# Appendix B

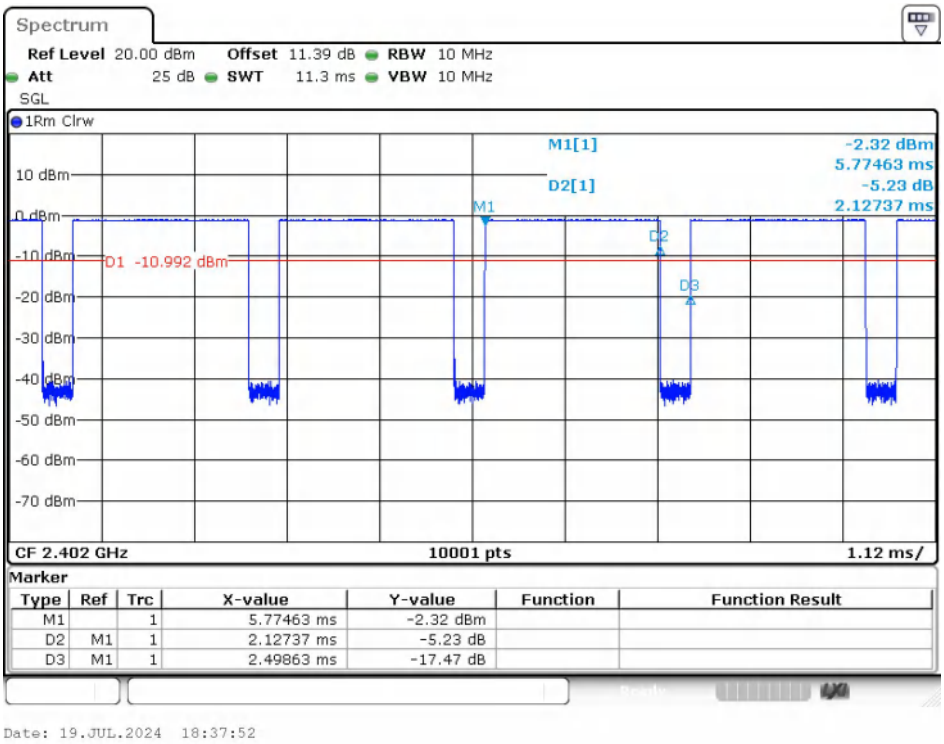
| | |
|---|---|
| Report No.: | CISRR24071808902 |
| FCC ID: | 2BF2Q-KW03-1 |
| Product Name: | White noise speaker |
| Model No.: | KW03 |
| Test Engineer: | Lucas Huang |
| Supervised by: | Rory Huang |

# 1) Duty Cycle

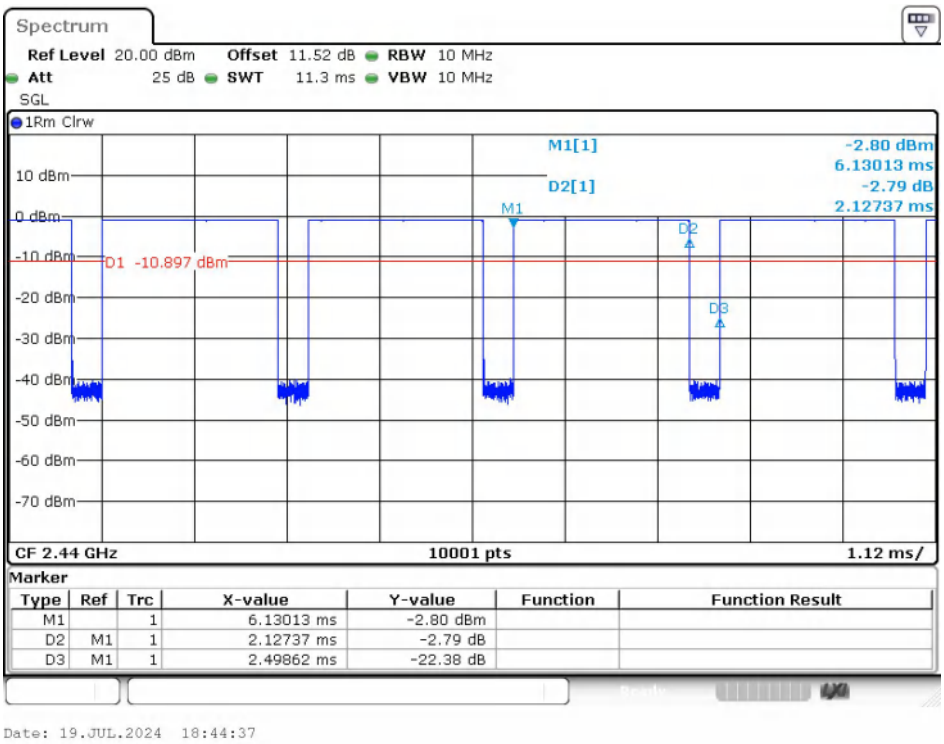
**Test Result**

| Mode | Channel | On Time (ms) | Period (ms) | Duty Cycle (%) | Duty Cycle (linear) | Duty Cycle Factor (dB) | 1/T |
|---|---|---|---|---|---|---|---|
| BLE 1M | 0 | 2.127 | 2.499 | 85.14 | 0.8514 | 0.6987 | 0.47 |
| | 19 | 2.127 | 2.499 | 85.14 | 0.8514 | 0.6987 | 0.47 |
| | 39 | 2.127 | 2.499 | 85.14 | 0.8514 | 0.6987 | 0.47 |
| BLE 2M | 0 | 1.075 | 2.499 | 43.04 | 0.4304 | 3.6613 | 0.93 |
| | 19 | 1.075 | 2.499 | 43.04 | 0.4304 | 3.6613 | 0.93 |
| | 39 | 1.075 | 2.500 | 43.02 | 0.4302 | 3.6633 | 0.93 |

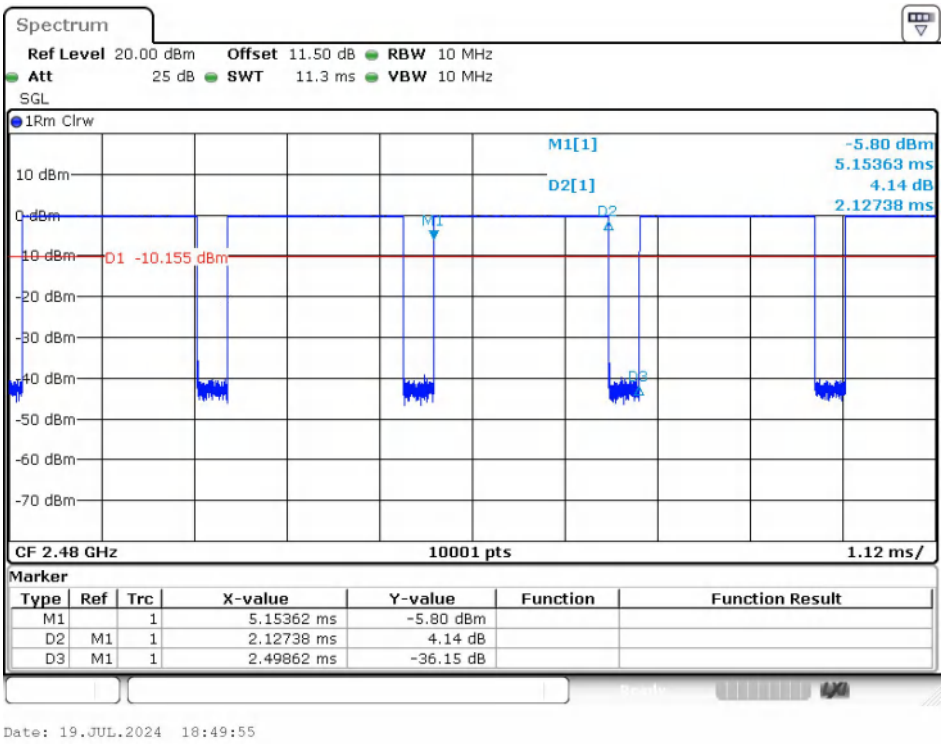
**Test Graphs**



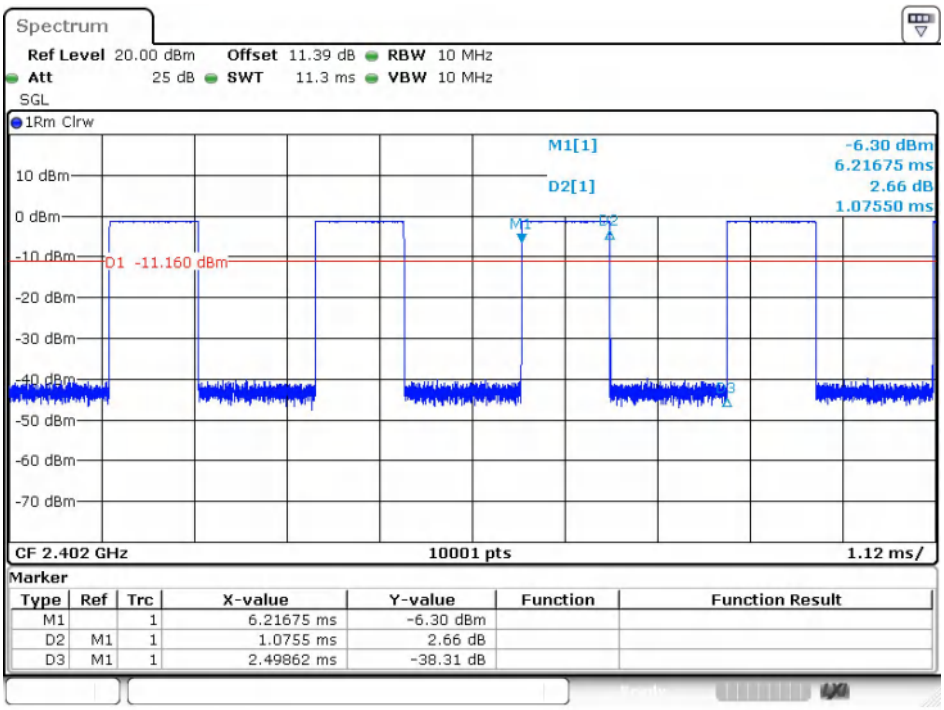

BLE 1M_Channel 0



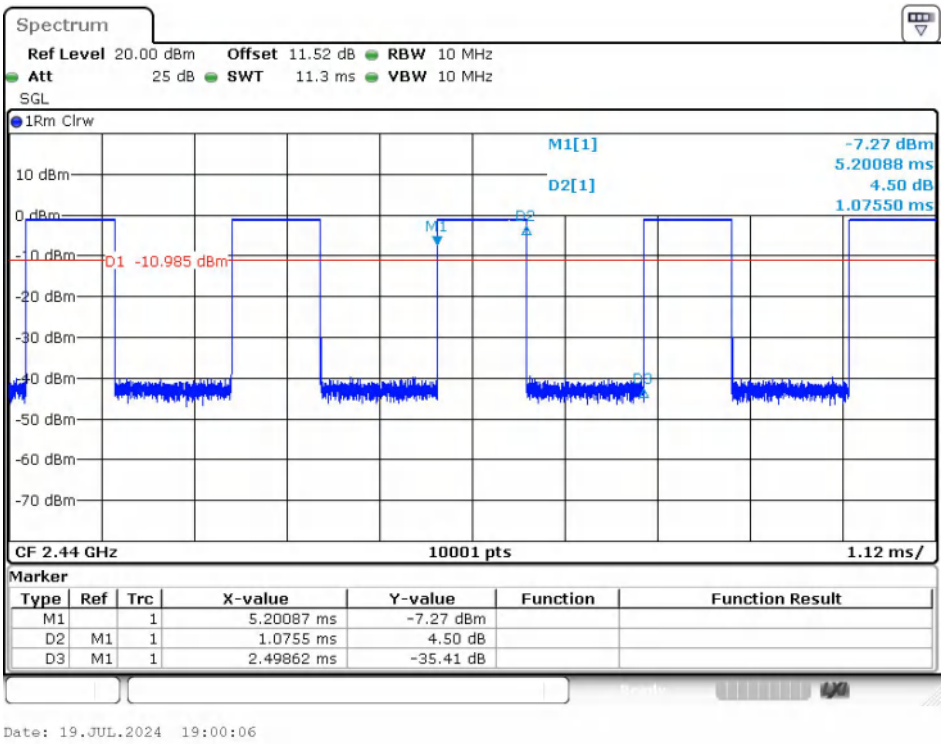

**BLE 1M_Channel 19**



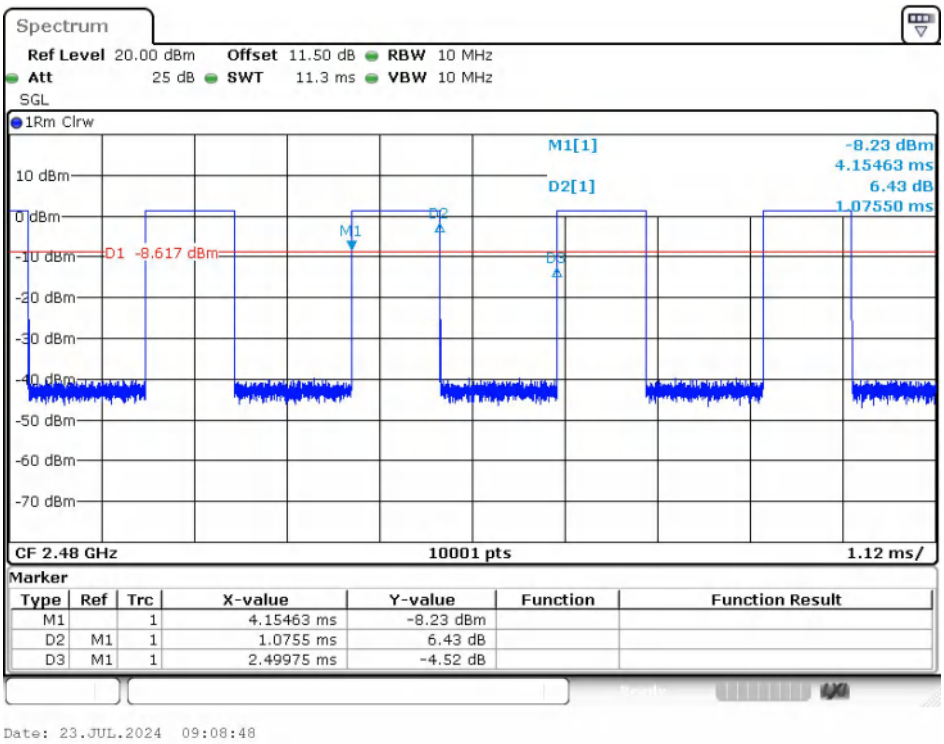

**BLE 1M_Channel 39**




**BLE 2M_Channel 0**




**BLE 2M_Channel 19**



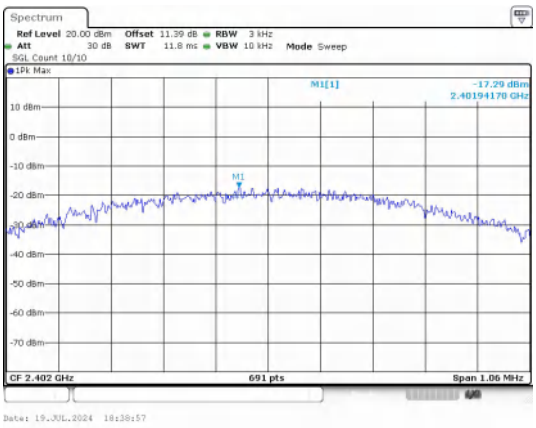

**BLE 2M_Channel 39**

# 2) Power Spectral Density

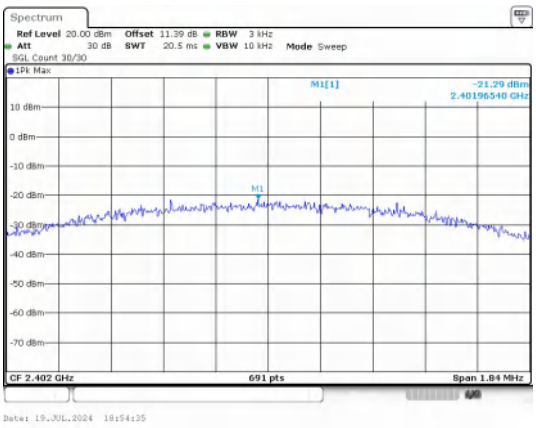
### Test Result

| Mode | Channel | PSD (dBm/3kHz) | Limit (dBm/3kHz) | Result |
|---|---|---|---|---|
| BLE 1M | 0 | -17.290 | ≤8 | PASS |
| BLE 1M | 19 | -17.064 | ≤8 | PASS |
| BLE 1M | 39 | -16.293 | ≤8 | PASS |
| BLE 2M | 0 | -21.293 | ≤8 | PASS |
| BLE 2M | 19 | -20.152 | ≤8 | PASS |
| BLE 2M | 39 | -18.434 | ≤8 | PASS |

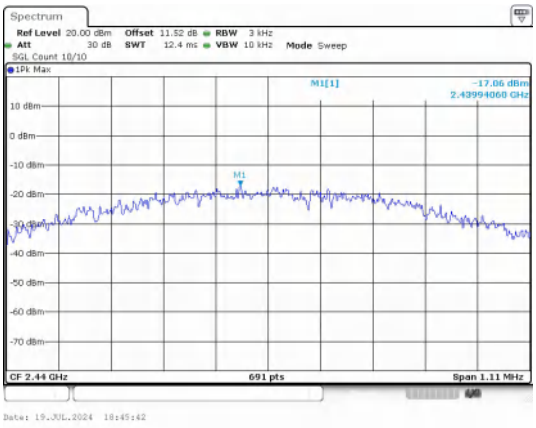
### Test Graphs



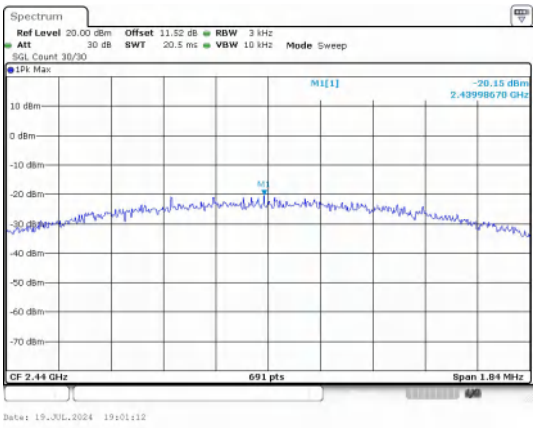

BLE 1M_Channel 0



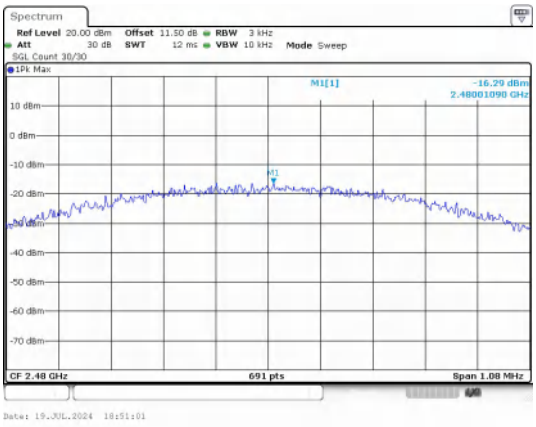

BLE 2M_Channel 0



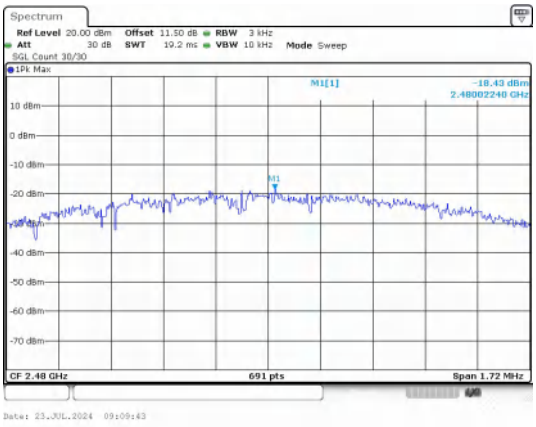

BLE 1M_Channel 19




BLE 2M_Channel 19




BLE 1M_Channel 39



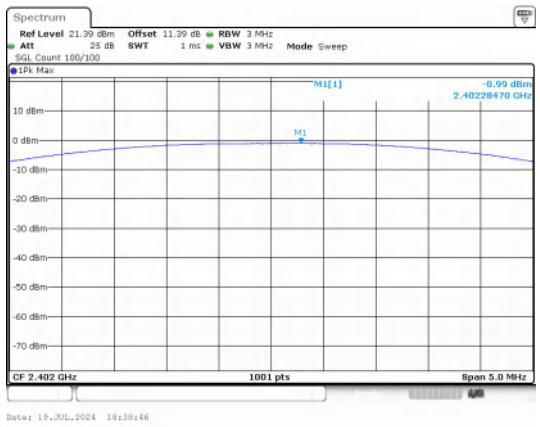

BLE 2M_Channel 39

# 3) Conducted Output Power

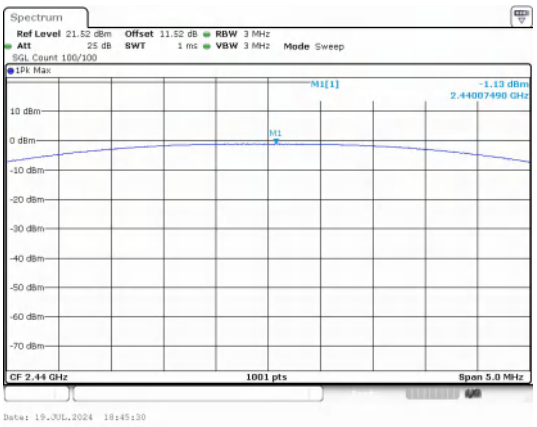
**Test Result**

| Mode | Channel | Peak Output Power (dBm) | Peak Output Power (mW) | Limit (dBm) | Result |
|---|---|---|---|---|---|
| BLE 1M | 0 | -0.99 | 0.80 | ≤30 | PASS |
| | 19 | -1.13 | 0.77 | ≤30 | PASS |
| | 39 | -0.13 | 0.97 | ≤30 | PASS |
| BLE 2M | 0 | -1.15 | 0.77 | ≤30 | PASS |
| | 19 | -0.97 | 0.80 | ≤30 | PASS |
| | 39 | -0.12 | 0.97 | ≤30 | PASS |

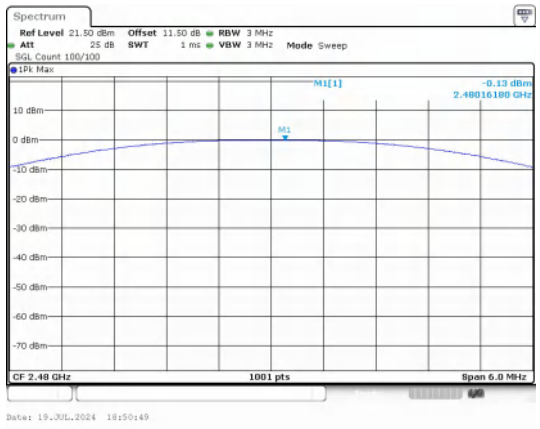
**Test Graphs**



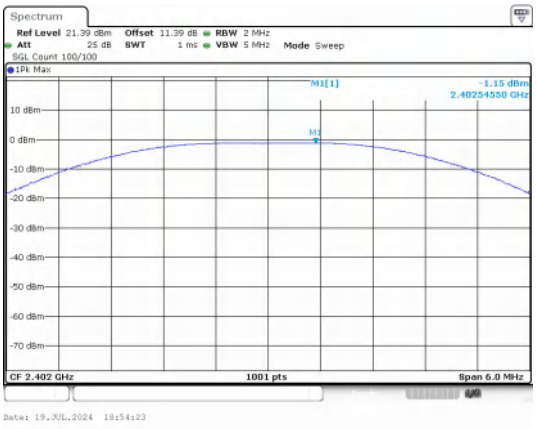

Peak Output Power
BLE 1M_Channel 0



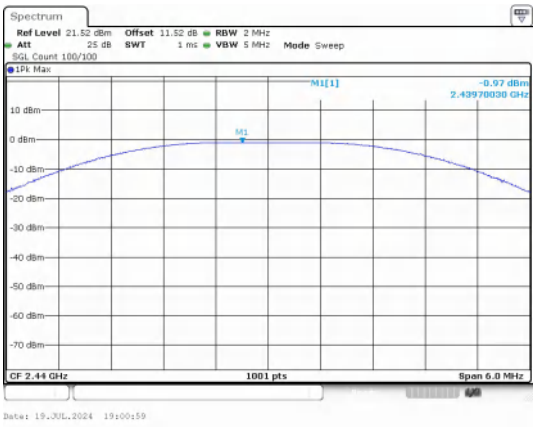
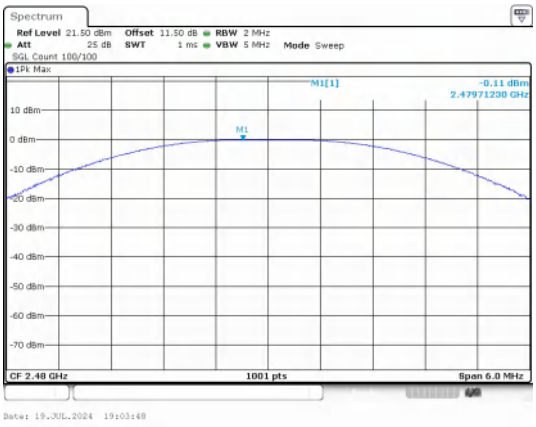

Peak Output Power
BLE 1M_Channel 19




Peak Output Power
BLE 1M_Channel 39




Peak Output Power
BLE 2M_Channel 0

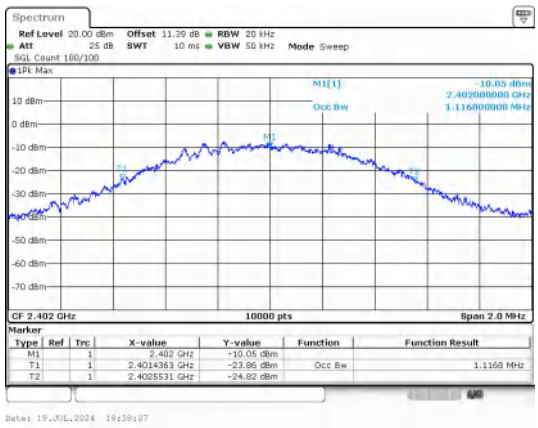
| | |
|---|---|
|  |  |
| **Peak Output Power**<br>**BLE 2M_Channel 19** | **Peak Output Power**<br>**BLE 2M_Channel 39** |

# 4) 99% Bandwidth

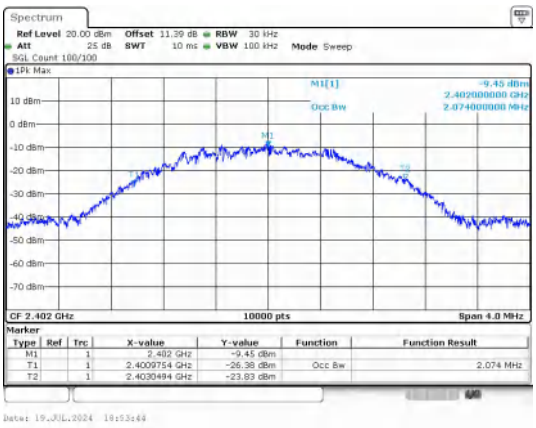
### Test Result

| Mode | Channel | Center Frequency (MHz) | 99% BW (MHz) |
|---|---|---|---|
| BLE 1M | 0 | 2402 | 1.1170 |
| BLE 1M | 19 | 2440 | 1.1310 |
| BLE 1M | 39 | 2480 | 1.1730 |
| BLE 2M | 0 | 2402 | 2.0740 |
| BLE 2M | 19 | 2440 | 2.0850 |
| BLE 2M | 39 | 2480 | 2.0880 |

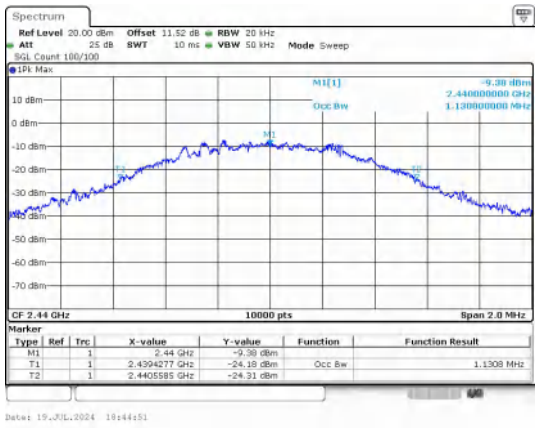
### Test Graphs



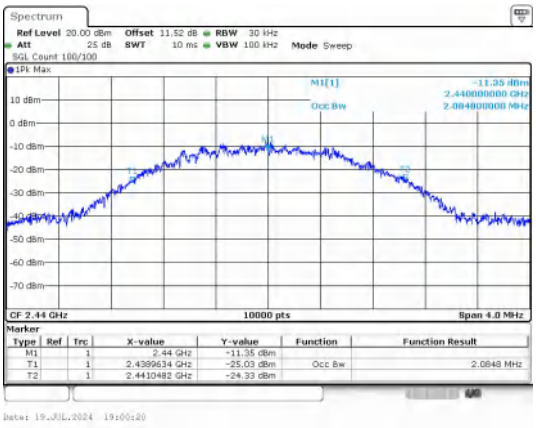

BLE 1M_Channel 0



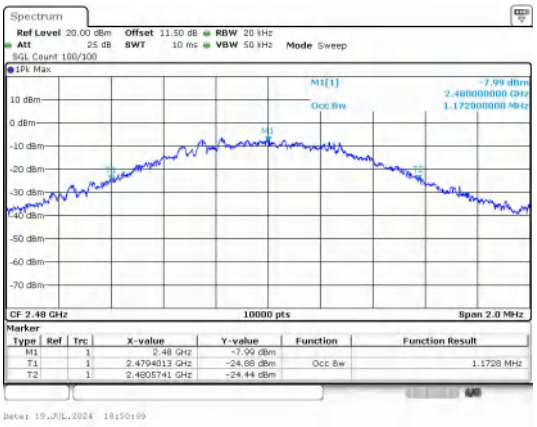

BLE 2M_Channel 0



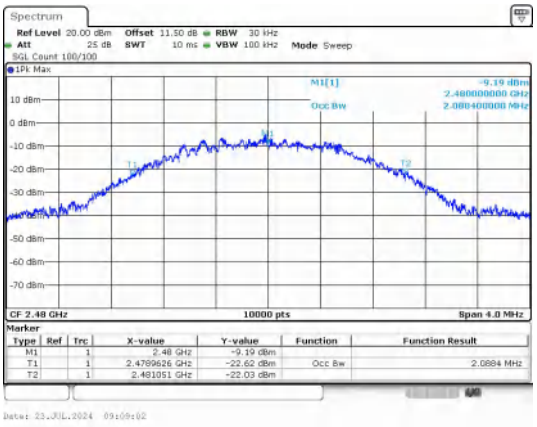

BLE 1M_Channel 19




BLE 2M_Channel 19




BLE 1M_Channel 39



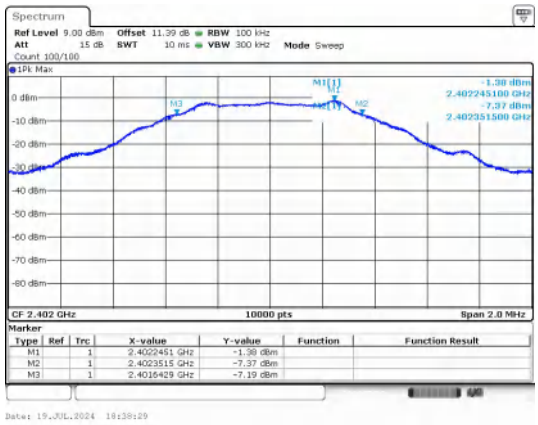

BLE 2M_Channel 39

# 5) 6dB Bandwidth

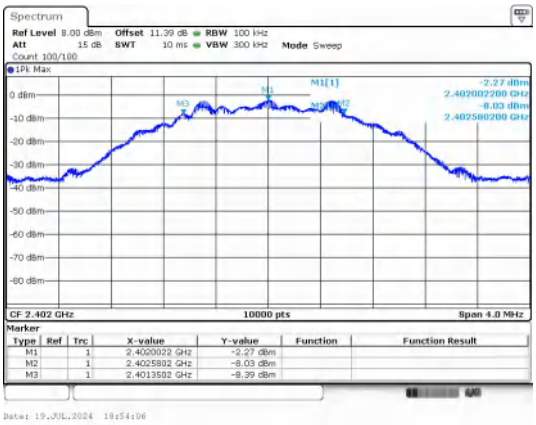
**Test Result**

| Mode | Channel | Center Frequency (MHz) | 6 dB Bandwidth (MHz) | Limit (MHz) | Result |
|---|---|---|---|---|---|
| BLE 1M | 0 | 2402 | 0.7100 | ≥0.5 | PASS |
| | 19 | 2440 | 0.7400 | | PASS |
| | 39 | 2480 | 0.7200 | | PASS |
| BLE 2M | 0 | 2402 | 1.230 | | PASS |
| | 19 | 2440 | 1.230 | | PASS |
| | 39 | 2480 | 1.150 | | PASS |

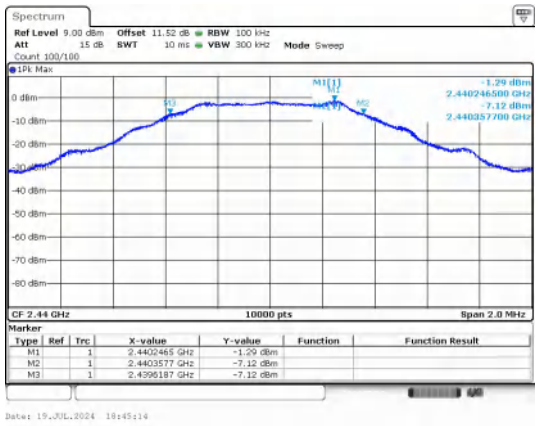
**Test Graphs**



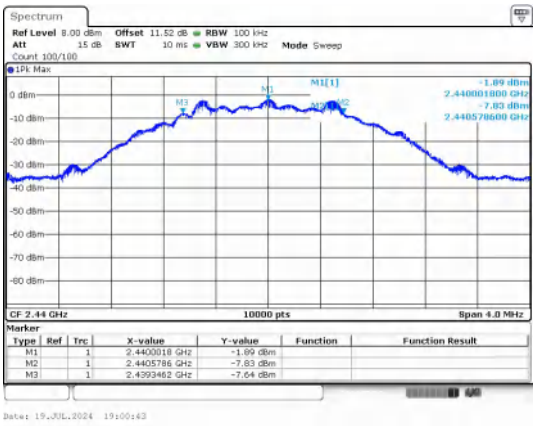

BLE 1M_Channel 0



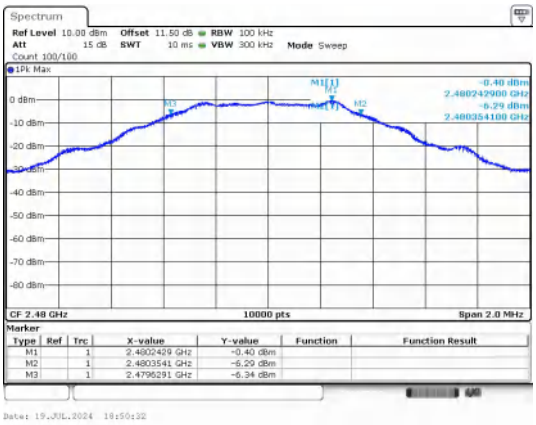

BLE 2M_Channel 0



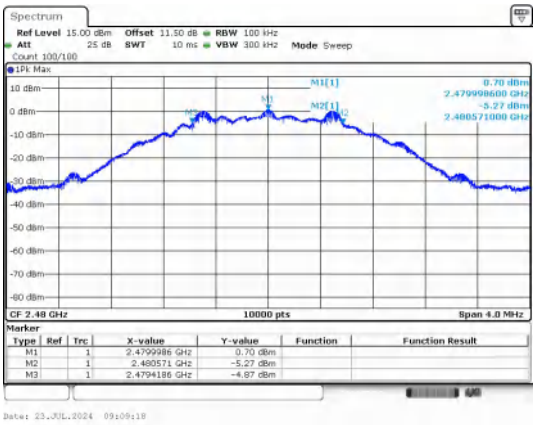

BLE 1M_Channel 19




BLE 2M_Channel 19




BLE 1M_Channel 39



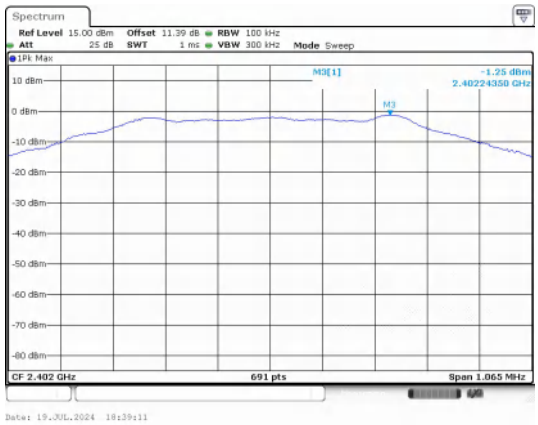

BLE 2M_Channel 39

# 6) Conducted Out Of Band Emission

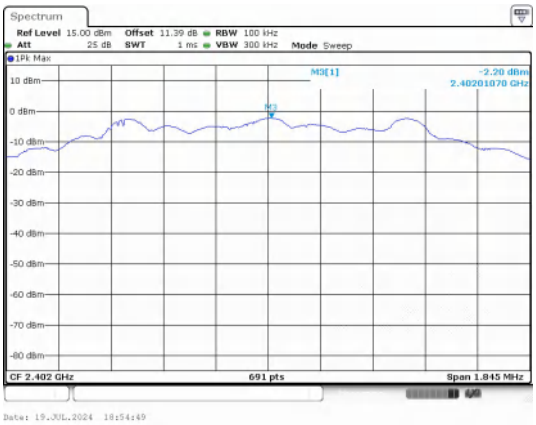
**Test Result**

| Mode | Channel | OOB Emission Frequency (MHz) | OOB Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result |
|---|---|---|---|---|---|---|
| BLE 1M | 0 | 2395.59 | -48.501 | -21.25 | -27.251 | PASS |
| | | 2400.00 | -50.257 | -21.25 | -29.007 | PASS |
| | | 4803.80 | -45.100 | -21.25 | -23.850 | PASS |
| | 19 | 9760.39 | -43.719 | -21.4 | -22.319 | PASS |
| | 39 | 2483.50 | -49.849 | -20.43 | -29.419 | PASS |
| | | 9920.20 | -43.748 | -20.43 | -23.318 | PASS |
| BLE 2M | 0 | 2400.00 | -36.472 | -22.2 | -14.272 | PASS |
| | | 9608.08 | -45.533 | -22.2 | -23.333 | PASS |
| | 19 | 9760.39 | -42.733 | -21.81 | -20.923 | PASS |
| | 39 | 2483.50 | -50.393 | -19.39 | -31.003 | PASS |
| | | 9920.20 | -41.724 | -19.39 | -22.334 | PASS |

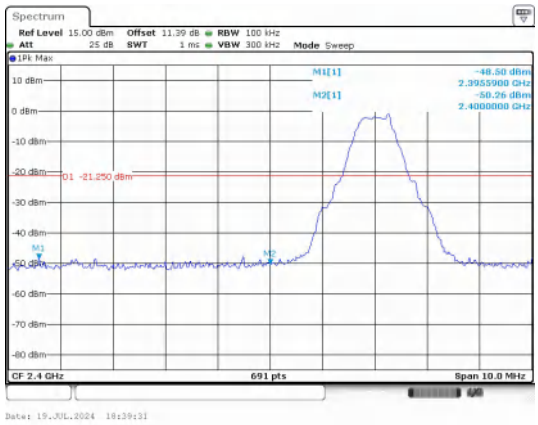
**Test Graphs**



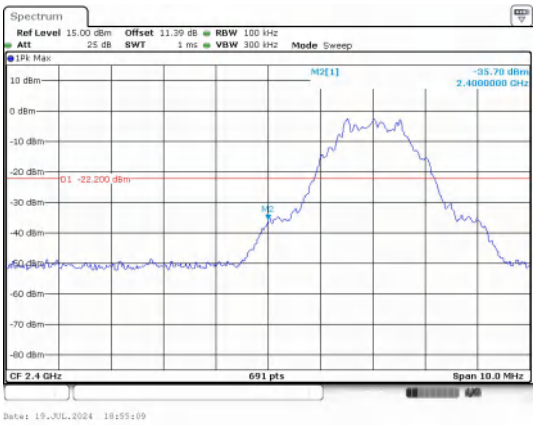

In-Band Reference Level
BLE 1M_Channel 0



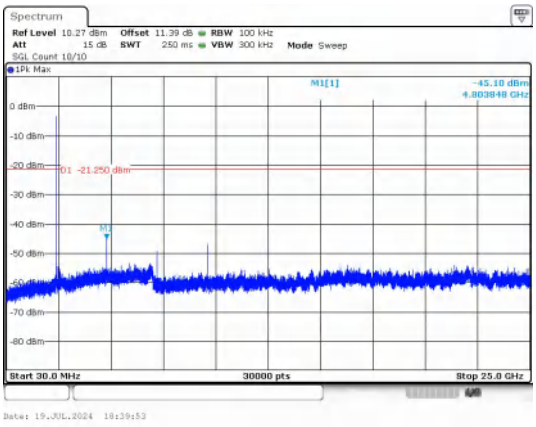
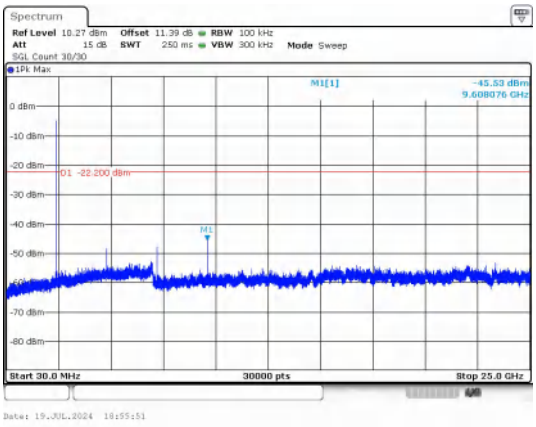
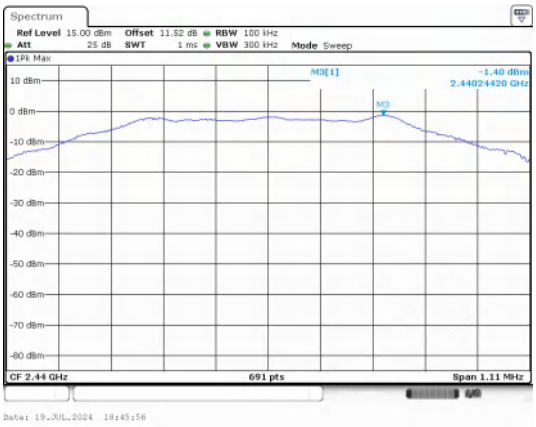
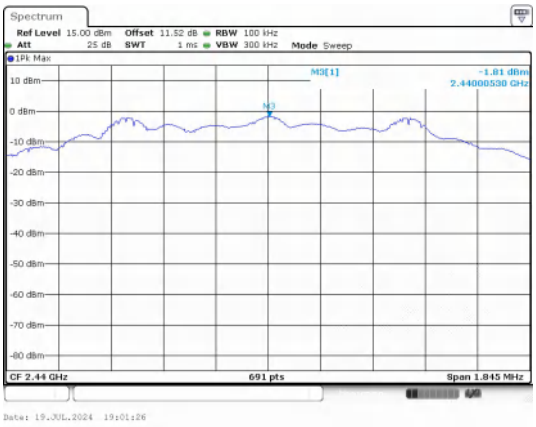
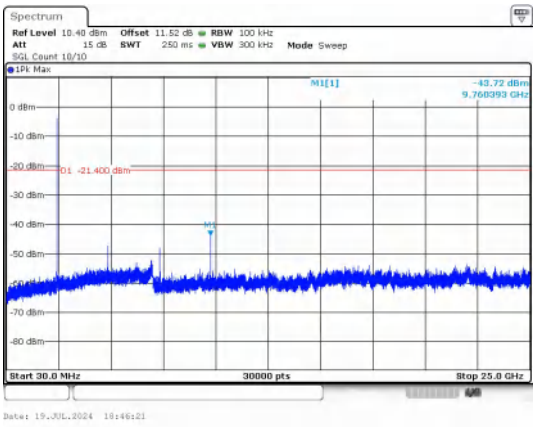
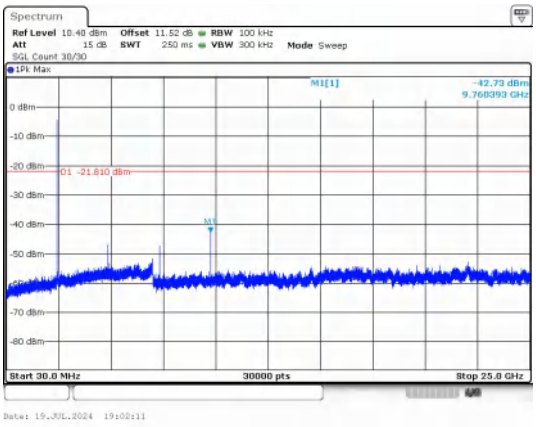

In-Band Reference Level
BLE 2M_Channel 0

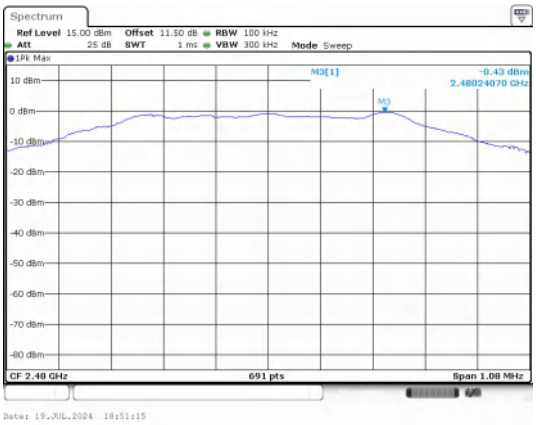



Out Of Band Emission



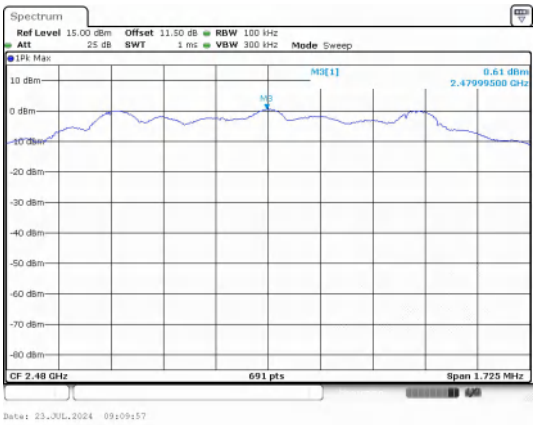

Out Of Band Emission

| BLE 1M_Channel 0 | BLE 2M_Channel 0 |
|---|---|
|  |  |
| 30.0 MHz - 25000.0 MHz<br>BLE 1M_Channel 0 | 30.0 MHz - 25000.0 MHz<br>BLE 2M_Channel 0 |
|  |  |
| In-Band Reference Level<br>BLE 1M_Channel 19 | In-Band Reference Level<br>BLE 2M_Channel 19 |
|  |  |
| 30.0 MHz - 25000.0 MHz<br>BLE 1M_Channel 19 | 30.0 MHz - 25000.0 MHz<br>BLE 2M_Channel 19 |



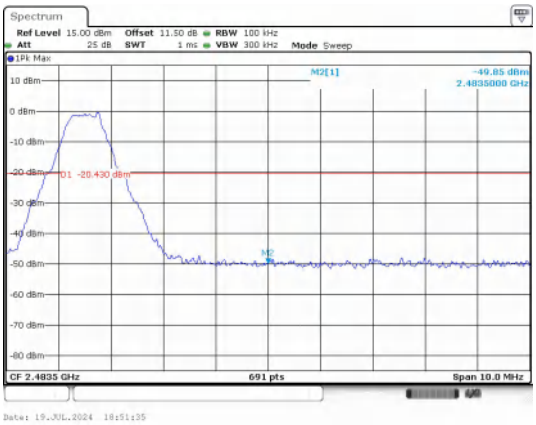

**In-Band Reference Level**

**BLE 1M_Channel 39**



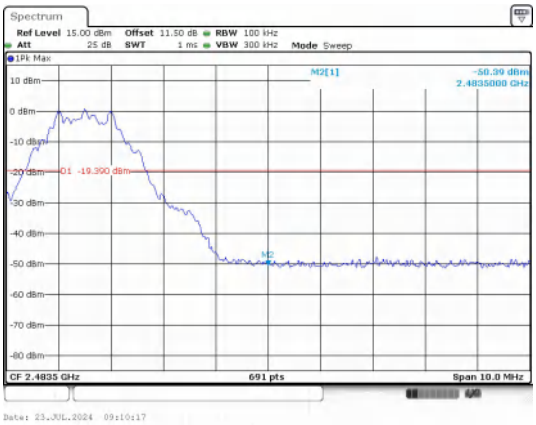

**In-Band Reference Level**

**BLE 2M_Channel 39**



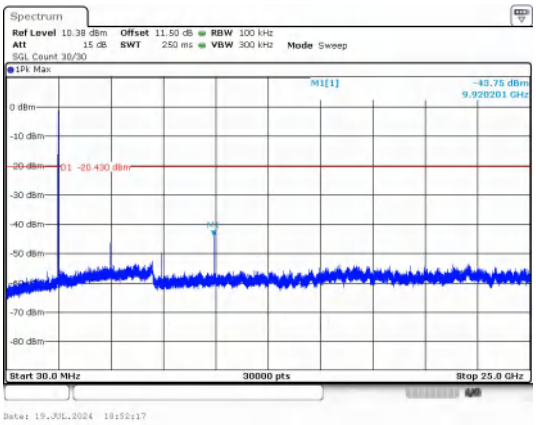

**Out Of Band Emission**

**BLE 1M_Channel 39**



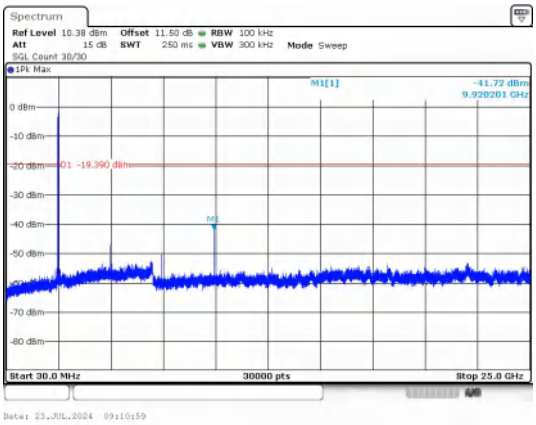

**Out Of Band Emission**

**BLE 2M_Channel 39**




**30.0 MHz - 25000.0 MHz**

**BLE 1M_Channel 39**




**30.0 MHz - 25000.0 MHz**

**BLE 2M_Channel 39**