

# APPENDIX REPORT

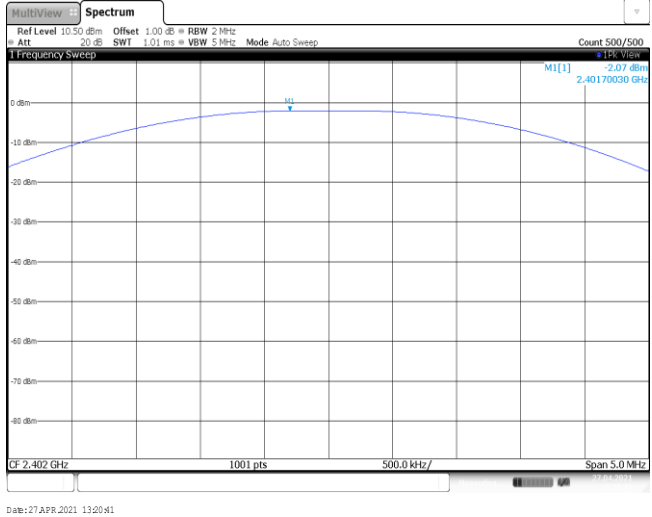
|                 |                 |                     |               |
|-----------------|-----------------|---------------------|---------------|
| Project No.     | SHT2103073009EW | Radio Specification | Bluetooth BLE |
| Test sample No. | YPHT21030730046 | Model No.           | X55           |
| Start test date | 2021-04-27      | Finish date         | 2021-04-27    |
| Temperature     | 25.4°C          | Humidity            | 37%           |
| Test Engineer   | Hailey Chen     | Auditor             | Xiaodong Zhe  |

| Appendix clause | Test item                                    | Result |
|-----------------|--|--------|
| A               | Peak Output Power                            | PASS   |
| B               | Power Spectral Density                       | PASS   |
| C               | 6 dB Bandwidth                               | PASS   |
| D               | 99% Occupied Bandwidth                       | PASS   |
| E               | Duty cycle                                   | PASS   |
| F               | Band edge and Spurious Emissions (conducted) | PASS   |

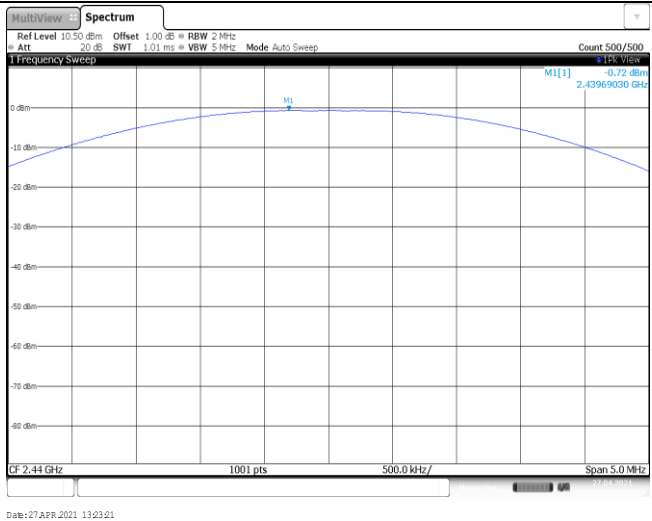
**Appendix A: Peak Output Power**

| Type   | Channel | Output power (dBm) | Average Output power (dBm) | Limit (dBm) | Result |
|--------|---------|--------------------|----------------------------|-------------|--------|
| BT-BLE | 00      | -2.07              | -2.08                      | ≤ 30.00     | Pass   |
|        | 19      | -0.72              | -0.74                      |             |        |
|        | 39      | -1.15              | -1.17                      |             |        |

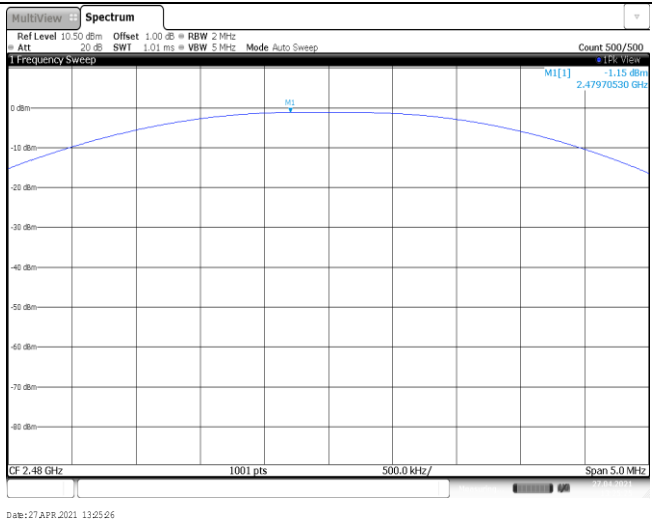
CH00



CH19



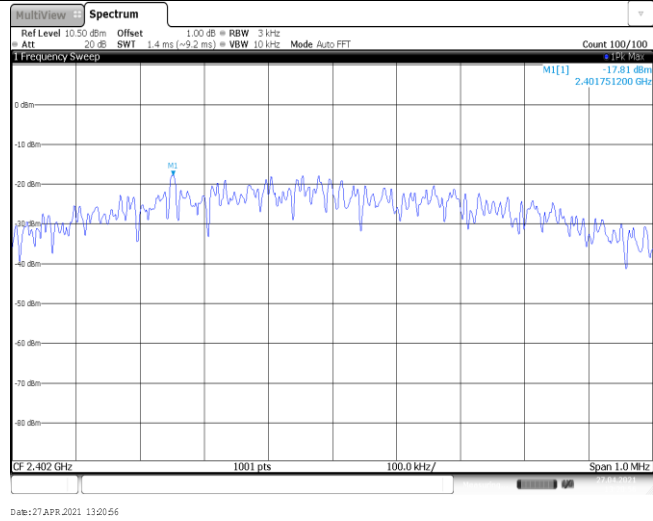
CH39



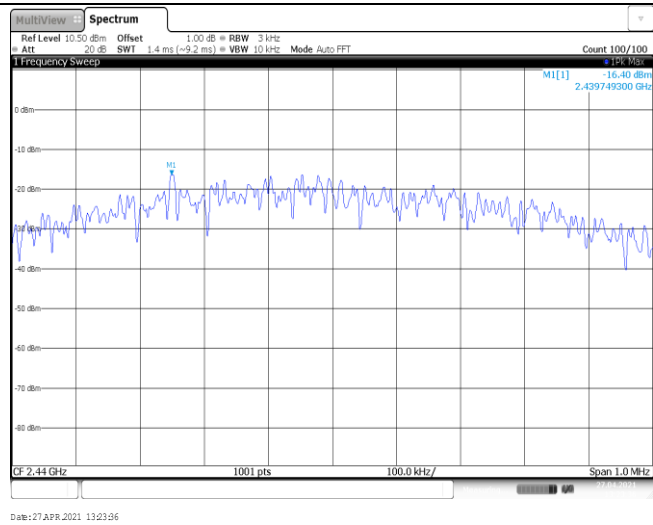
**Appendix B: Power Spectral Density**

| Type   | Channel | Power Spectral Density(dBm/3KHz) | Limit (dBm/3KHz) | Result |
|--------|---------|----------------------------------|------------------|--------|
| BT-BLE | 00      | -17.81                           | ≤8.00            | Pass   |
|        | 19      | -16.40                           |                  |        |
|        | 39      | -16.87                           |                  |        |

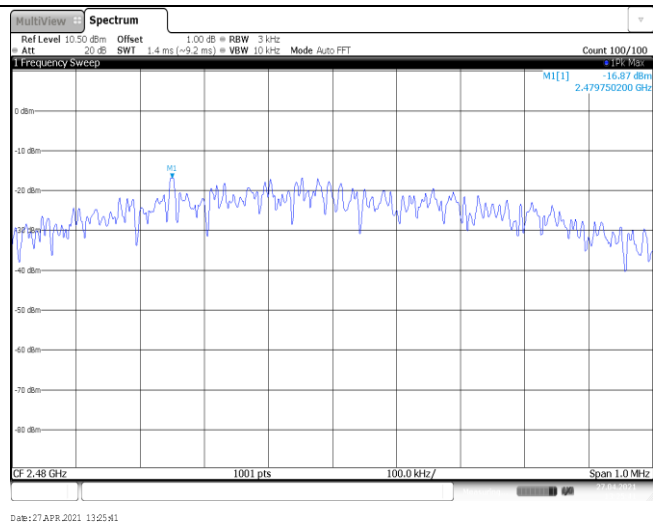
CH00



CH19



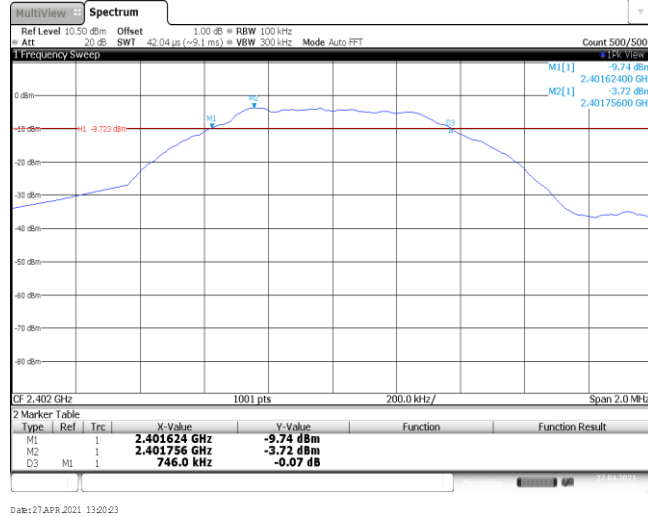
CH39



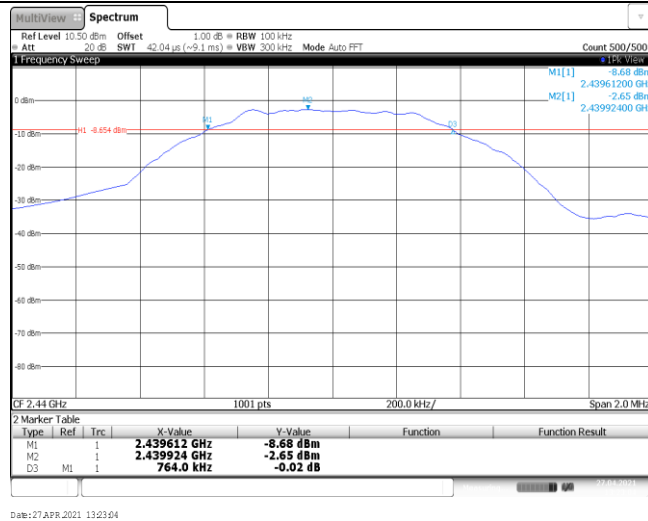
**Appendix C: 6dB bandwidth**

| Type   | Channel | 6dB Bandwidth(kHz) | Limit (kHz) | Result |
|--------|---------|--------------------|-------------|--------|
| BT-BLE | 00      | 746.00             | ≥500        | Pass   |
|        | 19      | 764.00             |             |        |
|        | 39      | 756.00             |             |        |

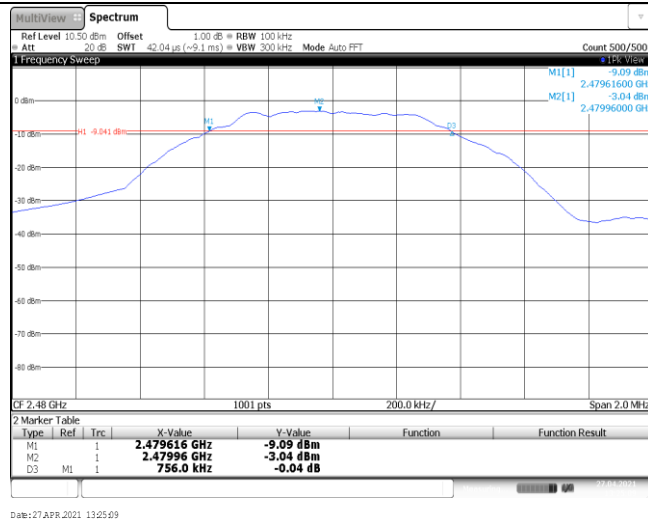
CH00



CH19



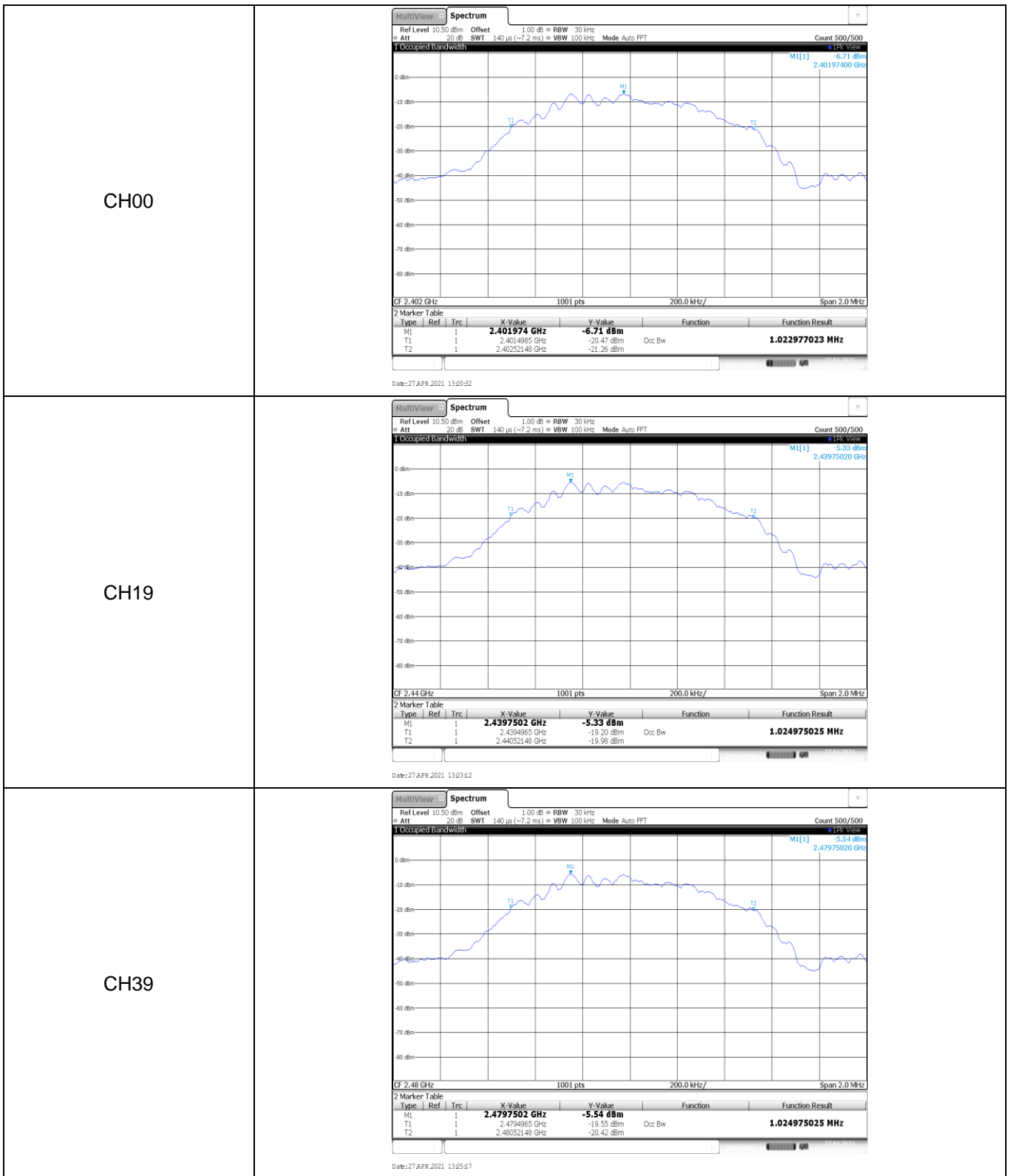
CH39



**Appendix D: 99% Occupied Bandwidth**

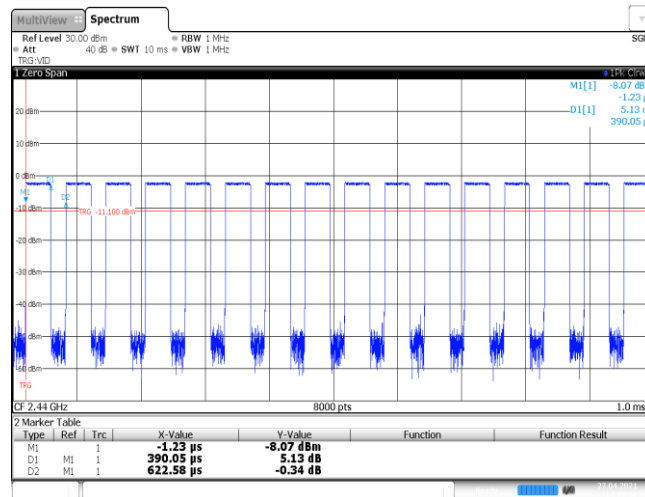
| Type   | Channel | 99% Occupied Bandwidth(MHz) | Limit (kHz) | Result |
|--------|---------|-----------------------------|-------------|--------|
| BT-BLE | 00      | 1.02                        | -           | Pass   |
|        | 19      | 1.02                        |             |        |
|        | 39      | 1.02                        |             |        |





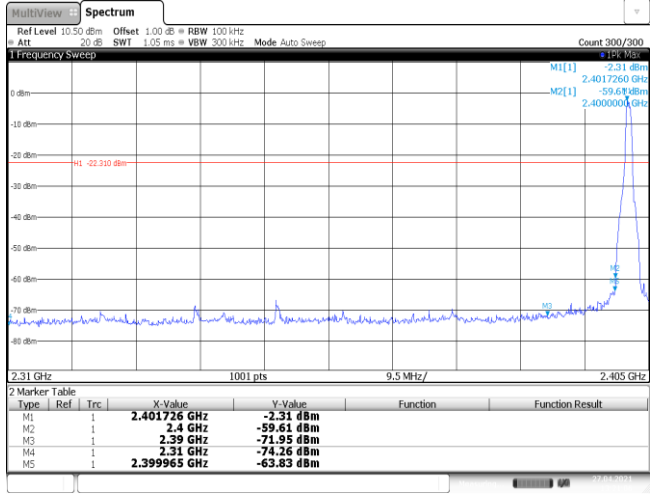
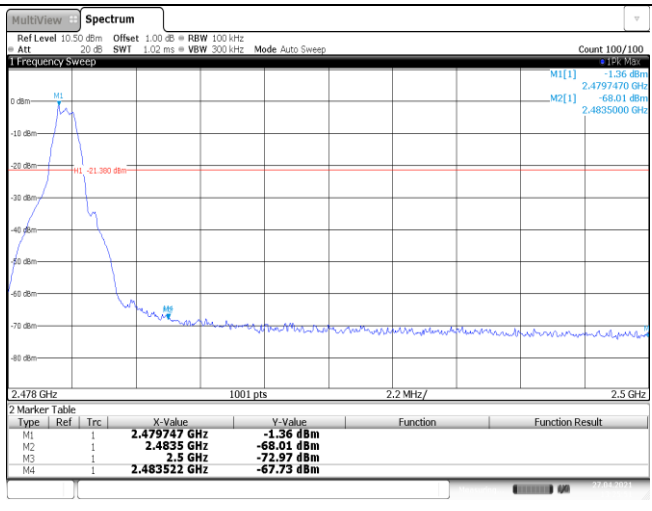
### Appendix E: Duty cycle

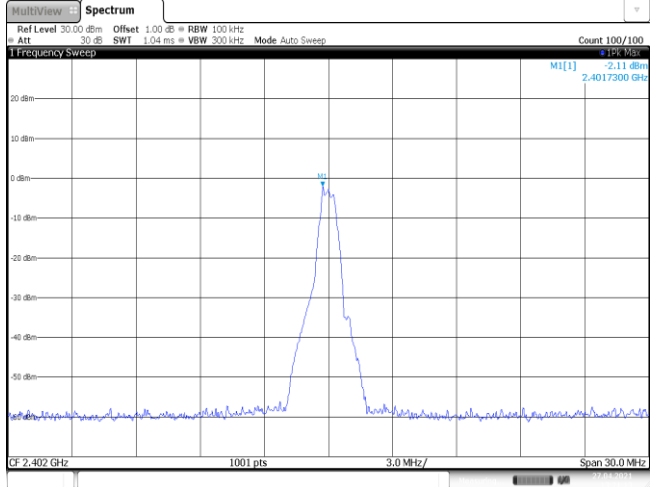
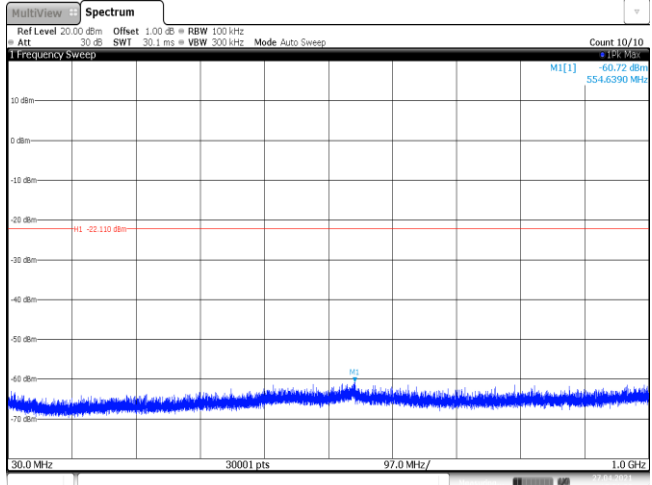
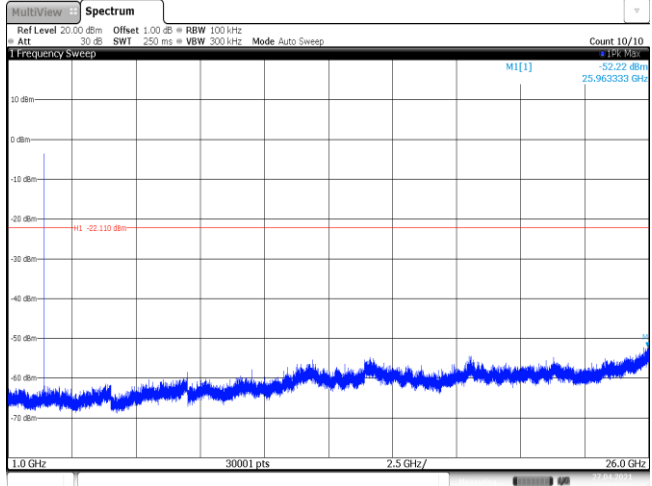
| Test Frequency (MHz) | T <sub>on</sub> time for single burst (ms) | T <sub>period</sub> (ms) | Duty cycle | 1/T <sub>on</sub> time (kHz) |
|----------------------|--|--------------------------|------------|------------------------------|
| 2440                 | 0.39                                       | 0.62                     | 62.9%      | 2.6                          |

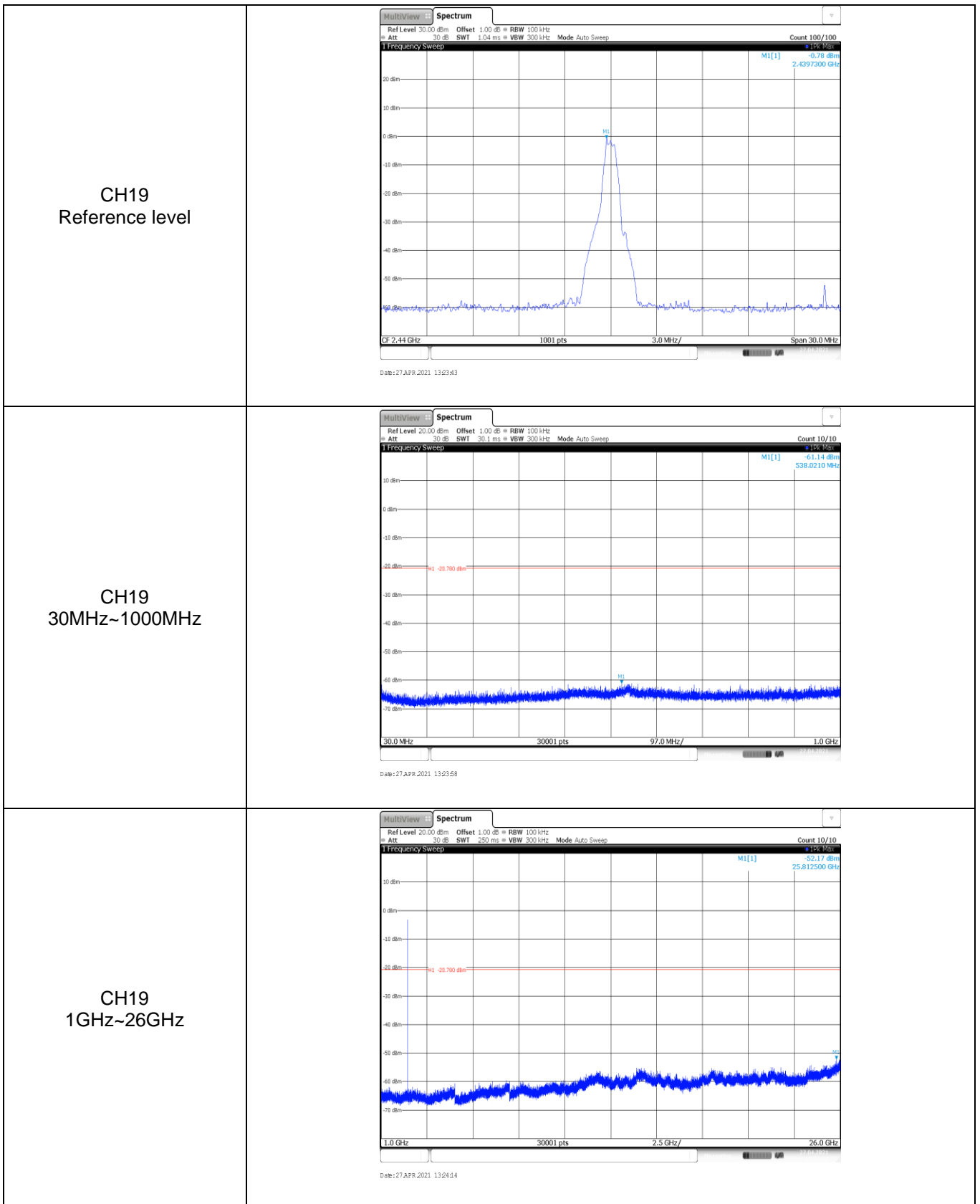


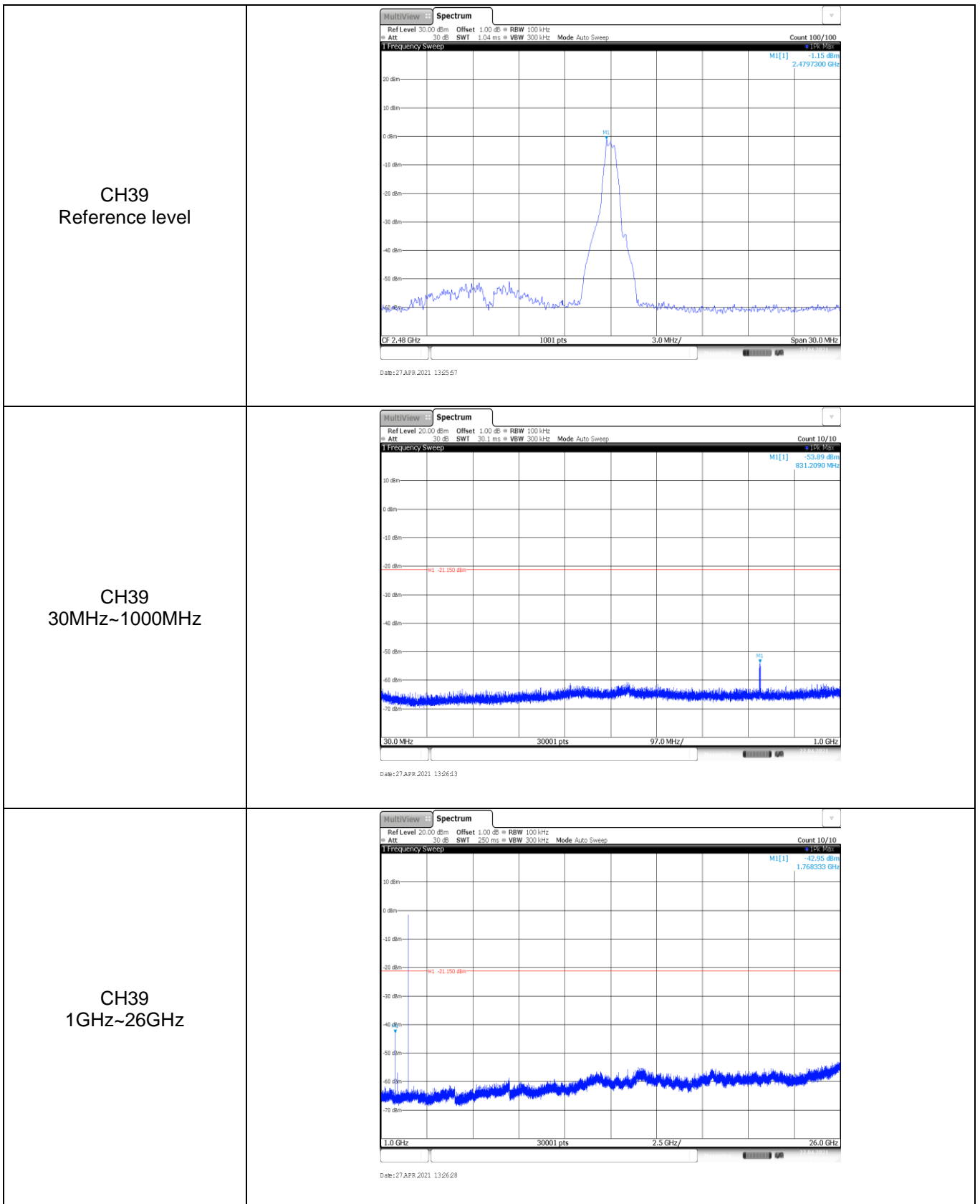
Date: 27 APR 2021 13:22:51

### Appendix F: Band edge and Spurious Emissions (conducted)

| Test Item:                              | Band edge  |      |              |            |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
|---|--|------|--------------|------------|----------|-----------------|----------|-----------------|----|---|--|--------------|-----------|--|--|----|---|--|------------|------------|--|--|----|---|--|----------|------------|--|--|----|---|--|--------------|------------|--|--|----|---|--|--------------|------------|--|--|
| <p style="text-align: center;">CH00</p> |  <p><b>2 Marker Table</b></p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.401726 GHz</td> <td>-2.31 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-59.61 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-71.95 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-74.26 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399965 GHz</td> <td>-63.83 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 27 APR. 2021 13:21:05</p> | Type | Ref          | Trc        | X-Value  | Y-Value         | Function | Function Result | M1 | 1 |  | 2.401726 GHz | -2.31 dBm |  |  | M2 | 1 |  | 2.4 GHz    | -59.61 dBm |  |  | M3 | 1 |  | 2.39 GHz | -71.95 dBm |  |  | M4 | 1 |  | 2.31 GHz     | -74.26 dBm |  |  | M5 | 1 |  | 2.399965 GHz | -63.83 dBm |  |  |
| Type                                    | Ref  | Trc  | X-Value      | Y-Value    | Function | Function Result |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M1                                      | 1  |      | 2.401726 GHz | -2.31 dBm  |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M2                                      | 1  |      | 2.4 GHz      | -59.61 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M3                                      | 1  |      | 2.39 GHz     | -71.95 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M4                                      | 1  |      | 2.31 GHz     | -74.26 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M5                                      | 1  |      | 2.399965 GHz | -63.83 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| <p style="text-align: center;">CH39</p> |  <p><b>2 Marker Table</b></p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.479747 GHz</td> <td>-1.36 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4833 GHz</td> <td>-68.01 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-72.97 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.483522 GHz</td> <td>-67.73 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 27 APR. 2021 13:25:50</p>  | Type | Ref          | Trc        | X-Value  | Y-Value         | Function | Function Result | M1 | 1 |  | 2.479747 GHz | -1.36 dBm |  |  | M2 | 1 |  | 2.4833 GHz | -68.01 dBm |  |  | M3 | 1 |  | 2.5 GHz  | -72.97 dBm |  |  | M4 | 1 |  | 2.483522 GHz | -67.73 dBm |  |  |    |   |  |              |            |  |  |
| Type                                    | Ref  | Trc  | X-Value      | Y-Value    | Function | Function Result |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M1                                      | 1  |      | 2.479747 GHz | -1.36 dBm  |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M2                                      | 1  |      | 2.4833 GHz   | -68.01 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M3                                      | 1  |      | 2.5 GHz      | -72.97 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |
| M4                                      | 1  |      | 2.483522 GHz | -67.73 dBm |          |                 |          |                 |    |   |  |              |           |  |  |    |   |  |            |            |  |  |    |   |  |          |            |  |  |    |   |  |              |            |  |  |    |   |  |              |            |  |  |

| Test Item:                      | SE   |
|---------------------------------|--|
| <p>CH00<br/>Reference level</p> |  <p>Ref Level 30.00 dBm    Offset 1.00 dB    RBW 100 kHz<br/>         Att 30 dB    SWI 1.04 ms    VBW 300 kHz    Mode Auto Sweep<br/>         Count 100/100<br/>         MI[1] 2.11 dBm<br/>         2.4017300 GHz<br/>         CF 2.402 GHz    1001 pts    3.0 MHz/    Span 30.0 MHz<br/>         Date: 27 APR 2021 13:21:43</p>                    |
| <p>CH00<br/>30MHz~1000MHz</p>   |  <p>Ref Level 20.00 dBm    Offset 1.00 dB    RBW 100 kHz<br/>         Att 30 dB    SWI 30.1 ms    VBW 300 kHz    Mode Auto Sweep<br/>         Count 10/10<br/>         MI[1] -60.72 dBm<br/>         554.6390 MHz<br/>         MI -22.10 dBm<br/>         30.0 MHz    30001 pts    97.0 MHz/    1.0 GHz<br/>         Date: 27 APR 2021 13:21:29</p> |
| <p>CH00<br/>1GHz~26GHz</p>      |  <p>Ref Level 20.00 dBm    Offset 1.00 dB    RBW 100 kHz<br/>         Att 30 dB    SWI 250 ms    VBW 300 kHz    Mode Auto Sweep<br/>         Count 10/10<br/>         MI[1] -52.22 dBm<br/>         25.963333 GHz<br/>         MI -22.10 dBm<br/>         1.0 GHz    30001 pts    2.5 GHz/    26.0 GHz<br/>         Date: 27 APR 2021 13:21:45</p> |





-----End of Report-----