

TEST REPORT					
FCC ID:	2AQRM-A67L				
Test Report No::	TCT241031E011				
Date of issue::	Dec. 11, 2024				
Testing laboratory::	SHENZHEN TONGCE TESTING	G LAB			
Testing location/ address:	2101 & 2201, Zhenchang Factor Fuhai Subdistrict, Bao'an District 518103, People's Republic of Ch	, Shenzhen, Guangdong,			
Applicant's name:	FOXX Development Inc.				
Address::	3480 Preston Ridge Road, Suite	500, Alpharetta, GA 30005, USA			
Manufacturer's name:	FOXX Development Inc.				
Address::	3480 Preston Ridge Road, Suite	500, Alpharetta, GA 30005, USA			
Standard(s):	FCC CFR Title 47 Part 15 Subpart C Section 15.247 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 ANSI C63.10:2020				
Product Name::	Smart Phone	Smart Phone			
Trade Mark:	FOXXD, FOXX, MIRO	FOXXD, FOXX, MIRO			
Model/Type reference:	A67L	A67L			
Rating(s):	Rechargeable Li-ion Battery DC Power Adapter: Model: Foxx-22 Input: AC 100-240V, 50/60Hz, 0 Output: DC 5V, 2000mA				
Date of receipt of test item ::	Oct. 31, 2024				
Date (s) of performance of test:	Oct. 31, 2024 ~ Dec. 09, 2024				
Tested by (+signature):	Aaron MO	AMON ARONGCE			
Check by (+signature):	Beryl ZHAO Boy(16 TCT)				
Approved by (+signature):	Tomsin	Tomsm 180			

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1. General Product Information

1.1. EUT description

Product Name:	Smart Phone	
Model/Type reference:	A67L	
Sample Number:	TCT241031E009-0101	
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20)	
Channel Separation:	5MHz	
Number of Channel:	11 for 802.11b/802.11g/802.11n(HT20)	
Modulation Technology:	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing (OFDM)	
Data speed:	802.11b: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps 802.11g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36M 48Mbps, 54Mbps 802.11n: Up to 150Mbps	lbps,
Antenna Type:	PIFA Antenna	
Antenna Gain:	-3.21dBi	
Rating(s):	Rechargeable Li-ion Battery DC 3.85V Power Adapter: Model: Foxx-22 Input: AC 100-240V, 50/60Hz, 0.5A Output: DC 5V, 2000mA	

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None.



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1.3. Operation Frequency

For 802.11b/g/n(HT20)

		_					
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Note:

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

802.11b/802.11g/802.11n(HT20)

11.0,00=1119,00=111.1(111=0)				
Channel	Frequency			
The lowest channel	2412MHz			
The middle channel	2437MHz			
The Highest channel	2462MHz			





2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203/§15.247 (c)	PASS
AC Power Line Conducted Emission	§15.207	PASS
Conducted Output Power	§15.247 (b)(3)	PASS
6dB Emission Bandwidth	§15.247 (a)(2)	PASS
Power Spectral Density	§15.247 (e)	PASS
Band Edge	§15.247(d)	PASS
Spurious Emission	§15.205/§15.209	PASS

Note:

- 1. PASS: Test item meets the requirement.
- 2. Fail: Test item does not meet the requirement.
- 3. N/A: Test case does not apply to the test object.
- 4. The test result judgment is decided by the limit of test standard.





3. General Information

3.1. Test environment and mode

Operating Environment:				
Condition	Conducted Emission	Radiated Emission		
Temperature:	24.6 °C	25.2 °C		
Humidity:	51 % RH	48 % RH		
Atmospheric Pressure:	1010 mbar	1010 mbar		
Test Software:				
Software Information:	Engineering mode			
Power Level:	Default			
Test Mode:				
Engineering mode: Keep the EUT in continuous transmitting by select channel and modulations with Fully-charged battery.				

The sample was placed 0.8m & 1.5m for the measurement below & above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case (Z axis) are shown in Test Results of the following pages.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Has Helst sassi	
Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	6.5Mbps



3.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
1	/	/	1	1

Note:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
- 3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.





4. Facilities and Accreditations

4.1. Facilities

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

• FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

• IC - Registration No.: 10668A

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Innovation, Science and Economic Development Canada for radio equipment testing.

4.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4.3. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB



5. Test Results and Measurement Data

5.1. Antenna requirement

Standard requirement: FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

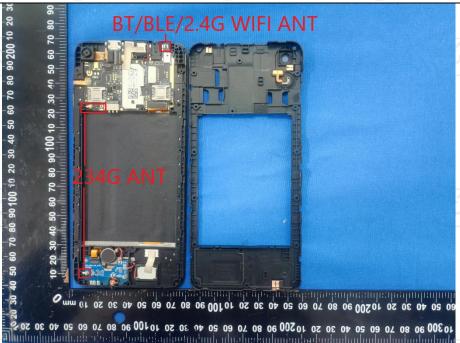
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

E.U.T Antenna:

The Bluetooth antenna is PIFA antenna which permanently attached, and the best case gain of the antenna is -3.21dBi.



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5.2. Conducted Emission

5.2.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.207				
·					
Test Method:	ANSI C63.10:2020	ANSI C63.10:2020			
Frequency Range:	150 kHz to 30 MHz				
Receiver setup:	RBW=9 kHz, VBW=30	kHz, Sweep time	=auto		
	Frequency range	Limit (c	dBuV)		
	(MHz)	Quasi-peak	Áverage		
Limits:	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	- 60	50		
	Reference	e Plane			
Test Setup:	Remark E.U.T AC power Test table/Insulation plane Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m				
Test Mode:	Transmitting Mode				
Test Procedure:	 The E.U.T is connect line impedance state provides a 50ohm/5 measuring equipmer The peripheral device power through a LIST coupling impedance refer to the block photographs). Both sides of A.C. conducted interferent emission, the relative the interface cables ANSI C63.10:2020 or 	cilization network out coupling import. es are also conners so that provides with 500hm term diagram of the line are checkence. In order to fire positions of equitations	(L.I.S.N.). This pedance for the ected to the main a 500hm/50uH lination. (Please test setup and d for maximum and the maximum pment and all of ed according to		
Test Result:	PASS				



5.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)						
Equipment	Manufacturer	Model	Serial Number	Calibration Due		
EMI Test Receiver	R&S	ESCI3	100898	Jun. 26, 2025		
LISN	Schwarzbeck	NSLK 8126	8126453	Jan. 31, 2025		
Attenuator	N/A	10dB	164080	Jun. 26, 2025		
Line-5	TCT	CE-05	/	Jun. 26, 2025		
EMI Test Software	EZ_EMC	EMEC-3A1	1.1.4.2	/ (3		

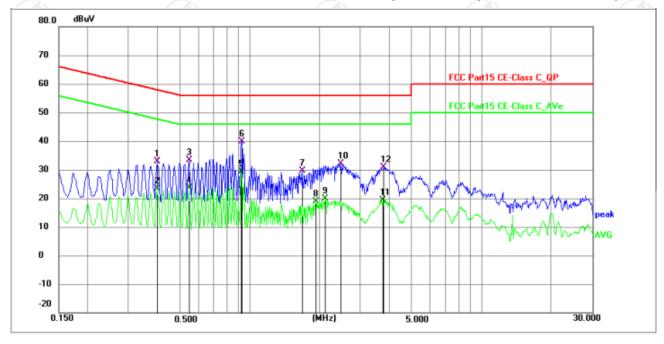




5.2.3. Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.3975	22.33	10.57	32.90	57.91	-25.01	QP	Р	
2	0.3975	12.84	10.57	23.41	47.91	-24.50	AVG	Р	
3	0.5460	22.68	10.60	33.28	56.00	-22.72	QP	Р	
4	0.5460	13.03	10.60	23.63	46.00	-22.37	AVG	Р	
5	0.9193	18.62	10.67	29.29	46.00	-16.71	AVG	Р	
6 *	0.9240	29.10	10.67	39.77	56.00	-16.23	QP	Р	
7	1.6890	19.08	10.67	29.75	56.00	-26.25	QP	Р	
8	1.9365	8.13	10.68	18.81	46.00	-27.19	AVG	Р	
9	2.1120	9.26	10.68	19.94	46.00	-26.06	AVG	Р	
10	2.4630	21.56	10.67	32.23	56.00	-23.77	QP	Р	
11	3.7454	8.71	10.65	19.36	46.00	-26.64	AVG	Р	
12	3.7860	20.17	10.66	30.83	56.00	-25.17	QP	Р	

Note:

Freq. = Emission frequency in MHz

Reading level $(dB\mu V)$ = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement $(dB\mu V)$ = Reading level $(dB\mu V)$ + Corr. Factor (dB)

 $Limit (dB\mu V) = Limit stated in standard$

 $Margin (dB) = Measurement (dB\mu V) - Limits (dB\mu V)$

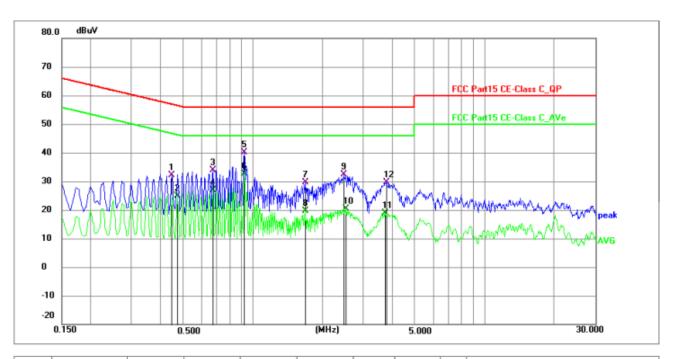
Q.P. =Quasi-Peak

AVG =average

^{*} is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.



Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4470	21.53	10.57	32.10	56.93	-24.83	QP	Р	
2	0.4740	14.31	10.57	24.88	46.44	-21.56	AVG	Р	
3	0.6720	23.28	10.67	33.95	56.00	-22.05	QP	Р	
4	0.6720	16.09	10.67	26.76	46.00	-19.24	AVG	Р	
5	0.9193	29.35	10.67	40.02	56.00	-15.98	QP	Р	
6 *	0.9193	22.08	10.67	32.75	46.00	-13.25	AVG	Р	
7	1.6935	18.85	10.67	29.52	56.00	-26.48	QP	Р	
8	1.6935	8.98	10.67	19.65	46.00	-26.35	AVG	Р	
9	2.4810	21.75	10.67	32.42	56.00	-23.58	QP	Р	
10	2.5304	9.80	10.67	20.47	46.00	-25.53	AVG	Р	
11	3.7364	8.14	10.65	18.79	46.00	-27.21	AVG	Р	
12	3.7635	18.96	10.66	29.62	56.00	-26.38	QP	Р	

Note 1:

Freq. = Emission frequency in MHz

Reading level $(dB\mu V)$ = Receiver reading

Corr. Factor (dB) = LISN factor + Cable loss

Measurement ($dB\mu V$) = Reading level ($dB\mu V$) + Corr. Factor (dB)

Limit $(dB\mu V)$ = Limit stated in standard

 $Margin (dB) = Measurement (dB\mu V) - Limits (dB\mu V)$

Q.P. =Quasi-Peak

AVG =average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

Note 2: Measurements were conducted in all three channels (high, middle, low) and all modulation (802.11b, 802.11g, 802.11n(HT20)) and the worst case Mode (Highest channel and 802.11g) was submitted only.



5.3. Maximum Conducted (Average) Output Power

5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB 558074 D01 v05r02
Limit:	30dBm
Test Setup:	
Test Mode:	Transmitting mode with modulation
rest wode.	, and the second
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Measure the conducted output power and record the results in the test report.
Test Result:	PASS

5.3.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY50101018	Jun. 26, 2025
Test Software	TST Pass		1	1

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5.4. Emission Bandwidth

5.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)					
Test Method:	KDB 558074 D01 v05r02					
Limit:	>500kHz					
Test Setup:	Spectrum Analyzer EUT					
Test Mode:	Transmitting mode with modulation					
Test Procedure:	 Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. Measure and record the results in the test report. 					
Test Result:	PASS					

5.4.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY50101018	Jun. 26, 2025
Test Software	TST Pass	1		



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5.5. Power Spectral Density

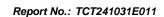
5.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)					
Test Method:	KDB 558074 D01 v05r02					
Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.					
Test Setup:	Spectrum Analyzer EUT					
Test Mode:	Transmitting mode with modulation					
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): 3 kHz ≤ RBW ≤ 100 kHz. Video bandwidth VBW ≥ 3 x RBW. Set the span to at least 1.5 times the OBW. Detector = RMS, Sweep time = auto couple. Employ trace averaging (RMS) mode over a minimum of 100 traces. Use the peak marker function to determine the maximum power level. Measure and record the results in the test report. 					
Test Result:	PASS					

5.5.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY50101018	Jun. 26, 2025
Test Software	TST Pass		1	1

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5.6. Conducted Band Edge and Spurious Emission Measurement

5.6.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)					
Test Method:	KDB 558074 D01 v05r02					
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).					
Test Setup:	Spectrum Analyzer EUT					
Test Mode:	Transmitting mode with modulation					
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). Measure and record the results in the test report. The RF fundamental frequency should be excluded against the limit line in the operating frequency band. 					
Test Result:	PASS					

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5.6.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY50101018	Jun. 26, 2025
Test Software	TST Pass		1	1



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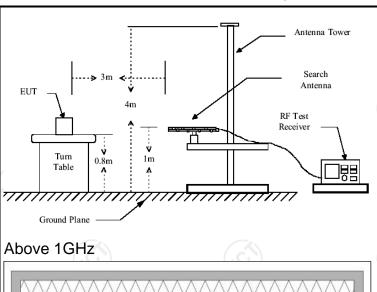


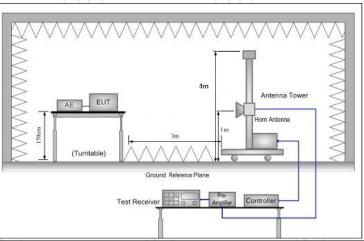
5.7. Radiated Spurious Emission Measurement

5.7.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.209							
Test Method:	ANSI C63.10	0:2020						
Frequency Range:	9 kHz to 25 (GHz				(<		
Measurement Distance:	3 m	3 m						
Antenna Polarization:	Horizontal & Vertical							
Operation mode:	Transmitting mode with modulation							
	Frequency	Detector	RBW	VBW		Remark		
	9kHz- 150kHz	Quasi-pea	k 200Hz	1kHz	Q	uasi-peak Value		
Receiver Setup:	150kHz- 30MHz	Quasi-pea	k 9kHz	30kHz	Q	uasi-peak Value		
·	30MHz-1GHz	Quasi-pea	k 120KHz	300KHz	Q	uasi-peak Value		
		Peak	1MHz	3MHz	Р	eak Value		
	Above 1GHz	Peak	1MHz	10Hz		erage Value		
	Frequer	ncy	Field Str	•	Measurement Distance (meters)			
	0.009-0.4	490	2400/F(300			
	0.490-1.	705	24000/F	(KHz)		30		
	1.705-3		30			30		
	30-88	-	100			3		
1 1 14	88-210		150			3		
Limit:	216-96		200 500			3		
	Above 9	960	500			3		
	II Frequency I		d Strength ovolts/meter)	Measure Distan (mete	се	Detector		
	Above 1GHz		500	3		Average		
	Above IGHZ	2	5000	3		Peak		
Test setup:	For radiated emissions below 30MHz Distance = 3m Computer Pre -Amplifier							
	30MHz to 10		d Plane	_ [Receiver			





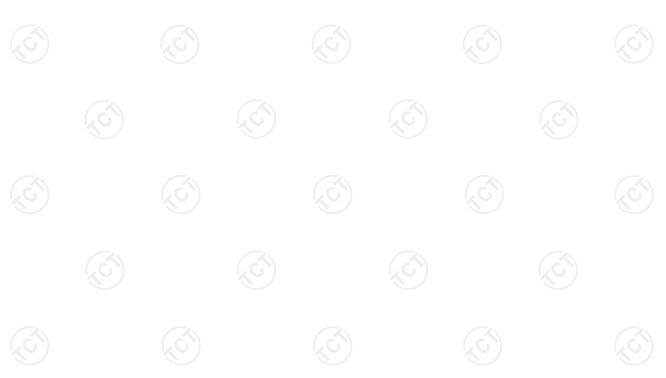


Test Procedure:

1. For the radiated emission test below 1GHz: The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level. For the radiated emission test above 1GHz: Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance. while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which



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	maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 4. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission
	 level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 5. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=120 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
	(3) Set RBW = 1 MHz, VBW= 3MHz for f >1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test results:	PASS





5.7.2. Test Instruments

	Radiated Em	nission Test Site	e (966)	
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI7	100529	Jan. 31, 2025
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025
Pre-amplifier	SKET	LNPA_0118G- 45	SK2021012 102	Jan. 31, 2025
Pre-amplifier	SKET	LNPA_1840G- 50	SK2021092 03500	Jan. 31, 2025
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 2025
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 26, 2025
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 28, 2025
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Feb. 02, 2025
Coaxial cable	SKET	RE-03-D	/	Jun. 26, 2025
Coaxial cable	SKET	RE-03-M	1	Jun. 26, 2025
Coaxial cable	SKET	RE-03-L	1	Jun. 26, 2025
Coaxial cable	SKET	RE-04-D	1	Jun. 26, 2025
Coaxial cable	SKET	RE-04-M	(0)	Jun. 26, 2025
Coaxial cable	SKET	RE-04-L	1	Jun. 26, 2025
Antenna Mast	Keleto	RE-AM	1	
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	

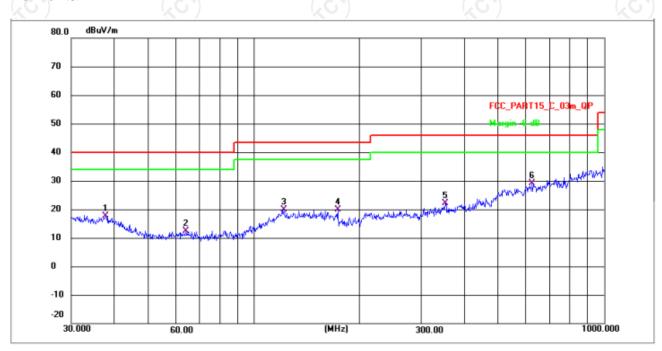




5.7.3. Test Data

Please refer to following diagram for individual Below 1GHz

Horizontal:

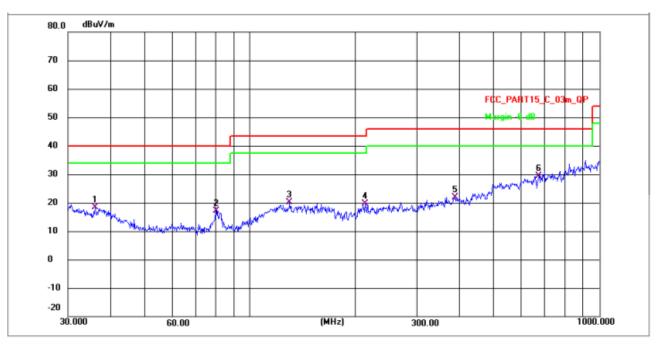


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	37.7459	27.28	-9.65	17.63	40.00	-22.37	QP	Р
2	63.7588	21.73	-9.42	12.31	40.00	-27.69	QP	Р
3	121.7619	42.16	-22.27	19.89	43.50	-23.61	QP	Р
4	173.2051	41.63	-21.79	19.84	43.50	-23.66	QP	Р
5	352.3251	42.43	-20.21	22.22	46.00	-23.78	QP	Р
6 *	622.8900	47.33	-18.17	29.16	46.00	-16.84	QP	Р





Vertical:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	35.9376	28.02	-9.66	18.36	40.00	-21.64	QP	Р
2	80.0806	26.45	-9.26	17.19	40.00	-22.81	QP	Р
3	129.6950	33.69	-13.48	20.21	43.50	-23.29	QP	Р
4	213.0151	34.15	-14.42	19.73	43.50	-23.77	QP	Р
5	387.3123	34.63	-12.72	21.91	46.00	-24.09	QP	Р
6 *	671.6658	47.07	-17.81	29.26	46.00	-16.74	QP	Р

Note: 1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported

- 2. Measurements were conducted in all three channels (high, middle, low) and all modulation (802.11b, 802.11g, 802.11n(HT20)) and the worst case Mode (Highest channel and 802.11g) was submitted only.
- 3. Freq. = Emission frequency in MHz

Measurement $(dB\mu V/m) = Reading level (dB\mu V) + Corr. Factor (dB)$

Correction Factor= Antenna Factor + Cable loss - Pre-amplifier

 $Limit (dB\mu V/m) = Limit stated in standard$

 $Margin (dB) = Measurement (dB\mu V/m) - Limits (dB\mu V/m)$

* is meaning the worst frequency has been tested in the test frequency range.



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Test Result of Radiated Spurious at Band edges

			est Mode: 80	, ,			
	Test Cha	nnel: Lo	west channe	I, Test Polar	ization: Ve	rtical	
Frequency	Reading	Factor	Level	Limit	Marging	Detector	Result
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
2310	69.06	-16.45	52.61	74	-21.39	Peak	Pass
2390	67.94	-15.86	52.08	74	-21.92	Peak	Pass
2400	69.07	-15.82	53.25	74	-20.75	Peak	Pass
	Test Chan	nel: Low	est channel,	Test Polariz	ation: Hori	zontal	
Frequency	Reading	Factor	Level	Limit	Marging	Detector	Result
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
2310	69.38	-16.45	52.93	74	-21.07	Peak	Pass
2390	68.26	-15.86	52.40	74	-21.60	Peak	Pass
2400	69.39	-15.82	53.57	74	-20.43	Peak	Pass
	Test Chai	nnel: Hig	hest channe	l, Test Polar	ization: Ve	rtical	
Frequency	Reading	Factor	Level	Limit	Marging	Detector	Result
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
2483.5	70.44	-16.60	53.84	74	-20.16	Peak	Pass
2500	68.72	-16.45	52.27	74	-21.73	Peak	Pass
	Test Chani	nel: High	est channel,	Test Polariz	ation: Hor	izontal	
Frequency	Reading	Factor	Level	Limit	Marging	Detector	Result
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	(dB)	
2483.5	70.26	-16.60	53.66	74	-20.34	Peak	Pass
2500	68.33	-16.45	51.88	74	-22.12	Peak	Pass

Note:

- 1. Peak Final Emission Level=Peak Reading + Correction Factor;
- 2. Correction Factor= Antenna Factor + Cable loss Pre-amplifier
- 3. Measurements were conducted in all two channels (high, low) and all modulation (802.11b, 802.11g, 802.11n(HT20)) and the worst case Mode 802.11n(HT20) was submitted only.



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Above 1GHz Modulation Type: 802.11b

	Low channel: 2412 MHz											
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emissic Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)			
4824	Н	59.87)	-9.48	50.39		74	54	-3.61			
7236	Ι	50.89		-1.34	49.55		74	54	-4.45			
	Η											
4824	V	59.96	(-9.48	50.48	<u> </u>	74	54	-3.52			
7236	V	52.10	(-1.34	50.76)	74	54	-3.24			
	V											

				Middle char	nnel: 2437M	Hz			
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4874	Н	60.95		-9.37	51.58		74	54	-2.42
7311	(,H)	51.33	(-1.17	50.16	.c'\ }	74	54	-3.84
	H		(<u> </u>		<u></u>		<u></u>	
4874	V	58.84		-9.37	49.47		74	54	-4.53
7311	V	50.85	·	-1.17	49.68		74	54	-4.32
(40)	V	1/20)	&	9)		χO -J-		

	High channel: 2462 MHz											
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)			
4924	Η	59.05		-9.26	49.79		74	54	-4.21			
7386	Ι	50.42		-1.01	49.41		74	54	-4.59			
4-1	Η		\	(\ -					
KO)		KO.		×	9)				KO)			
4924	V	60.94		-9.26	51.68		74	54	-2.32			
7386	V	50.27		-1.01	49.26		74	54	-4.74			
	V											

Note:

- 1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss Pre-amplifier
- 2. $Margin (dB) = Emission Level (Peak) (dB\mu V/m)-Average limit (dB\mu V/m)$
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
- 5. Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.

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Modulation Type: 802.11g

					nel: 2412 MH				
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4824	Н	60.76)	-9.48	51.28		74	54	-2.72
7236	Η	50.35		-1.34	49.01		74	54	-4.99
	Н								
4824	V	61.21	(-9.48	51.73		74	54	-2.27
7236	٧	51.45		-1.34	50.11)	74	54	-3.89
	V								

				Middle chai	nnel: 2437M	Hz			
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4874	Н	59.82		-9.37	50.45		74	54	-3.55
7311	(H)	51.16	(-1.17	49.99	· C }	74	54	-4.01
	H		<	<u> </u>		<u></u>		2.2	
4874	V	57.92		-9.37	48.55		74	54	-5.45
7311	V	49.54		-1.17	48.37		74	54	-5.63
(<u> </u>	V	1/)		9)		ζO -j-		<u> </u>

	High channel: 2462 MHz												
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emissic Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)				
4924	Н	58.55		-9.26	49.29		74	54	-4.71				
7386	Η	49.53		-1.01	48.52		74	54	-5.48				
4	Η			(
KO)				X)		(0)		KO)				
4924	V	60.35		-9.26	51.09		74	54	-2.91				
7386	V	50.58		-1.01	49.57		74	54	-4.43				
	V												

Note:

- 1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss Pre-amplifier
- 2. Margin (dB) = Emission Level (Peak) (dB μ V/m)-Average limit (dB μ V/m)
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
- 5. Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.





Modulation Type: 802.11n(HT20)

	Low channel: 2412 MHz												
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)				
4824	Н	59.69)	-9.48	50.21		74	54	-3.79				
7236	Ι	49.62		-1.34	48.28		74	54	-5.72				
	Н												
4824	V	59.50	(-9.48	50.02	(C) }	74	54	-3.98				
7236	V	49.47	(-1.34	48.13)	74	54	-5.87				
	V												

				Middle char	nnel: 2437M	Hz			
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4874	Н	59.41		-9.37	50.04		74	54	-3.96
7311	(H)	49.85	(-1.17	48.68	· C \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	74	54	-5.32
			7	<u> </u>		<u></u>			
4874	V	58.03		-9.37	43.38		74	54	-10.62
7311	V	49.49		-1.17	43.04		74	54	-10.96
(Q)	V)	🐰	9)		ζO -j-		(<u>L</u>

High channel: 2462 MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Emission Peak (dBµV/m)	AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4924	Н	59.31		-9.26	50.05		74	54	-3.95
7386	Ι	51.3		-1.01	50.29		74	54	-3.71
44	Ι			(
KO)		XO		K)		(0)		KO)
4924	V	58.97		-9.26	49.71		74	54	-4.29
7386	V	50.35		-1.01	49.34		74	54	-4.66
	V								

Note:

- 1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss Pre-amplifier
- 2. Margin (dB) = Emission Level (Peak) (dB μ V/m)-Average limit (dB μ V/m)
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 25GHz.
- 5. Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.





Appendix A: Test Result of Conducted Test

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

				Α	int1		
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
		2412	8.385	8.510	98.53	0.06	1.03
802.11b	SISO	2437	8.385	8.473	98.96	0.05	0.74
		2462	8.385	8.473	98.96	0.05	0.59
		2412	1.394	1.445	96.47	0.16	1.18
802.11g	SISO	2437	1.393	1.444	96.47	0.16	1.30
		2462	1.392	1.481	93.99	0.27	3.71
000 115		2412	1.300	1.352	96.15	0.17	1.43
802.11n (HT20)	SISO	2437	1.310	1.360	96.32	0.16	1.95
		2462	1.312	1.399	93.78	0.28	4.43

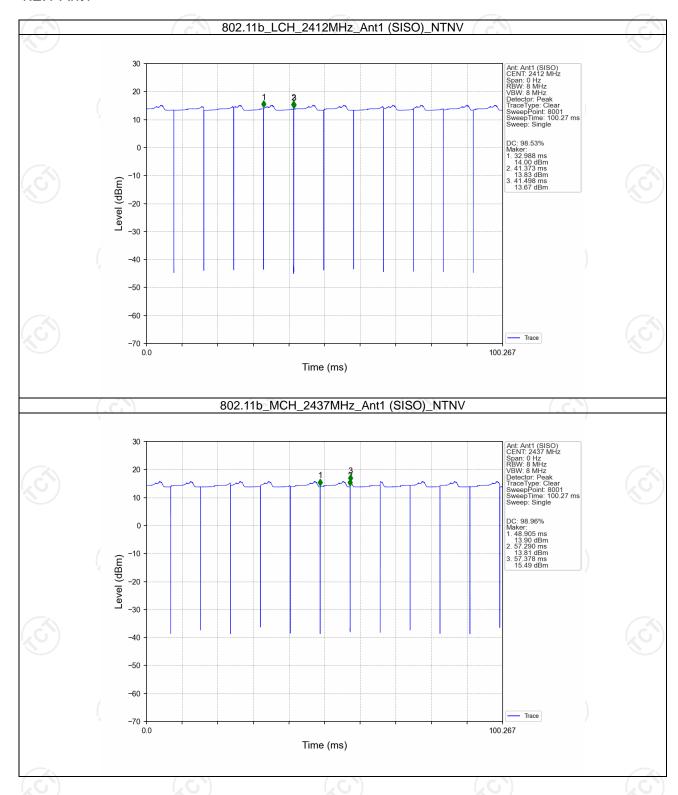


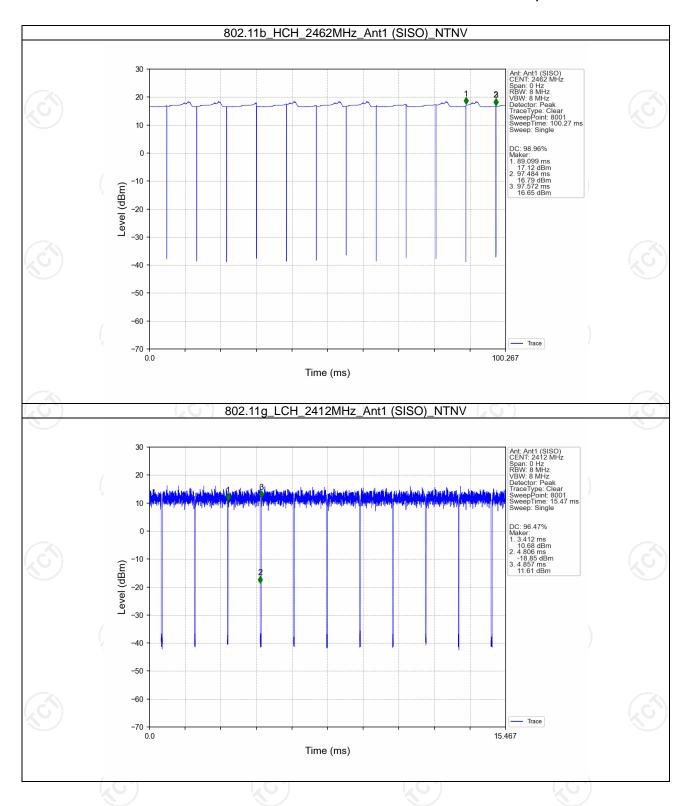
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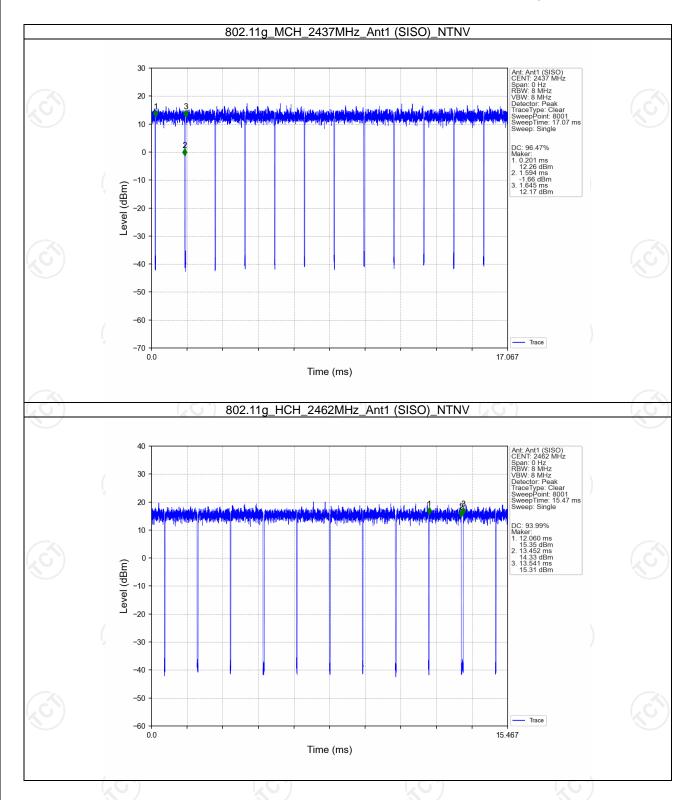


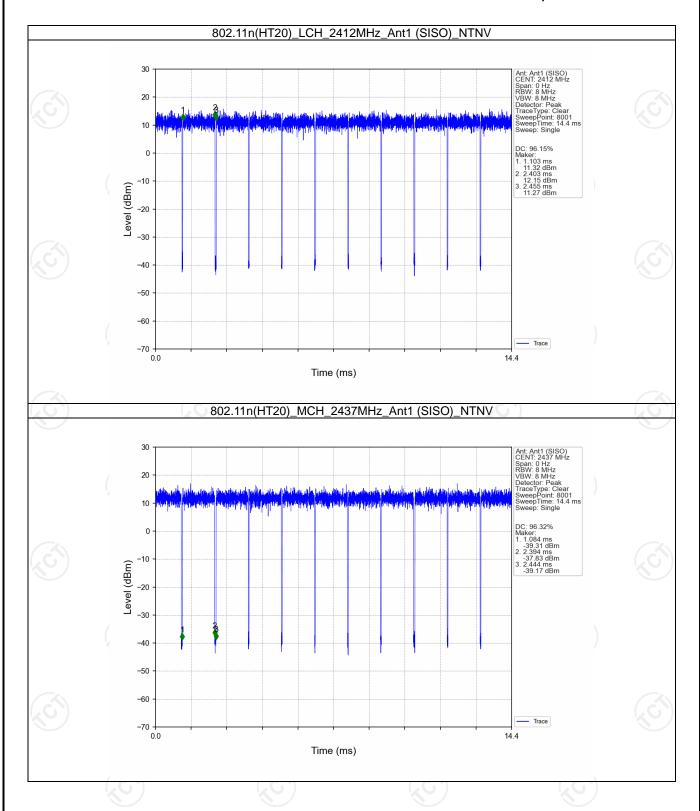
1.2 Test Graph

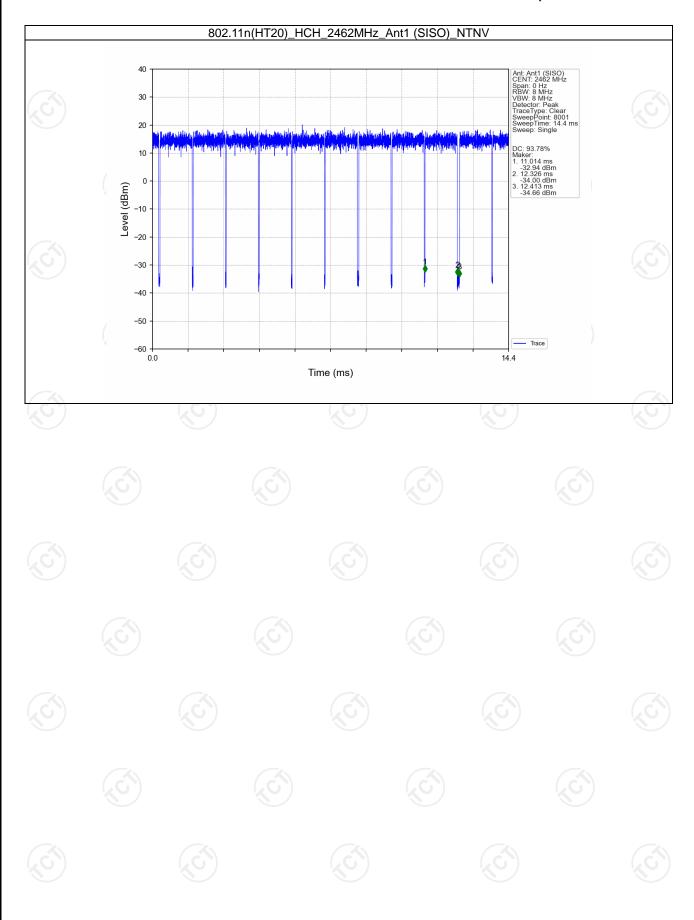
1.2.1 Ant1













2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX	Frequency	ANIT	99% Occupie	\/a ==!:a4	
	Type	(MHz)	ANT	Result	Limit	Verdict
802.11b	10	2412	1	11.326	/ 20	Pass
	SISO	2437	1	11.933	/	Pass
		2462	1	11.848	/	Pass
802.11g	SISO	2412	1	17.799	/	Pass
		2437	1	18.427		Pass
		2462	1 20	18.095		Pass
802.11n (HT20)	SISO	2412	1	18.509	1	Pass
		2437	1	19.184	/	Pass
		2462	1	18.879	/	Pass

2.1.2 6dB BW

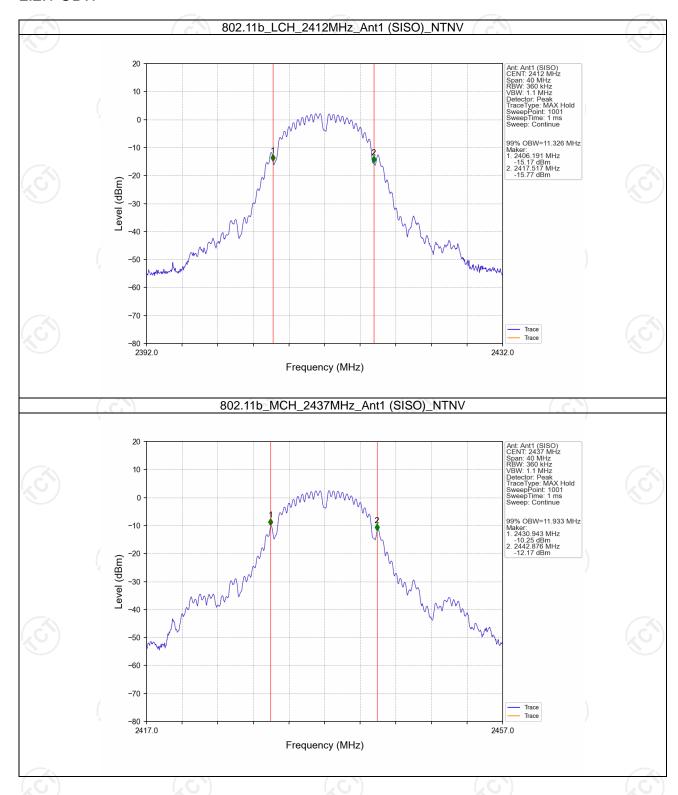
Mada	TX	Frequency	ANT	6dB Bandwidth (MHz)		\/a ndi at	
Mode	Type	(MHz)	ANI	Result Limit		Verdict	
802.11b		2412	1.	8.274	>=0.5	Pass	
	SISO	2437	1	8.727	>=0.5	Pass	
		2462	1	8.665	>=0.5	Pass	
802.11g	SISO	2412	1	16.258	>=0.5	Pass	
		2437	1	16.994	>=0.5	Pass	
		2462	1	16.554	>=0.5	Pass	
802.11n (HT20)	SISO	2412	1	17.478	>=0.5	Pass	
		2437	1	17.942	>=0.5	Pass	
		2462	1	17.713	>=0.5	Pass	

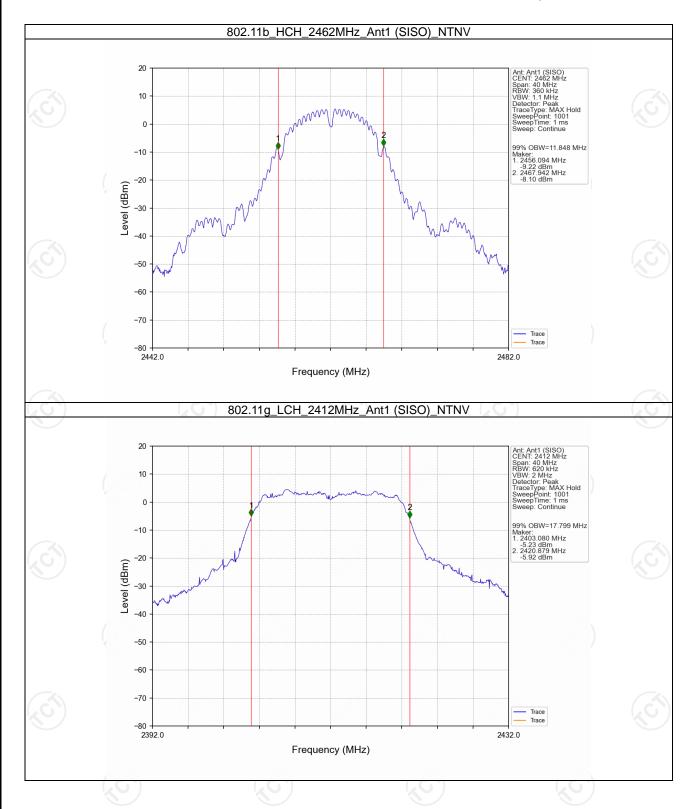


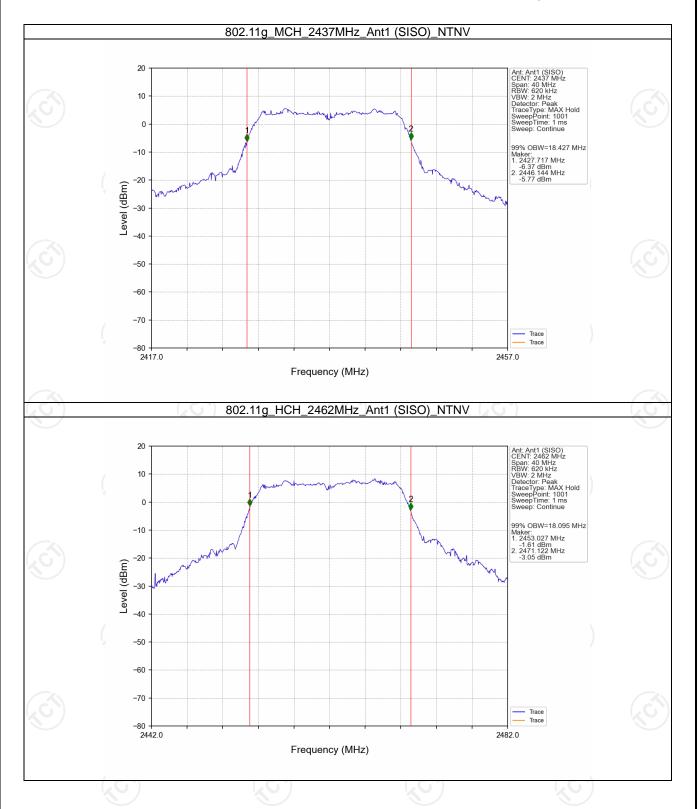


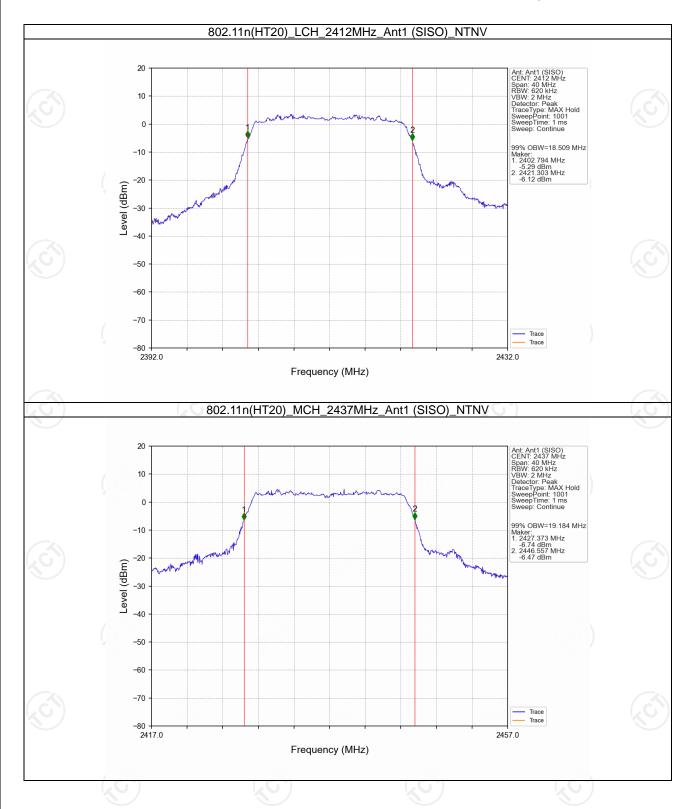
2.2 Test Graph

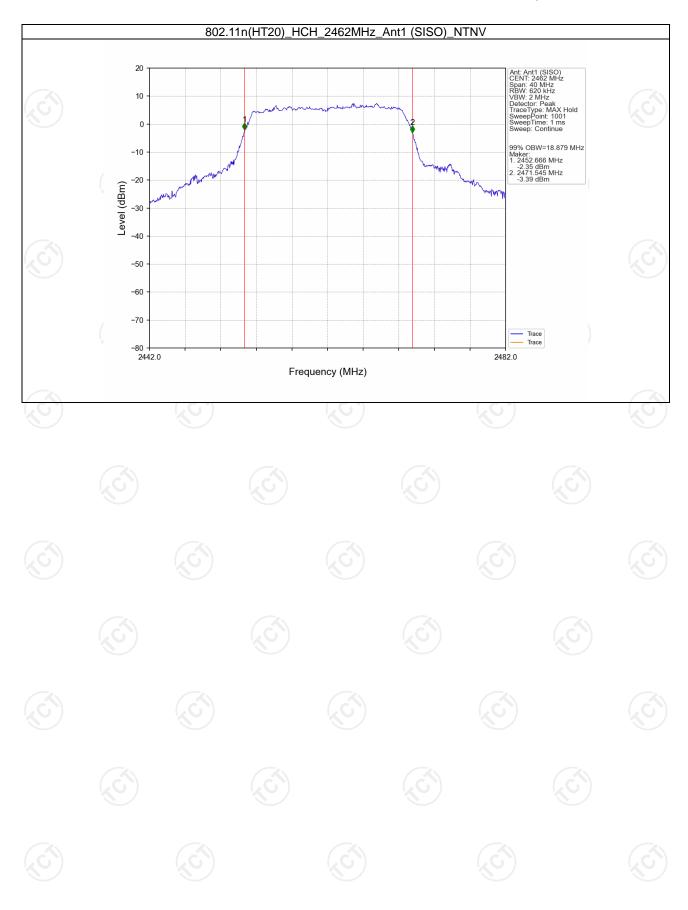
2.2.1 OBW







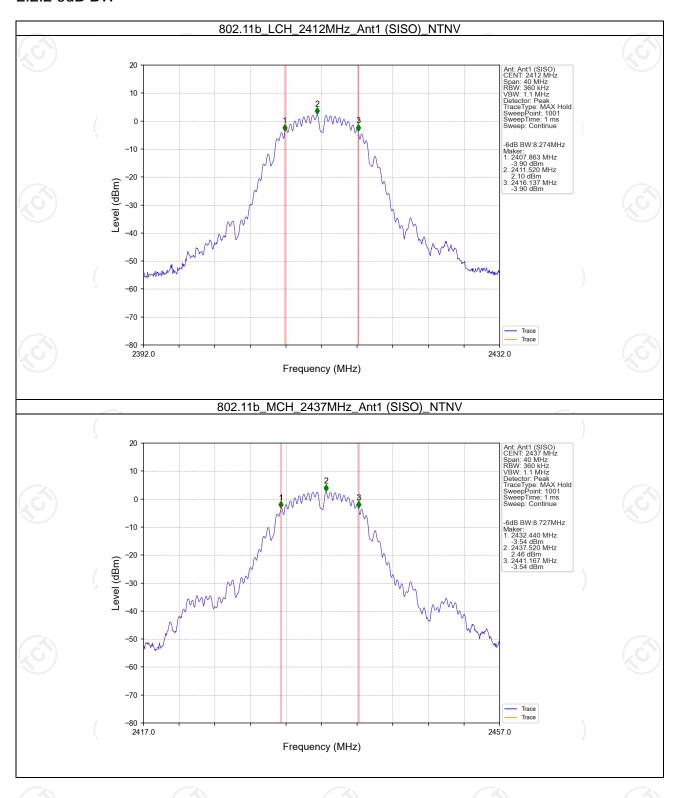


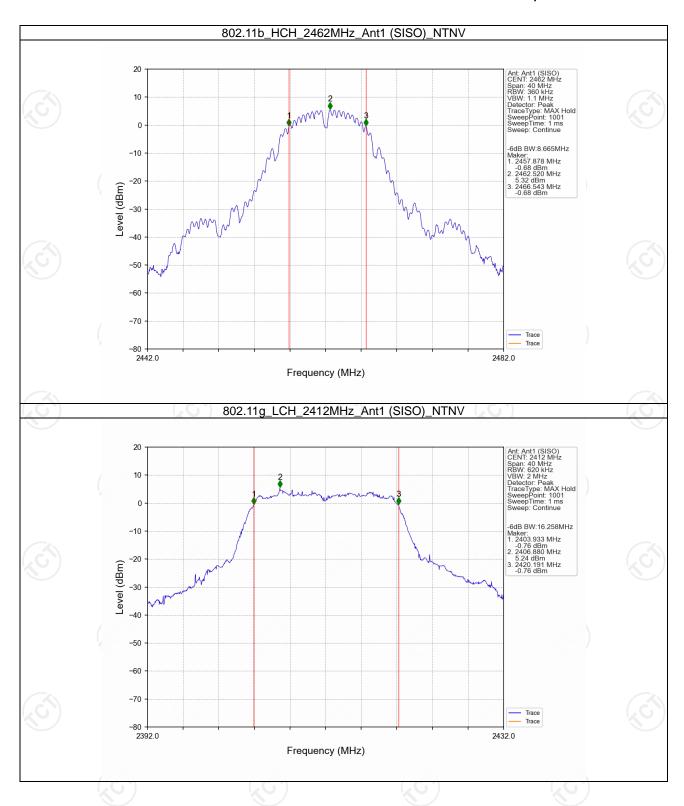


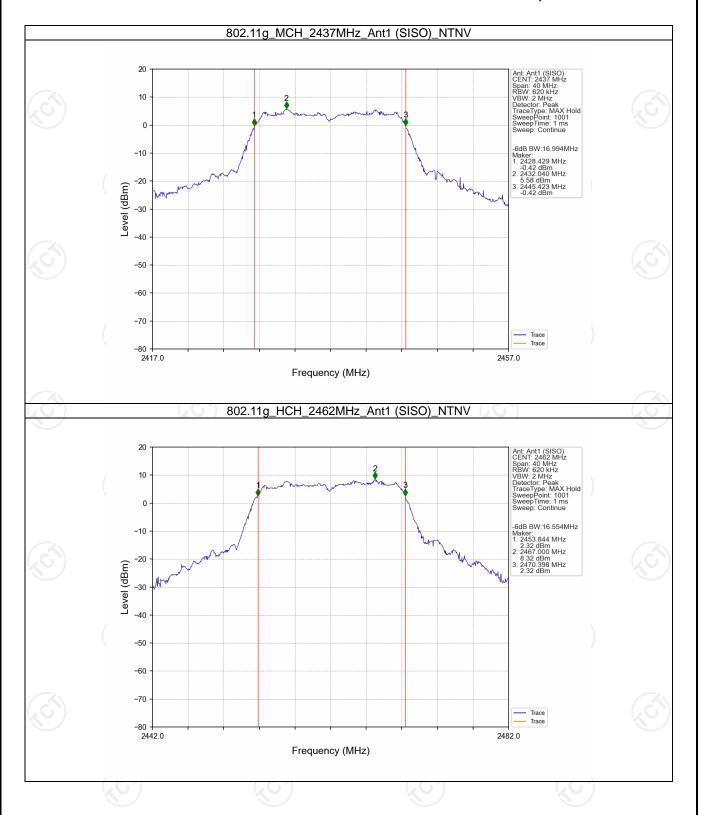


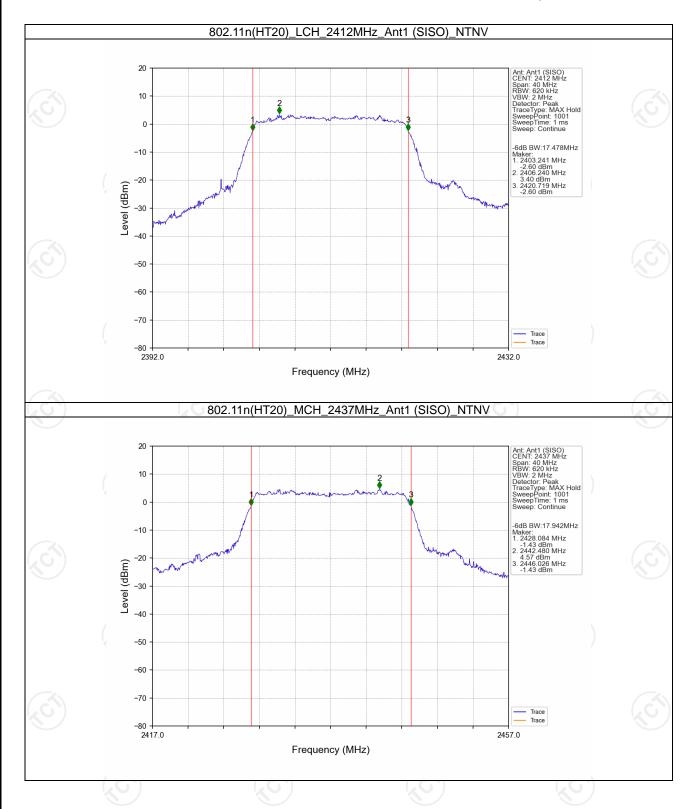


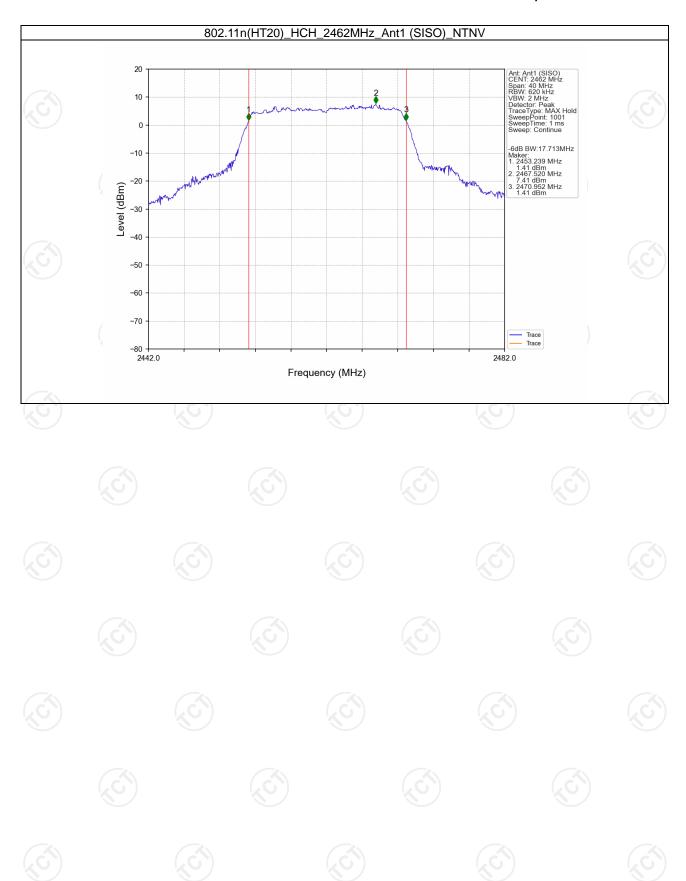
2.2.2 6dB BW













3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

TX	Frequency	Maximum Average Conducted	\/a ndiat		
Type	(MHz)	ANT1	Limit	Verdict	
(0)	2412	10.00	<=30	Pass	
SISO	2437	10.56	<=30	Pass	
	2462	13.28	<=30	Pass	
	2412	9.65	<=30	Pass	
SISO	2437	10.93	<=30	Pass	
	2462	13.49	<=30	Pass	
SISO	2412	9.04	<=30	Pass	
	2437	10.25	<=30	Pass	
	2462	12.81	<=30	Pass	
	Type SISO SISO	Type (MHz) 2412 SISO 2437 2462 SISO 2437 2462 2412 SISO 2437	Type (MHz) ANT1 2412 10.00 SISO 2437 10.56 2462 13.28 2412 9.65 SISO 2437 10.93 2462 13.49 2412 9.04 SISO 2437 10.25	Type (MHz) ANT1 Limit 2412 10.00 <=30 SISO 2437 10.56 <=30 2462 13.28 <=30 SISO 2437 10.93 <=30 2412 9.65 <=30 2412 9.65 <=30 2412 9.04 <=30 SISO 2437 10.25 <=30	

4. Maximum Power Spectral Density

4.1 Test Result

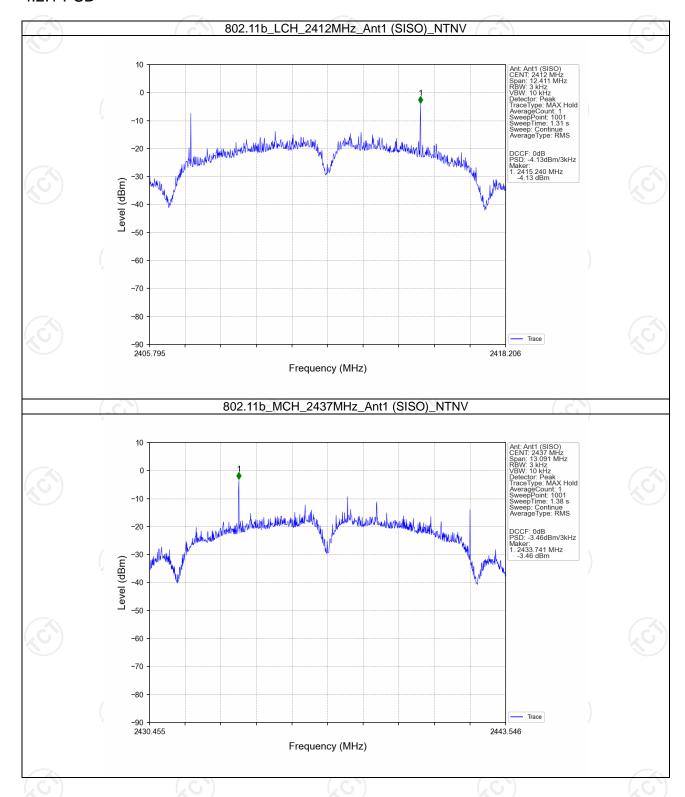
4.1.1 PSD

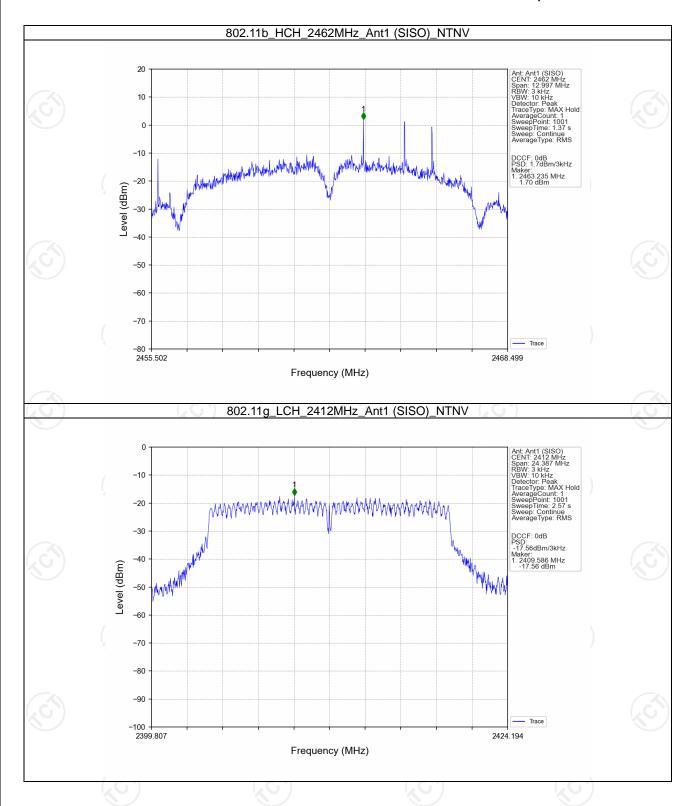
Mode	TX Type	Frequency	Maximum PSD (dBm/3kHz)		\/a nali a4
		(MHz)	ANT1	Limit	Verdict
802.11b	SISO	2412	-4.13	<=8	Pass
		2437	-3.46	<=8	Pass
		2462	1.70	<=8	Pass
802.11g	SISO	2412	-17.56	<=8	Pass
		2437	-14.98	<=8	Pass
		2462	-14.23	<=8	Pass
802.11n (HT20)	SISO	2412	-17.94	<=8	Pass
		2437	-17.37	<=8	Pass
		2462	-14.39	<=8	Pass
Note1: Antenna Gai	n: Ant1: -3.21dBi;				

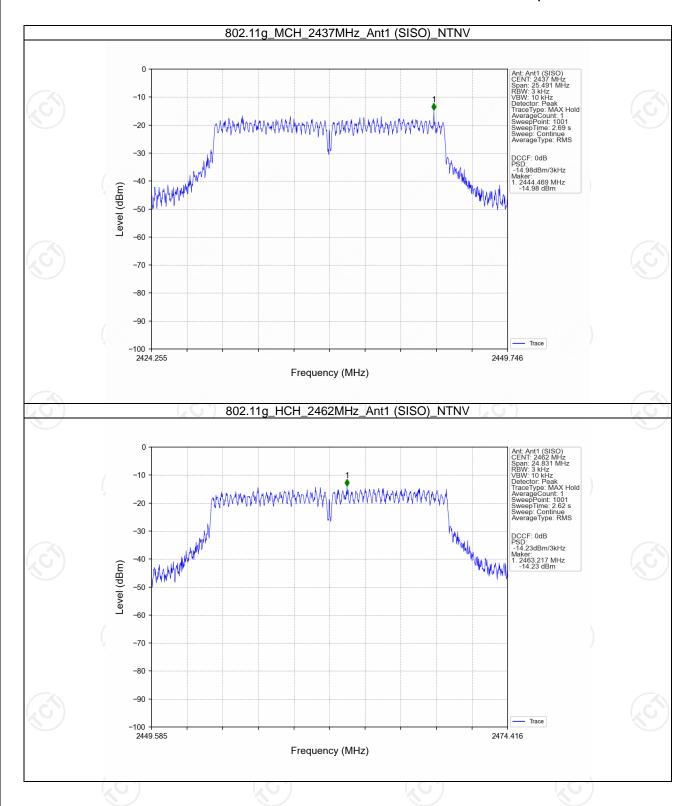


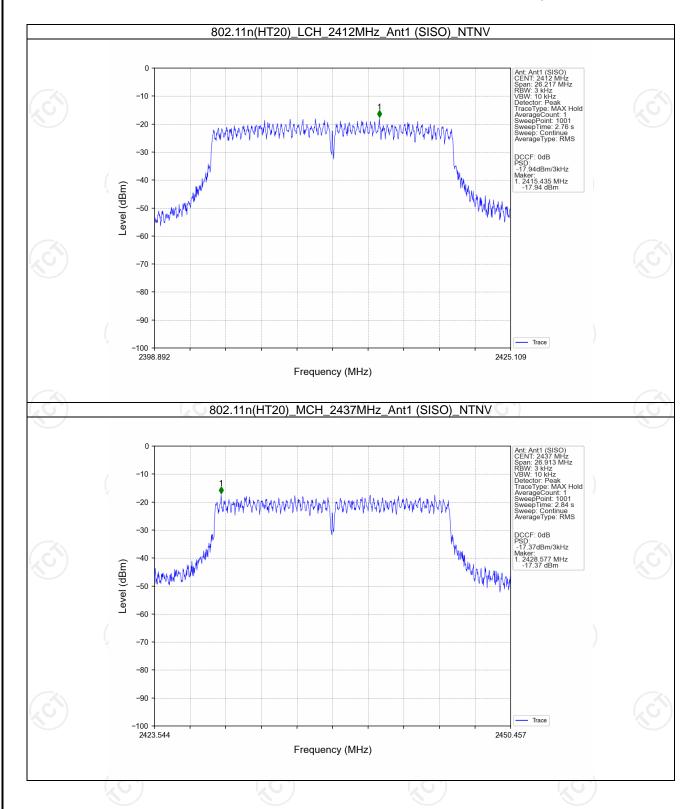
4.2 Test Graph

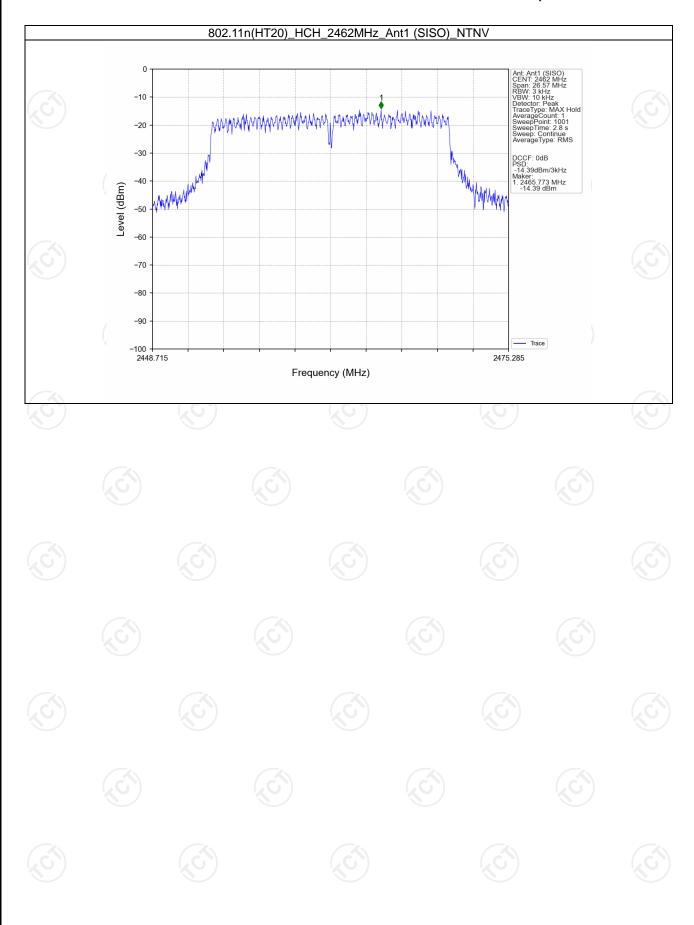
4.2.1 PSD













5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode TX Type		Frequency (MHz) ANT		Level of Reference (dBm)	
(0)		2412	χO1)	0.84	
802.11b	SISO	2437	1	1.18	
		2462	1	4.46	
		2412	1	-1.38	
802.11g	SISO	2437	1	-0.29	
		2462	1	2.81	
802.11n		2412	1	-1.70	
	SISO	2437	1	-0.94	
(HT20)		2462	1	2.05	

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b		2412	1	4.46	-25.54	Pass
	SISO	2437	1	4.46	-25.54	Pass
		2462	1	4.46	-25.54	Pass
802.11g	SISO	2412	1	2.81	-27.19	Pass
		2437	1	2.81	-27.19	Pass
		2462	1	2.81	-27.19	Pass
802.11n (HT20)	SISO	2412	1	2.05	-27.95	Pass
		2437	1	2.05	-27.95	Pass
		2462	1	2.05	-27.95	Pass

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.



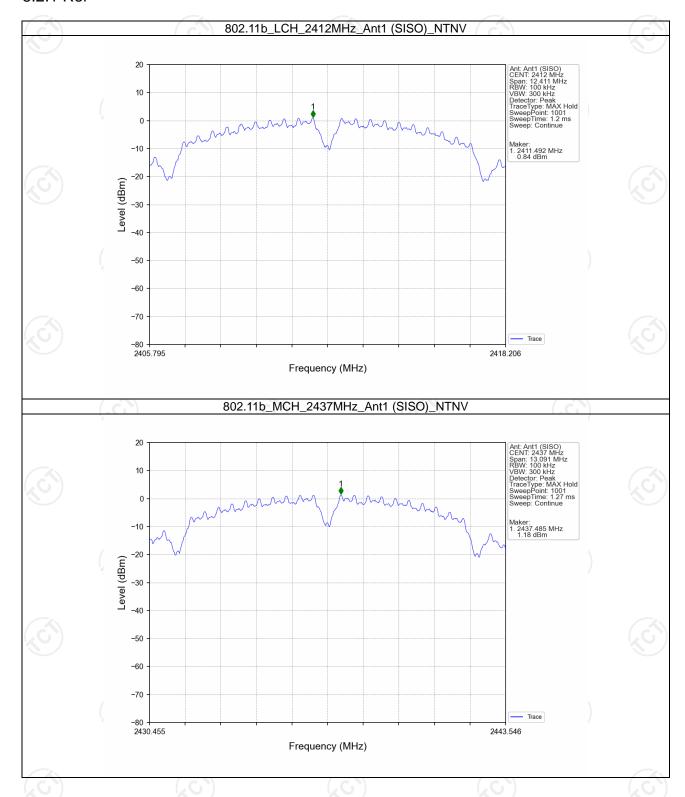
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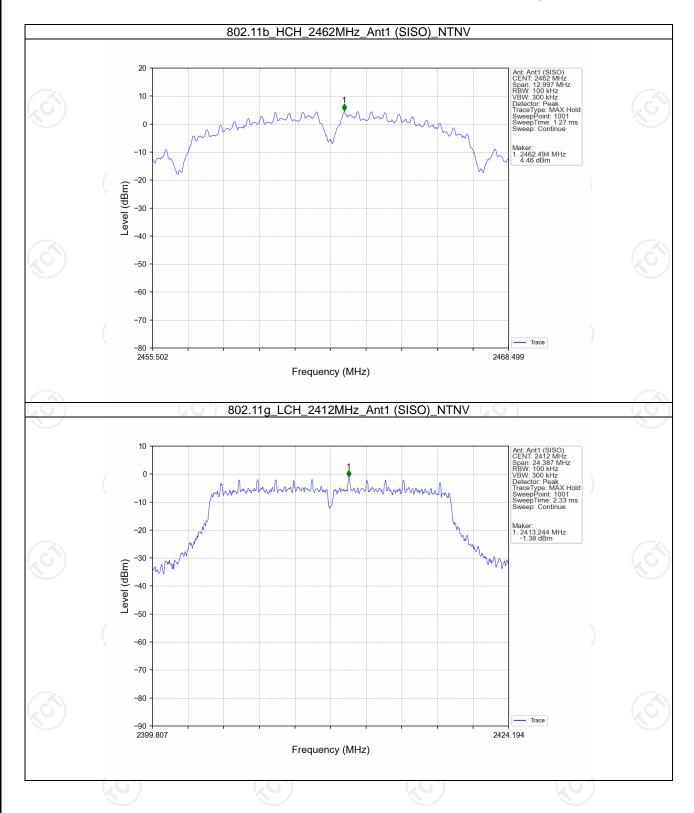
Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

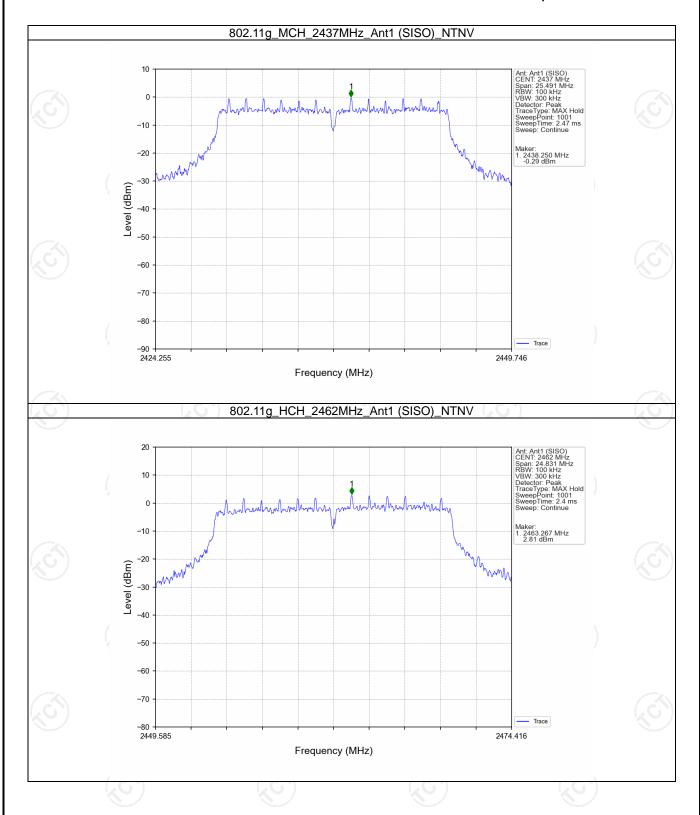


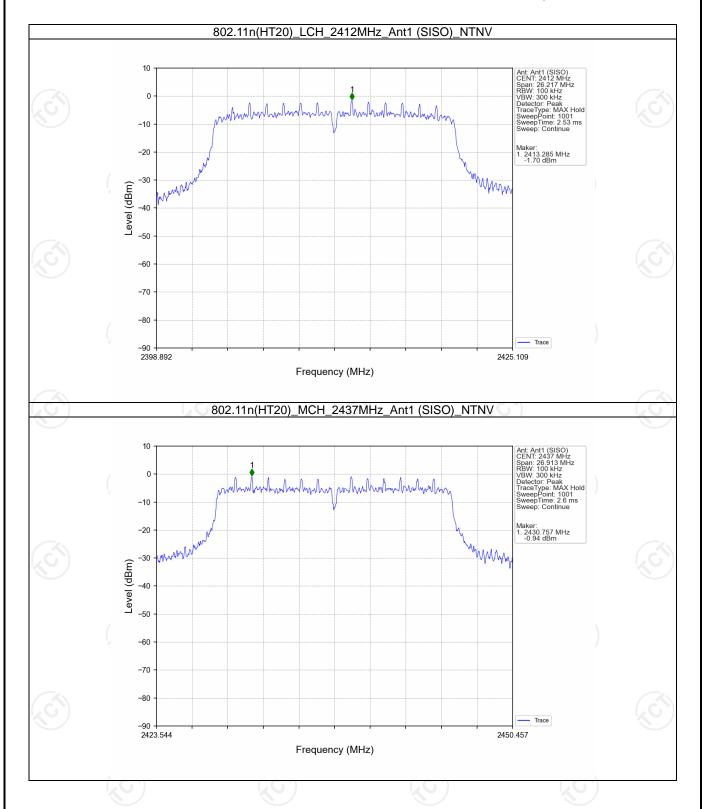
5.2 Test Graph

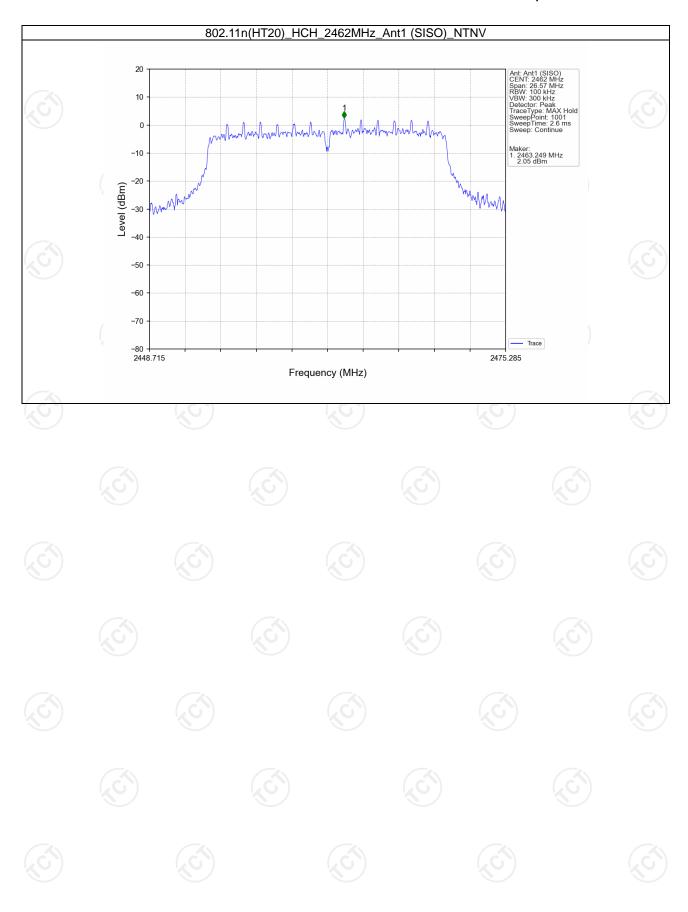
5.2.1 Ref







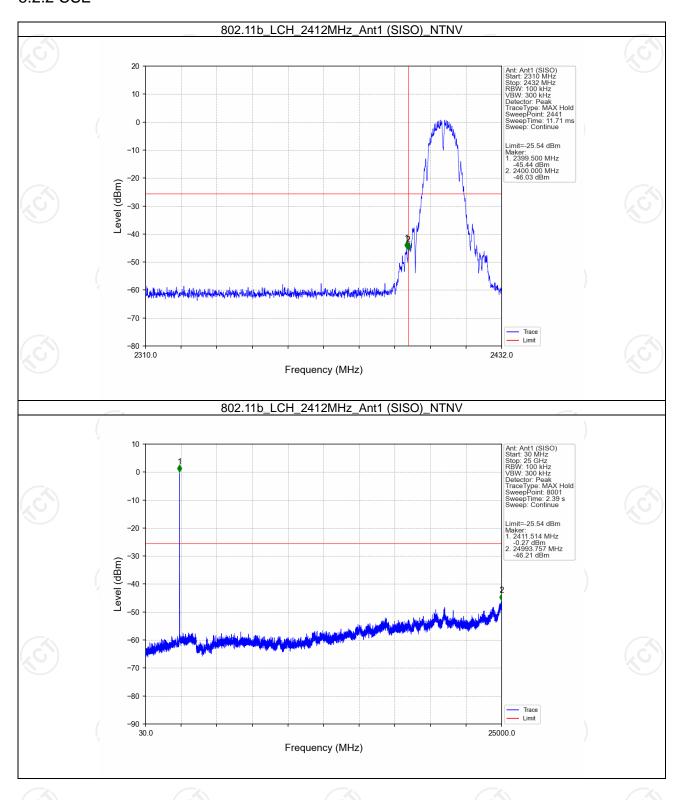


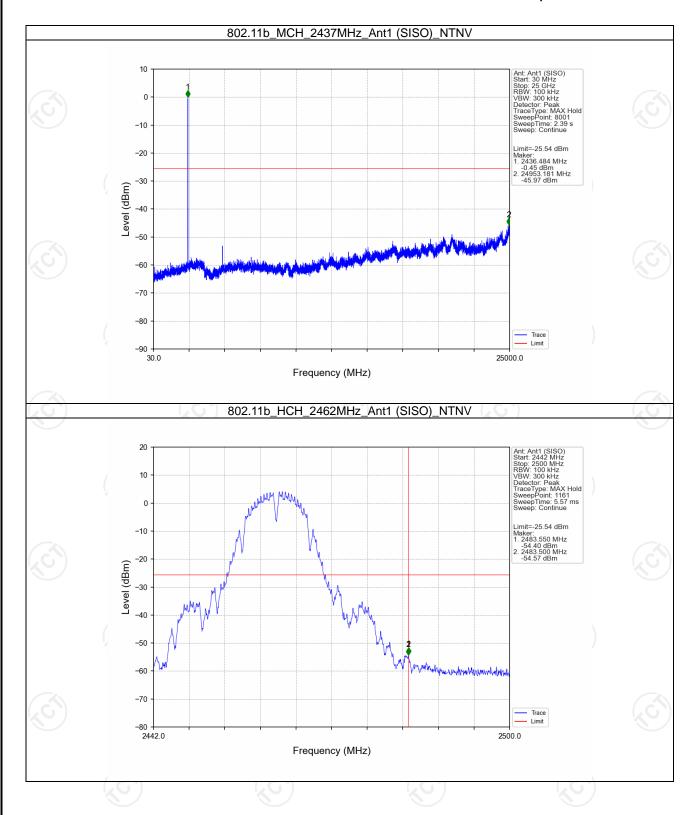


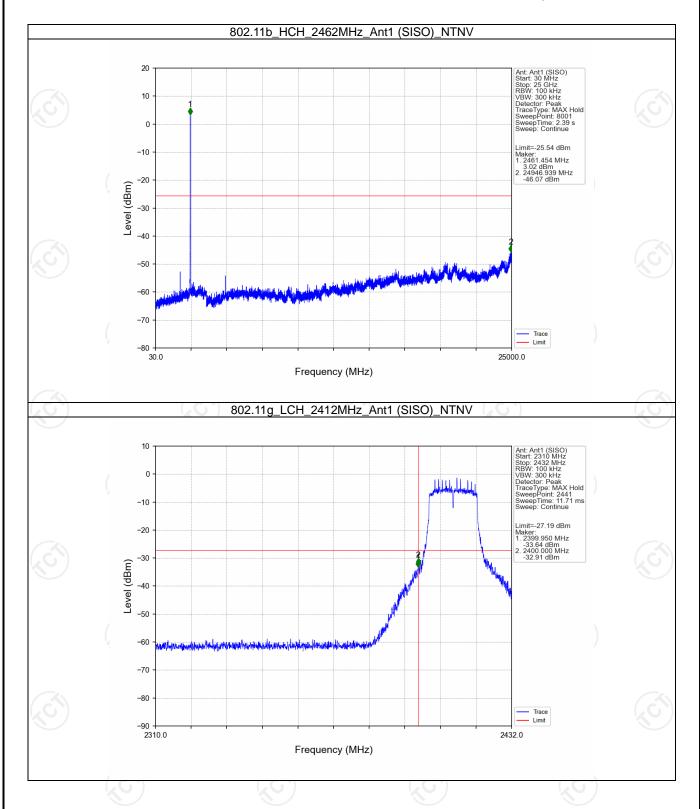


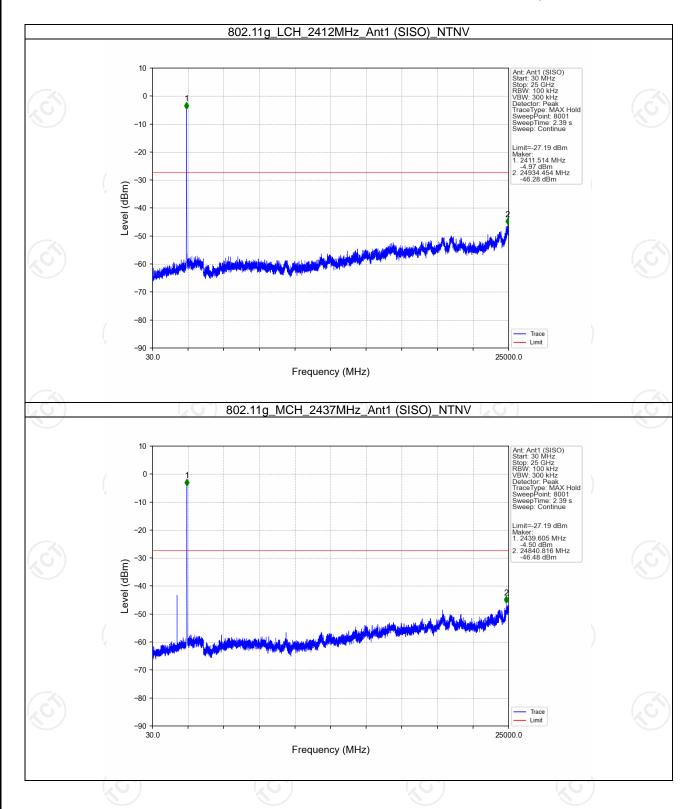


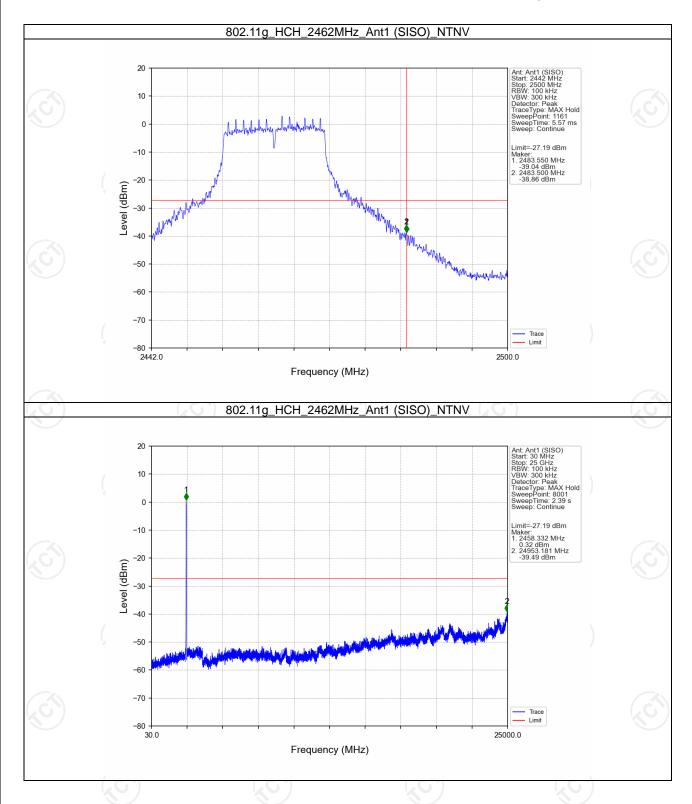
5.2.2 CSE

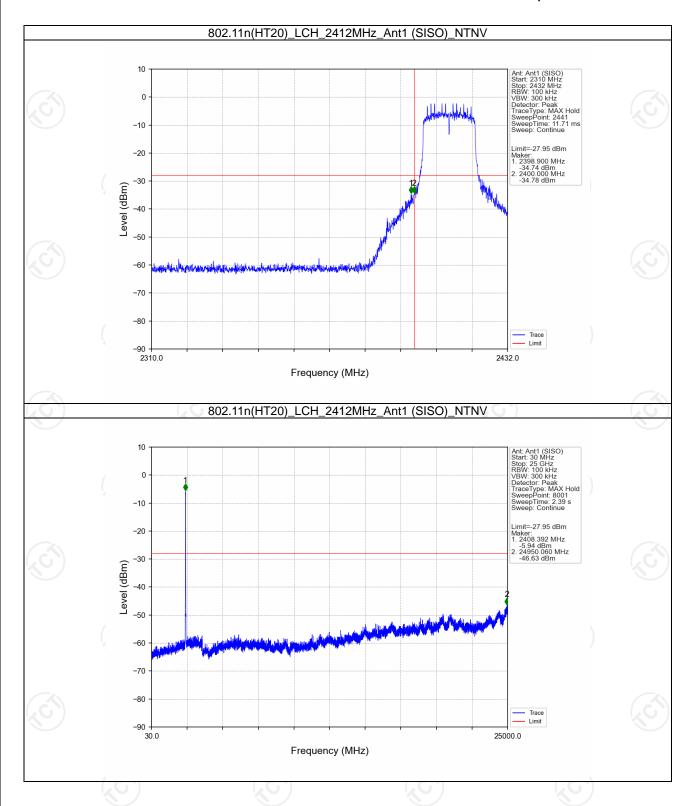


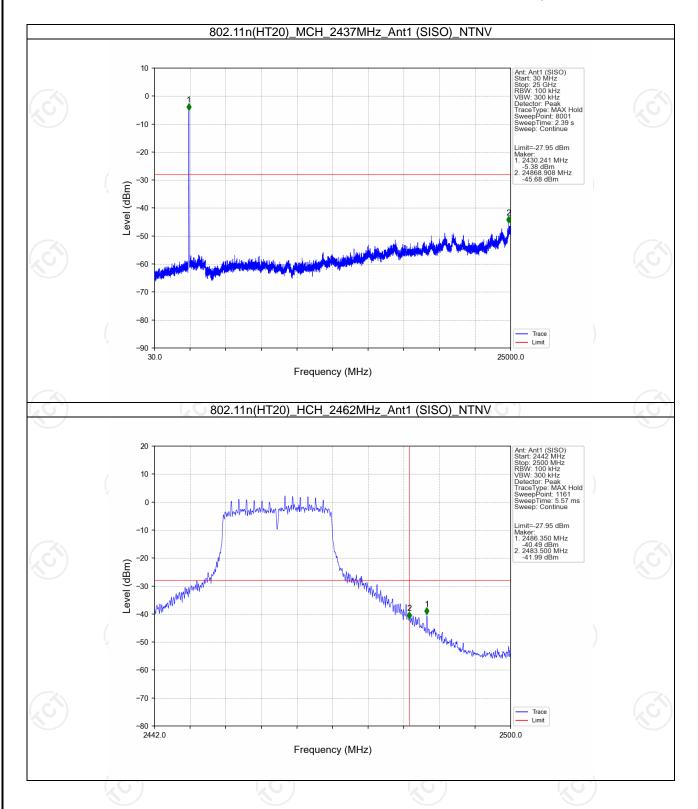


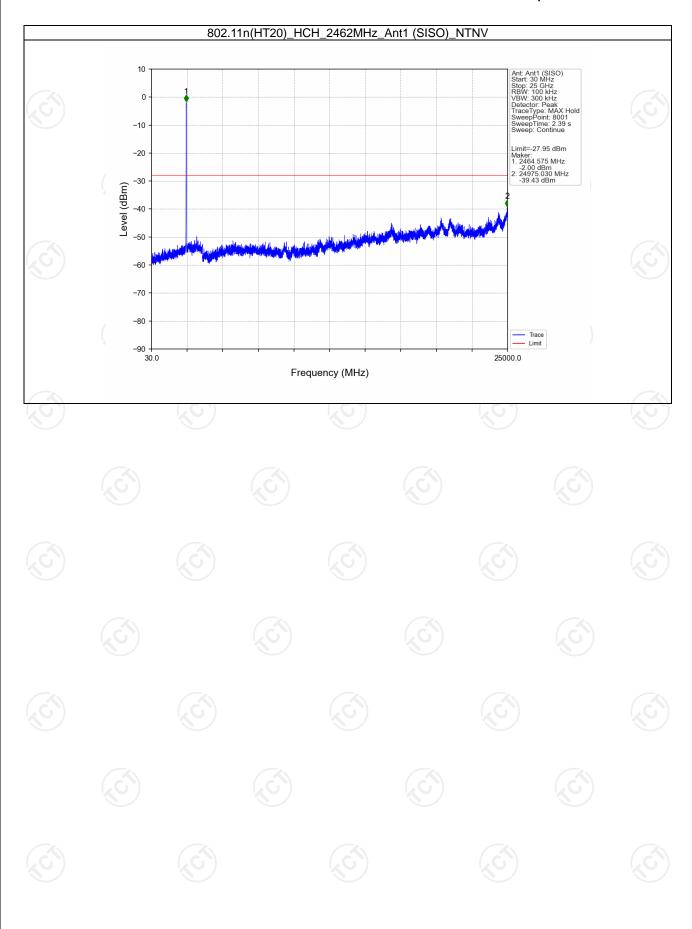














Appendix B: Photographs of Test Setup

Please refer to document Appendix No.: TCT241031E009-A

Appendix C: Photographs of EUT

Please refer to document Appendix No.: TCT241031E009-B & TCT241031E009-C

