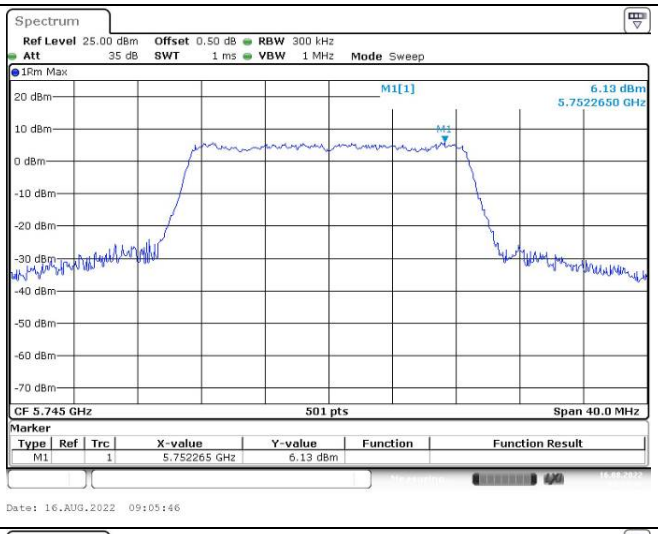
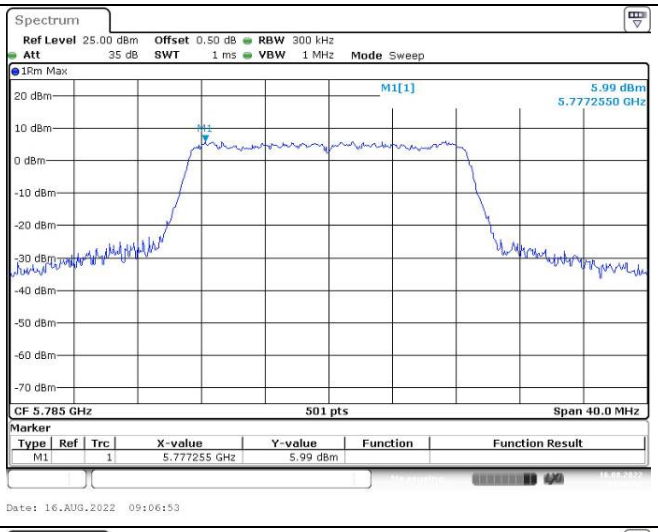
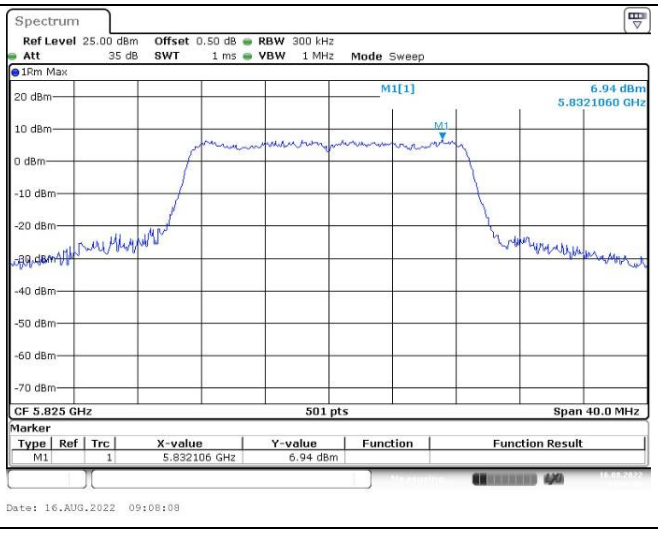
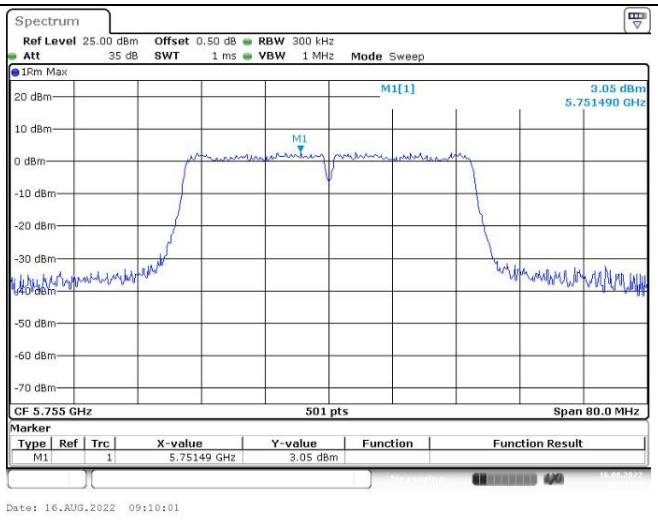
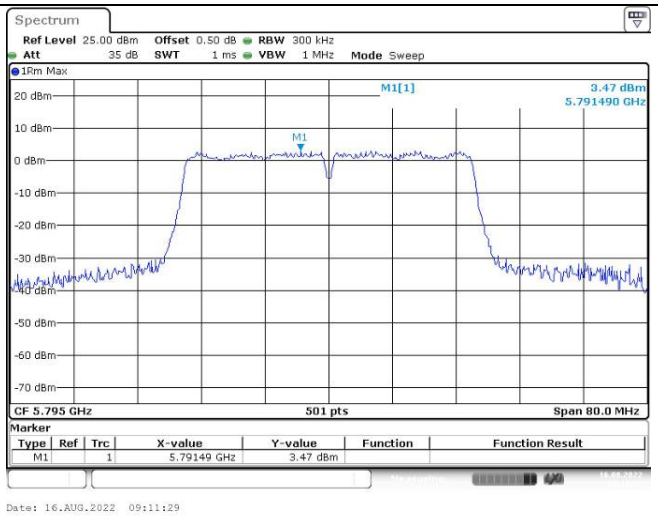
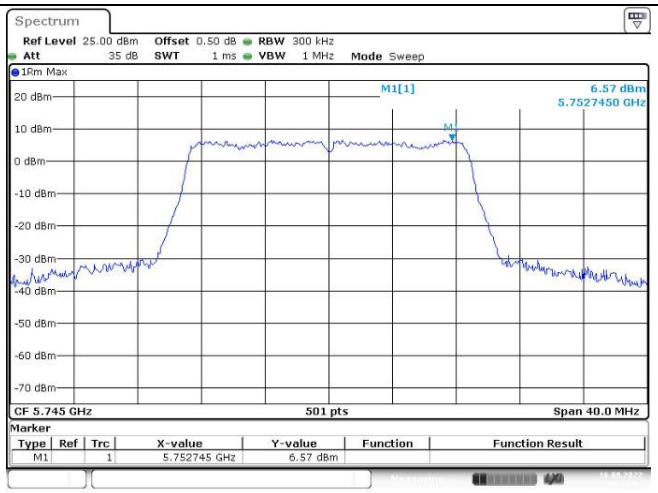
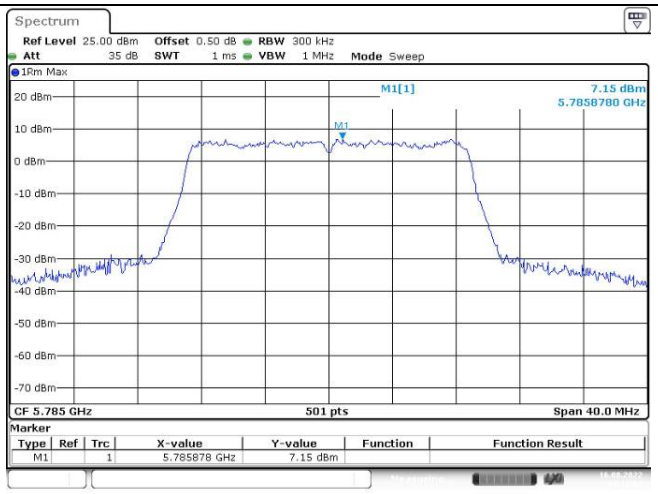
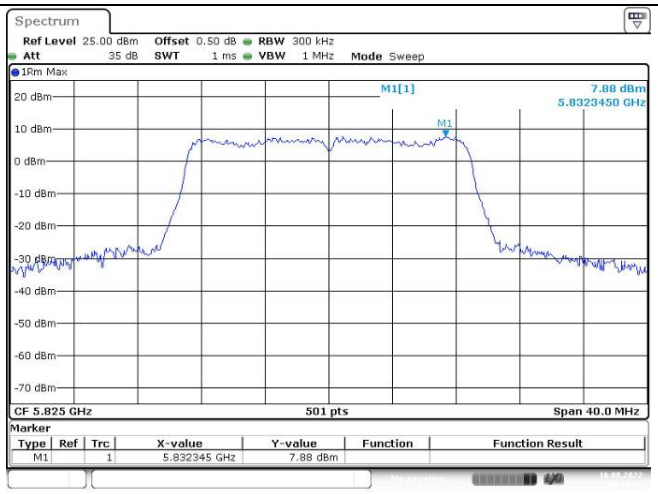
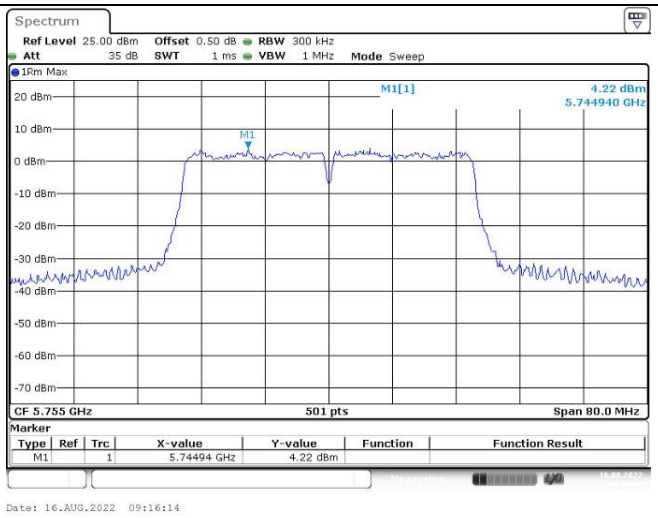
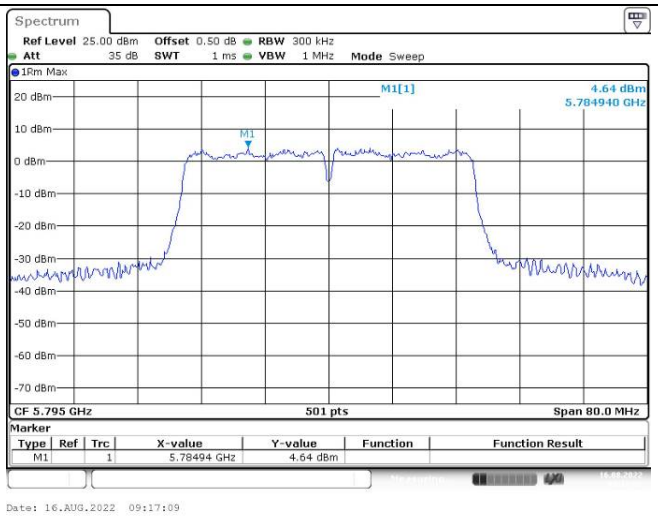
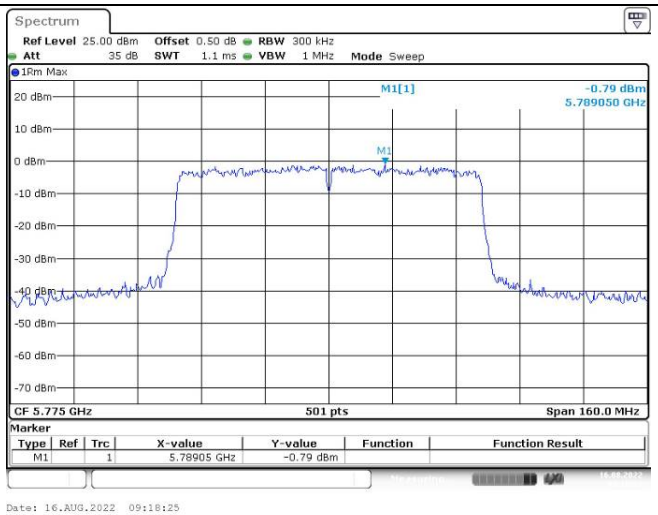
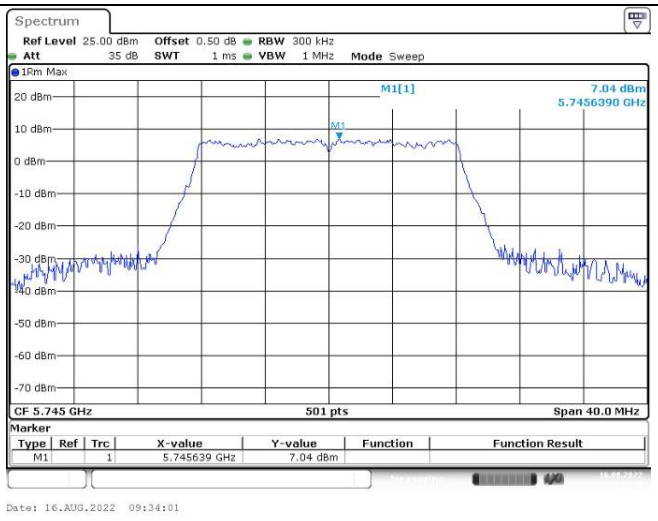
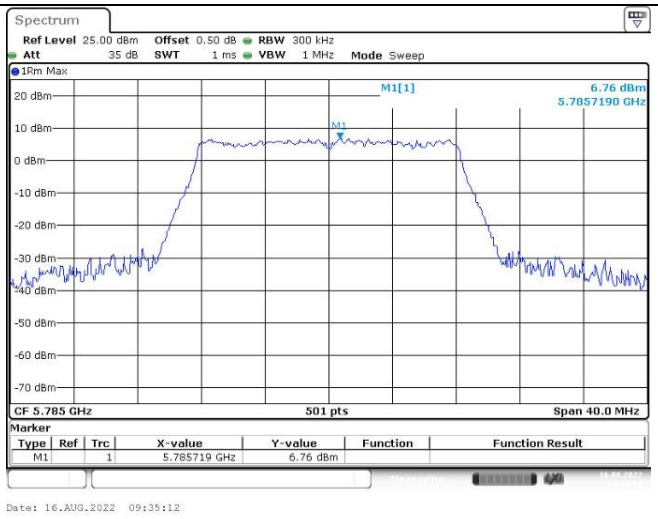
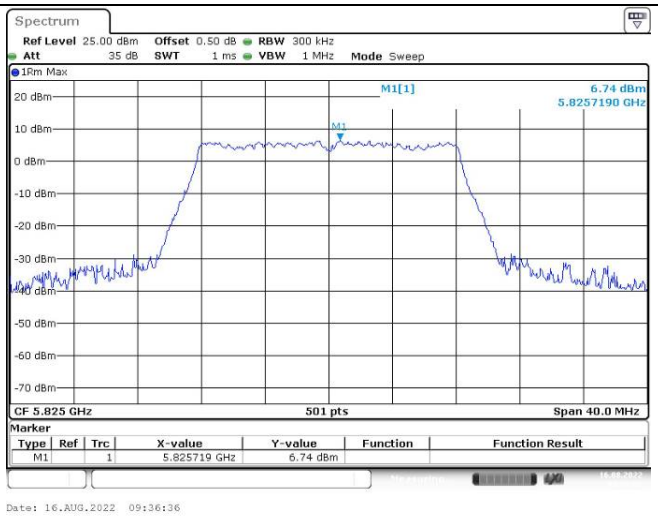
Maximum power spectral density	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

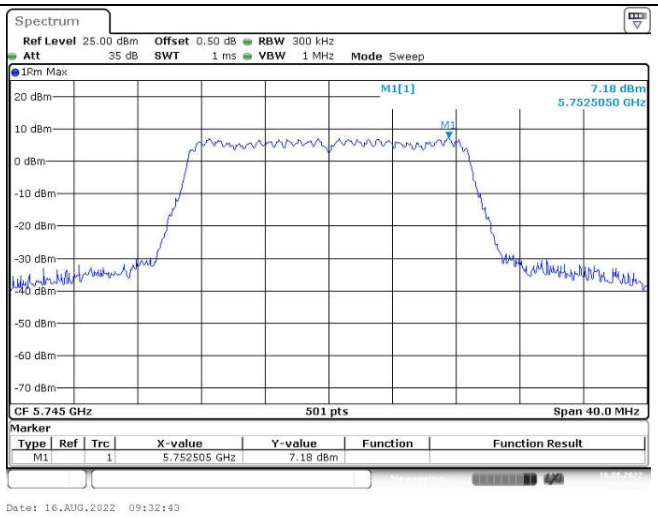
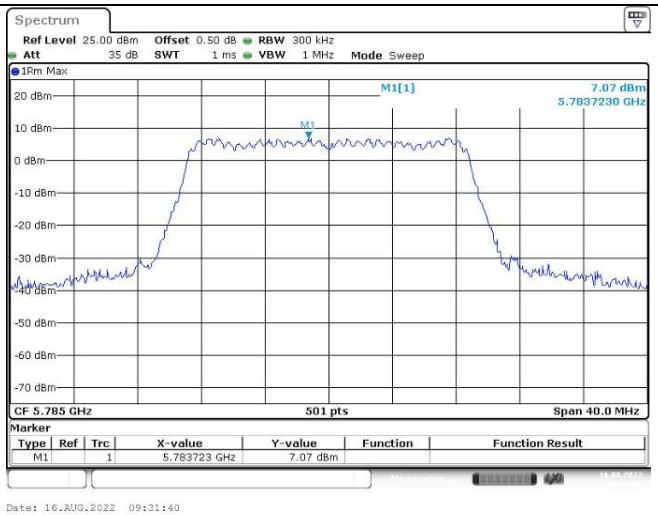
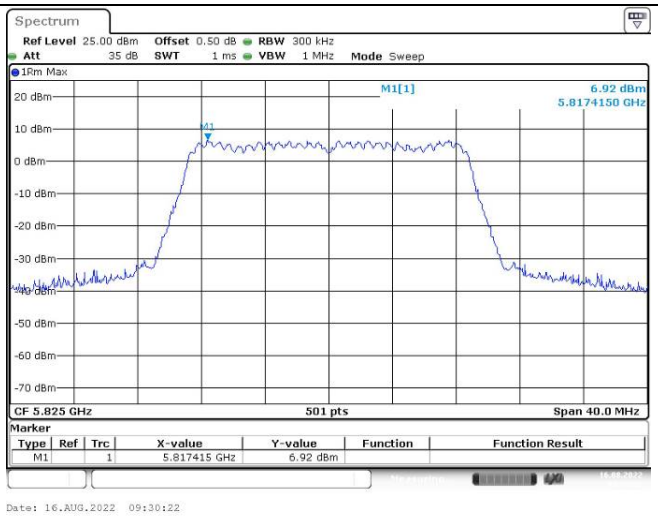
Maximum power spectral density	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

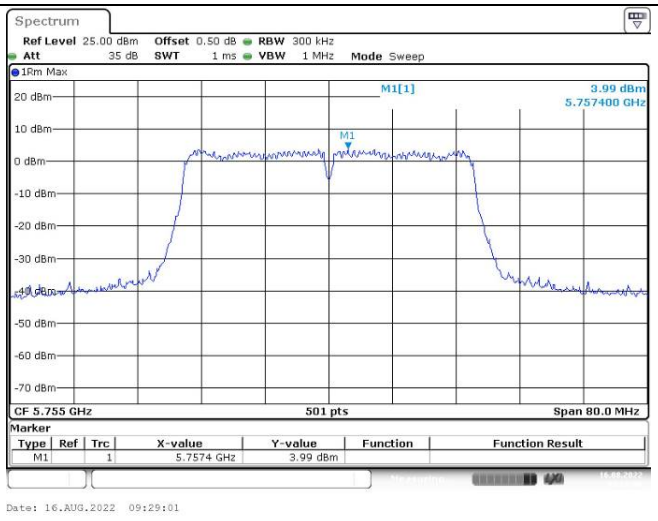
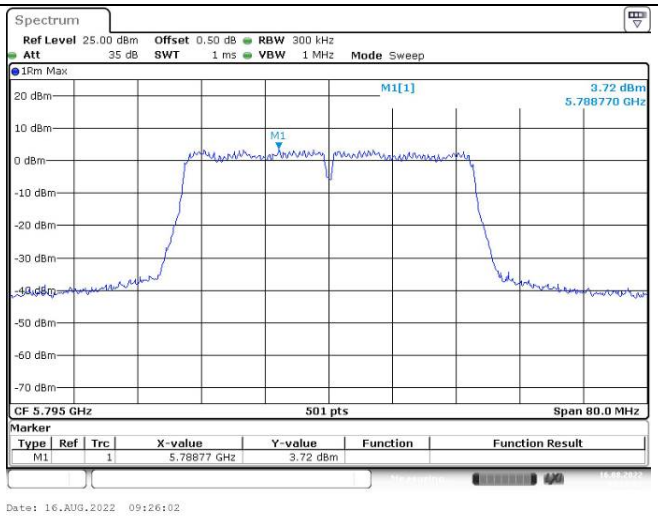
Maximum power spectral density	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

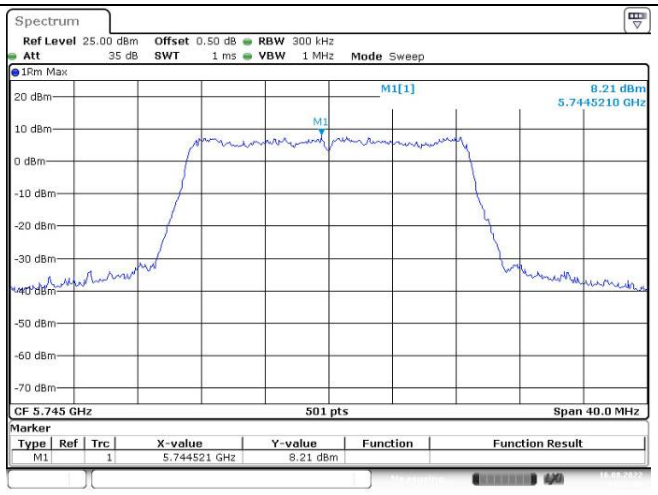
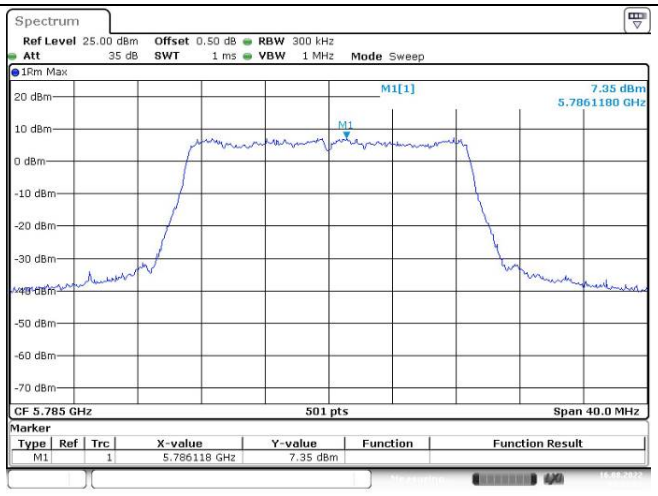
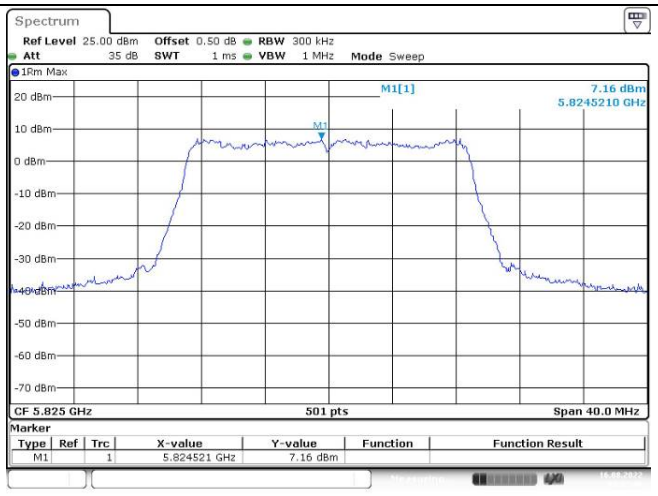
Maximum power spectral density	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

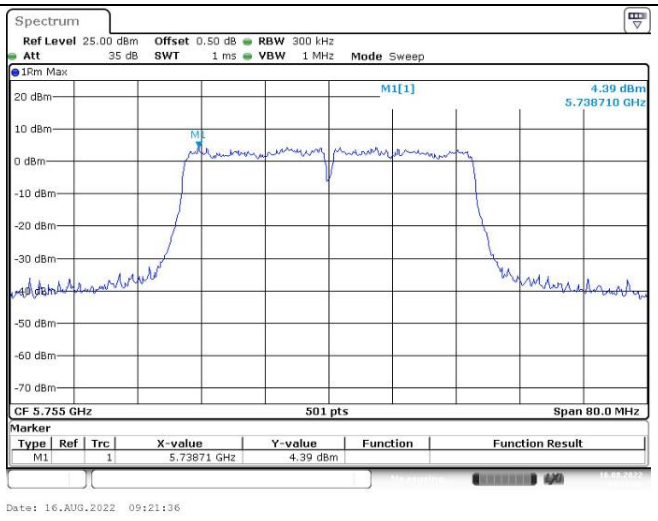
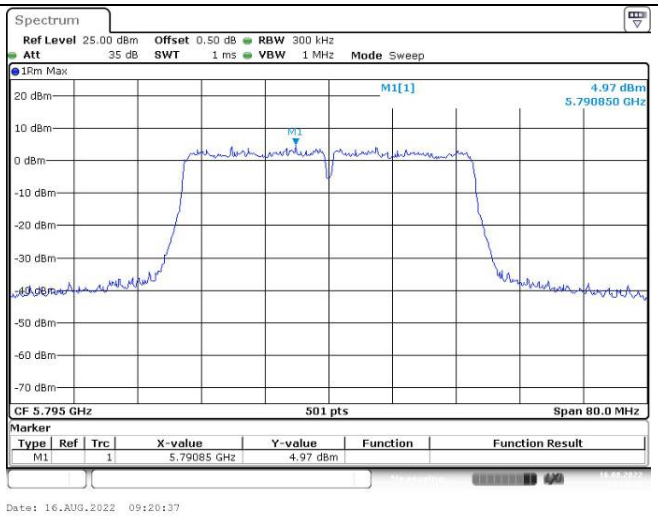
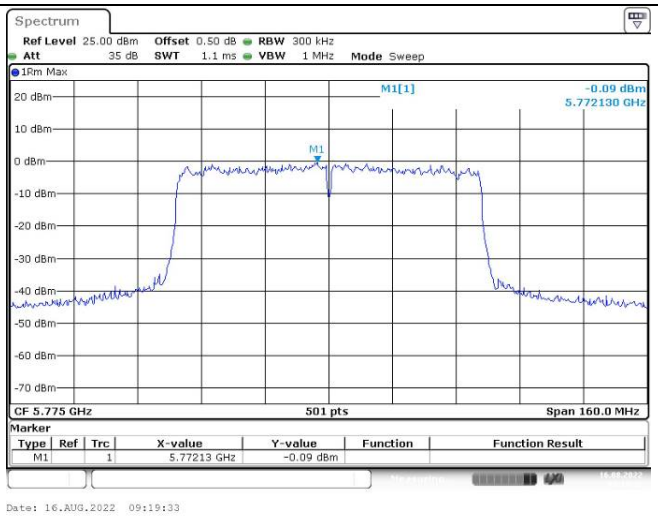
Chain1：

Maximum power spectral density	
802.11a Lowest Channel	
802.11a Middle Channel	
802.11a Highest Channel	

Maximum power spectral density	
802.11n ht20 Lowest Channel	
802.11n ht20 Middle Channel	
802.11n ht20 Highest Channel	

Maximum power spectral density	
802.11n ht40 Lowest Channel	
802.11n ht40 Highest Channel	

Maximum power spectral density	
802.11ac vht20 Lowest Channel	
802.11ac vht20 Middle Channel	
802.11ac vht20 Highest Channel	

Maximum power spectral density	
802.11ac vht40 Lowest Channel	
802.11ac vht40 Highest Channel	
802.11ac vht80 Middle Channel	

4.6 Duty Cycle:

Serial Number:	CR22080002-RF-S1	Test Date:	2022-08-15
Test Site:	RF	Test Mode:	Transmitting
Tester:	Julie Tan	Test Result:	N/A

Environmental Conditions:					
Temperature: (℃)	26.2	Relative Humidity: (%)	69	ATM Pressure: (kPa)	99.9

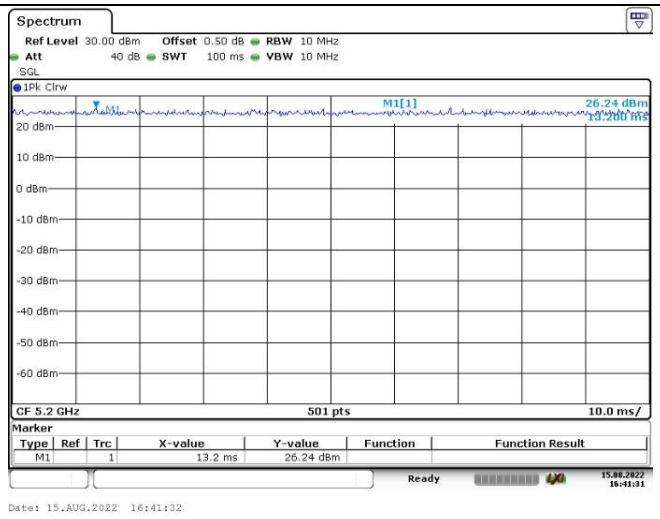
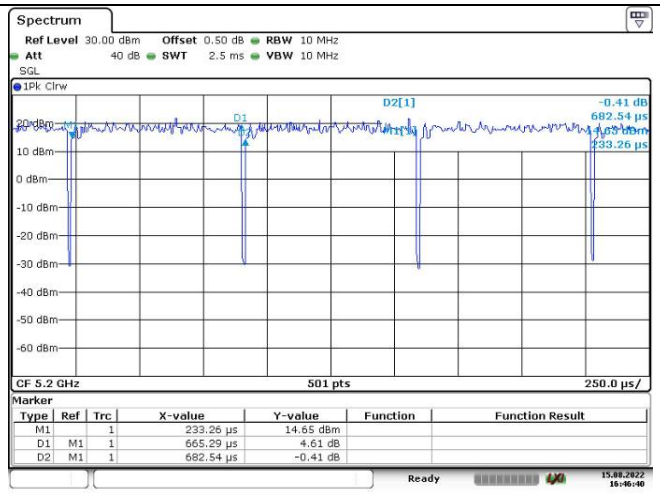
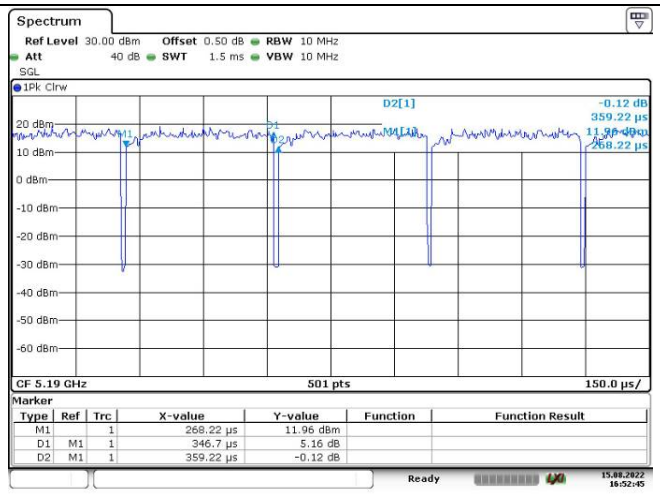
Test Equipment List and Details:

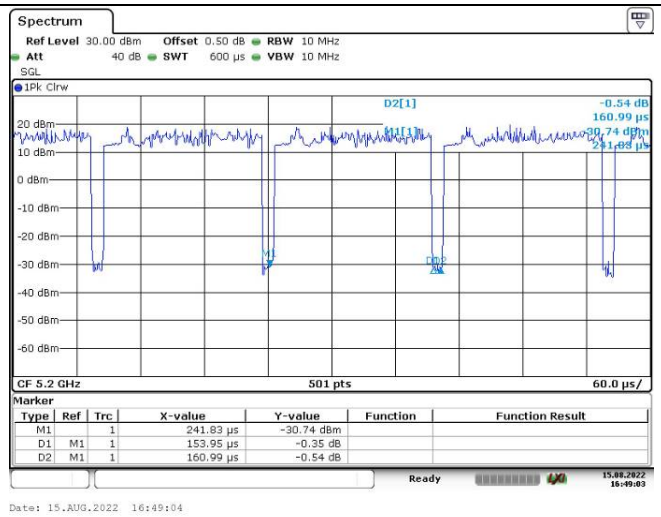
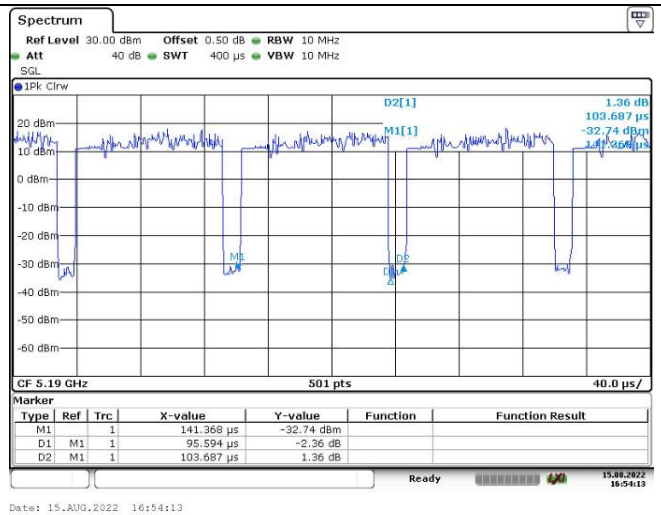
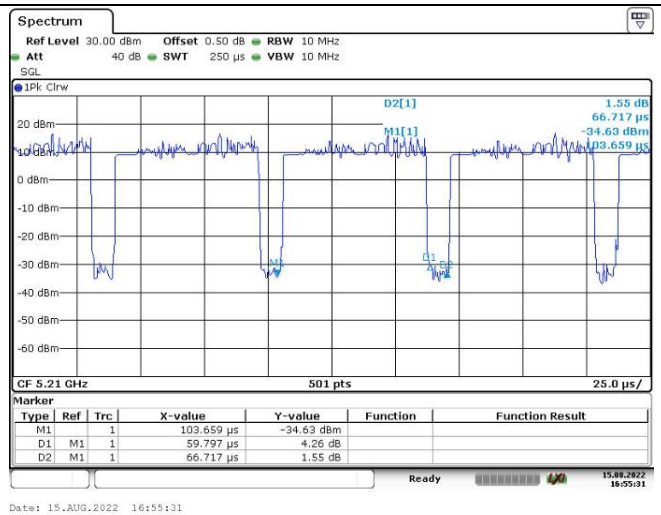
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2021-10-10	2022-10-09
zhuoxiang	Coaxial Cable	SMA-178	211002	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554404	Each time	N/A

** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Test Modes	Ton (ms)	Ton+off (ms)	Duty cycle (%)
802.11a	100	100	100.00
802.11n ht20	0.665	0.683	97.36
802.11n ht40	0.345	0.359	96.10
802.11ac vht20	0.154	0.161	95.65
802.11ac vht40	0.096	0.104	92.31
802.11ac vht80	0.06	0.067	89.55

Duty Cycle	
802.11a	
802.11n ht20	
802.11n ht40	

Duty Cycle	
802.11ac vht20	
802.11ac vht40	
802.11ac vht80	

5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

According to §1.1307(b)(3)(i)

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th}\ (\text{mW}) = \begin{cases} ERP_{20\ cm}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\ cm} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\ cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

d = the separation distance (cm);

According to KDB 447498 D04 Interim General RF Exposure Guidance v01:

2.2.2 Simultaneous Transmission with both SAR-based and MPE-Based Test Exemptions

This case is described in detail in § 1.1307(b)(3)(ii)(B) and covers the situations where both SAR-based and MPE-based exemption may be considered for test exemption in fixed, mobile, or portable device exposure conditions. For these cases, a device with multiple RF sources transmitting simultaneously will be considered an RF exempt device if the condition of Formula (1) is satisfied.

$$\sum_{i=1}^{a}\frac{P_i}{P_{th,i}} + \sum_{j=1}^{b}\frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c}\frac{Evaluated_k}{Exposure\ Limit_k} \le 1$$

5.2 Measurement Result

Operation Modes	Frequency (MHz)	Distance (mm)	P_{th}		Maximum Conducted Power including Tune-up Tolerance (dBm)	Antenna Gain + Beamforming Gain (dBi)	ERP (dBm)	ERP (mW)	Exemption
			(mW)	(dBm)					
WLAN 2.4G	2412-2462	200	3060	**34.86**	26	8.0	31.85	1531.09	Compliant
WLAN 5.2G	5150-5250	200	3060	**34.86**	21	8.0	26.85	484.17	Compliant
WLAN 5.8G	5725-5850	200	3060	**34.86**	22	8.0	27.85	609.54	Compliant

WLAN 2.4G and 5G can transmit simultaneously:

$$\sum_{i=1}^{a}\left(\frac{P_i}{P_{th_i}}\right)+\sum_{j=1}^{b}\left(\frac{ERP_j}{ERP_{th_j}}\right)+\sum_{k=1}^{c}\left(\frac{Evaluated_k}{Exposure\ Limit_k}\right)$$

= $EPR_{-2.4G}/P_{th-2.4G}$ +EPR_{-5G}/P_{th-5G}
=1531.09/3060+609.54/3060
=0.70
Result: The device compliant the Exemption at 20cm distances.

===== END OF REPORT =====