RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
EUT Name:	2K Wi-Fi Battery Camera
Model:	OC101A-BDW-AZ1
Sample ID:	HC-C-202505-0132-01-04#
Test Standard:	FCC Part 15.247&RSS 247 Issue 3
Environmental Conditions	
Ambient Temperature:	25℃
Ambient Humidity:	45%RH
Test Power Supply:	DC 3.7V
Test Engineer:	Gold Zhang
Note: For a more detailed features description, please refer to the report TBR-C-202505-0132-16	

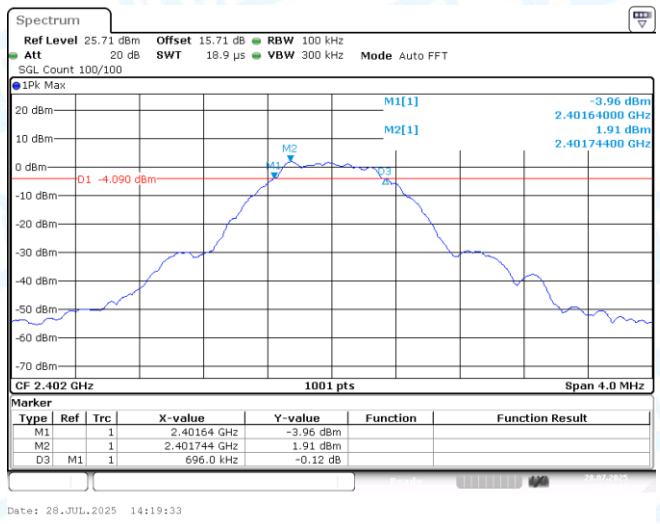
Contents

1. DTS Bandwidth

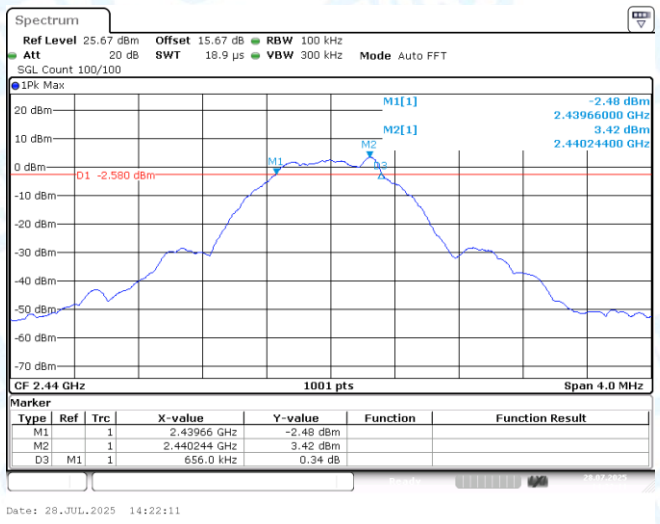
1.1 Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.70	2401.64	2402.34	0.5	PASS
BLE_1M	Ant1	2440	0.66	2439.66	2440.32	0.5	PASS
BLE_1M	Ant1	2480	0.66	2479.66	2480.32	0.5	PASS
BLE_2M	Ant1	2402	1.10	2401.45	2402.55	0.5	PASS
BLE_2M	Ant1	2440	1.26	2439.33	2440.59	0.5	PASS
BLE_2M	Ant1	2480	1.38	2479.30	2480.68	0.5	PASS

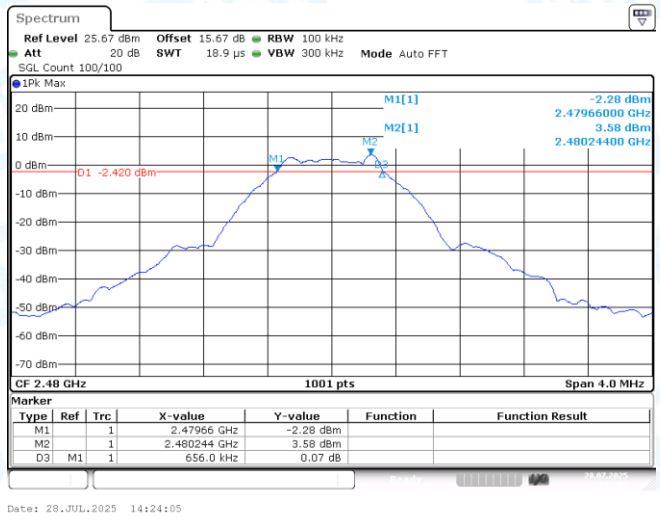
1.2 Test Graphs



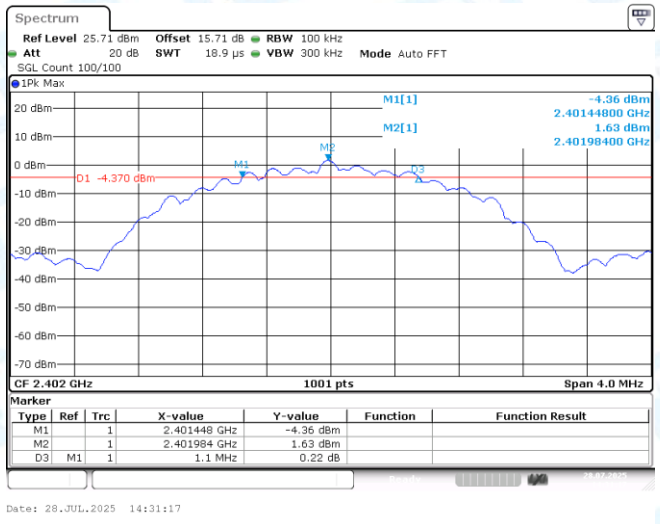
BLE_1M-Ant1-2402-PASS



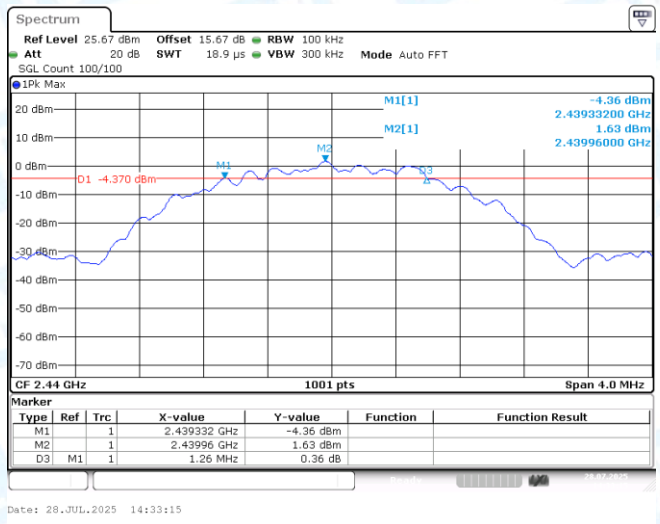
BLE_1M-Ant1-2440-PASS



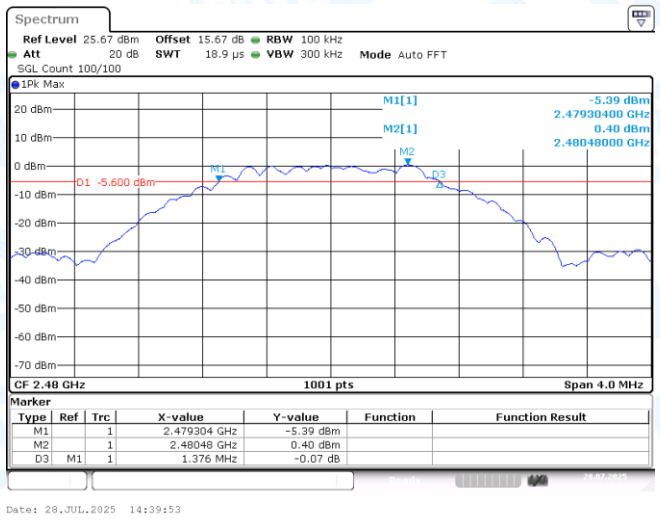
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



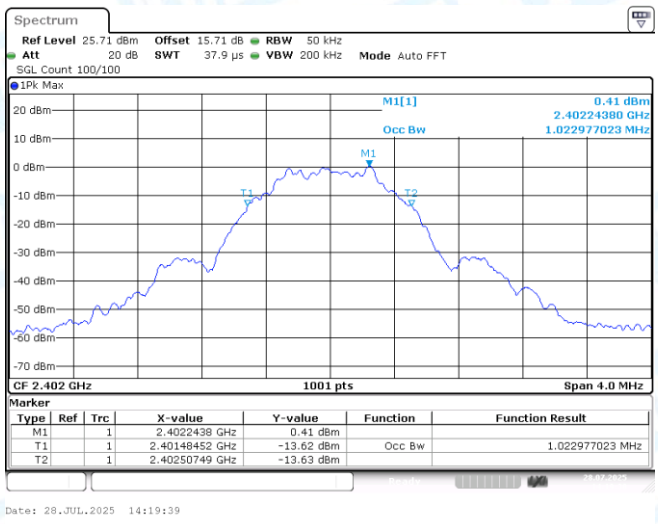
BLE_2M-Ant1-2480-PASS

2. Occupied Channel Bandwidth

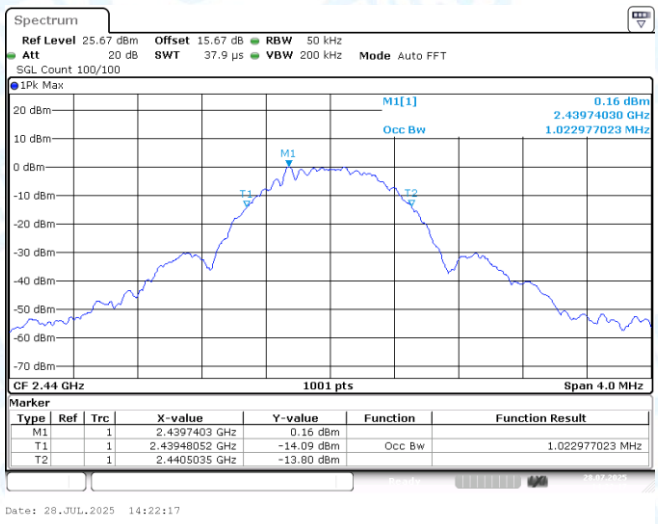
2.1 Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0230	2401.4845	2402.5075	---	---
BLE_1M	Ant1	2440	1.0230	2439.4805	2440.5035	---	---
BLE_1M	Ant1	2480	1.0190	2479.4805	2480.4995	---	---
BLE_2M	Ant1	2402	2.0380	2400.9890	2403.0270	---	---
BLE_2M	Ant1	2440	2.0579	2438.9770	2441.0350	---	---
BLE_2M	Ant1	2480	2.0579	2478.9770	2481.0350	---	---

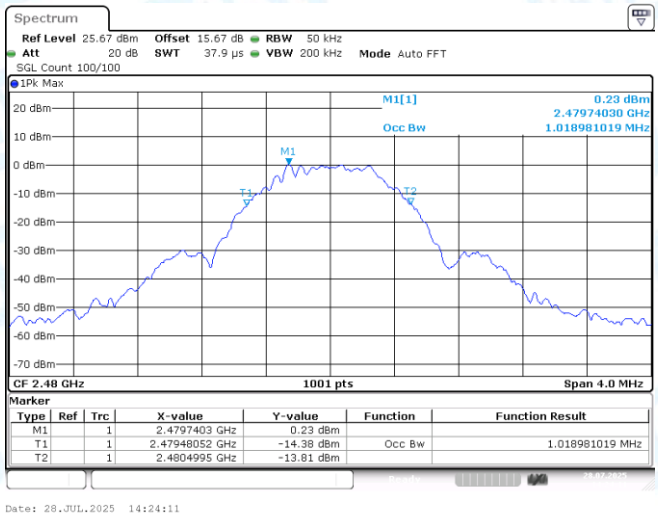
2.2 Test Graphs



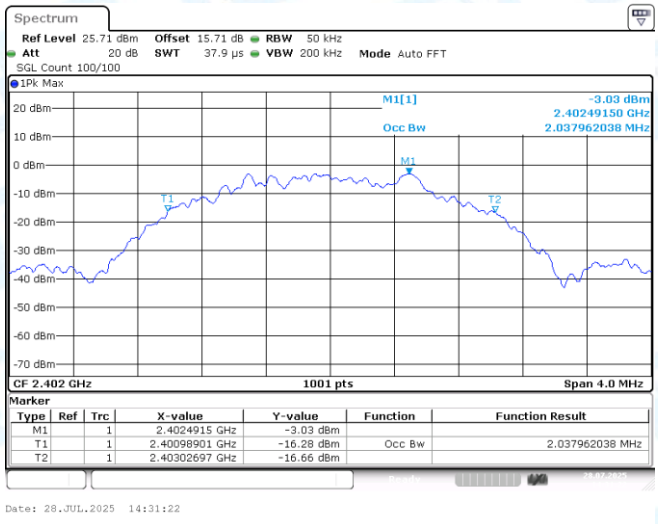
BLE_1M-Ant1-2402



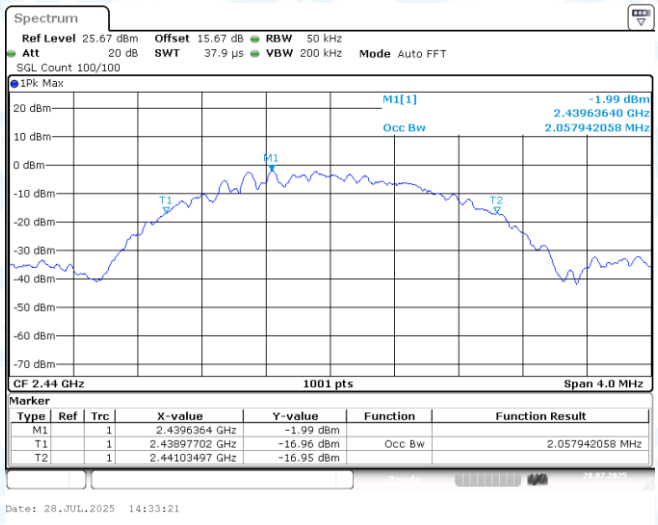
BLE_1M-Ant1-2440



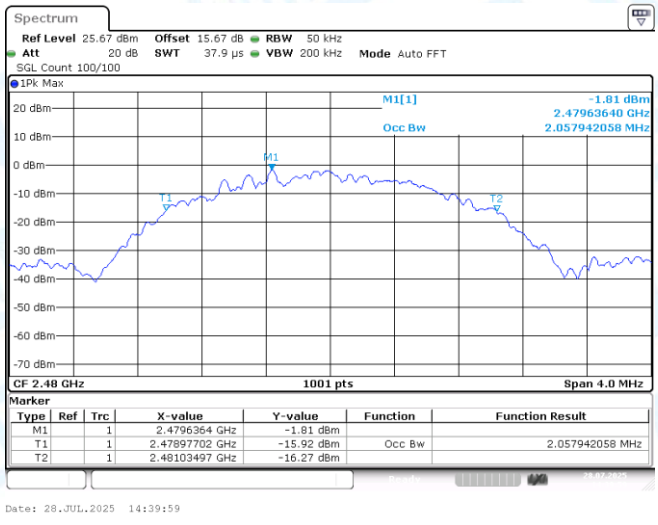
BLE_1M-Ant1-2480



BLE_2M-Ant1-2402



BLE_2M-Ant1-2440



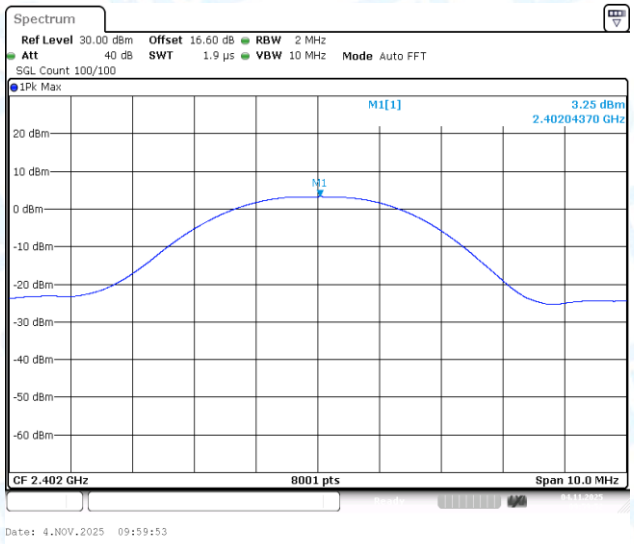
BLE_2M-Ant1-2480

3. Maximum conducted output power

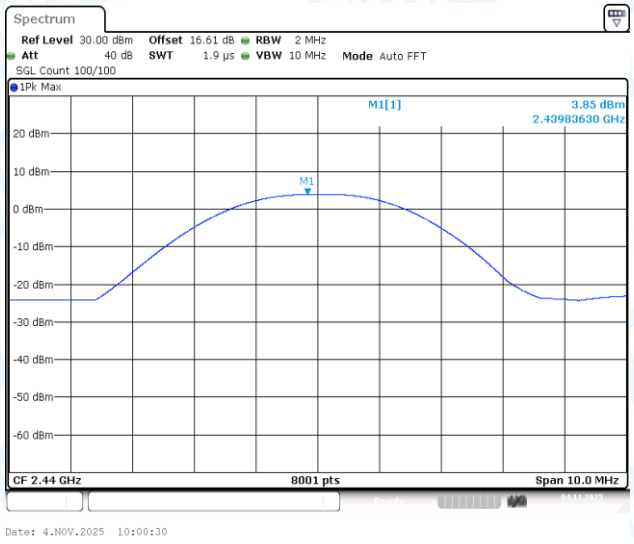
3.1 Test Result Peak

Test Mode	Antenna	Frequency [MHz]	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Gain [dBi]	EIRP[dBm]	EIRP Limit[dBm]	Verdict	
BLE_1M	Ant1	2402	3.25	≤30	1.19	4.44	≤36	PASS	
BLE_1M	Ant1	2440	3.85	≤30	1.19	5.04	≤36	PASS	
BLE_1M	Ant1	2480	3.28	≤30	1.19	4.47	≤36	PASS	
BLE_2M	Ant1	2402	3.12	≤30	1.19	4.31	≤36	PASS	
BLE_2M	Ant1	2440	3.71	≤30	1.19	4.90	≤36	PASS	
BLE_2M	Ant1	2480	3.29	≤30	1.19	4.48	≤36	PASS	

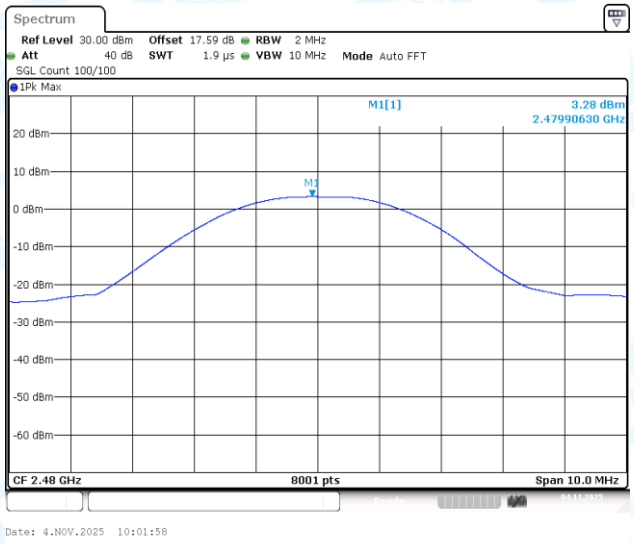
3.2 Test Graphs Peak



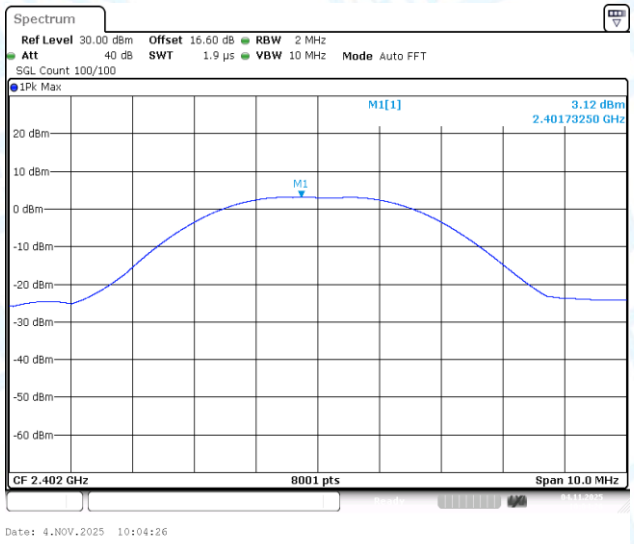
BLE_1M-Ant1-2402-PASS



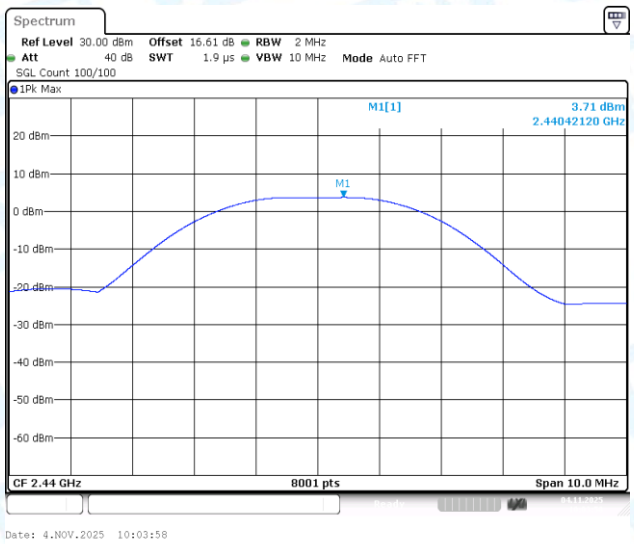
BLE_1M-Ant1-2440-PASS



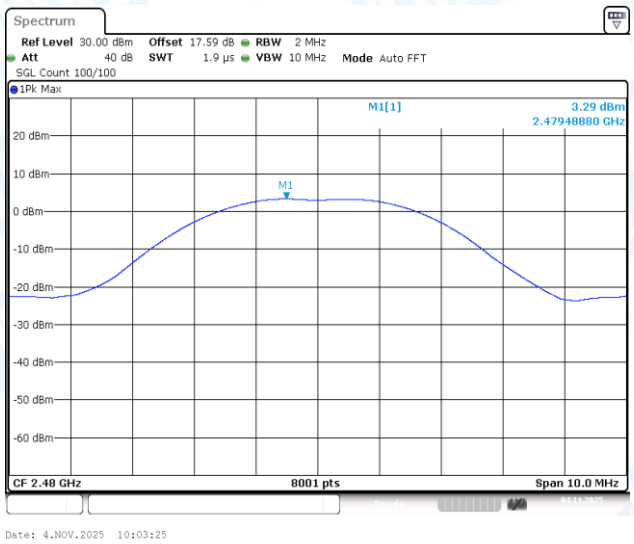
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



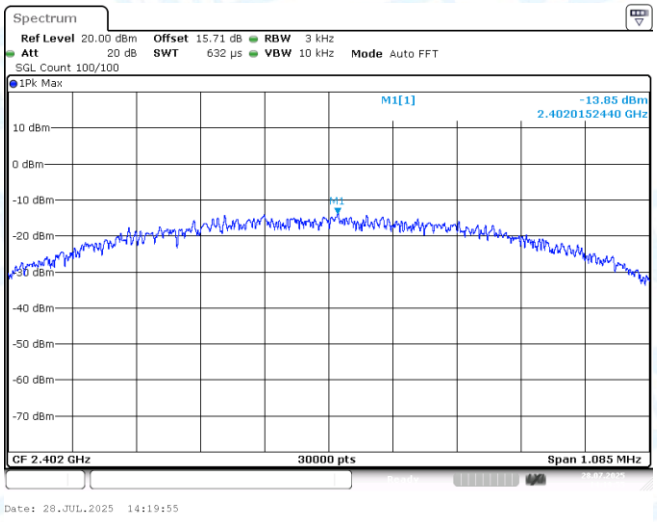
BLE_2M-Ant1-2480-PASS

4. Maximum power spectral density

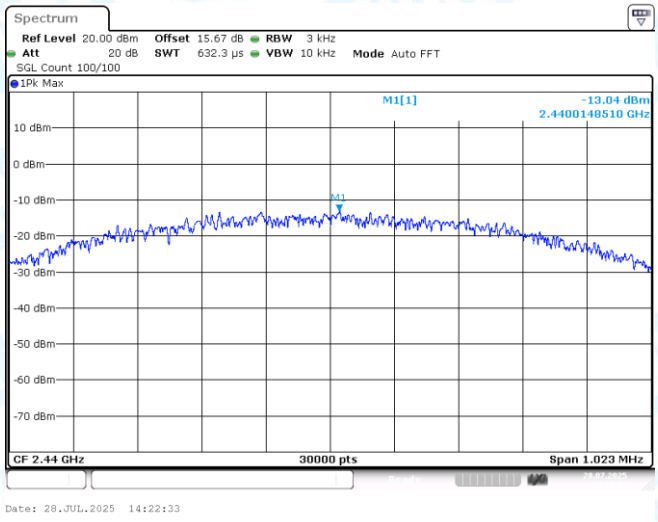
4.1 Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.85	≤8.00	PASS
BLE_1M	Ant1	2440	-13.04	≤8.00	PASS
BLE_1M	Ant1	2480	-13.04	≤8.00	PASS
BLE_2M	Ant1	2402	-16.52	≤8.00	PASS
BLE_2M	Ant1	2440	-15.81	≤8.00	PASS
BLE_2M	Ant1	2480	-15.63	≤8.00	PASS

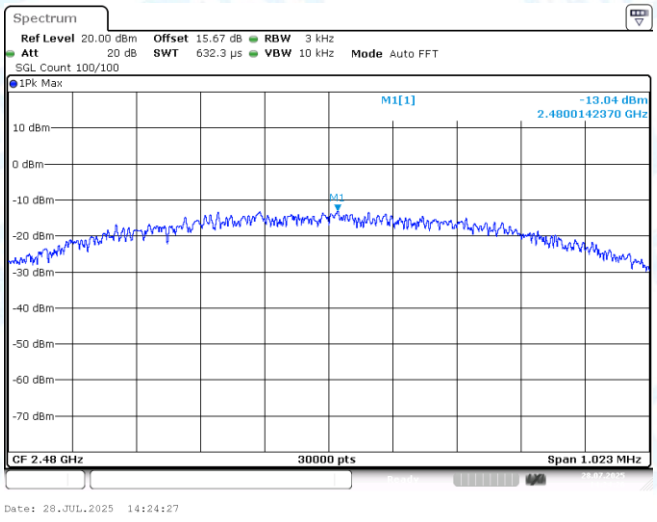
4.2 Test Graphs



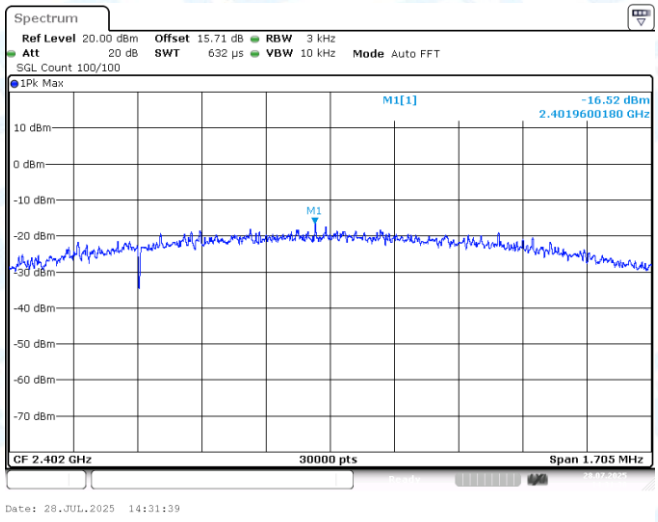
BLE_1M-Ant1-2402-PASS



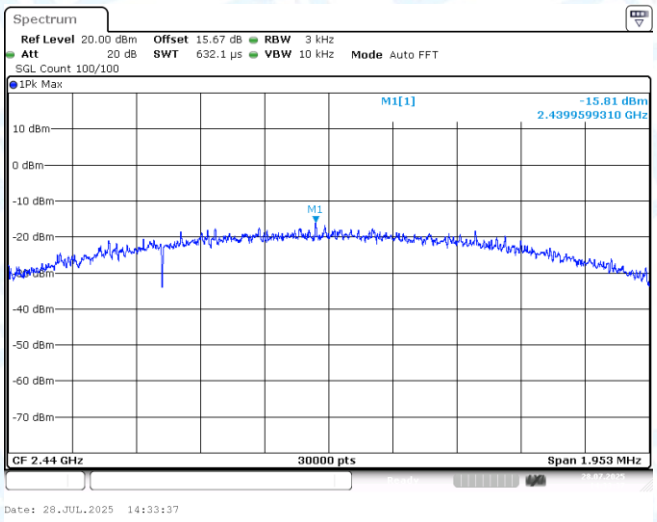
BLE_1M-Ant1-2440-PASS



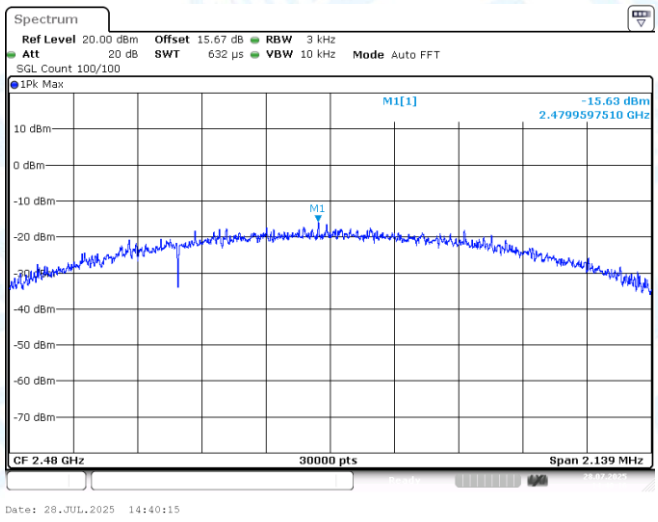
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



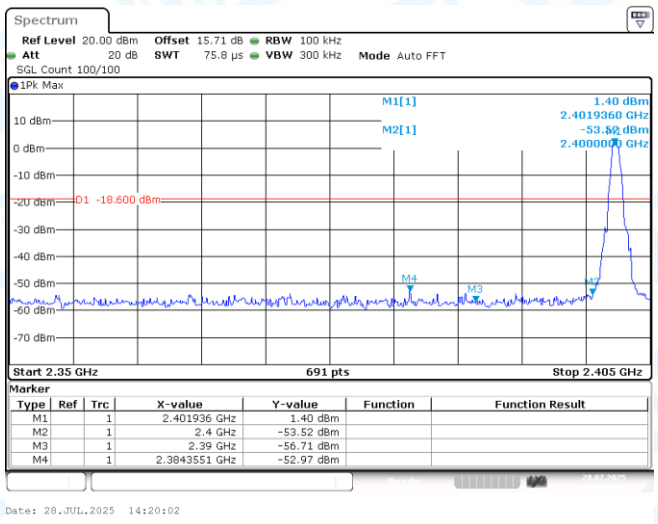
BLE_2M-Ant1-2480-PASS

5. Band edge measurements

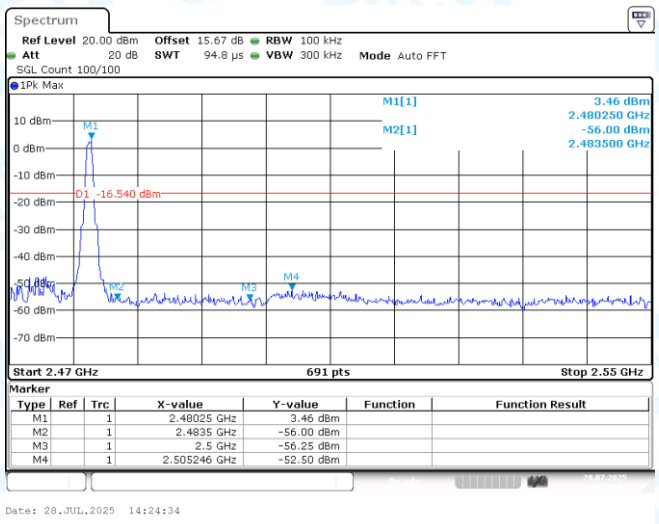
5.1 Test Result

Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.40	-52.97	≤-18.6	PASS
BLE_1M	Ant1	High	2480	3.46	-52.5	≤-16.54	PASS
BLE_2M	Ant1	Low	2402	1.78	-30.96	≤-18.22	PASS
BLE_2M	Ant1	High	2480	0.89	-52.98	≤-19.11	PASS

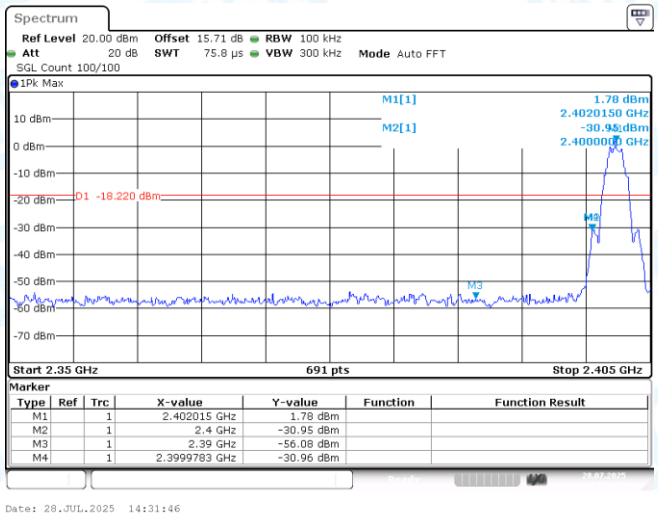
5.2 Test Graphs



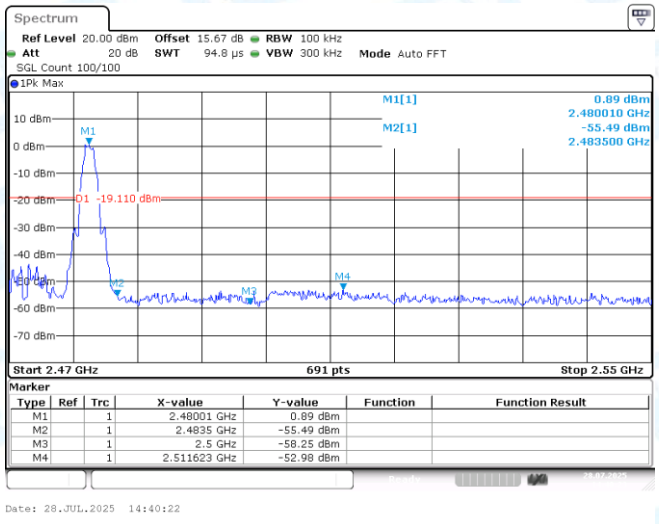
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



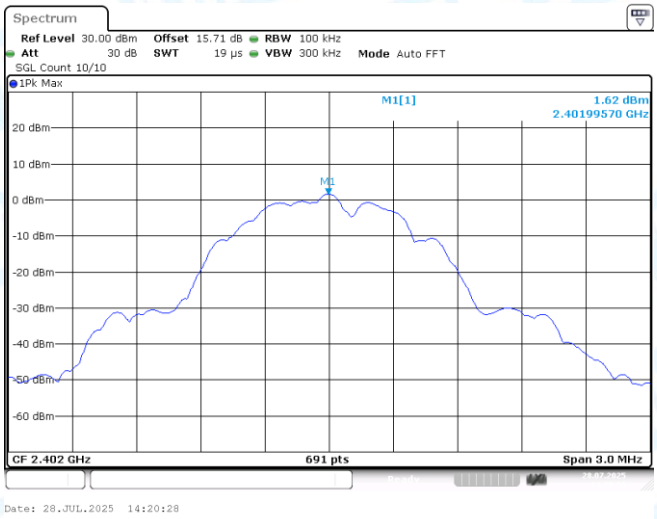
BLE_2M-Ant1-2480-PASS

6. Conducted Spurious Emission

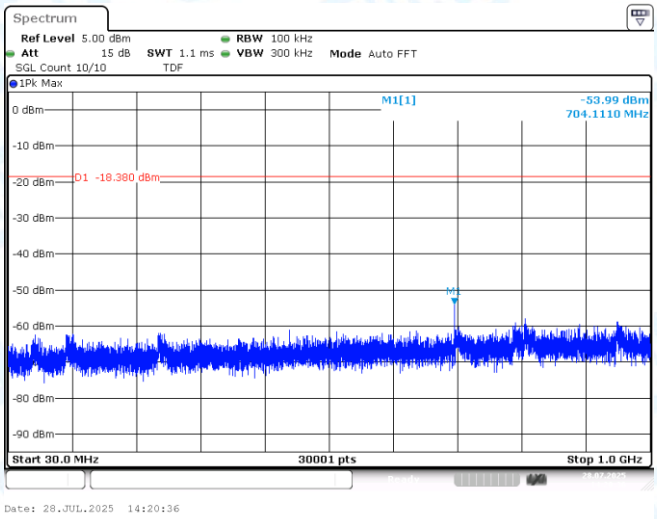
6.1 Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	1.62	1.62	---	PASS
BLE_1M	Ant1	2402	30~1000	1.62	-53.99	≤-18.38	PASS
BLE_1M	Ant1	2402	1000~26500	1.62	-36.49	≤-18.38	PASS
BLE_1M	Ant1	2440	0~Reference	1.20	1.20	---	PASS
BLE_1M	Ant1	2440	30~1000	1.20	-58.28	≤-18.8	PASS
BLE_1M	Ant1	2440	1000~26500	1.20	-37.29	≤-18.8	PASS
BLE_1M	Ant1	2480	0~Reference	2.02	2.02	---	PASS
BLE_1M	Ant1	2480	30~1000	2.02	-58.3	≤-17.98	PASS
BLE_1M	Ant1	2480	1000~26500	2.02	-36.99	≤-17.98	PASS
BLE_2M	Ant1	2402	0~Reference	-2.61	-2.61	---	PASS
BLE_2M	Ant1	2402	30~1000	-2.61	-57.66	≤-22.61	PASS
BLE_2M	Ant1	2402	1000~26500	-2.61	-36.73	≤-22.61	PASS
BLE_2M	Ant1	2440	0~Reference	0.02	0.02	---	PASS
BLE_2M	Ant1	2440	30~1000	0.02	-58.58	≤-19.98	PASS
BLE_2M	Ant1	2440	1000~26500	0.02	-37.09	≤-19.98	PASS
BLE_2M	Ant1	2480	0~Reference	-0.89	-0.89	---	PASS
BLE_2M	Ant1	2480	30~1000	-0.89	-57.5	≤-20.89	PASS
BLE_2M	Ant1	2480	1000~26500	-0.89	-37.01	≤-20.89	PASS

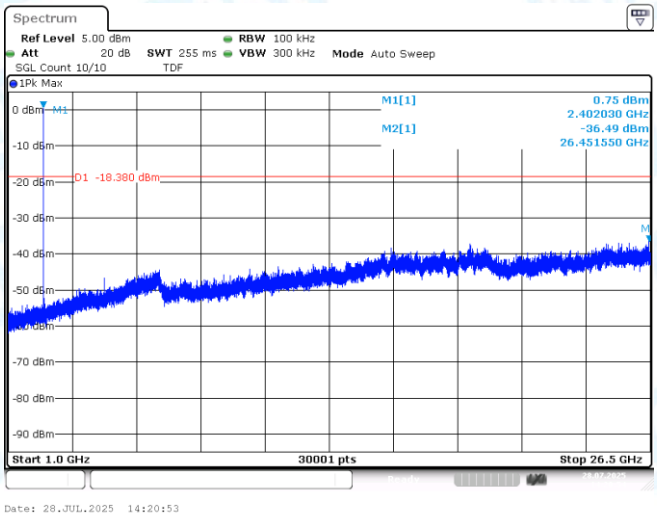
6.2 Test Graphs



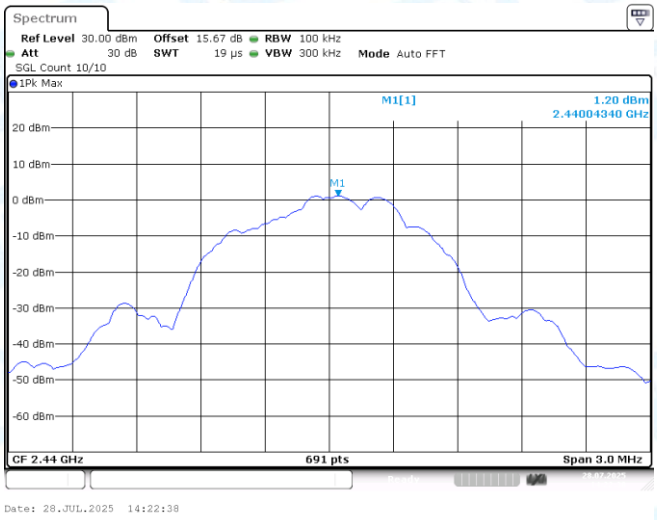
BLE_1M-Ant1-2402-0~Reference-PASS



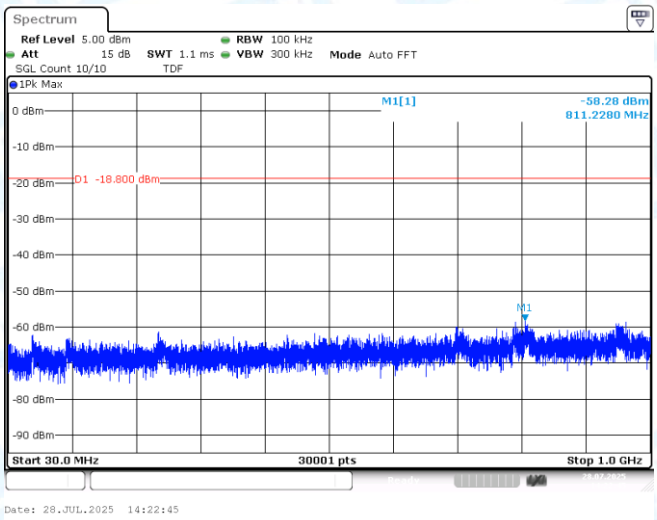
BLE_1M-Ant1-2402-30~1000-PASS



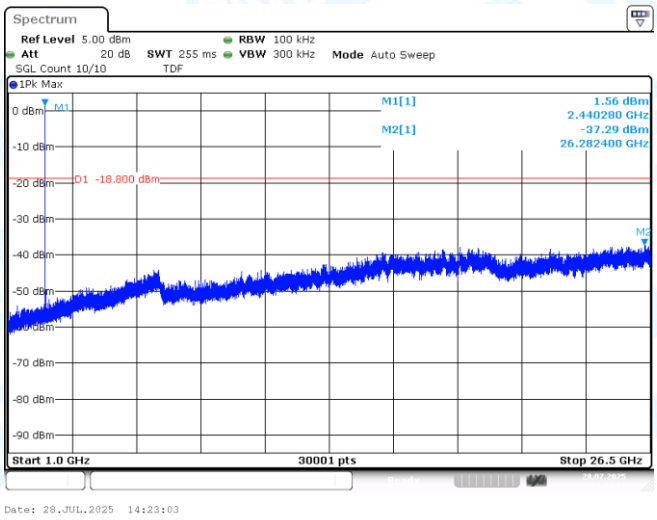
BLE_1M-Ant1-2402-1000~26500-PASS



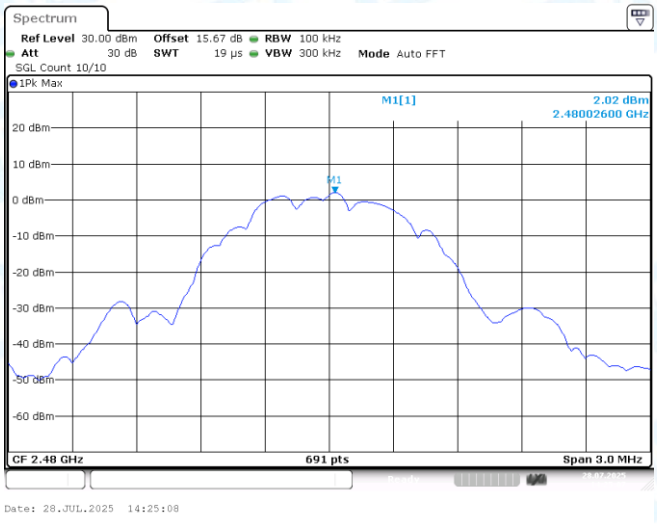
BLE_1M-Ant1-2440-0~Reference-PASS



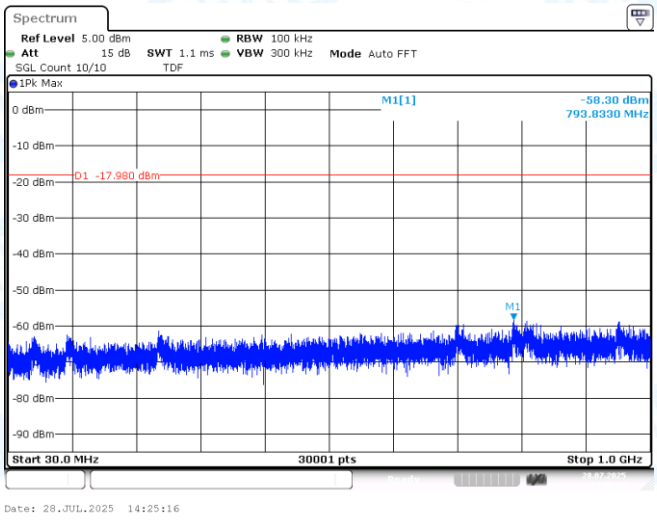
BLE_1M-Ant1-2440-30~1000-PASS



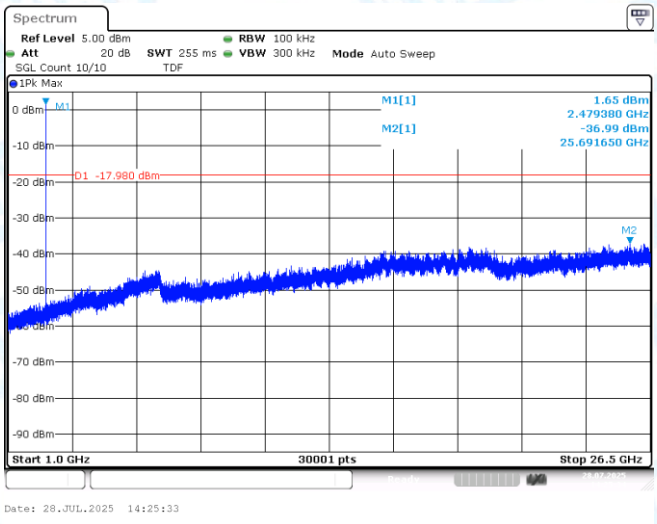
BLE_1M-Ant1-2440-1000~26500-PASS



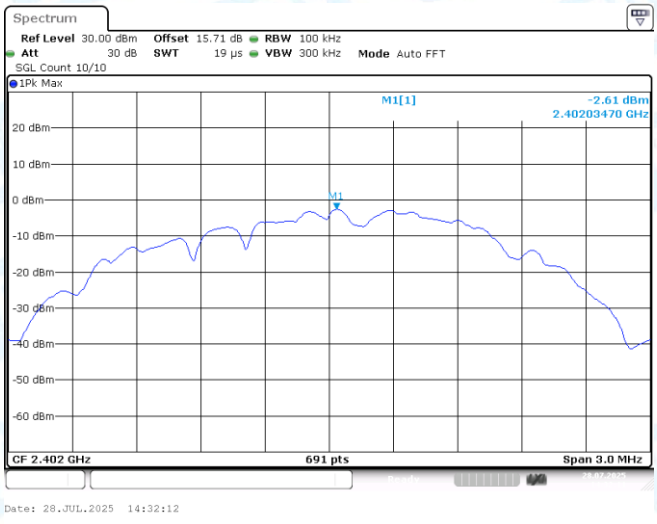
BLE_1M-Ant1-2480-0~Reference-PASS



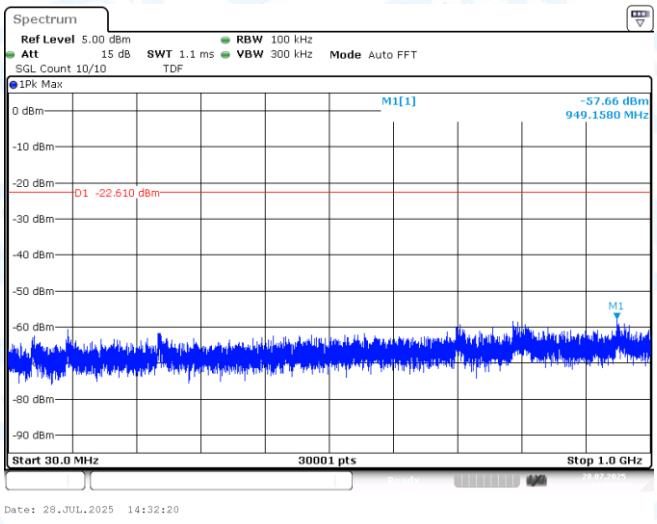
BLE_1M-Ant1-2480-30~1000-PASS



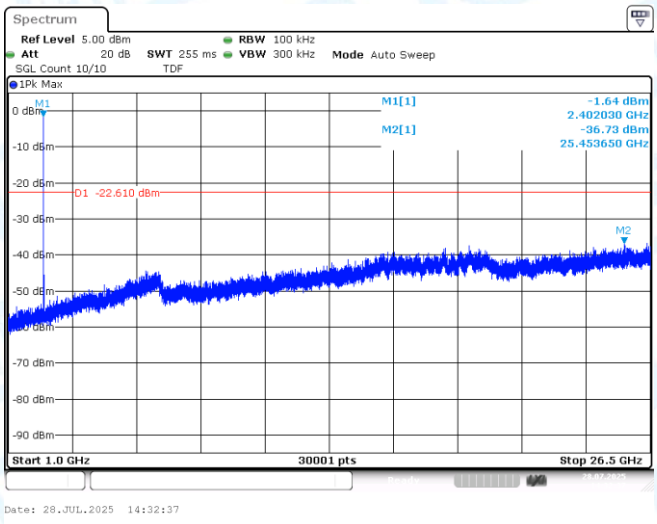
BLE_1M-Ant1-2480-1000~26500-PASS



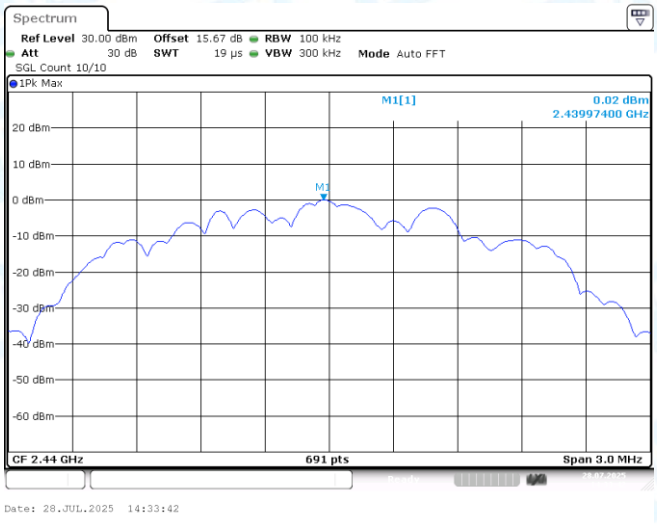
BLE_2M-Ant1-2402-0~Reference-PASS



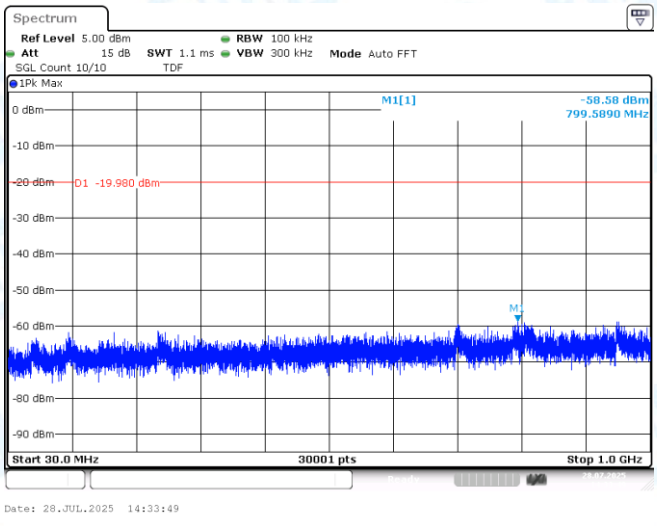
BLE_2M-Ant1-2402-30~1000-PASS



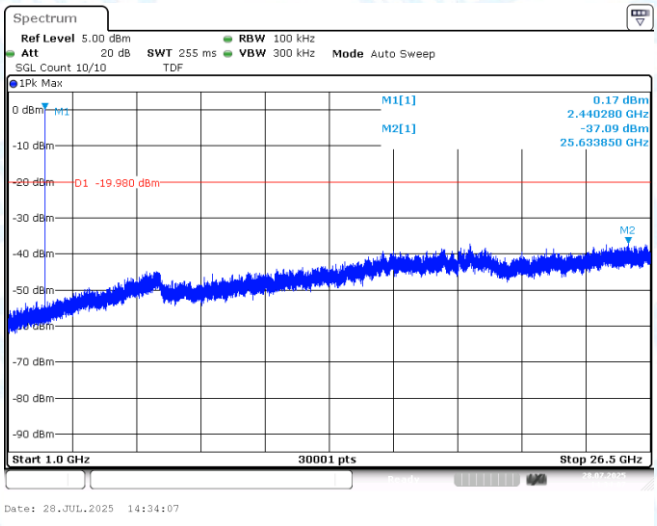
BLE_2M-Ant1-2402-1000~26500-PASS



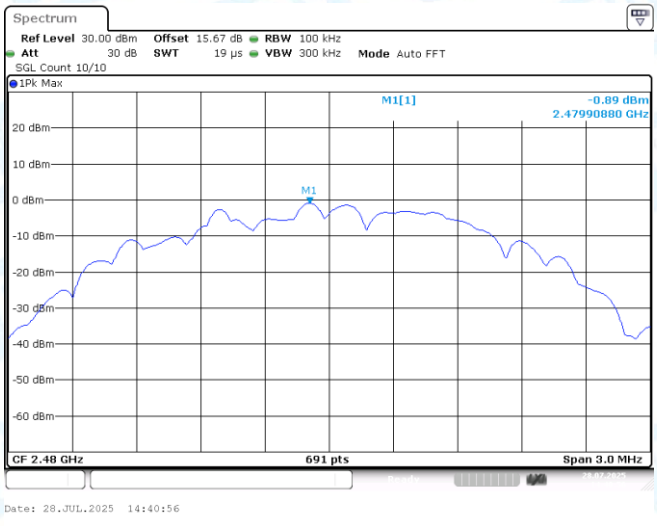
BLE_2M-Ant1-2440-0~Reference-PASS



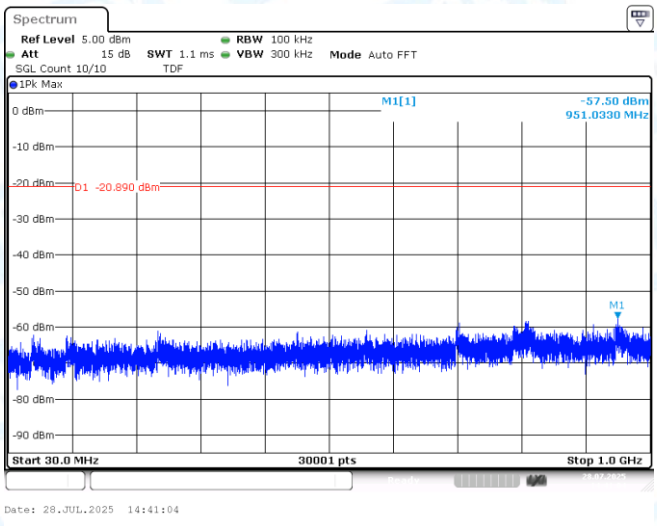
BLE_2M-Ant1-2440-30~1000-PASS



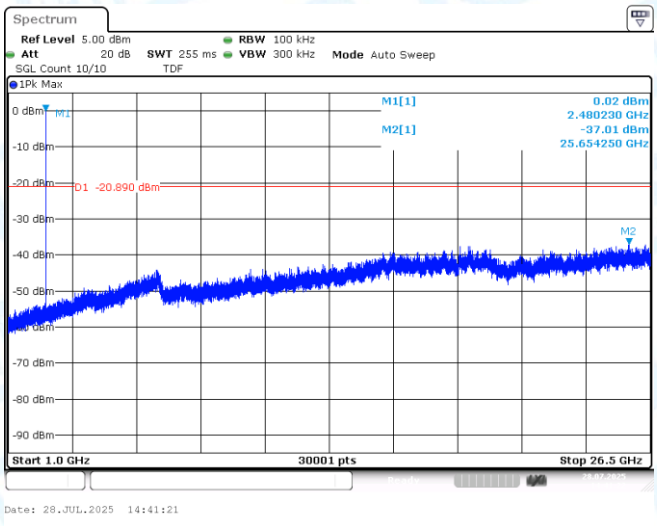
BLE_2M-Ant1-2440-1000~26500-PASS



BLE_2M-Ant1-2480-0~Reference-PASS



BLE_2M-Ant1-2480-30~1000-PASS



BLE_2M-Ant1-2480-1000~26500-PASS

7. Duty Cycle

7.1 Test Result

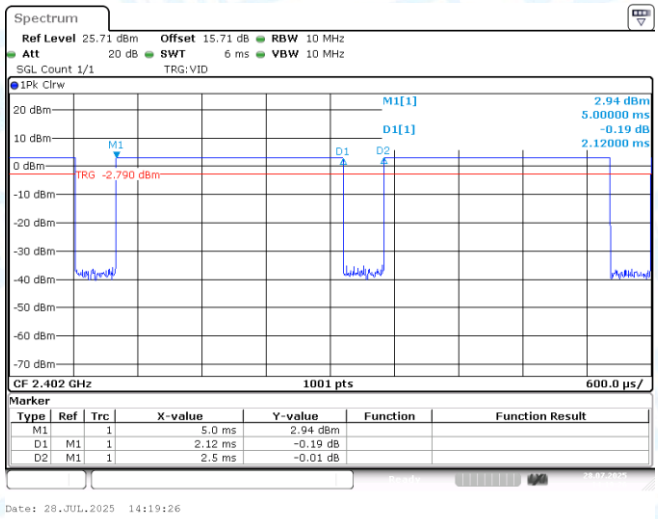
TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factory	1/T [kHz]
BLE_1M	Ant1	2402	2.12	2.50	84.80	0.72	0.47
BLE_2M	Ant1	2402	1.06	1.87	56.68	2.47	0.94

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

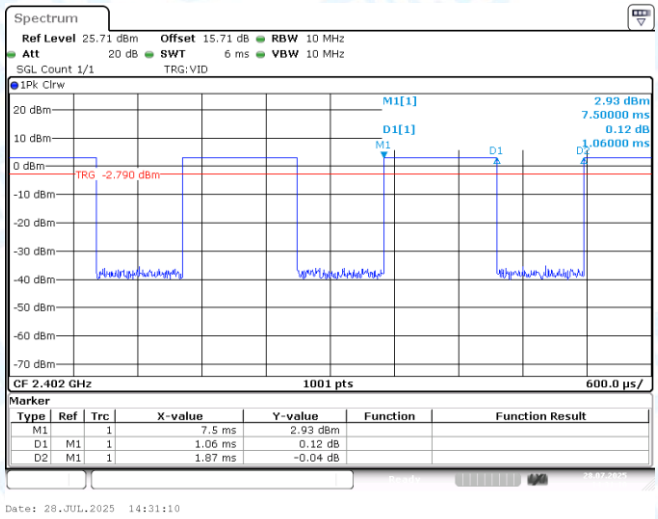
2, DC Factory=$10*\mathrm{Log}_{10}(1/\text{Duty Cycle})$

3, 1/T=1/ Transmission Duration

7.2 Test Graphs



NTNV-BLE_1M-Ant1-2402



NTNV-BLE_2M-Ant1-2402

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