

RF Test Report

For

Applicant Name: Shenzhen Kenxinda Technology Co., Ltd.

Address: 5 Floors, Shenzhen Bay Science and Technology Park, Nanshan

District, Shenzhen, China

EUT Name: Mobile phone

Brand Name: KXD, EL 意龍, E&L 意龍

Model Number: A11 Series Model Number: 13C

Issued By

Company Name: BTF Testing Lab (Shenzhen) Co., Ltd.

F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park,

Approved b

Address: Tantou Community, Songgang Street, Bao'an District, Shenzhen,

China

Report Number: BTF240202R00705 Test Standards: 47 CFR Part 15E

Test Conclusion: Pass

FCC ID: 2BEC4-A11

Test Date: 2024-07-01 to 2024-08-05

Date of Issue: 2024-08-07

Test by: SSXX.9W

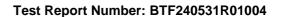
Ssxx.guo / Tester

Prepared by:

Chris Liu/Project engineer

Ryan.CJ /EMC manager

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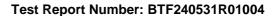


Revision History			
Version	Issue Date	Revisions Content	
R_V0	2024-08-07	Original	
Note: Once the revision has been made, then previous versions reports are invalid			



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1 Introduction

1.1 Identification of Testing Laboratory

Company Name:		BTF Testing Lab (Shenzhen) Co., Ltd.
	Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou
	Address.	Community, Songgang Street, Bao'an District, Shenzhen, China
	Phone Number:	+86-0755-23146130
Fax Number:		+86-0755-23146130

1.2 Identification of the Responsible Testing Location

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130
FCC Registration Number:	518915
Designation Number:	CN1330

1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.



2 Product Information

2.1 Application Information

Company Name:	Shenzhen Kenxinda Technology Co., Ltd.
Address:	5 Floors, Shenzhen Bay Science and Technology Park, Nanshan District, Shenzhen, China

2.2 Manufacturer Information

Company Name: Sichuan Southwest Prosperity Communication Technology Limited Com	
Address:	NO.98, New Tianwan Road, Lingang Development Zone, Yibin Sichuan P.R.China

2.3 Factory Information

Company Name:	Sichuan Southwest Prosperity Communication Technology Limited Company
Address:	NO.98, New Tianwan Road, Lingang Development Zone, Yibin Sichuan P.R.China

2.4 General Description of Equipment under Test (EUT)

EUT Name:	Mobile phone
Test Model Number:	A11
Series Model Number:	13C
Description of Model name differentiation:	Only the appearance is different, everything else is the same
Hardware Version:	KXD02_MB_V1.31
Software Version:	A11_KXD-V1.03

2.5 Technical Information

Power Supply:	DC 5V from adaptor or DC 3.85V from battery
Power Adaptor:	POWER ADAPTER Model:CD-28 Input:100-240V~50/60Hz 0.3A Output:5V===2A
Operation Frequency	U-NII Band 1: 5.18~5.24 GHz
Range	U-NII Band 3: 5.745~5.825 GHz
Frequency Block	U-NII Band 1: 5.15~5.25 GHz
1 requeries block	U-NII Band 3: 5.725~5.85 GHz
	802.11a: 20 MHz
	802.11n: 20 MHz
Channel Bandwidth	802.11n: 40 MHz
Onamici Banawati	802.11ac: 20 MHz
	802.11ac: 40 MHz
	802.11ac: 80 MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	-0.29dBi
Noto:	

Note

^{#:} The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.



3 Summary of Test Results

3.1 Test Standards

The tests were performed according to following standards:

47 CFR Part 15E: Unlicensed National Information Infrastructure Devices

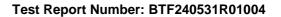
3.2 Uncertainty of Test

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	±2.64dB
Occupied Bandwidth	±69kHz
Transmitter Power, Conducted	±0.87dB
Power Spectral Density	±0.69dB
Conducted Spurious Emissions	±0.95dB
Radiated Spurious Emissions (above 1GHz)	1-6GHz: ±3.94dB 6-18GHz: ±4.16dB
Radiated Spurious Emissions (30M - 1GHz)	±4.12dB

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15E	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15E	47 CFR Part 15.207(a)	Pass
Maximum conducted output power	47 CFR Part 15E	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)	Pass
Power spectral density	47 CFR Part 15E	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)	Pass
Emission bandwidth and occupied bandwidth	47 CFR Part 15E	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. 47 CFR Part 15.407(e)	Pass
Channel Availability Check Time	47 CFR Part 15E	47 CFR Part 15.407(h)(2)(ii)	Pass
U-NII Detection Bandwidth	47 CFR Part 15E	47 CFR Part 15.407(h)(2)	Pass
Statistical Performance Check	47 CFR Part 15E	KDB 935210 D02, Clause 5.1 Table 2	Pass
Channel Move Time, Channel Closing Transmission Time	47 CFR Part 15E	47 CFR Part 15.407(h)(2)(iii)	Pass
Non-Occupancy Period Test	47 CFR Part 15E	47 CFR Part 15.407(h)(2)(iv)	Pass
DFS Detection Thresholds	47 CFR Part 15E	KDB 905462 D02, Clause 5.2 Table 3	Pass
Band edge emissions (Radiated)	47 CFR Part 15E	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass





Undesirable emission limits (below 1GHz)	47 CFR Part 15E	47 CFR Part 15.407(b)(9)	Pass
Undesirable emission limits (above 1GHz)	47 CFR Part 15E	47 CFR Part 15.407(b)(1) 47 CFR Part 15.407(b)(2) 47 CFR Part 15.407(b)(4) 47 CFR Part 15.407(b)(10)	Pass

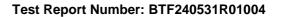
Test Configuration

Test Equipment List

Conducted Emission at AC power line							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date		
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	00953	2023-11-16	2024-11-15		
Coaxial Switcher	SCHWARZBECK	CX210	CX210	2023-11-16	2024-11-15		
V-LISN	SCHWARZBECK	NSLK 8127	01073	2023-11-16	2024-11-15		
LISN	AFJ	LS16/110VAC	16010020076	2023-11-16	2024-11-15		
EMI Receiver	ROHDE&SCHWA RZ	ESCI3	101422	2023-11-16	2024-11-15		

Duty Cycle					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	1	V1.00	1	1	/
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15

Maximum conducted	Maximum conducted output power							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date			
RFTest software	1	V1.00	1	1	1			
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15			
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15			
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15			
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15			
WIDEBAND RADIO COMMNUNICATION	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15			



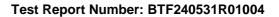


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MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15

Power spectral densi	Power spectral density							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date			
RFTest software	1	V1.00	1	1	1			
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15			
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15			
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15			
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15			
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15			
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15			

Emission bandwidth and occupied bandwidth							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date		
RFTest software	1	V1.00	1	1	/		
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15		
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15		
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15		
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15		
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15		
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15		

Channel Availability Check Time								
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date			
RFTest software	1	V1.00	1	1	1			
RF Control Unit	Techy	TR1029-1	/	2023-11-16	2024-11-15			
RF Sensor Unit	Techy	TR1029-2	/	2023-11-16	2024-11-15			
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15			
Adjustable Direct	Dongguan	etm-6050c	20211026123	2023-11-16	2024-11-15			





Current Regulated Power Supply	Tongmen Electronic Technology Co., LTD	31			
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15

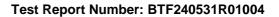
U-NII Detection Bandwidth							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date		
RFTest software	1	V1.00	1	1	1		
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15		
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15		
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15		
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15		
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15		
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15		

Statistical Performance	Statistical Performance Check							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date			
RFTest software	1	V1.00	1	/	1			
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15			
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15			
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15			
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15			
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15			
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15			

Channel Move Time, Channel Closing Transmission Time								
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date			
RFTest software	1	V1.00	1	1	1			
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15			
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15			
Programmable constant temperature	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15			

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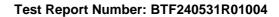


and humidity box					
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15

Non-Occupancy Perio	Non-Occupancy Period Test				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	1	V1.00	1	/	1
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15

DFS Detection Thresholds					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RFTest software	1	V1.00	1	1	1
RF Control Unit	Techy	TR1029-1	1	2023-11-16	2024-11-15
RF Sensor Unit	Techy	TR1029-2	1	2023-11-16	2024-11-15
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	2023-11-16	2024-11-15
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15

Band edge emissions (Radiated)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	1	1
Preamplifier	SCHWARZBECK	BBV9744	00246	2023-11-16	2023-11-23





RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2023-11-16	2024-11-15
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	2024-11-15
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2023-11-16	2024-11-15
EMI TEST RECEIVER	ROHDE&SCHWA RZ	ESCI7	101032	2023-11-16	2024-11-15
SIGNAL ANALYZER	ROHDE&SCHWA RZ	FSQ40	100010	2023-11-16	2024-11-15
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	80000	2023-11-16	2024-11-15
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2023-11-16	2024-11-15
EZ_EMC	Frad	FA-03A2 RE+	1	/	1
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2023-11-16	2024-11-15

Undesirable emission	Jndesirable emission limits (below 1GHz)				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	1	1
Preamplifier	SCHWARZBECK	BBV9744	00246	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2023-11-16	2024-11-15
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2023-11-16	2024-11-15
EMI TEST RECEIVER	ROHDE&SCHWA RZ	ESCI7	101032	2023-11-16	2024-11-15
SIGNAL ANALYZER	ROHDE&SCHWA RZ	FSQ40	100010	2023-11-16	2024-11-15
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	80000	2023-11-16	2024-11-15
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2023-11-16	2024-11-15
EZ_EMC	Frad	FA-03A2 RE+	1	1	1
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1



Log periodic antenna	SCHWAR7BECK	VULB 9168	01328	2021-11-28	2024-11-15
Log periodic antenna	OCHWAILEDLOIL	V O L D 3 100	01320	2021-11-20	2024-11-13

Undesirable emission limits (above 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	1	1
Preamplifier	SCHWARZBECK	BBV9744	00246	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	2023-11-16	2024-11-15
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	2023-11-16	2024-11-15
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2023-11-16	2024-11-15
EMI TEST RECEIVER	ROHDE&SCHWA RZ	ESCI7	101032	2023-11-16	2024-11-15
SIGNAL ANALYZER	ROHDE&SCHWA RZ	FSQ40	100010	2023-11-16	2024-11-15
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	2023-11-16	2024-11-15
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2023-11-16	2024-11-15
EZ_EMC	Frad	FA-03A2 RE+	1	1	/
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2023-11-16	2024-11-15

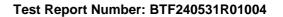


4.2 Test Auxiliary Equipment

The EUT was tested as an independent device.

4.3 Test Modes

No.	Test Modes	Description
TM1	802.11a mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.
TM2	802.11n mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.
ТМ3	802.11ac mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with 802.11ac modulation type. Only the data of worst case is recorded in the report.
TM4	Normal Operating	Keep the EUT works in normal operating mode and connect to companion device





5 Evaluation Results (Evaluation)

5.1 Antenna requirement

Test 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 shall be considered sufficient to comply with the provisions of this section.
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6 Radio Spectrum Matter Test Results (RF)

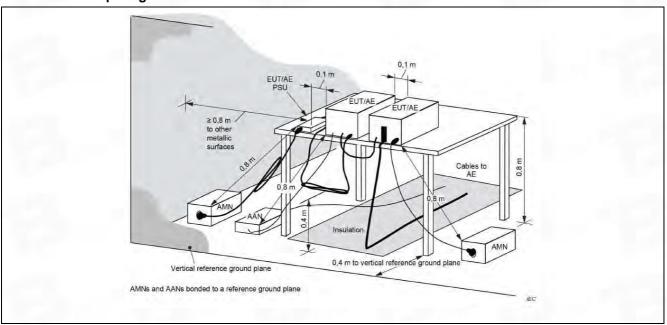
6.1 Conducted Emission at AC power line

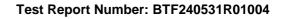
Test Requirement:	47 CFR Part 15.207(a)		
Test Method:	Refer to ANSI C63.10-2020 sec conducted emissions from unlicen	tion 6.2, standard test met sed wireless devices	hod for ac power-line
	Frequency of emission (MHz)	Conducted limit (dBµV)	
		Quasi-peak	Average
Test Limit:	0.15-0.5	66 to 56*	56 to 46*
lest Lillit.	0.5-5	56	46
	5-30	60	50
*Decreases with the logarithm of the frequency.			

6.1.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.1.2 Test Setup Diagram:

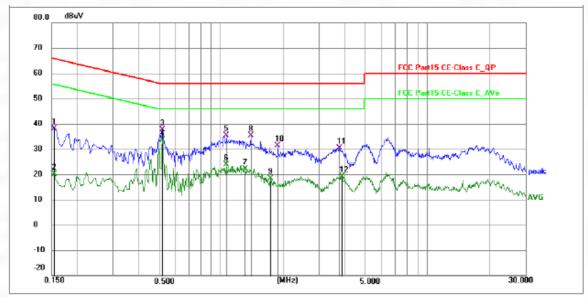






6.1.3 Test Data:

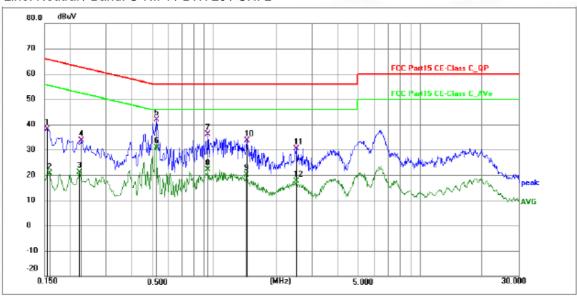
TM1 / Line: Line / Band: U-NII 1 / BW: 20 / CH: L



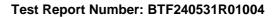
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1545	27.78	10.46	38.24	65.75	-27.51	QP	Р	
2	0.1545	9.75	10.46	20.21	55.75	-35.54	AVG	Р	
3	0.5190	26.93	10.59	37.52	56.00	-18.48	QP	Р	
4 *	0.5190	22.92	10.59	33.51	46.00	-12.49	AVG	Р	
5	1.0635	24.64	10.66	35.30	56.00	-20.70	QP	Р	
6	1.0635	13.25	10.66	23.91	46.00	-22.09	AVG	Р	
7	1.3110	11.59	10.66	22.25	46.00	-23.75	AVG	Р	
8	1.3920	24.71	10.66	35.37	56.00	-20.63	QP	Р	
9	1.7430	7.67	10.67	18.34	46.00	-27.66	AVG	Р	
10	1.8825	20.78	10.68	31.46	56.00	-24.54	QP	Р	
11	3.7410	19.66	10.65	30.31	56.00	-25.69	QP	Р	
12	3.8490	8.46	10.66	19.12	46.00	-26.88	AVG	Р	







No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1545	27.77	10.46	38.23	65.75	-27.52	QP	Р	
2	0.1590	10.26	10.47	20.73	55.52	-34.79	AVG	Р	
3	0.2220	10.48	10.56	21.04	52.74	-31.70	AVG	Р	
4	0.2265	23.13	10.56	33.69	62.58	-28.89	QP	Р	
5 *	0.5235	31.22	10.59	41.81	56.00	-14.19	QP	Р	
6	0.5235	20.41	10.59	31.00	46.00	-15.00	AVG	Р	
7	0.9330	25.58	10.67	36.25	56.00	-19.75	QP	Р	
8	0.9330	11.37	10.67	22.04	46.00	-23.96	AVG	Р	
9	1.4370	9.38	10.66	20.04	46.00	-25.96	AVG	Р	
10	1.4415	22.94	10.66	33.60	56.00	-22.40	QP	Р	
11	2.5080	19.64	10.67	30.31	56.00	-25.69	QP	Р	
12	2.5080	6.91	10.67	17.58	46.00	-28.42	AVG	Р	





6.2 Duty Cycle

Test Requirement:	All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum-power transmission duration, T, are required for each tested mode of operation.
Test Method:	ANSI C63.10-2020 section 12.2 (b)
Test Limit:	No limits, only for report use.
Procedure:	 i) Set the center frequency of the instrument to the center frequency of the transmission. ii) Set RBW >= EBW if possible; otherwise, set RBW to the largest available value. iii) Set VBW >= RBW. iv) Set detector = peak. v) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T, where T is defined in item a1) of 12.2, and the number of sweep points across duration T exceeds 100.

6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.2.2 Test Data:

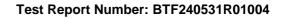
Please Refer to Appendix for Details.





6.3 Maximum conducted output power

0.0 Maximum cond	ucted output power
	47 CFR Part 15.407(a)(1)(i)
	47 CFR Part 15.407(a)(1)(ii)
To the Domestic control	47 CFR Part 15.407(a)(1)(iii)
Test Requirement:	47 CFR Part 15.407(a)(1)(iv)
	47 CFR Part 15.407(a)(2)
	47 CFR Part 15.407(a)(3)(i)
Test Method:	ANSI C63.10-2020 , section 12.3
10001110011001	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum
	conducted output power over the frequency band of operation shall not exceed 1
	W provided the maximum antenna gain does not exceed 6 dBi.
	If transmitting antennas of directional gain greater than 6 dBi are used, the
	maximum conducted output power shall be reduced by the amount in dB that the
	directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any
	elevation angle above 30 degrees as measured from the horizon must not exceed
	125 mW (21 dBm).
	120 11174 (21 dbitt).
	For an indoor access point operating in the band 5.15-5.25 GHz, the maximum
	conducted output power over the frequency band of operation shall not exceed 1
	W provided the maximum antenna gain does not exceed 6 dBi.
	If transmitting antennas of directional gain greater than 6 dBi are used, the
	maximum conducted output power shall be reduced by the amount in dB that the
	directional gain of the antenna exceeds 6 dBi.
	an obtaining ann an an anna anna anna anna ann
	For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the
	maximum conducted output power over the frequency band of operation shall not
	exceed 1 W.
	Fixed point-to-point U-NII devices may employ antennas with directional gain up to
	23 dBi without any corresponding reduction in the maximum conducted output
	power.
To add in the	For fixed point-to-point transmitters that employ a directional antenna gain greater
Test Limit:	than 23 dBi, a 1 dB reduction in maximum conducted output power is required for
	each 1 dB of antenna gain in excess of 23 dBi.
	Fixed, point-to-point operations exclude the use of point-to-multipoint systems,
	omnidirectional applications, and multiple collocated transmitters transmitting the
	same information. The operator of the U-NII device, or if the equipment is
	professionally installed, the installer, is responsible for ensuring that systems
	employing high gain directional antennas are used exclusively for fixed,
	point-to-point operations.
	For client devices in the 5.15-5.25 GHz band, the maximum conducted output
	power over the frequency band of operation shall not exceed 250 mW provided the
	maximum antenna gain does not exceed 6 dBi.
	If transmitting antennas of directional gain greater than 6 dBi are used, the
	maximum conducted output power shall be reduced by the amount in dB that the
	directional gain of the antenna exceeds 6 dBi.
	F - 11 - 5 05 5 05 011 15 47 5 705 011 1 - 1 - 11 - 11 - 11 - 11 - 11 -
	For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output
	power over the frequency bands of operation shall not exceed the lesser of 250
	mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.
	If transmitting antennas of directional gain greater than 6 dBi are used, the
	maximum conducted output power shall be reduced by the amount in dB that the
	directional gain of the antenna exceeds 6 dBi.





	For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.
	If transmitting antennas of directional gain greater than 6 dBi are used, the
	maximum conducted output power shall be reduced by the amount in dB that the
	directional gain of the antenna exceeds 6 dBi.
	However, fixed point-to-point U-NII devices operating in this band may employ
	transmitting antennas with directional gain greater than 6 dBi without any
	corresponding reduction in transmitter conducted power. Fixed, point-to-point
	operations exclude the use of point-to-multipoint systems, omnidirectional
	applications, and multiple collocated transmitters transmitting the same
	information. The operator of the U-NII device, or if the equipment is professionally
	installed, the installer, is responsible for ensuring that systems employing high gain
	directional antennas are used exclusively for fixed, point-to-point operations.
	Method SA-1
	a) Set span to encompass the entire 26 dB EBW or 99% OBW of the signal.
	b) Set RBW = 1 MHz.
	c) Set VBW >= 3 MHz.
	d) Number of points in sweep >= [2 × span / RBW]. (This gives bin-to-bin spacing
	d) Number of points in sweep >= [2 * span / RBW]. (This gives bin-to-bin spacing <= RBW / 2, so
	that narrowband signals are not lost between frequency bins.)
	e) Sweep time = auto.
	f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample
	detector mode.
	g) If transmit duty cycle < 98%, use a video trigger with the trigger level set to
	enable triggering
	only on full power pulses. The transmitter shall operate at maximum power control
	level for the
Procedure:	entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF
	intervals) or
	at duty cycle >= 98%, and if each transmission is entirely at the maximum power
	control level,
	then the trigger shall be set to "free run."
	h) Trace average at least 100 traces in power averaging (rms) mode.
	i) Compute power by integrating the spectrum across the 26 dB EBW or 99% OBW
	of the signal
	using the instrument's band power measurement function, with band limits set
	equal to the
	EBW or OBW band edges. If the instrument does not have a band power function,
	then sum the
	spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB
	EBW or 99%
	OBW of the spectrum.
C24 FUT Operation	

6.3.1 E.U.T. Operation:

Operating Environment:			
Temperature:	25.5 °C		
Humidity:	50.6 %		
Atmospheric Pressure:	1010 mbar		

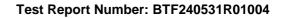
6.3.2 Test Data:

Please Refer to Appendix for Details.





6.4 Power spectral	density
Test Requirement:	47 CFR Part 15.407(a)(1)(i) 47 CFR Part 15.407(a)(1)(ii) 47 CFR Part 15.407(a)(1)(iii) 47 CFR Part 15.407(a)(1)(iv) 47 CFR Part 15.407(a)(2) 47 CFR Part 15.407(a)(3)(i)
Test Method:	ANSI C63.10-2020 , section 12.5
	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.
	Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the
Test Limit:	same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
	For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the
	directional gain of the antenna exceeds 6 dBi. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.
	If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For the band 5.725-5.850 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter





	conducted power.
	Fixed, point-to-point operations exclude the use of point-to-multipoint systems,
	omnidirectional applications, and multiple collocated transmitters transmitting the
	same information. The operator of the U-NII device, or if the equipment is
	professionally installed, the installer, is responsible for ensuring that systems
	employing high gain directional antennas are used exclusively for fixed,
	point-to-point operations.
	a) Create an average power spectrum for the EUT operating mode being tested by
	following the
	instructions in 12.3.2 for measuring maximum conducted output power using a
	spectrum
	analyzer or EMI receiver; that is, select the appropriate test method (SA-1, SA-2,
	SA-3, or their
	respective alternatives) and apply it up to, but not including, the step labeled,
	"Compute
	power" (This procedure is required even if the maximum conducted output
	power
	measurement was performed using the power meter method PM.)
	b) Use the peak search function on the instrument to find the peak of the spectrum.
	c) Make the following adjustments to the peak value of the spectrum, if applicable:
	1) If method SA-2 or SA-2A was used, then add [10 log (1 / D)], where D is the duty
	cycle, to the peak of the spectrum.
	2) If method SA-3A was used and the linear mode was used in step h) of 12.3.2.7,
	add
Procedure:	1 dB to the final result to compensate for the difference between linear averaging
	and
	power averaging.
	d) The result is the PPSD.
	e) The procedure in item a) through item c) requires the use of 1 MHz resolution
	bandwidth to
	satisfy the 1 MHz measurement bandwidth specified by some regulatory
	authorities.This
	requirement also permits use of resolution bandwidths less than 1 MHz "provided
	that the
	measured power is integrated to show the total power over the measurement
	bandwidth" (i.e.,
	1 MHz). If measurements are performed using a reduced resolution bandwidth and
	integrated
	over 1 MHz bandwidth, the following adjustments to the procedures apply:
	1) Set RBW >= 1 / T, where T is defined in 12.2 a).
	2) Set VBW >= [3 × RBW].
	3) Care shall be taken such that the measurements are performed during a period
	of continuous transmission or are corrected upward for duty cycle.
	or continuous transmission or are corrected upward for duty cycle.

6.4.1 E.U.T. Operation:

•		
Operating Environment:		
Temperature:	25.5 °C	
Humidity:	50.6 %	
Atmospheric Pressure:	1010 mbar	

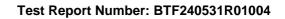
6.4.2 Test Data:

Please Refer to Appendix for Details.



6.5 Emission bandwidth and occupied bandwidth

	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use.
Test Requirement:	U-NII 3, U-NII 4: 47 CFR Part 15.407(e)
Test Method:	ANSI C63.10-2020 , section 6.9.3 & 12.4
Tool Mourou.	KDB 789033 D02, Clause C.2
Toot Limits	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use.
Test Limit:	U-NII 3, U-NII 4: Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.
	Emission bandwidth:
	a) Set RBW = approximately 1% of the emission bandwidth.
	b) Set the VBW > RBW.
	c) Detector = peak.
	d) Trace mode = max hold.
	e) Measure the maximum width of the emission that is 26 dB down from the peak
	of the emission.
	Compare this with the RBW setting of the instrument. Readjust RBW and repeat
	measurement as needed until the RBW/EBW ratio is approximately 1%.
	as needed until the Now/Low fallo is approximately 170.
	Occupied bandwidth:
	a) The instrument center frequency is set to the nominal EUT channel center
	frequency. The
	frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times
	the OBW.
	b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW,
	and VBW shall be approximately three times the RBW, unless otherwise specified
	by the
	applicable requirement.
	c) Set the reference level of the instrument as required, keeping the signal from
	exceeding the
Procedure:	maximum input mixer level for linear operation. In general, the peak of the spectral
	envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific
	guidance is given
	in 4.1.5.2.
	d) Step a) through step c) might require iteration to adjust within the specified
	range.
	e) Video averaging is not permitted. Where practical, a sample detection and single
	sweep mode
	shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be
	used.
	f) Use the 99% power bandwidth function of the instrument (if available) and report
	the measured
	bandwidth.
	g) If the instrument does not have a 99% power bandwidth function, then the trace
	data points are
	recovered and directly summed in linear power terms. The recovered amplitude
	data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the
	total is reached;
	that frequency is recorded as the lower frequency. The process is repeated until
	99.5% of the
	total is reached; that frequency is recorded as the upper frequency. The 99%





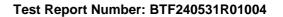
power bandwidth is the difference between these two frequencies. h) The occupied bandwidth shall be reported by providing plot(s) of the measuring display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s). 6 dB emission bandwidth: a) Set RBW = 100 kHz. b) Set the video bandwidth (VBW) ≥ 3 >= RBW. c) Detector = Peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar

6.5.2 Test Data:

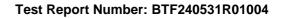
Please Refer to Appendix for Details.





6.6 Band edge emissions (Radiated)

	47 CFR Part 15.407(b)	(1)					
	47 CFR Part 15.407(b)						
Test Requirement:	47 CFR Part 15.407(b)						
	47 CFR Part 15.407(b)						
Test Method:	ANSI C63.10-2020 , se		2.7.6				
10011110111011	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the						
	5.15-5.35 GHz band sh						
	For transmitters operat 5.15-5.35 GHz band sh						
	For transmitters operat	ing solely in the 5.725-	5.850 GHz band	i:			
	All emissions shall be li						
	or below the band edge	e increasing linearly to	10 dBm/MHz at	25 MHz above or			
	below the band edge, a						
	linearly to a level of 15.						
	from 5 MHz above or b		creasing linearly	to a level of 27			
	dBm/MHz at the band of	· · · · · · · · · · · · · · · · · · ·					
	MHz	MHz	MHz	GHz			
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15			
	¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46			
	2.1735-2.1905 4.125-4.128	16.80425-16.80475 25.5-25.67	960-1240 1300-1427	7.25-7.75 8.025-8.5			
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2			
	4.20725-4.20775	73-74.6	1645.5-1646.	9.3-9.5			
	4.20125-4.20115	10-14.0	5	0.0-0.0			
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7			
	6.26775-6.26825	108-121.94	1718.8-1722. 2	13.25-13.4			
Test Limit:	6.31175-6.31225	123-138	2200-2300	14.47-14.5			
	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2			
	8.362-8.366	156.52475-156.525 25	2483.5-2500	17.7-21.4			
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12			
	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0			
	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8			
	12.51975-12.52025 12.57675-12.57725	240-285 322-335.4	3345.8-3358 3600-4400	36.43-36.5 (²)			
	13.36-13.41						
	¹ Until February 1, 1999), this restricted band sl	hall be 0.490-0.5	510 MHz.			
	² Above 38.6						
	The field strength of en						
	exceed the limits show						
	MHz, compliance with t						
	measurement instrume 1000 MHz, compliance						
	based on the average						
	15.35apply to these me		ciilissions. The	provisions in 8			
	Except as provided else	ewhere in this subpart,	the emissions fr	rom an intentional			



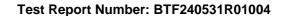


	radiator shall not exceed	d the field strength levels spec	ified in the following table:
	Frequency (MHz)	Field strength	Measurement
		(microvolts/meter)	distance
		(,	(meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
		100 **	
	30-88		3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
	Above 1GHz:		
Procedure:	above the ground at a 3 degrees to determine the b. The EUT was set 3 m was mounted on the top c. The antenna height is determine the maximum polarizations of the antend d. For each suspected of the antenna was tuned of below 30MHz, the an was turned from 0 degree. The test-receiver system Bandwidth with Maximum f. If the emission level of specified, then testing correported. Otherwise the	EUT was placed on the top of meter fully-anechoic chamber e position of the highest radiateters away from the interference of a variable-height antenna to varied from one meter to four a value of the field strength. Both are set to make the meast emission, the EUT was arrange to heights from 1 meter to 4 meterna was tuned to heights 1 meters to 360 degrees to find the tem was set to Peak Detect Furm Hold Mode. If the EUT in peak mode was 1 could be stopped and the peak emissions that did not have 10 ing peak or average method as	r. The table was rotated 360 tion. Ince-receiving antenna, which tower. In meters above the ground to oth horizontal and vertical surement. Indeed to its worst case and then eters (for the test frequency meter) and the rotatable table maximum reading. Inction and Specified OdB lower than the limit values of the EUT would be OdB margin would be
	h. The radiation measur Transmitting mode, and	west channel, the middle char ements are performed in X, Y, found the X axis positioning w ures until all frequencies meas	Z axis positioning for hich it is the worst case.
		Pablo Lagat Antanna Factor 1	Program Factor
		Cable Loss+ Antenna Factor- F	
		40GHz, the disturbance above	•
	testing, so only above p emissions from the radia	plots are the highest emission oints had been displayed. The ator which are attenuated more	amplitude of spurious
	need not be reported.		
	3. As shown in this sect	on, for frequencies above 1GI	Hz, the field strength limits
		mits. However, the peak field s	
		n permitted average limits spe	
		of modulation. For the emissio	
		only the peak measurement is	
		ve 18GHz were very low and the	
		ound when testing, so only the	
	displayed	Jana when testing, so only the	above narmonics nad peen

6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %

displayed.

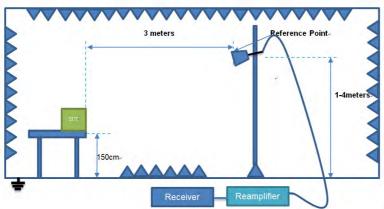




Atmospheric Pressure:

1010 mbar

6.6.2 Test Setup Diagram:



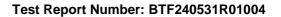




6.6.3 Test Data:

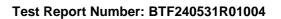
Note: All the mode have been tested, and only the worst mode 802.11n(20) are in the report

		U	NII-1&2A 20M_	_5180MHz_H	Horizontal				
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	
1	5097.679	42.57	5.28	47.85	68.20	-20.35	peak	Р	
2	5150.000	43.51	5.33	48.84	68.20	-19.36	peak	Р	
UNII-1&2A 20M_5180MHz_Vertical									
	Frequency	Reading	Factor	Level	Limit	Margin	. .		
No.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
1	5072.679	41.32	5.35	46.67	68.20	-21.53	peak	Р	
2	5150.000	43.99	5.33	49.32	68.20	-18.88	peak	Р	
		U	NII-1&2A 20M_	_5320MHz_H	Horizontal				
NI-	Frequency	Reading	Factor	Level	Limit	Margin	Datastan	D/F	
No.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
1	5350.000	43.07	5.45	48.52	68.20	-19.68	peak	Р	
2	5460.000	44.43	5.52	49.95	68.20	-18.25	peak	Р	
			UNII-1&2A 20N	1_5320MHz	_Vertical				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
INO.	(MHz)	(dBu∀)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector P/I	F/F	
1	5350.000	43.52	5.45	48.97	68.20	-19.23	peak	Р	
2	5460.000	45.55	5.52	51.07	68.20	-17.13	peak	Р	
			UNII-3 20M_5	745MHz_Ho	rizontal				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
140.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	1 /1	
1	5650.000	44.31	5.63	49.94	68.20	-18.26	peak	Р	
2	5700.000	44.77	5.70	50.47	105.20	-54.73	peak	Р	
3	5720.000	45.51	5.66	51.17	110.80	-59.63	peak	Р	
			UNII-3 20M_	5745MHz_V	ertical			Ţ.	ï
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)			
1	5650.000	43.57	5.63	49.20	68.20	-19.00	peak	Р	
2	5700.000	44.83	5.70	50.53	105.20	-54.67	peak	Р	
3	5720.000	45.43	5.66	51.09	110.80	-59.71	peak	Р	





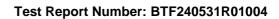
UNII-3 20M_5825MHz_Horizontal									
No.	Frequency	Reading	Factor	Level	Limit	Margin	Datastar	P/F	
INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
1	5855.000	46.24	5.73	51.97	110.80	-58.83	peak	Р	
2	5875.000	45.48	5.74	51.22	105.20	-53.98	peak	Р	
3	5925.000	44.93	5.66	50.59	68.20	-17.61	peak	Р	
			UNII-3 20M_5	825MHz_Ho	rizontal				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
1	5855.000	46.52	5.73	52.25	110.80	-58.55	peak	Р	
2	5875.000	46.37	5.74	52.11	105.20	-53.09	peak	Р	
3	5925.000	45.44	5.66	51.10	68.20	-17.10	peak	Р	





6.7 Undesirable emission limits (below 1GHz)

Test Requirement:	47 CFR Part 15.407(b)(9)				
Test Method:	ANSI C63.10-2020 , section 12.7.4, 12.7.5, 12.7.6 Unwanted emissions below 1 GHz must comply with the general field strength					
Test Limit:	limits set forth in § 15.20 Except as provided else		ssions from an intentional ified in the following table: Measurement distance			
rest Limit.	0.009-0.490 0.490-1.705 1.705-30.0 30-88 88-216 216-960 Above 960	2400/F(kHz) 24000/F(kHz) 30 100 ** 150 ** 200 **	(meters) 300 30 30 30 3 3 3 3			
Procedure:	above the ground at a 3 degrees to determine the b. The EUT was set 3 owhich was mounted on c. The antenna height is determine the maximum polarizations of the antend. For each suspected of the antenna was turned of below 30MHz, the and was turned from 0 degree. The test-receiver sys Bandwidth with Maximum f. If the emission level of specified, then testing coreported. Otherwise the re-tested one by one used ata sheet. In g. Test the EUT in the long. The testing mode, and in the rediation measure transmitting mode, and in the rediation measure the step of the ste	EUT was placed on the top of a meter semi-anechoic chamber to position of the highest radiator 10 meters away from the interpretate the top of a variable-height and a varied from one meter to four an value of the field strength. Both and are set to make the measurements are set to make the measurements are set to make the measurements are to 4 meters and 1 meter to 4 meters and 1 meters are peaked by the field strength and 1 meters are peaked and the peaker of the EUT in peak mode was 1 meters are performed in 2 meters are performed in 3 meters are performed in 4 meters are performed in 5 meters are performed in 6 meters are performed in 7 meters are performed in 8 meters are performed in 8 meters are performed in 9 meters are performed in 1 meters are until all frequencies measures until all frequencies measures until all frequencies measures are the highest emission of the story which are attenuated more wears and 1 meters and 1 meters are performed in 2 meters are performed in 3 meters are performed in 3 meters are performed in 3 meters are performed in 4 meters are performed in 5 meters are performed in 6 meters ar	er. The table was rotated 360 ion. rference-receiving antenna, tenna tower. meters above the ground to the horizontal and vertical urement. ed to its worst case and then eters (for the test frequency neter) and the rotatable table maximum reading. Inction and Specified OdB lower than the limit values of the EUT would be odB margin would be cified and then reported in a nel, the Highest channel. Z axis positioning for thich it is the worst case. Preamp Factor OMHz was very low. The nest could be found when amplitude of spurious ethan 20dB below the limit tharmonics were the highest			

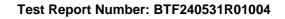




- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. 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 or average method as specified and then reported in a data sheet.
- g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- i. Repeat above procedures until all frequencies measured was complete. Remark:
- 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
- 3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
- 4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

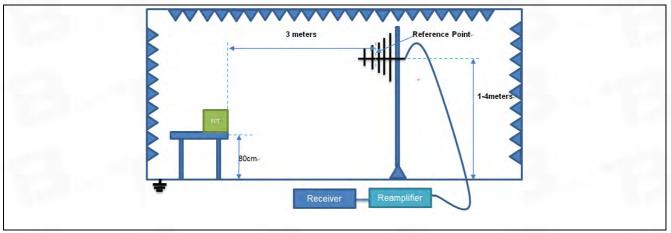
6.7.1 E.U.T. Operation:

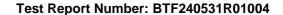
Operating Environment:	
Temperature:	25.5 °C
Humidity:	50.6 %
Atmospheric Pressure:	1010 mbar





6.7.2 Test Setup Diagram:

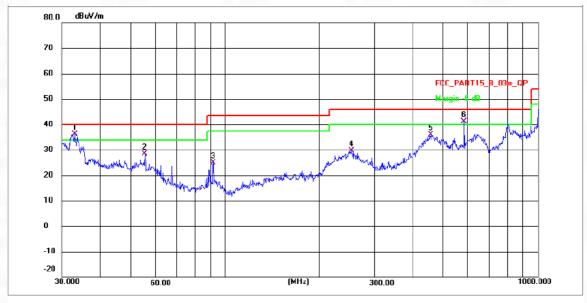






6.7.3 Test Data:

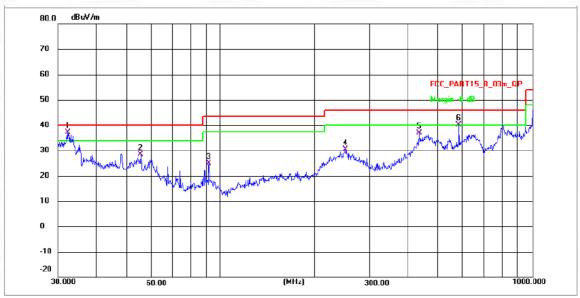
Note: All the mode have been tested, and only the worst mode are in the report TM1 / Polarization: Horizontal / Band: U-NII 1 / BW: 20 / CH: L



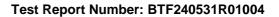
	No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
Г	1 *	32.9791	35.47	0.60	36.07	40.00	-3.93	QP	Р
	2	55.5119	29.68	-1.40	28.28	40.00	-11.72	QP	Р
	3	91.6554	29.70	-4.79	24.91	43.50	-18.59	QP	Р
	4	253.3920	29.08	0.53	29.61	46.00	-16.39	QP	Р
	5	455.1072	32.03	3.97	36.00	46.00	-10.00	QP	Р
	6 !	580.7026	42.25	-1.21	41.04	46.00	-4.96	QP	Р







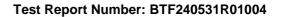
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	32.2925	38.92	-1.71	37.21	40.00	-2.79	QP	Р
2	55.5119	31.68	-3.40	28.28	40.00	-11.72	QP	Р
3	91.6554	29.70	-4.79	24.91	43.50	-18.59	QP	Р
4	252.0627	27.35	2.96	30.31	46.00	-15.69	QP	Р
5	435.5898	34.15	2.70	36.85	46.00	-9.15	QP	Р
6!	580.7026	40.82	-0.78	40.04	46.00	-5.96	QP	Р





6.8 Undesirable emission limits (above 1GHz)

6.8 Undesirable er	nission limits (abov	e 1GHz)						
	47 CFR Part 15.407(b))(1)						
Test Requirement:	47 CFR Part 15.407(b)							
rest Requirement.	47 CFR Part 15.407(b))(4)						
	47 CFR Part 15.407(b)	(10)						
Test Method:	ANSI C63.10-2020 , section 12.7.4, 12.7.5, 12.7.6							
	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the							
	5.15-5.35 GHz band sh	nall not exceed an e.i.r.	p. of −27 dBm/N	1Hz.				
	For transmitters operat							
	5.15-5.35 GHz band sh	nall not exceed an e.i.r.	p. of −27 dBm/N	1Hz.				
	For transmitters operat							
	All emissions shall be I							
	or below the band edge							
	below the band edge, a							
	linearly to a level of 15.							
	from 5 MHz above or b dBm/MHz at the band		creasing inleany	to a level of 27				
	MHz	MHz	MHz	GHz				
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15				
	10.495-0.505	16.69475-16.69525	608-614	5.35-5.46				
	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75				
	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5				
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2				
	4.20725-4.20775	73-74.6	1645.5-1646.	9.3-9.5				
	4.20120 4.20110	70 74.0	5	0.0 0.0				
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7				
	6.26775-6.26825	108-121.94	1718.8-1722.	13.25-13.4				
			2					
Took Limit.	6.31175-6.31225	123-138	2200-2300	14.47-14.5				
Test Limit:	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2				
	8.362-8.366	156.52475-156.525	2483.5-2500	17.7-21.4				
	0.27625.0.20675	25	2600 2000	22 04 22 42				
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12				
	8.41425-8.41475 12.29-12.293	162.0125-167.17 167.72-173.2	3260-3267	23.6-24.0 31.2-31.8				
	12.51975-12.52025	240-285	3332-3339 3345.8-3358	36.43-36.5				
	12.57675-12.57725	322-335.4	3600-4400	(²)				
	13.36-13.41	322-333.4	3000-4400	()				
	10.00-10.41							
	¹ Until February 1, 1999	9. this restricted band sl	hall be 0.490-0.5	510 MHz.				
	² Above 38.6							
	The field strength of en	missions appearing with	nin these frequer	ncy bands shall not				
	exceed the limits show	n in § 15.209. At freque	encies equal to c	or less than 1000				
	MHz, compliance with							
	measurement instrume							
	1000 MHz, compliance							
	based on the average		emissions. The _l	provisions in §				
	15.35apply to these me	easurements.						
	Event sa preside de la	outboro in this subsection	the emissions	rom on intentional				
	Except as provided els							
	radiator shall not excee							
	Frequency (MHz)	Field strength		Measurement				





		(microvolts/meter)	distance
			(meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
		300	3
	Above 1GHz:	h - FIIT	a matation whale to d. C. martana
		he EUT was placed on the top of	
		a 3 meter fully-anechoic chamber	
		the position of the highest radiat	
		B meters away from the interferen	
		top of a variable-height antenna t	
		t is varied from one meter to four	
		um value of the field strength. Bo	
	polarizations of the a	ntenna are set to make the meas	urement.
	d. For each suspecte	d emission, the EUT was arrange	ed to its worst case and then
	the antenna was tune	ed to heights from 1 meter to 4 me	eters (for the test frequency
	of below 30MHz, the	antenna was tuned to heights 1 n	neter) and the rotatable table
	was turned from 0 de	grees to 360 degrees to find the	maximum reading.
	e. The test-receiver s	ystem was set to Peak Detect Fu	inction and Specified
	Bandwidth with Maxir		
		I of the EUT in peak mode was 1	0dB lower than the limit
		g could be stopped and the peak	
		he emissions that did not have 10	
		using peak or average method as	
Procedure:	in a data sheet.	acing pount or average meaner at	
		e lowest channel, the middle char	nnel the Highest channel
		surements are performed in X, Y,	
		nd found the X axis positioning w	
		edures until all frequencies meas	
	Remark:	edures ariai aii irequerioles iricas	area was complete.
		+ Cable Loss+ Antenna Factor- F	Preamn Factor
		to 40GHz, the disturbance above	
		ove plots are the highest emission	
		e points had been displayed. The	
		adiator which are attenuated more	
			than 2000 below the littlit
	need not be reported		Jz the field etremeth limite
		ection, for frequencies above 1Gb	
		e limits. However, the peak field s	
		num permitted average limits spe	
	dB under any condition	on of modulation. For the emissio	ns whose peak level is lower

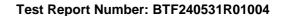
6.8.1 E.U.T. Operation:

Operating Environment	:	
Temperature:	25.5 °C	
Humidity:	50.6 %	
Atmospheric Pressure:	1010 mbar	

than the average limit, only the peak measurement is shown in the report.

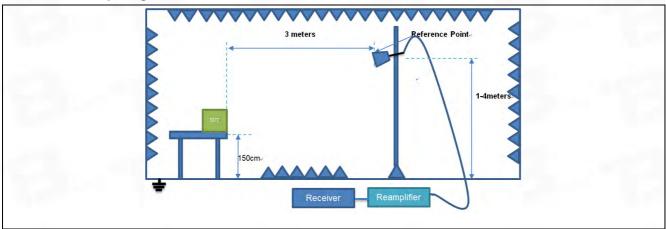
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been

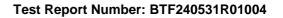
displayed.





6.8.2 Test Setup Diagram:



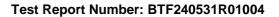




6.8.3 Test Data:

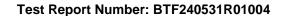
Not:All of the mode had be tested, only the worse mode of 802.11a are show in the report:

				UNII-1_20	OM_5180MHz_I	Horizontal				
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
	INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	1 /1	
	1	10360.000	85.18	-45.12	40.06	74.00	-33.94	peak	Р	
	2	15540.000	85.92	-42.88	43.04	74.00	-30.96	peak	Р	
			U	NII-1_20	M_5180MHz	_Vertical				
	NI-	Frequency	Reading	Factor	Level	Limit	Margin	Datastas	D/E	
	No.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
	1	10360.000	85.94	-45.18	40.76	74.00	-33.24	peak	Р	
	2	15540.000	86.68	-42.94	43.74	74.00	-30.26	peak	Р	
			l	JNII-1_20I	M_5200MHz_H	orizontal				
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
	INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	F/F	
	1	10400.000	88.64	-45.18	43.46	74.00	-30.54	peak	Р	
	2	15600.000	89.38	-42.94	46.44	74.00	-27.56	peak	Р	
	UNII-1_20M_5200MHz_Vertical					·				
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
	140.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	1 //	
	1	10400.000	89.09	-45.18	43.91	74.00	-30.09	peak	Р	
	2	15600.000	89.83	-42.94	46.89	74.00	-27.11	peak	Р	
-			l	JNII-1_20I	M_5240MHz_H	orizontal				
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
	110.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Dotocioi		
	1	10460.000	89.62	-45.07	44.55	74.00	-29.45	peak	Р	
	2	15690.000	90.36	-42.83	47.53	74.00	-26.47	peak	Р	
				UNII-1_2						
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)			
	1	10460.000	90.01	-45.07	44.94	74.00	-29.06	peak	Р	
	2	15690.000	90.75	-42.83	47.92	74.00	-26.08	peak	Р	
T	ı			UNII-3_20		1				
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)			
	1	11490.000	87.62	-44.70	42.92	74.00	-31.08	peak	Р	
	2	17235.000	85.12	-40.61	44.51	74.00	-29.49	peak	Р	



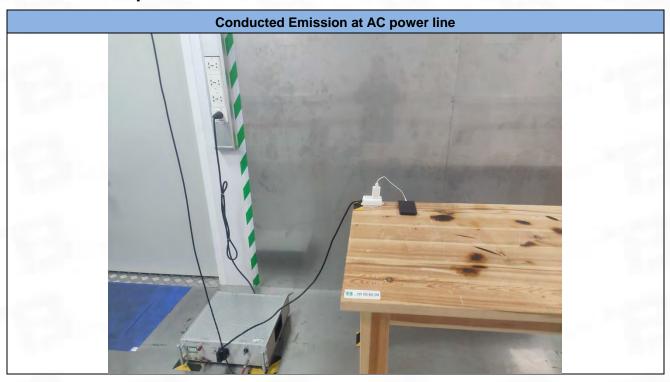


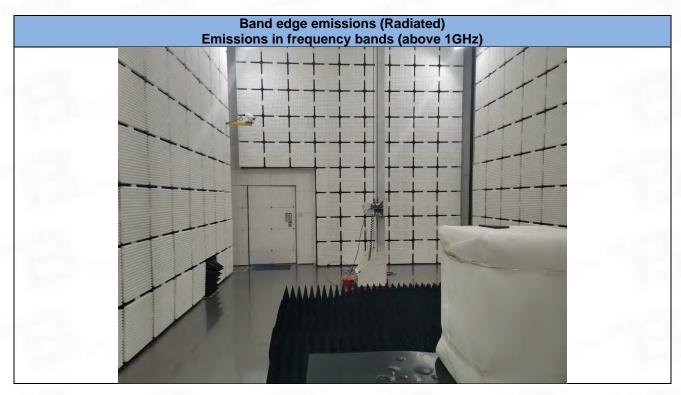
			UNII-3_2	20M_5745MHz	_Vertical				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
1	11490.000	88.18	-44.70	43.48	74.00	-30.52	peak	Р	
2	17235.000	85.68	-40.61	45.07	74.00	-28.93	peak	Р	
		l	JNII-3_20I	M_5785MHz_H	orizontal				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F	
1	11570.000	88.58	-44.64	43.94	74.00	-30.06	peak	Р	
2	17355.000	86.08	-40.55	45.53	74.00	-28.47	peak	Р	
			UNII-3_2	0M_5785MHz_	Vertical		•		
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	F/F	
1	11570.000	89.04	-44.64	44.40	74.00	-29.60	peak	Р	
2	17355.000	86.54	-40.55	45.99	74.00	-28.01	peak	Р	
		·	JNII-3_20I	M_5825MHz_H	orizontal				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
INO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	F/F	
1	11650.000	89.17	-44.59	44.58	74.00	-29.42	peak	Р	
2	17475.000	86.67	-40.50	46.17	74.00	-27.83	peak	Р	
			UNII-3_2	0M_5825MHz_	Vertical				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F	
NO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	F/F	
1	11650.000	89.52	-44.59	44.93	74.00	-29.07	peak	Р	
2	17475.000	87.02	-40.50	46.52	74.00	-27.48	peak	Р	

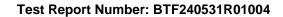




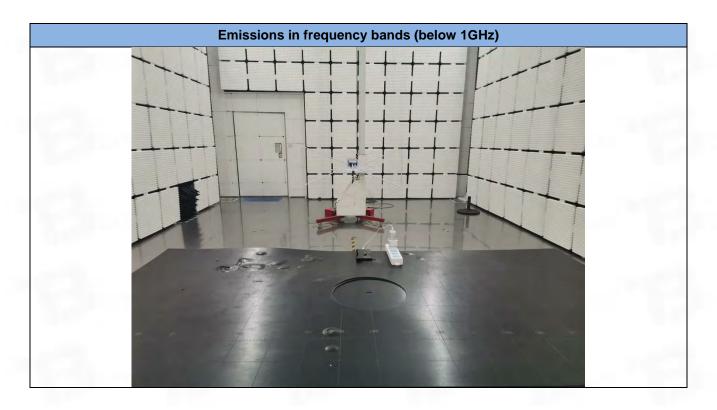
Test Setup Photos 7

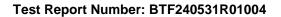








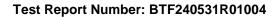






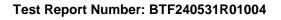
EUT Constructional Details (EUT Photos)

Please refer to the test report No. BTF240202R00702





Appendix





1. Duty Cycle

1.1 Test Result

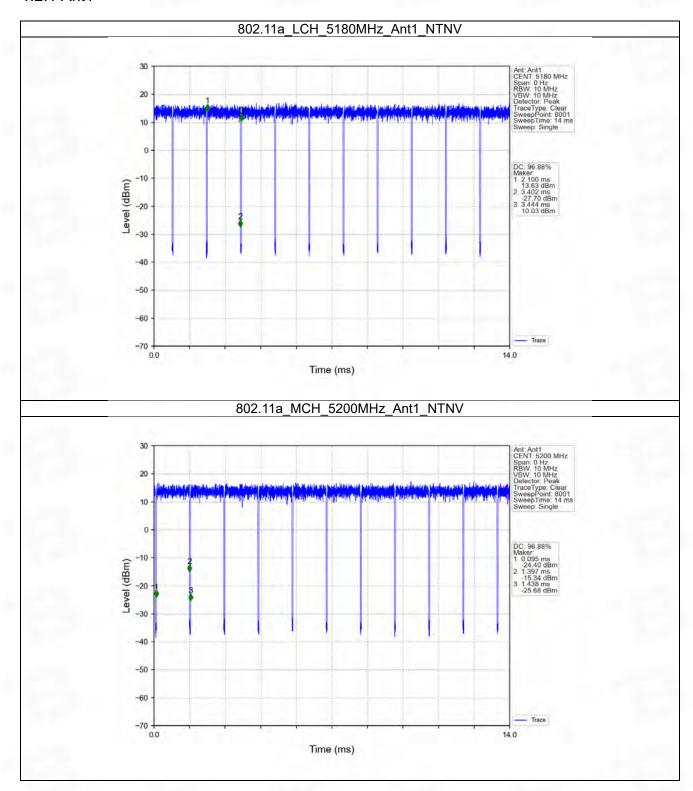
1.1.1 Ant1

				A	nt1		
Mode	TX	Frequency	T_on	Period	Duty Cycle	Duty Cycle	Max. DC
Mode	Type	(MHz)	(ms)	(ms)	(%)	Correction Factor (dB)	Variation (%)
		5180	1.302	1.344	96.88	0.14	0.13
802.11a		5200	1.302	1.344	96.88	0.14	0.00
	SISO	5240	1.302	1.346	96.73	0.14	0.13
	3130	5745	1.300	1.344	96.73	0.14	0.13
		5785	1.302	1.346	96.73	0.14	0.13
		5825	1.300	1.344	96.73	0.14	0.13
		5180	1.290	1.332	96.85	0.14	0.00
		5200	1.290	1.334	96.70	0.15	0.13
802.11n		5240	1.290	1.333	96.77	0.14	0.13
(HT20)		5745	1.289	1.332	96.77	0.14	0.13
		5785	1.289	1.333	96.70	0.15	0.13
		5825	1.290	1.334	96.70	0.15	0.13
802.11n		5190	0.638	0.680	93.82	0.28	0.13
	SISO	5230	0.637	0.679	93.81	0.28	0.13
(HT40)	3130	5755	0.638	0.681	93.69	0.28	0.25
		5795	0.640	0.680	94.12	0.26	0.01
		5180	1.314	1.356	96.90	0.14	0.13
	SISO	5200	1.314	1.356	96.90	0.14	0.00
802.11ac		5240	1.314	1.358	96.76	0.14	0.13
(VHT20)	3130	5745	1.313	1.356	96.83	0.14	0.13
		5785	1.313	1.357	96.76	0.14	0.13
		5825	1.312	1.356	96.76	0.14	0.13
		5190	0.654	0.696	93.97	0.27	0.13
802.11ac	SISO	5230	0.654	0.696	93.97	0.27	0.13
(VHT40)	3130	5755	0.654	0.697	93.83	0.28	0.13
		5795	0.653	0.696	93.82	0.28	0.13
802.11ac	SISO	5210	0.326	0.368	88.59	0.53	0.14
(VHT80)	3130	5775	0.325	0.368	88.32	0.54	0.27

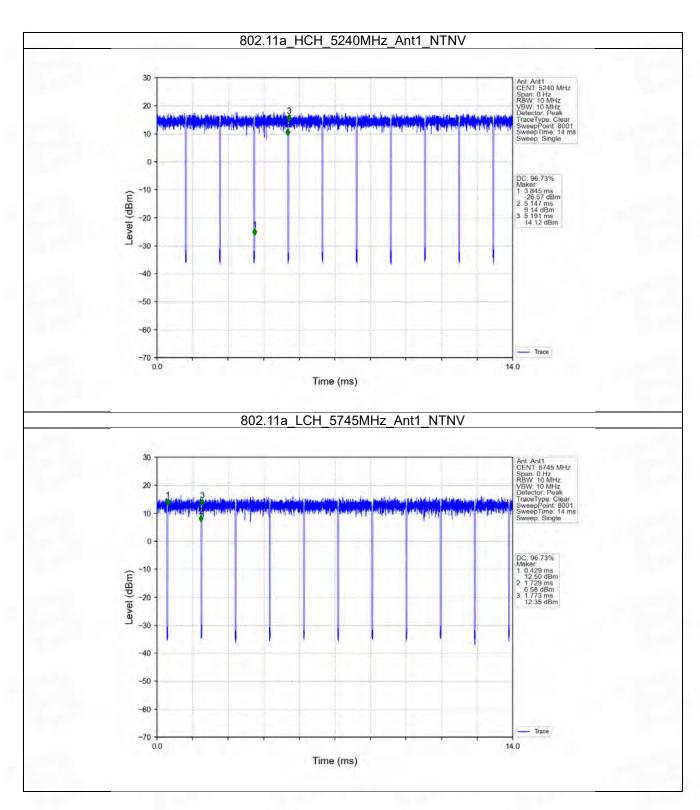


1.2 Test Graph

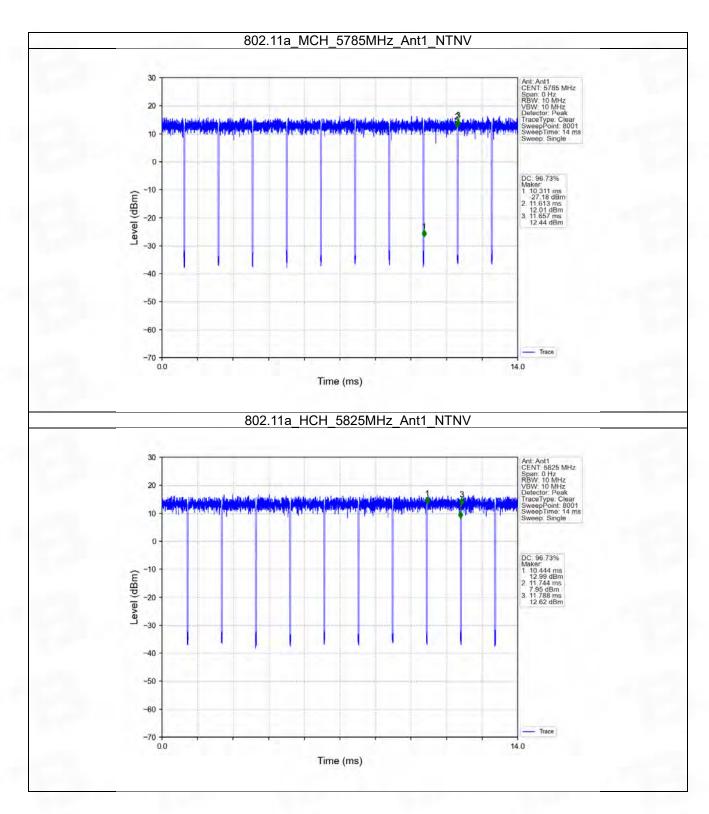
1.2.1 Ant1



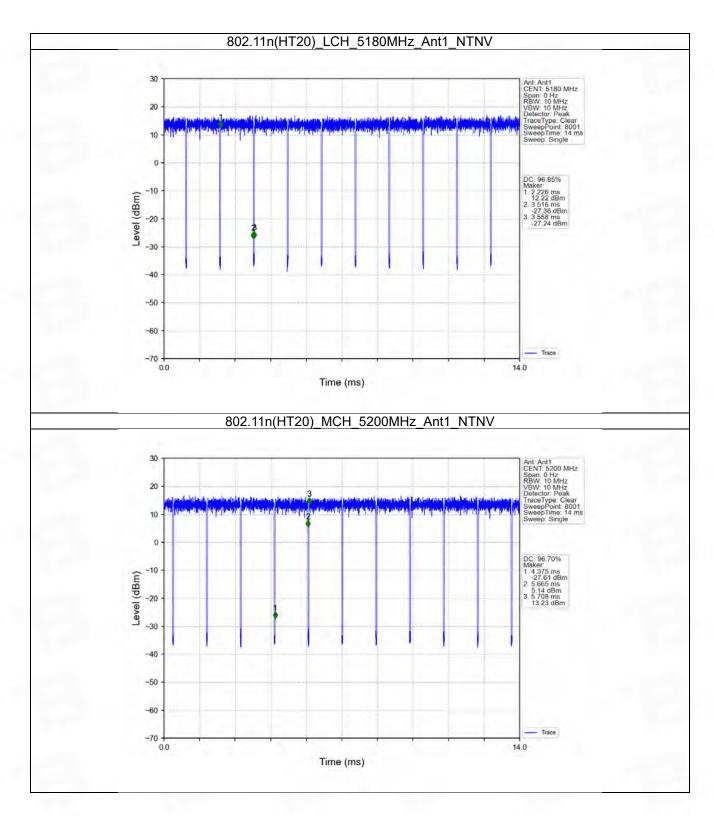




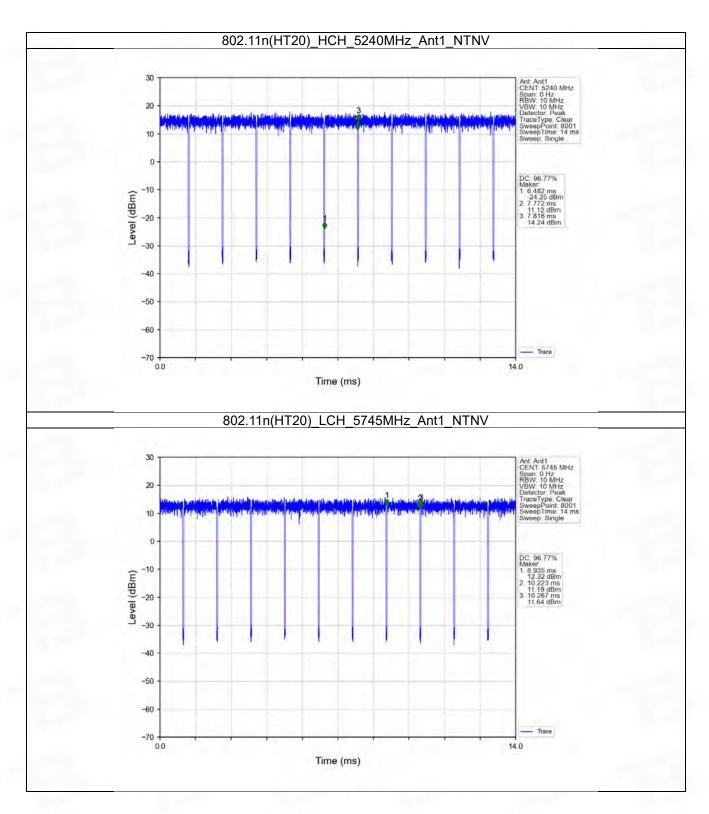




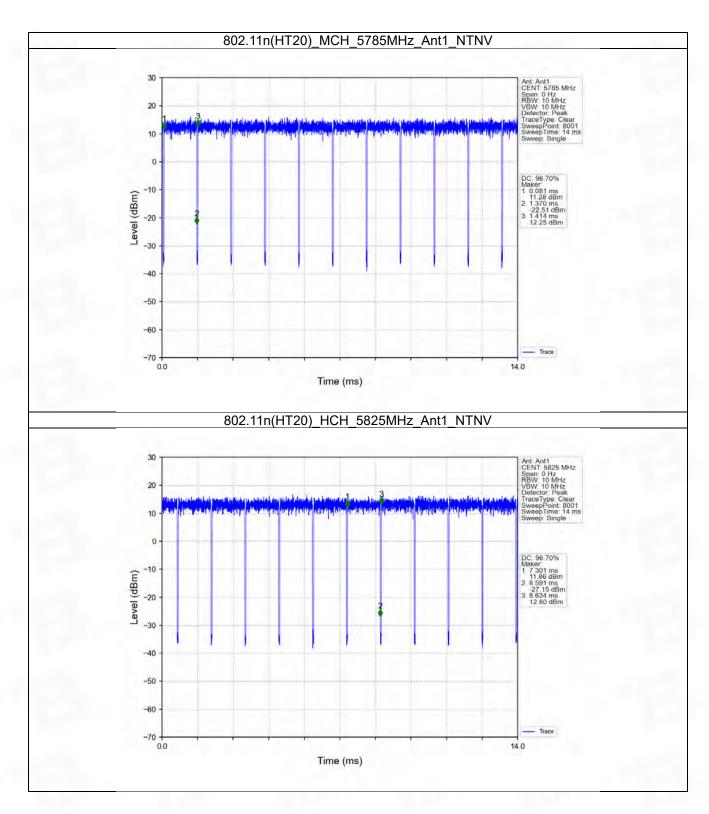




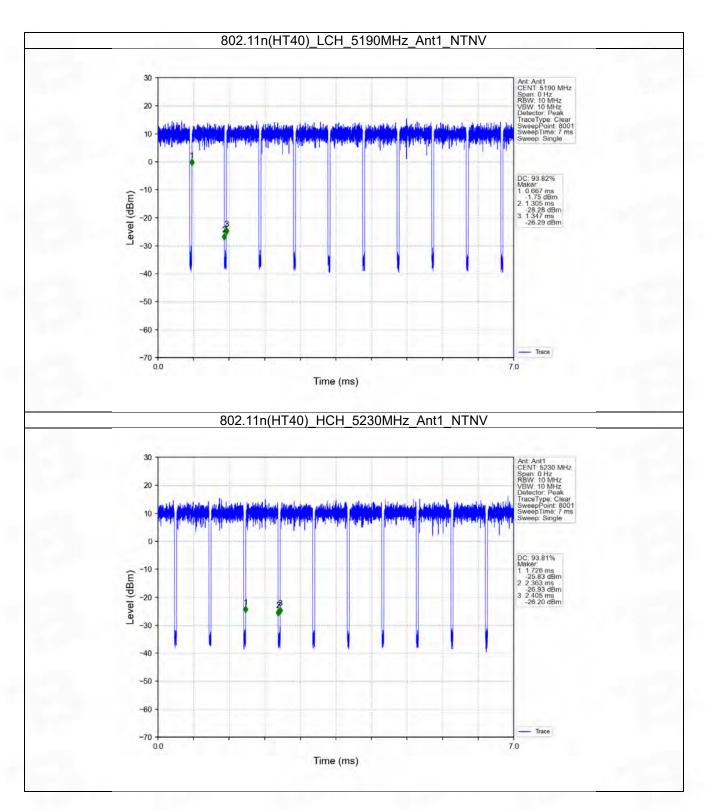




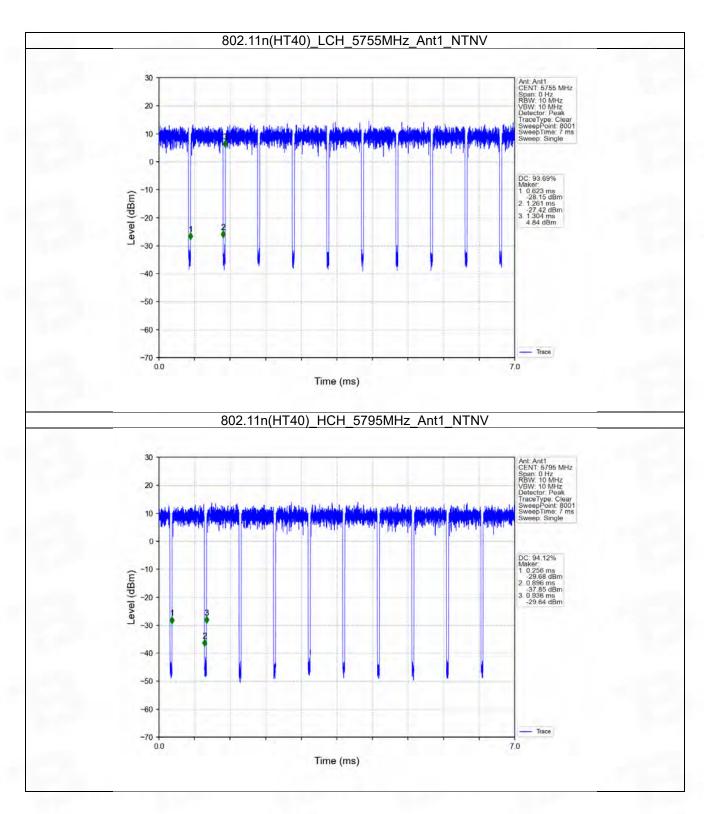




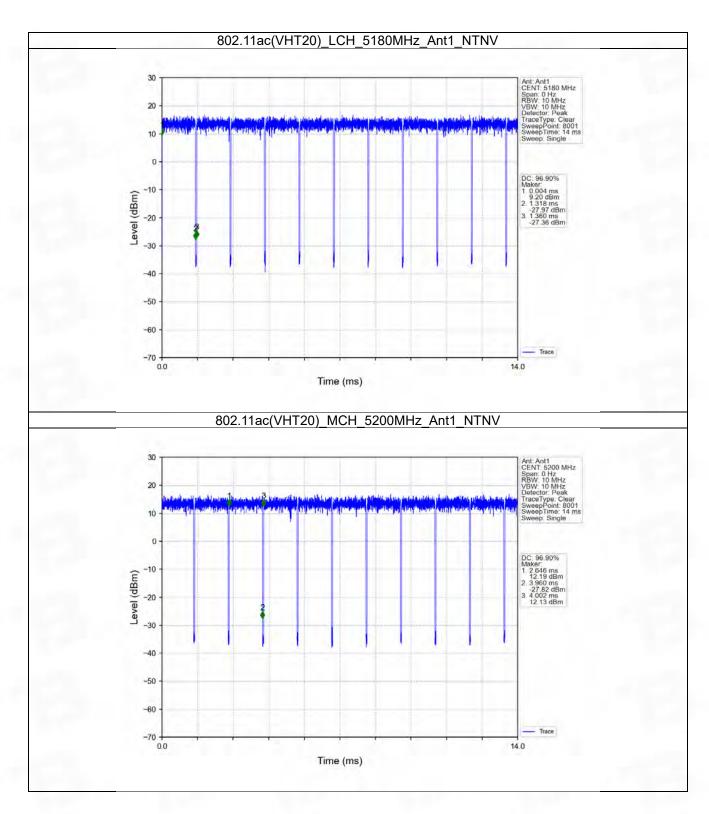




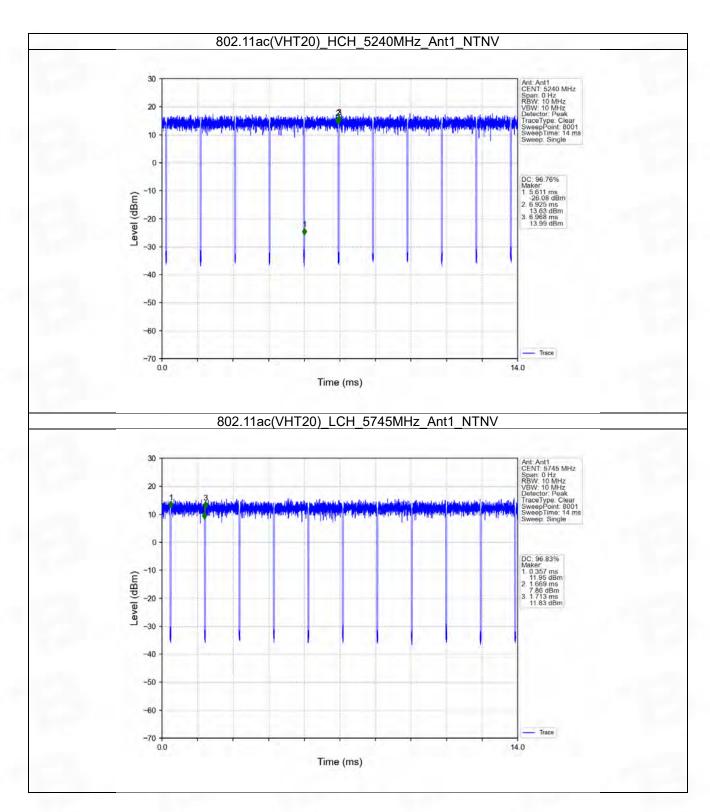




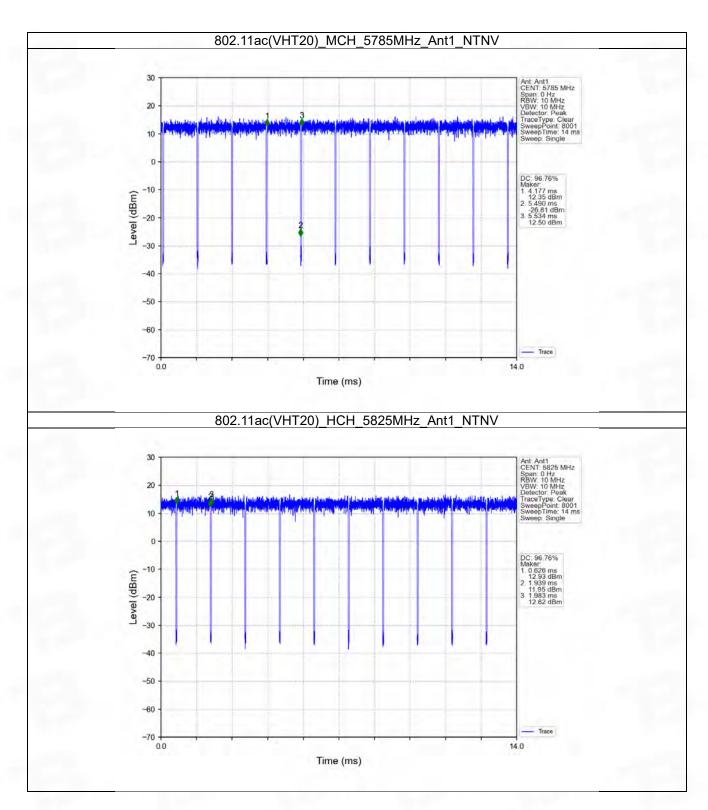




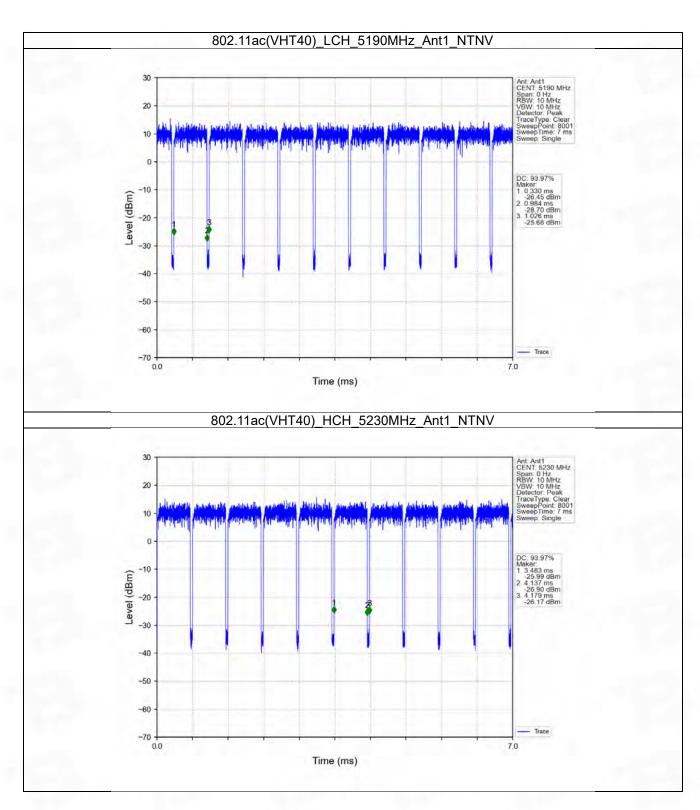




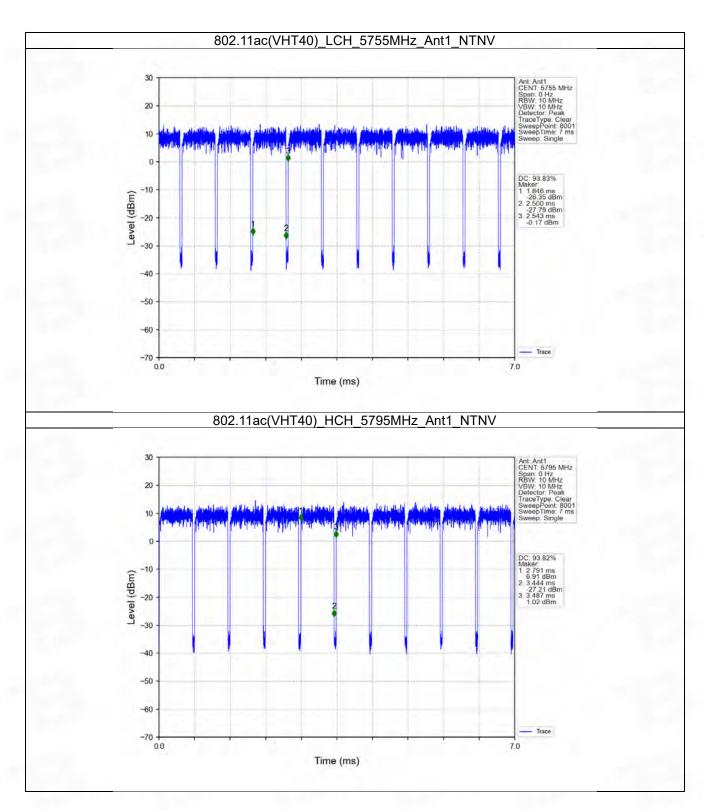




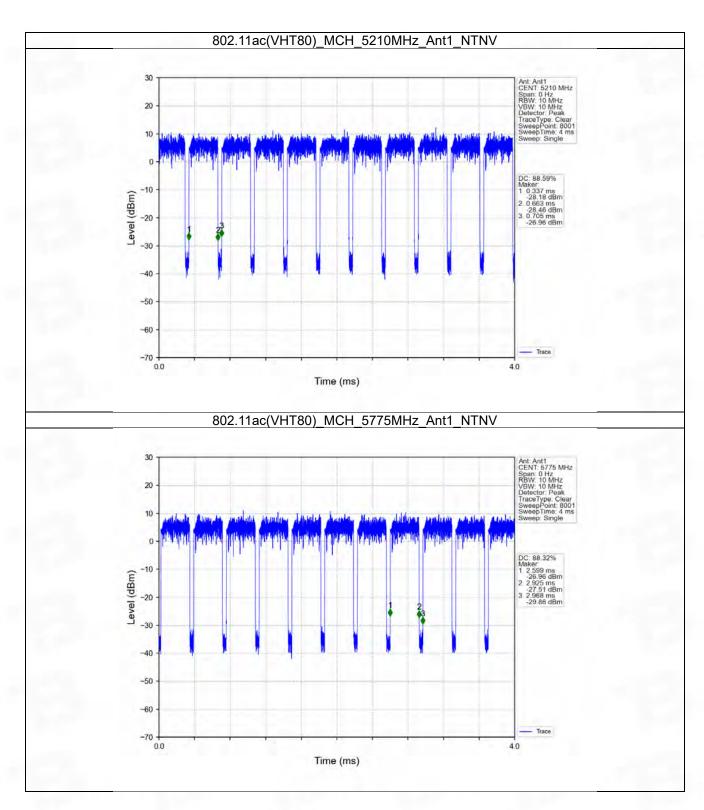


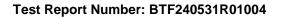














2. Bandwidth

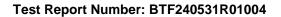
2.1 Test Result

2.1.1 OBW

Mode	TX	Frequency		99% Occupied B	Vordict	
wode	Type	(MHz)	AINT	Result	Limit	Verdict
		5180	1	20.355	1	Pass
		5200	1	20.522	1	Pass
000 11 -	SISO	5240	1	20.493	1	Pass
802.11a	5150	5745	1	19.984	1	Pass
		5785	1	19.862	1	Pass
		5825	1	20.048	1	Pass
		5180	1	20.558	1	Pass
		5200	1	20.333	1	Pass
802.11n	SISO	5240	1	20.274	1	Pass
(HT20)	5150	5745	1	19.825	1	Pass Pass
		5785	1	19.705	1	Pass
		5825	1	19.749	1	Pass
	SISO	5190	1	37.661	1	Pass
802.11n		5230	1	37.485	1	Pass
(HT40)		5755	1	37.461	1	Pass
		5795	1	37.298	1	Pass
	SISO	5180	1	19.685	1	Pass
		5200	1	19.923	1	Pass
802.11ac		5240	1	20.215	1	Pass
(VHT20)		5745	1	19.456	1	Pass
		5785	1	19.409	1	Pass
		5825	1	19.584	1	Pass
		5190	1	37.450	1	Pass
802.11ac	CICO	5230	1	37.275	1	Pass
(VHT40)	SISO	5755	1	37.452	1	Pass
,		5795	1	37.270	1	Pass
802.11ac	CICO	5210	1	77.982	1	Pass
(VHT80)	SISO	5775	1	77.443	1	Pass

2.1.2 6dB BW

	TX	Fraguenay		6dB Bandw	idth (MHz)	
Mode	Type	Frequency (MHz)	ANT	Result	Limit	Verdict
	,	5745	1	15.192	>=0.5	Pass
802.11a	SISO	5785	1	15.163	>=0.5	Pass
		5825	1	15.188	>=0.5	Pass
000 11-	SIGO	5745	1	15.156	>=0.5	Pass
802.11n		5785	1	15.187	>=0.5	Pass
(HT20)		5825	1	15.177	>=0.5	Pass
802.11n SISO	5755	1	35.162	>=0.5	Pass	
(HT40)	3130	5795	1	35.150	>=0.5	Pass





902 1100		5745	1	15.181	>=0.5	Pass
802.11ac (VHT20)	SISO	5785	1	15.170	>=0.5	Pass
(11120)		5825	1	15.159	>=0.5	Pass
802.11ac	SISO	5755	1	35.176	>=0.5	Pass
(VHT40)	3130	5795	1	35.167	>=0.5	Pass
802.11ac (VHT80)	SISO	5775	1	75.126	>=0.5	Pass

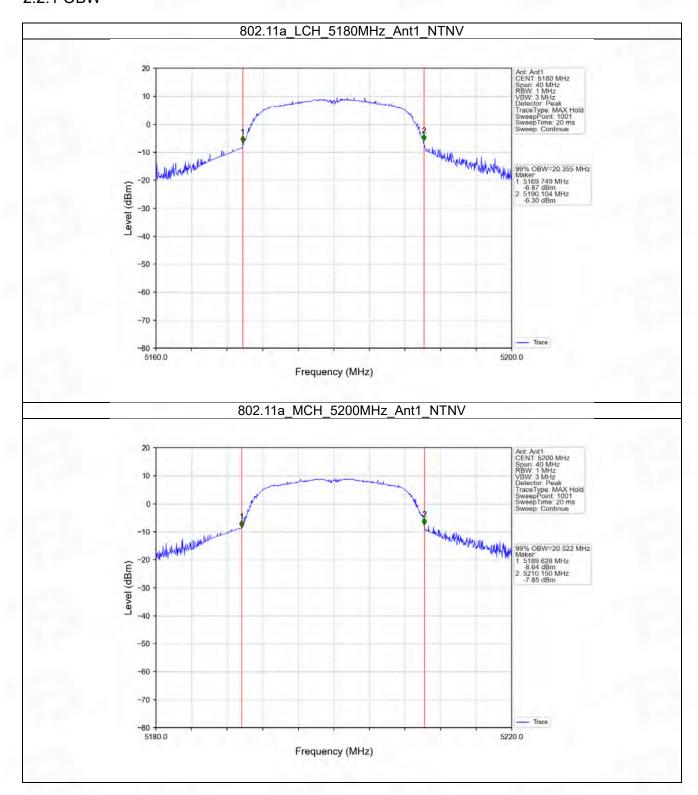
2.1.3 26dB BW

Mada	TX	Frequency	ANIT	26dB Bandv	Verdict	
Mode	Туре	(MHz)	ANT	Result	Result Limit	
		5180	1	30.146	1	Pass
802.11a	SISO	5200	1	32.038	1	Pass
		5240	1	29.972	/	Pass
902 11p		5180	1	33.122	1	Pass
802.11n (HT20)	SISO	5200	1	36.511	1	Pass
(П120)		5240	1	31.276	/	Pass
802.11n	SISO	5190	1	75.839	1	Pass
(HT40)		5230	1	73.603	/	Pass
902 1100	SISO	5180	1	35.142	1	Pass
802.11ac		5200	1	31.636	/	Pass
(VHT20)		5240	1	31.790	1	Pass
802.11ac	11ac alac	5190	1	73.616	1	Pass
(VHT40)	SISO	5230	1	72.808	/	Pass
802.11ac (VHT80)	SISO	5210	1	140.457	1	Pass

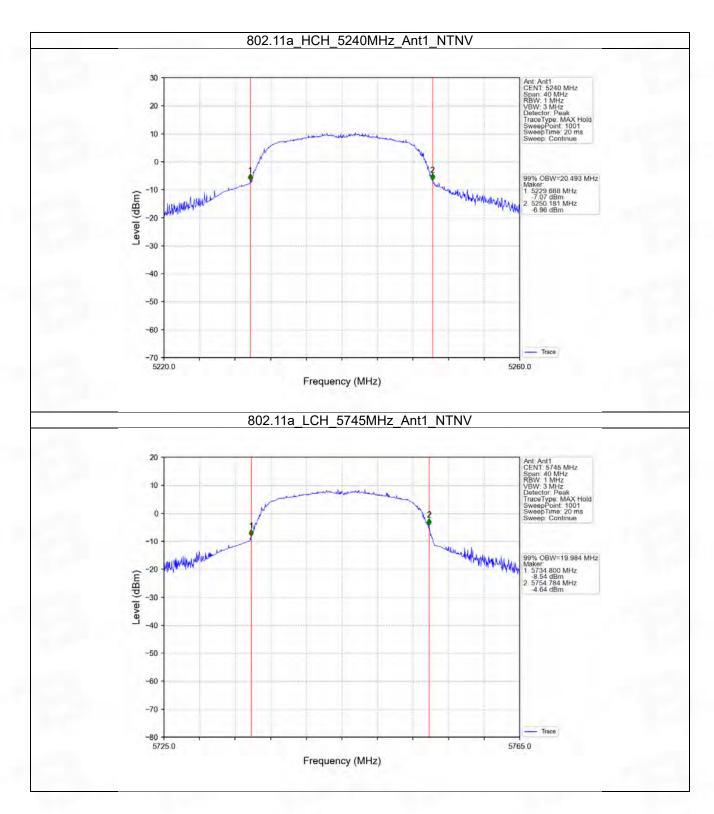


2.2 Test Graph

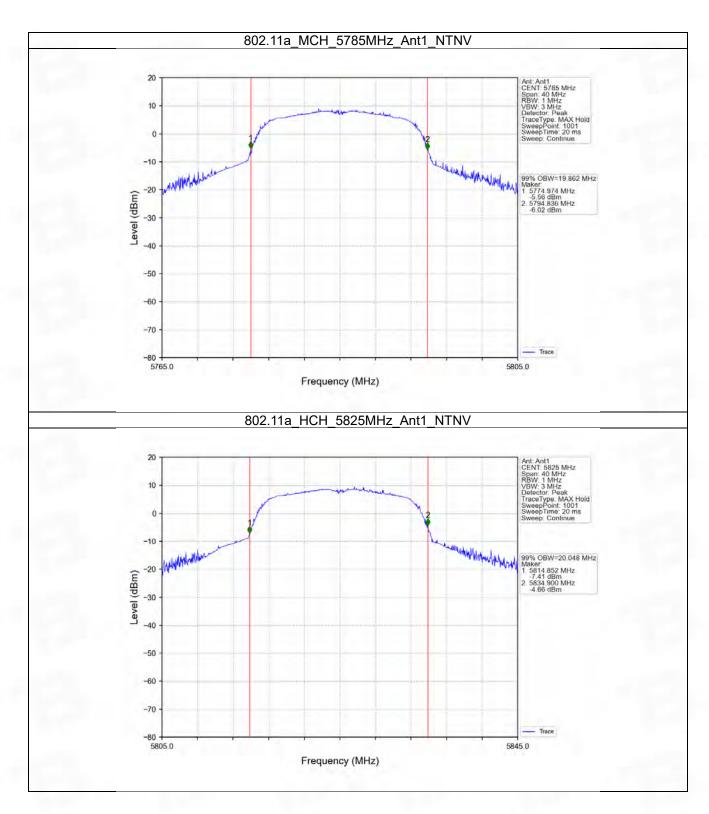
2.2.1 OBW



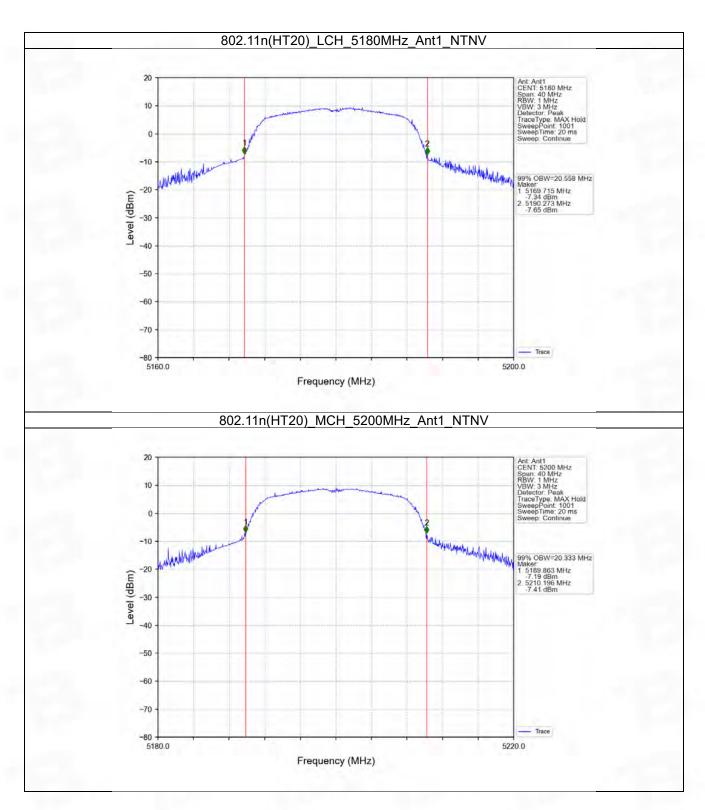




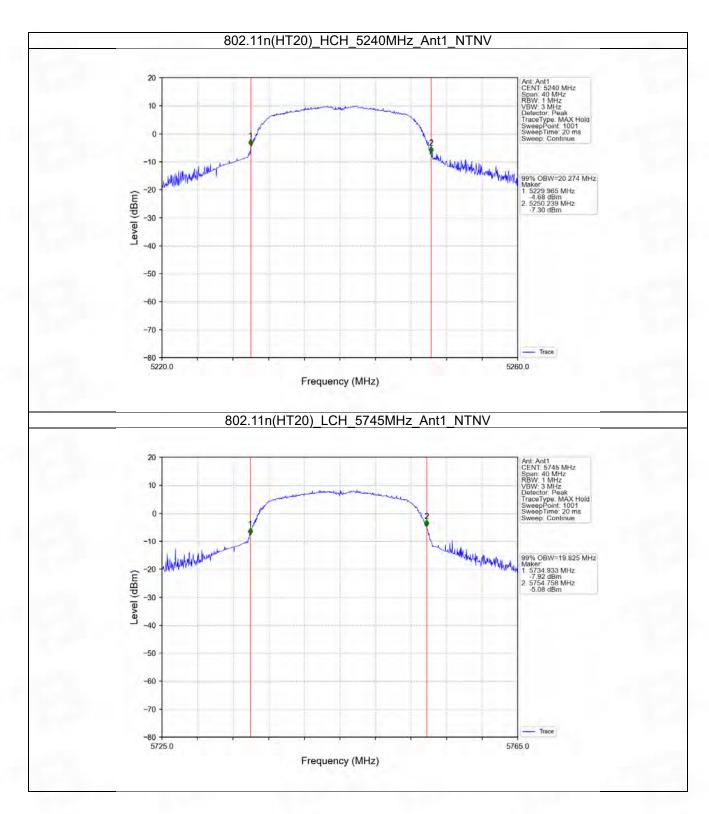




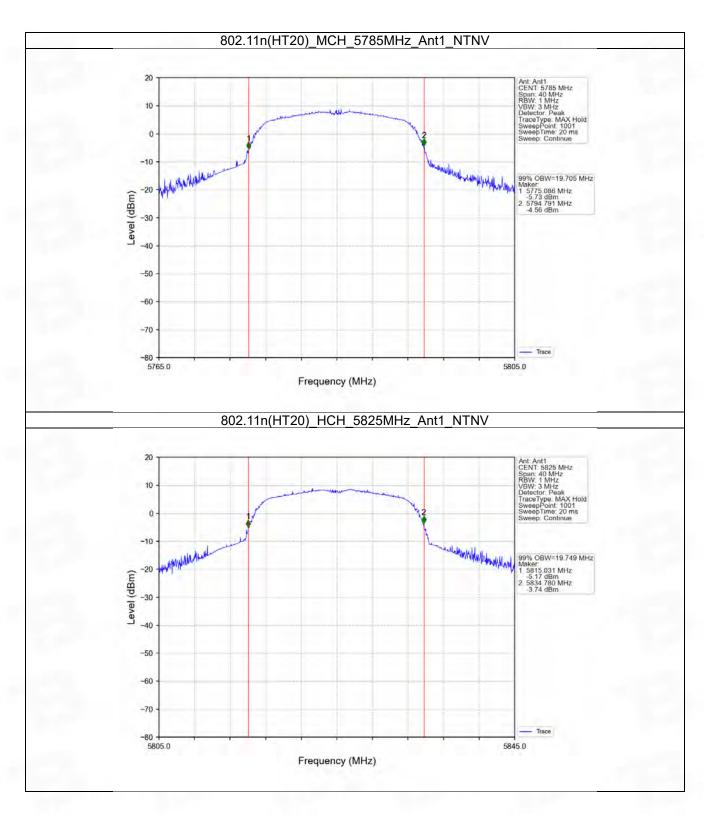




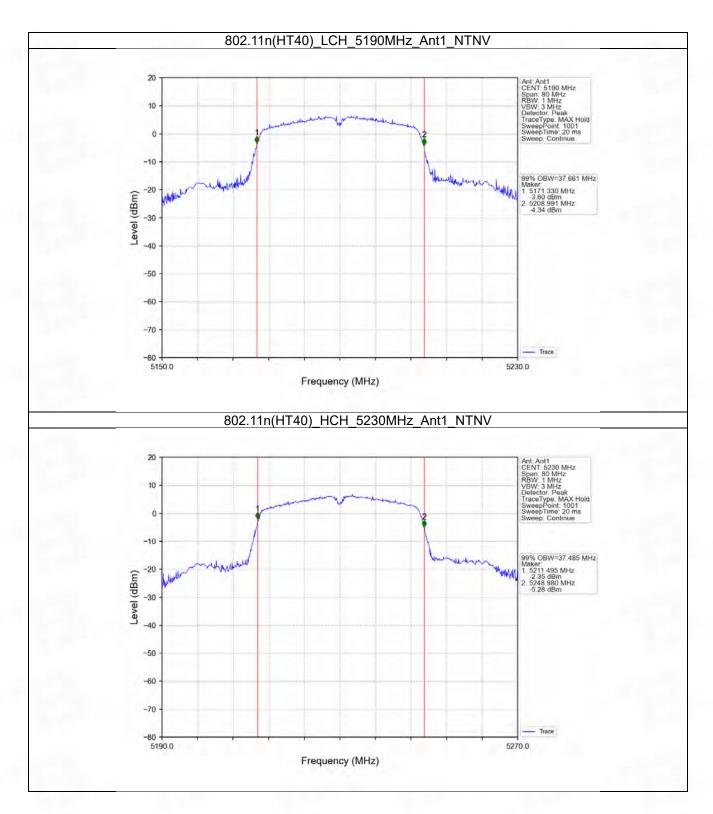




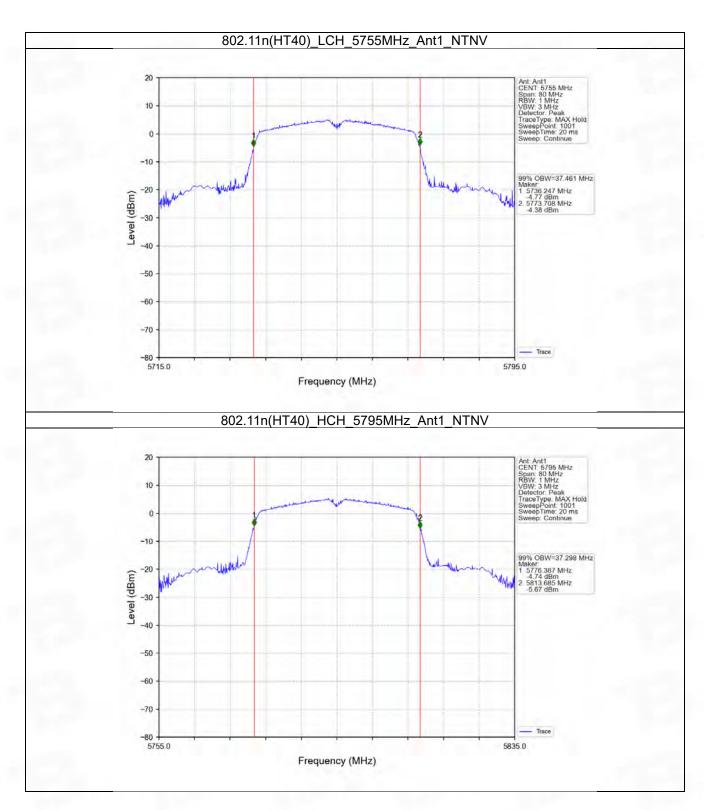




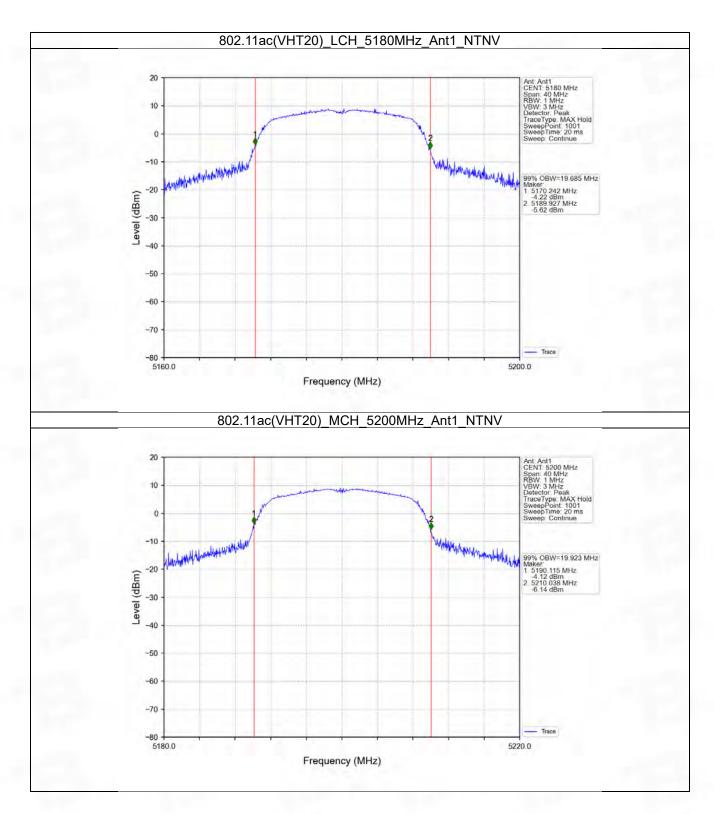




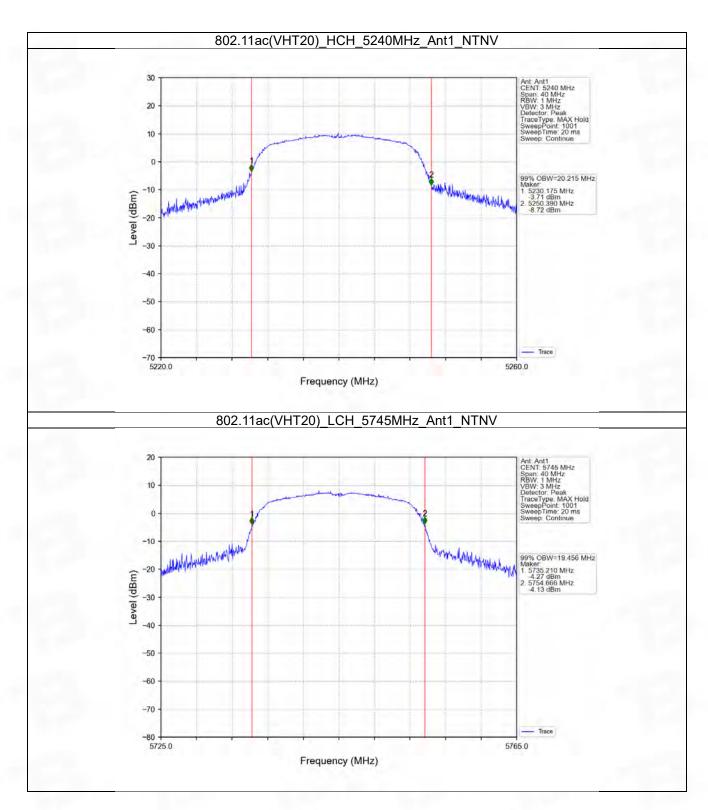




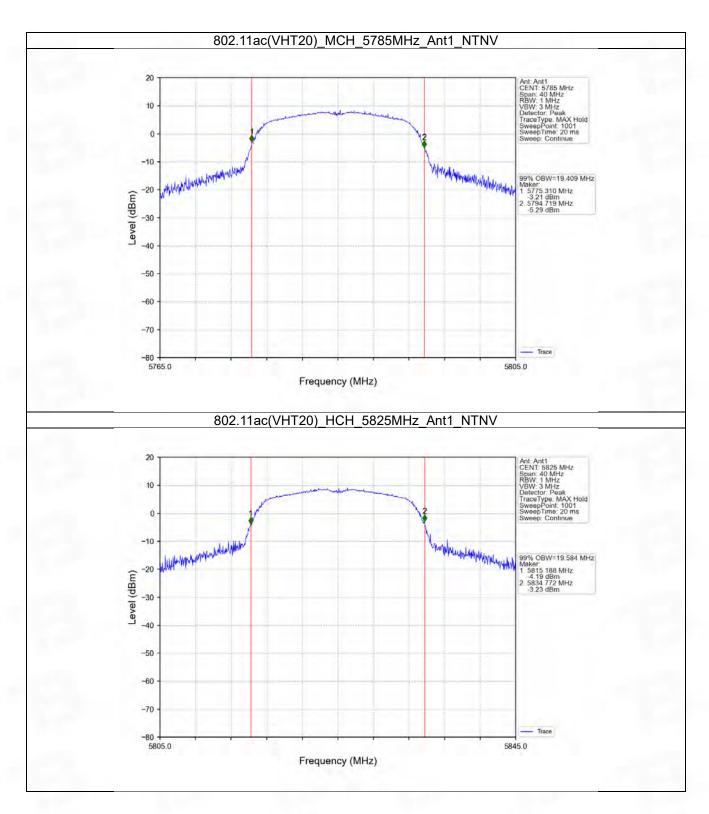




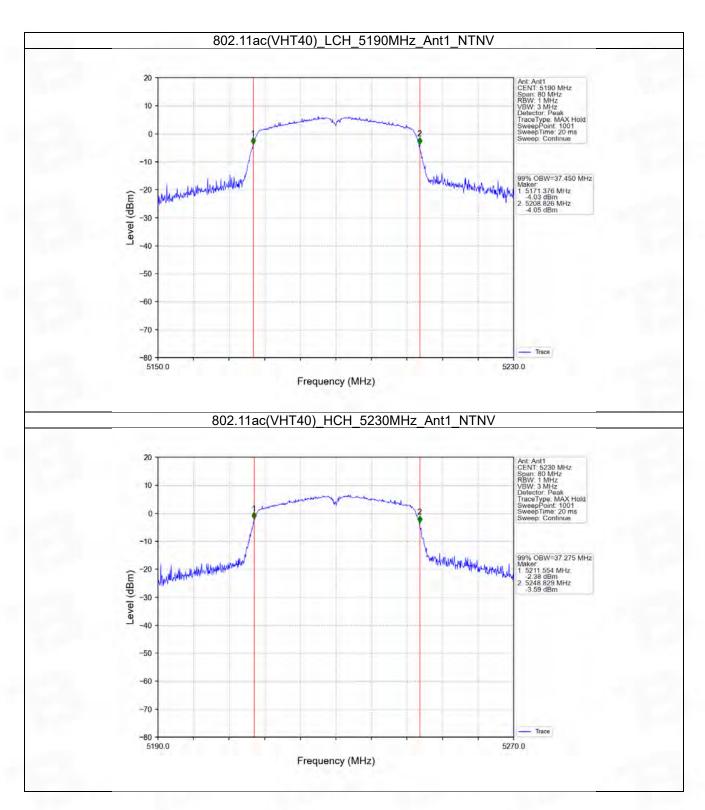




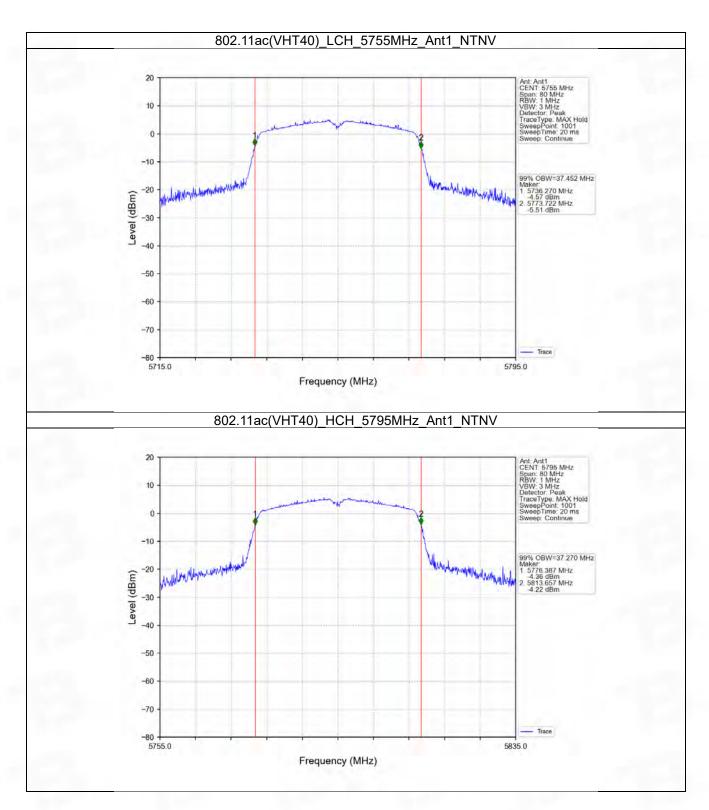




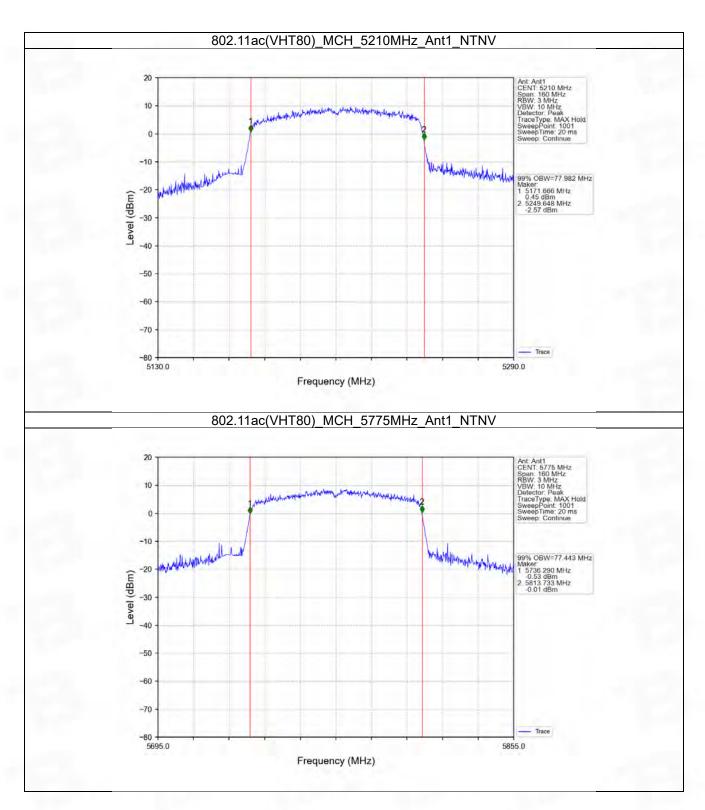






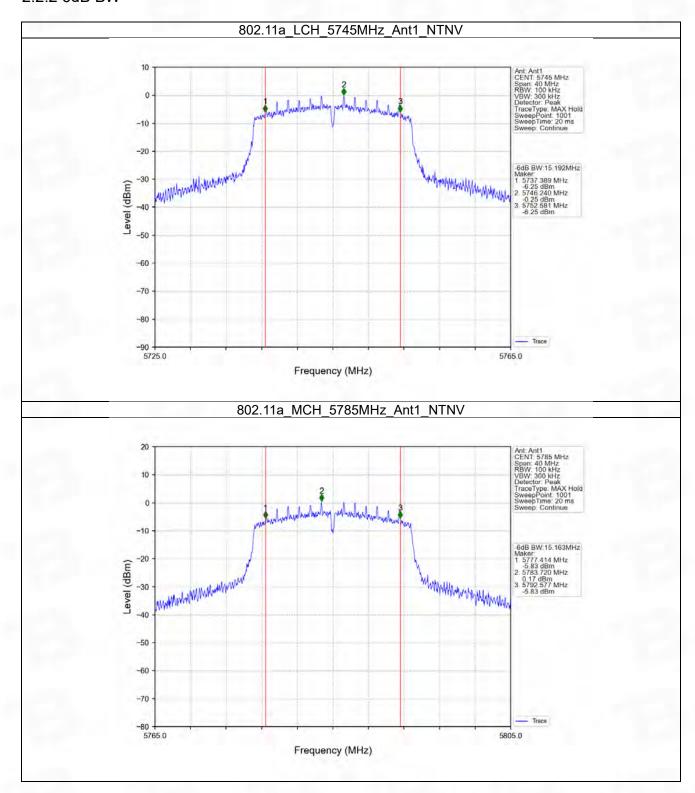




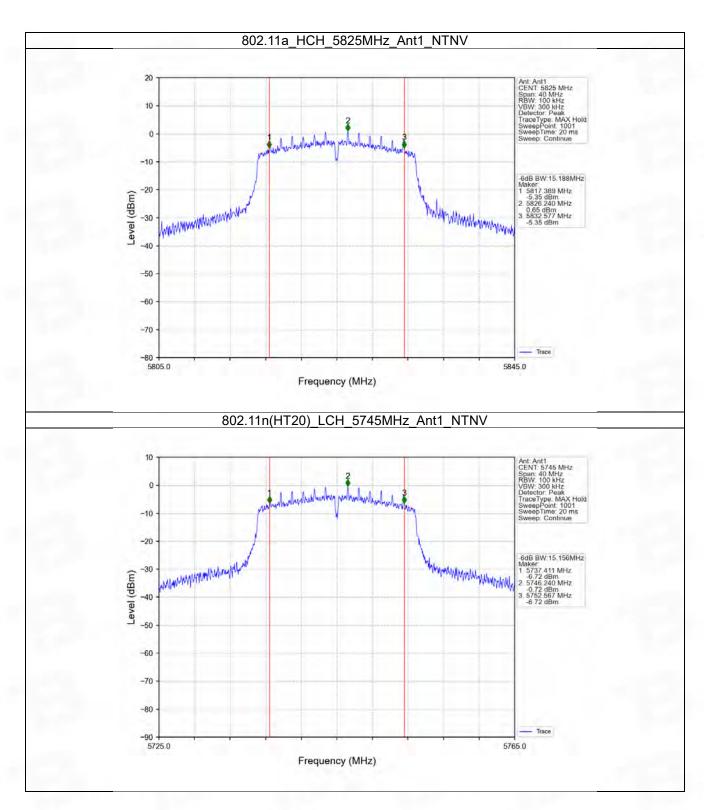




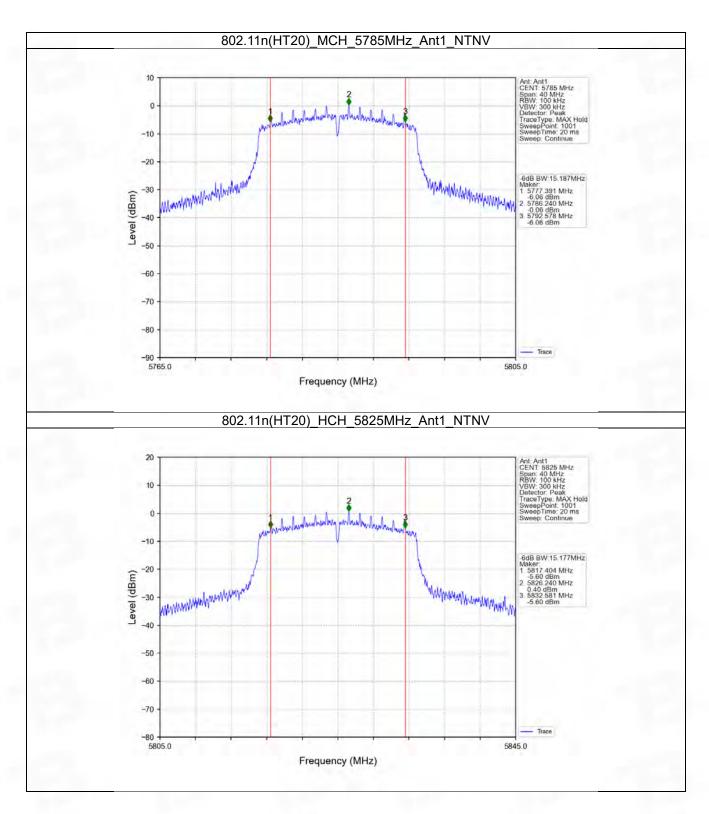
2.2.2 6dB BW



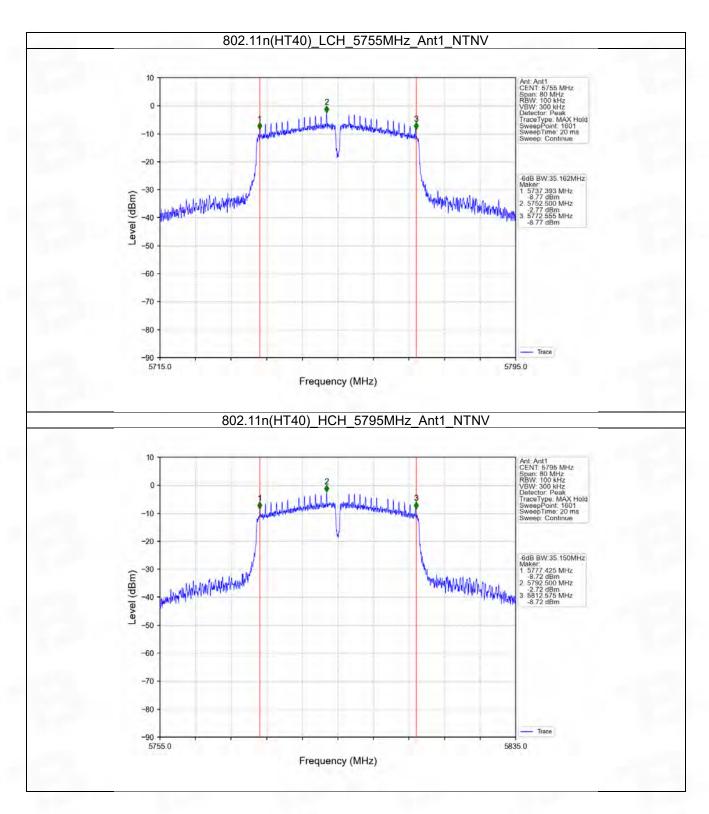




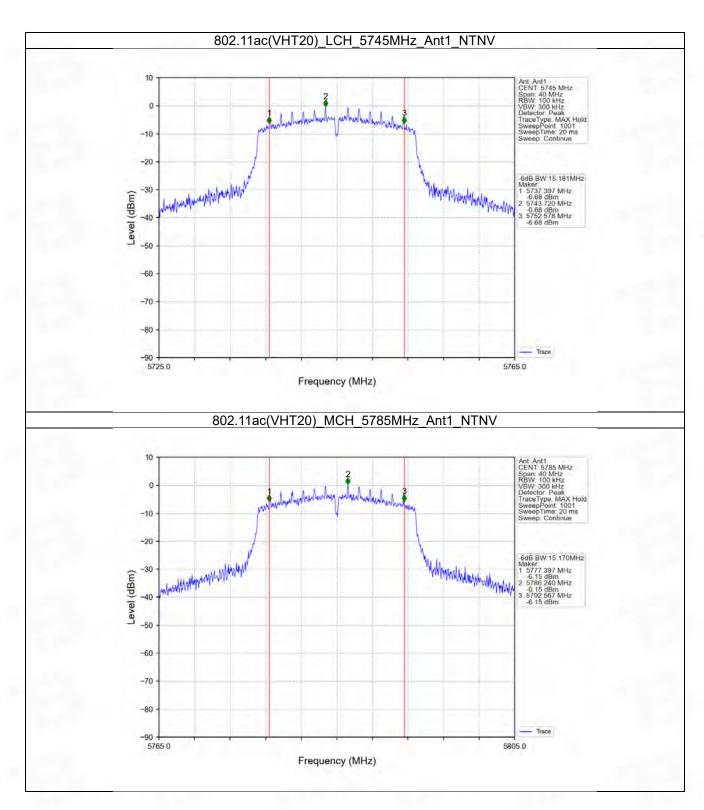




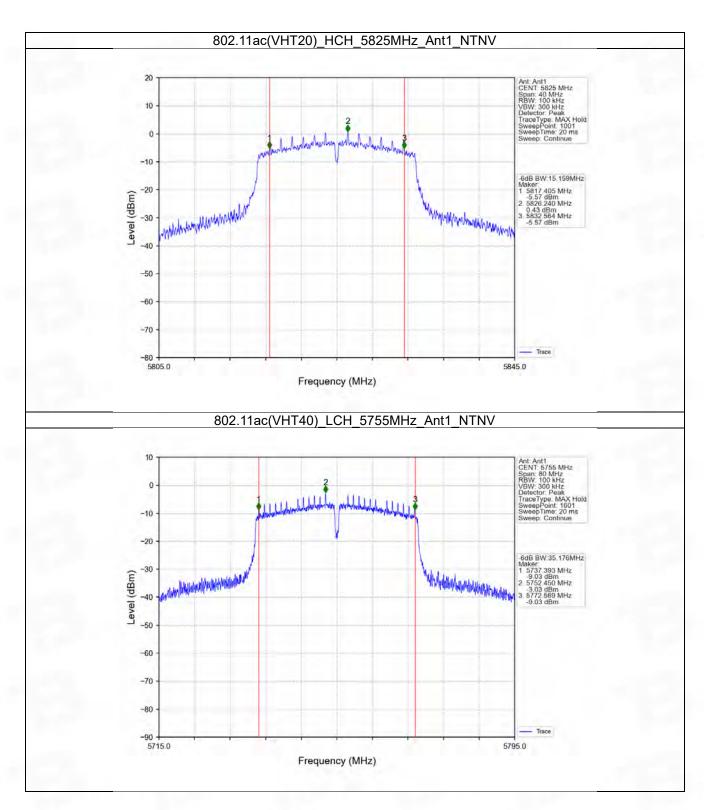




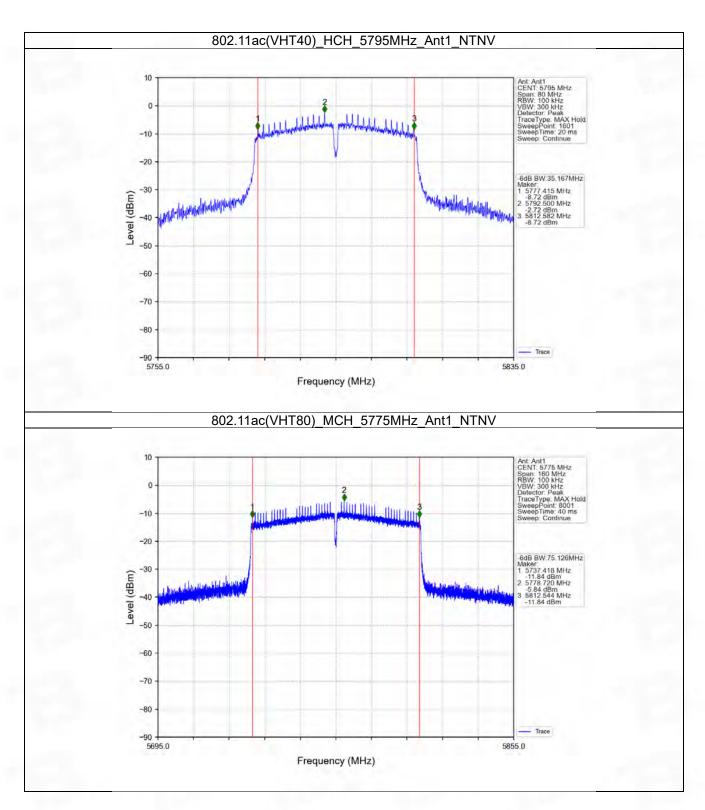






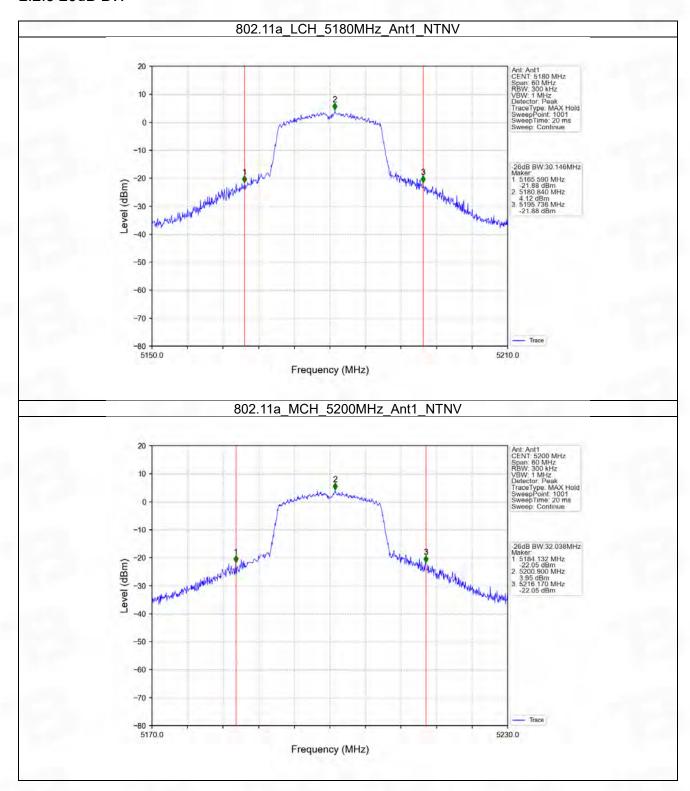




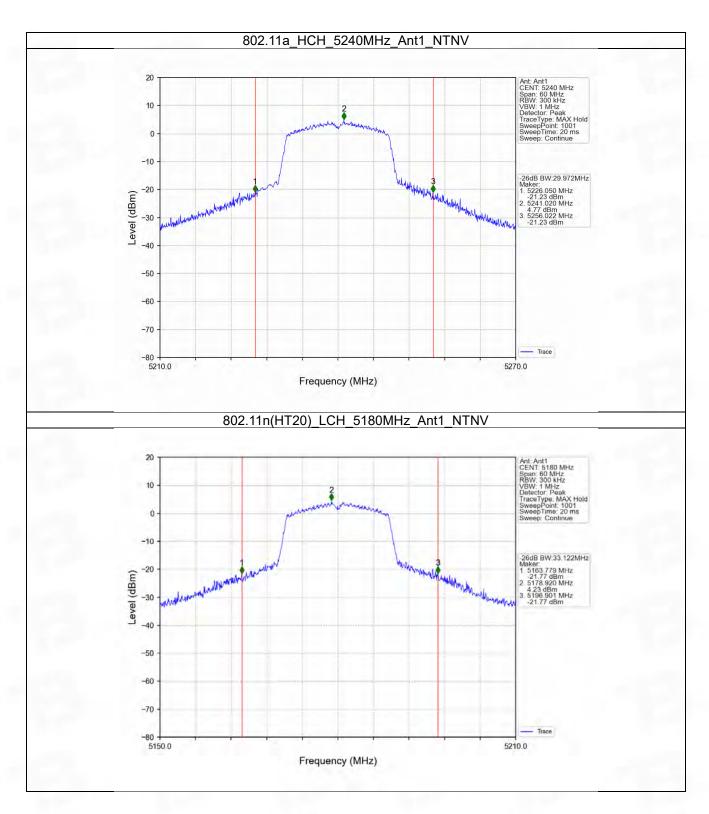




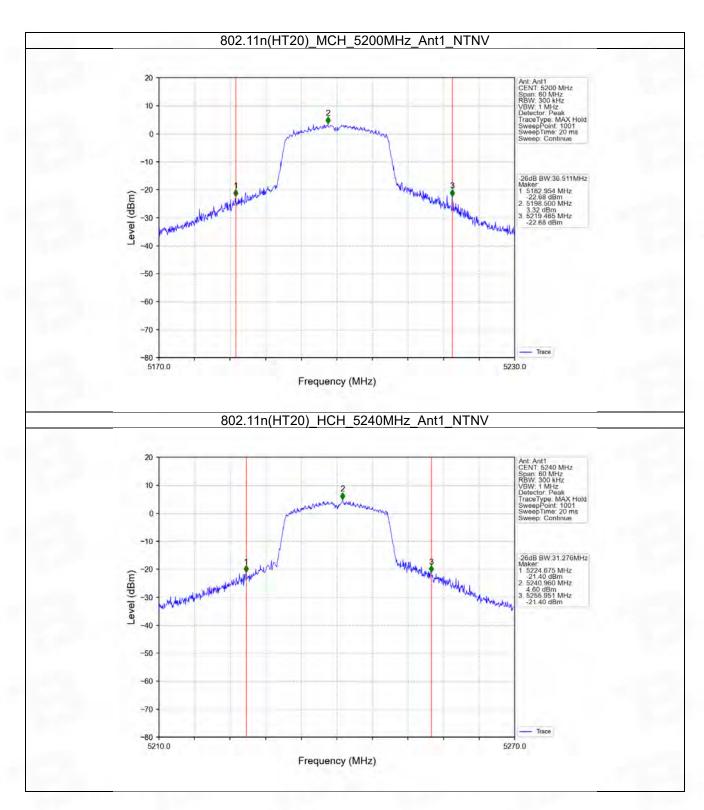
2.2.3 26dB BW



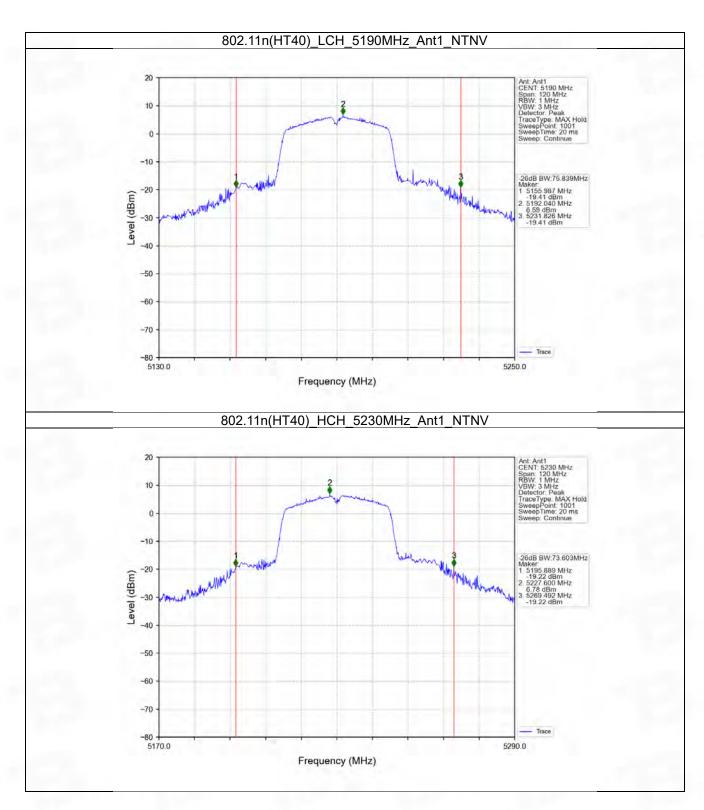




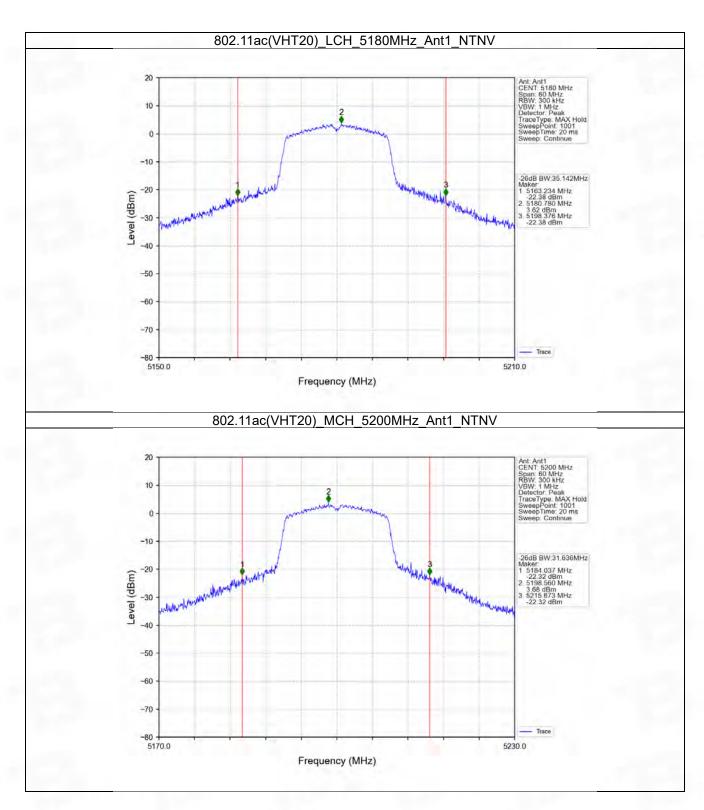




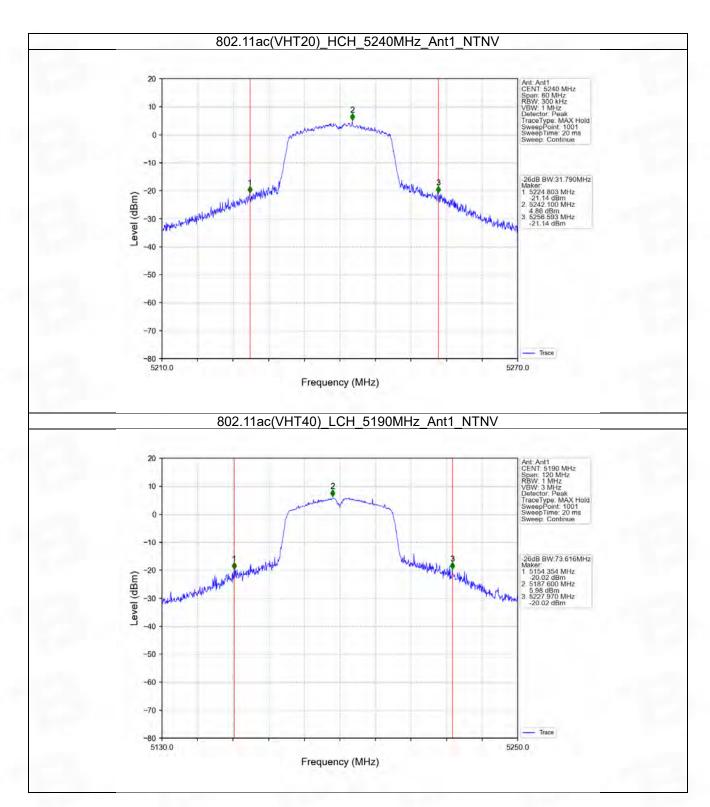




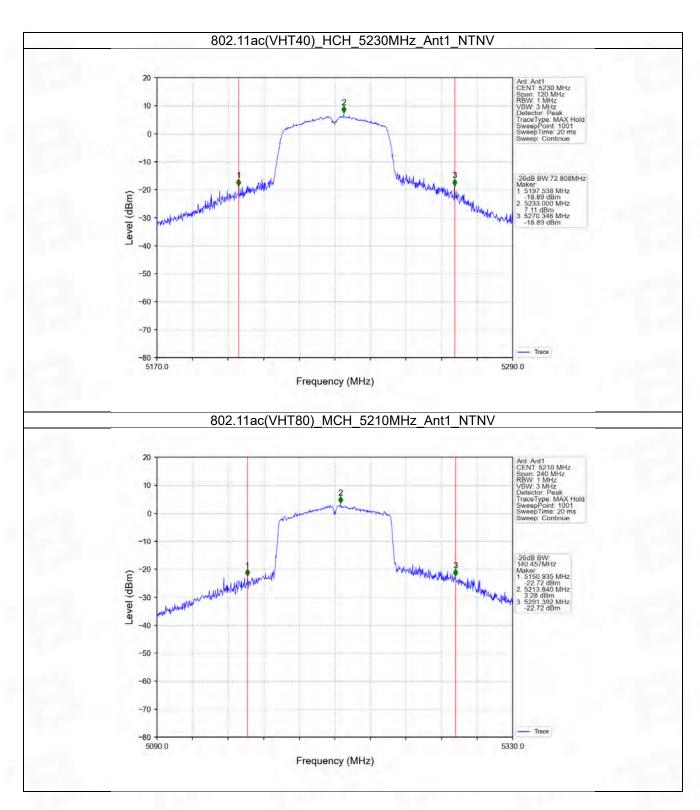


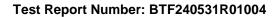














3. Maximum Conducted Output Power

3.1 Test Result

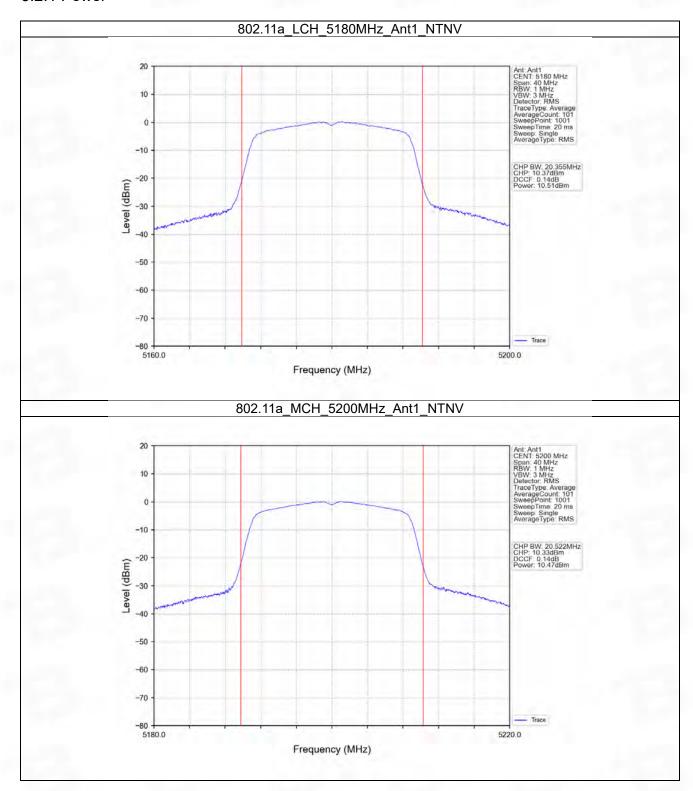
3.1.1 Power

802.11a SIS 802.11n (HT20) SIS 802.11n (HT40) SIS	so ·	5180 5200 5240 5745 5785 5825 5180 5200 5240	ANT1 10.51 10.47 11.28 9.33 9.71 10.26 10.51 10.27	Limit <=23.98 <=23.98 <=23.98 <=30 <=30 <=30 <=30 <=30	Pass Pass Pass Pass Pass Pass Pass
802.11n (HT20) SIS 802.11n (HT40) SIS		5200 5240 5745 5785 5825 5180 5200	10.47 11.28 9.33 9.71 10.26 10.51	<=23.98 <=23.98 <=30 <=30 <=30	Pass Pass Pass Pass Pass
802.11n (HT20) SIS 802.11n (HT40) SIS		5240 5745 5785 5825 5180 5200	11.28 9.33 9.71 10.26 10.51	<=23.98 <=30 <=30 <=30	Pass Pass Pass Pass
802.11n (HT20) SIS 802.11n (HT40) SIS		5745 5785 5825 5180 5200	9.33 9.71 10.26 10.51	<=30 <=30 <=30	Pass Pass Pass
802.11n (HT20) SIS 802.11n (HT40) SIS		5785 5825 5180 5200	9.71 10.26 10.51	<=30 <=30	Pass Pass
(HT20) SIS 802.11n (HT40) SIS	SO -	5825 5180 5200	10.26 10.51	<=30	Pass
(HT20) SIS 802.11n (HT40) SIS	SO :	5180 5200	10.51		
(HT20) SIS 802.11n (HT40) SIS	SO -	5200		<=23.98	
(HT20) SIS 802.11n (HT40) SIS	60		10.27	~- <u>~</u> 0.00	Pass
(HT20) SIS 802.11n (HT40) SIS 802.11ac SIS	SO -	5240	10.21	<=23.98	Pass
802.11n (HT40) SIS	50	02.10	11.31	<=23.98	Pass
(HT40) SIS		5745	9.02	<=30	Pass
(HT40) SIS		5785	9.42	<=30	Pass
(HT40) SIS		5825	10.03	<=30	Pass
(HT40) SIS		5190	10.32	<=23.98	Pass
802.11ac Su	SISO	5230	10.68	<=23.98	Pass
		5755	9.20	<=30	Pass
		5795	9.38	<=30	Pass
	SISO —	5180	10.33	<=23.98	Pass
		5200	10.28	<=23.98	Pass
(VHT20)		5240	11.06	<=23.98	Pass
		5745	9.00	<=30	Pass
		5785	9.38	<=30	Pass
		5825	10.15	<=30	Pass
	SISO _	5190	10.04	<=23.98	Pass
802.11ac		5230	10.54	<=23.98	Pass
(VHT40)		5755	8.98	<=30	Pass
		5795	9.53	<=30	Pass
802.11ac	20	5210	10.28	<=23.98	Pass
(VHT80) SIS		5775	9.22	<=30	Pass

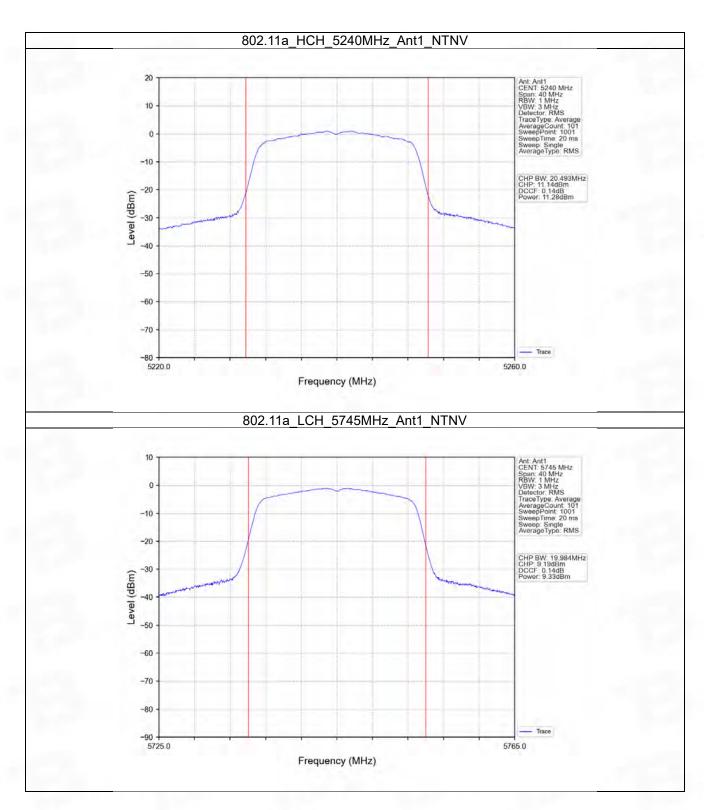


3.2 Test Graph

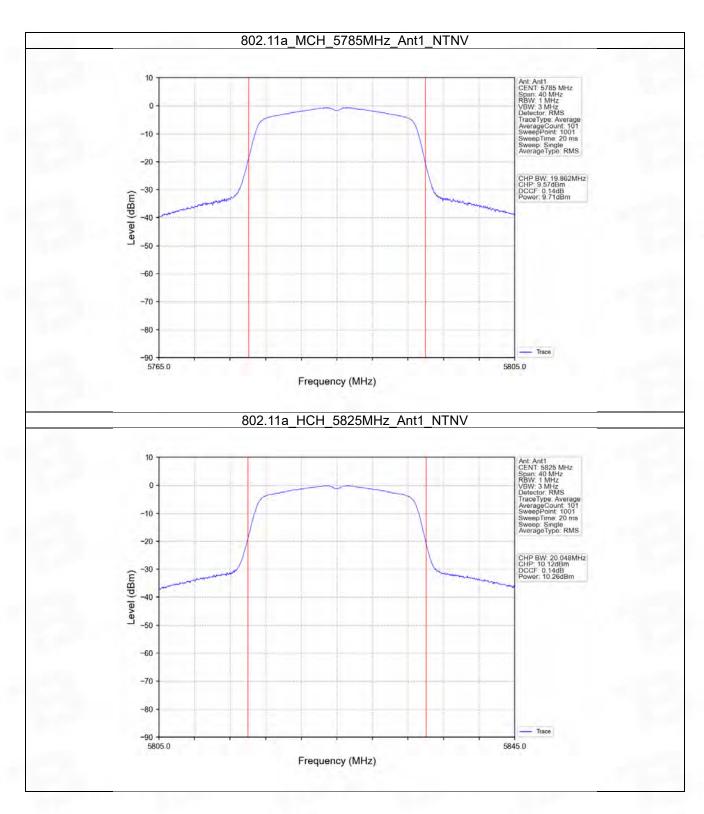
3.2.1 Power



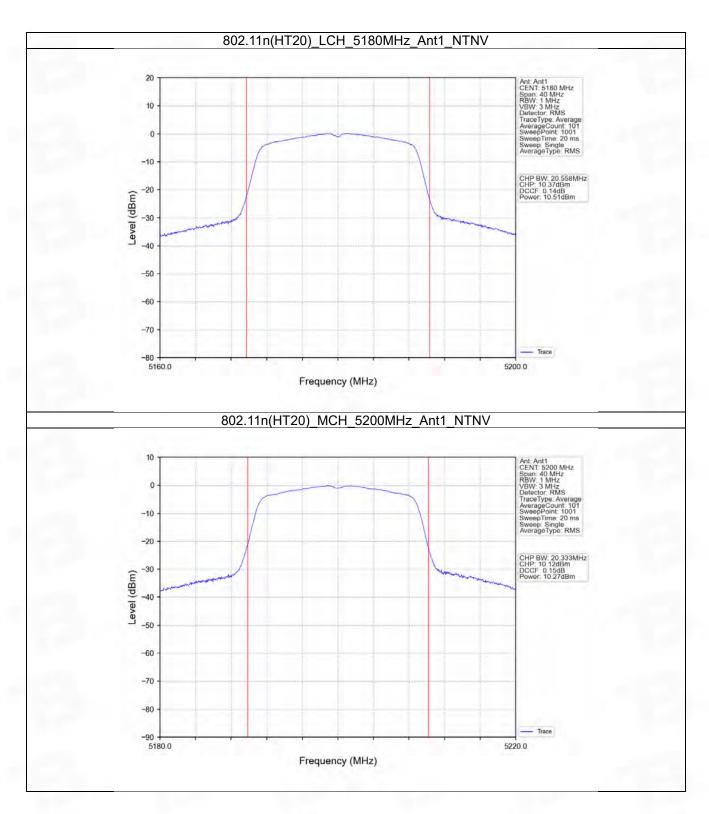




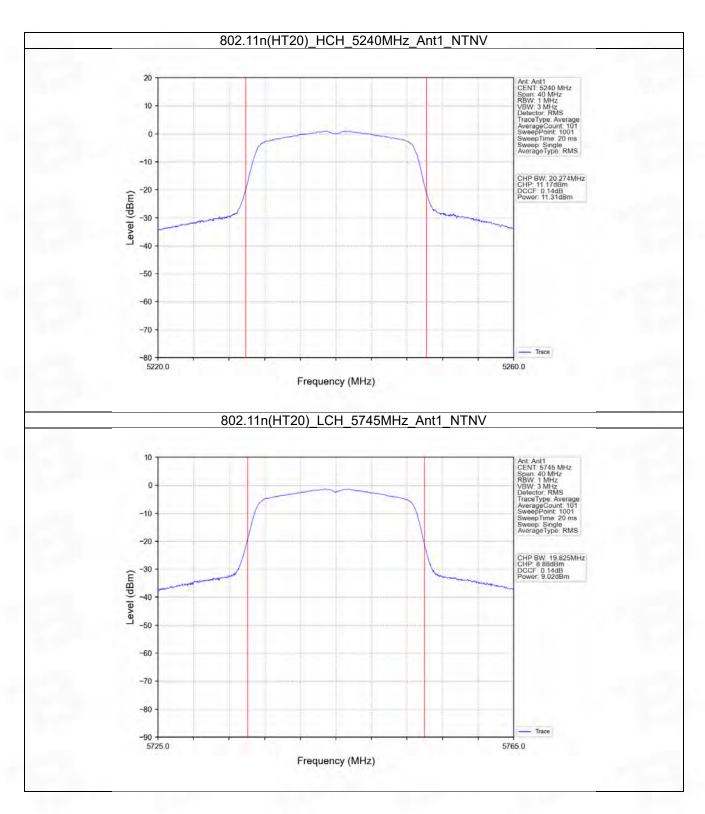




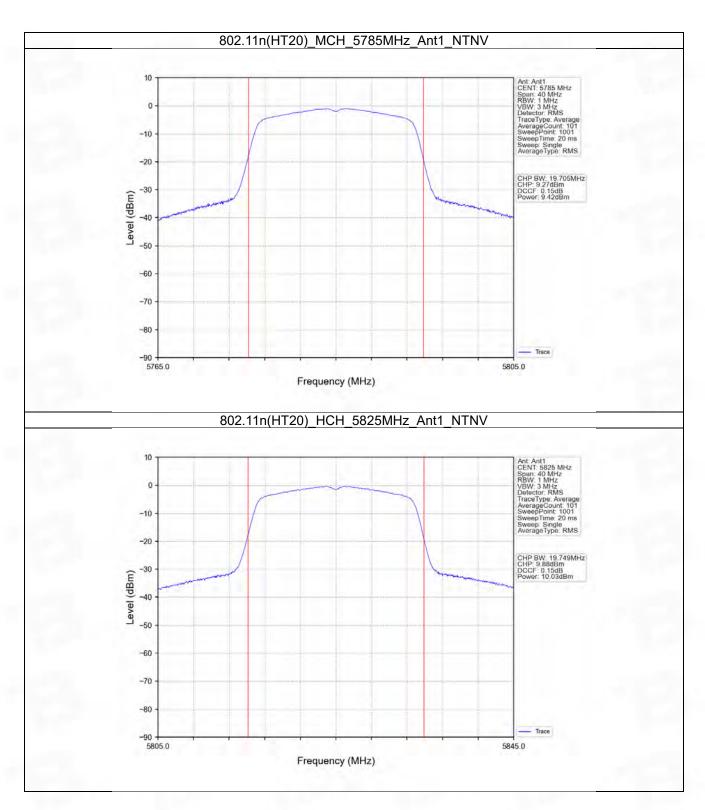




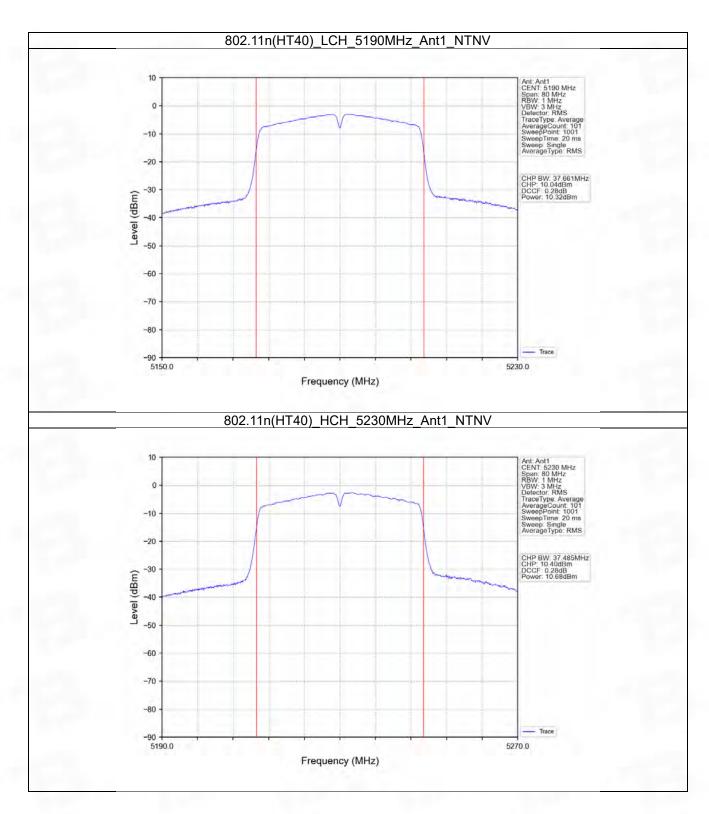




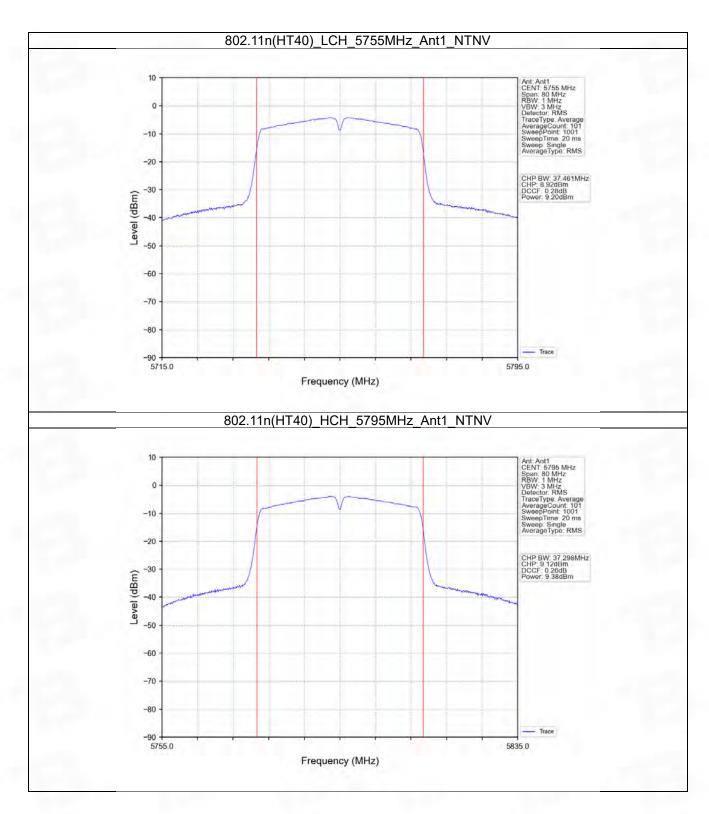




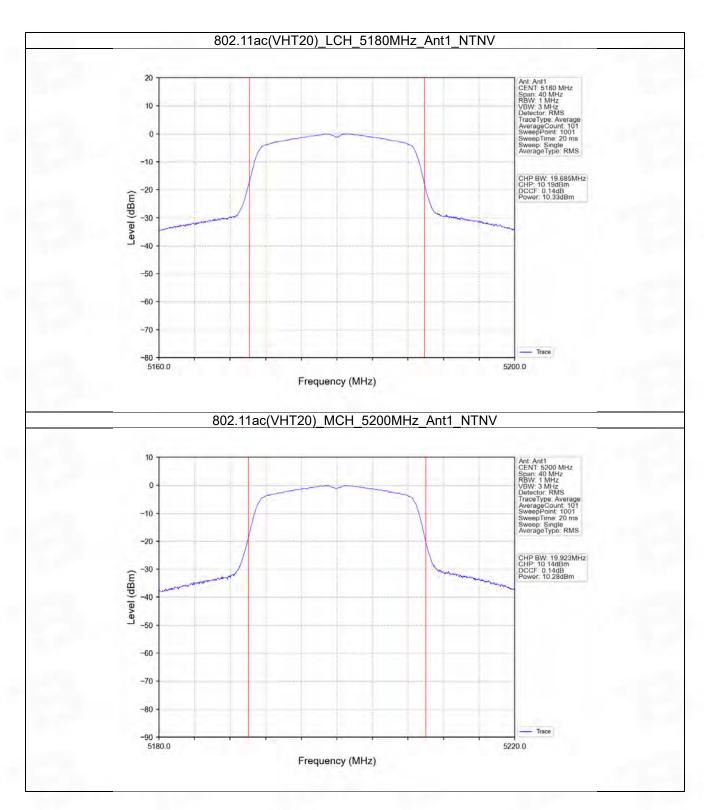




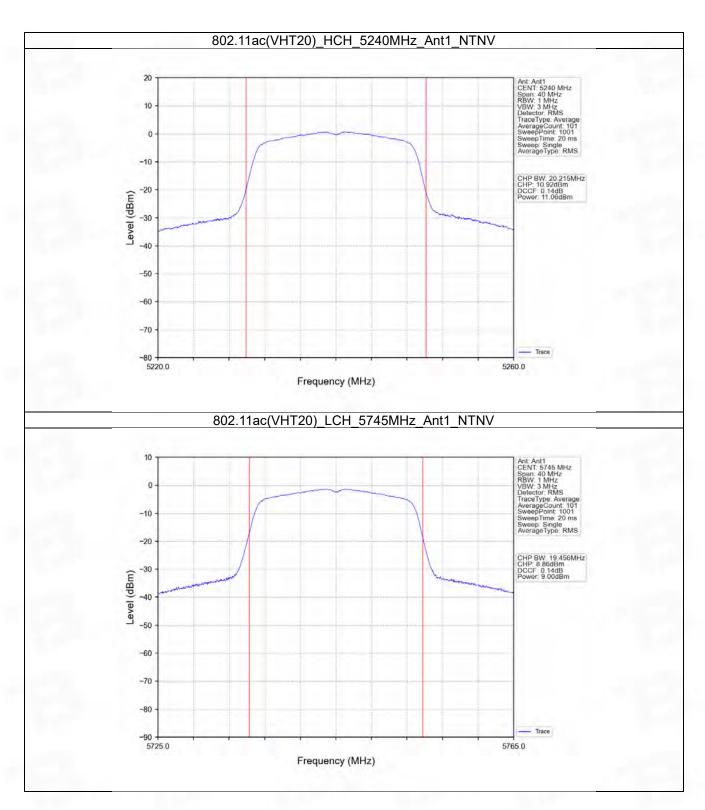




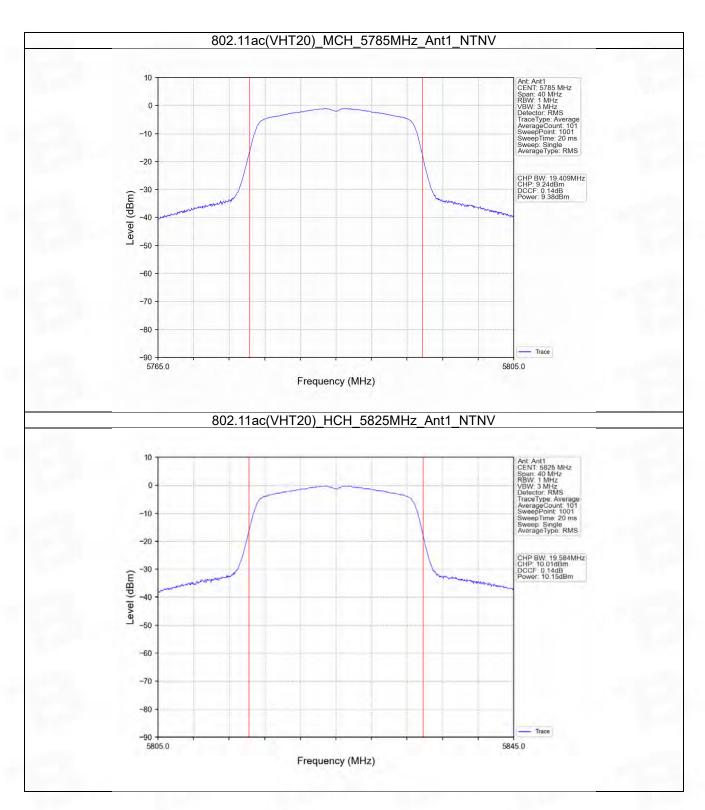




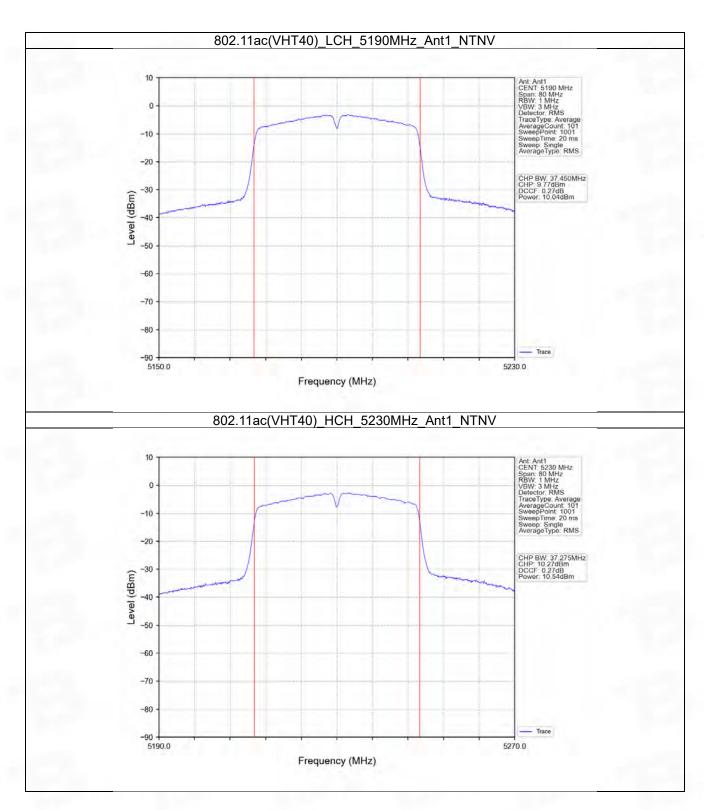




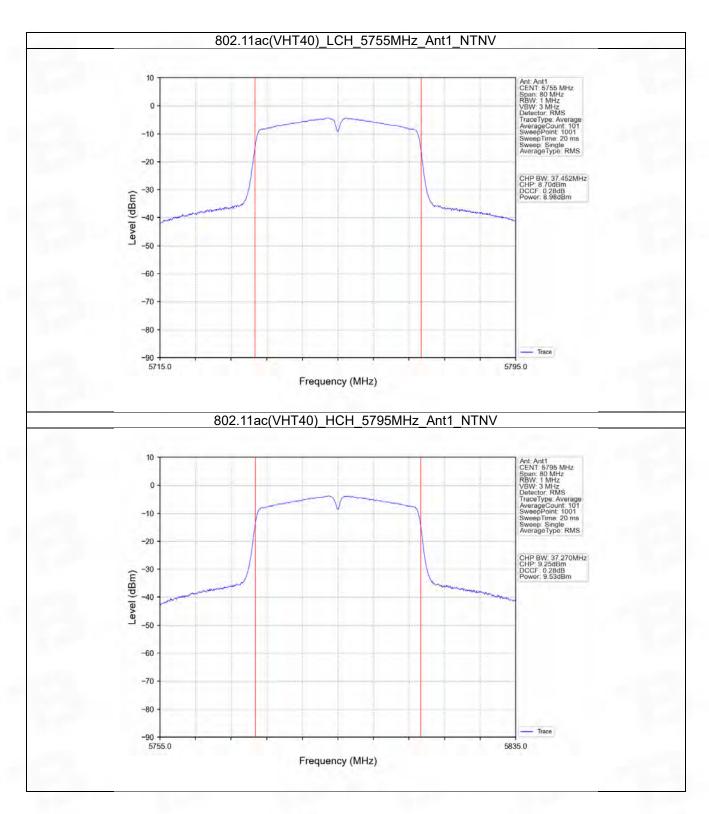




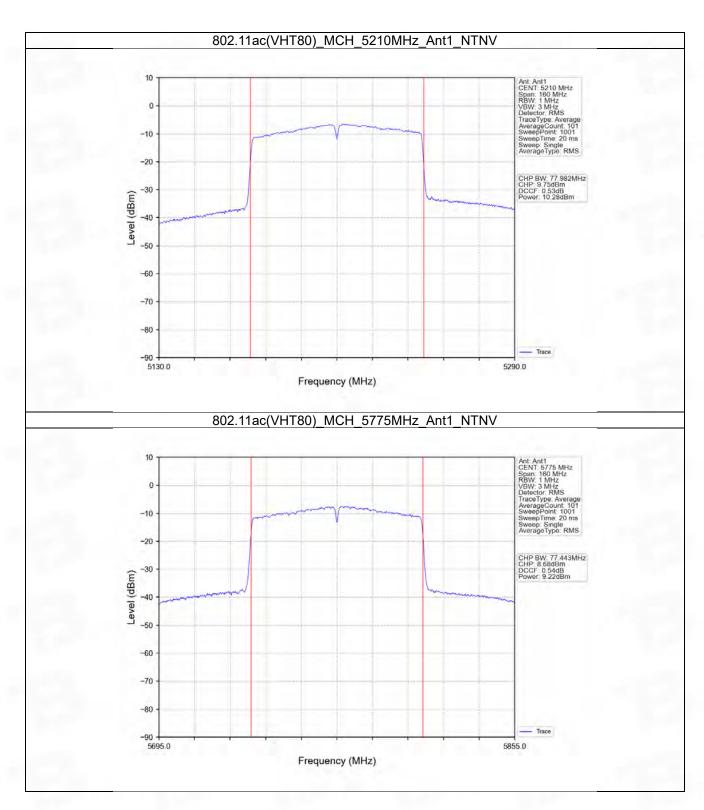


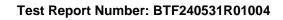














4. Maximum Power Spectral Density

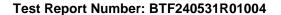
4.1 Test Result

4.1.1 PSD

Mode	TX	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict	
	Type		ANT1	Limit	verdict	
		5180	0.36	<=11	Pass	
802.11a	SISO)2.11a SISO	5200	0.37	<=11	Pass
		5240	1.09	<=11	Pass	
000 11p	SISO	5180	0.35	<=11	Pass	
802.11n		5200	0.05	<=11	Pass	
(HT20)		5240	1.09	<=11	Pass	
802.11n	CICO	5190	-2.70	<=11	Pass	
(HT40)	SISO	5230	-2.23	<=11	Pass	
000 11		5180	0.16	<=11	Pass	
802.11ac (VHT20)	SISO	5200	0.18	<=11	Pass	
(VH120)		5240	0.84	<=11	Pass	
802.11ac	SISO	5190	-2.93	<=11	Pass	
(VHT40)	3130	5230	-2.42	<=11	Pass	
802.11ac (VHT80)	SISO	5210	-5.95	<=11	Pass	
Note1: Antenna (dBi;				

4.1.2 PSD-Band3

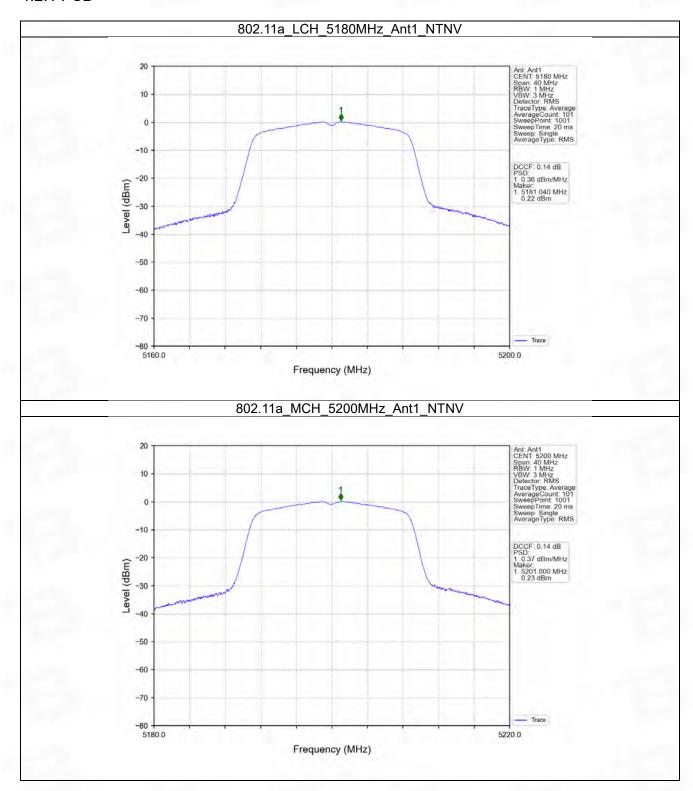
Mode	TX	Frequency	Maximum PSD (dBm/500kHz)		Verdict
	Type	(MHz)	ANT1	Limit	verdict
802.11a	SISO	5745	-3.27	<=30	Pass
		5785	-2.86	<=30	Pass
		5825	-2.45	<=30	Pass
802.11n (HT20)	SISO	5745	-3.36	<=30	Pass
		5785	-3.21	<=30	Pass
		5825	-2.70	<=30	Pass
802.11n (HT40)	SISO	5755	-6.33	<=30	Pass
		5795	-6.20	<=30	Pass
802.11ac (VHT20)	SISO	5745	-3.64	<=30	Pass
		5785	-3.24	<=30	Pass
		5825	-2.47	<=30	Pass
802.11ac (VHT40)	SISO	5755	-6.55	<=30	Pass
		5795	-6.03	<=30	Pass
802.11ac (VHT80)	SISO	5775	-9.36	<=30	Pass
te1: Antenna (Gain: Ant1: -0.2	9dBi;			



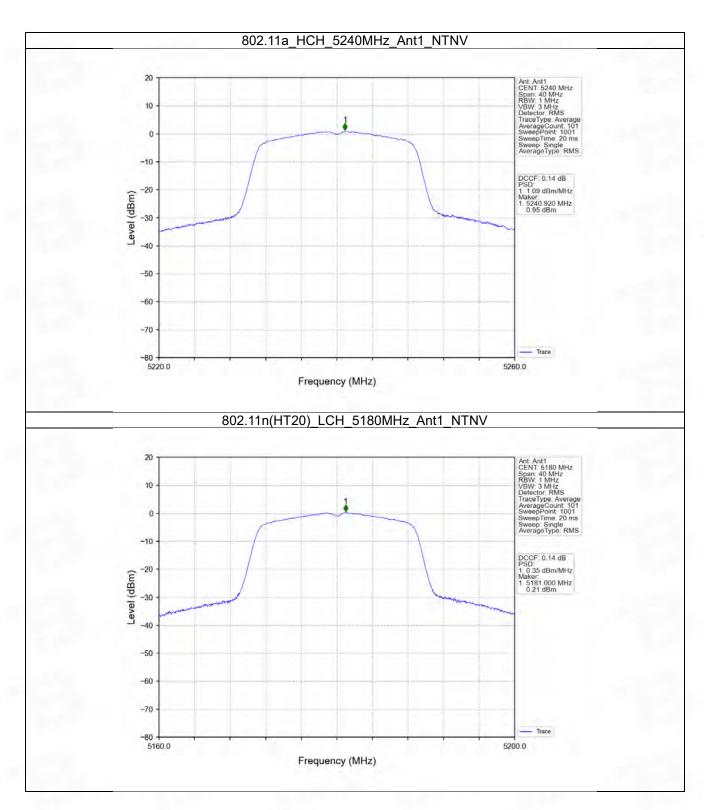


4.2 Test Graph

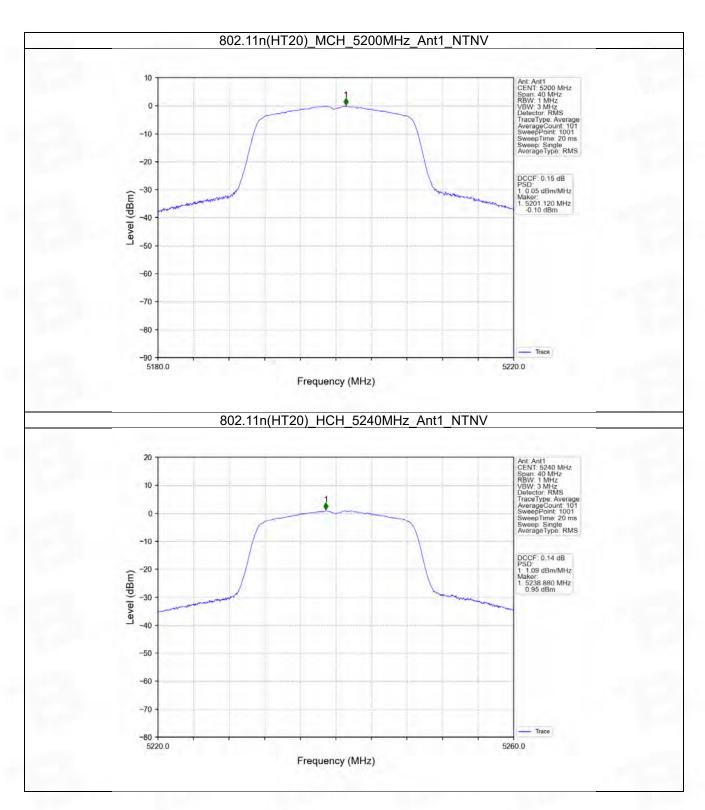
4.2.1 PSD



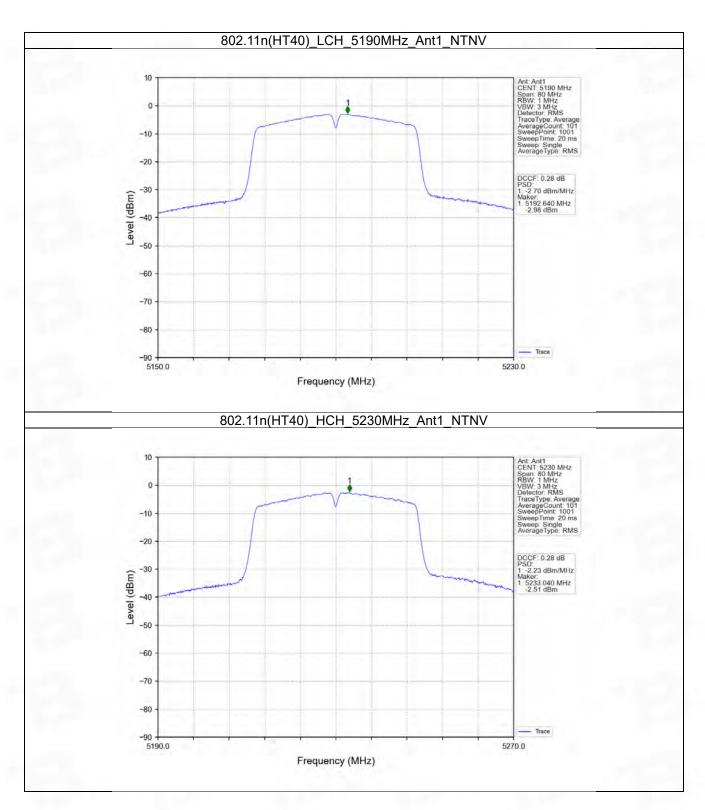




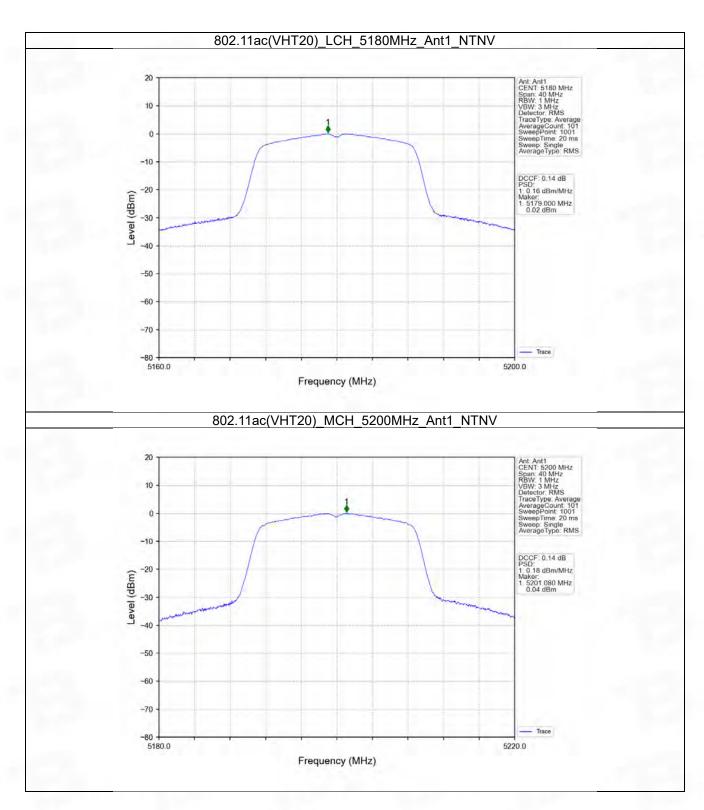




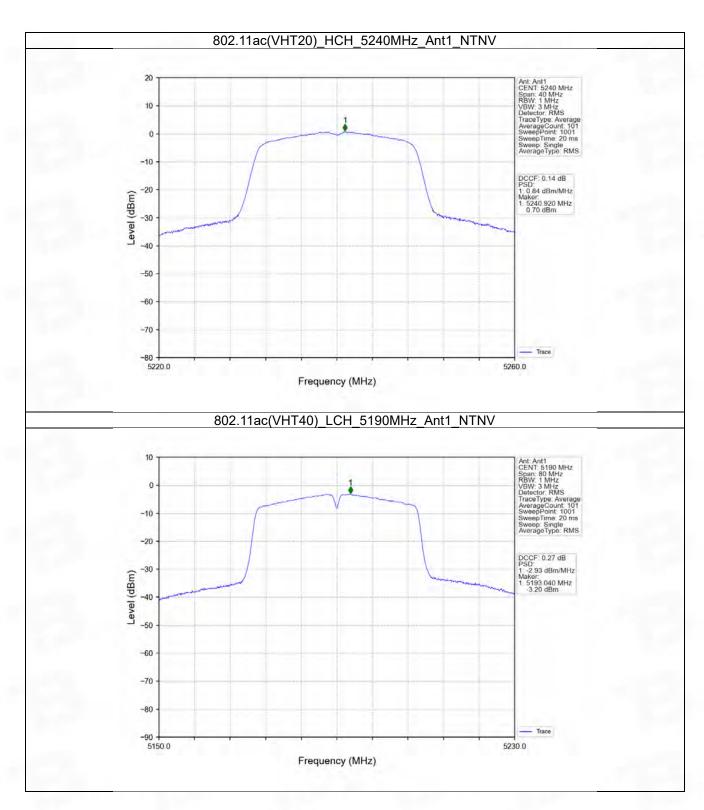




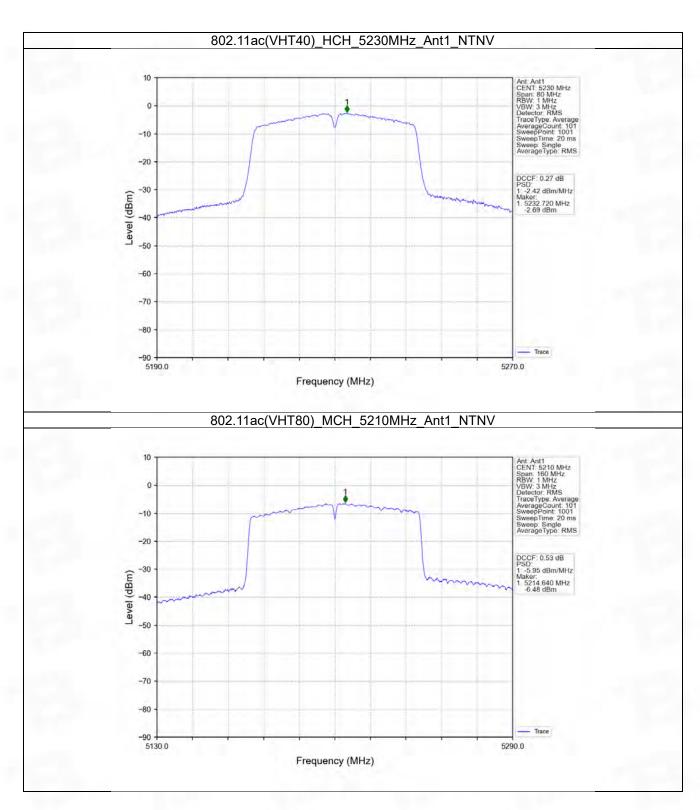






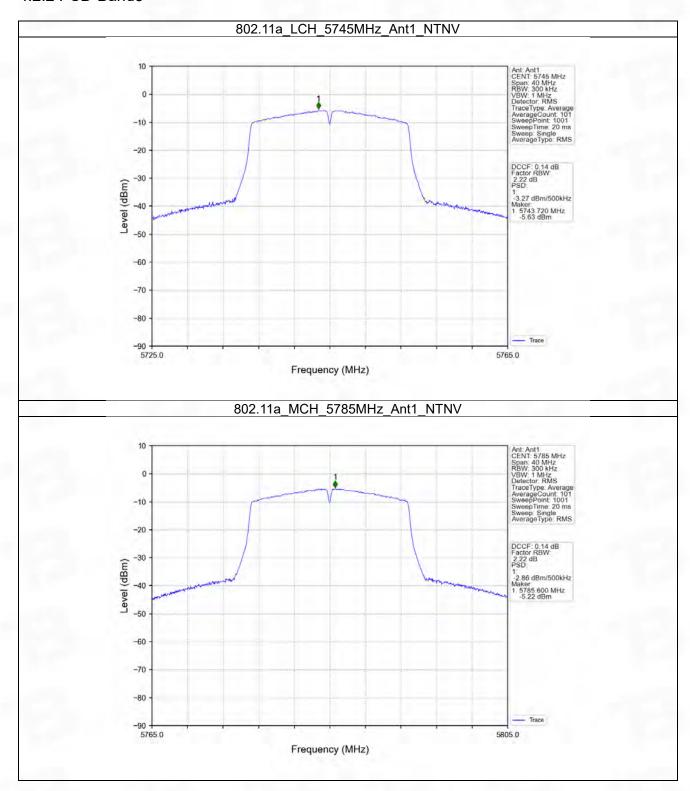




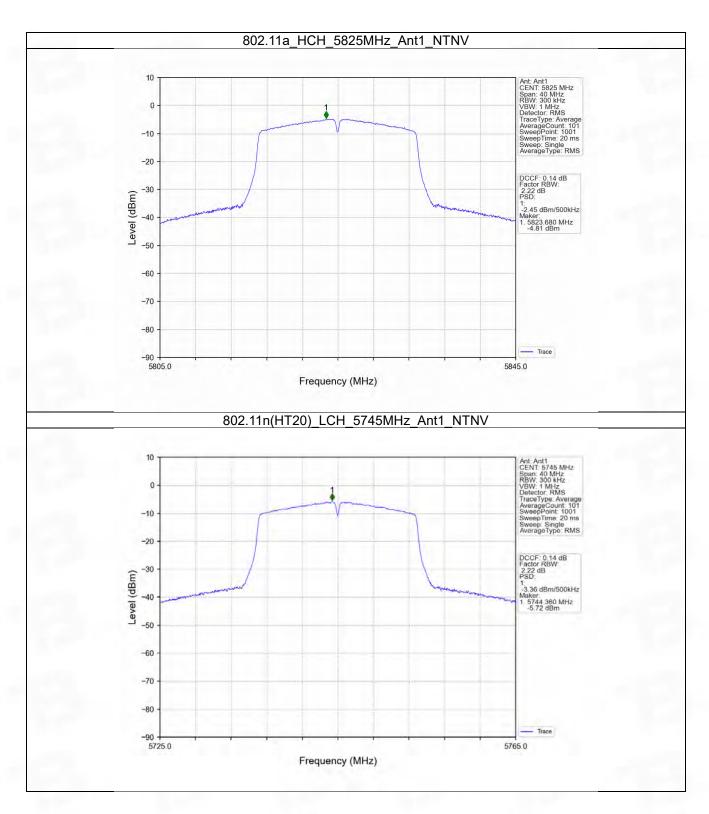




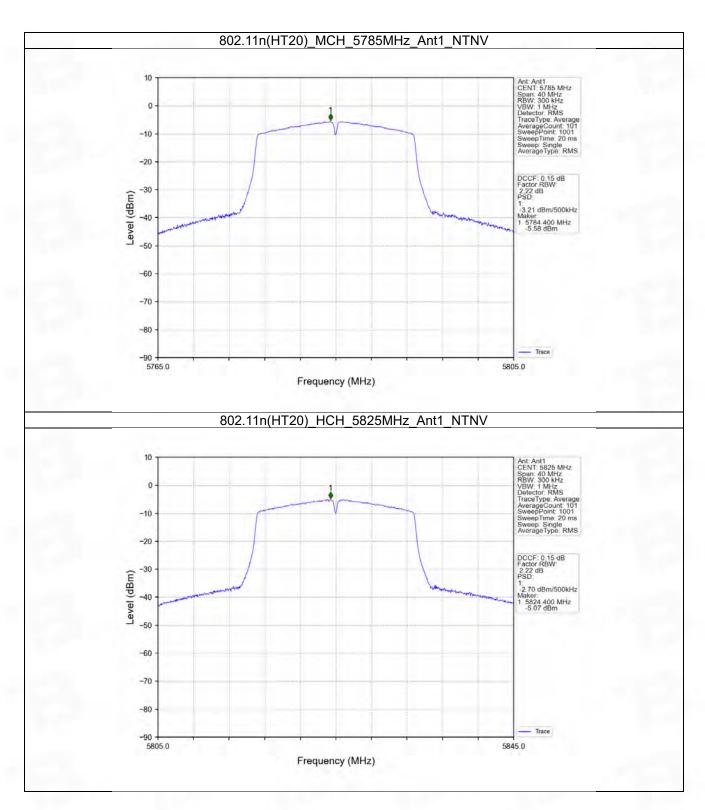
4.2.2 PSD-Band3



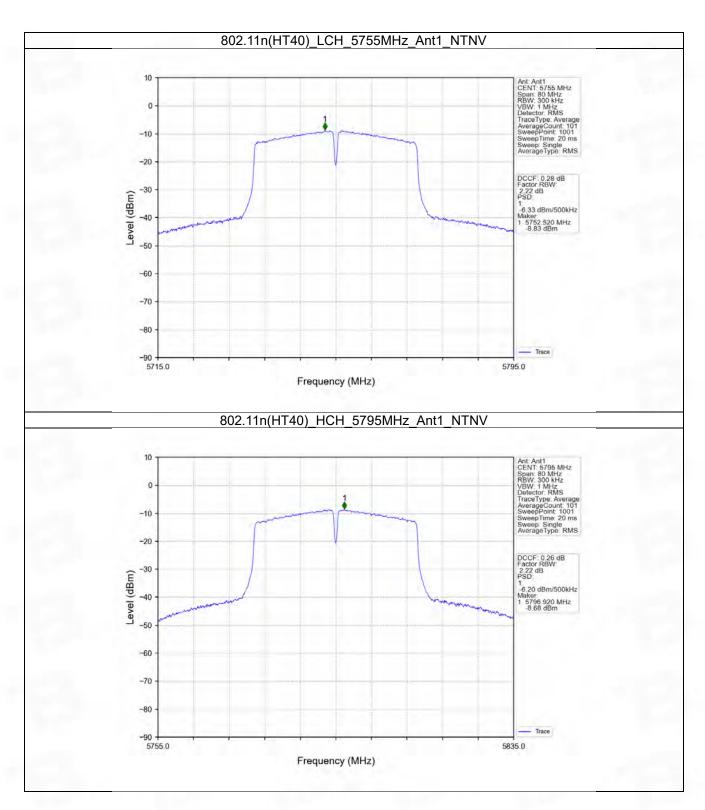




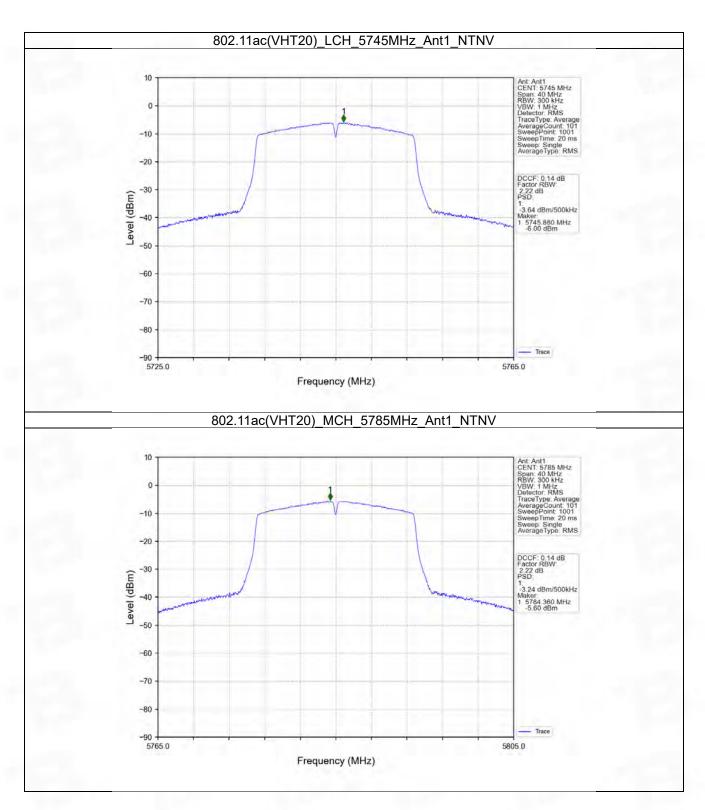




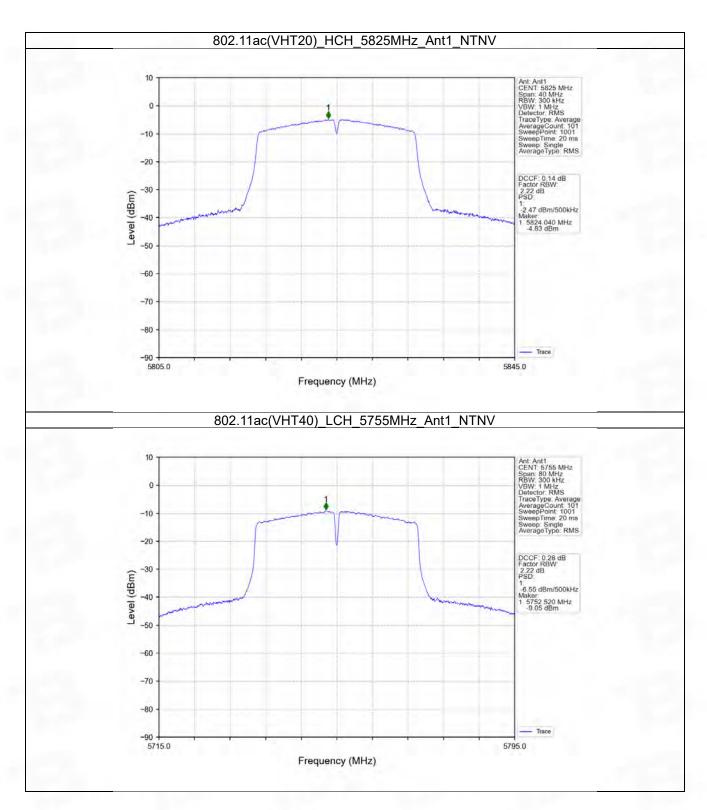




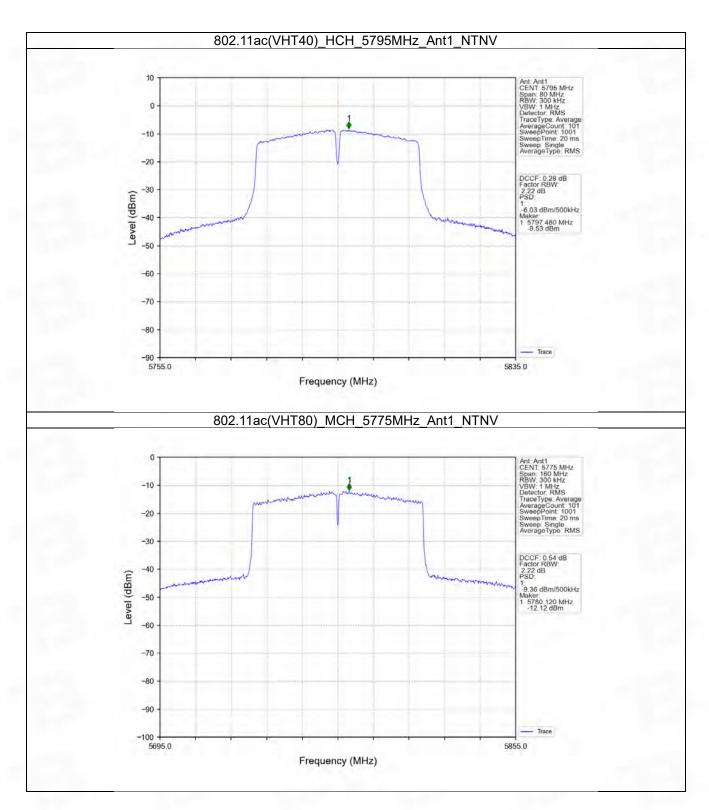


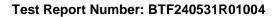














5. Frequency Stability

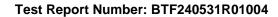
5.1 Test Result

5.1.1 Ant1

	TX	Frequency	Temperature	Ant1 Voltage	Measured Frequency	Limit	
Mode	Type	(MHz)	(°C)	(VAC)	(MHz)	(MHz)	Verdict
	турс	(1011 12)	(0)	102	5179.982	5150 to 5250	Pass
ä			20	120	5179.981	5150 to 5250	Pass
		5180		138	5179.981	5150 to 5250	Pass
			-30	120	5179.981	5150 to 5250	Pass
			-20	120	5179.981	5150 to 5250	Pass
			-10	120	5179.981	5150 to 5250	Pass
			0	120	5179.981	5150 to 5250	Pass
			10	120	5179.981	5150 to 5250	Pass
			30	120	5179.981	5150 to 5250	Pass
			40	120	5179.981		
			50	120	5179.981	5150 to 5250	Pass
			50			5150 to 5250	Pass
			00	102	5199.981	5150 to 5250	Pass
			20	120	5199.981	5150 to 5250	Pass
			20	138	5199.981	5150 to 5250	Pass
			-30	120	5199.981	5150 to 5250	Pass
		5000	-20	120	5199.981	5150 to 5250	Pass
Carrier Wave	SISO	5200	-10	120	5199.981	5150 to 5250	Pass
			0	120	5199.981	5150 to 5250	Pass
			10	120	5199.981	5150 to 5250	Pass
			30	120	5199.981	5150 to 5250	Pass
			40	120	5199.981	5150 to 5250	Pass
			50	120	5199.981	5150 to 5250	Pass
		5240	20	102	5239.981	5150 to 5250	Pass
				120	5239.981	5150 to 5250	Pass
				138	5239.981	5150 to 5250	Pass
			-30	120	5239.981	5150 to 5250	Pass
			-20	120	5239.981	5150 to 5250	Pass
			-10	120	5239.981	5150 to 5250	Pass
			0	120	5239.981	5150 to 5250	Pass
			10	120	5239.981	5150 to 5250	Pass
			30	120	5239.981	5150 to 5250	Pass
			40	120	5239.981	5150 to 5250	Pass
			50	120	5239.981	5150 to 5250	Pass
		5745	20	102	5744.979	5725 to 5850	Pass
				120	5744.979	5725 to 5850	Pass
				138	5744.979	5725 to 5850	Pass
			-30	120	5744.979	5725 to 5850	Pass
			-20	120	5744.979	5725 to 5850	Pass
			-10	120	5744.979	5725 to 5850	Pass
			0	120	5744.979	5725 to 5850	Pass
			10	120	5744.978	5725 to 5850	Pass

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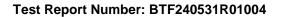




		30	120	5744.978	5725 to 5850	Pass
		40	120	5744.979	5725 to 5850	Pass
		50	120	5744.978	5725 to 5850	Pass
		- 00	102	5784.979	5725 to 5850	Pass
		20	120	5784.979	5725 to 5850	Pass
			138	5784.979	5725 to 5850	Pass
		-30	120	5784.979	5725 to 5850	Pass
		-20	120	5784.978	5725 to 5850	Pass
	5785	-10	120	5784.978	5725 to 5850	Pass
	3703	0	120	5784.978	5725 to 5850	Pass
		10	120	5784.979	5725 to 5850	Pass
		30	120	5784.979	5725 to 5850	Pass
	- 11 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	40	120	5784.979	5725 to 5850	Pass
		50	120	5784.978	5725 to 5850	Pass
		30	102	5824.978	5725 to 5850	Pass
		20	120	5824.978	5725 to 5850	Pass
		20	138	5824.978	5725 to 5850	Pass
		-30	120	5824.978	5725 to 5850	Pass
		-20	120	5824.978	5725 to 5850	Pass
	5825	-10	120	5824.978	5725 to 5850	Pass
	3023	0	120	5824.978	5725 to 5850	Pass
		10	120	5824.978	5725 to 5850	Pass
		30	120	5824.978	5725 to 5850	Pass
	-	40	120	5824.978	5725 to 5850	Pass
		50	120	5824.978	5725 to 5850	Pass
		30	102	5189.981	5150 to 5250	Pass
		20	120	5189.981	5150 to 5250	Pass
			138	5189.981	5150 to 5250	Pass
		-30	120	5189.981	5150 to 5250	Pass
		-20	120	5189.981	5150 to 5250	Pass
	5190	-10	120	5189.981	5150 to 5250	Pass
	3190	0	120	5189.981	5150 to 5250	Pass
		10	120	5189.981	5150 to 5250	Pass
		30	120	5189.981	5150 to 5250	Pass
		40	120	5189.981	5150 to 5250	Pass
		50	120	5189.981	5150 to 5250	Pass
		30	102	5229.981	5150 to 5250	Pass
		20	120	5229.981	5150 to 5250	Pass
		20	138	5229.981	5150 to 5250	Pass
		-30	120	5229.981	5150 to 5250	Pass
		-20	120	5229.981	5150 to 5250	Pass
	5230	-10	120	5229.981	5150 to 5250	Pass
	5230	0	120	5229.981	5150 to 5250	Pass
		10	120	5229.981	5150 to 5250	Pass
		30	120	5229.981	5150 to 5250	Pass
		40	120	5229.981	5150 to 5250	Pass
		50	120	5229.981	5150 to 5250	Pass
		30	102	5754.979	5725 to 5850	Pass
		20	120	5755.096	5725 to 5850	Pass
			138	5753.090	5725 to 5850	Pass
	5755	-30	120	5754.759	5725 to 5850	
		-20	120	5754.549	5725 to 5850	Pass
		-20 -10	120	5754.544	5725 to 5850	Pass Pass
		-10	120	3733.424	3723 10 3030	r ass

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			0	120	5755.460	5725 to 5850	Pass
			10	120	5754.535	5725 to 5850	Pass
			30	120	5754.708	5725 to 5850	Pass
			40	120	5755.251	5725 to 5850	Pass
		,	50	120	5754.725	5725 to 5850	Pass
		5795		102	5794.984	5725 to 5850	Pass
			20	120	5794.982	5725 to 5850	Pass
				138	5794.981	5725 to 5850	Pass
			-30	120	5794.980	5725 to 5850	Pass
			-20	120	5794.980	5725 to 5850	Pass
			-10	120	5794.980	5725 to 5850	Pass
			0	120	5794.980	5725 to 5850	Pass
			10	120	5794.980	5725 to 5850	Pass
			30	120	5794.980	5725 to 5850	Pass
			40	120	5794.979	5725 to 5850	Pass
			50	120	5794.979	5725 to 5850	Pass
		5210		102	5209.983	5150 to 5250	Pass
			20	120	5209.983	5150 to 5250	Pass
				138	5209.982	5150 to 5250	Pass
			-30	120	5209.982	5150 to 5250	Pass
			-20	120	5209.982	5150 to 5250	Pass
			-10	120	5209.982	5150 to 5250	Pass
			0	120	5209.982	5150 to 5250	Pass
			10	120	5209.981	5150 to 5250	Pass
			30	120	5209.982	5150 to 5250	Pass
			40	120	5209.982	5150 to 5250	Pass
			50	120	5209.981	5150 to 5250	Pass
			20	102	5774.979	5725 to 5850	Pass
				120	5774.979	5725 to 5850	Pass
				138	5774.979	5725 to 5850	Pass
			-30	120	5774.979	5725 to 5850	Pass
			-20	120	5774.979	5725 to 5850	Pass
		5775	-10	120	5774.979	5725 to 5850	Pass
			0	120	5774.979	5725 to 5850	Pass
			10	120	5774.979	5725 to 5850	Pass
			30	120	5774.979	5725 to 5850	Pass
			40	120	5774.979	5725 to 5850	Pass
			50	120	5774.979	5725 to 5850	Pass

6. Form731

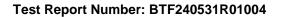
6.1 Test Result

6.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
5180	5240	0.0135	11.31
5745	5825	0.0106	10.26
5190	5230	0.0117	10.68
5755	5795	0.0090	9.53
5210	5210	0.0107	10.28

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