

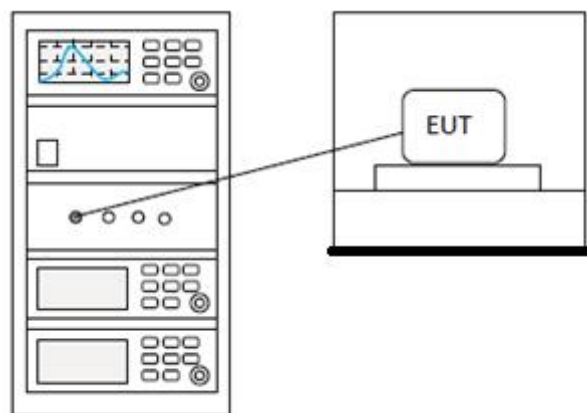
## 14 CONDUCTED BAND EDGES MEASUREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	William
Temperature	25°C
Humidity	60%

### 14.1 LIMITS

<b>Limit:</b>	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).
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### 14.2 BLOCK DIAGRAM OF TEST SETUP



### 14.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

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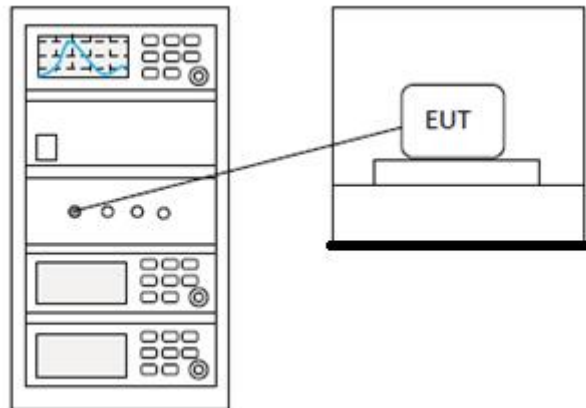
## 15 MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.8.1
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	William
Temperature	25°C
Humidity	60%

### 15.1 LIMITS

Limit:	≥500 kHz
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### 15.2 BLOCK DIAGRAM OF TEST SETUP



### 15.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

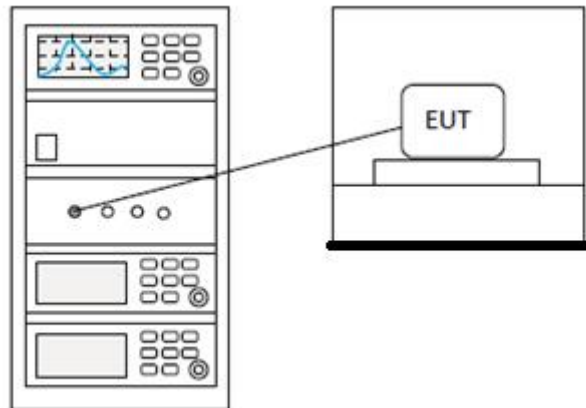
## 16 POWER SPECTRUM DENSITY

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.10.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	William
Temperature	25°C
Humidity	60%

### 16.1 LIMITS

**Limit:**  $\leq 8\text{dBm}$  in any 3 kHz band during any time interval of continuous transmission

### 16.2 BLOCK DIAGRAM OF TEST SETUP



### 16.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

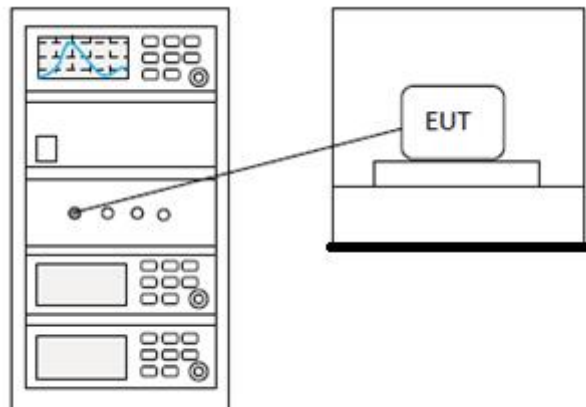
## 17 CONDUCTED PEAK OUTPUT POWER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.5 & Section 11.9.1
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	William
Temperature	25°C
Humidity	60%

### 17.1 LIMITS

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for $\geq 50$ hopping channels
	0.25 for $25 \leq$ hopping channels $< 50$
	1 for digital modulation
2400-2483.5	1 for $\geq 75$ non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

### 17.2 BLOCK DIAGRAM OF TEST SETUP



### 17.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

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## 18 CONDUCTED EMISSIONS AT AC POWER LINE (150KHZ-30MHZ)

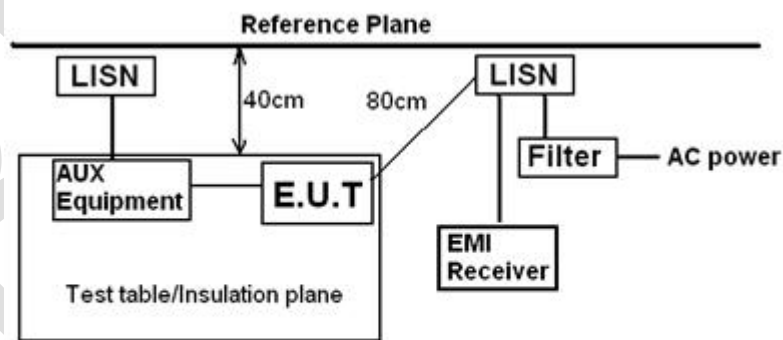
<b>Test Standard</b>	47 CFR Part 15, Subpart C 15.247
<b>Test Method</b>	ANSI C63.10 (2013) Section 6.2
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX
<b>Tester</b>	William
<b>Temperature</b>	25°C
<b>Humidity</b>	60%

### 18.1 LIMITS

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

### 18.2 BLOCK DIAGRAM OF TEST SETUP



Remark:  
 E.U.T: Equipment Under Test  
 LISN: Line Impedance Stabilization Network  
 Test table height=0.8m

### 18.3 PROCEDURE

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

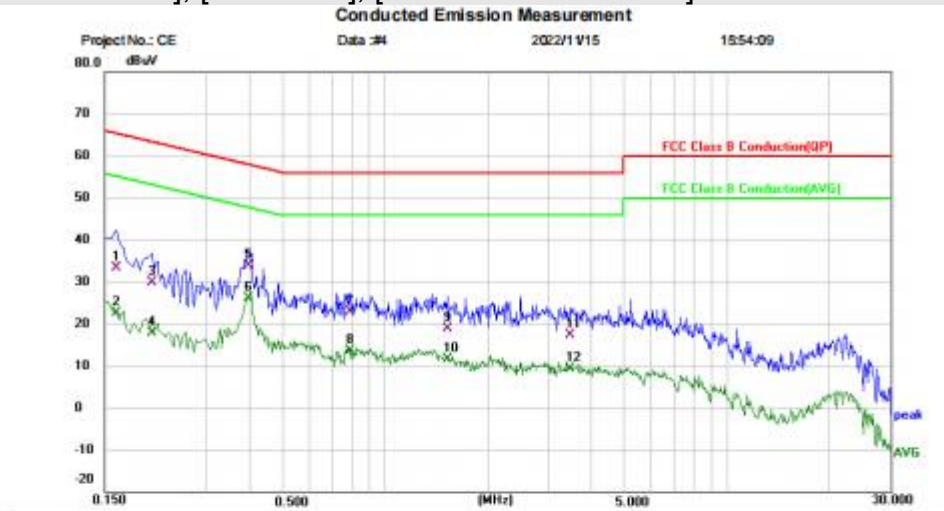
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
  - 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
  - 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.
- Remark: LISN=Read Level+ Cable Loss+ LISN Factor

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### 18.4 TEST DATA

[TestMode: TX]; [Line: Line]; [Power:AC120V/60Hz]



Site: \_\_\_\_\_ Phase: **L1** Temperature: (C) \_\_\_\_\_  
 Limit: FCC Class B Conduction(QP) Power: \_\_\_\_\_ Humidity: %RH \_\_\_\_\_  
 EUT: Wireless Doorbell  
 M/N: WLTRX-3015  
 Mode: TX Mode  
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1620	32.57	0.77	33.34	65.36	-32.02	QP	
2		0.1620	21.81	0.77	22.58	55.36	-32.78	AVG	
3		0.2060	29.02	0.78	29.80	63.37	-33.57	QP	
4		0.2060	17.17	0.78	17.95	53.37	-35.42	AVG	
5		0.3940	33.52	0.30	33.82	57.98	-24.16	QP	
6	*	0.3940	25.75	0.30	26.05	47.98	-21.93	AVG	
7		0.7900	22.46	0.30	22.76	56.00	-33.24	QP	
8		0.7900	13.25	0.30	13.55	46.00	-32.45	AVG	
9		1.5140	18.60	0.23	18.83	56.00	-37.17	QP	
10		1.5140	11.50	0.23	11.73	46.00	-34.27	AVG	
11		3.4780	17.19	0.29	17.48	56.00	-38.52	QP	
12		3.4780	9.09	0.29	9.38	46.00	-36.62	AVG	

**Test Result: Pass**



## 19 APPENDIX

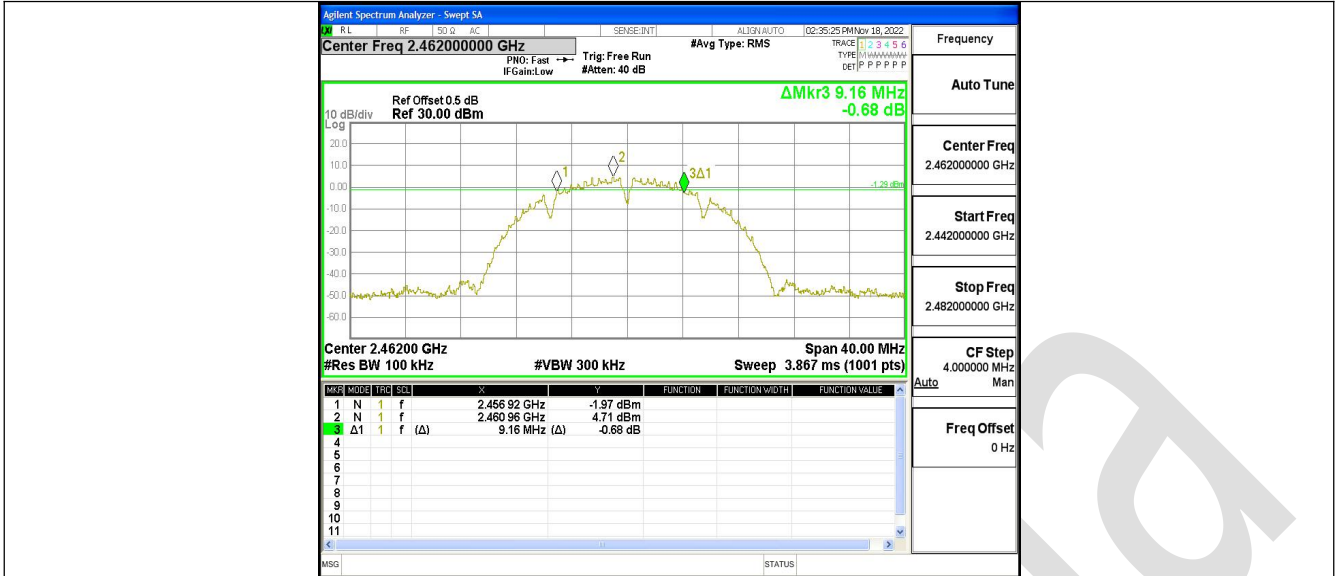
### 19.1 APPENDIX A: DTS BANDWIDTH

#### Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.120	2407.400	2416.520	>=0.5	PASS
		2437	9.640	2432.400	2442.040	>=0.5	PASS
		2462	9.160	2456.920	2466.080	>=0.5	PASS
11G	Ant1	2412	16.440	2403.760	2420.200	>=0.5	PASS
		2437	16.400	2428.800	2445.200	>=0.5	PASS
		2462	16.400	2453.760	2470.160	>=0.5	PASS
11N20SISO	Ant1	2412	17.640	2403.160	2420.800	>=0.5	PASS
		2437	17.280	2428.520	2445.800	>=0.5	PASS
		2462	17.360	2453.160	2470.520	>=0.5	PASS

### Test Graphs

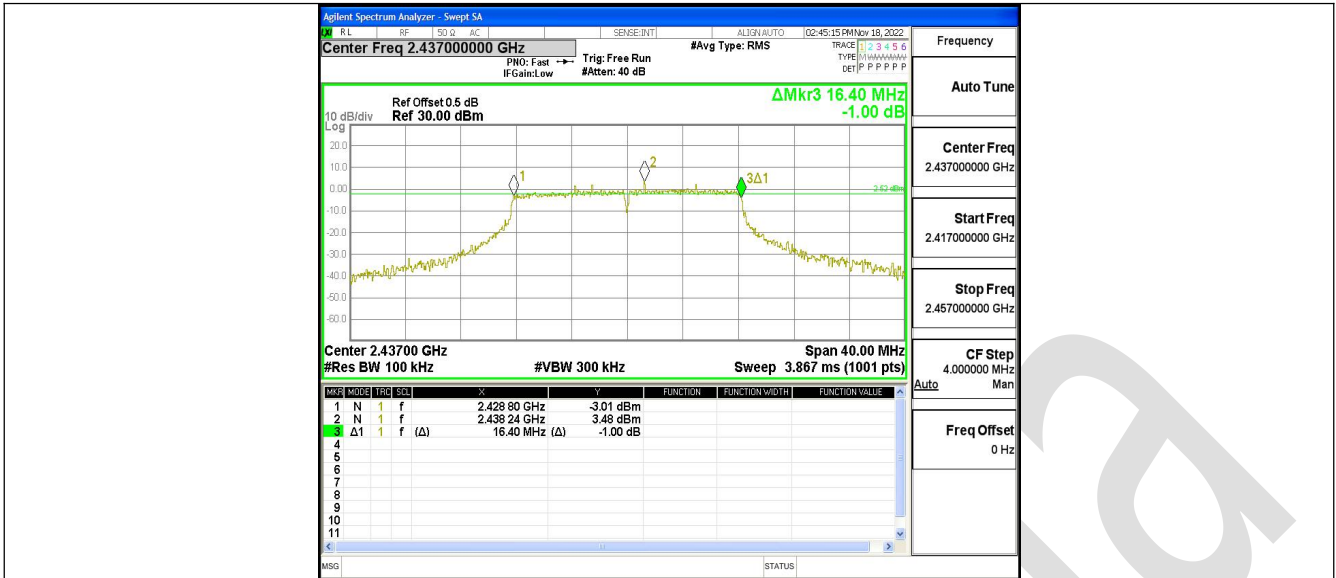


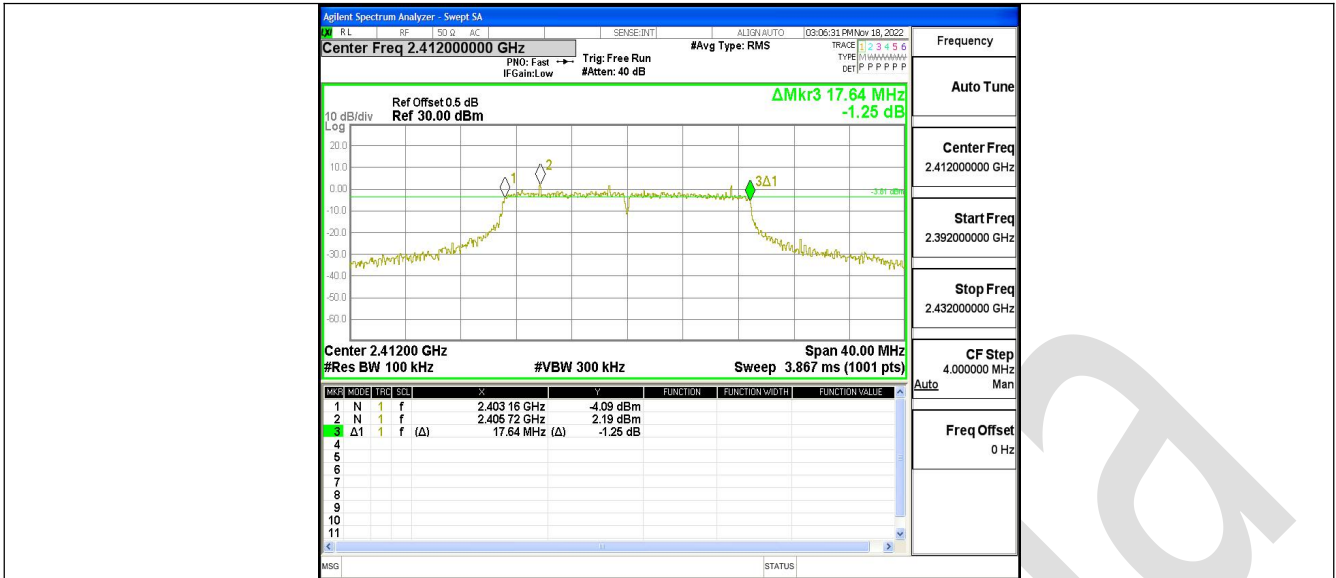


11B Ant1 2462

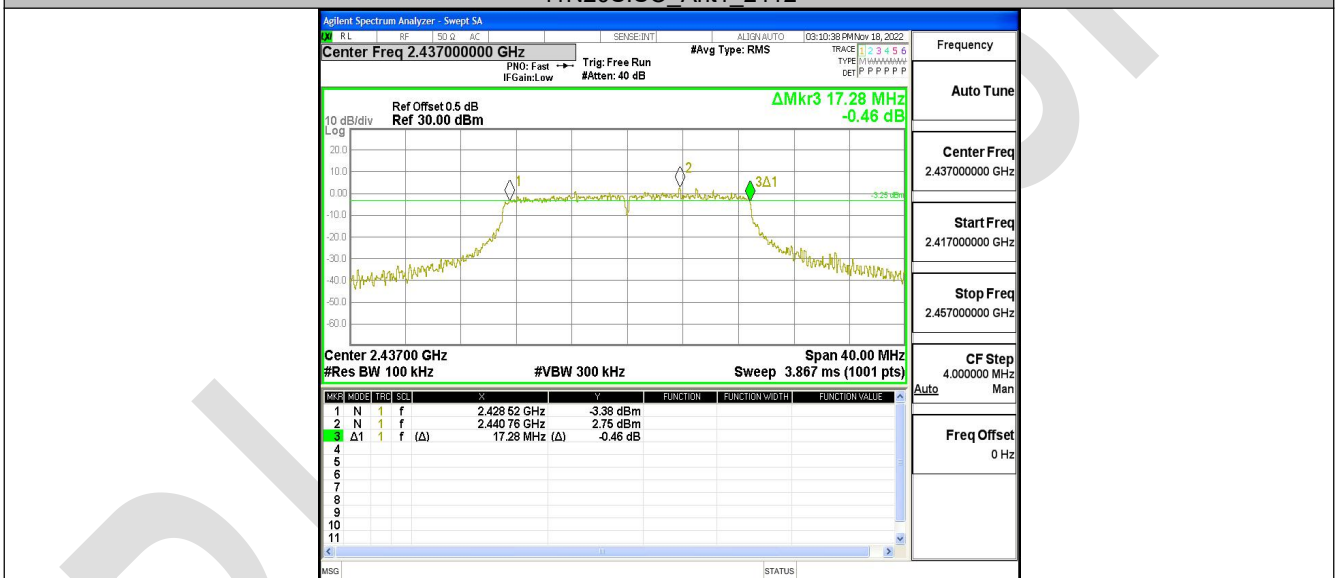


11G Ant1 2412



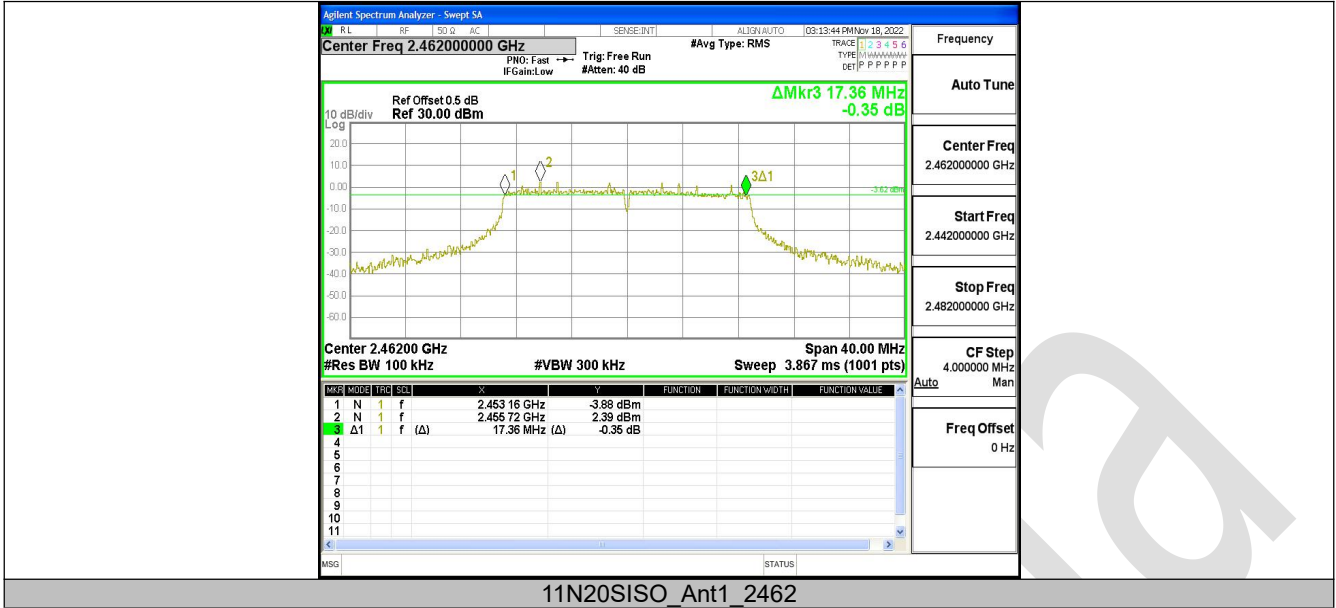


11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437







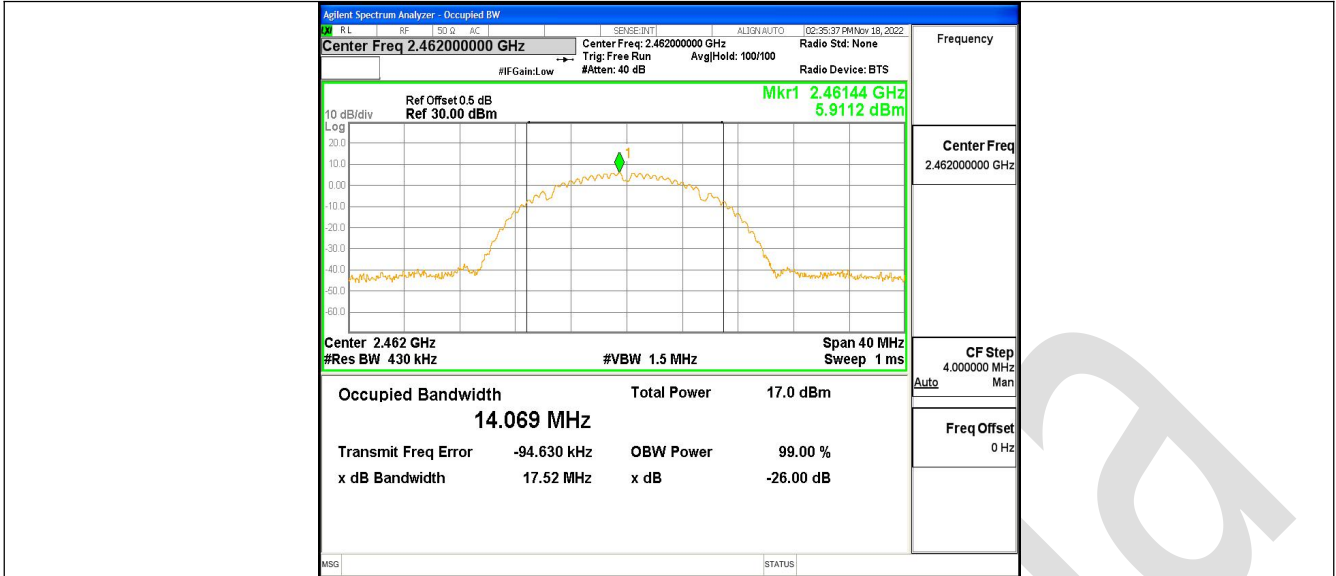
## 19.2 APPENDIX B: OCCUPIED CHANNEL BANDWIDTH

### Test Result

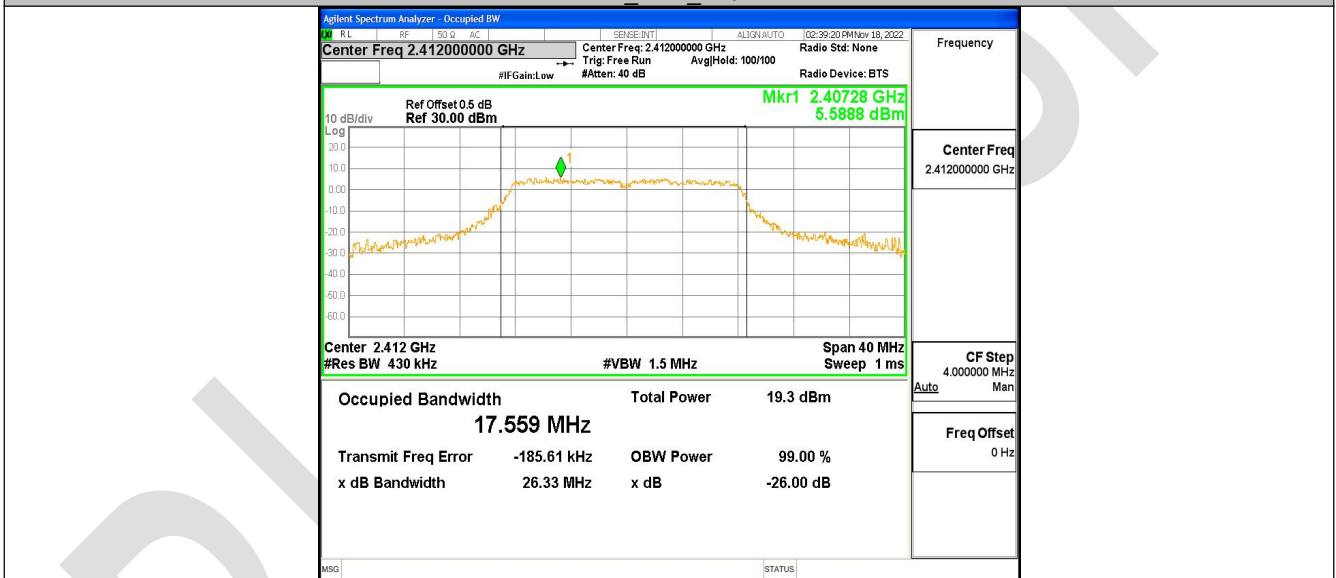
TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.073	2404.906	2418.979	---	PASS
		2437	14.015	2430.087	2444.102	---	PASS
		2462	14.069	2454.871	2468.940	---	PASS
11G	Ant1	2412	17.559	2403.035	2420.594	---	PASS
		2437	17.206	2428.457	2445.663	---	PASS
		2462	17.385	2453.178	2470.563	---	PASS
11N20SISO	Ant1	2412	18.638	2402.612	2421.250	---	PASS
		2437	18.151	2428.032	2446.183	---	PASS
		2462	18.443	2452.671	2471.114	---	PASS

### Test Graphs





11B Ant1 2462



11G Ant1 2412

