



# FCC PART 15C TEST REPORT No.I20Z60563-IOT08

for

**Client Name: TCL Communication Ltd.**

**Product Name: 5G NR/ LTE/WCDMA/GSM Mobile Phone**

**Model Name: T790Y**

**With**

**FCC ID: 2ACCJN043**

**Hardware Version: 03**

**Software Version:v2.0.1A.H.6**

**Issued Date: 2020-06-02**

**Note:**

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

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I20Z60563-IOT08	Rev.0	1st edition	2020-06-02

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## 1. TEST LABORATORY

### 1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FC

C accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

### 1.2. Testing Location

Conducted testing Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,  
P. R. China100191

Radiated testing Location: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology  
Development Area, Beijing, P. R. China 100176

### 1.3. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

### 1.4. Project date

Testing Start Date: 2020-04-16

Testing End Date: 2020-06-02

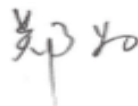
### 1.5. Signature



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Xie Fangfang

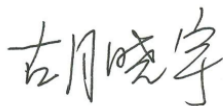
(Prepared this test report)



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Zheng Wei

(Reviewed this test report)



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Hu Xiaoyu

(Approved this test report)



## **2. CLIENT INFORMATION**

### **2.1. Applicant Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science  
Park, Shatin, NT, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

### **2.2. Manufacturer Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science  
Park, Shatin, NT, Hong Kong  
City: Hong Kong  
Postal Code: /  
Country: China  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

### **3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY**

#### **EQUIPMENT(AE)**

##### **3.1. About EUT**

Description	5G NR/ LTE/WCDMA/GSM Mobile Phone		
Model name	T790Y		
FCC ID	2ACCJN043		
WLAN Frequency Range	ISM Band: 5725MHz~5850MHz		
Type of modulation	OFDM		
Voltage	3.85V		
Antenna Gain	-1.90dBi(ant4),-1.80dBi(ant5)		
Antenna Function Description	802.11a/n/ac MIMO	Ant4	Ant5

##### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>SN or IMEI</b>	<b>HW Version</b>	<b>SW Version</b>
EUT38a	354926110009808	03	v2.0.1A.H.6
EUT2	354926110009766	03	v2.0.1A.H.6

\*EUT ID: is used to identify the test sample in the lab internally.

##### **3.3. Internal Identification of AE used during the test**

<b>AE ID*</b>	<b>Description</b>	<b>SN</b>
AE1	Battery	/
AE2	Charger	/
AE3	USB Cable	/

AE1

Model	TLp043E7
Manufacturer	VEKEN
Capacitance	4360mAh
Nominal voltage	/

AE2

Model	QC13US
Manufacturer	BYD
Length of cable	/

AE3

Model	CDA0000139C1
Manufacturer	Juwei
Length of cable	/

\*AE ID: is used to identify the test sample in the lab internally.

##### **3.4. EUT set-ups**

<b>EUT set-up No.</b>	<b>Combination of EUT and AE</b>	<b>Remarks</b>
Set.F3	UT38a + AE1+ AE2 + AE3	WIFI

### 3.5. General Description

Equipment Under Test (EUT) is a model of 5G NR/ LTE/WCDMA/GSM Mobile Phone with integrated antenna. It consists of normal options: Battery and Charger.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the Client.

## 4. REFERENCE DOCUMENTS

### 4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

### 4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC Part15	FCC CFR 47, Part 15, Subpart C and E: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.407 General technical requirements	2018
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
UNII: KDB 789033 D02	General U-NII Test Procedures New Rules v02r01	2017-12
KDB 558074 D01	Federal Communications Commission Office of Engineering and Technology Laboratory Division GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES	2019

## 5. LABORATORY ENVIRONMENT

Conducted RF performance testing is performed in shielding room.

EMC performance testing is performed in Semi-anechoic chamber.



## 6. SUMMARY OF TEST RESULTS

### 6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.407 (a)	/	P
Peak Power Spectral Density	15.407 (a)	/	P
Occupied 6dB Bandwidth	15.407 (e)	/	P
Band Edges Compliance - Conducted& Radiated	15.407 (b)	/	P
Transmitter Spurious Emission - Conducted	15.407	/	P
Transmitter Spurious Emission - Radiated	15.407, 15.205, 15.209	/	P
AC Powerline Conducted Emission	15.107, 15.207	/	P

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

### 6.2. Statements

CTTL has evaluated the test cases requested by the client/matrix manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

### 6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	26°C
Voltage	3.85V
Humidity	44%

## 7. TEST EQUIPMENTS UTILIZED

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ40	200089	Rohde & Schwarz	1 year	2021-05-06
2	LISN	ENV216	101459	Rohde & Schwarz	1 year	2021-03-17
3	Test Receiver	ESCI	100766	Rohde & Schwarz	1 year	2021-03-10
4	Shielding Room	S81	/	ETS-Lindgren	/	/

### Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	Rohde & Schwarz	1 year	2020-10-30
2	BiLog Antenna	VULB9163	9163-482	Schwarzbeck	1 year	2020-09-16
3	Dual-Ridge Waveguide Horn Antenna	3117	00139065	ETS-Lindgren	1 year	2020-11-10
4	Dual-Ridge Waveguide Horn Antenna	3116	2661	ETS-Lindgren	1 year	2020-10-08
5	Vector Signal Analyzer	FSV40	101047	Rohde & Schwarz	1 year	2020-06-16

## 8. Measurement Uncertainty

### 8.1. Transmitter Output Power

Measurement Uncertainty: 0.387dB,k=1.96

### 8.2. Peak Power Spectral Density

Measurement Uncertainty: 0.705dB,k=1.96

### 8.3. Occupied 6dB Bandwidth

Measurement Uncertainty: 60.80Hz,k=1.96

### 8.4. Band Edges Compliance

Measurement Uncertainty : 0.62dB,k=1.96

### 8.5. Spurious Emissions

#### Conducted (k=1.96)

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 2\text{GHz}$	1.22
$2\text{GHz} \leq f \leq 3.6\text{GHz}$	1.22
$3.6\text{GHz} \leq f \leq 8\text{GHz}$	1.22
$8\text{GHz} \leq f \leq 12.75\text{GHz}$	1.51
$12.75\text{GHz} \leq f \leq 26\text{GHz}$	1.51
$26\text{GHz} \leq f \leq 40\text{GHz}$	1.59

#### Radiated (k=2)

Frequency Range	Uncertainty(dB)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.40
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.32
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.26

### 8.6. AC Power-line Conducted Emission

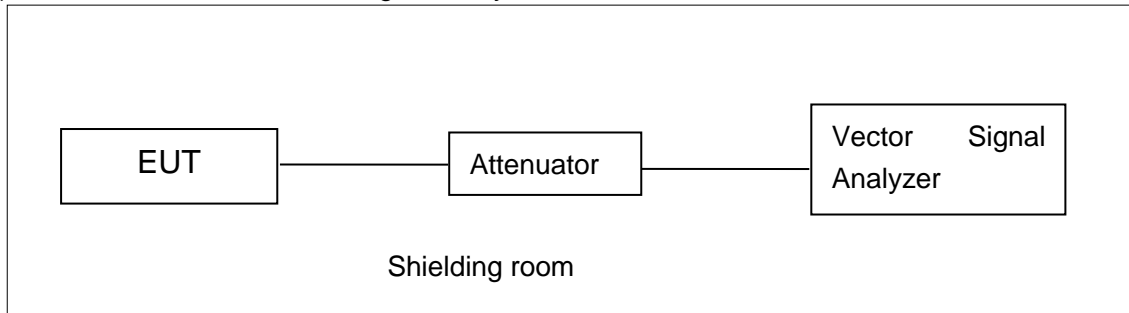
Measurement Uncertainty : 3.08dB,k=2

## ANNEX A: MEASUREMENT RESULTS

### A.1. Measurement Method

#### A.1.1. Conducted Measurements

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode.
- 3). Set the EUT to the required channel.
- 4). Set the spectrum analyzer to start measurement.
- 5). Record the values. Vector Signal Analyzer

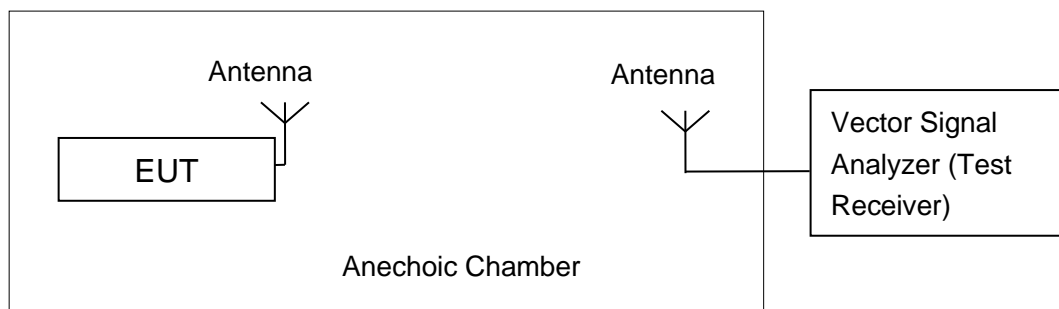


#### A.1.2. Radiated Emission Measurements

In the case of radiated emission, the used settings are as follows,

Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;

Sweep frequency from 1 GHz to 26GHz, RBW = 1MHz, VBW = 10Hz;



The measurement is made according to ANSI C63.10.

The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

## A.2. Maximum Peak Output Power

### Measurement Limit and Method:

Standard	Limit (dBm)
FCC CRF Part 15.407(a)	< 30

### A.2.2. Maximum Average Output Power-conducted

#### Measurement Results:

##### Duty Cycle

11a	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps		
%	99.44%	99.26%	99.17%	99.06%	98.35%	98.22%	97.92%	97.78%		
11n-20	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7		
%	99.25%	99.17%	99.02%	98.87%	98.46%	98.33%	97.89%	97.76%		
11n-40	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7		
%	99.16%	99.19%	98.83%	98.53%	97.63%	97.15%	96.83%	96.54%		
11ac-20	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	
%	99.19%	99.17%	99.05%	98.15%	98.16%	98.19%	97.92%	97.85%	97.77%	
11ac-40	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
%	99.17%	99.11%	98.92%	98.57%	97.82%	97.13%	96.71%	96.59%	95.96%	95.56%
11ac-80	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
%	98.52%	98.23%	97.64%	96.90%	95.34%	94.20%	93.54%	93.12%	91.88%	91.17%

The data rate 18Mbps(11a) 、MCS2(11n-20) 、MCS3(11ac-20) 、MCS1(11n-40) 、MCS0(11ac-40)、MCS4(11ac-80)is selected as worse condition, and the following cases are performed with this condition.

5GHz Band									
Mode	Date Rate	Chnanel	Freq.(MHz)	Average Conducted Power (dBm)			Limit(dBm)	Pass/Fail	
				Ant4	Ant5	SUM			
11a	18Mbps	149	5745 MHz	17.01	16.86	19.95	30.00	Pass	
11a	18Mbps	157	5785 MHz	16.68	17.84	20.31	30.00	Pass	
11a	18Mbps	165	5825 MHz	16.53	18.16	20.43	30.00	Pass	
11n-20	MCS2	149	5745 MHz	15.70	16.09	18.91	30.00	Pass	
11n-20	MCS2	157	5785 MHz	15.23	15.81	18.54	30.00	Pass	
11n-20	MCS2	165	5825 MHz	15.48	15.59	18.55	30.00	Pass	
11ac-20	MCS3	149	5745 MHz	15.77	16.04	18.92	30.00	Pass	
11ac-20	MCS3	157	5785 MHz	15.19	15.79	18.51	30.00	Pass	
11ac-20	MCS3	165	5825 MHz	15.55	15.65	18.61	30.00	Pass	
11n-40	MCS1	151	5755 MHz	14.99	15.31	18.16	30.00	Pass	
11n-40	MCS1	159	5795 MHz	14.71	15.34	18.05	30.00	Pass	
11ac-40	MCS0	151	5825 MHz	14.97	15.27	18.13	30.00	Pass	
11ac-40	MCS0	159	5745 MHz	14.67	15.39	18.06	30.00	Pass	
11ac-80	MCS4	159	5775 MHz	12.72	13.48	16.13	30.00	Pass	

**Conclusion: PASS**

### A.3. Peak Power Spectral Density

#### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407(a)	< 30 dBm/500 kHz

The measurement is made according to ANSI C63.10 and KDB789033 D02

#### Measurement Uncertainty:

Measurement Uncertainty	0.75dB
-------------------------	--------

#### Measurement Results:

5GHz Band									
Mode	Data Rate	Channel	Freq.(MHz)	Peak Power Spectral Density (dBm/500 kHz)			Peak Power Spectral Density Limit (dBm/500 kHz)		Pass/Fail
				Ant4	Ant5	SUM	Ant4	Ant5	
11a	18Mbps	149	5745 MHz	3.01	3.18	6.11	30.00		Pass
11a	18Mbps	157	5785 MHz	2.49	3.12	5.83	30.00		Pass
11a	18Mbps	165	5825 MHz	2.81	2.64	5.74	30.00		Pass
11n-20	MCS2	149	5745 MHz	2.60	2.69	5.66	30.00		Pass
11n-20	MCS2	157	5785 MHz	2.10	2.49	5.31	30.00		Pass
11n-20	MCS2	165	5825 MHz	2.22	1.96	5.10	30.00		Pass
11ac-20	MCS3	149	5745 MHz	3.08	2.66	5.89	30.00		Pass
11ac-20	MCS3	157	5785 MHz	2.19	2.43	5.32	30.00		Pass
11ac-20	MCS3	165	5825 MHz	2.26	1.90	5.09	30.00		Pass
11n-40	MCS1	151	5755 MHz	-0.63	-0.85	2.27	30.00		Pass
11n-40	MCS1	159	5795 MHz	-1.61	-1.08	1.67	30.00		Pass
11ac-40	MCS0	151	5825 MHz	-0.67	-0.85	2.25	30.00		Pass
11ac-40	MCS0	159	5745 MHz	-1.63	-1.13	1.64	30.00		Pass
11ac-80	MCS4	159	5775 MHz	-6.38	-5.79	-3.06	30.00		Pass

**Conclusion: PASS**

#### A.4. Occupied 6dB Bandwidth

##### Measurement Limit:

Standard	Limit (kHz)
FCC 47 CFR Part 15.407 (e)	≥ 500

The measurement is made according to KDB789033 D02 .

##### Measurement Uncertainty:

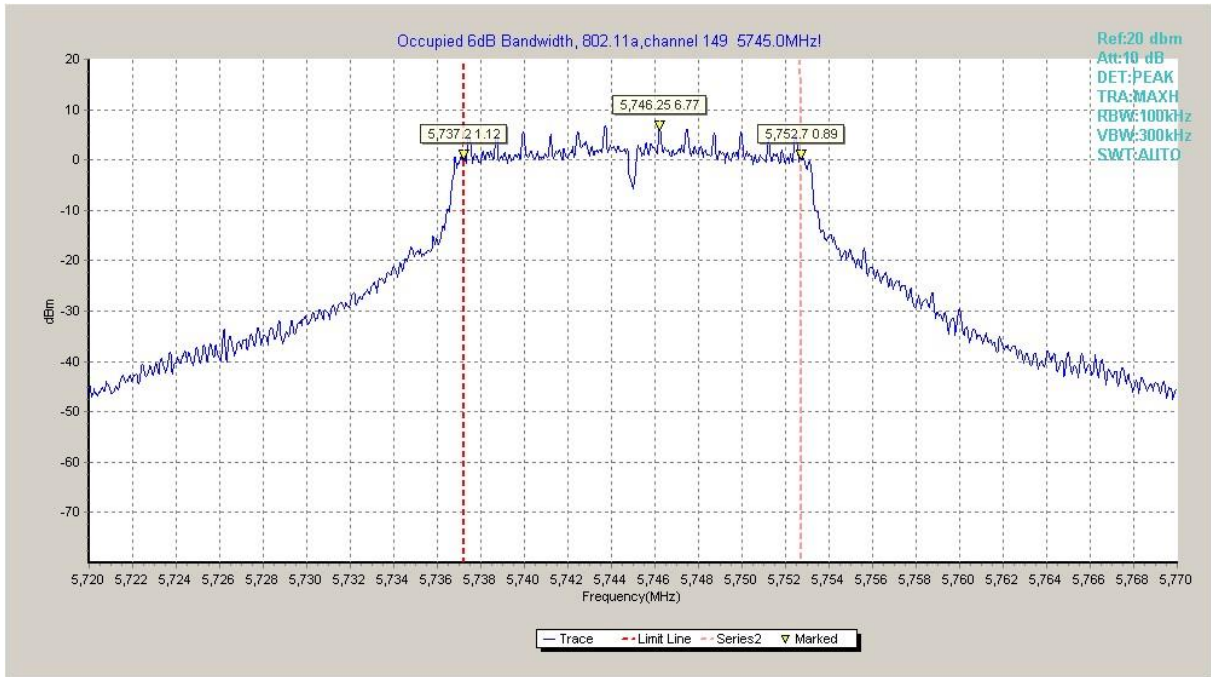
Measurement Uncertainty	60.80Hz
-------------------------	---------

##### Measurement Result:

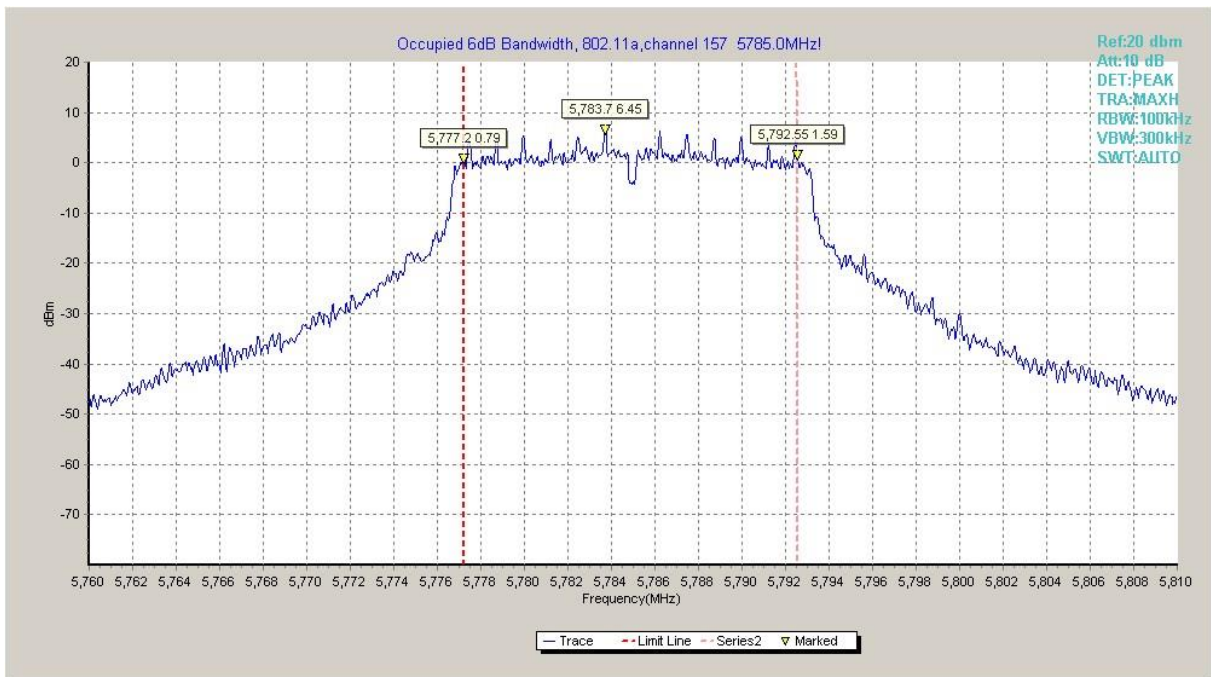
Mode	Channel	Occupied 6dB Bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	149	Fig.1	15.50	P
	157	Fig.2	15.35	P
	165	Fig.3	15.35	P
802.11n HT20	149	Fig.4	16.00	P
	157	Fig.5	16.60	P
	165	Fig.6	15.45	P
802.11ac HT20	149	Fig.7	16.55	P
	157	Fig.8	16.00	P
	165	Fig.9	15.15	P
802.11n HT40	151	Fig.10	35.36	P
	159	Fig.11	35.36	P
802.11ac HT40	151	Fig.12	35.36	P
	159	Fig.13	35.36	P
802.11ac HT80	155	Fig.14	75.04	P

**Conclusion: PASS**

**Test graphs as below:**

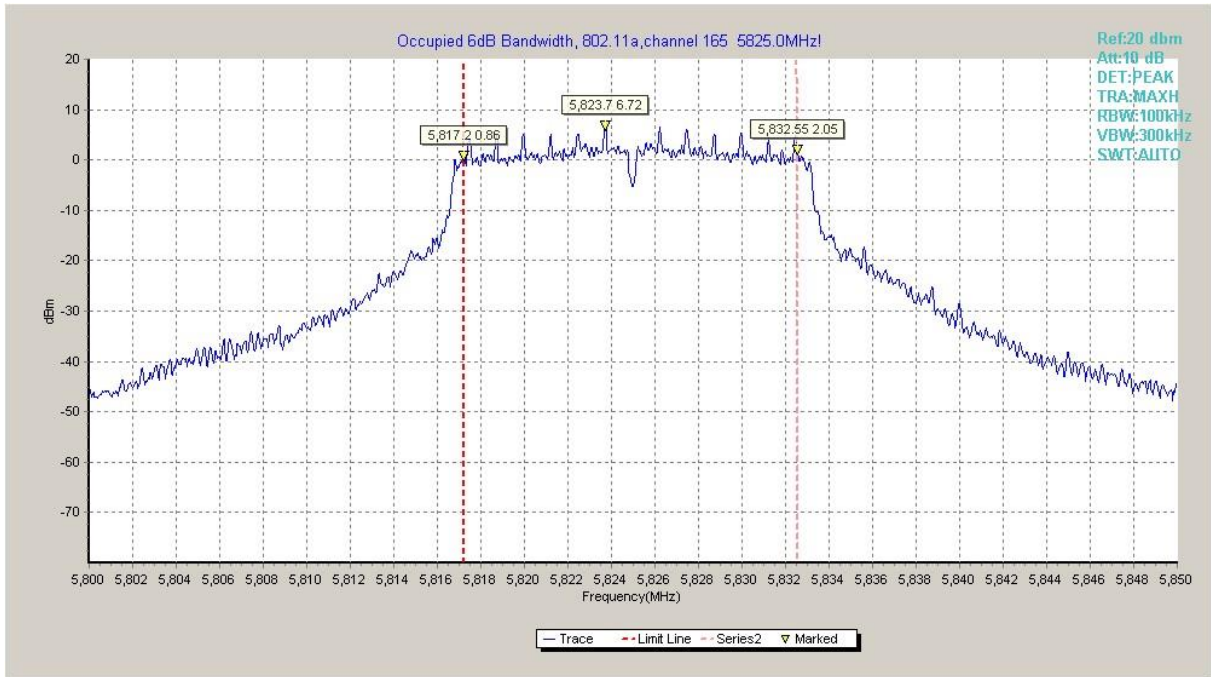


**Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)**

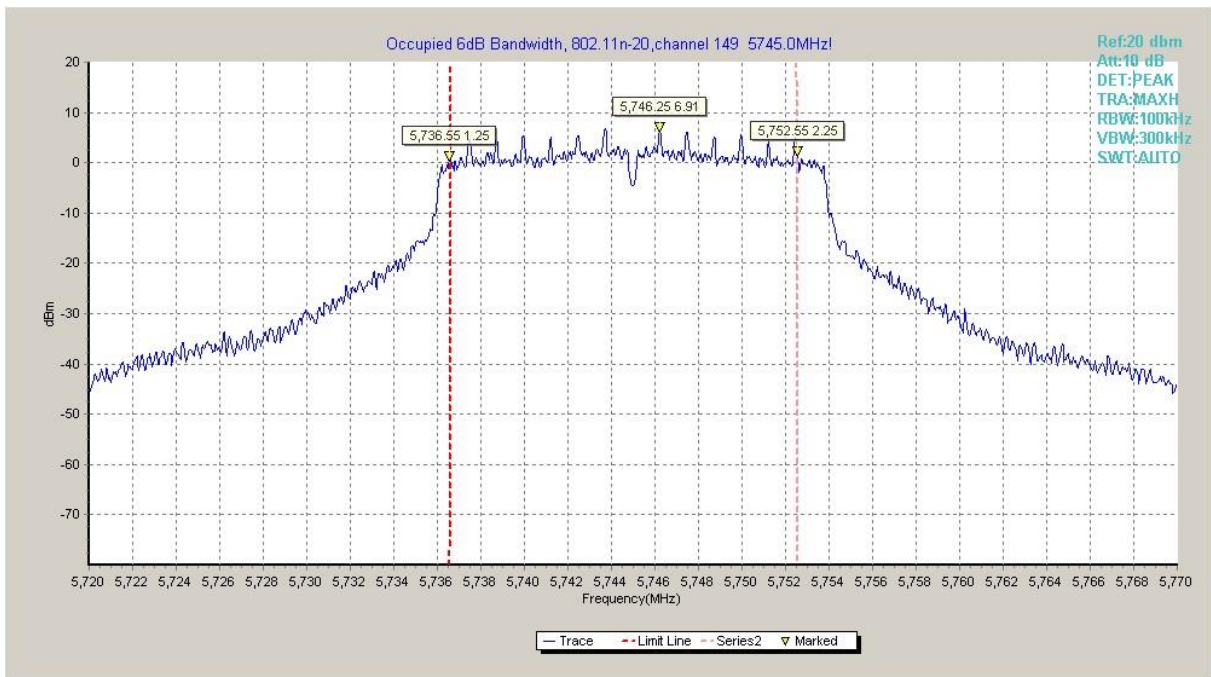


**Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)**





**Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)**



**Fig. 4 Occupied 6dB Bandwidth (802.11n-HT20, Ch 149)**

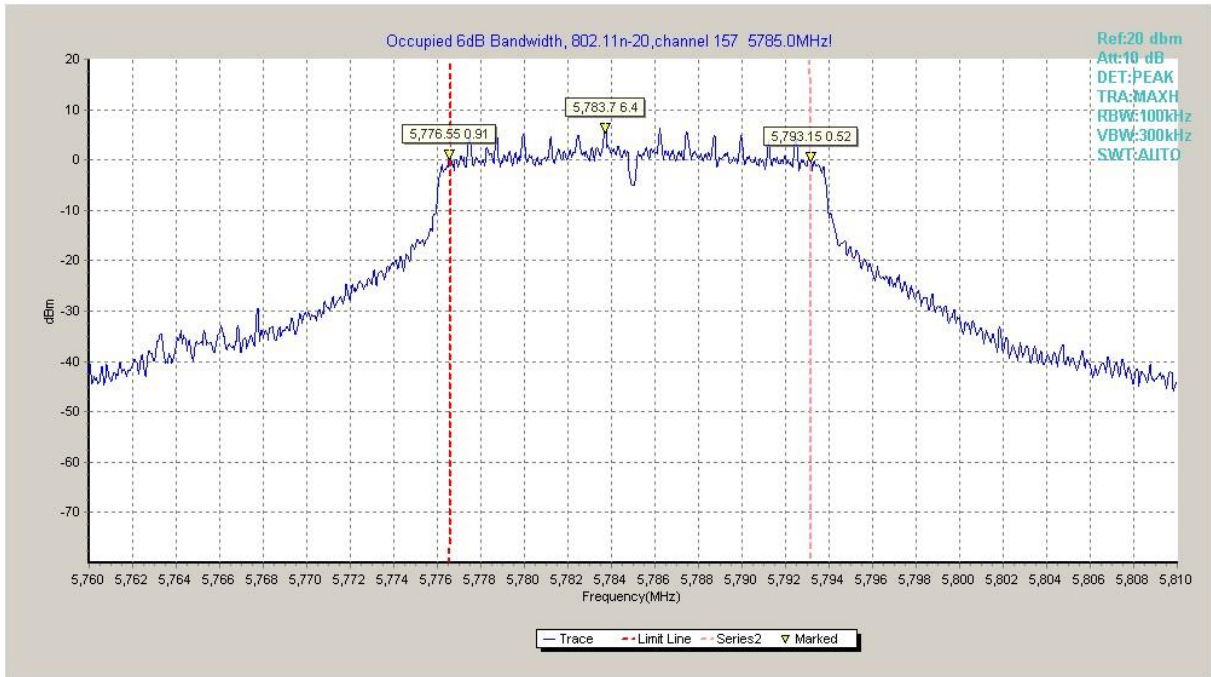


Fig. 5 Occupied 6dB Bandwidth (802.11n-HT20, Ch 157)

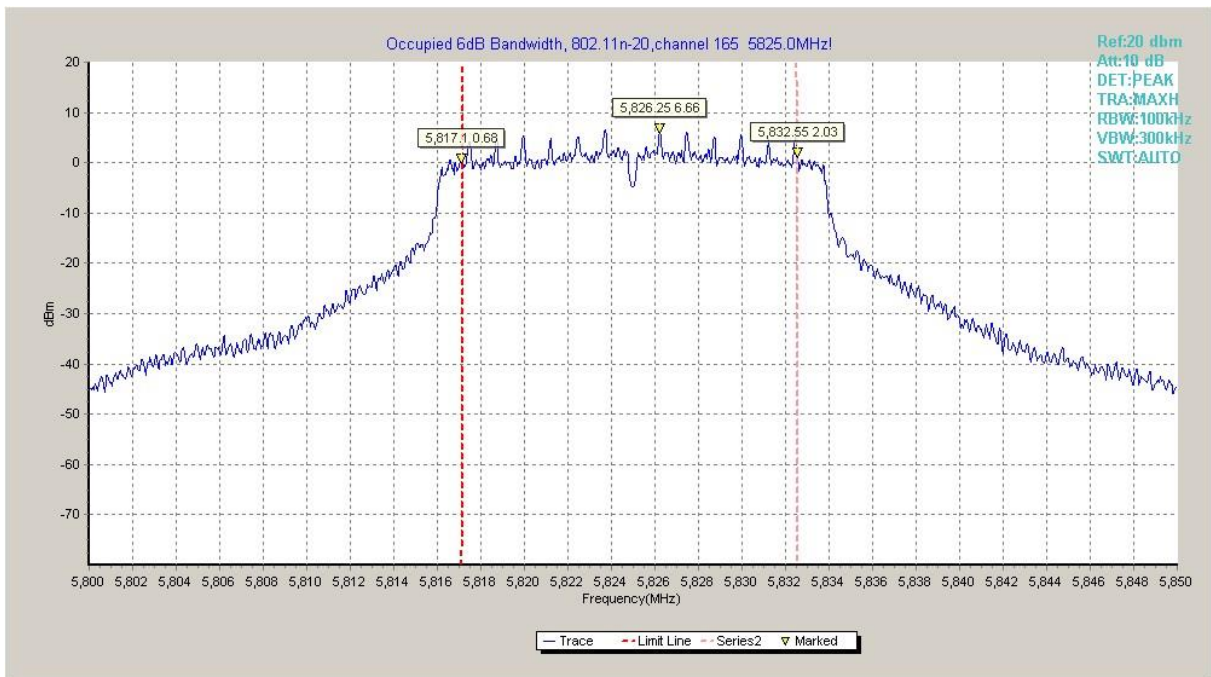
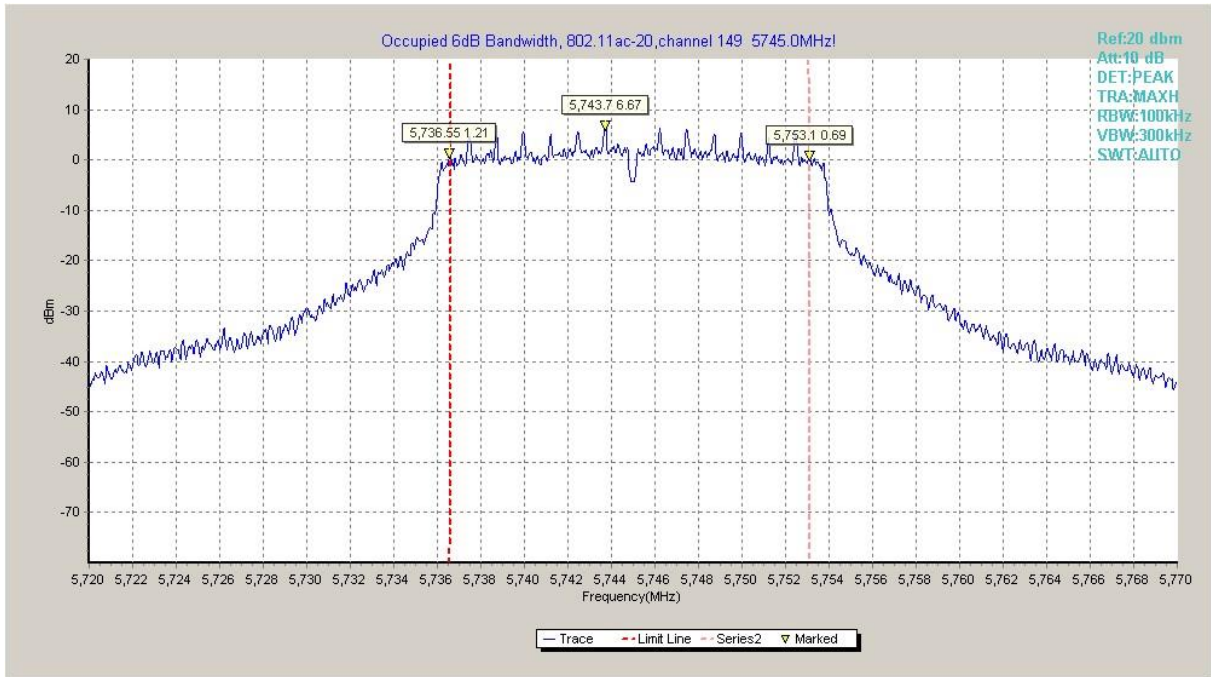
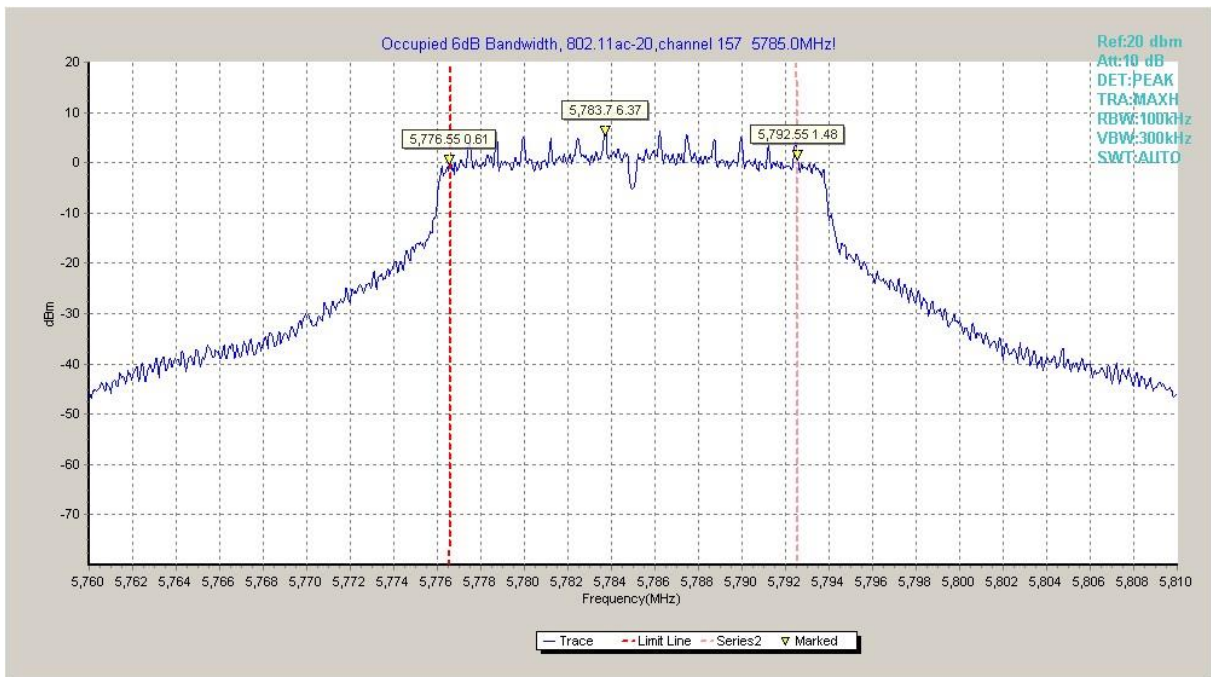


Fig. 6 Occupied 6dB Bandwidth (802.11n-HT20, Ch 165)

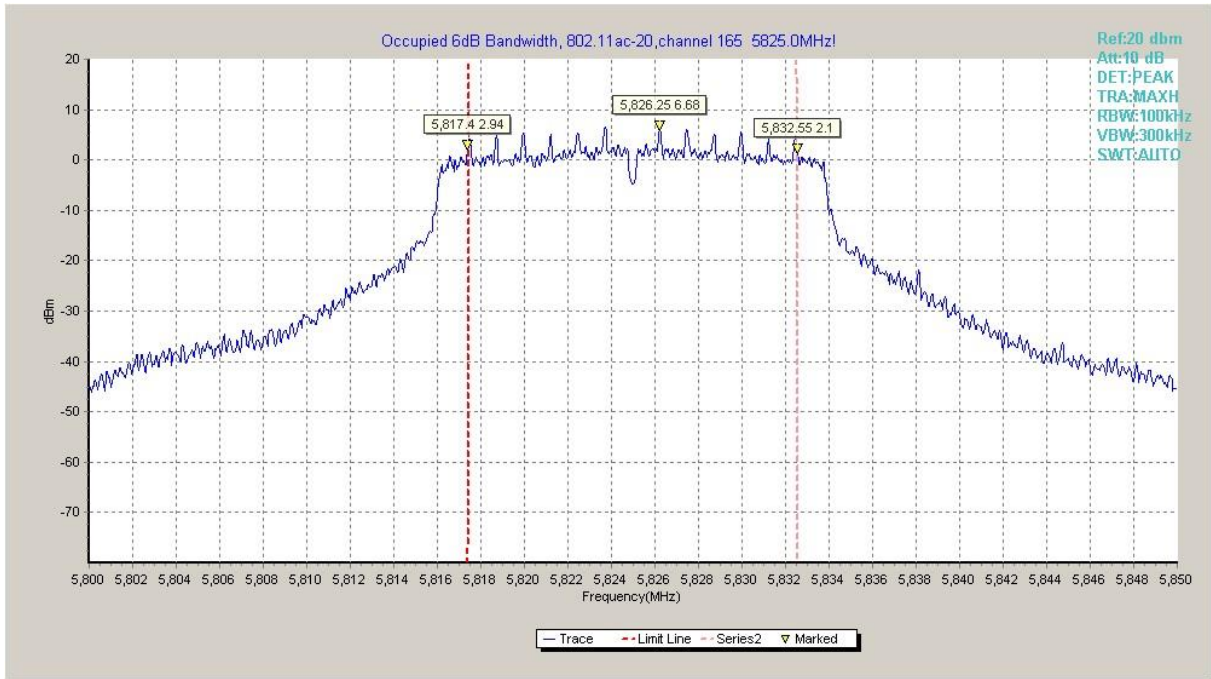


**Fig. 7 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 149)**

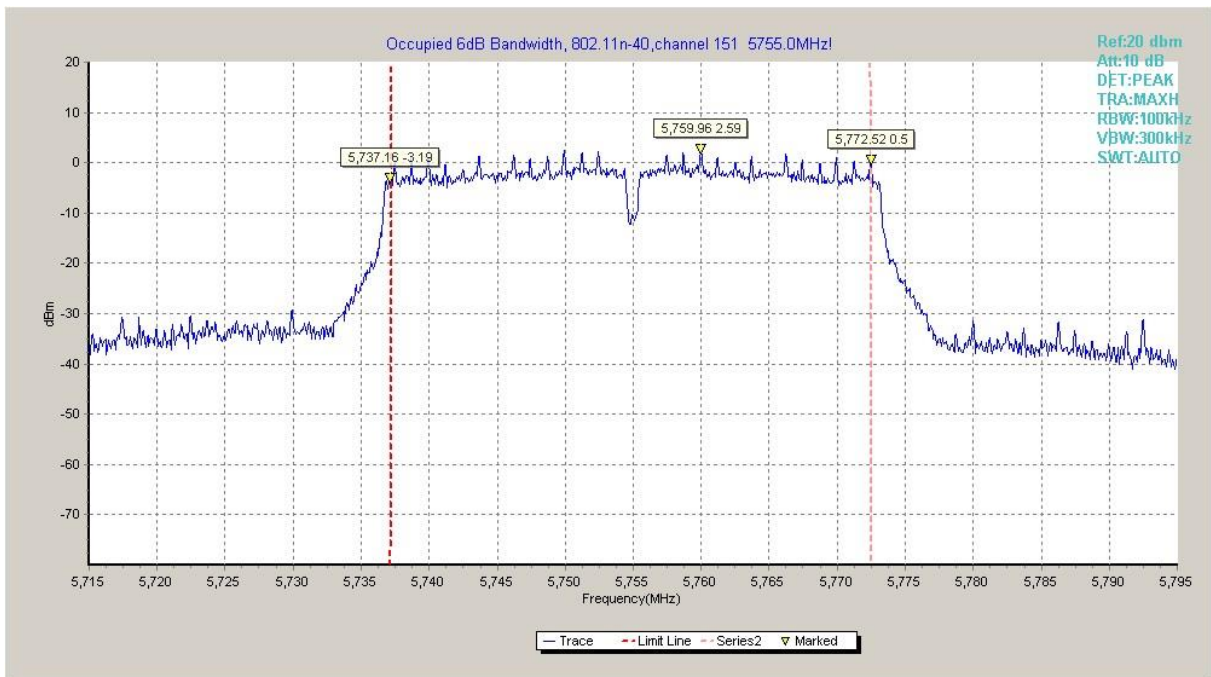


**Fig. 8 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 157)**





**Fig. 9 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 165)**



**Fig. 10 Occupied 6dB Bandwidth (802.11n-HT40, Ch 151)**

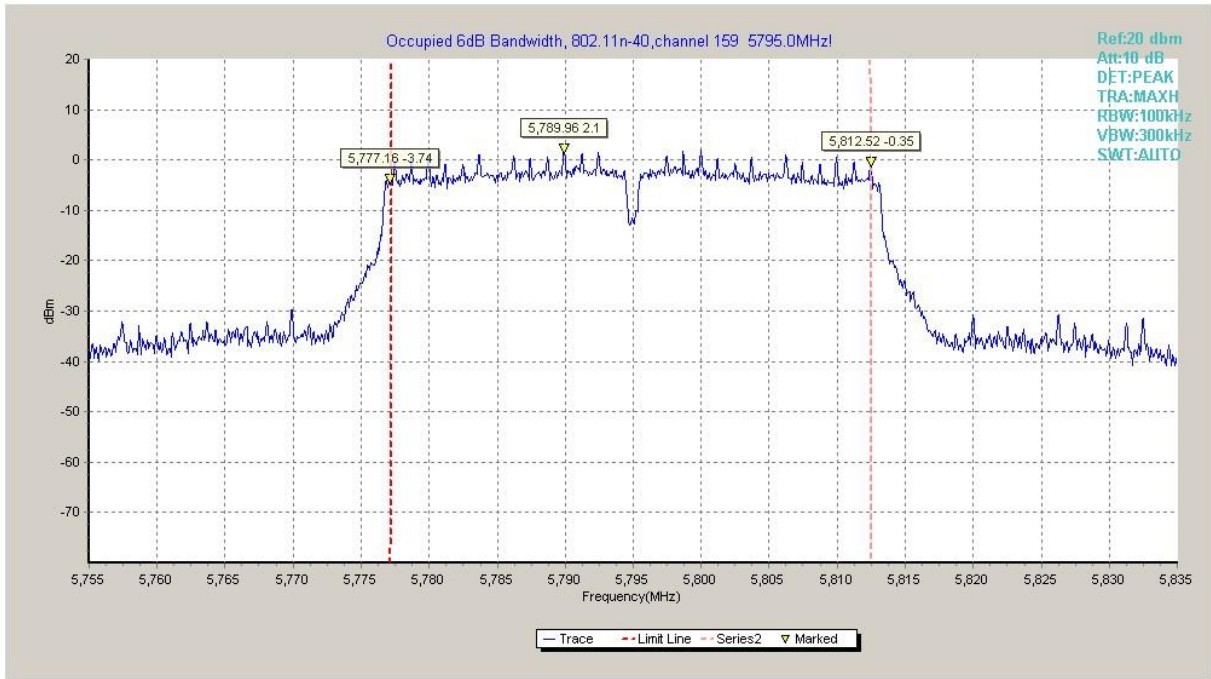


Fig. 11 Occupied 6dB Bandwidth (802.11n-HT40, Ch 159)

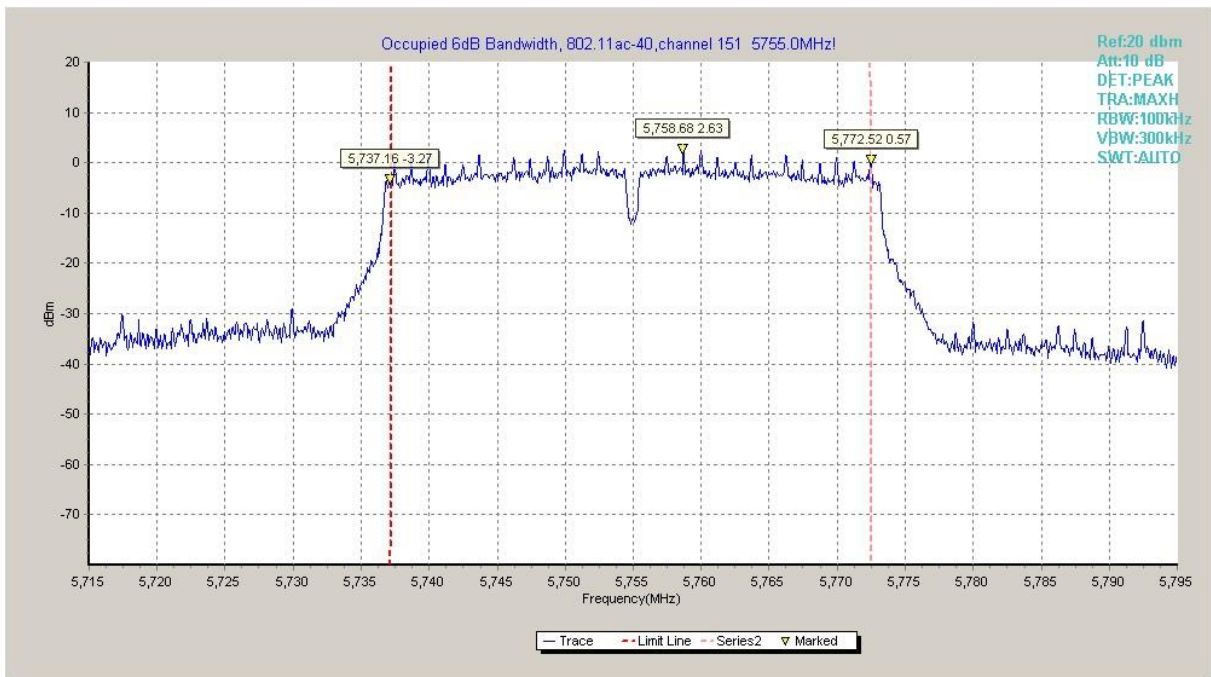
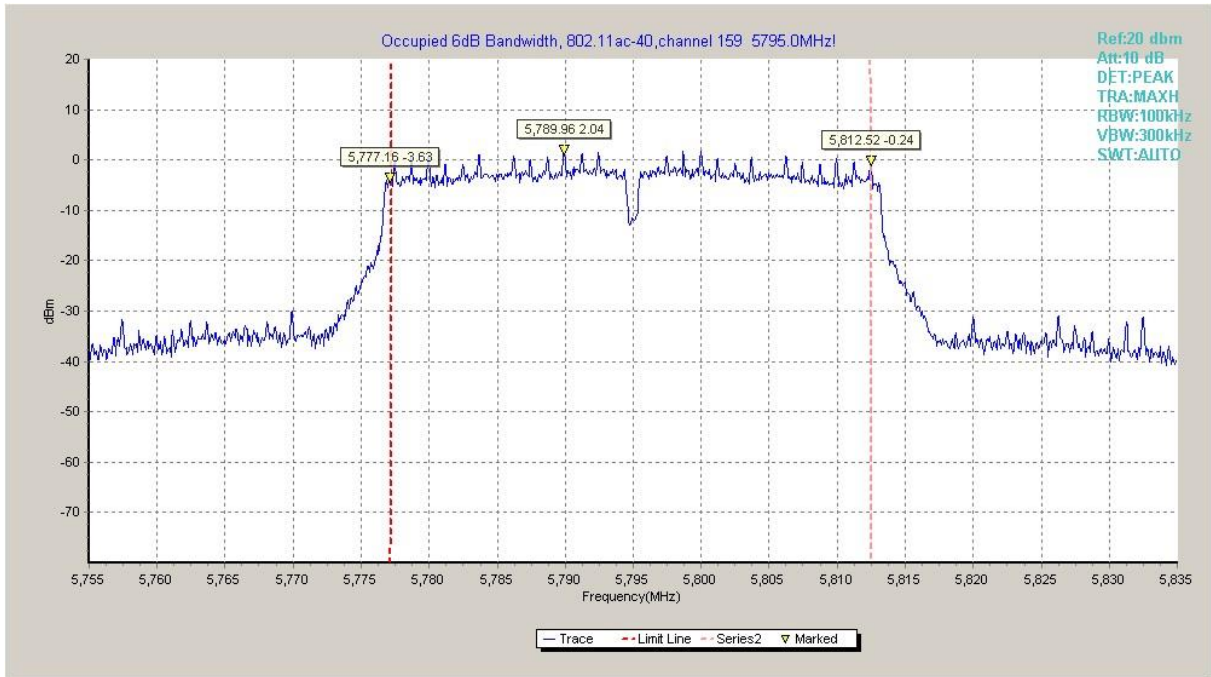
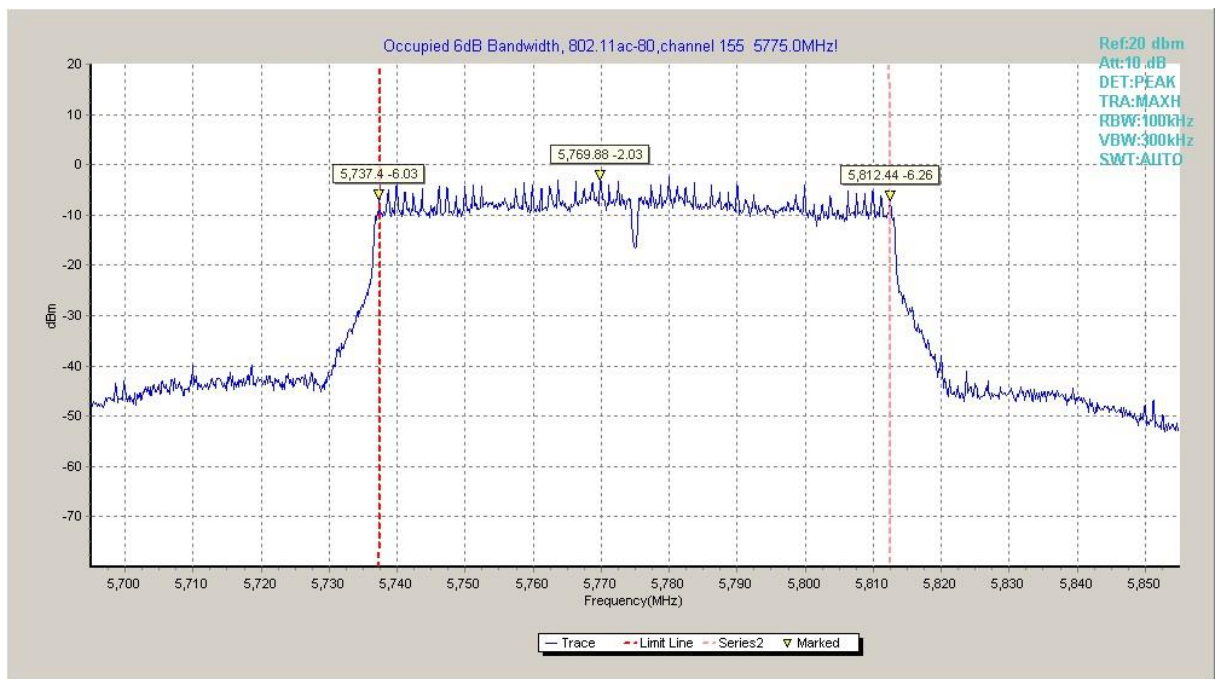


Fig. 12 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 151)



**Fig. 13 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 159)**



**Fig. 14 Occupied 6dB Bandwidth (802.11ac-HT80, Ch 155)**

## A.5. Transmitter Spurious Emission

### Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC 47 CFR Part 15.407	5725MHz~5850MHz	< -27

The measurement is made according to ANSI C63.10 .

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

### Measurement Uncertainty:

Frequency Range	Uncertainty(dB)
30MHz ≤ f ≤ 2GHz	0.63
2GHz ≤ f ≤ 3.6GHz	0.82
3.6GHz ≤ f ≤ 8GHz	1.55
8GHz ≤ f ≤ 20GHz	1.86
20GHz ≤ f ≤ 22GHz	1.90
22GHz ≤ f ≤ 26GHz	2.20

### Transmitter Spurious Emission - Radiated

#### Measurement Limit:

Standard	Frequency (MHz)	Limit (dBm/MHz)
FCC 47 CFR Part 15.407	5725MHz~5850MHz	< -27

The measurement is made according to ANSI C63.10.

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Limit in restricted band:

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBμV/m)	Measurement distance(m)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

#### Measurement Results:

**Note:**A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

#### Average Results:

**802.11a**  
 Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.000	36.9	-32.8	34.8	34.97	48.2	11.3	H	155	138
5651.200	36.9	-32.8	34.8	35.00	49.1	12.1	H	155	3
11795.450	37.2	-29.4	38.7	27.79	48.3	11.1	H	155	28
16059.600	42.4	-23.5	40.9	25.04	48.3	5.9	H	155	48
17819.600	44.2	-22.5	41.3	25.40	48.3	4.1	H	155	92
17922.500	44.7	-22.7	41.3	26.10	48.3	3.6	H	155	249

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Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5691.600	37.2	-32.9	34.8	35.25	48.3	11.1	H	155	4
5850.000	37.7	-32.4	35.0	35.15	48.3	10.6	H	155	28
11819.100	37.1	-29.3	38.8	27.67	48.3	11.2	H	155	48
16062.350	42.3	-23.5	40.9	24.97	48.3	6.0	H	155	108
17835.550	44.2	-22.5	41.3	25.45	48.3	4.1	H	155	138
17930.700	44.7	-22.7	41.3	26.09	48.3	3.6	H	155	92

## Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.400	36.9	-32.2	35.1	34.03	48.6	11.7	H	155	27
5924.800	36.9	-32.2	35.1	33.98	48.3	11.5	H	155	48
12340.500	37.5	-27.8	39.0	26.31	48.3	10.8	H	155	28
16125.050	42.4	-23.3	41.0	24.76	48.3	5.9	H	155	68
17848.200	44.2	-22.5	41.3	25.46	48.3	4.1	H	155	4
17962.050	44.6	-22.7	41.3	26.04	48.3	3.7	H	155	28

**802.11n-HT20**

## Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.000	36.9	-32.8	34.8	35.00	48.2	11.3	H	155	28
5650.800	37.0	-32.8	34.8	35.03	48.8	11.8	H	155	48
12359.750	37.5	-27.9	39.0	26.43	48.3	10.8	H	155	82
16141.550	42.5	-23.3	41.0	24.79	48.3	5.8	H	155	3
17752.500	44.3	-22.3	41.3	25.37	48.3	4.0	H	155	25
17929.050	44.6	-22.7	41.3	26.03	48.3	3.7	H	155	115



## Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5693.200	34.2	-32.9	34.8	32.27	48.3	14.1	H	155	48
5858.400	33.2	-32.4	35.0	30.57	48.3	15.1	H	155	5
12372.400	37.5	-28.0	39.0	26.48	48.3	10.8	H	155	28
16151.550	42.4	-23.3	41.0	24.75	48.3	5.9	H	155	138
17799.250	44.1	-22.4	41.3	25.29	48.3	4.2	H	155	108
17951.600	44.6	-22.7	41.3	26.02	48.3	3.7	H	155	248

## Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.400	36.9	-32.2	35.1	34.02	48.6	11.7	H	155	46
5924.800	36.9	-32.2	35.1	33.99	48.3	11.5	H	155	28
12372.950	37.6	-28.0	39.0	26.59	48.3	10.7	H	155	97
16145.950	42.4	-23.3	41.0	24.77	48.3	5.9	H	155	3
17774.500	44.2	-22.4	41.3	25.26	48.3	4.1	H	155	38
17914.200	44.7	-22.6	41.3	26.02	48.3	3.6	H	155	357

**802.11n-HT40**

## Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.000	40.9	-32.8	34.8	38.95	48.2	7.3	H	155	80
5650.800	41.5	-32.8	34.8	39.55	48.8	7.3	H	155	102
12371.300	37.5	-28.0	39.0	26.48	48.3	10.8	H	155	118
16129.450	42.4	-23.3	41.0	24.77	48.3	5.9	H	155	0
17809.150	44.2	-22.4	41.3	25.34	48.3	4.1	H	155	18
17986.800	44.8	-22.8	41.3	26.28	48.3	3.5	H	155	340

## Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5925.000	41.2	-32.2	35.1	38.30	48.2	7.0	H	155	48
5924.400	41.6	-32.2	35.1	38.72	48.6	7.0	H	155	94
12648.500	37.3	-28.0	39.1	26.30	48.3	11.0	H	155	249
16143.200	42.5	-23.3	41.0	24.84	48.3	5.8	H	155	273
17870.200	44.3	-22.6	41.3	25.61	48.3	4.0	H	155	1
17979.100	44.7	-22.8	41.3	26.19	48.3	3.6	H	155	17

**802.11ac-HT20**

## Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.000	36.5	-32.8	34.8	34.56	48.2	11.7	H	155	25
5650.800	36.7	-32.8	34.8	34.74	48.8	12.1	H	155	48
12372.400	37.6	-28.0	39.0	26.62	48.3	10.7	H	155	295
16148.150	42.3	-23.3	41.0	24.65	48.3	6.0	H	155	94
17840.500	44.3	-22.5	41.3	25.51	48.3	4.0	H	155	275
17946.100	44.6	-22.7	41.3	26.02	48.3	3.7	H	155	3

## Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5745.200	40.9	-32.9	34.9	38.90	48.3	7.4	H	155	48
5821.200	41.0	-32.6	35.0	38.62	48.3	7.3	H	155	69
12430.700	37.5	-28.2	39.0	26.75	48.3	10.8	H	155	0
16082.150	42.4	-23.5	40.9	24.93	48.3	5.9	H	155	82
17830.050	44.3	-22.5	41.3	25.54	48.3	4.0	H	155	267
17923.000	44.7	-22.7	41.3	26.09	48.3	3.6	H	155	358

## Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.400	36.5	-32.2	35.1	33.62	48.6	12.1	H	155	65
5925.000	36.1	-32.2	35.1	33.22	48.2	12.1	H	155	85
12353.700	37.4	-27.9	39.0	26.29	48.3	10.9	H	155	136
16822.500	42.4	-23.0	41.6	23.79	48.3	5.9	H	155	0
17784.400	44.2	-22.4	41.3	25.33	48.3	4.1	H	155	40
17929.050	44.6	-22.7	41.3	25.98	48.3	3.7	H	155	15

**802.11ac-HT40**

## Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.000	41.5	-32.8	34.8	39.52	48.2	6.7	H	155	46
5650.400	42.1	-32.8	34.8	40.16	48.5	6.4	H	155	28
12372.950	37.5	-28.0	39.0	26.49	48.3	10.8	H	155	97
16143.200	42.5	-23.3	41.0	24.80	48.3	5.8	H	155	3
17780.000	44.3	-22.4	41.3	25.43	48.3	4.0	H	155	38
17913.100	44.7	-22.6	41.3	26.02	48.3	3.6	H	155	357

## Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5925.000	40.6	-32.2	35.1	37.66	48.2	7.6	H	155	25
5924.400	41.1	-32.2	35.1	38.21	48.6	7.5	H	155	48
12677.650	37.3	-27.9	39.1	26.22	48.3	11.0	H	155	295
16142.650	42.4	-23.3	41.0	24.77	48.3	5.9	H	155	94
17755.800	44.3	-22.3	41.3	25.31	48.3	4.0	H	155	275
17935.650	44.5	-22.7	41.3	25.95	48.3	3.8	H	155	3

**802.11ac-HT80**

## Ch155\_L

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.000	41.5	-32.8	34.8	39.53	48.3	6.8	H	155	20
5651.200	41.4	-32.8	34.8	39.48	48.3	6.9	H	155	48
11810.300	33.9	-29.3	38.8	24.47	54.0	20.1	H	155	26
12677.100	34.2	-27.9	39.1	23.07	54.0	19.8	H	155	80
16147.600	37.2	-23.3	41.0	19.52	54.0	16.8	H	155	2
17912.000	39.0	-22.6	41.3	20.34	54.0	15.0	H	155	72

## Ch155\_R

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.000	41.2	-32.2	35.1	38.29	48.3	7.1	H	155	20
5924.800	41.2	-32.2	35.1	38.30	48.3	7.1	H	155	248
11810.300	33.9	-29.3	38.8	24.47	54.0	20.1	H	155	26
12677.100	34.2	-27.9	39.1	23.07	54.0	19.8	H	155	80
16147.600	37.2	-23.3	41.0	19.52	54.0	16.8	H	155	2
17912.000	39.0	-22.6	41.3	20.34	54.0	15.0	H	155	72

**Peak Results:**
**802.11a**

## Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.989	52.2	-32.8	34.8	50.30	68.9	16.7	H	155	132
5652.116	51.7	-32.8	34.8	49.72	69.8	18.1	H	155	0
10125.100	48.1	-30.2	37.3	40.98	68.3	20.2	H	155	22
13607.700	51.8	-27.3	38.9	40.14	68.3	16.5	V	155	44
14691.200	54.3	-25.1	39.7	39.66	68.3	14.0	H	155	88

17069.950	57.4	-23.0	41.6	38.80	68.3	10.9	V	155	246
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**Ch157**

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5676.000	50.0	-32.8	34.8	48.07	68.3	18.3	H	155	0
5852.800	50.6	-32.4	35.0	48.03	68.3	17.7	H	155	22
12943.850	50.3	-28.4	39.2	39.54	68.3	18.0	H	155	44
13648.400	52.1	-27.1	38.9	40.30	68.3	16.2	H	155	110
14611.450	53.9	-25.2	39.6	39.44	68.3	14.4	H	155	132
17517.650	57.5	-22.8	41.2	39.05	68.3	10.8	V	155	88

**Ch165**

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.701	49.8	-32.2	35.1	46.95	69.2	19.3	H	155	22
5924.713	49.5	-32.2	35.1	46.62	68.4	18.9	H	155	44
12888.300	50.0	-28.5	39.2	39.32	68.3	18.3	H	155	22
13086.850	50.1	-28.5	39.1	39.49	68.3	18.2	V	155	66
15137.800	54.2	-24.7	39.9	39.05	68.3	14.1	H	155	0
16950.600	56.8	-23.0	41.7	38.11	68.3	11.5	H	155	22

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**Ch149**

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.391	51.7	-32.8	34.8	49.79	68.5	16.8	H	155	22
5651.185	53.2	-32.8	34.8	51.23	69.1	15.9	H	155	44
12953.200	50.2	-28.4	39.2	39.48	68.3	18.1	H	155	88
13156.700	50.5	-28.3	39.1	39.69	68.3	17.8	H	155	0
14680.200	53.8	-25.1	39.7	39.24	68.3	14.5	H	155	22
16920.350	57.0	-23.0	41.7	38.40	68.3	11.3	V	155	110

**Ch157**

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5639.400	47.2	-32.8	34.8	45.26	68.3	21.1	H	155	44
5860.400	46.4	-32.4	35.0	43.80	68.3	21.9	H	155	0
12589.150	49.7	-28.2	39.0	38.89	68.3	18.6	V	155	22
14053.750	51.5	-25.4	39.1	37.88	68.3	16.8	H	155	132
14807.250	54.5	-25.0	39.7	39.83	68.3	13.8	H	155	110
17006.700	57.4	-23.0	41.7	38.68	68.3	10.9	V	155	352

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Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.804	50.1	-32.2	35.1	47.22	69.1	19.0	H	155	44
5924.701	50.9	-32.2	35.1	48.01	68.4	17.5	H	155	22
12947.150	49.5	-28.4	39.2	38.77	68.3	18.8	H	155	88
13128.100	50.5	-28.4	39.1	39.73	68.3	17.8	V	155	0
14735.200	53.8	-25.0	39.7	39.07	68.3	14.5	H	155	44
17221.750	56.6	-22.9	41.5	38.02	68.3	11.7	V	155	352

**802.11n-HT40**

## Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.644	56.7	-32.8	34.8	54.80	68.7	11.9	H	155	88
5651.104	55.6	-32.8	34.8	53.70	69.0	13.4	H	155	110
12957.600	51.4	-28.4	39.2	40.63	68.3	16.9	V	155	44
14742.350	53.5	-25.0	39.7	38.81	68.3	14.8	V	155	0
16759.200	57.2	-23.0	41.6	38.66	68.3	11.1	H	155	22
17093.600	56.9	-23.0	41.6	38.35	68.3	11.4	V	155	352

## Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.149	54.8	-32.2	35.1	51.95	68.8	14.0	H	155	44
5924.816	55.6	-32.2	35.1	52.68	68.3	12.7	H	155	88
13150.650	50.3	-28.3	39.1	39.54	68.3	18.0	H	155	242
13779.850	51.7	-26.6	39.0	39.41	68.3	16.6	V	155	264
14745.100	53.4	-25.0	39.7	38.72	68.3	14.9	H	155	0
16907.700	57.4	-23.0	41.6	38.77	68.3	10.9	H	155	22

**802.11ac-HT20**

## Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.771	52.3	-32.8	34.8	50.33	68.8	16.5	H	155	22
5651.668	53.5	-32.8	34.8	51.58	69.4	15.9	H	155	44
13041.200	50.4	-28.5	39.2	39.66	68.3	17.9	V	155	284
14275.400	51.9	-25.4	39.3	38.02	68.3	16.4	H	155	88
14739.600	54.0	-25.0	39.7	39.28	68.3	14.3	H	155	264
16931.350	56.9	-23.0	41.7	38.22	68.3	11.4	V	155	0

## Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5728.000	57.9	-33.0	34.9	56.02	68.3	10.4	H	155	44
5848.000	55.7	-32.4	35.0	53.12	68.3	12.6	H	155	66
12861.350	51.6	-28.5	39.1	41.00	68.3	16.7	V	155	0
13011.500	50.6	-28.5	39.2	39.88	68.3	17.7	H	155	88
14981.050	53.9	-24.7	39.8	38.78	68.3	14.4	V	155	264
17601.800	57.4	-22.2	41.2	38.41	68.3	10.9	V	155	352

## Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.080	46.0	-32.2	35.1	43.09	69.6	23.6	H	155	66
5925.000	45.4	-32.2	35.1	42.50	68.2	22.8	H	155	88
12909.200	50.8	-28.5	39.2	40.08	68.3	17.5	H	155	132
13602.200	50.8	-27.3	38.9	39.23	68.3	17.5	H	155	0
14737.950	54.1	-25.0	39.7	39.38	68.3	14.2	V	155	44
17239.900	57.3	-22.8	41.5	38.66	68.3	11.0	H	155	22

**802.11ac-HT40**

## Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.667	55.9	-32.8	34.8	53.97	68.7	12.8	H	155	44
5651.898	56.2	-32.8	34.8	54.25	69.6	13.4	H	155	22
13092.350	51.1	-28.5	39.1	40.47	68.3	17.2	H	155	88
14671.400	53.9	-25.1	39.7	39.36	68.3	14.4	V	155	0
17039.150	57.0	-23.0	41.7	38.32	68.3	11.3	H	155	44
17388.400	57.2	-23.0	41.3	38.95	68.3	11.1	V	155	352

## Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.368	55.4	-32.2	35.1	52.53	68.7	13.2	H	155	22
5924.793	54.6	-32.2	35.1	51.68	68.4	13.8	H	155	44
12835.500	51.0	-28.6	39.1	40.41	68.3	17.3	V	155	284
13034.600	50.1	-28.5	39.2	39.36	68.3	18.2	H	155	88
14747.850	54.1	-25.0	39.7	39.36	68.3	14.2	H	155	264
17638.650	56.9	-22.0	41.2	37.72	68.3	11.4	V	155	0

**802.11ac-HT80**

## Ch155\_L

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5450.598	54.9	-32.7	34.6	53.01	68.3	13.4	H	155	22
5451.162	55.7	-32.7	34.6	53.85	68.3	12.6	H	155	44
10116.850	47.7	-30.2	37.3	40.61	68.3	20.6	H	155	22
12984.550	50.6	-28.4	39.2	39.81	68.3	17.7	H	155	88
16661.850	56.6	-23.2	41.5	38.29	68.3	11.8	V	155	0
16997.900	56.9	-23.0	41.7	38.24	68.3	11.4	V	155	66

## Ch155\_R

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.149	54.7	-32.2	35.1	51.79	68.3	13.6	H	155	22
5924.655	56.0	-32.2	35.1	53.07	68.3	12.3	H	155	242
10116.850	47.7	-30.2	37.3	40.61	68.3	20.6	H	155	22
12984.550	50.6	-28.4	39.2	39.81	68.3	17.7	H	155	88
16661.850	56.6	-23.2	41.5	38.29	68.3	11.8	V	155	0
16997.900	56.9	-23.0	41.7	38.24	68.3	11.4	V	155	66

**Conclusion: PASS**

## A.6. Band Edges Compliance

### Band Edges - Radiated

#### Measurement Limit:

Standard	Limit (dBm/MHz)	
FCC 47 CFR Part 15.407	at the band edge	27
	at 5 MHz above or below the band edge	15.6
	at 25 MHz above or below the band edge	10
	at 75 MHz or more above or below the band edge	-27
	Note: increasing linearly from point to point.	

The measurement is made according to KDB 789033 D02

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Measurement Result:

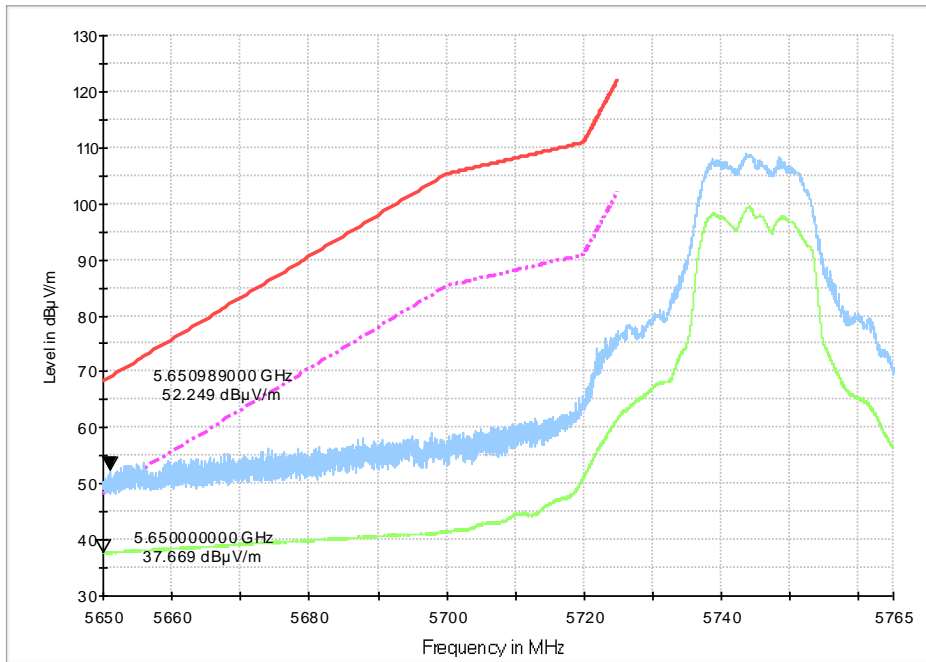
Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.15	P
	5825 MHz	Fig.16	P
802.11n HT20	5745 MHz	Fig.17	P
	5825 MHz	Fig.18	P
802.11ac HT20	5745 MHz	Fig.19	P
	5825 MHz	Fig.20	P
802.11n HT40	5755 MHz	Fig.21	P
	5795 MHz	Fig.22	P
802.11ac HT40	5755 MHz	Fig.23	P
	5795 MHz	Fig.24	P
802.11ac HT80	5775 MHz	Fig.25	P
	5775 MHz	Fig.26	P

**Conclusion: PASS**

**Test graphs as below:**

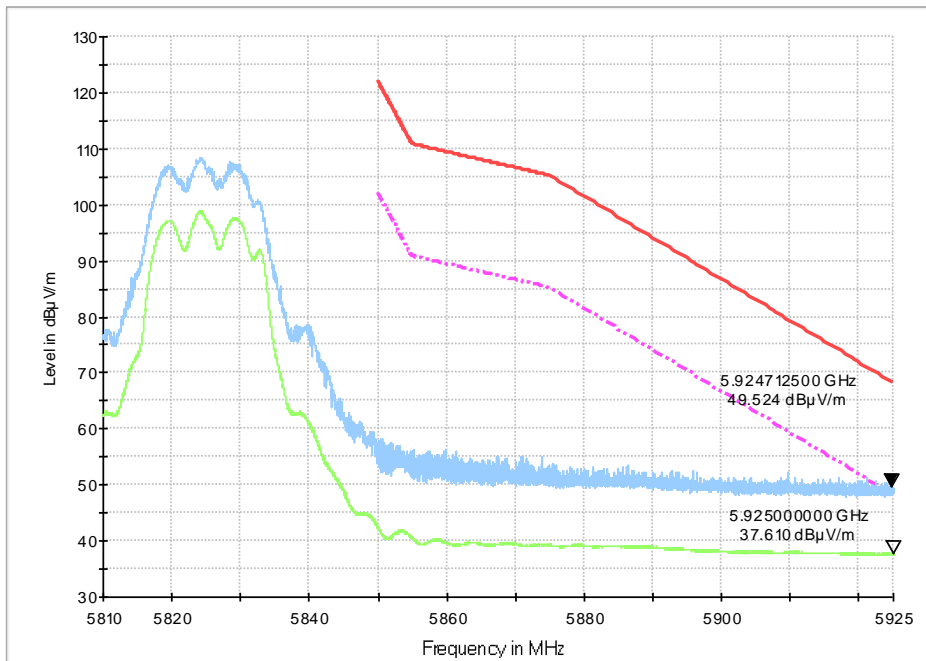


RE - Power-5.650GHz-5.765GHz



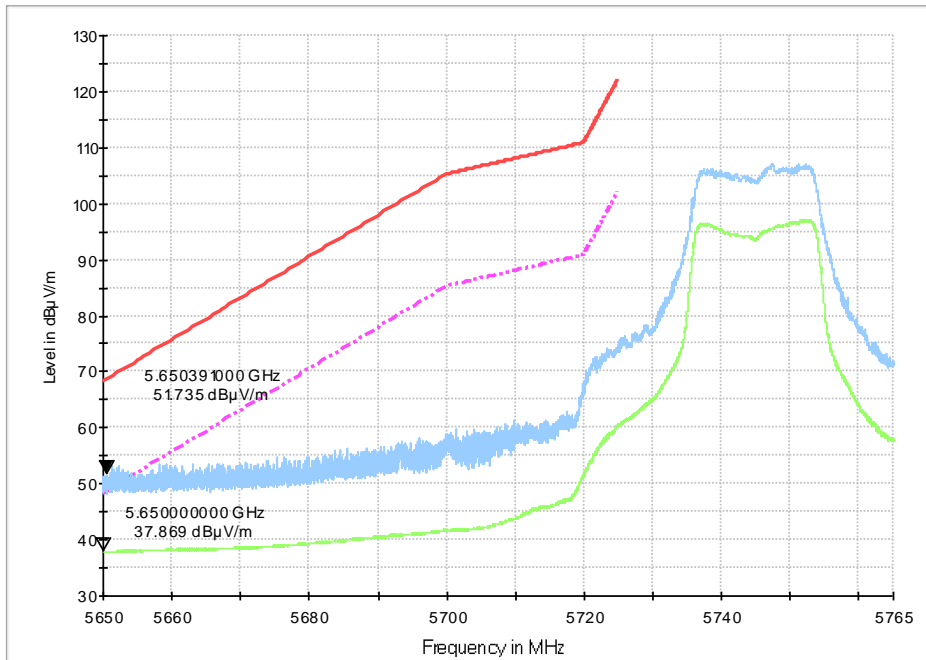
**Fig. 15 Band Edges (802.11a, 5745MHz)**

RE - Power-5.810GHz-5.925GHz



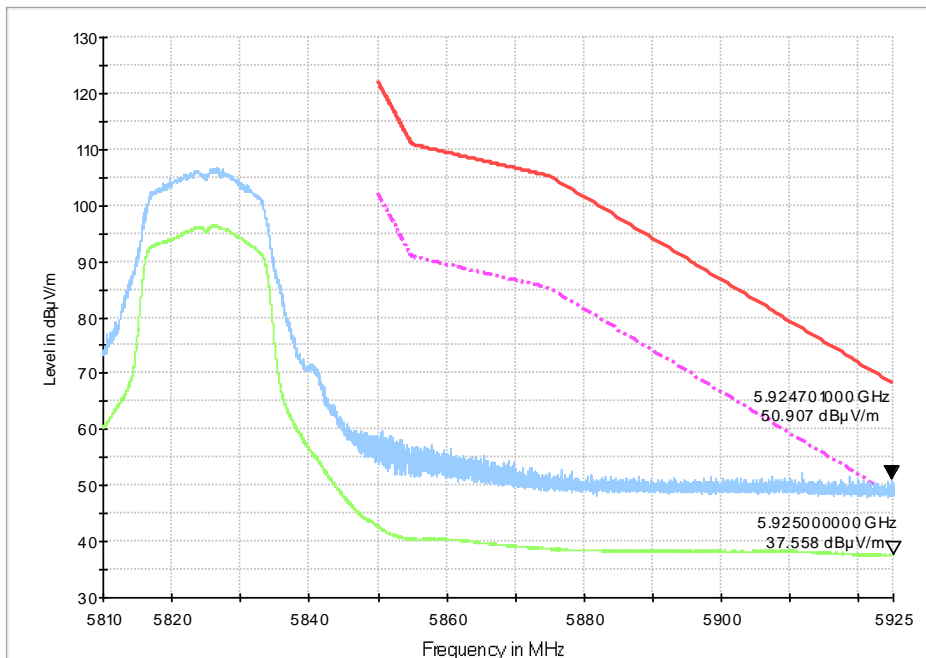
**Fig. 16 Band Edges (802.11a, 5825MHz)**

RE - Power-5.650GHz-5.765GHz



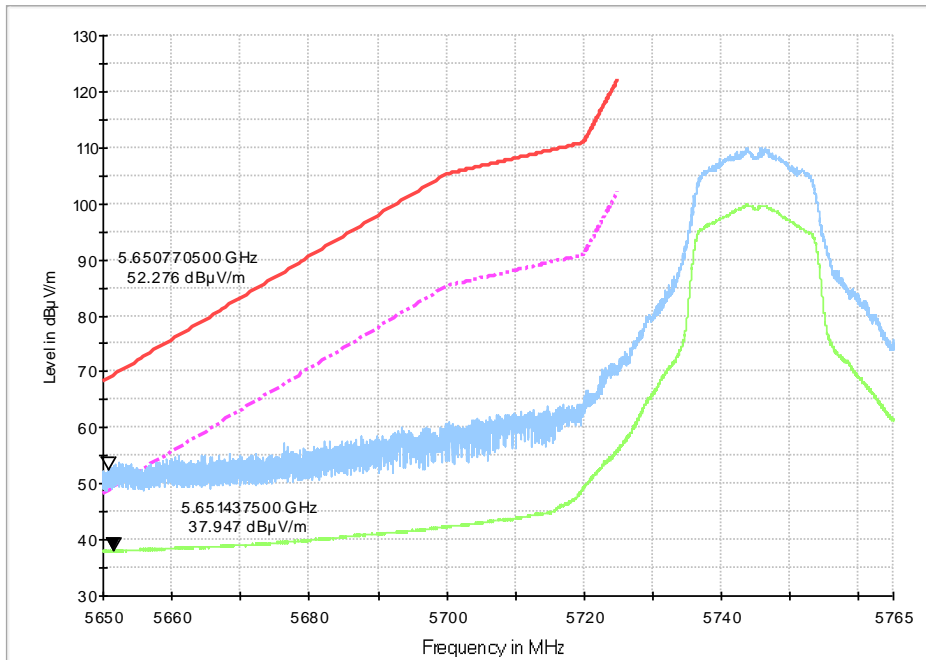
**Fig. 17 Band Edges (802.11n-HT20, 5745MHz)**

RE - Power-5.810GHz-5.925GHz



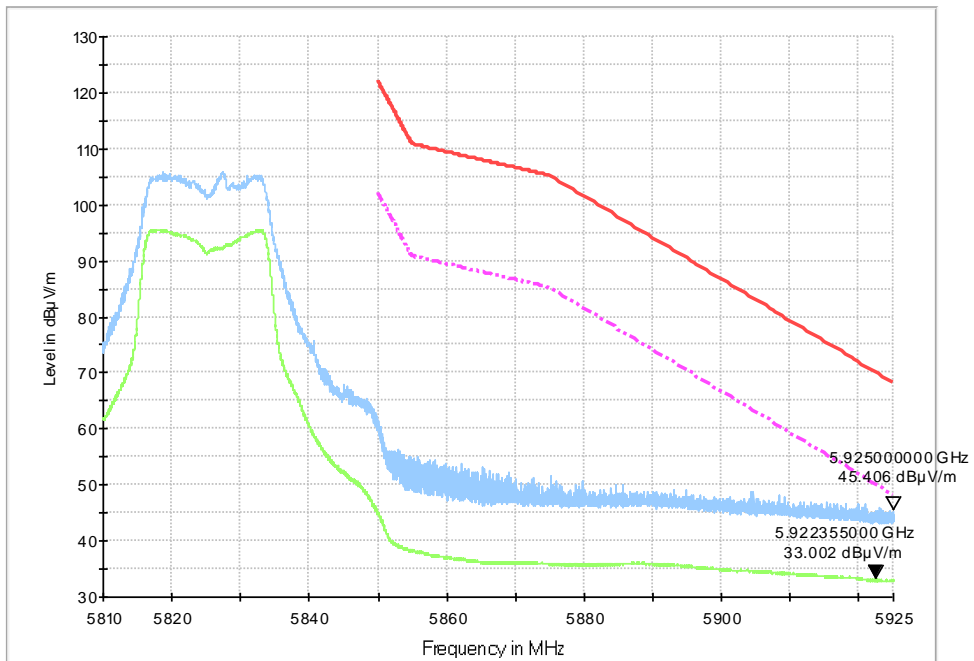
**Fig. 18 Band Edges (802.11n-HT20, 5825MHz)**

RE - Power-5.650GHz-5.765GHz



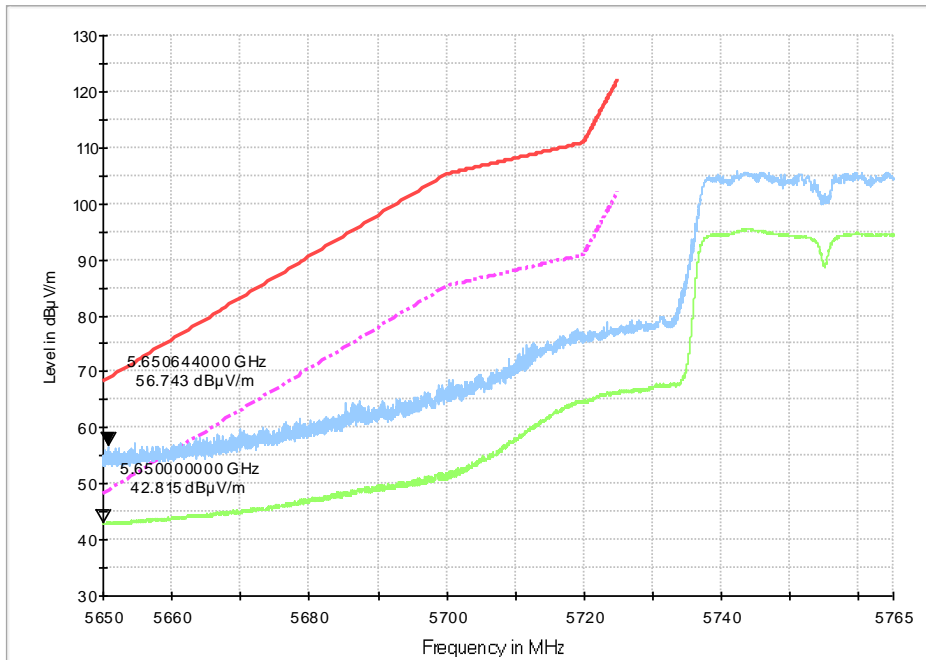
**Fig. 19 Band Edges (802.11ac-HT20, 5745MHz)**

RE - Power-5.810GHz-5.925GHz



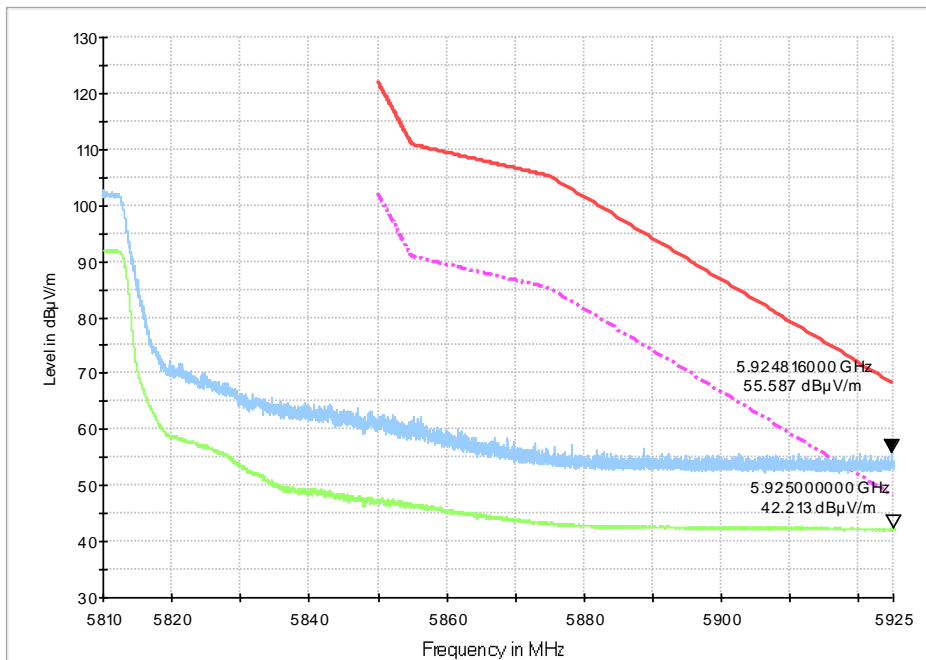
**Fig. 20 Band Edges (802.11ac-HT20, 5825MHz)**

RE - Power-5.650GHz-5.765GHz



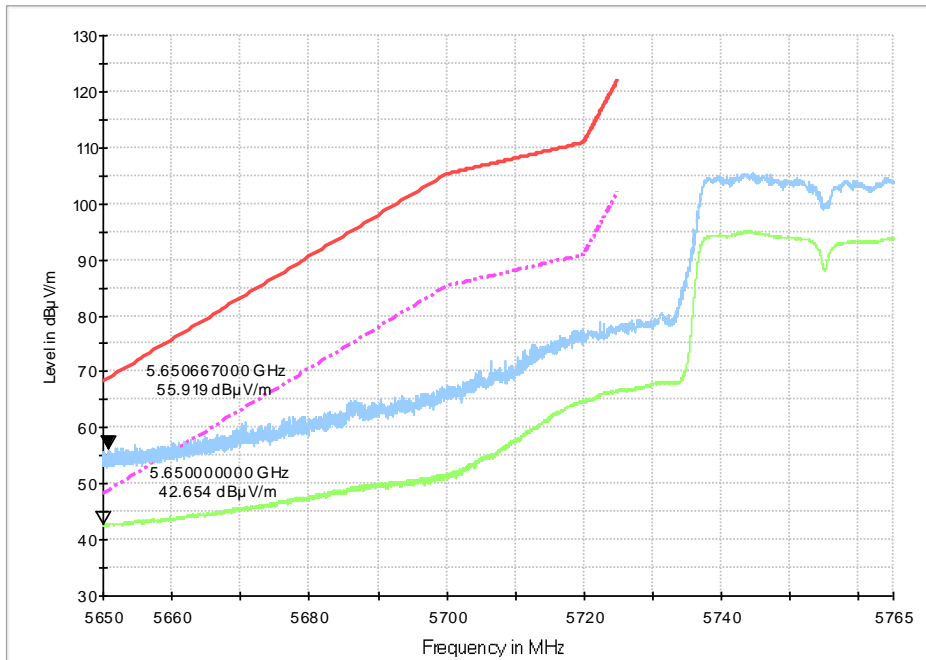
**Fig. 21 Band Edges (802.11n-HT40, 5755MHz)**

RE - Power-5.810GHz-5.925GHz



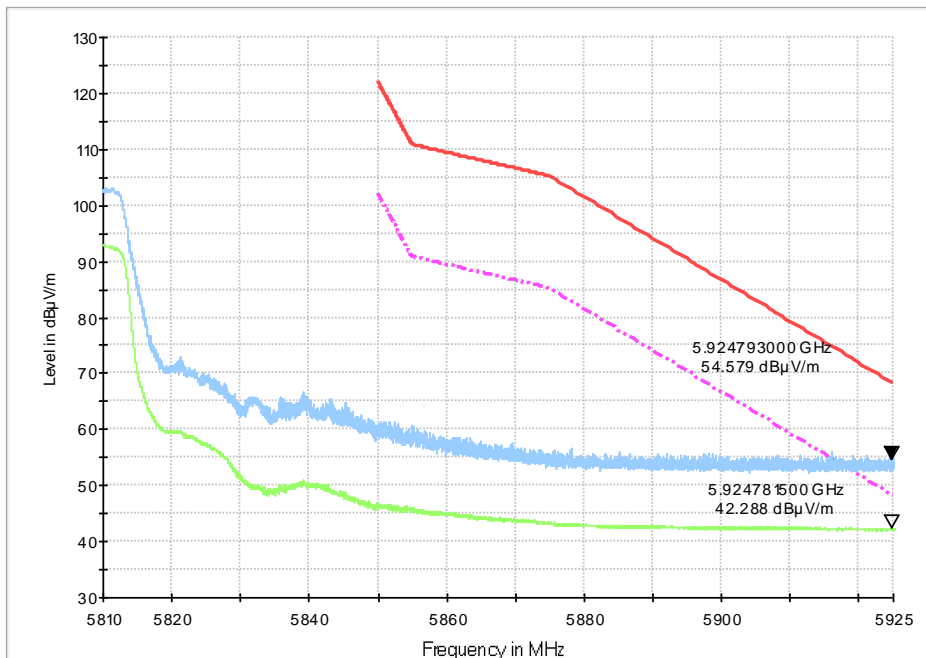
**Fig. 22 Band Edges (802.11n-HT40, 5795MHz)**

RE - Power-5.650GHz-5.765GHz



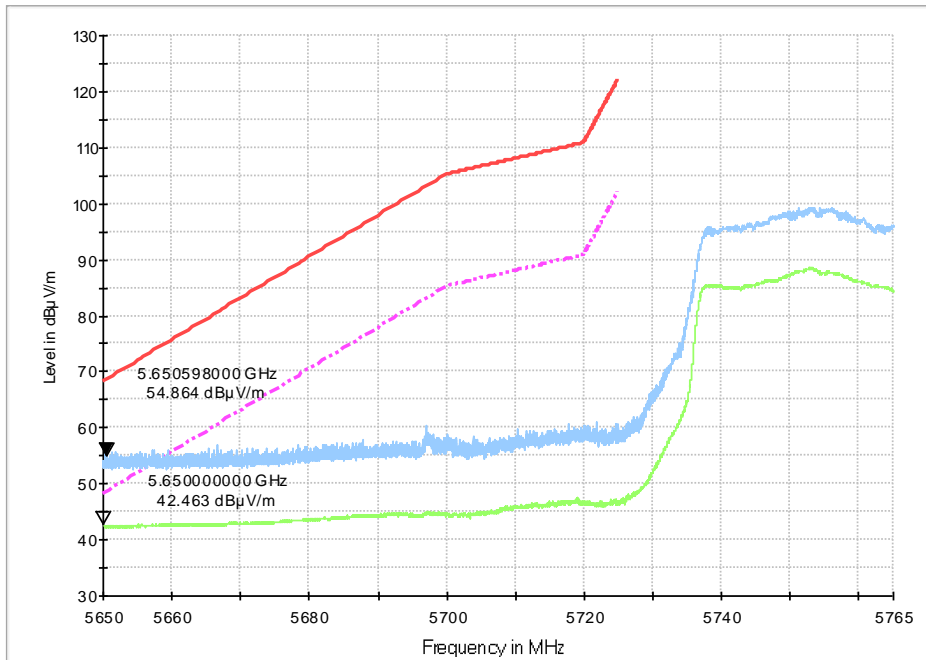
**Fig. 23 Band Edges (802.11ac-HT40, 5755MHz)**

RE - Power-5.810GHz-5.925GHz



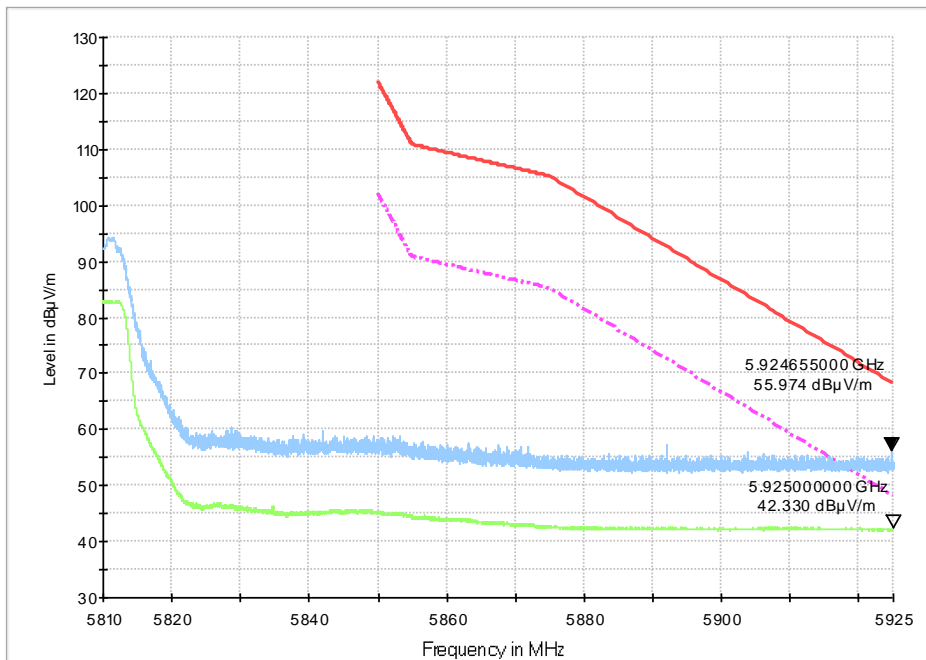
**Fig. 24 Band Edges (802.11ac-HT40, 5795MHz)**

RE - Power-5.650GHz-5.765GHz



**Fig. 25 Band Edges (802.11ac-HT80, 5775MHz)**

RE - Power-5.810GHz-5.925GHz



**Fig. 26 Band Edges (802.11ac-HT80, 5775MHz)**

## A.7. AC Powerline Conducted Emission

### Test Condition:

Voltage (V)	Frequency (Hz)
110	60

### Measurement uncertainty:

Expanded measurement uncertainty for this test item is  $U = 3.2\text{dB}$ ,  $k=2$ .

### Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig. 27	Fig. 28	P
0.5 to 5	56			
5 to 30	60			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dB $\mu$ V)	Result (dB $\mu$ V)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.27	Fig.28	P
0.5 to 5	46			
5 to 30	50			

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

The measurement is made according to ANSI C63.10 .

**Conclusion: PASS**

Test graphs as below:

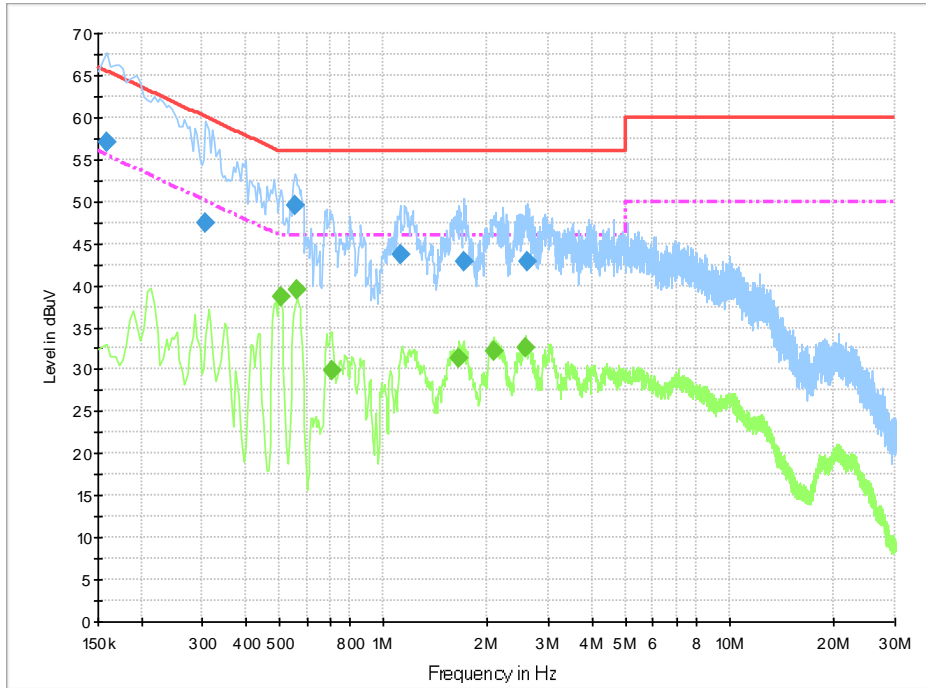


Fig. 27 AC Powerline Conducted Emission-802.11a

### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.159000	57.1	10000.0	9.000	On	L1	20.1	8.4	65.5	
0.307500	47.3	10000.0	9.000	On	L1	19.9	12.7	60.0	
0.555000	49.6	10000.0	9.000	On	L1	19.8	6.4	56.0	
1.117500	43.8	10000.0	9.000	On	L1	19.7	12.2	56.0	
1.707000	42.8	10000.0	9.000	On	L1	19.7	13.2	56.0	
2.611500	42.9	10000.0	9.000	On	L1	19.6	13.2	56.0	

### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.505500	38.6	10000.0	9.000	On	N	19.8	7.4	46.0	
0.564000	39.5	10000.0	9.000	On	L1	19.8	6.5	46.0	
0.708000	30.0	10000.0	9.000	On	L1	19.7	16.0	46.0	
1.657500	31.4	10000.0	9.000	On	L1	19.7	14.6	46.0	
2.085000	32.1	10000.0	9.000	On	L1	19.7	13.9	46.0	
2.584500	32.6	10000.0	9.000	On	L1	19.6	13.4	46.0	



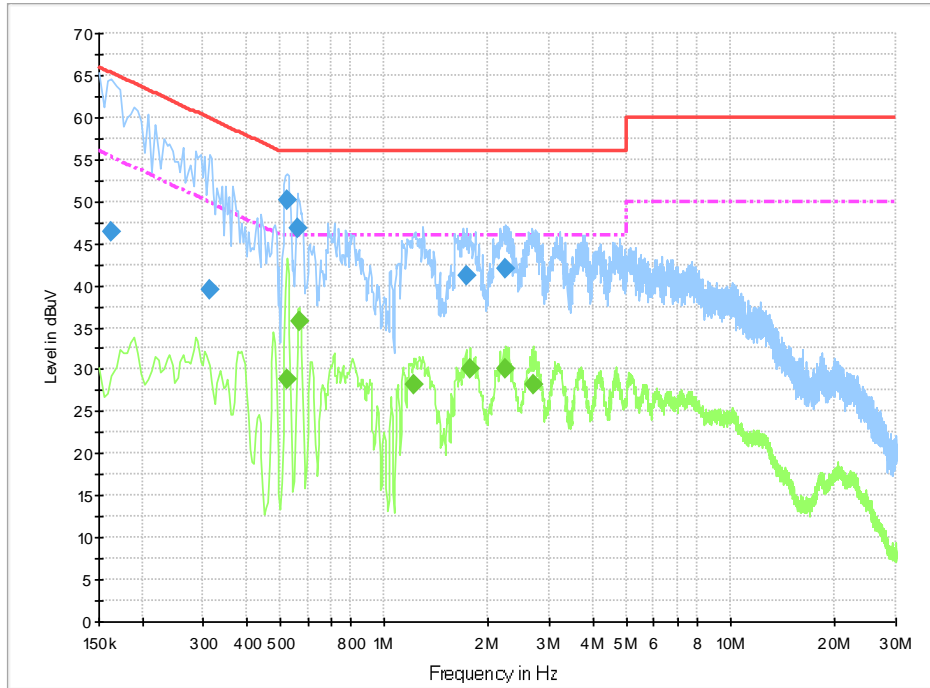


Fig. 28 AC Powerline Conducted Emission-Idle

### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.163500	46.5	10000.0	9.000	On	N	20.1	18.8	65.3	
0.312000	39.6	10000.0	9.000	On	L1	19.9	20.3	59.9	
0.523500	50.1	10000.0	9.000	On	L1	19.8	5.9	56.0	
0.559500	46.9	10000.0	9.000	On	L1	19.8	9.1	56.0	
1.725000	41.1	10000.0	9.000	On	L1	19.7	14.9	56.0	
2.247000	42.0	10000.0	9.000	On	L1	19.5	14.0	56.0	

### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.523500	28.9	10000.0	9.000	On	L1	19.8	17.1	46.0	
0.568500	35.8	10000.0	9.000	On	L1	19.8	10.2	46.0	
1.216500	28.2	10000.0	9.000	On	L1	19.7	17.8	46.0	
1.770000	30.2	10000.0	9.000	On	L1	19.7	15.8	46.0	
2.247000	30.1	10000.0	9.000	On	L1	19.5	15.9	46.0	
2.683500	28.2	10000.0	9.000	On	L1	19.6	17.8	46.0	

## ANNEX B: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p> 	
<hr/> <b>Certificate of Accreditation to ISO/IEC 17025:2005</b> <hr/>	
NVLAP LAB CODE: 600118-0	
<b>Telecommunication Technology Labs, CAICT</b> Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
<b>Electromagnetic Compatibility &amp; Telecommunications</b>	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i>	
<hr/> 2019-09-26 through 2020-09-30 Effective Dates	 For the National Voluntary Laboratory Accreditation Program

\*\*\* END OF REPORT BODY \*\*\*