

# APPENDIX REPORT

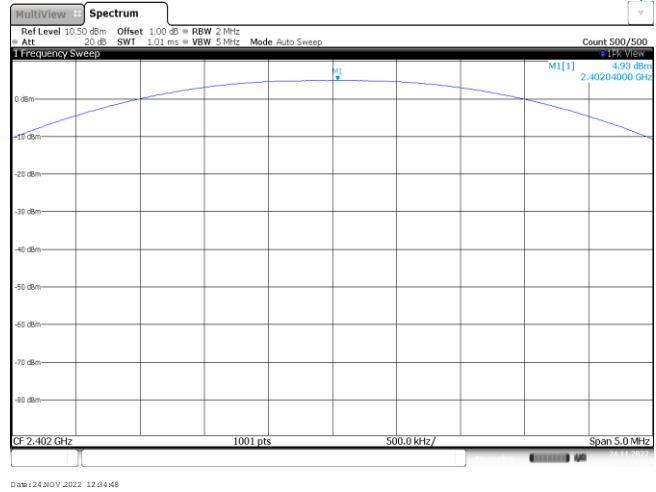
|                 |                 |                     |                      |
|-----------------|-----------------|---------------------|----------------------|
| Project No.     | SHT2112010901EW | Radio Specification | Bluetooth BLE        |
| Test sample No. | YPHT21120109002 | Model No.           | SE-200PB             |
| Start test date | 2022-11-24      | Finish date         | 2022-11-24           |
| Temperature     | 25.8℃           | Humidity            | 36%                  |
| Test Engineer   | Xiaoxiao Li     | Auditor             | <i>Xiaodong Zheo</i> |

| 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   |

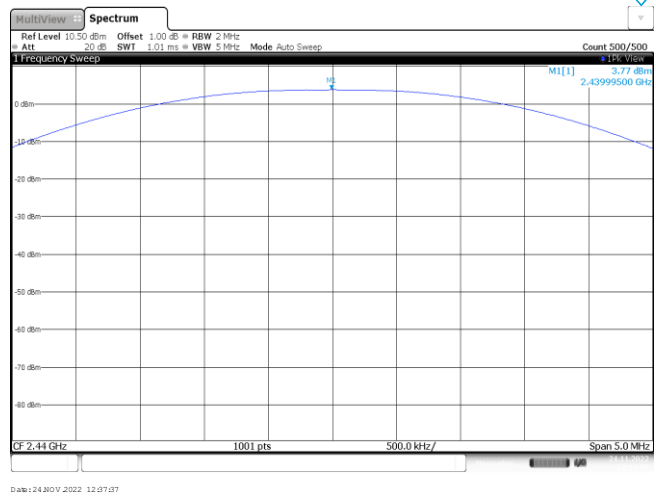
**Appendix A: Peak Output Power**

| Type   | Channel | Peak Output power (dBm) | Average Output power (dBm) | Limit (dBm) | Result |
|--------|---------|-------------------------|----------------------------|-------------|--------|
| BT-BLE | 00      | 4.93                    | 4.83                       | ≤ 30.00     | Pass   |
|        | 19      | 3.77                    | 3.66                       |             |        |
|        | 39      | 2.25                    | 2.04                       |             |        |

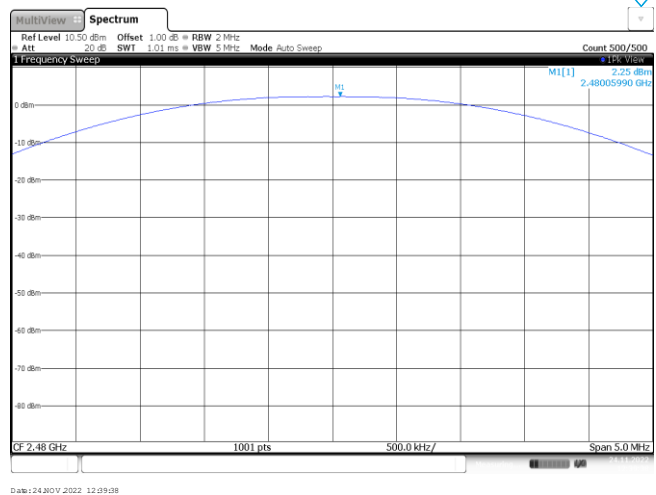
CH00



CH19



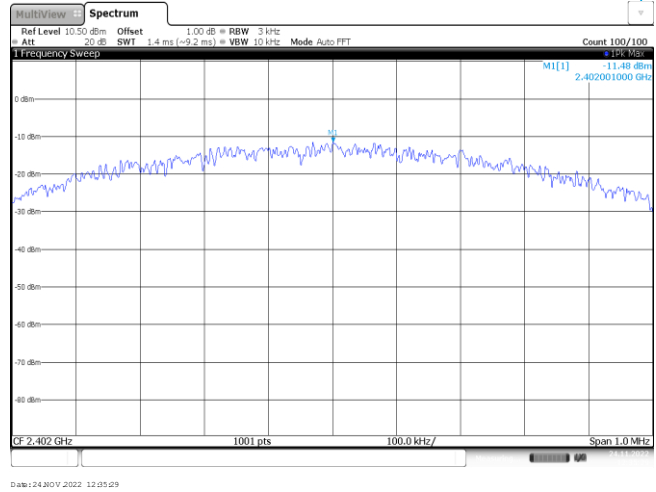
CH39



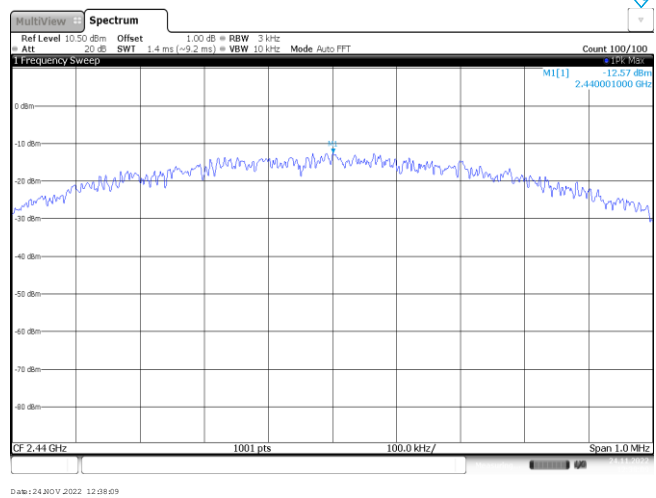
**Appendix B: Power Spectral Density**

| Type   | Channel | Power Spectral Density(dBm/3KHz) | Limit (dBm/3KHz) | Result |
|--------|---------|----------------------------------|------------------|--------|
| BT-BLE | 00      | -11.48                           | ≤8.00            | Pass   |
|        | 19      | -12.57                           |                  |        |
|        | 39      | -14.17                           |                  |        |

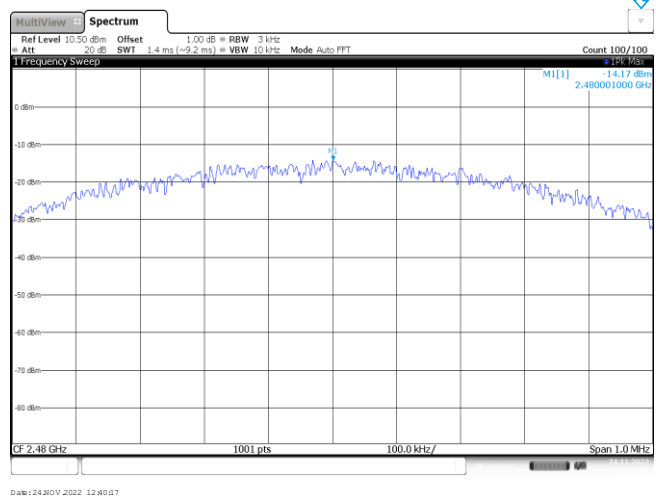
CH00



CH19



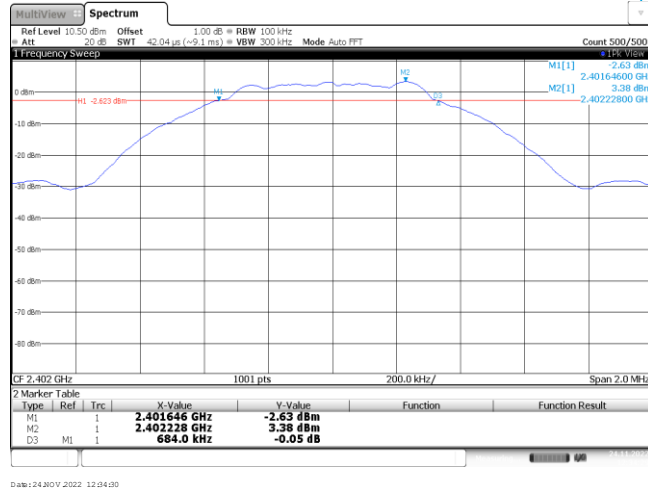
CH39



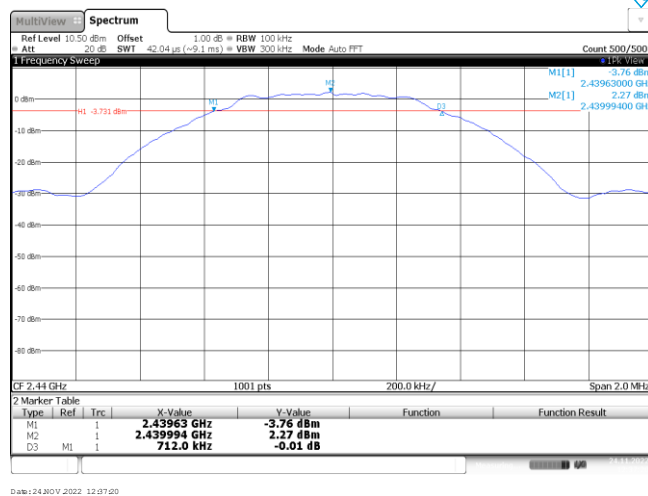
**Appendix C: 6dB bandwidth**

| Type   | Channel | 6dB Bandwidth(kHz) | Limit (kHz) | Result |
|--------|---------|--------------------|-------------|--------|
| BT-BLE | 00      | 684.00             | ≥500        | Pass   |
|        | 19      | 712.00             |             |        |
|        | 39      | 708.00             |             |        |

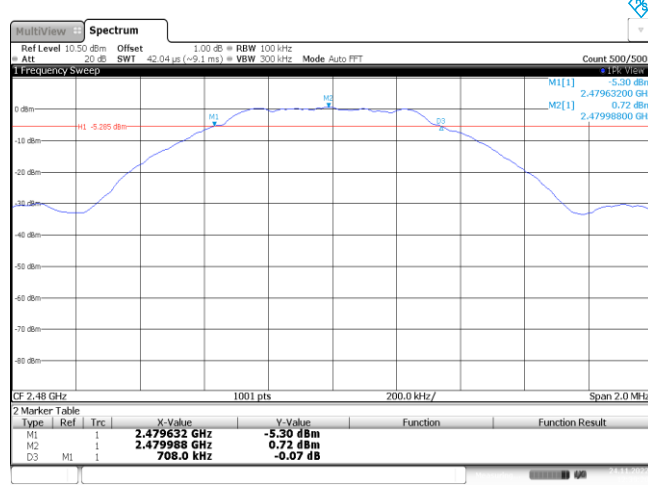
CH00



CH19



CH39

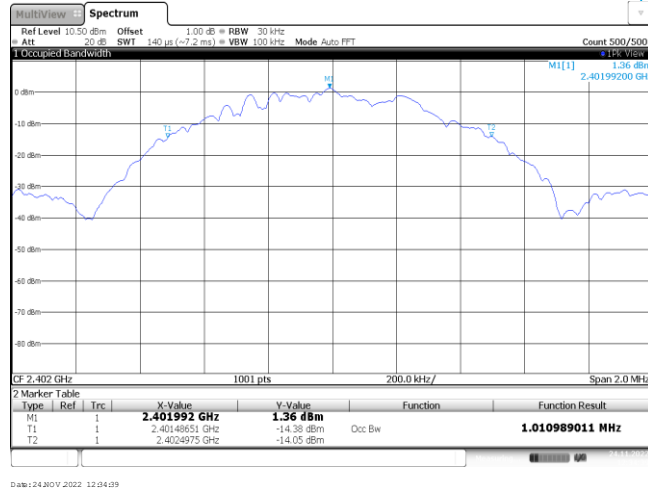


**Appendix D: 99% Occupied Bandwidth**

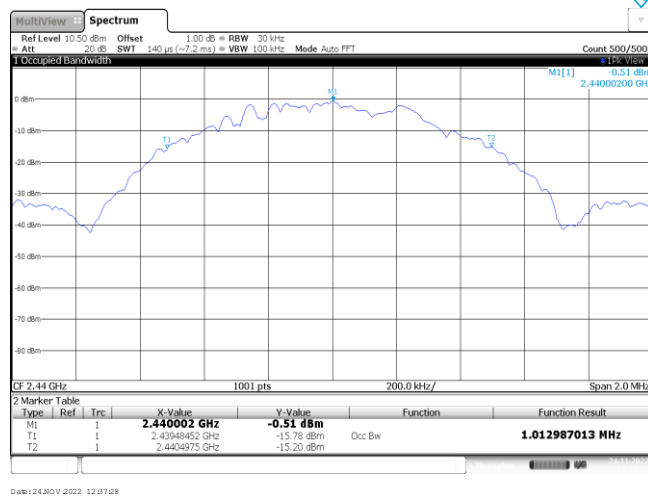
| Type   | Channel | 99% Occupied Bandwidth(MHz) | Limit (kHz) | Result |
|--------|---------|-----------------------------|-------------|--------|
| BT-BLE | 00      | 1.01                        | -           | Pass   |
|        | 19      | 1.01                        |             |        |
|        | 39      | 1.01                        |             |        |



CH00



CH19

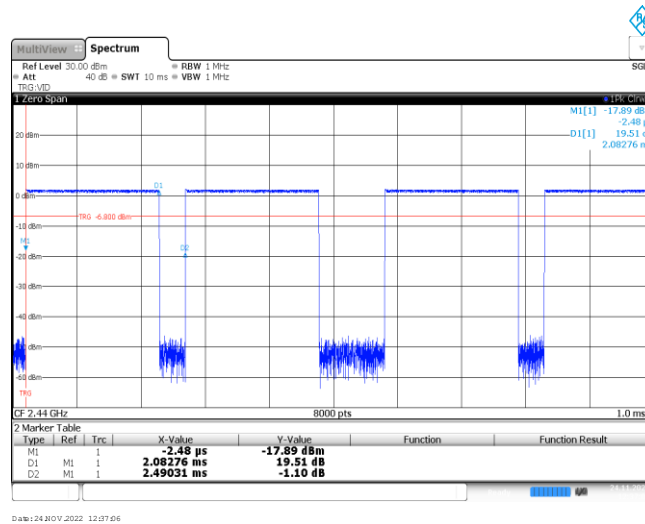


CH39

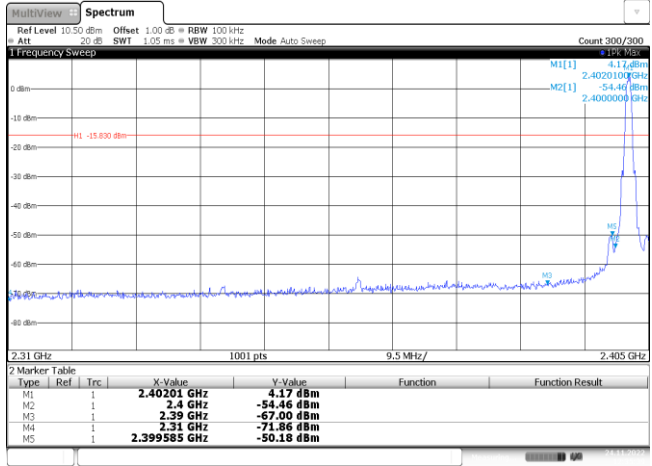
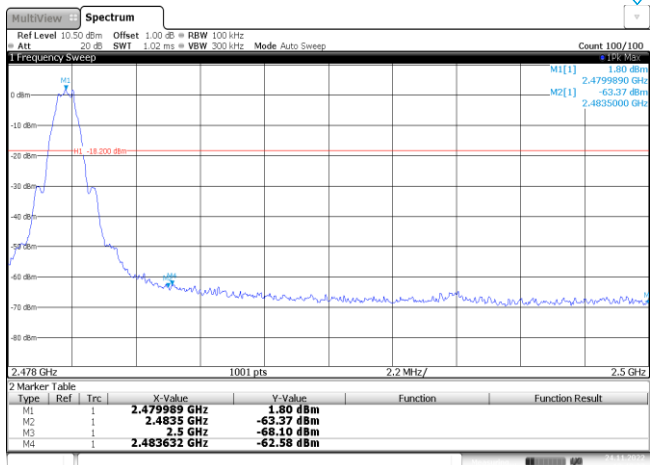


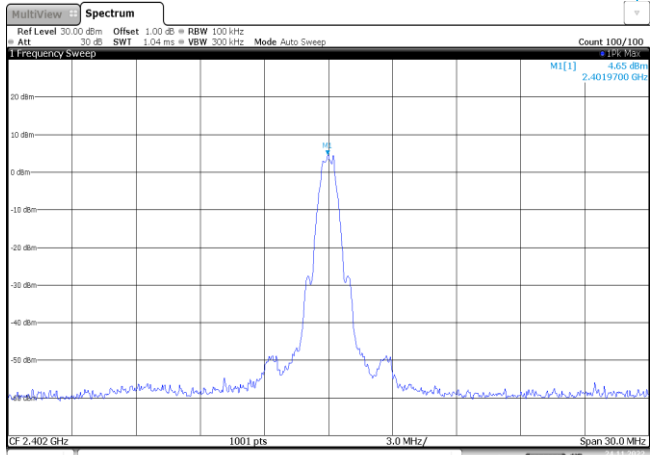
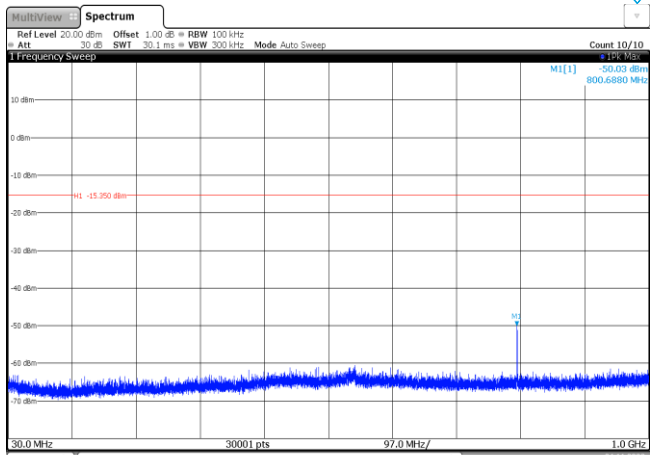
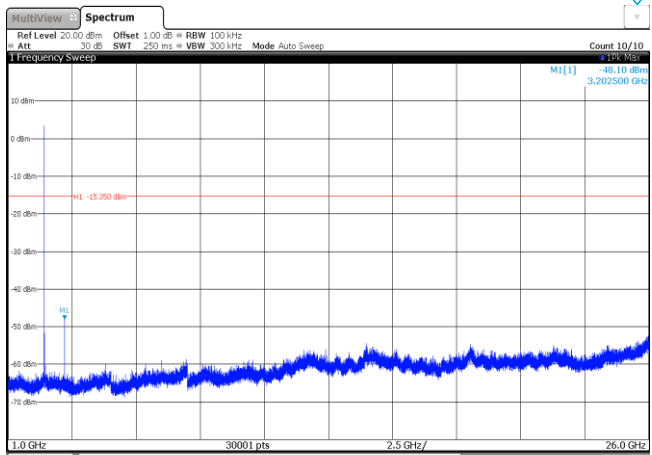
### Appendix E: Duty cycle

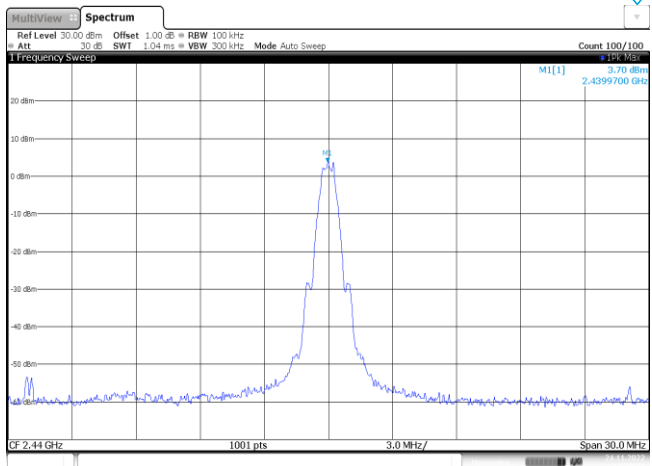
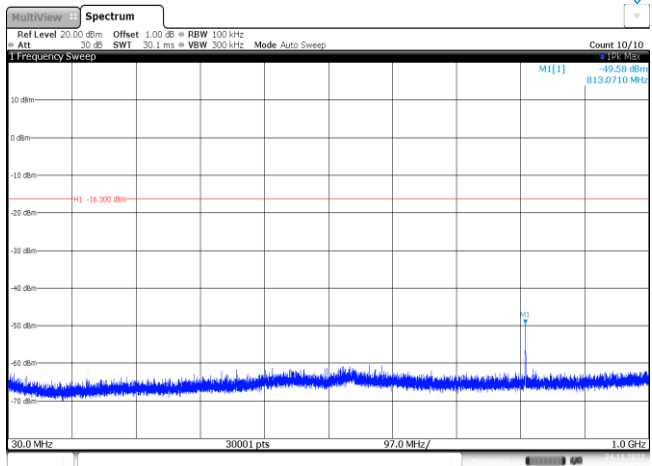
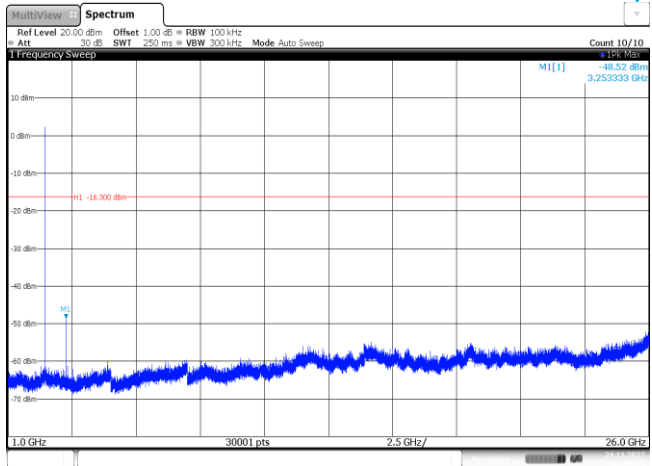
| Test Frequency (MHz) | T <sub>on</sub> time for single burst (ms) | T <sub>period</sub> (ms) | Duty cycle | 1/T <sub>on</sub> time (kHz) |
|----------------------|--|--------------------------|------------|------------------------------|
| 2440                 | 2.08                                       | 2.49                     | 83.5%      | 0.5                          |



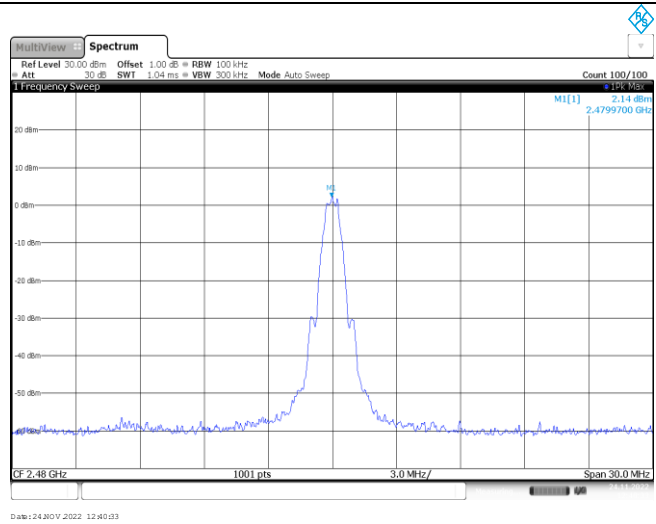
### Appendix F: Band edge and Spurious Emissions (conducted)

| Test Item:                              | Band edge  |
|---|--|
| <p style="text-align: center;">CH00</p> |  <p style="text-align: center;">Date: 24.10.2022 12:55:39</p>  |
| <p style="text-align: center;">CH39</p> |  <p style="text-align: center;">Date: 24.10.2022 12:50:27</p> |

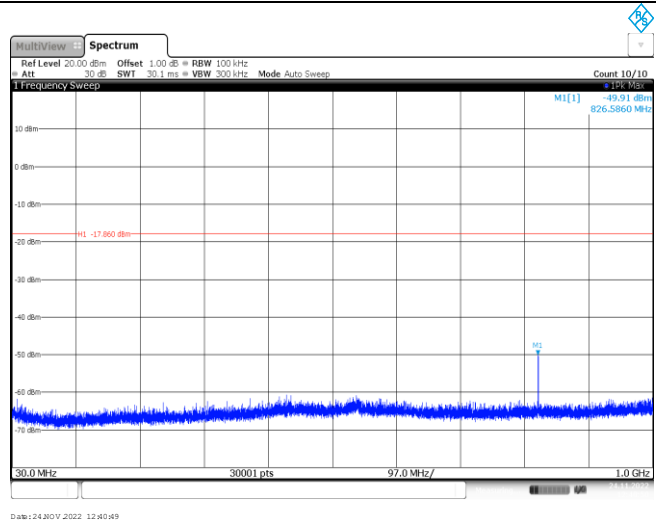
| Test Item:                      | SE   |
|---------------------------------|--|
| <p>CH00<br/>Reference level</p> |  <p>Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz<br/>Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep<br/>Count 100/100<br/>MI[1] -4.43 dBm<br/>2.4019700 GHz<br/>CF 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz<br/>Date: 24.NOV.2022 12:05:47</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] -50.03 dBm<br/>800.6880 MHz<br/>MI -15.250 dBm<br/>30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz<br/>Date: 24.NOV.2022 12:06:03</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] -48.10 dBm<br/>3.202500 GHz<br/>MI -15.250 dBm<br/>1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz<br/>Date: 24.NOV.2022 12:06:39</p>  |

|                                 |   |
|---------------------------------|---|
| <p>CH19<br/>Reference level</p> |  <p>The spectrum plot shows a single sharp peak at 2.4399700 GHz. The y-axis represents power in dBm, ranging from -70 to 20. The x-axis represents frequency in MHz, with a span of 30.0 MHz. The plot title is 'Spectrum' and it includes parameters: Ref Level 30.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att 30 dB, SWI 1.04 ms, VBW 300 kHz, Mode Auto Sweep, Count 100/100. A cursor M1[1] is positioned at the peak with a value of 3.70 dBm.</p>   |
| <p>CH19<br/>30MHz~1000MHz</p>   |  <p>The spectrum plot shows a noise floor around -70 dBm with a single peak at 813.0710 MHz. The y-axis ranges from -70 to 20 dBm. The x-axis ranges from 30.0 MHz to 1.0 GHz with a span of 97.0 MHz. The plot title is 'Spectrum' and it includes parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att 30 dB, SWI 30.1 ms, VBW 300 kHz, Mode Auto Sweep, Count 10/10. A cursor M1[1] is positioned at the peak with a value of -43.26 dBm. A red horizontal line is drawn at -16.300 dBm.</p> |
| <p>CH19<br/>1GHz~26GHz</p>      |  <p>The spectrum plot shows a noise floor around -70 dBm with a single peak at 3.253303 GHz. The y-axis ranges from -70 to 20 dBm. The x-axis ranges from 1.0 GHz to 26.0 GHz with a span of 2.5 GHz. The plot title is 'Spectrum' and it includes parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Att 30 dB, SWI 250 ms, VBW 300 kHz, Mode Auto Sweep, Count 10/10. A cursor M1[1] is positioned at the peak with a value of -43.32 dBm. A red horizontal line is drawn at -16.300 dBm.</p>  |

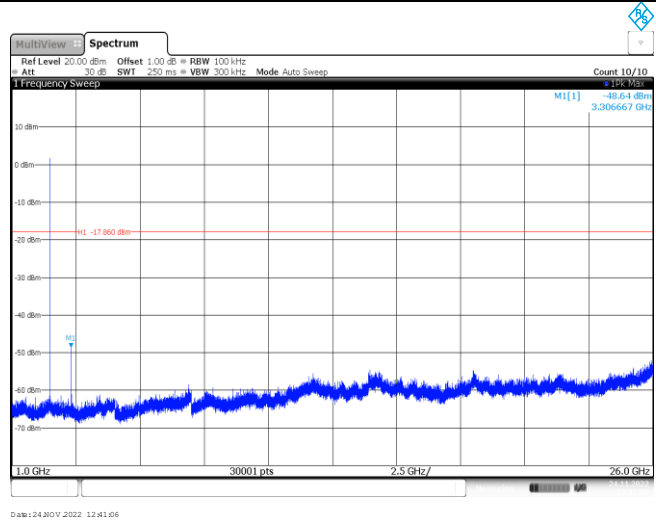
CH39  
Reference level



CH39  
30MHz~1000MHz



CH39  
1GHz~26GHz



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