

<b>Prüfbericht-Nr.:</b> Test report no.:	<b>CN22TWVE 003</b>	<b>Auftrags-Nr.:</b> Order no.:	<b>168349178</b>	<b>Seite 1 von 21</b> Page 1 of 21	
<b>Kunden-Referenz-Nr.:</b> Client reference no.:	<b>N/A</b>	<b>Auftragsdatum:</b> Order date:	<b>2021-12-23</b>		
<b>Auftraggeber:</b> Client:	<b>ZTE Corporation</b> ZTE Plaza, Hi-Tech Park, Nanshan District, Shenzhen, Guangdong, P.R.China				
<b>Prüfgegenstand:</b> Test item:	<b>RichMedia Box</b>				
<b>Bezeichnung / Typ-Nr.:</b> Identification / Type no.:	<b>ZXV10 B866V2F, ZXV10 B866V2F1, ZXV10 B866V2Fi, ZXV10 B866V2FA, ZXV10 B866V2FB, ZXV10 B866V2K, ZXV10 B866V2K1, ZXV10 B860HF, ZXV10 B860V2F, ZXV10 B870V2F, ZXV10 B766V2</b> (Trademark: ZTE)				
<b>Auftrags-Inhalt:</b> Order content:	<b>Test Report</b>				
<b>Prüfgrundlage:</b> Test specification:	<b>CFR47 FCC Part15: Subpart E Section 15.407</b> <b>FCC KDB 662911 D01 Multiple Transmitter Output v02r01</b> <b>FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01</b> <b>ANSI C63.10:2013</b>				
<b>Wareneingangsdatum:</b> Date of sample receipt:	<b>2021-12-29</b>	<b>Please refer to Photo Document</b>			
<b>Prüfmuster-Nr.:</b> Test sample no.:	<b>A003191348-002~004</b> <b>A003199431-002</b>				
<b>Prüfzeitraum:</b> Testing period:	<b>2021-12-30 - 2022-01-20</b>				
<b>Ort der Prüfung:</b> Place of testing:	<b>TÜV Rheinland (Shenzhen) Co., Ltd.</b>				
<b>Prüflaboratorium:</b> Testing laboratory:	<b>TÜV Rheinland (Shenzhen) Co., Ltd.</b>				
<b>Prüfergebnis*:</b> Test result*:	<b>Pass</b>				
<b>geprüft von:</b> tested by:	<b>X</b> <u>Tim Zhang</u>	<b>genehmigt von:</b> authorized by:	<b>X</b> <u>Lin Lin</u>		
<b>Datum:</b> Date:	<b>2022-01-21</b> <small>Signed by: Tim Zhang</small>	<b>Ausstellungsdatum:</b> Issue date:	<b>2022-01-21</b> <small>Signed by: Lin Lin</small>		
<b>Stellung / Position:</b>	<b>Project Manager</b>	<b>Stellung / Position:</b>	<b>Reviewer</b>		
<b>Sonstiges / Other:</b>	<b>FCC ID: Q78-ZXV10905Y4A</b>				
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> Condition of the test item at delivery:	<b>Prüfmuster vollständig und unbeschädigt</b> <b>Test item complete and undamaged</b>				
<b>* Legende:</b>	<b>1 = sehr gut</b>	<b>2 = gut</b>	<b>3 = befriedigend</b>	<b>4 = ausreichend</b>	<b>5 = mangelhaft</b>
<b>* Legend:</b>	<b>1 = very good</b>	<b>2 = good</b>	<b>3 = satisfactory</b>	<b>4 = sufficient</b>	<b>5 = poor</b>
	<b>P(ass) = entspricht o.g. Prüfgrundlage(n)</b>	<b>F(ail) = entspricht nicht o.g. Prüfgrundlage(n)</b>	<b>N/A = nicht anwendbar</b>	<b>N/T = nicht getestet</b>	
	<b>P(ass) = passed a.m. test specification(s)</b>	<b>F(ail) = failed a.m. test specification(s)</b>	<b>N/A = not applicable</b>	<b>N/T = not tested</b>	
<b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b> <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

v05

## **Test Summary**

**5.1.1 ANTENNA REQUIREMENT**

*RESULT: Pass*

**5.1.2 MAXIMUM PEAK CONDUCTED OUTPUT POWER**

*RESULT: Pass*

**5.1.3 CONDUCTED POWER SPECTRAL DENSITY**

*RESULT: Pass*

**5.1.4 FREQUENCY STABILITY**

*RESULT: Pass*

**5.1.5 26dB BANDWIDTH AND 99% BANDWIDTH**

*RESULT: Pass*

**5.1.6 6dB BANDWIDTH**

*RESULT: Pass*

**5.1.7 RADIATED SPURIOUS EMISSION**

*RESULT: Pass*

**5.1.8 DYNAMIC FREQUENCY SELECTION (DFS)**

*RESULT: Pass*

**5.1.9 CONDUCTED EMISSION ON AC MAINS**

*RESULT: Pass*

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## 1 General Remarks

### 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:  
Appendix A: Test Results of 5GHz Wi-Fi

## 2 Test Sites

### 2.1 Test Facilities

**TÜV Rheinland (Shenzhen) Co., Ltd.**

No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China.

FCC Accreditation Designation No.: 694916

ISED wireless device testing laboratory: 25069

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

<b>Radio Spectrum Testing (SRD-Tonscend)</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Cal. until</b>
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2022-09-28
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2022-09-28
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2022-09-28
DC power supply	Keysight	E3642A	MY61276100	2022-09-28
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2022-09-28
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2022-09-28
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
<b>Unwanted Emission Testing (TS9975)</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial No.</b>	<b>Cal. until</b>
EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
Signal Analyzer	R&S	FSV 40	101439	2022-08-09
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2022-08-09
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2022-08-09
Amplifier	R&S	SCU-18F	180070	2022-08-09
Amplifier	R&S	SCU40A	100475	2022-08-09
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2022-08-08
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2022-08-08
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2022-08-08
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2022-09-13
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22

<b>Conducted Emission</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Until</b>
EMI Test Receiver	R&S	ESR3	102428	2022-08-10
Artificial Mains Network	R&S	ENV216	102333	2022-08-10
Artificial Mains Network	R&S	ENV432	101411	2022-08-10
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power (conducted)	$\pm 2.5$ dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	$\pm 6$ dB
Radiated Emission of Receiver, valid up to 26.5 GHz	$\pm 6$ dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	$\pm 3.70$ dB / $\pm 3.30$ dB
Temperature	$\pm 1$ °C
Humidity	$\pm 5$ %
Voltage (DC)	$\pm 1$ %
Voltage (AC, <10kHz)	$\pm 2$ %

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. File for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

### 3 General Product Information

#### 3.1 Product Function and Intended Use

The EUT is a RichMedia Box, which supports Bluetooth(dual mode), 2.4GHz Wi-Fi 802.11 b/g/n and 5GHz Wi-Fi 802.11a/n/ac wireless technology.

According to the declaration of the applicant, the schematics, PCB layout and electronic components are identical, only the model no. is different for market strategy.

The EUT have four adapters, details as below table:

Description	Model	Rating	Manufacturer
Adapter 1#	UWP-12W-1210S	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	I.T.E&AV POWER SUPPLY
Adapter 2#	KL-WA120100-B	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	XIAMEN KELI ELECTRONIC CO., LTD
Adapter 3#	MN012E-L120100	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	XIAMEN CASTEC ELECTRONIC INDUSTRY CO., LTD
Adapter 4#	RD1201000-C55-35MGD	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	Shenzhen Ruide electronic industrial Co., Ltd.

For details refer to the User Manual, Technical Description and Circuit Diagram.

#### 3.2 Ratings and System Details

**Table 2: Technical Specification of EUT**

General Information of EUT	Value
Kind of Equipment:	RichMedia Box
Type Designation:	ZXV10 B866V2F, ZXV10 B866V2F1, ZXV10 B866V2Fi, ZXV10 B866V2FA, ZXV10 B866V2FB, ZXV10 B866V2K, ZXV10 B866V2K1, ZXV10 B860HF, ZXV10 B860V2F, ZXV10 B870V2F, ZXV10 B766V2
Trademark:	ZTE
FCC ID:	Q78-ZXV10905Y4A
Operating Voltage:	AC 120~240V, 50/60Hz input via adapter
Testing Voltage:	AC 120V, 60Hz
<b>Technical Specification of Bluetooth (dual mode)</b>	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Channel Number:	BDR & EDR mode:79 channels, Low Energy mode:40 channels
Channel Separation:	BDR & EDR mode: 1MHz, Low Energy mode: 2MHz
Data Rate:	BDR & EDR mode: 1Mbps, 3Mbps Low Energy mode: 1Mbps
Antenna Type:	Integral Antenna
Antenna Gain of Bluetooth:	3.0 dBi
<b>Technical Specification of Wi-Fi 802.11 b/g/n</b>	
Operating Frequency:	2412 - 2462 MHz for 802.11b/g/n(HT20) 2422 - 2452 MHz for 802.11n(HT40)
Type of Modulation:	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)

Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n
Channel Number:	11 channels for 802.11b/g/n(HT20) 7 channels for 802.11n(HT40)
Channel Separation:	5 MHz
Antenna Type:	Integral Antenna
Number of Antenna:	2
Antenna Gain 1:	3.0 dBi
Antenna Gain 2:	3.0 dBi
<b>Technical Specification of Wi-Fi 802.11 a/n/ac</b>	
Operating Frequency:	5180-5320MHz, 5500-5700MHz, 5745-5825MHz
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM/256QAM)
Channel Number:	5180-5320MHz, 14CHs, 802.11 a/n20/n40/ac20/ac40/ac80 5500-5700MHz, 12CHs, 802.11 a/n20/n40/ac20/ac40/ac80 5745-5825MHz, 8CHs, 802.11 a/n20/n40/ac20/ac40/ac80
Channel Separation	5 MHz
Antenna Type:	Integral Antenna
Number of Antenna:	2
Antenna Gain 1:	3.5 dBi
Antenna Gain 2:	3.5 dBi
<b>Note:</b> The EUT supports MIMO 2*2, any transmit signals are correlated with each other, so $\text{Directional gain} = G_{ANT} + 10 \log(N_{ANT}) \text{ dBi} = 6.51 \text{ dBi}$ ; The limit of output power = each band power limit-0.51 The limit of power spectral density = each band PSD limit-0.51.	

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Wi-Fi 802.11 a/n/ac wireless transmitting mode
  - 1. Low channel
  - 2. Middle channel
  - 3. High channel
- B. On, Normal Operation (Wi-Fi Link)
- C. Off

### 3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.



### 3.5 Submitted Documents

- Application Form
- Operation Description
- Schematics
- PCB Layout
- User Manual
- Block Diagram
- Rating Label
- Parts List

## 4 Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

**Radio Spectrum:** The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests were performed on model ZXV10 B866V2F in this report.

**Table 3: Test channel and frequency**

Mode	Test Channels
802.11 a/n-HT20/ac20	L: 5180MHz; 5260MHz; 5500MHz; 5745MHz M: MHz; 5200MHz;5280MHz; 5580MHz; 5785MHz H: 5240MHz;5320MHz; 5700MHz; 5825MHz
802.11 n-HT40/ac40	L/M: 5190MHz; 5270MHz; 5510MHz; 5510MHz; 5755MHz H: 5230MHz; 5310MHz; 5670MHz; 5795MHz
802.11 ac80	L/M/H: 5210MHz; 5290MHz; 5530MHz; 5610MHz; 5775MHz

### 4.3 Special Accessories and Auxiliary Equipment

**Table 4: List of Accessories and Auxiliary Equipment**

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8
LCD 4K Color Display	PHILIPS	272P7V	AUCA1833000075472
Soundbar	Fenda	NS-HTSB22	/
RJ45 cable	/	/	/
AV cable	/	/	/
HDMI cable	/	/	/
Optical fiber cable	/	/	/

## 4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

## 4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

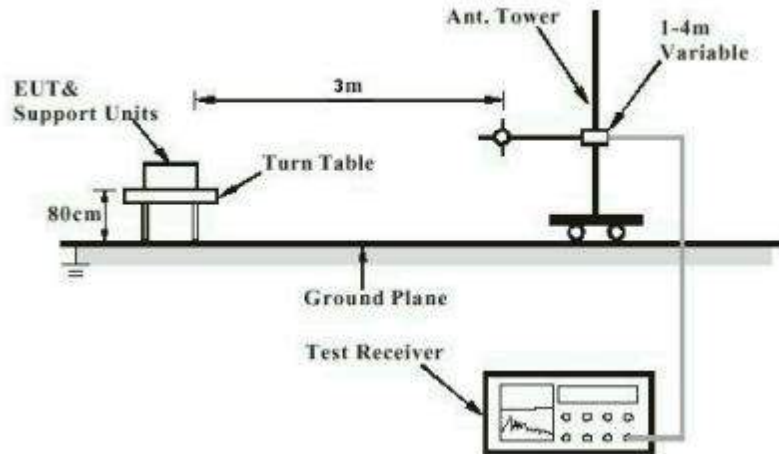


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

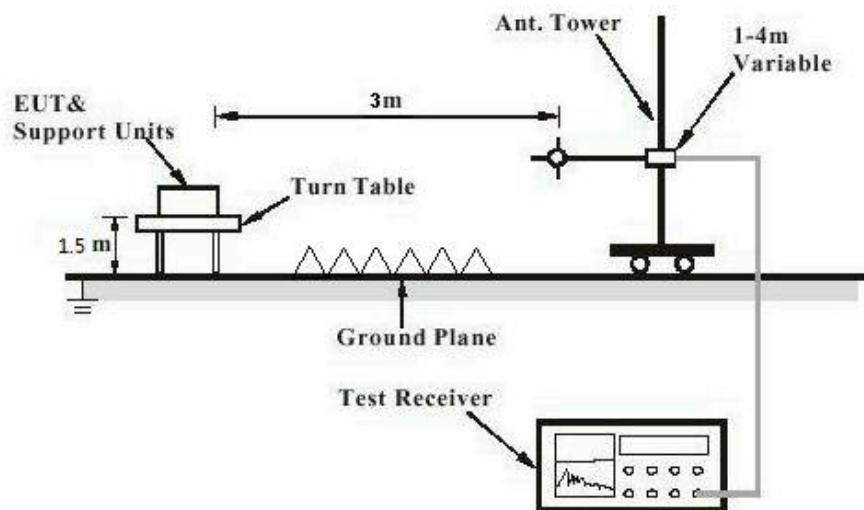


Diagram of Measurement Configuration for Mains Conduction Measurement

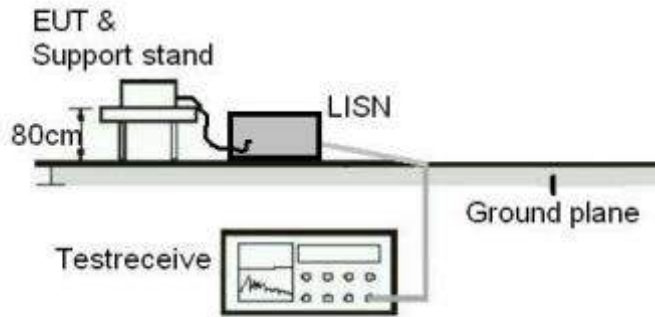


Diagram of Measurement Configuration for Conducted Transmitter Measurement

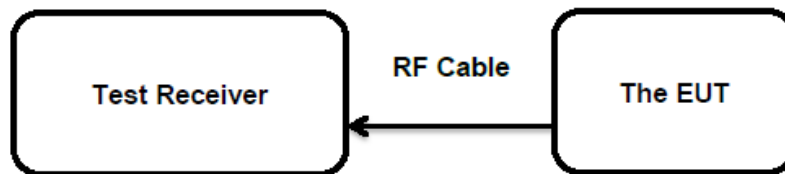
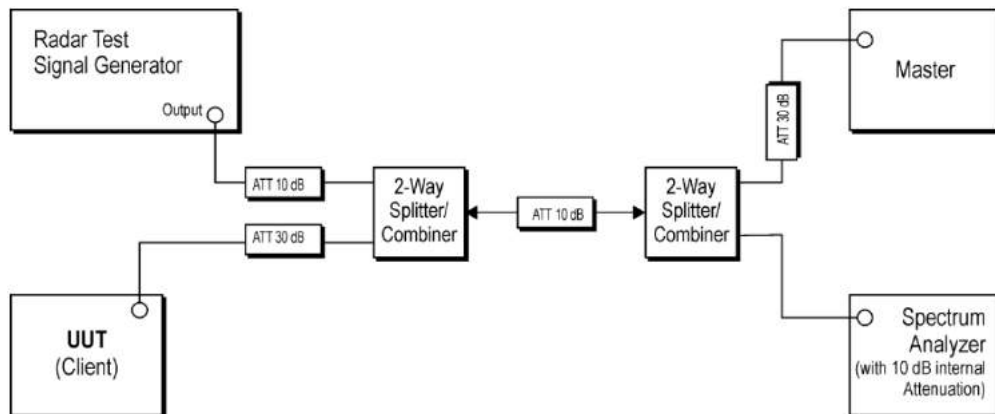


Diagram of Measurement Configuration for Dynamic Frequency Selection (DFS)



## 5 Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.203

According to the manufacturer declared, the EUT have two integral antennas, Each antenna has a Max. antenna gain of 3.5 dBi , and the antenna connector is designed with permanent attachment and no consideration of replacement.

Therefore, the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

## 5.1.2 Maximum Peak Conducted Output Power

**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407(a)(1)&(2)&(4)
Basic standard	: ANSI C63.10: 2013
Limits	: <250mW (24dBm) (5150-5250MHz) *<250mW (24dBm) (5250-5350MHz, 5470-5725MHz) *250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz, where is lesser. <1W (30dBm) (5725-5850MHz)
Kind of test site	: Shielded Room

**Test Setup**

Date of testing	: 2022-01-06 to 2022-01-07
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

### 5.1.3 Conducted Power Spectral Density

**RESULT:****Pass****Test Specification**

Test standard	: FCC part 15.407(a)
Basic standard	: ANSI C63.10: 2013 KDB 789033 D02 v01r03
Limits	: <11dBm/MHz (5150-5250MHz 5250-5350MHz, 5470-5725MHz) <30dBm/500kHz (5725-5850MHz)
Kind of test site	: Shielded Room

**Test Setup**

Date of testing	: 2022-01-06 to 2022-01-07
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.



### 5.1.4 Frequency Stability

**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.407(g)  
Basic standard : ANSI C63.10: 2013  
Limits : Within assigned bands  
Kind of test site : Shielded Room

**Test Setup**

Date of testing : 2022-01-06 to 2022-01-07  
Input voltage : AC 120V, 60Hz  
Operation mode : A  
Test channel : Low / Middle / High  
Ambient temperature : 24.8 °C  
Relative humidity : 55 %  
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

### 5.1.5 26dB Bandwidth and 99% Bandwidth

**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407(e)
Basic standard	: ANSI C63.10: 2013
Limits	: N/A
Kind of test site	: Shielded Room

**Test Setup**

Date of testing	: 2022-01-06 to 2022-01-07
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

### 5.1.6 6dB Bandwidth

**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407(e)
Basic standard	: ANSI C63.10: 2013
Limits	: At least 500KHz (5725-5850MHz)
Kind of test site	: Shielded Room

**Test Setup**

Date of testing	: 2022-01-06 to 2022-01-07
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 24.8 °C
Relative humidity	: 55 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

## 5.1.7 Radiated Spurious Emission

**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407(b) & FCC Part 15.205 & FCC Part 15.209
Basic standard	: ANSI C63.10: 2013 KDB 789033 D02 v01r03
Limits	: <ul style="list-style-type: none"><li>• For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</li><li>• For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</li><li>• For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. Emissions outside the band 5470-5600 MHz and 5650-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.</li><li>• 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.</li></ul> Restricted Bands meet the requirement of 15.209 limit
Kind of test site	: 3m Semi-anechoic Chamber

**Test Setup**

Date of testing	: 2022-01-11 to 2022-01-19
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

**Remark:**

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix A.

### 5.1.8 Dynamic Frequency Selection (DFS)

**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.407(h)  
Basic standard : ANSI C63.10: 2013  
Limits : 5250-5350MHz, 5470-5725MHz  
Channel Move Time: Within 10 seconds.  
Channel Closing Transmission Time: 200ms+aggregate of  
60ms over remaining 10s period;  
Non-Occupancy Period: at least 30 minutes.  
Kind of test site : Shielded Room

**Test Setup**

Date of testing : 2022-01-13  
Input voltage : AC 120V, 60Hz  
Operation mode : A  
Test channel : CH 58, CH 106  
Ambient temperature : 24.8 °C  
Relative humidity : 55 %  
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A.

### 5.1.9 Conducted Emission on AC Mains

**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.207(a)
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a)
Kind of test site	: Shielded Room

**Test Setup**

Date of testing	: 2022-01-16
Input voltage	: AC 120V, 60Hz
Operation mode	: B
Earthing	: Not connected
Ambient temperature	: 23.1 °C
Relative humidity	: 52 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A.

## 6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the separate test photo file.

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### Appendix A.1: Test Results of Maximum Conducted output power

TestMode	Channel	Result[dBm]			Limit[dBm]	Verdict
		Ant1	Ant2	MIMO		
11A-SISO	5180	13.23	12.54	-	≤24	PASS
	5200	13.17	12.73	-	≤24	PASS
	5240	13.29	12.60	-	≤24	PASS
	5260	13.16	12.68	-	≤24	PASS
	5280	13.17	12.53	-	≤24	PASS
	5320	13.39	12.39	-	≤24	PASS
	5500	13.59	11.96	-	≤24	PASS
	5580	13.47	12.13	-	≤24	PASS
	5700	13.58	12.66	-	≤24	PASS
	5745	13.28	12.39	-	≤30	PASS
	5785	13.31	12.92	-	≤30	PASS
5825	13.22	12.91	-	≤30	PASS	
11N20MIMO	5180	13.03	12.52	15.79	≤23.49	PASS
	5200	13.03	12.41	15.74	≤23.49	PASS
	5240	13.18	12.42	15.83	≤23.49	PASS
	5260	13.15	12.84	16.01	≤23.49	PASS
	5280	13.12	12.60	15.88	≤23.49	PASS
	5320	13.29	12.55	15.95	≤23.49	PASS
	5500	13.43	12.46	15.98	≤23.49	PASS
	5580	13.36	12.73	16.07	≤23.49	PASS
	5700	13.11	12.27	15.72	≤23.49	PASS
	5745	13.10	12.32	15.74	≤29.49	PASS
	5785	13.11	12.74	15.94	≤29.49	PASS
5825	13.06	12.88	15.98	≤29.49	PASS	
11N40MIMO	5190	13.49	12.74	16.14	≤23.49	PASS
	5230	13.14	12.57	15.87	≤23.49	PASS
	5270	12.90	12.71	15.82	≤23.49	PASS
	5310	13.18	12.33	15.79	≤23.49	PASS
	5510	13.36	12.30	15.87	≤23.49	PASS
	5550	13.18	12.57	15.90	≤23.49	PASS
	5670	13.20	12.45	15.85	≤23.49	PASS
	5755	13.15	12.64	15.91	≤29.49	PASS
5795	13.12	12.93	16.04	≤29.49	PASS	
11AC20MIMO	5180	12.92	12.38	15.67	≤23.49	PASS
	5200	12.78	12.48	15.64	≤23.49	PASS
	5240	13.37	12.64	16.03	≤23.49	PASS
	5260	12.82	12.57	15.71	≤23.49	PASS
	5280	12.70	12.33	15.53	≤23.49	PASS
	5320	13.02	12.34	15.70	≤23.49	PASS
	5500	13.09	12.19	15.67	≤23.49	PASS
	5580	13.06	12.90	15.99	≤23.49	PASS
	5700	13.23	12.85	16.05	≤23.49	PASS
	5745	13.21	12.81	16.02	≤29.49	PASS
	5785	13.16	13.05	16.12	≤29.49	PASS
5825	13.13	13.00	16.08	≤29.49	PASS	
11AC40MIMO	5190	12.90	13.03	15.98	≤23.49	PASS
	5230	12.95	12.71	15.87	≤23.49	PASS
	5270	12.80	12.95	15.89	≤23.49	PASS
	5310	12.98	12.72	15.86	≤23.49	PASS
	5510	13.30	12.80	16.07	≤23.49	PASS
	5550	13.00	13.11	16.07	≤23.49	PASS
	5670	13.31	13.16	16.25	≤23.49	PASS
	5755	12.80	12.85	15.84	≤23.49	PASS
5795	12.81	12.95	15.89	≤23.49	PASS	
11ac80MIMO	5210	12.22	12.33	15.29	≤23.49	PASS
	5290	12.33	12.45	15.40	≤23.49	PASS

	5530	12.69	12.66	15.69	≤23.49	PASS
	5610	12.85	12.92	15.90	≤23.49	PASS
	5775	12.96	13.02	16.00	≤29.49	PASS

## Appendix A.2: Test Results of Conducted Power Spectral Density

TestMode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A-SISO	Ant1	5180	3.62	≤11	PASS
	Ant2	5180	4.07	≤11	PASS
	total	5180	----	----	----
	Ant1	5200	3.46	≤11	PASS
	Ant2	5200	3.72	≤11	PASS
	total	5200	----	----	----
	Ant1	5240	4.22	≤11	PASS
	Ant2	5240	3.55	≤11	PASS
	total	5240	----	----	----
	Ant1	5260	3.96	≤11	PASS
	Ant2	5260	3.6	≤11	PASS
	total	5260	----	----	----
	Ant1	5280	3.85	≤11	PASS
	Ant2	5280	3.01	≤11	PASS
	total	5280	----	----	----
	Ant1	5320	4.1	≤11	PASS
	Ant2	5320	3.5	≤11	PASS
	total	5320	----	----	----
	Ant1	5500	3.34	≤11	PASS
	Ant2	5500	1.66	≤11	PASS
	total	5500	----	----	----
	Ant1	5580	3.61	≤11	PASS
	Ant2	5580	2.94	≤11	PASS
	total	5580	----	----	----
	Ant1	5700	3.04	≤11	PASS
	Ant2	5700	2.96	≤11	PASS
	total	5700	----	----	----
	Ant1	5745	3.57	≤30	PASS
	Ant2	5745	3.53	≤30	PASS
	total	5745	----	----	----
Ant1	5785	3.16	≤30	PASS	
Ant2	5785	3.5	≤30	PASS	
total	5785	----	----	----	
Ant1	5825	3.94	≤30	PASS	
Ant2	5825	4.31	≤30	PASS	
total	5825	----	----	----	
11N20MIMO	Ant1	5180	3.51	≤10.49	PASS
	Ant2	5180	2.99	≤10.49	PASS
	total	5180	6.27	≤10.49	PASS
	Ant1	5200	2.66	≤10.49	PASS
	Ant2	5200	3.17	≤10.49	PASS
	total	5200	5.93	≤10.49	PASS
	Ant1	5240	4.17	≤10.49	PASS
	Ant2	5240	4.22	≤10.49	PASS
	total	5240	7.21	≤10.49	PASS
	Ant1	5260	3.11	≤10.49	PASS
	Ant2	5260	3.43	≤10.49	PASS
	total	5260	6.28	≤10.49	PASS
	Ant1	5280	2.83	≤10.49	PASS
	Ant2	5280	3.21	≤10.49	PASS
	total	5280	6.03	≤10.49	PASS
	Ant1	5320	3.06	≤10.49	PASS
	Ant2	5320	3.71	≤10.49	PASS
	total	5320	6.41	≤10.49	PASS
	Ant1	5500	2.16	≤10.49	PASS
	Ant2	5500	1.85	≤10.49	PASS
	total	5500	5.02	≤10.49	PASS
Ant1	5580	3.18	≤10.49	PASS	

	Ant2	5580	3.47	≤10.49	PASS
	total	5580	6.34	≤10.49	PASS
	Ant1	5700	2.29	≤10.49	PASS
	Ant2	5700	2.63	≤10.49	PASS
	total	5700	5.47	≤10.49	PASS
	Ant1	5745	3.19	≤29.49	PASS
	Ant2	5745	3.17	≤29.49	PASS
	total	5745	6.19	≤29.49	PASS
	Ant1	5785	2.6	≤29.49	PASS
	Ant2	5785	3.81	≤29.49	PASS
	total	5785	6.26	≤29.49	PASS
	Ant1	5825	3.19	≤29.49	PASS
	Ant2	5825	4.06	≤29.49	PASS
	total	5825	6.66	≤29.49	PASS
11N40MIMO	Ant1	5190	0.63	≤10.49	PASS
	Ant2	5190	1.66	≤10.49	PASS
	total	5190	4.19	≤10.49	PASS
	Ant1	5230	0.84	≤10.49	PASS
	Ant2	5230	0.23	≤10.49	PASS
	total	5230	3.56	≤10.49	PASS
	Ant1	5270	0.07	≤10.49	PASS
	Ant2	5270	1.32	≤10.49	PASS
	total	5270	3.75	≤10.49	PASS
	Ant1	5310	1.15	≤10.49	PASS
	Ant2	5310	0.2	≤10.49	PASS
	total	5310	3.71	≤10.49	PASS
	Ant1	5510	1.17	≤10.49	PASS
	Ant2	5510	-0.12	≤10.49	PASS
	total	5510	3.58	≤10.49	PASS
	Ant1	5550	-0.15	≤10.49	PASS
	Ant2	5550	0.18	≤10.49	PASS
	total	5550	3.03	≤10.49	PASS
	Ant1	5670	-0.05	≤10.49	PASS
	Ant2	5670	0.6	≤10.49	PASS
	total	5670	3.30	≤10.49	PASS
	Ant1	5755	0.19	≤29.49	PASS
	Ant2	5755	0.53	≤29.49	PASS
	total	5755	3.37	≤29.49	PASS
Ant1	5795	-0.85	≤29.49	PASS	
Ant2	5795	1.33	≤29.49	PASS	
total	5795	3.39	≤29.49	PASS	
11AC20MIMO	Ant1	5180	3.49	≤10.49	PASS
	Ant2	5180	3.74	≤10.49	PASS
	total	5180	6.63	≤10.49	PASS
	Ant1	5200	3.23	≤10.49	PASS
	Ant2	5200	3.54	≤10.49	PASS
	total	5200	6.40	≤10.49	PASS
	Ant1	5240	4.1	≤10.49	PASS
	Ant2	5240	4.44	≤10.49	PASS
	total	5240	7.28	≤10.49	PASS
	Ant1	5260	3.23	≤10.49	PASS
	Ant2	5260	3.58	≤10.49	PASS
	total	5260	6.42	≤10.49	PASS
	Ant1	5280	2.83	≤10.49	PASS
	Ant2	5280	2.68	≤10.49	PASS
	total	5280	5.77	≤10.49	PASS
	Ant1	5320	3.61	≤10.49	PASS
	Ant2	5320	2.65	≤10.49	PASS
	total	5320	6.17	≤10.49	PASS
	Ant1	5500	2.58	≤10.49	PASS
	Ant2	5500	2.01	≤10.49	PASS
	total	5500	5.31	≤10.49	PASS
	Ant1	5580	2.24	≤10.49	PASS

	Ant2	5580	3.46	≤10.49	PASS
	total	5580	5.90	≤10.49	PASS
	Ant1	5700	2.23	≤10.49	PASS
	Ant2	5700	3.43	≤10.49	PASS
	total	5700	5.88	≤10.49	PASS
	Ant1	5745	2.19	≤29.49	PASS
	Ant2	5745	2.87	≤29.49	PASS
	total	5745	5.55	≤29.49	PASS
	Ant1	5785	1.88	≤29.49	PASS
	Ant2	5785	3.73	≤29.49	PASS
	total	5785	5.91	≤29.49	PASS
	Ant1	5825	2.85	≤29.49	PASS
	Ant2	5825	3.93	≤29.49	PASS
	total	5825	6.43	≤29.49	PASS
11AC40MIMO	Ant1	5190	0.55	≤10.49	PASS
	Ant2	5190	1.93	≤10.49	PASS
	total	5190	4.30	≤10.49	PASS
	Ant1	5230	1.76	≤10.49	PASS
	Ant2	5230	1.41	≤10.49	PASS
	total	5230	4.60	≤10.49	PASS
	Ant1	5270	-0.48	≤10.49	PASS
	Ant2	5270	0.85	≤10.49	PASS
	total	5270	3.25	≤10.49	PASS
	Ant1	5310	0.73	≤10.49	PASS
	Ant2	5310	0.98	≤10.49	PASS
	total	5310	3.87	≤10.49	PASS
	Ant1	5510	0.48	≤10.49	PASS
	Ant2	5510	0.62	≤10.49	PASS
	total	5510	3.56	≤10.49	PASS
	Ant1	5550	-0.33	≤10.49	PASS
	Ant2	5550	1.63	≤10.49	PASS
	total	5550	3.77	≤10.49	PASS
	Ant1	5670	0.47	≤10.49	PASS
	Ant2	5670	1.31	≤10.49	PASS
	total	5670	3.92	≤10.49	PASS
	Ant1	5755	-0.2	≤29.49	PASS
	Ant2	5755	1.67	≤29.49	PASS
	total	5755	3.85	≤29.49	PASS
Ant1	5795	-0.77	≤29.49	PASS	
Ant2	5795	1.03	≤29.49	PASS	
total	5795	3.23	≤29.49	PASS	
11AC80MIMO	Ant1	5210	-1.13	≤10.49	PASS
	Ant2	5210	-0.61	≤10.49	PASS
	total	5210	2.15	≤10.49	PASS
	Ant1	5290	-2.09	≤10.49	PASS
	Ant2	5290	-1.44	≤10.49	PASS
	total	5290	1.26	≤10.49	PASS
	Ant1	5530	-2.08	≤10.49	PASS
	Ant2	5530	-2.32	≤10.49	PASS
	total	5530	0.81	≤10.49	PASS
	Ant1	5610	-1.88	≤10.49	PASS
	Ant2	5610	-2.02	≤10.49	PASS
	total	5610	1.06	≤10.49	PASS
	Ant1	5775	-1.96	≤29.49	PASS
	Ant2	5775	0.22	≤29.49	PASS
	total	5775	2.28	≤29.49	PASS

### Appendix A.3: Test Results of Frequency Stability

Voltage Temperature								
TestMode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11AC20	Ant1	5180	NV	NT	8000	1.54	20	PASS
	Ant1	5200	NV	NT	14000	2.69	20	PASS
	Ant1	5240	NV	NT	22000	4.20	20	PASS
	Ant1	5260	NV	NT	30000	5.70	20	PASS
	Ant1	5280	NV	NT	33000	6.25	20	PASS
	Ant1	5320	NV	NT	35000	6.58	20	PASS
	Ant1	5500	NV	NT	32000	5.82	20	PASS
	Ant1	5580	NV	NT	32000	5.73	20	PASS
	Ant1	5700	NV	NT	37000	6.49	20	PASS
	Ant1	5745	NV	NT	36000	6.27	20	PASS
11AC40	Ant1	5785	NV	NT	39000	6.74	20	PASS
	Ant1	5825	NV	NT	35000	6.01	20	PASS
	Ant1	5190	NV	NT	33000	6.36	20	PASS
	Ant1	5230	NV	NT	38000	7.27	20	PASS
	Ant1	5270	NV	NT	38000	7.21	20	PASS
	Ant1	5310	NV	NT	23000	4.33	20	PASS
	Ant1	5510	NV	NT	36000	6.49	20	PASS
	Ant1	5550	NV	NT	37000	6.67	20	PASS
11AC80	Ant1	5670	NV	NT	39000	6.88	20	PASS
	Ant1	5755	NV	NT	40000	7.48	20	PASS
	Ant1	5795	NV	NT	41000	7.75	20	PASS
	Ant1	5210	NV	NT	39000	7.96	20	PASS
	Ant1	5290	NV	NT	41000	7.66	20	PASS
	Ant1	5530	NV	NT	44000	7.79	20	PASS
	Ant1	5610	NV	NT	43000	8.19	20	PASS
	Ant1	5775	NV	NT	44000	7.90	20	PASS

## Appendix A.4: Test Results of 26dB Bandwidth

TestMode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-SISO	Ant1	5180	19.560	5170.120	5189.680	---	PASS
		5200	19.800	5190.080	5209.880	---	PASS
		5240	19.960	5230.240	5250.200	---	PASS
		5260	20.400	5249.840	5270.240	---	PASS
		5280	19.680	5270.240	5289.920	---	PASS
		5320	19.400	5310.320	5329.720	---	PASS
		5500	19.960	5490.040	5510.000	---	PASS
		5580	19.280	5570.480	5589.760	---	PASS
		5700	19.720	5690.080	5709.800	---	PASS
		5745	19.840	5735.200	5755.040	---	PASS
		5785	20.400	5775.040	5795.440	---	PASS
5825	19.360	5815.440	5834.800	---	PASS		
11N20MIMO	Ant1	5180	20.080	5170.080	5190.160	---	PASS
		5200	20.360	5189.880	5210.240	---	PASS
		5240	19.800	5230.200	5250.000	---	PASS
		5260	19.760	5250.120	5269.880	---	PASS
		5280	20.240	5270.080	5290.320	---	PASS
		5320	20.360	5309.760	5330.120	---	PASS
		5500	19.920	5490.120	5510.040	---	PASS
		5580	19.960	5569.880	5589.840	---	PASS
		5700	20.400	5689.880	5710.280	---	PASS
		5745	20.000	5735.000	5755.000	---	PASS
		5785	20.200	5774.800	5795.000	---	PASS
5825	20.160	5815.000	5835.160	---	PASS		
11N40MIMO	Ant1	5190	40.160	5169.920	5210.080	---	PASS
		5230	40.640	5209.360	5250.000	---	PASS
		5270	40.400	5249.600	5290.000	---	PASS
		5310	40.320	5289.680	5330.000	---	PASS
		5510	40.240	5489.920	5530.160	---	PASS
		5550	40.720	5529.680	5570.400	---	PASS
		5670	40.800	5650.000	5690.800	---	PASS
		5755	40.000	5735.080	5775.080	---	PASS
5795	40.800	5774.520	5815.320	---	PASS		
11AC20MIMO	Ant1	5180	20.000	5170.080	5190.080	---	PASS
		5200	20.200	5189.840	5210.040	---	PASS
		5240	19.880	5230.160	5250.040	---	PASS
		5260	20.240	5249.800	5270.040	---	PASS
		5280	20.120	5270.040	5290.160	---	PASS
		5320	19.880	5310.040	5329.920	---	PASS
		5500	20.120	5490.040	5510.160	---	PASS
		5580	20.040	5569.880	5589.920	---	PASS
		5700	19.880	5690.080	5709.960	---	PASS
		5745	19.840	5735.120	5754.960	---	PASS
		5785	20.360	5774.840	5795.200	---	PASS
5825	20.000	5815.080	5835.080	---	PASS		
11AC40MIMO	Ant1	5190	40.800	5169.360	5210.160	---	PASS
		5230	40.480	5209.680	5250.160	---	PASS
		5270	40.400	5249.840	5290.240	---	PASS
		5310	40.320	5289.600	5329.920	---	PASS
		5510	40.480	5490.080	5530.560	---	PASS
		5550	40.960	5529.760	5570.720	---	PASS
		5670	40.160	5649.840	5690.000	---	PASS
		5755	40.480	5734.760	5775.240	---	PASS
5795	40.080	5774.760	5814.840	---	PASS		
11AC80MIMO	Ant1	5210	80.960	5169.520	5250.480	---	PASS
		5290	80.480	5249.680	5330.160	---	PASS
		5530	80.800	5489.840	5570.640	---	PASS
		5610	80.640	5569.840	5650.480	---	PASS
5775	80.000	5735.160	5815.160	---	PASS		



11A-SISO Ant1 5180



11A-SISO Ant1 5200



11A-SISO Ant1 5240





11A-SISO Ant1 5260



11A-SISO Ant1 5280



11A-SISO Ant1 5320



11A-SISO Ant1 5500



11A-SISO Ant1 5580



11A-SISO Ant1 5700



11A-SISO Ant1 5745



11A-SISO Ant1 5785



11A-SISO Ant1 5825





11N20MIMO Ant1 5180



11N20MIMO Ant1 5200



11N20MIMO Ant1 5240



11N20MIMO Ant1 5260



11N20MIMO Ant1 5280



11N20MIMO Ant1 5320



11N20MIMO Ant1 5500



11N20MIMO Ant1 5580



11N20MIMO Ant1 5700





11N20MIMO Ant1 5745



11N20MIMO Ant1 5785



11N20MIMO Ant1 5825



11N40MIMO Ant1 5190



11N40MIMO Ant1 5230



11N40MIMO Ant1 5270





11N40MIMO Ant1 5310



11N40MIMO Ant1 5510



11N40MIMO Ant1 5550



11N40MIMO Ant1 5670



11N40MIMO Ant1 5755



11N40MIMO Ant1 5795



11AC20MIMO\_Ant1\_5180



11AC20MIMO\_Ant1\_5200



11AC20MIMO\_Ant1\_5240





11AC20MIMO\_Ant1\_5260



11AC20MIMO\_Ant1\_5280



11AC20MIMO\_Ant1\_5320



11AC20MIMO\_Ant1\_5500



11AC20MIMO\_Ant1\_5580



11AC20MIMO\_Ant1\_5700



11AC20MIMO\_Ant1\_5745



11AC20MIMO\_Ant1\_5785



11AC20MIMO\_Ant1\_5825





11AC40MIMO\_Ant1\_5190



11AC40MIMO\_Ant1\_5230



11AC40MIMO\_Ant1\_5270



11AC40MIMO\_Ant1\_5310



11AC40MIMO\_Ant1\_5510



11AC40MIMO\_Ant1\_5550





11AC40MIMO\_Ant1\_5670



11AC40MIMO\_Ant1\_5755



11AC40MIMO\_Ant1\_5795



11AC80MIMO\_Ant1\_5210



11AC80MIMO\_Ant1\_5290



11AC80MIMO\_Ant1\_5530



11AC80MIMO\_Ant1\_5610



11AC80MIMO\_Ant1\_5775



### Appendix A.5: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-SISO	Ant1	5180	16.804	5171.527	5188.331	---	PASS
		5200	16.885	5191.626	5208.511	---	PASS
		5240	16.823	5231.613	5248.436	---	PASS
		5260	16.880	5251.591	5268.471	---	PASS
		5280	16.901	5271.611	5288.512	---	PASS
		5320	16.857	5311.613	5328.470	---	PASS
		5500	16.723	5491.707	5508.430	---	PASS
		5580	16.824	5571.682	5588.506	---	PASS
		5700	16.876	5691.606	5708.482	---	PASS
		5745	16.988	5736.562	5753.550	---	PASS
		5785	16.766	5776.643	5793.409	---	PASS
11N20MIMO	Ant1	5825	16.879	5816.535	5833.414	---	PASS
		5180	17.800	5171.111	5188.911	---	PASS
		5200	17.882	5191.123	5209.005	---	PASS
		5240	17.794	5231.139	5248.933	---	PASS
		5260	17.828	5251.117	5268.945	---	PASS
		5280	17.878	5271.119	5288.997	---	PASS
		5320	17.804	5311.143	5328.947	---	PASS
		5500	17.746	5491.187	5508.933	---	PASS
		5580	17.760	5571.193	5588.953	---	PASS
		5700	17.895	5691.098	5708.993	---	PASS
		5745	17.873	5736.090	5753.963	---	PASS
11N40MIMO	Ant1	5785	17.884	5776.122	5794.006	---	PASS
		5825	17.872	5816.113	5833.985	---	PASS
		5190	36.204	5171.888	5208.092	---	PASS
		5230	36.284	5211.945	5248.229	---	PASS
		5270	36.330	5251.827	5288.157	---	PASS
		5310	36.068	5292.002	5328.070	---	PASS
		5510	36.217	5492.001	5528.218	---	PASS
		5550	36.303	5531.957	5568.260	---	PASS
11AC20MIMO	Ant1	5670	36.228	5651.935	5688.163	---	PASS
		5755	36.086	5737.014	5773.100	---	PASS
		5795	36.253	5776.956	5813.209	---	PASS
		5180	17.829	5171.110	5188.939	---	PASS
		5200	17.835	5191.169	5209.004	---	PASS
		5240	17.751	5231.156	5248.907	---	PASS
		5260	17.869	5251.080	5268.949	---	PASS
		5280	17.851	5271.115	5288.966	---	PASS
11AC40MIMO	Ant1	5320	17.790	5311.110	5328.900	---	PASS
		5500	17.749	5491.187	5508.936	---	PASS
		5580	17.810	5571.124	5588.934	---	PASS
		5700	17.845	5691.088	5708.933	---	PASS
		5745	17.813	5736.123	5753.936	---	PASS
		5785	17.795	5776.084	5793.879	---	PASS
		5825	17.797	5816.118	5833.915	---	PASS
		5190	36.218	5171.929	5208.147	---	PASS
11AC80MIMO	Ant1	5230	36.065	5211.993	5248.058	---	PASS
		5270	36.287	5251.857	5288.144	---	PASS
		5310	36.057	5292.003	5328.060	---	PASS
		5510	36.081	5492.027	5528.108	---	PASS
		5550	36.361	5531.906	5568.267	---	PASS
		5670	36.165	5651.935	5688.100	---	PASS
		5755	36.200	5736.912	5773.112	---	PASS
		5795	36.131	5776.986	5813.117	---	PASS
11AC80MIMO	Ant1	5210	75.493	5172.305	5247.798	---	PASS
		5290	75.573	5252.279	5327.852	---	PASS
		5530	75.523	5492.365	5567.888	---	PASS
		5610	75.621	5572.263	5647.884	---	PASS



	5775	75.732	5737.119	5812.851	---	PASS
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11A-SISO\_Ant1\_5180



11A-SISO\_Ant1\_5200



11A-SISO\_Ant1\_5240



11A-SISO Ant1 5260



11A-SISO Ant1 5280



11A-SISO Ant1 5320



11A-SISO Ant1 5500



11A-SISO Ant1 5580



11A-SISO Ant1 5700





11A-SISO Ant1 5745



11A-SISO Ant1 5785



11A-SISO Ant1 5825





11N20MIMO Ant1 5180



11N20MIMO Ant1 5200



11N20MIMO Ant1 5240



11N20MIMO Ant1 5260



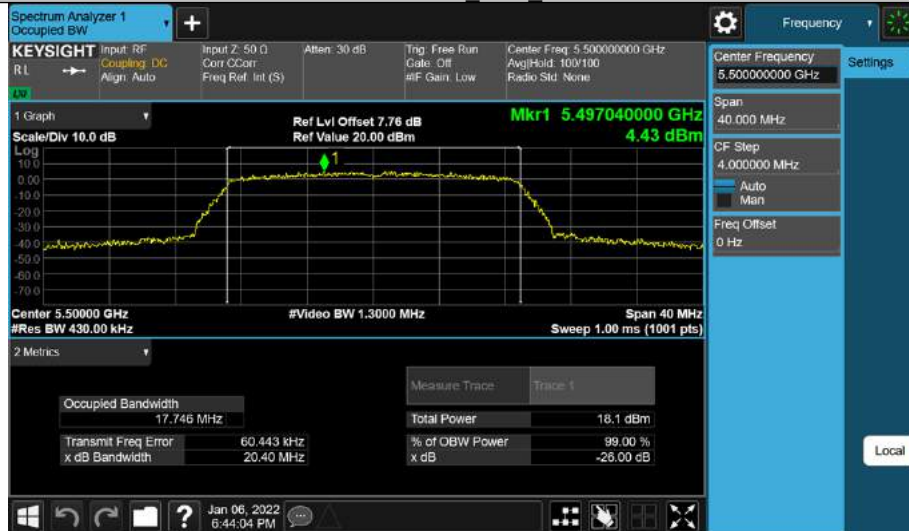
11N20MIMO Ant1 5280



11N20MIMO Ant1 5320



11N20MIMO Ant1 5500



11N20MIMO Ant1 5580



11N20MIMO Ant1 5700





11N20MIMO Ant1 5745



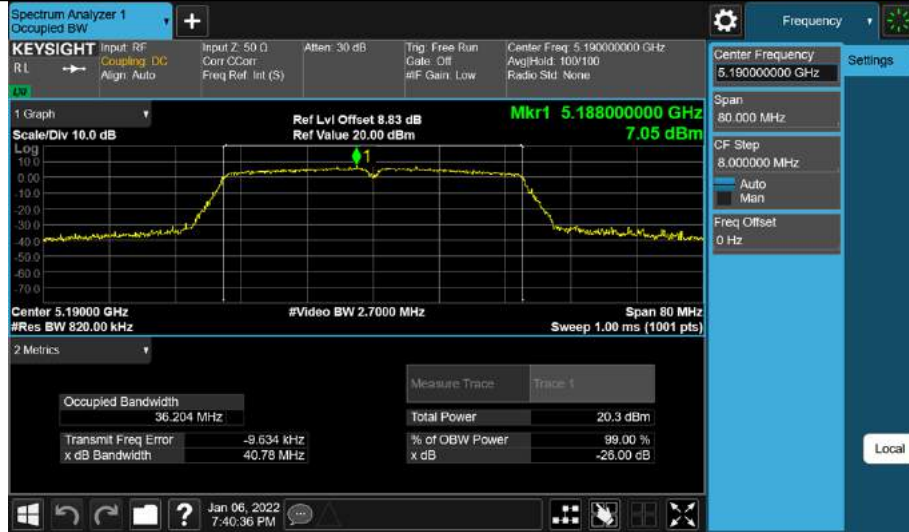
11N20MIMO Ant1 5785



11N20MIMO Ant1 5825



11N40MIMO Ant1 5190



11N40MIMO Ant1 5230



11N40MIMO Ant1 5270



11N40MIMO Ant1 5310



11N40MIMO Ant1 5510



11N40MIMO Ant1 5550





11N40MIMO Ant1 5670



11N40MIMO Ant1 5755



11N40MIMO Ant1 5795



11AC20MIMO\_Ant1\_5180



11AC20MIMO\_Ant1\_5200



11AC20MIMO\_Ant1\_5240





11AC20MIMO\_Ant1\_5260



11AC20MIMO\_Ant1\_5280



11AC20MIMO\_Ant1\_5320





11AC20MIMO\_Ant1\_5745



11AC20MIMO\_Ant1\_5785



11AC20MIMO\_Ant1\_5825





11AC40MIMO\_Ant1\_5190



11AC40MIMO\_Ant1\_5230



11AC40MIMO\_Ant1\_5270



11AC40MIMO\_Ant1\_5310



11AC40MIMO\_Ant1\_5510



11AC40MIMO\_Ant1\_5550



11AC40MIMO\_Ant1\_5670



11AC40MIMO\_Ant1\_5755



11AC40MIMO\_Ant1\_5795





11AC80MIMO\_Ant1\_5210



11AC80MIMO\_Ant1\_5290



11AC80MIMO\_Ant1\_5530





11AC80MIMO\_Ant1\_5610



11AC80MIMO\_Ant1\_5775



**Appendix A.6: Test Results of 6dB Bandwidth**

TestMode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-SISO	Ant1	5745	16.040	5736.920	5752.960	0.5	PASS
		5785	13.760	5777.520	5791.280	0.5	PASS
		5825	12.360	5818.680	5831.040	0.5	PASS
11N20MIMO	Ant1	5745	15.720	5737.480	5753.200	0.5	PASS
		5785	10.080	5780.000	5790.080	0.5	PASS
		5825	17.600	5816.240	5833.840	0.5	PASS
11N40MIMO	Ant1	5755	32.640	5737.480	5770.120	0.5	PASS
		5795	35.040	5777.480	5812.520	0.5	PASS
11AC20MIMO	Ant1	5745	14.520	5738.400	5752.920	0.5	PASS
		5785	14.960	5777.560	5792.520	0.5	PASS
		5825	15.320	5817.800	5833.120	0.5	PASS
11AC40MIMO	Ant1	5755	33.920	5738.680	5772.600	0.5	PASS
		5795	32.560	5777.480	5810.040	0.5	PASS
11AC80MIMO	Ant1	5775	75.040	5737.560	5812.600	0.5	PASS

11A-SISO Ant1 5745



11A-SISO Ant1 5785



11A-SISO Ant1 5825



11N20MIMO Ant1 5745



11N20MIMO Ant1 5785



11N20MIMO Ant1 5825





11N40MIMO Ant1 5755



11N40MIMO Ant1 5795



11AC20MIMO Ant1 5745



11AC20MIMO\_Ant1\_5785



11AC20MIMO\_Ant1\_5825



11AC40MIMO\_Ant1\_5755





11AC40MIMO\_Ant1\_5795



11AC80MIMO\_Ant1\_5775



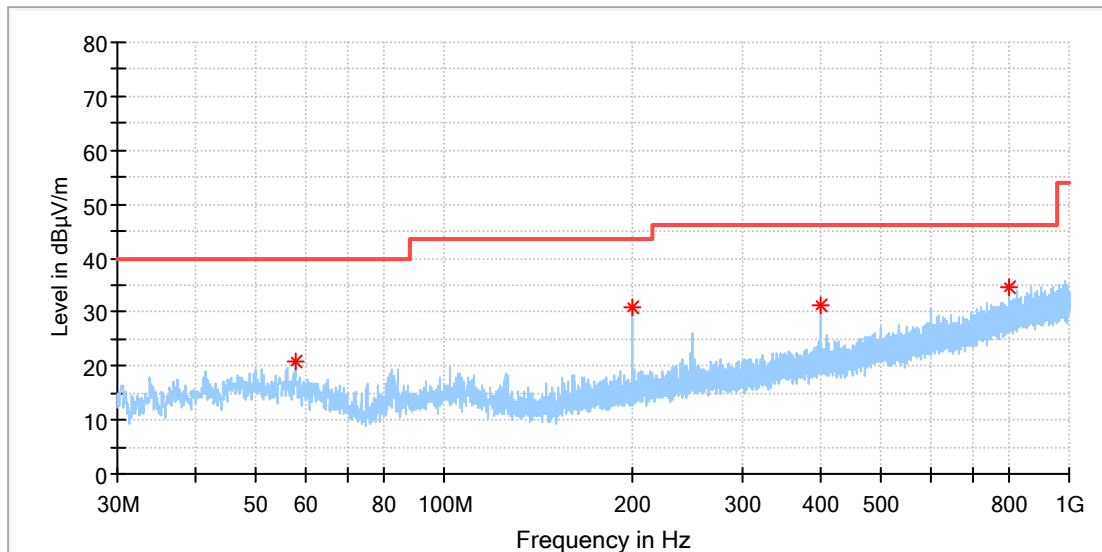
Note: 1. Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and above 18GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported. 2. This testing was carried out on different modulations, but only the worst case was presented in this report. 3. We tested four adapters, but only the worst case was presented in this report.

**Appendix A.7: Test Results of Radiated Spurious Emissions  
30MHz - 1GHz (Worst case)**

# Test Report

## EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 5G_11a_Ch36
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.407
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



## Critical\_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
57.742000	20.69	40.00	19.31	100.0	H	230.0	-18.7
199.992500	30.78	43.50	12.72	100.0	H	230.0	-19.0
400.006500	31.26	46.00	14.74	100.0	H	312.0	-13.6
800.034500	34.64	46.00	11.36	100.0	H	172.0	-6.4

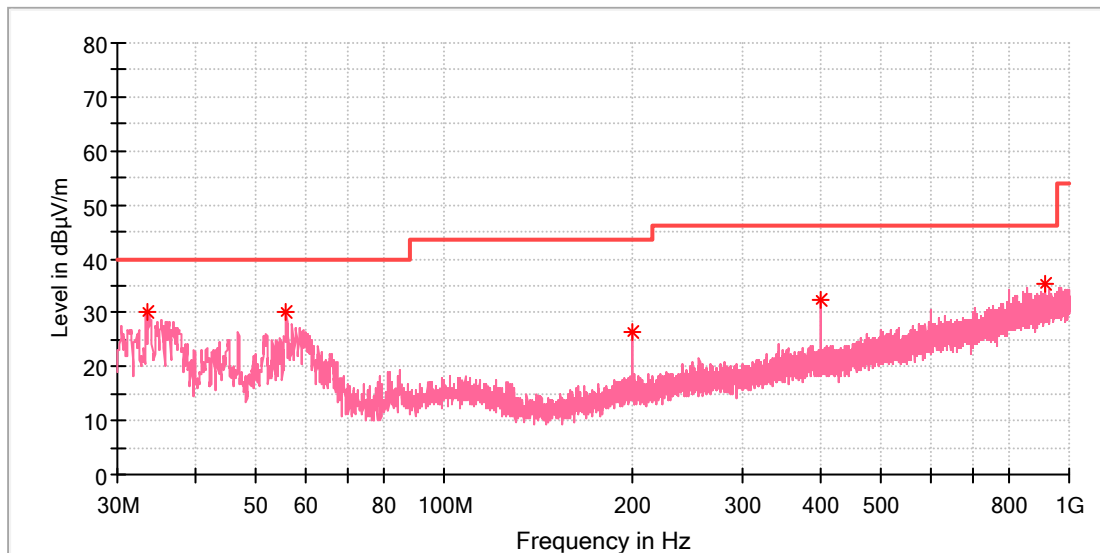
## Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

# Test Report

## EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 5G_11a_Ch36
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.407
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



## Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.395000	30.14	40.00	9.86	100.0	V	222.0	-22.4
55.947500	30.02	40.00	9.98	100.0	V	277.0	-18.5
199.992500	26.48	43.50	17.02	100.0	V	19.0	-19.0
400.006500	32.40	46.00	13.60	100.0	V	331.0	-13.6
916.580000	35.32	46.00	10.68	100.0	V	340.0	-4.9

## Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---