

# FCC REPORT (UNII)

**Applicant:** TECNO MOBILE LIMITED

**Address of Applicant:** FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT

**Equipment Under Test (EUT)**

**Product Name:** Mobile Phone

**Model No.:** KF8

**Trade mark:** TECNO

**FCC ID:** 2ADYY-KF8

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart E Section 15.407

**Date of sample receipt:** 01 Dec., 2020

**Date of Test:** 01 Dec., to 23 Dec., 2020

**Date of report issued:** 24 Dec., 2020

**Test Result:** PASS\*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang  
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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## 2 Version

Version No.	Date	Description
00	24 Dec., 2020	Original

Tested by: YT Yang  
Test Engineer

Date: 24 Dec., 2020

Reviewed by: Winner Zhang  
Project Engineer

Date: 24 Dec., 2020

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## 4 Test Summary

Test Item	Section in CFR 47	Test Result
Antenna requirement	15.203 & 15.407 (a)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.407 (a) (1) (iv) & (a) (3)	Pass
26dB Occupied Bandwidth	15.407 (a) (12)	Pass
6dB Emission Bandwidth	15.407(e)	Pass
Power Spectral Density	15.407 (a) (1) (iv) & (a) (3)	Pass
Band Edge	15.407(b)	Pass
Spurious Emission	15.407 (b) & 15.205 & 15.209	Pass
Frequency Stability	15.407(g)	Pass
<b>Remark:</b>		
1. Pass: The EUT complies with the essential requirements in the standard. 2. N/A: Not Applicable. 3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).		
<b>Test Method:</b>	ANSI C63.10-2013 KDB 789033 D02 General UNII Test Procedures New Rules v02r01	

## 5 General Information

### 5.1 Client Information

Applicant:	TECNO MOBILE LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Manufacturer:	TECNO MOBILE LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Factory:	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China

### 5.2 General Description of E.U.T.

Product Name:	Mobile Phone				
Model No.:	KF8				
Operation Frequency:	Band 1: 5150MHz-5250MHz		Band 4: 5725MHz-5825MHz		
Channel numbers:	Band 1:	802.11a/802.11n20: 4	802.11n40: 2 802.11ac: 1		
	Band 4:	802.11a/802.11n20: 5	802.11n40: 2 802.11ac: 1		
Channel separation:	20MHz:	802.11a/802.11n-HT20/802.11ac-HT20			
	40MHz:	802.11n-HT40/802.11ac-HT40			
	80MHz:	802.11ac-HT80			
Modulation technology (IEEE 802.11a):	BPSK, QPSK, 16-QAM, 64-QAM				
Modulation technology (IEEE 802.11n):	BPSK, QPSK, 16-QAM, 64-QAM				
Modulation technology (IEEE 802.11ac):	BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM				
Data speed (IEEE 802.11a):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps				
Data speed (IEEE 802.11n20):	MCS0: 6.5Mbps, MCS1:13Mbps, MCS2:19.5Mbps, MCS3:26Mbps, MCS4:39Mbps, MCS5:52Mbps, MCS6:58.5Mbps, MCS7:65Mbps				
Data speed (IEEE 802.11n40):	MCS0:15Mbps, MCS1:30Mbps, MCS2:45Mbps, MCS3:60Mbps, MCS4:90Mbps, MCS5:120Mbps, MCS6:135Mbps, MCS7:150Mbps				
Data speed (IEEE 802.11ac):	Up to 433.3Mbps				
Antenna Type:	Internal Antenna				
Antenna gain:	-0.9 dBi				
Power supply:	Rechargeable Li-ion Polymer Battery DC3.85V-4900mAh				
AC adapter:	Model: U100TSA Input: AC100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2000mA				
Test Sample Condition:	The test samples were provided in good working order with no visible defects.				

Operation Frequency each of channel					
Band 1					
802.11a/802.11n/ac-HT20		802.11n/ac-HT40		802.11ac-HT80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	38	5190MHz	42	5210MHz
40	5200MHz	46	5230MHz		
44	5220MHz				
48	5240MHz				

Band 4					
802.11a/802.11n/ac-HT20		802.11n/ac-HT40		802.11ac-HT80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	151	5755MHz	155	5775MHz
153	5765MHz	159	5795MHz		
157	5785MHz				
161	5805MHz				
165	5825MHz				

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Band 1					
802.11a/802.11n/ac-HT20		802.11n/ac-HT40		802.11ac-HT80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest	5180MHz	Lowest	5190MHz	Middle	5210MHz
Middle	5200MHz	Highest	5230MHz		
Highest	5240MHz				

Band 4					
802.11a/802.11n/ac-HT20		802.11n/ac-HT40		802.11ac-HT80	
Channel	Frequency	Channel	Frequency	Channel	Frequency
Lowest	5745MHz	Lowest	5755MHz	Middle	5775MHz
Middle	5785MHz	Highest	5795MHz		
Highest	5825MHz				

### 5.3 Test environment and mode, and test samples plans

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Continuously transmitting mode	Keep the EUT in 100% duty cycle transmitting with modulation.
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
Per-scan all kind of data rate, and found the follow list were the worst case.	
Mode	Data rate
802.11a	6 Mbps
802.11n/ac20	6.5 Mbps
802.11n/ac40	13.5 Mbps
802.11ac80	29.3 Mbps

### 5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
The EUT has been tested as an independent unit.				

### 5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.20 dB (k=2)

### 5.6 Additions to, deviations, or exclusions from the method

No
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### 5.7 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.
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## 5.8 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

## 5.9 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.110~116, Building B, Jinyuan Business Building, Xixiang Road,  
Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>

## 5.10 Test Instruments list

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2020	07-21-2021
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-07-2020	03-06-2021
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-22-2020	06-21-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-07-2020	03-06-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2020	06-21-2021
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2020	11-17-2021
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Pre-amplifier	HP	8447D	2944A09358	03-07-2020	03-06-2021
Pre-amplifier	CD	PAP-1G18	11804	03-07-2020	03-06-2021
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-05-2020	03-04-2021
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2020	11-17-2021
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-05-2020	03-04-2021
Spectrum Analyzer	Agilent	N9020A	MY50510123	11-18-2019	11-17-2020
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-05-2020	03-04-2021
Signal Generator	R&S	SMR20	1008100050	03-05-2020	03-04-2021
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0		
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2020	03-06-2021
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2020	03-06-2021
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2020	03-06-2021
DC Power Supply	XinNuoEr	WYK-10020K	1409050110020	09-25-2020	09-24-2021
Temperature Humidity Chamber	HengPu	HPGDS-500	20140828008	11-01-2020	10-31-2021
Simulated Station	Rohde & Schwarz	CMW500	140493	07-22-2020	07-21-2021

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-05-2020	03-04-2021
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-05-2020	03-04-2021
LISN	CHASE	MN2050D	1447	03-05-2020	03-04-2021
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2020	07-20-2021
Cable	HP	10503A	N/A	03-05-2020	03-04-2021
EMI Test Software	AUDIX	E3	Version: 6.110919b		

Conducted method:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9010B	MY60240202	11-27-2020	11-26-2021
Vector Signal Generator	Keysight	N5182B	MY59101009	11-27-2020	11-26-2021
Analog Signal Generator	Keysight	N5173B	MY59100765	11-27-2020	11-26-2021
Power Detector Box	MWRF-test	MW100-PSB	MW201020JYT	11-27-2020	11-26-2021
Simulated Station	Rohde & Schwarz	CMW270	102335	11-27-2020	11-26-2021
RF Control Box	MWRF-test	MW100-RFCB	MW200927JYT	N/A	N/A
PDU	MWRF-test	XY-G10	N/A	N/A	N/A
Test Software	MWRF-test	MTS 8310	Version: 2.0.0.0		
DC Power Supply	Keysight	E3642A	MY60296194	11-27-2020	11-26-2021
Temperature Humidity Chamber	ZhongZhi	CZ-C-150D	ZH16491	09-23-2020	09-22-2021

## 6 Test results and Measurement Data

### 6.1 Antenna requirement

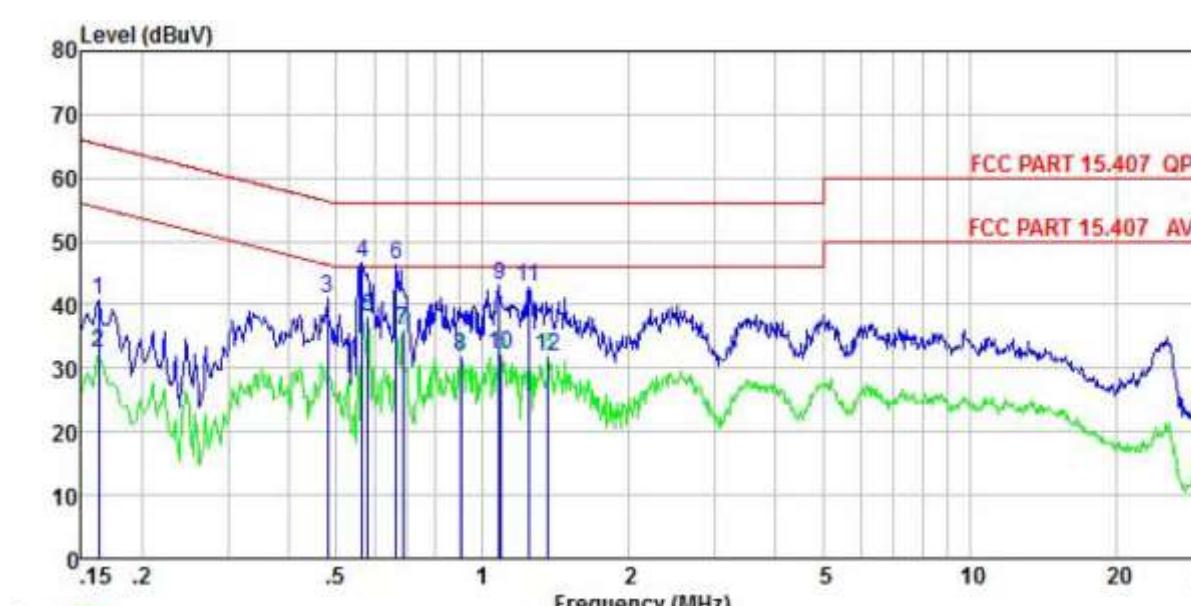
<b>Standard requirement:</b>	FCC Part15 E Section 15.203 /407(a)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.	
<b>E.U.T Antenna:</b>	
	The Wi-Fi antenna is an Internal antenna which cannot replace by end-user, the best case gain of the antenna is -0.9 dBi.

## 6.2 Conducted Emission

Test Requirement:	FCC Part15 C Section 15.207		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)		Limit (dBuV)
	Quasi-peak		
	0.15-0.5	66 to 56*	0.15-0.5
	0.5-5	56	0.5-5
	5-30	60	5-30
* Decreases with the logarithm of the frequency.			
Test procedure	<ol style="list-style-type: none"> <li>The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). It provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10(latest version) on conducted measurement.</li> </ol>		
Test setup:	<p style="text-align: center;"><b>Reference Plane</b></p> <p><i>Remark:</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>		
Test Instruments:	Refer to section 5.10 for details		
Test mode:	Refer to section 5.3 for details.		
Test results:	Passed		

**Measurement Data:**

<b>Product name:</b>	Mobile Phone	<b>Product model:</b>	KF8
<b>Test by:</b>	YT	<b>Test mode:</b>	5G Wi-Fi Tx mode
<b>Test frequency:</b>	150 kHz ~ 30 MHz	<b>Phase:</b>	Line
<b>Test voltage:</b>	AC 120 V/60 Hz	<b>Environment:</b>	Temp: 22.5°C Huni: 55%

Trace: 27

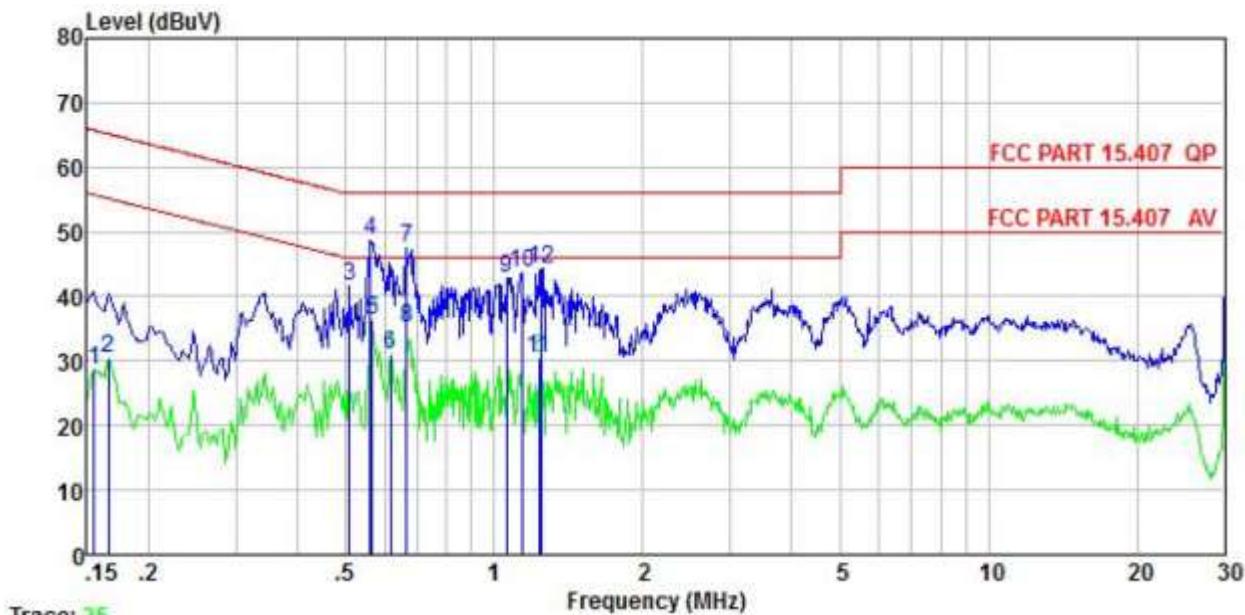
  

Freq	Read Level	LISN Factor	Aux Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.162	30.74	-0.58	-0.08	10.77	40.85	65.34	-24.49 QP
2	0.162	22.26	-0.58	-0.08	10.77	32.37	55.34	-22.97 Average
3	0.481	30.85	-0.44	-0.24	10.75	40.92	56.32	-15.40 QP
4	0.567	36.75	-0.47	-0.37	10.76	46.67	56.00	-9.33 QP
5	0.582	28.21	-0.48	-0.37	10.76	38.12	46.00	-7.88 Average
6	0.665	36.40	-0.51	-0.39	10.77	46.27	56.00	-9.73 QP
7	0.686	26.06	-0.52	-0.40	10.77	35.91	46.00	-10.09 Average
8	0.904	21.44	-0.59	0.21	10.84	31.90	46.00	-14.10 Average
9	1.082	32.47	-0.61	0.38	10.88	43.12	56.00	-12.88 QP
10	1.094	21.68	-0.61	0.36	10.88	32.31	46.00	-13.69 Average
11	1.242	32.29	-0.59	0.22	10.90	42.82	56.00	-13.18 QP
12	1.367	21.56	-0.57	0.11	10.91	32.01	46.00	-13.99 Average

**Notes:**

- An initial pre-scan was performed on the line and neutral lines with peak detector.
- Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- Final Level = Receiver Read level + LISN Factor + Aux Factor + Cable Loss.

<b>Product name:</b>	Mobile Phone	<b>Product model:</b>	KF8
<b>Test by:</b>	YT	<b>Test mode:</b>	5G Wi-Fi Tx mode
<b>Test frequency:</b>	150 kHz ~ 30 MHz	<b>Phase:</b>	Neutral
<b>Test voltage:</b>	AC 120 V/60 Hz	<b>Environment:</b>	Temp: 22.5°C Huni: 55%

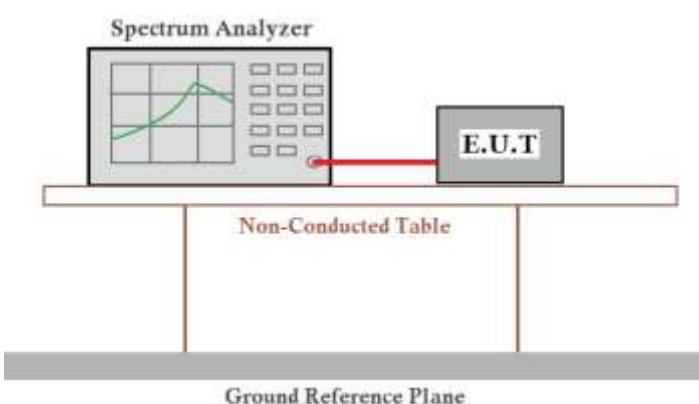


Freq MHz	Read Level dBuV	LISN Factor dB	Aux Factor dB	Cable Loss dB	Line Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1 0.155	18.50	-0.69	0.01	10.77	28.59	55.74	-27.15	Average
2 0.166	20.25	-0.68	0.01	10.77	30.35	55.16	-24.81	Average
3 0.510	31.51	-0.65	0.03	10.76	41.65	56.00	-14.35	QP
4 0.561	38.50	-0.65	0.03	10.76	48.64	56.00	-7.36	QP
5 0.567	26.05	-0.65	0.03	10.76	36.19	46.00	-9.81	Average
6 0.617	20.93	-0.64	0.04	10.77	31.10	46.00	-14.90	Average
7 0.665	37.44	-0.64	0.04	10.77	47.61	56.00	-8.39	QP
8 0.665	24.87	-0.64	0.04	10.77	35.04	46.00	-10.96	Average
9 1.060	32.56	-0.68	0.09	10.88	42.85	56.00	-13.15	QP
10 1.141	33.35	-0.69	0.10	10.89	43.65	56.00	-12.35	QP
11 1.229	19.96	-0.69	0.11	10.90	30.28	46.00	-15.72	Average
12 1.242	34.10	-0.69	0.11	10.90	44.42	56.00	-11.58	QP

**Notes:**

- An initial pre-scan was performed on the line and neutral lines with peak detector.
- Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- Final Level = Receiver Read level + LISN Factor + Aux Factor + Cable Loss.

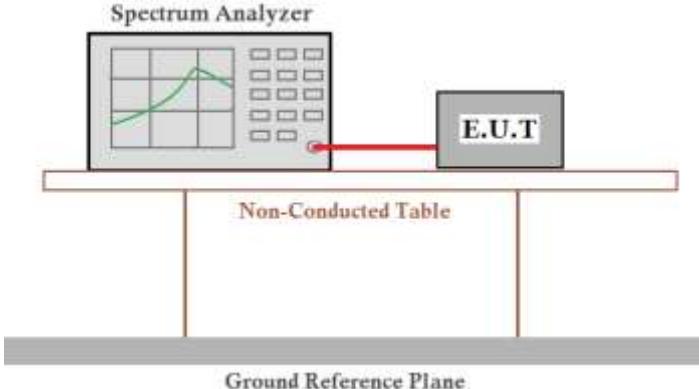
## 6.3 Conducted Output Power

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (iv) & (a) (3)
Limit:	Band 1: 24dBm Band 4: 30dBm
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

### Measurement Data:

Refer to Appendix A - 5.2G Wi-Fi, Appendix A - 5.8G Wi-Fi

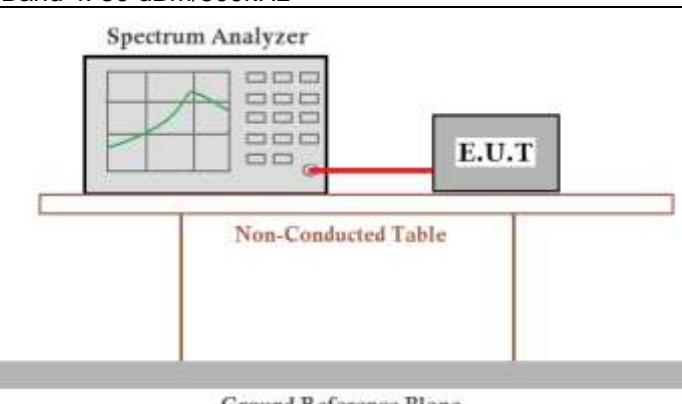
## 6.4 Occupy Bandwidth

Test Requirement:	FCC Part15 E Section 15.407 (a) (12) and Section 15.407 (e)
Limit:	Band 1/4: N/A (26dB Emission Bandwidth and 99% Occupy Bandwidth) Band 4: >500kHz (6dB Bandwidth)
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

### Measurement Data:

Refer to Appendix A - 5.2G Wi-Fi, Appendix A - 5.8G Wi-Fi

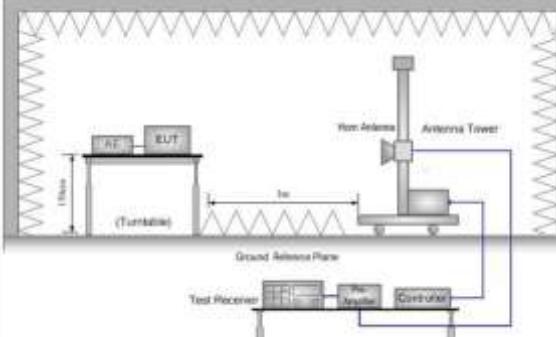
## 6.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407 (a) (1) (iv) & (a)(3)
Limit:	Band 1: 11 dBm/MHz Band 4: 30 dBm/500kHz
Test setup:	
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

### Measurement Data:

Refer to Appendix A - 5.2G Wi-Fi, Appendix A - 5.8G Wi-Fi

## 6.6 Band Edge

Test Requirement:	FCC Part 15 E Section 15.407 (b)					
Receiver setup:	Detector	RBW	VBW	Remark		
	Quasi-peak	120kHz	300kHz	Quasi-peak Value		
	RMS	1MHz	3MHz	Average Value		
Limit:	Band	Limit (dBuV/m @3m)		Remark		
	Band 1	68.20		Peak Value		
		54.00		Average Value		
<p>Band 4 limit:            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.</p> <p>Remark:</p> <ol style="list-style-type: none"> <li>1. Band 1 limit:  <math>E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 68.2 \text{ dBuV/m}</math>, for <math>\text{EIPR}[\text{dBm}] = -27 \text{ dBm}</math>.</li> <li>2. Band 4 limit:  <math>E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 68.2 \text{ dBuV/m}</math>, for <math>\text{EIPR}[\text{dBm}] = -27 \text{ dBm}</math>.  <math>E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 105.2 \text{ dBuV/m}</math>, for <math>\text{EIPR}[\text{dBm}] = 10 \text{ dBm}</math>.  <math>E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 110.8 \text{ dBuV/m}</math>, for <math>\text{EIPR}[\text{dBm}] = 15.6 \text{ dBm}</math>.  <math>E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 122.2 \text{ dBuV/m}</math>, for <math>\text{EIPR}[\text{dBm}] = 27 \text{ dBm}</math>.</li> </ol>						
Test Procedure:	<ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>					
Test setup:						
Test Instruments:	Refer to section 5.10 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					

**Measurement Data (worst case):**
**Band 1:**

Band 1 – 802.11a									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	50.78	31.53	6.69	2.54	41.93	49.61	68.20	-18.59	Horizontal
5150.00	47.39	31.53	6.69	2.54	41.93	46.22	68.20	-21.98	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	40.59	31.53	6.69	2.54	41.93	39.42	54.00	-14.58	Horizontal
5150.00	37.65	31.53	6.69	2.54	41.93	36.48	54.00	-17.52	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.92	31.97	6.87	2.61	41.89	46.48	68.20	-21.72	Horizontal
5350.00	47.41	31.97	6.87	2.61	41.89	46.97	68.20	-21.23	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.50	31.97	6.87	2.61	41.89	36.06	54.00	-17.94	Horizontal
5350.00	37.14	31.97	6.87	2.61	41.89	36.70	54.00	-17.30	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11n(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	50.63	31.53	6.69	2.54	41.93	49.46	68.20	-18.74	Horizontal
5150.00	48.26	31.53	6.69	2.54	41.93	47.09	68.20	-21.11	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	40.32	31.53	6.69	2.54	41.93	39.15	54.00	-14.85	Horizontal
5150.00	39.95	31.53	6.69	2.54	41.93	38.78	54.00	-15.22	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.52	31.97	6.87	2.61	41.89	47.08	68.20	-21.12	Horizontal
5350.00	46.69	31.97	6.87	2.61	41.89	46.25	68.20	-21.95	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.52	31.97	6.87	2.61	41.89	36.08	54.00	-17.92	Horizontal
5350.00	38.19	31.97	6.87	2.61	41.89	37.75	54.00	-16.25	Vertical

*Remark:*

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11n(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	50.66	31.53	6.69	2.54	41.93	49.49	68.20	-18.71	Horizontal
5150.00	47.98	31.53	6.69	2.54	41.93	46.81	68.20	-21.39	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	40.36	31.53	6.69	2.54	41.93	39.19	54.00	-14.81	Horizontal
5150.00	38.79	31.53	6.69	2.54	41.93	37.62	54.00	-16.38	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.65	31.97	6.87	2.61	41.89	46.21	68.20	-21.99	Horizontal
5350.00	47.89	31.97	6.87	2.61	41.89	47.45	68.20	-20.75	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	35.65	31.97	6.87	2.61	41.89	35.21	54.00	-18.79	Horizontal
5350.00	36.23	31.97	6.87	2.61	41.89	35.79	54.00	-18.21	Vertical

*Remark:*

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11ac(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	46.65	31.53	6.69	2.54	41.93	45.48	68.20	-22.72	Horizontal
5150.00	47.13	31.53	6.69	2.54	41.93	45.96	68.20	-22.24	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	36.65	31.53	6.69	2.54	41.93	35.48	54.00	-18.52	Horizontal
5150.00	35.18	31.53	6.69	2.54	41.93	34.01	54.00	-19.99	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.56	31.97	6.87	2.61	41.89	47.12	68.20	-21.08	Horizontal
5350.00	46.98	31.97	6.87	2.61	41.89	46.54	68.20	-21.66	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	37.56	31.97	6.87	2.61	41.89	37.12	54.00	-16.88	Horizontal
5350.00	36.29	31.97	6.87	2.61	41.89	35.85	54.00	-18.15	Vertical

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11ac(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	47.52	31.53	6.69	2.54	41.93	46.35	68.20	-21.85	Horizontal
5150.00	46.98	31.53	6.69	2.54	41.93	45.81	68.20	-22.39	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	35.52	31.53	6.69	2.54	41.93	34.35	54.00	-19.65	Horizontal
5150.00	34.17	31.53	6.69	2.54	41.93	33.00	54.00	-21.00	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	46.65	31.97	6.87	2.61	41.89	46.21	68.20	-21.99	Horizontal
5350.00	47.89	31.97	6.87	2.61	41.89	47.45	68.20	-20.75	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.65	31.97	6.87	2.61	41.89	36.21	54.00	-17.79	Horizontal
5350.00	35.17	31.97	6.87	2.61	41.89	34.73	54.00	-19.27	Vertical
<i>Remark:</i>									
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.									
2. The emission levels of other frequencies are very lower than the limit and not show in test report.									

Band 1 – 802.11ac(HT80)									
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	47.87	31.53	7.05	2.54	41.93	47.06	68.20	-21.14	Horizontal
5150.00	46.65	31.53	7.05	2.54	41.93	45.84	68.20	-22.36	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5150.00	40.25	31.53	7.05	2.54	41.93	39.44	54.00	-14.56	Horizontal
5150.00	37.98	31.53	7.05	2.54	41.93	37.17	54.00	-16.83	Vertical
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	47.52	31.97	6.87	2.61	41.89	47.08	68.20	-21.12	Horizontal
5350.00	47.98	31.97	6.87	2.61	41.89	47.54	68.20	-20.66	Vertical
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5350.00	36.13	31.97	6.87	2.61	41.89	35.69	54.00	-18.31	Horizontal
5350.00	35.59	31.97	6.87	2.61	41.89	35.15	54.00	-18.85	Vertical
<i>Remark:</i>									
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.									
2. The emission levels of other frequencies are very lower than the limit and not show in test report.									

**Band 4:**

Band 4 – 802.11a									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	50.53	32.68	7.45	2.69	41.85	51.50	68.20	-16.70	Horizontal
5700.00	51.98	32.77	7.60	2.72	41.90	53.17	105.20	-52.03	Horizontal
5720.00	52.66	32.81	7.64	2.72	41.92	53.91	110.80	-56.89	Horizontal
5725.00	53.47	32.81	7.69	2.72	41.94	54.75	122.20	-67.45	Horizontal
5650.00	49.95	32.68	7.45	2.69	41.85	50.92	68.20	-17.28	Vertical
5700.00	52.33	32.77	7.60	2.72	41.90	53.52	105.20	-51.68	Vertical
5720.00	56.89	32.81	7.64	2.72	41.92	58.14	110.80	-52.66	Vertical
5725.00	59.99	32.81	7.69	2.72	41.94	61.27	122.20	-60.93	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	50.55	33.04	7.45	2.69	41.85	51.88	122.20	-70.32	Horizontal
5855.00	51.56	33.05	7.60	2.72	41.90	53.03	110.80	-57.77	Horizontal
5875.00	47.95	33.08	7.64	2.72	41.92	49.47	105.20	-55.73	Horizontal
5925.00	51.36	33.17	7.69	2.72	41.94	53.00	68.20	-15.20	Horizontal
5850.00	52.59	33.04	7.45	2.69	41.85	53.92	122.20	-68.28	Vertical
5855.00	53.66	33.05	7.60	2.72	41.90	55.13	110.80	-55.67	Vertical
5875.00	47.89	33.08	7.64	2.72	41.92	49.41	105.20	-55.79	Vertical
5925.00	50.98	33.17	7.69	2.72	41.94	52.62	68.20	-15.58	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11n(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	49.95	32.68	7.45	2.69	41.85	50.92	68.20	-17.28	Horizontal
5700.00	50.56	32.77	7.60	2.72	41.90	51.75	105.20	-53.45	Horizontal
5720.00	52.16	32.81	7.64	2.72	41.92	53.41	110.80	-57.39	Horizontal
5725.00	57.98	32.81	7.69	2.72	41.94	59.26	122.20	-62.94	Horizontal
5650.00	51.43	32.68	7.45	2.69	41.85	52.40	68.20	-15.80	Vertical
5700.00	52.26	32.77	7.60	2.72	41.90	53.45	105.20	-51.75	Vertical
5720.00	56.98	32.81	7.64	2.72	41.92	58.23	110.80	-52.57	Vertical
5725.00	57.18	32.81	7.69	2.72	41.94	58.46	122.20	-63.74	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	54.52	33.04	7.45	2.69	41.85	55.85	122.20	-66.35	Horizontal
5855.00	53.36	33.05	7.60	2.72	41.90	54.83	110.80	-55.97	Horizontal
5875.00	51.47	33.08	7.64	2.72	41.92	52.99	105.20	-52.21	Horizontal
5925.00	52.59	33.17	7.69	2.72	41.94	54.23	68.20	-13.97	Horizontal
5850.00	47.98	33.04	7.45	2.69	41.85	49.31	122.20	-72.89	Vertical
5855.00	50.56	33.05	7.60	2.72	41.90	52.03	110.80	-58.77	Vertical
5875.00	52.34	33.08	7.64	2.72	41.92	53.86	105.20	-51.34	Vertical
5925.00	51.39	33.17	7.69	2.72	41.94	53.03	68.20	-15.17	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11n(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	53.23	32.68	7.45	2.69	41.85	54.20	68.20	-14.00	Horizontal
5700.00	54.65	32.77	7.60	2.72	41.90	55.84	105.20	-49.36	Horizontal
5720.00	52.19	32.81	7.64	2.72	41.92	53.44	110.80	-57.36	Horizontal
5725.00	54.56	32.81	7.69	2.72	41.94	55.84	122.20	-66.36	Horizontal
5650.00	52.39	32.68	7.45	2.69	41.85	53.36	68.20	-14.84	Vertical
5700.00	51.89	32.77	7.60	2.72	41.90	53.08	105.20	-52.12	Vertical
5720.00	52.45	32.81	7.64	2.72	41.92	53.70	110.80	-57.10	Vertical
5725.00	53.66	32.81	7.69	2.72	41.94	54.94	122.20	-67.26	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	49.65	33.04	7.45	2.69	41.85	50.98	122.20	-71.22	Horizontal
5855.00	50.58	33.05	7.60	2.72	41.90	52.05	110.80	-58.75	Horizontal
5875.00	49.95	33.08	7.64	2.72	41.92	51.47	105.20	-53.73	Horizontal
5925.00	48.53	33.17	7.69	2.72	41.94	50.17	68.20	-18.03	Horizontal
5850.00	47.85	33.04	7.45	2.69	41.85	49.18	122.20	-73.02	Vertical
5855.00	49.83	33.05	7.60	2.72	41.90	51.30	110.80	-59.50	Vertical
5875.00	47.51	33.08	7.64	2.72	41.92	49.03	105.20	-56.17	Vertical
5925.00	47.36	33.17	7.69	2.72	41.94	49.00	68.20	-19.20	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11ac(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	47.95	32.68	7.45	2.69	41.85	48.92	68.20	-19.28	Horizontal
5700.00	51.53	32.77	7.60	2.72	41.90	52.72	105.20	-52.48	Horizontal
5720.00	53.65	32.81	7.64	2.72	41.92	54.90	110.80	-55.90	Horizontal
5725.00	52.48	32.81	7.69	2.72	41.94	53.76	122.20	-68.44	Horizontal
5650.00	47.65	32.68	7.45	2.69	41.85	48.62	68.20	-19.58	Vertical
5700.00	48.16	32.77	7.60	2.72	41.90	49.35	105.20	-55.85	Vertical
5720.00	51.33	32.81	7.64	2.72	41.92	52.58	110.80	-58.22	Vertical
5725.00	49.89	32.81	7.69	2.72	41.94	51.17	122.20	-71.03	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	50.56	33.04	7.45	2.69	41.85	51.89	122.20	-70.31	Horizontal
5855.00	59.95	33.05	7.60	2.72	41.90	61.42	110.80	-49.38	Horizontal
5875.00	47.85	33.08	7.64	2.72	41.92	49.37	105.20	-55.83	Horizontal
5925.00	52.56	33.17	7.69	2.72	41.94	54.20	68.20	-14.00	Horizontal
5850.00	53.39	33.04	7.45	2.69	41.85	54.72	122.20	-67.48	Vertical
5855.00	50.45	33.05	7.60	2.72	41.90	51.92	110.80	-58.88	Vertical
5875.00	51.73	33.08	7.64	2.72	41.92	53.25	105.20	-51.95	Vertical
5925.00	52.34	33.17	7.69	2.72	41.94	53.98	68.20	-14.22	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11ac(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	49.65	32.68	7.45	2.69	41.85	50.62	68.20	-17.58	Horizontal
5700.00	48.15	32.77	7.60	2.72	41.90	49.34	105.20	-55.86	Horizontal
5720.00	51.43	32.81	7.64	2.72	41.92	52.68	110.80	-58.12	Horizontal
5725.00	53.65	32.81	7.69	2.72	41.94	54.93	122.20	-67.27	Horizontal
5650.00	50.25	32.68	7.45	2.69	41.85	51.22	68.20	-16.98	Vertical
5700.00	52.49	32.77	7.60	2.72	41.90	53.68	105.20	-51.52	Vertical
5720.00	51.78	32.81	7.64	2.72	41.92	53.03	110.80	-57.77	Vertical
5725.00	53.39	32.81	7.69	2.72	41.94	54.67	122.20	-67.53	Vertical
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	51.23	33.04	7.45	2.69	41.85	52.56	122.20	-69.64	Horizontal
5855.00	48.95	33.05	7.60	2.72	41.90	50.42	110.80	-60.38	Horizontal
5875.00	49.73	33.08	7.64	2.72	41.92	51.25	105.20	-53.95	Horizontal
5925.00	47.51	33.17	7.69	2.72	41.94	49.15	68.20	-19.05	Horizontal
5850.00	48.95	33.04	7.45	2.69	41.85	50.28	122.20	-71.92	Vertical
5855.00	49.96	33.05	7.60	2.72	41.90	51.43	110.80	-59.37	Vertical
5875.00	46.28	33.08	7.64	2.72	41.92	47.80	105.20	-57.40	Vertical
5925.00	47.81	33.17	7.69	2.72	41.94	49.45	68.20	-18.75	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11ac(HT80)									
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5650.00	50.56	32.68	7.45	2.69	41.85	51.53	68.20	-16.67	Horizontal
5700.00	51.53	32.77	7.60	2.72	41.90	52.72	105.20	-52.48	Horizontal
5720.00	55.95	32.81	7.64	2.72	41.92	57.20	110.80	-53.60	Horizontal
5725.00	59.96	32.81	7.69	2.72	41.94	61.24	122.20	-60.96	Horizontal
5650.00	51.43	32.68	7.45	2.69	41.85	52.40	68.20	-15.80	Vertical
5700.00	52.39	32.77	7.60	2.72	41.90	53.58	105.20	-51.62	Vertical
5720.00	59.89	32.81	7.64	2.72	41.92	61.14	110.80	-49.66	Vertical
5725.00	57.84	32.81	7.69	2.72	41.94	59.12	122.20	-63.08	Vertical
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV/m)	Antenna Factor (dB)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5850.00	62.53	33.04	7.45	2.69	41.85	63.86	122.20	-58.34	Horizontal
5855.00	54.15	33.05	7.60	2.72	41.90	55.62	110.80	-55.18	Horizontal
5875.00	55.95	33.08	7.64	2.72	41.92	57.47	105.20	-47.73	Horizontal
5925.00	54.35	33.17	7.69	2.72	41.94	55.99	68.20	-12.21	Horizontal
5850.00	46.68	33.04	7.45	2.69	41.85	48.01	122.20	-74.19	Vertical
5855.00	55.58	33.05	7.60	2.72	41.90	57.05	110.80	-53.75	Vertical
5875.00	57.95	33.08	7.64	2.72	41.92	59.47	105.20	-45.73	Vertical
5925.00	59.63	33.17	7.69	2.72	41.94	61.27	68.20	-6.93	Vertical

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

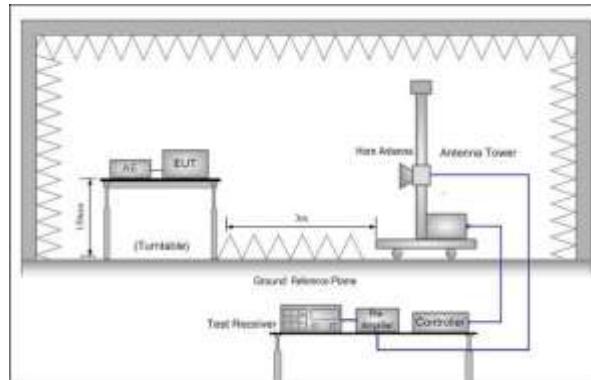
## 6.7 Spurious Emission

### 6.7.1 Restricted Band

Test Requirement:	FCC Part15 E Section 15.407(b)								
Test Frequency Range:	4.5 GHz to 5.15 GHz and 5.35GHz to 5.46GHz								
Test site:	Measurement Distance: 3m								
Receiver setup:	Frequency	Detector	RBW	VBW	Remark				
	Above 1GHz	Peak	1MHz	3MHz	Peak Value				
Limit:	Frequency	Limit (dBuV/m @3m)		Remark					
	Above 1GHz	74.00		Peak Value					
Test Procedure:	<ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>								
Test setup:									
Test Instruments:	Refer to section 5.10 for details								
Test mode:	Refer to section 5.3 for details								
Test results:	Passed(Refer to section 6.6)								

### 6.7.2 Unwanted Emissions out of the Restricted Bands

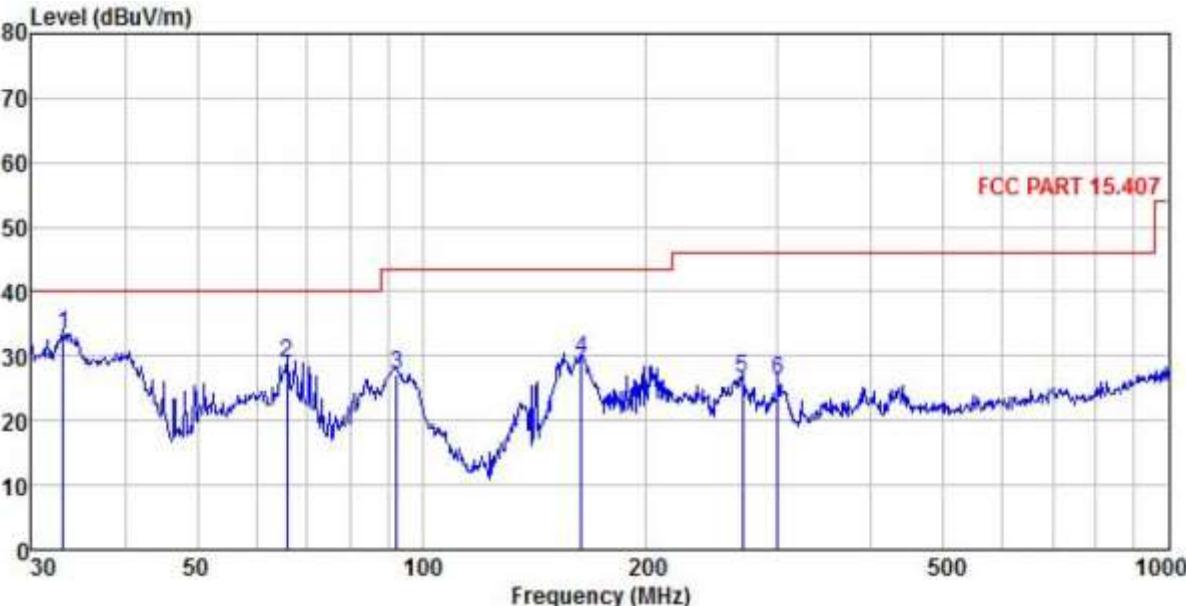
Test Requirement:	FCC Part15 C Section 15.209 and 15.205								
Test Frequency Range:	30MHz to 40GHz								
Test site:	Measurement Distance: 3m								
Receiver setup:	Frequency	Detector	RBW	VBW	Remark				
	30MHz-1GHz	Quasi-peak	100kHz	300kHz	Quasi-peak Value				
	Above 1GHz	Peak	1MHz	3MHz	Peak Value				
		RMS	1MHz	3MHz	Average Value				
Limit:	Frequency	Limit (dB <sub>μ</sub> V/m @3m)		Remark					
	30MHz-88MHz	40.0		Quasi-peak Value					
	88MHz-216MHz	43.5		Quasi-peak Value					
	216MHz-960MHz	46.0		Quasi-peak Value					
	960MHz-1GHz	54.0		Quasi-peak Value					
	Above 1GHz	68.20		Peak Value					
		54.00		Average Value					
Remark: Above 1GHz limit: $E[dB\mu V/m] = EIRP[dBm] + 95.2 - 68.2 = dB\mu V/m$ , for EIRP[dBm]=-27dBm.									
Test Procedure:	<ol style="list-style-type: none"> <li>The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>								
Test setup:	<p>Below 1GHz</p> <p>Above 1GHz</p>								



Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data (worst case):****Below 1GHz**

<b>Product Name:</b>	Mobile Phone		<b>Product Model:</b>	KF8
<b>Test By:</b>	YT		<b>Test mode:</b>	5G Wi-Fi Tx mode
<b>Test Frequency:</b>	30 MHz ~ 1 GHz		<b>Polarization:</b>	Vertical
<b>Test Voltage:</b>	AC 120/60Hz		<b>Environment:</b>	Temp: 24°C Huni: 57%

The graph shows the measured emission levels (blue line) compared to the FCC Part 15.407 limits (red step-line). The x-axis represents Frequency (MHz) from 30 to 1000, and the y-axis represents Level (dBuV/m) from 0 to 80. The measured levels generally stay below the limit, except for a few peaks at specific frequencies (labeled 1-6).

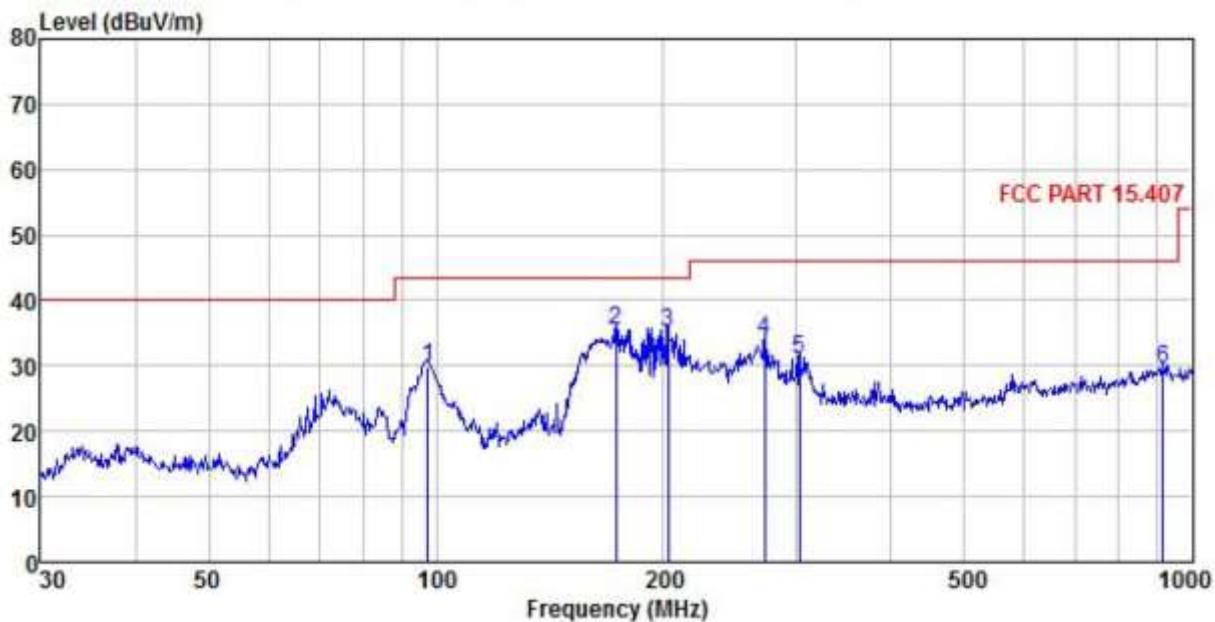
  

Freq	ReadAntenna Level	Cable Loss	Aux Factor	Preamp Factor	Limit Level	Line Limit	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1	33.095	50.66	12.31	0.36	0.00	29.96	33.37	40.00 -6.63 QP
2	66.034	48.50	9.87	0.43	0.00	29.75	29.05	40.00 -10.95 QP
3	92.462	46.65	9.45	0.50	0.00	29.56	27.04	43.50 -16.46 QP
4	163.755	42.37	15.58	0.64	0.00	29.10	29.49	43.50 -14.01 QP
5	268.485	35.58	18.58	0.82	0.00	28.51	26.47	46.00 -19.53 QP
6	299.316	35.13	18.70	0.86	0.00	28.45	26.24	46.00 -19.76 QP

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. The Aux Factor is a notch filter switch box loss, this item is not used.

<b>Product Name:</b>	Mobile Phone	<b>Product Model:</b>	KF8
<b>Test By:</b>	YT	<b>Test mode:</b>	5G Wi-Fi Tx mode
<b>Test Frequency:</b>	30 MHz ~ 1 GHz	<b>Polarization:</b>	Horizontal
<b>Test Voltage:</b>	AC 120/60Hz	<b>Environment:</b>	Temp: 24°C Huni: 57%



Freq MHz	Read	Antenna	Cable	Aux	Preamp	Limit	Over	Remark
	Level	Factor	Loss	Factor	Factor	Line	Line	
	dBuV	dB/m	dB	dB	dB	dBuV/m	dBuV/m	dB
1 97.456	49.88	9.10	0.51	0.00	29.54	29.95	43.50	-13.55 QP
2 173.205	47.02	16.69	0.66	0.00	29.02	35.35	43.50	-8.15 QP
3 202.810	44.81	18.31	0.72	0.00	28.81	35.03	43.50	-8.47 QP
4 272.278	43.09	18.59	0.82	0.00	28.50	34.00	46.00	-12.00 QP
5 302.481	39.95	18.70	0.86	0.00	28.45	31.06	46.00	-14.94 QP
6 916.069	33.08	22.67	1.51	0.00	27.83	29.43	46.00	-16.57 QP

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. The Aux Factor is a notch filter switch box loss, this item is not used.

**Above 1GHz:**
**Band 1:**

Band 1 – 802.11a									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10360.00	47.95	40.10	9.82	3.95	41.97	59.85	68.20	-8.35	Vertical
10360.00	48.36	40.10	9.82	3.95	41.97	60.26	68.20	-7.94	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10360.00	37.52	40.10	9.82	3.95	41.97	49.42	54.00	-4.58	Vertical
10360.00	36.69	40.10	9.82	3.95	41.97	48.59	54.00	-5.41	Horizontal
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10400.00	48.52	40.00	9.85	3.98	41.95	60.40	68.20	-7.80	Vertical
10400.00	47.16	40.00	9.85	3.98	41.95	59.04	68.20	-9.16	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10400.00	36.65	40.00	9.85	3.98	41.95	48.53	54.00	-5.47	Vertical
10400.00	37.49	40.00	9.85	3.98	41.95	49.37	54.00	-4.63	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10480.00	49.65	39.70	9.96	4.02	41.88	61.45	68.20	-6.75	Vertical
10480.00	47.26	39.70	9.96	4.02	41.88	59.06	68.20	-9.14	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10480.00	37.95	39.70	9.96	4.02	41.88	49.75	54.00	-4.25	Vertical
10480.00	38.05	39.70	9.96	4.02	41.88	49.85	54.00	-4.15	Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11n(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10360.00	48.52	40.10	9.82	3.95	41.97	60.42	68.20	-7.78	Vertical
10360.00	47.33	40.10	9.82	3.95	41.97	59.23	68.20	-8.97	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10360.00	39.65	40.10	9.82	3.95	41.97	51.55	54.00	-2.45	Vertical
10360.00	38.76	40.10	9.82	3.95	41.97	50.66	54.00	-3.34	Horizontal
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10400.00	49.95	40.00	9.85	3.98	41.95	61.83	68.20	-6.37	Vertical
10400.00	48.73	40.00	9.85	3.98	41.95	60.61	68.20	-7.59	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10400.00	38.47	40.00	9.85	3.98	41.95	50.35	54.00	-3.65	Vertical
10400.00	37.19	40.00	9.85	3.98	41.95	49.07	54.00	-4.93	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10480.00	48.98	39.70	9.96	4.02	41.88	60.78	68.20	-7.42	Vertical
10480.00	47.76	39.70	9.96	4.02	41.88	59.56	68.20	-8.64	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10480.00	37.95	39.70	9.96	4.02	41.88	49.75	54.00	-4.25	Vertical
10480.00	38.19	39.70	9.96	4.02	41.88	49.99	54.00	-4.01	Horizontal
Remark:									
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.									
2. The emission levels of other frequencies are very lower than the limit and not show in test report.									

Band 1 – 802.11n(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10380.00	48.75	40.00	9.85	3.95	41.95	60.60	68.20	-7.60	Vertical
10380.00	47.33	40.00	9.85	3.95	41.95	59.18	68.20	-9.02	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10380.00	39.79	40.00	9.85	3.95	41.95	51.64	54.00	-2.36	Vertical
10380.00	38.12	40.00	9.85	3.95	41.95	49.97	54.00	-4.03	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10460.00	49.95	39.80	9.92	4.02	41.90	61.79	68.20	-6.41	Vertical
10460.00	48.37	39.80	9.92	4.02	41.90	60.21	68.20	-7.99	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10460.00	38.45	39.80	9.92	4.02	41.90	50.29	54.00	-3.71	Vertical
10460.00	36.19	39.80	9.92	4.02	41.90	48.03	54.00	-5.97	Horizontal

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11ac(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10360.00	47.98	40.10	9.82	3.95	41.97	59.88	68.20	-8.32	Vertical
10360.00	48.26	40.10	9.82	3.95	41.97	60.16	68.20	-8.04	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10360.00	37.48	40.10	9.82	3.95	41.97	49.38	54.00	-4.62	Vertical
10360.00	38.14	40.10	9.82	3.95	41.97	50.04	54.00	-3.96	Horizontal
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10400.00	48.98	40.00	9.85	3.98	41.95	60.86	68.20	-7.34	Vertical
10400.00	49.73	40.00	9.85	3.98	41.95	61.61	68.20	-6.59	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10400.00	38.65	40.00	9.85	3.98	41.95	50.53	54.00	-3.47	Vertical
10400.00	37.14	40.00	9.85	3.98	41.95	49.02	54.00	-4.98	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10480.00	48.98	39.70	9.96	4.02	41.88	60.78	68.20	-7.42	Vertical
10480.00	47.39	39.70	9.96	4.02	41.88	59.19	68.20	-9.01	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10480.00	38.65	39.70	9.96	4.02	41.88	50.45	54.00	-3.55	Vertical
10480.00	36.14	39.70	9.96	4.02	41.88	47.94	54.00	-6.06	Horizontal
<i>Remark:</i>									
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.									
2. The emission levels of other frequencies are very lower than the limit and not show in test report.									

Band 1 – 802.11ac(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10380.00	47.85	40.00	9.85	3.95	41.95	59.70	68.20	-8.50	Vertical
10380.00	49.37	40.00	9.85	3.95	41.95	61.22	68.20	-6.98	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10380.00	36.65	40.00	9.85	3.95	41.95	48.50	54.00	-5.50	Vertical
10380.00	35.87	40.00	9.85	3.95	41.95	47.72	54.00	-6.28	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10460.00	48.52	39.80	9.92	4.02	41.90	60.36	68.20	-7.84	Vertical
10460.00	47.17	39.80	9.92	4.02	41.90	59.01	68.20	-9.19	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10460.00	36.65	39.80	9.92	4.02	41.90	48.49	54.00	-5.51	Vertical
10460.00	35.27	39.80	9.92	4.02	41.90	47.11	54.00	-6.89	Horizontal

**Remark:**

- Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 1 – 802.11ac(HT80)									
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10420.00	48.26	40.10	9.82	3.98	41.97	60.19	68.20	-8.01	Vertical
10420.00	46.69	40.10	9.82	3.98	41.97	58.62	68.20	-9.58	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
10420.00	38.52	40.10	9.82	3.98	41.97	50.45	54.00	-3.55	Vertical
10420.00	36.65	40.10	9.82	3.98	41.97	48.58	54.00	-5.42	Horizontal

*Remark:*

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

**Band 4:**

Band 4 – 802.11a									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490.00	47.85	41.50	10.81	4.21	42.29	62.08	74.00	-11.92	Vertical
11490.00	46.69	41.50	10.81	4.21	42.29	60.92	74.00	-13.08	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490.00	36.65	41.50	10.81	4.21	42.29	50.88	54.00	-3.12	Vertical
11490.00	37.12	41.50	10.81	4.21	42.29	51.35	54.00	-2.65	Horizontal
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570.00	46.69	41.38	10.78	4.21	42.27	60.79	74.00	-13.21	Vertical
11570.00	45.52	41.38	10.78	4.21	42.27	59.62	74.00	-14.38	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570.00	35.52	41.38	10.78	4.21	42.27	49.62	54.00	-4.38	Vertical
11570.00	34.19	41.38	10.78	4.21	42.27	48.29	54.00	-5.71	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650.00	45.56	41.26	10.76	4.21	42.26	59.53	74.00	-14.47	Vertical
11650.00	46.18	41.26	10.76	4.21	42.26	60.15	74.00	-13.85	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650.00	36.48	41.26	10.76	4.21	42.26	50.45	54.00	-3.55	Vertical
11650.00	35.17	41.26	10.76	4.21	42.26	49.14	54.00	-4.86	Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11n(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490.00	48.35	41.50	10.81	4.21	42.29	62.58	74.00	-11.42	Vertical
11490.00	47.19	41.50	10.81	4.21	42.29	61.42	74.00	-12.58	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490.00	35.65	41.50	10.81	4.21	42.29	49.88	54.00	-4.12	Vertical
11490.00	36.19	41.50	10.81	4.21	42.29	50.42	54.00	-3.58	Horizontal
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570.00	45.52	41.38	10.78	4.21	42.27	59.62	74.00	-14.38	Vertical
11570.00	46.98	41.38	10.78	4.21	42.27	61.08	74.00	-12.92	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570.00	36.52	41.38	10.78	4.21	42.27	50.62	54.00	-3.38	Vertical
11570.00	35.17	41.38	10.78	4.21	42.27	49.27	54.00	-4.73	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650.00	46.52	41.26	10.76	4.21	42.26	60.49	74.00	-13.51	Vertical
11650.00	45.18	41.26	10.76	4.21	42.26	59.15	74.00	-14.85	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650.00	35.95	41.26	10.76	4.21	42.26	49.92	54.00	-4.08	Vertical
11650.00	34.78	41.26	10.76	4.21	42.26	48.75	54.00	-5.25	Horizontal

**Remark:**

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11n(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11510.00	46.15	41.50	10.81	4.21	42.29	60.38	74.00	-13.62	Vertical
11510.00	47.22	41.50	10.81	4.21	42.29	61.45	74.00	-12.55	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11510.00	37.65	41.50	10.81	4.21	42.29	51.88	54.00	-2.12	Vertical
11510.00	36.19	41.50	10.81	4.21	42.29	50.42	54.00	-3.58	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11590.00	46.15	41.32	10.77	4.21	42.27	60.18	74.00	-13.82	Vertical
11590.00	47.16	41.32	10.77	4.21	42.27	61.19	74.00	-12.81	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11590.00	36.65	41.32	10.77	4.21	42.27	50.68	54.00	-3.32	Vertical
11590.00	35.17	41.32	10.77	4.21	42.27	49.20	54.00	-4.80	Horizontal

*Remark:*

- Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11ac(HT20)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490.00	47.65	41.50	10.81	4.21	42.29	61.88	74.00	-12.12	Vertical
11490.00	48.13	41.50	10.81	4.21	42.29	62.36	74.00	-11.64	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11490.00	37.65	41.50	10.81	4.21	42.29	51.88	54.00	-2.12	Vertical
11490.00	35.91	41.50	10.81	4.21	42.29	50.14	54.00	-3.86	Horizontal
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570.00	48.52	41.38	10.78	4.21	42.27	62.62	74.00	-11.38	Vertical
11570.00	47.16	41.38	10.78	4.21	42.27	61.26	74.00	-12.74	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11570.00	36.67	41.38	10.78	4.21	42.27	50.77	54.00	-3.23	Vertical
11570.00	37.98	41.38	10.78	4.21	42.27	52.08	54.00	-1.92	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650.00	46.56	41.26	10.76	4.21	42.26	60.53	74.00	-13.47	Vertical
11650.00	47.12	41.26	10.76	4.21	42.26	61.09	74.00	-12.91	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11650.00	36.65	41.26	10.76	4.21	42.26	50.62	54.00	-3.38	Vertical
11650.00	35.97	41.26	10.76	4.21	42.26	49.94	54.00	-4.06	Horizontal
<i>Remark:</i>									
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.									
2. The emission levels of other frequencies are very lower than the limit and not show in test report.									

Band 4 – 802.11ac(HT40)									
Test channel: Lowest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11510.00	44.65	41.50	10.81	4.21	42.29	58.88	74.00	-15.12	Vertical
11510.00	45.98	41.50	10.81	4.21	42.29	60.21	74.00	-13.79	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11510.00	36.62	41.50	10.81	4.21	42.29	50.85	54.00	-3.15	Vertical
11510.00	34.57	41.50	10.81	4.21	42.29	48.80	54.00	-5.20	Horizontal
Test channel: Highest channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11590.00	47.85	41.32	10.77	4.21	42.27	61.88	74.00	-12.12	Vertical
11590.00	46.69	41.32	10.77	4.21	42.27	60.72	74.00	-13.28	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11590.00	35.35	41.32	10.77	4.21	42.27	49.38	54.00	-4.62	Vertical
11590.00	33.14	41.32	10.77	4.21	42.27	47.17	54.00	-6.83	Horizontal

*Remark:*

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Band 4 – 802.11ac(HT80)									
Test channel: Middle channel									
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11550.00	46.65	41.50	10.81	4.21	42.29	60.88	74.00	-13.12	Vertical
11550.00	45.27	41.50	10.81	4.21	42.29	59.50	74.00	-14.50	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
11550.00	34.57	41.50	10.81	4.21	42.29	48.80	54.00	-5.20	Vertical
11550.00	33.19	41.50	10.81	4.21	42.29	47.42	54.00	-6.58	Horizontal

*Remark:*

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss + Aux Factor – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

## 6.8 Frequency stability

Test Requirement:	FCC Part15 E Section 15.407 (g)
Limit:	Manufacturers 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.
Test setup:	<p style="text-align: center;"><b>Temperature Chamber</b></p> <p><b>Note :</b> Measurement setup for testing on Antenna connector</p>
Test procedure:	<ol style="list-style-type: none"><li>1. The EUT is installed in an environment test chamber with external power source.</li><li>2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.</li><li>3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.</li><li>4. When temperature is stabled, measure the frequency stability.</li><li>5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.</li></ol>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data (the worst channel):****Band 1:****Voltage vs. Frequency Stability (Lowest channel=5180MHz)**

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Temp(°C)	Voltage(ac)		
20	3.50V	5179.997643	0.45
	3.85V	5179.974779	4.87
	4.40V	5179.963951	6.96

**Temperature vs. Frequency Stability (Lowest channel=5180MHz)**

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Voltage(ac)	Temp(°C)		
3.85V	-20	5179.987033	2.50
	-10	5179.995377	0.89
	0	5179.968421	6.10
	10	5179.987556	2.40
	20	5179.996681	0.64
	30	5179.974290	4.96
	40	5179.963775	6.99
	50	5179.974929	4.84

**Band 4:****Voltage vs. Frequency Stability (Lowest channel=5745MHz)**

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Temp(°C)	Voltage(ac)		
20	3.50V	5744.974766	4.39
	3.85V	5744.993381	1.15
	4.40V	5744.998588	0.25

**Temperature vs. Frequency Stability (Lowest channel=5745MHz)**

Test conditions		Frequency(MHz)	Max. Deviation (ppm)
Voltage(ac)	Temp(°C)		
3.85V	-20	5744.994798	0.91
	-10	5744.993693	1.10
	0	5744.994771	0.91
	10	5744.985355	2.55
	20	5744.993864	1.07
	30	5744.994481	0.96
	40	5744.999347	0.11
	50	5744.992458	1.31

## Appendix A - 5.2G Wi-Fi Test Data

**Duty Cycle**

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	a	5180	Ant1	97.68	0.1
NVNT	a	5200	Ant1	97.66	0.1
NVNT	a	5240	Ant1	97.72	0.1
NVNT	ac20	5180	Ant1	97.6	0.11
NVNT	ac20	5200	Ant1	97.6	0.11
NVNT	ac20	5240	Ant1	97.64	0.1
NVNT	ac40	5190	Ant1	97.5	0.11
NVNT	ac40	5230	Ant1	97.51	0.11
NVNT	ac80	5210	Ant1	94.89	0.23
NVNT	n20	5180	Ant1	97.57	0.11
NVNT	n20	5200	Ant1	97.54	0.11
NVNT	n20	5240	Ant1	97.54	0.11
NVNT	n40	5190	Ant1	97.49	0.11
NVNT	n40	5230	Ant1	97.45	0.11

Duty Cycle NVNT a 5180MHz Ant1



## Duty Cycle NVNT a 5200MHz Ant1



## Duty Cycle NVNT a 5240MHz Ant1



## Duty Cycle NVNT ac20 5180MHz Ant1



## Duty Cycle NVNT ac20 5200MHz Ant1



## Duty Cycle NVNT ac20 5240MHz Ant1



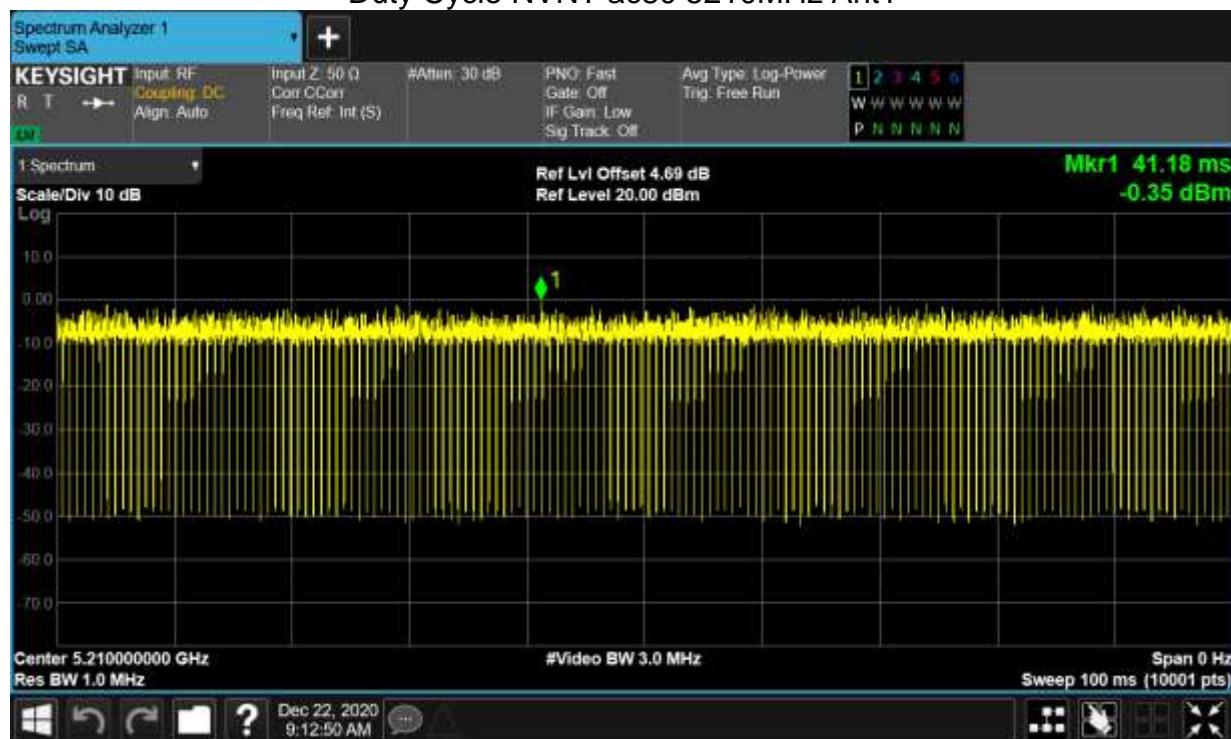
## Duty Cycle NVNT ac40 5190MHz Ant1



## Duty Cycle NVNT ac40 5230MHz Ant1



## Duty Cycle NVNT ac80 5210MHz Ant1



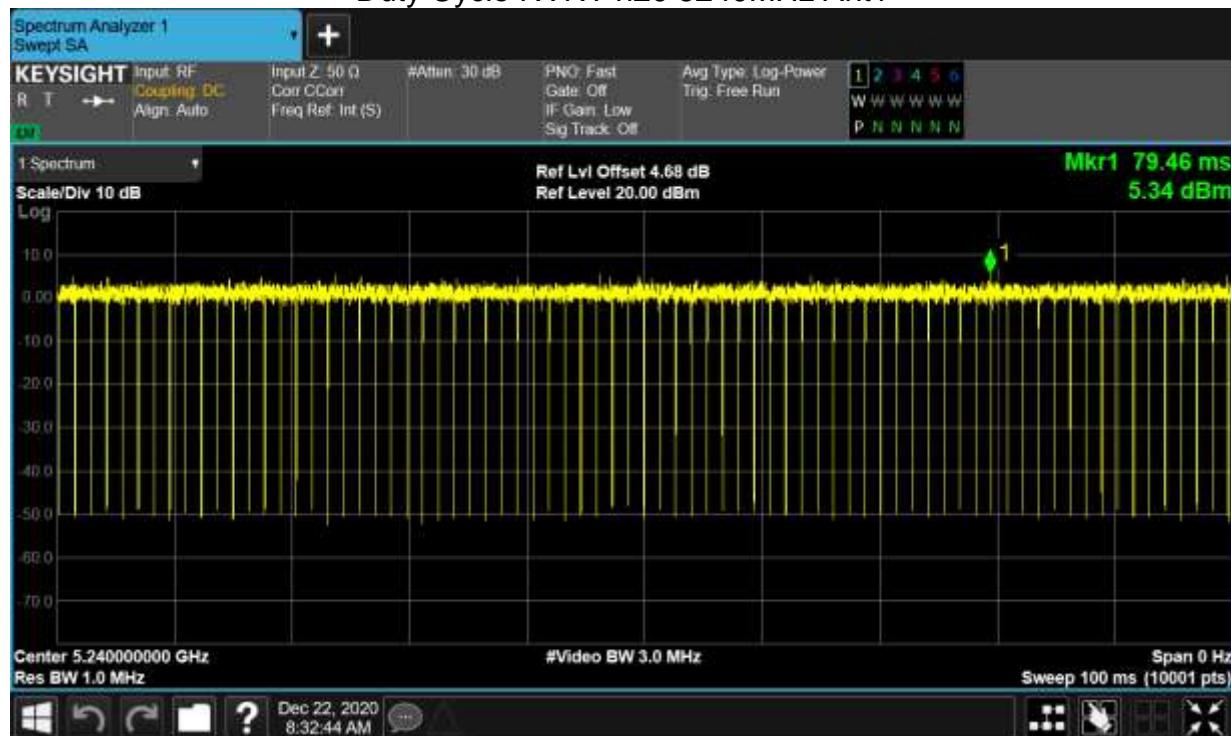
## Duty Cycle NVNT n20 5180MHz Ant1



## Duty Cycle NVNT n20 5200MHz Ant1



## Duty Cycle NVNT n20 5240MHz Ant1



## Duty Cycle NVNT n40 5190MHz Ant1



## Duty Cycle NVNT n40 5230MHz Ant1



## Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	8.57	0.1	8.67	24	Pass
NVNT	a	5200	Ant1	8.35	0.1	8.45	24	Pass
NVNT	a	5240	Ant1	8.12	0.1	8.22	24	Pass
NVNT	ac20	5180	Ant1	8.6	0.11	8.71	24	Pass
NVNT	ac20	5200	Ant1	8.18	0.11	8.29	24	Pass
NVNT	ac20	5240	Ant1	8.2	0.1	8.3	24	Pass
NVNT	ac40	5190	Ant1	8.79	0.11	8.9	24	Pass
NVNT	ac40	5230	Ant1	8.97	0.11	9.08	24	Pass
NVNT	ac80	5210	Ant1	8.85	0.23	9.08	24	Pass
NVNT	n20	5180	Ant1	8.38	0.11	8.49	24	Pass
NVNT	n20	5200	Ant1	8.26	0.11	8.37	24	Pass
NVNT	n20	5240	Ant1	8	0.11	8.11	24	Pass
NVNT	n40	5190	Ant1	8.84	0.11	8.95	24	Pass
NVNT	n40	5230	Ant1	9.05	0.11	9.16	24	Pass

## Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.36623133
NVNT	a	5200	Ant1	16.38752218
NVNT	a	5240	Ant1	16.4136606
NVNT	ac20	5180	Ant1	17.53539911
NVNT	ac20	5200	Ant1	17.58761636
NVNT	ac20	5240	Ant1	17.5546289
NVNT	ac40	5190	Ant1	35.99425289
NVNT	ac40	5230	Ant1	36.01943085
NVNT	ac80	5210	Ant1	75.23384967
NVNT	n20	5180	Ant1	17.52992716
NVNT	n20	5200	Ant1	17.56668049
NVNT	n20	5240	Ant1	17.54861263
NVNT	n40	5190	Ant1	35.93268229
NVNT	n40	5230	Ant1	36.02442558

OBW NVNT a 5180MHz Ant1



## OBW NVNT a 5200MHz Ant1



## OBW NVNT a 5240MHz Ant1



## OBW NVNT ac20 5180MHz Ant1



## OBW NVNT ac20 5200MHz Ant1



## OBW NVNT ac20 5240MHz Ant1



## OBW NVNT ac40 5190MHz Ant1



## OBW NVNT ac40 5230MHz Ant1



## OBW NVNT ac80 5210MHz Ant1



## OBW NVNT n20 5180MHz Ant1



## OBW NVNT n20 5200MHz Ant1



## OBW NVNT n20 5240MHz Ant1



## OBW NVNT n40 5190MHz Ant1



## OBW NVNT n40 5230MHz Ant1



## Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-1.135	11	Pass
NVNT	a	5200	Ant1	-1.048	11	Pass
NVNT	a	5240	Ant1	-1.695	11	Pass
NVNT	ac20	5180	Ant1	-1.43	11	Pass
NVNT	ac20	5200	Ant1	-1.682	11	Pass
NVNT	ac20	5240	Ant1	-1.859	11	Pass
NVNT	ac40	5190	Ant1	-2.789	11	Pass
NVNT	ac40	5230	Ant1	-3.582	11	Pass
NVNT	ac80	5210	Ant1	-6.849	11	Pass
NVNT	n20	5180	Ant1	-1.321	11	Pass
NVNT	n20	5200	Ant1	-1.725	11	Pass
NVNT	n20	5240	Ant1	-1.928	11	Pass
NVNT	n40	5190	Ant1	-3.175	11	Pass
NVNT	n40	5230	Ant1	-3.607	11	Pass

## PSD NVNT a 5180MHz Ant1



## PSD NVNT a 5200MHz Ant1



## PSD NVNT a 5240MHz Ant1



## PSD NVNT ac20 5180MHz Ant1



## PSD NVNT ac20 5200MHz Ant1



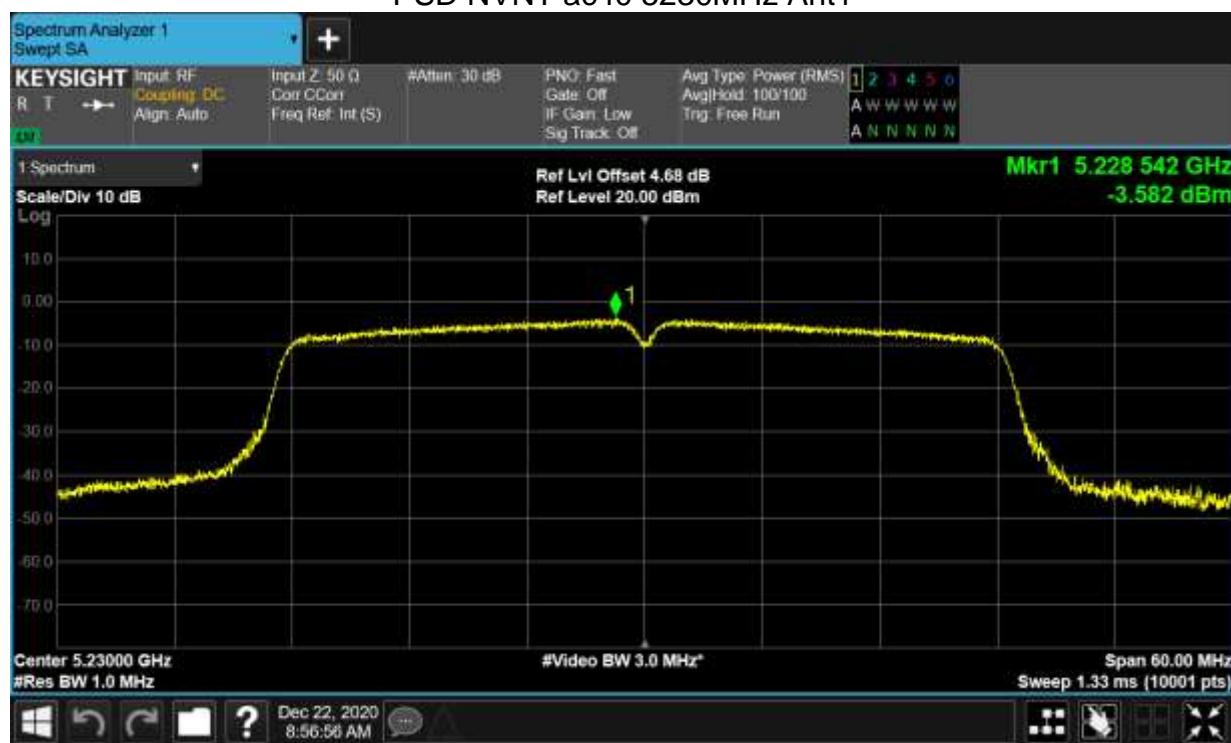
## PSD NVNT ac20 5240MHz Ant1



## PSD NVNT ac40 5190MHz Ant1



## PSD NVNT ac40 5230MHz Ant1



## PSD NVNT ac80 5210MHz Ant1



## PSD NVNT n20 5180MHz Ant1



## PSD NVNT n20 5200MHz Ant1



## PSD NVNT n20 5240MHz Ant1



## PSD NVNT n40 5190MHz Ant1



## PSD NVNT n40 5230MHz Ant1



## Appendix A - 5.8G Wi-Fi Test Data

**Duty Cycle**

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	a	5745	Ant1	91.26	0.4
NVNT	a	5785	Ant1	91.27	0.4
NVNT	a	5825	Ant1	91.24	0.4
NVNT	ac20	5745	Ant1	98.77	0.05
NVNT	ac20	5785	Ant1	98.8	0.05
NVNT	ac20	5825	Ant1	98.74	0.06
NVNT	ac40	5755	Ant1	97.57	0.11
NVNT	ac40	5795	Ant1	97.53	0.11
NVNT	ac80	5775	Ant1	94.97	0.22
NVNT	n20	5745	Ant1	98.77	0.05
NVNT	n20	5785	Ant1	98.77	0.05
NVNT	n20	5825	Ant1	98.73	0.06
NVNT	n40	5755	Ant1	97.54	0.11
NVNT	n40	5795	Ant1	97.55	0.11

Duty Cycle NVNT a 5745MHz Ant1



## Duty Cycle NVNT a 5785MHz Ant1



## Duty Cycle NVNT a 5825MHz Ant1



## Duty Cycle NVNT ac20 5745MHz Ant1



## Duty Cycle NVNT ac20 5785MHz Ant1



## Duty Cycle NVNT ac20 5825MHz Ant1



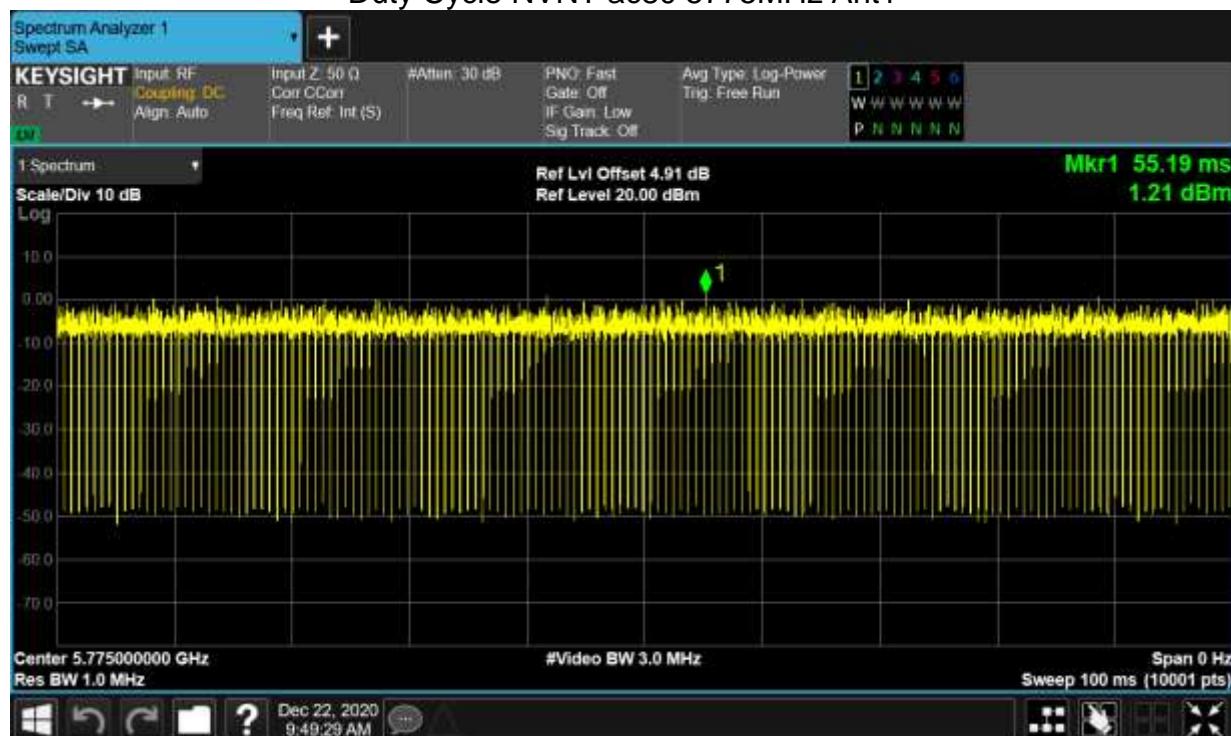
## Duty Cycle NVNT ac40 5755MHz Ant1



## Duty Cycle NVNT ac40 5795MHz Ant1



## Duty Cycle NVNT ac80 5775MHz Ant1



## Duty Cycle NVNT n20 5745MHz Ant1



## Duty Cycle NVNT n20 5785MHz Ant1



## Duty Cycle NVNT n20 5825MHz Ant1



## Duty Cycle NVNT n40 5755MHz Ant1



## Duty Cycle NVNT n40 5795MHz Ant1



## Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	9.42	0.4	9.82	30	Pass
NVNT	a	5785	Ant1	10.11	0.4	10.51	30	Pass
NVNT	a	5825	Ant1	9.24	0.4	9.64	30	Pass
NVNT	ac20	5745	Ant1	10.43	0.05	10.48	30	Pass
NVNT	ac20	5785	Ant1	11.03	0.05	11.08	30	Pass
NVNT	ac20	5825	Ant1	10.23	0.06	10.29	30	Pass
NVNT	ac40	5755	Ant1	10.28	0.11	10.39	30	Pass
NVNT	ac40	5795	Ant1	10.99	0.11	11.1	30	Pass
NVNT	ac80	5775	Ant1	10.58	0.22	10.8	30	Pass
NVNT	n20	5745	Ant1	10.49	0.05	10.54	30	Pass
NVNT	n20	5785	Ant1	11.08	0.05	11.13	30	Pass
NVNT	n20	5825	Ant1	10.22	0.06	10.28	30	Pass
NVNT	n40	5755	Ant1	10.31	0.11	10.42	30	Pass
NVNT	n40	5795	Ant1	10.71	0.11	10.82	30	Pass

**-6dB Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	16.003	0.5	Pass
NVNT	a	5785	Ant1	15.395	0.5	Pass
NVNT	a	5825	Ant1	15.937	0.5	Pass
NVNT	ac20	5745	Ant1	12.654	0.5	Pass
NVNT	ac20	5785	Ant1	13.587	0.5	Pass
NVNT	ac20	5825	Ant1	13.565	0.5	Pass
NVNT	ac40	5755	Ant1	31.298	0.5	Pass
NVNT	ac40	5795	Ant1	33.794	0.5	Pass
NVNT	ac80	5775	Ant1	73.856	0.5	Pass
NVNT	n20	5745	Ant1	15.183	0.5	Pass
NVNT	n20	5785	Ant1	14.213	0.5	Pass
NVNT	n20	5825	Ant1	15.044	0.5	Pass
NVNT	n40	5755	Ant1	35.012	0.5	Pass
NVNT	n40	5795	Ant1	33.789	0.5	Pass

**-6dB Bandwidth NVNT a 5745MHz Ant1**

## -6dB Bandwidth NVNT a 5785MHz Ant1



## -6dB Bandwidth NVNT a 5825MHz Ant1



## -6dB Bandwidth NVNT ac20 5745MHz Ant1



## -6dB Bandwidth NVNT ac20 5785MHz Ant1



## -6dB Bandwidth NVNT ac20 5825MHz Ant1



## -6dB Bandwidth NVNT ac40 5755MHz Ant1



**-6dB Bandwidth NVNT ac40 5795MHz Ant1****-6dB Bandwidth NVNT ac80 5775MHz Ant1**

## -6dB Bandwidth NVNT n20 5745MHz Ant1



## -6dB Bandwidth NVNT n20 5785MHz Ant1



## -6dB Bandwidth NVNT n20 5825MHz Ant1



## -6dB Bandwidth NVNT n40 5755MHz Ant1



## -6dB Bandwidth NVNT n40 5795MHz Ant1



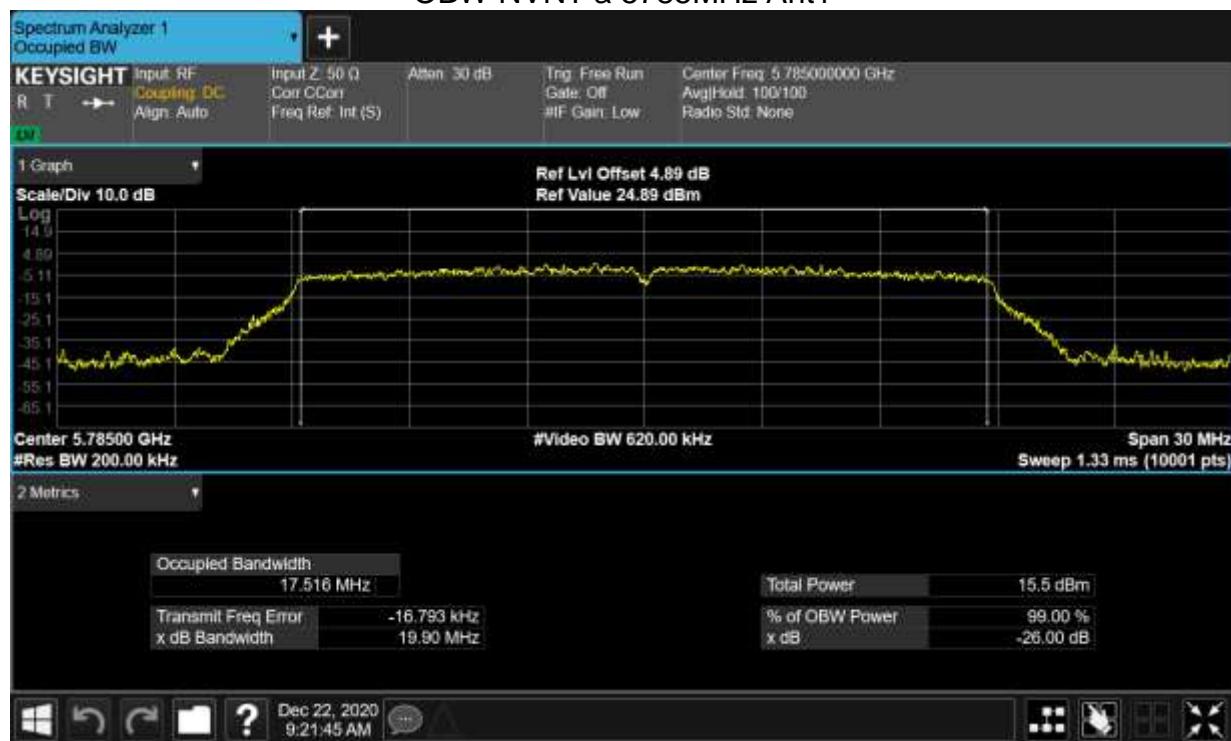
## Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	26dB(MHz)
NVNT	a	5745	Ant1	17.56004797	19.90
NVNT	a	5785	Ant1	17.51578586	19.90
NVNT	a	5825	Ant1	17.56780399	19.84
NVNT	ac20	5745	Ant1	17.55244313	19.92
NVNT	ac20	5785	Ant1	17.53356675	19.89
NVNT	ac20	5825	Ant1	17.54715693	20.00
NVNT	ac40	5755	Ant1	35.98032971	40.06
NVNT	ac40	5795	Ant1	35.96527163	40.37
NVNT	ac80	5775	Ant1	75.12010927	80.42
NVNT	n20	5745	Ant1	17.53499262	20.22
NVNT	n20	5785	Ant1	17.56308223	19.91
NVNT	n20	5825	Ant1	17.60148236	20.20
NVNT	n40	5755	Ant1	35.91001639	39.96
NVNT	n40	5795	Ant1	35.87574367	40.16

## OBW NVNT a 5745MHz Ant1



## OBW NVNT a 5785MHz Ant1



## OBW NVNT a 5825MHz Ant1



## OBW NVNT ac20 5745MHz Ant1



## OBW NVNT ac20 5785MHz Ant1



## OBW NVNT ac20 5825MHz Ant1



## OBW NVNT ac40 5755MHz Ant1



## OBW NVNT ac40 5795MHz Ant1



## OBW NVNT ac80 5775MHz Ant1



## OBW NVNT n20 5745MHz Ant1



## OBW NVNT n20 5785MHz Ant1



## OBW NVNT n20 5825MHz Ant1



## OBW NVNT n40 5755MHz Ant1



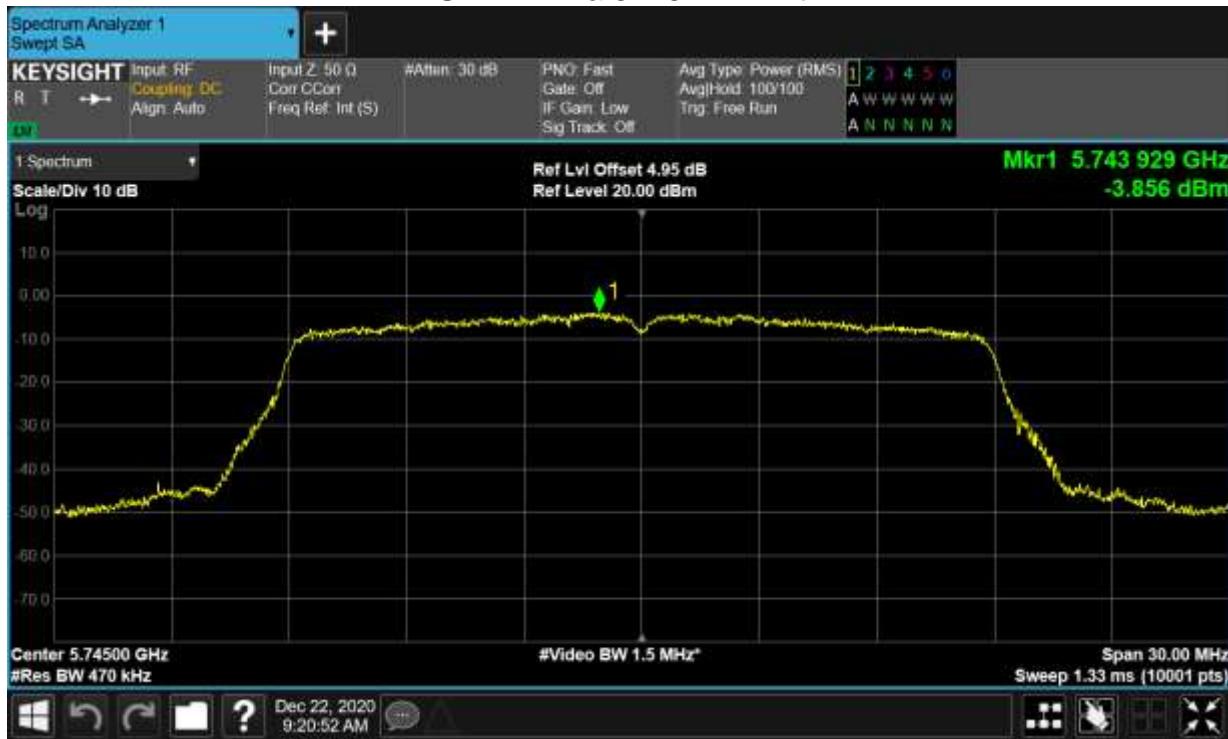
## OBW NVNT n40 5795MHz Ant1



## Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	-3.856	30	Pass
NVNT	a	5785	Ant1	-3.894	30	Pass
NVNT	a	5825	Ant1	-4.595	30	Pass
NVNT	ac20	5745	Ant1	-2.494	30	Pass
NVNT	ac20	5785	Ant1	-2.664	30	Pass
NVNT	ac20	5825	Ant1	-3.148	30	Pass
NVNT	ac40	5755	Ant1	-4.51	30	Pass
NVNT	ac40	5795	Ant1	-4.897	30	Pass
NVNT	ac80	5775	Ant1	-7.961	30	Pass
NVNT	n20	5745	Ant1	-2.583	30	Pass
NVNT	n20	5785	Ant1	-2.627	30	Pass
NVNT	n20	5825	Ant1	-3.208	30	Pass
NVNT	n40	5755	Ant1	-4.735	30	Pass
NVNT	n40	5795	Ant1	-5.123	30	Pass

PSD NVNT a 5745MHz Ant1



## PSD NVNT a 5785MHz Ant1



## PSD NVNT a 5825MHz Ant1



## PSD NVNT ac20 5745MHz Ant1



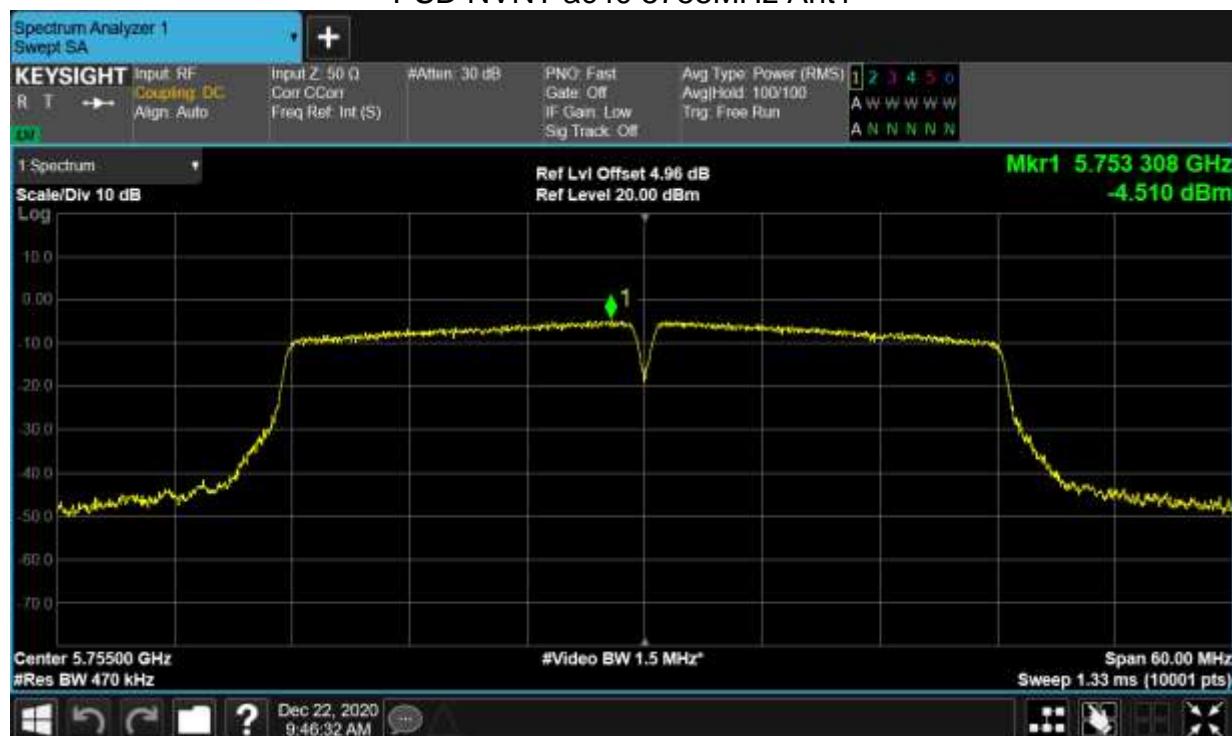
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## PSD NVNT ac20 5825MHz Ant1



## PSD NVNT ac40 5755MHz Ant1



## PSD NVNT ac40 5795MHz Ant1



## PSD NVNT ac80 5775MHz Ant1



## PSD NVNT n20 5745MHz Ant1



## PSD NVNT n20 5785MHz Ant1



## PSD NVNT n20 5825MHz Ant1



## PSD NVNT n40 5755MHz Ant1



## PSD NVNT n40 5795MHz Ant1



-----End of report-----