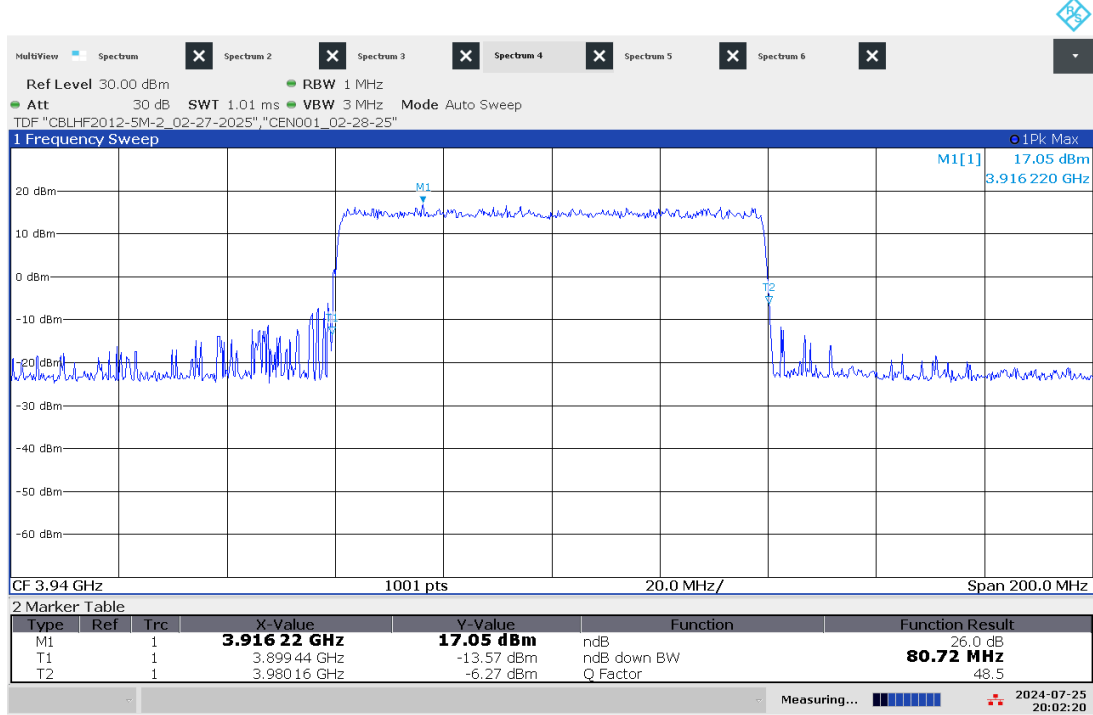
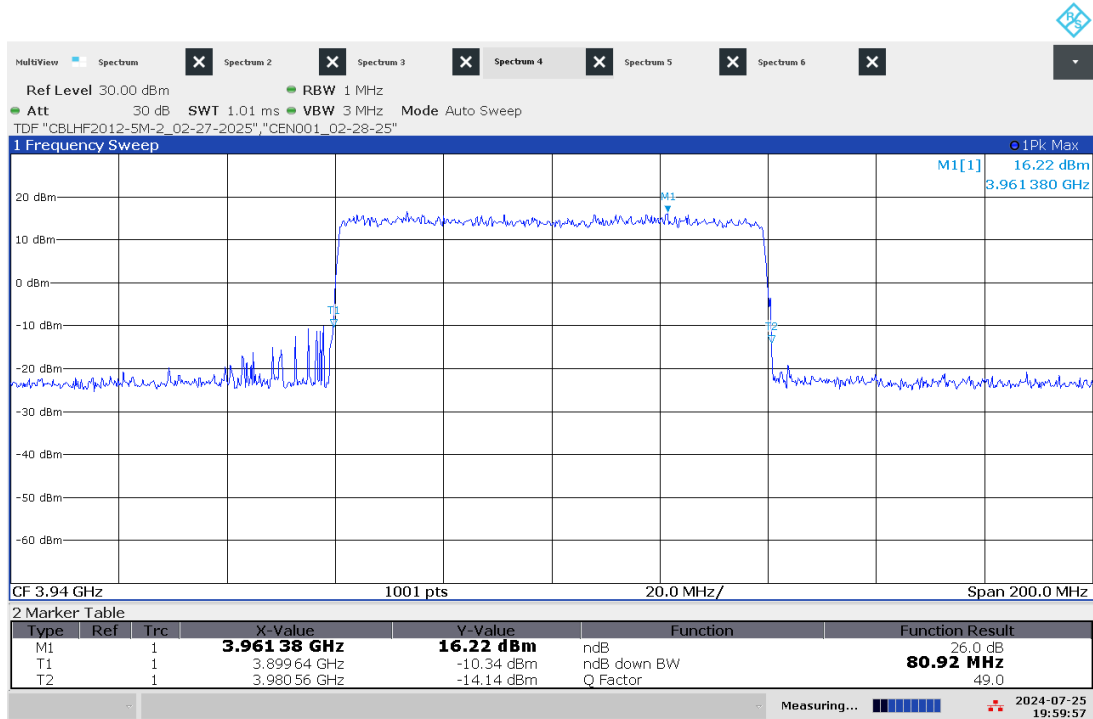


High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.1, Antenna Port 3



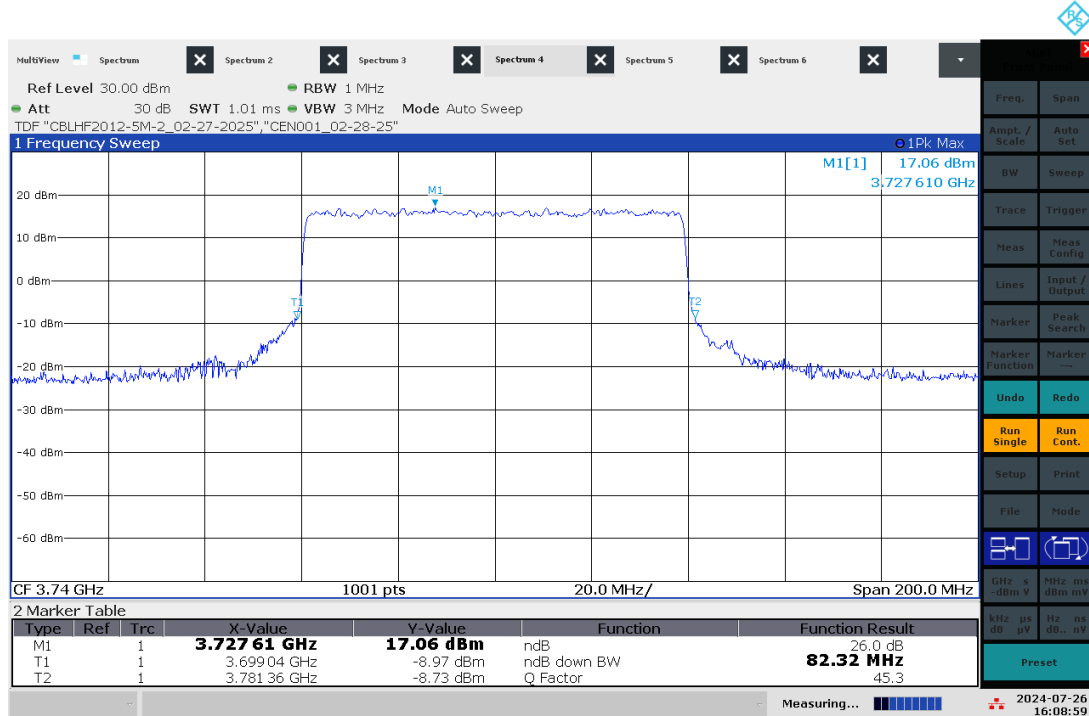
08:02:20 PM 07/25/2024

High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.1, Antenna Port 4



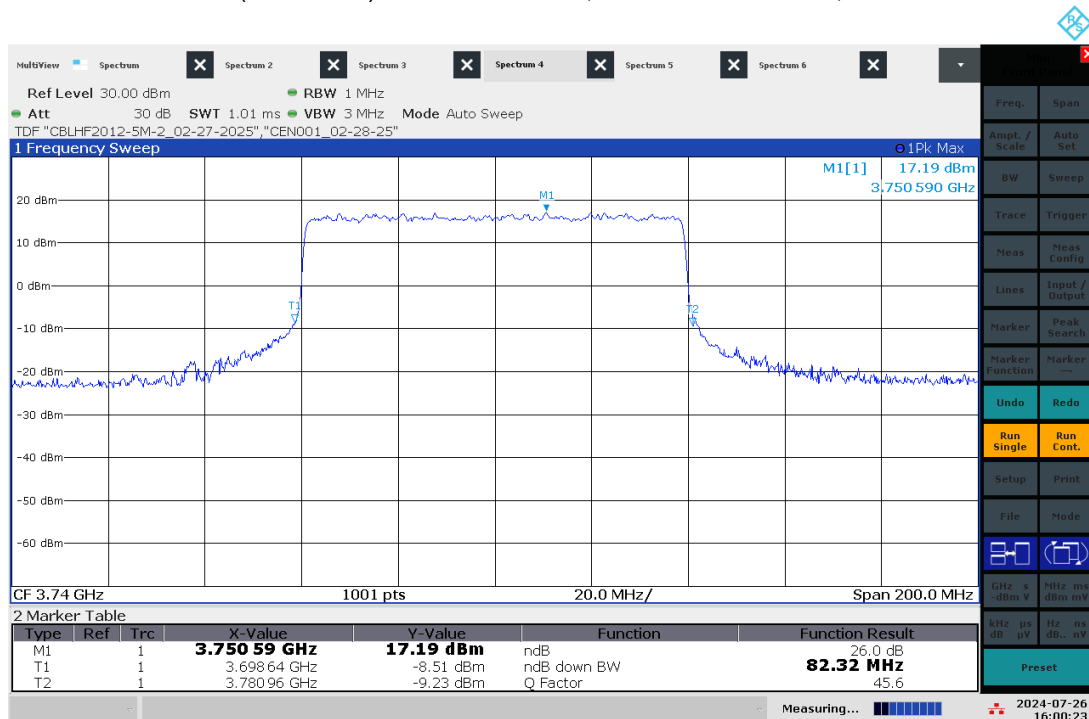
07:59:57 PM 07/25/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 1



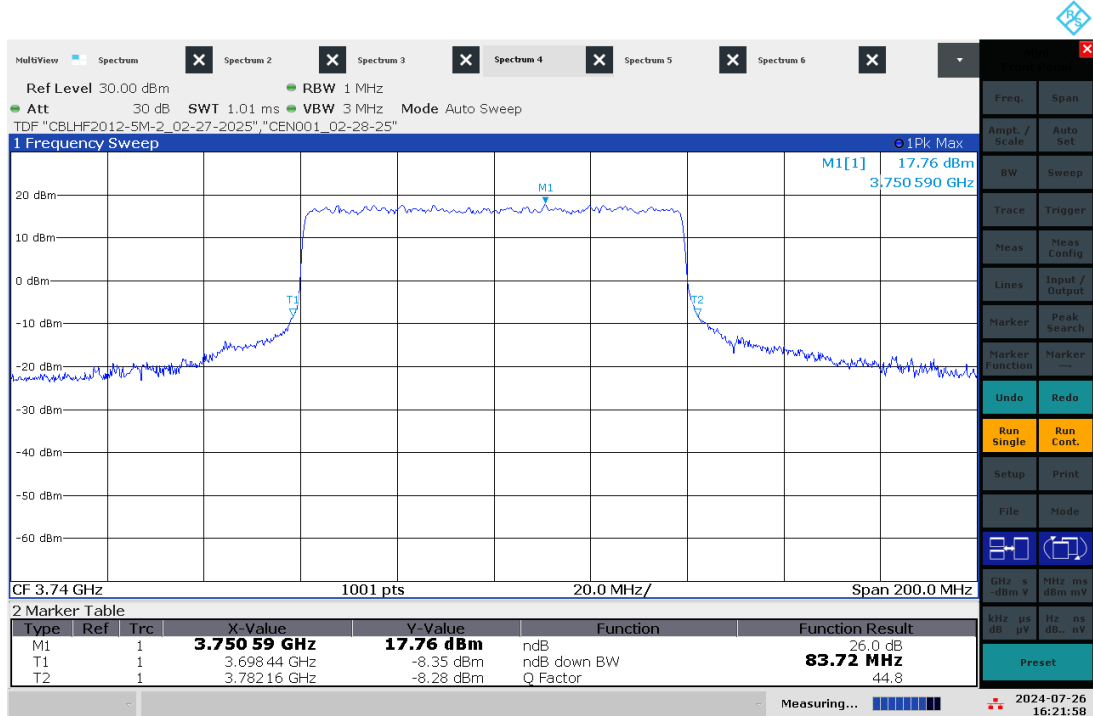
04:08:59 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 2



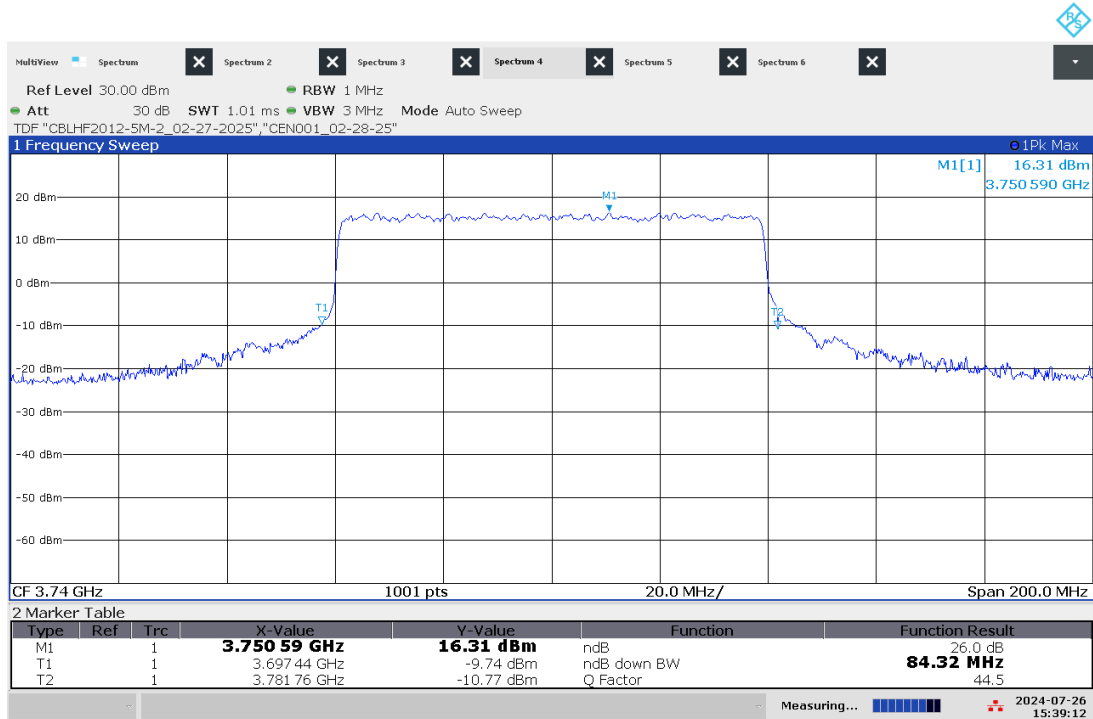
04:00:23 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 3



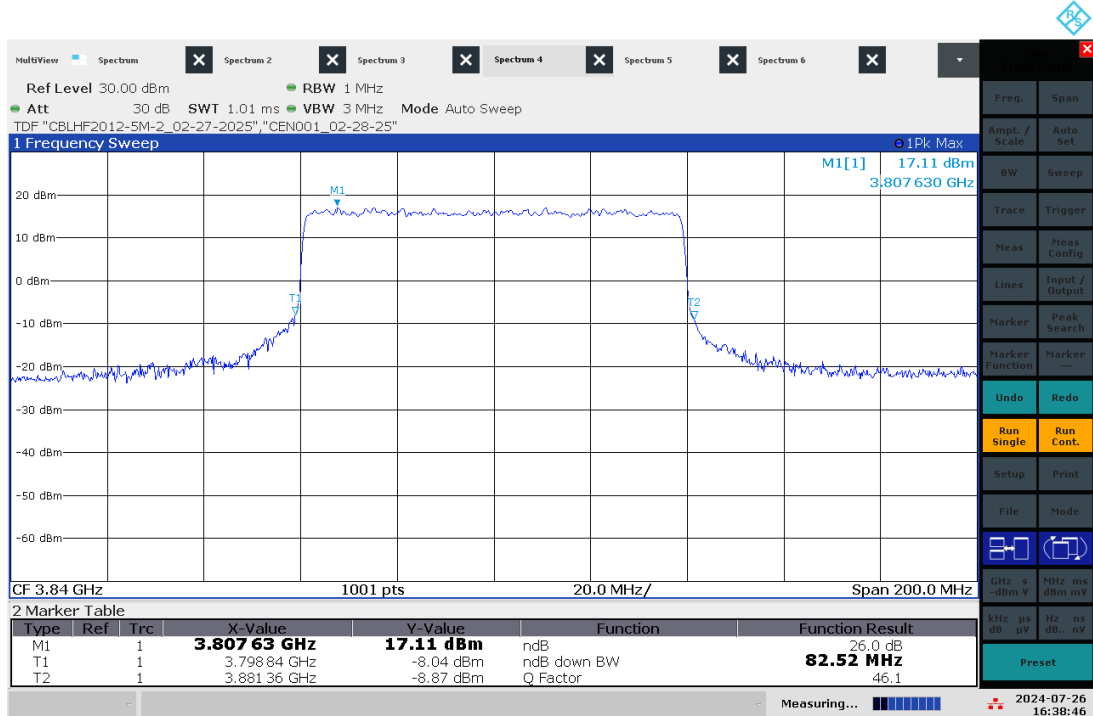
04:21:59 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 4



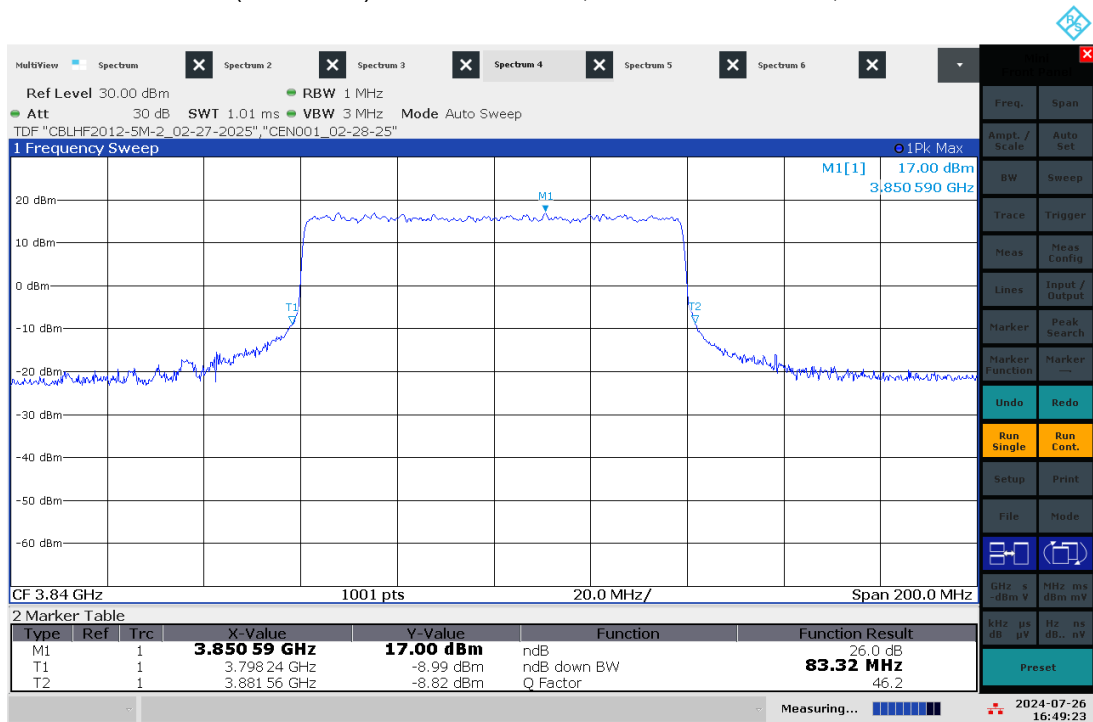
03:39:13 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 1



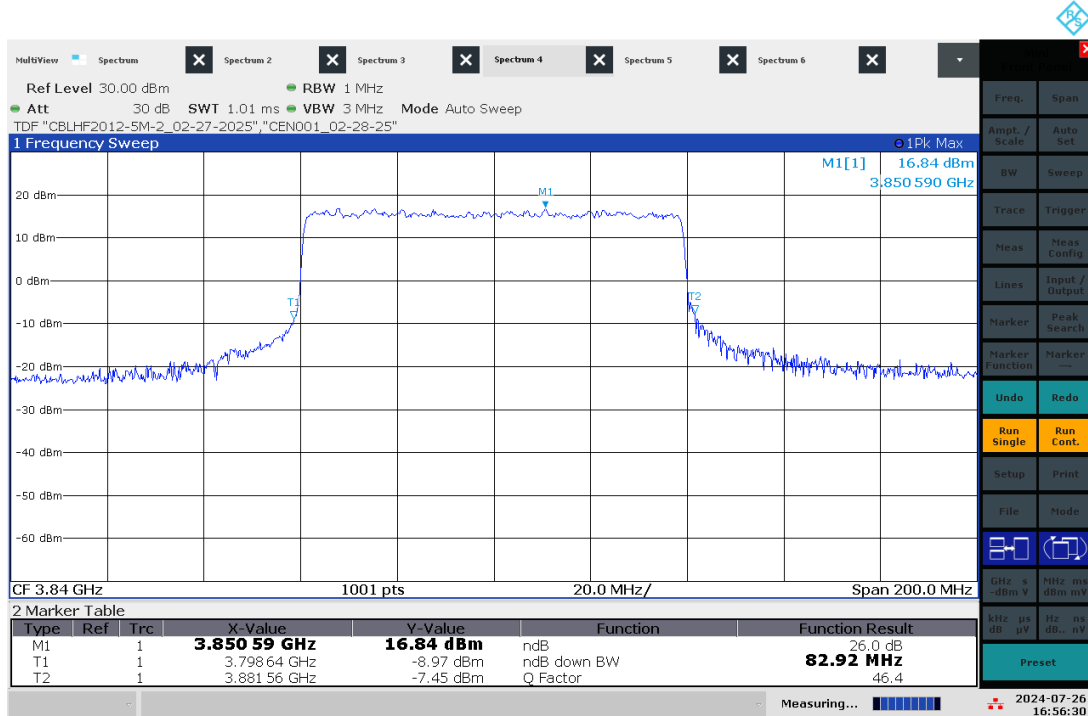
04:38:46 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 2



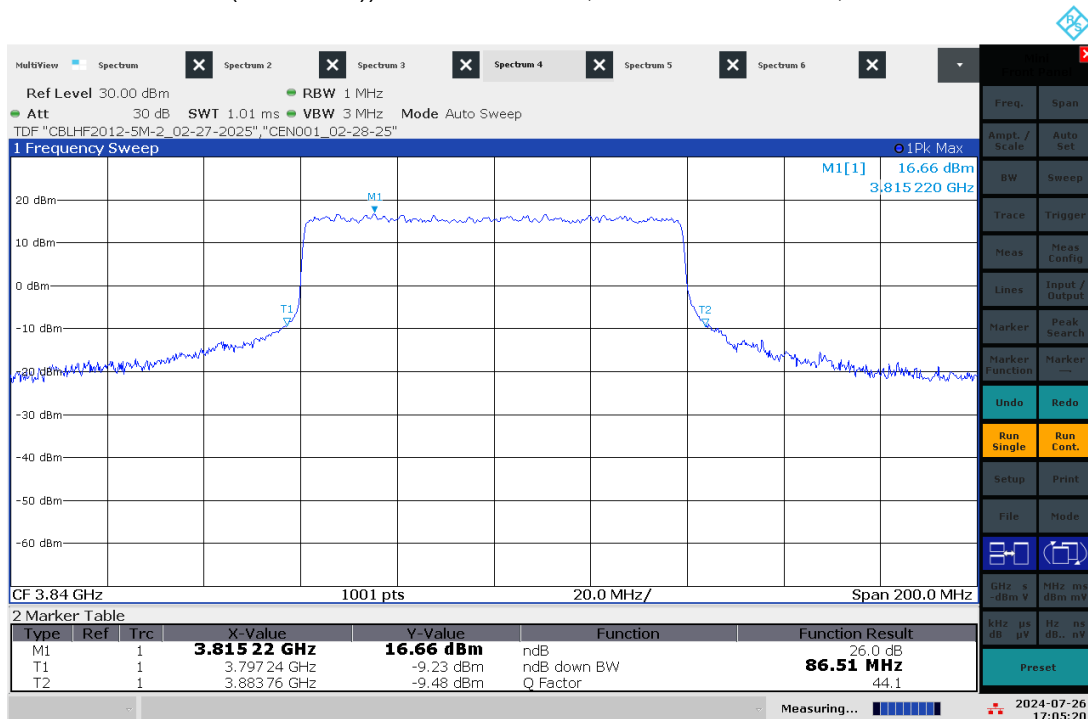
04:49:24 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 3



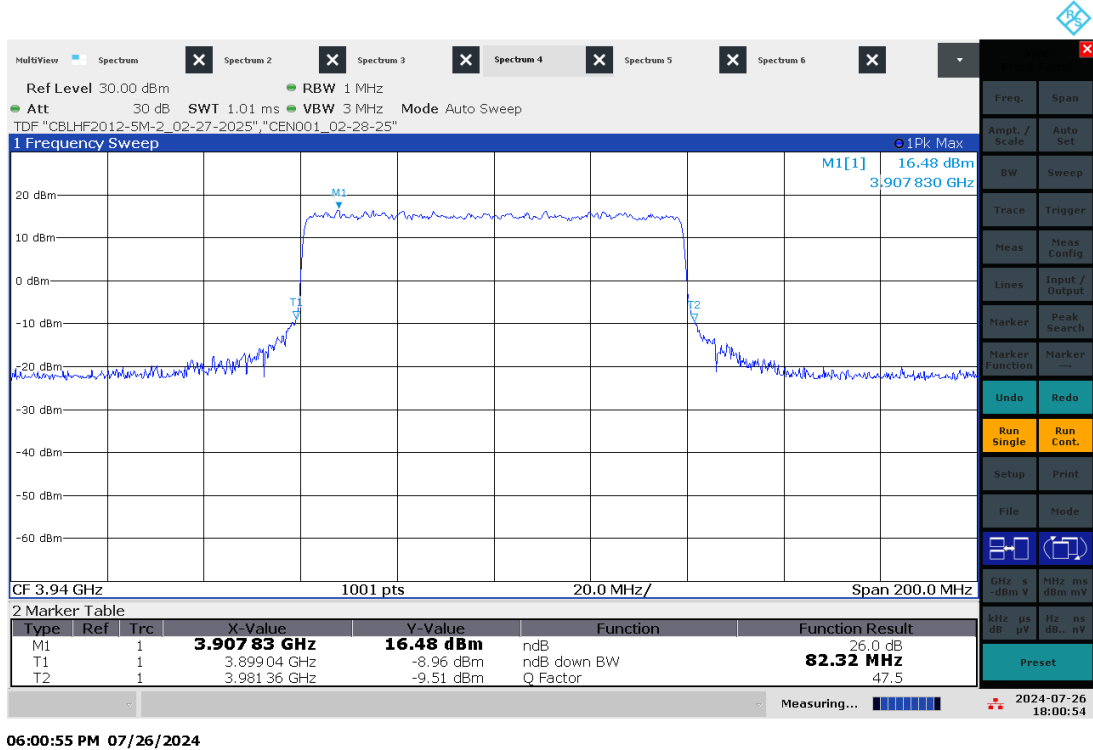
04:56:31 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 4

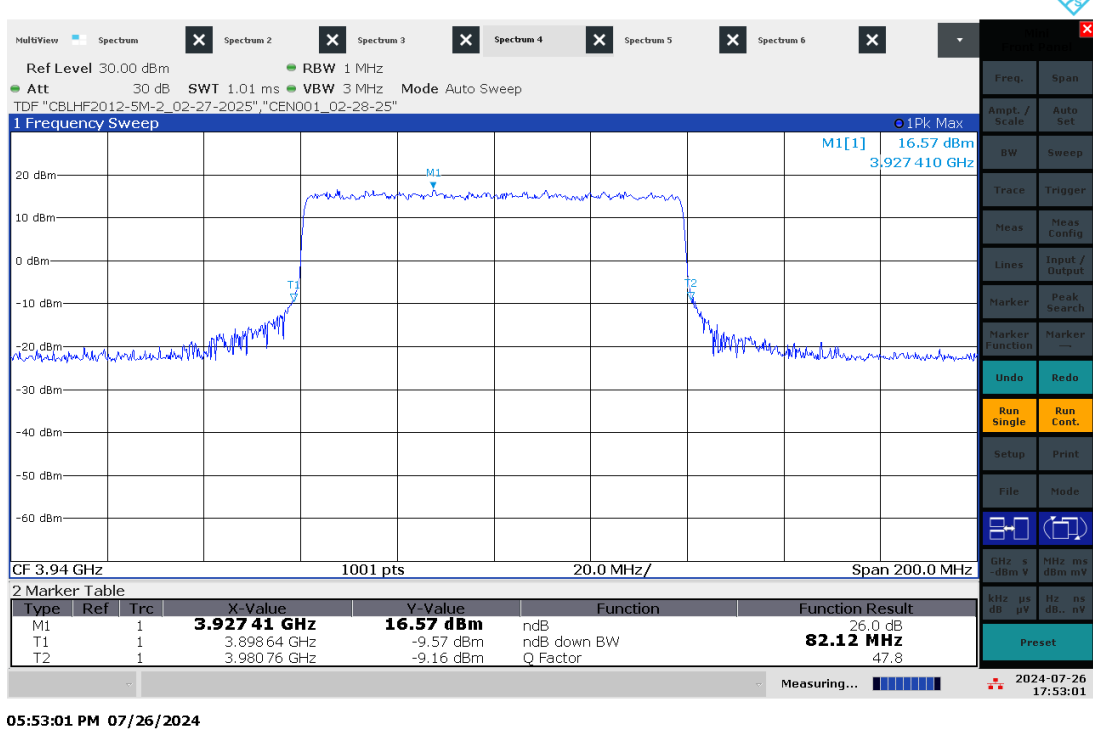


05:05:20 PM 07/26/2024

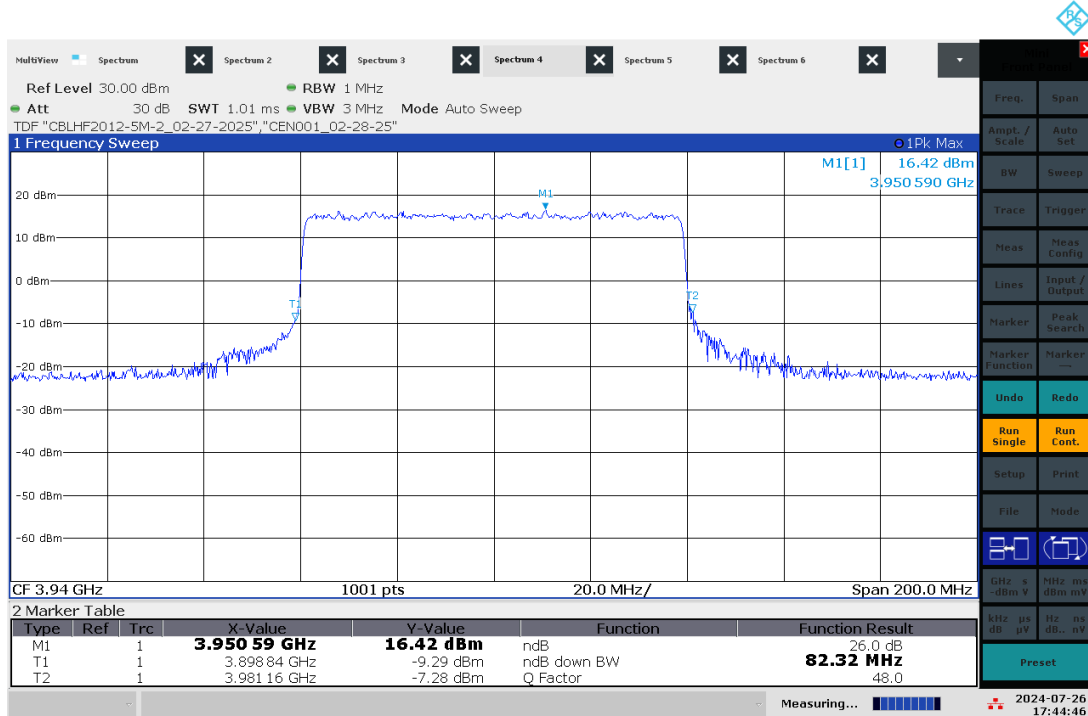
High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 1



High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 2

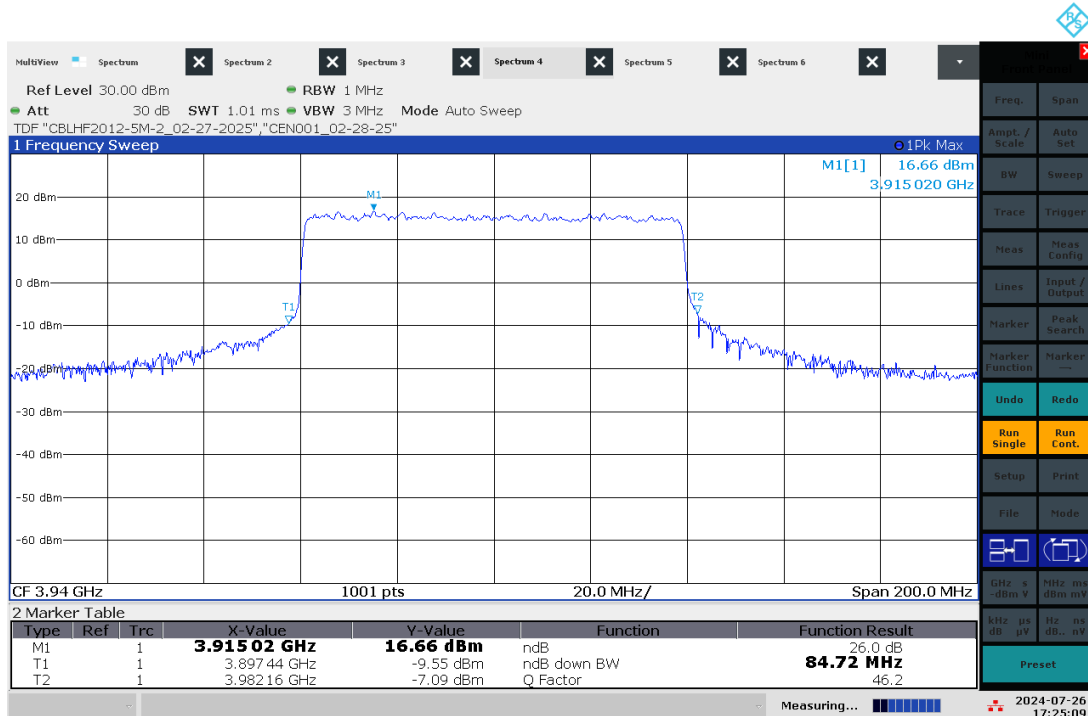


High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 3



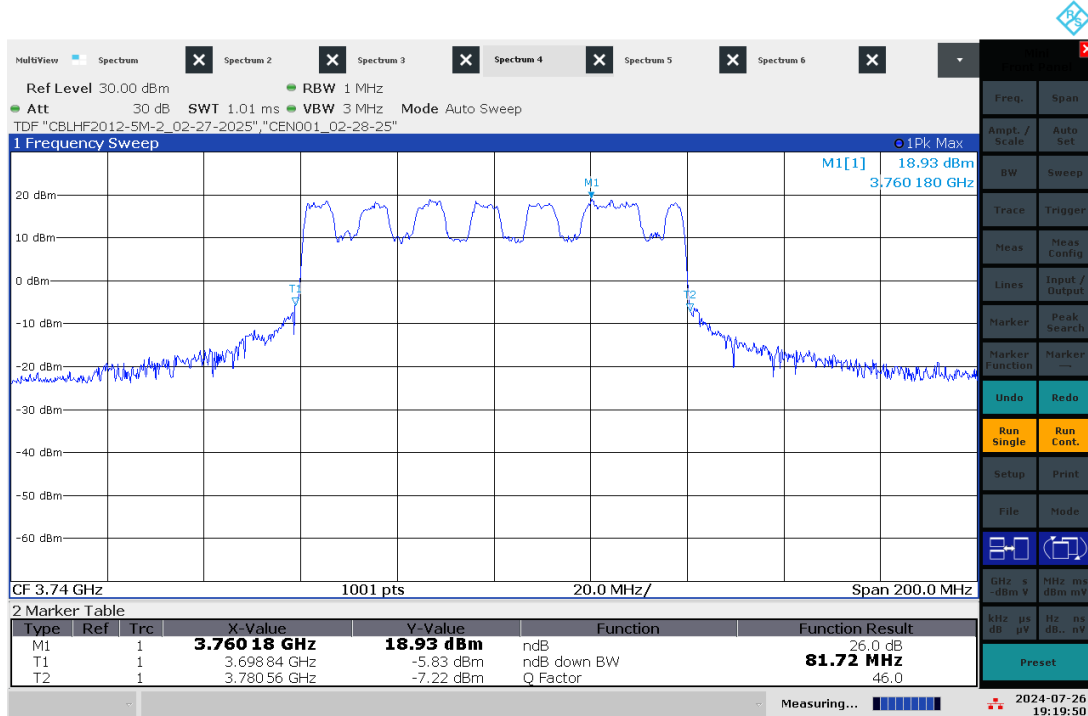
05:44:47 PM 07/26/2024

High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.1a, Antenna Port 4



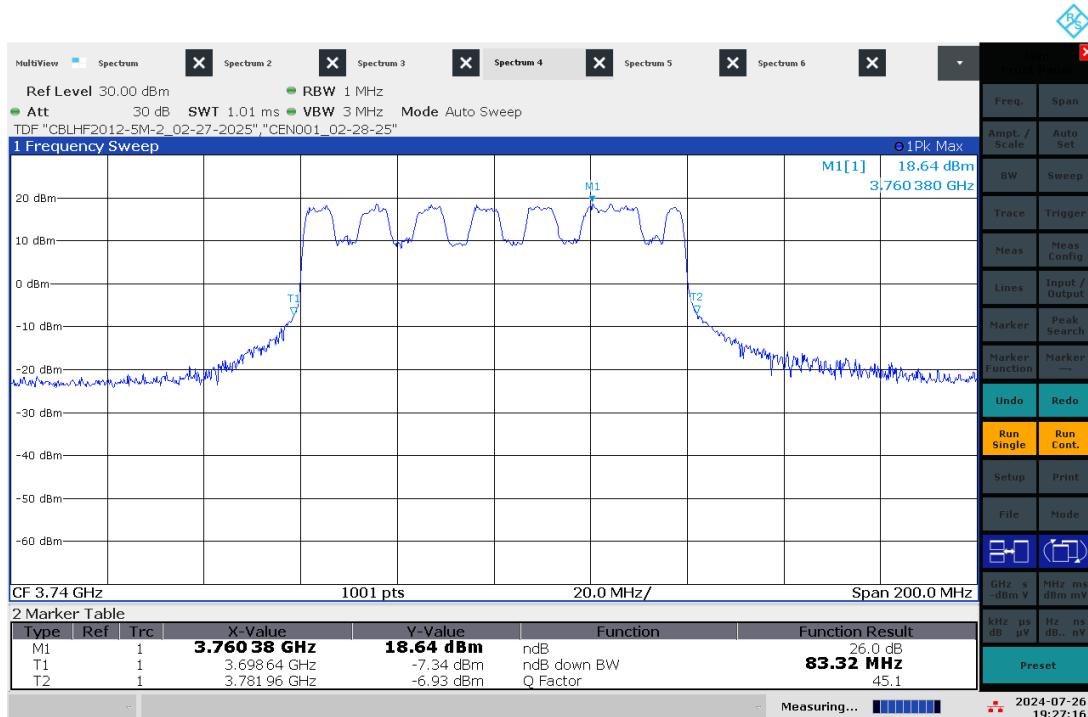
05:25:10 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 1



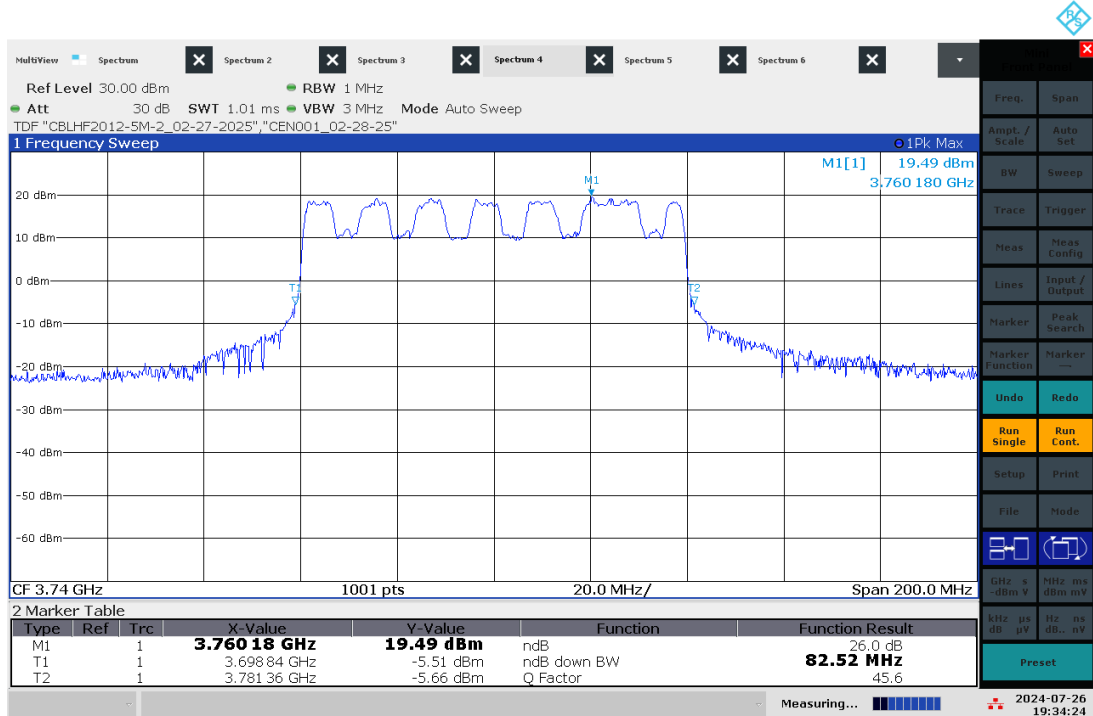
07:19:50 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 2



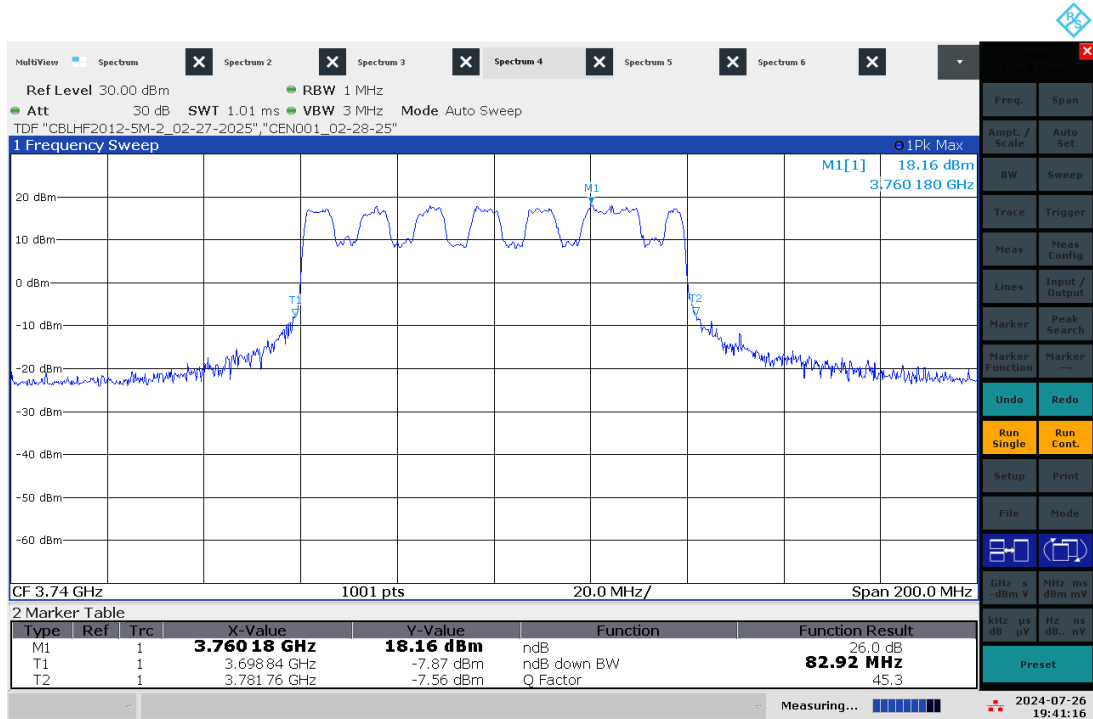
07:27:17 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 3



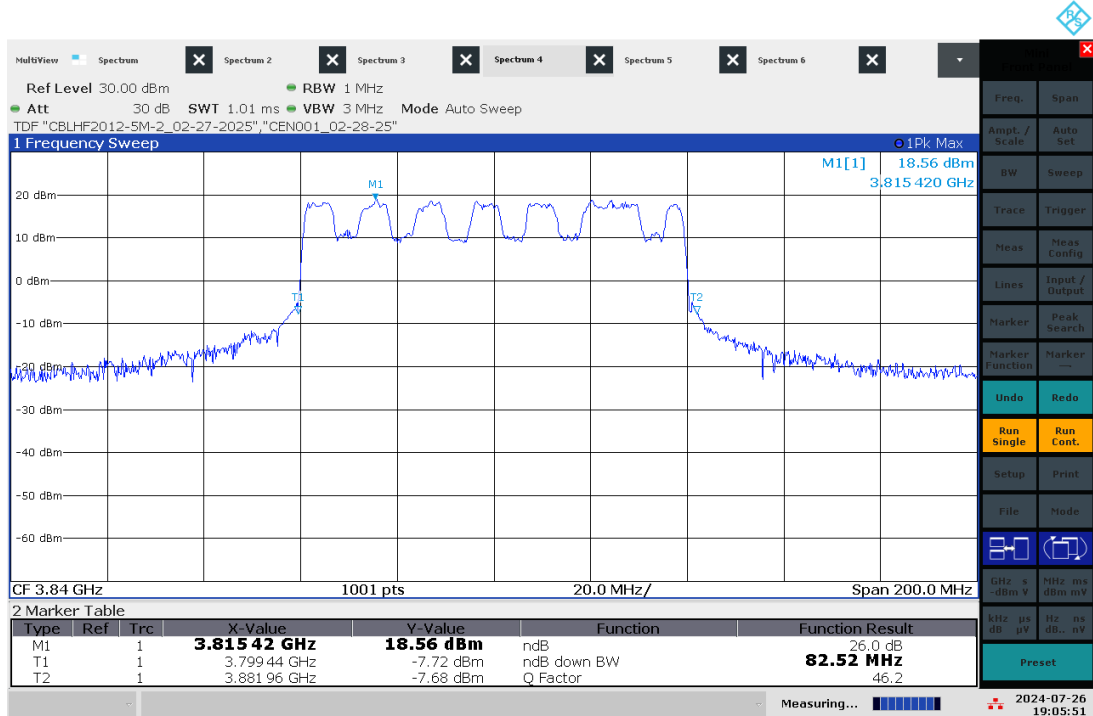
07:34:25 PM 07/26/2024

Low Channel (3740 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 4



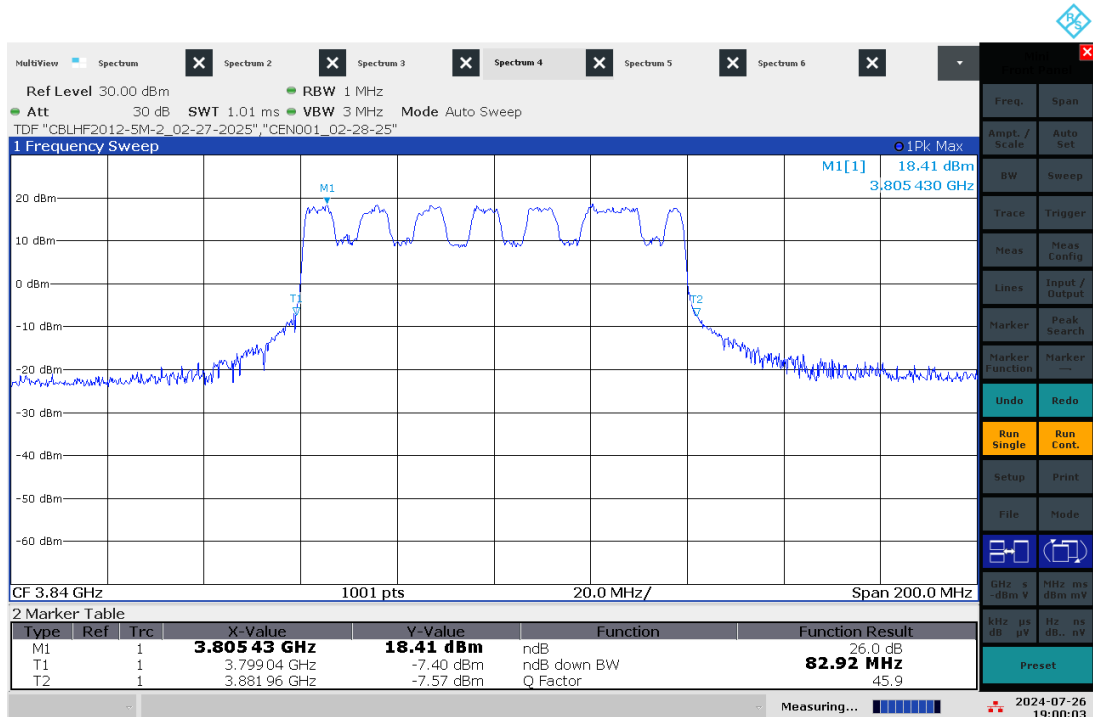
07:41:16 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 1



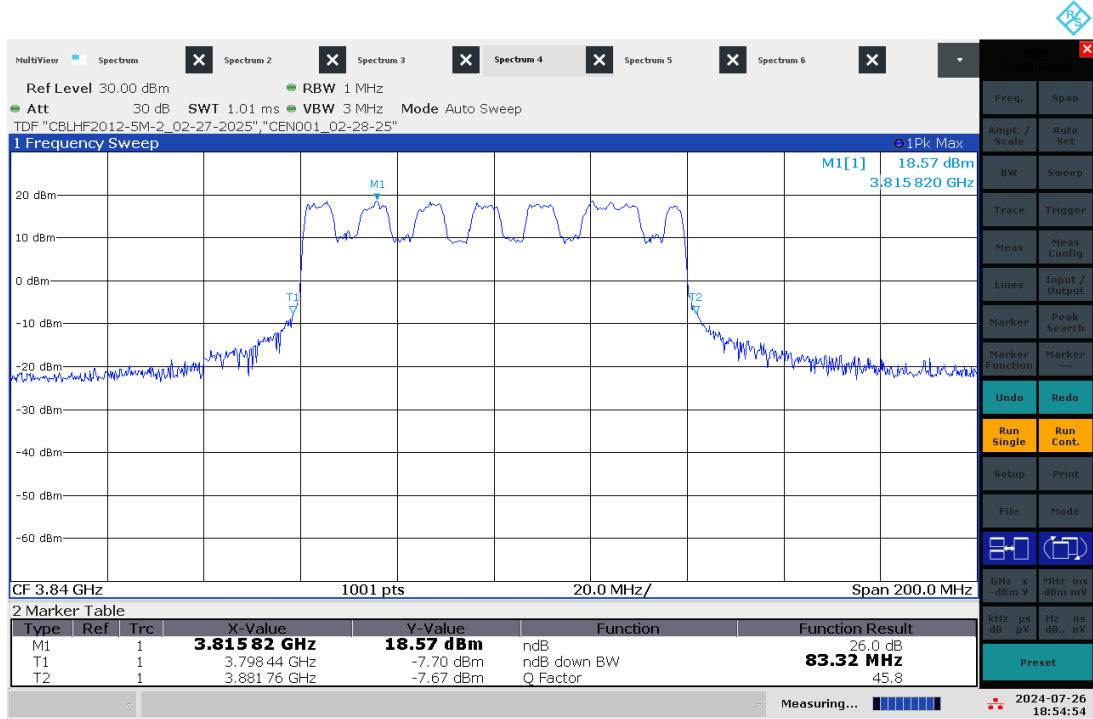
07:05:52 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 2



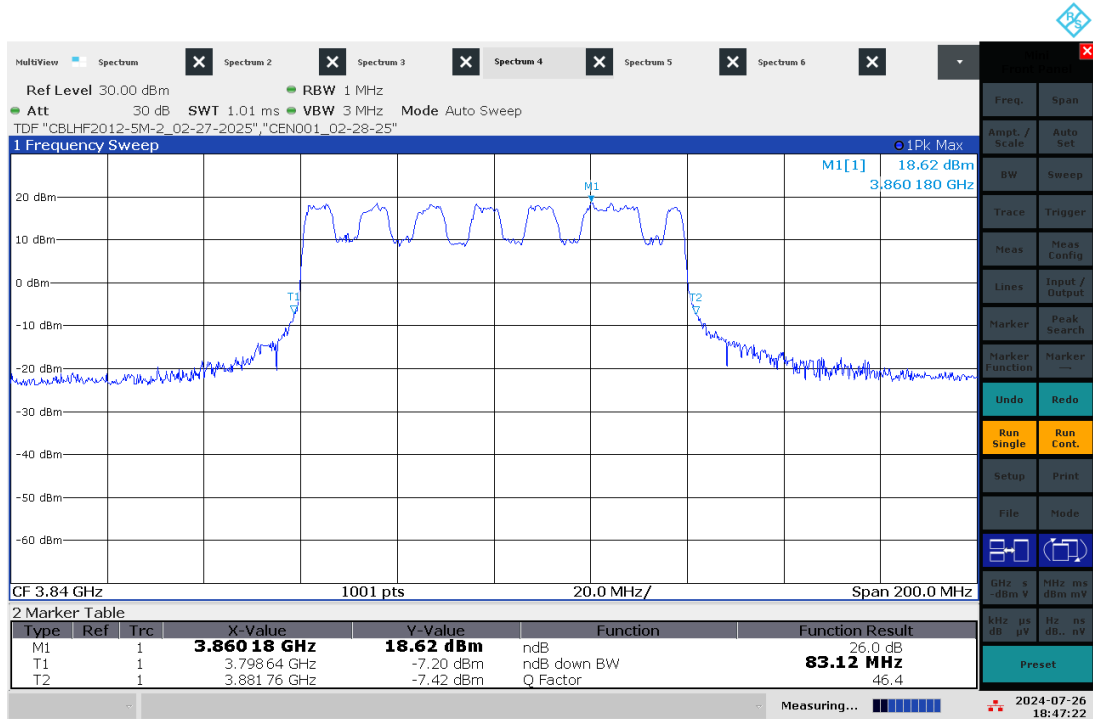
07:00:04 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 3



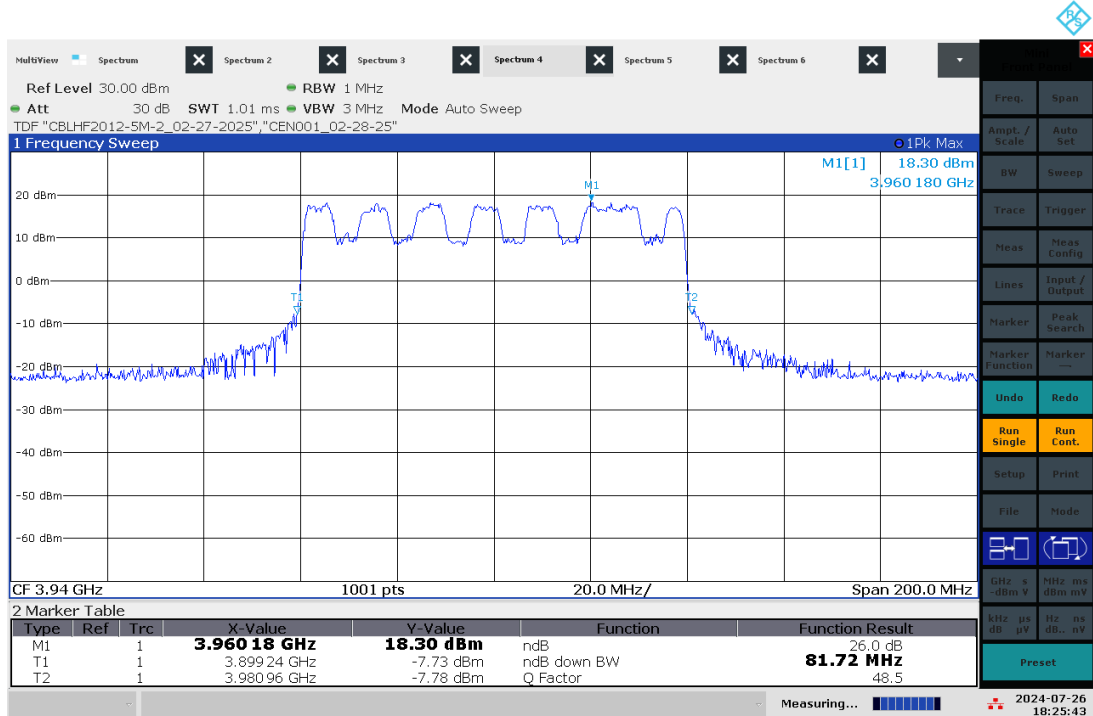
06:54:55 PM 07/26/2024

Mid Channel (3840 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 4



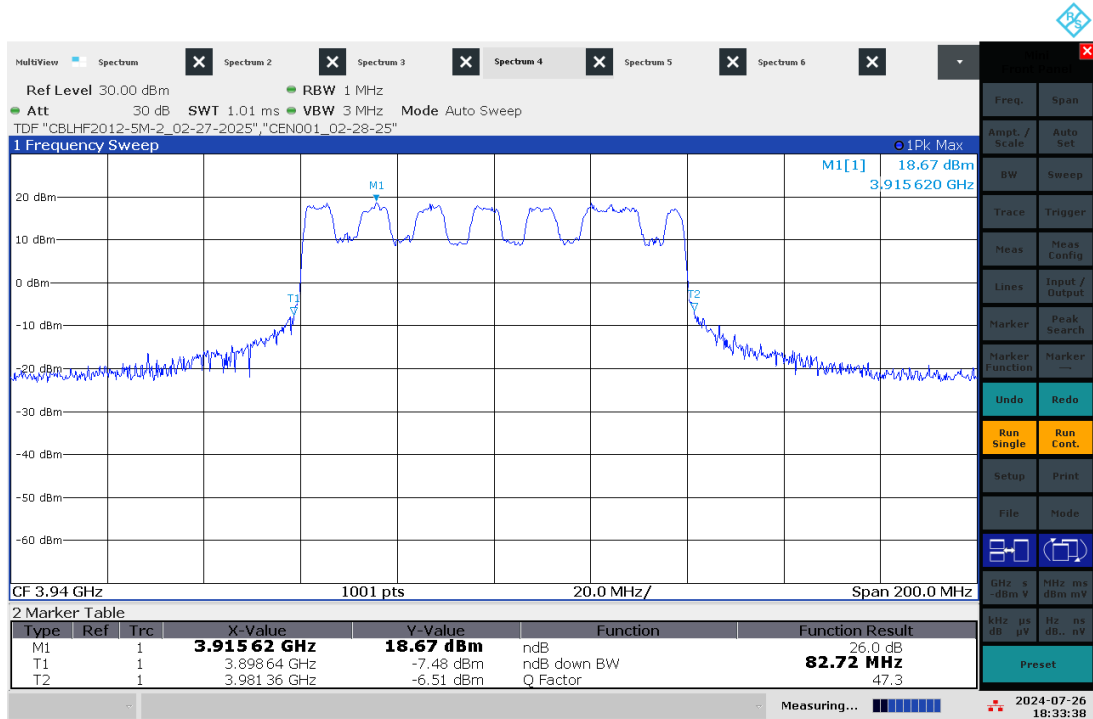
06:47:23 PM 07/26/2024

High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 3



06:25:44 PM 07/26/2024

High Channel (3940 MHz) 26 dB Bandwidth, Modulation: TM3.3, Antenna Port 4



06:33:39 PM 07/26/2024

Product Standard: FCC Title 47 CFR Part 27				Limit applied: See Report Section 6.2 Pretest Verification w/ signal generator: Yes			
Test Date	Test Personnel/ Initials	Supervising Engineer/ Initials	Input Voltage	Mode	Atmospheric Data		
					Temp C°	Relative Humidity %	Atmospheric Pressure mbar
07/25/2024	Vathana F. Ven <i>VSV</i>	N/A	POE	Continuous Transmitting	21	49	1005
07/26/2024	Kouma Sinn <i>KPS</i>	N/A	POE	Continuous Transmitting	23	46	1005

Deviations, Additions, or Exclusions: None

9 Band Edge Emissions

9.1 Method

Tests are performed in accordance with ANSI C63.26:2015.

TEST SITE: EMC Lab (AMAP Lab)

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

9.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV009'	weather station	Davis Instruments	6351 Vantage VUE	DAV009	04/05/2024	04/05/2025
ROS005-1'	Signal and Spectrum Analyzer	Rohde and Schwartz	FSW43	100646	11/22/2023	11/22/2024
CBLHF2012-5M-2'	5m 9kHz-40GHz Coaxial Cable - SET2	Huber & Suhner	SF102	252676002	02/27/2024	02/27/2025
CEN001'	DC-40GHz attenuator 20dB	Centric RF	C411-20	CEN001	02/28/2024	02/28/2025

Software Utilized:

Name	Manufacturer	Version
None	N/A	N/A

9.3 Results:

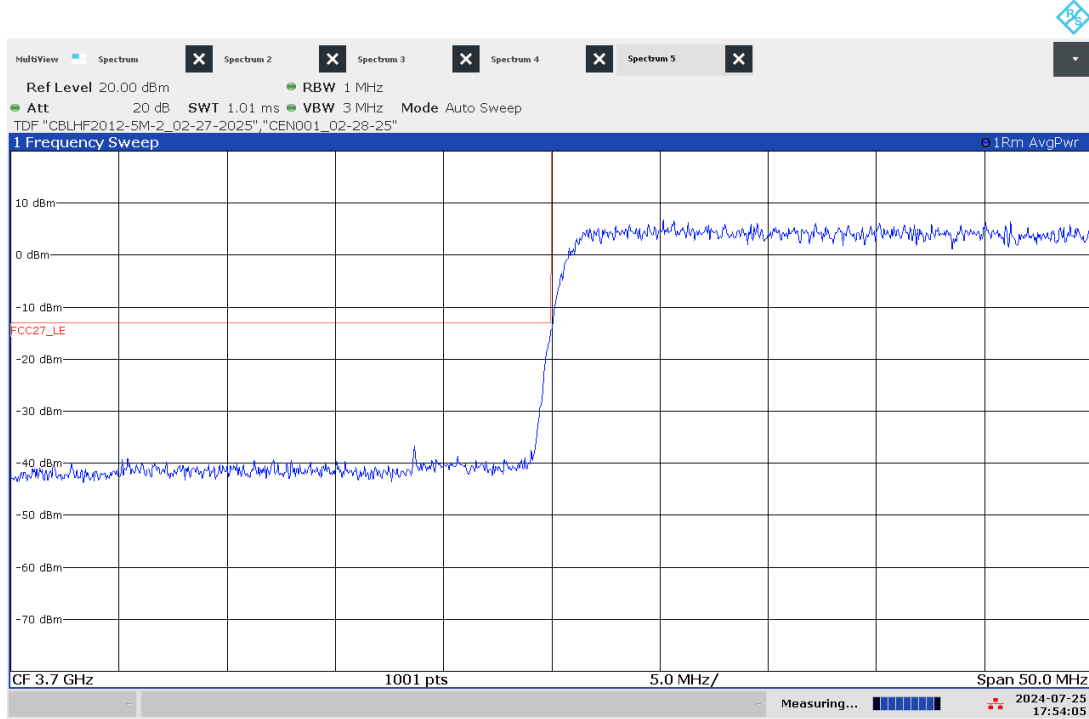
The sample tested was found to Comply.

9.4 Setup Photograph:



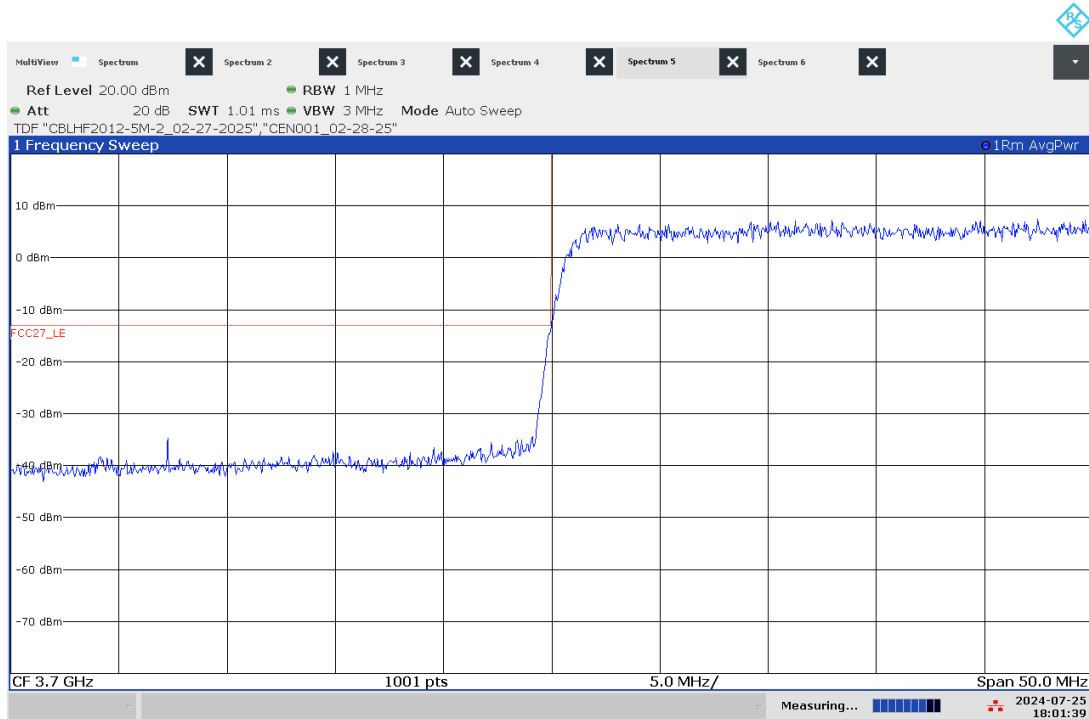
9.5 Plots/Data:

Lower Band Edge, Modulation: TM1.1, Antenna Port 1



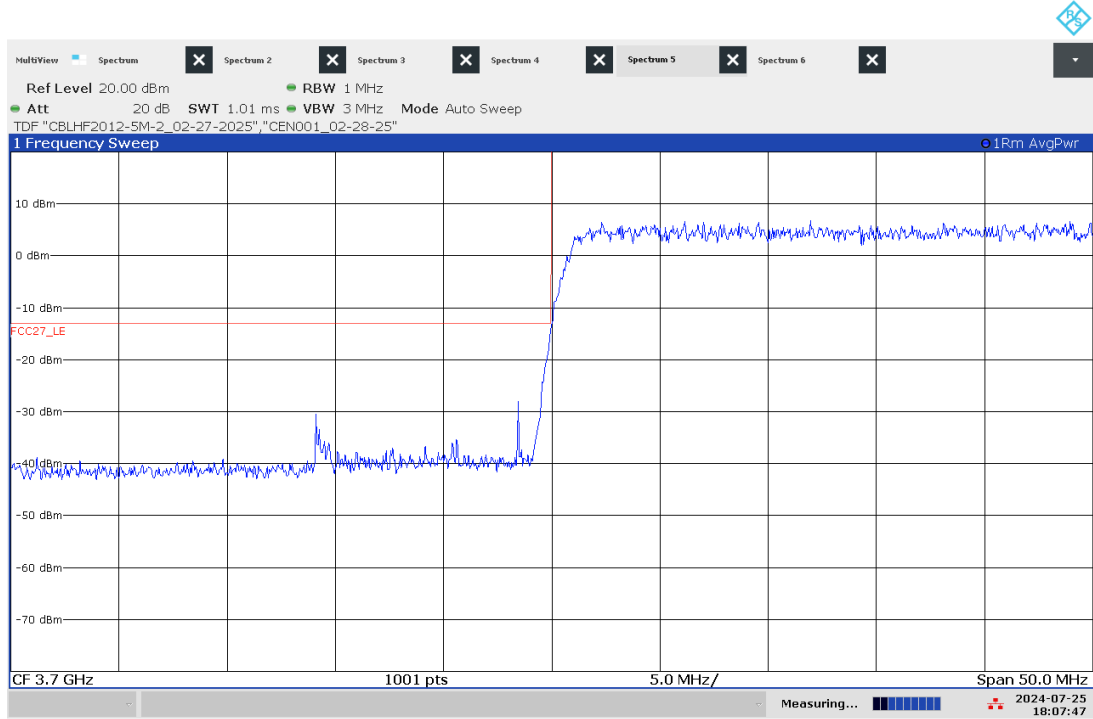
05:54:06 PM 07/25/2024

Lower Band Edge, Modulation: TM1.1, Antenna Port 2



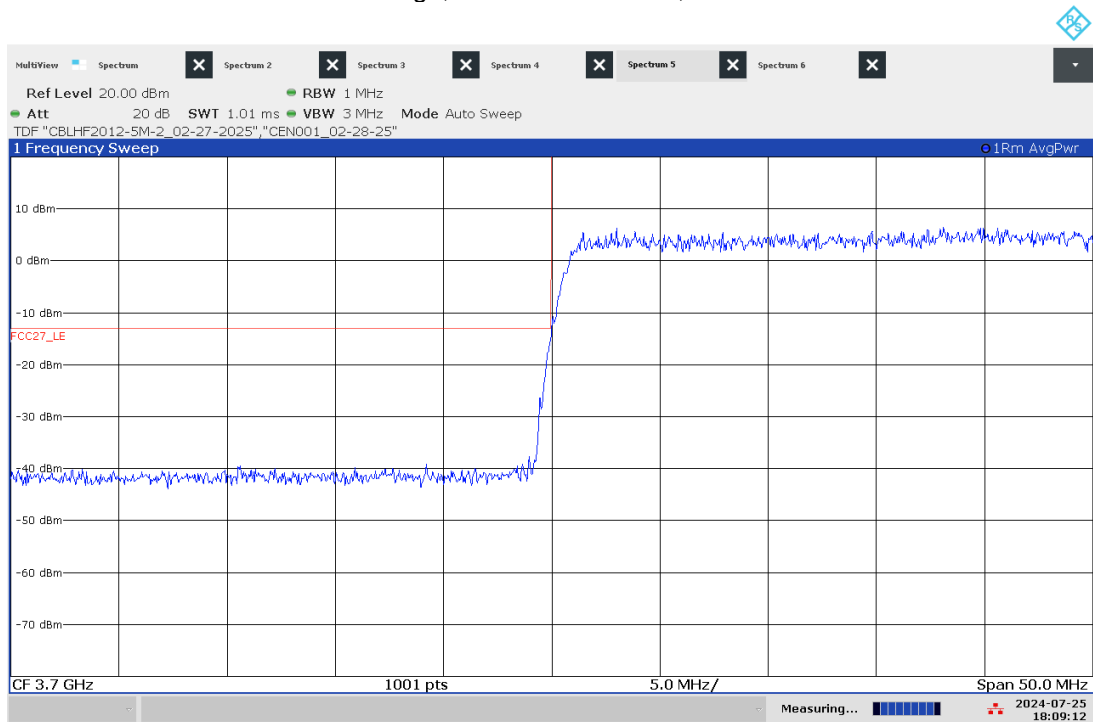
06:01:39 PM 07/25/2024

Lower Band Edge, Modulation: TM1.1, Antenna Port 3



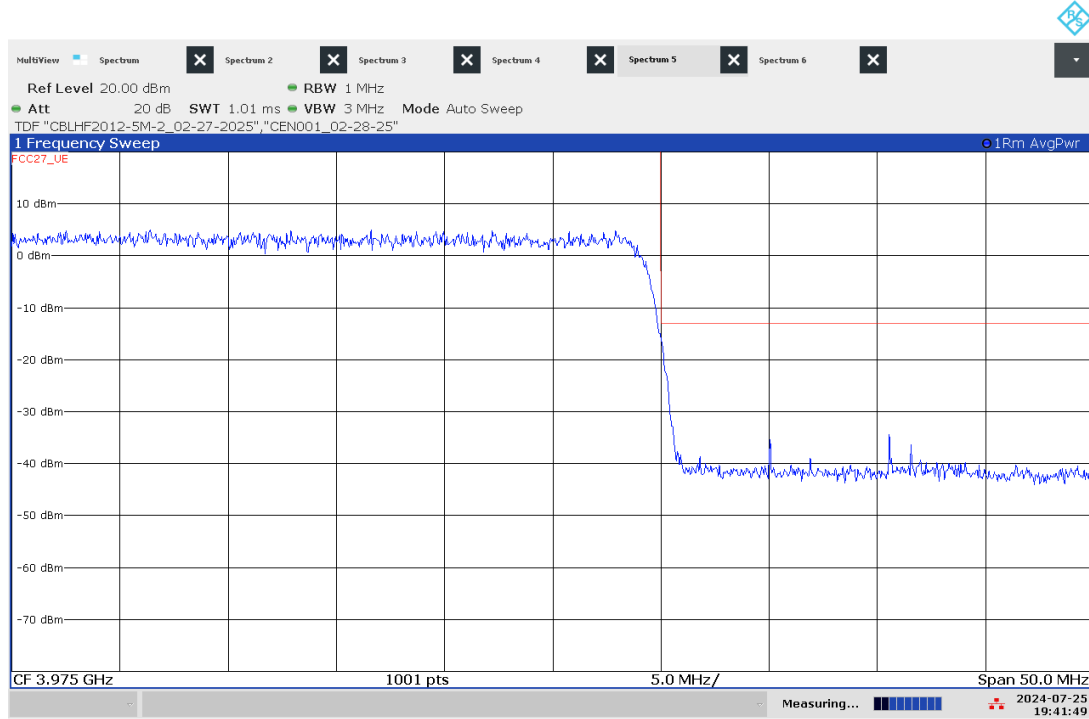
06:07:48 PM 07/25/2024

Lower Band Edge, Modulation: TM1.1, Antenna Port 4



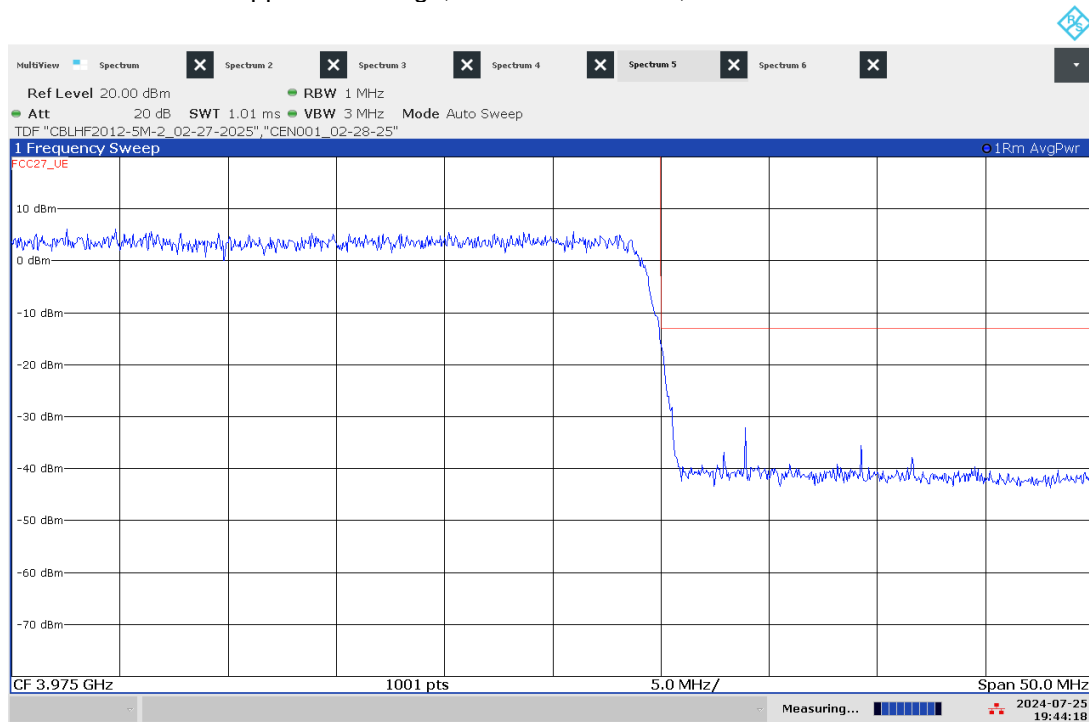
06:09:12 PM 07/25/2024

Upper Band Edge, Modulation: TM1.1, Antenna Port 1



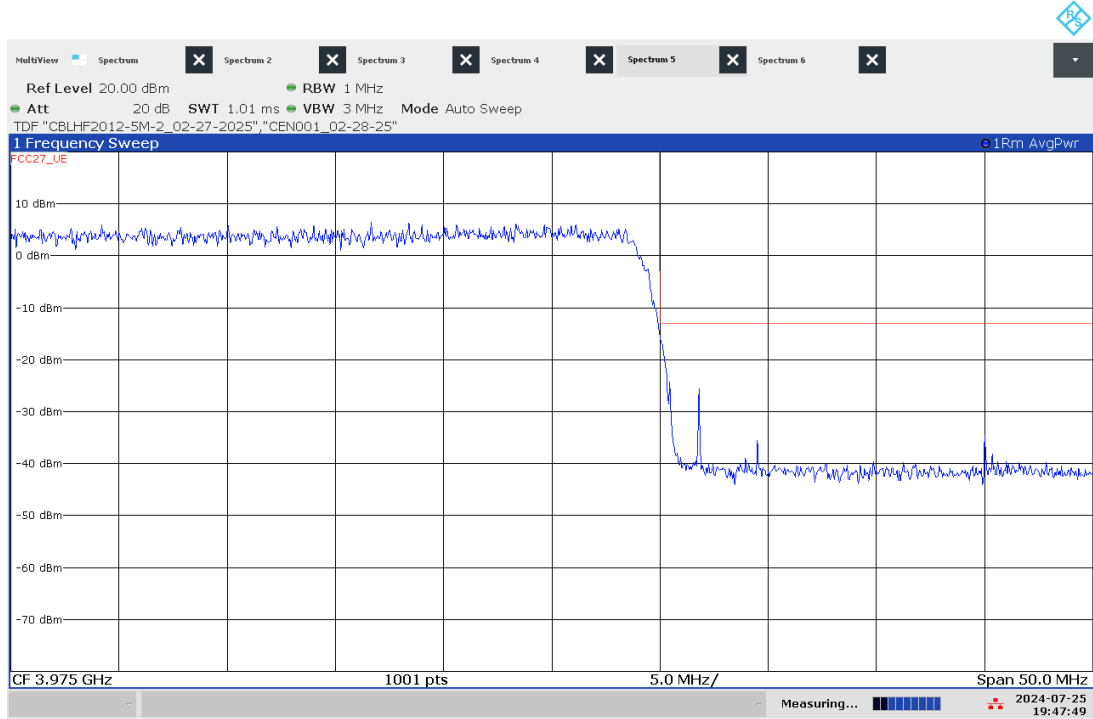
07:41:49 PM 07/25/2024

Upper Band Edge, Modulation: TM1.1, Antenna Port 2



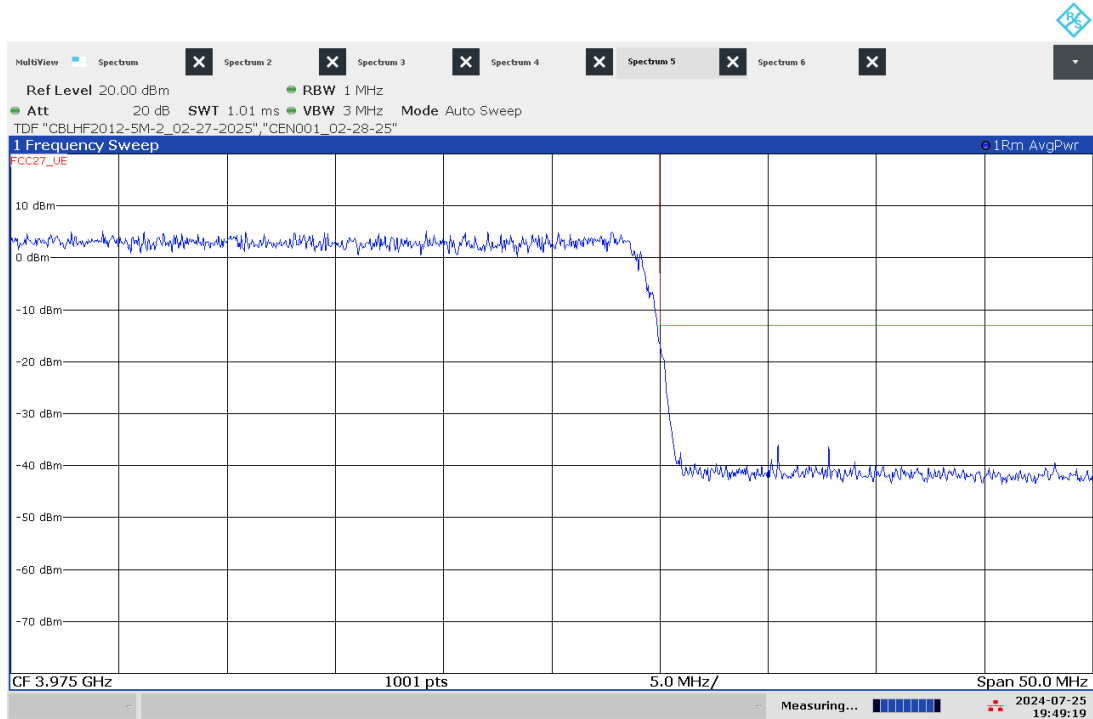
07:44:19 PM 07/25/2024

Upper Band Edge, Modulation: TM1.1, Antenna Port 3



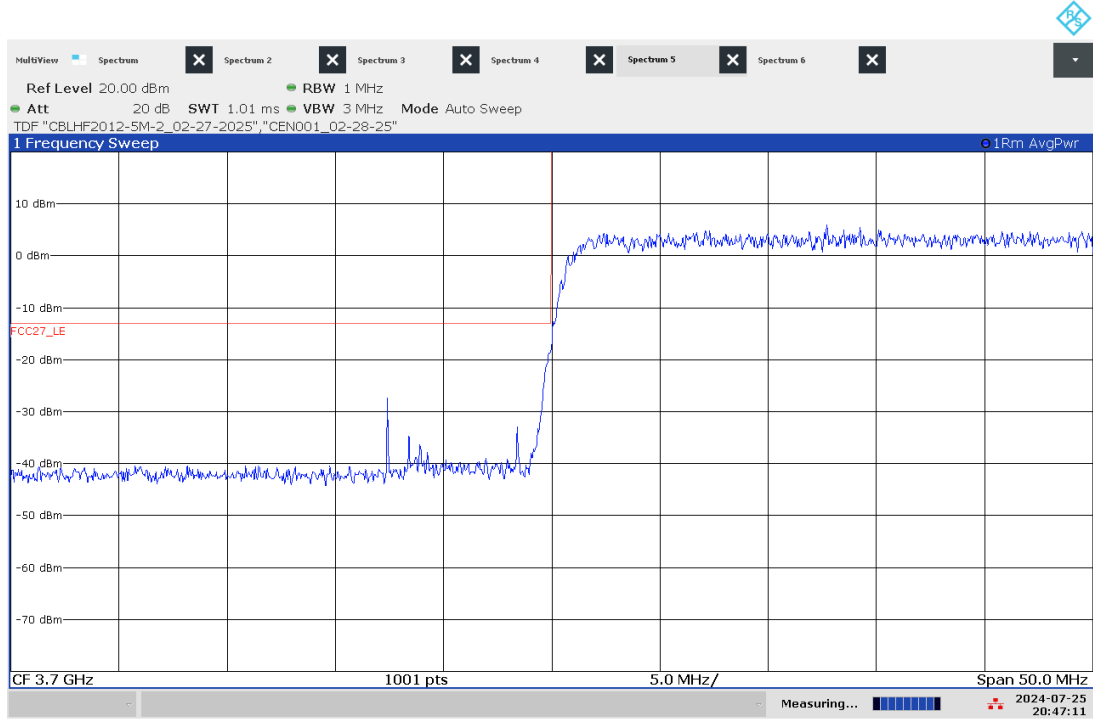
07:47:49 PM 07/25/2024

Upper Band Edge, Modulation: TM1.1, Antenna Port 4



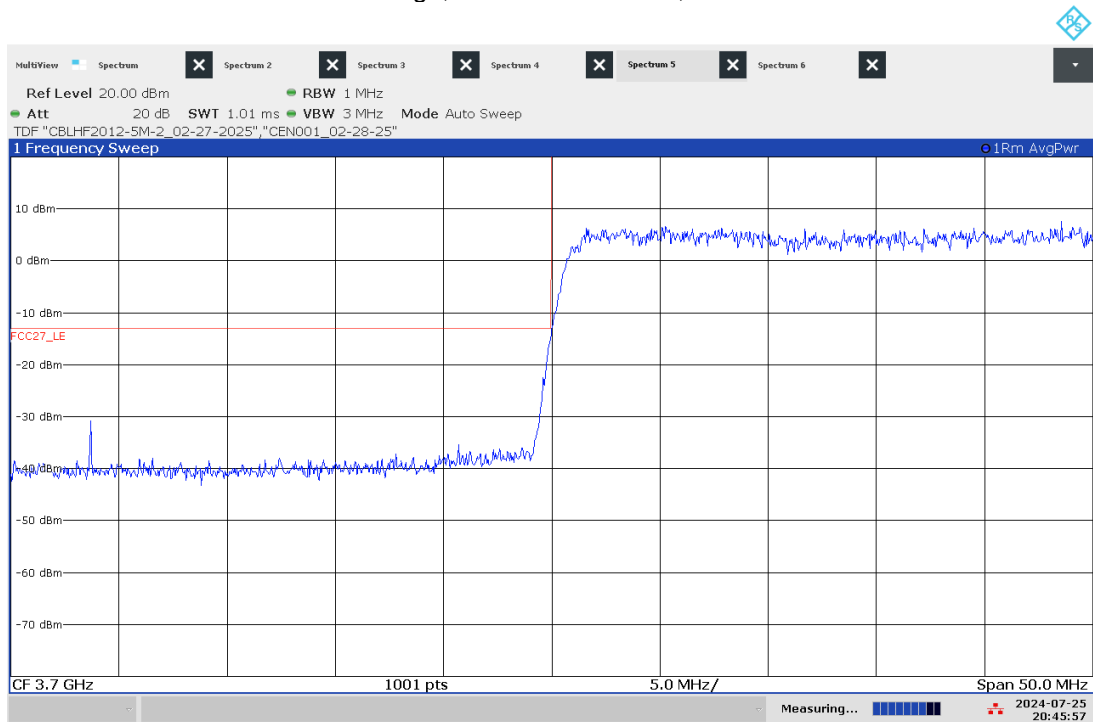
07:49:19 PM 07/25/2024

Lower Band Edge, Modulation: TM3.1, Antenna Port 1



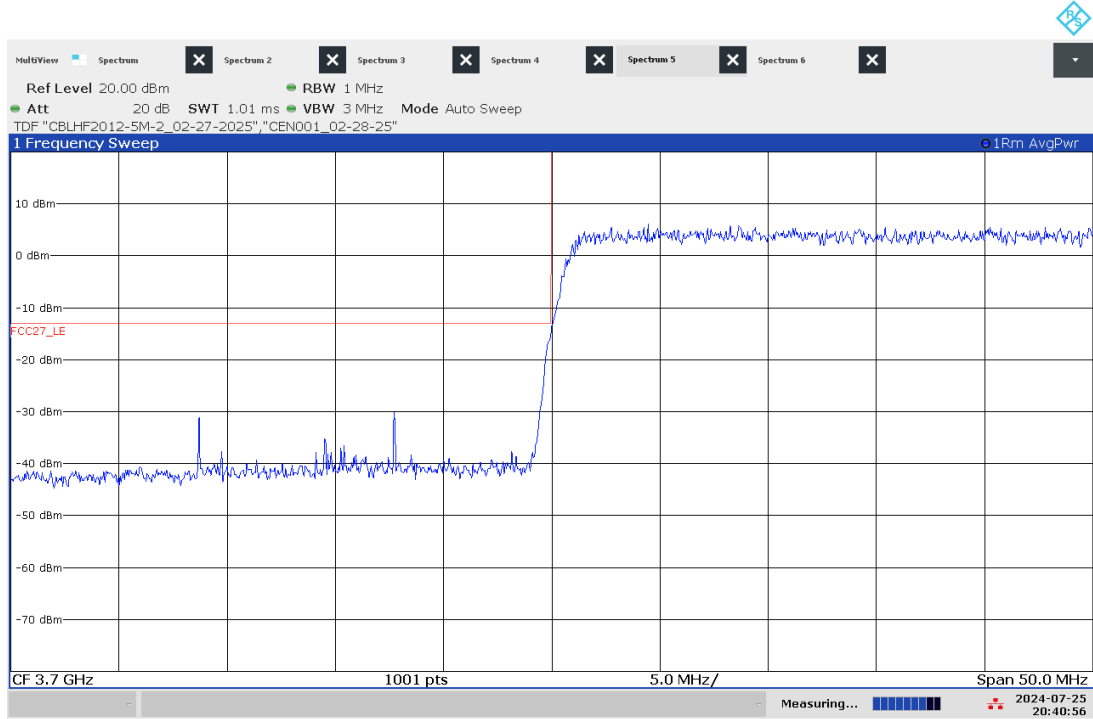
08:47:11 PM 07/25/2024

Lower Band Edge, Modulation: TM3.1, Antenna Port 2



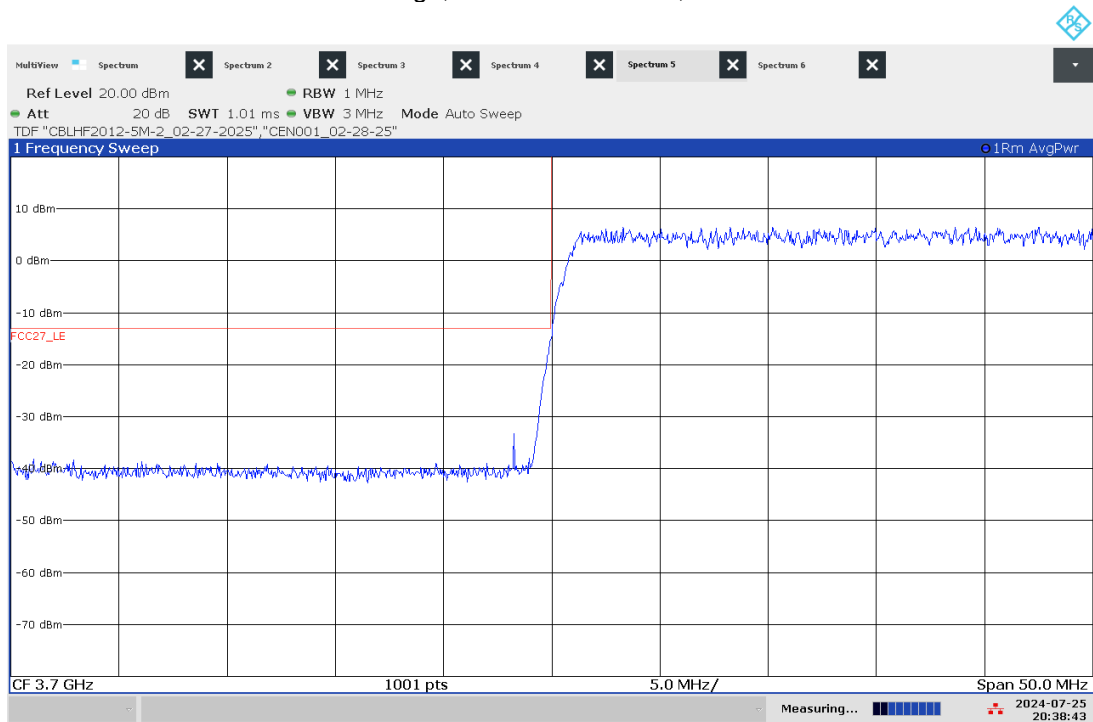
08:45:57 PM 07/25/2024

Lower Band Edge, Modulation: TM3.1, Antenna Port 3



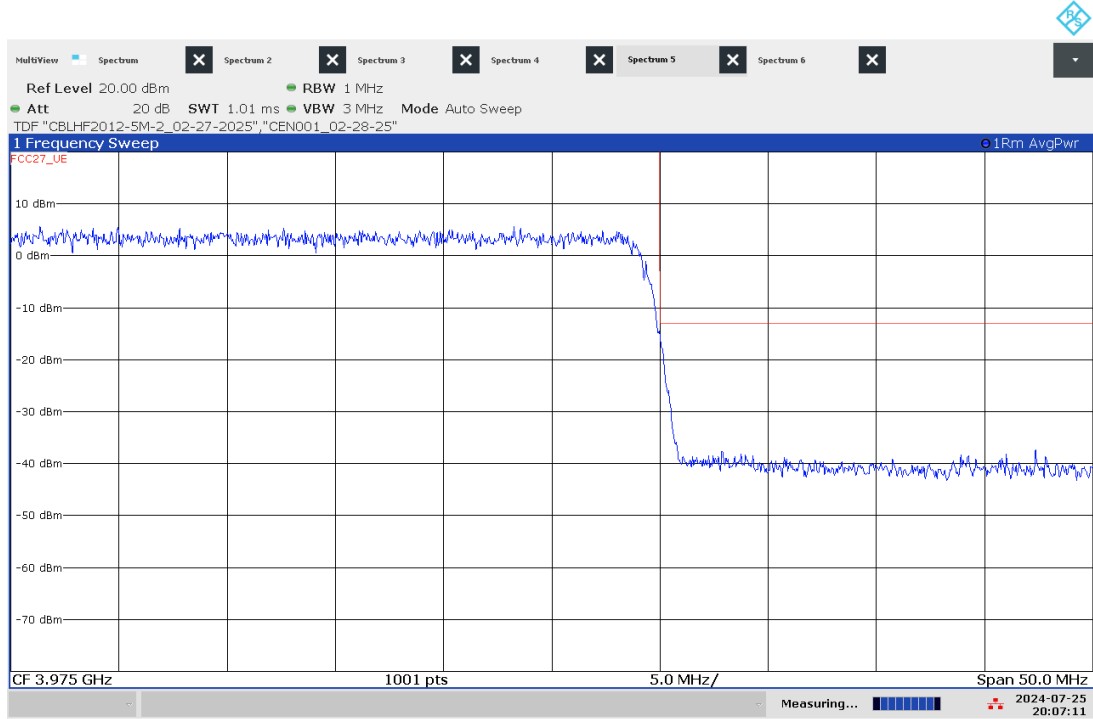
08:40:56 PM 07/25/2024

Lower Band Edge, Modulation: TM3.1, Antenna Port 4



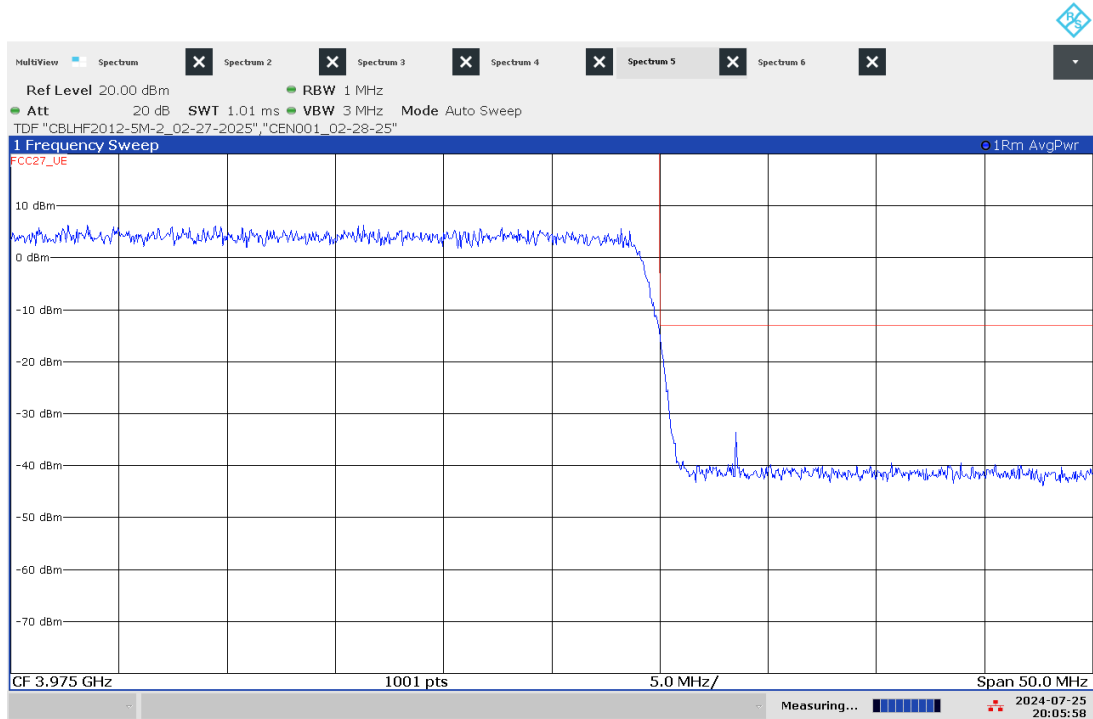
08:38:44 PM 07/25/2024

Upper Band Edge, Modulation: TM3.1, Antenna Port 1



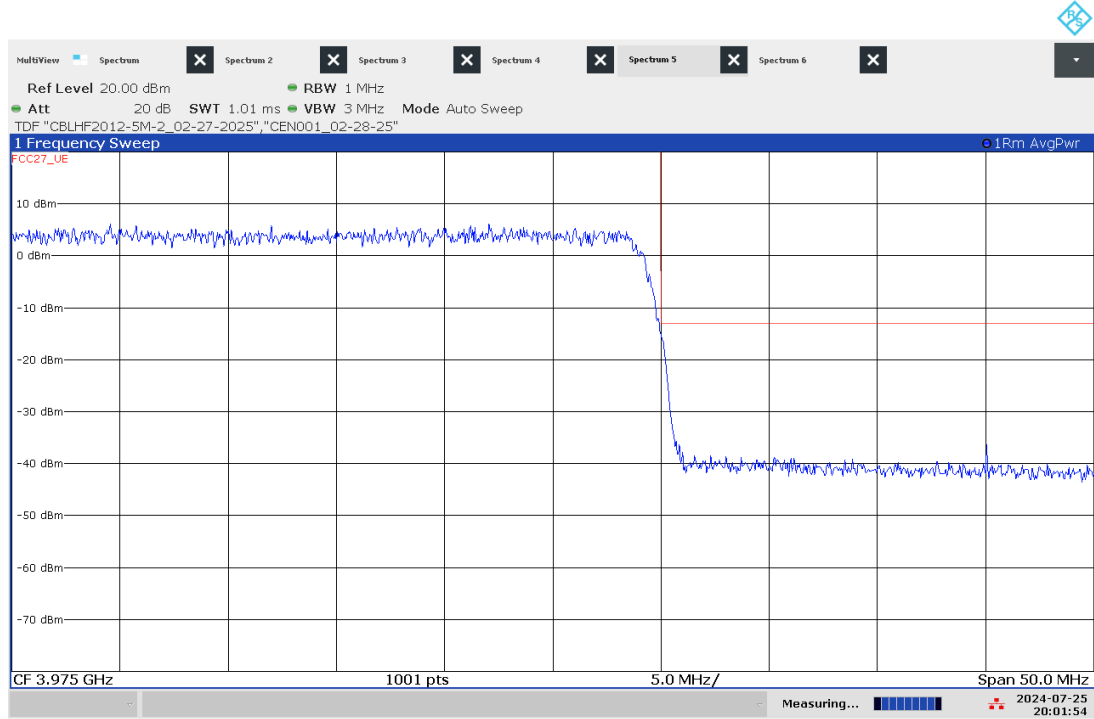
08:07:11 PM 07/25/2024

Upper Band Edge, Modulation: TM3.1, Antenna Port 2



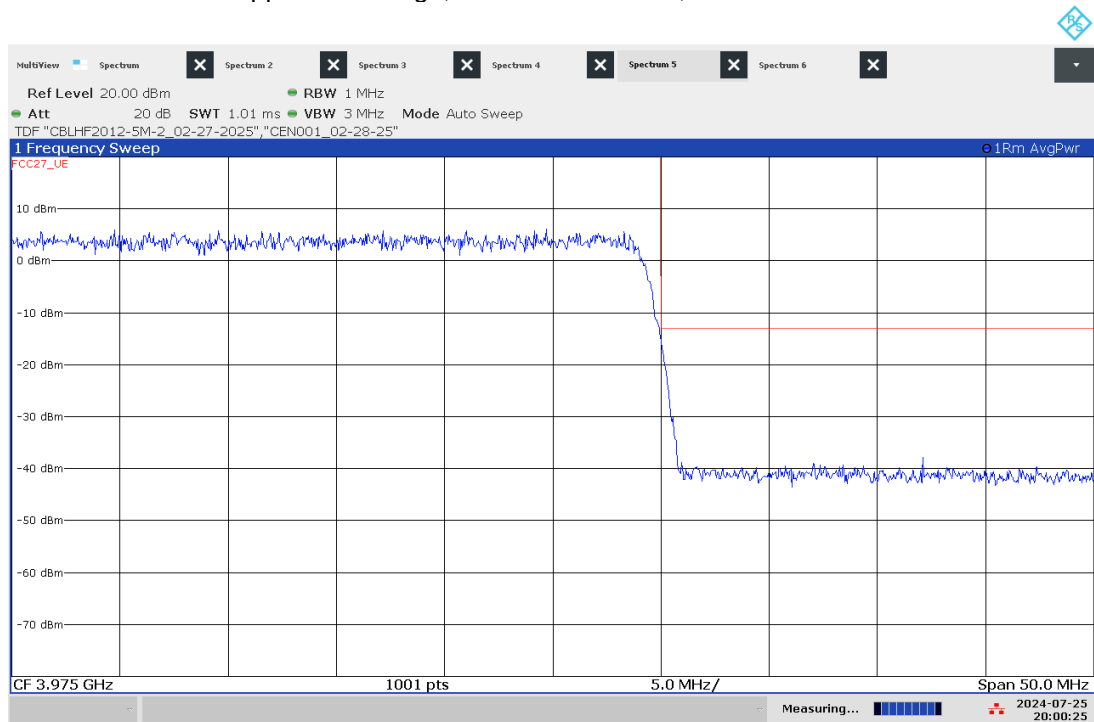
08:05:58 PM 07/25/2024

Upper Band Edge, Modulation: TM3.1, Antenna Port 3



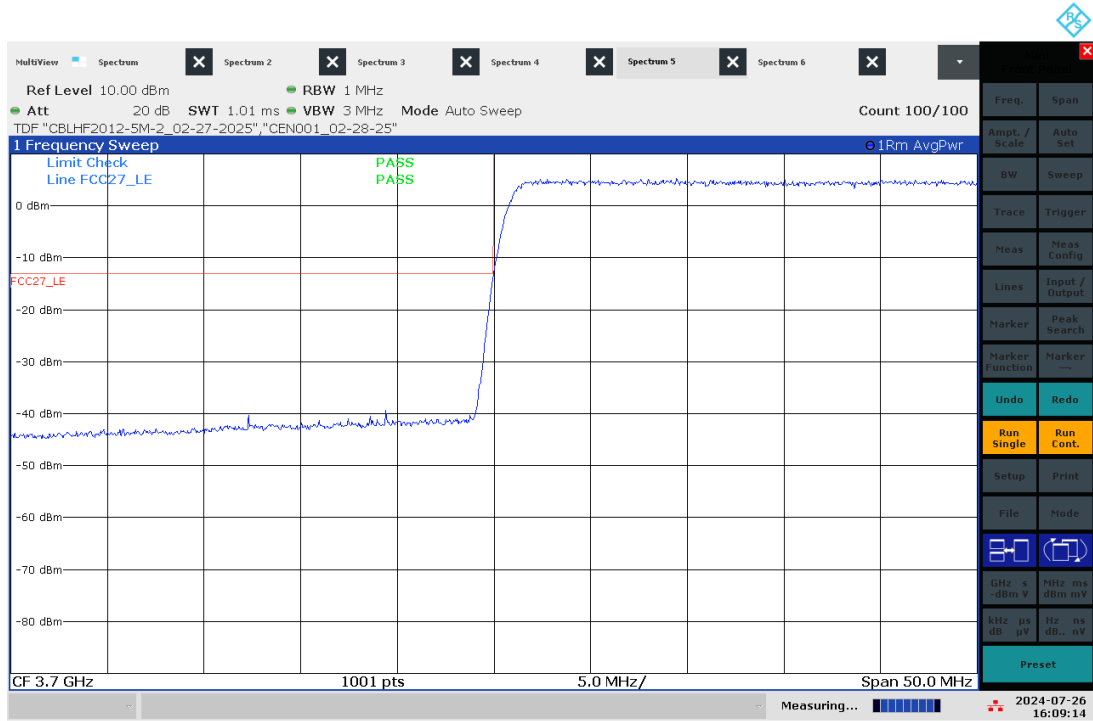
08:01:54 PM 07/25/2024

Upper Band Edge, Modulation: TM3.1, Antenna Port 4



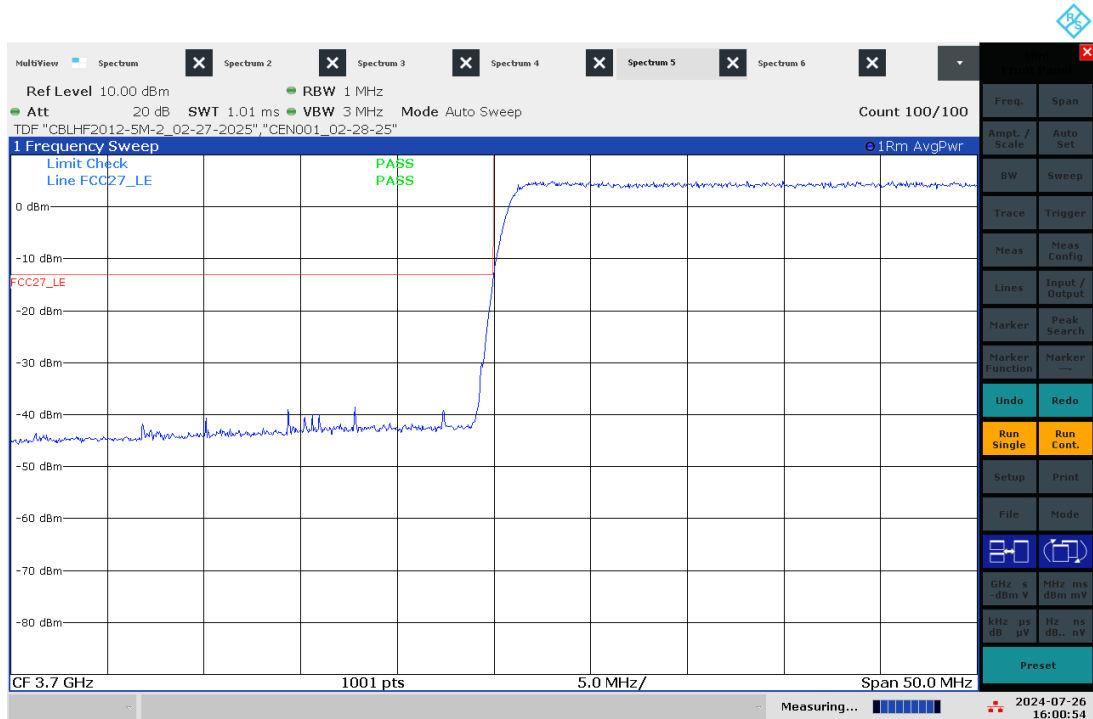
08:00:25 PM 07/25/2024

Lower Band Edge, Modulation: TM3.1a, Antenna Port 1



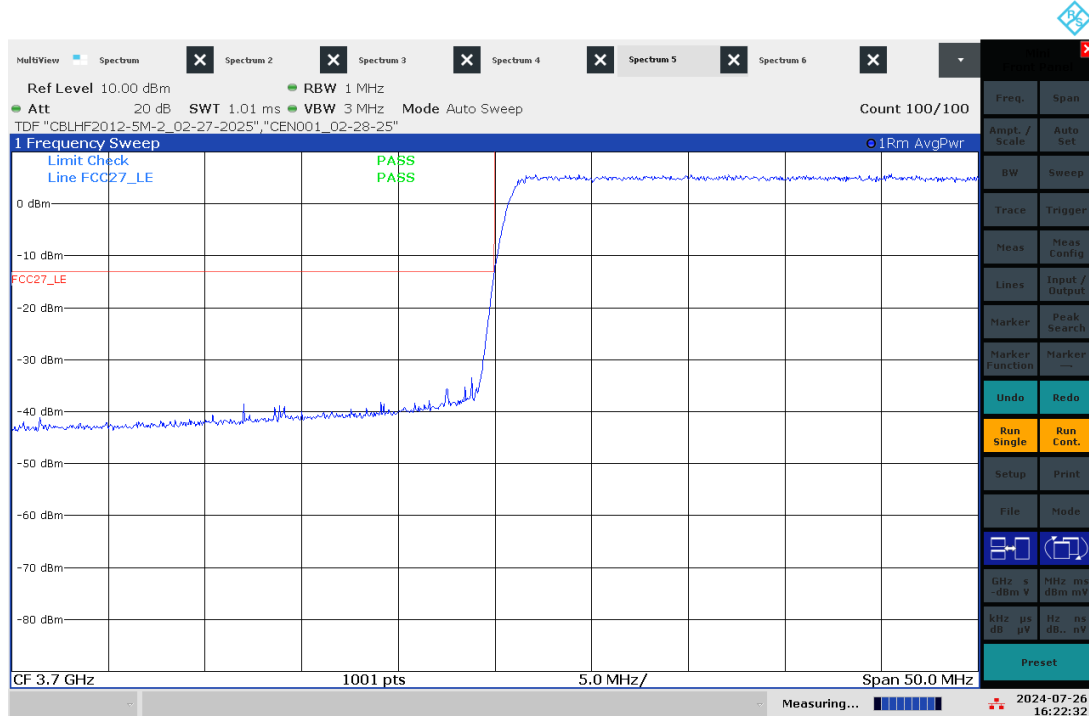
04:09:15 PM 07/26/2024

Lower Band Edge, Modulation: TM3.1a, Antenna Port 2



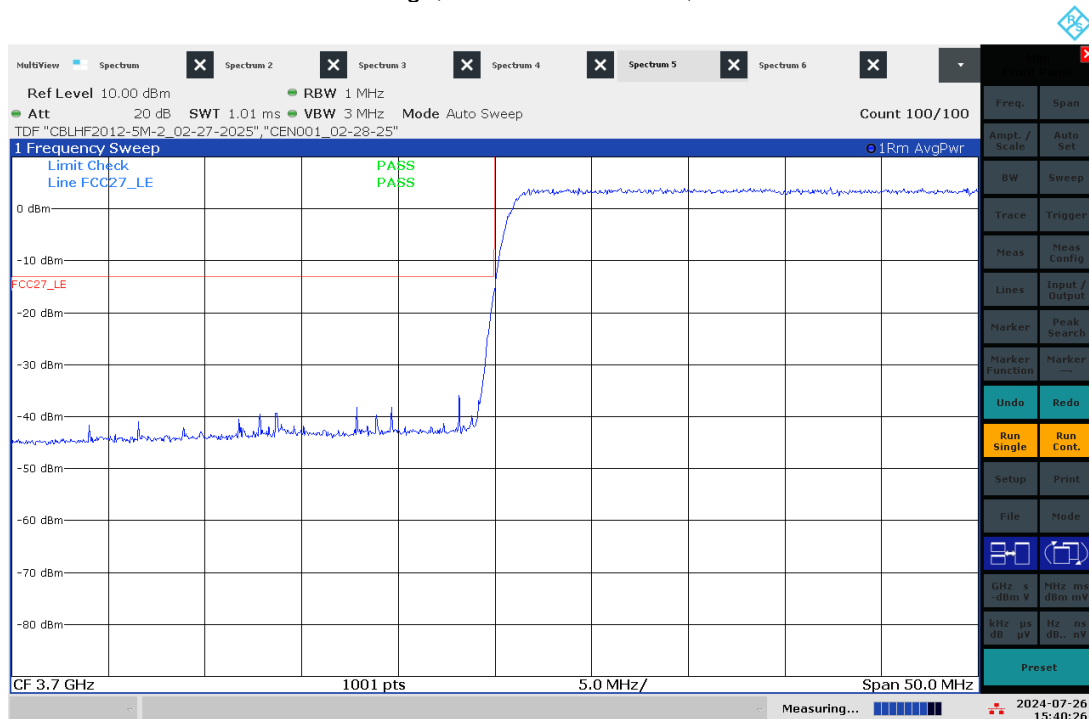
04:00:54 PM 07/26/2024

Lower Band Edge, Modulation: TM3.1a, Antenna Port 3



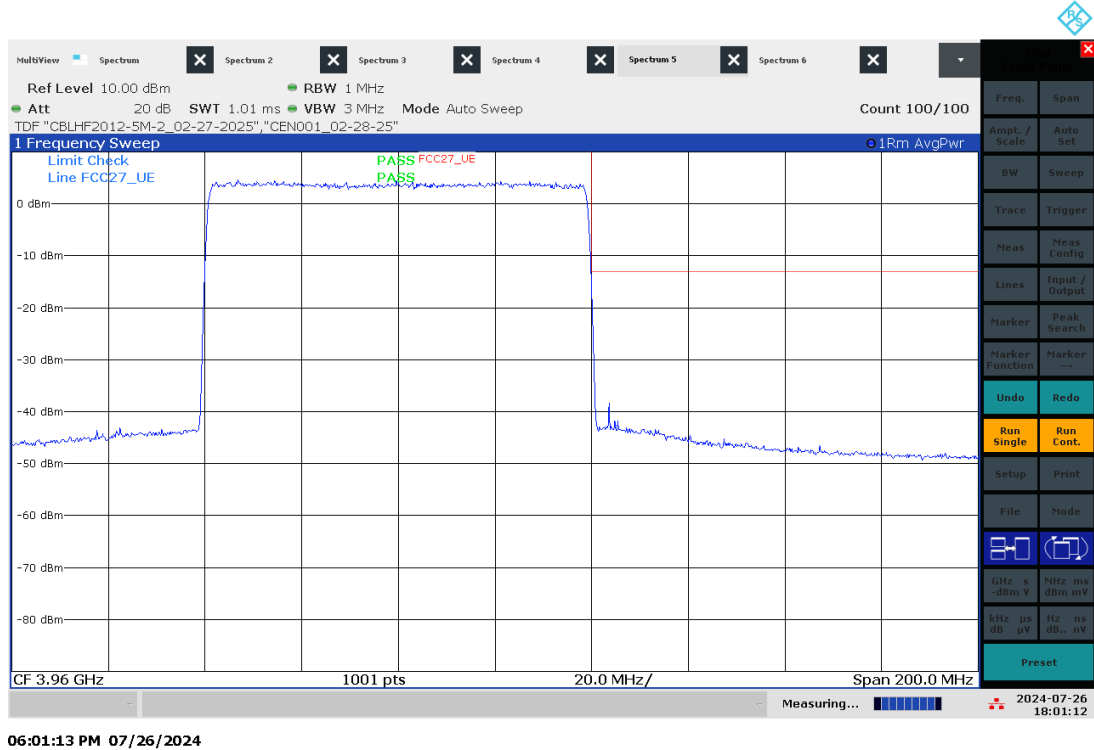
04:22:33 PM 07/26/2024

Lower Band Edge, Modulation: TM3.1a, Antenna Port 4

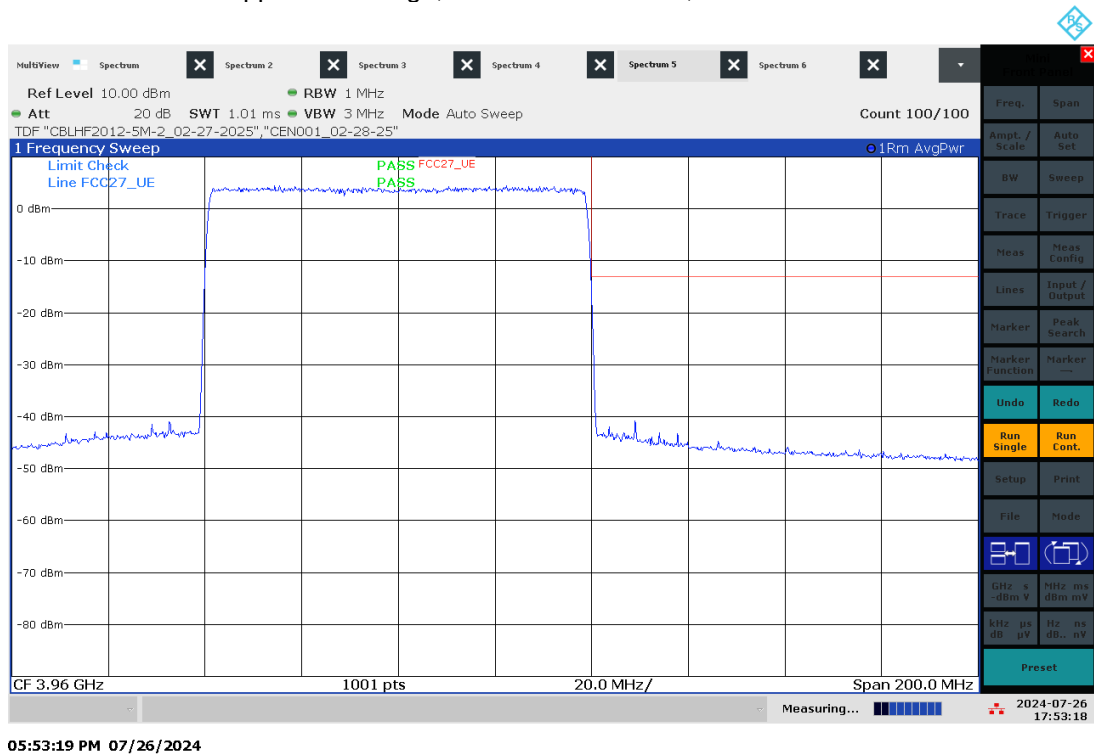


03:40:27 PM 07/26/2024

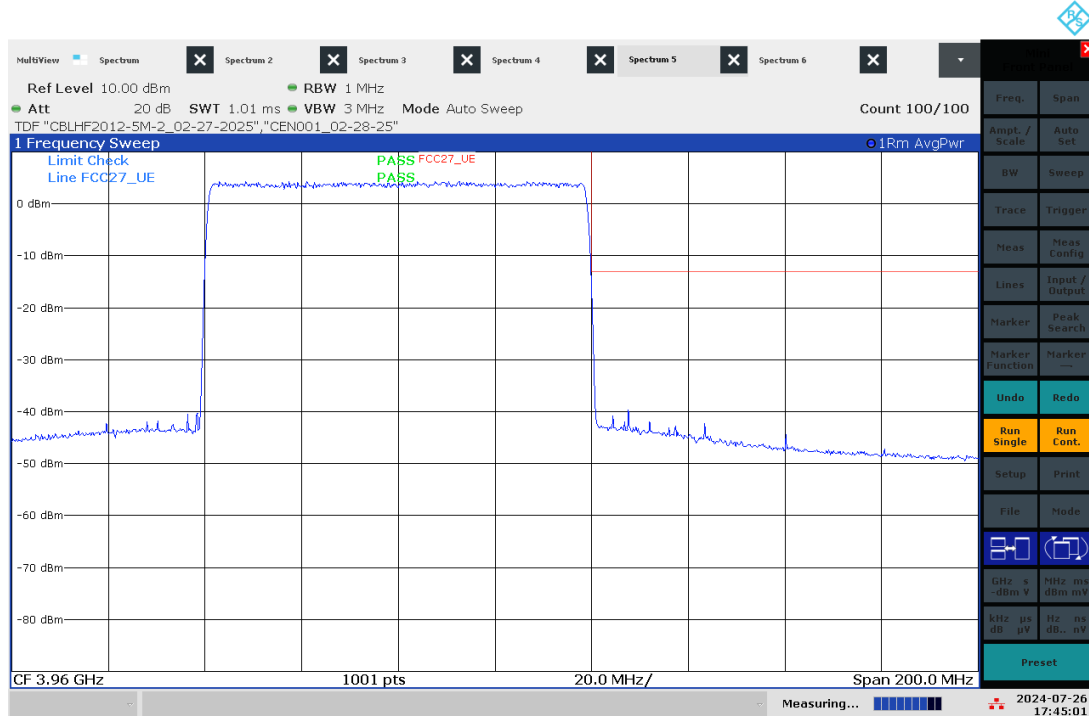
Upper Band Edge, Modulation: TM3.1a, Antenna Port 1



Upper Band Edge, Modulation: TM3.1a, Antenna Port 2

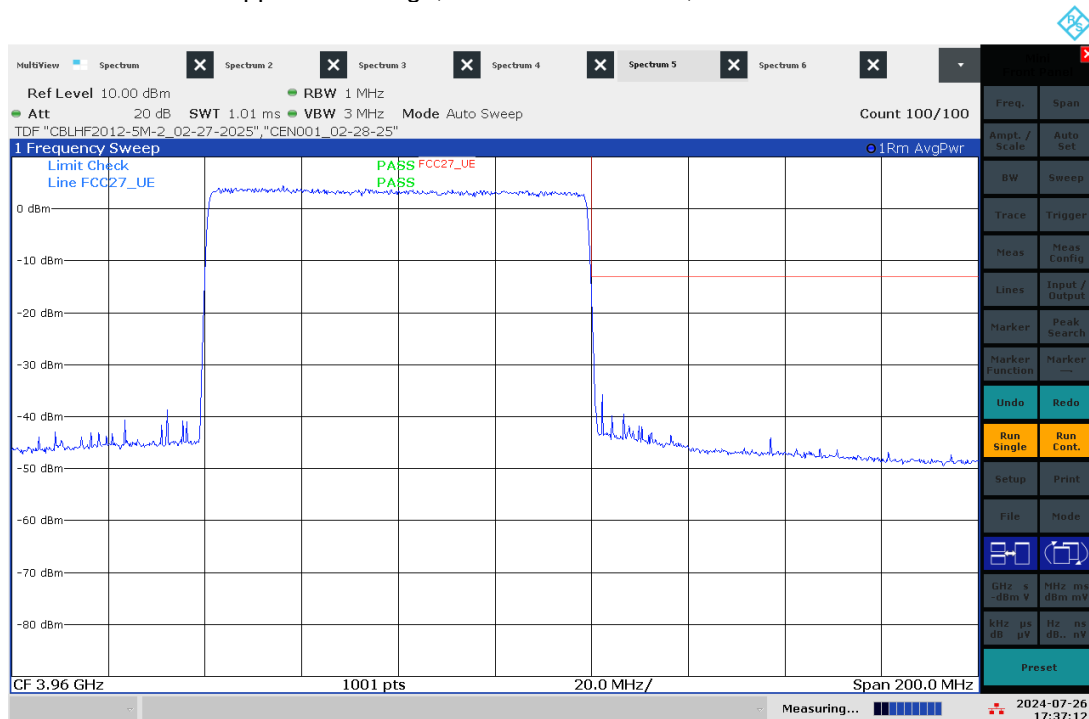


Upper Band Edge, Modulation: TM3.1a, Antenna Port 3



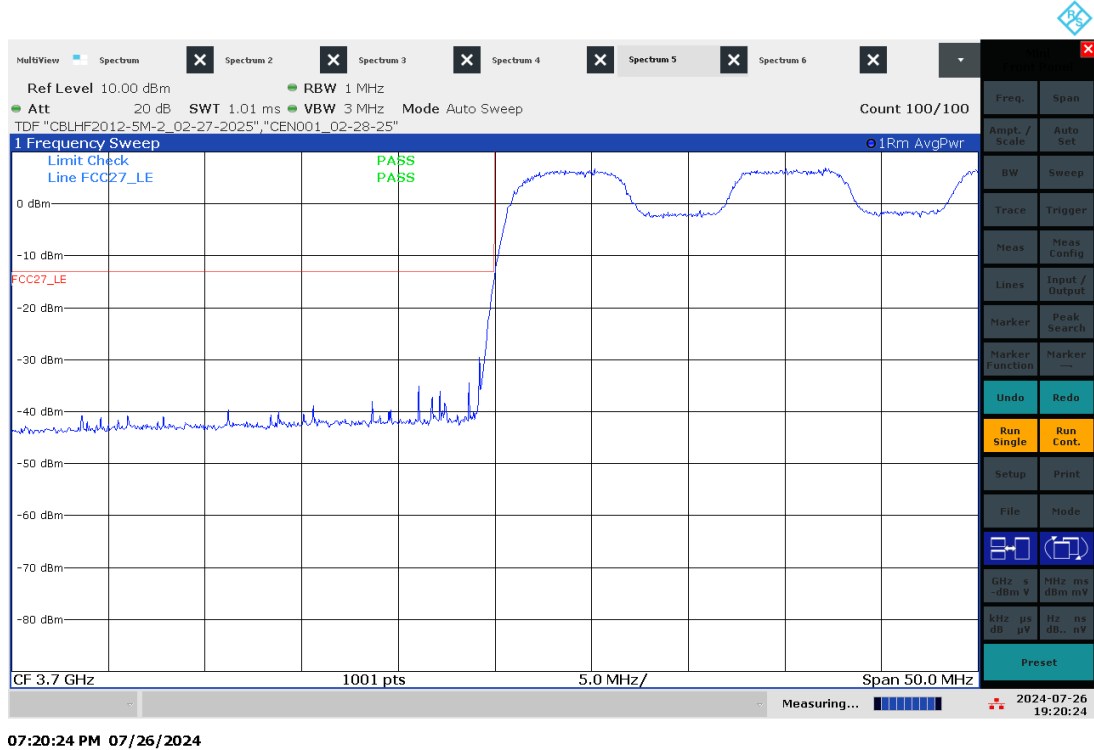
05:45:01 PM 07/26/2024

Upper Band Edge, Modulation: TM3.1a, Antenna Port 4

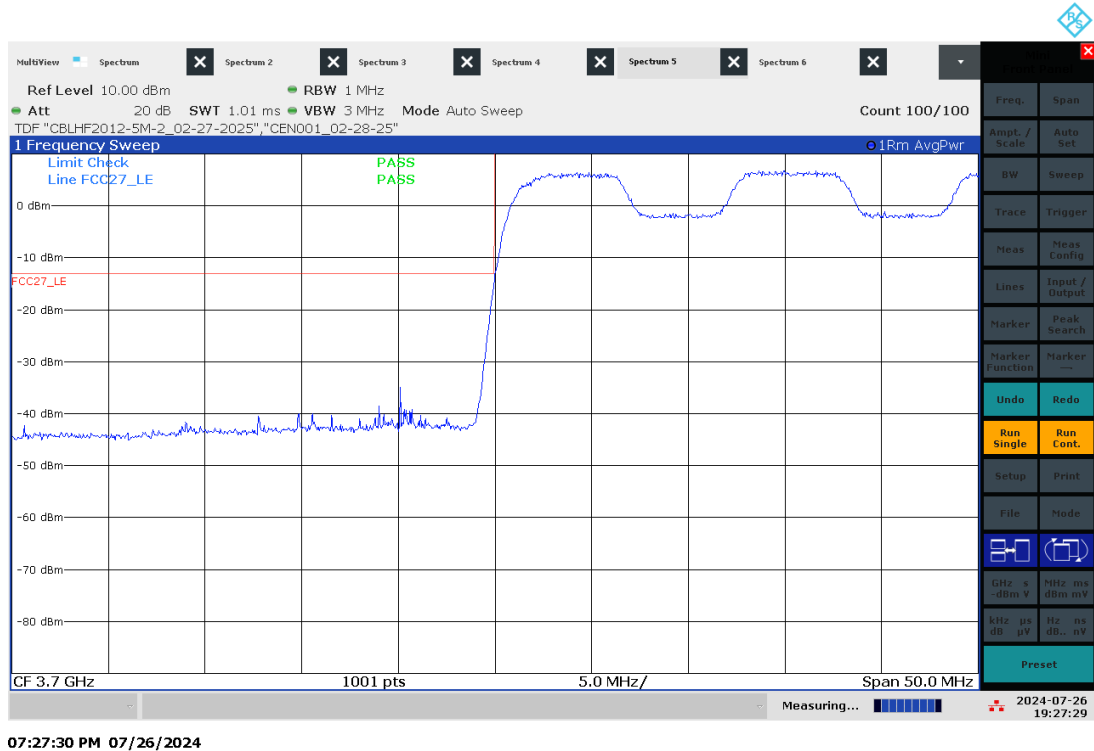


05:37:13 PM 07/26/2024

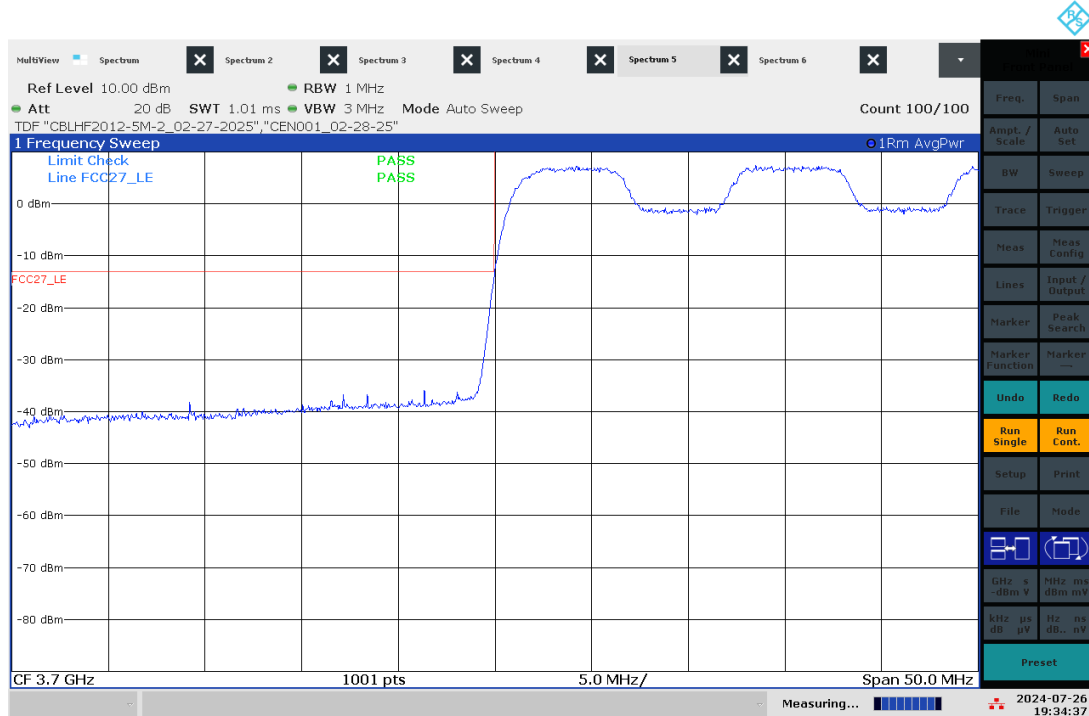
Lower Band Edge, Modulation: TM3.3, Antenna Port 1



Lower Band Edge, Modulation: TM3.3, Antenna Port 2

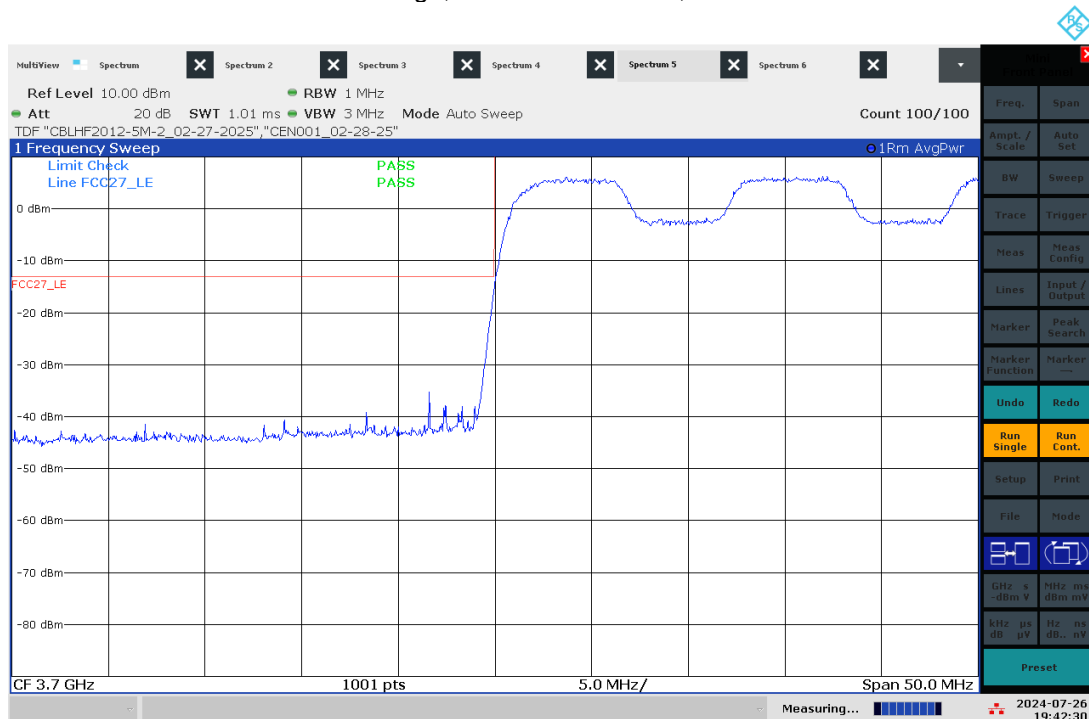


Lower Band Edge, Modulation: TM3.3, Antenna Port 3



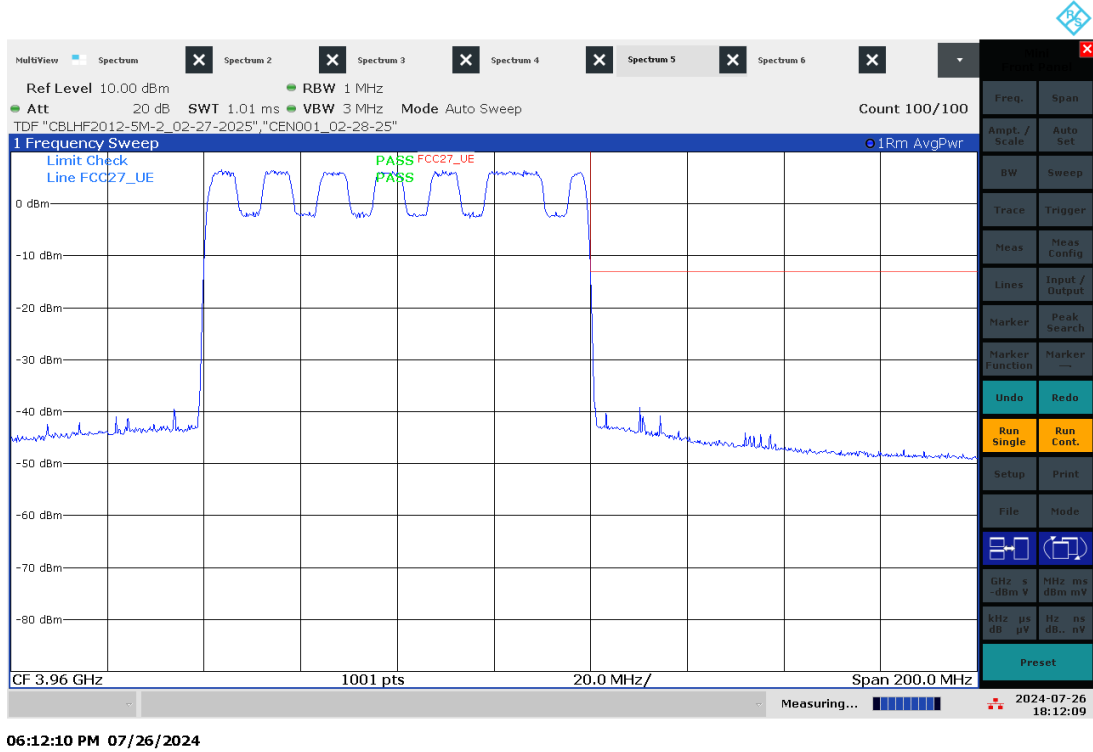
07:34:38 PM 07/26/2024

Lower Band Edge, Modulation: TM3.3, Antenna Port 4

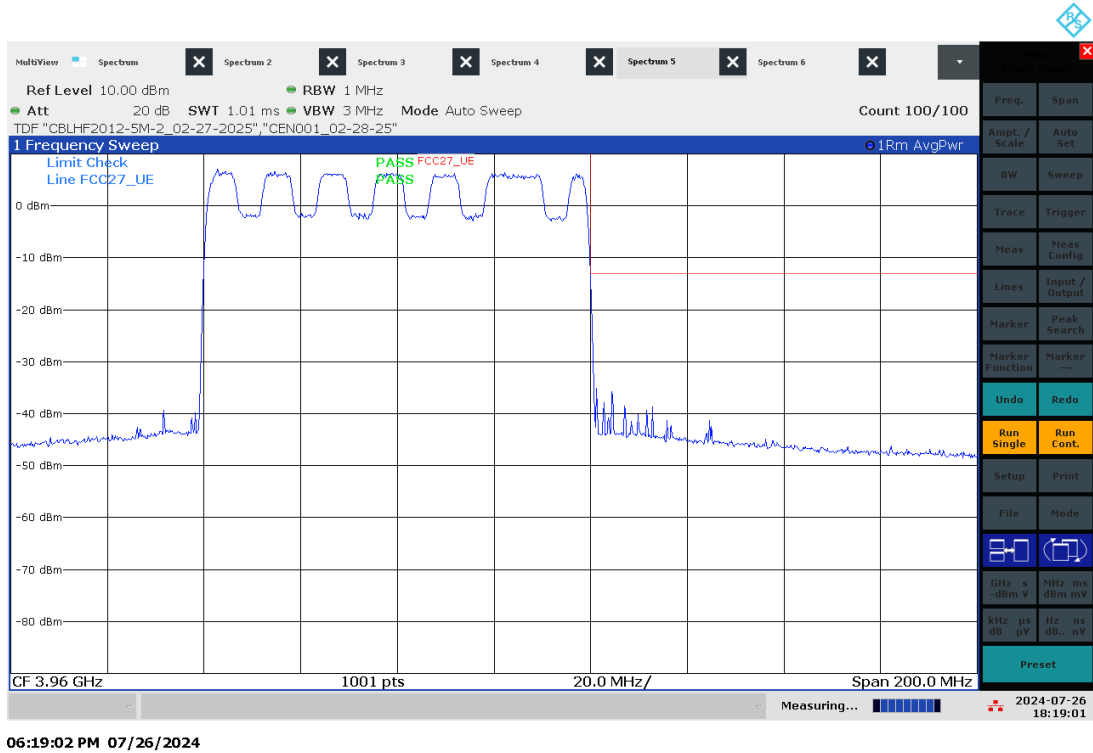


07:42:31 PM 07/26/2024

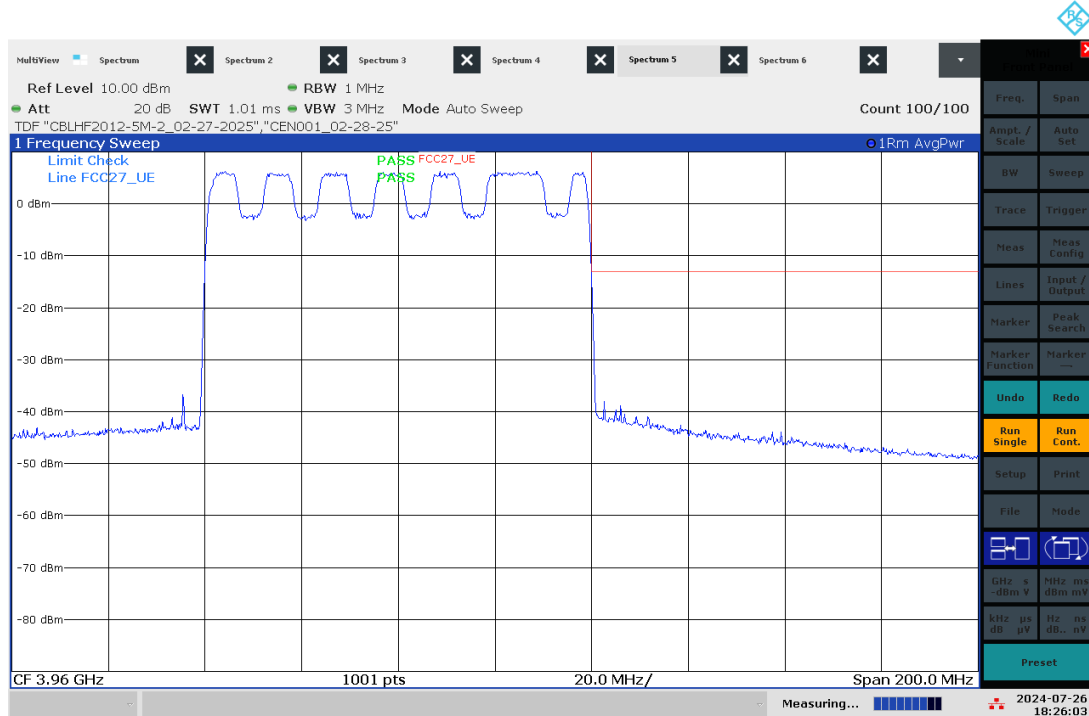
Upper Band Edge, Modulation: TM3.3, Antenna Port 1



Upper Band Edge, Modulation: TM3.3, Antenna Port 2

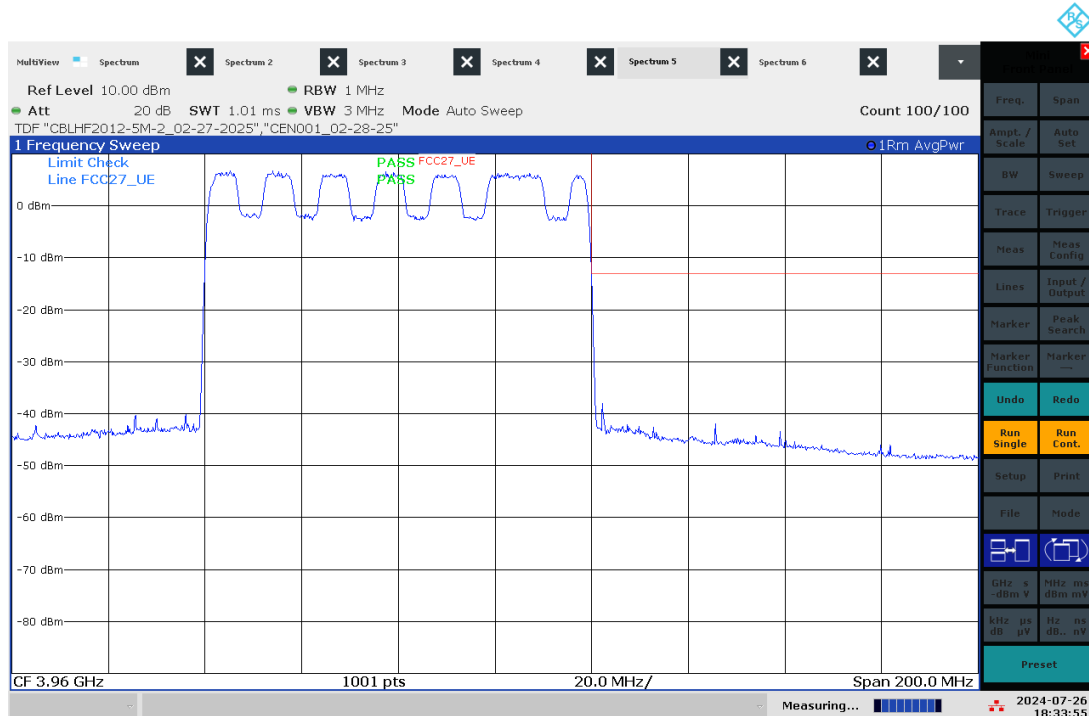


Upper Band Edge, Modulation: TM3.3, Antenna Port 3



06:26:03 PM 07/26/2024

Upper Band Edge, Modulation: TM3.3, Antenna Port 4



06:33:56 PM 07/26/2024

Product Standard: FCC Title 47 CFR Part 27					Limit applied: See Report Section 6.2 Pretest Verification w/ signal generator: Yes		
Test Date	Test Personnel/ Initials	Supervising Engineer/ Initials	Input Voltage	Mode	Atmospheric Data		
					Temp C°	Relative Humidity %	Atmospheric Pressure mbar
07/25/2024	Vathana F. Ven <i>VSV</i>	N/A	POE	Continuous Transmitting	21	49	1005
07/26/2024	Kouma Sinn <i>KPS</i>	N/A	POE	Continuous Transmitting	23	46	1005

Deviations, Additions, or Exclusions: None

10 Antenna Port Conducted and Radiated Emissions

10.1 Method

Tests are performed in accordance with ANSI C63.4: 2014 and ANSI C63.26:2015.

TEST SITE: EMC Lab (AMAP Lab) & 10m ALSE

The EMC Lab has one Semi-anechoic Chamber and one Shielded Chamber. AC Mains Power is available at 120, 230, and 277 Single Phase; 208, 400, and 480 3-Phase. Large reference ground-planes are installed in the general lab area to facilitate EMC work not requiring a shielded environment.

The 10m ALSE is 13m (Length) x 21m (Depth) x 10m (Height) with the effective size in terms of space from the tips of the absorber is 12m (Length) x 20m (Depth) x 8.5m (Height). This chamber achieves broadband performance using a unique arrangement of hybrid and ferrite tile absorber. This chamber has a built in 3m diameter turntable (Embedded type). The metal structure of the table makes electrical connection around the entire circumference of the turntable to the ground plane with a metal brush type connection. The turntable is located on one end of the chamber and the antennas are mounted 3 and 10 meters away at the other end of the chamber on the adjustable an Antenna Mast. The antenna mast is a non-conductive bore sighted type with remote control of antenna height and polarization. The Antenna Mast and the turntable can be remotely controlled through the controller located in the adjacent Control room. A Styrofoam table 80 cm high is used for table-top equipment.

10.2 Limits:

FCC Part 27.53(l)(1) For base station operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

10.3 Test Equipment Used:

Test equipment used for antenna port conducted emissions

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV009'	weather station	Davis Instruments	6351 Vantage VUE	DAV009	04/05/2024	03/27/2025
ROS005-1'	Signal and Spectrum Analyzer	Rohde and Schwartz	FSW43	100646	11/22/2023	11/22/2024
CBLHF2012-5M-2'	5m 9kHz-40GHz Coaxial Cable - SET2	Huber & Suhner	SF102	252676002	02/27/2024	02/27/2025
CEN001'	DC-40GHz attenuator 20dB	Centric RF	C411-20	CEN001	02/28/2024	02/28/2025

Software Utilized:

Name	Manufacturer	Version
None	N/A	N/A

Test equipment used for radiated emissions from 9 kHz-30 MHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014'	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
145-414'	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	07/19/2023	07/19/2024
IW001'	2 meter cable	Insulated Wire	2801-NPS	001	07/15/2024	07/15/2025
145-412'	5m chamber cable	Huber + Suhner	Sucoflex 106 -1500mm	001	VBV	Verified
ETS003'	9kHz-30MHz Active Loop Antenna	ETS Lindgren	6502	00143396	01/25/2024	01/25/2025

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	2023.0.9.0

Test equipment used for radiated emissions from 30-1000 MHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
HS003	10m under floor cable	Huber-Schuner	10m-1	HS003	02/27/2024	02/27/2025
HS001	DC-18GHz cable 1.5m long	Huber & Suhner	SucoFlex 106A	HS001	01/30/2024	01/30/2025
IW006	DC-18GHz cable 8.4m long	Insulated Wire	2800-NPS	IW006	05/23/2024	05/23/2025
145145	Broadband Hybrid Antenna 30 MHz - 3 GHz	Sunol Sciences Corp.	JB3	A122313	07/11/2024	07/11/2025
PRE11	50dB gain pre-amp	Pasternack	PRE11	PRE11	09/15/2023	09/15/2024

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	2023.0.9.0

Test equipment used from 1-18 GHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS014	Receiver 1Hz-44GHz	Rhode & Schwarz	ESW 44	103232	06/10/2024	06/10/2025
145-420	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/27/2024	02/27/2025
145-414	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	07/19/2024	07/19/2024
IW001	2 meter cable	Insulated Wire	2801-NPS	001	07/15/2024	07/15/2025
145-412	5m chamber cable	Huber + Suhner	Sucoflex 106 -1500mm	001	VBU	Verified
PRE12	Pre-amplifier	Com Power	PAM-118A	18040117	05/02/2024	05/02/2025

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	2023.0.9.0

Test equipment used from 18-40 GHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007	Weather Station Vantage Vue	Davis	6250	MS191212003	03/27/2024	03/27/2025
ROS005-1	Signal and Spectrum Analyzer	Rohde and Shwartz	FSW43	100646	11/22/2023	11/22/2024
PRE9	100MHz-40GHz Preamp	MITEQ	NSP4000-NFG	1260417	10/03/2023	10/03/2024
EMC04	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	02/13/2024	02/13/2025
REA006	18GHz High Pass Filter	Reactel, Inc	7HS-18G/40G K11	(06)1	04/23/2024	04/23/2025
CBLHF2012 -5M-2'	5m 9kHz-40GHz Coaxial Cable - SET2	Huber & Suhner	SF102	252676002	02/27/2024	02/27/2025
CBLHF2012 -2M-2'	2m 9kHz-40GHz Coaxial Cable - SET2	Huber & Suhner	SF102	252675002	02/27/2024	02/27/2025

Software Utilized:

Name	Manufacturer	Version
None	N/A	N/A

10.4 Results:

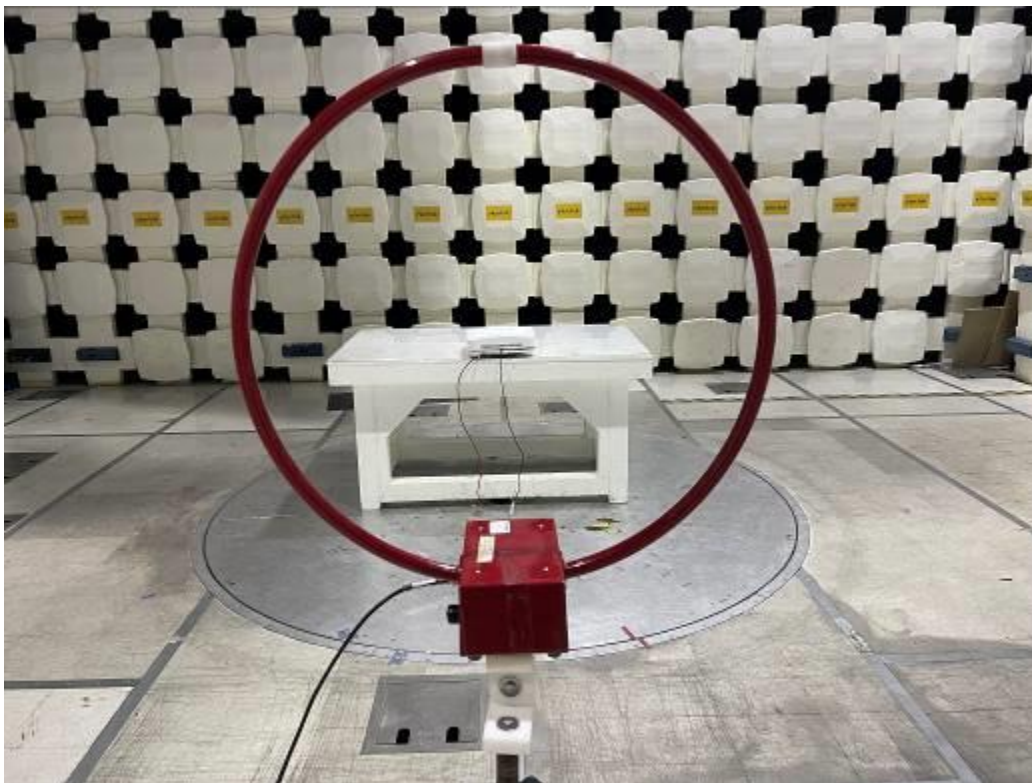
The sample tested was found to Comply.

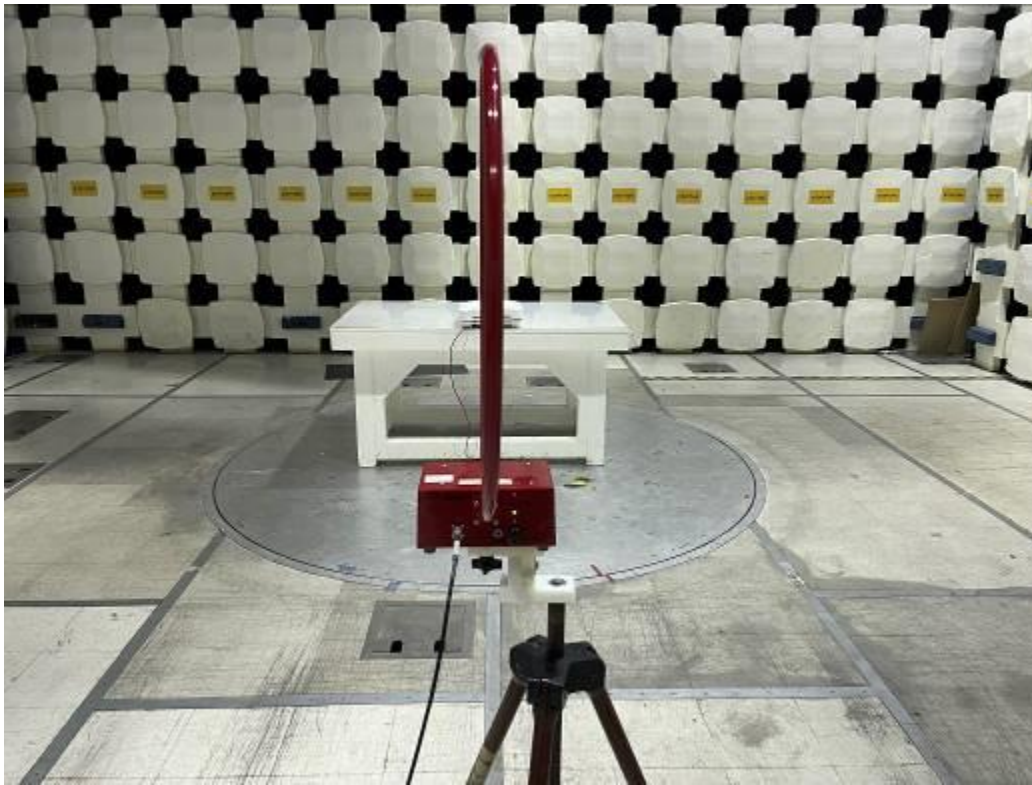
10.5 Setup Photographs:

Antenna Port Conducted Emissions

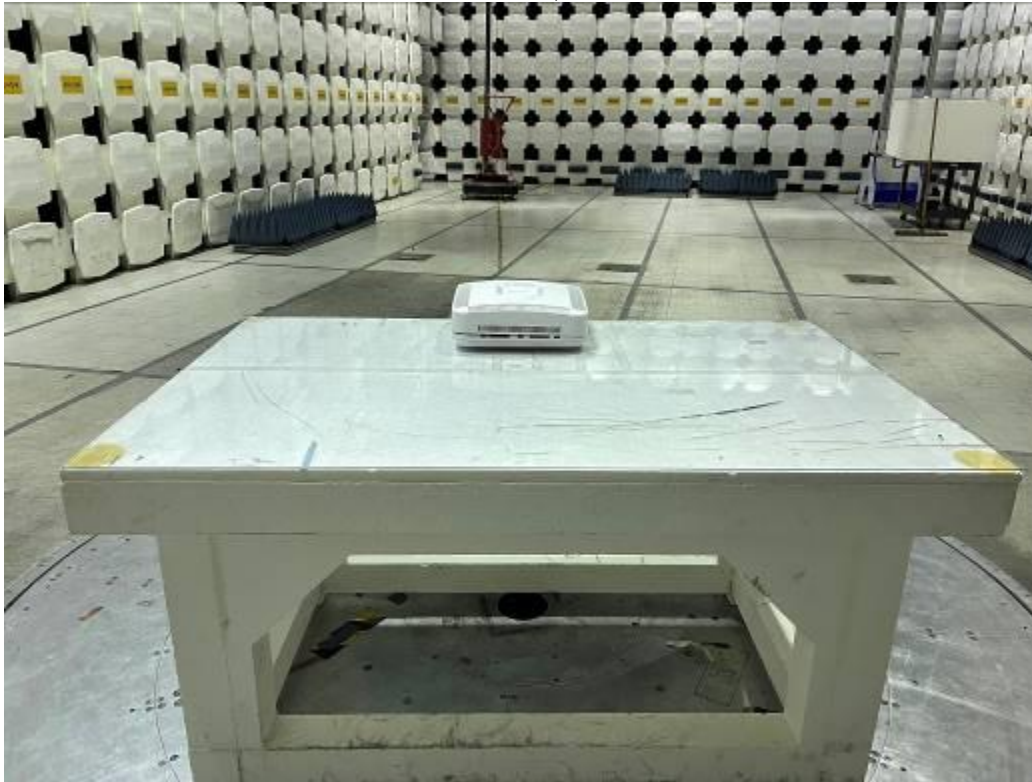


Radiated Emissions, 9 kHz-30 MHz

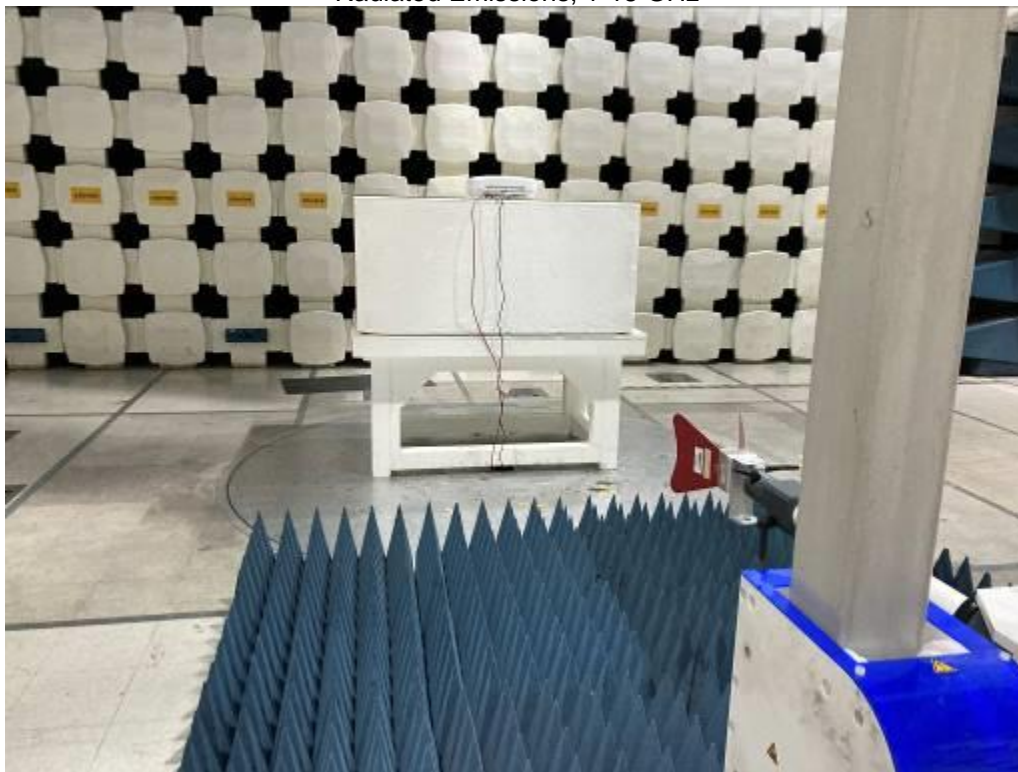




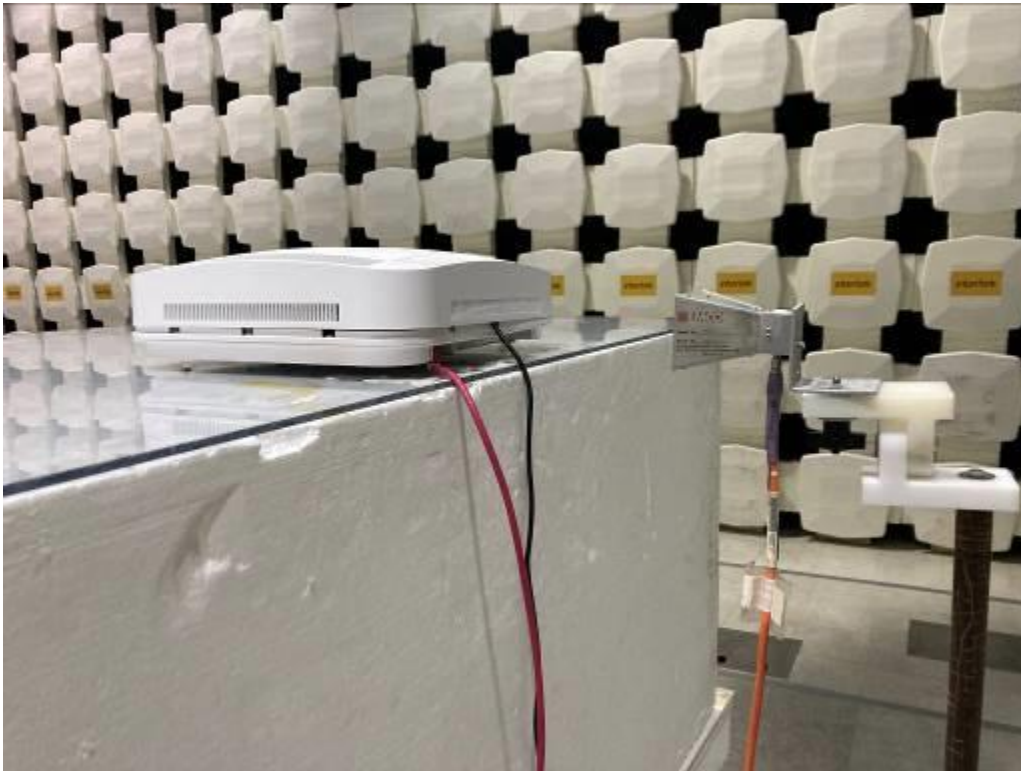
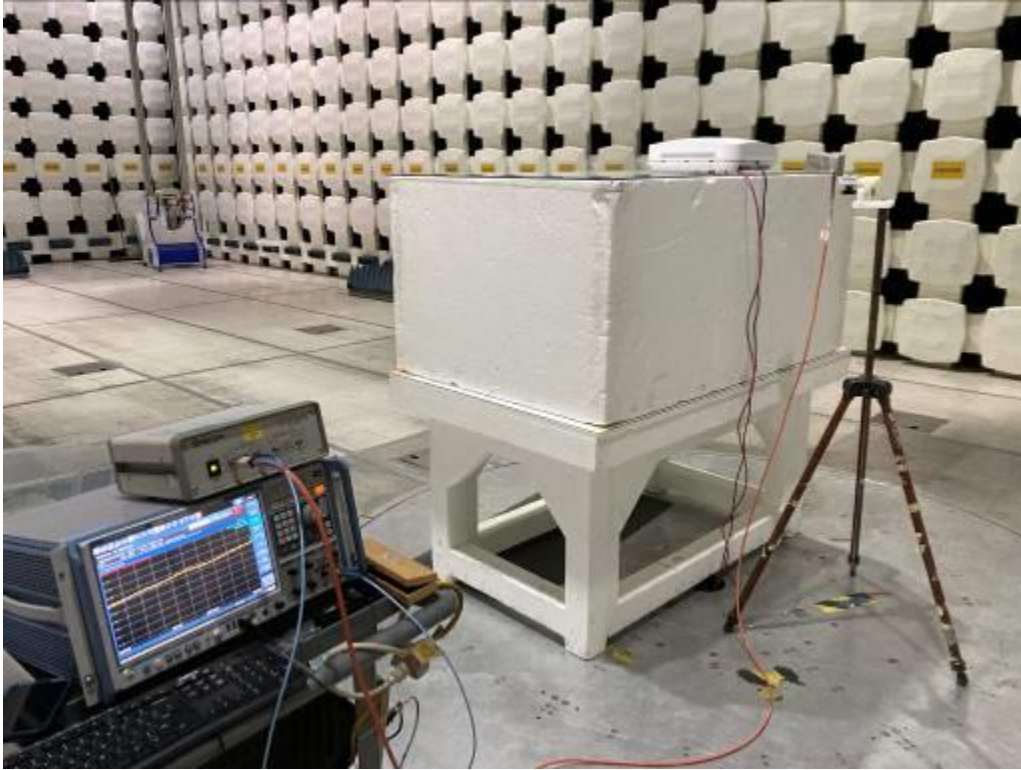
Radiated Emissions, 30-1000 MHz



Radiated Emissions, 1-18 GHz

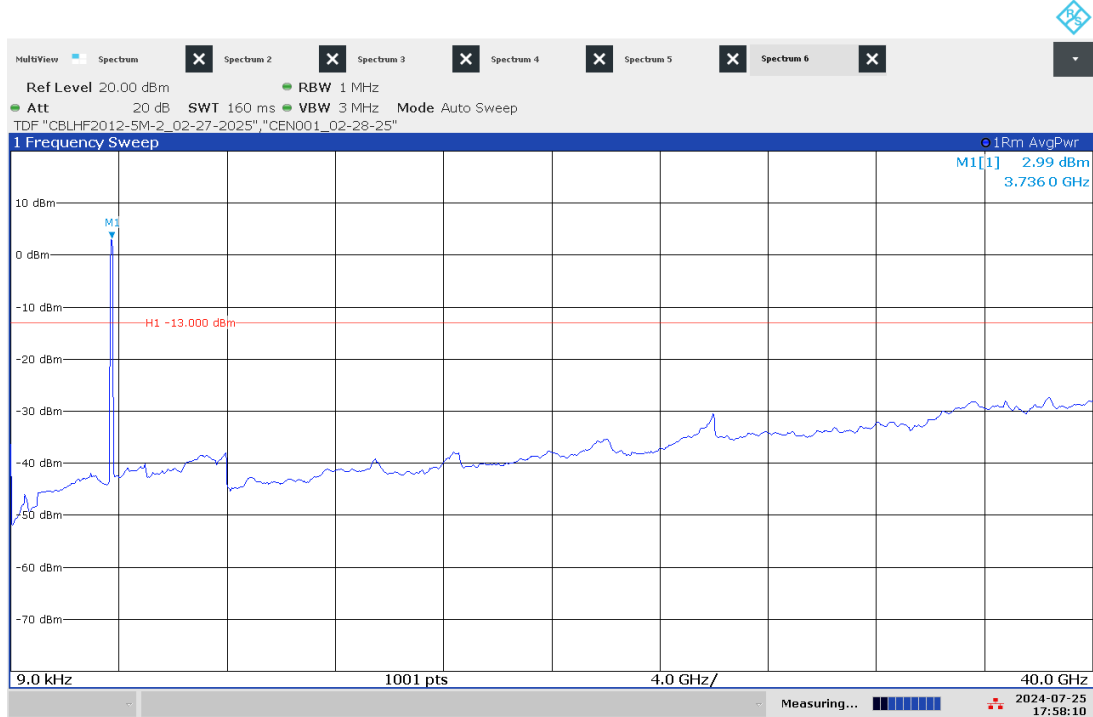


Radiated Emissions, 18-40 GHz



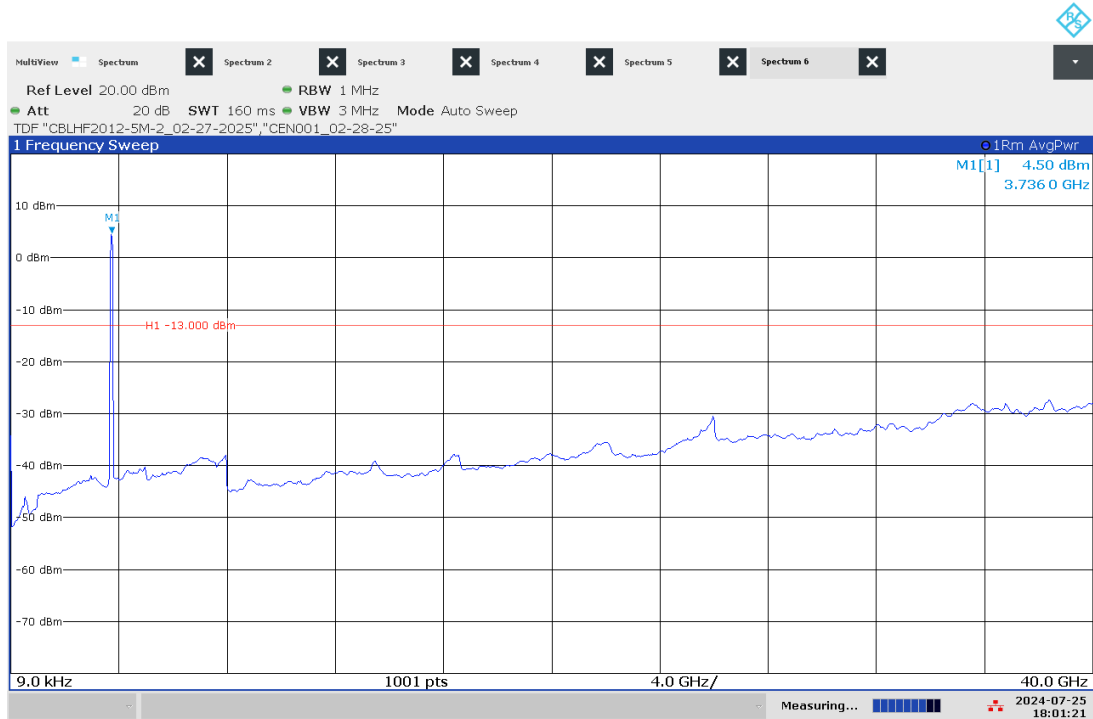
10.6 Plots/Data:

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 1



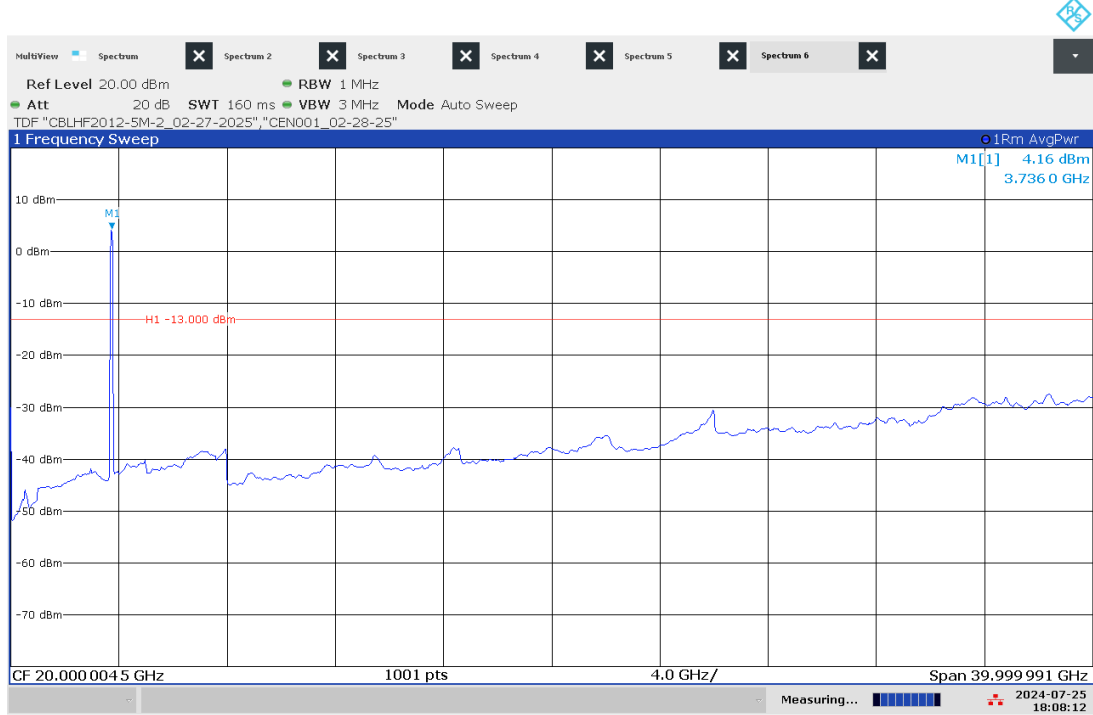
05:58:10 PM 07/25/2024

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 2



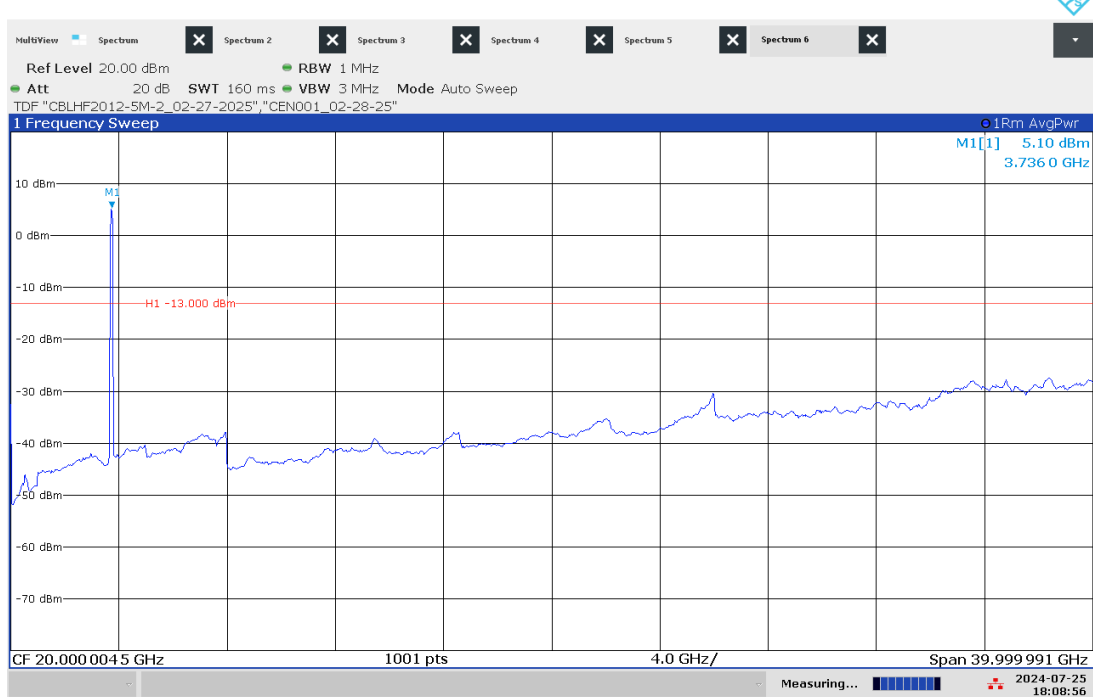
06:01:21 PM 07/25/2024

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 3



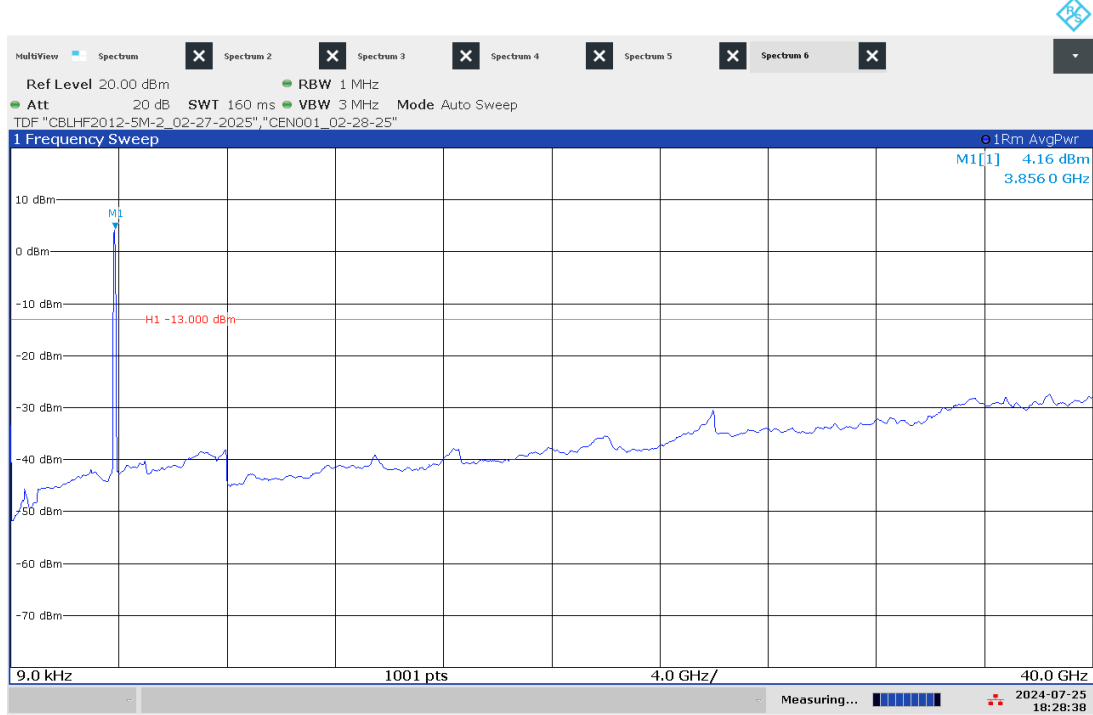
06:08:12 PM 07/25/2024

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 4



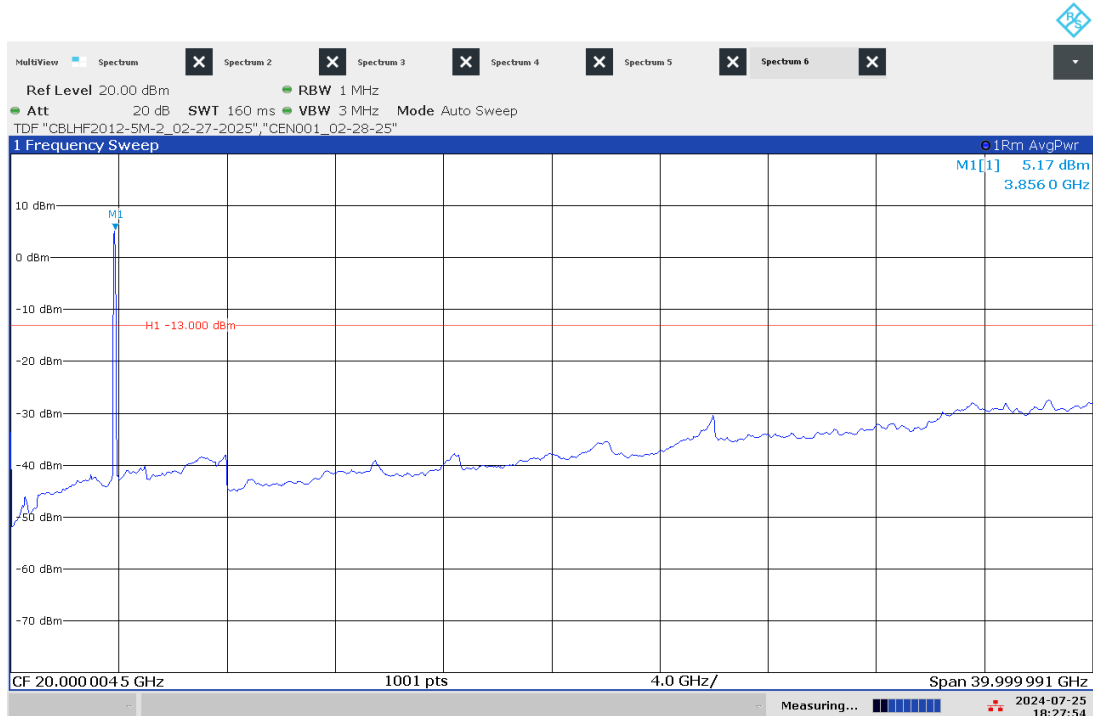
06:08:56 PM 07/25/2024

Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 1



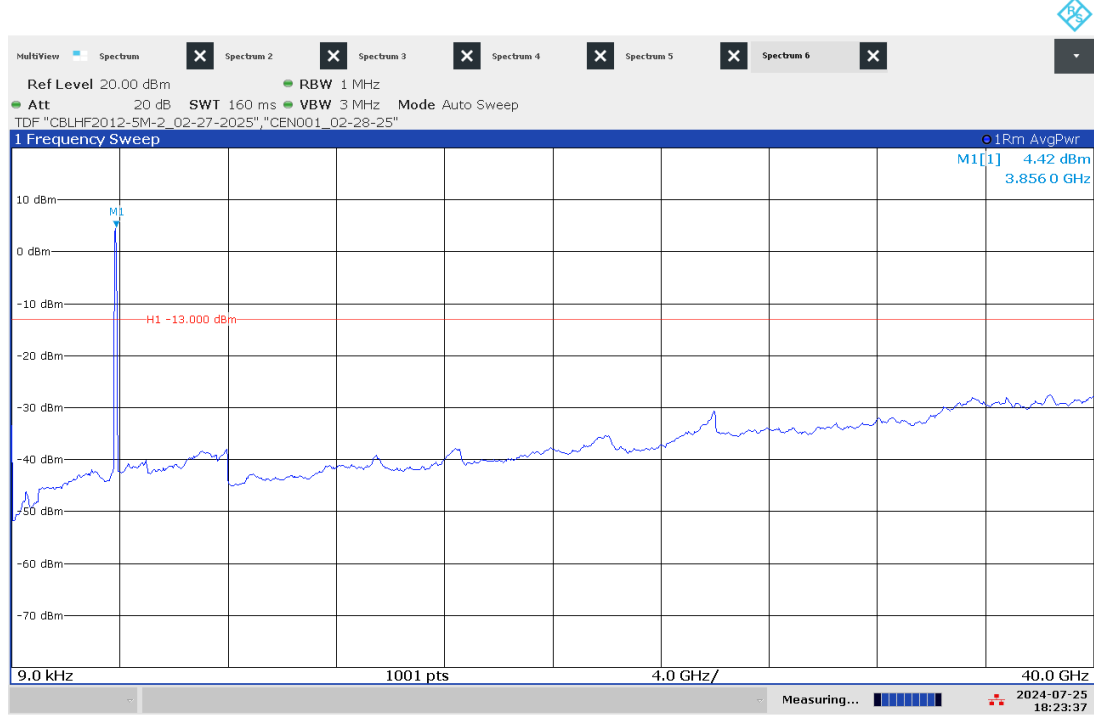
06:28:38 PM 07/25/2024

Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 2

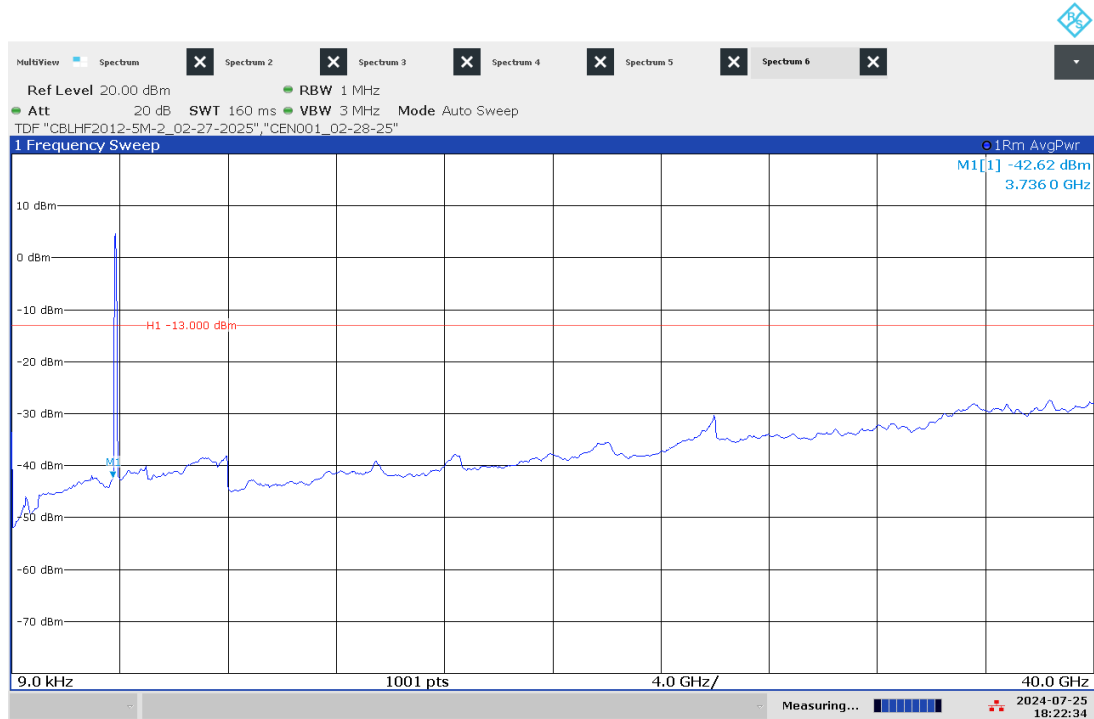


06:27:54 PM 07/25/2024

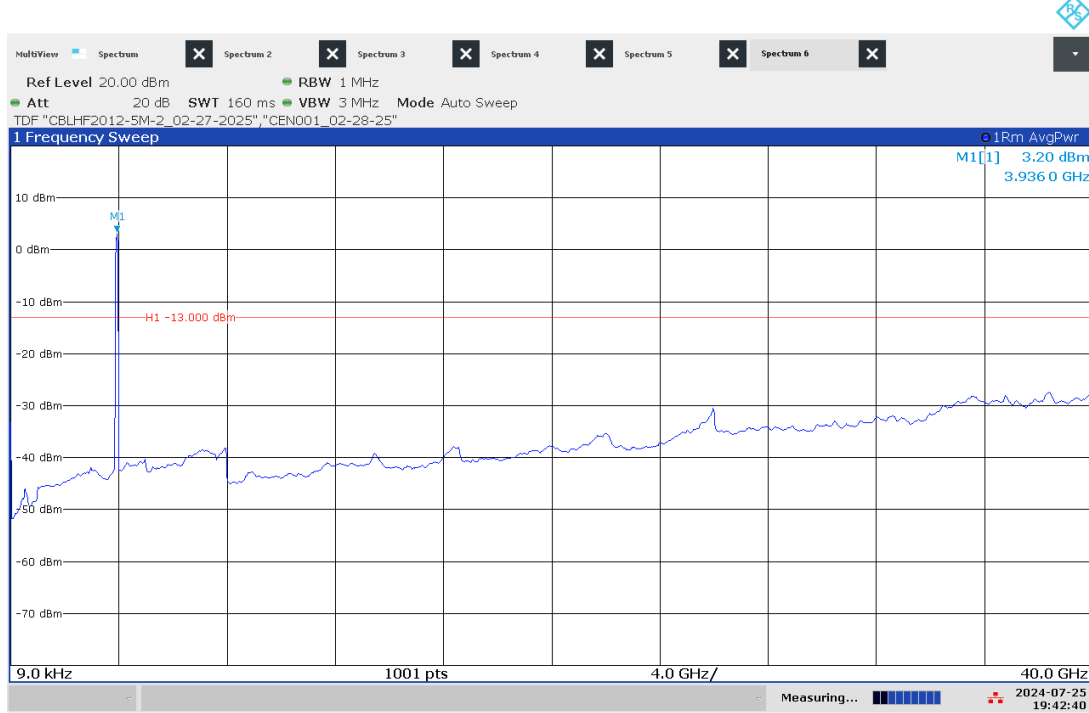
Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 3



Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 4

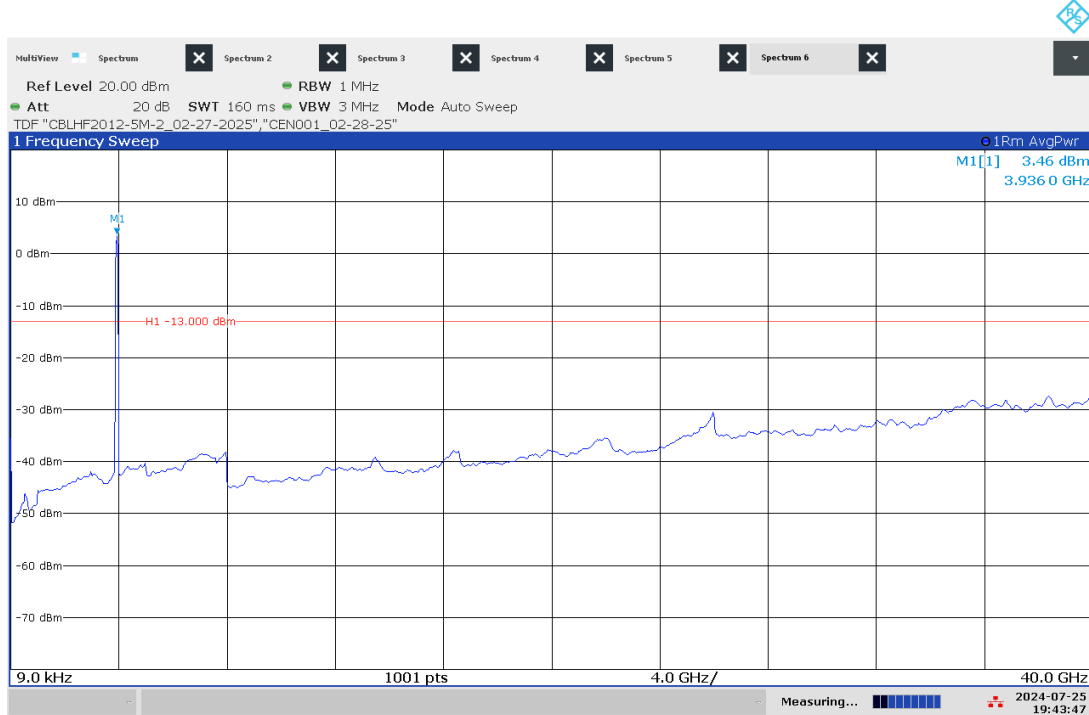


High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 1



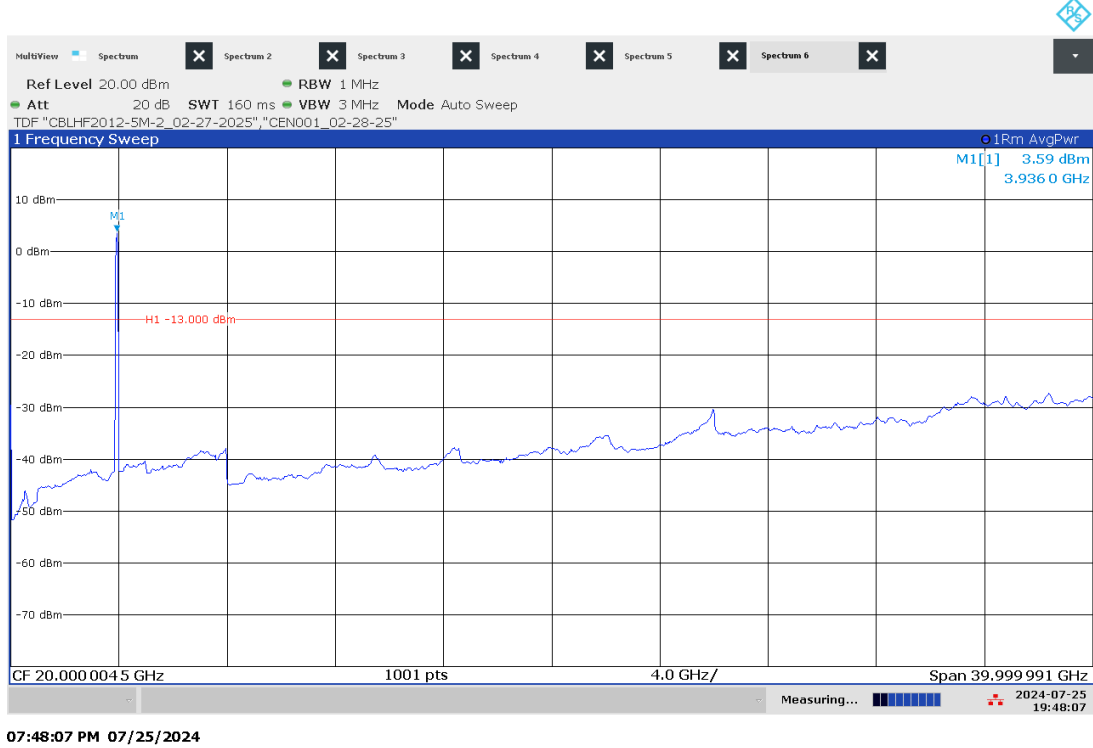
07:42:41 PM 07/25/2024

High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 2

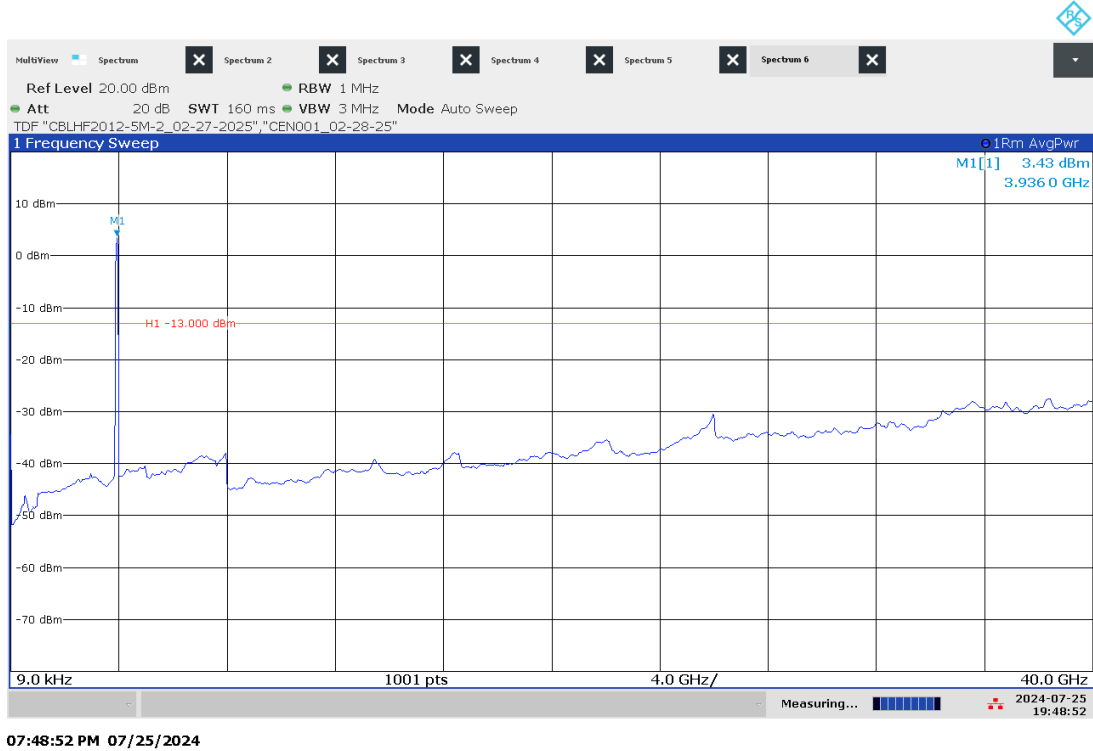


07:43:47 PM 07/25/2024

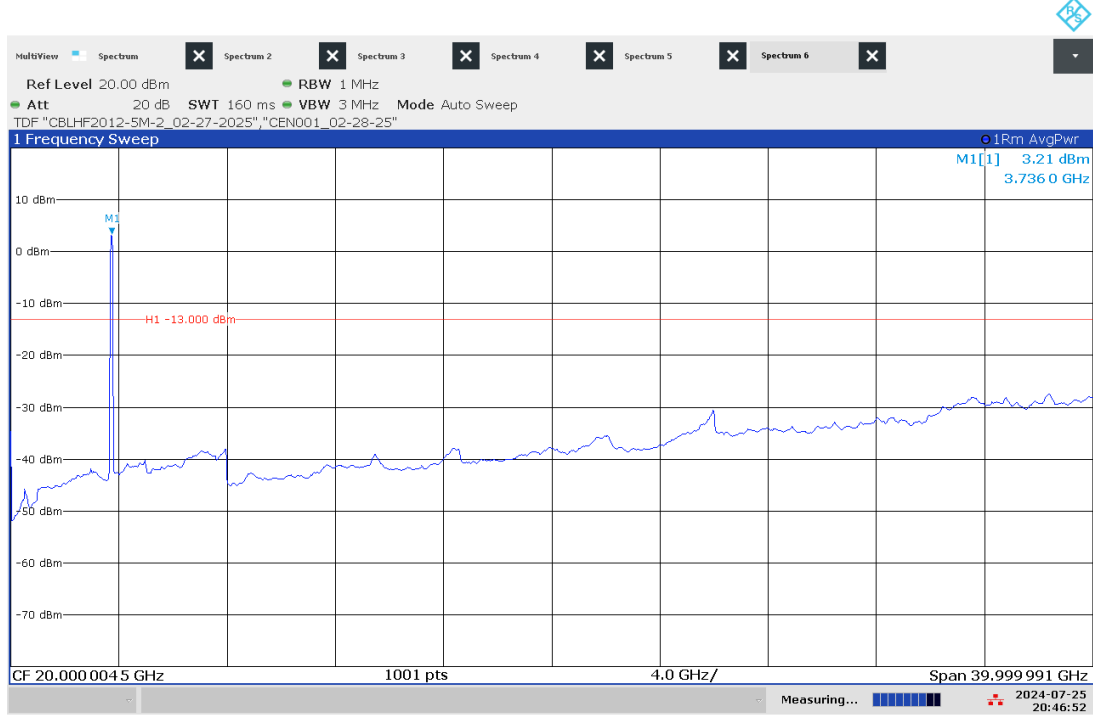
High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 3



High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM1.1, Antenna Port 4

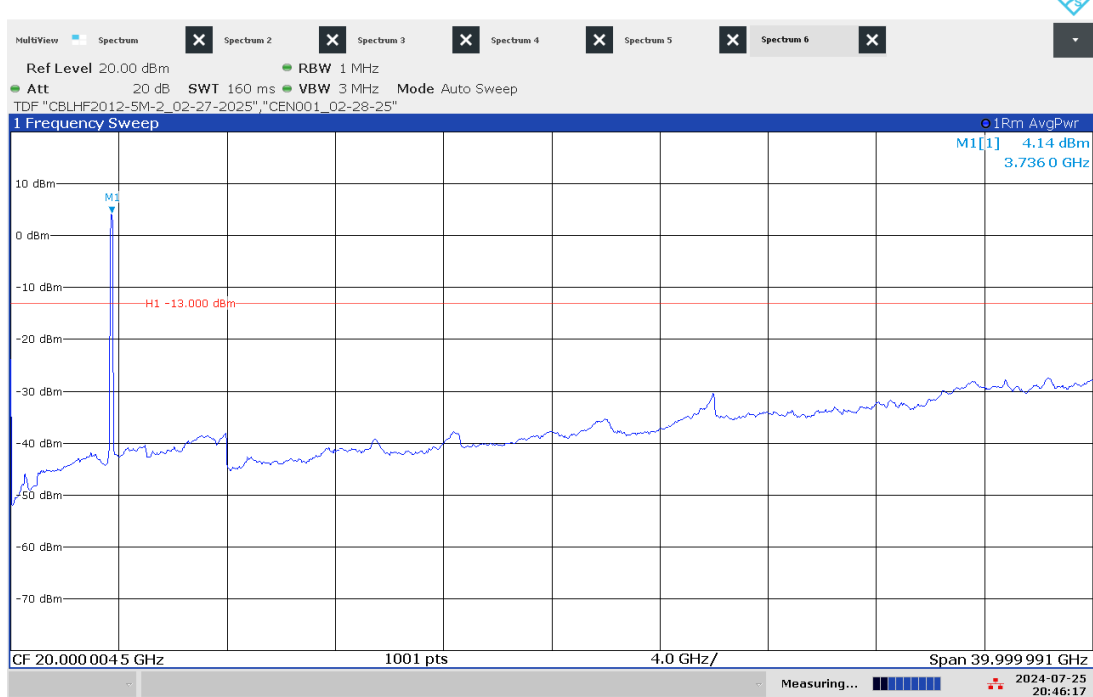


Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 1



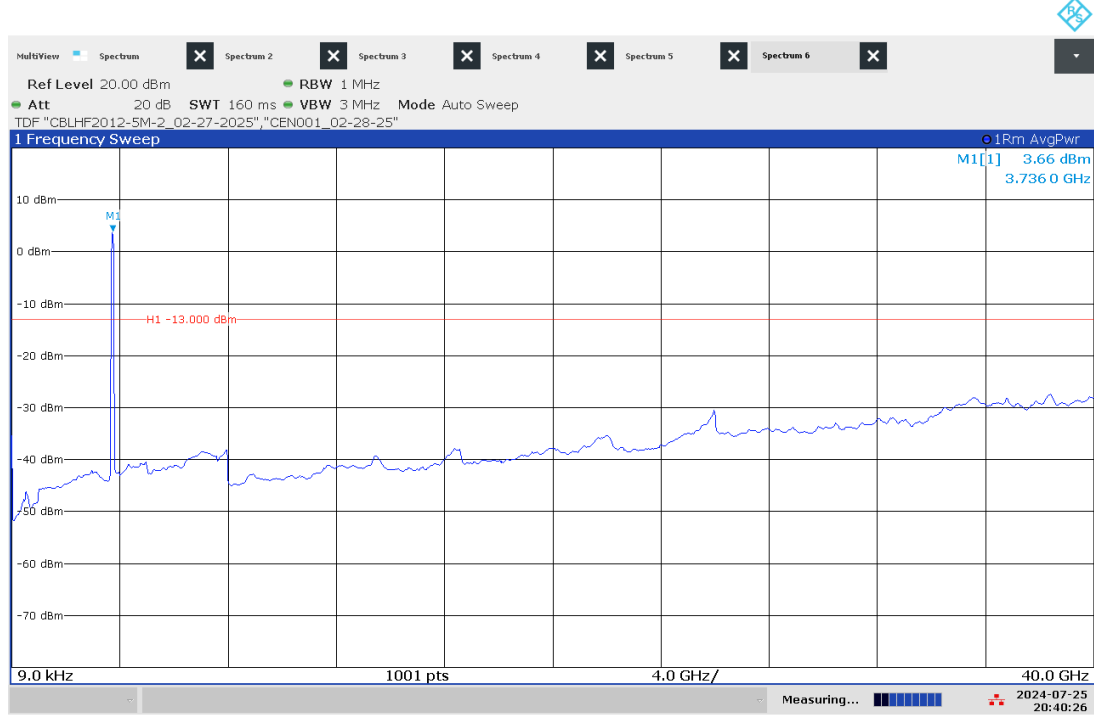
08:46:52 PM 07/25/2024

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 2



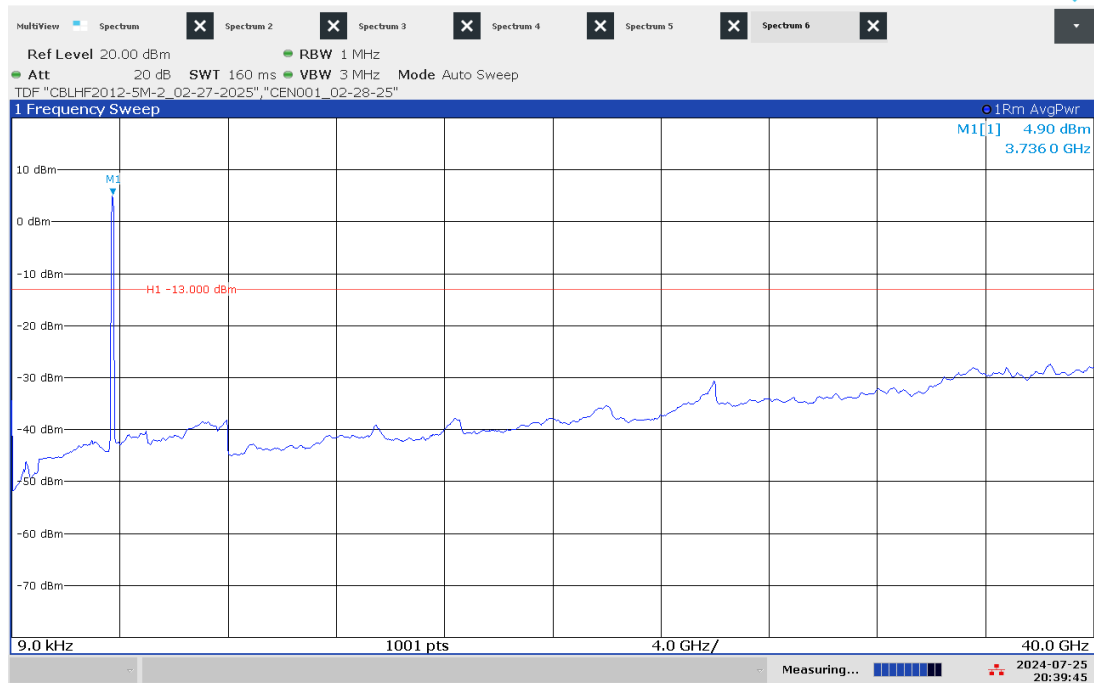
08:46:17 PM 07/25/2024

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 3



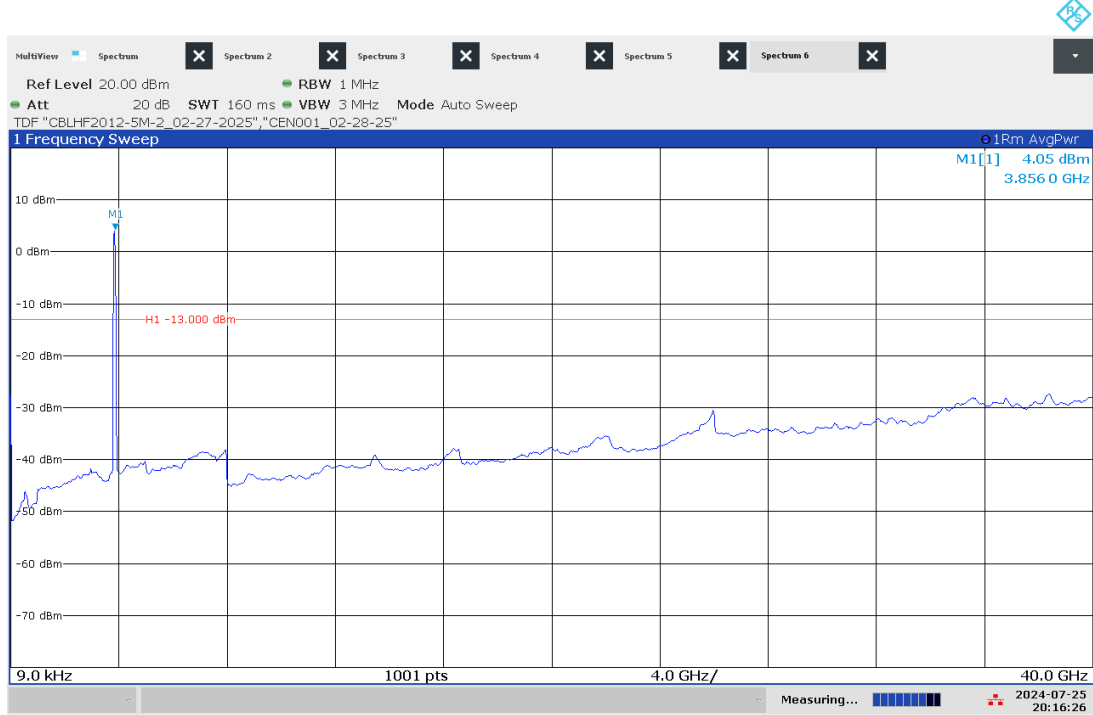
08:40:27 PM 07/25/2024

Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 4



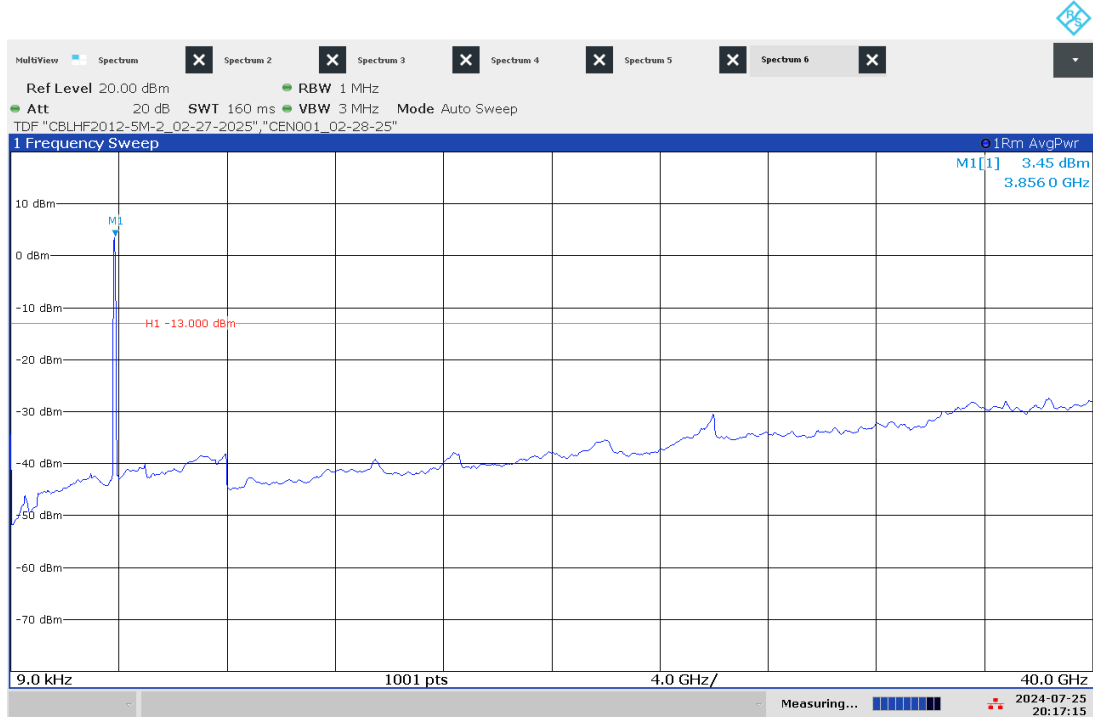
08:39:45 PM 07/25/2024

Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 1



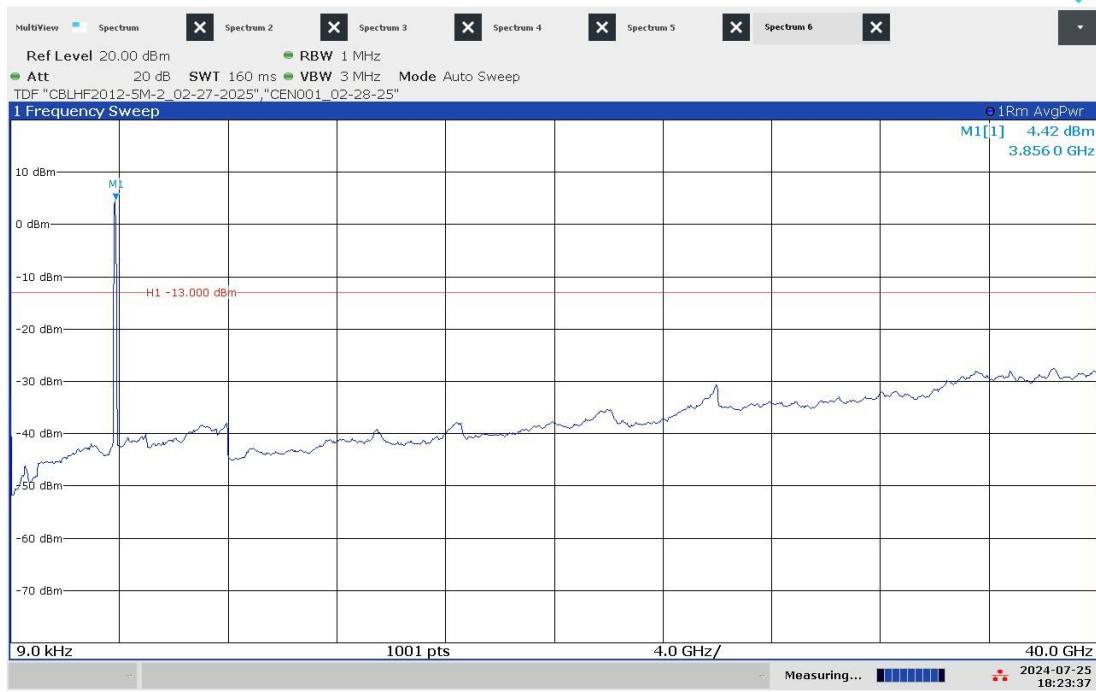
08:16:26 PM 07/25/2024

Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 2



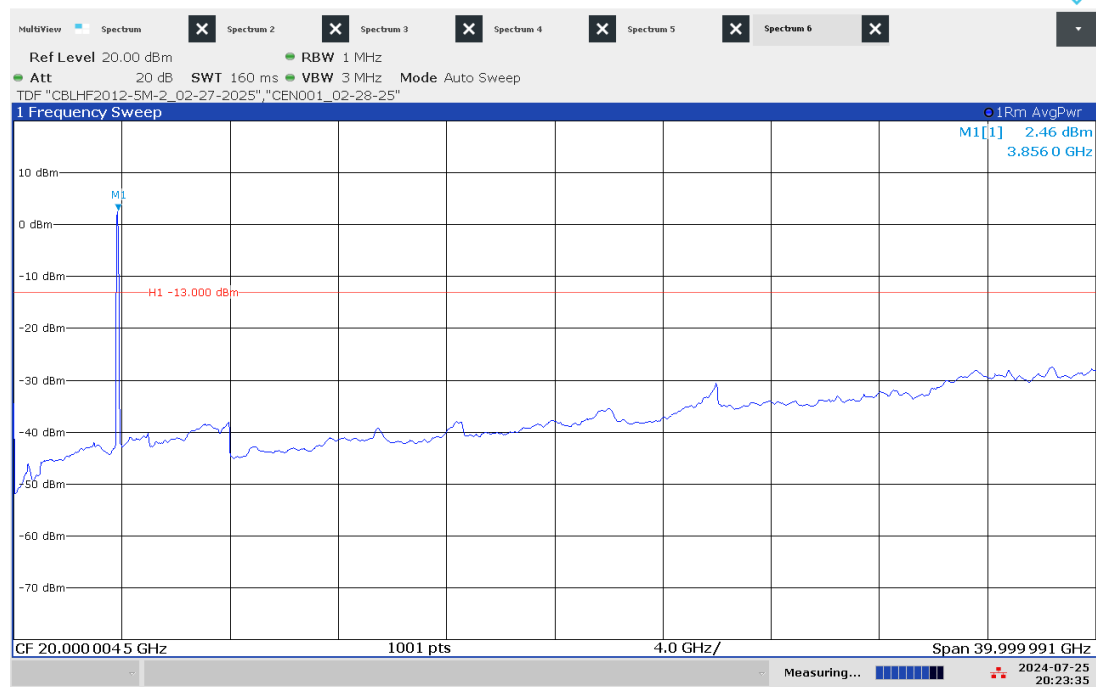
08:17:15 PM 07/25/2024

Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 3



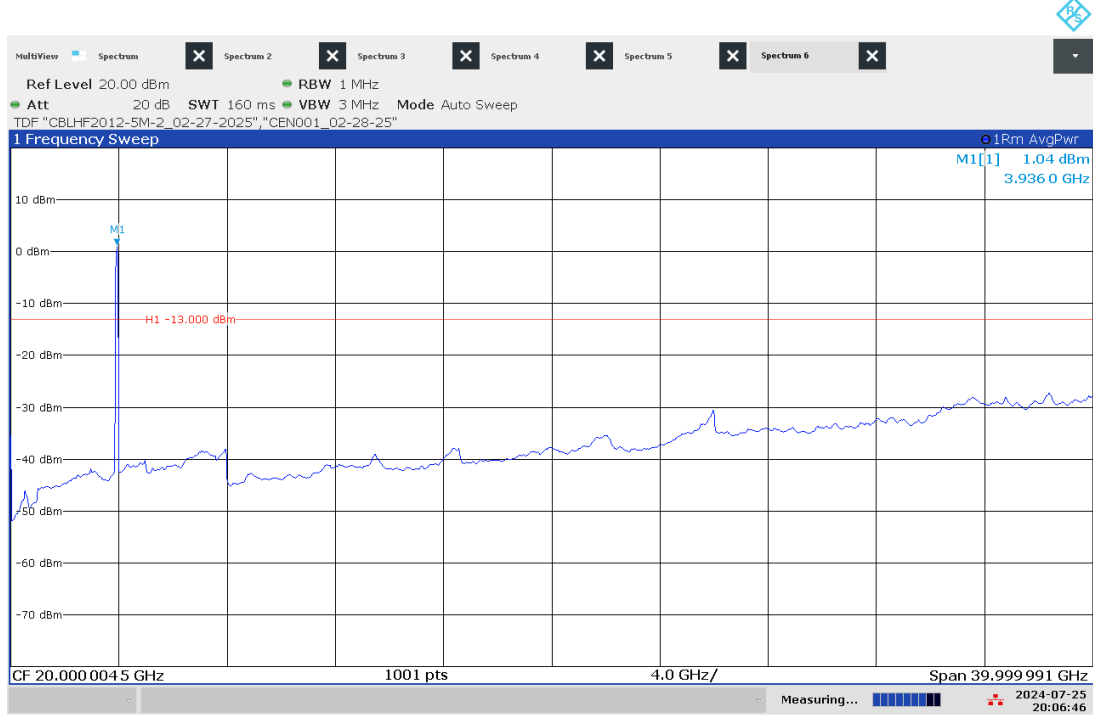
06:23:37 PM 07/25/2024

Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 4



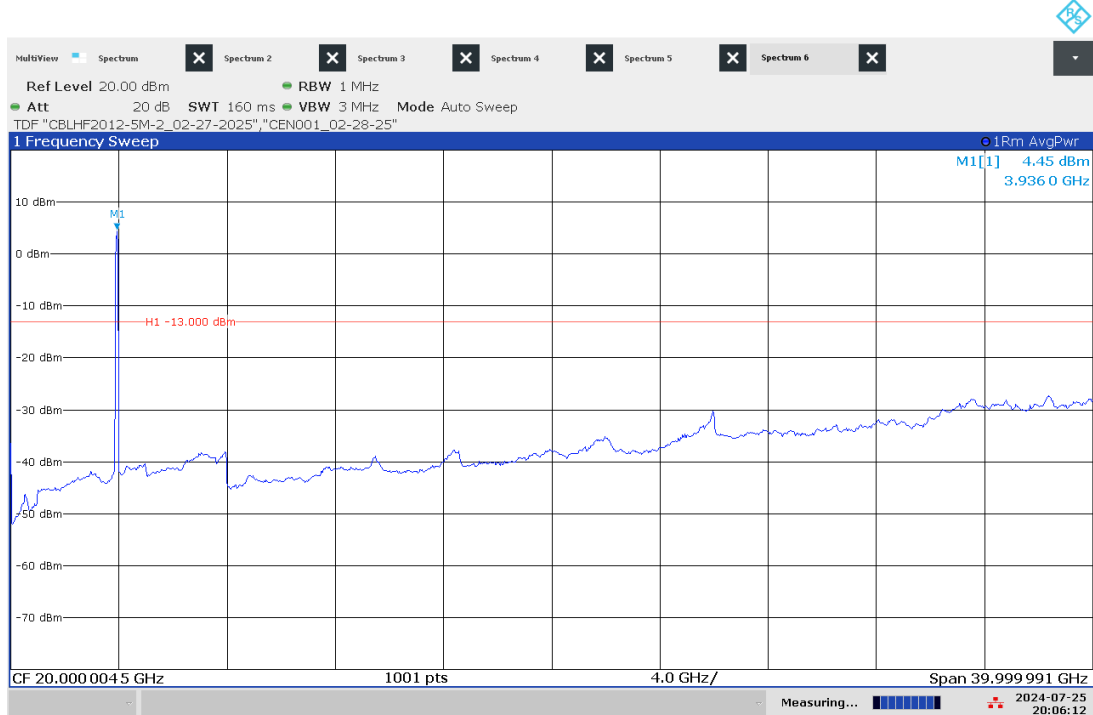
08:23:35 PM 07/25/2024

High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 1



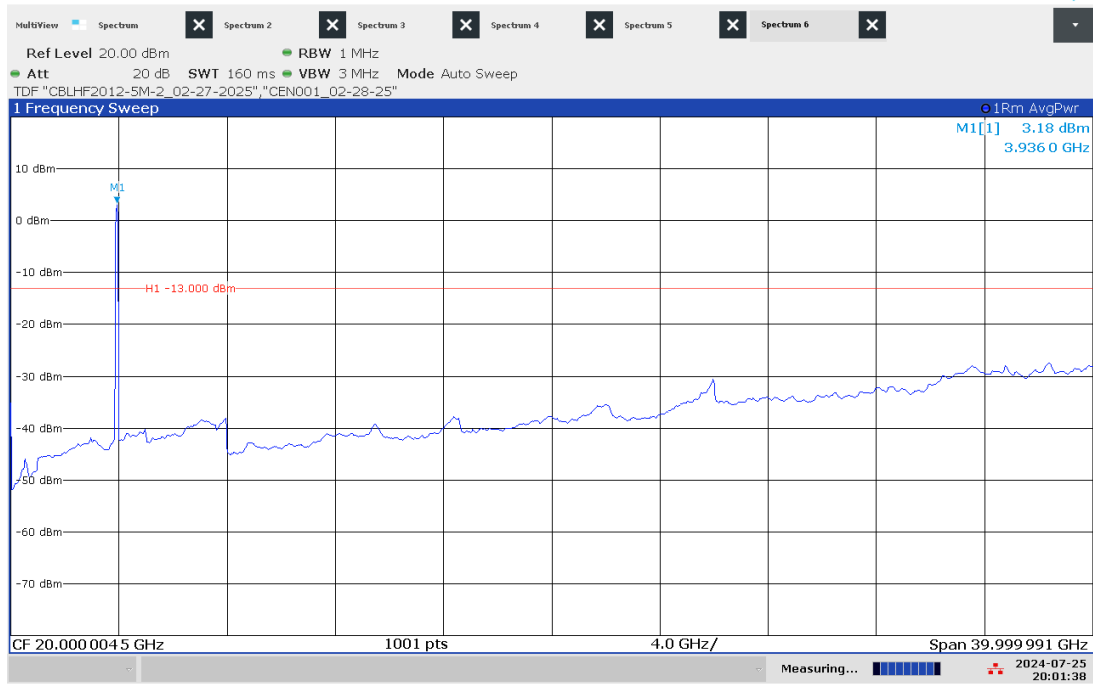
08:06:46 PM 07/25/2024

High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 2



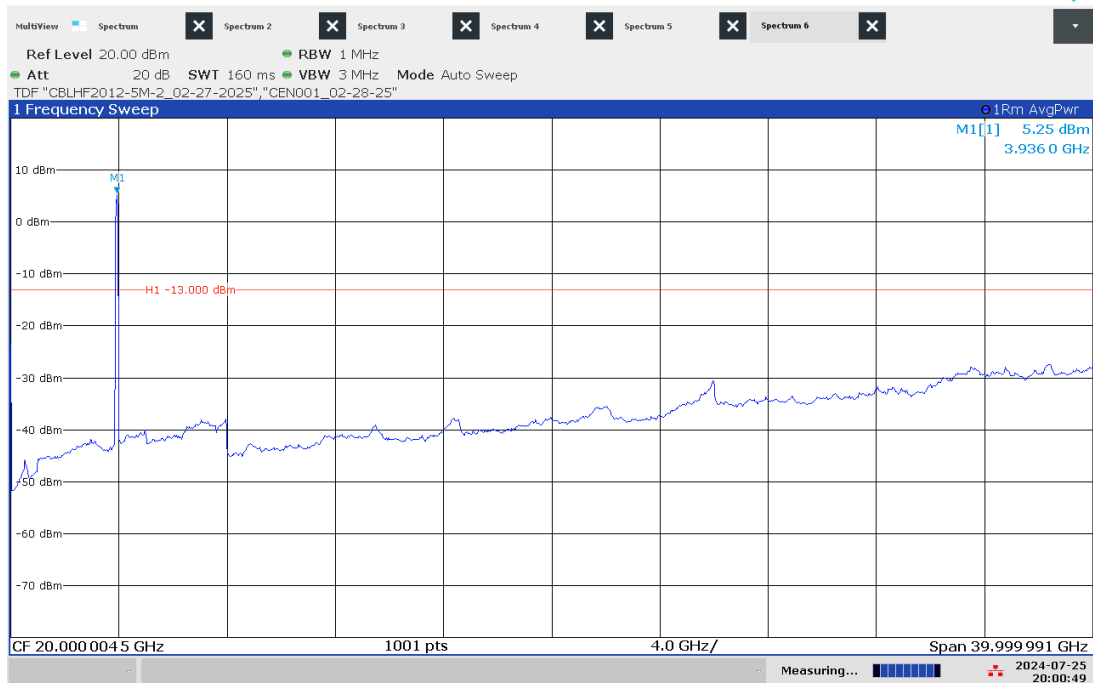
08:06:13 PM 07/25/2024

High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 3



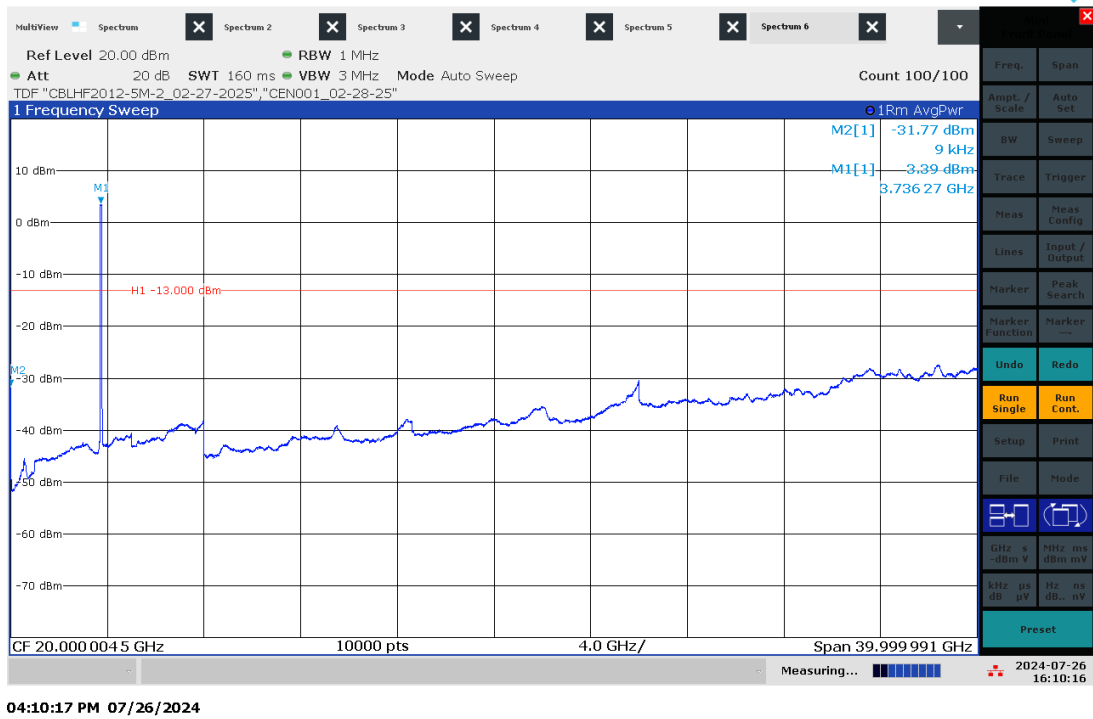
08:01:38 PM 07/25/2024

High Channel (3940 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1, Antenna Port 4

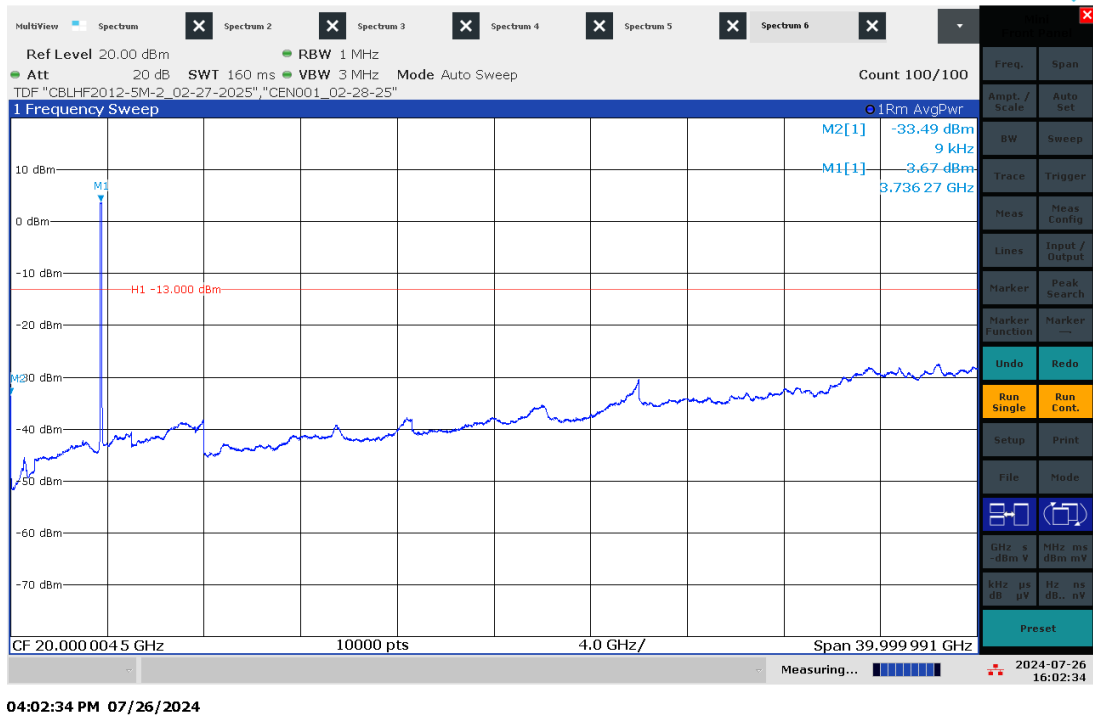


08:00:49 PM 07/25/2024

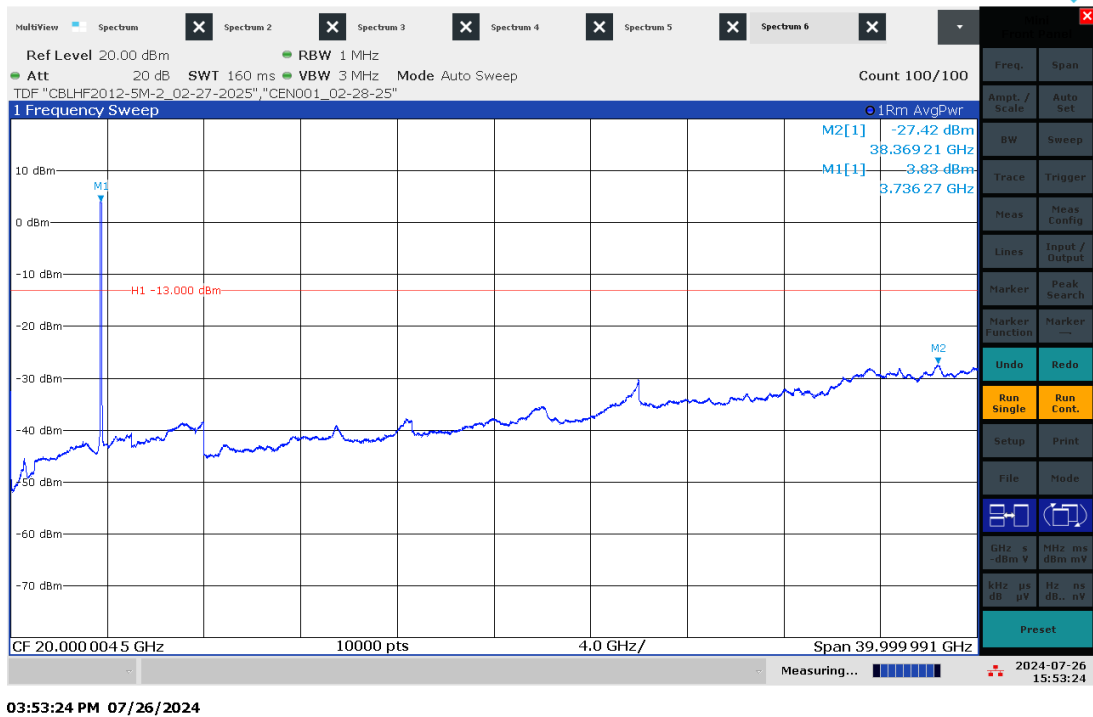
Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1a, Antenna Port 1



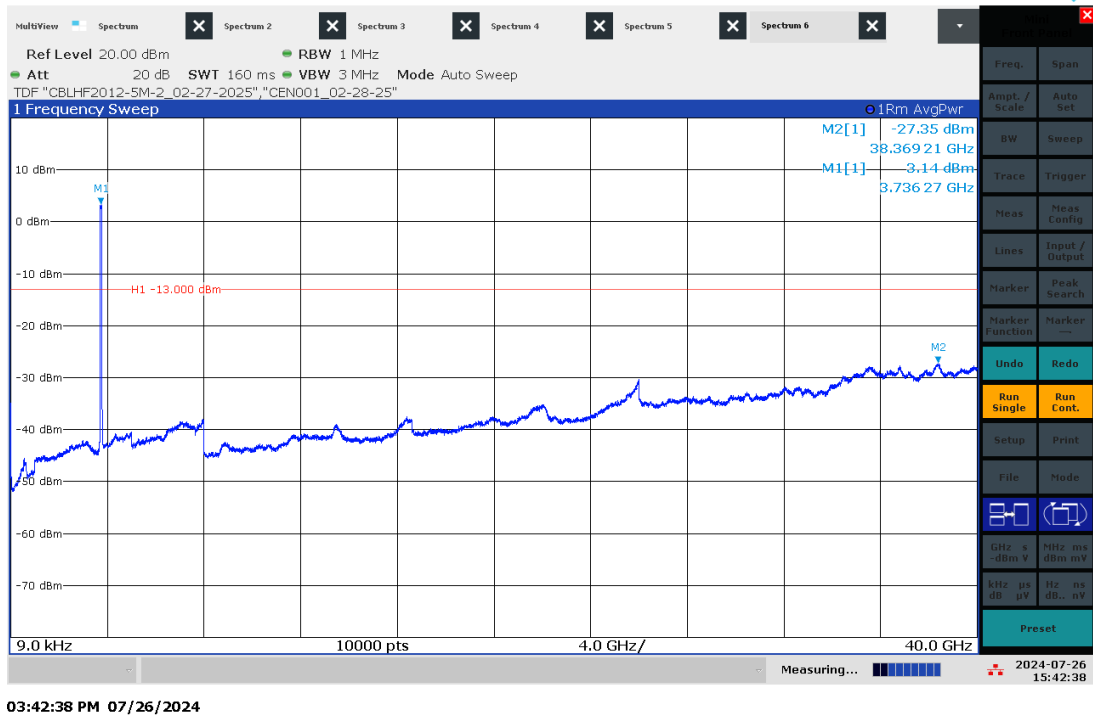
Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1a, Antenna Port 2



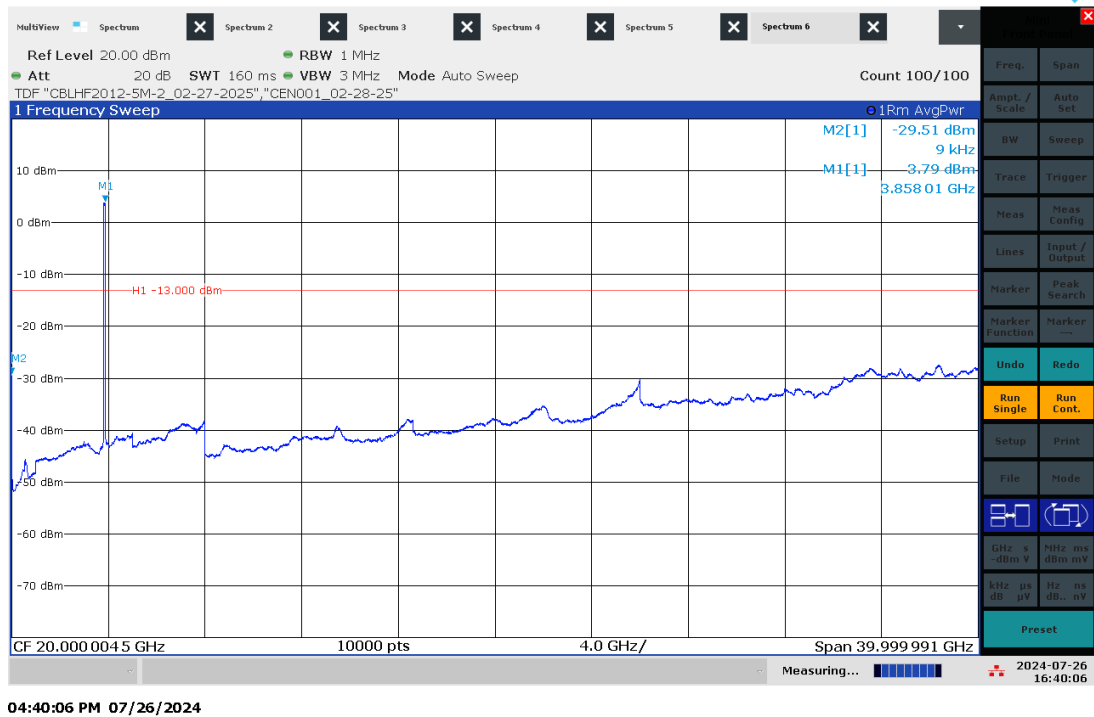
Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1a, Antenna Port 3



Low Channel (3740 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1a, Antenna Port 4



Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1a, Antenna Port 1



Mid Channel (3840 MHz) Antenna Port Conducted Emissions, Modulation: TM3.1a, Antenna Port 2

