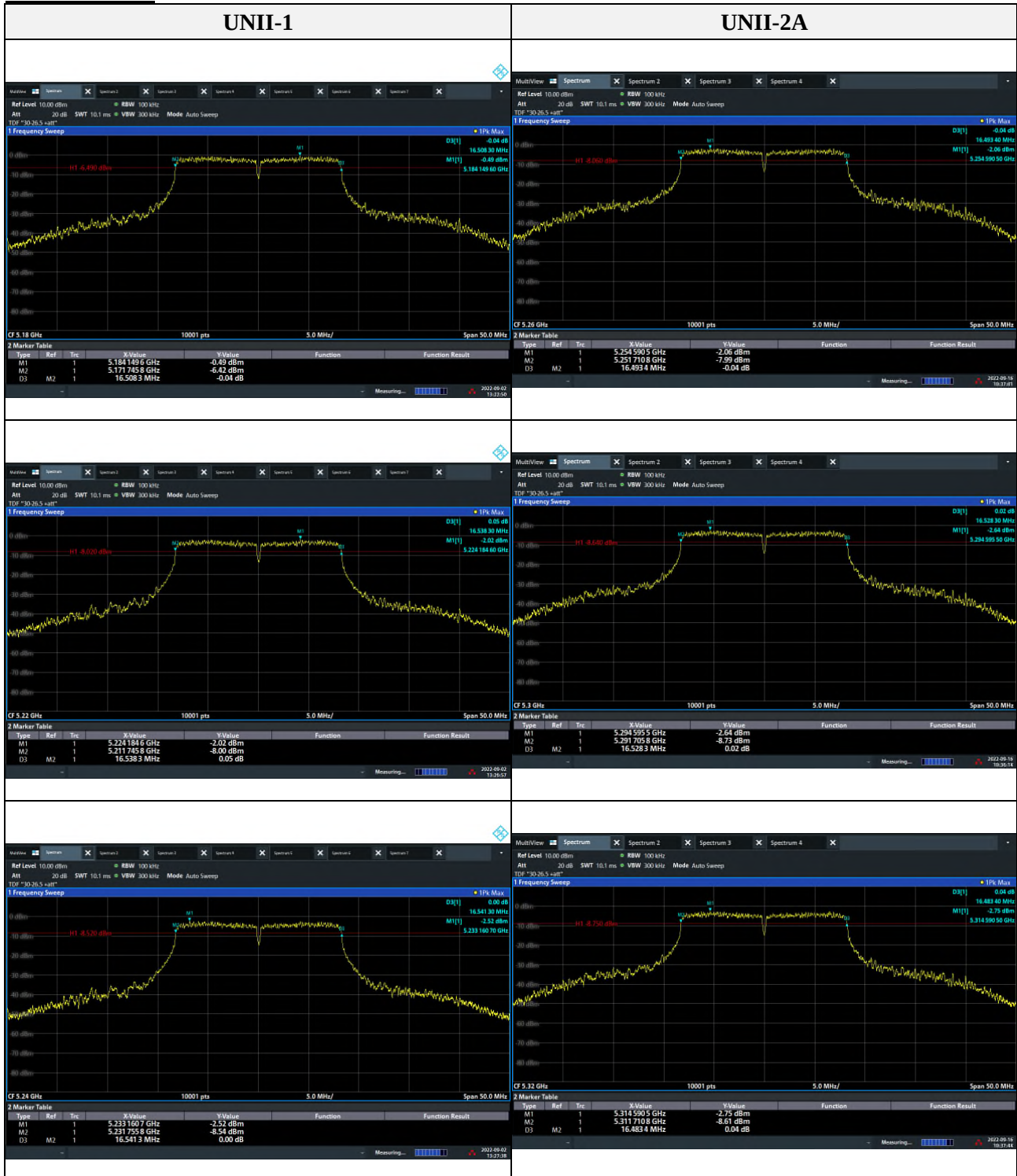
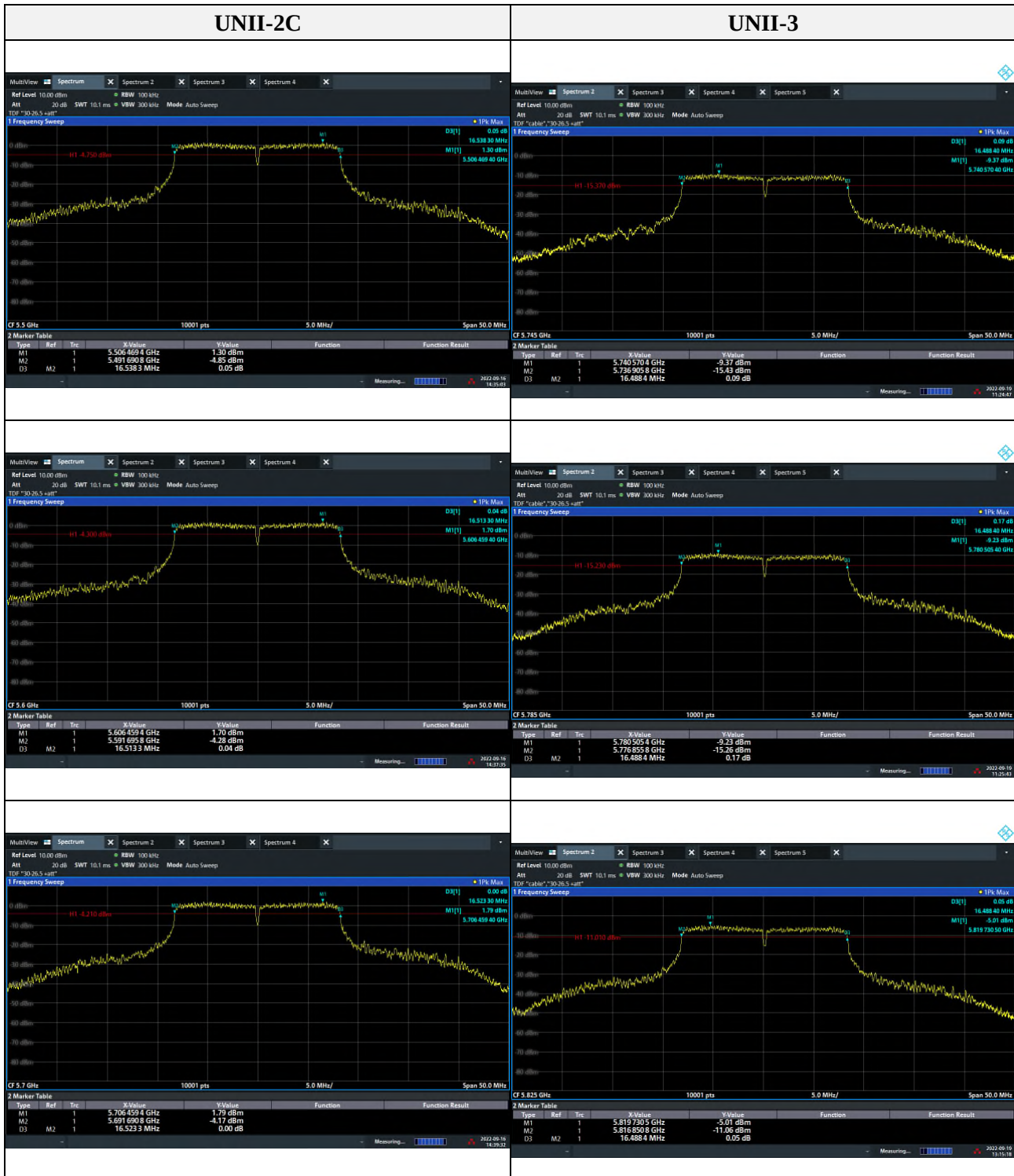


## ANT1

Mode : 802.11a

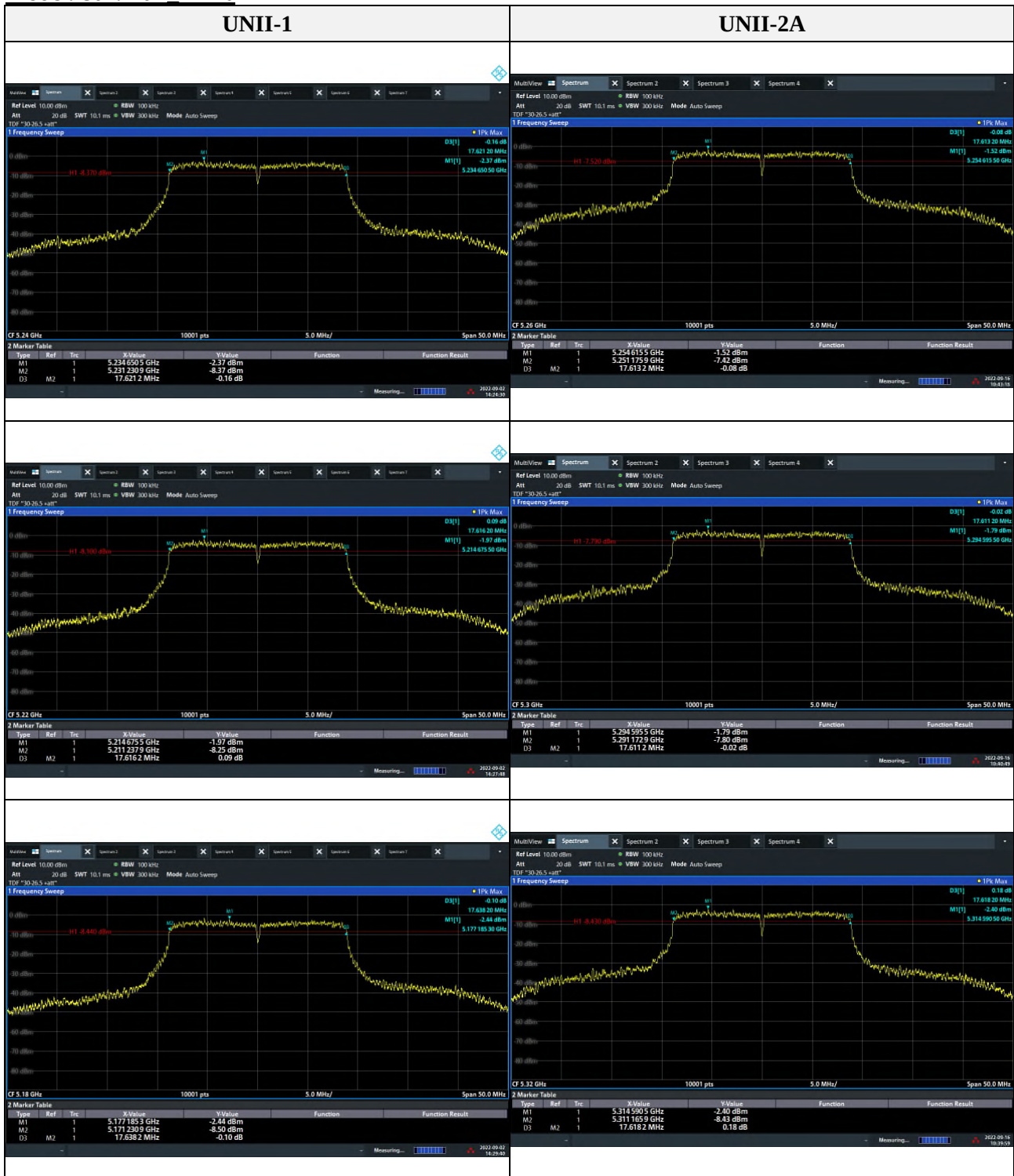


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



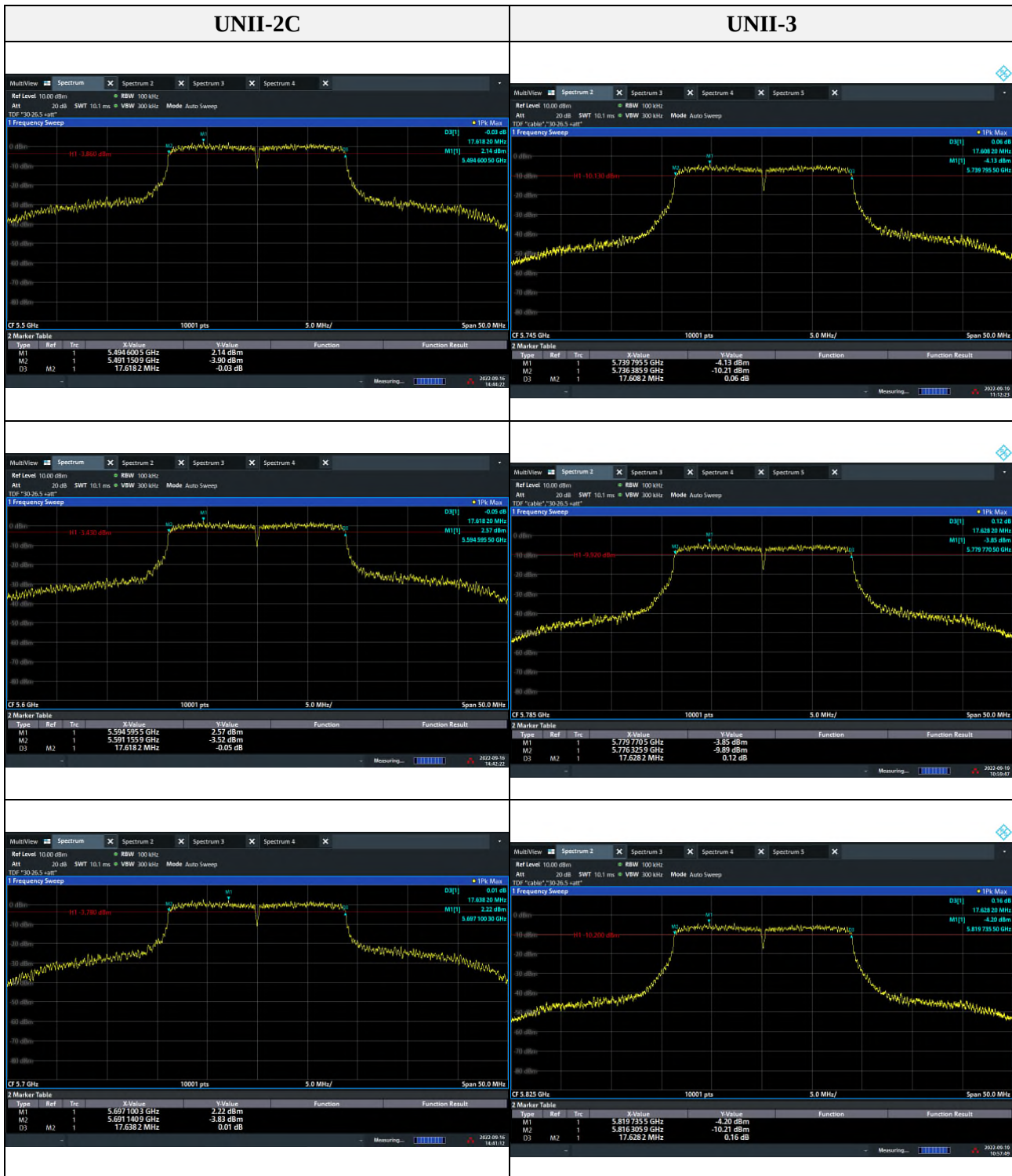
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

## Mode : 802.11an HT20



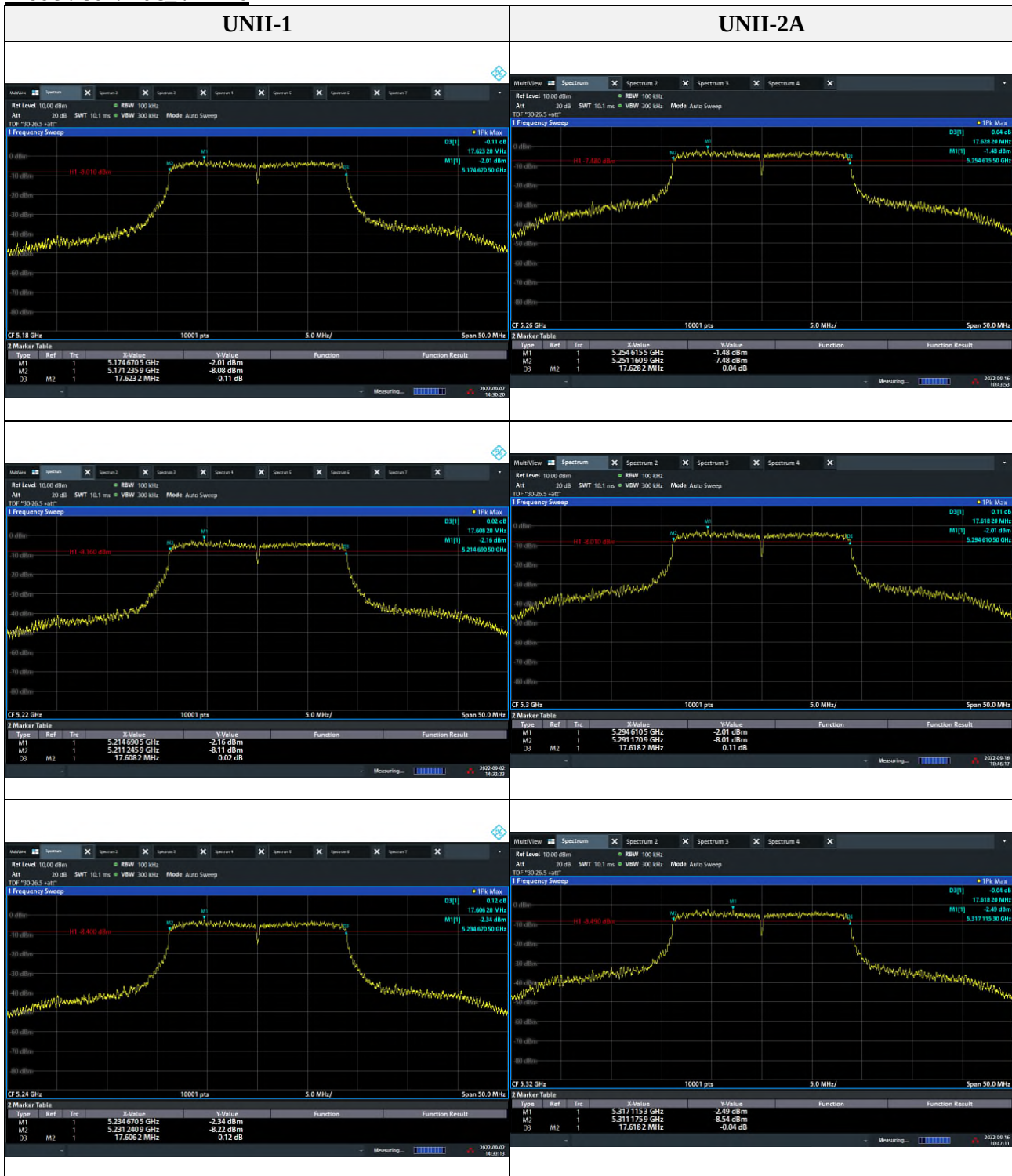
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



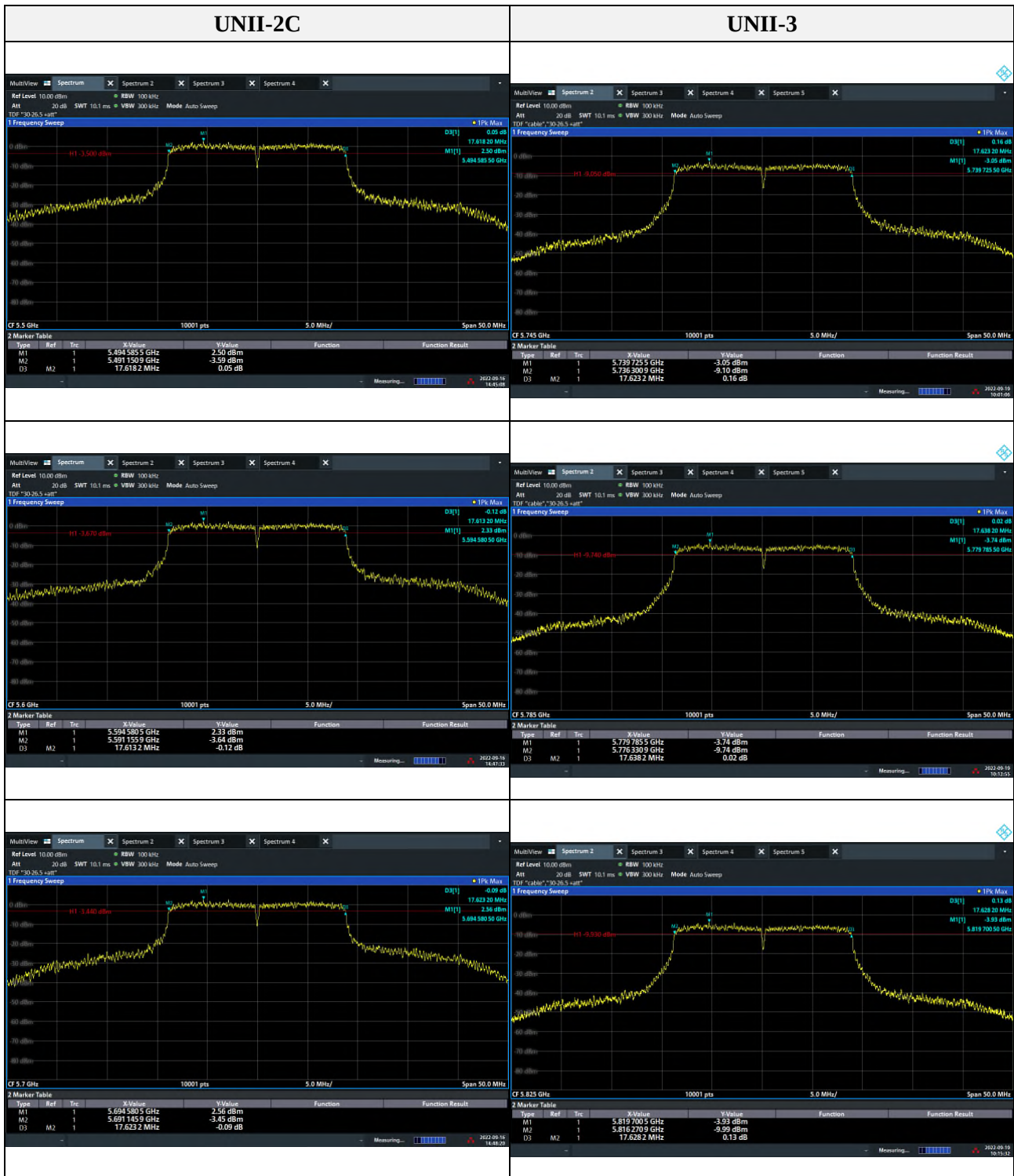


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11ac VHT20**



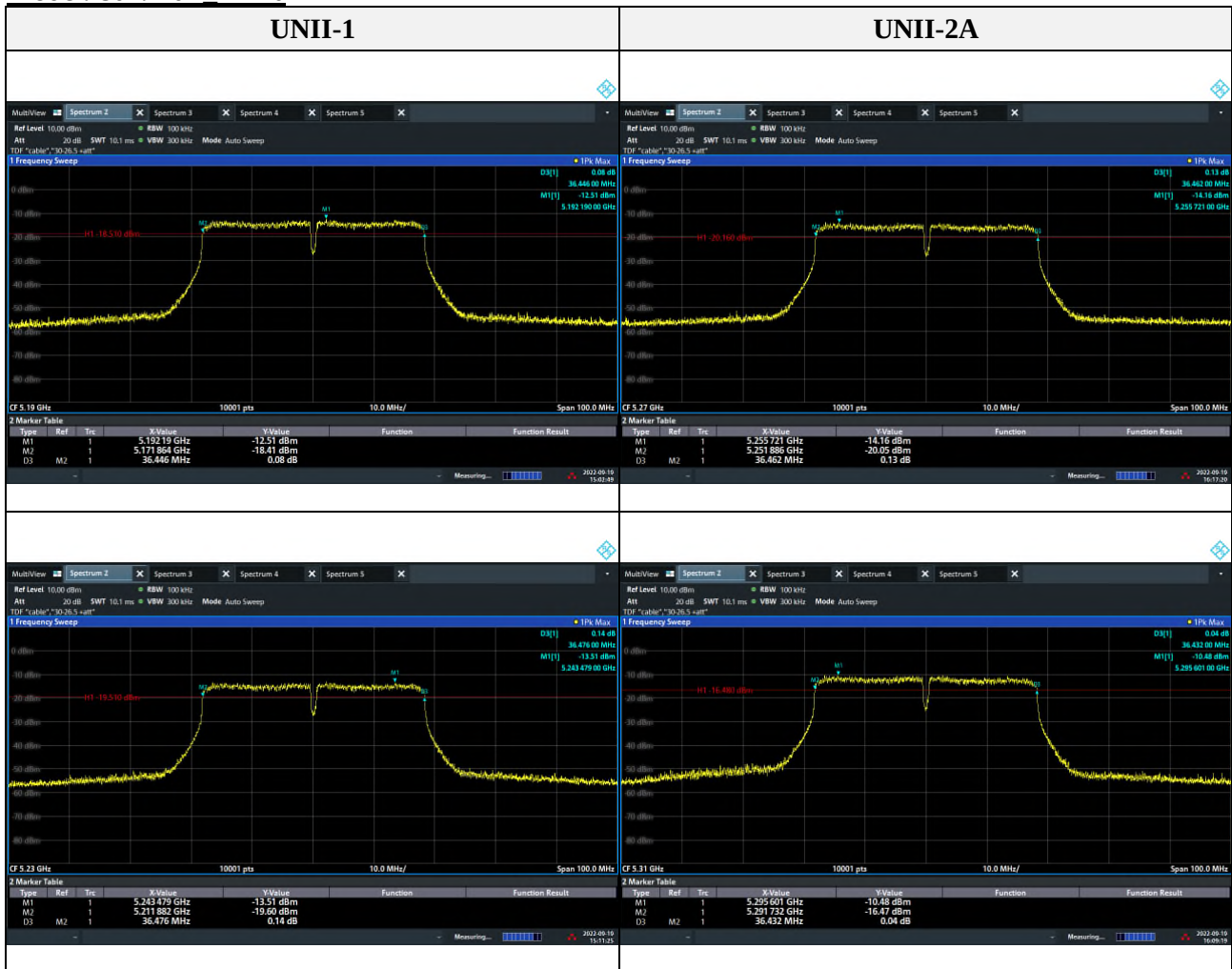
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



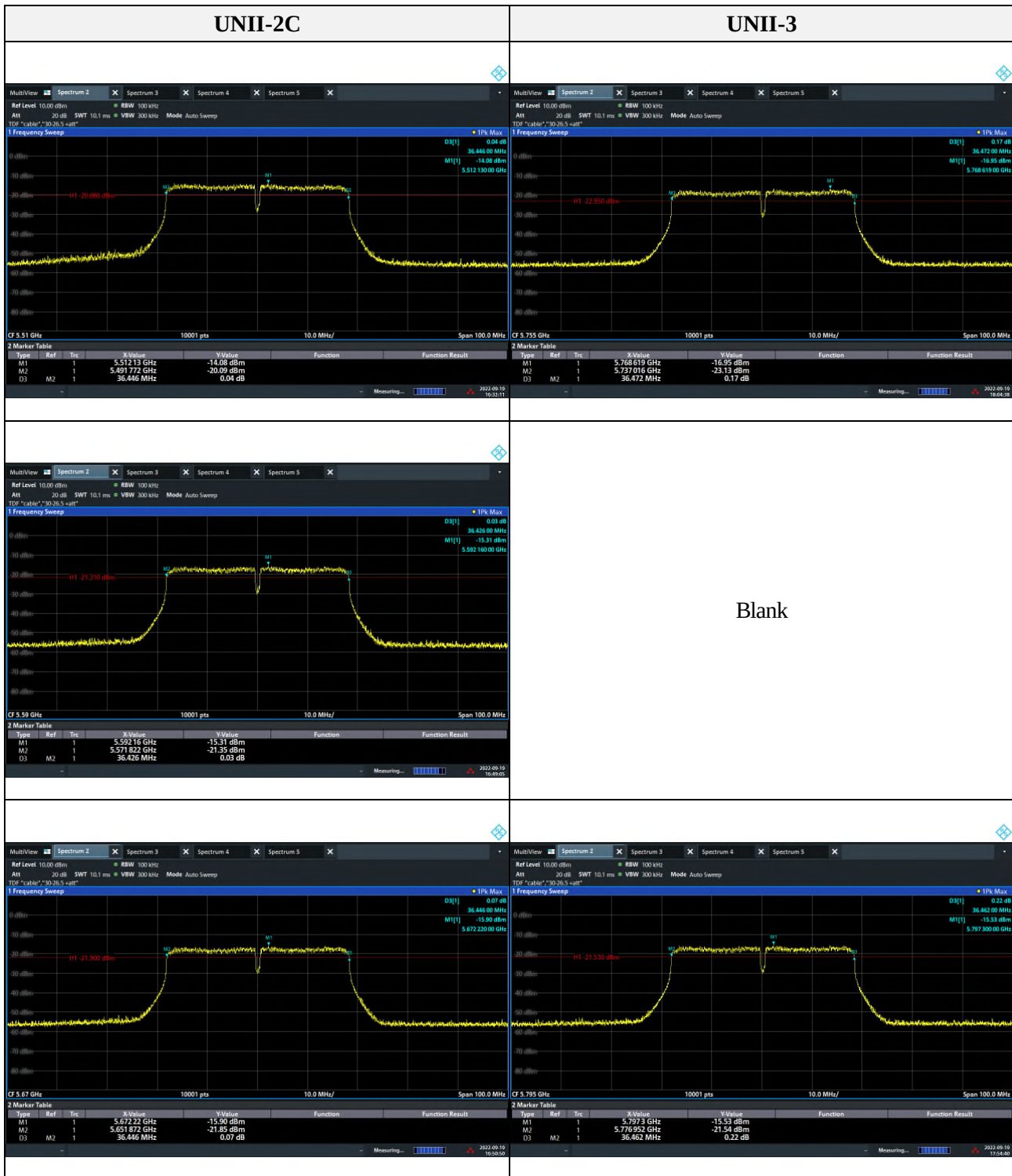
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



**Mode : 802.11an HT40**

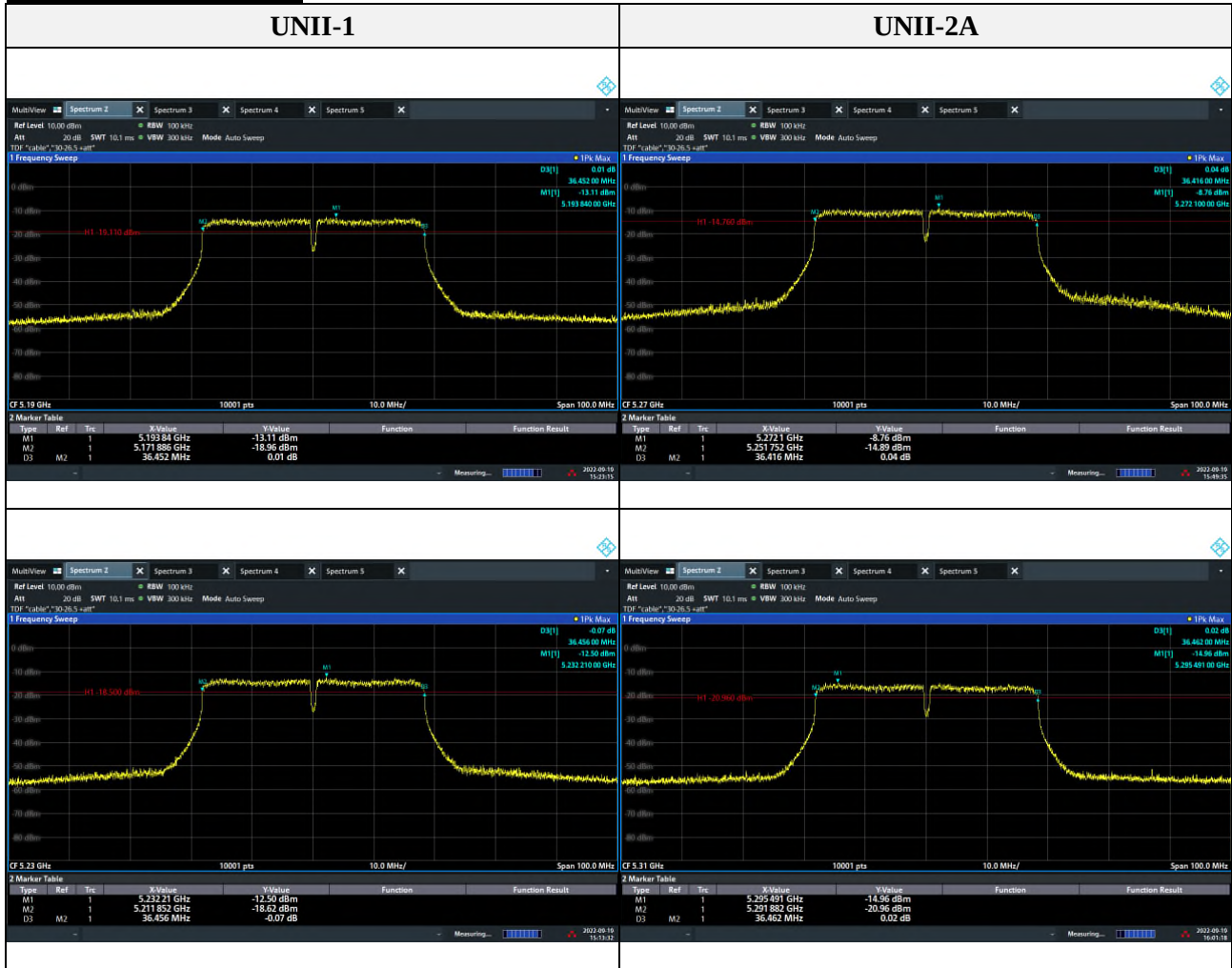


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.





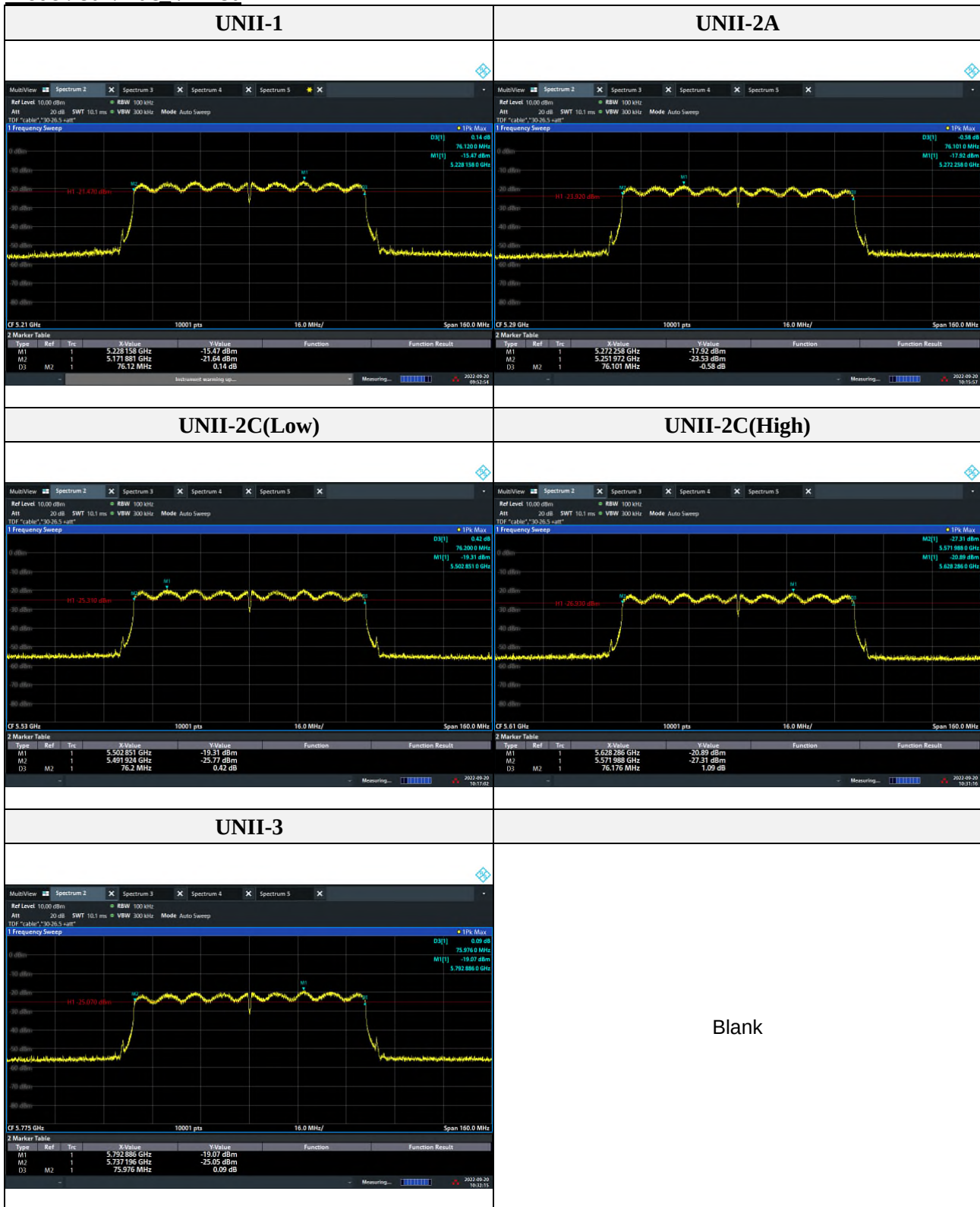
**Mode : 802.11ac VHT40**



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



## Mode : 802.11ac VHT80

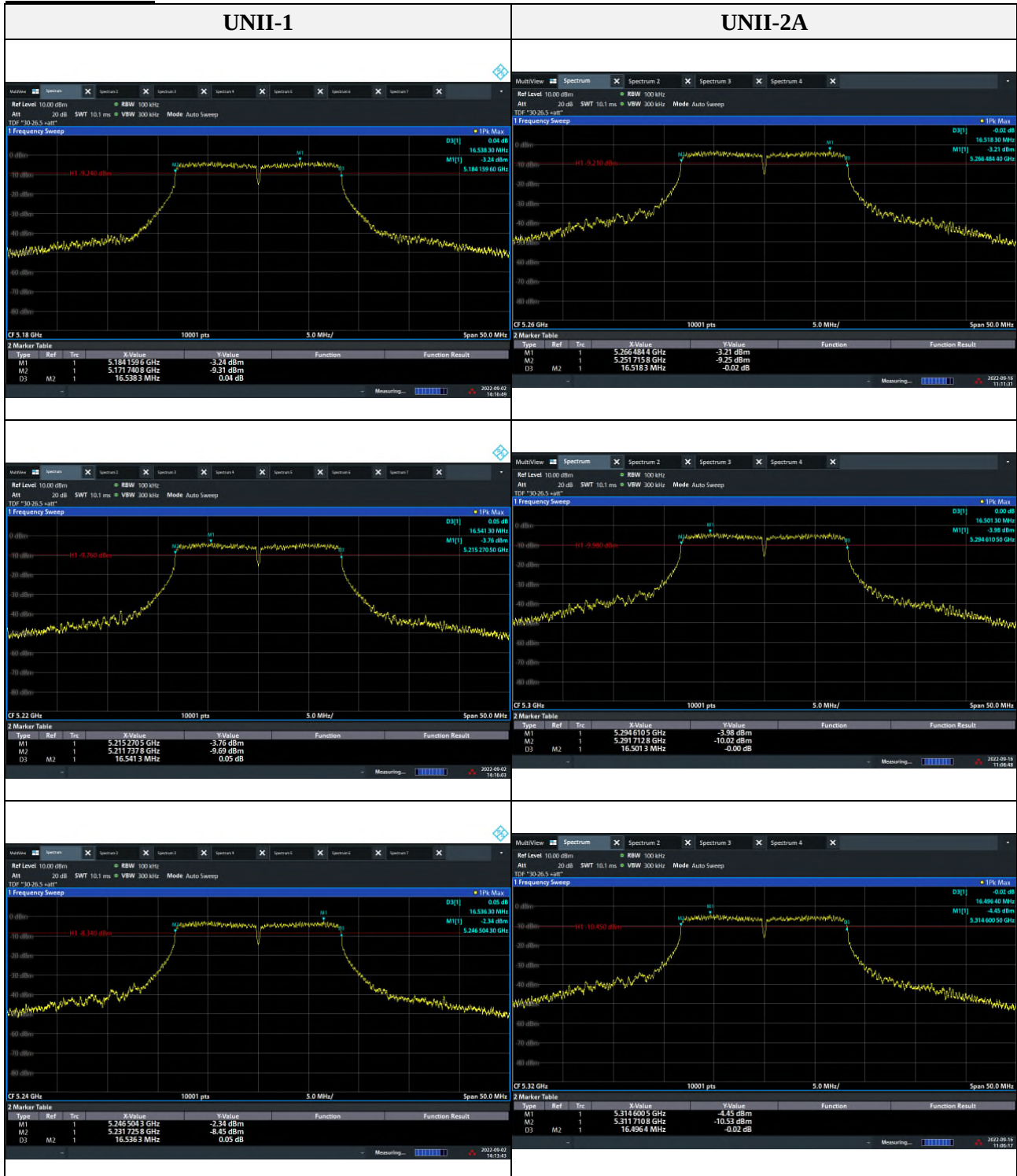


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

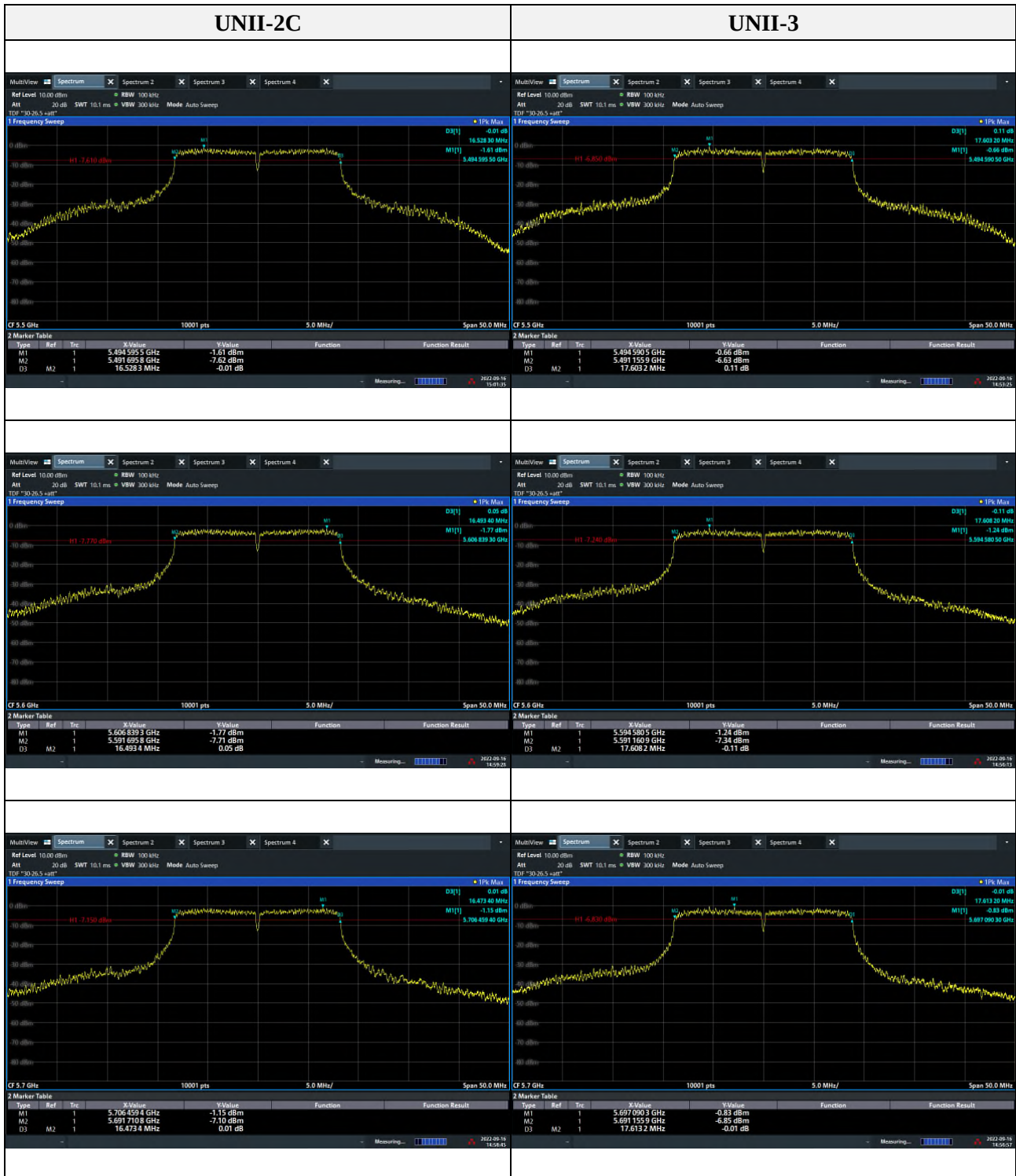


## ANT2

Mode : 802.11a

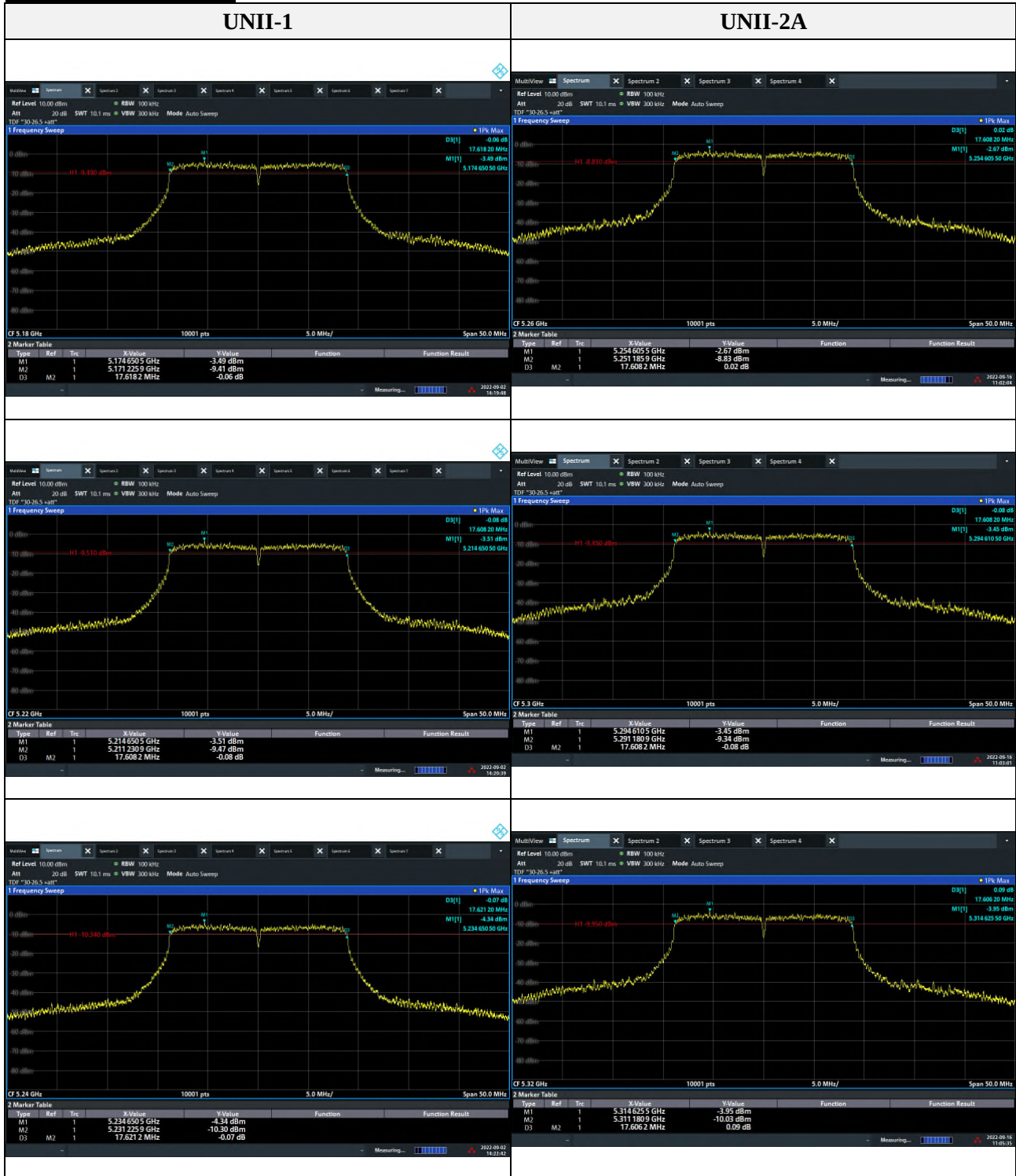


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



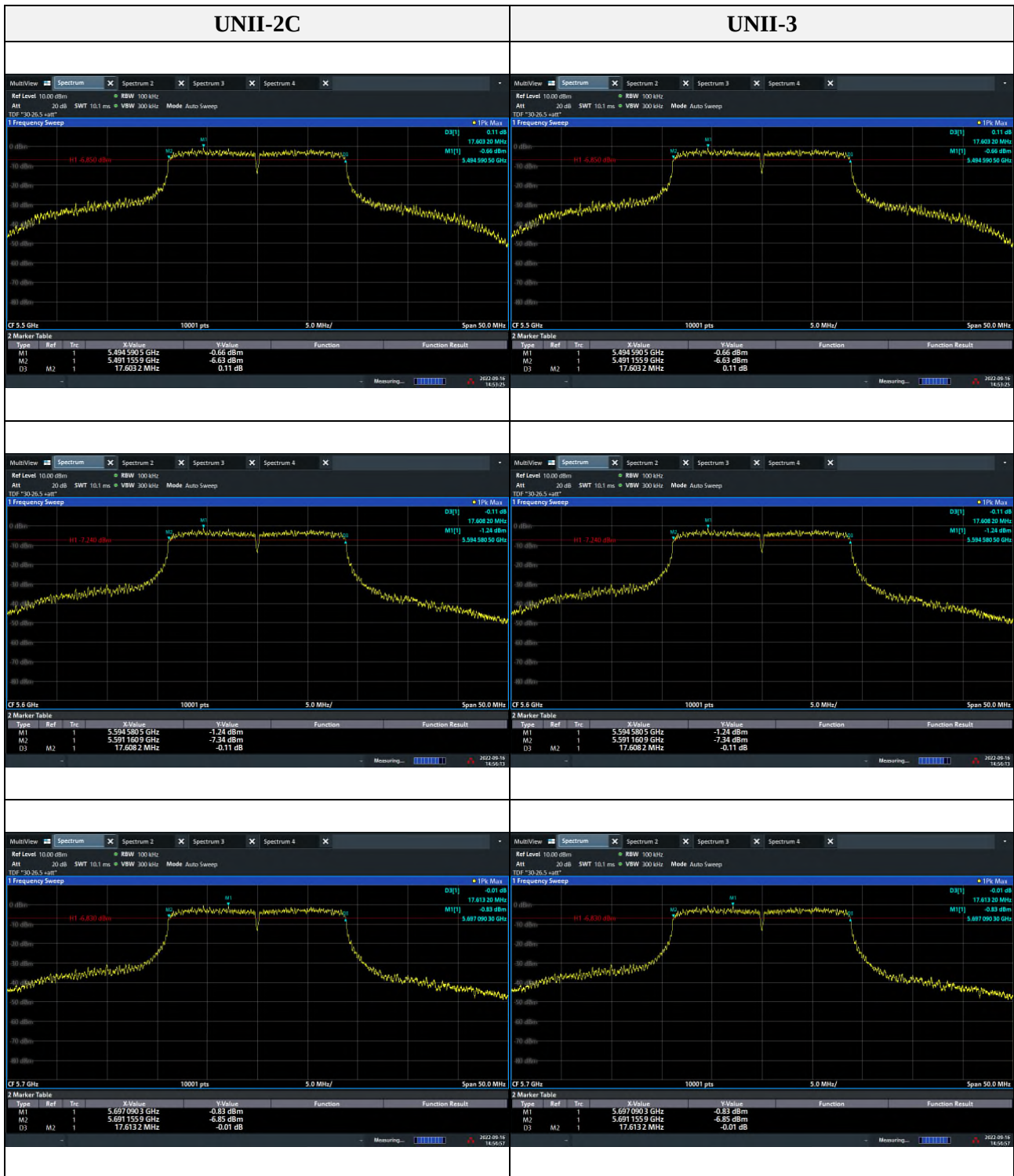
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11an HT20**



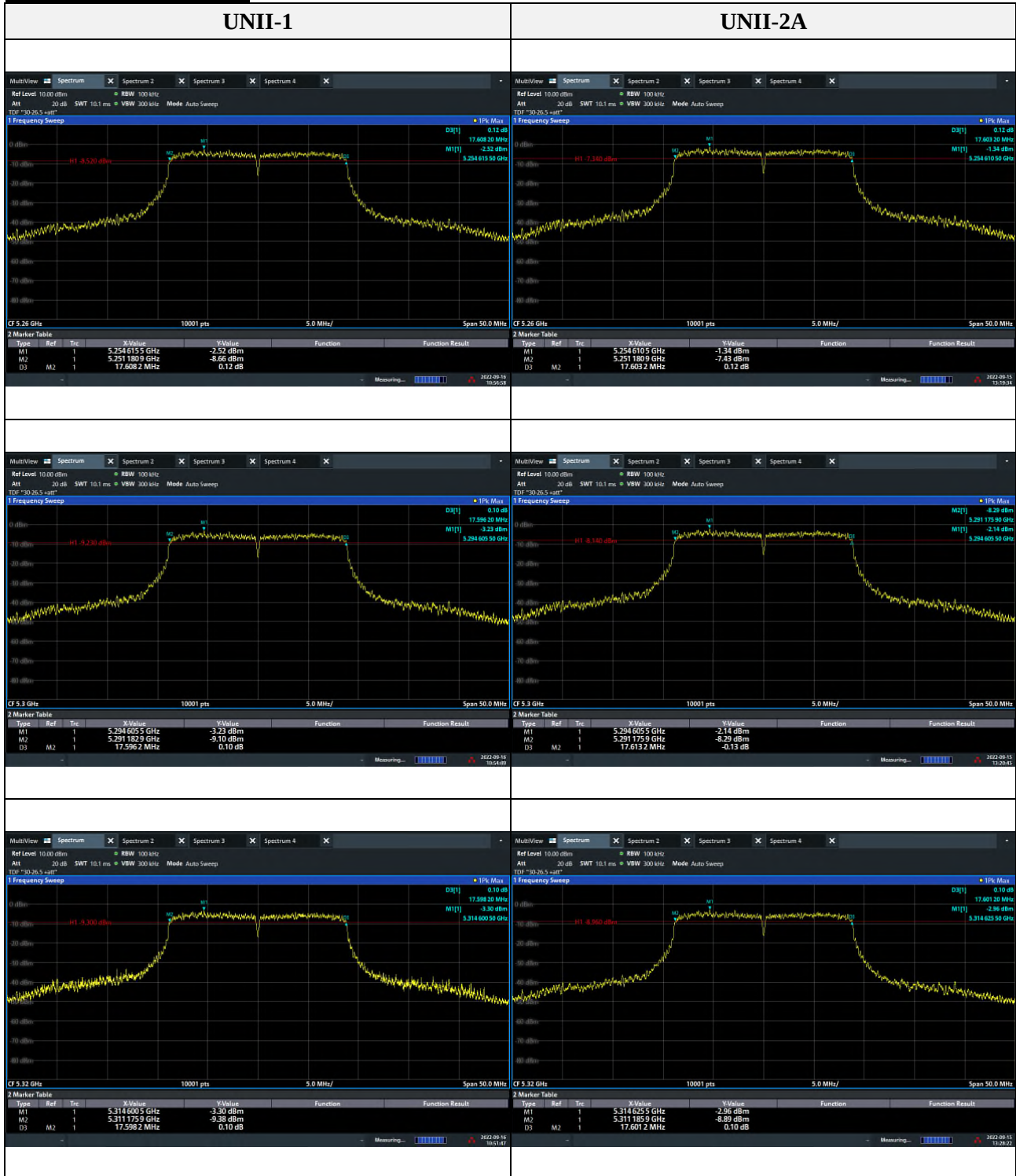
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



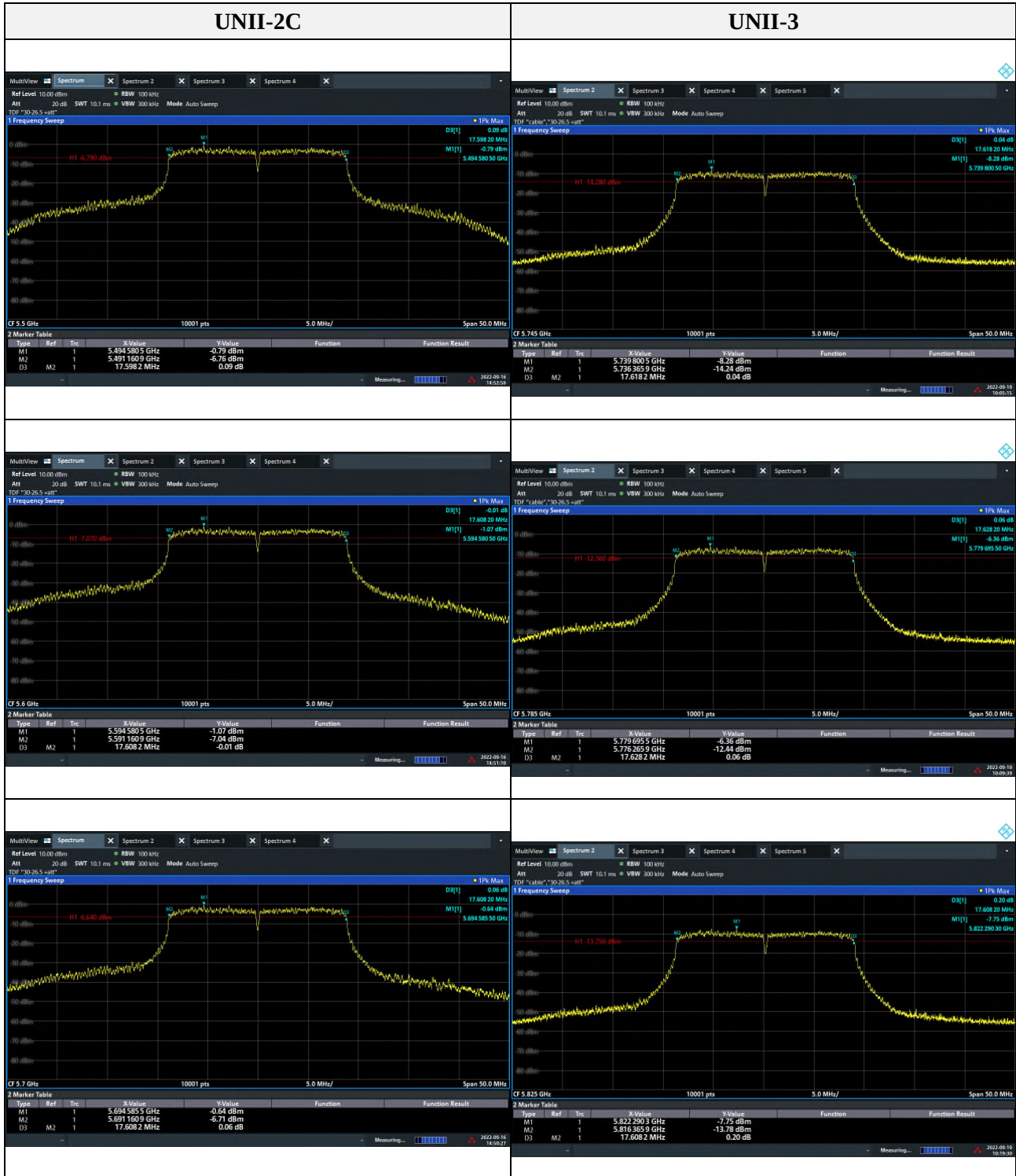


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11ac VHT20**



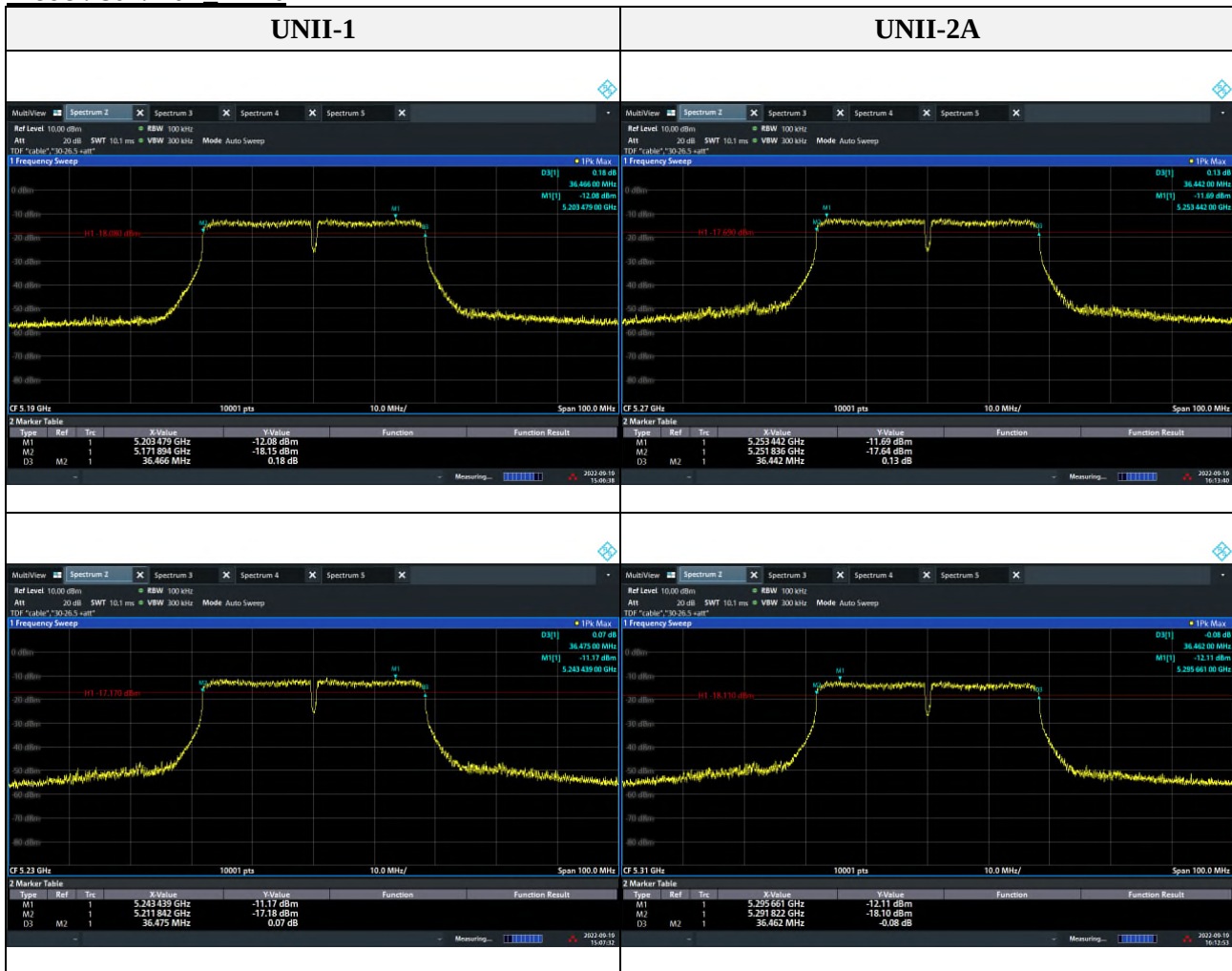
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



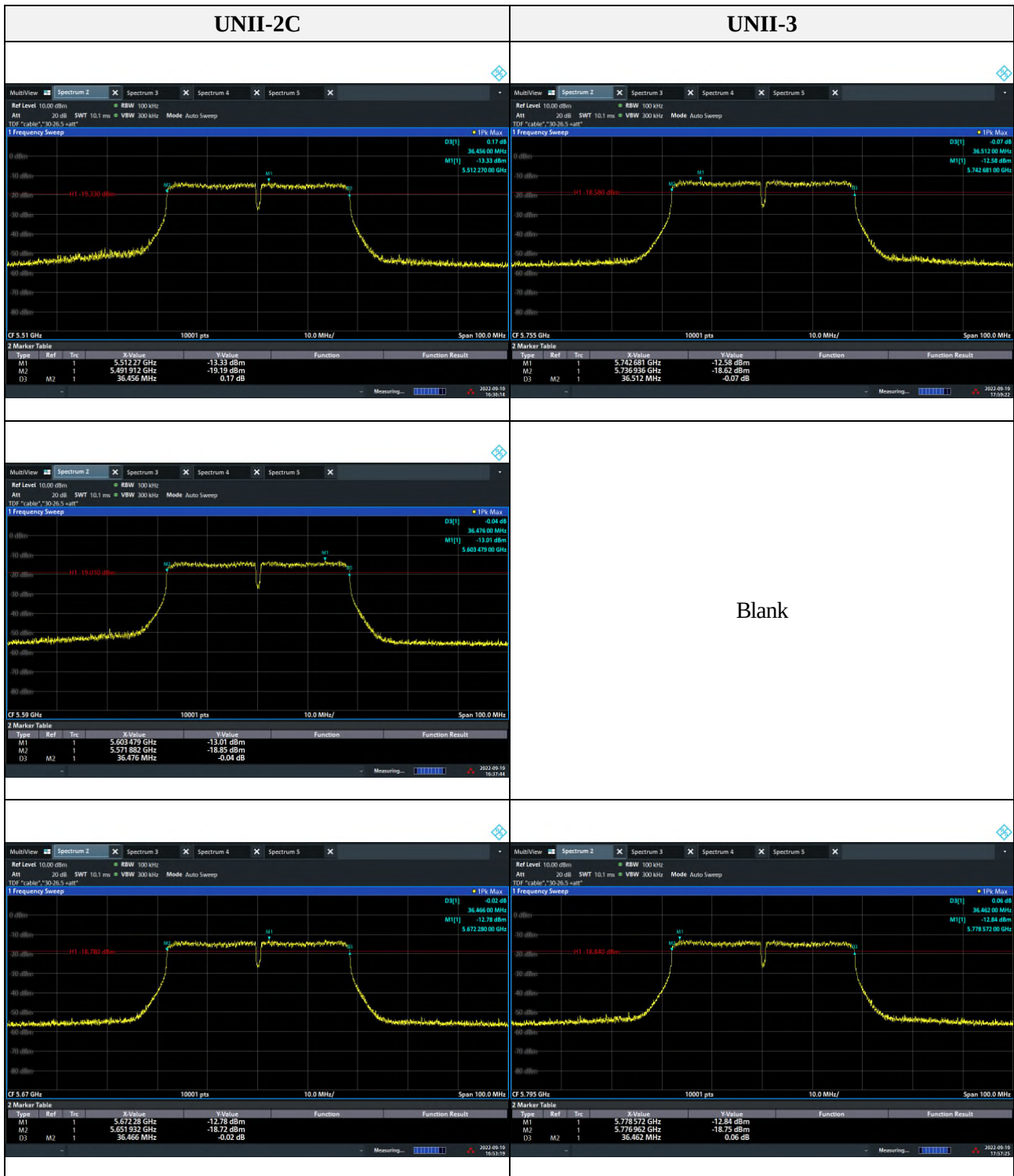
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



**Mode : 802.11an HT40**

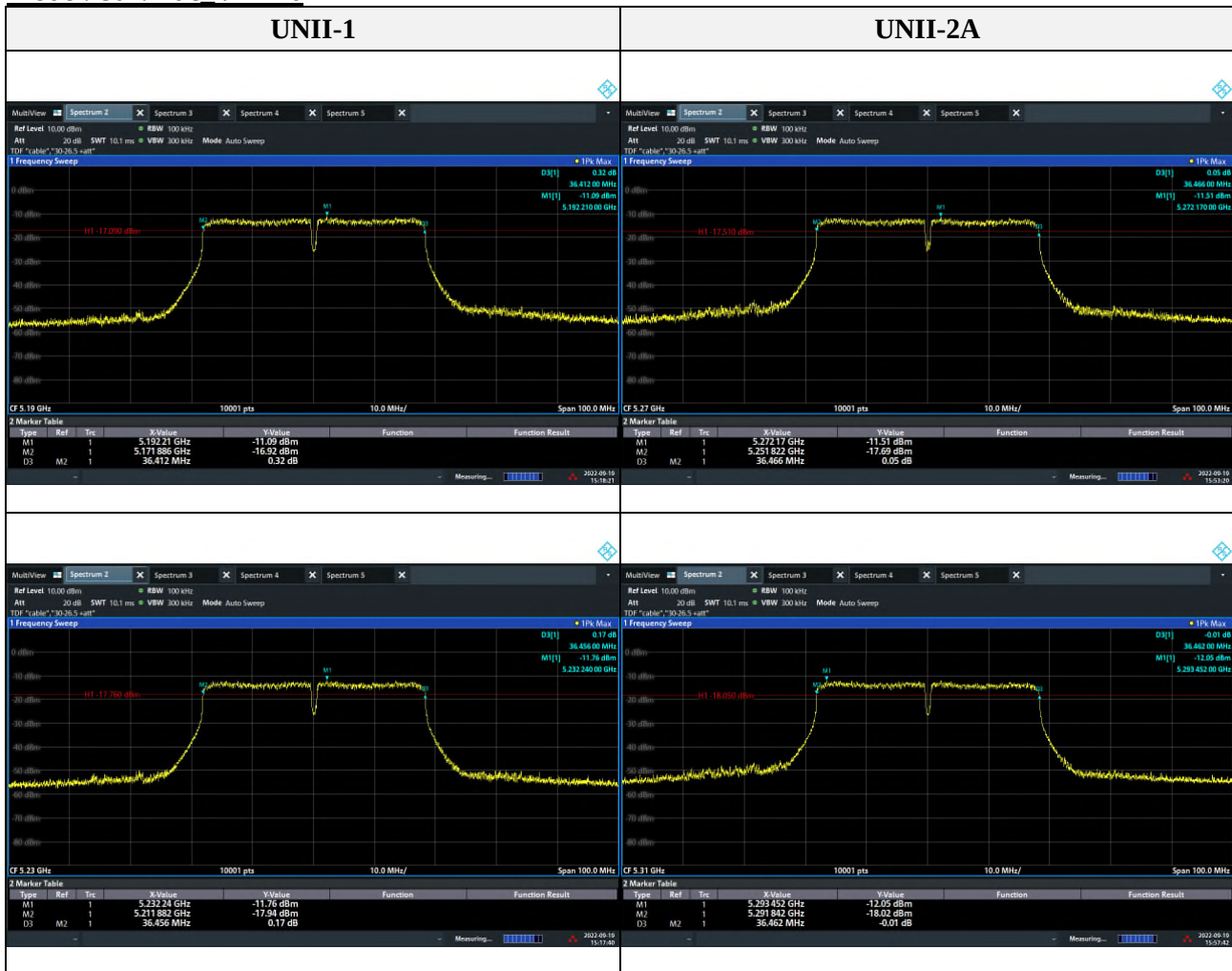


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



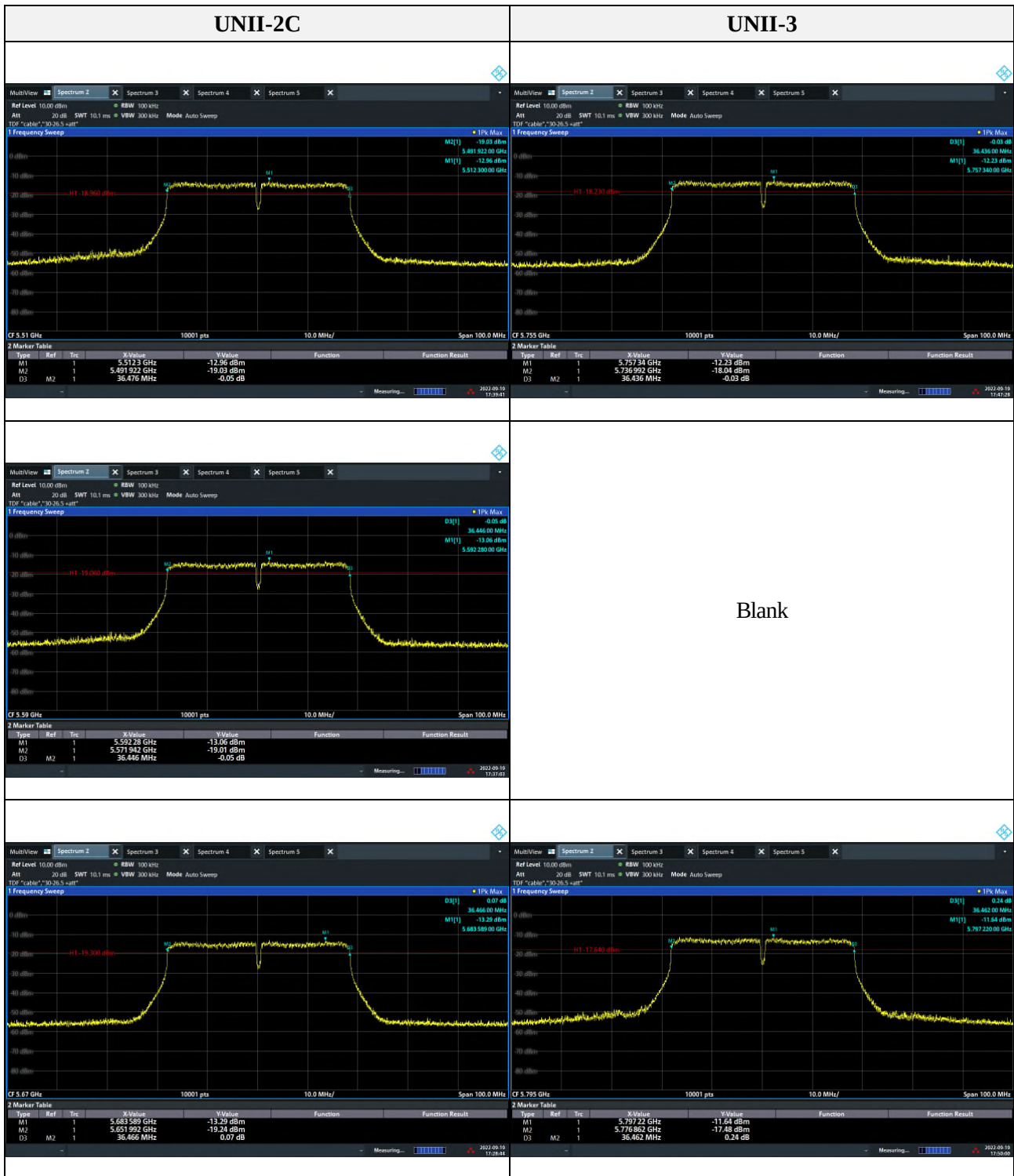
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11ac VHT40**

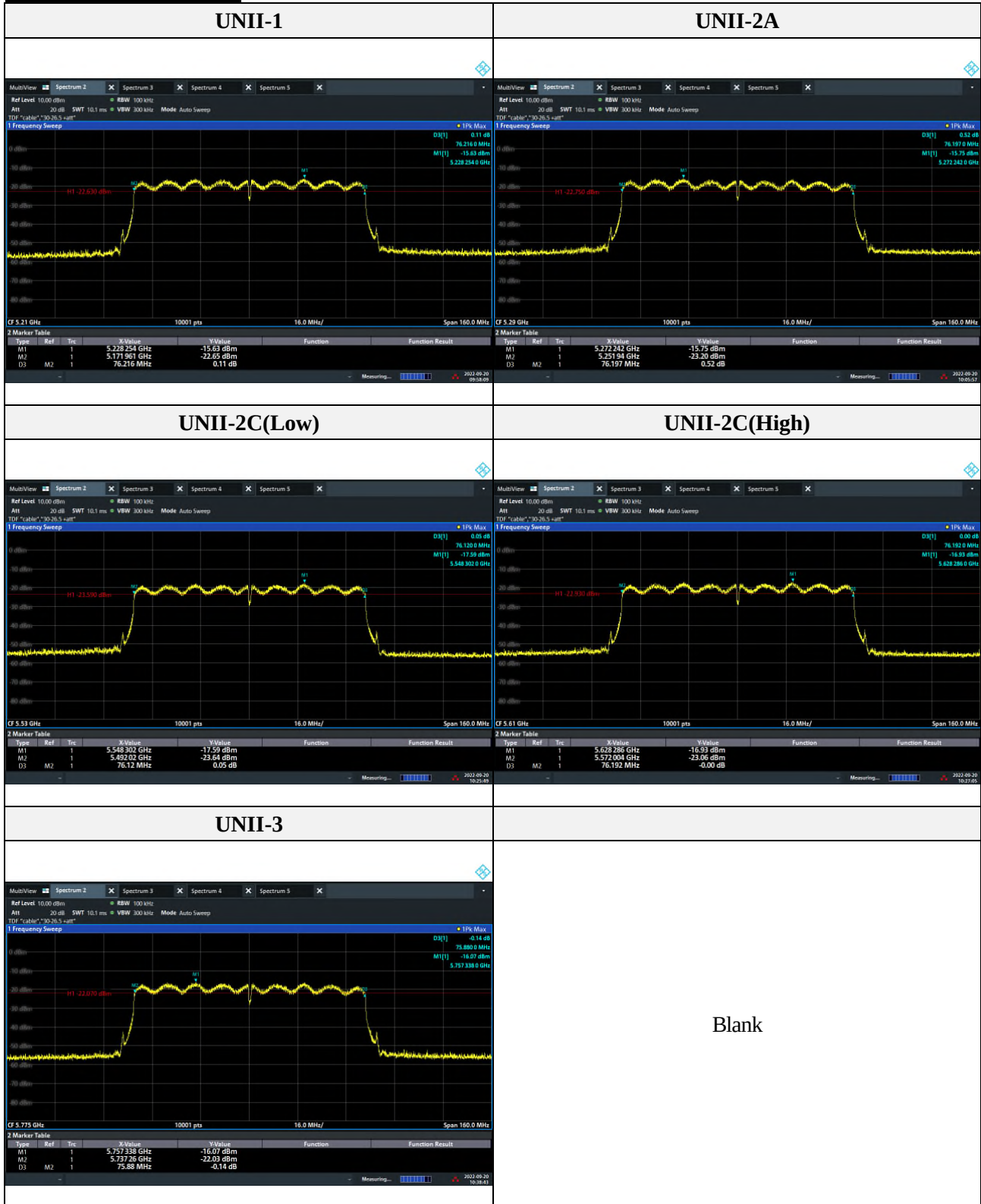


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.





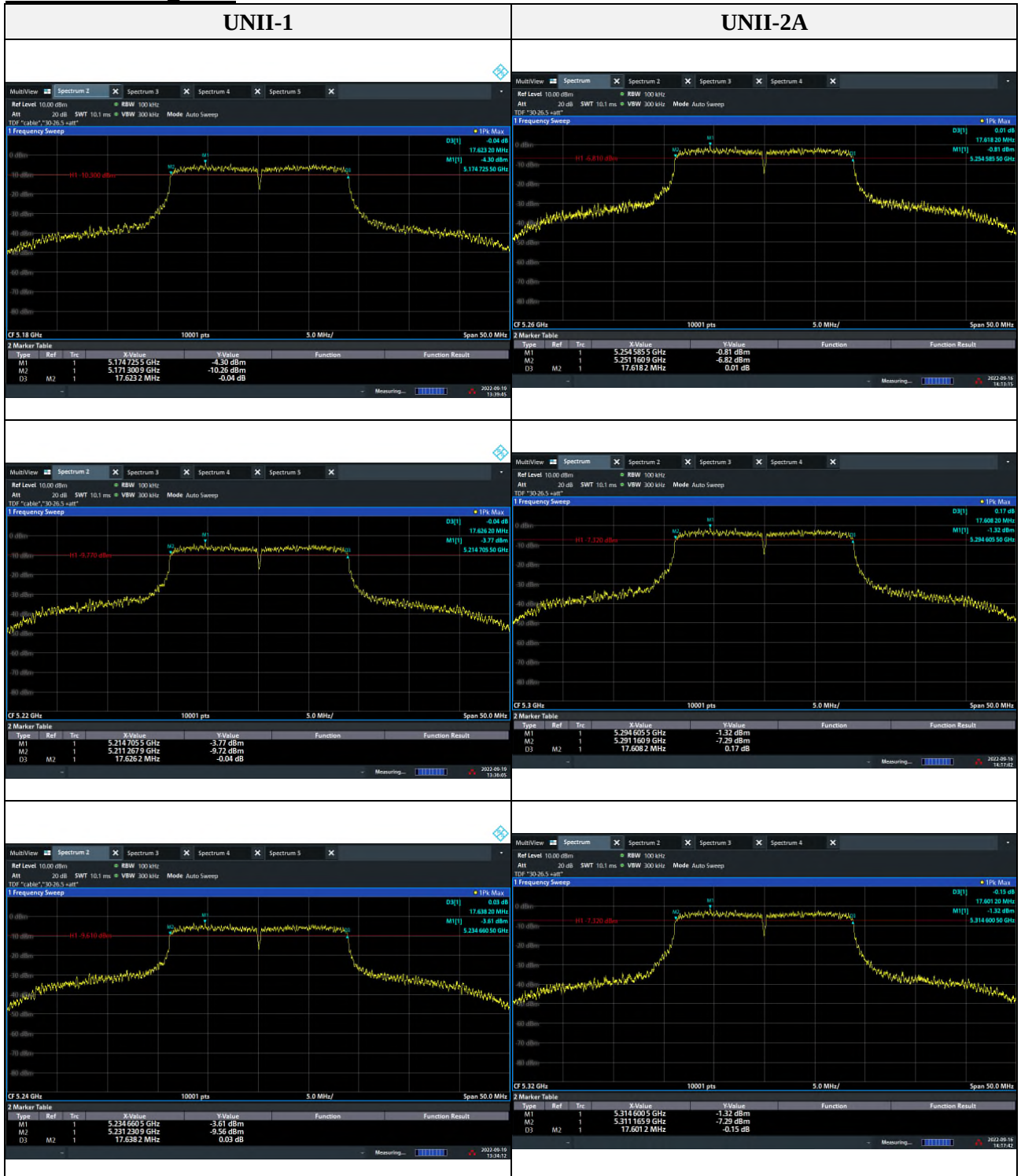
**Mode : 802.11ac VHT80**



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

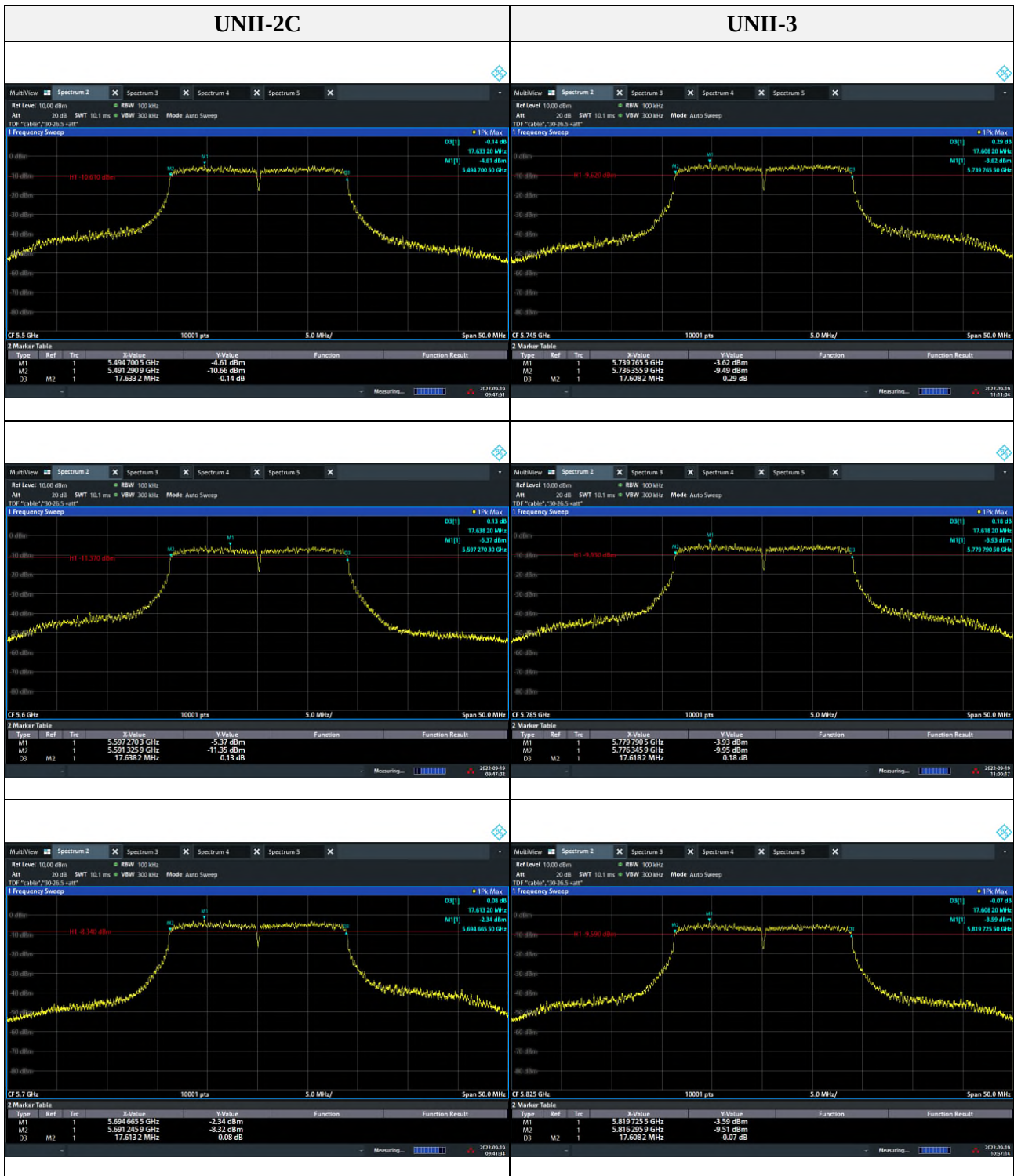
## MIMO ANT1

### Mode : 802.11an HT20



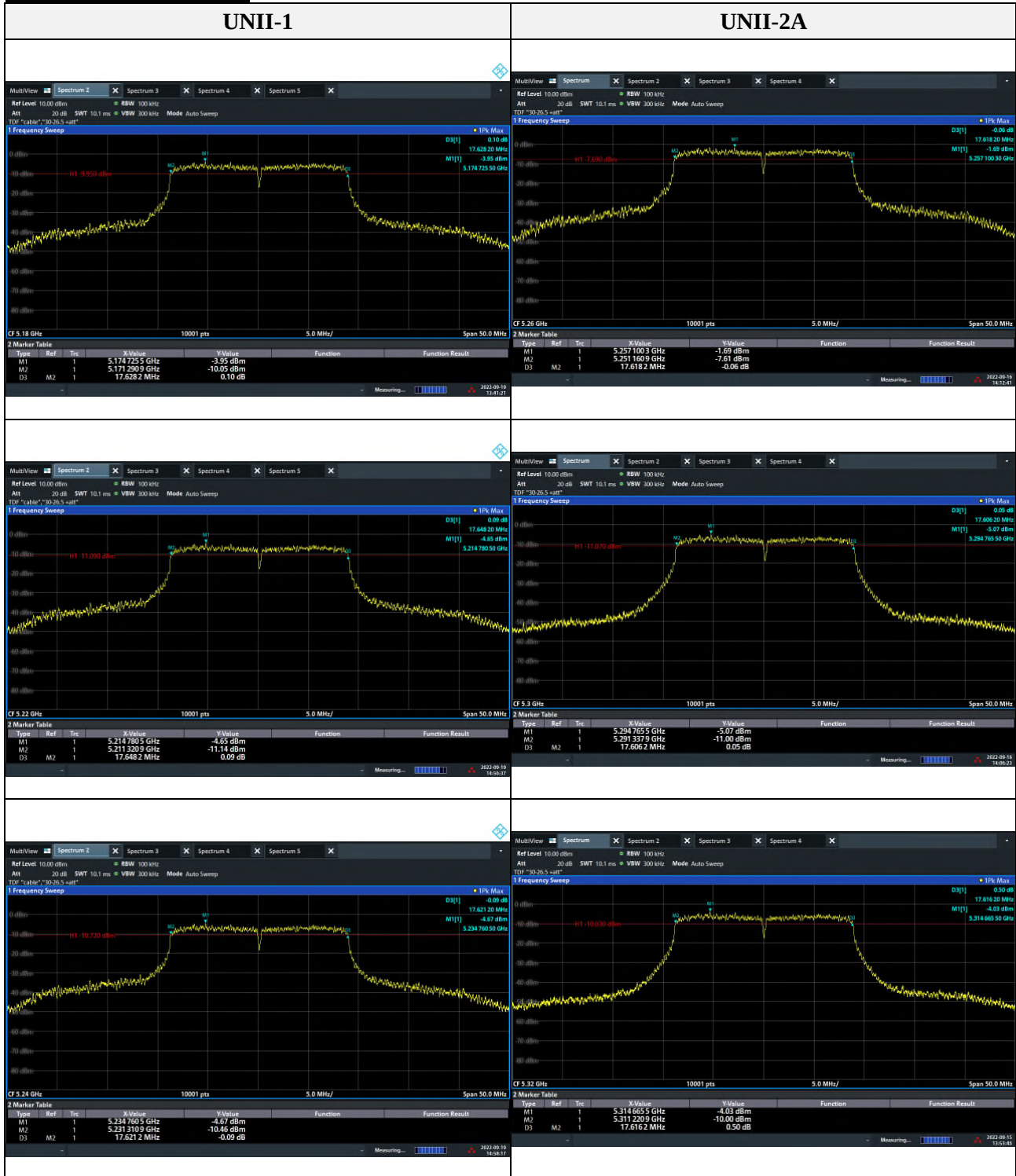
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



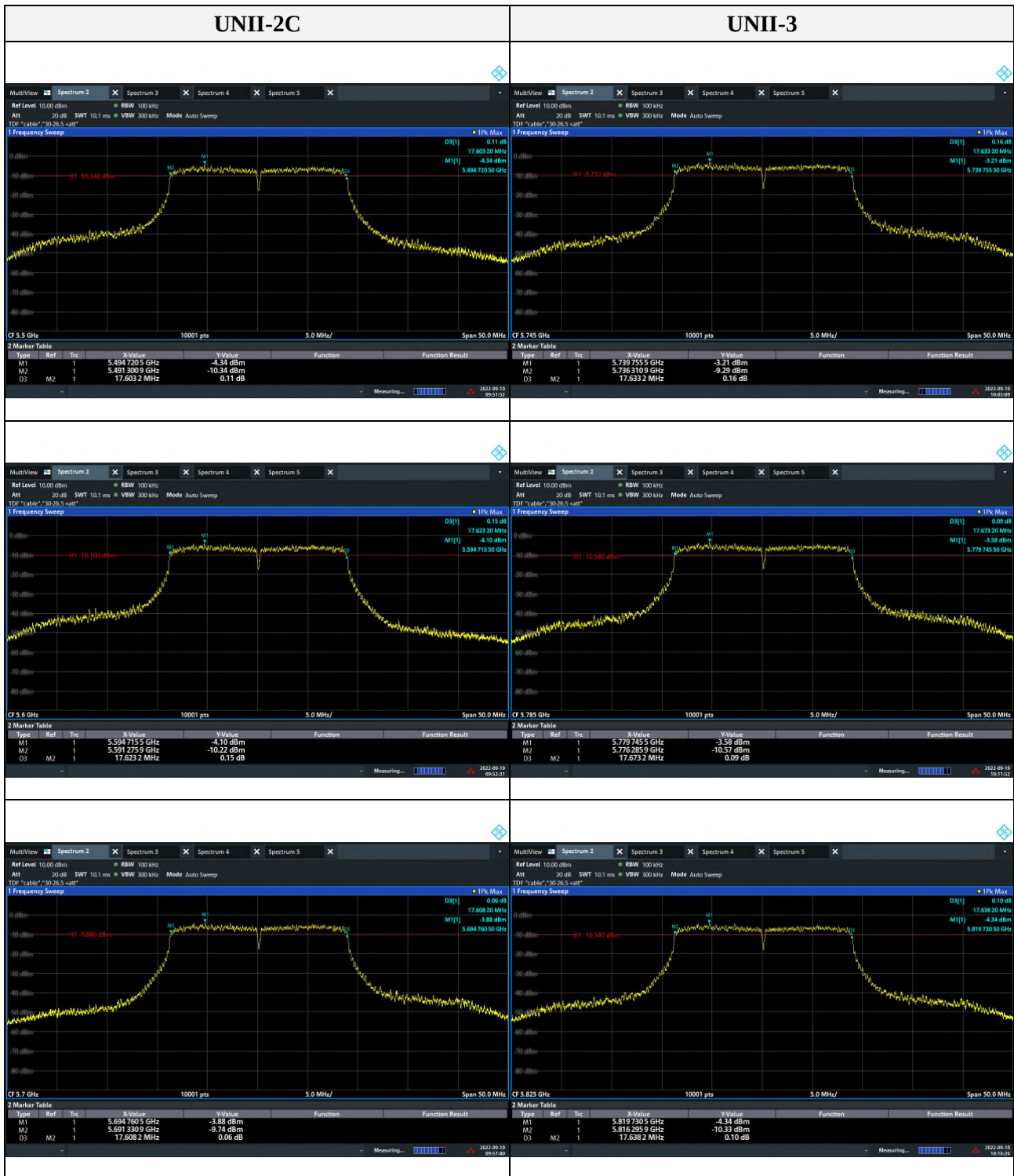


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11ac VHT20**



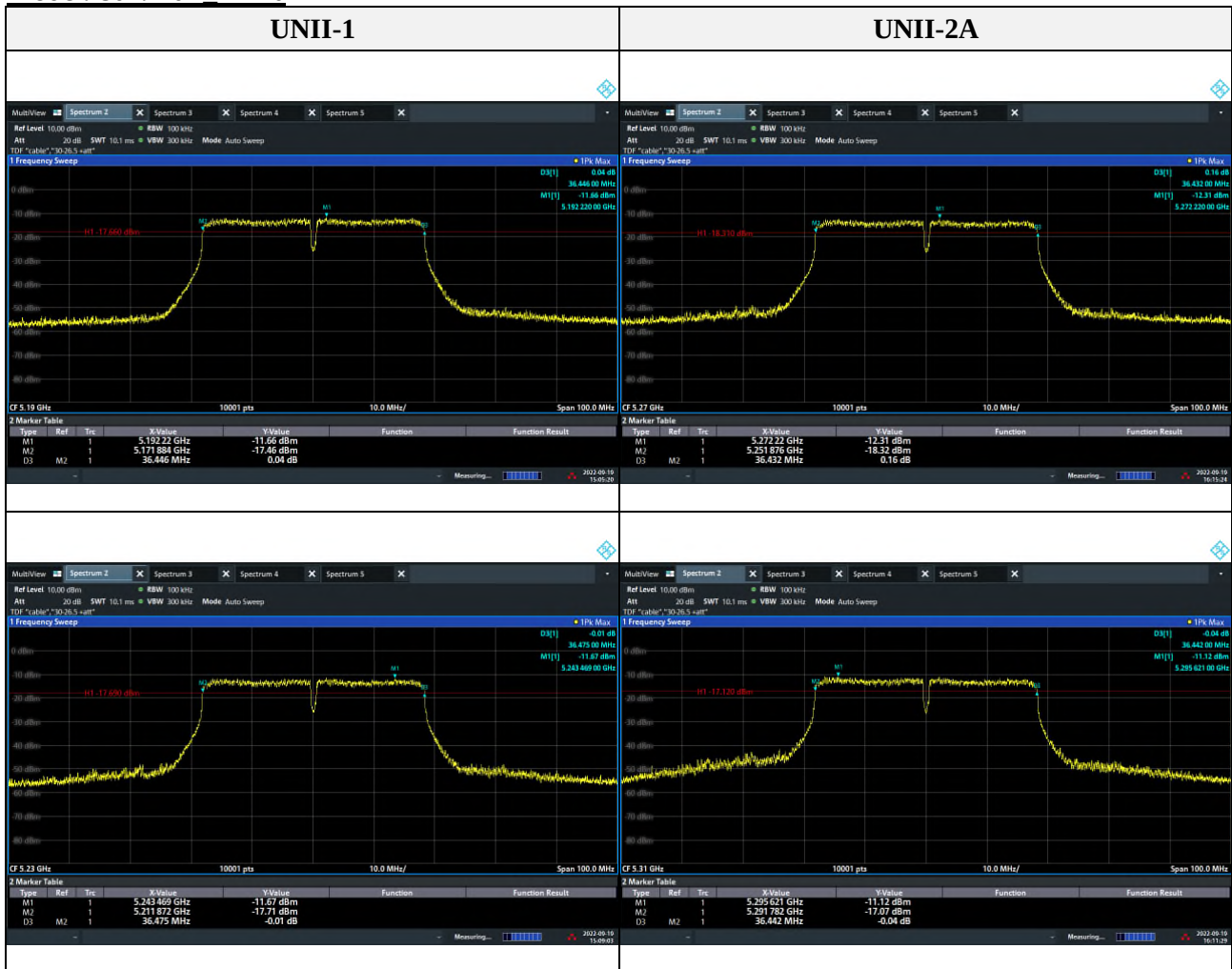
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



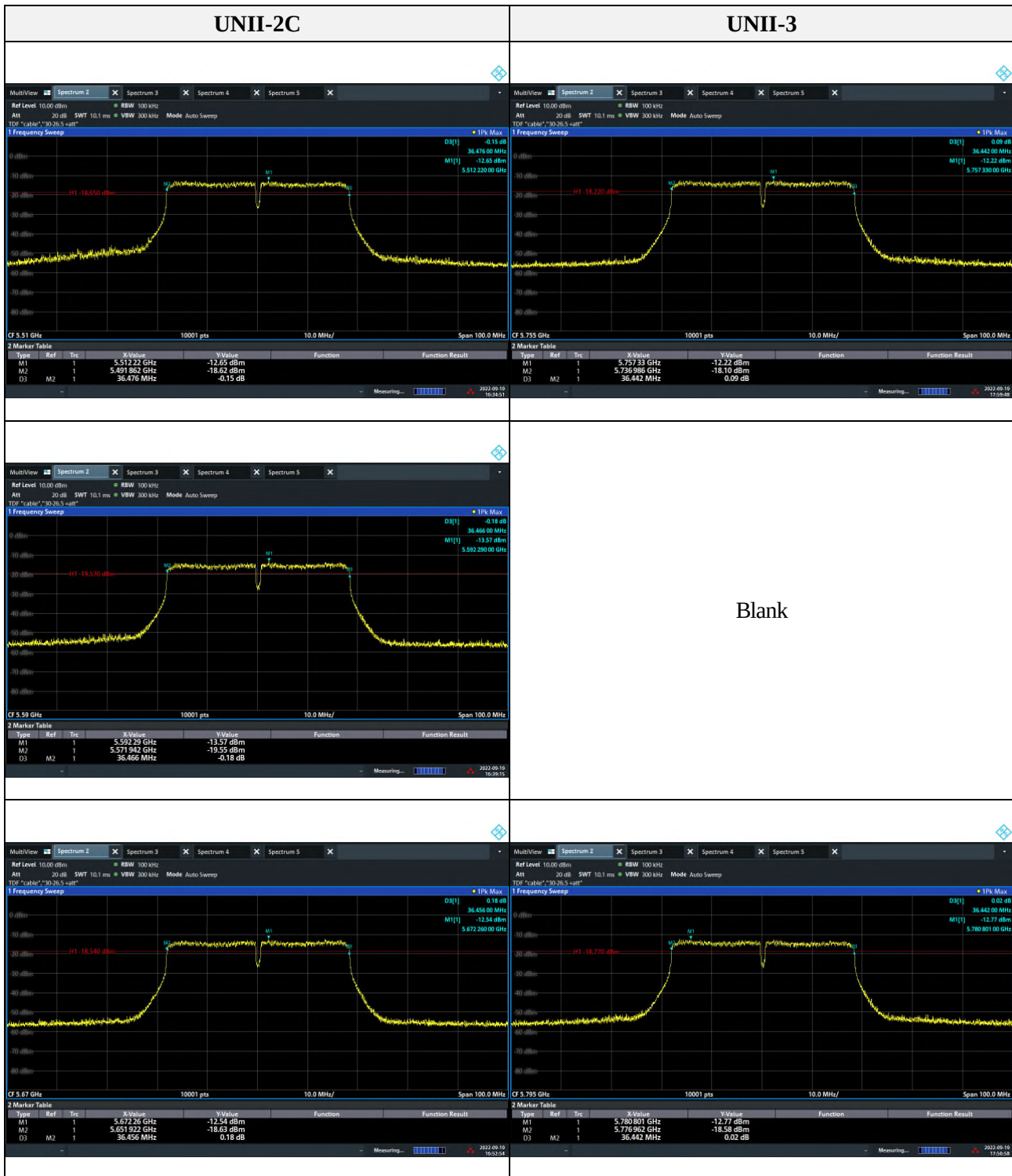
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



**Mode : 802.11an HT40**

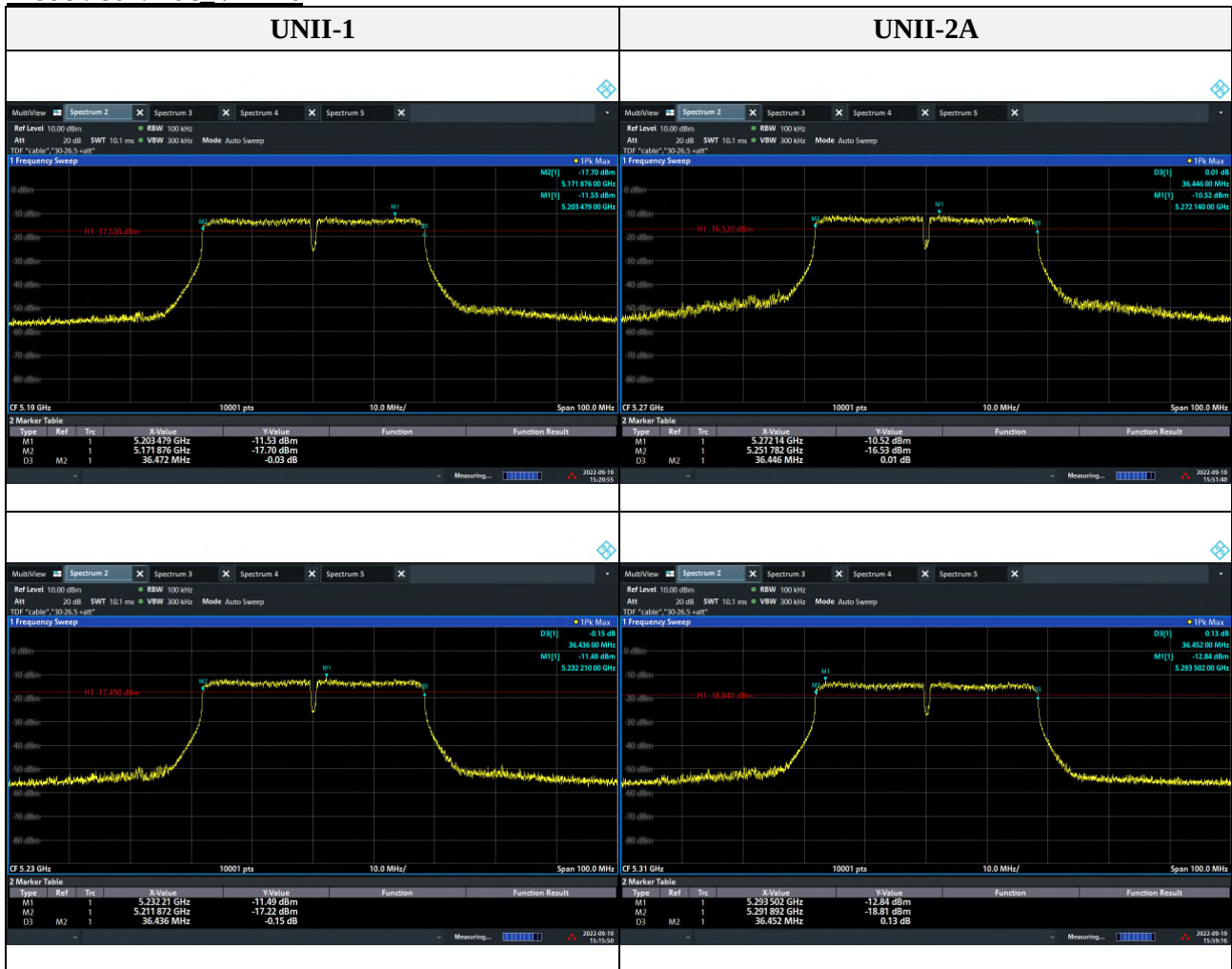


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



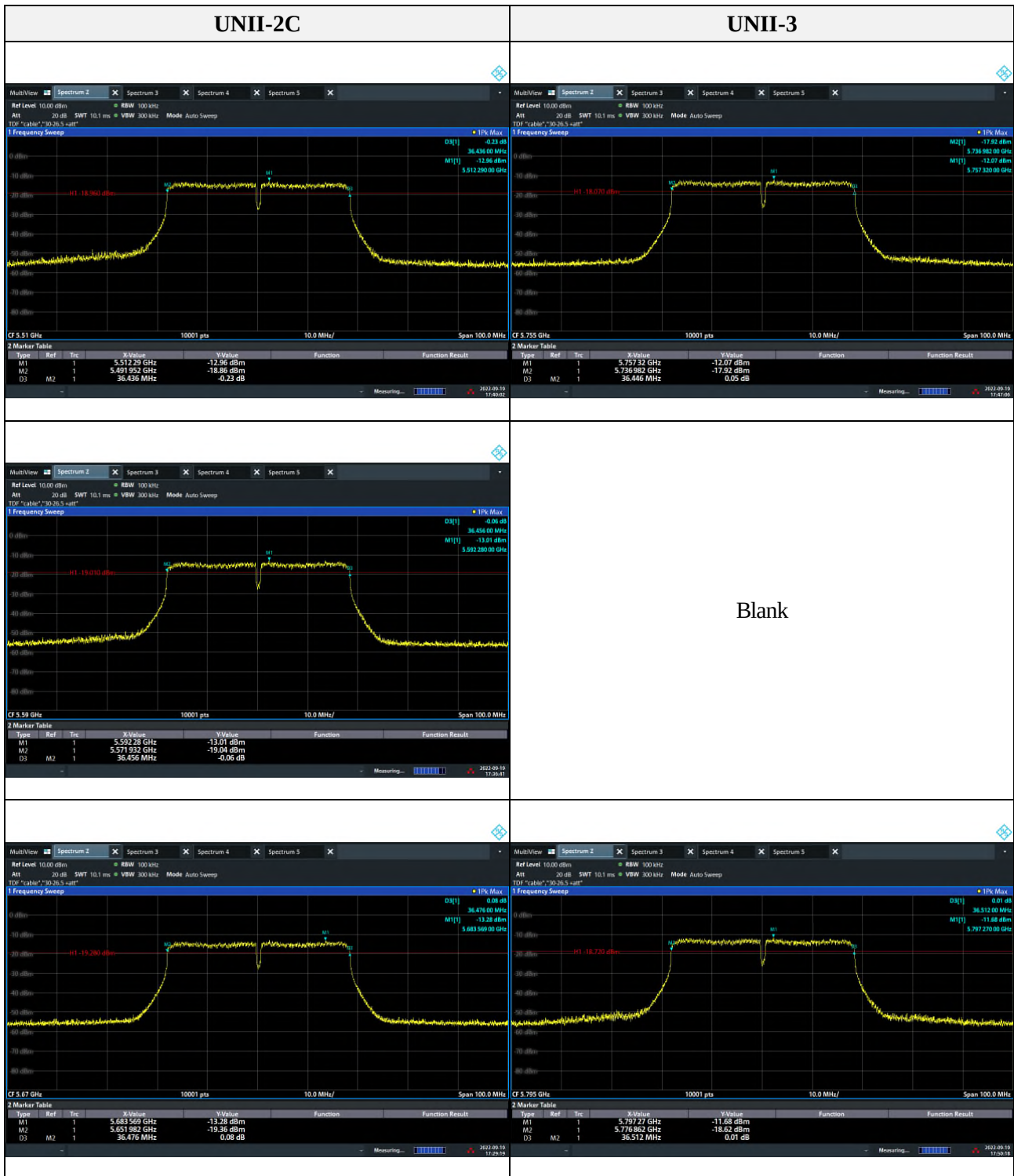
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11ac VHT40**



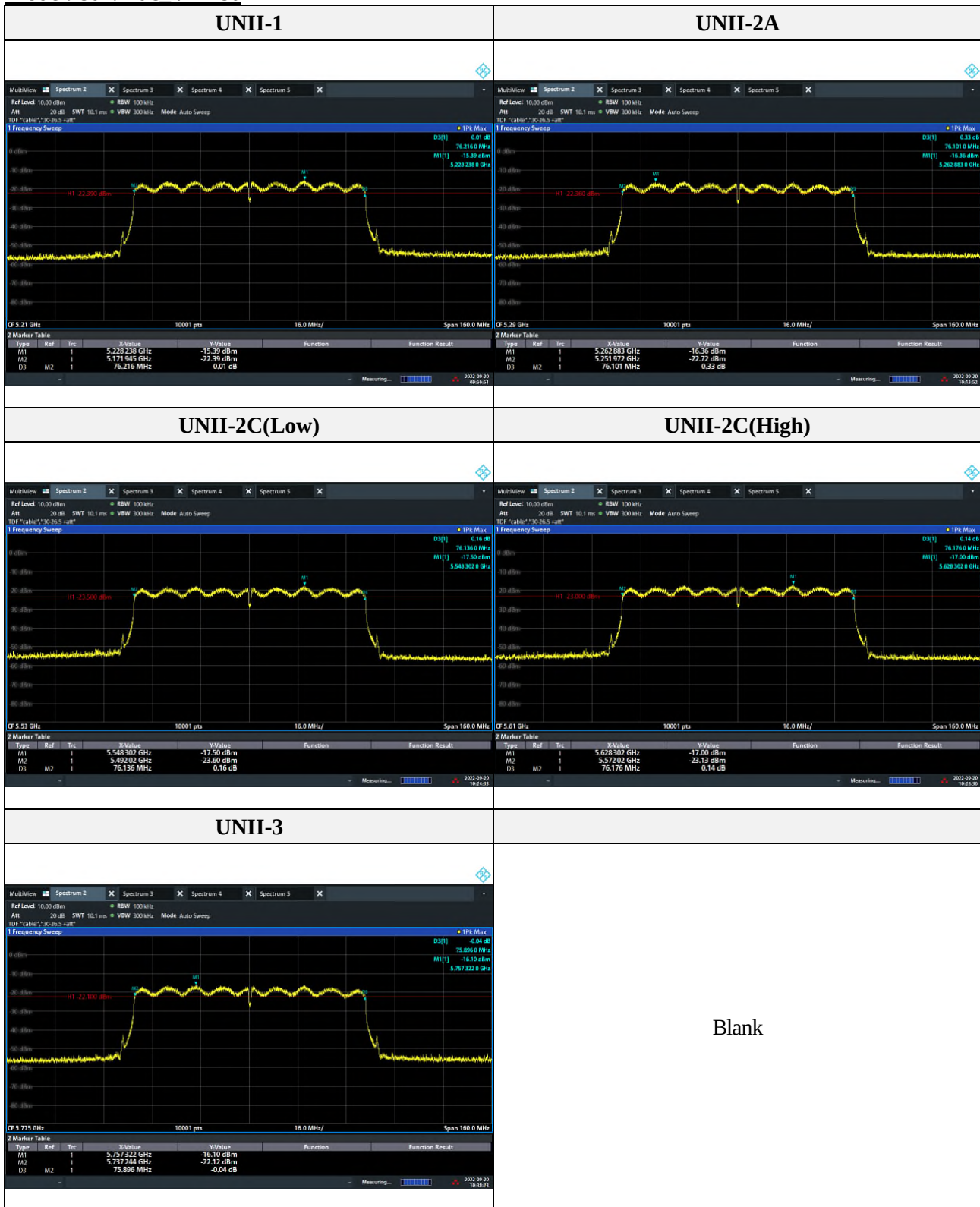
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.





This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

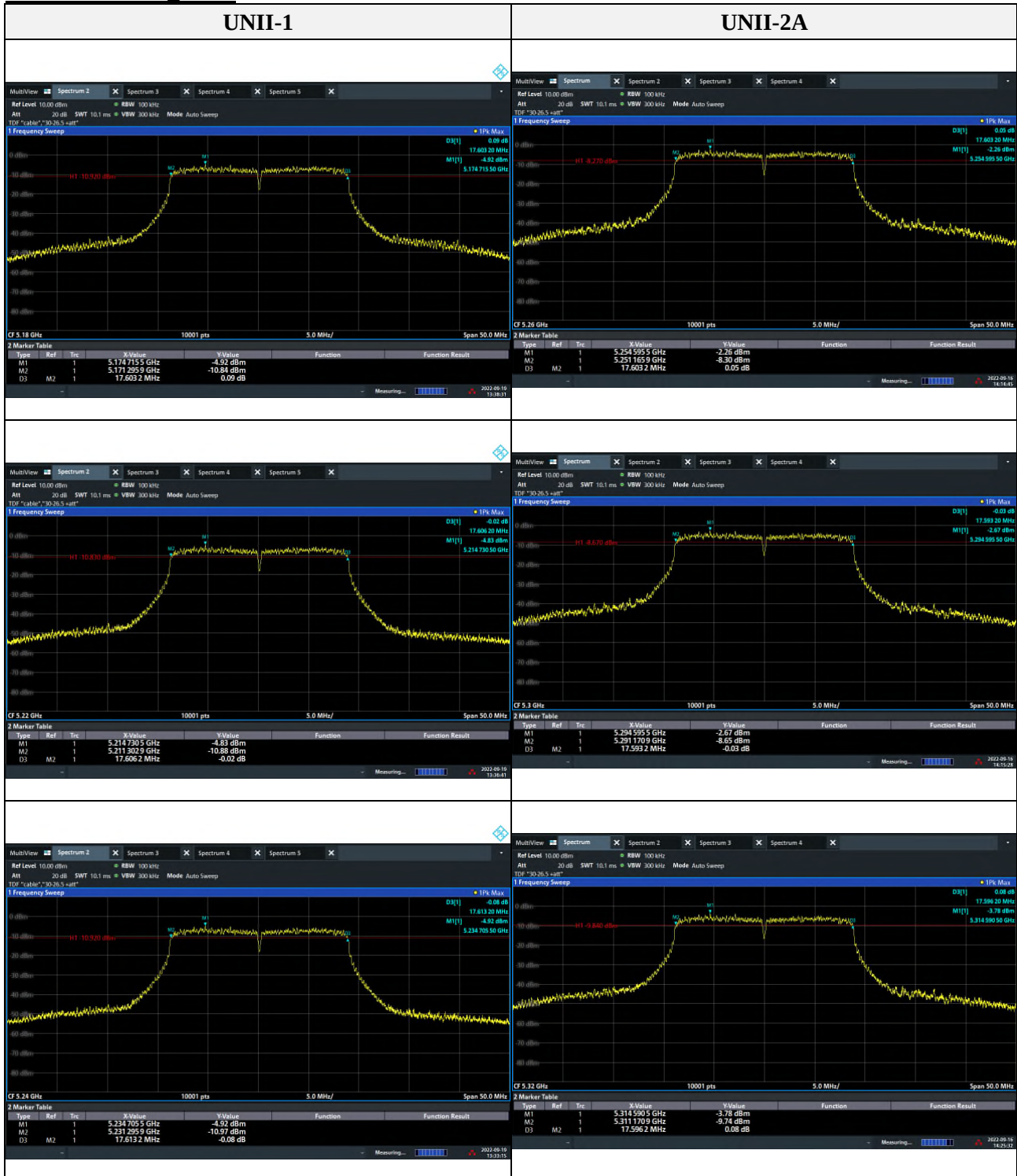
**Mode : 802.11ac VHT80**



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

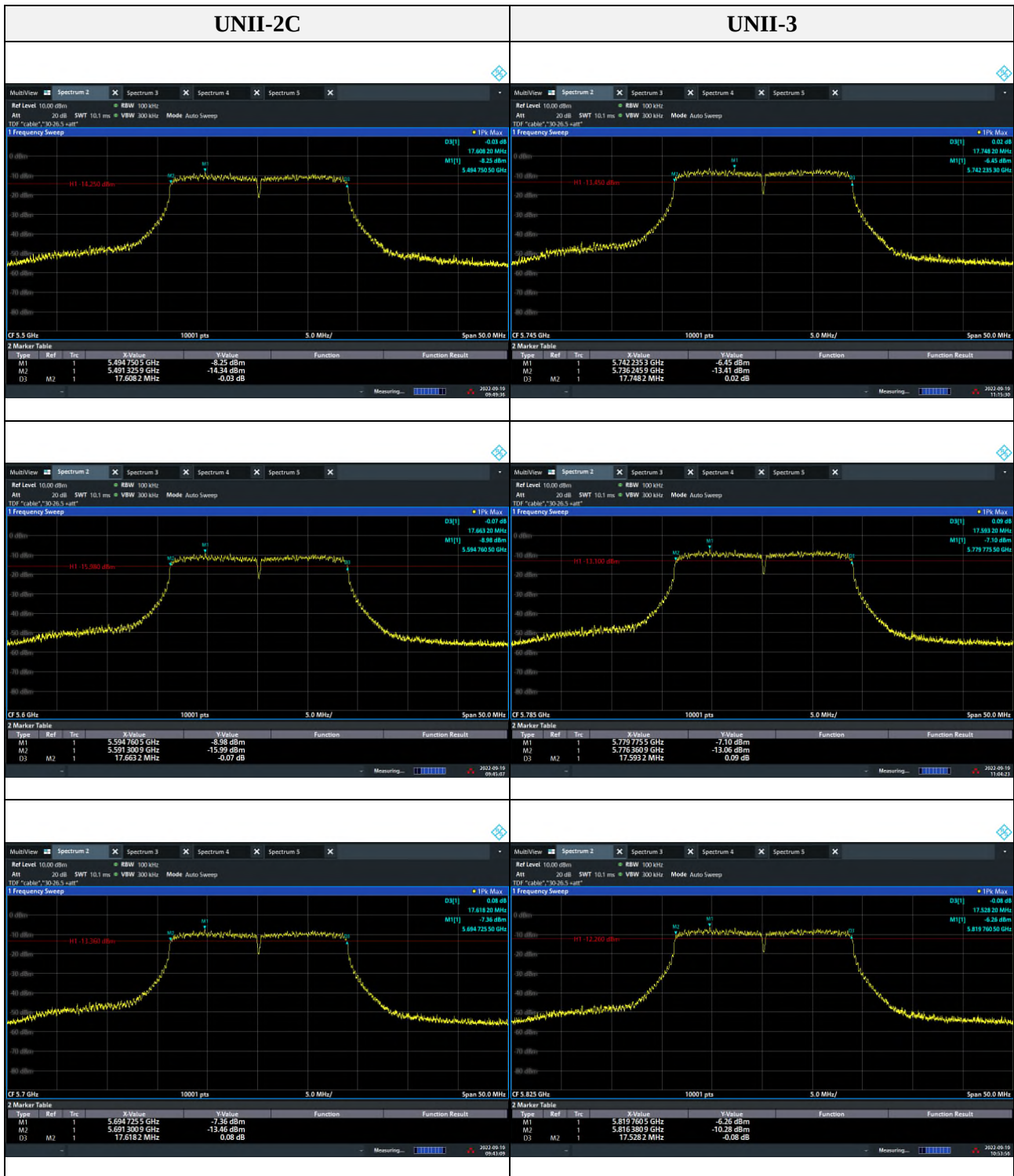
## MIMO ANT2

### Mode : 802.11an HT20



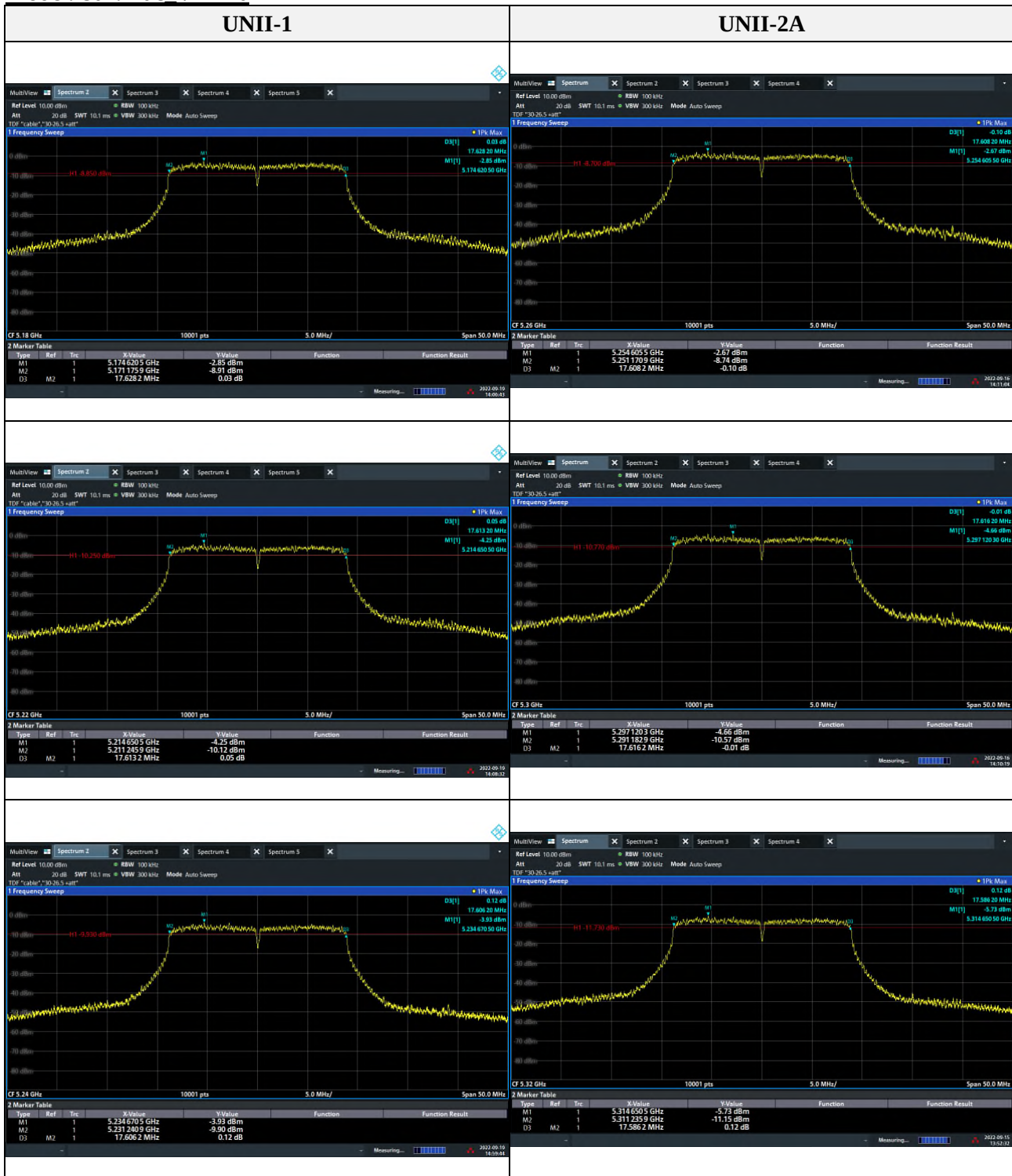
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



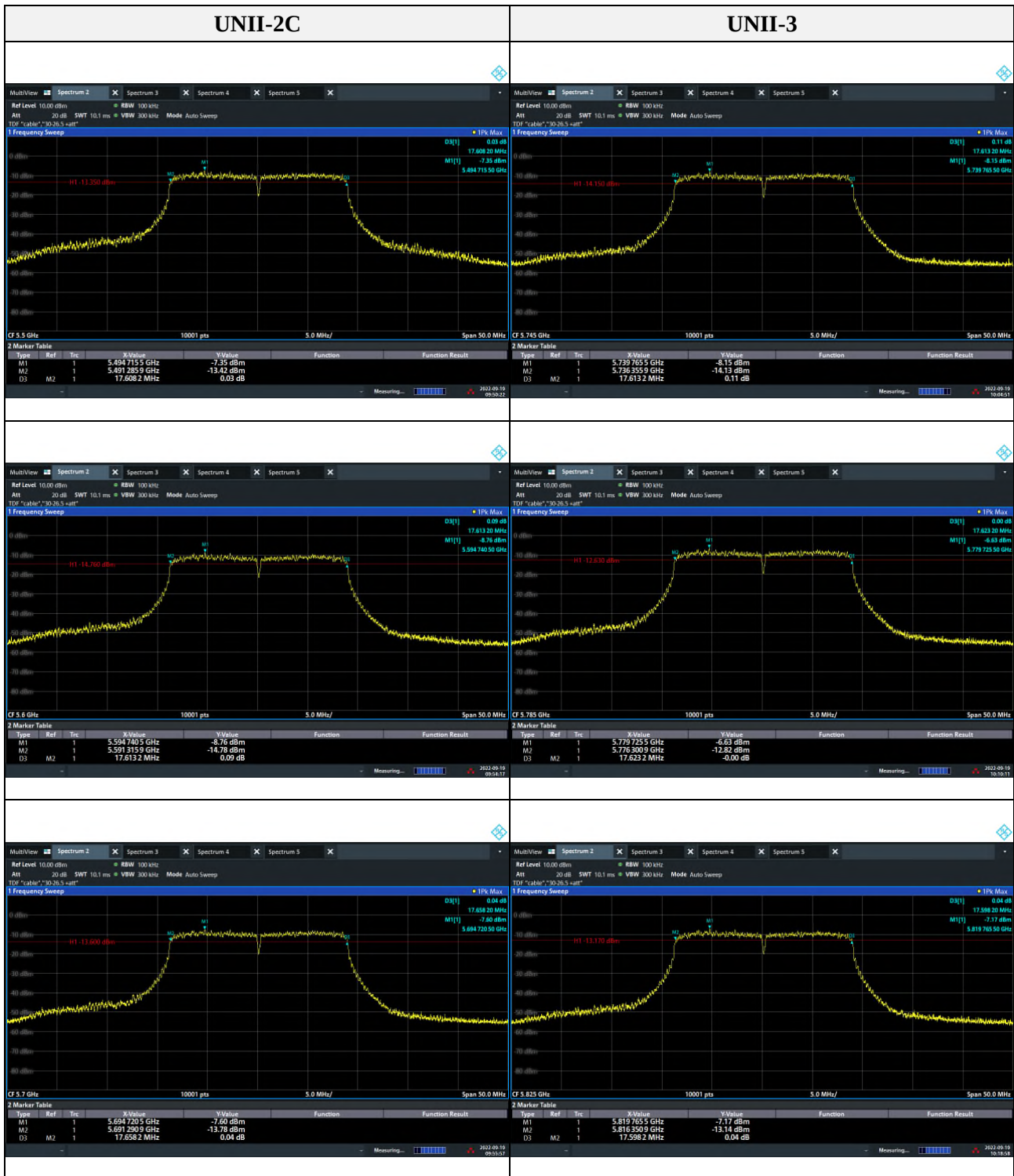


This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

## Mode : 802.11ac VHT20



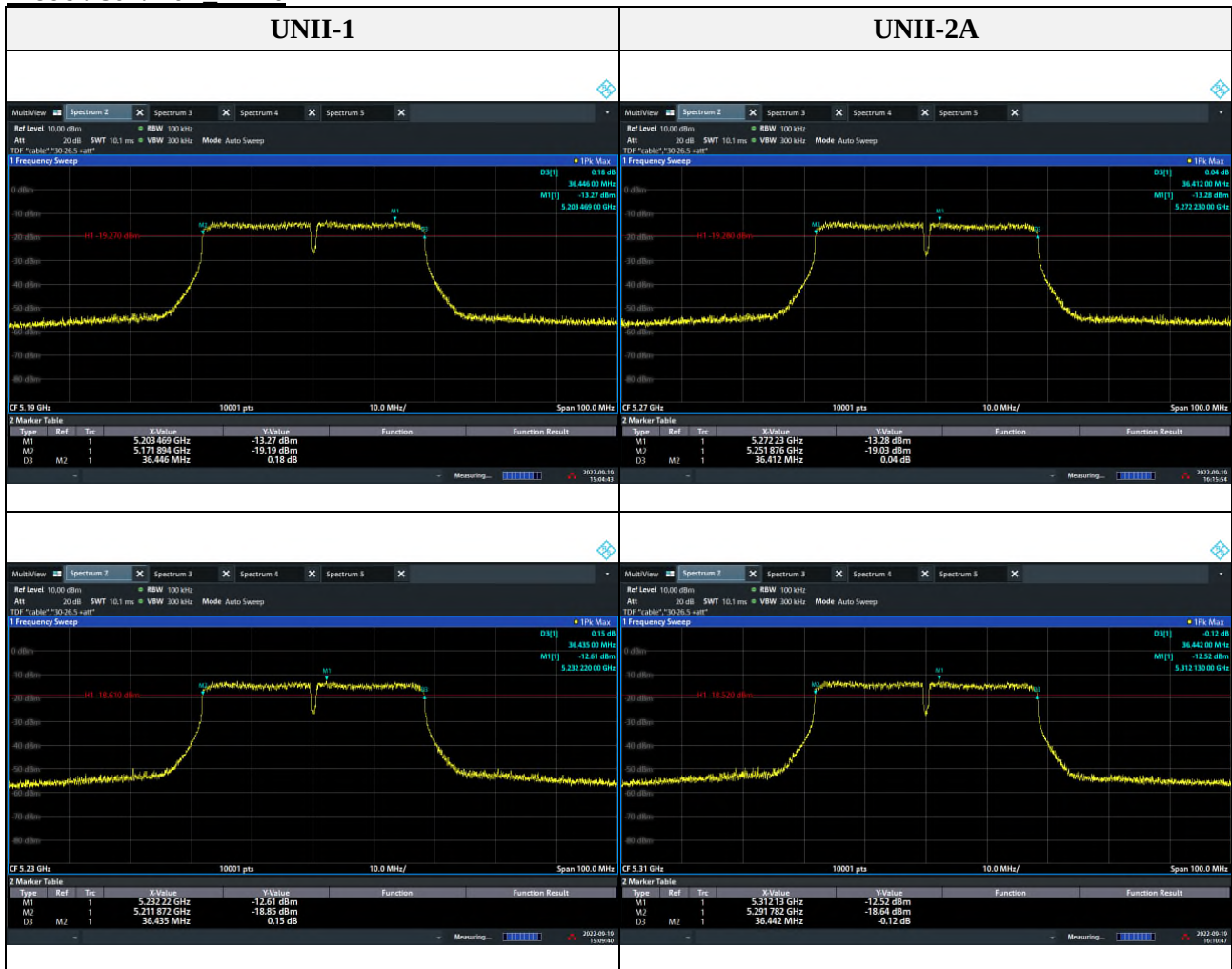
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



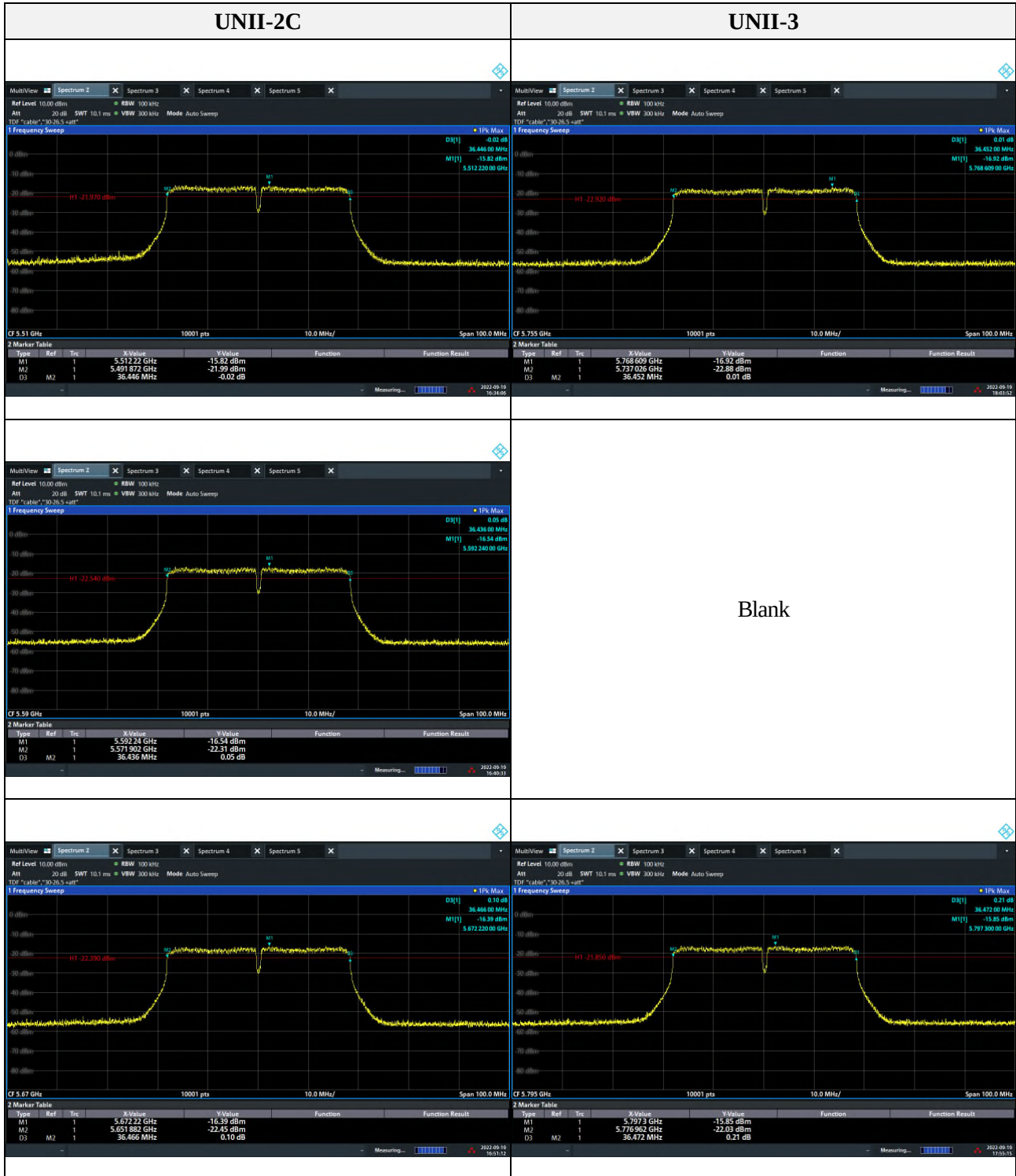
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



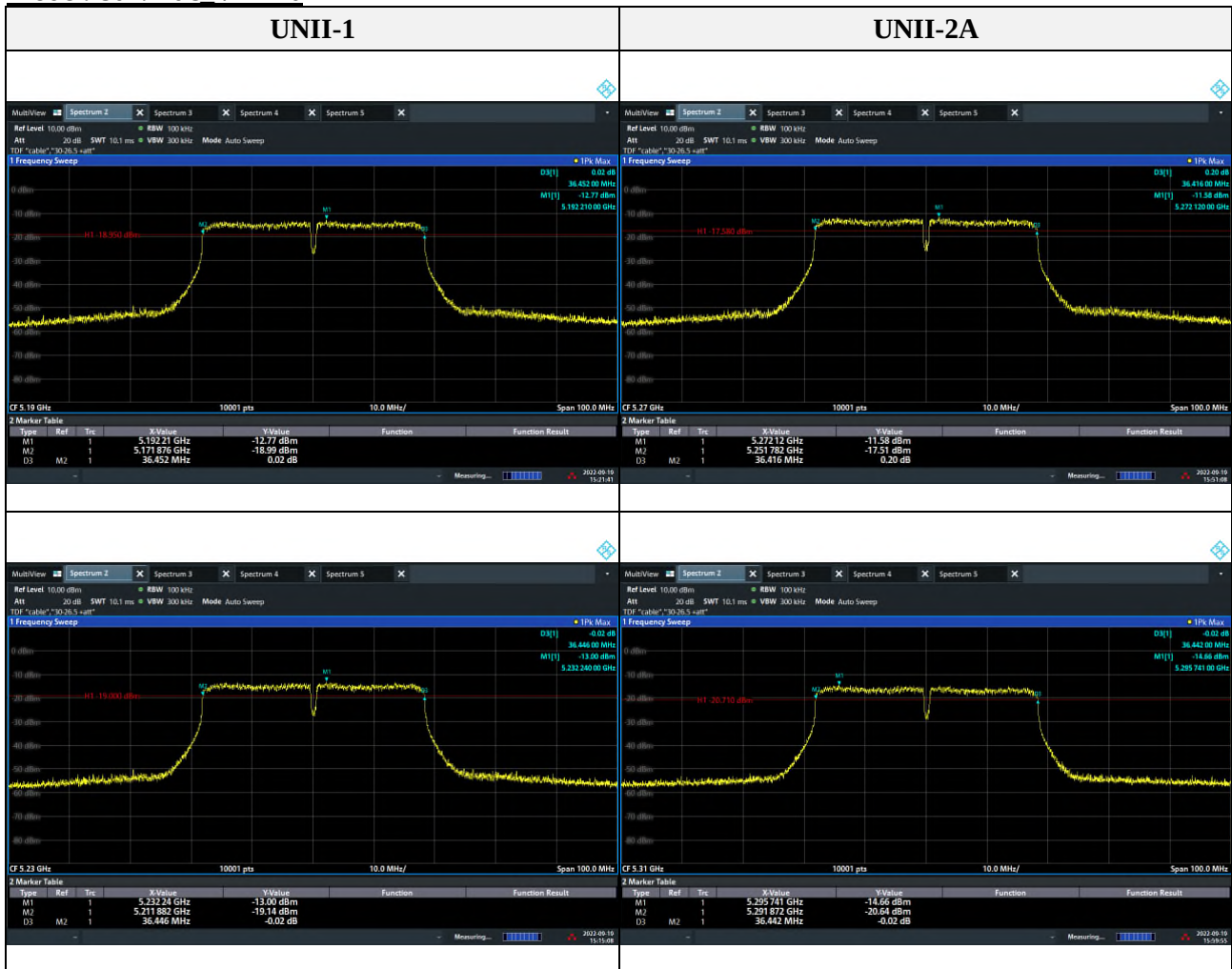
**Mode : 802.11an HT40**



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

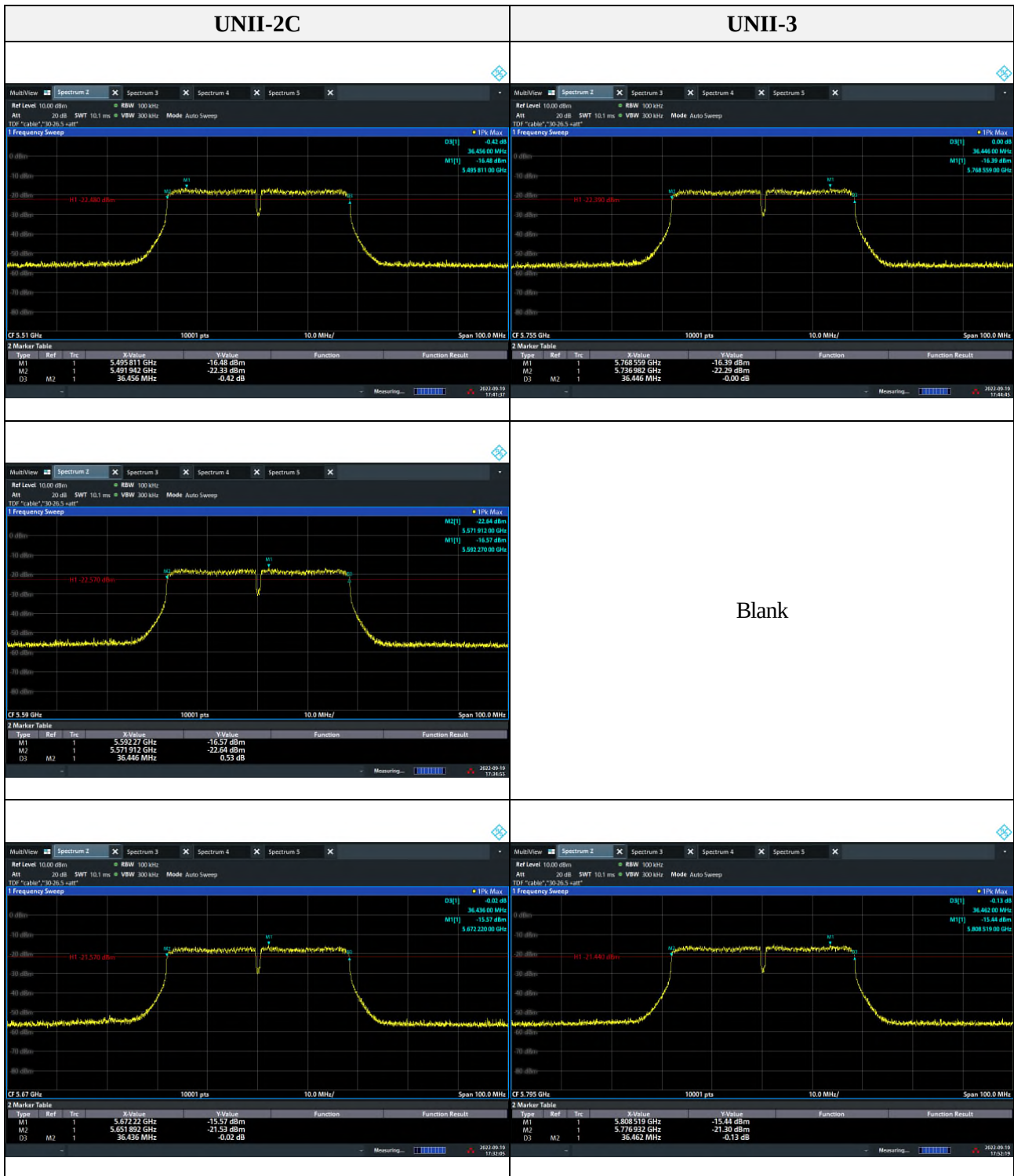


**Mode : 802.11ac VHT40**



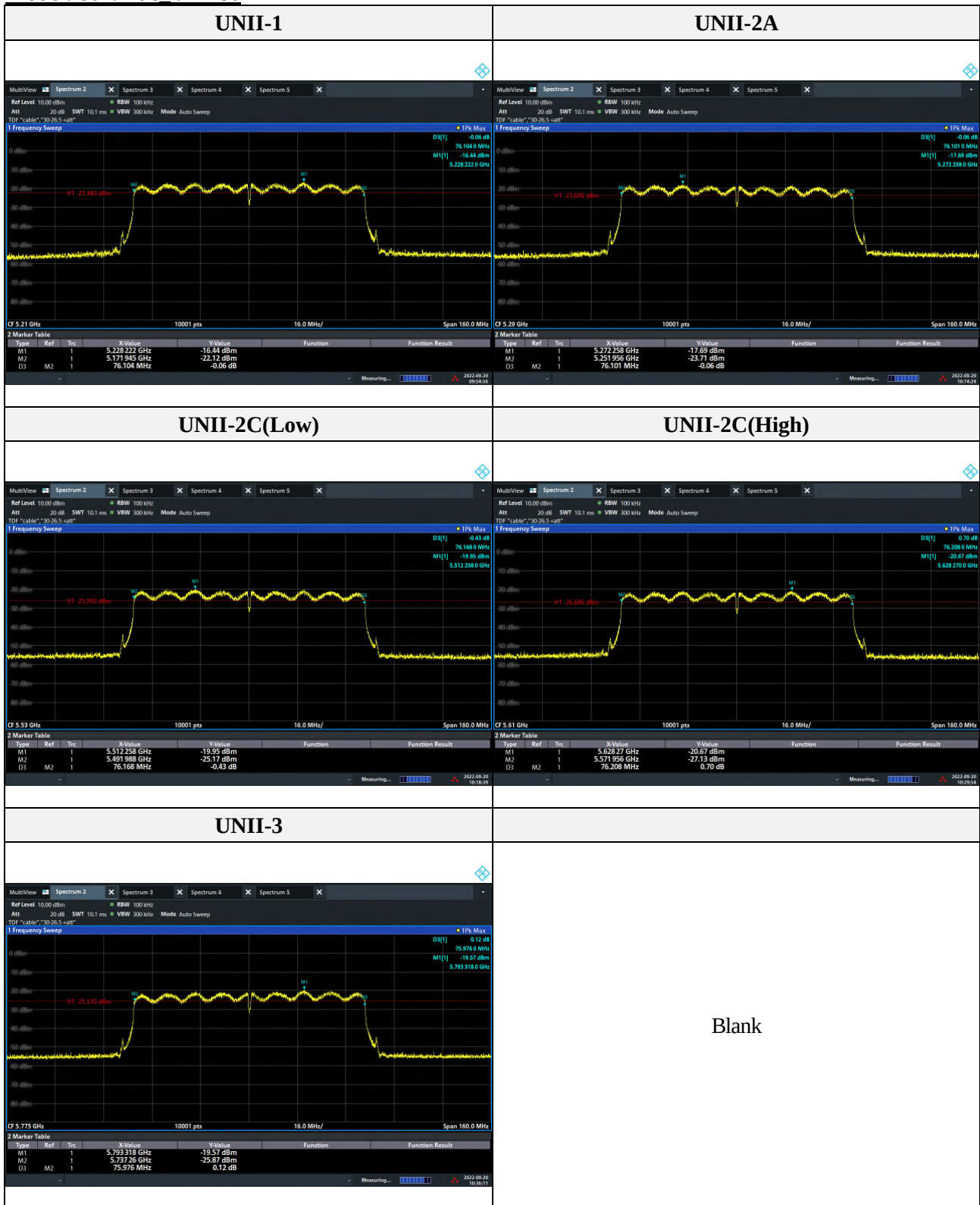
This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.





This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

**Mode : 802.11ac VHT80**



This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.

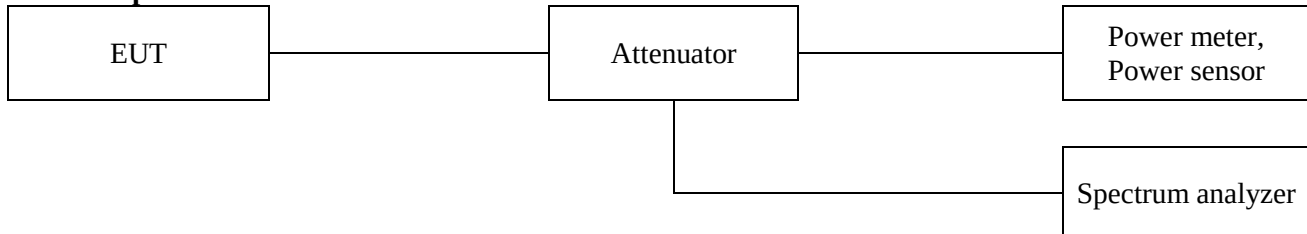
### 3.3. Maximum conducted output power

#### Test procedure

KDB 789033 D02 v02r01– Section E.3.a) or b)

Used test method is Section E.3.b)

#### Test setup



#### Section E.3.a)

##### Method PM (Measurement using an RF average power meter):

- i. Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the conditions listed below are satisfied.
  - The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
  - At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
  - The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- ii. If the transmitter does not transmit continuously, measure the duty cycle,  $x$ , of the transmitter output signal as described in section II.B.
- iii. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
- iv. Adjust the measurement in dBm by adding  $10 \log (1/x)$  where  $x$  is the duty cycle (e.g.,  $10 \log (1/0.25)$  if the duty cycle is 25 %).

#### Section E.3.b)

##### Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.



**Limit  
FCC**

| Band    | EUT Category |                                   | Limit                      |
|---------|--------------|-----------------------------------|----------------------------|
| UNII-1  |              | Outdoor access point              | 1 W (30 dBm)               |
|         | ✓            | Indoor access point               |                            |
|         |              | Fixed point-to-point access point |                            |
|         |              | Mobile and portable client device | 250 mW(24 dBm)             |
| UNII-2A | ✓            |                                   | 250 mW or 11 dBm + 10logB* |
| UNII-2C | ✓            |                                   | 250 mW or 11 dBm + 10logB* |
| UNII-3  | ✓            |                                   | 1 W (30 dBm)               |

**IC**

| Band                               | Limit                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 5150~5250 MHz                      | EIRP shall not exceed 200 mW or 10+10logB*, dBm                                                                      |
| 5250~5350 MHz                      | Conducted output power shall not exceed 250 mW or 11 dBm + 10logB*<br>EIRP shall not exceed 1.0 W or 17+10logB*, dBm |
| 5470~5600 MHz and<br>5650~5725 MHz | Conducted output power shall not exceed 250 mW or 11 dBm + 10logB*<br>EIRP shall not exceed 1.0 W or 17+10logB*, dBm |
| 5725~5850 MHz                      | Conducted output power shall not exceed 1 W                                                                          |

**Note.**

- 1.FCC Limit B is the 26 dB emission bandwidth.
- 2.IC Limit B is the 99% emission bandwidth in megahertz

**Test results**  
**ANT1**

| Mode             | Frequency (MHz) | Mode     | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |          |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11 a | AV            | 0.7            | 9.01               | 30.00       | 30.00 |
|                  | 5 220           |          | AV            |                | 8.95               |             |       |
|                  | 5 240           |          | AV            |                | 8.82               |             |       |
| UNII-2A          | 5 260           |          | AV            | 0.7            | 8.70               | 24.00       | 24.00 |
|                  | 5 280           |          | AV            |                | 8.16               |             |       |
|                  | 5 320           |          | AV            |                | 7.60               |             |       |
| UNII-2C          | 5 500           |          | AV            | 0.5            | 5.89               | 24.00       | 24.00 |
|                  | 5 600           |          | AV            |                | 6.35               |             |       |
|                  | 5 700           |          | AV            |                | 6.85               |             |       |
| UNII-3           | 5 745           |          | AV            |                | 6.33               | 30.00       | 30.00 |
|                  | 5 785           |          | AV            |                | 6.15               |             |       |
|                  | 5 825           |          | AV            |                | 5.98               |             |       |

| Mode             | Frequency (MHz) | Mode           | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11 an_HT20 | AV            | 0.7            | 9.22               | 30.00       | 30.00 |
|                  | 5 220           |                | AV            |                | 9.03               |             |       |
|                  | 5 240           |                | AV            |                | 8.87               |             |       |
| UNII-2A          | 5 260           |                | AV            | 0.7            | 8.60               | 24.00       | 24.00 |
|                  | 5 280           |                | AV            |                | 8.26               |             |       |
|                  | 5 320           |                | AV            |                | 7.68               |             |       |
| UNII-2C          | 5 500           |                | AV            | 0.5            | 5.69               | 24.00       | 24.00 |
|                  | 5 600           |                | AV            |                | 6.23               |             |       |
|                  | 5 700           |                | AV            |                | 6.75               |             |       |
| UNII-3           | 5 745           |                | AV            |                | 5.98               | 30.00       | 30.00 |
|                  | 5 785           |                | AV            |                | 5.78               |             |       |
|                  | 5 825           |                | AV            |                | 5.63               |             |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.

| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11 ac VHT20 | AV            | 0.7            | 9.33               | 30.00       | 30.00 |
|                  | 5 220           |                 | AV            |                | 9.10               |             |       |
|                  | 5 240           |                 | AV            |                | 8.92               |             |       |
| UNII-2A          | 5 260           |                 | AV            | 0.7            | 8.60               | 24.00       | 24.00 |
|                  | 5 280           |                 | AV            |                | 8.08               |             |       |
|                  | 5 320           |                 | AV            |                | 7.61               |             |       |
| UNII-2C          | 5 500           |                 | AV            | 0.5            | 5.72               | 24.00       | 24.00 |
|                  | 5 600           |                 | AV            |                | 6.25               |             |       |
|                  | 5 700           |                 | AV            |                | 6.71               |             |       |
| UNII-3           | 5 745           |                 | AV            |                | 6.33               | 30.00       | 30.00 |
|                  | 5 785           |                 | AV            |                | 6.16               |             |       |
|                  | 5 825           |                 | AV            |                | 6.03               |             |       |

| Mode             | Frequency (MHz) | Mode           | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 190           | 802.11 an_HT40 | AV            | 0.7            | 9.40               | 30.00       | 30.00 |
|                  | 5 230           |                | AV            |                | 8.83               |             |       |
| UNII-2A          | 5 270           |                | AV            |                | 8.23               | 24.00       | 24.00 |
|                  | 5 310           |                | AV            |                | 7.97               |             |       |
| UNII-2C          | 5 510           |                | AV            | 0.5            | 5.86               | 24.00       | 24.00 |
|                  | 5 590           |                | AV            |                | 6.45               |             |       |
|                  | 5 670           |                | AV            |                | 6.84               |             |       |
| UNII-3           | 5 755           |                | AV            |                | 6.33               | 30.00       | 30.00 |
|                  | 5 795           |                | AV            |                | 6.27               |             |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 190           | 802.11 ac VHT40 | AV            | 0.7            | 8.20               | 30.00       | 30.00 |
|                  | 5 230           |                 | AV            |                | 7.21               |             |       |
| UNII-2A          | 5 270           |                 | AV            |                | 6.89               | 24.00       | 24.00 |
|                  | 5 310           |                 | AV            |                | 6.47               |             |       |
| UNII-2C          | 5 510           |                 | AV            | 0.5            | 6.02               | 24.00       | 24.00 |
|                  | 5 590           |                 | AV            |                | 6.40               |             |       |
|                  | 5 670           |                 | AV            |                | 6.81               |             |       |
| UNII-3           | 5 755           |                 | AV            |                | 6.42               | 30.00       | 30.00 |
|                  | 5 795           |                 | AV            |                | 6.30               |             |       |

| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 210           | 802.11 ac VHT80 | AV            | 0.7            | 8.41               | 30.00       | 30.00 |
| UNII-2A          | 5 290           |                 | AV            |                | 8.00               | 24.00       | 24.00 |
| UNII-2C          | 5 530           |                 | AV            | 0.5            | 5.71               | 24.00       | 24.00 |
|                  | 5 610           |                 | AV            |                | 6.22               |             |       |
| UNII-3           | 5 775           |                 | AV            |                | 5.85               | 30.00       | 30.00 |

## ANT2

| Mode             | Frequency (MHz) | Mode     | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |          |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11 a | AV            | 0.7            | 7.54               | 30.00       | 30.00 |
|                  | 5 220           |          | AV            |                | 7.19               |             |       |
|                  | 5 240           |          | AV            |                | 7.05               |             |       |
| UNII-2A          | 5 260           |          | AV            | 0.7            | 6.94               | 24.00       | 24.00 |
|                  | 5 280           |          | AV            |                | 6.31               |             |       |
|                  | 5 320           |          | AV            |                | 5.64               |             |       |
| UNII-2C          | 5 500           |          | AV            | 0.5            | 4.95               | 24.00       | 24.00 |
|                  | 5 600           |          | AV            |                | 4.27               |             |       |
|                  | 5 700           |          | AV            |                | 4.15               |             |       |
| UNII-3           | 5 745           |          | AV            | 0.5            | 3.96               | 30.00       | 30.00 |
|                  | 5 785           |          | AV            |                | 3.88               |             |       |
|                  | 5 825           |          | AV            |                | 3.54               |             |       |

| Mode             | Frequency (MHz) | Mode           | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11 an_HT20 | AV            | 0.7            | 7.58               | 30.00       | 30.00 |
|                  | 5 220           |                | AV            |                | 7.30               |             |       |
|                  | 5 240           |                | AV            |                | 7.01               |             |       |
| UNII-2A          | 5 260           |                | AV            | 0.7            | 6.76               | 24.00       | 24.00 |
|                  | 5 280           |                | AV            |                | 6.33               |             |       |
|                  | 5 320           |                | AV            |                | 5.64               |             |       |
| UNII-2C          | 5 500           |                | AV            | 0.5            | 4.54               | 24.00       | 24.00 |
|                  | 5 600           |                | AV            |                | 4.14               |             |       |
|                  | 5 700           |                | AV            |                | 4.11               |             |       |
| UNII-3           | 5 745           |                | AV            | 0.5            | 3.98               | 30.00       | 30.00 |
|                  | 5 785           |                | AV            |                | 3.82               |             |       |
|                  | 5 825           |                | AV            |                | 3.67               |             |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.

| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11 ac VHT20 | AV            | 0.7            | 7.61               | 30.00       | 30.00 |
|                  | 5 220           |                 | AV            |                | 7.33               |             |       |
|                  | 5 240           |                 | AV            |                | 7.05               |             |       |
| UNII-2A          | 5 260           |                 | AV            | 0.7            | 6.79               | 24.00       | 24.00 |
|                  | 5 280           |                 | AV            |                | 6.23               |             |       |
|                  | 5 320           |                 | AV            |                | 5.60               |             |       |
| UNII-2C          | 5 500           |                 | AV            | 0.5            | 4.53               | 24.00       | 24.00 |
|                  | 5 600           |                 | AV            |                | 4.20               |             |       |
|                  | 5 700           |                 | AV            |                | 4.04               |             |       |
| UNII-3           | 5 745           |                 | AV            | 0.5            | 3.87               | 30.00       | 30.00 |
|                  | 5 785           |                 | AV            |                | 3.56               |             |       |
|                  | 5 825           |                 | AV            |                | 3.39               |             |       |

| Mode             | Frequency (MHz) | Mode           | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 190           | 802.11 an_HT40 | AV            | 0.7            | 7.67               | 30.00       | 30.00 |
|                  | 5 230           |                | AV            |                | 7.16               |             |       |
| UNII-2A          | 5 270           |                | AV            | 0.7            | 6.69               | 24.00       | 24.00 |
|                  | 5 310           |                | AV            |                | 6.13               |             |       |
| UNII-2C          | 5 510           |                | AV            | 0.5            | 4.72               | 24.00       | 24.00 |
|                  | 5 590           |                | AV            |                | 4.46               |             |       |
|                  | 5 670           |                | AV            |                | 4.46               |             |       |
| UNII-3           | 5 755           |                | AV            | 0.5            | 4.16               | 30.00       | 30.00 |
|                  | 5 795           |                | AV            |                | 3.98               |             |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.



| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 190           | 802.11 ac VHT40 | AV            | 0.7            | 7.65               | 30.00       | 30.00 |
|                  | 5 230           |                 | AV            |                | 6.77               |             |       |
| UNII-2A          | 5 270           |                 | AV            |                | 6.48               | 24.00       | 24.00 |
|                  | 5 310           |                 | AV            |                | 6.15               |             |       |
| UNII-2C          | 5 510           |                 | AV            | 0.5            | 4.50               | 24.00       | 24.00 |
|                  | 5 590           |                 | AV            |                | 4.33               |             |       |
|                  | 5 670           |                 | AV            |                | 4.36               |             |       |
| UNII-3           | 5 755           |                 | AV            |                | 4.02               | 30.00       | 30.00 |
|                  | 5 795           |                 | AV            |                | 3.83               |             |       |

| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 210           | 802.11 ac VHT80 | AV            | 0.7            | 7.01               | 30.00       | 30.00 |
| UNII-2A          | 5 290           |                 | AV            |                | 6.14               | 24.00       | 24.00 |
| UNII-2C          | 5 530           |                 | AV            | 0.5            | 4.27               | 24.00       | 24.00 |
|                  | 5 610           |                 | AV            |                | 4.15               |             |       |
| UNII-3           | 5 775           |                 | AV            |                | 3.87               | 30.00       | 30.00 |

### MIMO ANT1+ANT2

| Mode             | Frequency (MHz) | Mode              | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-------------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                   |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11<br>an_HT20 | AV            | 3.7            | 7.02               | 30.00       | 30.00 |
|                  | 5 220           |                   | AV            |                | 6.82               |             |       |
|                  | 5 240           |                   | AV            |                | 6.51               |             |       |
| UNII-2A          | 5 260           |                   | AV            |                | 3.35               | 24.00       | 24.00 |
|                  | 5 280           |                   | AV            |                | 3.45               |             |       |
|                  | 5 320           |                   | AV            |                | 3.67               |             |       |
| UNII-2C          | 5 500           |                   | AV            | 3.5            | 6.54               | 24.00       | 24.00 |
|                  | 5 600           |                   | AV            |                | 6.47               |             |       |
|                  | 5 700           |                   | AV            |                | 7.09               |             |       |
| UNII-3           | 5 745           |                   | AV            |                | 7.24               | 30.00       | 30.00 |
|                  | 5 785           |                   | AV            |                | 7.35               |             |       |
|                  | 5 825           |                   | AV            |                | 7.45               |             |       |

| Mode             | Frequency (MHz) | Mode                  | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                       |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 180           | 802.11<br>ac<br>VHT20 | AV            | 3.7            | 7.96               | 30.00       | 30.00 |
|                  | 5 220           |                       | AV            |                | 7.37               |             |       |
|                  | 5 240           |                       | AV            |                | 6.69               |             |       |
| UNII-2A          | 5 260           |                       | AV            |                | 2.97               | 24.00       | 24.00 |
|                  | 5 280           |                       | AV            |                | 2.49               |             |       |
|                  | 5 320           |                       | AV            |                | 2.11               |             |       |
| UNII-2C          | 5 500           |                       | AV            | 3.5            | 6.36               | 24.00       | 24.00 |
|                  | 5 600           |                       | AV            |                | 6.52               |             |       |
|                  | 5 700           |                       | AV            |                | 7.30               |             |       |
| UNII-3           | 5 745           |                       | AV            |                | 7.25               | 30.00       | 30.00 |
|                  | 5 785           |                       | AV            |                | 7.32               |             |       |
|                  | 5 825           |                       | AV            |                | 7.40               |             |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.

| Mode             | Frequency (MHz) | Mode           | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 190           | 802.11 an_HT40 | AV            | 3.7            | 4.51               | 30.00       | 30.00 |
|                  | 5 230           |                | AV            |                | 3.14               |             |       |
| UNII-2A          | 5 270           |                | AV            |                | -0.32              | 24.00       | 24.00 |
|                  | 5 310           |                | AV            |                | -1.03              |             |       |
| UNII-2C          | 5 510           |                | AV            | 3.5            | 3.55               | 24.00       | 24.00 |
|                  | 5 590           |                | AV            |                | 3.94               |             |       |
|                  | 5 670           |                | AV            |                | 4.39               |             |       |
| UNII-3           | 5 755           |                | AV            |                | 4.53               | 30.00       | 30.00 |
|                  | 5 795           |                | AV            |                | 4.66               |             |       |

| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 190           | 802.11 ac VHT40 | AV            | 3.7            | 4.14               | 30.00       | 30.00 |
|                  | 5 230           |                 | AV            |                | 3.13               |             |       |
| UNII-2A          | 5 270           |                 | AV            |                | -0.45              | 24.00       | 24.00 |
|                  | 5 310           |                 | AV            |                | -1.01              |             |       |
| UNII-2C          | 5 510           |                 | AV            | 3.5            | 3.55               | 24.00       | 24.00 |
|                  | 5 590           |                 | AV            |                | 4.01               |             |       |
|                  | 5 670           |                 | AV            |                | 4.50               |             |       |
| UNII-3           | 5 755           |                 | AV            |                | 4.57               | 30.00       | 30.00 |
|                  | 5 795           |                 | AV            |                | 4.64               |             |       |

| Mode             | Frequency (MHz) | Mode            | Detector mode | Ant Gain (dBi) | Output power (dBm) | Limit (dBm) |       |
|------------------|-----------------|-----------------|---------------|----------------|--------------------|-------------|-------|
|                  |                 |                 |               |                |                    | FCC         | IC    |
| UNII-1 (E.I.R.P) | 5 210           | 802.11 ac VHT80 | AV            | 3.7            | 1.27               | 30.00       | 30.00 |
| UNII-2A          | 5 290           |                 | AV            |                | -1.59              | 24.00       | 24.00 |
| UNII-2C          | 5 530           |                 | AV            | 3.5            | 2.33               | 24.00       | 24.00 |
|                  | 5 610           |                 | AV            |                | 2.75               |             |       |
| UNII-3           | 5 775           |                 | AV            |                | 2.68               | 30.00       | 30.00 |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
 The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
 The authenticity of the test report, contact kes@kes.co.kr.



### 3.4. Power spectral density

#### Test procedure

KDB 789033 D02 v02r01 – Section F

#### Test setup



#### Section F

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power...” (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
  - a) If Method SA-2 or SA-2 Alternative was used, add  $10 \log(1/x)$ , where  $x$  is the duty cycle, to the peak of the spectrum.
  - b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
  - a) Set  $RBW \geq 1/T$ , where  $T$  is defined in section II.B.1.a)
  - b) Set  $VBW \geq 3 RBW$ .
  - c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10 \log(500 \text{ kHz}/RBW)$  to the measured result, whereas  $RBW (< 500 \text{ kHz})$  is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
  - d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add  $10 \log(1 \text{ MHz}/RBW)$  to the measured result, whereas  $RBW (< 1 \text{ MHz})$  is the reduced resolution bandwidth of spectrum analyzer set during measurement.
  - e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

#### Note.

As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since  $RBW=100 \text{ kHz}$  is available on nearly all spectrum analyzers.

**Limit  
FCC**

| Band    | EUT Category |                                   | Limit          |
|---------|--------------|-----------------------------------|----------------|
| UNII-1  |              | Outdoor access point              | 17 dBm/MHz     |
|         | ✓            | Indoor access point               |                |
|         |              | Fixed point-to-point access point |                |
|         |              | Mobile and portable client device | 11 dBm/MHz     |
| UNII-2A | ✓            |                                   | 11 dBm/MHz     |
| UNII-2C | ✓            |                                   | 11 dBm/MHz     |
| UNII-3  | ✓            |                                   | 30 dBm/500 kHz |

**IC**

| Band                               | Limit                            |
|------------------------------------|----------------------------------|
| 5150~5250 MHz                      | EIRP spectral density 10 dBm/MHz |
| 5250~5350 MHz                      | 11 dBm/MHz                       |
| 5470~5600 MHz and<br>5650~5725 MHz | 11 dBm/MHz                       |
| 5725~5850 MHz                      | 30 dBm/500 kHz                   |

**Note.**

1. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceed 6 dBi.

**Test results**  
**ANT1**

| Mode        | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |       |
|-------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|-------|
|             |                    |                     |                  |               |              |             |              | FCC            | IC    |       |
| 802.11<br>a | 5 180              | UNII-1<br>(E.I.R.P) | 2.24             | -             | 1.73         | 0.7         | 4.67         | 17.00          | 10.00 |       |
|             | 5 220              |                     | 1.64             |               |              |             | 4.07         |                |       |       |
|             | 5 240              |                     | 0.84             |               |              |             | 3.27         |                |       |       |
|             | 5 260              | UNII-2A             | 1.42             |               | 1.74         | 0.7         | 3.16         | 11.00          | 11.00 |       |
|             | 5 300              |                     | 1.08             |               |              |             | 2.82         |                |       |       |
|             | 5 320              |                     | 0.61             |               |              |             | 2.35         |                |       |       |
|             | 5 500              | UNII-2C             | 4.80             |               | 1.74         | 0.5         | 6.54         |                |       |       |
|             | 5 600              |                     | 5.66             |               |              |             | 7.40         |                |       |       |
|             | 5 700              |                     | 5.37             |               |              |             | 7.11         |                |       |       |
|             | 5 745              | UNII-3              | -8.19            |               | 1.74         |             | 0.5          | -6.45          | 30.00 | 30.00 |
|             | 5 785              |                     | -8.86            |               |              |             |              | -7.12          |       |       |
|             | 5 825              |                     | -3.78            |               |              |             |              | -2.04          |       |       |

| Mode              | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |       |
|-------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|-------|
|                   |                    |                     |                  |               |              |             |              | FCC            | IC    |       |
| 802.11<br>an_HT20 | 5 180              | UNII-1<br>(E.I.R.P) | 0.53             | -             | 1.84         | 0.7         | 3.07         | 17.00          | 10.00 |       |
|                   | 5 220              |                     | 0.81             |               |              |             | 3.35         |                |       |       |
|                   | 5 240              |                     | 0.88             |               |              |             | 3.42         |                |       |       |
|                   | 5 260              | UNII-2A             | 1.39             |               | 1.84         | 0.7         | 3.23         | 11.00          | 11.00 |       |
|                   | 5 300              |                     | 0.49             |               |              |             | 2.33         |                |       |       |
|                   | 5 320              |                     | 0.84             |               |              |             | 2.68         |                |       |       |
|                   | 5 500              | UNII-2C             | 5.23             |               | 1.84         | 0.5         | 7.07         |                |       |       |
|                   | 5 600              |                     | 5.05             |               |              |             | 6.89         |                |       |       |
|                   | 5 700              |                     | 5.58             |               |              |             | 7.42         |                |       |       |
|                   | 5 745              | UNII-3              | -4.15            |               | 1.84         |             | 0.5          | -2.31          | 30.00 | 30.00 |
|                   | 5 785              |                     | -3.22            |               |              |             |              | -1.38          |       |       |
|                   | 5 825              |                     | -4.81            |               |              |             |              | -2.97          |       |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |  |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|--|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |  |
| 802.11<br>ac_VHT20 | 5 180              | UNII-1<br>(E.I.R.P) | 0.94             | -             | 1.83         | 0.7         | 3.47         | 17.00          | 10.00 |  |
|                    | 5 220              |                     | 0.72             |               |              |             | 3.25         |                |       |  |
|                    | 5 240              |                     | 0.32             |               |              |             | 2.85         |                |       |  |
|                    | 5 260              | UNII-2A             | 1.13             |               | 1.83         |             | 2.96         | 11.00          | 11.00 |  |
|                    | 5 300              |                     | 0.77             |               |              |             | 2.60         |                |       |  |
|                    | 5 320              |                     | 0.14             |               |              |             | 1.97         |                |       |  |
|                    | 5 500              | UNII-2C             | 4.96             |               | 1.82         | 0.5         | 6.78         |                |       |  |
|                    | 5 600              |                     | 5.44             |               |              |             | 7.26         |                |       |  |
|                    | 5 700              |                     | 5.12             |               |              |             | 6.94         |                |       |  |
|                    | 5 745              | UNII-3              | -2.80            |               | 1.84         |             | -0.96        | 30.00          | 30.00 |  |
|                    | 5 785              |                     | -4.30            |               |              |             | -2.46        |                |       |  |
|                    | 5 825              |                     | -3.48            |               |              |             | -1.64        |                |       |  |

| Mode              | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|-------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                   |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>an_HT40 | 5 190              | UNII-1<br>(E.I.R.P) | -9.72            | -             | 3.15         | 0.7         | -5.87        | 17.00          | 10.00 |
|                   | 5 230              |                     | -10.10           |               |              |             | -6.25        |                |       |
|                   | 5 270              | UNII-2A             | -10.44           |               | 3.15         |             | -7.29        | 11.00          | 11.00 |
|                   | 5 310              |                     | -8.46            |               |              |             | -5.31        |                |       |
|                   | 5 510              | UNII-2C             | -11.98           |               | 3.14         | 0.5         | -8.84        |                |       |
|                   | 5 590              |                     | -12.82           |               |              |             | -9.68        |                |       |
|                   | 5 670              |                     | -12.20           |               |              |             | -9.06        |                |       |
|                   | 5 755              | UNII-3              | -16.51           |               | 3.17         |             | -13.34       | 30.00          | 30.00 |
|                   | 5 795              |                     | -14.99           |               |              |             | -11.82       |                |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.





| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>ac_VHT40 | 5 190              | UNII-1<br>(E.I.R.P) | -9.72            | -             | 3.16         | 0.7         | -5.86        | 17.00          | 10.00 |
|                    | 5 230              |                     | -9.89            |               |              |             | -6.03        |                |       |
|                    | 5 270              | UNII-2A             | -7.68            |               | 3.16         |             | -4.52        | 11.00          | 11.00 |
|                    | 5 310              |                     | -11.33           |               |              |             | -8.17        |                |       |
|                    | 5 510              | UNII-2C             | -12.92           |               | 3.16         | -9.76       |              |                |       |
|                    | 5 590              |                     | -12.96           |               |              | -9.80       |              |                |       |
|                    | 5 670              |                     | -13.34           |               |              | -10.18      |              |                |       |
|                    | 5 755              | UNII-3              | -15.56           |               | 3.13         | -12.43      | 30.00        | 30.00          |       |
|                    | 5 795              |                     | -15.53           |               |              | -12.40      |              |                |       |

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>ac_VHT80 | 5 210              | UNII-1<br>(E.I.R.P) | -13.00           | -             | 5.02         | 0.7         | -7.28        | 17.00          | 10.00 |
|                    | 5 290              | UNII-2A             | -14.34           |               | 5.00         |             | -9.34        |                |       |
|                    | 5 530              | UNII-2C             | -16.49           |               | 5.04         | 0.5         | -11.45       | 11.00          | 11.00 |
|                    | 5 610              |                     | -17.57           |               |              |             | -12.53       |                |       |
|                    | 5 775              | UNII-3              | -15.86           |               | 5.02         |             | -10.84       | 30.00          | 30.00 |

## ANT2

| Mode        | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |       |
|-------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|-------|
|             |                    |                     |                  |               |              |             |              | FCC            | IC    |       |
| 802.11<br>a | 5 180              | UNII-1<br>(E.I.R.P) | -0.18            | -             | 1.73         | 0.7         | 2.25         | 17.00          | 10.00 |       |
|             | 5 220              |                     | 0.05             |               |              |             | 2.48         |                |       |       |
|             | 5 240              |                     | 0.55             |               |              |             | 2.98         |                |       |       |
|             | 5 260              | UNII-2A             | 0.24             |               | 1.74         | 0.7         | 1.98         | 11.00          | 11.00 |       |
|             | 5 300              |                     | 0.20             |               |              |             | 1.94         |                |       |       |
|             | 5 320              |                     | -1.06            |               |              |             | 0.68         |                |       |       |
|             | 5 500              | UNII-2C             | 2.06             |               | 1.74         | 0.5         | 3.80         |                |       |       |
|             | 5 600              |                     | 1.46             |               |              |             | 3.20         |                |       |       |
|             | 5 700              |                     | 2.86             |               |              |             | 4.60         |                |       |       |
|             | 5 745              | UNII-3              | -7.47            |               | 1.74         |             | 0.5          | -5.73          | 30.00 | 30.00 |
|             | 5 785              |                     | -6.85            |               |              |             |              | -5.11          |       |       |
|             | 5 825              |                     | -3.78            |               |              |             |              | -2.04          |       |       |

| Mode              | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |       |
|-------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|-------|
|                   |                    |                     |                  |               |              |             |              | FCC            | IC    |       |
| 802.11<br>an_HT20 | 5 180              | UNII-1<br>(E.I.R.P) | -0.62            | -             | 1.84         | 0.7         | 1.92         | 17.00          | 10.00 |       |
|                   | 5 220              |                     | -0.68            |               |              |             | 1.86         |                |       |       |
|                   | 5 240              |                     | -1.26            |               |              |             | 1.28         |                |       |       |
|                   | 5 260              | UNII-2A             | 0.02             |               | 1.84         |             | 0.7          | 1.86           | 11.00 | 11.00 |
|                   | 5 300              |                     | -0.77            |               |              |             |              | 1.07           |       |       |
|                   | 5 320              |                     | -1.29            |               |              |             |              | 0.55           |       |       |
|                   | 5 500              | UNII-2C             | 1.80             |               | 1.84         | 0.5         | 3.64         |                |       |       |
|                   | 5 600              |                     | 1.49             |               |              |             | 3.33         |                |       |       |
|                   | 5 700              |                     | 2.05             |               |              |             | 3.89         |                |       |       |
|                   | 5 745              | UNII-3              | -6.77            |               | 1.84         |             | 0.5          | -4.93          | 30.00 | 30.00 |
|                   | 5 785              |                     | -7.56            |               |              |             |              | -5.72          |       |       |
|                   | 5 825              |                     | -3.90            |               |              |             |              | -2.06          |       |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |  |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|--|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |  |
| 802.11<br>ac_VHT20 | 5 180              | UNII-1<br>(E.I.R.P) | -0.21            | -             | 1.83         | 0.7         | 2.32         | 17.00          | 10.00 |  |
|                    | 5 220              |                     | -0.62            |               |              |             | 1.91         |                |       |  |
|                    | 5 240              |                     | -1.09            |               |              |             | 1.44         |                |       |  |
|                    | 5 260              | UNII-2A             | 1.58             |               | 1.83         |             | 3.41         | 11.00          | 11.00 |  |
|                    | 5 300              |                     | 0.10             |               |              |             | 1.93         |                |       |  |
|                    | 5 320              |                     | -0.19            |               |              |             | 1.64         |                |       |  |
|                    | 5 500              | UNII-2C             | 1.85             |               | 1.82         | 0.5         | 3.67         |                |       |  |
|                    | 5 600              |                     | 1.42             |               |              |             | 3.24         |                |       |  |
|                    | 5 700              |                     | 2.70             |               |              |             | 4.52         |                |       |  |
|                    | 5 745              | UNII-3              | -8.38            |               | 1.84         |             | -6.54        | 30.00          | 30.00 |  |
|                    | 5 785              |                     | -4.67            |               |              |             | -2.83        |                |       |  |
|                    | 5 825              |                     | -7.73            |               |              |             | -5.89        |                |       |  |

| Mode              | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|-------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                   |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>an_HT40 | 5 190              | UNII-1<br>(E.I.R.P) | -8.58            | -             | 3.15         | 0.7         | -4.73        | 17.00          | 10.00 |
|                   | 5 230              |                     | -8.19            |               |              |             | -4.34        |                |       |
|                   | 5 270              | UNII-2A             | -8.72            |               | 3.15         |             | -5.57        | 11.00          | 11.00 |
|                   | 5 310              |                     | -8.48            |               |              |             | -5.33        |                |       |
|                   | 5 510              | UNII-2C             | -9.86            |               | 3.14         | 0.5         | -6.72        |                |       |
|                   | 5 590              |                     | -10.27           |               |              |             | -7.13        |                |       |
|                   | 5 670              |                     | -9.41            |               |              |             | -6.27        |                |       |
|                   | 5 755              | UNII-3              | -11.75           |               | 3.17         |             | -8.58        | 30.00          | 30.00 |
|                   | 5 795              |                     | -12.32           |               |              |             | -9.15        |                |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.



| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>ac_VHT40 | 5 190              | UNII-1<br>(E.I.R.P) | -8.42            | -             | 3.16         | 0.7         | -4.56        | 17.00          | 10.00 |
|                    | 5 230              |                     | -8.60            |               |              |             | -4.74        |                |       |
|                    | 5 270              | UNII-2A             | -7.89            |               | 3.16         |             | -4.73        | 11.00          | 11.00 |
|                    | 5 310              |                     | -9.52            |               |              |             | -6.36        |                |       |
|                    | 5 510              | UNII-2C             | -9.59            |               | 3.16         | -6.43       |              |                |       |
|                    | 5 590              |                     | -10.12           |               |              | -6.96       |              |                |       |
|                    | 5 670              |                     | -10.04           |               |              | -6.88       |              |                |       |
|                    | 5 755              | UNII-3              | -11.97           |               | 3.13         | -8.84       | 30.00        | 30.00          |       |
|                    | 5 795              |                     | -10.51           |               |              | -7.38       |              |                |       |

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>ac_VHT80 | 5 210              | UNII-1<br>(E.I.R.P) | -12.27           | -             | 5.02         | 0.7         | -6.55        | 17.00          | 10.00 |
|                    | 5 290              | UNII-2A             | -12.46           |               | 5.00         |             | -7.46        |                |       |
|                    | 5 530              | UNII-2C             | -14.16           |               | 5.04         | 0.5         | -9.12        | 11.00          | 11.00 |
|                    | 5 610              |                     | -13.77           |               |              |             | -8.73        |                |       |
|                    | 5 775              | UNII-3              | -15.79           |               | 5.02         |             | -10.77       | 30.00          | 30.00 |



### MIMO ANT1+ANT2

| Mode              | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|-------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                   |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>an_HT20 | 5 180              | UNII-1<br>(E.I.R.P) | -1.77            | -             | 1.84         | 3.7         | 3.77         | 17.00          | 10.00 |
|                   | 5 220              |                     | -0.84            |               |              |             | 4.70         |                |       |
|                   | 5 240              |                     | -1.05            |               |              |             | 4.49         |                |       |
|                   | 5 260              | UNII-2A             | 1.49             |               | 1.84         | 3.7         | 3.33         | 11.00          | 11.00 |
|                   | 5 300              |                     | 1.36             |               |              |             | 3.20         |                |       |
|                   | 5 320              |                     | 0.98             |               |              |             | 2.82         |                |       |
|                   | 5 500              | UNII-2C             | -2.17            |               | 1.84         | 3.5         | -0.33        |                |       |
|                   | 5 600              |                     | -1.70            |               |              |             | 0.14         |                |       |
|                   | 5 700              |                     | -0.86            |               |              |             | 0.98         |                |       |
|                   | 5 745              | UNII-3              | -2.69            |               | 1.84         | 3.5         | -0.85        | 30.00          | 30.00 |
|                   | 5 785              |                     | -4.25            |               |              |             | -2.41        |                |       |
|                   | 5 825              |                     | -3.34            |               |              |             | -1.50        |                |       |

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |       |
| 802.11<br>ac_VHT20 | 5 180              | UNII-1<br>(E.I.R.P) | -1.07            | -             | 1.83         | 3.7         | 4.46         | 17.00          | 10.00 |       |
|                    | 5 220              |                     | -2.02            |               |              |             | 3.51         |                |       |       |
|                    | 5 240              |                     | -1.70            |               |              |             | 3.83         |                |       |       |
|                    | 5 260              | UNII-2A             | 1.13             |               | 1.83         | 3.7         | 2.96         | 11.00          | 11.00 |       |
|                    | 5 300              |                     | -2.06            |               |              |             | -0.23        |                |       |       |
|                    | 5 320              |                     | -1.87            |               |              |             | -0.04        |                |       |       |
|                    | 5 500              | UNII-2C             | -0.83            |               | 1.82         | 3.5         | 0.99         |                |       |       |
|                    | 5 600              |                     | -1.70            |               |              |             | 0.12         |                |       |       |
|                    | 5 700              |                     | -0.86            |               |              |             | 0.96         |                |       |       |
|                    | 5 745              | UNII-3              | -3.72            |               | 1.84         |             | 3.5          | -1.88          | 30.00 | 30.00 |
|                    | 5 785              |                     | -2.87            |               |              |             |              | -1.03          |       |       |
|                    | 5 825              |                     | -5.20            |               |              |             |              | -3.36          |       |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.



| Mode              | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|-------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                   |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>an_HT40 | 5 190              | UNII-1<br>(E.I.R.P) | -8.79            | -             | 3.15         | 3.7         | -1.94        | 17.00          | 10.00 |
|                   | 5 230              |                     | -8.25            |               |              |             | -1.4         |                |       |
|                   | 5 270              | UNII-2A             | -8.97            |               | 3.15         |             | -5.82        | 11.00          | 11.00 |
|                   | 5 310              |                     | -8.28            |               |              |             | -5.13        |                |       |
|                   | 5 510              | UNII-2C             | -9.48            |               | 3.14         | -6.34       |              |                |       |
|                   | 5 590              |                     | -10.14           |               |              | -7.00       |              |                |       |
|                   | 5 670              |                     | -9.29            |               |              | -6.15       |              |                |       |
|                   | 5 755              | UNII-3              | -12.05           |               | 3.17         | -8.88       | 30.00        | 30.00          |       |
|                   | 5 795              |                     | -12.01           |               |              | -8.84       |              |                |       |

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>ac_VHT40 | 5 190              | UNII-1<br>(E.I.R.P) | -8.05            | -             | 3.16         | 3.7         | -1.19        | 17.00          | 10.00 |
|                    | 5 230              |                     | -8.59            |               |              |             | -1.73        |                |       |
|                    | 5 270              | UNII-2A             | -7.66            |               | 3.16         |             | -4.50        | 11.00          | 11.00 |
|                    | 5 310              |                     | -9.34            |               |              |             | -6.18        |                |       |
|                    | 5 510              | UNII-2C             | -9.85            |               | 3.16         | -6.69       |              |                |       |
|                    | 5 590              |                     | -9.82            |               |              | -6.66       |              |                |       |
|                    | 5 670              |                     | -9.89            |               |              | -6.73       |              |                |       |
|                    | 5 755              | UNII-3              | -11.63           |               | 3.13         | 3.5         | -8.50        | 30.00          | 30.00 |
|                    | 5 795              |                     | -11.62           |               |              |             | -8.49        |                |       |

This report shall not be reproduced except in full, without the written approval of KES Co., Ltd.  
The results shown in this test report refer only to the sample(s) tested unless otherwise stated.  
The authenticity of the test report, contact kes@kes.co.kr.

| Mode               | Frequency<br>(MHz) | Band                | PSD<br>(dBm/MHz) | RBWF<br>Note1 | DCF<br>Note2 | Ant<br>Gain | Sum<br>Note3 | Limit(dBm/MHz) |       |
|--------------------|--------------------|---------------------|------------------|---------------|--------------|-------------|--------------|----------------|-------|
|                    |                    |                     |                  |               |              |             |              | FCC            | IC    |
| 802.11<br>ac_VHT80 | 5 210              | UNII-1<br>(E.I.R.P) | -12.19           | -             | 5.02         | 3.7         | -3.47        | 17.00          | 10.00 |
|                    | 5 290              | UNII-2A             | -12.60           |               | 5.00         |             | -7.60        |                |       |
|                    | 5 530              | UNII-2C             | -14.14           |               | 5.04         | 3.5         | -9.10        | 11.00          | 11.00 |
|                    | 5 610              |                     | -13.74           |               |              |             | -8.70        |                |       |
|                    | 5 775              | UNII-3              | -15.59           |               | 5.02         |             | -10.57       | 30.00          | 30.00 |

**Note.**

- UNII-1 =  $10\log(1 \text{ MHz}/1 \text{ MHz})$   
 UNII-2A =  $10\log(1 \text{ MHz}/1 \text{ MHz})$   
 UNII-2C =  $10\log(1 \text{ MHz}/1 \text{ MHz})$   
 UNII-3 =  $10\log(500 \text{ kHz} / 500 \text{ kHz})$
- Refer to the page 234 on this report.
- Sum(dBm) = PSD(dBm) + RBWF + Duty correction factor (dB)