

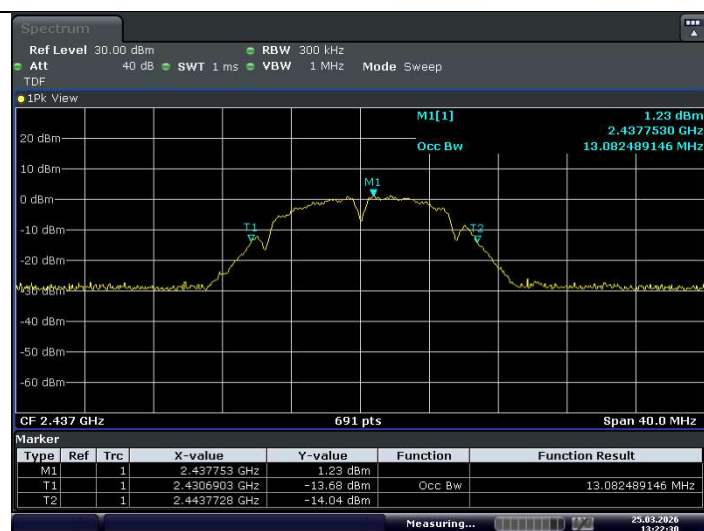
## 99 % Bandwidth

11b

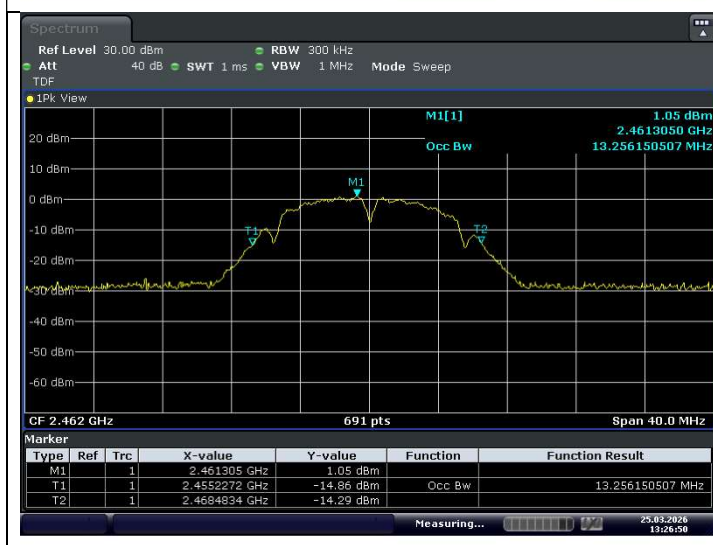
Low Channel



Middle Channel

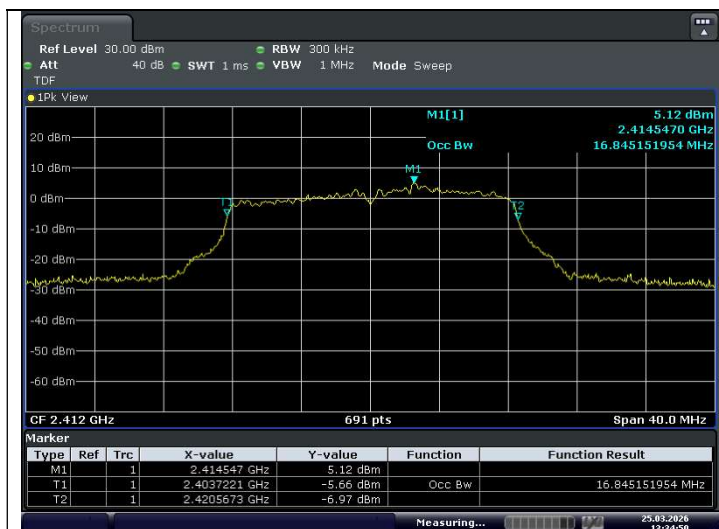


High Channel

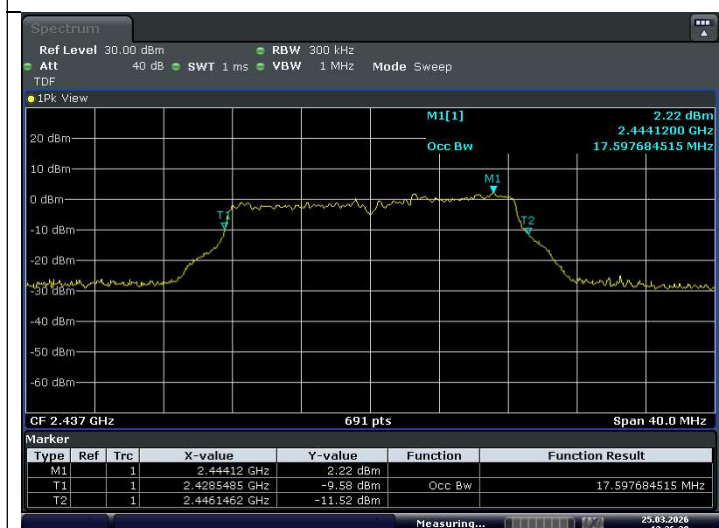


11g

Low Channel



Middle Channel

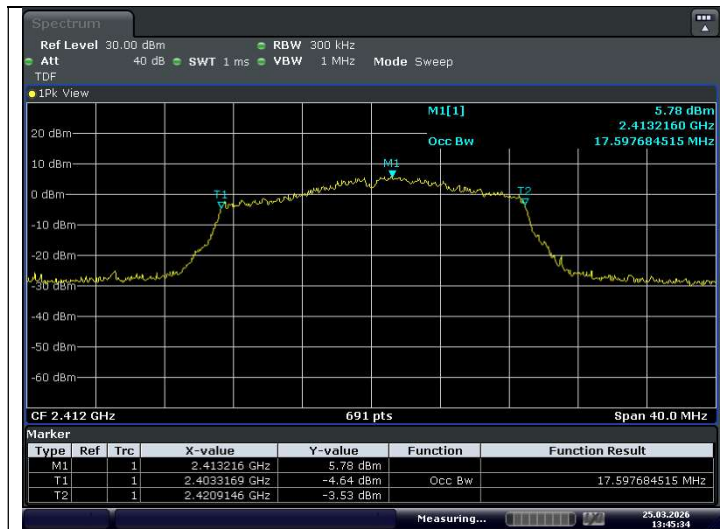


High Channel

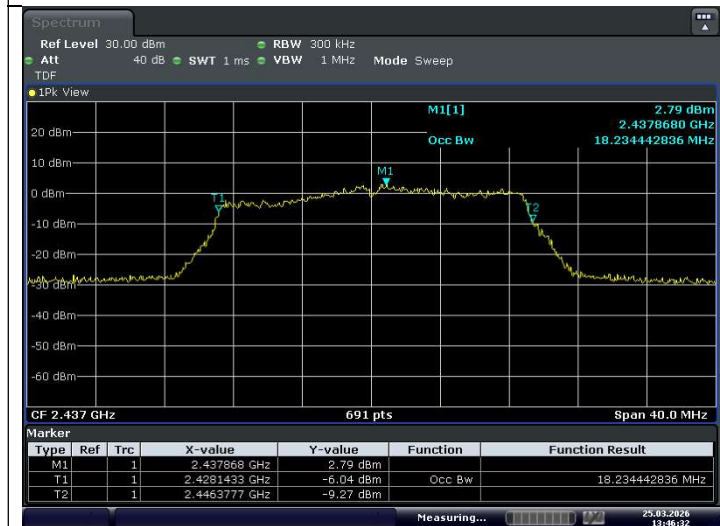


## 11n\_HT20

### Low Channel



### Middle Channel

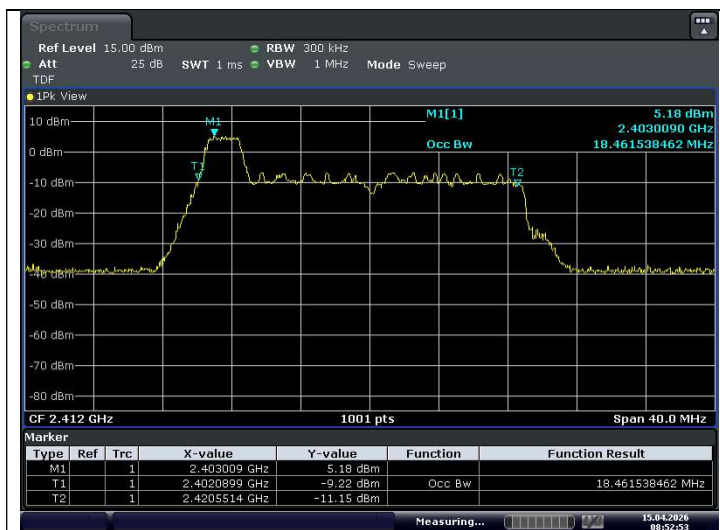


### High Channel

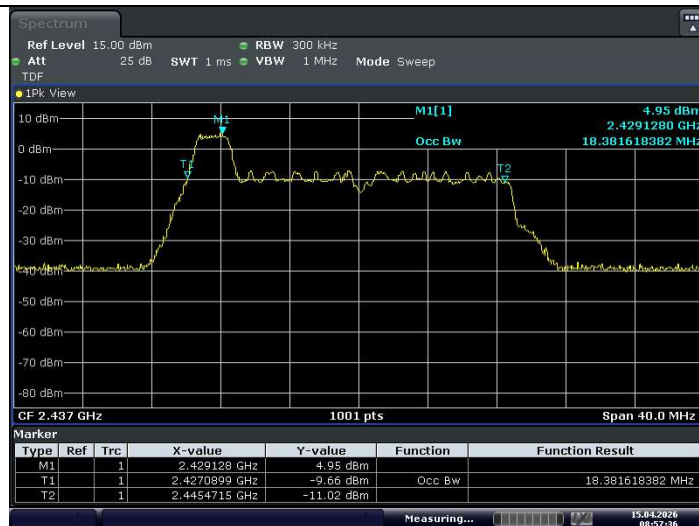


## 11ax\_HE20\_26T\_ORU

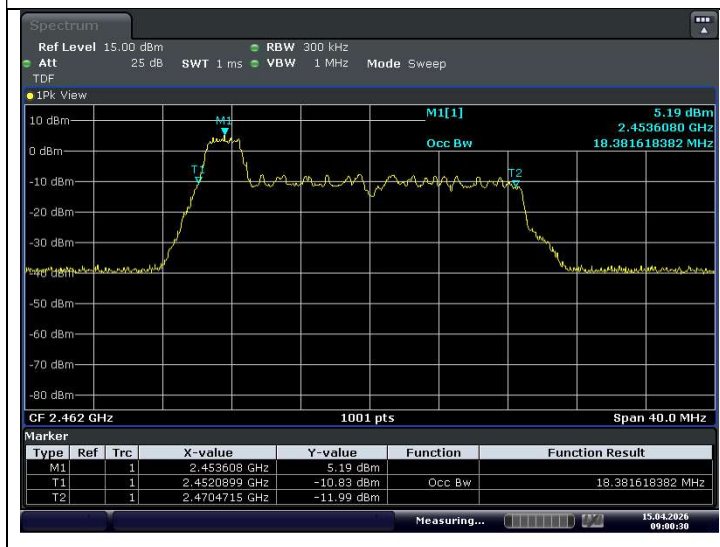
### Low Channel



### Middle Channel



### High Channel



## 11ax\_HE20\_26T\_4RU

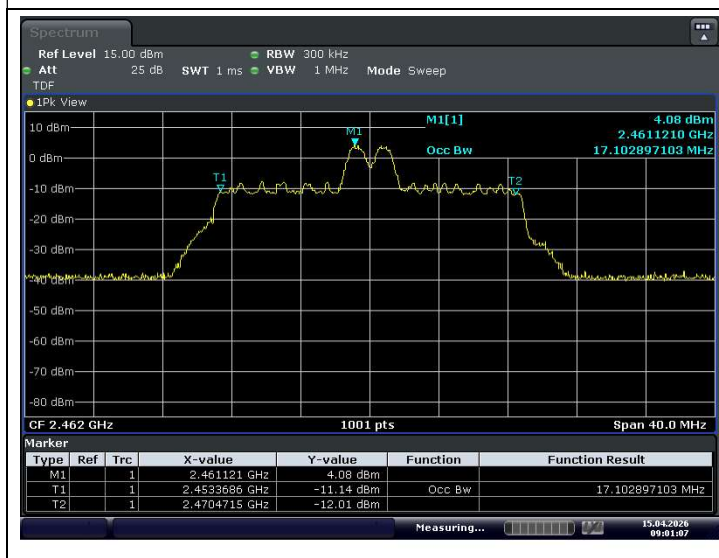
### Low Channel



### Middle Channel

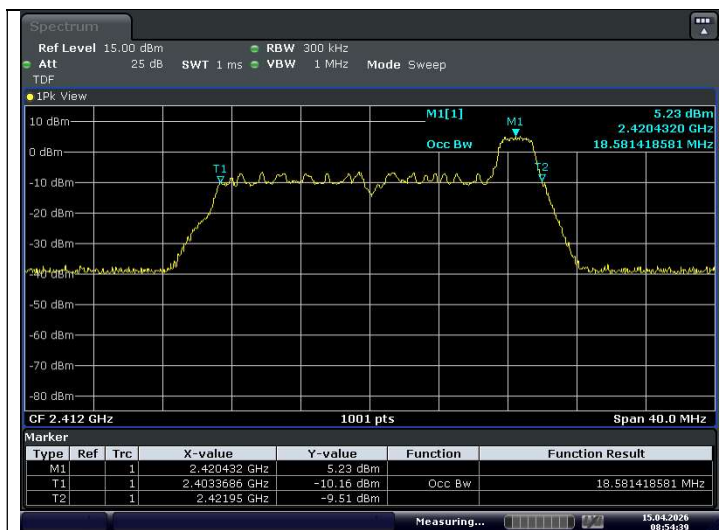


### High Channel

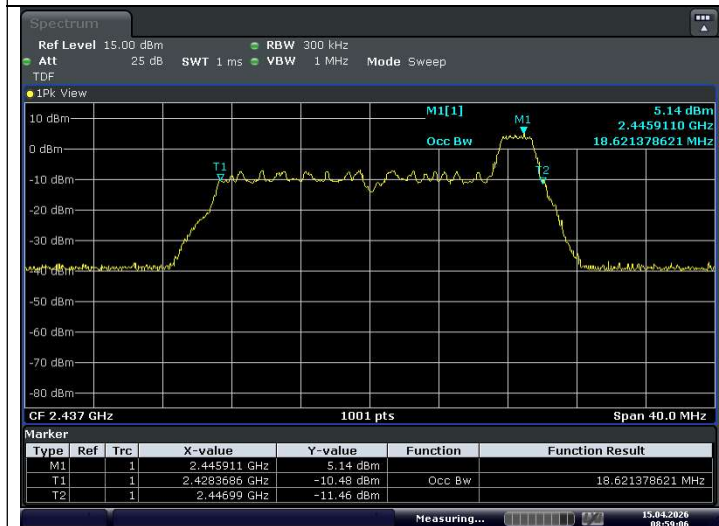


## 11ax\_HE20\_26T\_8RU

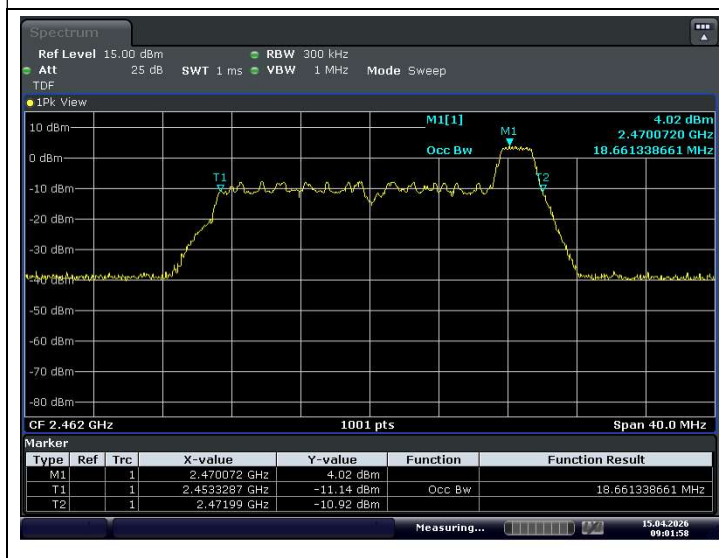
### Low Channel



### Middle Channel

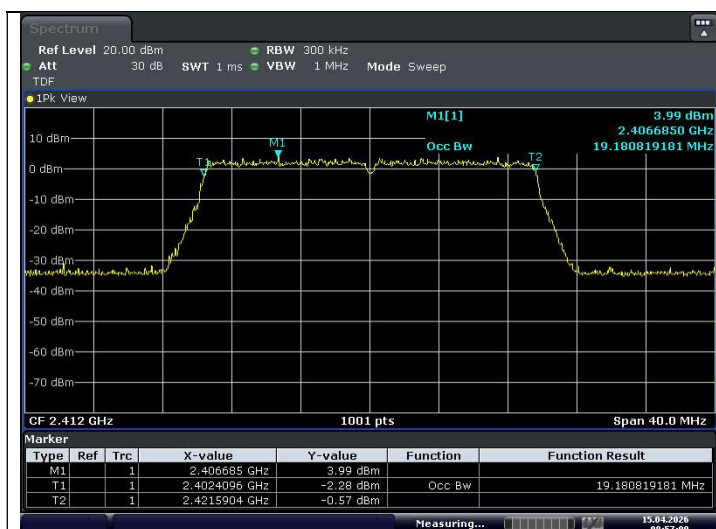


### High Channel

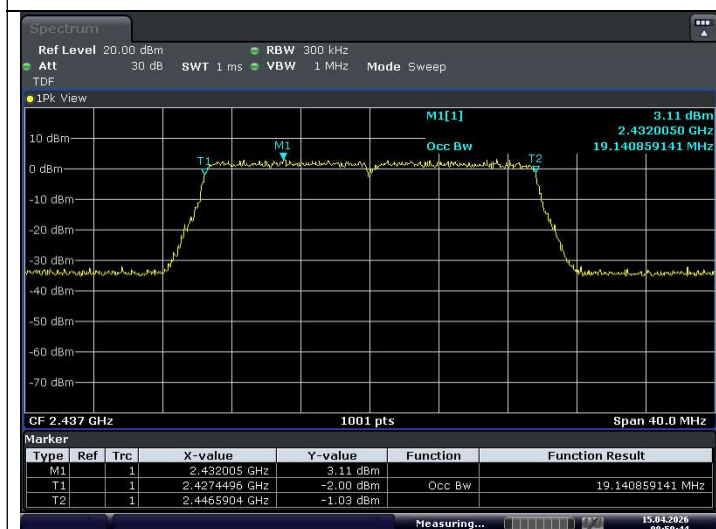


## 11ax\_HE20\_SU

### Low Channel



### Middle Channel

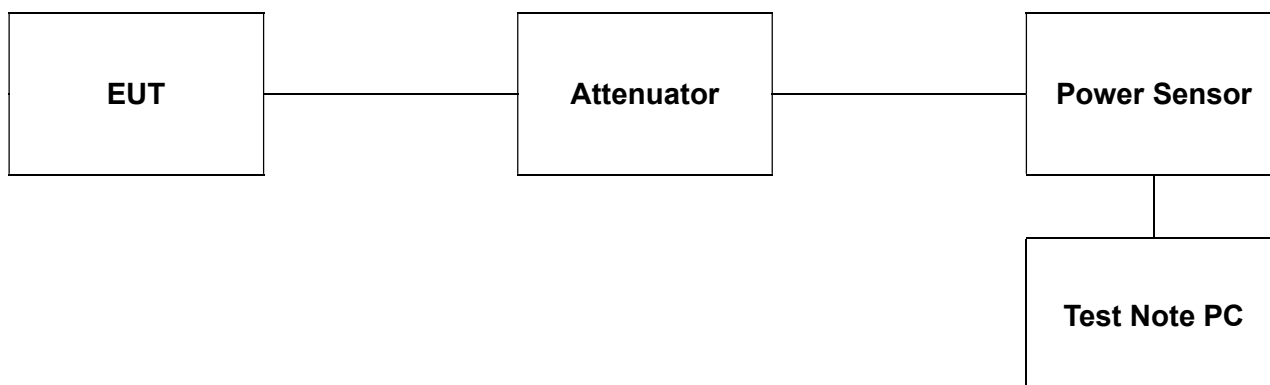


### High Channel



## 4. Maximum Peak Conducted Output Power

### 4.1. Test Setup



### 4.2. Limit

#### 4.2.1. FCC

According to §15.247(b)(3), for systems using digital modulation in the 902-928 MHz, 2 400-2 483.5 MHz, and 5 725-5 850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

According to §15.247(b)(4), the conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraph (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 4.2.2. IC

According to RSS-247 Issue 4, 6.3.2, For DTS operating in the band 902-928 MHz, the maximum peak conducted output power shall not exceed 1W, and the e.i.r.p. shall not exceed 4 W.

For DTS operating in the band 2 400-2 483.5 MHz, the maximum peak conducted output power shall not exceed 1W, and the e.i.r.p. shall not exceed 4 W, except as provided in section 6.5 a) and b).

As an alternative to a peak power measurement, compliance can be based on a measurement of the maximum conducted output power.

### 4.3. Test Procedure

The test follows section 11.9.1.3 of ANSI C63.10-2020 (for FCC) and ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 (for ISSED).

#### **PKPM1 Peak-reading power meter method**

- The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

The test follows section 11.9.2.3.2 of ANSI C63.10-2020 (for FCC) and ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 (for ISSED).

#### **Method AVGP-M (Measurement using a gated RF average-reading power meter)**

- Alternatively, 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 this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

Gate triggering can be implemented in such a way that the sweep of the instrument is only active during the burst period of the device. Any Gate triggering shall be performed on the full power portion of the pulses and care must be taken to ensure that static portions of the pulse are not included in the measurement (ensuring that the trace is averaged over the entire symbol range). All Gate triggered measurements shall be accompanied by a Gate setup plot in the test report.

#### **Test program: (S/W name: R&S Power Viewer, Version: 3.2.0)**

1. Initially overall offset for attenuator and cable loss is measured per frequency.
2. Measured offset is inserted in test program in advance of measurement for output power.
3. Power for each frequency (channel) of device is investigated as final result.
4. Final result reported on this section from R&S power viewer program includes with several factors and test program shows only final result.

#### 4.4. Test Results

Ambient temperature : (23 ± 1) °C  
 Relative humidity : 47 %

##### - Legacy

| Mode     | Channel | Frequency (MHz) | Average Power Result (dB m) | Peak Power Result (dB m) | Limit (dB m) |
|----------|---------|-----------------|-----------------------------|--------------------------|--------------|
| 11b      | Low     | 2 412           | <u>11.37</u>                | <u>14.68</u>             | 30           |
|          | Middle  | 2 437           | 11.26                       | 14.55                    |              |
|          | High    | 2 462           | 10.77                       | 14.10                    |              |
| 11g      | Low     | 2 412           | <u>11.37</u>                | <u>20.40</u>             |              |
|          | Middle  | 2 437           | 11.00                       | 20.17                    |              |
|          | High    | 2 462           | 10.48                       | 19.69                    |              |
| 11n_HT20 | Low     | 2 412           | <u>11.27</u>                | <u>21.05</u>             |              |
|          | Middle  | 2 437           | 11.02                       | 20.03                    |              |
|          | High    | 2 462           | 10.37                       | 19.95                    |              |

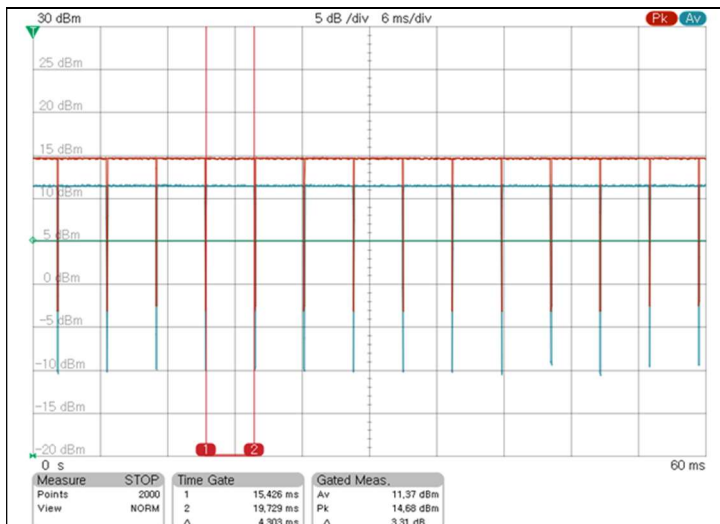
**- 11ax\_HE20**

| Mode                   | Channel | Frequency (MHz) | Average Power Result (dB m) | Peak Power Result (dB m) | Limit (dB m) |
|------------------------|---------|-----------------|-----------------------------|--------------------------|--------------|
| 11ax_HE20<br>26T_0RU   | Low     | 2 412           | 4.19                        | 14.50                    | 30           |
|                        | Middle  | 2 437           | 4.00                        | 13.61                    |              |
|                        | High    | 2 462           | 3.67                        | 13.46                    |              |
| 11ax_HE20<br>26T_4RU   | Low     | 2 412           | 4.51                        | 14.24                    |              |
|                        | Middle  | 2 437           | 4.34                        | 15.03                    |              |
|                        | High    | 2 462           | 3.64                        | 12.76                    |              |
| 11ax_HE20<br>26T_8RU   | Low     | 2 412           | 4.16                        | 13.69                    |              |
|                        | Middle  | 2 437           | 3.99                        | 12.72                    |              |
|                        | High    | 2 462           | 3.48                        | 12.67                    |              |
| 11ax_HE20<br>52T_37RU  | Low     | 2 412           | 4.36                        | 14.03                    |              |
|                        | Middle  | 2 437           | 4.24                        | 13.74                    |              |
|                        | High    | 2 462           | 3.82                        | 13.09                    |              |
| 11ax_HE20<br>52T_38RU  | Low     | 2 412           | 4.43                        | 13.93                    |              |
|                        | Middle  | 2 437           | 4.11                        | 13.69                    |              |
|                        | High    | 2 462           | 3.77                        | 13.07                    |              |
| 11ax_HE20<br>52T_40RU  | Low     | 2 412           | 4.38                        | 13.72                    |              |
|                        | Middle  | 2 437           | 4.27                        | 13.61                    |              |
|                        | High    | 2 462           | 3.55                        | 12.50                    |              |
| 11ax_HE20<br>106T_53RU | Low     | 2 412           | 5.70                        | 16.13                    |              |
|                        | Middle  | 2 437           | 5.88                        | 16.15                    |              |
|                        | High    | 2 462           | 5.10                        | 14.85                    |              |
| 11ax_HE20<br>106T_54RU | Low     | 2 412           | 5.68                        | 15.28                    |              |
|                        | Middle  | 2 437           | 5.48                        | 15.10                    |              |
|                        | High    | 2 462           | 5.09                        | 15.06                    |              |
| 11ax_HE20<br>242T_61RU | Low     | 2 412           | <b>6.08</b>                 | <b>15.55</b>             |              |
|                        | Middle  | 2 437           | 5.53                        | 14.56                    |              |
|                        | High    | 2 462           | 5.18                        | 14.58                    |              |
| 11ax_HE20_SU           | Low     | 2 412           | <b>10.99</b>                | <b>21.79</b>             |              |
|                        | Middle  | 2 437           | 10.65                       | 21.62                    |              |
|                        | High    | 2 462           | 10.57                       | 20.58                    |              |

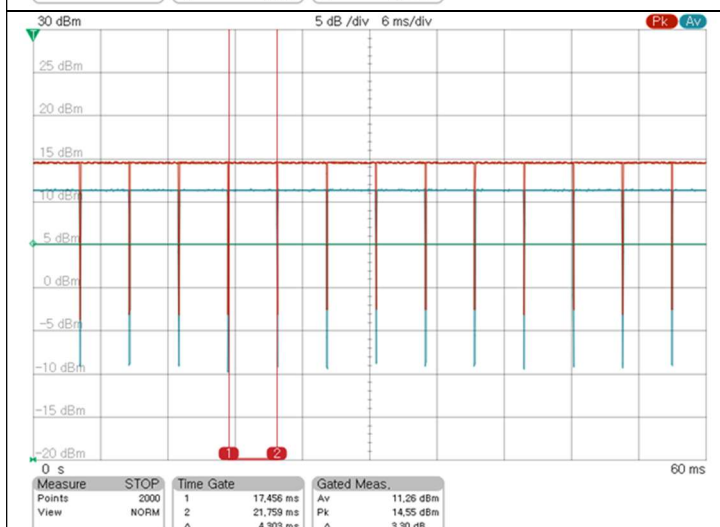
## Test plots

11b

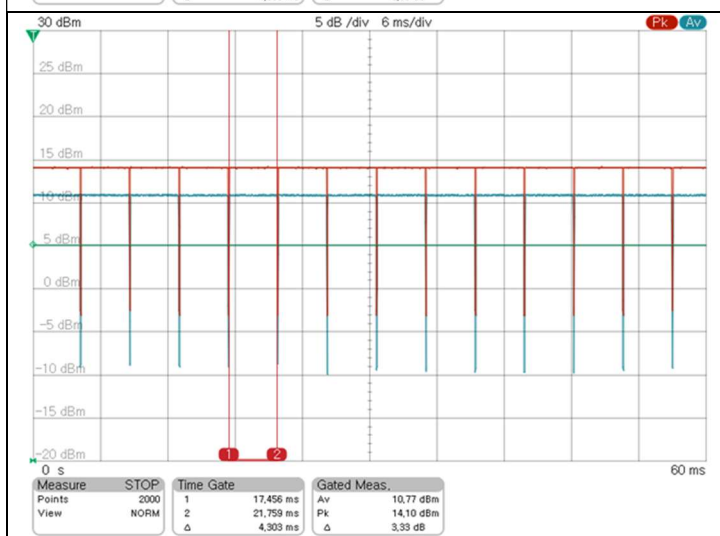
Low Channel



Middle Channel

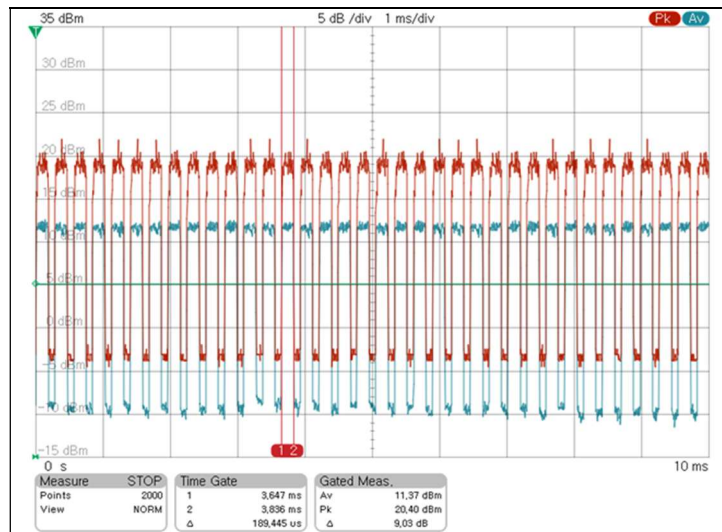


High Channel

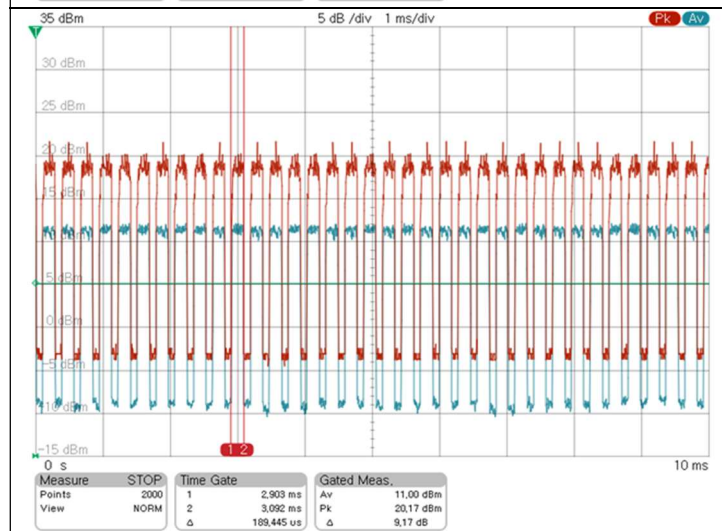


11g

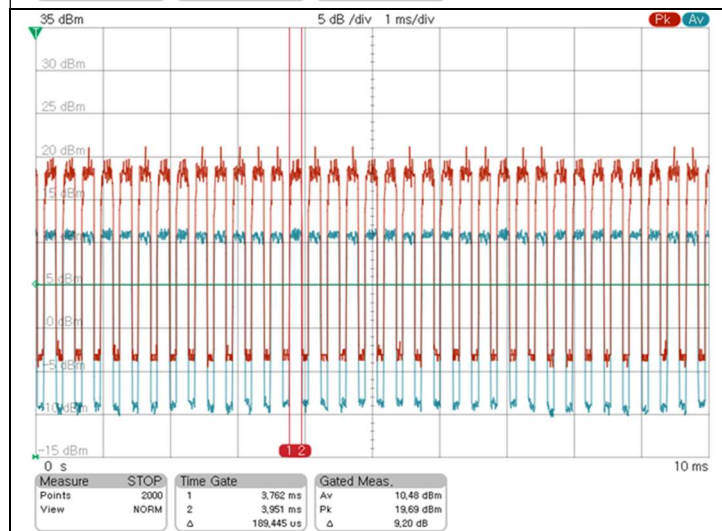
Low Channel



Middle Channel

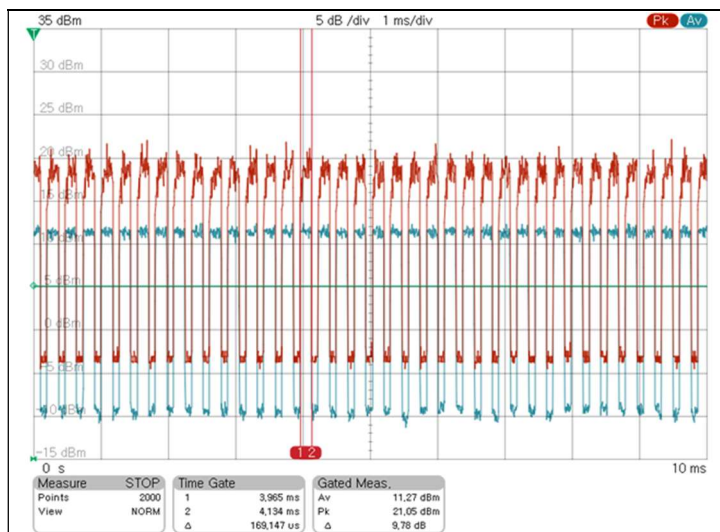


High Channel

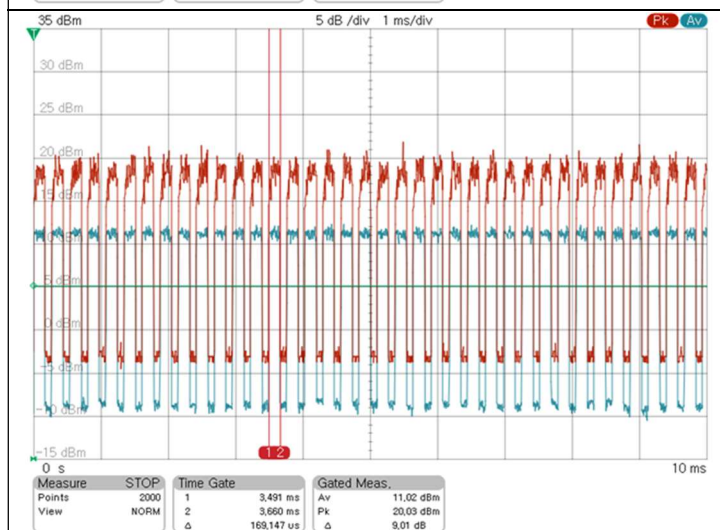


## 11n\_HT20

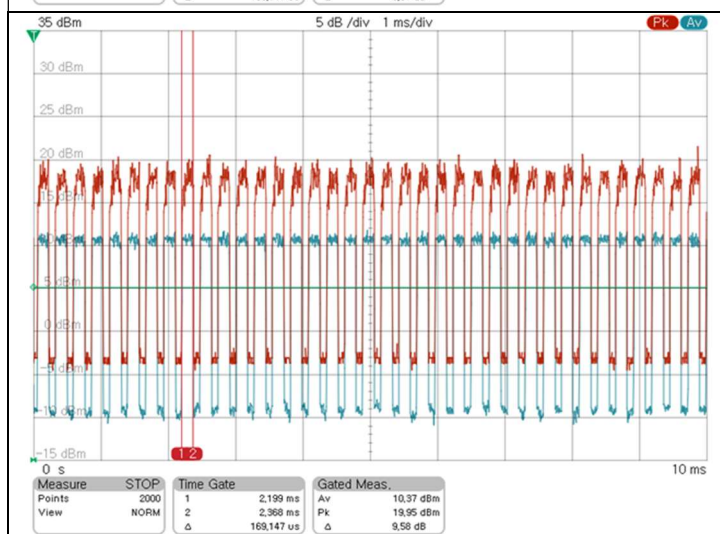
Low Channel



Middle Channel

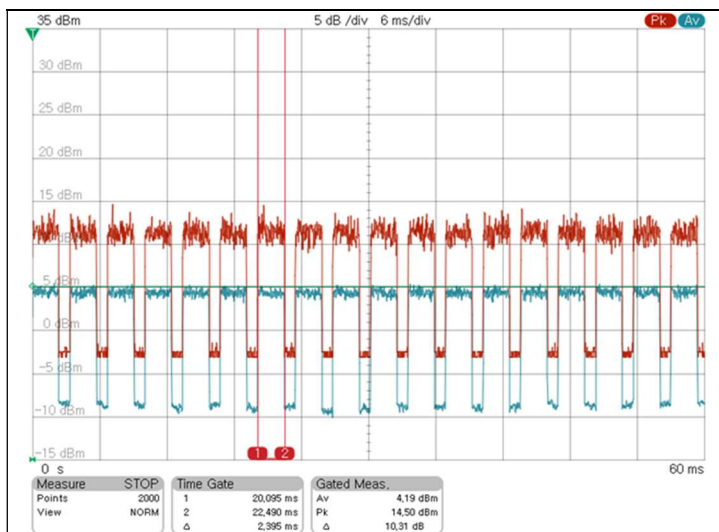


High Channel

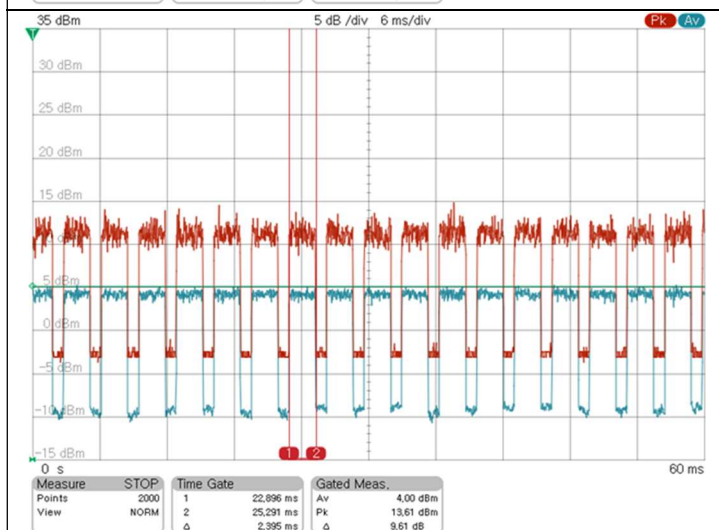


## 11ax\_HE20\_26T\_0RU

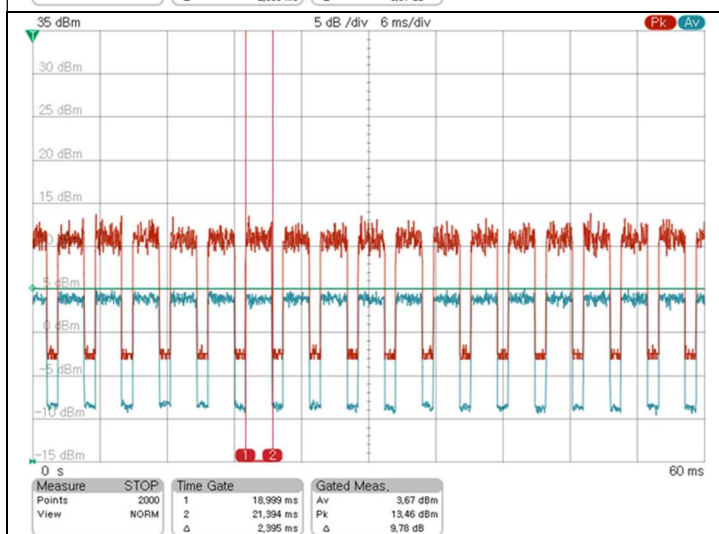
Low Channel



Middle Channel

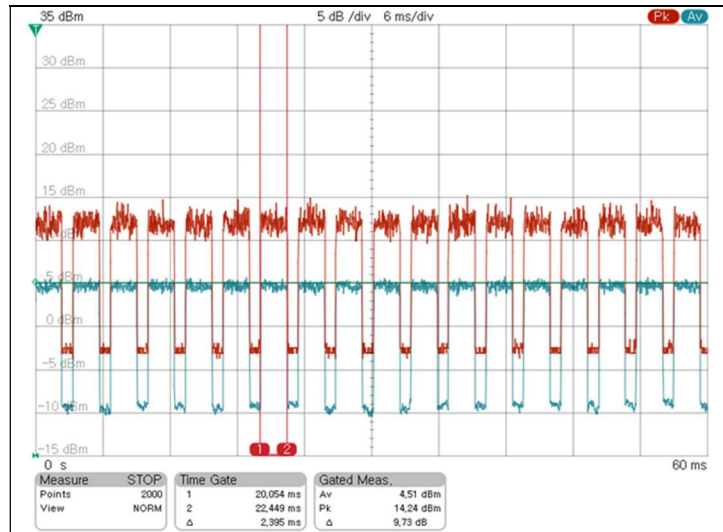


High Channel

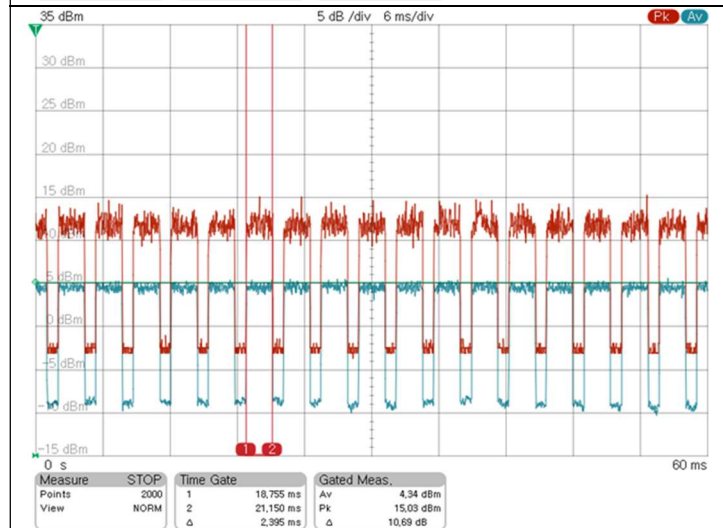


## 11ax\_HE20\_26T\_4RU

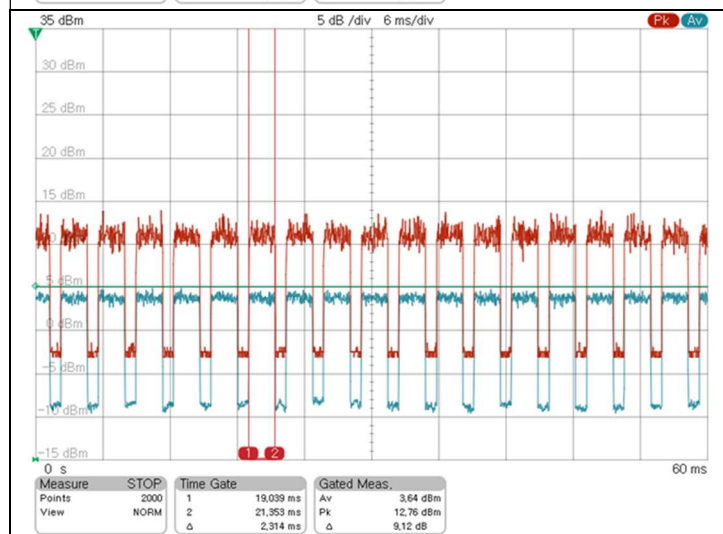
Low Channel



Middle Channel

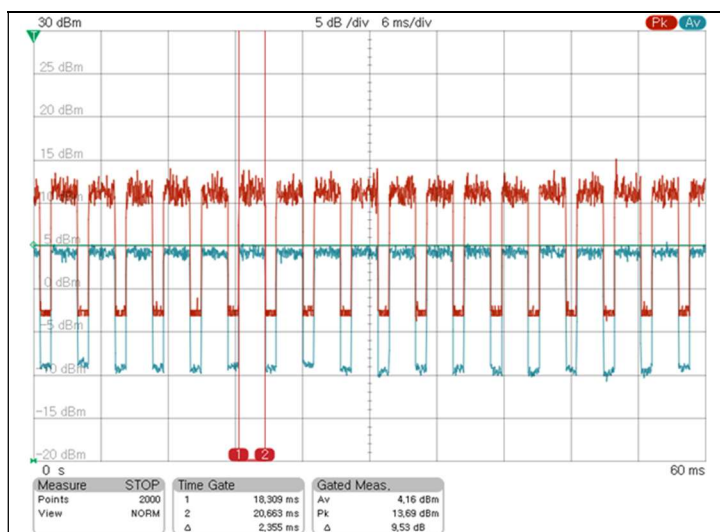


High Channel

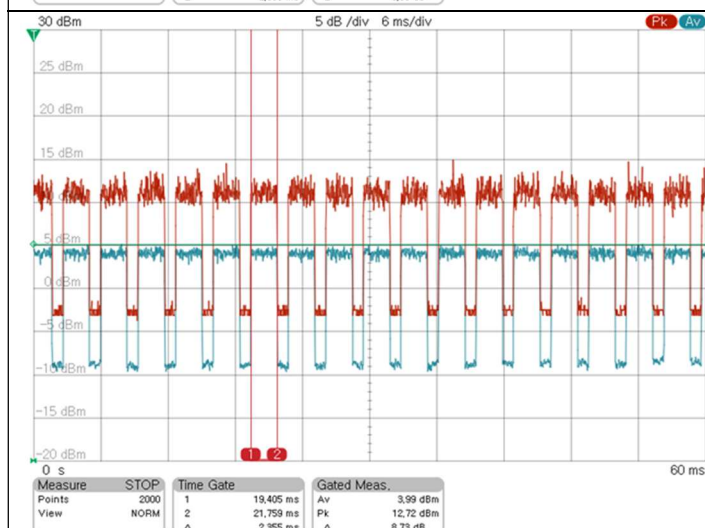


## 11ax\_HE20\_26T\_8RU

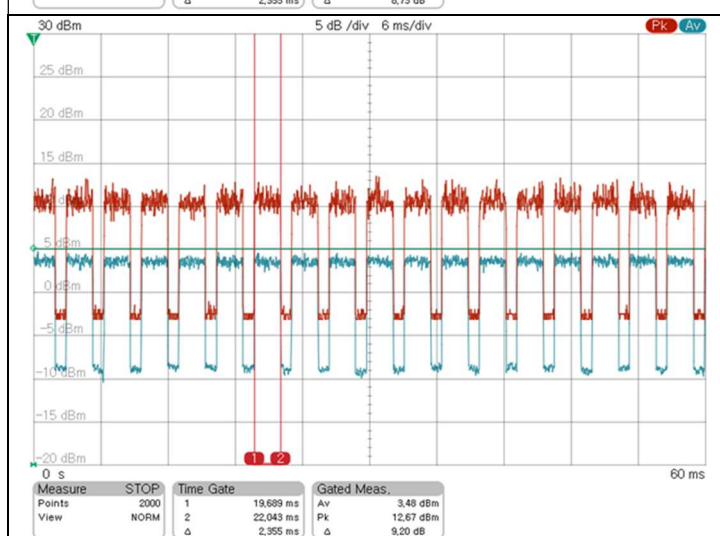
Low Channel



Middle Channel

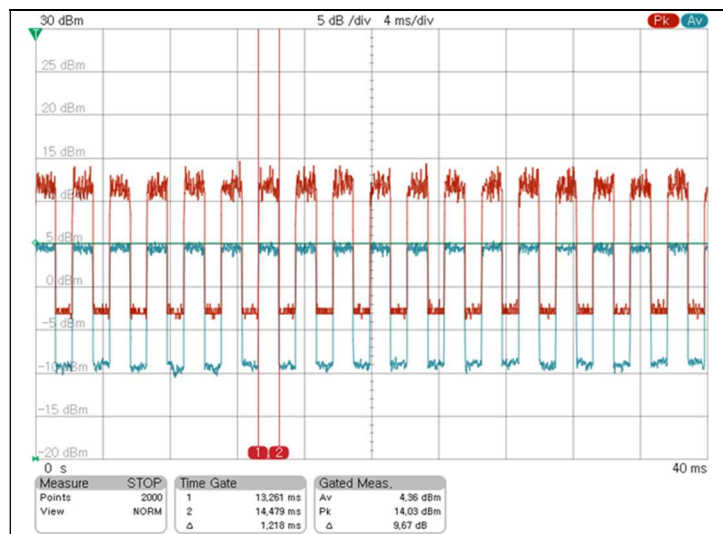


High Channel

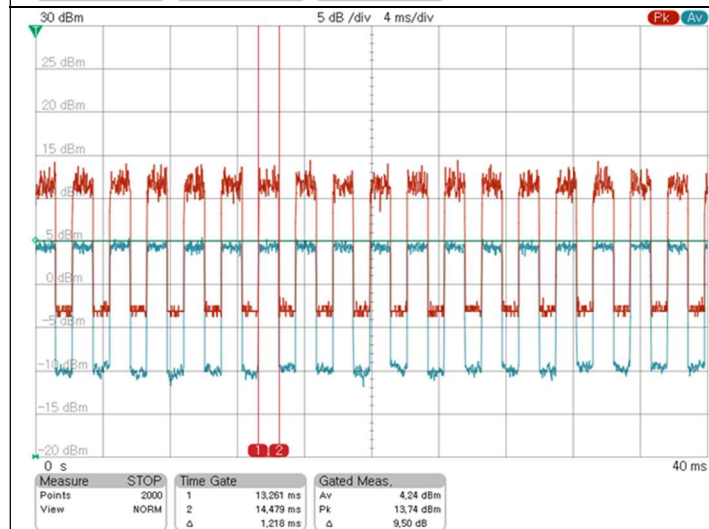


## 11ax\_HE20\_52T\_37RU

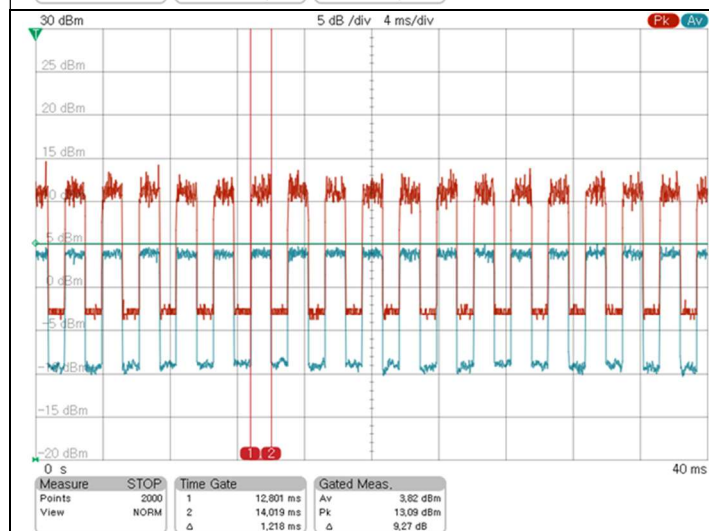
Low Channel



Middle Channel

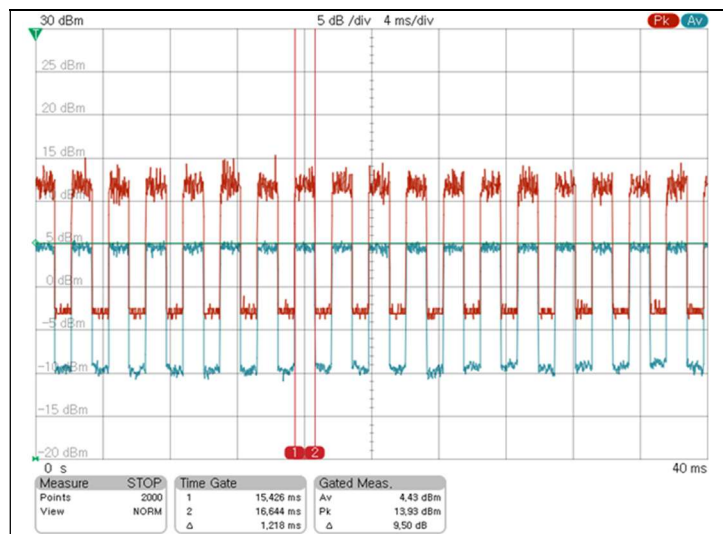


High Channel

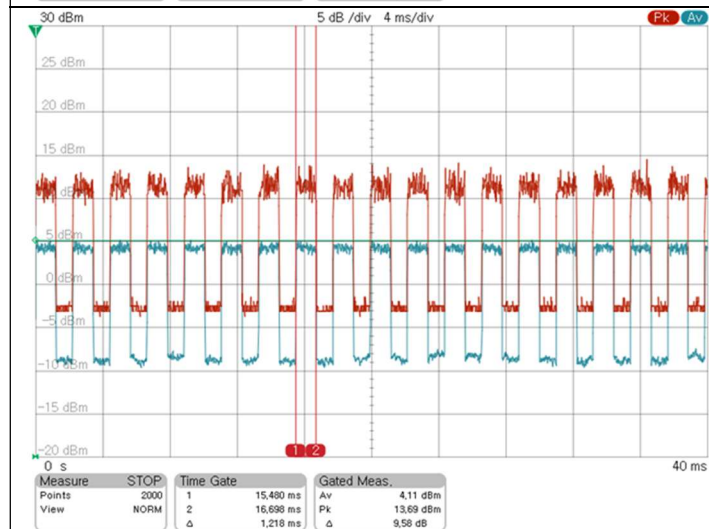


## 11ax\_HE20\_52T\_38RU

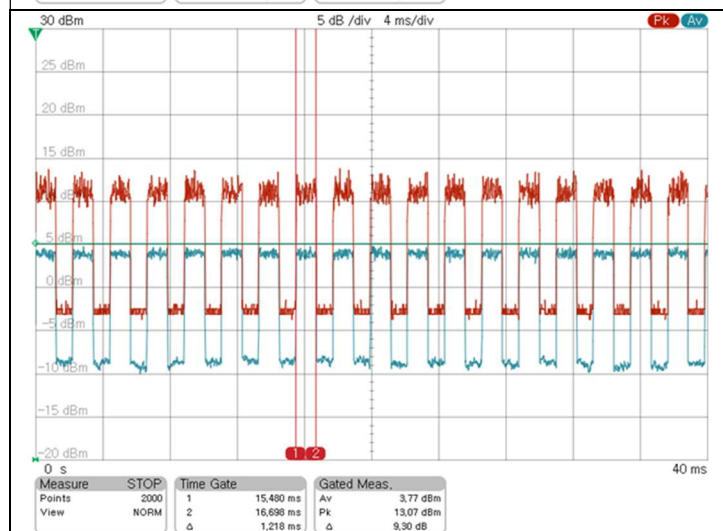
Low Channel



Middle Channel

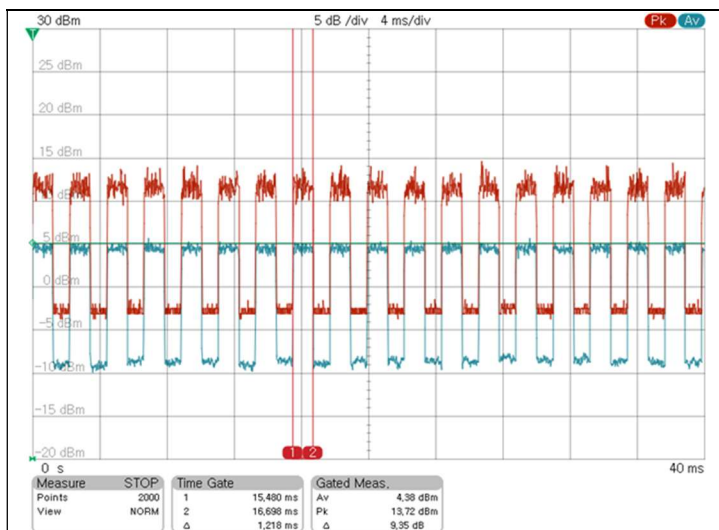


High Channel

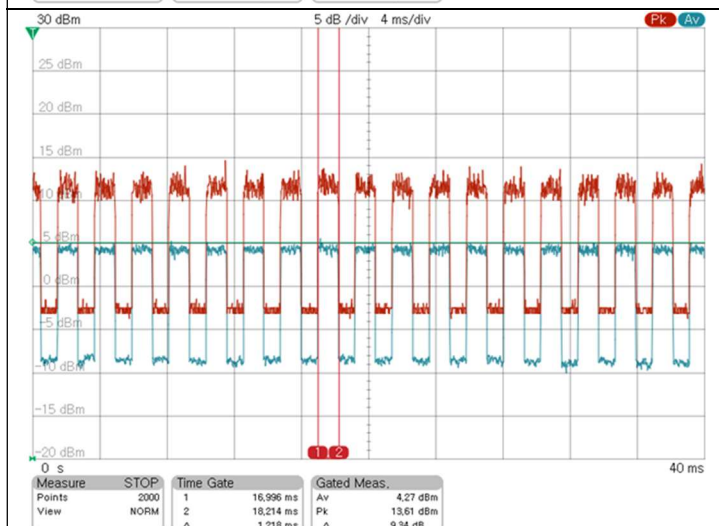


## 11ax\_HE20\_52T\_40RU

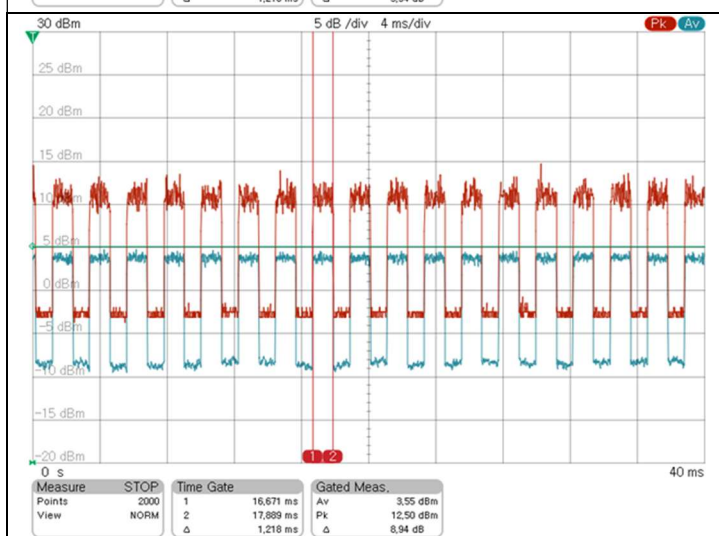
Low Channel



Middle Channel

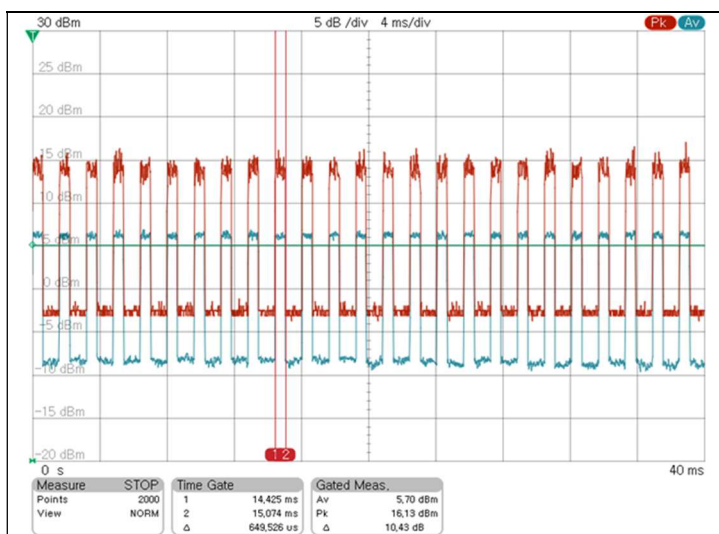


High Channel

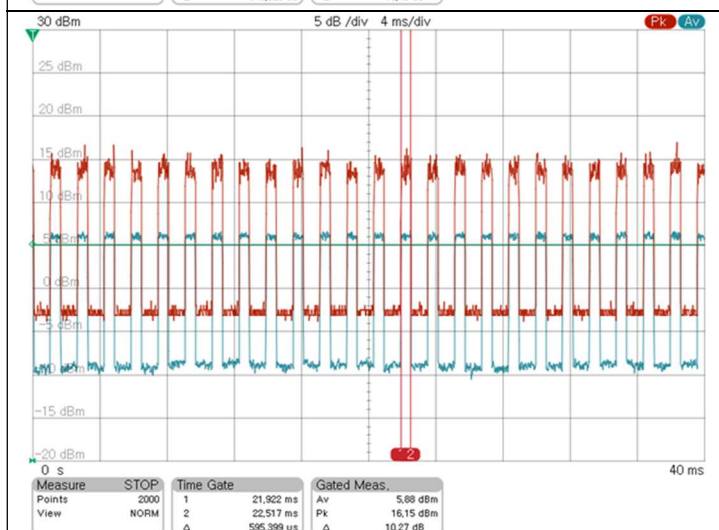


## 11ax\_HE20\_106T\_53RU

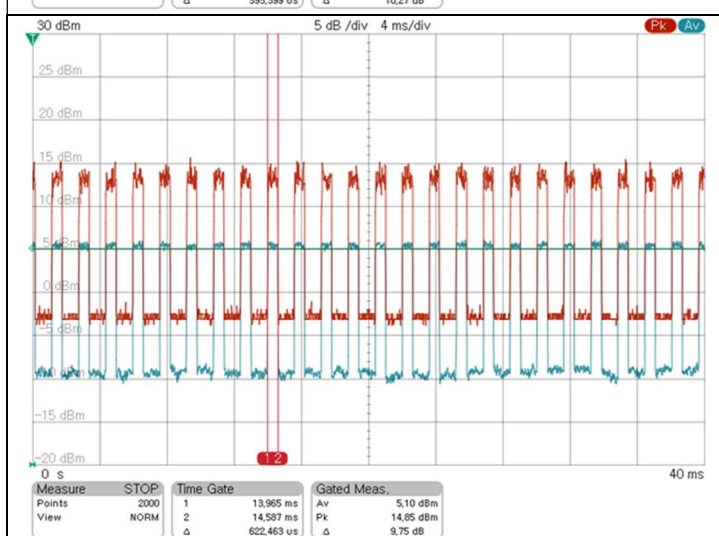
Low Channel



Middle Channel

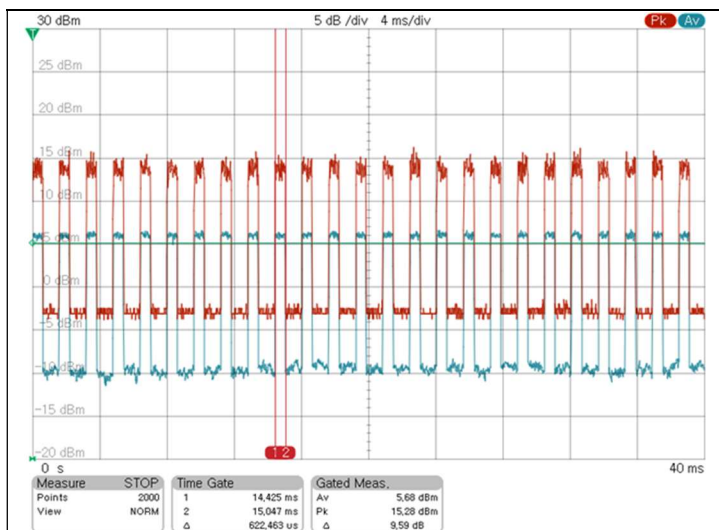


High Channel

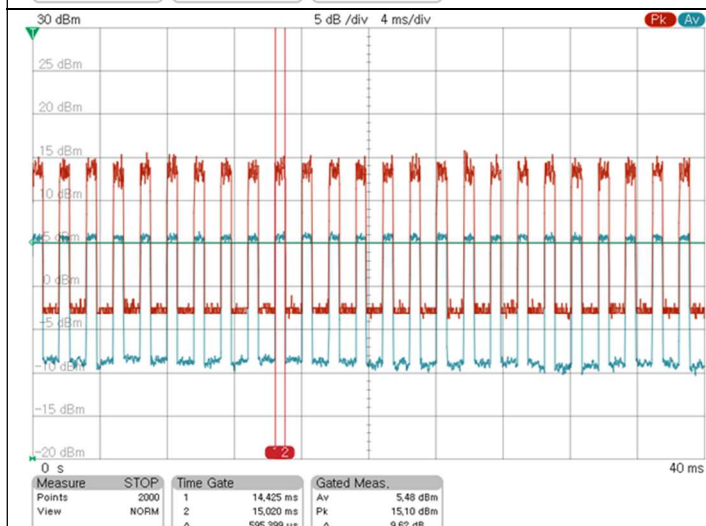


## 11ax\_HE20\_106T\_54RU

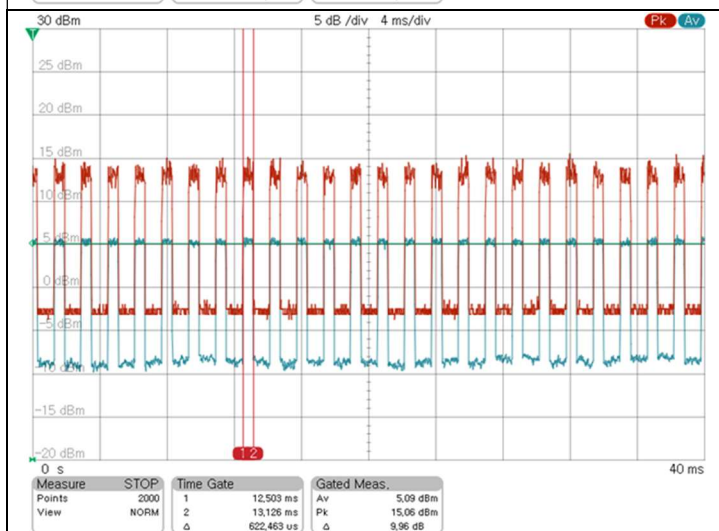
Low Channel



Middle Channel

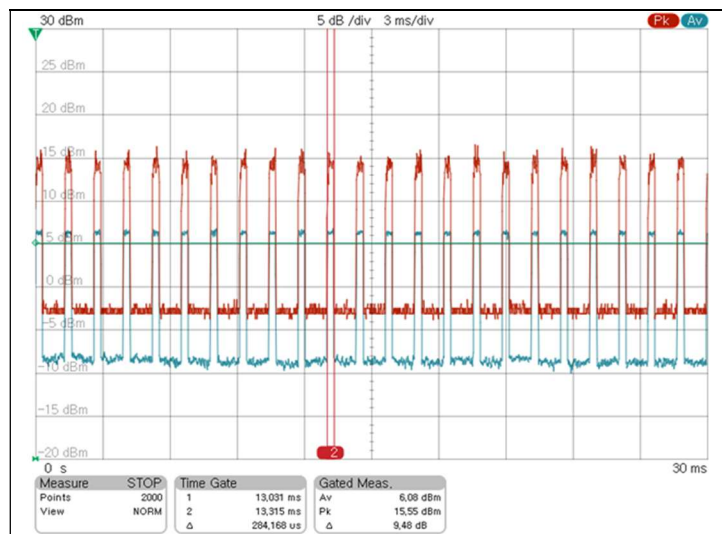


High Channel

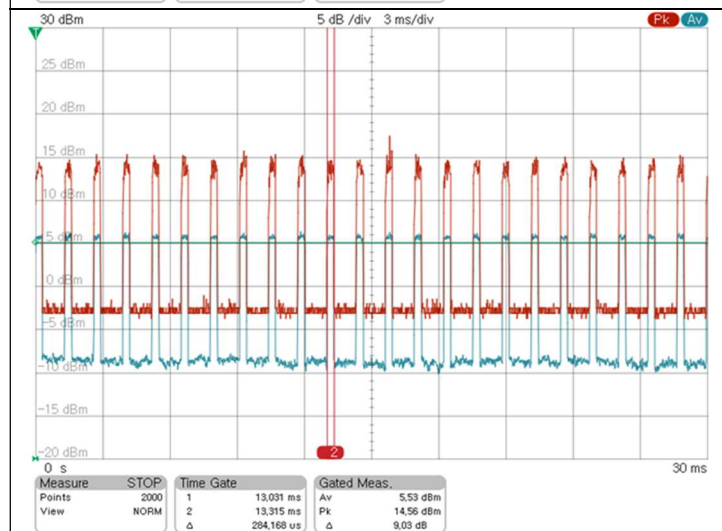


## 11ax\_HE20\_242T\_61RU

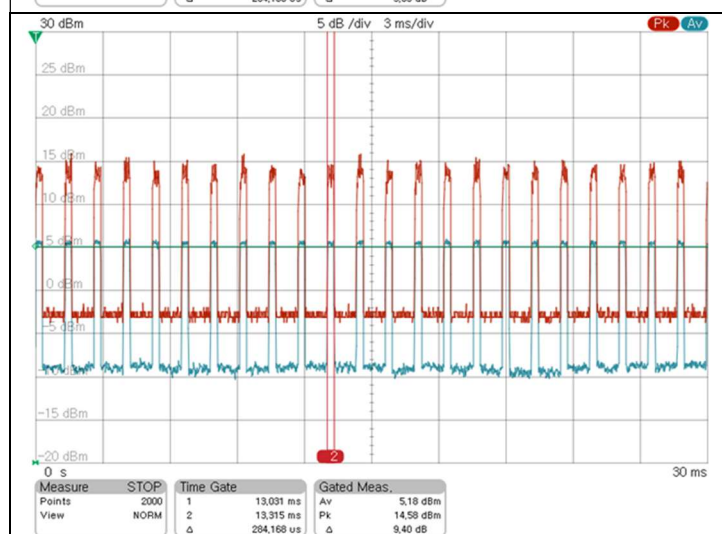
Low Channel



Middle Channel

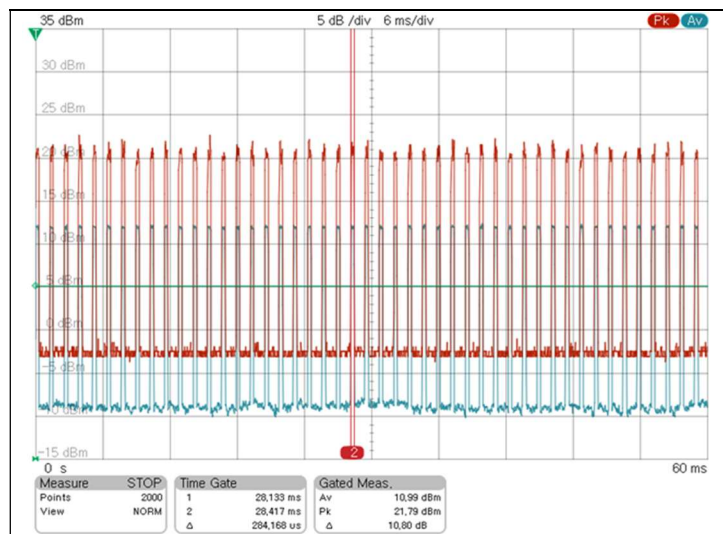


High Channel

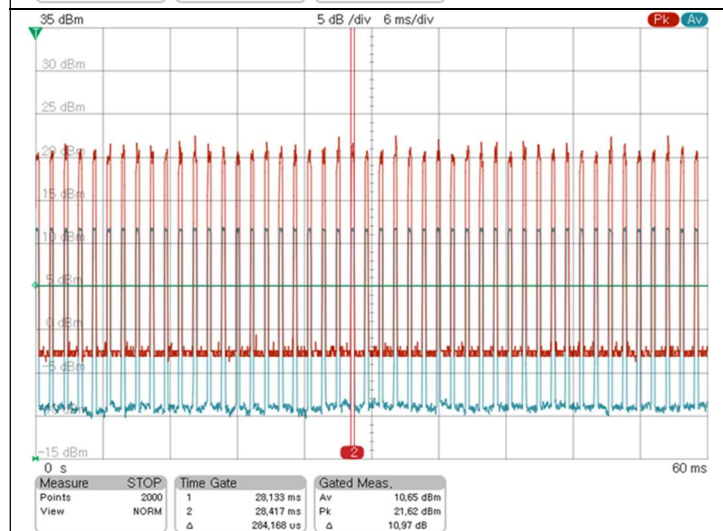


## 11ax\_HE20\_SU

Low Channel



Middle Channel



High Channel

