FCC RADIO TEST REPORT
FCC ID: 2AUUX-ELF1

Product：	AX6000 Tri-band Mesh Wi-Fi 6 Router
Trade Mark：	ELFKS
Model Name：	ELF1
Family Model：	N/A
Report No.：	S21031503703001

Prepared for

Kingsignal Technology Co., Ltd.
23-27/F, block B, building 10, No. 1819, Shahe West Road, Nanshan District Shenzhen,Guangdong China

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.
1/F, Building E, Fenda Science Park, Sanwei Community,
Xixiang Street Bao'an District, Shenzhen 518126 P.R. China
Tel.: 400-800-6106,0755-2320 0050 / 2320 0090
Website:http://www.ntek.org.cn

TEST RESULT CERTIFICATION

Applicant's name	Kingsignal Technology Co., Ltd.
Address	23-27/F, block B, building 10, No. 1819, Shahe West Road, Nanshan District Shenzhen,Guangdong China
Manufacturer's Name	Fusung (Huizhou)Innovation Electronic Technology Co., Ltd
Address	44\45 building, the seventh zone, Daxin Group, Shuguang Road, Chengjiang

Product description

Product name	AX6000 Tri-band Mesh Wi-Fi 6 Router
Model and/or type reference	ELF1
Family Model	N/A
Standards	FCC Part15.407
Test procedure	ANSI C63.10-2013 and KDB 789033 D02 General UNII Test Procedures New Rules v02r01 FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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

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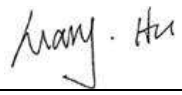
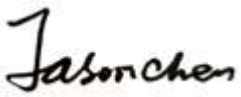
Date of Test .....

Date (s) of performance of tests	15 Mar. 2021 ~ 13 Apr. 2021
Date of Issue	13 Apr. 2021
Test Result	**Pass**

Testing Engineer : 

(Mary Hu)

Technical Manager : 

(Jason Chen)

Authorized Signatory : 

(Alex Li)

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Revision History

Report No.	Version	Description	Issued Date
S21031503703001	Rev.01	Initial issue of report	13 Apr. 2021

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart E			
Standard Section	Test Item	Judgment	Remark
15.207	AC Power Line Conducted Emissions	PASS	
15.209(a), 15.407 (b)(4) 15.407 (b)(8)	Spurious Radiated Emissions	PASS	
15.407 (a)(3)	26 dB and 99% Emission Bandwidth	PASS	
15.407(e)	Minimum 6 dB bandwidth	PASS	
15.407 (a)(3)	Maximum Conducted Output Power	PASS	
15.407(b)(4)	Band Edge	PASS	
15.407 (a)(3)	Power Spectral Density	PASS	
15.407(b)	Spurious Emissions at Antenna Terminals	PASS	
15.203	Antenna Requirement	PASS	
15.407(c)	Automatically discontinue transmission	PASS	(Note 2)

NOTE:

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

(2) The product supports Adaptive (Load Based Equipment) and Short Control Signaling Transmissions, in line with Automatically discontinue transmission.

1.1 FACILITIES AND ACCREDITATIONS

FACILITIES

All measurement facilities used to collect the measurement data are located at 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

CNAS-Lab.	:	The Certificate Registration Number is L5516.
IC-Registration		The Certificate Registration Number is 9270A. CAB identifier:CN0074
FCC- Accredited		Test Firm Registration Number: 463705. Designation Number: CN1184
A2LA-Lab.		The Certificate Registration Number is 4298.01
Name of Firm	:	Shenzhen NTEK Testing Technology Co., Ltd.
Site Location	:	1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

1.2 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	Conducted Emission Test	±2.80dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(30MHz~1GHz)	±2.64dB
5	All emissions, radiated(1GHz~6GHz)	±2.40dB
6	All emissions, radiated(＞6GHz)	±2.52dB
7	Temperature	±0.5°C
8	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>AX6000 Tri-band Mesh Wi-Fi 6 Router</td></tr>
<tr><td>Trade Mark</td><td>ELFKS</td></tr>
<tr><td>Model Name</td><td>ELF1</td></tr>
<tr><td>Family Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>FCC ID</td><td>2AUUX-ELF1</td></tr>
<tr><td>Product Description</td><td>
<table>
<tr><td>IEEE 802.11 WLAN Mode Supported</td><td>☒802.11a/n/ac/ax (20MHz channel bandwidth)
☒802.11n/ac/ax (40MHz channel bandwidth)
☒802.11ac/ax (80MHz channel bandwidth)</td></tr>
<tr><td>Data Rate</td><td>802.11a: 6,9,12,18,24,36,48,54Mbps;
802.11n(HT20/HT40):MCS0-MCS15;
802.11ac(VHT20):MCS0-MCS8;
802.11ac(VHT40/VHT80):MCS0-MCS9;
802.11ax(VHT20): NSS1, MCS0-MCS8
802.11ax(VHT40/VHT80):NSS1, MCS0-MCS9</td></tr>
<tr><td>Modulation</td><td>OFDM with BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM</td></tr>
<tr><td>Operating Frequency Range</td><td>☒ U-NII-1: 5150 MHz ~5250MHz
☐ U-NII-2A: 5250MHz~5350MHz
☐ U-NII-2C: 5470MHz~5725MHz
☒ U-NII-3: 5725 MHz ~5850 MHz</td></tr>
<tr><td>Function:</td><td>☐Outdoor AP ☒Indoor AP ☐Fixed P2P
☐Client</td></tr>
<tr><td>Support TPC</td><td>☐YES
☒NO</td></tr>
<tr><td>Antenna Type</td><td>Reference Note 3</td></tr>
<tr><td>Antenna Gain</td><td>Reference Note 3</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, More details of EUT technical specification, please refer to the User's Manual.
</td></tr>
<tr><td>Ratings</td><td>☒DC supply:
DC 12V from Adapter or POE .</td></tr>
<tr><td>Adapter</td><td>☒Adapter supply 1:
MODEL: A481-1203500C
INPUT:100V~240V~50/60Hz 1.5A
OUTPUT:12V⎓3.5A
☒Adapter supply 2:
MODEL: GQ48-120350-AU
INPUT:100V~240V~50/60Hz 1.5A
OUTPUT:12V⎓3.5A</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
<tr><td>HW Version</td><td>ELF1 Rev C</td></tr>
<tr><td>SW Version</td><td>N/A</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. Frequency and Channel list for 802.11a/n/ac/ax:

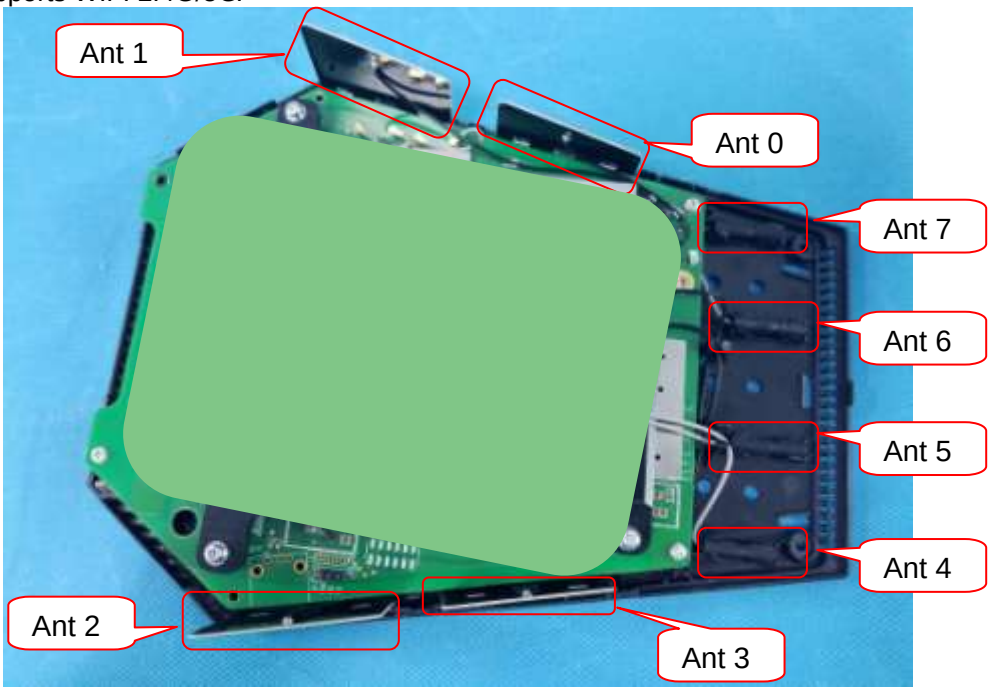
Band	20MHz		40MHz		80MHz	
	Channel	Frequency	Channel	Frequency	Channel	Frequency
U-NII-1	36	5180 MHz	38	5190 MHz	42	5210 MHz
	40	5200 MHz	46	5230 MHz	-	-
	44	5220 MHz				
	48	5240 MHz				
U-NII-3	149	5745 MHz	151	5755 MHz	155	5775 MHz
	153	5765 MHz	159	5795 MHz		
	157	5785 MHz				
	161	5805 MHz				
	165	5825 MHz				

3 Table for Filed Antenna

Antenna	Brand	Model Name	Connector	5.8G Gain (dBi)	Antenna Type
0	N/A	N/A	IPEX	5.06	Embedded Antenna
1	N/A	N/A	IPEX	5.06	Embedded Antenna
2	N/A	N/A	IPEX	5.06	Embedded Antenna
3	N/A	N/A	IPEX	5.06	Embedded Antenna

Antenna	Brand	Model Name	Connector	5.2G Gain (dBi)	Antenna Type
4	N/A	N/A	IPEX	3.73	Embedded Antenna
5	N/A	N/A	IPEX	3.73	Embedded Antenna
6	N/A	N/A	IPEX	3.73	Embedded Antenna
7	N/A	N/A	IPEX	3.73	Embedded Antenna

This EUT has supports WIFI 2.4G/5G.



The EUT 5G WIFI has four antennas, and different modes support different transmit mode what describe as Following form:

Mode	Tx/Rx
802.11a/802.11n/ac/ax	1TX, 1RX
802.11n/ac/ax	4TX, 4RX

For 5GHz mode, Antenna 0,1,2,3 for 5.8G, Antenna 4,5,6,7 for 5.2G, are transmitting, each with the same directional gain.
For MIMO mode,
Directional gain= $G_{ANT} + 10\log(N_{ANT}/N_{SS})$ dBi, =9.75dbi in 5.2GHz
Directional gain= $G_{ANT} + 10\log(N_{ANT}/N_{SS})$ dBi, =11.08dbi in 5.8GHz

Note: G_{ANT} is the antenna gain in dBi.
N_{ANT} means the number of Antennas.
N_{SS} the number of independent spatial streams of data; for the case of NSS = 1.

2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n 20 /ac 20/ax 20 CH36/ CH40/ CH 48 802.11a / n 20 /ac 20/ ax 20 CH149/ CH157/ CH 165
Mode 3	802.11n40 /ac40/ax40 CH38/ CH 46 802.11n 40 /ac 40/ax40 CH 151 / CH 159
Mode 4	802.11ac80/ax80 CH 42 802.11ac 80/ax80 CH 155

For Radiated Emission	
Final Test Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n 20 /ac 20/ax 20 CH36/ CH40/ CH 48 802.11a / n 20 /ac 20/ ax 20 CH149/ CH157/ CH 165
Mode 3	802.11n40 /ac40/ax40 CH38/ CH 46 802.11n 40 /ac 40/ax40 CH 151 / CH 159
Mode 4	802.11ac80/ax80 CH 42 802.11ac 80/ax80 CH 155

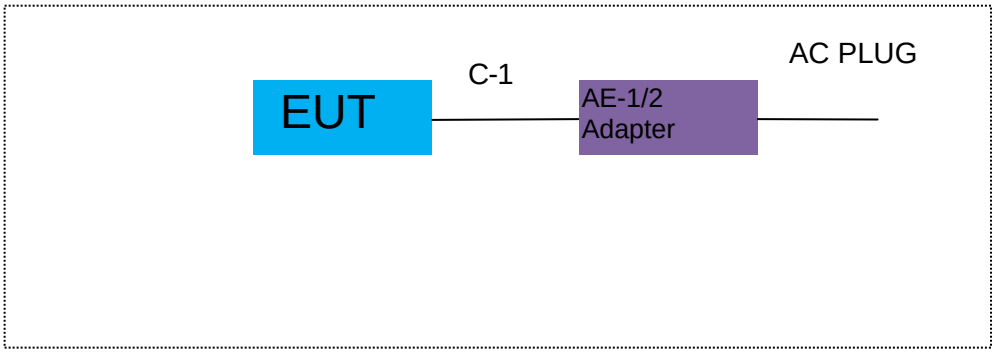
Note:

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

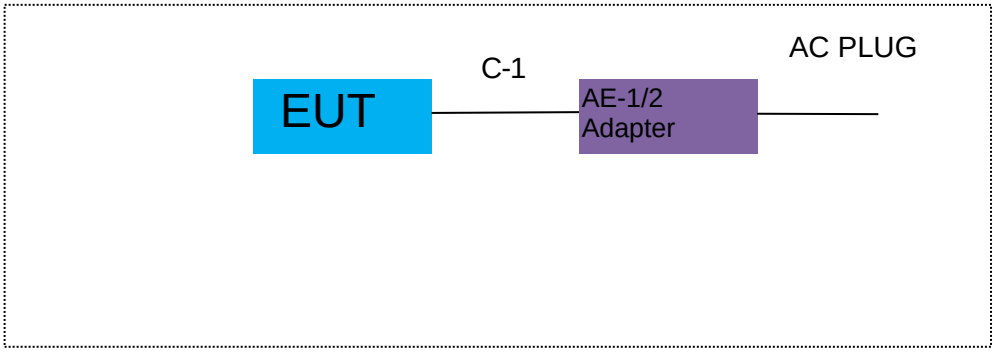
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

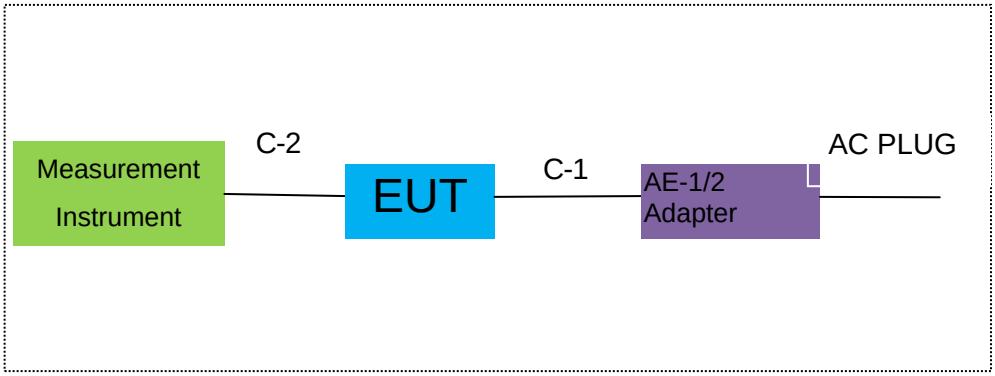
For AC Conducted Emission Mode



For Radiated Test Cases



For Conducted Test Cases



Note:1.The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Item	Equipment	Brand	Model/Type No.	Series No.	Note
AE-1	Adapter	Xinspower	A481-1203500C	N/A	Peripherals
AE-2	Adapter	N/A	GQ48-120350-AU	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	USB Cable	YES	NO	1.0m
C-2	RF Cable	YES	NO	0.1m

Note:

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

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation& Conducted Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Aglient	E4407B	MY45108040	2020.05.11	2021.05.10	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2020.07.13	2021.07.12	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2020.08.07	2021.08.06	1 year
4	Test Receiver	R&S	ESPI7	101318	2020.05.11	2021.05.10	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2021.04.10	2022.04.09	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.05.11	2023.05.10	3 year
7	Horn Antenna	EM	EM-AH-10180	2011071402	2021.04.10	2022.04.09	1 year
8	Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	803	2020.12.19	2021.12.08	1 year
9	Amplifier	EMC	EMC051835SE	980246	2020.07.13	2021.07.12	1 year
10	Active Loop Antenna	SCHWARZBECK	FMZB 1519 B	055	2020.12.10	2021.12.09	1 year
11	Power Meter	DARE	RPR3006W	15I00041SNO84	2020.07.13	2021.07.12	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2020.07.13	2023.07.12	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2020.07.13	2021.07.12	1 year
14	High Test Cable(1G-40GHz)	N/A	R-03	N/A	2019.06.28	2022.06.27	3 year
15	High Test Cable(1G-40GHz)	N/A	R-04	N/A	2021.04.10	2022.04.09	1 year
16	Filter	TRILTHIC	2400MHz	29	2020.07.13	2021.07.12	1 year
17	temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A

Note:

We will use the temporary antenna connector (soldered on the PCB board) When conducted test
And this temporary antenna connector is listed within the instrument list

AC Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2020.05.11	2021.05.10	1 year
2	LISN	R&S	ENV216	101313	2021.04.10	2022.04.09	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2020.05.11	2021.05.10	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2020.05.11	2023.05.10	3 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2020.05.11	2023.05.10	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2020.05.11	2023.05.10	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2020.05.11	2023.05.10	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable& Aux Equipment which is scheduled for calibration every 3 years.

3. TEST REQUIREMENTS

3.1CONDUCTED EMISSION MEASUREMENT

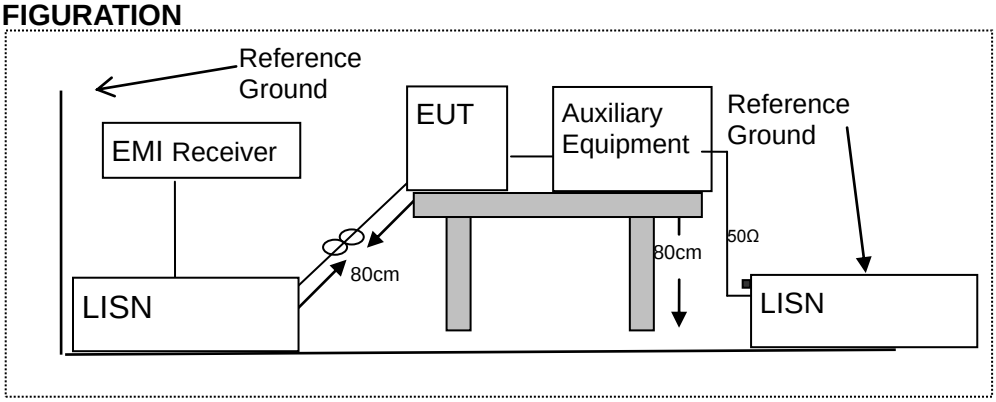
3.1.1 APPLICABLE STANDARD

According to FCC Part 15.207(a)

3.1.2 CONFORMANCE LIMIT

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56*	56-46*
0.5-5.0	56	46
5.0-30.0	60	50
Note: 1. *Decreases with the logarithm of the frequency 2. The lower limit shall apply at the transition frequencies 3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.		

3.1.3 TEST CONFIGURATION



3.1.4 TEST PROCEDURE

According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
2. The EUT was placed on a table which is 0.8m above ground plane.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
4. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40cm long.
5. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
6. LISN at least 80 cm from nearest part of EUT chassis.
7. The frequency range from 150KHz to 30MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth(IF bandwidth=9KHz) with Maximum Hold Mode
9. For the actual test configuration, please refer to the related Item –EUT Test Photos.

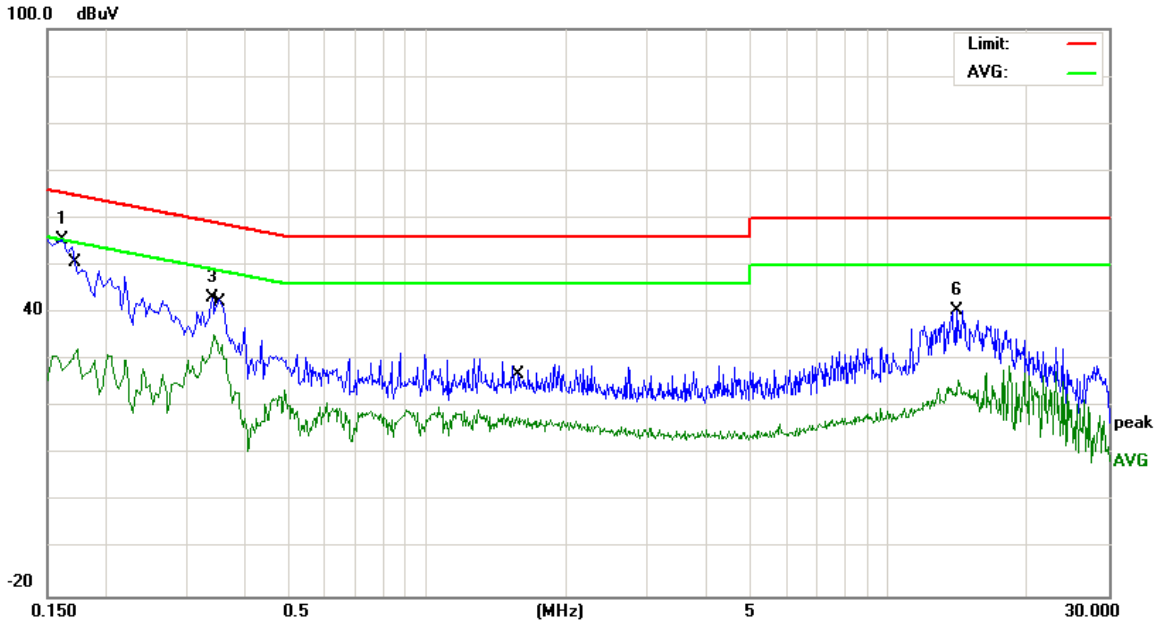
3.1.5 TEST RESULTS

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name ：	ELF1
Temperature：	21.1 ℃	Relative Humidity：	41%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 12V from Adapter 1 AC 120V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1620	45.94	9.56	55.50	65.36	-9.86	QP
0.1740	22.75	9.56	32.31	54.76	-22.45	AVG
0.3420	33.60	9.54	43.14	59.15	-16.01	QP
0.3500	24.01	9.54	33.55	48.96	-15.41	AVG
1.5660	8.46	9.58	18.04	46.00	-27.96	AVG
13.9940	30.63	9.76	40.39	60.00	-19.61	QP
14.1500	15.98	9.76	25.74	50.00	-24.26	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

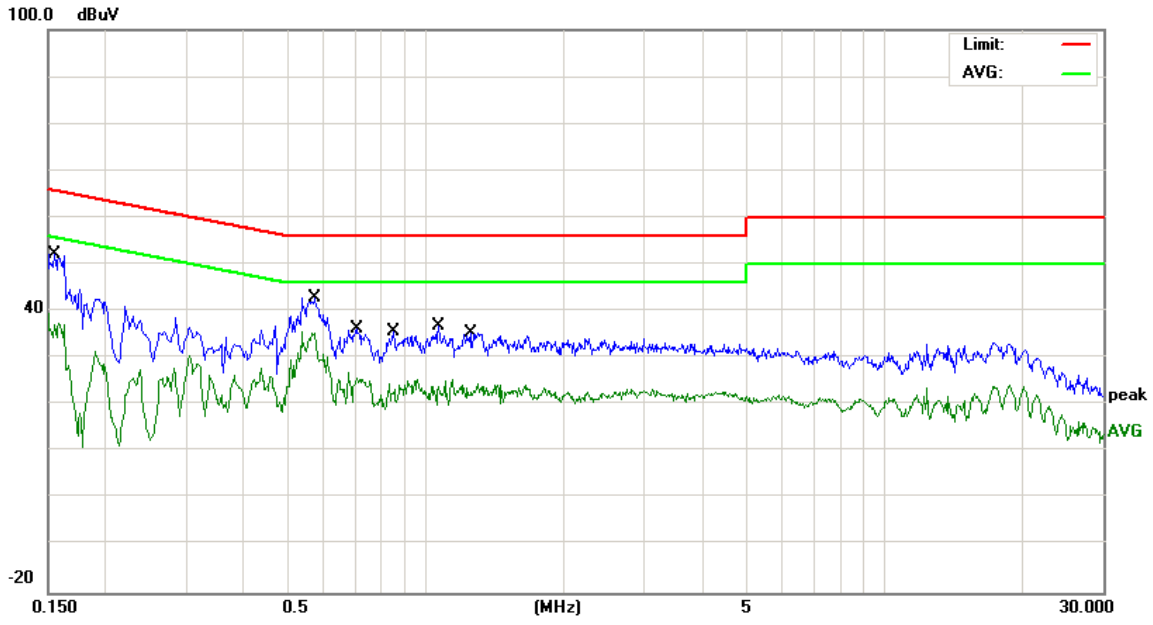


EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name ：	ELF1
Temperature：	21 ℃	Relative Humidity：	51%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 12V from Adapter 1 AC 120V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1500	24.11	9.55	33.66	55.99	-22.33	AVG
0.1620	47.42	9.55	56.97	65.36	-8.39	QP
0.3420	32.32	9.53	41.85	59.15	-17.30	QP
0.3420	23.03	9.53	32.56	49.15	-16.59	AVG
0.9820	25.44	9.55	34.99	56.00	-21.01	QP
1.3220	10.70	9.55	20.25	46.00	-25.75	AVG
14.2980	18.08	9.74	27.82	50.00	-22.18	AVG
14.8860	33.34	9.75	43.09	60.00	-16.91	QP

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

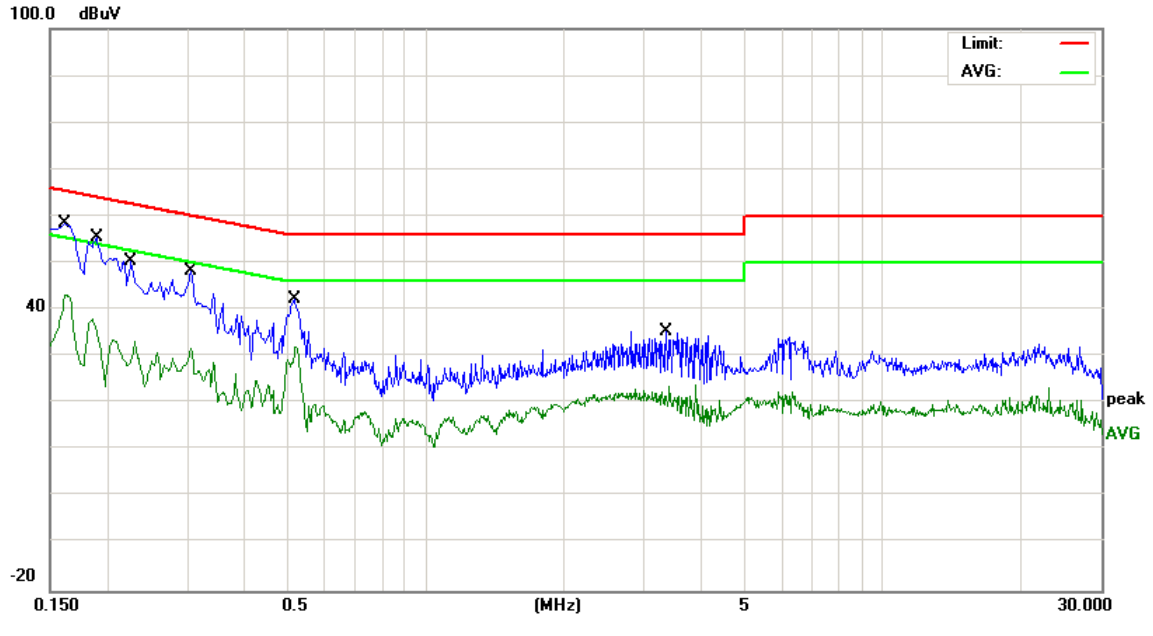


EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name ：	ELF1
Temperature：	21.1 ℃	Relative Humidity：	41%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 12V from Adapter 2 AC 120V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1620	48.83	9.56	58.39	65.36	-6.97	QP
0.1620	33.64	9.56	43.20	55.36	-12.16	AVG
0.1900	46.00	9.55	55.55	64.03	-8.48	QP
0.1900	28.63	9.55	38.18	54.03	-15.85	AVG
0.2260	40.86	9.55	50.41	62.59	-12.18	QP
0.2260	24.07	9.55	33.62	52.59	-18.97	AVG
0.3059	38.76	9.54	48.30	60.08	-11.78	QP
0.3059	22.11	9.54	31.65	50.08	-18.43	AVG
0.5140	32.57	9.55	42.12	56.00	-13.88	QP
0.5140	22.36	9.55	31.91	46.00	-14.09	AVG
3.3540	25.75	9.60	35.35	56.00	-20.65	QP
3.3540	13.98	9.60	23.58	46.00	-22.42	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

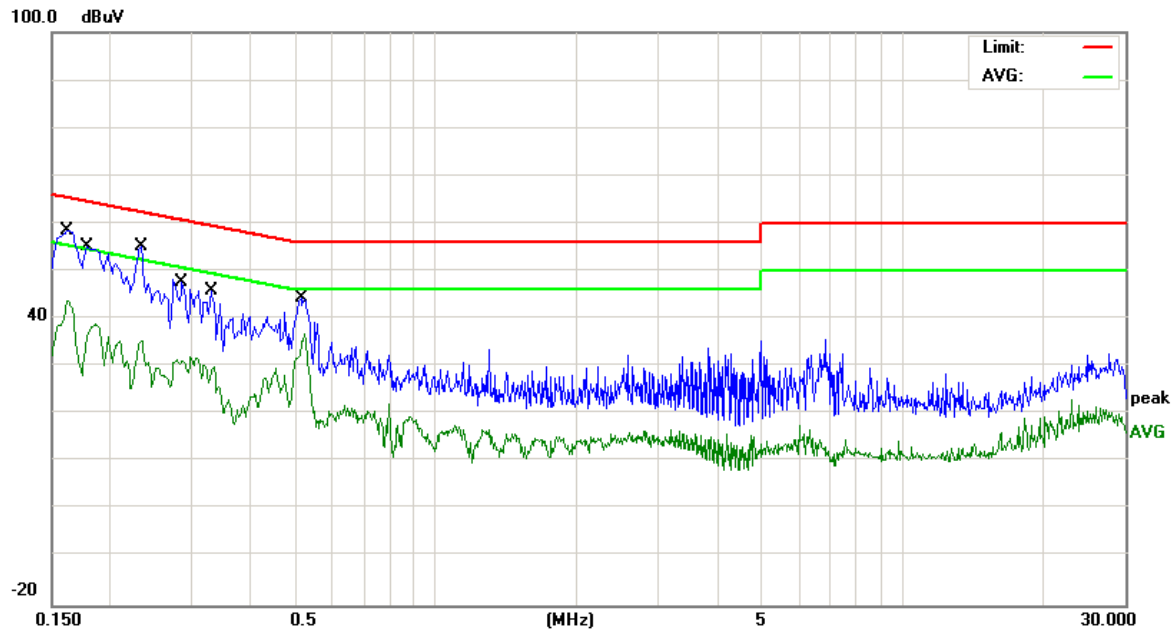


EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name ：	ELF1
Temperature：	21 ℃	Relative Humidity：	51%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 12V from Adapter 2 AC 120V/60Hz	Test Mode：	Mode 1

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1620	48.86	9.55	58.41	65.36	-6.95	QP
0.1620	34.32	9.55	43.87	55.36	-11.49	AVG
0.1779	45.59	9.54	55.13	64.58	-9.45	QP
0.1779	29.33	9.54	38.87	54.58	-15.71	AVG
0.2340	45.76	9.54	55.30	62.30	-7.00	QP
0.2340	25.86	9.54	35.40	52.30	-16.90	AVG
0.2858	38.07	9.53	47.60	60.64	-13.04	QP
0.2858	22.54	9.53	32.07	50.64	-18.57	AVG
0.3300	36.25	9.53	45.78	59.45	-13.67	QP
0.3300	20.73	9.53	30.26	49.45	-19.19	AVG
0.5140	34.79	9.54	44.33	56.00	-11.67	QP
0.5140	27.37	9.54	36.91	46.00	-9.09	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 APPLICABLE STANDARD

According to FCC Part 15.407(b) and 15.209

3.2.2 CONFORMANCE LIMIT

According to FCC Part 15.407(b)(7): 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)).

According to FCC Part15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

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

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009~0.490	2400/F(KHz)	20 log (uV/m)	300
0.490~1.705	24000/F(KHz)	20 log (uV/m)	30
1.705~30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Remark :1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

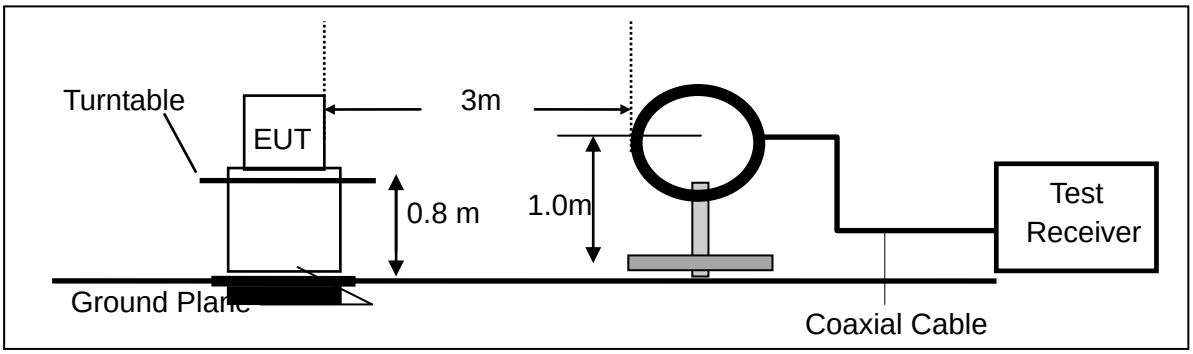
Limit line=Specific limits(dBuV) + distance extrapolation factor.

3.2.3 MEASURING INSTRUMENTS

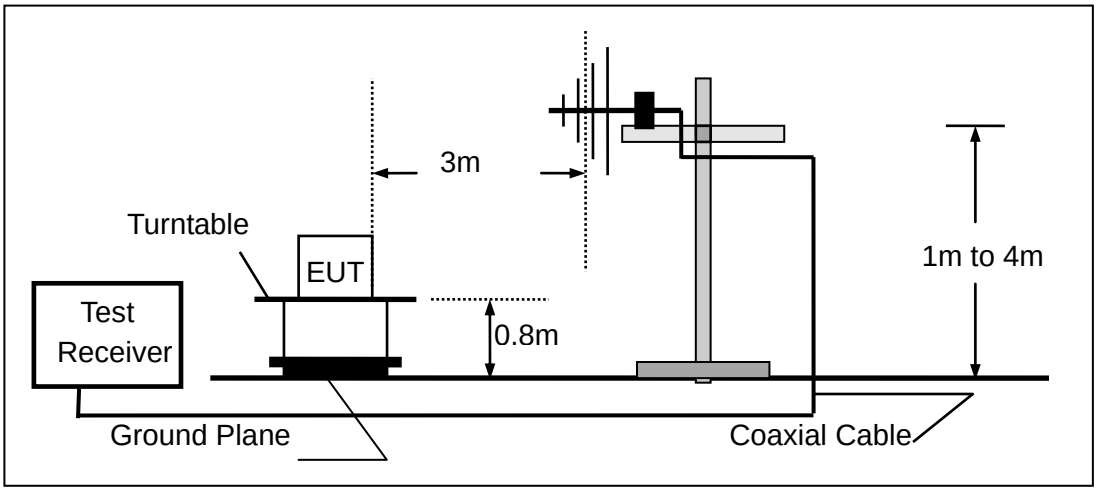
The Measuring equipment is listed in the section 6.3 of this test report.

3.2.4 TEST CONFIGURATION

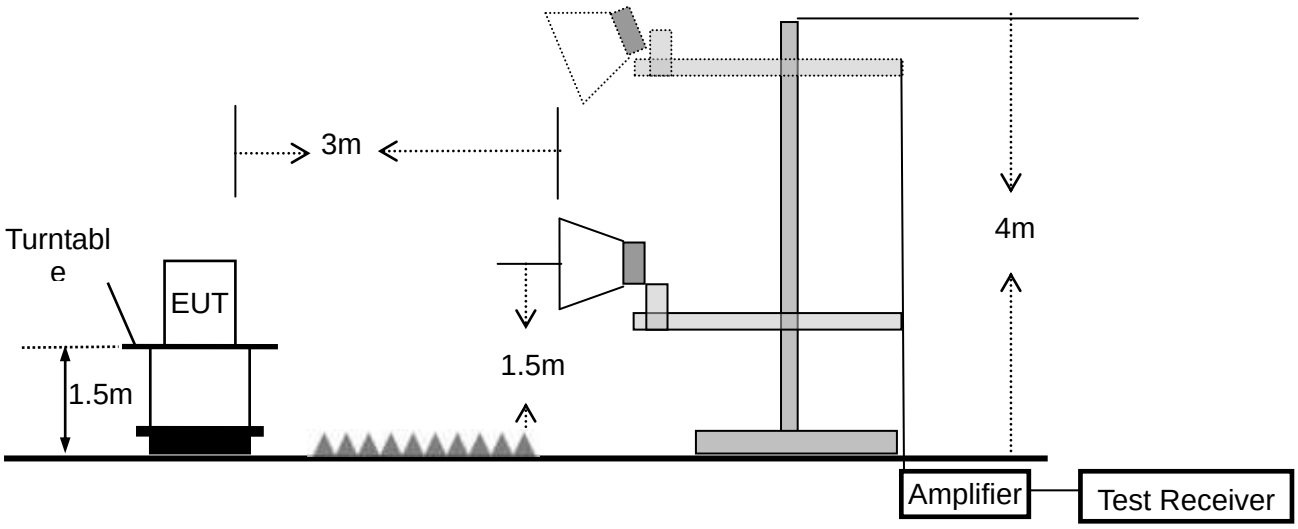
(a) For radiated emissions below 30MHz



(b) For radiated emissions from 30MHz to 1000MHz



(c) For radiated emissions above 1000MHz



3.2.5 TEST PROCEDURE

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.
This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT.
Use the following spectrum analyzer settings:

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

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

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

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

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

3.2.6 TEST RESULTS (9KHz – 30 MHz)

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX	Polarization :	--

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

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

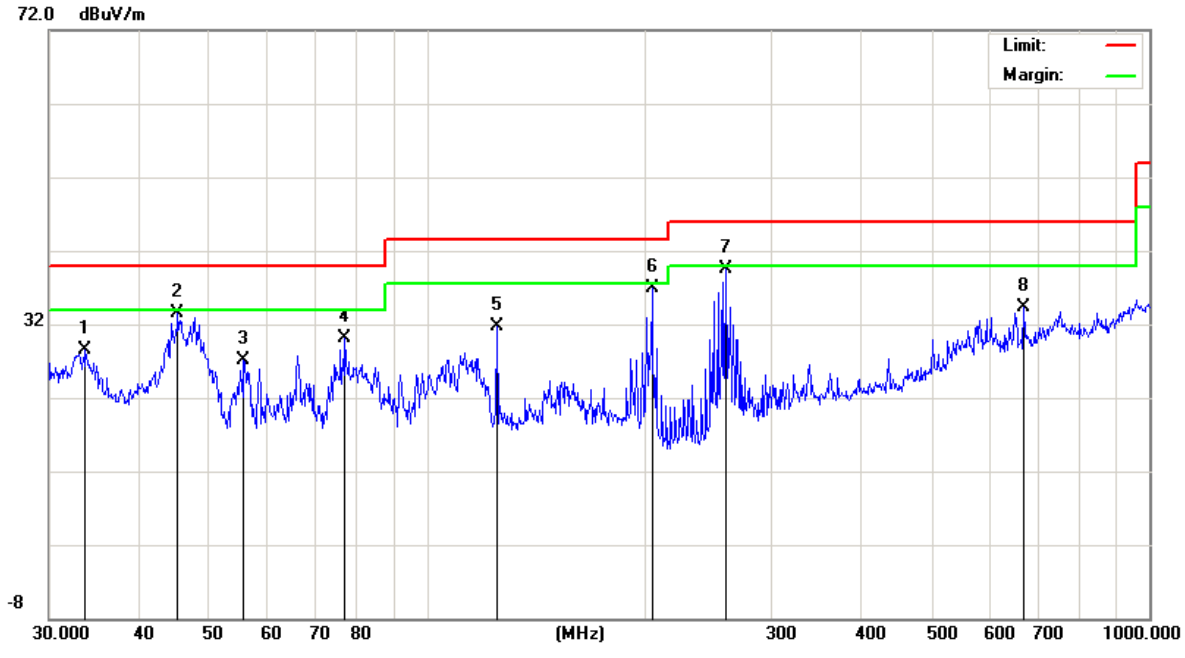
3.2.7 TEST RESULTS (30MHz – 1GHz)

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25.4 ℃	Relative Humidity：	47%
Pressure：	1010 hPa	Test Voltage ：	DC 12V from Adapter 1 AC 120V/60Hz
Test Mode ：	TX(5.2G)- 802.11a (Low CH)		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	33.6802	11.16	17.39	28.55	40.00	-11.45	QP
V	45.2166	22.24	11.18	33.42	40.00	-6.58	QP
V	55.8047	20.61	6.53	27.14	40.00	-12.86	QP
V	77.0505	22.50	7.52	30.02	40.00	-9.98	QP
V	125.0066	19.65	12.15	31.80	43.50	-11.70	QP
V	204.9551	27.06	9.81	36.87	43.50	-6.63	QP
V	259.2338	24.66	14.80	39.46	46.00	-6.54	QP
V	670.4893	11.82	22.40	34.22	46.00	-11.78	QP

Remark:

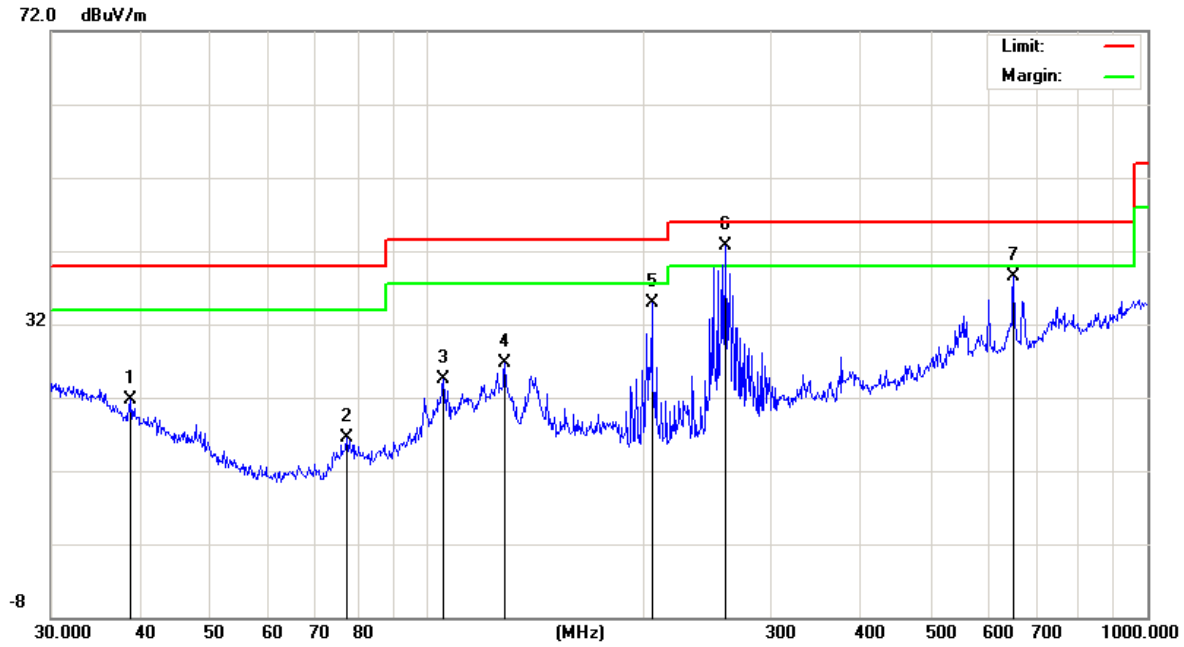
Emission Level= Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
H	38.7518	7.12	14.57	21.69	40.00	-18.31	QP
H	77.3212	8.93	7.59	16.52	40.00	-23.48	QP
H	105.2718	13.42	11.10	24.52	43.50	-18.98	QP
H	128.1130	14.23	12.41	26.64	43.50	-16.86	QP
H	204.9551	25.11	9.81	34.92	43.50	-8.58	QP
H	259.2338	27.98	14.80	42.78	46.00	-3.22	QP
H	651.9417	15.93	22.67	38.60	46.00	-7.40	QP

Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level - Limit

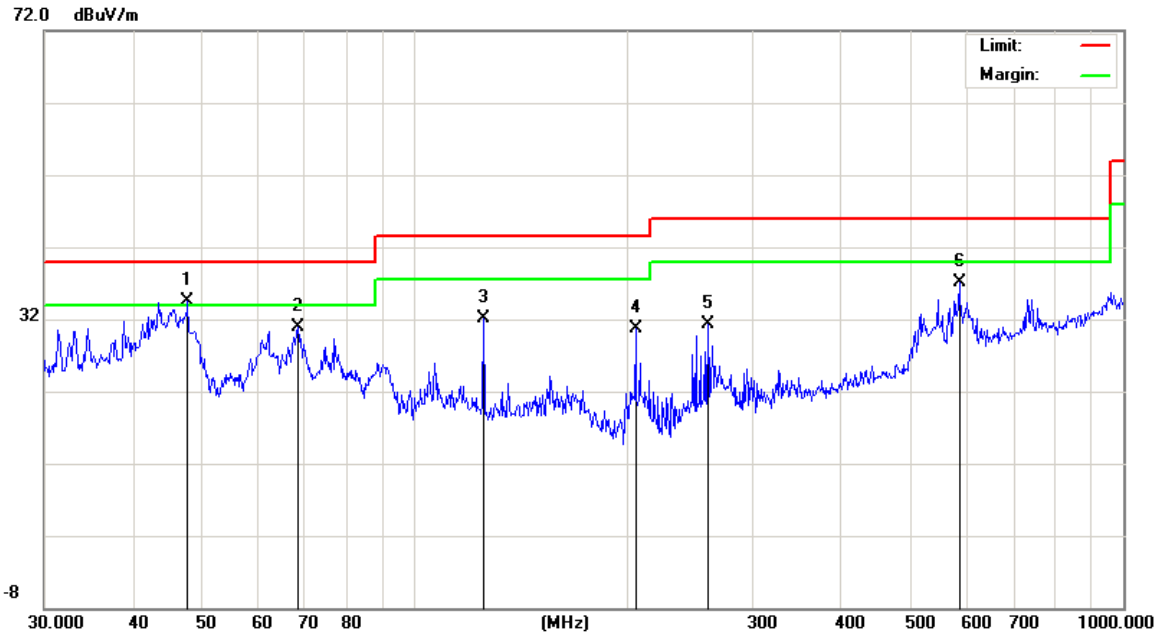


EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25.4 ℃	Relative Humidity：	47%
Pressure：	1010 hPa	Test Voltage ：	DC 12V from Adapter 1 AC 120V/60Hz
Test Mode ：	TX(5.8G)- 802.11a (Low CH)		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	47.8260	23.69	10.84	34.53	40.00	-5.47	QP
V	68.3907	24.81	6.01	30.82	40.00	-9.18	QP
V	125.0066	19.88	12.15	32.03	43.50	-11.47	QP
V	204.9550	20.81	9.81	30.62	43.50	-12.88	QP
V	259.2337	16.43	14.80	31.23	46.00	-14.77	QP
V	586.8437	15.48	21.58	37.06	46.00	-8.94	QP

Remark:

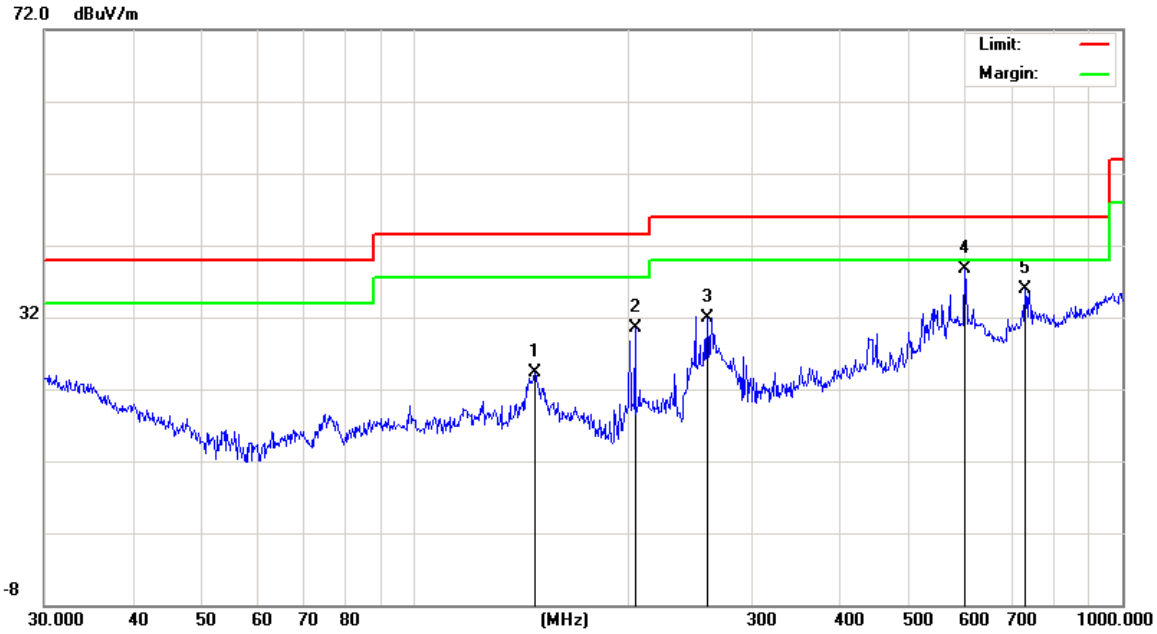
Emission Level= Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
H	147.9214	12.40	12.00	24.40	43.50	-19.10	QP
H	204.9550	20.68	9.81	30.49	43.50	-13.01	QP
H	259.2336	17.11	14.80	31.91	46.00	-14.09	QP
H	599.3211	17.11	21.69	38.80	46.00	-7.20	QP
H	729.3582	10.72	25.10	35.82	46.00	-10.18	QP

Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level - Limit

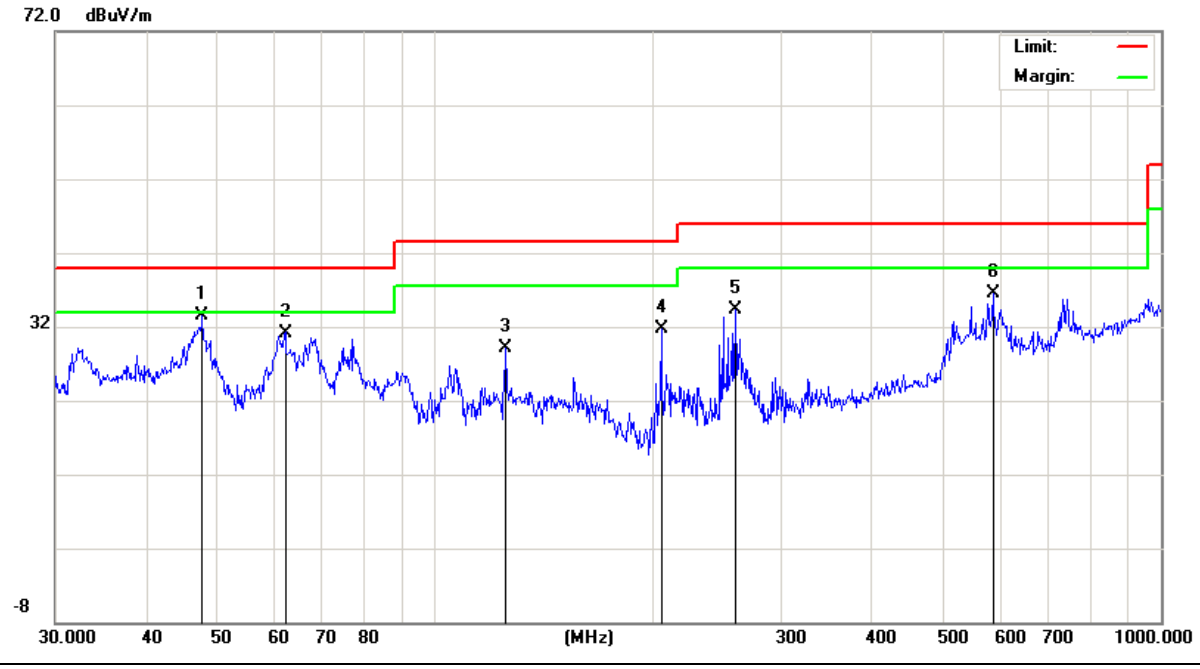


EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25.4 ℃	Relative Humidity：	47%
Pressure：	1010 hPa	Test Voltage ：	DC 12V from Adapter 2 AC 120V/60Hz
Test Mode ：	TX(5.2G)- 802.11a (Low CH)		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	47.8260	22.69	10.84	33.53	40.00	-6.47	QP
V	62.2128	25.27	5.93	31.20	40.00	-8.80	QP
V	125.0066	16.88	12.15	29.03	43.50	-14.47	QP
V	204.9550	21.81	9.81	31.62	43.50	-11.88	QP
V	259.2336	19.43	14.80	34.23	46.00	-11.77	QP
V	586.8437	14.98	21.58	36.56	46.00	-9.44	QP

Remark:

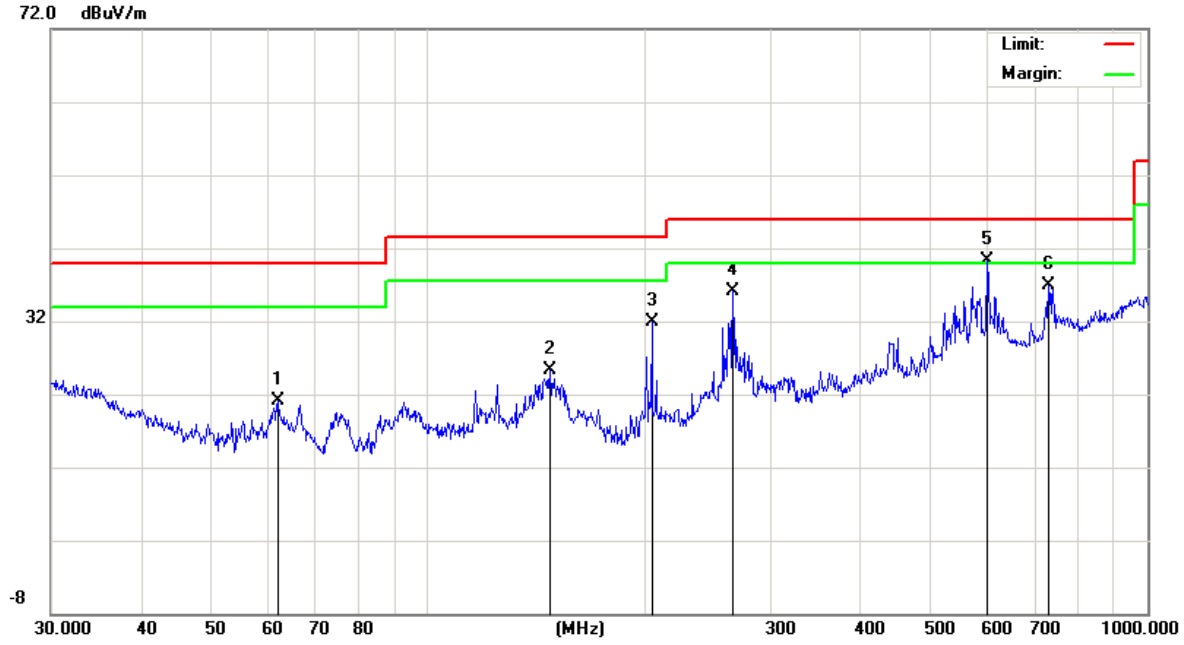
Emission Level= Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
H	61.9951	15.20	5.89	21.09	40.00	-18.91	QP
H	147.9214	13.40	12.00	25.40	43.50	-18.10	QP
H	204.9550	22.18	9.81	31.99	43.50	-11.51	QP
H	265.6757	21.65	14.37	36.02	46.00	-9.98	QP
H	599.3211	18.61	21.69	40.30	46.00	-5.70	QP
H	729.3582	11.72	25.10	36.82	46.00	-9.18	QP

Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level - Limit

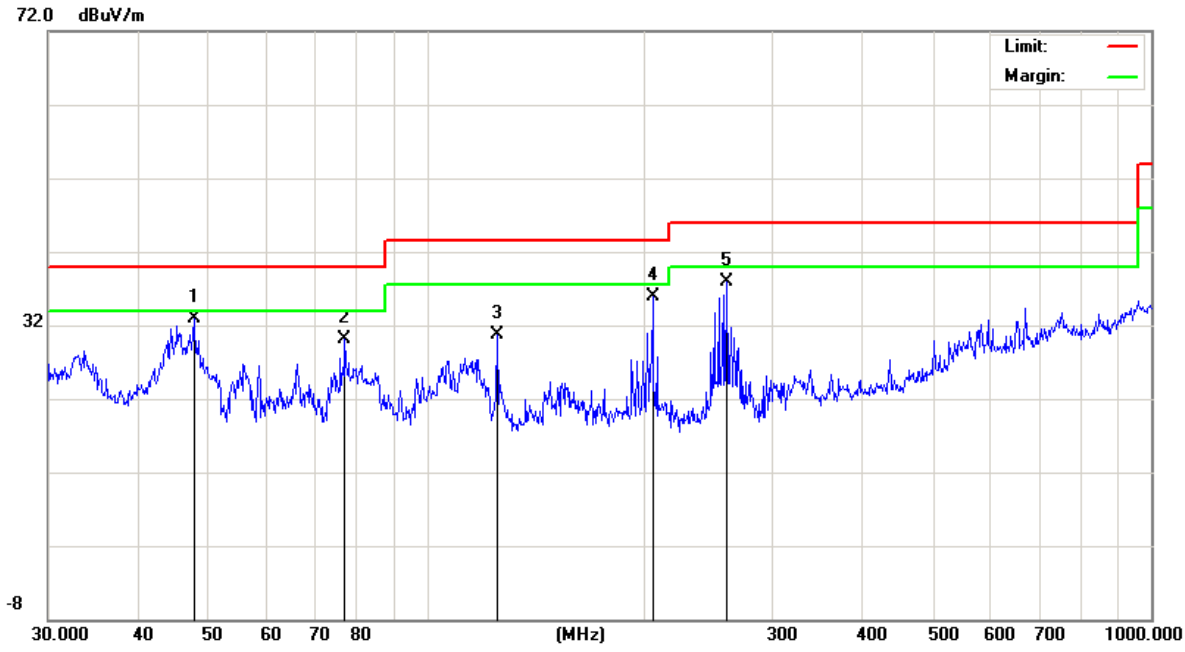


EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25.4 ℃	Relative Humidity：	47%
Pressure：	1010 hPa	Test Voltage ：	DC 12V from Adapter 2 AC 120V/60Hz
Test Mode ：	TX(5.8G)- 802.11a (Low CH)		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	47.6584	22.09	10.83	32.92	40.00	-7.08	QP
V	77.0503	22.50	7.52	30.02	40.00	-9.98	QP
V	125.0066	18.65	12.15	30.80	43.50	-12.70	QP
V	204.9550	26.06	9.81	35.87	43.50	-7.63	QP
V	259.2336	23.16	14.80	37.96	46.00	-8.04	QP

Remark:

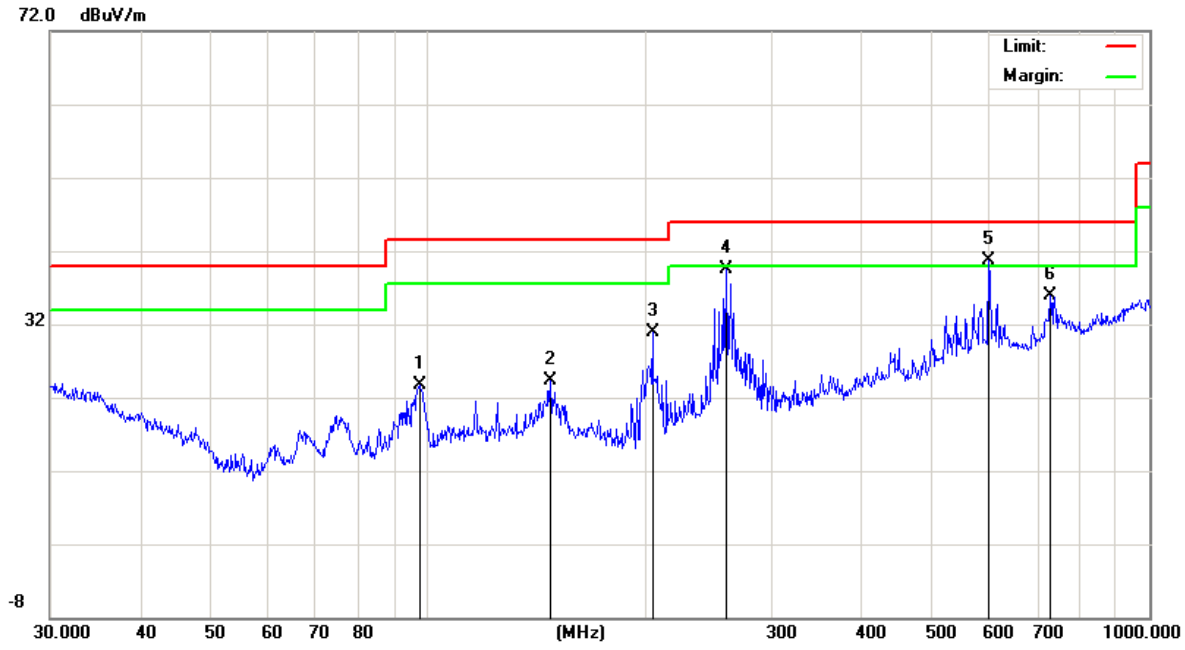
Emission Level= Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
H	97.7981	13.25	10.52	23.77	43.50	-19.73	QP
H	147.9214	12.40	12.00	24.40	43.50	-19.10	QP
H	204.9550	21.18	9.81	30.99	43.50	-12.51	QP
H	259.2336	24.61	14.80	39.41	46.00	-6.59	QP
H	599.3211	19.11	21.69	40.80	46.00	-5.20	QP
H	729.3582	10.72	25.10	35.82	46.00	-10.18	QP

Remark:

Emission Level= Meter Reading+ Factor, Margin= Emission Level - Limit



3.2.8 TEST RESULTS (1GHz-18GHz)

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX(5.2G) - 802.11n20 _5180~5240MHz		

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G									
Vertical	3015	57.34	5.94	35.40	44.00	54.68	68.20	-13.52	Pk
Vertical	10360	57.8	8.46	39.75	44.50	61.51	68.20	-6.69	Pk
Vertical	15540	60.89	10.12	38.80	44.10	65.71	74.00	-8.29	Pk
Vertical	15540	41.51	10.12	38.80	42.70	47.73	54.00	-6.27	AV
Horizontal	2981	58.67	5.94	35.18	44.00	55.79	68.20	-12.41	Pk
Horizontal	10360	59.17	8.46	38.71	44.50	61.84	68.20	-6.36	Pk
Horizontal	15540	59.53	10.12	38.38	44.10	63.93	74.00	-10.07	Pk
Horizontal	15540	43.05	10.12	38.38	44.10	47.45	54.00	-6.55	AV
middle Channel (5200 MHz)-Above 1G									
Vertical	3561	60.52	6.48	36.35	44.05	59.30	68.20	-8.90	Pk
Vertical	10400	56.92	8.47	37.88	44.51	58.76	68.20	-9.44	Pk
Vertical	15600	60.52	10.12	38.80	44.10	65.34	74.00	-8.66	Pk
Vertical	15600	41.88	10.12	38.80	42.70	48.10	54.00	-5.90	AV
Horizontal	3363	57.16	6.48	36.37	44.05	55.96	68.20	-12.24	Pk
Horizontal	10400	58.45	8.47	38.64	44.50	61.06	68.20	-7.14	Pk
Horizontal	15600	60.95	10.12	38.38	44.10	65.35	74.00	-8.65	Pk
Horizontal	15600	45.2	10.12	38.38	44.10	49.60	54.00	-4.40	AV
High Channel (5240 MHz)-Above 1G									
Vertical	3926	55.25	7.10	37.24	43.50	56.09	74.00	-17.91	Pk
Vertical	3926	44.67	7.10	37.24	43.50	45.51	54.00	-8.49	AV
Vertical	10480	59.98	8.46	37.68	44.50	61.62	68.20	-6.58	Pk
Vertical	15720	56.25	10.12	38.80	44.10	61.07	74.00	-12.93	Pk
Vertical	15720	43.74	10.12	38.80	42.70	49.96	54.00	-4.04	AV
Horizontal	3885	55.21	7.10	37.24	43.50	56.05	74.00	-17.95	Pk
Horizontal	3885	44.88	7.10	37.24	43.50	45.72	54.00	-8.28	AV
Horizontal	10480	58.32	8.46	38.57	44.50	60.85	68.20	-7.35	Pk
Horizontal	15720	56.3	10.12	38.38	44.10	60.70	74.00	-13.30	Pk
Horizontal	15720	44.83	10.12	38.38	44.10	49.23	54.00	-4.77	AV

Note:"802.11n20 (5G)" mode is the worst mode.

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX(5.8G) - 802.11n20 _5725~5850MHz		

Polar	Frequency	Meter Reading	Cable loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector Type
(H/V)	(MHz)	(dBuV)	(dB)	dB/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G									
Vertical	2806.9	65.42	5.94	35.40	44.00	62.76	74.00	-11.24	Pk
Vertical	2806.9	46.18	5.94	35.40	44.00	43.52	54.00	-10.48	AV
Vertical	11490.56	63.86	8.46	39.75	44.50	67.57	74.00	-6.43	Pk
Vertical	11490.56	44.10	8.46	39.75	44.50	47.81	54.00	-6.19	AV
Vertical	17235.32	60.15	10.12	38.80	44.10	64.97	68.20	-3.23	Pk
Horizontal	2911.524	64.93	5.94	35.18	44.00	62.05	68.20	-6.15	Pk
Horizontal	11490.56	62.91	8.46	38.71	44.50	65.58	74.00	-8.42	Pk
Horizontal	11490.56	41.39	8.46	38.71	44.50	44.06	54.00	-9.94	AV
Horizontal	17235.56	59.65	10.12	38.38	44.10	64.05	68.20	-4.15	Pk
middle Channel (5785 MHz)-Above 1G									
Vertical	3763.083	64.78	6.48	36.35	44.05	63.56	74.00	-10.44	Pk
Vertical	3763.083	42.63	6.48	36.35	44.05	41.41	54.00	-12.59	AV
Vertical	11570.56	63.77	8.47	37.88	44.51	65.61	74.00	-8.39	Pk
Vertical	11570.56	45.72	8.47	37.88	44.51	47.56	54.00	-6.44	AV
Vertical	17355.56	59.28	10.12	38.8	44.10	64.10	68.20	-4.10	Pk
Horizontal	3561.585	61.40	6.48	36.37	44.05	60.20	68.20	-8.00	Pk
Horizontal	11570.56	61.08	8.47	38.64	44.50	63.69	74.00	-10.31	Pk
Horizontal	11570.56	44.20	8.47	38.64	44.50	46.81	54.00	-7.19	AV
Horizontal	17355.56	64.67	10.12	38.38	44.10	69.07	74.00	-4.93	Pk
Horizontal	17355.35	44.33	10.12	38.38	44.10	48.72751	54.00	-5.27	AV
High Channel (5825 MHz)-Above 1G									
Vertical	3907.168	61.38	7.10	37.24	43.50	62.22	74.00	-11.78	Pk
Vertical	3907.168	43.61	7.10	37.24	43.50	44.45	54.00	-9.55	AV
Vertical	11650.54	61.87	8.46	37.68	44.50	63.51	74.00	-10.49	Pk
Vertical	11650.54	43.50	8.46	37.68	44.50	45.14	54.00	-8.86	AV
Vertical	17475.54	60.23	10.12	38.8	44.10	65.05	68.20	-3.15	Pk
Horizontal	3912.779	62.09	7.10	37.24	43.50	62.93	74.00	-11.07	Pk
Horizontal	3912.779	44.24	7.10	37.24	43.50	45.08	54.00	-8.92	AV
Horizontal	11650.54	63.23	8.46	38.57	44.50	65.76	74.00	-8.24	Pk
Horizontal	11650.54	43.62	8.46	38.57	44.50	46.15	54.00	-7.85	AV
Horizontal	17475.54	60.56	10.12	38.38	44.10	64.96	68.20	-3.24	Pk

Note:"802.11n20 (5G)" mode is the worst mode.

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

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

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Spurious Emission in Restricted Bands 3260MHz- 18000MHz

All the modulation modes have been tested, the worst result was report as below:

Frequency	Reading Level	Cable Loss	Antenna Factor	Preamp Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBμV)	(dB)	dB/m	(dB)	(dBμV/m)	(dBμV/m)	(dB)	Type	
4500	64.67	5.2	35.6	44.2	61.27	74	-12.73	Pk	Horizontal
4500	47.45	5.2	35.6	44.2	44.05	54	-9.95	AV	Horizontal
4500	54.49	5.2	35.6	44.2	51.09	74	-22.91	Pk	Horizontal
4500	40.95	5.2	35.6	44.2	37.55	54	-16.45	AV	Horizontal
5150	70.23	5.36	35.66	44.22	67.03	74	-6.97	Pk	Horizontal
5150	52.20	5.36	35.66	44.22	49.00	54	-5.00	AV	Horizontal
5150	70.41	5.36	35.66	44.22	67.21	74	-6.79	Pk	Vertical
5150	52.16	5.36	35.66	44.22	48.96	54	-5.04	AV	Vertical
5350	63.44	5.68	35.68	44.22	60.58	74	-13.42	Pk	Vertical
5350	42.43	5.68	35.68	44.22	39.57	54	-14.43	AV	Vertical
5350	55.50	5.68	35.68	44.22	52.64	74	-21.36	Pk	Horizontal
5350	38.67	5.68	35.68	44.22	35.81	54	-18.19	AV	Horizontal

“802.11n20” mode is the worst mode. When PK value is lower than the Average value limit, average don't record.
Other emissions are attenuated 20dB below the limit that does not recorded in the report.

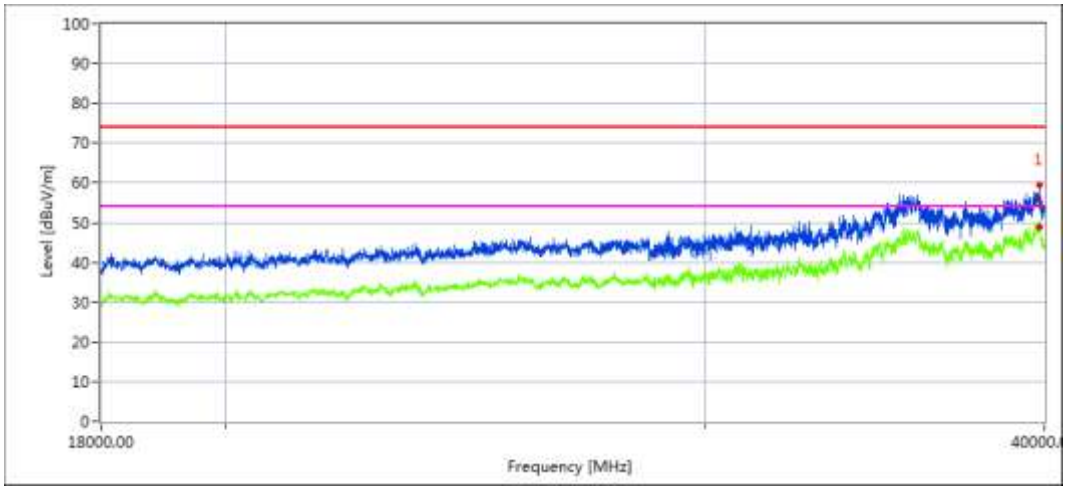
3.2.9 TEST RESULTS (18GHZ-40GHZ)

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX (5.2G)-802.11n20 5180MHz~5240MHz; TX (5.8G)-802.11n20 5745MHz~5825MHz		

All the modulation modes have been tested, and the worst result was report as below:

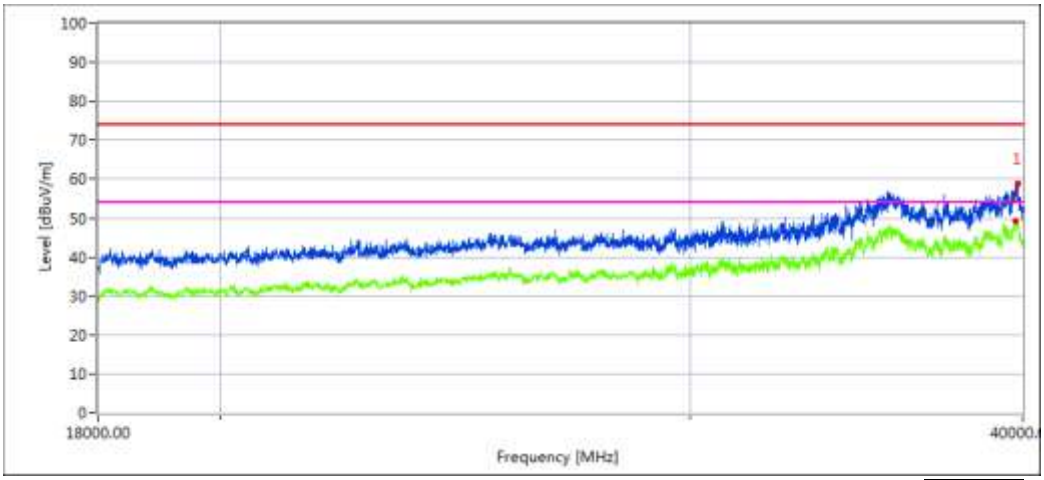
Low Channel (5180 MHz)-Above 1G

Horizontal



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39769.27	33.82	20.09	44.07	43.48	54.5	68.2	13.7	Peak

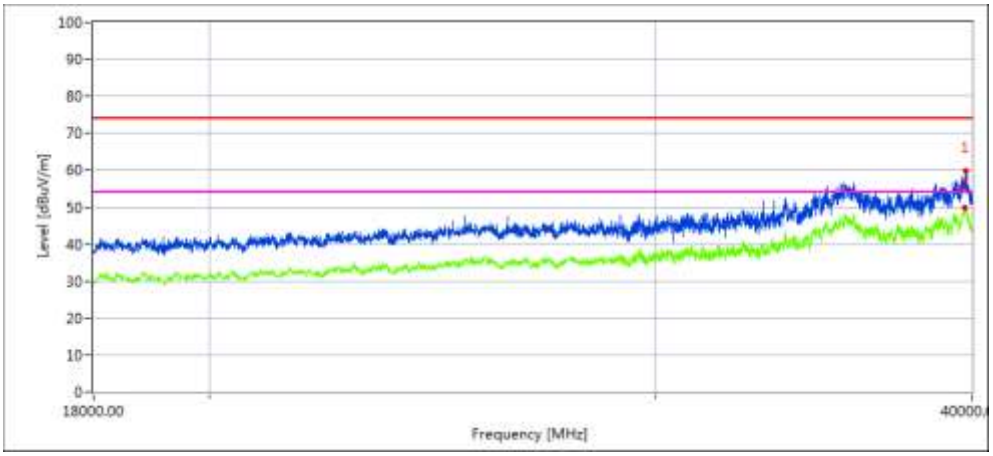
Vertical



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39769.546	35.92	20.09	44.07	43.48	56.6	68.2	11.6	Peak

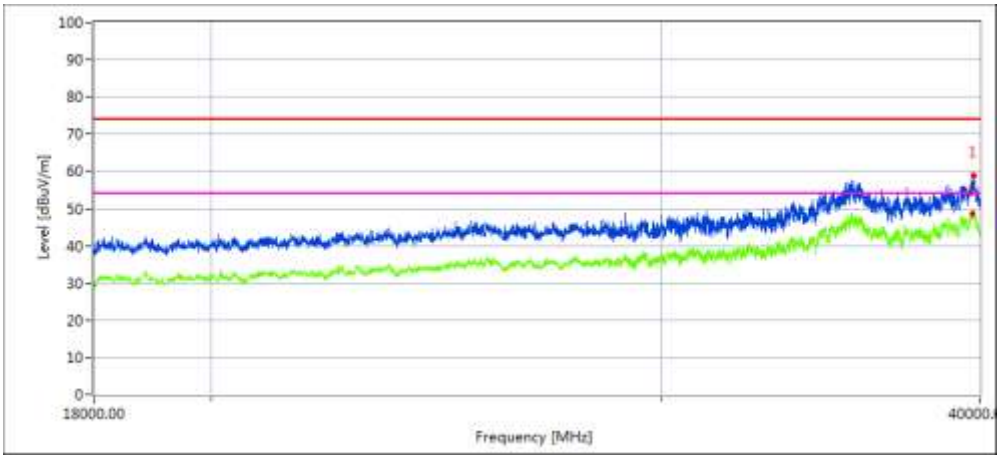
High Channel (5240 MHz)-Above 1G

Horizontal



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39793.264	38.37	19.11	42.73	44.61	55.6	68.2	12.6	Peak

Vertical

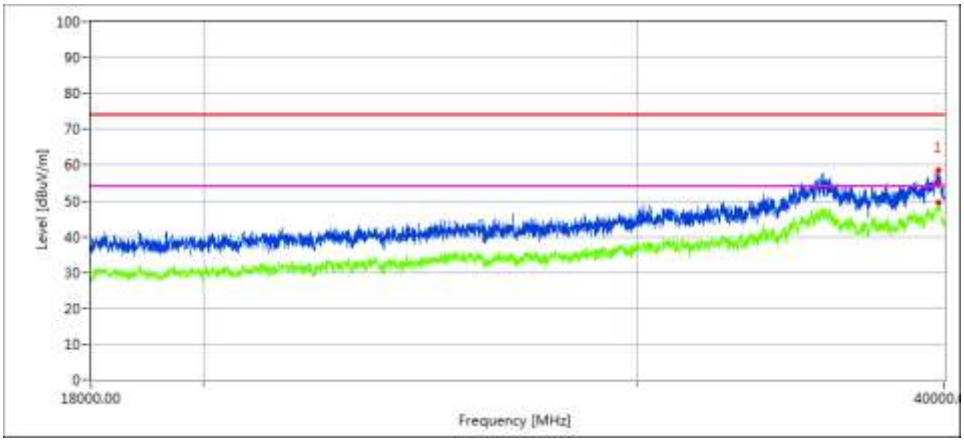


Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39795.968	35.42	20.09	44.07	43.48	56.1	68.2	12.1	Peak

Note:802.11n20 MIMO mode is the worst mode.

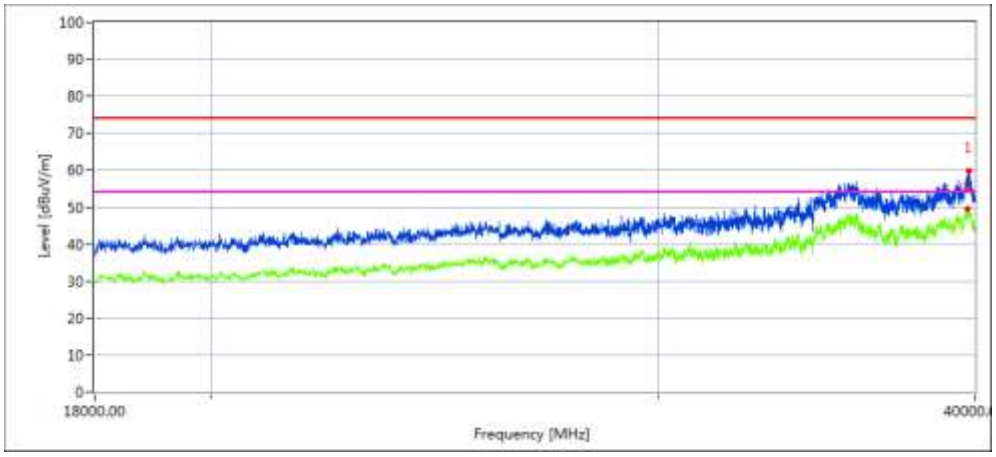
Low Channel (5745 MHz)-Above 1G

Horizontal



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39769.114	38.35	19.98	43.84	44.62	56.6	68.2	11.6	Peak

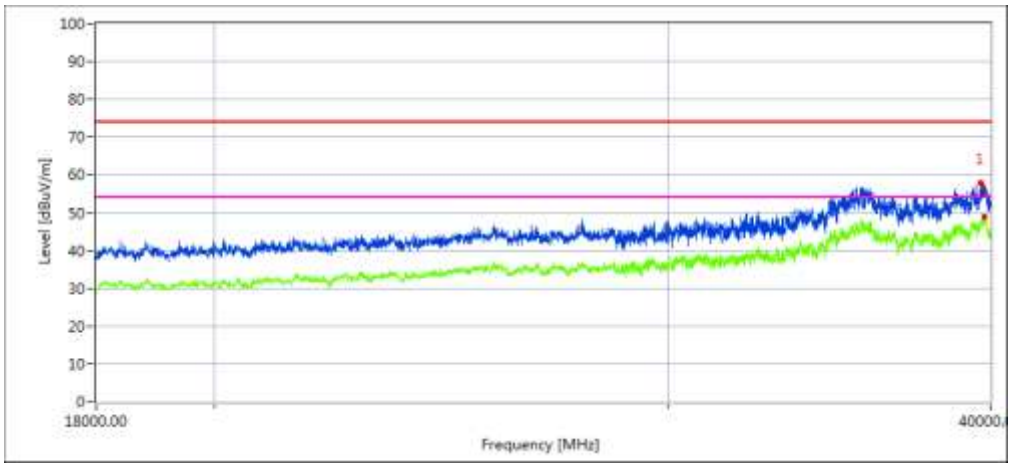
Vertical



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39770.880	35.92	20.01	44.06	42.69	57.3	68.2	10.9	Peak

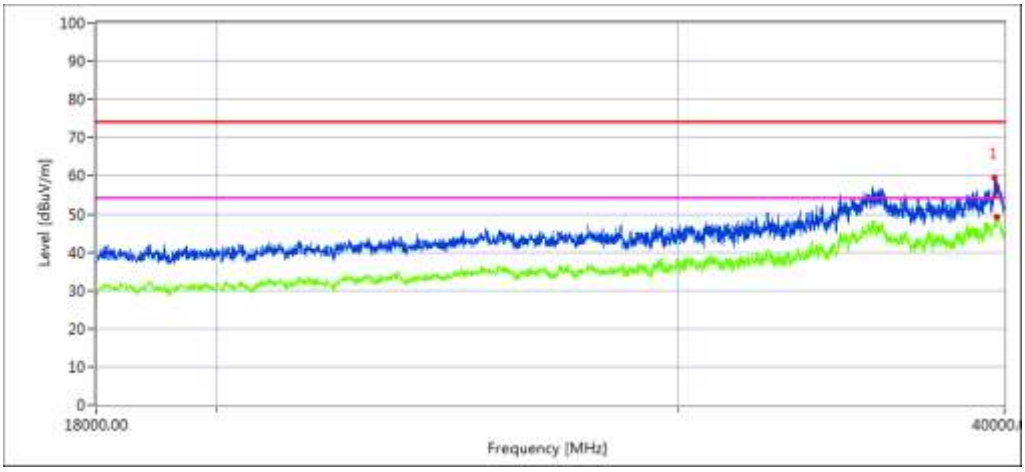
High Channel (5825 MHz)-Above 1G

Horizontal



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39656.332	29.9	19.98	43.84	44.62	49.1	68.2	19.1	Peak

Vertical



Frequency (MHz)	Meter Reading(dBuV)	Cable loss(dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin dB	Detector Type
39673.022	36.12	20.01	44.06	42.69	57.5	68.2	10.7	Peak

Note:802.11n20 MIMO mode is the worst mode.

3.3 POWER SPECTRAL DENSITY TEST

3.3.1 Applied procedures / limit

According to FCC §15.407(a) (1) (3)

For the band 5.15-5.25 GHz,

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.,

3.3.2 TEST PROCEDURE

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

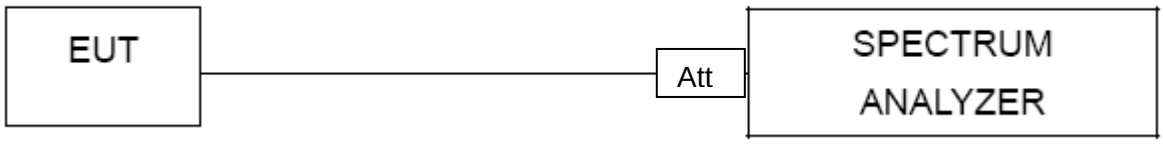
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

3.3.3 DEVIATION FROM STANDARD

No deviation.

3.3.4 TEST SETUP



3.3.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

3.3.6 **TEST RESULTS**

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1015 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX Frequency Band 1 (5150-5250MHz), Band 3 (5745-5825MHz)		

Note: Band1 For 802.11n/ac/ax 5GHz has MIMO mode.
Directional gain=9.75dbi
9.75dbi＞6.0dbi so power limit is limit= 17-(9.75-6)=13.25 in dBm
Band3 For 802.11n/ac/ax 5GHz has MIMO mode.
Directional gain=11.08dbi
11.08dbi＞6.0dbi so power limit is limit=30-(11.08-6)=24.92 in dBm

Test data reference attachment.

3.4 26DB & 99% EMISSION BANDWIDTH

3.4.1 Applied procedures / limit

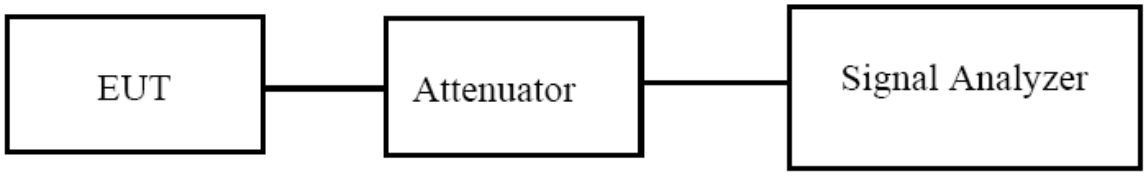
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

3.4.2 TEST PROCEDURE

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



3.4.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.4.4 TEST RESULTS

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX Frequency Band 1 (5150-5250MHz), Band 3 (5745-5825MHz)		

Test data reference attachment.

3.5 MINIMUM 6 DB BANDWIDTH

3.5.1 Applied procedures / limit

According to FCC §15.407(e)
(e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.5.2 TEST PROCEDURE

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

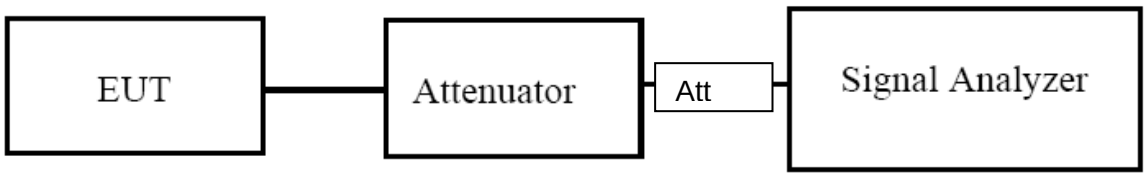
f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.5.3 DEVIATION FROM STANDARD

No deviation.

3.5.4 TEST SETUP



3.5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.5.6 TEST RESULTS

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX (5G) Mode Frequency Band 3 (5725-5850MHz)		

Test data reference attachment.

3.6 MAXIMUM CONDUCTED OUTPUT POWER

3.6.1 PPLIED PROCEDURES / LIMIT

According to FCC §15.407(a) (1) (3)

For the band 5.15-5.25 GHz,

(1) (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.,

3.6.2 TEST PROCEDURE

· Maximum conducted output power may be measured using a spectrum analyzer/EMI receiver or an RF power meter.

1. Device Configuration

If possible, configure or modify the operation of the EUT so that it transmits continuously at its maximum power control level (see section II.B.).

a) The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

b) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations (e.g., overheating), the EUT shall be operated at its maximum power control level with the transmit duration as long as possible and the duty cycle as high as possible.

2. Measurement using a Spectrum Analyzer or EMI Receiver (SA)

Measurement of maximum conducted output power using a spectrum analyzer requires integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99-percent occupied bandwidth of the signal.1 However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with § 15.407(a).

a) The test method shall be selected as follows: (i) Method SA-1 or SA-1 Alternative (averaging with the EUT transmitting at full power throughout each sweep) shall be applied if either of the following conditions can be satisfied:

• The EUT transmits continuously (or with a duty cycle ≥ 98 percent).

• Sweep triggering or gating can be implemented in a way that the device transmits at the maximum power control level throughout the duration of each of the instrument sweeps to be averaged. This condition can generally be achieved by triggering the instrument's sweep if the duration of the sweep (with the analyzer configured as in Method SA-1, below) is equal to or shorter than the duration T of each transmission from the EUT and if those transmissions exhibit full power throughout their durations.

(ii) Method SA-2 or SA-2 Alternative (averaging across on and off times of the EUT transmissions, followed by duty cycle correction) shall be applied if the conditions of (i) cannot be achieved and the transmissions exhibit a constant duty cycle during the measurement duration. Duty cycle will be considered to be constant if variations are less than ± 2 percent.

(iii) Method SA-3 (RMS detection with max hold) or SA-3 Alternative (reduced VBW with max hold) shall be applied if the conditions of (i) and (ii) cannot be achieved.

b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep): (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

(ii) Set RBW = 1 MHz.

(iii) Set VBW ≥ 3 MHz.

(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)

(v) Sweep time = auto.

(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

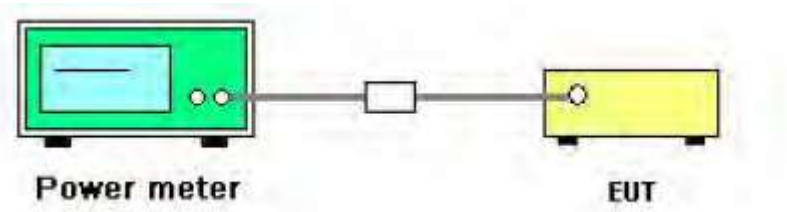
(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum

3.6.3 DEVIATION FROM STANDARD

No deviation.

3.6.4 TEST SETUP



3.6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.6.6 TEST RESULTS

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX Frequency Band 1 (5150-5250MHz), Band 3 (5745-5825MHz)		

Note: Band1 For 802.11n/ac/ax 5GHz has MIMO mode.
Directional gain=9.75dbi
9.75dbi＞6.0dbi so power limit is limit= 30-(9.75-6)=26.25 in dBm
Band3 For 802.11n/ac/ax 5GHz has MIMO mode.
Directional gain=11.08dbi
11.08dbi＞6.0dbi so power limit is limit=30-(11.08-6)=24.92 in dBm

Test data reference attachment.

3.7 OUT OF BAND EMISSIONS

3.7.1 Applicable Standard

According to FCC §15.407(b)

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(2) For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

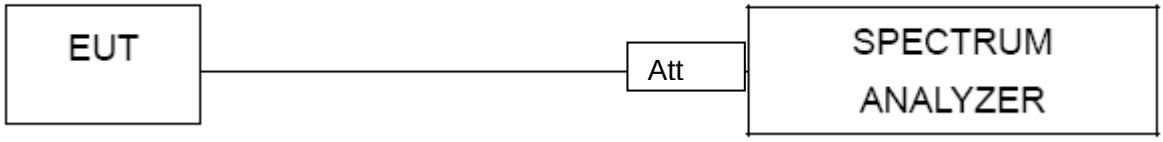
3.7.2 Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

3.7.3 DEVIATION FROM STANDARD

No deviation.

3.7.4 TEST SETUP



3.7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.7.6 TEST RESULTS

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 12V

Note: Offset contains antenna gain and cable loss.

Test data reference attachment.

3.8 SPURIOUS RF CONDUCTED EMISSIONS

3.8.1Conformance Limit

According to FCC §15.407(b)(1) (4)

3.8.2Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

3.8.3Test Setup

Please refer to Section 6.1 of this test report.

3.8.4Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=1000kHz and VBW= 3000KHz to measure the peak field strength , and measure frequency range from 30MHz to 40GHz.

3.8.5Test Results

Remark: The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.

Test data reference attachment.
Offset contains antenna gain and cable loss.

3.9 FREQUENCY STABILITY MEASUREMENT

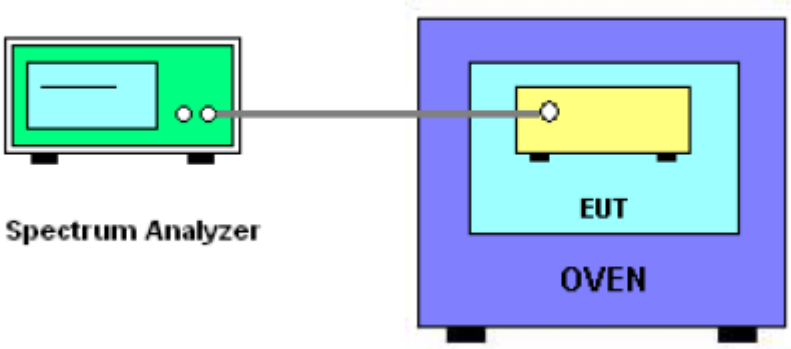
3.9.1 LIMIT

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.9.2 TEST PROCEDURES

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10_6 ppm .
6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -10°C~45°C.

3.9.3 TEST SETUP LAYOUT



3.9.4 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously un-modulation transmitting mode.

3.9.5 TEST RESULTS

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX Frequency Band I (5150-5250MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5180.0375	5180	0.0375	-7.2475
		V max (V)	13.80	5180.0738	5180	0.0738	-14.2525
		V min (V)	10.20	5180.0456	5180	0.0456	-8.7943
Limits				Within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5180.0318	5180	0.0318	-6.1344
		T (°C)	-10	5180.0018	5180	0.0018	-0.3392
		T (°C)	0	5180.0685	5180	0.0685	-13.2193
		T (°C)	10	5180.0386	5180	0.0386	-7.4453
		T (°C)	20	5180.0286	5180	0.0286	-5.5293
		T (°C)	30	5180.0604	5180	0.0604	-11.6634
		T (°C)	40	5180.0087	5180	0.0087	-1.6851
		T (°C)	50	5180.0648	5180	0.0648	-12.5084
		T (°C)	60	5180.0360	5180	0.0360	-6.9562
		T (°C)	70	5180.0375	5180	0.0375	-7.2372
Limits				Within 5150-5250MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5200.0582	5200	0.0582	-11.1940
		V max (V)	13.80	5200.0656	5200	0.0656	-12.6112
		V min (V)	10.20	5200.0133	5200	0.0133	-2.5594
Limits				Within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5200.0074	5200	0.0074	-1.4254
		T (°C)	-10	5200.0143	5200	0.0143	-2.7476
		T (°C)	0	5200.0538	5200	0.0538	-10.3382
		T (°C)	10	5200.0148	5200	0.0148	-2.8422
		T (°C)	20	5200.0757	5200	0.0757	-14.5613
		T (°C)	30	5200.0183	5200	0.0183	-3.5266
		T (°C)	40	5200.0466	5200	0.0466	-8.9671
		T (°C)	50	5200.0325	5200	0.0325	-6.2490
		T (°C)	60	5200.0764	5200	0.0764	-14.6947
		T (°C)	70	5200.0504	5200	0.0504	-9.6844
Limits				Within 5150-5250MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5240.0454	5240	0.0454	-8.6733
		V max (V)	13.80	5240.0679	5240	0.0679	-12.9563
		V min (V)	10.20	5240.0681	5240	0.0681	-12.9978
Limits				Within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12	T (°C)	-20	5240.0761	5240	0.0761	-14.5217
		T (°C)	-10	5240.0722	5240	0.0722	-13.7747
		T (°C)	0	5240.0490	5240	0.0490	-9.3439
		T (°C)	10	5240.0073	5240	0.0073	-1.3977
		T (°C)	20	5240.0196	5240	0.0196	-3.7327
		T (°C)	30	5240.0117	5240	0.0117	-2.2313
		T (°C)	40	5240.0255	5240	0.0255	-4.8747
		T (°C)	50	5240.0541	5240	0.0541	-10.3194
		T (°C)	60	5240.0455	5240	0.0455	-8.6827
		T (°C)	70	5240.0587	5240	0.0587	-11.2095
Limits				Within 5150-5250MHz			
Result				Complies			

EUT：	AX6000 Tri-band Mesh Wi-Fi 6 Router	Model Name. ：	ELF1
Temperature：	25 ℃	Relative Humidity：	56%
Pressure：	1012 hPa	Test Voltage ：	DC 12V
Test Mode ：	TX Band 3 (5745-5825MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5745.0631	5745	0.06314	-10.9908
		V max (V)	13.80	5745.0703	5745	0.07030	-12.2371
		V min (V)	10.20	5745.0650	5745	0.06498	-11.3112
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.00	T (°C)	-20	5745.0501	5745	0.05013	-8.7255
		T (°C)	-10	5745.0504	5745	0.05042	-8.7763
		T (°C)	0	5745.0023	5745	0.00231	-0.4013
		T (°C)	10	5745.0797	5745	0.07973	-13.8777
		T (°C)	20	5745.0774	5745	0.07739	-13.4700
		T (°C)	30	5745.0763	5745	0.07635	-13.2890
		T (°C)	40	5745.0530	5745	0.05296	-9.2189
		T (°C)	50	5745.0503	5745	0.05034	-8.7632
		T (°C)	60	5745.0441	5745	0.04407	-7.6709
		T (°C)	70	5745.0295	5745	0.02950	-5.1347
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5785.0036	5785	0.00363	-0.6280
		V max (V)	13.80	5785.0701	5785	0.07014	-12.1250
		V min (V)	10.20	5785.0292	5785	0.02918	-5.0439
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.00	T (°C)	-20	5785.0333	5785	0.03326	-5.7502
		T (°C)	-10	5785.0182	5785	0.01816	-3.1391
		T (°C)	0	5785.0398	5785	0.03976	-6.8733
		T (°C)	10	5785.0635	5785	0.06350	-10.9763
		T (°C)	20	5785.0416	5785	0.04164	-7.1977
		T (°C)	30	5785.0743	5785	0.07427	-12.8381
		T (°C)	40	5785.0423	5785	0.04226	-7.3053
		T (°C)	50	5785.0711	5785	0.07107	-12.2848
		T (°C)	60	5785.0622	5785	0.06225	-10.7604
		T (°C)	70	5785.0721	5785	0.07210	-12.4637
Limits				± 20 ppm			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.00	5825.0404	5825	0.04043	-6.9407
		V max (V)	13.80	5825.0614	5825	0.06142	-10.5438
		V min (V)	10.20	5825.0188	5825	0.01876	-3.2213
Limits				± 20 ppm			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency：5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.00	T (°C)	-20	5825.0339	5825	0.03395	-5.8280
		T (°C)	-10	5825.0138	5825	0.01385	-2.3770
		T (°C)	0	5825.0681	5825	0.06812	-11.6943
		T (°C)	10	5825.0657	5825	0.06570	-11.2797
		T (°C)	20	5825.0499	5825	0.04993	-8.5709
		T (°C)	30	5825.0499	5825	0.04991	-8.5684
		T (°C)	40	5825.0397	5825	0.03970	-6.8159
		T (°C)	50	5825.0669	5825	0.06691	-11.4872
		T (°C)	60	5825.0452	5825	0.04518	-7.7554
		T (°C)	70	5825.0218	5825	0.02183	-3.7485
Limits				± 20 ppm			
Result				Complies			

4. ANTENNA REQUIREMENT

4.1 STANDARD REQUIREMENT

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

4.2 EUT ANTENNA

The EUT antenna is permanent attached Embedded Antenna, It comply with the standard requirement.

Table for Filed Antenna

Antenna	Brand	Model Name	Connector	5.8G Gain (dBi)	Antenna Type
0	N/A	N/A	IPEX	5.06	Embedded Antenna
1	N/A	N/A	IPEX	5.06	Embedded Antenna
2	N/A	N/A	IPEX	5.06	Embedded Antenna
3	N/A	N/A	IPEX	5.06	Embedded Antenna

Antenna	Brand	Model Name	Connector	5.2G Gain (dBi)	Antenna Type
4	N/A	N/A	IPEX	3.73	Embedded Antenna
5	N/A	N/A	IPEX	3.73	Embedded Antenna
6	N/A	N/A	IPEX	3.73	Embedded Antenna
7	N/A	N/A	IPEX	3.73	Embedded Antenna

END OF REPORT