

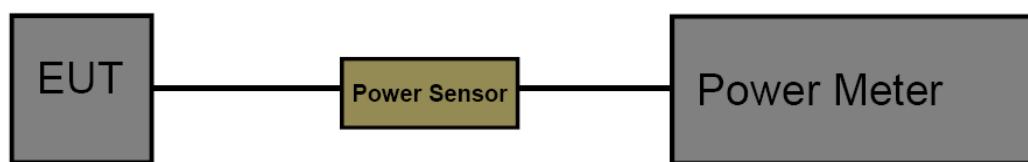
## 3.6. Peak Output Power

### Limit

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)

Section	Test Item	Limit	Frequency Range (MHz)
FCC CFR 47 Part15.247 (b)(3)	Maximum Conducted Output Power	1 Watt or 30dBm	2400~2483.5

### Test Configuration



### Test Procedure

1. The maximum conducted output power may be measured using a broadband RF power meter.
2. Power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

### Test Mode

Please refer to the clause 2.4.

**Test Result**

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	17.67	≤30.00	PASS
	Ant2	2412	17.97	≤30.00	PASS
	Ant1	2437	17.65	≤30.00	PASS
	Ant2	2437	17.96	≤30.00	PASS
	Ant1	2462	17.75	≤30.00	PASS
	Ant2	2462	17.69	≤30.00	PASS
11G	Ant1	2412	16.92	≤30.00	PASS
	Ant2	2412	17.30	≤30.00	PASS
	Ant1	2437	17.02	≤30.00	PASS
	Ant2	2437	17.67	≤30.00	PASS
	Ant1	2462	17.03	≤30.00	PASS
	Ant2	2462	17.53	≤30.00	PASS
11N20MIMO	Ant1	2412	14.19	≤30.00	PASS
	Ant2	2412	14.30	≤30.00	PASS
	total	2412	17.26	≤30.00	PASS
	Ant1	2437	14.12	≤30.00	PASS
	Ant2	2437	15.14	≤30.00	PASS
	total	2437	17.67	≤30.00	PASS
	Ant1	2462	14.18	≤30.00	PASS
	Ant2	2462	14.31	≤30.00	PASS
	total	2462	17.26	≤30.00	PASS
11N40MIMO	Ant1	2422	14.55	≤30.00	PASS
	Ant2	2422	14.41	≤30.00	PASS
	total	2422	17.49	≤30.00	PASS
	Ant1	2437	14.36	≤30.00	PASS
	Ant2	2437	15.08	≤30.00	PASS
	total	2437	17.75	≤30.00	PASS
	Ant1	2452	14.38	≤30.00	PASS
	Ant2	2452	15.18	≤30.00	PASS
	total	2452	17.81	≤30.00	PASS
11AX20MIMO	Ant1	2412	14.61	≤30.00	PASS
	Ant2	2412	14.62	≤30.00	PASS
	total	2412	17.63	≤30.00	PASS
	Ant1	2437	14.64	≤30.00	PASS
	Ant2	2437	14.91	≤30.00	PASS
	total	2437	17.79	≤30.00	PASS
	Ant1	2462	14.64	≤30.00	PASS
	Ant2	2462	14.29	≤30.00	PASS
	total	2462	17.48	≤30.00	PASS
11AX40MIMO	Ant1	2422	14.50	≤30.00	PASS
	Ant2	2422	14.25	≤30.00	PASS
	total	2422	17.39	≤30.00	PASS
	Ant1	2437	14.33	≤30.00	PASS
	Ant2	2437	14.86	≤30.00	PASS
	total	2437	17.61	≤30.00	PASS
	Ant1	2452	14.36	≤30.00	PASS
	Ant2	2452	14.66	≤30.00	PASS
	total	2452	17.52	≤30.00	PASS

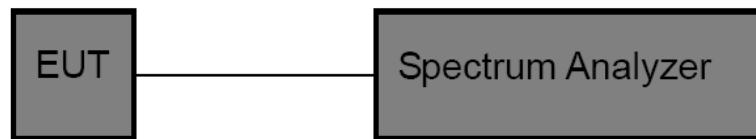
## 3.7. Power Spectral Density

### Limit

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)

Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	8 dBm (in any 3 kHz)	2400~2483.5

### Test Configuration



### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:  
Set analyzer center frequency to DTS channel center frequency.  
Set the span to 1.5 times the DTS bandwidth.  
Set the RBW to: 3 kHz.  
Set the VBW to: 10 kHz.  
Detector: peak.  
Sweep time: auto.

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

### Test Mode

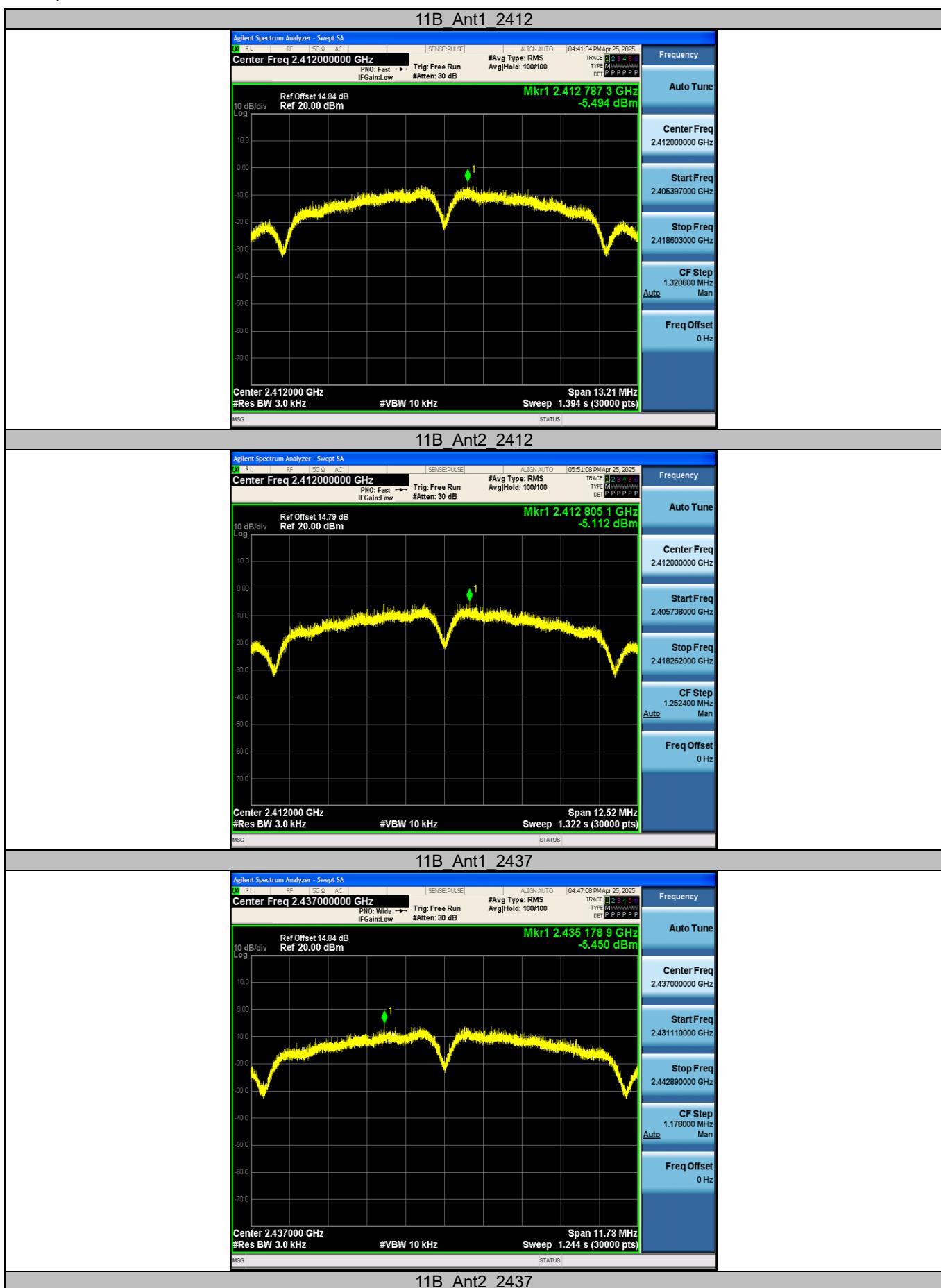
Please refer to the clause 2.4.

**Test Result**

TestMode	Antenna	Frequency[MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-5.49	≤8.00	PASS
	Ant2	2412	-5.11	≤8.00	PASS
	Ant1	2437	-5.45	≤8.00	PASS
	Ant2	2437	-5.14	≤8.00	PASS
	Ant1	2462	-5.99	≤8.00	PASS
	Ant2	2462	-5.32	≤8.00	PASS
11G	Ant1	2412	-13.25	≤8.00	PASS
	Ant2	2412	-12.24	≤8.00	PASS
	Ant1	2437	-13.67	≤8.00	PASS
	Ant2	2437	-12.29	≤8.00	PASS
	Ant1	2462	-13.40	≤8.00	PASS
	Ant2	2462	-12.32	≤8.00	PASS
11N20MIMO	Ant1	2412	-17.14	≤8.00	PASS
	Ant2	2412	-16.39	≤8.00	PASS
	total	2412	-13.74	≤8.00	PASS
	Ant1	2437	-15.97	≤8.00	PASS
	Ant2	2437	-15.50	≤8.00	PASS
	total	2437	-12.72	≤8.00	PASS
	Ant1	2462	-16.43	≤8.00	PASS
	Ant2	2462	-16.73	≤8.00	PASS
	total	2462	-13.57	≤8.00	PASS
	Ant1	2422	-18.24	≤8.00	PASS
11N40MIMO	Ant2	2422	-19.55	≤8.00	PASS
	total	2422	-15.84	≤8.00	PASS
	Ant1	2437	-18.93	≤8.00	PASS
	Ant2	2437	-18.93	≤8.00	PASS
	total	2437	-15.92	≤8.00	PASS
	Ant1	2452	-18.81	≤8.00	PASS
	Ant2	2452	-17.47	≤8.00	PASS
	total	2452	-15.08	≤8.00	PASS
11AX20MIMO	Ant1	2412	-16.91	≤8.00	PASS
	Ant2	2412	-17.37	≤8.00	PASS
	total	2412	-14.12	≤8.00	PASS
	Ant1	2437	-16.48	≤8.00	PASS
	Ant2	2437	-16.61	≤8.00	PASS
	total	2437	-13.53	≤8.00	PASS
	Ant1	2462	-17.77	≤8.00	PASS
	Ant2	2462	-17.78	≤8.00	PASS
11AX40MIMO	total	2462	-14.76	≤8.00	PASS
	Ant1	2422	-20.30	≤8.00	PASS
	Ant2	2422	-20.48	≤8.00	PASS
	total	2422	-17.38	≤8.00	PASS
	Ant1	2437	-20.70	≤8.00	PASS
	Ant2	2437	-19.52	≤8.00	PASS
	total	2437	-17.06	≤8.00	PASS
	Ant1	2452	-18.90	≤8.00	PASS
TRF No: CTC-TR-057_A2	Ant2	2452	-19.87	≤8.00	PASS
	total	2452	-16.35	≤8.00	PASS



Test plot as follows:



CTC Laboratories, Inc.

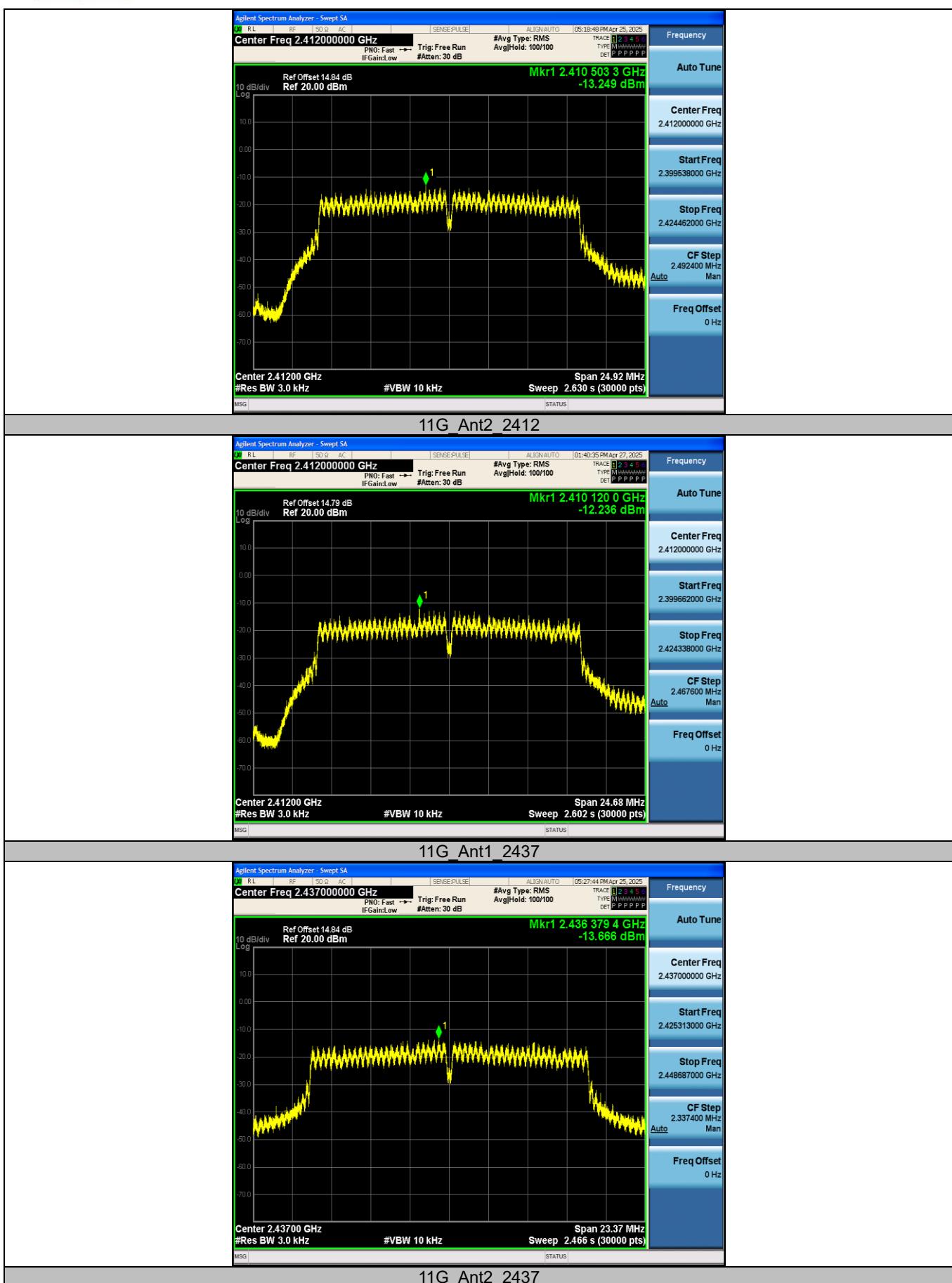
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhua Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 [Http://www.sz-ctc.org.cn](http://www.sz-ctc.org.cn)

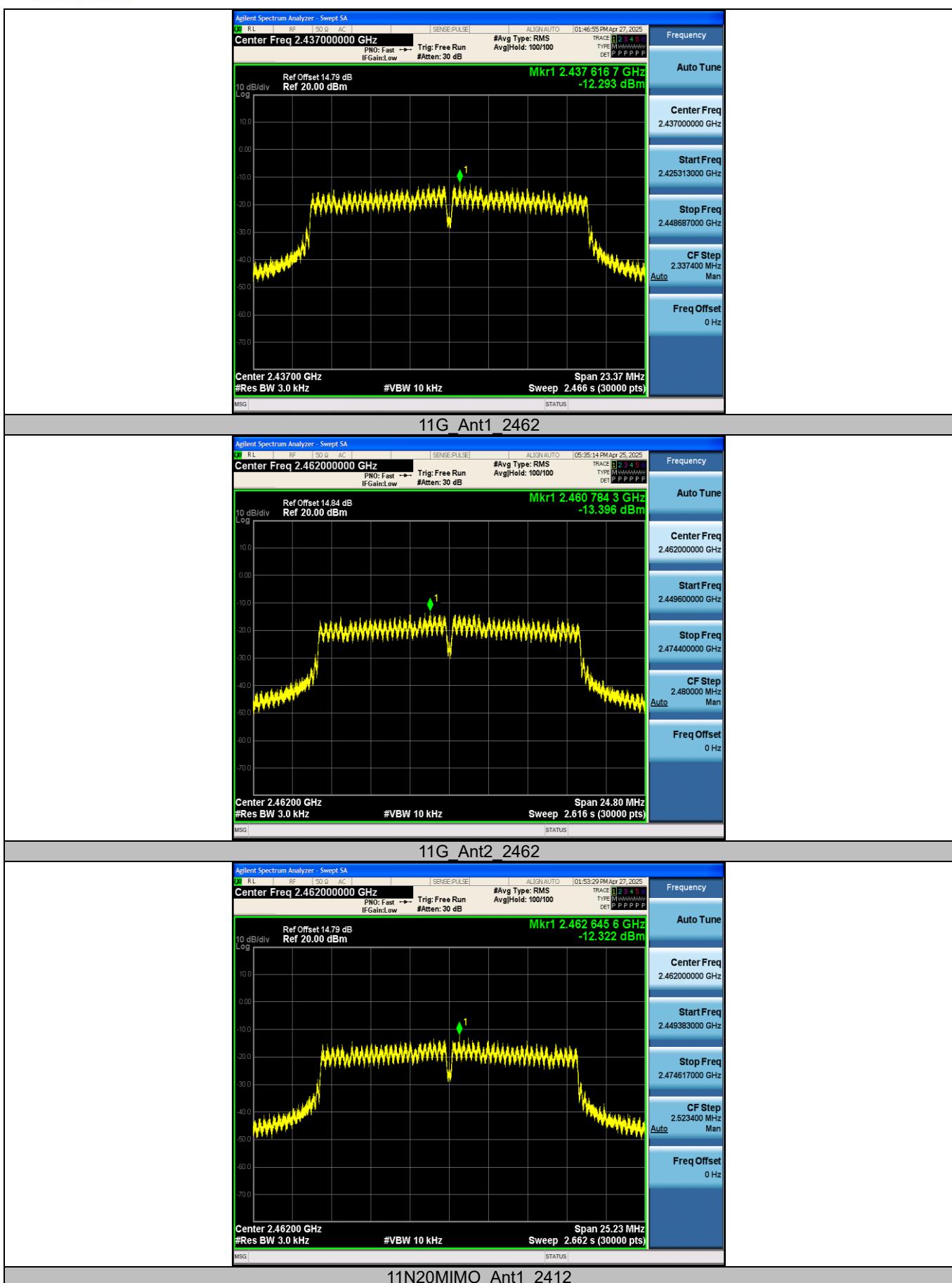
For anti-fake verification, please visit the official website of China Inspection And Testing

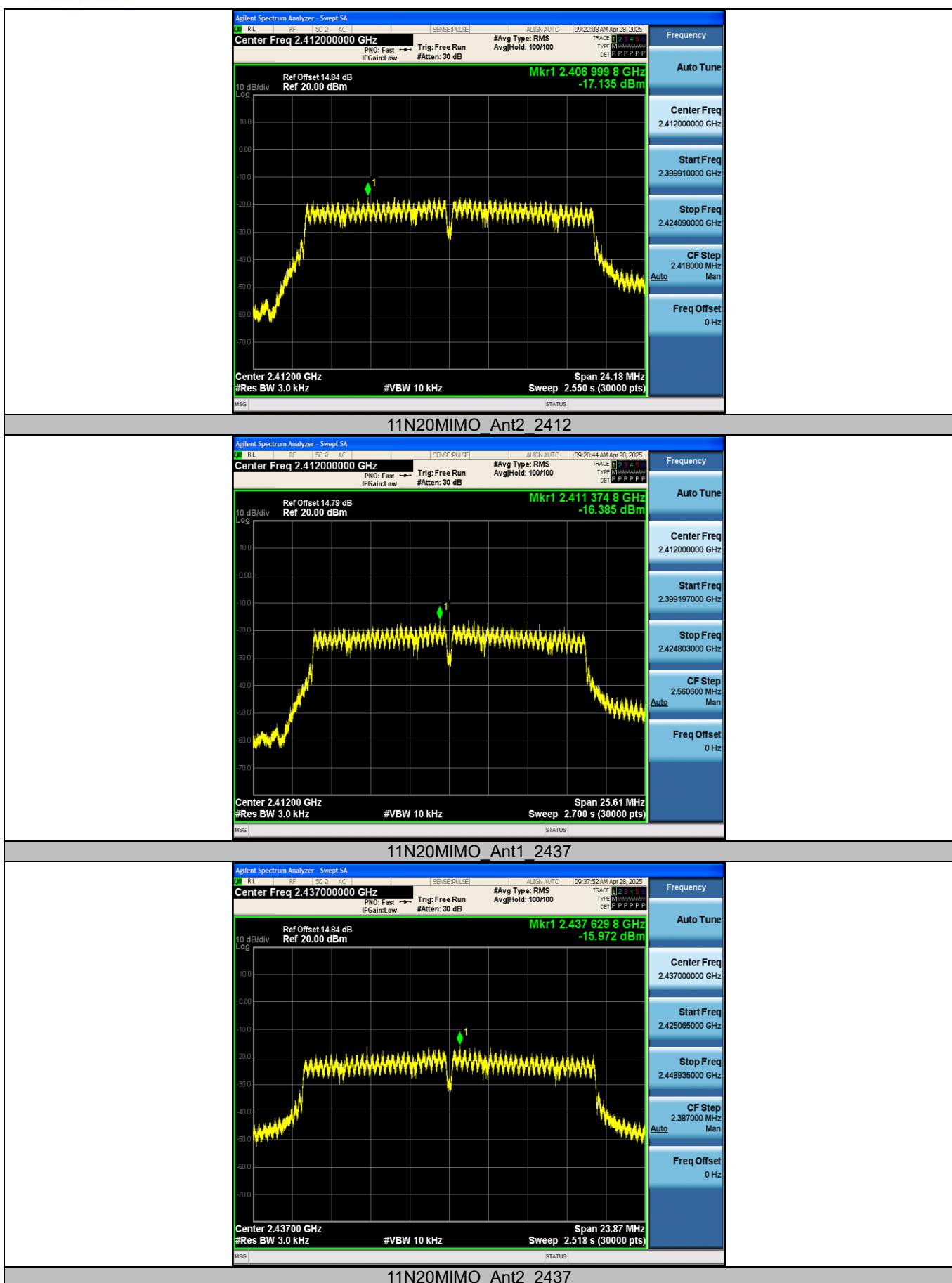
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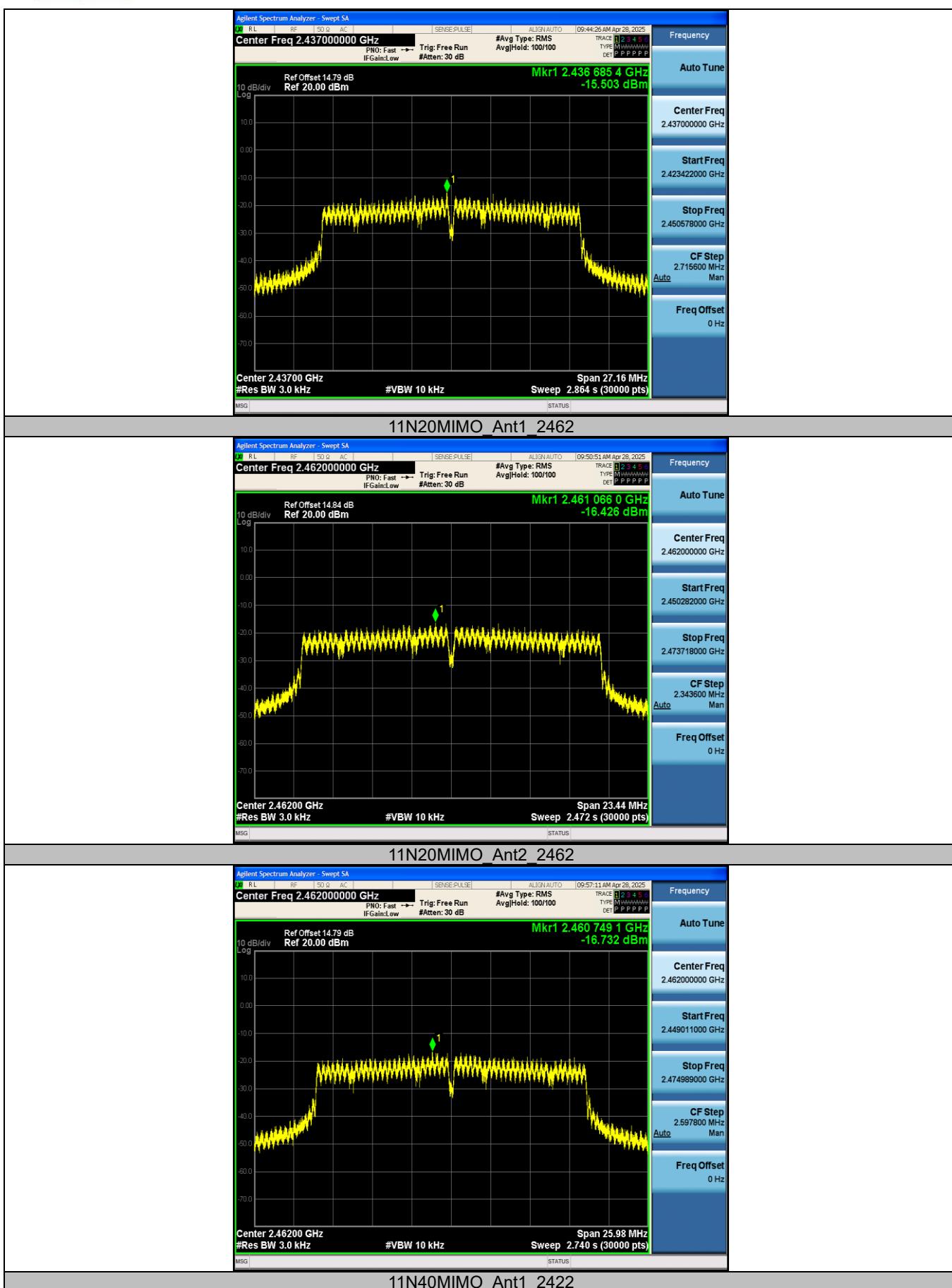
Society : [www.ctc-cnaq.com](http://www.ctc-cnaq.com)











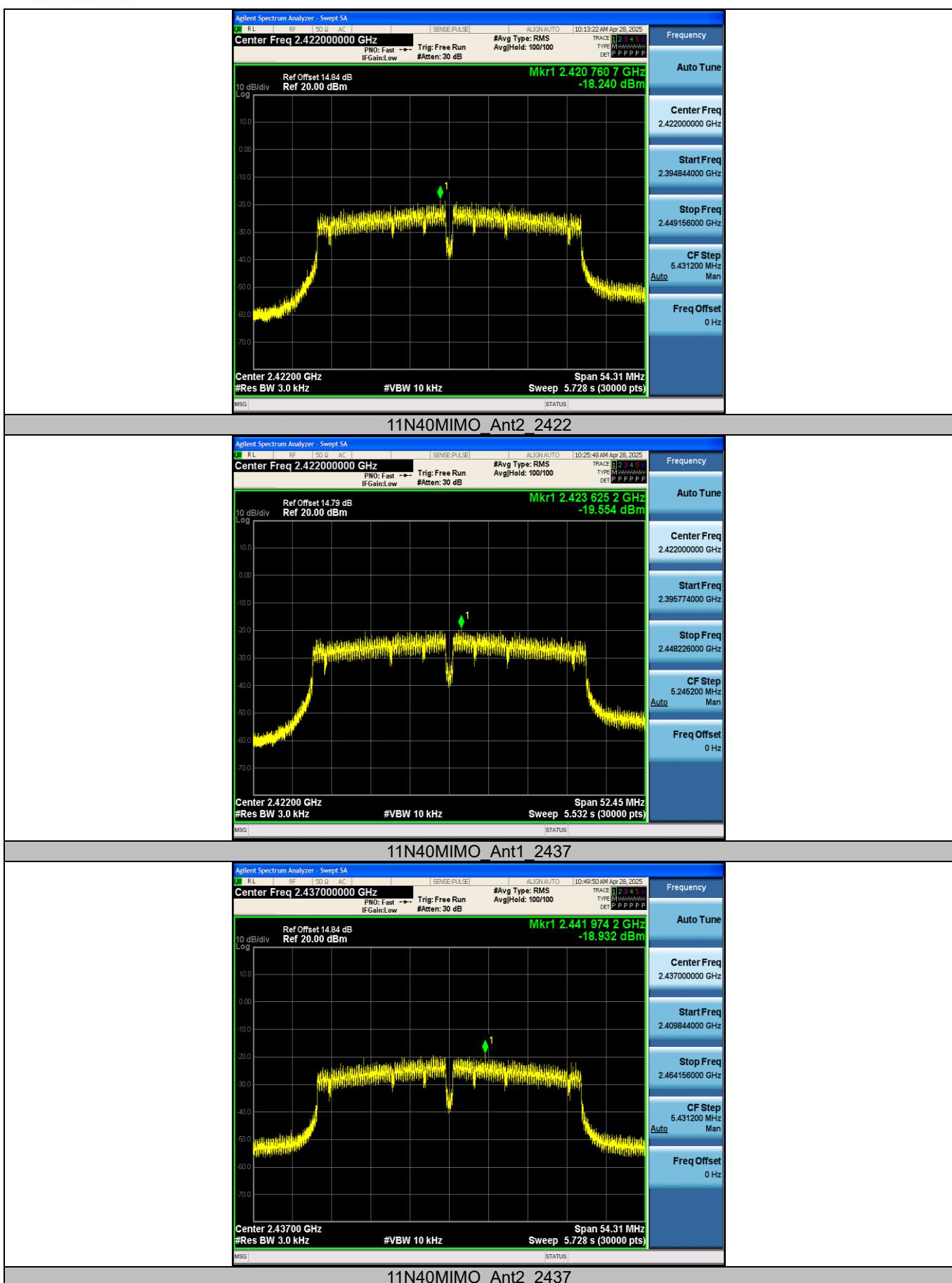
CTC Laboratories, Inc.

Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhua Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 [Http://www.sz-ctc.org.cn](http://www.sz-ctc.org.cn)

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TRF No: CTC-TR-057\_A2

Society : [www.ctc-cnaq.com](http://www.ctc-cnaq.com)



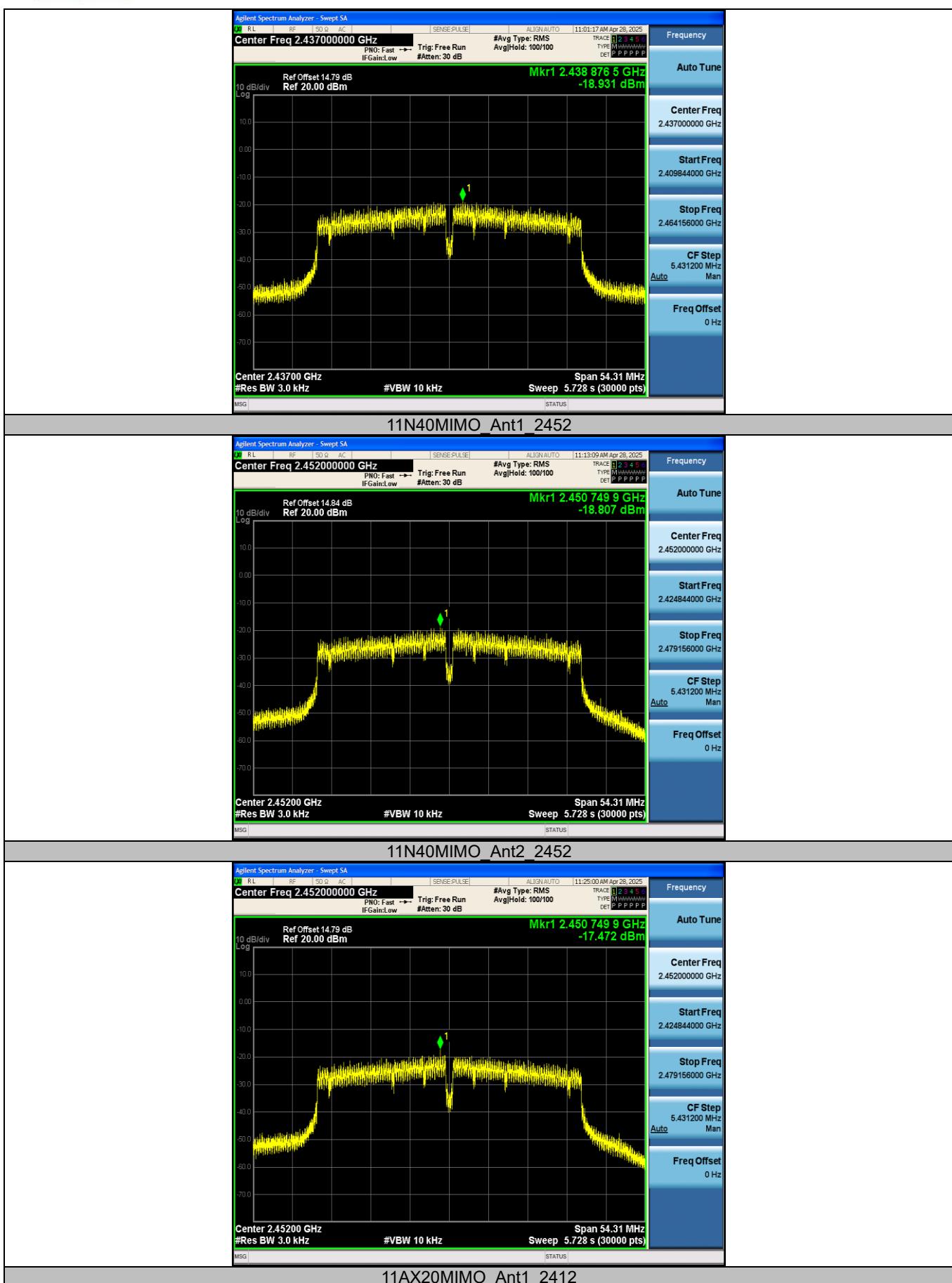
CTC Laboratories, Inc.

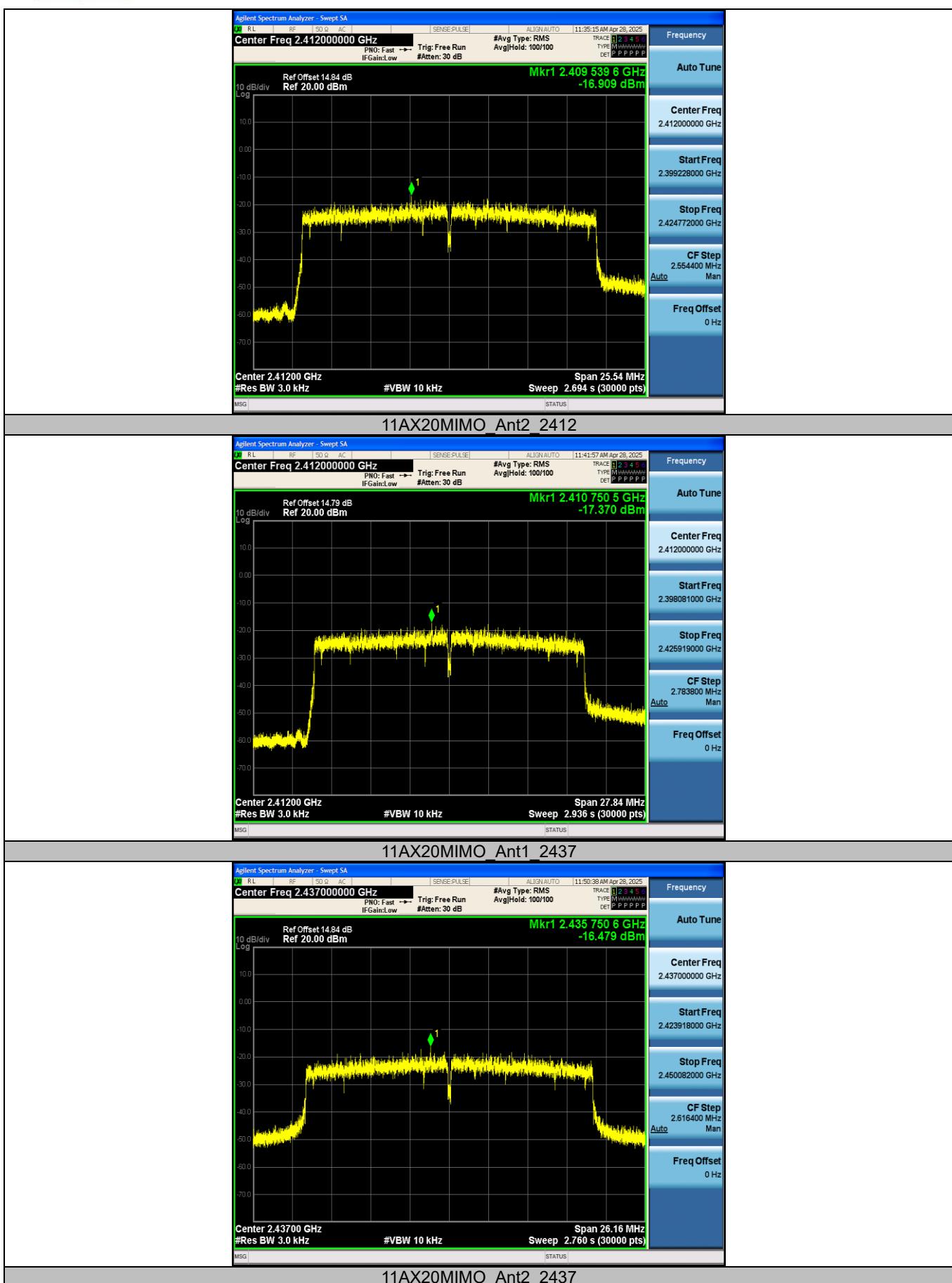
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhua Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 [Http://www.sz-ctc.org.cn](http://www.sz-ctc.org.cn)

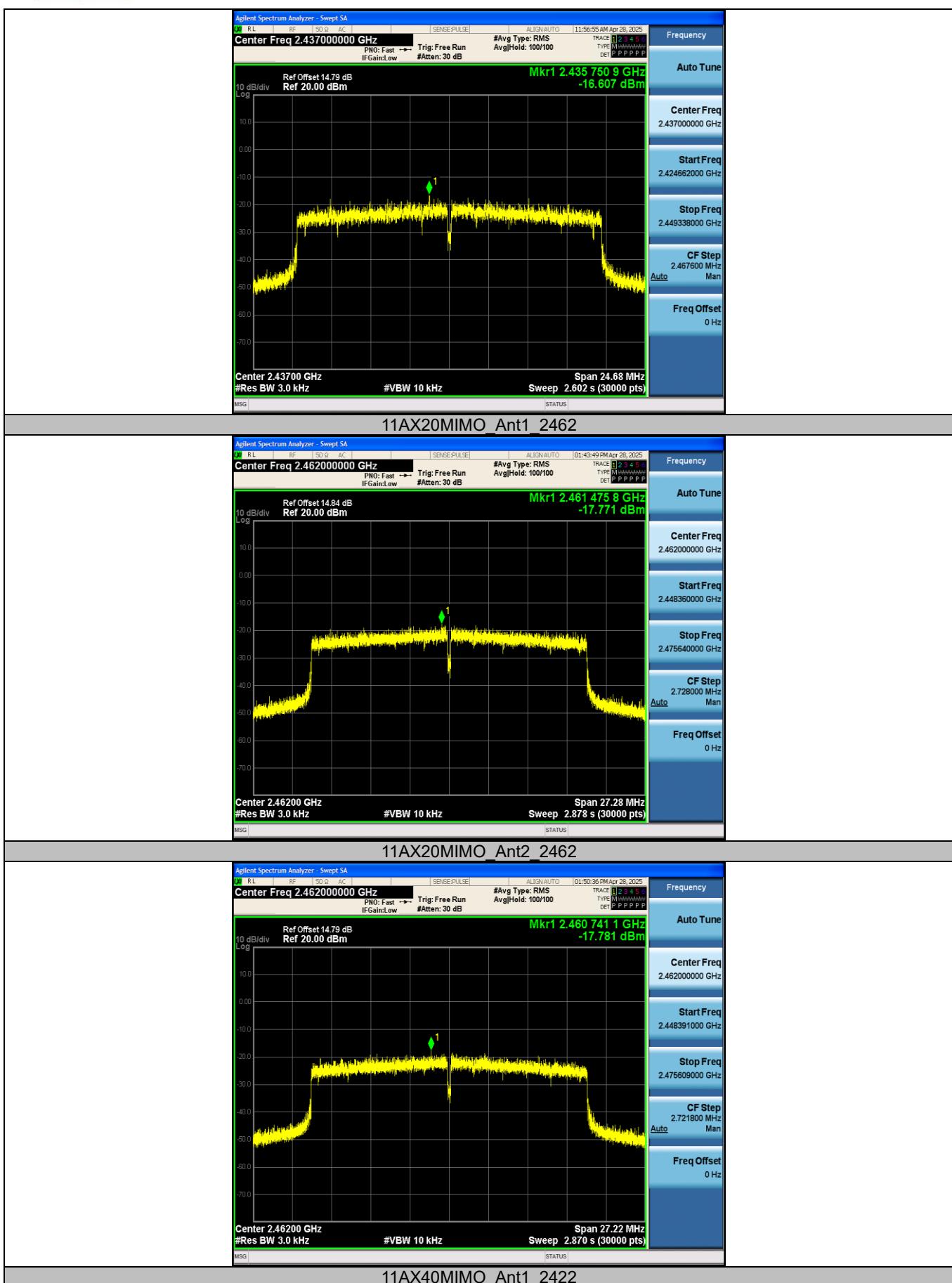
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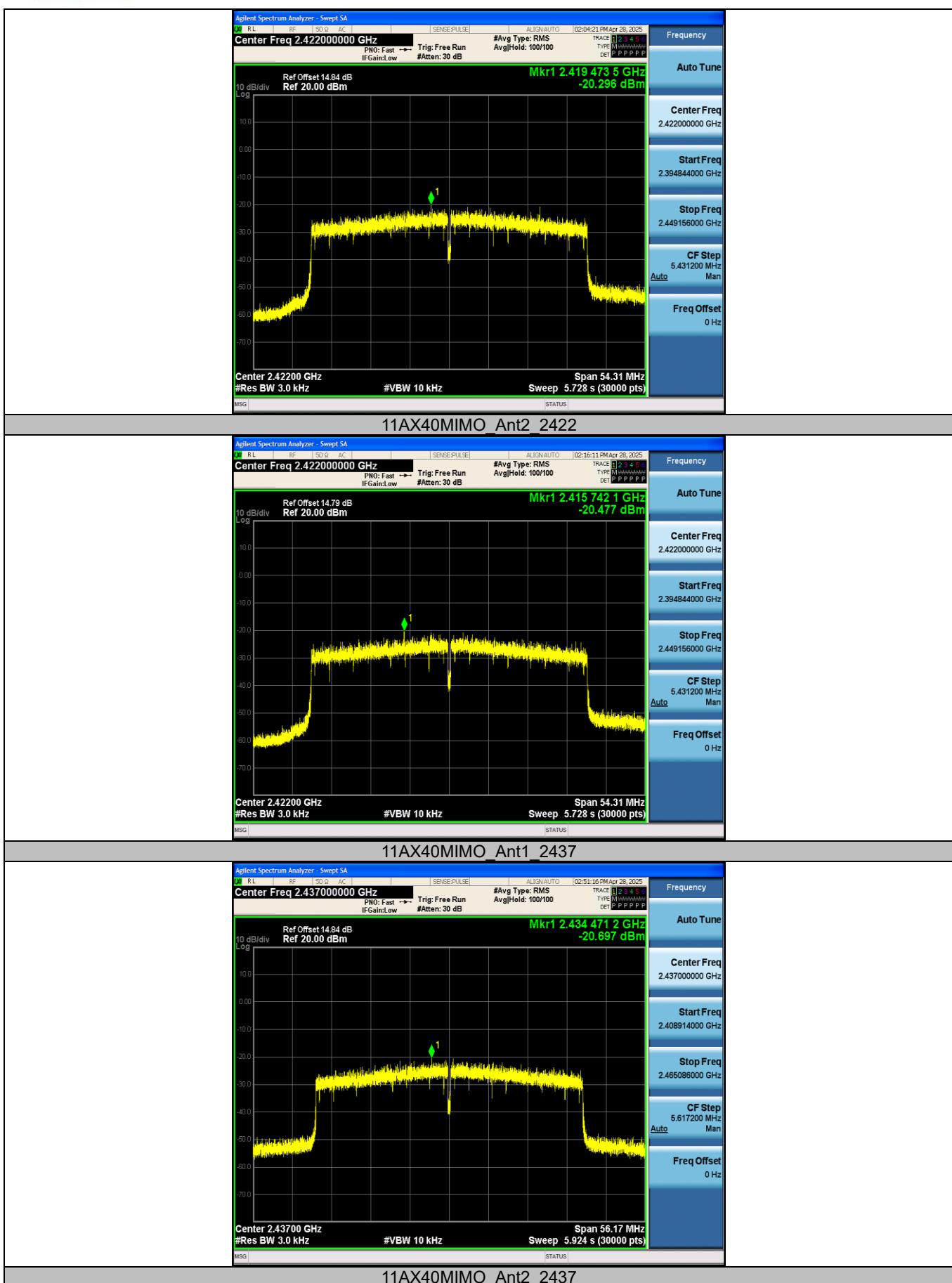
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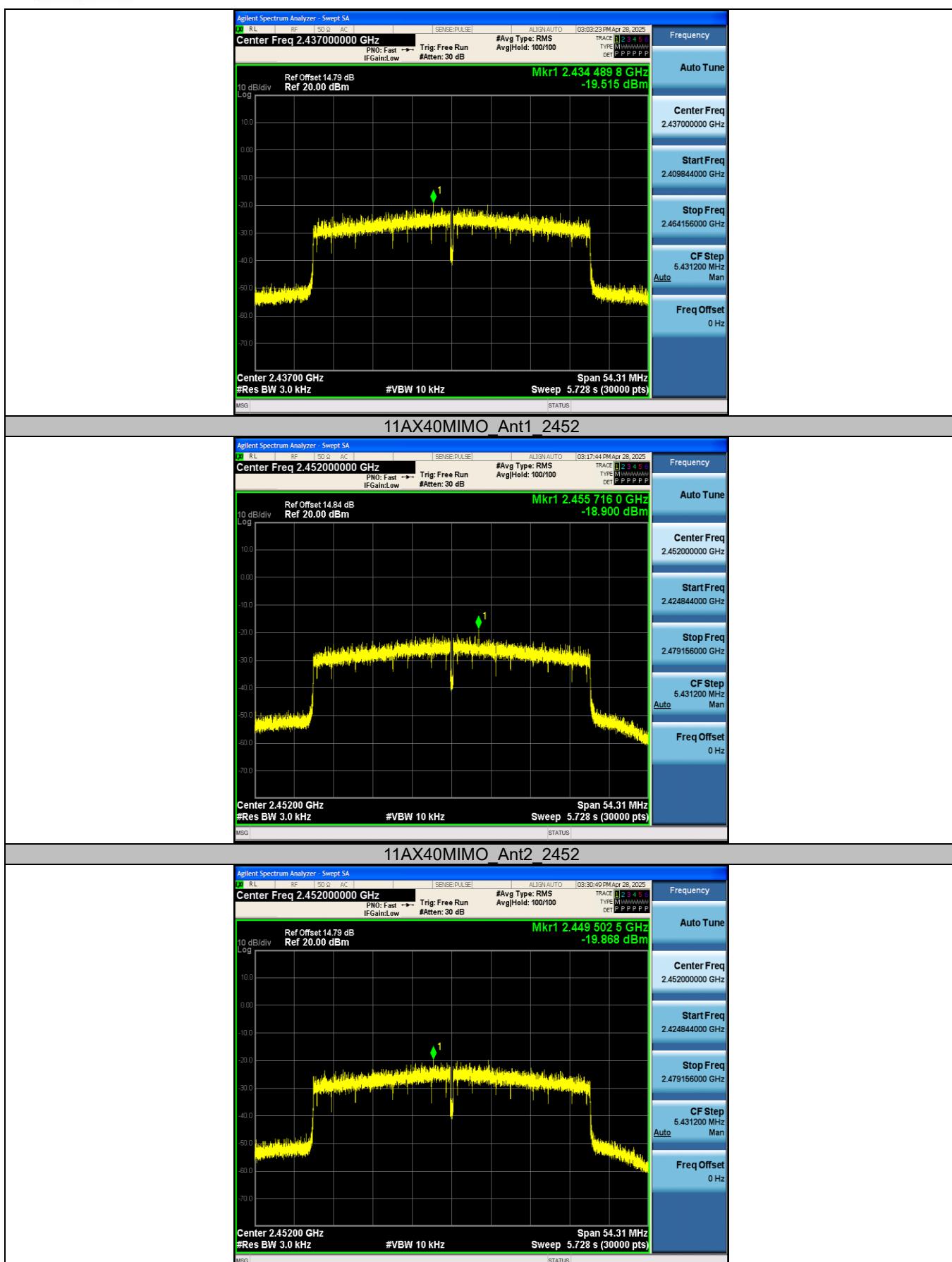
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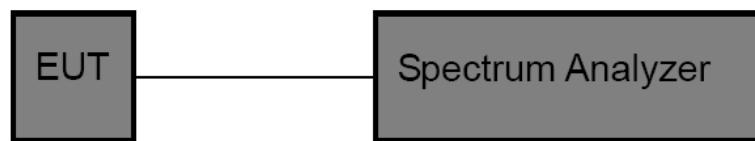


## 3.8. Duty Cycle

### Limit

None, for report purposes only.

### Test Configuration



### Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:  
Set analyzer center frequency to test channel center frequency.  
Set the span to 0Hz.  
Set the RBW to 10MHz.  
Set the VBW to 10MHz.  
Detector: Peak.  
Sweep time: Auto.  
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

### Test Mode

Please refer to the clause 2.4.

**Test Result**

TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	1/T Minimum VBW (kHz)	Final Setting for VBW (kHz)
11B	Ant1	2412	8.41	8.47	99.29	0.12	1
	Ant2	2412	8.41	8.47	99.29	0.12	1
	Ant1	2437	8.41	8.47	99.29	0.12	1
	Ant2	2437	8.42	8.48	99.29	0.12	1
	Ant1	2462	8.42	8.48	99.29	0.12	1
	Ant2	2462	8.41	8.47	99.29	0.12	1
11G	Ant1	2412	1.39	1.45	95.86	0.72	1
	Ant2	2412	1.40	1.46	95.89	0.71	1
	Ant1	2437	1.40	1.46	95.89	0.71	1
	Ant2	2437	1.39	1.45	95.86	0.72	1
	Ant1	2462	1.40	1.46	95.89	0.71	1
	Ant2	2462	1.40	1.46	95.89	0.71	1
11N20MIMO	Ant1	2412	0.66	0.72	91.67	1.52	2
	Ant2	2412	0.67	0.73	91.78	1.49	2
	Ant1	2437	0.66	0.72	91.67	1.52	2
	Ant2	2437	0.66	0.72	91.67	1.52	2
	Ant1	2462	0.66	0.72	91.67	1.52	2
	Ant2	2462	0.66	0.72	91.67	1.52	2
11N40MIMO	Ant1	2422	0.33	0.39	84.62	3.03	3
	Ant2	2422	0.34	0.39	87.18	2.94	3
	Ant1	2437	0.34	0.39	87.18	2.94	3
	Ant2	2437	0.34	0.39	87.18	2.94	3
	Ant1	2452	0.34	0.40	85.00	2.94	3
	Ant2	2452	0.33	0.39	84.62	3.03	3
11AX20MIMO	Ant1	2412	0.20	0.26	76.92	5.00	5
	Ant2	2412	0.21	0.27	77.78	4.76	5
	Ant1	2437	0.21	0.27	77.78	4.76	5
	Ant2	2437	0.20	0.26	76.92	5.00	5
	Ant1	2462	0.56	0.61	91.80	1.79	5
	Ant2	2462	0.56	0.61	91.80	1.79	5
11AX40MIMO	Ant1	2422	0.21	0.26	80.77	4.76	5
	Ant2	2422	0.20	0.26	76.92	5.00	5
	Ant1	2437	0.20	0.26	76.92	5.00	5
	Ant2	2437	0.20	0.26	76.92	5.00	5
	Ant1	2452	0.20	0.26	76.92	5.00	5
	Ant2	2452	0.21	0.26	80.77	4.76	5



## 3.9. Antenna Requirement

### Requirement

#### **FCC CFR Title 47 Part 15 Subpart C Section 15.203**

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 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.

#### **FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i)**

(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.

### Test Result

The directional gain of the antenna is less than 6dBi, please refer to the EUT internal photographs antenna photo.

\*\*\*\*\*THE END OF REPORT\*\*\*\*\*