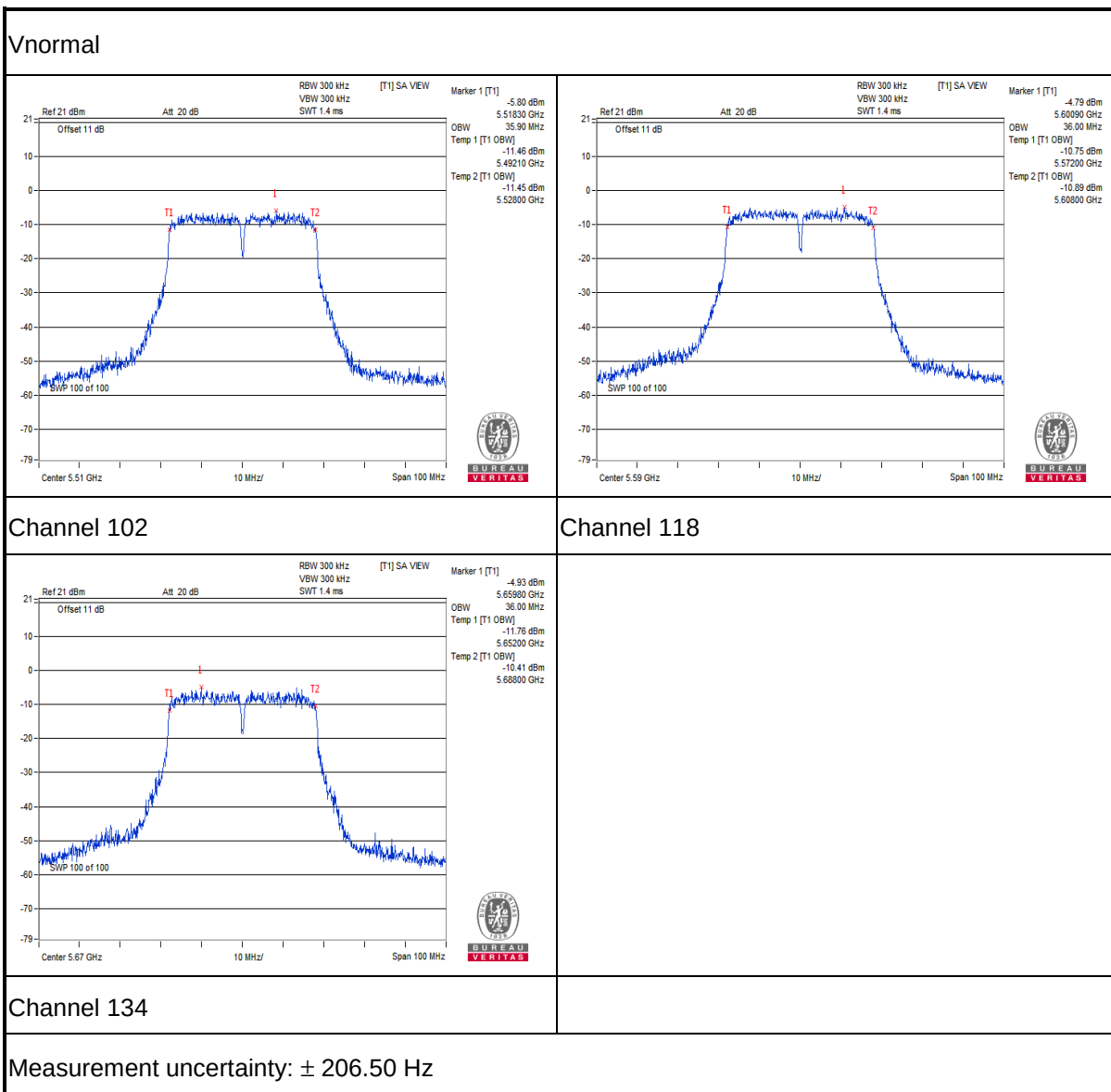
Channel 46



Channel 54

Channel 62

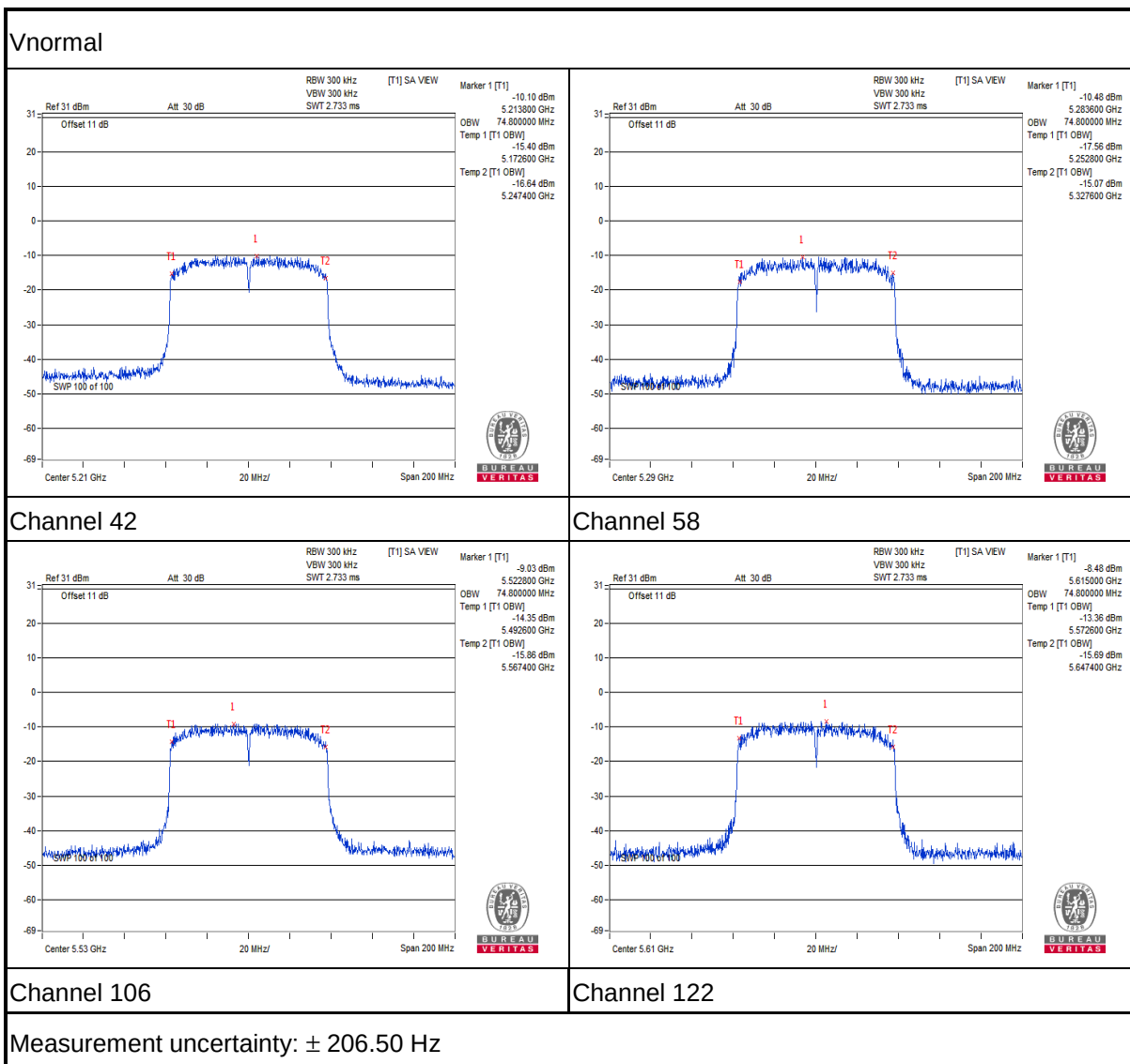
Measurement uncertainty: ± 206.50 Hz



802.11ac (80MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V_{normal}
		OCCUPIED BANDWIDTH (MHz)
42	5210	74.80
58	5290	74.80
106	5530	74.80
122	5610	74.80
MEASUREMENT UNCERTAINTY		$\pm 206.50\text{Hz}$

NOTE: For the test plots please refer to the below pages.



4.3 SPREADING BANDWIDTH MEASUREMENT (90% POWER BANDWIDTH)

4.3.1 LIMITS OF SPREADING BANDWIDTH

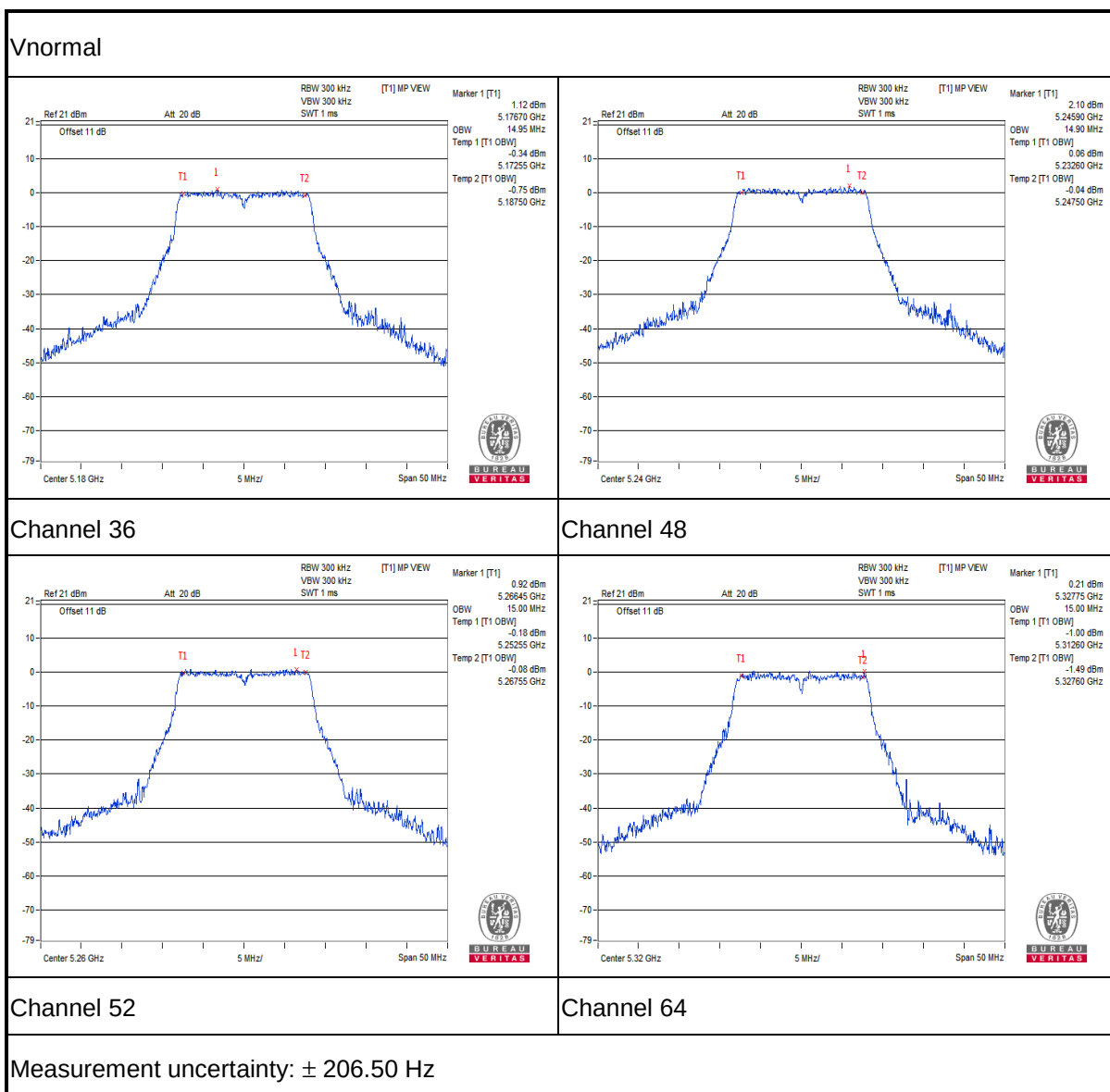
ITEM	LIMIT
SPREADING BANDWIDTH	$\geq 500\text{kHz}$

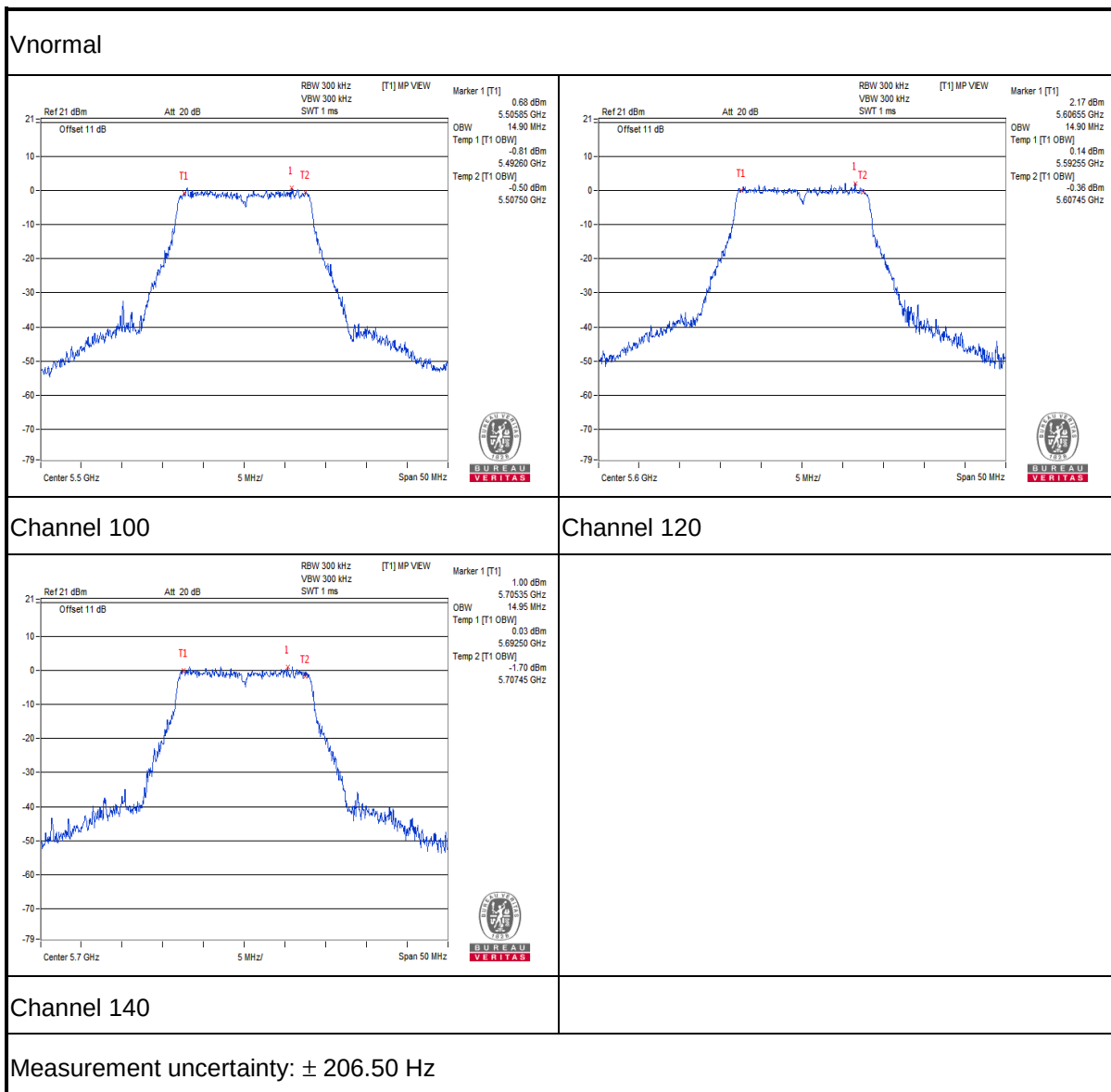
4.3.2 TEST RESULTS

802.11a

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V_{normal}
		OCCUPIED BANDWIDTH (MHz)
36	5180	14.95
48	5240	14.90
52	5260	15.00
64	5320	15.00
100	5500	14.90
120	5600	14.90
140	5700	14.95
MEASUREMENT UNCERTAINTY		$\pm 206.50\text{Hz}$

NOTE: For the test plots please refer to the below pages.

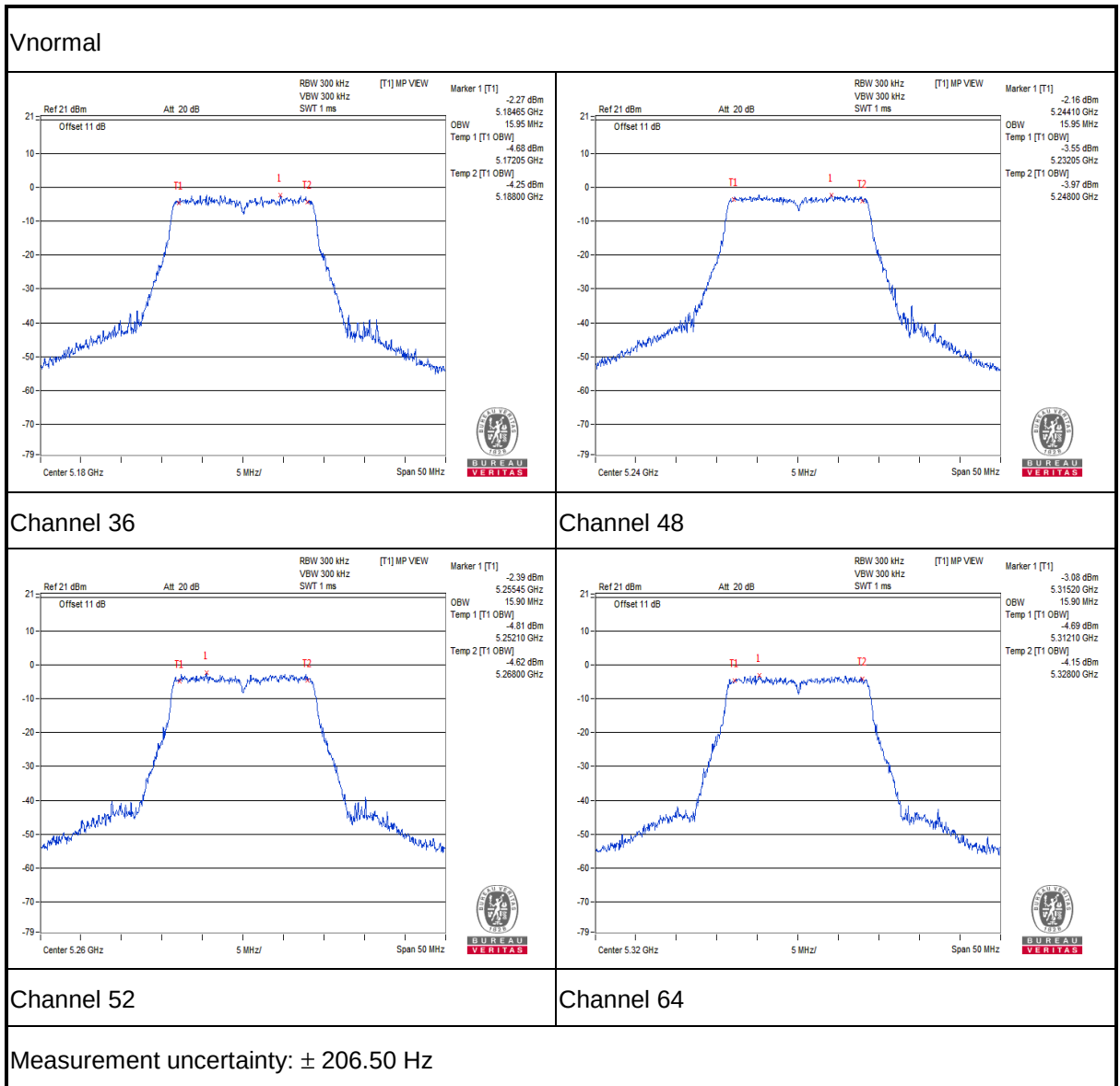


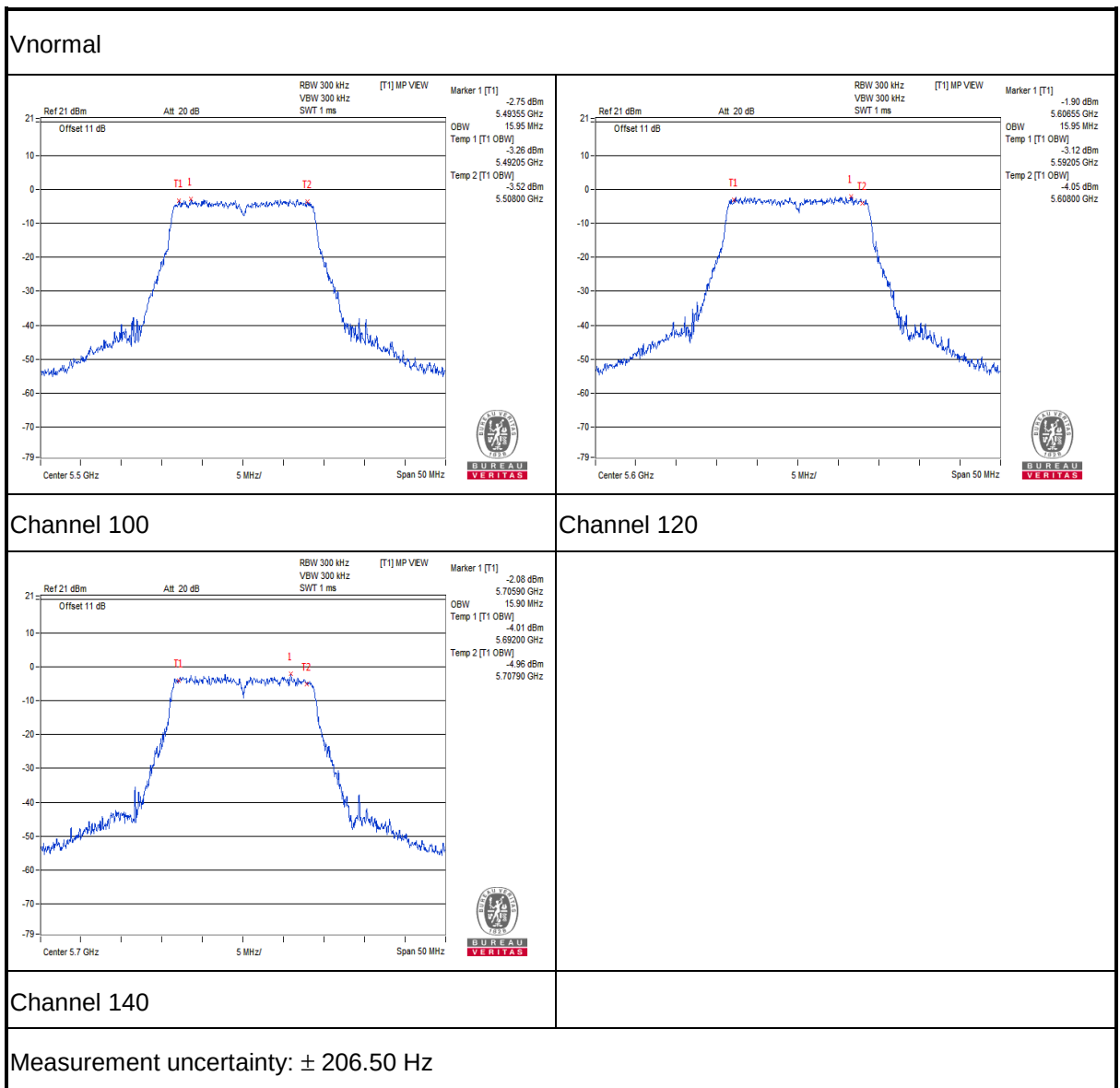


802.11n (20MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V _{normal}
		OCCUPIED BANDWIDTH (MHz)
36	5180	15.95
48	5240	15.95
52	5260	15.90
64	5320	15.90
100	5500	15.95
120	5600	15.95
140	5700	15.90
MEASUREMENT UNCERTAINTY		± 206.50Hz

NOTE: For the test plots please refer to the below pages.

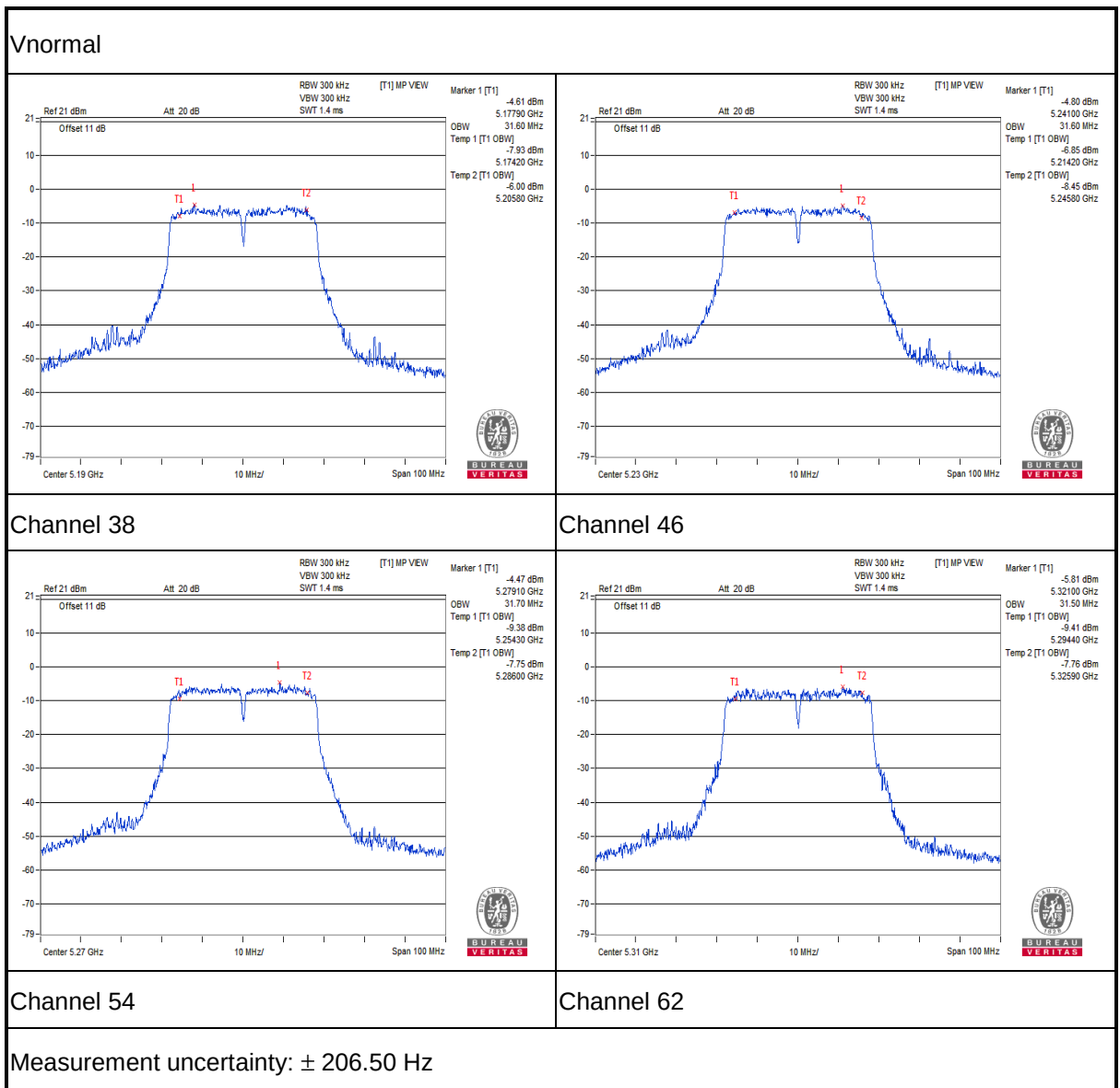


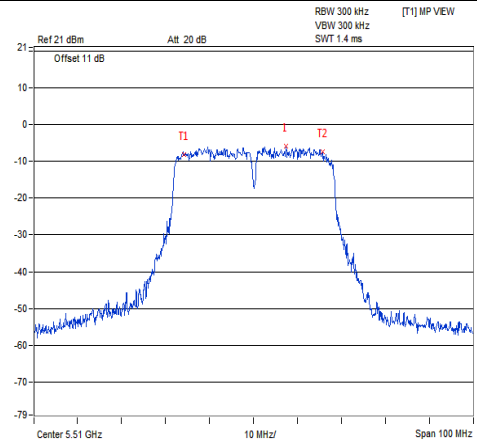
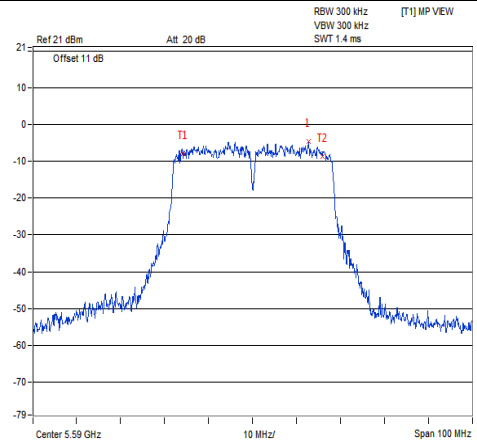
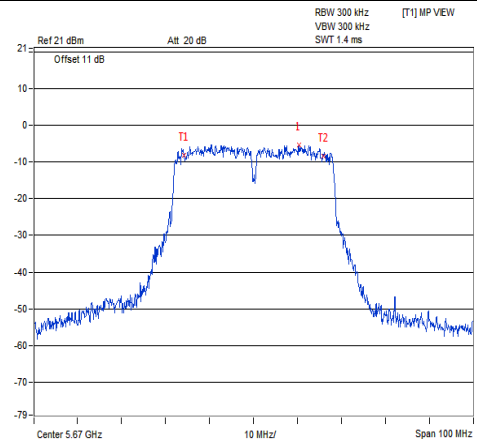


802.11n (40MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V_{normal}
		OCCUPIED BANDWIDTH (MHz)
38	5190	31.60
46	5230	31.60
54	5270	31.70
62	5310	31.50
102	5510	31.60
118	5590	31.80
134	5670	31.90
MEASUREMENT UNCERTAINTY		$\pm 206.50\text{Hz}$

NOTE: For the test plots please refer to the below pages.

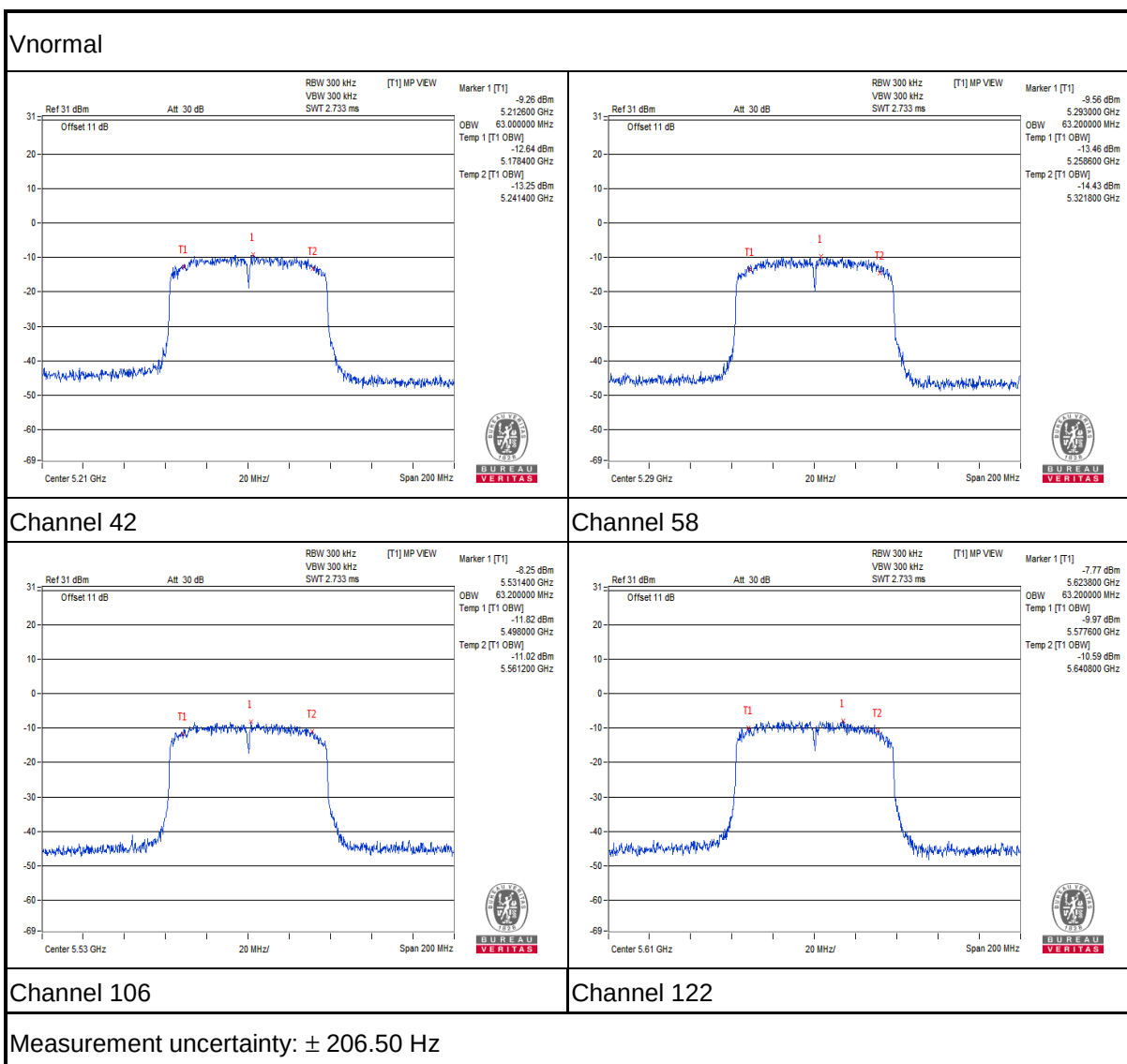


Vnormal	
 Ref 21 dBm Alt 20 dB RBW 300 kHz VBW 300 kHz SWT 1.4 ms [T1] MP VIEW Marker 1 [T1] -5.94 dBm 5.51740 GHz OBW 31.60 MHz Temp 1 [T1] OBW -8.05 dBm 5.49410 GHz Temp 2 [T1] OBW -7.48 dBm 5.52570 GHz Center 5.51 GHz 10 MHz/ Span 100 MHz	 Ref 21 dBm Alt 20 dB RBW 300 kHz VBW 300 kHz SWT 1.4 ms [T1] MP VIEW Marker 1 [T1] -4.84 dBm 5.60280 GHz OBW 31.80 MHz Temp 1 [T1] OBW -7.86 dBm 5.57410 GHz Temp 2 [T1] OBW -8.64 dBm 5.60590 GHz Center 5.59 GHz 10 MHz/ Span 100 MHz
Channel 102	Channel 118
 Ref 21 dBm Alt 20 dB RBW 300 kHz VBW 300 kHz SWT 1.4 ms [T1] MP VIEW Marker 1 [T1] -5.31 dBm 5.68030 GHz OBW 31.90 MHz Temp 1 [T1] OBW -8.18 dBm 5.65400 GHz Temp 2 [T1] OBW -8.53 dBm 5.68590 GHz Center 5.67 GHz 10 MHz/ Span 100 MHz	
Channel 134	
Measurement uncertainty: ± 206.50 Hz	

802.11ac (80MHz)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH
CHANNEL	FREQUENCY (MHz)	V_{normal}
		OCCUPIED BANDWIDTH (MHz)
42	5210	63.00
58	5290	63.20
106	5530	63.20
122	5610	63.20
MEASUREMENT UNCERTAINTY		$\pm 206.50\text{Hz}$

NOTE: For the test plots please refer to the below pages.



4.4 SPURIOUS EMISSIONS FOR TRANSMITTER MEASUREMENT

4.4.1 LIMITS OF SPURIOUS EMISSIONS

W52 & W53 bands: 802.11a / 802.11n (HT20)

Frequencies (MHz)	Limit
OBW $\leq$ 18MHz	
30.0MHz to 1000.0MHz	$\leq$ 0.25 μ W/100kHz
1000.0MHz to 5140.0MHz	$\leq$ 2.5 μ W/MHz
5360.0MHz to 26000.0MHz	$\leq$ 2.5 μ W/MHz
18MHz < OBW < 19MHz	
30.0MHz to 1000.0MHz	$\leq$ 0.25 μ W/100kHz
1000.0MHz to 5135.0MHz	$\leq$ 2.5 μ W/MHz
5365.0MHz to 26000.0MHz	$\leq$ 2.5 μ W/MHz

W52 & W53 bands: 802.11n (HT40)

Frequencies (MHz)	Limit
30.0MHz ~ 1000.0MHz	$\leq$ 0.25 μ W/100kHz
1000.0MHz ~ 5100.0MHz	$\leq$ 2.5 μ W/MHz
5400.0MHz ~ 26000.0MHz	$\leq$ 2.5 μ W/MHz

W52 & W53 bands: 802.11ac (VHT80)

Frequencies (MHz)	Limit
30.0MHz ~ 1000.0MHz	$\leq$ 0.25 μ W/100kHz
1000.0MHz ~ 5020.0MHz	$\leq$ 2.5 μ W/MHz
5480.0MHz ~ 26000.0MHz	$\leq$ 2.5 μ W/MHz

W56 band: 802.11a / 802.11n (HT20)

Frequencies (MHz)	Limit
30.0MHz to 1000.0MHz	$\leq 0.25 \mu\text{W}/100\text{kHz}$
1000.0MHz ~ 5455.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$
5745.0MHz ~ 26000.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$

W56 band: 802.11n (HT40)

Frequencies (MHz)	Limit
30.0MHz to 1000.0MHz	$\leq 0.25 \mu\text{W}/100\text{kHz}$
1000.0MHz ~ 5420.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$
5760.0MHz ~ 26000.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$

W56 band: 802.11ac (VHT80)

Frequencies (MHz)	Limit
30.0MHz to 1000.0MHz	$\leq 0.25 \mu\text{W}/100\text{kHz}$
1000.0MHz ~ 5340.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$
5800.0MHz ~ 26000.0MHz	$\leq 2.5 \mu\text{W}/\text{MHz}$

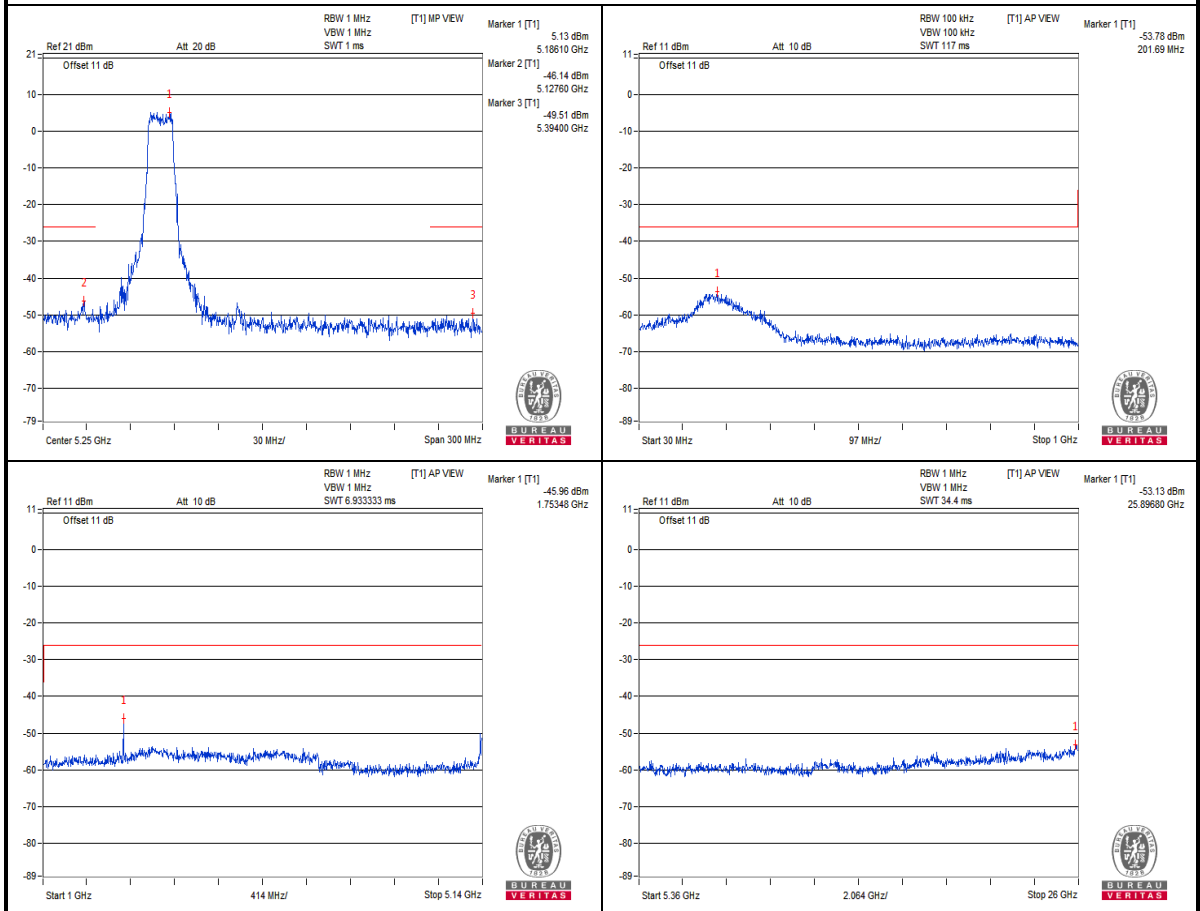
4.4.2 TEST RESULTS

802.11a (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH36 (5180MHz)		CH48 (5240MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30.0MHz ~ 1000.0MHz	201.690	0.004185uW	194.900	0.004475uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5140.0MHz	1753.480	0.025309uW	2142.640	0.004749uW	2.5uWMHz	PASS
	5360.0MHz ~ 26000.0MHz	25896.800	0.004854uW	25504.640	0.003868uW	2.5uW/MHz	PASS

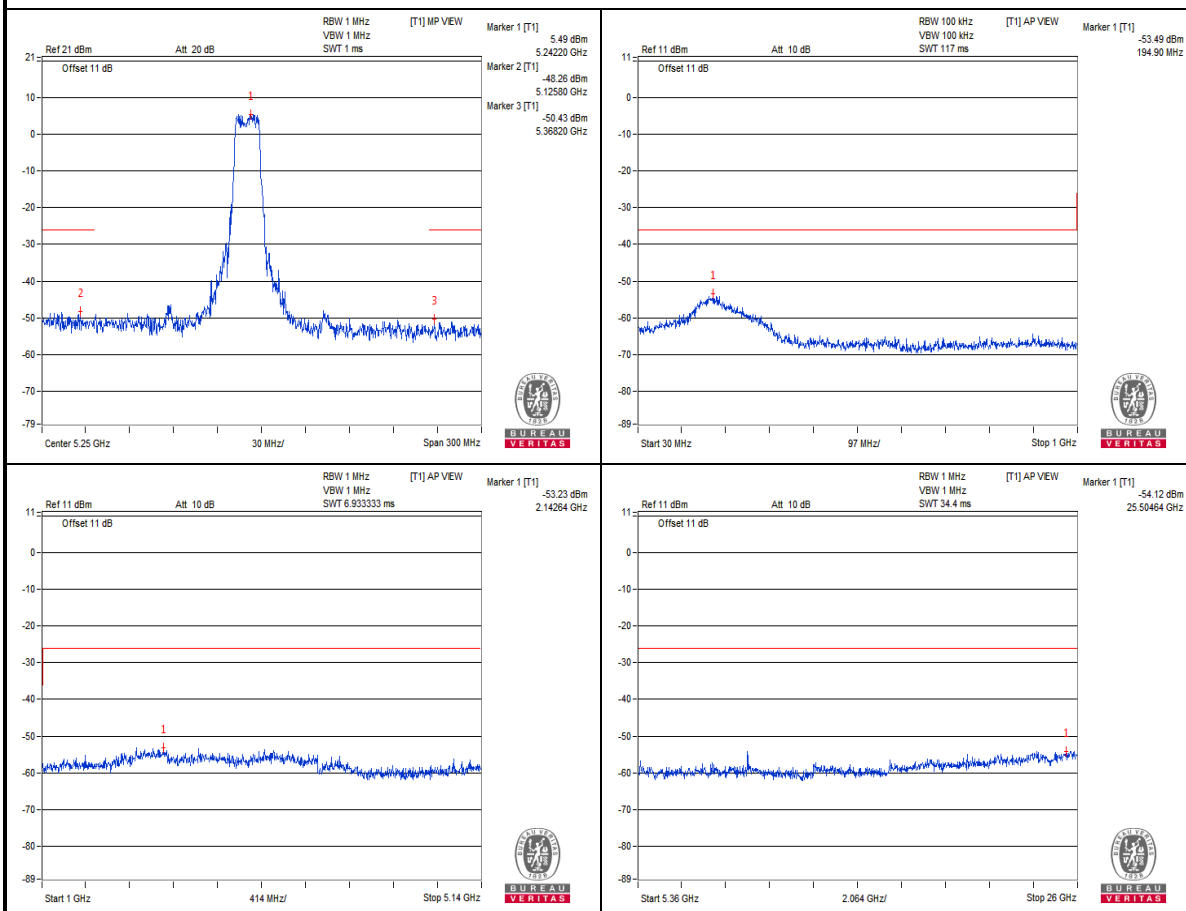
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 36



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 48



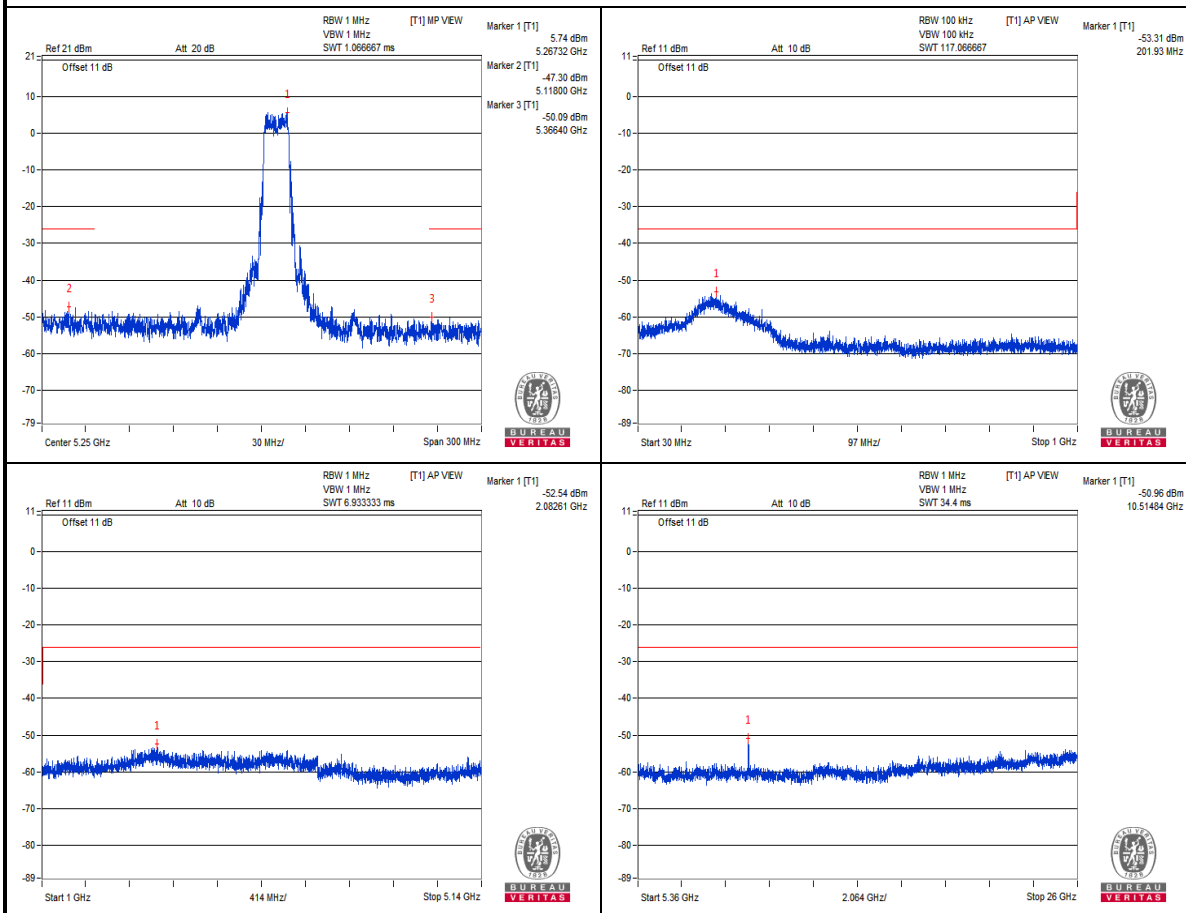
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11a (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 52 (5260MHz)		CH 64 (5320MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V_{normal}	30.0MHz ~ 1000.0MHz	201.930	0.004657uW	191.990	0.004425uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5135.0MHz	2082.610	0.005565uW	2066.050	0.005011uW	2.5uW/MHz	PASS
	5365.0MHz ~ 26000.0MHz	10514.840	0.008uW	10638.680	0.011092uW	2.5uW/MHz	PASS

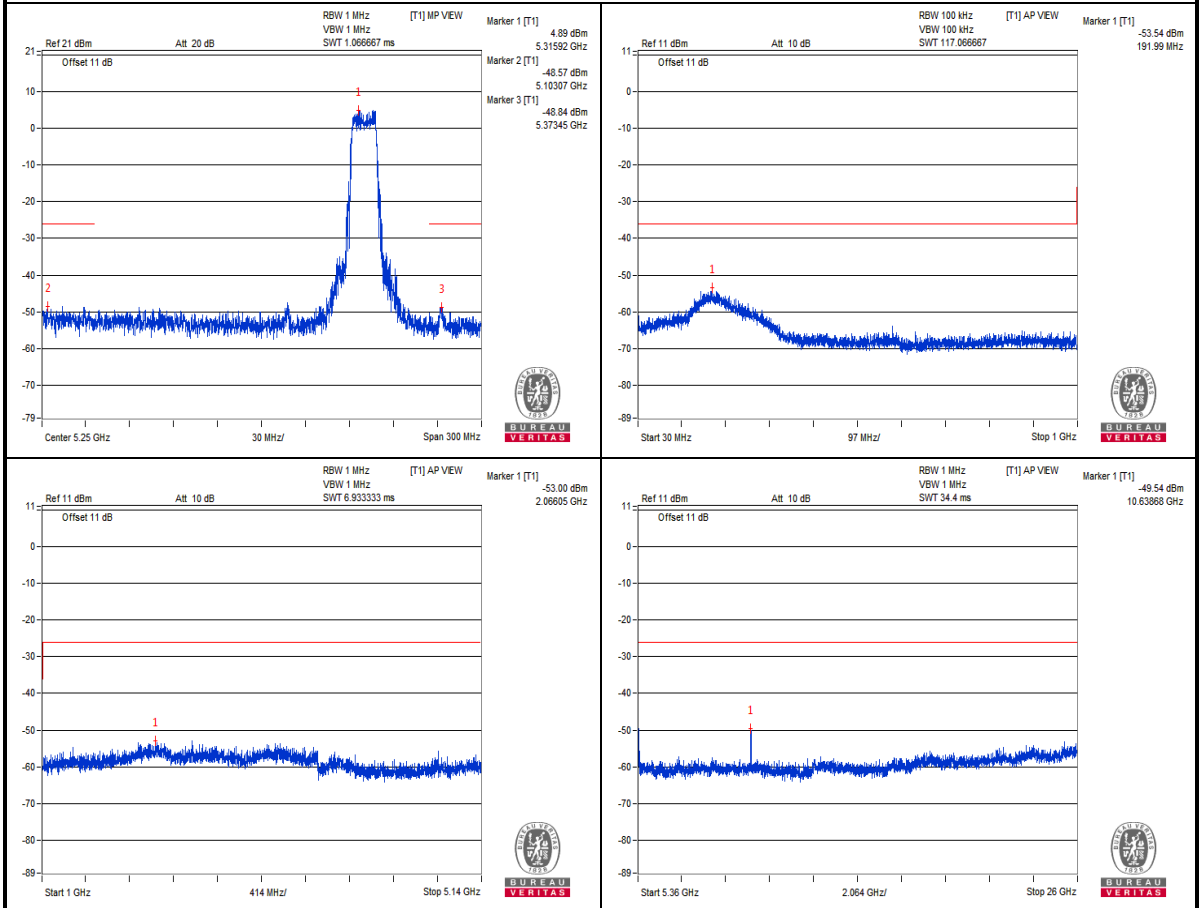
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 52



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 64



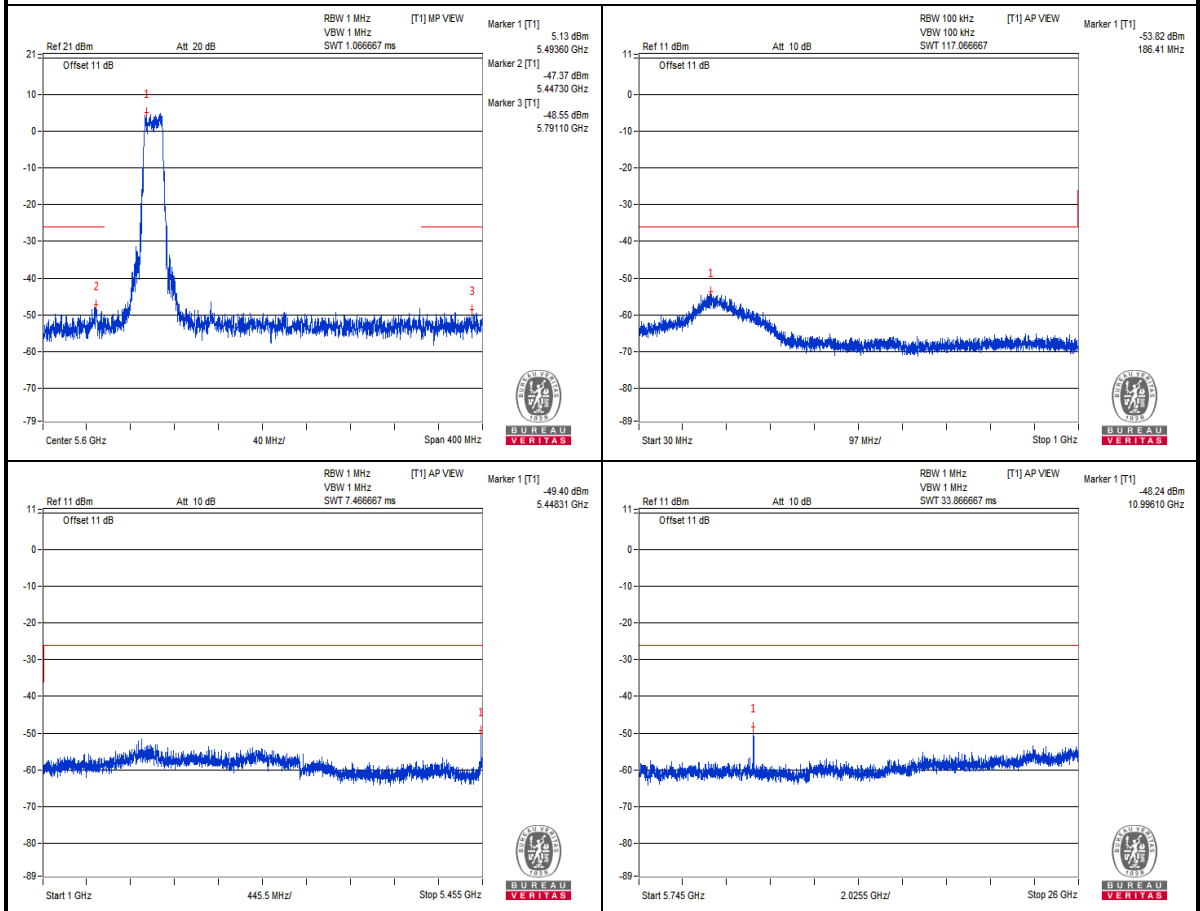
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11a (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 100 (5500MHz)		CH 120 (5600MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30.0MHz ~ 1000.0MHz	186.410	0.004142uW	199.990	0.004497uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5455.0MHz	5448.310	0.011475uW	2413.340	0.006625uW	2.5uWMHz	PASS
	5745.0MHz ~ 26000.0MHz	10996.100	0.014984uW	11198.650	0.010811uW	2.5uW/MHz	PASS
TEST CHANNEL		CH140 (5700MHz)				LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)		MEASURE VALUE			
V _{normal}	30.0MHz ~ 1000.0MHz	182.290		0.005625uW		0.25uW/100kHz	PASS
	1000.0MHz ~ 5455.0MHz	2052.490		0.004775uW		2.5uWMHz	PASS
	5745.0MHz ~ 26000.0MHz	11396.140		0.017037uW		2.5uW/MHz	PASS

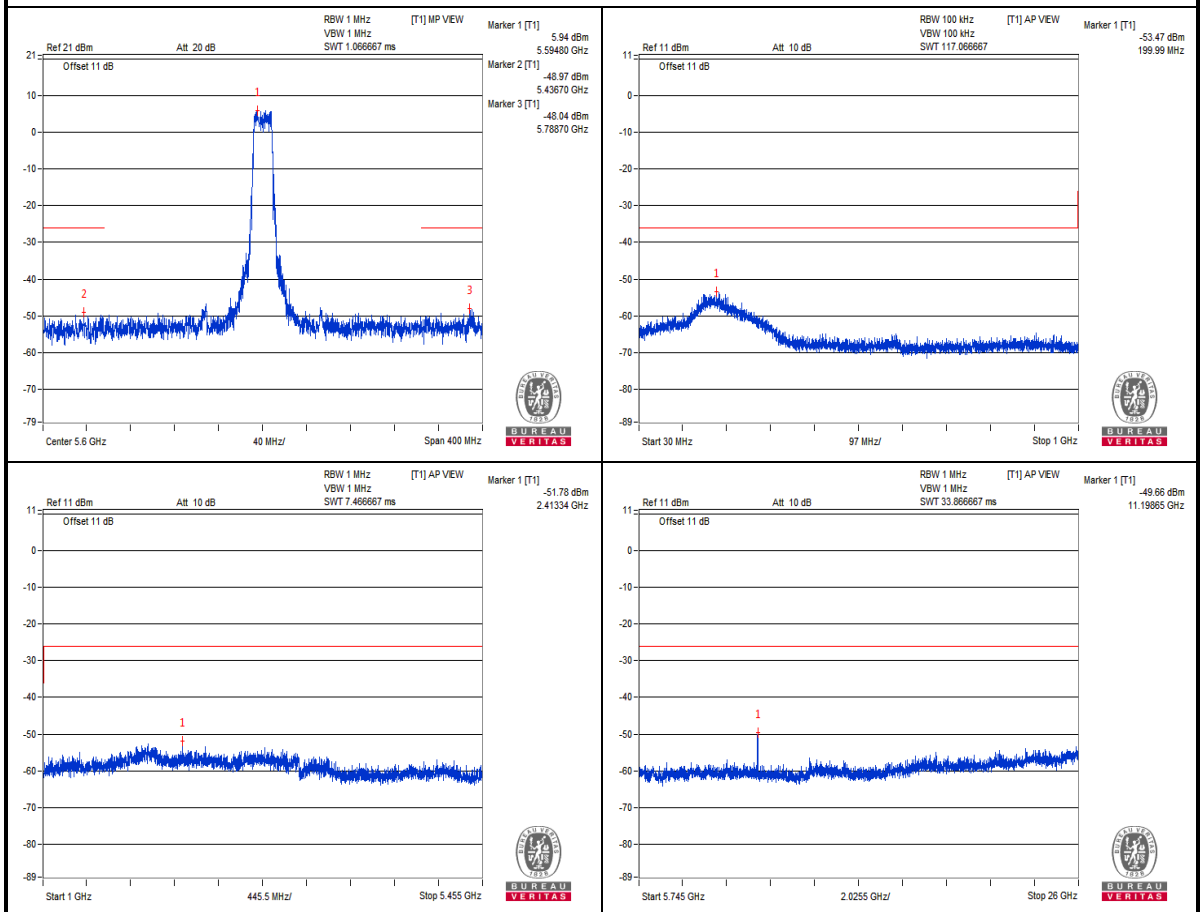
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 100



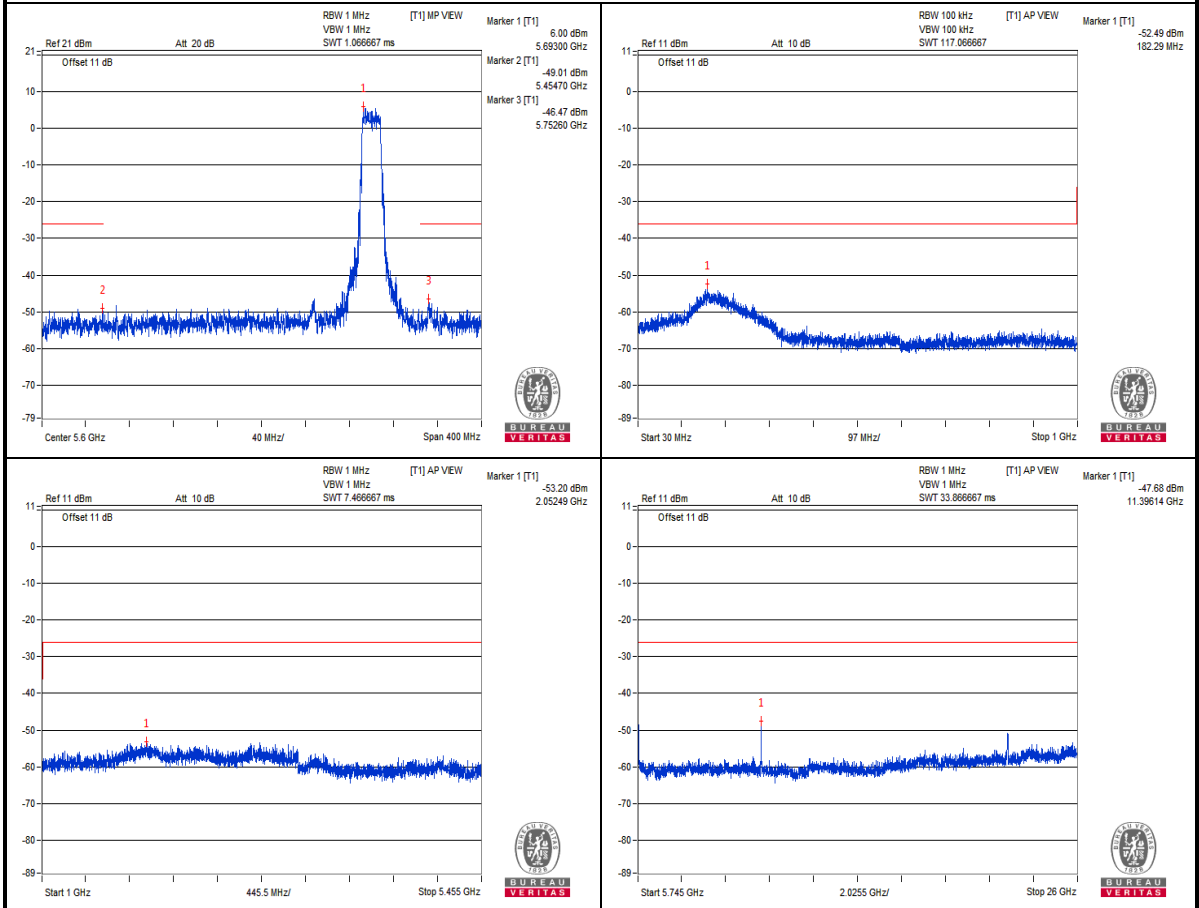
Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 120



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 140



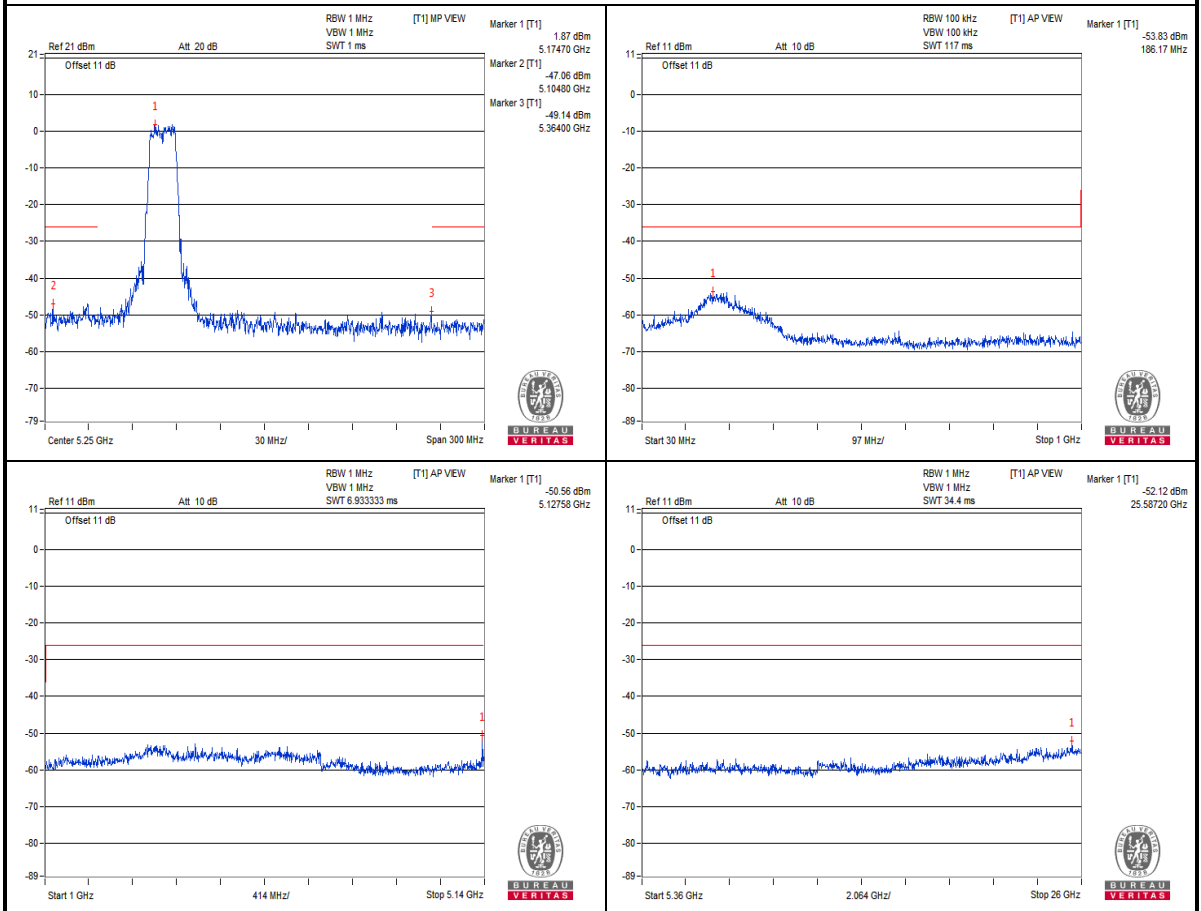
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11n (20MHz) (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH36 (5180MHz)		CH48 (5240MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V_{normal}	30.0MHz ~ 1000.0MHz	186.170	0.004138uW	203.630	0.004809uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5135.0MHz	5127.580	0.008783uW	1745.200	0.020811uW	2.5uW/MHz	PASS
	5365.0MHz ~ 26000.0MHz	25587.200	0.006124uW	26000.000	0.00381uW	2.5uW/MHz	PASS

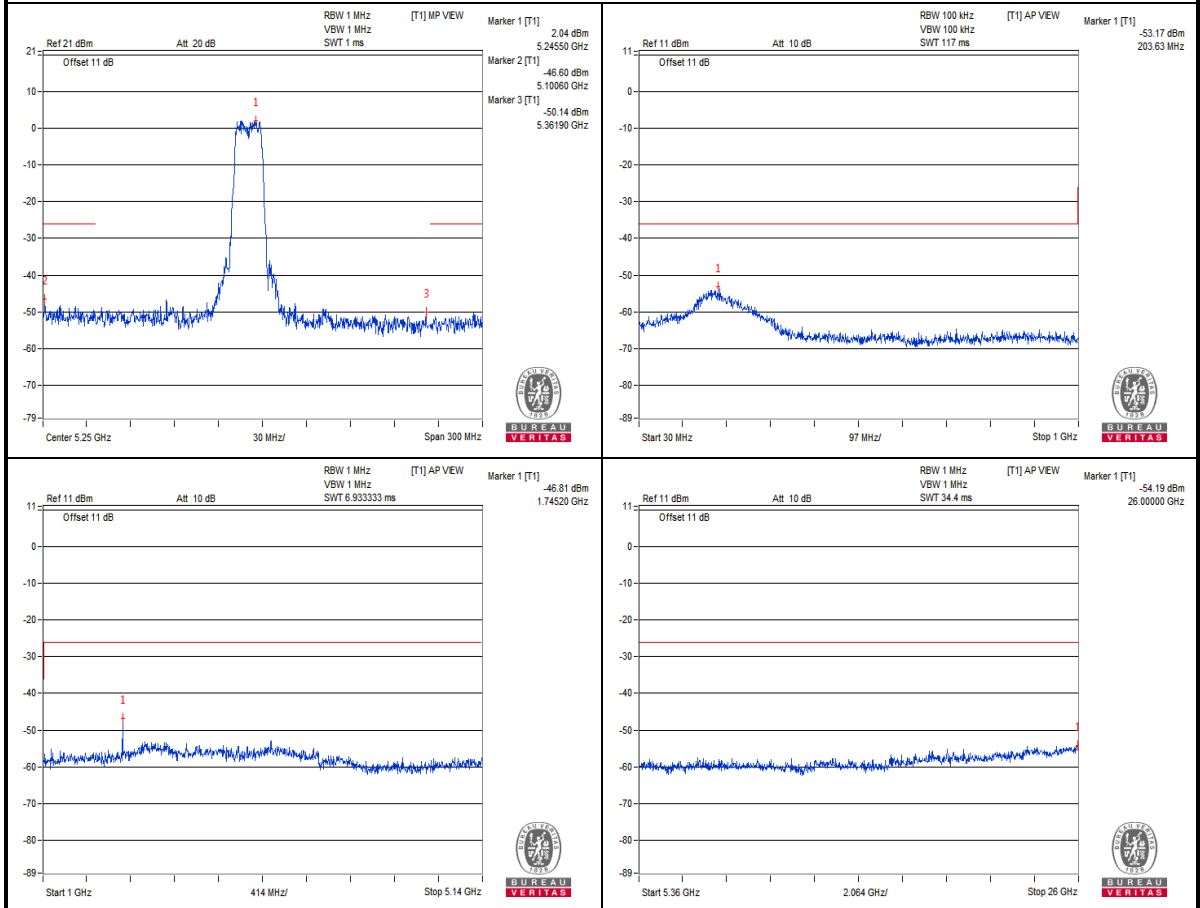
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 36



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 48



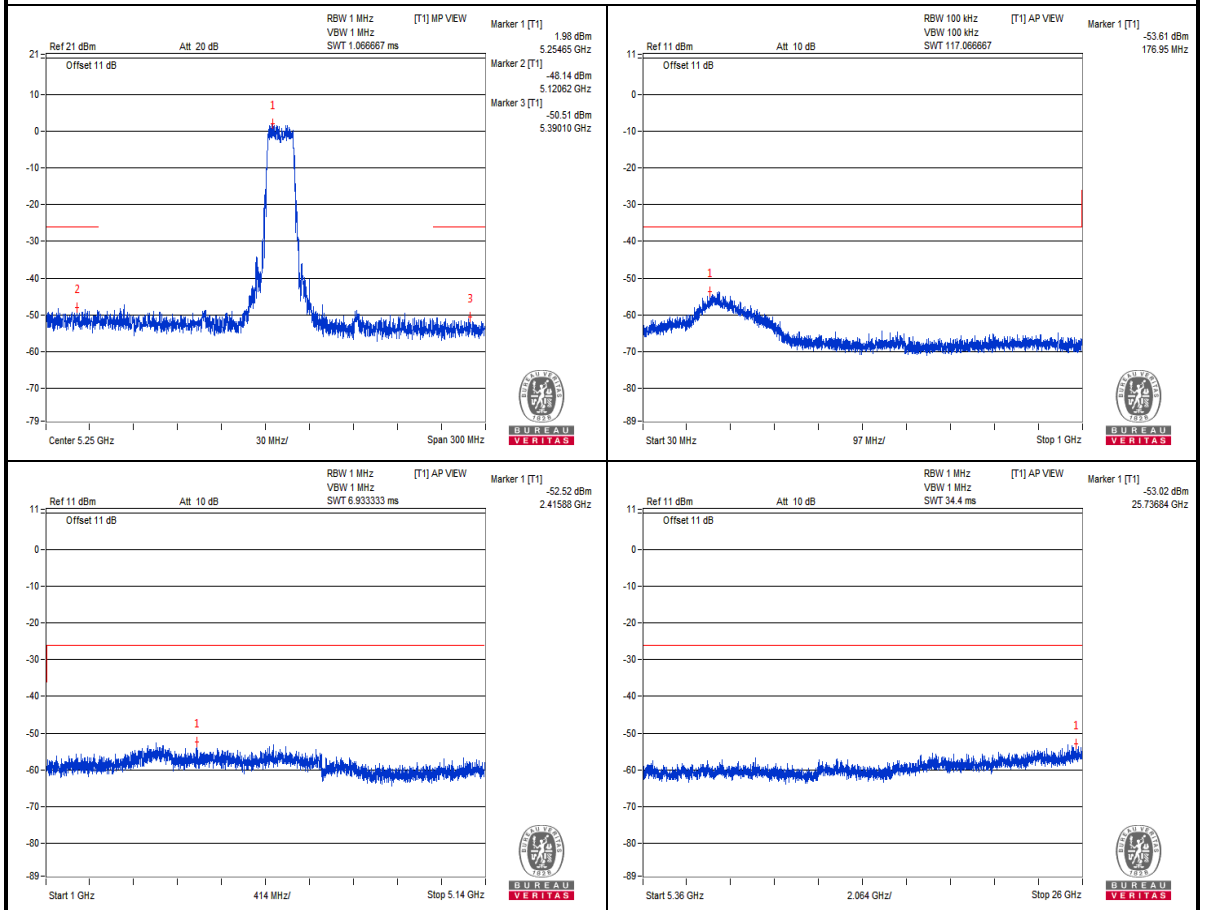
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11n 20MHz (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 52 (5260MHz)		CH 64 (5320MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V_{normal}	30.0MHz ~ 1000.0MHz	176.950	0.004355uW	199.750	0.004023uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5135.0MHz	2415.880	0.00559uW	2420.020	0.004621uW	2.5uW/MHz	PASS
	5365.0MHz ~ 26000.0MHz	25736.840	0.004984uW	5370.320	0.005908uW	2.5uW/MHz	PASS

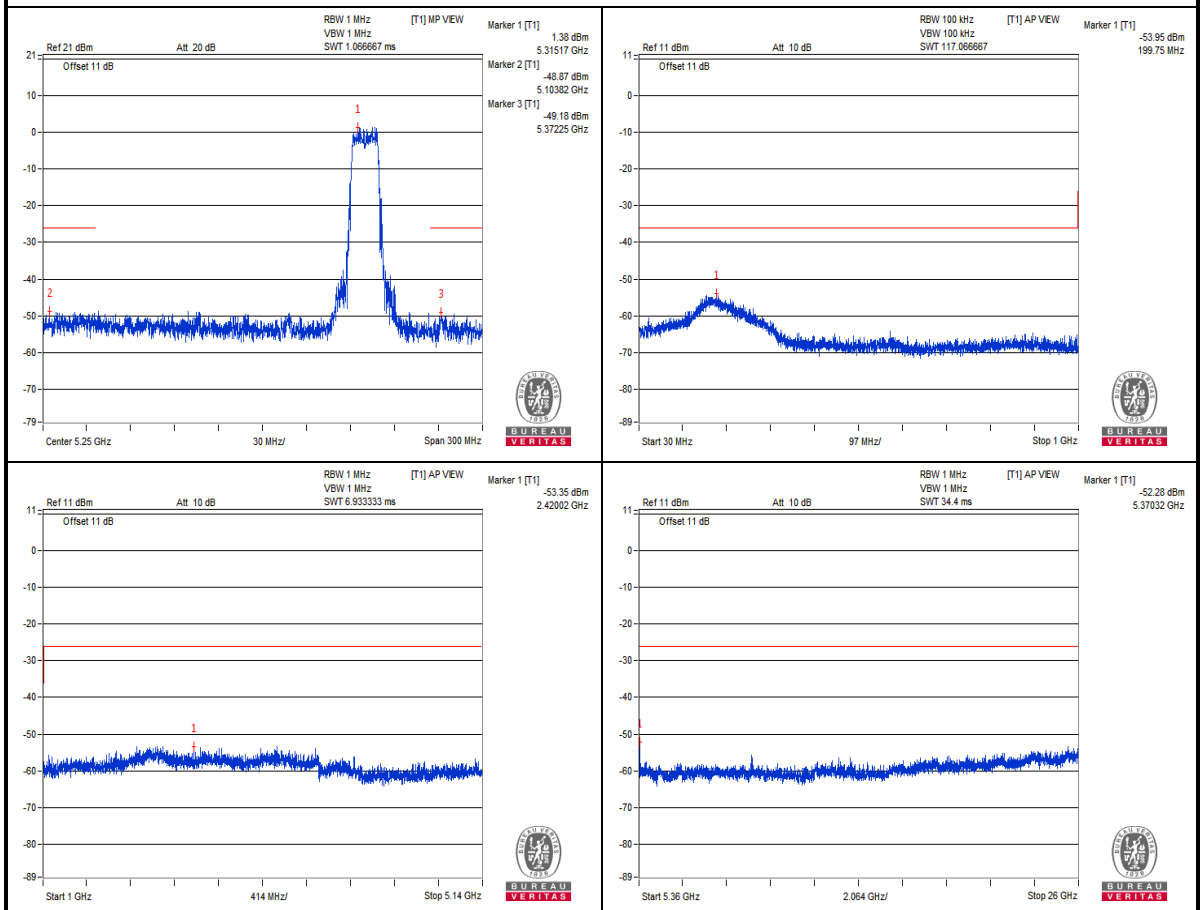
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 52



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 64



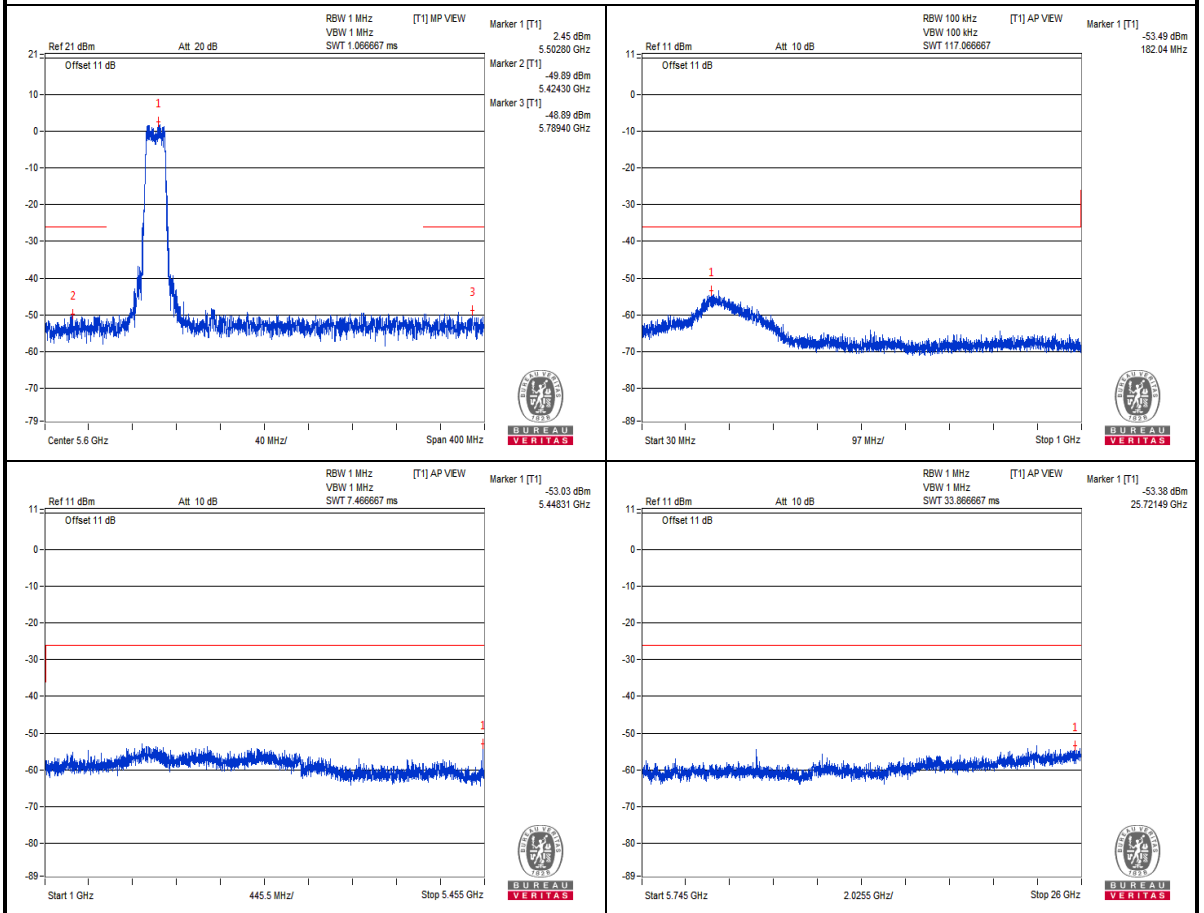
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11n 20MHz (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 100 (5500MHz)		CH 120 (5600MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30.0MHz ~ 1000.0MHz	182.040	0.004469uW	191.260	0.004475uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5455.0MHz	5448.310	0.004968uW	2203.960	0.005508uW	2.5uW/MHz	PASS
	5745.0MHz ~ 26000.0MHz	25721.490	0.004591uW	25989.870	0.004395uW	2.5uW/MHz	PASS
TEST CHANNEL		CH140 (5700MHz)				LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)		MEASURE VALUE			
V _{normal}	30.0MHz ~ 1000.0MHz	184.230		0.004866uW		0.25uW/100kHz	PASS
	1000.0MHz ~ 5455.0MHz	2038.010		0.005143uW		2.5uW/MHz	PASS
	5745.0MHz ~ 26000.0MHz	5750.060		0.006562uW		2.5uW/MHz	PASS

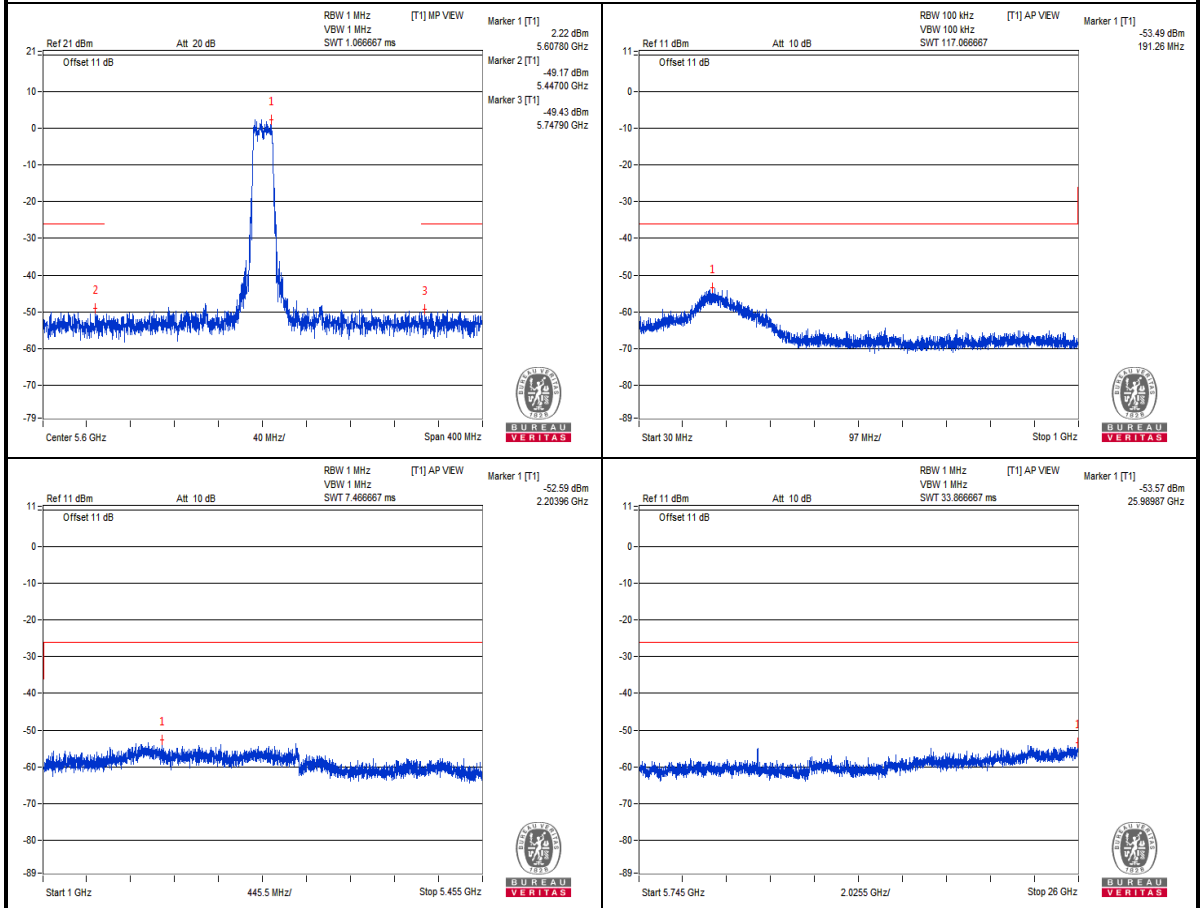
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 100



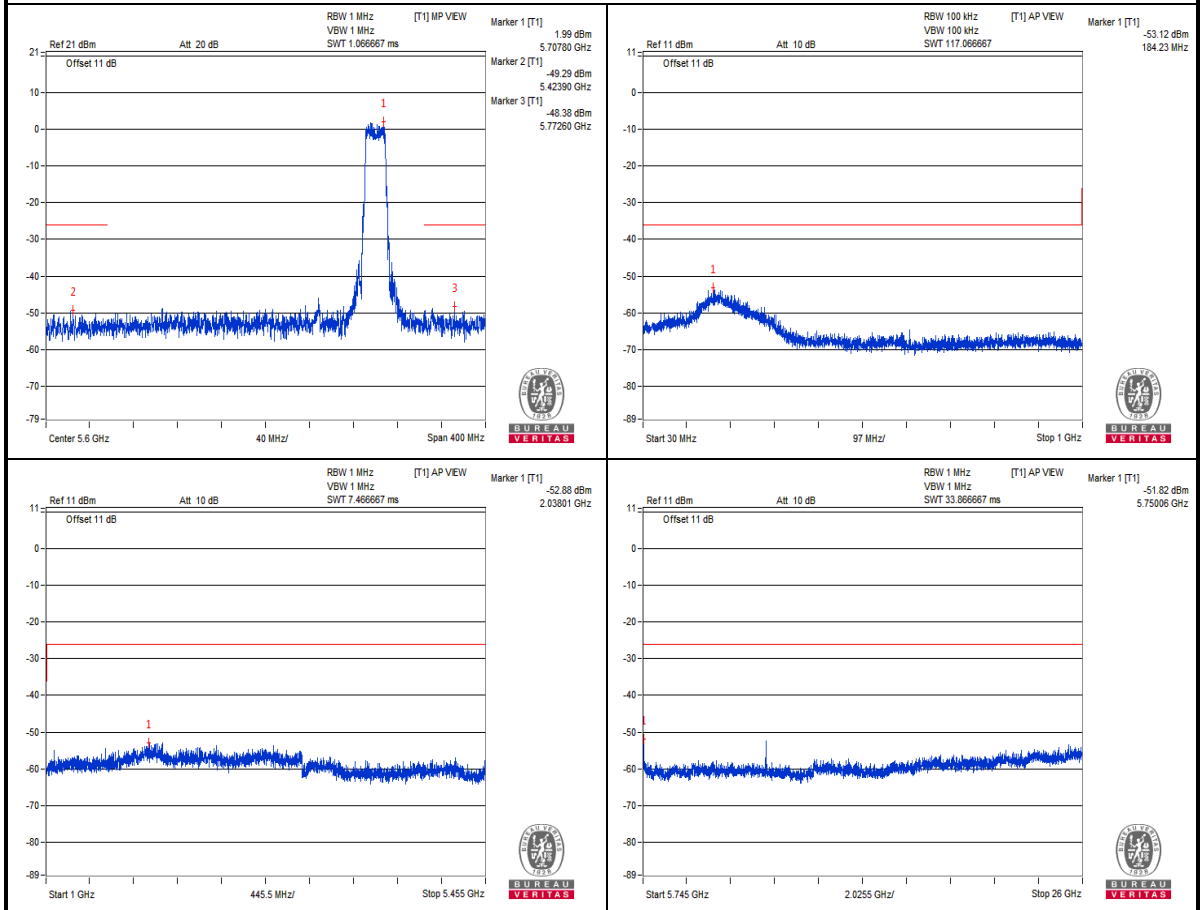
Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 120



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 140



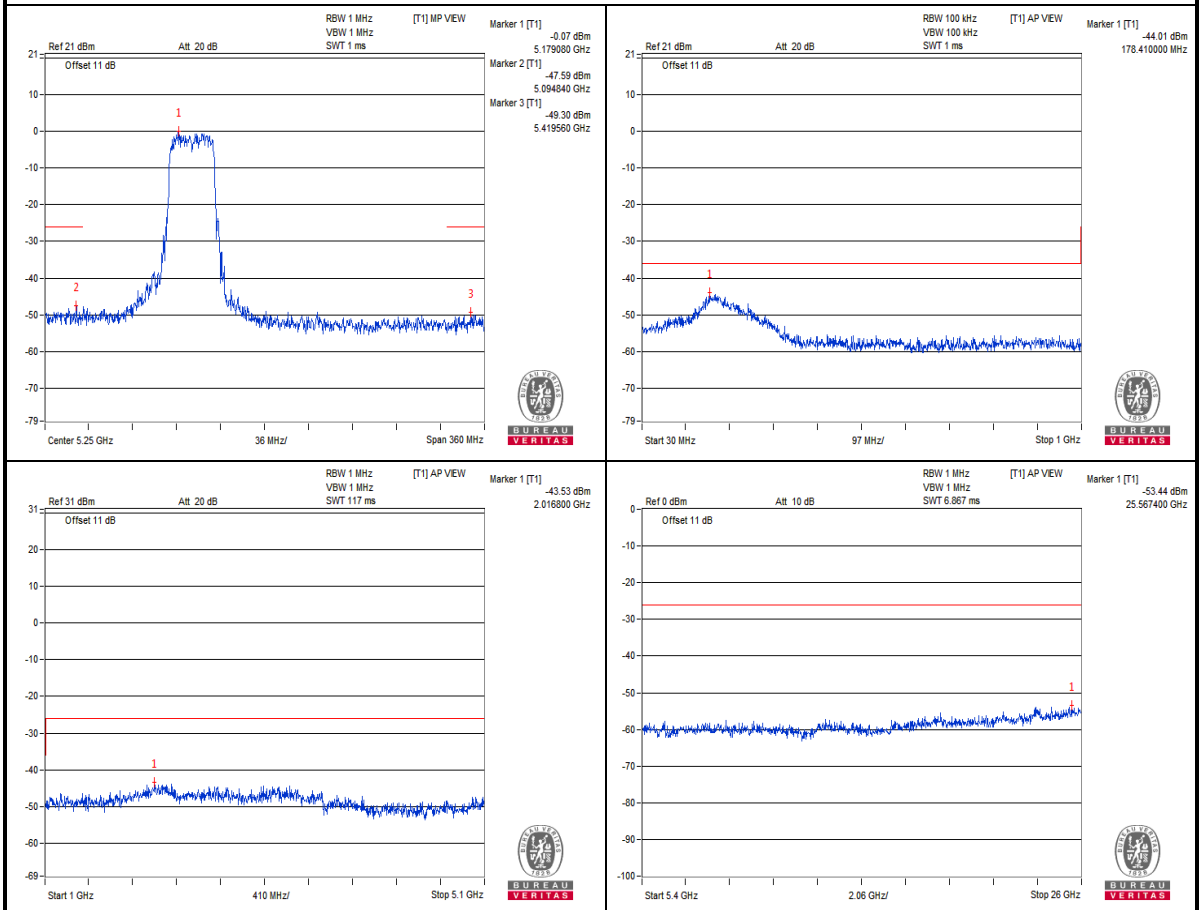
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11n 40MHz (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH38 (5190MHz)		CH46 (5230MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V_{normal}	30.0MHz ~ 1000.0MHz	178.410	0.039638uW	182.290	0.034348uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5100.0MHz	2016.800	0.044307uW	3205.800	0.047531uW	2.5uW/MHz	PASS
	5400.0MHz ~ 26000.0MHz	25567.400	0.004526uW	25340.800	0.004294uW	2.5uW/MHz	PASS

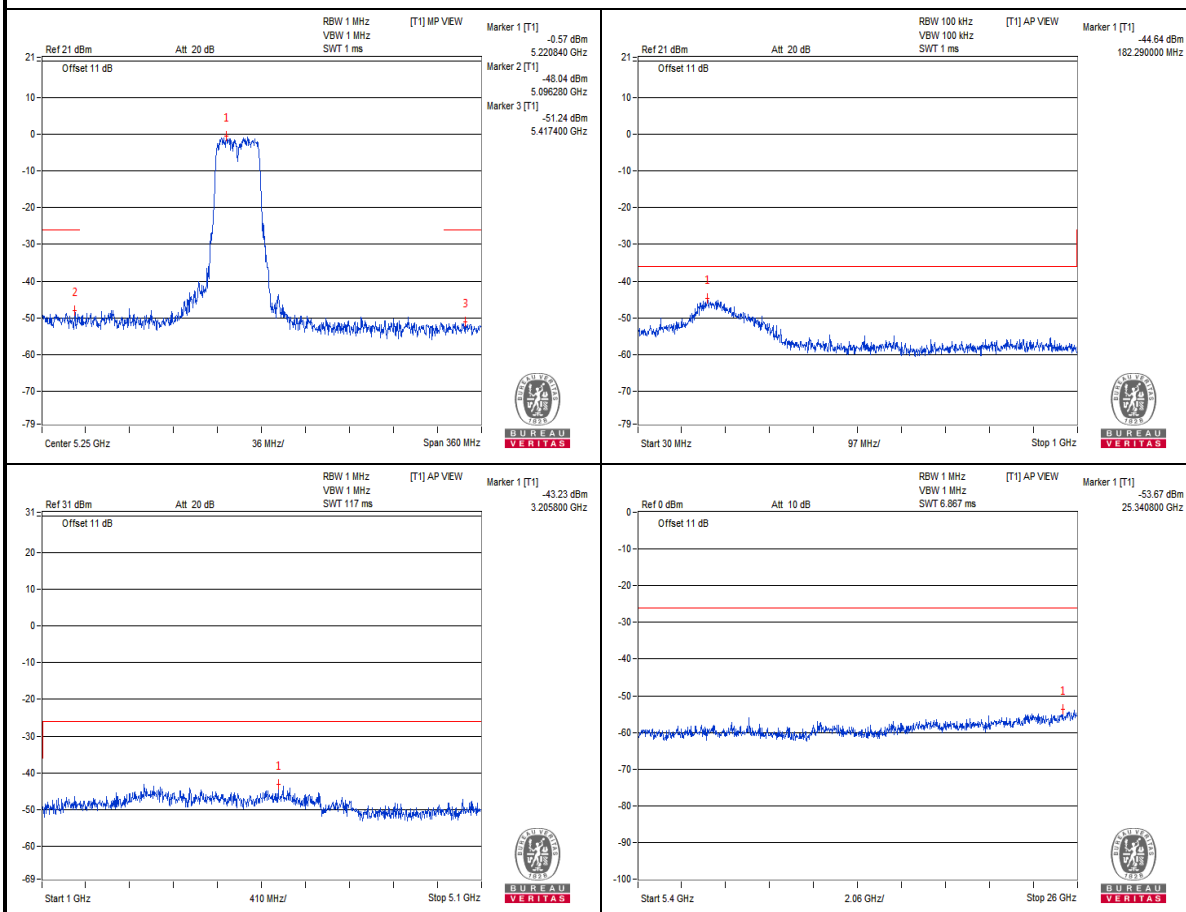
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 38



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 46



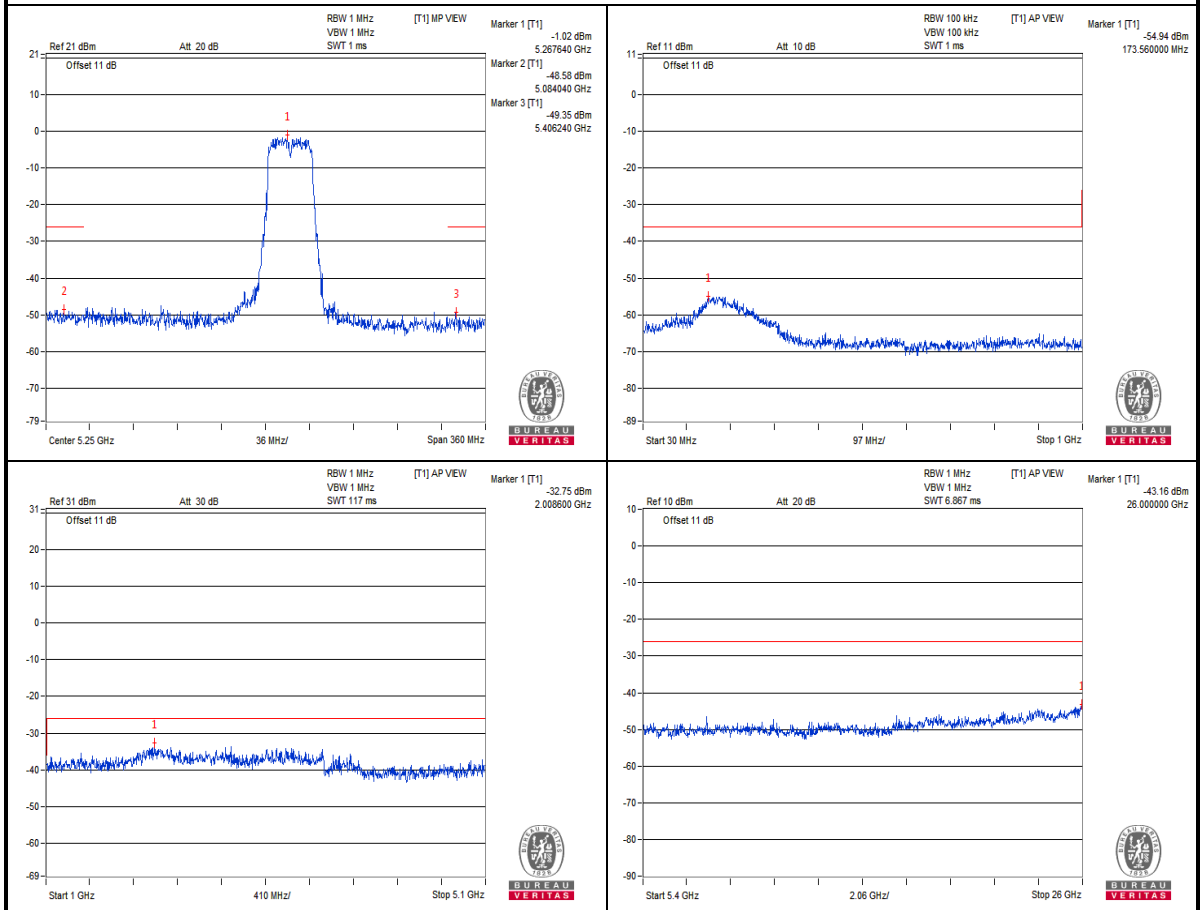
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11n 40MHz (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 54 (5270MHz)		CH 62 (5310MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V_{normal}	30.0MHz ~ 1000.0MHz	173.560	0.003203uW	177.440	0.00356uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5100.0MHz	2008.600	0.530308uW	2135.700	0.52179uW	2.5uW/MHz	PASS
	5400.0MHz ~ 26000.0MHz	26000.000	0.04824uW	25629.200	0.042295uW	2.5uW/MHz	PASS

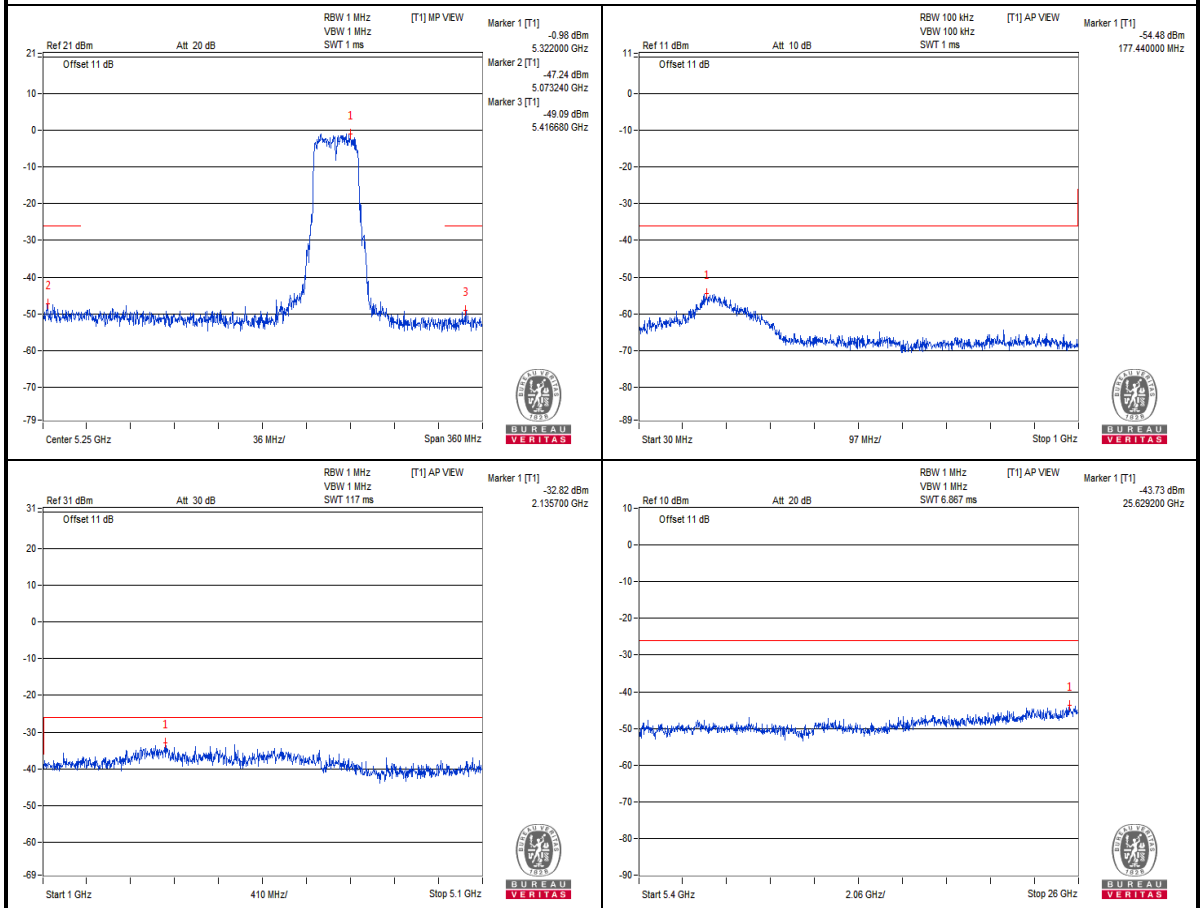
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 54



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 62



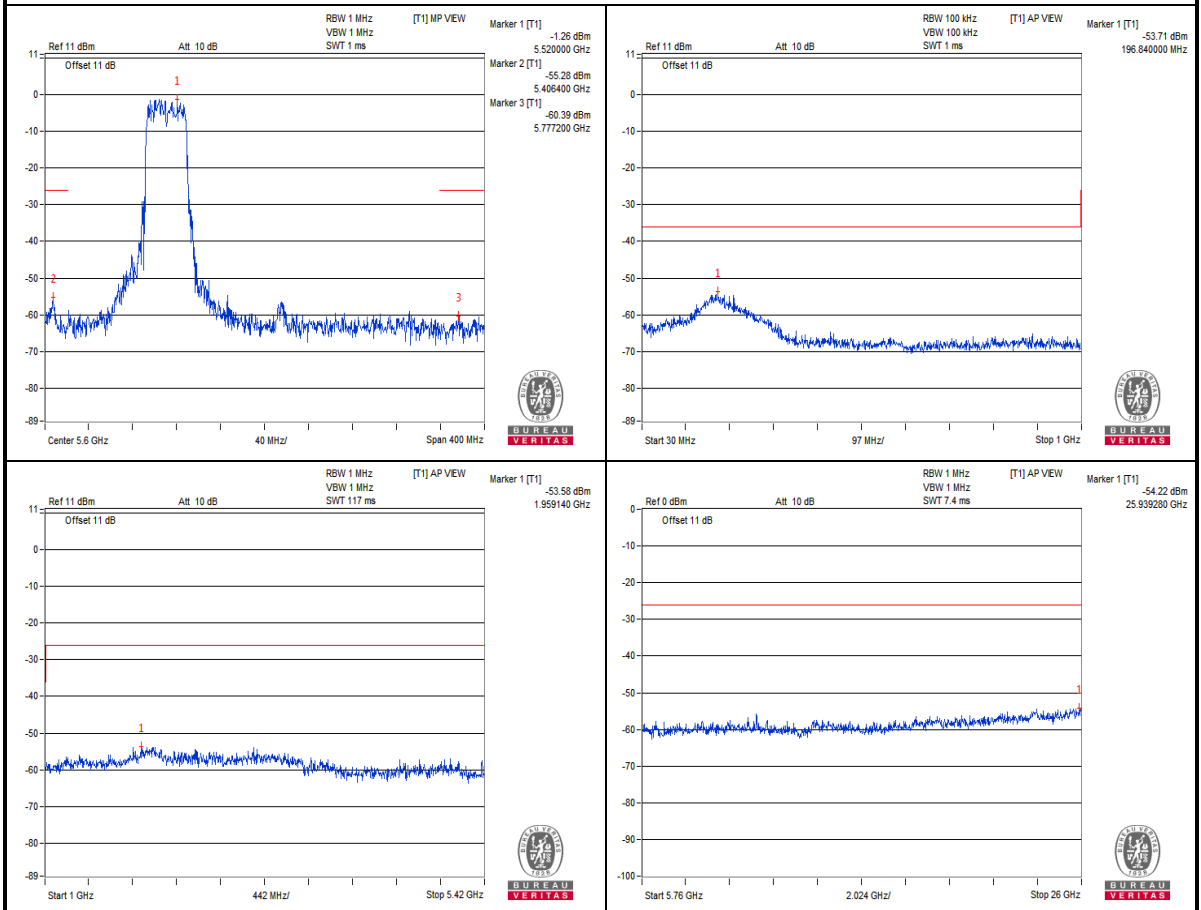
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11n 40MHz (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 102 (5510MHz)		CH 118 (5590MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30.0MHz ~ 1000.0MHz	196.840	0.004247uW	189.080	0.003773uW	0.25uW/100kHz	PASS
	1000.0MHz ~ 5420.0MHz	1959.140	0.004376uW	2007.760	0.005319uW	2.5uW/MHz	PASS
	5760MHz ~ 26000.0MHz	25939.280	0.003777uW	25838.080	0.004028uW	2.5uW/MHz	PASS
TEST CHANNEL		CH 134 (5670MHz)				LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)		MEASURE VALUE			
V _{normal}	30.0MHz ~ 1000.0MHz	192.960		0.003897uW		0.25uW/100kHz	PASS
	1000.0MHz ~ 5420.0MHz	1764.660		0.025322uW		2.5uW/MHz	PASS
	5760MHz ~ 26000.0MHz	25919.040		0.004008uW		2.5uW/MHz	PASS

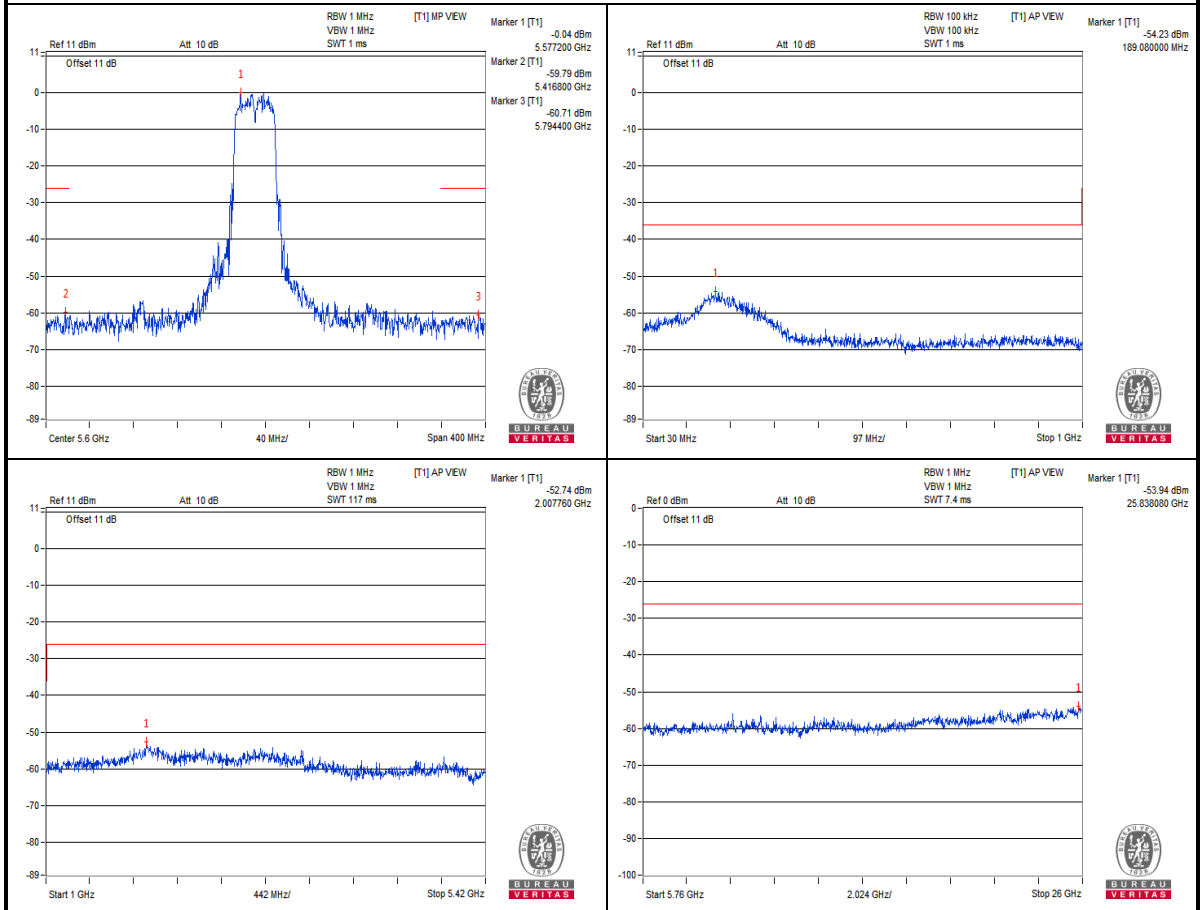
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 100



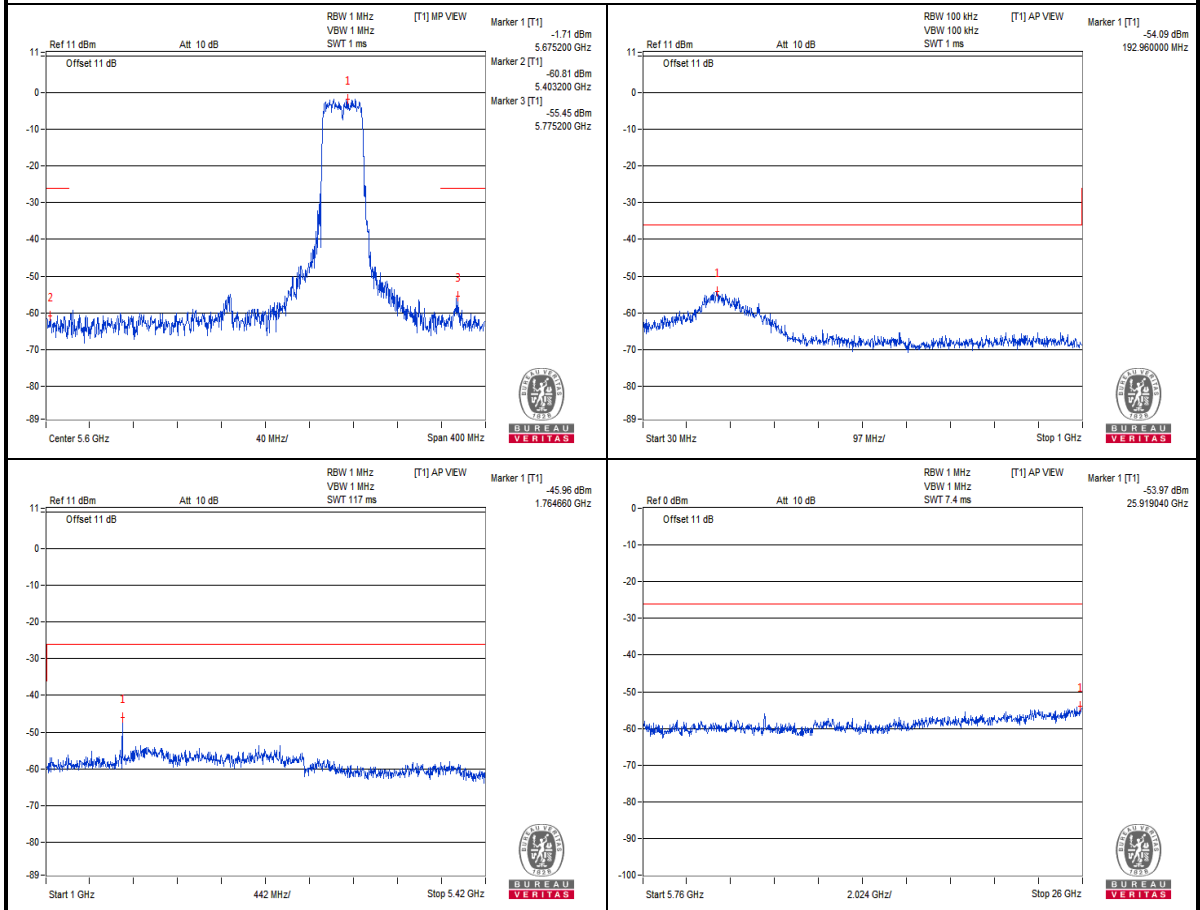
Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 118



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 134



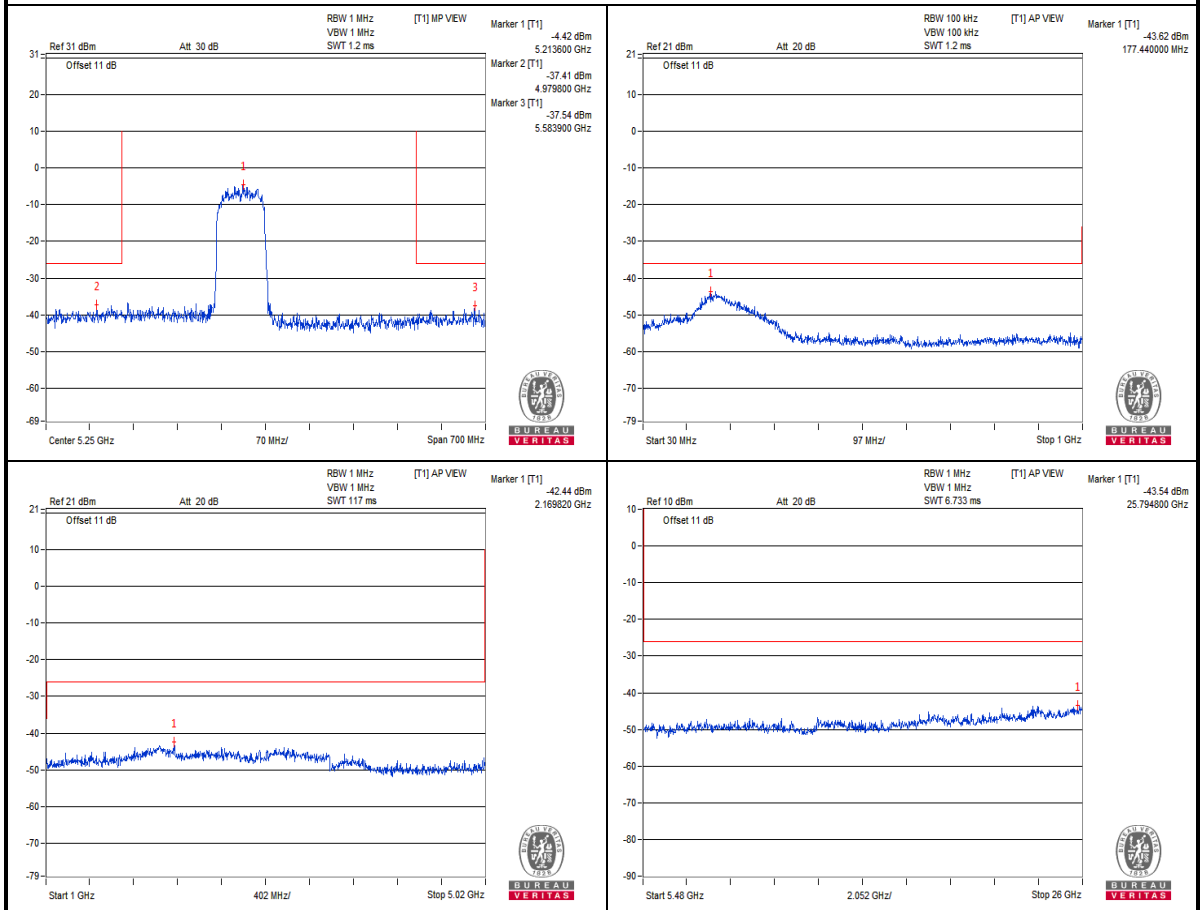
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11ac 80MHz (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH			
TEST CHANNEL		CH 42 (5210MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30MHz to 1000MHz	177.440	0.043431uW	0.25uW/100kHz	PASS
	1000MHz to 5020MHz	2169.820	0.056948uW	2.5uW/MHz	PASS
	5480MHz to 26000MHz	25794.800	0.044163uW	2.5uW/MHz	PASS

NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 42



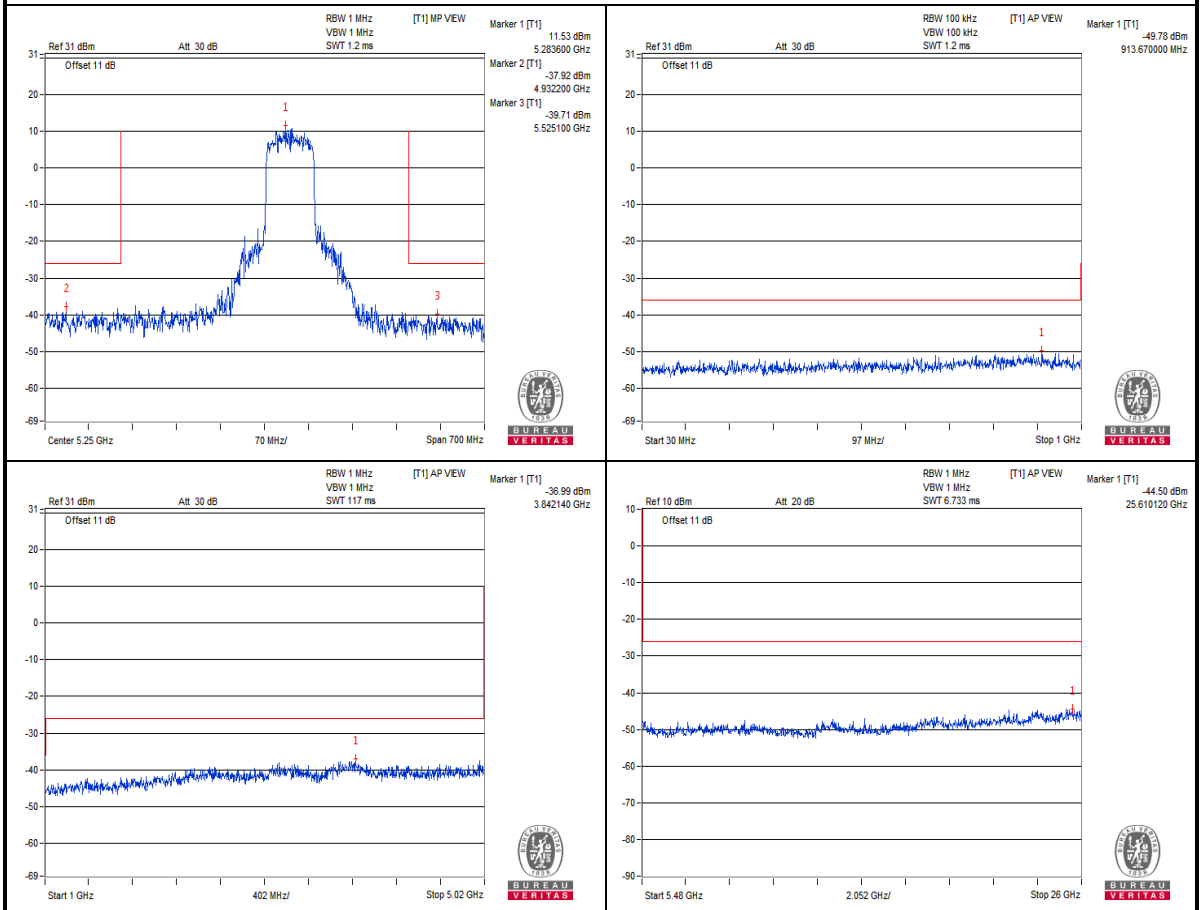
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11ac 80MHz (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH			
TEST CHANNEL		CH 58 (5290MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30MHz to 1000MHz	913.670	0.010503uW	0.25uW/100kHz	PASS
	1000MHz to 5020MHz	3842.140	0.199811uW	2.5uW/MHz	PASS
	5480MHz to 26000MHz	25610.120	0.035444uW	2.5uW/MHz	PASS

NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 58



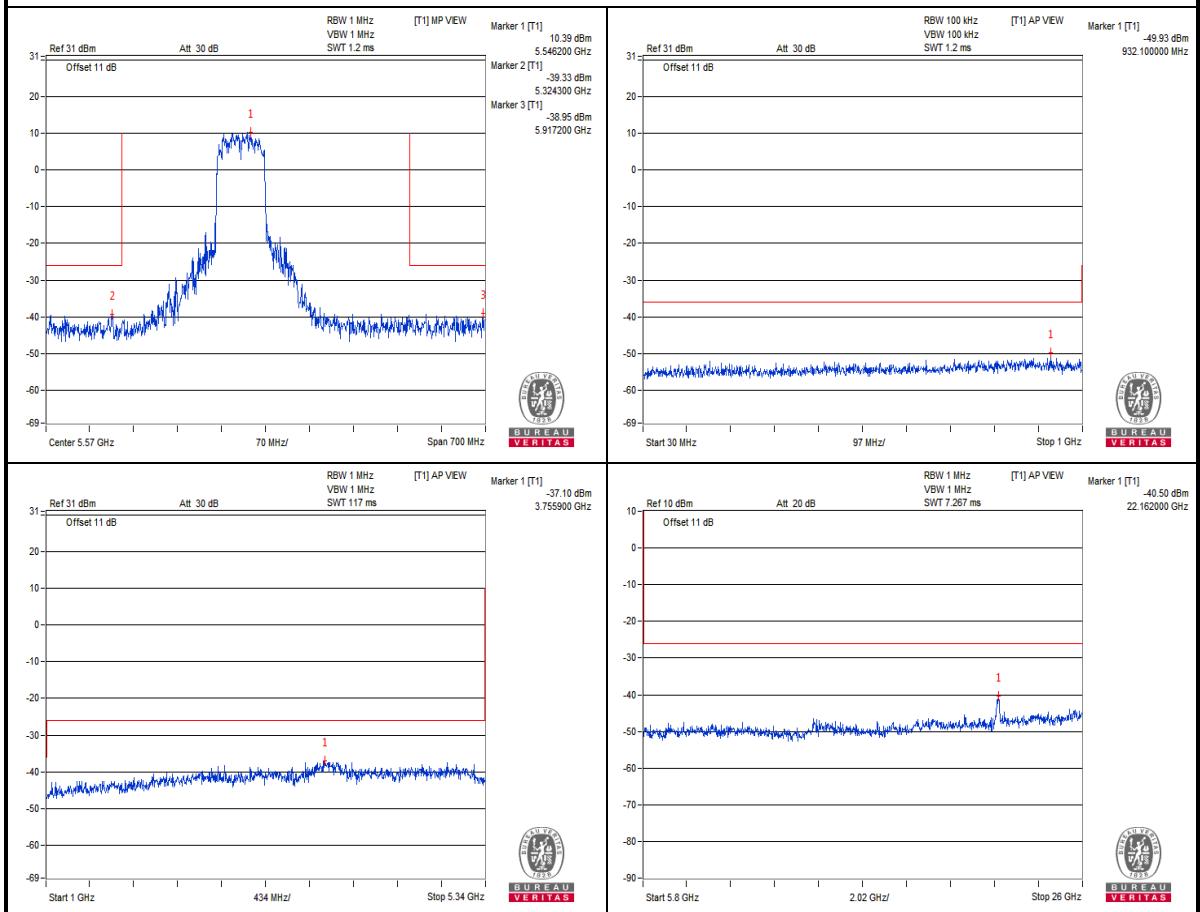
Measurement uncertainty: $\pm 3.93\text{dB}$

802.11ac 80MHz (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
TEST CHANNEL		CH 106 (5530MHz)		CH 122 (5610MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	30MHz to 1000MHz	932.100	0.010156uW	822.490	0.007515uW	0.25uW/100kHz	PASS
	1000MHz to 5340MHz	3755.900	0.194846uW	3855.720	0.204453uW	2.5uW/MHz	PASS
	5800MHz to 26000MHz	22162.000	0.089107uW	25697.000	0.043308uW	2.5uW/MHz	PASS

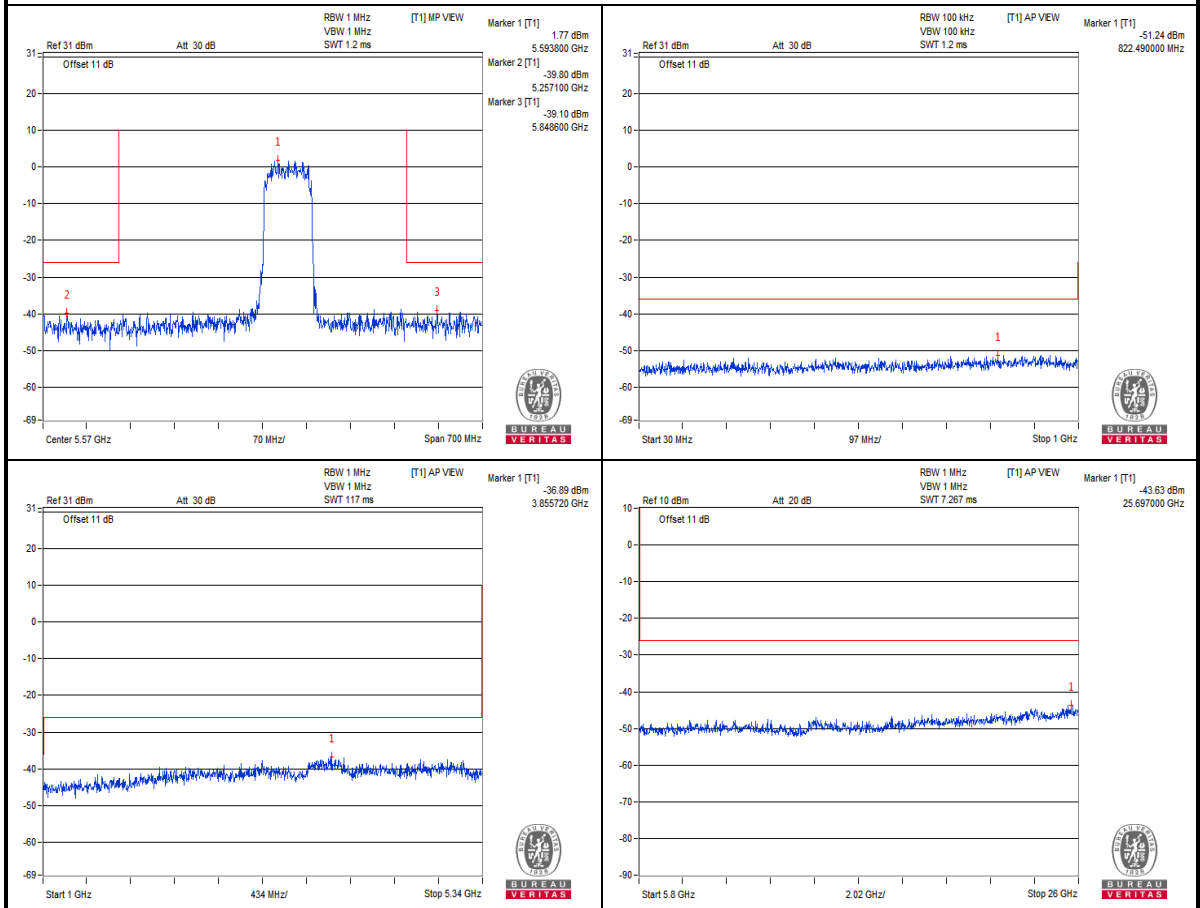
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

Vnormal
CH 106



Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal
CH 122



Measurement uncertainty: $\pm 3.93\text{dB}$

4.5 OUT-BAND LEAKAGE POWER

4.5.1 LIMITS OF LEAKAGE POWER (EIRP)

W52 band: 802.11a / 802.11n (HT20)

Frequencies (MHz)	Limit
OBW $\leq$ 18MHz	
$5140.0 \leq f_o \leq 5142.0\text{MHz}$	$\leq 2.5 \text{ uW/MHz}$
$5142.0 < f_o \leq 5150.0\text{MHz}$	$\leq 15.0 \text{ uW/MHz}$
$5250.0 \leq f_o < 5251.0\text{MHz}$	$\leq 10.0^{1-(f-9)} \text{ mW/MHz}$
$5251.0 \leq f_o < 5260.0\text{MHz}$	$\leq 10.0^{1-(8/90)(f-11)} \text{ mW/MHz}$
$5260.0 \leq f_o < 5266.7\text{MHz}$	$\leq 10.0^{1.8-(6/50)(f-20)} \text{ mW/MHz}$
$5266.7 \leq f_o \leq 5360.0\text{MHz}$	$\leq 2.5 \text{ }\mu\text{W/MHz}$
18MHz < OBW < 19MHz	
$5135.0 \leq f_o \leq 5142.0\text{MHz}$	$\leq 2.5 \text{ uW/MHz}$
$5142.0 < f_o \leq 5150.0\text{MHz}$	$\leq 15.0 \text{ uW/MHz}$
$5250.0 \leq f_o < 5251.0\text{MHz}$	$\leq 10.0^{1-(f-9)} \text{ mW/MHz}$
$5251.0 \leq f_o < 5260.0\text{MHz}$	$\leq 10.0^{1-(8/90)(f-11)} \text{ mW/MHz}$
$5260.0 \leq f_o < 5266.7\text{MHz}$	$\leq 10.0^{1.8-(6/50)(f-20)} \text{ mW/MHz}$
$5266.7 \leq f_o \leq 5365.0\text{MHz}$	$\leq 2.5 \text{ }\mu\text{W/MHz}$

W52 band: 802.11n (HT40)

Frequencies (MHz)	Limit
$5100.0 \leq f_o \leq 5141.6\text{MHz}$	$\leq 2.5 \text{ uW/MHz}$
$5141.6 < f_o \leq 5150.0\text{MHz}$	$\leq 15.0 \text{ uW/MHz}$
$5250.0 \leq f_o < 5251.0\text{MHz}$	$\leq 10.0^{-(f-20)+\log(1/2)} \text{ mW/MHz}$
$5251.0 \leq f_o < 5270.0\text{MHz}$	$\leq 10.0^{-(8/190)(f-21)-1+\log(1/2)} \text{ mW/MHz}$
$5270.0 \leq f_o < 5278.4\text{MHz}$	$\leq 10.0^{-(3/50)(f-40)-1.8+\log(1/2)} \text{ mW/MHz}$
$5278.4 \leq f_o \leq 5400.0\text{MHz}$	$\leq 2.5 \text{ }\mu\text{W/MHz}$

W52 band: 802.11ac (VHT80)

Frequencies (MHz)	Limit
$5020.0 \leq f_o \leq 5123.2\text{MHz}$	$\leq 2.5 \text{ uW/MHz}$
$5123.2 < f_o \leq 5150.0\text{MHz}$	$\leq 15.0 \text{ uW/MHz}$
$5250.0 \leq f_o < 5251.0\text{MHz}$	$\leq 10.0^{-(f-40)+\log(1/4)} \text{ mW/MHz}$
$5251.0 \leq f_o < 5290.0\text{MHz}$	$\leq 10.0^{-(8/390)(f-41)-1+\log(1/4)} \text{ mW/MHz}$
$5290.0 \leq f_o < 5296.7\text{MHz}$	$\leq 10.0^{-(3/100)(f-80)-1.8+\log(1/4)} \text{ mW/MHz}$
$5296.7 \leq f_o \leq 5480.0\text{MHz}$	$\leq 2.5 \text{ }\mu\text{W/MHz}$

W53 band: 802.11a / 802.11n (HT20)

Frequencies (MHz)	Limit
OBW ≤ 18MHz	
5140.0 ≤ fo ≤ 5233.3MHz	≤ 2.5 μW/MHz
5233.3 < fo ≤ 5240.0MHz	≤ 10.0 ^{-1.8-(6/50)(f-20)} mW/MHz
5240.0 < fo ≤ 5249.0MHz	≤ 10.0 ^{-1-(8/90)(f-11)} mW/MHz
5249.0 < fo ≤ 5250.0MHz	≤ 10.0 ^{1-(f-9)} mW/MHz
5350.0 ≤ fo ≤ 5360.0MHz	≤ 2.5 μW/MHz
18MHz < OBW < 19MHz	
5135.0 ≤ fo ≤ 5233.3MHz	≤ 2.5 μW/MHz
5233.3 < fo ≤ 5240.0MHz	≤ 10.0 ^{-1.8-(6/50)(f-20)} mW/MHz
5240.0 < fo ≤ 5249.0MHz	≤ 10.0 ^{-1-(8/90)(f-11)} mW/MHz
5249.0 < fo ≤ 5250.0MHz	≤ 10.0 ^{1-(f-9)} mW/MHz
5350.0 ≤ fo ≤ 5365.0MHz	≤ 2.5 μW/MHz

W53 band: 802.11n (HT40)

Frequencies (MHz)	Limit
5100.0 ≤ fo ≤ 5210.0MHz	≤ 2.5 μW/MHz
5210.0 < fo ≤ 5221.6MHz	≤ 2.5 μW/MHz
5221.6 < fo ≤ 5230.0MHz	≤ 10.0 ^{-(3/50)(f-40)-1.8+log(1/2)} mW/MHz
5230.0 < fo ≤ 5249.0MHz	≤ 10.0 ^{-(8/190)(f-21)-1+log(1/2)} mW/MHz
5249.0 < fo ≤ 5250.0MHz	≤ 10.0 ^{-(f-20)+log(1/2)} mW/MHz
5350.0 ≤ fo < 5358.4MHz	≤ 15 μW/MHz
5358.4 ≤ fo ≤ 5400.0MHz	≤ 2.5 μW/MHz

W53 band: 802.11ac (VHT80)

Frequencies (MHz)	Limit
5020.0 ≤ fo ≤ 5203.3MHz	≤ 2.5 μW/MHz
5203.3 < fo ≤ 5210.0MHz	≤ 10.0 ^{-(3/100)(f-80)-1.8+log(1/4)} mW/MHz
5210.0 < fo ≤ 5249.0MHz	≤ 10.0 ^{-(8/390)(f-41)-1+log(1/4)} mW/MHz
5249.0 < fo ≤ 5250.0MHz	≤ 10.0 ^{-(f-40)+log(1/4)} mW/MHz
5350.0 ≤ fo < 5376.8MHz	≤ 15 μW/MHz
5376.8 ≤ fo ≤ 5480.0MHz	≤ 2.5 μW/MHz

W56 band: 802.11a / 802.11n (HT20)

Frequencies (MHz)	Limit
$5455 \leq f_o \leq 5460\text{MHz}$	$\leq 2.5 \mu\text{W/MHz}$
$5460 < f_o \leq 5470\text{MHz}$	$\leq 12.5 \mu\text{W/MHz}$
$5725 \leq f_o < 5740\text{MHz}$	$\leq 12.5 \mu\text{W/MHz}$
$5740 \leq f_o \leq 5745\text{MHz}$	$\leq 2.5 \mu\text{W/MHz}$

W56 band: 802.11n (HT40)

Frequencies (MHz)	Limit
$5420 \leq f_o \leq 5460\text{MHz}$	$\leq 12.5 \mu\text{W/MHz}$
$5460 < f_o \leq 5470\text{MHz}$	$\leq 50 \mu\text{W/MHz}$
$5725 \leq f_o \leq 5760\text{MHz}$	$\leq 12.5 \mu\text{W/MHz}$

W56 band: 802.11ac (VHT80)

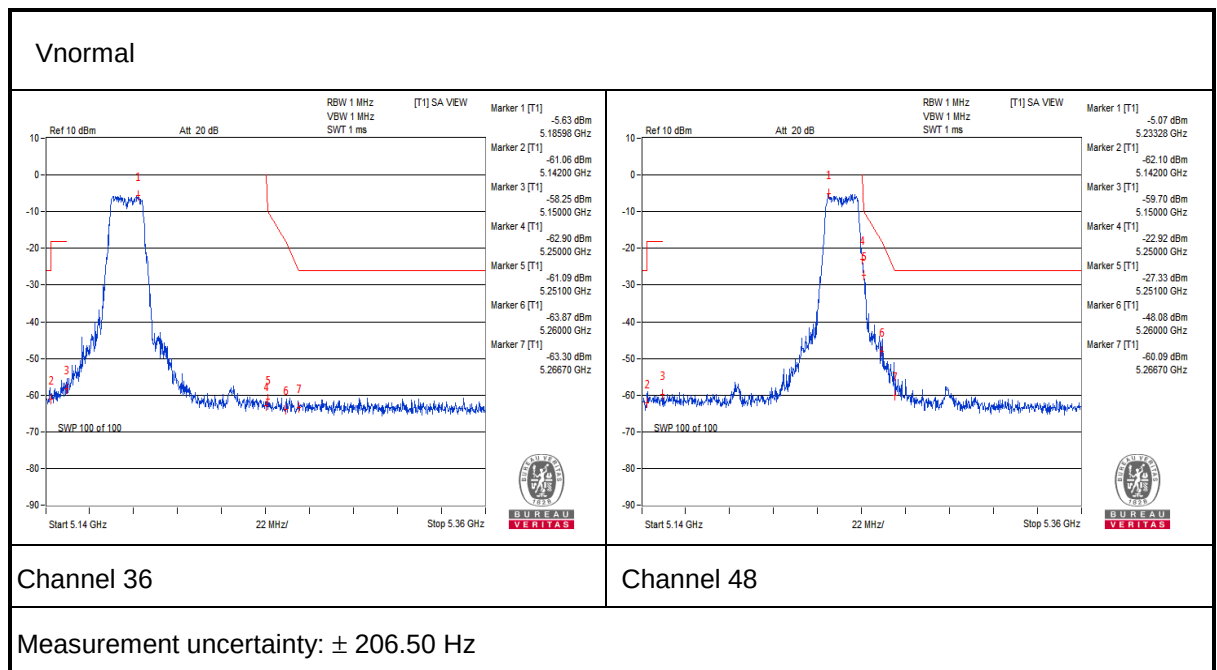
Frequencies (MHz)	Limit
$5340 \leq f_o \leq 5460\text{MHz}$	$\leq 12.5 \mu\text{W/MHz}$
$5460 < f_o \leq 5469.5\text{MHz}$	$\leq 50 \mu\text{W/MHz}$
$5469.5 < f_o \leq 5470\text{MHz}$	$\leq 51.2 \mu\text{W/MHz}$
$5725 \leq f_o \leq 5800\text{MHz}$	$\leq 12.5 \mu\text{W/MHz}$

4.5.2 TEST RESULTS

802.11a (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH36 (5180MHz)		CH48 (5240MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	
V_{normal}	5140.0 ≤ fo ≤ 5142.0MHz	5142.00	0.000782	5142.00	0.000616	PASS
	5142.0 ≤ fo ≤ 5150.0MHz	5150.00	0.001496	5150.00	0.001070	PASS
	5250.0 ≤ fo ≤ 5251.0MHz	5250.00	0.000512	5250.00	5.095221	PASS
	5251.0 ≤ fo < 5260.0MHz	5251.00	0.000777	5251.00	1.846697	PASS
	5260.0 ≤ fo < 5266.7MHz	5260.00	0.000410	5260.00	0.015556	PASS
	5266.7 ≤ fo ≤ 5360.0MHz	5266.70	0.000467	5266.70	0.000977	PASS

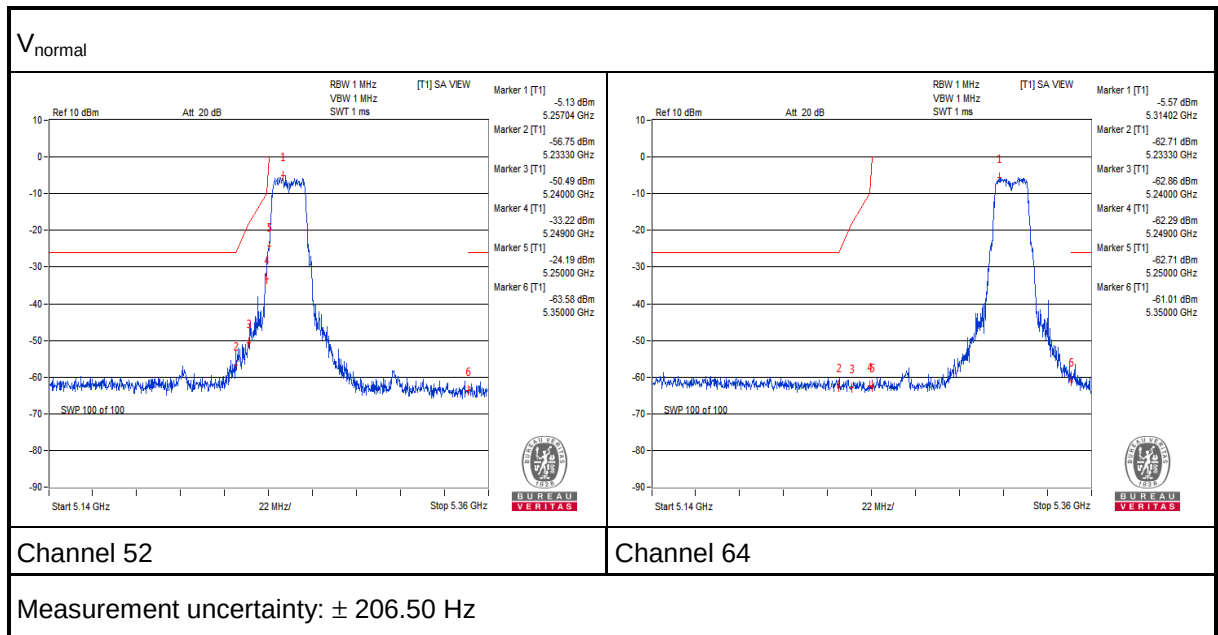
- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are attached on the following pages.
 3. Offset = Attenuator + Cable loss + Antenna Gain



802.11a (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH 52 (5260MHz)		CH 64 (5320MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	
V_{normal}	5140.0 ≤ fo ≤ 5233.3	5233.30	0.002110	5233.30	0.000536	PASS
	5233.3 < fo ≤ 5240.0	5240.00	0.008929	5240.00	0.000516	PASS
	5240.0 < fo ≤ 5249.0	5249.00	0.475829	5249.00	0.000590	PASS
	5249.0 < fo ≤ 5250.0	5250.00	3.807688	5250.00	0.000536	PASS
	5350.0 ≤ fo ≤ 5360.0	5350.00	0.000438	5350.00	0.000792	PASS

- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.
3. Offset = Attenuator + Cable loss + Antenna Gain

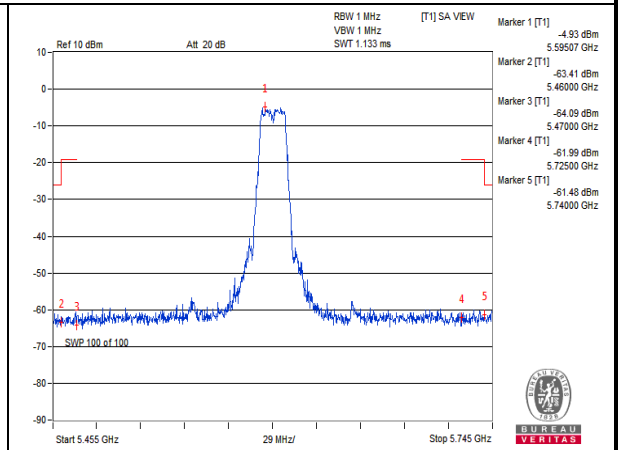
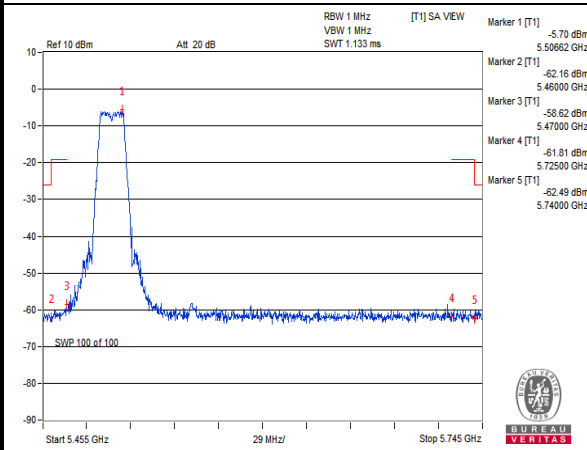


802.11a (W56)

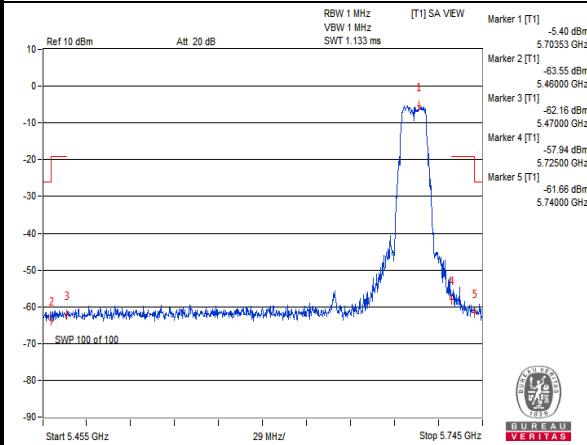
ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH 100 (5500MHz)		CH 120 (5600MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	
V _{normal}	5455.0 ≤ fo ≤ 5460.0	5460.00	0.000608	5460.00	0.000456	PASS
	5460.0 < fo ≤ 5470.0	5470.00	0.001372	5470.00	0.000389	PASS
	5725.0 ≤ fo < 5740.0	5725.00	0.000659	5725.00	0.000632	PASS
	5740.0 ≤ fo ≤ 5745.0	5740.00	0.000563	5740.00	0.000711	PASS
	FREQUENCY BAND (MHz)	CH 140 (5700MHz)				
		FREQUENCY (MHz)		MEASURE VALUE (uW/MHz)		
V _{normal}	5455.0 ≤ fo ≤ 5460.0	5460.00		0.000441		PASS
	5460.0 < fo ≤ 5470.0	5470.00		0.000608		PASS
	5725.0 ≤ fo < 5740.0	5725.00		0.001606		PASS
	5740.0 ≤ fo ≤ 5745.0	5740.00		0.000682		PASS

NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are attached on the following pages.
 3. Offset = Attenuator + Cable loss + Antenna Gain

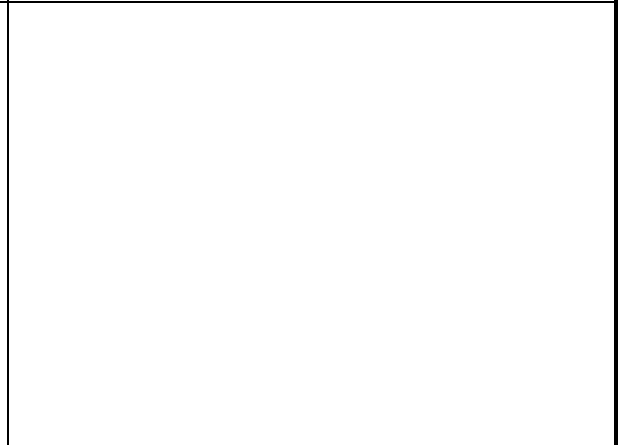
Vnormal



Channel 100



Channel 120



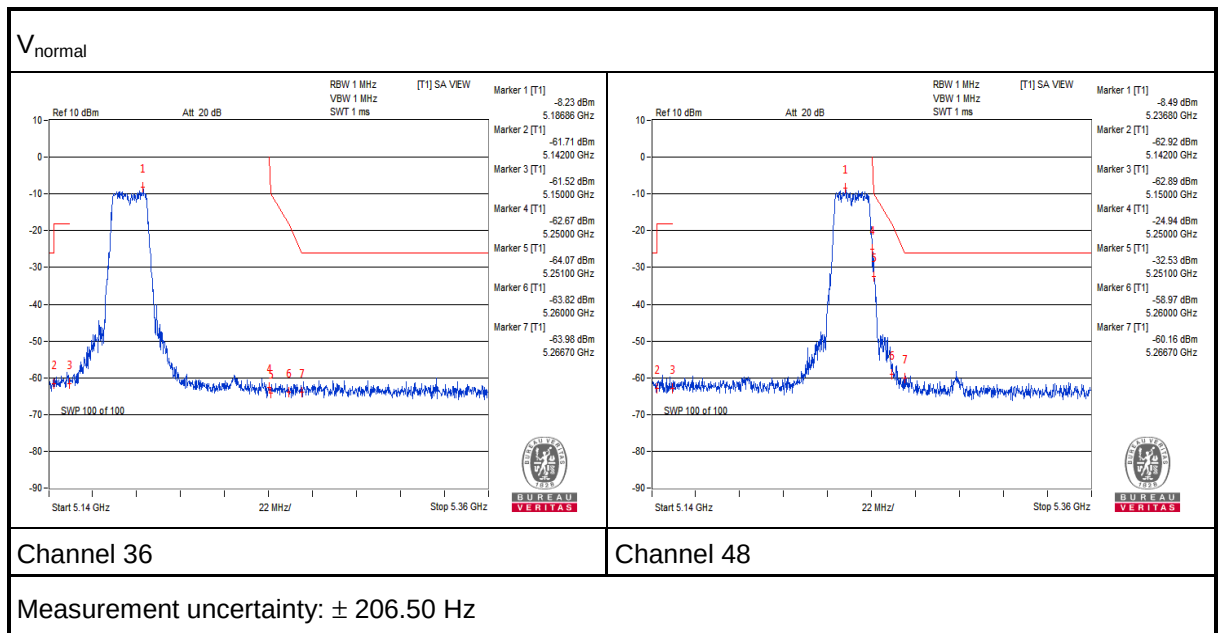
Channel 140

Measurement uncertainty: ± 206.50 Hz

802.11n 20MHz (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH36 (5180MHz)		CH48 (5240MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	
V_{normal}	5140.0 ≤ fo ≤ 5142.0MHz	5142.00	0.000673	5142.00	0.000510	PASS
	5142.0 ≤ fo ≤ 5150.0MHz	5150.00	0.000704	5150.00	0.000513	PASS
	5250.0 ≤ fo ≤ 5251.0MHz	5250.00	0.000540	5250.00	3.203689	PASS
	5251.0 ≤ fo < 5260.0MHz	5251.00	0.000392	5251.00	0.557555	PASS
	5260.0 ≤ fo < 5266.7MHz	5260.00	0.000415	5260.00	0.001267	PASS
	5266.7 ≤ fo ≤ 5360.0MHz	5266.70	0.000399	5266.70	0.000963	PASS

NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are attached on the following pages.
 3. Offset = Attenuator + Cable loss + Antenna Gain

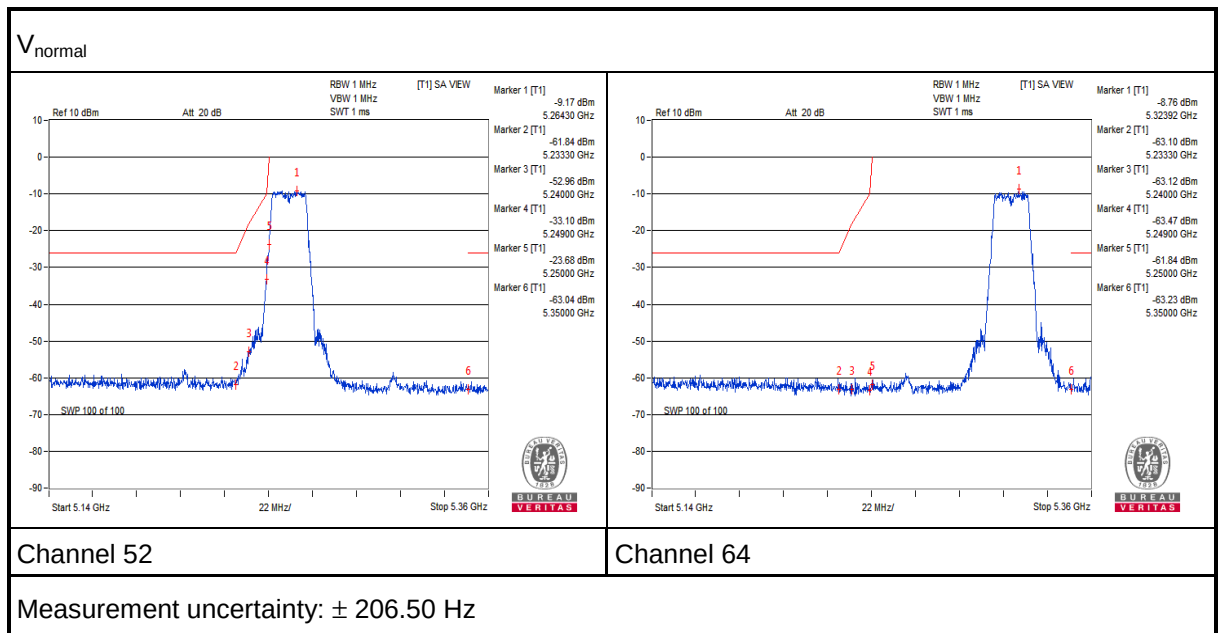




802.11n 20MHz (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μ W/MHz)				
	FREQUENCY BAND (MHz)	CH 52 (5260MHz)		CH 64 (5320MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μ W/MHz)	FREQUENCY (MHz)	MEASURE VALUE (μ W/MHz)	
V_{normal}	$5140.0 \leq f_o \leq 5233.3$	5233.30	0.000654	5233.30	0.000489	PASS
	$5233.3 < f_o \leq 5240.0$	5240.00	0.005053	5240.00	0.000487	PASS
	$5240.0 < f_o \leq 5249.0$	5249.00	0.489217	5249.00	0.000449	PASS
	$5249.0 < f_o \leq 5250.0$	5250.00	4.277833	5250.00	0.000653	PASS
	$5350.0 \leq f_o \leq 5360.0$	5350.00	0.000496	5350.00	0.000475	PASS

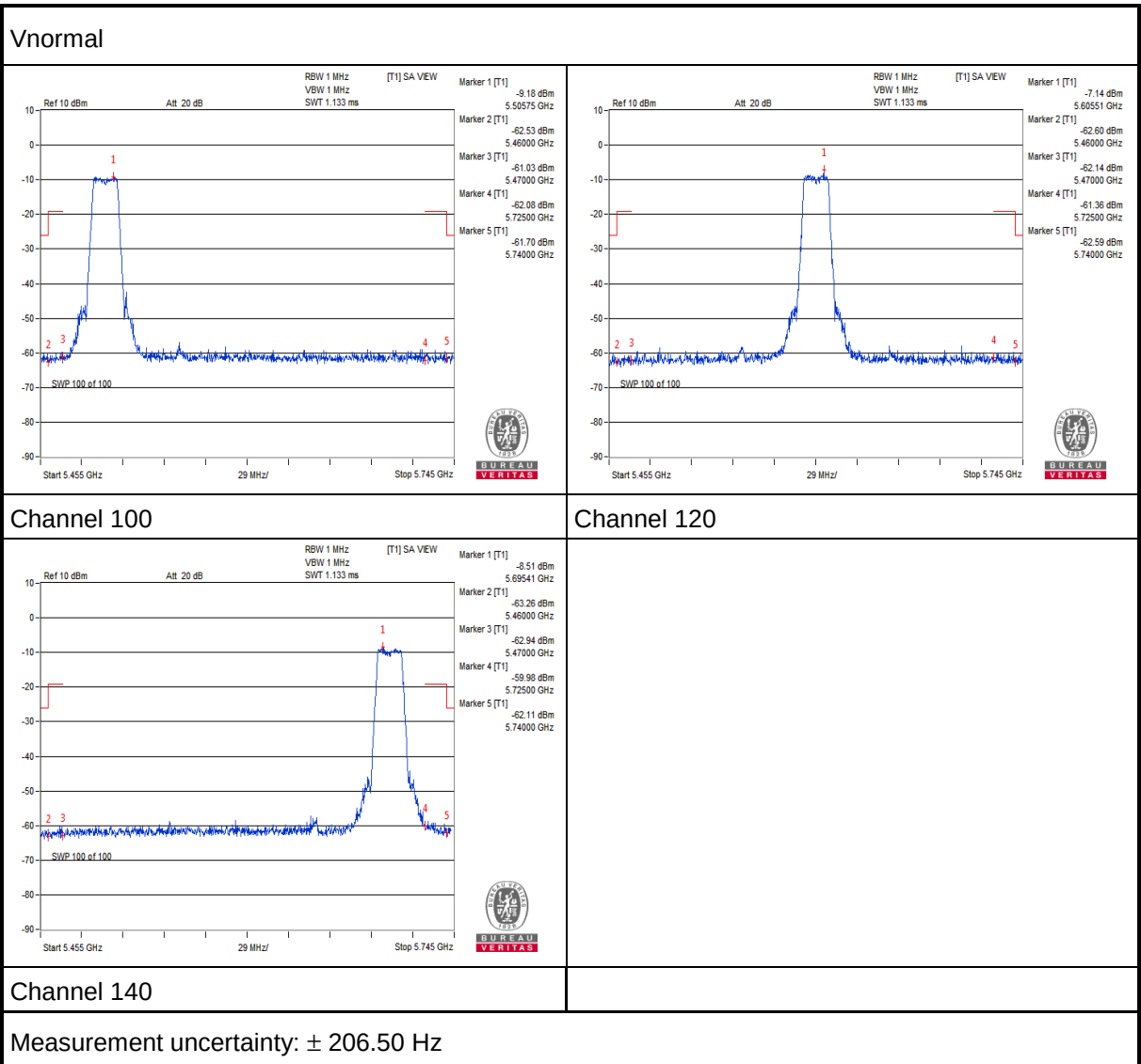
NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are attached on the following pages.
 3. Offset = Attenuator + Cable loss + Antenna Gain



802.11n20MHz (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH 100 (5500MHz)		CH 120 (5600MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	
V _{normal}	5455.0 ≤ fo ≤ 5460.0	5460.00	0.000558	5460.00	0.000549	PASS
	5460.0 < fo ≤ 5470.0	5470.00	0.000788	5470.00	0.000611	PASS
	5725.0 ≤ fo < 5740.0	5725.00	0.000619	5725.00	0.000731	PASS
	5740.0 ≤ fo ≤ 5745.0	5740.00	0.000676	5740.00	0.000550	PASS
	FREQUENCY BAND (MHz)	CH 140 (5700MHz)				
		FREQUENCY (MHz)		MEASURE VALUE (uW/MHz)		
V _{normal}	5455.0 ≤ fo ≤ 5460.0	5460.00		0.000472		PASS
	5460.0 < fo ≤ 5470.0	5470.00		0.000508		PASS
	5725.0 ≤ fo < 5740.0	5725.00		0.001003		PASS
	5740.0 ≤ fo ≤ 5745.0	5740.00		0.000615		PASS

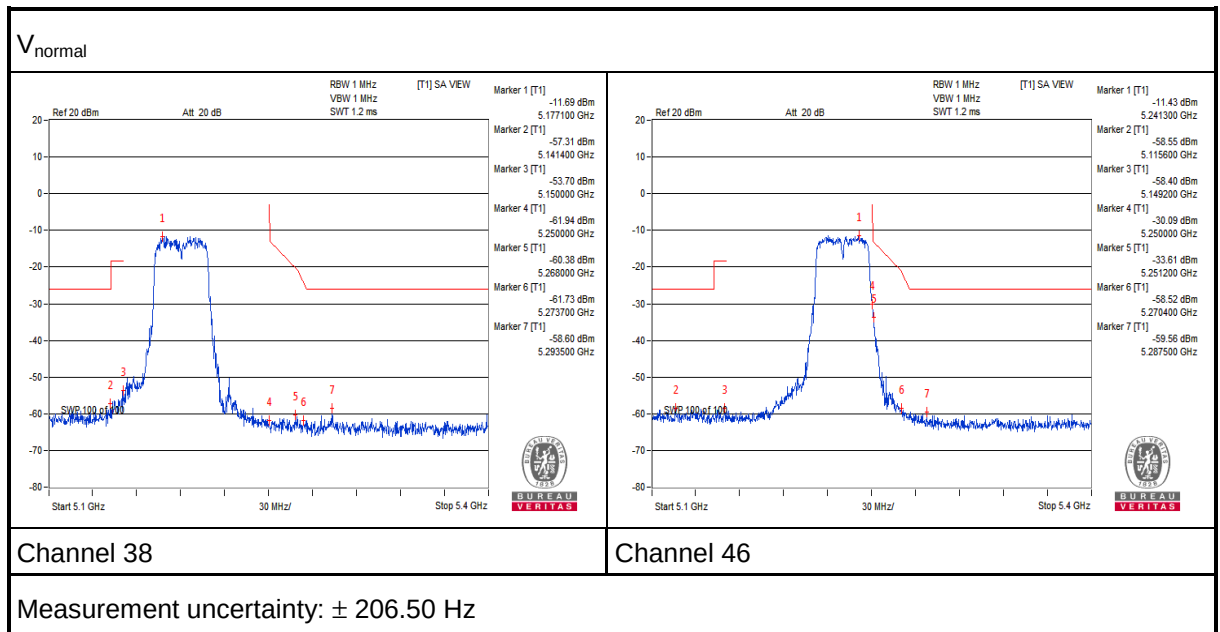
- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are attached on the following pages.
 3. Offset = Attenuator + Cable loss + Antenna Gain



802.11n 40MHz (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH38 (5190MHz)		CH46 (5230MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	
V_{normal}	5100.0 ≤ fo ≤ 5141.6MHz	5141.40	0.001854	5115.60	0.001394	PASS
	5141.6 ≤ fo ≤ 5150.0MHz	5150.00	0.004264	5149.20	0.001444	PASS
	5250.0 ≤ fo ≤ 5251.0MHz	5250.00	0.000639	5250.00	0.977445	PASS
	5251.0 ≤ fo < 5270.0MHz	5268.00	0.000916	5251.20	0.435222	PASS
	5270.0 ≤ fo < 5278.4MHz	5273.70	0.000671	5270.40	0.001406	PASS
	5278.4 ≤ fo ≤ 5400.0MHz	5293.50	0.001380	5287.50	0.001106	PASS

NOTE: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are attached on the following pages.
 3. Offset = Attenuator + Cable loss + Antenna Gain





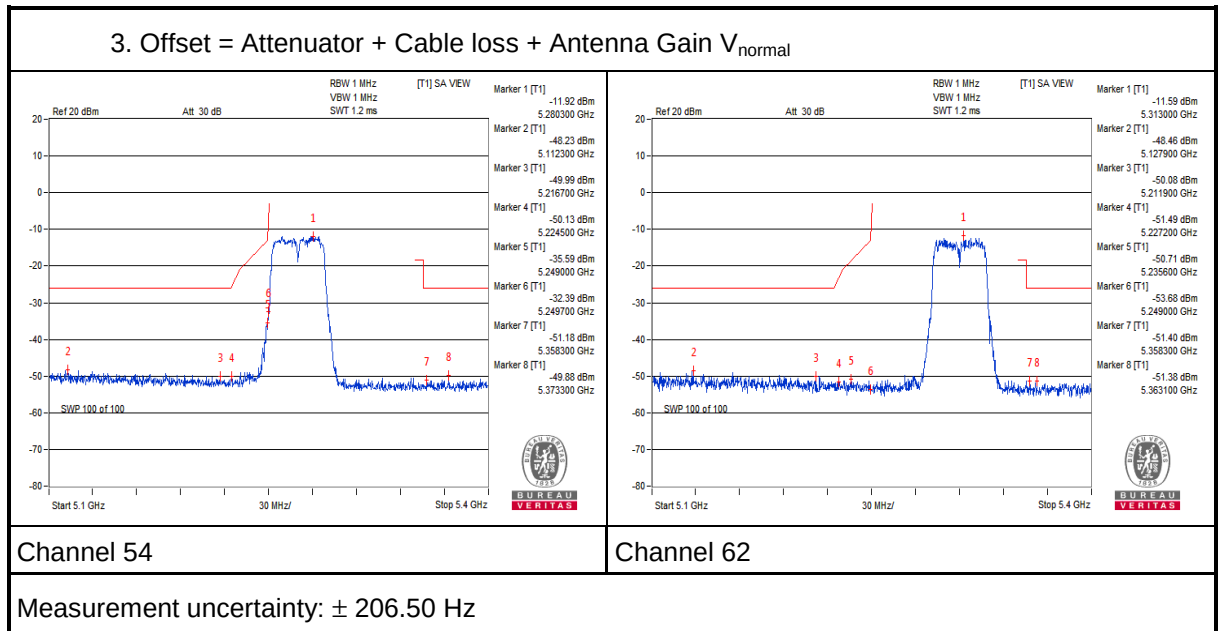
**BUREAU
VERITAS**

Test Report No.: RJ180411W011-3

802.11n 40MHz (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH 54 (5270MHz)		CH 62 (5310MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	
V_{normal}	5100 ≤ fo ≤ 5210	5112.30	0.015006	5127.90	0.014243	PASS
	5210 ≤ fo ≤ 5221.6	5216.70	0.010018	5211.90	0.009804	PASS
	5221.6 ≤ fo ≤ 5230	5224.50	0.009702	5227.20	0.007084	PASS
	5230 ≤ fo ≤ 5249	5249.00	0.275819	5235.60	0.008478	PASS
	5249 ≤ fo ≤ 5250	5249.70	0.576193	5249.00	0.004282	PASS
	5350 ≤ fo ≤ 5358.4	5358.30	0.007608	5358.30	0.007236	PASS
	5358.4 ≤ fo ≤ 5400	5373.30	0.010268	5363.10	0.007277	PASS

- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.

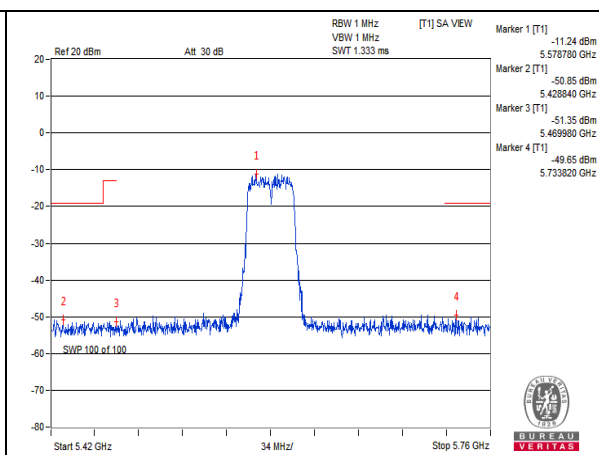
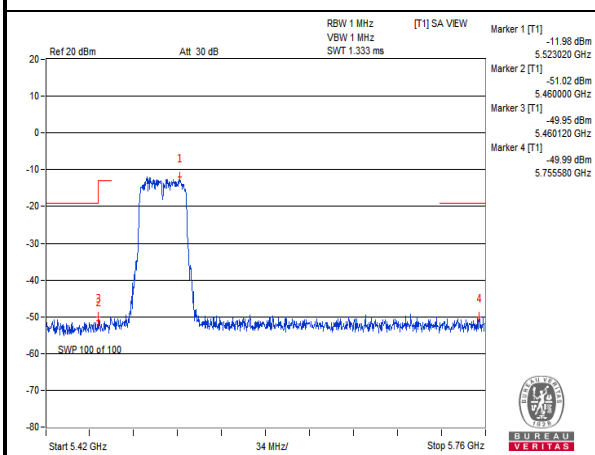


802.11n40MHz (W56)

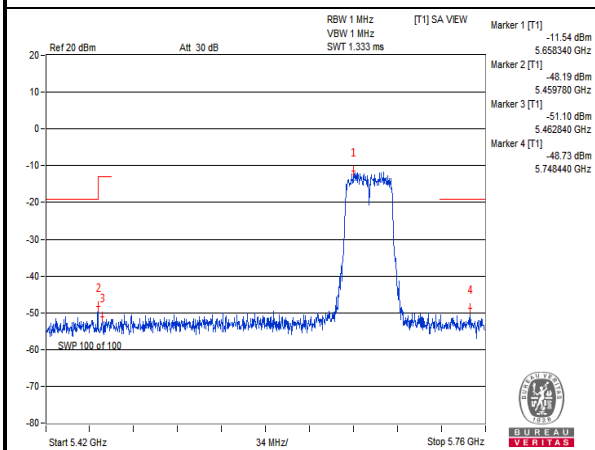
ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH 102 (5510MHz)		CH 118 (5590MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	
V _{normal}	5420.0 ≤ fo ≤ 5460.0	5460.00	0.007891	5428.84	0.008216	PASS
	5460.0 < fo ≤ 5470.0	5460.12	0.010107	5469.98	0.007324	PASS
	5725.0 ≤ fo ≤ 5760.0	5755.58	0.010020	5733.82	0.010820	PASS
	FREQUENCY BAND (MHz)	CH 134 (5670MHz)				
		FREQUENCY (MHz)		MEASURE VALUE (uW/MHz)		
V _{normal}	5420.0 ≤ fo ≤ 5460.0	5459.78		0.015163		PASS
	5460.0 < fo ≤ 5470.0	5462.84		0.007755		PASS
	5725.0 ≤ fo ≤ 5760.0	5748.44		0.013383		PASS

- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.
3. Offset = Attenuator + Cable loss + Antenna Gain

Vnormal



Channel 100



Channel 118



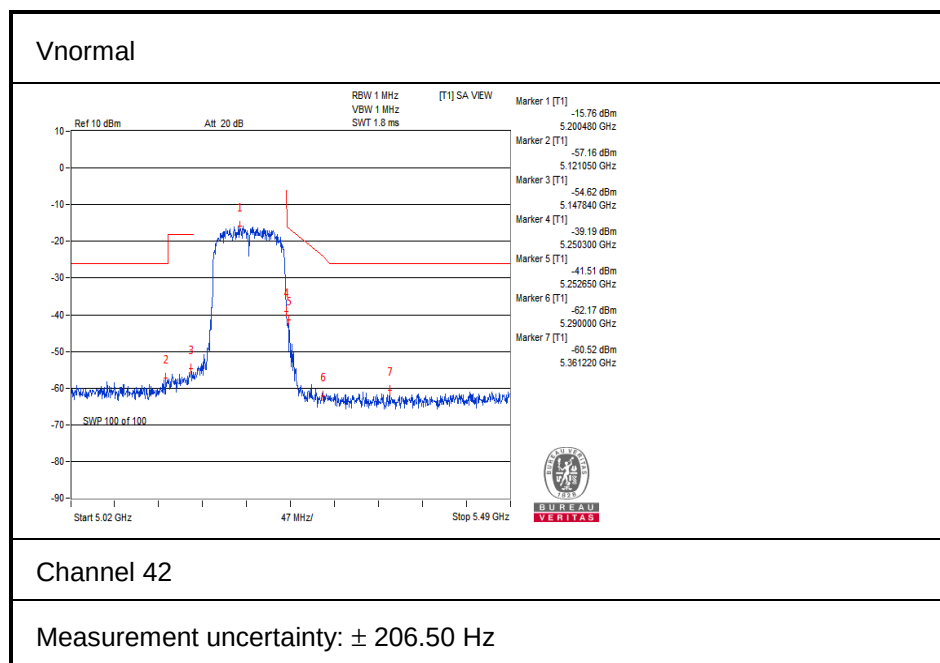
Channel 134

Measurement uncertainty: ± 206.50 Hz

802.11ac 80MHz (W52)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH		
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)		
	FREQUENCY BAND (MHz)	CH 42 (5210MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	
V_{normal}	5020.0 ≤ fo ≤ 5123.2MHz	5121.05	0.001919	PASS
	5123.2 ≤ fo ≤ 5150.0MHz	5147.84	0.003444	PASS
	5250.0 ≤ fo ≤ 5251.0MHz	5250.30	0.120418	PASS
	5251.0 ≤ fo < 5290.0MHz	5252.65	0.070616	PASS
	5290.0 ≤ fo < 5296.7MHz	5290.00	0.000606	PASS
	5296.7 ≤ fo ≤ 5480.0MHz	5361.22	0.000886	PASS

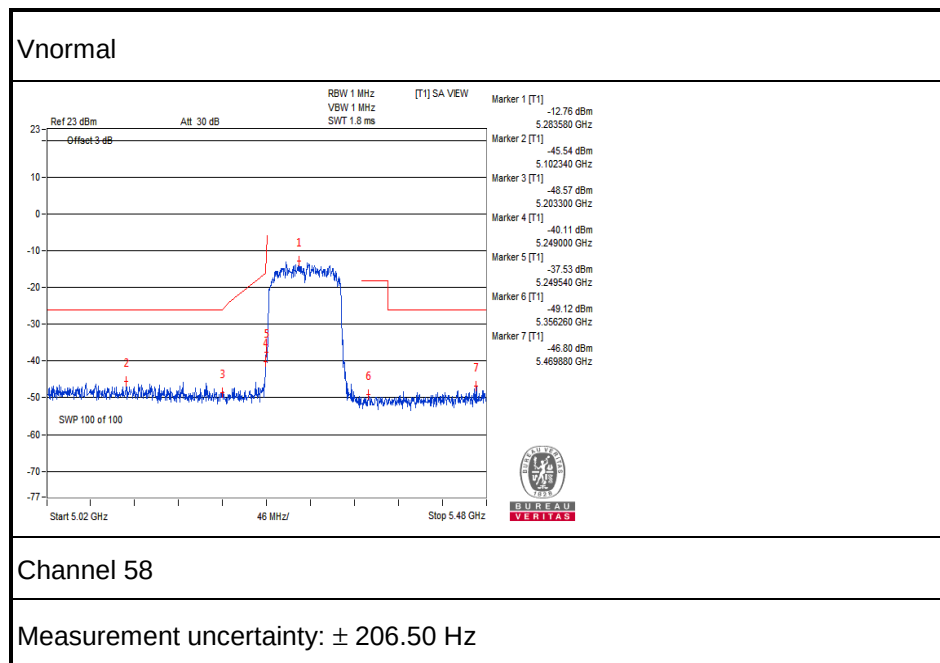
- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots are please refer to the below.
 3. Offset = Attenuator + Cable loss + Antenna Gain



802.11ac 80MHz (W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH		
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)		
	FREQUENCY BAND (MHz)	CH 58 (5290MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (μW/MHz)	
V _{normal}	5020.0 ≤ fo ≤ 5203.3MHz	5102.34	0.027887	PASS
	5203.3 ≤ fo ≤ 5210.0MHz	5203.30	0.013888	PASS
	5210.0 ≤ fo ≤ 5249.0MHz	5249.00	0.097291	PASS
	5249.0 ≤ fo < 5250.0MHz	5249.54	0.176516	PASS
	5350.0 ≤ fo < 5376.8MHz	5356.26	0.012220	PASS
	5376.8 ≤ fo ≤ 5480.0MHz	5469.88	0.020853	PASS

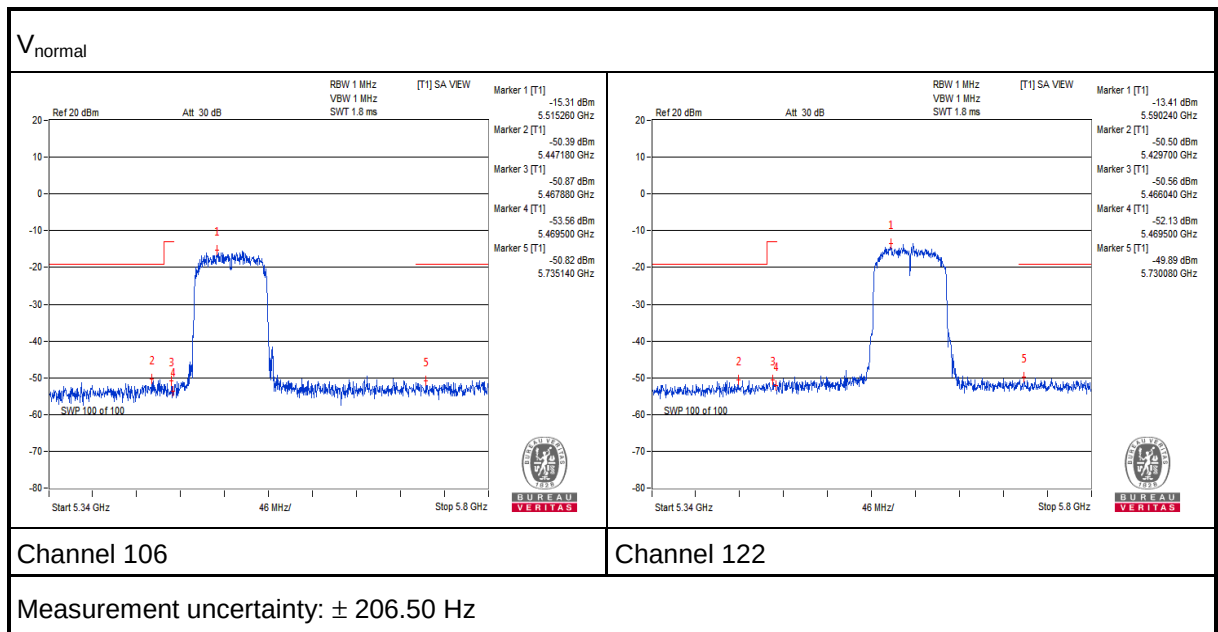
- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots please refer to the below.
3. Offset = Attenuator + Cable loss + Antenna Gain



802.11ac 80MHz (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
TEST CONDITION		OUT-BAND LEAKAGE POWER (μW/MHz)				
	FREQUENCY BAND (MHz)	CH 106 (5530MHz)		CH 122 (5610MHz)		RESULT
		FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE VALUE (uW/MHz)	
V_{normal}	5340 ≤ fo ≤ 5460	5447.18	0.009134	5429.70	0.008899	PASS
	5460 ≤ fo ≤ 5469.5	5467.88	0.008179	5466.04	0.008782	PASS
	5469.5 ≤ fo ≤ 5470	5469.50	0.004399	5469.50	0.006122	PASS
	5725 ≤ fo ≤ 5800	5735.14	0.008265	5730.08	0.010237	PASS

- NOTE:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
 2. The spectrum plots please refer to the below.
 3. Offset = Attenuator + Cable loss + Antenna Gain



4.6 ADJACENT CHANNEL POWER TOLERANCE

4.6.1 LIMITS OF POWER TOLERANCE

802.11a/ 802.11n (20MHz)

FREQUENCIES (MHz)	LIMIT
MEAN POWER 20MHz DISTANCE OF CARRIER	$\geq 25\text{dBc}$
MEAN POWER 40MHz DISTANCE OF CARRIER	$\geq 40\text{dBc}$

802.11n (40MHz)

FREQUENCIES (MHz)	LIMIT
MEAN POWER 40MHz DISTANCE OF CARRIER	$\geq 25\text{dBc}$
MEAN POWER 80MHz DISTANCE OF CARRIER	$\geq 40\text{dBc}$

802.11ac (80MHz)

FREQUENCIES (MHz)	LIMIT
MEAN POWER 80MHz DISTANCE OF CARRIER	$\geq 25\text{dBc}$

4.6.2 TEST SETUP



4.6.3 TEST RESULTS

802.11a (W52 & W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
VOLTAGE		CH 36	CH 48	CH 52	CH 64	LIMIT (dBc)
V_{nom}	MEAN POWER OF CARRIER (dBm)	10.67	10.93	10.37	10.32	-
	MEAN POWER +20MHz DISTANCE OF CARRIER (dBc)	40.59	41.62	41.77	42.11	25
	MEAN POWER -20MHz DISTANCE OF CARRIER (dBc)	40.03	41.64	40.57	41.43	25
	MEAN POWER +40MHz DISTANCE OF CARRIER (dBc)	55.38	56.13	55.79	55.94	40
	MEAN POWER -40MHz DISTANCE OF CARRIER (dBc)	54.55	55.53	55.30	55.90	40
MEASUREMENT UNCERTAINTY: $\pm 3.93\text{dB}$						

802.11a (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH			
VOLTAGE		CH 100	CH 120	CH 140	LIMIT (dBc)
V_{nom}	MEAN POWER OF CARRIER (dBm)	10.44	11.16	10.39	-
	MEAN POWER +20MHz DISTANCE OF CARRIER (dBc)	41.90	42.02	42.96	25
	MEAN POWER -20MHz DISTANCE OF CARRIER (dBc)	41.14	41.47	40.74	25
	MEAN POWER +40MHz DISTANCE OF CARRIER (dBc)	54.97	55.86	55.08	40
	MEAN POWER -40MHz DISTANCE OF CARRIER (dBc)	55.56	55.44	55.05	40
MEASUREMENT UNCERTAINTY: $\pm 3.93\text{dB}$					

802.11n (20MHz) (W52 & W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
VOLTAGE		CH 36	CH 48	CH 52	CH 64	LIMIT (dBc)
V_{nom}	MEAN POWER OF CARRIER (dBm)	7.20	7.28	7.27	6.85	-
	MEAN POWER +20MHz DISTANCE OF CARRIER (dBc)	38.75	39.02	38.25	39.09	25
	MEAN POWER -20MHz DISTANCE OF CARRIER (dBc)	37.04	38.32	38.50	38.98	25
	MEAN POWER +40MHz DISTANCE OF CARRIER (dBc)	52.33	52.99	53.18	52.88	40
	MEAN POWER -40MHz DISTANCE OF CARRIER (dBc)	51.34	52.33	52.60	52.56	40
MEASUREMENT UNCERTAINTY: $\pm 3.93\text{dB}$						

802.11n (20MHz) (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH			
VOLTAGE		CH 100	CH 120	CH 140	LIMIT (dBc)
V_{nom}	MEAN POWER OF CARRIER (dBm)	7.30	7.71	7.29	-
	MEAN POWER +20MHz DISTANCE OF CARRIER (dBc)	38.10	37.30	38.31	25
	MEAN POWER -20MHz DISTANCE OF CARRIER (dBc)	39.34	39.36	38.05	25
	MEAN POWER +40MHz DISTANCE OF CARRIER (dBc)	52.08	52.73	52.32	40
	MEAN POWER -40MHz DISTANCE OF CARRIER (dBc)	52.71	52.34	52.26	40
MEASUREMENT UNCERTAINTY: $\pm 3.93\text{dB}$					

802.11n (40MHz) (W52 & W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
VOLTAGE		CH 38	CH 46	CH 54	CH 62	LIMIT (dBc)
V_{nom}	MEAN POWER OF CARRIER (dBm)	7.03	6.74	6.34	6.37	-
	MEAN POWER +40MHz DISTANCE OF CARRIER (dBc)	41.94	41.12	41.23	41.65	25
	MEAN POWER -40MHz DISTANCE OF CARRIER (dBc)	39.90	40.60	41.02	40.89	25
	MEAN POWER +80MHz DISTANCE OF CARRIER (dBc)	49.76	49.78	49.46	49.32	40
	MEAN POWER -80MHz DISTANCE OF CARRIER (dBc)	48.01	48.17	48.38	48.62	40
MEASUREMENT UNCERTAINTY: $\pm 3.93\text{dB}$						

802.11n (40MHz) (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH			
VOLTAGE		CH 102	CH 118	CH 134	LIMIT (dBc)
V_{nom}	MEAN POWER OF CARRIER (dBm)	6.45	6.96	7.33	-
	MEAN POWER +40MHz DISTANCE OF CARRIER (dBc)	41.45	41.51	42.54	25
	MEAN POWER -40MHz DISTANCE OF CARRIER (dBc)	41.18	40.84	41.30	25
	MEAN POWER +80MHz DISTANCE OF CARRIER (dBc)	48.23	49.05	49.49	40
	MEAN POWER -80MHz DISTANCE OF CARRIER (dBc)	49.03	48.80	48.93	40
MEASUREMENT UNCERTAINTY: $\pm 3.93\text{dB}$					

802.11ac (80MHz) (W52 & W53 & W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH				
VOLTAGE		CH 42	CH 58	CH 106	CH 122	LIMIT (dBc)
V _{nom}	MEAN POWER OF CARRIER (dBm)	4.26	4.24	5.41	6.16	-
	MEAN POWER +80MHz DISTANCE OF CARRIER (dBc)	33.70	33.97	33.60	34.76	25
	MEAN POWER -80MHz DISTANCE OF CARRIER (dBc)	31.90	32.69	34.18	34.07	25
MEASUREMENT UNCERTAINTY: ± 3.93dB						

4.7 ANTENNA POWER MEASUREMENT

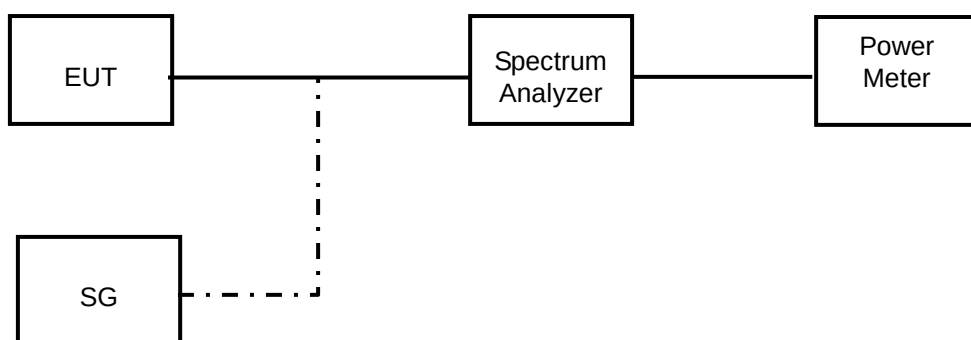
4.7.1 LIMITS OF ANTENNA POWER

W52			
Mode	802.11a / 802.11n(HT20)	802.11n(HT40)	802.11ac(VHT80)
Output power	10mW/MHz	5mW/MHz	2.5mW/MHz
E.I.R.P	10mW/MHz	5mW/MHz	2.5mW/MHz

W53			
Mode	802.11a / 802.11n(HT20)	802.11n(HT40)	802.11ac(VHT80)
Output power	10mW/MHz	5mW/MHz	2.5mW/MHz
E.I.R.P (with TPC)	10mW/MHz	5mW/MHz	2.5mW/MHz
E.I.R.P (without TPC)	5mW/MHz	2.5mW/MHz	1.25mW/MHz

W56			
Mode	802.11a / 802.11n(HT20)	802.11n(HT40)	802.11ac(VHT80)
Output power	10mW/MHz	5mW/MHz	2.5mW/MHz
E.I.R.P (with TPC)	50mW/MHz	25mW/MHz	12.5mW/MHz
E.I.R.P (without TPC)	25mW/MHz	12.5mW/MHz	6.25mW/MHz

4.7.2 TEST SETUP



4.7.3 TEST RESULTS

802.11a (W52)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	MAX. LIMIT (mW/MHz)
V_{normal}	1.633	1.734	10
RATED POWER	1.8mW/MHz		
TOLERANCE OF ANTENNA POWER	0.36mW/MHz ~2.16mW/MHz		
MEASUREMENT UNCERTAINTY	± 1.11dB		

NOTE: Output power tolerance (%) = $\{(1.734 - 1.8) / 1.8\} * 100 = -3.67(\%)$.

PIFA antenna with 2dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	MAX. LIMIT (mW/MHz)
V_{normal}	2.588	2.748	10
MEASUREMENT UNCERTAINTY	± 1.11dB		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11n (20MHz) (W52)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.748	0.797	10
RATED POWER	0.85mW/MHz		
TOLERANCE OF ANTENNA POWER	0.17mW/MHz ~1.02mW/MHz		
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE: Output power tolerance (%) = $\{(0.797 - 0.85) / 0.85\} * 100 = -6.24(\%)$.

PIFA antenna with 2dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	MAX. LIMIT (mW/MHz)
V_{normal}	1.186	1.263	10
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11n (40MHz) (W52)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 38 5190MHz	CHANNEL 46 5230MHz	MAX. LIMIT (mW/MHz)
V _{normal}	0.434	0.445	5
RATED POWER	0.5mW/MHz		
TOLERANCE OF ANTENNA POWER	0.1mW/MHz ~ 0.6 mW/MHz		
MEASUREMENT UNCERTAINTY	± 1.11dB		

NOTE: Output power tolerance (%) = $\{(0.445 - 0.5) / 0.5\} * 100 = -11(\%)$.

PIFA antenna with 2dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 38 5190MHz	CHANNEL 46 5230MHz	MAX. LIMIT (mW/MHz)
V _{normal}	0.688	0.705	5
MEASUREMENT UNCERTAINTY	± 1.11dB		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11ac (80MHz) (W52)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH	
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)	
	CHANNEL 42 5210MHz	MAX. LIMIT (mW/MHz)
V _{normal}	0.285	2.5
RATED POWER	0.3mW/MHz	
TOLERANCE OF ANTENNA POWER	0.06mW/MHz ~ 0.36 mW/MHz	
MEASUREMENT UNCERTAINTY	± 1.11dB	

NOTE: Output power tolerance (%) = $\{(0.285 - 0.3) / 0.3\} * 100 = -5$ (%).

PIFA antenna with 2dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH	
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)	
	CHANNEL 42 5210MHz	MAX. LIMIT (mW/MHz)
V _{normal}	0.452	2.5
MEASUREMENT UNCERTAINTY	± 1.11dB	

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11a (W53)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (Mw/MHz)		
	CHANNEL 52 5260MHz	CHANNEL64 5320MHz	MAX. LIMIT (Mw/MHz)
V_{normal}	1.765	1.786	10
RATED POWER	1.8mW/MHz		
TOLERANCE OF ANTENNA POWER	0.36mW/MHz ~2.16mW/MHz		
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE: Output power tolerance (%) = $\{(1.786 - 1.8) / 1.8\} * 100 = -0.78(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (Mw/MHz)		
	CHANNEL 52 5260MHz	CHANNEL64 5320MHz	MAX. LIMIT (Mw/MHz)
V_{normal}	2.671	2.703	5
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11n (20MHz) (W53)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 52 5260MHz	CHANNEL64 5320MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.764	0.792	10
RATED POWER	0.85mW/MHz		
TOLERANCE OF ANTENNA POWER	0.17mW/MHz ~1.02mW/MHz		
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE: Output power tolerance (%) = $\{(0.792 - 0.85) / 0.85\} * 100 = -6.83(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 52 5260MHz	CHANNEL64 5320MHz	MAX. LIMIT (mW/MHz)
V_{normal}	1.156	1.199	5
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11n (40MHz) (W53)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 54 5270MHz	CHANNEL 62 5310MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.451	0.444	5
RATED POWER	0.5mW/MHz		
TOLERANCE OF ANTENNA POWER	0.1mW/MHz ~ 0.6 mW/MHz		
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE: Output power tolerance (%) = $\{(0.451 - 0.5) / 0.5\} * 100 = -9.8(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 54 5270MHz	CHANNEL 62 5310MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.683	0.672	2.5
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11ac (80MHz) (W52)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH	
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)	
	CHANNEL 58 5290MHz	MAX. LIMIT (mW/MHz)
V _{normal}	0.293	2.5
RATED POWER	0.3mW/MHz	
TOLERANCE OF ANTENNA POWER	0.06mW/MHz ~ 0.36 mW/MHz	
MEASUREMENT UNCERTAINTY	± 1.11dB	

NOTE: Output power tolerance (%) = $\{(0.293 - 0.3) / 0.3\} * 100 = -2.33(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH	
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)	
	CHANNEL 58 5290MHz	MAX. LIMIT (mW/MHz)
V _{normal}	0.443	2.5
MEASUREMENT UNCERTAINTY	± 1.11dB	

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11a (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)			
	CHANNEL 100 5500MHz	CHANNEL 120 5600MHz	CHANNEL 140 5700MHz	MAX. LIMIT (mW/MHz)
V _{normal}	1.746	1.688	1.777	10
RATED POWER	1.8mW/MHz			
TOLERANCE OF ANTENNA POWER	0.36mW/MHz ~2.16mW/MHz			
MEASUREMENT UNCERTAINTY	± 1.11dB			

NOTE: Output power tolerance (%) = $\{(1.777 - 1.8) / 1.8\} * 100 = -1.28(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)			
	CHANNEL 100 5500MHz	CHANNEL 120 5600MHz	CHANNEL 140 5700MHz	MAX. LIMIT (mW/MHz)
V _{normal}	2.643	2.555	2.690	25
MEASUREMENT UNCERTAINTY	± 1.11dB			

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11n (20MHz) (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)			
	CHANNEL 100 5500MHz	CHANNEL 120 5600MHz	CHANNEL 140 5700MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.740	0.752	0.803	10
RATED POWER	0.85mW/MHz			
TOLERANCE OF ANTENNA POWER	0.17mW/MHz ~1.02mW/MHz			
MEASUREMENT UNCERTAINTY	± 1.11dB			

NOTE: Output power tolerance (%) = $\{(0.803 - 0.85) / 0.85\} * 100 = -5.53(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)			
	CHANNEL 100 5500MHz	CHANNEL 120 5600MHz	CHANNEL 140 5700MHz	MAX. LIMIT (mW/MHz)
V_{normal}	1.120	1.138	1.215	25
MEASUREMENT UNCERTAINTY	± 1.11dB			

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11n (40MHz) (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)			
	CHANNEL 102 5510MHz	CHANNEL 118 5590MHz	CHANNEL 134 5670MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.428	0.422	0.412	5
RATED POWER	0.5mW/MHz			
TOLERANCE OF ANTENNA POWER	0.1mW/MHz ~ 0.6 mW/MHz			
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$			

NOTE: Output power tolerance (%) = $\{(0.428 - 0.5) / 0.5\} * 100 = -14.4(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)			
	CHANNEL 102 5510MHz	CHANNEL 118 5590MHz	CHANNEL 134 5670MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.648	0.639	0.624	12.5
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$			

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

802.11ac (80MHz) (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	CONDUCTED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.289	0.284	10
RATED POWER	0.3mW/MHz		
TOLERANCE OF ANTENNA POWER	0.06mW/MHz ~ 0.36 mW/MHz		
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE: Output power tolerance (%) = $\{(0.289 - 0.3) / 0.3\} * 100 = -3.67(\%)$.

PIFA antenna with 1.8dBi gain

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	RADIATED RF OUTPUT POWER DENSITY (mW/MHz)		
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	MAX. LIMIT (mW/MHz)
V_{normal}	0.437	0.430	10
MEASUREMENT UNCERTAINTY	$\pm 1.11\text{dB}$		

NOTE:

1. The value of radiated RF output densities are "calculated" values.
2. Calculated radiated power is only for maximum antenna gain.

4.8 SPURIOUS EMISSIONS FOR RECEIVER

4.8.1 LIMITS OF SPURIOUS EMISSIONS FOR RECEIVER

FREQUENCIES (MHz)	LIMIT
BELOW 1GHz	$\leq 4\text{nW}$ (-54dBm)
ABOVE 1GHz	$\leq 20\text{nW}$ (-47dBm)

4.8.2 TEST SETUP



4.8.3 TEST RESULTS

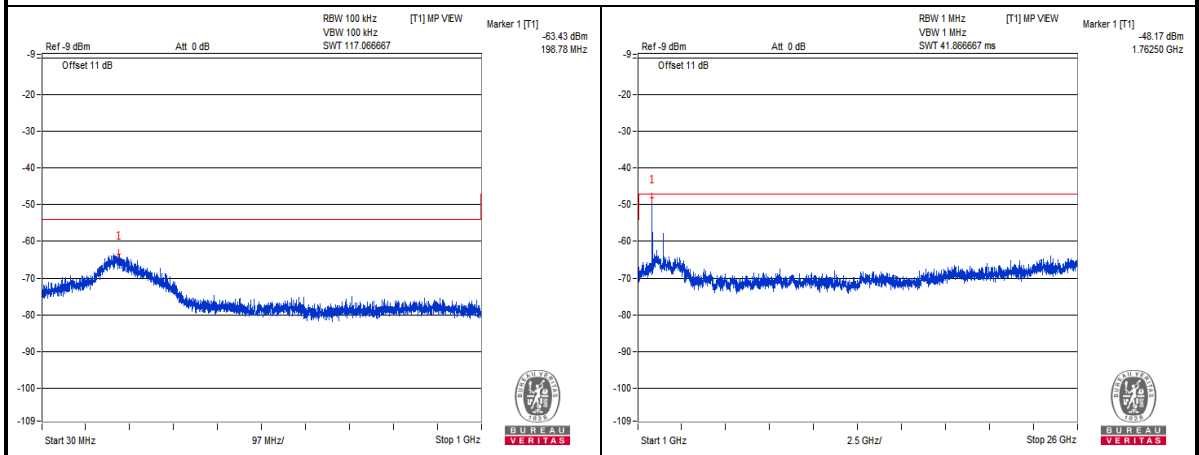
802.11a (W52 & W53)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
Test CHANNEL		CH36 (5180MHz)		CH48 (5240MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	below 1GHz	198.780	0.45331nW	182.530	0.415268nW	4nW	PASS
	above 1GHz	1762.500	15.217566nW	1743.750	9.36049nW	20nW	PASS
Test CHANNEL		CH52 (5260MHz)		CH64 (5320MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	below 1GHz	192.470	0.525947nW	190.050	0.513251nW	4nW	PASS
	above 1GHz	2412.500	5.368893nW	1868.750	0.564797nW	20nW	PASS

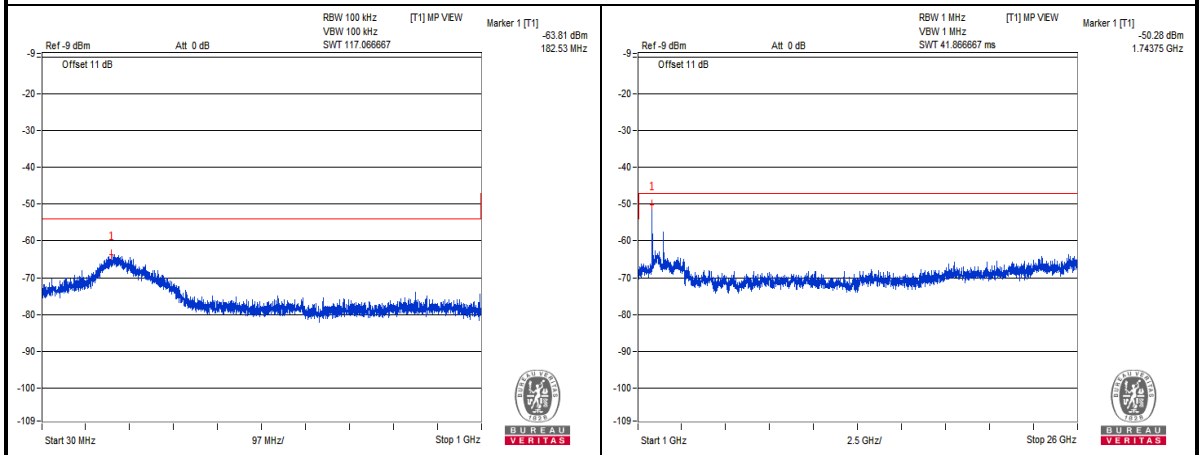
802.11a (W56)

ENVIRONMENTAL CONDITIONS		25 deg.C, 68% RH					
Test CHANNEL		CH100 (5500MHz)		CH120 (5600MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE VALUE	FREQUENCY (MHz)	MEASURE VALUE		
V _{normal}	below 1GHz	191.260	0.629702nW	197.320	0.415021nW	4nW	PASS
	above 1GHz	1762.500	10.116655nW	2075.000	0.479582nW	20nW	PASS
Test CHANNEL		CH140 (5700MHz)				LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)		MEASURE VALUE			
V _{normal}	below 1GHz	182.040		0.502272nW		4nW	PASS
	above 1GHz	2412.500		8.041848nW		20nW	PASS

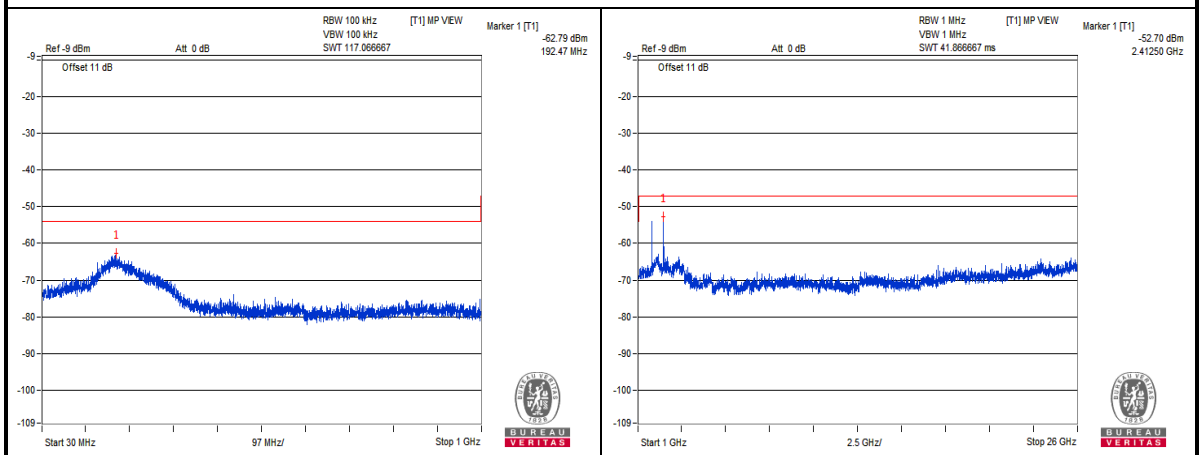
Vnormal



Channel 36



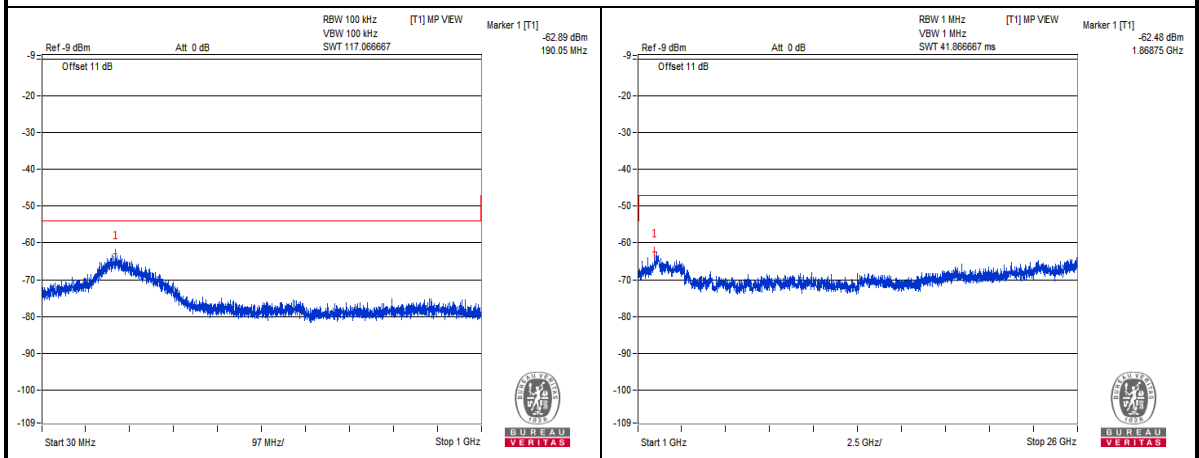
Channel 48



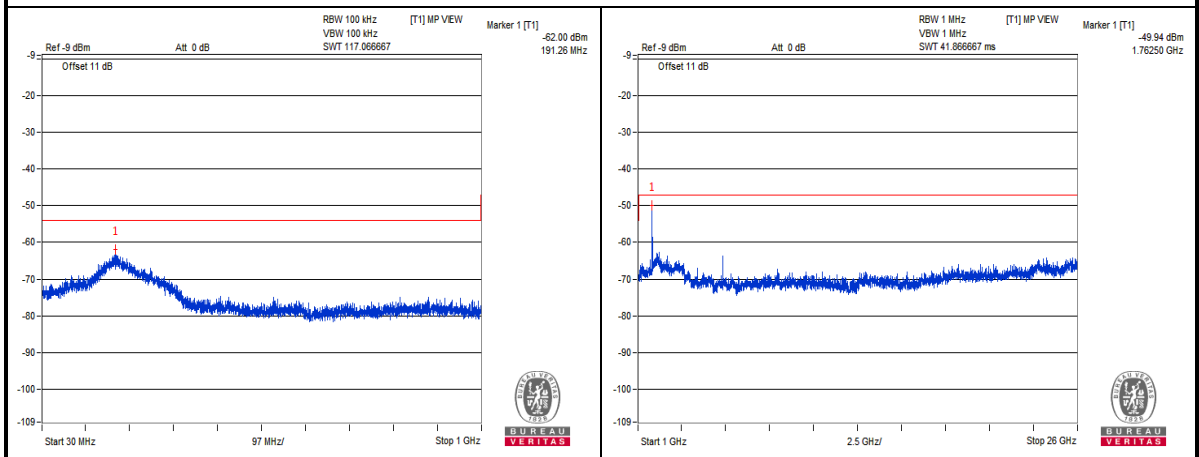
Channel 52

Measurement uncertainty: $\pm 3.93\text{dB}$

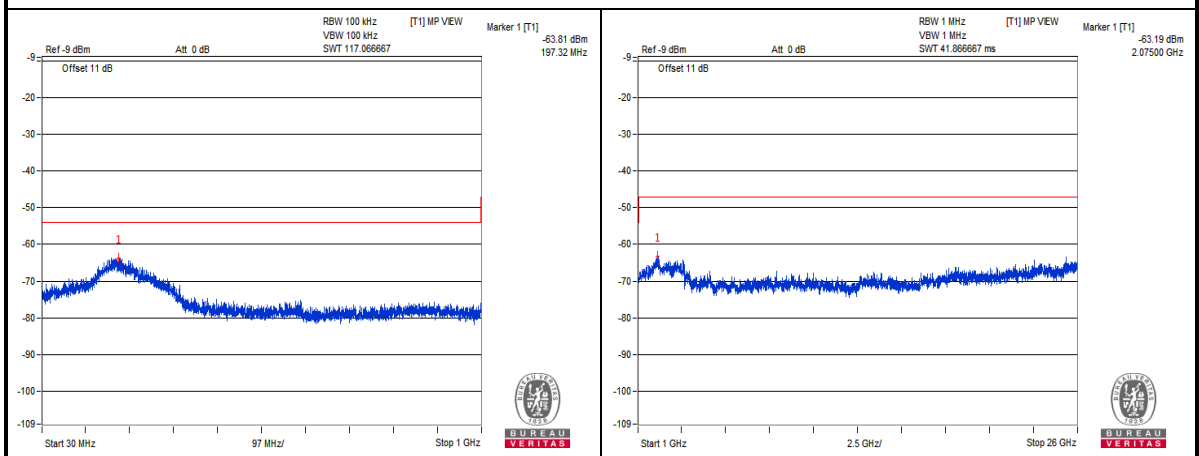
Vnormal



Channel 64



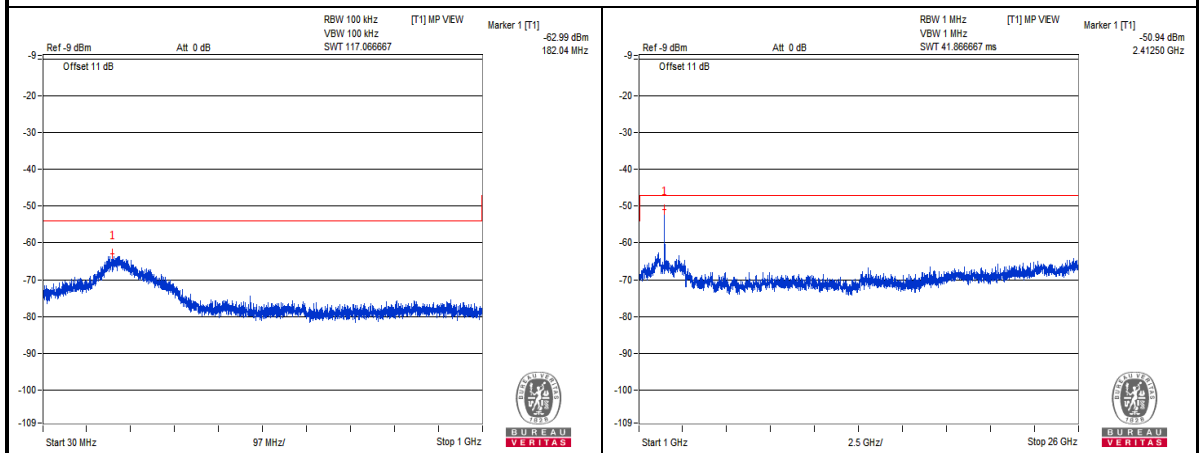
Channel 100



Channel 120

Measurement uncertainty: $\pm 3.93\text{dB}$

Vnormal



Channel 140

Measurement uncertainty: $\pm 3.93\text{dB}$

4.9 BURST LENGTH

4.9.1 LIMITS OF BURST LENGTH

FREQUENCIES (MHz)	LIMIT
TRANSMITTER OPERATING	$\leq 4\text{ms}$

4.9.2 TEST SETUP



4.9.3 TEST RESULTS

802.11a (W52 & W53)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	BURST LENGTH (ms)			
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	CHANNEL 52 5260MHz	CHANNEL 64 5320MHz
V _{normal}	1.34	1.34	1.36	1.34
MEASUREMENT UNCERTAINTY	± 0.01%			

802.11a (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	BURST LENGTH (ms)		
	CHANNEL 100 5500MHz	CHANNEL 120 5600MHz	CHANNEL 140 5700MHz
V _{normal}	1.36	1.34	1.34
MEASUREMENT UNCERTAINTY	± 0.01%		

Vnormal



Measurement uncertainty: $\pm 0.01\text{dB}$



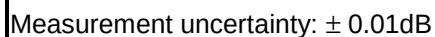
802.11n (20MHz) (W52 & W53)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	BURST LENGTH (ms)			
	CHANNEL 36 5180MHz	CHANNEL 48 5240MHz	CHANNEL 52 5260MHz	CHANNEL 64 5320MHz
V_{normal}	1.25	1.28	1.27	1.27
MEASUREMENT UNCERTAINTY	$\pm 0.01\%$			

802.11n (20MHz) (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	BURST LENGTH (ms)		
	CHANNEL 100 5500MHz	CHANNEL 120 5600MHz	CHANNEL 140 5700MHz
V_{normal}	1.28	1.28	1.28
MEASUREMENT UNCERTAINTY	$\pm 0.01\%$		





802.11n (40MHz) (W52 & W53)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	BURST LENGTH (ms)			
	CHANNEL 38 5190MHz	CHANNEL 46 5230MHz	CHANNEL 54 5270MHz	CHANNEL 62 5310MHz
V_{normal}	0.64	0.63	0.64	0.63
MEASUREMENT UNCERTAINTY	$\pm 0.01\%$			

802.11n (40MHz) (W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH		
TEST CONDITION	BURST LENGTH (ms)		
	CHANNEL 102 5510MHz	CHANNEL 118 5590MHz	CHANNEL 134 5670MHz
V_{normal}	0.63	0.63	0.63
MEASUREMENT UNCERTAINTY	$\pm 0.01\%$		

Vnormal





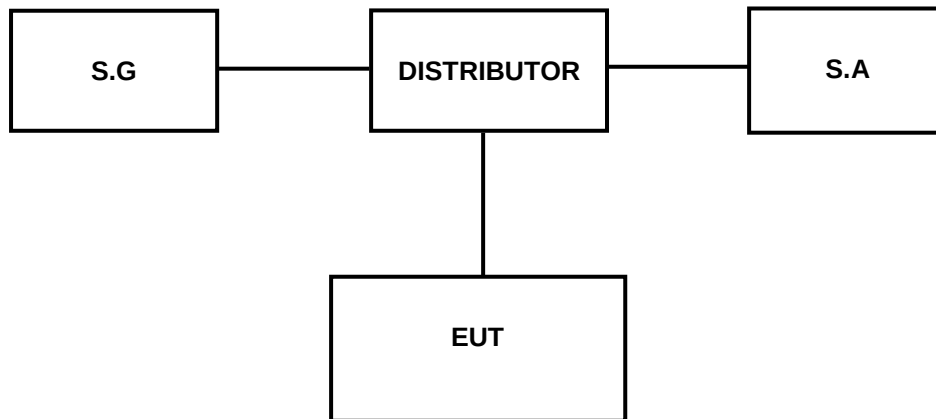
802.11ac (80MHz) (W52 & W53 & W56)

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH			
TEST CONDITION	BURST LENGTH (ms)			
	CH 42 5210MHz	CH 58 5290MHz	CH 106 5530MHz	CH 122 5610MHz
V_{normal}	0.25	0.23	0.23	0.25
MEASUREMENT UNCERTAINTY	$\pm 0.01\%$			



4.10 CARRIER SENSE CAPABILITY

4.10.1 MEASURING SYSTEM BLOCK DIAGRAM



4.10.2 MEASURING OPERATION PROCEDURES

- Turn the standard signal generator output OFF. Leave the equipment under test to be ready for transmission and verify the transmission with the spectrum analyzer.
- Set the equipment under test to the receiving state.
- Turn the standard signal generator ON and leave the equipment under test to be ready for transmission and verify with the spectrum analyzer that no transmission is being made.

4.10.3 LEVEL OF THE AMBIENT CARRIER

802.11a (W52)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5180	-49.50	5.00	-44.50
5240	-49.60	5.13	-44.47

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 2dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11a (W53)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5260	-49.83	11.21	-38.62
5320	-49.93	11.31	-38.62

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11a (W56)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5500	-50.22	11.49	-38.73
5600	-50.37	11.56	-38.81
5700	-50.53	11.61	-38.92

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11n (20MHz) (W52)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5180	-49.50	11.15	-38.35
5240	-49.60	11.16	-38.44

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 2dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11n (20MHz) (W53)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5260	-49.83	11.23	-38.60
5320	-49.93	11.32	-38.61

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11n (20MHz) (W56)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5500	-50.22	11.5	-38.72
5600	-50.37	11.57	-38.80
5700	-50.53	11.62	-38.91

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11n (40MHz) (W52)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5190	-49.51	11.15	-38.36
5230	-49.58	11.16	-38.42

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 2dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11n (40MHz) (W53)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5270	-49.85	11.24	-38.61
5310	-49.91	11.31	-38.60

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11n (40MHz) (W56)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5510	-50.23	11.49	-38.74
5590	-50.36	11.56	-38.80
5670	-50.48	11.59	-38.89

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11ac (80MHz) (W52)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5210	-49.55	11.15	-38.40

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 2dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11ac (80MHz) (W53)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5290	-49.88	11.24	-38.64

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

CF = Distributor loss + cable loss.

802.11ac (80MHz) (W56)

FREQUENCY (MHz)	Pcs (dBm)	C.F (dB)	S.G LEVEL
5530	-50.26	11.49	-38.77
5610	-50.39	11.56	-38.83

NOTE:

Pcs (dBm) = 22.79 + Gr - 20log(F).

Gr: Antenna gain (5GHz: 1.8dBi).

F: Transmission frequency (MHz).

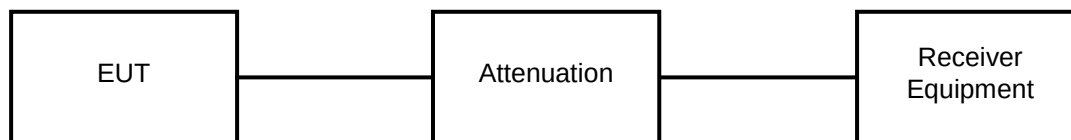
CF = Distributor loss + cable loss.

4.11 INTERFERENCE PREVENTION FUNCTION

4.11.1 LIMITS OF INTERFERENCE PREVENTION FUNCTION

NA

4.11.2 TEST SETUP



4.11.3 TEST RESULTS

ENVIRONMENTAL CONDITIONS	25 deg.C, 68% RH
Link Mode	Test Result
WiFi	PASS



BUREAU
VERITAS

Test Report No.: RJ180411W011-3

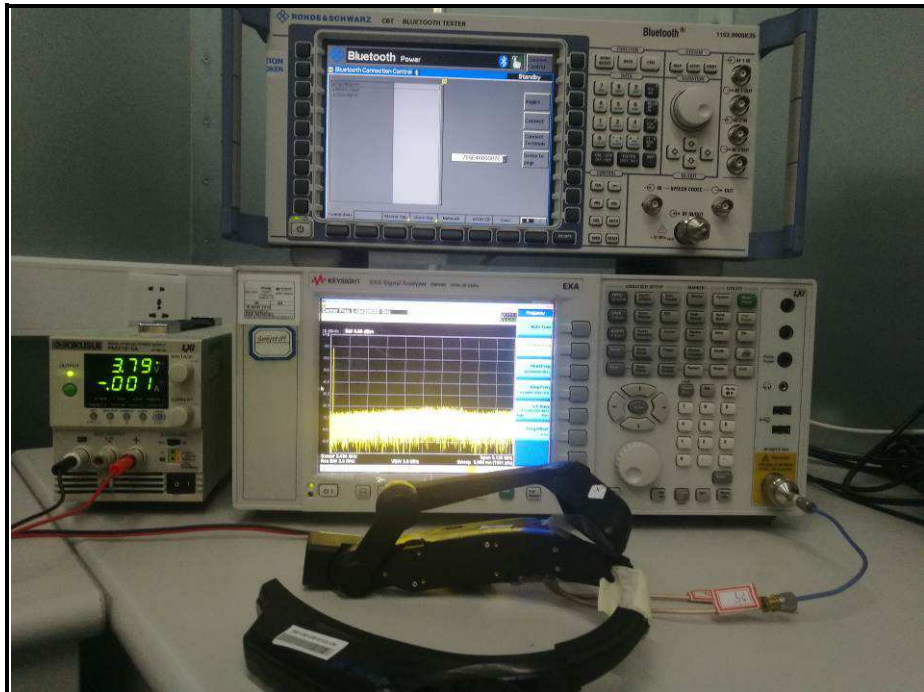
5 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Calibration Authority	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	LiSai	Mar. 02,18	Mar. 01,19
DC Source	Kikusui/JP	PMX18-5A	0000001	N/A	Jan. 07,18	Jan. 06,19
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	LiSai	Jun. 28,17	Jun. 27,18
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	LiSai	Mar. 16,18	Mar. 15,19
Power Sensor	ANRITSU	MA2411B	1339352	LiSai	Mar. 16,18	Mar. 15,19

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2. The test was performed in RF Oven room.

6 PHOTOGRAPHS OF THE TEST CONFIGURATION



7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications were made to the EUT by the lab during the test.

--- END