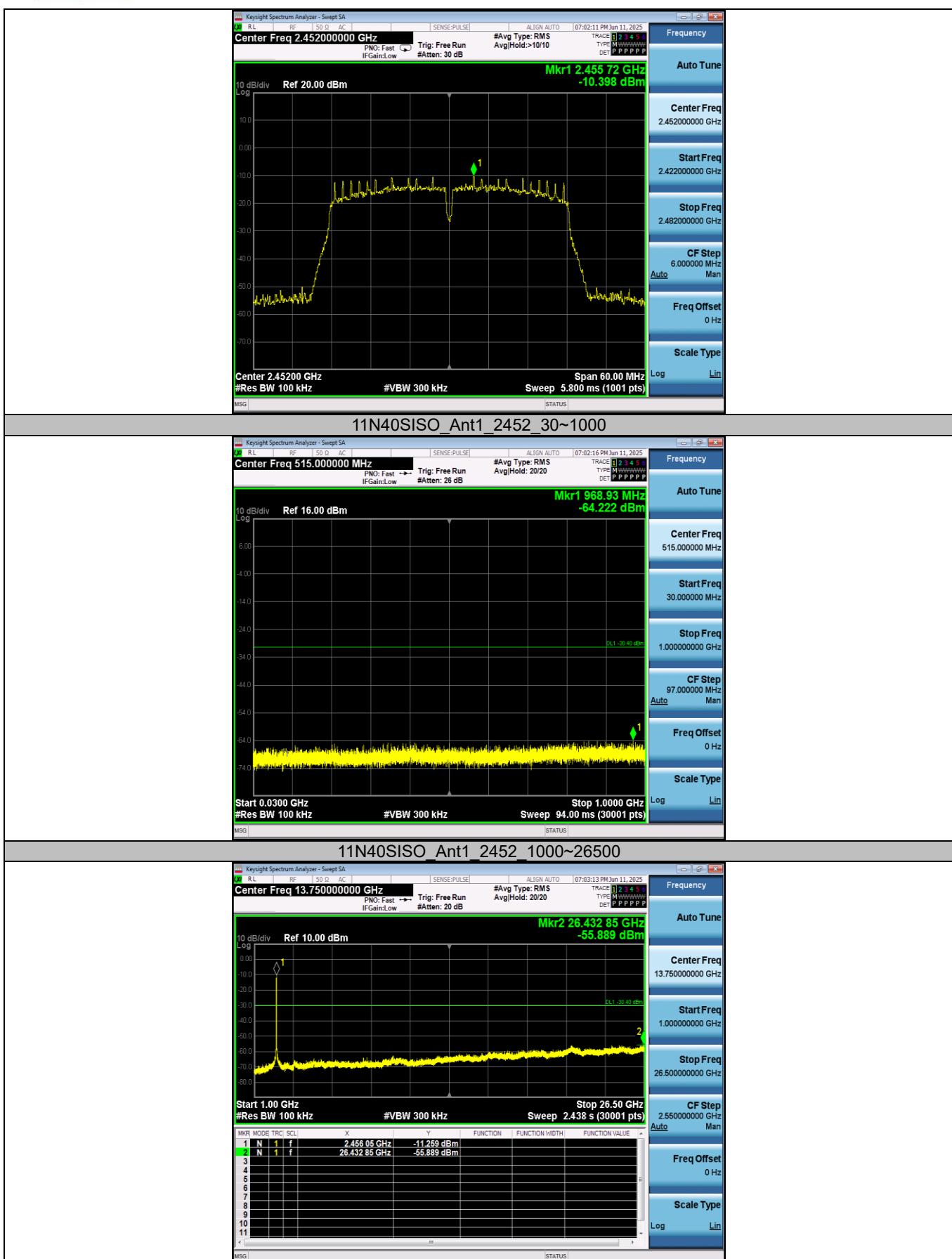


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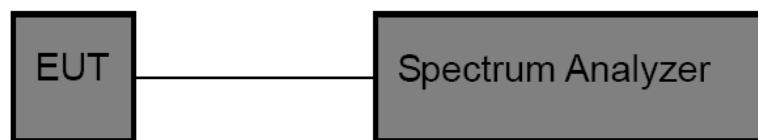
### 3.5. DTS Bandwidth

#### Limit

#### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2)

Test Item	Limit	Frequency Range (MHz)
DTS Bandwidth	$\geq 500$ kHz (6dB bandwidth)	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. DTS Spectrum Setting:
  - (1) Set RBW = 100 kHz.
  - (2) Set the video bandwidth (VBW)  $\geq 3$  RBW.
  - (3) Detector = Peak.
  - (4) Trace mode = Max hold.
  - (5) Sweep = Auto couple.OCB Spectrum Setting:
  - (1) Set RBW = 1% ~ 5% occupied bandwidth.
  - (2) Set the video bandwidth (VBW)  $\geq 3$  RBW.
  - (3) Detector = Peak.
  - (4) Trace mode = Max hold.
  - (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

#### Test Mode

Please refer to the clause 2.4.

**Test Result**

TestMode	Antenna	Frequency [MHz]	OCB [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	13.161	10.200	2406.920	2417.120	0.5	PASS
		2437	13.157	11.120	2431.880	2443.000	0.5	PASS
		2462	13.176	11.120	2456.880	2468.000	0.5	PASS
11G	Ant1	2412	16.885	14.200	2405.400	2419.600	0.5	PASS
		2437	16.903	15.80	2429.08	2444.88	0.5	PASS
		2462	17.063	15.12	2454.40	2469.52	0.5	PASS
11N20SISO	Ant1	2412	17.807	14.040	2405.520	2419.560	0.5	PASS
		2437	17.902	17.60	2428.20	2445.80	0.5	PASS
		2462	17.752	17.040	2453.480	2470.520	0.5	PASS
11N40SISO	Ant1	2422	35.794	34.960	2404.560	2439.520	0.5	PASS
		2437	36.044	35.04	2419.48	2454.52	0.5	PASS
		2452	35.734	35.120	2434.480	2469.600	0.5	PASS

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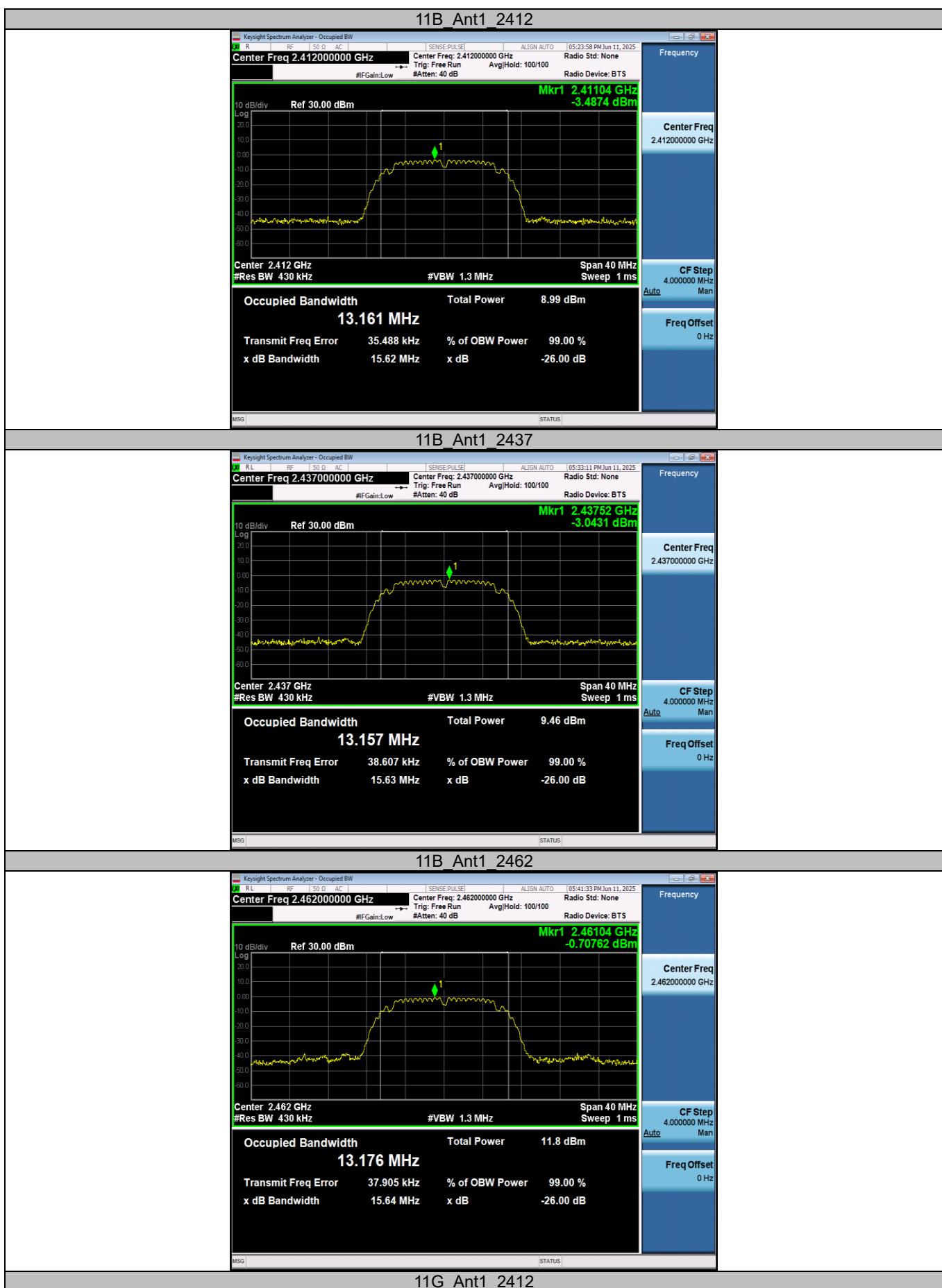
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99% Bandwidth:



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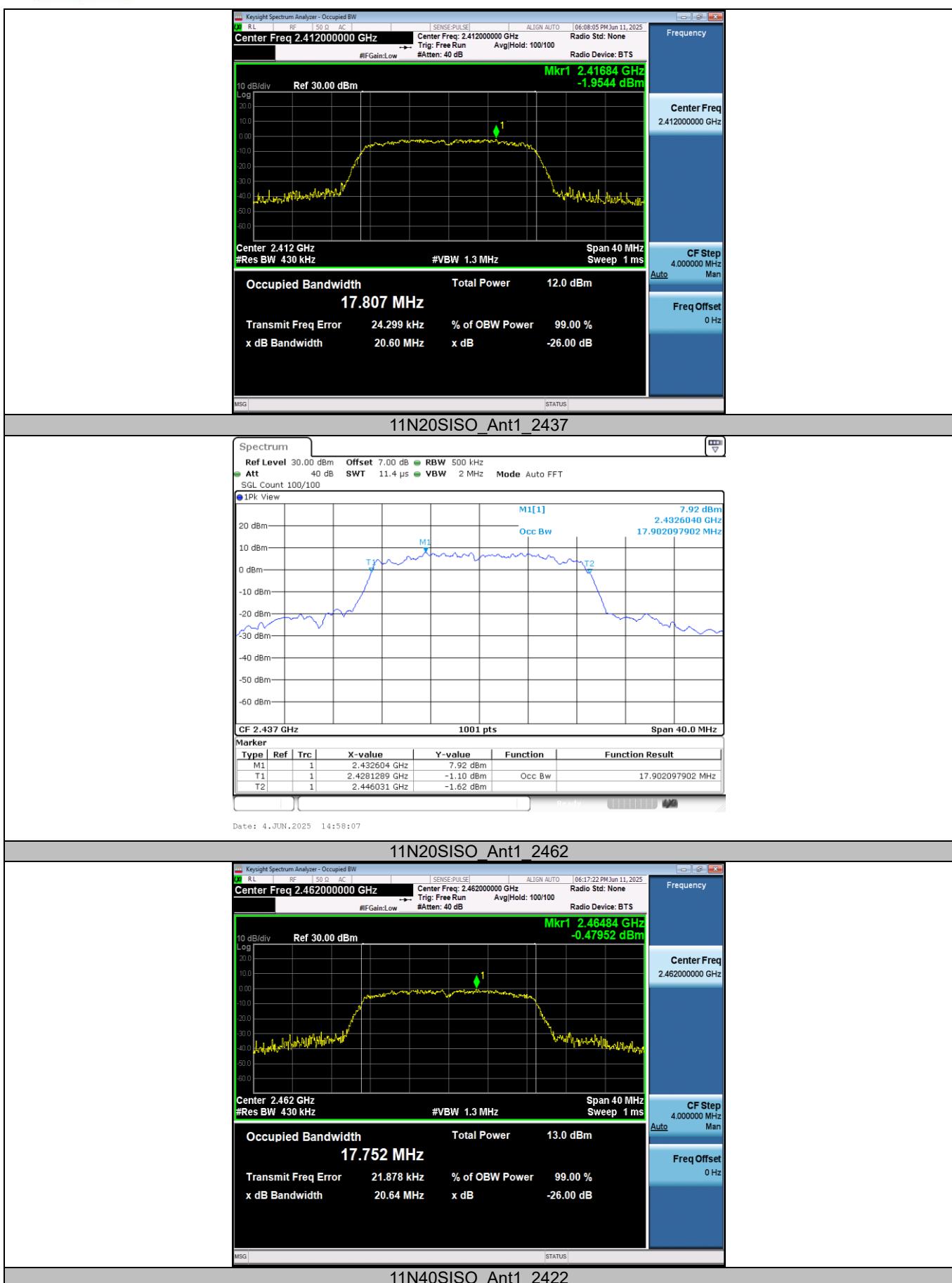


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DTS Bandwidth:

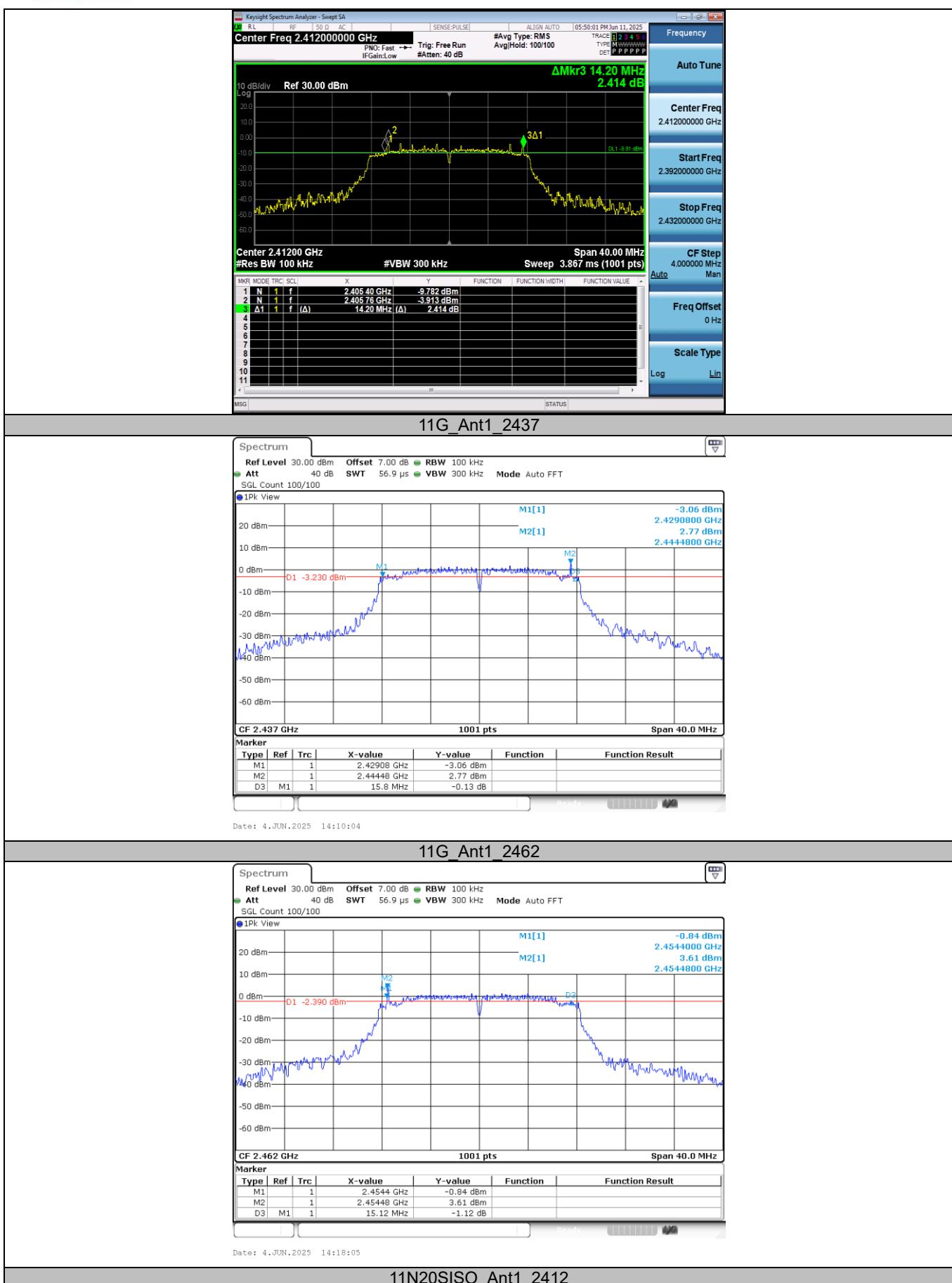


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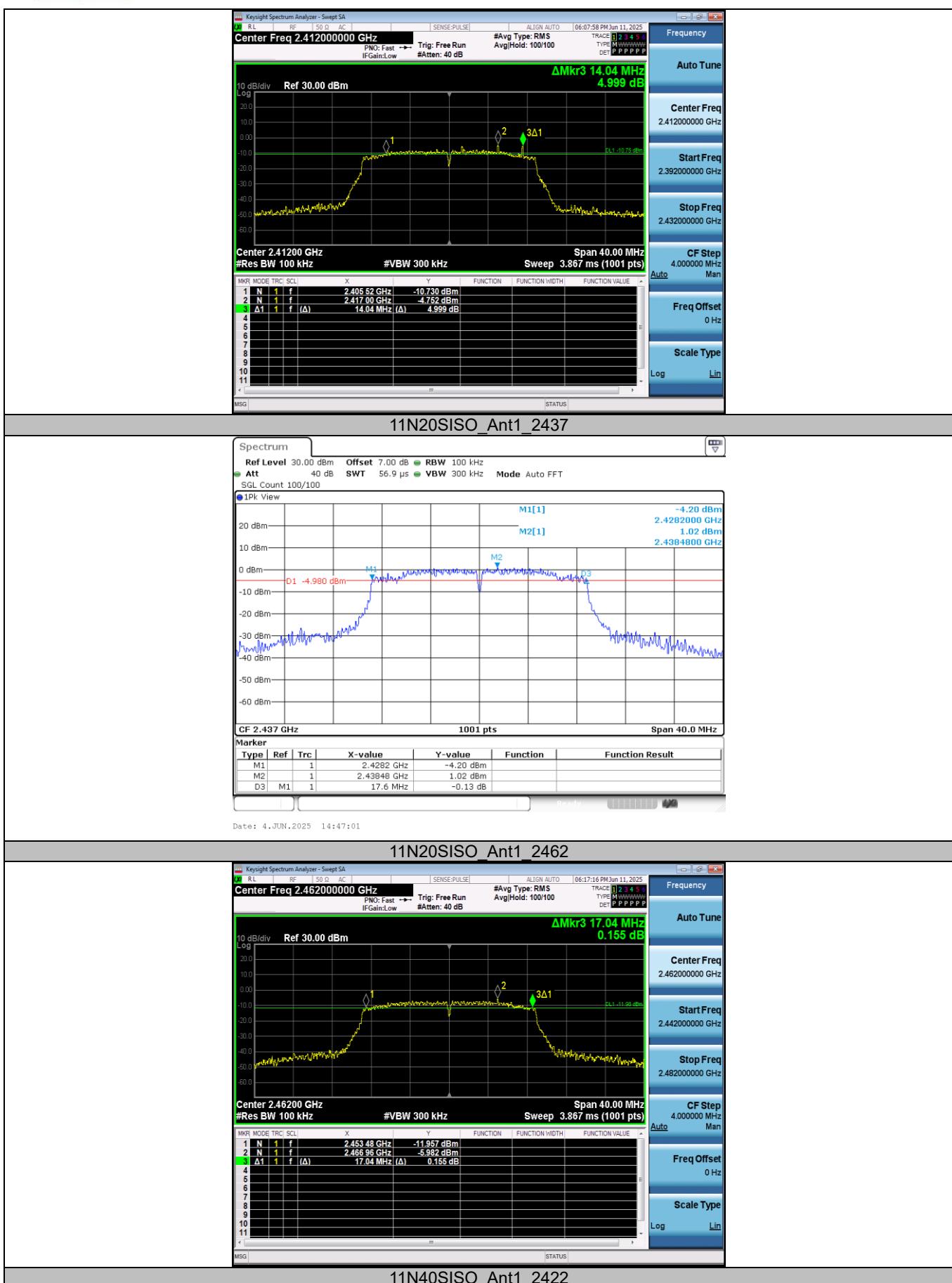


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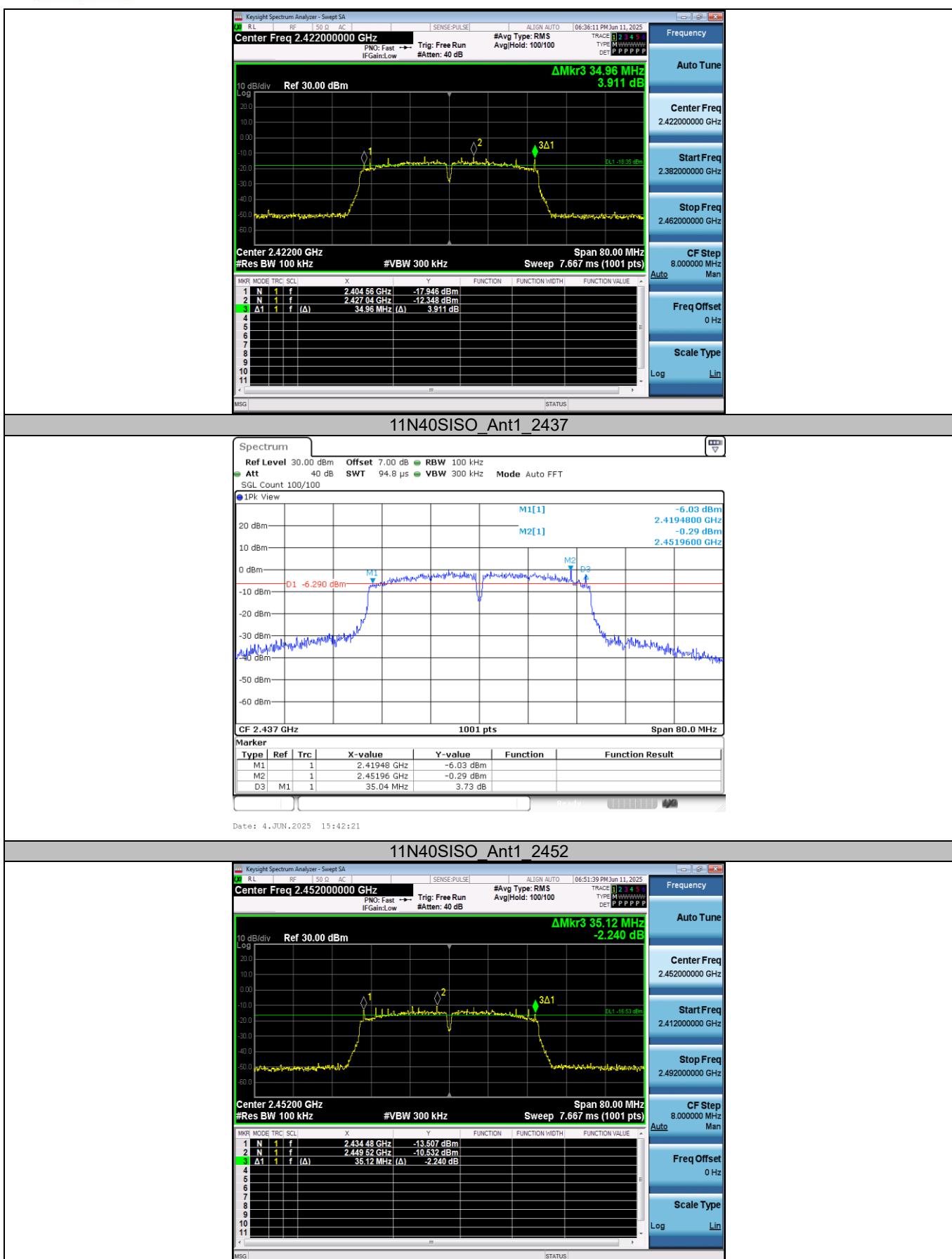


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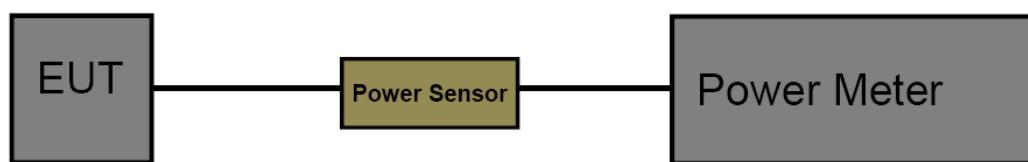
## 3.6. Peak Output Power

### 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	8.59	≤30.00	PASS
		2437	9.23	≤30.00	PASS
		2462	11.55	≤30.00	PASS
11G	Ant1	2412	13.84	≤30.00	PASS
		2437	22.56	≤30.00	PASS
		2462	22.48	≤30.00	PASS
11N20SISO	Ant1	2412	12.78	≤30.00	PASS
		2437	22.66	≤30.00	PASS
		2462	14.17	≤30.00	PASS
11N40SISO	Ant1	2422	8.60	≤30.00	PASS
		2437	22.95	≤30.00	PASS
		2452	10.28	≤30.00	PASS



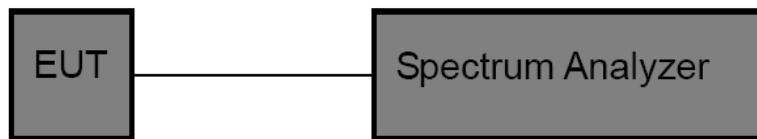
## 3.7. Power Spectral Density

### 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	-20.60	≤8.00	PASS
		2437	-19.71	≤8.00	PASS
		2462	-17.65	≤8.00	PASS
11G	Ant1	2412	-17.75	≤8.00	PASS
		2437	-11.01	≤8.00	PASS
		2462	-10.33	≤8.00	PASS
11N20SISO	Ant1	2412	-20.01	≤8.00	PASS
		2437	-10.00	≤8.00	PASS
		2462	-19.08	≤8.00	PASS
11N40SISO	Ant1	2422	-26.65	≤8.00	PASS
		2437	-12.70	≤8.00	PASS
		2452	-24.79	≤8.00	PASS

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## 11B\_Ant1\_2412



## 11B\_Ant1\_2437



## 11B\_Ant1\_2462



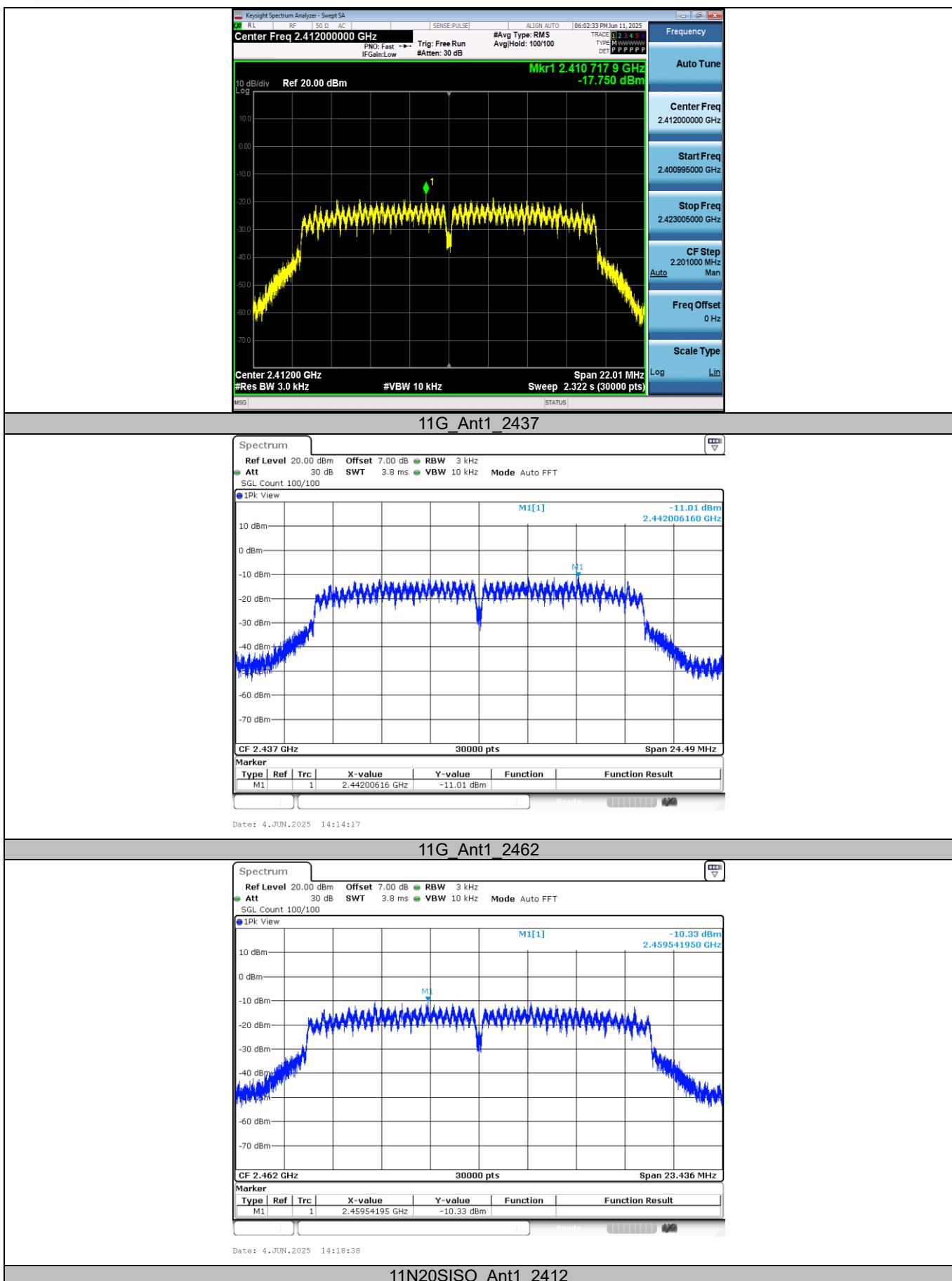
## 11G\_Ant1\_2412

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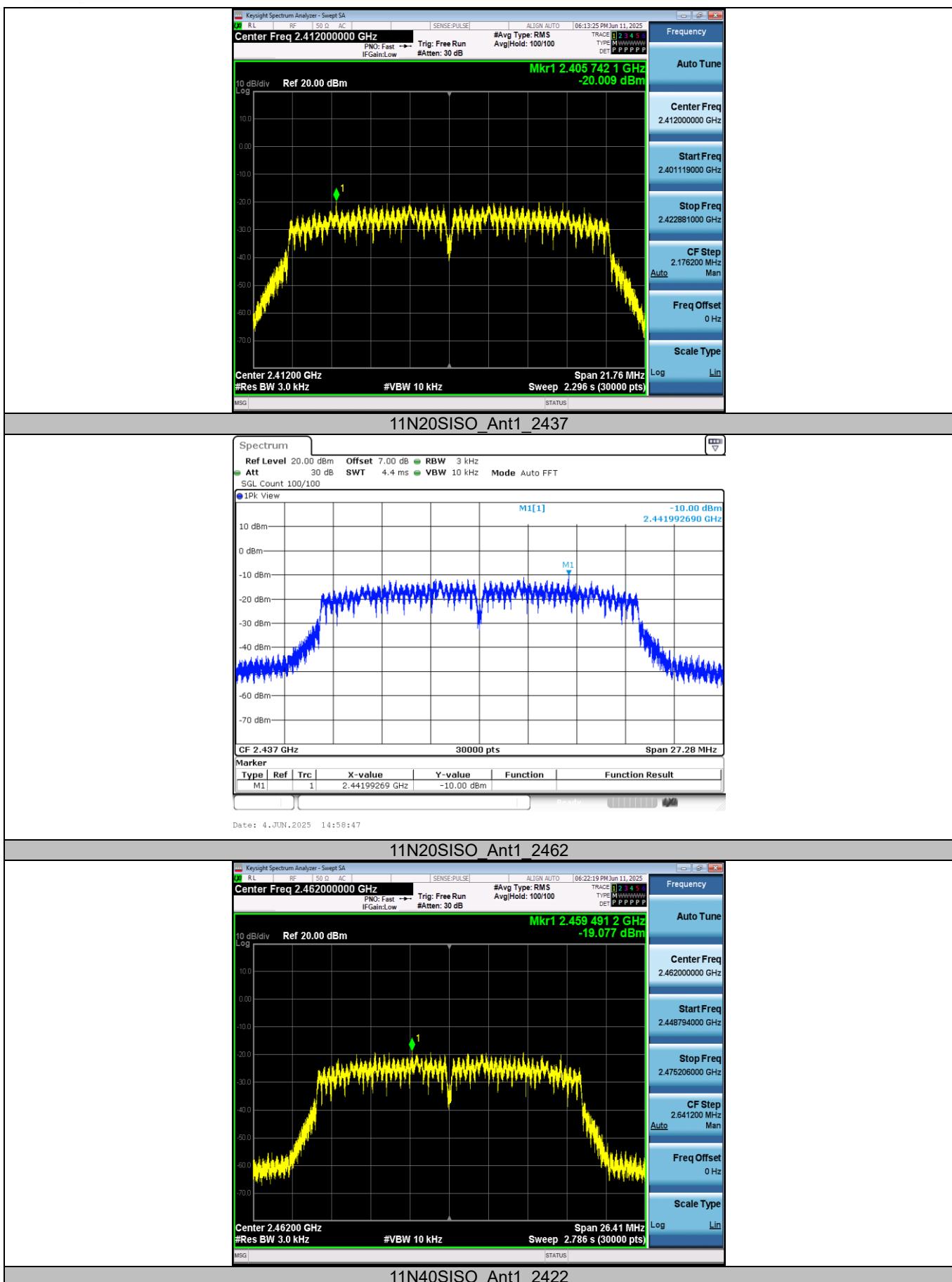


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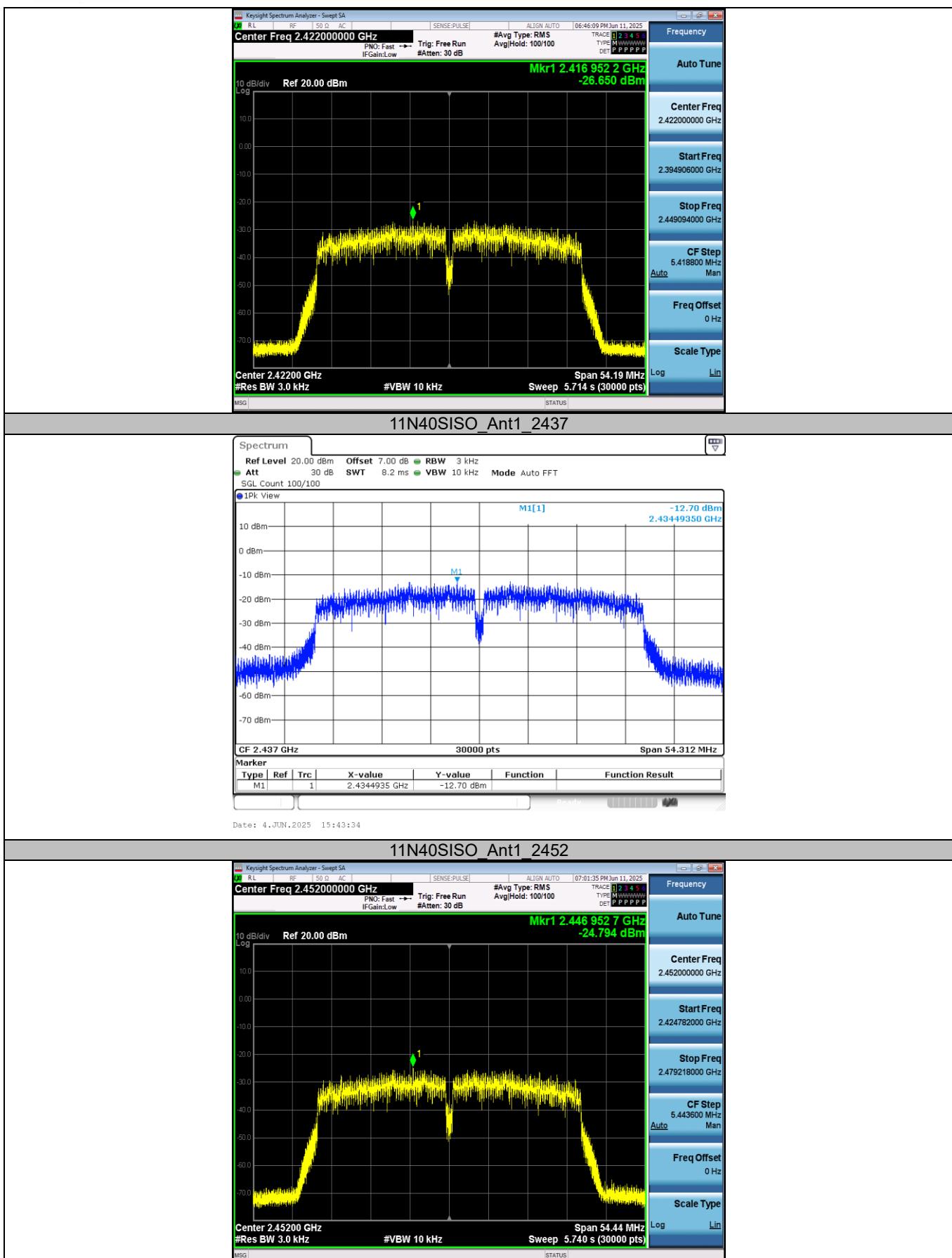


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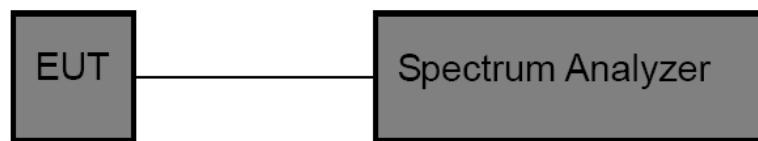
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## 3.8. Duty Cycle

### 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**

Test Mode	Frequency (MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)	1/T Minimum VBW (kHz)	Final Setting for VBW (kHz)
802.11b	2412	8.39	8.41	99.76	0.12	1
	2437	8.39	8.41	99.76	0.12	1
	2462	8.39	8.41	99.76	0.12	1
802.11g	2412	1.39	1.41	98.58	0.72	1
	2437	1.39	1.41	98.58	0.72	1
	2462	1.40	1.41	99.29	0.71	1
802.11n(HT20)	2412	5.09	5.10	99.80	0.20	1
	2437	5.08	5.10	99.61	0.20	1
	2462	5.09	5.11	99.61	0.20	1
802.11n(HT40)	2422	2.47	2.49	99.20	0.40	1
	2437	2.47	2.49	99.20	0.40	1
	2452	2.46	2.48	99.19	0.41	1

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Test plot as follows:

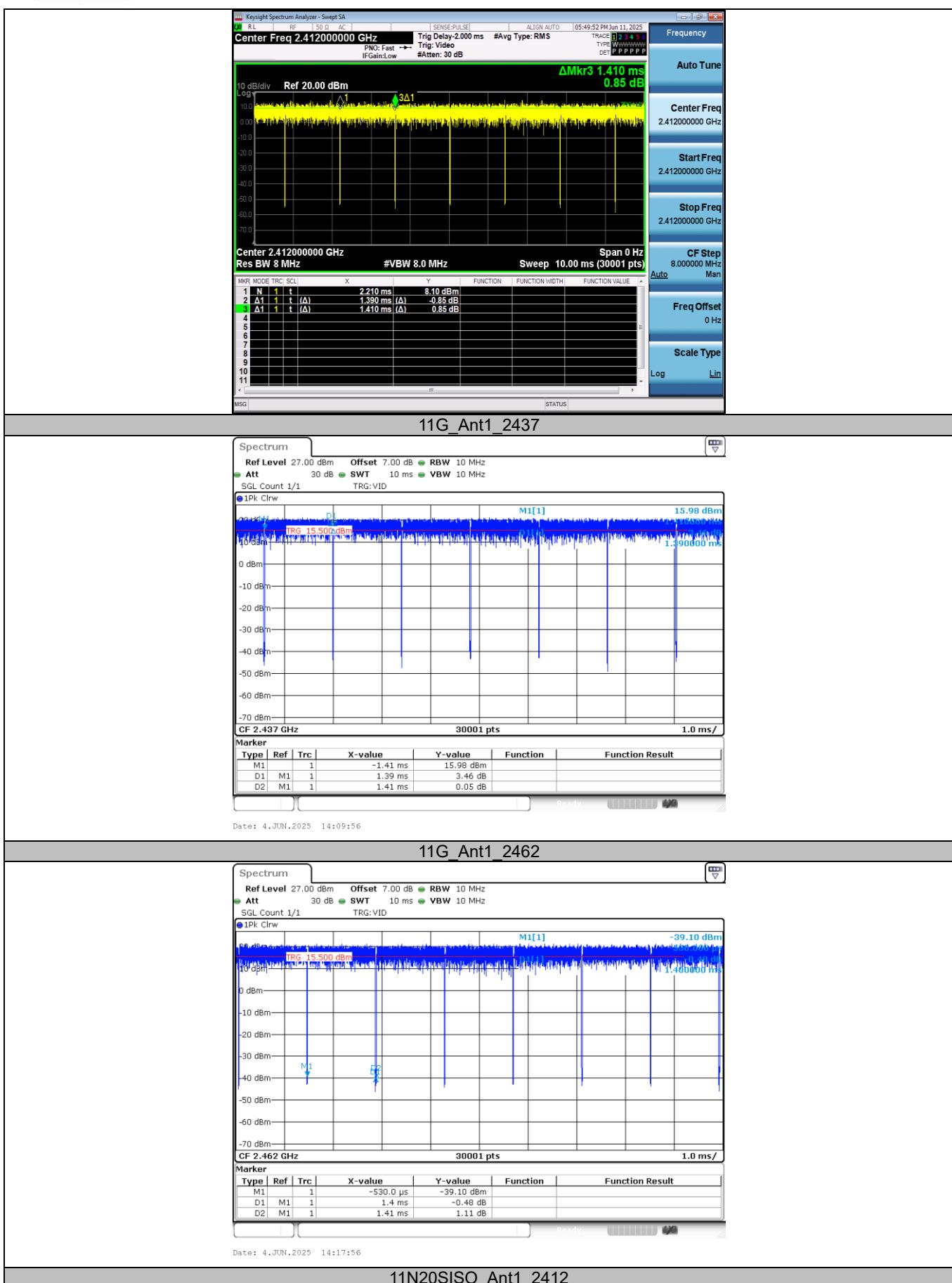


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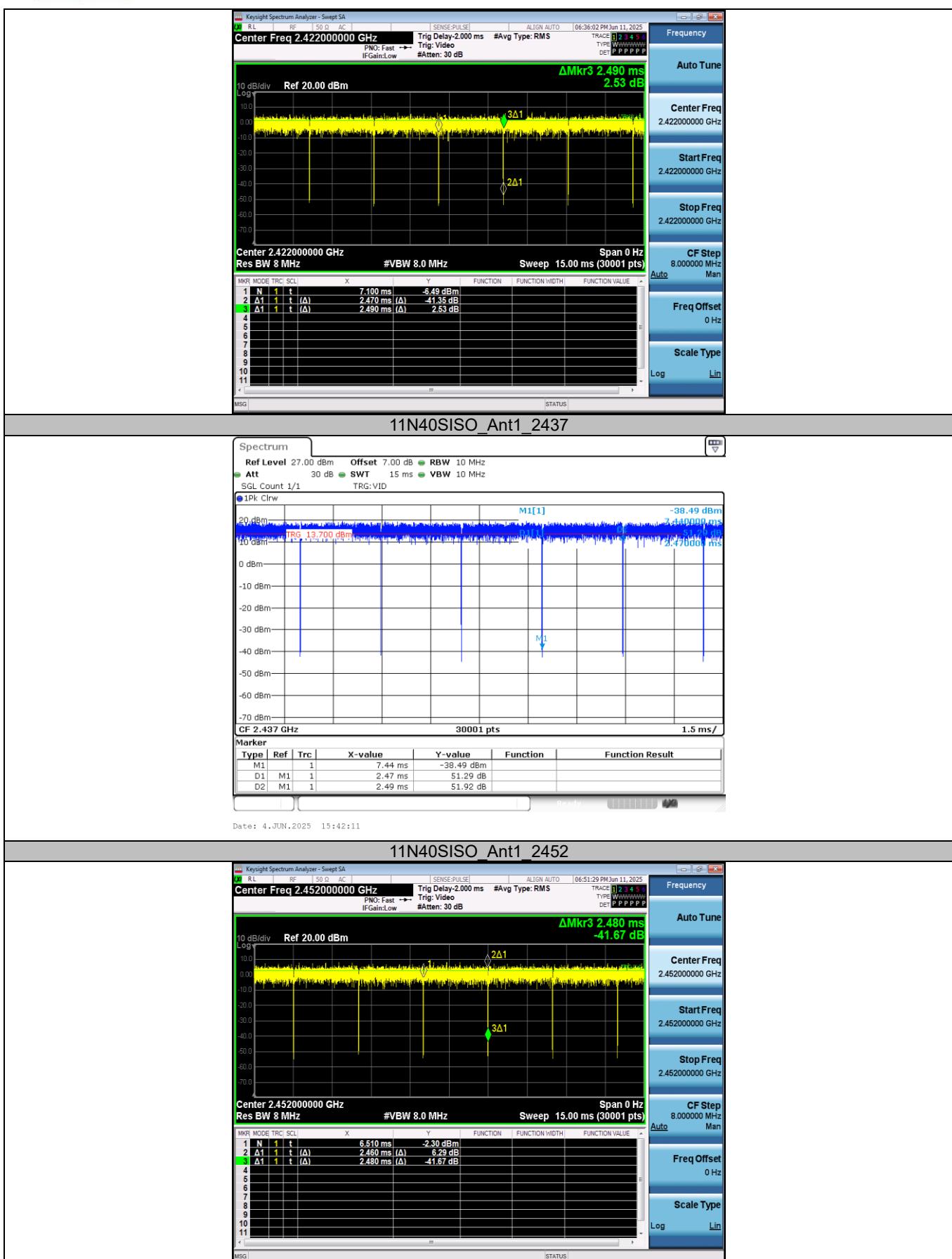


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## 3.9. Antenna Requirement

### 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\*\*\*\*\*