



FCC PART 15C TEST REPORT No.I20Z61503-IOT03

for

TCL Communication Ltd.

5G NR/ LTE/WCDMA/GSM Mobile Phone

Model name: T781

With

FCC ID: 2ACCJH133

Hardware Version: PIO

Software Version: 1A5A

Issued Date: 2020-11-02

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: ctl_terminals@caict.ac.cn, website: www.caict.ac.cn



REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z61503-IOT03	Rev.0	1st edition	2020-10-26
I20Z61503-IOT03	Rev.1	Update accreditation certificate	2020-11-02

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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 FCC 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

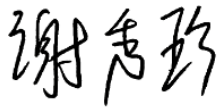
1.3. Testing Environment

Normal Temperature: 15-35°C
Extreme Temperature: -20/+55°C
Relative Humidity: 20-75%

1.4. Project date

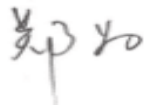
Testing Start Date: 2020-09-28
Testing End Date: 2020-10-26

1.5. Signature




Xie Xiuzhen

(Prepared this test report)



Zheng Wei

(Reviewed this test report)



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	T781
FCC ID	2ACCJH133
WLAN Frequency Band	ISM Band: 5725MHz~5850MHz
Type of modulation	OFDM
Voltage	3.8V

3.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	358008610207418/ 358008610207426	PIO	1A5A
EUT2	358008610207632/ 358008610207640	PIO	1A5A

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	/
AE2	Battery	/
AE6	Charger	/
AE7	Charger	/
AE8	Charger	/
AE13	USB Cable	/
AE14	USB Cable	/

AE1

Model	TLp043E7(CAC4360002C7)
Manufacturer	veken
Capacitance	4500mAh
Nominal voltage	3.85V

AE2

Model	TLp043E1(CAC4360006C1)
Manufacturer	BYD
Capacitance	4500mAh
Nominal voltage	/

AE6

Model	CBA0059BGTC5
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Manufacturer	PUAN
Length of cable	/
AE7	
Model	CBA0059BGTC7
Manufacturer	CHENYANG
Length of cable	/
AE8	
Model	CBA0064BGTC5
Manufacturer	PUAN
Length of cable	/
AE13	
Model	CDA0000128C1
Manufacturer	JUWEI
Length of cable	/
AE14	
Model	CDA0000128C2
Manufacturer	SHENGHUA
Length of cable	/

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

3.4. 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	3.8V
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	2021-09-16
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	2021-10-08
5	Vector Signal Analyzer	FSV40	101047	Rohde & Schwarz	1 year	2021-06-16

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	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.86
$1\text{GHz} \leq f \leq 18\text{GHz}$	5.26
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.28

8.6. AC Power-line Conducted Emission

Measurement Uncertainty : 3.38dB,k=2

ANNEX A: EUT parameters

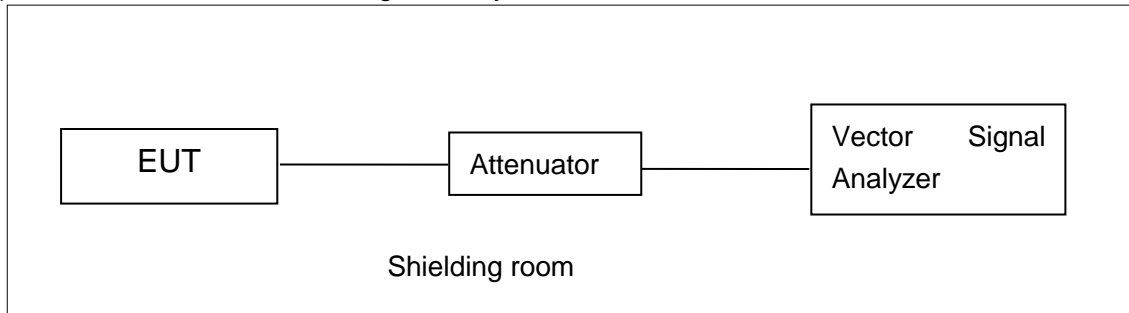
Disclaimer: the antenna gain and the worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX B: MEASUREMENT RESULTS

B.1. Measurement Method

B.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

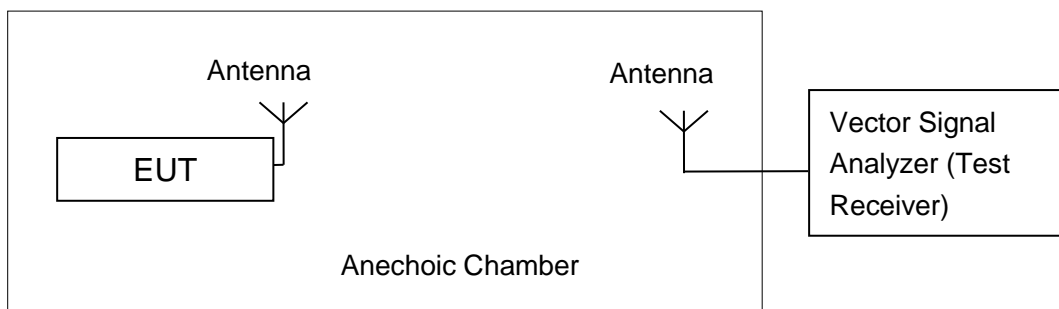


B.1.2. Radiated Emission Measurements

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.

B.2. Maximum Peak Output Power

Measurement Limit and Method:

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

B.2.1 Antenna Gain

Antenna gain is -5.5dBi and the value is supplied by the applicant or manufacturer.

B.2.2. Maximum Average Output Power-Conducted

Measurement Results:

802.11a mode

Mode	Data Rate (Mbps)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11a	6	18.37	17.98	17.18

The data rate 6Mbps is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11n(20MHz)	MCS0	18.22	17.88	17.02

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11ac-HT20 mode

Mode	Data Rate (Index)	Test Result (dBm)		
		5745MHz (Ch149)	5785MHz (Ch157)	5825MHz (Ch165)
802.11ac(20MHz)	MCS0	18.20	17.85	17.03

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11n-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11n(40MHz)	MCS0	18.03	17.49

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11ac-HT40 mode

Mode	Data Rate (Index)	Test Result (dBm)	
		5755MHz (Ch151)	5795MHz (Ch159)
802.11ac(40MHz)	MCS0	18.06	17.52

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

802.11ac-HT80 mode

Mode	Data Rate (Index)	Test Result (dBm)
		5775MHz (Ch155)
802.11ac (80MHz)	MCS0	17.07

The data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

Conclusion: PASS

B.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
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Measurement Results:

Mode	Channel	Power Spectral Density (dBm/500kHz)	Conclusion
802.11a	149	10.90	P
	157	9.85	P
	165	9.51	P
802.11n HT20	149	10.63	P
	157	9.83	P
	165	9.24	P
802.11ac HT20	149	10.70	P
	157	9.78	P
	165	9.51	P
802.11n HT40	151	6.56	P
	159	5.74	P
802.11ac HT40	151	6.53	P
	159	5.88	P
802.11ac HT80	155	3.16	P

Conclusion: PASS

B.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
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Measurement Result:

Mode	Channel	Occupied 6dB Bandwidth (MHz)		conclusion
		Fig.	Value	
802.11a	149	Fig.1	15.55	P
	157	Fig.2	15.55	P
	165	Fig.3	15.55	P
802.11n HT20	149	Fig.4	15.95	P
	157	Fig.5	16.00	P
	165	Fig.6	15.95	P
802.11ac HT20	149	Fig.7	15.95	P
	157	Fig.8	16.50	P
	165	Fig.9	16.00	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	75.20	P

Conclusion: PASS

Test graphs as below:

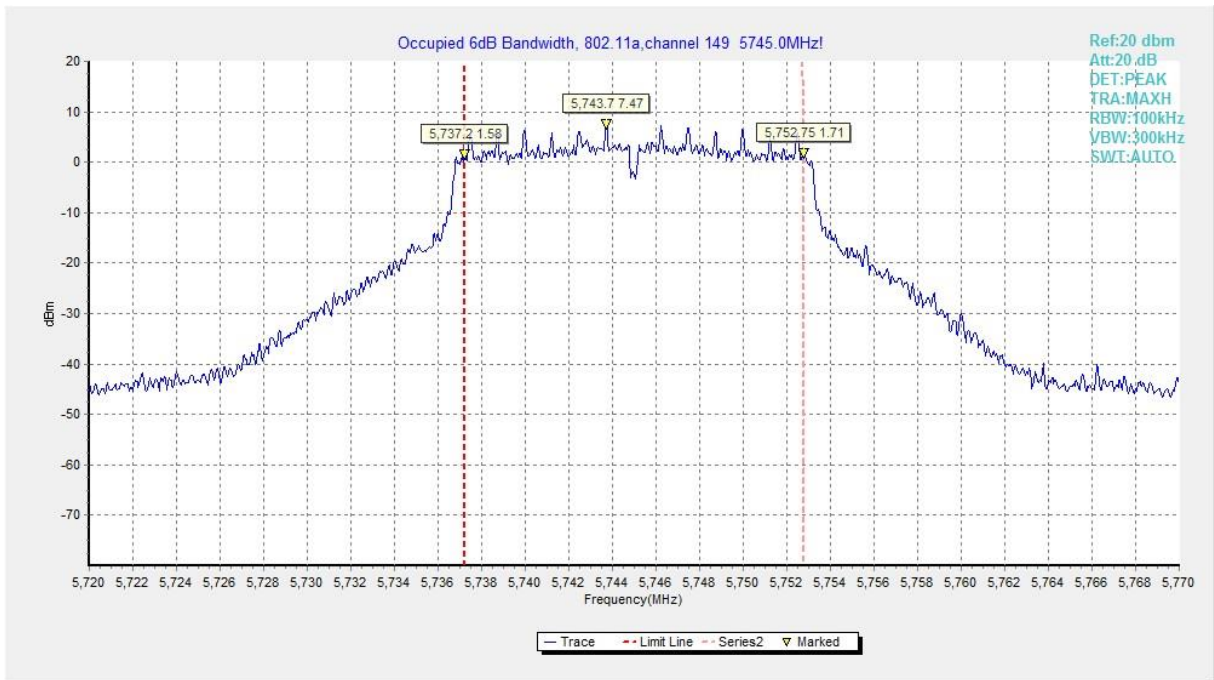


Fig. 1 Occupied 6dB Bandwidth (802.11a, Ch 149)

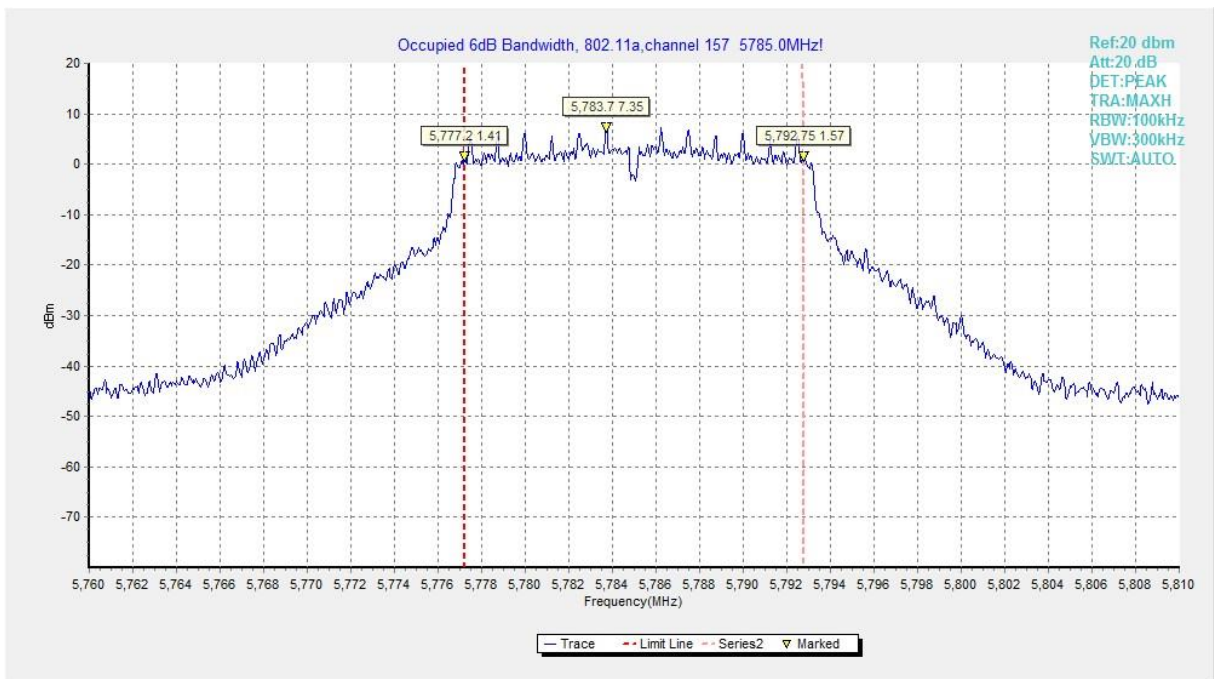


Fig. 2 Occupied 6dB Bandwidth (802.11a, Ch 157)

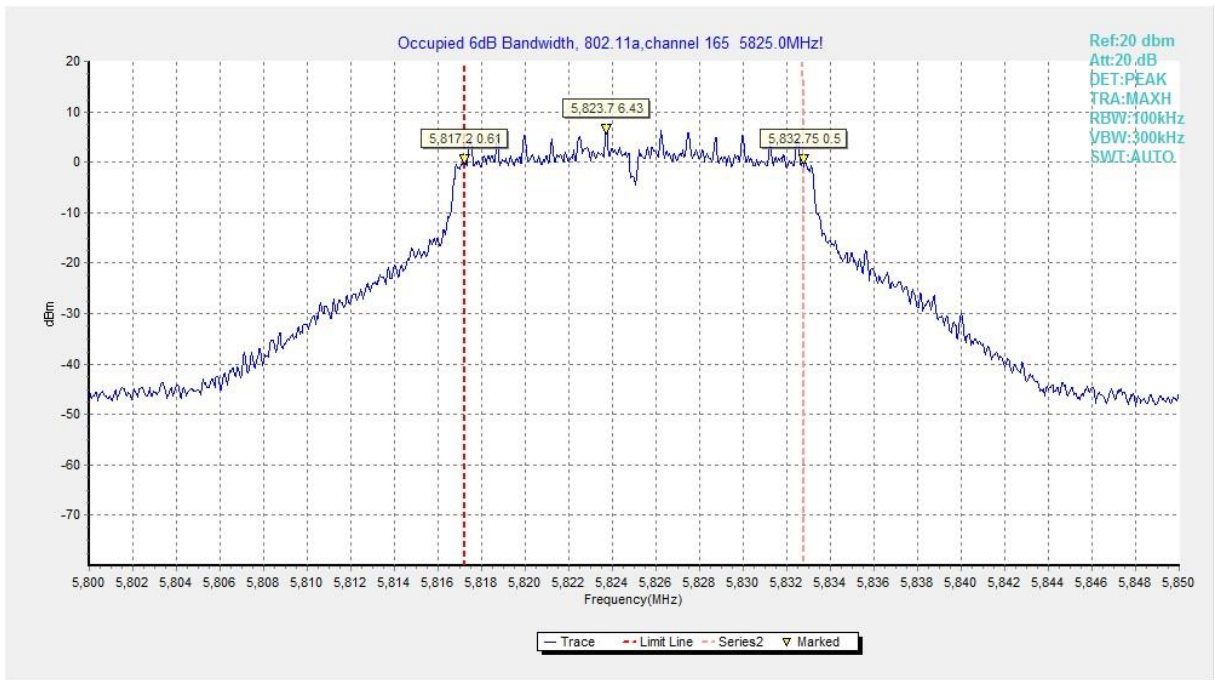


Fig. 3 Occupied 6dB Bandwidth (802.11a, Ch 165)

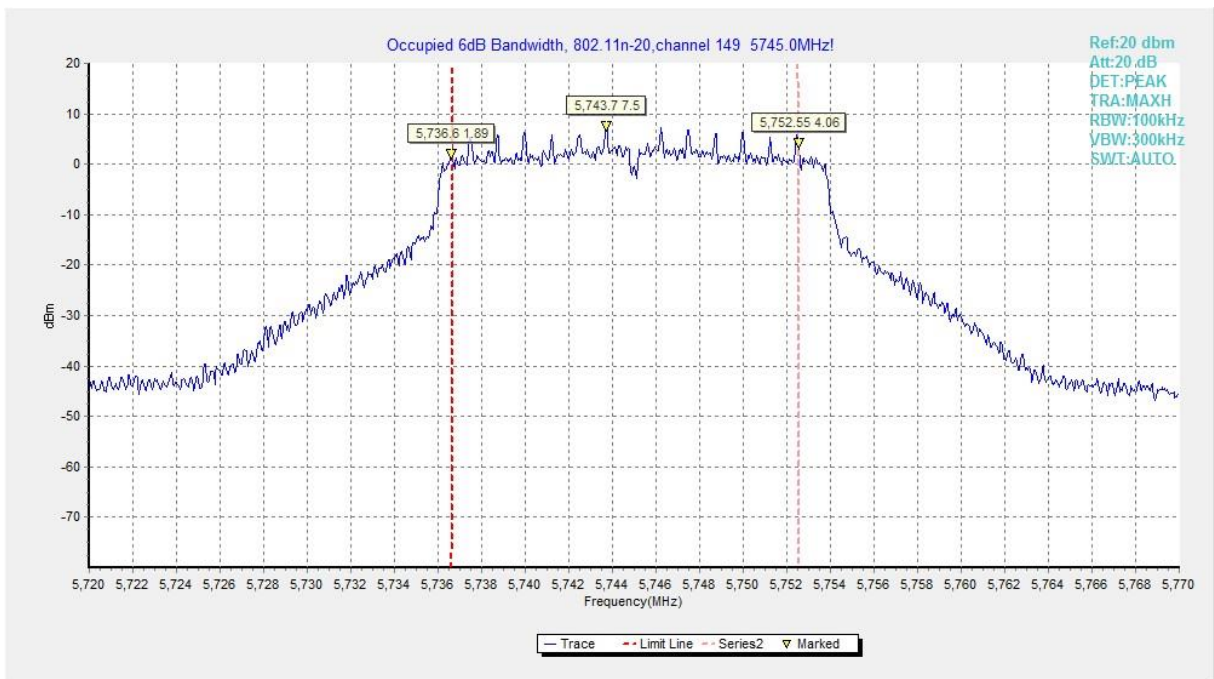


Fig. 4 Occupied 6dB Bandwidth (802.11n-HT20, Ch 149)

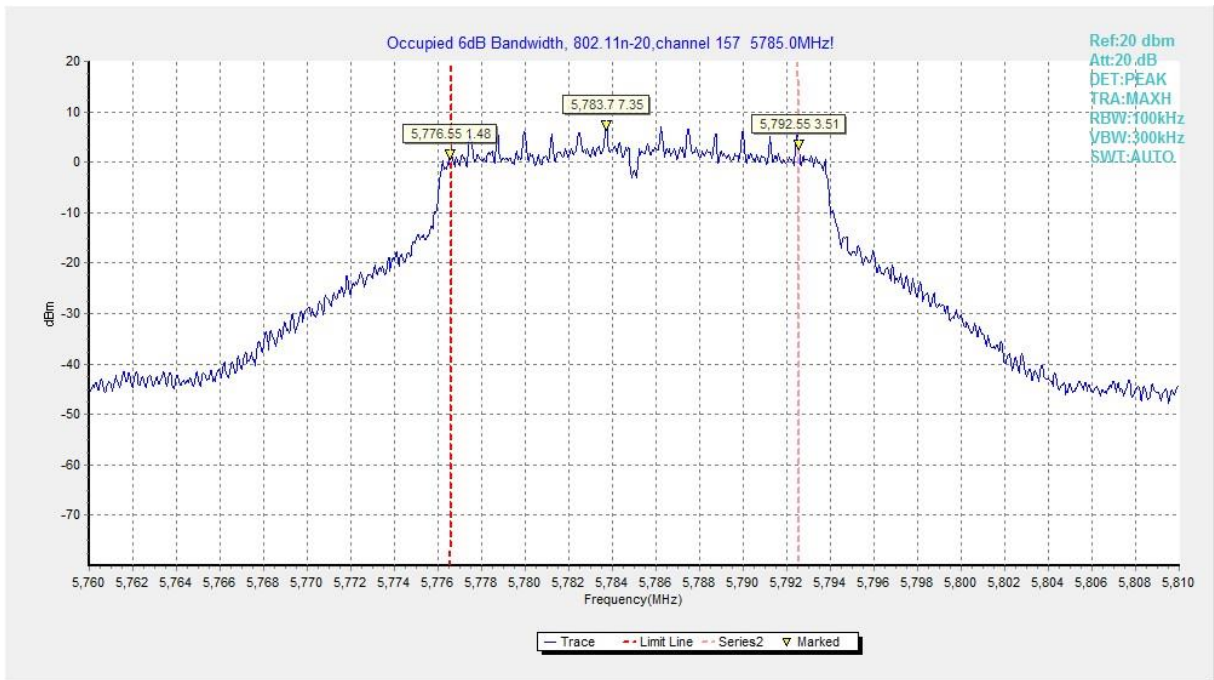


Fig. 5 Occupied 6dB Bandwidth (802.11n-HT20, Ch 157)

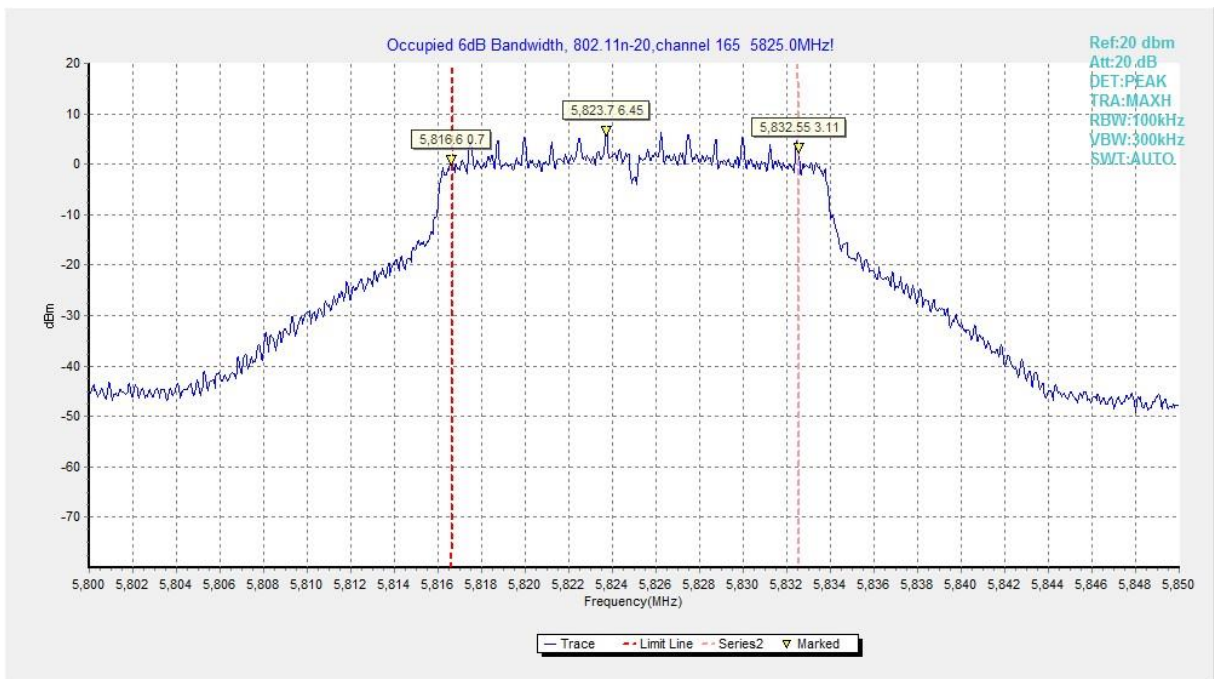


Fig. 6 Occupied 6dB Bandwidth (802.11n-HT20, Ch 165)

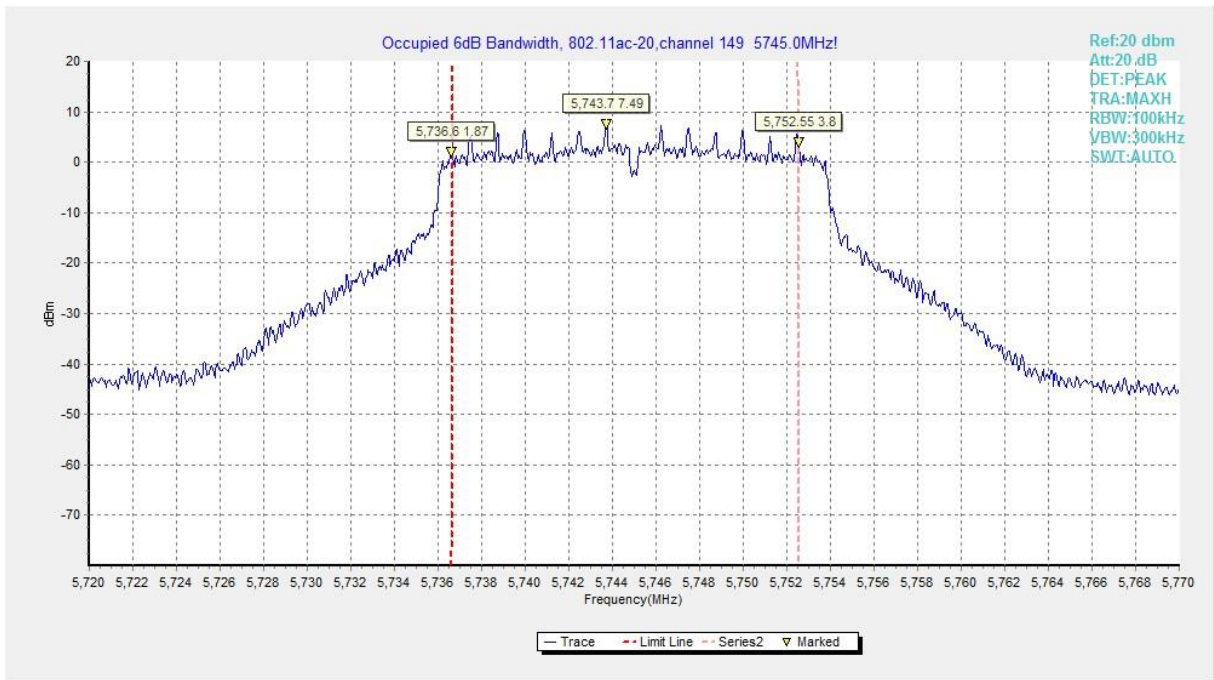


Fig. 7 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 149)

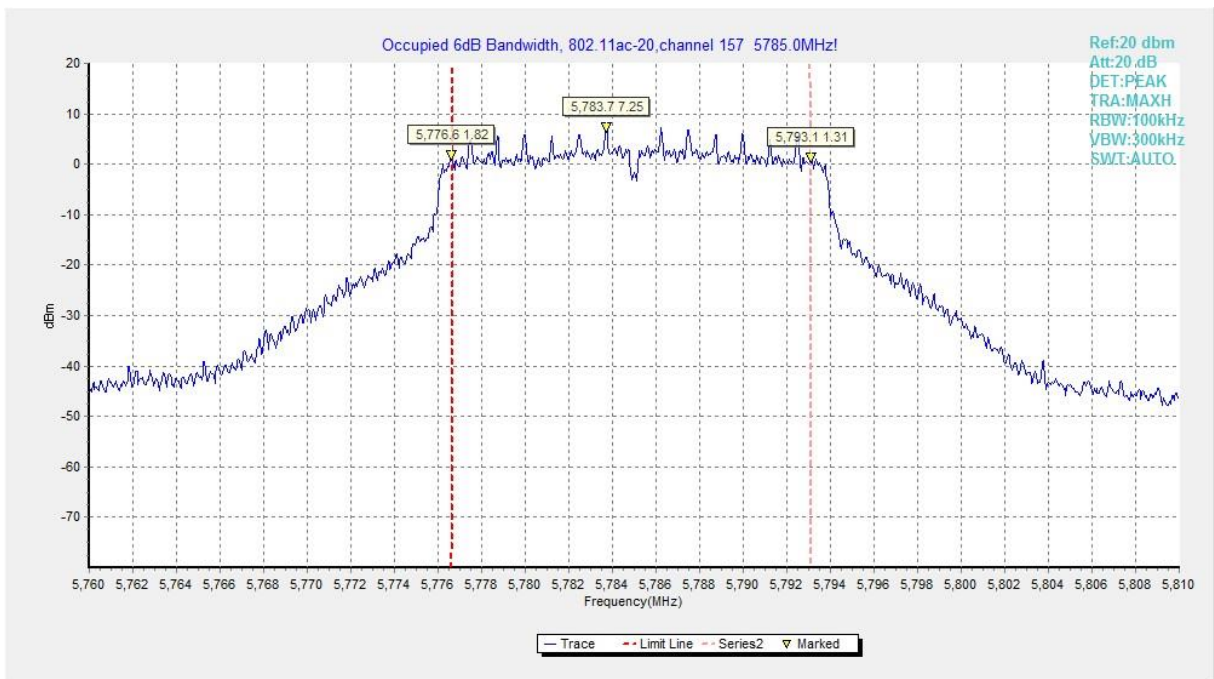


Fig. 8 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 157)

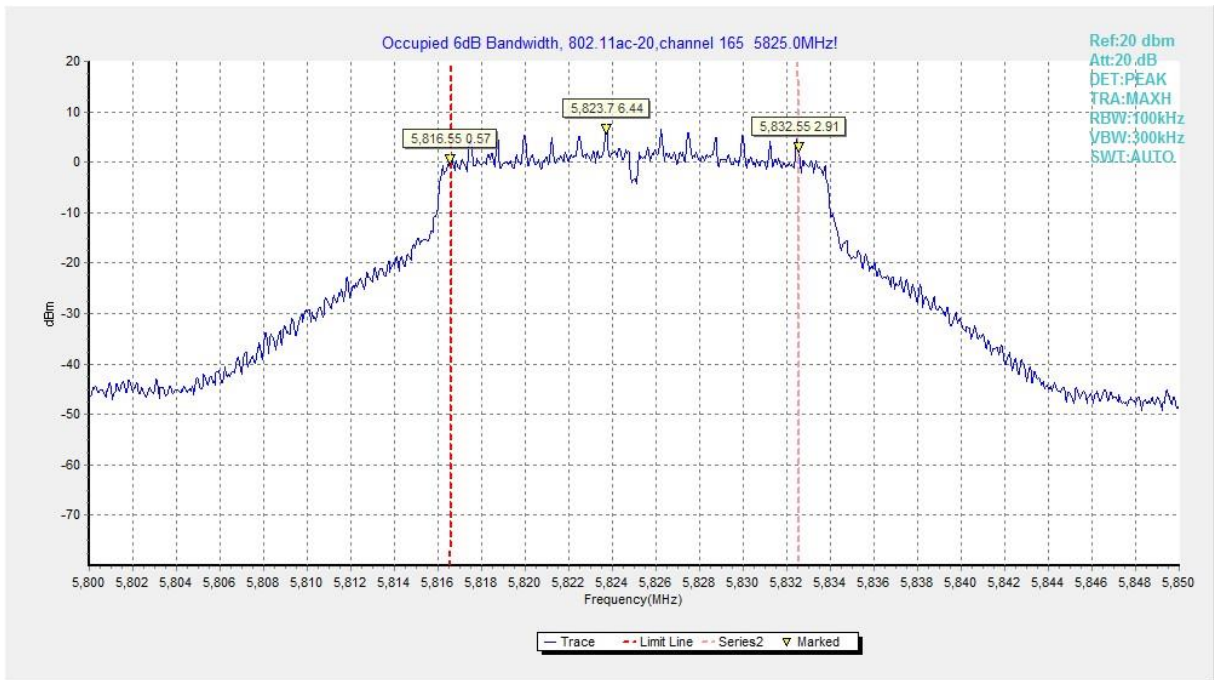


Fig. 9 Occupied 6dB Bandwidth (802.11ac-HT20, Ch 165)

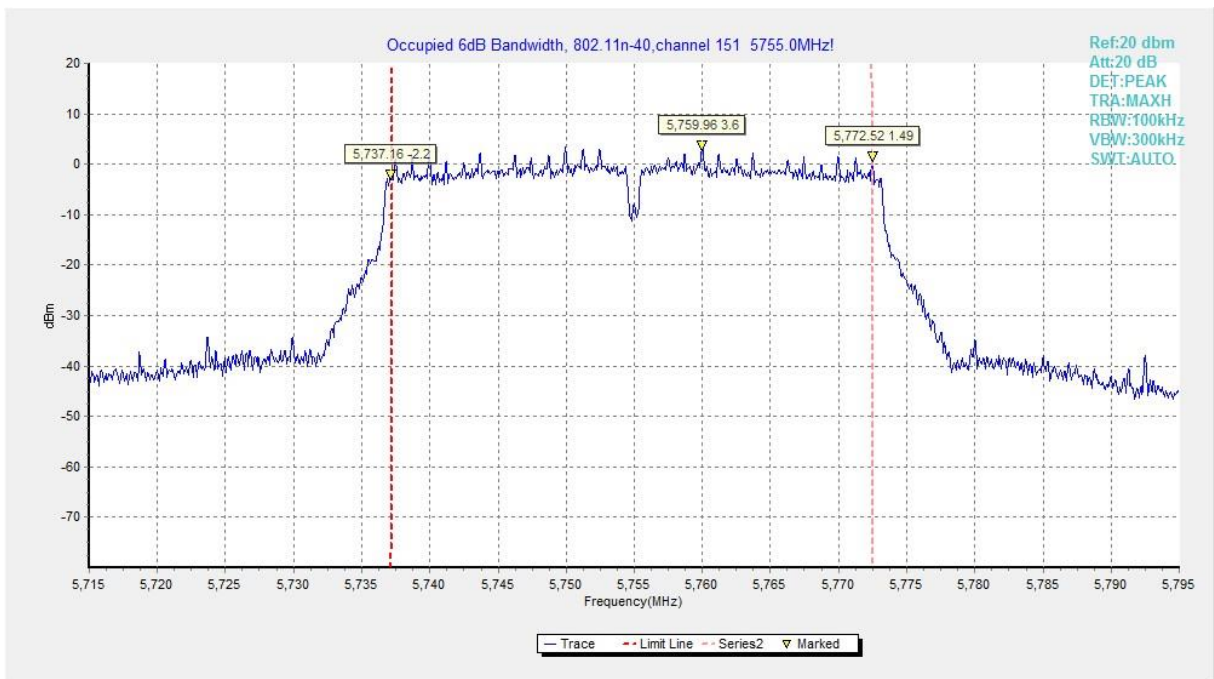


Fig. 10 Occupied 6dB Bandwidth (802.11n-HT40, Ch 151)

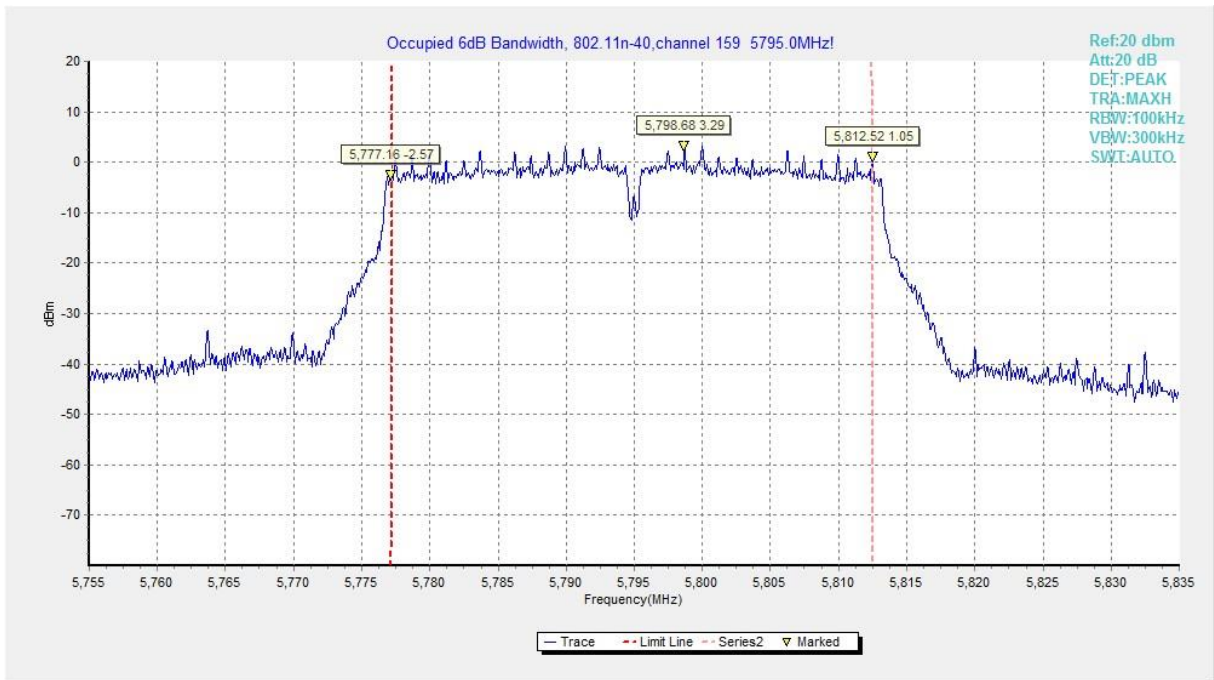


Fig. 11 Occupied 6dB Bandwidth (802.11n-HT40, Ch 159)

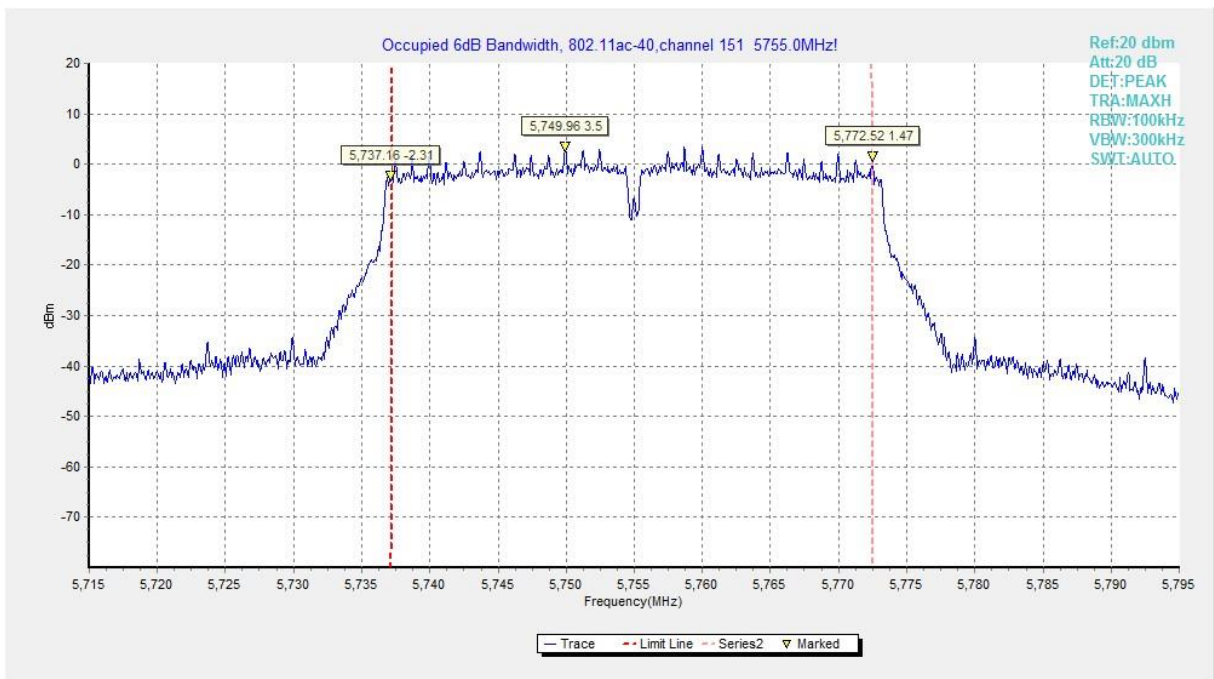


Fig. 12 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 151)

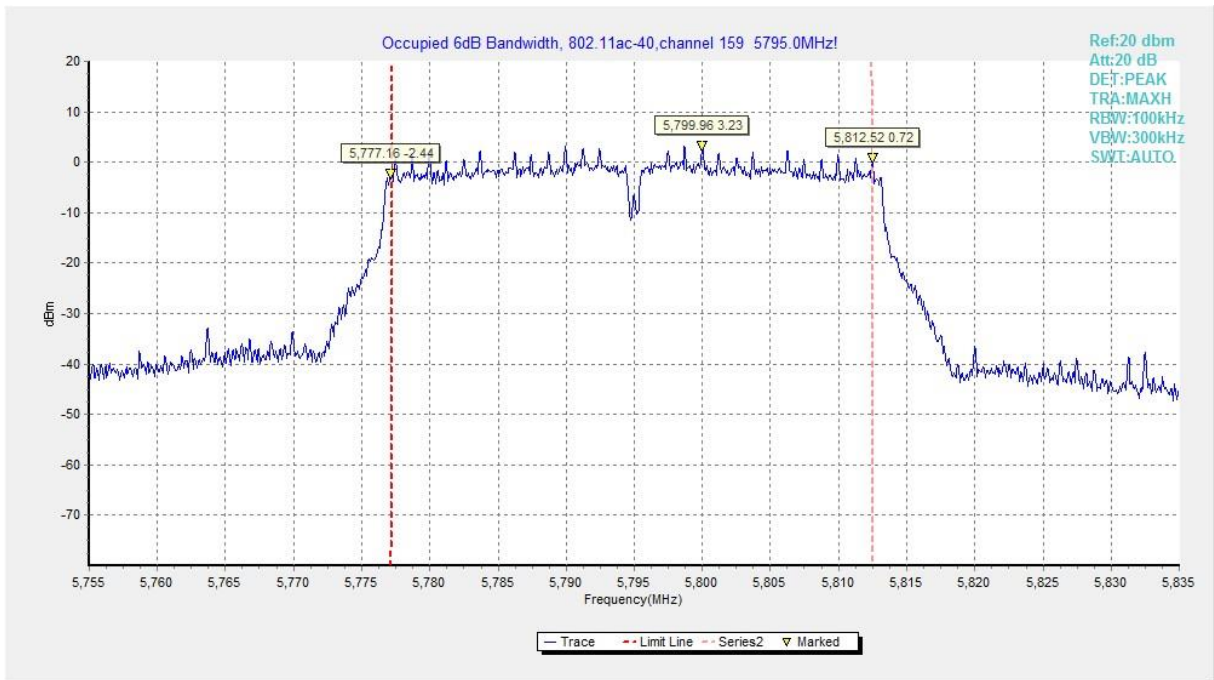


Fig. 13 Occupied 6dB Bandwidth (802.11ac-HT40, Ch 159)

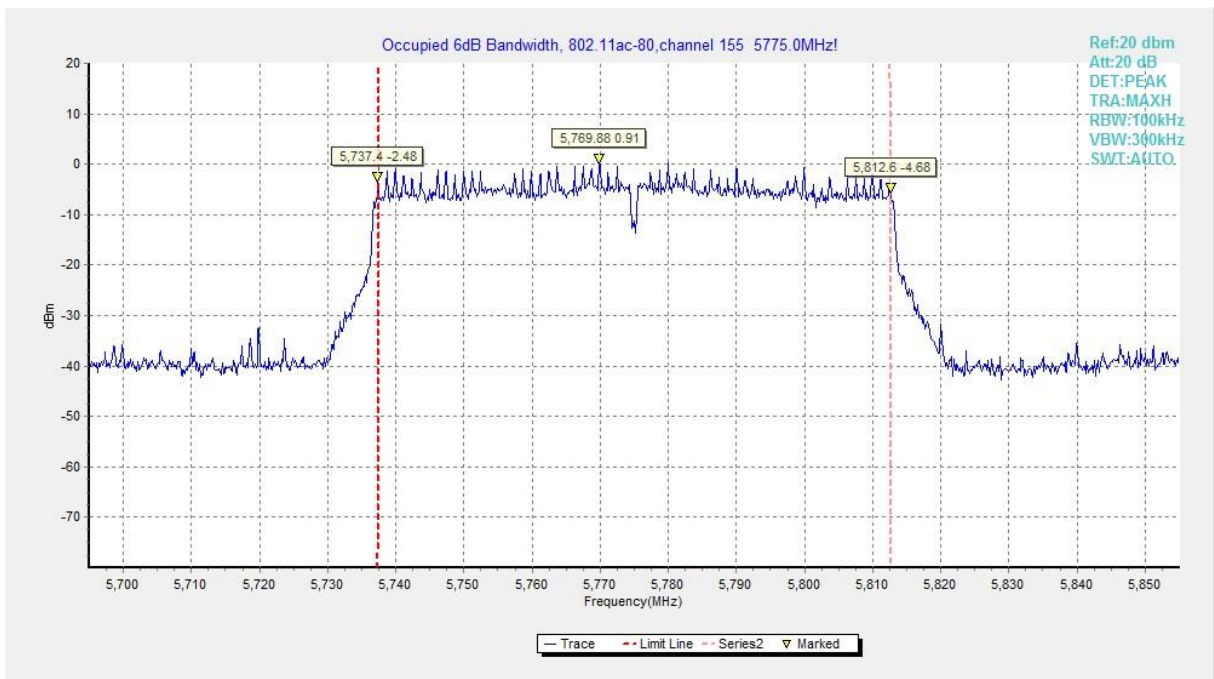


Fig. 14 Occupied 6dB Bandwidth (802.11ac-HT80, Ch 155)

B.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

B.5.1 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 (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5386.800	39.7	-22.3	34.4	27.59	54.0	14.3	H	155	4
5392.000	39.6	-22.3	34.4	27.52	54.0	14.4	H	155	26
11490.200	34.9	-29.1	38.2	25.82	54.0	19.1	H	155	356
16142.100	36.9	-23.3	40.9	19.25	54.0	17.1	H	155	348
17777.800	38.7	-22.4	41.5	19.54	54.0	15.3	H	155	174
17839.400	38.7	-22.5	41.5	19.67	54.0	15.3	H	155	112

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5388.400	39.6	-22.3	34.4	27.55	54.0	14.4	H	155	226
5396.000	39.4	-22.3	34.4	27.36	54.0	14.6	H	155	92
11567.200	34.4	-29.2	38.3	25.37	54.0	19.6	H	155	70
17719.500	38.7	-22.2	41.6	19.40	54.0	15.3	H	155	8
17767.900	38.7	-22.3	41.5	19.46	54.0	15.3	H	155	48
17907.600	38.9	-22.6	41.5	20.02	54.0	15.1	H	155	246

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5383.600	39.6	-22.3	34.4	27.49	54.0	14.4	H	155	20
5397.200	39.5	-22.3	34.4	27.45	54.0	14.5	H	155	18
11649.700	34.2	-29.4	38.4	25.30	54.0	19.8	H	155	90
17780.000	38.7	-22.4	41.5	19.48	54.0	15.3	H	155	114
17830.600	38.8	-22.5	41.5	19.72	54.0	15.2	H	155	36
17895.500	38.8	-22.6	41.5	19.93	54.0	15.2	H	155	2

802.11n-HT20

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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5382.400	39.7	-22.3	34.4	27.59	54.0	14.3	H	155	16
5392.400	39.6	-22.3	34.4	27.50	54.0	14.4	H	155	48
11489.100	34.6	-29.2	38.2	25.52	54.0	19.4	H	155	80
17717.300	38.7	-22.2	41.6	23.77	54.0	15.3	H	155	8
17739.300	38.8	-22.3	41.6	19.63	54.0	15.2	H	155	102
17905.400	39.2	-22.6	41.5	20.27	54.0	14.8	H	155	118

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5383.600	39.6	-22.3	34.4	27.56	54.0	14.4	H	155	28
5392.000	39.6	-22.3	34.4	27.48	54.0	14.4	H	155	46
11569.400	34.2	-29.2	38.3	25.15	54.0	19.8	H	155	8
17728.300	38.5	-22.2	41.6	19.24	54.0	15.5	H	155	6
17752.500	38.7	-22.3	41.5	19.42	54.0	15.3	H	155	24
17828.400	38.9	-22.5	41.5	19.81	54.0	15.1	H	155	185

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5376.000	39.6	-22.3	34.4	27.54	54.0	14.4	H	155	4
5389.200	39.6	-22.3	34.4	27.49	54.0	14.4	H	155	348
11649.700	34.4	-29.4	38.4	25.44	54.0	19.6	H	155	28
17755.800	38.7	-22.3	41.5	19.45	54.0	15.3	H	155	356
17836.100	38.8	-22.5	41.5	19.72	54.0	15.2	H	155	24
17915.300	38.9	-22.6	41.5	20.05	54.0	15.1	H	155	2

802.11n-HT40
Ch151

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5382.800	39.7	-22.3	34.4	27.60	54.0	14.3	H	155	268
5397.600	39.5	-22.3	34.4	27.44	54.0	14.5	H	155	138
11510.000	33.8	-29.1	38.2	24.70	54.0	20.2	H	155	104
17711.800	38.8	-22.2	41.6	19.46	54.0	15.2	H	155	40
17915.300	38.8	-22.6	41.5	19.89	54.0	15.2	H	155	28
17954.900	38.7	-22.7	41.5	19.88	54.0	15.3	H	155	8

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
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5382.000	39.5	-22.3	34.4	27.45	54.0	14.5	V	155	132
5397.200	39.5	-22.3	34.4	27.47	54.0	14.5	H	155	0
11589.200	33.8	-29.3	38.3	24.74	54.0	20.2	H	155	66
17736.000	38.8	-22.3	41.6	19.47	54.0	15.2	V	155	44
17836.100	38.7	-22.5	41.5	19.65	54.0	15.3	V	155	242
17905.400	38.7	-22.6	41.5	19.83	54.0	15.3	H	155	66

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)
5382.800	39.6	-22.3	34.4	27.49	54.0	14.4	H	155	202
5388.400	39.6	-22.3	34.4	27.49	54.0	14.4	H	155	225
11490.200	34.4	-29.1	38.2	25.30	54.0	19.6	H	155	174
17707.400	38.8	-22.2	41.6	19.47	54.0	15.2	H	155	4
17776.670	38.8	-22.4	41.5	19.61	54.0	15.2	H	155	172
17829.500	38.8	-22.5	41.5	19.73	54.0	15.2	H	155	194

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)
5384.800	39.6	-22.3	34.4	27.52	54.0	14.4	H	155	28
5391.200	39.5	-22.3	34.4	27.42	54.0	14.5	H	155	248
11569.400	34.1	-29.2	38.3	25.05	54.0	19.9	H	155	38
17719.500	38.8	-22.2	41.6	19.43	54.0	15.2	H	155	98
17753.600	38.7	-22.3	41.5	19.46	54.0	15.3	H	155	183
17835.000	38.8	-22.5	41.5	19.78	54.0	15.2	H	155	356

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)
5381.200	39.6	-22.3	34.4	27.58	54.0	14.4	H	155	18
5388.000	39.5	-22.3	34.4	27.45	54.0	14.5	H	155	56
11644.200	36.0	-29.4	38.3	27.05	54.0	18.0	H	155	139
17737.100	38.8	-22.3	41.6	19.52	54.0	15.2	H	155	108
17762.400	38.7	-22.3	41.5	19.51	54.0	15.3	H	155	78
17820.700	38.7	-22.5	41.5	19.67	54.0	15.3	H	155	36

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)
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5353.600	39.6	-22.3	34.3	27.55	54.0	14.4	H	155	22
5388.000	39.6	-22.3	34.4	27.55	54.0	14.4	H	155	242
11510.000	33.8	-29.1	38.2	24.71	54.0	20.2	V	155	44
17740.400	38.8	-22.3	41.6	19.56	54.0	15.2	H	155	88
17830.600	38.7	-22.5	41.5	19.61	54.0	15.3	V	155	176
17896.600	38.7	-22.6	41.5	19.77	54.0	15.3	H	155	0

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5381.600	39.6	-22.3	34.4	27.52	54.0	14.4	H	155	22
5388.000	39.6	-22.3	34.4	27.53	54.0	14.4	H	155	22
11589.200	33.7	-29.3	38.3	24.68	54.0	20.3	H	155	88
17706.300	38.7	-22.2	41.6	19.37	54.0	15.3	V	155	110
17824.000	38.7	-22.5	41.5	19.58	54.0	15.3	V	155	44
17916.400	38.7	-22.7	41.5	19.86	54.0	15.3	H	155	0

802.11ac-HT80

Ch155

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5383.200	39.7	-22.3	34.5	27.44	54.0	14.3	H	155	25
5396.400	39.6	-22.3	34.5	27.35	54.0	14.4	H	155	186
10965.500	33.1	-29.9	37.9	25.15	48.3	15.2	H	155	4
17740.400	38.6	-28.0	39.0	27.62	48.3	9.7	H	155	6
17785.500	38.7	-23.6	40.8	21.46	48.3	9.6	H	155	25
17896.600	38.8	-22.5	41.3	20.00	48.3	9.5	H	155	350

Peak Results:
802.11a

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.587	54.3	-22.8	34.7	42.47	68.6	14.3	H	155	0
5655.969	55.5	-22.8	34.7	43.65	72.6	17.1	V	155	22
11490.200	47.7	-29.1	38.2	40.58	74.0	26.3	V	155	352
17234.950	54.9	-22.8	41.9	44.06	68.3	13.4	V	155	352
17380.150	56.3	-23.0	41.7	41.26	68.3	12.0	V	155	176
17527.550	56.9	-22.7	41.6	37.86	68.3	11.4	V	155	110

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5731.600	55.2	-23.0	34.8	43.32	68.3	13.1	H	155	220
5818.800	55.8	-22.6	35.0	43.41	68.3	12.5	V	155	88
11569.950	47.1	-29.2	38.3	39.91	74.0	26.9	H	155	66
17354.850	55.1	-22.9	41.8	41.29	68.3	13.2	H	155	0
17502.800	57.4	-22.9	41.6	42.41	68.3	10.9	H	155	44
17603.450	57.7	-22.2	41.6	38.57	68.3	10.6	V	155	242

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5920.584	56.6	-22.2	35.2	43.66	71.5	14.9	H	155	22
5924.701	55.3	-22.2	35.2	42.33	68.4	13.1	H	155	22
11650.250	47.7	-29.4	38.4	40.29	74.0	26.3	H	155	88
17474.750	55.8	-23.1	41.6	41.74	68.3	12.5	V	155	110
17594.650	57.2	-22.3	41.6	42.47	68.3	11.1	V	155	44
17621.050	57.5	-22.1	41.6	38.38	68.3	10.8	H	155	0

802.11n-HT20
Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.909	54.5	-22.8	34.7	42.70	68.9	14.3	H	155	22
5654.669	55.0	-22.8	34.7	43.17	71.7	16.6	H	155	44
11490.200	47.4	-29.1	38.2	40.15	74.0	26.6	V	155	88
17234.950	55.4	-22.8	41.9	41.45	68.3	12.9	V	155	0
17276.750	58.5	-22.8	41.9	43.31	68.3	9.8	H	155	110
17452.750	57.5	-23.2	41.7	38.39	68.3	10.8	H	155	132

Ch157

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5755.400	55.8	-22.9	34.9	43.81	68.3	12.5	H	155	22
5831.400	55.6	-22.5	35.0	43.14	68.3	12.7	H	155	44
10260.400	47.6	-30.1	37.5	40.19	74.0	26.4	V	155	0
13158.900	52.2	-28.3	39.3	41.15	68.3	16.1	H	155	0
14761.050	54.7	-25.0	39.8	39.99	68.3	13.6	V	155	22
17390.600	57.1	-23.0	41.7	38.38	68.3	11.2	H	155	176

Ch165

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5921.320	56.5	-22.2	35.2	43.59	70.9	14.4	H	155	0
5924.713	55.9	-22.2	35.2	42.90	68.4	12.6	V	155	352
11650.250	47.5	-29.4	38.4	40.41	74.0	26.5	V	155	22
17474.750	56.5	-23.1	41.6	45.47	68.3	11.8	H	155	352
17559.450	58.0	-22.5	41.6	42.93	68.3	10.3	V	155	22
17632.050	57.7	-22.0	41.6	38.69	68.3	10.6	V	155	0

802.11n-HT40

Ch151

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.840	55.2	-22.8	34.7	43.35	68.8	13.6	H	155	264
5655.394	55.2	-22.8	34.7	43.38	72.2	17.0	H	155	132
11510.000	47.4	-29.1	38.2	39.43	74.0	26.6	H	155	110
17265.000	55.3	-22.8	41.9	44.46	68.3	13.0	H	155	44
17445.600	57.0	-23.1	41.7	43.03	68.3	11.3	H	155	22
17639.200	57.4	-22.0	41.6	38.61	68.3	10.9	V	155	0

Ch159

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.770	56.6	-22.2	35.2	43.62	69.1	12.5	H	155	136
5924.161	56.6	-22.2	35.2	43.61	68.8	12.3	H	155	8
11589.750	46.9	-29.3	38.3	38.70	74.0	27.1	H	155	70
17385.100	56.5	-23.0	41.7	45.36	68.3	11.8	H	155	48
17508.850	56.9	-22.8	41.6	42.19	68.3	11.4	H	155	246
17601.250	57.2	-22.2	41.6	38.17	68.3	11.1	H	155	70

802.11ac-HT20

Ch149

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5651.415	55.0	-22.8	34.7	43.12	69.2	14.3	H	155	198
5655.888	55.4	-22.8	34.7	43.57	72.6	17.1	H	155	220
11490.200	48.0	-29.1	38.2	39.68	74.0	26.0	V	155	176
17234.950	55.1	-22.8	41.9	41.40	68.3	13.2	V	155	0
17474.200	57.0	-23.1	41.6	42.20	68.3	11.3	H	155	176
17616.650	57.3	-22.1	41.6	38.27	68.3	11.0	V	155	198

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)
5757.800	54.6	-22.9	34.9	42.62	68.3	13.7	H	155	22
5814.800	54.9	-22.7	35.0	42.56	68.3	13.4	H	155	242
11569.950	47.4	-29.2	38.3	40.31	74.0	26.6	V	155	44
17354.000	55.2	-22.9	41.8	44.34	68.3	13.1	H	155	88
17437.350	56.7	-23.1	41.7	41.78	68.3	11.6	V	155	176
17584.750	58.2	-22.3	41.6	39.00	68.3	10.1	H	155	0

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)
5923.126	57.0	-22.2	35.2	44.08	69.6	12.6	H	155	22
5924.966	56.4	-22.2	35.2	43.48	68.2	11.8	H	155	44
11650.250	46.8	-29.4	38.4	39.38	74.0	27.2	H	155	132
17474.750	55.4	-23.1	41.6	44.61	68.3	12.9	V	155	110
17571.550	57.3	-22.4	41.6	42.31	68.3	11.0	H	155	88
17653.500	57.1	-22.1	41.6	37.93	68.3	11.2	H	155	44

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)
5652.220	55.5	-22.8	34.7	43.63	69.8	14.4	H	155	28
5656.601	55.1	-22.8	34.7	43.28	73.1	18.0	H	155	248
11510.000	47.4	-29.1	38.2	38.38	74.0	26.6	H	155	38
17265.200	57.0	-22.8	41.9	45.88	68.3	11.3	H	155	98
17375.750	56.9	-23.0	41.7	39.78	68.3	11.4	H	155	183
17458.250	57.5	-23.2	41.6	38.46	68.3	10.8	H	155	356

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)
5916.180	56.8	-22.3	35.2	43.92	74.7	17.9	H	155	20
5923.620	56.3	-22.2	35.2	43.32	69.2	13.0	H	155	18
11589.750	46.9	-29.3	38.3	39.68	74.0	27.1	H	155	90
17385.100	54.9	-23.0	41.7	44.05	68.3	13.4	H	155	114
17525.900	57.1	-22.7	41.6	41.96	68.3	11.2	H	155	36
17631.500	56.8	-22.0	41.6	37.82	68.3	11.5	H	155	2

802.11ac-HT80

Ch155

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.954	55.0	-22.8	34.8	43.07	68.9	13.9	V	155	24
5655.187	55.2	-22.8	34.8	43.29	72.0	16.8	V	155	18
11550.150	46.5	-30.0	37.2	39.30	74.0	27.5	H	155	0
17325.150	55.1	-28.4	39.2	44.36	68.3	13.2	H	155	0
17479.150	57.9	-25.4	39.4	43.96	68.3	10.4	V	155	22
17626.000	56.8	-23.0	41.7	38.19	68.3	11.5	V	155	352

Conclusion: PASS

B.6. Band Edges Compliance

B.6.1 Band Edges - Radiated

Measurement Limit:

Standard	Limit (dBm/MHz)	
	FCC 47 CFR Part 15.407	at the band edge
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

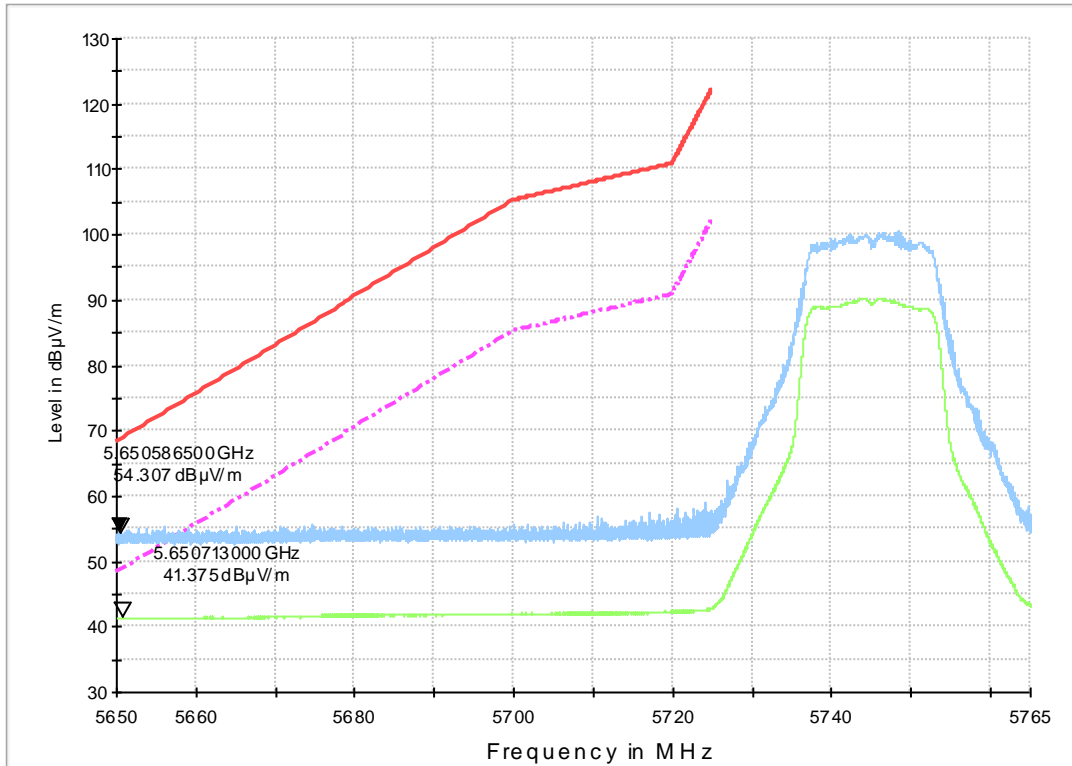


Fig. 15 Band Edges (802.11a, 5745MHz)

RE - Power-5.810GHz-5.925GHz

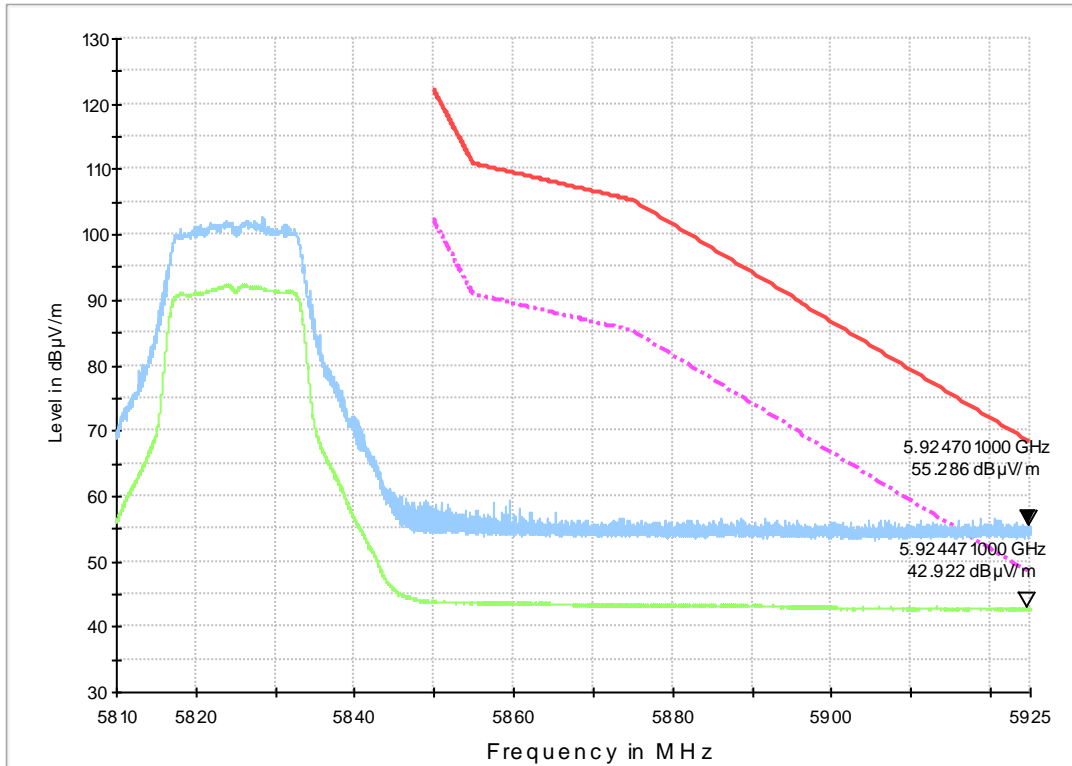


Fig. 16 Band Edges (802.11a, 5825MHz)

RE - Power-5.650GHz-5.765GHz

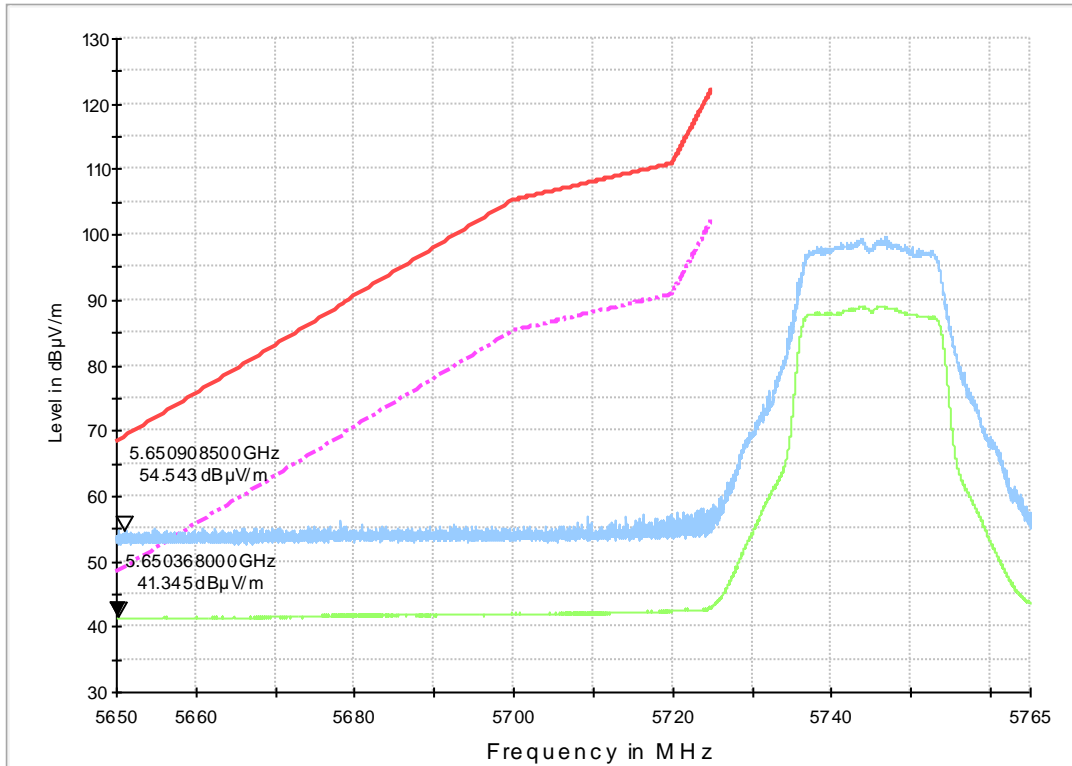


Fig. 17 Band Edges (802.11n-HT20, 5745MHz)

RE - Power-5.810GHz-5.925GHz

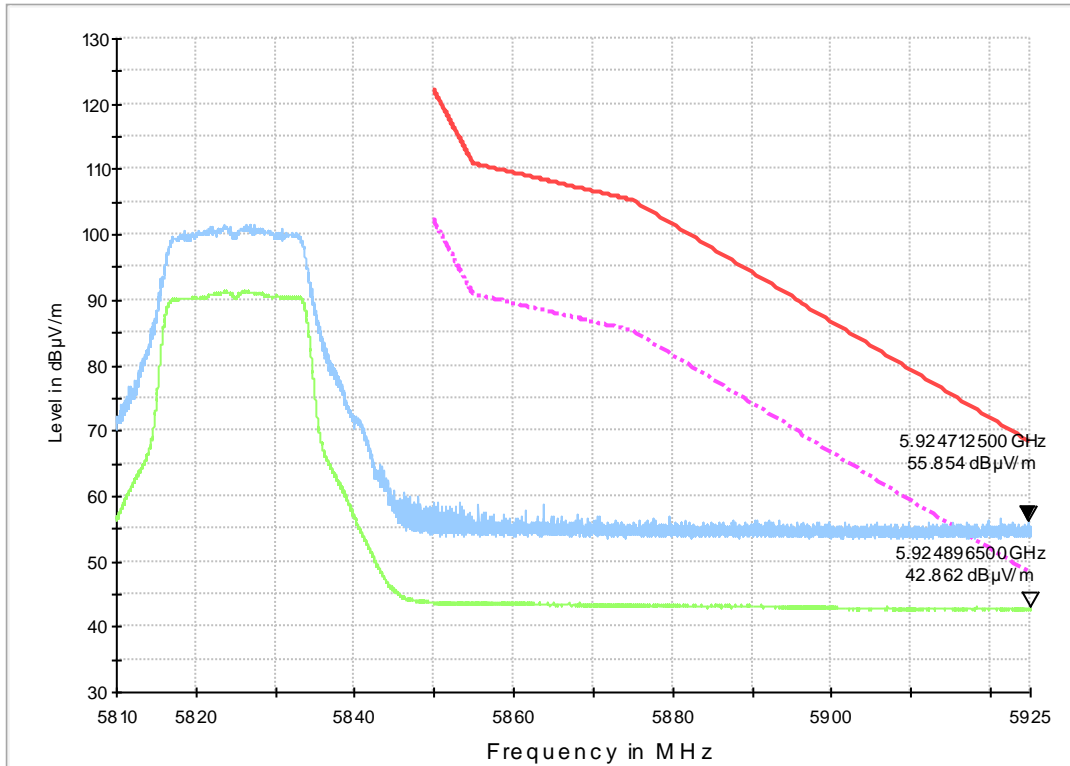


Fig. 18 Band Edges (802.11n-HT20, 5825MHz)

RE - Power-5.650GHz-5.765GHz

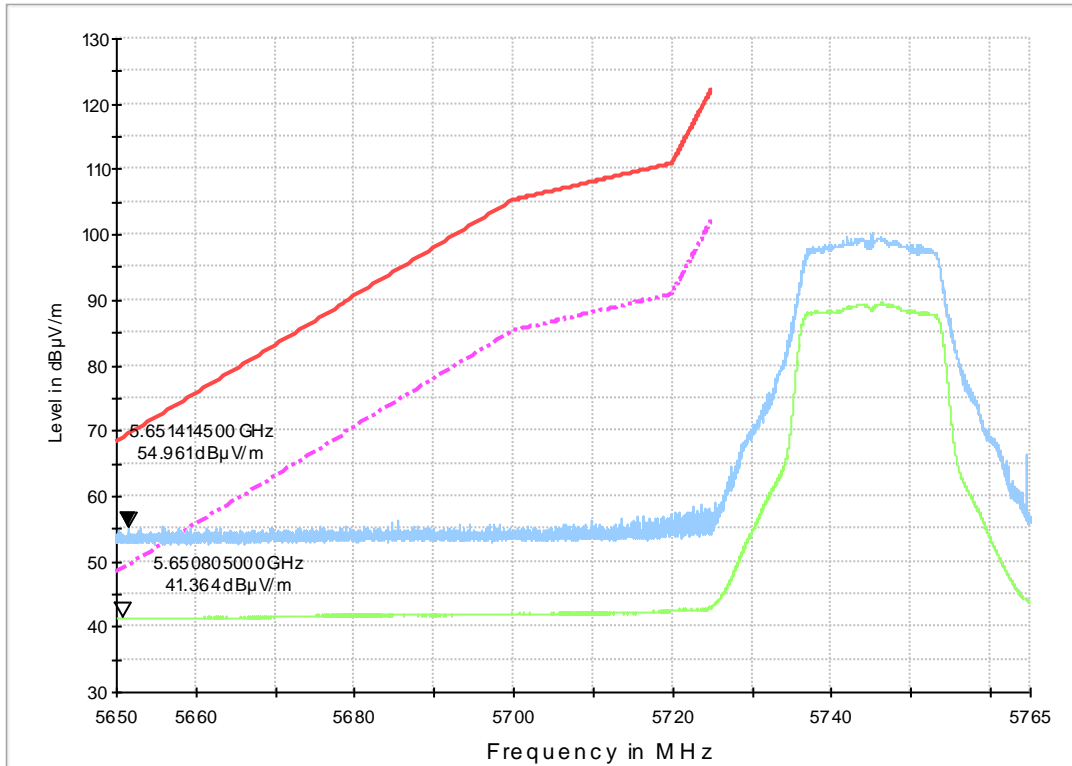


Fig. 19 Band Edges (802.11ac-HT20, 5745MHz)

RE - Power-5.810GHz-5.925GHz

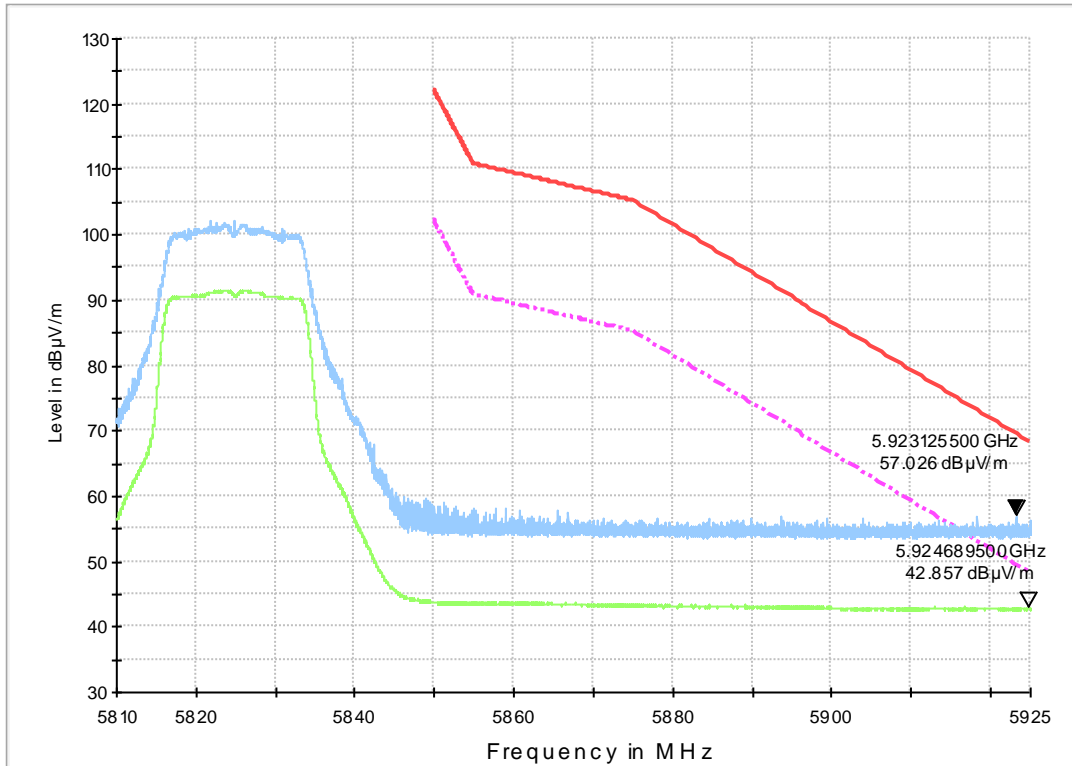


Fig. 20 Band Edges (802.11ac-HT20, 5825MHz)

RE - Power-5.650GHz-5.765GHz

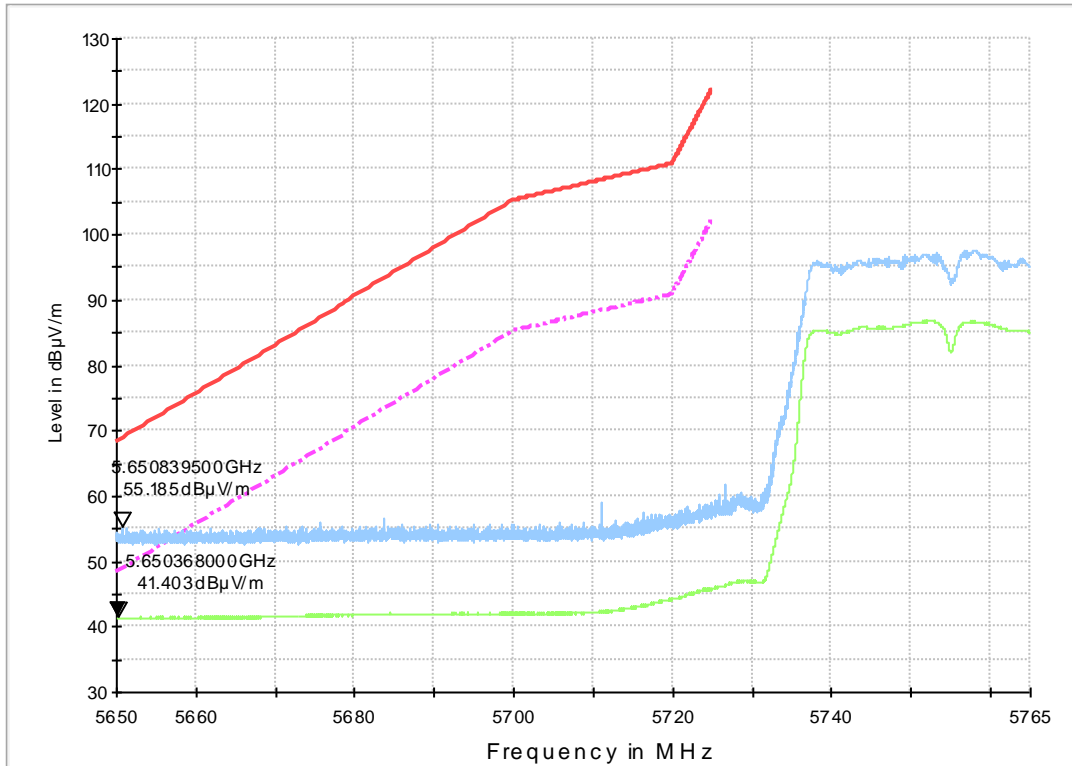


Fig. 21 Band Edges (802.11n-HT40, 5755MHz)

RE - Power-5.810GHz-5.925GHz

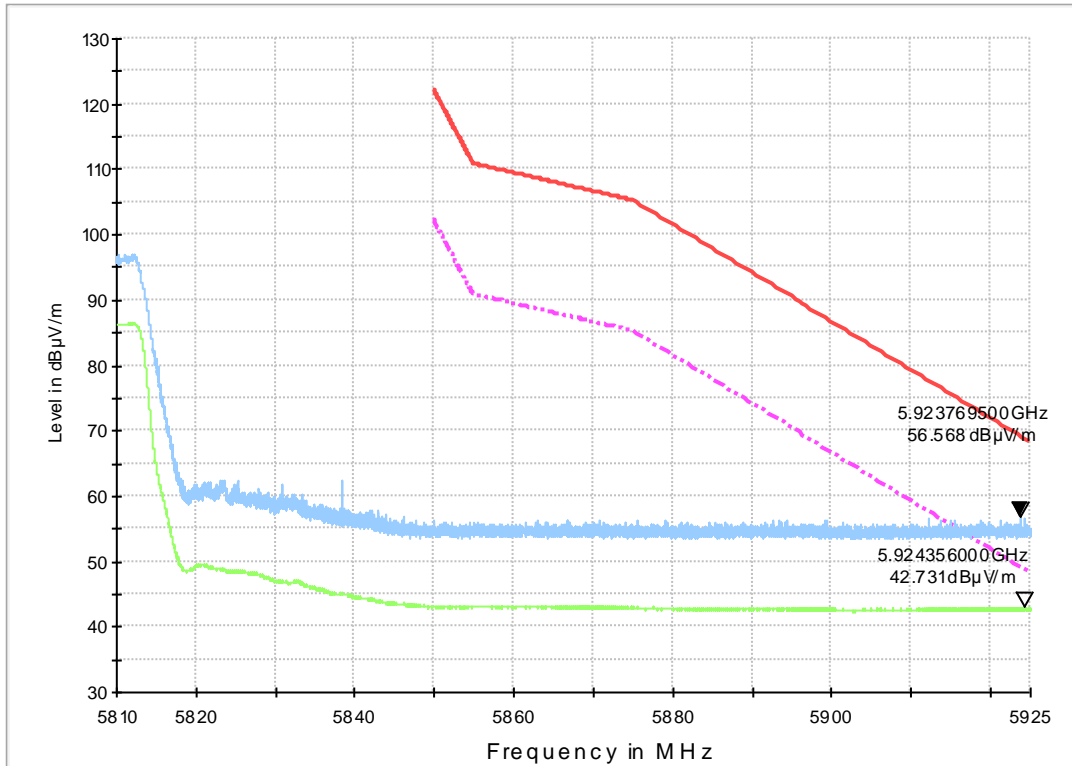


Fig. 22 Band Edges (802.11n-HT40, 5795MHz)

RE - Power-5.650GHz-5.765GHz

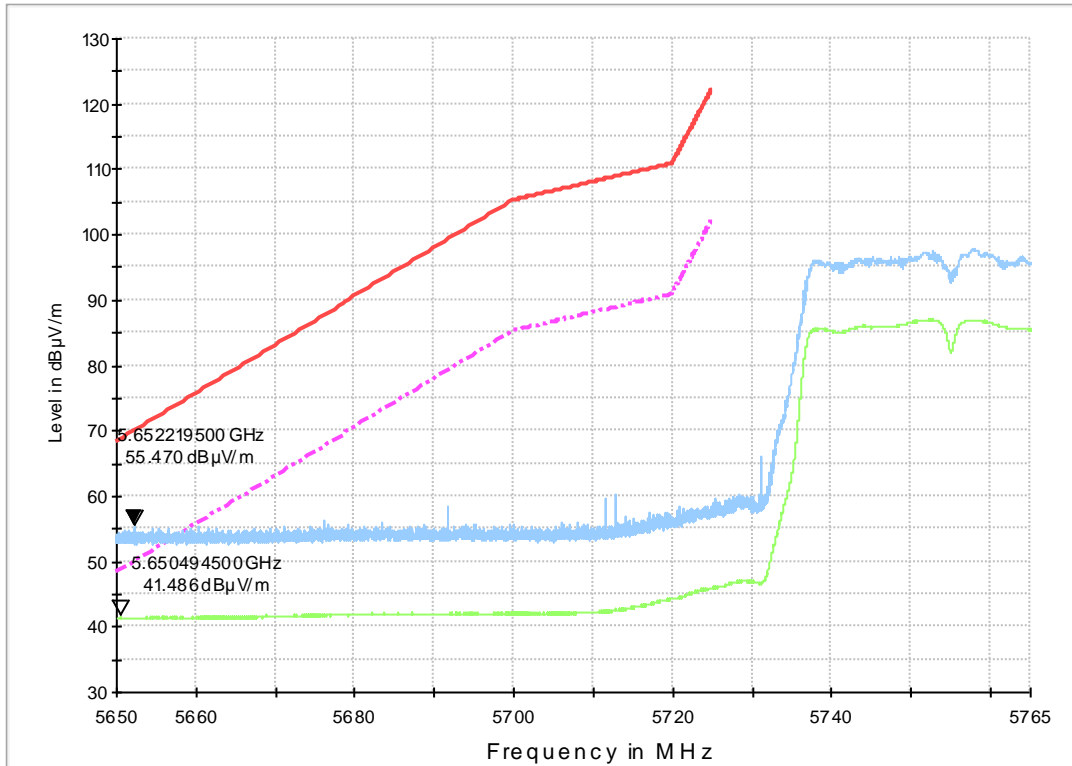


Fig. 23 Band Edges (802.11ac-HT40, 5755MHz)

RE - Power-5.810GHz-5.925GHz

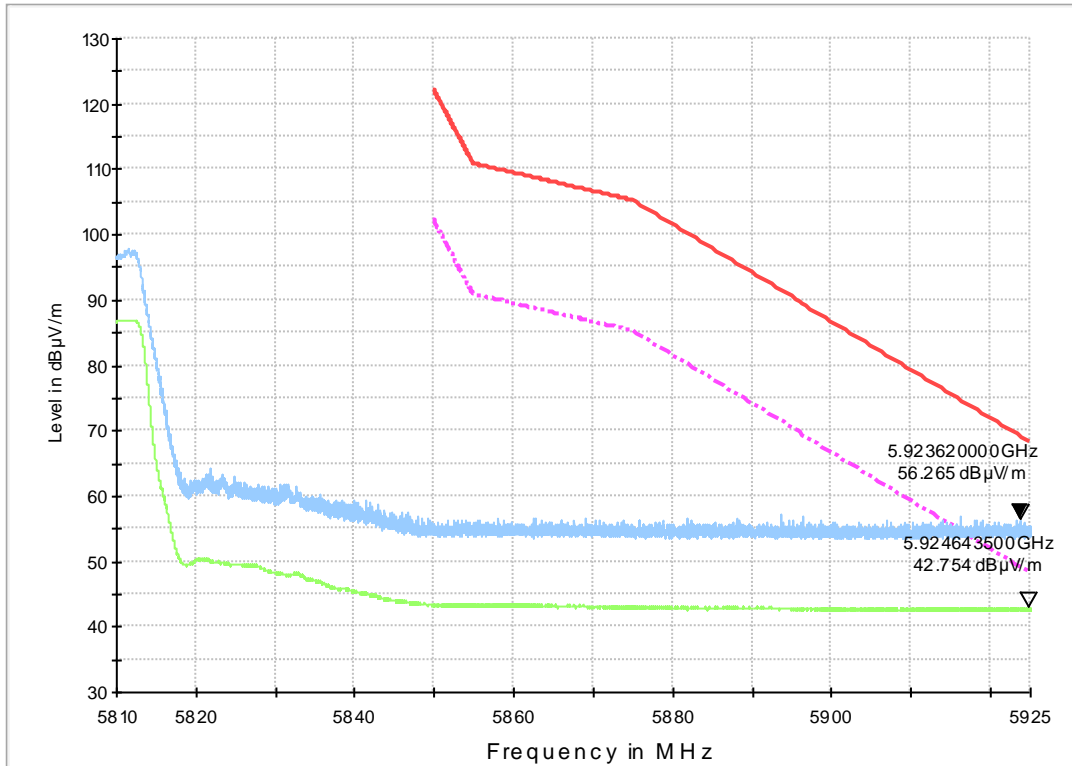


Fig. 24 Band Edges (802.11ac-HT40, 5795MHz)

RE - Power-5.650GHz-5.765GHz

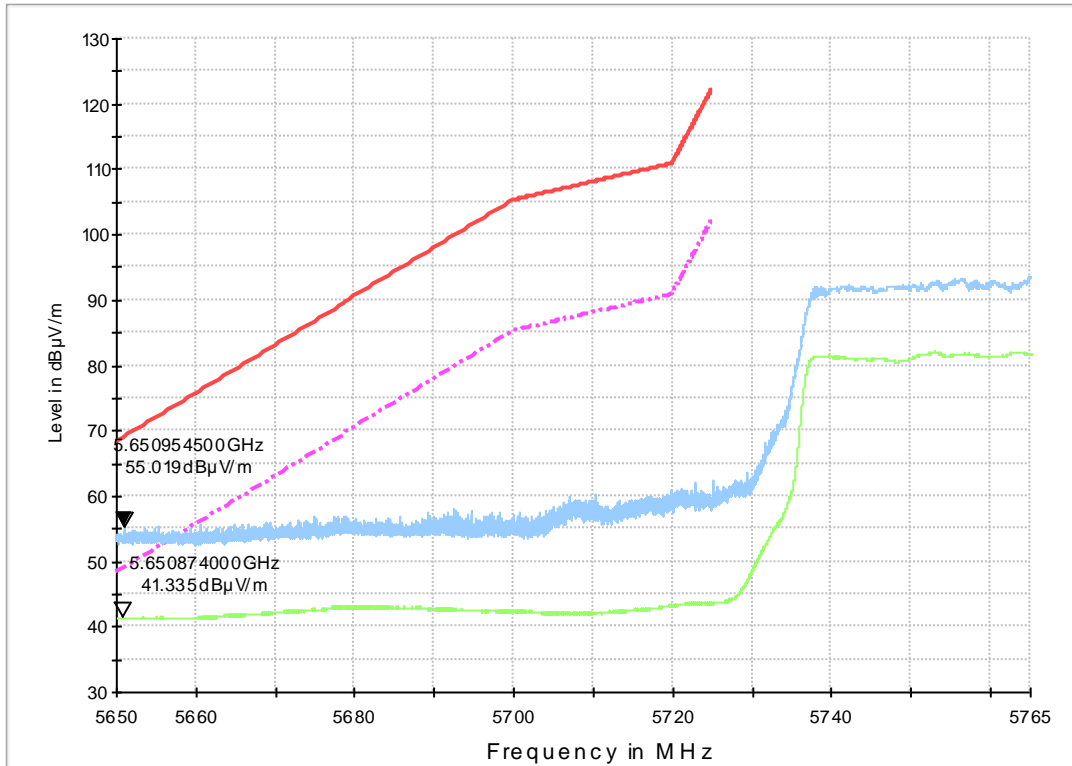


Fig. 25 Band Edges (802.11ac-HT80, 5775MHz)

RE - Power-5.810GHz-5.925GHz

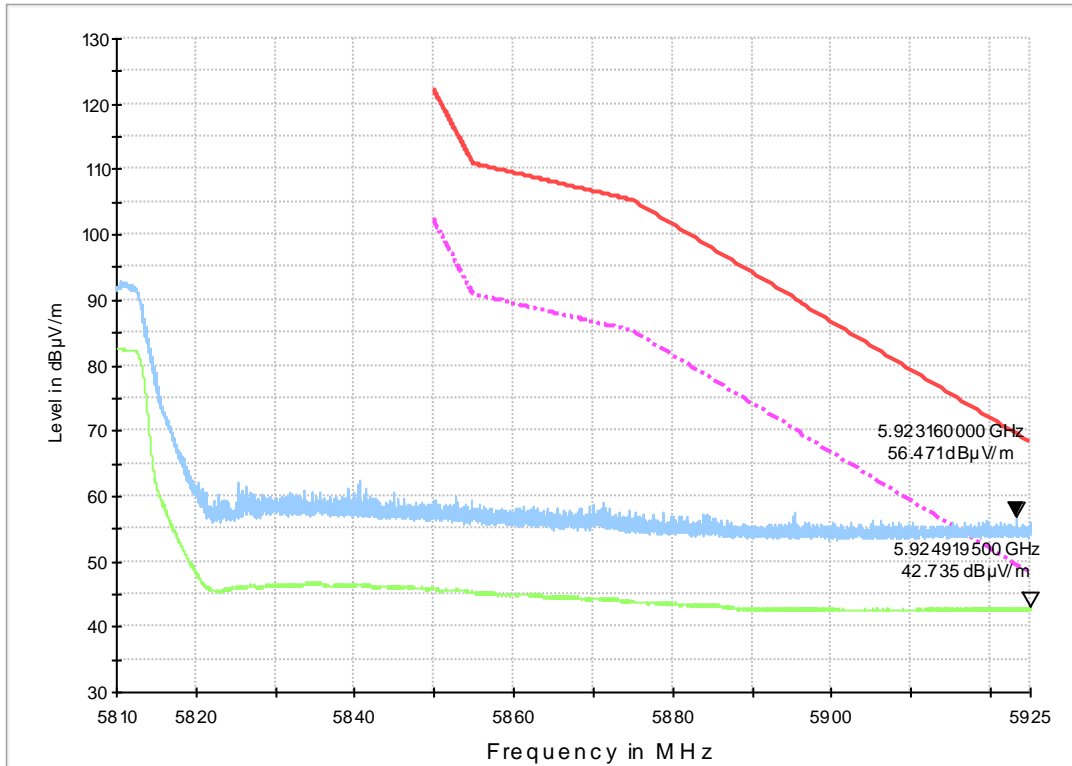


Fig. 26 Band Edges (802.11ac-HT80, 5775MHz)

B.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
110	60

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dB μ V)	Result (dB μ 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 μ V)	Result (dB μ 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:

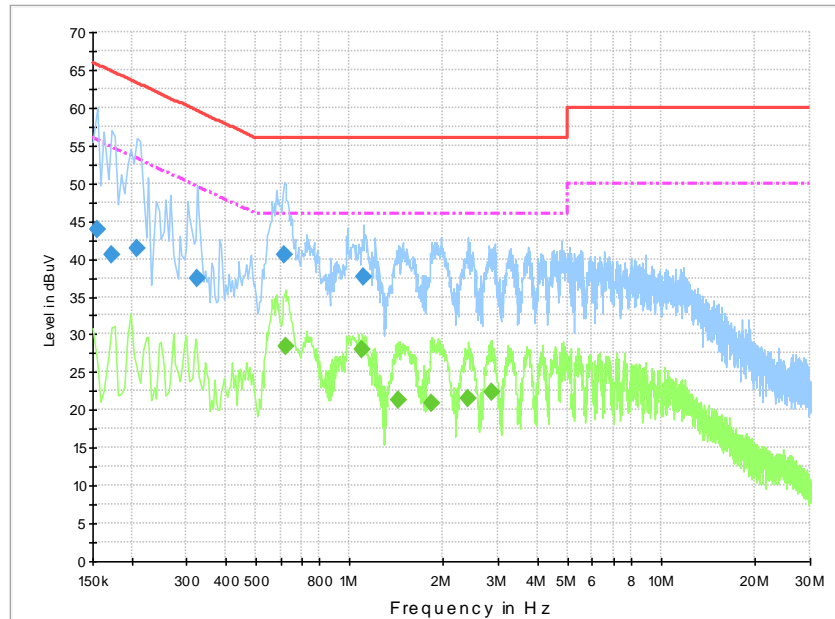


Fig. 27 AC Powerline Conducted Emission-802.11a

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.154500	44.0	5000.0	9.000	On	N	19.9	21.8	65.8	
0.172500	40.6	5000.0	9.000	On	L1	20.1	24.2	64.8	
0.208500	41.5	5000.0	9.000	On	L1	19.9	21.8	63.3	
0.325500	37.5	5000.0	9.000	On	L1	19.9	22.1	59.6	
0.618000	40.4	5000.0	9.000	On	L1	19.9	15.6	56.0	
1.108500	37.5	5000.0	9.000	On	L1	19.8	18.5	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.622500	28.5	5000.0	9.000	On	L1	19.9	17.5	46.0	
1.099500	28.0	5000.0	9.000	On	L1	19.8	18.0	46.0	
1.432500	21.3	5000.0	9.000	On	L1	19.8	24.7	46.0	
1.828500	20.8	5000.0	9.000	On	L1	19.8	25.2	46.0	
2.409000	21.5	5000.0	9.000	On	L1	19.8	24.5	46.0	
2.868000	22.4	5000.0	9.000	On	L1	19.8	23.6	46.0	

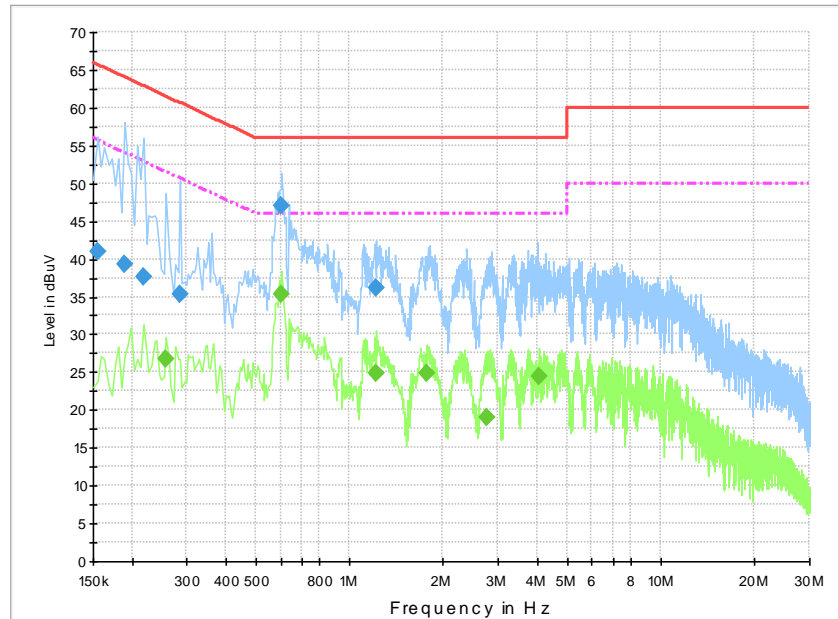


Fig. 28 AC Powerline Conducted Emission-Idle




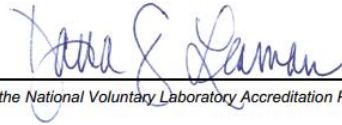
Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.154500	40.9	5000.0	9.000	On	L1	19.9	24.8	65.8	
0.190500	39.4	5000.0	9.000	On	L1	20.0	24.6	64.0	
0.217500	37.6	5000.0	9.000	On	L1	19.9	25.4	62.9	
0.285000	35.2	5000.0	9.000	On	L1	19.9	25.4	60.7	
0.604500	46.9	5000.0	9.000	On	L1	20.0	9.1	56.0	
1.216500	36.2	5000.0	9.000	On	L1	19.8	19.8	56.0	

Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.258000	26.7	5000.0	9.000	On	L1	19.9	24.7	51.5	
0.604500	35.3	5000.0	9.000	On	L1	20.0	10.7	46.0	
1.216500	24.8	5000.0	9.000	On	L1	19.8	21.2	46.0	
1.774500	25.0	5000.0	9.000	On	L1	19.8	21.0	46.0	
2.773500	19.1	5000.0	9.000	On	L1	19.8	26.9	46.0	
4.065000	24.4	5000.0	9.000	On	L1	19.8	21.6	46.0	

ANNEX C: Accreditation Certificate

<p>United States Department of Commerce National Institute of Standards and Technology</p>  	
<hr/> Certificate of Accreditation to ISO/IEC 17025:2017 <hr/>	
NVLAP LAB CODE: 600118-0	
Telecommunication Technology Labs, CAICT Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
Electromagnetic Compatibility & Telecommunications	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. 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>	
2020-09-29 through 2021-09-30 <i>Effective Dates</i>	  <i>For the National Voluntary Laboratory Accreditation Program</i>

*** END OF REPORT BODY ***