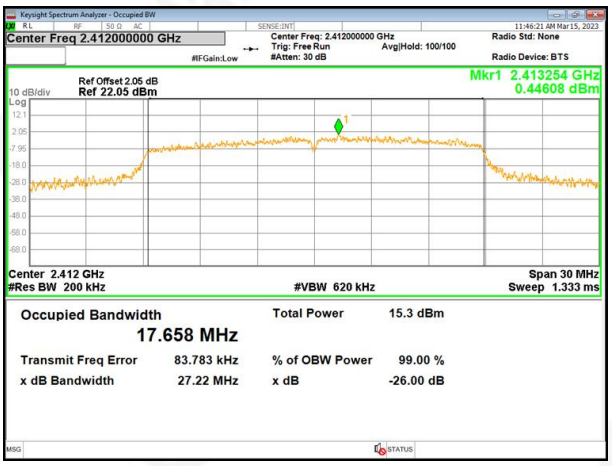
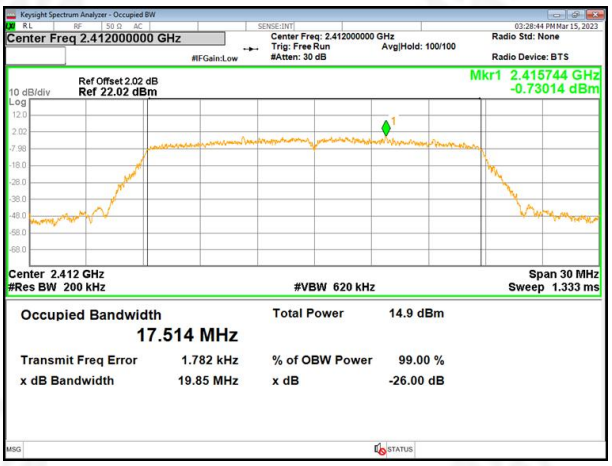
## 99% Occupy Bandwidth

ANT1 ANT2

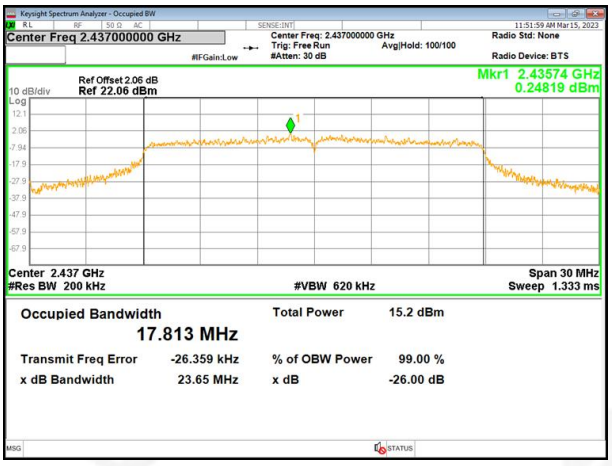
### 802.11n20

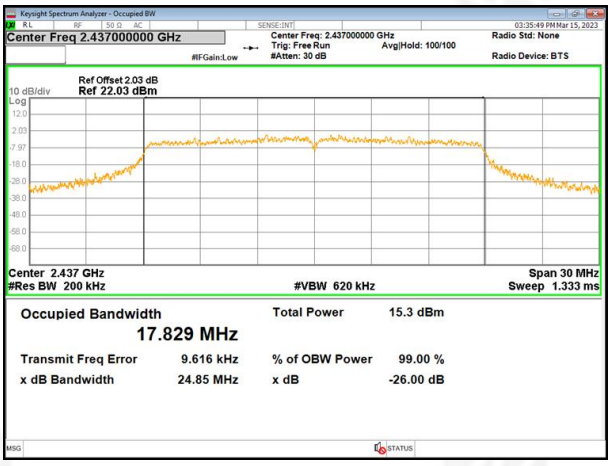
#### Lowest channel



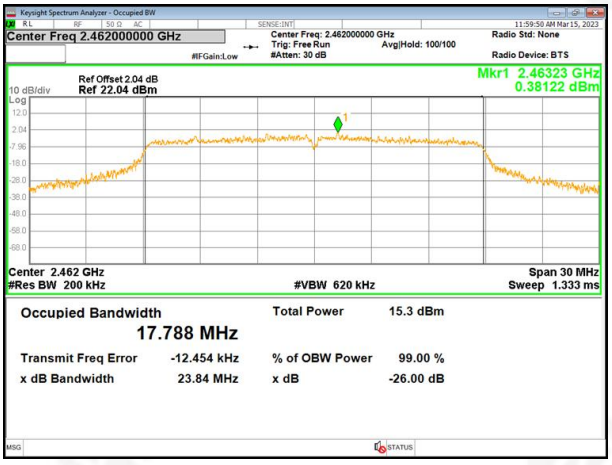



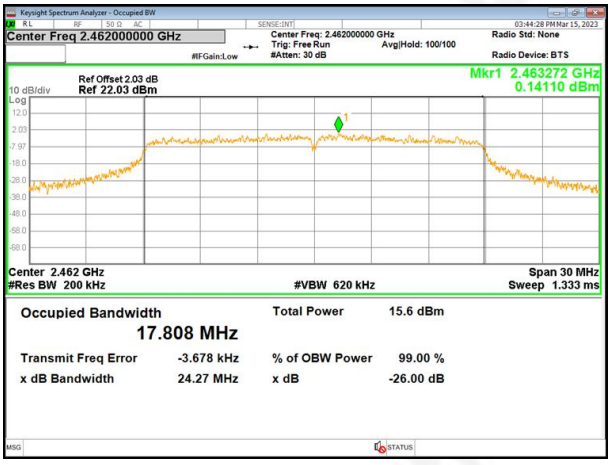

#### Middle channel




#### Highest channel



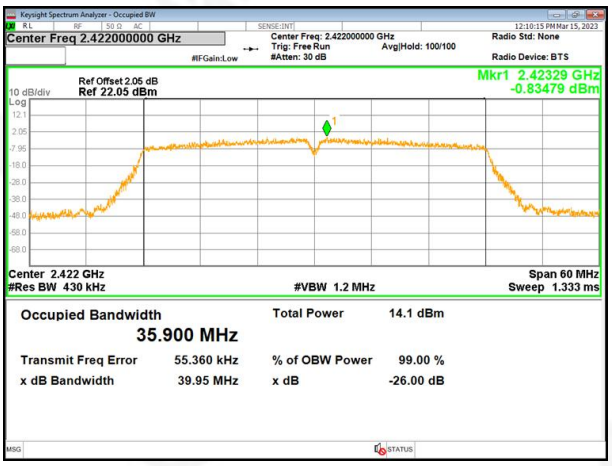



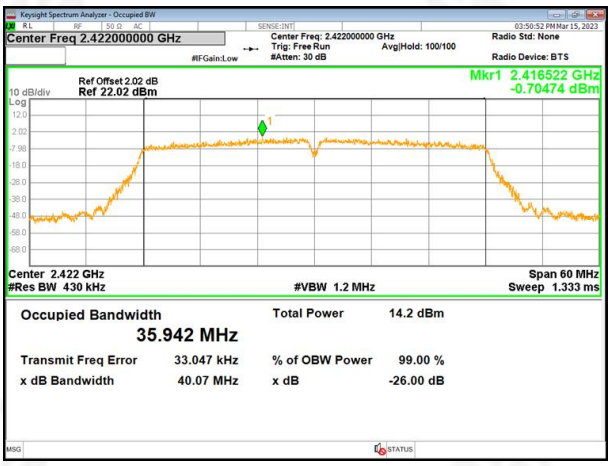
## 99% Occupy Bandwidth

ANT1 ANT2

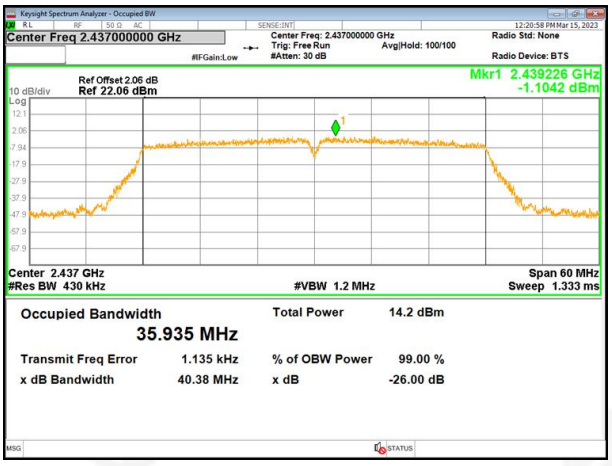
### 802.11n40

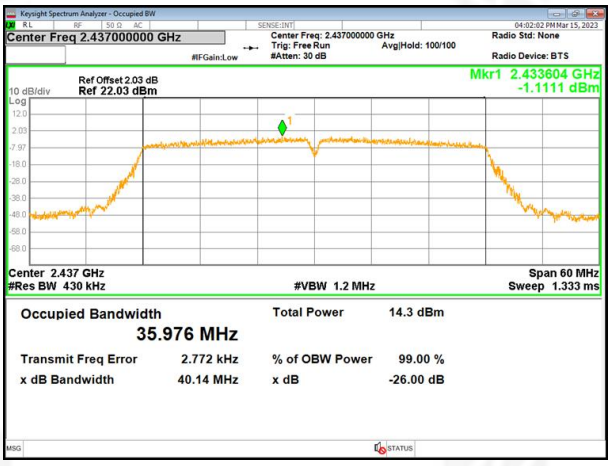
#### Lowest channel



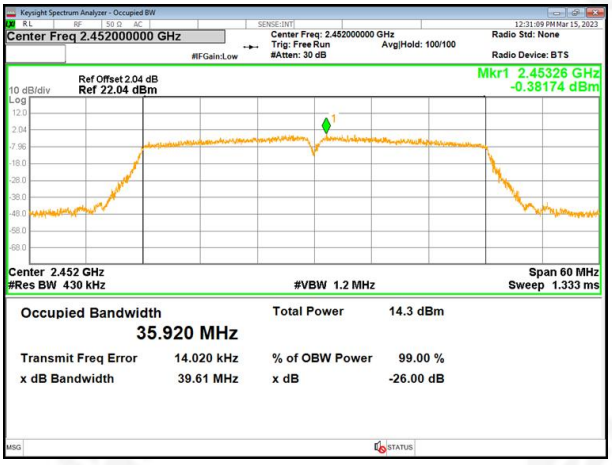



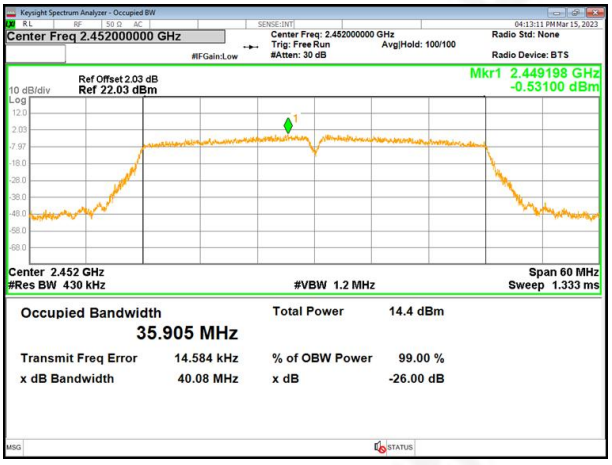

#### Middle channel




#### Highest channel



## 8.PEAK OUTPUT POWER TEST

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (b)(3) |
| Test Method: | KDB558074 D0115.247 Meas Guidancev05r02 |

### 8.1 APPLIED PROCEDURES/LIMIT

| FCC Part15 (15.247) , Subpart C | | | | |
|---|---|---|---|---|
| Section | Test Item | Limit | Frequency Range (MHz) | Result |
| 15.247(b)(3) | Peak Output Power | 1 watt or 30dBm | 2400-2483.5 | PASS |

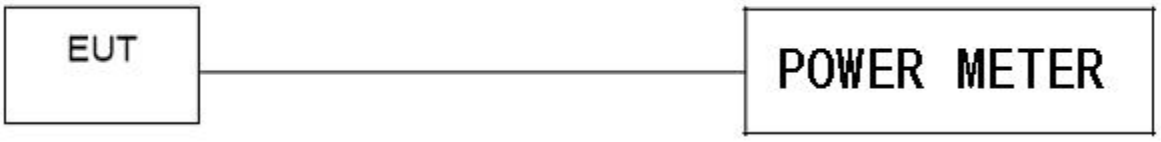
### 8.2 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

### 8.3 DEVIATION FROM STANDARD

No deviation.

### 8.4 TEST SETUP




### 8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULT

| Temperature : | 25.2℃ | Relative Humidity : | 55% |
|---|---|---|---|
| Pressure : | 101kPa | Test Voltage : | DC 12V |

| ANT1 | | | | | | |
|---|---|---|---|---|---|---|
| Test CH | Peak Output Power (dBm) | | | | Limit(dBm) | Result |
| | 802.11b | 802.11g | 802.11n(HT20) | 802.11n(HT40) | | |
| Lowest | 12.31 | 15.17 | 14.14 | 13.09 | 30.00 | Pass |
| Middle | 12.51 | 14.64 | 14.03 | 13.03 | | |
| Highest | 12.73 | 14.81 | 14.24 | 13.18 | | |

| ANT2 | | | | | | |
|---|---|---|---|---|---|---|
| Test CH | Peak Output Power (dBm) | | | | Limit(dBm) | Result |
| | 802.11b | 802.11g | 802.11n(HT20) | 802.11n(HT40) | | |
| Lowest | 12.27 | 14.58 | 13.95 | 13.20 | 30.00 | Pass |
| Middle | 12.56 | 14.76 | 14.26 | 13.22 | | |
| Highest | 12.79 | 14.99 | 14.30 | 13.42 | | |

Directional Gain = GANT+10*log(NANT)dBi=2.18+10*log(2)dBi=5.19dBi

| Test mode | Frequency | MIMO EIRP POWER (dBm) | Limit(dBm) | Result |
|---|---|---|---|---|
| 802.11n20 | Lowest | 17.06 | 30.00 | Pass |
| | Middle | 17.16 | 30.00 | Pass |
| | Highest | 17.28 | 30.00 | Pass |
| 802.11n40 | Lowest | 16.16 | 30.00 | Pass |
| | Middle | 16.14 | 30.00 | Pass |
| | Highest | 16.31 | 30.00 | Pass |
| MIMO EIRP POWER =ANT1+ ANT2 | | | | |

## 9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

| | |
|---|---|
| Test Requirement: | FCC Part15 C Section 15.247 (d) |
| Test Method: | KDB558074 D0115.247 Meas Guidancev05r02 |

### 9.1 APPLICABLE STANDARD

in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, 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 in15.209(a).

### 9.2 TEST PROCEDURE

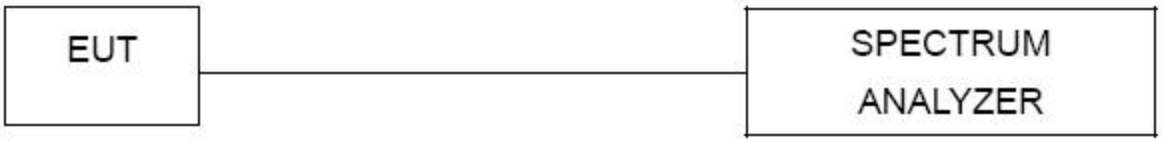
Using the following spectrum analyzer setting:

A) Set the RBW = 100KHz.
B) Set the VBW = 300KHz.
C) Sweep time = auto couple.
D) Detector function = peak.
E) Trace mode = max hold.
F) Allow trace to fully stabilize.

### 9.3 DEVIATION FROM STANDARD

No deviation.

### 9.4 TEST SETUP



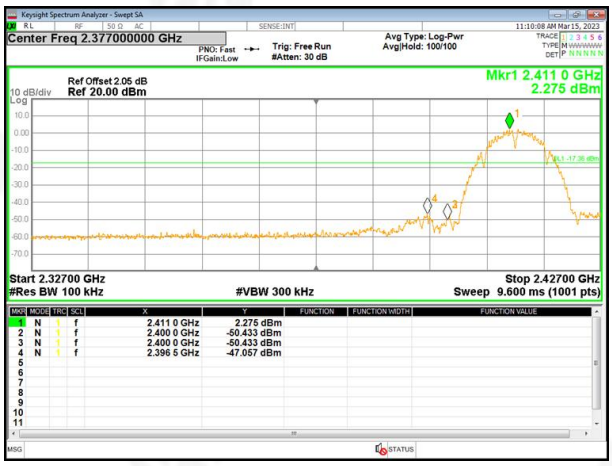

### 9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

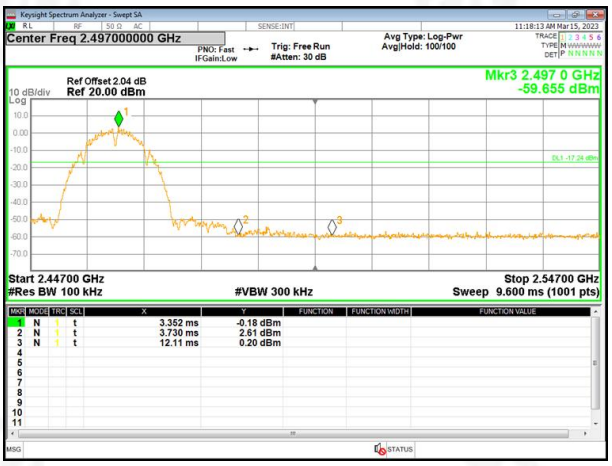
### 9.6 TEST RESULTS

Test plot as follows:

| ANT1 | |
|---|---|
| Test mode: | 802.11b |

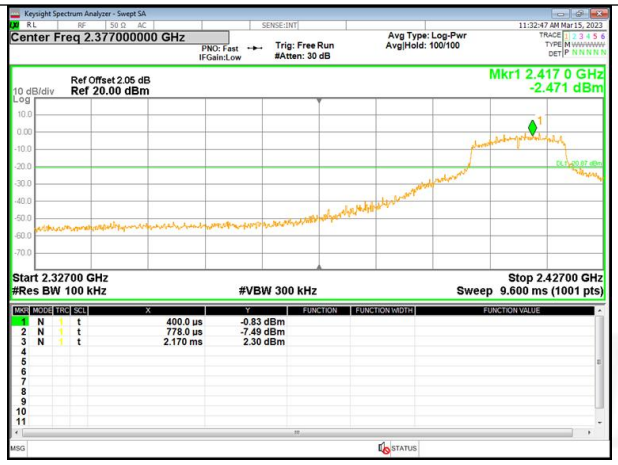



Lowest channel

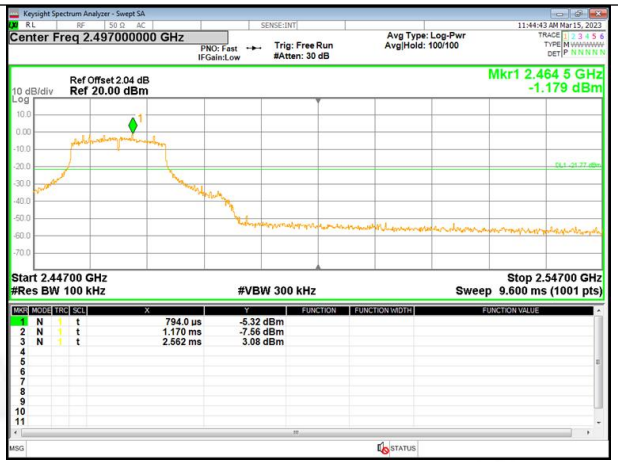



Highest channel

| Test mode: | 802.11g |
|---|---|

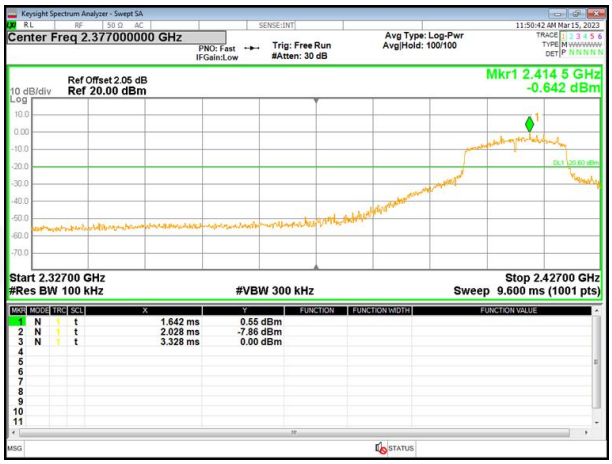



Lowest channel

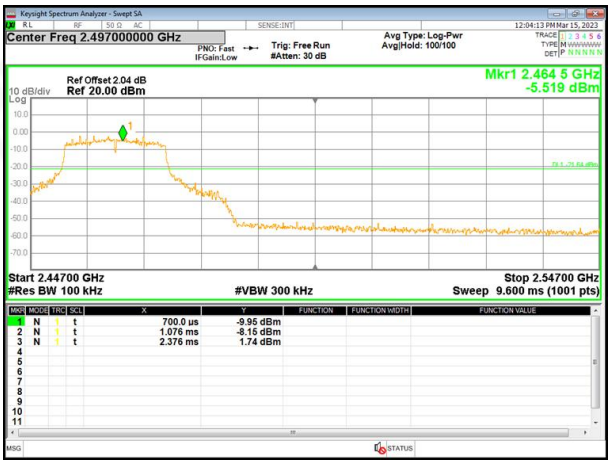



Highest channel

| Test mode: | 802.11n(HT20) |
|---|---|

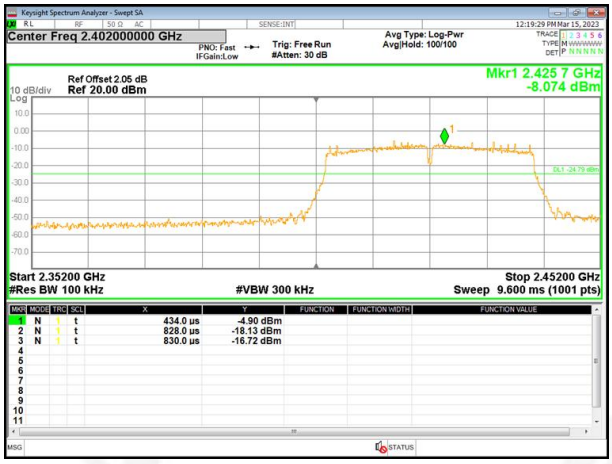



Lowest channel

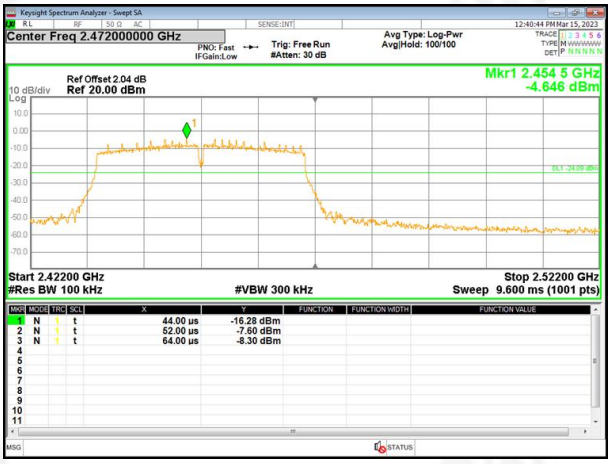



Highest channel

| Test mode: | 802.11n(HT40) |
|---|---|

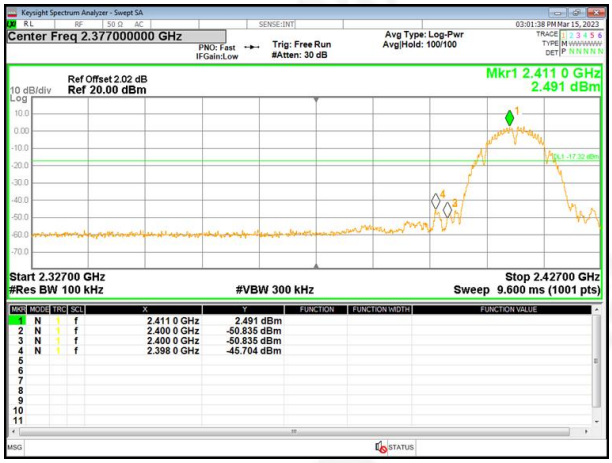



Lowest channel




Highest channel

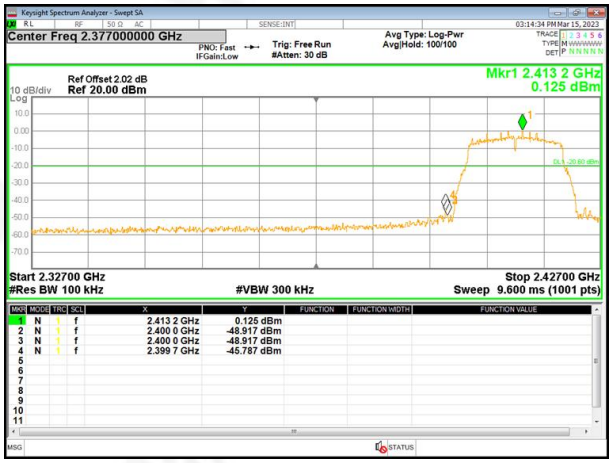
| ANT2 | |
|---|---|
| Test mode: | 802.11b |



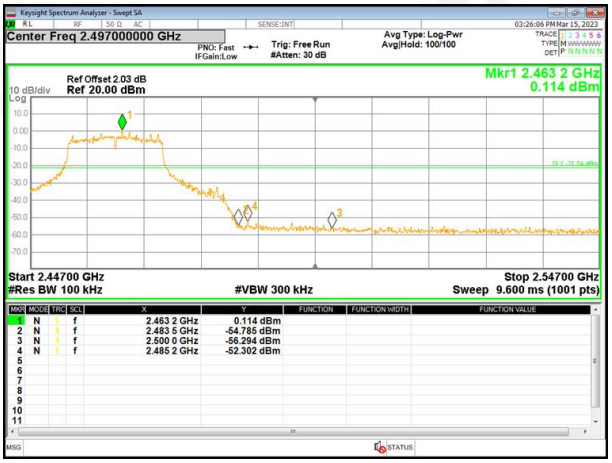

Lowest channel

Highest channel

| Test mode: | 802.11g |
|---|---|

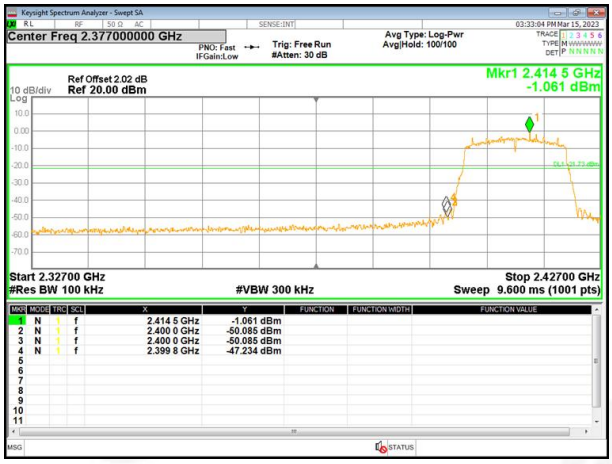



Lowest channel

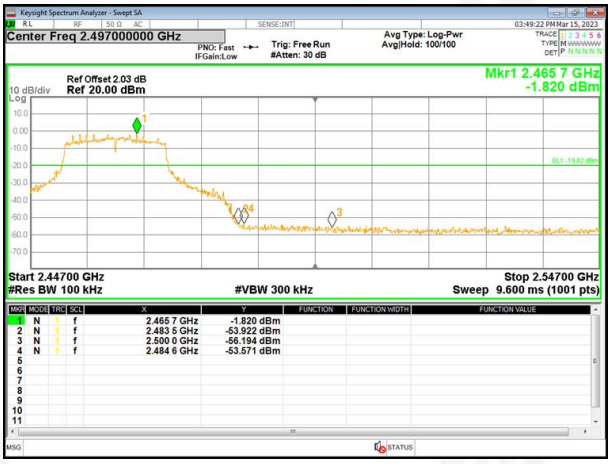



Highest channel

| Test mode: | 802.11n(HT20) |
|---|---|



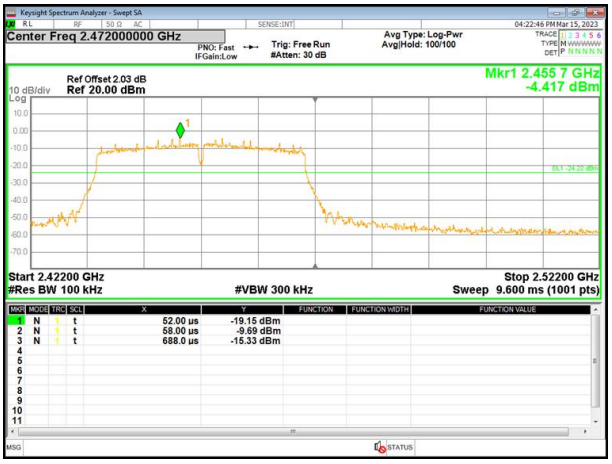

Lowest channel




Highest channel

| Test mode: | 802.11n(HT40) |
|---|---|

Lowest channel

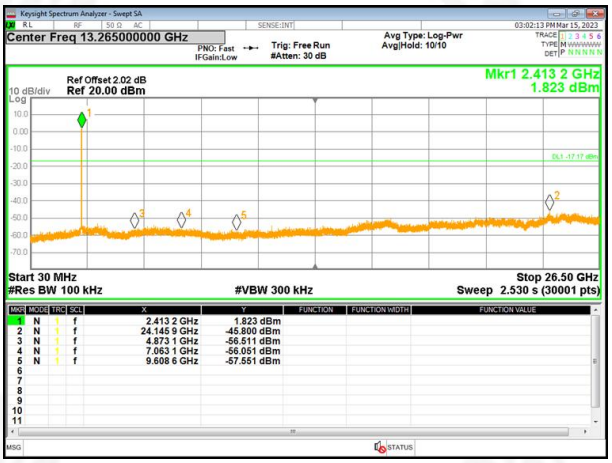



Highest channel

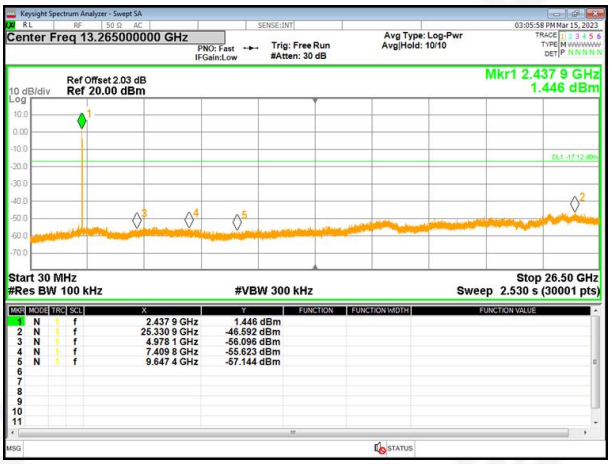
Test plot as follows:

| 802.11b | |
|---|---|
| ANT1 | ANT2 |

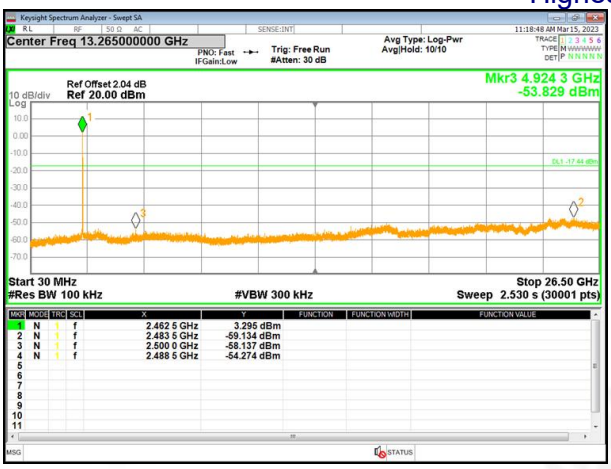
Lowest channel

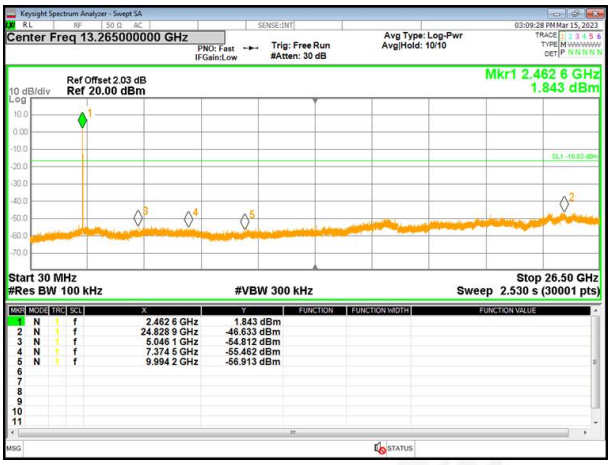



Middle channel




Highest channel

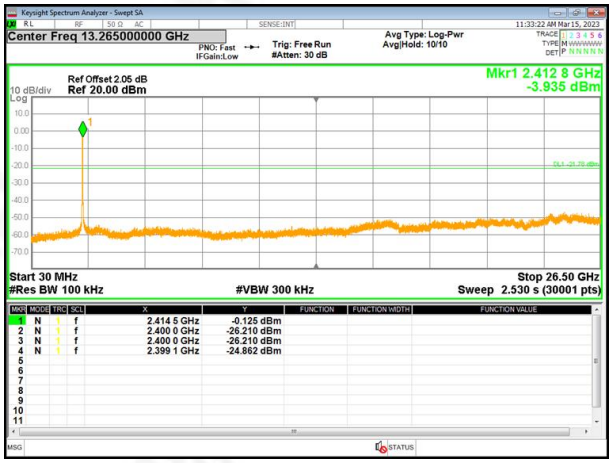


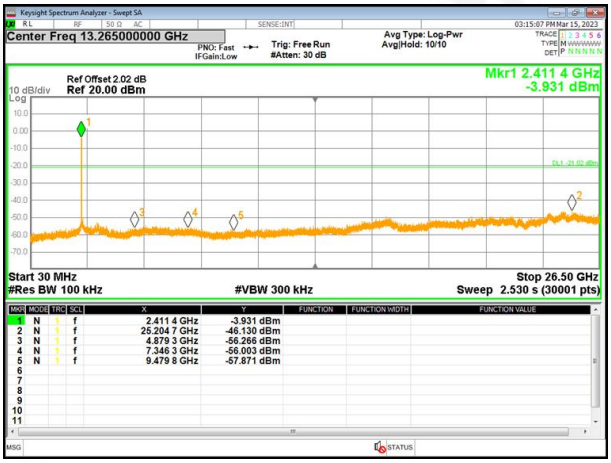



## 802.11g

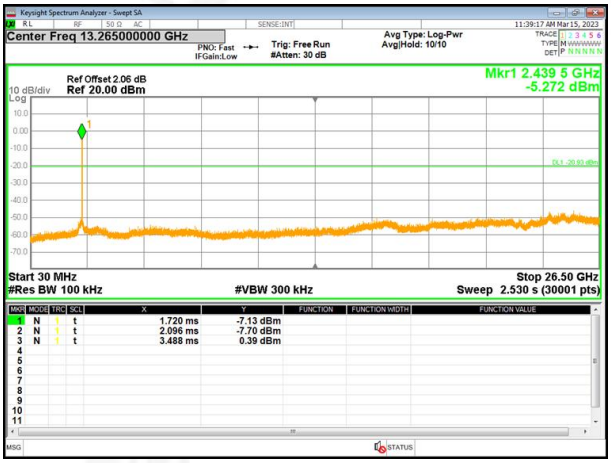
| ANT1 | ANT2 |
|---|---|

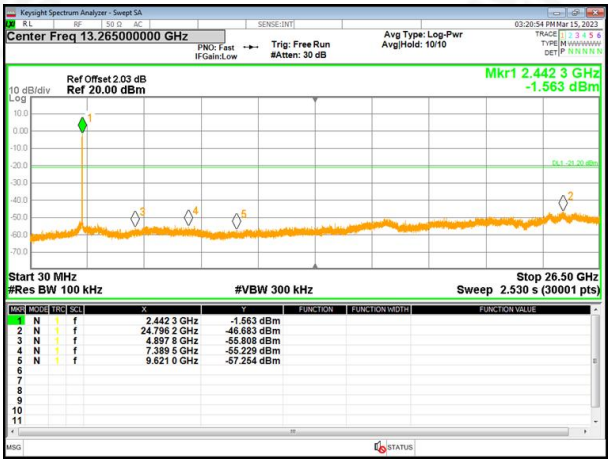
### Lowest channel



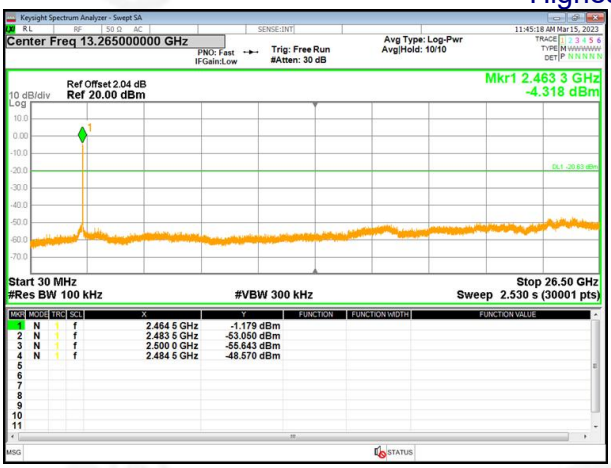



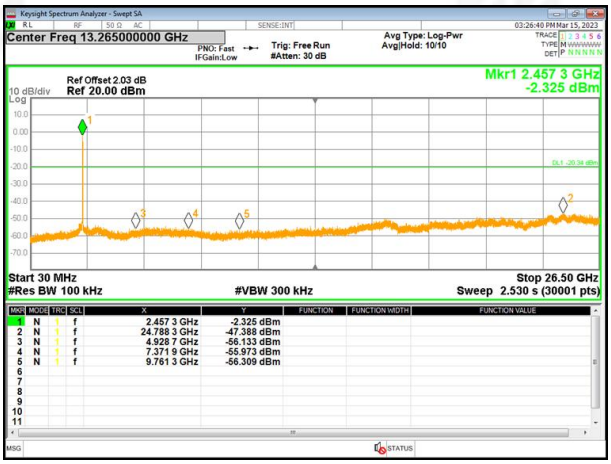

### Middle channel




### Highest channel

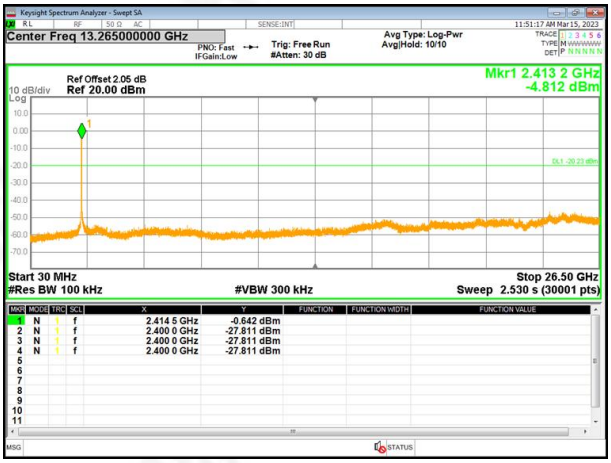


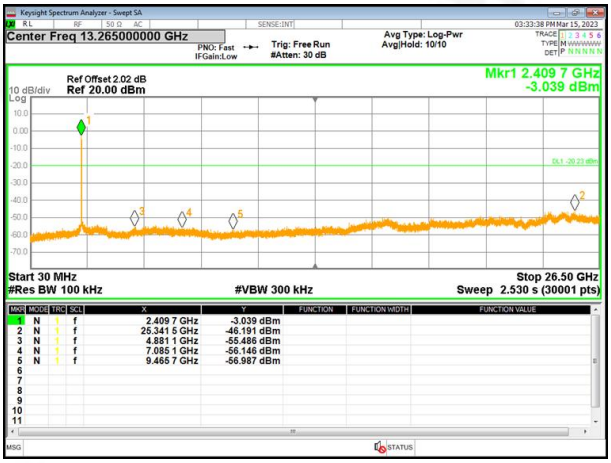



## 802.11n(HT20)

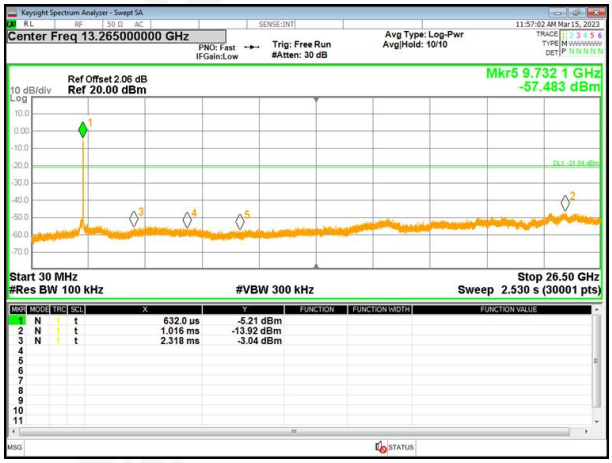
| ANT1 | ANT2 |
|---|---|

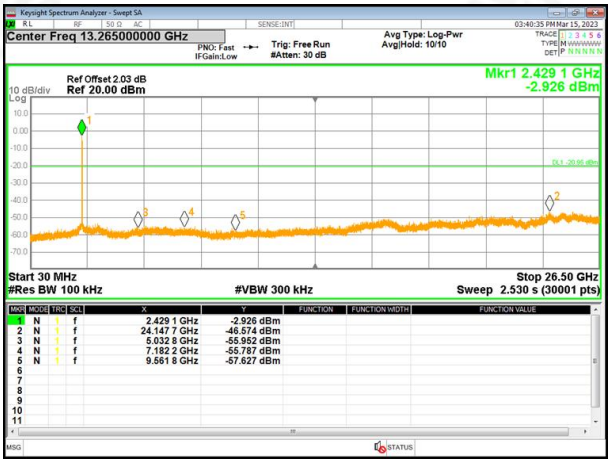
### Lowest channel



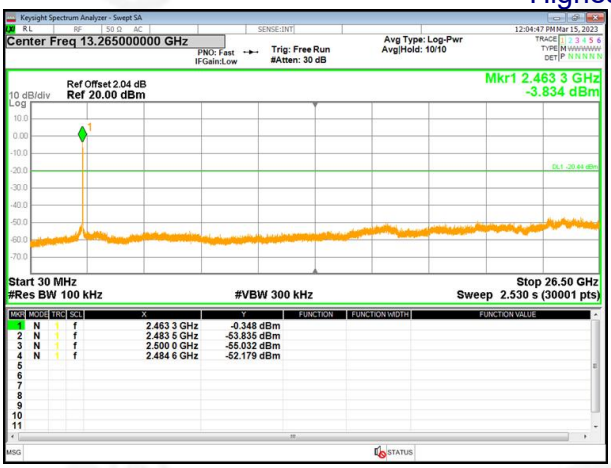



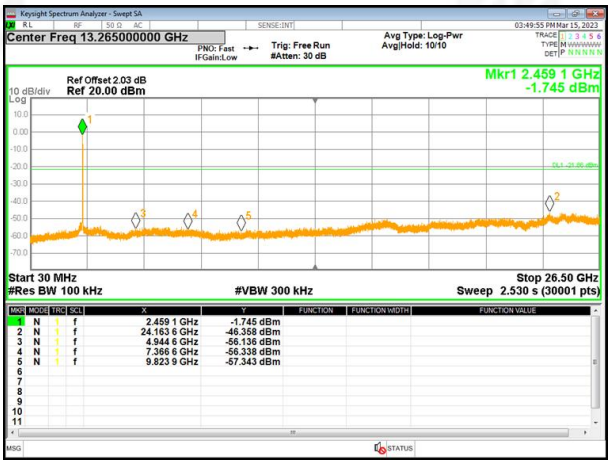

### Middle channel




### Highest channel



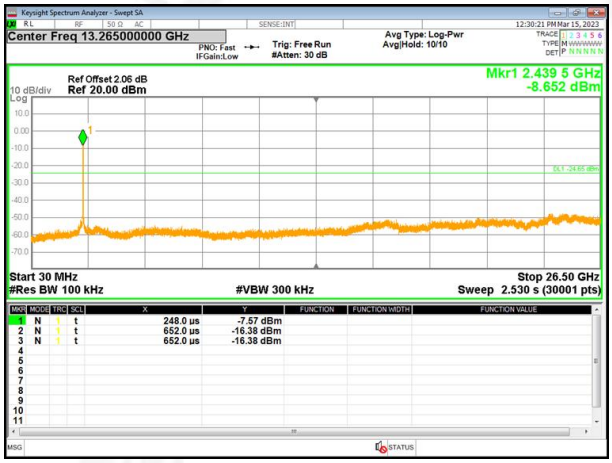



## 802.11n(HT40)

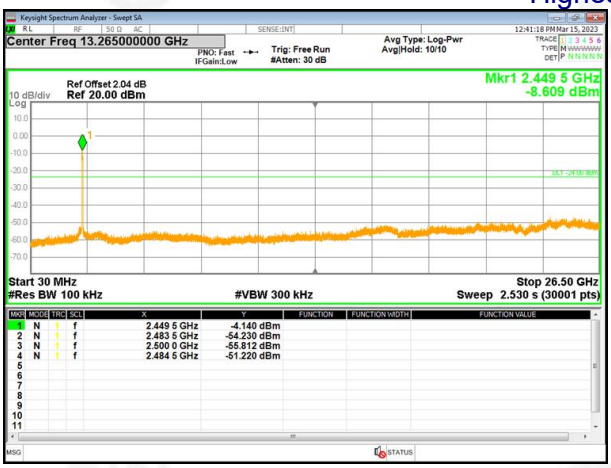
### ANT1

#### Lowest channel

#### Middle channel




#### Highest channel




### ANT2

#### Lowest channel

#### Middle channel

#### Highest channel

## 10. ANTENNA REQUIREMENT

| Standard requirement: | FCC Part15 C Section 15.203 /247(b)(4) |
|---|---|
| 15.203 requirement:<br>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.<br>15.247(b) (4) requirement:<br>(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi. | |
| EUT Antenna: | |
| The antenna is FPC Antenna, the best case gain of the antenna is 2.18dBi, reference to the appendix II for details | |

## 11. TEST SETUP PHOTO

Reference to the appendix I for details.

## 12. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

**※※※※※ END OF REPORT ※※※※※**