

Modulation: FLORA

Results

The spurious frequencies detected at less than 20 dB below the limit:

Freq Rng (GHz)	Freq (MHz)	Unwanted Freq (MHz)	Unwanted Lvl (dBµV/m)	Pol	Detector
[0.03, 1]	2480.00000	930.058500	17.57	V	QP

* The spurious frequencies detected does not depend of the selected channel.

Verdict

Pass

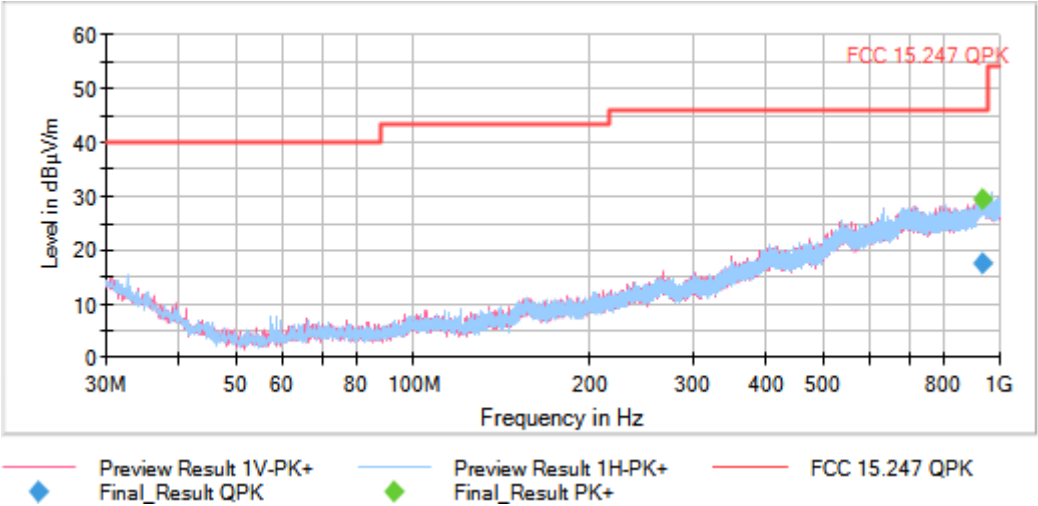
Approved by (name / position & signature)

Antonio José Jurado
Industrial & Automotive
EMC Lab. Manager

Attachments

Frequency MHz = 2480.00000 Modulation = FLORA
Frequency Range GHz = [0.03, 1]

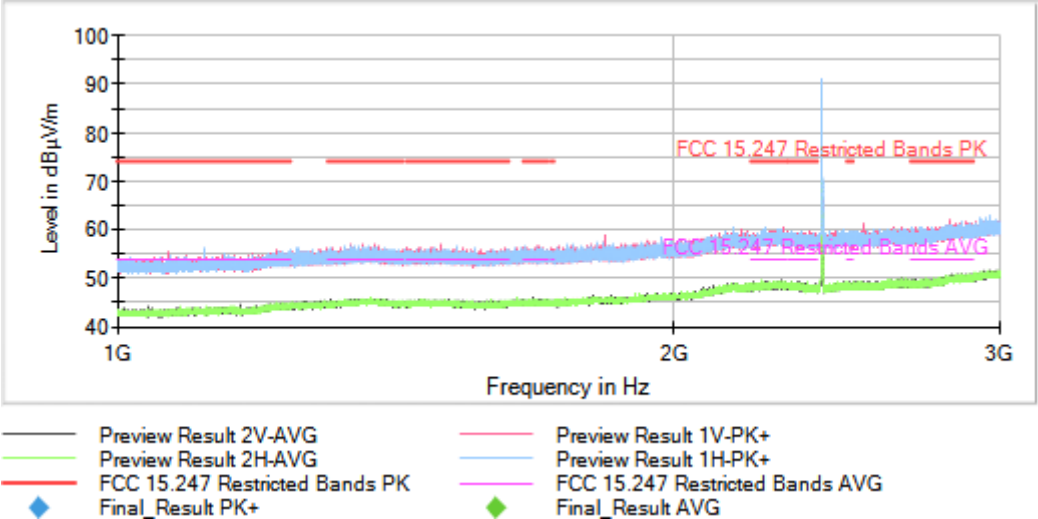
Images:



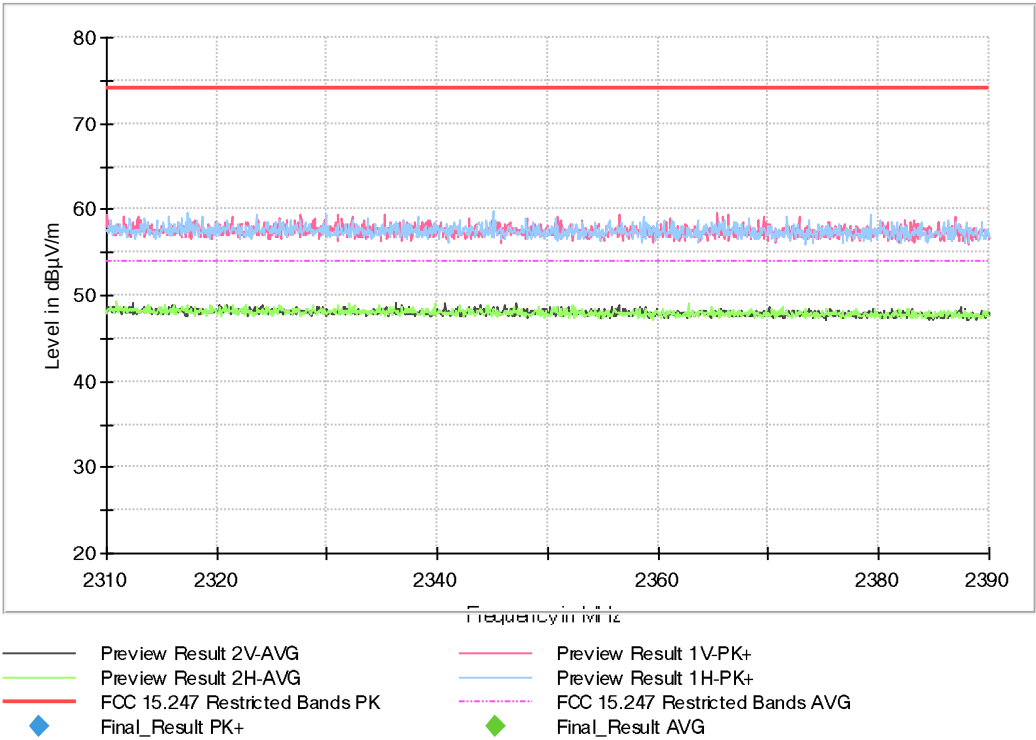
This plot is valid for all channels

Frequency MHz = 2402.00000 Modulation = FLORA
Frequency Range GHz = [1, 3]

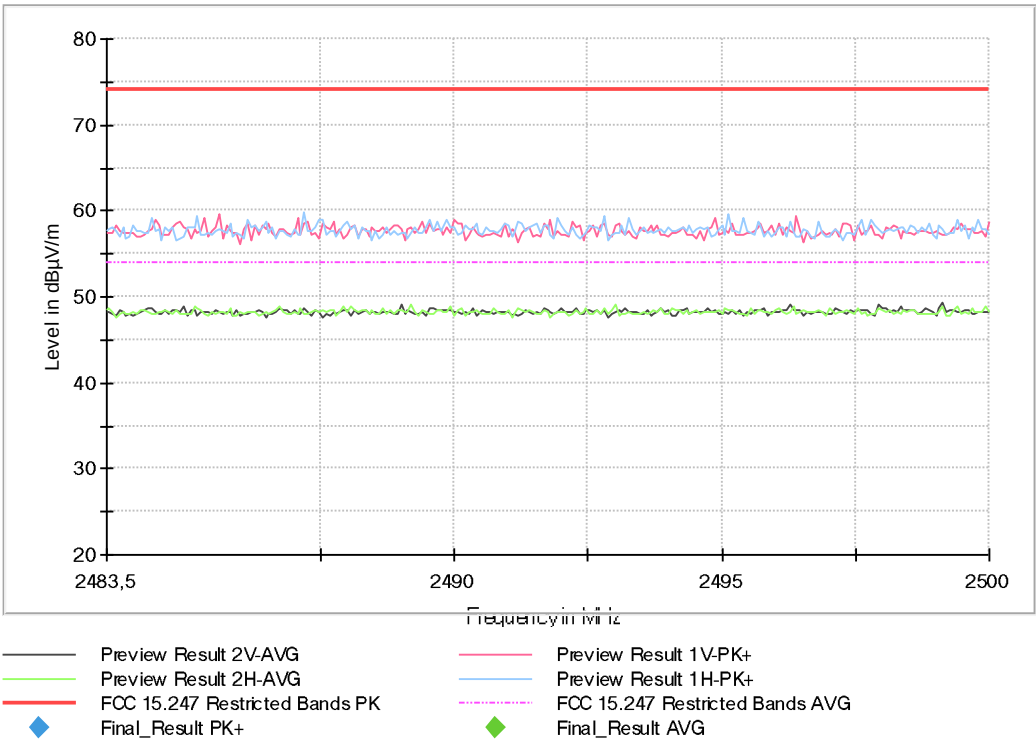
Images:



Full Spectrum

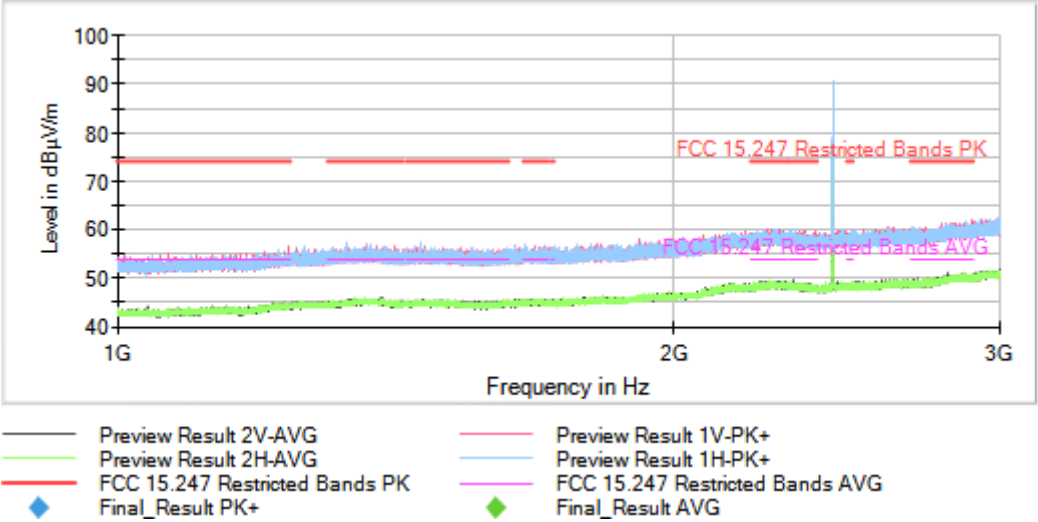


Full Spectrum

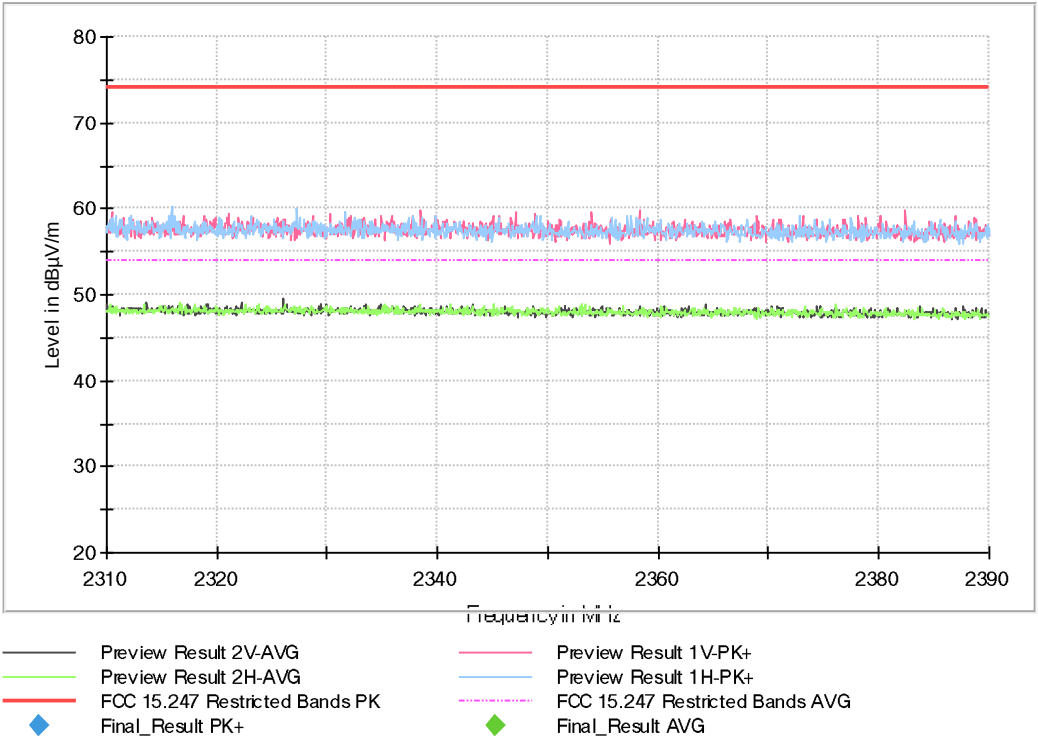


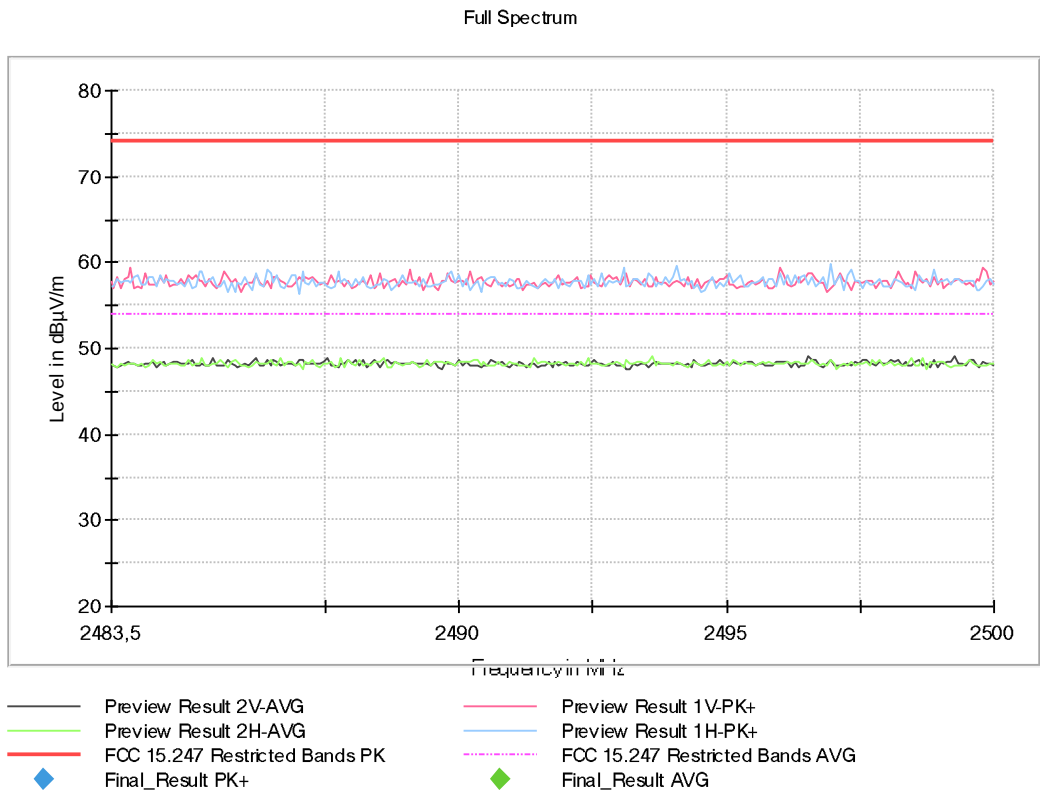
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2440.00000 Modulation = FLORA
Frequency Range GHz = [1, 3]

Images:



Full Spectrum

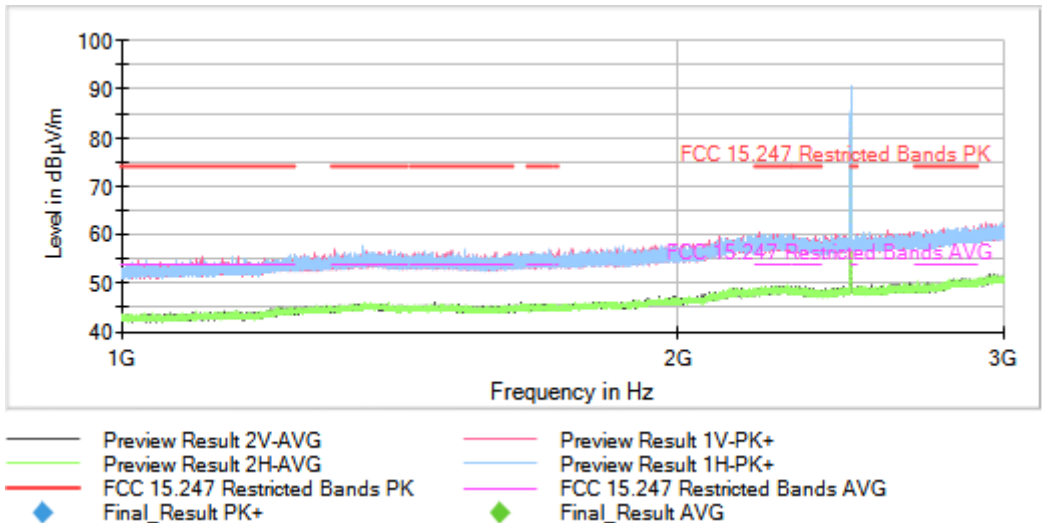




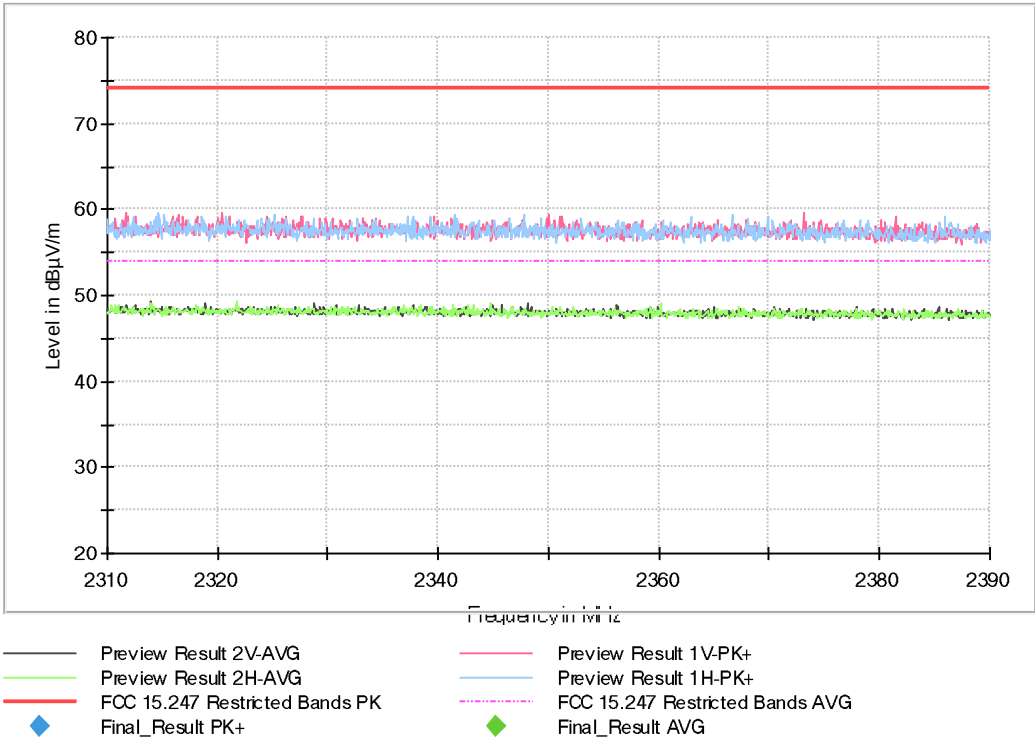
Frequency MHz = 2480.00000 Modulation = FLORA

Frequency Range GHz = [1, 3]

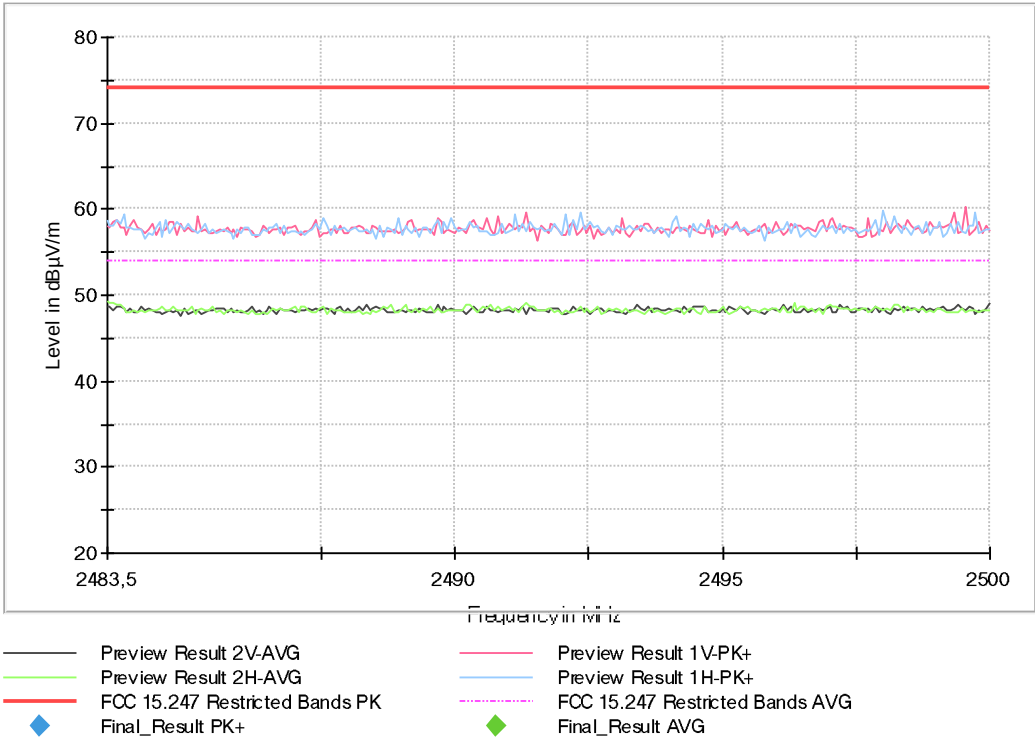
Images:



Full Spectrum

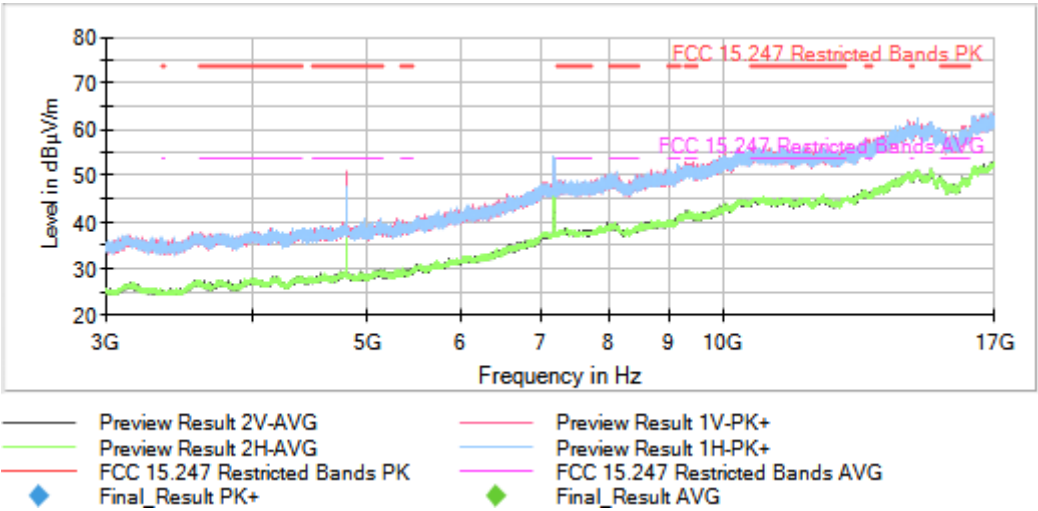


Full Spectrum



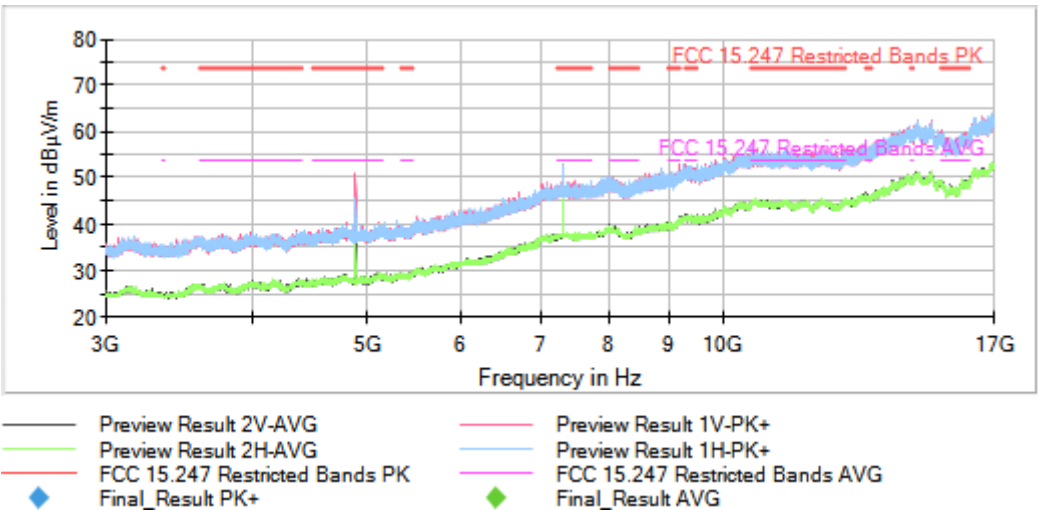
Frequency MHz = 2402.00000 Modulation = FLORA
Frequency Range GHz = [3, 17]

Images:



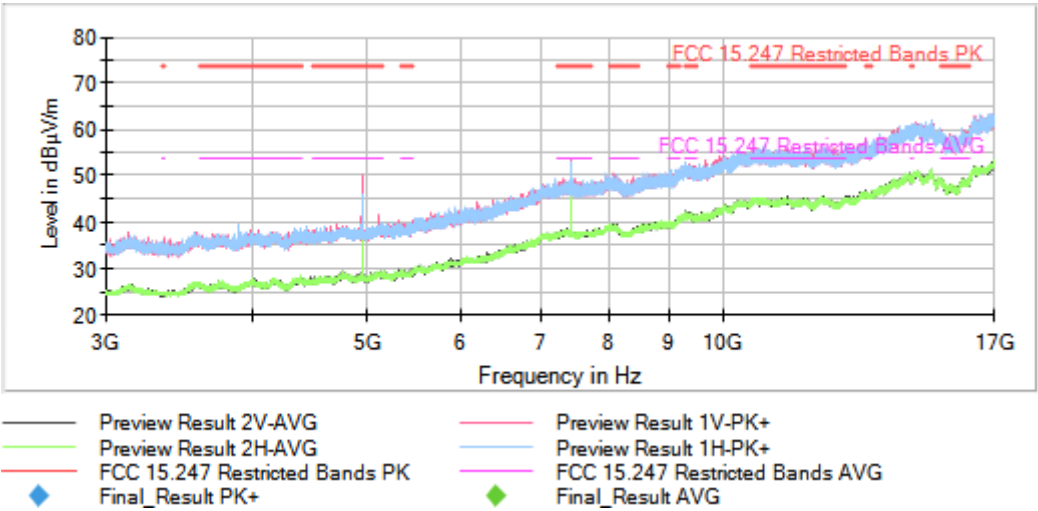
Frequency MHz = 2440.00000 Modulation = FLORA
Frequency Range GHz = [3, 17]

Images:



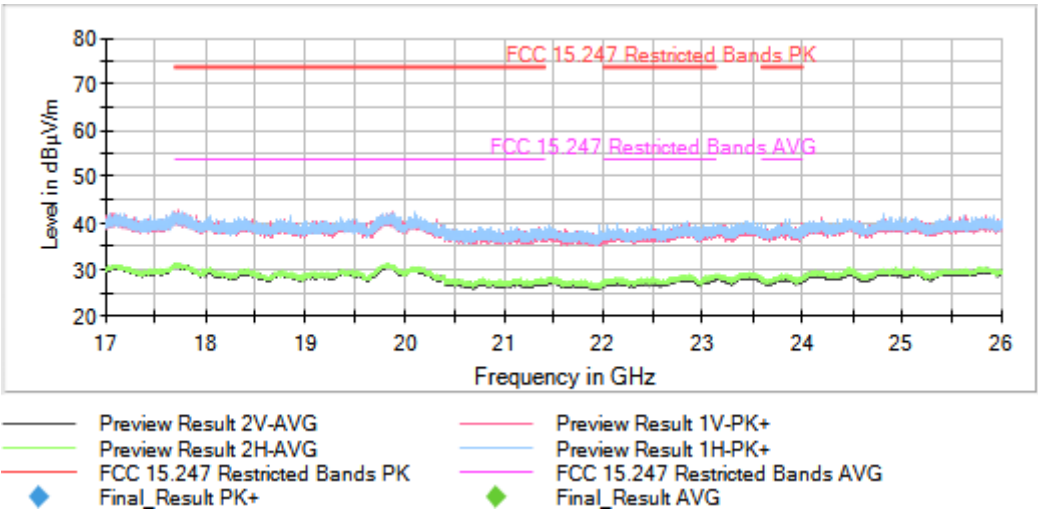
Frequency MHz = 2480.00000 Modulation = FLORA
Frequency Range GHz = [3, 17]

Images:



Frequency MHz = 2440.00000 Modulation = FLORA
Frequency Range GHz = [17, 26]

Images:



This plot is valid for all channels

Results for Sample 03

No spurious frequencies detected at less than 20 dB below the limit.

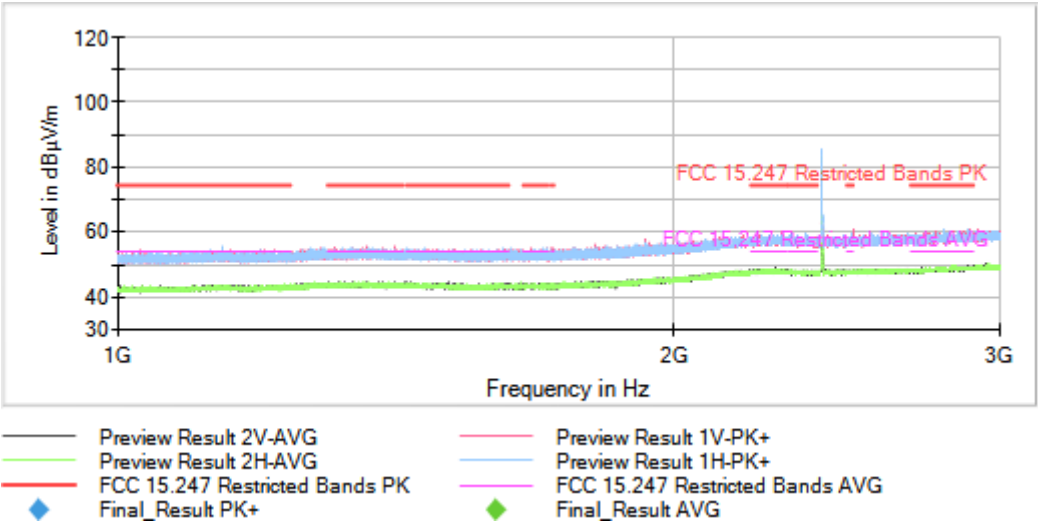
Verdict

Pass

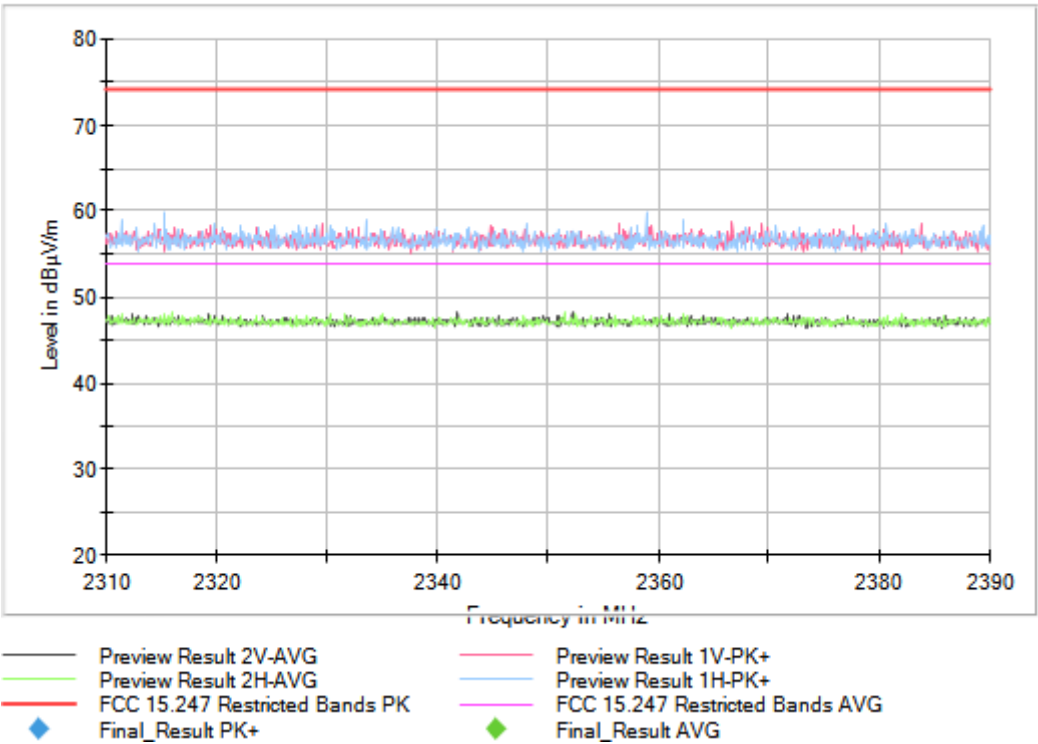
Attachments

Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = FLORA
Frequency Range GHz = [1, 3]

Images:



Full Spectrum



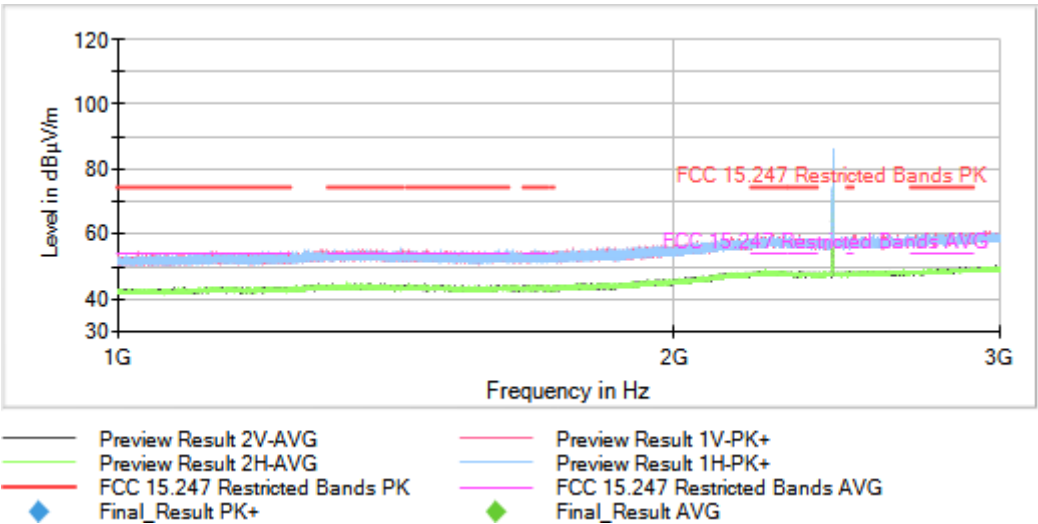


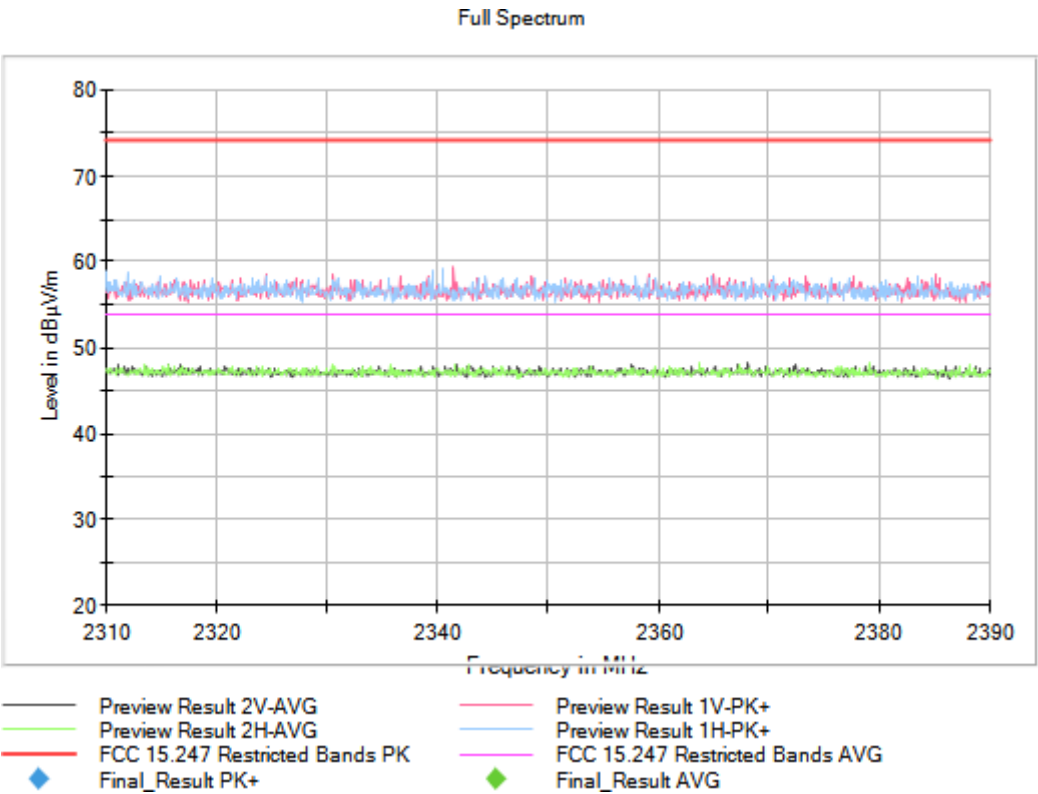
Operation Band MHz = [2400, 2483.5]

Frequency MHz = 2440.00000 Modulation = FLORA

Frequency Range GHz = [1, 3]

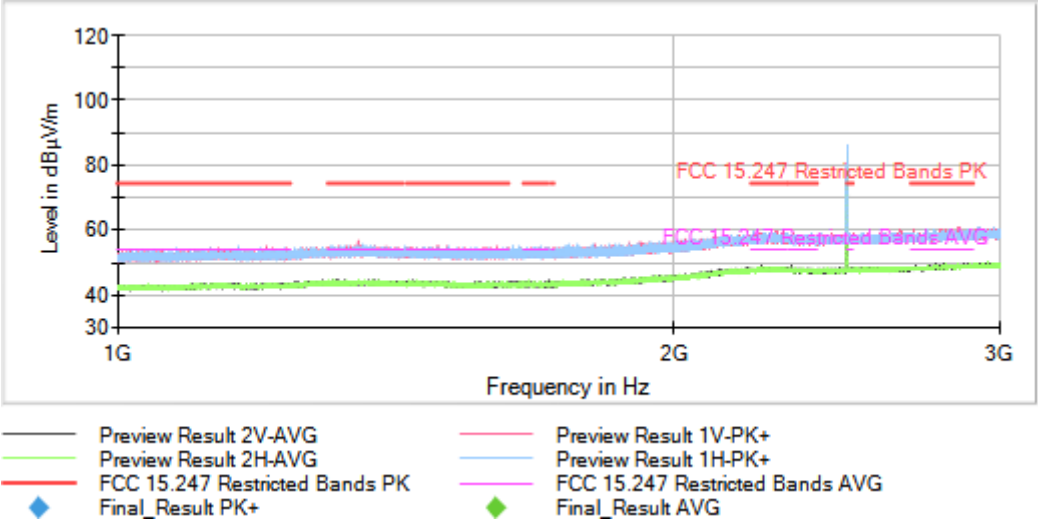
Images:



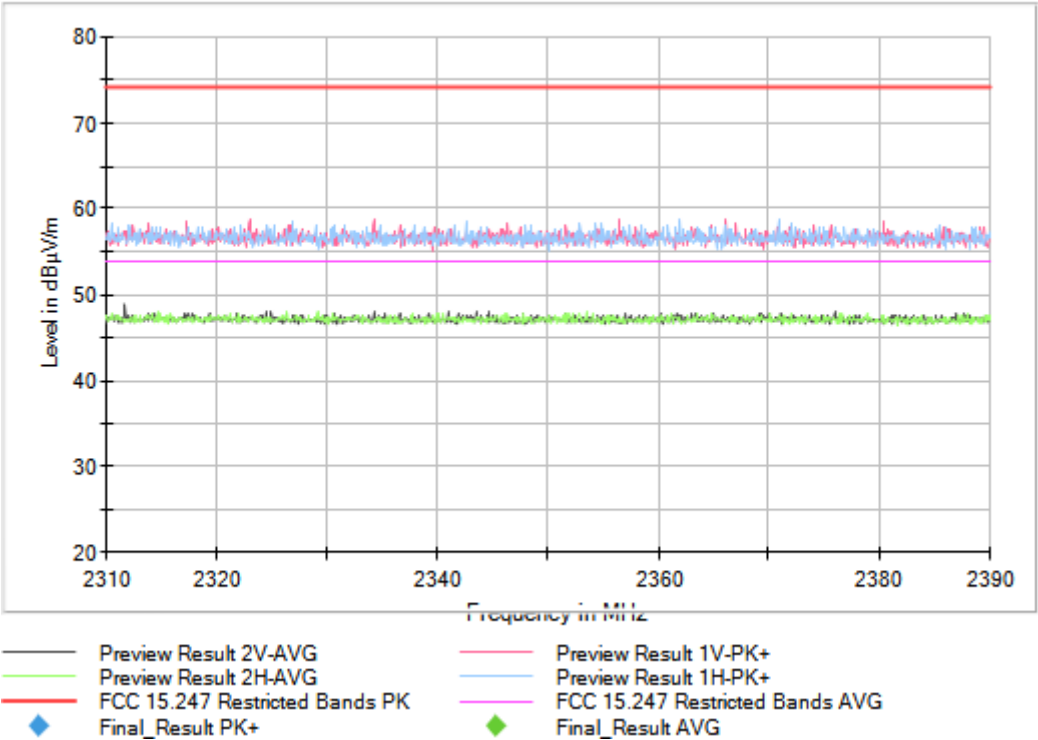


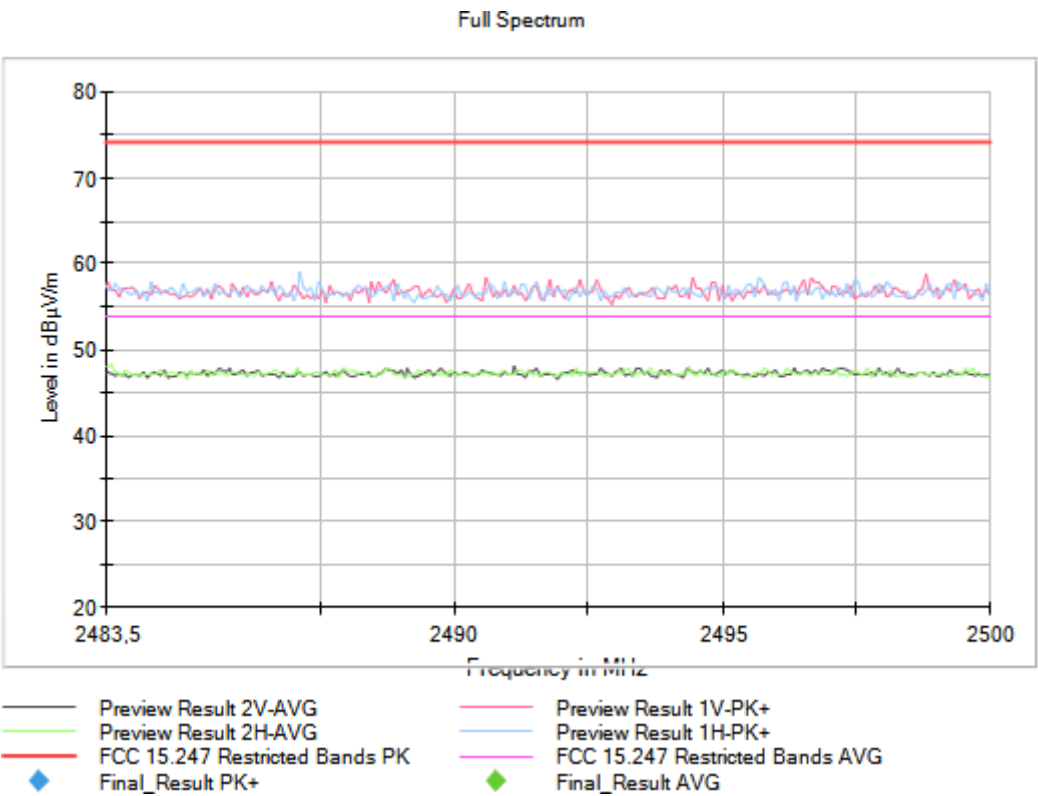
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = FLORA
Frequency Range GHz = [1, 3]

Images:



Full Spectrum



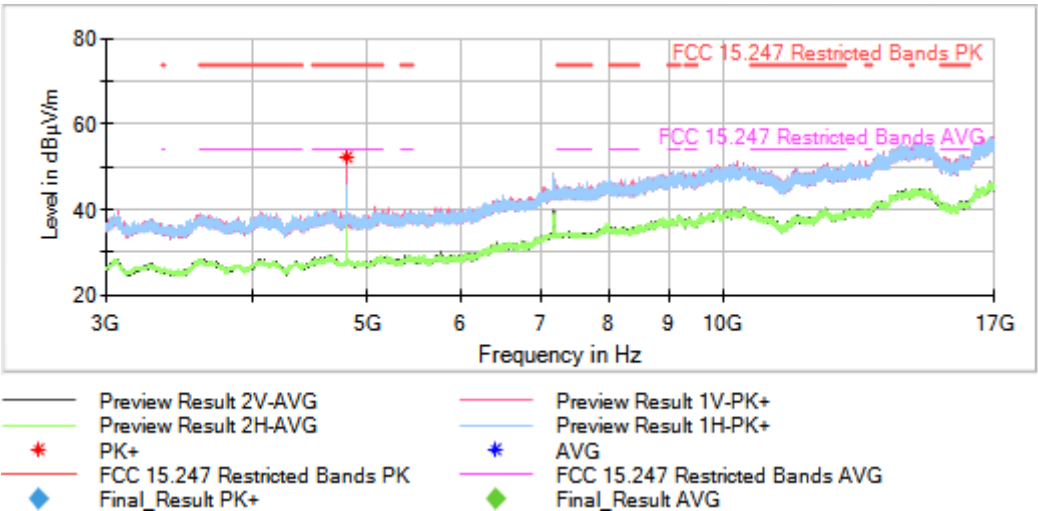


Operation Band MHz = [2400, 2483.5]

Frequency MHz = 2402.00000 Modulation = FLORA

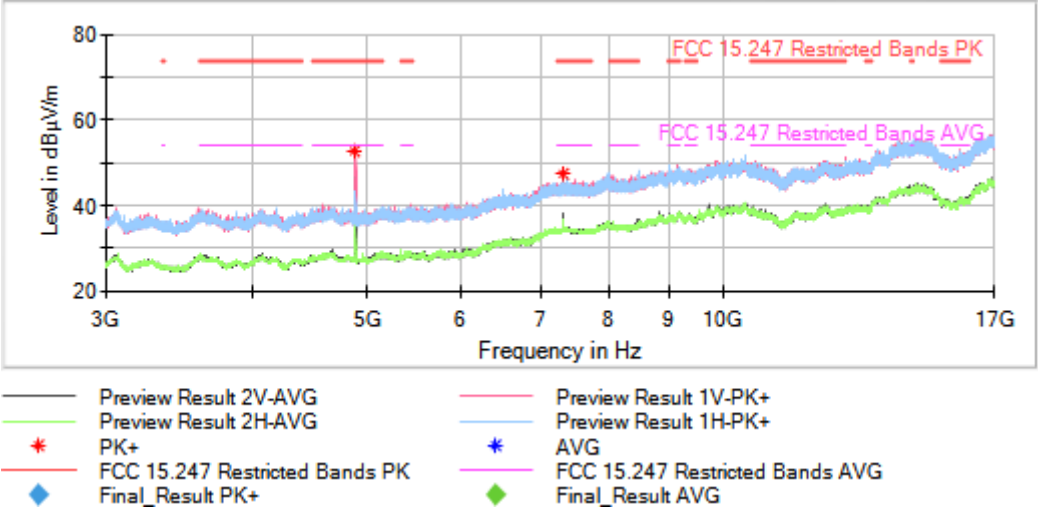
Frequency Range GHz = [3, 17]

Images:



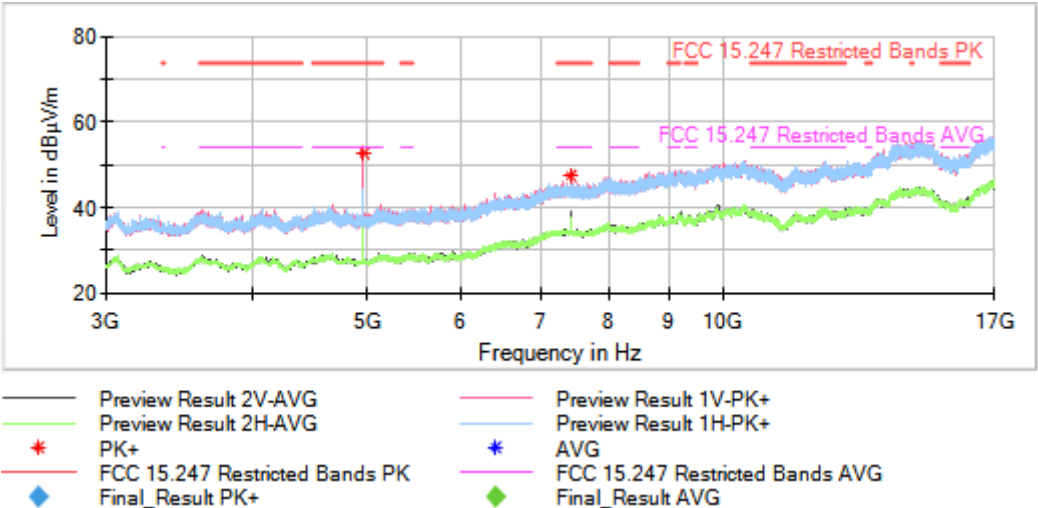
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2440.00000 Modulation = FLORA
Frequency Range GHz = [3, 17]

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = FLORA
Frequency Range GHz = [3, 17]

Images:



99dBw Occupied Channel Bandwidth 99%

Specification

* RSS-Gen Issue 5, Clause 6.7 Occupied bandwidth (or 99% emission bandwidth) and x dB bandwidth:

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

Modulation: BT (GFSK)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	0.874
		2441.00000	0.878
		2480.00000	0.874

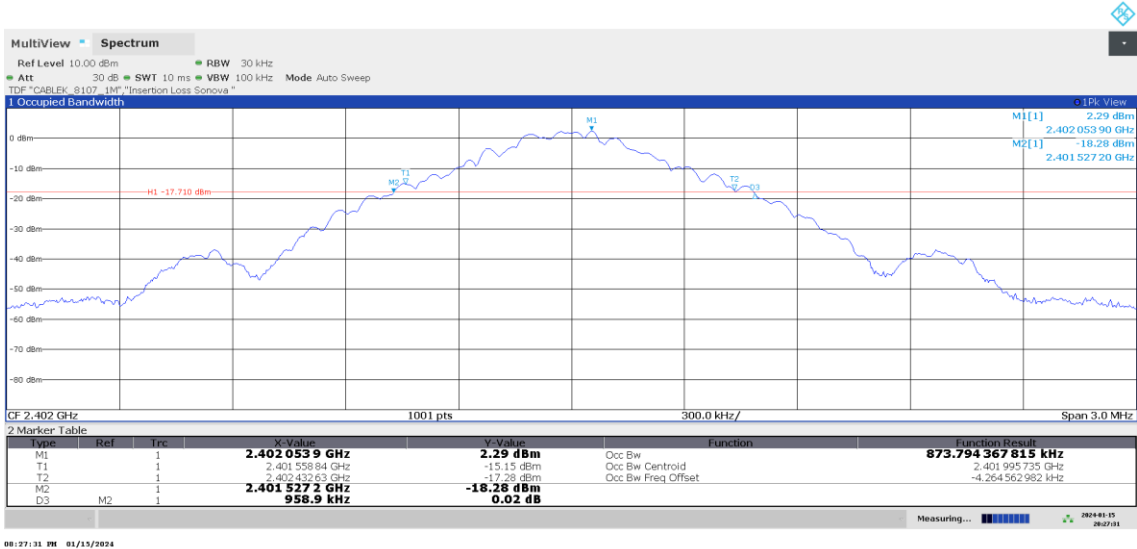
Verdict

Pass

Attachments

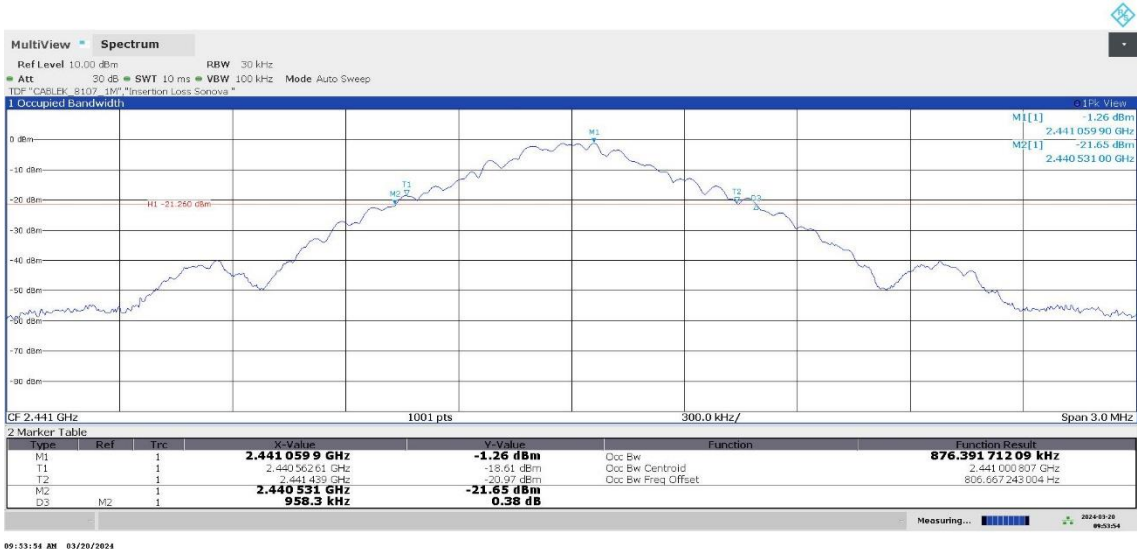
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = BT (GFSK)

Images:



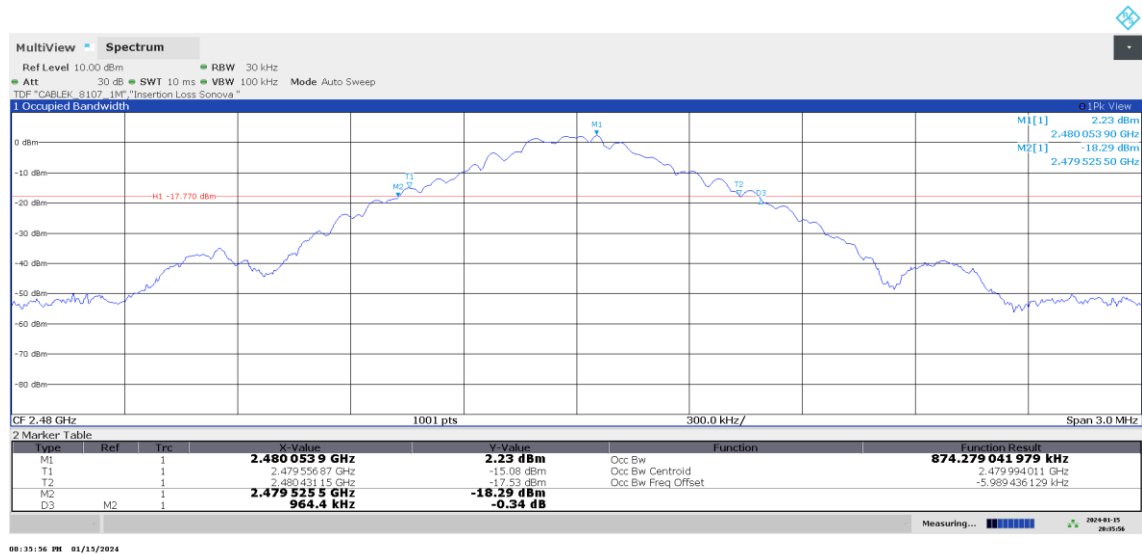
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2441.00000 Modulation = BT (GFSK)

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = BT (GFSK)

Images:



Modulation: BT (Pi/4 DQPSK 2-DH5)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1.201
		2441.00000	1.201
		2480.00000	1.201

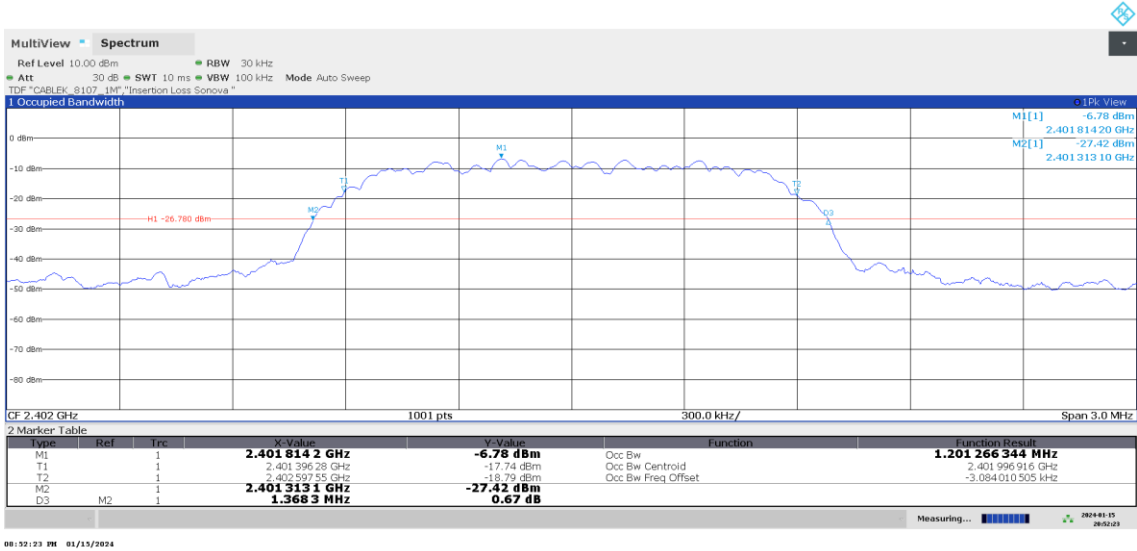
Verdict

Pass

Attachments

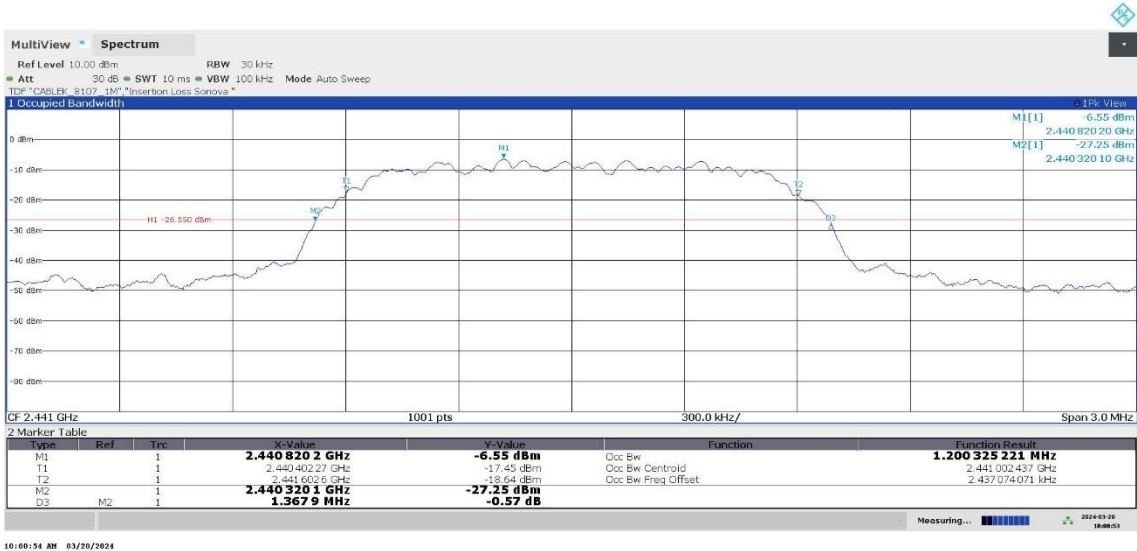
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



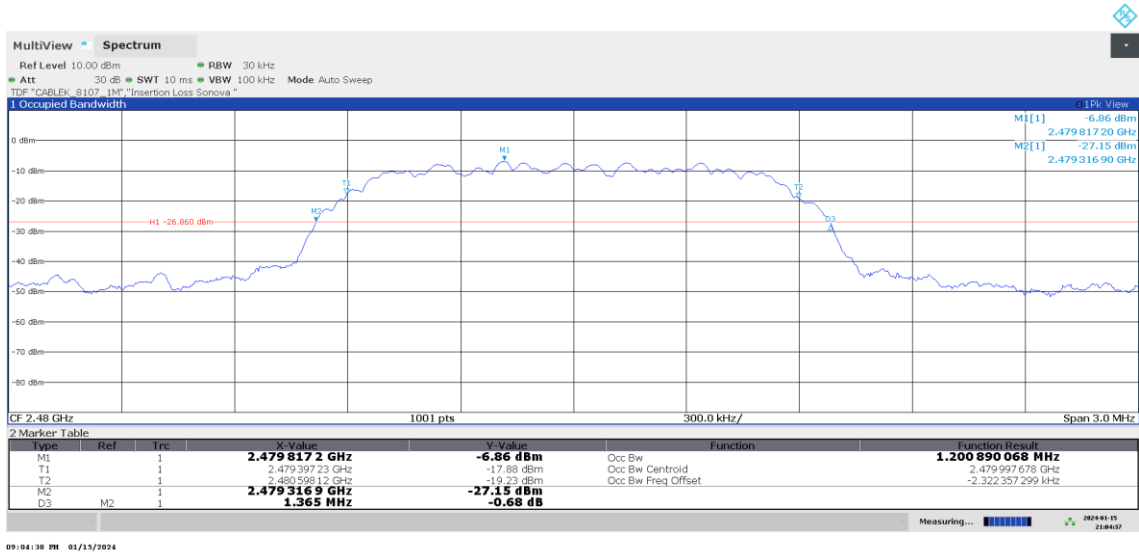
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2441.00000 Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = BT (Pi/4 DQPSK 2-DH5)

Images:



Modulation: BT (8DPSK 3-DH5)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1.210
		2441.00000	1.210
		2480.00000	1.210

Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = BT (8DPSK 3-DH5)

Images:



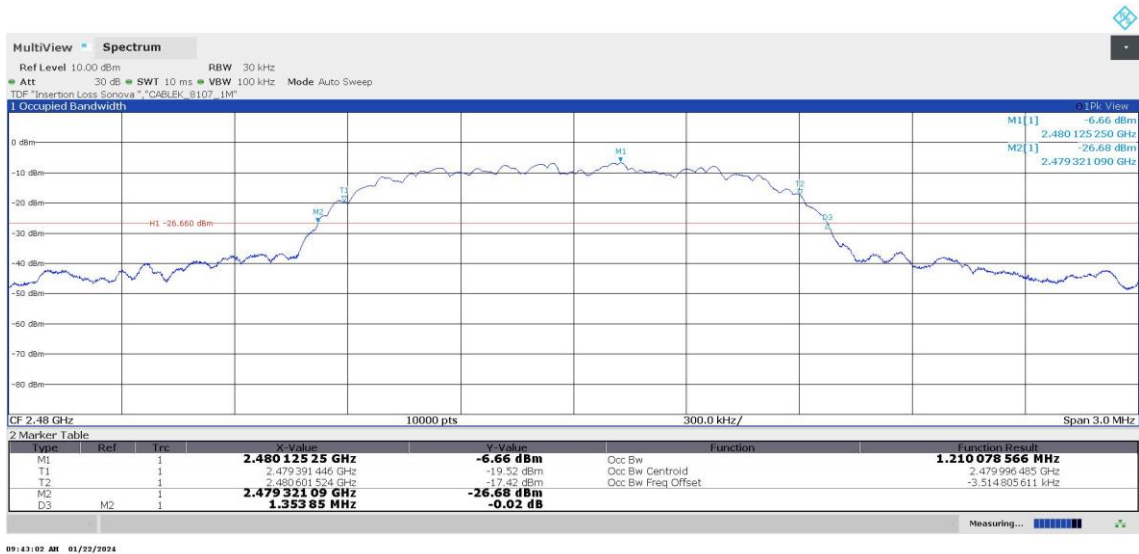
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2441.00000 Modulation = BT (8DPSK 3-DH5)

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = BT (8DPSK 3-DH5)

Images:



Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1.031
		2440.00000	1.034
		2480.00000	1.032

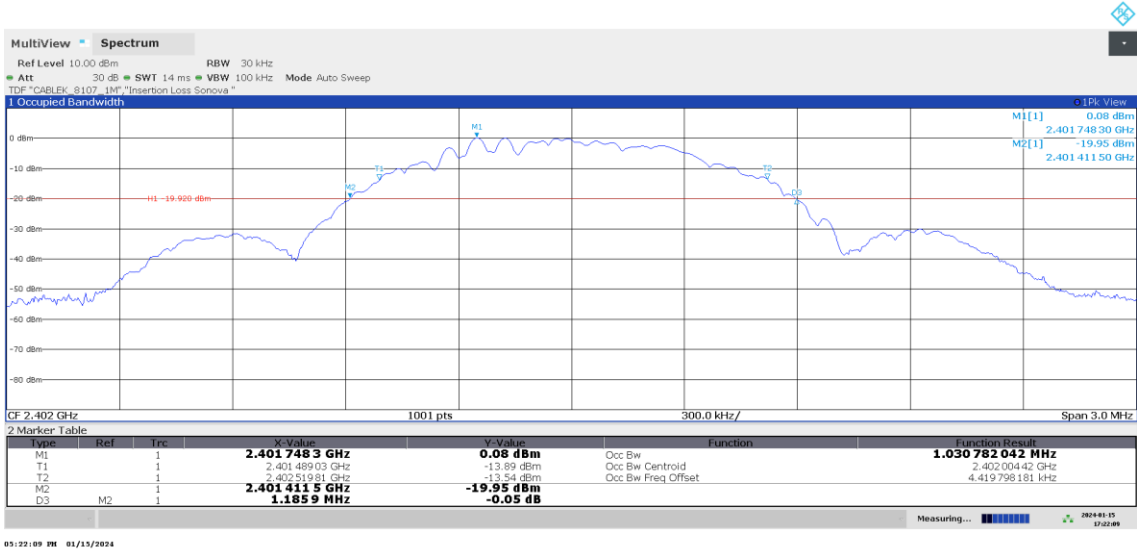
Verdict

Pass

Attachments

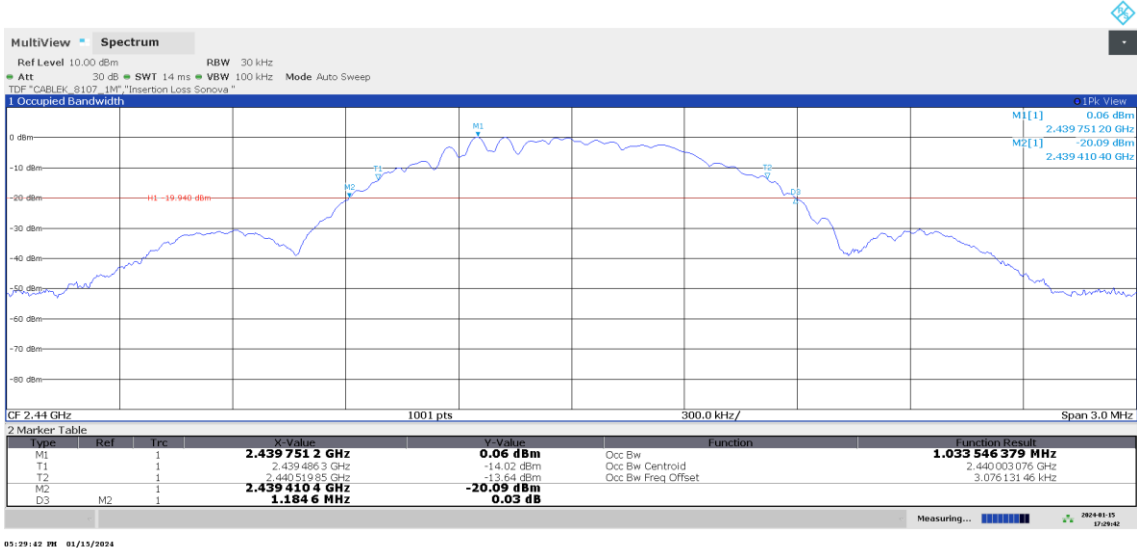
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



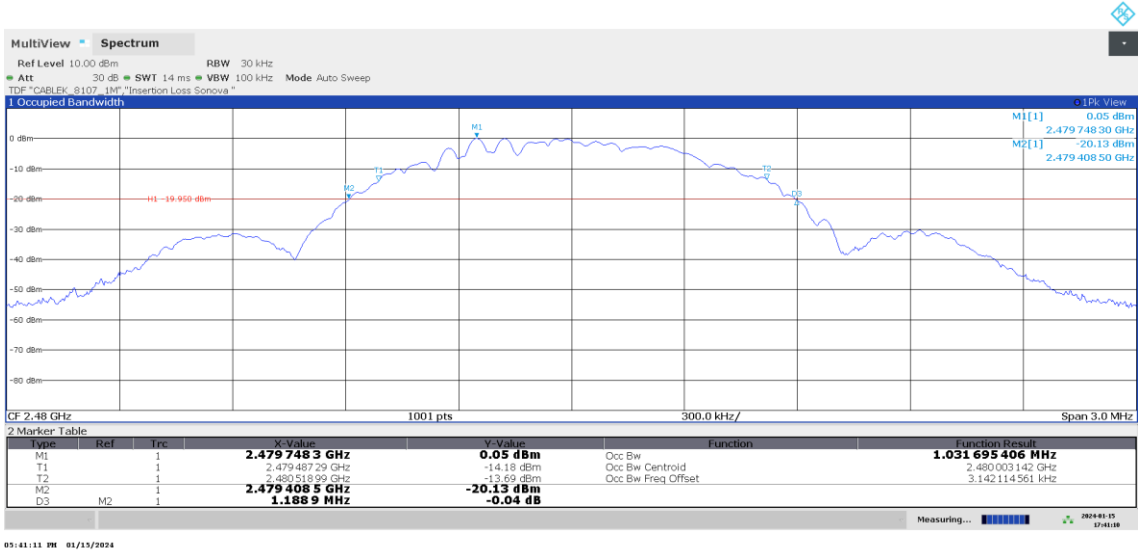
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2440.00000 Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = BTLE 5.0 (GFSK 1 Mbit/s)

Images:



Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2.062
		2440.00000	2.061
		2480.00000	2.062

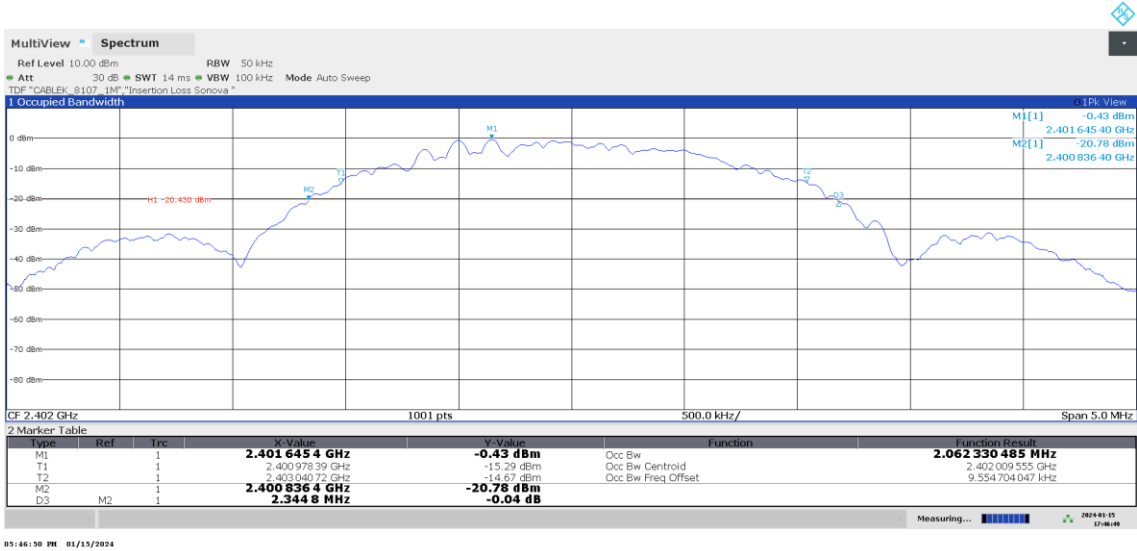
Verdict

Pass

Attachments

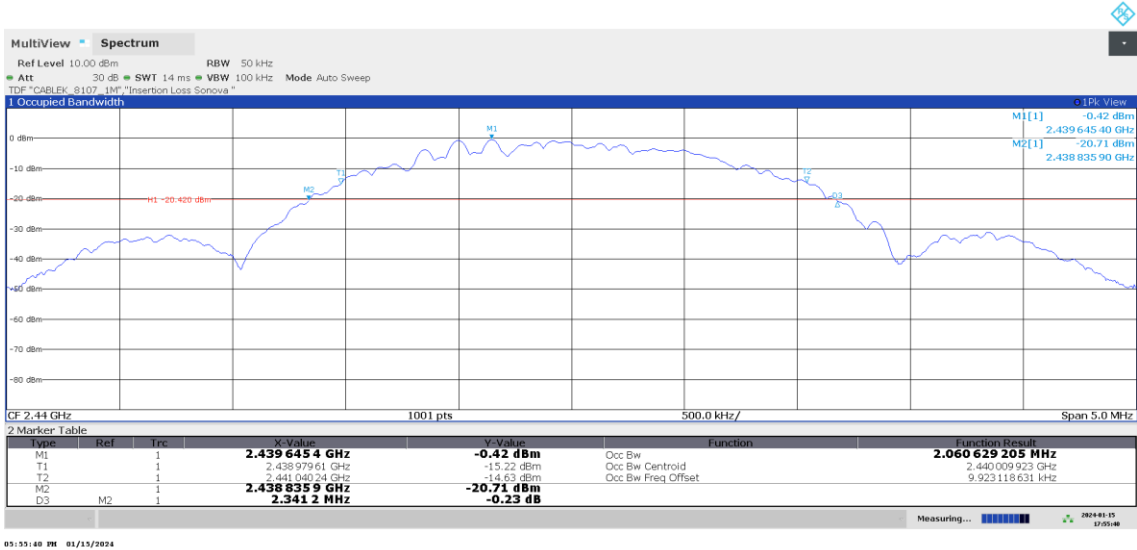
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:



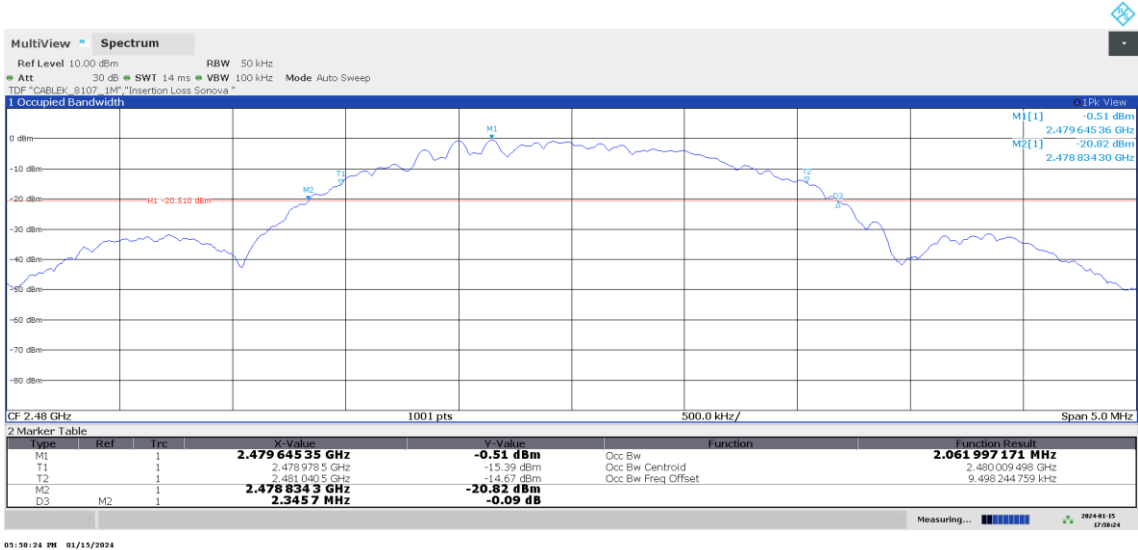
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2440.00000 Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = BTLE 5.0 (GFSK 2 Mbit/s)

Images:



Modulation: DM

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	1.743
		2440.00000	1.741
		2480.00000	1.738

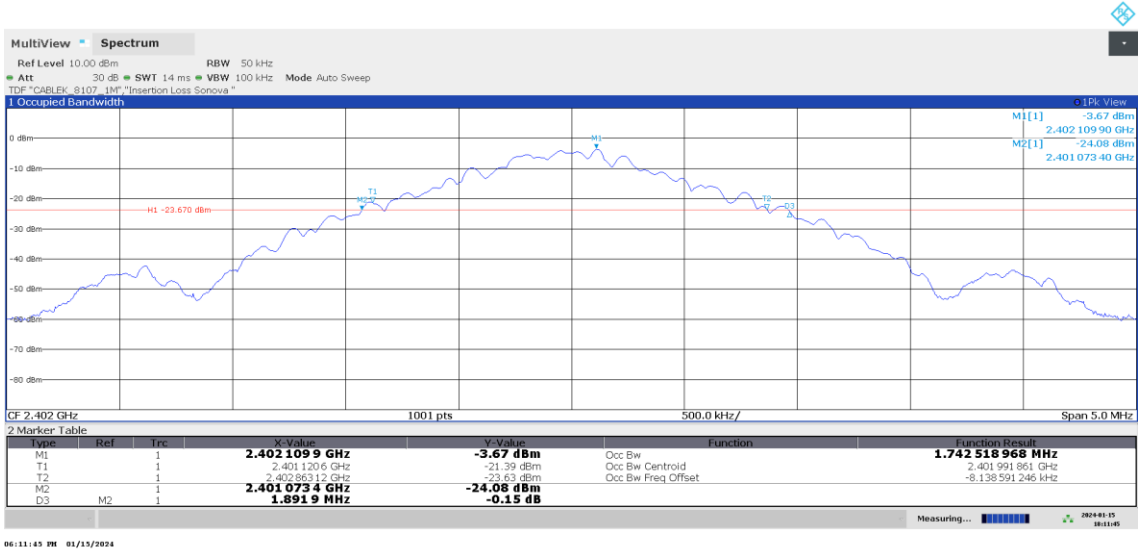
Verdict

Pass

Attachments

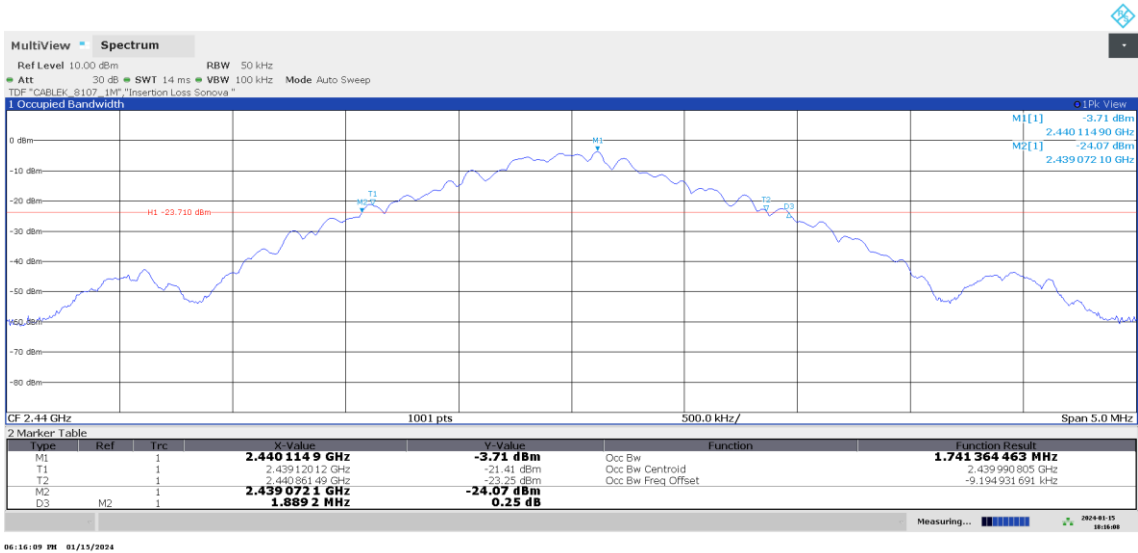
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = DM

Images:



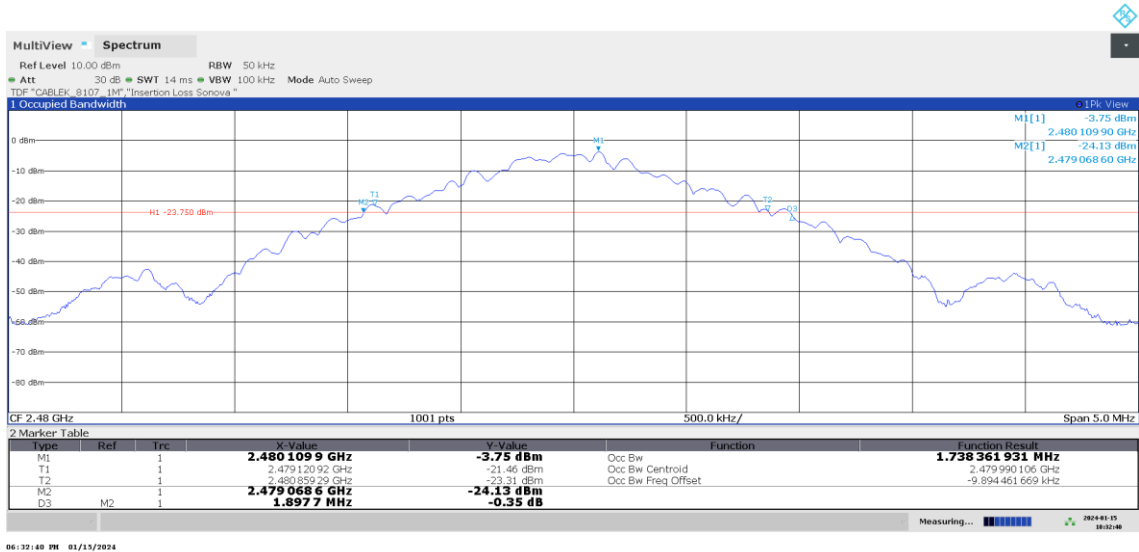
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2440.00000 Modulation = DM

Images:



Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2480.00000 Modulation = DM

Images:



Modulation: FLORA

Results

Operation Band (MHz)	Equipment	Freq (MHz)	99OBW (MHz)
[2400, 2483.5]	Digital Transmission System (DTS)	2402.00000	2.669
		2440.00000	2.668
		2480.00000	2.669

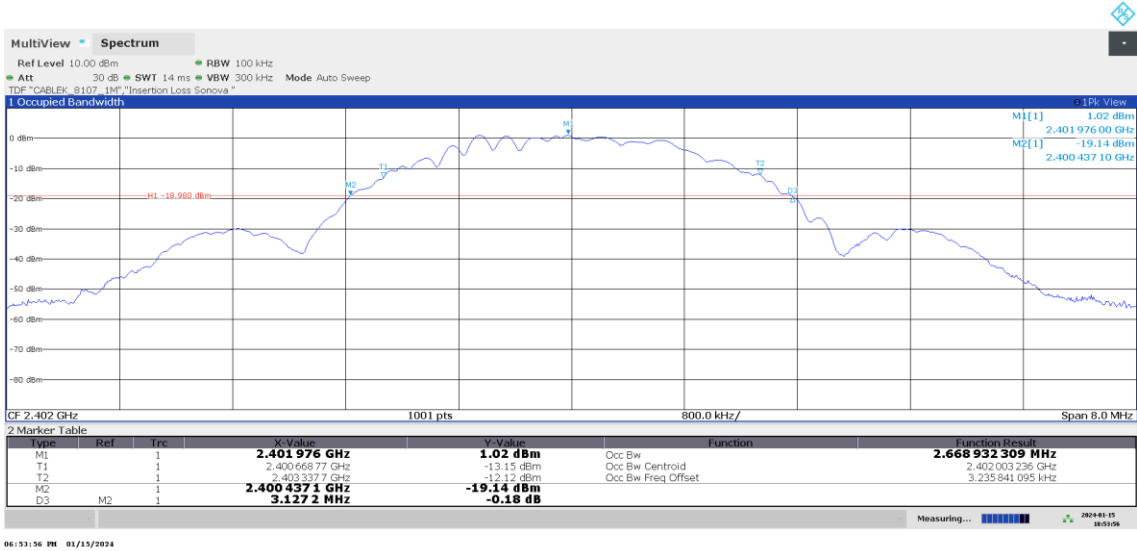
Verdict

Pass

Attachments

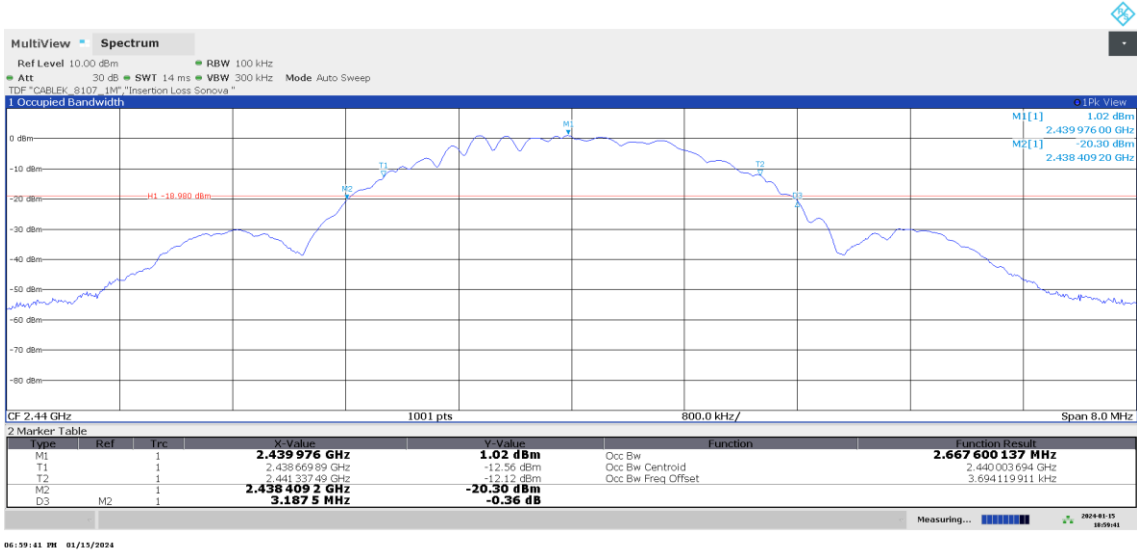
Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2402.00000 Modulation = FLORA

Images:

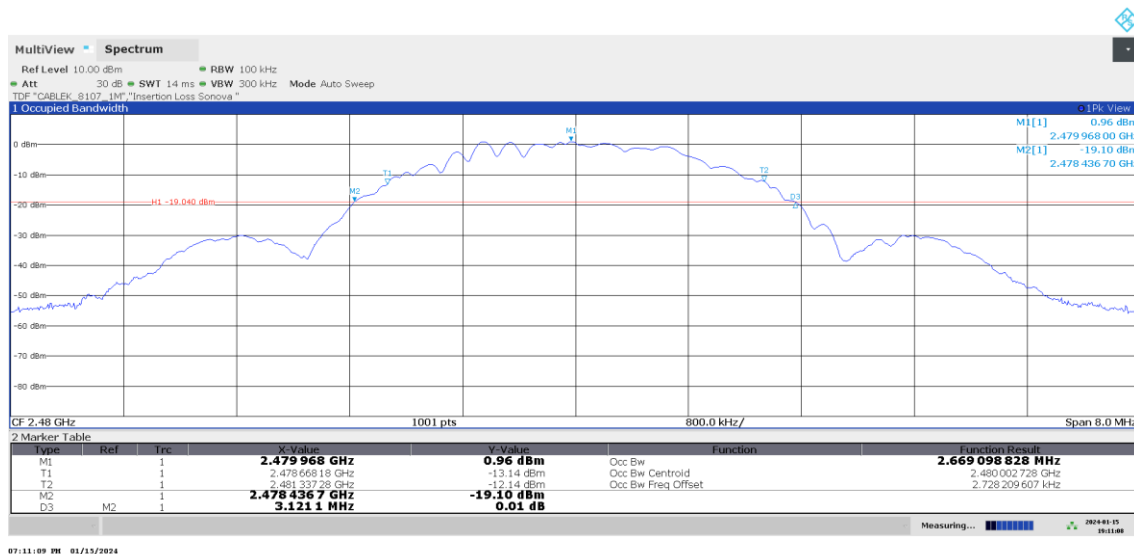


Operation Band MHz = [2400, 2483.5]
Frequency MHz = 2440.00000 Modulation = FLORA

Images:



Modulation = FLORA



FCC 15.249 (b) / RSS-210 B.10 (a) Field strength of fundamental and harmonics emissions

Limits

The field strength of emissions from intentional radiators shall comply with the following:

Fundamental frequency (MHz)	Field strength of fundamental (mV/m)	Field strength (dBµV/m)	Measurement distance (m)
902 - 928	50	93.98	3
2400 - 2483.5	50	93.98	3
5725 - 5875	50	93.98	3
24000 - 24250	250	107.96	3

For frequencies above 1000 MHz, the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Modulation: BTLE 5.0 (GFSK 1 Mbit/s)

Results

Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	91.54	91.01
	2440.00	91.59	91.09
	2480.00	91.25	92.67

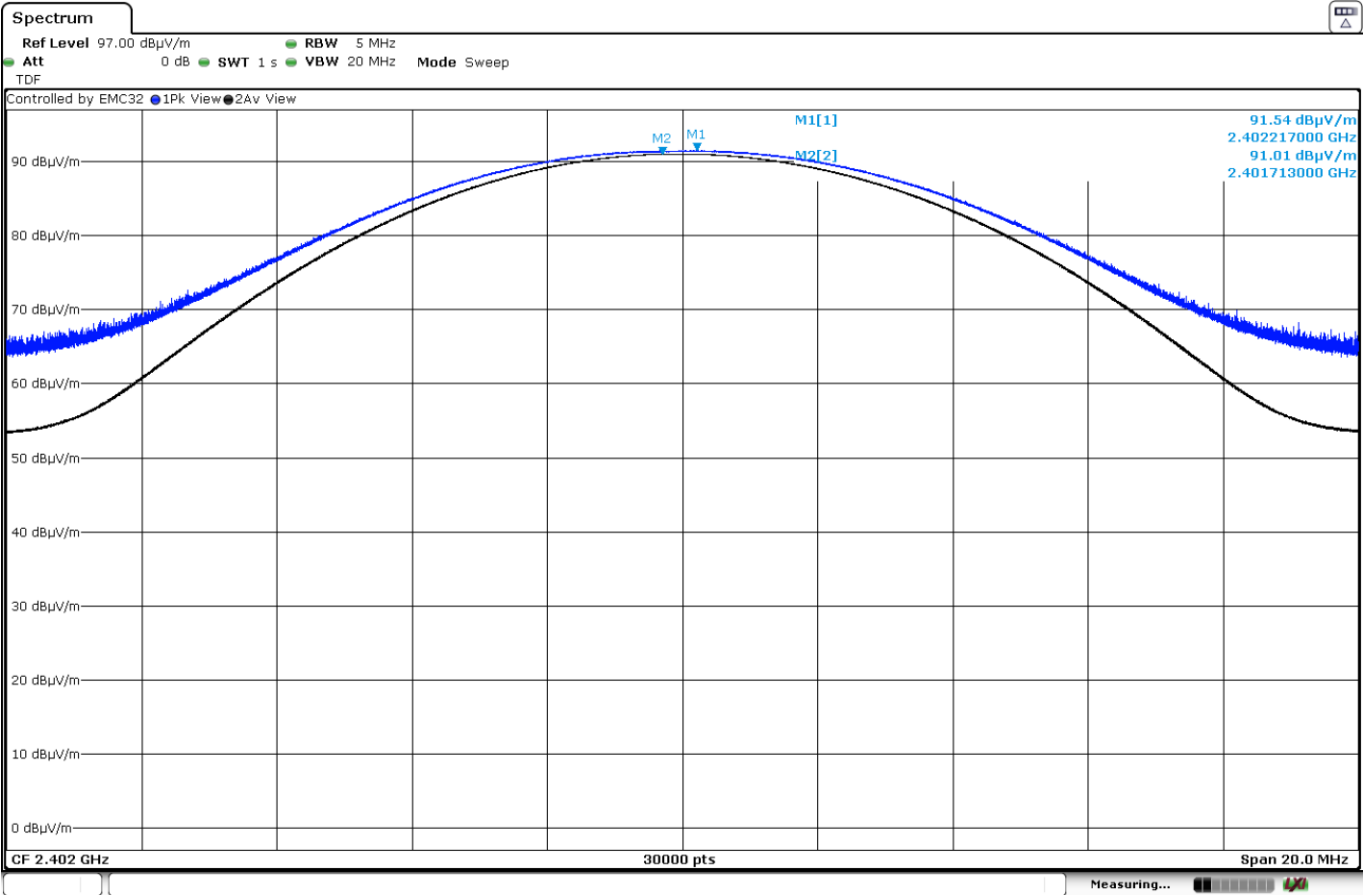
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2402.00000

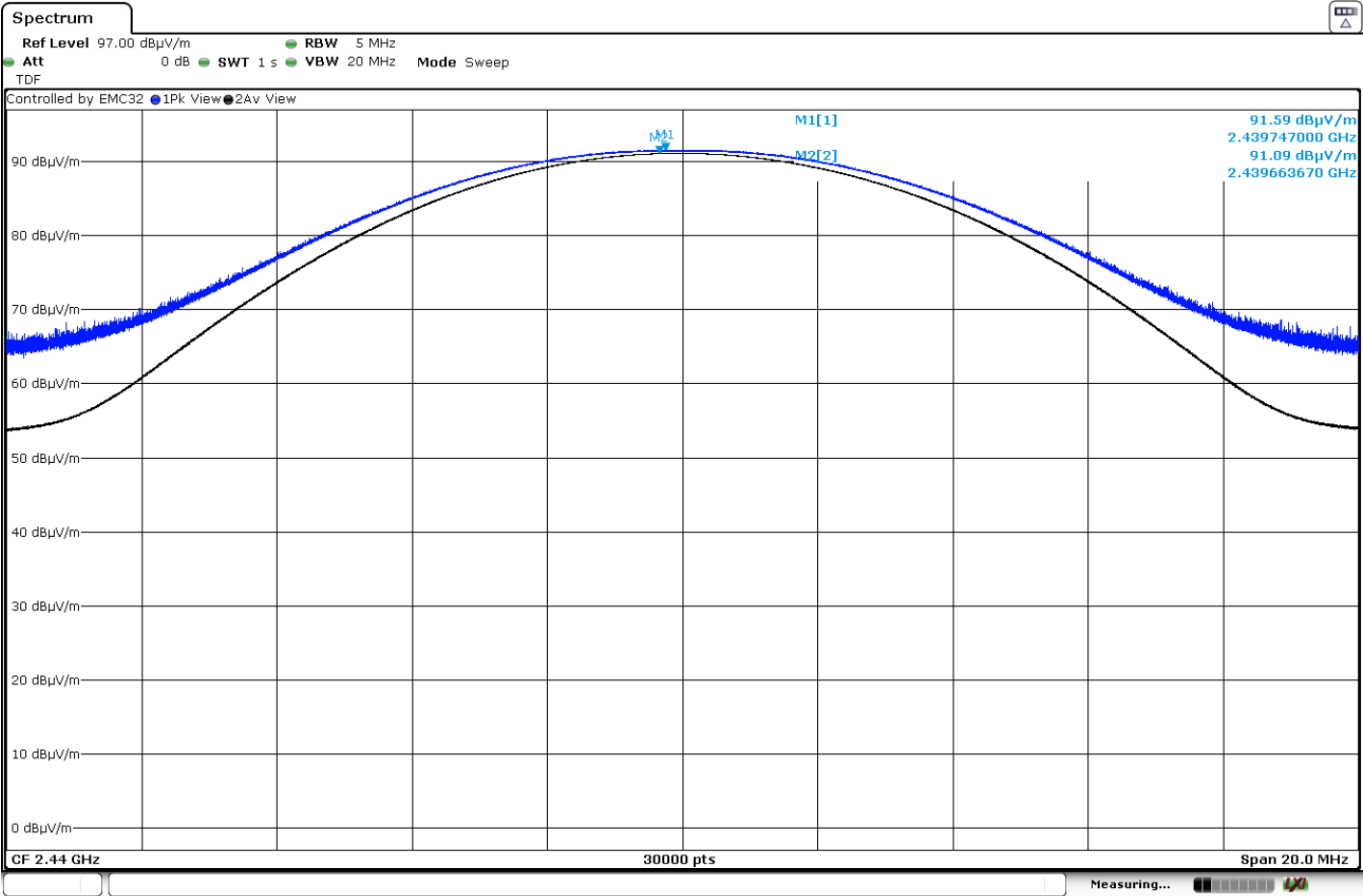
Images:



Date: 11.JAN.2024 21:07:31

Operation Band MHz = [2400, 2483.5] Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2440.00000

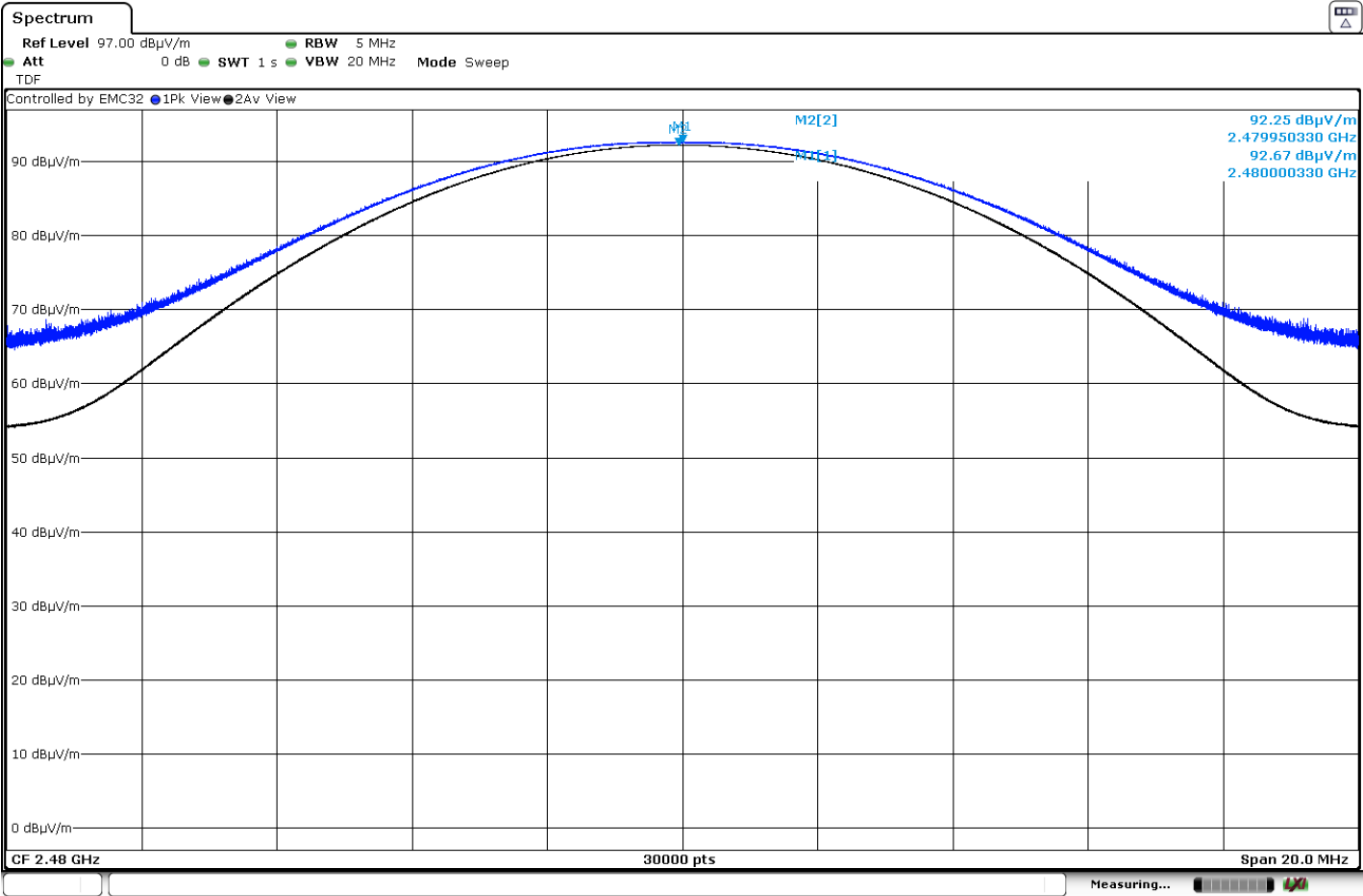
Images:



Date: 11.JAN.2024 21:37:18

Operation Band MHz = [2400, 2483.5] Modulation = BTLE 5.0 (GFSK 1 Mbit/s)
Frequency MHz = 2480.00000

Images:



Date: 11.JAN.2024 22:05:24

Modulation: BTLE 5.0 (GFSK 2 Mbit/s)

Results

Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	90.43	89.81
	2440.00	91.24	90.36
	2480.00	92.87	92.37

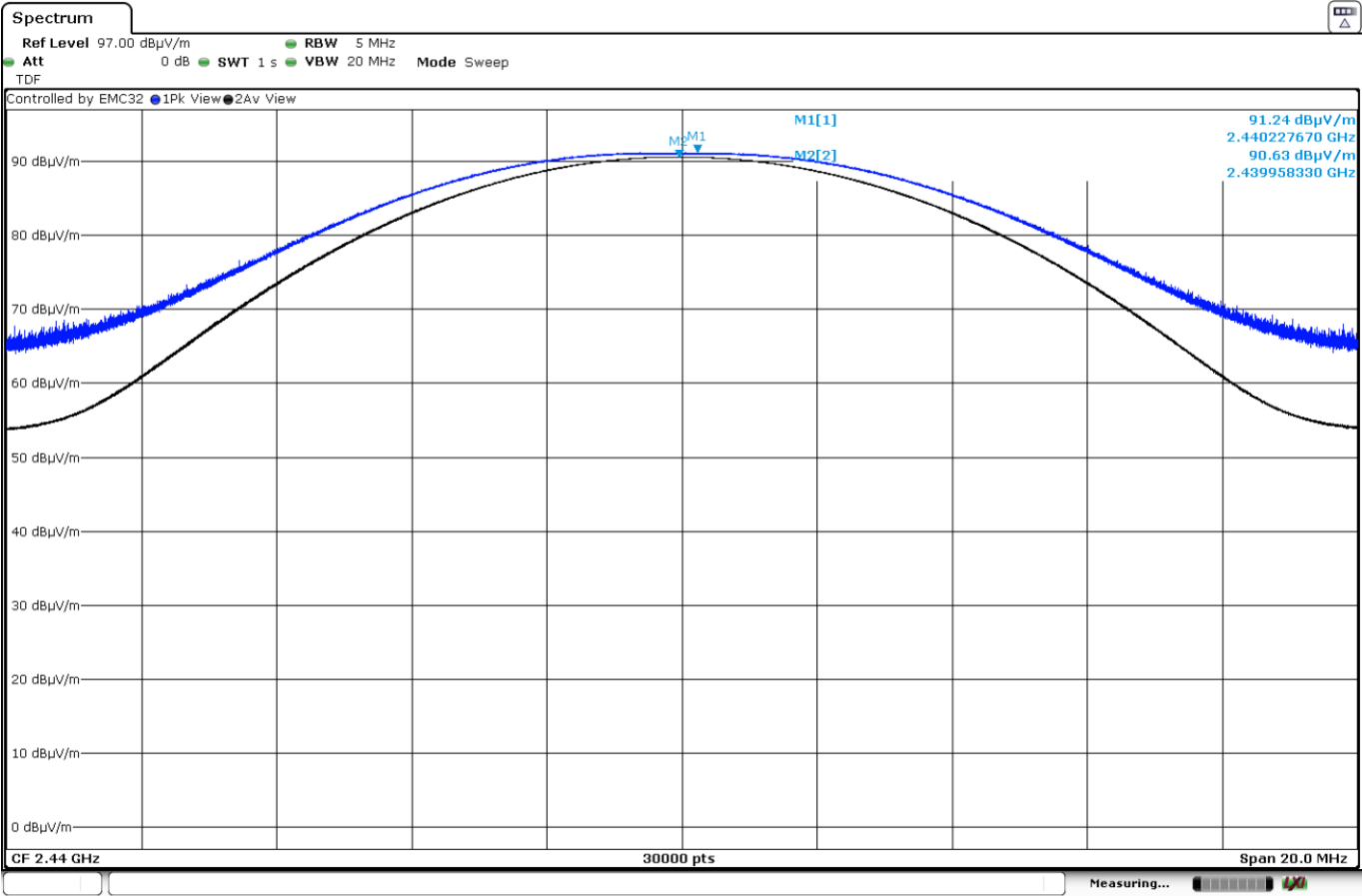
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2402.00000

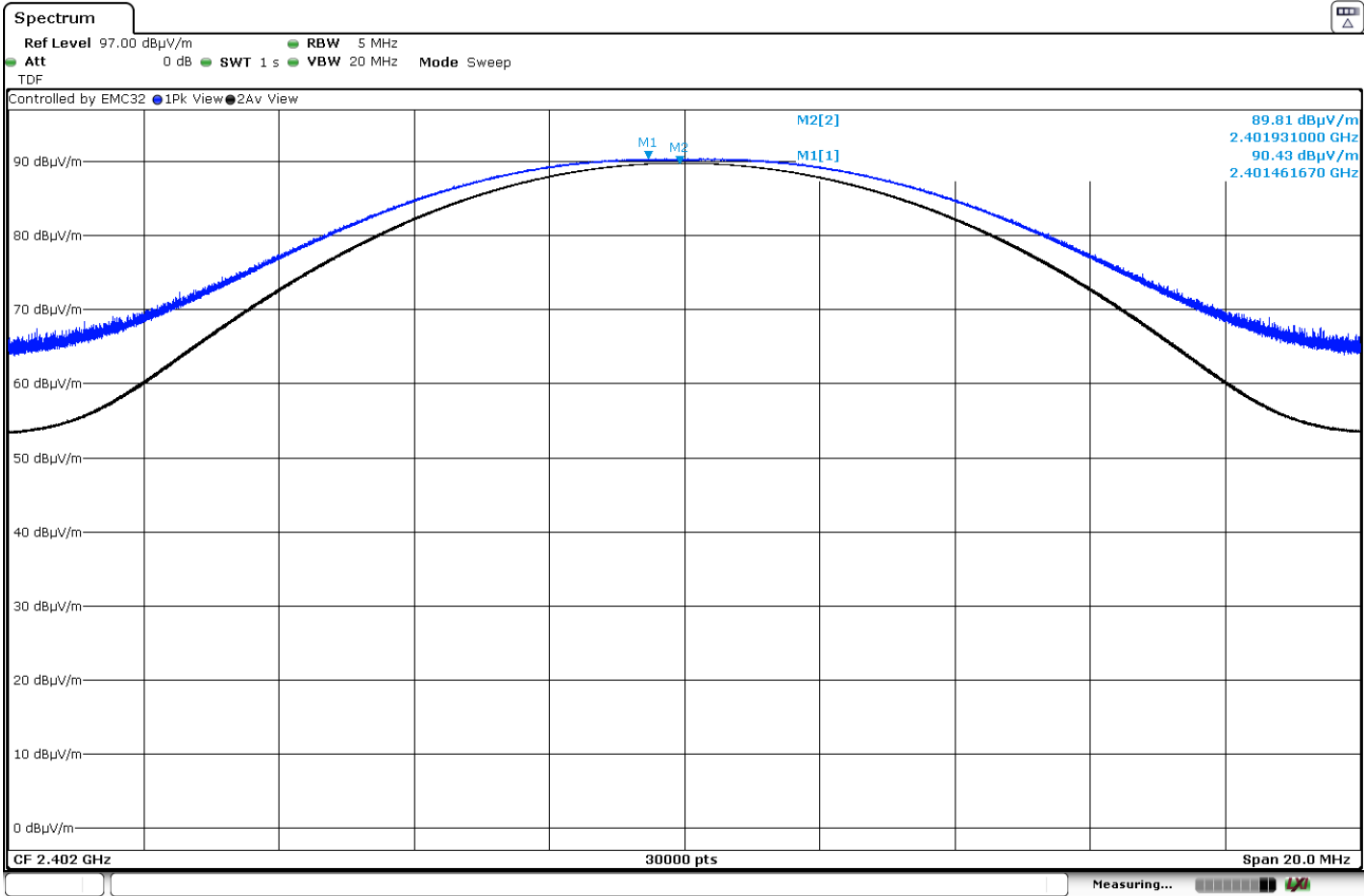
Images:



Date: 12.JAN.2024 10:38:17

Operation Band MHz = [2400, 2483.5] Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2440.00000

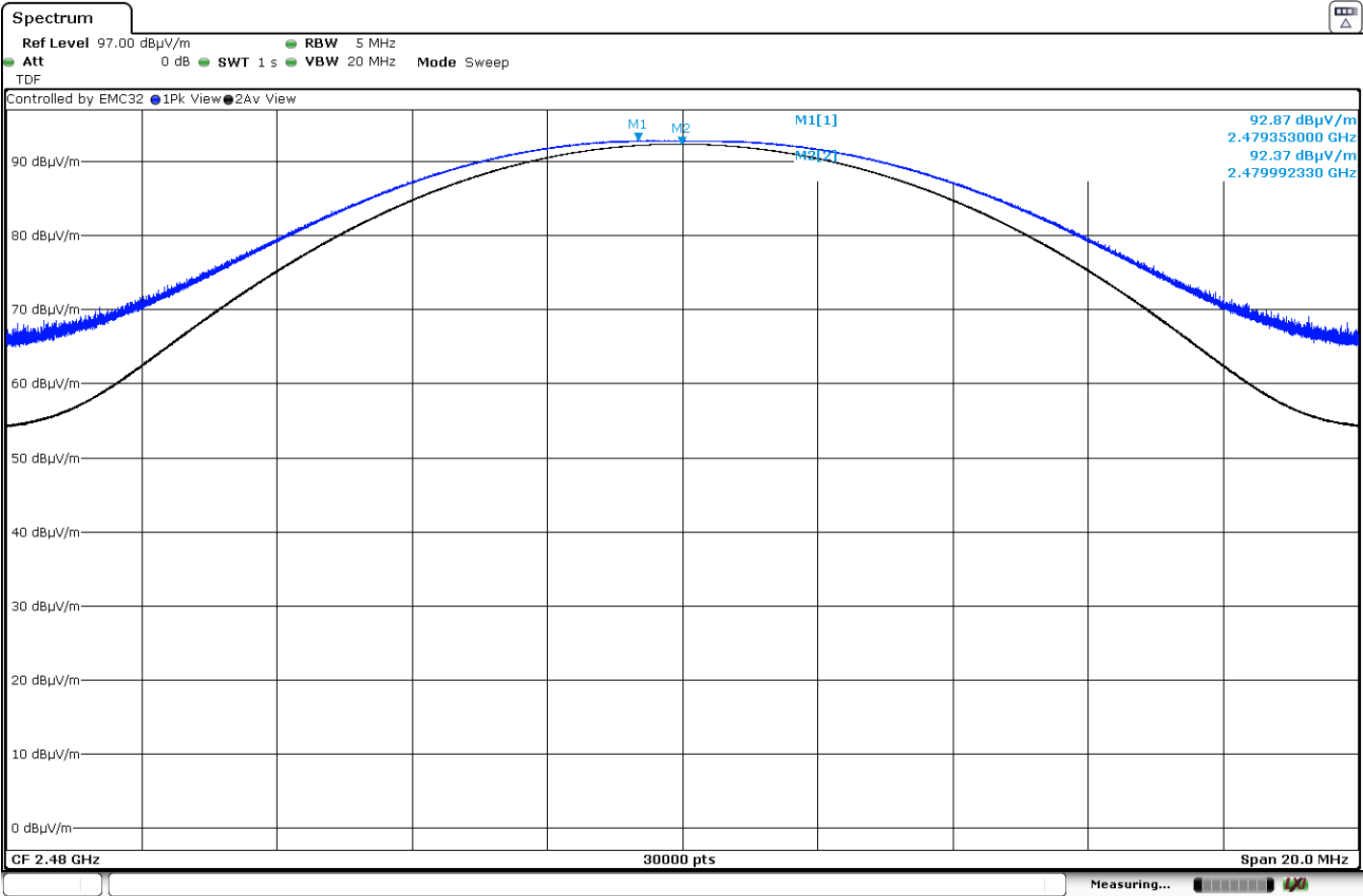
Images:



Date: 12.JAN.2024 13:05:13

Operation Band MHz = [2400, 2483.5] Modulation = BTLE 5.0 (GFSK 2 Mbit/s)
Frequency MHz = 2480.00000

Images:



Date: 12.JAN.2024 13:26:02

Modulation: BT (GFSK)

Results

Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	90.43	89.92
	2441.00	91.58	91.06
	2480.00	92.79	92.29

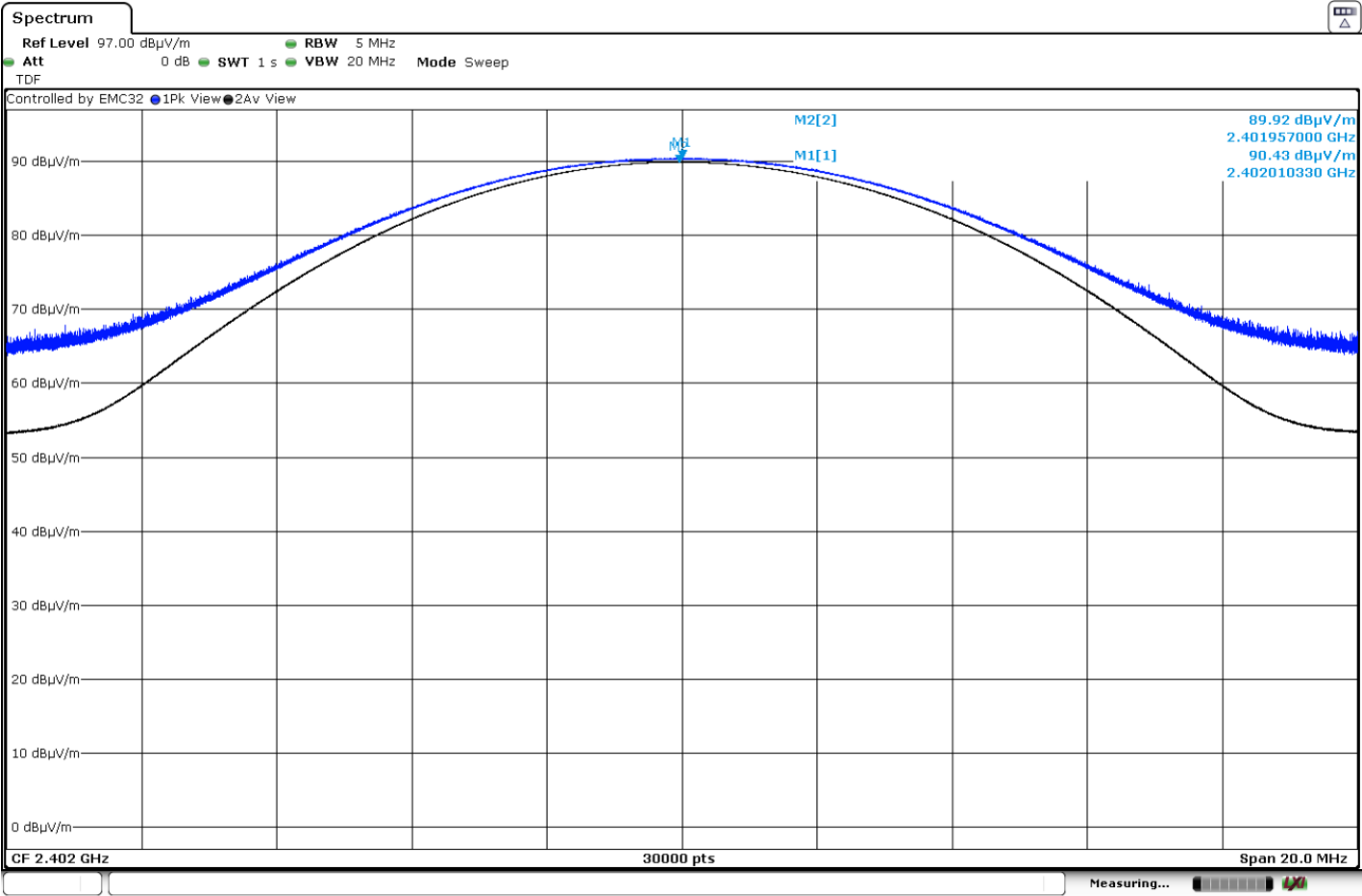
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Modulation = BT (GFSK)
Frequency MHz = 2402.00000

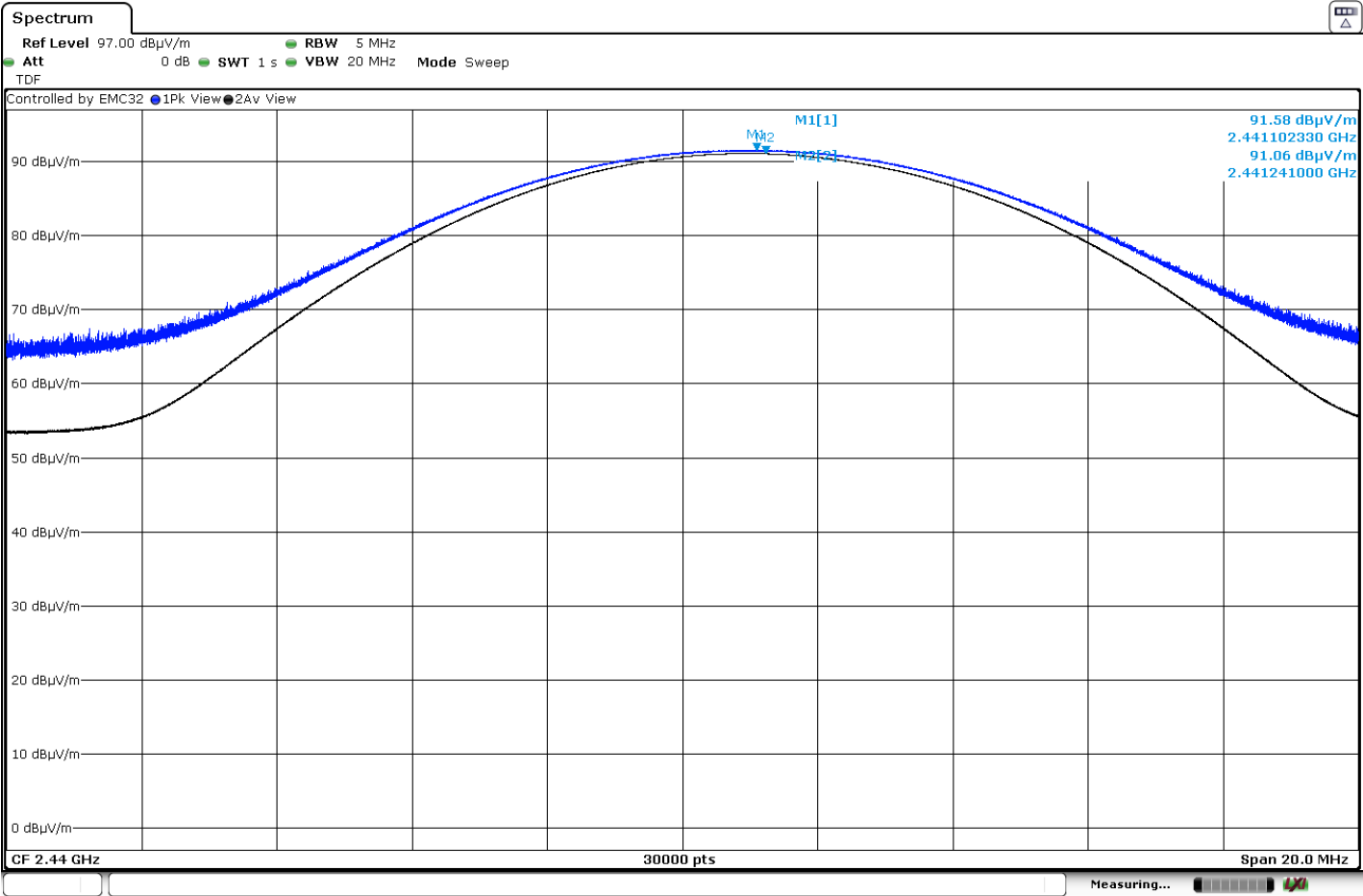
Images:



Date: 12.JAN.2024 14:43:08

Operation Band MHz = [2400, 2483.5] Modulation = BT (GFSK)
Frequency MHz = 2441.00000

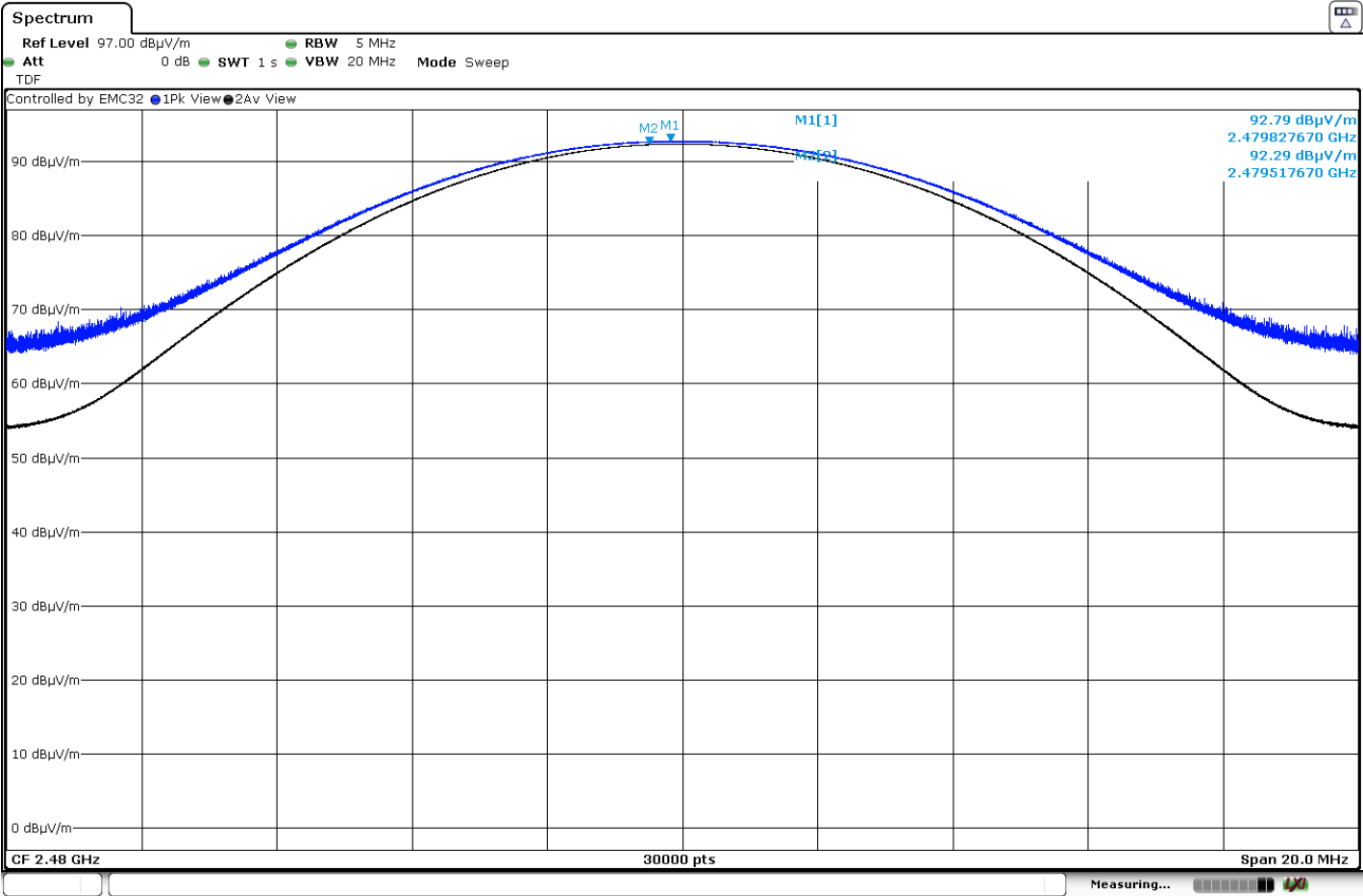
Images:



Date: 12.JAN.2024 17:11:19

Operation Band MHz = [2400, 2483.5] Modulation = BT (GFSK)
Frequency MHz = 2480.00000

Images:



Date: 12.JAN.2024 17:45:51

Modulation: BT (Pi/4 DQPSK 2-DH5)

Results

Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	88.70	85.46
	2441.00	89.10	85.68
	2480.00	90.08	86.87

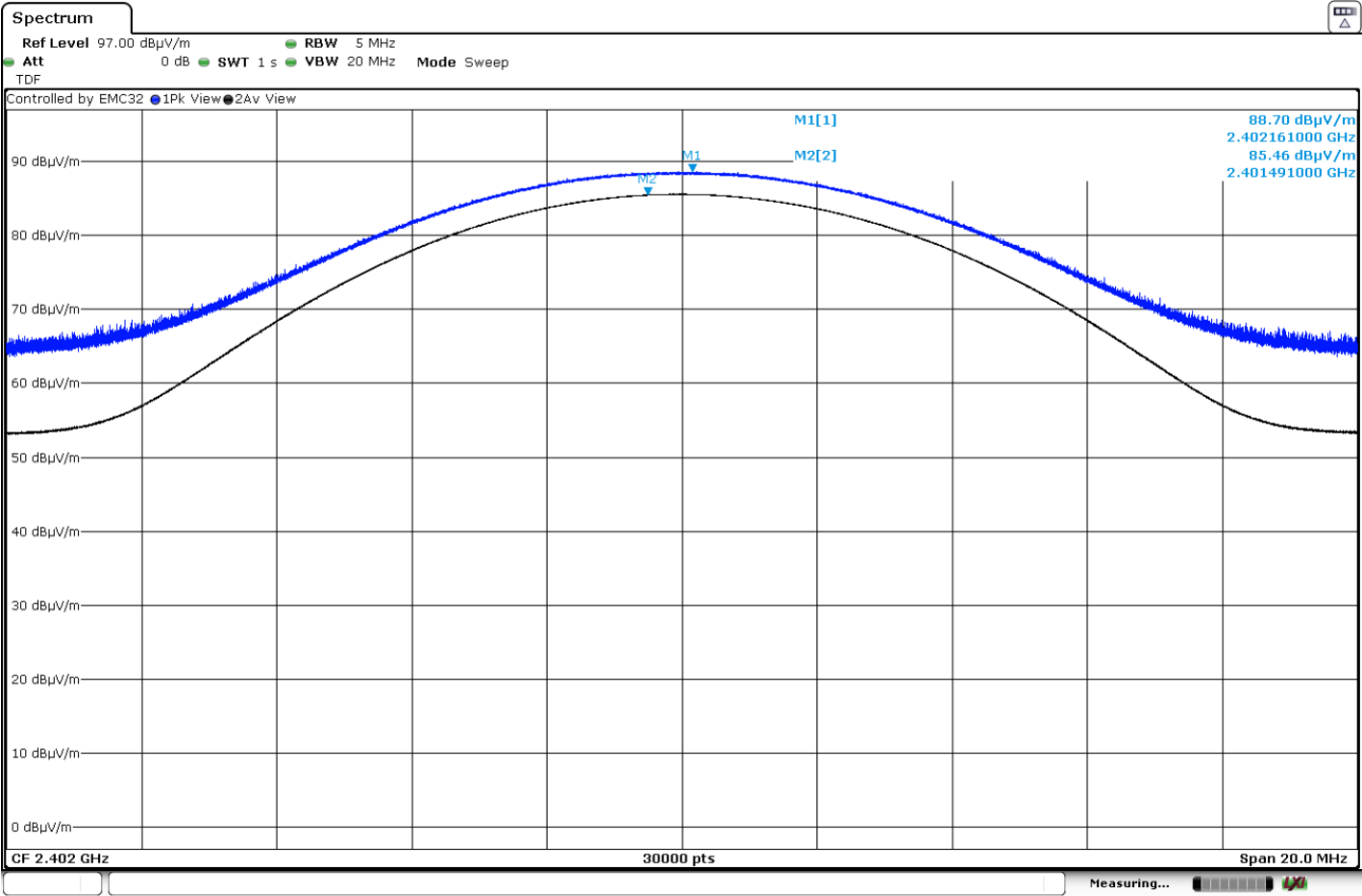
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Modulation = BT (Pi/4 DQPSK 2-DH5)
Frequency MHz = 2402.00000

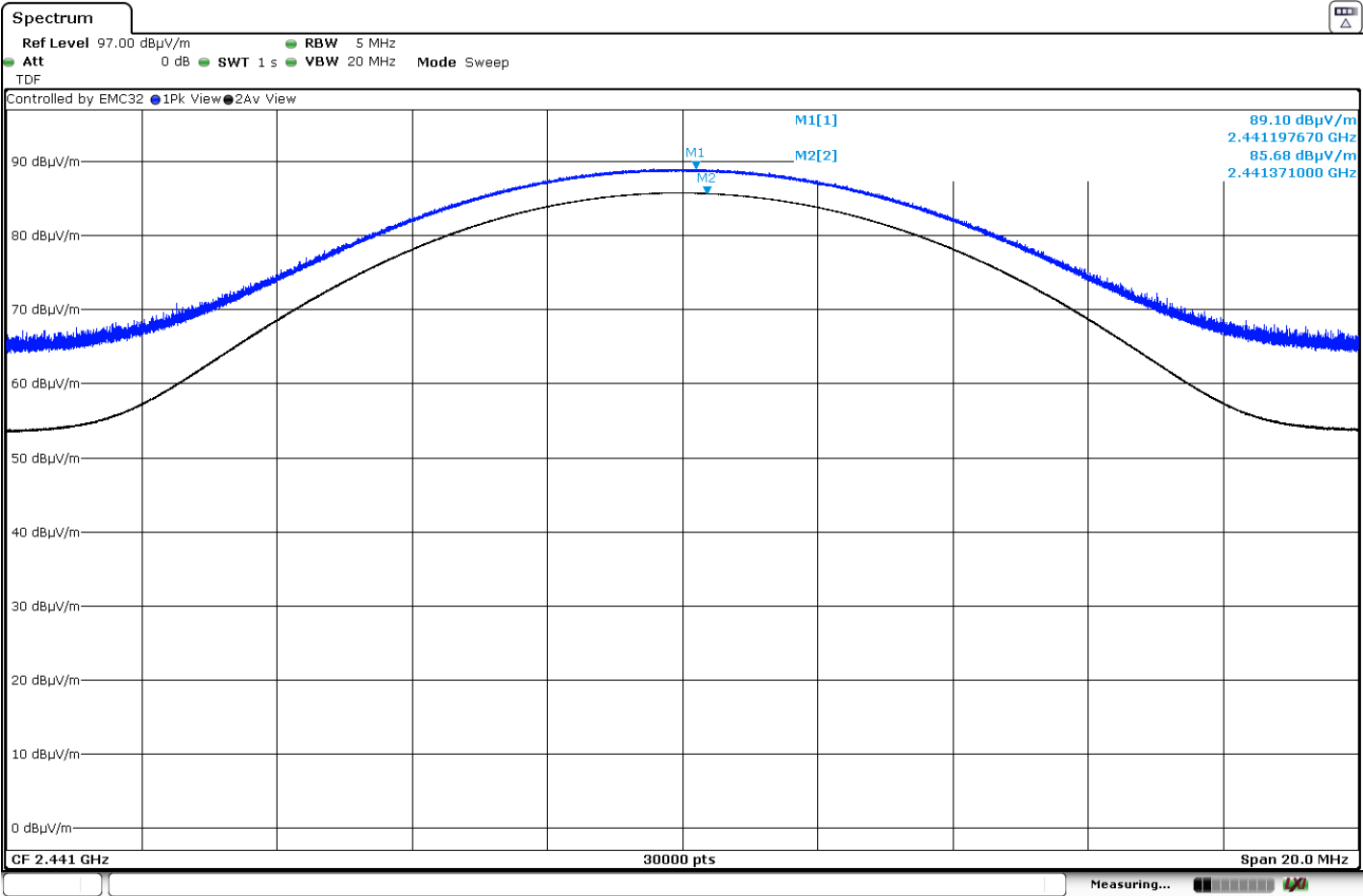
Images:



Date: 12.JAN.2024 18:29:21

Operation Band MHz = [2400, 2483.5] Modulation = BT (Pi/4 DQPSK 2-DH5)
Frequency MHz = 2441.00000

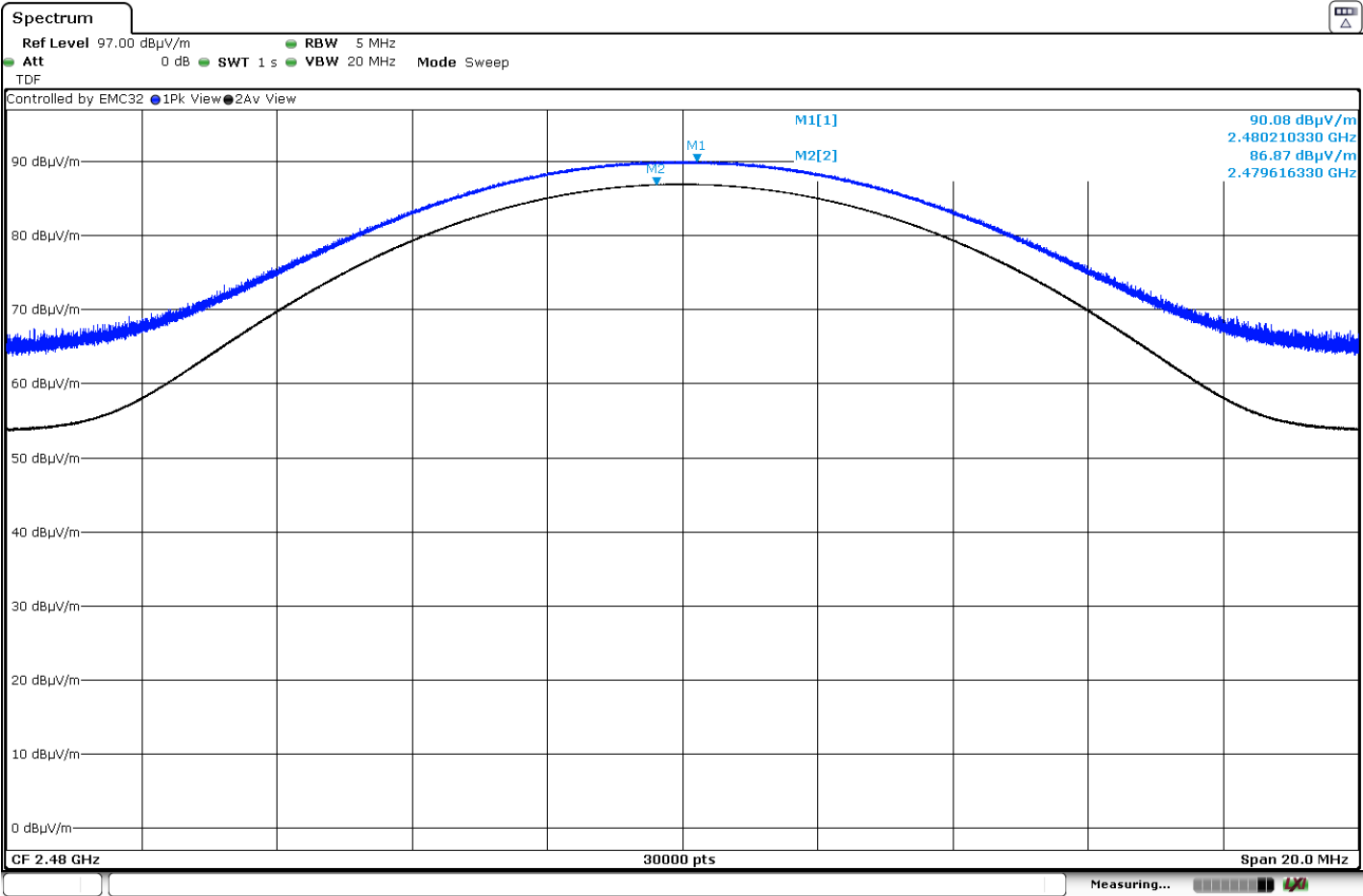
Images:



Date: 12.JAN.2024 19:28:53

Operation Band MHz = [2400, 2483.5] Modulation = BT (Pi/4 DQPSK 2-DH5)
Frequency MHz = 2480.00000

Images:



Date: 15.JAN.2024 09:21:53

Modulation: BT (8DPSK 3-DH5)

Results

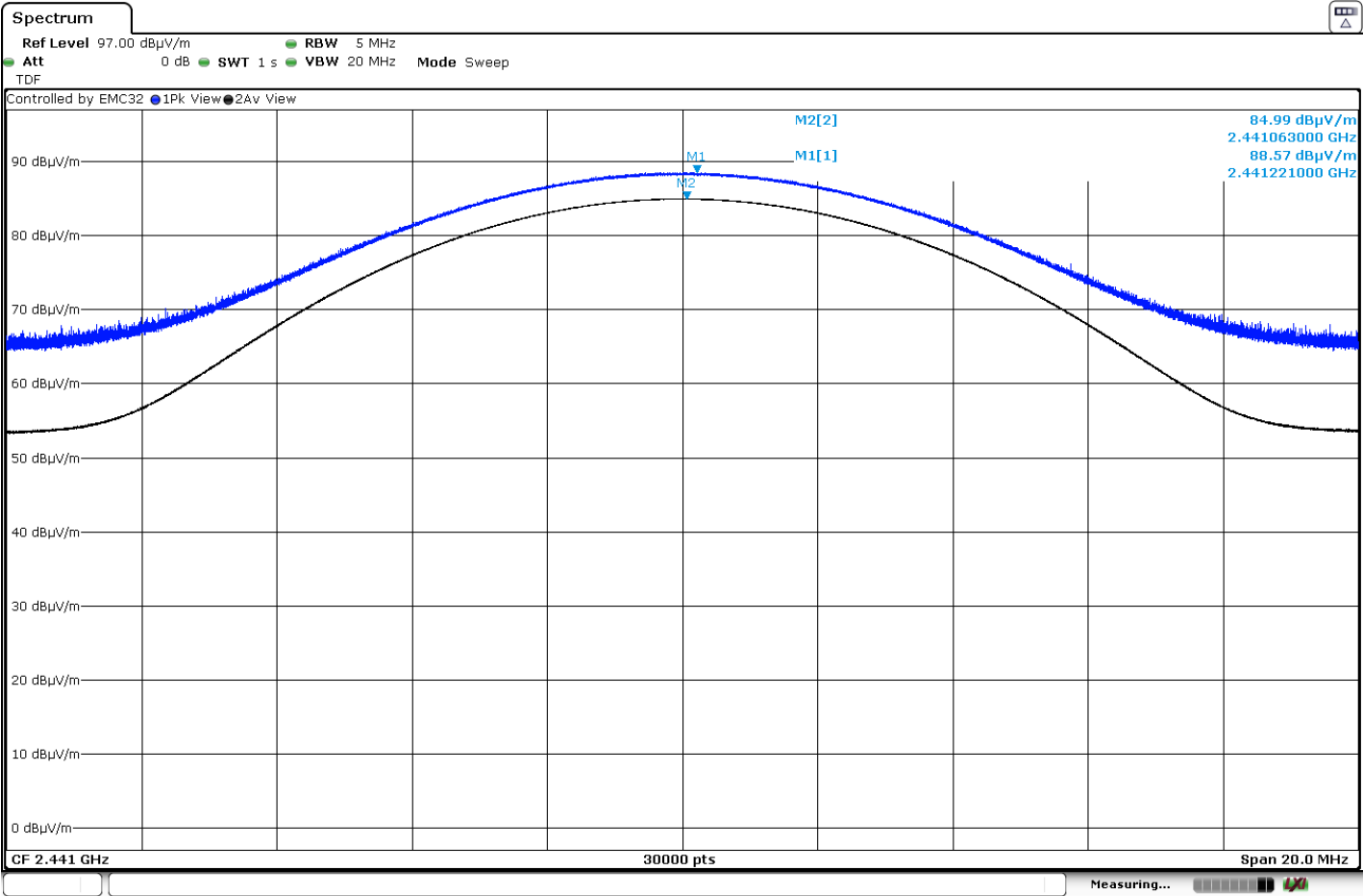
Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	89.65	86.21
	2441.00	88.57	84.99
	2480.00	90.31	86.63

Verdict

Pass

Operation Band MHz = [2400, 2483.5] Modulation = BT (8DPSK 3-DH5)
Frequency MHz = 2441.00000

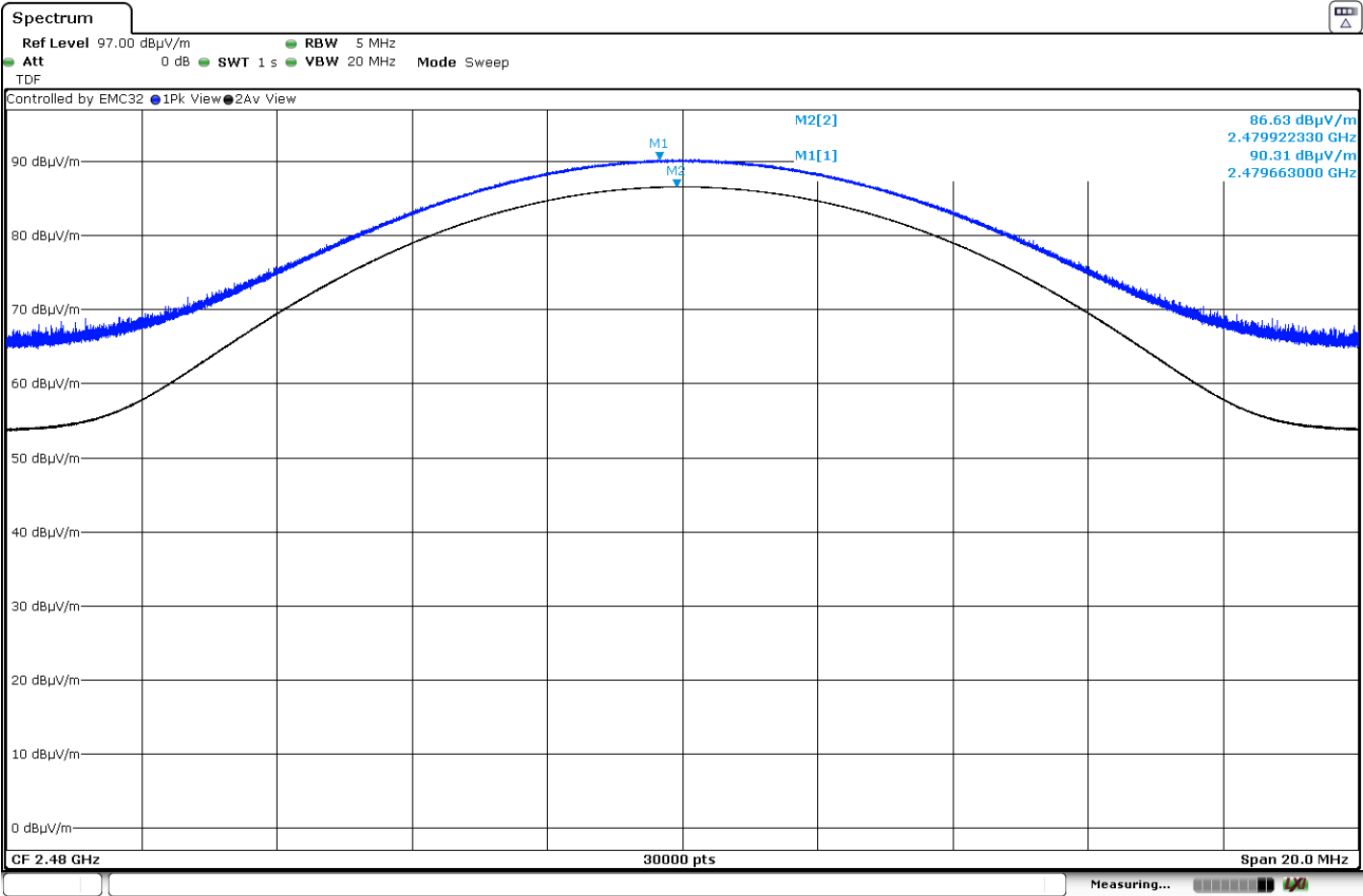
Images:



Date: 15.JAN.2024 11:01:15

Operation Band MHz = [2400, 2483.5] Modulation = BT (8DPSK 3-DH5)
Frequency MHz = 2480.00000

Images:



Date: 15.JAN.2024 13:59:10

Modulation: DM

Results

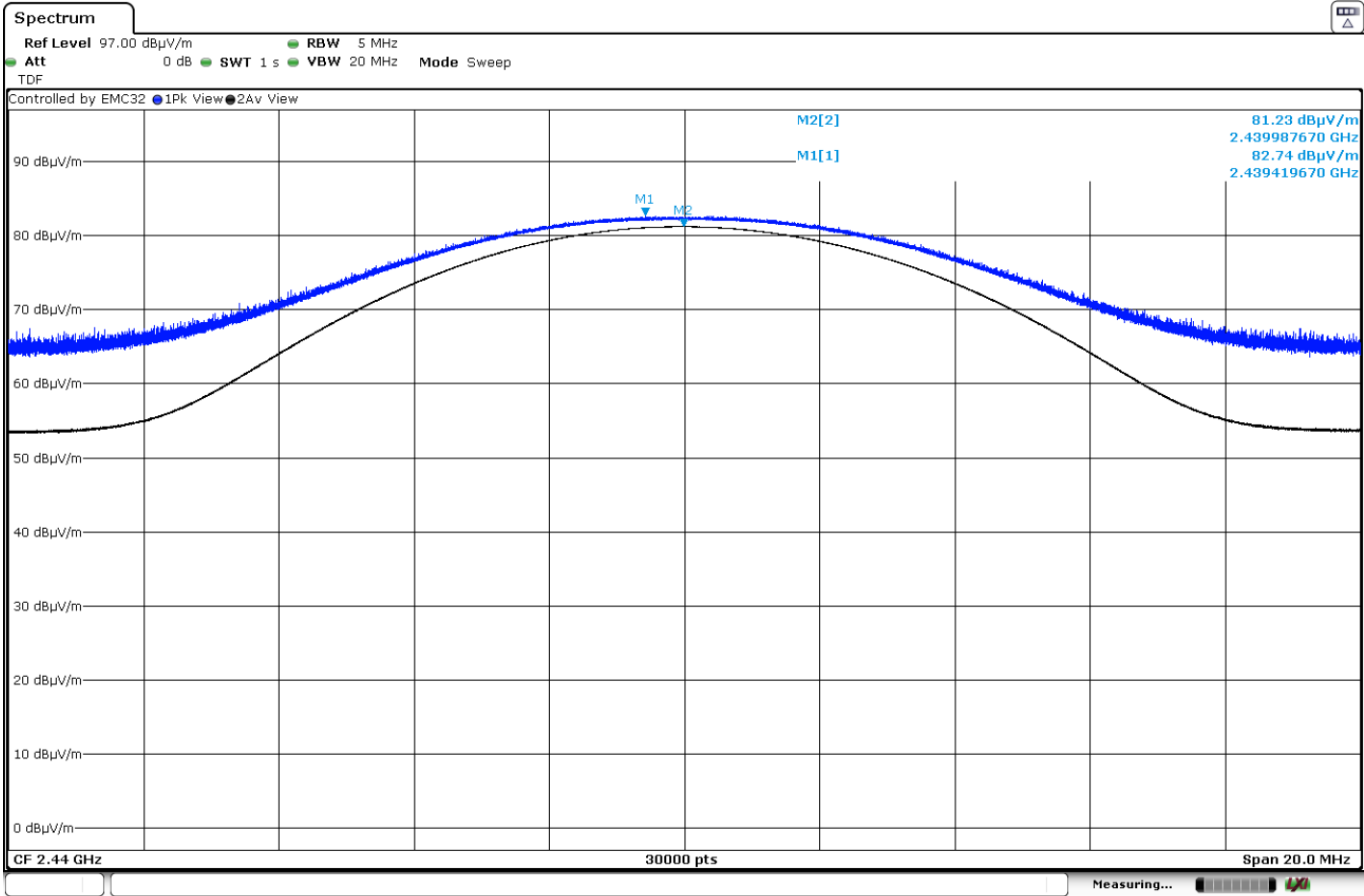
Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	82.35	80.88
	2440.00	82.74	81.23
	2480.00	85.12	84.01

Verdict

Pass

Operation Band MHz = [2400, 2483.5] Modulation = DM
Frequency MHz = 2440.00000

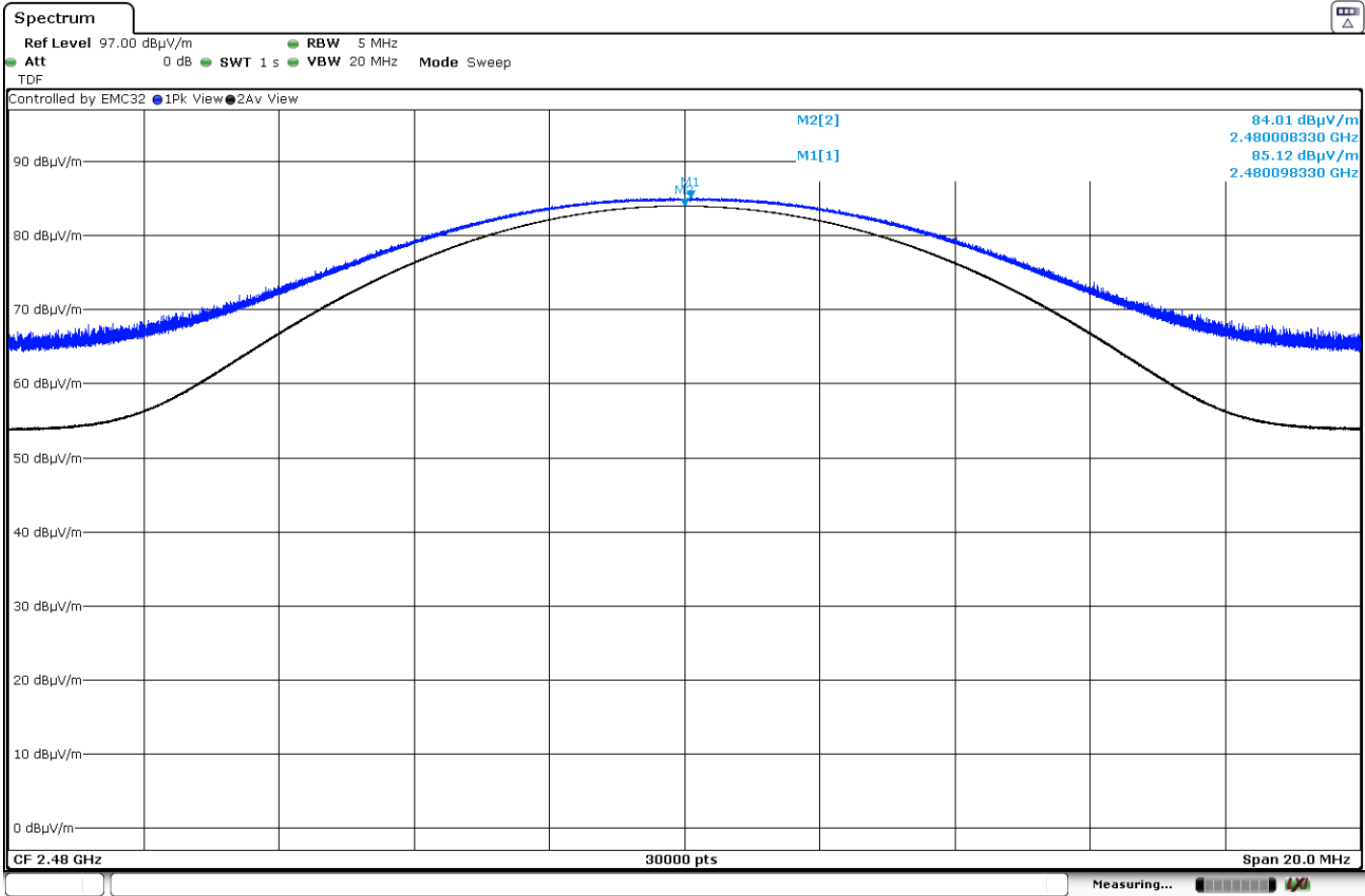
Images:



Date: 11.JAN.2024 14:04:19

Operation Band MHz = [2400, 2483.5] Modulation = DM
Frequency MHz = 2480.00000

Images:



Date: 11.JAN.2024 14:23:00

Modulation: FLORA

Results

Operation Band (MHz)	Freq (MHz)	Pk Field (dBµV/m)	Avg Field (dBµV/m)
[2400, 2483.5]	2402.00	92.22	92.07
	2440.00	91.43	90.51
	2480.00	91.66	91.04

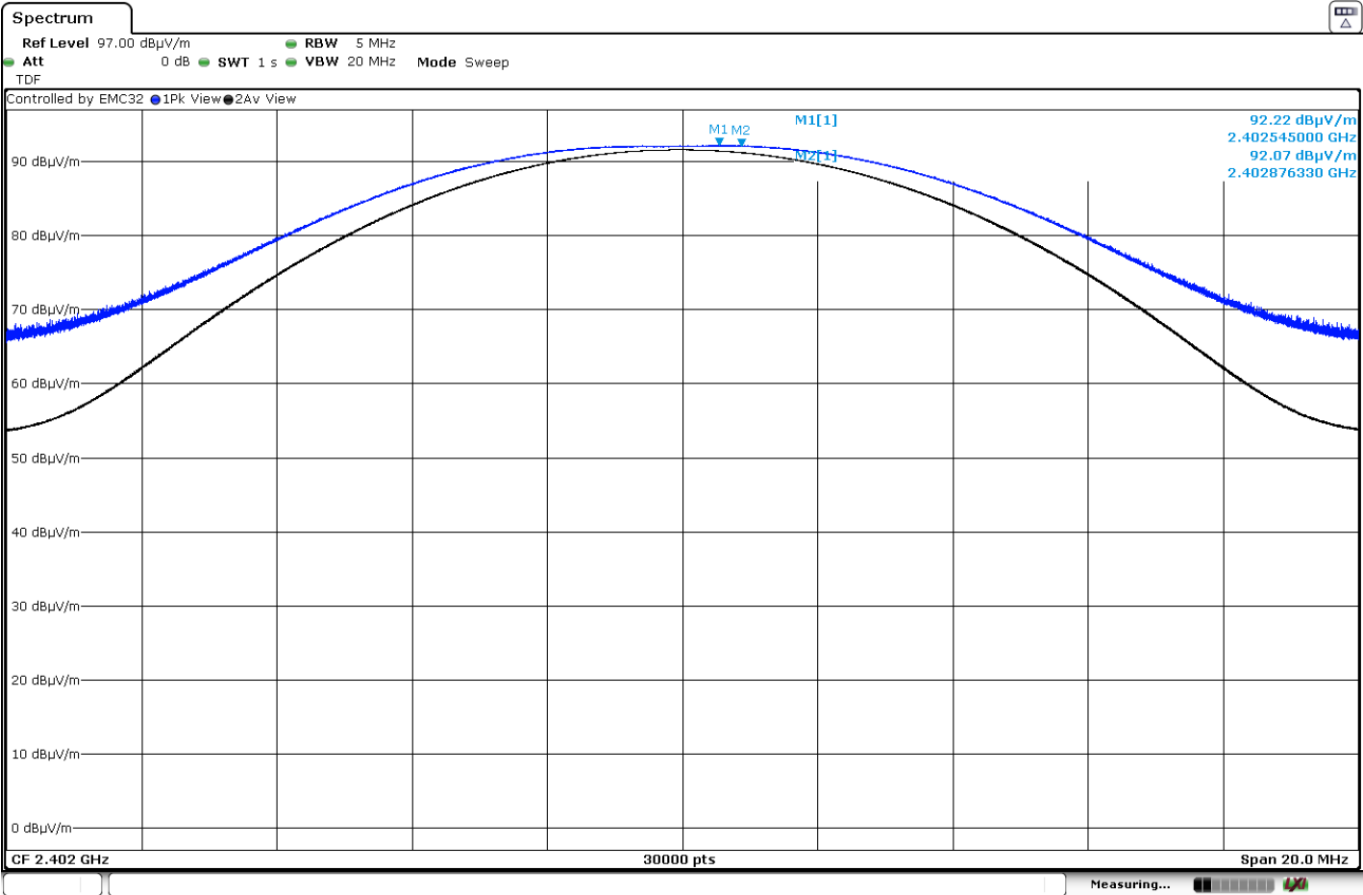
Verdict

Pass

Attachments

Operation Band MHz = [2400, 2483.5] Modulation = FLORA
Frequency MHz = 2402.00000

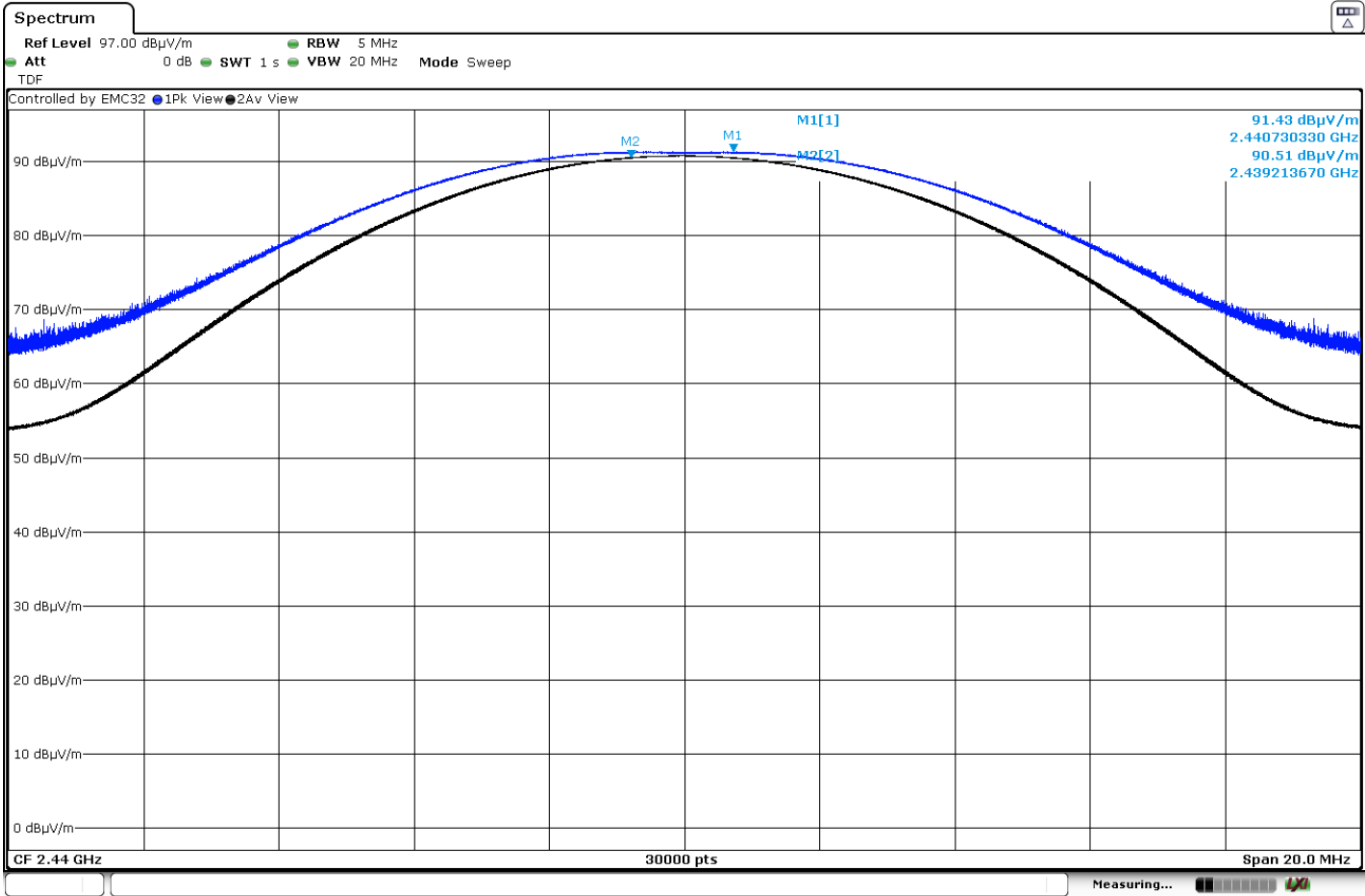
Images:



Date: 11.JAN.2024 18:00:50

Operation Band MHz = [2400, 2483.5] Modulation = FLORA
Frequency MHz = 2440.00000

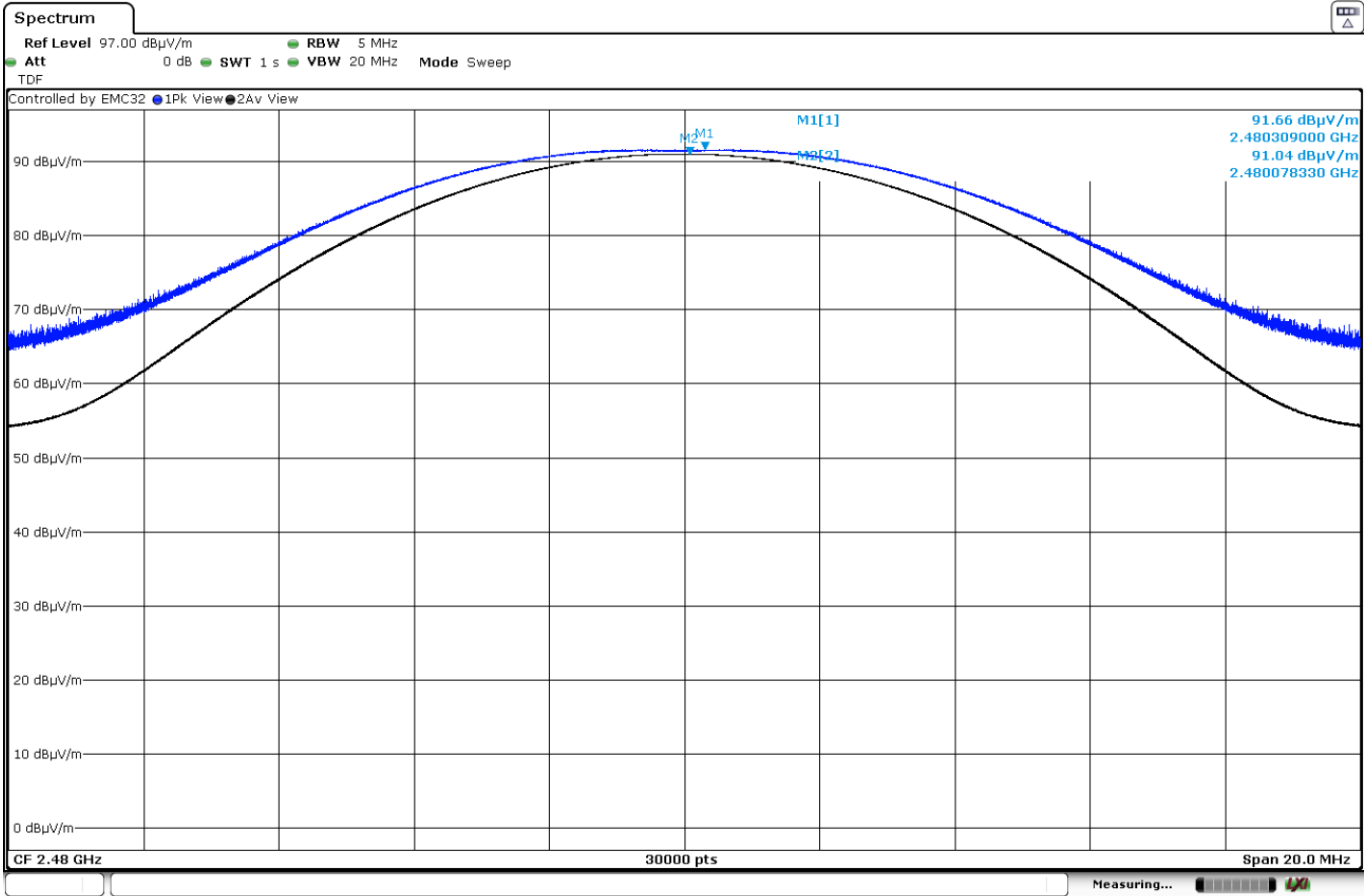
Images:



Date: 11.JAN.2024 18:43:38

Operation Band MHz = [2400, 2483.5] Modulation = FLORA
Frequency MHz = 2480.00000

Images:



Date: 11.JAN.2024 19:10:14