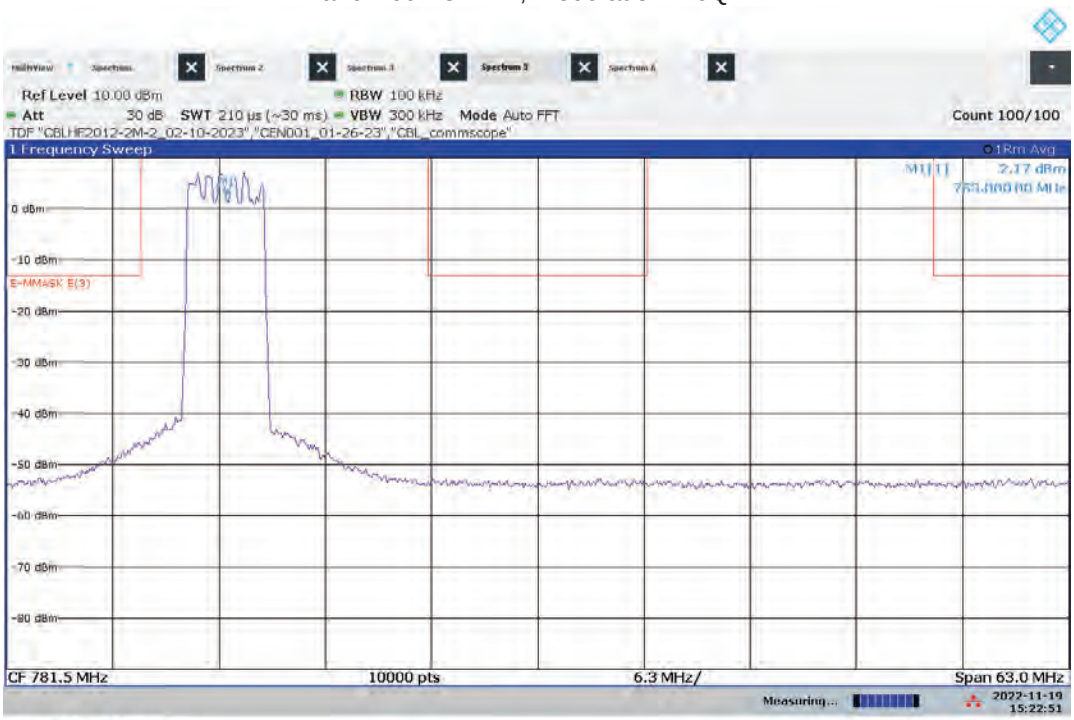
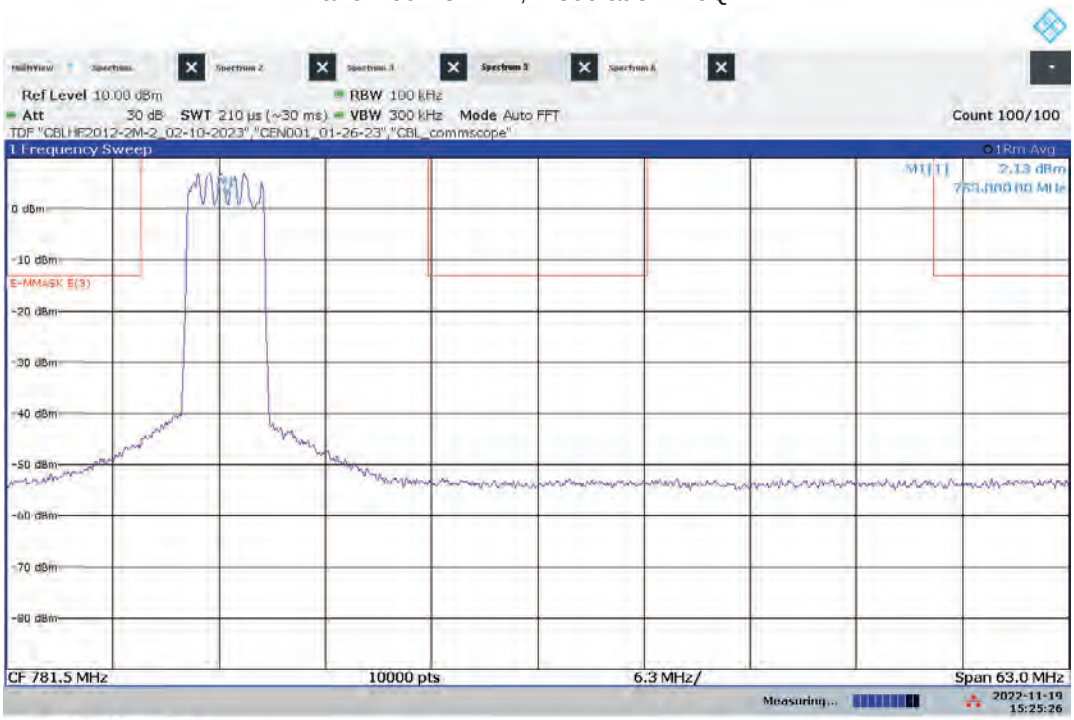
Lo-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



03:22:51 PM 11/19/2022

Lo-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



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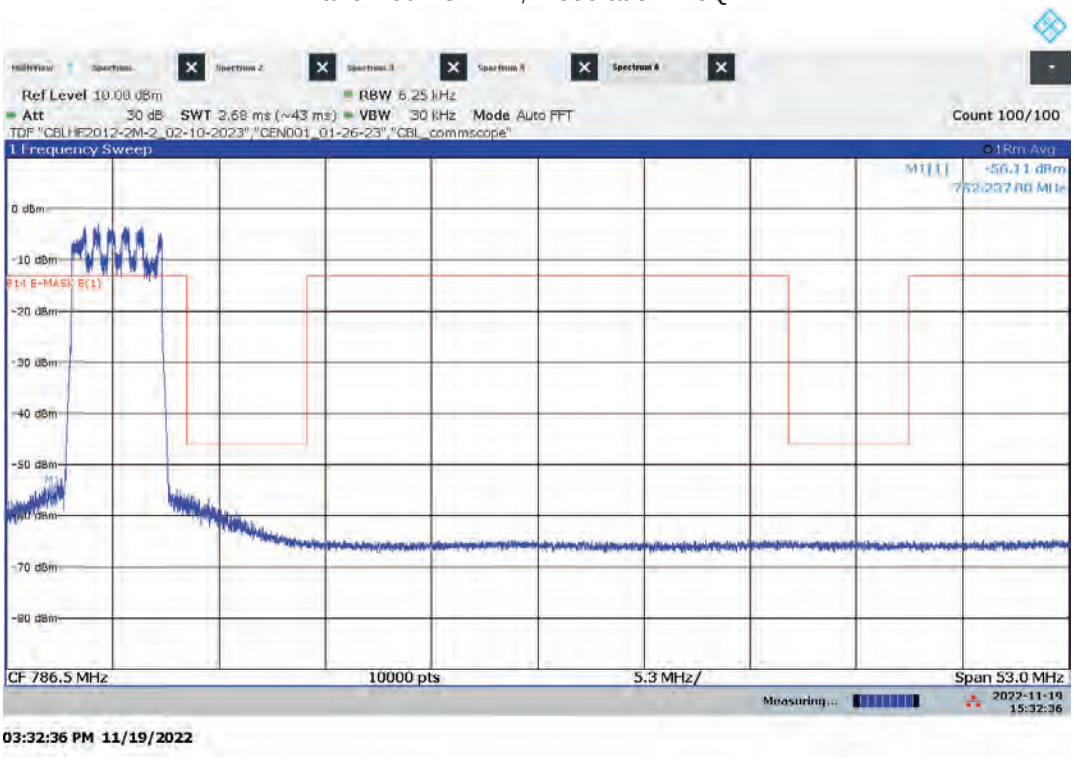
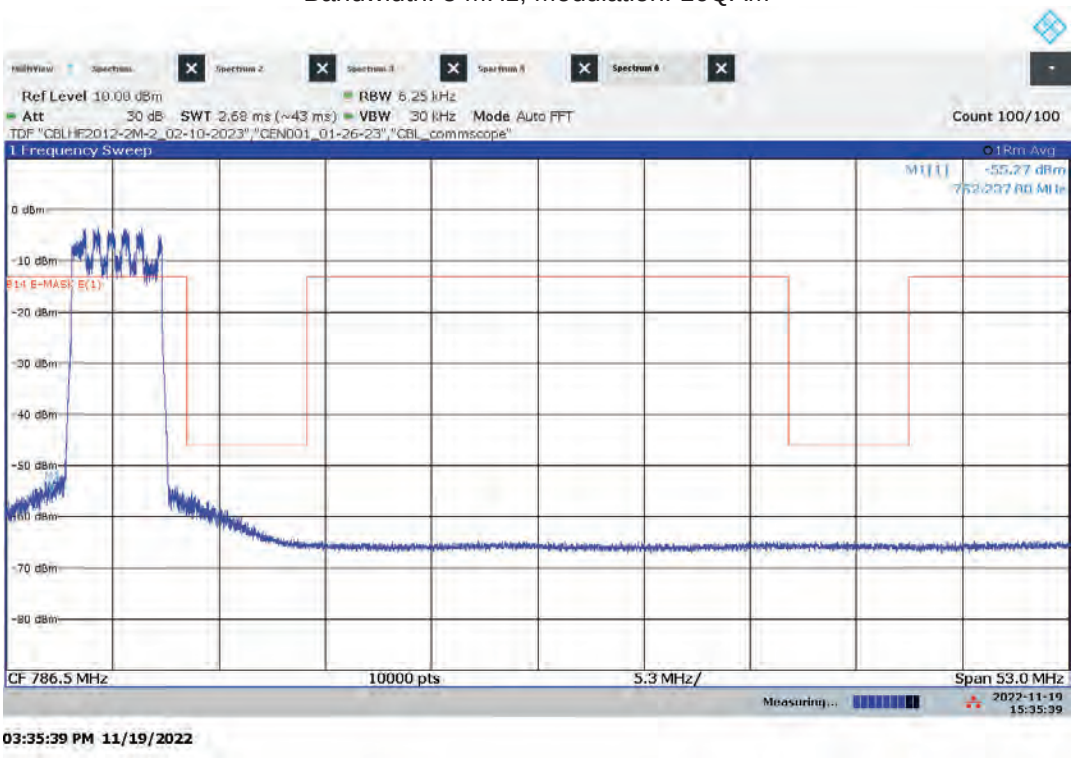
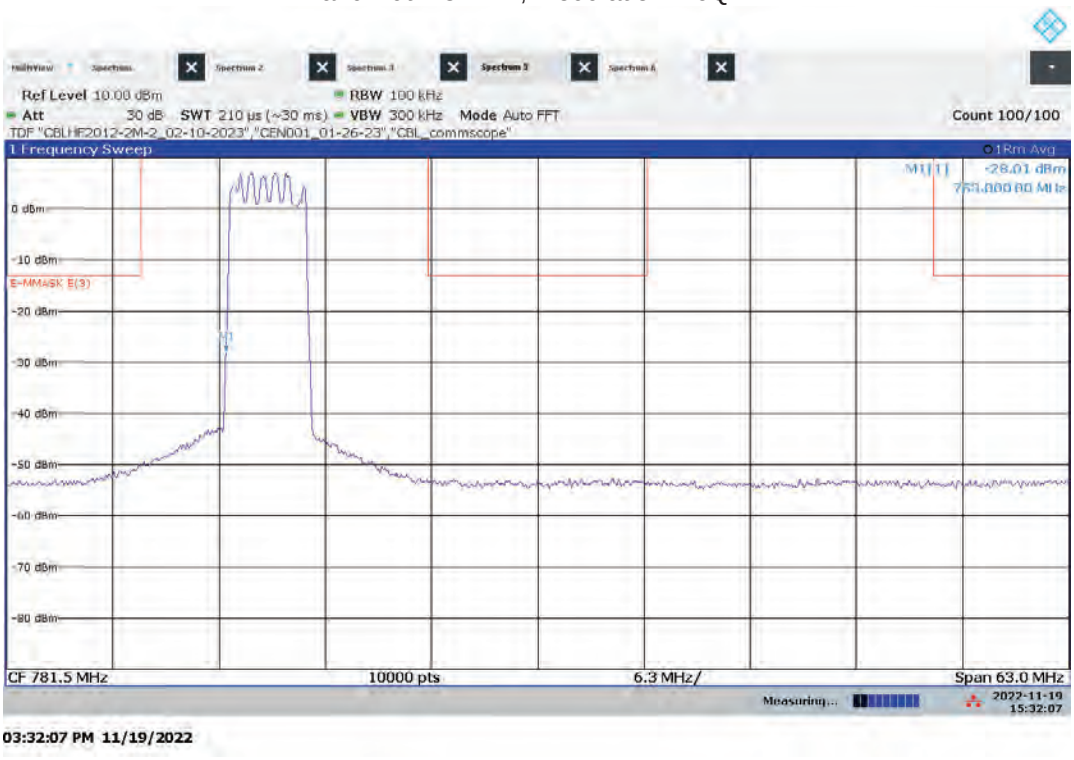
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



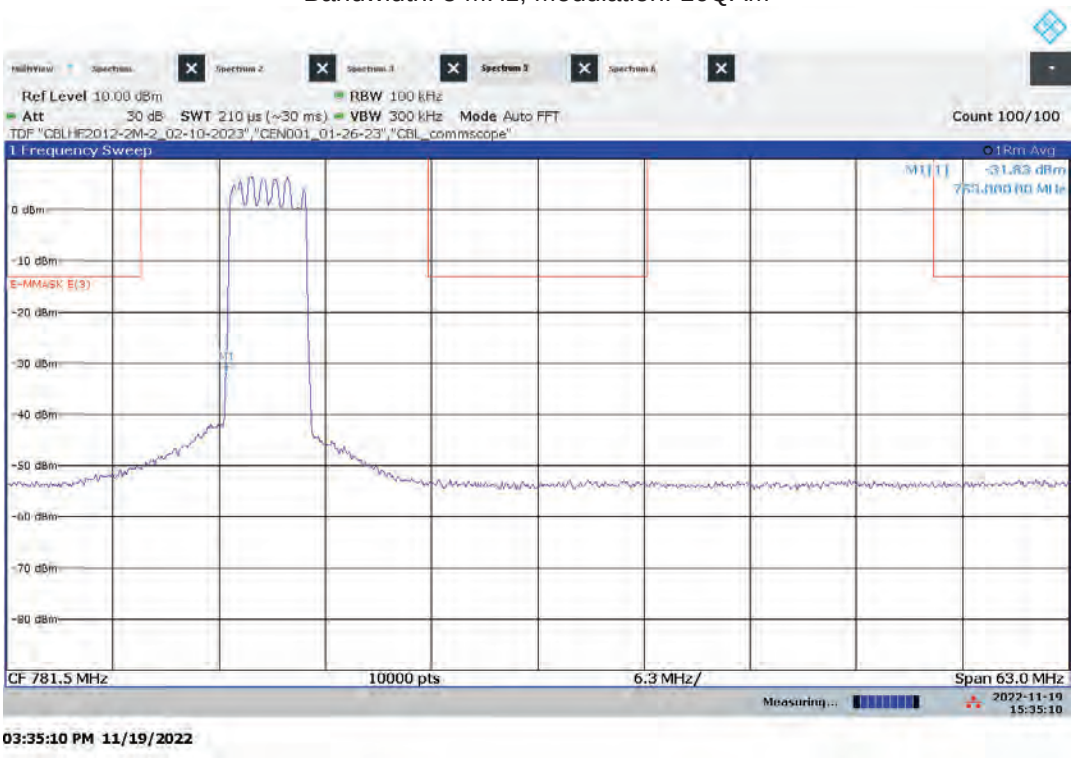
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



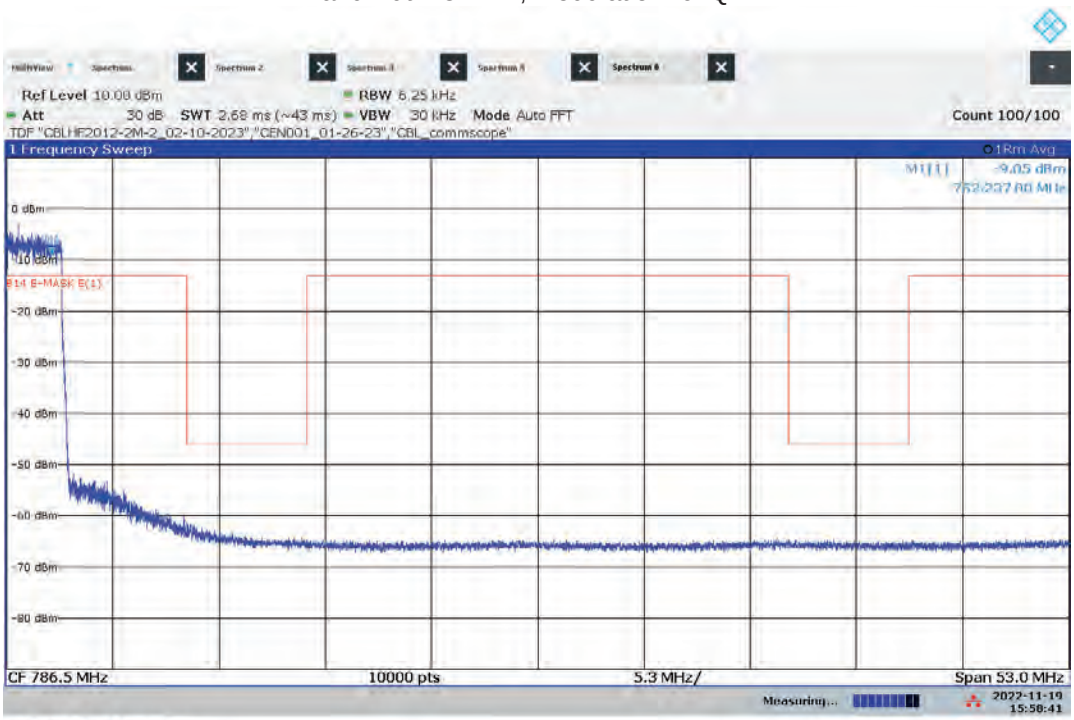
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



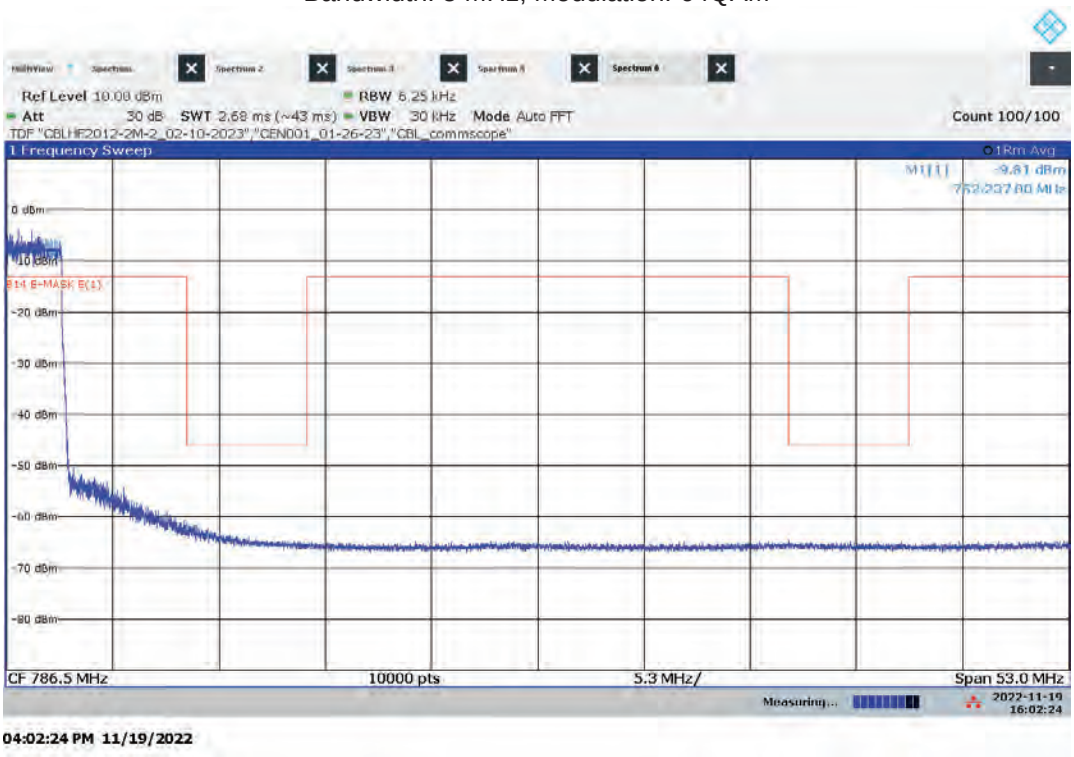
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



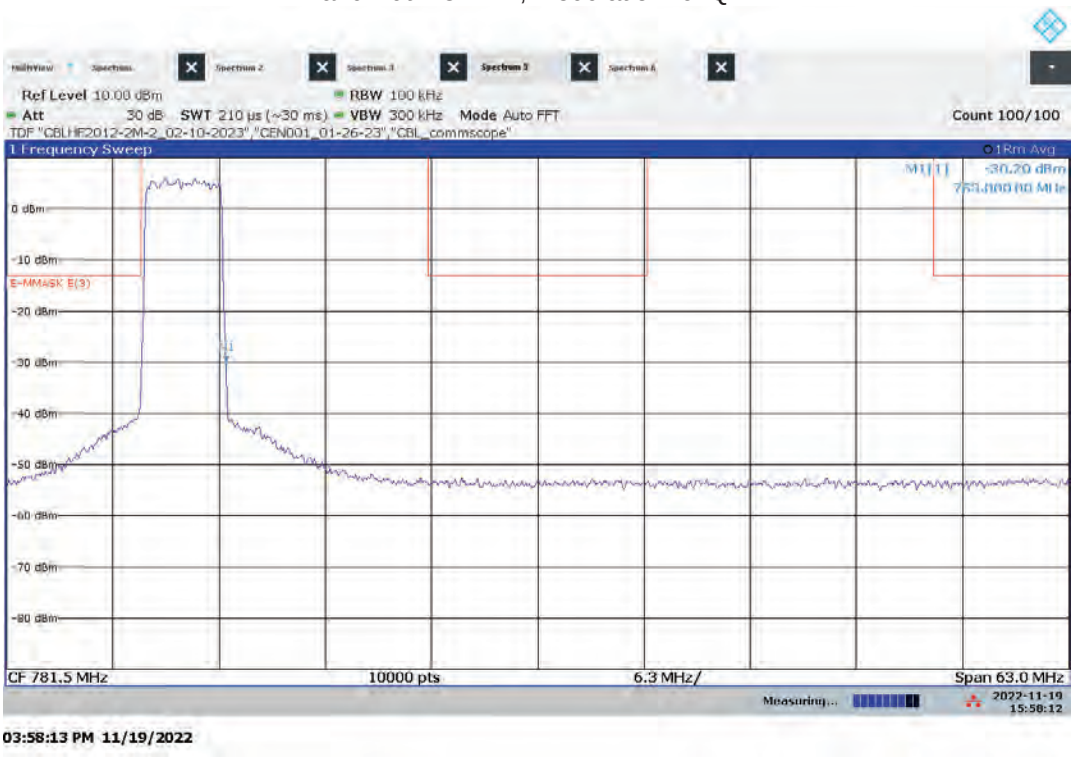
Lo-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



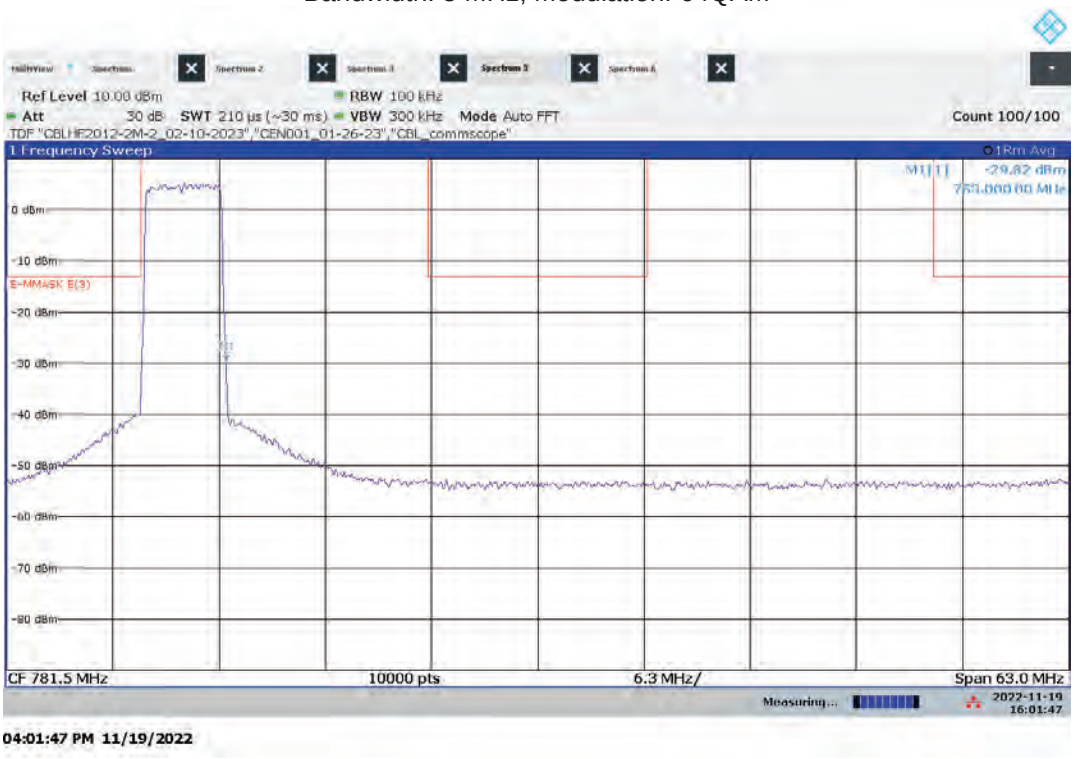
Lo-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



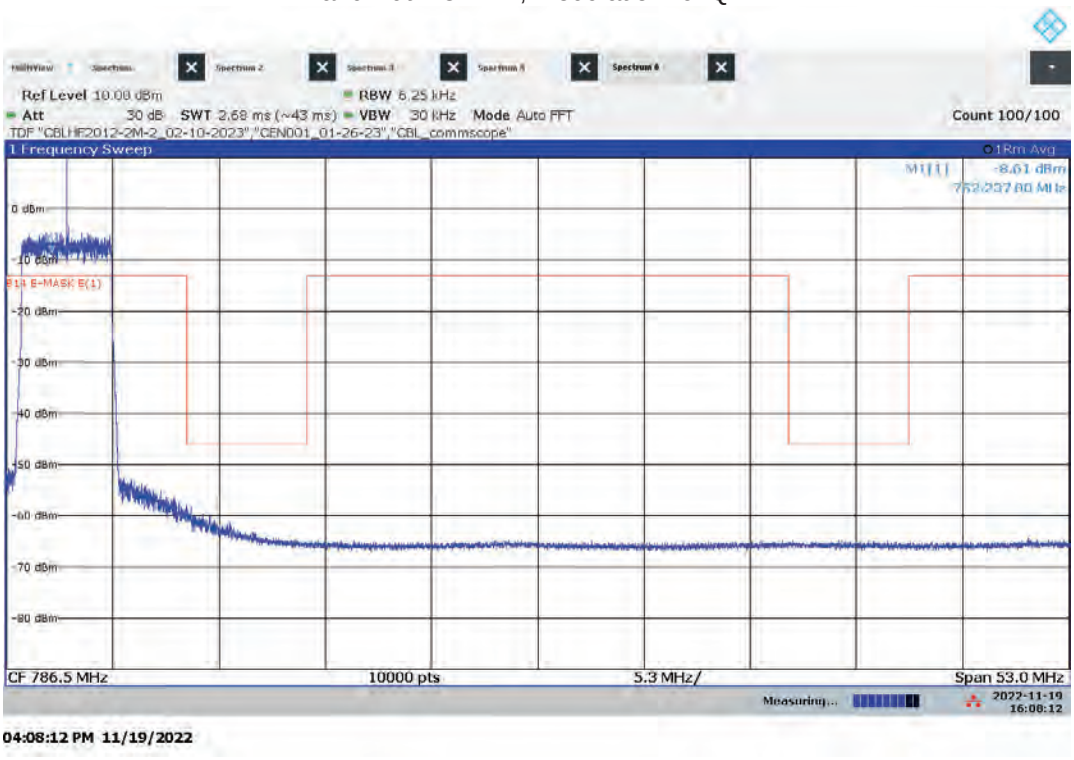
Lo-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



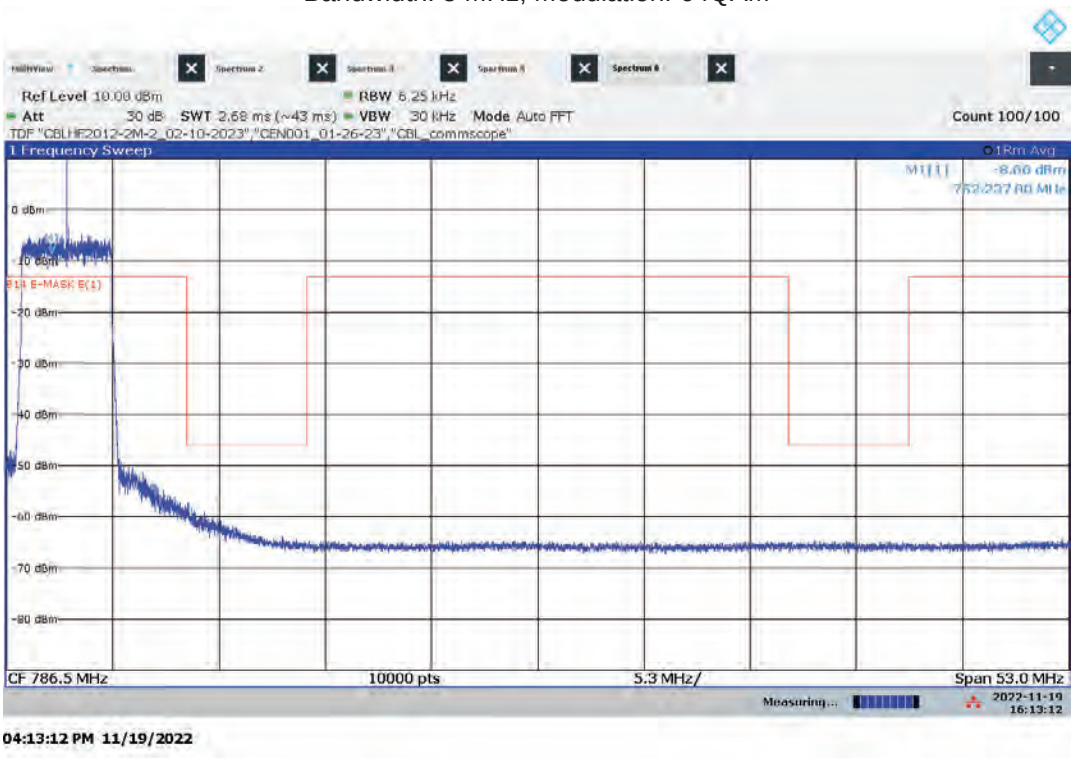
Lo-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



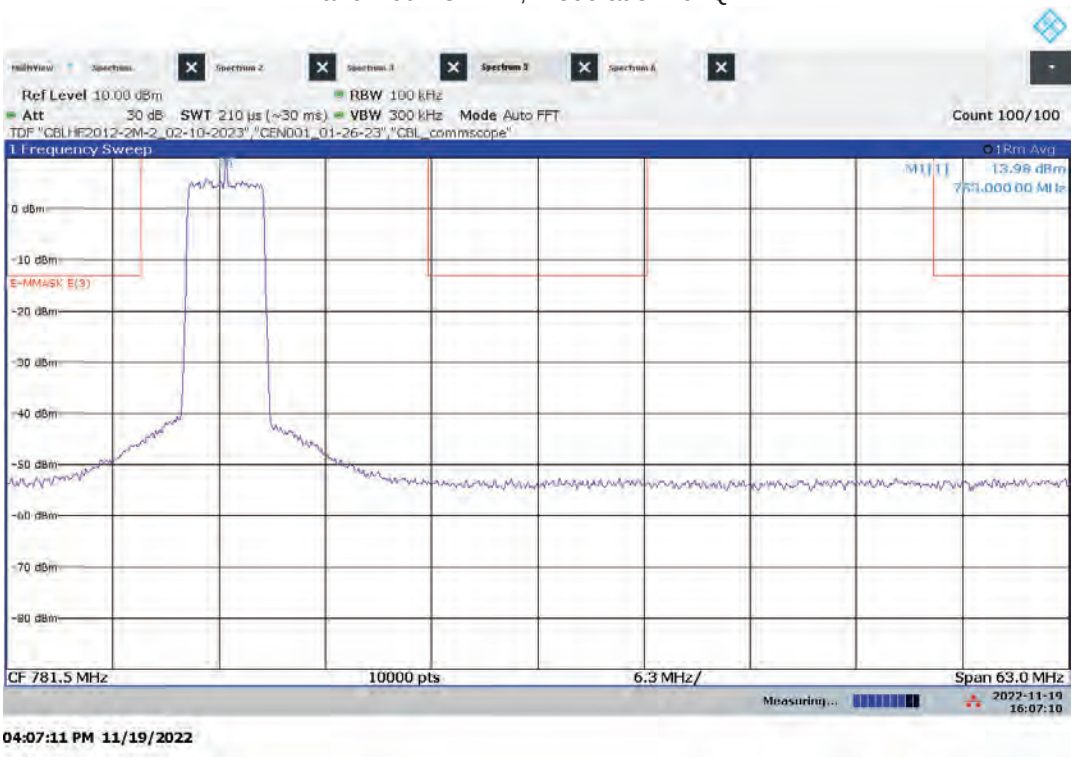
Lo-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



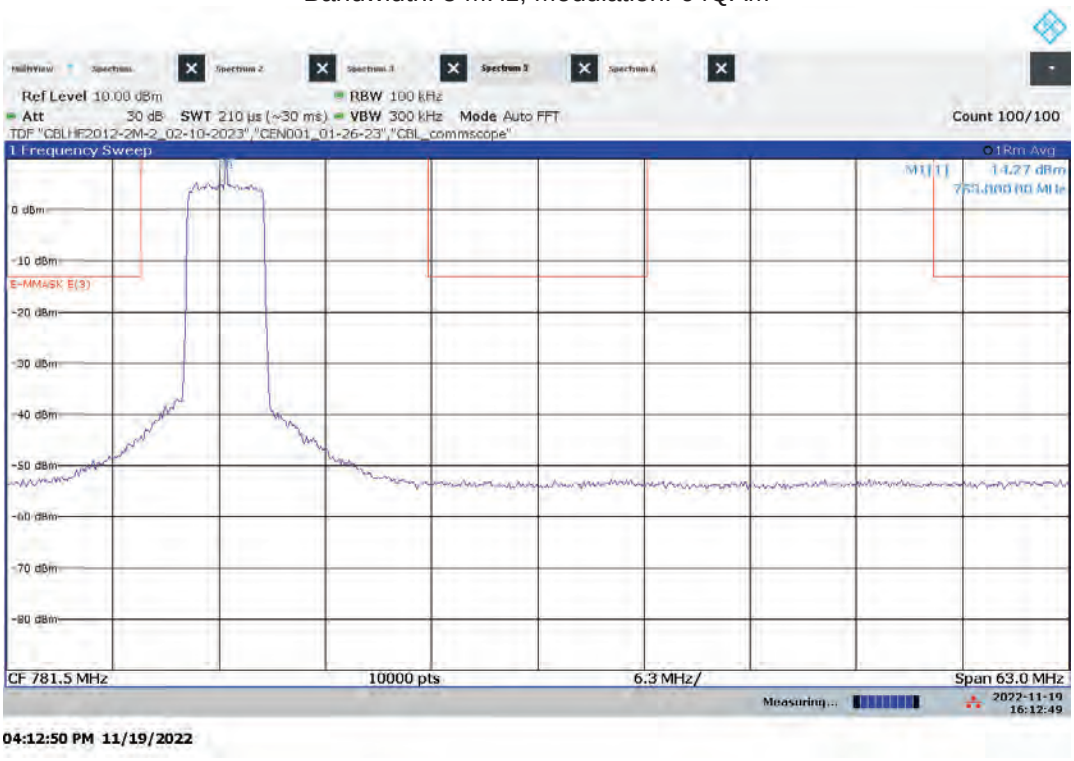
Lo-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



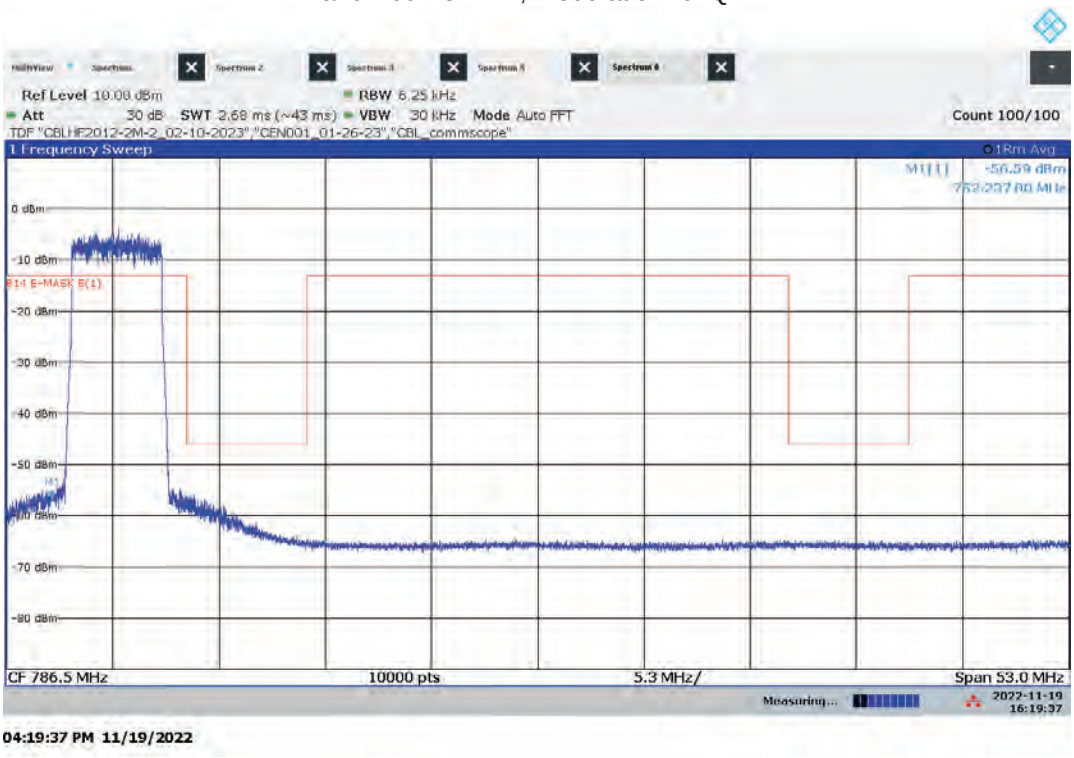
Lo-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



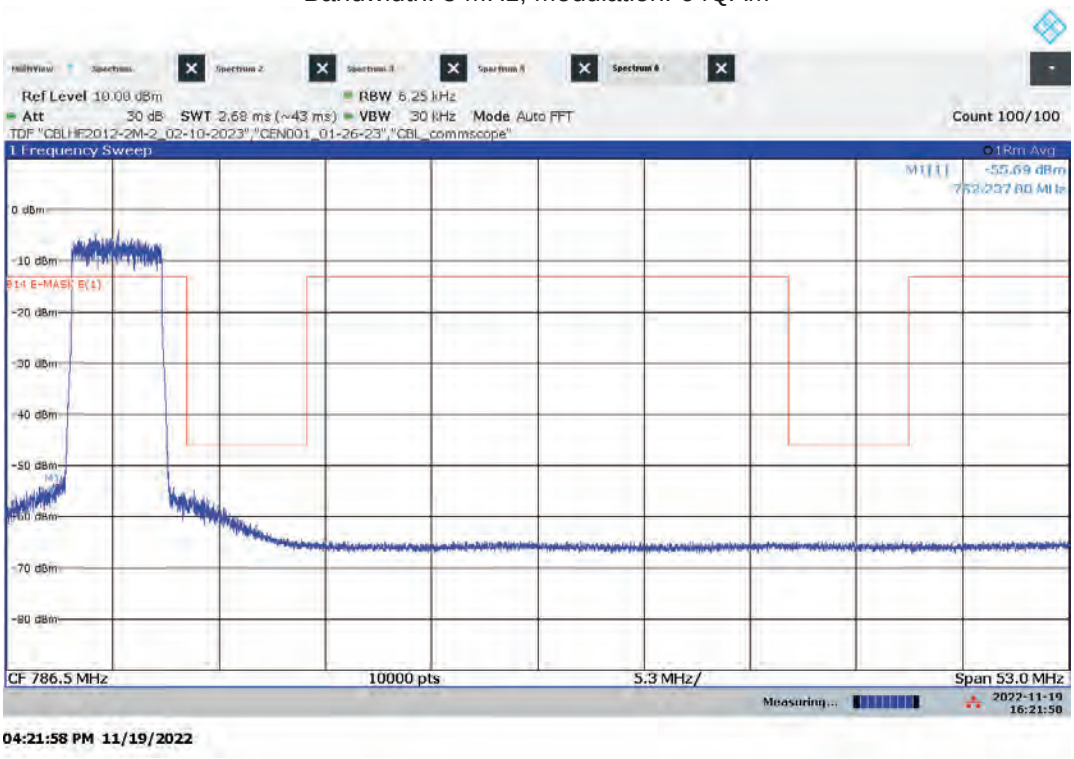
Lo-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



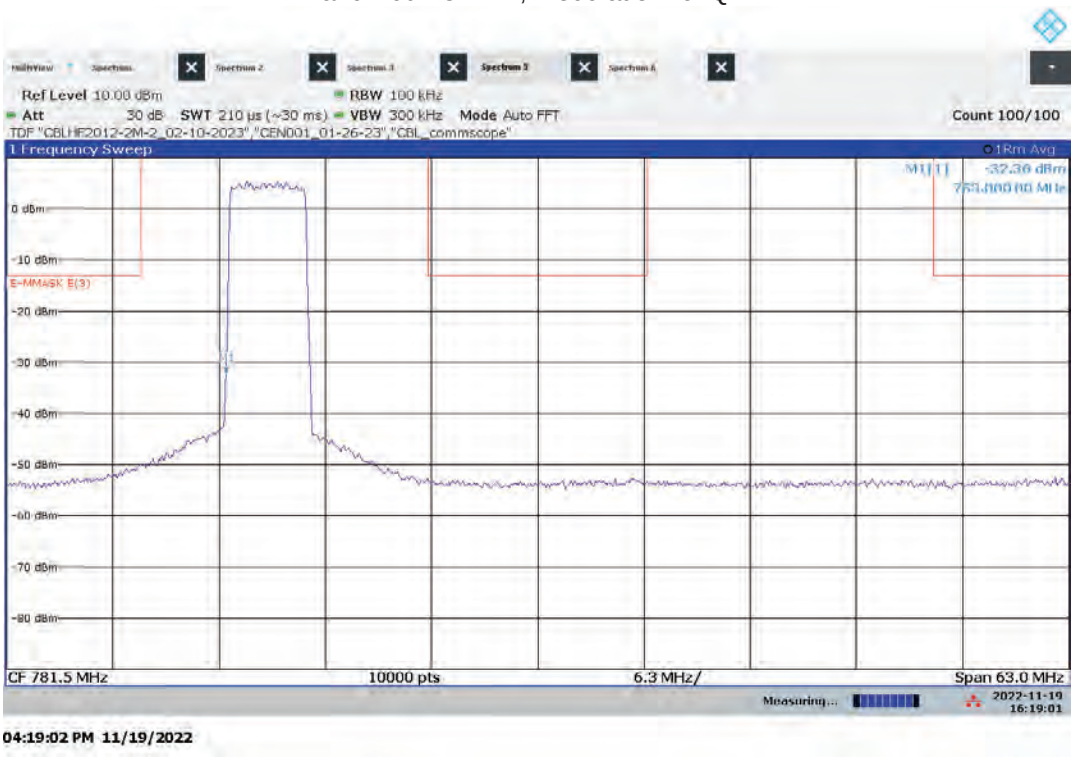
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



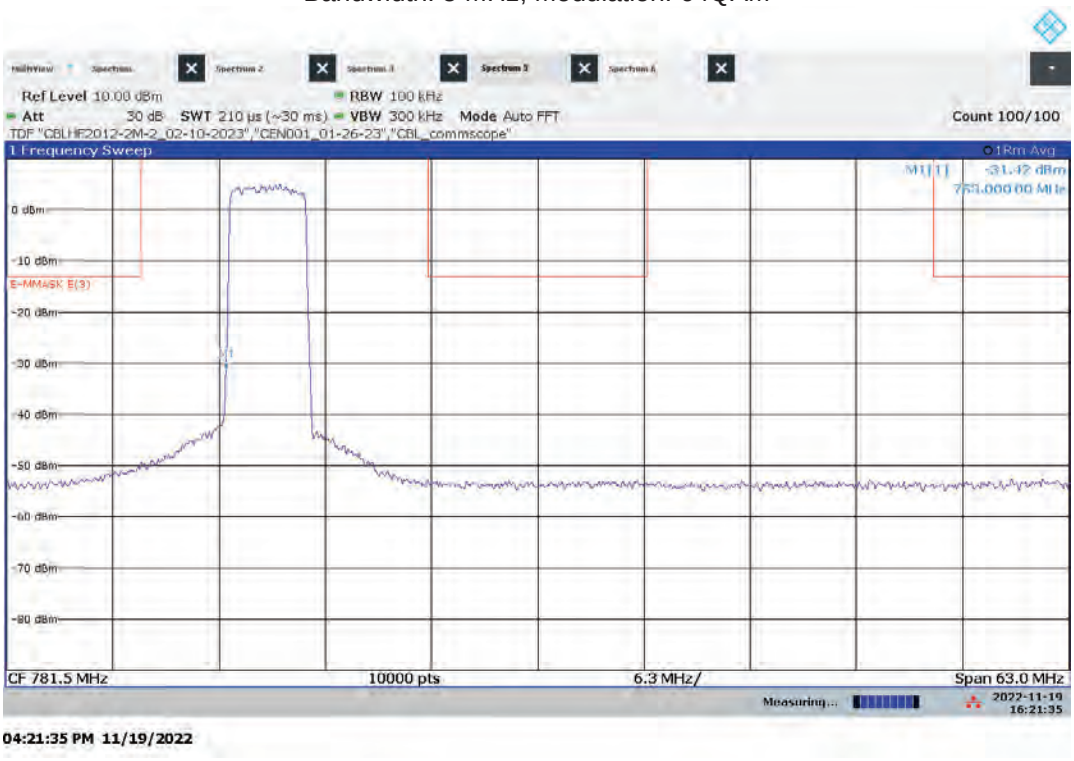
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



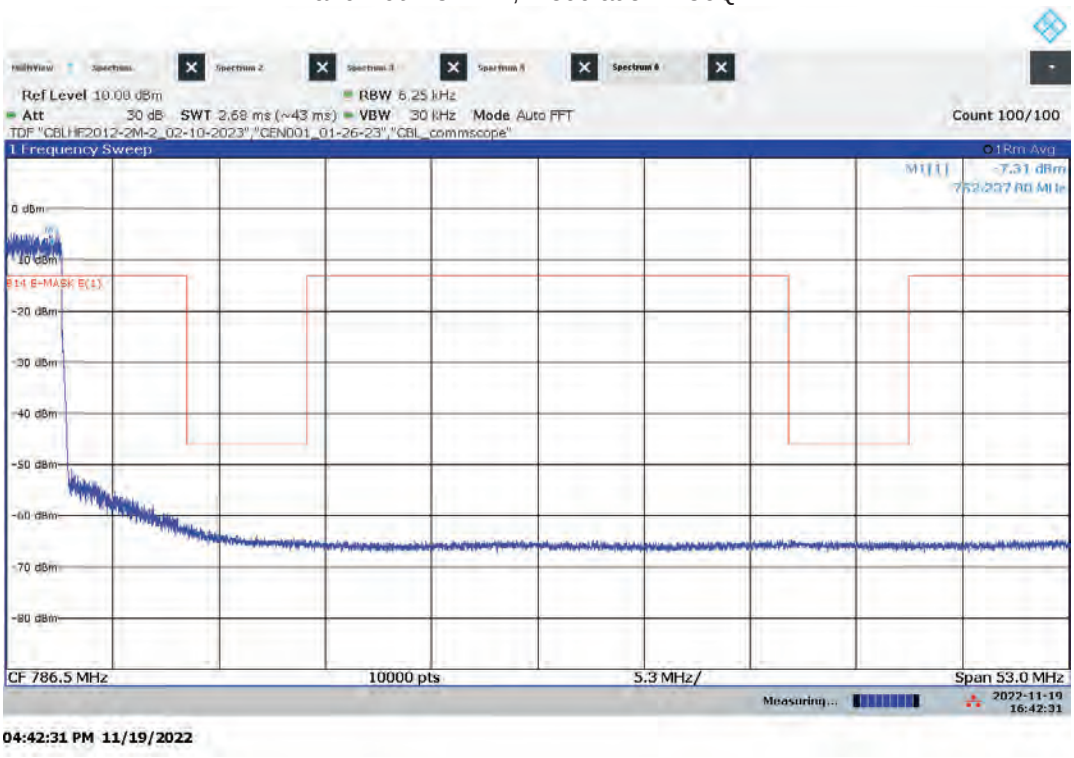
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



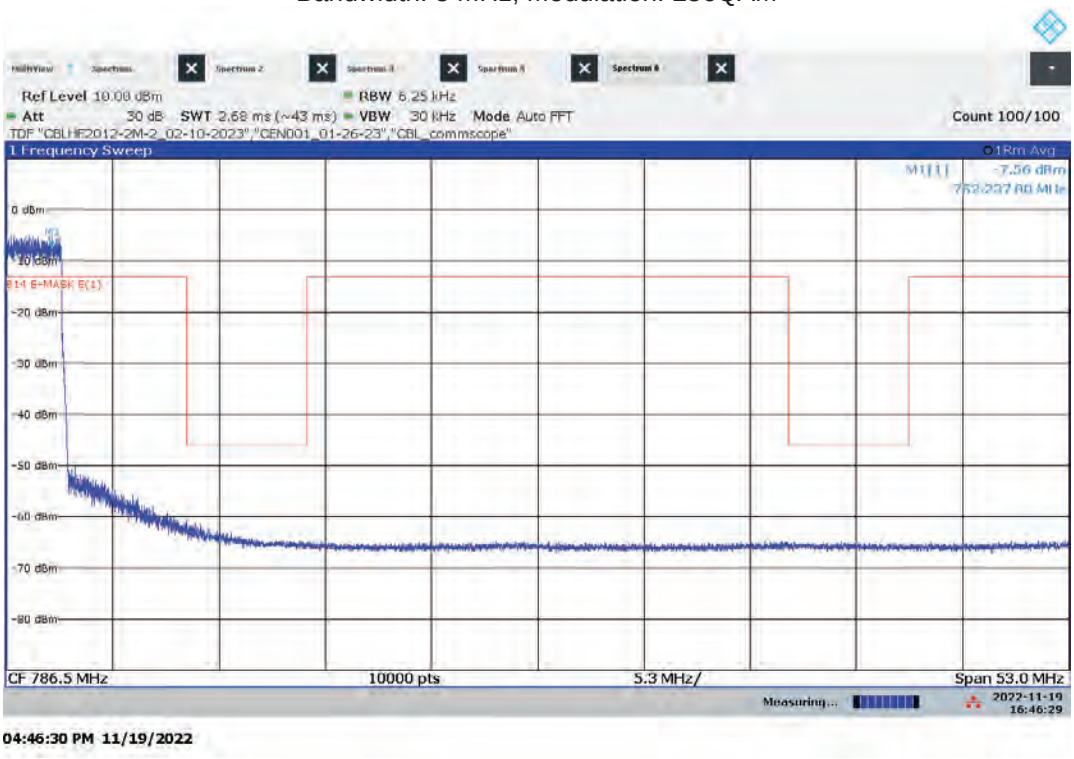
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



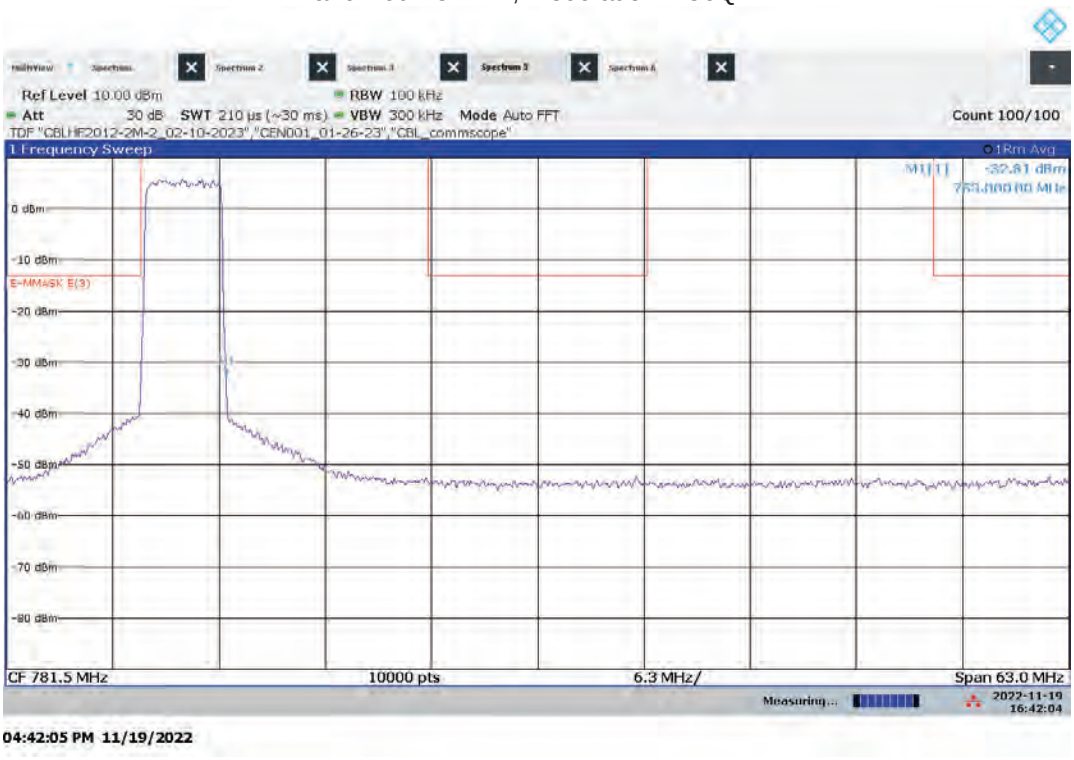
Lo-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



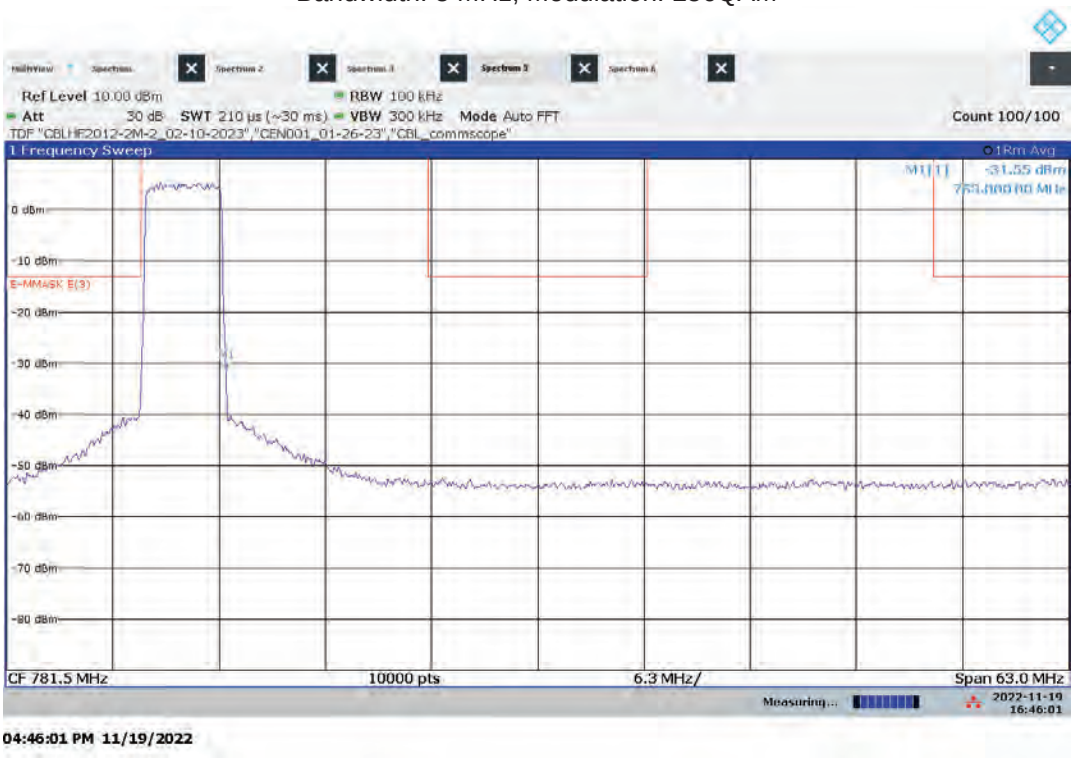
Lo-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



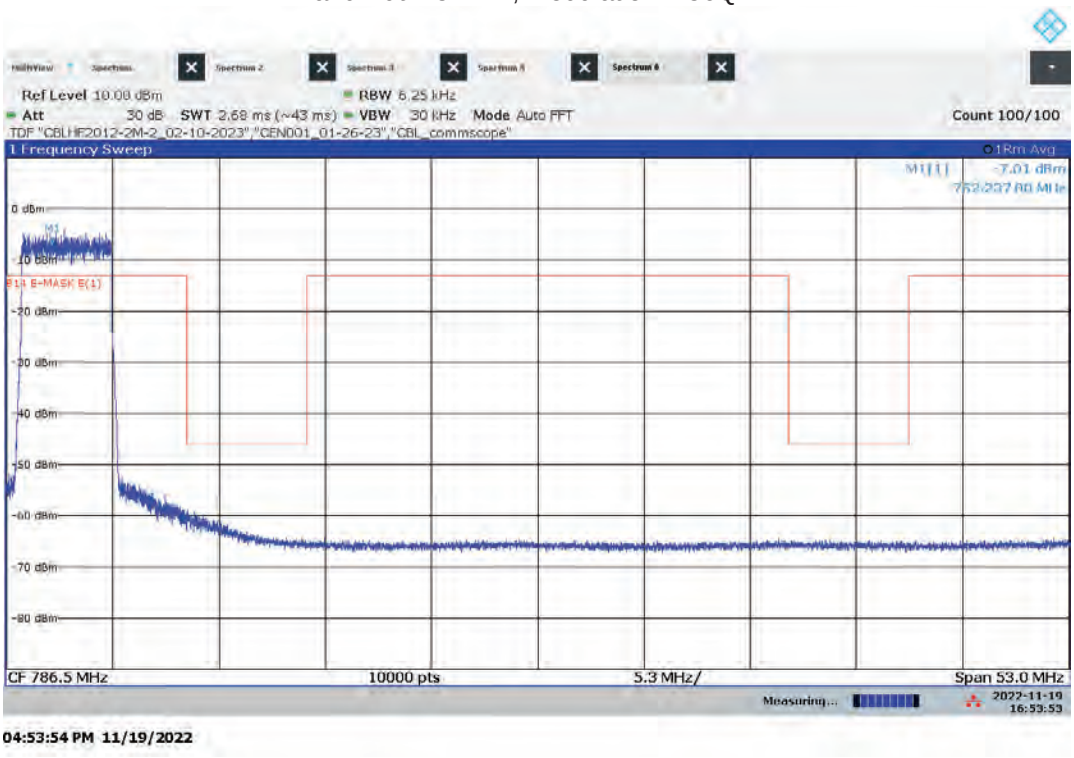
Lo-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



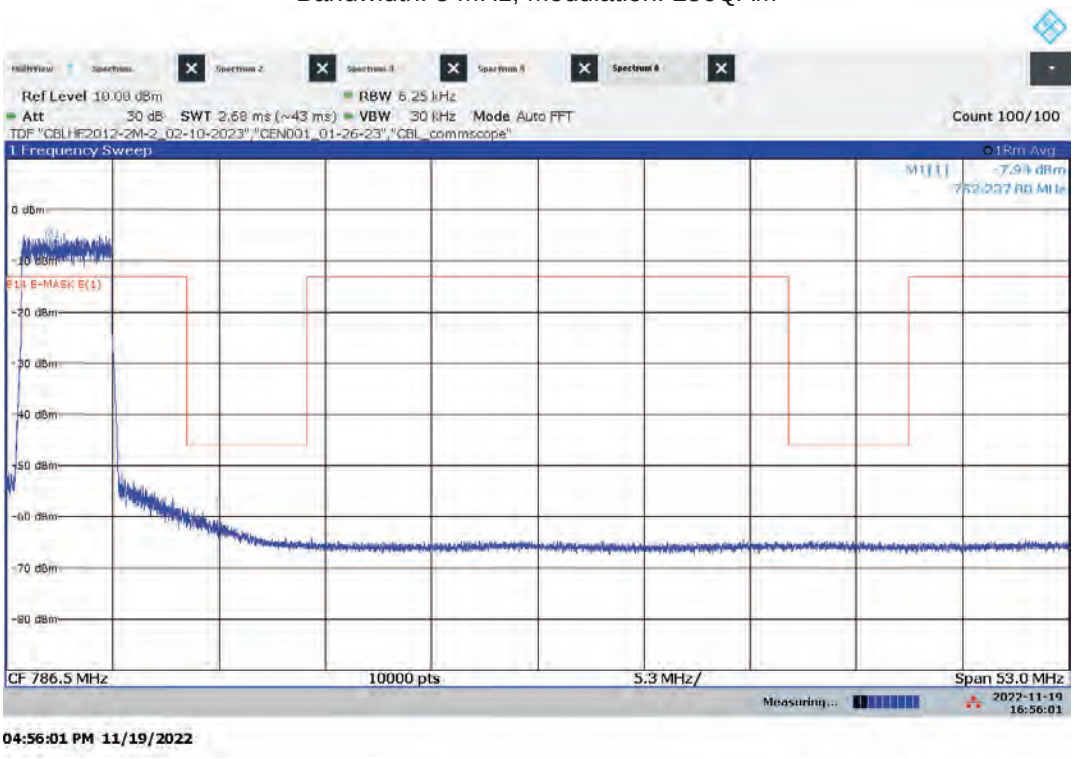
Lo-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



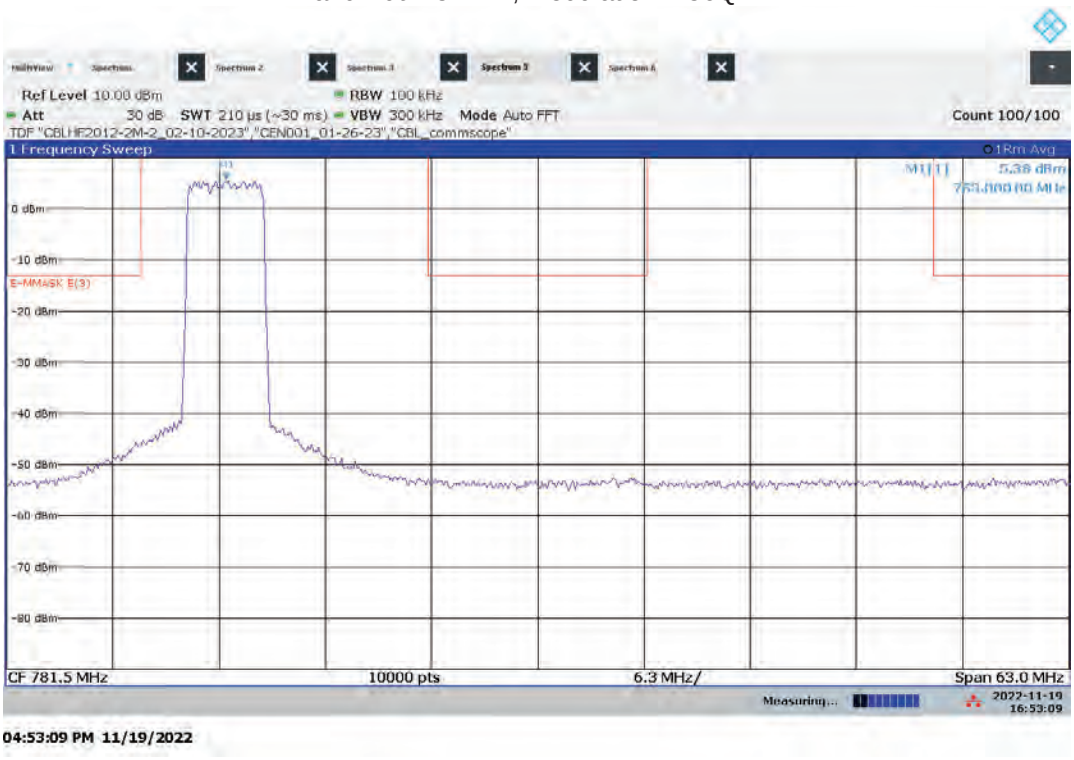
Lo-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



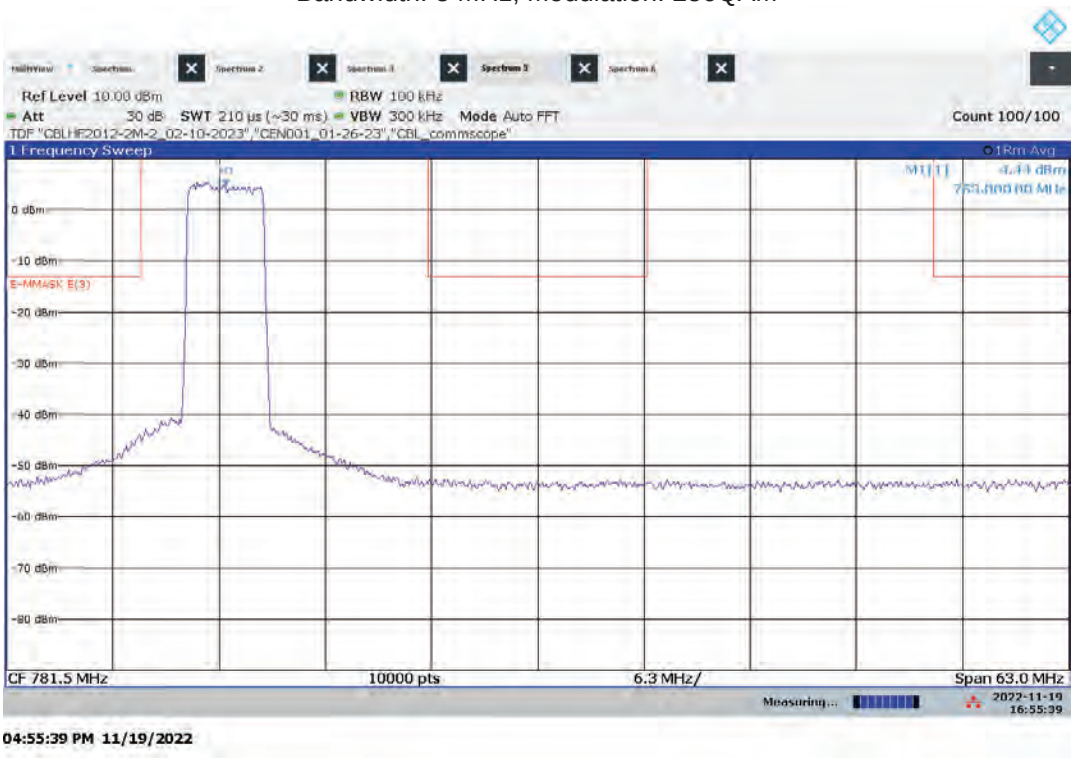
Lo-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



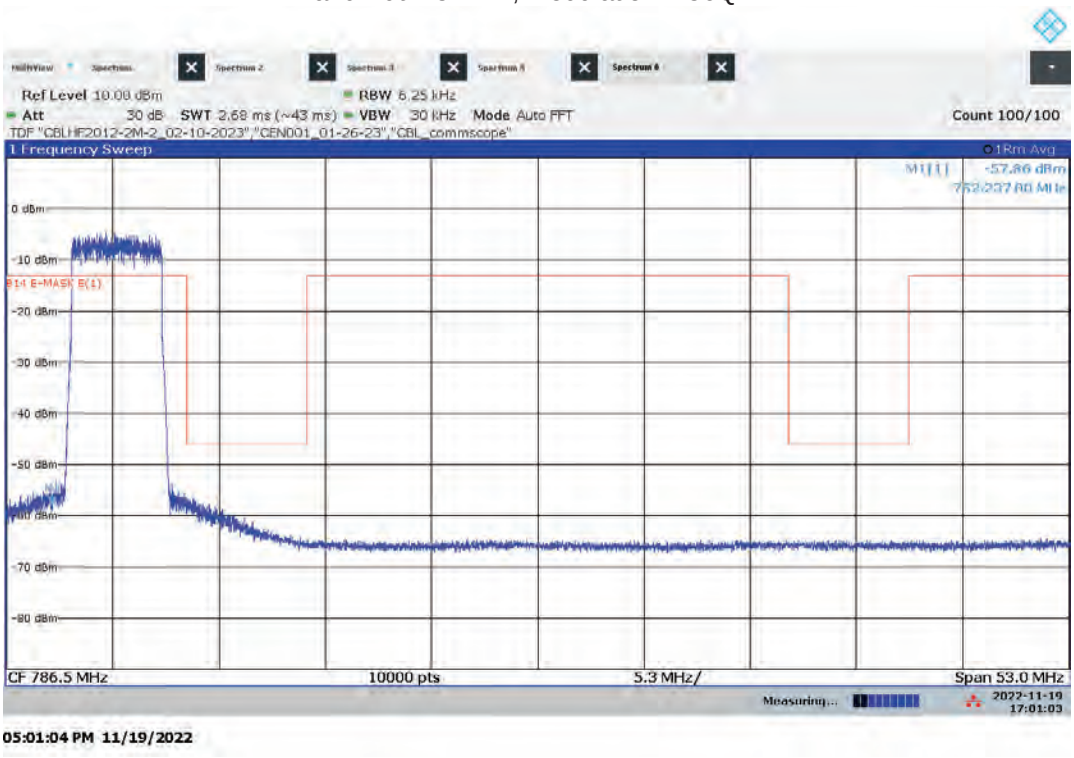
Lo-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



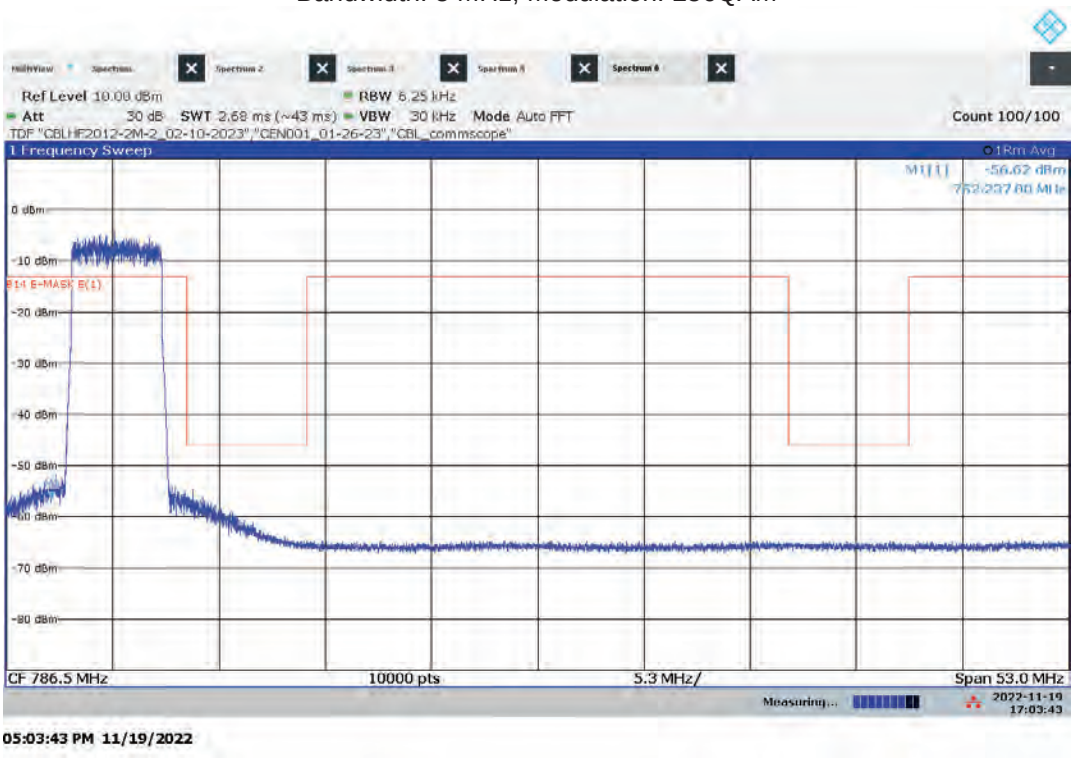
Lo-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



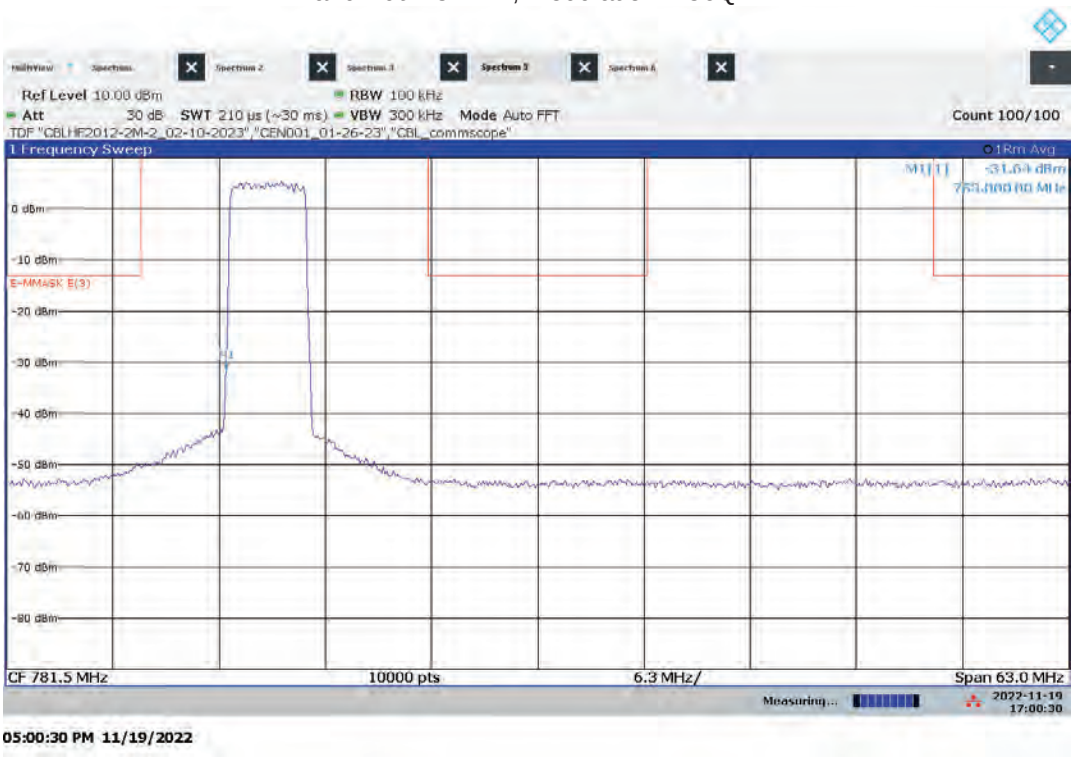
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



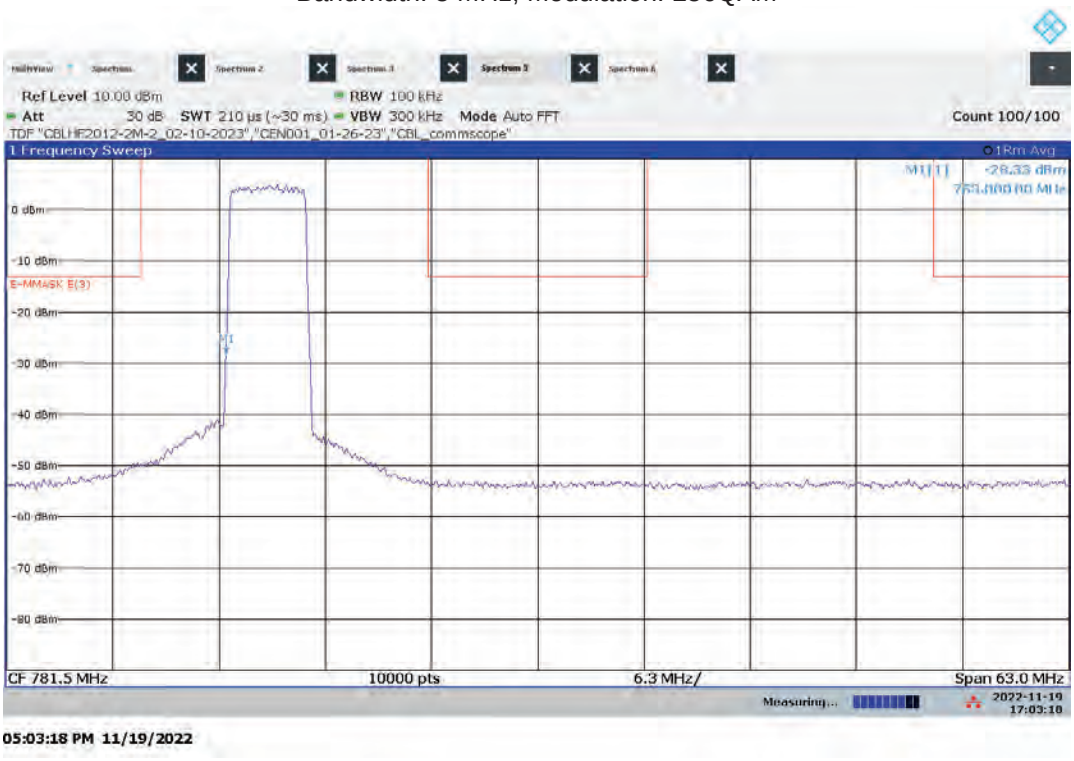
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



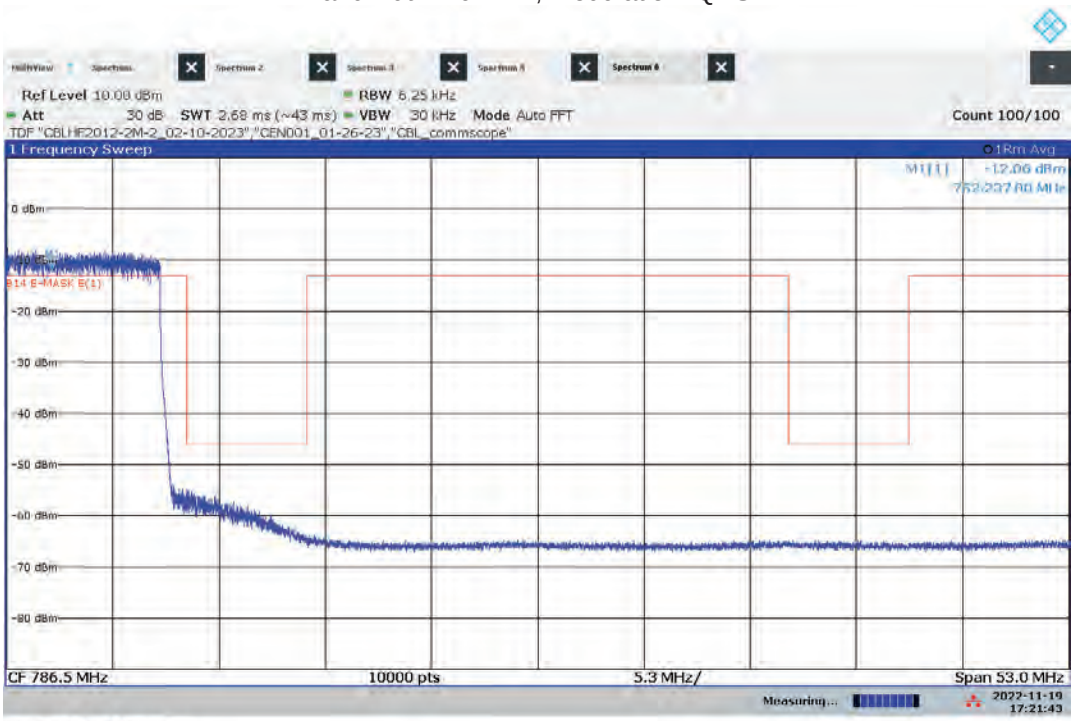
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: QPSK



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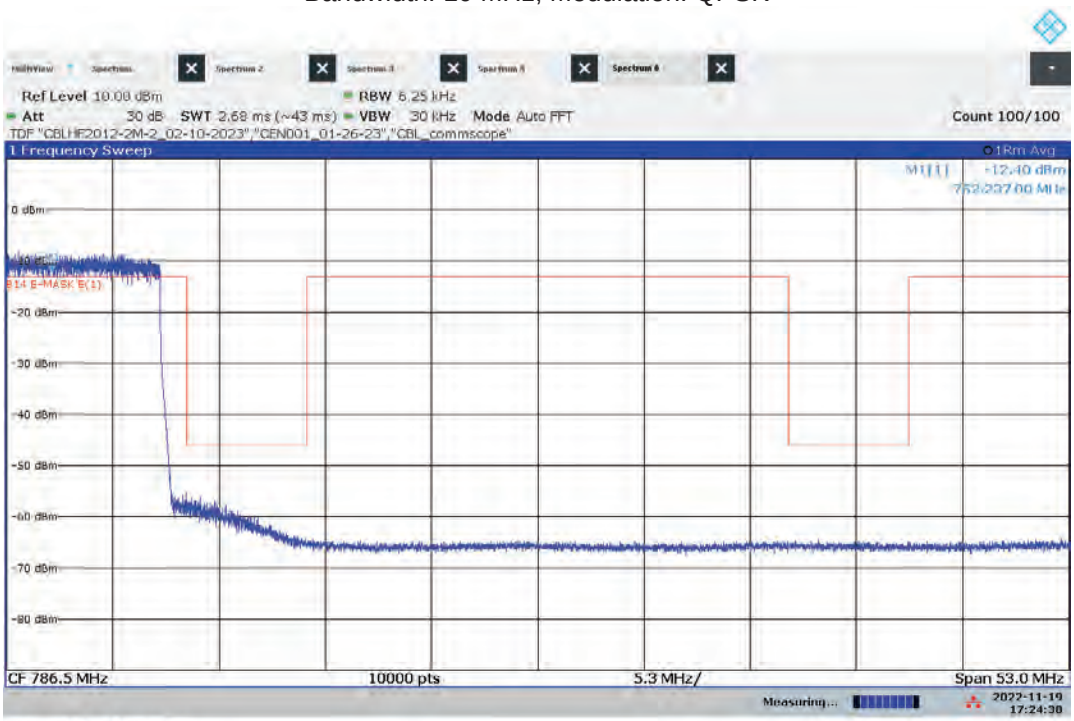
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: QPSK



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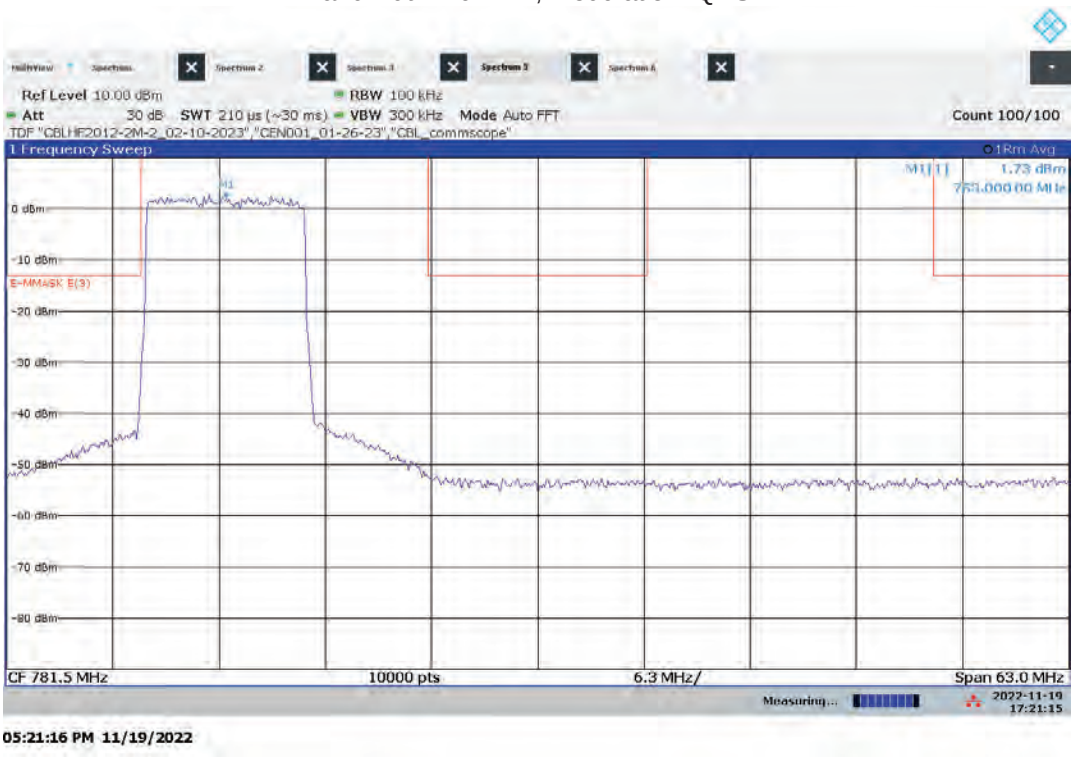
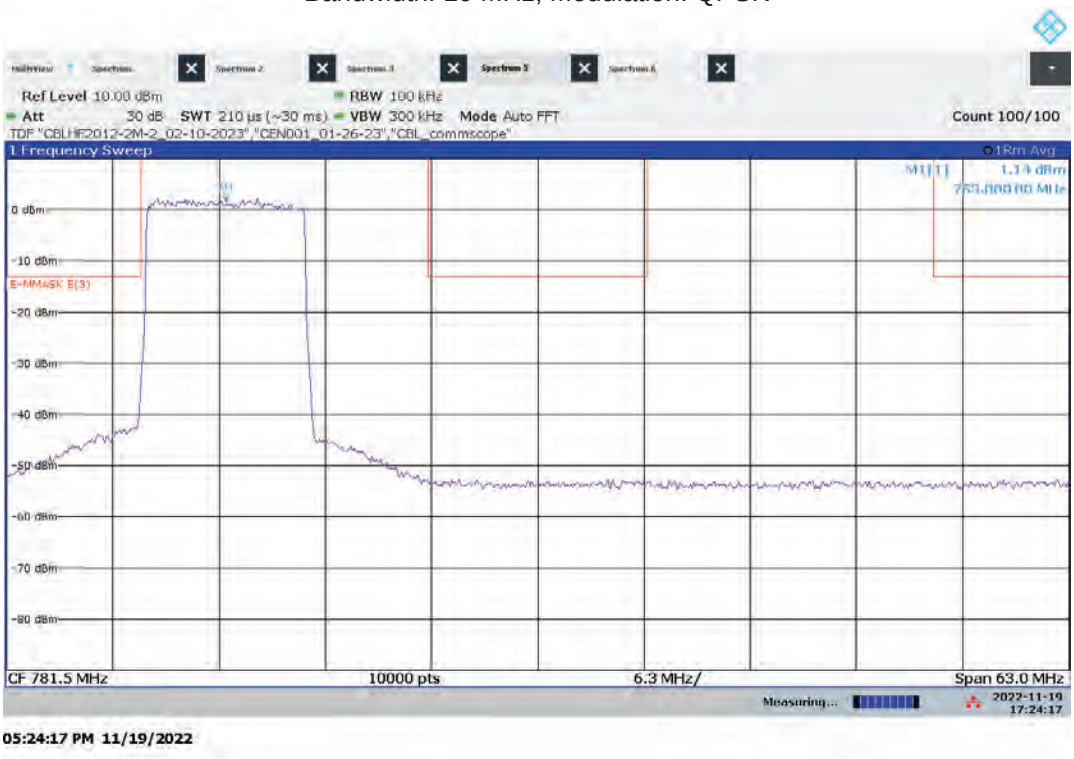
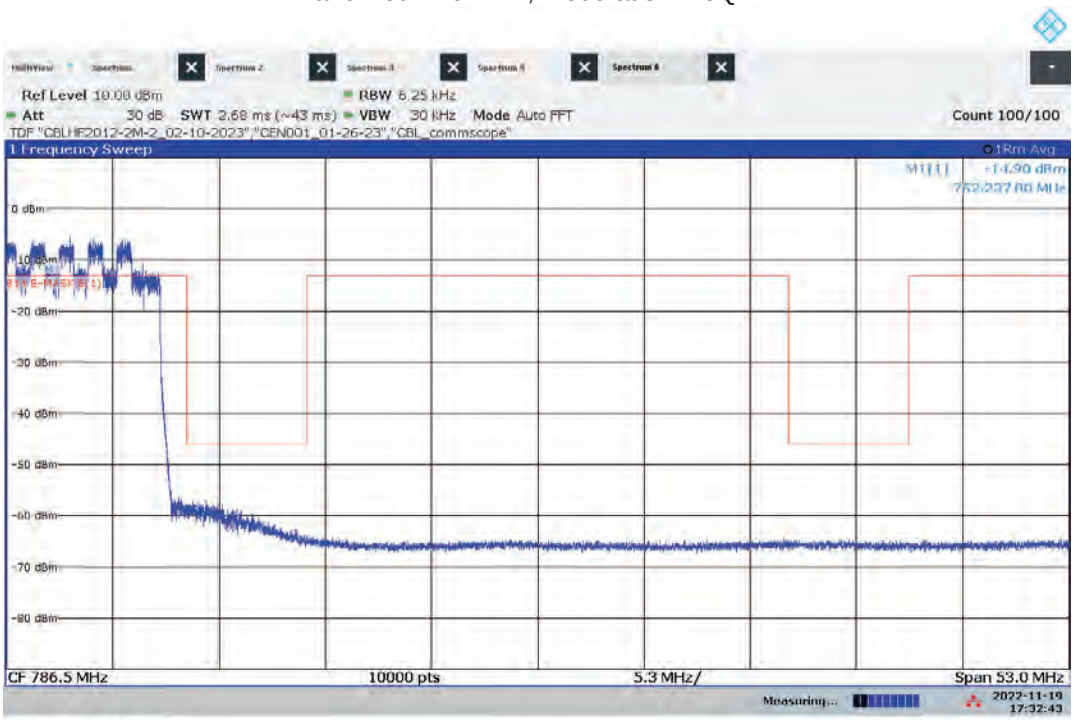
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: QPSK



Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: QPSK



Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 16QAM



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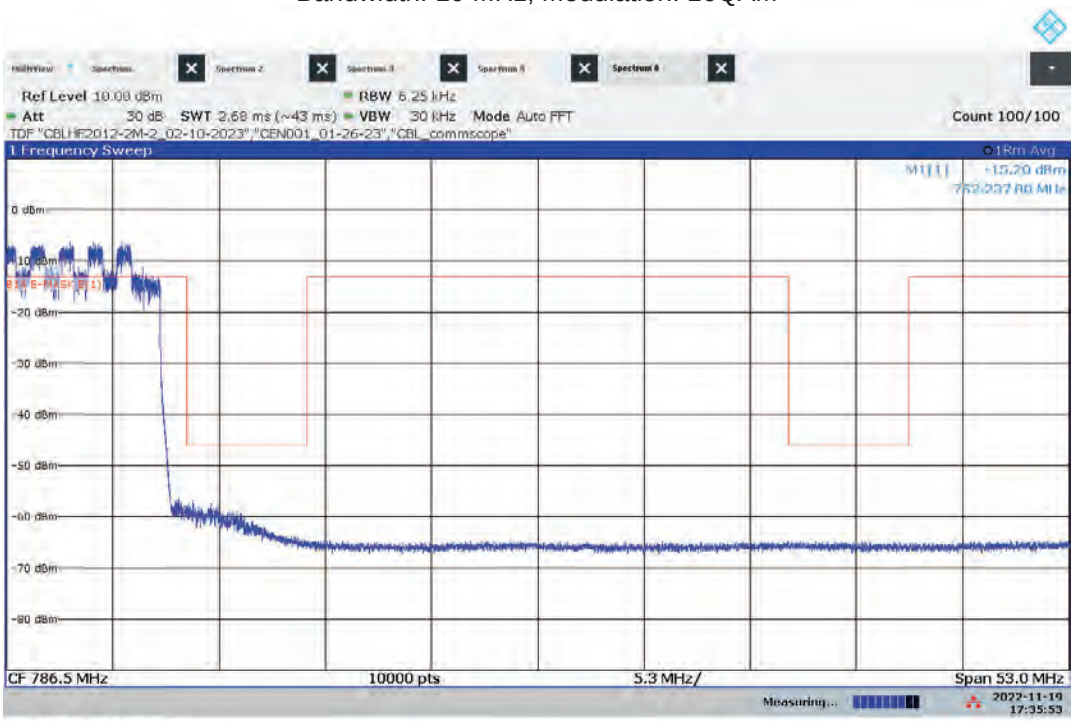
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 16QAM



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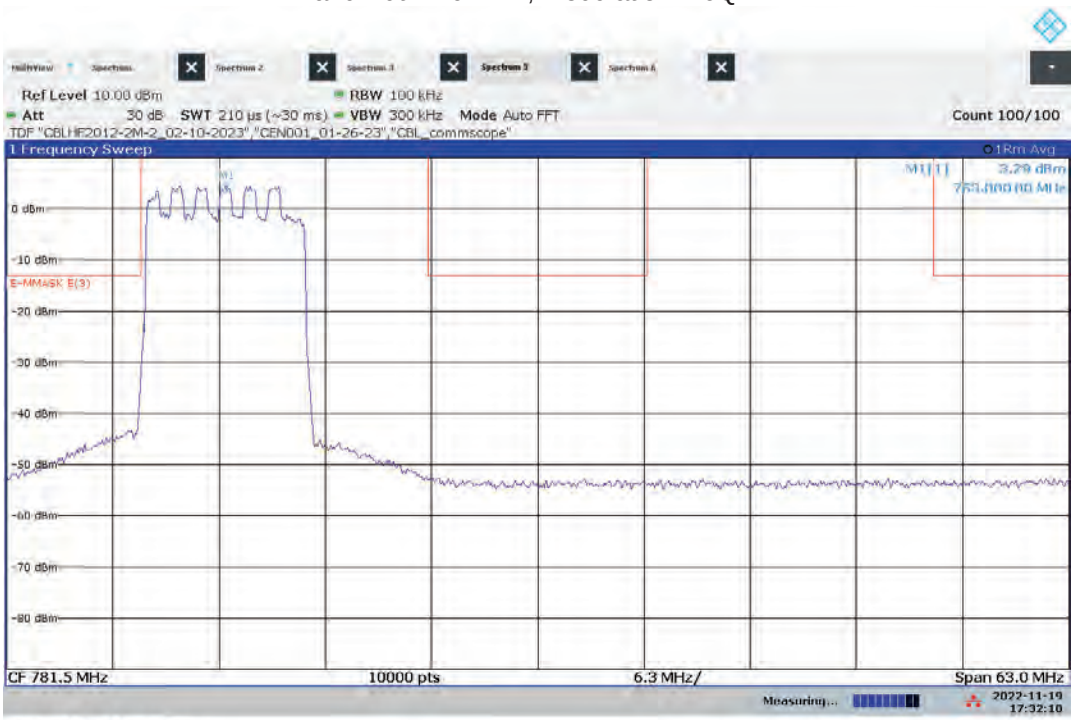
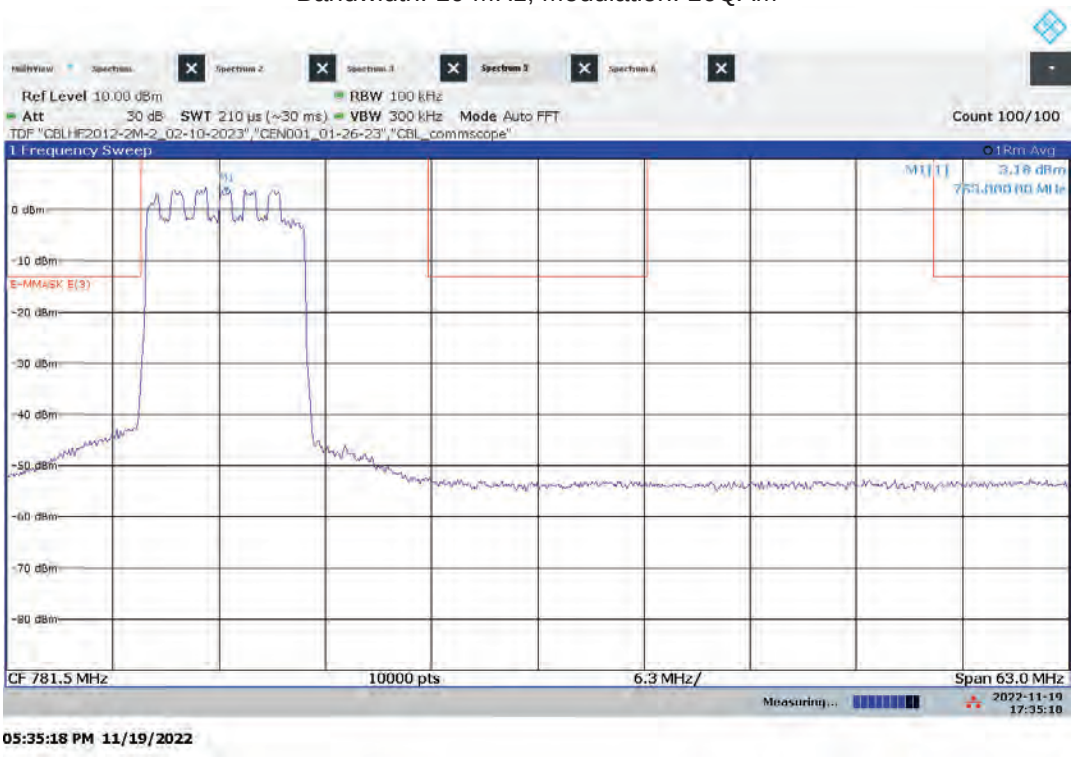
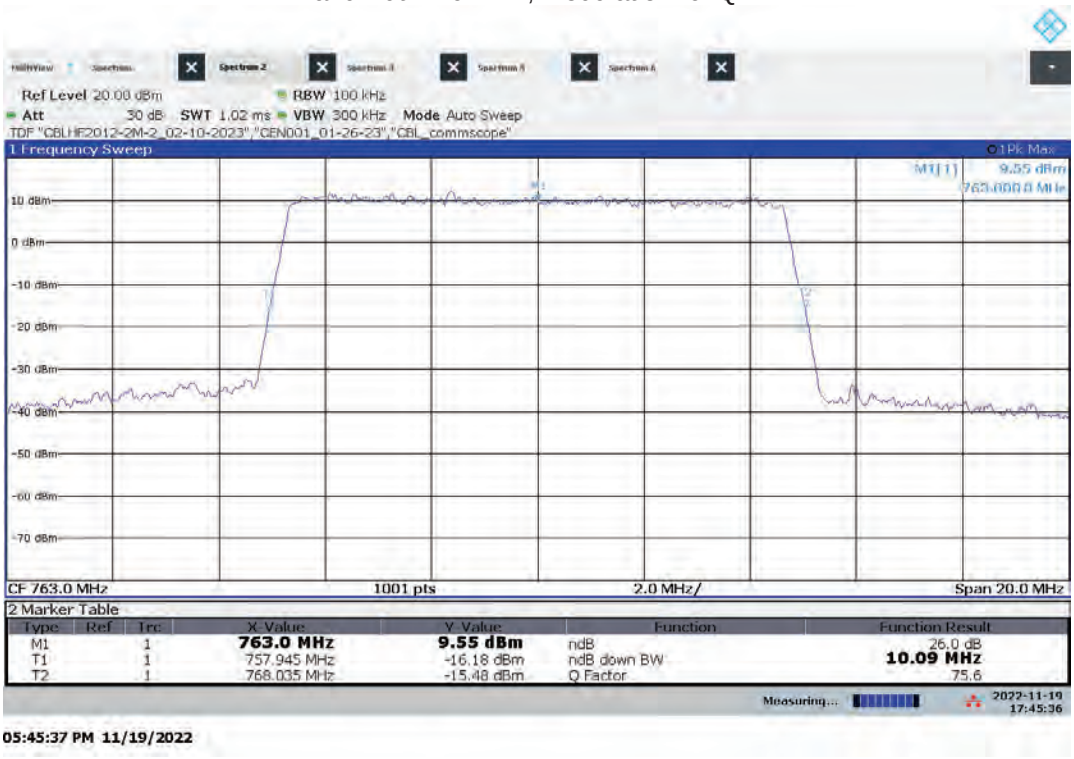
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 16QAM



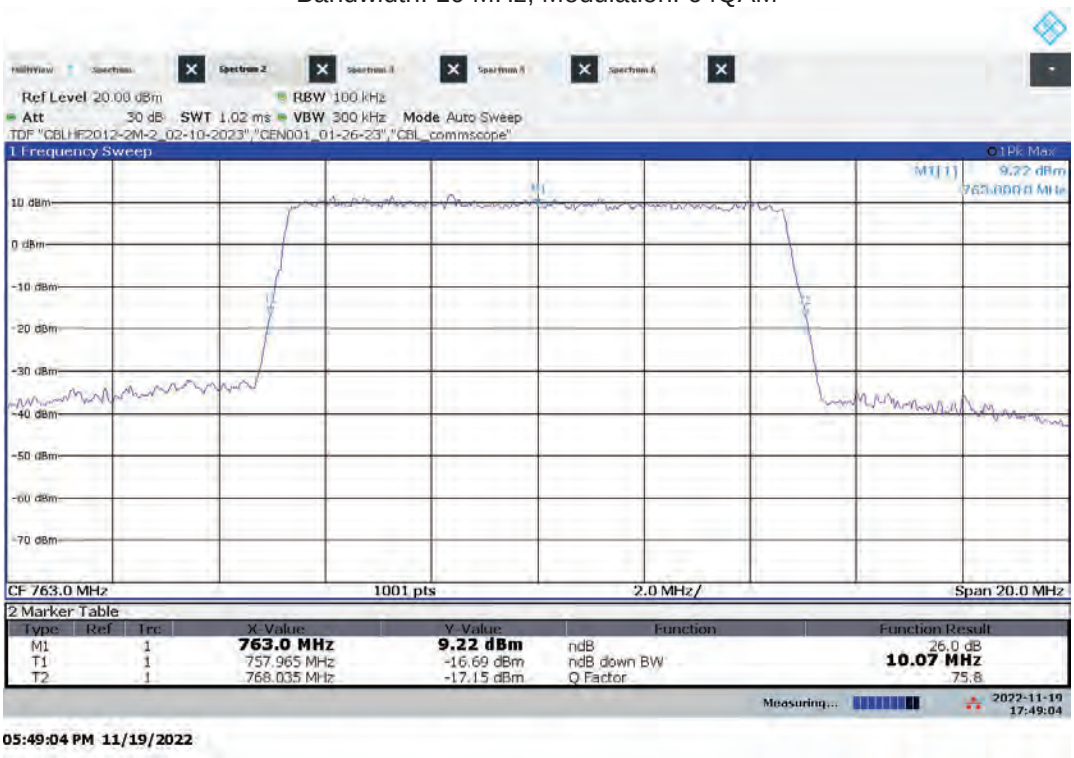
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 16QAM



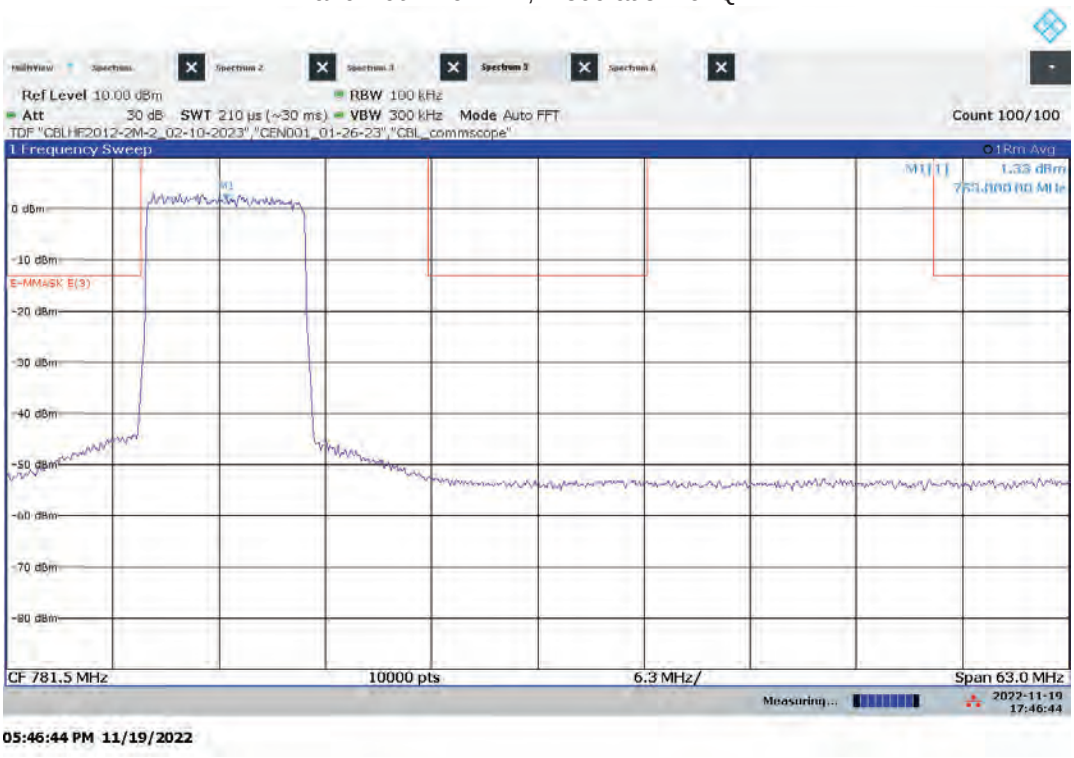
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 64QAM



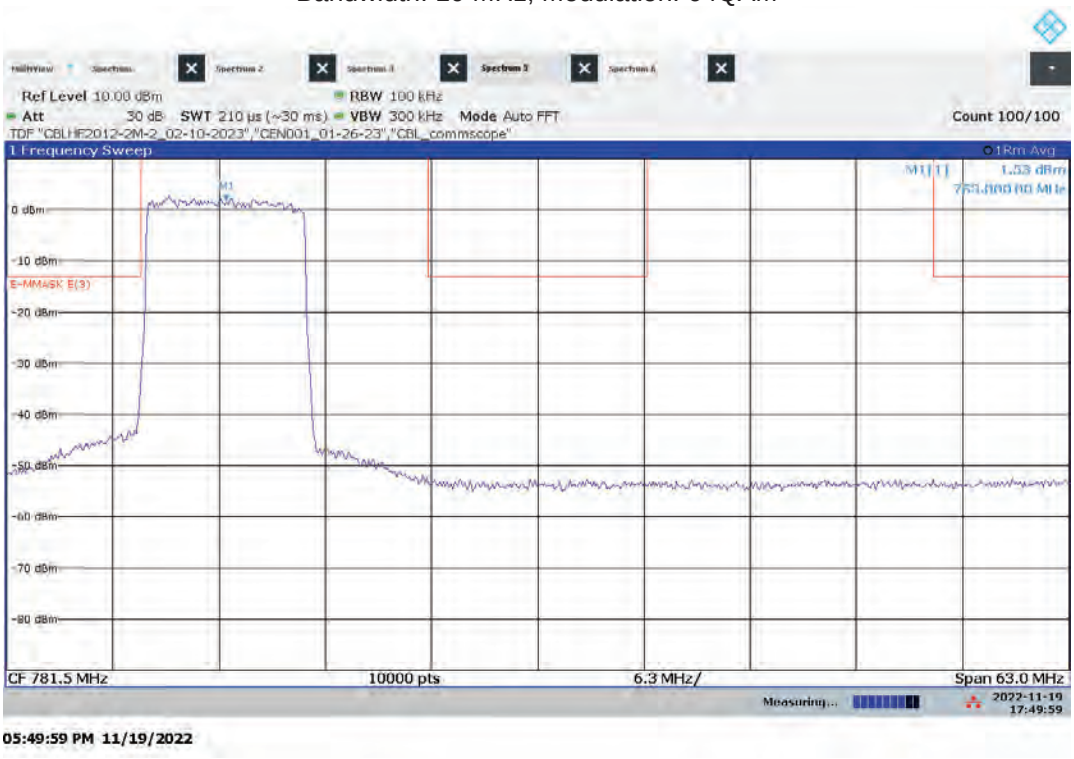
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 64QAM



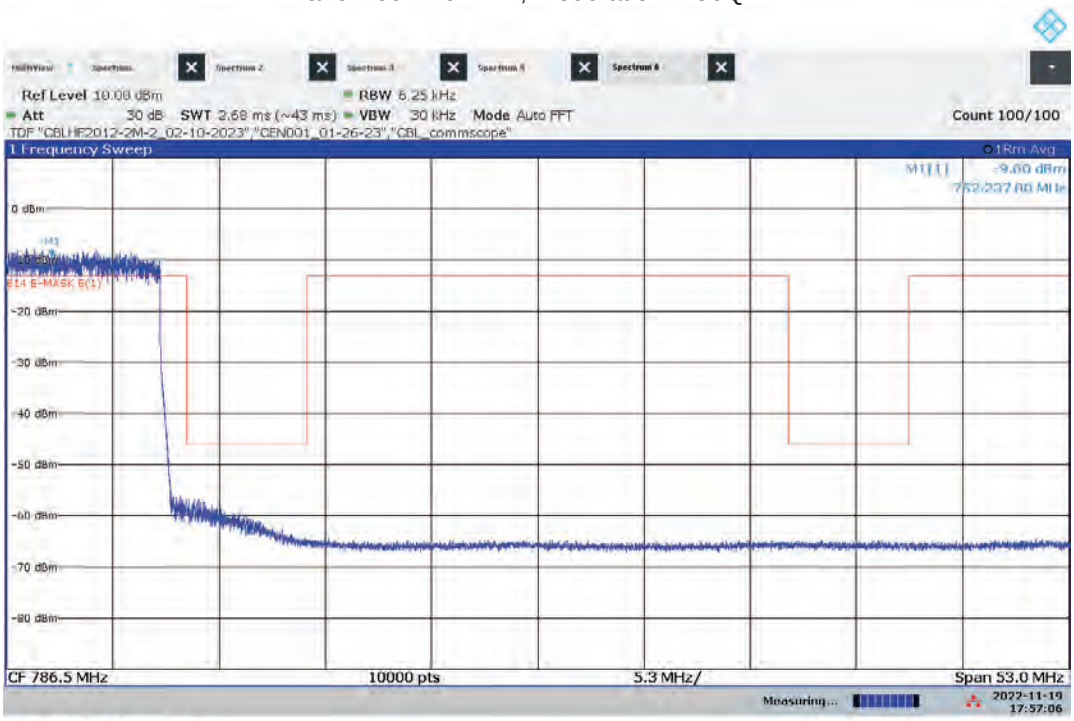
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 64QAM



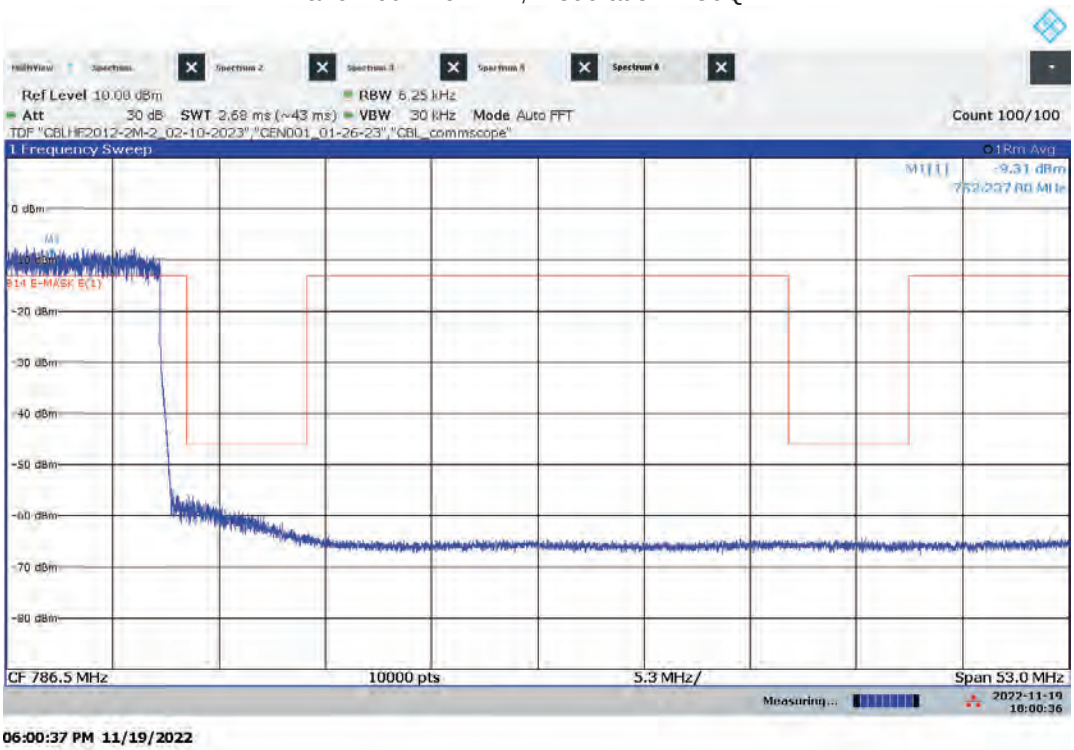
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 64QAM



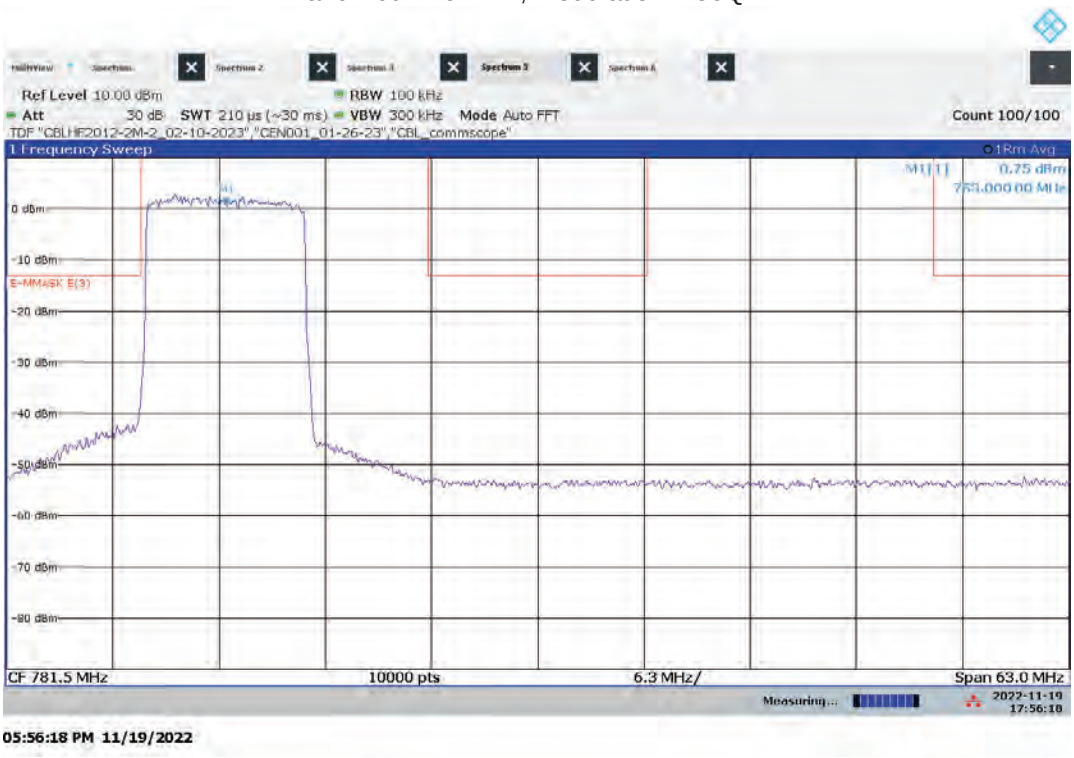
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 256QAM



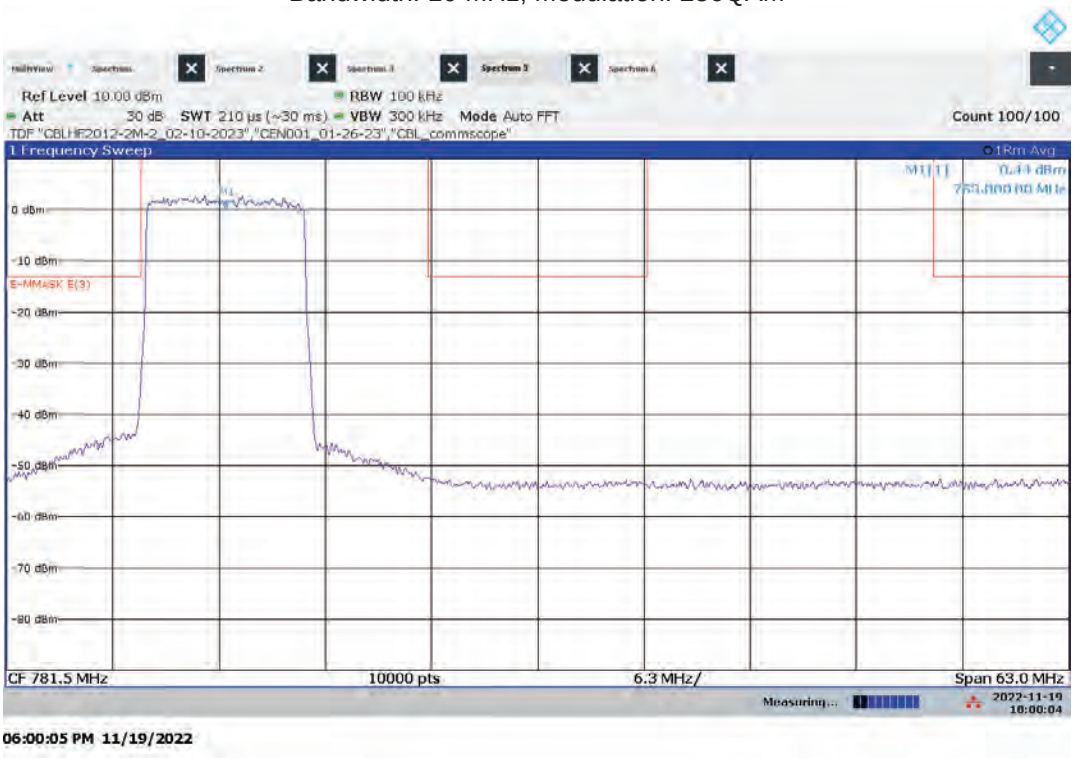
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 256QAM



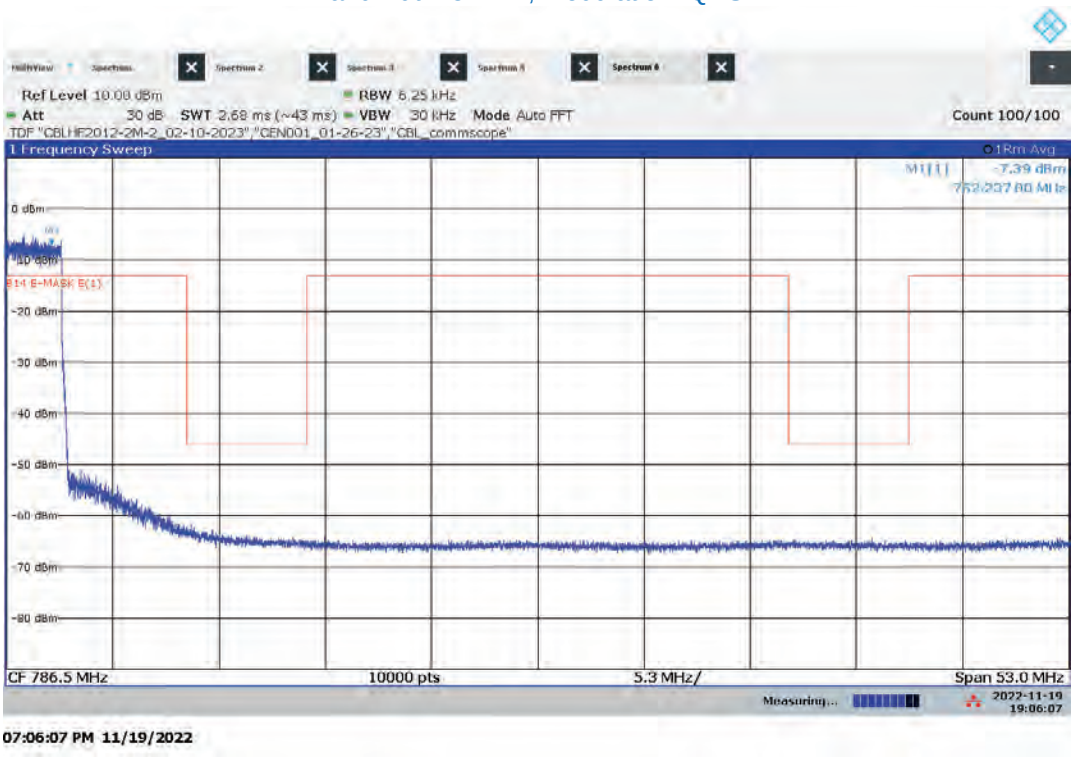
Lo-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 256QAM



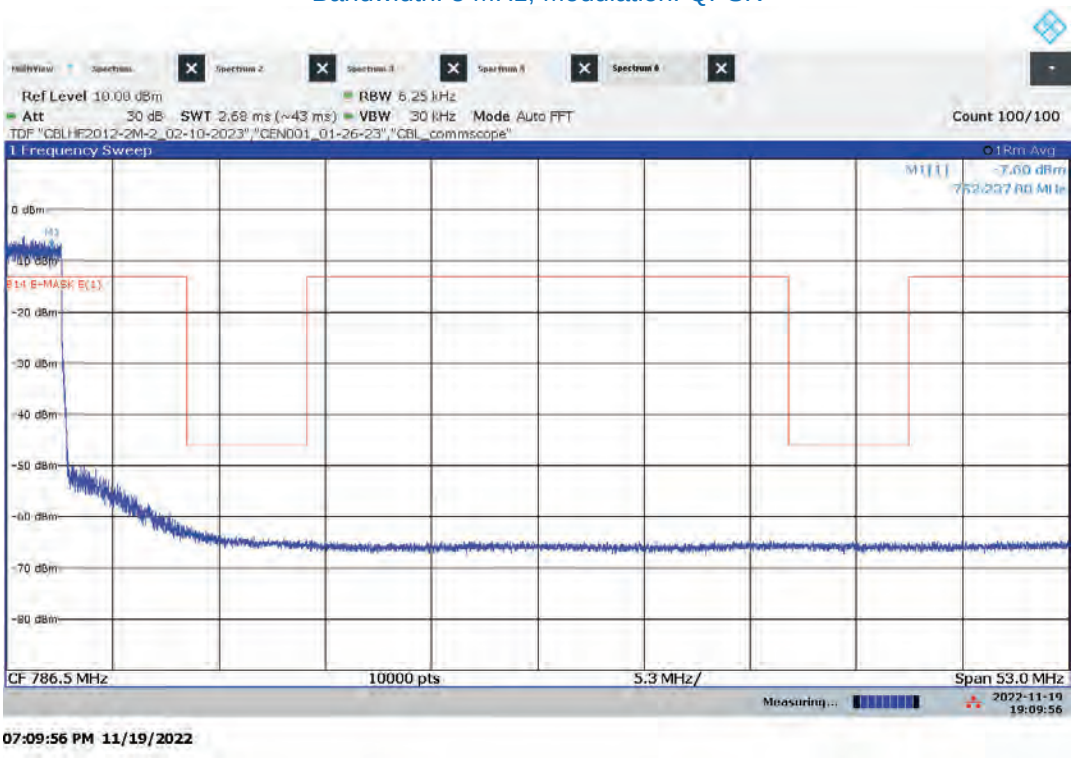
Lo-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 256QAM



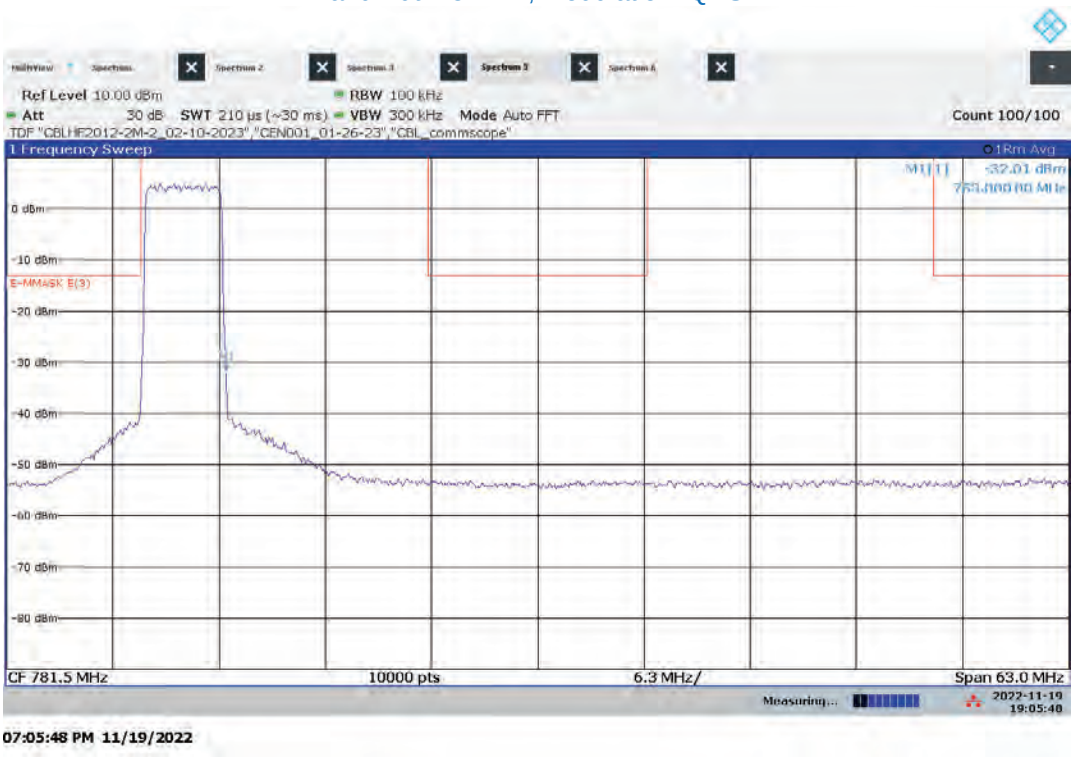
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: QPSK



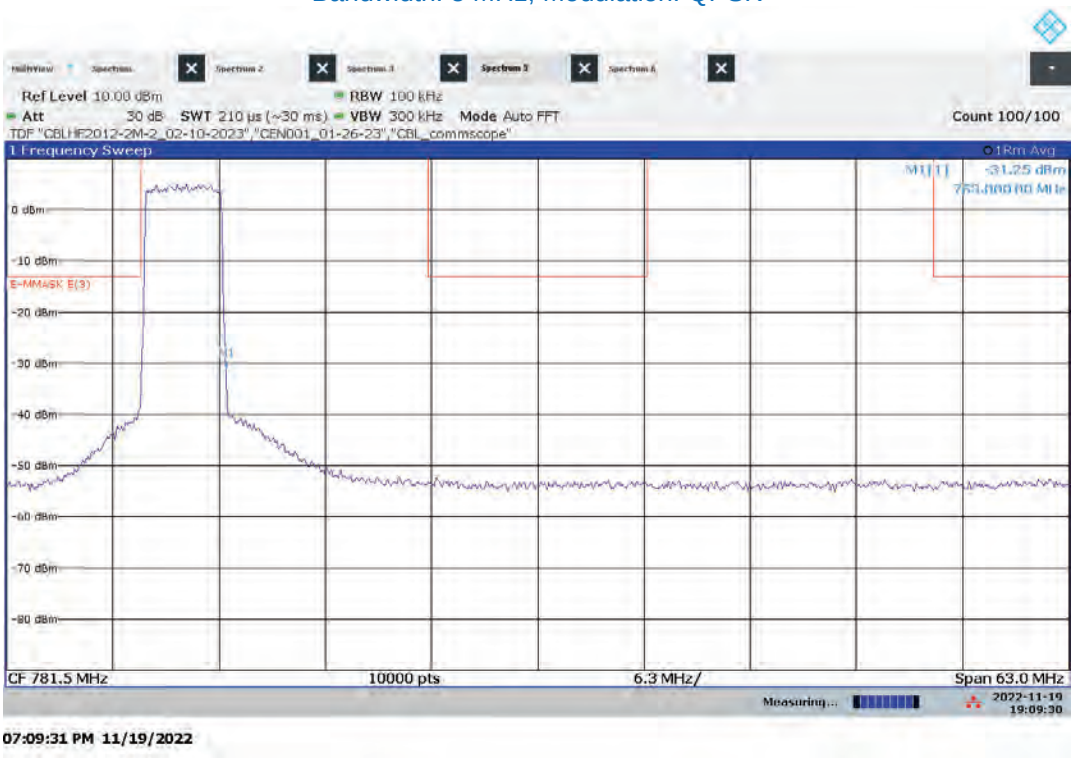
Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: QPSK



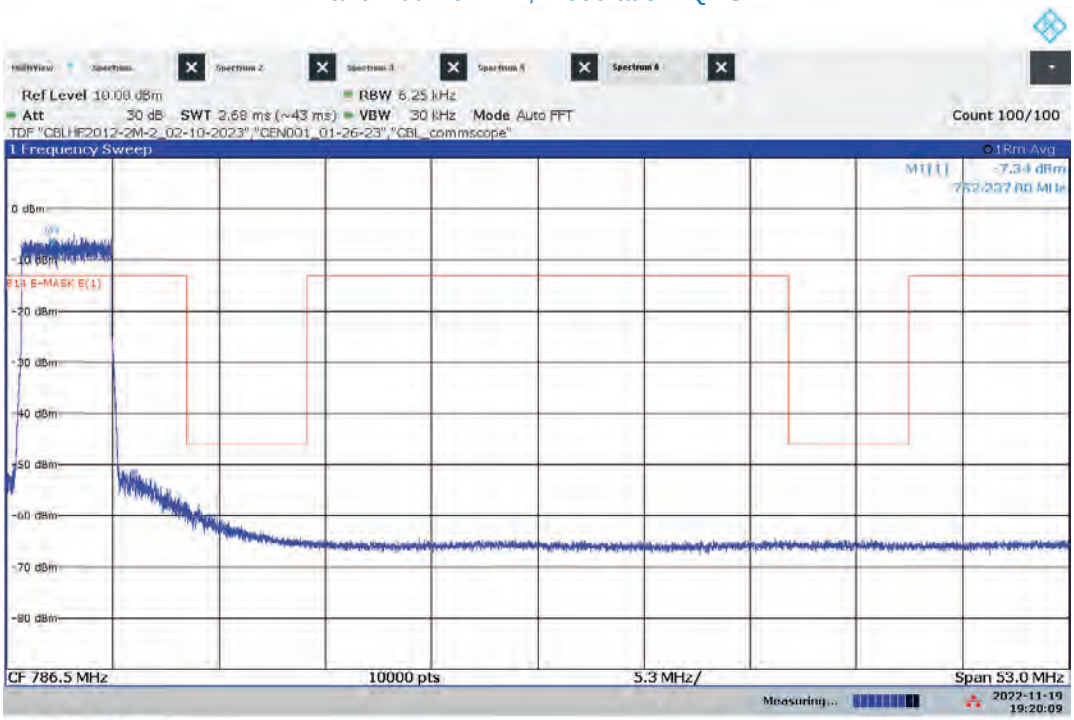
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: QPSK



Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: QPSK



Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: QPSK



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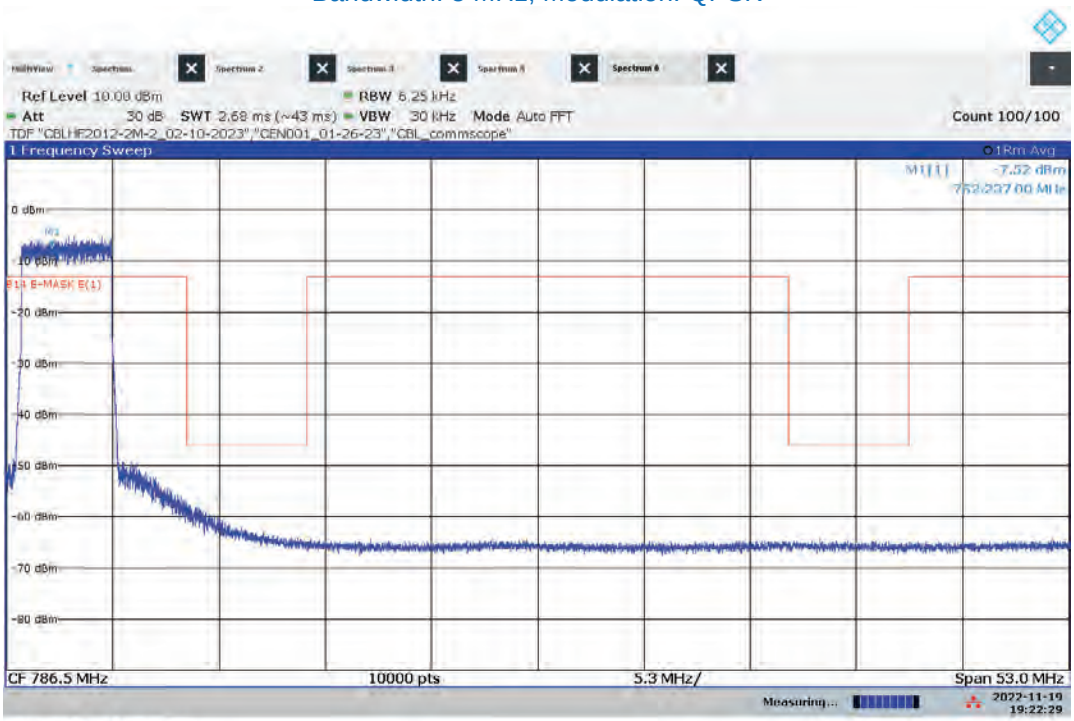
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: QPSK



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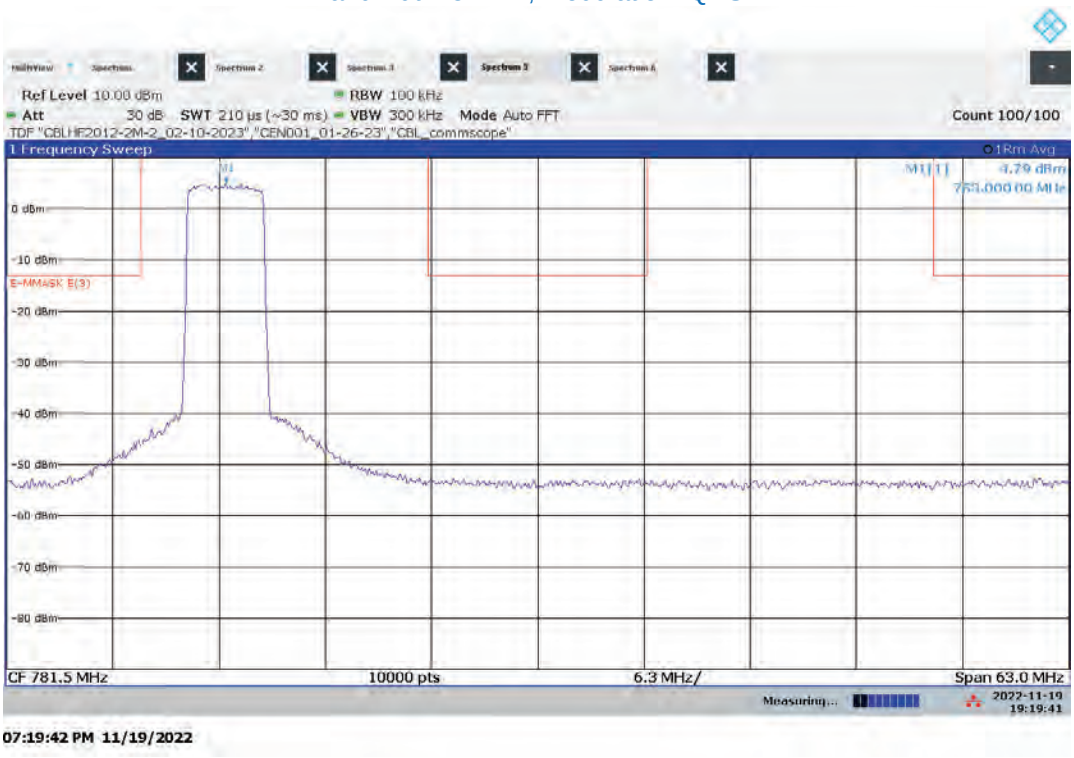
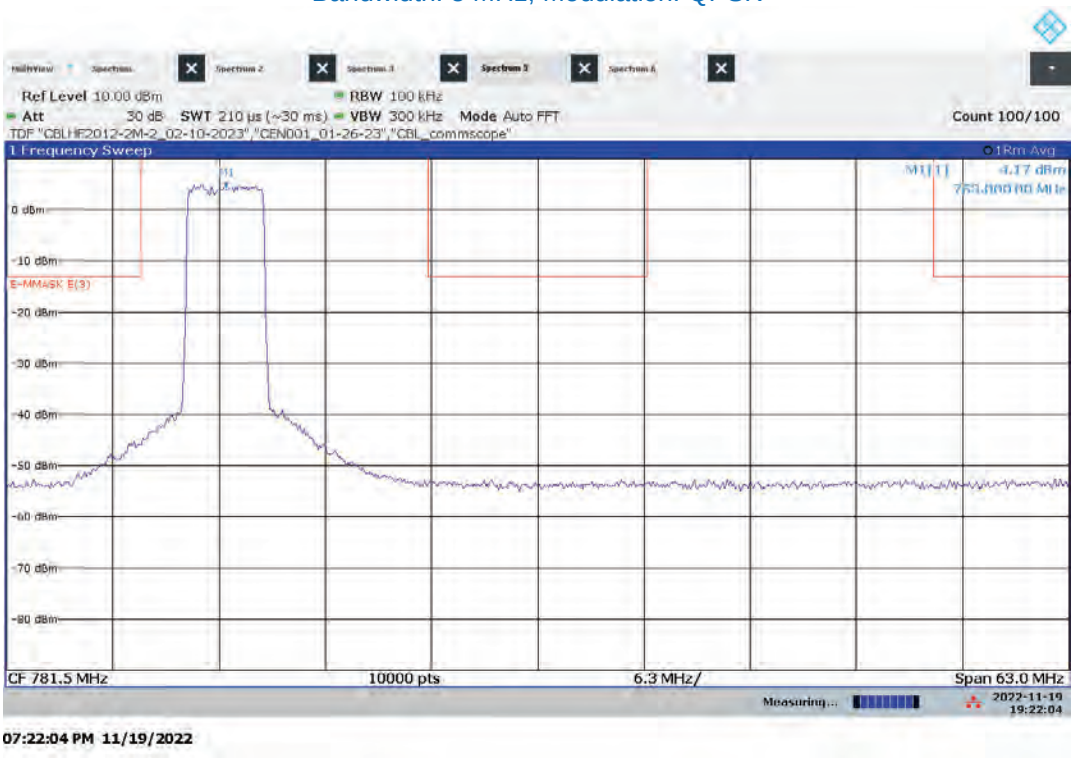
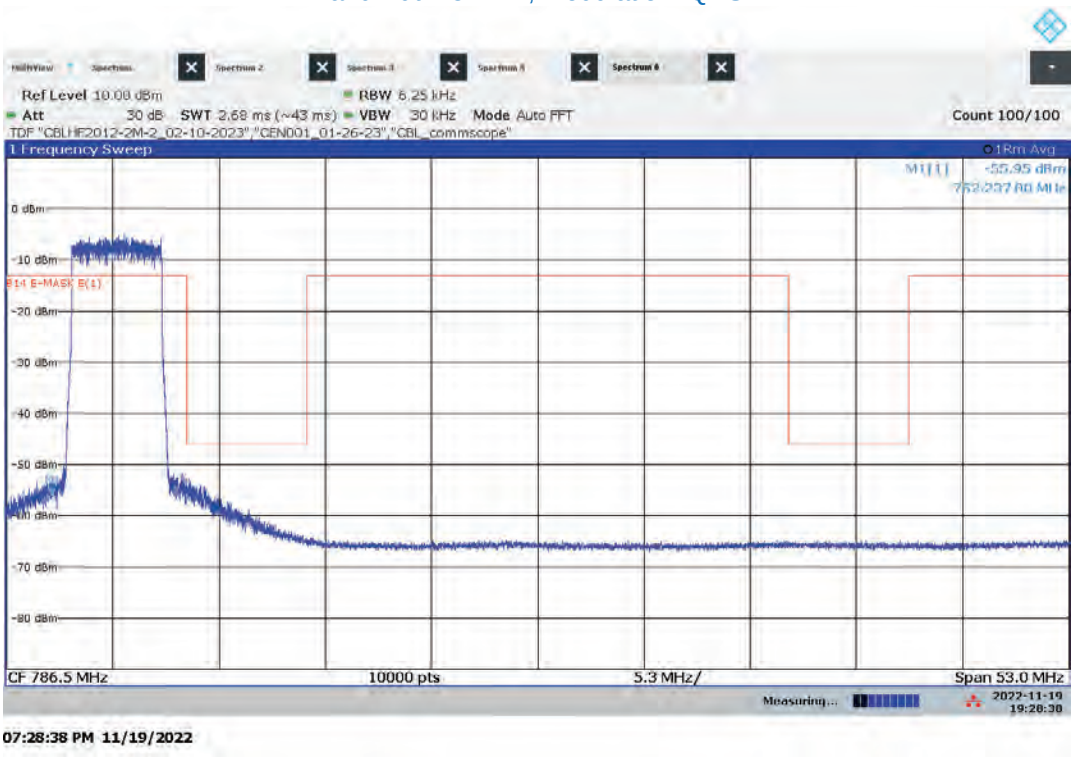
Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: QPSK



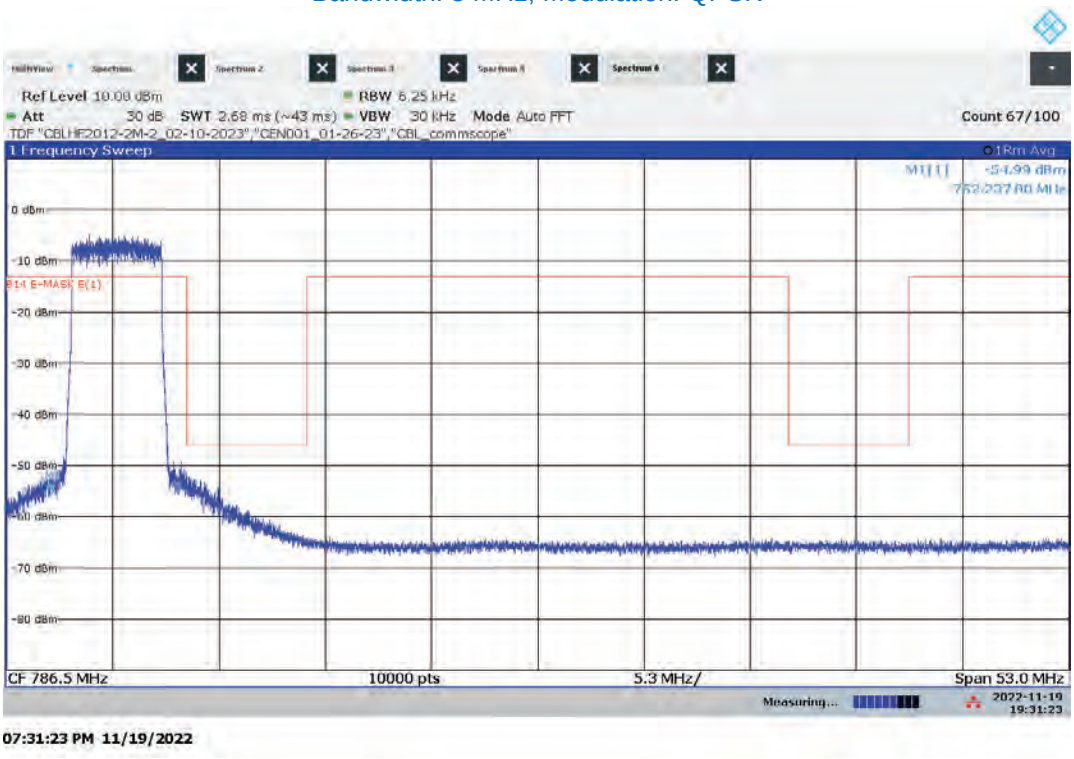
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: QPSK



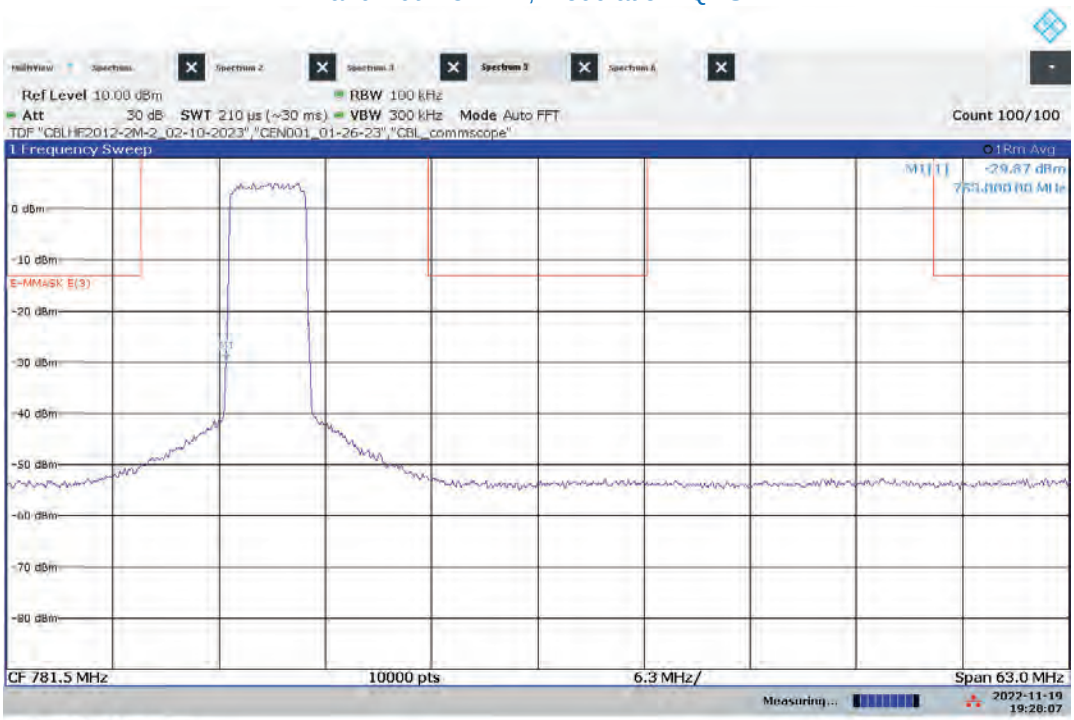
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: QPSK



Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: QPSK



Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: QPSK



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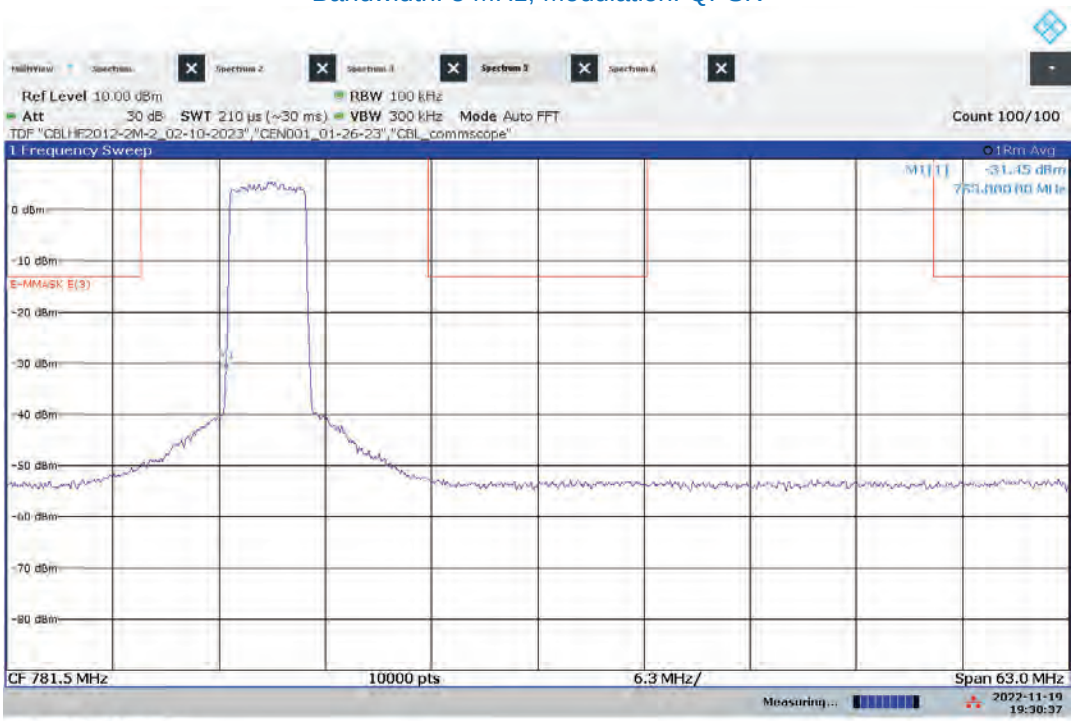
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: QPSK



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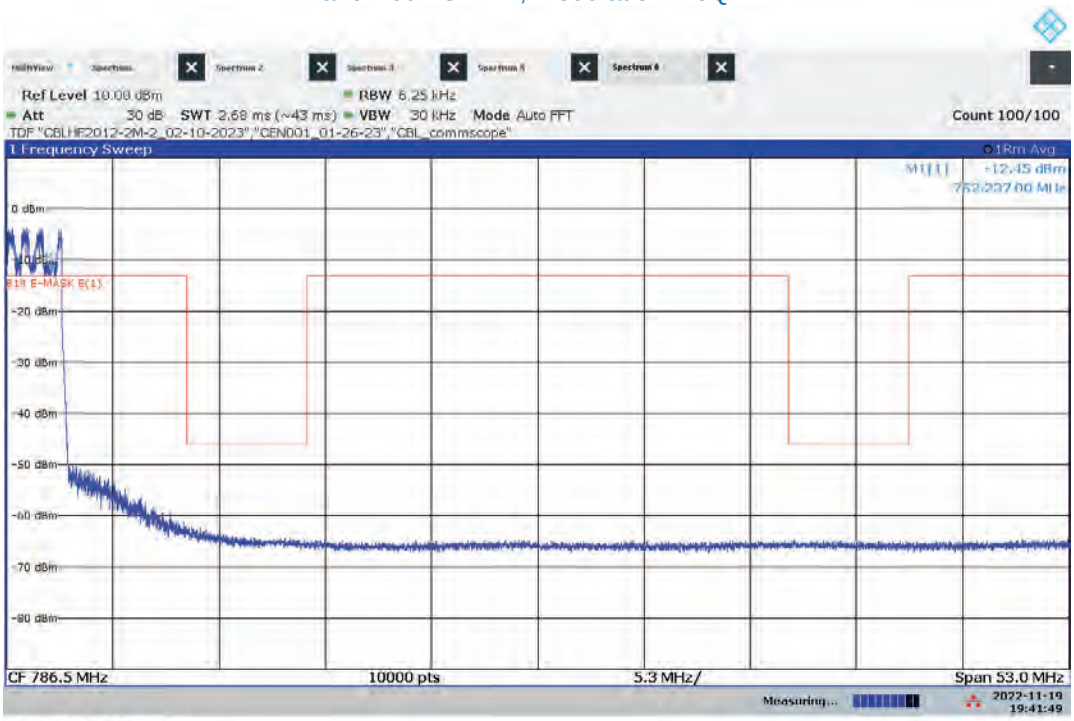
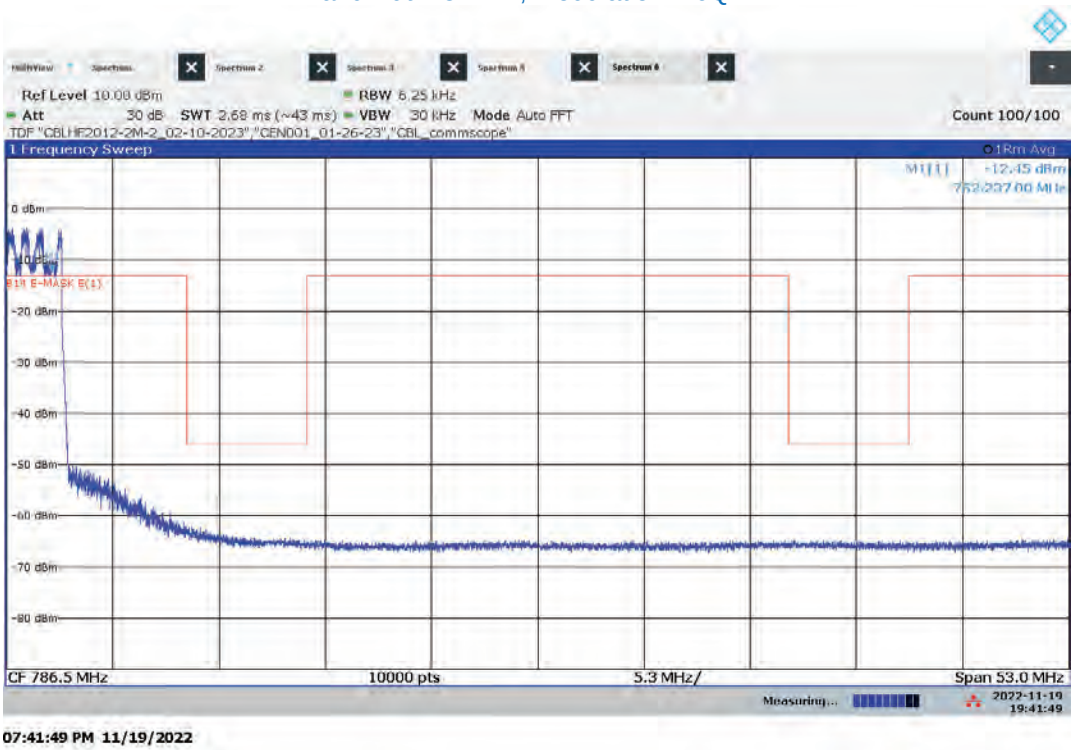
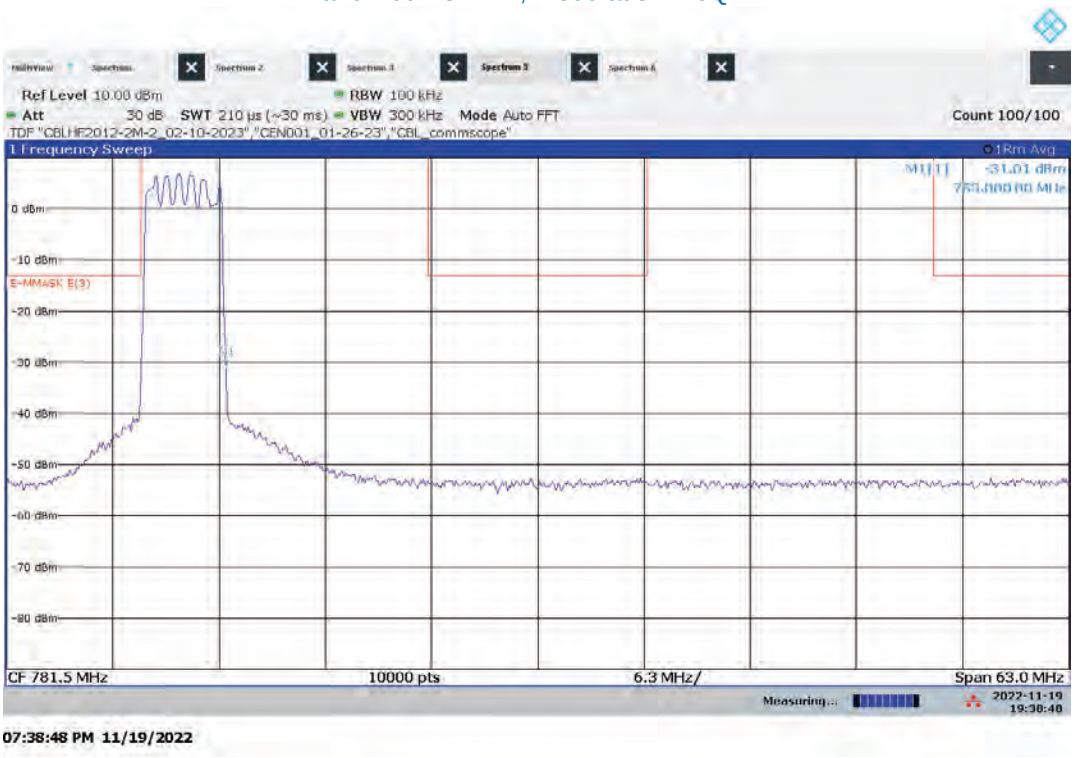
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



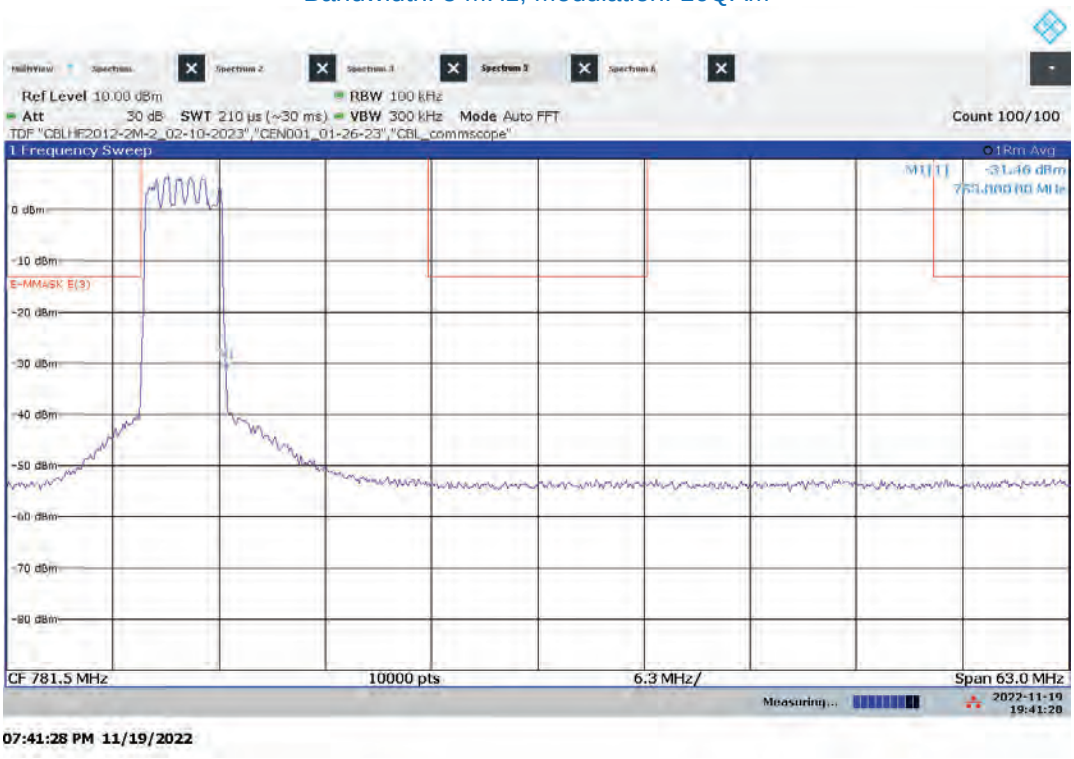
Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



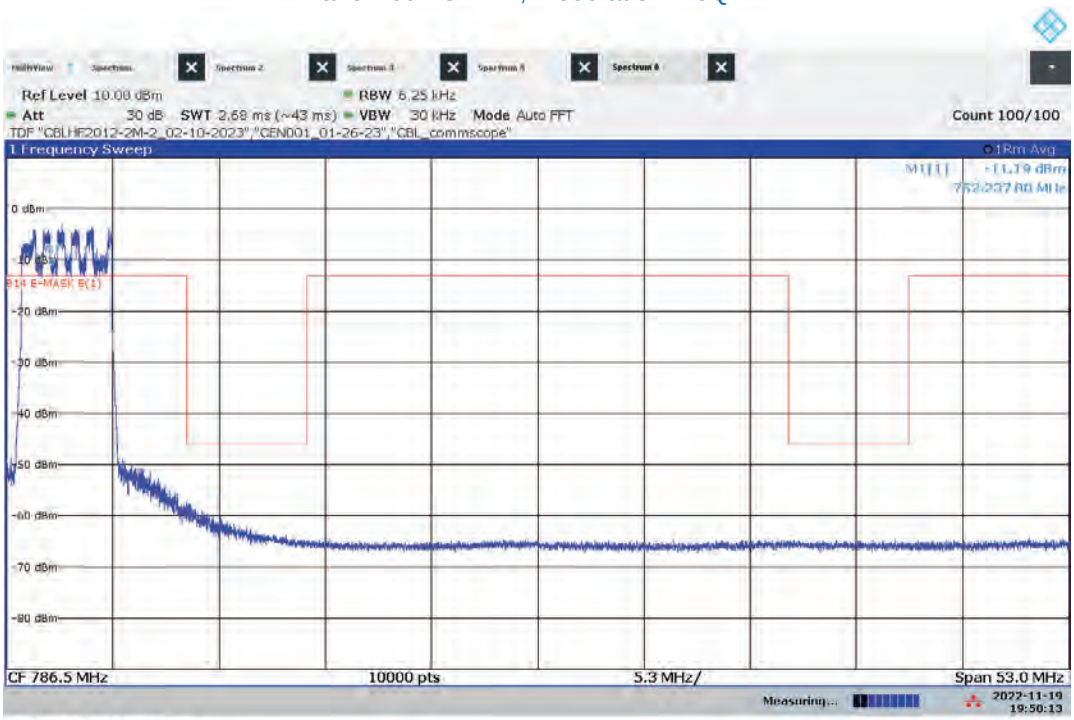
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



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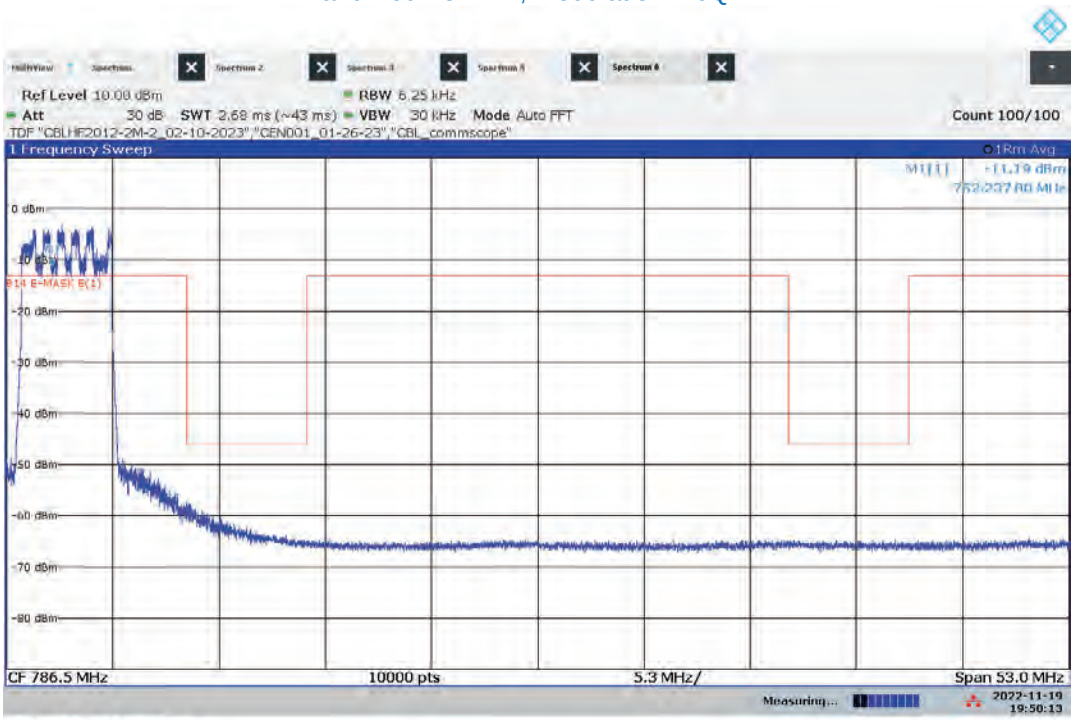
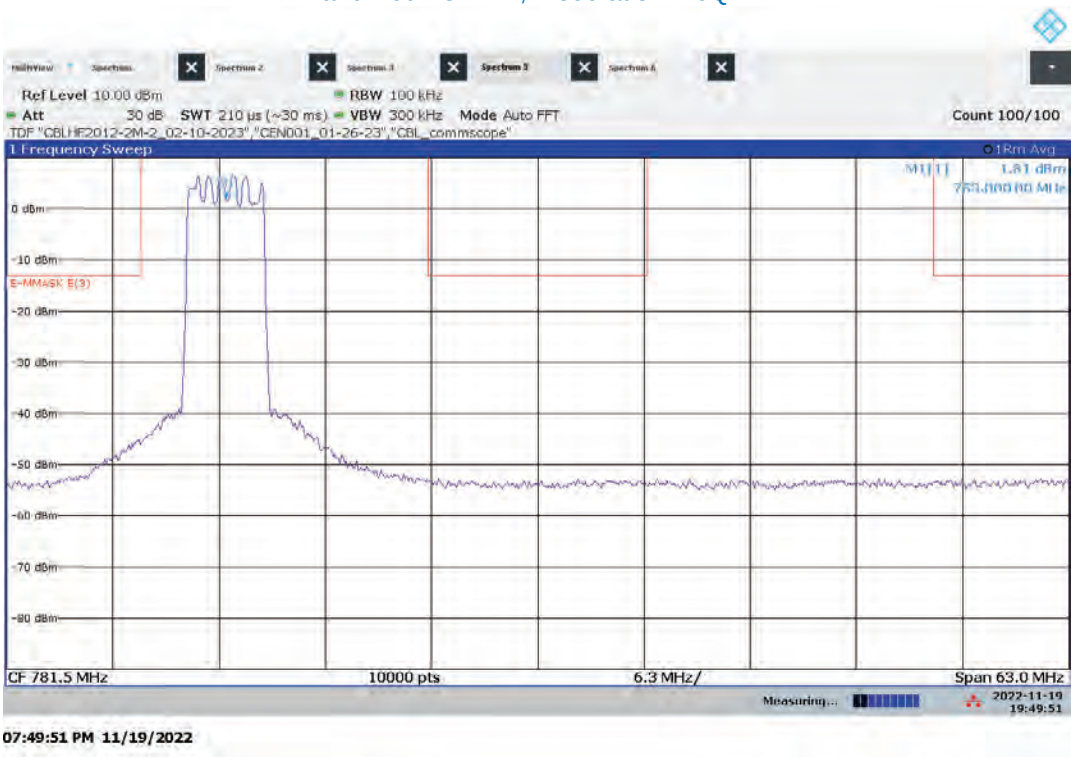
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM

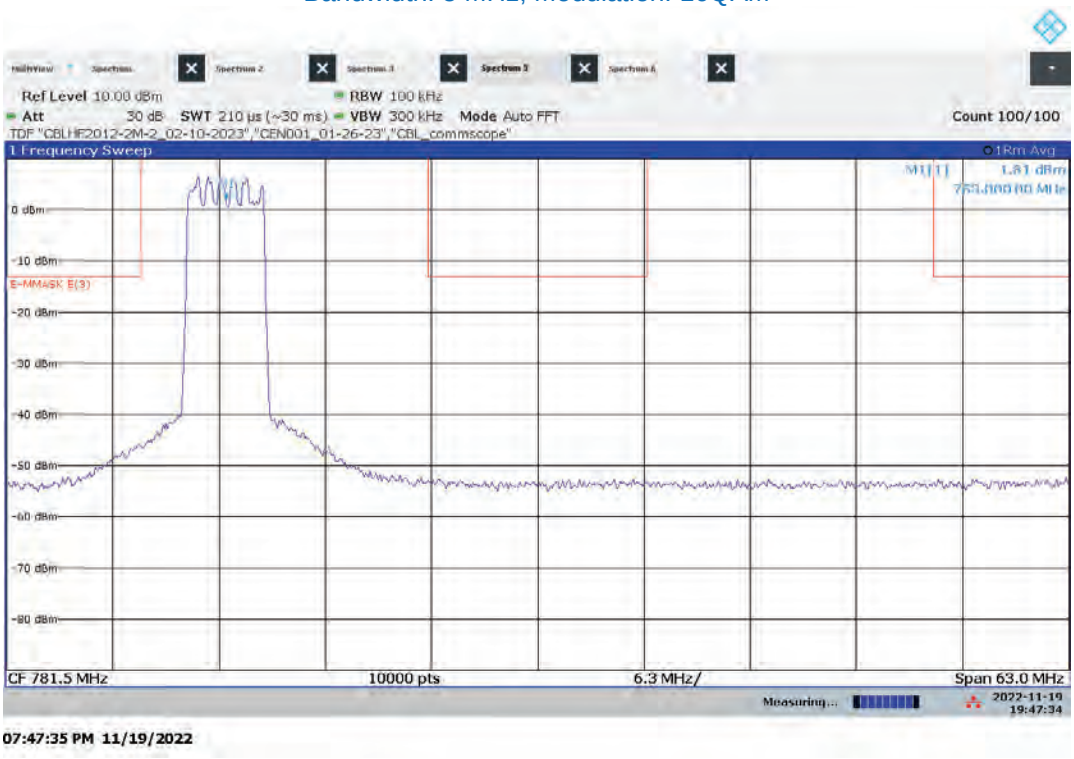


07:50:13 PM 11/19/2022

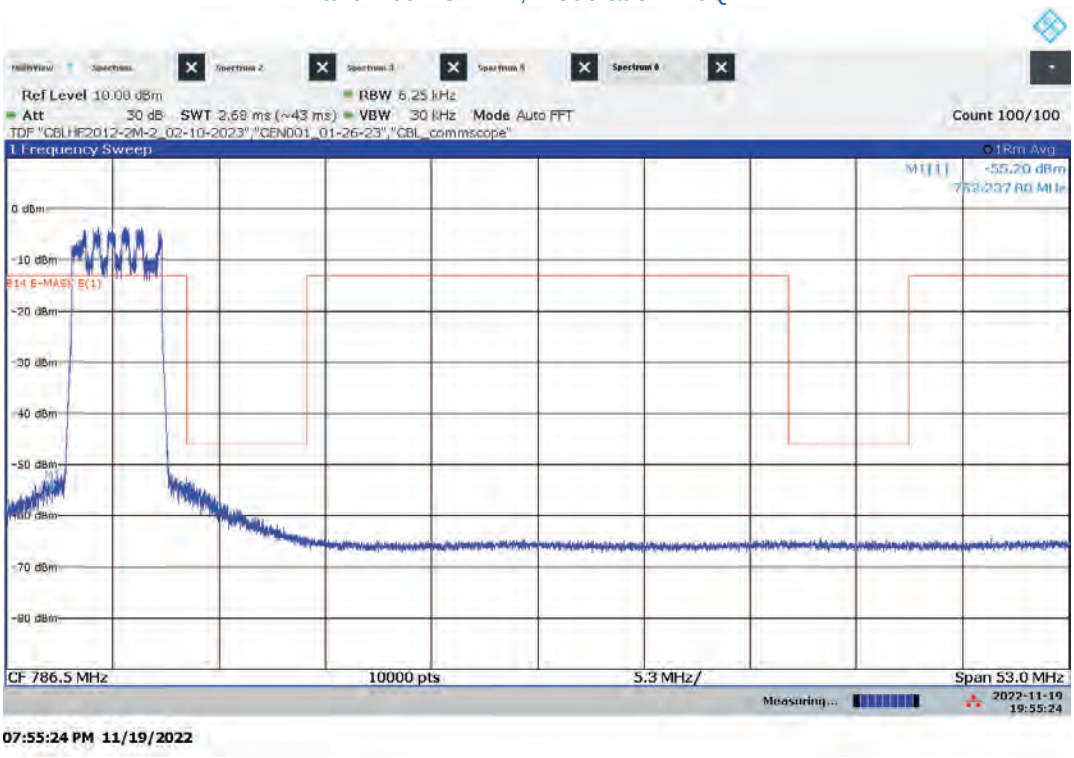
Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



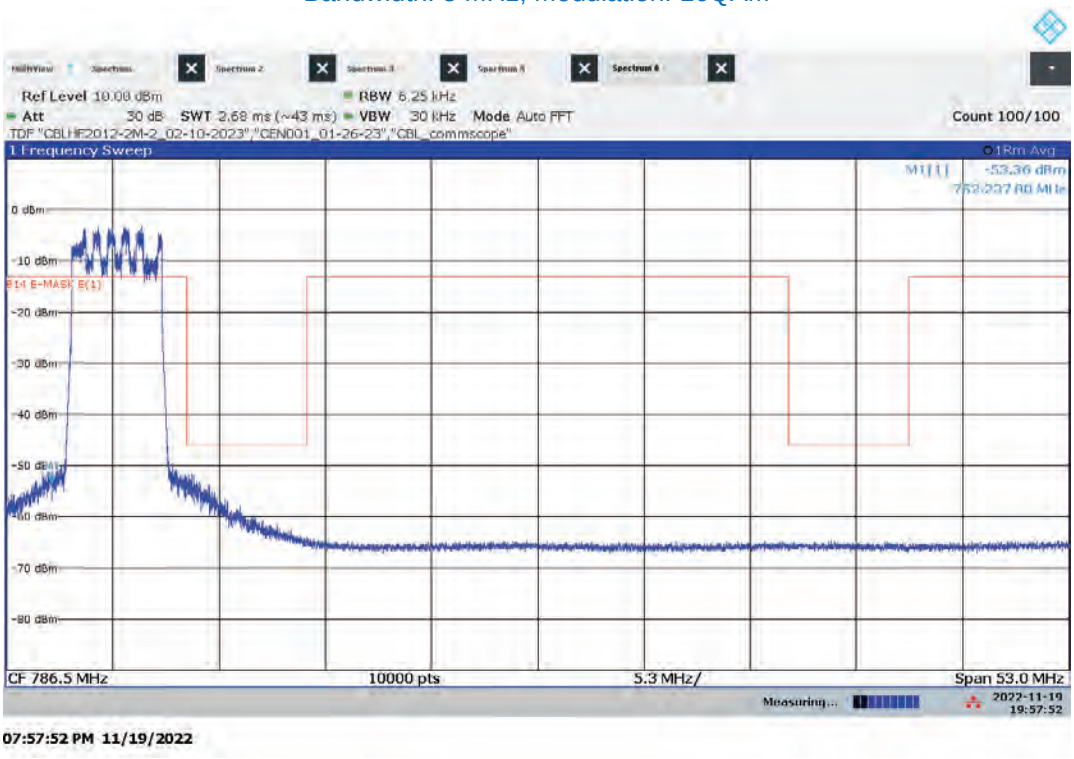
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



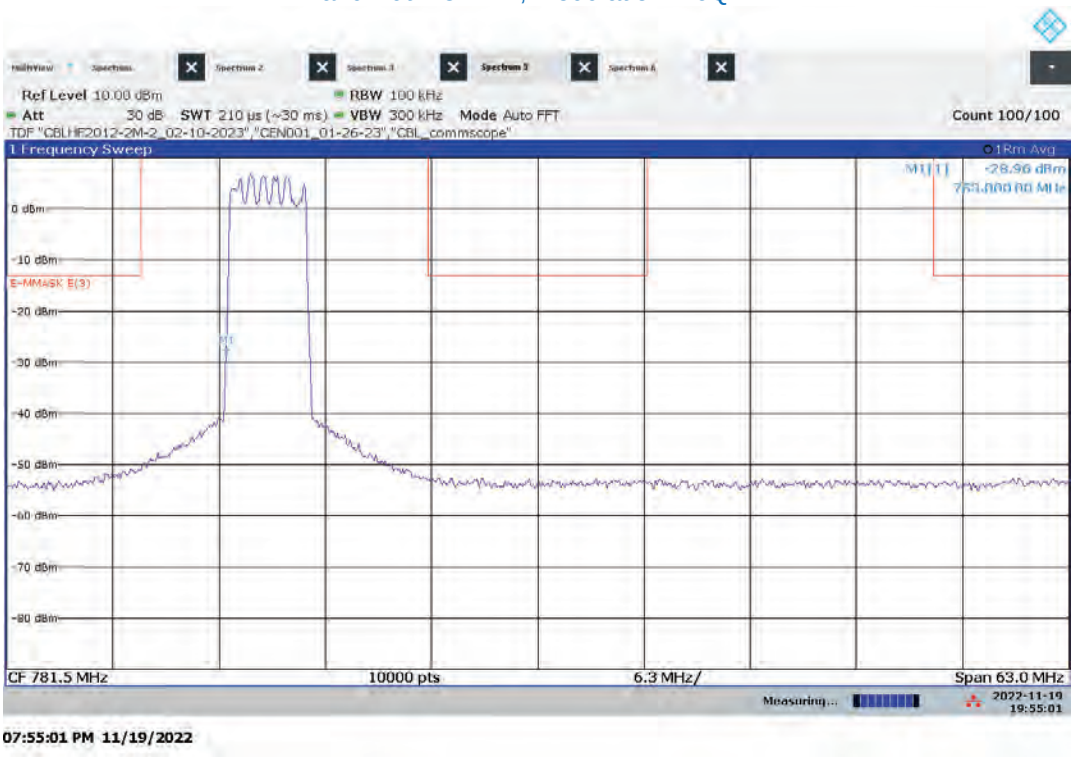
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



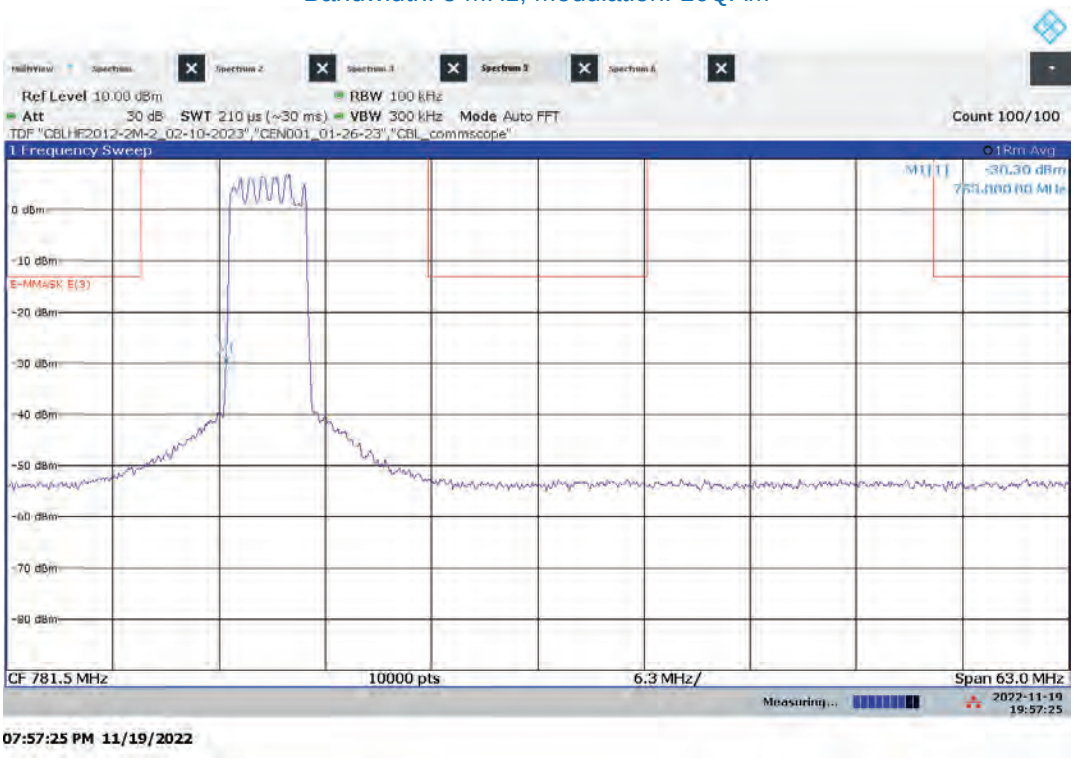
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 16QAM



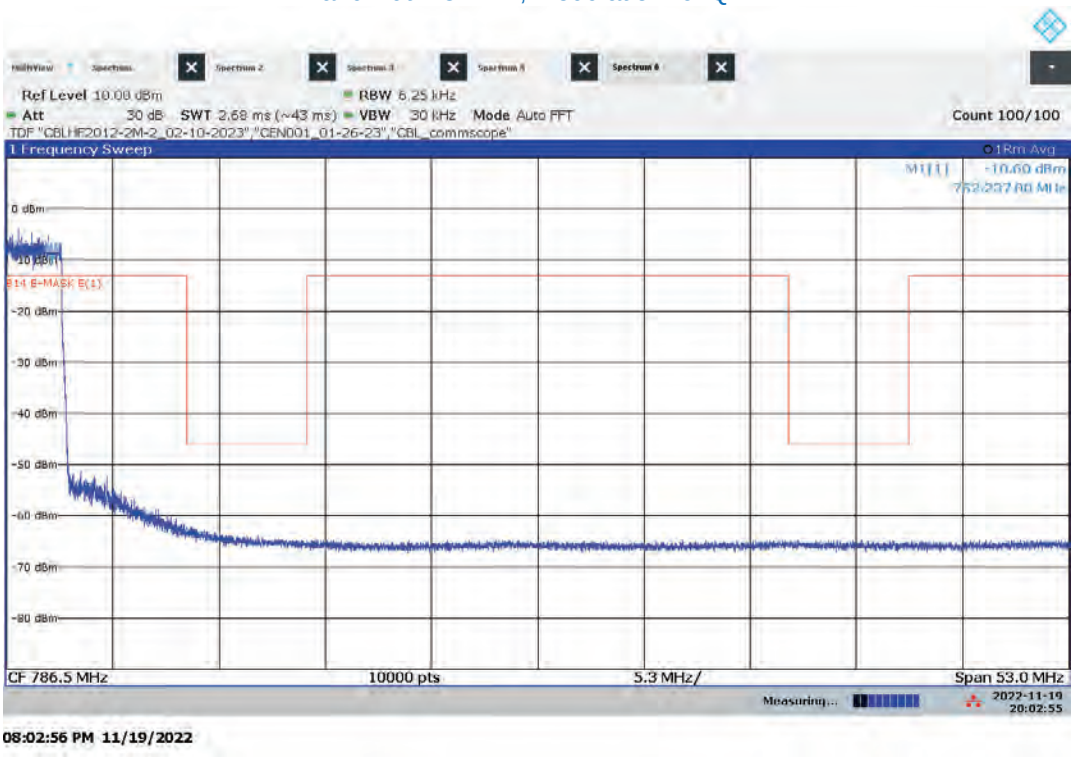
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



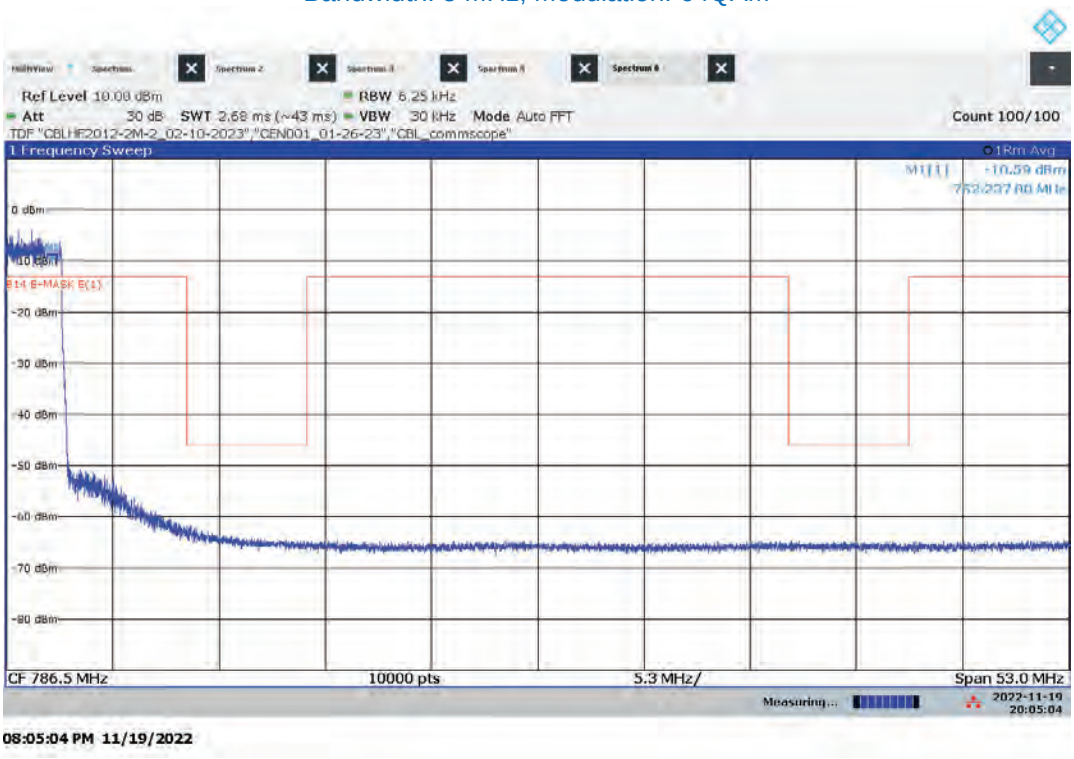
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 16QAM



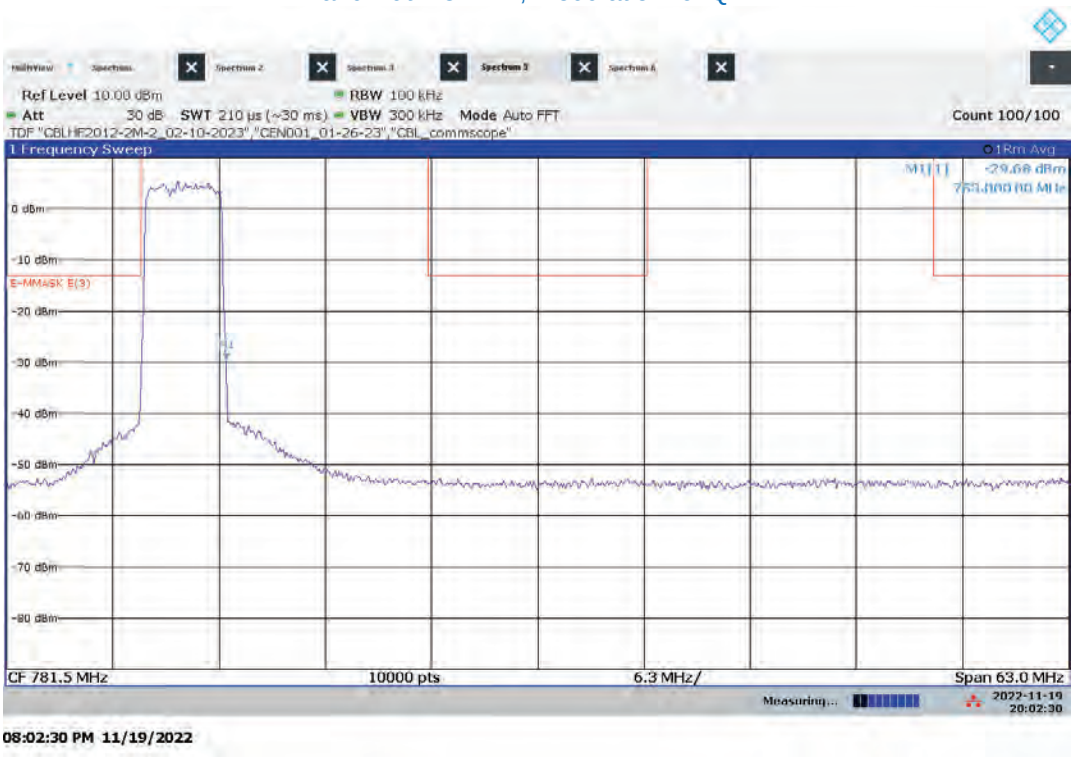
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



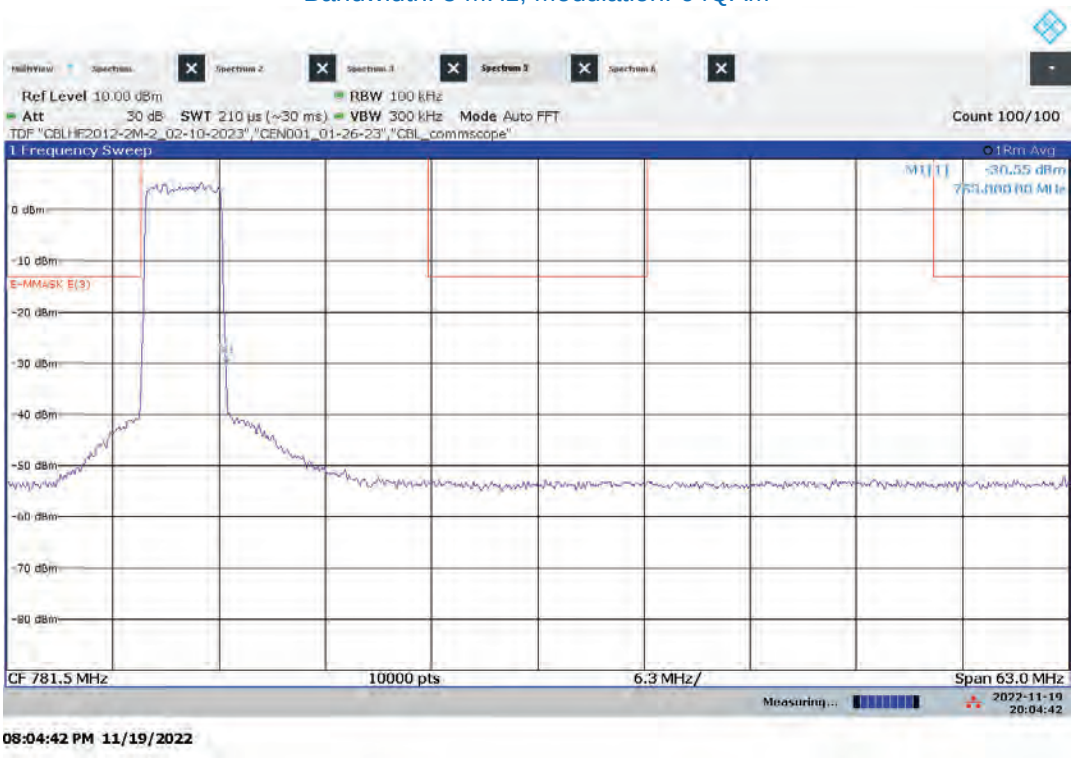
Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



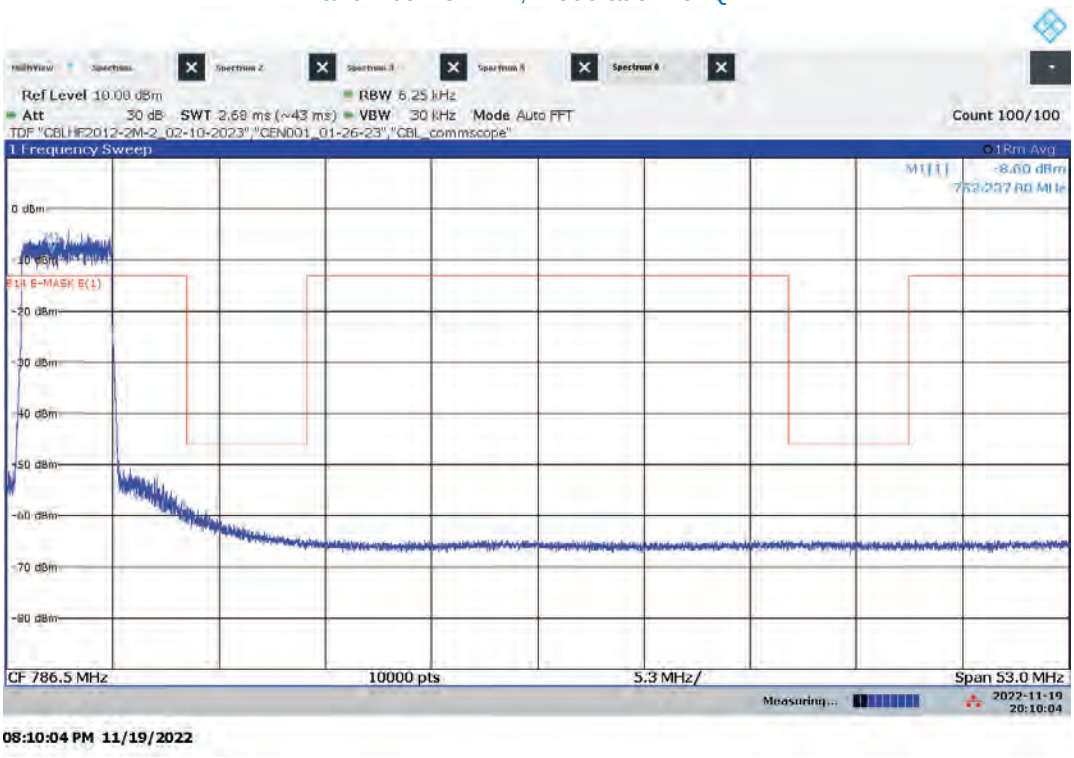
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



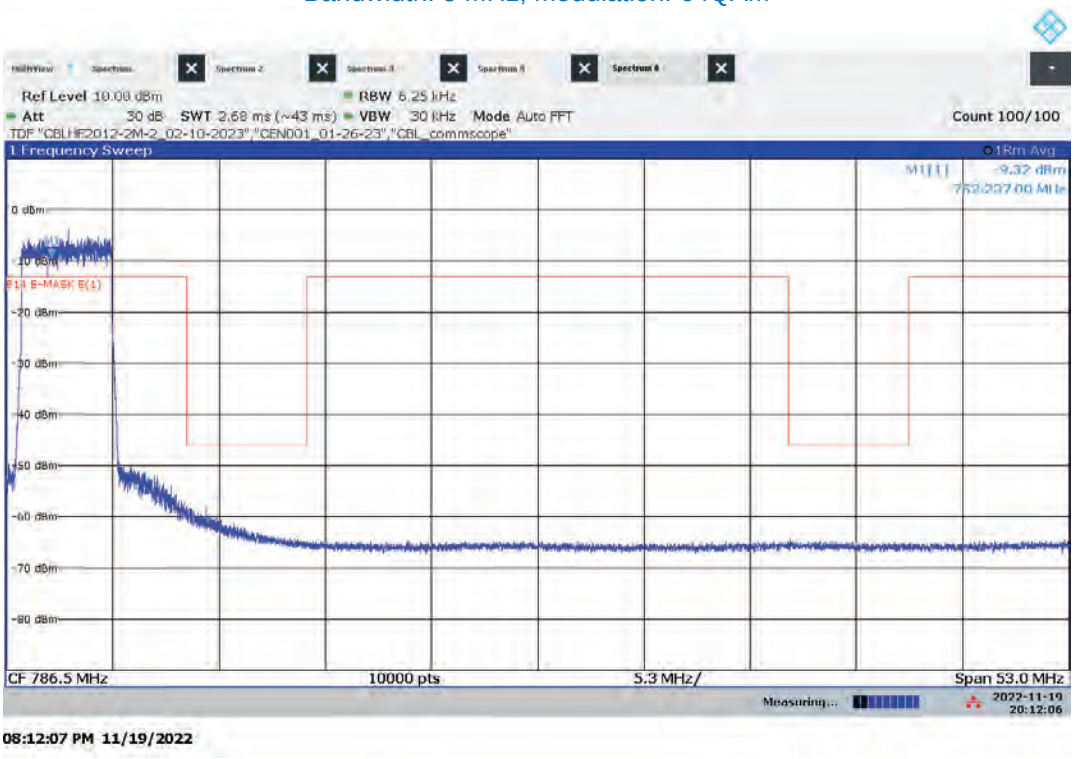
Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



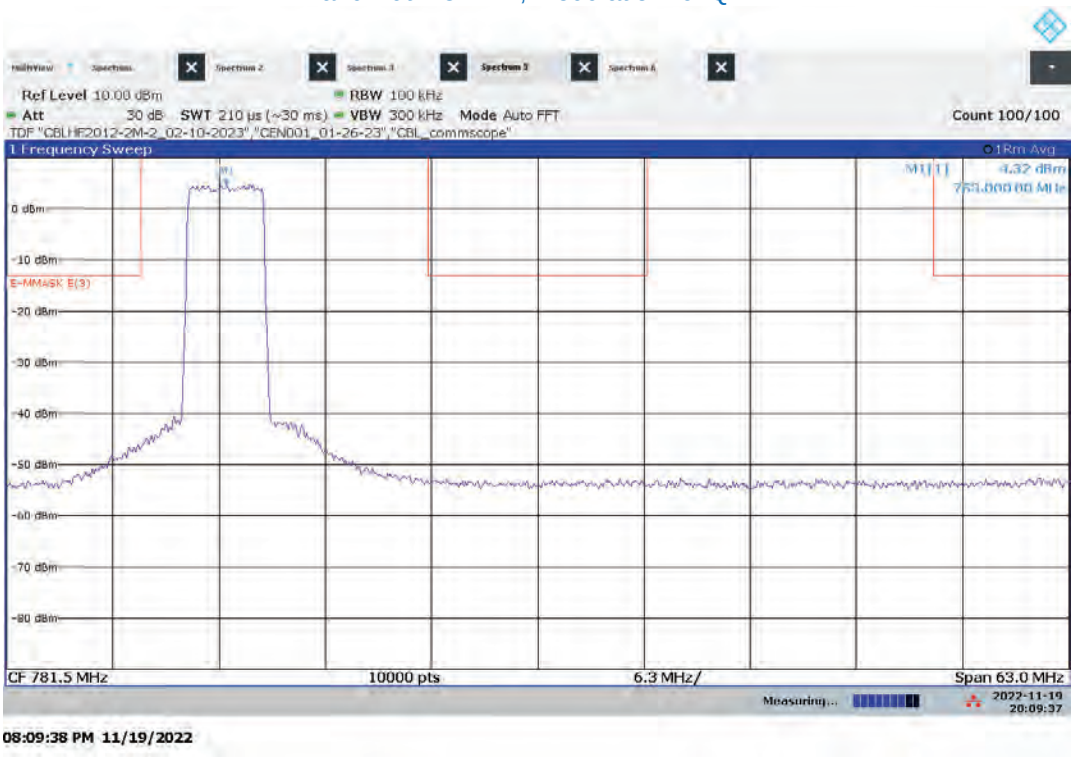
Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



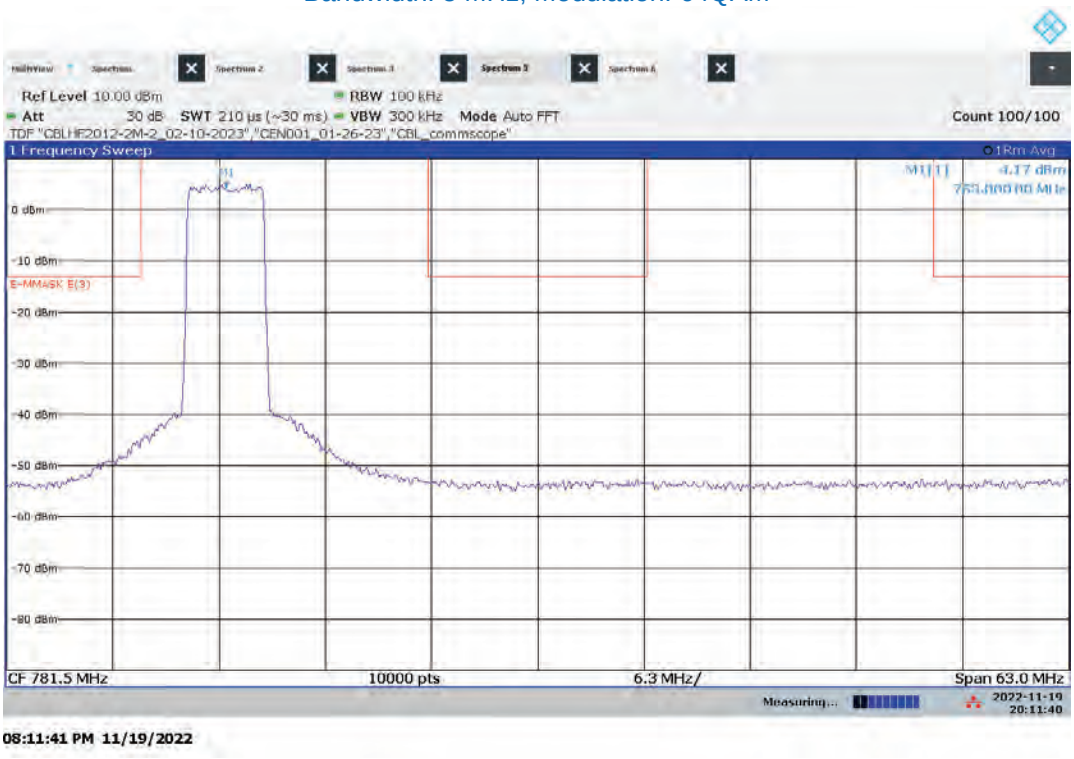
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



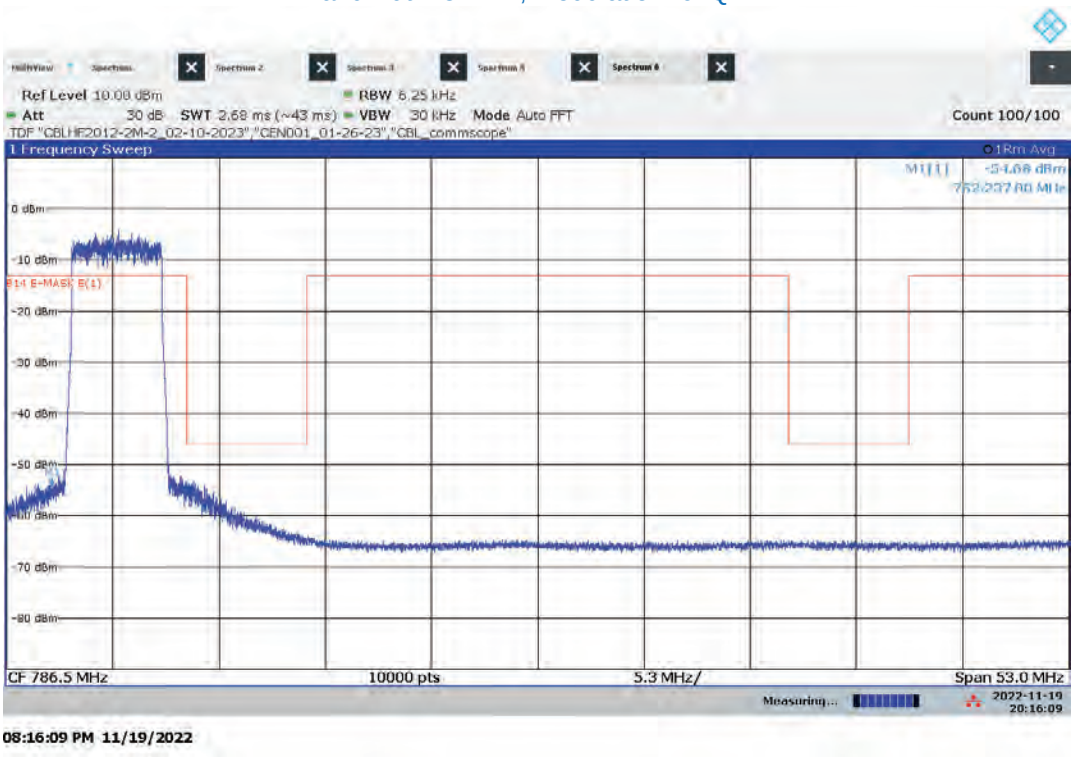
Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



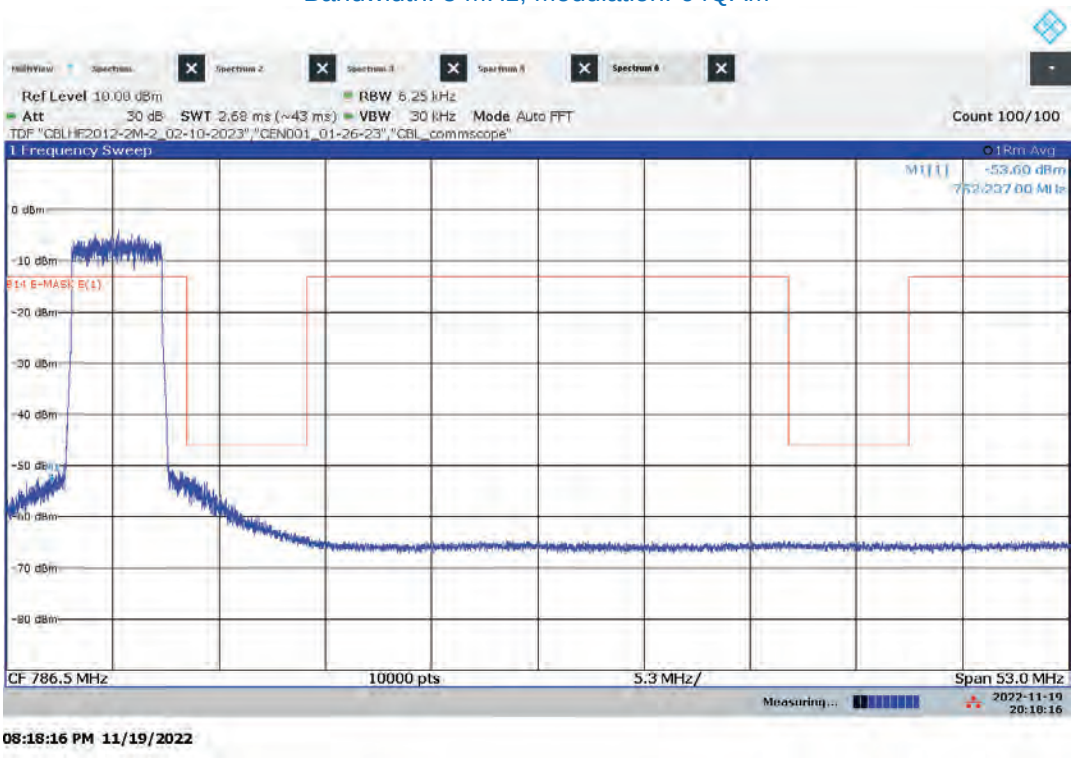
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



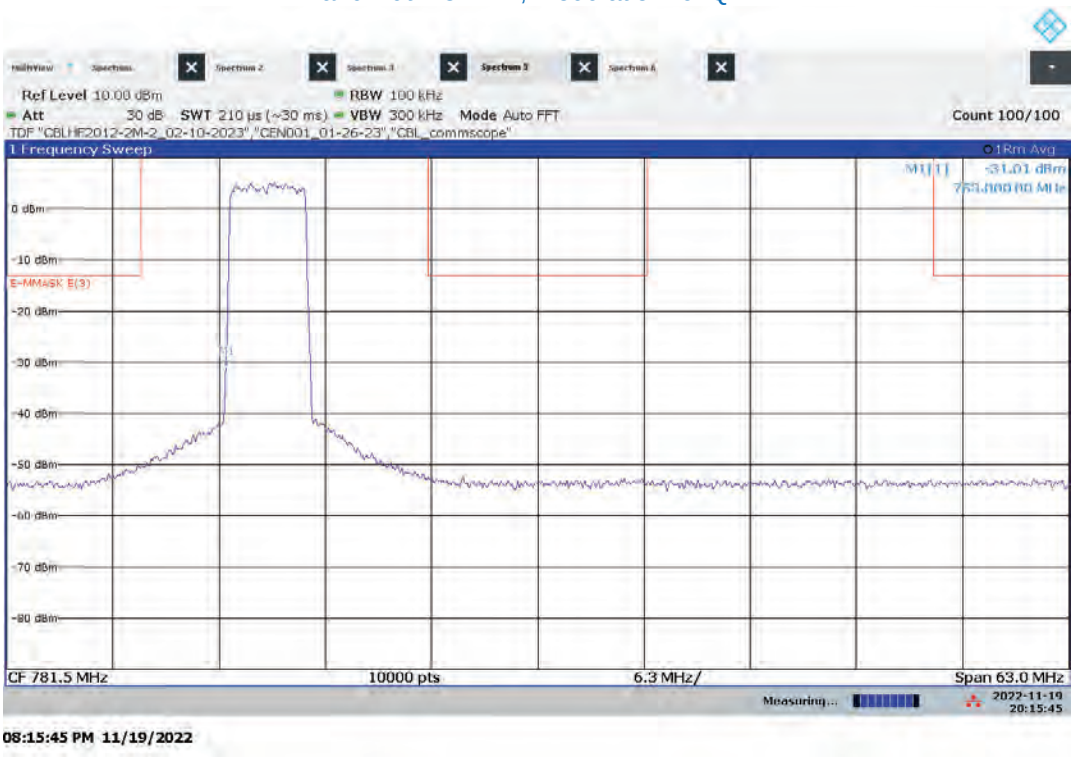
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



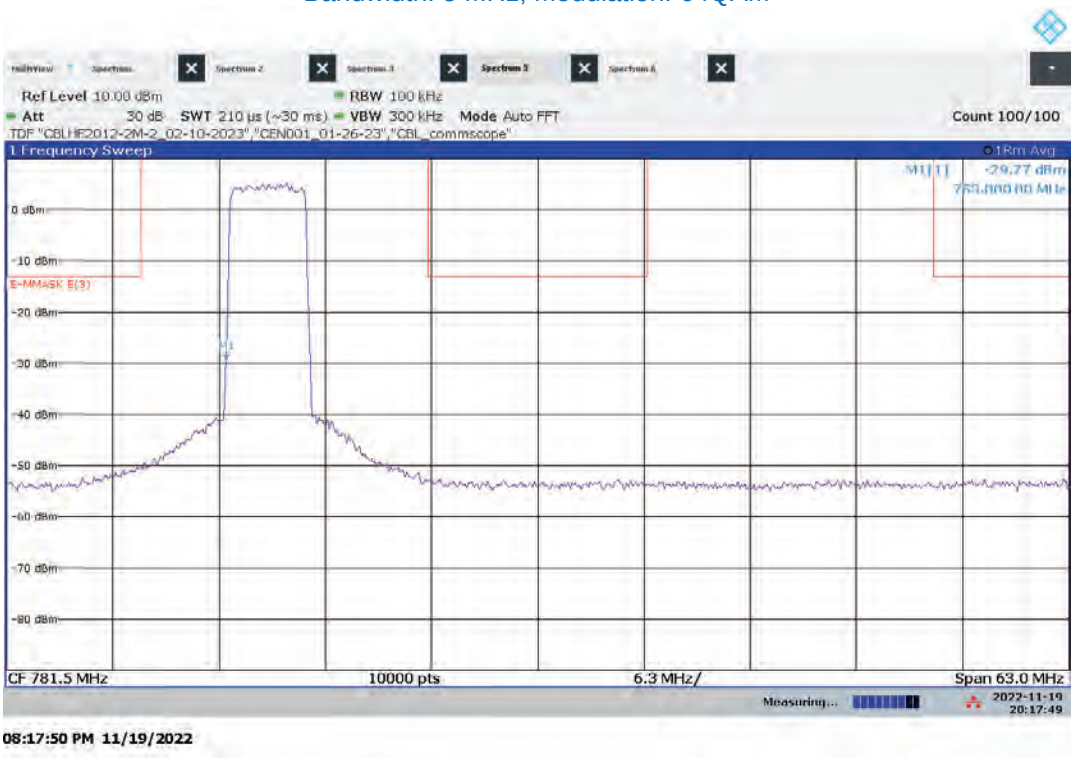
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 64QAM



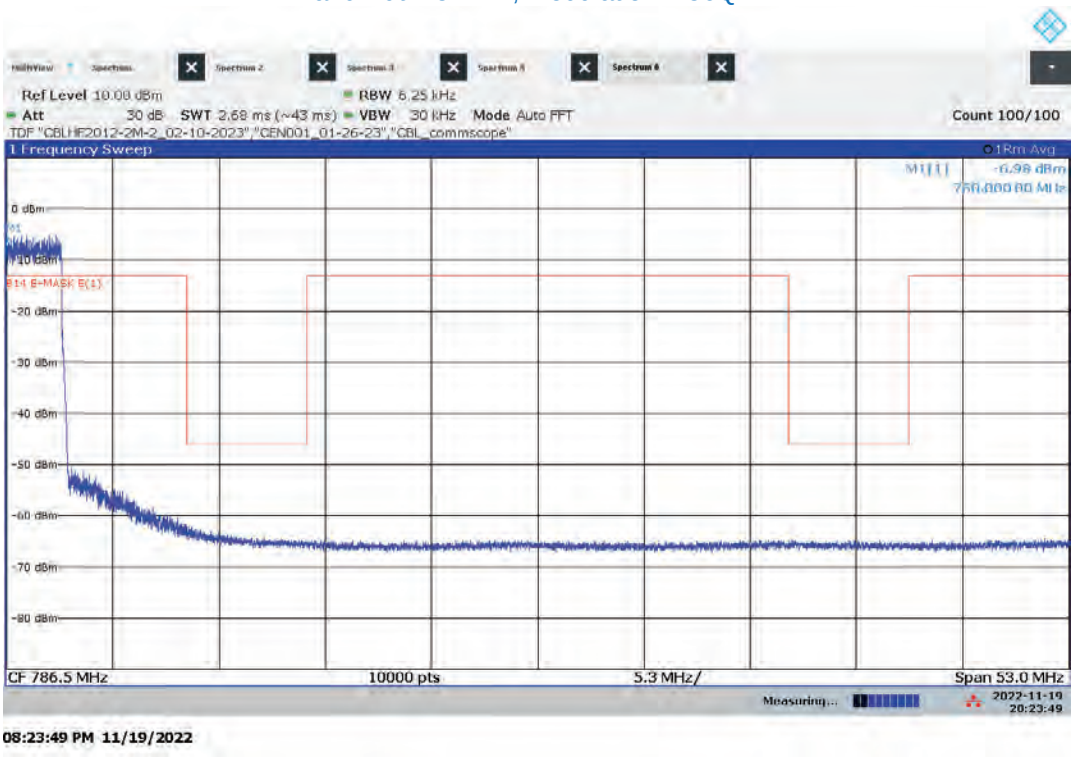
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



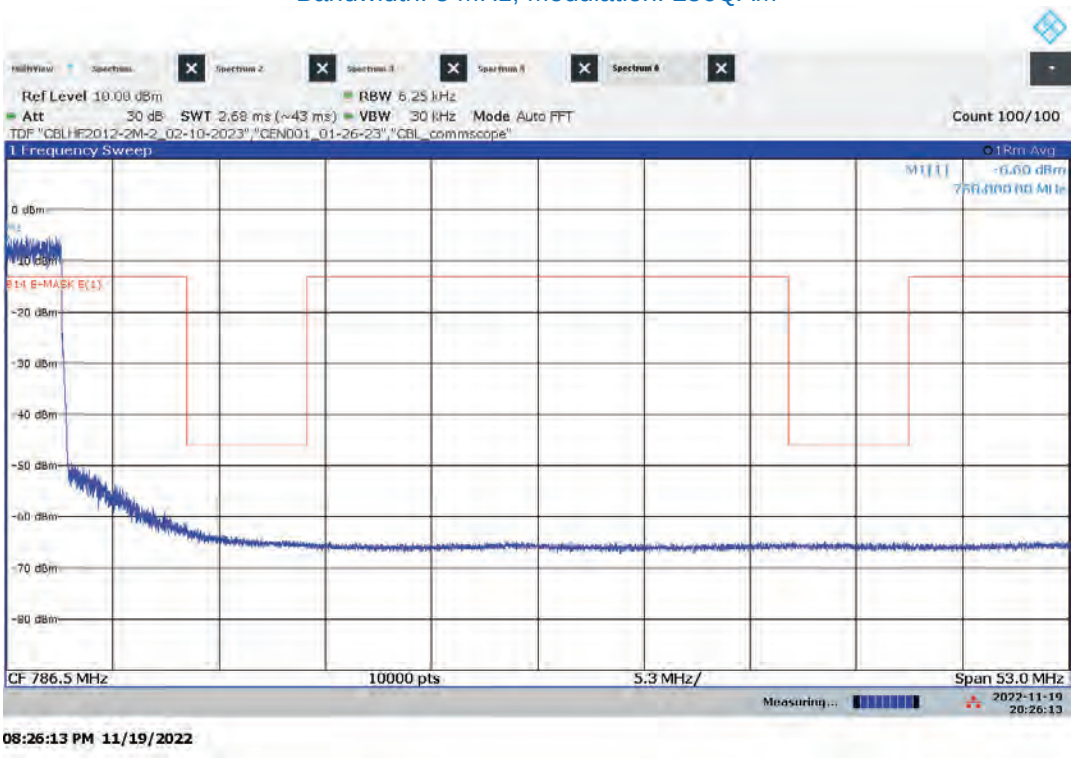
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 64QAM



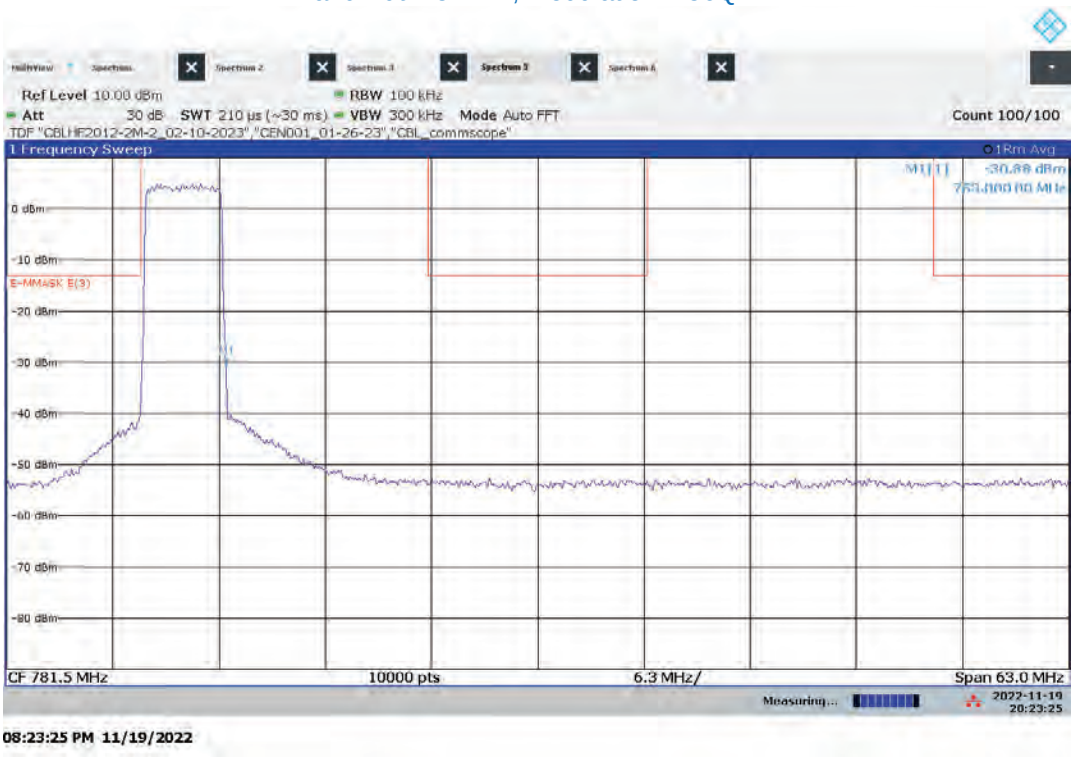
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



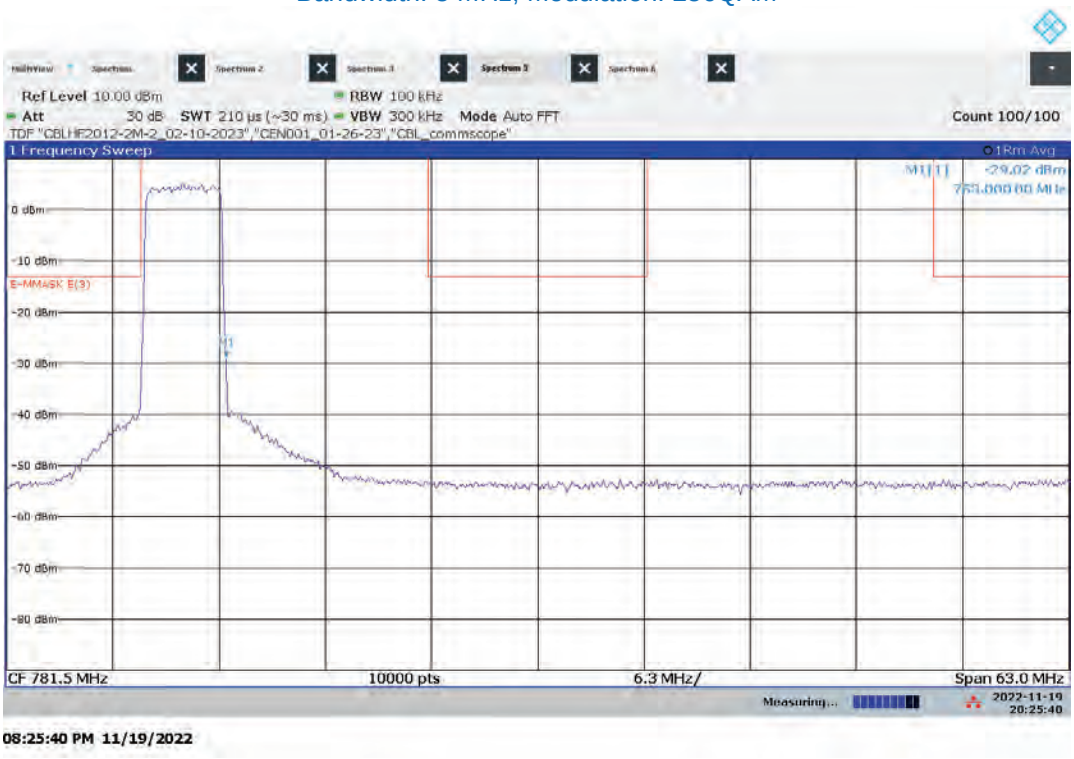
Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



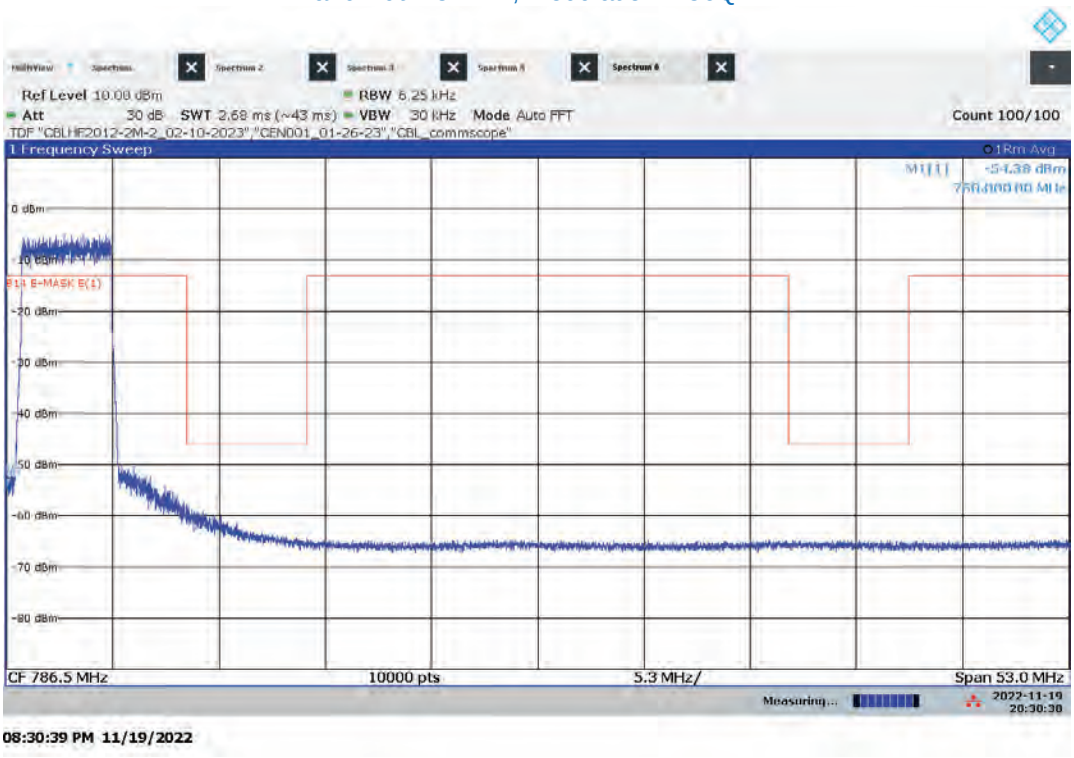
Hi-PIM – ANT0 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



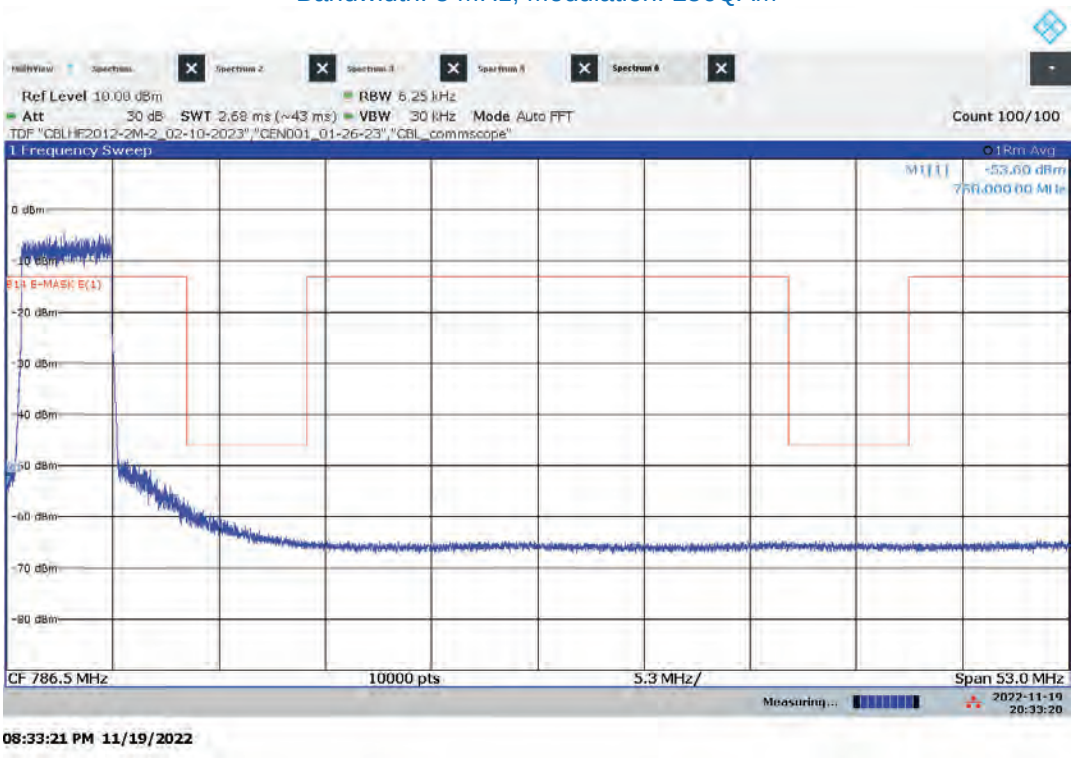
Hi-PIM – ANT1 Low Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



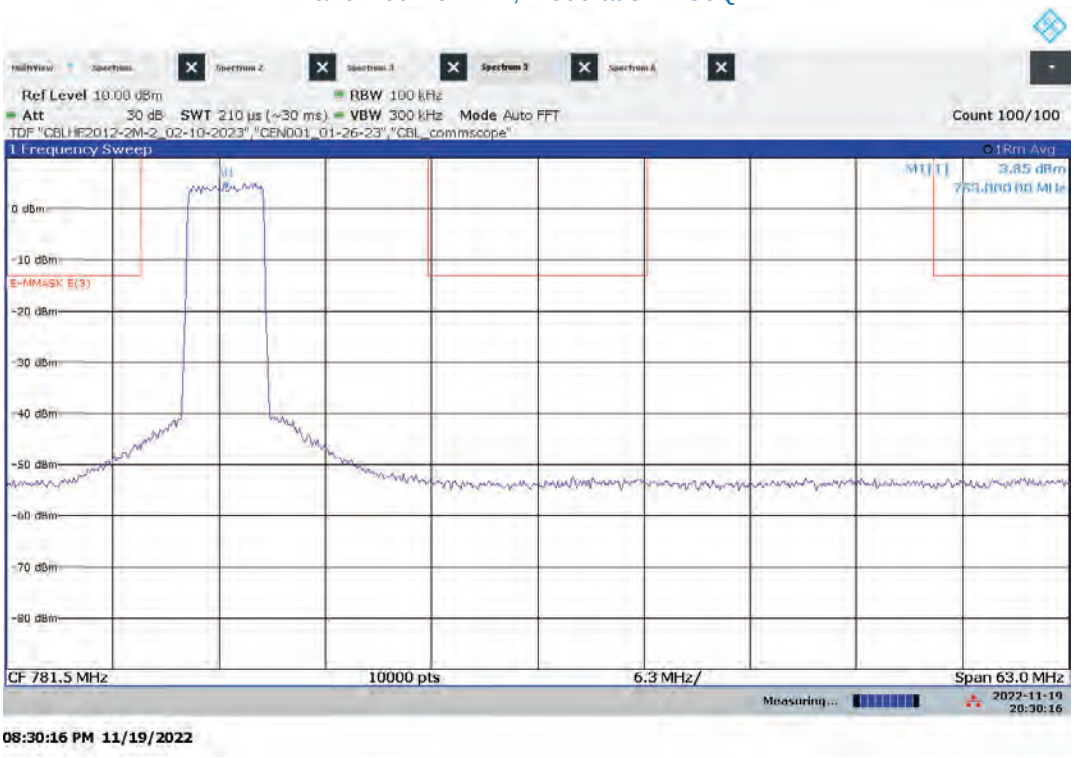
Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



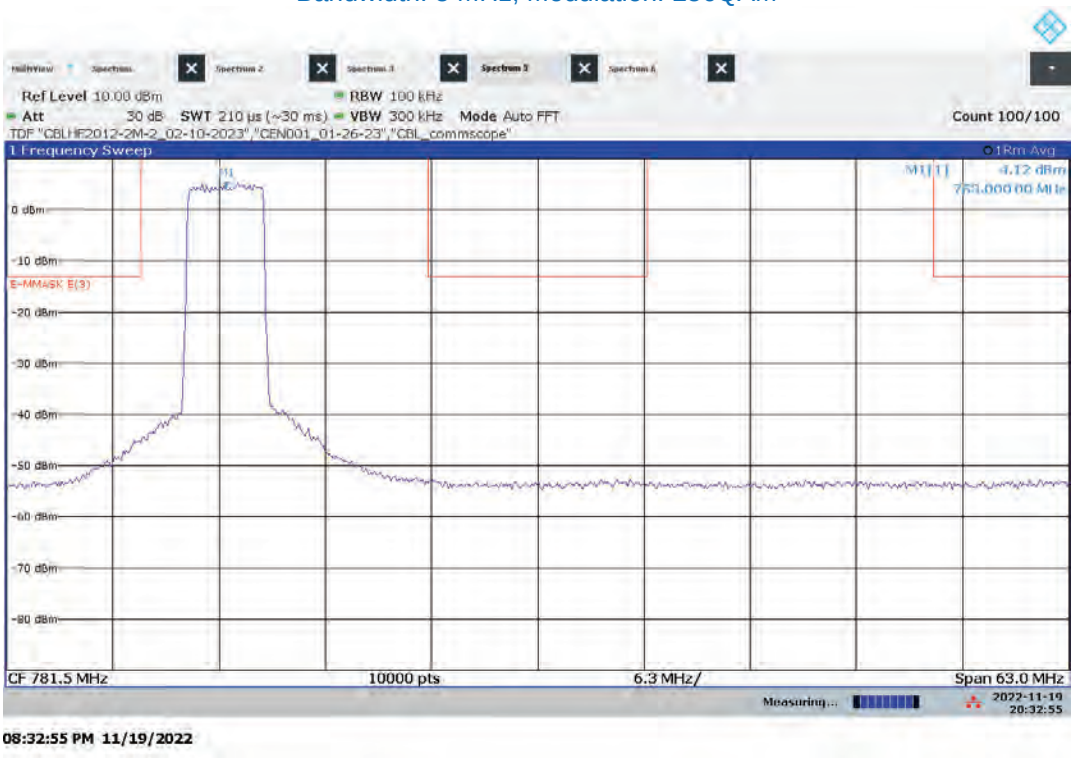
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



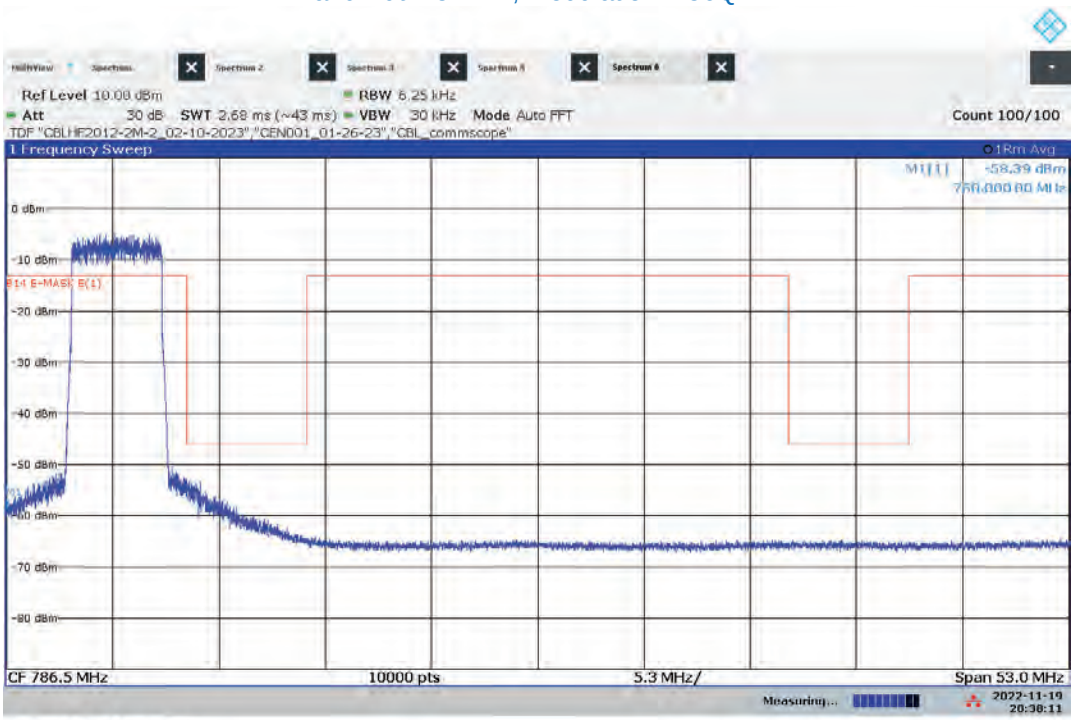
Hi-PIM – ANT0 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



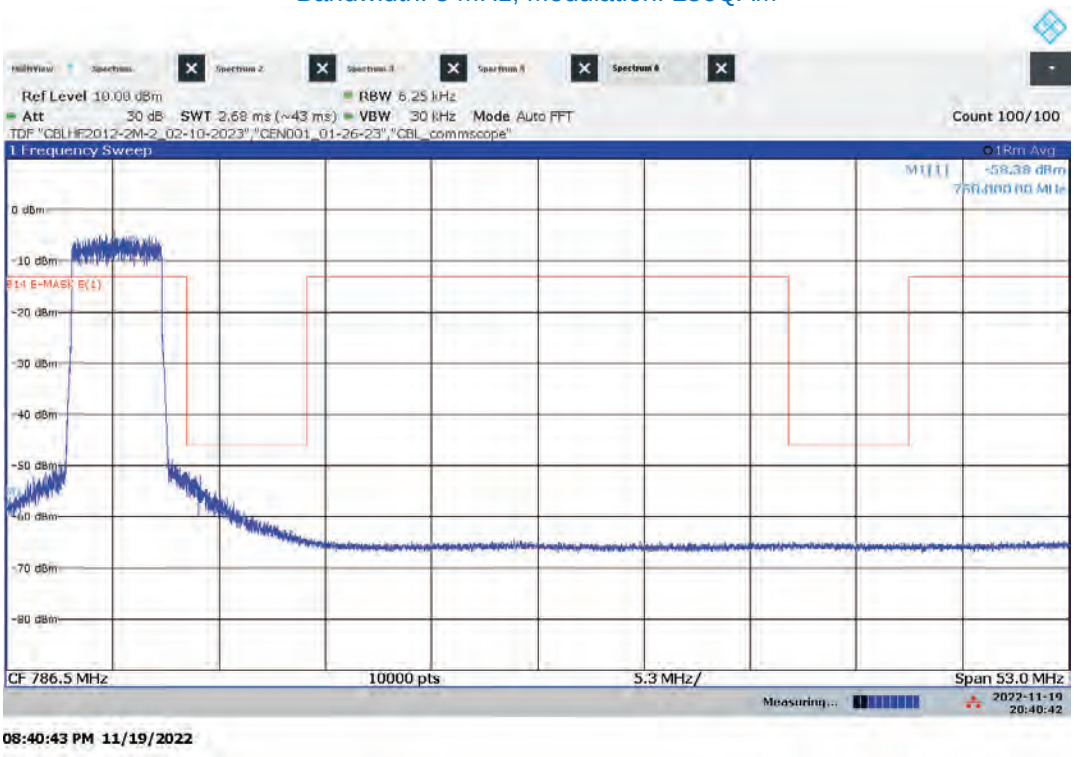
Hi-PIM – ANT1 Mid Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



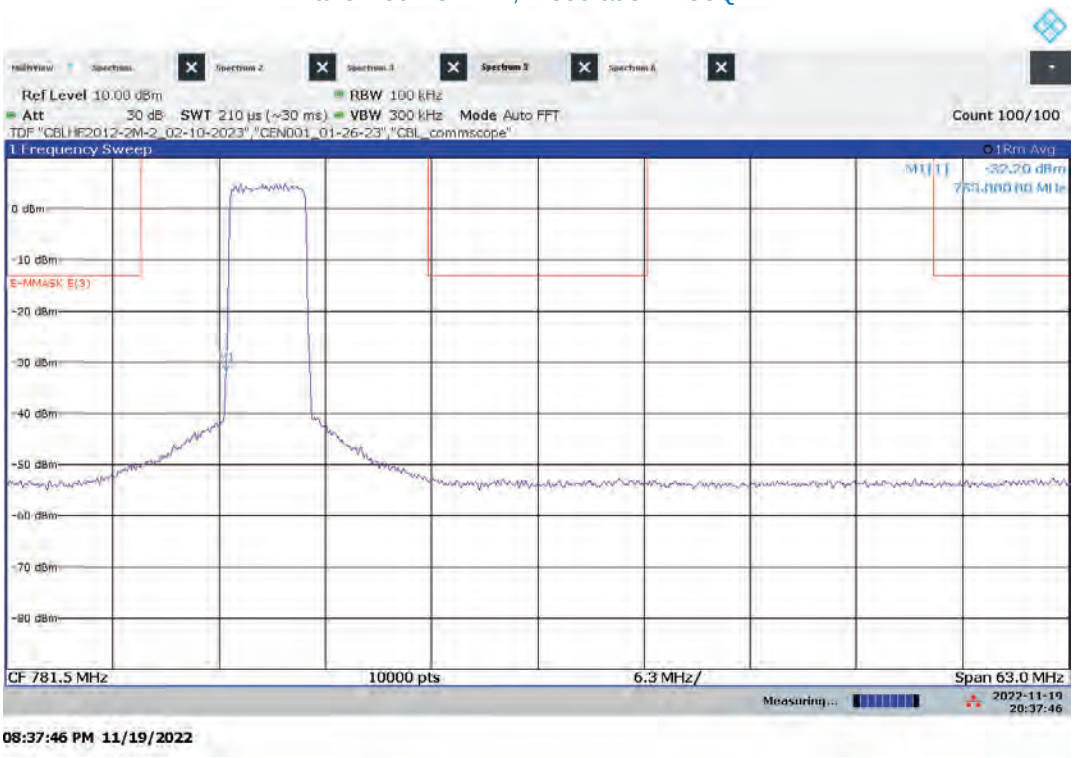
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



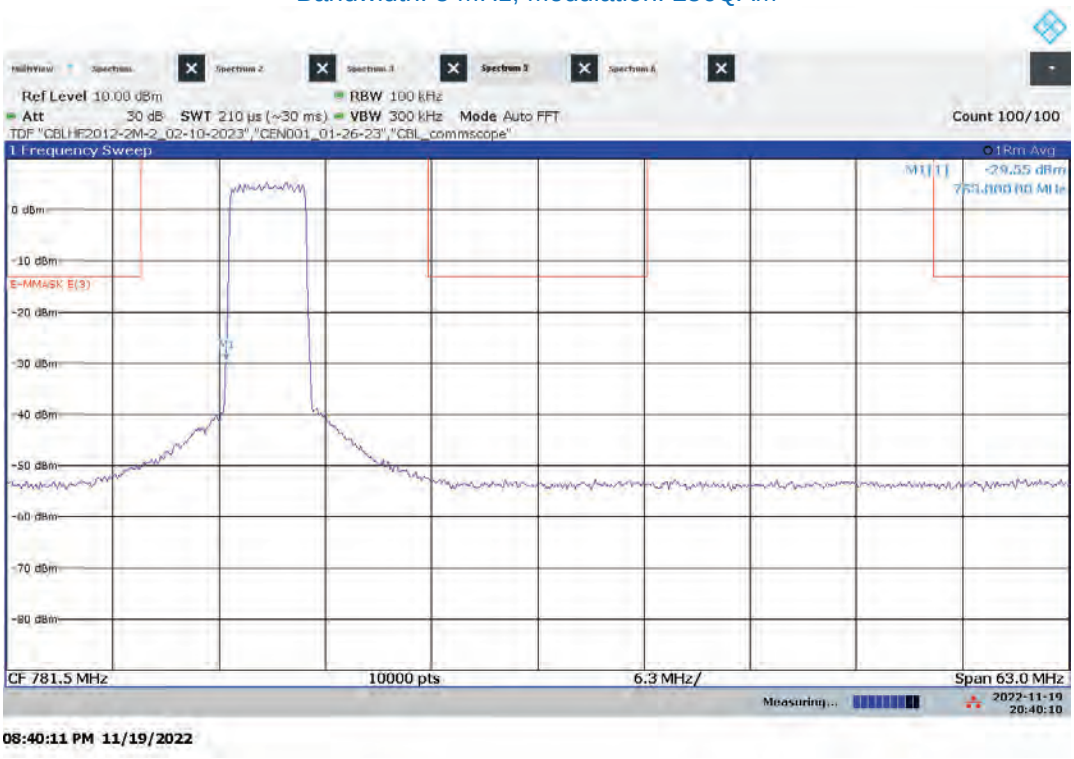
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 5 MHz, Modulation: 256QAM



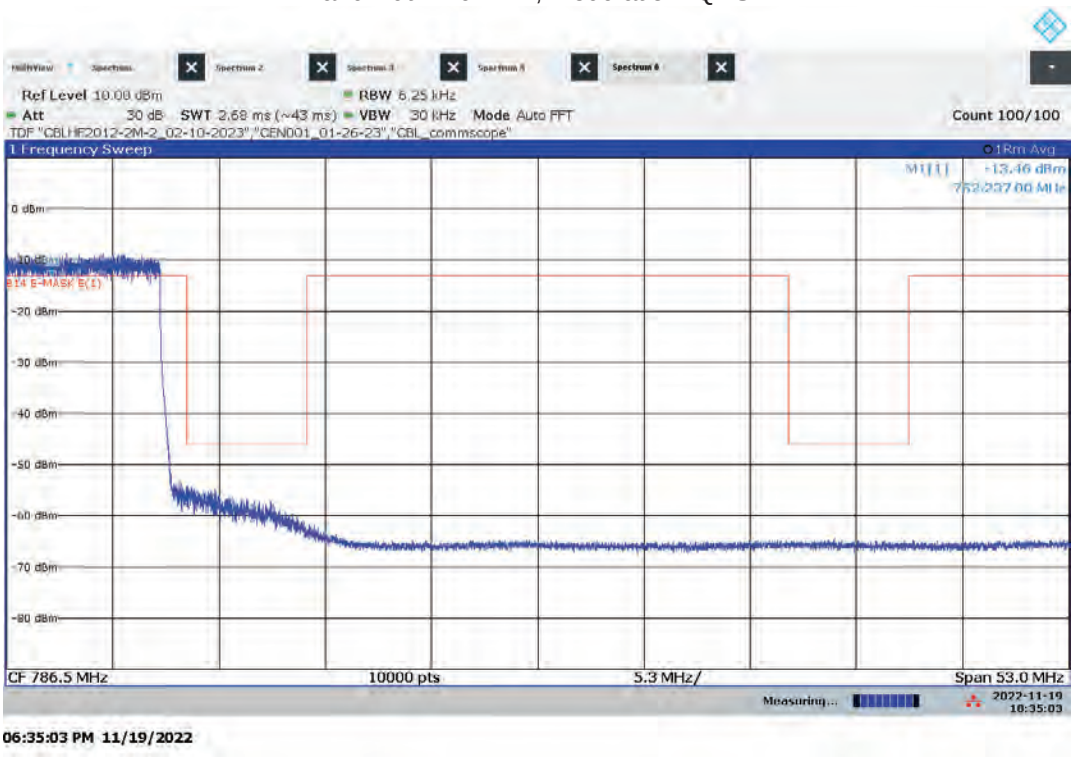
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



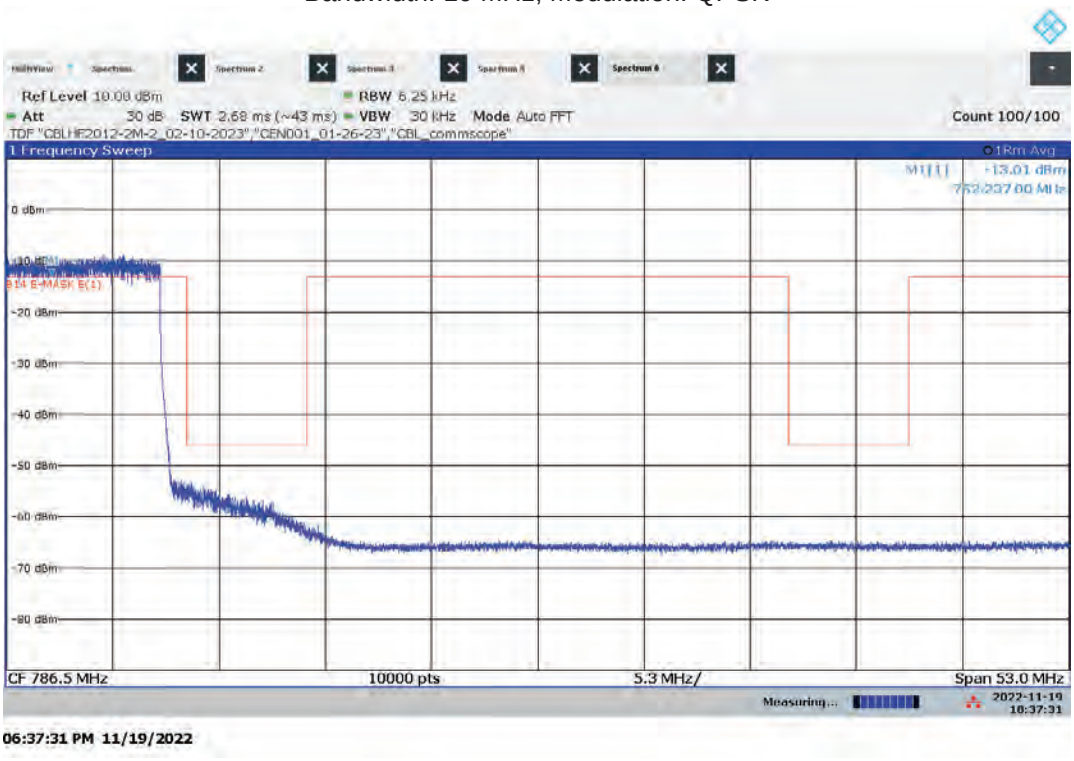
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 5 MHz, Modulation: 256QAM



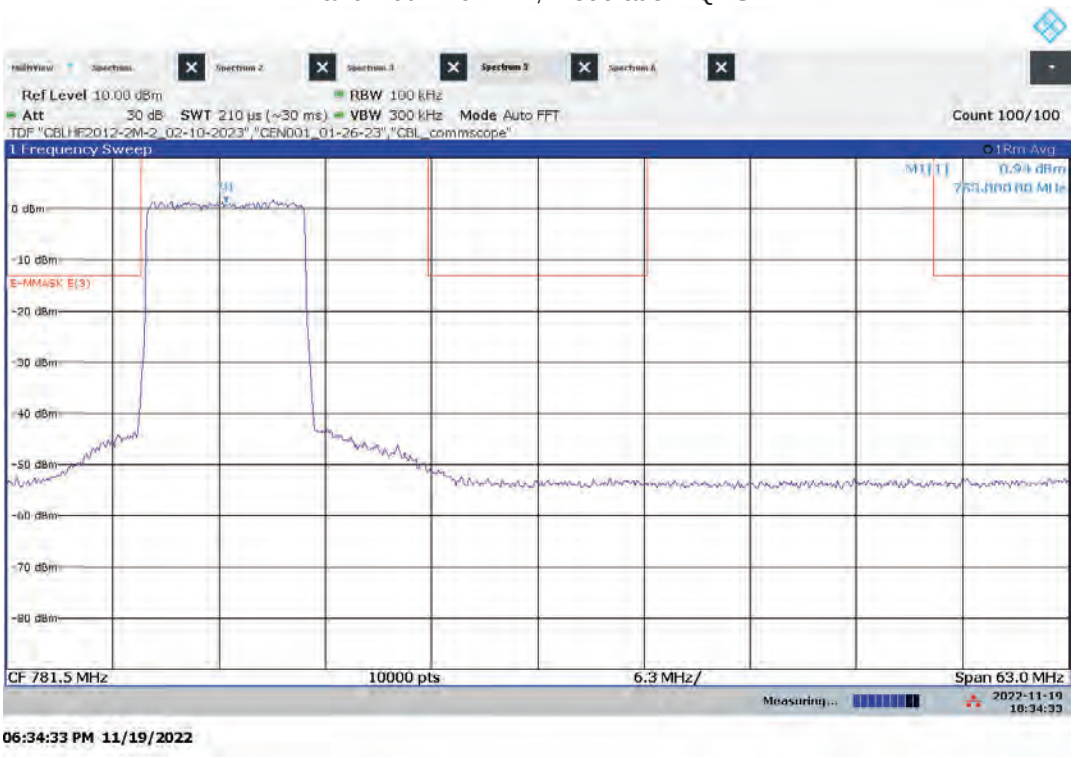
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: QPSK



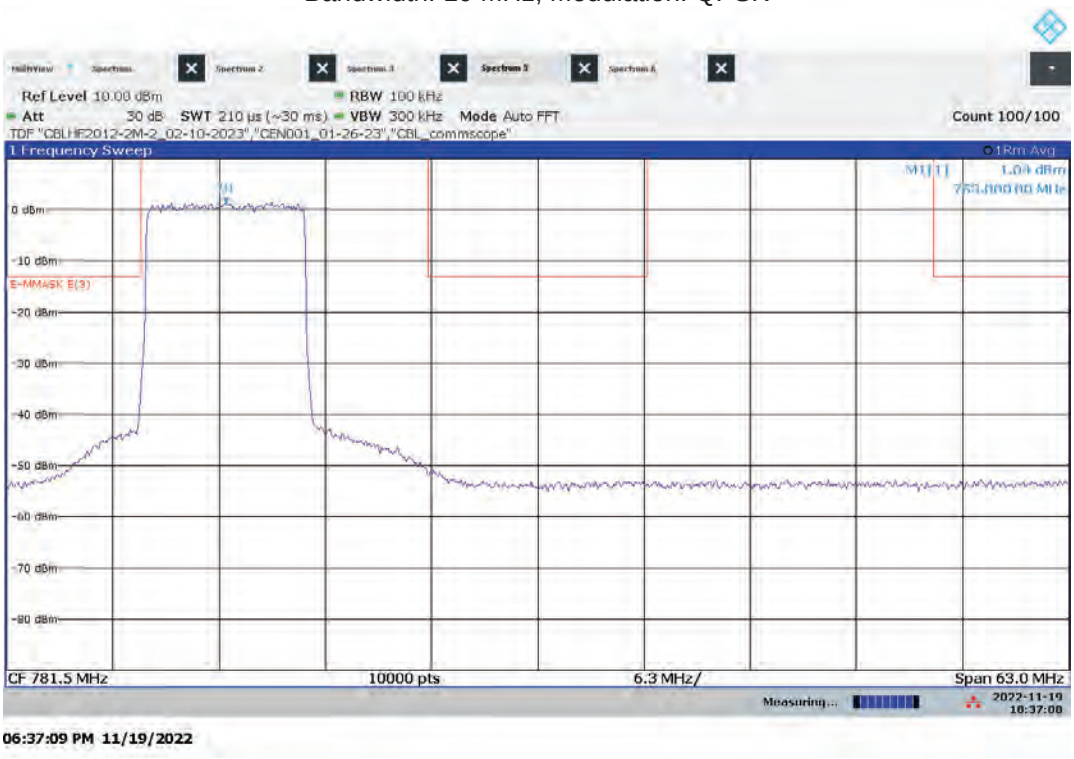
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: QPSK



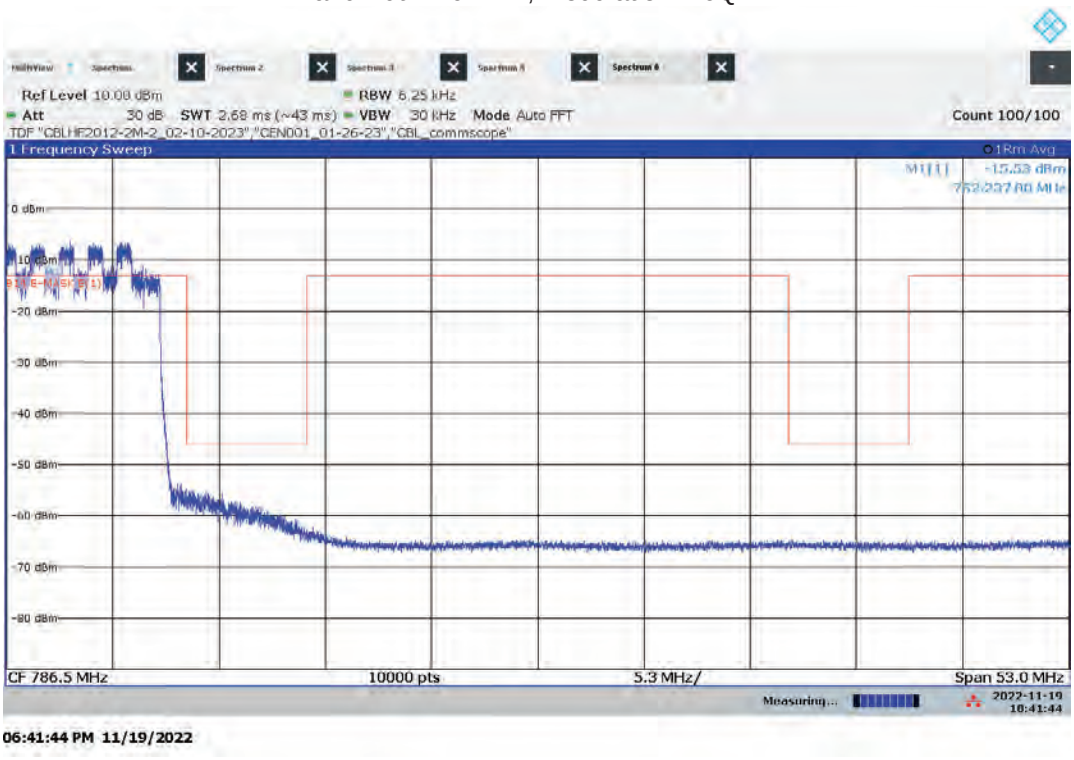
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: QPSK



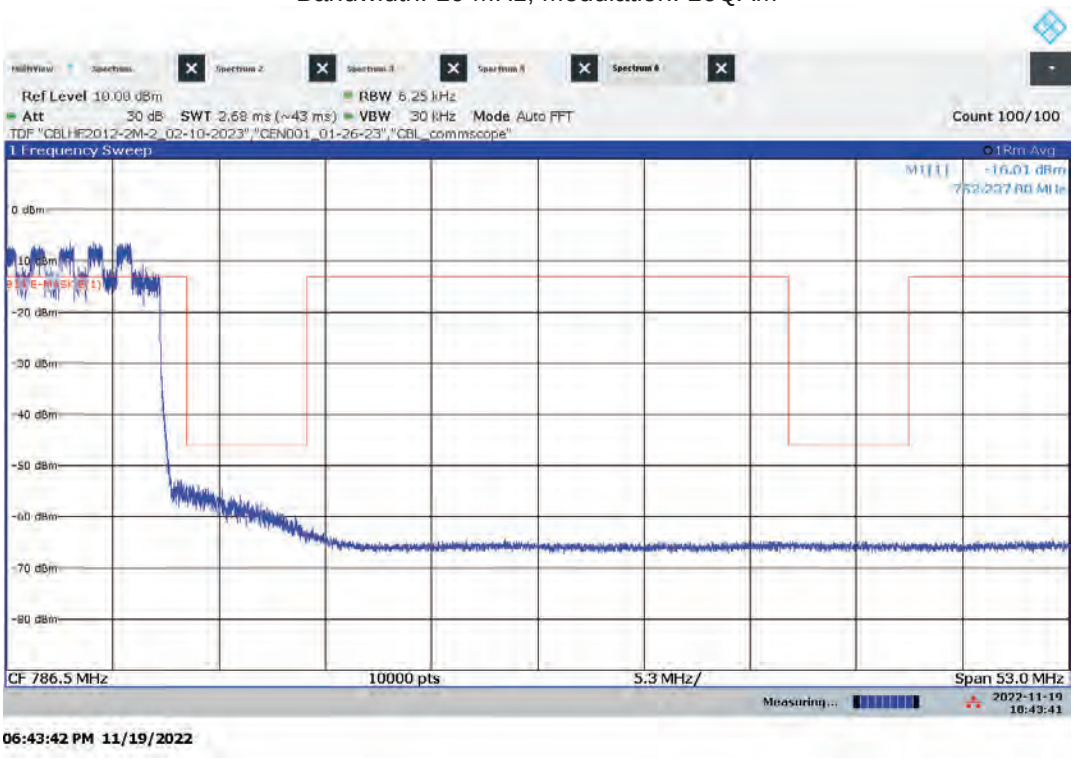
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: QPSK



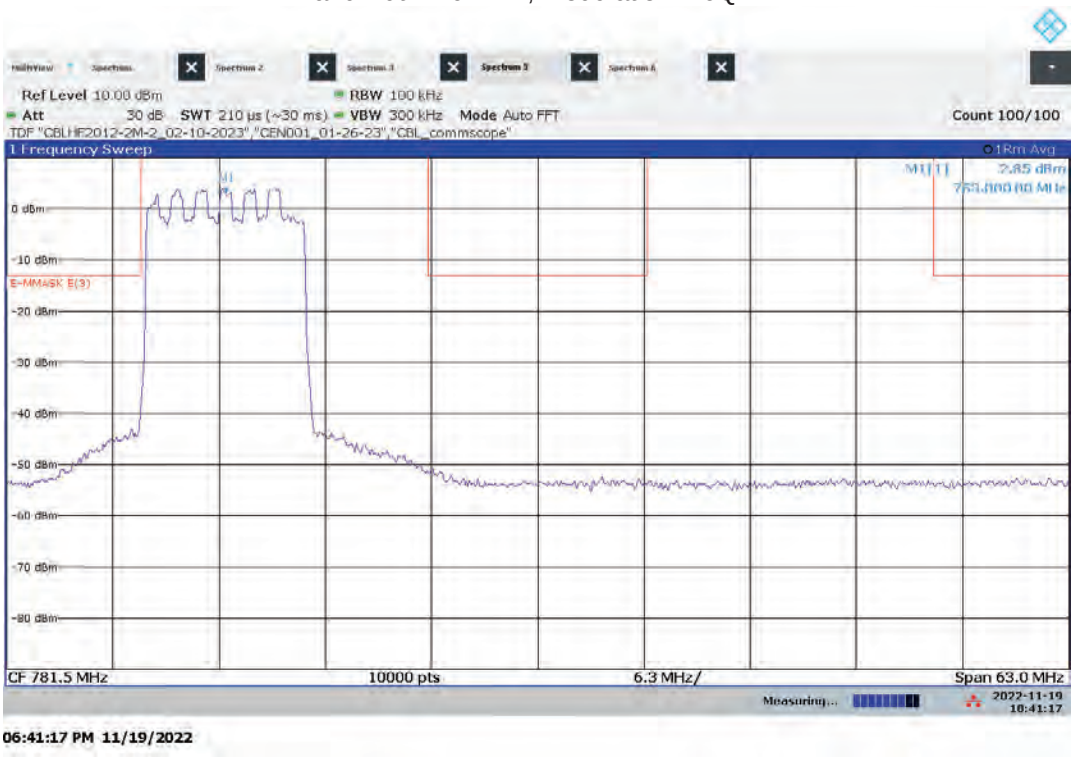
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 16QAM



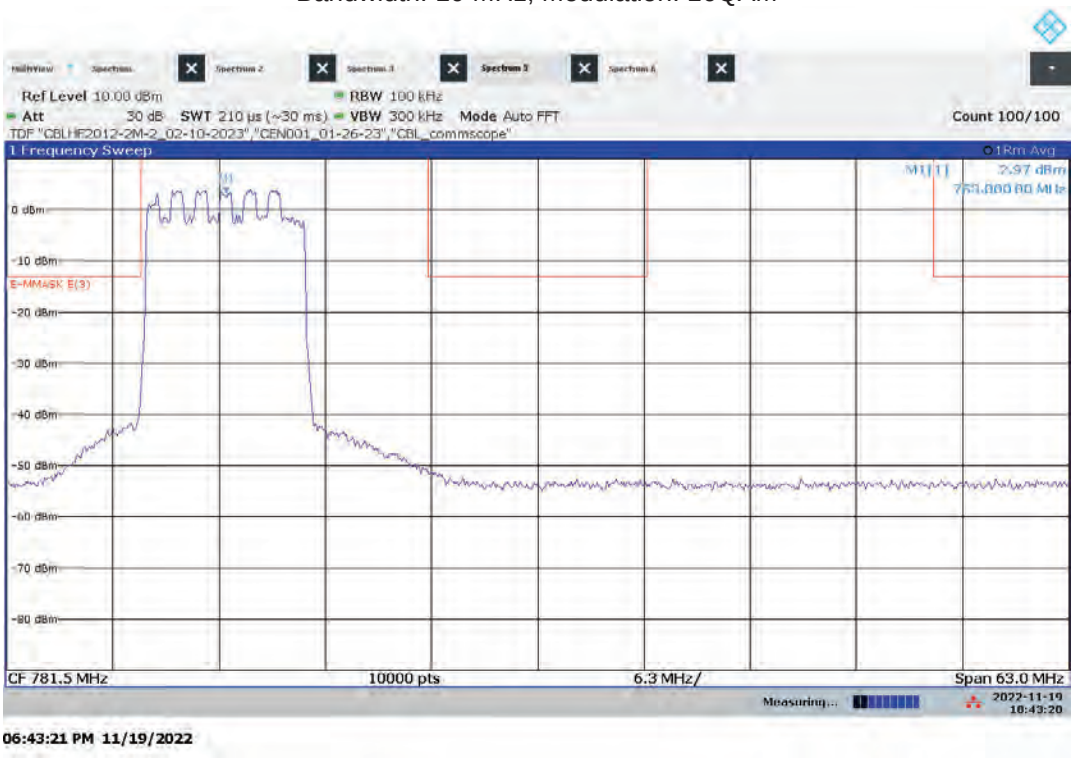
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 16QAM



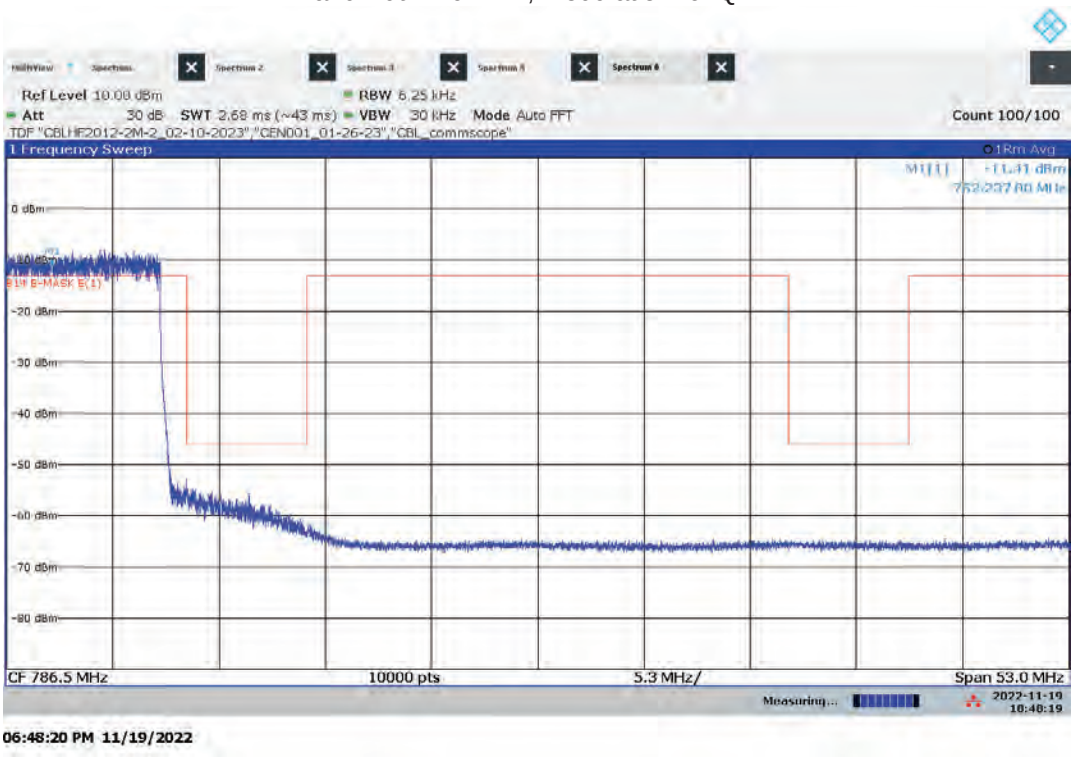
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 16QAM



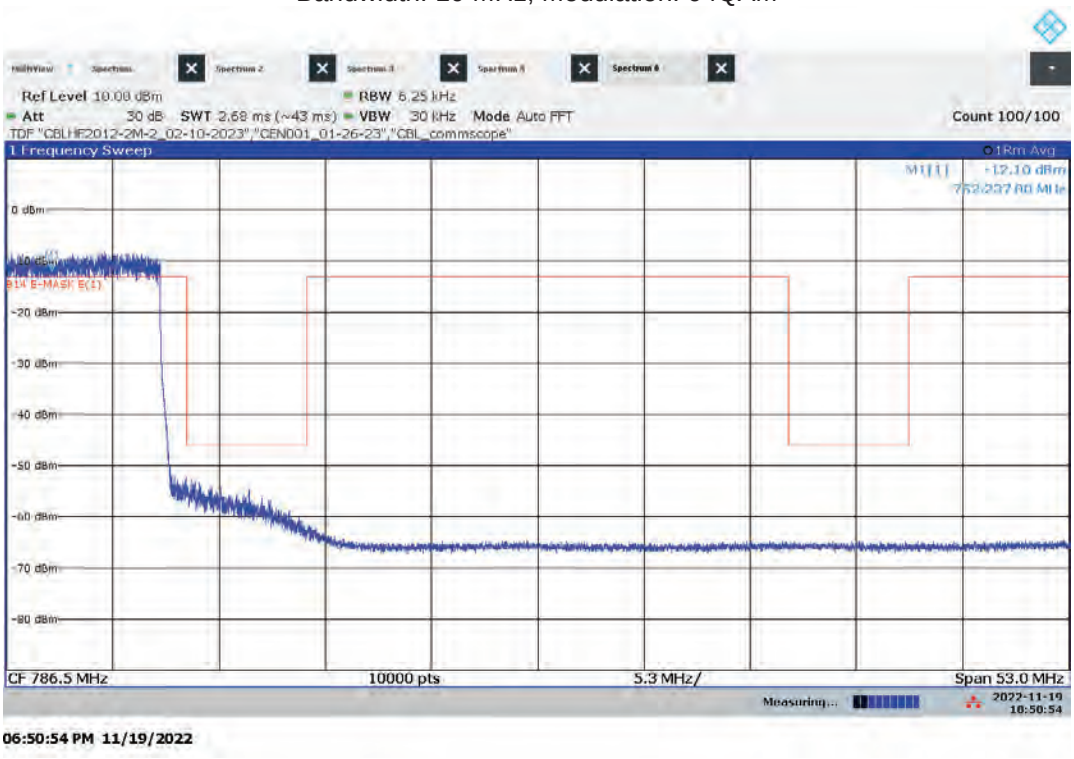
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 16QAM



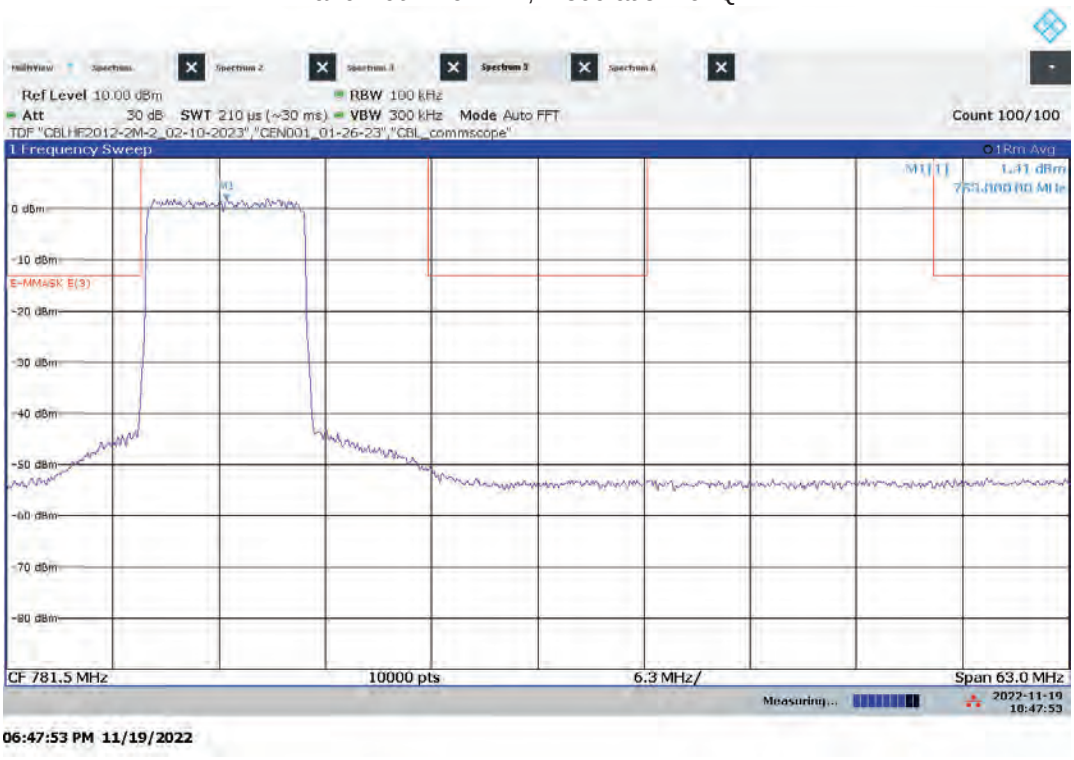
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 64QAM



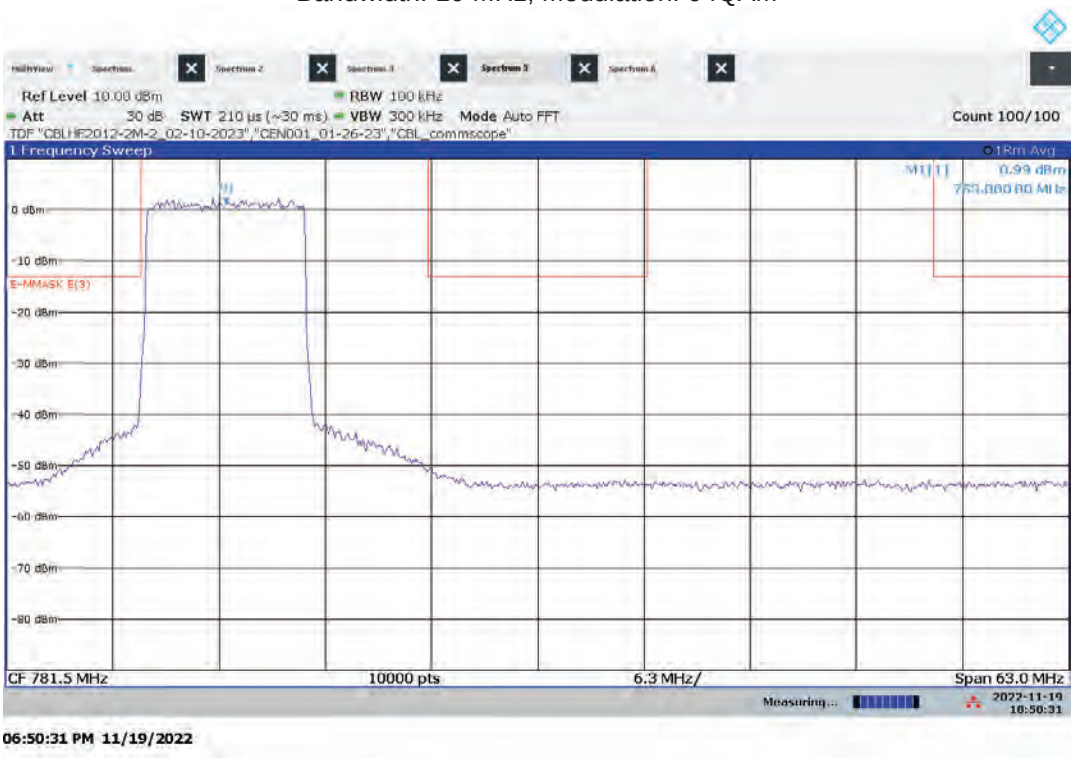
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 64QAM



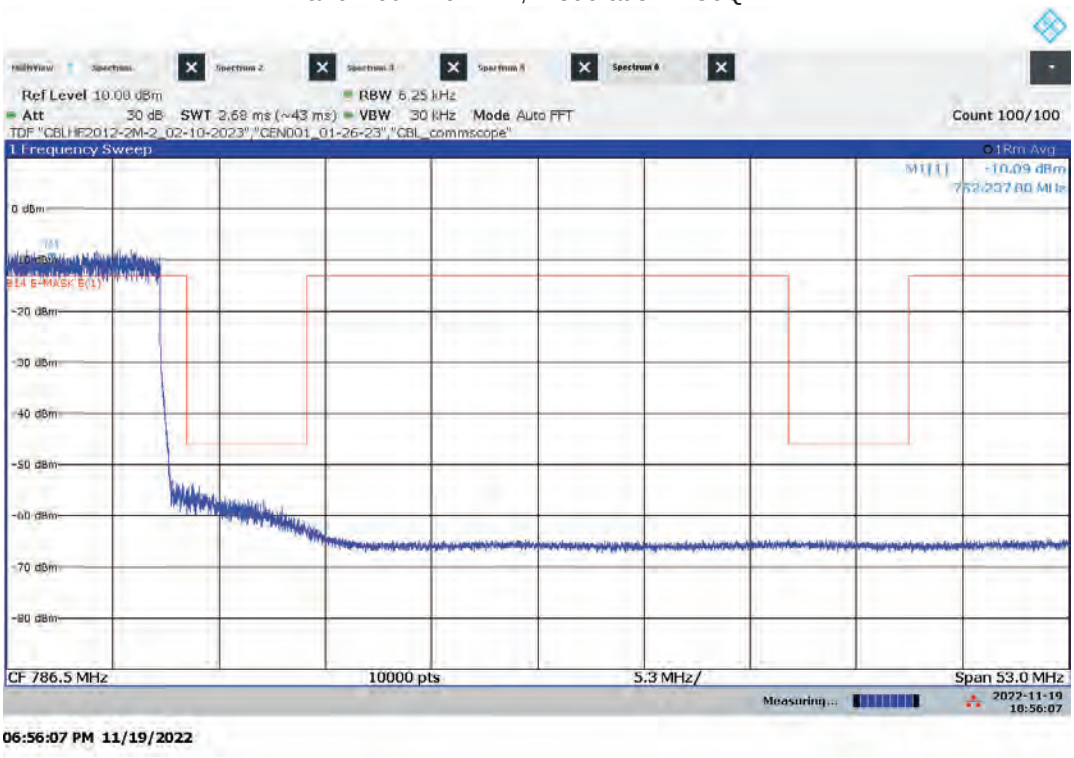
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 64QAM



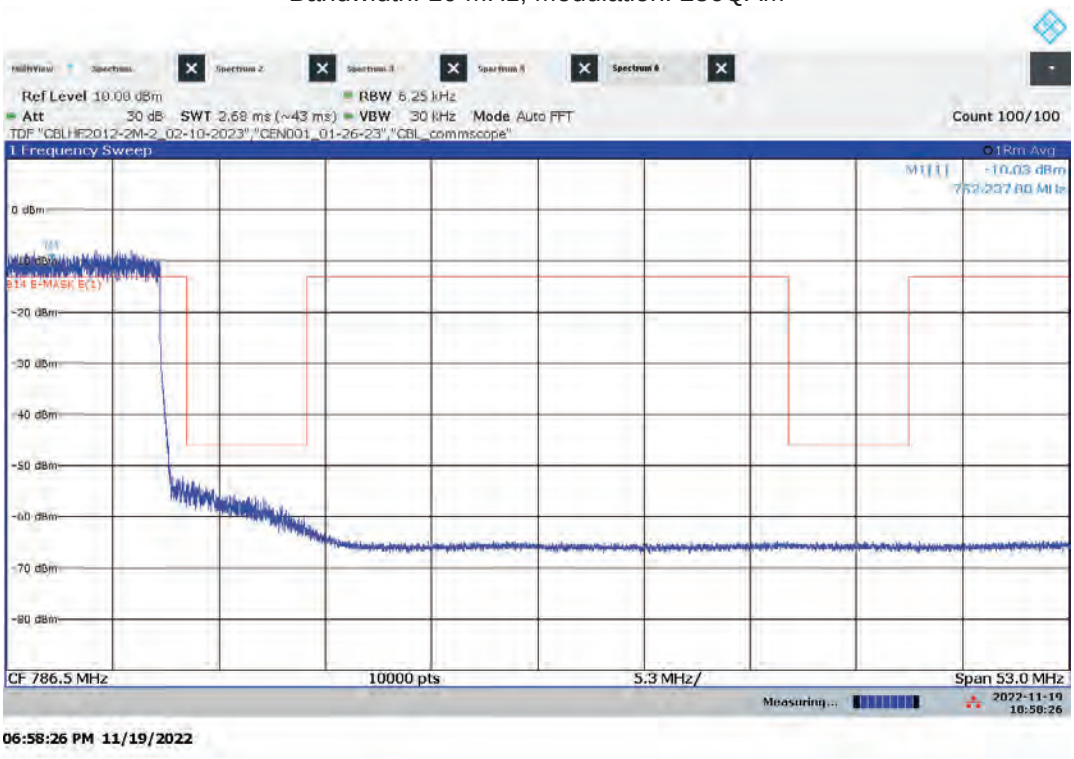
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 64QAM



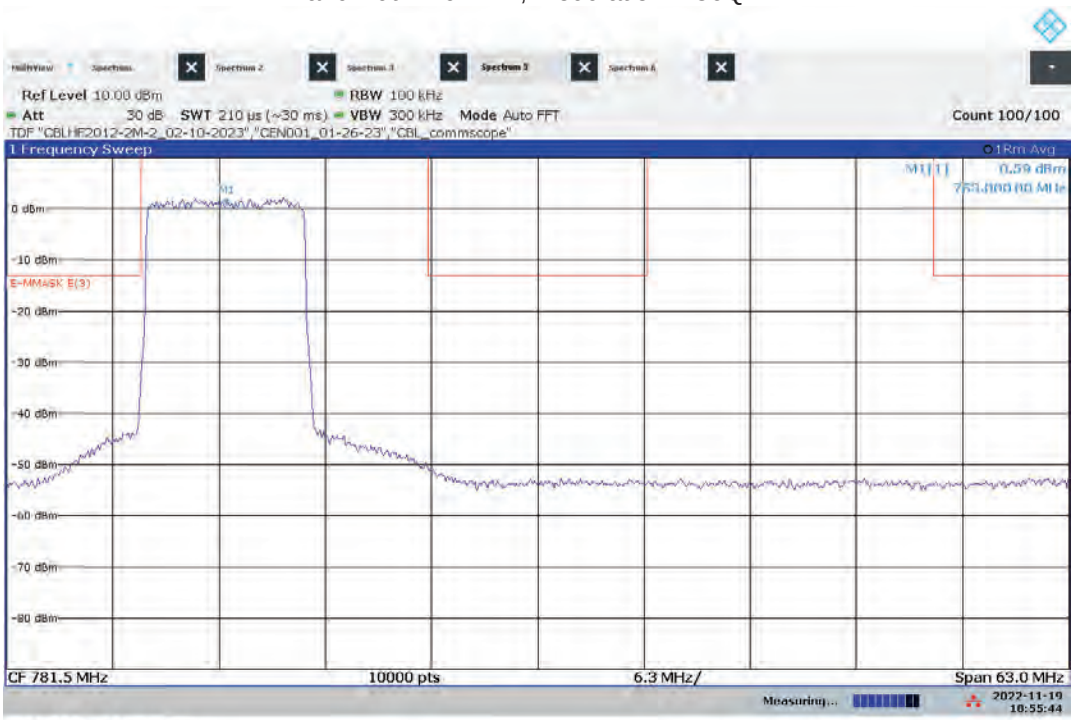
Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 256QAM



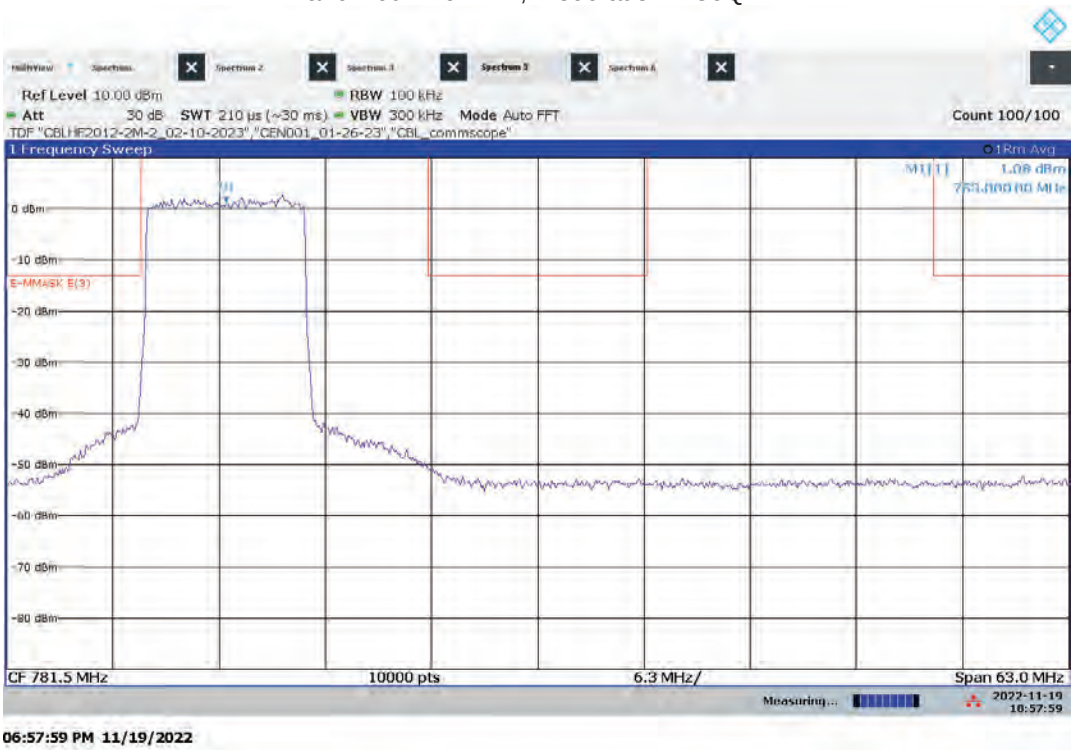
Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (1))
Bandwidth: 10 MHz, Modulation: 256QAM



Hi-PIM – ANT0 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 256QAM



Hi-PIM – ANT1 High Channel Emission/Band Edge (Mask e (3))
Bandwidth: 10 MHz, Modulation: 256QAM



	Product Standard: CFR47 FCC Part 90			Limit applied: See Report Section 6.3 Pretest Verification w/BB source: N/A			
Test Date	Test Personnel/ Initials	Supervising Engineer/ Initials	Input Voltage	Mode	Atmospheric Data		
					Temp C°	Relative Humidity %	Atmospheric Pressure mbar
11/19/2022	Kouma Sinn KPS	Vathana F. Ven VFV	POE	Transmit	24	14	1009

Deviations, Additions, or Exclusions: None

9 Antenna Conducted and Radiated Emissions

9.1 Method

Tests are performed in accordance with ANSI C63.26 and CFR47 FCC Parts 2.1051, 2.1057 and 90.

TEST SITE: EMC **Lab and** 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.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucispr
Radiated Emissions, 10m	30-1000 MHz	4.9 dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	4.5 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.4 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	4.8 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	4.8 dB	N/A

As shown in the table above our radiated emissions U_{lab} is less than the corresponding U_{CISPR} reference value in CISPR 16-4-2 Table 1, hence the compliance of the product is only based on the measured value, and no measurement uncertainty correction is required, based on CISPR 22 and CISPR 11 (for 2006 and later revisions) Clause 11.

Sample Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG
Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB/m
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows.

Assume a receiver reading of 52.0 dBμV is obtained. The antenna factor of 7.4 dB/m and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 52.0 dBμV
AF = 7.4 dB/m
CF = 1.6 dB
AG = 29.0 dB
FS = 32 dBμV/m

To convert from dBμV to μV or mV the following was used:

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μV
NF = Net Reading in dBμV

Example:

FS = RA + AF + CF – AG = 52.0 + 7.4 + 1.6 – 29.0 = 32.0
$UF = 10^{(32\ dB\mu V / 20)}$ = 39.8 μV/m

Alternately, when BAT-EMC Emission Software is used, the “Level” includes all losses and gains and is compared directly in the “Margin” column to the “Limit”. The “Correction” includes Antenna Factor, Preamp, and Cable Loss. These are already accounted for in the “Level” column.

9.2 Test Equipment Used:

Test equipment used for antenna port conducted emissions

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV005'	Weather Station	Davis	6250	MS191218083	02/11/2022	02/11/2023
ROS005-1'	Signal and Spectrum Analyzer	Rohde and Shwartz	FSW43	100646	11/02/2021	11/02/2022
CEN001'	DC-40GHz attenuator 20dB	Centric RF	C411-20	CEN001	01/26/2022	01/26/2023
CBLHF2012-2M-2'	2m 9kHz-40GHz Coaxial Cable - SET2	Huber & Suhner	SF102	252675002	02/10/2022	02/10/2023
CEN001'	DC-40GHz attenuator 20dB	Centric RF	C411-20	CEN001	01/26/2022	01/26/2023
None	Mini SMA cable	Provided by CommScope	None	None	VBU	Verified

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	03/08/2022	03/08/2023
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/23/2022	06/23/2023
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/21/2022	02/21/2023
145-414'	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	01/14/2022	01/14/2023
145-423'	Pre-amp to under floor	Huber and Suhner	SF106A/11N/11N/1.5m	145-423	02/15/2022	02/15/2023
IW006;	DC-18GHz cable 8.4m long	Insulated Wire	2800-NPS	IW006	07/14/2022	07/14/2023
ETS003'	9kHz-30MHz Active Loop Antenna	ETS Lindgren	6502	00143396	09/06/2022	09/06/2023

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	03/08/2022	03/08/2023
PRE10'	30-1000MHz pre-amp	ITS	PRE10	PRE10	02/15/2022	02/15/2023
145-424'	9kHz to 40GHz Cable	Huber and Suhner	Sucoflex	145-424	02/15/2022	02/15/2023
145-422'	10Amp Pre-amp to under floor	Utiflex	UFB311A-0-2756-70070	145-422	02/21/2022	02/21/2023
HS003'	10m under floor cable	Huber-Schuner	10m-1	HS003	02/15/2022	02/15/2023
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/21/2022	02/21/2023
145145'	Broadband Hybrid Antenna 30 MHz - 3 GHz	Sunol Sciences Corp.	JB3	A122313	06/16/2022	06/16/2023
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/23/2022	06/23/2023

Test equipment used for radiated emissions from 1-8 GHz

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/08/2022	03/08/2023
PRE12'	Pre-amplifier	Com Power	PAM-118A	18040117	12/06/2021	12/06/2022
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/23/2022	06/23/2023
ETS002'	1-18GHz DRG Horn Antenna	ETS Lindgren	3117	00143260	09/27/2022	09/27/2023
145-420'	Receiver to floor cable	Utiflex	UFB311A-2-0591-70070	145-420	02/21/2022	02/21/2023
145-414'	Cable 145-414	Huber + Suhner	3m Track A cable	145-414	01/14/2022	01/14/2023
145-423'	Pre-amp to under floor	Huber and Suhner	SF106A/11N/11N/1.5m	145-423	02/15/2022	02/15/2023
IW006;	DC-18GHz cable 8.4m long	Insulated Wire	2800-NPS	IW006	07/14/2022	07/14/2023
REA003	1GHz High Pass Filter	Reactel, Inc	7HS-1G/10G-S11	06-1	02/09/2022	02/09/2023

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	3.18.0.16

9.3 Results:

The sample tested was found to Comply.

Limits:
CFR47 FCC Part 90.543 (e)(1) and (e)(3) – For operations in the 758-768 MHz, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(e)(1): On all frequencies between 769-775 MHz and 799-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations.

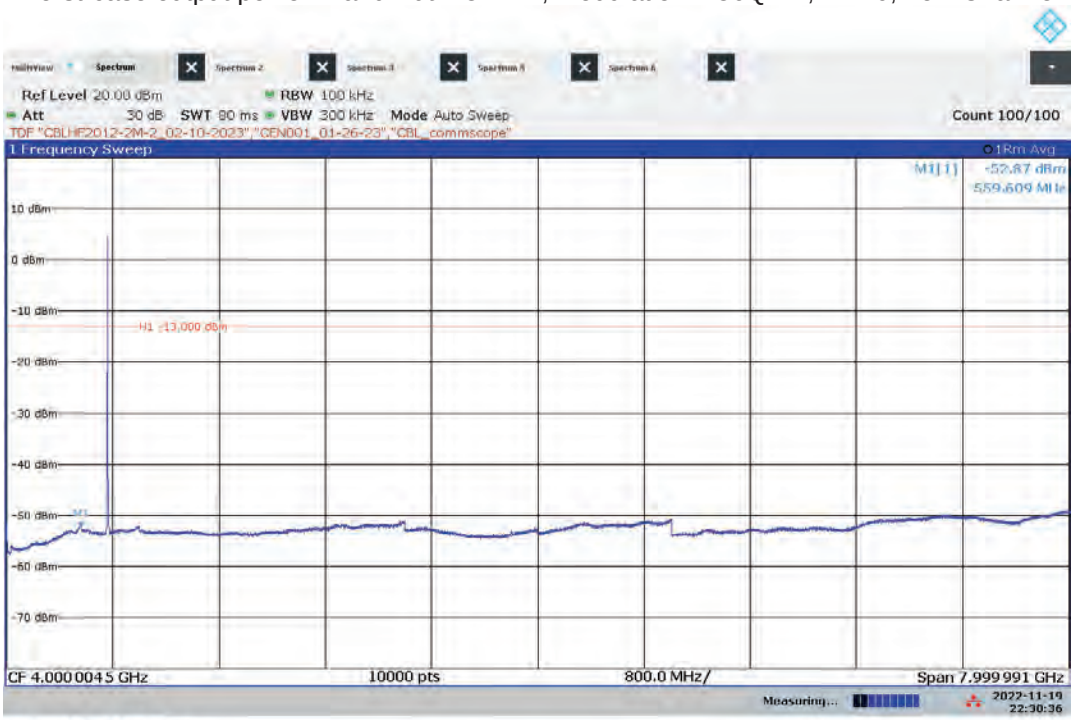
(e)(3): On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least 43 + 10 log (P) dB.

9.4 Setup Photographs:

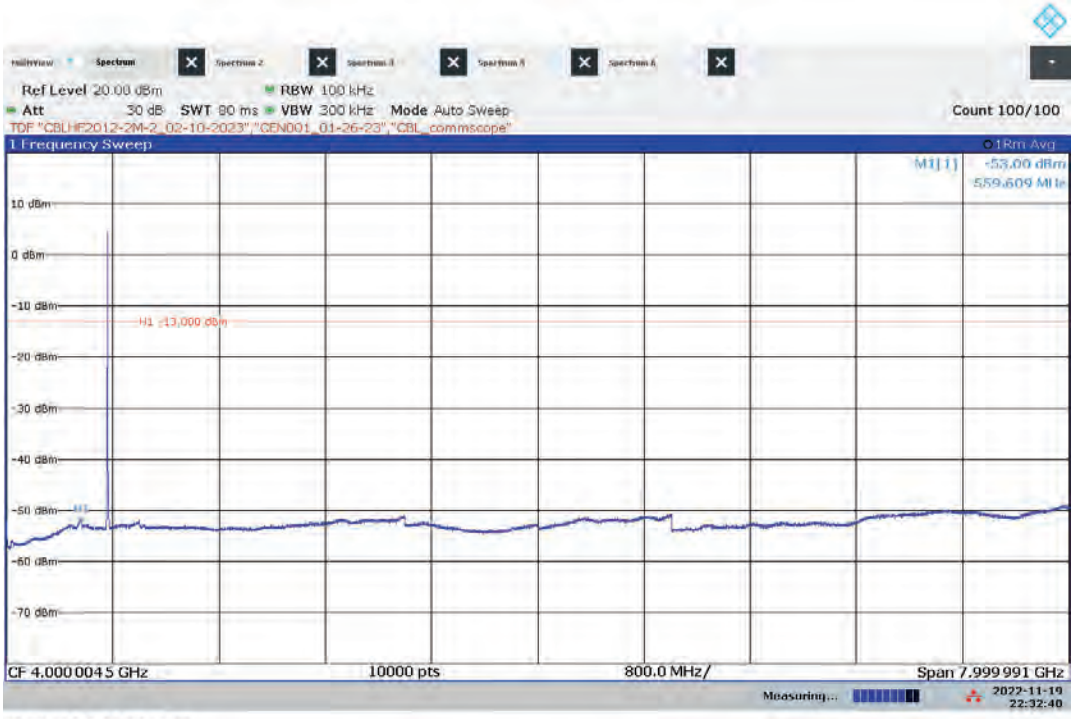
Confidential – Photos not included in this report

9.5 Plots/Data:

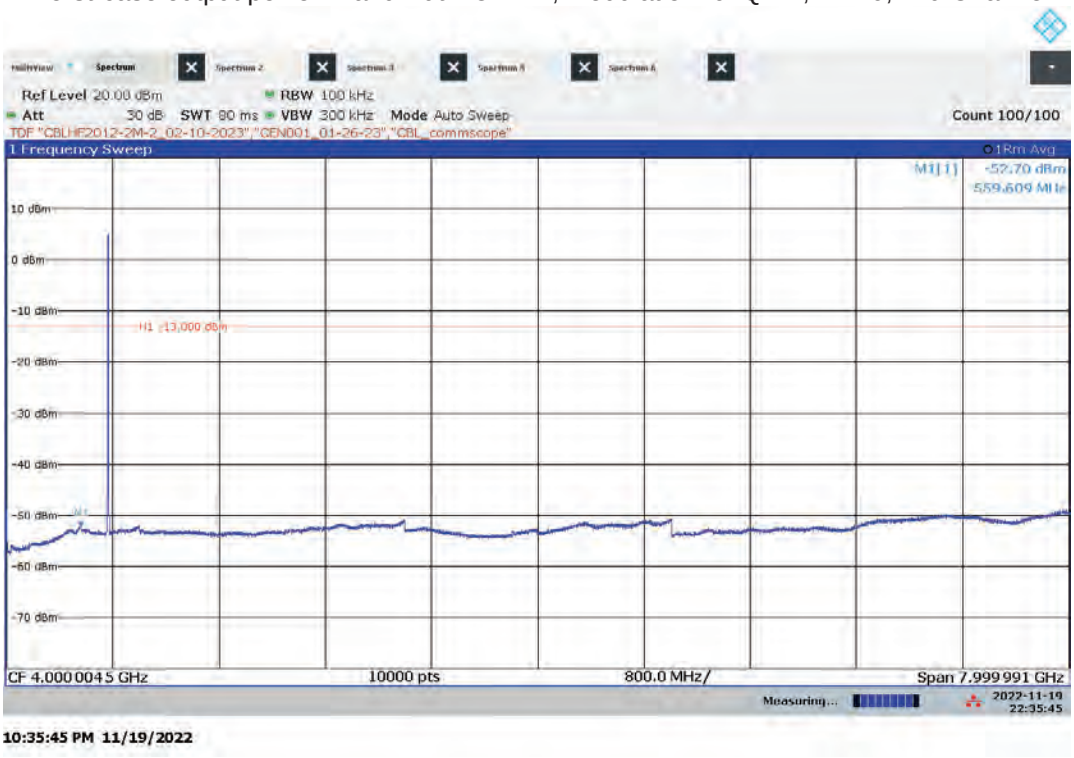
Lo-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 256QAM, ANT0, Low Channel



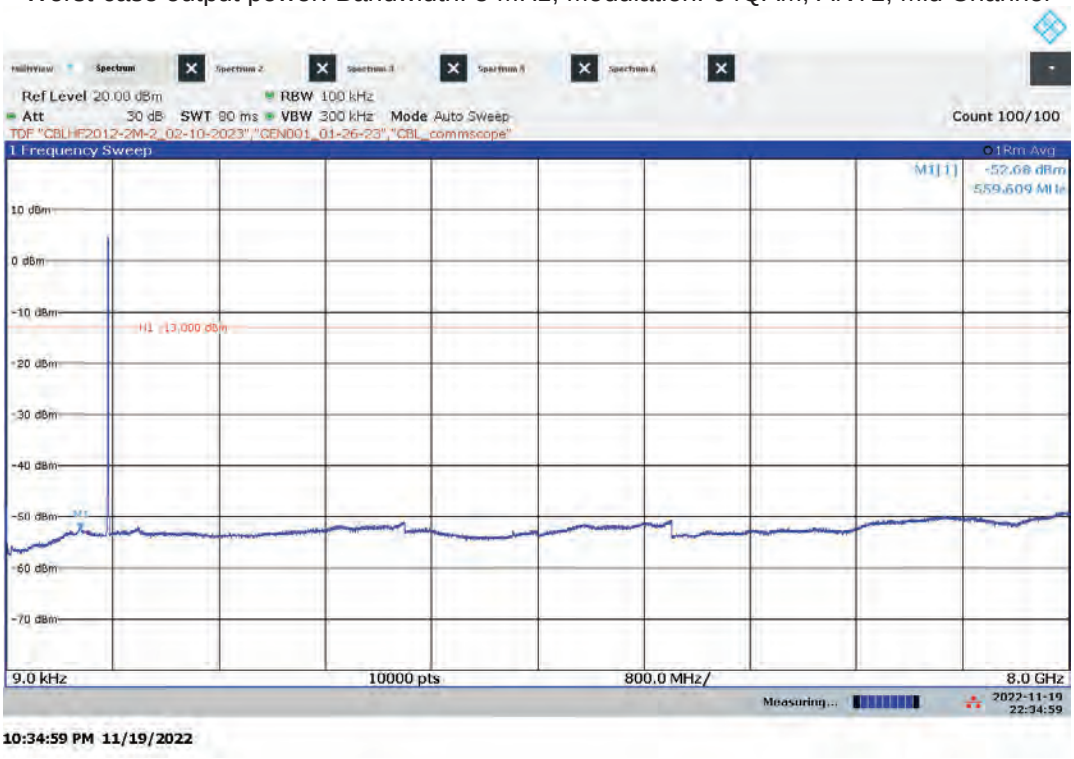
Lo-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 256QAM, ANT1, Low Channel



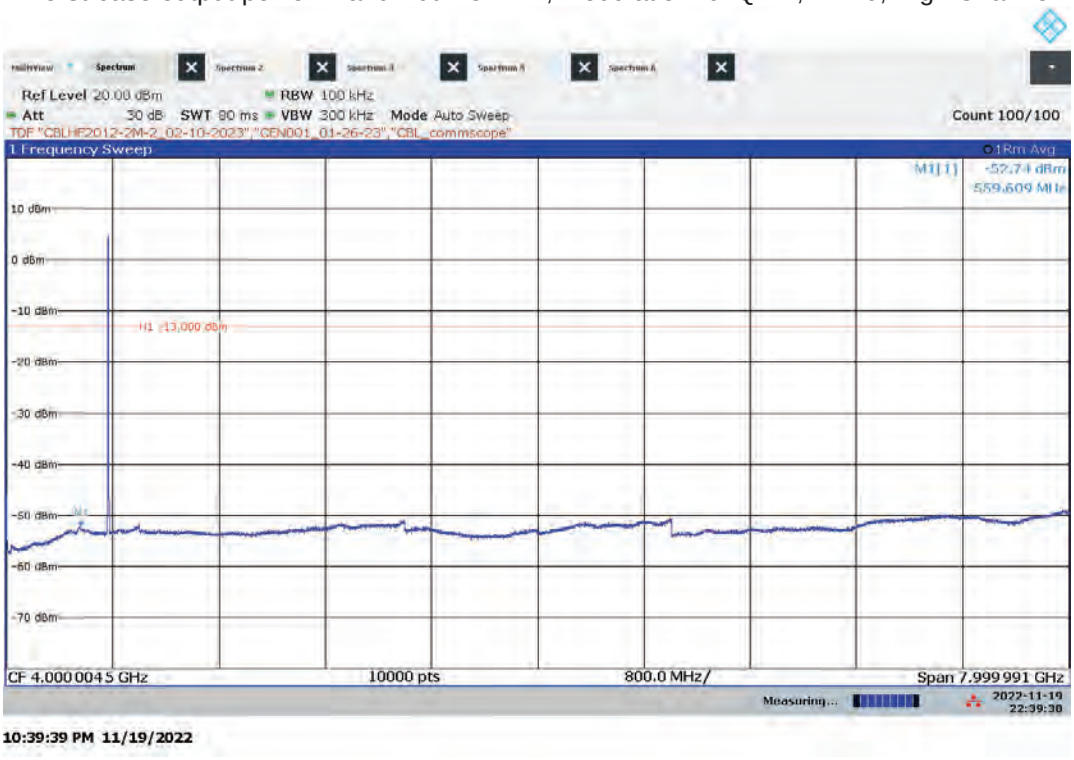
Lo-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, ANT0, Mid Channel



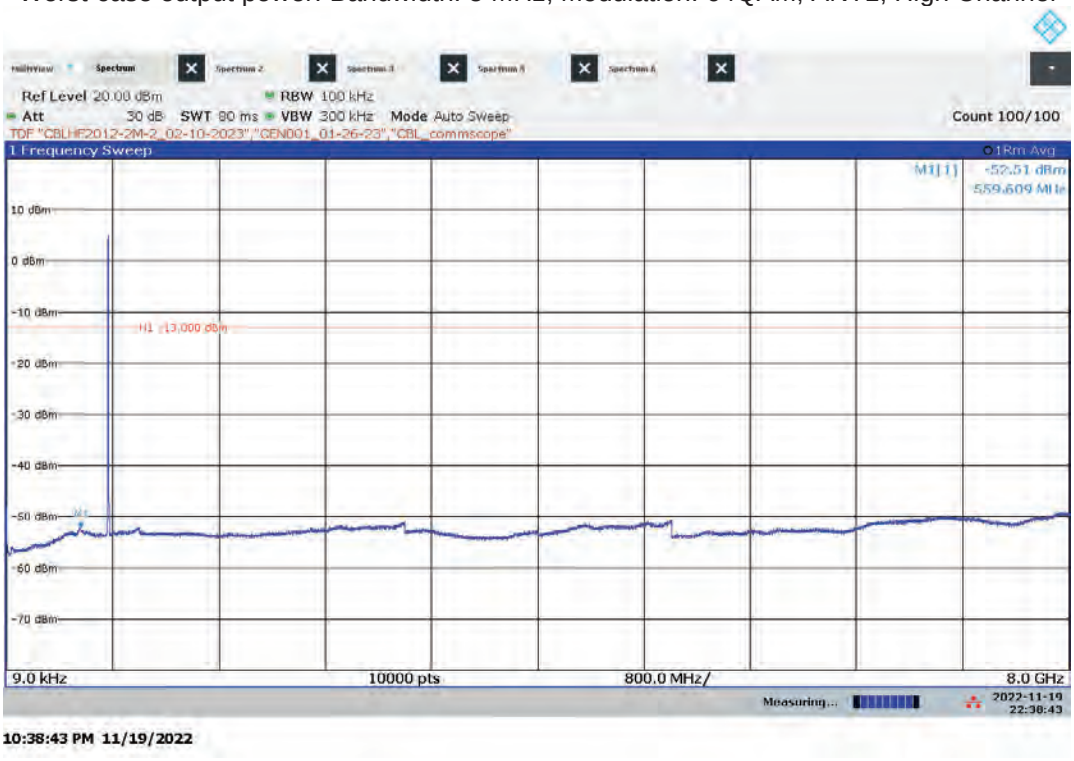
Lo-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, ANT1, Mid Channel



Lo-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, ANT0, High Channel



Lo-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, ANT1, High Channel

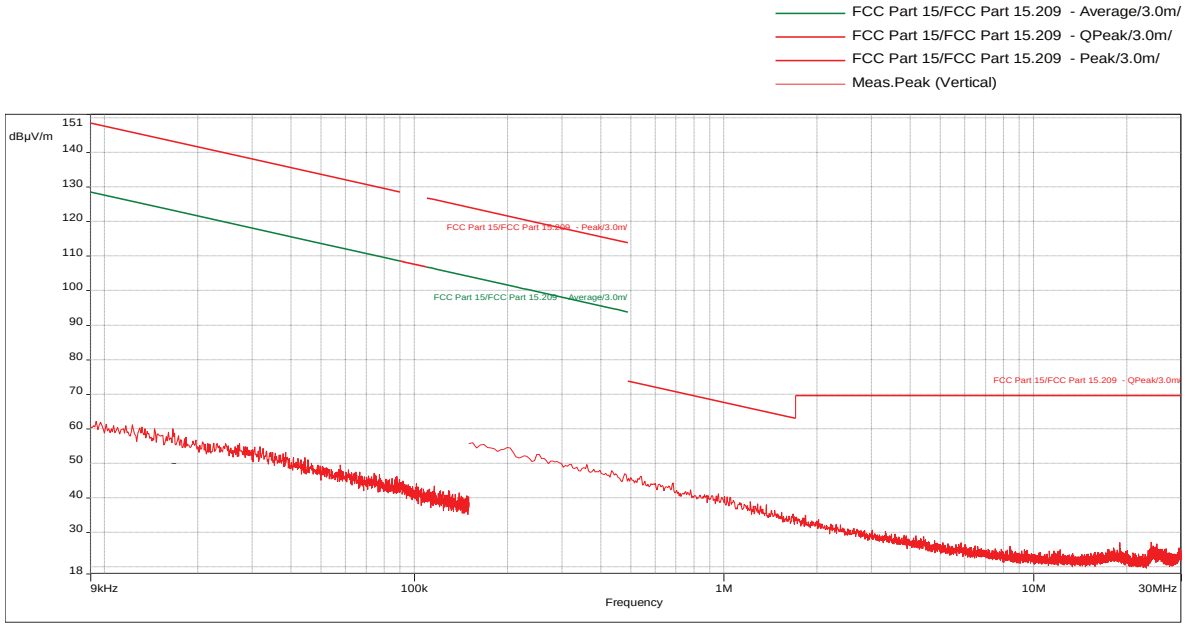


Lo-PIM Radiated Emissions, 9 kHz-30 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, Mid Channel
(Only mid channel was selected for testing in this frequency range)

Test Information:

Date and Time	11/21/2022 5:54:24 PM
Client and Project Number	CommScope_G105250625
Engineer	Vathana Ven
Temperature	26 C
Humidity	12 %
Atmospheric Pressure	1013 mbar
Comments	RE 9kHz-30MHz Loop antenna, Electric Field, 3M Location (FCC 15.209)_(Lo-PIM) Tx Mid CH_5MHz BW_64QAM

Graph:



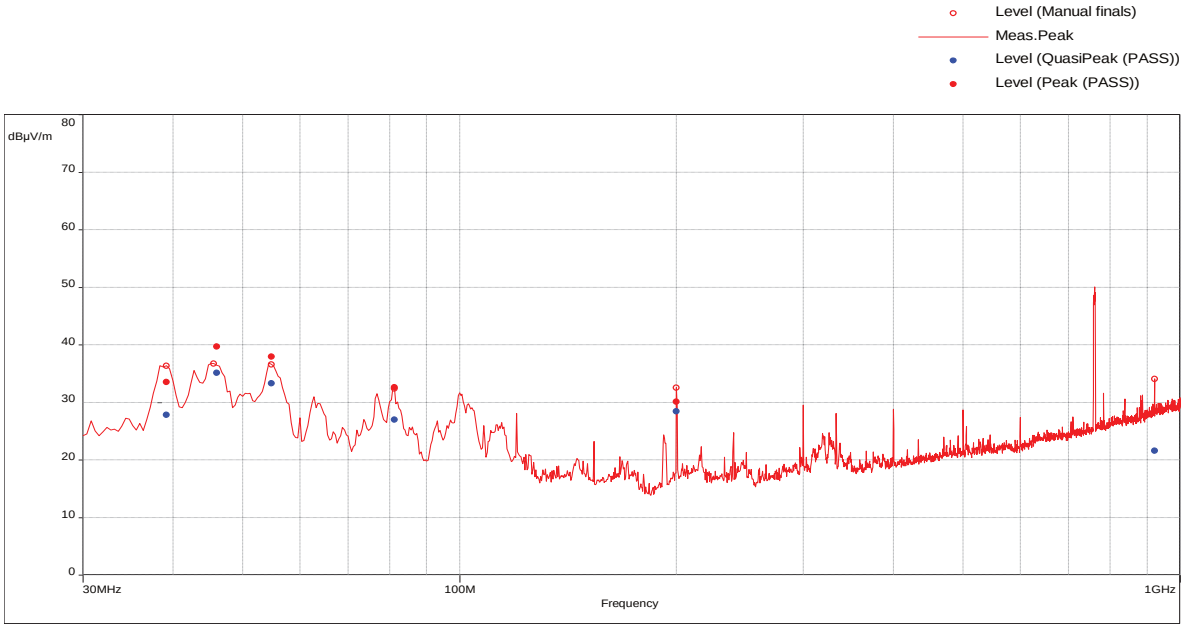
Results: No emissions were detected above the measuring equipment noise floor.

Lo-PIM Radiated Emissions, 30-1000 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 256QAM, Low Channel

Test Information:

Date and Time	11/20/2022 8:34:32 AM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 1: Low Ch (Lo-PIM), 5 MHz 256QAM, RE 30-1000MHz SA mode

Graph:



Results:

EIRP Level (PASS) (6)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.32631579	33.57	-51.23	-13	-38.23	96.00	3.13	Vertical	120000.00	-18.90
46.13684211	39.73	-45.07	-13	-32.07	39.00	1.44	Vertical	120000.00	-23.41
54.73684211	37.99	-46.81	-13	-33.81	335.00	2.01	Vertical	120000.00	-25.68
81.16842105	32.66	-52.14	-13	-39.14	170.00	2.84	Vertical	120000.00	-25.08
200	30.12	-54.68	-13	-41.68	155.00	1.53	Vertical	120000.00	-19.11
922.1052632	28.50	-56.3	-13	-43.3	234.00	2.17	Vertical	120000.00	-5.01

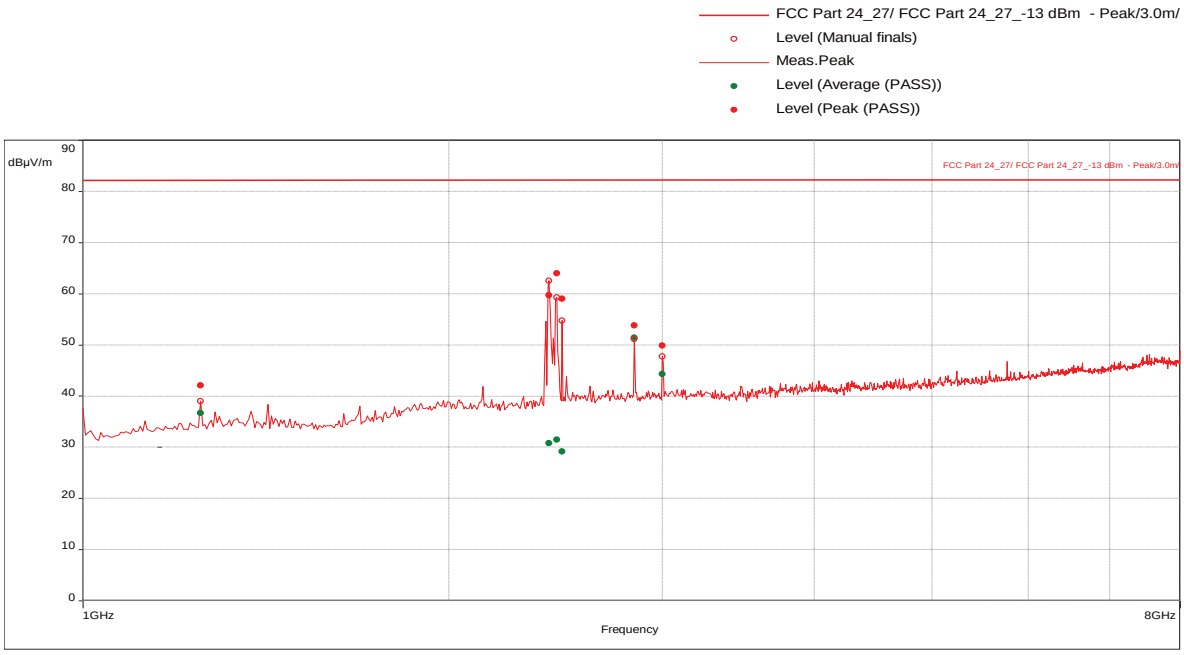
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Lo-PIM Radiated Emissions, 1-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 256QAM, Low Channel

Test Information:

Date and Time	11/21/2022 8:23:52 PM
Client and Project Number	CommScope_G105250625
Engineer	Vathana Ven
Temperature	26 C
Humidity	12 %
Atmospheric Pressure	1013 mbar
Comments	Low Ch (Lo-PIM), 5 MHz 256QAM, RE 1-8 GHz

Graph:



Results:

EIRP Level (PASS) (6)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1250	42.10	-53.16	-13	-40.07	293.00	1.80	Horizontal	1000000.00	-7.62
2422.368421	59.69	-35.57	-13	-22.50	170.00	3.69	Vertical	1000000.00	-3.29
2453.157895	63.98	-31.28	-13	-18.21	344.00	1.90	Vertical	1000000.00	-2.99
2480	59.00	-36.26	-13	-23.20	97.00	1.05	Vertical	1000000.00	-2.78
2844.473684	53.80	-41.46	-13	-28.40	147.00	1.70	Vertical	1000000.00	-2.40
3000	49.87	-45.39	-13	-32.33	133.00	1.30	Vertical	1000000.00	-2.02

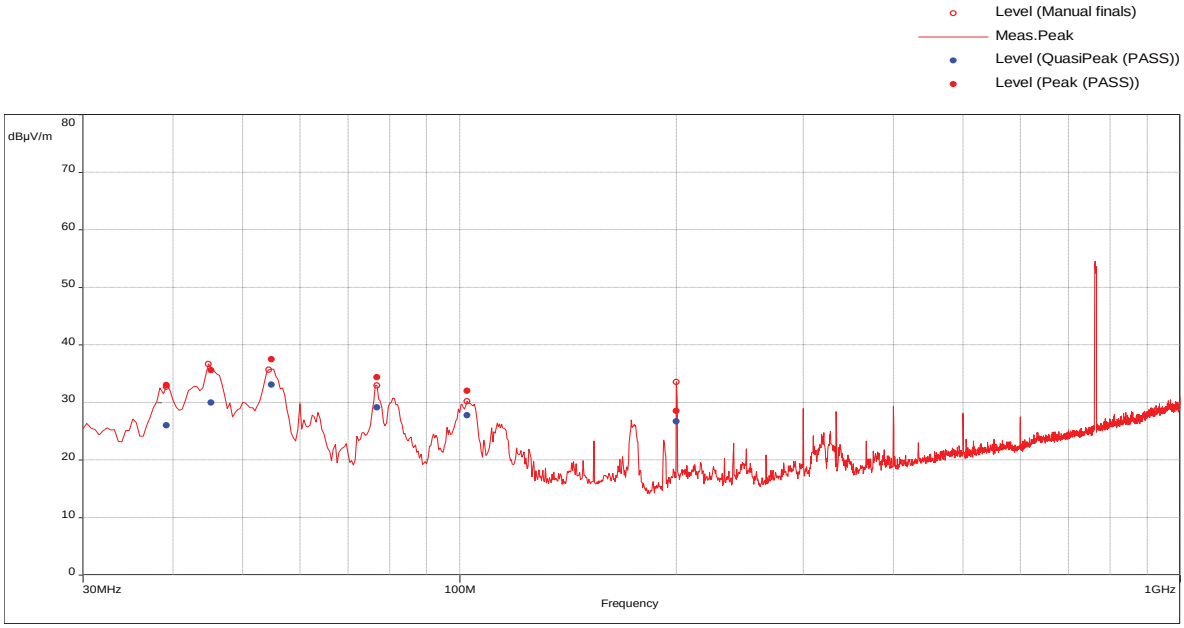
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter

Lo-PIM Radiated Emissions, 30-1000 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, Mid Channel

Test Information:

Date and Time	11/20/2022 9:25:58 AM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 2: Mid Ch (Lo-PIM), 5 MHz 64QAM, RE 30-1000MHz SA mode

Graph:



Results:

EIRP Level (PASS) (6)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.26315789	33.04	-51.76	-13	-38.76	118.00	2.51	Vertical	120000.00	-18.85
45.08421053	35.60	-49.2	-13	-36.2	323.00	1.45	Vertical	120000.00	-22.82
54.77894737	37.52	-47.28	-13	-34.28	315.00	1.79	Vertical	120000.00	-25.68
76.98947368	34.36	-50.44	-13	-37.44	301.00	2.85	Vertical	120000.00	-24.83
102.4947368	32.00	-52.8	-13	-39.8	0.00	1.41	Vertical	120000.00	-21.27
200	28.50	-56.3	-13	-43.3	148.00	2.56	Vertical	120000.00	-19.11

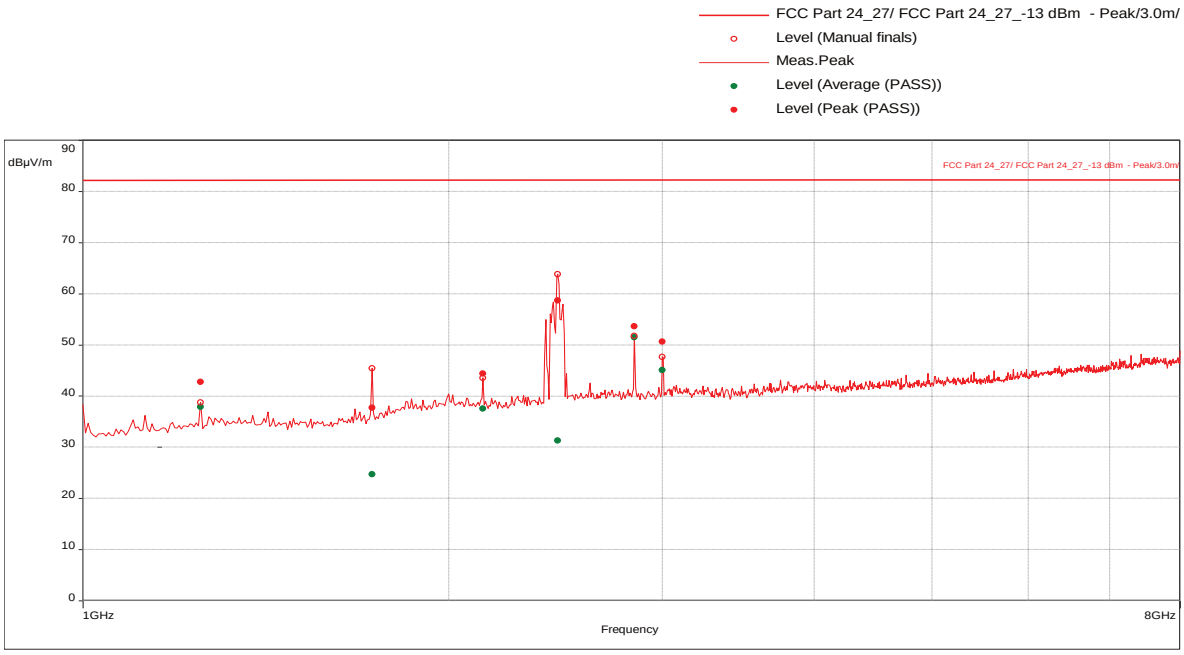
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Lo-PIM Radiated Emissions, 1-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, Mid Channel

Test Information:

Date and Time	11/21/2022 7:25:53 PM
Client and Project Number	CommScope_G105250625
Engineer	Vathana Ven
Temperature	26 C
Humidity	12 %
Atmospheric Pressure	1013 mbar
Comments	Mid Ch (Lo-PIM), 5 MHz 64QAM, RE 1-8 GHz SA mode

Graph:



Results:

EIRP Level (PASS) (6)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1250	42.77	-52.49	-13	-39.40	299.00	1.80	Horizontal	1000000.00	-7.62
1730.526316	37.70	-57.56	-13	-44.48	51.00	2.60	Horizontal	1000000.00	-6.19
2133.421053	44.41	-50.85	-13	-37.78	109.00	1.00	Vertical	1000000.00	-3.86
2458.947368	58.67	-36.59	-13	-23.52	210.00	2.50	Vertical	1000000.00	-2.96
2844.473684	53.67	-41.59	-13	-28.53	153.00	1.70	Vertical	1000000.00	-2.40
3000	50.61	-44.65	-13	-31.59	125.00	1.01	Vertical	1000000.00	-2.02

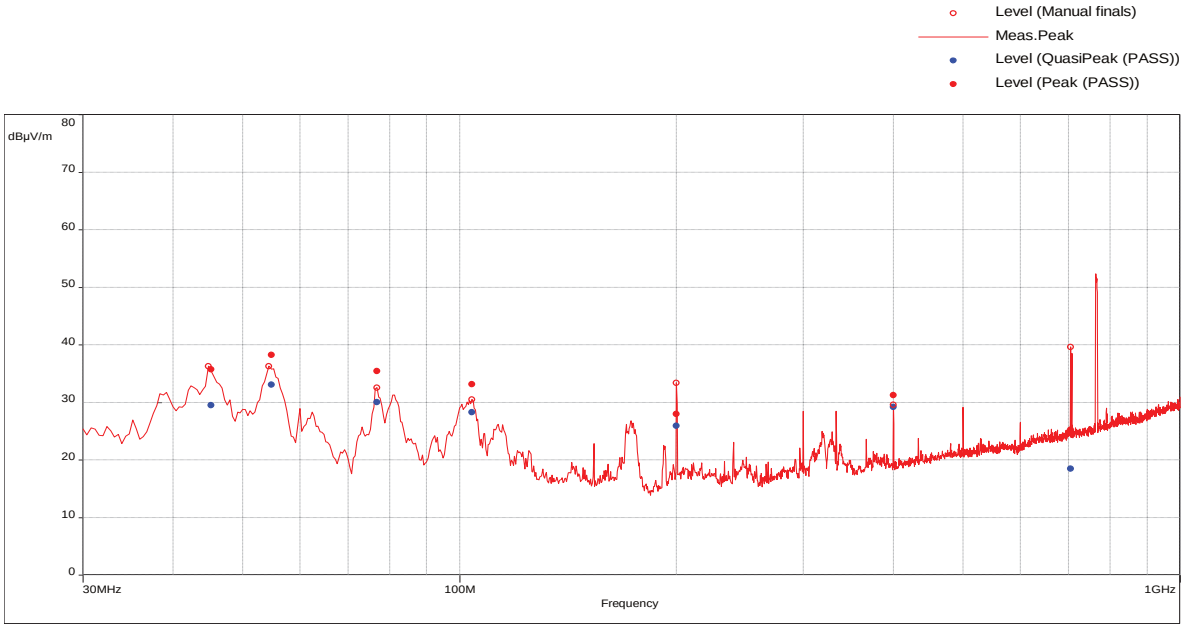
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter

Lo-PIM Radiated Emissions, 30-1000 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, High Channel

Test Information:

Date and Time	11/20/2022 10:16:22 AM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 3: High Ch (Lo-PIM), 5 MHz 64QAM, RE 30-1000MHz SA mode

Graph:



Results:

EIRP Level (PASS) (7)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
45.24210526	35.78	-49.02	-13	-36.02	258.00	2.46	Vertical	120000.00	-22.90
54.87368421	38.26	-46.54	-13	-33.54	257.00	1.81	Vertical	120000.00	-25.69
76.8	35.44	-49.36	-13	-36.36	316.00	2.85	Vertical	120000.00	-24.81
104.0947368	33.13	-51.67	-13	-38.67	0.00	1.29	Vertical	120000.00	-20.79
200	27.97	-56.83	-13	-43.83	163.00	2.61	Vertical	120000.00	-19.11
400	31.23	-53.57	-13	-40.57	279.00	2.25	Horizontal	120000.00	-15.19
704.7052632	25.22	-59.58	-13	-46.58	353.00	2.45	Vertical	120000.00	-8.78

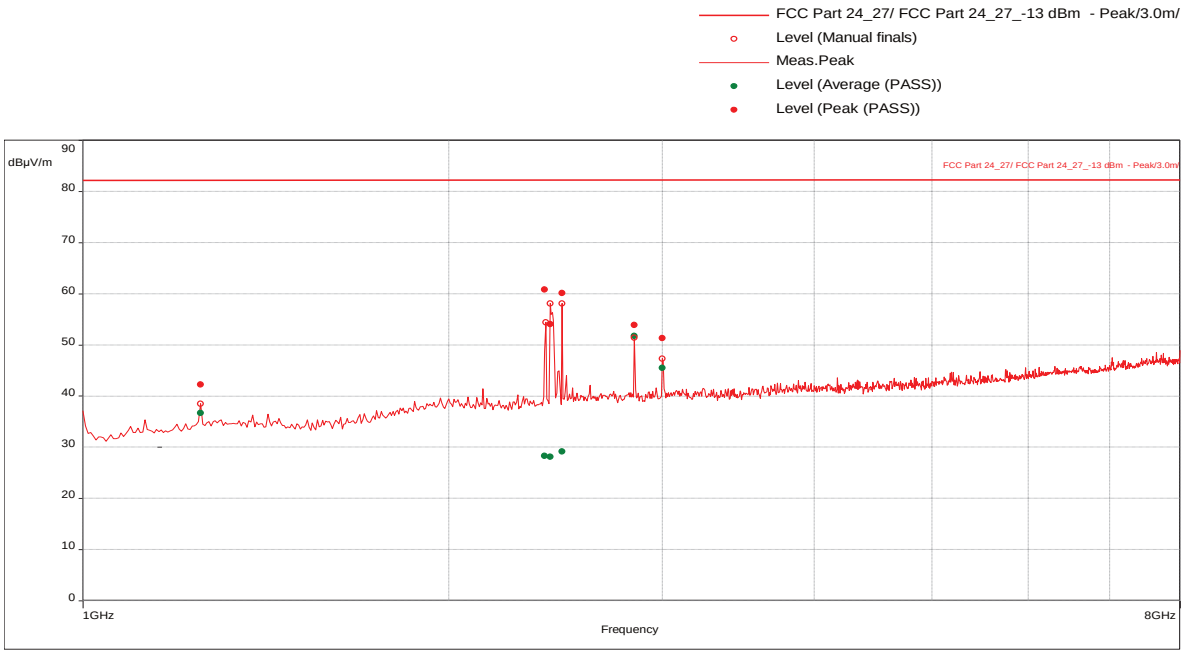
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Lo-PIM Radiated Emissions, 1-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, High Channel

Test Information:

Date and Time	11/21/2022 7:52:50 PM
Client and Project Number	CommScope_G105250625
Engineer	Vathana Ven
Temperature	26 C
Humidity	12 %
Atmospheric Pressure	1013 mbar
Comments	High Ch (Lo-PIM), 5 MHz 64QAM, RE 1-8 Ghz SA mode

Graph:



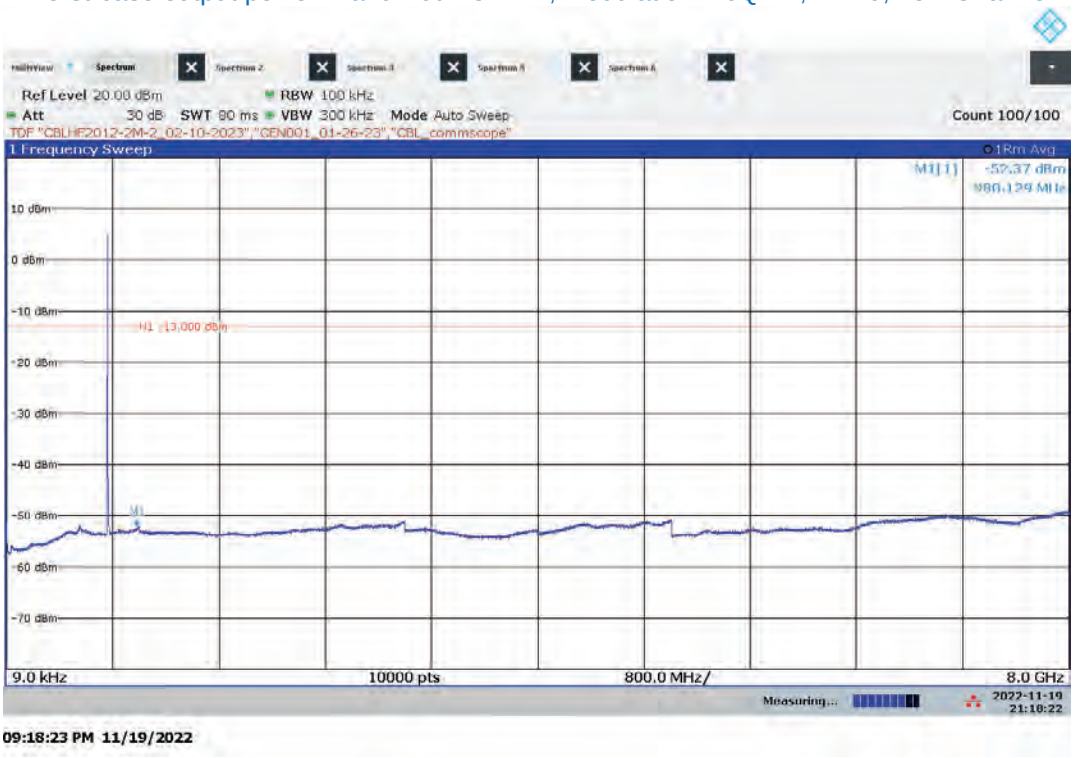
Results:

EIRP Level (PASS) (6)

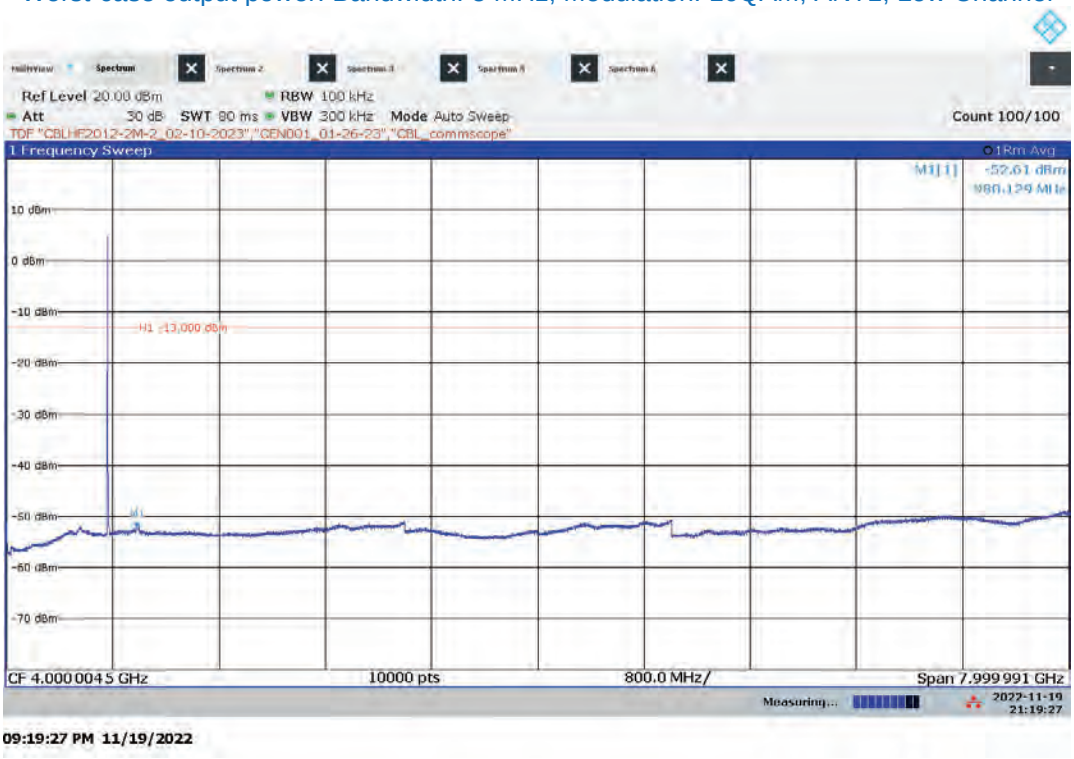
Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1250	42.29	-52.97	-13	-39.88	290.00	1.75	Horizontal	1000000.00	-7.62
2402.105263	60.82	-34.44	-13	-21.37	169.00	2.35	Vertical	1000000.00	-3.40
2426.578947	54.08	-41.18	-13	-28.11	232.00	1.55	Vertical	1000000.00	-3.29
2479.736842	60.19	-35.07	-13	-22.00	309.00	1.00	Vertical	1000000.00	-2.78
2844.473684	53.93	-41.33	-13	-28.27	147.00	1.70	Vertical	1000000.00	-2.40
3000	51.33	-43.93	-13	-30.86	125.00	1.05	Vertical	1000000.00	-2.02

Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

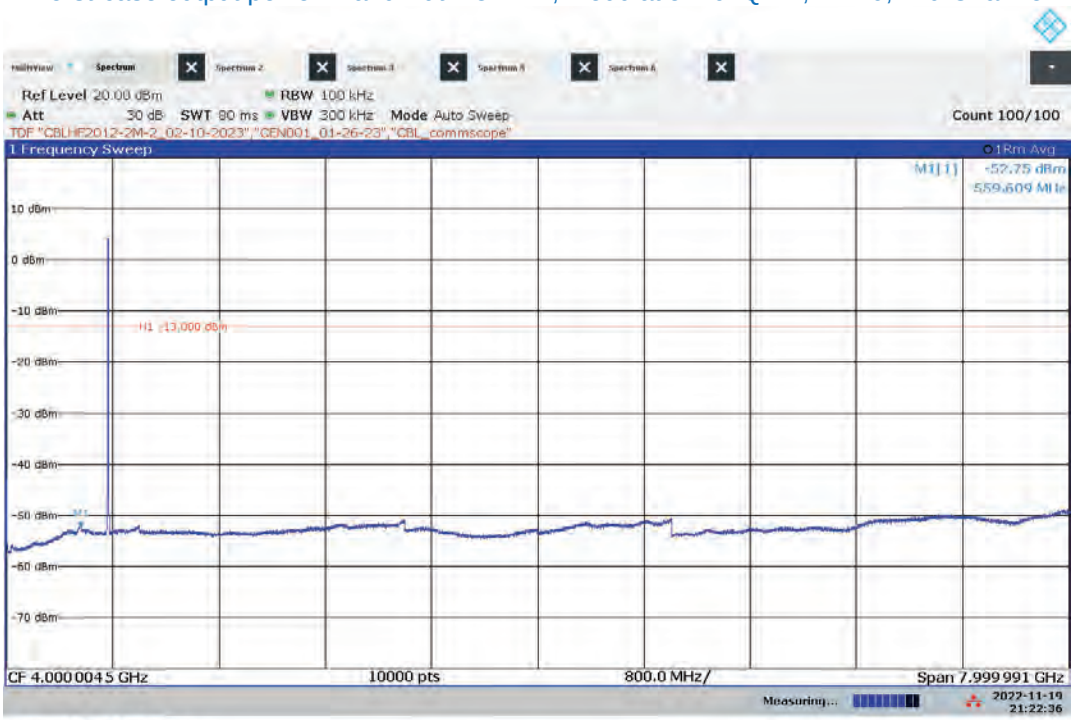
Hi-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, ANT0, Low Channel



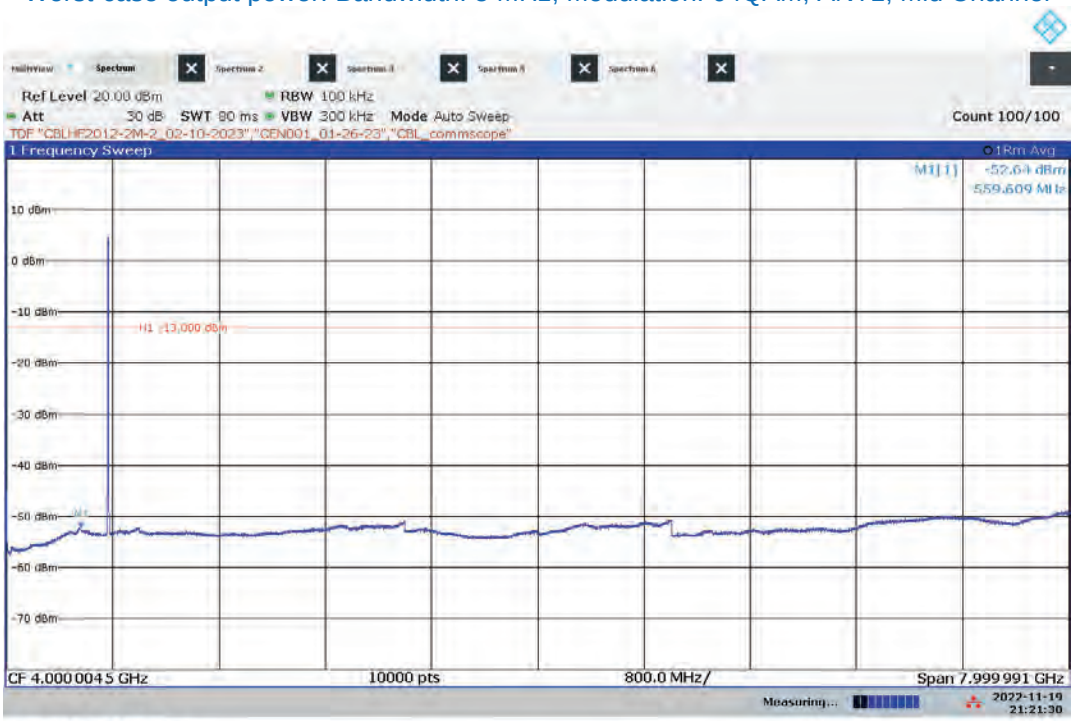
Hi-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, ANT1, Low Channel



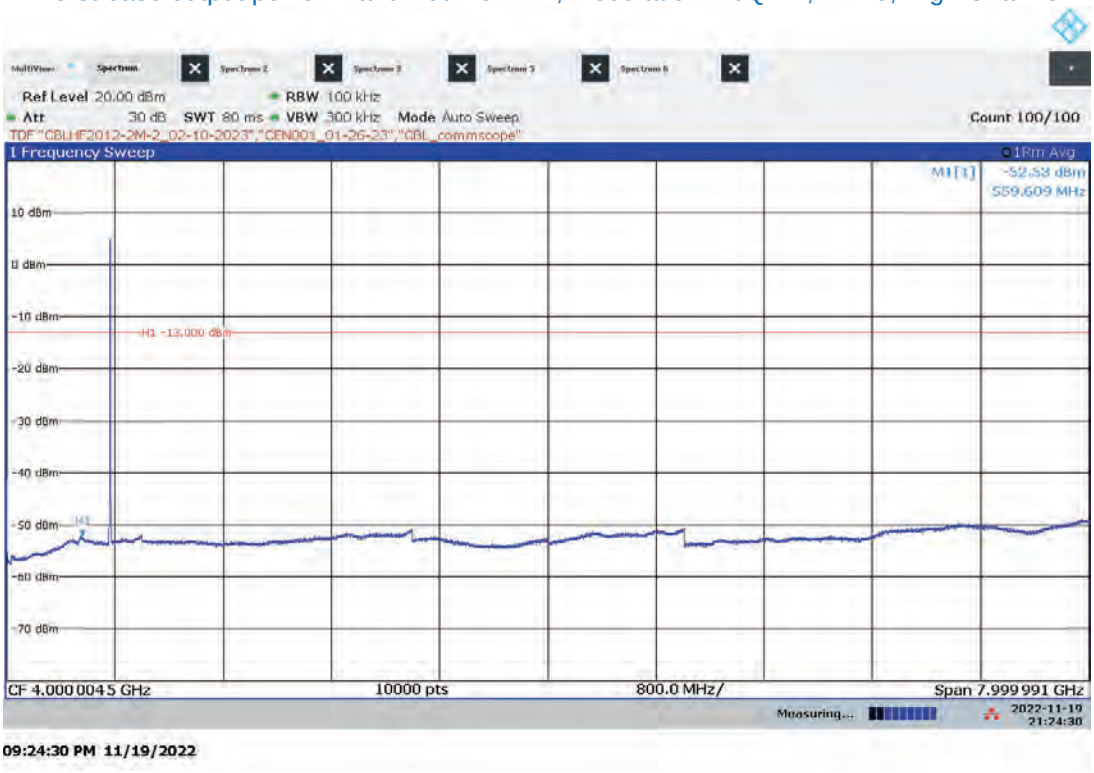
Hi-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, ANT0, Mid Channel



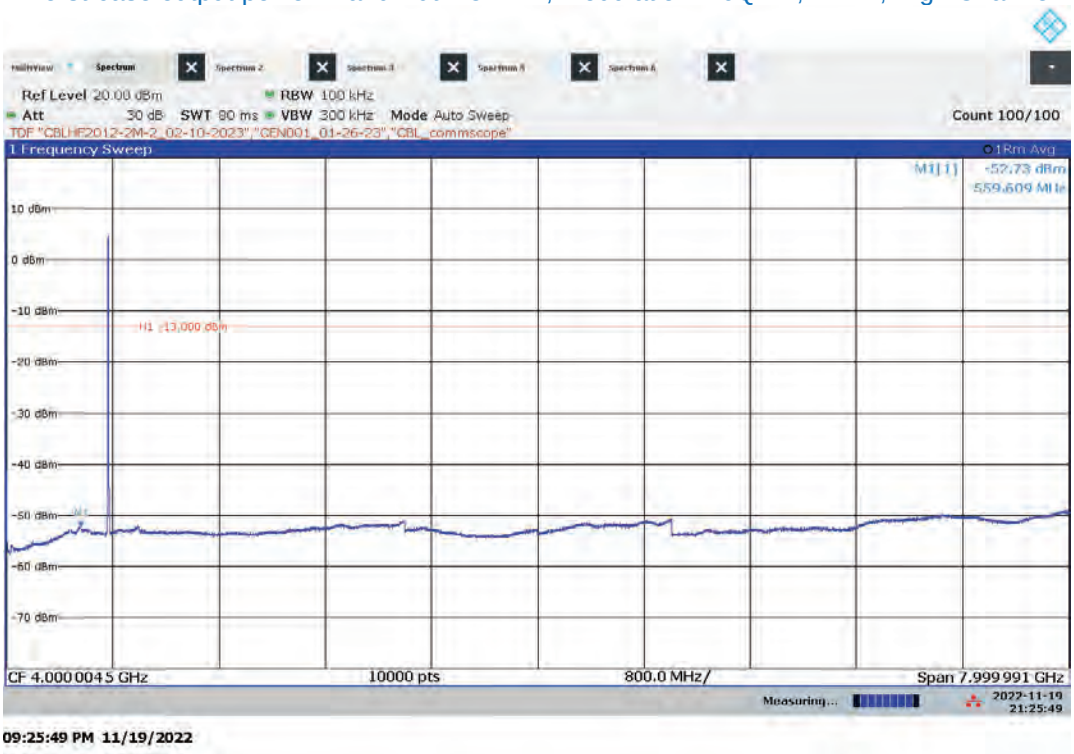
Hi-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, ANT1, Mid Channel



Hi-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, ANT0, High Channel



Hi-PIM Antenna Port Conducted Emissions, 9 kHz-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, ANT1, High Channel

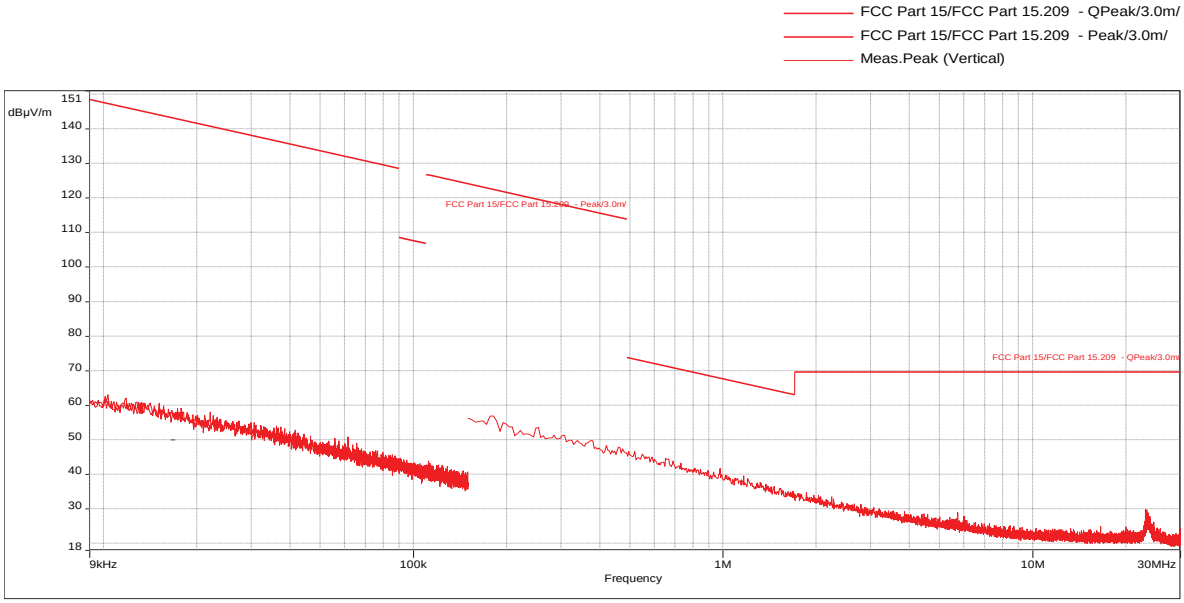


Hi-PIM Radiated Emissions, 9 kHz-30 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, Low Channel
(Only low channel was selected for testing in this frequency range)

Test Information:

Date and Time	11/21/2022 4:32:06 PM
Client and Project Number	CommScope_G105250625
Engineer	Vathana Ven
Temperature	26 C
Humidity	12 %
Atmospheric Pressure	1013 mbar
Comments	CRE 9kHz-30MHz Loop antenna, Electric Field, 3M Location (FCC 15.209)_Tx High CH_5MHz BW_16QAM

Graph:



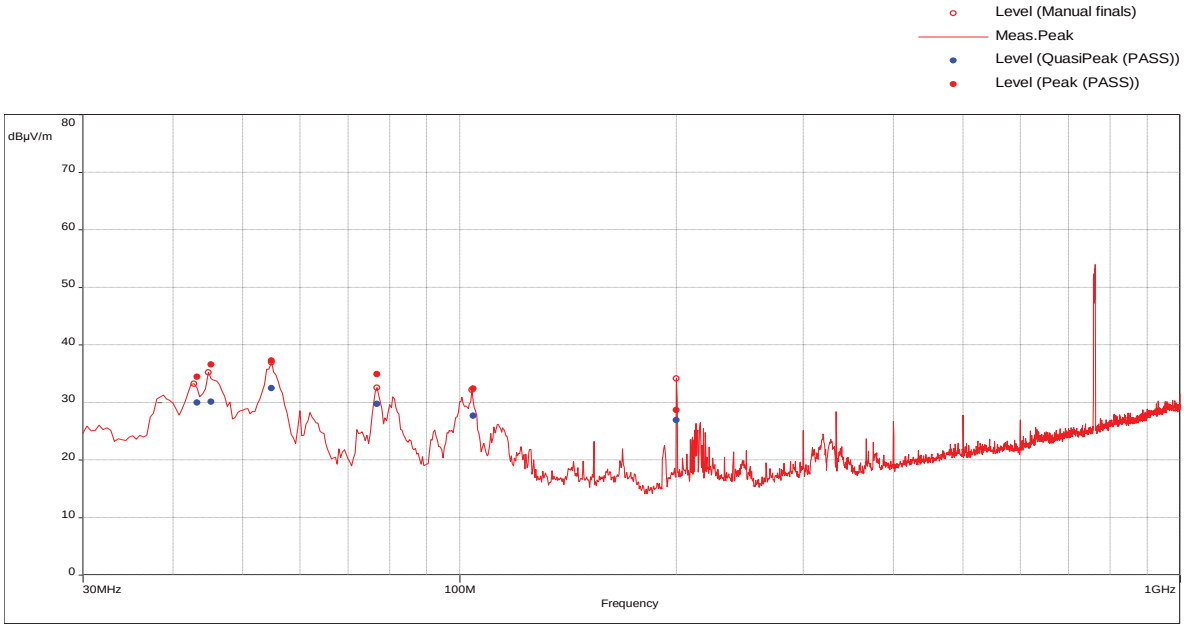
Results: No emissions were detected above the measuring equipment noise floor.

Hi-PIM Radiated Emissions, 30-1000 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, Low Channel

Test Information:

Date and Time	11/20/2022 11:14:17 AM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 4: Low Ch (Hi-PIM), 5 MHz 16QAM, RE 30-1000MHz SA mode

Graph:



Results:

EIRP Level (PASS) (6)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
43.11578947	34.46	-50.34	-13	-37.34	0.00	2.45	Vertical	120000.00	-21.59
45.11578947	36.55	-48.25	-13	-35.25	273.00	1.45	Vertical	120000.00	-22.83
54.95789474	37.26	-47.54	-13	-34.54	82.00	1.00	Vertical	120000.00	-25.70
76.83157895	34.91	-49.89	-13	-36.89	302.00	2.68	Vertical	120000.00	-24.81
104.2842105	32.44	-52.36	-13	-39.36	1.00	2.51	Vertical	120000.00	-20.75
200	28.68	-56.12	-13	-43.12	150.00	2.18	Vertical	120000.00	-19.11

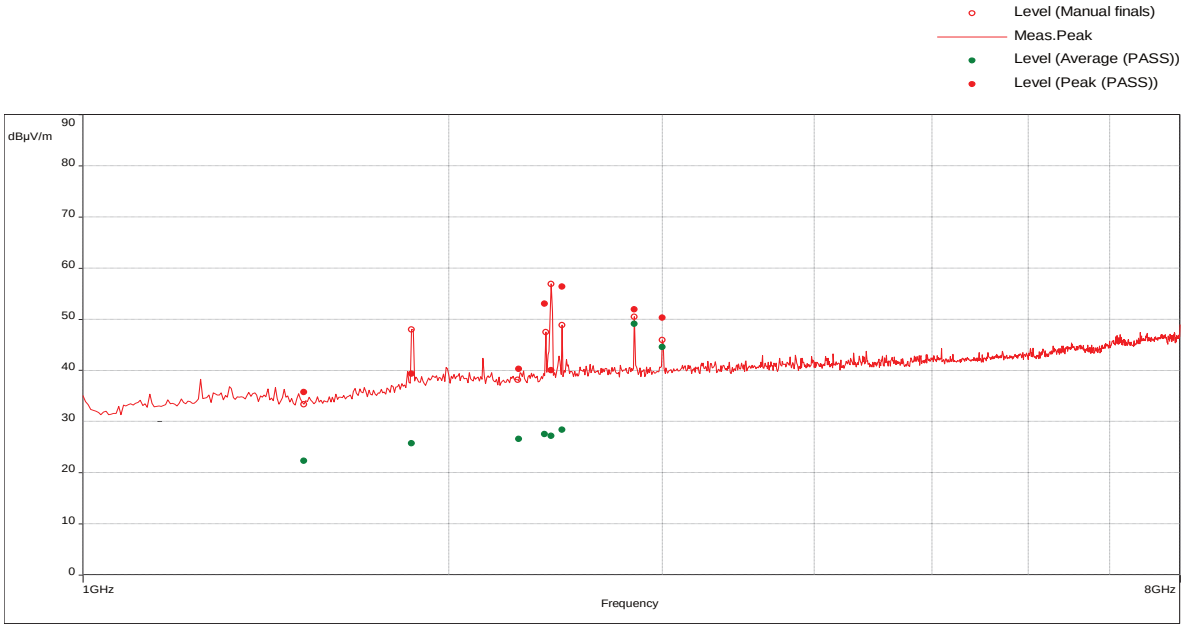
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Hi-PIM Radiated Emissions, 1-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, Low Channel

Test Information:

Date and Time	11/20/2022 3:24:39 PM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 9: Lo Ch (Hi-PIM), 5 MHz 16QAM, RE 1-8 Ghz SA mode

Graph:



Results:

EIRP Level (PASS) (8)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1519.736842	35.78	-59.48	-13	-46.48	286.00	1.35	Vertical	1000000.00	-7.97
1863.421053	39.39	-55.87	-13	-42.87	31.00	3.25	Vertical	1000000.00	-4.37
2282.631579	40.31	-54.95	-13	-41.95	199.00	3.05	Horizontal	1000000.00	-3.85
2402.105263	53.05	-42.21	-13	-29.21	17.00	2.05	Vertical	1000000.00	-3.40
2427.631579	40.08	-55.18	-13	-42.18	75.00	2.05	Vertical	1000000.00	-3.29
2480.263158	56.36	-38.9	-13	-25.9	234.00	1.45	Vertical	1000000.00	-2.78
2844.473684	51.97	-43.29	-13	-30.29	112.00	1.35	Vertical	1000000.00	-2.40
3000	50.32	-44.94	-13	-31.94	126.00	1.15	Vertical	1000000.00	-2.02

Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Hi-PIM Radiated Emissions, 30-1000 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, Mid Channel

Test Information:

Date and Time	11/20/2022 12:03:39 PM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 5: Mid Ch (Hi-PIM), 5 MHz 64QAM, RE 30-1000MHz SA mode

Graph:

Results:

EIRP Level (PASS) (6)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
45.42105263	36.39	-48.41	-13	-35.41	310.00	1.47	Vertical	120000.00	-23.00
55.08421053	37.15	-47.65	-13	-34.65	97.00	1.84	Vertical	120000.00	-25.70
76.95789474	34.40	-50.4	-13	-37.4	251.00	3.02	Vertical	120000.00	-24.82
81.2	33.34	-51.46	-13	-38.46	112.00	2.67	Vertical	120000.00	-25.09
100.7473684	32.07	-52.73	-13	-39.73	258.00	1.39	Vertical	120000.00	-21.71
200	30.35	-54.45	-13	-41.45	156.00	1.46	Vertical	120000.00	-19.11

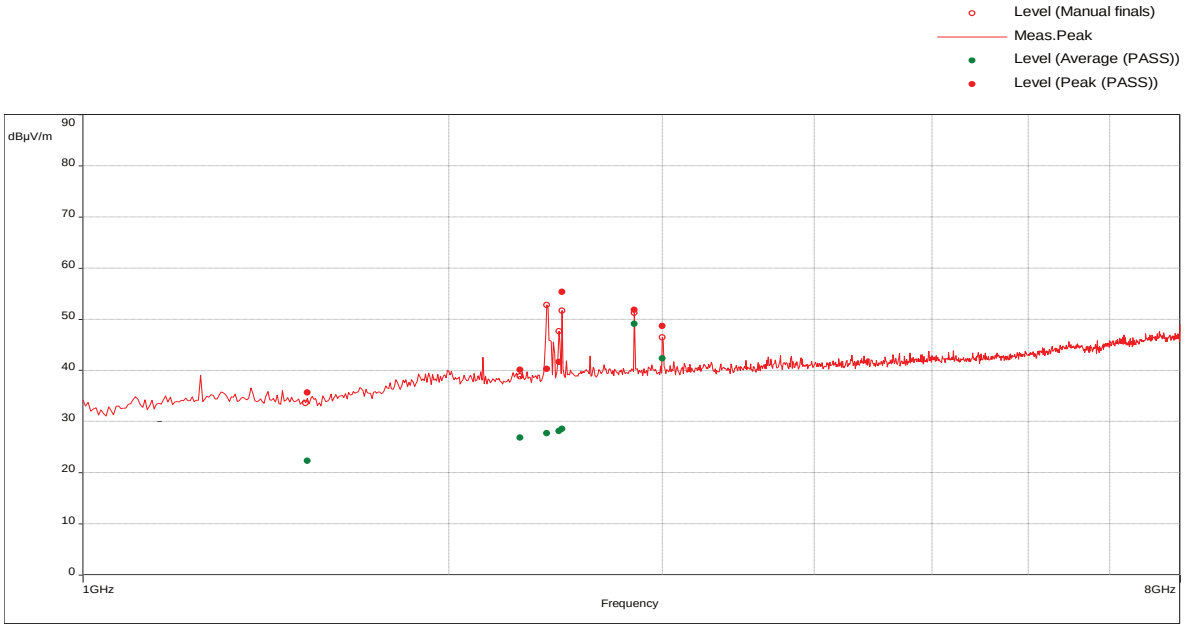
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Hi-PIM Radiated Emissions, 1-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 64QAM, Mid Channel

Test Information:

Date and Time	11/20/2022 3:19:20 PM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 8: Mid Ch (Hi-PIM), 5 MHz 64QAM, RE 1-8 Ghz SA mode

Graph:



Results:

EIRP Level (PASS) (7)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1528.421053	35.65	-59.61	-13	-46.61	242.00	1.65	Horizontal	1000000.00	-7.97
2292.368421	40.13	-55.13	-13	-42.13	4.00	1.70	Horizontal	1000000.00	-3.76
2411.578947	40.31	-54.95	-13	-41.95	252.00	2.10	Vertical	1000000.00	-3.31
2463.947368	41.65	-53.61	-13	-40.61	53.00	2.45	Horizontal	1000000.00	-2.92
2480	55.38	-39.88	-13	-26.88	45.00	1.00	Vertical	1000000.00	-2.78
2844.473684	51.82	-43.44	-13	-30.44	112.00	1.30	Vertical	1000000.00	-2.40
3000	48.66	-46.6	-13	-33.6	119.00	1.35	Vertical	1000000.00	-2.02

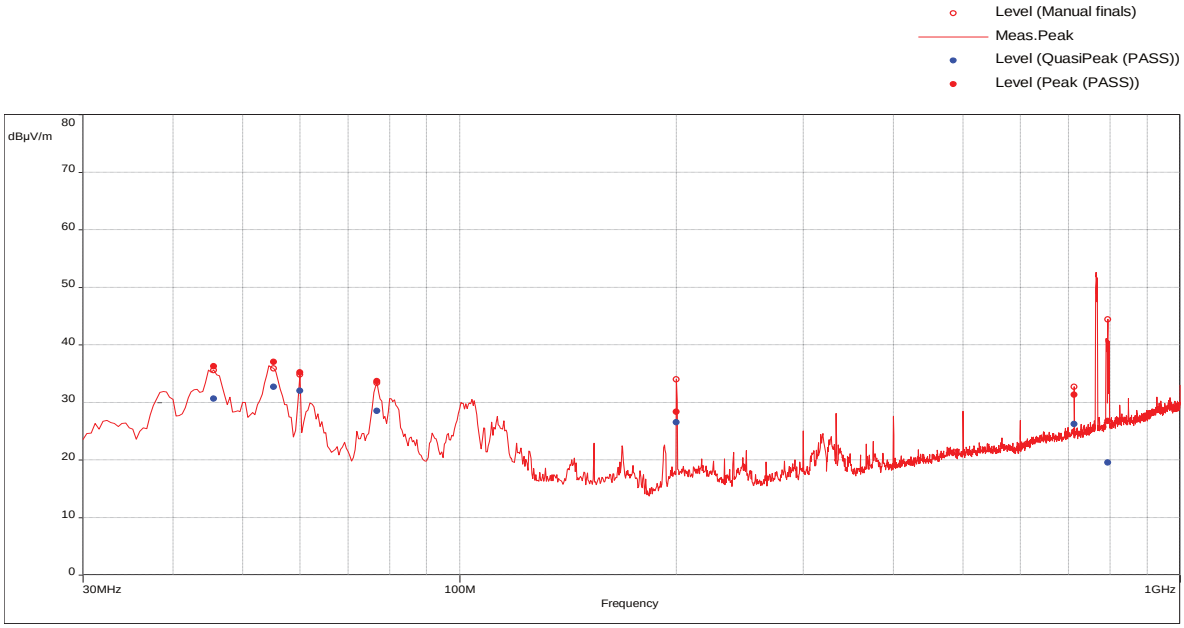
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Hi-PIM Radiated Emissions, 30-1000 MHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, High Channel

Test Information:

Date and Time	11/20/2022 12:57:51 PM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 6: High Ch (Hi-PIM), 5 MHz 16QAM, RE 30-1000MHz SA mode

Graph:



Results:

EIRP Level (PASS) (7)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
45.50526316	36.26	-48.54	-13	-35.54	257.00	2.10	Vertical	120000.00	-23.05
55.04210526	37.04	-47.76	-13	-34.76	46.00	2.52	Vertical	120000.00	-25.70
60	35.18	-49.62	-13	-36.62	82.00	1.57	Vertical	120000.00	-25.34
76.98947368	33.69	-51.11	-13	-38.11	257.00	2.90	Vertical	120000.00	-24.83
200	28.38	-56.42	-13	-43.42	149.00	2.09	Vertical	120000.00	-19.11
713.1684211	31.37	-53.43	-13	-40.43	112.00	2.12	Horizontal	120000.00	-8.62
793.8736842	26.74	-58.06	-13	-45.06	10.00	3.99	Horizontal	120000.00	-7.41

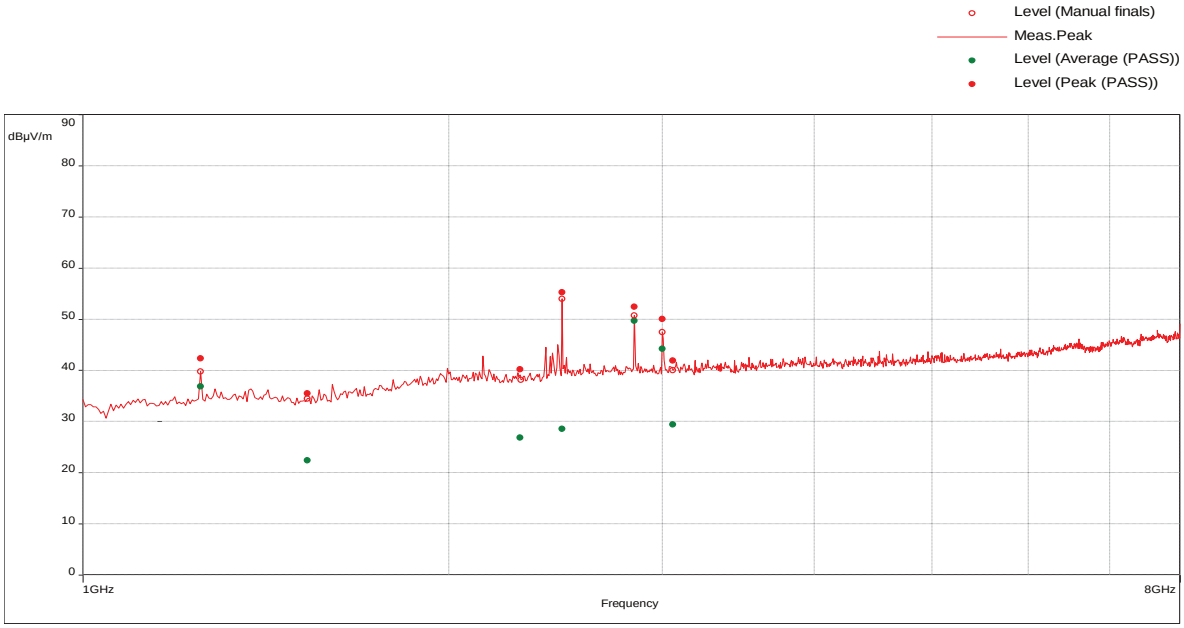
Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

Hi-PIM Radiated Emissions, 1-8 GHz
Worst-case output power: Bandwidth: 5 MHz, Modulation: 16QAM, High Channel

Test Information:

Date and Time	11/20/2022 2:10:23 PM
Client and Project Number	CommScope
Engineer	Kouma Sinn
Temperature	24 C
Humidity	17 %
Atmospheric Pressure	1003 mbar
Comments	Scan 7: High Ch (Hi-PIM), 5 MHz 16QAM, RE 1-8 Ghz SA mode

Graph:



Results:

EIRP Level (PASS) (7)

Frequency (MHz)	Peak Level (dBµV/m)	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1250	42.38	-52.88	-13	-39.88	46.00	1.80	Horizontal	1000000.00	-7.62
1529.736842	35.53	-59.73	-13	-46.73	103.00	1.50	Vertical	1000000.00	-7.97
2292.368421	40.26	-55	-13	-42	323.00	3.39	Horizontal	1000000.00	-3.76
2480	55.26	-40	-13	-27	45.00	1.00	Vertical	1000000.00	-2.78
2844.473684	52.41	-42.85	-13	-29.85	111.00	1.35	Vertical	1000000.00	-2.40
3000	50.02	-45.24	-13	-32.24	154.00	1.45	Vertical	1000000.00	-2.02
3059.736842	41.93	-53.33	-13	-40.33	293.00	1.75	Vertical	1000000.00	-1.57

Notes:
The level in EIRP (dBm) is calculated from peak readings as:
EIRP Level (dBm) = Peak Level (dBuV/m) + 20*LOG(d) -104.8, where d is the measurement distance (in the far field region) in meter.

	Product Standard: CFR47 FCC Part 90			Limit applied: See Report Section 9.3 Pretest Verification w/BB source: N/A			
Test Date	Test Personnel/ Initials	Supervising Engineer/ Initials	Input Voltage	Mode	Atmospheric Data		
					Temp C°	Relative Humidity %	Atmospheric Pressure mbar
11/19/2022	Kouma Sinn KPS	N/A	POE	Transmit	24	14	1009
11/21/2022	Vathana F. Ven VFV	N/A	POE	Transmit	28	12	1013

Deviations, Additions, or Exclusions: None

10 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	11/30/2022	105250625BOX-001	KPS	VFV	Original Issue
1	12/20/2022	105250625BOX-001.1	KPS	VFV	Included combined power in power tables in Section 6.3
2	01/11/2023	105250625BOX-001.2	KPS	VFV	Re-measured output power for Lo-PIM-TM3.1-64QAM-5MHz BW