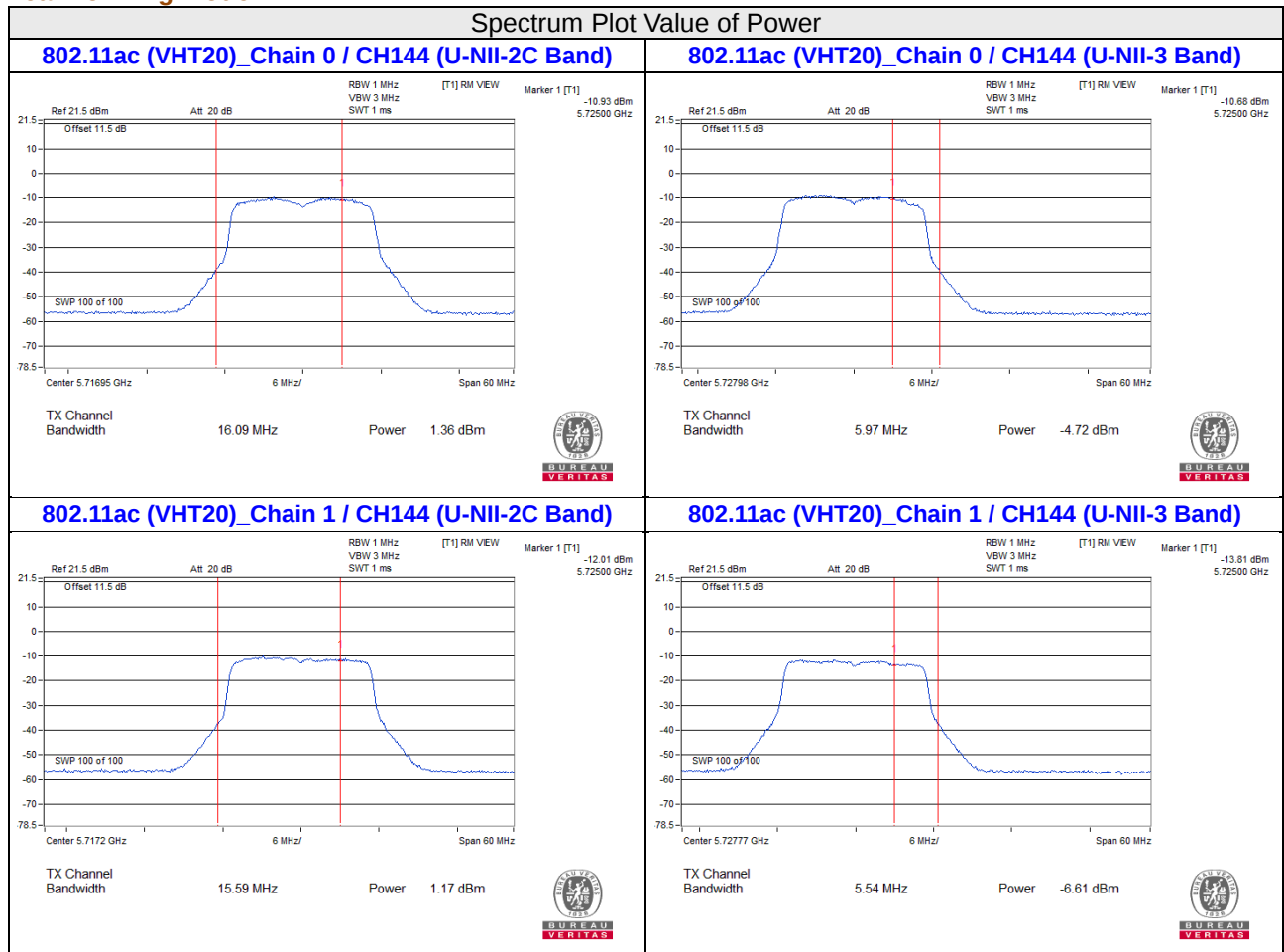
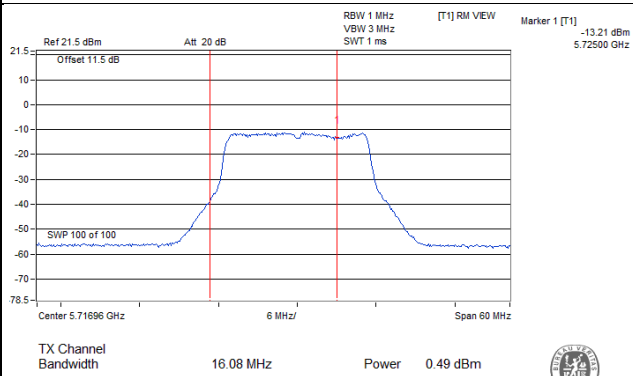


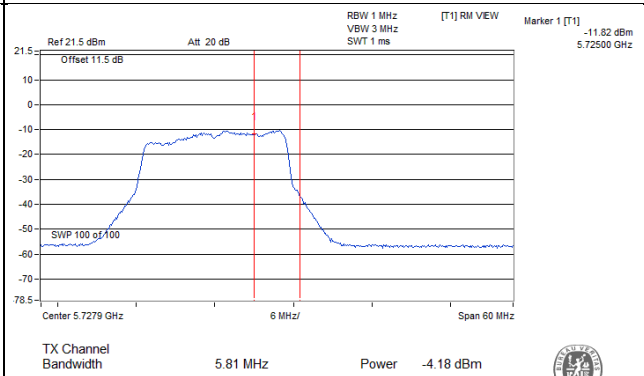
## Beamforming Mode



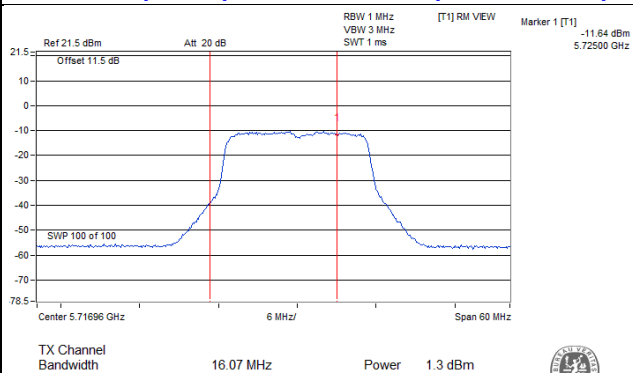
### 802.11ac (VHT20)\_Chain 2 / CH144 (U-NII-2C Band)



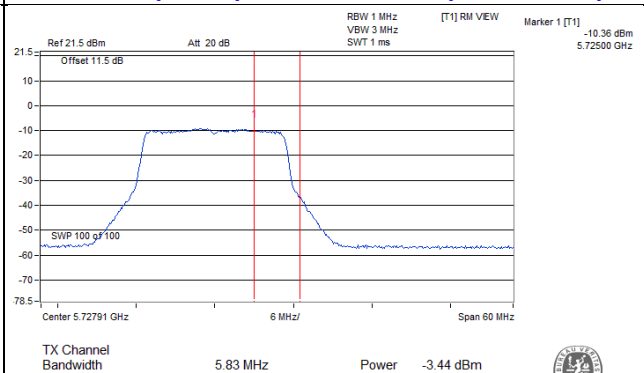
### 802.11ac (VHT20)\_Chain 2 / CH144 (U-NII-3 Band)



### 802.11ac (VHT20)\_Chain 3 / CH144 (U-NII-2C Band)

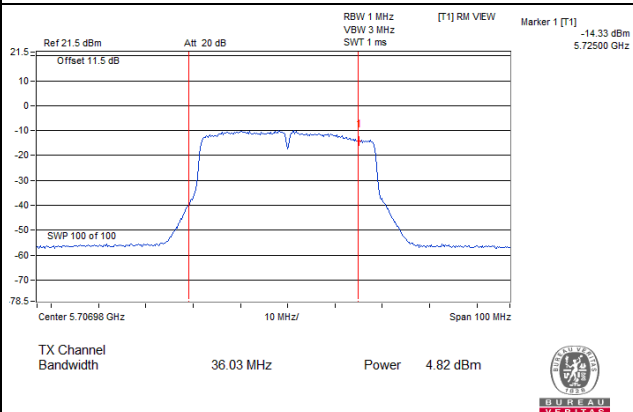


### 802.11ac (VHT20)\_Chain 3 / CH144 (U-NII-3 Band)

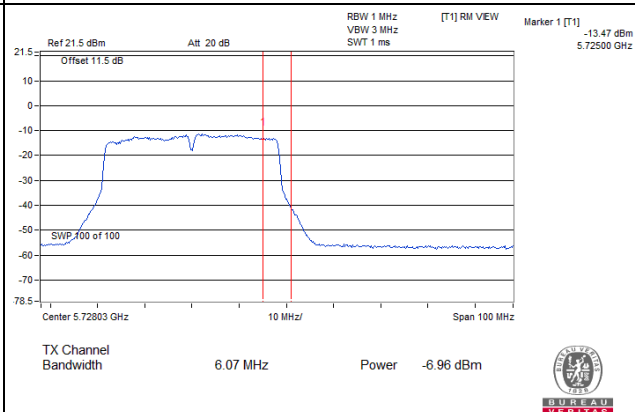


## Spectrum Plot Value of Power

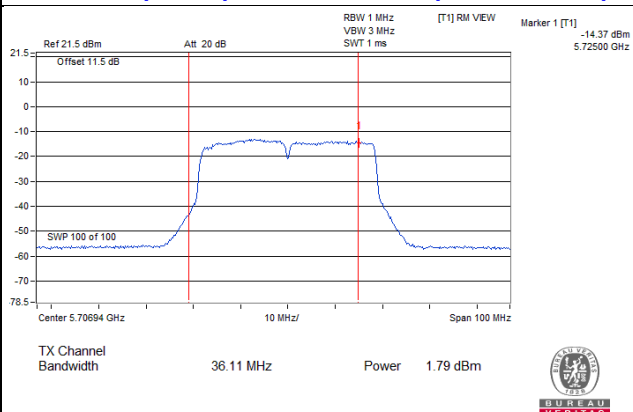
### 802.11ac (VHT40)\_Chain 0 / CH142 (U-NII-2C Band)



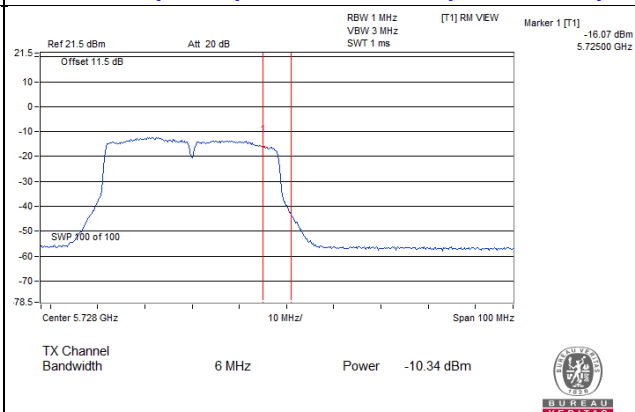
### 802.11ac (VHT40)\_Chain 0 / CH142 (U-NII-3 Band)



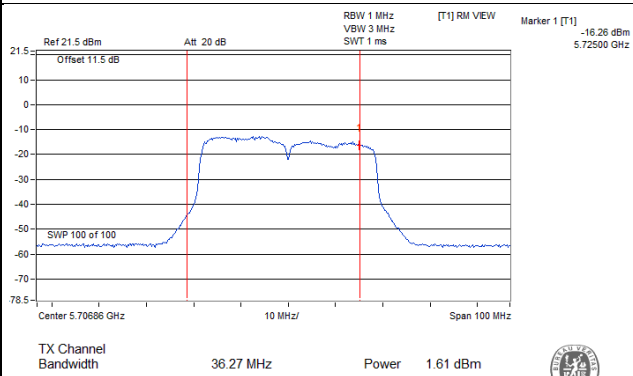
### 802.11ac (VHT40)\_Chain 1 / CH142 (U-NII-2C Band)



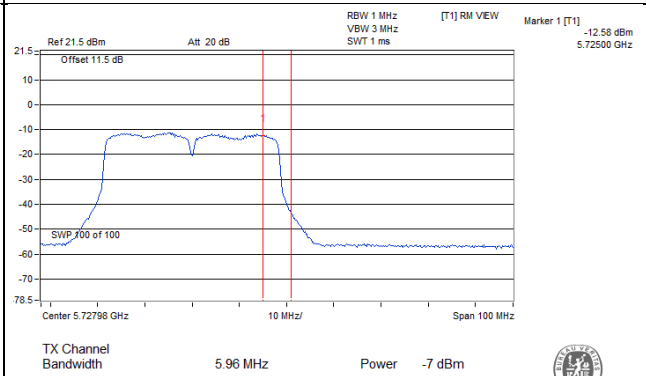
### 802.11ac (VHT40)\_Chain 1 / CH142 (U-NII-3 Band)



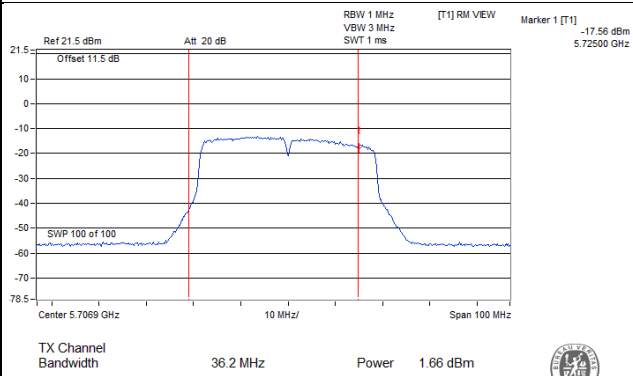
### 802.11ac (VHT40)\_Chain 2 / CH142 (U-NII-2C Band)



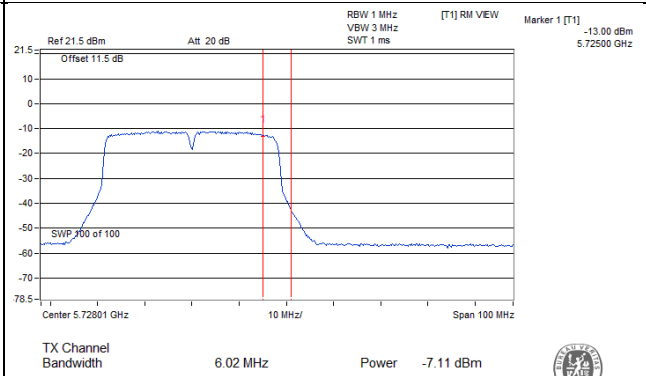
### 802.11ac (VHT40)\_Chain 2 / CH142 (U-NII-3 Band)



### 802.11ac (VHT40)\_Chain 3 / CH142 (U-NII-2C Band)

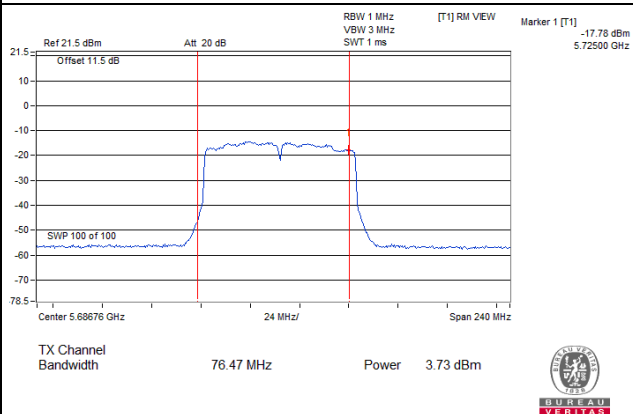


### 802.11ac (VHT40)\_Chain 3 / CH142 (U-NII-3 Band)

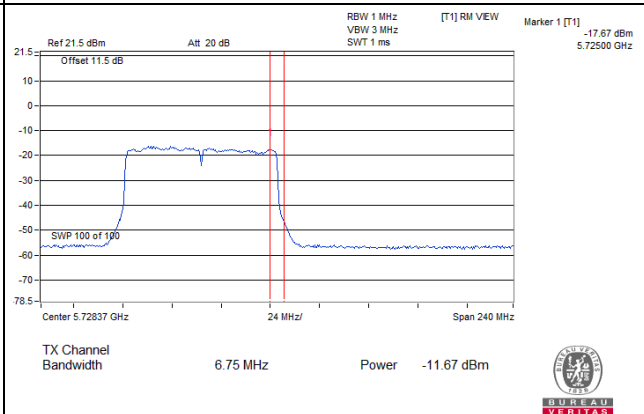


## Spectrum Plot Value of Power

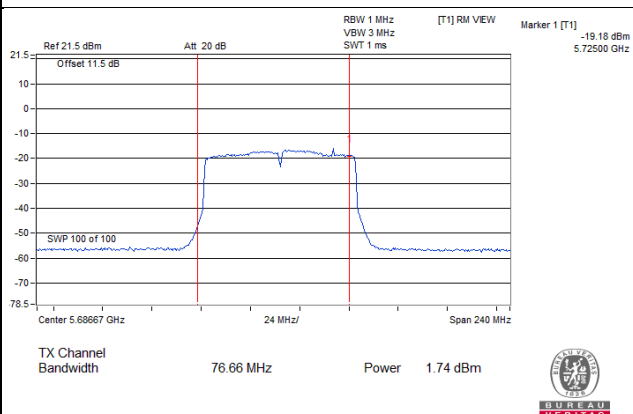
**802.11ac (VHT80)\_Chain 0 / CH138 (U-NII-2C Band)**



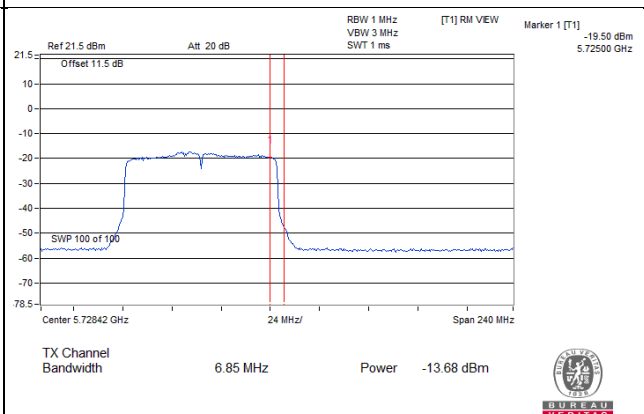
**802.11ac (VHT80)\_Chain 0 / CH138 (U-NII-3 Band)**



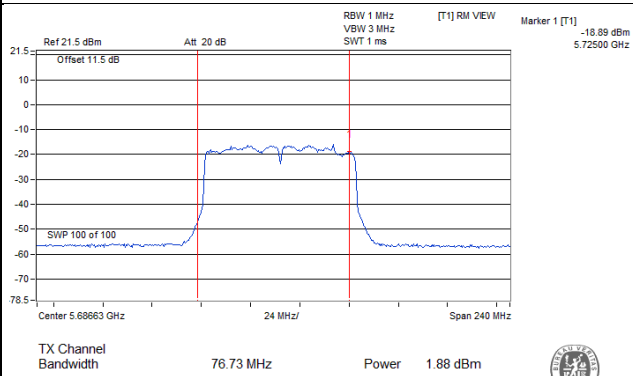
**802.11ac (VHT80)\_Chain 1 / CH138 (U-NII-2C Band)**



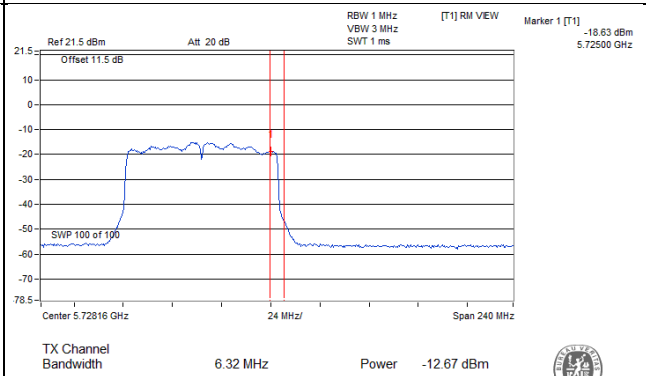
**802.11ac (VHT80)\_Chain 1 / CH138 (U-NII-3 Band)**



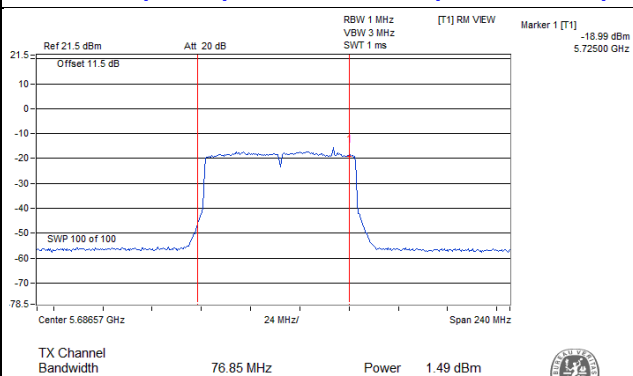
### 802.11ac (VHT80)\_Chain 2 / CH138 (U-NII-2C Band)



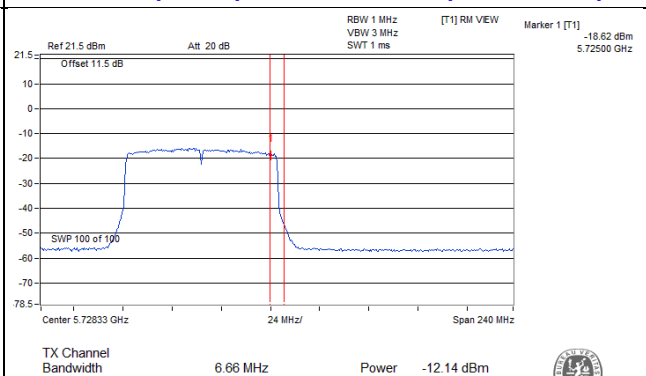
### 802.11ac (VHT80)\_Chain 2 / CH138 (U-NII-3 Band)



### 802.11ac (VHT80)\_Chain 3 / CH138 (U-NII-2C Band)

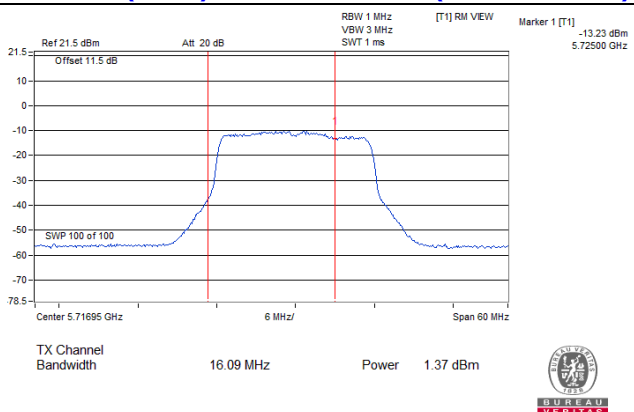


### 802.11ac (VHT80)\_Chain 3 / CH138 (U-NII-3 Band)

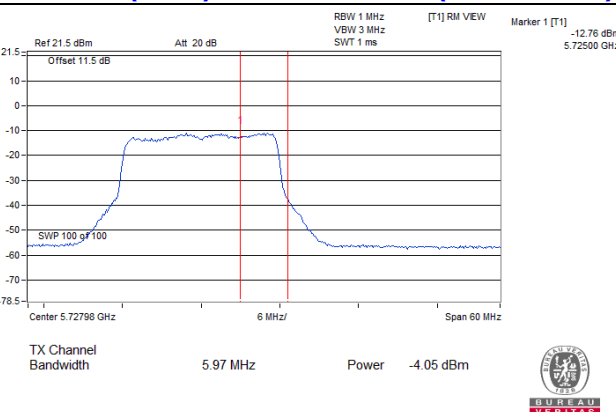


# Spectrum Plot Value of Power

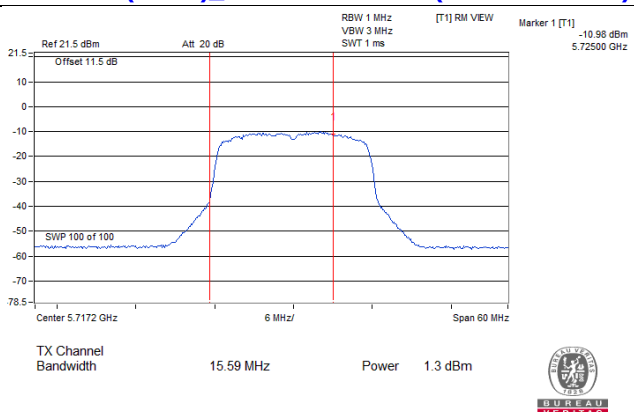
## 802.11ax (HE20)\_Chain 0 / CH144 (U-NII-2C Band)



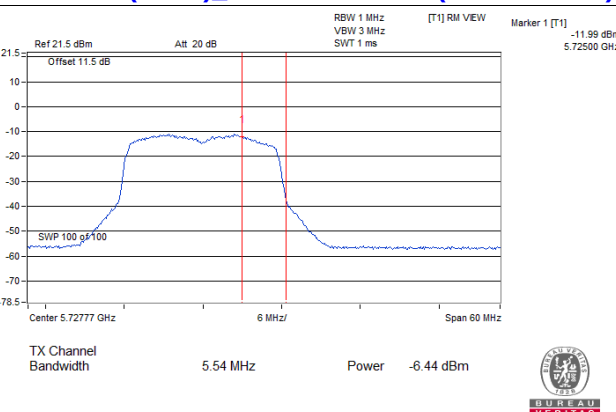
## 802.11ax (HE20)\_Chain 0 / CH144 (U-NII-3 Band)



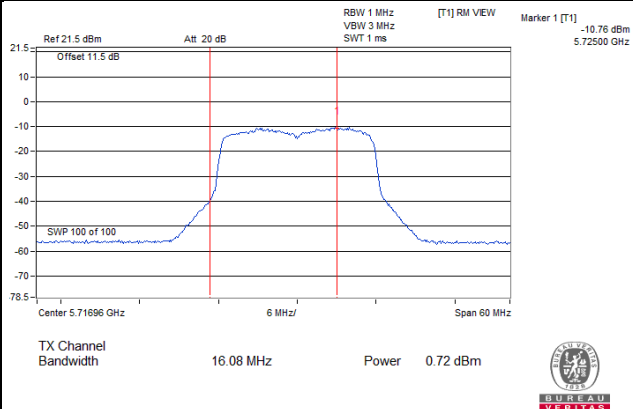
## 802.11ax (HE20)\_Chain 1 / CH144 (U-NII-2C Band)



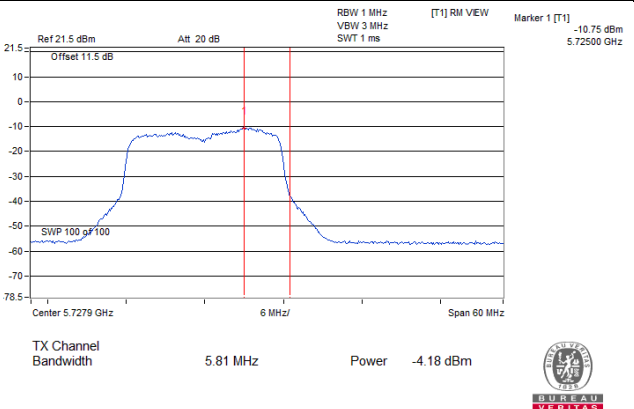
## 802.11ax (HE20)\_Chain 1 / CH144 (U-NII-3 Band)



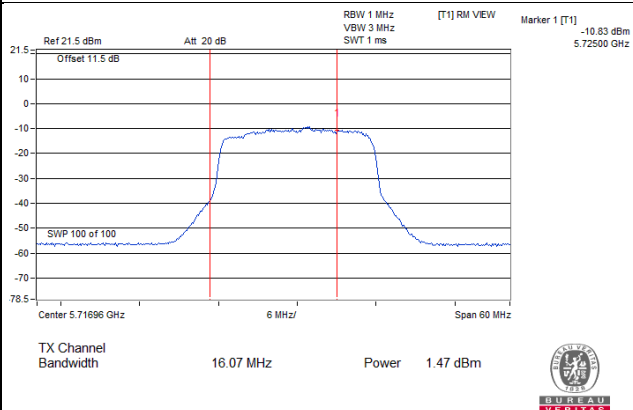
### 802.11ax (HE20)\_Chain 2 / CH144 (U-NII-2C Band)



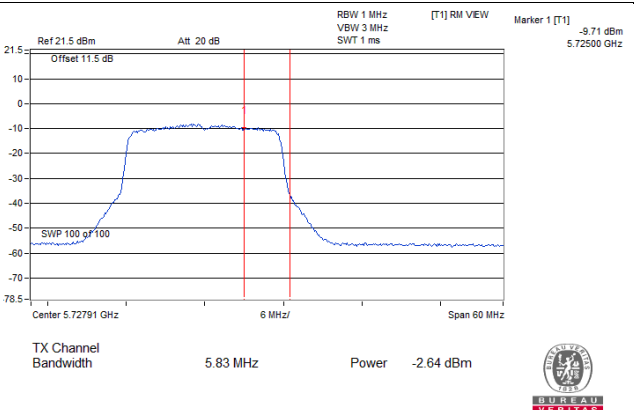
### 802.11ax (HE20)\_Chain 2 / CH144 (U-NII-3 Band)



### 802.11ax (HE20)\_Chain 3 / CH144 (U-NII-2C Band)

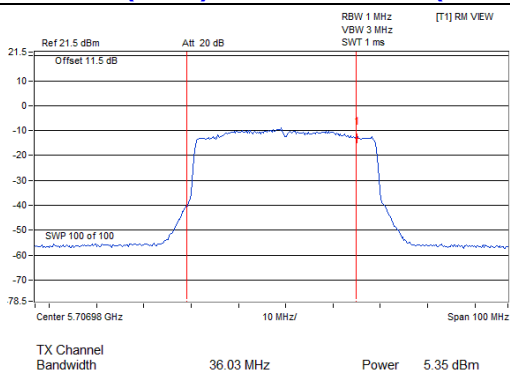


### 802.11ax (HE20)\_Chain 3 / CH144 (U-NII-3 Band)

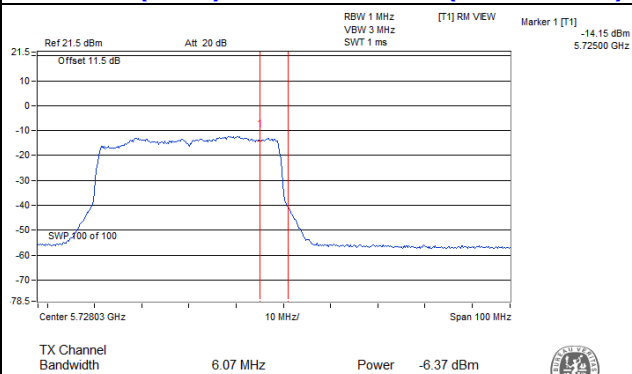


## Spectrum Plot Value of Power

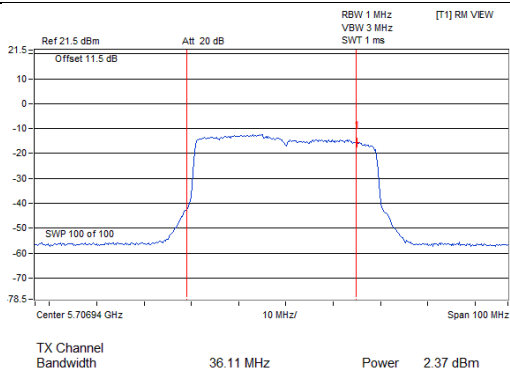
### 802.11ax (HE40)\_Chain 0 / CH142 (U-NII-2C Band)



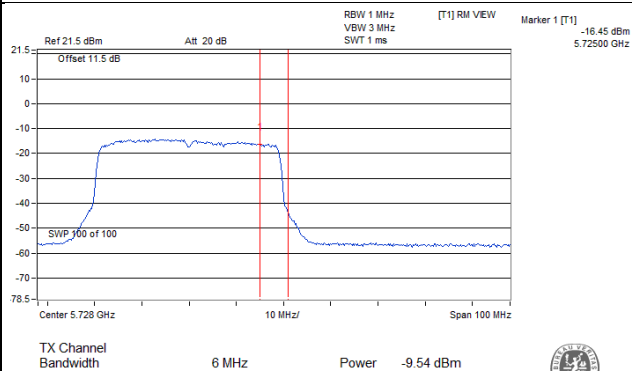
### 802.11ax (HE40)\_Chain 0 / CH142 (U-NII-3 Band)



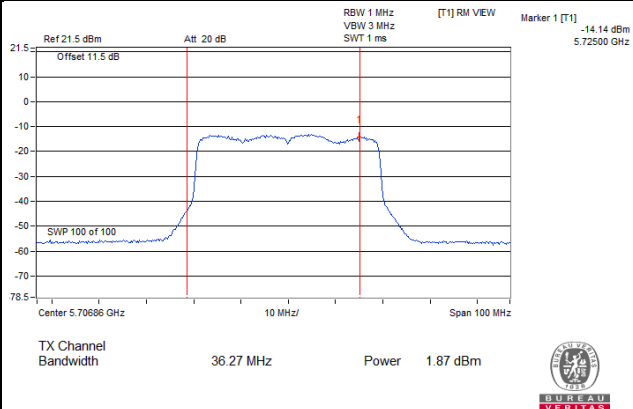
### 802.11ax (HE40)\_Chain 1 / CH142 (U-NII-2C Band)



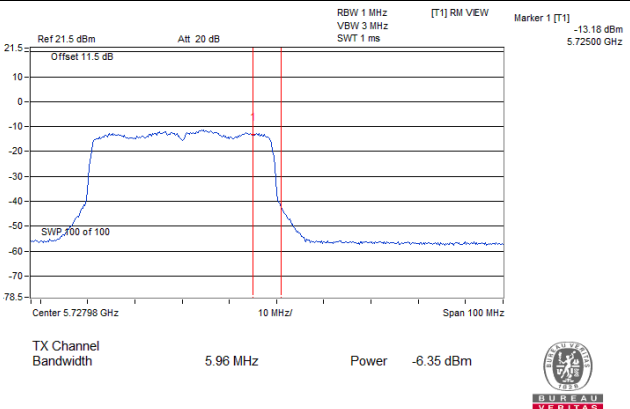
### 802.11ax (HE40)\_Chain 1 / CH142 (U-NII-3 Band)



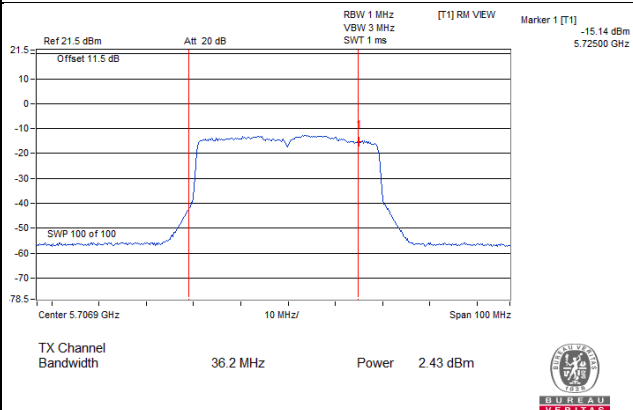
### 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-2C Band)



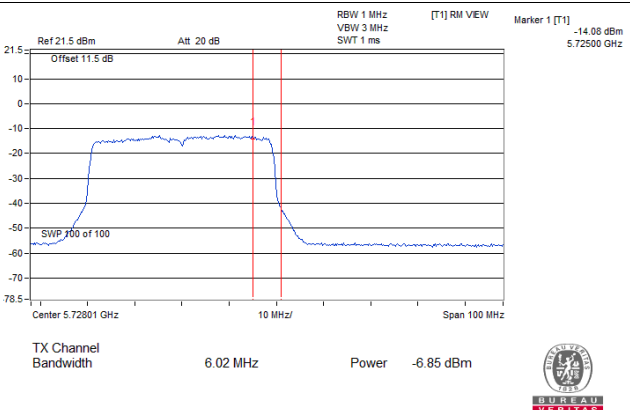
### 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-3 Band)



### 802.11ax (HE40)\_Chain 3 / CH142 (U-NII-2C Band)

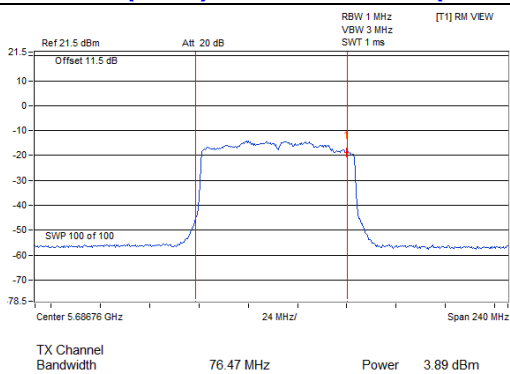


### 802.11ax (HE40)\_Chain 3 / CH142 (U-NII-3 Band)

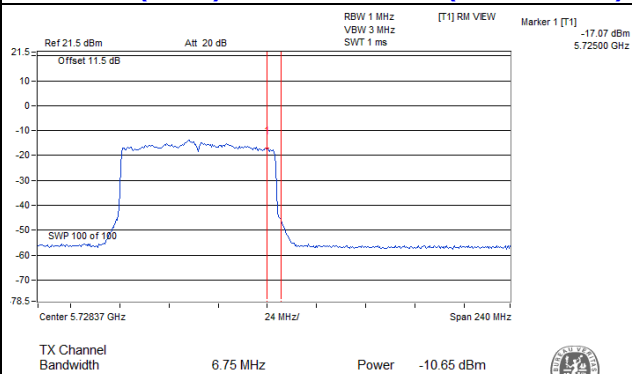


# Spectrum Plot Value of Power

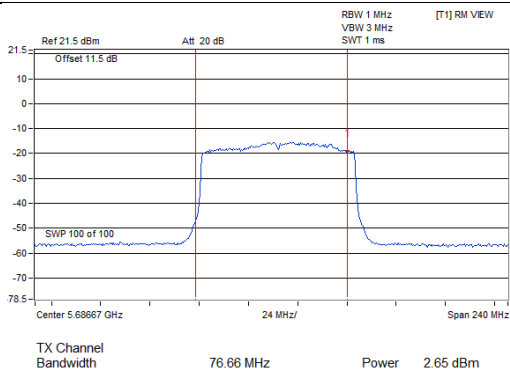
## 802.11ax (HE80)\_Chain 0 / CH138 (U-NII-2C Band)



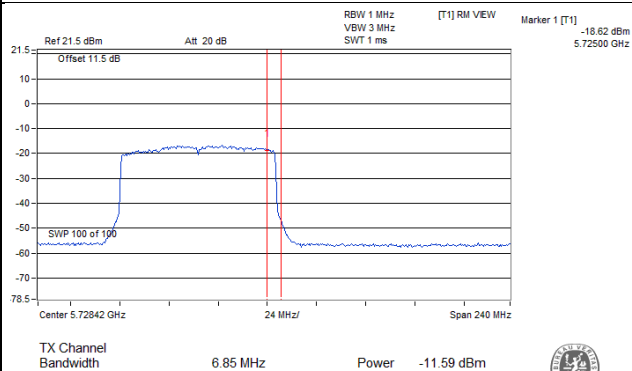
## 802.11ax (HE80)\_Chain 0 / CH138 (U-NII-3 Band)



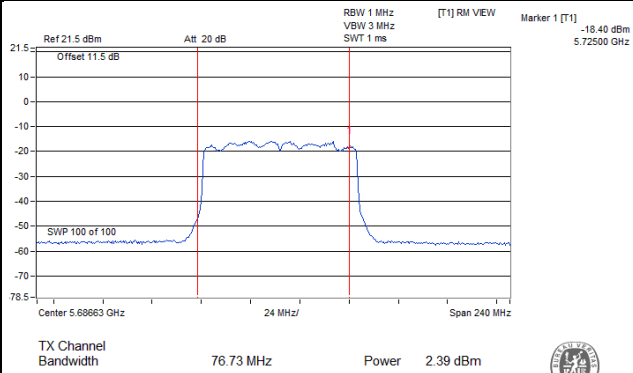
## 802.11ax (HE80)\_Chain 1 / CH138 (U-NII-2C Band)



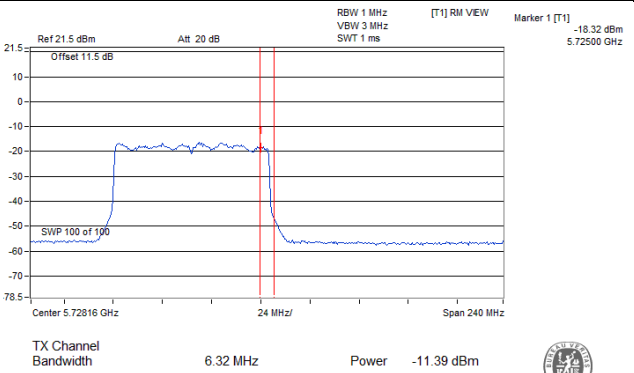
## 802.11ax (HE80)\_Chain 1 / CH138 (U-NII-3 Band)



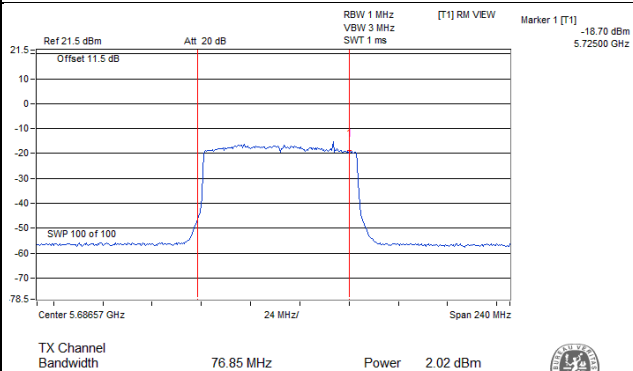
### 802.11ax (HE80)\_Chain 2 / CH138 (U-NII-2C Band)



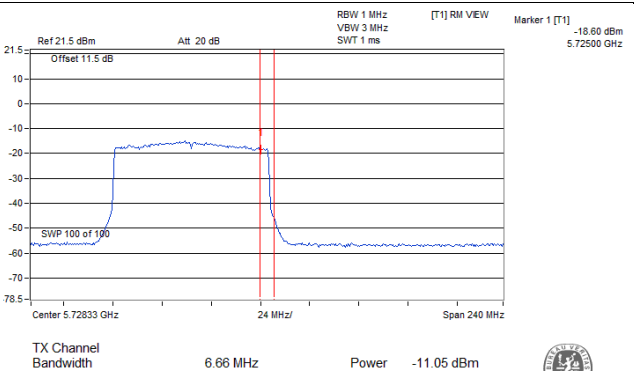
### 802.11ax (HE80)\_Chain 2 / CH138 (U-NII-3 Band)



### 802.11ax (HE80)\_Chain 3 / CH138 (U-NII-2C Band)



### 802.11ax (HE80)\_Chain 3 / CH138 (U-NII-3 Band)



## Non-Beamforming Mode

### 26dB OCCUPIED BANDWIDTH

#### 802.11a

| Channel             | Frequency (MHz) | 26dB Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|----------------------|--------|--------|--------|
|                     |                 | Chain0               | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 20.77                | 20.63  | 20.71  | 20.87  |
| 60                  | 5300            | 20.71                | 20.99  | 20.72  | 20.88  |
| 64                  | 5320            | 20.56                | 20.85  | 20.74  | 20.61  |
| 100                 | 5500            | 20.89                | 20.84  | 20.68  | 20.73  |
| 116                 | 5580            | 20.88                | 20.40  | 20.16  | 20.86  |
| 140                 | 5700            | 20.95                | 21.09  | 21.06  | 20.89  |
| 144 (U-NII-2C Band) | 5720            | 15.44                | 15.49  | 15.72  | 15.35  |

#### 802.11ax (HE20)

| Channel             | Frequency (MHz) | 26dB Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|----------------------|--------|--------|--------|
|                     |                 | Chain0               | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 21.98                | 21.84  | 21.71  | 21.79  |
| 60                  | 5300            | 22.02                | 22.09  | 22.03  | 22.36  |
| 64                  | 5320            | 22.10                | 22.00  | 22.12  | 21.72  |
| 100                 | 5500            | 22.27                | 22.09  | 22.51  | 22.02  |
| 116                 | 5580            | 22.32                | 21.57  | 22.18  | 22.27  |
| 140                 | 5700            | 21.69                | 21.84  | 21.38  | 21.90  |
| 144 (U-NII-2C Band) | 5720            | 16.09                | 15.59  | 16.08  | 16.07  |

#### 802.11ax (HE40)

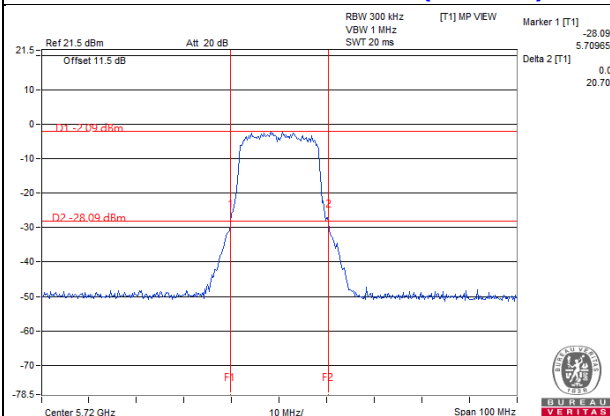
| Channel             | Frequency (MHz) | 26dB Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|----------------------|--------|--------|--------|
|                     |                 | Chain0               | Chain1 | Chain2 | Chain3 |
| 54                  | 5270            | 42.81                | 42.34  | 42.55  | 42.24  |
| 62                  | 5310            | 42.67                | 42.60  | 42.54  | 42.86  |
| 102                 | 5510            | 42.29                | 42.27  | 42.41  | 42.29  |
| 110                 | 5550            | 42.42                | 42.30  | 42.50  | 42.33  |
| 134                 | 5670            | 42.45                | 42.39  | 42.31  | 42.65  |
| 142 (U-NII-2C Band) | 5710            | 36.03                | 36.11  | 36.27  | 36.20  |

### 802.11ax (HE80)

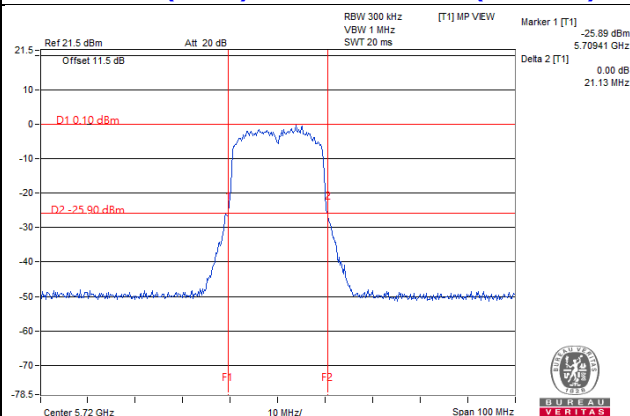
| Channel             | Frequency (MHz) | 26dB Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|----------------------|--------|--------|--------|
|                     |                 | Chain0               | Chain1 | Chain2 | Chain3 |
| 58                  | 5290            | 83.91                | 83.25  | 83.89  | 83.51  |
| 106                 | 5530            | 83.31                | 83.11  | 82.91  | 83.37  |
| 122                 | 5610            | 83.56                | 83.35  | 82.94  | 83.59  |
| 138 (U-NII-2C Band) | 5690            | 76.47                | 76.66  | 76.73  | 76.85  |

## Spectrum Plot of Worst Value

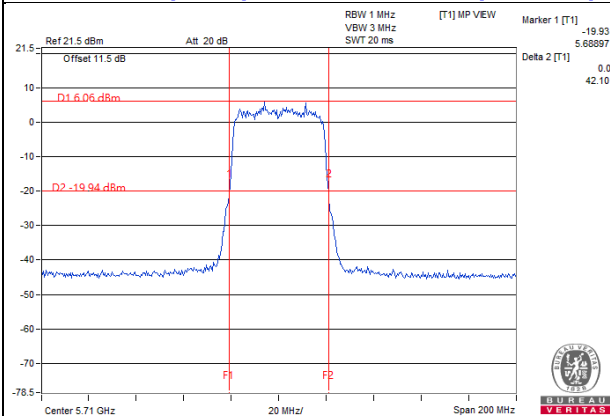
**802.11a\_Chain 3 / CH144 (U-NII-2C)**



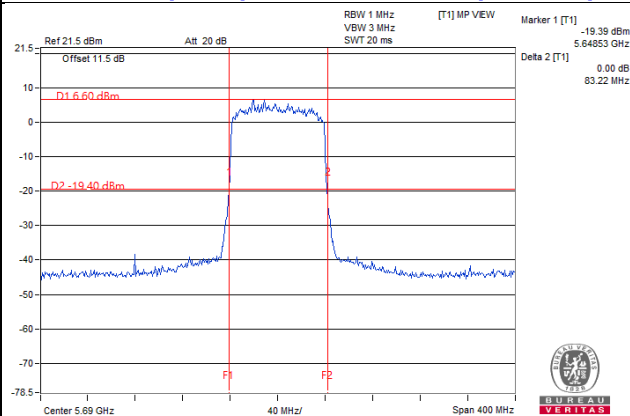
**802.11ax (HE20)\_Chain 1 / CH144 (U-NII-2C)**



**802.11ax (HE40)\_Chain 0 / CH142 (U-NII-2C)**



**802.11ax (HE80)\_Chain 0 / CH138 (U-NII-2C)**



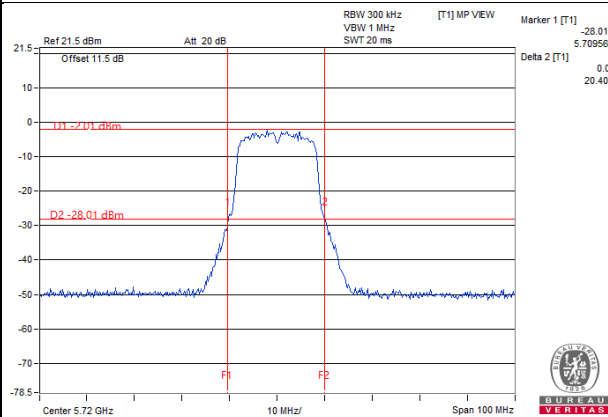
### Note:

- For CH144 (U-NII-2C) = 5725MHz - Marker 1
- For CH142 (U-NII-2C) = 5725MHz - Marker 1
- For CH138 (U-NII-2C) = 5725MHz - Marker 1

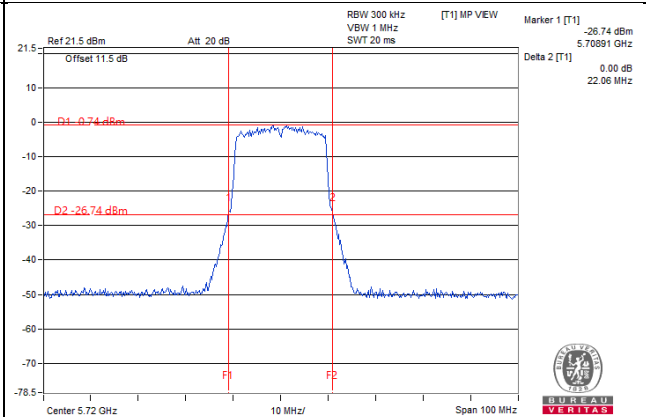
# For channel straddling 5725MHz of 26dB BW

## Spectrum Plot Value of 26dB BW

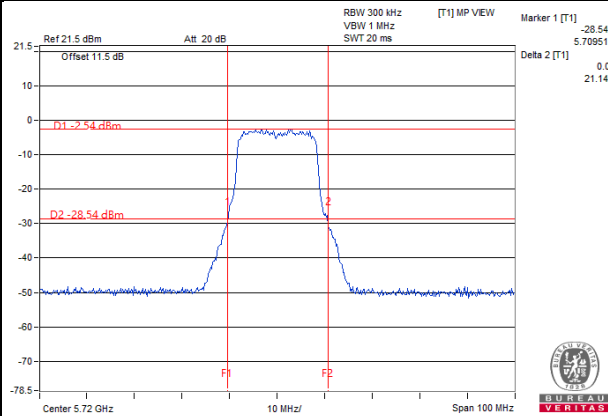
### 802.11a\_Chain 0 / CH144



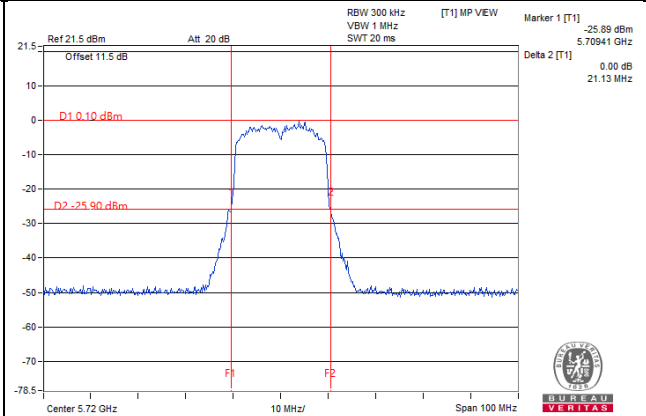
### 802.11ax (HE20)\_Chain 0 / CH144

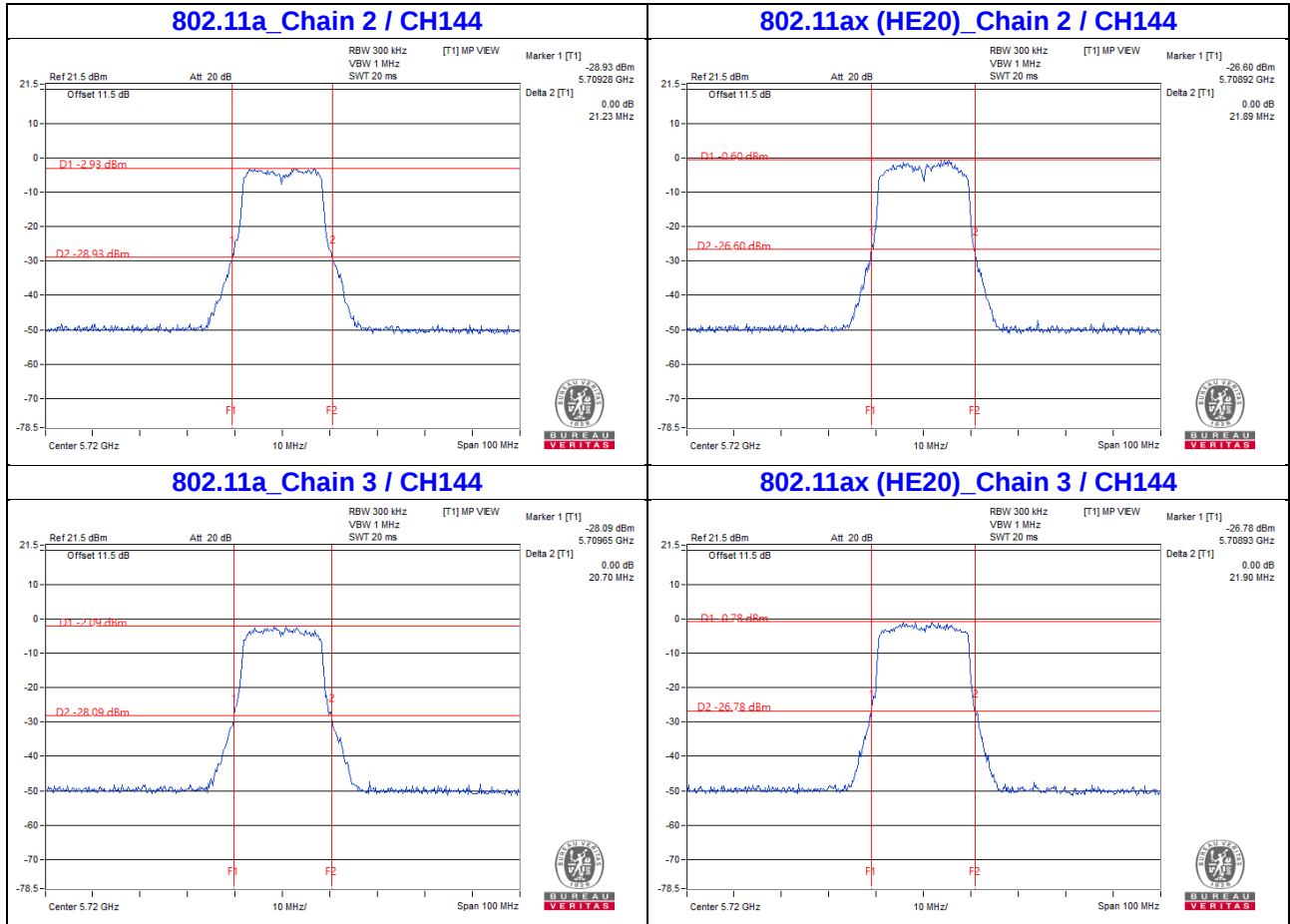


### 802.11a\_Chain 1 / CH144



### 802.11ax (HE20)\_Chain 1 / CH144



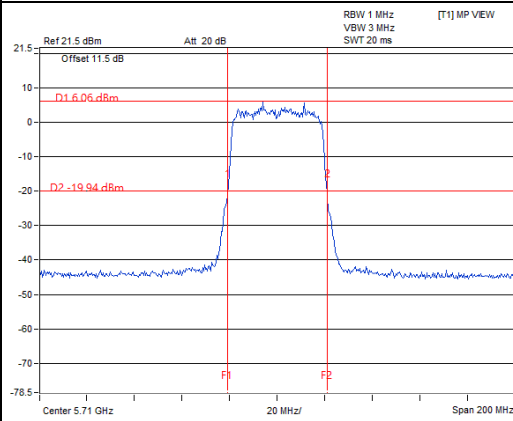


**Note:**

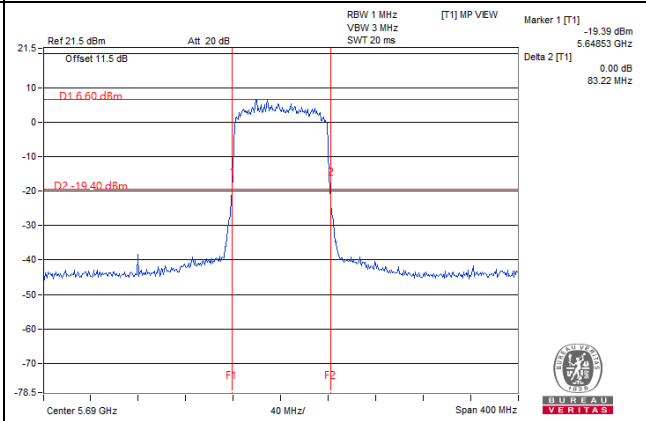
- For CH144 (U-NII-2C) = 5725MHz - Marker 1
- For CH142 (U-NII-2C) = 5725MHz - Marker 1
- For CH138 (U-NII-2C) = 5725MHz - Marker 1

# Spectrum Plot Value of 26dB BW

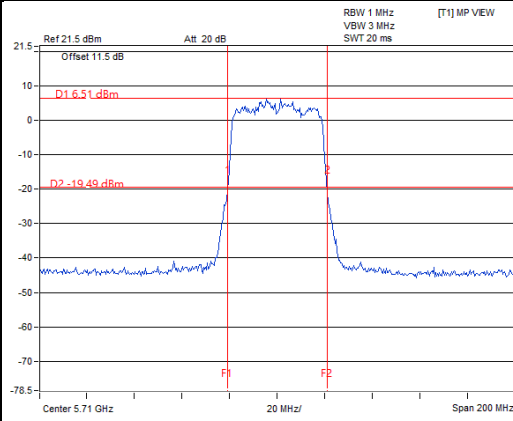
## 802.11ax (HE40)\_Chain 0 / CH142



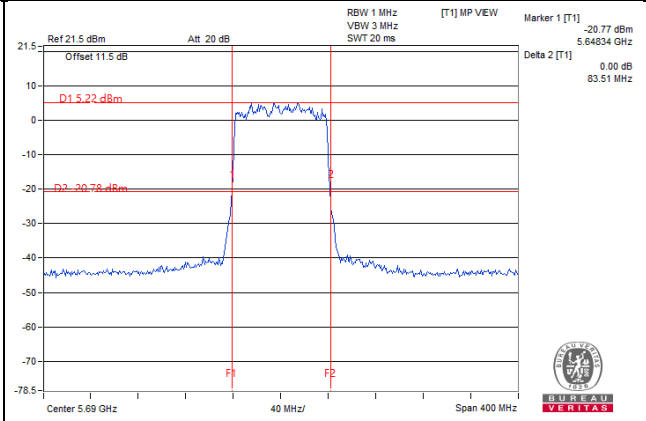
## 802.11ax (HE80)\_Chain 0 / CH138

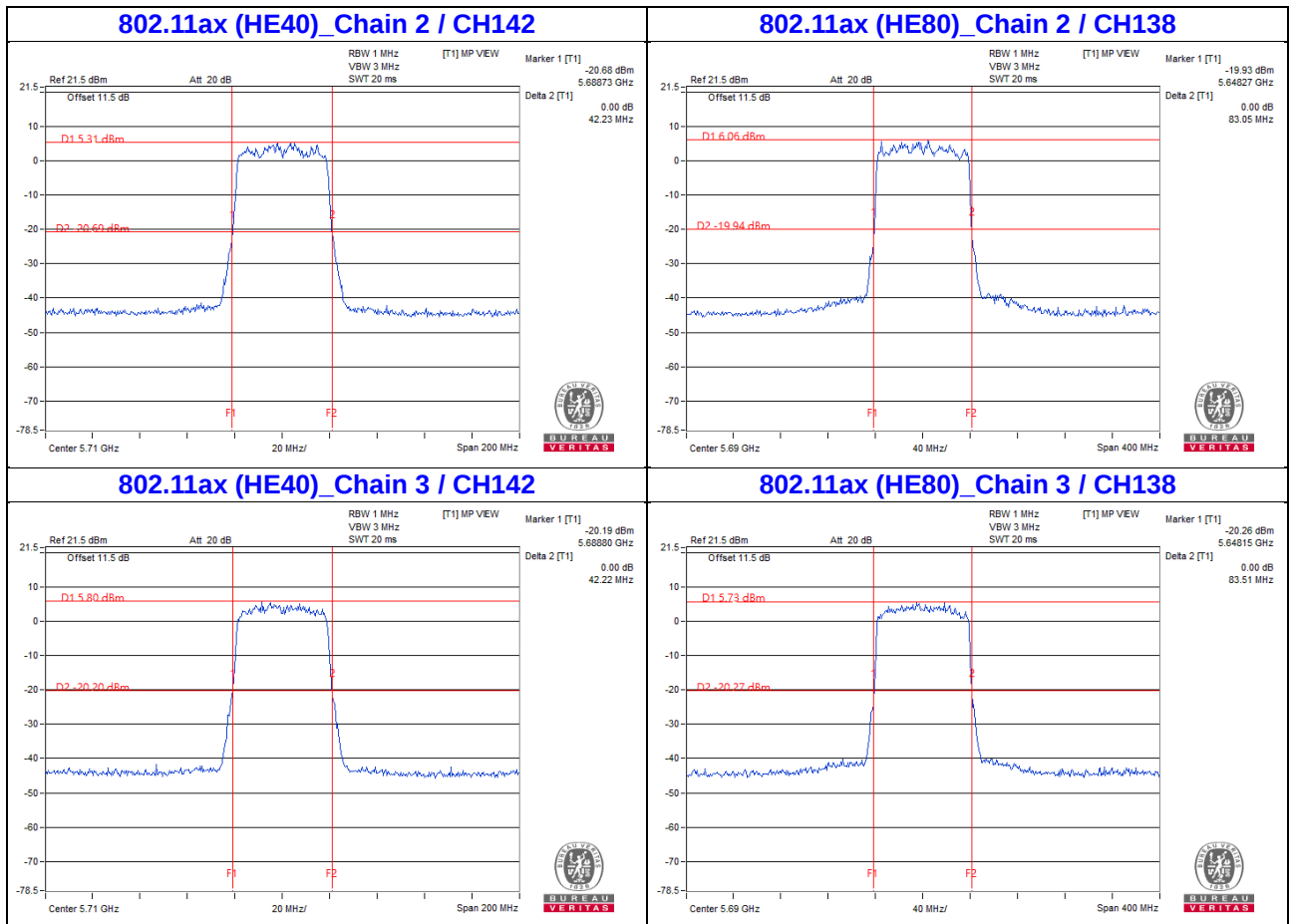


## 802.11ax (HE40)\_Chain 1 / CH142



## 802.11ax (HE80)\_Chain 1 / CH138



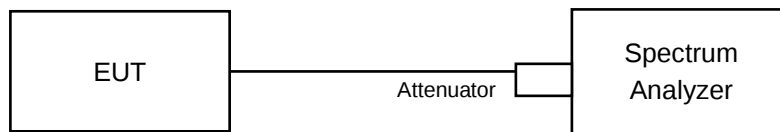


**Note:**

- For CH144 (U-NII-2C) = 5725MHz - Marker 1
- For CH142 (U-NII-2C) = 5725MHz - Marker 1
- For CH138 (U-NII-2C) = 5725MHz - Marker 1

## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Setup



### 4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to SAMPLE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

#### 4.4.4 Test Results (Mode 1)

##### Non-Beamforming Mode

##### 802.11a

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 60                  | 5300            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 64                  | 5320            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 100                 | 5500            | 16.44                    | 16.44  | 16.56  | 16.44  |
| 116                 | 5580            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 140                 | 5700            | 16.44                    | 16.56  | 16.44  | 16.44  |
| 144 (U-NII-2C Band) | 5720            | 13.28                    | 13.28  | 13.40  | 13.28  |
| 144 (U-NII-3 Band)  | 5720            | 3.16                     | 3.16   | 3.16   | 3.16   |

##### 802.11ax (HE20)

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 60                  | 5300            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 64                  | 5320            | 18.96                    | 18.96  | 19.08  | 18.96  |
| 100                 | 5500            | 18.96                    | 18.96  | 19.08  | 18.96  |
| 116                 | 5580            | 19.08                    | 18.96  | 18.84  | 19.08  |
| 140                 | 5700            | 18.96                    | 19.08  | 18.96  | 18.96  |
| 144 (U-NII-2C Band) | 5720            | 14.60                    | 14.60  | 14.60  | 14.60  |
| 144 (U-NII-3 Band)  | 5720            | 4.36                     | 4.36   | 4.36   | 4.36   |

### 802.11ax (HE40)

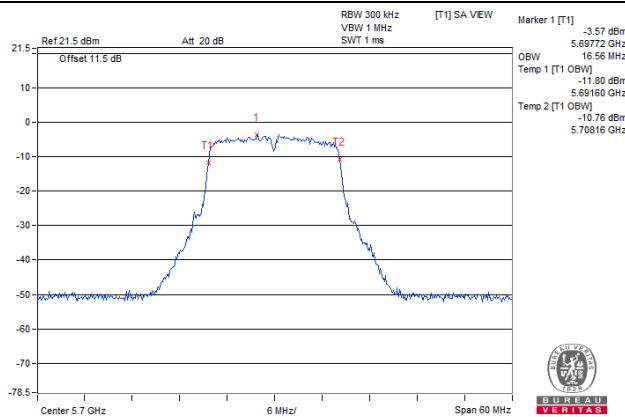
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 54                  | 5270            | 38.64                    | 37.68  | 37.92  | 37.92  |
| 62                  | 5310            | 37.92                    | 37.68  | 38.16  | 38.16  |
| 102                 | 5510            | 38.16                    | 37.68  | 37.68  | 37.92  |
| 110                 | 5550            | 37.92                    | 37.68  | 37.92  | 38.16  |
| 134                 | 5670            | 38.16                    | 37.92  | 37.92  | 38.16  |
| 142 (U-NII-2C Band) | 5710            | 33.96                    | 33.96  | 34.20  | 34.20  |
| 142 (U-NII-3 Band)  | 5710            | 3.72                     | 3.72   | 3.72   | 3.96   |

### 802.11ax (HE80)

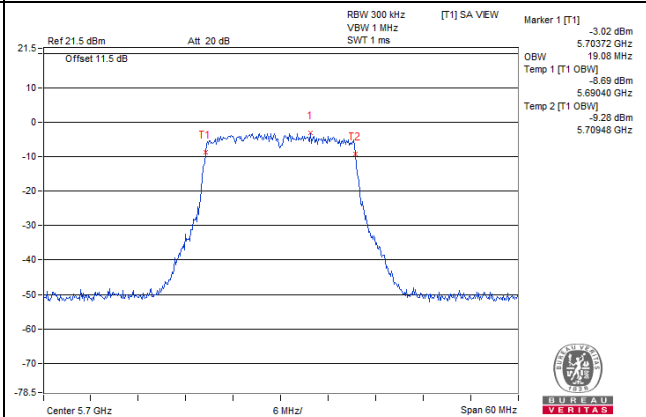
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 58                  | 5290            | 77.28                    | 77.28  | 77.76  | 77.28  |
| 106                 | 5530            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 122                 | 5610            | 77.28                    | 76.80  | 77.28  | 77.28  |
| 138 (U-NII-2C Band) | 5690            | 73.88                    | 73.88  | 73.88  | 73.88  |
| 138 (U-NII-3 Band)  | 5690            | 3.40                     | 3.40   | 3.40   | 3.40   |

# Spectrum Plot of Max. Value

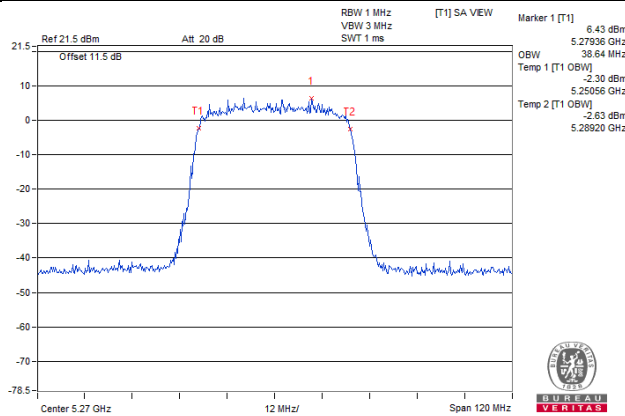
## 802.11a\_Chain 1 / CH140



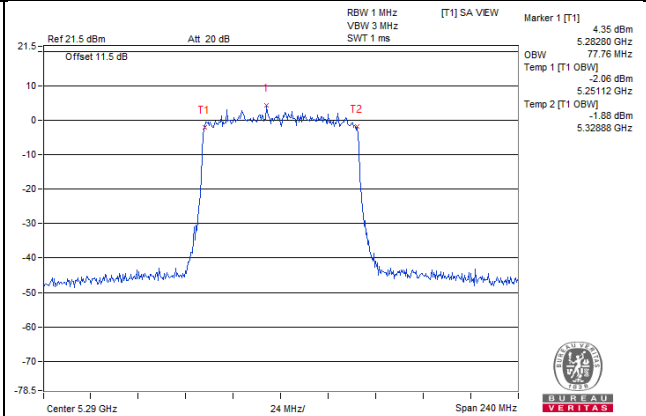
## 802.11ax (HE20)\_Chain 1 / CH140



## 802.11ax (HE40)\_Chain 0 / CH54



## 802.11ax (HE80)\_Chain 2 / CH58



#### 4.4.5 Test Results (Mode 2)

##### Non-Beamforming Mode

##### 802.11a

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 60                  | 5300            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 64                  | 5320            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 100                 | 5500            | 16.43                    | 16.44  | 16.44  | 16.44  |
| 116                 | 5580            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 140                 | 5700            | 16.56                    | 16.44  | 16.56  | 16.44  |
| 144 (U-NII-2C Band) | 5720            | 13.28                    | 13.28  | 13.4   | 13.28  |
| 144 (U-NII-3 Band)  | 5720            | 3.16                     | 3.16   | 3.28   | 3.16   |

##### 802.11ax (HE20)

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 19.08                    | 18.96  | 18.96  | 18.84  |
| 60                  | 5300            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 64                  | 5320            | 19.08                    | 18.96  | 18.96  | 18.96  |
| 100                 | 5500            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 116                 | 5580            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 140                 | 5700            | 19.08                    | 18.96  | 18.96  | 18.96  |
| 144 (U-NII-2C Band) | 5720            | 14.60                    | 14.60  | 14.60  | 14.60  |
| 144 (U-NII-3 Band)  | 5720            | 4.36                     | 4.36   | 4.36   | 4.36   |

### 802.11ax (HE40)

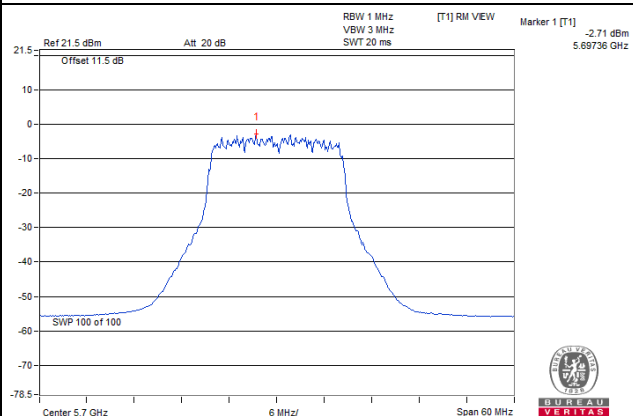
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 54                  | 5270            | 38.16                    | 38.16  | 37.92  | 37.68  |
| 62                  | 5310            | 38.16                    | 37.92  | 38.16  | 38.16  |
| 102                 | 5510            | 37.92                    | 37.68  | 38.16  | 37.92  |
| 110                 | 5550            | 37.92                    | 37.92  | 38.16  | 37.92  |
| 134                 | 5670            | 37.92                    | 37.68  | 37.92  | 38.16  |
| 142 (U-NII-2C Band) | 5710            | 34.20                    | 33.96  | 34.20  | 33.96  |
| 142 (U-NII-3 Band)  | 5710            | 3.96                     | 3.96   | 3.72   | 3.96   |

### 802.11ax (HE80)

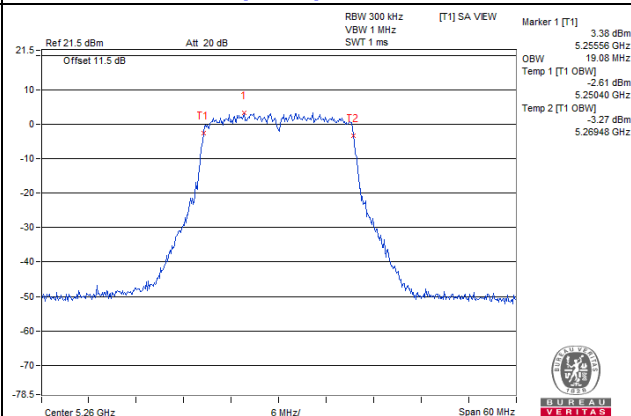
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 58                  | 5290            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 106                 | 5530            | 76.80                    | 77.28  | 77.28  | 77.28  |
| 122                 | 5610            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 138 (U-NII-2C Band) | 5690            | 73.88                    | 73.88  | 73.88  | 73.88  |
| 138 (U-NII-3 Band)  | 5690            | 3.40                     | 3.40   | 3.40   | 3.40   |

# Spectrum Plot of Max. Value

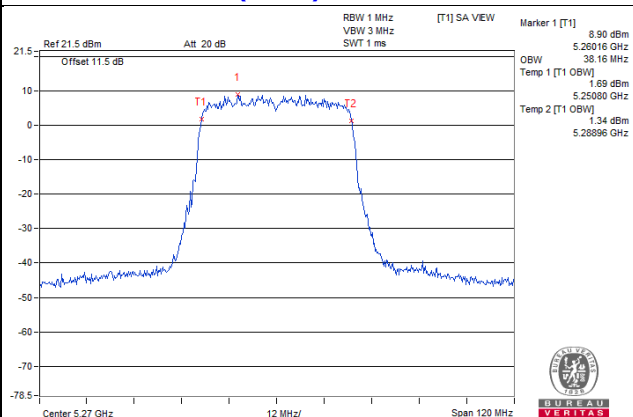
## 802.11a\_Chain 0 / CH140



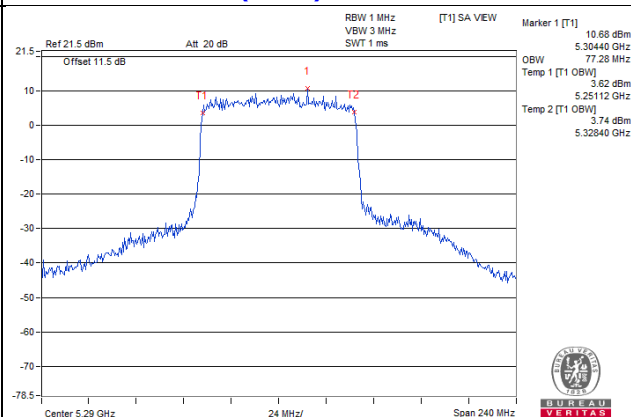
## 802.11ax (HE20)\_Chain 0 / CH52



## 802.11ax (HE40)\_Chain 0 / CH54



## 802.11ax (HE80)\_Chain 0 / CH58



#### 4.4.6 Test Results (Mode 3)

##### Non-Beamforming Mode

##### 802.11a

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 60                  | 5300            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 64                  | 5320            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 100                 | 5500            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 116                 | 5580            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 140                 | 5700            | 16.56                    | 16.44  | 16.32  | 16.56  |
| 144 (U-NII-2C Band) | 5720            | 13.28                    | 13.28  | 13.4   | 13.28  |
| 144 (U-NII-3 Band)  | 5720            | 3.16                     | 3.16   | 3.28   | 3.16   |

##### 802.11ax (HE20)

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 18.96                    | 19.08  | 18.96  | 18.96  |
| 60                  | 5300            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 64                  | 5320            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 100                 | 5500            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 116                 | 5580            | 19.08                    | 18.96  | 18.96  | 18.96  |
| 140                 | 5700            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 144 (U-NII-2C Band) | 5720            | 14.60                    | 14.60  | 14.60  | 14.60  |
| 144 (U-NII-3 Band)  | 5720            | 4.36                     | 4.36   | 4.48   | 4.36   |

### 802.11ax (HE40)

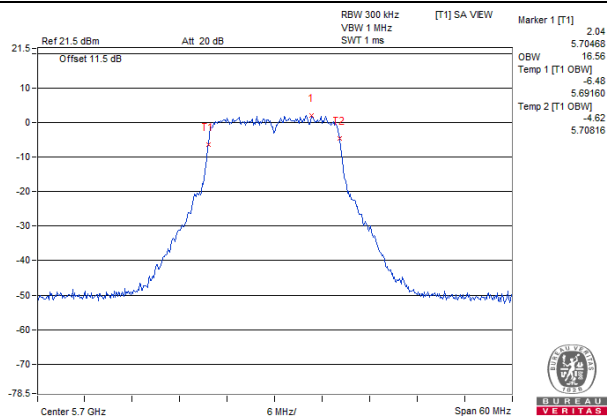
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 54                  | 5270            | 37.92                    | 37.92  | 38.16  | 38.16  |
| 62                  | 5310            | 37.68                    | 37.68  | 37.92  | 38.16  |
| 102                 | 5510            | 37.92                    | 37.92  | 38.16  | 38.16  |
| 110                 | 5550            | 37.92                    | 37.68  | 37.92  | 37.92  |
| 134                 | 5670            | 37.92                    | 37.92  | 37.68  | 38.16  |
| 142 (U-NII-2C Band) | 5710            | 33.96                    | 33.96  | 34.20  | 34.20  |
| 142 (U-NII-3 Band)  | 5710            | 3.72                     | 3.96   | 3.72   | 3.96   |

### 802.11ax (HE80)

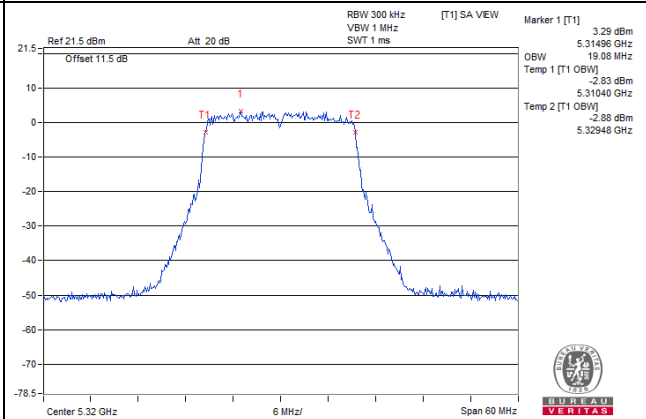
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 58                  | 5290            | 76.80                    | 77.28  | 77.28  | 76.80  |
| 106                 | 5530            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 122                 | 5610            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 138 (U-NII-2C Band) | 5690            | 73.88                    | 73.88  | 73.88  | 73.88  |
| 138 (U-NII-3 Band)  | 5690            | 3.40                     | 3.40   | 3.40   | 3.40   |

# Spectrum Plot of Max. Value

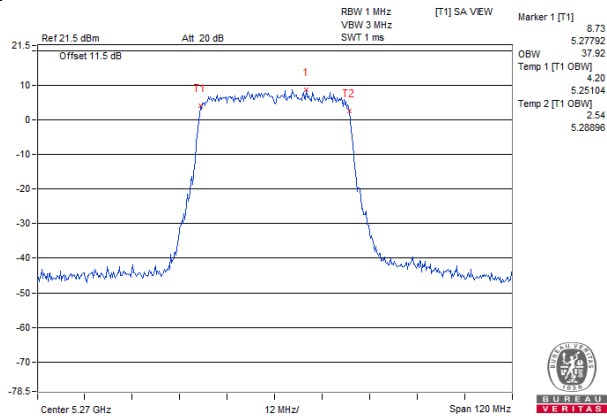
## 802.11a\_Chain 0 / CH140



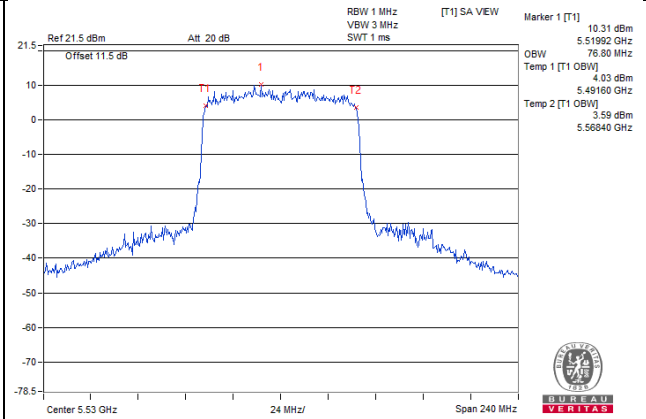
## 802.11ax (HE20)\_Chain 0 / CH116



## 802.11ax (HE40)\_Chain 2 / CH54



## 802.11ax (HE80)\_Chain 0 / CH106



#### 4.4.7 Test Results (Mode 4)

##### Non-Beamforming Mode

##### 802.11a

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 60                  | 5300            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 64                  | 5320            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 100                 | 5500            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 116                 | 5580            | 16.44                    | 16.44  | 16.44  | 16.44  |
| 140                 | 5700            | 16.68                    | 16.44  | 16.56  | 16.44  |
| 144 (U-NII-2C Band) | 5720            | 13.28                    | 13.28  | 13.40  | 13.28  |
| 144 (U-NII-3 Band)  | 5720            | 3.16                     | 3.16   | 3.28   | 3.16   |

##### 802.11ax (HE20)

| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 52                  | 5260            | 19.08                    | 19.08  | 18.96  | 18.96  |
| 60                  | 5300            | 18.96                    | 18.96  | 18.96  | 18.96  |
| 64                  | 5320            | 18.96                    | 19.08  | 18.96  | 19.08  |
| 100                 | 5500            | 19.08                    | 19.08  | 19.08  | 18.96  |
| 116                 | 5580            | 19.08                    | 18.96  | 19.08  | 19.08  |
| 140                 | 5700            | 18.96                    | 19.08  | 18.84  | 18.96  |
| 144 (U-NII-2C Band) | 5720            | 14.60                    | 14.48  | 14.48  | 14.60  |
| 144 (U-NII-3 Band)  | 5720            | 4.36                     | 4.24   | 4.36   | 4.36   |

### 802.11ax (HE40)

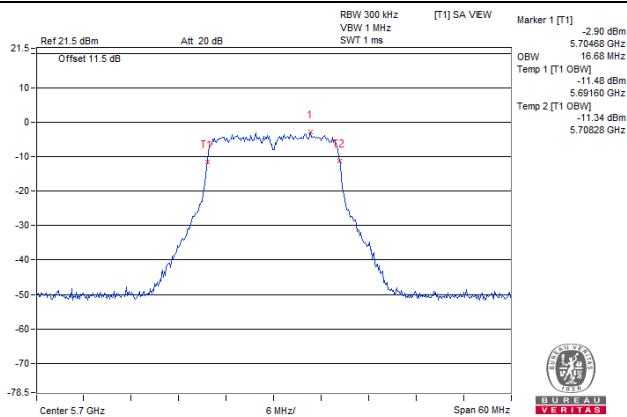
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 54                  | 5270            | 37.92                    | 38.16  | 37.92  | 37.92  |
| 62                  | 5310            | 38.16                    | 38.16  | 38.16  | 38.16  |
| 102                 | 5510            | 37.92                    | 37.68  | 38.16  | 37.92  |
| 110                 | 5550            | 38.16                    | 37.92  | 38.16  | 37.92  |
| 134                 | 5670            | 37.68                    | 37.68  | 37.68  | 38.16  |
| 142 (U-NII-2C Band) | 5710            | 34.20                    | 34.20  | 33.96  | 33.96  |
| 142 (U-NII-3 Band)  | 5710            | 3.72                     | 3.96   | 3.96   | 3.72   |

### 802.11ax (HE80)

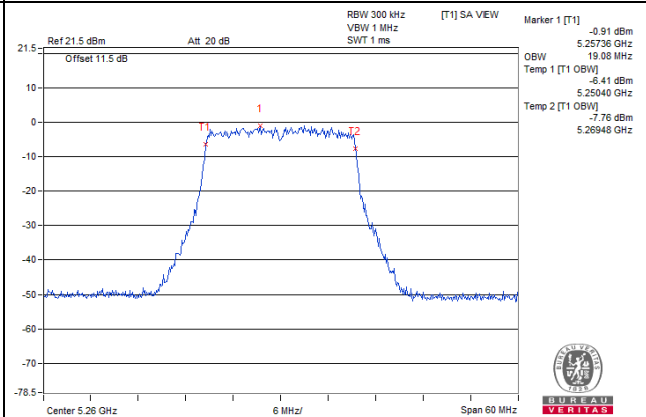
| Channel             | Frequency (MHz) | Occupied Bandwidth (MHz) |        |        |        |
|---------------------|-----------------|--------------------------|--------|--------|--------|
|                     |                 | Chain0                   | Chain1 | Chain2 | Chain3 |
| 58                  | 5290            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 106                 | 5530            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 122                 | 5610            | 77.28                    | 77.28  | 77.28  | 77.28  |
| 138 (U-NII-2C Band) | 5690            | 73.88                    | 73.88  | 73.88  | 73.88  |
| 138 (U-NII-3 Band)  | 5690            | 3.4                      | 3.4    | 3.4    | 3.4    |

# Spectrum Plot of Max. Value

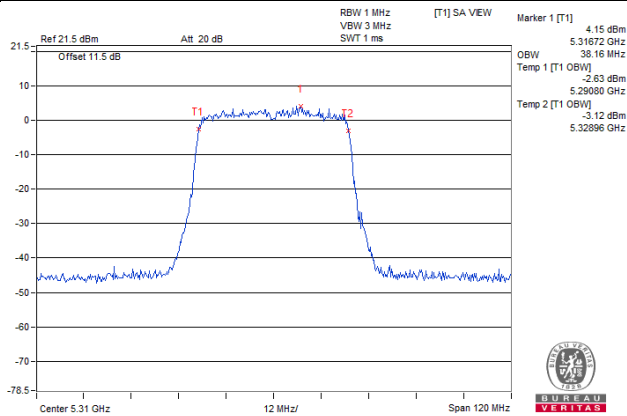
## 802.11a\_Chain 0 / CH140



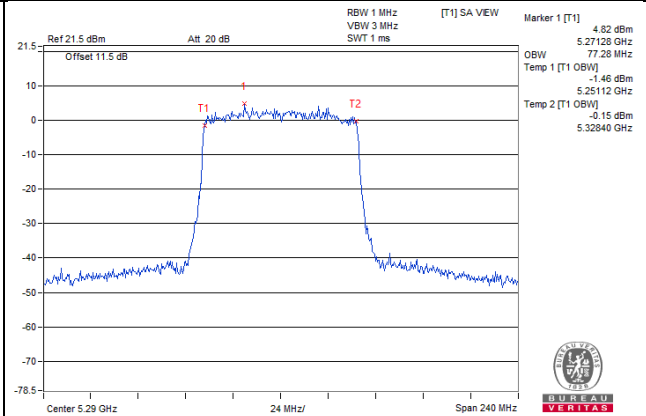
## 802.11ax (HE20)\_Chain 0 / CH52



## 802.11ax (HE40)\_Chain 0 / CH62



## 802.11ax (HE80)\_Chain 0 / CH58

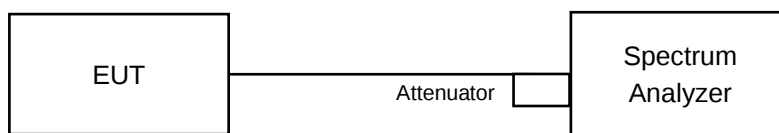


## 4.5 Peak Power Spectral Density Measurement

### 4.5.1 Limits of Peak Power Spectral Density Measurement

| Operation Band | EUT Category |                                   | Limit         |
|----------------|--------------|-----------------------------------|---------------|
| U-NII-1        |              | Outdoor Access Point              | 17dBm/ MHz    |
|                |              | Fixed point-to-point Access Point |               |
|                |              | Indoor Access Point               |               |
|                |              | Client device                     | 11dBm/ MHz    |
| U-NII-2A       | √            |                                   | 11dBm/ MHz    |
| U-NII-2C       | √            |                                   | 11dBm/ MHz    |
| U-NII-3        | √            |                                   | 30dBm/ 500kHz |

### 4.5.2 Test Setup



### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedure

#### For U-NII-2A, U-NII-2C band:

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
3. Sweep time = auto, trigger set to "free run".
4. Trace average at least 100 traces in power averaging mode.
5. Record the max value and add 10 log (1/duty cycle)

#### For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW  $\geq$  1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where  $BWCF = 10\log(500\text{kHz}/300\text{kHz})$
5. Sweep time = auto, trigger set to "free run".
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

#### 4.5.5 Deviation from Test Standard

No deviation.

#### 4.5.6 EUT Operating Condition

Same as Item 4.3.6.

#### 4.5.7 Test Results (Mode 1)

##### Non-Beamforming Mode

For U-NII-2A, U-NII-2C:

##### 802.11a

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -9.86                         | -10.02 | -9.58  | -9.80  | 0.35             | -3.44               | -2.02                    | Pass        |
| 60             | 5300              | -11.64                        | -10.13 | -9.32  | -9.53  | 0.35             | -3.70               | -2.02                    | Pass        |
| 64             | 5320              | -8.89                         | -10.85 | -9.52  | -8.84  | 0.35             | -3.08               | -2.02                    | Pass        |
| 100            | 5500              | -12.26                        | -8.86  | -8.54  | -10.30 | 0.35             | -3.39               | -2.02                    | Pass        |
| 116            | 5580              | -9.52                         | -10.66 | -8.57  | -9.55  | 0.35             | -3.14               | -2.02                    | Pass        |
| 140            | 5700              | -10.93                        | -9.11  | -9.78  | -9.85  | 0.35             | -3.50               | -2.02                    | Pass        |
| 144 (U-NII-2C) | 5720              | -9.41                         | -9.22  | -10.24 | -11.17 | 0.35             | -3.57               | -2.02                    | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
3. For U-NII-2C: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11ax (HE20)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -9.13                         | -9.32  | -9.94  | -12.60 | 0.18             | -3.85               | -2.02                    | Pass        |
| 60             | 5300              | -10.36                        | -10.03 | -11.04 | -9.49  | 0.18             | -3.99               | -2.02                    | Pass        |
| 64             | 5320              | -9.81                         | -10.20 | -13.34 | -9.36  | 0.18             | -4.23               | -2.02                    | Pass        |
| 100            | 5500              | -10.14                        | -11.70 | -10.23 | -9.14  | 0.18             | -4.01               | -2.02                    | Pass        |
| 116            | 5580              | -8.60                         | -8.99  | -10.46 | -10.05 | 0.18             | -3.26               | -2.02                    | Pass        |
| 140            | 5700              | -11.04                        | -11.05 | -9.64  | -9.02  | 0.18             | -3.90               | -2.02                    | Pass        |
| 144 (U-NII-2C) | 5720              | -10.33                        | -11.40 | -11.03 | -8.71  | 0.18             | -4.04               | -2.02                    | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
3. For U-NII-2C: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE40)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 54             | 5270              | -9.05                         | -10.22 | -10.29 | -10.45 | 0.24             | -3.70               | -2.02                    | Pass        |
| 62             | 5310              | -10.56                        | -9.90  | -9.34  | -10.91 | 0.24             | -3.87               | -2.02                    | Pass        |
| 102            | 5510              | -12.82                        | -10.24 | -9.42  | -9.88  | 0.24             | -4.15               | -2.02                    | Pass        |
| 110            | 5550              | -12.02                        | -8.79  | -10.73 | -9.63  | 0.24             | -3.87               | -2.02                    | Pass        |
| 134            | 5670              | -13.01                        | -11.53 | -8.75  | -8.86  | 0.24             | -3.92               | -2.02                    | Pass        |
| 142 (U-NII-2C) | 5710              | -9.69                         | -9.67  | -9.26  | -8.56  | 0.24             | -3.01               | -2.02                    | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
3. For U-NII-2C: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

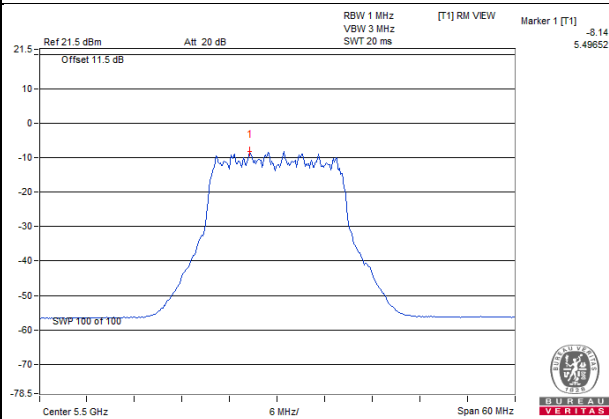
#### 802.11ax (HE80)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 58             | 5290              | -8.93                         | -10.00 | -8.49  | -9.48  | 0.19             | -2.98               | -2.02                    | Pass        |
| 106            | 5530              | -9.40                         | -8.69  | -9.67  | -8.45  | 0.19             | -2.81               | -2.02                    | Pass        |
| 122            | 5610              | -9.17                         | -8.99  | -8.77  | -8.64  | 0.19             | -2.68               | -2.02                    | Pass        |
| 138 (U-NII-2C) | 5690              | -10.58                        | -11.57 | -10.33 | -8.40  | 0.19             | -3.85               | -2.02                    | Pass        |

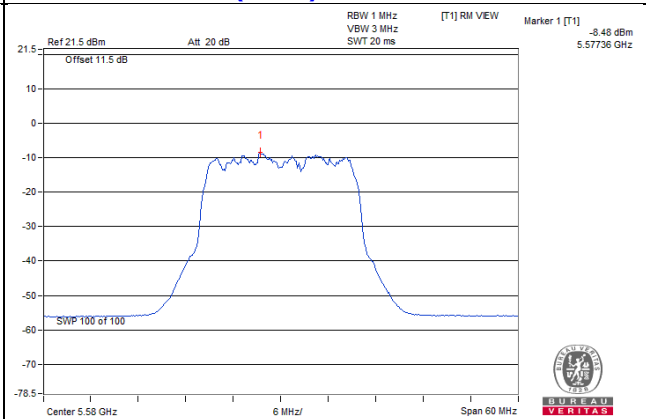
- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
3. For U-NII-2C: The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(19.02-6) = -2.02$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

# Spectrum Plot of Worst Value

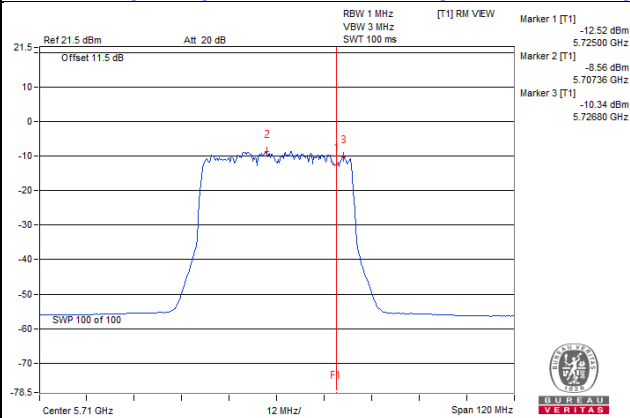
## 802.11a\_Chain 2 / CH100



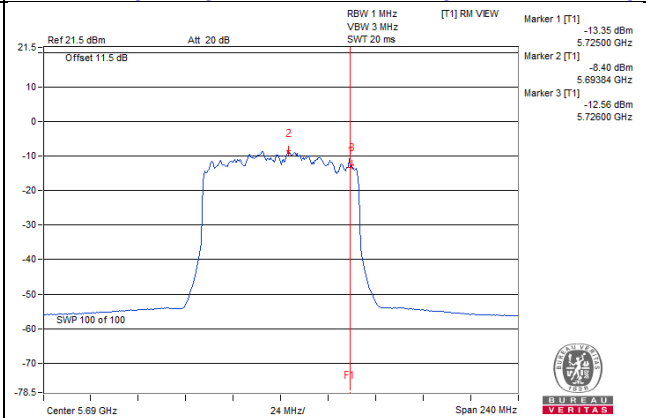
## 802.11ax (HE20)\_Chain 0 / CH116



## 802.11ax (HE40)\_Chain 3 / CH142 (U-NII-2C Band)



## 802.11ax (HE80)\_Chain 3 / CH138 (U-NII-2C Band)



### For U-NII-3:

#### 802.11a

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -19.55                           | -19.41 | -19.10 | -19.56 | 0.35             | -13.03                 | -10.81                 | 16.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(19.02-6) = 16.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE20)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -20.28                           | -20.18 | -19.84 | -19.69 | 0.18             | -13.79                 | -11.57                 | 16.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(19.02-6) = 16.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE40)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 142 (U-NII-3) | 5710              | -19.28                           | -20.12 | -19.03 | -19.23 | 0.24             | -13.13                 | -10.91                 | 16.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(19.02-6) = 16.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

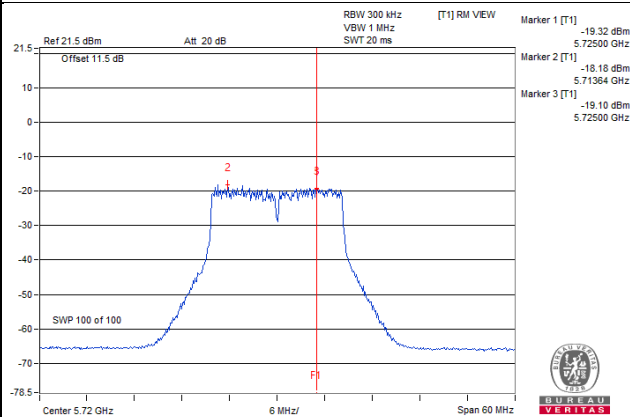
#### 802.11ax (HE80)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 138 (U-NII-3) | 5690              | -20.81                           | -21.04 | -20.48 | -21.19 | 0.19             | -14.66                 | -12.44                 | 16.98                  | Pass        |

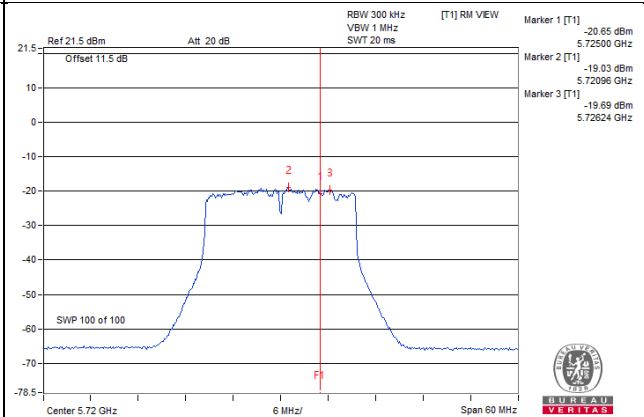
- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 19.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(19.02-6) = 16.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

# Spectrum Plot of Worst Value

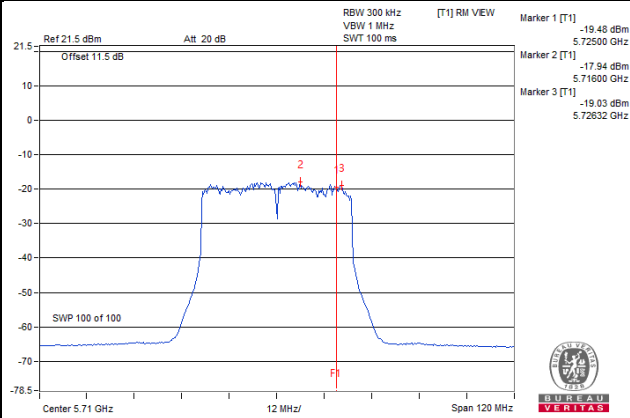
## 802.11a\_Chain 2 / CH144 (U-NII-3 Band)



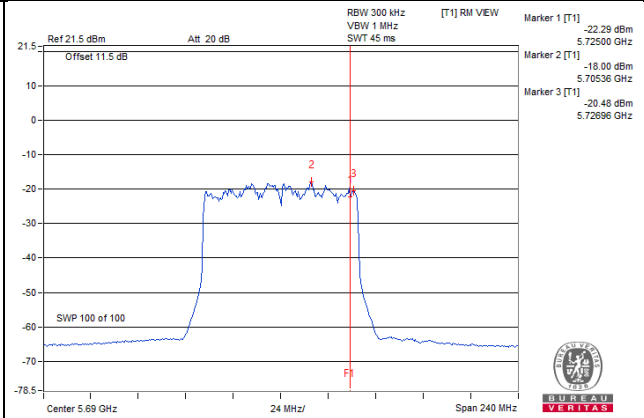
## 802.11ax (HE20)\_Chain 3 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 2 / CH138 (U-NII-3 Band)



#### 4.5.8 Test Results (Mode 2)

##### Non-Beamforming Mode

For U-NII-2A, U-NII-2C:

##### 802.11a

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -3.92                         | -4.38  | -4.11  | -3.25  | 0.35             | 2.48                | 3.98                     | Pass        |
| 60             | 5300              | -4.40                         | -3.04  | -4.54  | -4.05  | 0.35             | 2.40                | 3.98                     | Pass        |
| 64             | 5320              | -3.89                         | -4.53  | -3.43  | -3.51  | 0.35             | 2.55                | 3.98                     | Pass        |
| 100            | 5500              | -4.98                         | -4.45  | -2.75  | -3.97  | 0.35             | 2.41                | 3.98                     | Pass        |
| 116            | 5580              | -4.25                         | -6.04  | -2.46  | -4.43  | 0.35             | 2.26                | 3.98                     | Pass        |
| 140            | 5700              | -3.94                         | -3.11  | -4.79  | -4.99  | 0.35             | 2.23                | 3.98                     | Pass        |
| 144 (U-NII-2C) | 5720              | -4.54                         | -3.92  | -3.72  | -3.36  | 0.35             | 2.51                | 3.98                     | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
3. For U-NII-2C: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11ax (HE20)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -4.92                         | -5.54  | -3.62  | -3.46  | 0.18             | 1.90                | 3.98                     | Pass        |
| 60             | 5300              | -4.91                         | -3.99  | -4.83  | -3.80  | 0.18             | 1.85                | 3.98                     | Pass        |
| 64             | 5320              | -6.16                         | -3.91  | -5.45  | -4.68  | 0.18             | 1.23                | 3.98                     | Pass        |
| 100            | 5500              | -3.49                         | -4.74  | -4.03  | -4.89  | 0.18             | 1.95                | 3.98                     | Pass        |
| 116            | 5580              | -4.33                         | -5.51  | -3.27  | -5.70  | 0.18             | 1.61                | 3.98                     | Pass        |
| 140            | 5700              | -4.28                         | -5.03  | -6.46  | -3.26  | 0.18             | 1.60                | 3.98                     | Pass        |
| 144 (U-NII-2C) | 5720              | -3.95                         | -4.40  | -4.37  | -5.08  | 0.18             | 1.77                | 3.98                     | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
3. For U-NII-2C: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE40)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 54             | 5270              | -3.47                         | -3.53  | -3.71  | -3.48  | 0.24             | 2.71                | 3.98                     | Pass        |
| 62             | 5310              | -5.30                         | -4.17  | -3.48  | -5.33  | 0.24             | 1.76                | 3.98                     | Pass        |
| 102            | 5510              | -5.69                         | -3.94  | -3.70  | -4.68  | 0.24             | 1.82                | 3.98                     | Pass        |
| 110            | 5550              | -4.78                         | -3.88  | -3.14  | -4.11  | 0.24             | 2.32                | 3.98                     | Pass        |
| 134            | 5670              | -3.55                         | -5.11  | -3.80  | -3.80  | 0.24             | 2.24                | 3.98                     | Pass        |
| 142 (U-NII-2C) | 5710              | -4.17                         | -2.25  | -3.32  | -3.25  | 0.24             | 3.07                | 3.98                     | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
3. For U-NII-2C: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

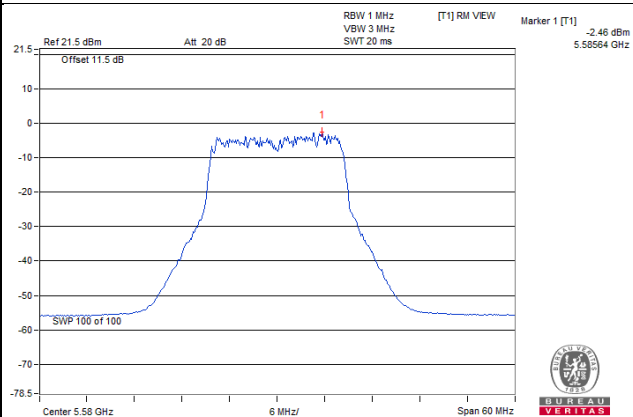
#### 802.11ax (HE80)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 58             | 5290              | -3.54                         | -4.12  | -2.77  | -3.53  | 0.19             | 2.75                | 3.98                     | Pass        |
| 106            | 5530              | -3.12                         | -2.48  | -3.75  | -3.11  | 0.19             | 3.12                | 3.98                     | Pass        |
| 122            | 5610              | -3.60                         | -2.86  | -3.50  | -2.56  | 0.19             | 3.10                | 3.98                     | Pass        |
| 138 (U-NII-2C) | 5690              | -3.47                         | -4.17  | -4.39  | -5.06  | 0.19             | 1.98                | 3.98                     | Pass        |

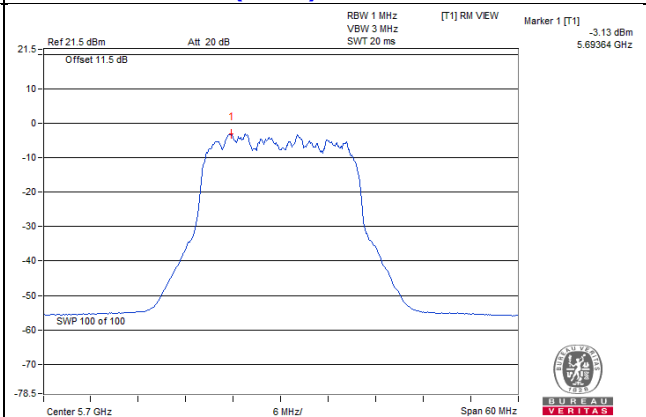
- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
3. For U-NII-2C: The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(13.02-6) = 3.98 dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

## Spectrum Plot of Worst Value

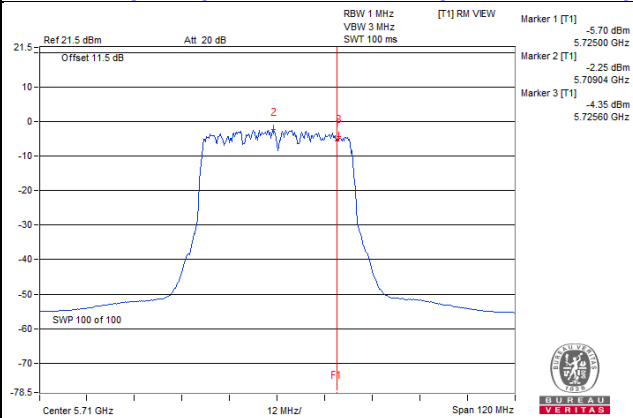
**802.11a\_Chain 2 / CH116**



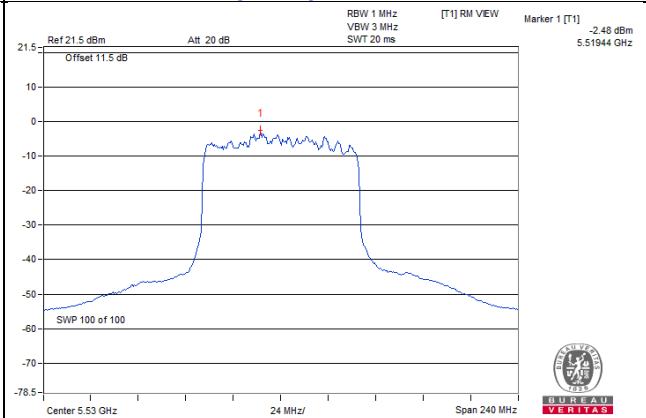
**802.11ax (HE20)\_Chain 3 / CH140**



**802.11ax (HE40)\_Chain 1 / CH142 (U-NII-2C Band)**



**802.11ax (HE80)\_Chain 1 / CH106**



### For U-NII-3:

#### 802.11a

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -11.91                           | -11.90 | -12.32 | -12.93 | 0.35             | -5.87                  | -3.65                  | 22.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(13.02-6) = 22.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE20)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -14.44                           | -13.54 | -14.33 | -12.97 | 0.18             | -7.58                  | -5.36                  | 22.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(13.02-6) = 22.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE40)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 142 (U-NII-3) | 5710              | -13.58                           | -13.67 | -12.47 | -12.90 | 0.24             | -6.87                  | -4.65                  | 22.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(13.02-6) = 22.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

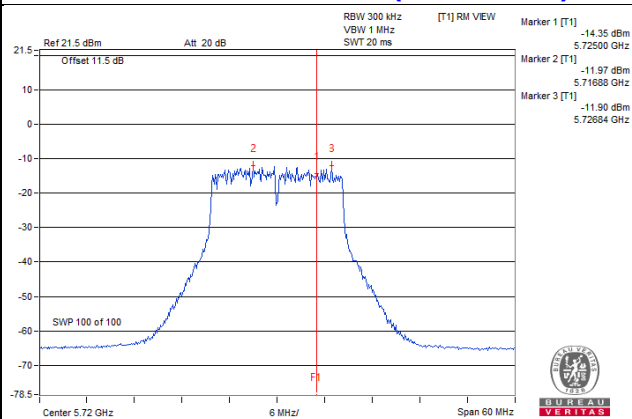
#### 802.11ax (HE80)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 138 (U-NII-3) | 5690              | -15.23                           | -14.25 | -14.36 | -16.32 | 0.19             | -8.75                  | -6.53                  | 22.98                  | Pass        |

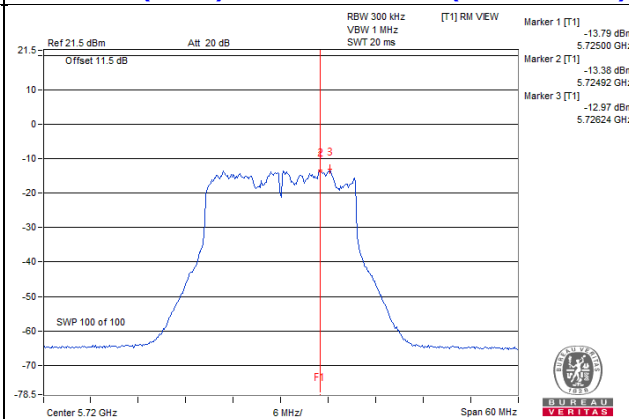
- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 13.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(13.02-6) = 22.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

# Spectrum Plot of Worst Value

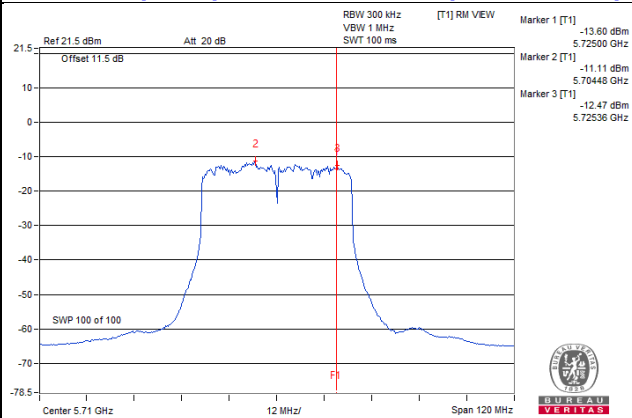
## 802.11a\_Chain 1 / CH144 (U-NII-3 Band)



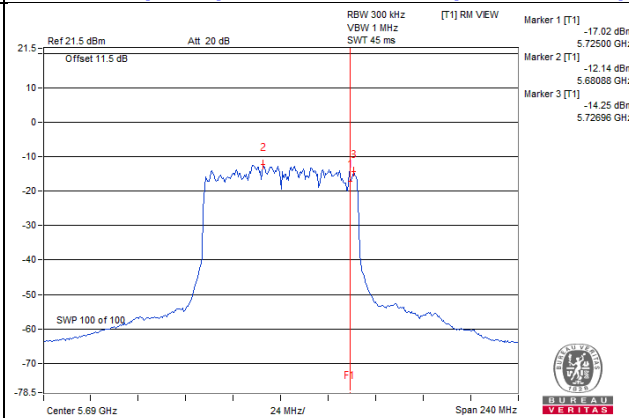
## 802.11ax (HE20)\_Chain 3 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 1 / CH138 (U-NII-3 Band)



#### 4.5.9 Test Results (Mode 3)

##### Non-Beamforming Mode

For U-NII-2A, U-NII-2C:

##### 802.11a

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -2.02                         | -3.09  | -3.97  | -5.09  | 0.35             | 2.97                | 4.48                     | Pass        |
| 60             | 5300              | -3.20                         | -3.74  | -3.50  | -4.09  | 0.35             | 2.75                | 4.48                     | Pass        |
| 64             | 5320              | -2.53                         | -2.72  | -4.83  | -3.87  | 0.35             | 2.98                | 4.48                     | Pass        |
| 100            | 5500              | -5.11                         | -4.92  | -2.64  | -3.37  | 0.35             | 2.49                | 4.48                     | Pass        |
| 116            | 5580              | -2.90                         | -5.42  | -2.19  | -4.95  | 0.35             | 2.71                | 4.48                     | Pass        |
| 140            | 5700              | -4.91                         | -3.28  | -1.84  | -4.96  | 0.35             | 2.82                | 4.48                     | Pass        |
| 144 (U-NII-2C) | 5720              | -4.30                         | -4.42  | -3.49  | -2.98  | 0.35             | 2.61                | 4.48                     | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
3. For U-NII-2C: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11ax (HE20)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -4.98                         | -3.37  | -3.25  | -4.41  | 0.18             | 2.26                | 4.48                     | Pass        |
| 60             | 5300              | -4.20                         | -3.81  | -5.08  | -4.46  | 0.18             | 1.84                | 4.48                     | Pass        |
| 64             | 5320              | -4.42                         | -3.83  | -3.38  | -5.05  | 0.18             | 2.08                | 4.48                     | Pass        |
| 100            | 5500              | -3.70                         | -3.13  | -4.76  | -2.86  | 0.18             | 2.65                | 4.48                     | Pass        |
| 116            | 5580              | -3.99                         | -3.05  | -3.71  | -5.82  | 0.18             | 2.17                | 4.48                     | Pass        |
| 140            | 5700              | -4.29                         | -3.67  | -3.79  | -5.37  | 0.18             | 1.97                | 4.48                     | Pass        |
| 144 (U-NII-2C) | 5720              | -3.33                         | -4.15  | -3.31  | -5.86  | 0.18             | 2.15                | 4.48                     | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
3. For U-NII-2C: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (HE40)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 54             | 5270              | -3.22                         | -3.69  | -2.53  | -3.12  | 0.24             | 3.14                | 4.48                     | Pass        |
| 62             | 5310              | -3.45                         | -4.18  | -3.56  | -4.18  | 0.24             | 2.43                | 4.48                     | Pass        |
| 102            | 5510              | -4.41                         | -5.47  | -2.77  | -3.31  | 0.24             | 2.39                | 4.48                     | Pass        |
| 110            | 5550              | -6.00                         | -3.31  | -3.97  | -1.93  | 0.24             | 2.69                | 4.48                     | Pass        |
| 134            | 5670              | -4.46                         | -3.05  | -3.75  | -3.81  | 0.24             | 2.52                | 4.48                     | Pass        |
| 142 (U-NII-2C) | 5710              | -3.37                         | -2.01  | -3.60  | -3.27  | 0.24             | 3.24                | 4.48                     | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
3. For U-NII-2C: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

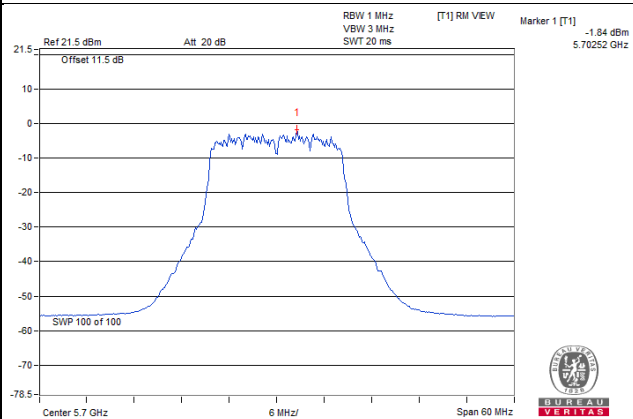
### 802.11ax (HE80)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 58             | 5290              | -4.49                         | -4.66  | -4.12  | -4.36  | 0.19             | 1.81                | 4.48                     | Pass        |
| 106            | 5530              | -3.83                         | -3.23  | -4.81  | -3.35  | 0.19             | 2.45                | 4.48                     | Pass        |
| 122            | 5610              | -3.61                         | -3.43  | -3.26  | -3.31  | 0.19             | 2.81                | 4.48                     | Pass        |
| 138 (U-NII-2C) | 5690              | -4.13                         | -4.18  | -4.38  | -4.12  | 0.19             | 2.01                | 4.48                     | Pass        |

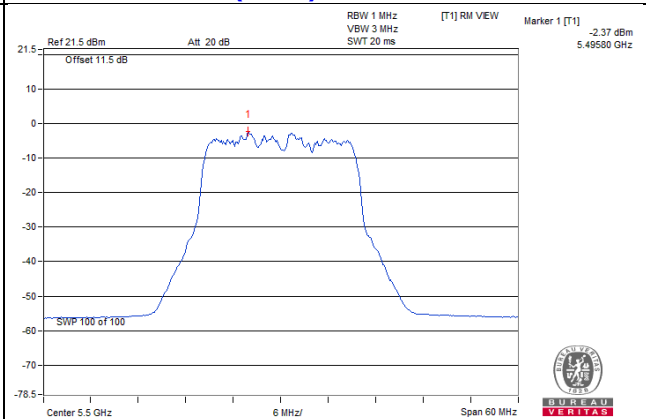
- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
3. For U-NII-2C: The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to  $11-(12.52-6) = 4.48$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

## Spectrum Plot of Worst Value

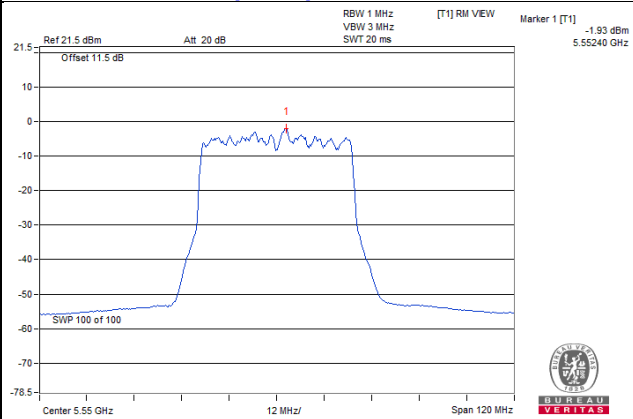
**802.11a\_Chain 2 / CH140**



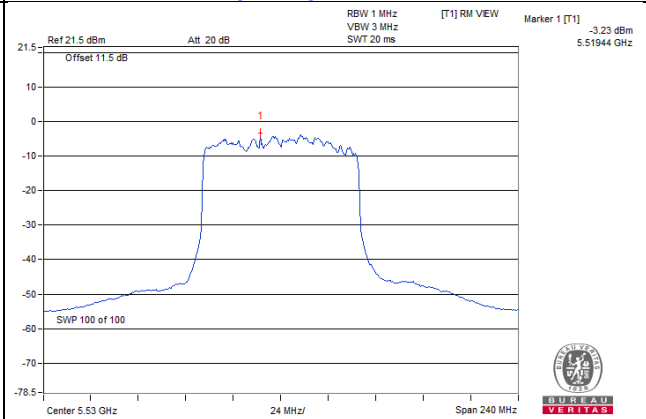
**802.11ax (HE20)\_Chain 3 / CH100**



**802.11ax (HE40)\_Chain 3 / CH110**



**802.11ax (HE80)\_Chain 1 / CH106**



### For U-NII-3:

#### 802.11a

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -13.73                           | -12.00 | -12.23 | -11.41 | 0.35             | -5.89                  | -3.67                  | 23.48                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to 30-(12.52-6) = 23.48 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE20)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -13.73                           | -12.89 | -14.48 | -13.92 | 0.18             | -7.52                  | -5.30                  | 23.48                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to 30-(12.52-6) = 23.48 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE40)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 142 (U-NII-3) | 5710              | -13.93                           | -12.36 | -12.78 | -12.43 | 0.24             | -6.57                  | -4.35                  | 23.48                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to 30-(12.52-6) = 23.48 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

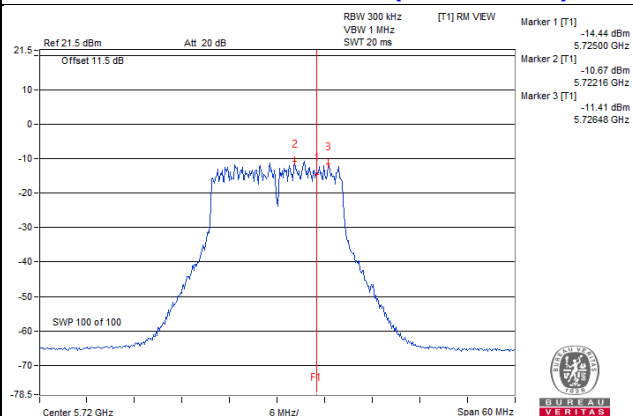
#### 802.11ax (HE80)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 138 (U-NII-3) | 5690              | -15.11                           | -14.82 | -15.61 | -15.15 | 0.19             | -8.95                  | -6.73                  | 23.48                  | Pass        |

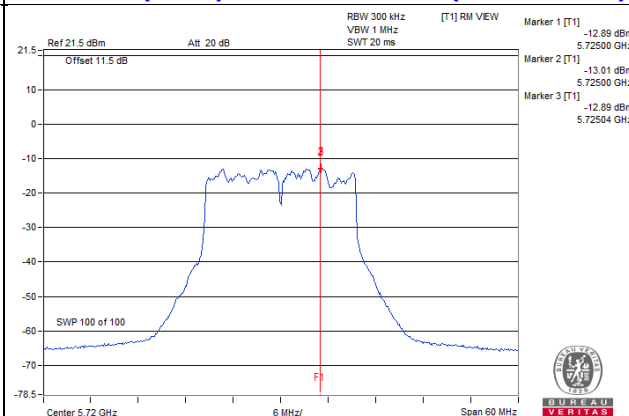
- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 12.52 dBi > 6dBi, so the power density limit shall be reduced to 30-(12.52-6) = 23.48 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

# Spectrum Plot of Worst Value

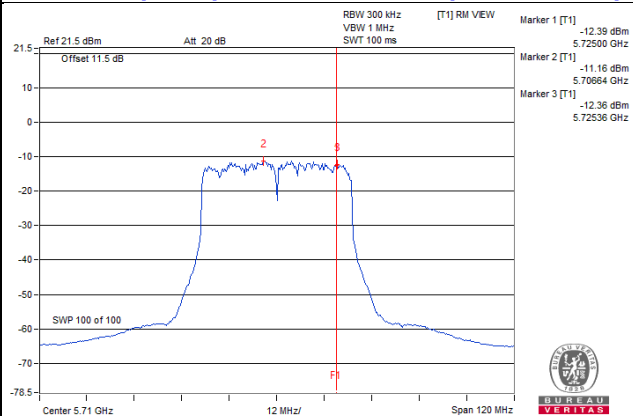
## 802.11a\_Chain 3 / CH144 (U-NII-3 Band)



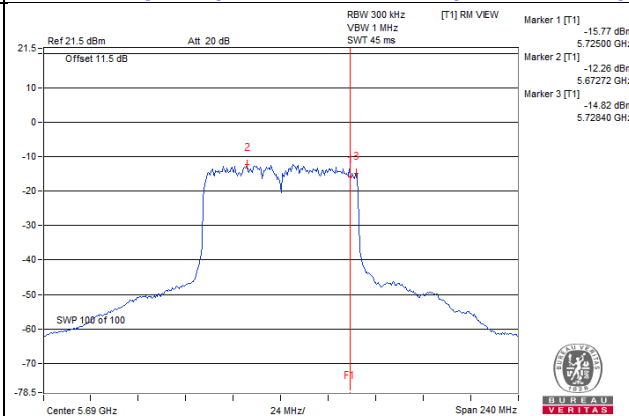
## 802.11ax (HE20)\_Chain 1 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 1 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 1 / CH138 (U-NII-3 Band)



#### 4.5.10 Test Results (Mode 4)

##### Non-Beamforming Mode

For U-NII-2A, U-NII-2C:

##### 802.11a

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -7.99                         | -9.30  | -9.43  | -8.24  | 0.35             | -2.32               | -1.02                    | Pass        |
| 60             | 5300              | -9.32                         | -7.55  | -8.78  | -7.55  | 0.35             | -1.86               | -1.02                    | Pass        |
| 64             | 5320              | -7.74                         | -9.09  | -9.11  | -8.39  | 0.35             | -2.17               | -1.02                    | Pass        |
| 100            | 5500              | -7.81                         | -9.21  | -7.28  | -11.03 | 0.35             | -2.23               | -1.02                    | Pass        |
| 116            | 5580              | -8.70                         | -7.77  | -8.52  | -9.50  | 0.35             | -2.21               | -1.02                    | Pass        |
| 140            | 5700              | -8.55                         | -8.89  | -9.98  | -8.50  | 0.35             | -2.57               | -1.02                    | Pass        |
| 144 (U-NII-2C) | 5720              | -9.00                         | -8.93  | -9.94  | -9.82  | 0.35             | -3.03               | -1.02                    | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(18.02-6) = -1.02 dBm.
3. For U-NII-2C: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(18.02-6) = -1.02 dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11ax (HE20)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 52             | 5260              | -8.97                         | -11.15 | -9.40  | -8.70  | 0.18             | -3.26               | -1.02                    | Pass        |
| 60             | 5300              | -8.11                         | -10.38 | -10.12 | -9.00  | 0.18             | -3.11               | -1.02                    | Pass        |
| 64             | 5320              | -8.29                         | -9.32  | -8.59  | -8.29  | 0.18             | -2.40               | -1.02                    | Pass        |
| 100            | 5500              | -8.39                         | -12.56 | -9.44  | -8.74  | 0.18             | -3.31               | -1.02                    | Pass        |
| 116            | 5580              | -9.09                         | -7.81  | -8.69  | -9.30  | 0.18             | -2.48               | -1.02                    | Pass        |
| 140            | 5700              | -9.92                         | -8.13  | -10.77 | -9.34  | 0.18             | -3.23               | -1.02                    | Pass        |
| 144 (U-NII-2C) | 5720              | -8.89                         | -11.78 | -7.58  | -9.13  | 0.18             | -2.90               | -1.02                    | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(18.02-6) = -1.02 dBm.
3. For U-NII-2C: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 11-(18.02-6) = -1.02 dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (HE40)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 54             | 5270              | -9.21                         | -8.51  | -8.65  | -9.30  | 0.24             | -2.64               | -1.02                    | Pass        |
| 62             | 5310              | -10.70                        | -9.03  | -9.45  | -7.54  | 0.24             | -2.77               | -1.02                    | Pass        |
| 102            | 5510              | -10.98                        | -9.22  | -8.14  | -8.18  | 0.24             | -2.73               | -1.02                    | Pass        |
| 110            | 5550              | -10.67                        | -7.82  | -8.56  | -8.01  | 0.24             | -2.37               | -1.02                    | Pass        |
| 134            | 5670              | -8.14                         | -8.32  | -11.52 | -9.23  | 0.24             | -2.85               | -1.02                    | Pass        |
| 142 (U-NII-2C) | 5710              | -8.48                         | -6.77  | -7.97  | -7.97  | 0.24             | -1.49               | -1.02                    | Pass        |

- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(18.02-6) = -1.02$  dBm.
3. For U-NII-2C: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(18.02-6) = -1.02$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

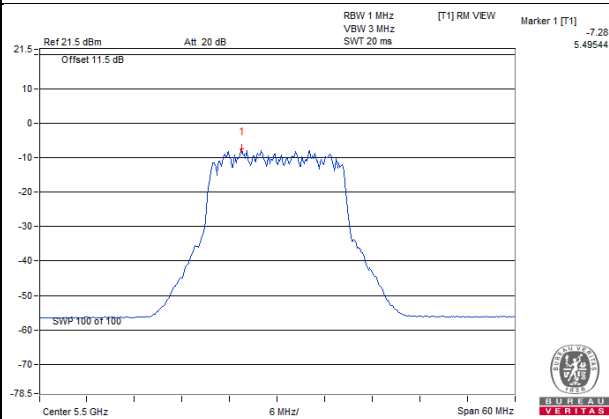
### 802.11ax (HE80)

| Chan.          | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/MHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/MHz) | Max. PSD Limit (dBm/MHz) | Pass / Fail |
|----------------|-------------------|-------------------------------|--------|--------|--------|------------------|---------------------|--------------------------|-------------|
|                |                   | Chain0                        | Chain1 | Chain2 | Chain3 |                  |                     |                          |             |
| 58             | 5290              | -8.61                         | -8.81  | -5.02  | -7.76  | 0.19             | -1.05               | -1.02                    | Pass        |
| 106            | 5530              | -8.24                         | -8.59  | -5.48  | -7.73  | 0.19             | -1.12               | -1.02                    | Pass        |
| 122            | 5610              | -9.48                         | -9.30  | -4.16  | -8.60  | 0.19             | -1.05               | -1.02                    | Pass        |
| 138 (U-NII-2C) | 5690              | -9.35                         | -8.66  | -8.68  | -8.59  | 0.19             | -2.60               | -1.02                    | Pass        |

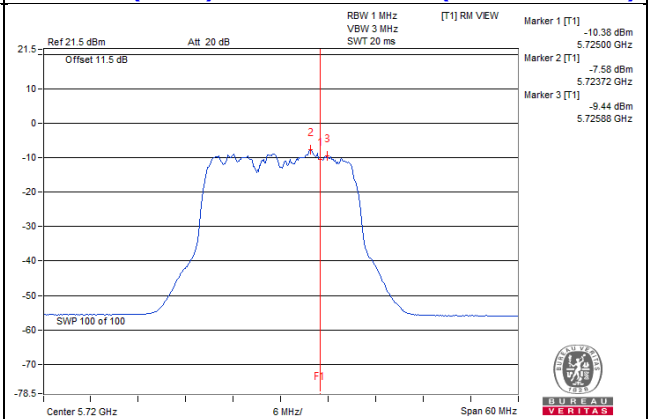
- Note: 1. Method a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-2A: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(18.02-6) = -1.02$  dBm.
3. For U-NII-2C: The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to  $11-(18.02-6) = -1.02$  dBm.
4. Refer to section 3.3 for duty cycle spectrum plot.

## Spectrum Plot of Worst Value

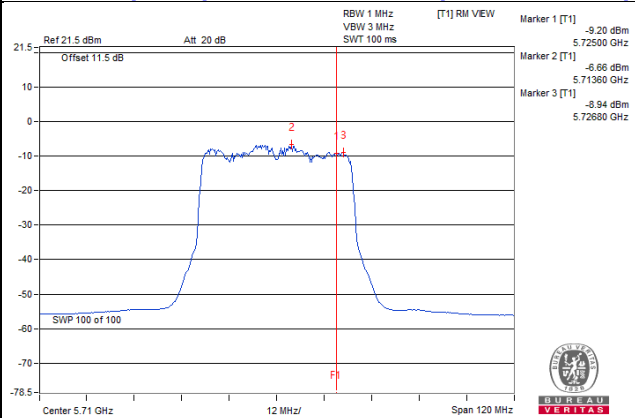
### 802.11a\_Chain 2 / CH100



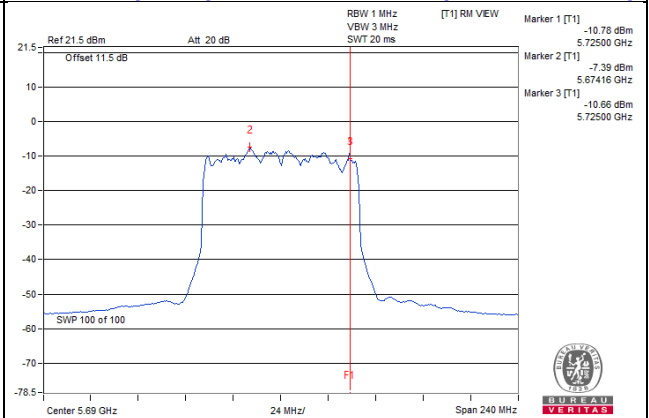
### 802.11ax (HE20)\_Chain 2 / CH144 (U-NII-2C Band)



### 802.11ax (HE40)\_Chain 1 / CH142 (U-NII-2C Band)



### 802.11ax (HE80)\_Chain 2 / CH122 (U-NII-2C Band)



### For U-NII-3:

#### 802.11a

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -18.69                           | -17.44 | -18.08 | -18.26 | 0.35             | -11.72                 | -9.50                  | 17.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(18.02-6) = 17.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE20)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 144 (U-NII-3) | 5720              | -17.82                           | -17.81 | -18.03 | -18.34 | 0.18             | -11.79                 | -9.57                  | 17.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(18.02-6) = 17.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

#### 802.11ax (HE40)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 142 (U-NII-3) | 5710              | -19.10                           | -17.09 | -18.64 | -18.95 | 0.24             | -12.11                 | -9.89                  | 17.98                  | Pass        |

- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(18.02-6) = 17.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

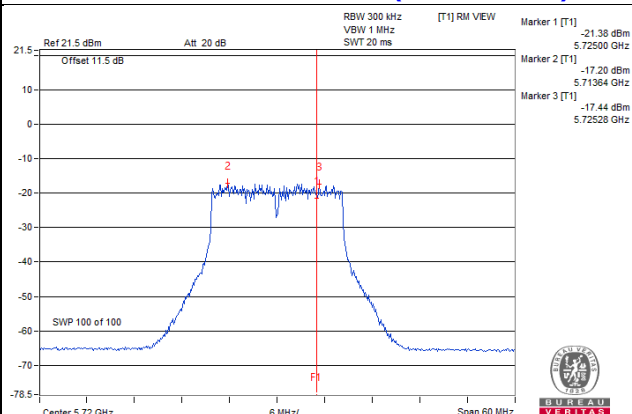
#### 802.11ax (HE80)

| Chan.         | Chan. Freq. (MHz) | PSD w/o Duty Factor (dBm/300kHz) |        |        |        | Duty Factor (dB) | Total PSD (dBm/300kHz) | Total PSD (dBm/500kHz) | PSD Limit (dBm/500kHz) | Pass / Fail |
|---------------|-------------------|----------------------------------|--------|--------|--------|------------------|------------------------|------------------------|------------------------|-------------|
|               |                   | Chain0                           | Chain1 | Chain2 | Chain3 |                  |                        |                        |                        |             |
| 138 (U-NII-3) | 5690              | -19.58                           | -21.19 | -19.74 | -19.79 | 0.19             | -13.82                 | -11.60                 | 17.98                  | Pass        |

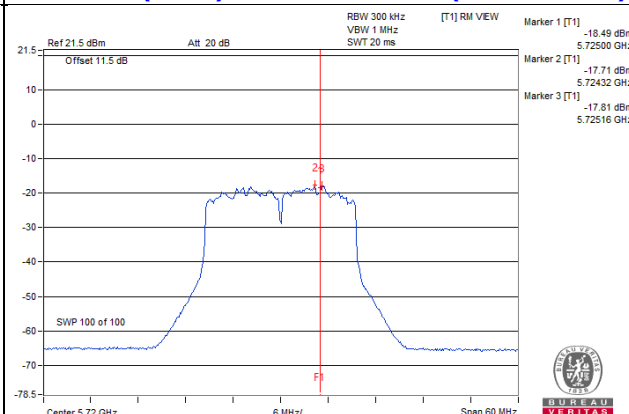
- Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.  
 2. The directional gain is 18.02 dBi > 6dBi, so the power density limit shall be reduced to 30-(18.02-6) = 17.98 dBm.  
 3. Refer to section 3.3 for duty cycle spectrum plot.

# Spectrum Plot of Worst Value

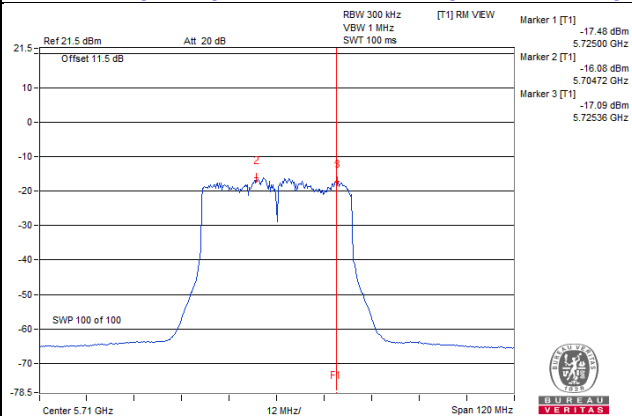
## 802.11a\_Chain 1 / CH144 (U-NII-3 Band)



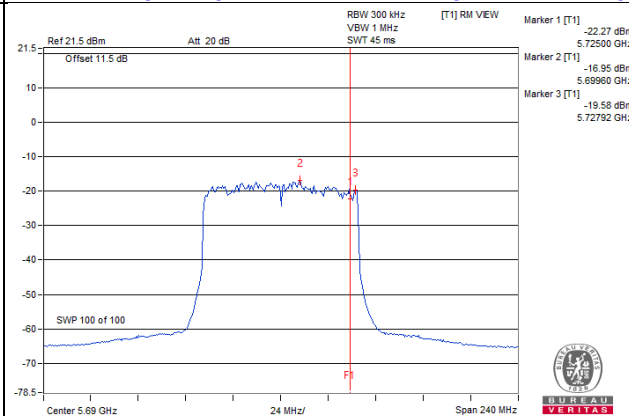
## 802.11ax (HE20)\_Chain 1 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 1 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 0 / CH138 (U-NII-3 Band)

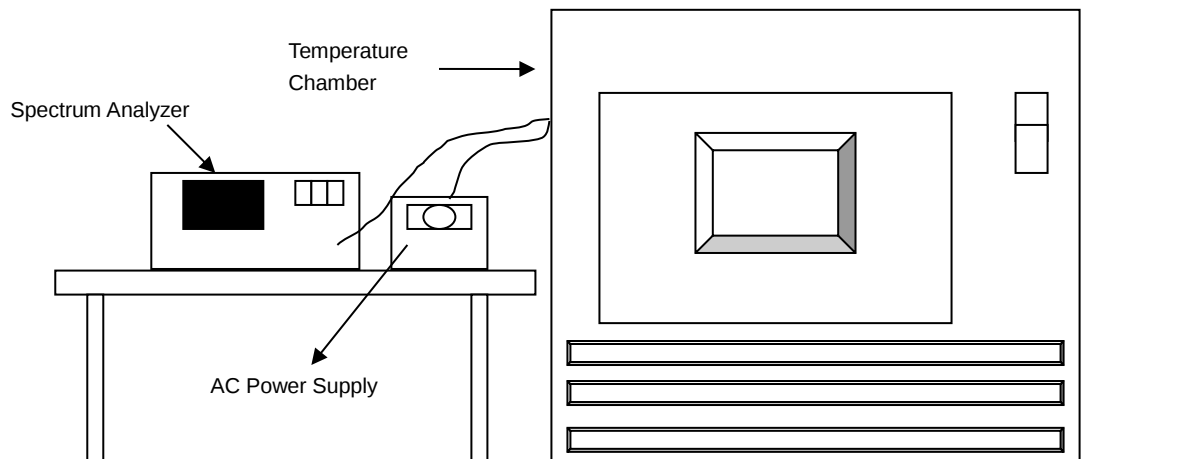


## 4.6 Frequency Stability Measurement

### 4.6.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

### 4.6.2 Test Setup



### 4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.6.4 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

#### 4.6.7 Test Results

| Frequency Stability Versus Temp. |                          |                                |           |                                |           |                                |           |                                |           |
|----------------------------------|--------------------------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|
| Operating Frequency: 5260 MHz    |                          |                                |           |                                |           |                                |           |                                |           |
| TEMP.<br>(°C)                    | Power<br>Supply<br>(Vac) | 0 Minute                       |           | 2 Minutes                      |           | 5 Minutes                      |           | 10 Minutes                     |           |
|                                  |                          | Measured<br>Frequency<br>(MHz) | Pass/Fail | Measured<br>Frequency<br>(MHz) | Pass/Fail | Measured<br>Frequency<br>(MHz) | Pass/Fail | Measured<br>Frequency<br>(MHz) | Pass/Fail |
| 55                               | 120                      | 5259.9826                      | Pass      | 5259.9794                      | Pass      | 5259.9782                      | Pass      | 5259.9816                      | Pass      |
| 50                               | 120                      | 5260.0189                      | Pass      | 5260.0171                      | Pass      | 5260.0179                      | Pass      | 5260.0187                      | Pass      |
| 40                               | 120                      | 5259.9898                      | Pass      | 5259.9913                      | Pass      | 5259.9912                      | Pass      | 5259.9899                      | Pass      |
| 30                               | 120                      | 5259.9837                      | Pass      | 5259.9863                      | Pass      | 5259.9878                      | Pass      | 5259.9842                      | Pass      |
| 20                               | 120                      | 5260.0011                      | Pass      | 5260.0052                      | Pass      | 5260.0057                      | Pass      | 5260.0057                      | Pass      |
| 10                               | 120                      | 5260.023                       | Pass      | 5260.0273                      | Pass      | 5260.0275                      | Pass      | 5260.0239                      | Pass      |
| 0                                | 120                      | 5259.9812                      | Pass      | 5259.9812                      | Pass      | 5259.9826                      | Pass      | 5259.9858                      | Pass      |
| -10                              | 120                      | 5259.9865                      | Pass      | 5259.9888                      | Pass      | 5259.9842                      | Pass      | 5259.9882                      | Pass      |
| -20                              | 120                      | 5260.0138                      | Pass      | 5260.0183                      | Pass      | 5260.0175                      | Pass      | 5260.0165                      | Pass      |
| -30                              | 120                      | 5260.0247                      | Pass      | 5260.0252                      | Pass      | 5260.0205                      | Pass      | 5260.0229                      | Pass      |
| -40                              | 120                      | 5260.0242                      | Pass      | 5260.0225                      | Pass      | 5260.0221                      | Pass      | 5260.0248                      | Pass      |

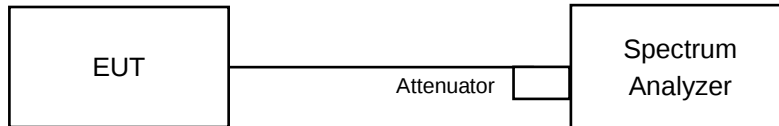
| Frequency Stability Versus Voltage |                          |                                |           |                                |           |                                |           |                                |           |
|------------------------------------|--------------------------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|
| Operating Frequency: 5260 MHz      |                          |                                |           |                                |           |                                |           |                                |           |
| TEMP.<br>(°C)                      | Power<br>Supply<br>(Vac) | 0 Minute                       |           | 2 Minutes                      |           | 5 Minutes                      |           | 10 Minutes                     |           |
|                                    |                          | Measured<br>Frequency<br>(MHz) | Pass/Fail | Measured<br>Frequency<br>(MHz) | Pass/Fail | Measured<br>Frequency<br>(MHz) | Pass/Fail | Measured<br>Frequency<br>(MHz) | Pass/Fail |
| 20                                 | 138                      | 5260.0013                      | PASS      | 5260.0043                      | PASS      | 5260.0065                      | PASS      | 5260.0058                      | PASS      |
|                                    | 120                      | 5260.0011                      | PASS      | 5260.0052                      | PASS      | 5260.0057                      | PASS      | 5260.0057                      | PASS      |
|                                    | 102                      | 5260.0008                      | PASS      | 5260.0061                      | PASS      | 5260.0046                      | PASS      | 5260.0057                      | PASS      |

## 4.7 6dB Bandwidth Measurement

### 4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

### 4.7.2 Test Setup



### 4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.7.4 Test Procedure

#### MEASUREMENT PROCEDURE REF

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

### 4.7.5 Deviation from Test Standard

No deviation.

### 4.7.6 EUT Operating Condition

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

#### 4.7.7 Test Results (Mode 1)

##### Non-Beamforming Mode

##### 802.11a

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 2.56                | 2.78   | 3.1    | 2.85   | 0.5                 | Pass        |

##### 802.11ax (HE20)

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 4.25                | 4.23   | 3.8    | 4.11   | 0.5                 | Pass        |

##### 802.11ax (HE40)

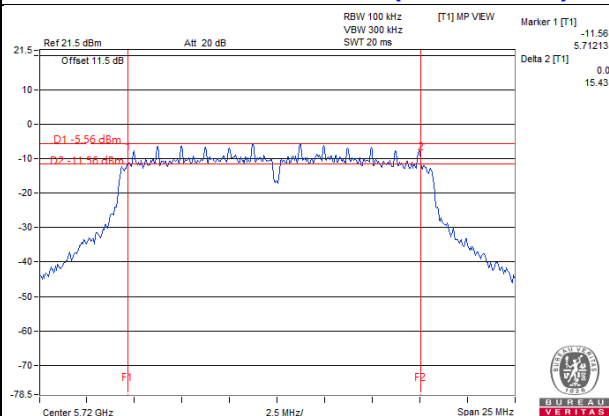
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 142 (U-NII-3) | 5710            | 3.61                | 3.72   | 3.52   | 4      | 0.5                 | Pass        |

##### 802.11ax (HE80)

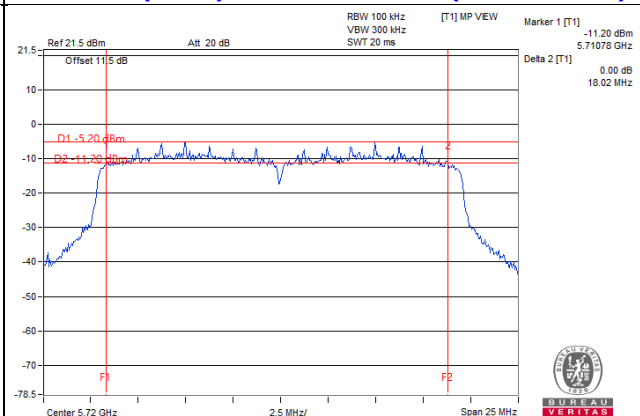
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 138 (U-NII-3) | 5690            | 1.68                | 2.72   | 2.77   | 2.69   | 0.5                 | Pass        |

# Spectrum Plot of Worst Value

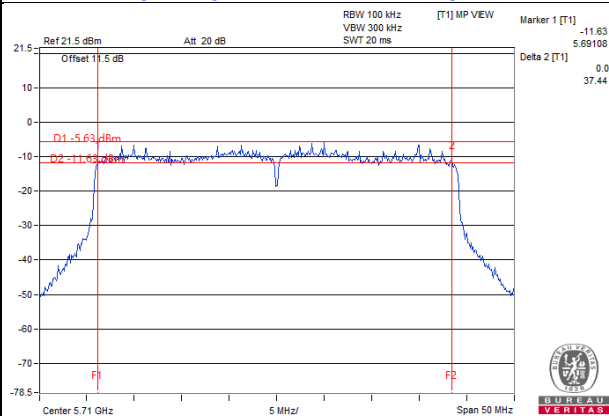
## 802.11a\_Chain 0 / CH144 (U-NII-3 Band)



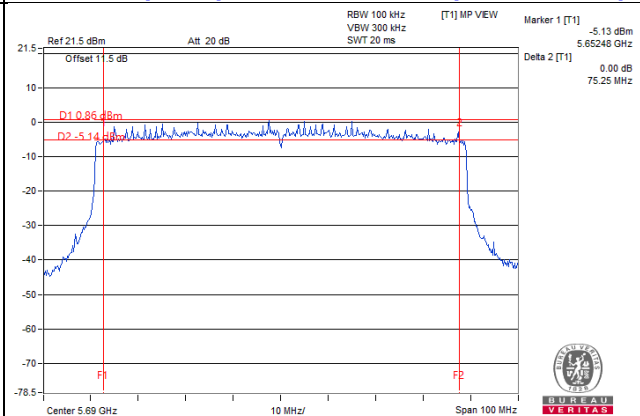
## 802.11ax (HE20)\_Chain 2 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 0 / CH138 (U-NII-3 Band)



Note: The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

#### 4.7.8 Test Results (Mode 2)

##### Non-Beamforming Mode

##### 802.11a

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 2.56                | 2.85   | 3.14   | 3.10   | 0.5                 | Pass        |

##### 802.11ax (HE20)

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 4.30                | 4.26   | 3.76   | 4.35   | 0.5                 | Pass        |

##### 802.11ax (HE40)

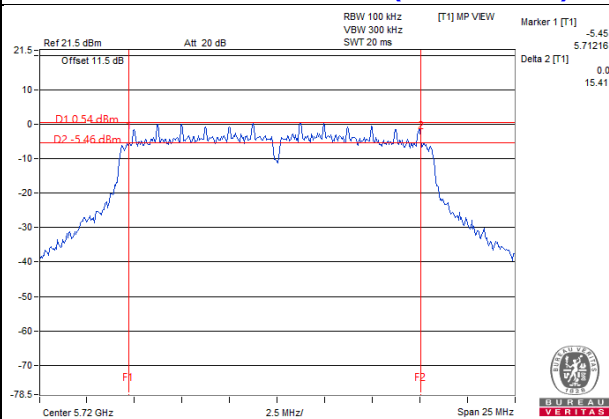
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 142 (U-NII-3) | 5710            | 4.00                | 3.78   | 2.56   | 3.89   | 0.5                 | Pass        |

##### 802.11ax (HE80)

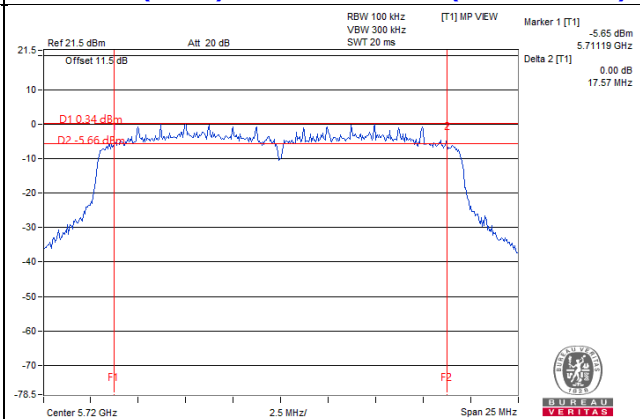
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 138 (U-NII-3) | 5690            | 2.81                | 3.43   | 1.43   | 2.72   | 0.5                 | Pass        |

# Spectrum Plot of Worst Value

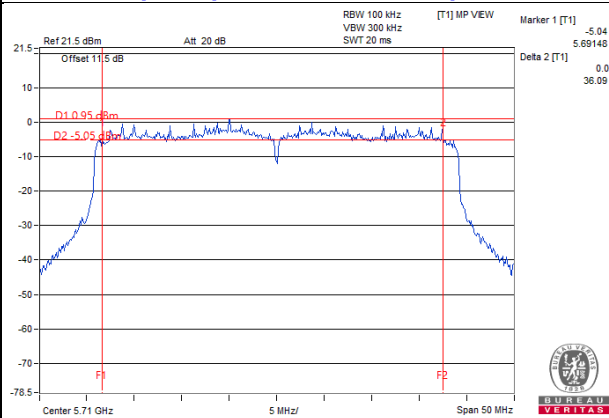
## 802.11a\_Chain 0 / CH144 (U-NII-3 Band)



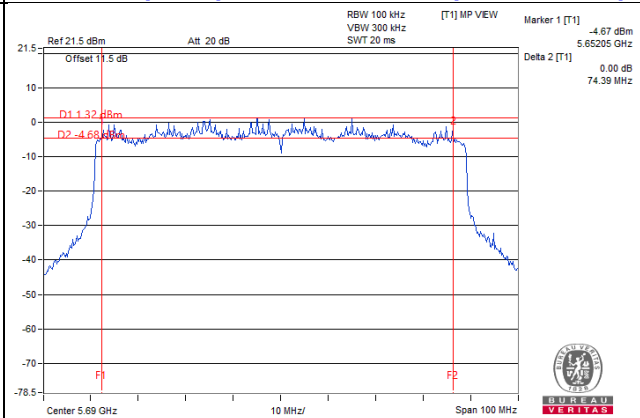
## 802.11ax (HE20)\_Chain 2 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 2 / CH138 (U-NII-3 Band)



Note: The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

#### 4.7.9 Test Results (Mode 3)

##### Non-Beamforming Mode

##### 802.11a

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 2.56                | 3.10   | 3.14   | 3.10   | 0.5                 | Pass        |

##### 802.11ax (HE20)

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 4.30                | 4.15   | 4.31   | 4.02   | 0.5                 | Pass        |

##### 802.11ax (HE40)

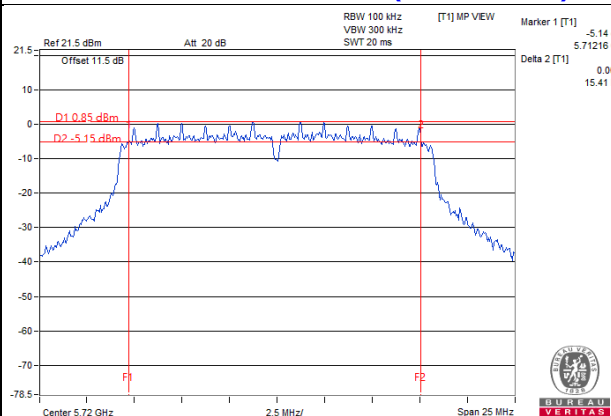
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 142 (U-NII-3) | 5710            | 3.81                | 3.89   | 3.03   | 3.89   | 0.5                 | Pass        |

##### 802.11ax (HE80)

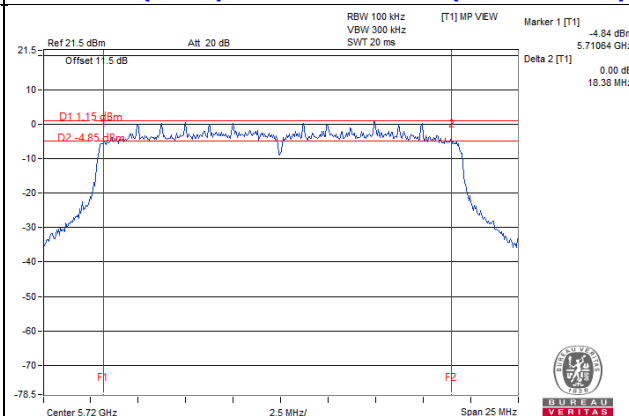
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 138 (U-NII-3) | 5690            | 2.68                | 2.22   | 2.77   | 2.72   | 0.5                 | Pass        |

# Spectrum Plot of Worst Value

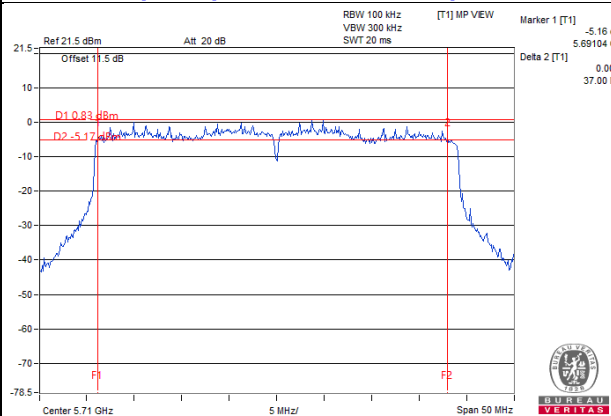
## 802.11a\_Chain 0 / CH144 (U-NII-3 Band)



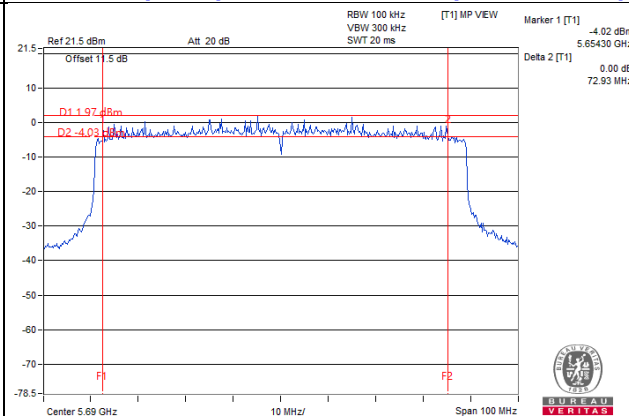
## 802.11ax (HE20)\_Chain 3 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 2 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 1 / CH138 (U-NII-3 Band)



Note: The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

#### 4.7.10 Test Results (Mode 4)

##### Non-Beamforming Mode

##### 802.11a

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 2.52                | 2.88   | 3.11   | 2.85   | 0.5                 | Pass        |

##### 802.11ax (HE20)

| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 144 (U-NII-3) | 5720            | 4.30                | 3.75   | 3.75   | 4.22   | 0.5                 | Pass        |

##### 802.11ax (HE40)

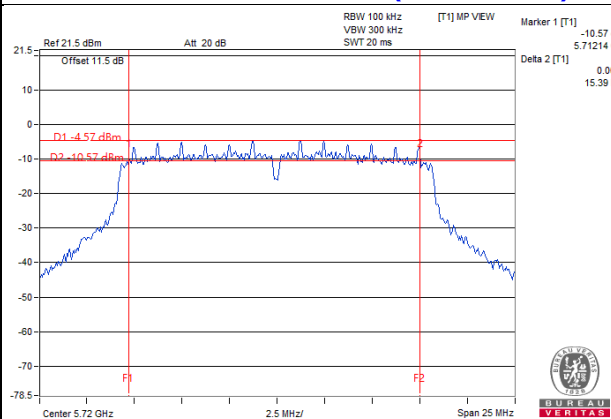
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 142 (U-NII-3) | 5710            | 3.39                | 3.43   | 3.82   | 3.89   | 0.5                 | Pass        |

##### 802.11ax (HE80)

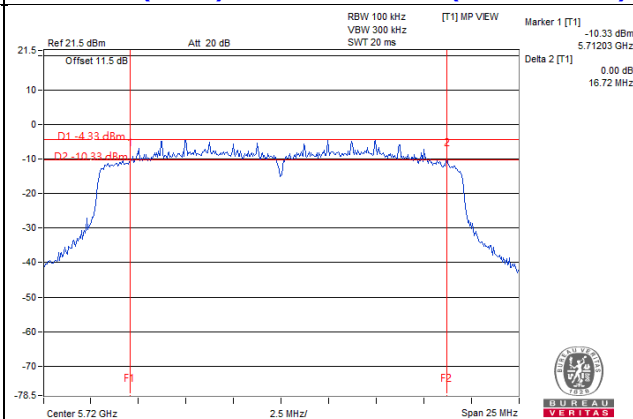
| Channel       | Frequency (MHz) | 6dB Bandwidth (MHz) |        |        |        | Minimum Limit (MHz) | Pass / Fail |
|---------------|-----------------|---------------------|--------|--------|--------|---------------------|-------------|
|               |                 | Chain0              | Chain1 | Chain2 | Chain3 |                     |             |
| 138 (U-NII-3) | 5690            | 2.68                | 2.71   | 2.72   | 3.40   | 0.5                 | Pass        |

# Spectrum Plot of Worst Value

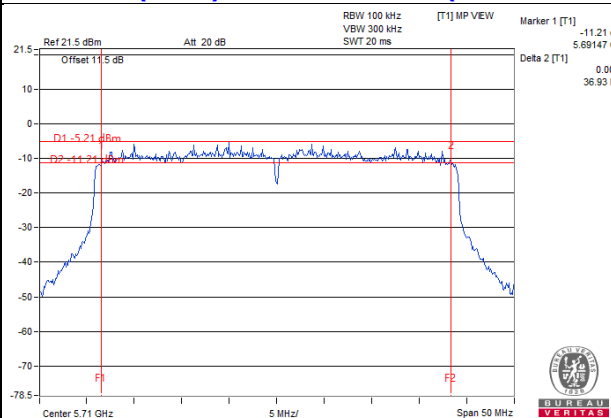
## 802.11a\_Chain 0 / CH144 (U-NII-3 Band)



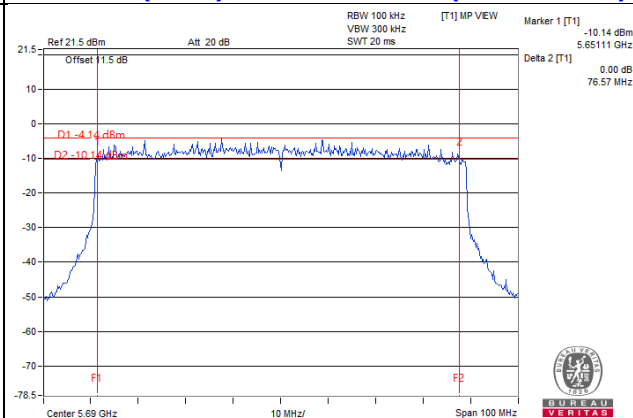
## 802.11ax (HE20)\_Chain 1 / CH144 (U-NII-3 Band)



## 802.11ax (HE40)\_Chain 0 / CH142 (U-NII-3 Band)



## 802.11ax (HE80)\_Chain 0 / CH138 (U-NII-3 Band)



Note: The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

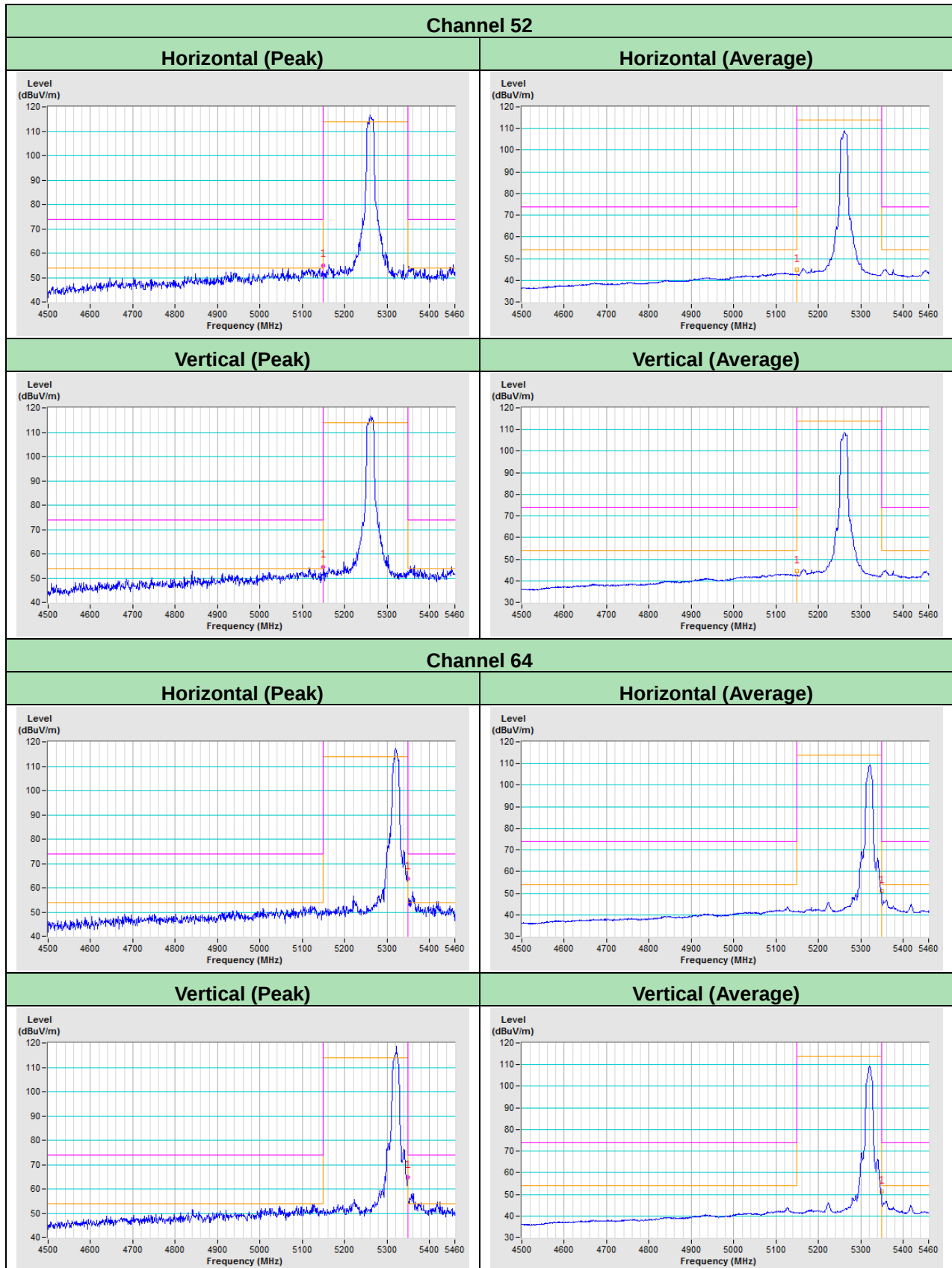
## 5 Pictures of Test Arrangements

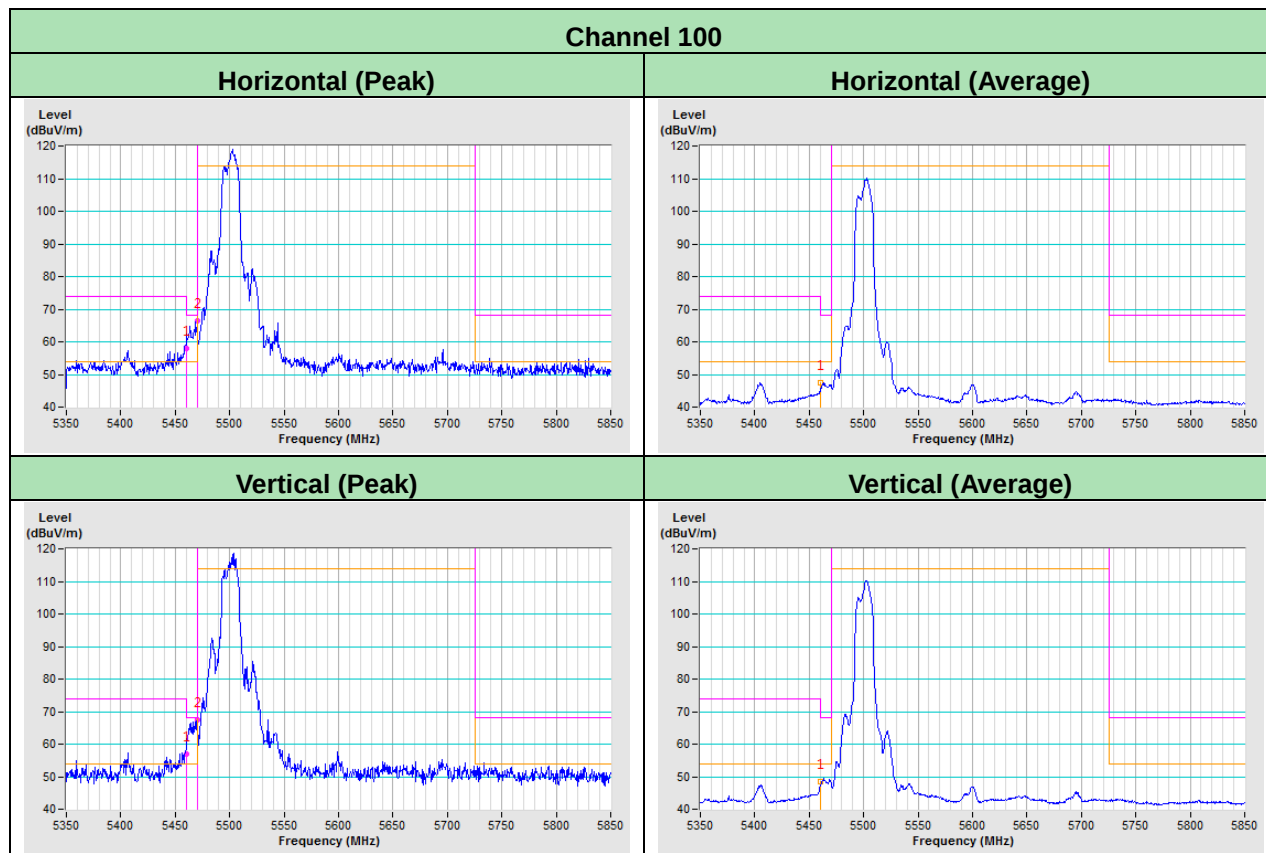
Please refer to the attached file (Test Setup Photo).

## Annex A - Band-Edge Measurement (For U-NII-2A, U-NII-2C band)

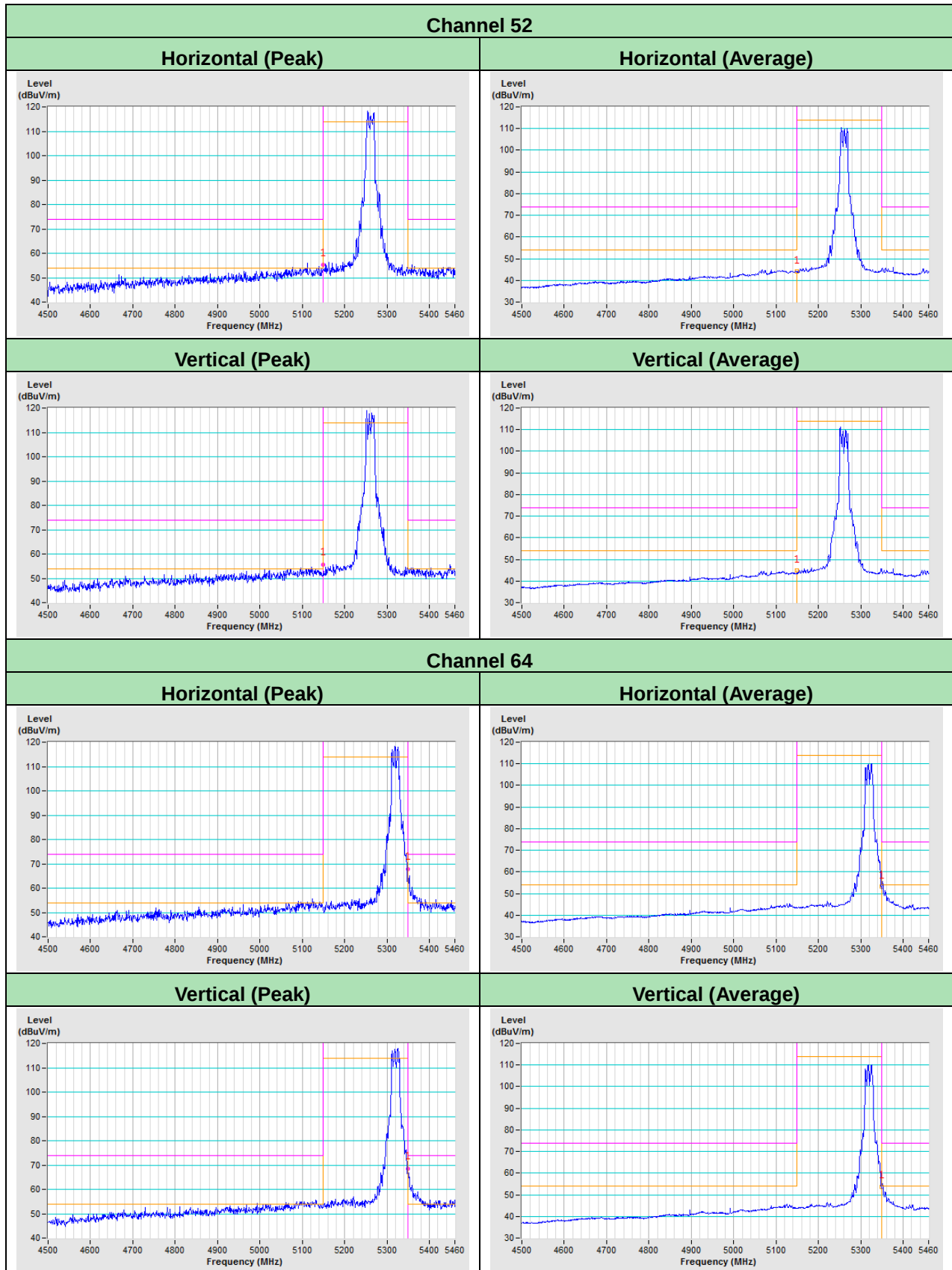
### Annex A.1 - Test Results (Mode 1)

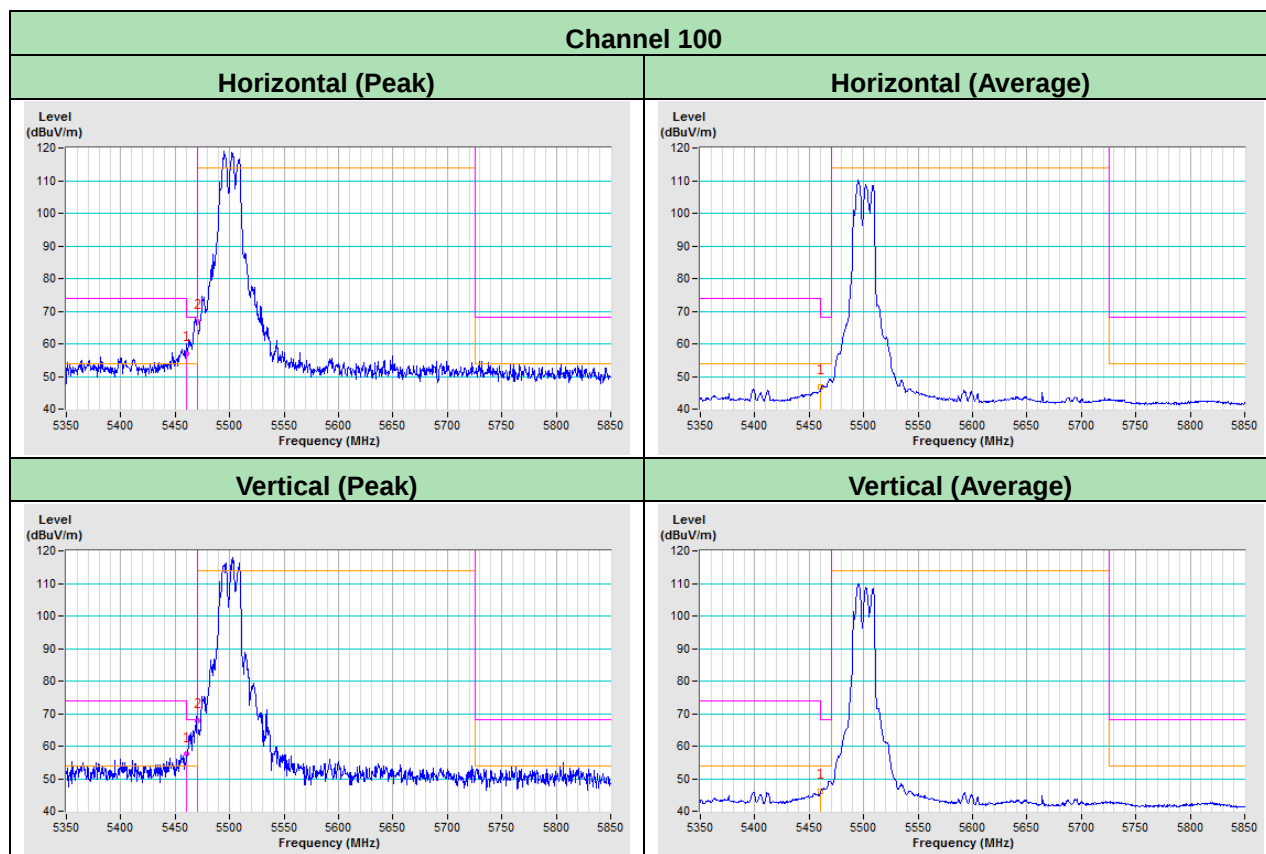
802.11a



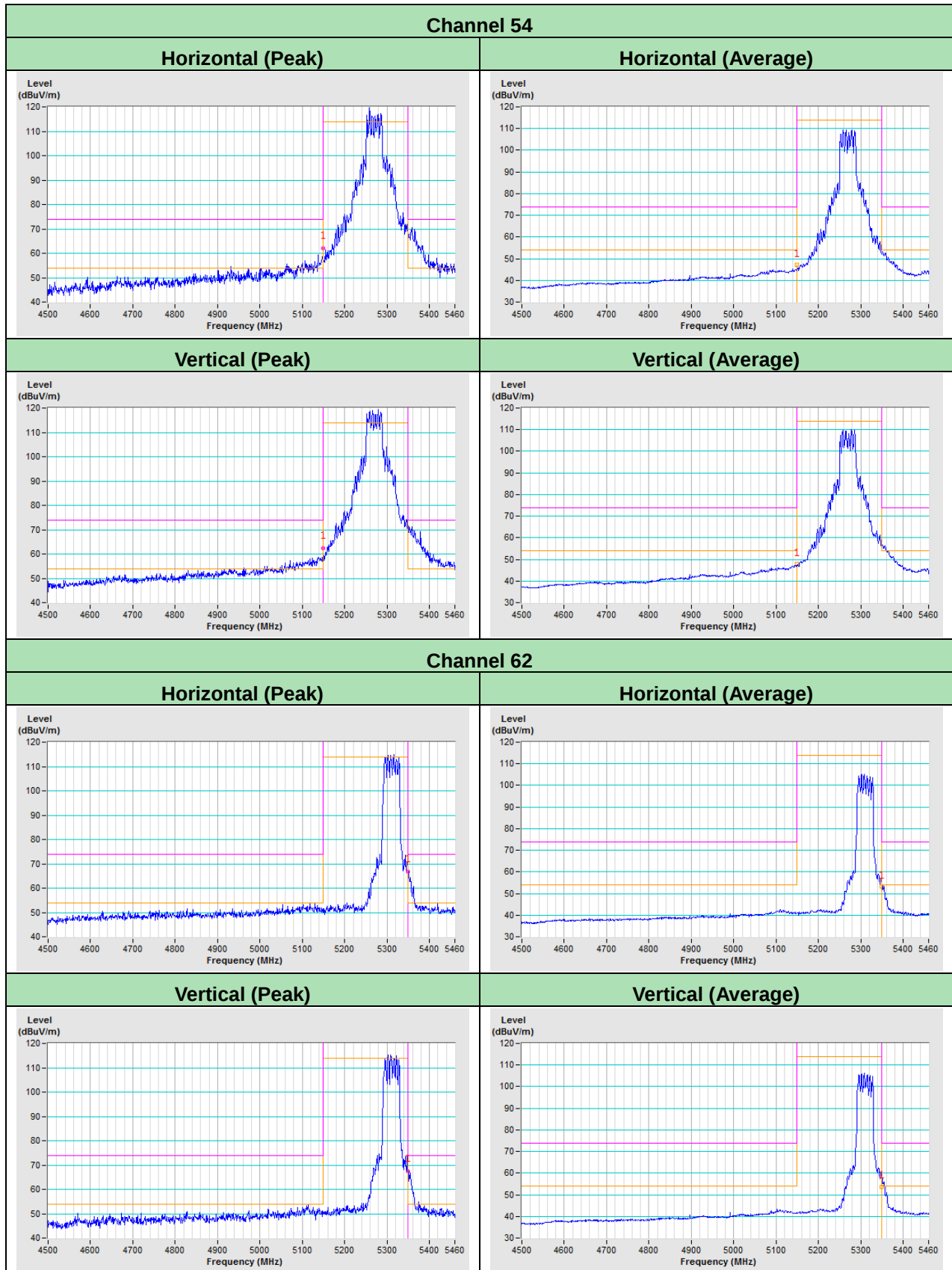


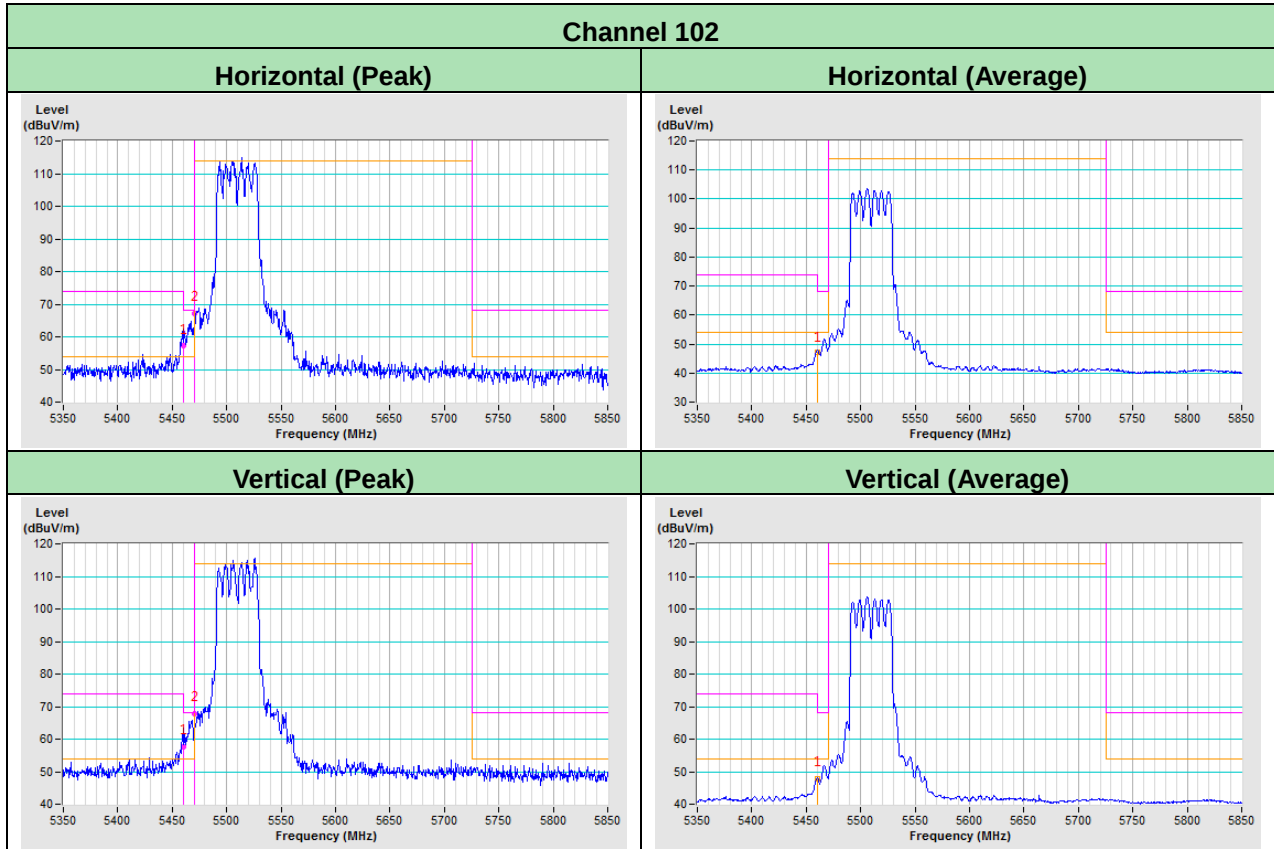
## 802.11ax (HE20)



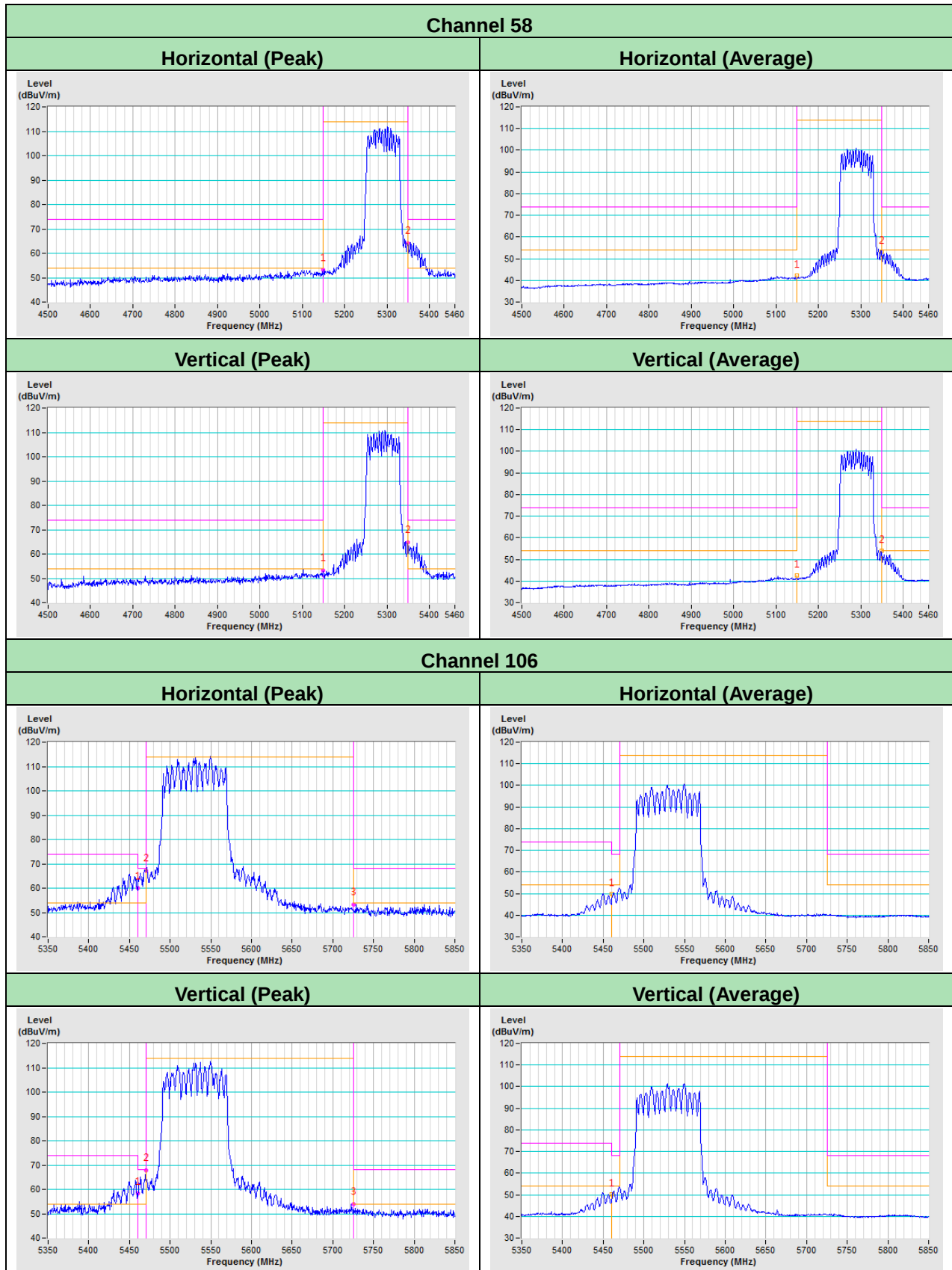


## 802.11ax (HE40)



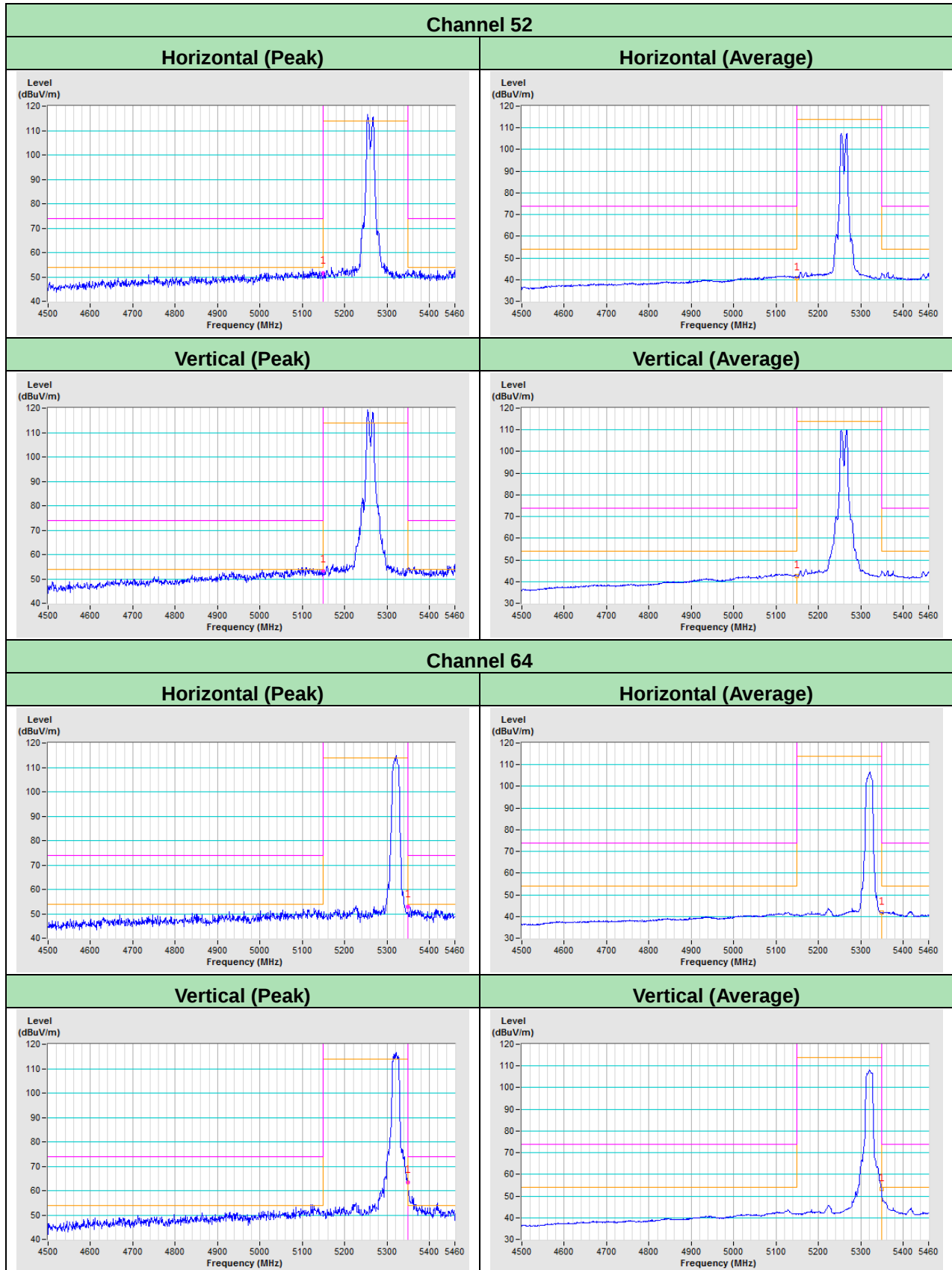


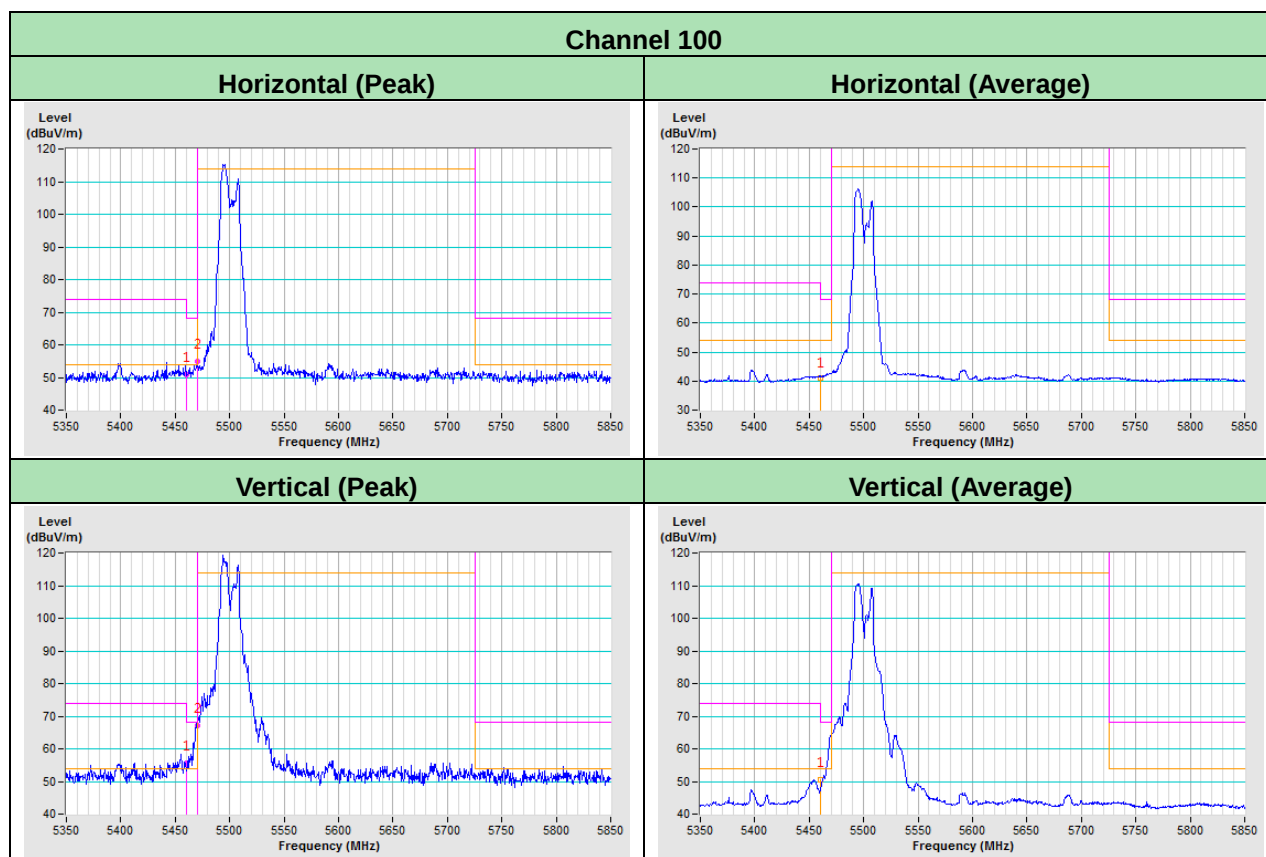
## 802.11ax (HE80)



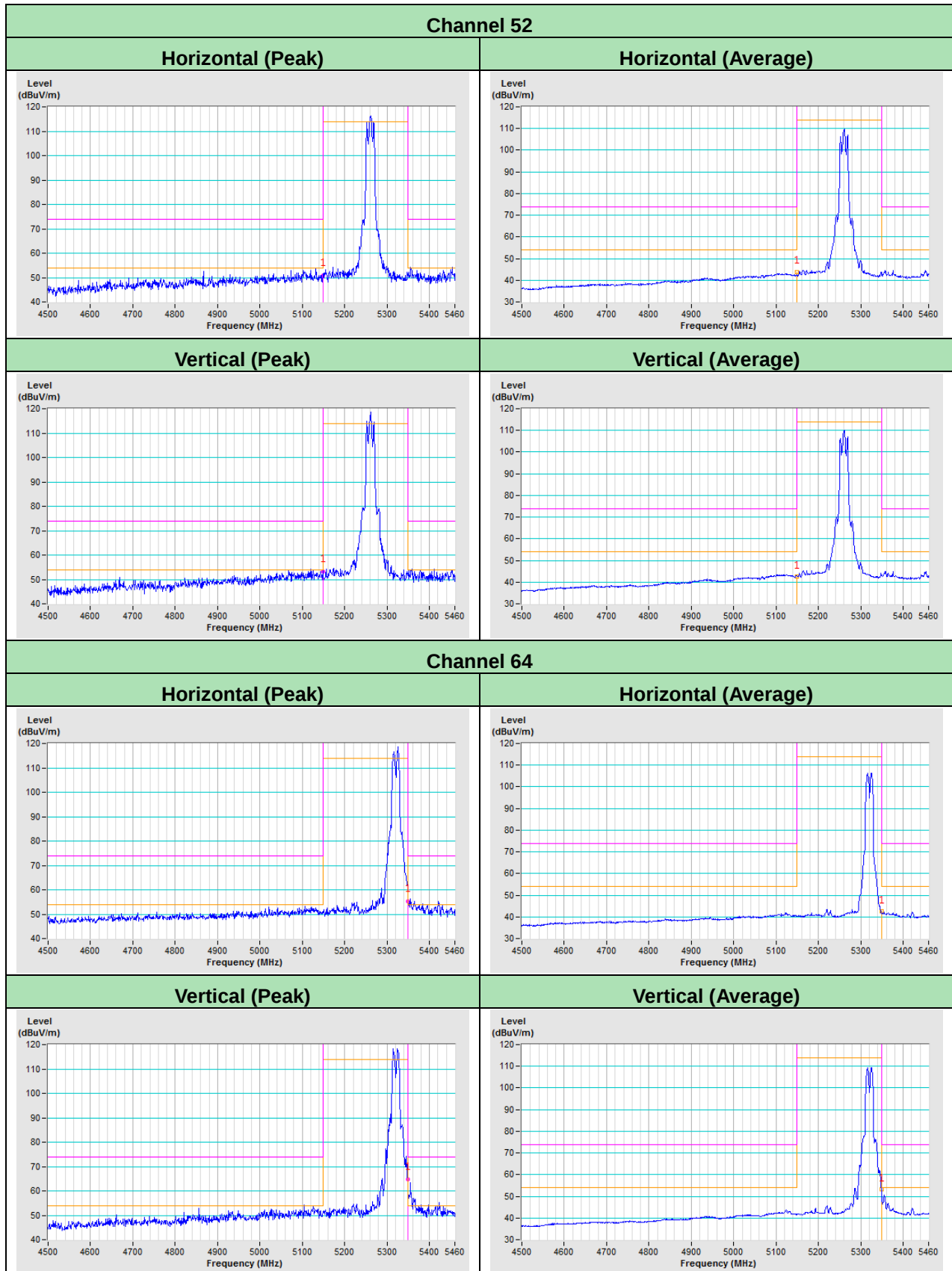
## Annex A.2 - Test Results (Mode 2)

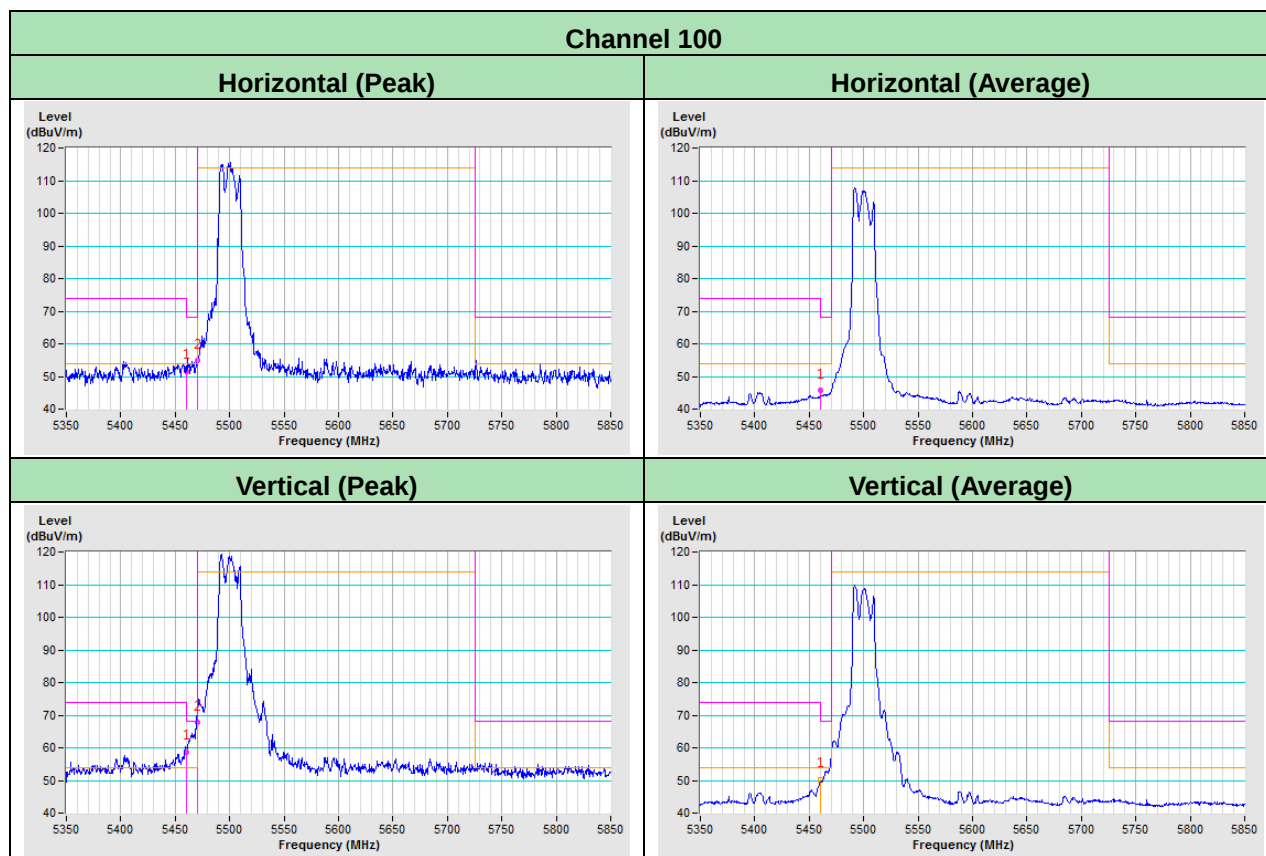
### 802.11a



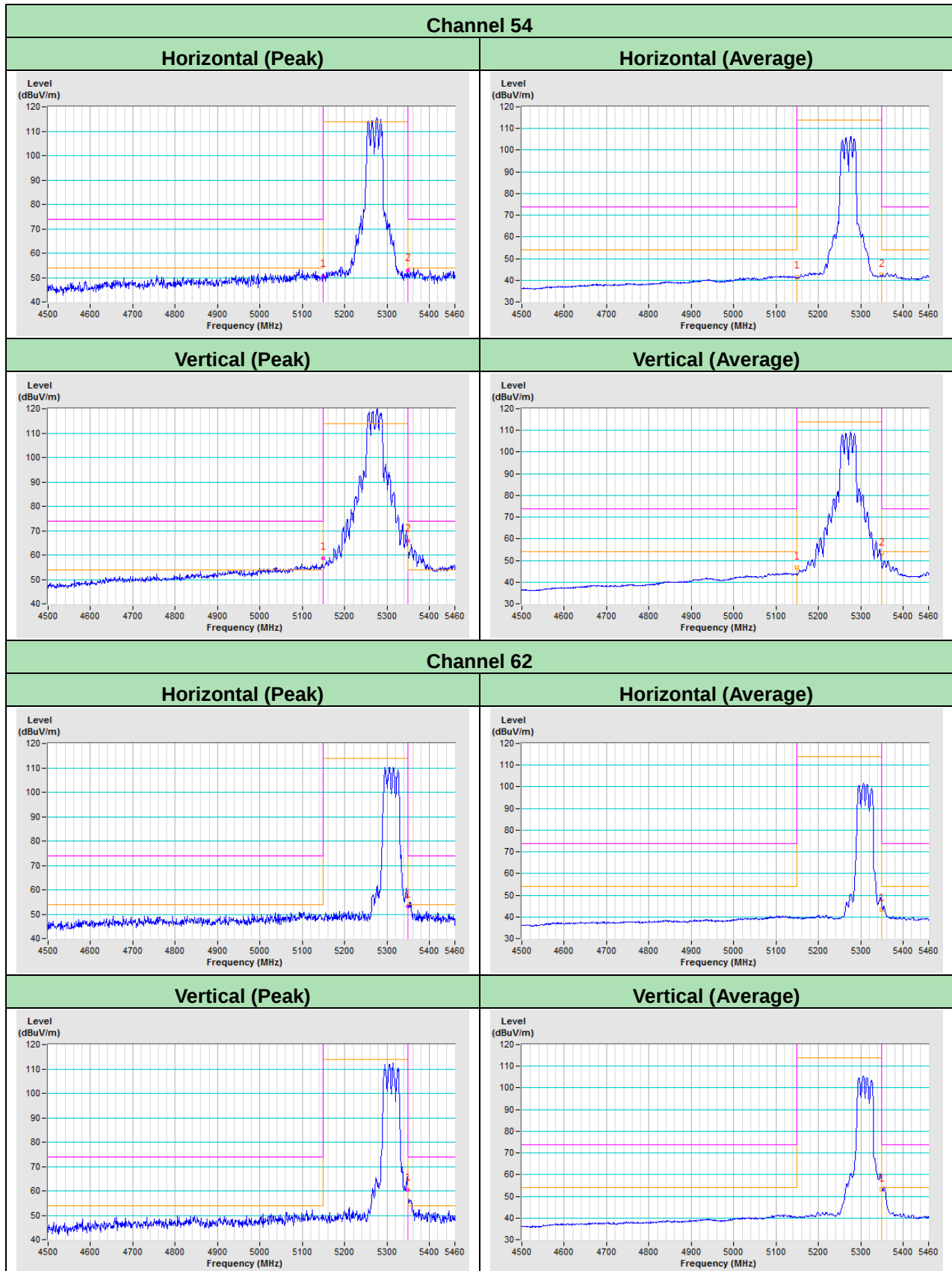


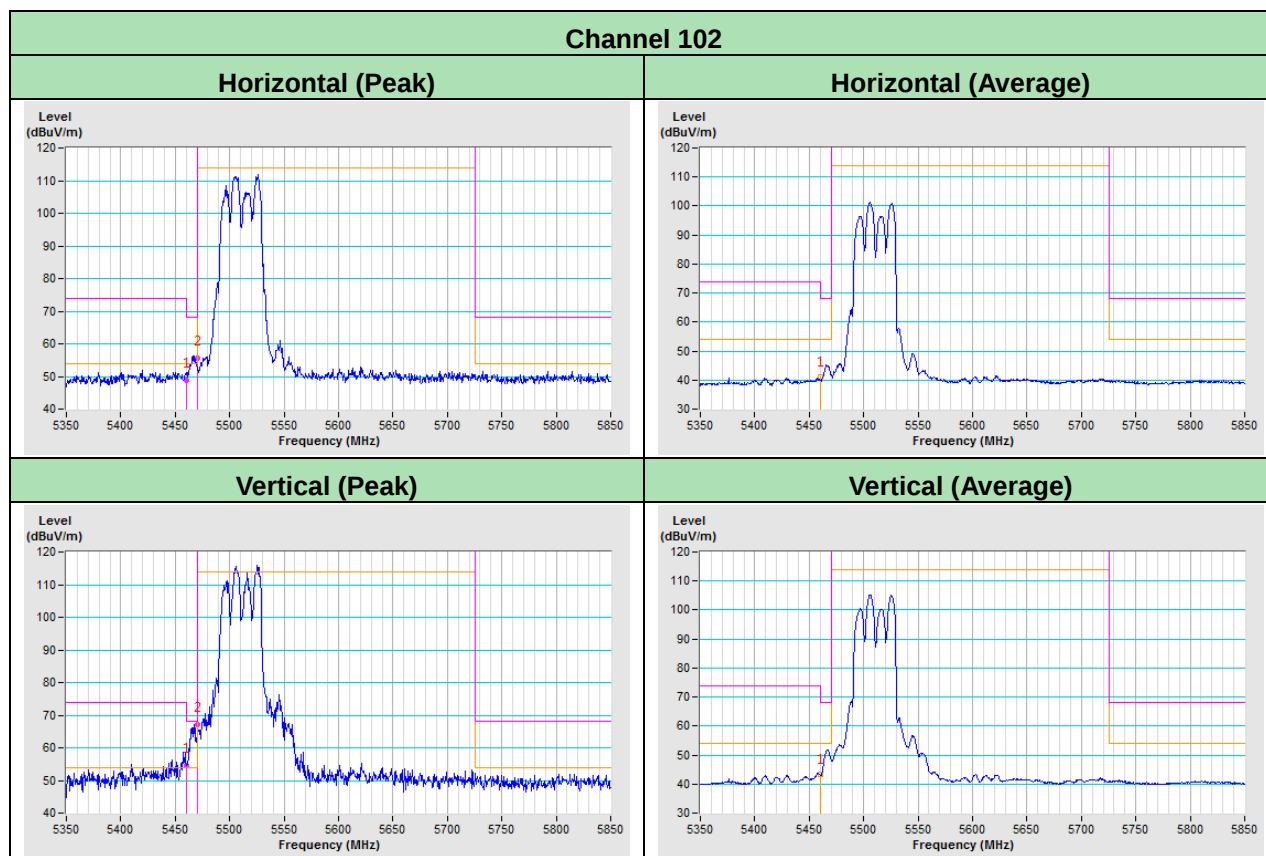
## 802.11ax (HE20)



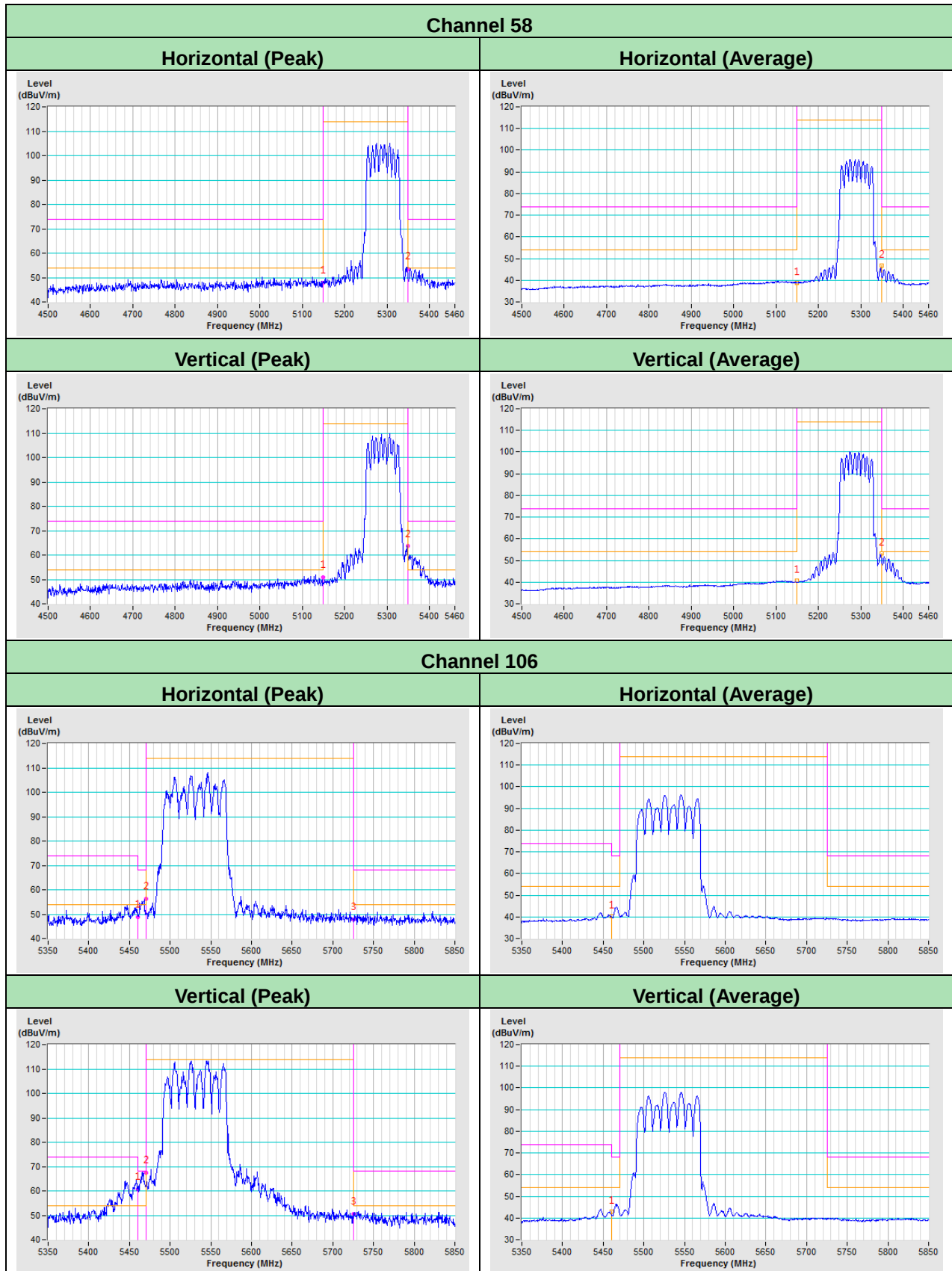


## 802.11ax (HE40)



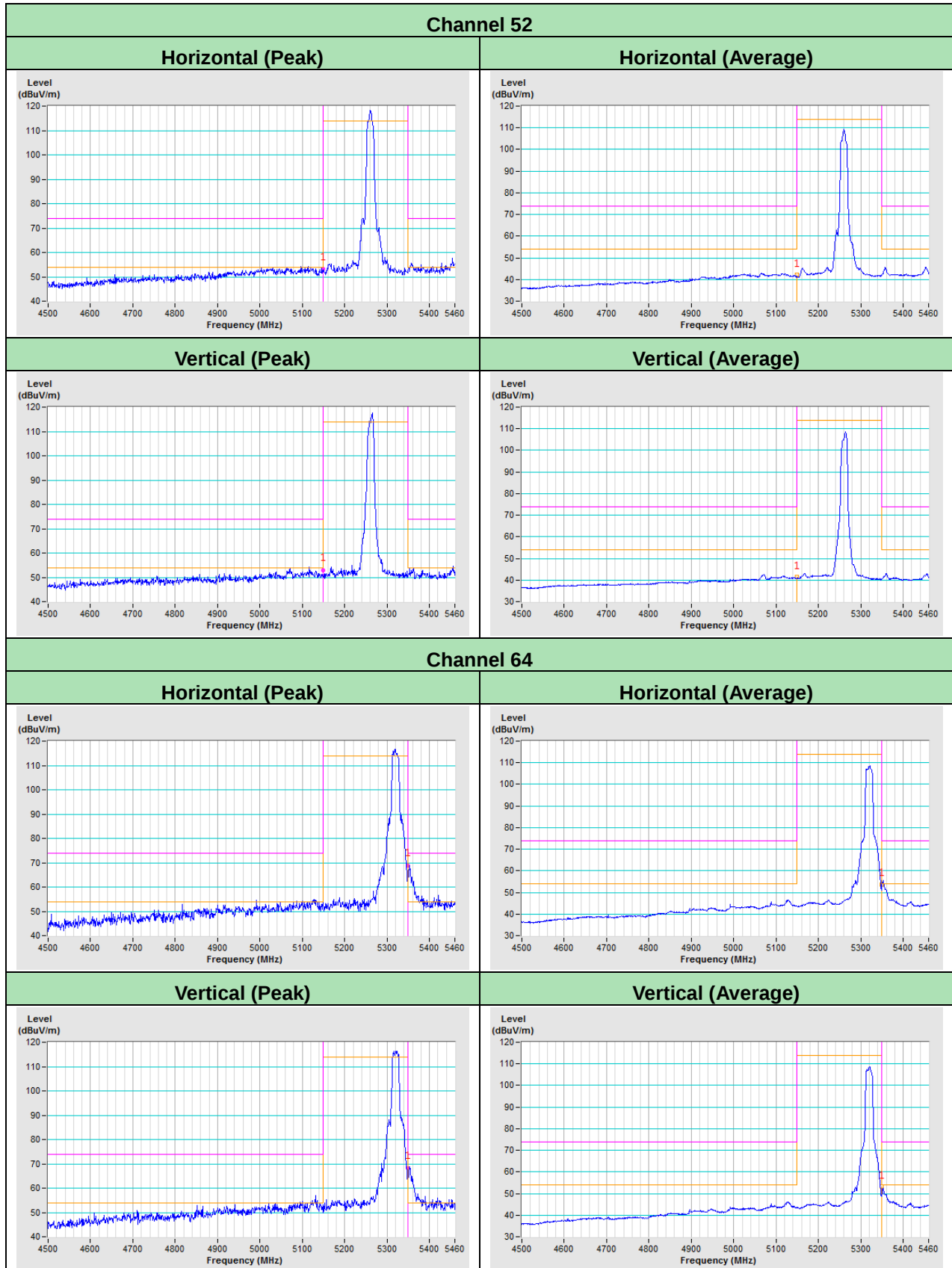


## 802.11ax (HE80)



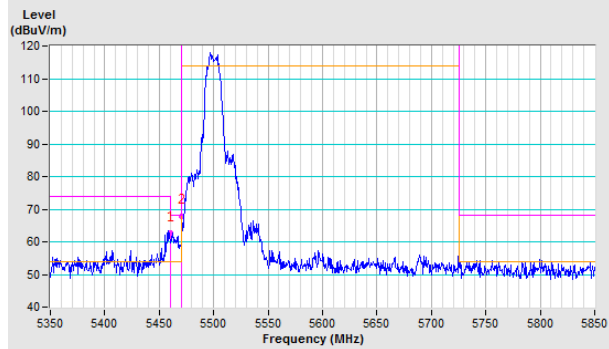
## Annex A.3 - Test Results (Mode 3)

### 802.11a

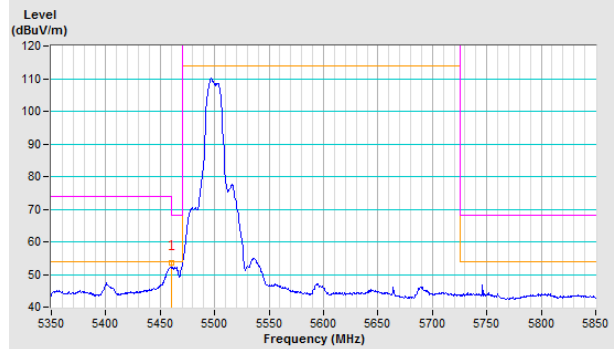


### Channel 100

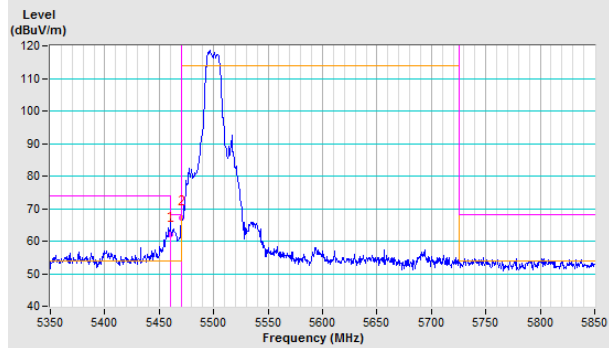
#### Horizontal (Peak)



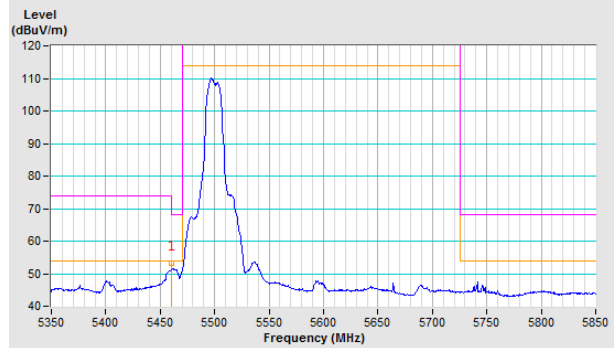
#### Horizontal (Average)



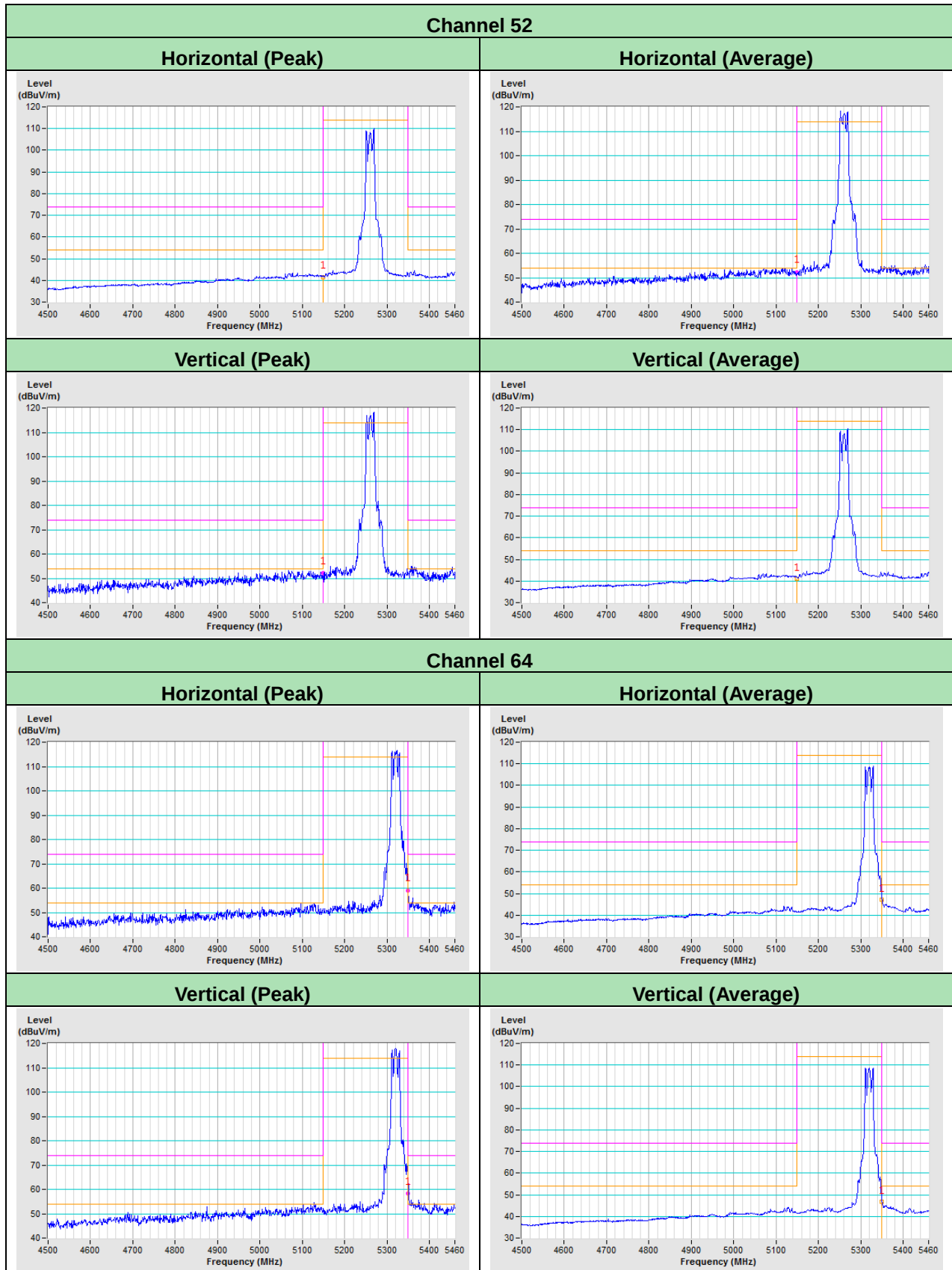
#### Vertical (Peak)

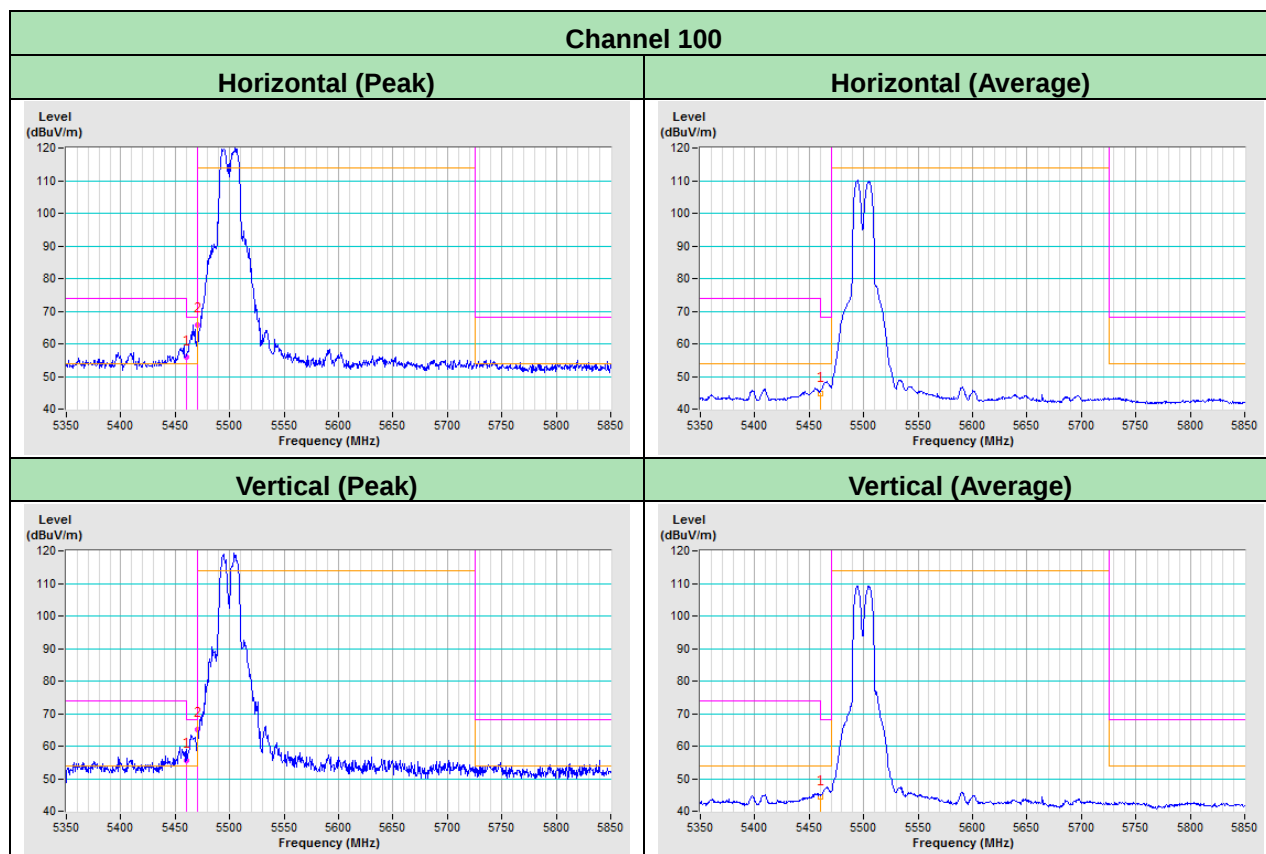


#### Vertical (Average)

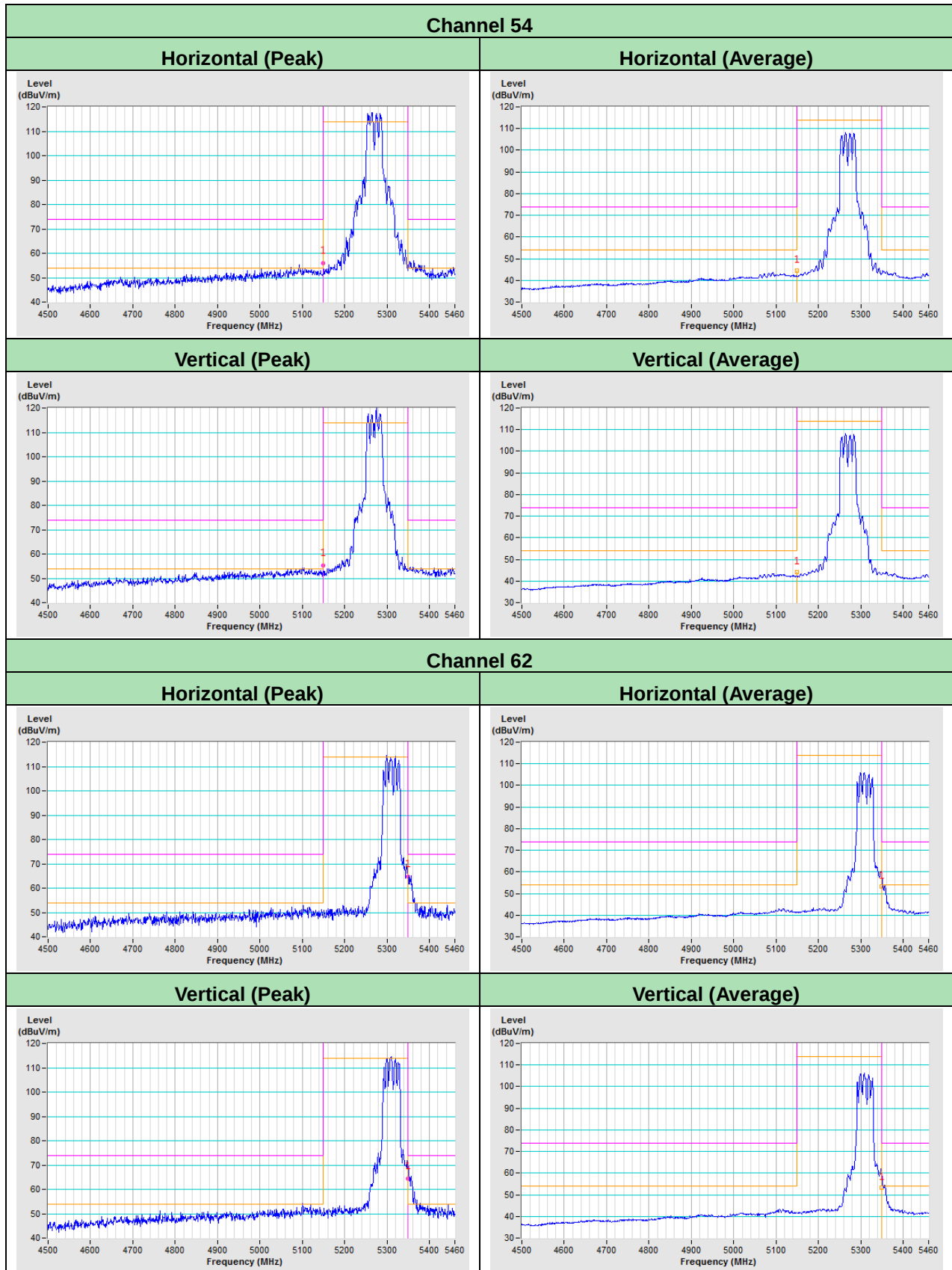


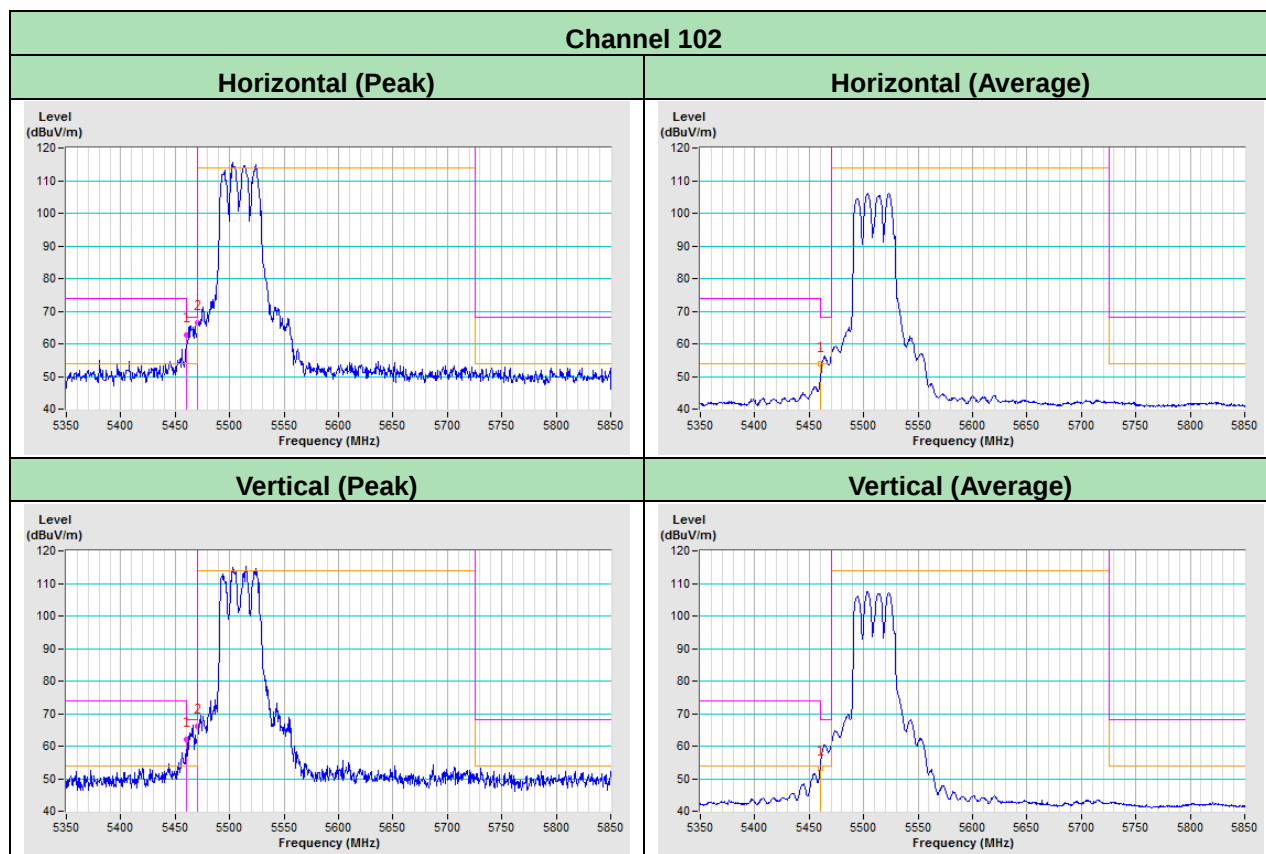
## 802.11ax (HE20)



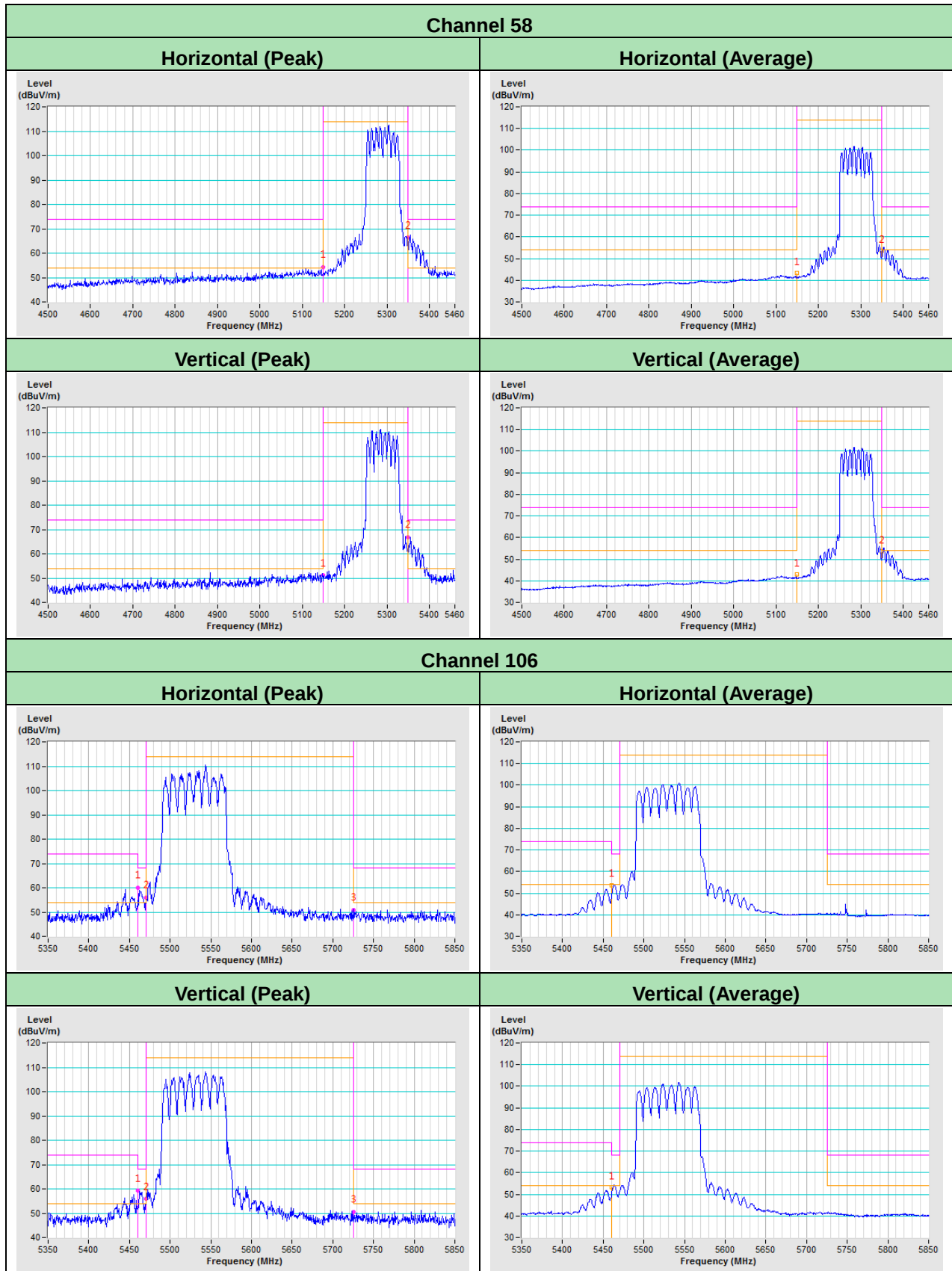


## 802.11ax (HE40)



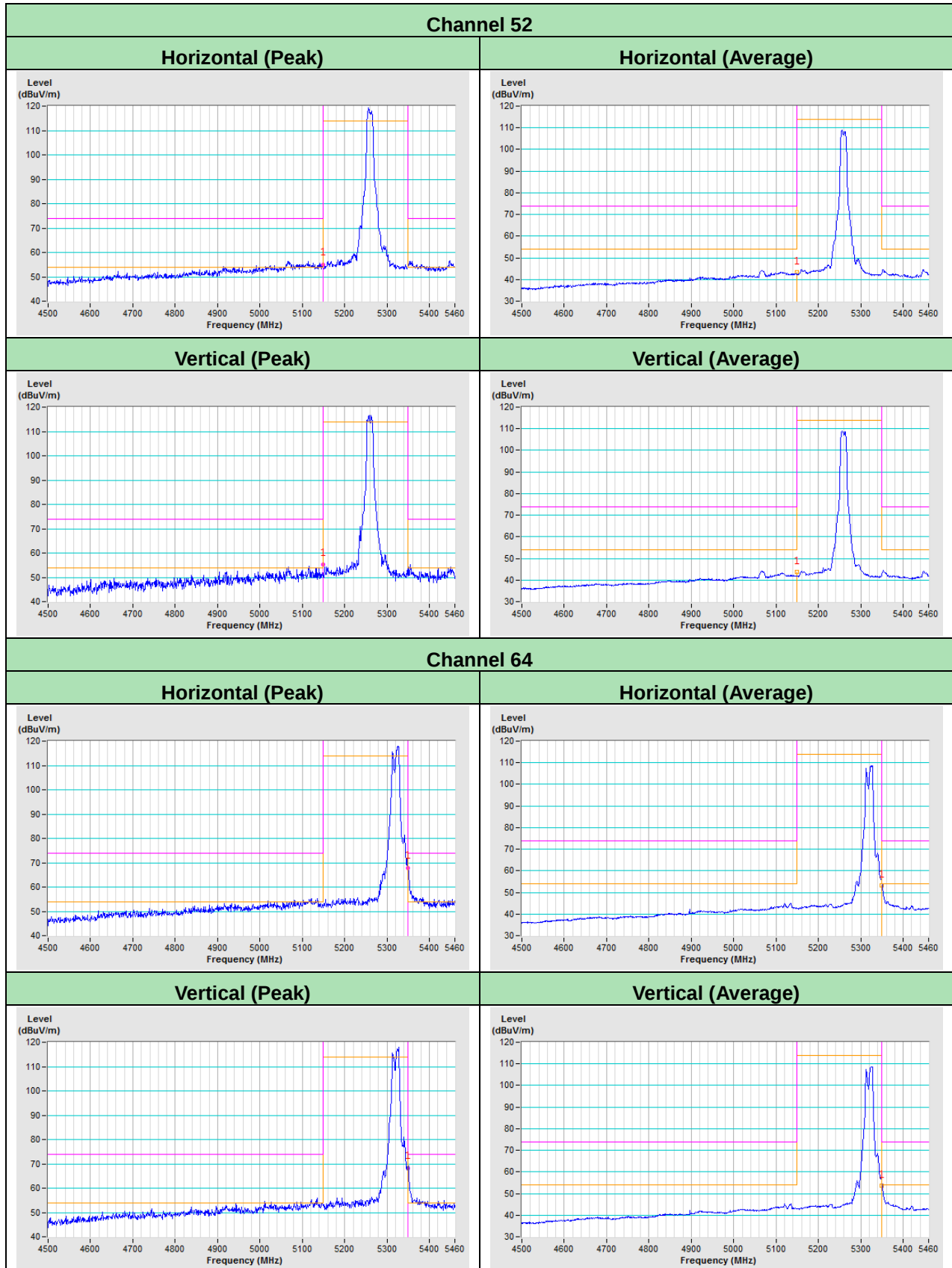


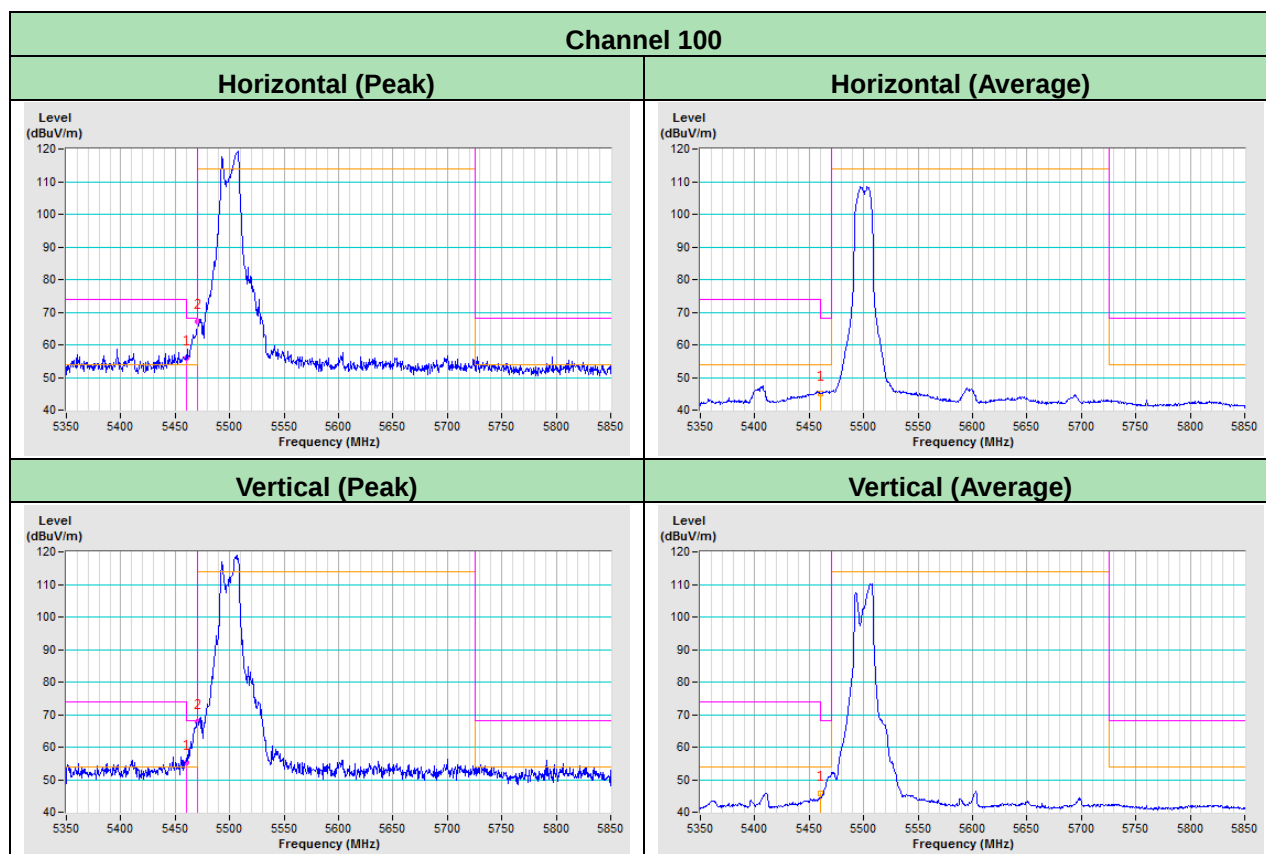
## 802.11ax (HE80)



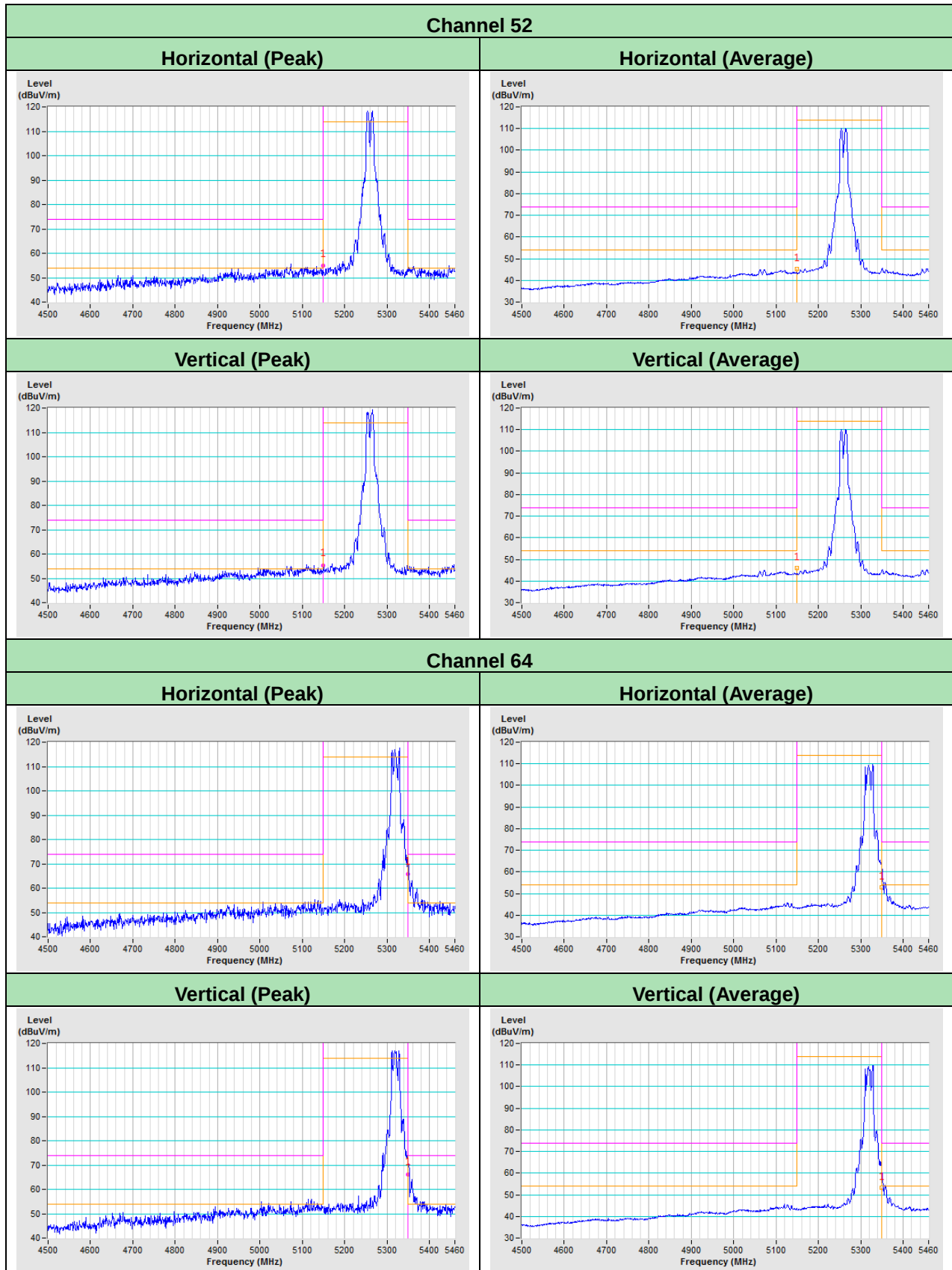
## Annex A.4 - Test Results (Mode 4)

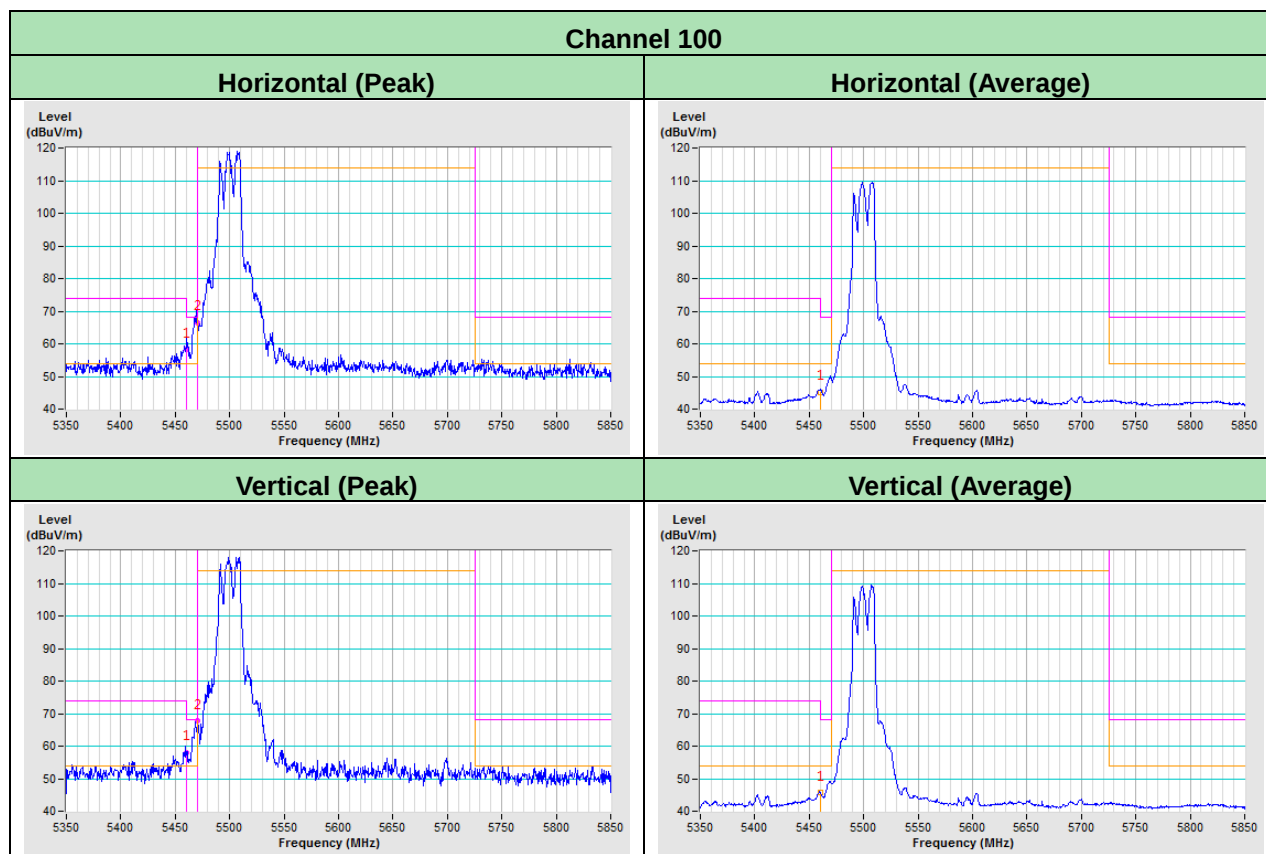
### 802.11a



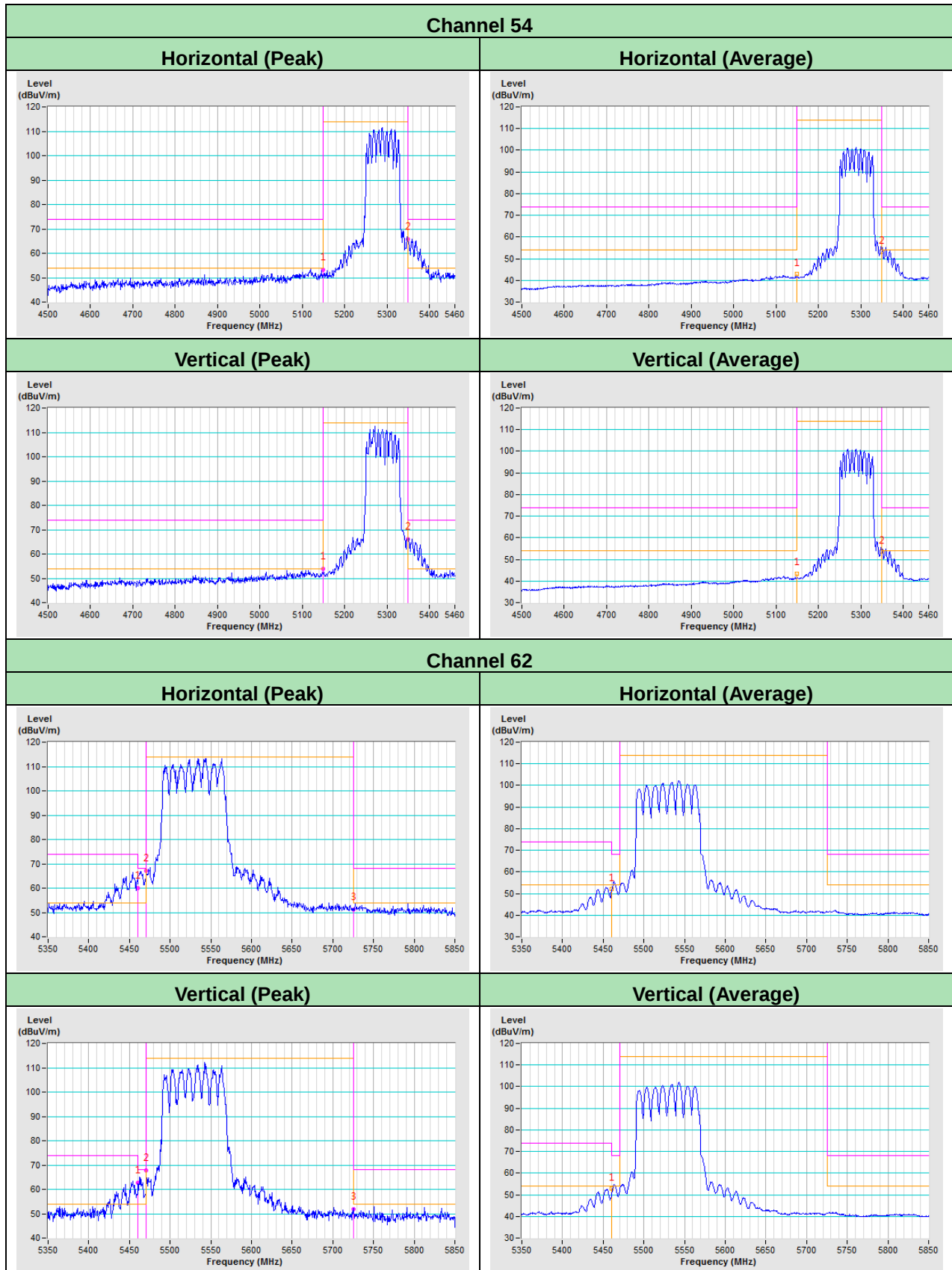


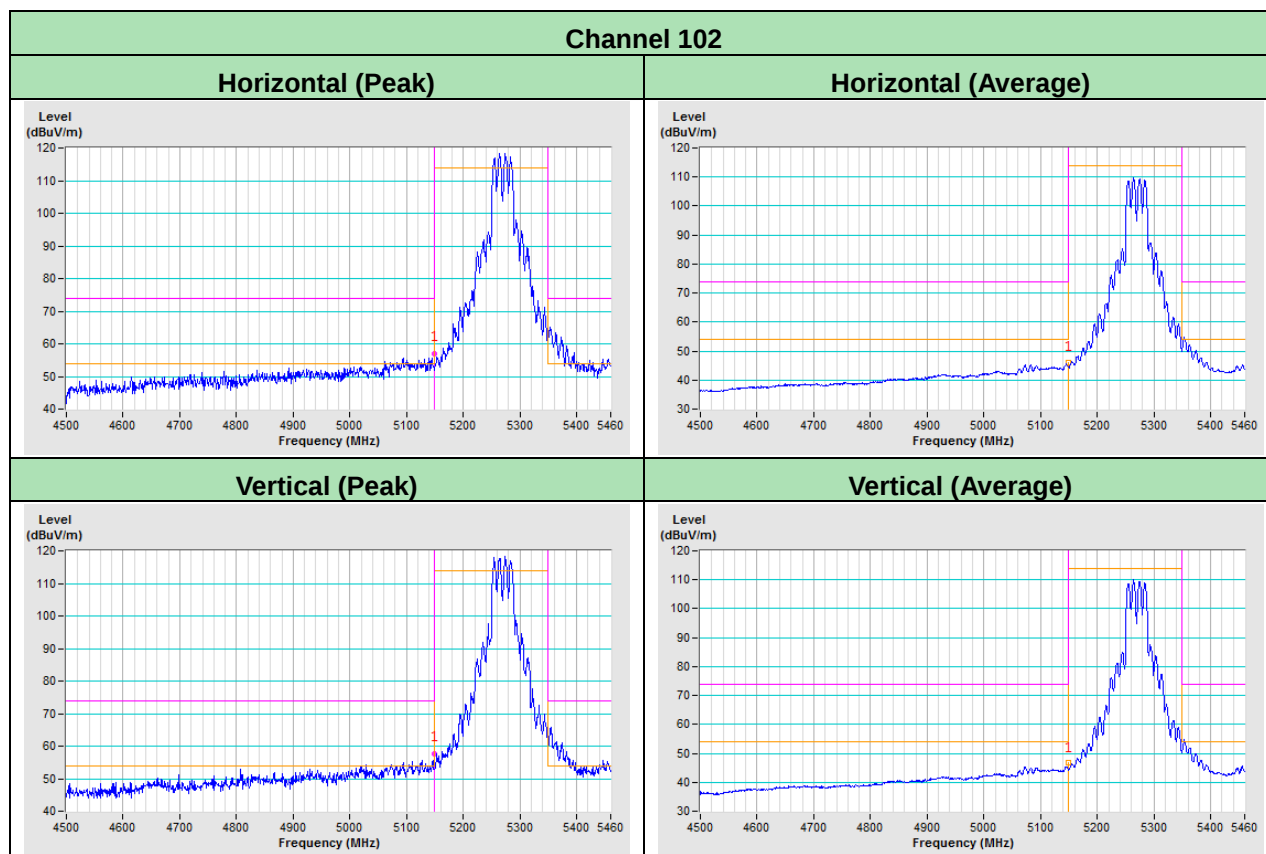
## 802.11ax (HE20)



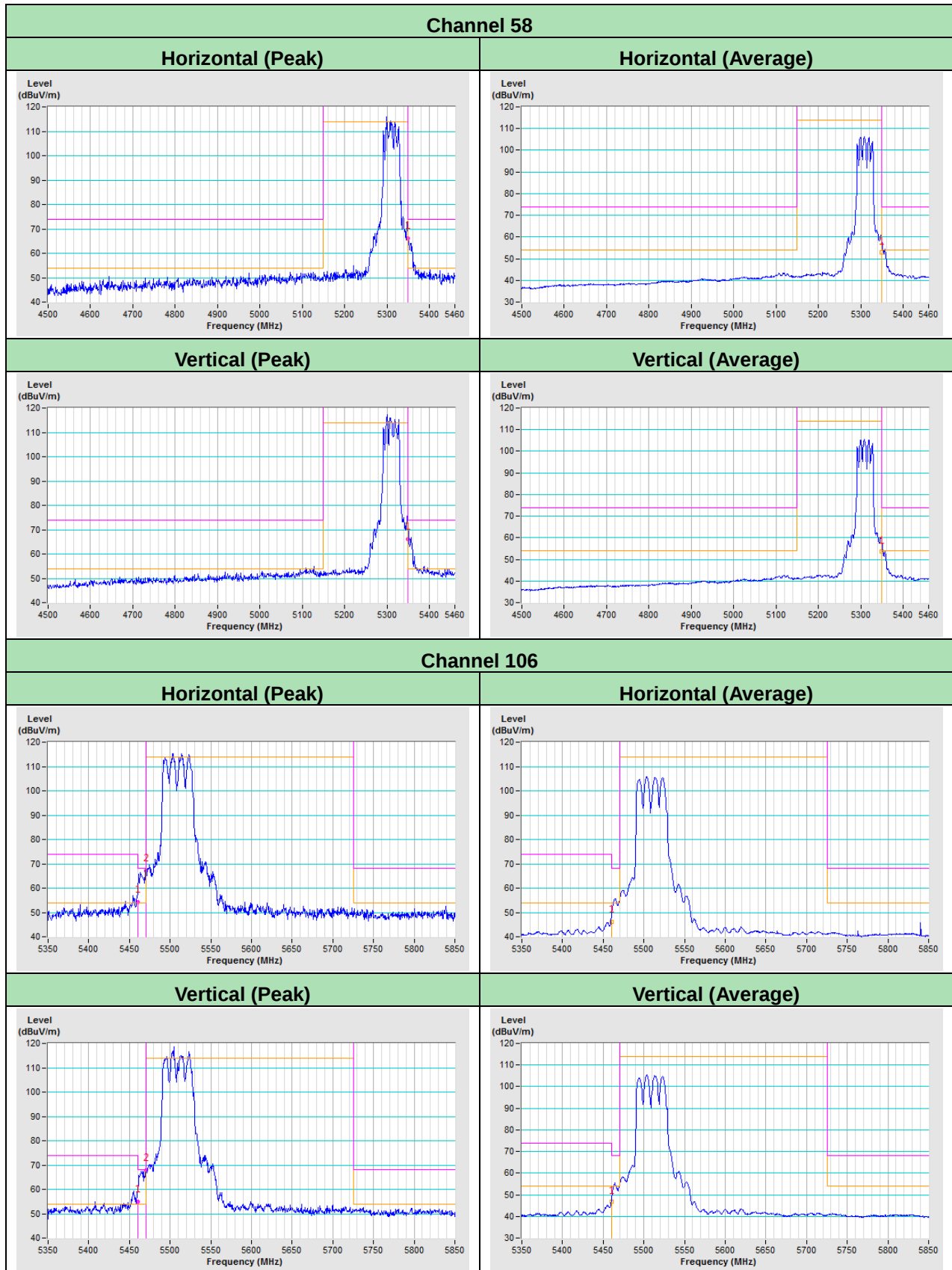


## 802.11ax (HE40)





## 802.11ax (HE80)



## Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Lin Kou EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

--- END ---