

TEST REPORT

Report No.: BCTC2606051300-4E

Applicant: Alpaca Tec Inc

Product Name: Computer

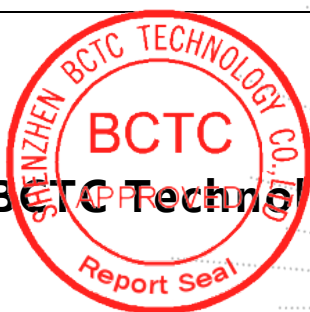
Test Model: TK-E180

Tested Date: 2026-06-26 to 2026-08-07

Issued Date: 2026-08-07



Shenzhen BCTC Technology Co., Ltd.



FCC ID: 2BWWJ-TK-E180

Product Name: Computer

Trademark: ALPACATEC

Model/Type Ref.: TK-E180,AL11,AL14, AL15,AL16,AL17,AL18,AL21,AL11A,AL14A,AL15A,AL16A,AL17A,AL18A,AL21A,TK-E140i,TK-E156,TK-E160,TK-E150U,TK-E140U

Prepared For: Alpaca Tec Inc

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Sample Received Date: 2026-06-26

Sample tested Date: 2026-06-26 to 2026-08-07

Report No.: BCTC2606051300-4E

Test Standards: 47 CFR Part 15 Subpart E (clause 15.407)
ANSI C63.10:2020

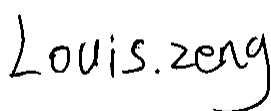
Test Results: PASS

Prepared by :



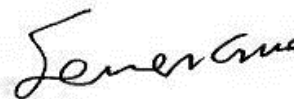
Mike Zheng

Reviewer by :



Louis Zeng

Approved by:



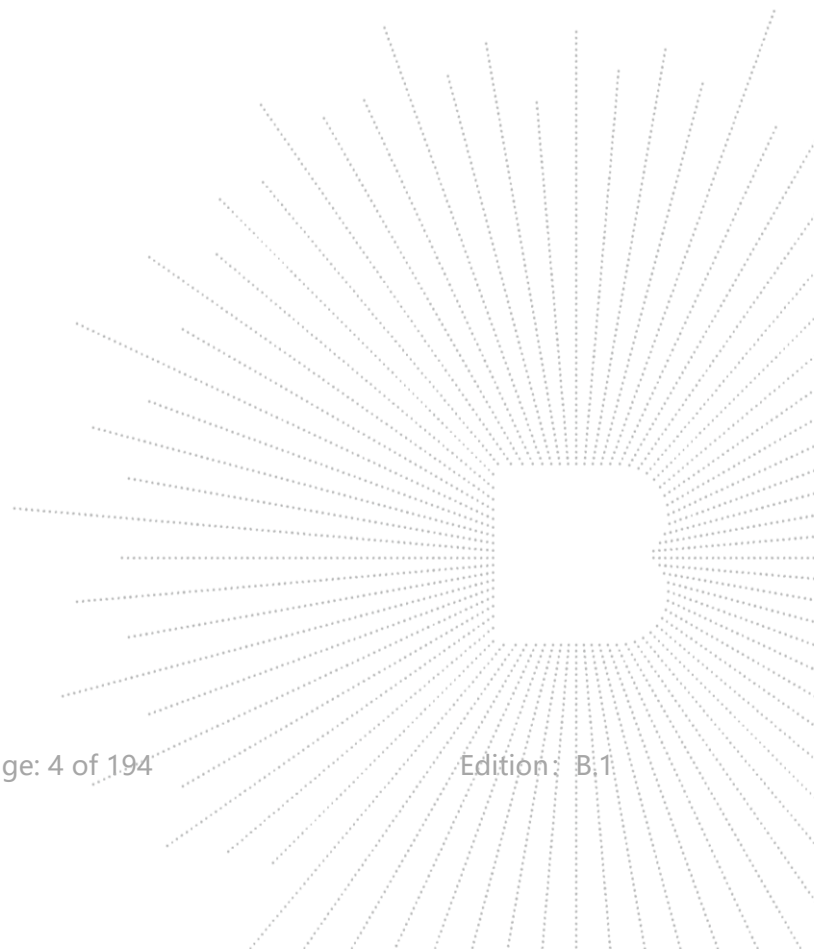
Sewen Guo

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Table of Content

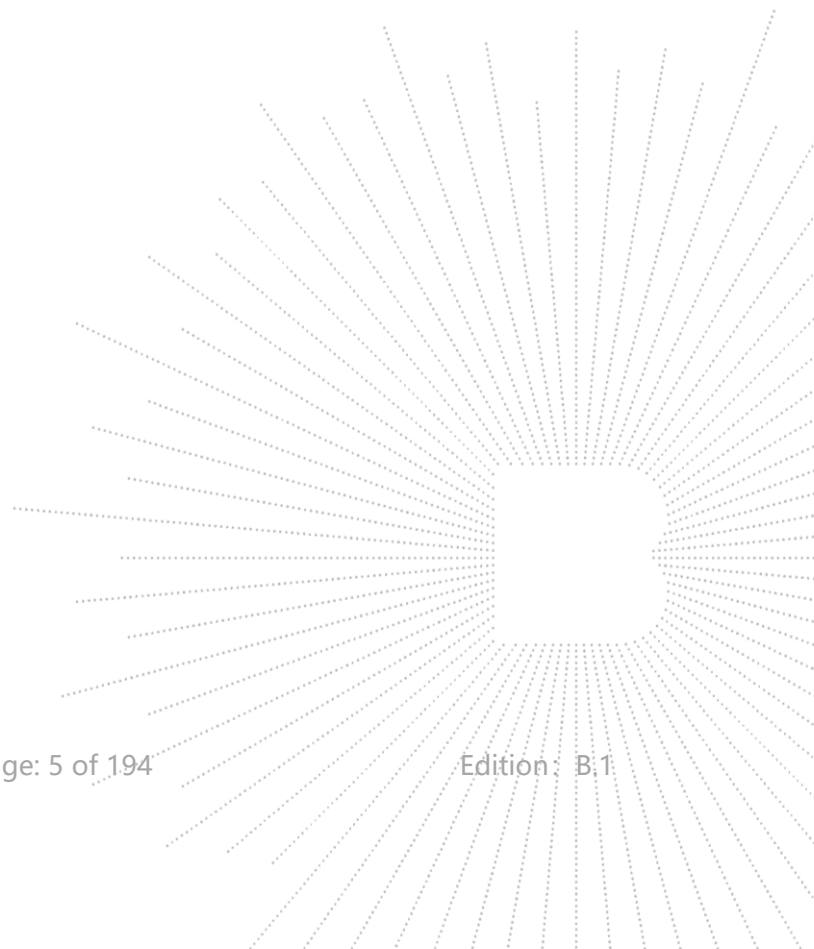
Test Report Declaration	Page
1. Version	5
2. Test Summary	6
3. Measurement Uncertainty	7
4. Product Information and Test Setup	8
4.1 Product Information	8
4.2 Test Setup Configuration	9
4.3 Support Equipment	9
4.4 Channel List	9
4.5 Test Mode	10
4.6 Table Of Parameters Of Text Software Setting	10
4.7 Antenna	11
5. Test Facility And Test Instrument Used	12
5.1 Test Facility	12
5.2 Test Instrument Used	12
6. Conducted Emissions	15
6.1 Block Diagram Of Test Setup	15
6.2 Limit	15
6.3 Test Procedure	15
6.4 EUT Operating Conditions	15
6.5 Test Result	16
7. Radiated Emissions	18
7.1 Block Diagram Of Test Setup	18
7.2 Limit	19
7.3 Test Procedure	20
7.4 EUT Operating Conditions	21
7.5 Test Result	21
8. Power Spectral Density Test	45
8.1 Block Diagram Of Test Setup	45
8.2 Limit	45
8.3 Test Procedure	46
8.4 EUT Operating Conditions	46
8.5 Test Result	47
9. 26dB & 6dB & 99% Emission Bandwidth	89
9.1 Block Diagram Of Test Setup	89
9.2 Limit	89
9.3 Test Procedure	89
9.4 EUT Operating Conditions	90
9.5 Test Result	91
10. Maximum Conducted Output Power	135
10.1 Block Diagram Of Test Setup	135
10.2 Limit	135
10.3 Test Procedure	135
10.4 EUT Operating Conditions	136

10.5	Test Result.....	137
11.	Out Of Band Emissions	141
11.1	Block Diagram Of Test Setup.....	141
11.2	Limit	141
11.3	Test Procedure	141
11.4	EUT Operating Conditions	142
11.5	Test Result.....	142
12.	Spurious RF Conducted Emissions.....	161
12.1	Block Diagram Of Test Setup.....	161
12.2	Limit	161
12.3	Test Procedure	161
12.4	Test Result.....	161
13.	Frequency Stability Measurement	182
13.1	Block Diagram Of Test Setup.....	182
13.2	Limit	182
13.3	Test Procedure	182
13.4	Test Result.....	183
14.	Duty Cycle Of Test Signal	189
14.1	Standard Requirement	189
14.2	Formula.....	189
14.3	Test Procedure	189
14.4	Test Result.....	189
15.	Antenna Requirement	191
15.1	Limit	191
15.2	Test Result.....	191
16.	EUT Test Setup Photographs.....	192



1. Version

Report No.	Issue Date	Description	Approved
BCTC2606051300-4E	2026-08-07	Original	Valid



2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a) 15.407 (b)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 a 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 a	PASS
6	Band Edge	15.407 b	PASS
7	Power Spectral Density	15.407 a	PASS
8	Spurious Emissions at Antenna Terminals	15.407 b	PASS
9	Antenna Requirement	15.203	PASS

NOTE1: N/A (Not Applicable)

NOTE2: According to FCC OET KDB 558074, the report use radiated measurements in the restricted frequency bands. In addition, the radiated test is also performed to ensure the emissions emanating from the device cabinet also comply with the applicable limits.

Note 3: "*" indicates that the test results are determined base on 47 CFR Part 15 Subpart E (clause 15.407). And the test results are took into account measurement uncertainty(see section 3 for measurement uncertainty information)

BCTC CO., LTD

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2:2011/AMD2:2018. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=5.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=5.0dB
5	Conducted Emission(150kHz-30MHz)	U=3.0dB
6	Power Spectral Density	U=3.46dB
7	Peak Power	U=0.31dB
8	Occupied Bandwidth/Frequency Range	U=3.46%
9	Conducted output power uncertainty	U=0.55dB
10	Frequency Error	U= 53.50 Hz
11	Frequency Drift	U=0.64 KHz
12	Temperature	U= 0.59 °C
13	Humidity	U= 5.3 %

4. Product Information and Test Setup

4.1 Product Information

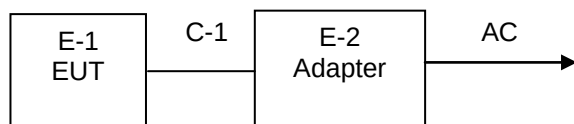
Model/Type Ref.:	TK-E180,AL11,AL14, AL15,AL16,AL17,AL18,AL21,AL11A,AL14A,AL15A,AL16A,AL17A,AL18A,AL21A,TK-E140i,TK-E156,TK-E160,TK-E150U,TK-E140U
Model differences:	The following models of units we produce are identical in electrical, mechanical and physical structure; The difference is only in the model name and color, we finally have TK-E180 as test model.
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported	☒ 802.11a ☒ 802.11n(20MHz channel bandwidth) ☒ 802.11n(40MHz channel bandwidth) ☒ 802.11ac(20MHz channel bandwidth) ☒ 802.11ac(40MHz channel bandwidth) ☒ 802.11ac(80MHz channel bandwidth) ☒ 802.11ax(20MHz channel bandwidth) ☒ 802.11ax(40MHz channel bandwidth) ☒ 802.11ax(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n/ac(HT20) /ax(HE20); 5190-5230MHz for 802.11n/ac(HT40) /ax(HE40); 5210MHz for 802.11 ac80/ax80; 5745-5825 MHz for 802.11a/n/ac(HT20) /ax(HE20); 5755-5795 MHz for 802.11n/ac(HT40) /ax(HE40); 5775MHz for 802.11 ac80/ax80
Type of Modulation:	☒ OFDM with BPSK/QPSK/16QAM/64QAM for 802.11a/n ☒ OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11ac ☒ OFDMA with 1024QAM for 802.11AX HE
Number Of Channel	4 channels for 802.11 a/n/ac/ax20 in the 5180-5240MHz band ; 2 channels for 802.11 n/ac/ax 40 in the 5190-5230MHz band ; 1 channels for 802.11 ac/ax 80 in the 5210MHz band ; 5 channels for 802.11 a/n/ac/ax 20 in the 5745-5825MHz band ; 2 channels for 802.11 n/ac/ax 40 in the 5755-5795MHz band ; 1 channels for 802.11 ac/ax 80 in the 5775MHz band
Antenna installation:	Internal antenna*2
Antenna Gain:	Antenna A: 1.92dBi Antenna B: 2.12dBi Remark: ☒ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information. Antenna gain information is provided by the client and the laboratory is not responsible for its authenticity ☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information. Antenna gain information is provided by the client and the laboratory is not responsible for its authenticity
Ratings:	DC 20V,3.25A
Battery:	DC 11.4V,5000mAh
Adapter:	Model: PD-UL65W Input: AC 100-240V,50/60Hz,1.5A Output: DC 5V/3.0A,9V/3.0A,12V/3.0A,15V/3.0A,20V/3.25A(65W Max)

4.2 Test Setup Configuration

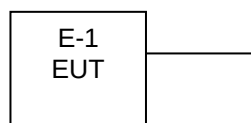
See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:

Conducted Emission:



Radiated Spurious Emission:



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Computer	ALPACATEC	TK-E180	N/A	EUT
E-2	Adapter	N/A	PD-UL65W	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	Charging cable	N/A	N/A	EUT

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

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

4.5 Test Mode

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	802.11a / n/ ac/ ax 20 CH36/ CH40/ CH 48 802.11a /n/ ac/ ax 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac/ ax 40 CH38/ CH 46 802.11n/ ac/ ax 40 CH 151 / CH 159
Mode 3	802.11 ac/ax 80 CH 42/ CH 155
Mode 4	Transmit mode

Notes:

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
3. The 802.11ax mode is investigated among different tones(26/52/106/242-tone RU channel), full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

4.6 Table Of Parameters Of Text Software Setting

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

RF Function	Mode Or Modulation type	ANT A Power Class	ANT B Power Class	Software For Testing
WIFI 5.1G	802.11a	10	10	AX series MP Toolkit
	802.11n/ac/ax20	9	9	
	802.11n/ac/ax40	9	9	
	802.11ac/ax80	9	9	
WIFI 5.8G	802.11a	10	10	
	802.11n/ac/ax20	9	9	
	802.11n/ac/ax40	9	9	
	802.11ac/ax80	9	9	

4.7 Antenna

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For power measurements on IEEE 802.11 devices,

Directional gain = GANT + Array Gain, where Array Gain is as follows:

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

GANT is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation follows F)2)f)ii) of KDB 662911 D01 v02r01.

$$\bullet \quad DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

As minimum NSS=1 is supported by EUT, the formula can be simplified as:

Directional gain = $10 \cdot \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi

Where $G_1, G_2, \dots, G_N$ denotes single antenna gain.

If a device has two antenna, GANT A= 2.12dBi; GANT B=1.92dBi;

Directional gain of power measurement = max (2.12, 1.92) + 0 = 2.12 dBi

Directional gain of PSD measurement = $10 \cdot \log [(10^{2.12/20} + 10^{1.92/20})^2 / 2] = 5.03$ dBi

Antenna A (dBi)	Antenna B (dBi)	Directional gain for Power (dBi)	Directional gain for PSD (dBi)
2.12	1.92	2.12	5.03

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Technology Co., Ltd.
Address: Room 101M, Unit 1, Building1, Pengyuan, No.18, Lilang Road, Shanglilang, Nanwan Subdistrict, Longgang District, Shenzhen, Guangdong, China.
The site and apparatus are constructed in conformance with the requirements of ANSI C63.4a-2017 and CISPR 16-1-1:2019 other equivalent standards.
FCC Test Firm Registration Number: 754702
ANAB certificate registration number is: CN3479

5.2 Test Instrument Used

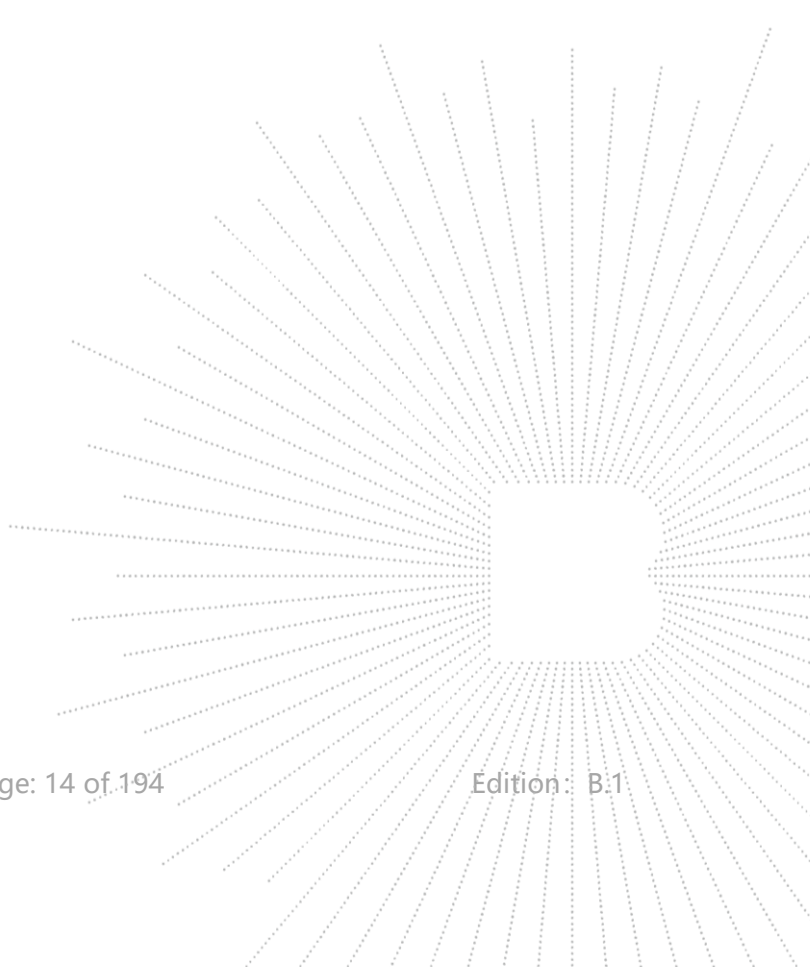
Conducted emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESCI	101421	2025.08.30	2026.08.29
AMN	SCHWHRZBECK	NSLK8128	05152	2026.01.22	2027.01.21
AMN	SCHWHRZBECK	NSLK8127	8127739	2025.09.16	2026.09.15
Pulse Limiter	SCHWHRZBECK	VTSD 9561-F-N	00547	2025.08.30	2026.08.29
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31
Software	EZ-EMC	Ver.EMC-CON 3A1	/	/	/

Radiated disturbance 1#					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Shielded room	CRT	9*6*6	/	2023.08.02	2026.08.01
				2026.07.24	2029.07.23
Broadband antenna	Schwarzbeck	VULB9160	3369	2026.05.16	2027.05.15
Receiver	R&S	ESPI	101396	2025.08.30	2026.08.29
Preamplifier	Schwarzbeck	BBV9744	00342	2025.08.30	2026.08.29
Loop Antenna	Schwarzbeck	FMZB1519B	00014	2026.01.05	2027.01.04
RF cable 5# (9kHz-6GHz)	Yunyi	3M	/	2025.08.30	2026.08.29
RF cable 8# (9kHz-1GHz)	Yunyi	7M	/	2025.10.28	2026.10.27
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31

Software	EZ-EMC	Ver.FA-03A2	/	/	/
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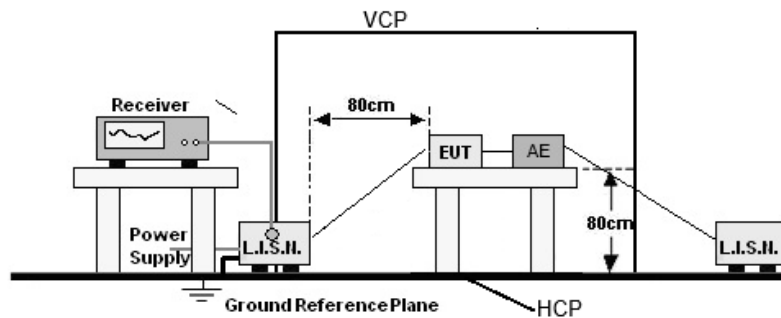
Radiated disturbance 2#					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Shielded room	ChengYu	9*6*6	/	2023.09.25	2026.09.24
Loop Antenna	Schwarzbeck	FMZB1519B	00014	2026.01.05	2027.01.04
Broadband antenna	SCHWHRZBECK	VULB9168	01620	2025.08.29	2026.08.28
Horn antenna(1 GHz -18GHz)	SCHWARZBECK	BBHA 9120 D	2792	2025.08.29	2026.08.28
Horn antenna (18 GHz -40GHz)	SCHWARZBECK	BBHA9170	00822	2025.12.29	2026.12.28
Receiver	R&S	ESR	1316	2025.08.30	2026.08.29
Spectrum Analyzer	R&S	FSV40	101328	2026.01.22	2027.01.21
Amplifier	SCHWHRZBECK	BBV9744	568	2025.08.30	2026.08.29
Amplifier	EMC INSTRUMENTS CORPORATION	EMC0518A45SE E	EMT-SZ2 233	2025.08.30	2026.08.29
Amplifier (18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	2026.05.09	2027.05.08
RF cable 3# (9kHz-6GHz)	Yunyi	10M	/	2025.08.30	2026.08.29
RF cable 9# (9kHz-1GHz)	Yunyi	2M	/	2025.10.28	2026.10.27
RF cable 5# (1GHz -18GHz)	SKET	9M	18038626	2025.08.30	2026.08.29
RF cable 6# (1GHz -18GHz)	SKET	5M	#10	2025.09.05	2026.09.04
RF cable 10# (18GHz-40GHz)	/	2M	2M	2026.05.09	2027.05.08
RF cable 11# (18GHz-40GHz)	/	2.5M	2.5M	2026.05.09	2027.05.08
Temperature & Humidity	Wettest	HTC-1	/	2025.09.05	2026.09.04
Software	EZ-EMC	Ver.FA-03A2	/	/	/

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Spectrum Analyzer	Keysight	N9020A	MY51287403	2025.08.30	2026.08.29
Signal Generator	Keysight	N5182A	MY50144088	2025.08.30	2026.08.29
Power Sensor	Keysight	U2001	MY51250006	2025.10.28	2026.10.27
Temperature & Humidity	Wetest	HTC-1	/	2025.09.01	2026.08.31
Communication test set	R&S	CMW500	157483	2025.08.30	2026.08.29
Radio frequency control box	MWRFtest	MW100-RFCB	\	\	\
Software	MWRFtest	MTS 8310	V 3.0.0.0	\	\
D.C. Power Supply	Elektro-Automatik GmbH & Co.KG	D-41747 Viersen	6230316	2025.09.30	2026.08.29
Temperature and humidity test chamber	Auchno	OJN-9606-408 L	19120183	2025.07.09	2026.07.08
				2026.07.07	2027.07.06



6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:

- *Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

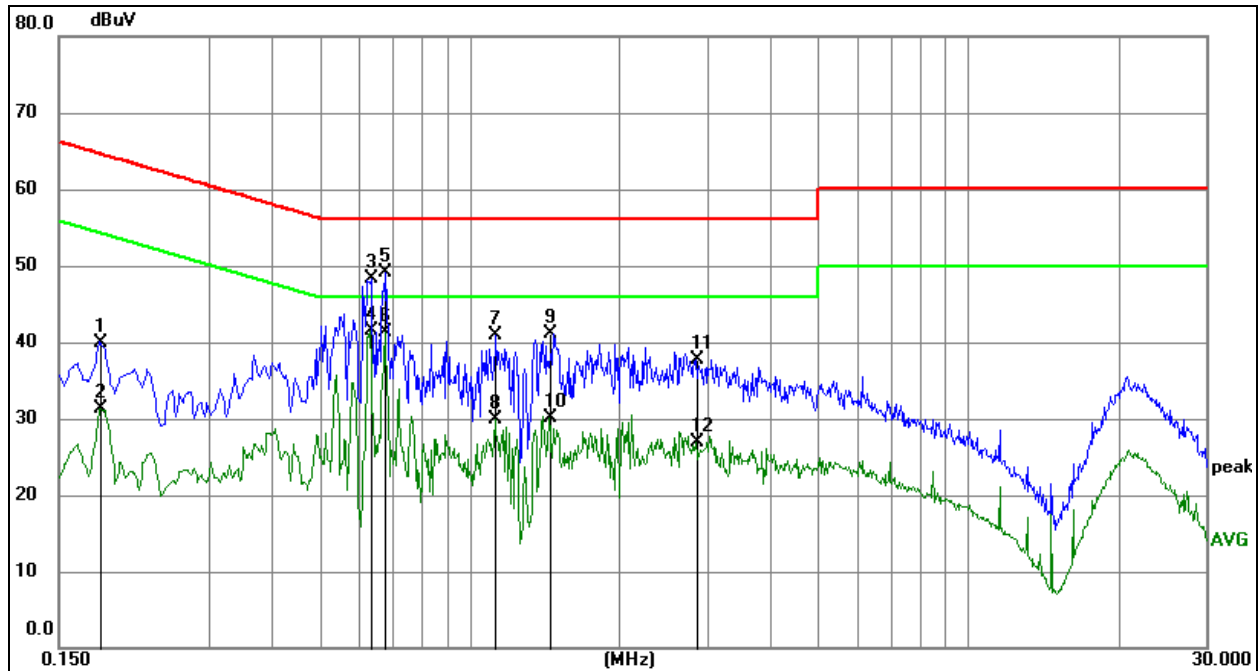
- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 EUT Operating Conditions

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

6.5 Test Result

Temperature:	25.8 °C	Relative Humidity:	49%
Pressure:	101KPa	Test Voltage :	AC 120/60Hz
Test Mode:	Mode 4	Polarization :	L



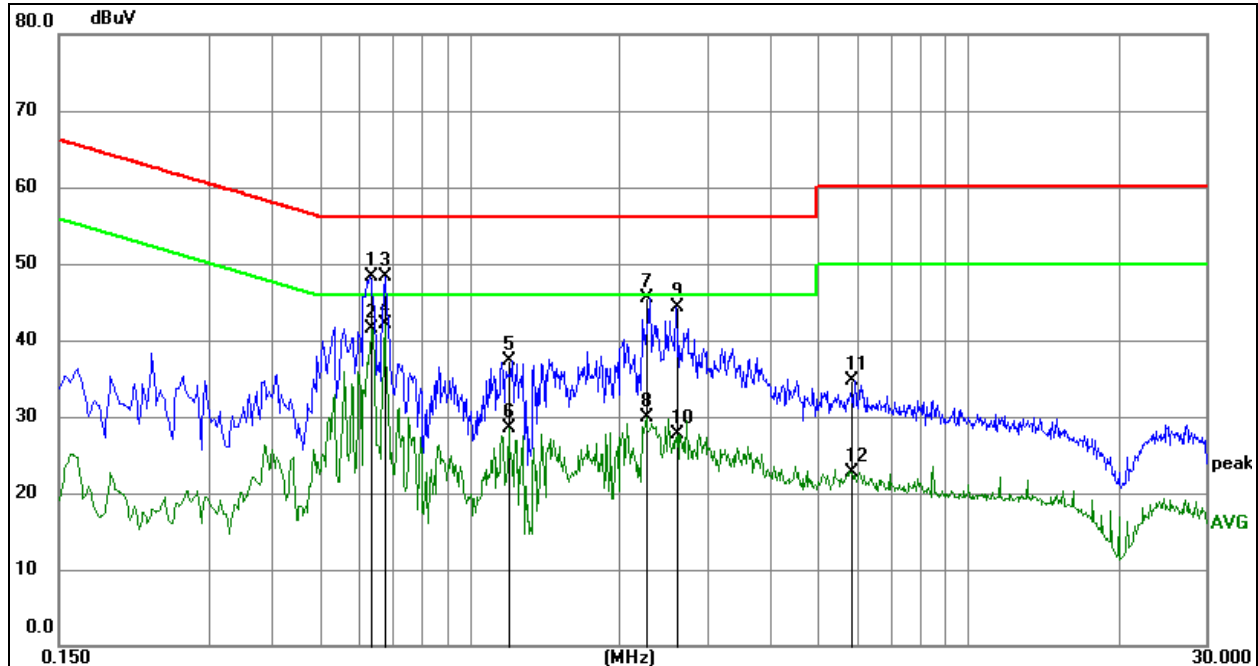
Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss+ Limiter (10dB).
3. Margin = (Reading+ Factor)–Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1815	29.46	10.54	40.00	64.42	-24.42	QP
2	0.1815	20.77	10.54	31.31	54.42	-23.11	AVG
3	0.6359	37.84	10.53	48.37	56.00	-7.63	QP
4 *	0.6359	30.99	10.53	41.52	46.00	-4.48	AVG
5	0.6764	38.52	10.53	49.05	56.00	-6.95	QP
6	0.6764	30.81	10.53	41.34	46.00	-4.66	AVG
7	1.1264	30.47	10.53	41.00	56.00	-15.00	QP
8	1.1264	19.33	10.53	29.86	46.00	-16.14	AVG
9	1.4459	30.56	10.53	41.09	56.00	-14.91	QP
10	1.4459	19.55	10.53	30.08	46.00	-15.92	AVG
11	2.8500	27.07	10.55	37.62	56.00	-18.38	QP
12	2.8500	16.27	10.55	26.82	46.00	-19.18	AVG

* Indicates the worst data.

Temperature:	25.8 °C	Relative Humidity:	49%
Pressure:	101KPa	Test Voltage :	AC 120V/60Hz
Test Mode:	Mode 4	Polarization :	N



Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = LISN factor + Cable Loss+ Limiter (10dB).
3. Margin = (Reading+ Factor)–Limit

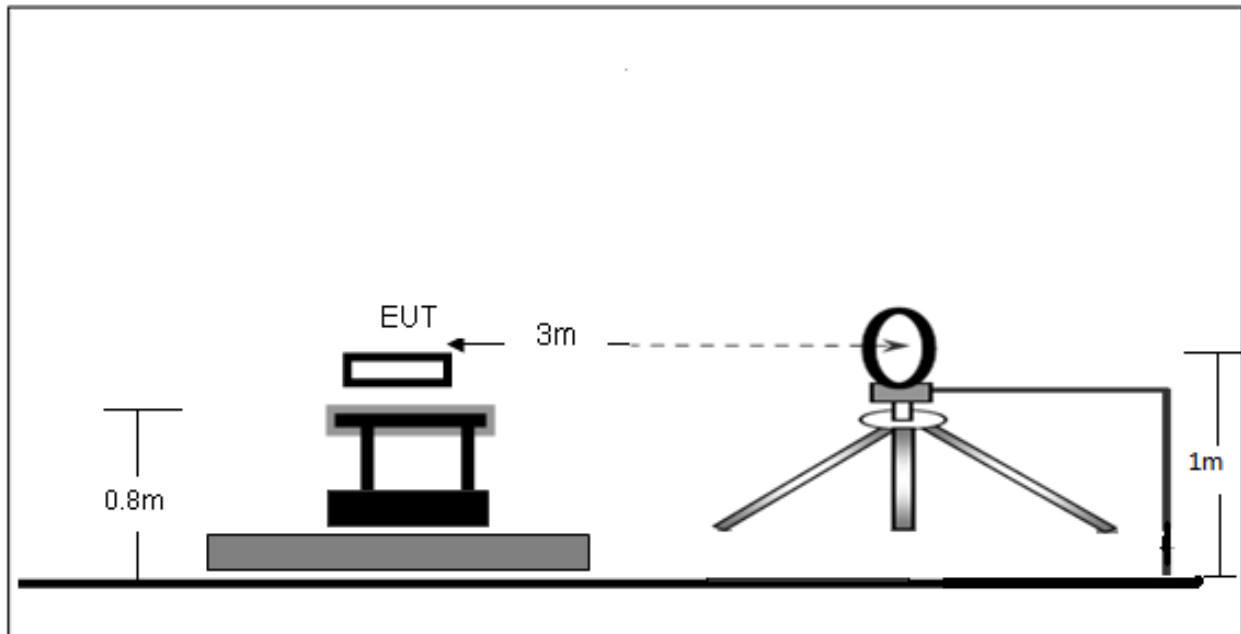
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.6315	37.84	10.53	48.37	56.00	-7.63	QP
2	0.6315	30.91	10.53	41.44	46.00	-4.56	AVG
3	0.6764	37.80	10.53	48.33	56.00	-7.67	QP
4 *	0.6764	31.52	10.53	42.05	46.00	-3.95	AVG
5	1.2028	26.72	10.53	37.25	56.00	-18.75	QP
6	1.2028	18.04	10.53	28.57	46.00	-17.43	AVG
7	2.2694	34.95	10.55	45.50	56.00	-10.50	QP
8	2.2694	19.31	10.55	29.86	46.00	-16.14	AVG
9	2.6070	33.73	10.55	44.28	56.00	-11.72	QP
10	2.6070	17.18	10.55	27.73	46.00	-18.27	AVG
11	5.8200	23.81	10.85	34.66	60.00	-25.34	QP
12	5.8200	11.92	10.85	22.77	50.00	-27.23	AVG

* Indicates the worst data.

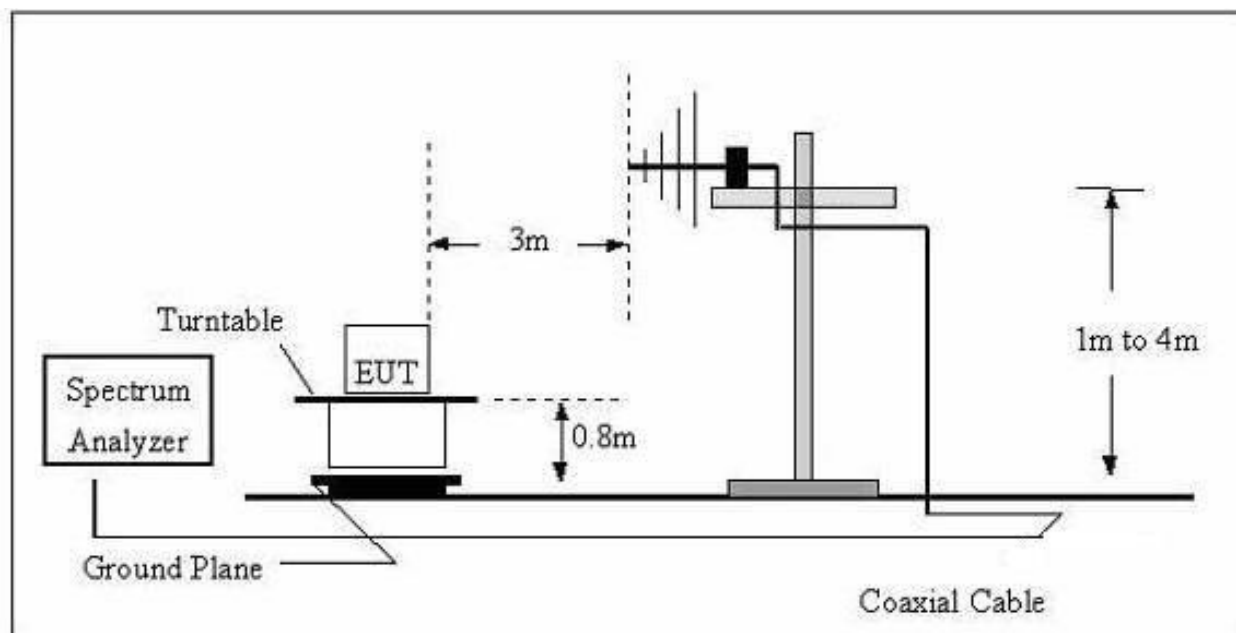
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

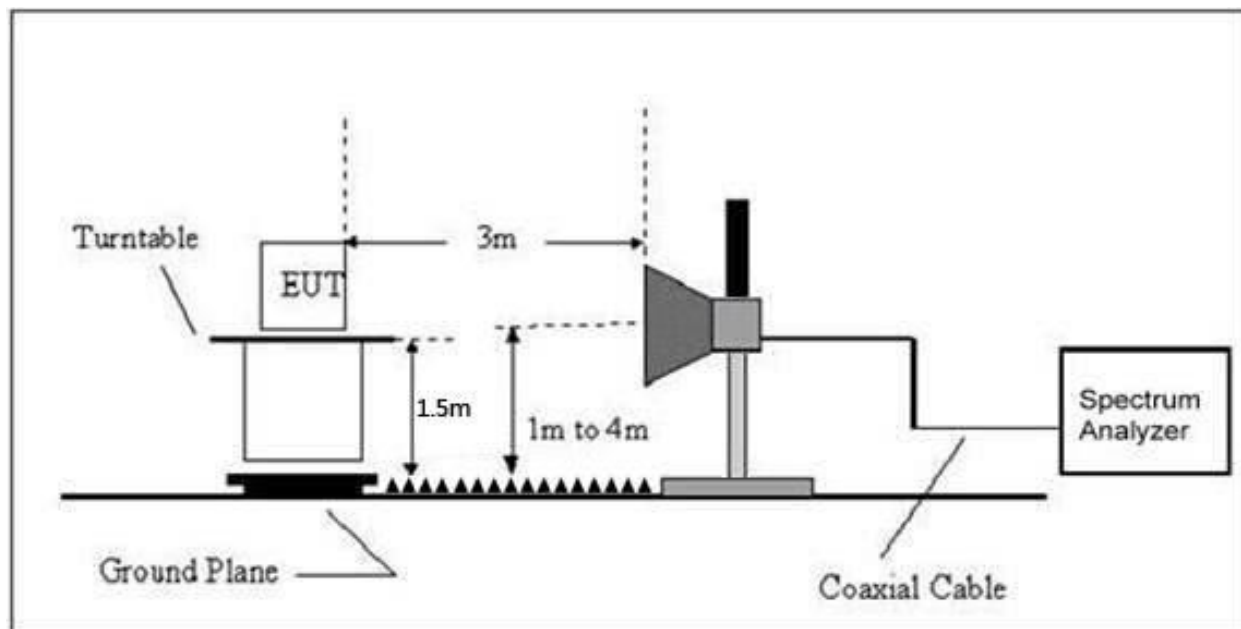
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

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.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:

- (1)The limit for radiated test was performed according to FCC PART 15C.
- (2)The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 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

- 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.
- 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.
- 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.
- 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.
- 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.
- 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 $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW} [kHz])$. , 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.

7.4 EUT Operating Conditions

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

7.5 Test Result

Below 30MHz

Temperature:	23.1 °C	Relative Humidity:	55%
Pressure:	101KPa	Test Voltage:	DC 11.4V
Test Mode:	Mode 4	Polarization:	--

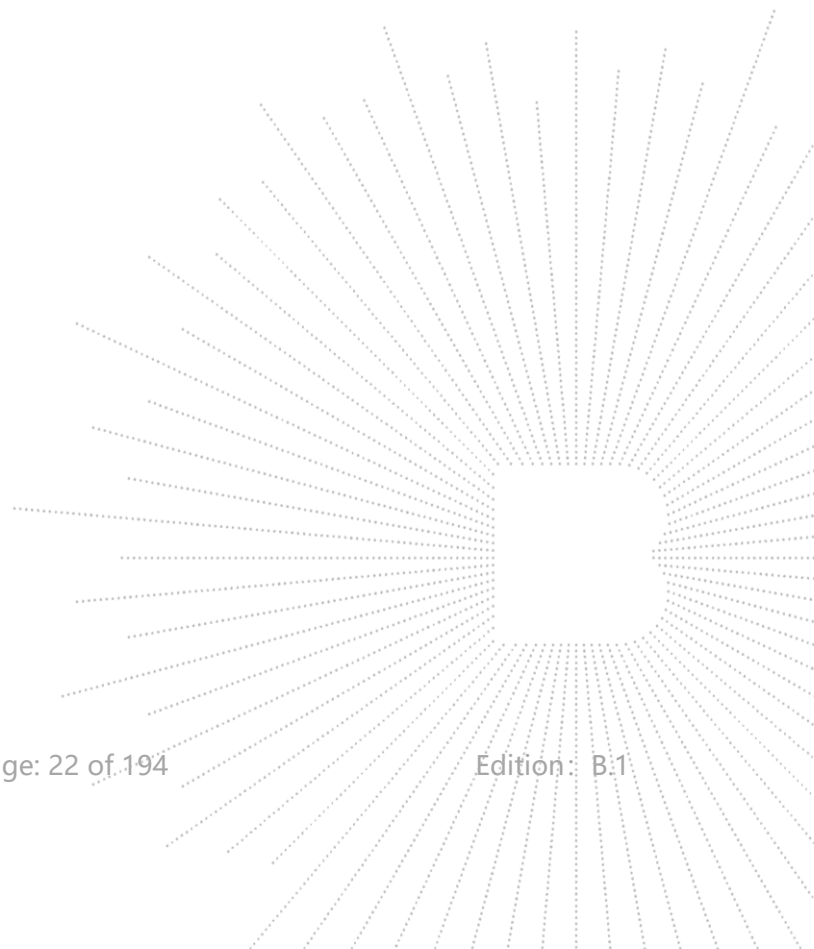
Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

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

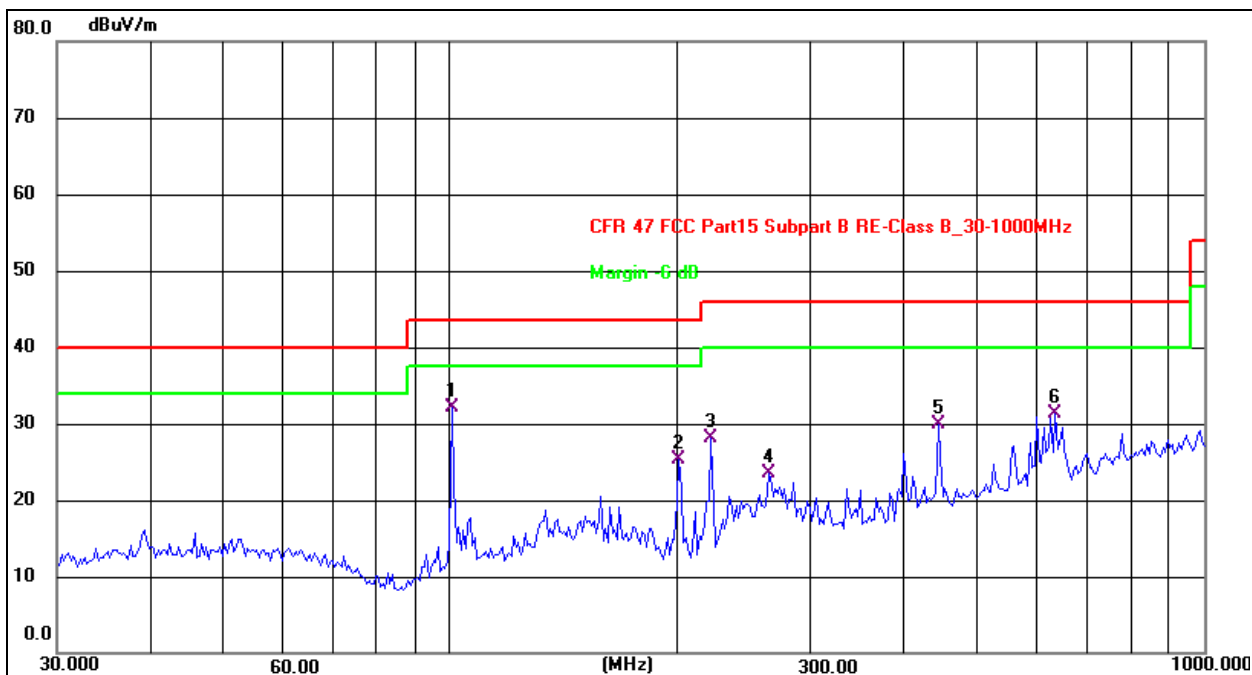
Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



Between 30MHz – 1GHz

Temperature:	23.1 °C	Relative Humidity:	55%
Pressure:	101KPa	Test Voltage :	DC 11.4V
Test Mode :	Mode 4	Polarization :	Horizontal



Remark:

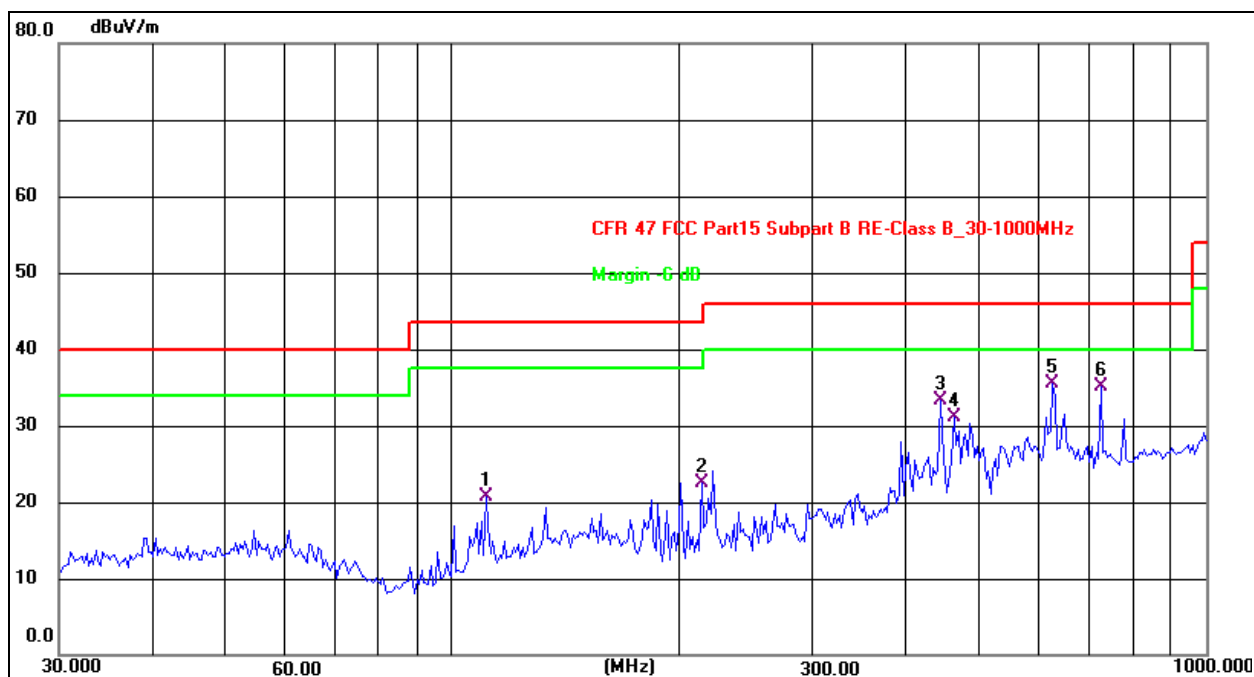
Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Margin = (Reading + Factor) – Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	100.2286	46.75	-14.58	32.17	43.50	-11.33	QP
2	200.6881	39.51	-14.22	25.29	43.50	-18.21	QP
3	221.3921	40.86	-12.82	28.04	46.00	-17.96	QP
4	263.8190	34.72	-11.13	23.59	46.00	-22.41	QP
5	443.2943	35.83	-6.01	29.82	46.00	-16.18	QP
6	633.9073	33.07	-1.68	31.39	46.00	-14.61	QP

* Indicates the worst data.

Temperature:	23.1 °C	Relative Humidity:	55%
Pressure:	101KPa	Test Voltage :	DC 11.4V
Test Mode :	Mode 4	Polarization :	Vertical



Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Margin = (Reading + Factor) – Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	110.5686	33.81	-13.14	20.67	43.50	-22.83	QP
2	213.7633	36.20	-13.66	22.54	43.50	-20.96	QP
3	443.2941	39.25	-6.01	33.24	46.00	-12.76	QP
4	462.3455	36.93	-5.75	31.18	46.00	-14.82	QP
5 *	625.0779	37.24	-1.77	35.47	46.00	-10.53	QP
6	724.2609	35.39	-0.21	35.18	46.00	-10.82	QP

* Indicates the worst data.

Between 1GHz – 40GHz

Test Mode :	TX(5.1G) - 802.11a
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.06	72.97	-10.51	62.46	68.20	-5.74	Pk
Vertical	4434.06	59.13	-10.51	48.62	54.00	-5.38	AV
Vertical	10360.19	61.76	-0.72	61.04	68.20	-7.16	Pk
Vertical	10360.19	49.99	-0.72	49.27	54.00	-4.73	AV
Vertical	15540.04	61.11	2.59	63.70	74.00	-10.30	Pk
Vertical	15540.04	49.84	2.59	52.43	54.00	-1.57	AV
Horizontal	4434.13	70.65	-10.51	60.14	68.20	-8.06	Pk
Horizontal	4434.13	59.08	-10.51	48.57	54.00	-5.43	AV
Horizontal	10360.16	64.47	-0.72	63.75	68.20	-4.45	Pk
Horizontal	10360.16	49.83	-0.72	49.11	54.00	-4.89	AV
Horizontal	15540.19	63.49	2.59	66.08	74.00	-7.92	Pk
Horizontal	15540.19	49.27	2.59	51.86	54.00	-2.14	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.16	74.99	-10.20	64.79	74.00	-9.21	Pk
Vertical	4592.16	59.07	-10.20	48.87	54.00	-5.13	AV
Vertical	10400.10	62.89	-0.67	62.22	68.20	-5.98	Pk
Vertical	10400.10	49.91	-0.67	49.24	54.00	-4.76	AV
Vertical	15600.08	62.03	2.67	64.70	74.00	-9.30	Pk
Vertical	15600.08	49.38	2.67	52.05	54.00	-1.95	AV
Horizontal	4592.18	71.60	-10.20	61.40	74.00	-12.60	Pk
Horizontal	4592.18	59.53	-10.20	49.33	54.00	-4.67	AV
Horizontal	10400.09	60.40	-0.67	59.73	68.20	-8.47	Pk
Horizontal	10400.09	49.31	-0.67	48.64	54.00	-5.36	AV
Horizontal	15600.06	64.14	2.67	66.81	74.00	-7.19	Pk
Horizontal	15600.06	49.40	2.67	52.07	54.00	-1.93	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.04	73.19	-9.45	63.74	74.00	-10.26	Pk
Vertical	4739.04	59.33	-9.45	49.88	54.00	-4.12	AV
Vertical	10480.04	63.49	-0.64	62.85	68.20	-5.35	Pk
Vertical	10480.04	49.10	-0.64	48.46	54.00	-5.54	AV
Vertical	15720.18	62.61	2.33	64.94	74.00	-9.06	Pk
Vertical	15720.18	49.19	2.33	51.52	54.00	-2.48	AV
Horizontal	4739.08	71.64	-9.45	62.19	74.00	-11.81	Pk
Horizontal	4739.08	59.49	-9.45	50.04	54.00	-3.96	AV
Horizontal	10480.10	61.87	-0.64	61.23	68.20	-6.97	Pk
Horizontal	10480.10	49.73	-0.64	49.09	54.00	-4.91	AV
Horizontal	15720.11	63.57	2.33	65.90	74.00	-8.10	Pk
Horizontal	15720.11	49.10	2.33	51.43	54.00	-2.57	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G 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.
The worst case is Antenna MIMO.

Test Mode :	TX(5.1G) - 802.11n-HT20
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.13	71.23	-10.51	60.72	68.20	-7.48	Pk
Vertical	4434.13	59.41	-10.51	48.90	54.00	-5.10	AV
Vertical	10360.09	61.70	-0.72	60.98	68.20	-7.22	Pk
Vertical	10360.09	49.79	-0.72	49.07	54.00	-4.93	AV
Vertical	15540.11	63.56	2.59	66.15	74.00	-7.85	Pk
Vertical	15540.11	50.00	2.59	52.59	54.00	-1.41	AV
Horizontal	4434.07	72.60	-10.51	62.09	68.20	-6.11	Pk
Horizontal	4434.07	59.19	-10.51	48.68	54.00	-5.32	AV
Horizontal	10360.03	62.81	-0.72	62.09	68.20	-6.11	Pk
Horizontal	10360.03	49.70	-0.72	48.98	54.00	-5.02	AV
Horizontal	15540.18	60.61	2.59	63.20	74.00	-10.80	Pk
Horizontal	15540.18	49.19	2.59	51.78	54.00	-2.22	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.14	71.85	-10.20	61.65	74.00	-12.35	Pk
Vertical	4592.14	59.29	-10.20	49.09	54.00	-4.91	AV
Vertical	10400.18	62.14	-0.67	61.47	68.20	-6.73	Pk
Vertical	10400.18	49.71	-0.67	49.04	54.00	-4.96	AV
Vertical	15600.19	62.41	2.67	65.08	74.00	-8.92	Pk
Vertical	15600.19	49.08	2.67	51.75	54.00	-2.25	AV
Horizontal	4592.07	71.21	-10.20	61.01	74.00	-12.99	Pk
Horizontal	4592.07	59.63	-10.20	49.43	54.00	-4.57	AV
Horizontal	10400.08	62.21	-0.67	61.54	68.20	-6.66	Pk
Horizontal	10400.08	49.24	-0.67	48.57	54.00	-5.43	AV
Horizontal	15600.19	63.40	2.67	66.07	74.00	-7.93	Pk
Horizontal	15600.19	49.79	2.67	52.46	54.00	-1.54	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.17	74.29	-9.45	64.84	74.00	-9.16	Pk
Vertical	4739.17	59.06	-9.45	49.61	54.00	-4.39	AV
Vertical	10480.01	61.26	-0.64	60.62	68.20	-7.58	Pk
Vertical	10480.01	49.82	-0.64	49.18	54.00	-4.82	AV
Vertical	15720.08	61.93	2.33	64.26	74.00	-9.74	Pk
Vertical	15720.08	49.71	2.33	52.04	54.00	-1.96	AV
Horizontal	4739.02	73.91	-9.45	64.46	74.00	-9.54	Pk
Horizontal	4739.02	59.94	-9.45	50.49	54.00	-3.51	AV
Horizontal	10480.10	64.46	-0.64	63.82	68.20	-4.38	Pk
Horizontal	10480.10	49.17	-0.64	48.53	54.00	-5.47	AV
Horizontal	15720.02	61.51	2.33	63.84	74.00	-10.16	Pk
Horizontal	15720.02	49.62	2.33	51.95	54.00	-2.05	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode :	TX(5.1G) - 802.11n-HT40
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.13	72.72	-10.52	62.20	68.20	-6.00	Pk
Vertical	4434.13	59.42	-10.52	48.90	54.00	-5.10	AV
Vertical	10380.16	60.64	-0.70	59.94	68.20	-8.26	Pk
Vertical	10380.16	49.46	-0.70	48.76	54.00	-5.24	AV
Vertical	15570.20	61.85	2.39	64.24	74.00	-9.76	Pk
Vertical	15570.20	49.63	2.39	52.02	54.00	-1.98	AV
Horizontal	4434.14	70.99	-10.52	60.47	74.00	-13.53	Pk
Horizontal	4434.14	60.00	-10.52	49.48	54.00	-4.52	AV
Horizontal	10380.03	62.83	-0.70	62.13	68.20	-6.07	Pk
Horizontal	10380.03	49.37	-0.70	48.67	54.00	-5.33	AV
Horizontal	15570.09	64.66	2.39	67.05	74.00	-6.95	Pk
Horizontal	15570.09	49.08	2.39	51.47	54.00	-2.53	AV
High Channel (5230 MHz)-Above 1G							
Vertical	4739.05	72.02	-9.45	62.57	68.20	-5.63	Pk
Vertical	4739.05	59.62	-9.45	50.17	54.00	-3.83	AV
Vertical	10460.17	64.06	-0.65	63.41	68.20	-4.79	Pk
Vertical	10460.17	49.45	-0.65	48.80	54.00	-5.20	AV
Vertical	15690.13	61.09	2.33	63.42	74.00	-10.58	Pk
Vertical	15690.13	49.01	2.33	51.34	54.00	-2.66	AV
Horizontal	4739.00	72.20	-9.45	62.75	68.20	-5.45	Pk
Horizontal	4739.00	59.13	-9.45	49.68	54.00	-4.32	AV
Horizontal	10460.10	64.49	-0.65	63.84	68.20	-4.36	Pk
Horizontal	10460.10	49.83	-0.65	49.18	54.00	-4.82	AV
Horizontal	15690.16	61.20	2.33	63.53	74.00	-10.47	Pk
Horizontal	15690.16	49.46	2.33	51.79	54.00	-2.21	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode:	TX(5.1G) - 802.11ac-HT20
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.18	72.83	-10.51	62.32	68.20	-5.88	Pk
Vertical	4434.18	59.07	-10.51	48.56	54.00	-5.44	AV
Vertical	10360.17	63.19	-0.72	62.47	68.20	-5.73	Pk
Vertical	10360.17	49.35	-0.72	48.63	54.00	-5.37	AV
Vertical	15540.14	62.41	2.59	65.00	74.00	-9.00	Pk
Vertical	15540.14	49.80	2.59	52.39	54.00	-1.61	AV
Horizontal	4434.12	71.38	-10.51	60.87	68.20	-7.33	Pk
Horizontal	4434.12	59.22	-10.51	48.71	54.00	-5.29	AV
Horizontal	10360.19	64.86	-0.72	64.14	68.20	-4.06	Pk
Horizontal	10360.19	49.08	-0.72	48.36	54.00	-5.64	AV
Horizontal	15540.06	62.26	2.59	64.85	74.00	-9.15	Pk
Horizontal	15540.06	49.06	2.59	51.65	54.00	-2.35	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.17	72.22	-10.20	62.02	74.00	-11.98	Pk
Vertical	4592.17	59.35	-10.20	49.15	54.00	-4.85	AV
Vertical	10400.12	64.25	-0.67	63.58	68.20	-4.62	Pk
Vertical	10400.12	49.28	-0.67	48.61	54.00	-5.39	AV
Vertical	15600.02	61.23	2.67	63.90	74.00	-10.10	Pk
Vertical	15600.02	49.24	2.67	51.91	54.00	-2.09	AV
Horizontal	4592.18	72.82	-10.20	62.62	74.00	-11.38	Pk
Horizontal	4592.18	59.03	-10.20	48.83	54.00	-5.17	AV
Horizontal	10400.19	61.44	-0.67	60.77	68.20	-7.43	Pk
Horizontal	10400.19	49.14	-0.67	48.47	54.00	-5.53	AV
Horizontal	15600.00	64.59	2.67	67.26	74.00	-6.74	Pk
Horizontal	15600.00	49.35	2.67	52.02	54.00	-1.98	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.06	73.94	-9.45	64.49	74.00	-9.51	Pk
Vertical	4739.06	59.34	-9.45	49.89	54.00	-4.11	AV
Vertical	10480.02	64.10	-0.64	63.46	68.20	-4.74	Pk
Vertical	10480.02	49.79	-0.64	49.15	54.00	-4.85	AV
Vertical	15720.05	64.32	2.33	66.65	74.00	-7.35	Pk
Vertical	15720.05	49.78	2.33	52.11	54.00	-1.89	AV
Horizontal	4739.08	74.27	-9.45	64.82	74.00	-9.18	Pk
Horizontal	4739.08	59.08	-9.45	49.63	54.00	-4.37	AV
Horizontal	10480.04	62.09	-0.64	61.45	68.20	-6.75	Pk
Horizontal	10480.04	49.38	-0.64	48.74	54.00	-5.26	AV
Horizontal	15720.09	63.12	2.33	65.45	74.00	-8.55	Pk
Horizontal	15720.09	49.62	2.33	51.95	54.00	-2.05	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode:	TX(5.1G) - 802.11ac-HT40
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.03	74.37	-10.52	63.85	68.20	-4.35	Pk
Vertical	4434.03	59.45	-10.52	48.93	54.00	-5.07	AV
Vertical	10380.05	61.70	-0.70	61.00	68.20	-7.20	Pk
Vertical	10380.05	49.69	-0.70	48.99	54.00	-5.01	AV
Vertical	15570.07	62.07	2.39	64.46	74.00	-9.54	Pk
Vertical	15570.07	49.20	2.39	51.59	54.00	-2.41	AV
Horizontal	4434.08	74.96	-10.52	64.44	74.00	-9.56	Pk
Horizontal	4434.08	59.23	-10.52	48.71	54.00	-5.29	AV
Horizontal	10380.02	63.32	-0.70	62.62	68.20	-5.58	Pk
Horizontal	10380.02	49.78	-0.70	49.08	54.00	-4.92	AV
Horizontal	15570.09	61.90	2.39	64.29	74.00	-9.71	Pk
Horizontal	15570.09	49.55	2.39	51.94	54.00	-2.06	AV
middle Channel (5230 MHz)-Above 1G							
Vertical	4739.14	73.93	-9.45	64.48	68.20	-3.72	Pk
Vertical	4739.14	59.23	-9.45	49.78	54.00	-4.22	AV
Vertical	10460.12	62.48	-0.65	61.83	68.20	-6.37	Pk
Vertical	10460.12	49.63	-0.65	48.98	54.00	-5.02	AV
Vertical	15690.03	61.98	2.33	64.31	74.00	-9.69	Pk
Vertical	15690.03	49.76	2.33	52.09	54.00	-1.91	AV
Horizontal	4739.06	70.22	-9.45	60.77	68.20	-7.43	Pk
Horizontal	4739.06	59.59	-9.45	50.14	54.00	-3.86	AV
Horizontal	10460.17	62.86	-0.65	62.21	68.20	-5.99	Pk
Horizontal	10460.17	49.80	-0.65	49.15	54.00	-4.85	AV
Horizontal	15690.07	63.53	2.33	65.86	74.00	-8.14	Pk
Horizontal	15690.07	49.74	2.33	52.07	54.00	-1.93	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode:	TX(5.1G) - 802.11ac-HT80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5210 MHz)-Above 1G							
Vertical	4434.13	74.91	-10.51	64.40	68.20	-3.80	Pk
Vertical	4434.13	59.93	-10.51	49.42	54.00	-4.58	AV
Vertical	10420.00	64.71	-0.66	64.05	68.20	-4.15	Pk
Vertical	10420.00	49.57	-0.66	48.91	54.00	-5.09	AV
Vertical	15630.15	61.66	2.55	64.21	74.00	-9.79	Pk
Vertical	15630.15	49.37	2.55	51.92	54.00	-2.08	AV
Horizontal	4434.04	71.98	-10.51	61.47	68.20	-6.73	Pk
Horizontal	4434.04	60.00	-10.51	49.49	54.00	-4.51	AV
Horizontal	10420.03	62.98	-0.66	62.32	68.20	-5.88	Pk
Horizontal	10420.03	49.64	-0.66	48.98	54.00	-5.02	AV
Horizontal	15630.16	64.55	2.55	67.10	74.00	-6.90	Pk
Horizontal	15630.16	49.08	2.55	51.63	54.00	-2.37	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

BCTC CO., LTD

Test Mode:	TX(5.1G) - 802.11ax- HE20
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
Vertical	4434.04	71.30	-10.51	60.79	68.20	-7.41	Pk
Vertical	4434.04	59.50	-10.51	48.99	54.00	-5.01	AV
Vertical	10360.16	60.39	-0.72	59.67	68.20	-8.53	Pk
Vertical	10360.16	49.40	-0.72	48.68	54.00	-5.32	AV
Vertical	15540.12	62.63	2.59	65.22	74.00	-8.78	Pk
Vertical	15540.12	49.64	2.59	52.23	54.00	-1.77	AV
Horizontal	4434.10	74.27	-10.51	63.76	68.20	-4.44	Pk
Horizontal	4434.10	59.35	-10.51	48.84	54.00	-5.16	AV
Horizontal	10360.07	61.13	-0.72	60.41	68.20	-7.79	Pk
Horizontal	10360.07	49.88	-0.72	49.16	54.00	-4.84	AV
Horizontal	15540.04	61.96	2.59	64.55	74.00	-9.45	Pk
Horizontal	15540.04	49.24	2.59	51.83	54.00	-2.17	AV
middle Channel (5200 MHz)-Above 1G							
Vertical	4592.20	72.61	-10.20	62.41	74.00	-11.59	Pk
Vertical	4592.20	59.59	-10.20	49.39	54.00	-4.61	AV
Vertical	10400.19	61.93	-0.67	61.26	68.20	-6.94	Pk
Vertical	10400.19	49.62	-0.67	48.95	54.00	-5.05	AV
Vertical	15600.12	63.52	2.67	66.19	74.00	-7.81	Pk
Vertical	15600.12	49.39	2.67	52.06	54.00	-1.94	AV
Horizontal	4592.04	74.76	-10.20	64.56	74.00	-9.44	Pk
Horizontal	4592.04	59.21	-10.20	49.01	54.00	-4.99	AV
Horizontal	10400.00	61.50	-0.67	60.83	68.20	-7.37	Pk
Horizontal	10400.00	49.41	-0.67	48.74	54.00	-5.26	AV
Horizontal	15600.01	64.05	2.67	66.72	74.00	-7.28	Pk
Horizontal	15600.01	49.60	2.67	52.27	54.00	-1.73	AV
High Channel (5240 MHz)-Above 1G							
Vertical	4739.00	70.90	-9.45	61.45	74.00	-12.55	Pk
Vertical	4739.00	59.90	-9.45	50.45	54.00	-3.55	AV
Vertical	10480.12	62.32	-0.64	61.68	68.20	-6.52	Pk
Vertical	10480.12	49.99	-0.64	49.35	54.00	-4.65	AV
Vertical	15720.11	62.30	2.33	64.63	74.00	-9.37	Pk
Vertical	15720.11	49.29	2.33	51.62	54.00	-2.38	AV
Horizontal	4739.06	73.72	-9.45	64.27	74.00	-9.73	Pk
Horizontal	4739.06	59.29	-9.45	49.84	54.00	-4.16	AV
Horizontal	10480.18	64.09	-0.64	63.45	68.20	-4.75	Pk
Horizontal	10480.18	49.50	-0.64	48.86	54.00	-5.14	AV
Horizontal	15720.05	64.79	2.33	67.12	74.00	-6.88	Pk
Horizontal	15720.05	49.29	2.33	51.62	54.00	-2.38	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode:	TX(5.1G) - 802.11 ax- HE40
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
Vertical	4434.04	70.29	-10.52	59.77	68.20	-8.43	Pk
Vertical	4434.04	59.79	-10.52	49.27	54.00	-4.73	AV
Vertical	10380.20	63.96	-0.70	63.26	68.20	-4.94	Pk
Vertical	10380.20	49.62	-0.70	48.92	54.00	-5.08	AV
Vertical	15570.15	60.98	2.39	63.37	74.00	-10.63	Pk
Vertical	15570.15	49.66	2.39	52.05	54.00	-1.95	AV
Horizontal	4434.08	73.79	-10.52	63.27	74.00	-10.73	Pk
Horizontal	4434.08	59.25	-10.52	48.73	54.00	-5.27	AV
Horizontal	10380.03	63.78	-0.70	63.08	68.20	-5.12	Pk
Horizontal	10380.03	49.84	-0.70	49.14	54.00	-4.86	AV
Horizontal	15570.10	60.45	2.39	62.84	74.00	-11.16	Pk
Horizontal	15570.10	49.60	2.39	51.99	54.00	-2.01	AV
middle Channel (5230 MHz)-Above 1G							
Vertical	4739.15	73.06	-9.45	63.61	68.20	-4.59	Pk
Vertical	4739.15	59.62	-9.45	50.17	54.00	-3.83	AV
Vertical	10460.19	62.79	-0.65	62.14	68.20	-6.06	Pk
Vertical	10460.19	49.20	-0.65	48.55	54.00	-5.45	AV
Vertical	15690.06	63.59	2.33	65.92	74.00	-8.08	Pk
Vertical	15690.06	49.02	2.33	51.35	54.00	-2.65	AV
Horizontal	4739.04	73.41	-9.45	63.96	68.20	-4.24	Pk
Horizontal	4739.04	59.99	-9.45	50.54	54.00	-3.46	AV
Horizontal	10460.12	61.56	-0.65	60.91	68.20	-7.29	Pk
Horizontal	10460.12	49.67	-0.65	49.02	54.00	-4.98	AV
Horizontal	15690.06	64.62	2.33	66.95	74.00	-7.05	Pk
Horizontal	15690.06	49.10	2.33	51.43	54.00	-2.57	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode:	TX(5.1G) - 802.11 ax- HE80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5210 MHz)-Above 1G							
Vertical	4434.06	71.69	-10.51	61.18	68.20	-7.02	Pk
Vertical	4434.06	59.58	-10.51	49.07	54.00	-4.93	AV
Vertical	10420.18	60.49	-0.66	59.83	68.20	-8.37	Pk
Vertical	10420.18	49.20	-0.66	48.54	54.00	-5.46	AV
Vertical	15630.07	60.58	2.55	63.13	74.00	-10.87	Pk
Vertical	15630.07	49.61	2.55	52.16	54.00	-1.84	AV
Horizontal	4434.04	72.20	-10.51	61.69	68.20	-6.51	Pk
Horizontal	4434.04	59.02	-10.51	48.51	54.00	-5.49	AV
Horizontal	10420.07	60.86	-0.66	60.20	68.20	-8.00	Pk
Horizontal	10420.07	49.25	-0.66	48.59	54.00	-5.41	AV
Horizontal	15630.19	64.70	2.55	67.25	74.00	-6.75	Pk
Horizontal	15630.19	49.17	2.55	51.72	54.00	-2.28	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

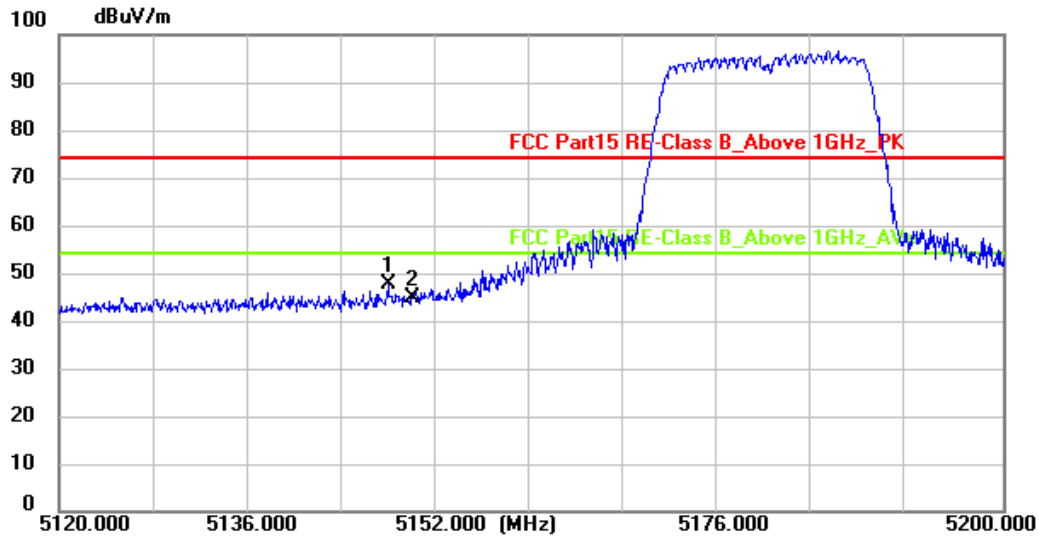
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

The worst case is Antenna MIMO.

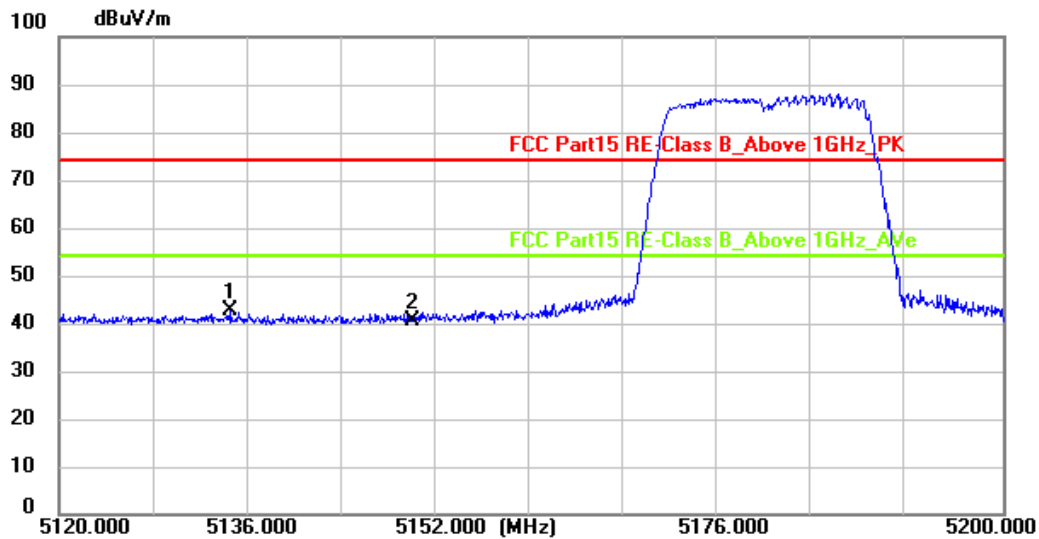
- ☒ Undesirable radiated Spurious Emission in Band Edge
- All the modes has been tested and the worst result 802.11n20 recorded as below:

802.11n20-5180-H



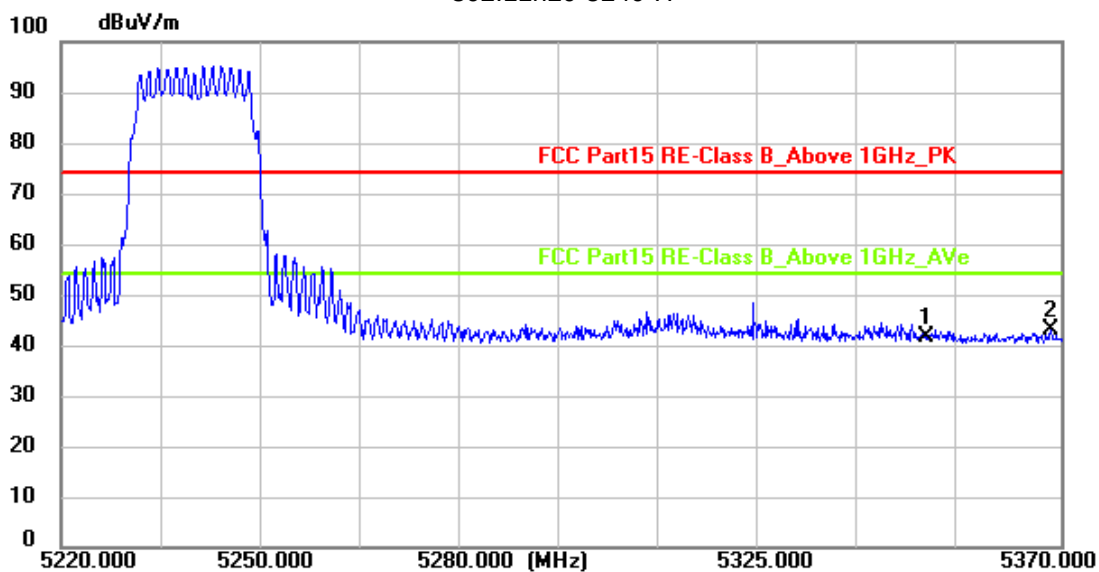
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	5147.8640	56.21	-8.69	47.52	74.00	-26.48	peak
2	5150.0000	53.59	-8.69	44.90	74.00	-29.10	peak

802.11n20-5180-V



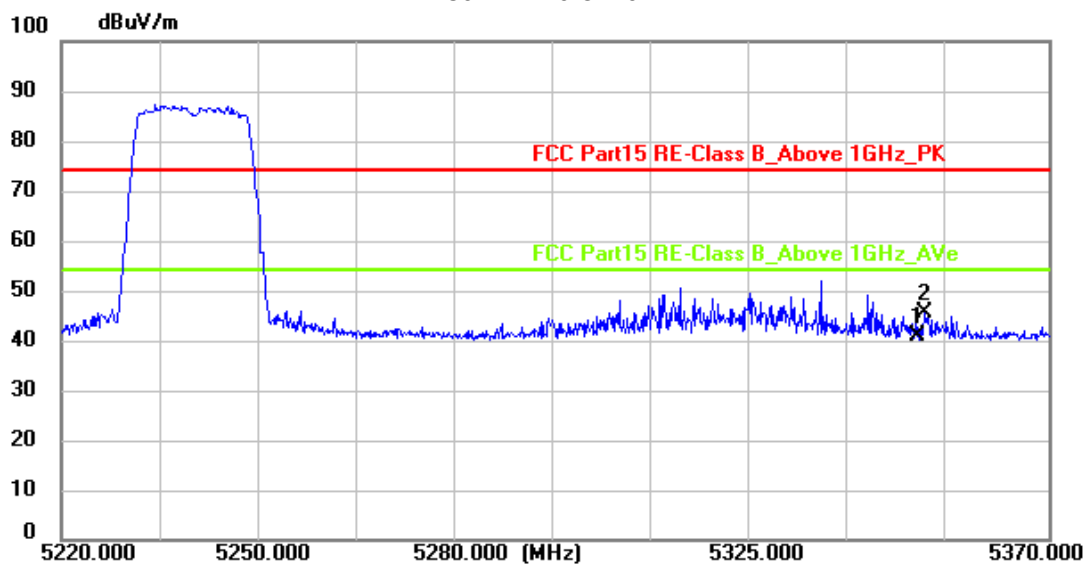
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	5134.4960	51.31	-8.66	42.65	74.00	-31.35	peak
2	5150.0000	49.24	-8.69	40.55	74.00	-33.45	peak

802.11n20-5240-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5350.0000	50.28	-8.76	41.52	74.00	-32.48	peak
2 *	5368.4550	51.95	-8.76	43.19	74.00	-30.81	peak

802.11n20-5240-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5350.0000	49.71	-8.76	40.95	74.00	-33.05	peak
2 *	5351.2350	54.14	-8.76	45.38	74.00	-28.62	peak

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. All modes have been measurement, only worst mode was reported.

Test Mode:	TX(5.8G) - 802.11a
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.126	72.56	-10.36	62.20	74	-11.80	Pk
Vertical	4679.126	59.61	-10.36	49.25	54	-4.75	AV
Vertical	11490.096	64.41	-0.19	64.22	68.2	-3.98	Pk
Vertical	11490.096	49.75	-0.19	49.56	54	-4.44	AV
Vertical	17235.021	56.60	4.28	60.88	68.2	-7.32	Pk
Vertical	17235.021	44.72	4.28	49.00	54	-5.00	AV
Horizontal	4679.038	74.97	-10.36	64.61	74	-9.39	Pk
Horizontal	4679.038	59.82	-10.36	49.46	54	-4.54	AV
Horizontal	11490.056	61.13	-0.19	60.94	68.2	-7.26	Pk
Horizontal	11490.056	49.67	-0.19	49.48	54	-4.52	AV
Horizontal	17235.100	56.70	4.28	60.98	68.2	-7.22	Pk
Horizontal	17235.100	44.25	4.28	48.53	54	-5.47	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.047	71.20	-10.20	61.00	74	-13.00	Pk
Vertical	4592.047	59.23	-10.20	49.03	54	-4.97	AV
Vertical	11570.156	61.28	-0.21	61.07	68.2	-7.13	Pk
Vertical	11570.156	49.93	-0.21	49.72	54	-4.28	AV
Vertical	17355.141	59.18	4.68	63.86	68.2	-4.34	Pk
Vertical	17355.141	44.14	4.68	48.82	54	-5.18	AV
Horizontal	4592.146	70.13	-10.20	59.93	74	-14.07	Pk
Horizontal	4592.146	59.54	-10.20	49.34	54	-4.66	AV
Horizontal	11570.049	60.50	-0.21	60.29	68.2	-7.91	Pk
Horizontal	11570.049	49.90	-0.21	49.69	54	-4.31	AV
Horizontal	17355.069	55.35	4.68	60.03	68.2	-8.17	Pk
Horizontal	17355.069	44.06	4.68	48.74	54	-5.26	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.151	72.30	-7.08	65.22	68.2	-2.98	Pk
Vertical	6039.151	59.04	-7.08	51.96	54	-2.04	AV
Vertical	11650.186	63.52	-0.50	63.02	74	-10.98	Pk
Vertical	11650.186	49.81	-0.50	49.31	54	-4.69	AV
Vertical	17475.042	55.22	4.77	59.99	68.2	-8.21	Pk
Vertical	17475.042	44.80	4.77	49.57	54	-4.43	AV
Horizontal	6039.066	70.55	-7.08	63.47	68.2	-4.73	Pk
Horizontal	6039.066	59.66	-7.08	52.58	54	-1.42	AV
Horizontal	11650.088	62.72	-0.50	62.22	74	-11.78	Pk
Horizontal	11650.088	49.33	-0.50	48.83	54	-5.17	AV
Horizontal	17475.064	59.24	4.77	64.01	68.2	-4.19	Pk
Horizontal	17475.064	44.89	4.77	49.66	54	-4.34	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode:	TX(5.8G) - 802.11n-HT20
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.133	73.49	-10.36	63.13	74	-10.87	Pk
Vertical	4679.133	59.20	-10.36	48.84	54	-5.16	AV
Vertical	11490.110	61.77	-0.19	61.58	68.2	-6.62	Pk
Vertical	11490.110	49.15	-0.19	48.96	54	-5.04	AV
Vertical	17235.085	59.81	4.28	64.09	68.2	-4.11	Pk
Vertical	17235.085	44.62	4.28	48.90	54	-5.10	AV
Horizontal	4679.015	70.15	-10.36	59.79	74	-14.21	Pk
Horizontal	4679.015	59.37	-10.36	49.01	54	-4.99	AV
Horizontal	11490.080	63.89	-0.19	63.70	68.2	-4.50	Pk
Horizontal	11490.080	49.75	-0.19	49.56	54	-4.44	AV
Horizontal	17235.096	59.72	4.28	64.00	68.2	-4.20	Pk
Horizontal	17235.096	44.78	4.28	49.06	54	-4.94	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.136	73.96	-10.20	63.76	74	-10.24	Pk
Vertical	4592.136	59.64	-10.20	49.44	54	-4.56	AV
Vertical	11570.183	64.29	-0.21	64.08	68.2	-4.12	Pk
Vertical	11570.183	49.07	-0.21	48.86	54	-5.14	AV
Vertical	17355.076	57.37	4.68	62.05	68.2	-6.15	Pk
Vertical	17355.076	44.55	4.68	49.23	54	-4.77	AV
Horizontal	4592.056	70.58	-10.20	60.38	74	-13.62	Pk
Horizontal	4592.056	59.74	-10.20	49.54	54	-4.46	AV
Horizontal	11570.096	60.58	-0.21	60.37	68.2	-7.83	Pk
Horizontal	11570.096	49.19	-0.21	48.98	54	-5.02	AV
Horizontal	17355.112	57.99	4.68	62.67	68.2	-5.53	Pk
Horizontal	17355.112	44.25	4.68	48.93	54	-5.07	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.119	74.33	-7.08	67.25	68.2	-0.95	Pk
Vertical	6039.119	59.34	-7.08	52.26	54	-1.74	AV
Vertical	11650.115	63.03	-0.50	62.53	74	-11.47	Pk
Vertical	11650.115	49.24	-0.50	48.74	54	-5.26	AV
Vertical	17475.072	58.51	4.77	63.28	68.2	-4.92	Pk
Vertical	17475.072	44.46	4.77	49.23	54	-4.77	AV
Horizontal	6039.105	73.84	-7.08	66.76	68.2	-1.44	Pk
Horizontal	6039.105	59.95	-7.08	52.87	54	-1.13	AV
Horizontal	11650.091	61.53	-0.50	61.03	74	-12.97	Pk
Horizontal	11650.091	49.74	-0.50	49.24	54	-4.76	AV
Horizontal	17475.030	56.78	4.77	61.55	68.2	-6.65	Pk
Horizontal	17475.030	44.02	4.77	48.79	54	-5.21	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode: TX(5.8G) - 802.11n-HT40

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.139	74.36	-10.36	64.00	74	-10.00	AV
Vertical	4679.139	59.35	-10.36	48.99	54	-5.01	Pk
Vertical	11510.070	60.21	-0.26	59.95	74	-14.05	AV
Vertical	11510.070	49.78	-0.26	49.52	54	-4.48	Pk
Vertical	17265.118	57.48	4.35	61.83	68.2	-6.37	AV
Vertical	17265.118	44.53	4.35	48.88	54	-5.12	Pk
Horizontal	4679.066	72.75	-10.36	62.39	74	-11.61	AV
Horizontal	4679.066	59.97	-10.36	49.61	54	-4.39	Pk
Horizontal	11510.031	62.03	-0.26	61.77	74	-12.23	AV
Horizontal	11510.031	49.05	-0.26	48.79	54	-5.21	Pk
Horizontal	17265.053	58.09	4.35	62.44	68.2	-5.76	AV
Horizontal	17265.053	44.06	4.35	48.41	54	-5.59	AV
middle Channel (5795 MHz)-Above 1G							
Vertical	6039.070	70.80	-7.08	63.72	68.2	-4.48	Pk
Vertical	6039.070	59.17	-7.08	52.09	54	-1.91	AV
Vertical	11590.156	61.01	-0.20	60.81	74	-13.19	Pk
Vertical	11590.156	49.56	-0.20	49.36	54	-4.64	AV
Vertical	17385.095	59.00	4.81	63.81	68.2	-4.39	Pk
Vertical	17385.095	44.94	4.81	49.75	54	-4.25	AV
Horizontal	6039.127	71.93	-7.08	64.85	68.2	-3.35	Pk
Horizontal	6039.127	59.35	-7.08	52.27	54	-1.73	AV
Horizontal	11590.153	61.11	-0.20	60.91	74	-13.09	Pk
Horizontal	11590.153	49.89	-0.20	49.69	54	-4.31	AV
Horizontal	17385.052	57.75	4.81	62.56	68.2	-5.64	Pk
Horizontal	17385.052	44.25	4.81	49.06	54	-4.94	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G 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.
The worst case is Antenna MIMO.

Test Mode: TX(5.8G) - 802.11ac-HT20

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.168	74.52	-10.36	64.16	74	-9.84	Pk
Vertical	4679.168	59.13	-10.36	48.77	54	-5.23	AV
Vertical	11490.160	63.16	-0.19	62.97	68.2	-5.23	Pk
Vertical	11490.160	49.17	-0.19	48.98	54	-5.02	AV
Vertical	17235.073	59.79	4.28	64.07	68.2	-4.13	Pk
Vertical	17235.073	44.83	4.28	49.11	54	-4.89	AV
Horizontal	4679.135	71.17	-10.36	60.81	74	-13.19	Pk
Horizontal	4679.135	59.69	-10.36	49.33	54	-4.67	AV
Horizontal	11490.001	61.76	-0.19	61.57	68.2	-6.63	Pk
Horizontal	11490.001	49.68	-0.19	49.49	54	-4.51	AV
Horizontal	17235.083	59.86	4.28	64.14	68.2	-4.06	Pk
Horizontal	17235.083	44.31	4.28	48.59	54	-5.41	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.032	70.45	-10.20	60.25	74	-13.75	Pk
Vertical	4592.032	59.10	-10.20	48.90	54	-5.10	AV
Vertical	11570.170	63.79	-0.21	63.58	68.2	-4.62	Pk
Vertical	11570.170	49.13	-0.21	48.92	54	-5.08	AV
Vertical	17355.089	57.42	4.68	62.10	68.2	-6.10	Pk
Vertical	17355.089	44.86	4.68	49.54	54	-4.46	AV
Horizontal	4592.017	71.50	-10.20	61.30	74	-12.70	Pk
Horizontal	4592.017	59.73	-10.20	49.53	54	-4.47	AV
Horizontal	11570.011	61.75	-0.21	61.54	68.2	-6.66	Pk
Horizontal	11570.011	49.89	-0.21	49.68	54	-4.32	AV
Horizontal	17355.177	56.82	4.68	61.50	68.2	-6.70	Pk
Horizontal	17355.177	44.72	4.68	49.40	54	-4.60	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.132	71.09	-7.08	64.01	68.2	-4.19	Pk
Vertical	6039.132	59.92	-7.08	52.84	54	-1.16	AV
Vertical	11650.144	63.02	-0.50	62.52	74	-11.48	Pk
Vertical	11650.144	49.61	-0.50	49.11	54	-4.89	AV
Vertical	17475.060	56.68	4.77	61.45	68.2	-6.75	Pk
Vertical	17475.060	44.37	4.77	49.14	54	-4.86	AV
Horizontal	6039.134	73.11	-7.08	66.03	68.2	-2.17	Pk
Horizontal	6039.134	59.83	-7.08	52.75	54	-1.25	AV
Horizontal	11650.086	63.25	-0.50	62.75	74	-11.25	Pk
Horizontal	11650.086	49.85	-0.50	49.35	54	-4.65	AV
Horizontal	17475.162	55.65	4.77	60.42	68.2	-7.78	Pk
Horizontal	17475.162	44.50	4.77	49.27	54	-4.73	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode: TX(5.8G) - 802.11ac-HT40

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.133	73.26	-10.36	62.90	74	-11.10	AV
Vertical	4679.133	59.84	-10.36	49.48	54	-4.52	Pk
Vertical	11510.060	60.27	-0.26	60.01	74	-13.99	AV
Vertical	11510.060	49.17	-0.26	48.91	54	-5.09	Pk
Vertical	17265.164	58.07	4.35	62.42	68.2	-5.78	AV
Vertical	17265.164	44.58	4.35	48.93	54	-5.07	Pk
Horizontal	4679.001	73.97	-10.36	63.61	74	-10.39	AV
Horizontal	4679.001	59.44	-10.36	49.08	54	-4.92	Pk
Horizontal	11510.116	62.27	-0.26	62.01	74	-11.99	AV
Horizontal	11510.116	49.64	-0.26	49.38	54	-4.62	Pk
Horizontal	17265.134	56.91	4.35	61.26	68.2	-6.94	AV
Horizontal	17265.134	44.57	4.35	48.92	54	-5.08	AV
middle Channel (5795 MHz)-Above 1G							
Vertical	6039.019	72.33	-7.08	65.25	68.2	-2.95	Pk
Vertical	6039.019	59.89	-7.08	52.81	54	-1.19	AV
Vertical	11590.043	64.39	-0.20	64.19	74	-9.81	Pk
Vertical	11590.043	49.33	-0.20	49.13	54	-4.87	AV
Vertical	17385.149	56.01	4.81	60.82	68.2	-7.38	Pk
Vertical	17385.149	44.17	4.81	48.98	54	-5.02	AV
Horizontal	6039.180	71.56	-7.08	64.48	68.2	-3.72	Pk
Horizontal	6039.180	59.66	-7.08	52.58	54	-1.42	AV
Horizontal	11590.011	63.80	-0.20	63.60	74	-10.40	Pk
Horizontal	11590.011	49.63	-0.20	49.43	54	-4.57	AV
Horizontal	17385.031	57.08	4.81	61.89	68.2	-6.31	Pk
Horizontal	17385.031	44.74	4.81	49.55	54	-4.45	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G 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.
The worst case is Antenna MIMO.

Test Mode:	TX(5.8G) - 802.11ac-HT80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5775 MHz)-Above 1G							
Vertical	4679.061	74.21	-10.36	63.85	74	-10.15	Pk
Vertical	4679.061	59.20	-10.36	48.84	54	-5.16	AV
Vertical	11550.112	60.85	0.23	61.08	74	-12.92	Pk
Vertical	11550.112	49.50	0.23	49.73	54	-4.27	AV
Vertical	17325.150	58.21	4.55	62.76	68.2	-5.44	Pk
Vertical	17325.150	44.08	4.55	48.63	54	-5.37	AV
Horizontal	4679.026	74.69	-10.36	64.33	74	-9.67	Pk
Horizontal	4679.026	59.13	-10.36	48.77	54	-5.23	AV
Horizontal	11550.074	64.61	0.23	64.84	74	-9.16	Pk
Horizontal	11550.074	49.07	0.23	49.30	54	-4.70	AV
Horizontal	17325.126	55.40	4.55	59.95	68.2	-8.25	Pk
Horizontal	17325.126	44.43	4.55	48.98	54	-5.02	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode: TX(5.8G) - 802.11ax-HE20

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
Vertical	4679.167	74.83	-10.36	64.47	74	-9.53	Pk
Vertical	4679.167	59.14	-10.36	48.78	54	-5.22	AV
Vertical	11490.091	62.72	-0.19	62.53	68.2	-5.67	Pk
Vertical	11490.091	49.43	-0.19	49.24	54	-4.76	AV
Vertical	17235.080	59.74	4.28	64.02	68.2	-4.18	Pk
Vertical	17235.080	44.37	4.28	48.65	54	-5.35	AV
Horizontal	4679.147	70.44	-10.36	60.08	74	-13.92	Pk
Horizontal	4679.147	59.30	-10.36	48.94	54	-5.06	AV
Horizontal	11490.146	61.70	-0.19	61.51	68.2	-6.69	Pk
Horizontal	11490.146	49.61	-0.19	49.42	54	-4.58	AV
Horizontal	17235.102	59.65	4.28	63.93	68.2	-4.27	Pk
Horizontal	17235.102	44.83	4.28	49.11	54	-4.89	AV
middle Channel (5785 MHz)-Above 1G							
Vertical	4592.196	72.69	-10.20	62.49	74	-11.51	Pk
Vertical	4592.196	59.08	-10.20	48.88	54	-5.12	AV
Vertical	11570.066	60.02	-0.21	59.81	68.2	-8.39	Pk
Vertical	11570.066	49.95	-0.21	49.74	54	-4.26	AV
Vertical	17355.037	57.93	4.68	62.61	68.2	-5.59	Pk
Vertical	17355.037	44.90	4.68	49.58	54	-4.42	AV
Horizontal	4592.104	71.54	-10.20	61.34	74	-12.66	Pk
Horizontal	4592.104	59.23	-10.20	49.03	54	-4.97	AV
Horizontal	11570.115	60.44	-0.21	60.23	68.2	-7.97	Pk
Horizontal	11570.115	49.56	-0.21	49.35	54	-4.65	AV
Horizontal	17355.129	57.25	4.68	61.93	68.2	-6.27	Pk
Horizontal	17355.129	44.72	4.68	49.40	54	-4.60	AV
High Channel (5825 MHz)-Above 1G							
Vertical	6039.058	71.87	-7.08	64.79	68.2	-3.41	Pk
Vertical	6039.058	59.52	-7.08	52.44	54	-1.56	AV
Vertical	11650.118	63.74	-0.50	63.24	74	-10.76	Pk
Vertical	11650.118	49.78	-0.50	49.28	54	-4.72	AV
Vertical	17475.025	55.06	4.77	59.83	68.2	-8.37	Pk
Vertical	17475.025	44.18	4.77	48.95	54	-5.05	AV
Horizontal	6039.147	73.37	-7.08	66.29	68.2	-1.91	Pk
Horizontal	6039.147	59.16	-7.08	52.08	54	-1.92	AV
Horizontal	11650.125	63.87	-0.50	63.37	74	-10.63	Pk
Horizontal	11650.125	49.98	-0.50	49.48	54	-4.52	AV
Horizontal	17475.033	58.80	4.77	63.57	68.2	-4.63	Pk
Horizontal	17475.033	44.51	4.77	49.28	54	-4.72	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

Test Mode: TX(5.8G) - 802.11ax-HE40

Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
Vertical	4679.183	74.47	-10.36	64.11	74	-9.89	AV
Vertical	4679.183	59.33	-10.36	48.97	54	-5.03	Pk
Vertical	11510.188	63.68	-0.26	63.42	74	-10.58	AV
Vertical	11510.188	49.30	-0.26	49.04	54	-4.96	Pk
Vertical	17265.027	59.67	4.35	64.02	68.2	-4.18	AV
Vertical	17265.027	44.65	4.35	49.00	54	-5.00	Pk
Horizontal	4679.163	71.80	-10.36	61.44	74	-12.56	AV
Horizontal	4679.163	59.37	-10.36	49.01	54	-4.99	Pk
Horizontal	11510.033	63.50	-0.26	63.24	74	-10.76	AV
Horizontal	11510.033	49.89	-0.26	49.63	54	-4.37	Pk
Horizontal	17265.181	58.64	4.35	62.99	68.2	-5.21	AV
Horizontal	17265.181	44.18	4.35	48.53	54	-5.47	AV
middle Channel (5795 MHz)-Above 1G							
Vertical	6039.172	71.54	-7.08	64.46	68.2	-3.74	Pk
Vertical	6039.172	59.48	-7.08	52.40	54	-1.60	AV
Vertical	11590.142	63.37	-0.20	63.17	74	-10.83	Pk
Vertical	11590.142	49.84	-0.20	49.64	54	-4.36	AV
Vertical	17385.168	57.87	4.81	62.68	68.2	-5.52	Pk
Vertical	17385.168	44.48	4.81	49.29	54	-4.71	AV
Horizontal	6039.091	74.51	-7.08	67.43	68.2	-0.77	Pk
Horizontal	6039.091	59.40	-7.08	52.32	54	-1.68	AV
Horizontal	11590.021	62.83	-0.20	62.63	74	-11.37	Pk
Horizontal	11590.021	49.55	-0.20	49.35	54	-4.65	AV
Horizontal	17385.013	57.75	4.81	62.56	68.2	-5.64	Pk
Horizontal	17385.013	44.98	4.81	49.79	54	-4.21	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G 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.
The worst case is Antenna MIMO.

Test Mode:	TX(5.8G) - 802.11ax-HE80
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Polar	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
(5775 MHz)-Above 1G							
Vertical	4679.145	71.83	-10.36	61.47	74	-12.53	Pk
Vertical	4679.145	59.42	-10.36	49.06	54	-4.94	AV
Vertical	11550.127	60.79	0.23	61.02	74	-12.98	Pk
Vertical	11550.127	49.33	0.23	49.56	54	-4.44	AV
Vertical	17325.069	56.95	4.55	61.50	68.2	-6.70	Pk
Vertical	17325.069	44.49	4.55	49.04	54	-4.96	AV
Horizontal	4679.013	72.85	-10.36	62.49	74	-11.51	Pk
Horizontal	4679.013	59.00	-10.36	48.64	54	-5.36	AV
Horizontal	11550.168	63.86	0.23	64.09	74	-9.91	Pk
Horizontal	11550.168	49.31	0.23	49.54	54	-4.46	AV
Horizontal	17325.180	55.64	4.55	60.19	68.2	-8.01	Pk
Horizontal	17325.180	44.04	4.55	48.59	54	-5.41	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G 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.

The worst case is Antenna MIMO.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, 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. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. 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.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 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 5.25-5.35 GHz and 5.47-5.725 GHz bands,

The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 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

For the band 5.725-5.85 GHz, 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.

8.3 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 ($< 1 \text{ MHz}$, or $< 500 \text{ kHz}$) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set $\text{RBW} \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $\text{VBW} \geq 3 \text{ RBW}$.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/\text{RBW})$ to the measured result, whereas RBW ($< 500 \text{ KHz}$) 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 $10\log(1\text{MHz}/\text{RBW})$ to the measured result, whereas RBW ($< 1 \text{ MHz}$) 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.

8.4 EUT Operating Conditions

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

8.5 Test Result

Temperature:	23.6℃	Relative Humidity:	50%
Pressure:	101KPa	Test Voltage:	DC 11.4V
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)		Total (dBm/MHz)	Limit (dBm/MHz)	Verdict
			Ant A	Ant B			
NVNT	a	5180	-5.33	-6.73	/	11	Pass
NVNT	a	5200	-4.23	-7.46	/	11	Pass
NVNT	a	5240	-4.98	-8.08	/	11	Pass
NVNT	n20	5180	-4.79	-8.65	-3.29	11	Pass
NVNT	n20	5200	-5.55	-8.07	-3.62	11	Pass
NVNT	n20	5240	-6.47	-8.65	-4.41	11	Pass
NVNT	n40	5190	-9.21	-12.37	-7.50	11	Pass
NVNT	n40	5230	-6.06	-11.7	-5.01	11	Pass
NVNT	ac20	5180	-4.39	-9.3	-3.17	11	Pass
NVNT	ac20	5200	-6.93	-9.2	-4.91	11	Pass
NVNT	ac20	5240	-6.01	-8.9	-4.21	11	Pass
NVNT	ac40	5190	-9.13	-12.9	-7.61	11	Pass
NVNT	ac40	5230	-9.92	-12.49	-8.01	11	Pass
NVNT	ac80	5210	-13.23	-15.4	-11.17	11	Pass
NVNT	ax20	5180	-3.84	-9.12	-2.71	11	Pass
NVNT	ax20	5200	-5.36	-8.8	-3.74	11	Pass
NVNT	ax20	5240	-5.58	-8.62	-3.83	11	Pass
NVNT	ax40	5190	-9.69	-12.87	-7.98	11	Pass
NVNT	ax40	5230	-10.66	-12.5	-8.47	11	Pass
NVNT	ax80	5210	-14.2	-16.08	-12.03	11	Pass

Total: antenna A+ antenna B



Ant A:

