

RF Test Data for BLE (Conducted Measurements)

General Description of EUT	
EUT Name:	IEEE 802.11ax/ac/a/b/g/n 2x2 WiFi 6E with Bluetooth5.3 Combo Module
Model:	WNFS-267AXI(BT)
Sample ID:	HC-C-202503-0098-01-01-2#
Test Standard:	FCC Part 15.247
Environmental Conditions	
Ambient Temperature:	25℃
Ambient Humidity:	45%RH
Test Power Supply:	DC 3.3V
Test Engineer:	Rick.chen
Note: For a more detailed features description, please refer to the report TBR-C-202503-0098-131	

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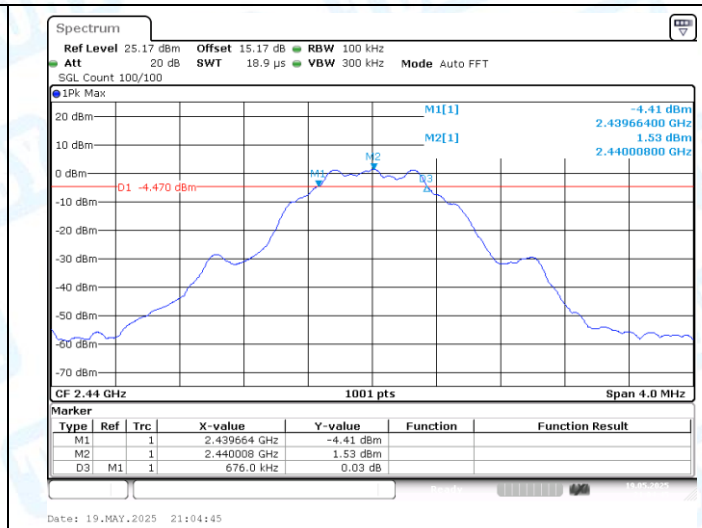
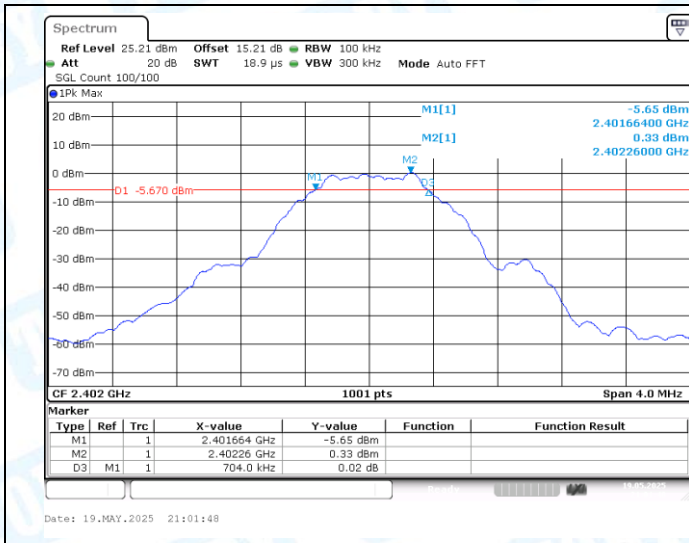
1: DTS Bandwidth

1.1 Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.70	2401.66	2402.37	0.5	PASS
BLE_1M	Ant1	2440	0.68	2439.66	2440.34	0.5	PASS
BLE_1M	Ant1	2480	0.69	2479.64	2480.33	0.5	PASS
BLE_2M	Ant1	2402	1.33	2401.31	2402.64	0.5	PASS
BLE_2M	Ant1	2440	1.33	2439.33	2440.66	0.5	PASS
BLE_2M	Ant1	2480	1.39	2479.32	2480.71	0.5	PASS

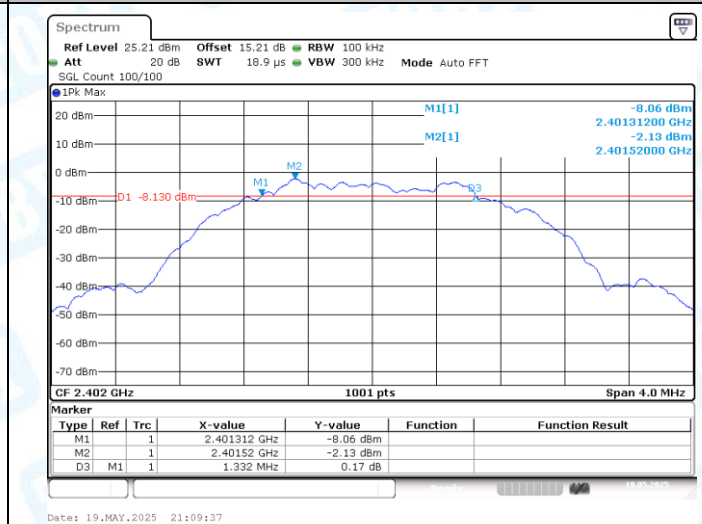
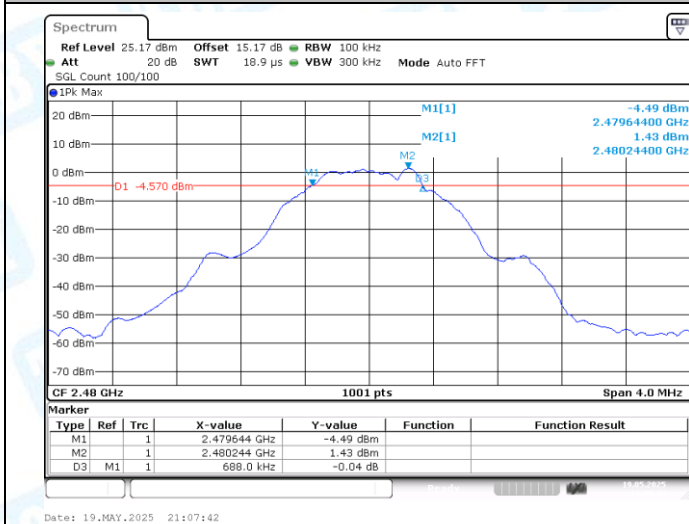
Note: RF Conducted test Offset= cable loss+ Attenuator(10dB).

1.2 Test Graphs



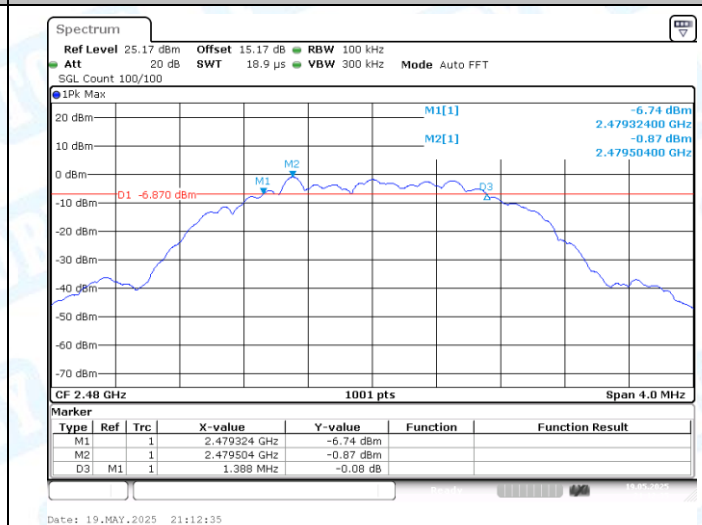
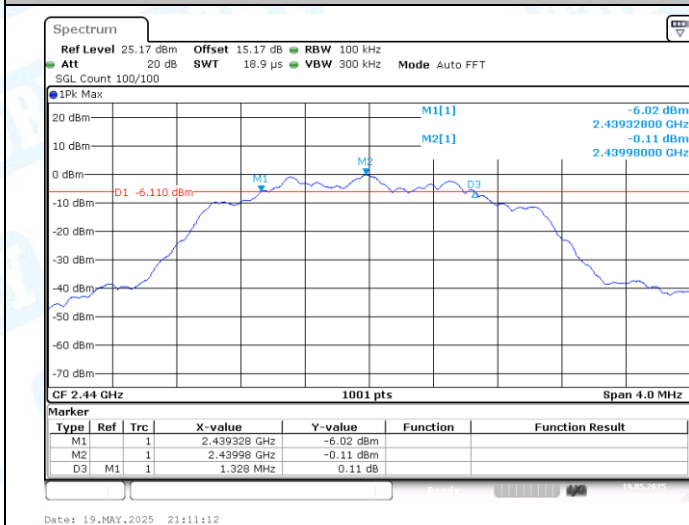
BLE_1M-Ant1-2402-PASS

BLE_1M-Ant1-2440-PASS



BLE_1M-Ant1-2480-PASS

BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS

BLE_2M-Ant1-2480-PASS

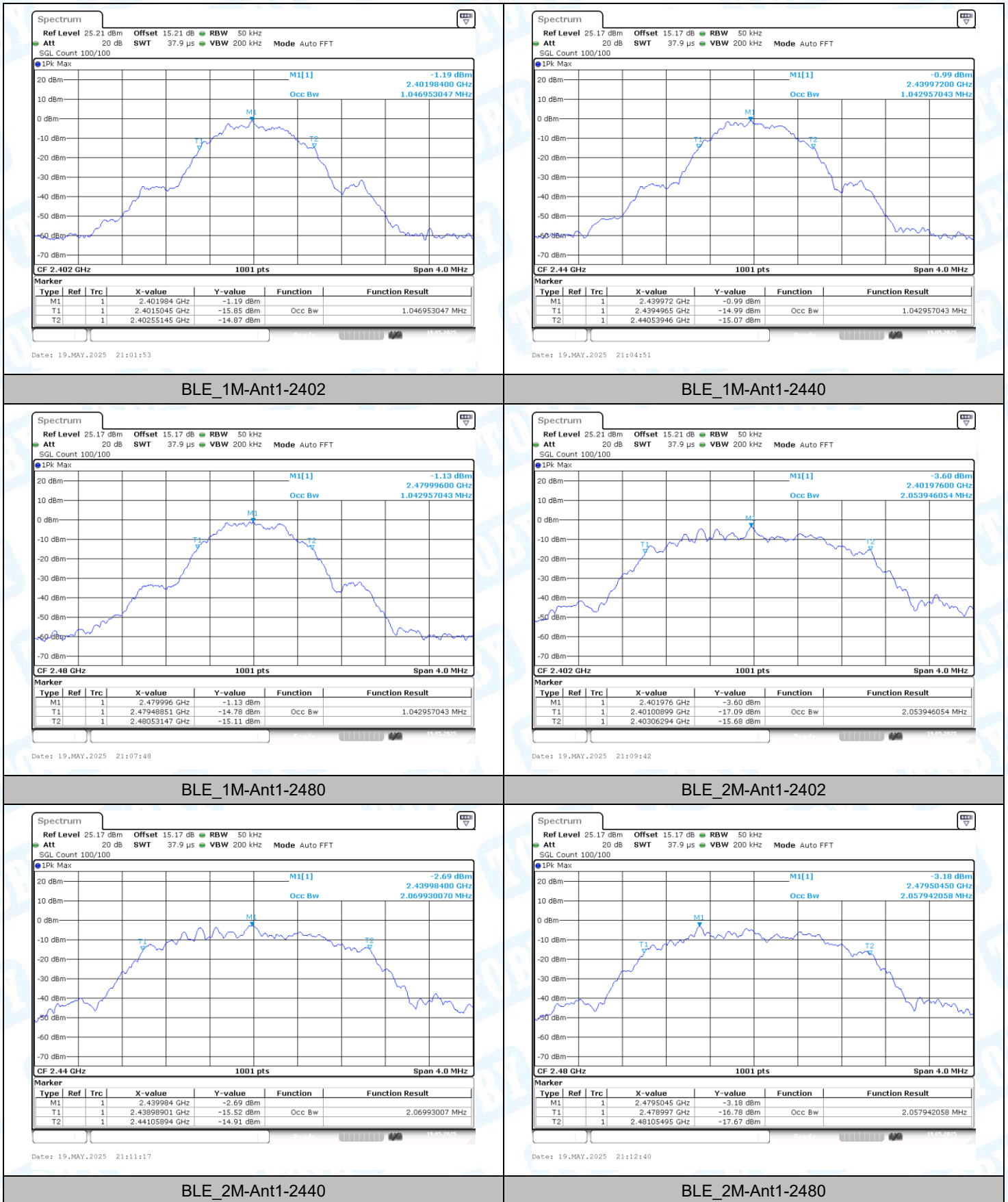
2: Occupied Channel Bandwidth

2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0470	2401.5045	2402.5514	---	---
BLE_1M	Ant1	2440	1.0430	2439.4965	2440.5395	---	---
BLE_1M	Ant1	2480	1.0430	2479.4885	2480.5315	---	---
BLE_2M	Ant1	2402	2.0539	2401.0090	2403.0629	---	---
BLE_2M	Ant1	2440	2.0699	2438.9890	2441.0589	---	---
BLE_2M	Ant1	2480	2.0579	2478.9970	2481.0549	---	---

Note: RF Conducted test Offset= cable loss+ Attenuator(10dB).

2.2 Test Graphs



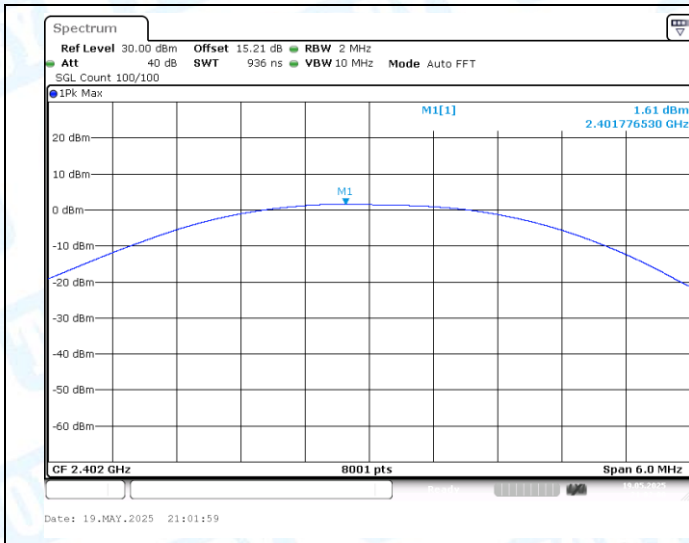
3: Maximum conducted output power

3.1 Test Result Peak

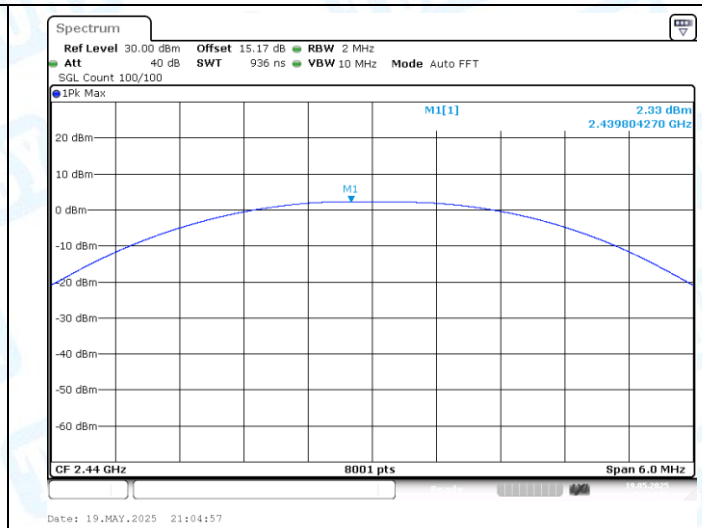
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.61	≤30	PASS
BLE_1M	Ant1	2440	2.33	≤30	PASS
BLE_1M	Ant1	2480	2.53	≤30	PASS
BLE_2M	Ant1	2402	1.92	≤30	PASS
BLE_2M	Ant1	2440	2.92	≤30	PASS
BLE_2M	Ant1	2480	3.08	≤30	PASS

Note: RF Conducted test Offset= cable loss+ Attenuator(10dB).

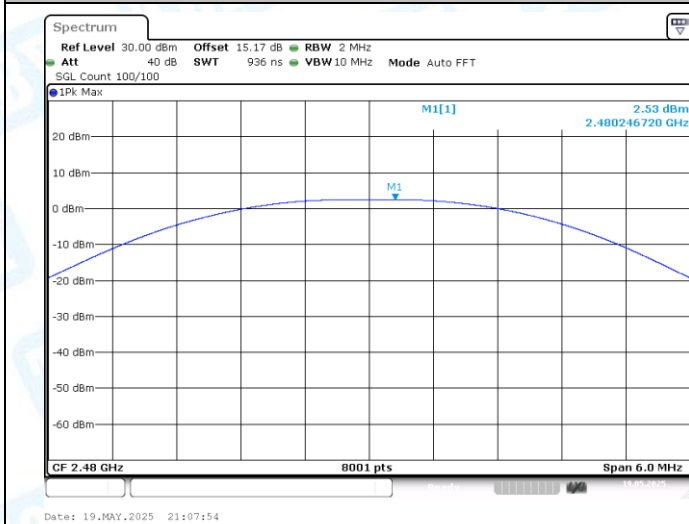
3.2 Test Graphs Peak



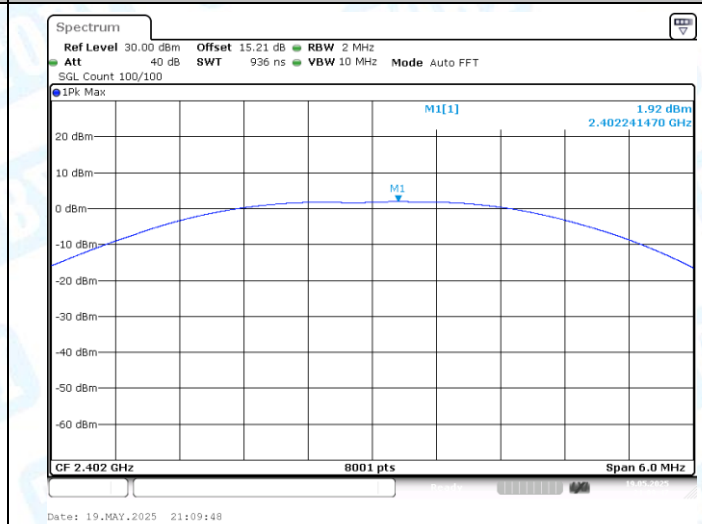
BLE_1M-Ant1-2402-PASS



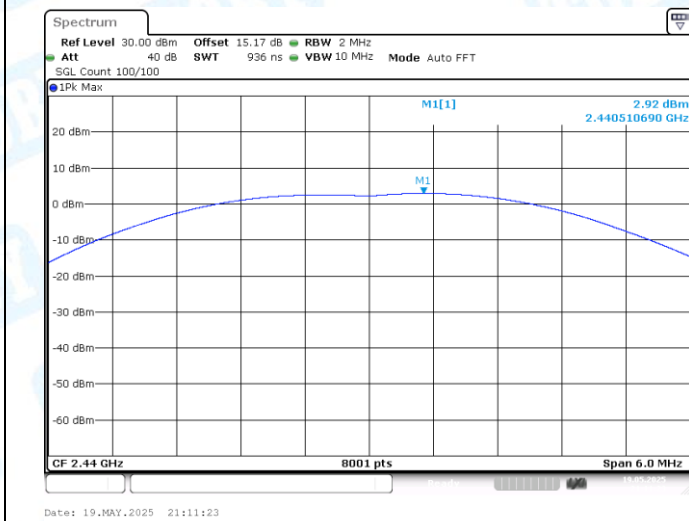
BLE_1M-Ant1-2440-PASS



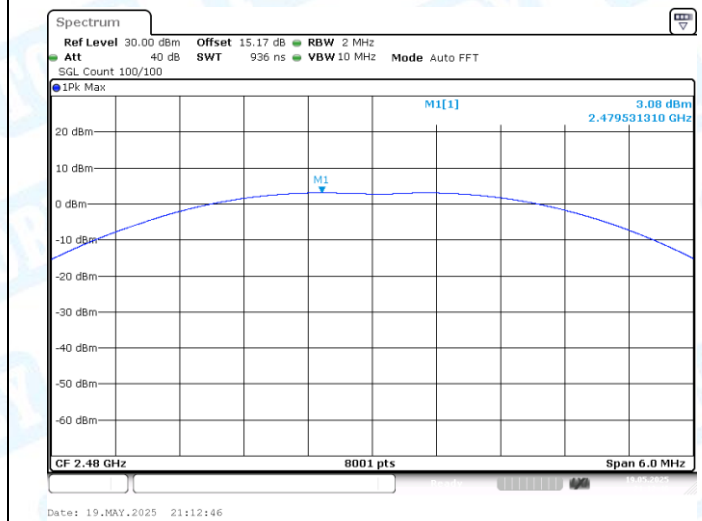
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



BLE_2M-Ant1-2480-PASS

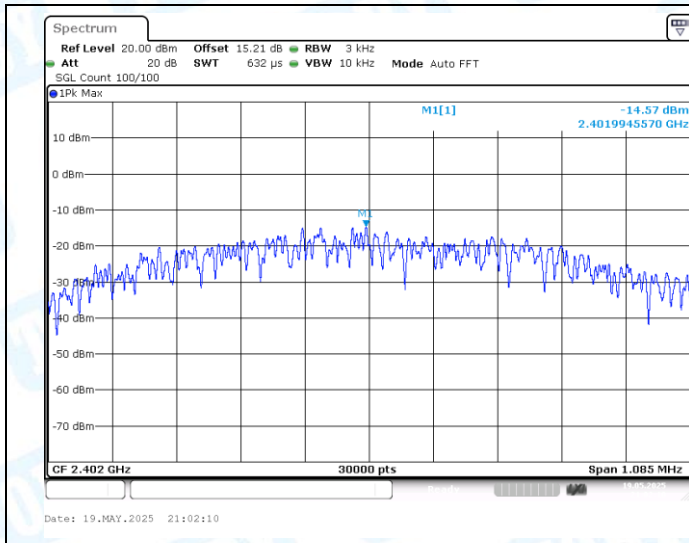
4: Maximum power spectral density

4.1 Test Result

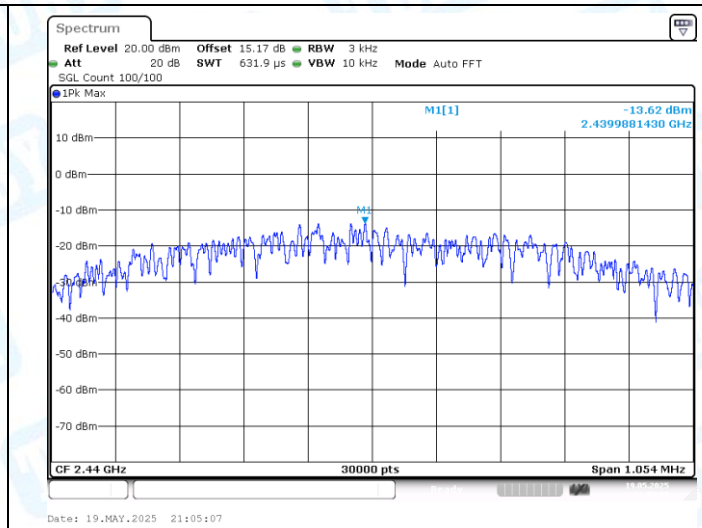
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.57	≤8.00	PASS
BLE_1M	Ant1	2440	-13.62	≤8.00	PASS
BLE_1M	Ant1	2480	-13.26	≤8.00	PASS
BLE_2M	Ant1	2402	-17.32	≤8.00	PASS
BLE_2M	Ant1	2440	-16.41	≤8.00	PASS
BLE_2M	Ant1	2480	-16.19	≤8.00	PASS

Note: RF Conducted test Offset= cable loss+ Attenuator(10dB).

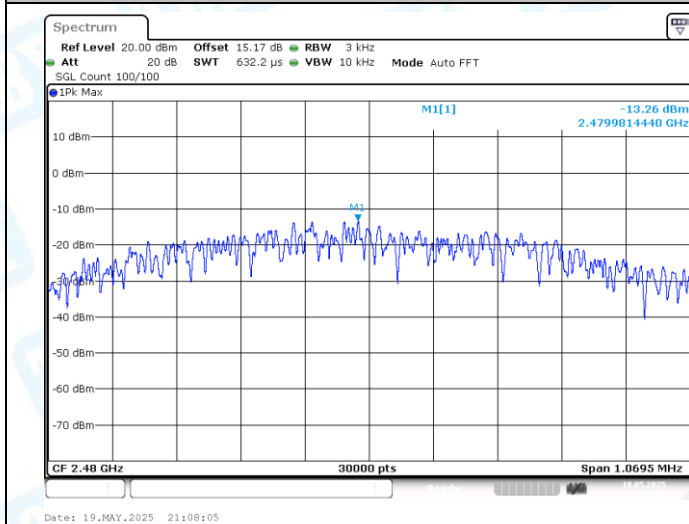
4.2 Test Graphs



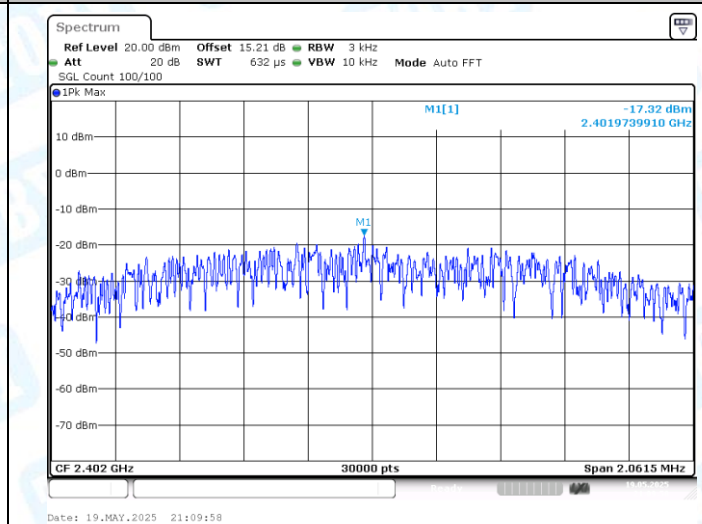
BLE_1M-Ant1-2402-PASS



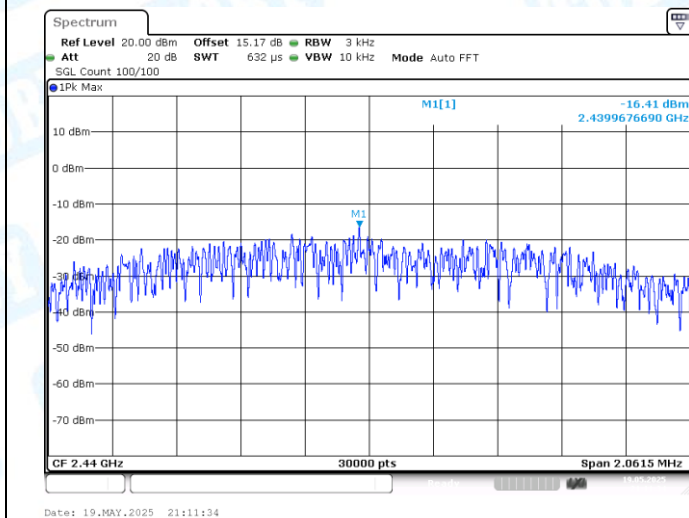
BLE_1M-Ant1-2440-PASS



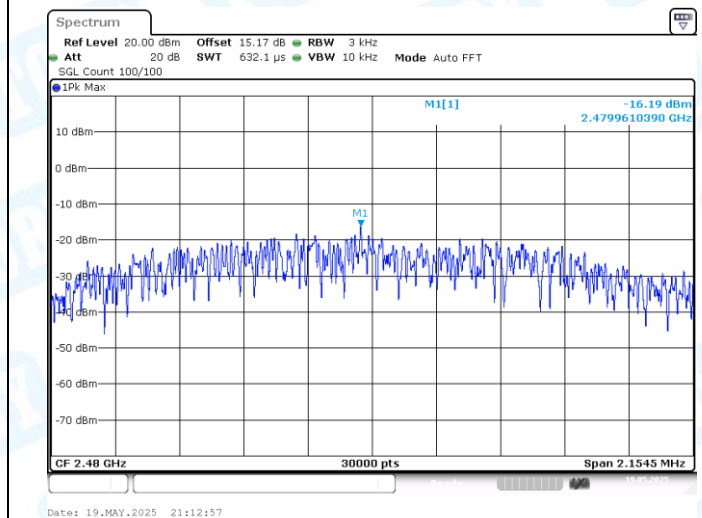
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



BLE_2M-Ant1-2480-PASS

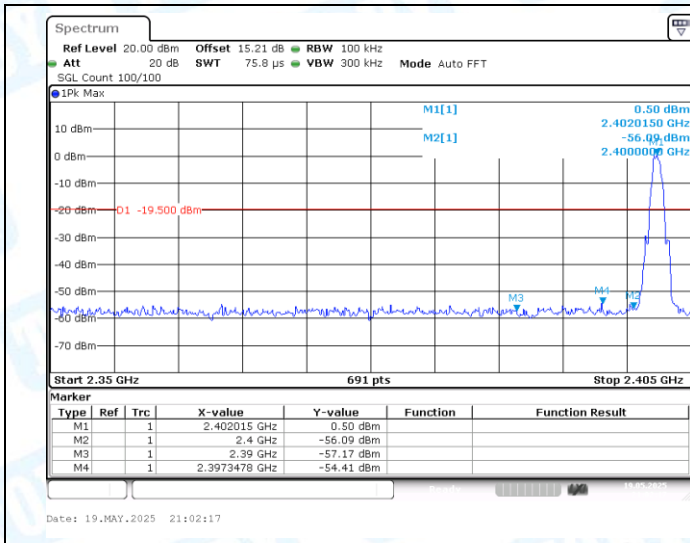
5: Band edge measurements

5.1 Test Result

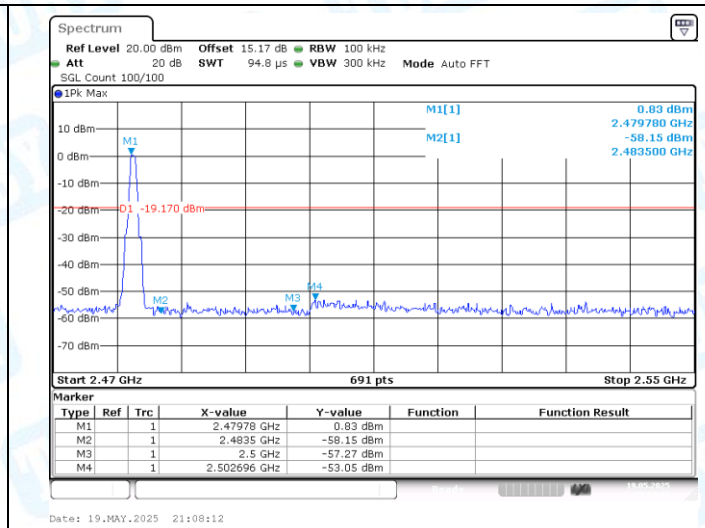
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.50	-54.41	≤-19.5	PASS
BLE_1M	Ant1	High	2480	0.83	-53.05	≤-19.17	PASS
BLE_2M	Ant1	Low	2402	-0.23	-49.48	≤-20.23	PASS
BLE_2M	Ant1	High	2480	-0.85	-52.84	≤-20.85	PASS

Note: RF Conducted test Offset= cable loss+ Attenuator(10dB).

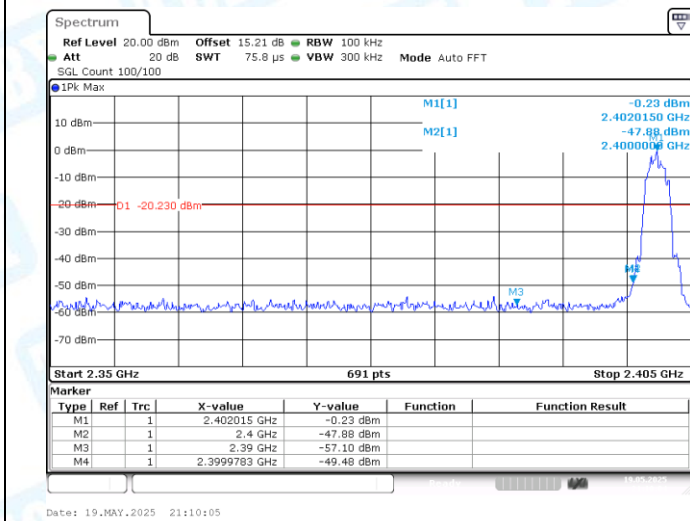
5.2 Test Graphs



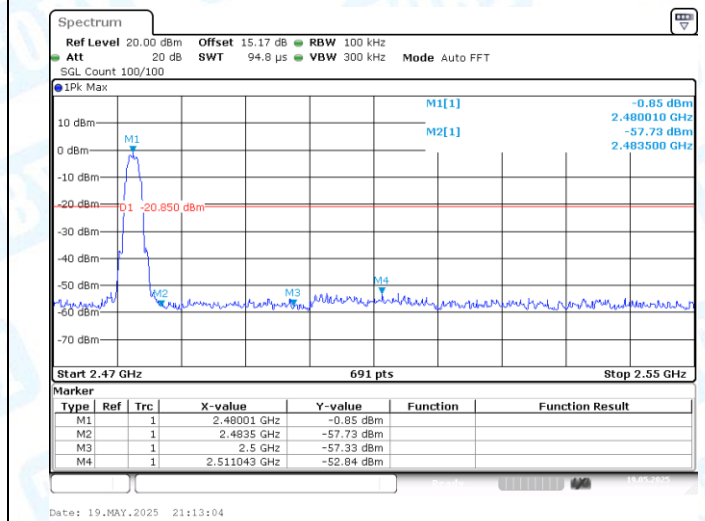
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2480-PASS

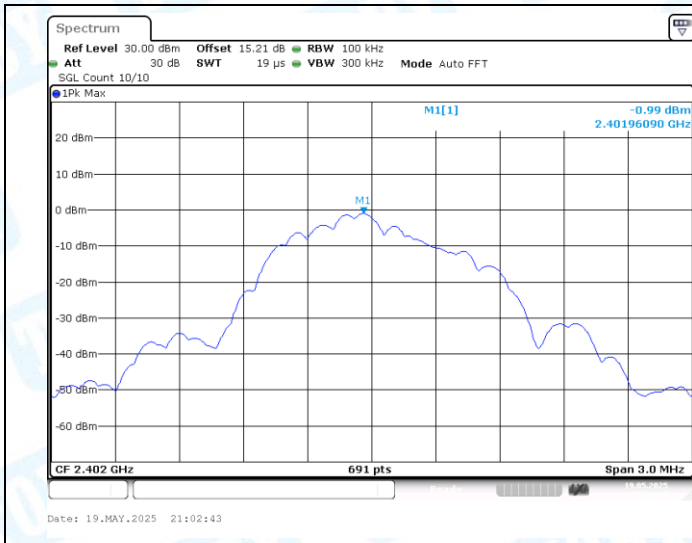
6: Conducted Spurious Emission

6.1 Test Result

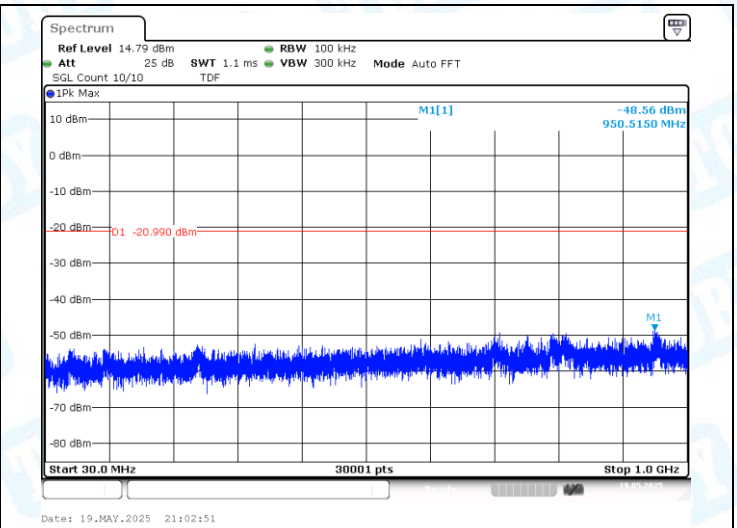
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-0.99	-0.99	---	PASS
BLE_1M	Ant1	2402	30~1000	-0.99	-48.56	≤-20.99	PASS
BLE_1M	Ant1	2402	1000~26500	-0.99	-34.14	≤-20.99	PASS
BLE_1M	Ant1	2440	0~Reference	0.92	0.92	---	PASS
BLE_1M	Ant1	2440	30~1000	0.92	-47.76	≤-19.08	PASS
BLE_1M	Ant1	2440	1000~26500	0.92	-35.72	≤-19.08	PASS
BLE_1M	Ant1	2480	0~Reference	0.18	0.18	---	PASS
BLE_1M	Ant1	2480	30~1000	0.18	-49.05	≤-19.82	PASS
BLE_1M	Ant1	2480	1000~26500	0.18	-35.72	≤-19.82	PASS
BLE_2M	Ant1	2402	0~Reference	-2.99	-2.99	---	PASS
BLE_2M	Ant1	2402	30~1000	-2.99	-48.99	≤-22.99	PASS
BLE_2M	Ant1	2402	1000~26500	-2.99	-35.23	≤-22.99	PASS
BLE_2M	Ant1	2440	0~Reference	-1.99	-1.99	---	PASS
BLE_2M	Ant1	2440	30~1000	-1.99	-47.07	≤-21.99	PASS
BLE_2M	Ant1	2440	1000~26500	-1.99	-34.87	≤-21.99	PASS
BLE_2M	Ant1	2480	0~Reference	-0.93	-0.93	---	PASS
BLE_2M	Ant1	2480	30~1000	-0.93	-48.38	≤-20.93	PASS
BLE_2M	Ant1	2480	1000~26500	-0.93	-34.33	≤-20.93	PASS

Note: RF Conducted test Offset= cable loss+ Attenuator(10dB).

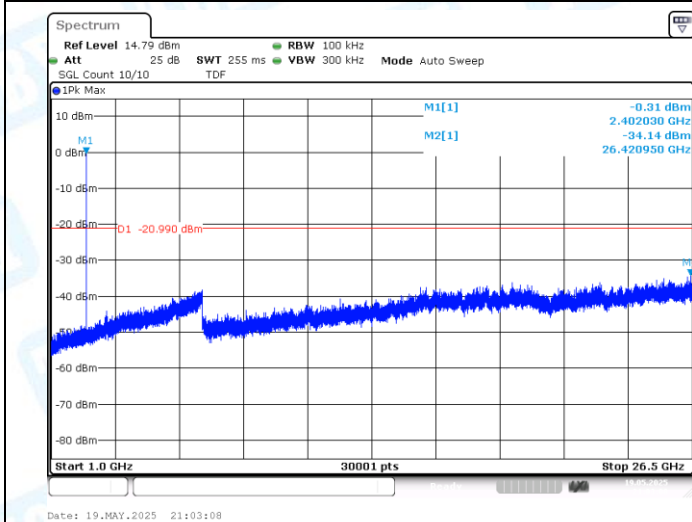
6.2 Test Graphs



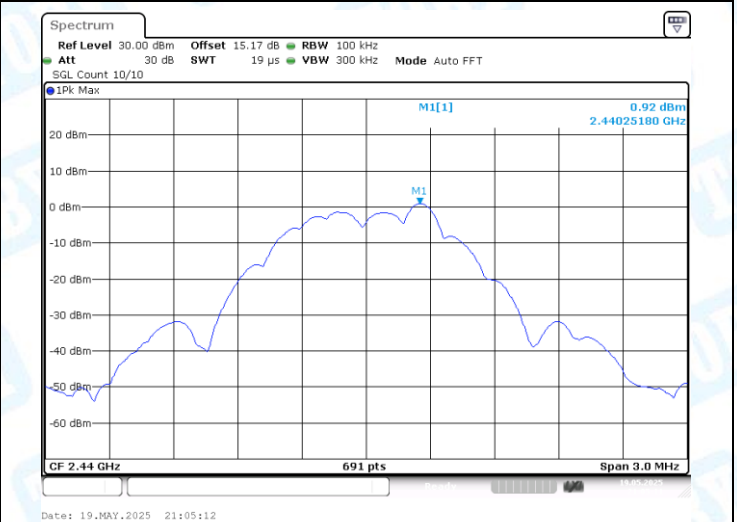
BLE_1M-Ant1-2402-0~Reference-PASS



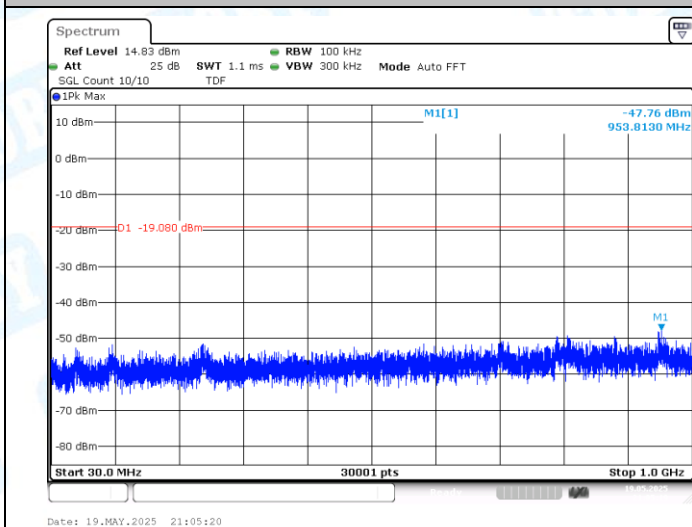
BLE_1M-Ant1-2402-30~1000-PASS



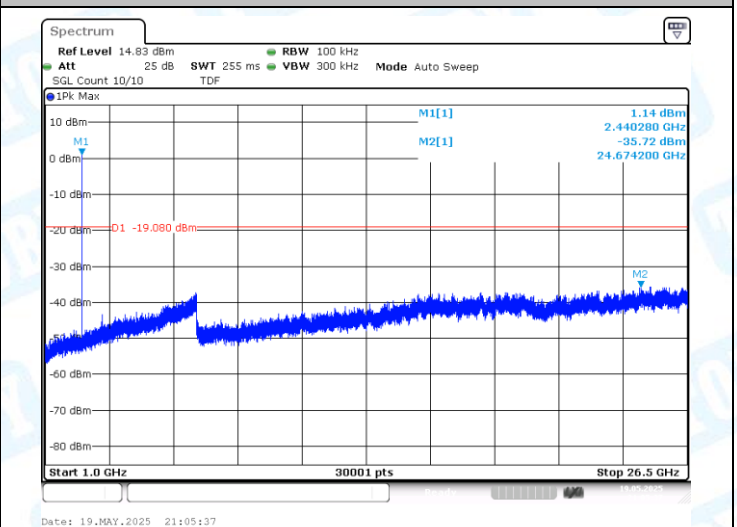
BLE_1M-Ant1-2402-1000~26500-PASS



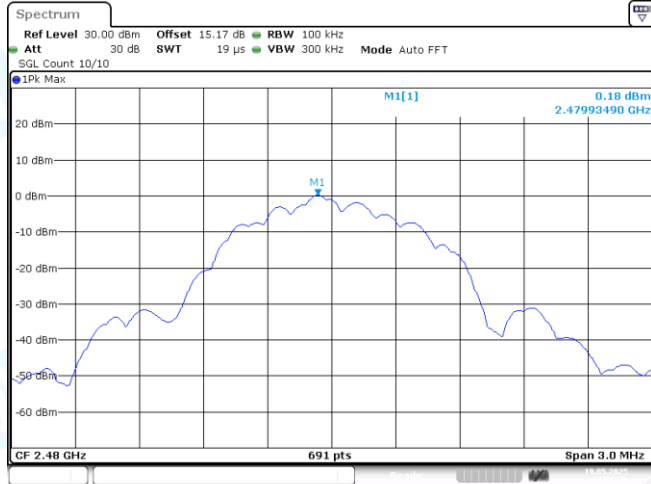
BLE_1M-Ant1-2440-0~Reference-PASS



BLE_1M-Ant1-2440-30~1000-PASS

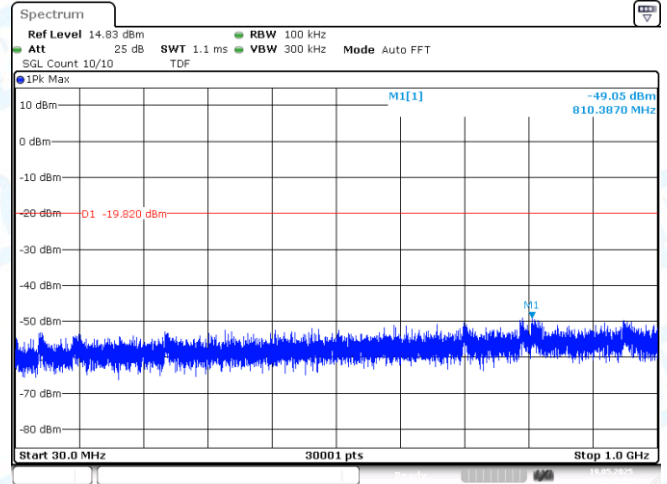


BLE_1M-Ant1-2440-1000~26500-PASS



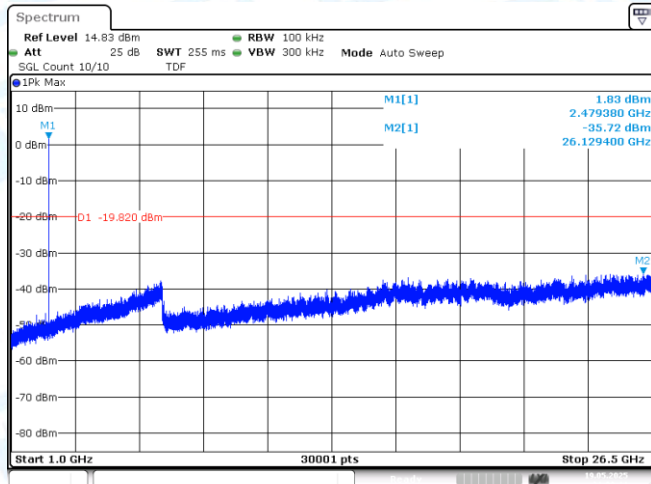
Date: 19.MAY.2025 21:08:46

BLE_1M-Ant1-2480-0~Reference-PASS



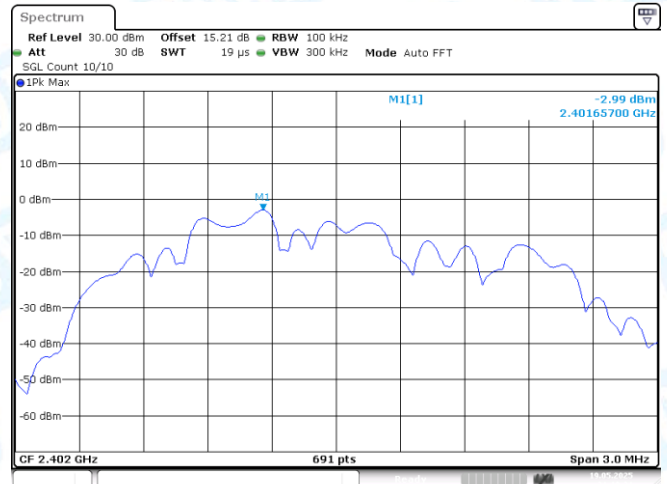
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BLE_1M-Ant1-2480-30~1000-PASS



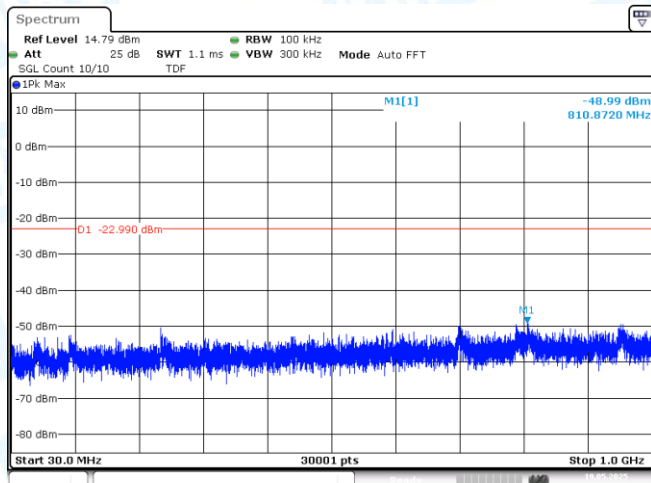
Date: 19.MAY.2025 21:09:11

BLE_1M-Ant1-2480-1000~26500-PASS



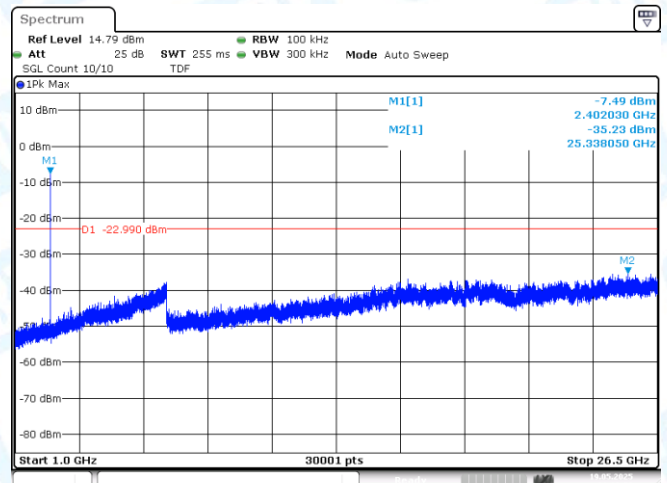
Date: 19.MAY.2025 21:10:31

BLE_2M-Ant1-2402-0~Reference-PASS



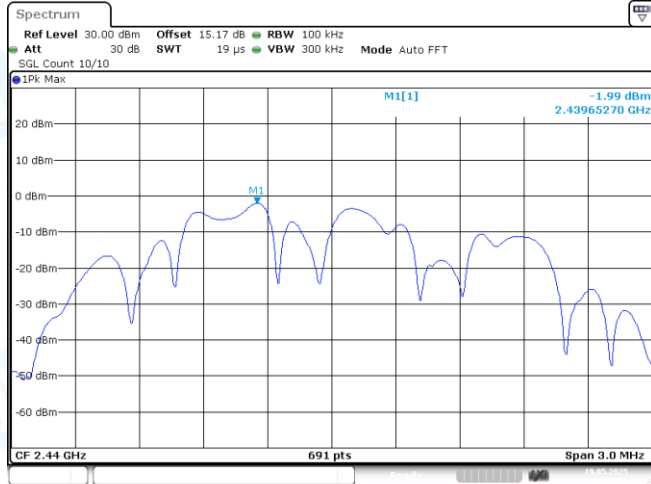
Date: 19.MAY.2025 21:10:39

BLE_2M-Ant1-2402-30~1000-PASS



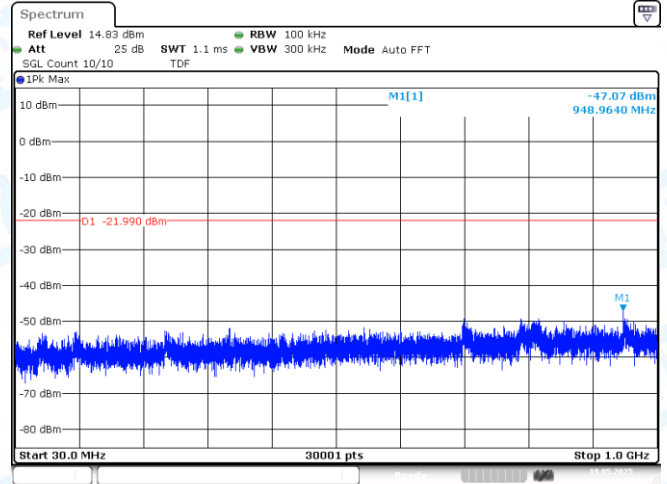
Date: 19.MAY.2025 21:10:56

BLE_2M-Ant1-2402-1000~26500-PASS



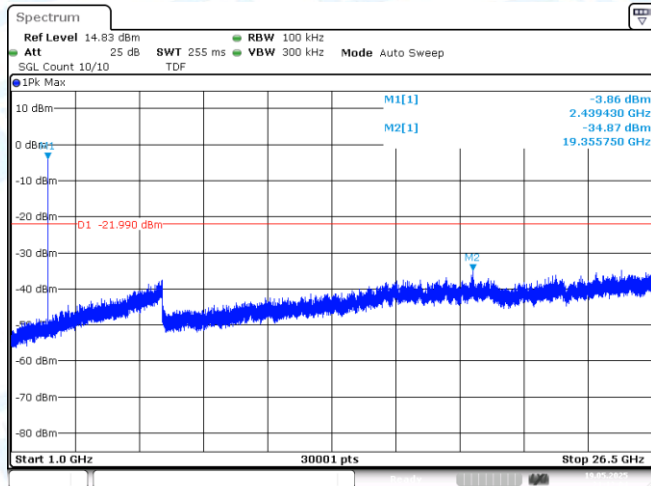
Date: 19.MAY.2025 21:11:38

BLE_2M-Ant1-2440-0~Reference-PASS



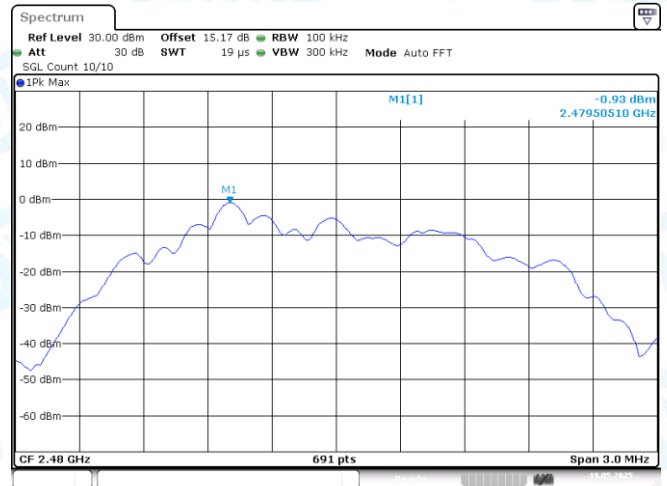
Date: 19.MAY.2025 21:11:46

BLE_2M-Ant1-2440-30~1000-PASS



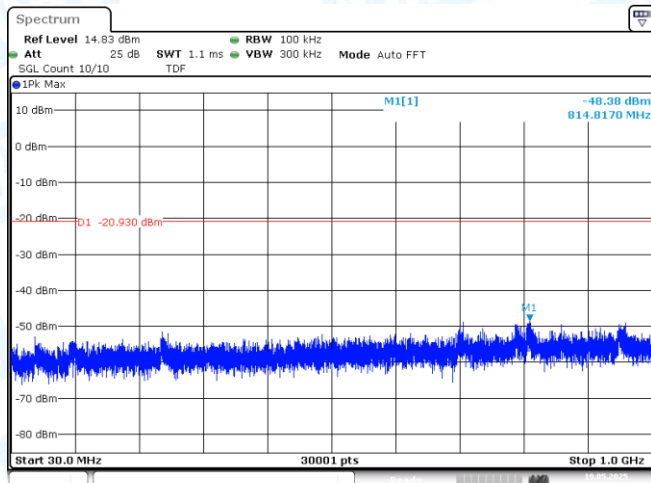
Date: 19.MAY.2025 21:12:04

BLE_2M-Ant1-2440-1000~26500-PASS



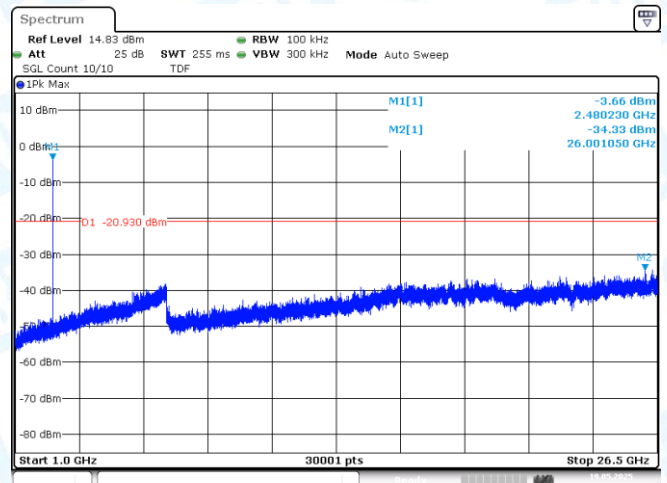
Date: 19.MAY.2025 21:13:38

BLE_2M-Ant1-2480-0~Reference-PASS



Date: 19.MAY.2025 21:13:46

BLE_2M-Ant1-2480-30~1000-PASS



Date: 19.MAY.2025 21:14:03

BLE_2M-Ant1-2480-1000~26500-PASS

7: Duty Cycle

7.1 Test Result

TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
BLE_1M	Ant1	2402	0.38	0.63	60.32	2.20	2.63
BLE_2M	Ant1	2402	0.20	0.63	31.75	4.98	5.00

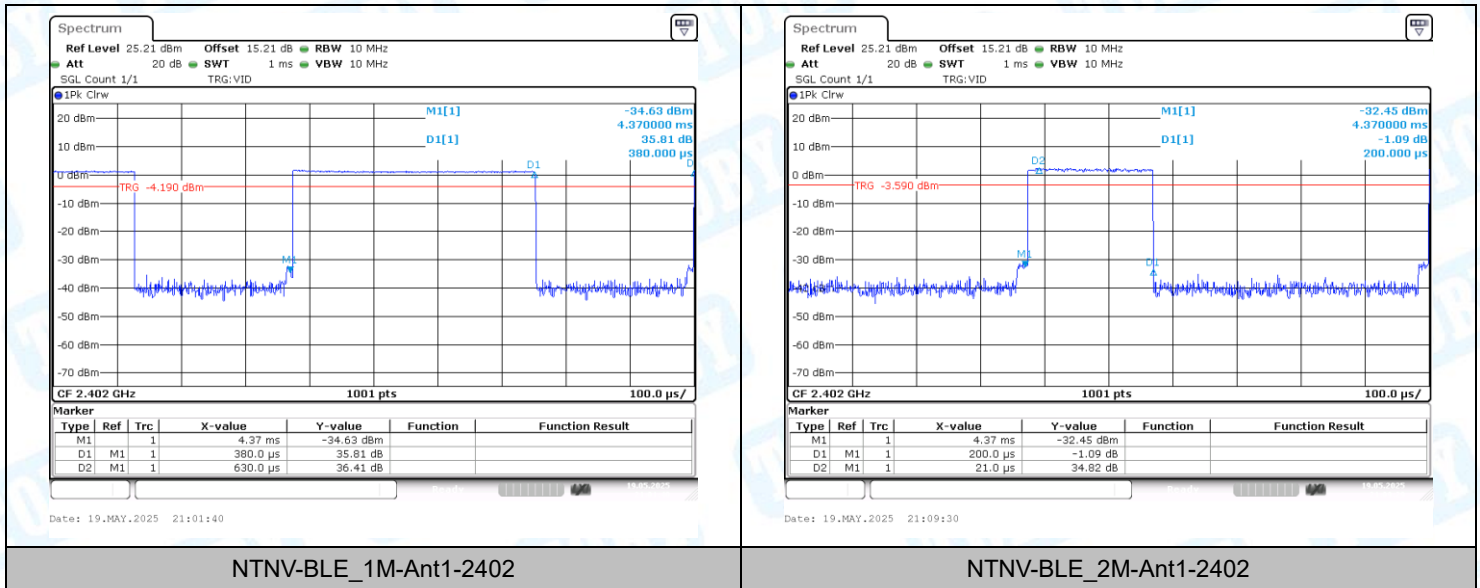
Note: 1, Duty Cycle= Transmission Duration/ Transmission Period

2, DC Factory=10*Log₁₀(1/Duty Cycle)

3, 1/T=1/ Transmission Duration

4, RF Conducted test Offset= cable loss+ Attenuator(10dB).

7.2 Test Graphs



-----END OF THE REPORT-----