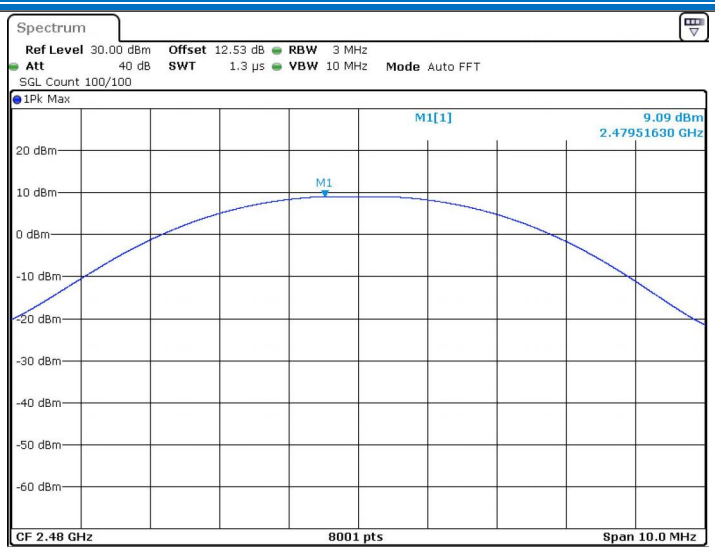
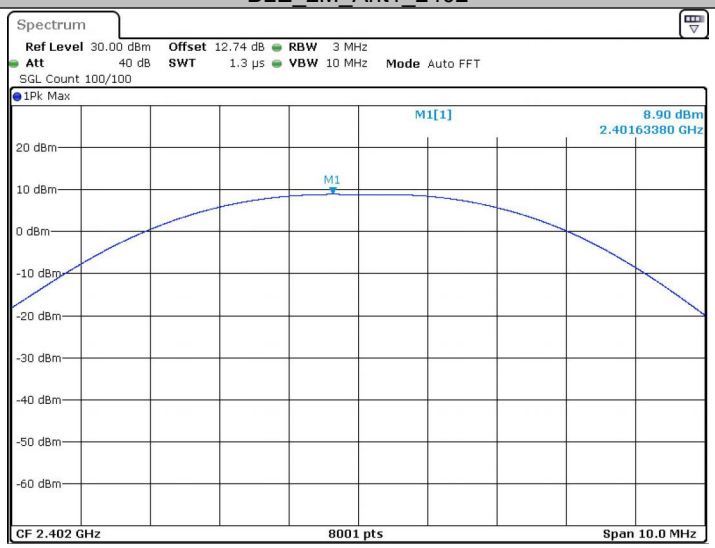


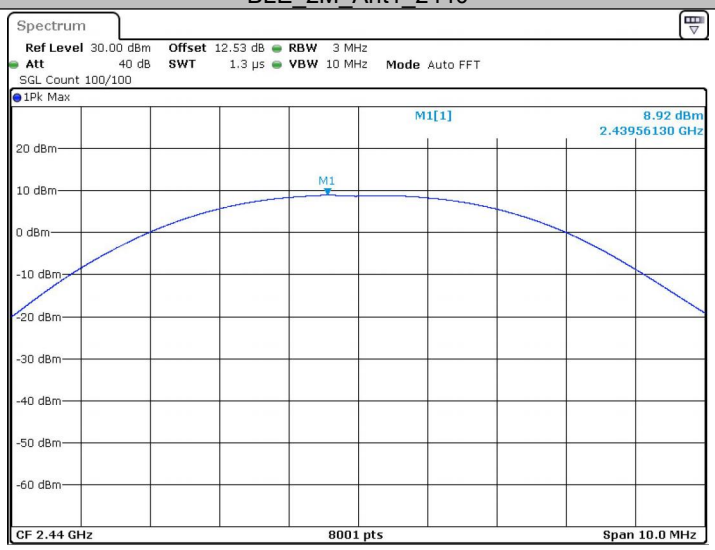

Date: 26.MAR.2025 11:38:43

BLE_2M_Ant1_2402



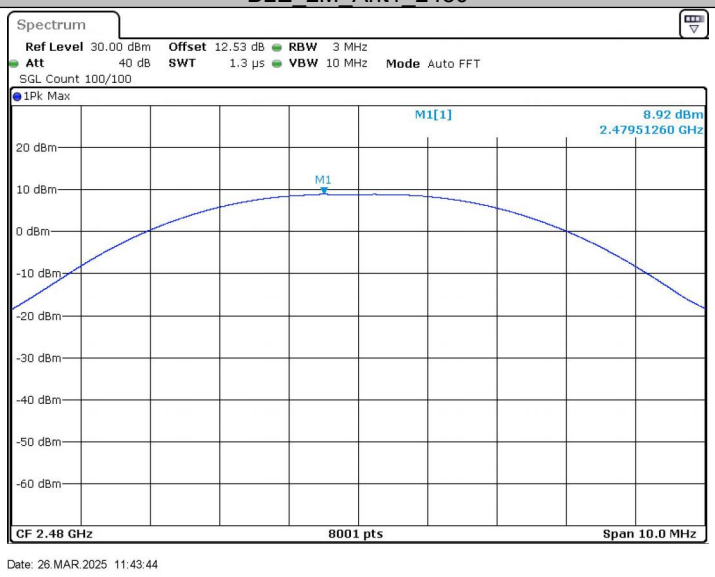

Date: 26.MAR.2025 11:40:33

BLE_2M_Ant1_2440

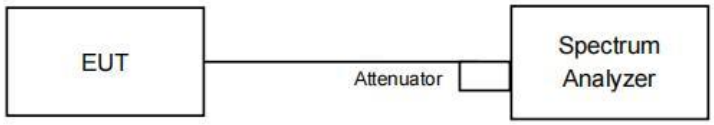



Date: 26.MAR.2025 11:42:25

BLE_2M_Ant1_2480



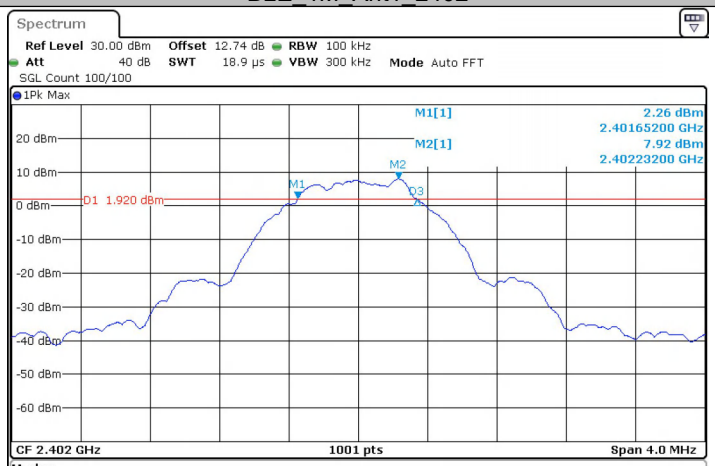
## 5.4 6dB Occupy Bandwidth

| | |
|---|---|
| Test Requirement: | 47 CFR Part 15C Section 15.247 (a)(2) |
| Test Method: | ANSI C63.10 2013 |
| Test Setup: |  *Remark: Offset=Cable loss+ attenuation factor.* |
| Limit: | ≥ 500 kHz |
| Instruments Used: | Refer to section 4.11 for details. |
| Test Results: | Pass |

**Measurement Data**

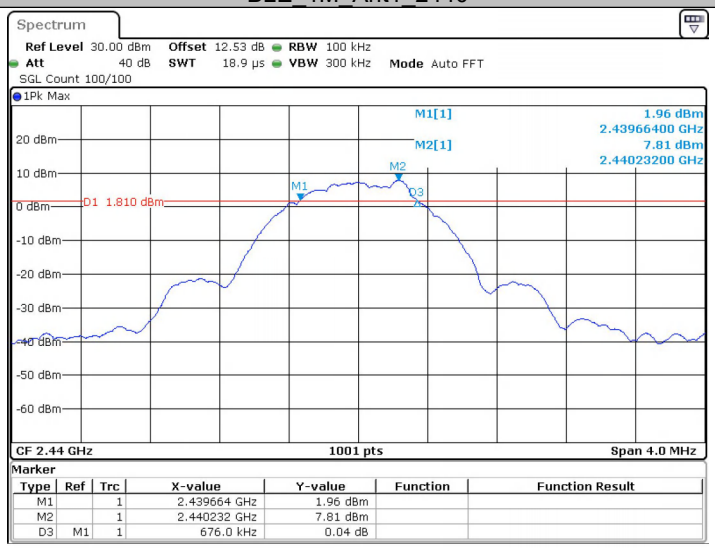
| GFSK mode (1Mbps) | | | |
|---|---|---|---|
| Test channel | 6dB Occupy Bandwidth (MHz) | Limit (kHz) | Result |
| Lowest | 0.69 | ≥500 | Pass |
| Middle | 0.68 | ≥500 | Pass |
| Highest | 0.70 | ≥500 | Pass |
| GFSK mode (2Mbps) | | | |
| Test channel | 6dB Occupy Bandwidth (MHz) | Limit (kHz) | Result |
| Lowest | 1.36 | ≥500 | Pass |
| Middle | 1.38 | ≥500 | Pass |
| Highest | 1.36 | ≥500 | Pass |

BLE_1M_Ant1_2402



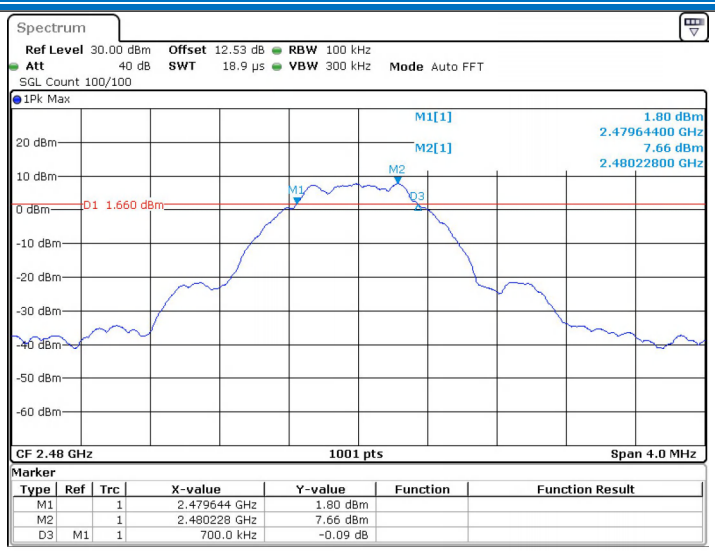

Date: 26.MAR.2025 11:34:57

BLE_1M_Ant1_2440



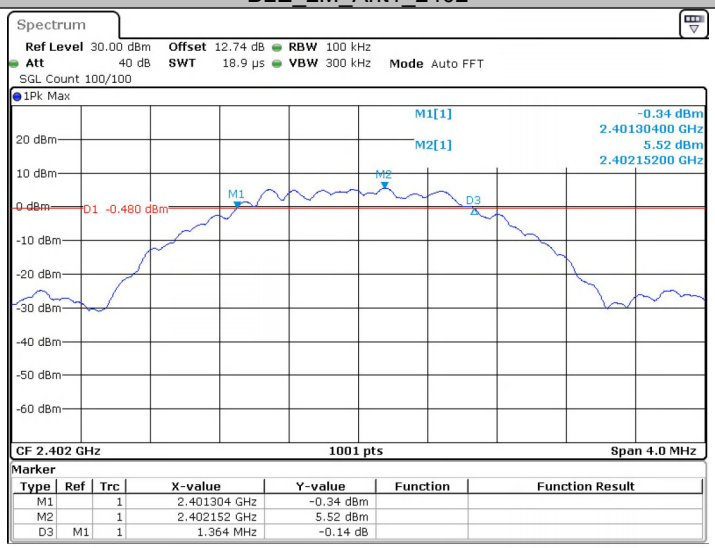

Date: 26.MAR.2025 11:36:36

BLE_1M_Ant1_2480



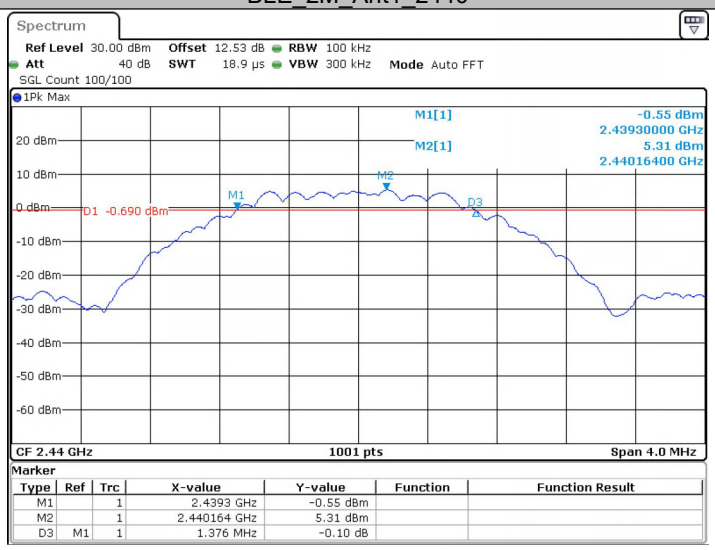

Date: 26.MAR.2025 11:38:35

BLE_2M_Ant1_2402



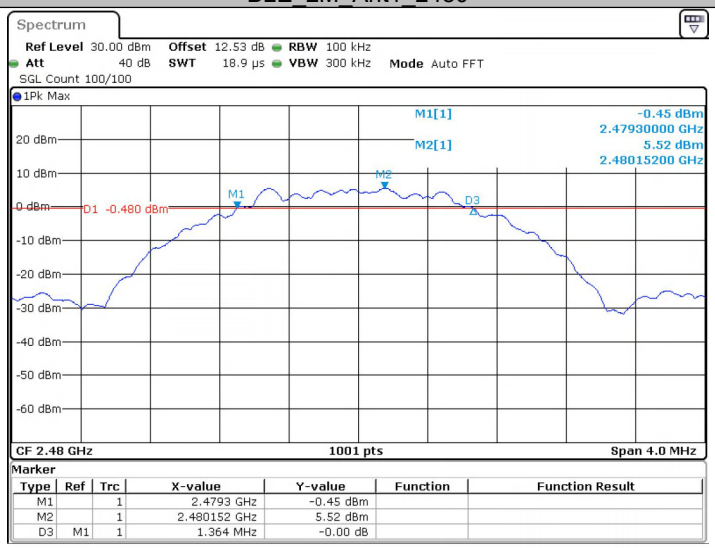

Date: 26.MAR.2025 11:40:24

BLE_2M_Ant1_2440

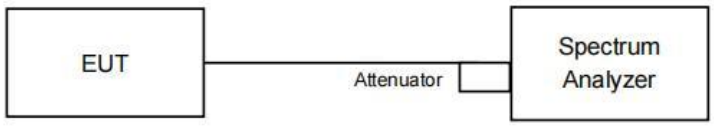



Date: 26.MAR.2025 11:42:16

BLE_2M_Ant1_2480



## 5.5 Power Spectral Density

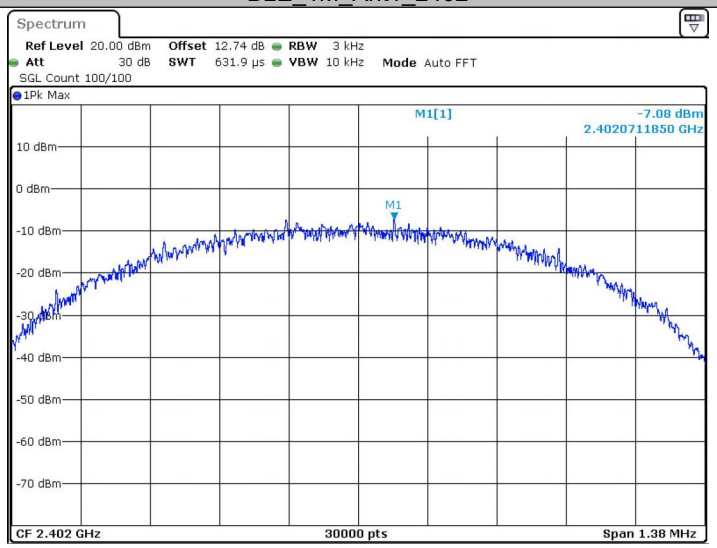
| | |
|---|---|
| Test Requirement: | 47 CFR Part 15C Section 15.247 (e) |
| Test Method: | ANSI C63.10 2013 |
| Test Setup: |  *Remark: Offset=Cable loss+ attenuation factor.* |
| Limit: | ≤8.00dBm/3kHz |
| Test Mode: | Transmitting with GFSK modulation. |
| Test Results: | Pass |

**Measurement Data**

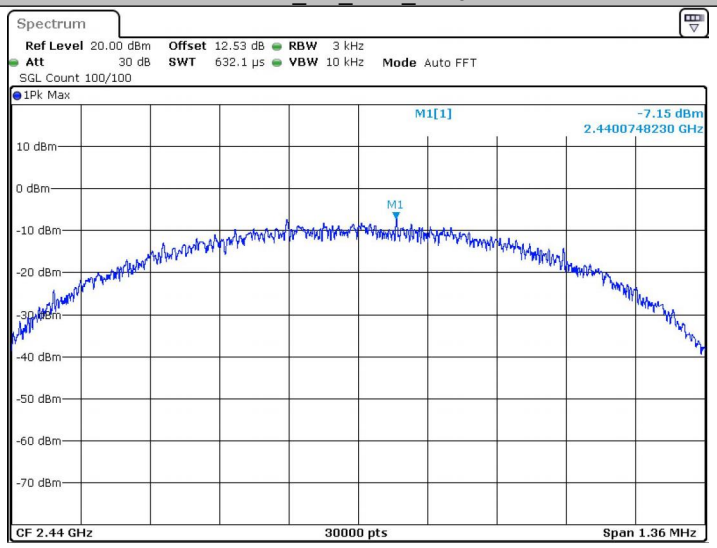
| GFSK mode (1Mbps) | | | |
|---|---|---|---|
| Test channel | Power Spectral Density (dBm/3kHz) | Limit (dBm/3kHz) | Result |
| Lowest | -7.08 | ≤8.00 | Pass |
| Middle | -7.15 | ≤8.00 | Pass |
| Highest | -7.21 | ≤8.00 | Pass |
| GFSK mode (2Mbps) | | | |
| Test channel | Power Spectral Density (dBm/3kHz) | Limit (dBm/3kHz) | Result |
| Lowest | -10.59 | ≤8.00 | Pass |
| Middle | -10.72 | ≤8.00 | Pass |
| Highest | -10.37 | ≤8.00 | Pass |

**Test plot as follows:**

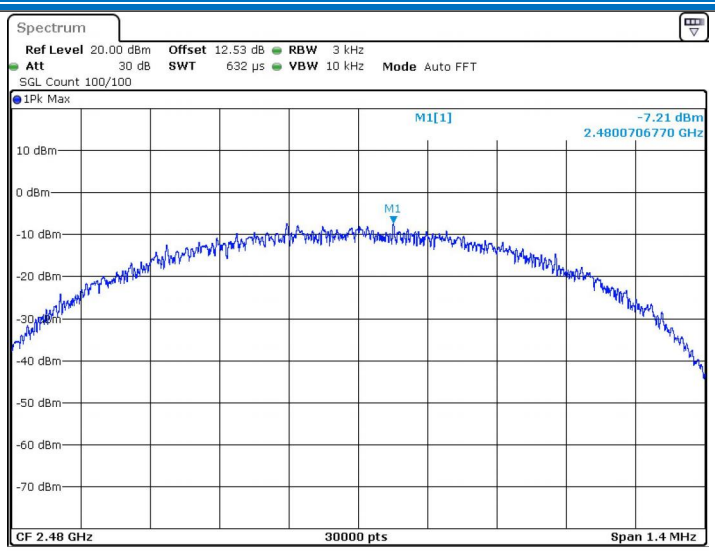
BLE_1M_Ant1_2402




BLE_1M_Ant1_2440




BLE_1M_Ant1_2480

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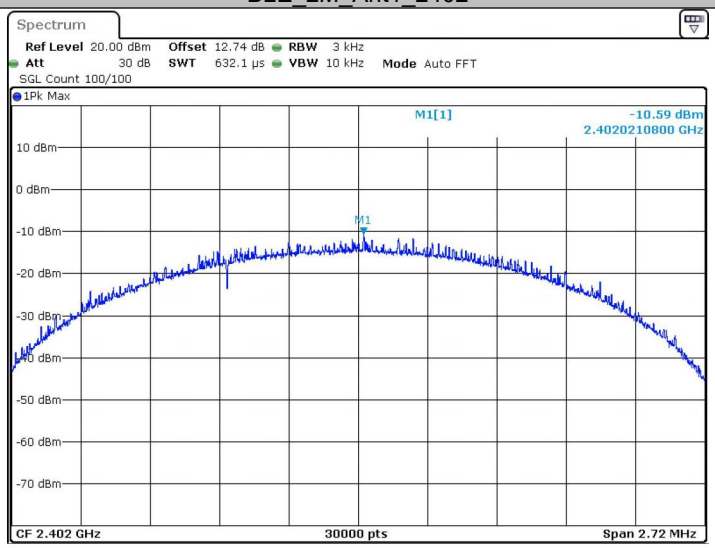
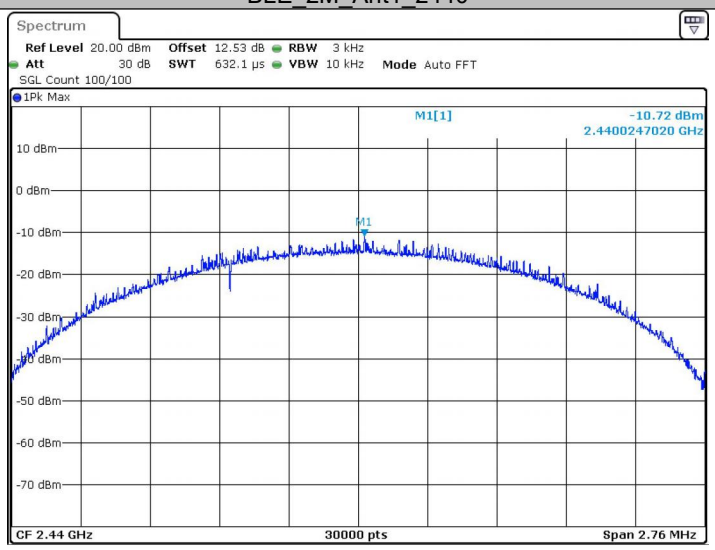
BLE_2M_Ant1_2402



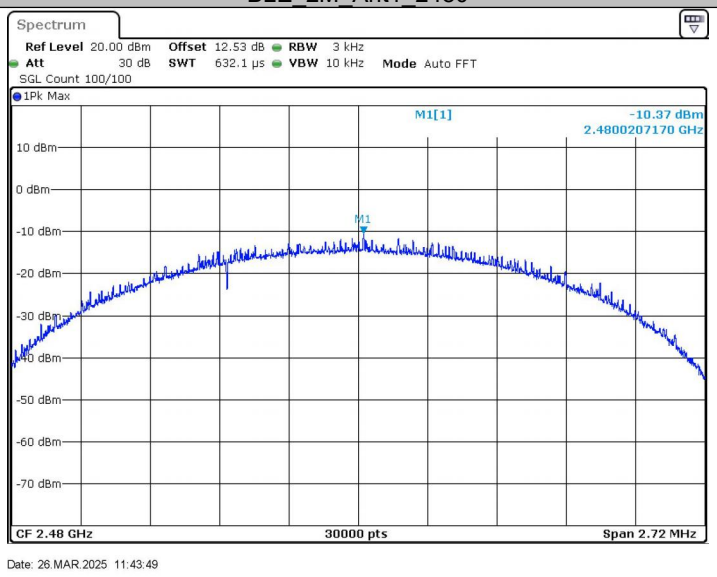

Date: 26.MAR.2025 11:40:38

BLE_2M_Ant1_2440

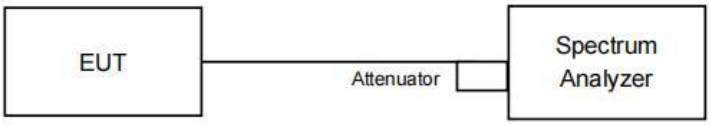



Date: 26.MAR.2025 11:42:30

BLE_2M_Ant1_2480



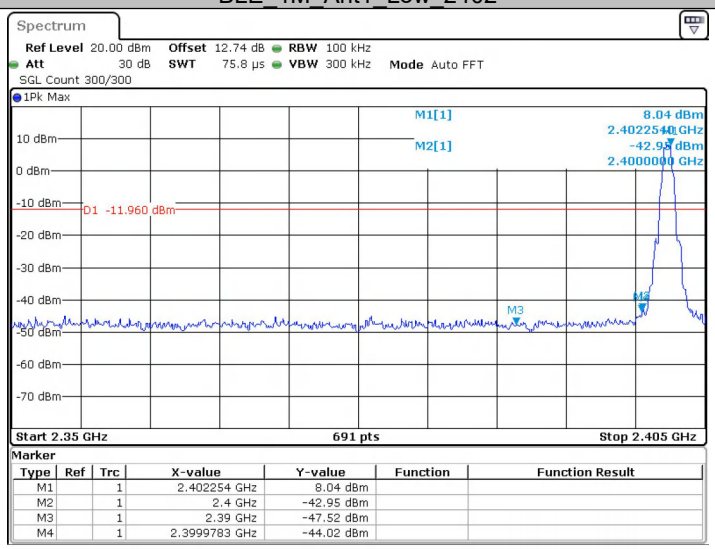
## 5.6 Band-edge for RF Conducted Emissions

| | |
|---|---|
| Test Requirement: | 47 CFR Part 15C Section 15.247 (d) |
| Test Method: | ANSI C63.10 2013 |
| Test Setup: |  <br>*Remark: Offset=Cable loss+ attenuation factor.* |
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |
| Test Mode: | Transmitting with GFSK modulation. |
| Test Results: | Pass |

| TestMode | ChName | Freq(MHz) | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|---|---|---|---|---|---|---|
| BLE_1M | Low | 2402 | 8.04 | -44.02 | ≤-11.96 | PASS |
| | High | 2480 | 7.98 | -43.38 | ≤-12.02 | PASS |
| BLE_2M | Low | 2402 | 7.30 | -27.7 | ≤-12.7 | PASS |
| | High | 2480 | 7.20 | -43.42 | ≤-12.8 | PASS |

**Test plot as follows:**

BLE_1M_Ant1_Low_2402




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.402254 GHz | 8.04 dBm | | |
| M2 | | 1 | 2.4 GHz | -42.95 dBm | | |
| M3 | | 1 | 2.39 GHz | -47.52 dBm | | |
| M4 | | 1 | 2.3999783 GHz | -44.02 dBm | | |

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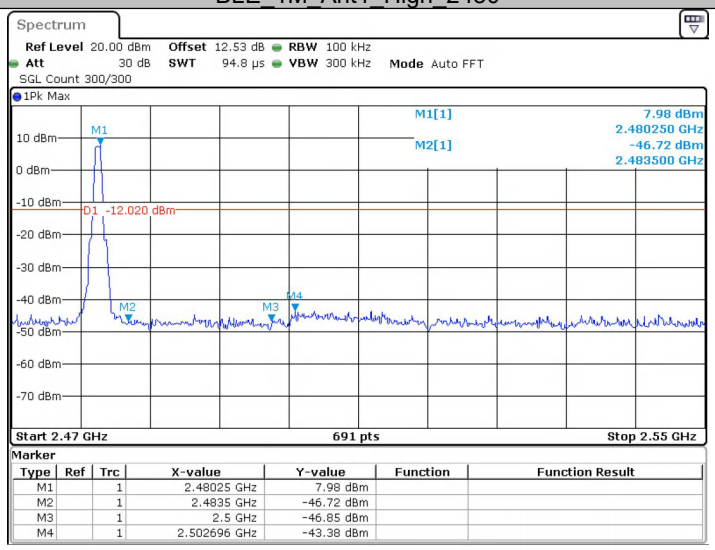
BLE_1M_Ant1_High_2480




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.48025 GHz | 7.98 dBm | | |
| M2 | | 1 | 2.4835 GHz | -46.72 dBm | | |
| M3 | | 1 | 2.5 GHz | -46.85 dBm | | |
| M4 | | 1 | 2.502696 GHz | -43.38 dBm | | |

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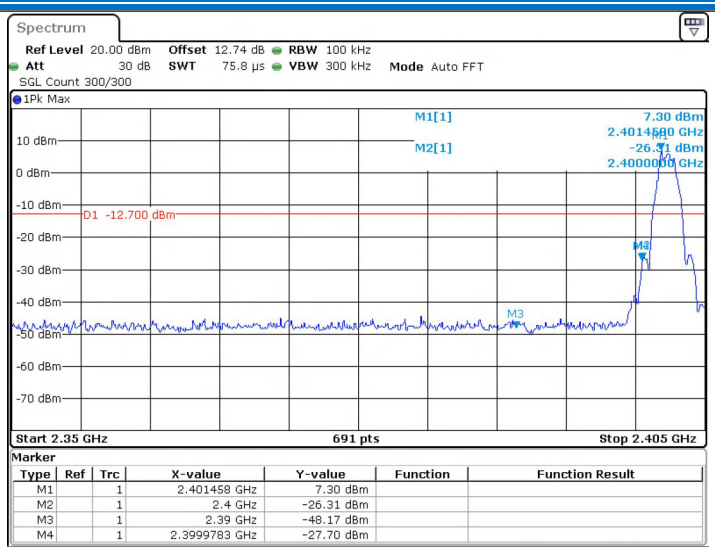
BLE_2M_Ant1_Low_2402




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.401458 GHz | 7.30 dBm | | |
| M2 | | 1 | 2.4 GHz | -26.31 dBm | | |
| M3 | | 1 | 2.39 GHz | -48.17 dBm | | |
| M4 | | 1 | 2.3999783 GHz | -27.70 dBm | | |

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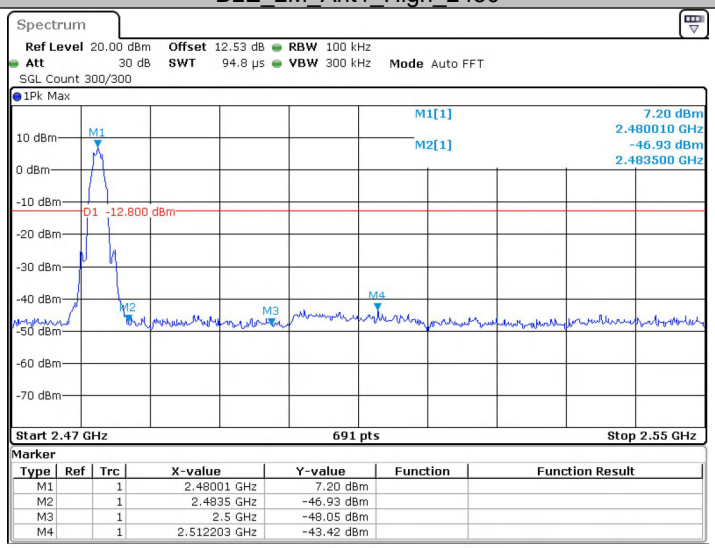
BLE_2M_Ant1_High_2480




Marker

| Type | Ref | Trc | X-value | Y-value | Function | Function Result |
|---|---|---|---|---|---|---|
| M1 | | 1 | 2.48001 GHz | 7.20 dBm | | |
| M2 | | 1 | 2.4835 GHz | -46.93 dBm | | |
| M3 | | 1 | 2.5 GHz | -48.05 dBm | | |
| M4 | | 1 | 2.512203 GHz | -43.42 dBm | | |

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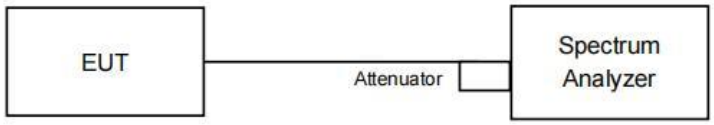
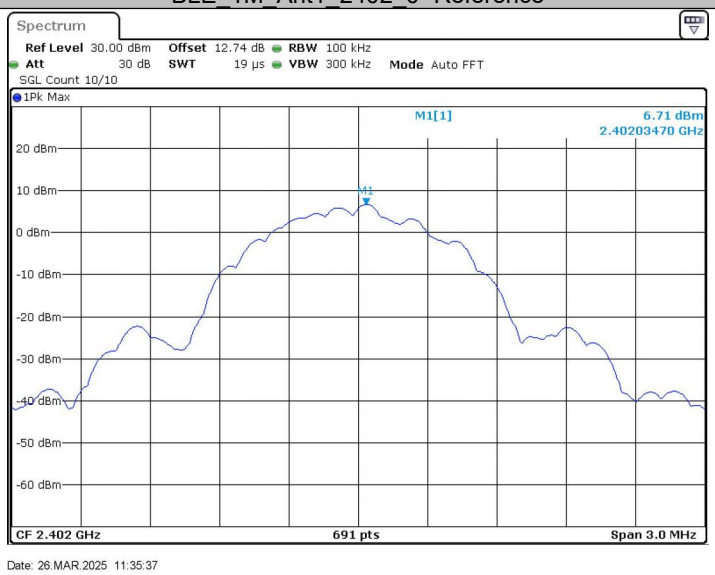
## 5.7 Spurious RF Conducted Emissions

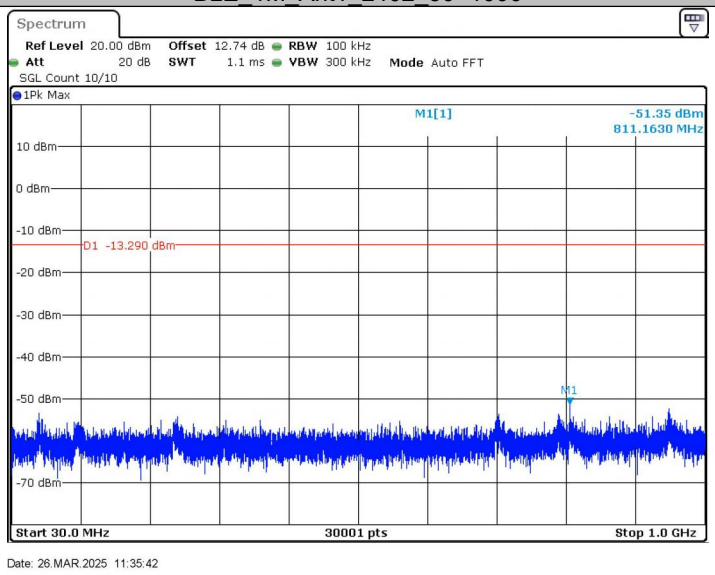
| | |
|---|---|
| Test Requirement: | 47 CFR Part 15C Section 15.247 (d) |
| Test Method: | ANSI C63.10 2013 |
| Test Setup: |  <br>*Remark: Offset=Cable loss+ attenuation factor.* |
| Limit: | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |
| Test Mode: | Transmitting with GFSK modulation. |
| Test Results: | Pass |

**Test plot as follows:**

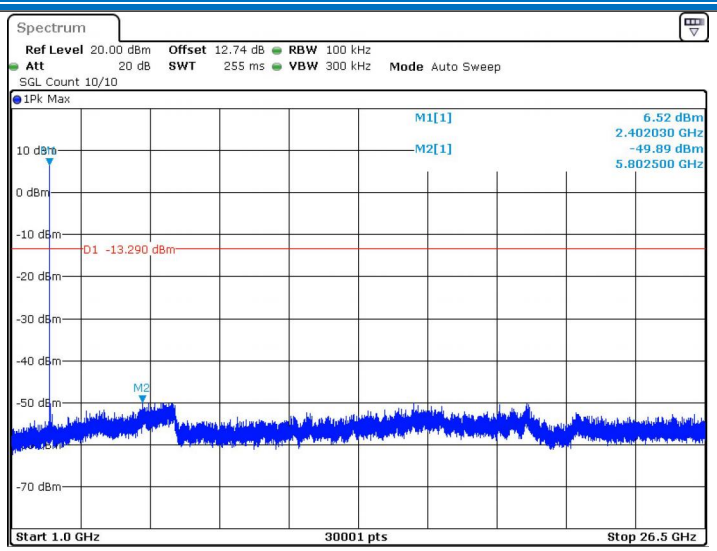
BLE_1M_Ant1_2402_0~Reference




BLE_1M_Ant1_2402_30~1000




BLE_1M_Ant1_2402_1000~26500

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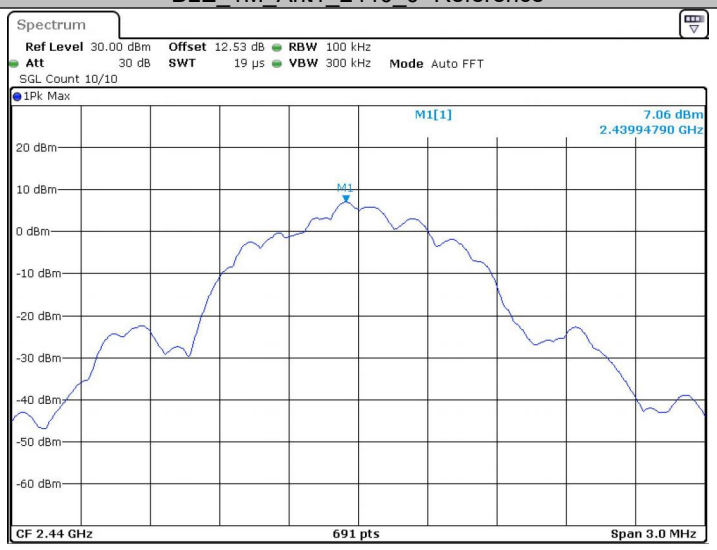
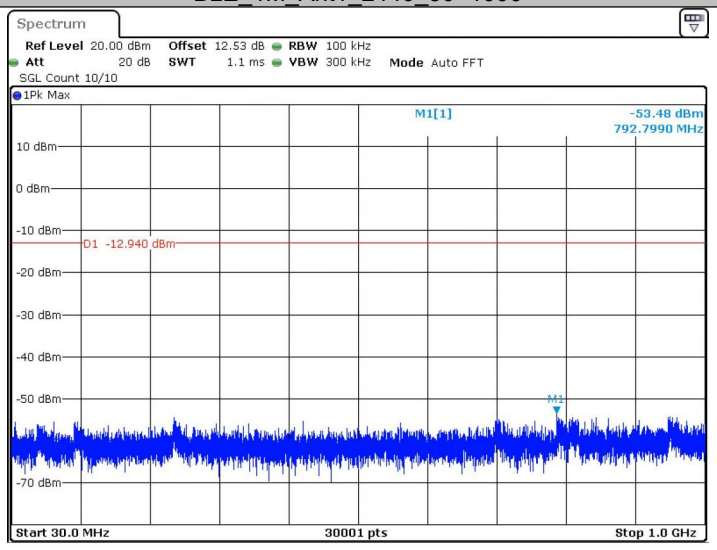
BLE_1M_Ant1_2440_0~Reference



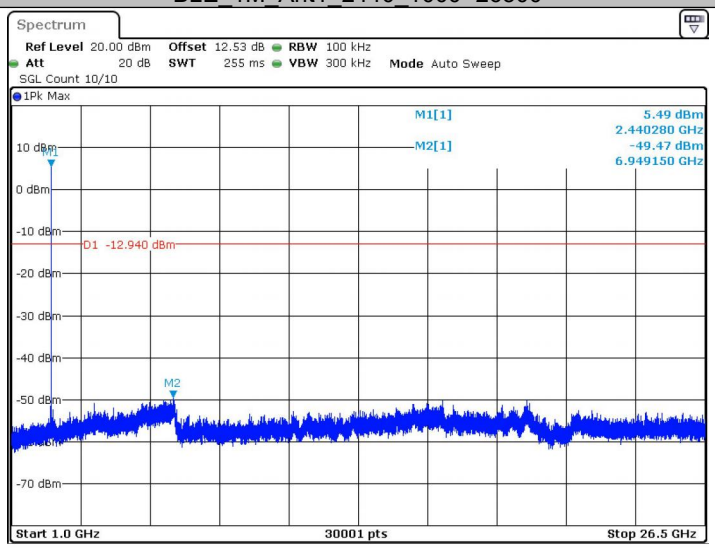

Date: 26.MAR.2025 11:36:54

BLE_1M_Ant1_2440_30~1000



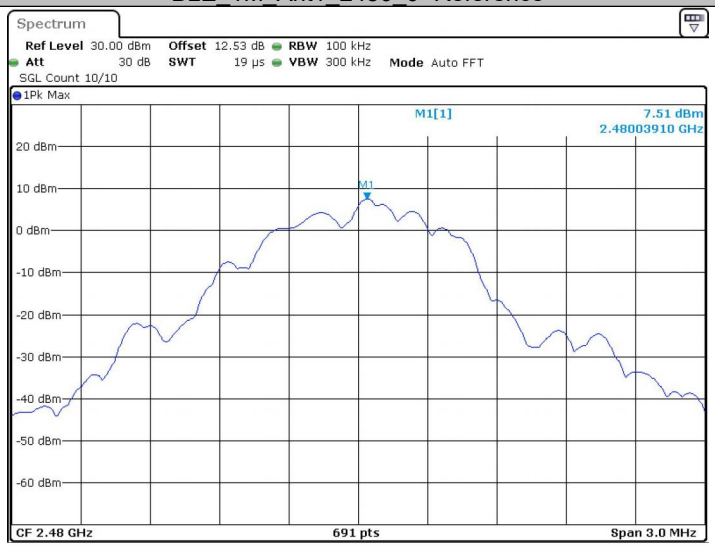

Date: 26.MAR.2025 11:36:58

BLE_1M_Ant1_2440_1000~26500



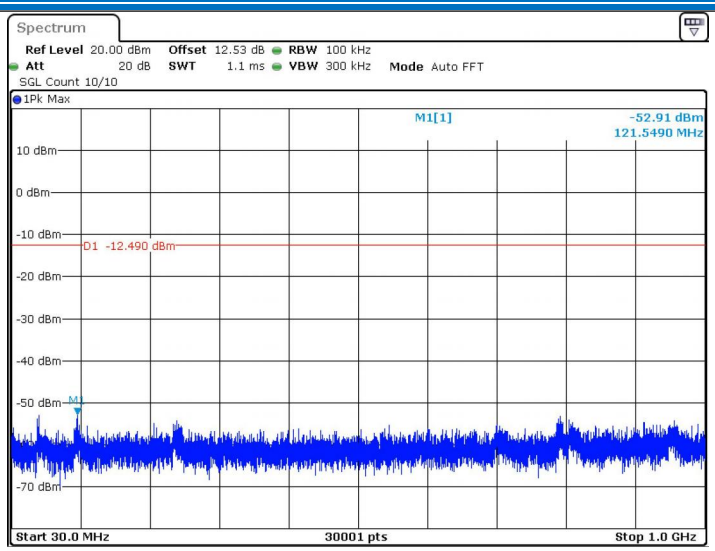

Date: 26.MAR.2025 11:37:09

BLE_1M_Ant1_2480_0~Reference



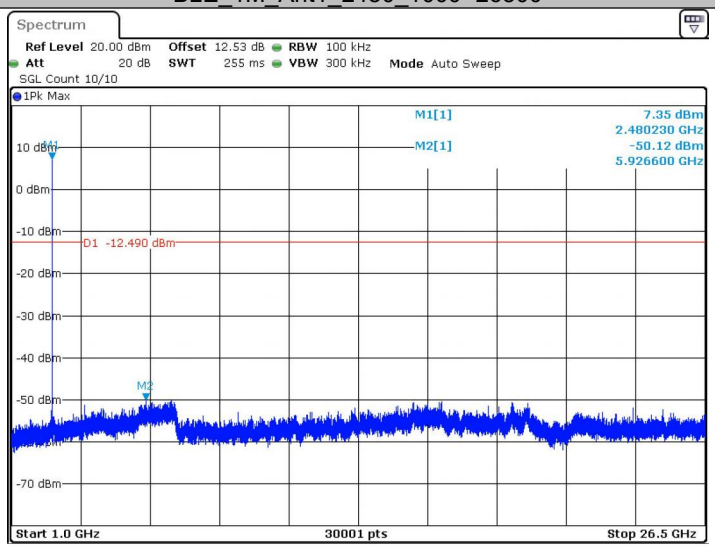

Date: 26.MAR.2025 11:39:13

BLE_1M_Ant1_2480_30~1000




Date: 26.MAR.2025 11:39:17

BLE_1M_Ant1_2480_1000~26500

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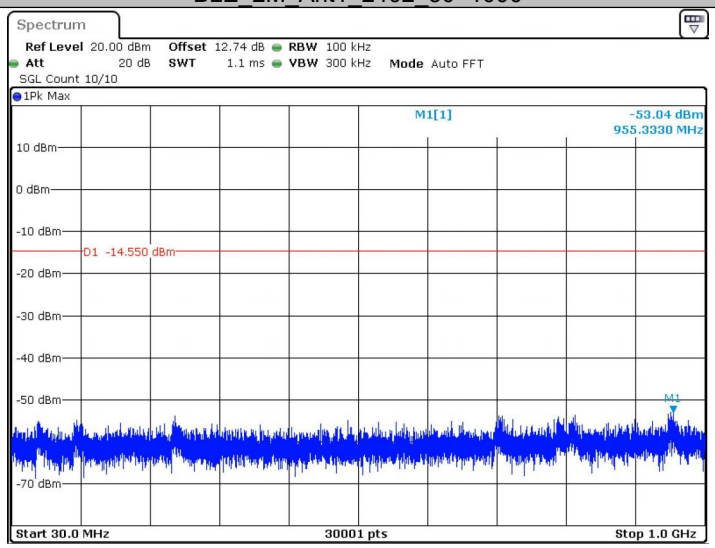
BLE_2M_Ant1_2402_0~Reference

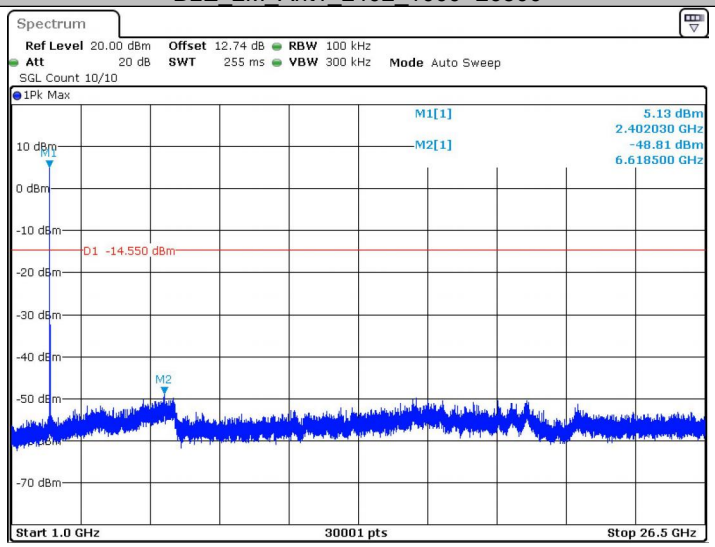

Date: 26.MAR.2025 11:41:03

BLE_2M_Ant1_2402_30~1000



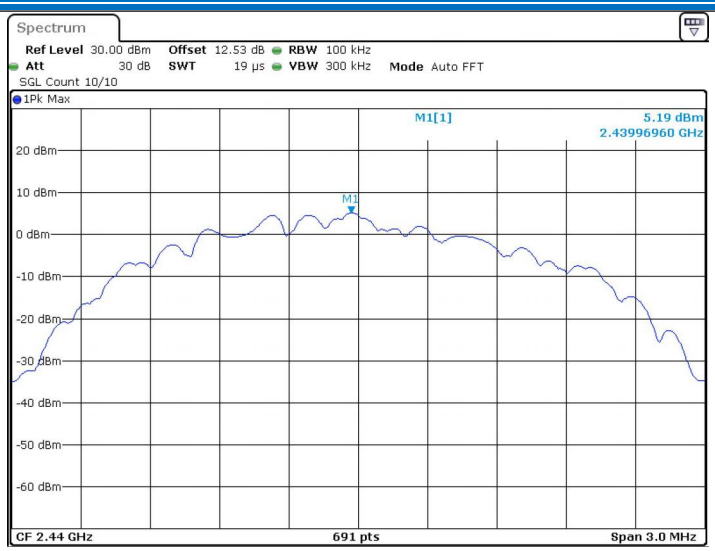

Date: 26.MAR.2025 11:41:07

BLE_2M_Ant1_2402_1000~26500



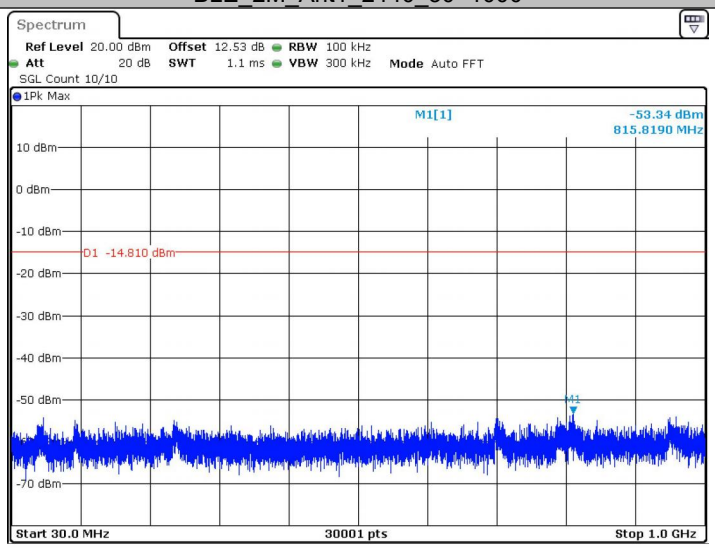

Date: 26.MAR.2025 11:41:18

BLE_2M_Ant1_2440_0~Reference



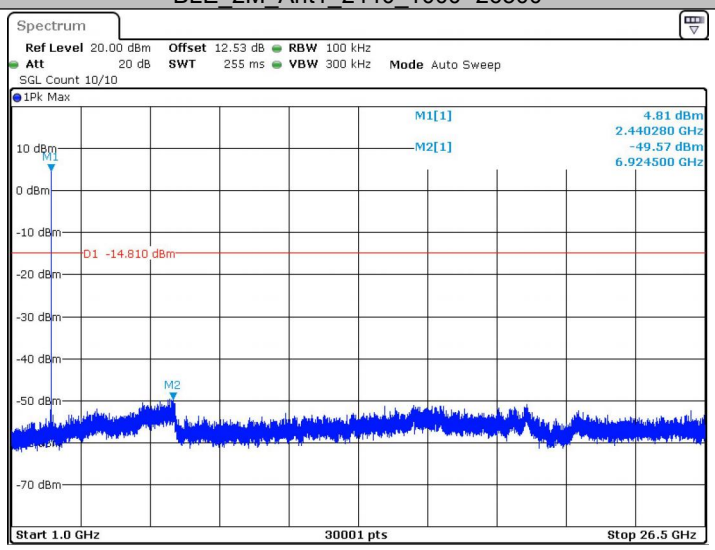

Date: 26.MAR.2025 11:42:34

BLE_2M_Ant1_2440_30~1000




Date: 26.MAR.2025 11:42:38

BLE_2M_Ant1_2440_1000~26500




Date: 26.MAR.2025 11:42:49