

7.4. POWER SPECTRAL DENSITY

LIMITS

| FCC Part15 (15.247) Subpart C, ISED RSS-247 | | | |
|---|------------------------|-------------|-----------------------|
| Section | Test Item | Limit | Frequency Range (MHz) |
| FCC §15.247 (e) ISED RSS-247 5.2 (b) | Power Spectral Density | 8 dBm/3 kHz | 2400-2483.5 |

TEST PROCEDURE

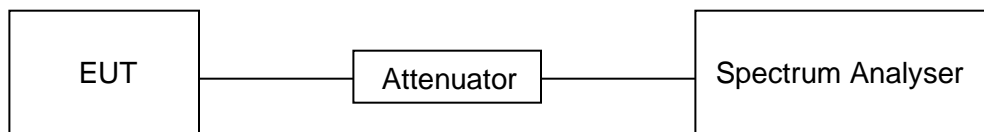
Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

| | |
|------------------|--|
| Center Frequency | The centre frequency of the channel under test |
| Detector | Peak |
| RBW | $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ |
| VBW | $\geq 3 \times \text{RBW}$ |
| Span | 1.5 x DTS bandwidth |
| Trace | Max hold |
| Sweep time | Auto couple. |

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP



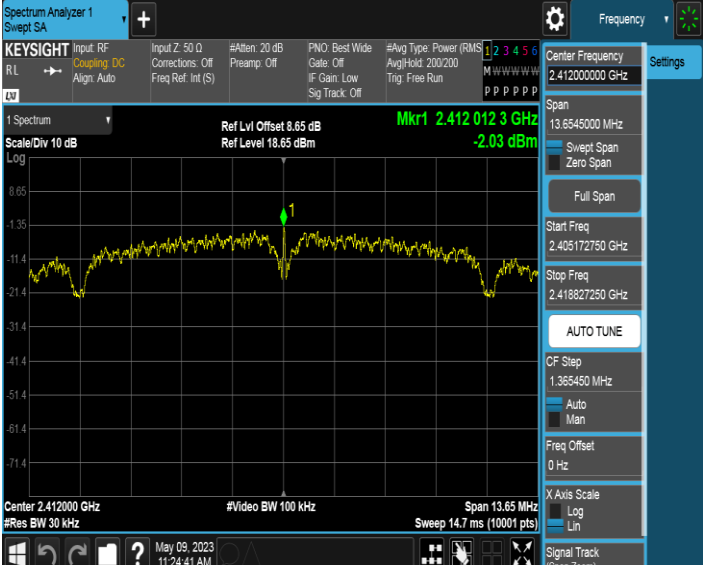
TEST ENVIRONMENT

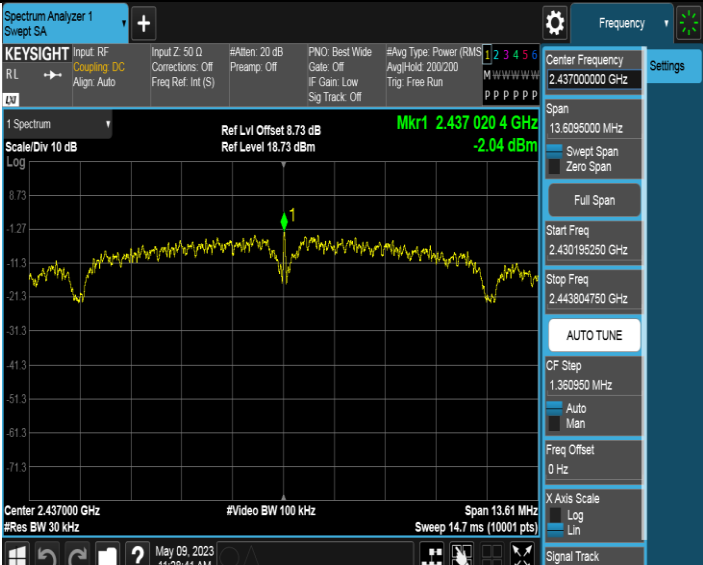
| | | | |
|---------------------|----------|-------------------|-------------|
| Temperature | 22.3°C | Relative Humidity | 47.8% |
| Atmosphere Pressure | 102.1kpa | Test Voltage | AC120V/60Hz |

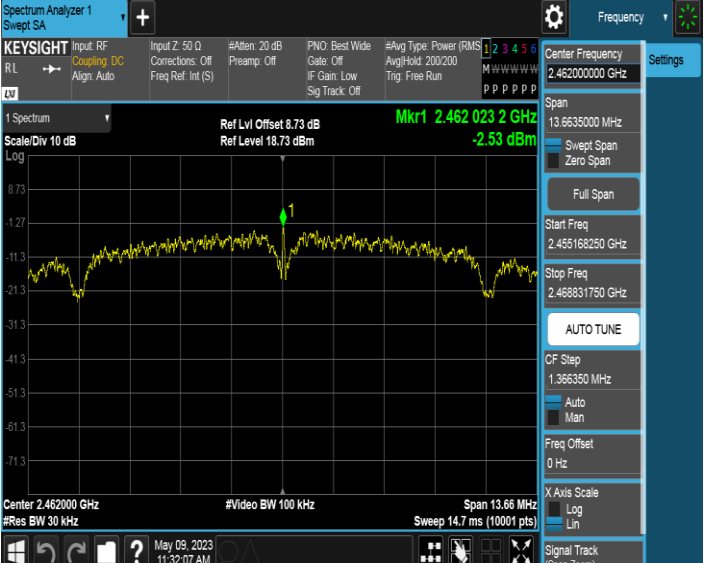
TEST RESULTS TABLE

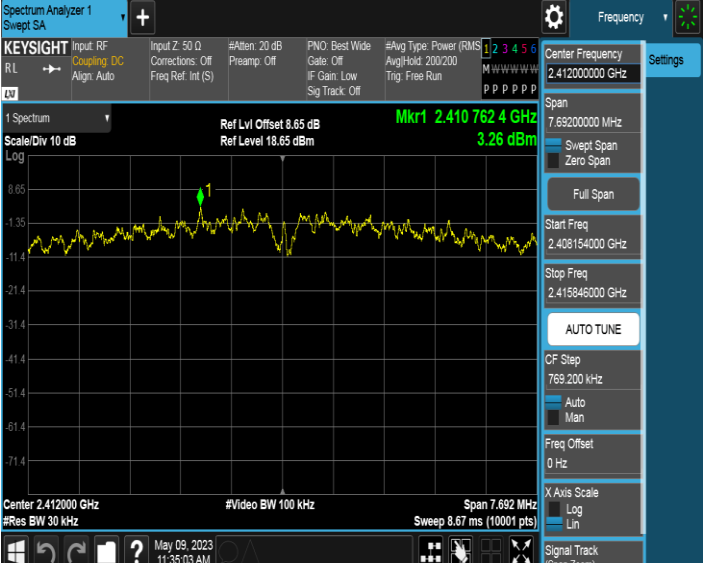
| Test Mode | Test Channel | Maximum Peak power spectral density (dBm/30kHz) | Result |
|-----------|--------------|---|--------|
| 11B | LCH | -2.03 | Pass |
| | MCH | -2.04 | Pass |
| | HCH | -2.53 | Pass |
| 11G | LCH | 3.26 | Pass |
| | MCH | 3.16 | Pass |
| | HCH | 2.83 | Pass |
| 11N HT20 | LCH | 2.76 | Pass |
| | MCH | 3.62 | Pass |
| | HCH | 2.93 | Pass |
| 11N HT40 | LCH | -0.25 | Pass |
| | MCH | 0.14 | Pass |
| | HCH | -0.37 | Pass |
| 11AX20 | LCH | -2.19 | Pass |
| | MCH | -1.95 | Pass |
| | HCH | -2.20 | Pass |

TEST GRAPHS

| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11B | LCH | PASS |
|  | | |

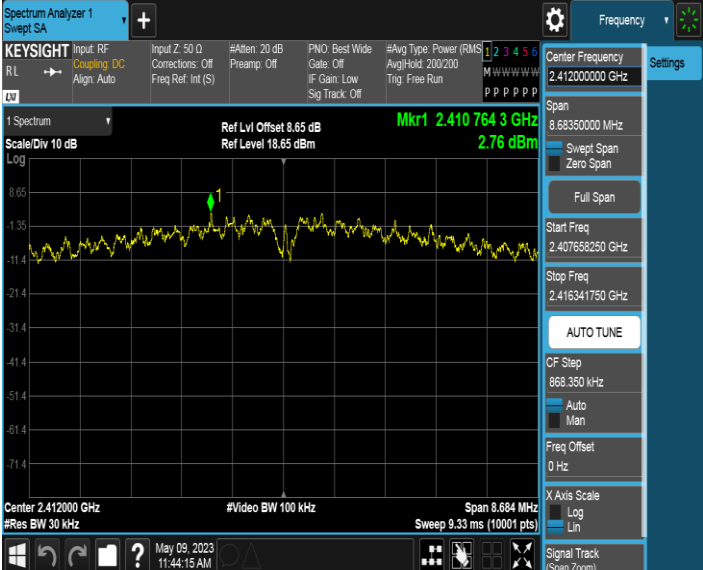
| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11B | MCH | PASS |
|  | | |

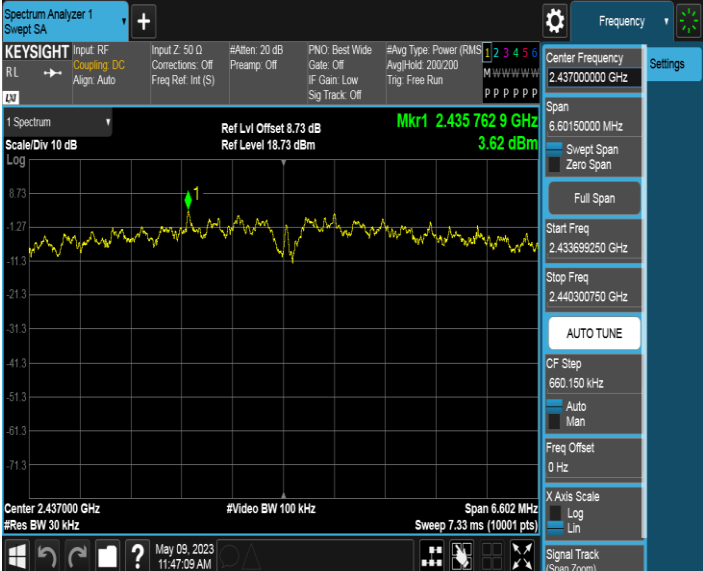
| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11B | HCH | PASS |
|  | | |

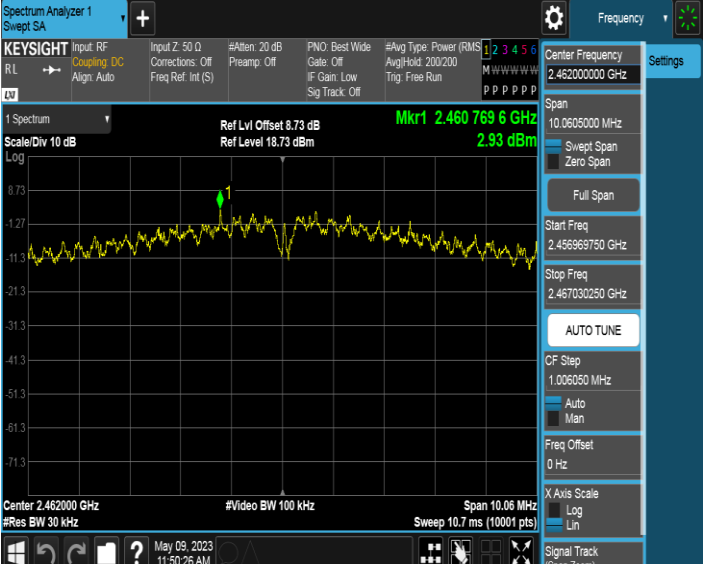
| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11G | LCH | PASS |
|  | | |

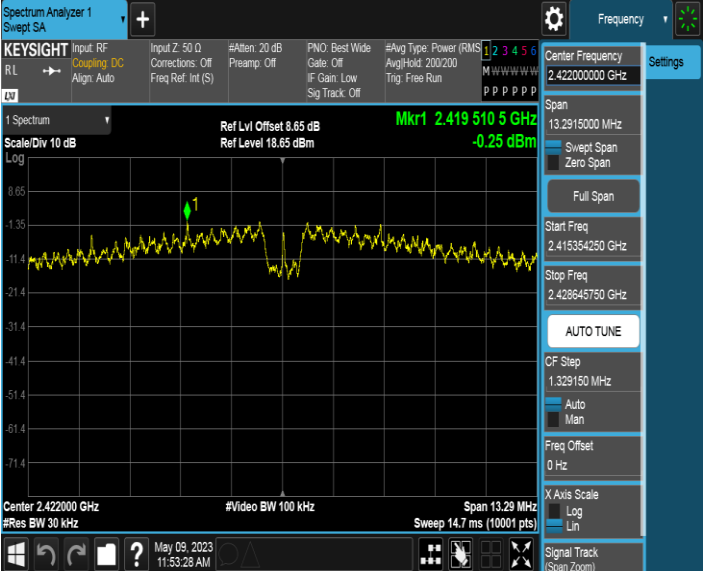
| Test Mode | Test Channel | Verdict |
|-----------|--------------|---------|
| 11G | MCH | PASS |
| | | |

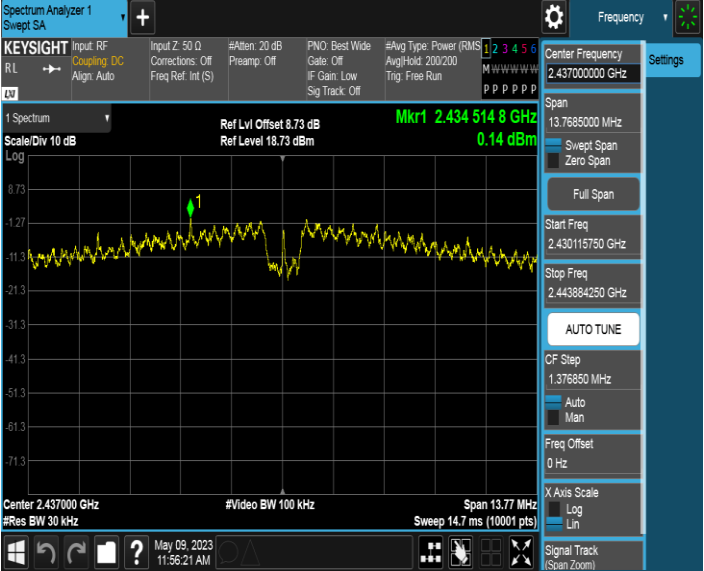
| Test Mode | Test Channel | Verdict |
|-----------|--------------|---------|
| 11G | HCH | PASS |
| | | |

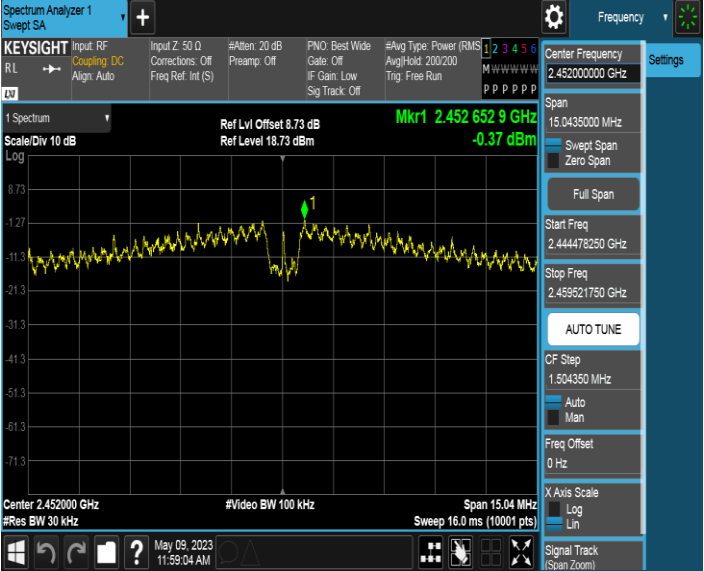
| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11N HT20 | LCH | PASS |
|  | | |

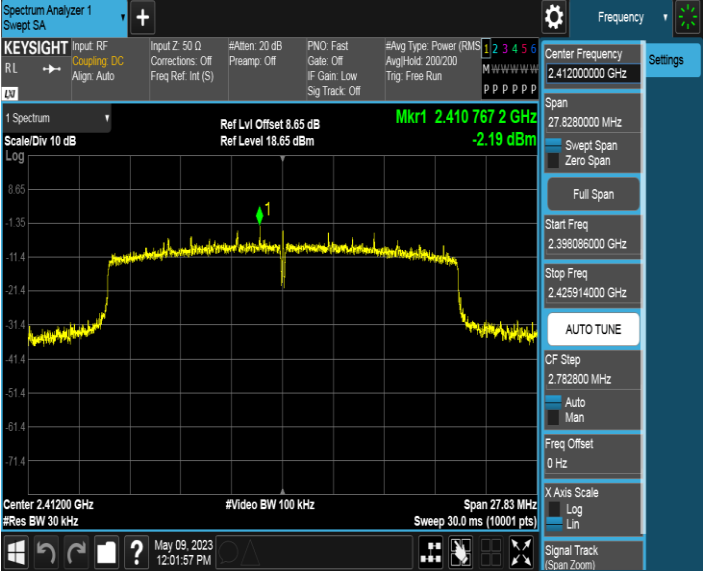
| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11N HT20 | MCH | PASS |
|  | | |


| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11N HT20 | HCH | PASS |
|  | | |

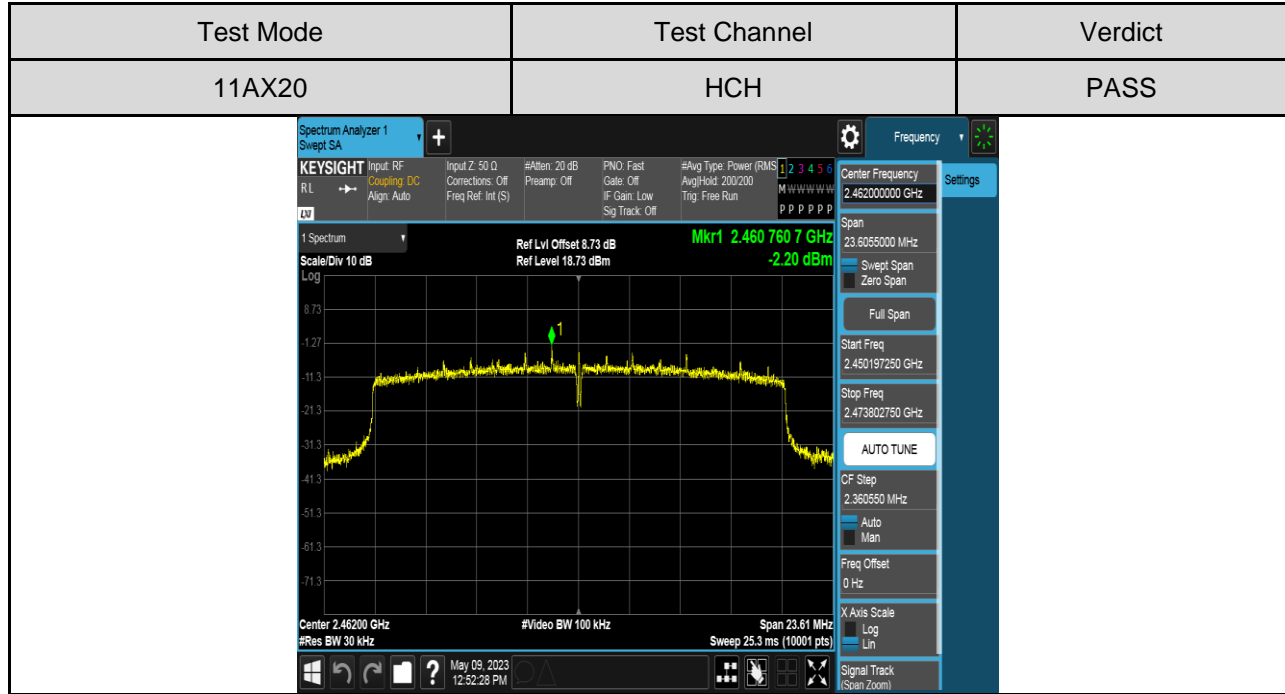
| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11N HT40 | LCH | PASS |
|  | | |

| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11N HT40 | MCH | PASS |
|  | | |

| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11N HT40 | HCH | PASS |
|  | | |

| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11AX20 | LCH | PASS |
|  | | |

| Test Mode | Test Channel | Verdict |
|--|--------------|---------|
| 11AX20 | MCH | PASS |
|  | | |



7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

| FCC Part15 (15.247) Subpart C, RSS-247 | | |
|--|---|--|
| Section | Test Item | Limit |
| FCC §15.247 (d) RSS-247 Clause 5.5 RSS-GEN Clause 6.13 | Conducted Bandedge and Spurious Emissions | 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power |

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

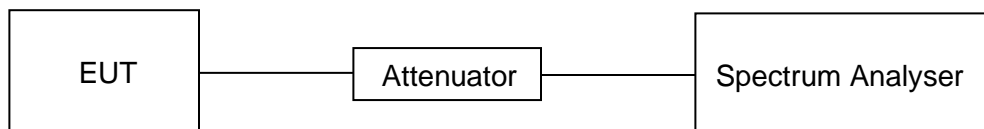
| | |
|------------------|--|
| Center Frequency | The centre frequency of the channel under test |
| Detector | Peak |
| RBW | 100K |
| VBW | $\geq 3 \times \text{RBW}$ |
| Span | 1.5 x DTS bandwidth |
| Trace | Max hold |
| Sweep time | Auto couple. |

Use the peak marker function to determine the maximum PSD level.

| | |
|--------------------|---|
| Span | Set the center frequency and span to encompass frequency range to be measured |
| Detector | Peak |
| RBW | 100K |
| VBW | $\geq 3 \times \text{RBW}$ |
| measurement points | $\geq \text{span}/\text{RBW}$ |
| Trace | Max hold |
| Sweep time | Auto couple. |

Use the peak marker function to determine the maximum amplitude level.

TEST SETUP



TEST ENVIRONMENT

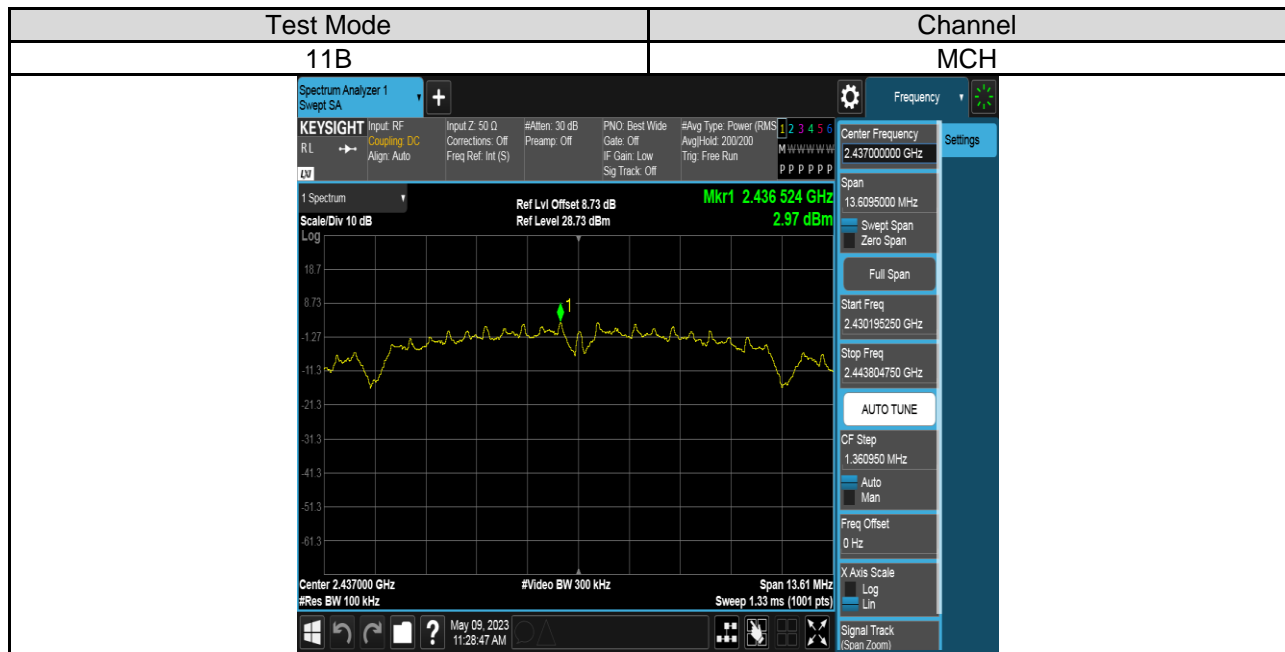
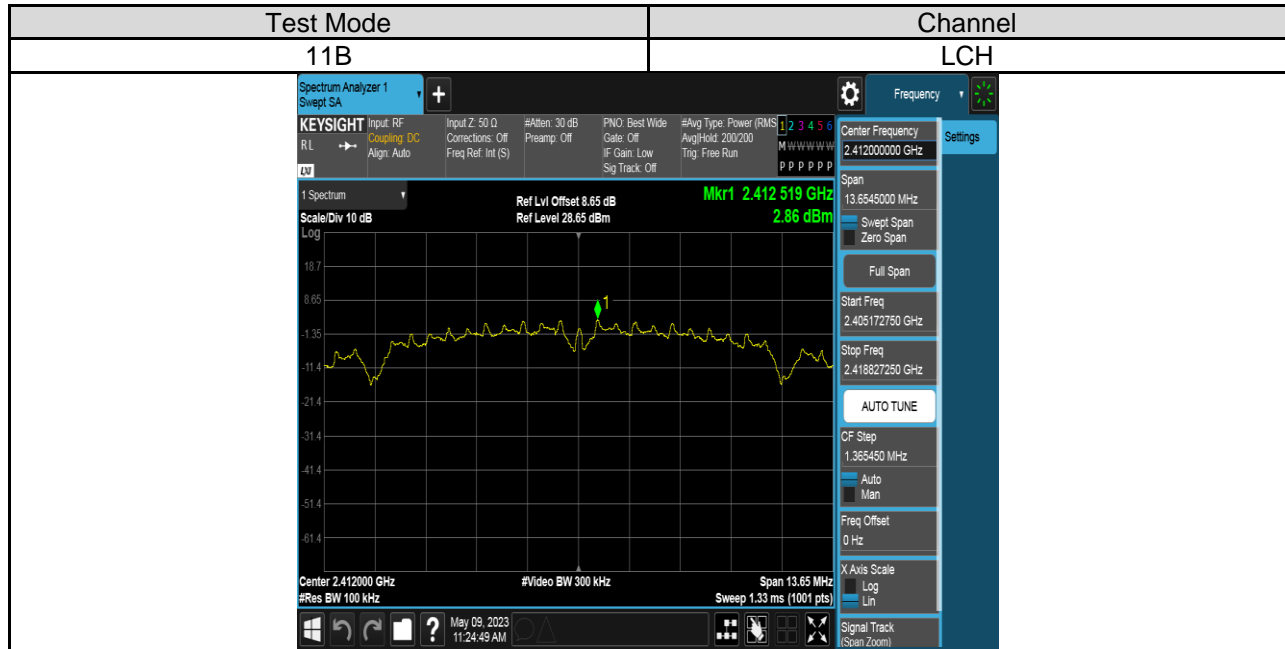
| | | | |
|---------------------|----------|-------------------|-------------|
| Temperature | 22.3°C | Relative Humidity | 47.8% |
| Atmosphere Pressure | 102.1kpa | Test Voltage | AC120V/60Hz |

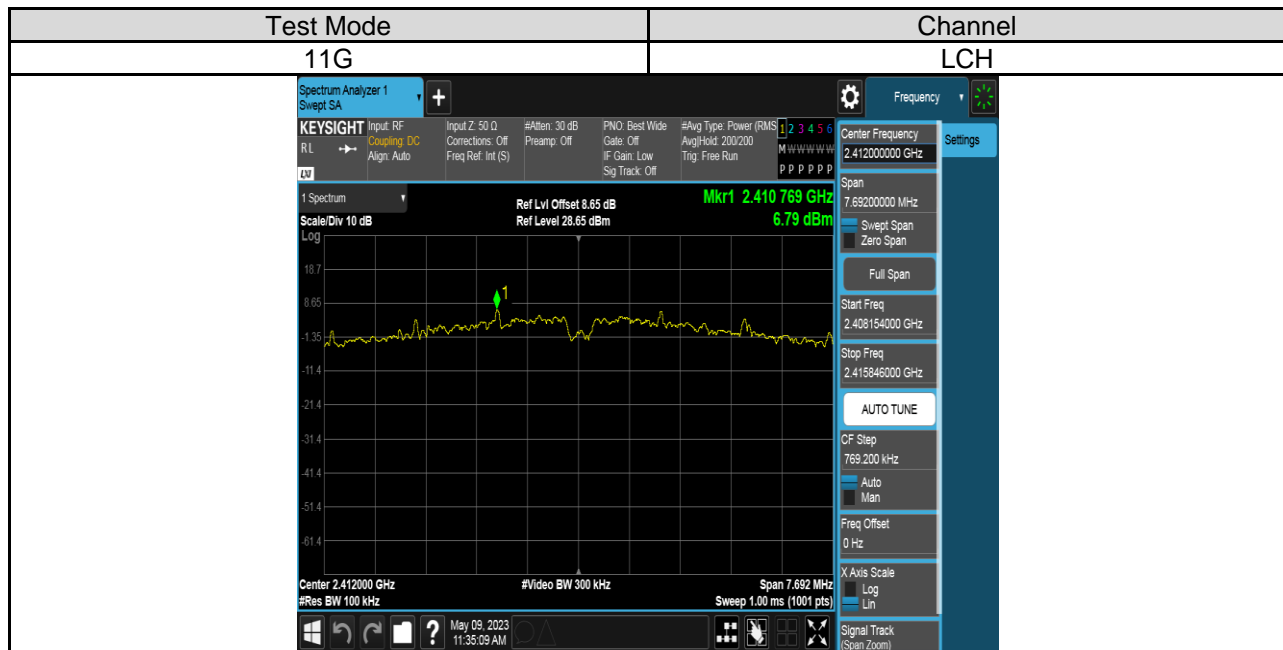
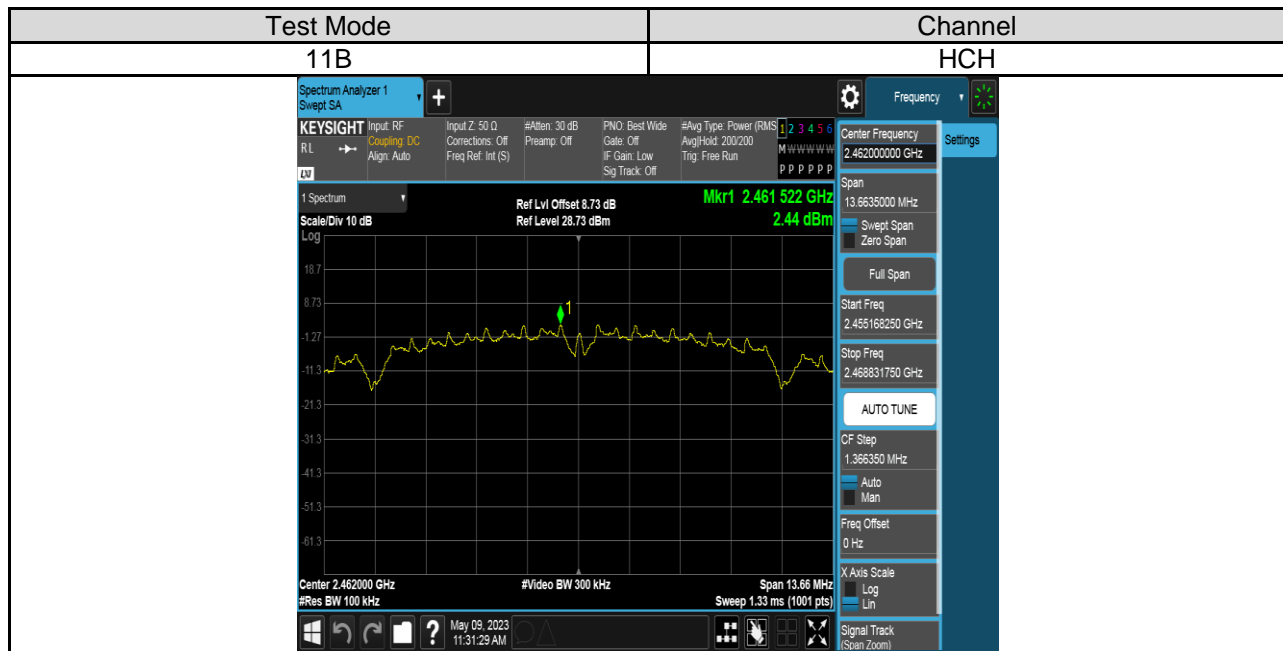
PART 1: REFERENCE LEVEL MEASUREMENT

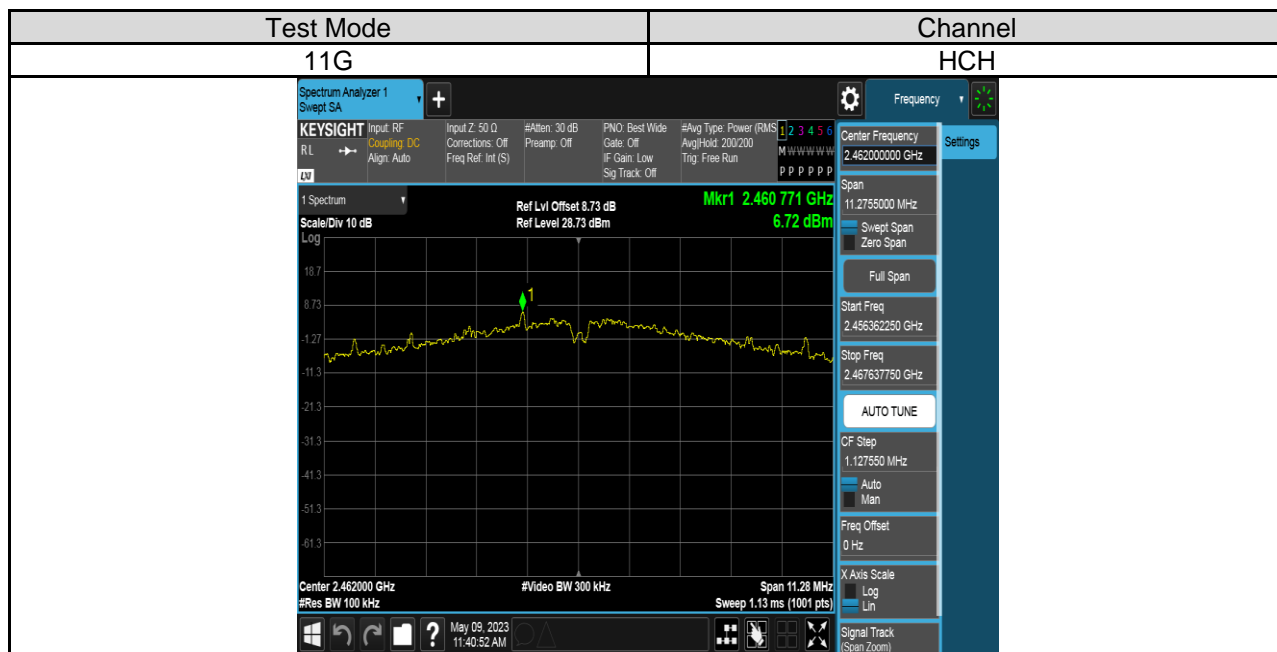
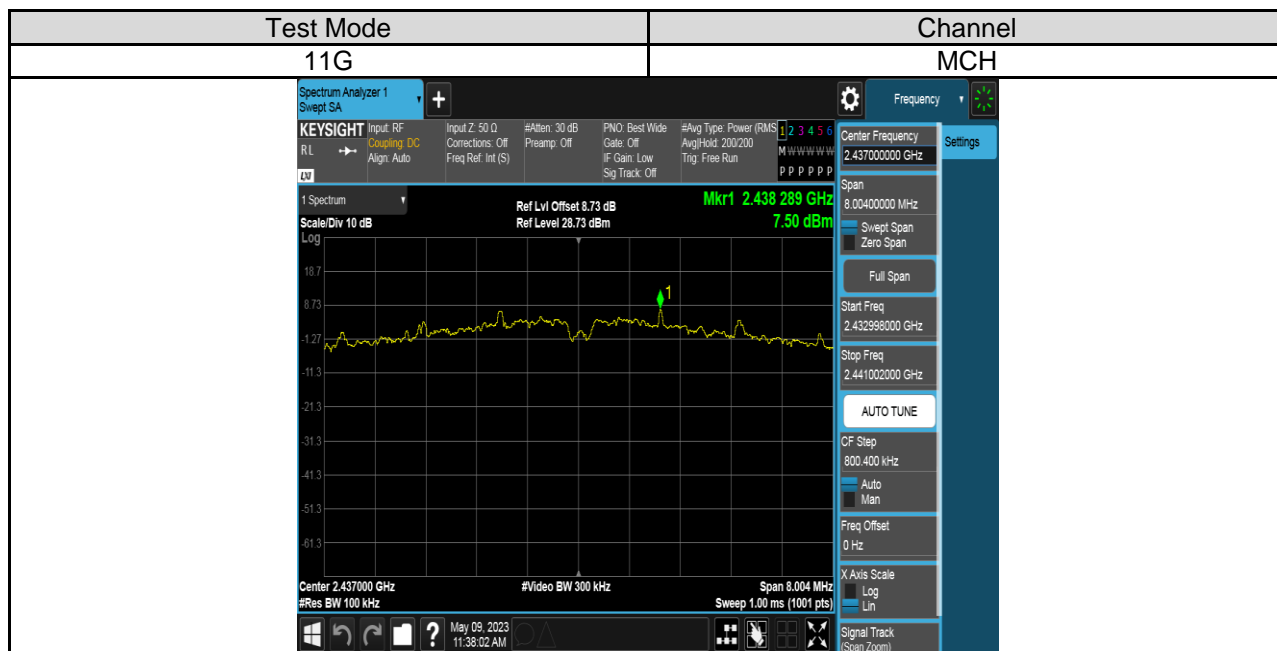
TEST RESULTS TABLE

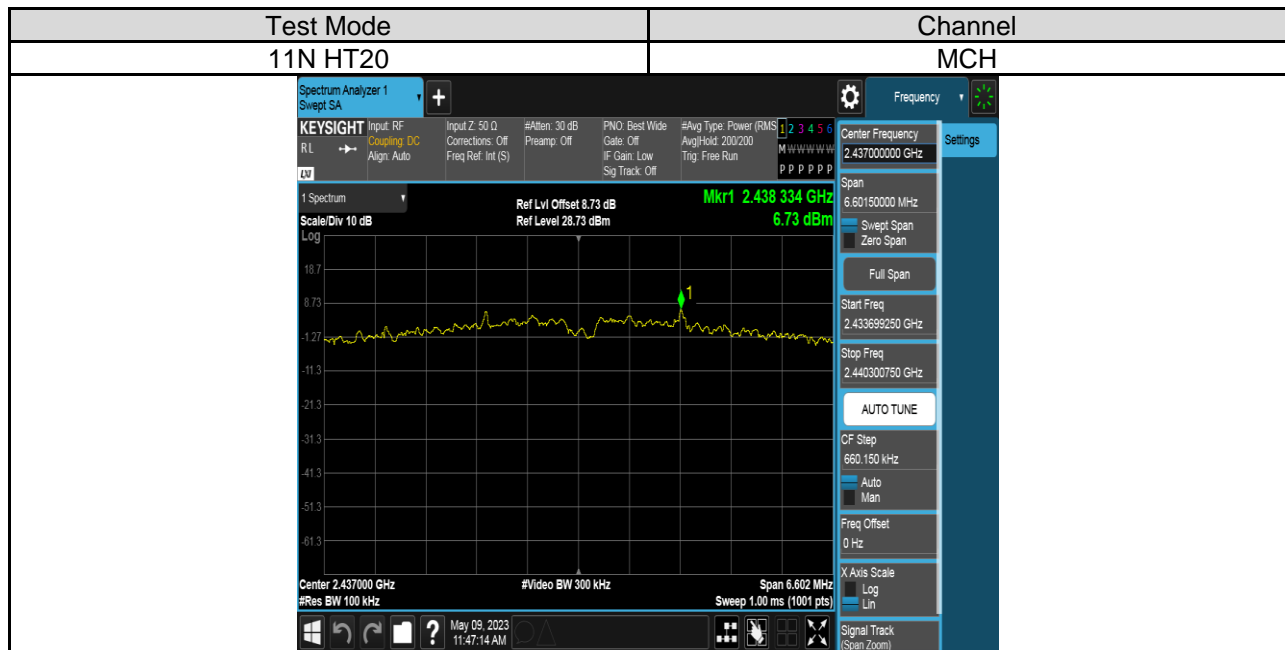
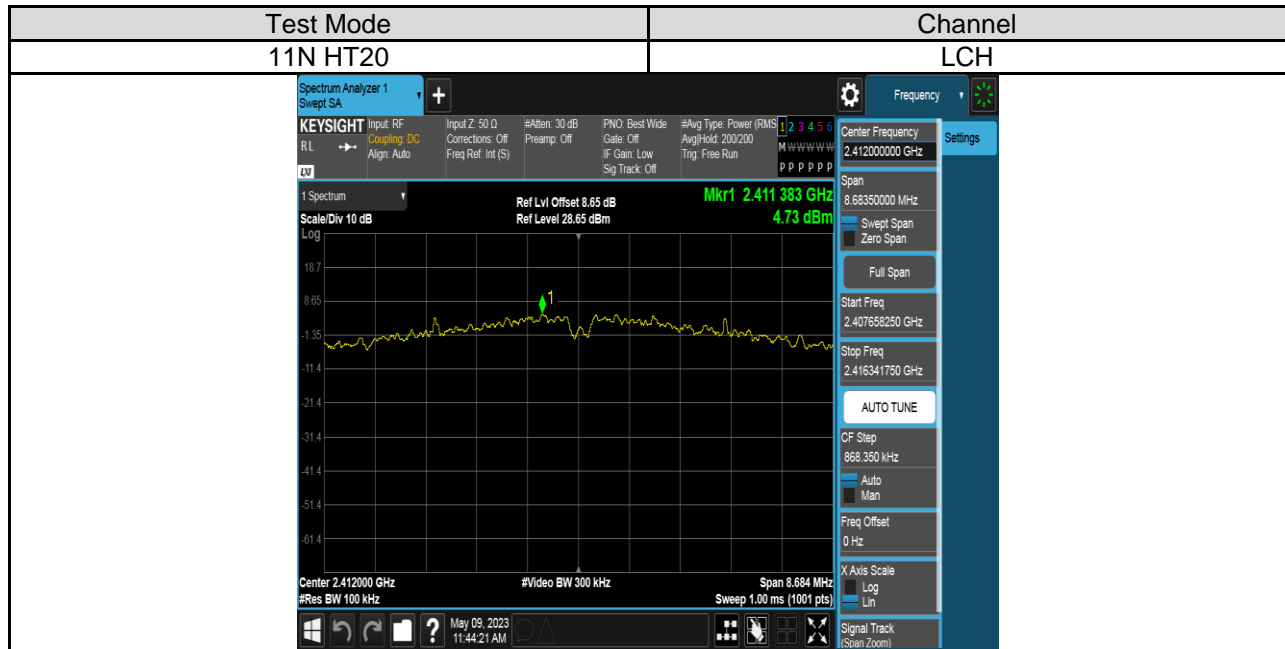
| Test Mode | Test Antenna | Channel | Pref(dBm) | Puw(dBm) | Verdict |
|-----------|--------------|---------|---------------------|----------|---------|
| 11B SISO | Antenna 1 | LCH | See the test graphs | <Limit | PASS |
| | | MCH | See the test graphs | <Limit | PASS |
| | | HCH | See the test graphs | <Limit | PASS |
| 11G SISO | Antenna 1 | LCH | See the test graphs | <Limit | PASS |
| | | MCH | See the test graphs | <Limit | PASS |
| | | HCH | See the test graphs | <Limit | PASS |
| 11N HT20 | Antenna 1 | LCH | See the test graphs | <Limit | PASS |
| | | MCH | See the test graphs | <Limit | PASS |
| | | HCH | See the test graphs | <Limit | PASS |
| 11N HT40 | Antenna 1 | LCH | See the test graphs | <Limit | PASS |
| | | MCH | See the test graphs | <Limit | PASS |
| | | HCH | See the test graphs | <Limit | PASS |
| 11AX20 | Antenna 1 | LCH | See the test graphs | <Limit | PASS |
| | | MCH | See the test graphs | <Limit | PASS |
| | | HCH | See the test graphs | <Limit | PASS |

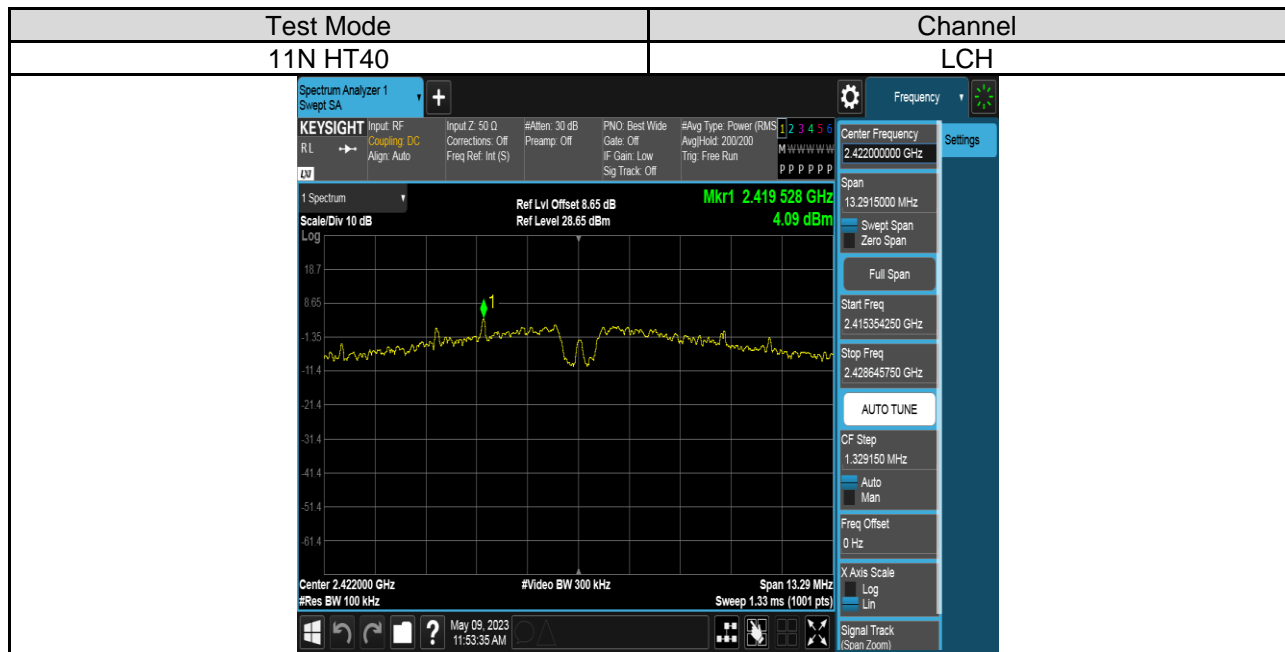
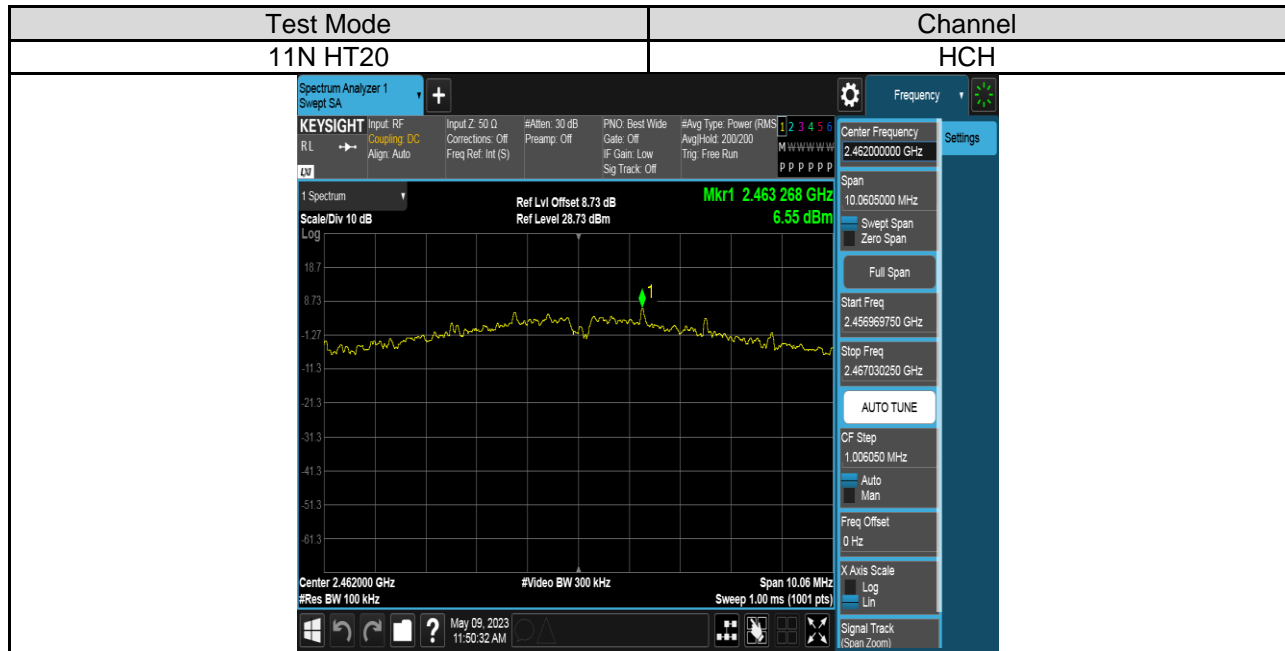
TEST GRAPHS

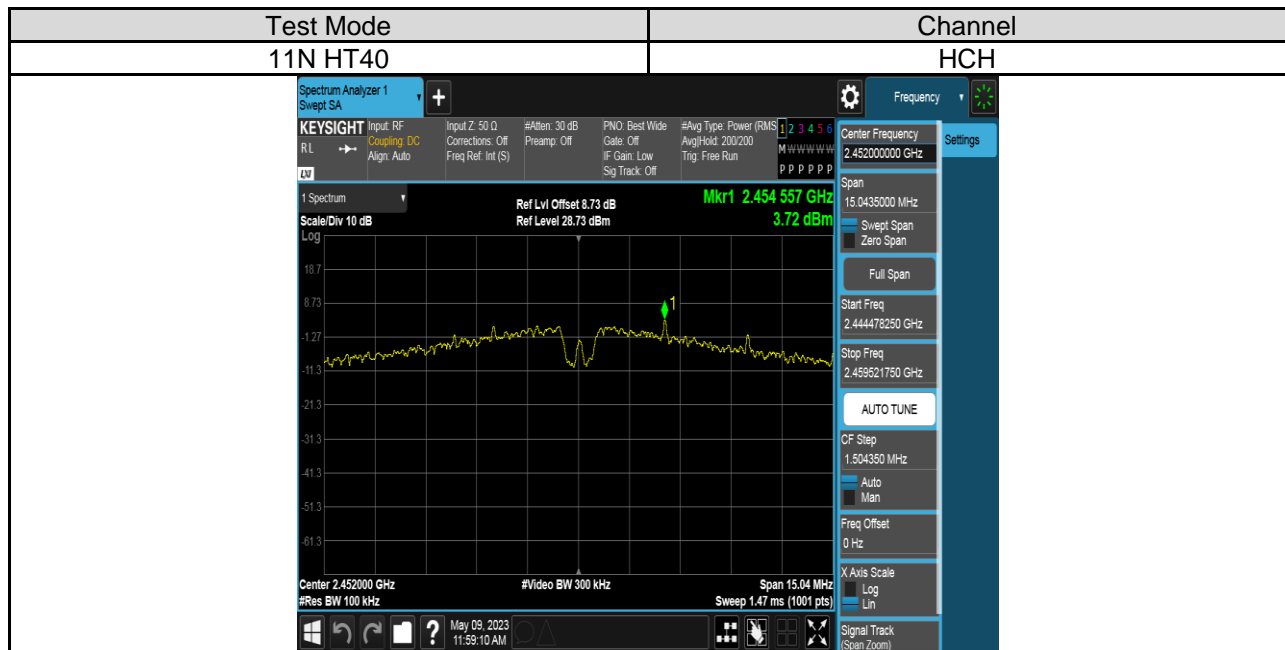
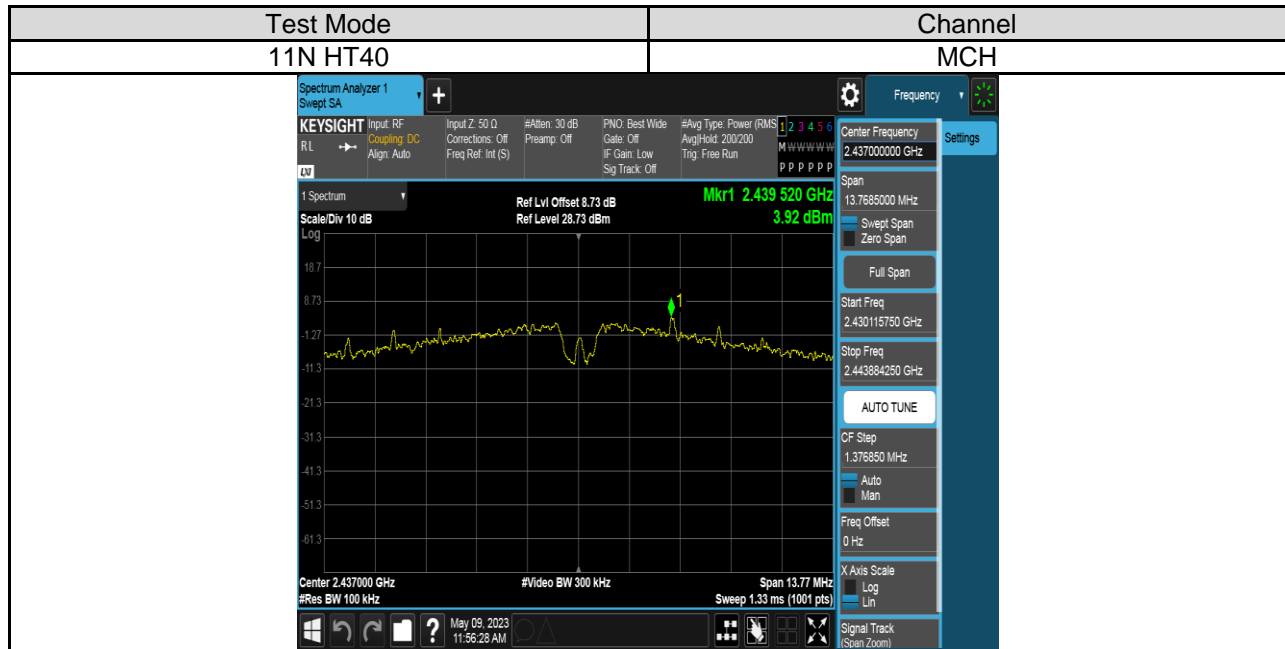


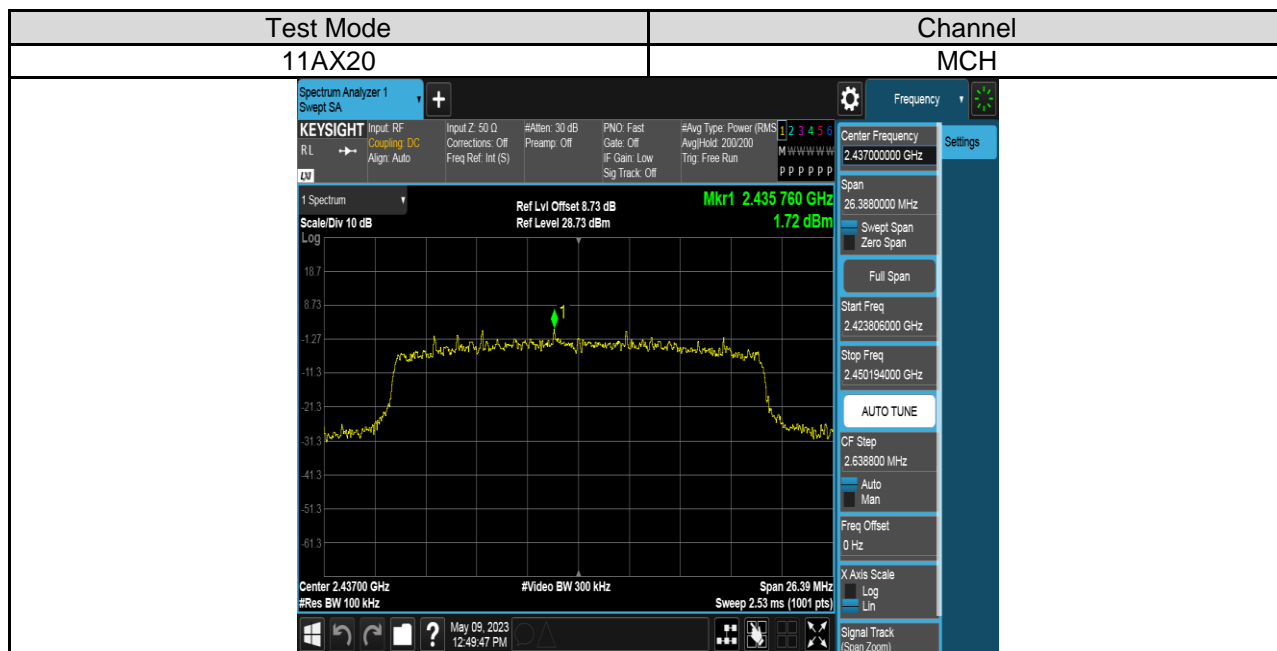
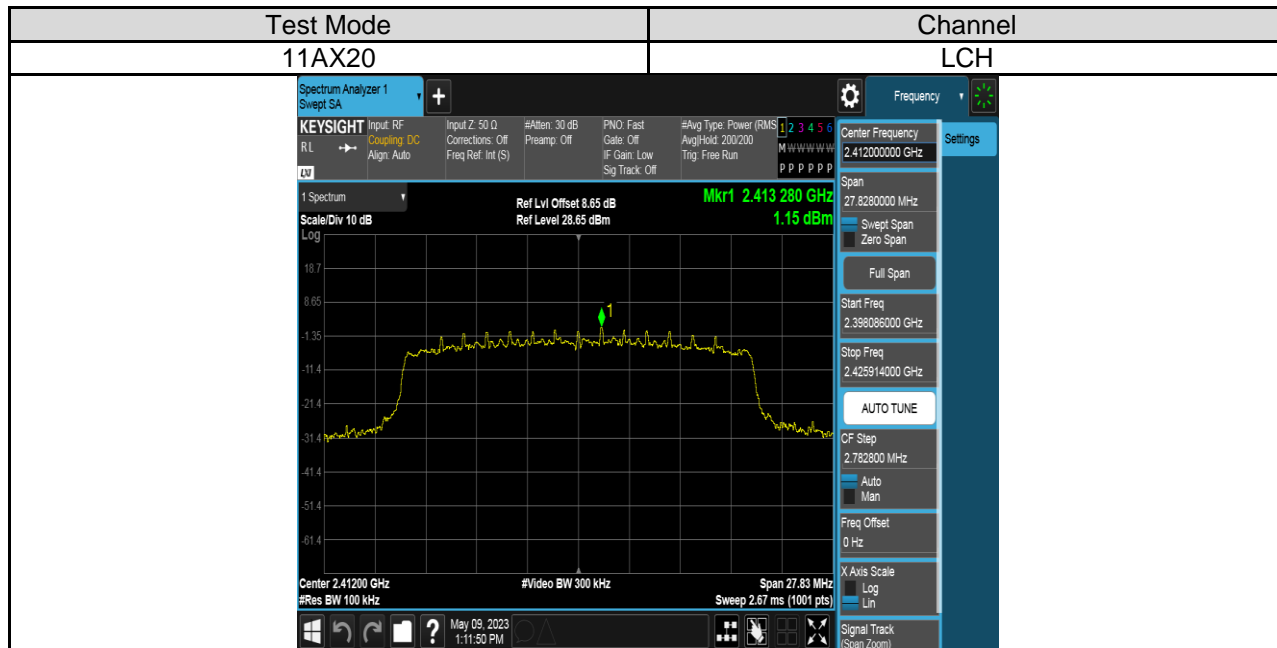










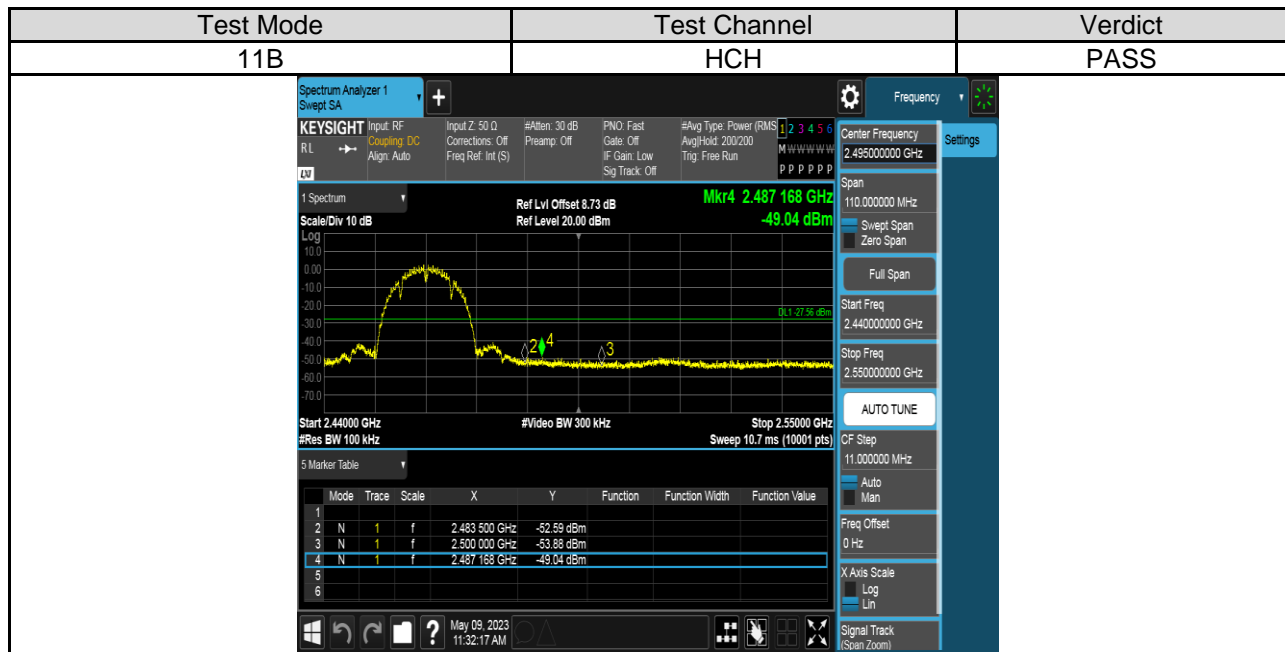
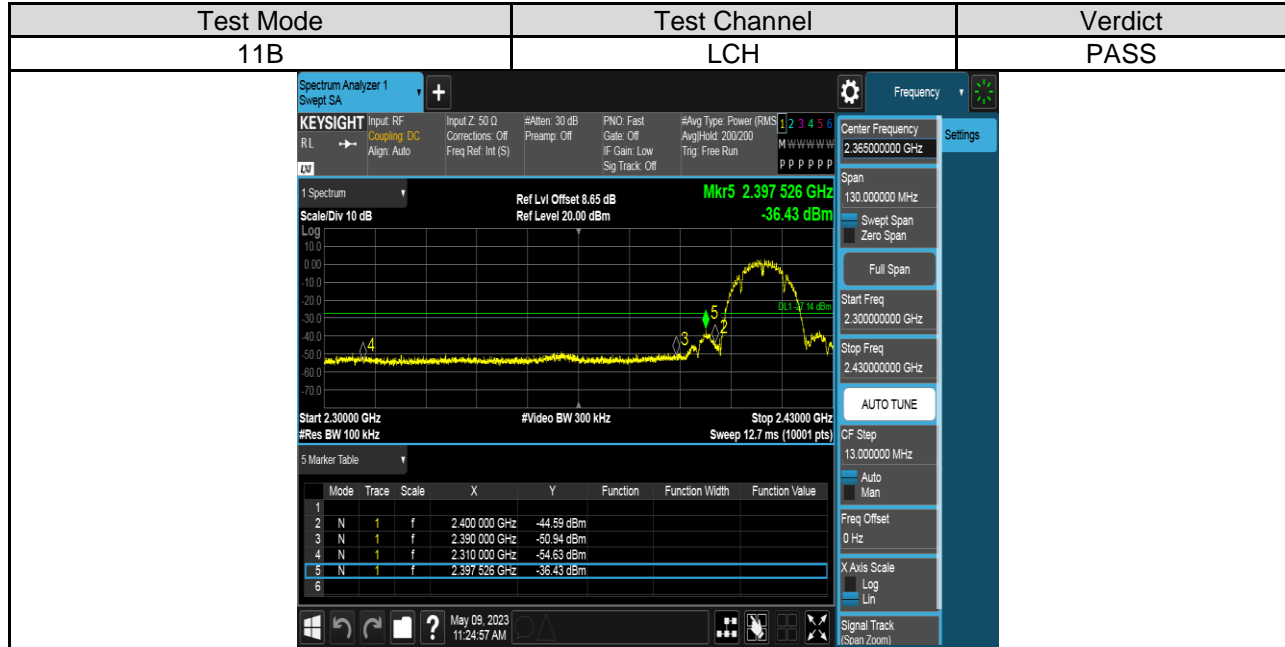


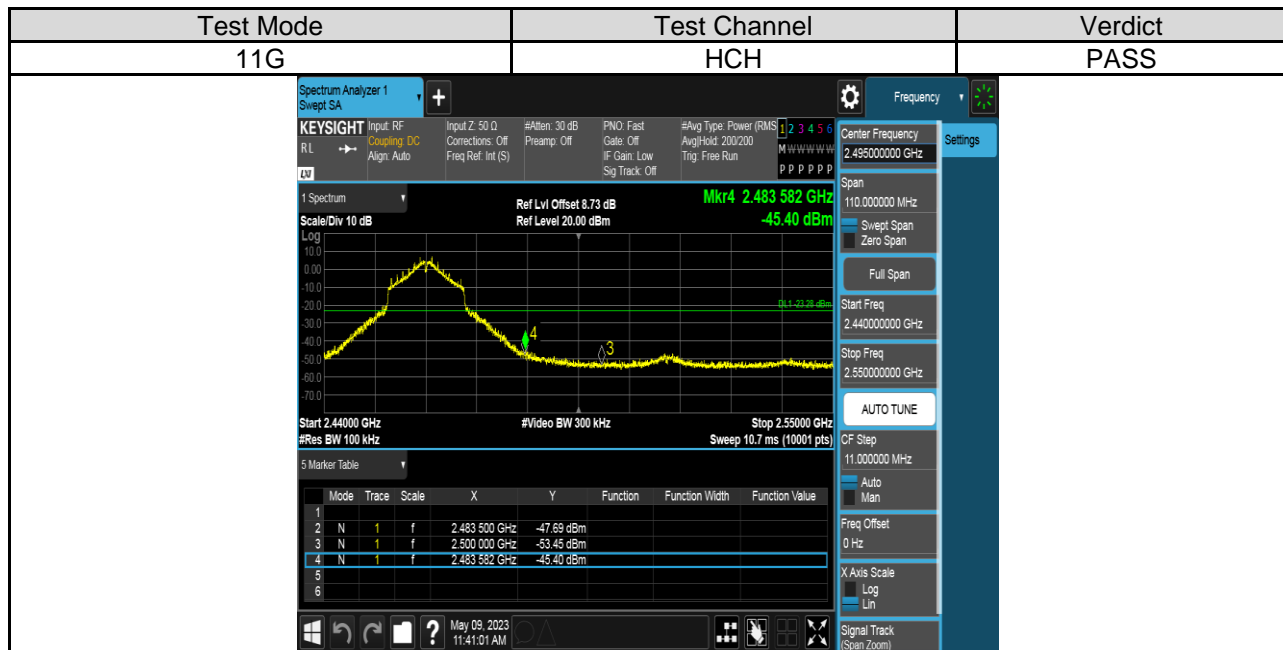
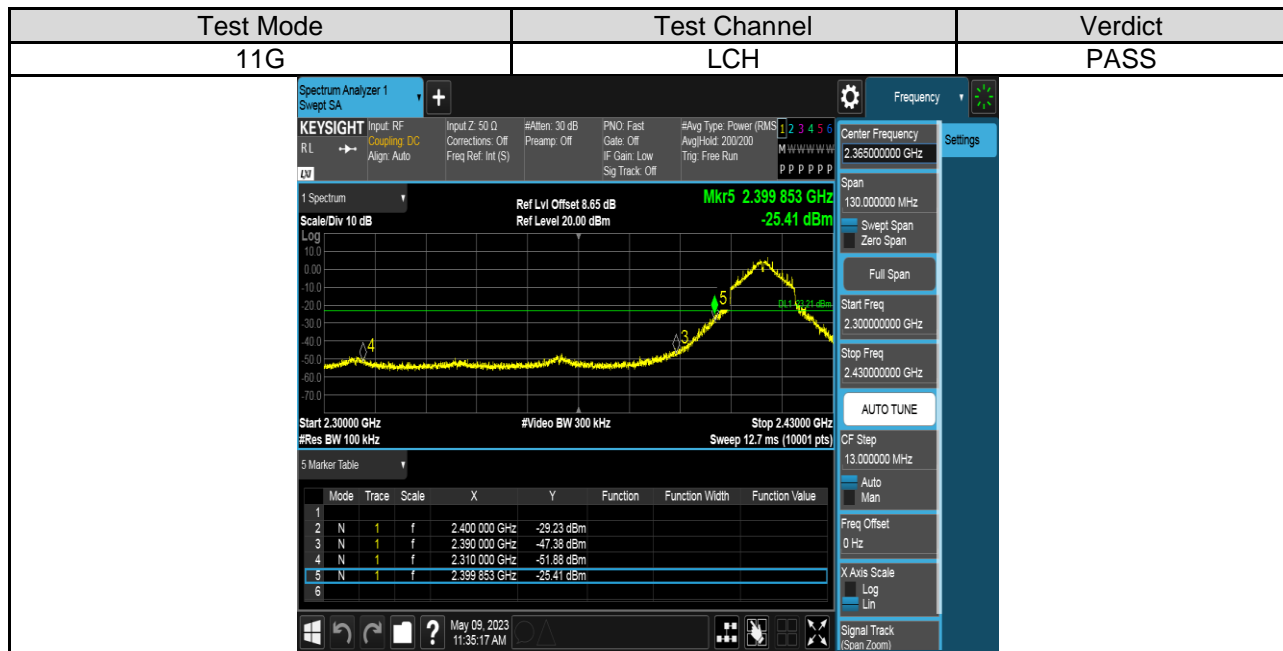


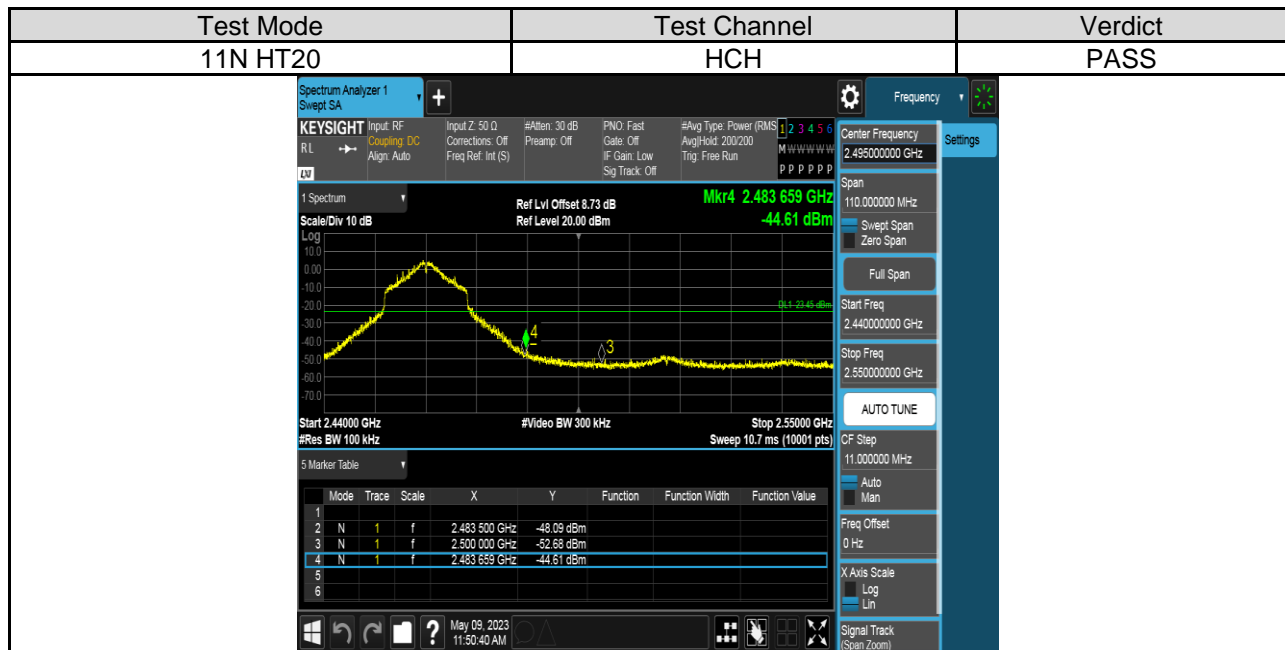
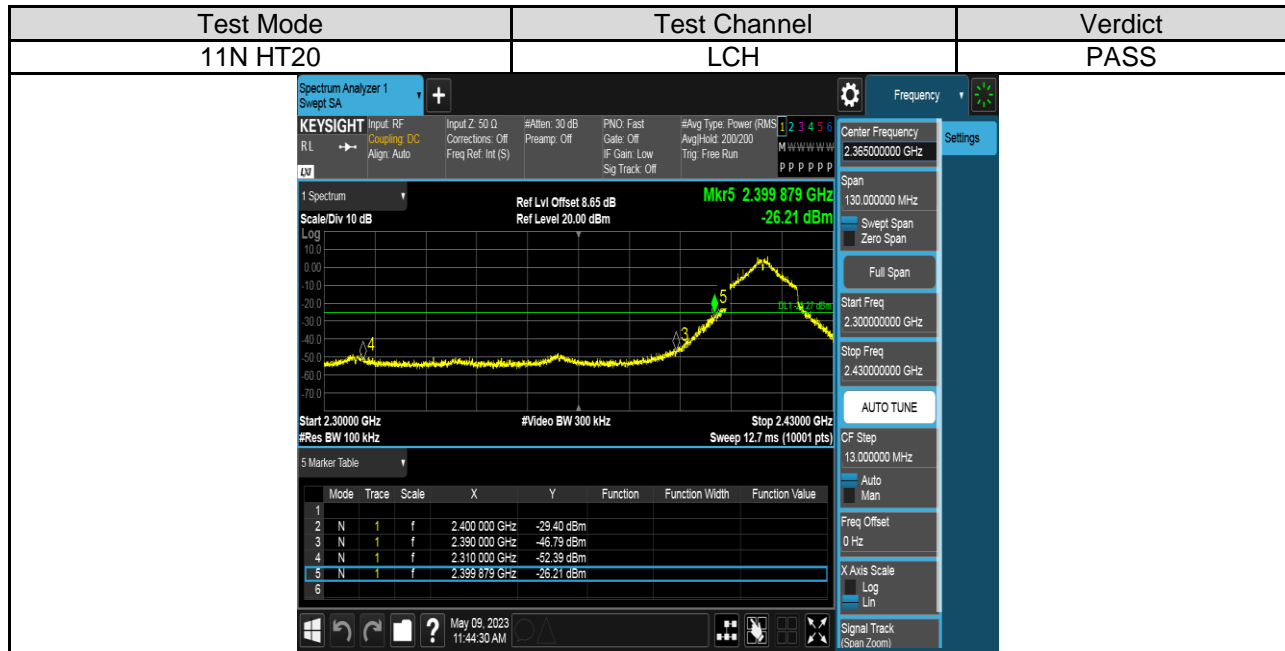
PART 2: CONDUCTED BANDEDGE**TEST RESULTS TABLE**

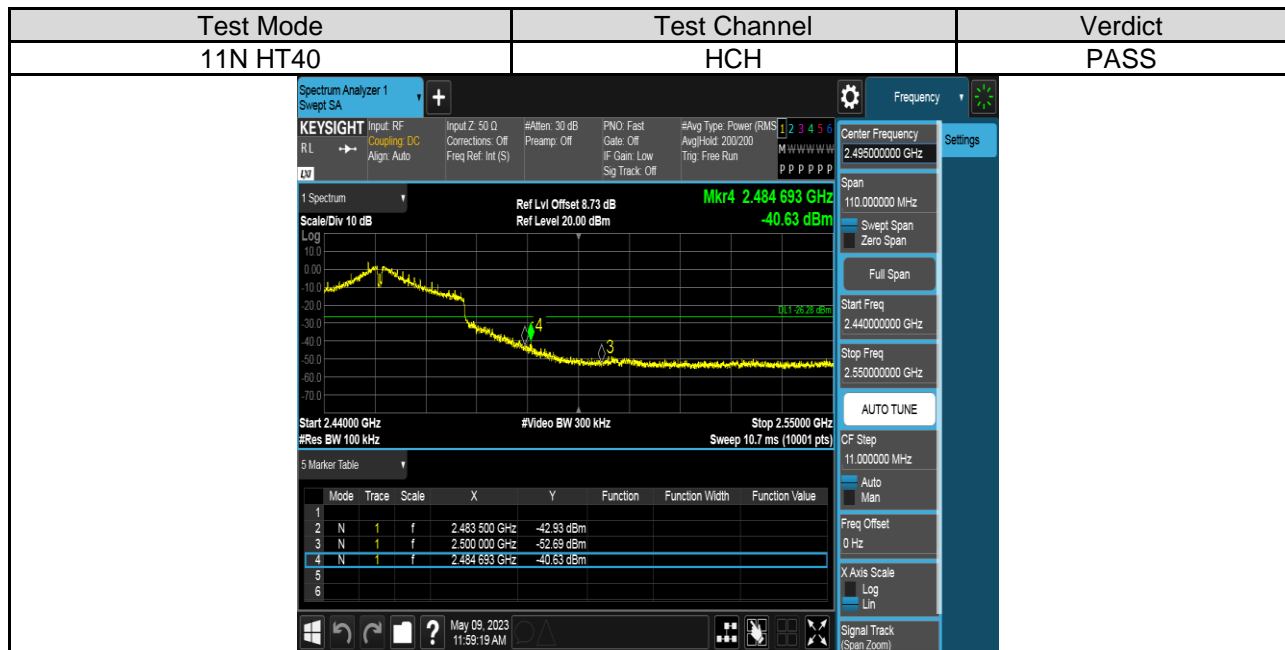
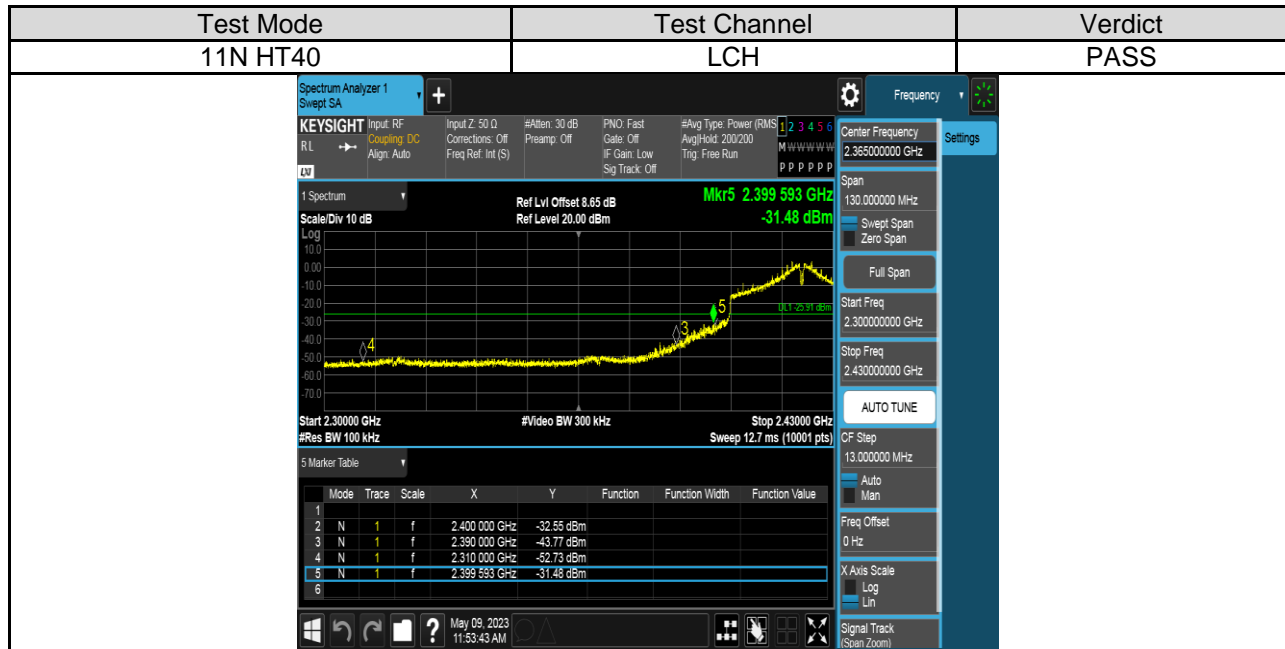
| Test Mode | Test Channel | Result | Verdict |
|-----------|--------------|-------------------------|---------|
| 11B | LCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11G | LCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11N HT20 | LCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11N HT40 | LCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11AX20 | LCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |

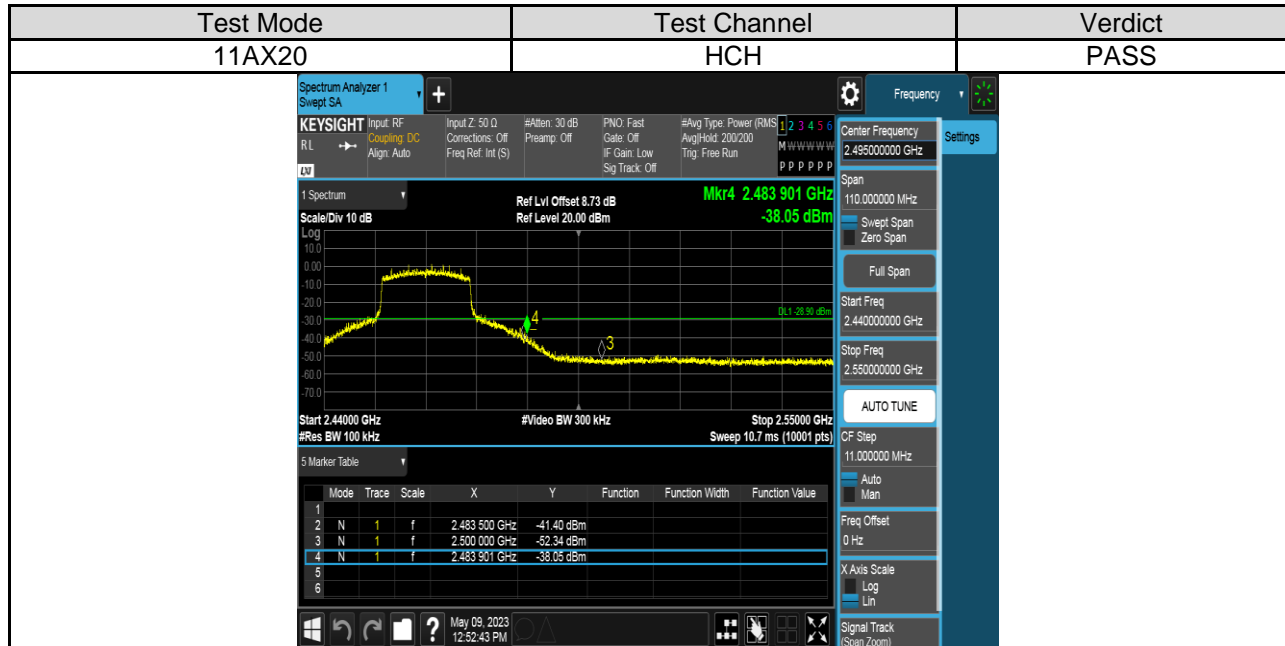
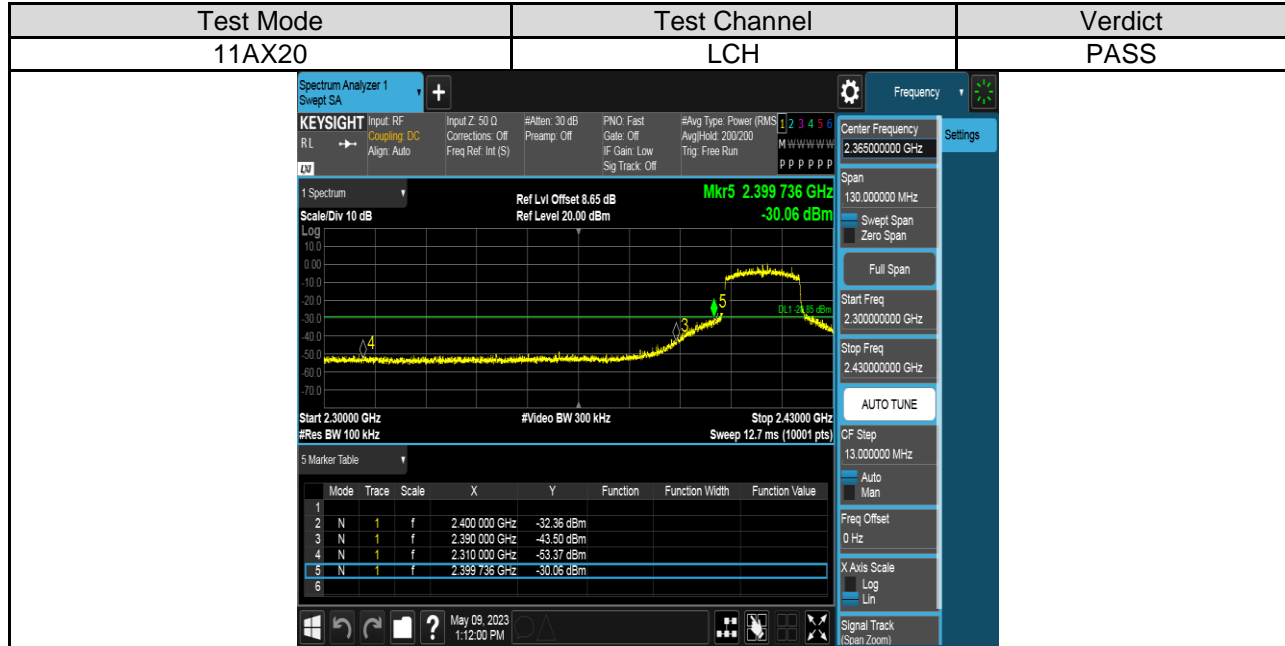
TEST GRAPHS











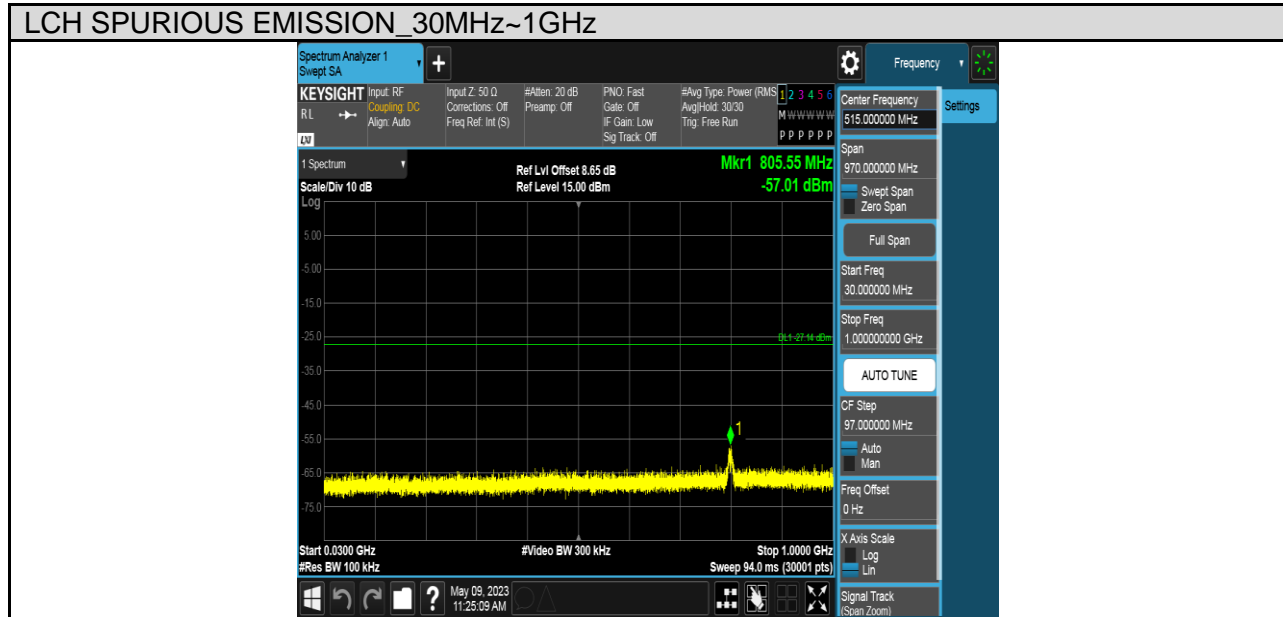
PART 3: CONDUCTED SPURIOUS EMISSION

TEST RESULTS TABLE

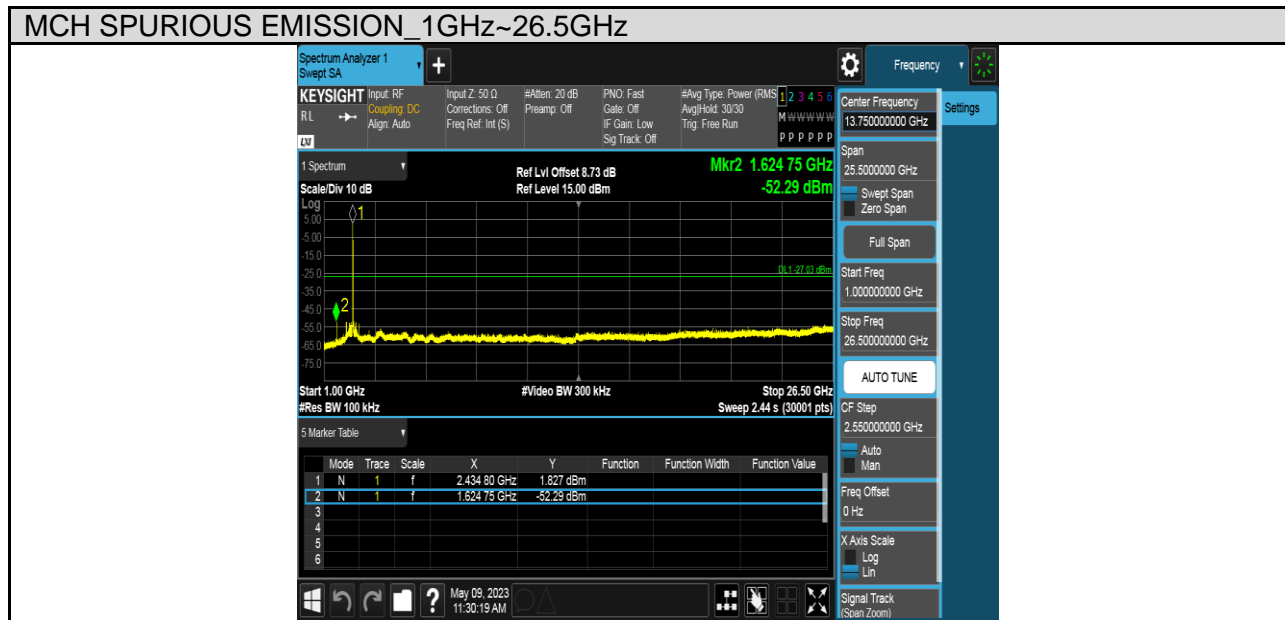
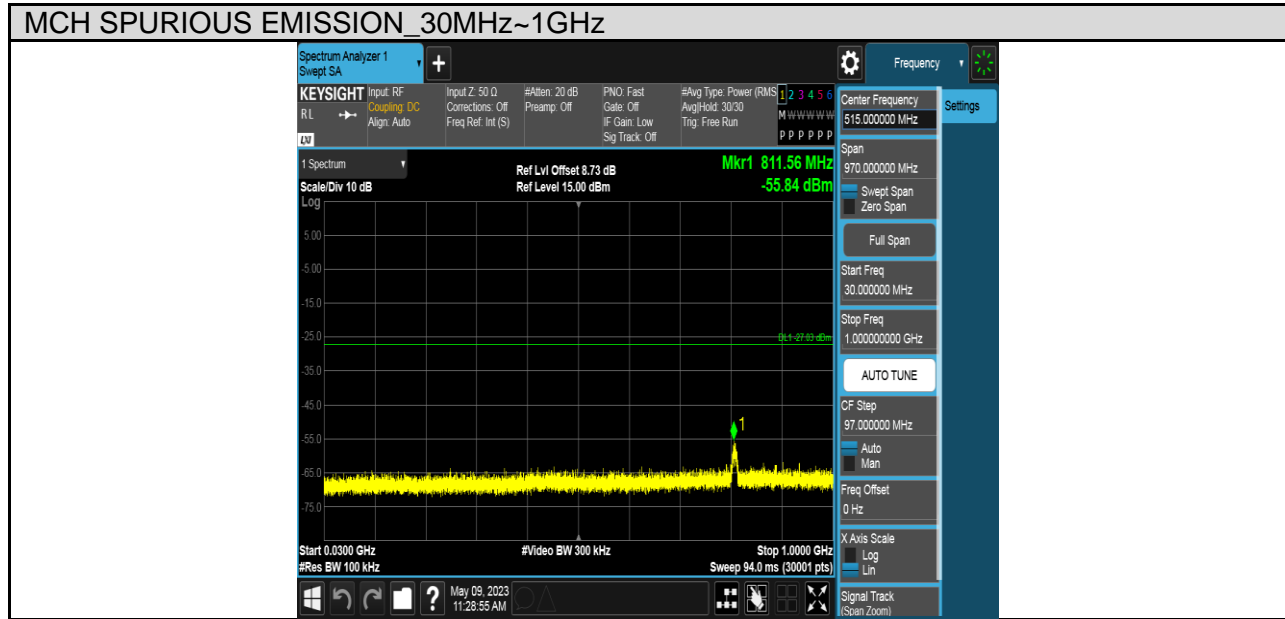
| Test Mode | Test Channel | Result | Verdict |
|-----------|--------------|-------------------------|---------|
| 11B | LCH | Refer to the Test Graph | PASS |
| | MCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11G | LCH | Refer to the Test Graph | PASS |
| | MCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11N HT20 | LCH | Refer to the Test Graph | PASS |
| | MCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11N HT40 | LCH | Refer to the Test Graph | PASS |
| | MCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |
| 11AX20 | LCH | Refer to the Test Graph | PASS |
| | MCH | Refer to the Test Graph | PASS |
| | HCH | Refer to the Test Graph | PASS |

TEST GRAPHS

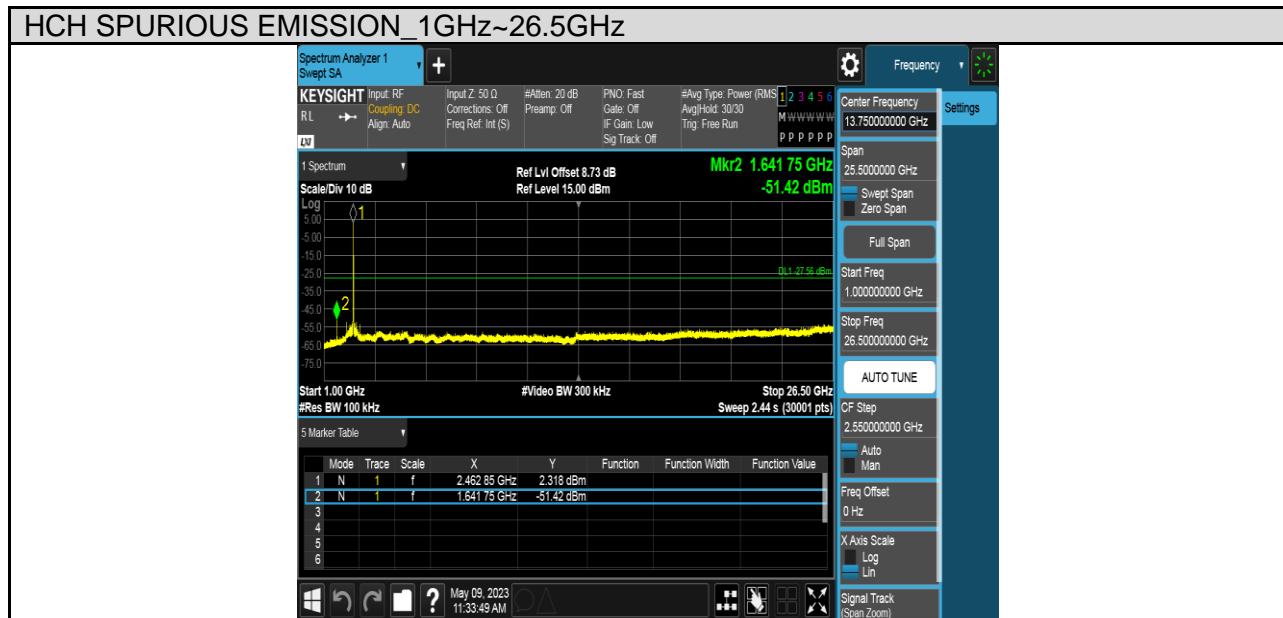
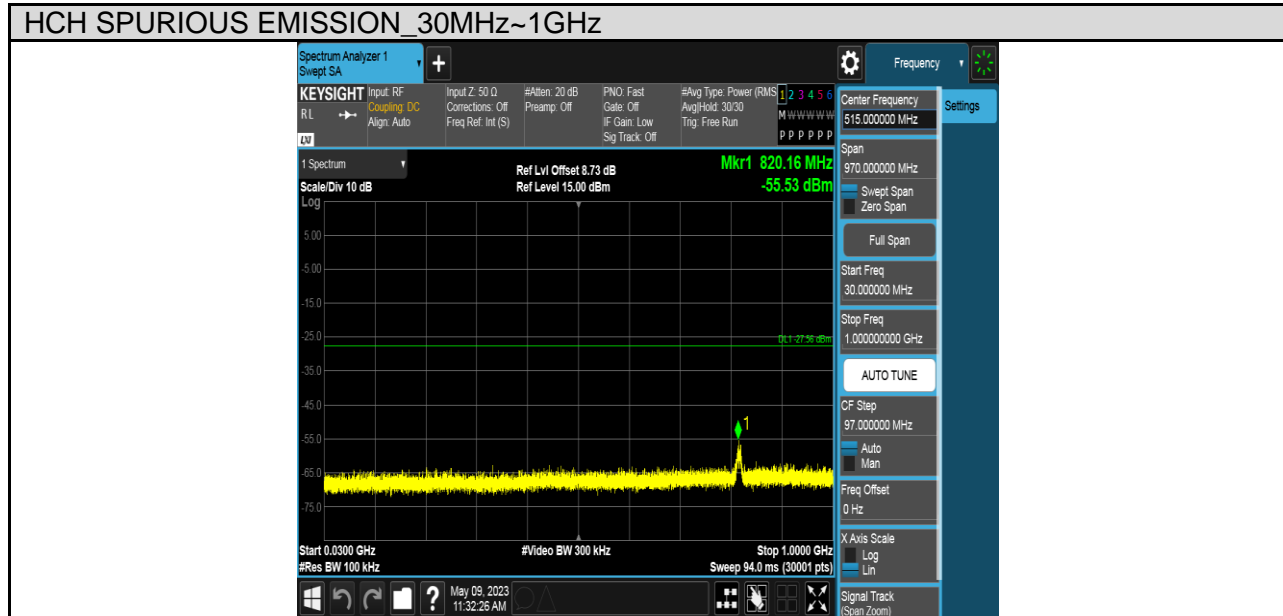
| | | |
|-----------|---------|---------|
| Test Mode | Channel | Verdict |
| 11B | LCH | PASS |



| | | |
|-----------|---------|---------|
| Test Mode | Channel | Verdict |
| 11B | MCH | PASS |



| | | |
|-----------|---------|---------|
| Test Mode | Channel | Verdict |
| 11B | HCH | PASS |



| | | |
|-----------|---------|---------|
| Test Mode | Channel | Verdict |
| 11G | LCH | PASS |

