

Report No.: T200928D02-RP1

## 4.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

### 4.5.1 Test Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the authorized frequency band,

Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement 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).

### 4.5.2 Test Procedure

Test method Refer as KDB 662911 D01, ANSI C63.10:2013.

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

### 4.5.3 Test Setup



### 4.5.4 Test Result

#### Chain 0:

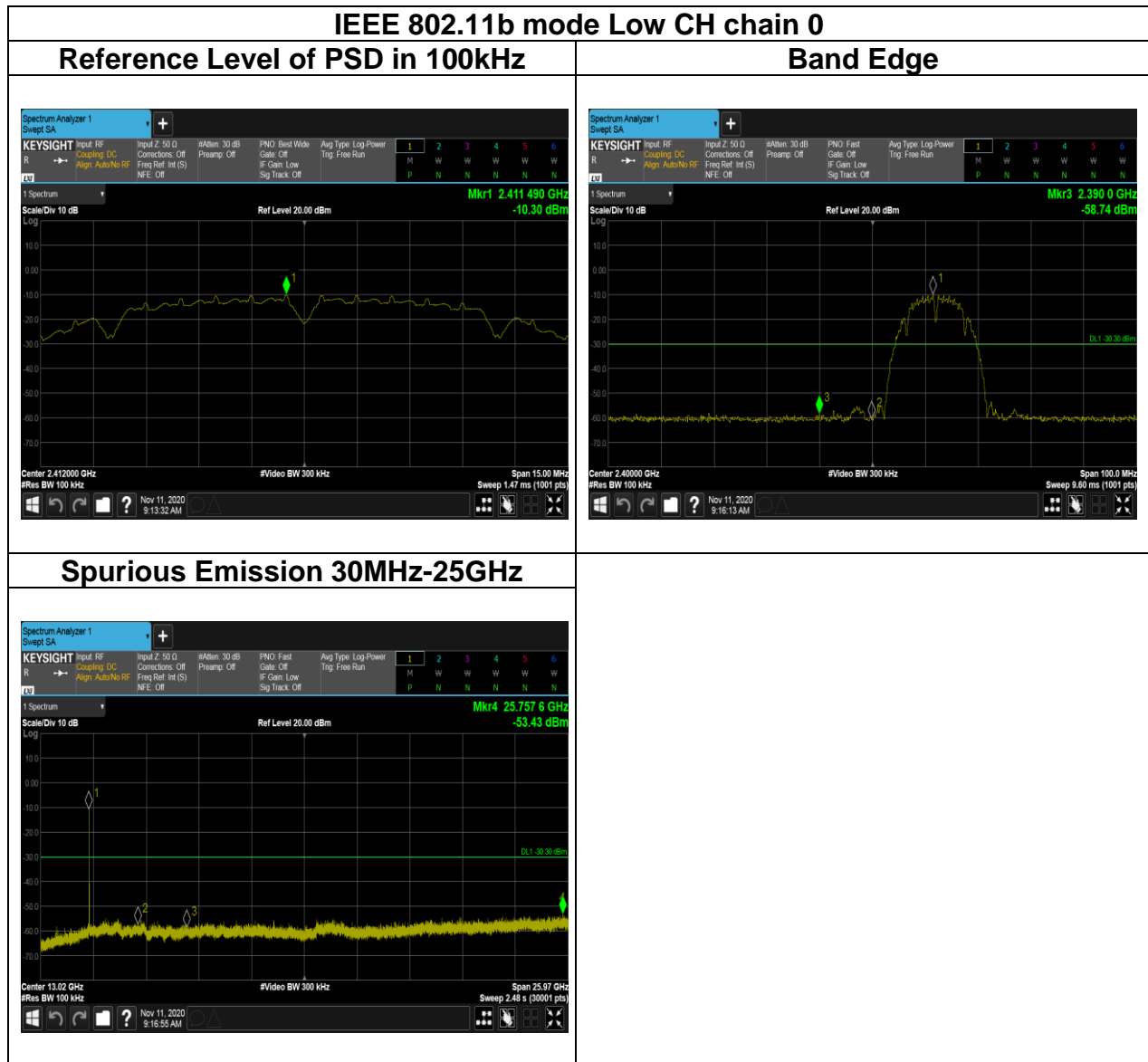
|                     |          |                   |                   |
|---------------------|----------|-------------------|-------------------|
| <b>Temperature:</b> | 24.7°C   | <b>Humidity:</b>  | 55.5% RH          |
| <b>Tested by:</b>   | Rick Lee | <b>Test date:</b> | November 11, 2020 |

#### Chain 1:

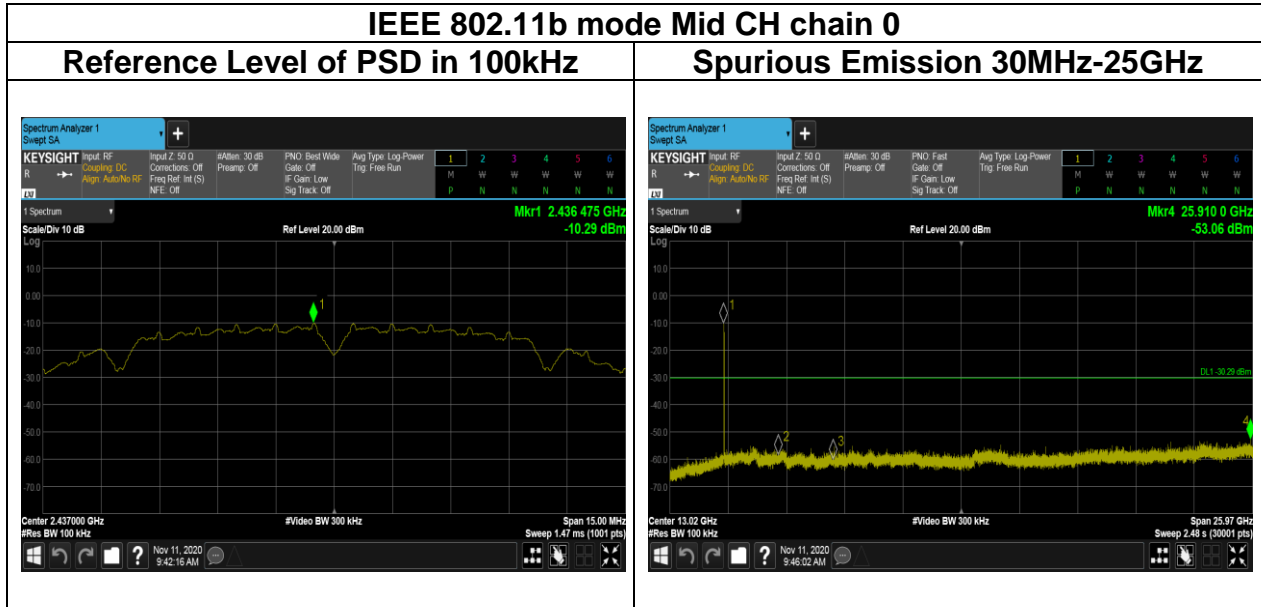
|                     |          |                   |                   |
|---------------------|----------|-------------------|-------------------|
| <b>Temperature:</b> | 25.9°C   | <b>Humidity:</b>  | 50% RH            |
| <b>Tested by:</b>   | Rick Lee | <b>Test date:</b> | November 24, 2020 |

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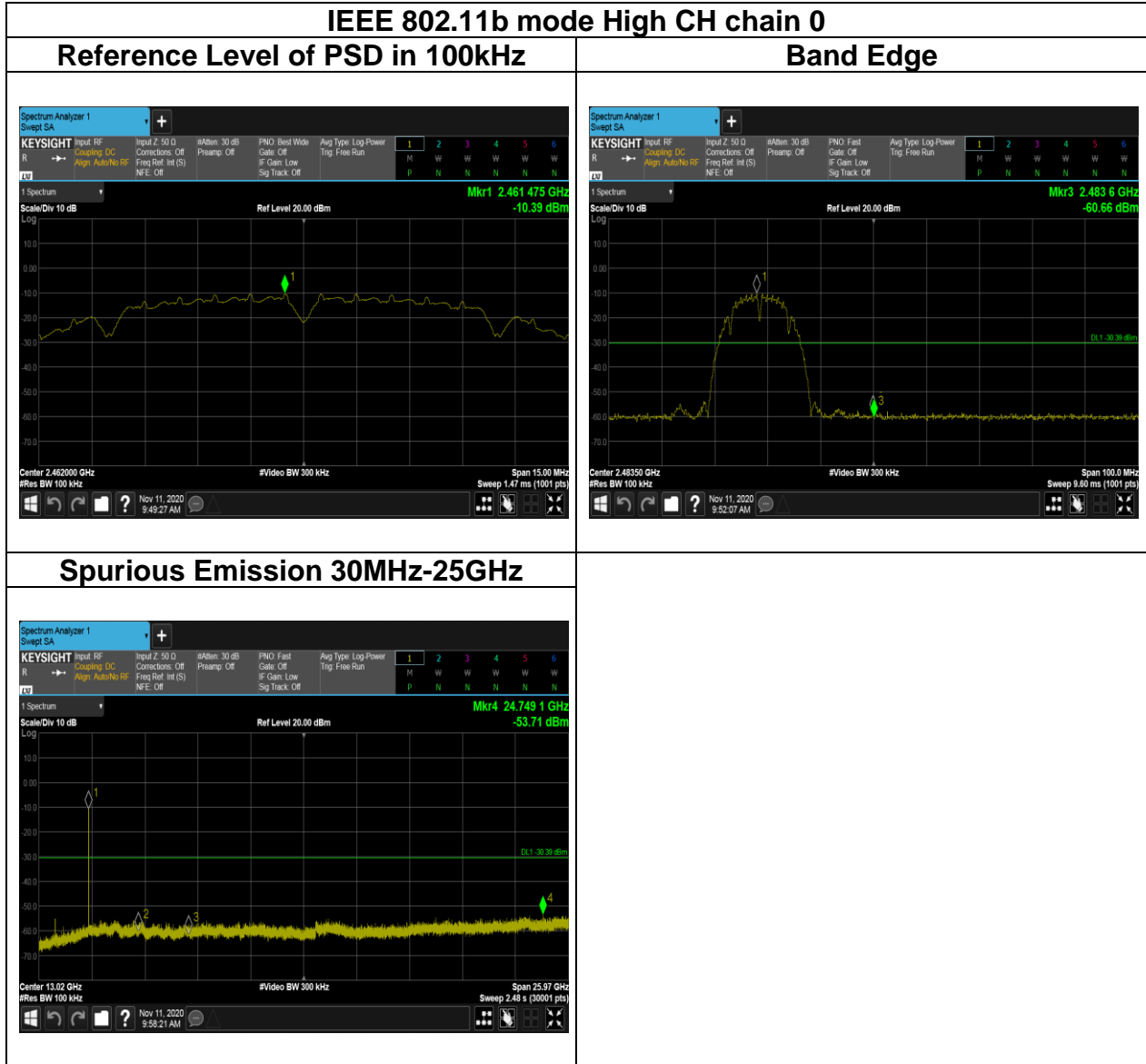
## Test Data



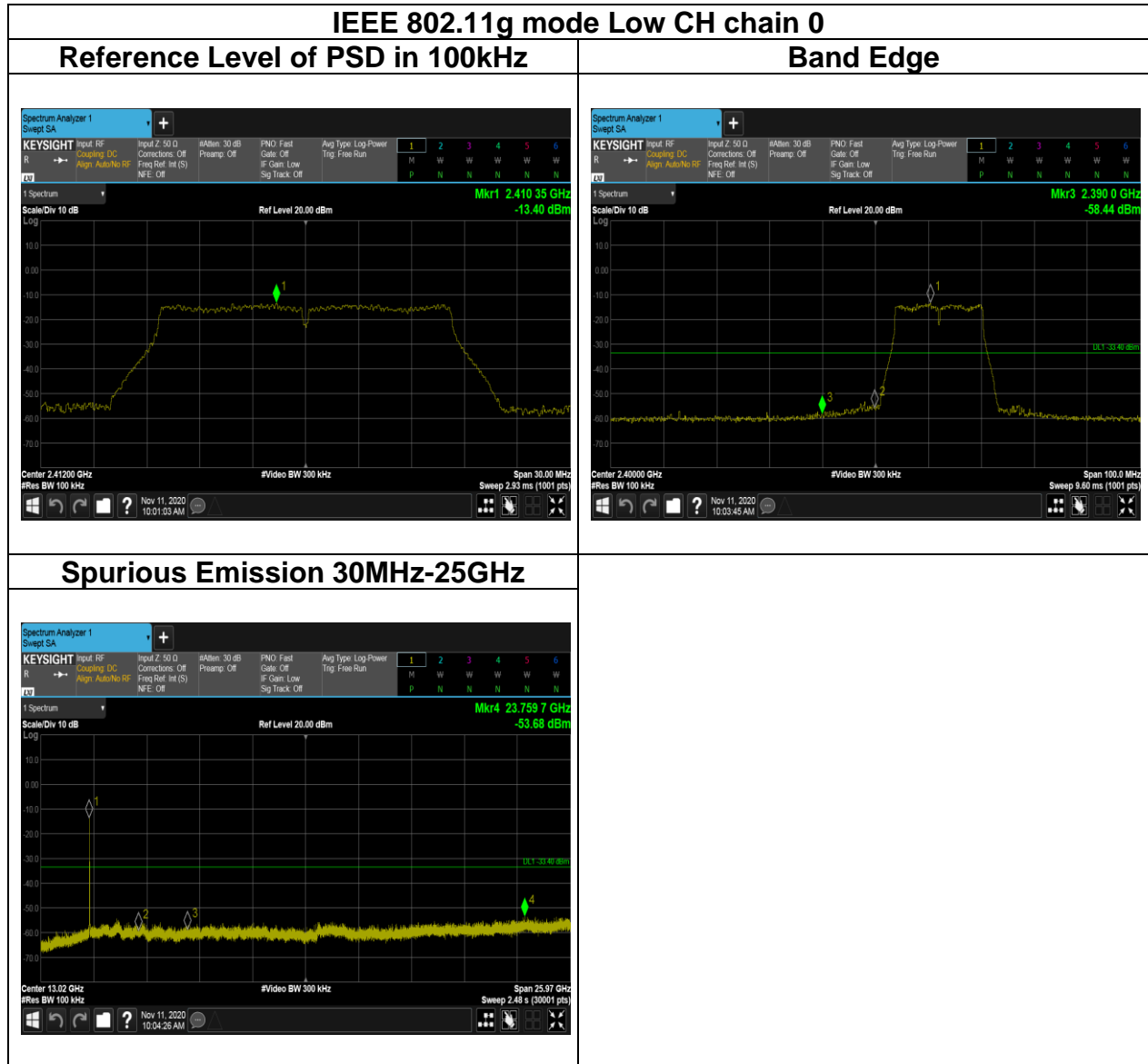
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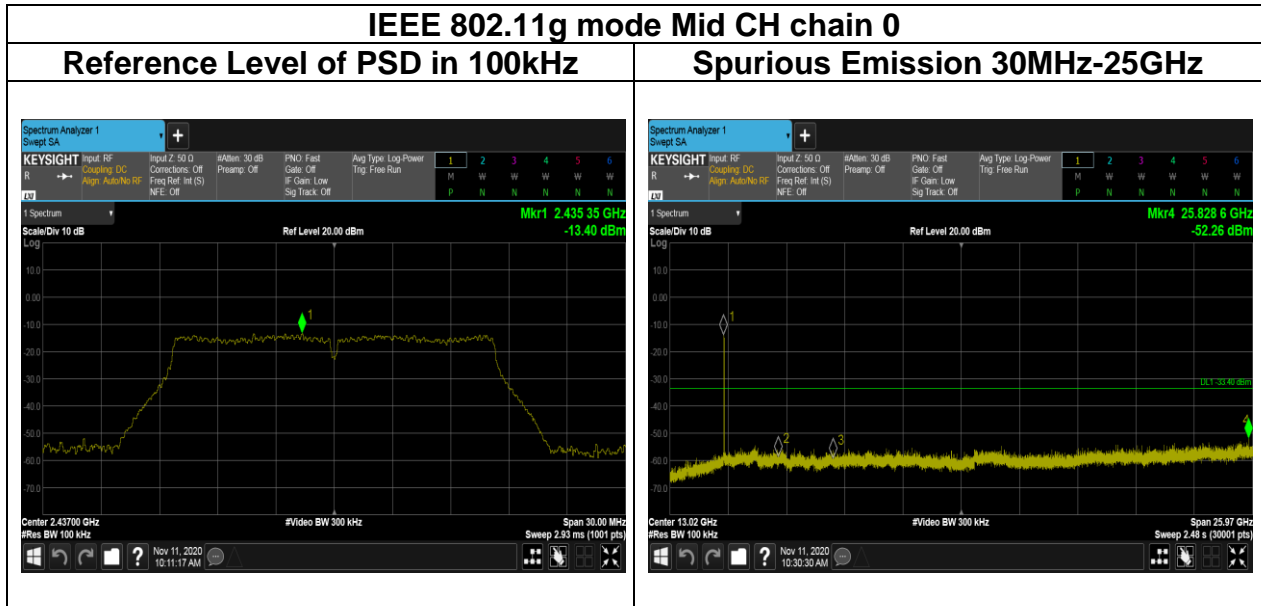
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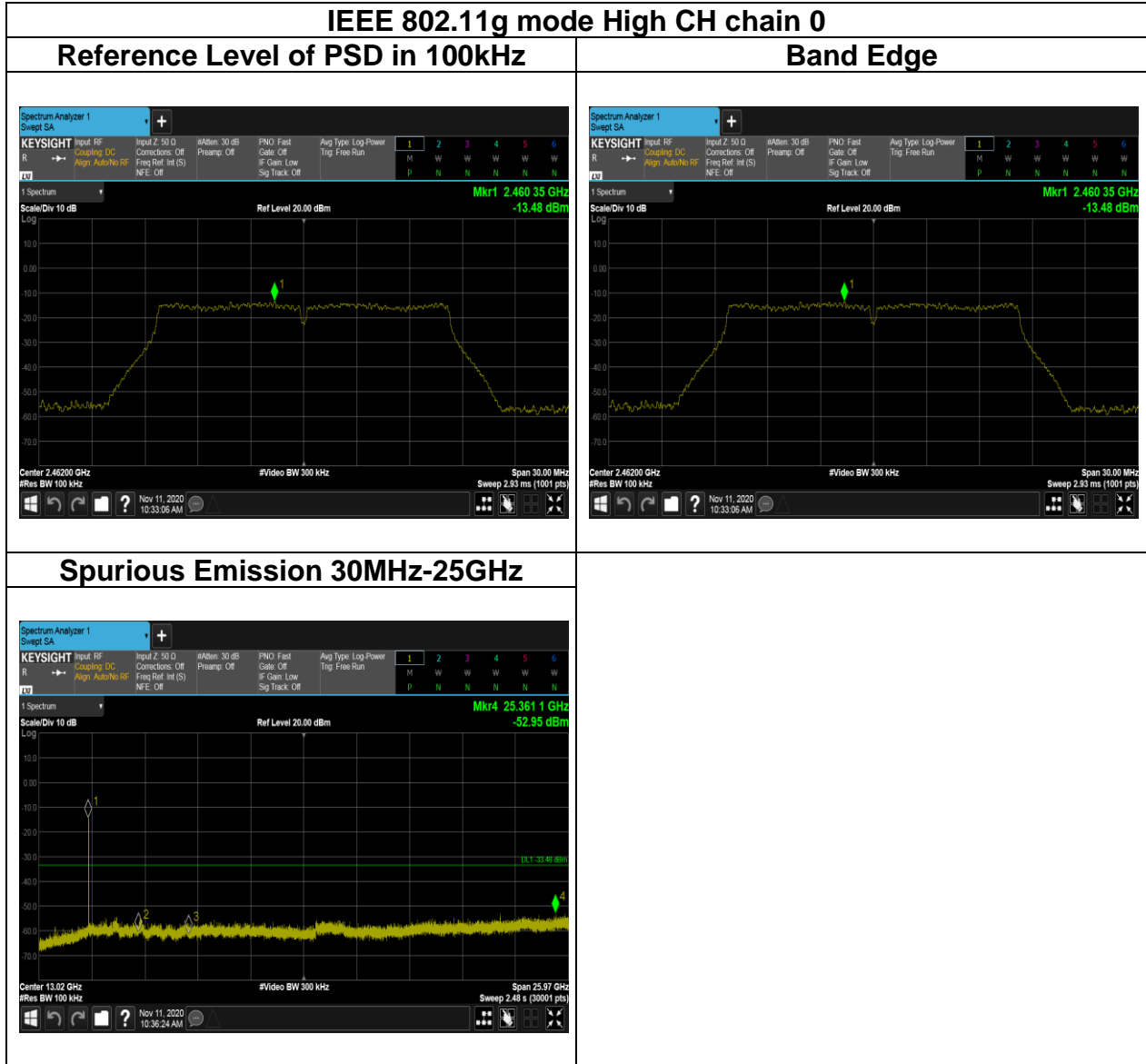
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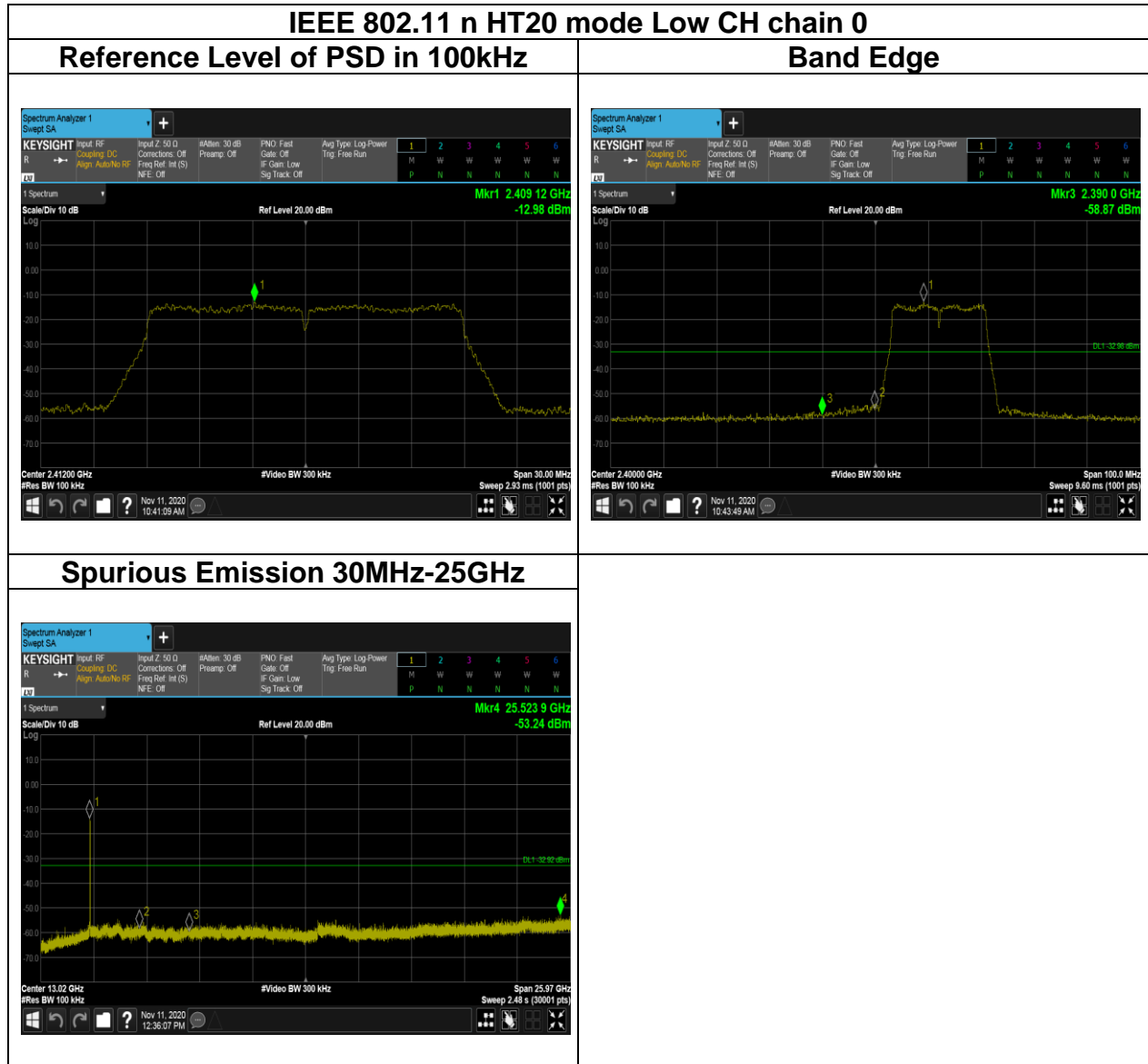
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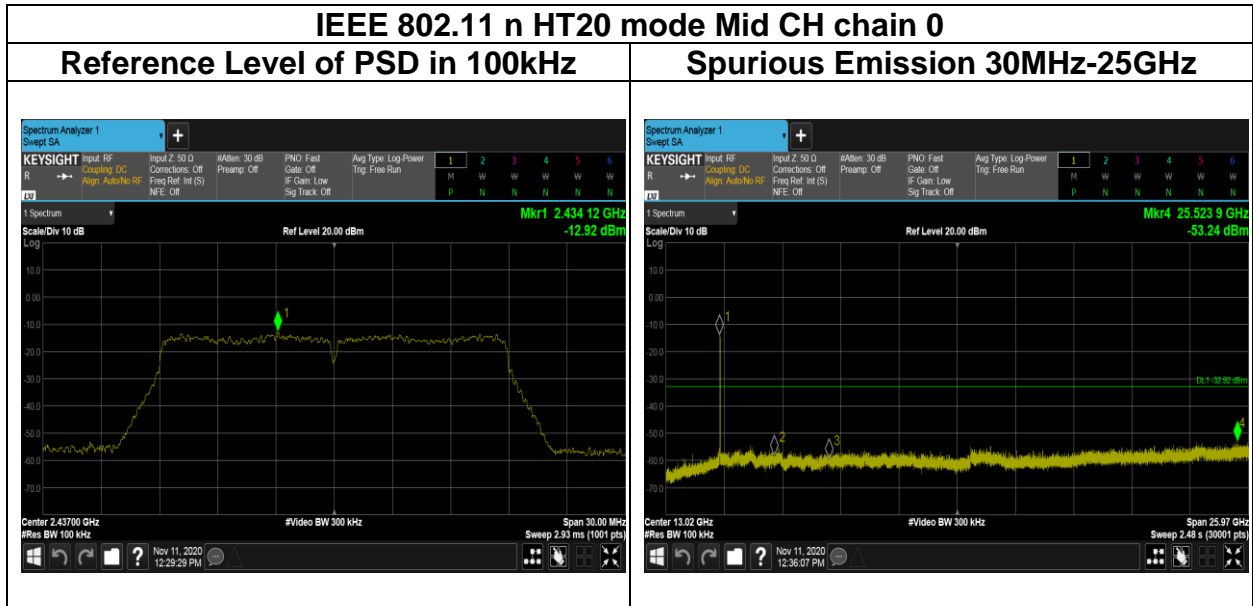


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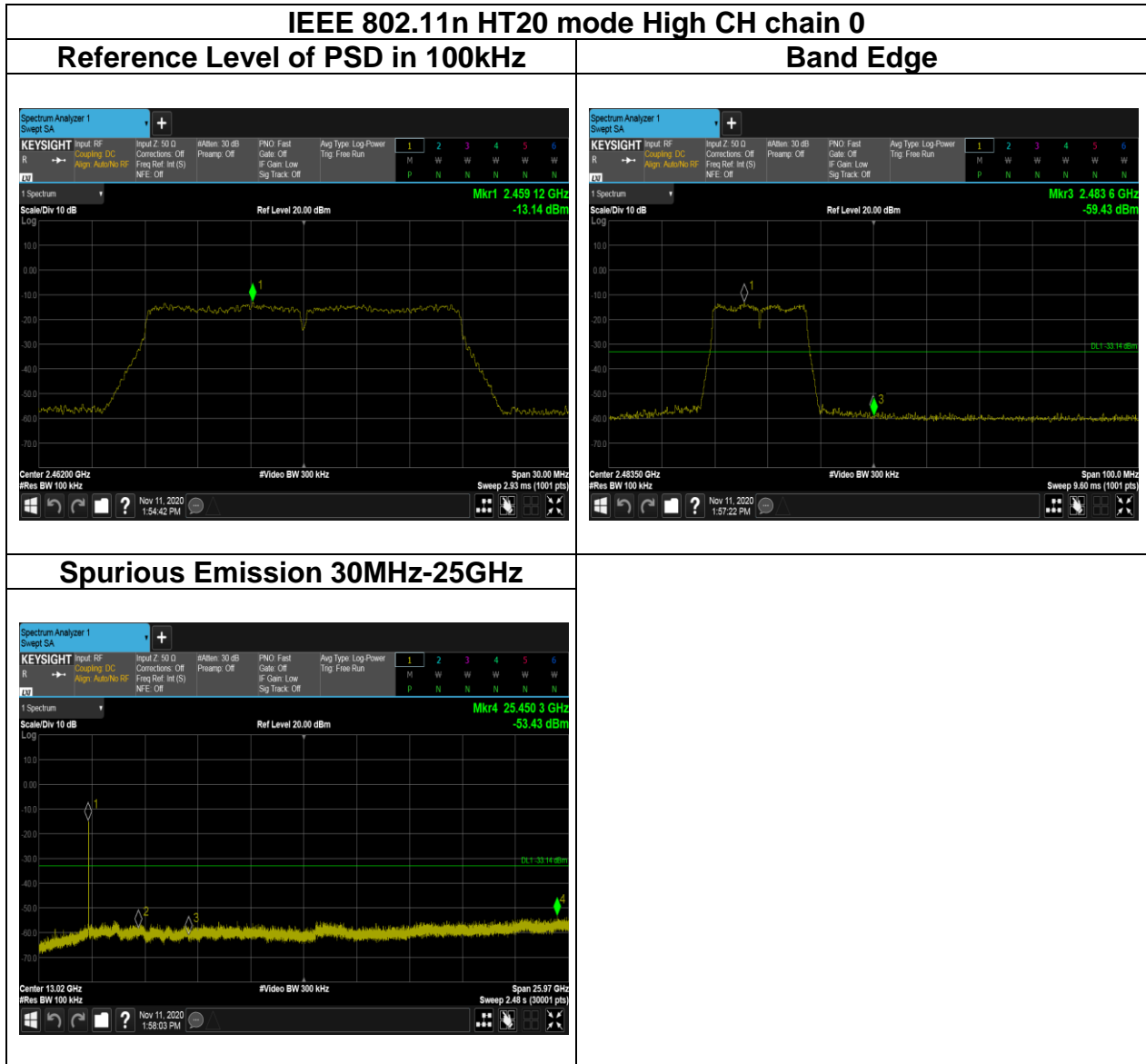




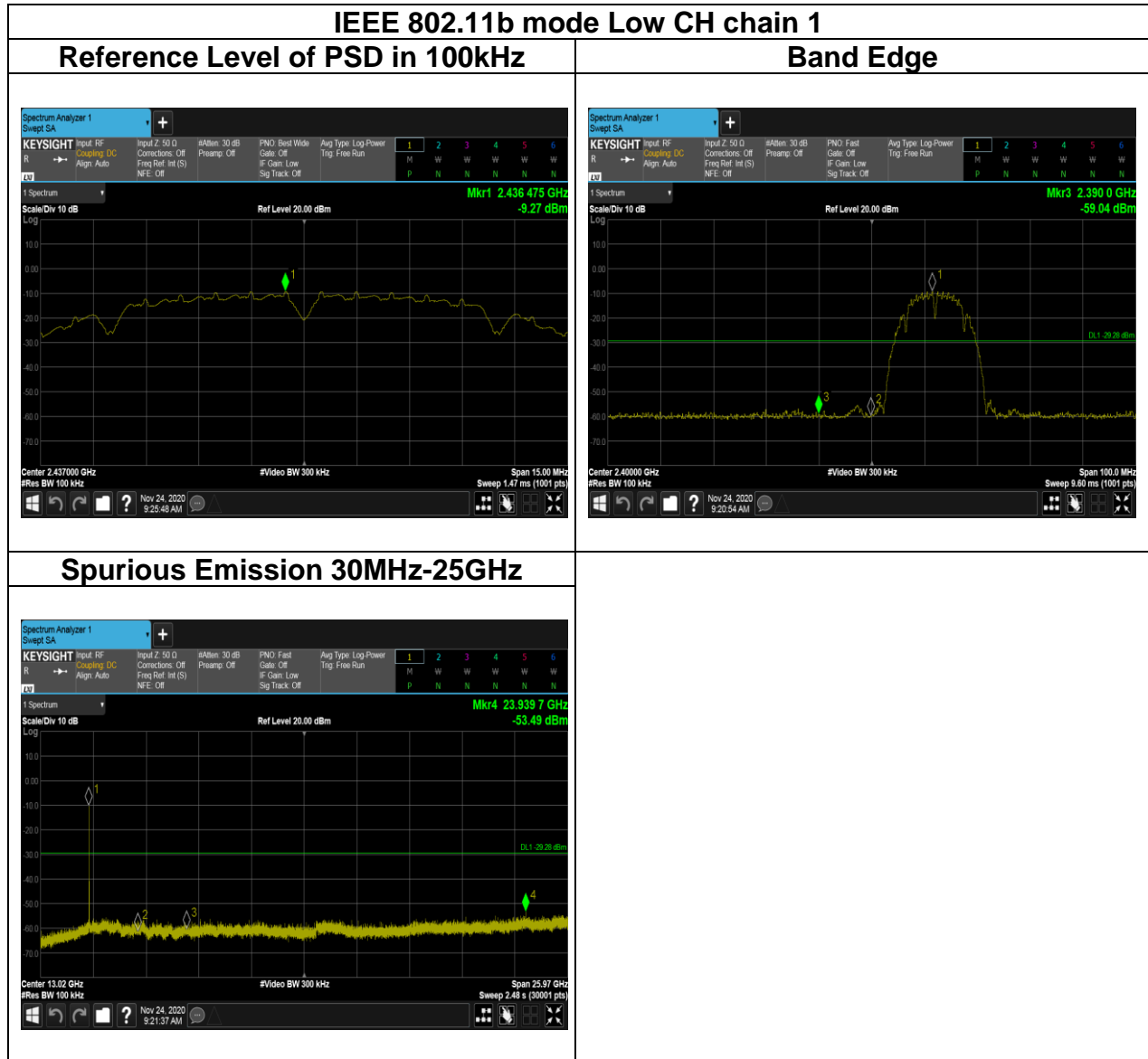
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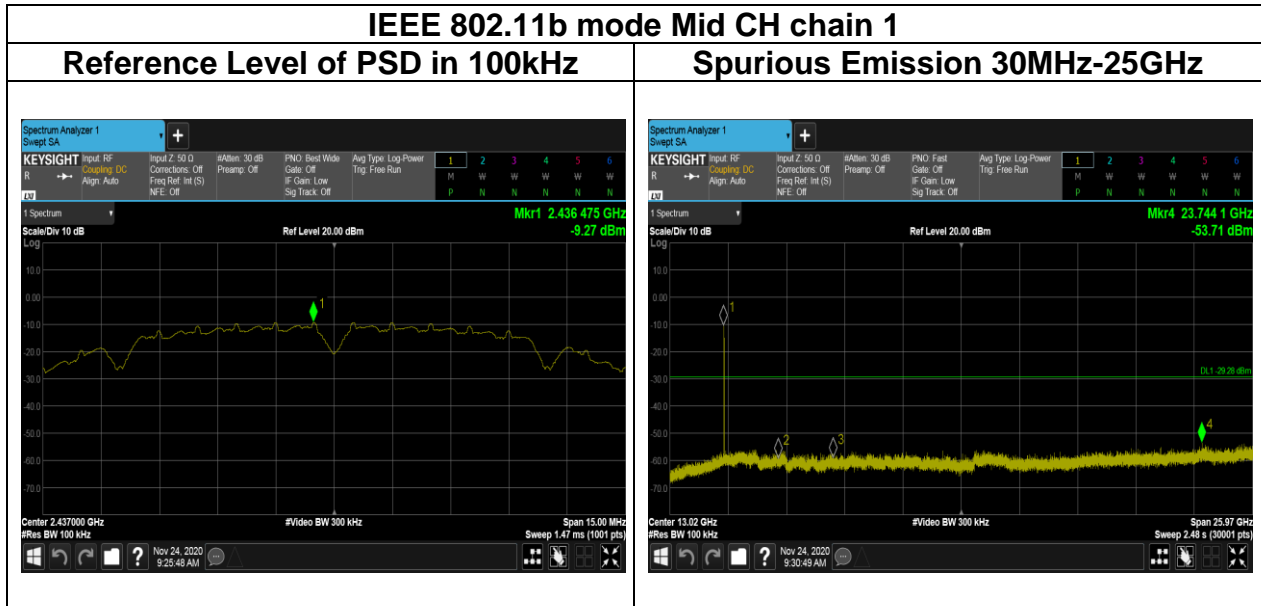
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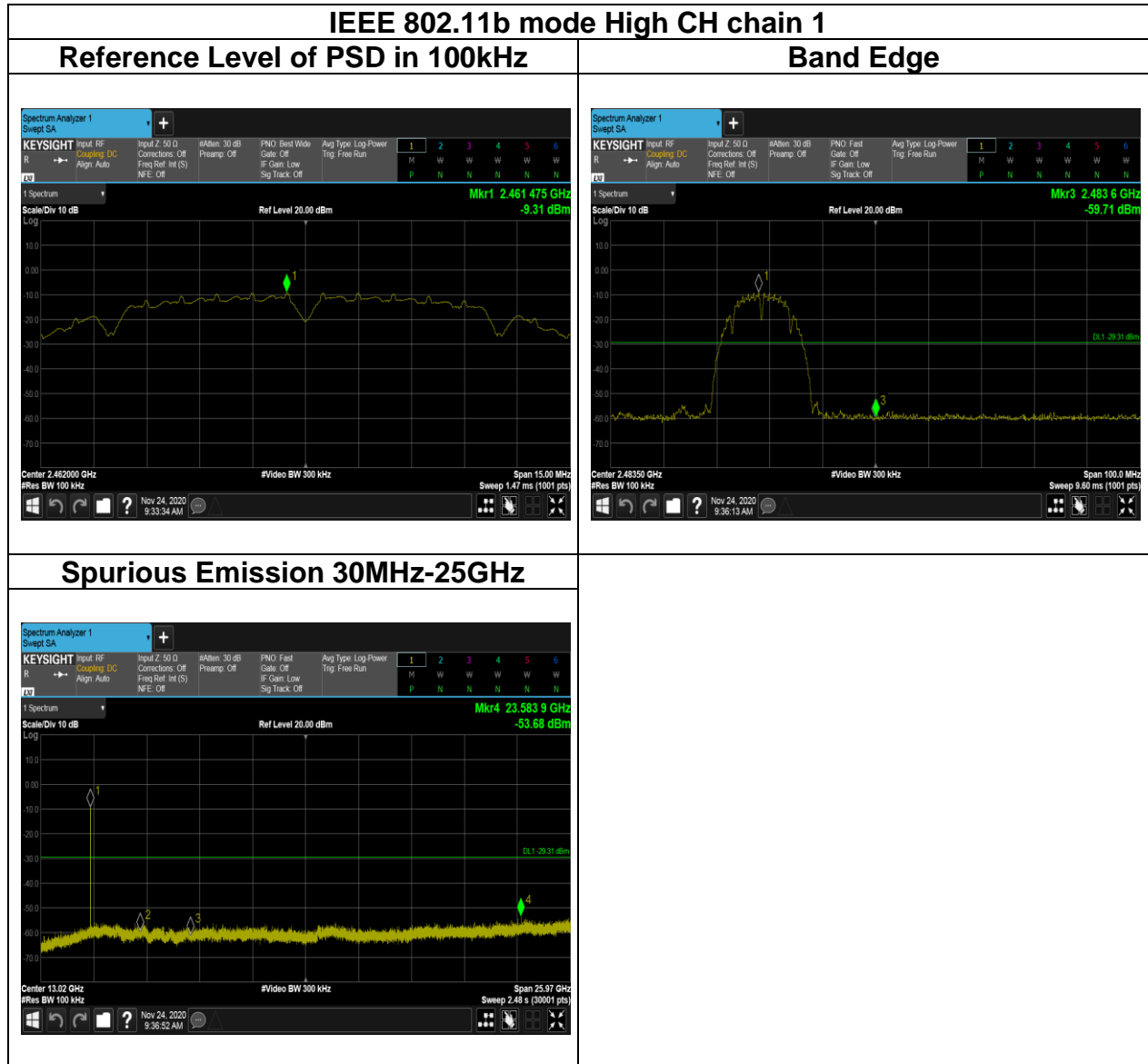
Report No.: T200928D02-RP1



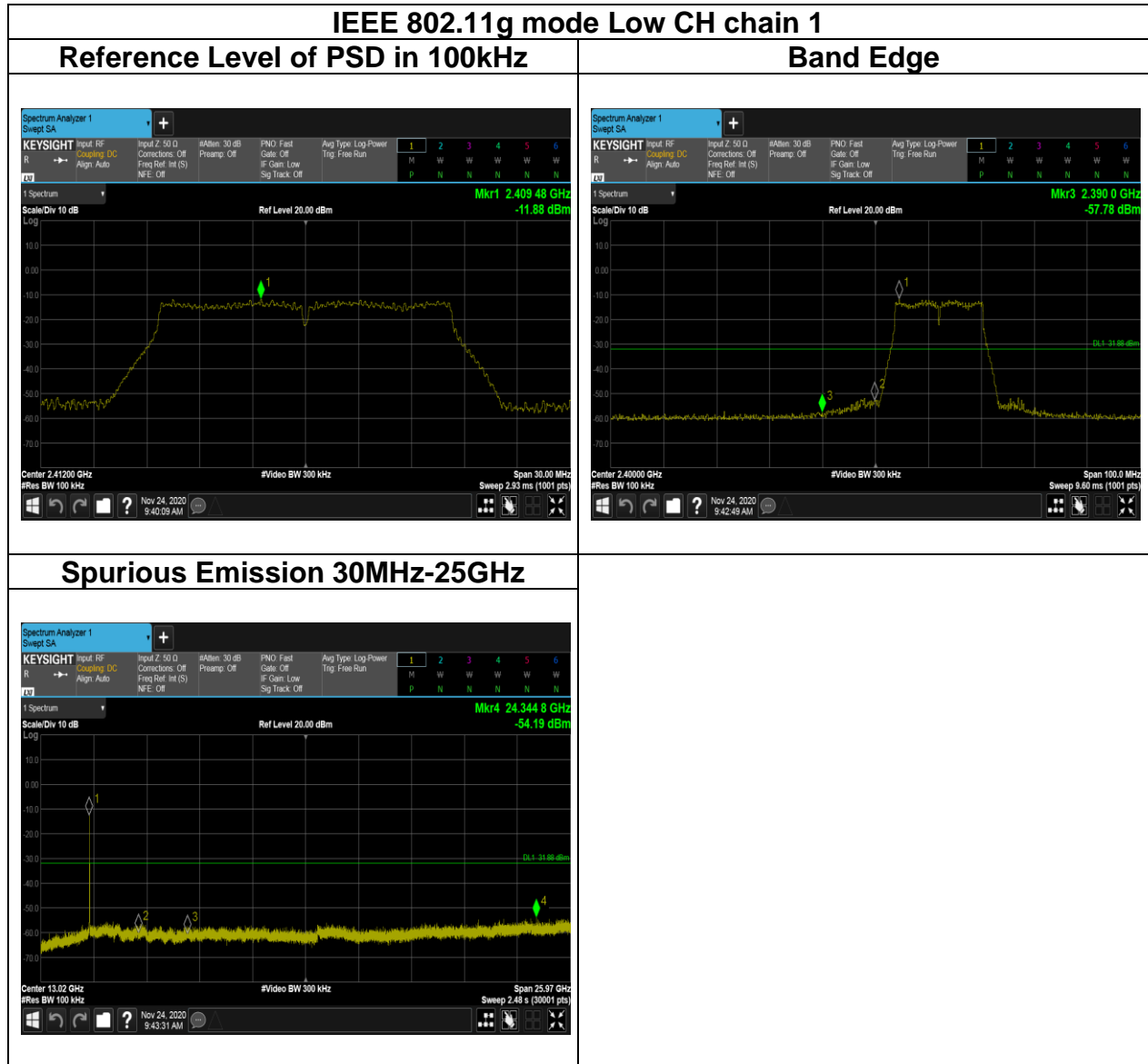
Report No.: T200928D02-RP1



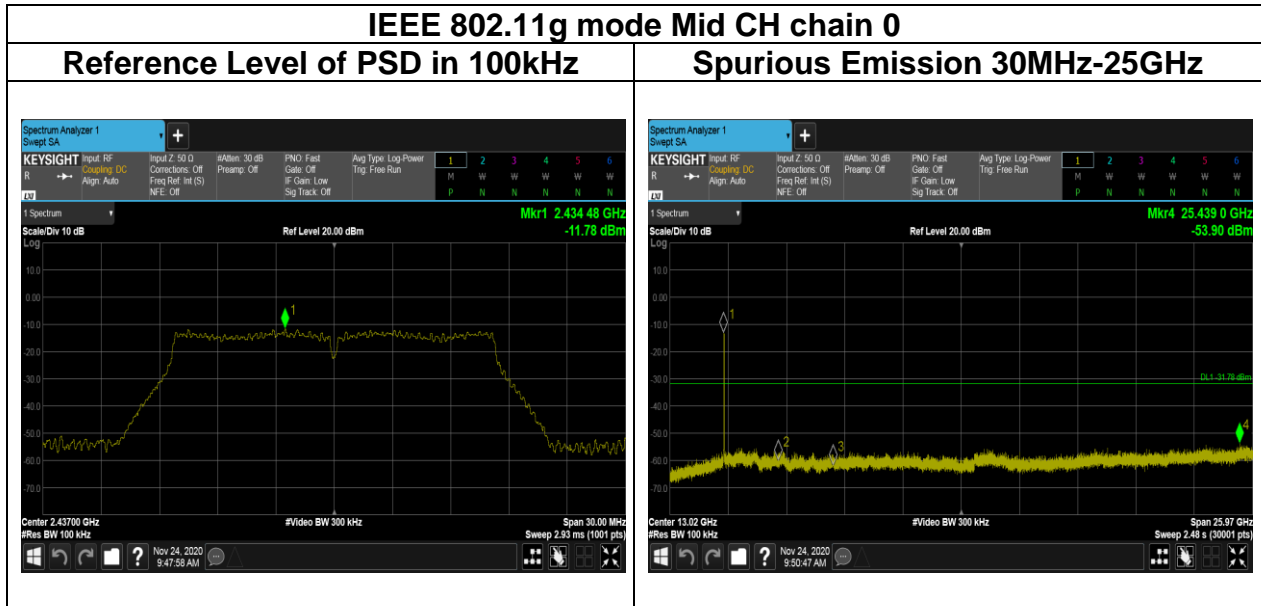
Report No.: T200928D02-RP1



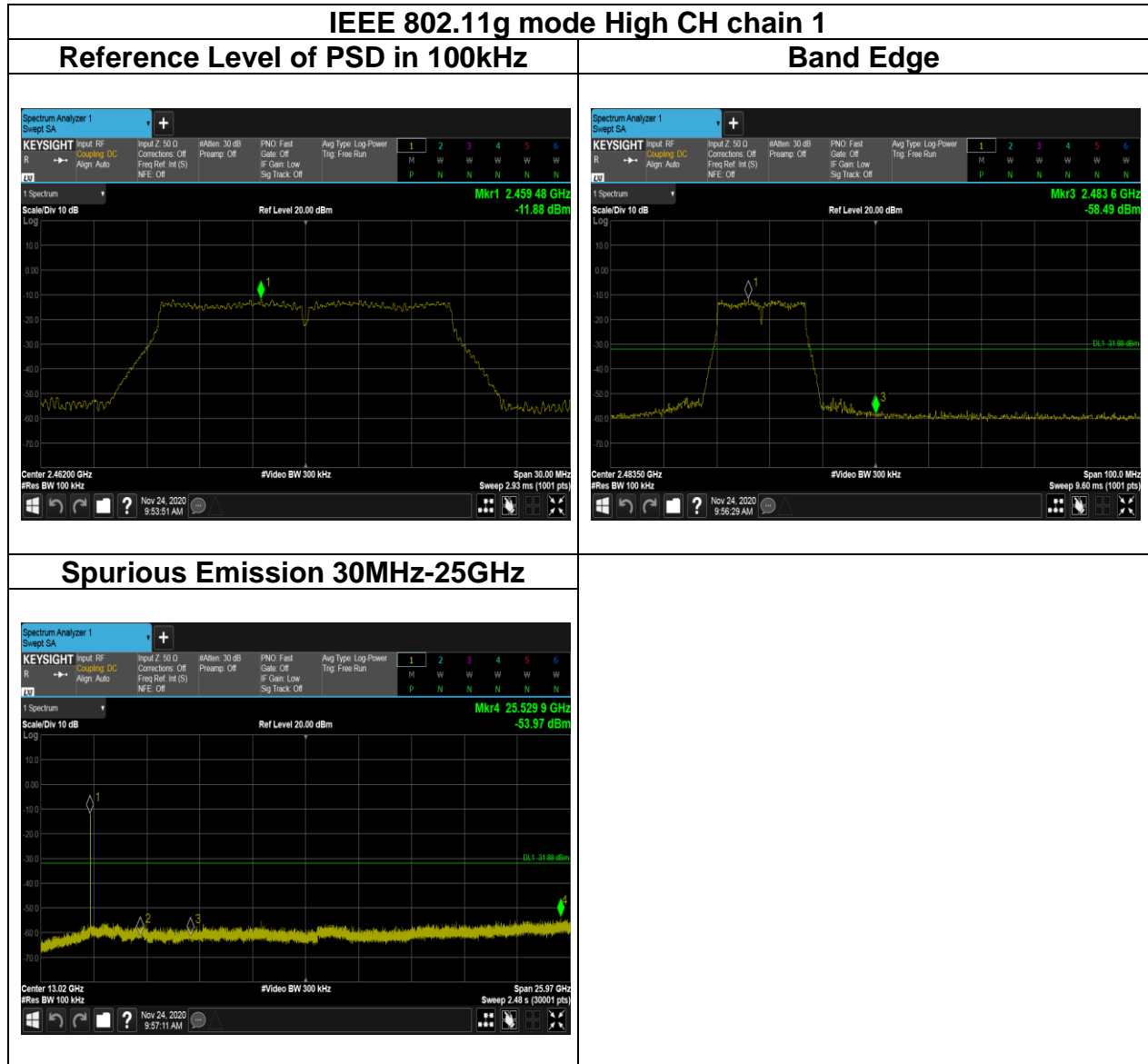
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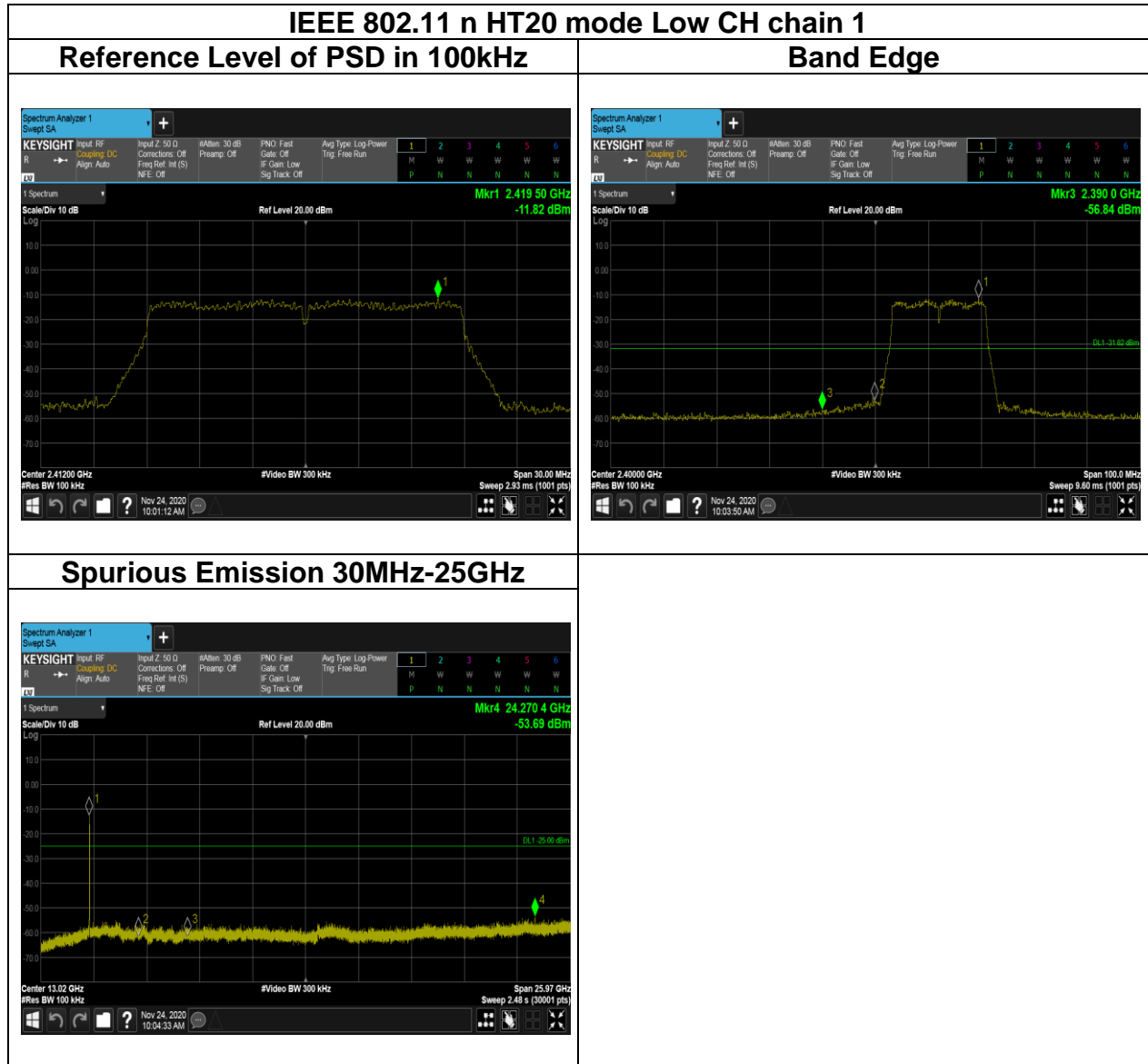


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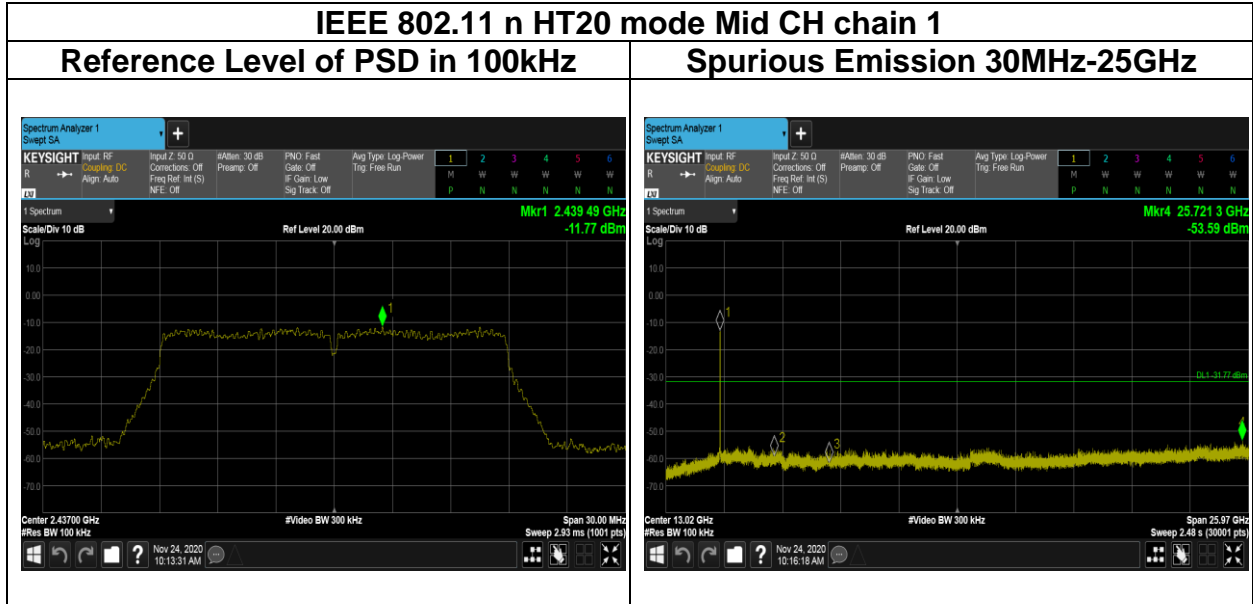




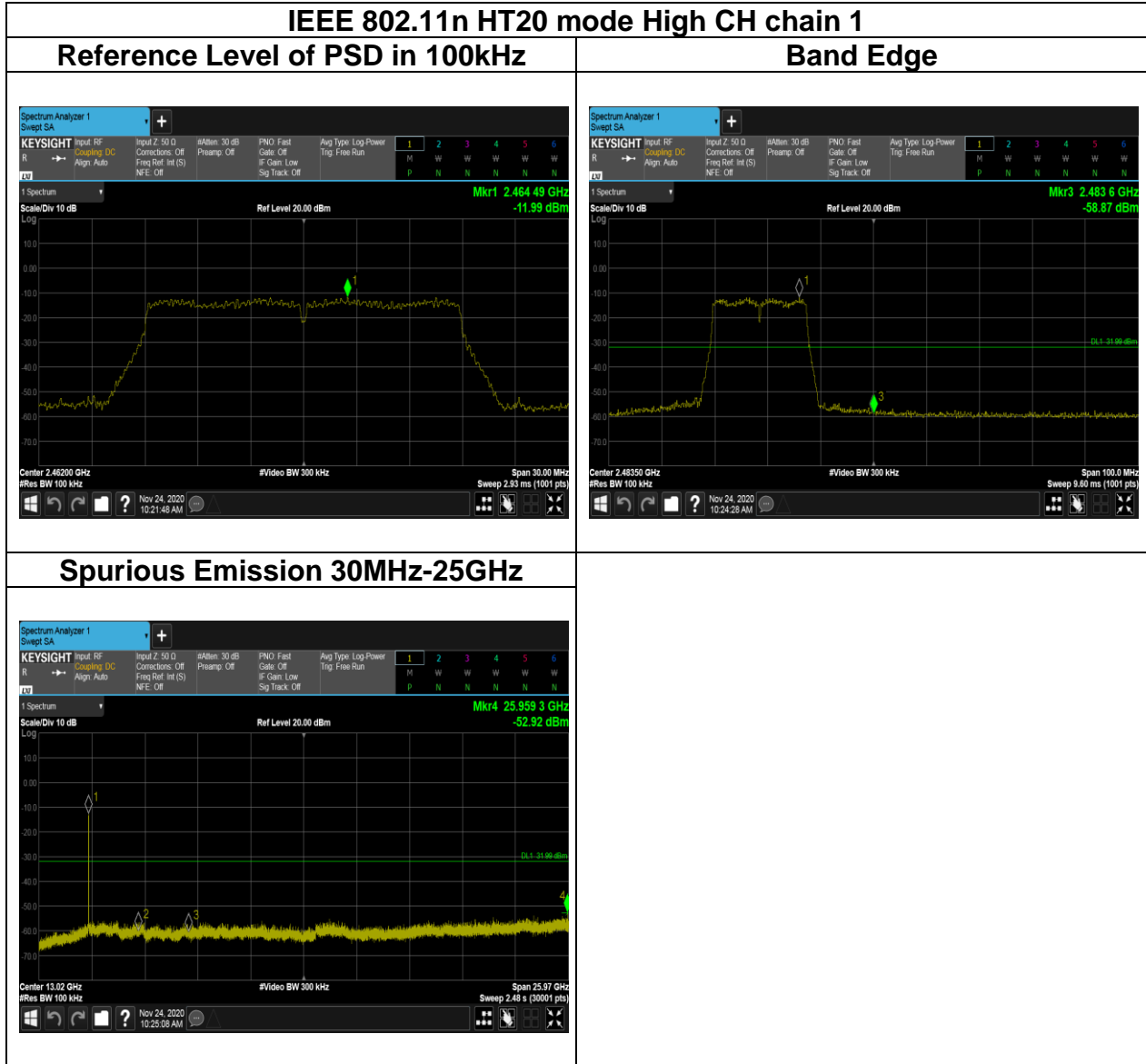
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## 4.6 RADIATION BANDEDGE AND SPURIOUS EMISSION

### 4.6.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

#### Below 30 MHz

| Frequency     | Field Strength (microvolts/m) | Magnetic H-Field (microamperes/m) | Measurement Distance (metres) |
|---------------|-------------------------------|-----------------------------------|-------------------------------|
| 9-490 kHz     | 2,400/F (F in kHz)            | 2,400/F (F in kHz)                | 300                           |
| 490-1,705 kHz | 24,000/F (F in kHz)           | 24,000/F (F in kHz)               | 30                            |
| 1.705-30 MHz  | 30                            | N/A                               | 30                            |

#### Above 30 MHz

| Frequency | Field Strength (microvolts/m) | Measurement Distance (metres) |
|-----------|-------------------------------|-------------------------------|
| 30-88     | 100                           | 3                             |
| 88-216    | 150                           | 3                             |
| 216-960   | 200                           | 3                             |
| Above 960 | 500                           | 3                             |

## 4.6.2 Test Procedure

Test method Refer as KDB 662911 D01, ANSI C63.10:2013.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

Note: No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

4. The SA setting following :

(1) Below 1G : RBW = 100kHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2) Above 1G :

(2.1) For Peak measurement : RBW = 1MHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2.2) For Average measurement : RBW = 1MHz, VBW

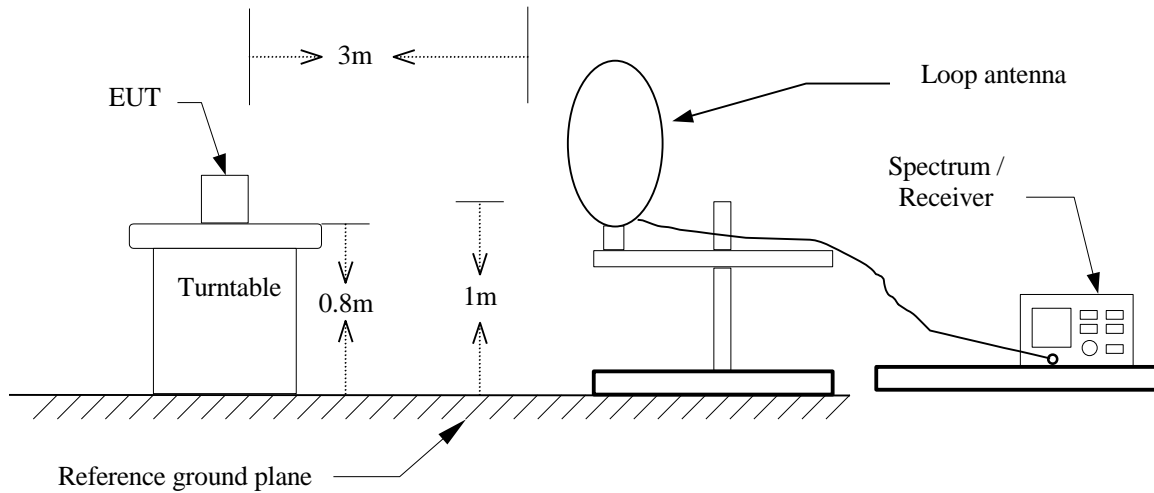
·If Duty Cycle  $\geq$  98%, VBW=10Hz.

·If Duty Cycle < 98%, VBW=1/T.

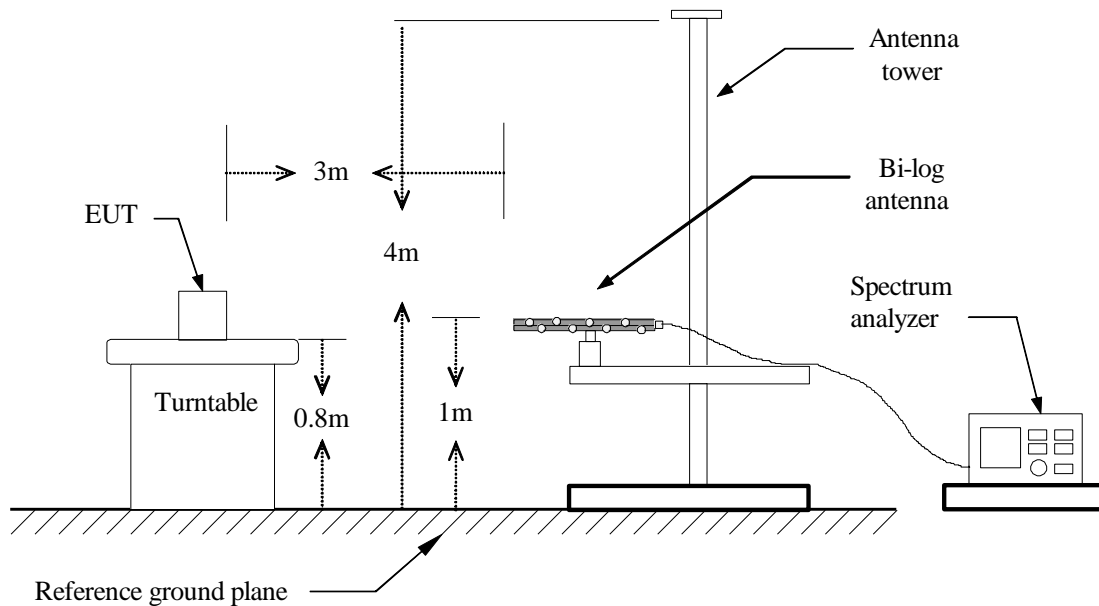
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### 4.6.3 Test Setup

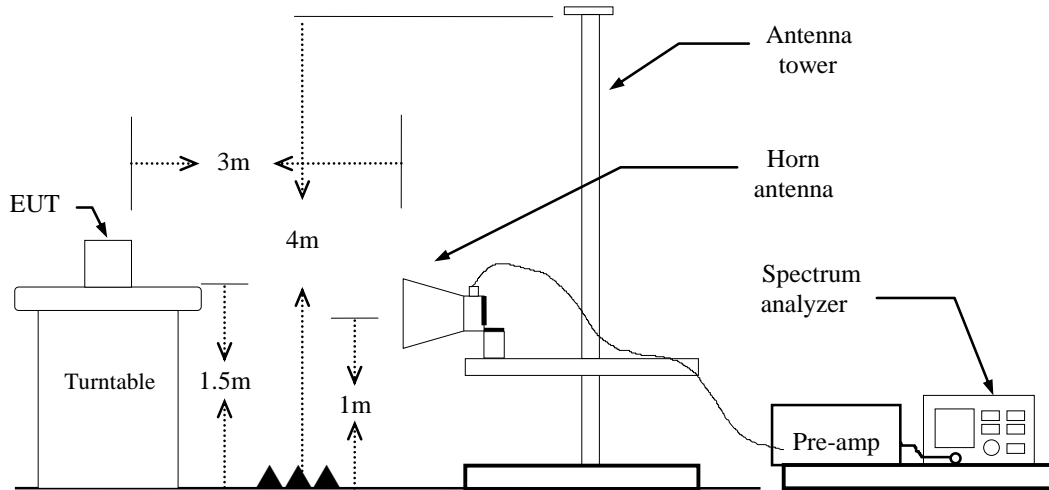
#### 9kHz ~ 30MHz



#### 30MHz ~ 1GHz



## Above 1 GHz

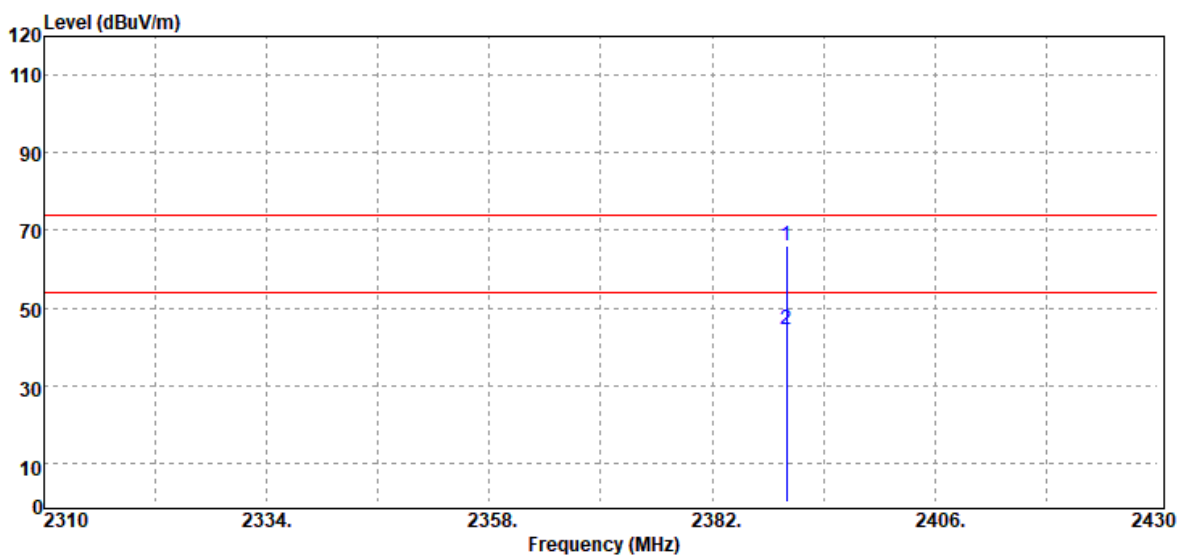


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### 4.6.4 Test Result

#### Band Edge Test Data

|           |                                |               |                   |
|-----------|--------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b Low CH<br>2412MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                      | Test Date     | November 12, 2020 |
| Polarize  | Vertical                       | Test Engineer | Ray Li            |
| Detector  | Peak / Average                 |               |                   |

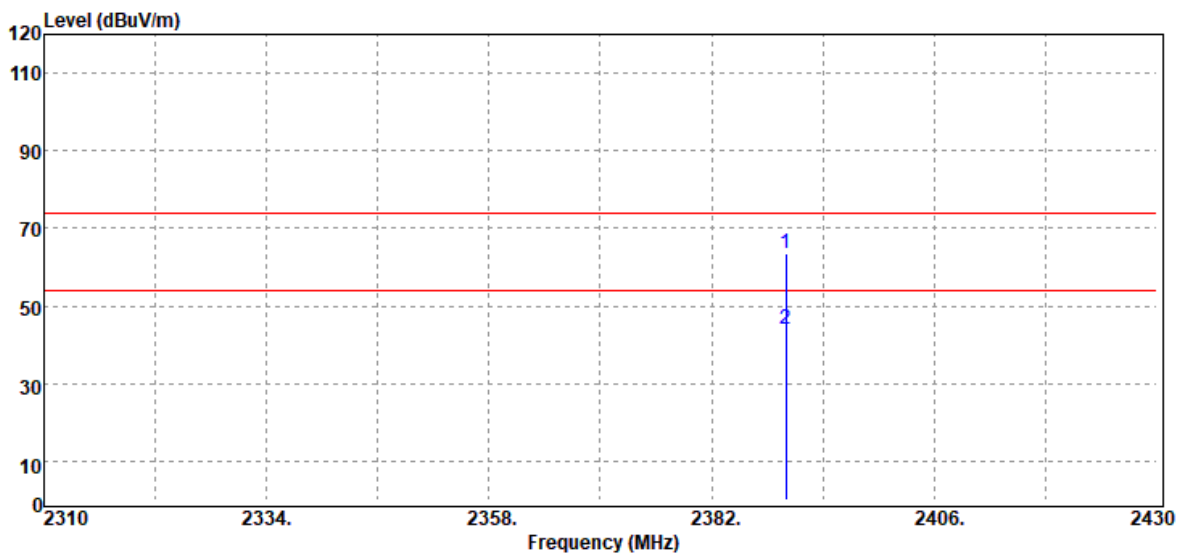


| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2390.00         | Peak                     | 83.00                         | -17.18      | 65.82              | 74.00              | -8.18       |
| 2390.00         | Average                  | 61.44                         | -17.18      | 44.26              | 54.00              | -9.74       |



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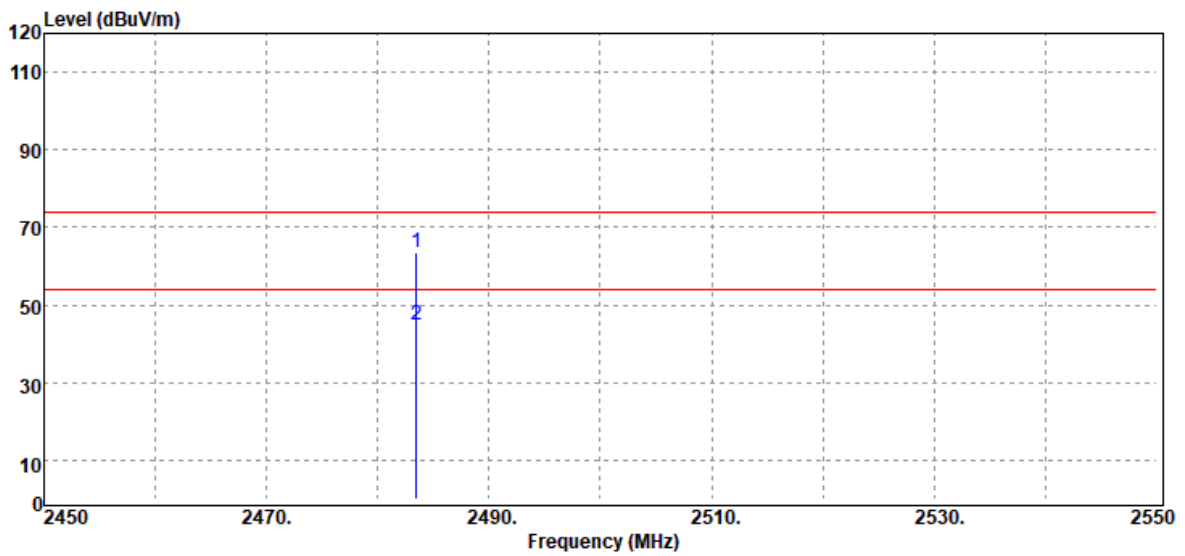
|           |                                |               |                   |
|-----------|--------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b Low CH<br>2412MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                      | Test Date     | November 12, 2020 |
| Polarize  | Horizontal                     | Test Engineer | Ray Li            |
| Detector  | Peak & Average                 |               |                   |



| Frequency<br>(MHz) | Detector<br>Mode<br>(PK/QP/AV) | Spectrum<br>Reading Level<br>(dBμV) | Factor<br>(dB) | Actual<br>FS<br>(dBμV/m) | Limit<br>@3m<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|--------------------------------|-------------------------------------|----------------|--------------------------|--------------------------|----------------|
| 2390.00            | Peak                           | 80.84                               | -17.18         | 63.66                    | 74.00                    | -10.34         |
| 2390.00            | Average                        | 61.24                               | -17.18         | 44.06                    | 54.00                    | -9.94          |

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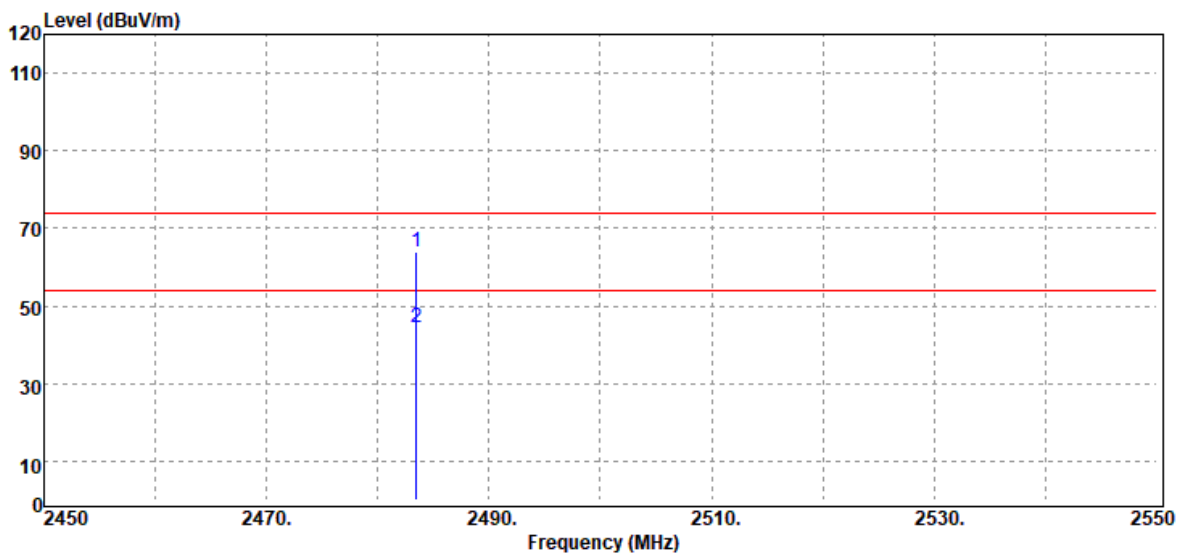
|           |                                 |               |                   |
|-----------|---------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b High CH<br>2462MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                       | Test Date     | November 12, 2020 |
| Polarize  | Vertical                        | Test Engineer | Ray Li            |
| Detector  | Peak / Average                  |               |                   |



| Frequency<br>(MHz) | Detector<br>Mode<br>(PK/QP/AV) | Spectrum<br>Reading Level<br>(dB $\mu$ V) | Factor<br>(dB) | Actual<br>FS<br>(dB $\mu$ V/m) | Limit<br>@3m<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|--------------------------------|---|----------------|--------------------------------|--------------------------------|----------------|
| 2483.50            | Peak                           | 80.39                                     | -16.98         | 63.41                          | 74.00                          | -10.59         |
| 2483.50            | Average                        | 61.79                                     | -16.98         | 44.81                          | 54.00                          | -9.19          |

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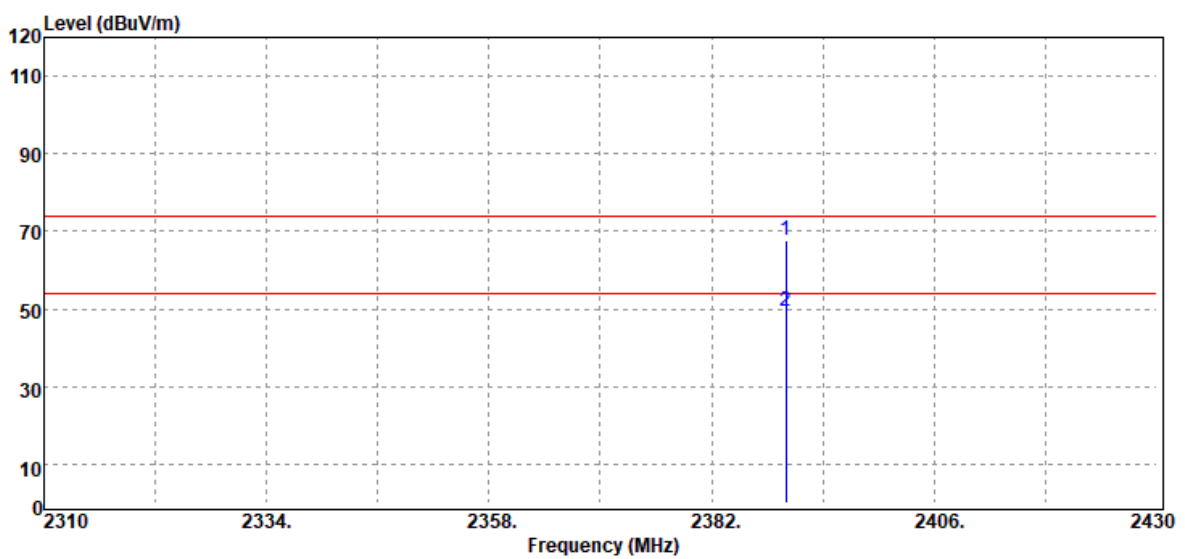
|           |                                 |               |                   |
|-----------|---------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b High CH<br>2462MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                       | Test Date     | November 12, 2020 |
| Polarize  | Horizontal                      | Test Engineer | Ray Li            |
| Detector  | Peak & Average                  |               |                   |



| Frequency<br>(MHz) | Detector<br>Mode<br>(PK/QP/AV) | Spectrum<br>Reading Level<br>(dB $\mu$ V) | Factor<br>(dB) | Actual<br>FS<br>(dB $\mu$ V/m) | Limit<br>@3m<br>(dB $\mu$ V/m) | Margin<br>(dB) |
|--------------------|--------------------------------|---|----------------|--------------------------------|--------------------------------|----------------|
| 2483.50            | Peak                           | 80.75                                     | -16.98         | 63.77                          | 74.00                          | -10.23         |
| 2483.50            | Average                        | 61.48                                     | -16.98         | 44.50                          | 54.00                          | -9.50          |

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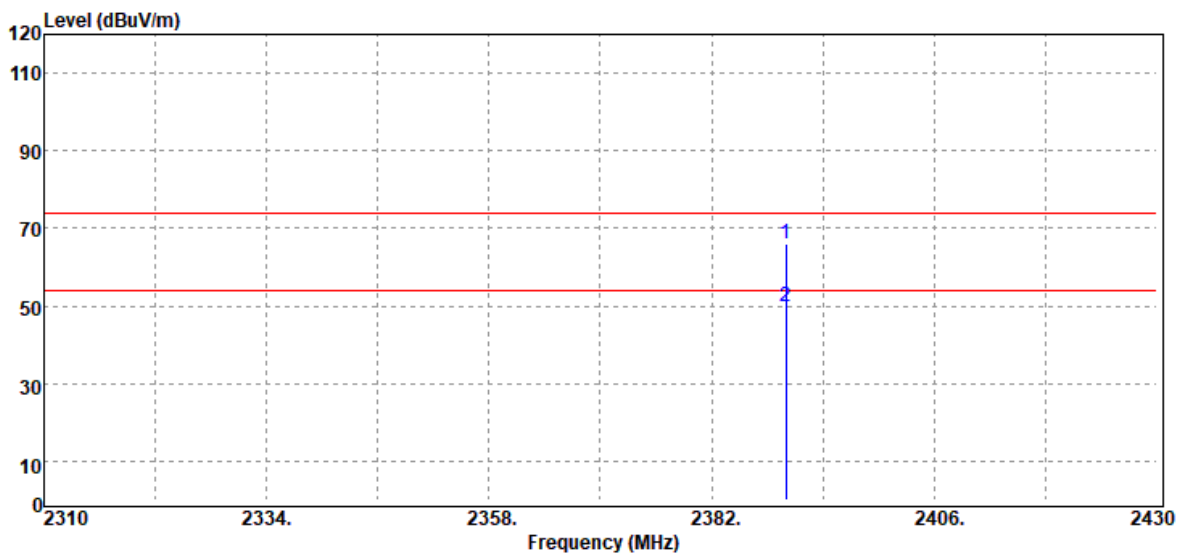
|           |                                |               |                   |
|-----------|--------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g Low CH<br>2412MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                      | Test Date     | November 12, 2020 |
| Polarize  | Vertical                       | Test Engineer | Ray Li            |
| Detector  | Peak / Average                 |               |                   |



| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBµV) | Factor (dB) | Actual FS (dBµV/m) | Limit @3m (dBµV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2390.00         | Peak                     | 84.70                         | -17.18      | 67.52              | 74.00              | -6.48       |
| 2390.00         | Average                  | 66.52                         | -17.18      | 49.34              | 54.00              | -4.66       |

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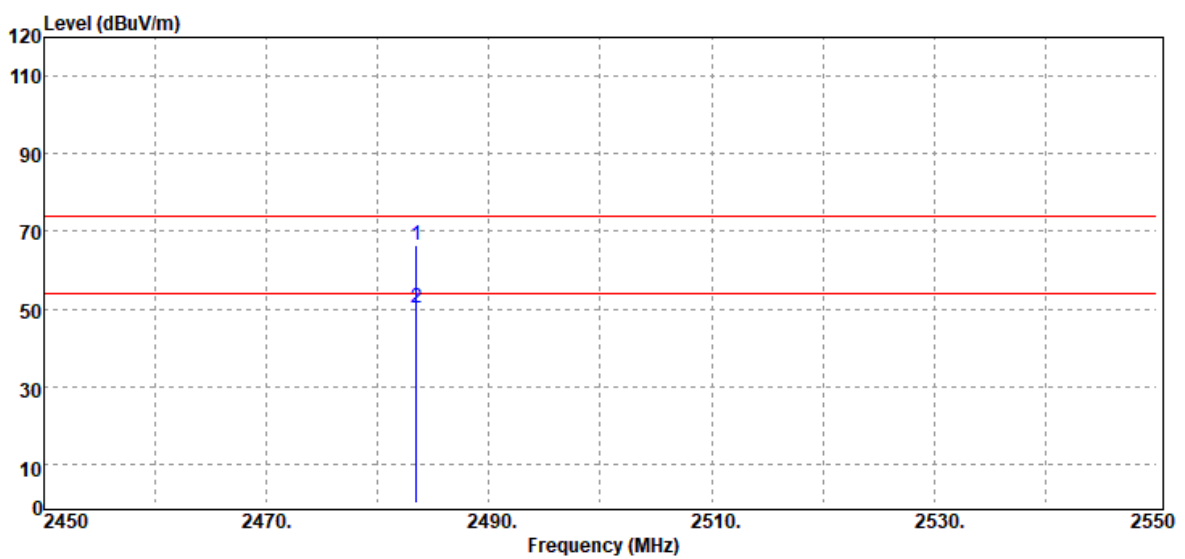
|           |                                |               |                   |
|-----------|--------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g Low CH<br>2412MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                      | Test Date     | November 12, 2020 |
| Polarize  | Horizontal                     | Test Engineer | Ray Li            |
| Detector  | Peak & Average                 |               |                   |



| Frequency<br>(MHz) | Detector<br>Mode<br>(PK/QP/AV) | Spectrum<br>Reading Level<br>(dBμV) | Factor<br>(dB) | Actual<br>FS<br>(dBμV/m) | Limit<br>@3m<br>(dBμV/m) | Margin<br>(dB) |
|--------------------|--------------------------------|-------------------------------------|----------------|--------------------------|--------------------------|----------------|
| 2390.00            | Peak                           | 83.27                               | -17.18         | 66.09                    | 74.00                    | -7.91          |
| 2390.00            | Average                        | 66.95                               | -17.18         | 49.77                    | 54.00                    | -4.23          |

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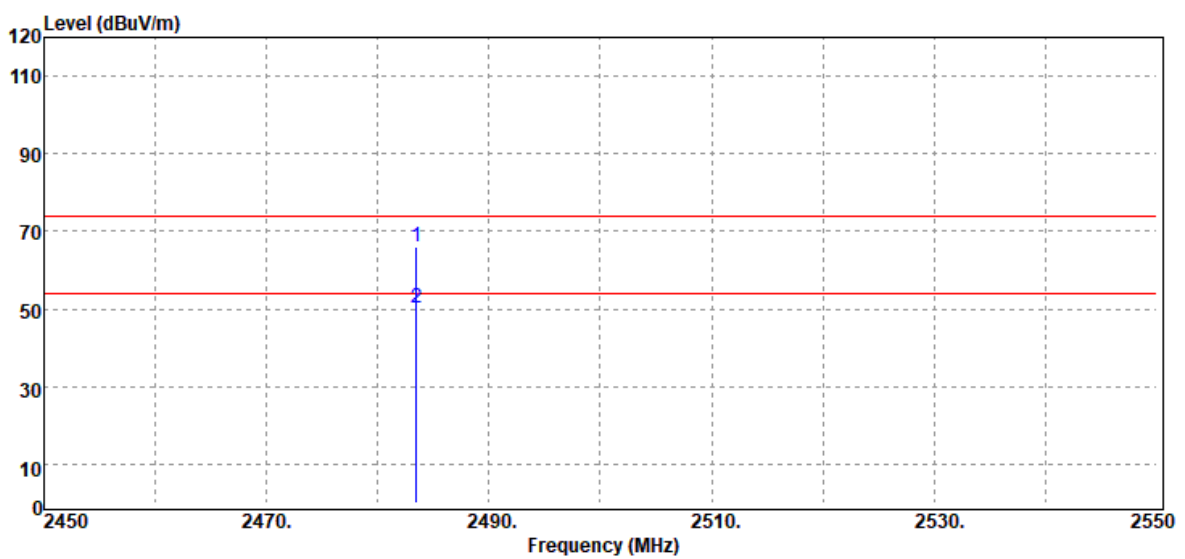
|           |                                 |               |                   |
|-----------|---------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g High CH<br>2462MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                       | Test Date     | November 12, 2020 |
| Polarize  | Vertical                        | Test Engineer | Ray Li            |
| Detector  | Peak / Average                  |               |                   |



| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2483.50         | Peak                     | 83.22                         | -16.98      | 66.24              | 74.00              | -7.76       |
| 2483.50         | Average                  | 67.30                         | -16.98      | 50.32              | 54.00              | -3.68       |

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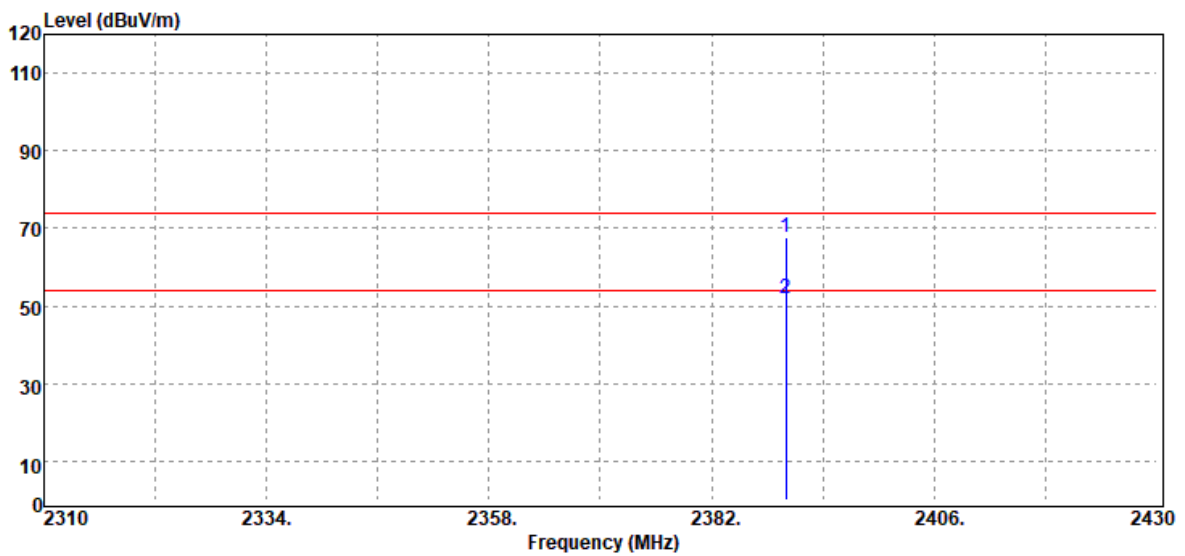
|           |                                 |               |                   |
|-----------|---------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g High CH<br>2462MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                       | Test Date     | November 12, 2020 |
| Polarize  | Horizontal                      | Test Engineer | Ray Li            |
| Detector  | Peak & Average                  |               |                   |



| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2483.50         | Peak                     | 83.10                         | -16.98      | 66.12              | 74.00              | -7.88       |
| 2483.50         | Average                  | 67.28                         | -16.98      | 50.30              | 54.00              | -3.70       |

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|           |                                     |               |                   |
|-----------|-------------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 Low CH<br>2412MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                           | Test Date     | November 12, 2020 |
| Polarize  | Vertical                            | Test Engineer | Ray Li            |
| Detector  | Peak / Average                      |               |                   |

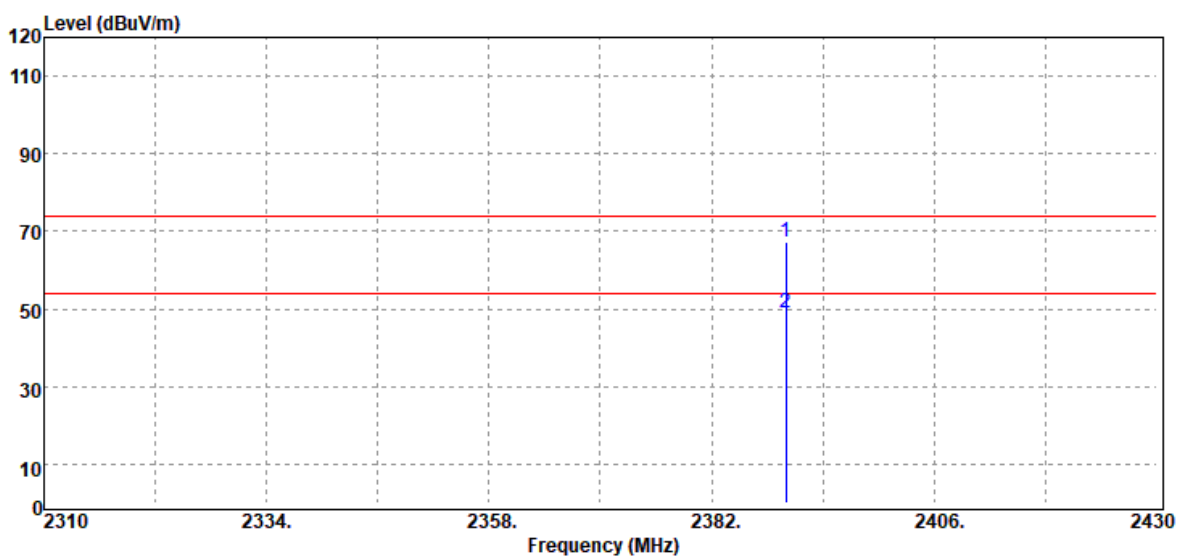


| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBµV) | Factor (dB) | Actual FS (dBµV/m) | Limit @3m (dBµV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2390.00         | Peak                     | 85.02                         | -17.18      | 67.84              | 74.00              | -6.16       |
| 2390.00         | Average                  | 68.91                         | -17.18      | 51.73              | 54.00              | -2.27       |



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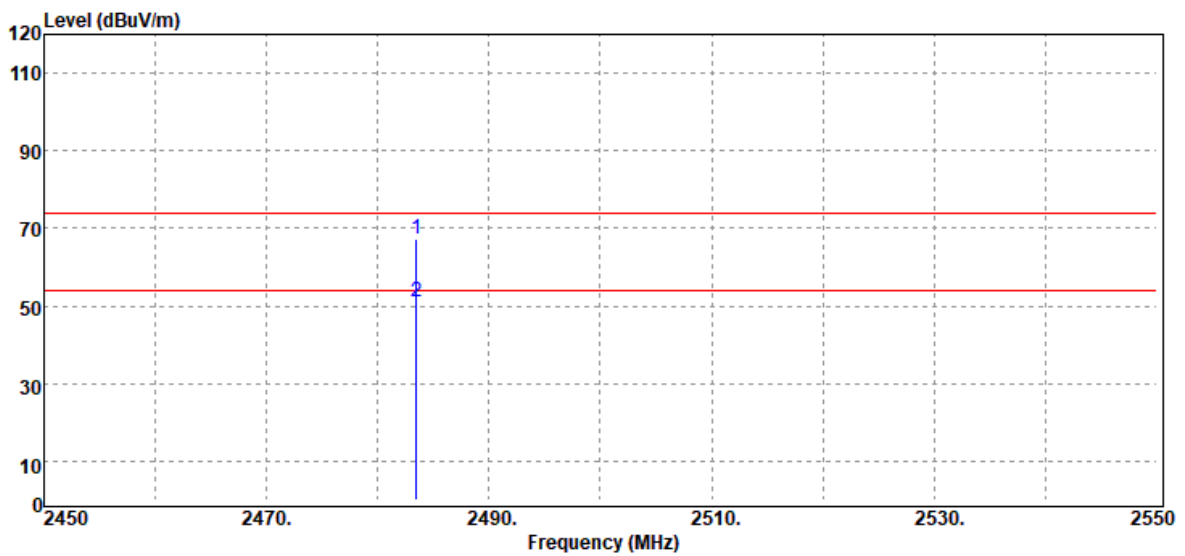
|           |                                   |               |                   |
|-----------|-----------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11 n20<br>Low CH 2412MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                         | Test Date     | November 12, 2020 |
| Polarize  | Horizontal                        | Test Engineer | Ray Li            |
| Detector  | Peak & Average                    |               |                   |



| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2390.00         | Peak                     | 84.44                         | -17.18      | 67.26              | 74.00              | -6.74       |
| 2390.00         | Average                  | 66.08                         | -17.18      | 48.90              | 54.00              | -5.10       |

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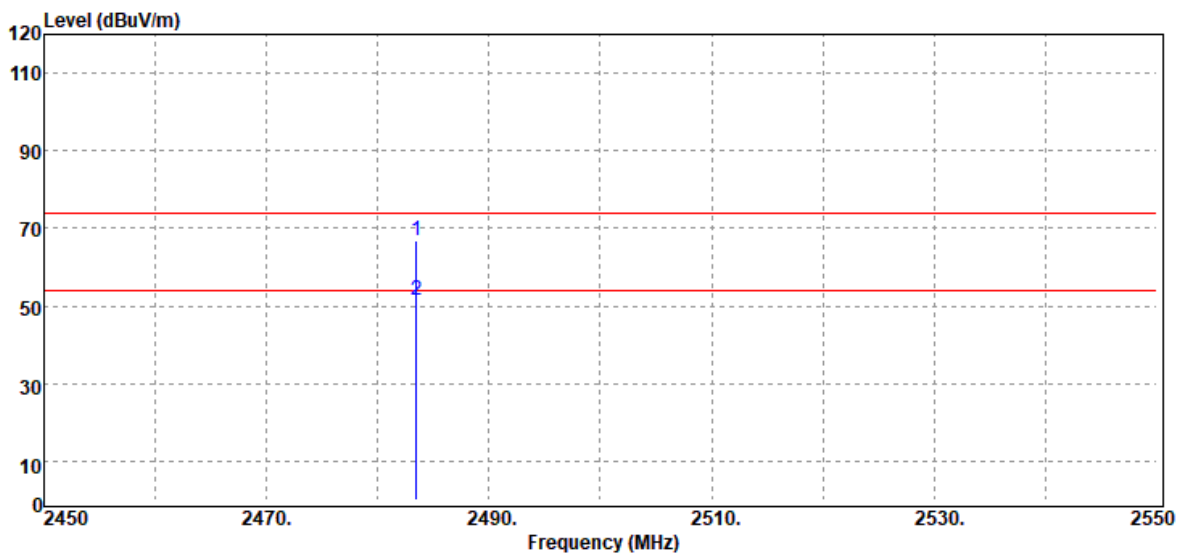
|           |                                      |               |                   |
|-----------|--------------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 High CH<br>2462MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                            | Test Date     | November 12, 2020 |
| Polarize  | Vertical                             | Test Engineer | Ray Li            |
| Detector  | Peak / Average                       |               |                   |



| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2483.50         | Peak                     | 84.26                         | -16.98      | 67.28              | 74.00              | -6.72       |
| 2483.50         | Average                  | 68.25                         | -16.98      | 51.27              | 54.00              | -2.73       |

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|           |                                   |               |                   |
|-----------|-----------------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n20 High CH<br>2462MHz | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Band Edge                         | Test Date     | November 12, 2020 |
| Polarize  | Horizontal                        | Test Engineer | Ray Li            |
| Detector  | Peak & Average                    |               |                   |

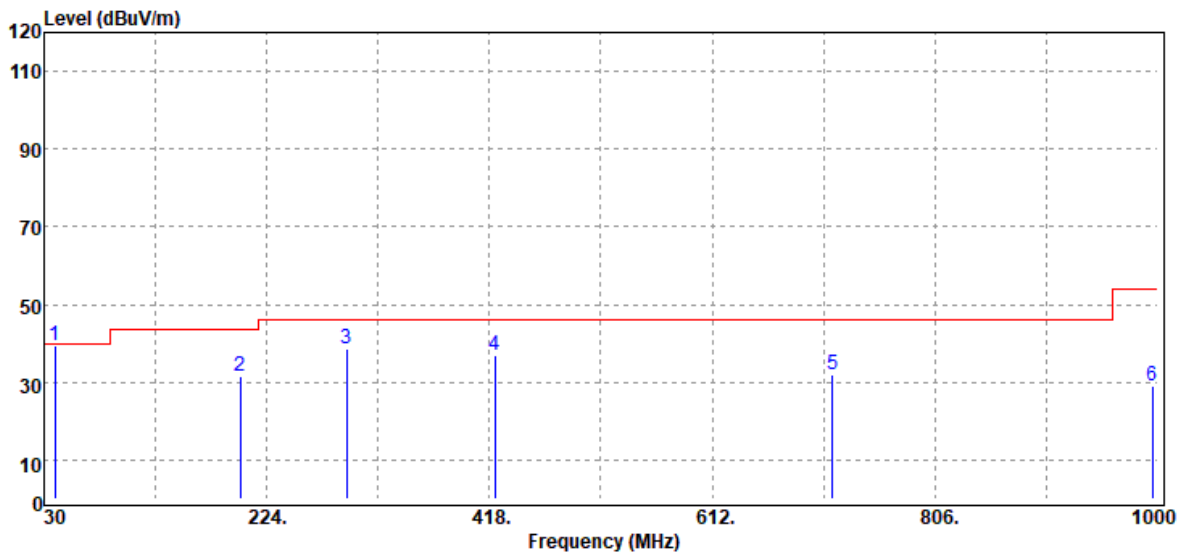


| Frequency (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-----------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 2483.50         | Peak                     | 83.99                         | -16.98      | 67.01              | 74.00              | -6.99       |
| 2483.50         | Average                  | 68.63                         | -16.98      | 51.65              | 54.00              | -2.35       |

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**Below 1G Test Data**

|           |            |               |                   |
|-----------|------------|---------------|-------------------|
| Test Mode | Mode 1     | Temp/Hum      | 22.6(°C)/ 59%RH   |
| Test Item | 30MHz-1GHz | Test Date     | November 18, 2020 |
| Polarize  | Vertical   | Test Engineer | Jerry Chang       |
| Detector  | Peak       |               |                   |

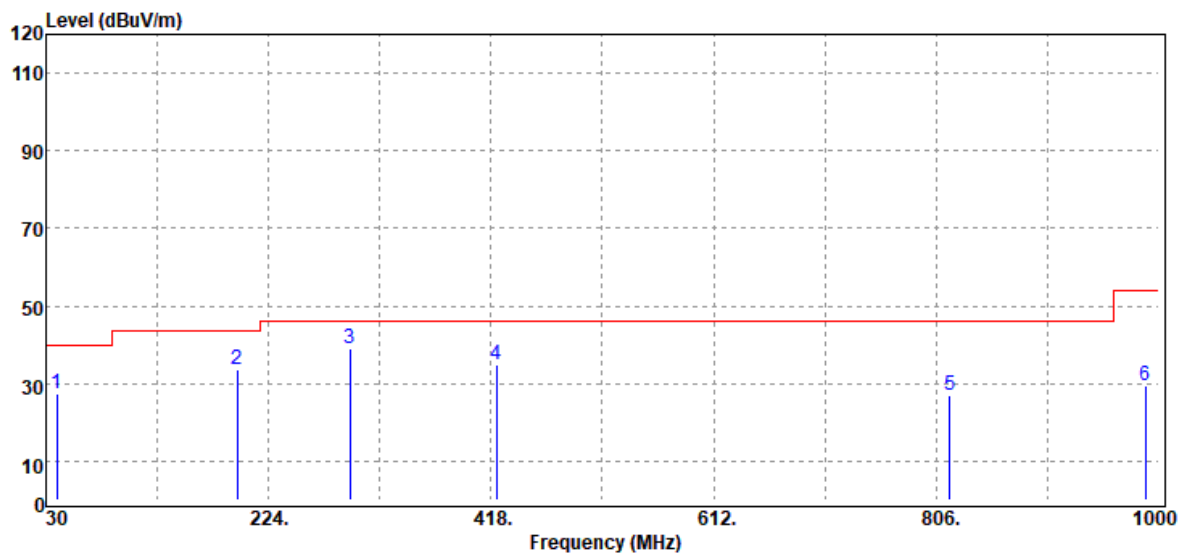


| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBµV) | Factor (dB) | Actual FS (dBµV/m) | Limit @3m (dBµV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 39.70       | Peak                     | 48.90                         | -9.65       | 39.25              | 40.00              | -0.75       |
| 200.72      | Peak                     | 41.35                         | -9.82       | 31.53              | 43.50              | -11.97      |
| 293.84      | Peak                     | 47.41                         | -8.68       | 38.73              | 46.00              | -7.27       |
| 422.85      | Peak                     | 41.81                         | -4.94       | 36.87              | 46.00              | -9.13       |
| 716.76      | Peak                     | 31.42                         | 0.38        | 31.80              | 46.00              | -14.20      |
| 995.15      | Peak                     | 24.32                         | 4.60        | 28.92              | 54.00              | -25.08      |

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Report No.: T200928D02-RP1

|           |            |               |                   |
|-----------|------------|---------------|-------------------|
| Test Mode | Mode 1     | Temp/Hum      | 22.6(°C)/ 59%RH   |
| Test Item | 30MHz-1GHz | Test Date     | November 18, 2020 |
| Polarize  | Horizontal | Test Engineer | Jerry Chang       |
| Detector  | Peak       |               |                   |



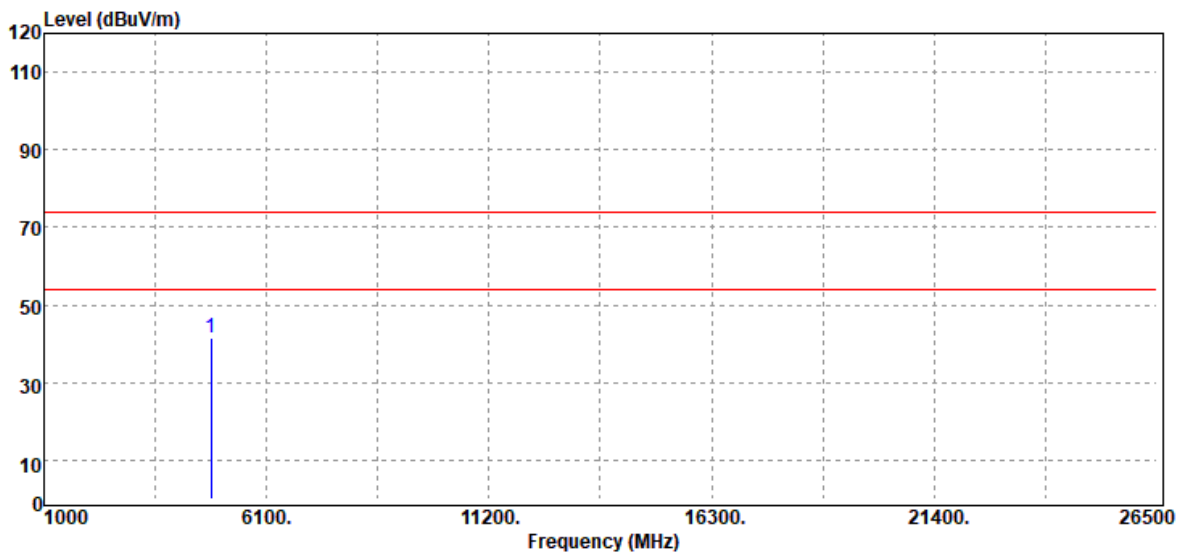
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 39.70       | Peak                     | 37.25                         | -9.65       | 27.60              | 40.00              | -12.40      |
| 196.84      | Peak                     | 43.41                         | -9.82       | 33.59              | 43.50              | -9.91       |
| 294.81      | Peak                     | 47.81                         | -8.67       | 39.14              | 46.00              | -6.86       |
| 422.85      | Peak                     | 39.91                         | -4.94       | 34.97              | 46.00              | -11.03      |
| 817.64      | Peak                     | 24.81                         | 1.98        | 26.79              | 46.00              | -19.21      |
| 988.36      | Peak                     | 25.21                         | 4.12        | 29.33              | 54.00              | -24.67      |

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

Report No.: T200928D02-RP1

**Above 1G Test Data**

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b Low CH | Temp/Hum      | 22.6(°C)/ 59%RH   |
| Test Item | Harmonic            | Test Date     | November 18, 2020 |
| Polarize  | Vertical            | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



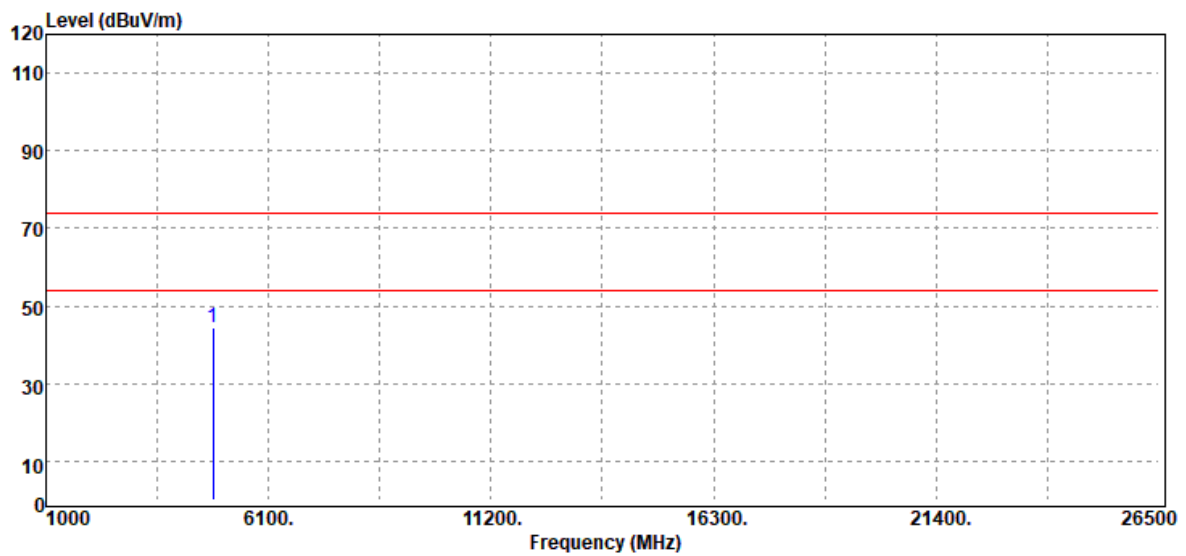
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBµV) | Factor (dB) | Actual FS (dBµV/m) | Limit @3m (dBµV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4824.00     | Peak                     | 52.92                         | -11.39      | 41.53              | 74.00              | -32.47      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b Low CH | Temp/Hum      | 22.6(°C)/ 59%RH   |
| Test Item | Harmonic            | Test Date     | November 18, 2020 |
| Polarize  | Horizontal          | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



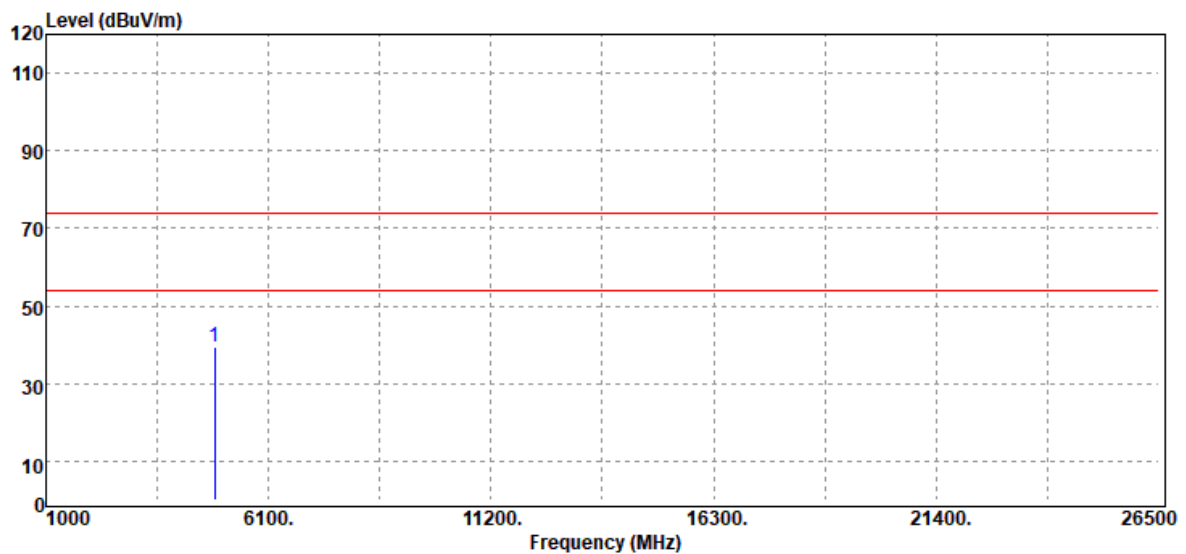
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4824.00     | Peak                     | 55.87                               | -11.39      | 44.48                    | 74.00                    | -29.52      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b Mid CH | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Harmonic            | Test Date     | November 11, 2020 |
| Polarize  | Vertical            | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4874.00     | Peak                     | 50.58                         | -11.12      | 39.46              | 74.00              | -34.54      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

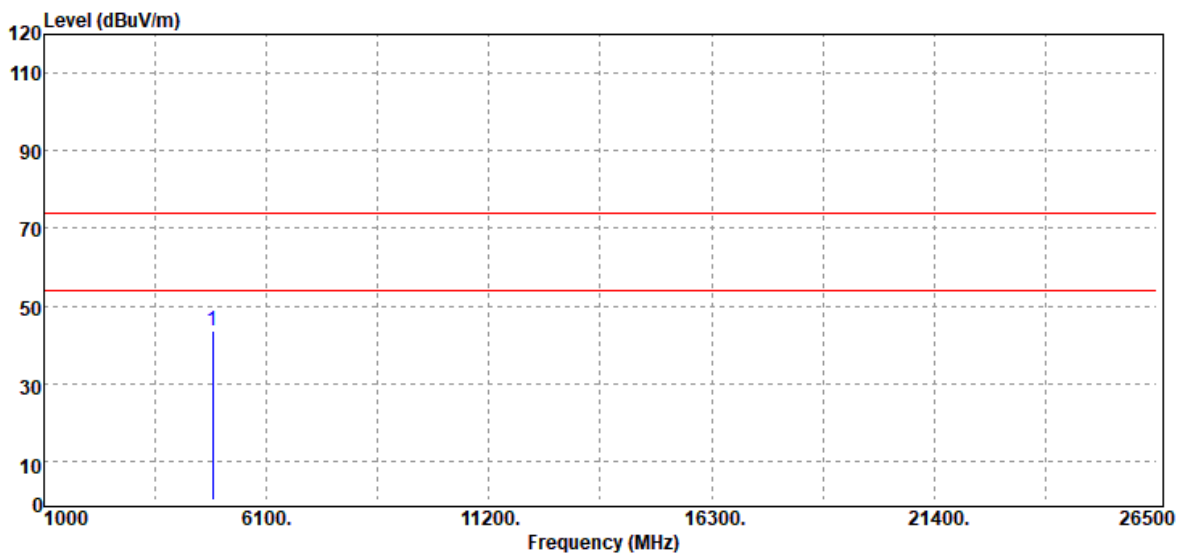
**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit



Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b Mid CH | Temp/Hum      | 22.4(°C)/ 55%RH   |
| Test Item | Harmonic            | Test Date     | November 11, 2020 |
| Polarize  | Horizontal          | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



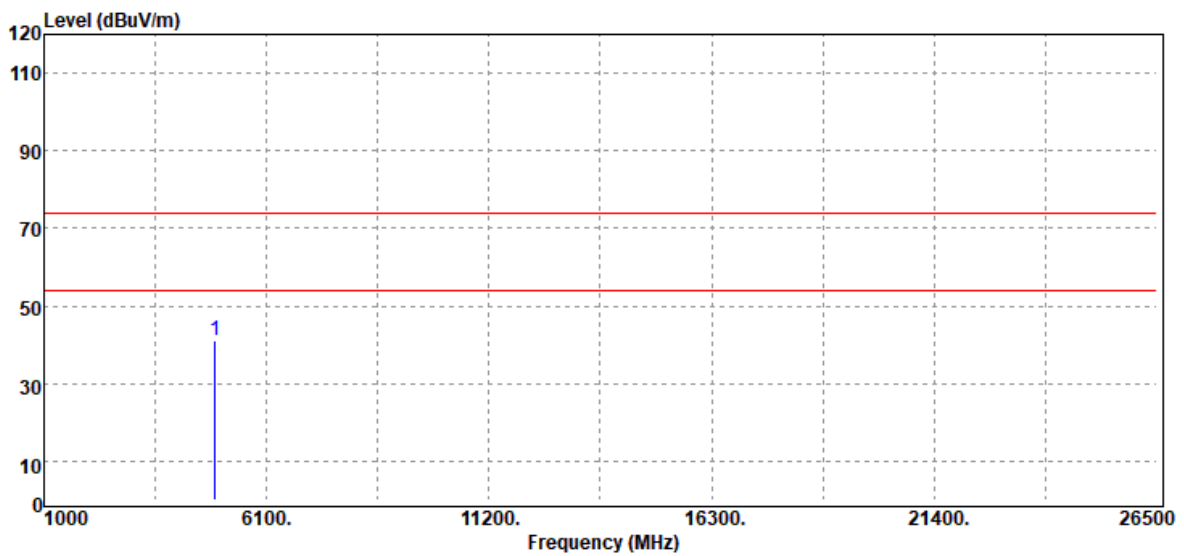
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4874.00     | Peak                     | 54.80                               | -11.12      | 43.68                    | 74.00                    | -30.32      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                      |               |                   |
|-----------|----------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b High CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic             | Test Date     | November 11, 2020 |
| Polarize  | Vertical             | Test Engineer | Ray Li            |
| Detector  | Peak                 |               |                   |



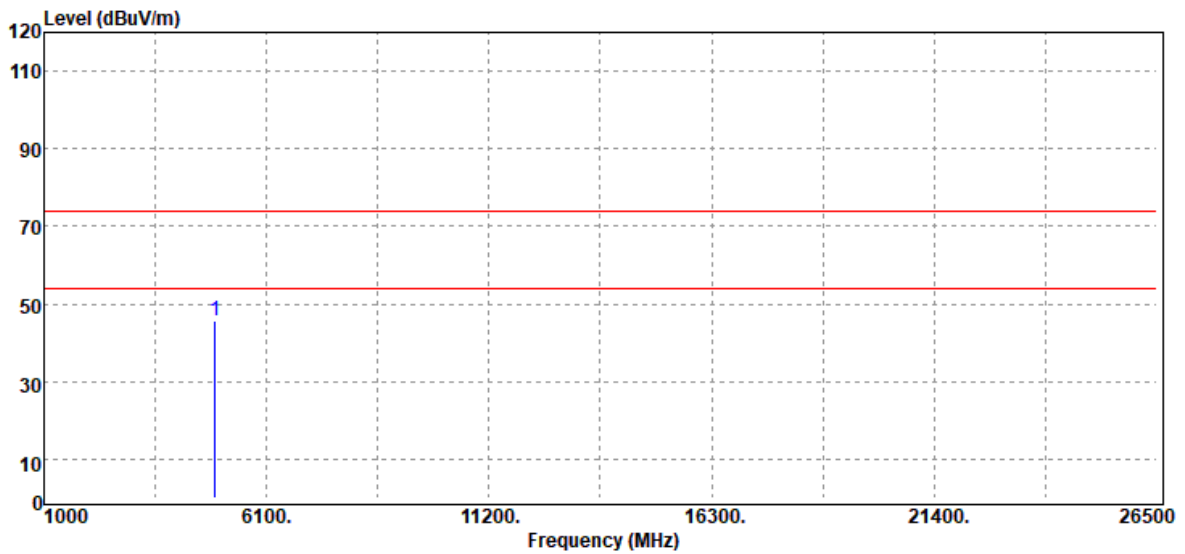
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4924.00     | Peak                     | 51.77                         | -10.77      | 41.00              | 74.00              | -33.00      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                      |               |                   |
|-----------|----------------------|---------------|-------------------|
| Test Mode | IEEE 802.11b High CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic             | Test Date     | November 11, 2020 |
| Polarize  | Horizontal           | Test Engineer | Ray Li            |
| Detector  | Peak                 |               |                   |



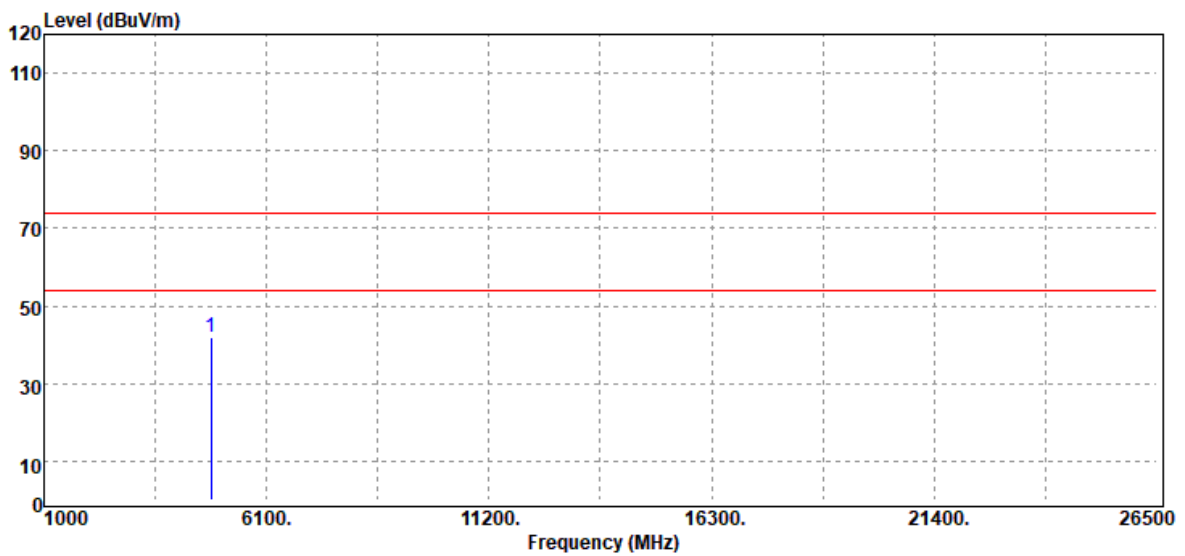
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4924.00     | Peak                     | 56.28                               | -10.77      | 45.51                    | 74.00                    | -28.49      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g Low CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic            | Test Date     | November 11, 2020 |
| Polarize  | Vertical            | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



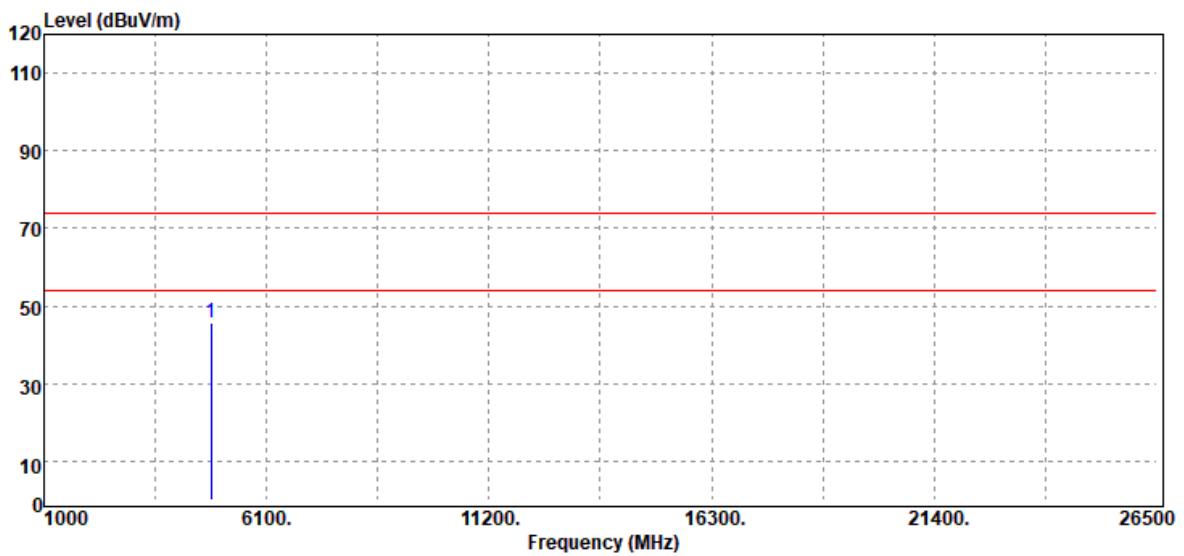
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4824.00     | Peak                     | 53.48                               | -11.39      | 42.09                    | 74.00                    | -31.91      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g Low CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic            | Test Date     | November 11, 2020 |
| Polarize  | Horizontal          | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



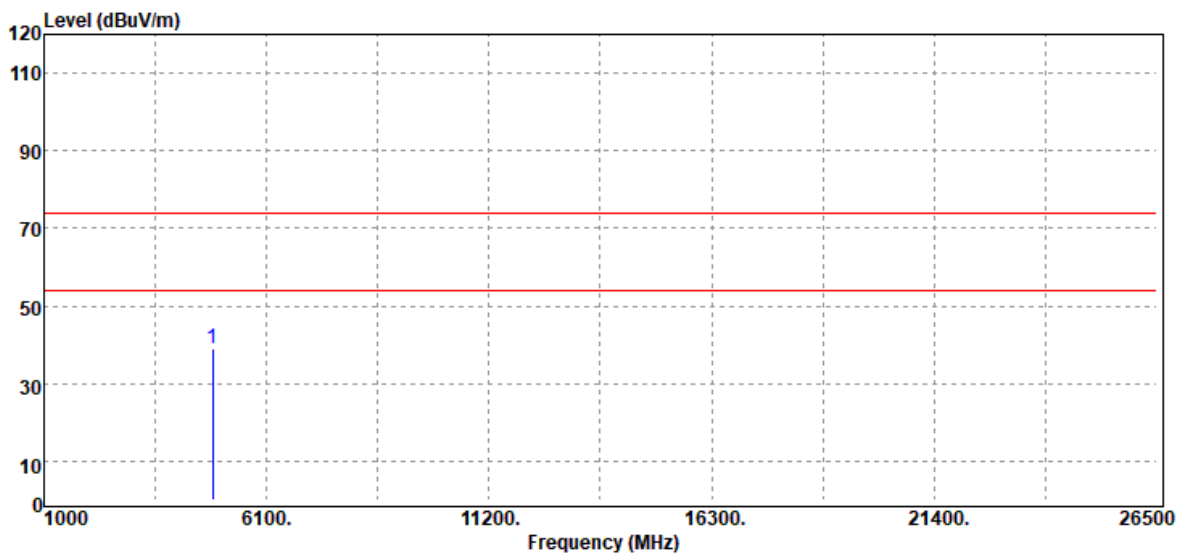
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4824.00     | Peak                     | 56.96                         | -11.39      | 45.57              | 74.00              | -28.43      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g Mid CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic            | Test Date     | November 11, 2020 |
| Polarize  | Vertical            | Test Engineer | Ray Li            |
| Detector  | Peak & Average      |               |                   |



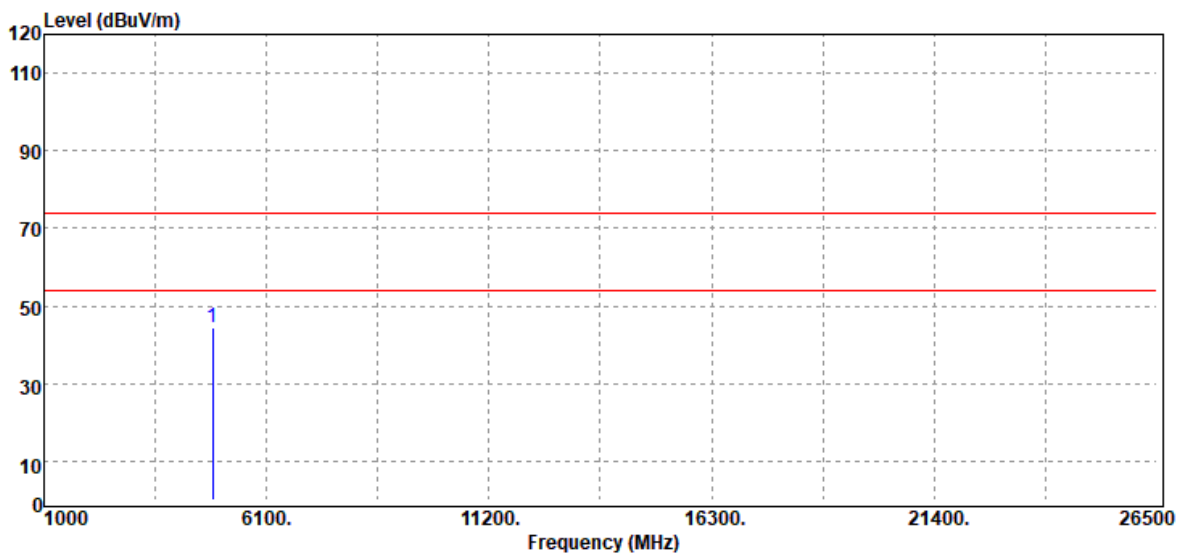
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4874.00     | Peak                     | 50.22                               | -11.12      | 39.10                    | 74.00                    | -34.90      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                     |               |                   |
|-----------|---------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g Mid CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic            | Test Date     | November 11, 2020 |
| Polarize  | Horizontal          | Test Engineer | Ray Li            |
| Detector  | Peak                |               |                   |



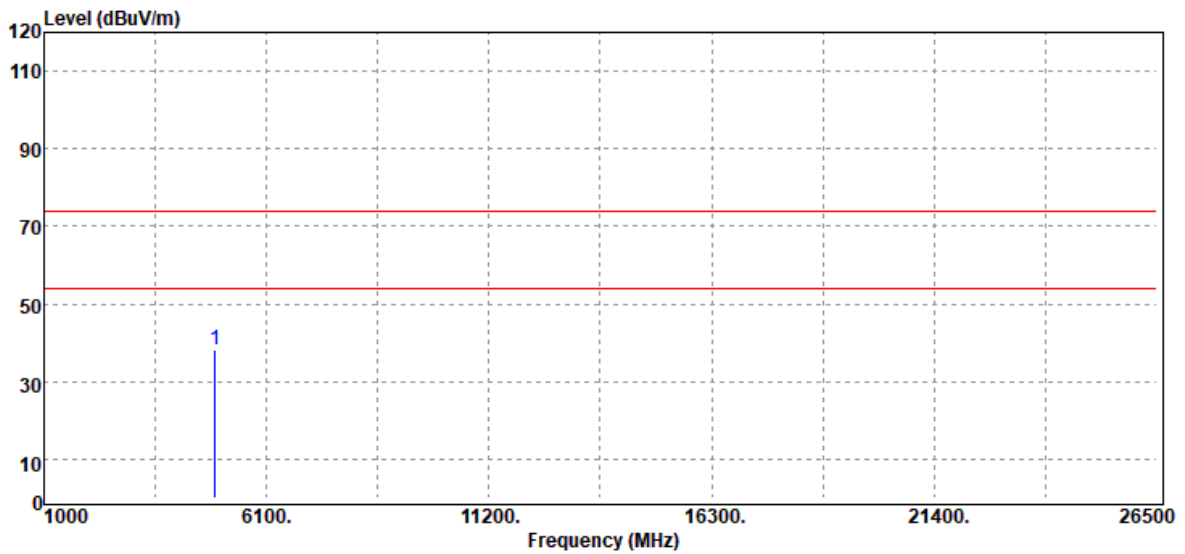
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4874.00     | Peak                     | 55.63                               | -11.12      | 44.51                    | 74.00                    | -29.49      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                      |               |                   |
|-----------|----------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g High CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic             | Test Date     | November 11, 2020 |
| Polarize  | Vertical             | Test Engineer | Ray Li            |
| Detector  | Peak                 |               |                   |



| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4924.00     | Peak                     | 49.09                         | -10.77      | 38.32              | 74.00              | -35.68      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

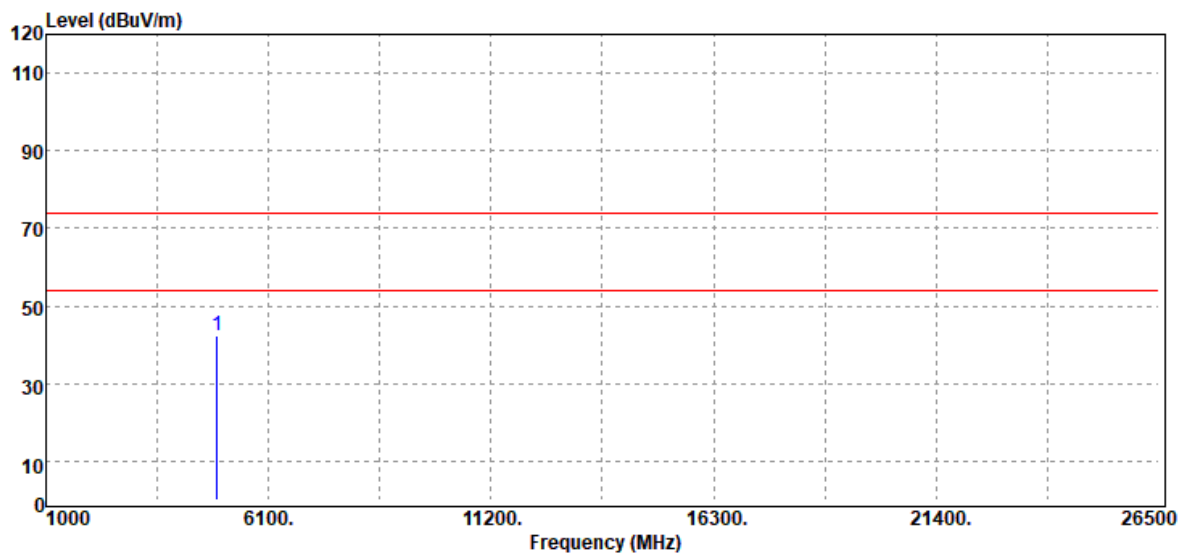
**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit



Report No.: T200928D02-RP1

|           |                      |               |                   |
|-----------|----------------------|---------------|-------------------|
| Test Mode | IEEE 802.11g High CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic             | Test Date     | November 11, 2020 |
| Polarize  | Horizontal           | Test Engineer | Ray Li            |
| Detector  | Peak                 |               |                   |



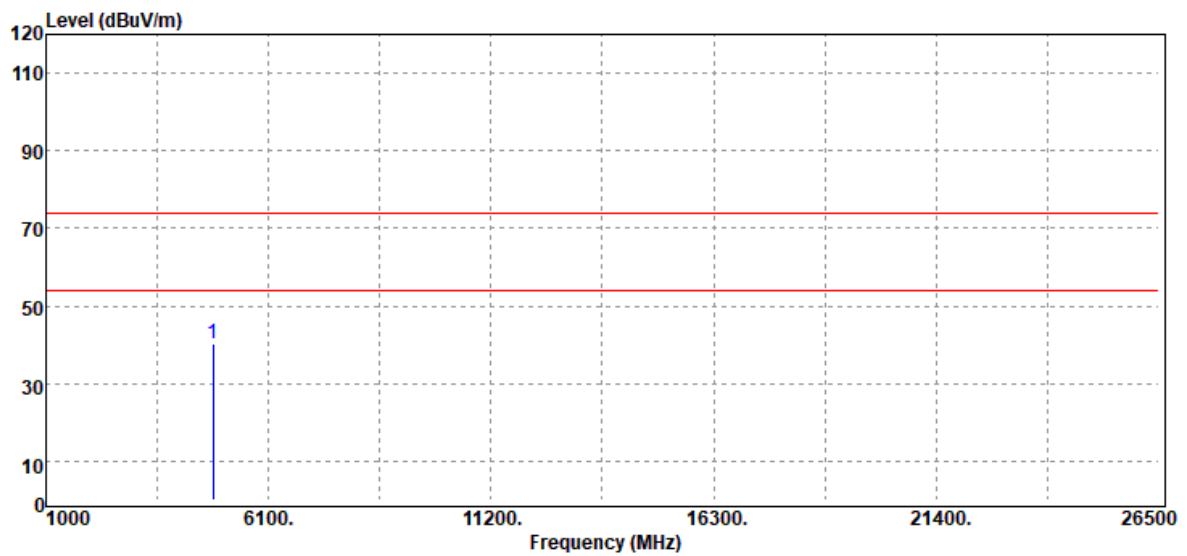
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4924.00     | Peak                     | 53.01                               | -10.77      | 42.24                    | 74.00                    | -31.76      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                          |               |                   |
|-----------|--------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic                 | Test Date     | November 11, 2020 |
| Polarize  | Vertical                 | Test Engineer | Ray Li            |
| Detector  | Peak                     |               |                   |



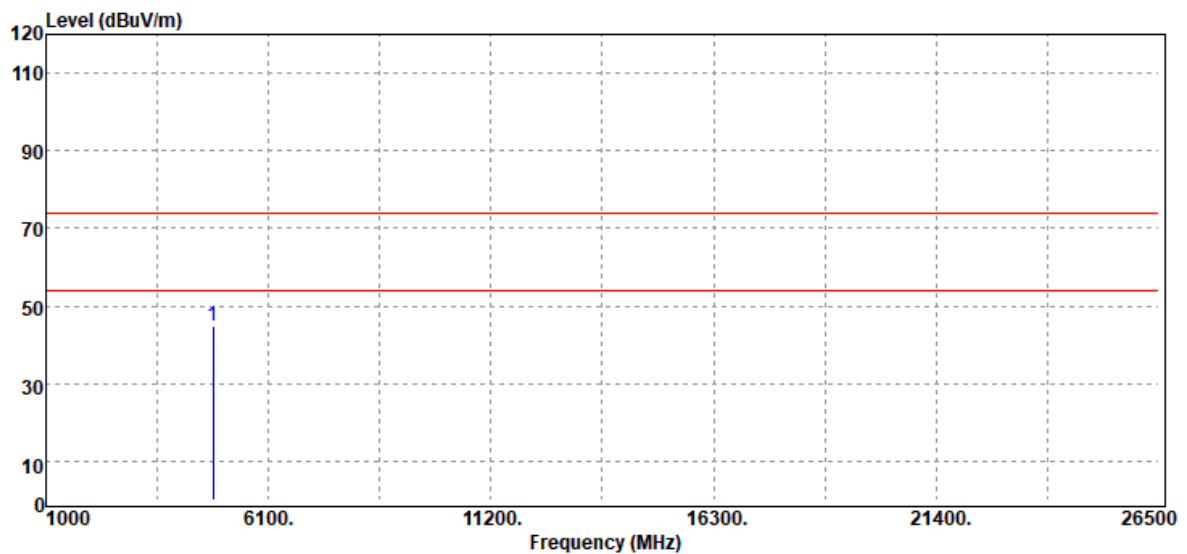
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limit @3m (dBuV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4824.00     | Peak                     | 51.83                         | -11.39      | 40.44              | 74.00              | -33.56      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                          |               |                   |
|-----------|--------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 Low CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic                 | Test Date     | November 11, 2020 |
| Polarize  | Horizontal               | Test Engineer | Ray Li            |
| Detector  | Peak                     |               |                   |



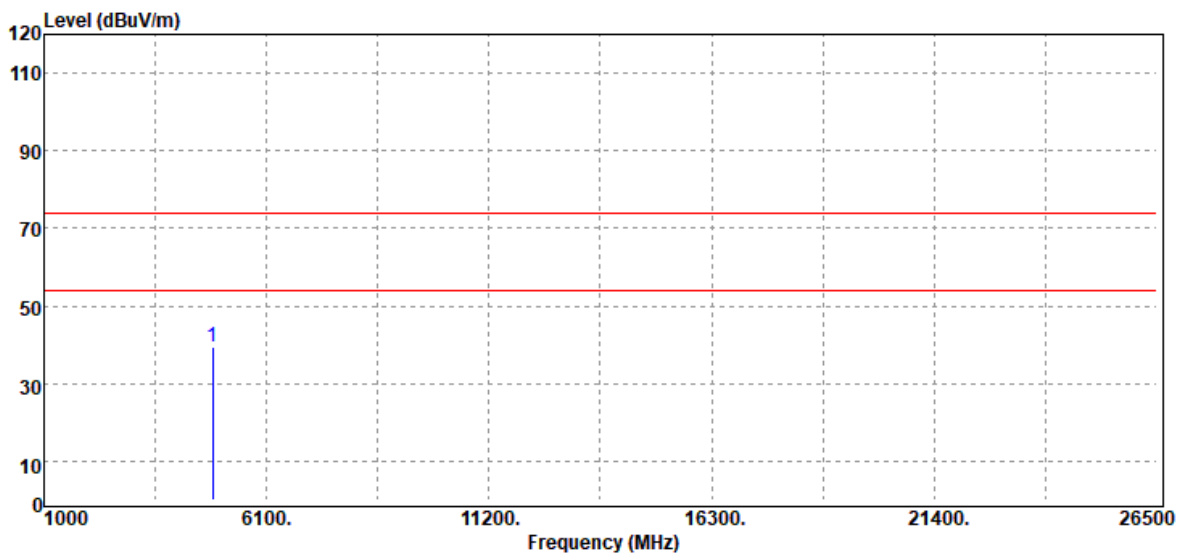
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4824.00     | Peak                     | 56.37                         | -11.39      | 44.98              | 74.00              | -29.02      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                          |               |                   |
|-----------|--------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic                 | Test Date     | November 11, 2020 |
| Polarize  | Vertical                 | Test Engineer | Ray Li            |
| Detector  | Peak                     |               |                   |



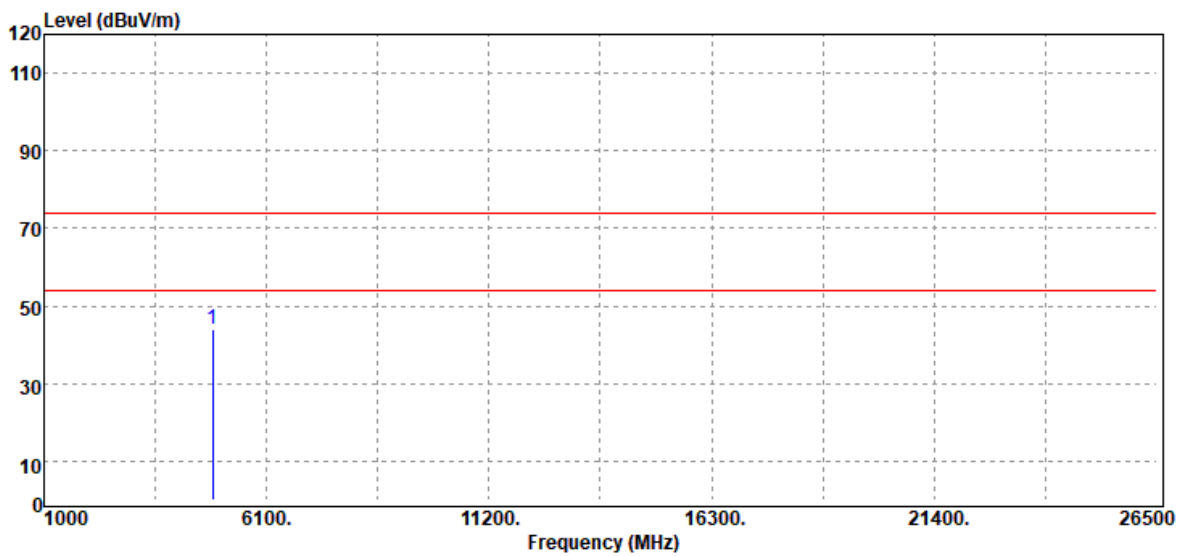
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4874.00     | Peak                     | 50.42                         | -11.12      | 39.30              | 74.00              | -34.70      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                          |               |                   |
|-----------|--------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 Mid CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic                 | Test Date     | November 11, 2020 |
| Polarize  | Horizontal               | Test Engineer | Ray Li            |
| Detector  | Peak                     |               |                   |



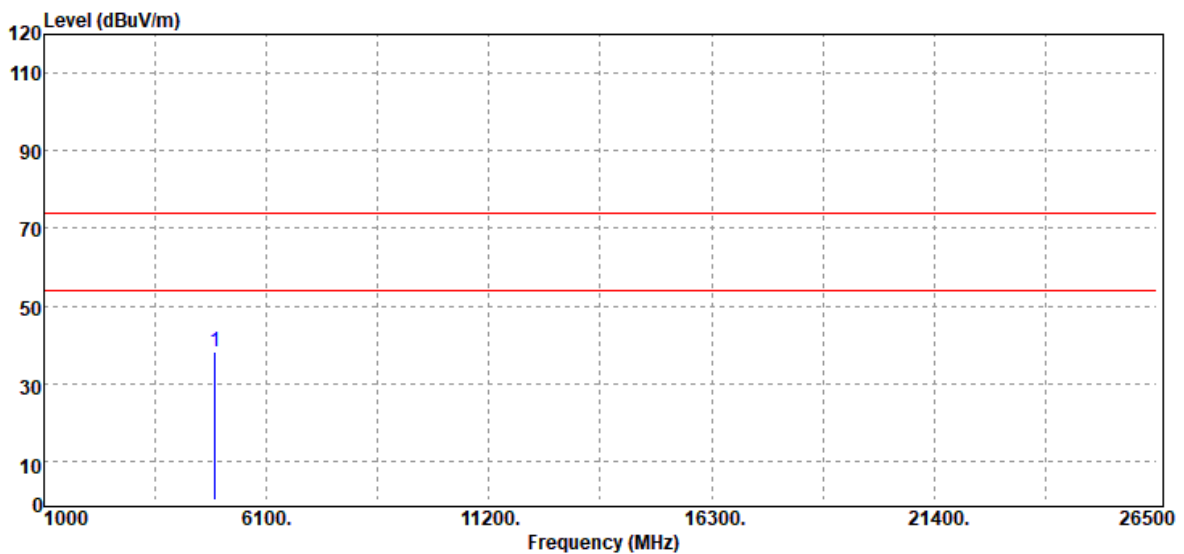
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4874.00     | Peak                     | 55.00                               | -11.12      | 43.88                    | 74.00                    | -30.12      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200928D02-RP1

|           |                           |               |                   |
|-----------|---------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic                  | Test Date     | November 11, 2020 |
| Polarize  | Vertical                  | Test Engineer | Ray Li            |
| Detector  | Peak                      |               |                   |



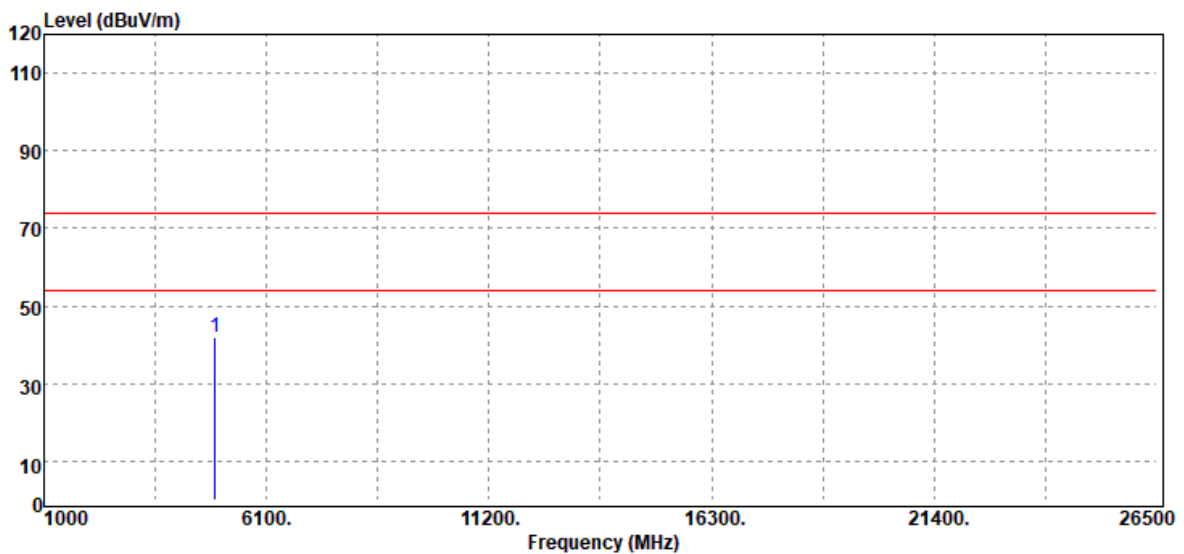
| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dB $\mu$ V) | Factor (dB) | Actual FS (dB $\mu$ V/m) | Limit @3m (dB $\mu$ V/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------------|-------------|--------------------------|--------------------------|-------------|
| 4924.00     | Peak                     | 49.08                               | -10.77      | 38.31                    | 74.00                    | -35.69      |
| N/A         |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |
|             |                          |                                     |             |                          |                          |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|           |                           |               |                   |
|-----------|---------------------------|---------------|-------------------|
| Test Mode | IEEE 802.11n HT20 High CH | Temp/Hum      | 22.9(°C)/ 55%RH   |
| Test Item | Harmonic                  | Test Date     | November 11, 2020 |
| Polarize  | Horizontal                | Test Engineer | Ray Li            |
| Detector  | Peak                      |               |                   |



| Freq. (MHz) | Detector Mode (PK/QP/AV) | Spectrum Reading Level (dBμV) | Factor (dB) | Actual FS (dBμV/m) | Limit @3m (dBμV/m) | Margin (dB) |
|-------------|--------------------------|-------------------------------|-------------|--------------------|--------------------|-------------|
| 4924.00     | Peak                     | 52.69                         | -10.77      | 41.92              | 74.00              | -32.08      |
| N/A         |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |
|             |                          |                               |             |                    |                    |             |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

- End of Test Report -