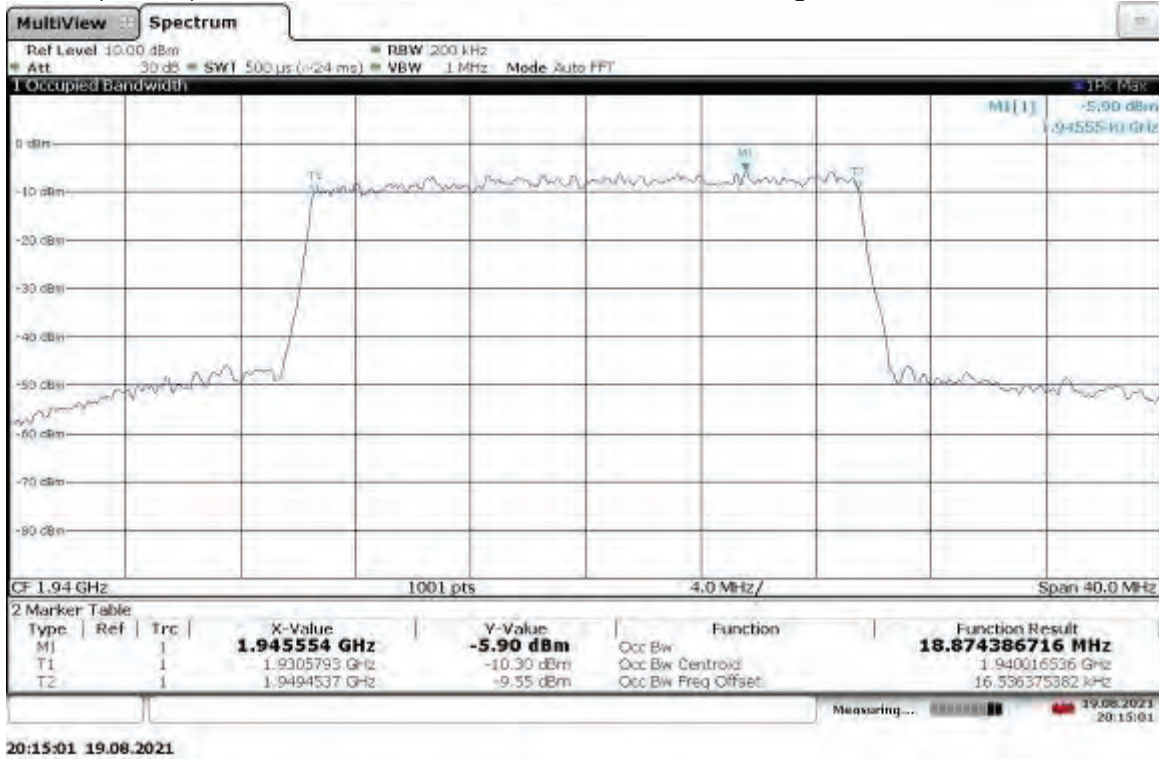
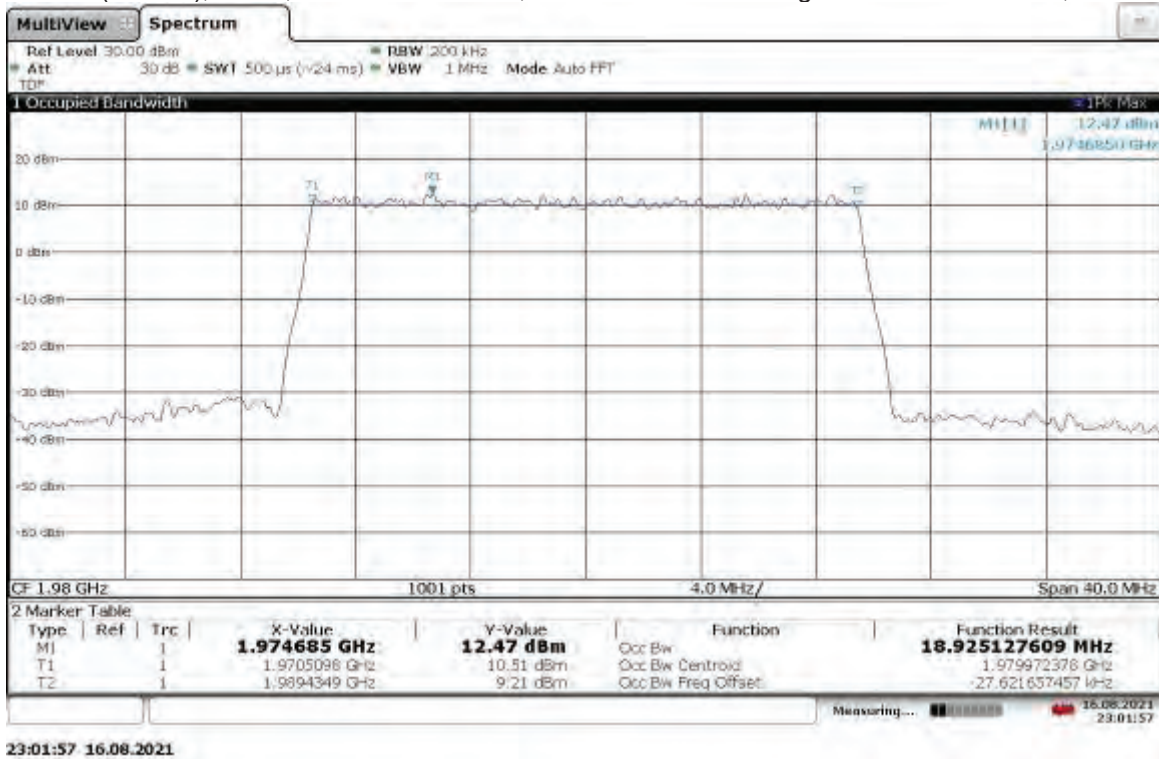


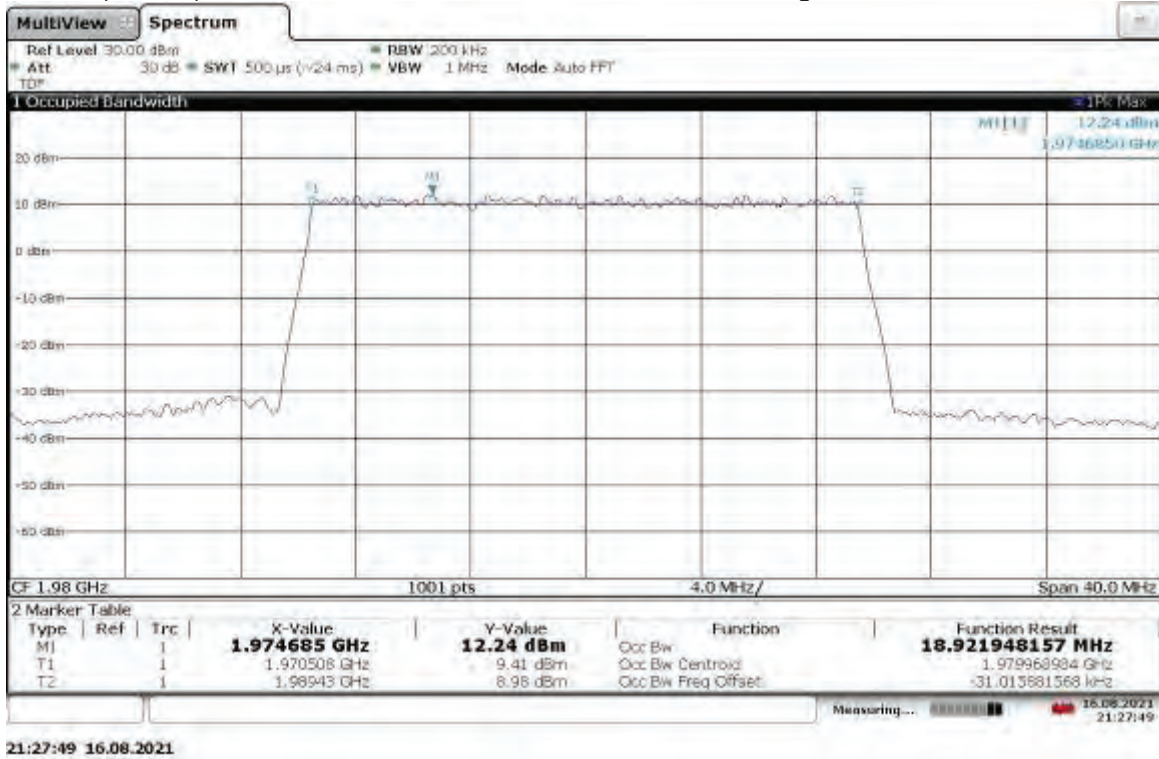
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz High Channel 1980 MHz, -30 °C



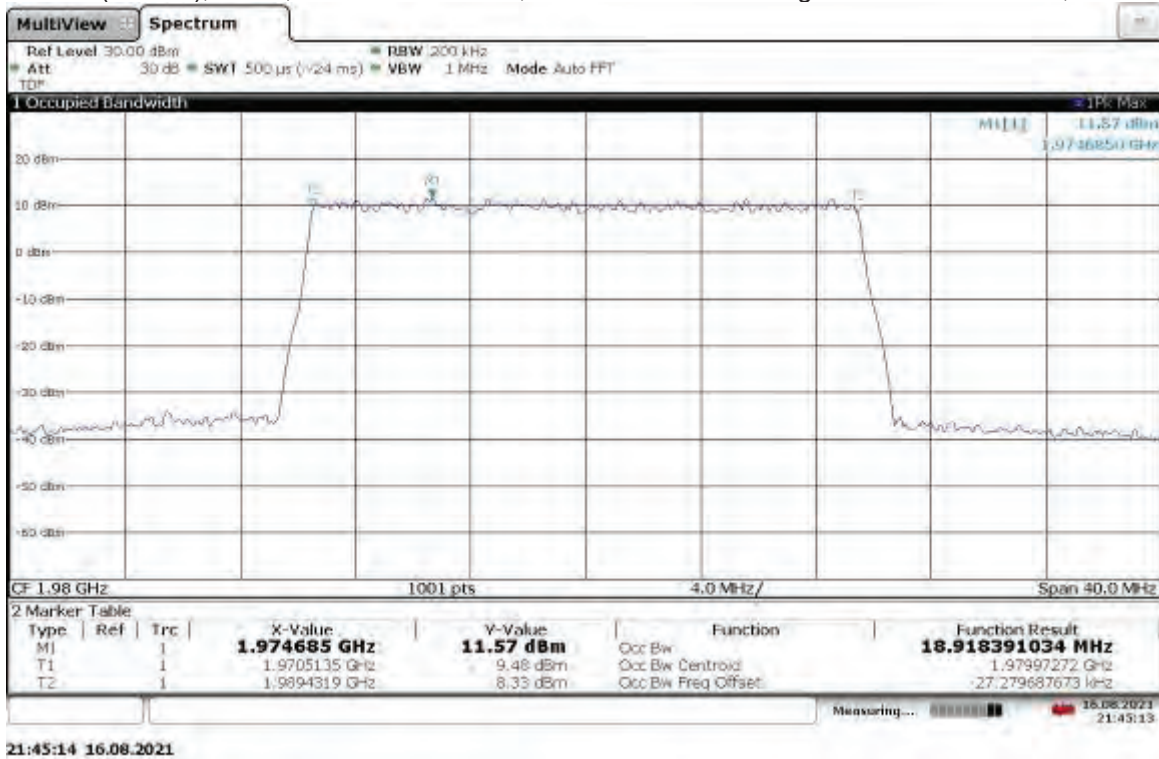
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz High Channel 1980 MHz, 10 °C



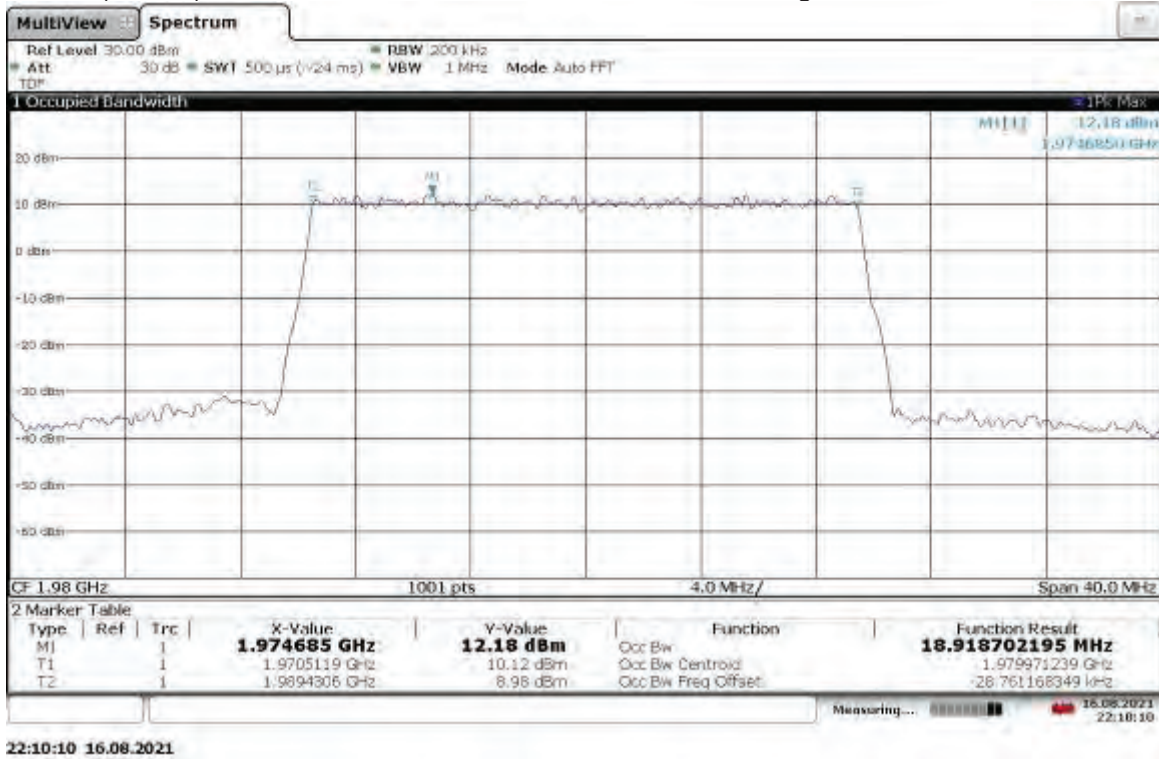
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz High Channel 1980 MHz, 20 °C



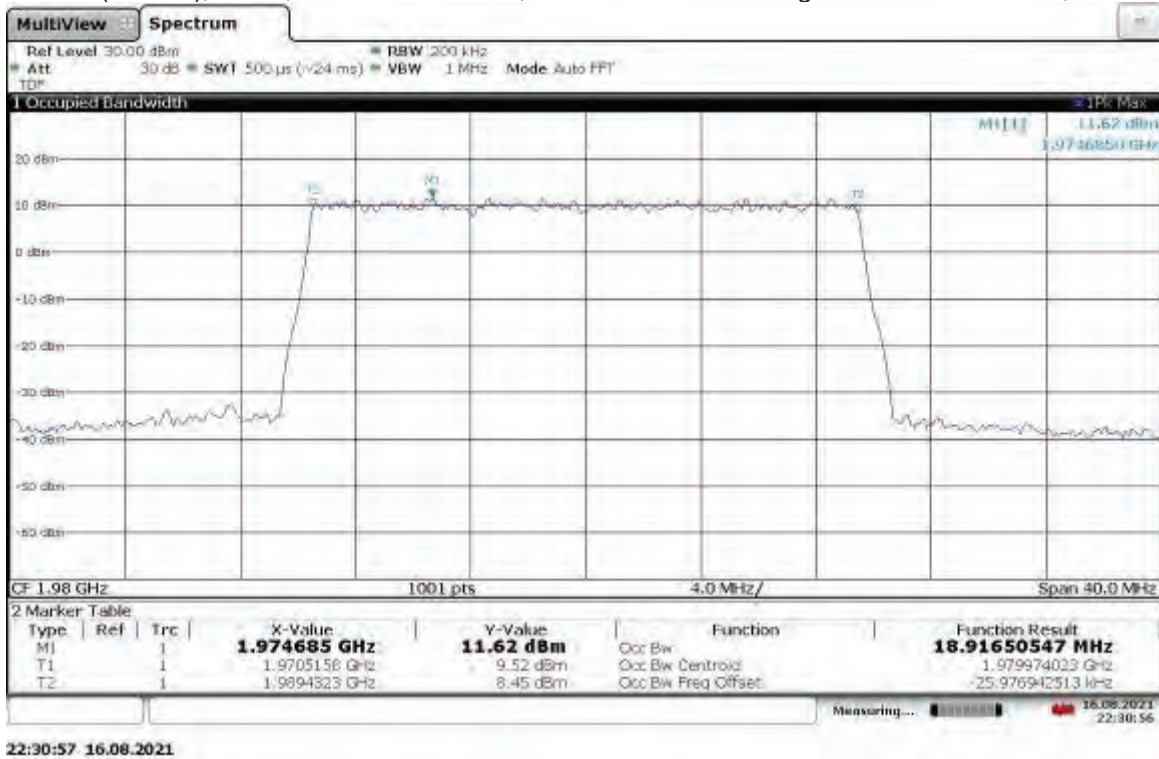
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz High Channel 1980 MHz, 30 °C



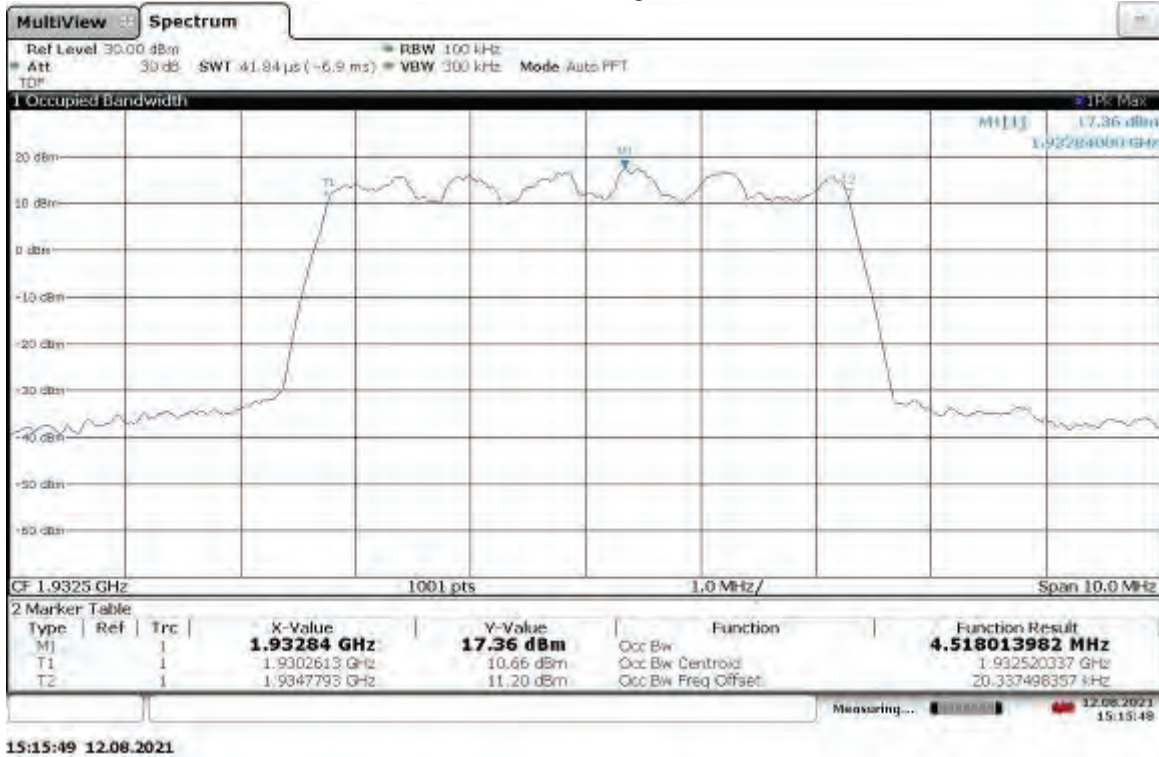
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz High Channel 1980 MHz, 40 °C



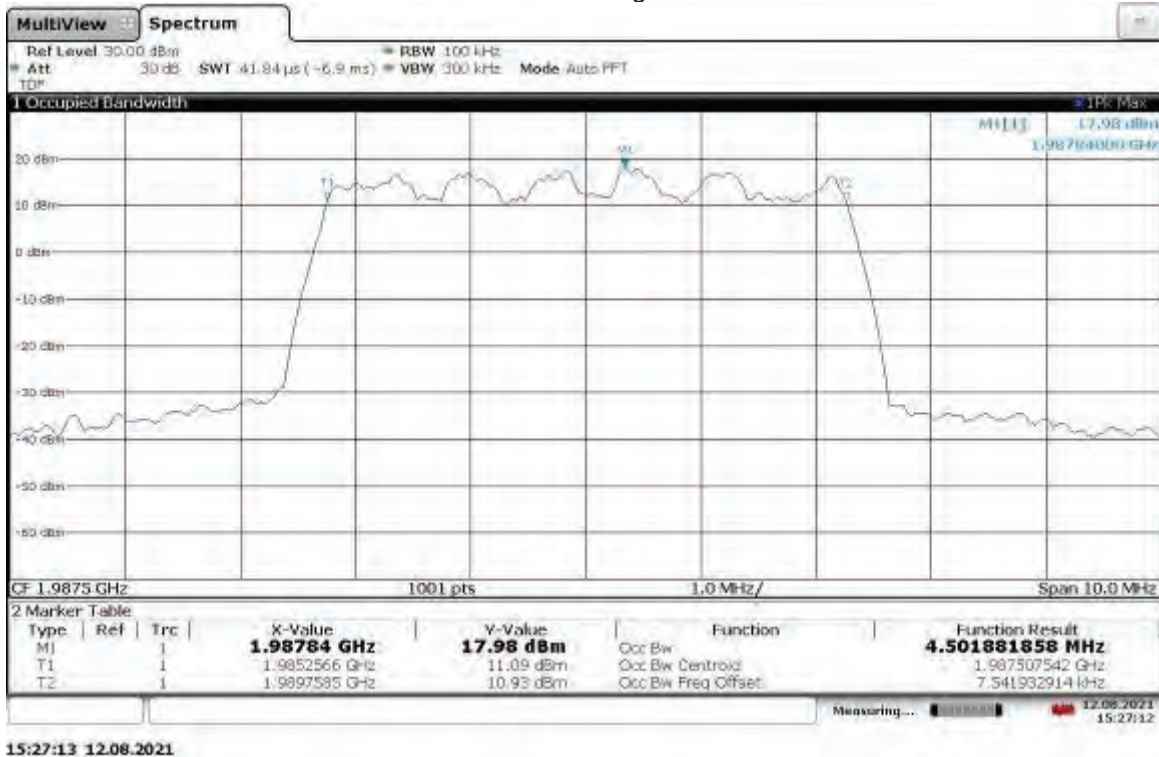
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz High Channel 1980 MHz, 50 °C



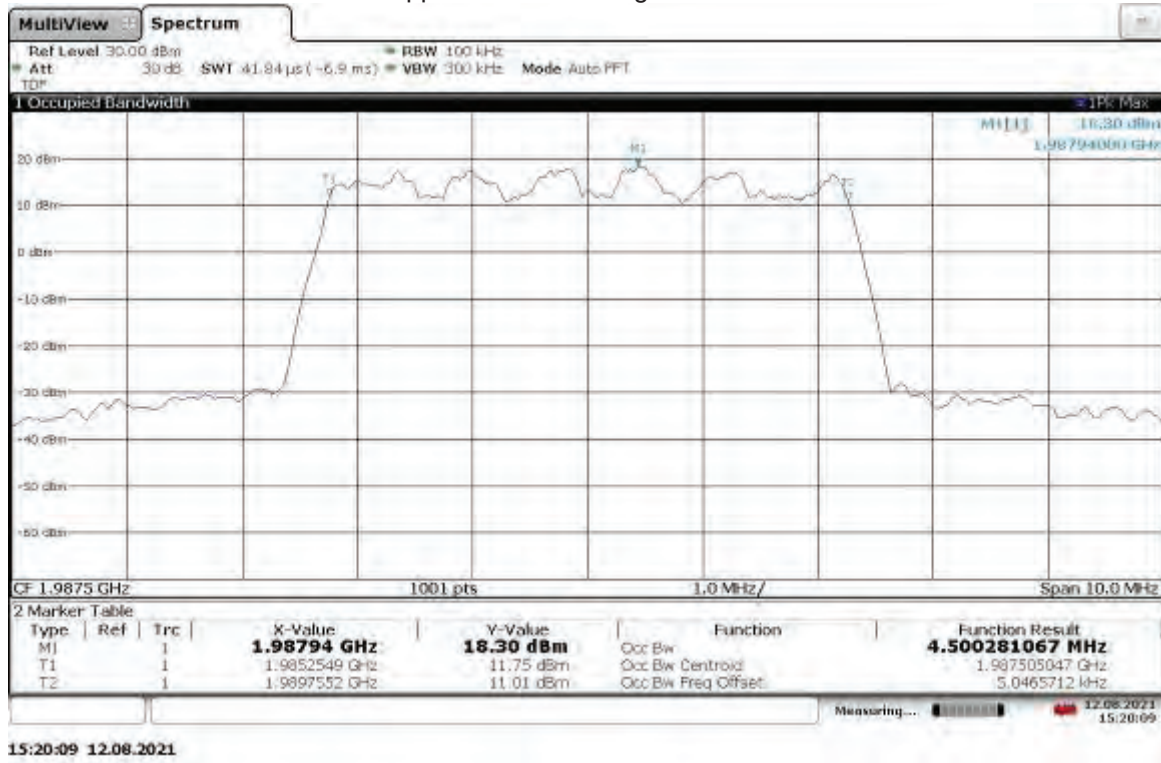
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, Low Channel,
Lower Extreme Voltage: 41.1VDC



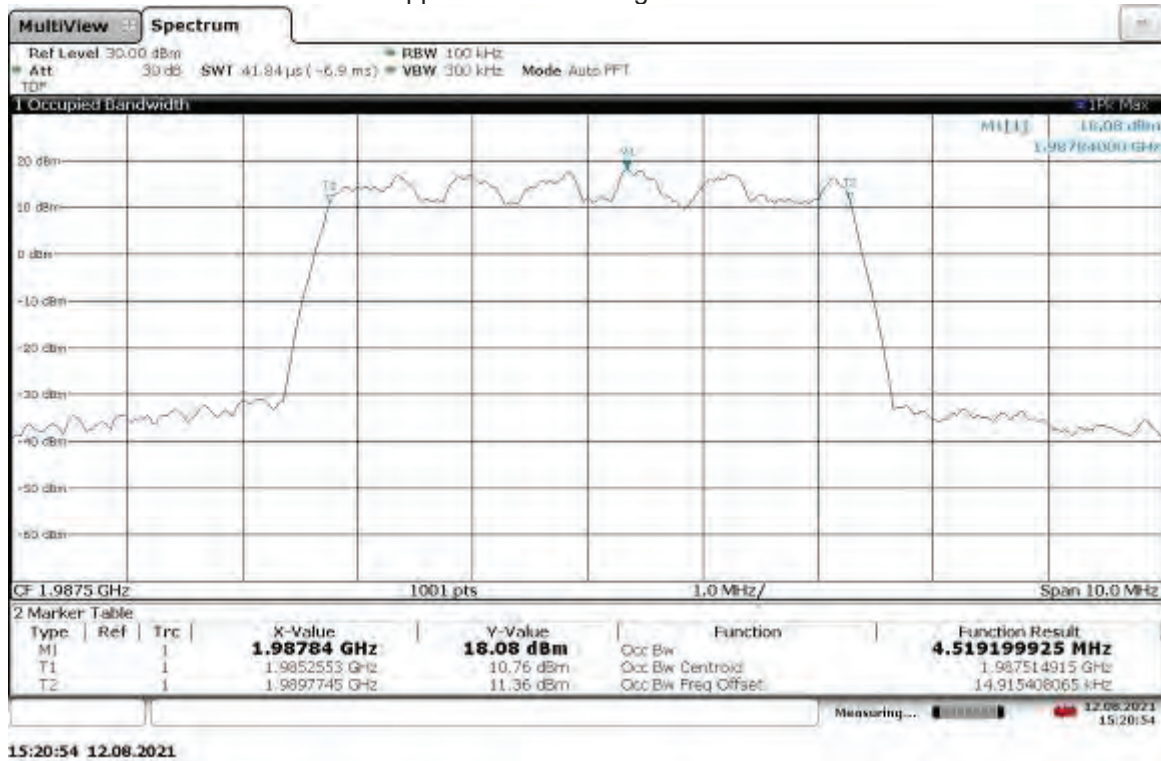
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, High Channel,
Lower Extreme Voltage: 41.1VDC



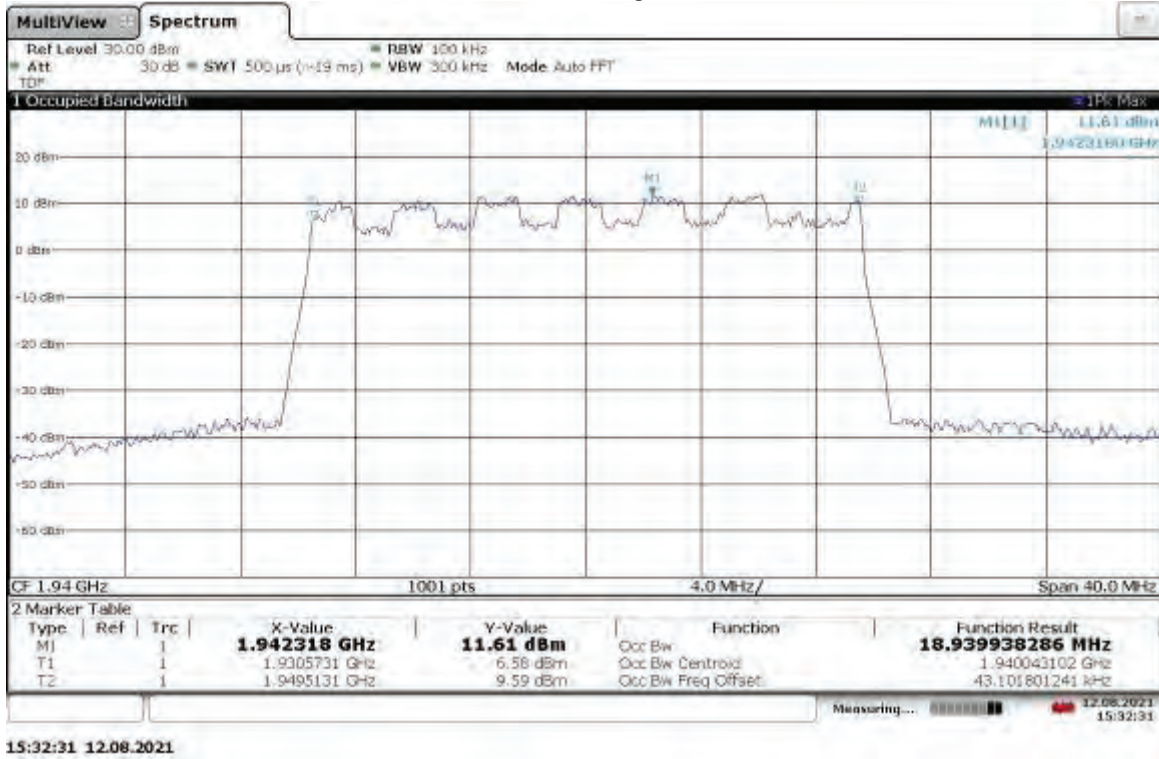
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, Low Channel,
Upper Extreme Voltage: 57.0VDC



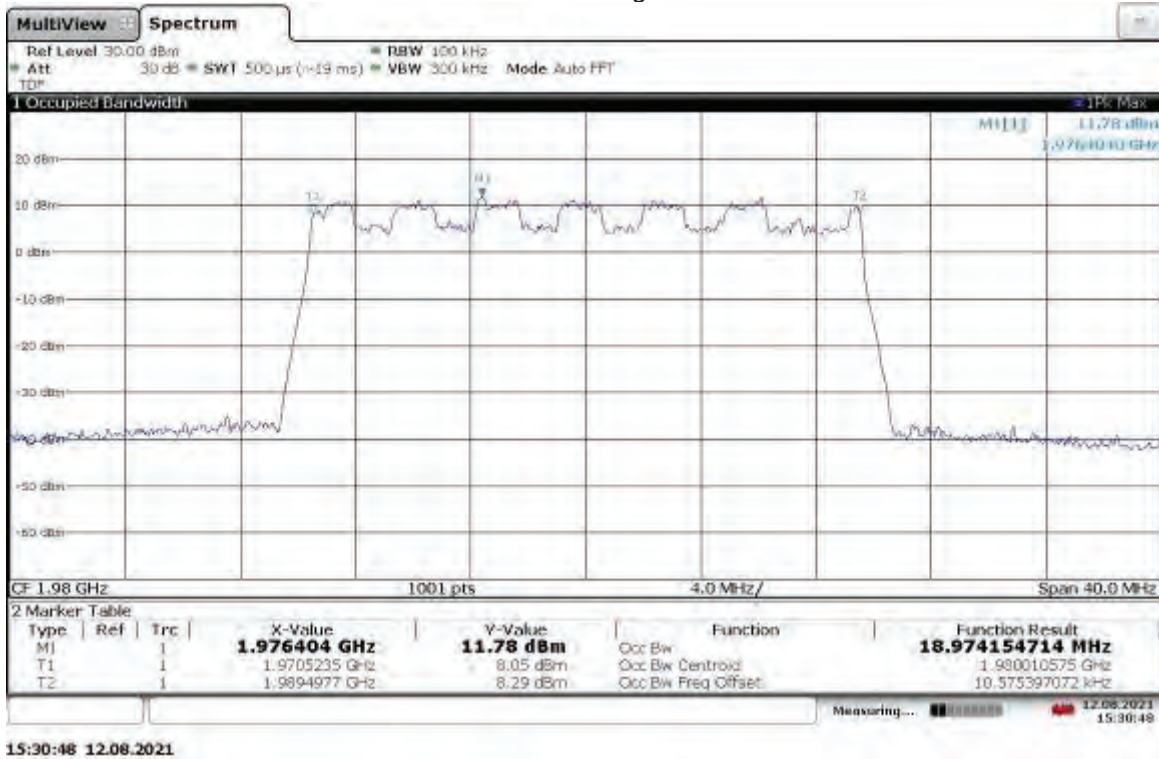
Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, High Channel,
Upper Extreme Voltage: 57.0VDC



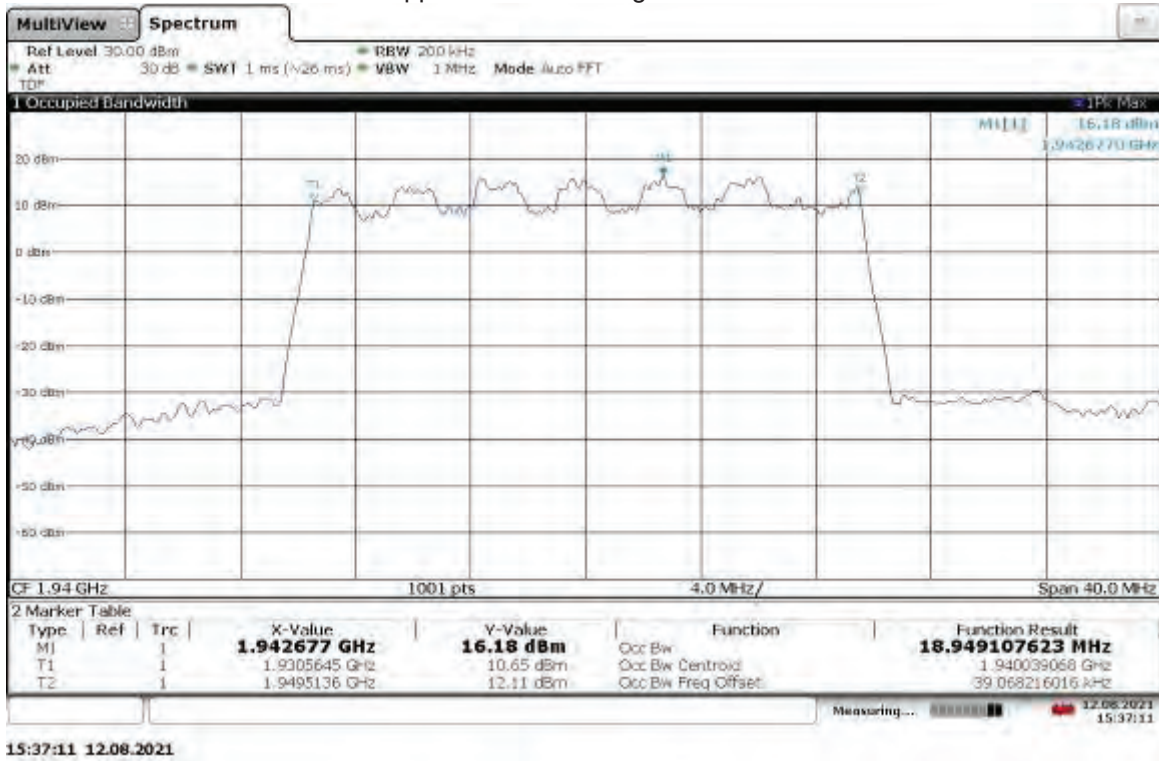
Slot 2 (Band 2), ANT0, Modulation: QPSK, Bandwidth: 20 MHz, Low Channel,
Lower Extreme Voltage: 41.1VDC



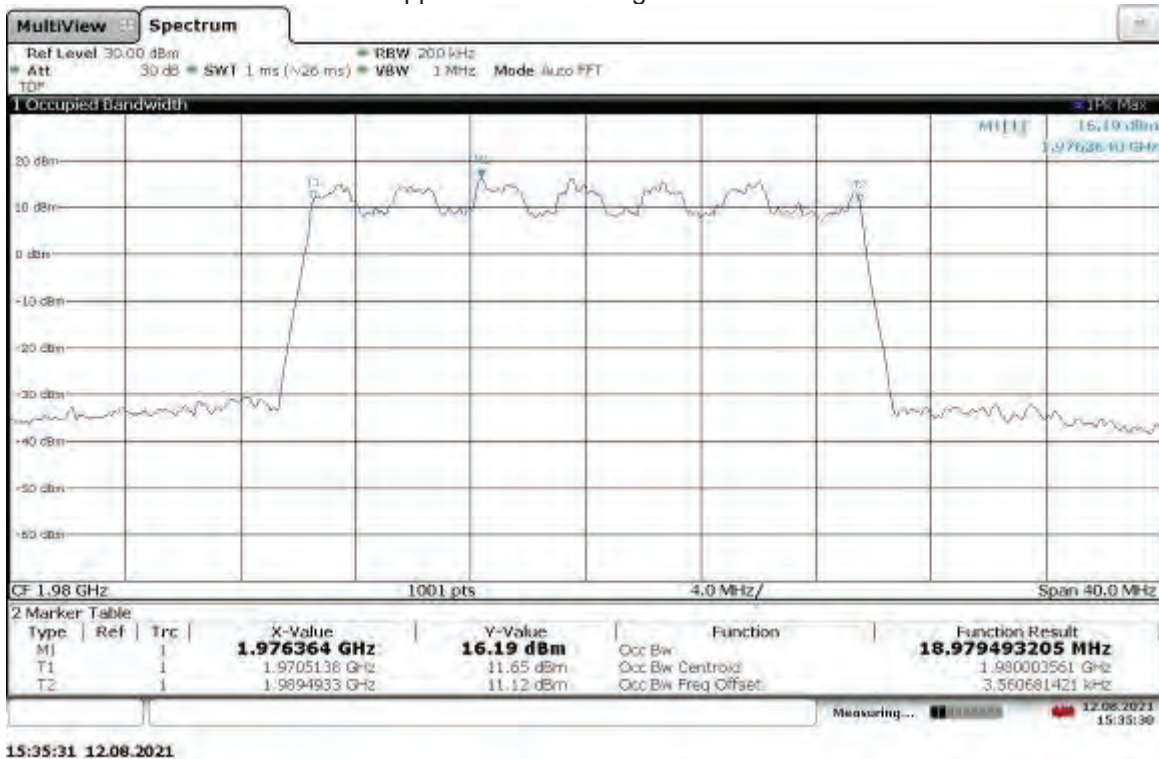
Slot 2 (Band 2), ANT0, Modulation: QPSK, Bandwidth: 20 MHz, High Channel,
Lower Extreme Voltage: 41.1VDC



Slot 0 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz, Low Channel,
Upper Extreme Voltage: 57.0VDC



Slot 2 (Band 2), ANT1, Modulation: QPSK, Bandwidth: 20 MHz, High Channel,
Upper Extreme Voltage: 57.0VDC



Test Personnel: Vathana Ven 
Supervising/Reviewing
Engineer:
(Where Applicable) N/A

Product Standard: FCC Part 24
Input Voltage: 48VDC (POE)

Pretest Verification w/
Ambient Signals or
BB Source: N/A

Test Date: 08/12/2021, 08/19/2021,
08/16/2021, 08/19/2021

Limit Applied: See report section 10.3

Ambient Temperature: 22, 22, 23, 24 °C

Relative Humidity: 41, 44, 34, 68 %

Atmospheric Pressure: 1011, 1002, 1005, 1008 mbars

Deviations, Additions, or Exclusions: None

11 Transmitter spurious emissions

11.1 Method

Tests are performed in accordance with ANSI C63.26 and CFR47 FCC Parts 2.1051, 2.1053, 2.1057, and 24

TEST SITE: EMC 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.

Measurement Uncertainty

Measurement	Frequency Range	Expanded Uncertainty (k=2)	Ucisp
Radiated Emissions, 10m	30-1000 MHz	4.6dB	6.3 dB
Radiated Emissions, 3m	30-1000 MHz	5.3 dB	6.3 dB
Radiated Emissions, 3m	1-6 GHz	4.5 dB	5.2 dB
Radiated Emissions, 3m	6-15 GHz	5.2 dB	5.5 dB
Radiated Emissions, 3m	15-18 GHz	5.0 dB	5.5 dB
Radiated Emissions, 3m	18-40 GHz	5.0 dB	5.5 dB

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 dB μ V/m
- RA = Receiver Amplitude (including preamplifier) in dB μ V
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- 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 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$$RA = 52.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB/m}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$FS = 32 \text{ dB}\mu\text{V/m}$$

To convert from dB μ V to μ V or mV the following was used:

$$UF = 10^{(NF / 20)} \text{ where } UF = \text{Net Reading in } \mu\text{V}$$
$$NF = \text{Net Reading in dB}\mu\text{V}$$

Example:

$$FS = RA + AF + CF - AG = 52.0 + 7.4 + 1.6 - 29.0 = 32.0$$

$$UF = 10^{(32 \text{ dB}\mu\text{V} / 20)} = 39.8 \mu\text{V/m}$$

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.

11.2 Test Equipment Used:

Test equipment used for antenna port conducted test

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
CEN001'	DC-40GHz attenuator 20dB	Centric RF	C411-20	CEN001	01/22/2021	01/22/2022
CBLSHF204'	Cable, SMA - SMA, 9kHz -40GHz, (Cable Kit 5)	Huber + Suhner	Sucoflex 102EA	234714001	02/03/2021	02/03/2022
ROS005-1'	Signal and Spectrum Analyzer	Rohde and Schwartz	FSW43	100646	10/27/2020	10/27/2021
DAV005'	Weather Station	Davis	6250	MS191218083	02/07/2021	02/07/2022

Software Utilized:

Name	Manufacturer	Version
None	--	--

Test equipment used for Radiated emissions

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
IW001'	2 meter cable	Insulated Wire	2801-NPS	001	10/07/2020	10/07/2021
HS003'	10m under floor cable	Huber-Schuner	10m-1	HS003	02/17/2021	02/17/2022
HS002'	DC-18GHz cable 1.4m long	Huber & Suhner	SucoFlex 106A	HS002	11/25/2020	11/25/2021
PRE11'	50dB gain preamp	Pasternack	PRE11	PRE11	09/02/2021	09/02/2022
IW006'	DC-18GHz cable 8.4m long	Insulated Wire	2800-NPS	IW006	11/25/2020	11/25/2021
PRE12'	Pre-amplifier	Com Power	PAM-118A	18040117	12/07/2020	12/07/2021
145145'	Broadband Hybrid Antenna 30 MHz - 3 GHz	Sunol Sciences Corp.	JB3	A122313	06/09/2021	09/09/2022
EMC04'	ANTENNA, RIDGED GUIDE, 18-40 GHZ	EMCO	3116	2090	01/28/2021	01/28/2022
CBLSHF204'	Cable, SMA - SMA, 9kHz -40GHz, (Cable Kit 5)	Huber + Suhner	Sucoflex 102EA	234714001	02/03/2021	02/03/2022
145108'	EMI Test Receiver (20Hz - 40GHz)	Rohde & Schwarz	ESIB40	100209	06/22/2021	06/22/2022
PRE8'	PREAMPLIFIER 1- 40 GHz	MITEQ	NSP4000-NF	507145	11/25/2020	11/25/2021
DAV007'	Weather Station Vantage Vue	Davis	6250	MS191212003	03/22/2021	03/22/2022
ETS005'	1-18GHz horn antenna	ETS-Lindgren	3117	00218279	09/28/2020	09/28/2021
PRE10'	30-1000MHz pre-amp	ITS	PRE10	PRE10	02/17/2021	02/17/2022

Software Utilized:

Name	Manufacturer	Version
BAT-EMC	Nexio	3.18.0.16

11.3 Results:

The sample tested was found to Comply. Where a resolution bandwidth of less than 1 MHz was used (in some cases, 120 kHz or 100 kHz), more than 10 dB margin to the limit is shown. Since the two antenna ports transmit uncorrelated data streams and use cross polarized antennas, no adjustments to the test results were applied due to MIMO operation, per KDB 662911.

§24.238(a): The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

(b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). 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.

Note: All spurious emissions were tested with narrowest bandwidth and QPSK modulation settings. Since there were no emissions within 30dB of limit, and settings had ~1dB effect on peak readings, other settings were not tested and EUT was considered compliant.

11.4 Setup Photographs:

9kHz-30 MHz Test Setup

Photographs are available in a separate exhibit

30-1000 MHz Test Setup

Photographs are available in a separate exhibit

1-18 GHz Test Setup

Photographs are available in a separate exhibit

18-22 GHz

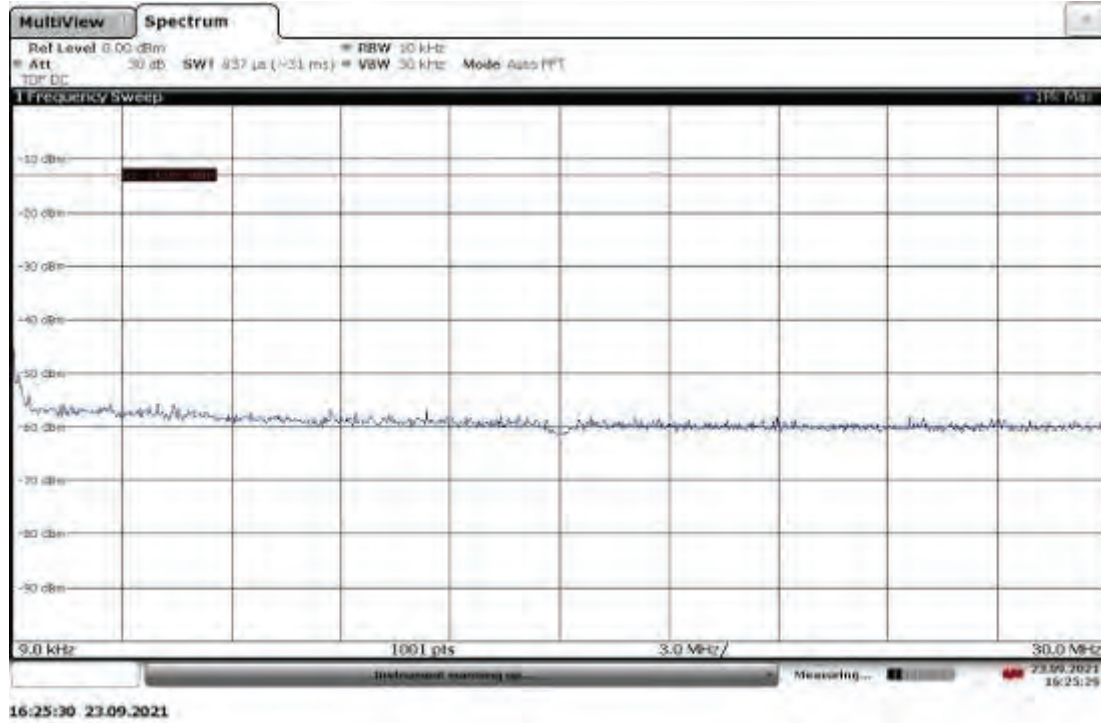
Photographs are available in a separate exhibit

Antenna Port Conducted Test Setup

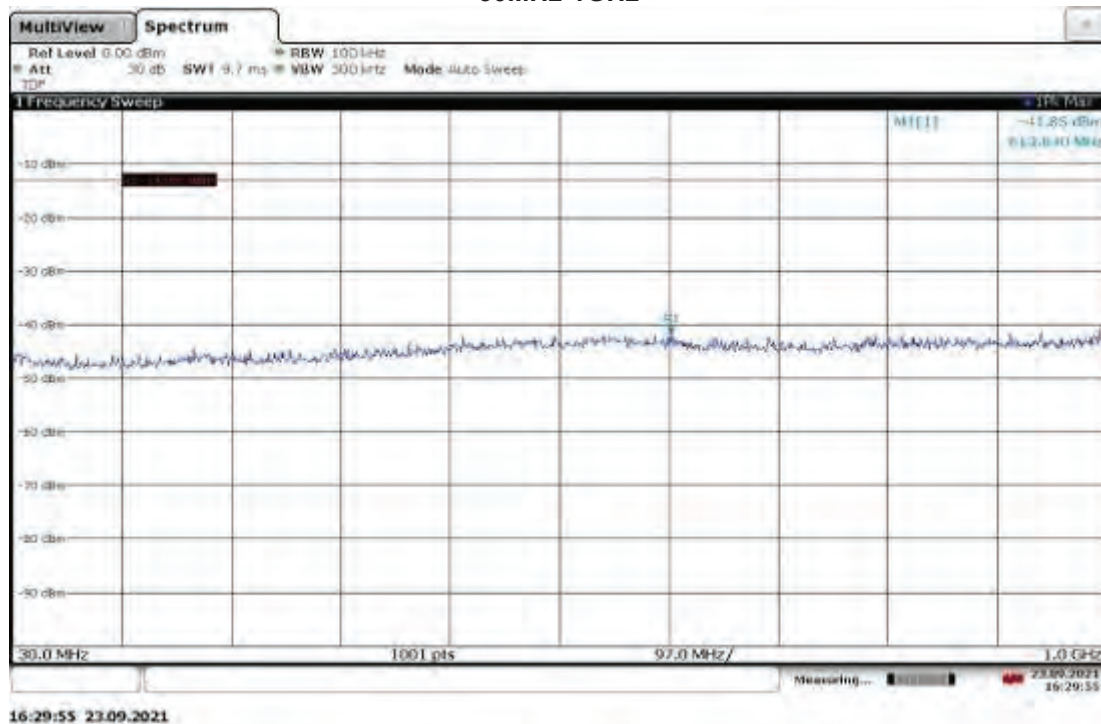
Photographs are available in a separate exhibit

11.5 Plots/Data:

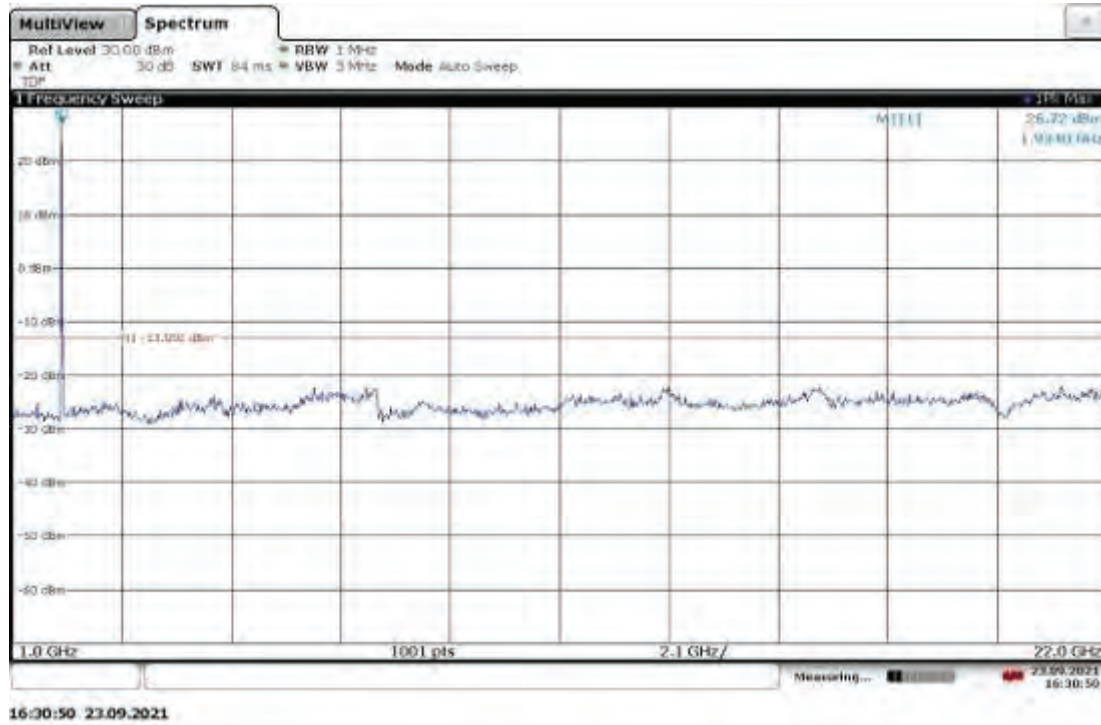
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 1932.5 MHz
9kHz-30MHz



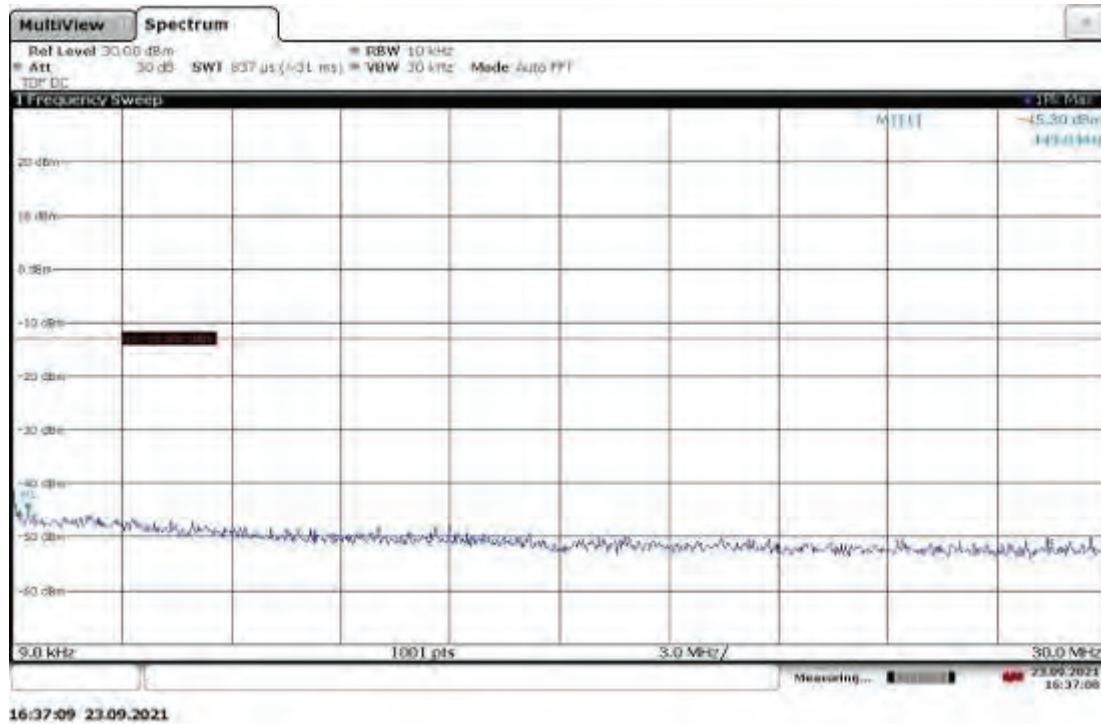
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 1932.5 MHz
30MHz-1GHz



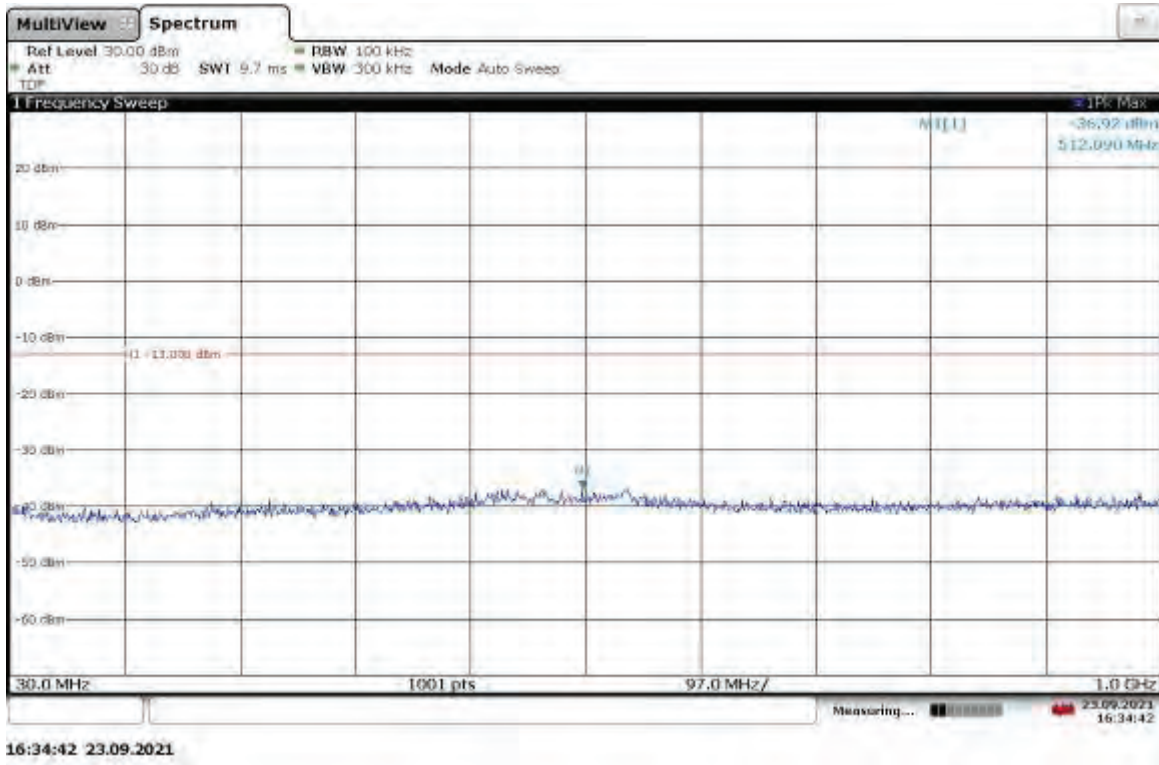
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 1932.5 MHz
1-22 GHz



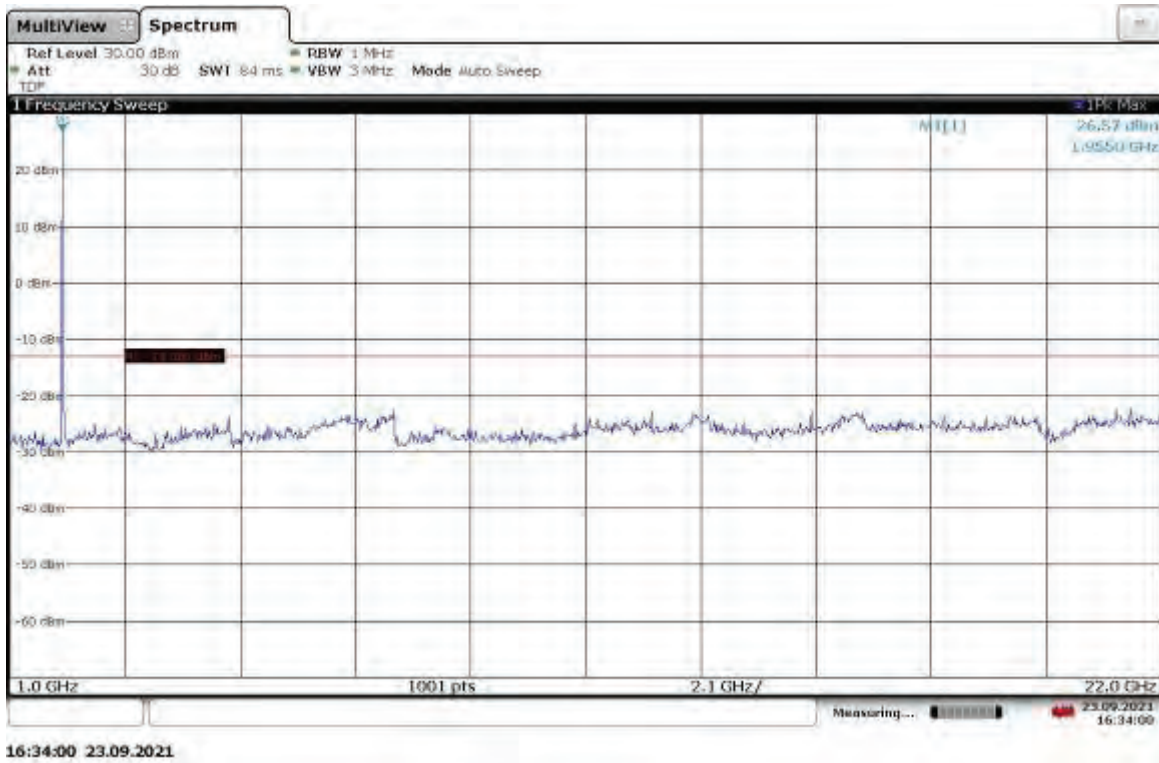
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
9kHz-MHz



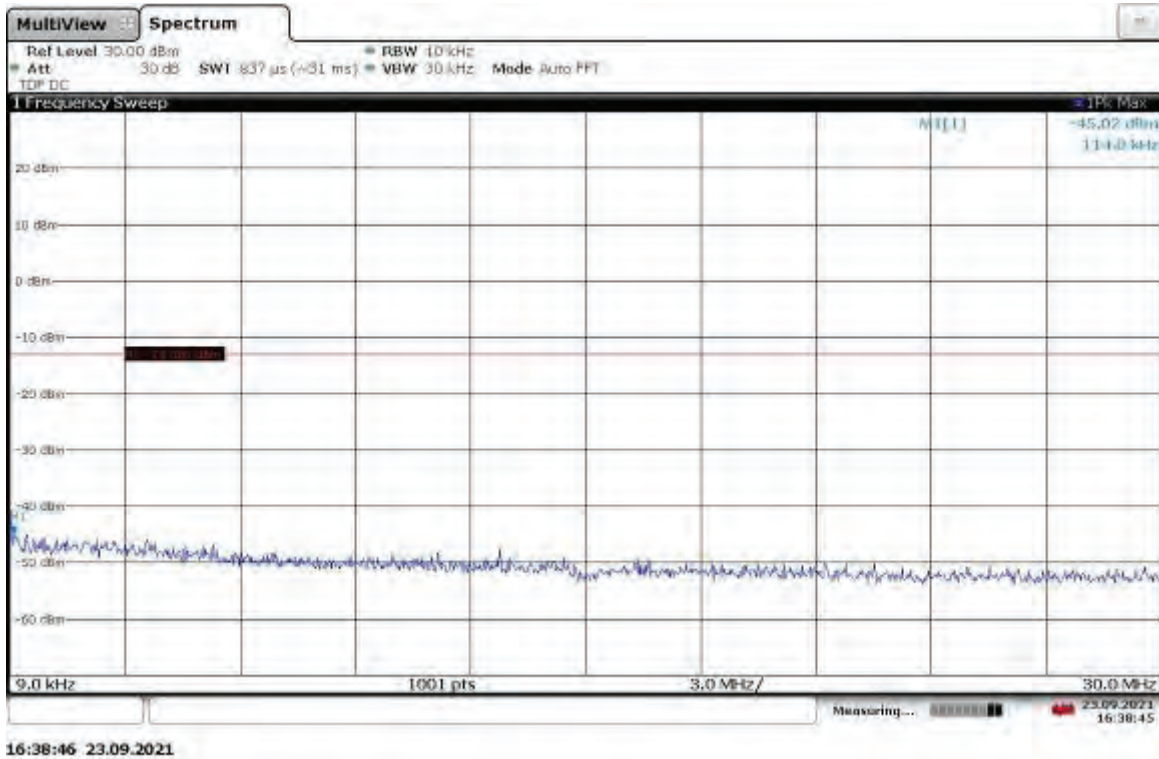
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
30MHz-1GHz



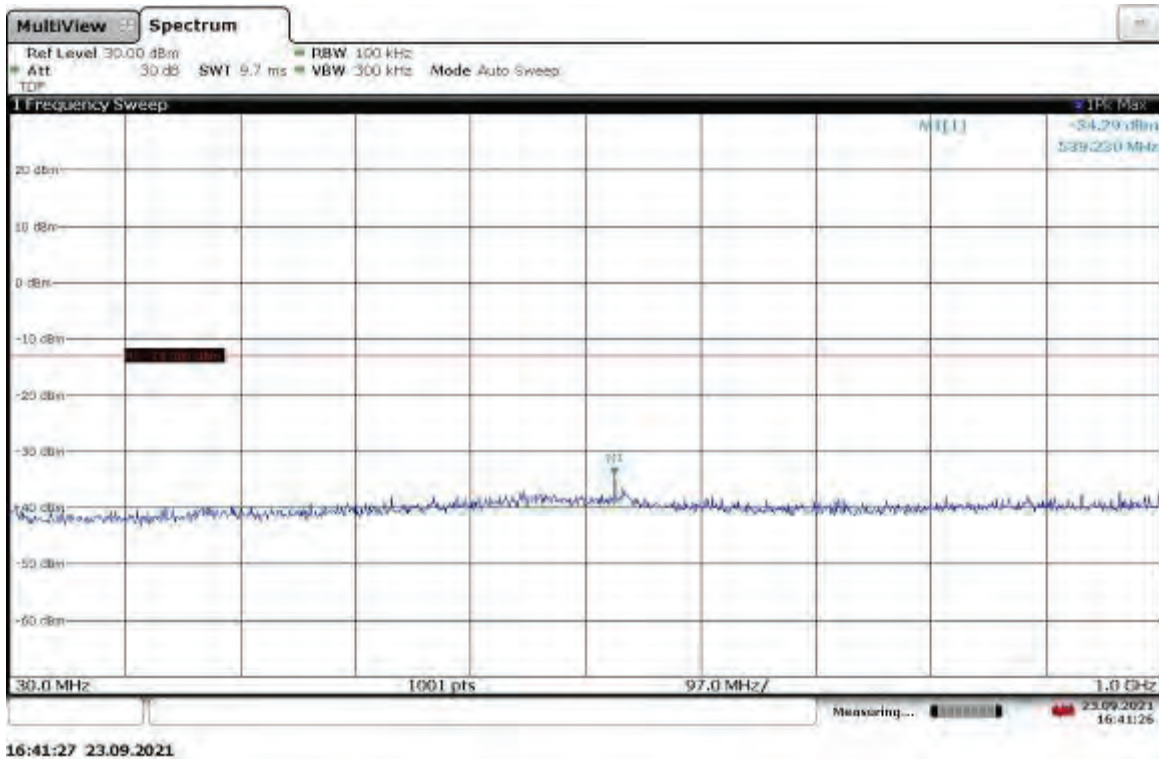
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
1-22GHz



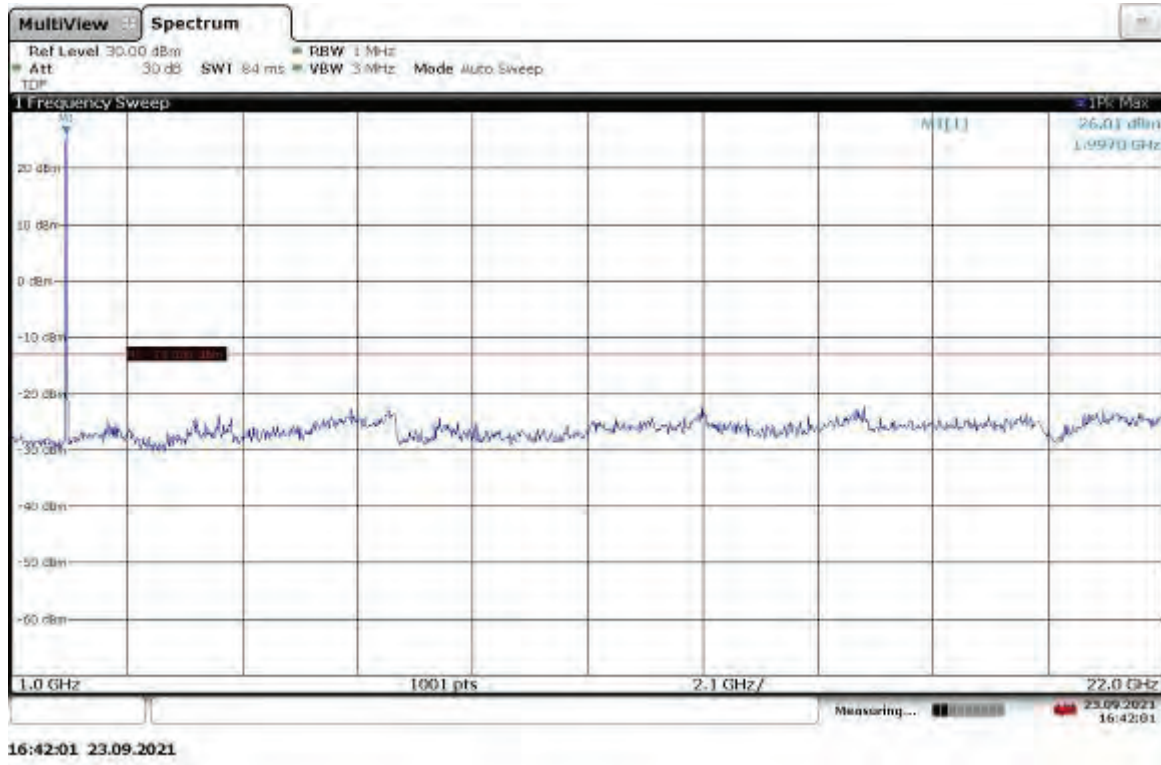
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
9kHz-30MHz



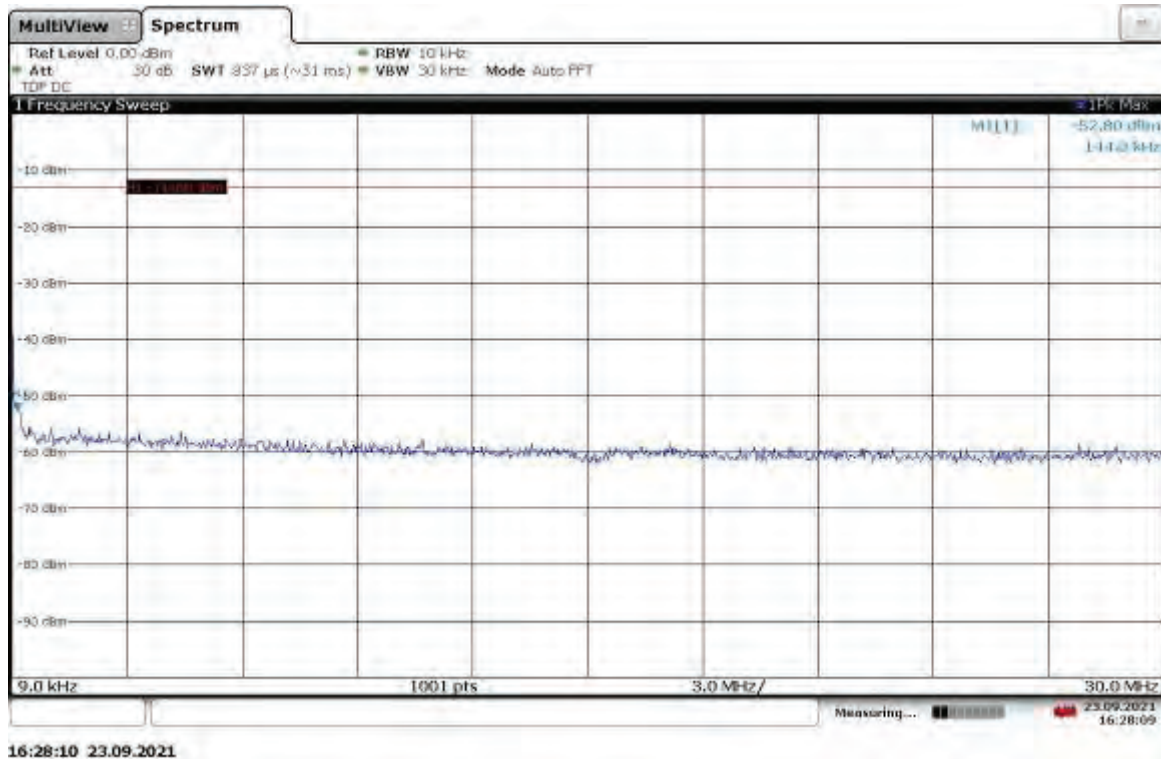
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
30MHz-1GHz



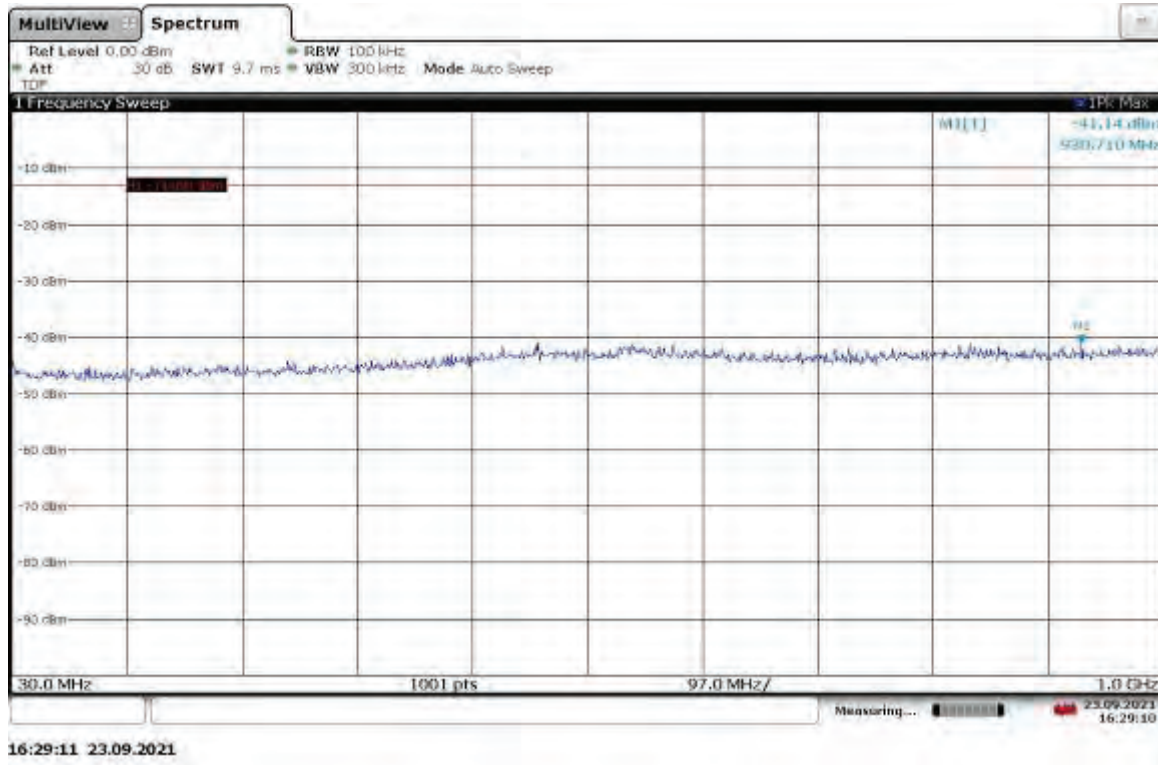
Slot 2 (Band 2), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
1-22GHz



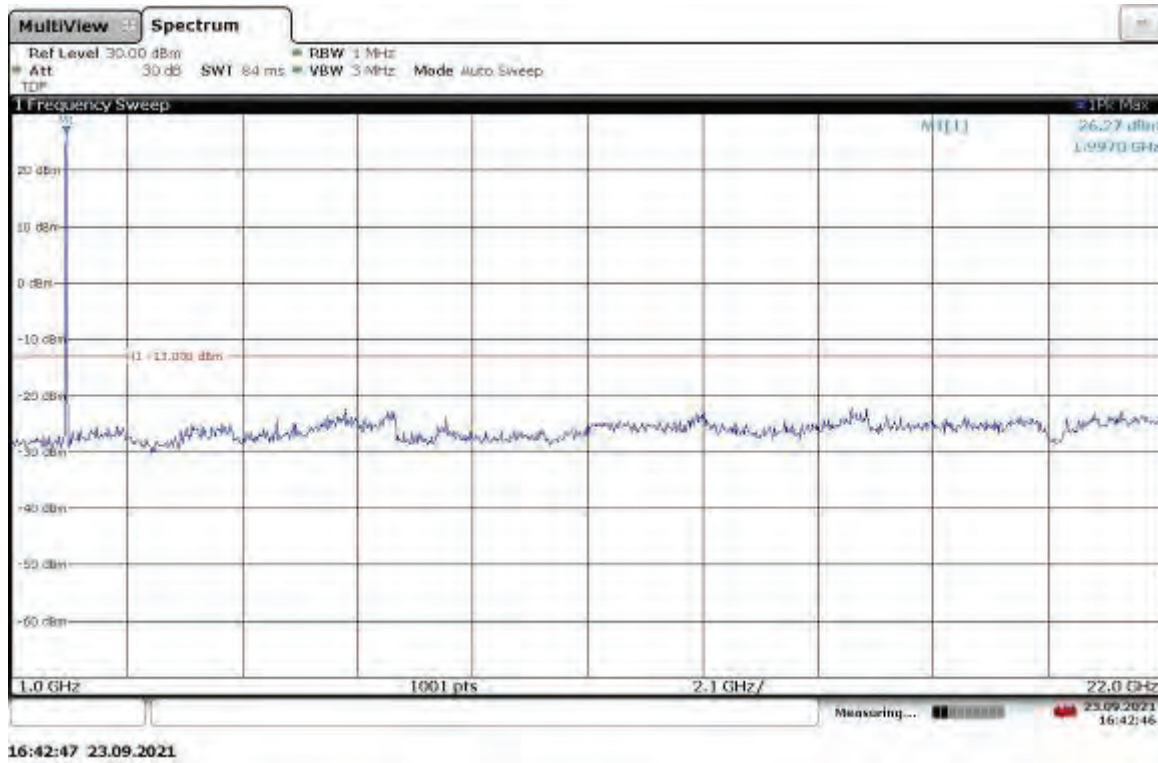
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 1932.5 MHz
9kHz-30MHz



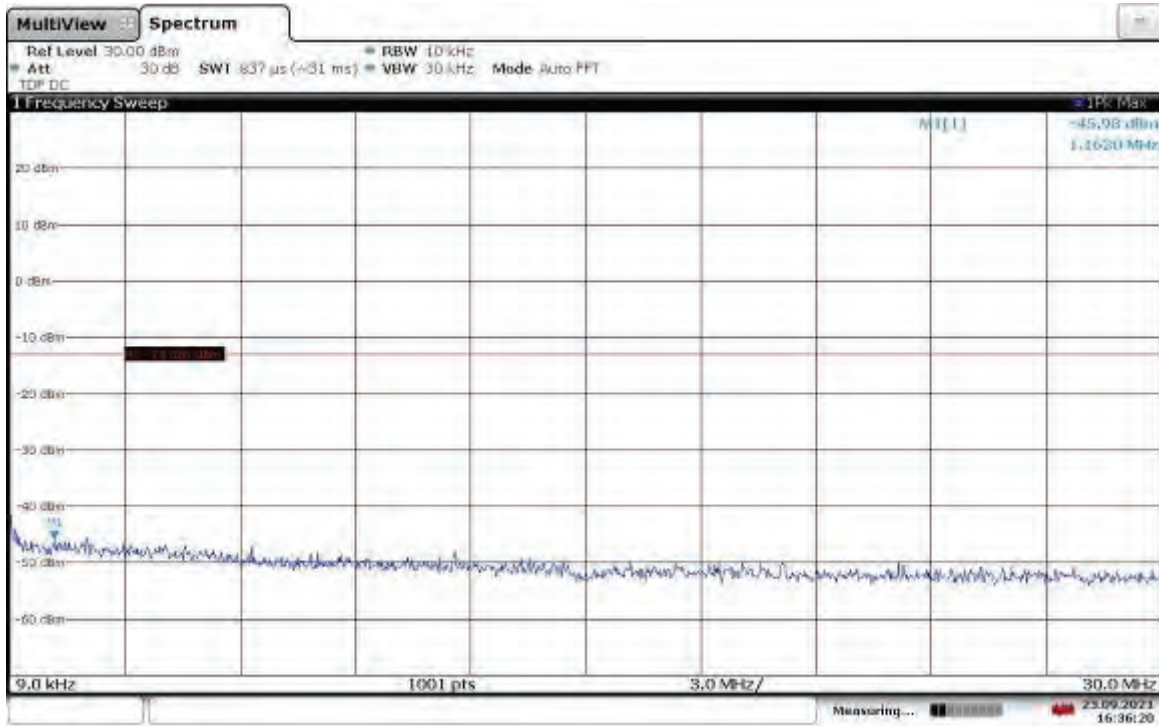
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 1932.5 MHz
30MHz-1GHz



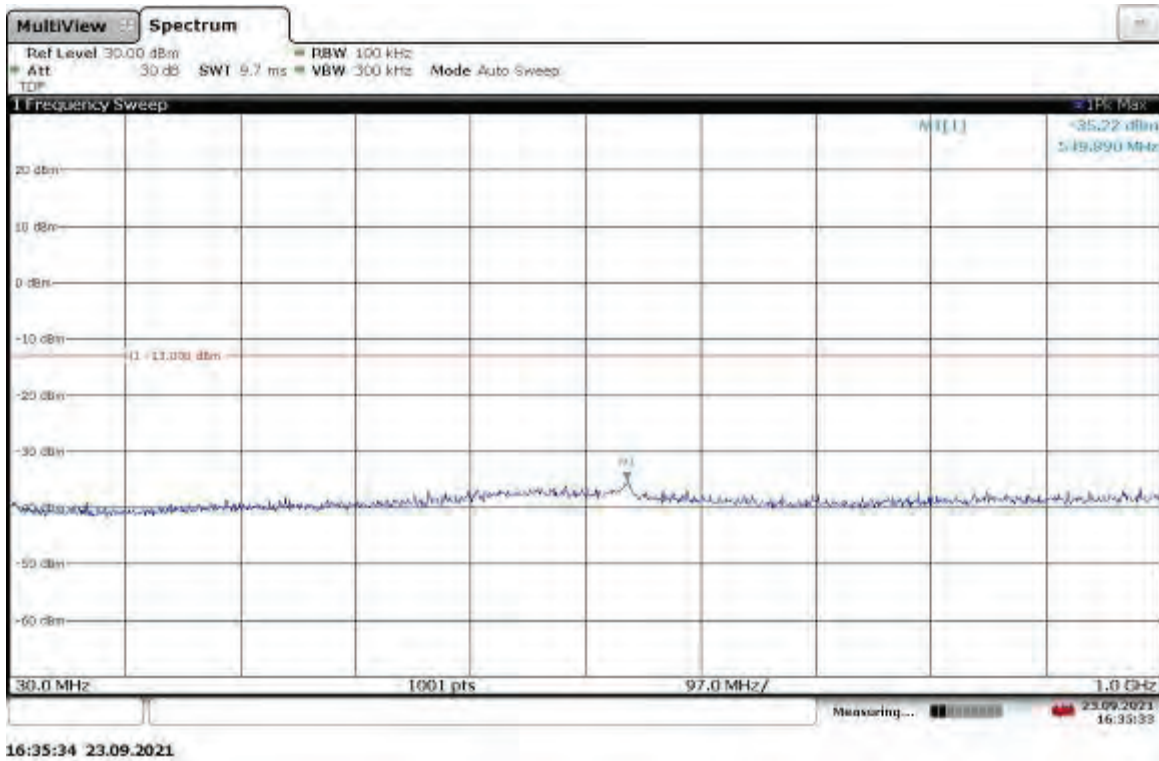
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 1932.5 MHz
1-22GHz



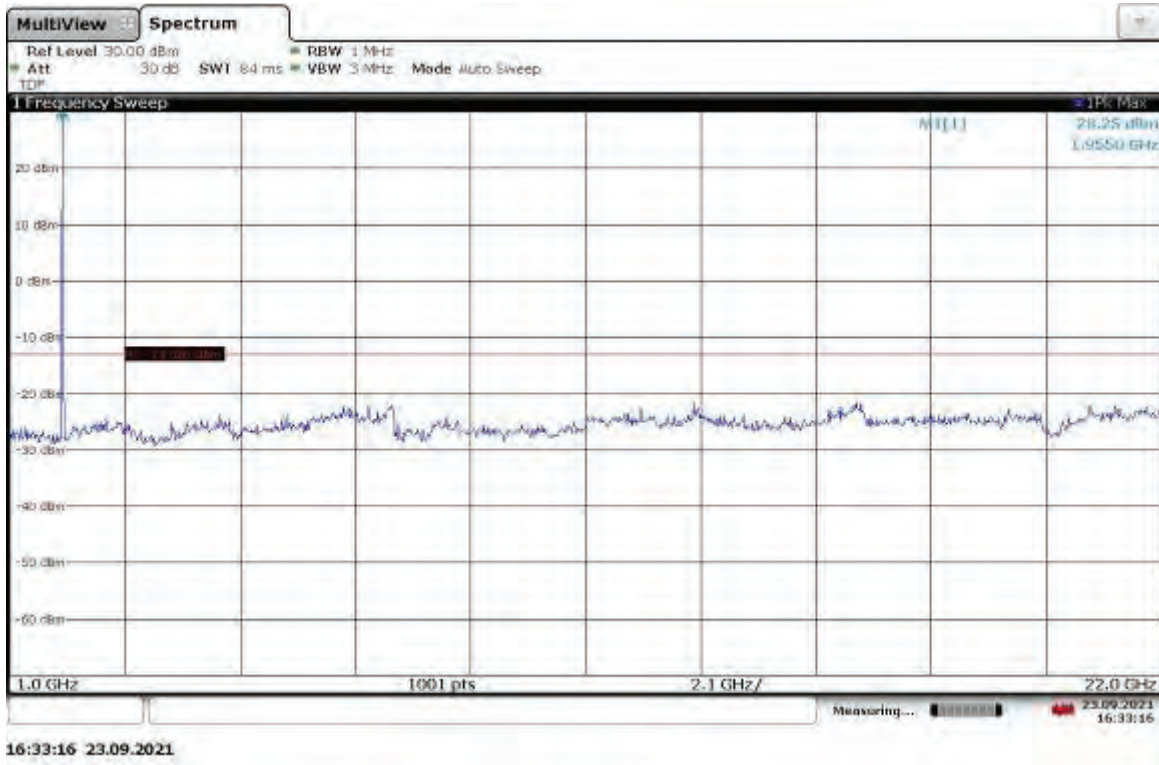
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
9kHz-30MHz



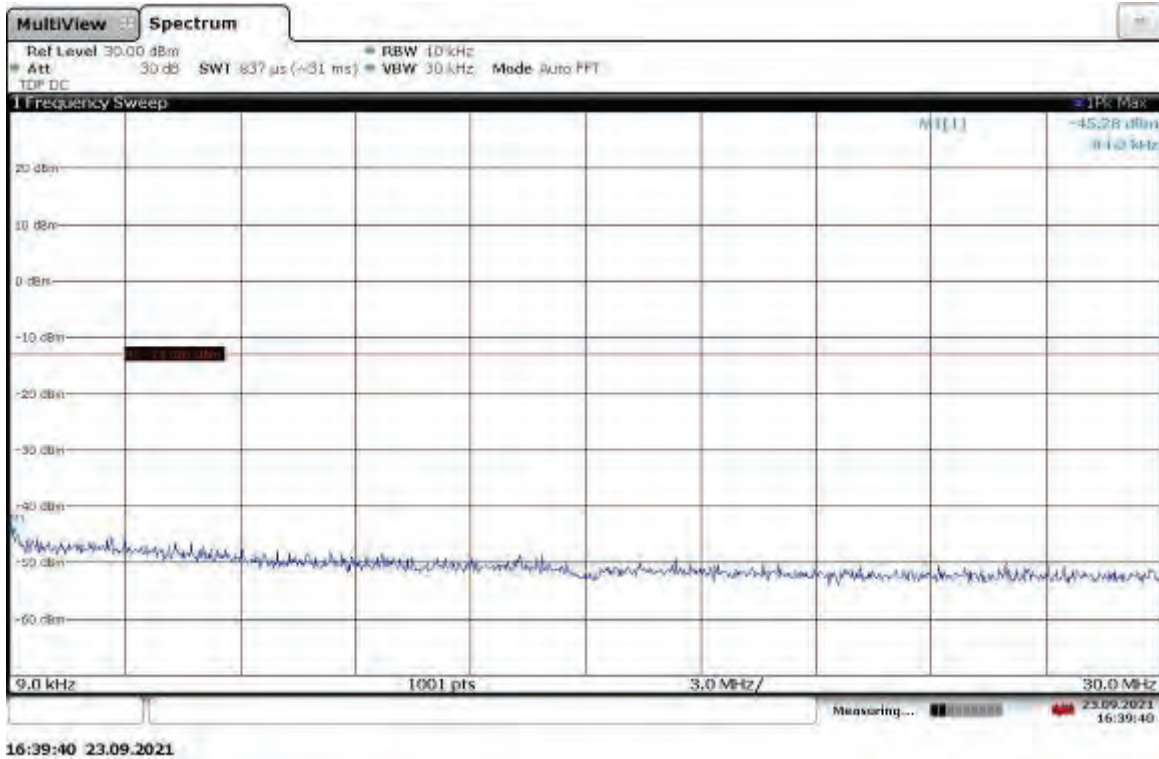
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
30MHz-1GHz



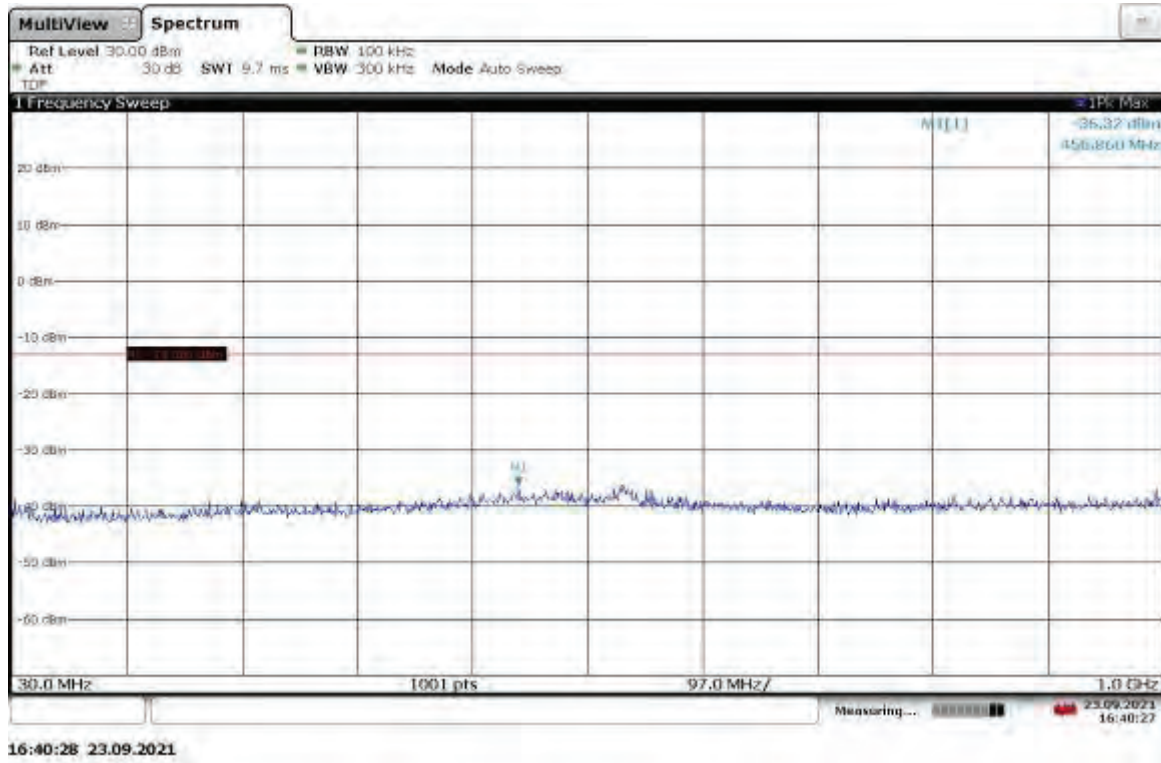
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
1-22GHz



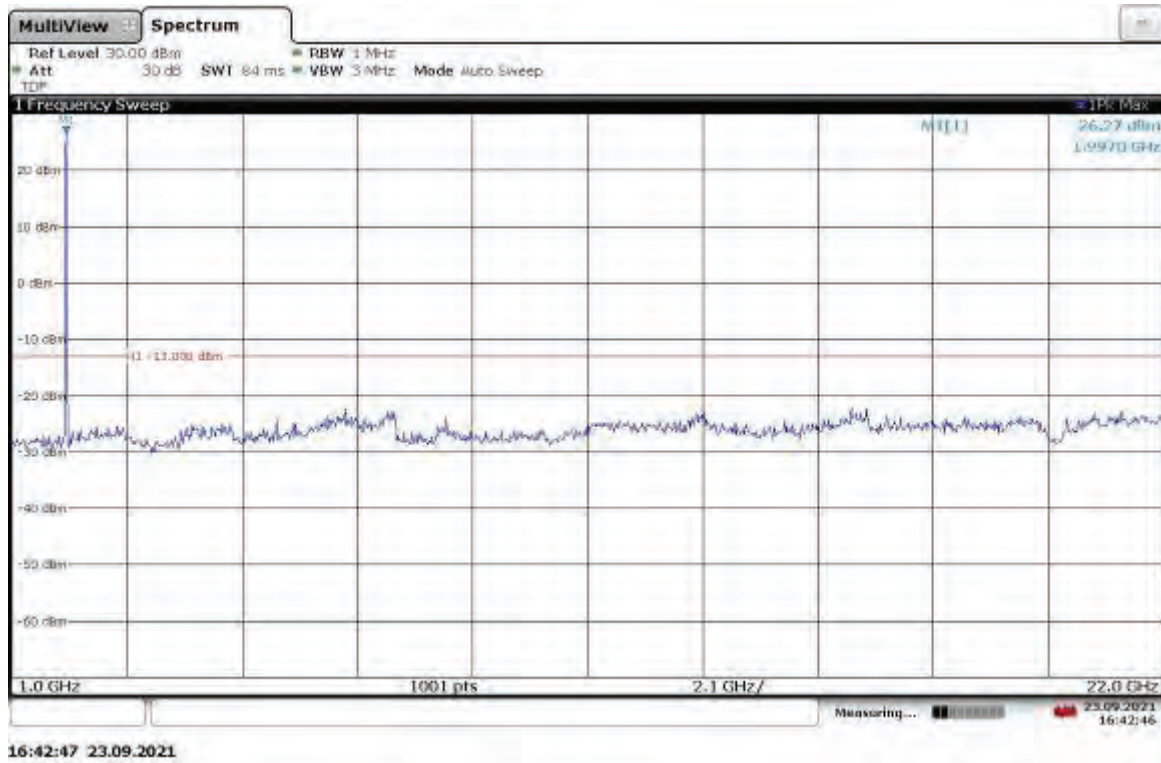
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
9kHz-30MHz



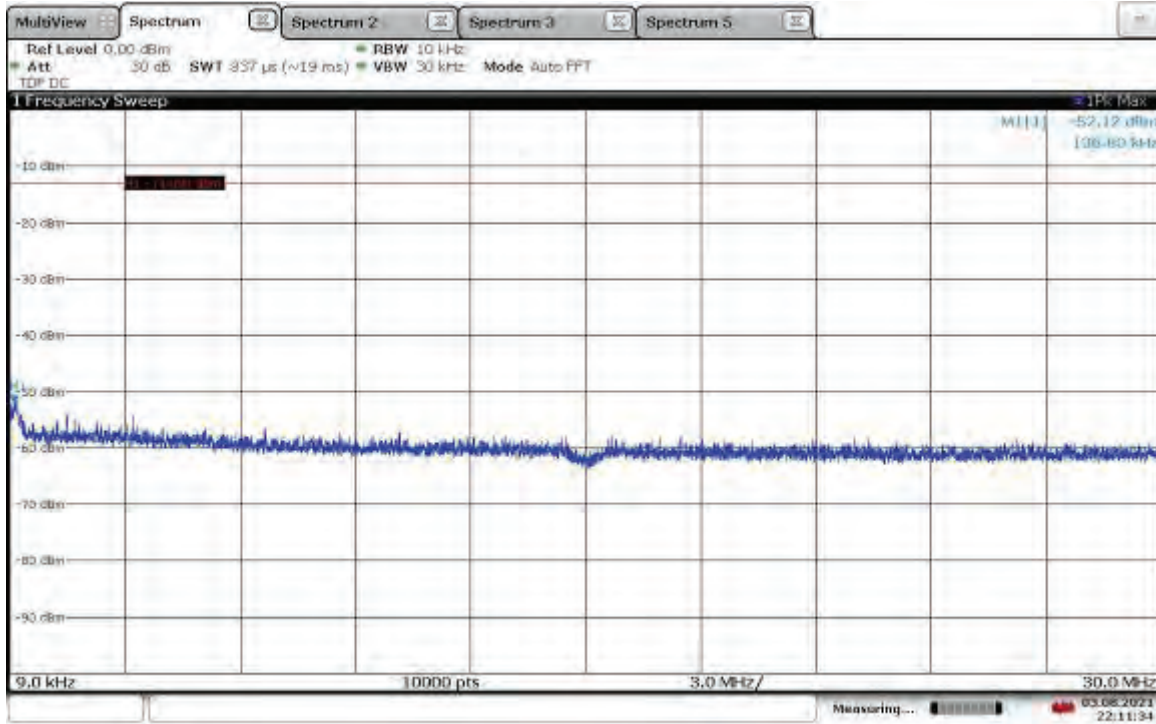
Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
30MHz-1GHz



Slot 2 (Band 2), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
1-22GHz

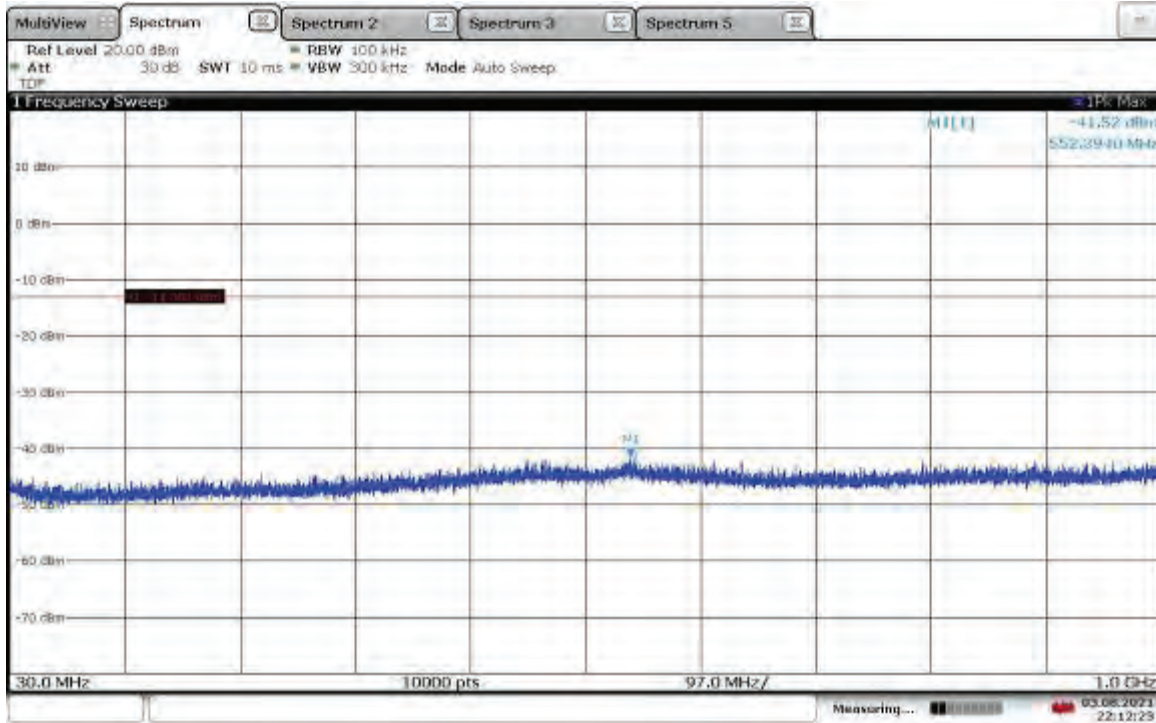


Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



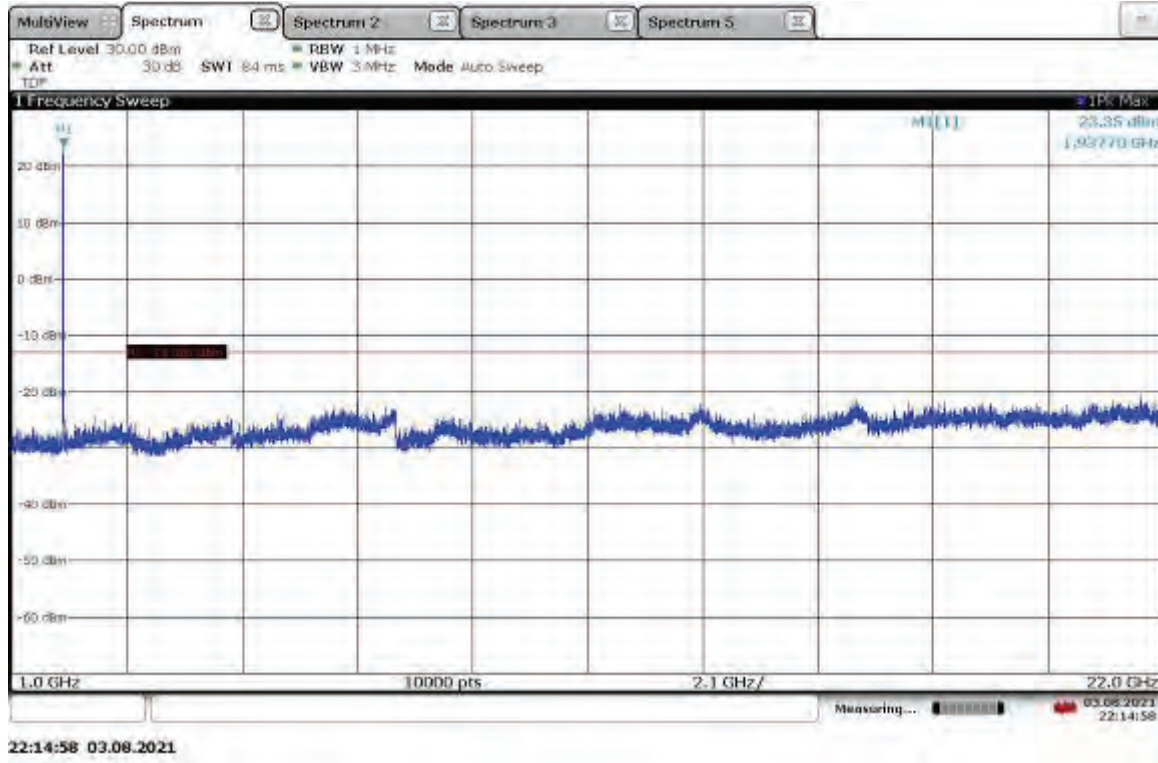
22:11:34 03.08.2021

Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz

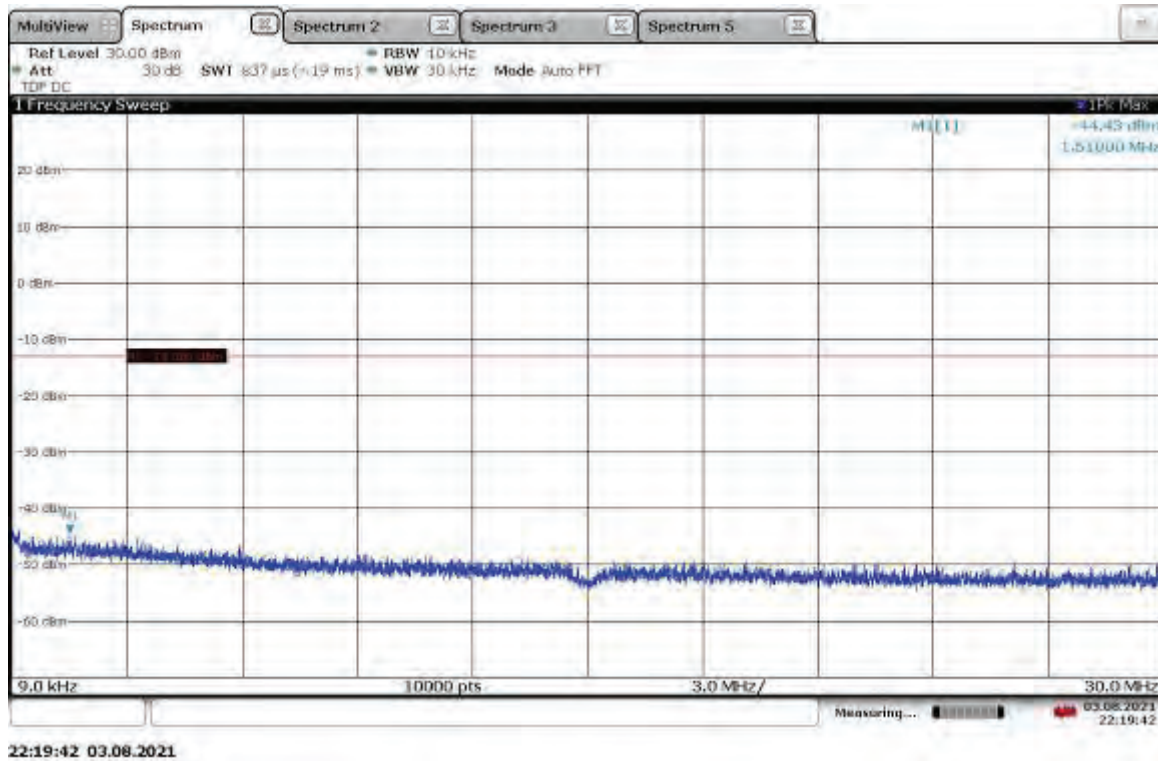


22:12:23 03.08.2021

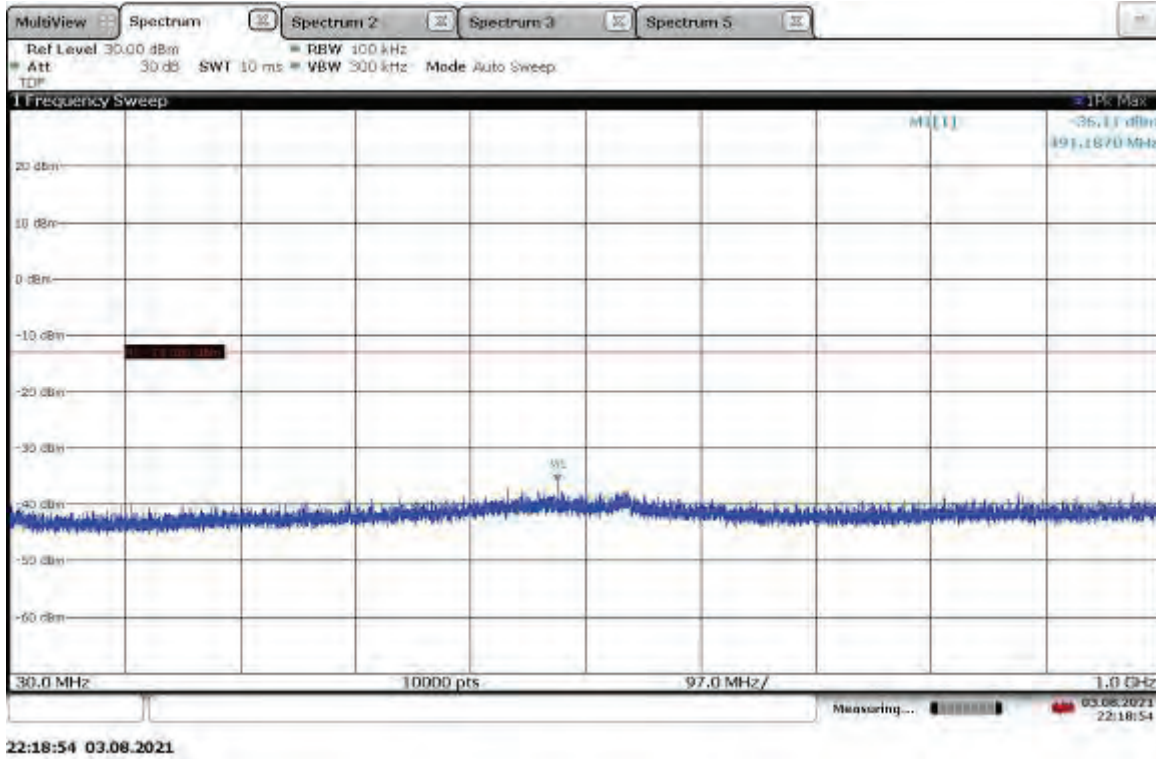
Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
1-22GHz



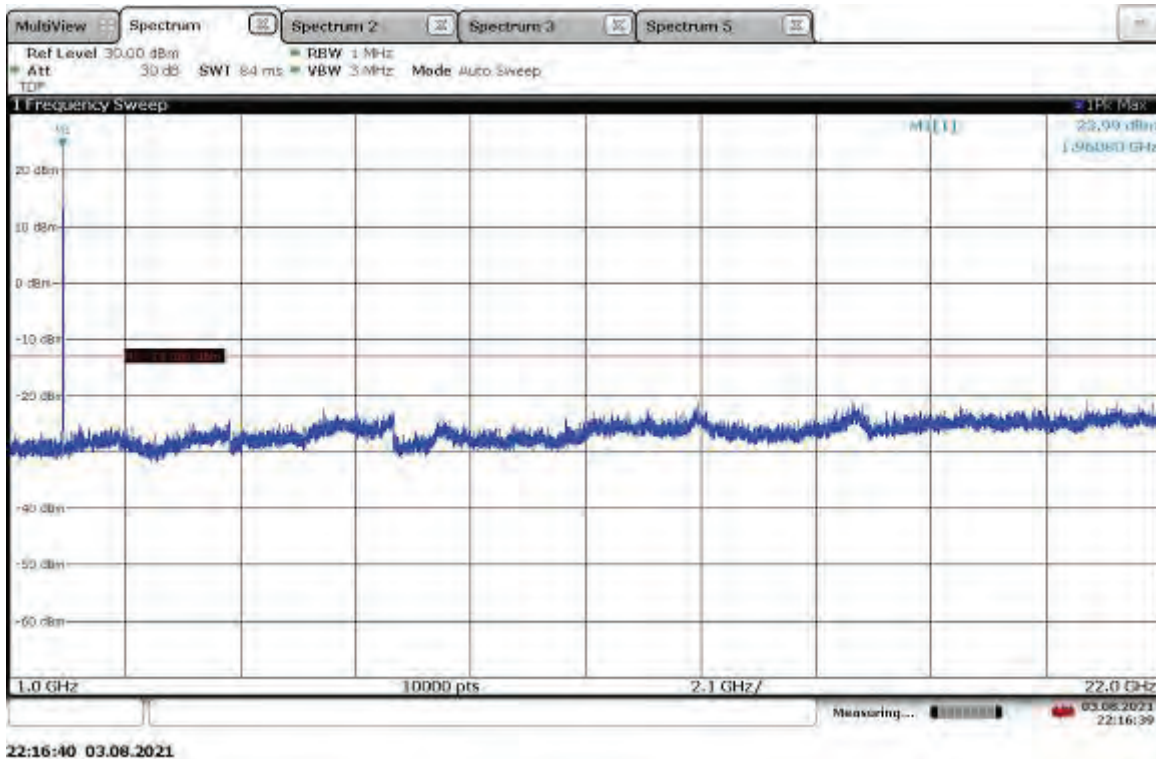
Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



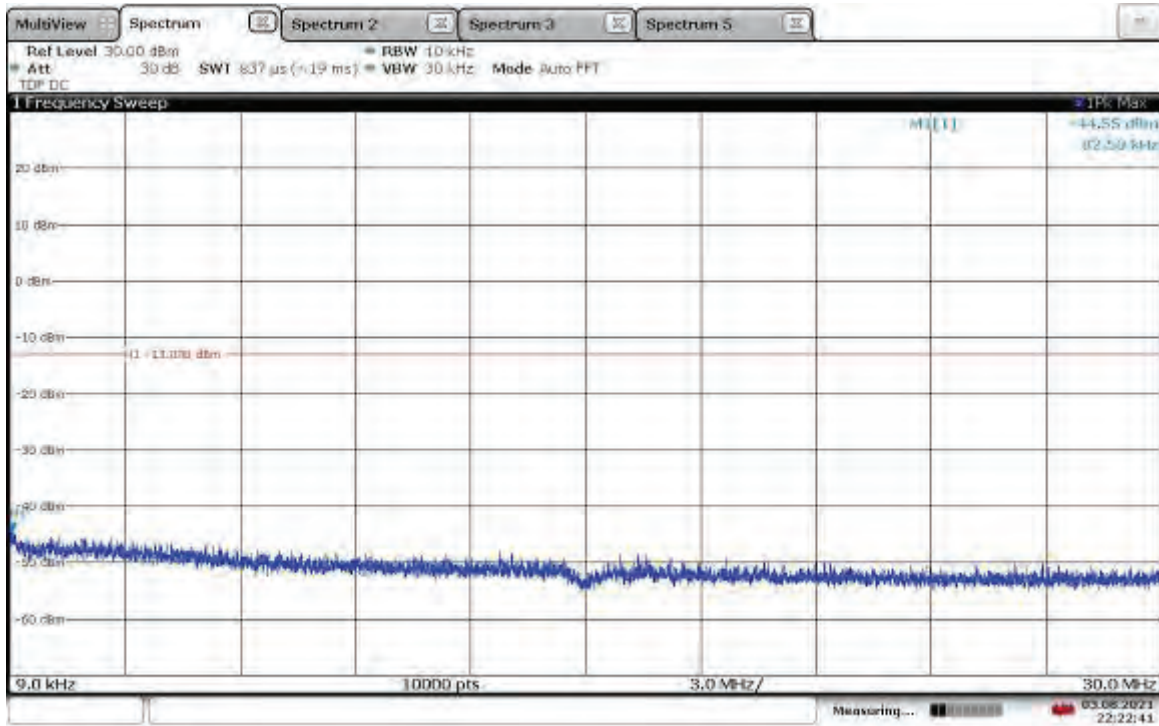
Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



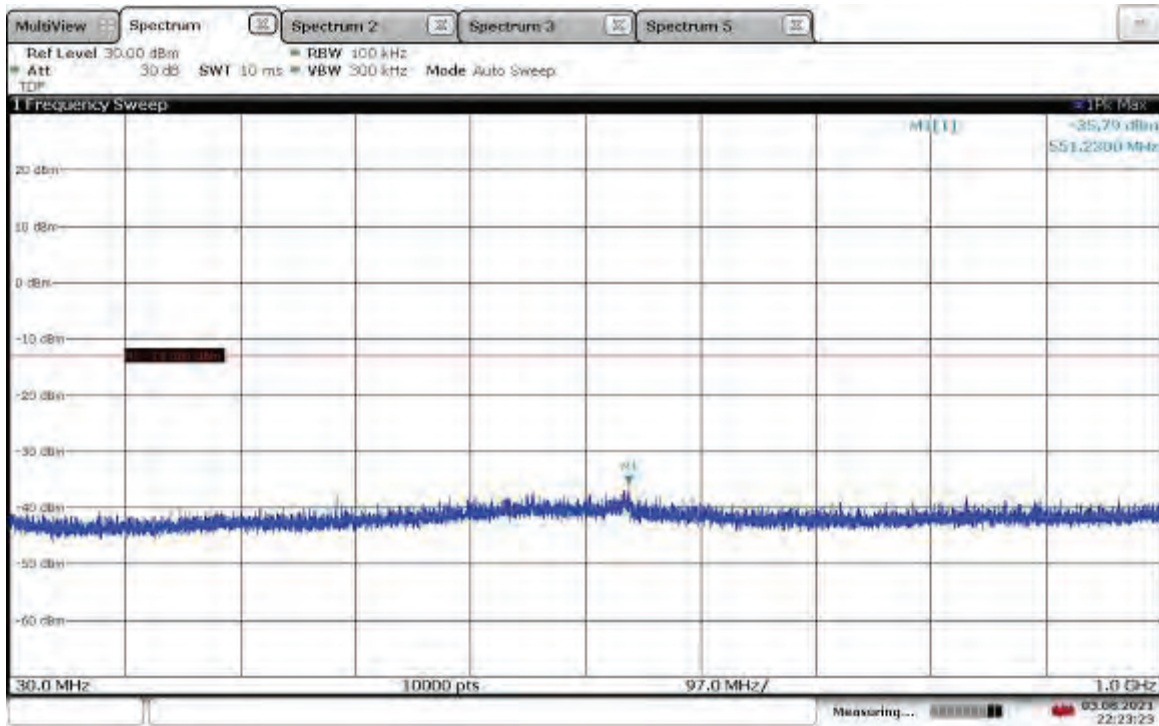
Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
1-22GHz



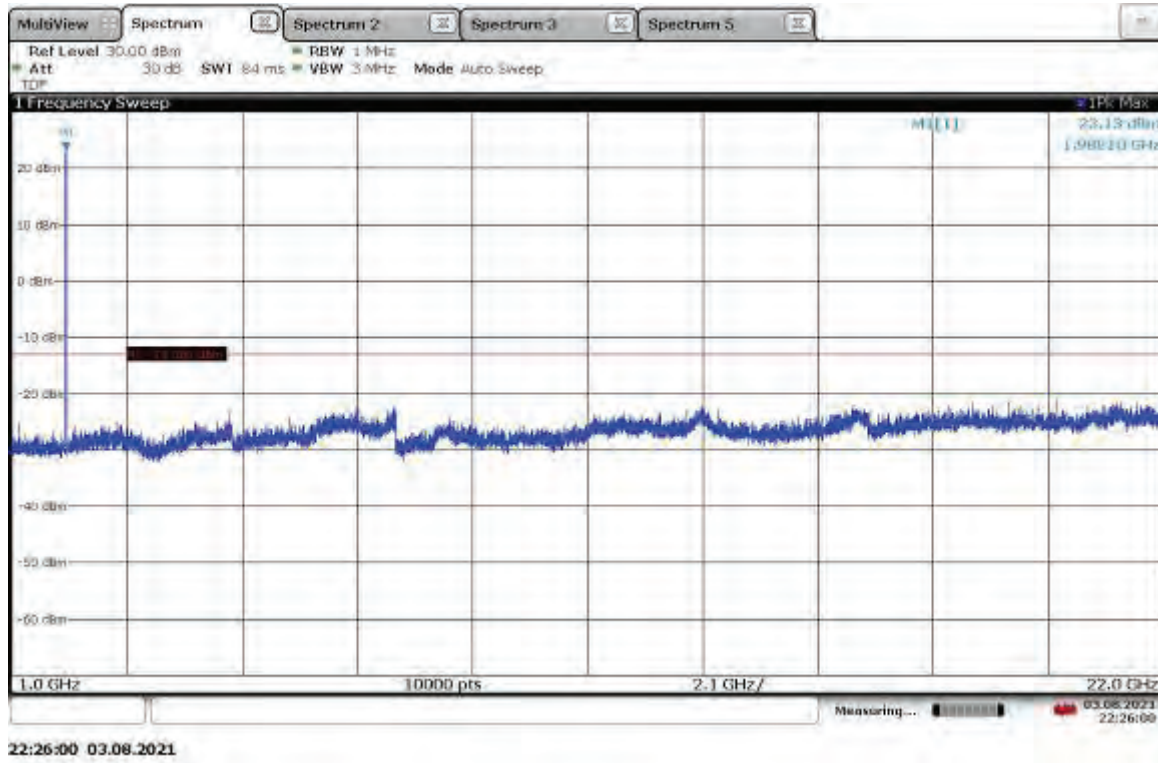
**Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz**



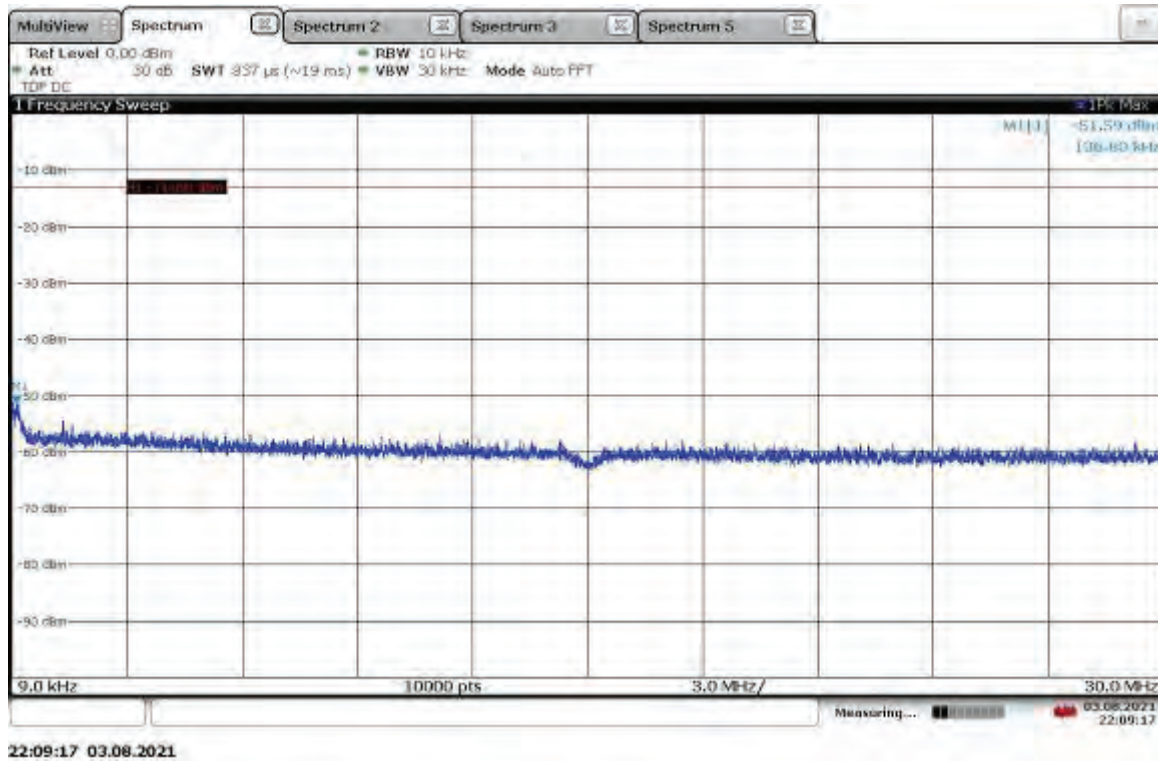
**Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz**



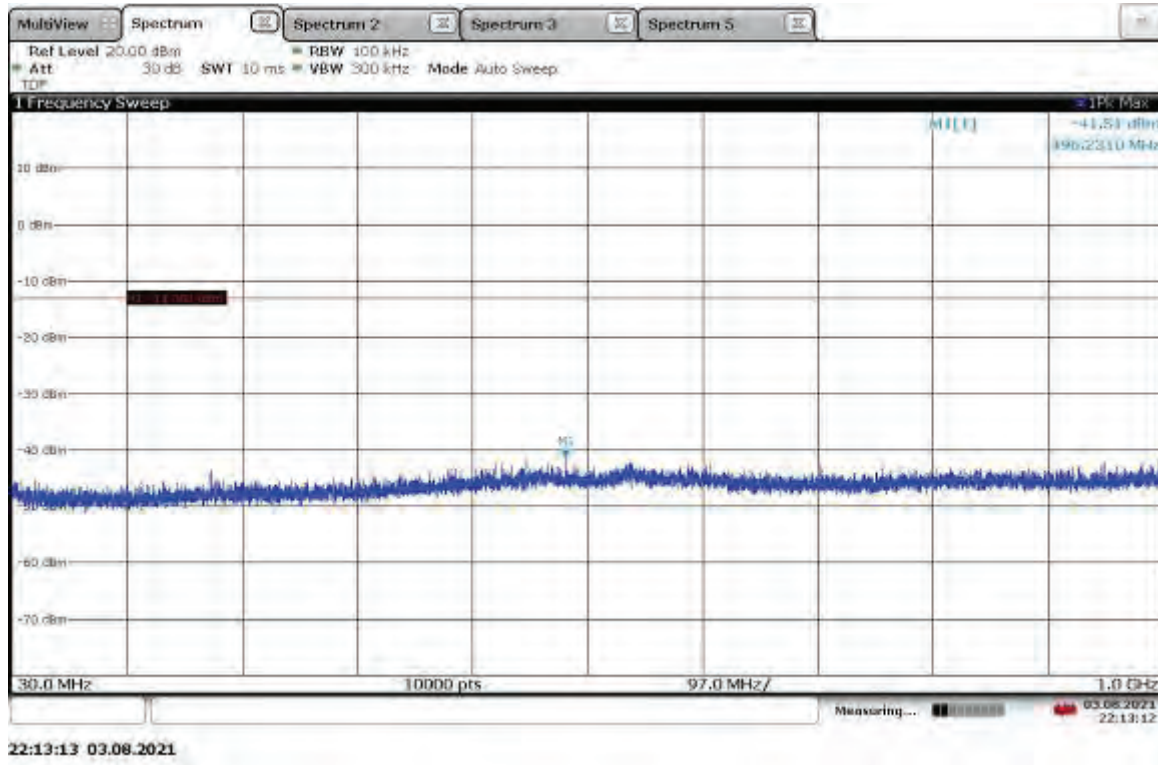
**Slot 2 (Band 2), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
1-22GHz**



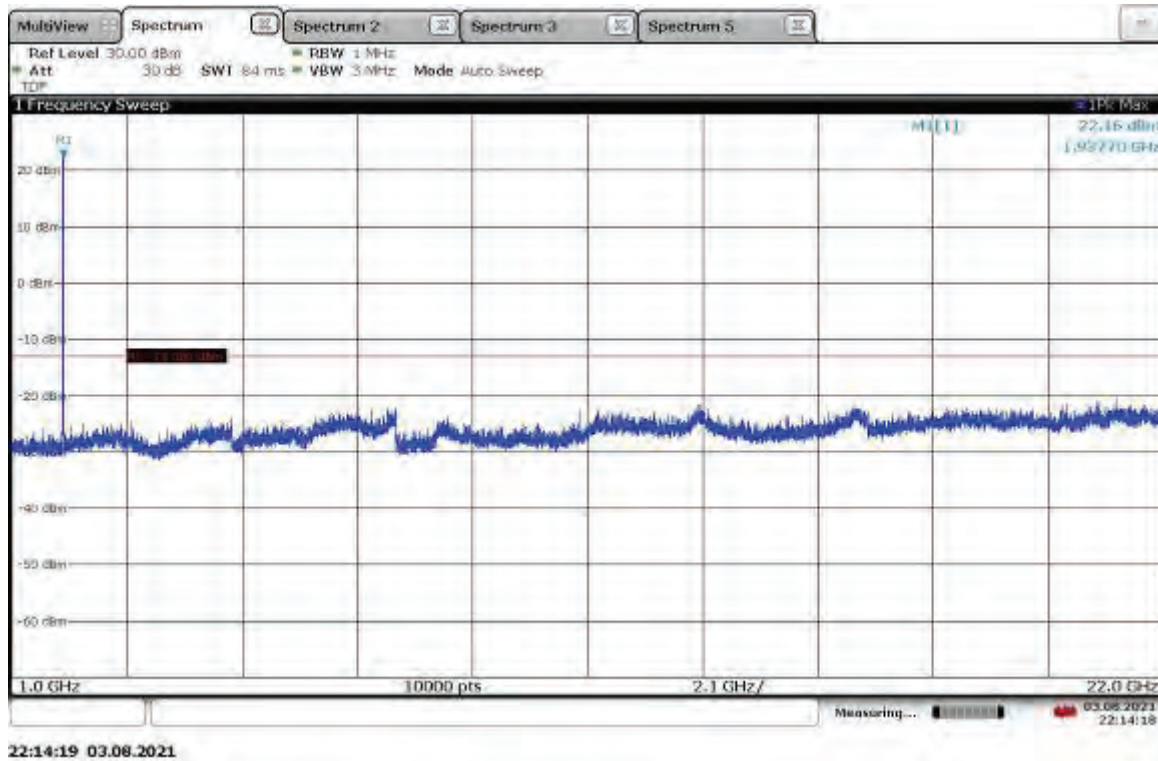
**Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz**



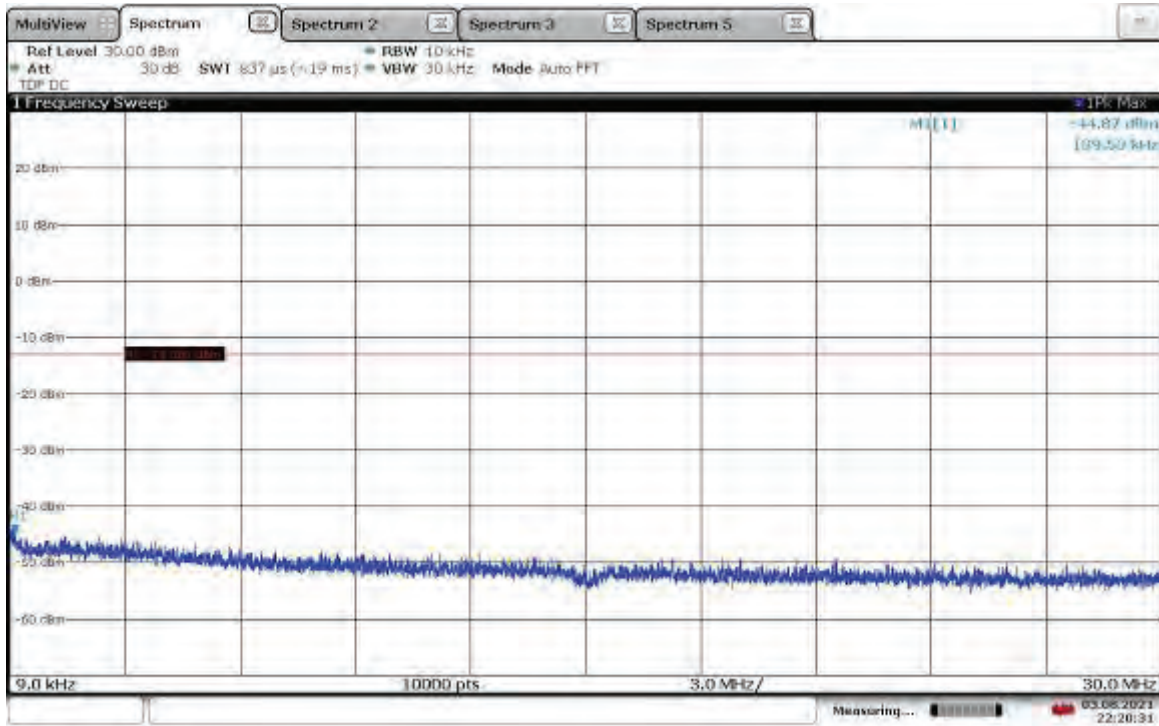
Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
1-22GHz

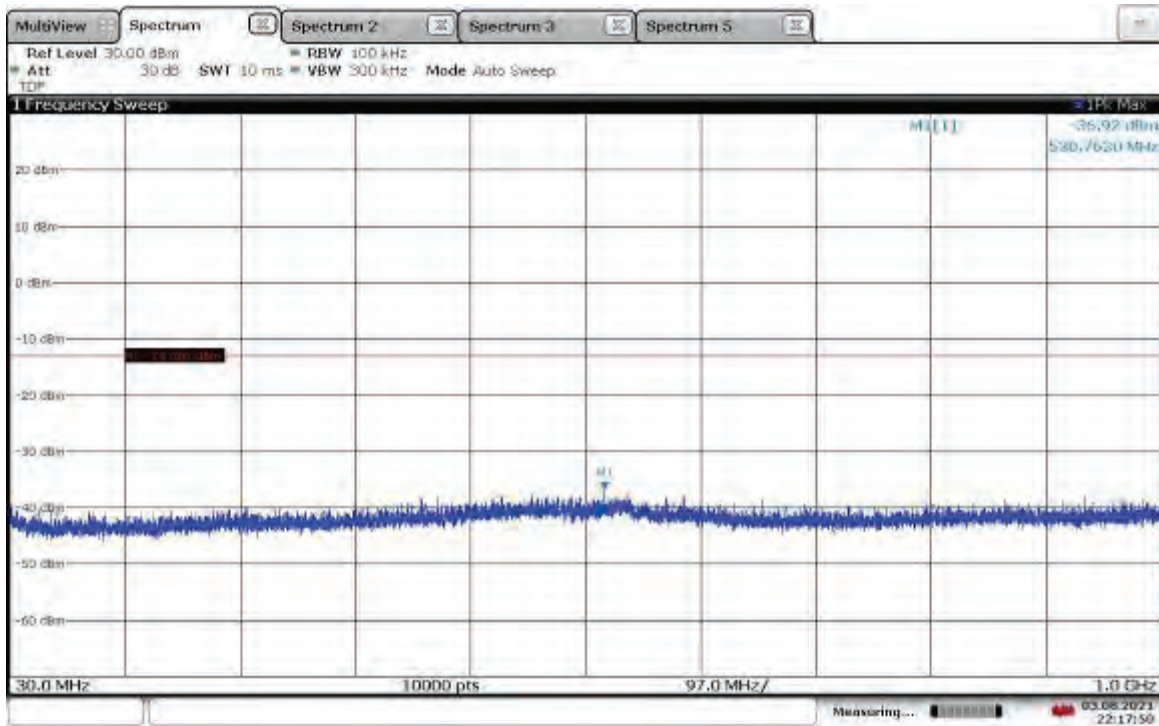


**Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz**



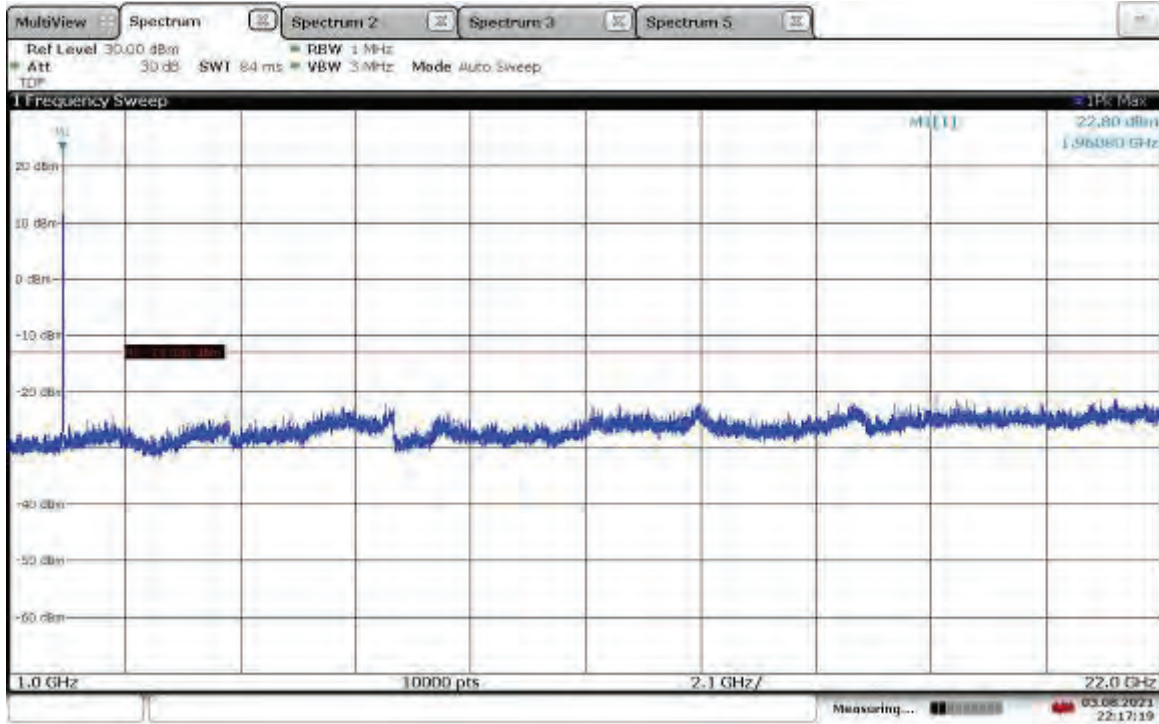
22:20:31 03.08.2021

**Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz**

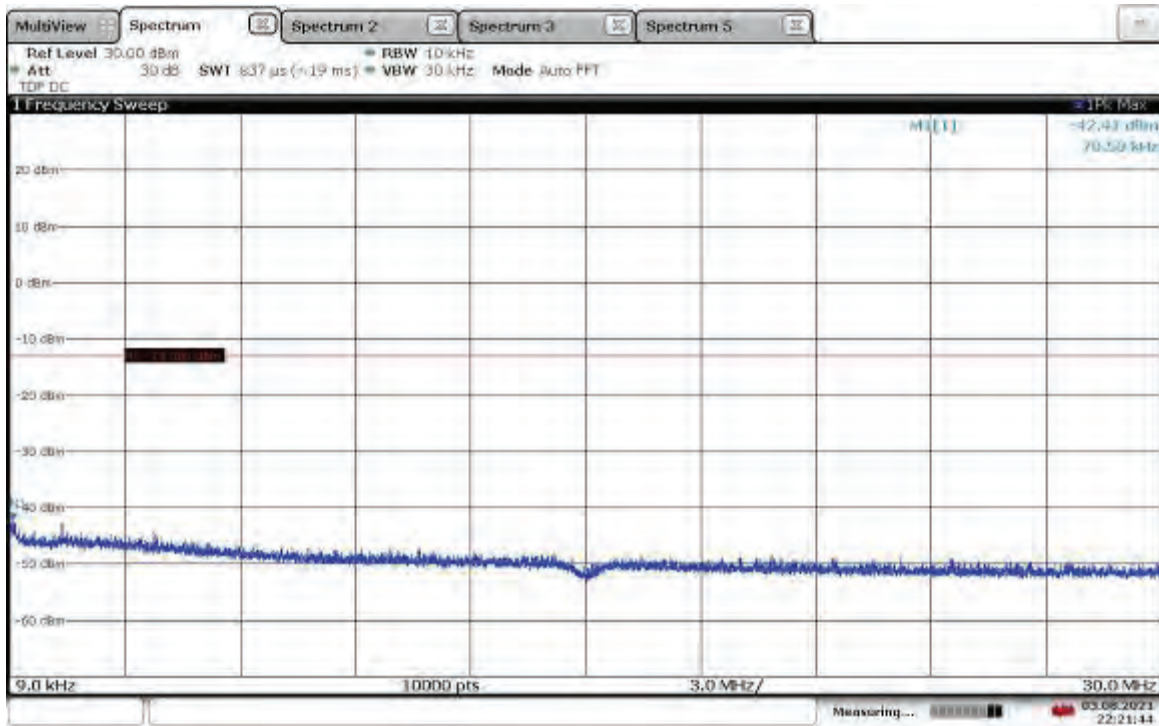


22:17:51 03.08.2021

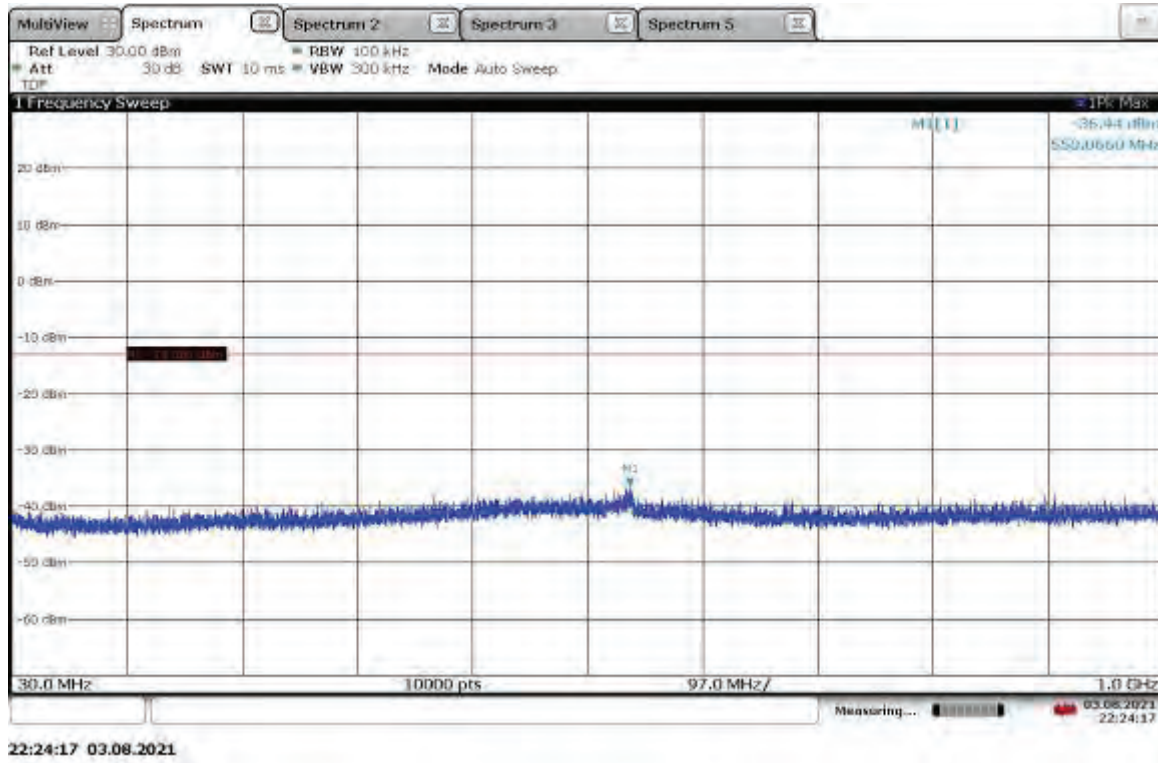
Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
1-22GHz



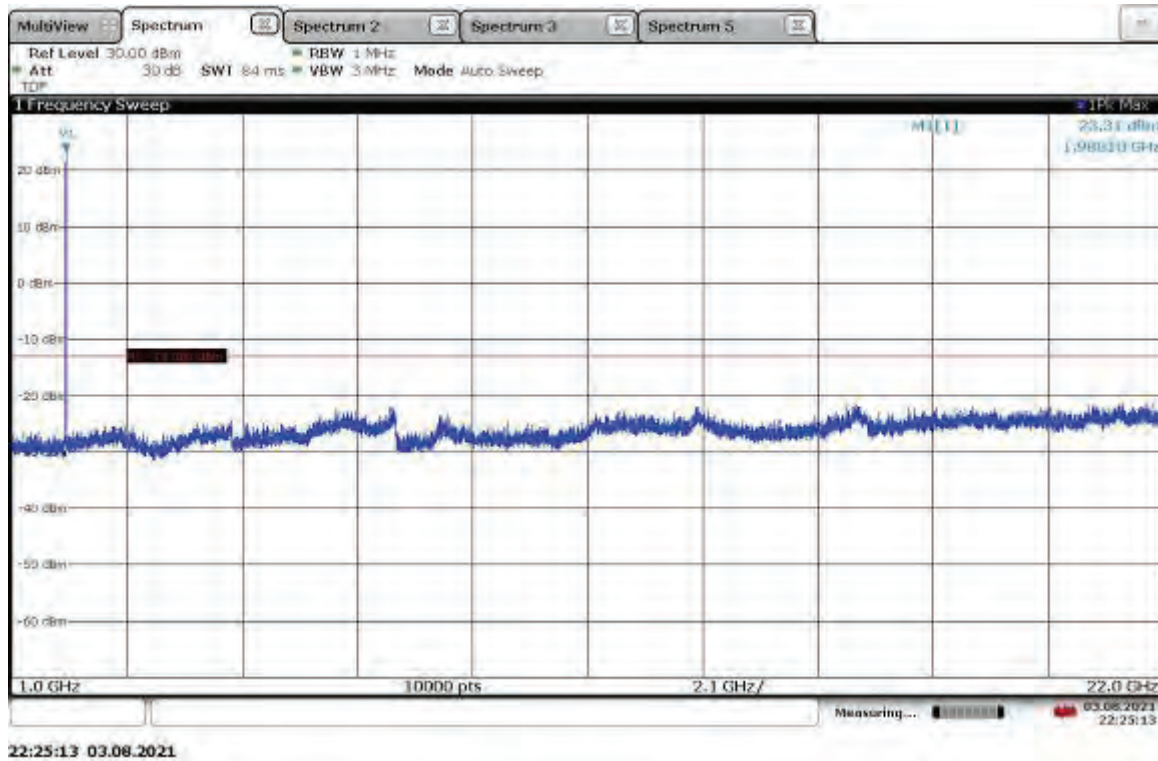
Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



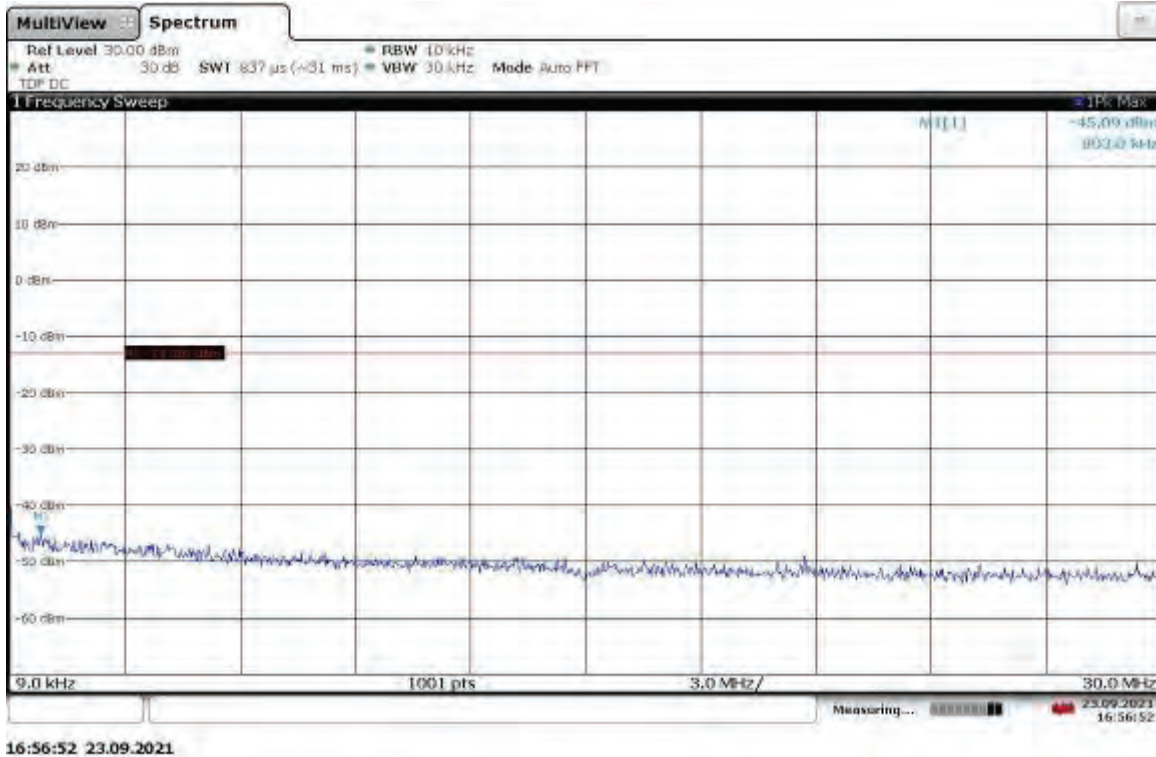
Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



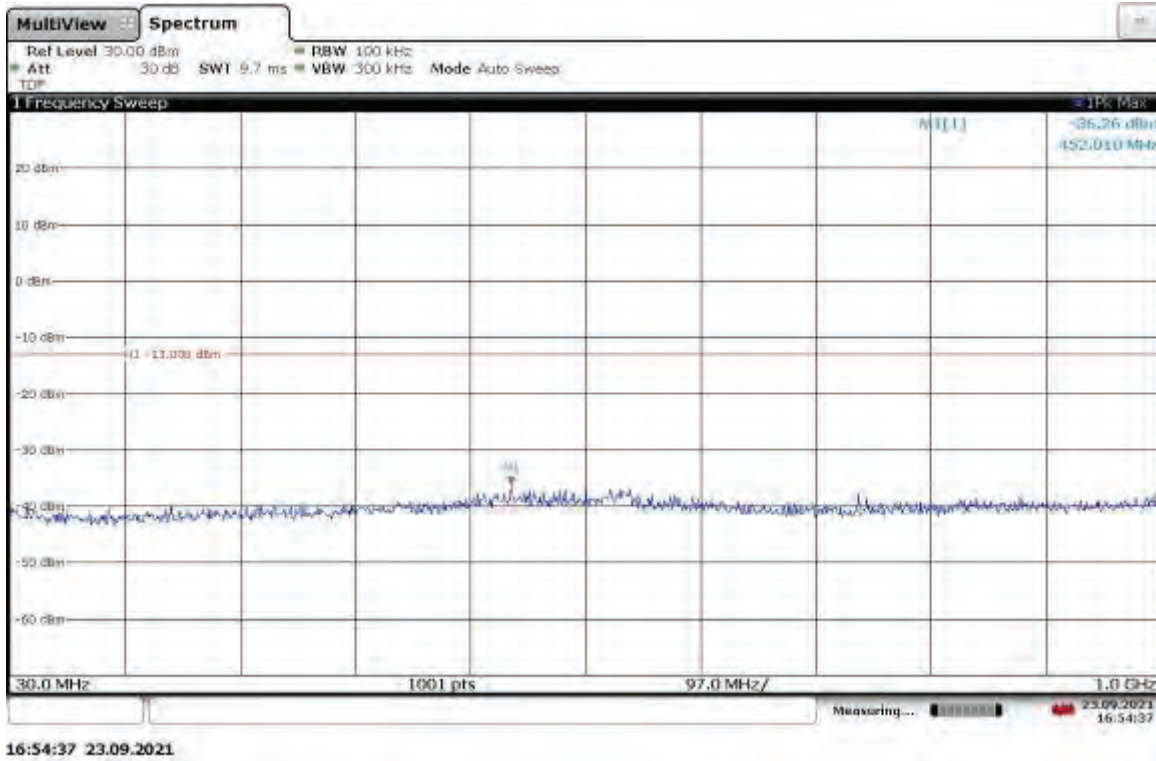
Slot 2 (Band 2), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
1-22GHz



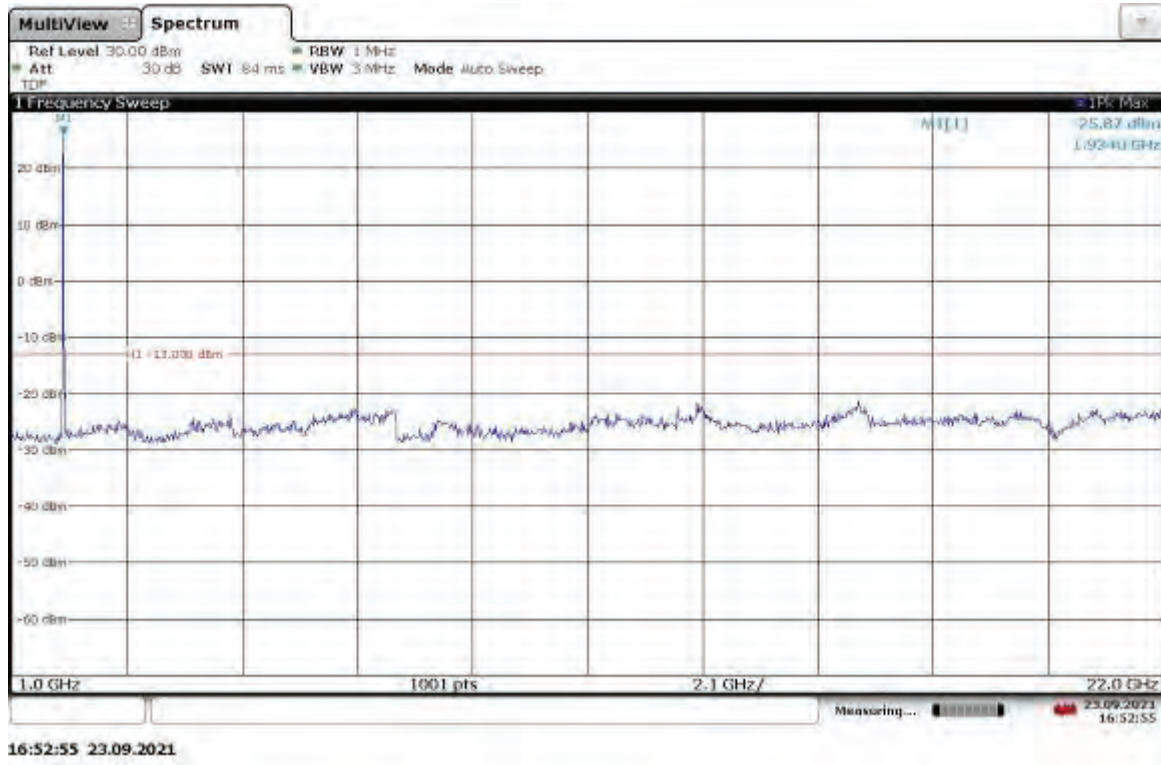
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



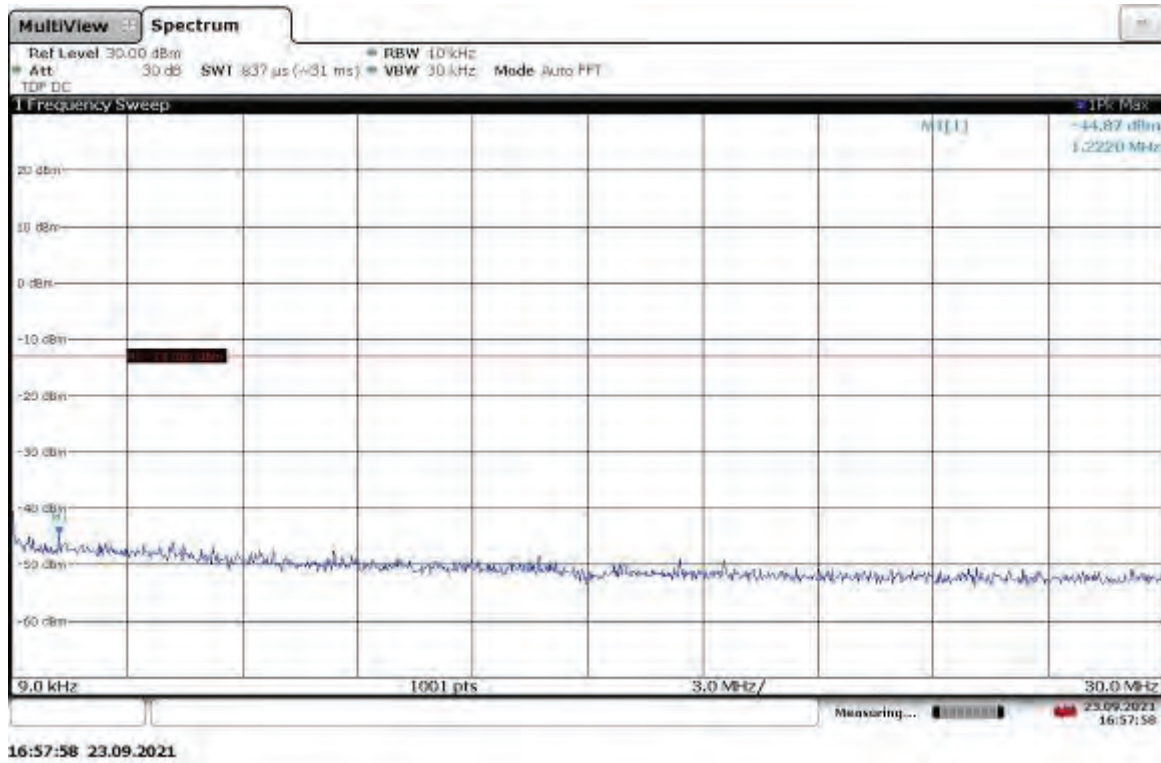
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



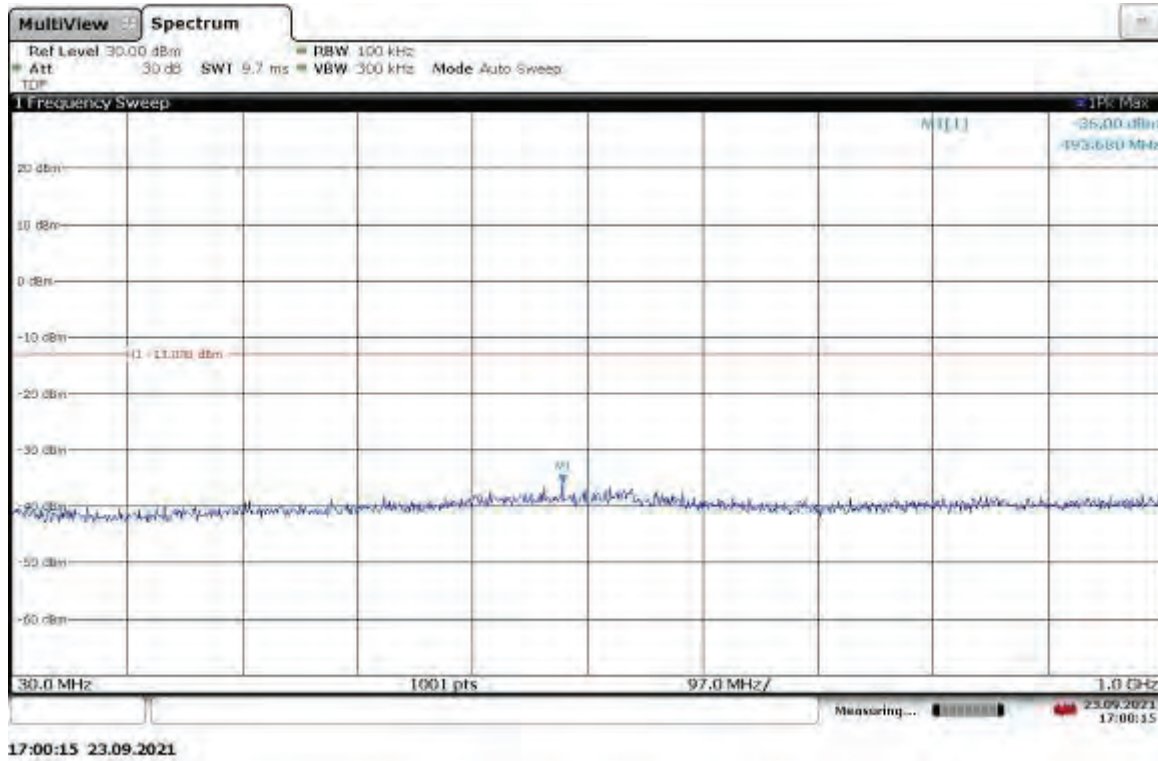
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
1-22GHz



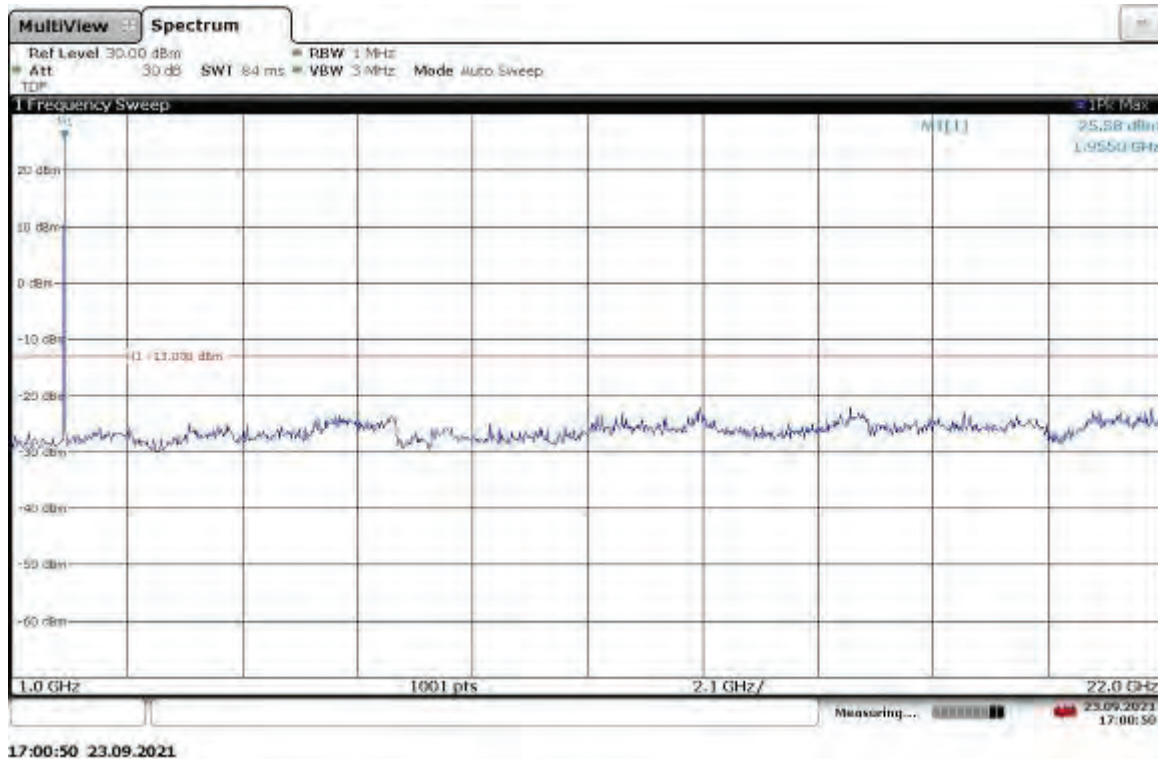
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



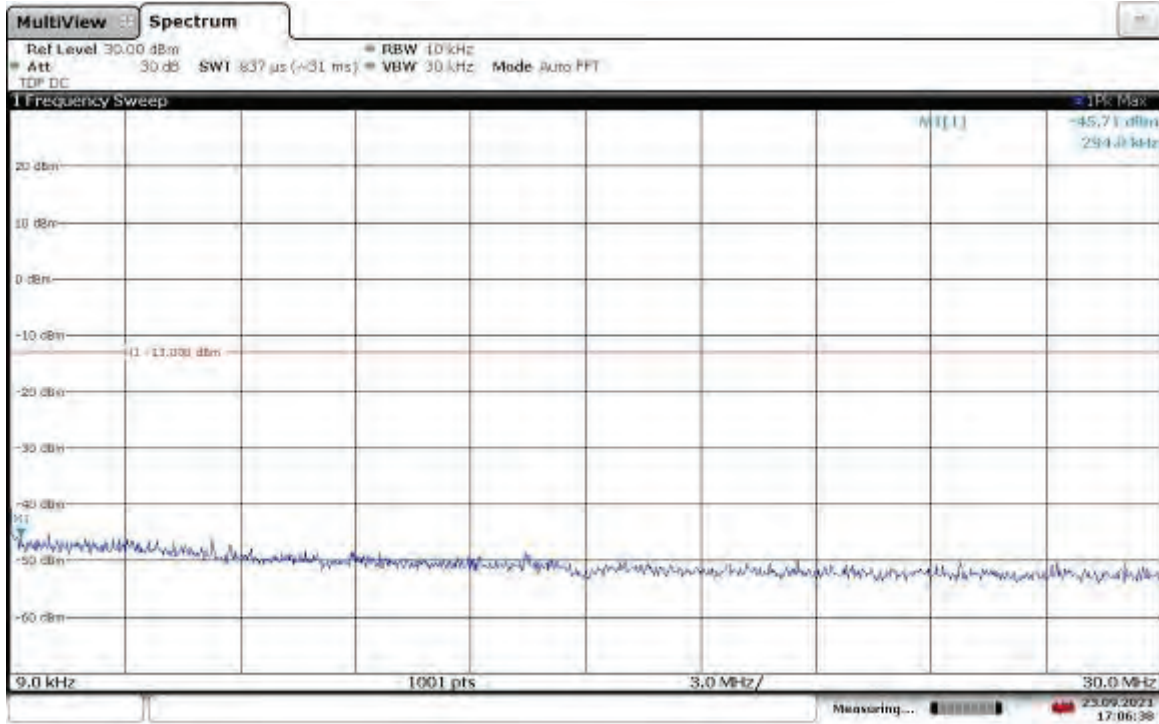
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



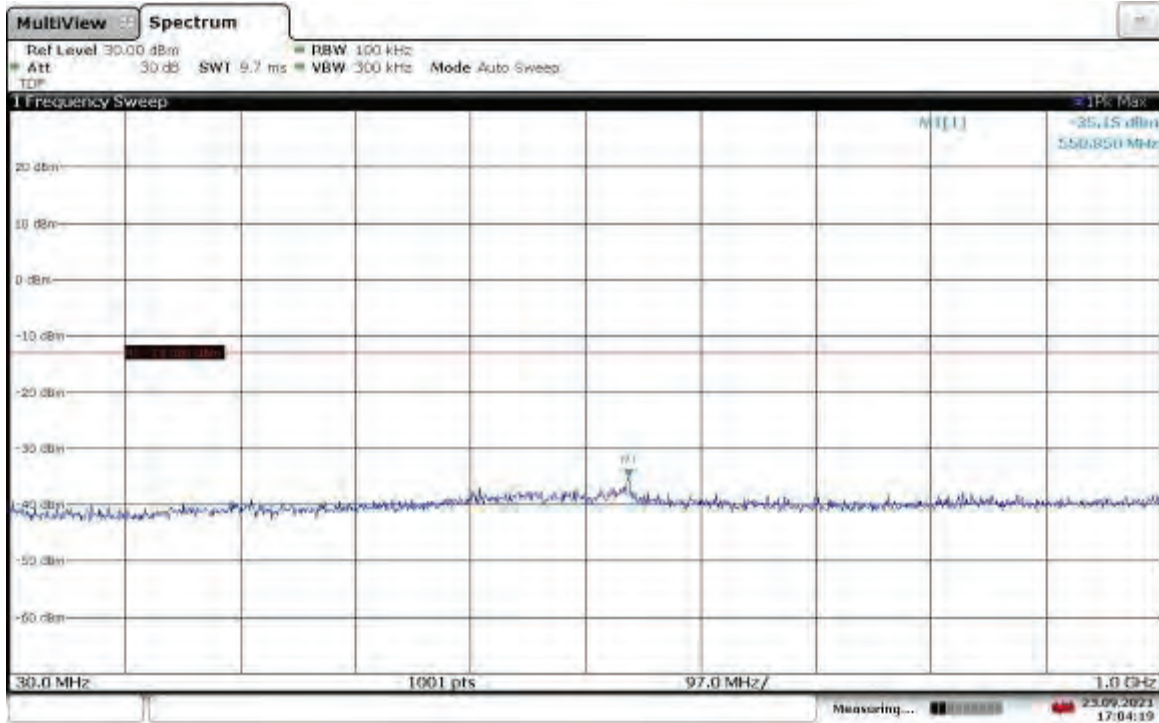
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
1-22GHz



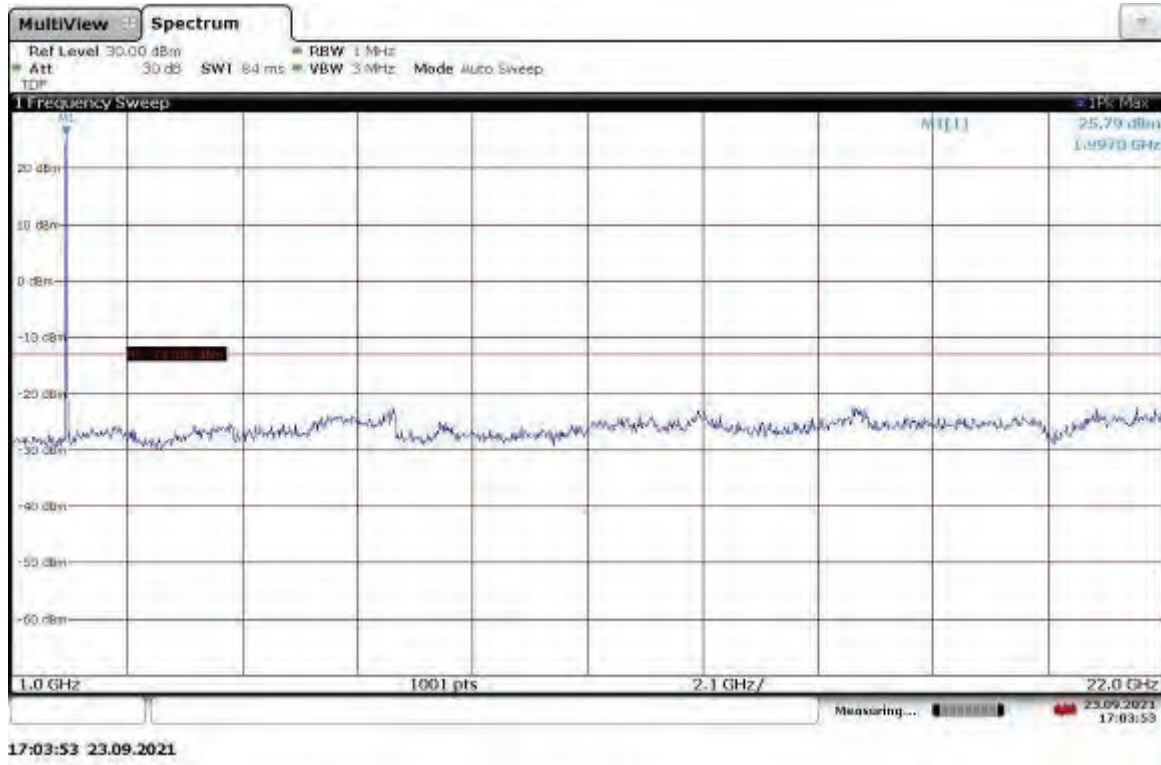
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



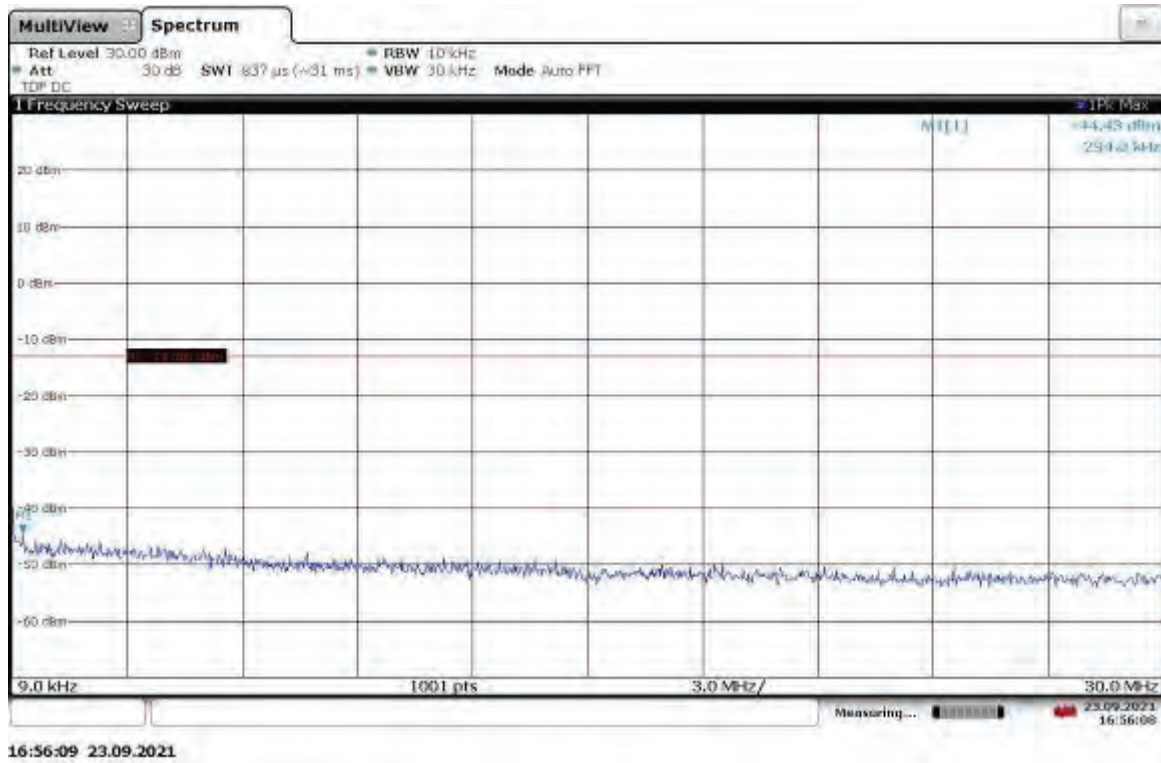
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



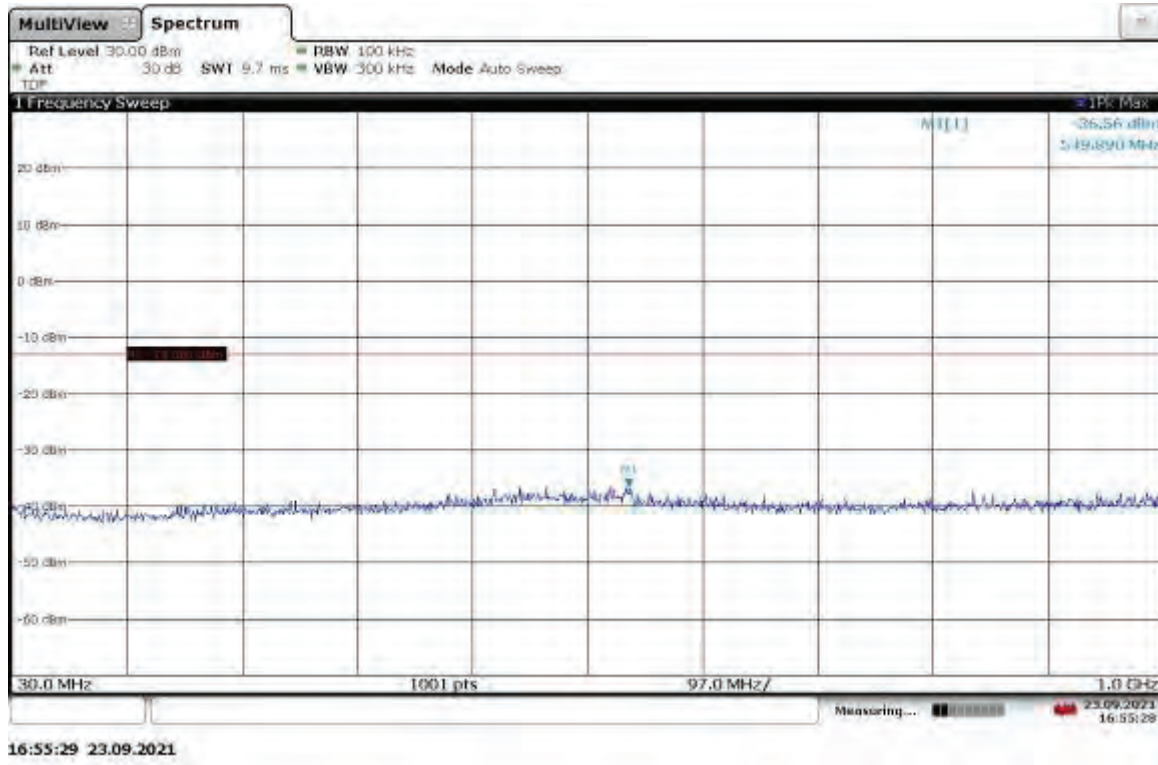
Slot 2 (Band 2), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
1-22GHz



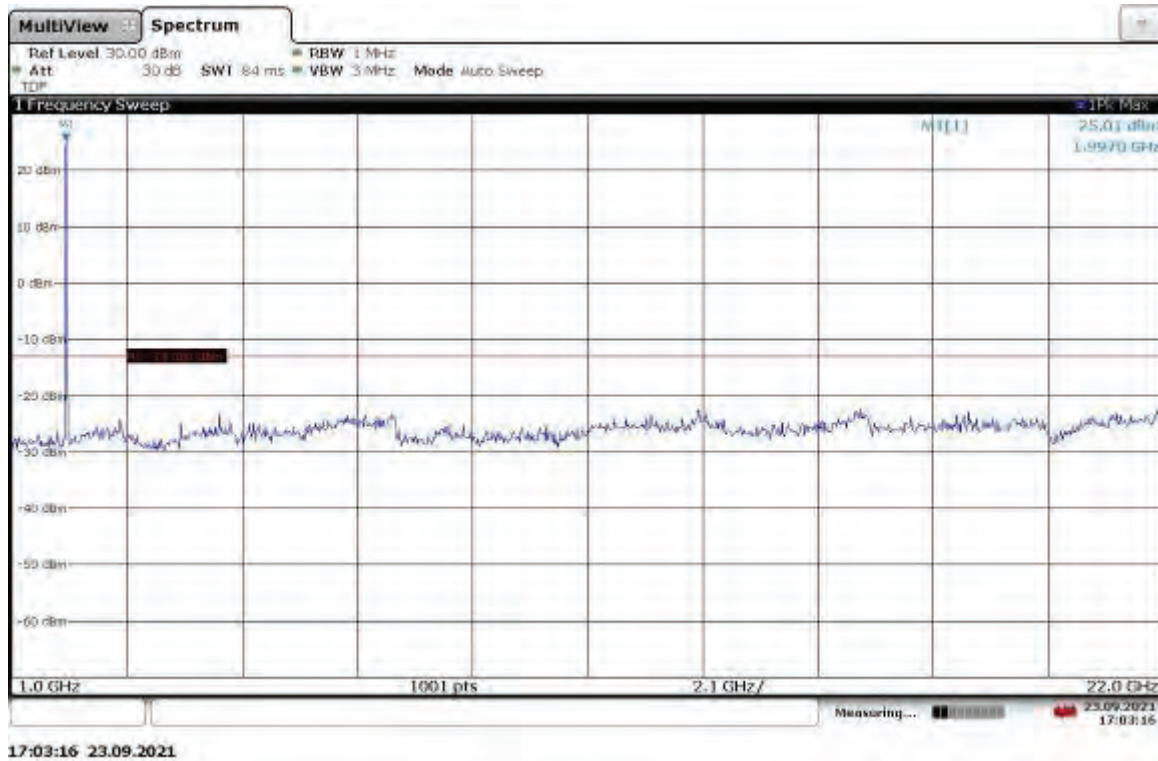
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



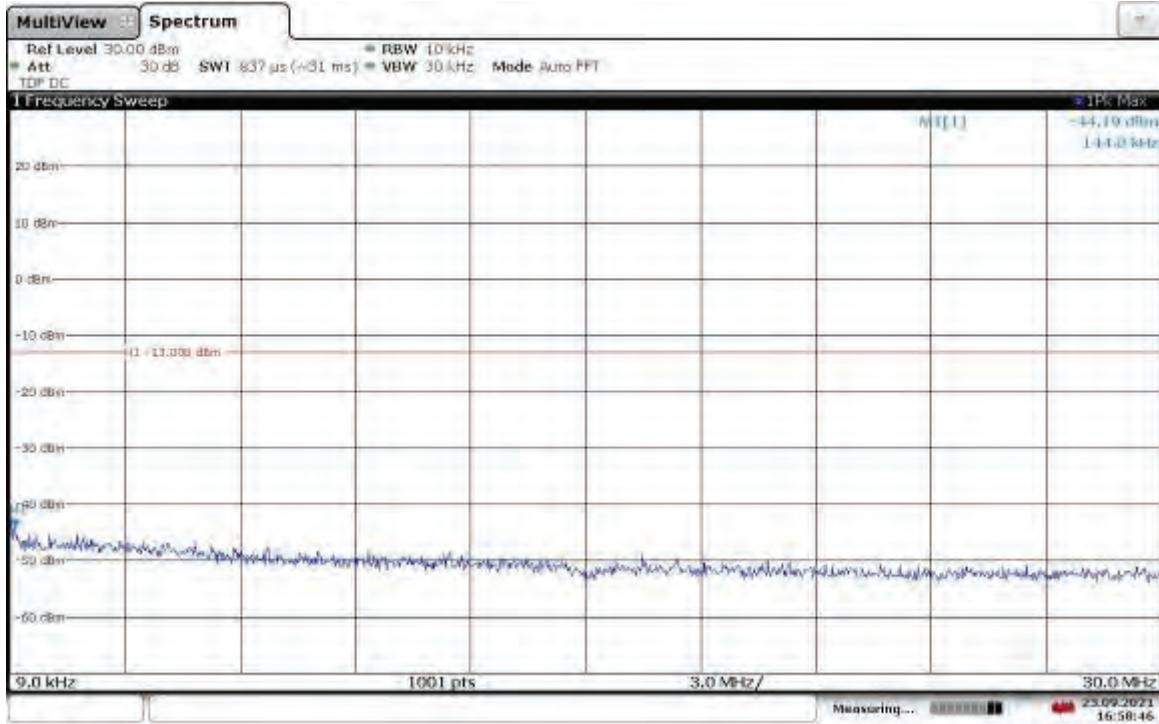
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



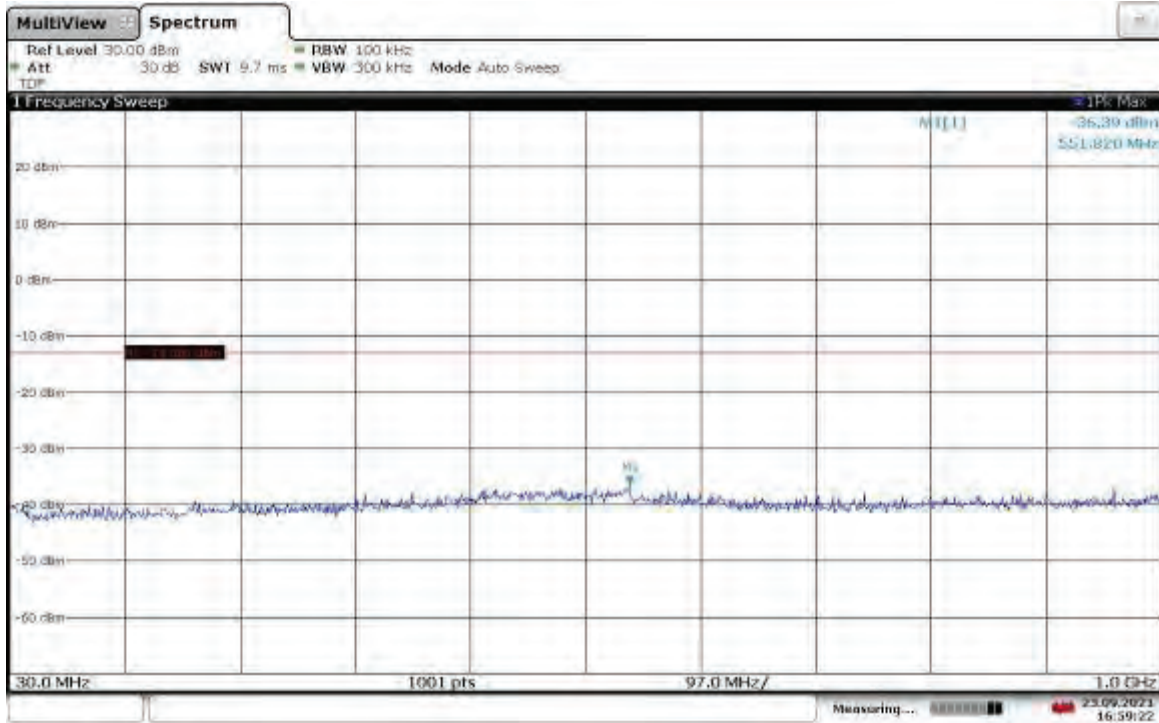
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
1-22GHz



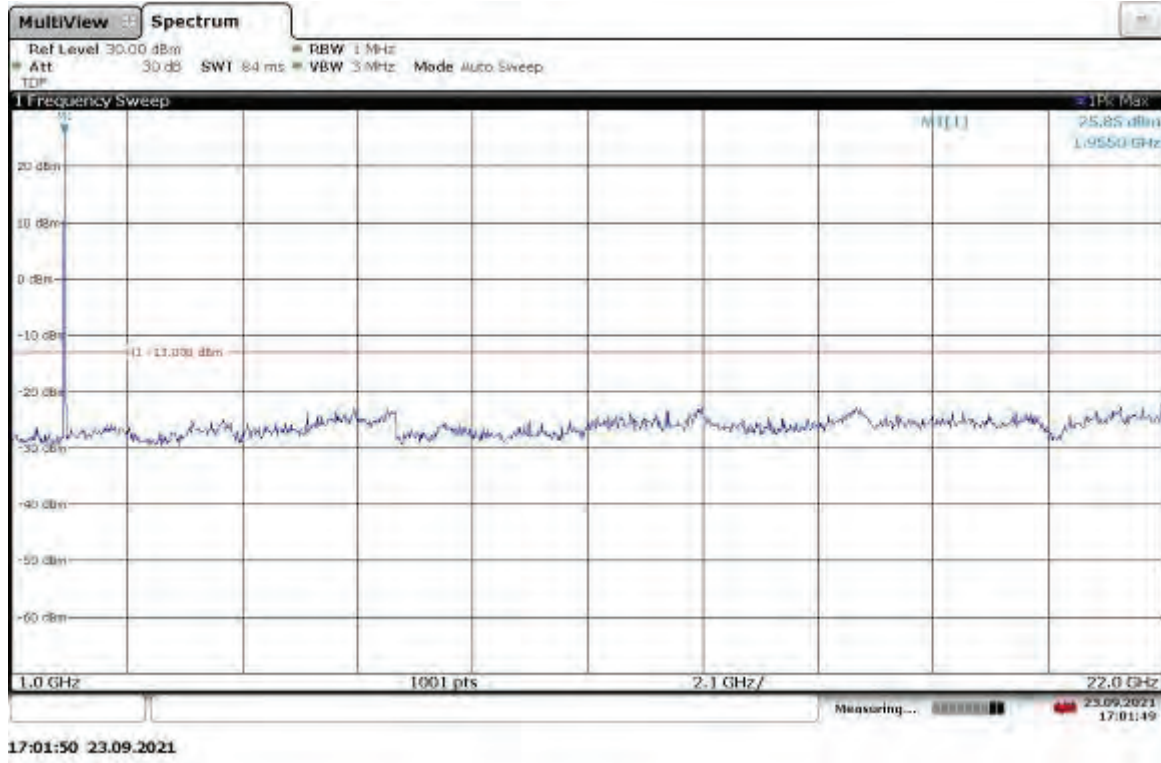
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



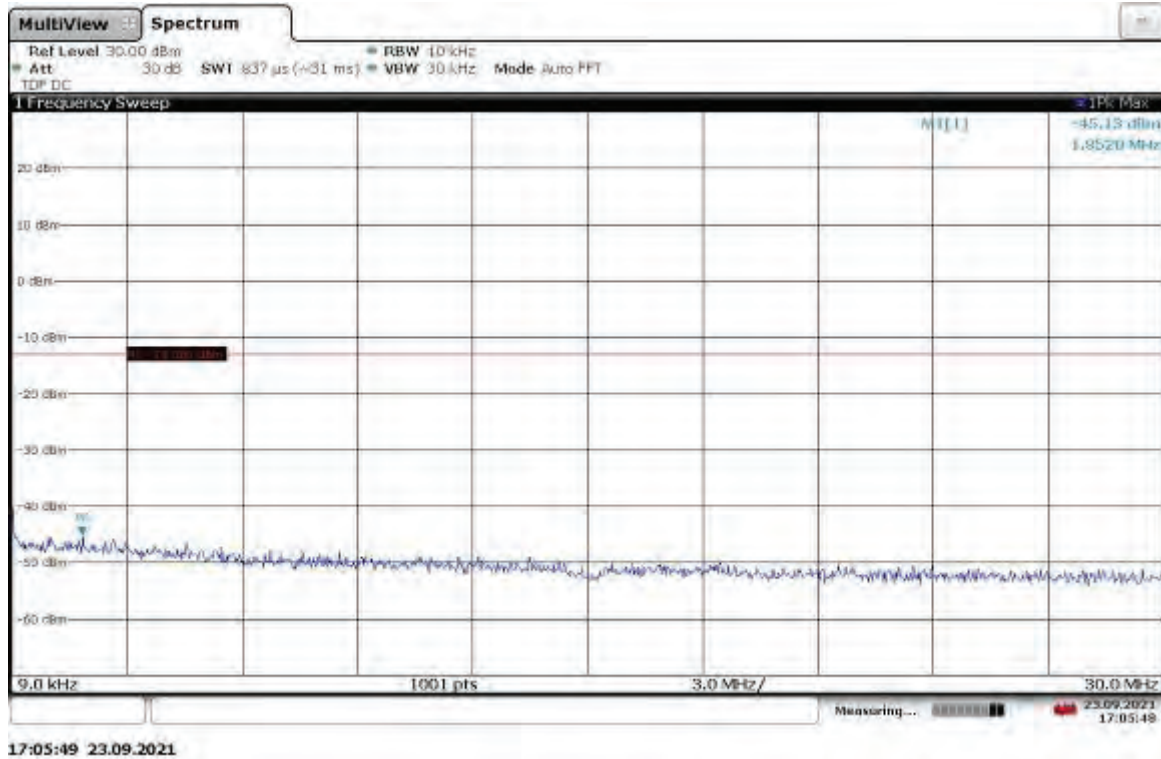
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



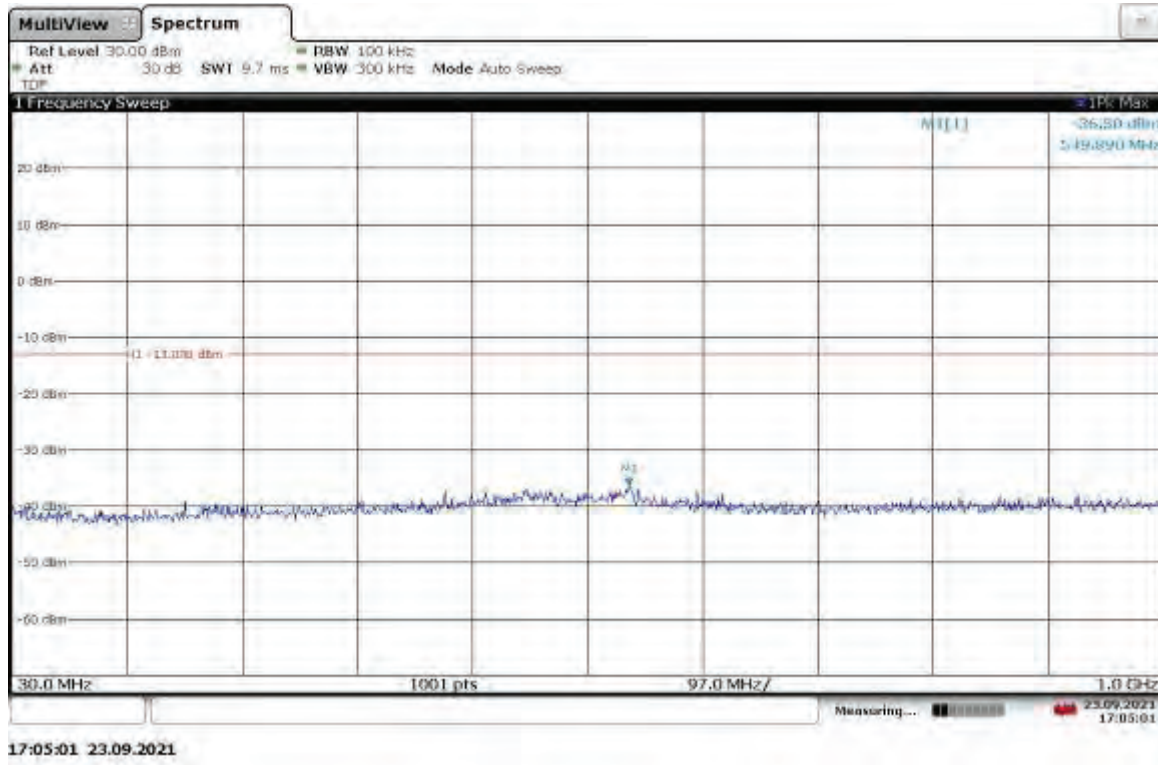
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
1-22GHz



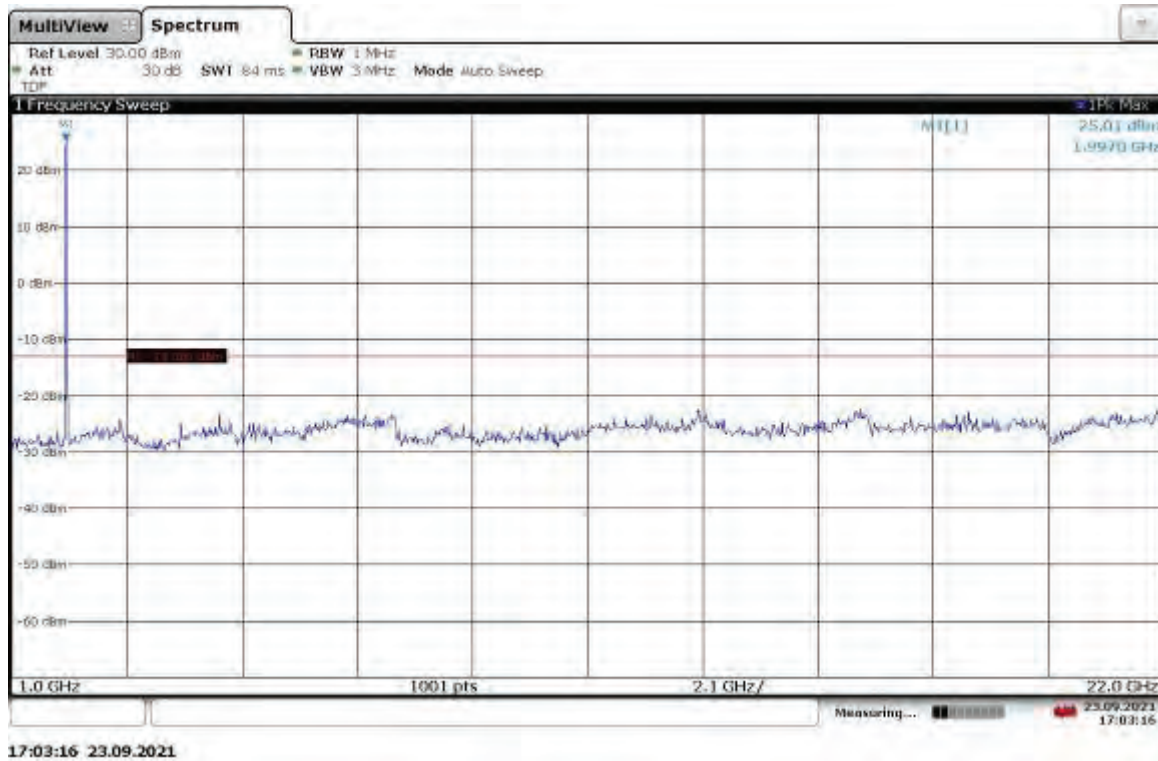
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



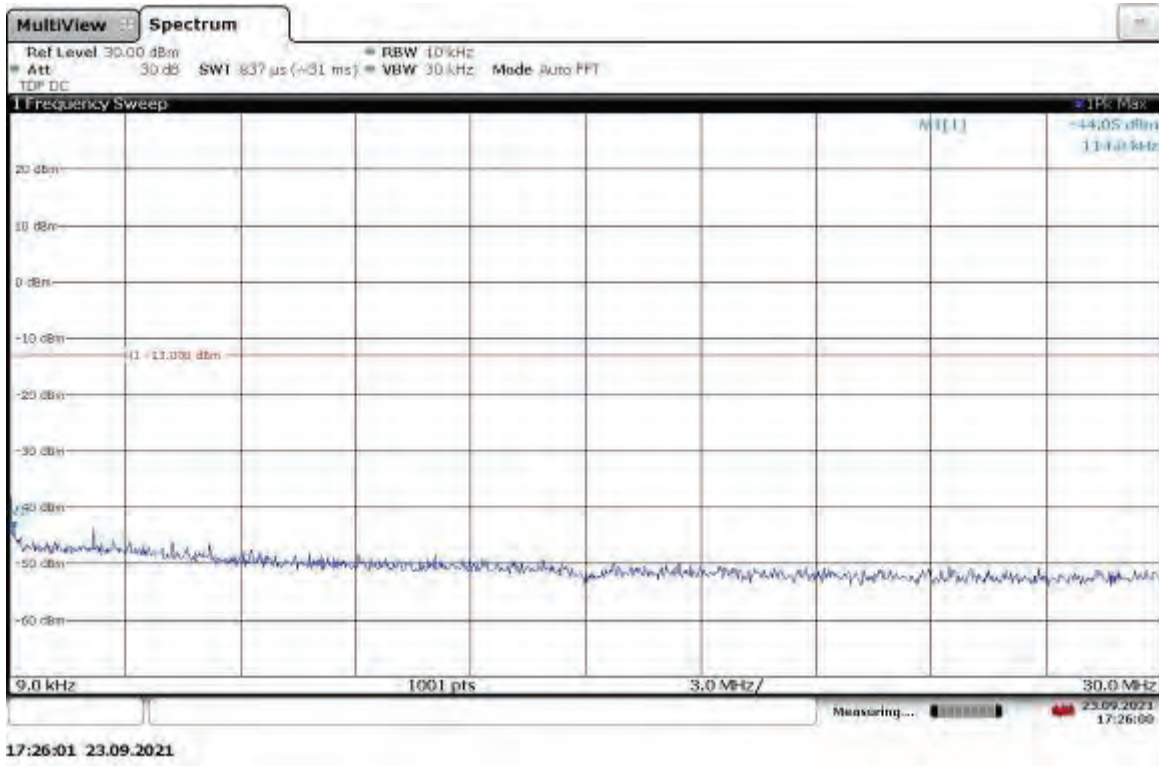
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



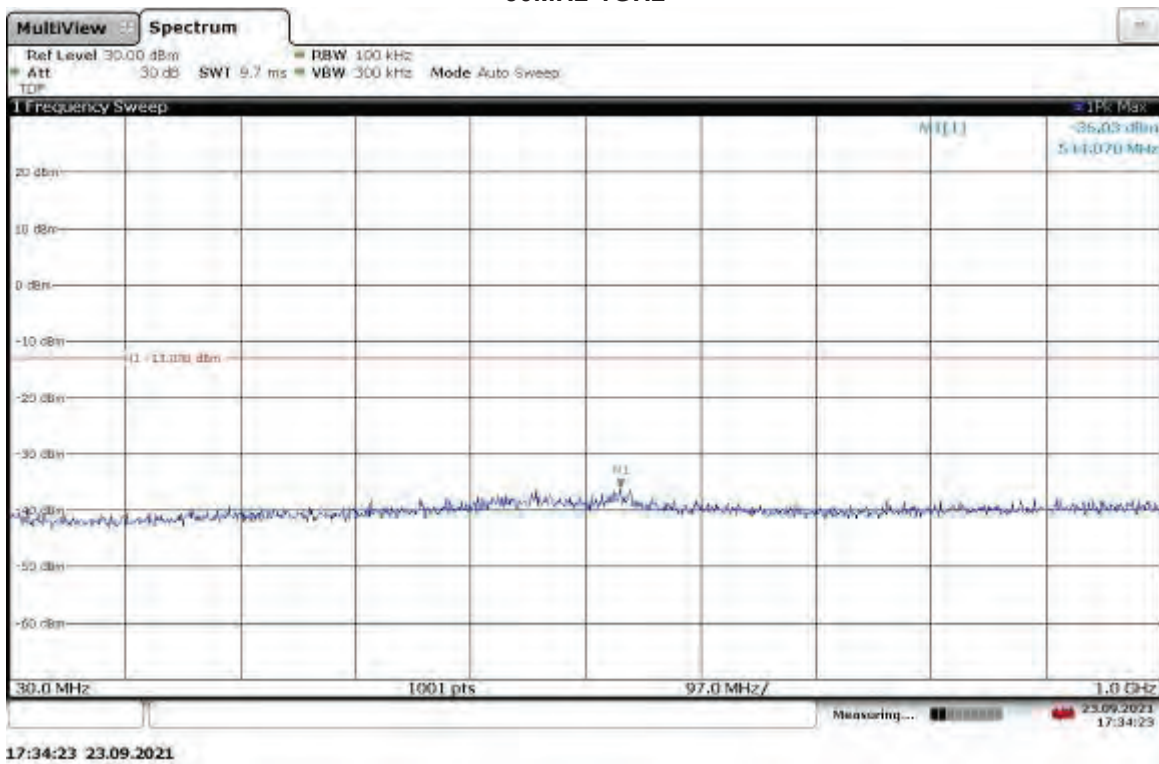
Slot 2 (Band 2), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
1-22GHz



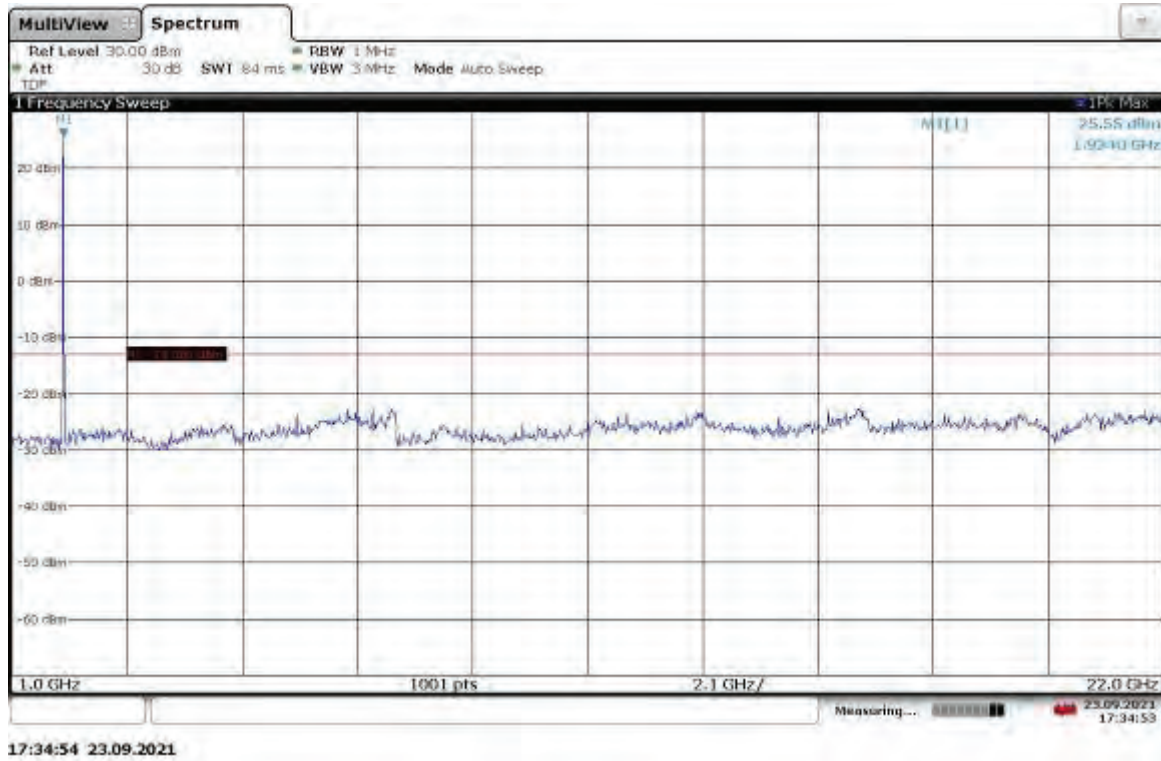
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



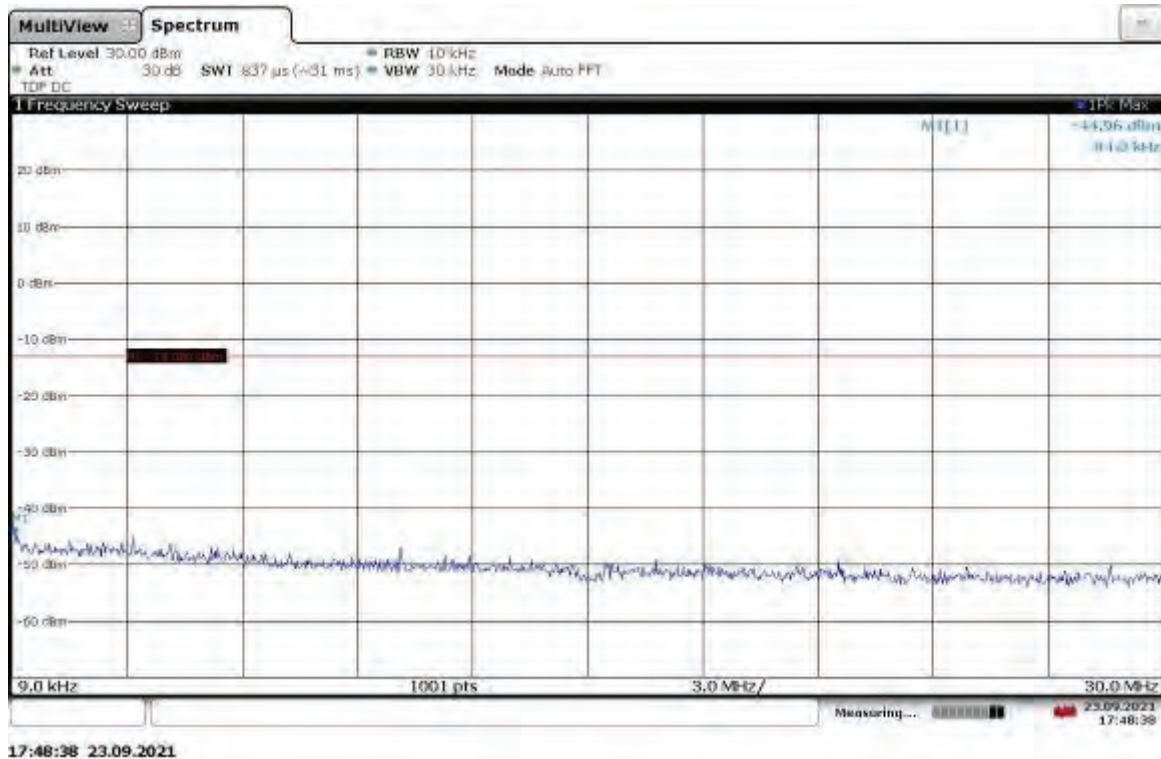
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



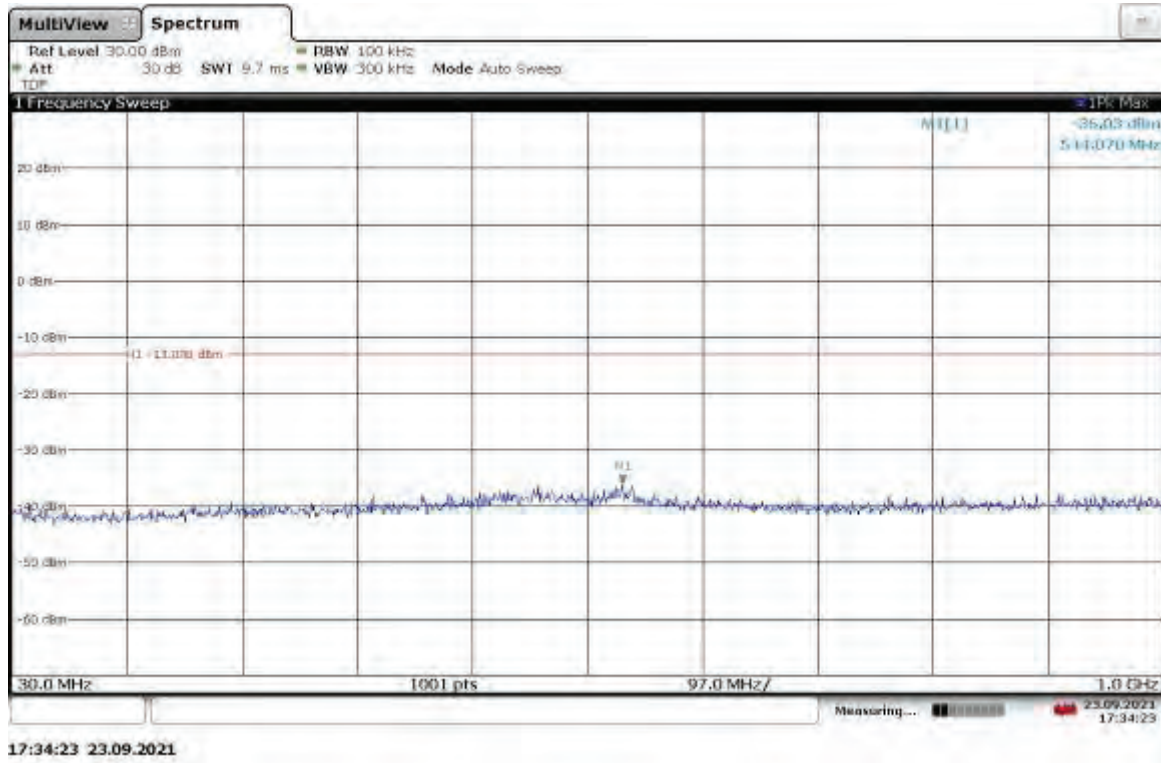
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
1-22GHz



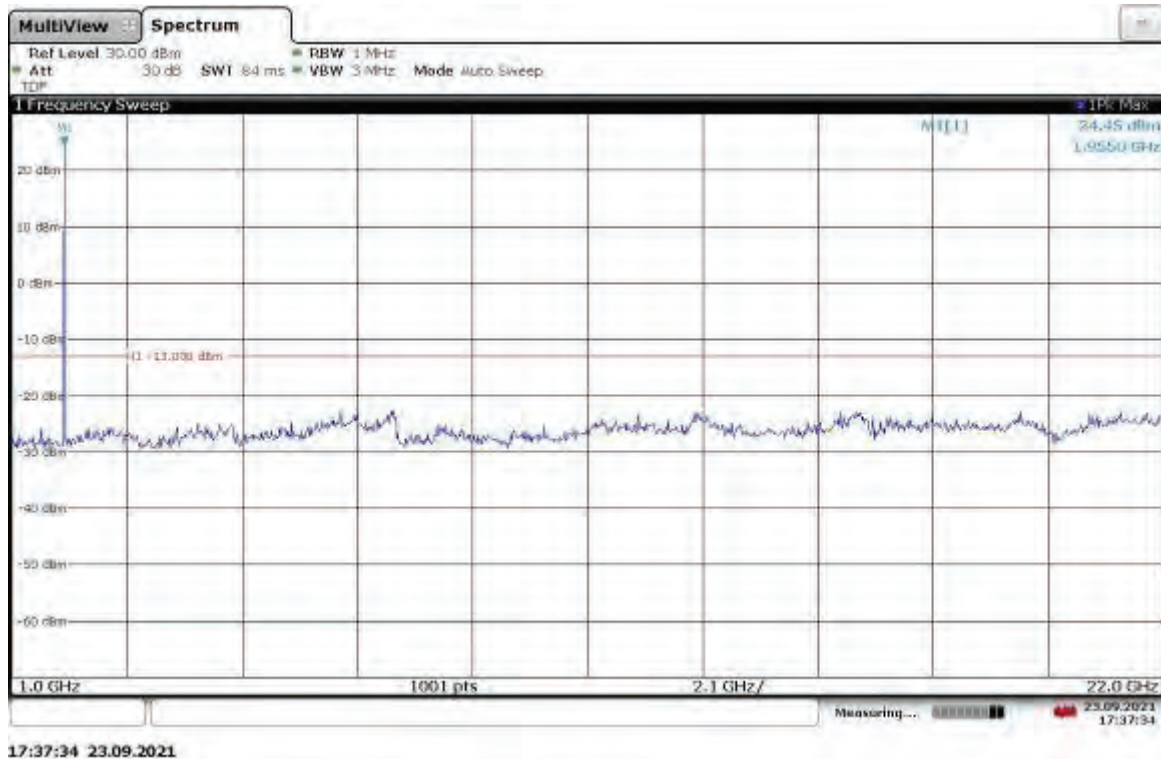
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



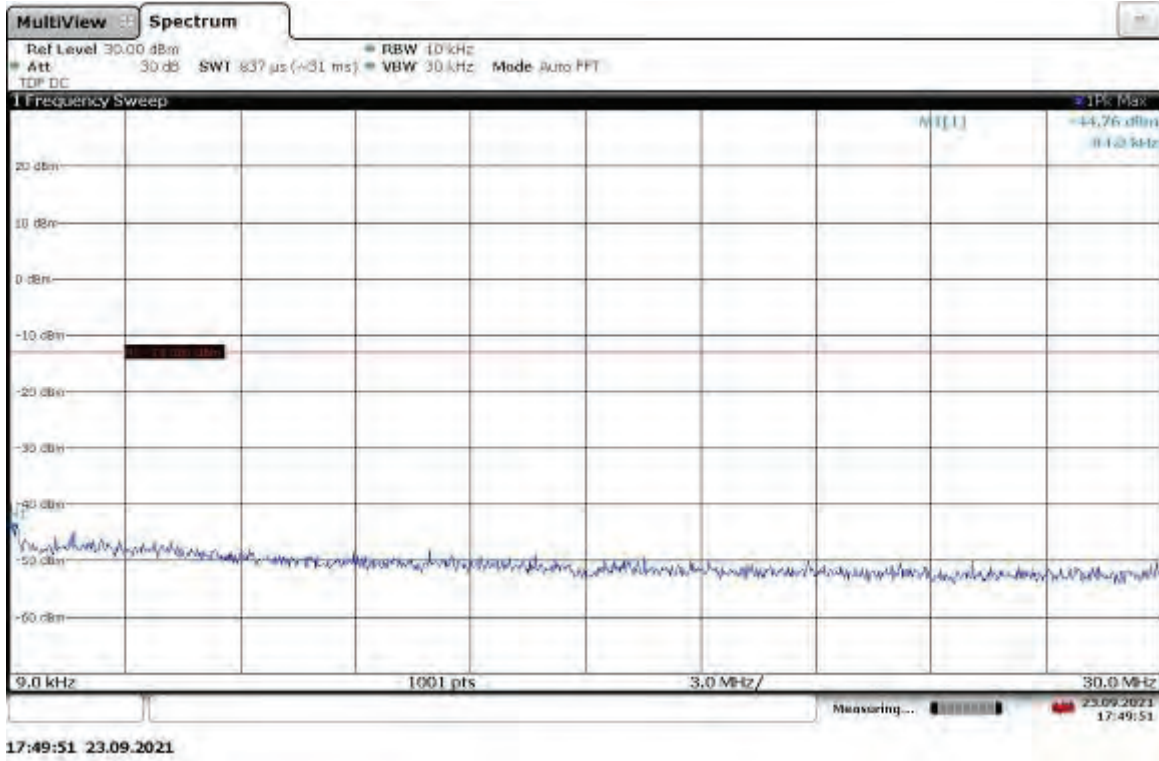
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



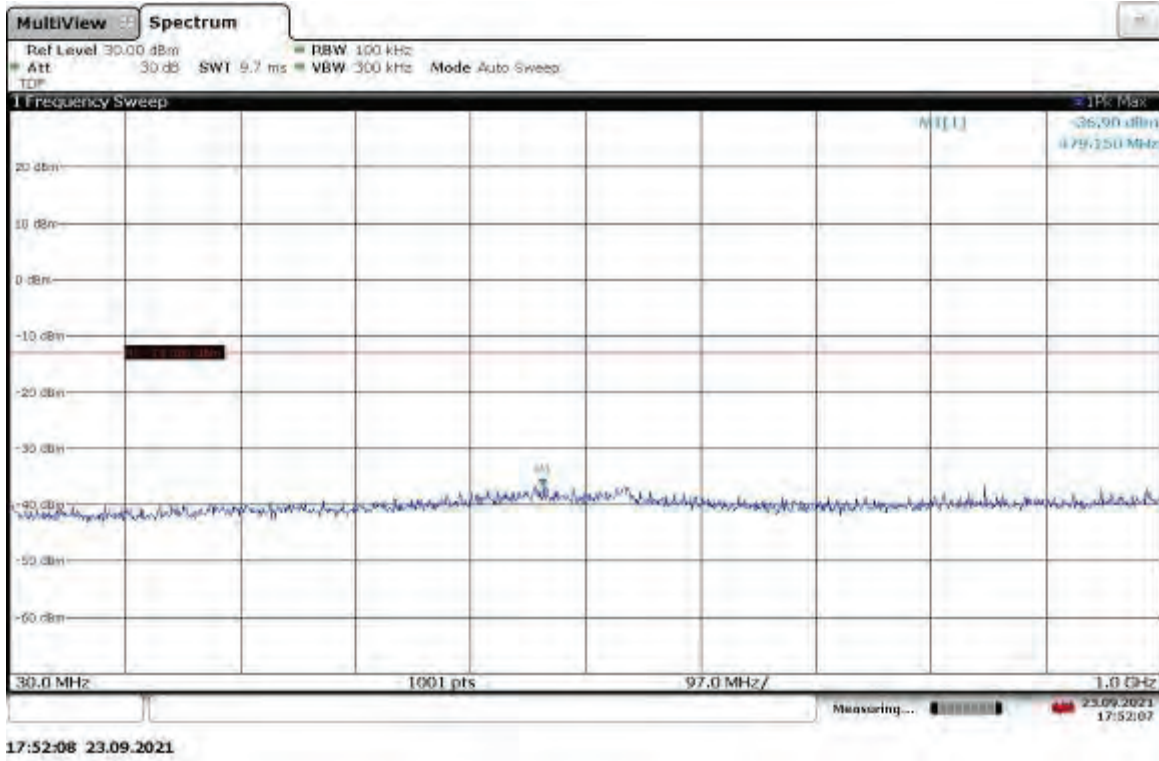
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
1-22GHz



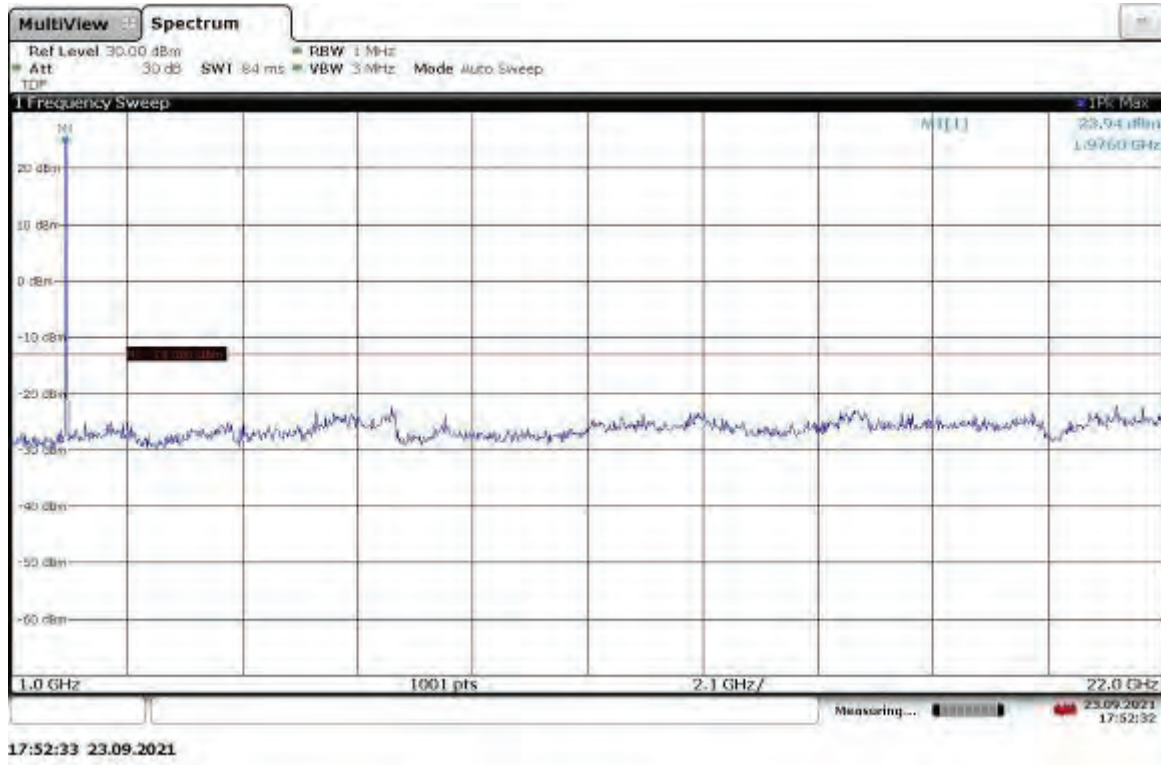
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



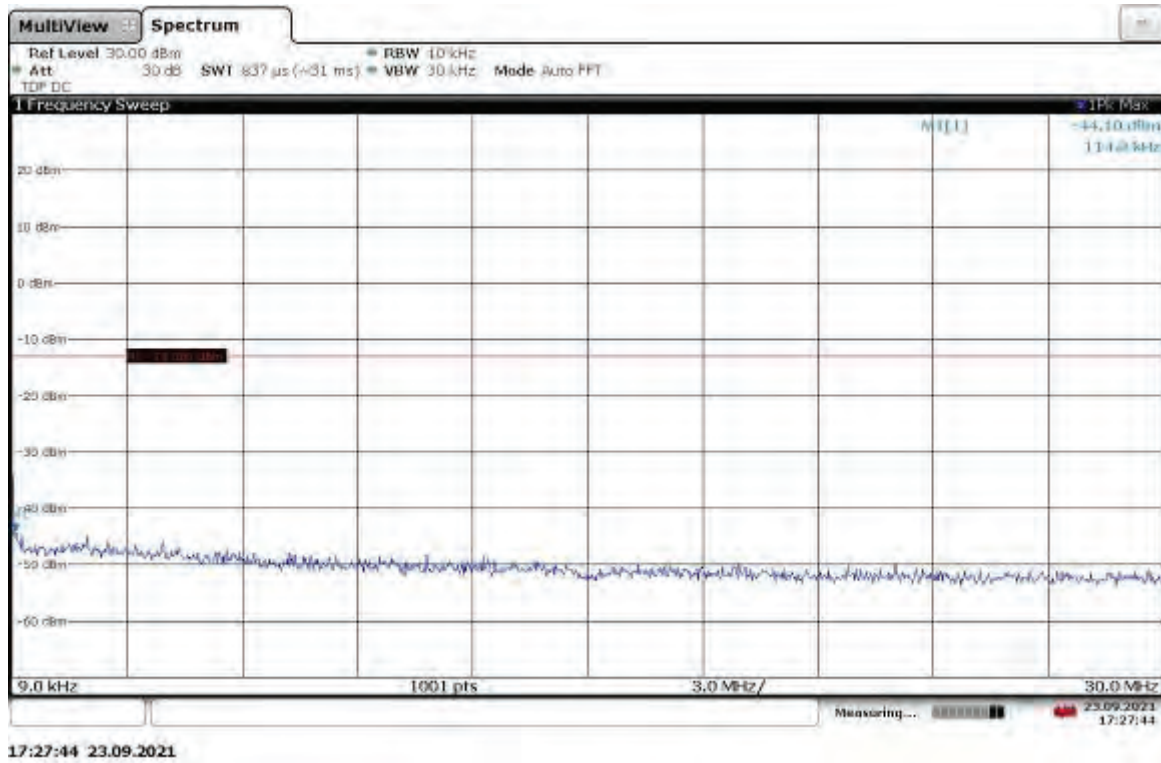
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



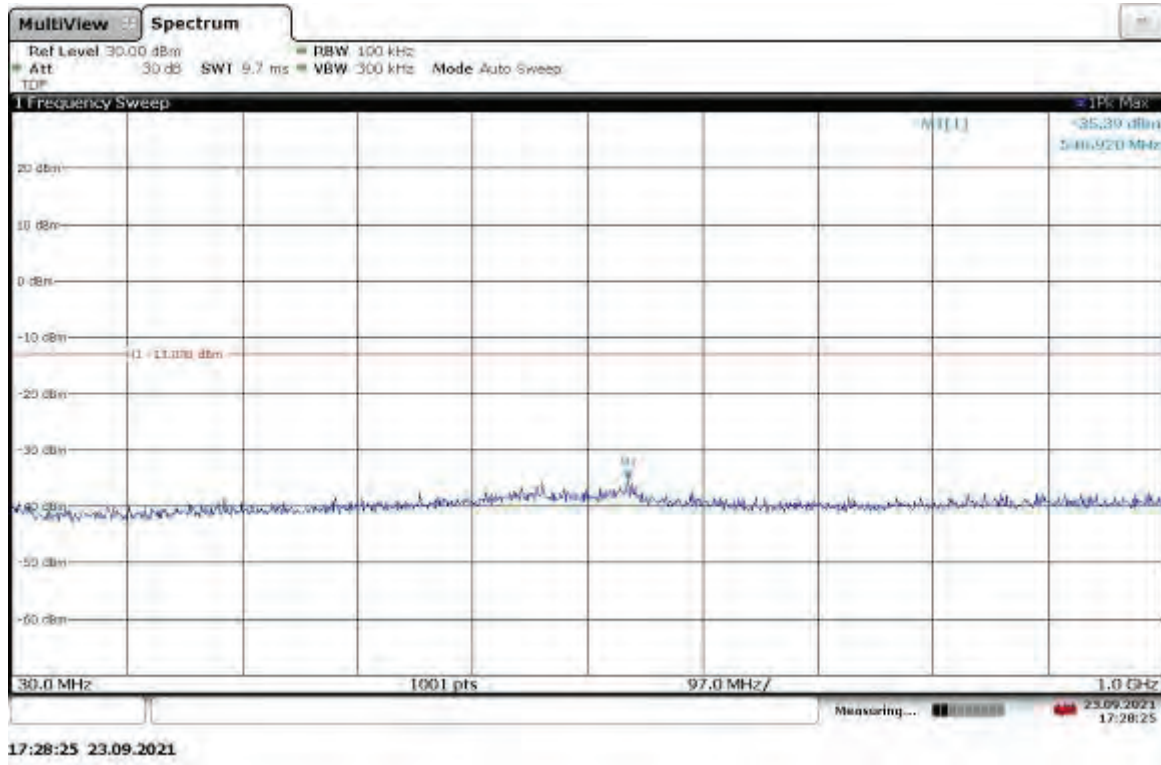
Slot 2 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
1-22GHz



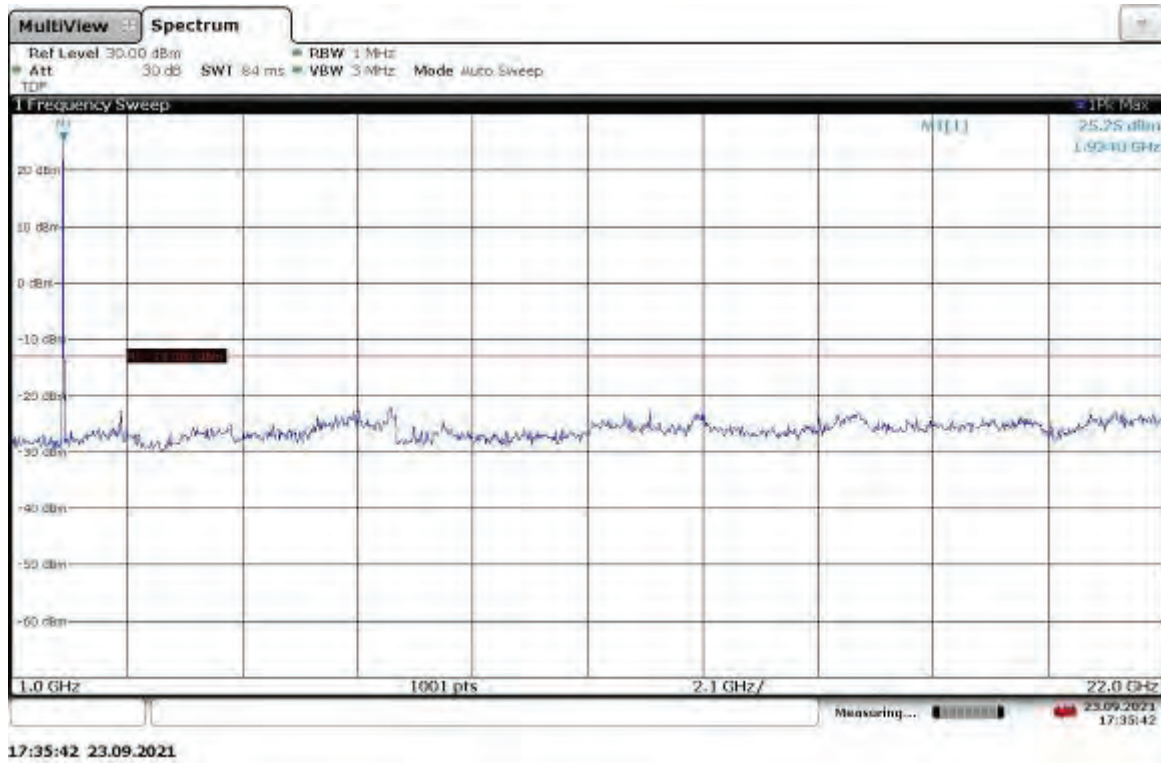
Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz

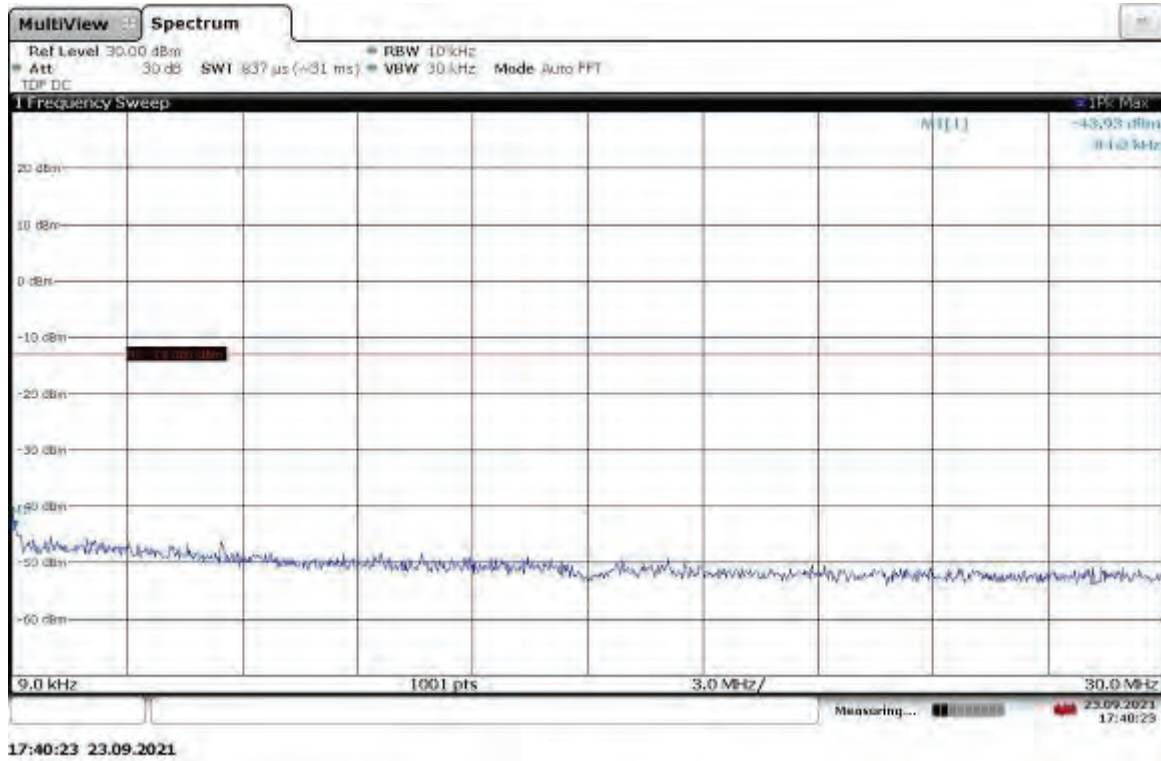
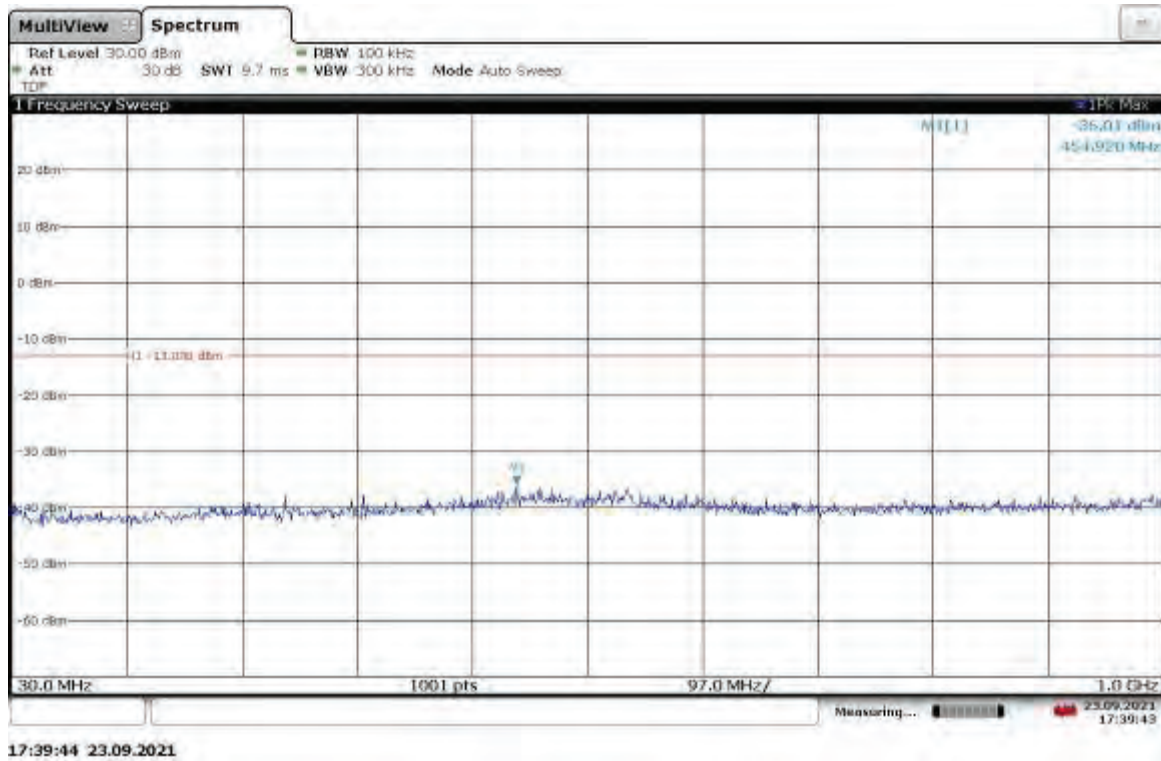


Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz

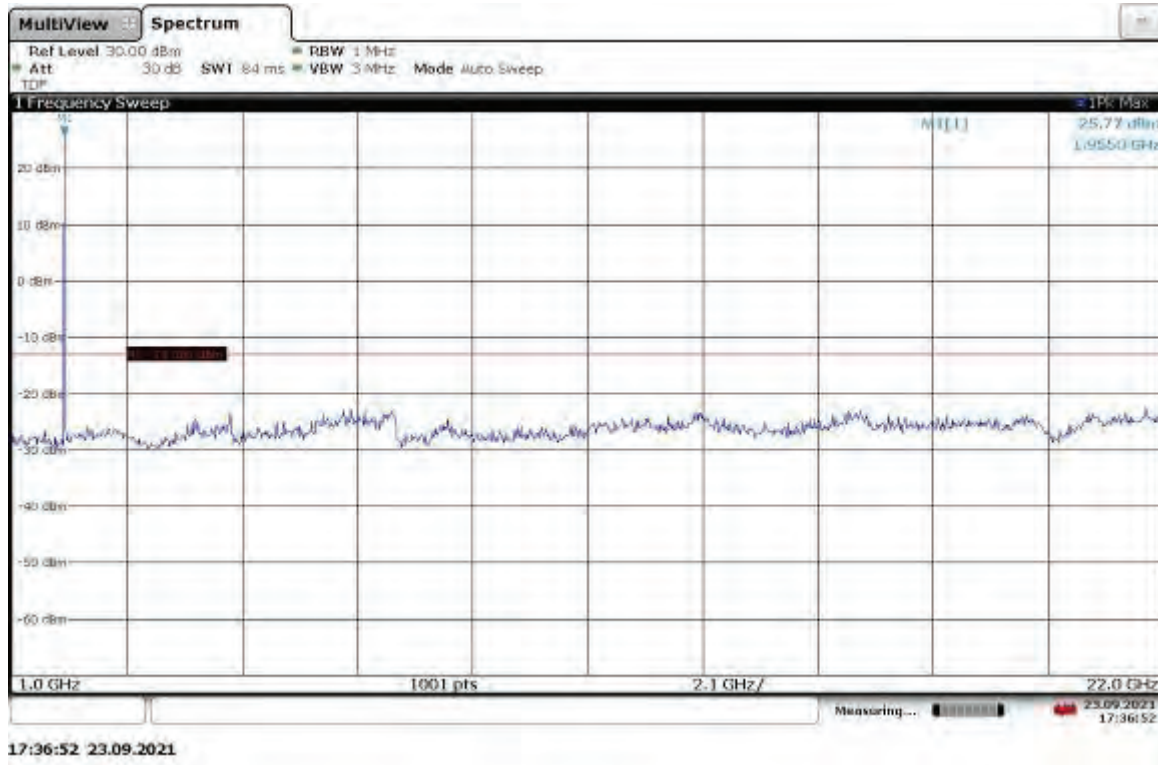


Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
1-22GHz

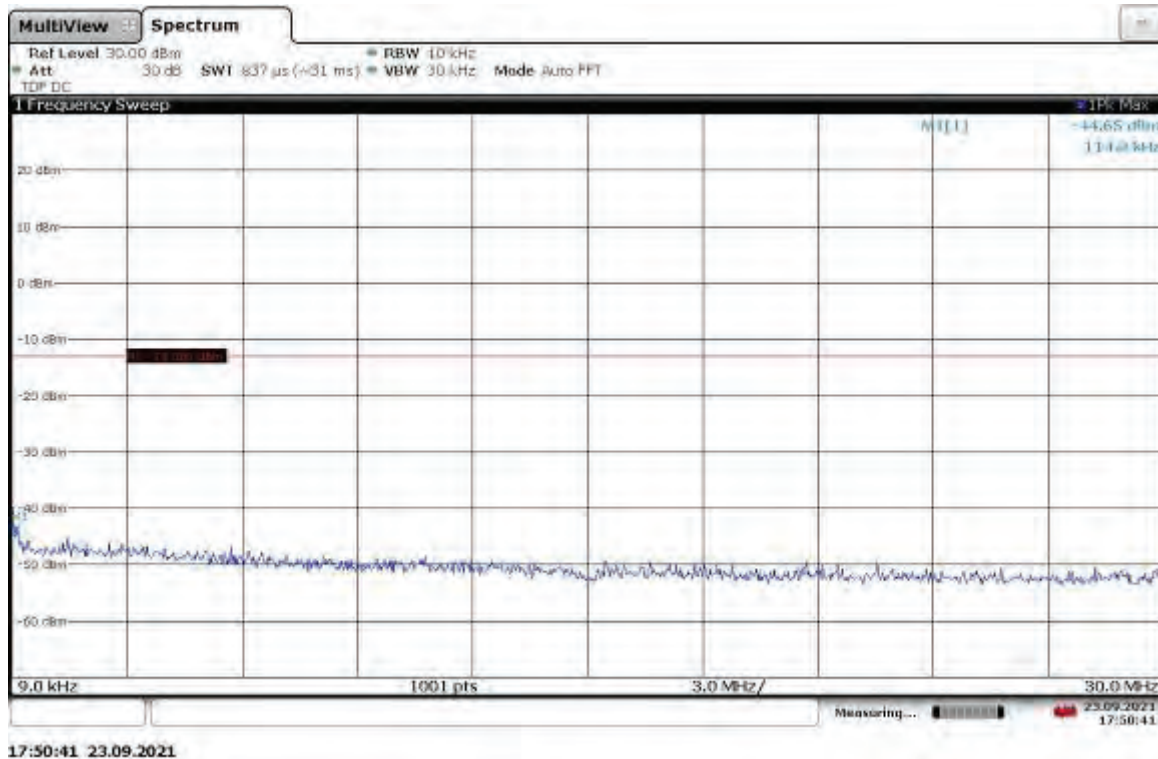


**Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz****Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz**

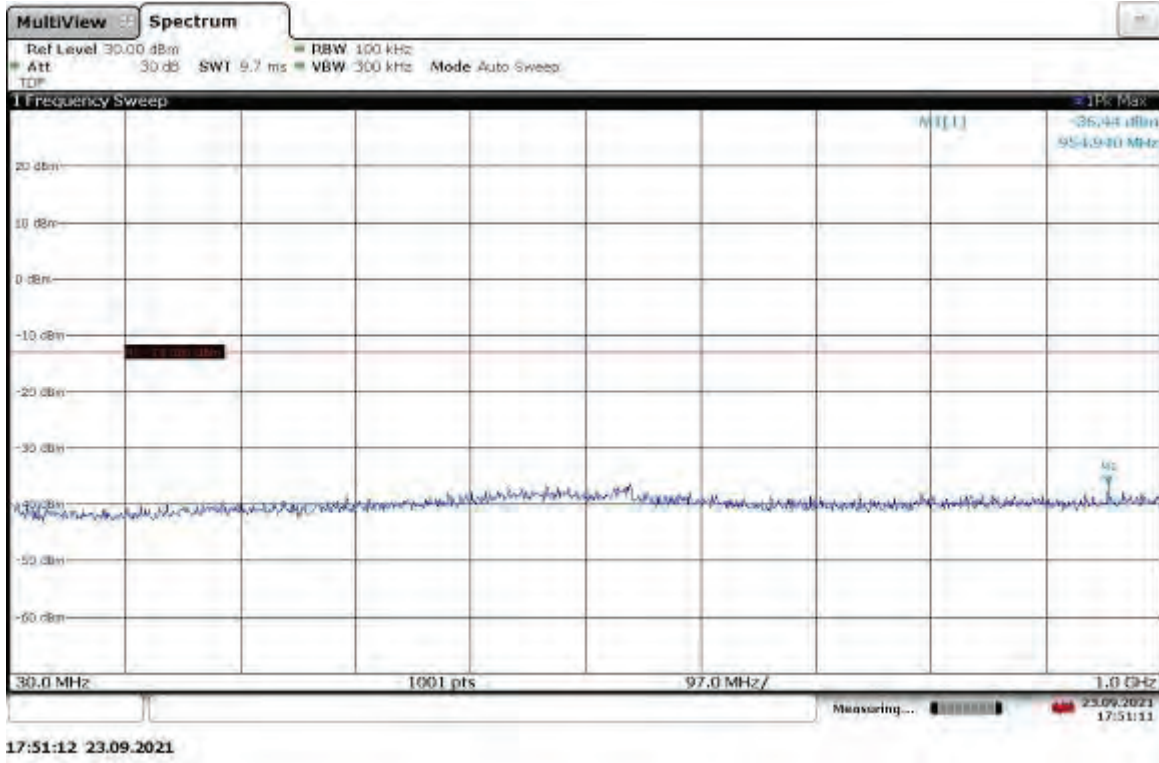
Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
1-22GHz



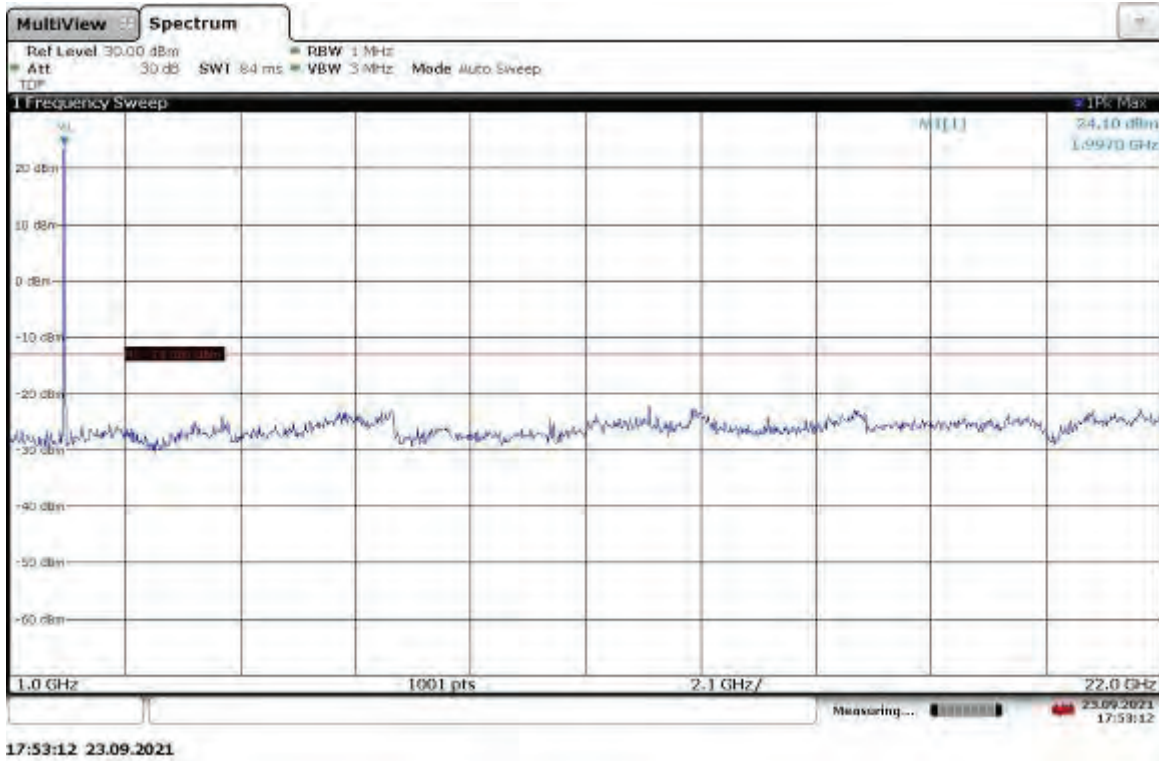
Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



Slot 2 (Band 2), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
1-22GHz



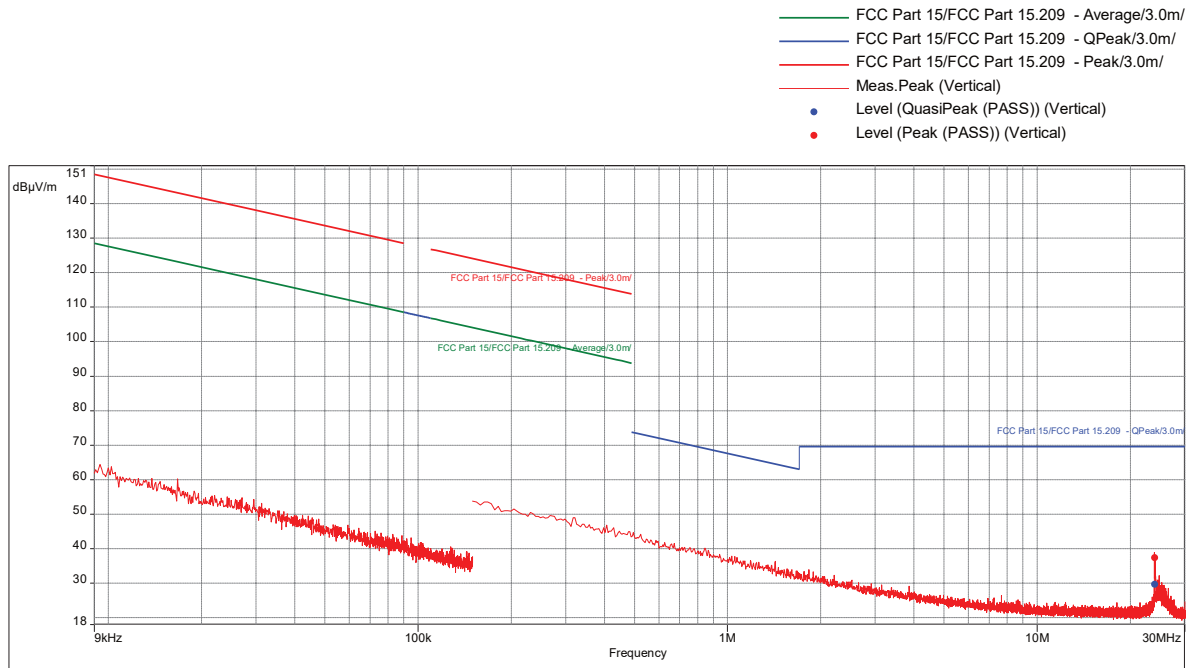
Radiated Emissions, 9k-30 MHz

Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/26/2021 7:52:18 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM1.1_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
23.96731579	37.40	69.54	-32.14	124.00	1.00	Vertical	9000.00	10.71

QuasiPeak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
23.96731579	29.65	69.54	-39.89	124.00	1.00	Vertical	9000.00	10.71

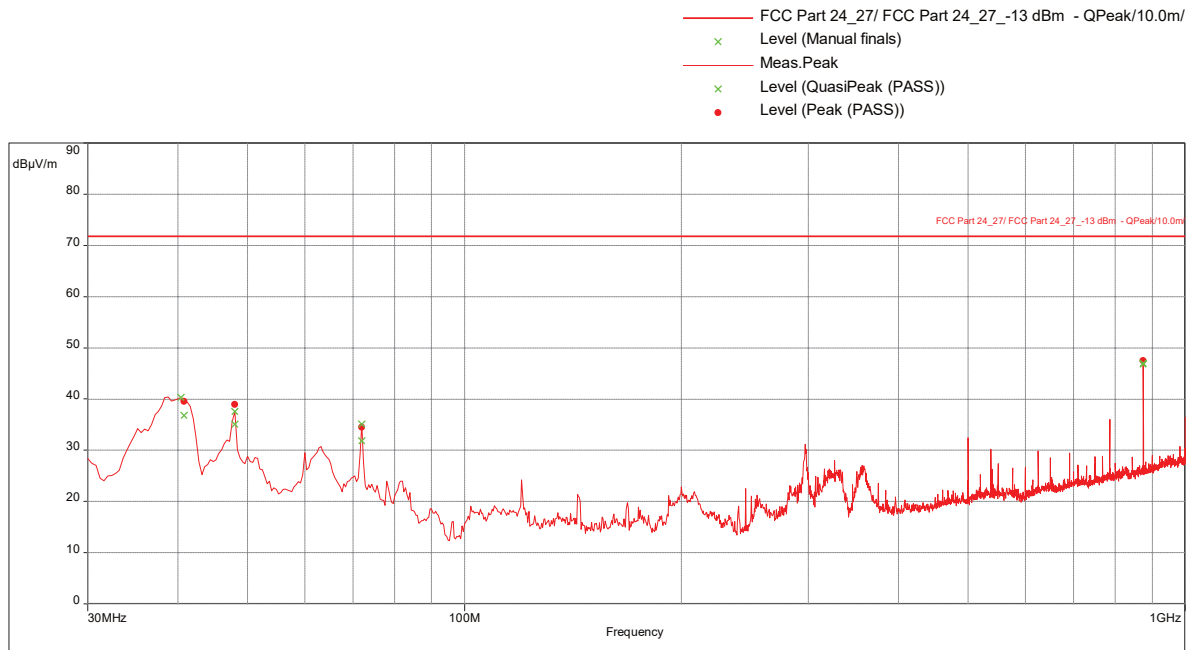
Radiated Emissions, 30-1000 MHz

Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/12/2021 8:01:14 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM1.1_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.71578947	39.57	-45.23	-13.00	-32.23	53.00	1.68	Vertical	120000.00	-20.08
48	38.93	-45.87	-13.00	-32.87	67.00	3.45	Vertical	120000.00	-24.48
72	34.48	-50.32	-13.00	-37.32	23.00	1.62	Vertical	120000.00	-24.77
874.9894737	47.51	-37.29	-13.00	-24.29	124.00	1.30	Horizontal	120000.00	-6.76

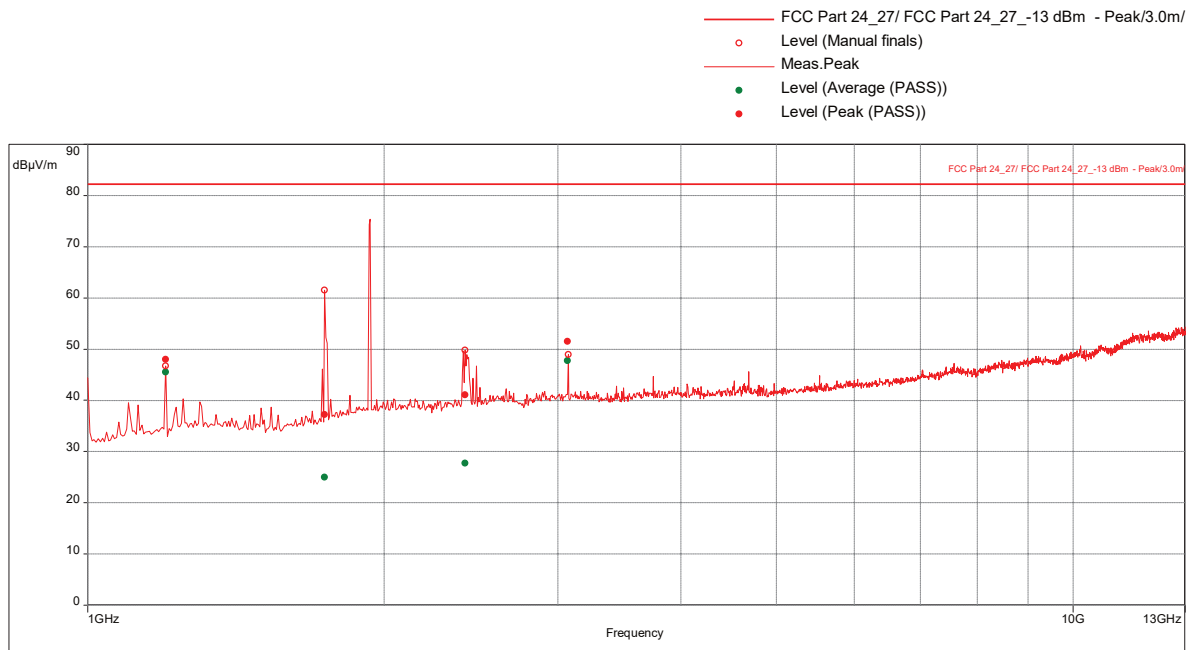
Level EIRP (dBm) = Level Peak (dBuV/m) -84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/21/2021 4:45:55 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM1.1_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	47.98	-47.28	-13.0	-34.28	3.00	1.65	Horizontal	1000000.00	-8.42
1742.368421	37.20	-58.06	-13.0	-45.06	176.00	2.70	Horizontal	1000000.00	-6.33
2415.263158	41.10	-54.16	-13.0	-41.16	4.00	3.05	Horizontal	1000000.00	-3.22
3072.105263	51.55	-43.71	-13.0	-30.71	96.00	1.00	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.2

The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

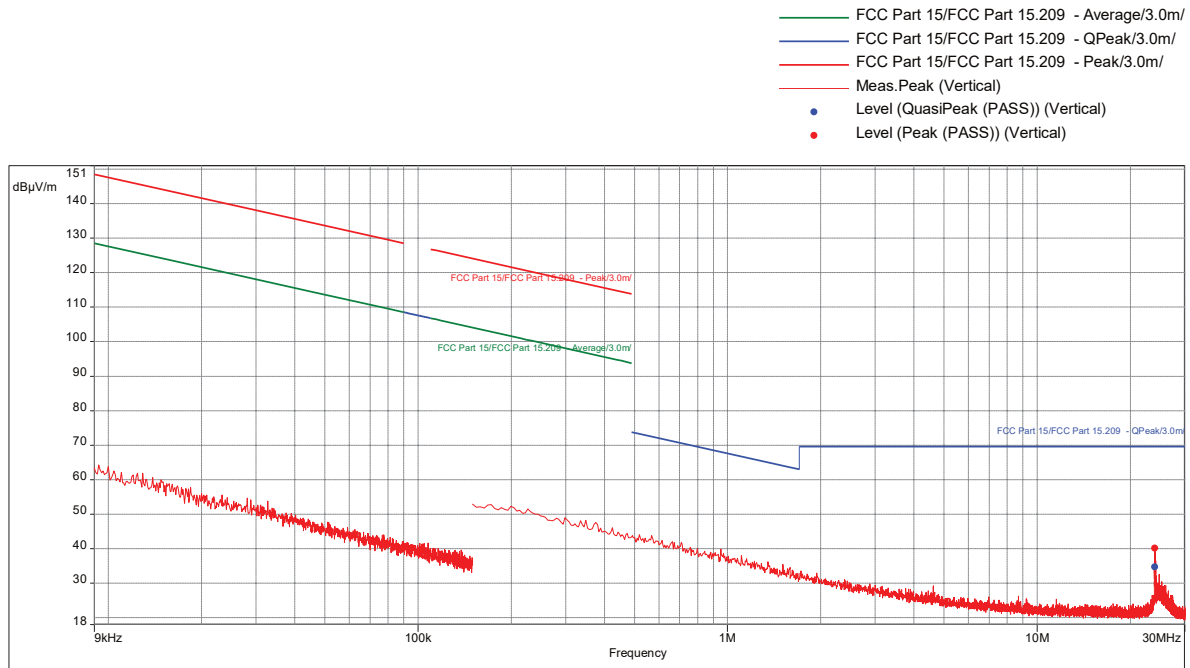
Radiated Emissions, 9kHz-30 MHz

Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/26/2021 8:27:45 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM1.1_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.00189474	40.12	69.54	-29.42	106.00	1.00	Vertical	9000.00	10.70

QuasiPeak (PASS) (1)

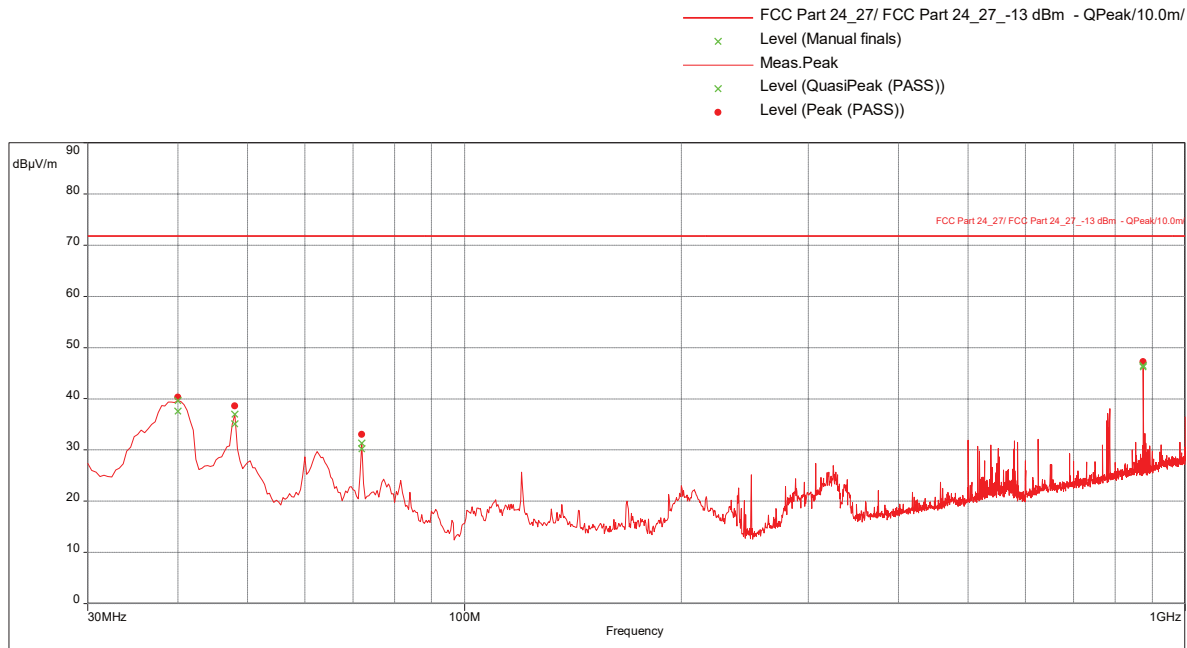
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.00189474	34.68	69.54	-34.86	106.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/12/2021 8:24:48 AM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM1.1_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.09473684	40.26	-44.54	-13.00	-31.54	124.00	1.00	Vertical	120000.00	-19.66
48	38.57	-46.23	-13.00	-33.23	291.00	1.00	Vertical	120000.00	-24.48
72	33.05	-51.75	-13.00	-38.75	111.00	1.62	Vertical	120000.00	-24.77
874.9894737	47.23	-37.57	-13.00	-24.57	127.00	1.30	Horizontal	120000.00	-6.76

Level EIRP (dBm) = Level Peak (dBuV/m) -84.8

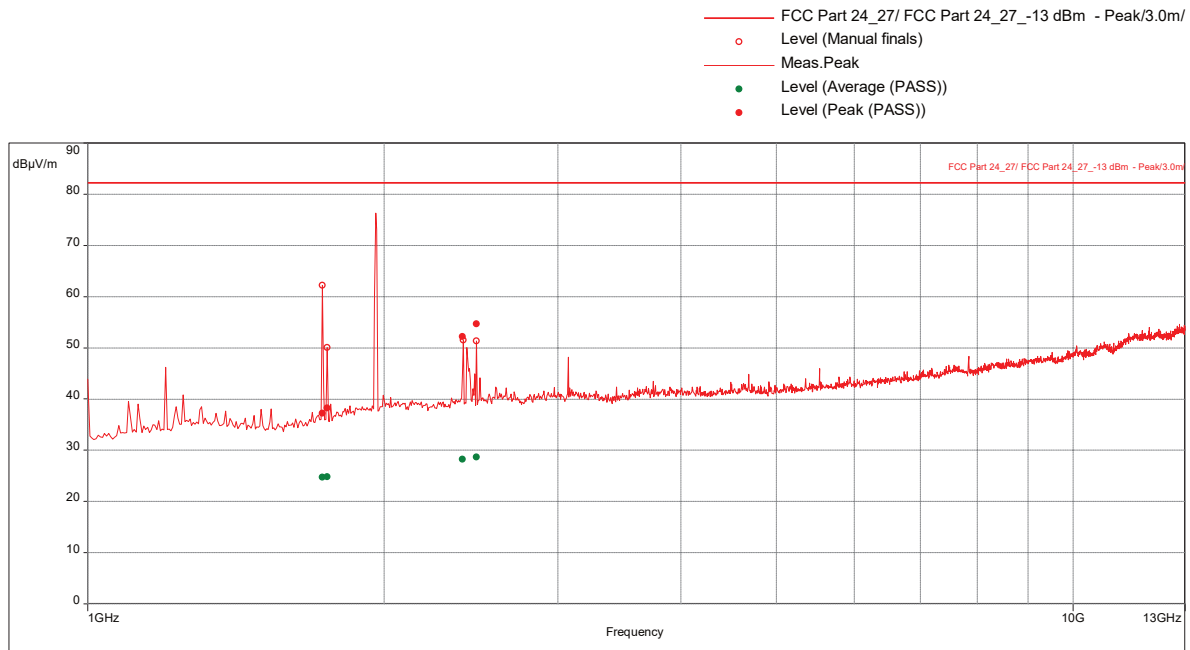
Radiated Emissions, 1-22 GHz

Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/21/2021 5:17:38 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM1.1_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1729.210526	37.24	-58.02	-13.0	-45.02	138.00	1.50	Horizontal	1000000.00	-6.55
1749.473684	38.24	-57.02	-13.0	-44.02	63.00	3.79	Horizontal	1000000.00	-6.21
2402.368421	52.17	-43.09	-13.0	-30.09	312.00	3.69	Horizontal	1000000.00	-3.15
2480	54.67	-40.59	-13.0	-27.59	290.00	2.15	Horizontal	1000000.00	-3.26

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

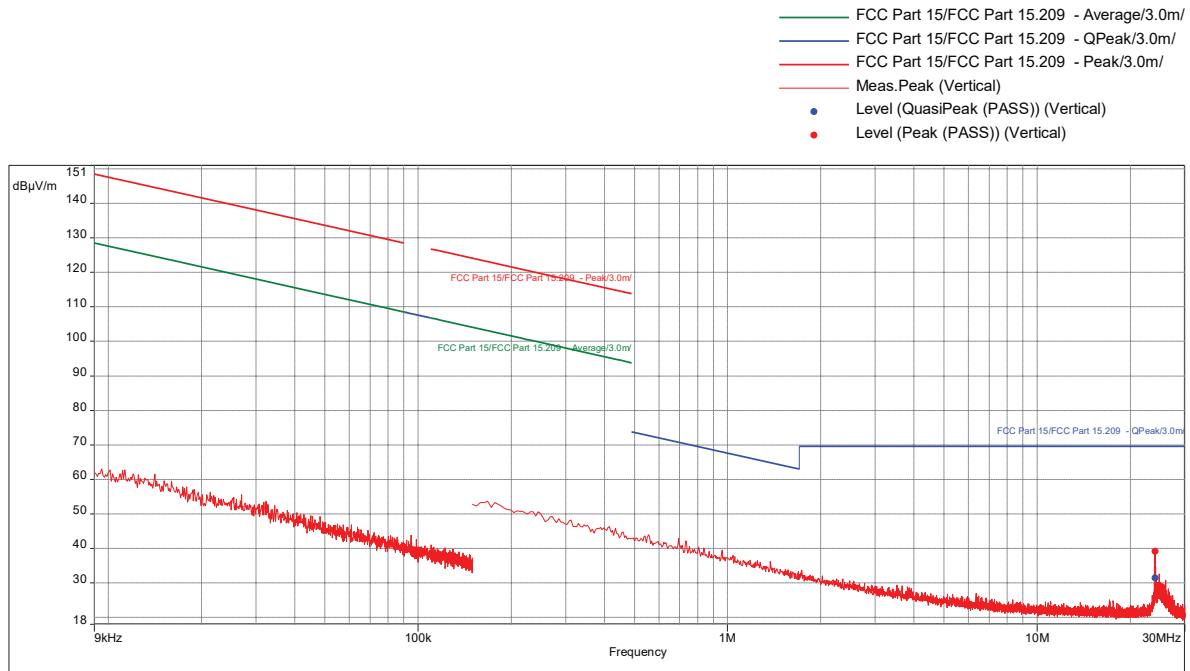
The highest peak on plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

**Radiated Emissions, 9kHz-30 MHz
Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ High Channel**

Test Information:

Date and Time	8/26/2021 9:02:11 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM1.1_Tx High CH 1987.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.06584211	39.13	69.54	-30.41	80.00	1.00	Vertical	9000.00	10.70

QuasiPeak (PASS) (1)

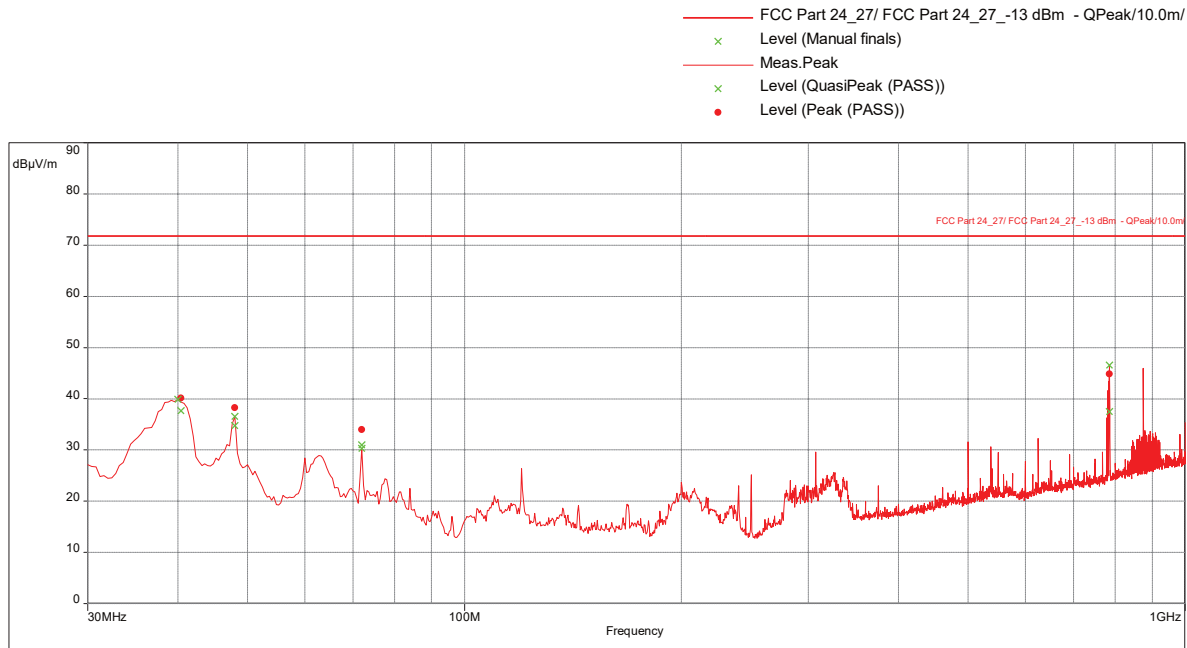
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.06584211	31.45	69.54	-38.09	80.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/12/2021 8:45:14 AM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM1.1_Tx High CH 1987.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.28421053	40.12	-44.68	-13.00	-31.68	54.00	1.00	Vertical	120000.00	-19.78
48.03157895	38.27	-46.53	-13.00	-33.53	220.00	2.52	Vertical	120000.00	-24.49
72	33.99	-50.81	-13.00	-37.81	183.00	1.68	Vertical	120000.00	-24.77
785.2631579	44.81	-39.99	-13.00	-26.99	0.00	2.31	Horizontal	120000.00	-7.89

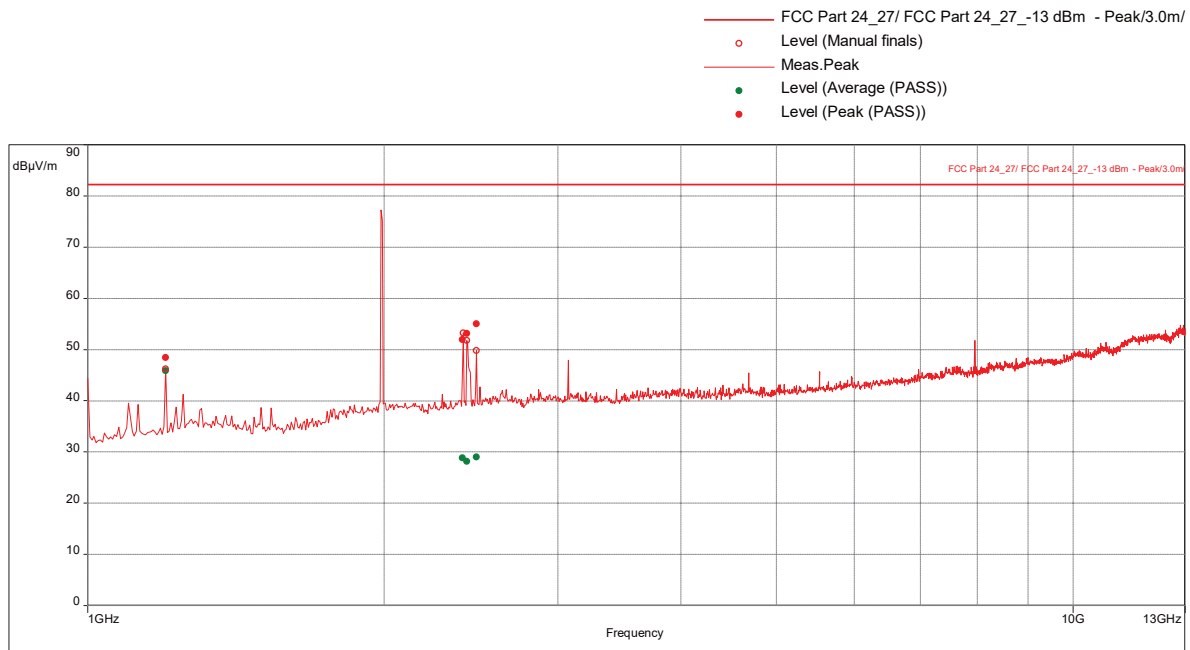
Level EIRP (dBm) = Level Peak (dBuV/m) -84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/21/2021 5:47:50 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM1.1_Tx High CH 1987.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.40	-46.86	-13.0	-33.86	359.00	1.15	Horizontal	1000000.00	-8.42
2402.368421	51.90	-43.36	-13.0	-30.36	190.00	1.40	Horizontal	1000000.00	-3.15
2426.315789	53.13	-42.13	-13.0	-29.13	283.00	3.39	Horizontal	1000000.00	-3.28
2480.263158	55.06	-40.20	-13.0	-27.20	234.00	2.15	Horizontal	1000000.00	-3.26

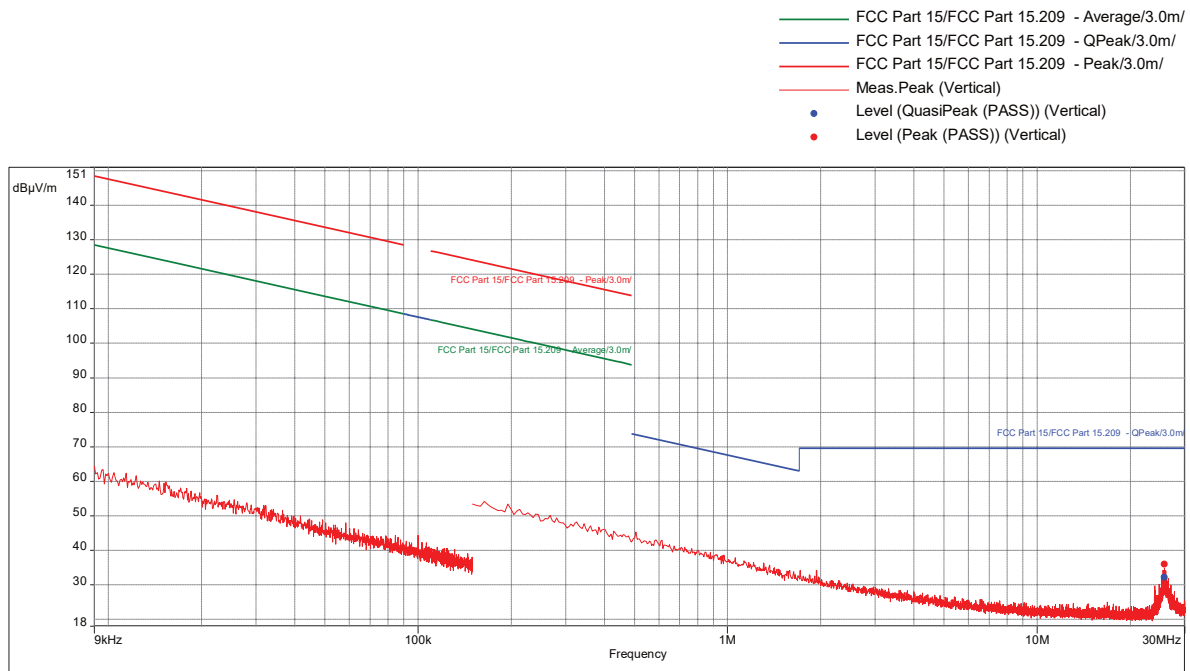
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22GHz. No emissions were detected above the measuring equipment noise floor.

Radiated Emissions, 9kHz-30 MHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/27/2021 6:07:17 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM3.2_Tx Low CH 1932.5MHz_RP5200 host

Graph:**Results:**

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
25.77726316	36.00	69.54	-33.54	150.00	1.00	Vertical	9000.00	10.46

QuasiPeak (PASS) (1)

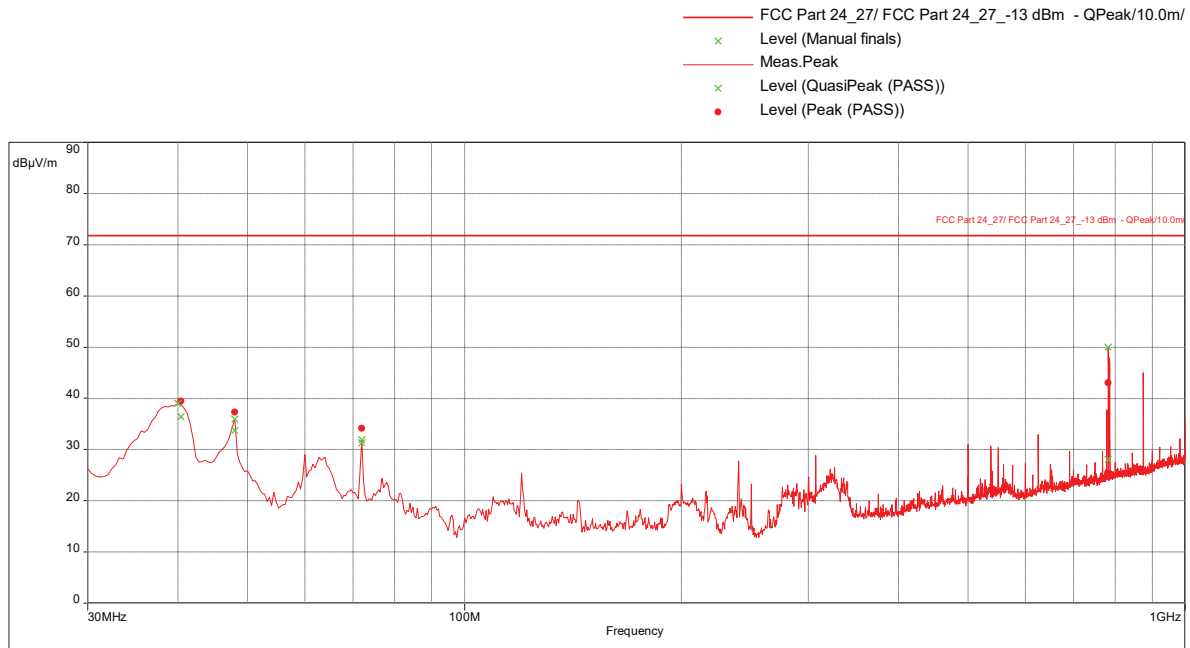
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
25.77726316	32.17	69.54	-37.37	150.00	1.00	Vertical	9000.00	10.46

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/12/2021 11:14:09 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM3.2_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.25263158	39.42	-45.42	-13.00	-32.38	119.00	2.23	Vertical	120000.00	-19.76
48	37.29	-47.51	-13.00	-34.51	256.00	2.35	Vertical	120000.00	-24.48
72	34.14	-50.66	-13.00	-37.66	4.00	1.62	Vertical	120000.00	-24.77
782	43.02	-41.78	-13.00	-28.78	359.00	1.00	Vertical	120000.00	-7.88

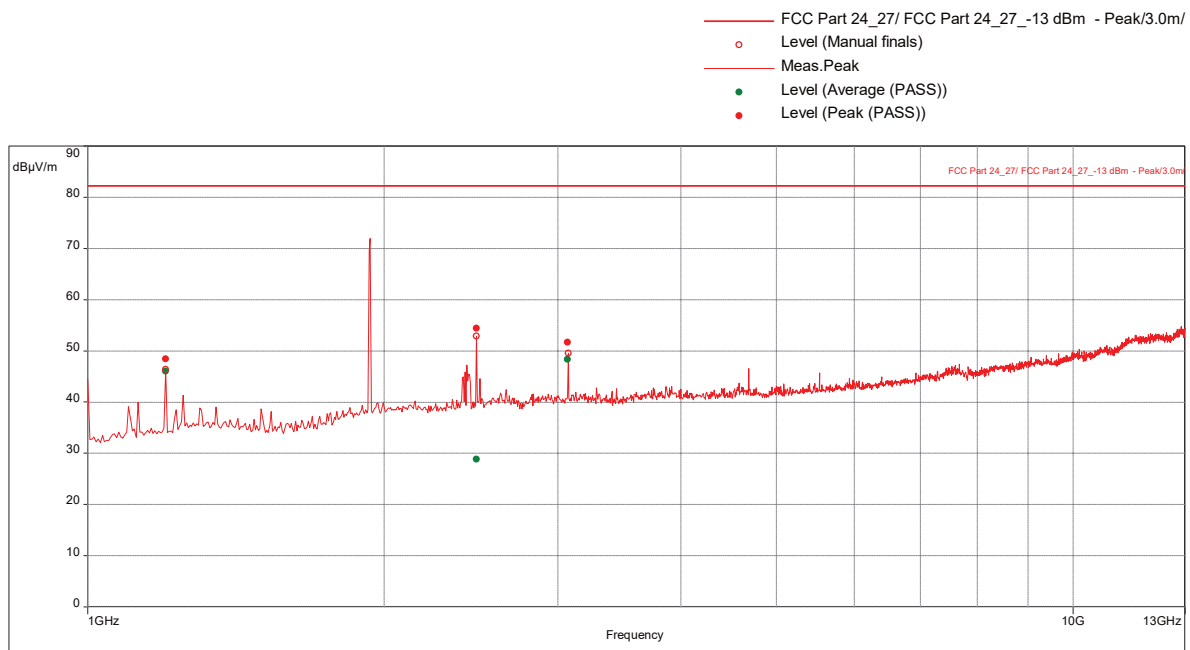
Level EIRP (dBm) = Level Peak (dBuV/m) -84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/21/2021 9:33:54 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.2_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (3)

Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.40	-46.86	-13.0	-33.86	359.00	1.05	Horizontal	1000000.00	-8.42
2479.736842	54.39	-40.87	-13.0	-27.87	261.00	1.00	Horizontal	1000000.00	-3.27
3072.105263	51.68	-43.58	-13.0	-30.58	100.00	1.10	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBμV/m) – 95.20

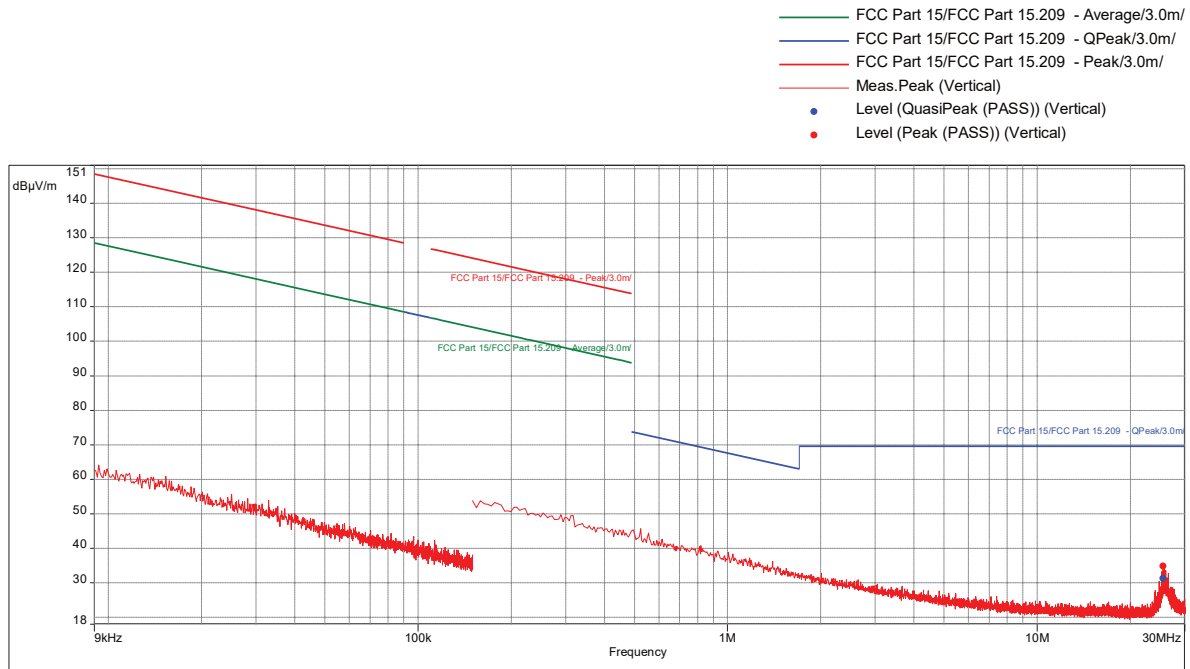
The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

Radiated Emissions, 9kHz-30 MHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/27/2021 6:40:12 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM3.2_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
25.53	34.79	69.54	-34.75	80.00	1.00	Vertical	9000.00	10.53

QuasiPeak (PASS) (1)

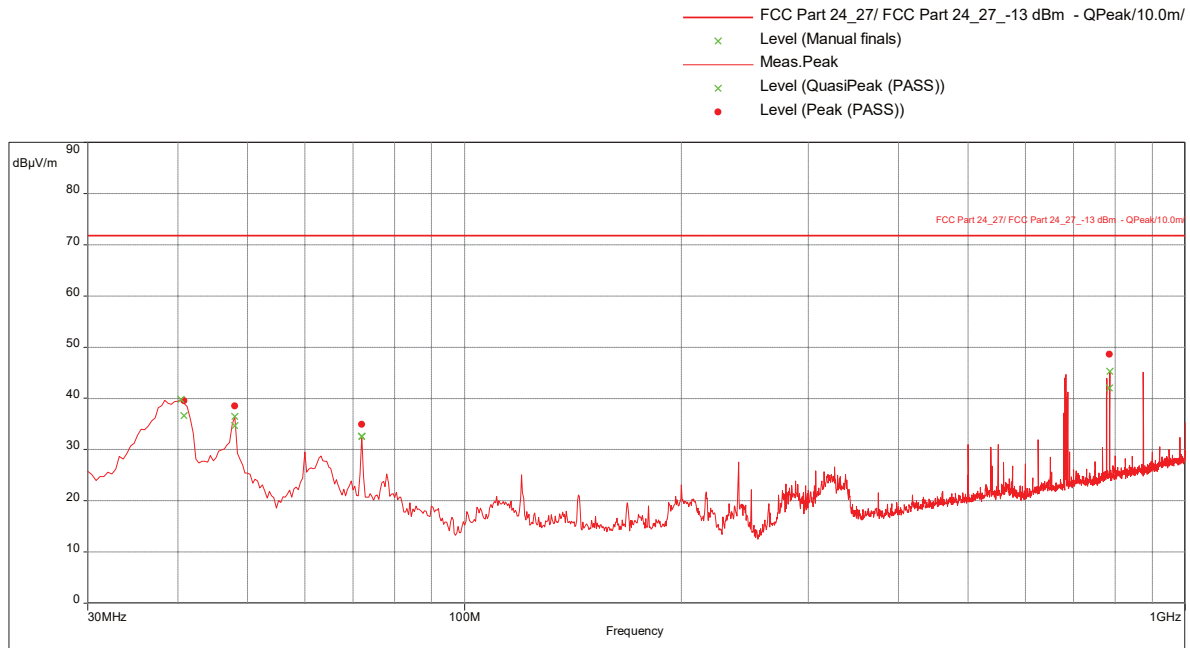
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
25.53	31.32	69.54	-38.22	80.00	1.00	Vertical	9000.00	10.53

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/12/2021 11:35:00 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM3.2_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.68421053	39.56	-45.24	-13.00	-32.24	139.00	2.81	Vertical	120000.00	-20.06
48	38.53	-46.27	-13.00	-33.27	98.00	2.29	Vertical	120000.00	-24.48
72	34.88	-49.92	-13.00	-36.92	162.00	1.62	Vertical	120000.00	-24.77
785.4631579	48.59	-36.21	-13.00	-23.21	316.00	2.29	Vertical	120000.00	-7.93

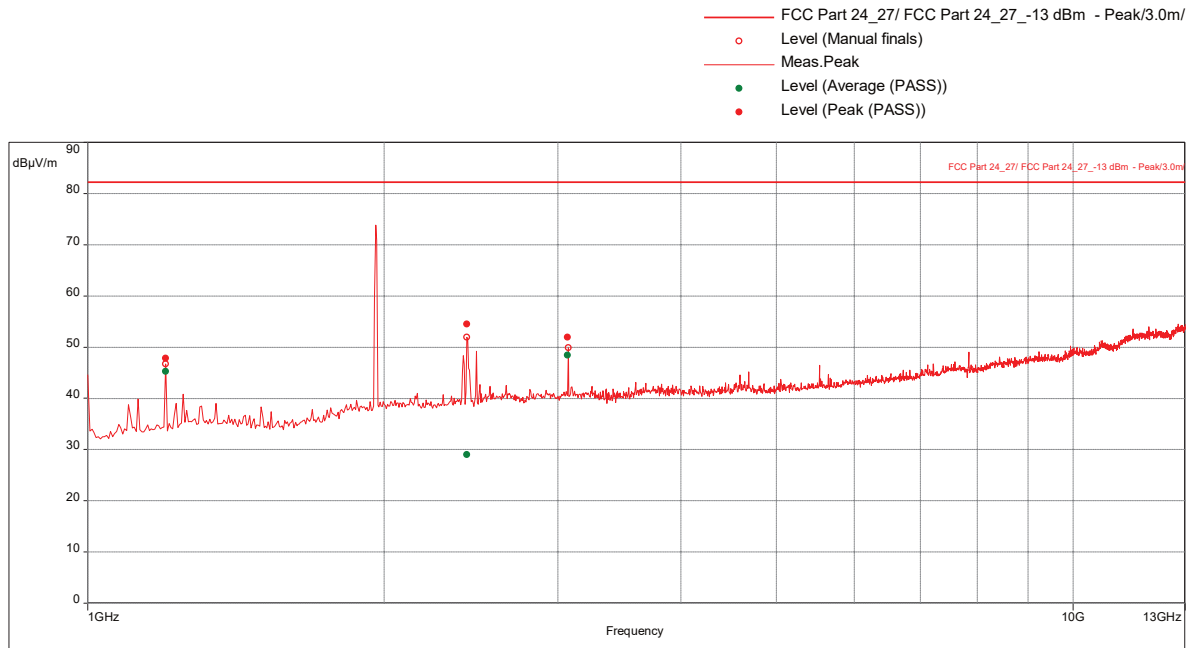
Level EIRP (dBm) = Level Peak (dBuV/m) - 84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/21/2021 10:01:01 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.2_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (3)

Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	47.85	-47.41	-13.0	-34.41	0.00	1.00	Horizontal	1000000.00	-8.42
2426.315789	54.52	-40.74	-13.0	-27.74	101.00	1.20	Horizontal	1000000.00	-3.28
3072.105263	51.96	-43.30	-13.0	-30.30	115.00	1.65	Horizontal	1000000.00	-2.07

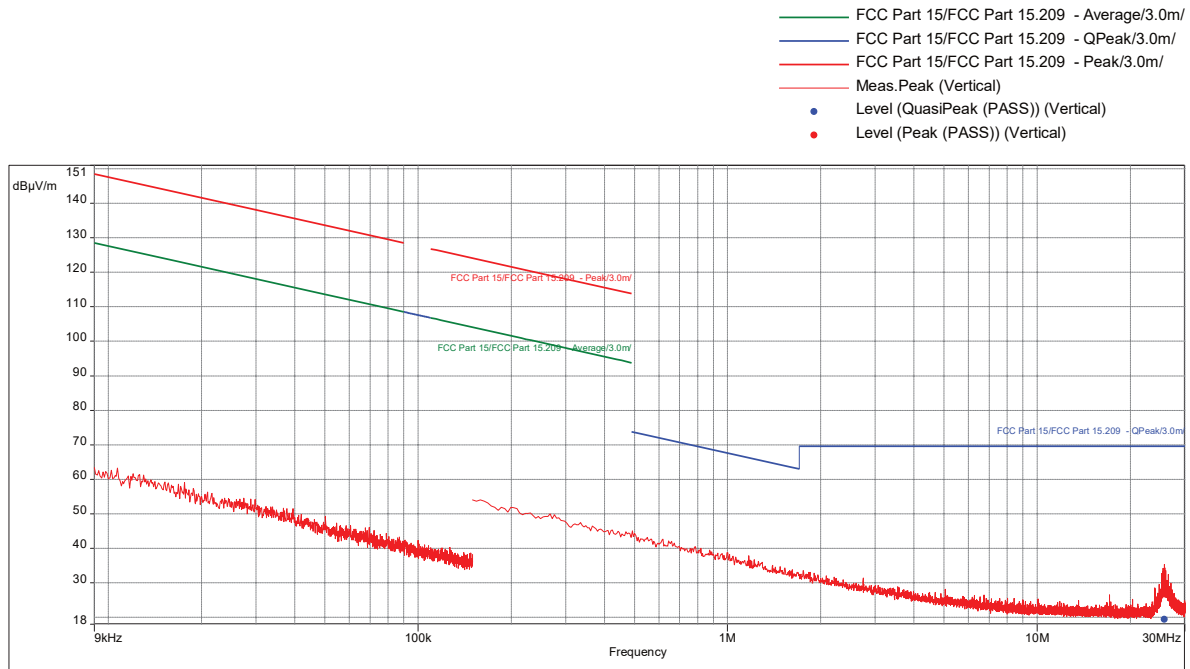
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

Radiated Emissions, 9kHz-30 MHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/27/2021 7:13:34 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM3.2_Tx High CH 1987.5MHz_RP5200 host

Graph:**Results:**

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
25.782	26.77	69.54	-42.77	253.00	1.00	Vertical	9000.00	10.46

QuasiPeak (PASS) (1)

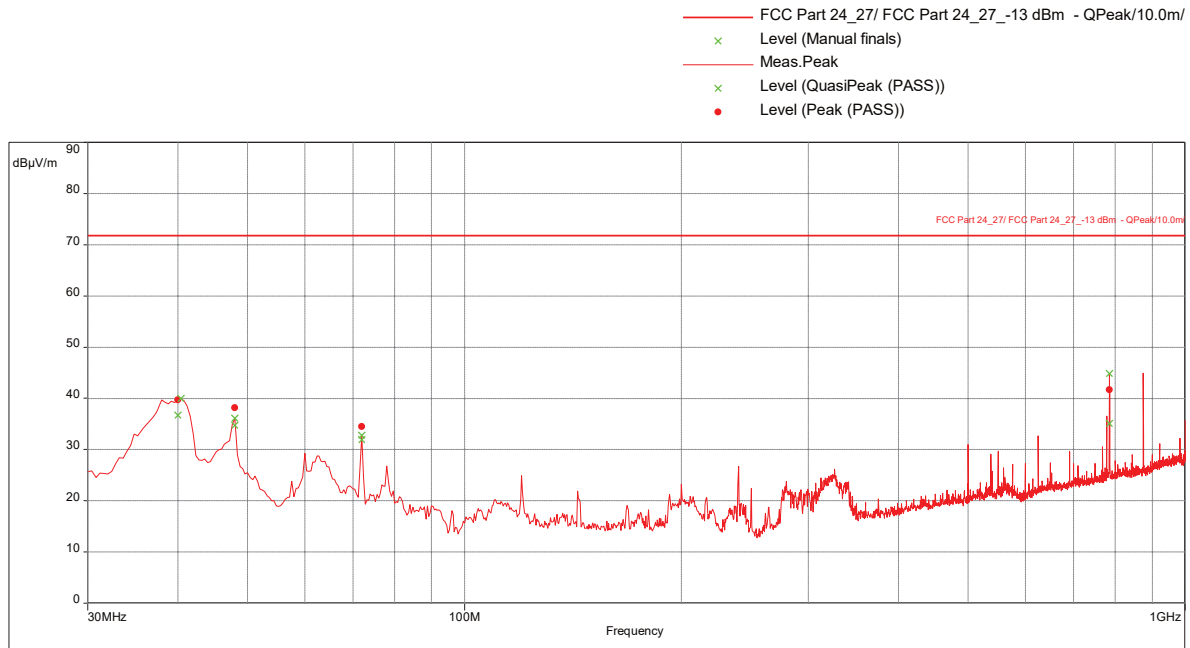
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
25.782	19.38	69.54	-50.16	253.00	1.00	Vertical	9000.00	10.46

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/12/2021 11:55:55 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM3.2_Tx High CH 1987.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

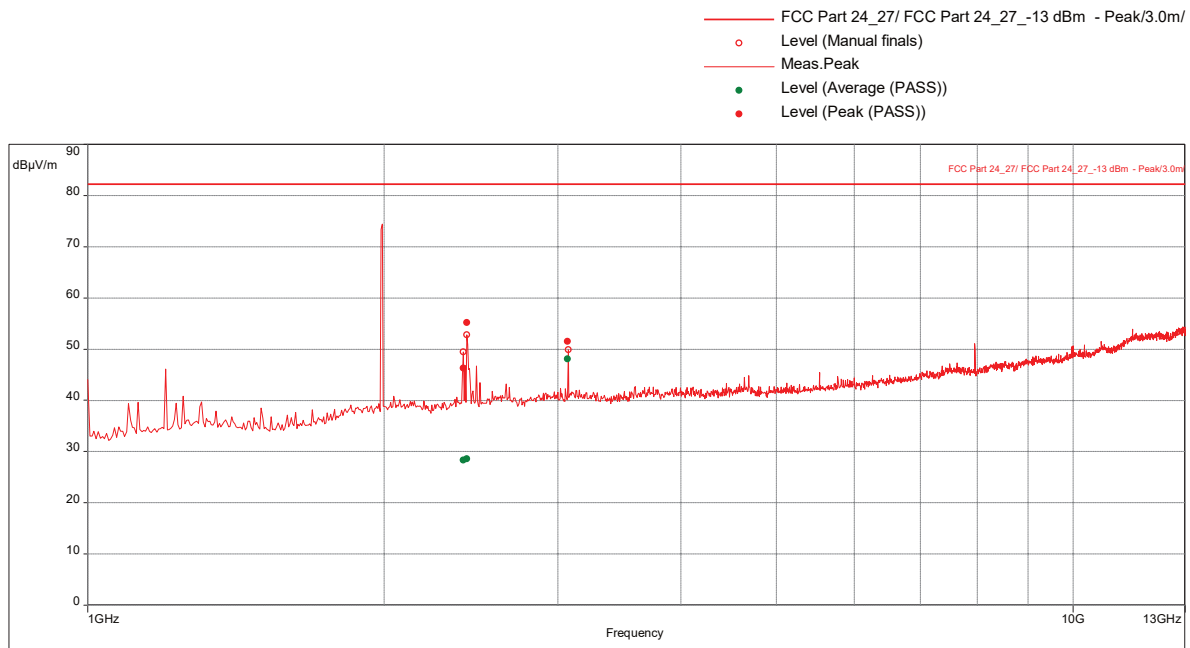
Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.98947368	39.67	-45.13	-13.00	-32.13	10.00	1.00	Vertical	120000.00	-19.59
48.03157895	38.17	-46.63	-13.00	-33.63	349.00	2.34	Vertical	120000.00	-24.49
72	34.48	-50.32	-13.00	-37.32	83.00	1.69	Vertical	120000.00	-24.77
784.7578947	41.64	-43.16	-13.00	-30.16	89.00	3.24	Vertical	120000.00	-7.87

Level EIRP (dBm) = Level Peak (dBuV/m) - 84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/21/2021 10:27:04 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.2_Tx High CH 1987.5MHz_RP5200 host

Graph:**Results:**

Peak (PASS) (3)

Frequency (MHz)	Level (dBμV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW Hz)	Correction (dB)
2405.789474	46.28	-48.98	-13.0	-35.98	0.00	2.70	Horizontal	1000000.00	-3.17
2426.315789	55.17	-40.09	-13.0	-27.09	97.00	1.15	Horizontal	1000000.00	-3.28
3072.105263	51.55	-43.71	-13.0	-30.71	98.00	1.00	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

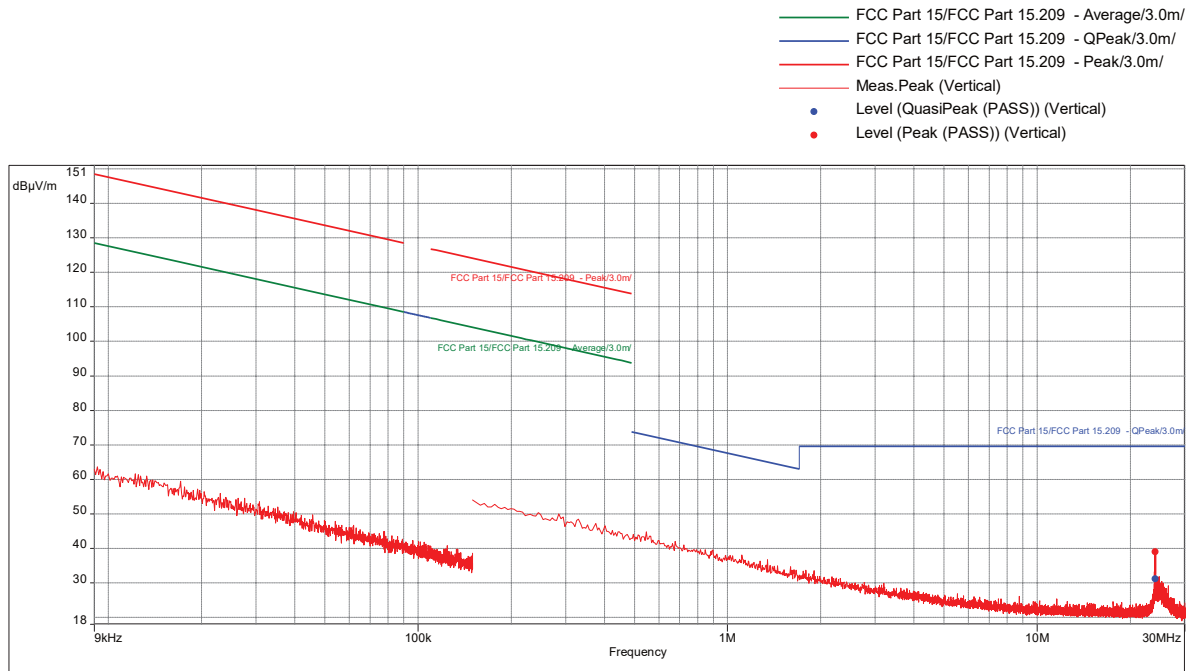
The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

**Radiated Emissions, 9kHz-30 MHz
Slot 2 (Band 2), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Low Channel**

Test Information:

Date and Time	8/26/2021 10:44:53 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM3.1_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.07721053	38.96	69.54	-30.58	137.00	1.00	Vertical	9000.00	10.70

QuasiPeak (PASS) (1)

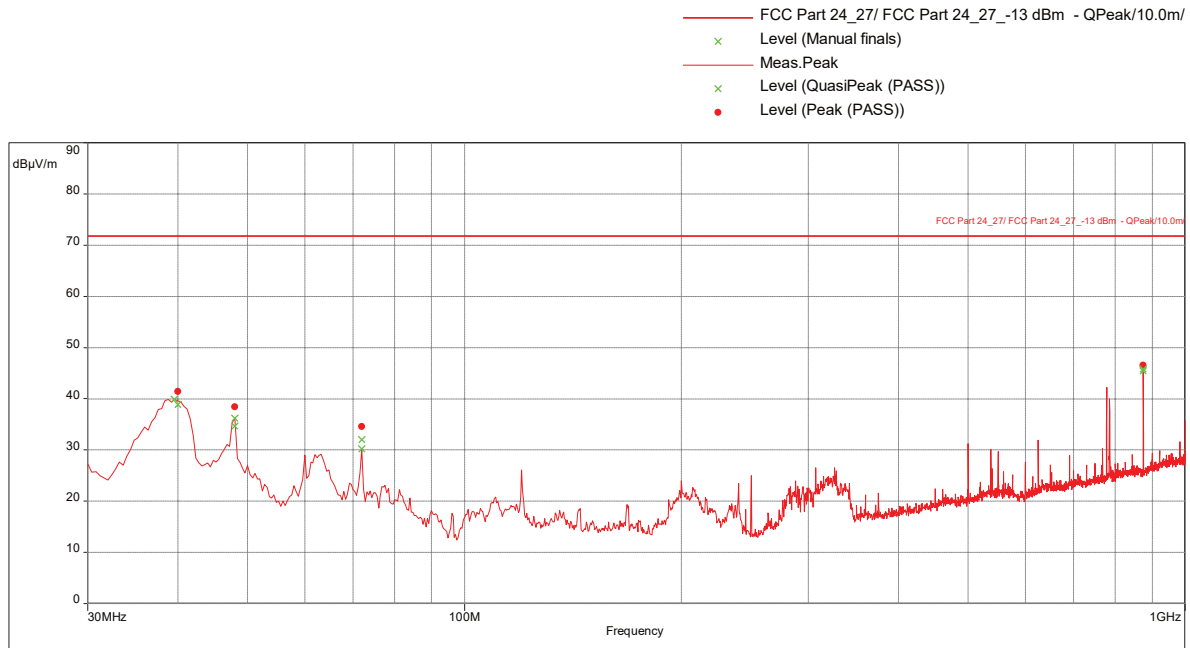
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.07721053	31.15	69.54	-38.39	137.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/12/2021 9:06:08 AM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM3.1_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.10526316	41.40	-43.40	-13.00	-30.40	9.00	1.00	Vertical	120000.00	-19.66
48.03157895	38.45	-46.35	-13.00	-33.35	104.00	2.45	Vertical	120000.00	-24.49
72	34.61	-50.19	-13.00	-37.19	82.00	1.64	Vertical	120000.00	-24.77
874.9894737	46.52	-38.28	-13.00	-25.28	125.00	1.30	Horizontal	120000.00	-6.76

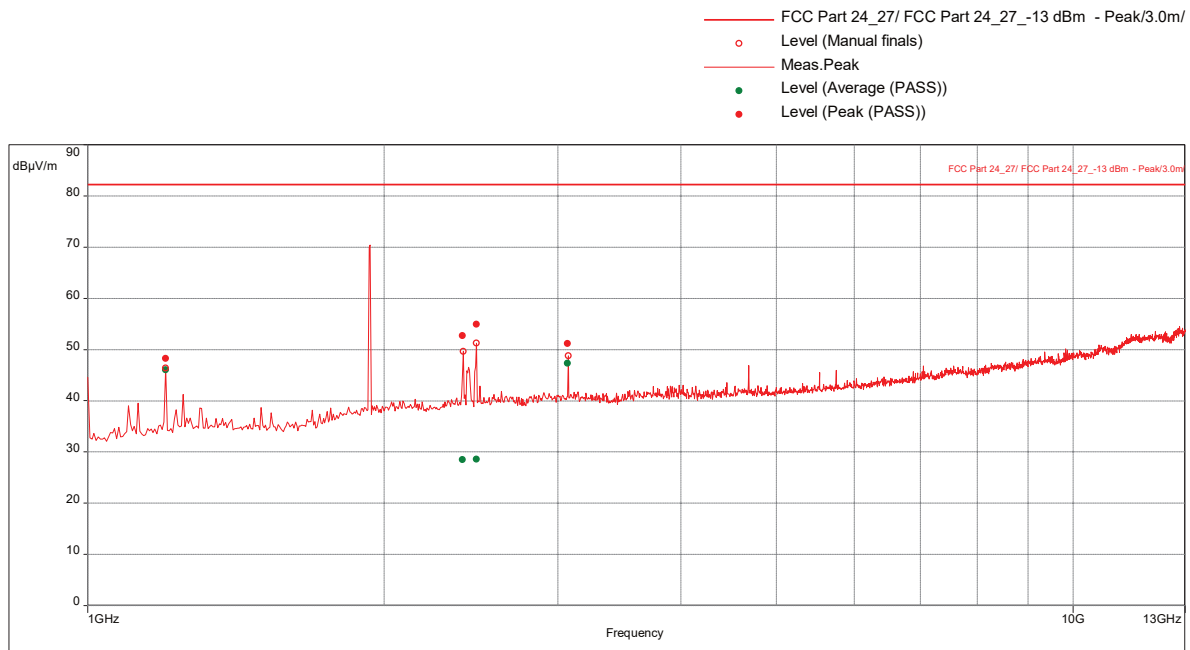
Level EIRP (dBm) = Level Peak (dBuV/m) - 84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/21/2021 6:18:42 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.1_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.26	-47.00	-13.0	-34.00	359.00	1.10	Horizontal	1000000.00	-8.42
2402.368421	52.71	-42.55	-13.0	-29.55	163.00	1.00	Horizontal	1000000.00	-3.15
2480	54.93	-40.33	-13.0	-27.33	293.00	1.01	Horizontal	1000000.00	-3.26
3071.842105	51.13	-44.13	-13.0	-31.13	115.00	1.41	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.30

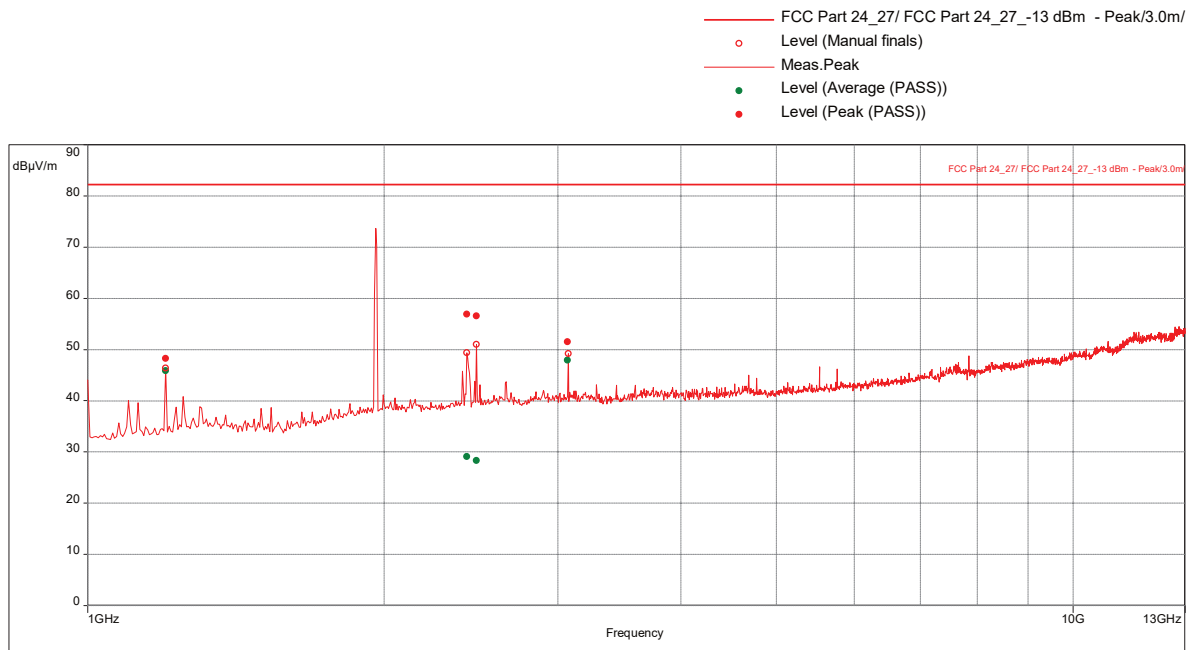
The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/21/2021 6:50:29 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.1_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.26	-47.00	-13.0	-34.00	359.00	1.05	Horizontal	1000000.00	-8.42
2426.052632	56.92	-38.34	-13.0	-25.34	108.00	2.60	Horizontal	1000000.00	-3.27
2479.736842	56.52	-38.74	-13.0	-25.74	231.00	2.15	Horizontal	1000000.00	-3.27
3071.842105	51.55	-43.71	-13.0	-30.71	111.00	1.30	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

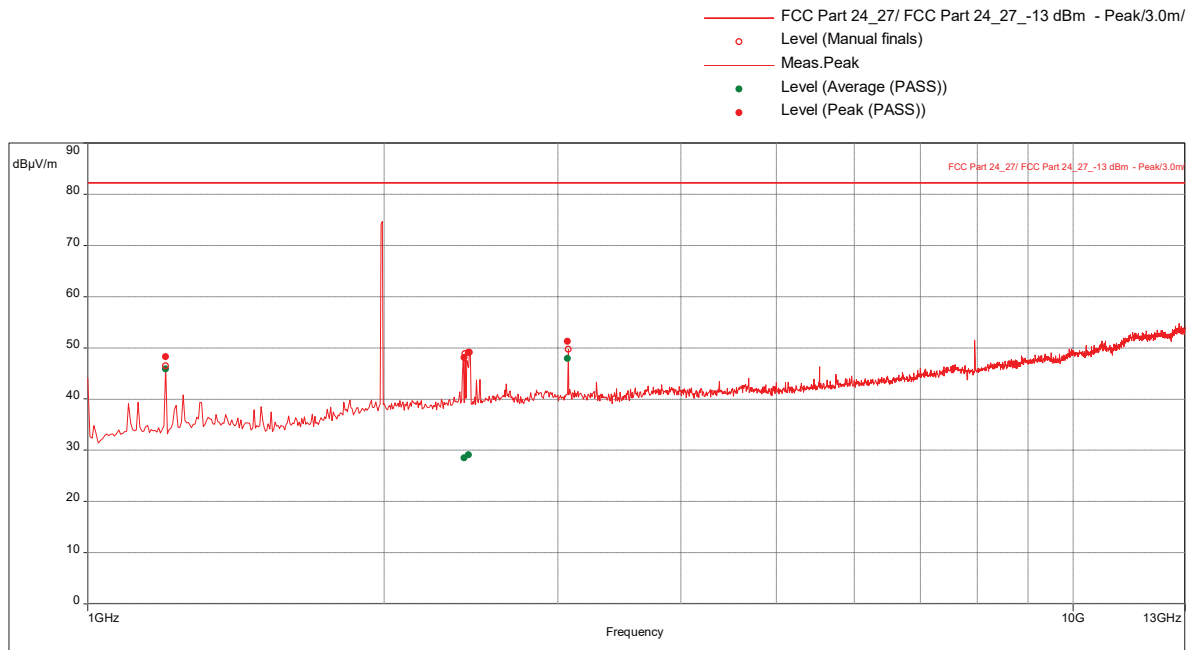
Radiated Emissions, 1-22 GHz

Slot 2 (Band 2), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/21/2021 7:21:02 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.1_Tx High CH 1987.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.26	-47.00	-13.0	-34.00	359.00	1.05	Horizontal	1000000.00	-8.42
2412.105263	48.09	-47.17	-13.0	-34.17	122.00	1.05	Horizontal	1000000.00	-3.20
2436.052632	49.13	-46.13	-13.0	-33.13	160.00	1.65	Horizontal	1000000.00	-3.33
3072.105263	51.27	-43.99	-13.0	-30.99	93.00	1.10	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

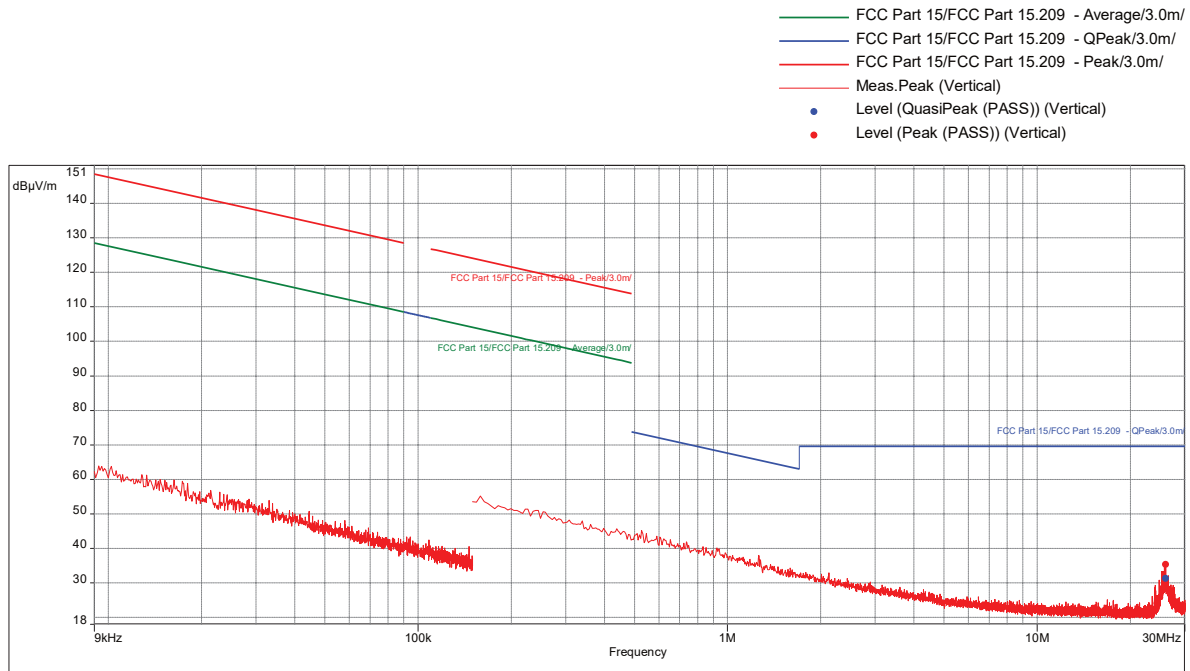
The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

Radiated Emissions, 9kHz-30 MHz
Slot 2 (Band 2), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/27/2021 4:20:05 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 9kHz-30MHz_POE_Band 2 5MHz BW_TM3.1a_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.02239474	35.34	69.54	-34.20	342.00	1.00	Vertical	9000.00	10.40

QuasiPeak (PASS) (1)

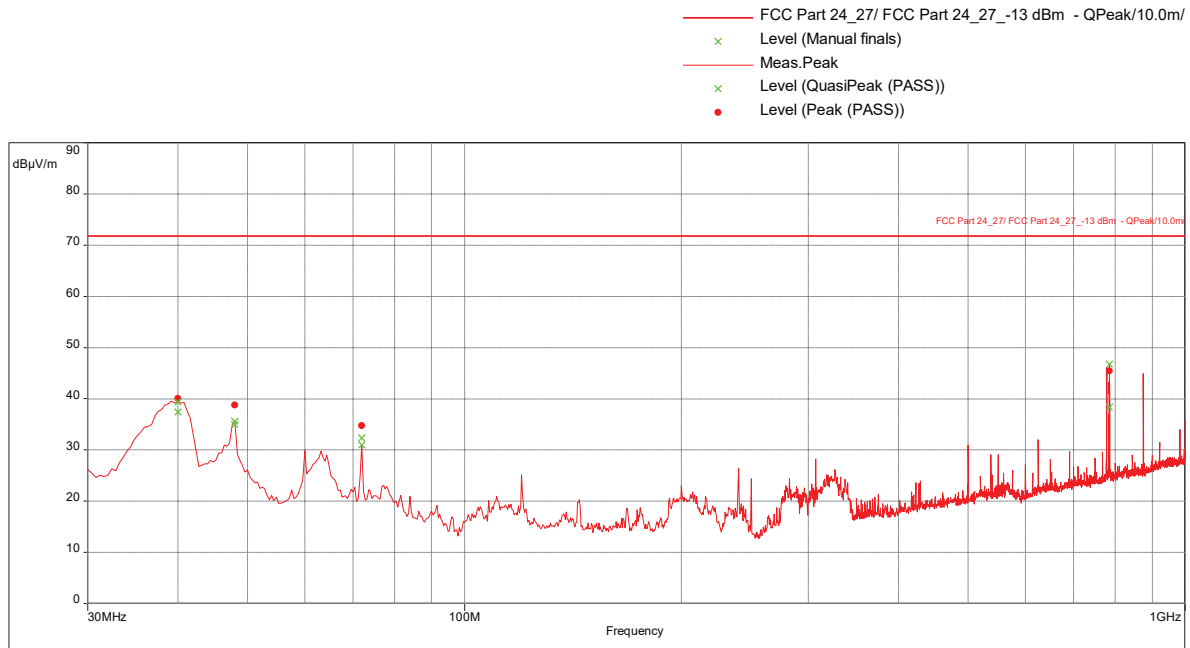
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.02239474	31.28	69.54	-38.26	342.00	1.00	Vertical	9000.00	10.40

Radiated Emissions, 30-1000 MHz
Slot 2 (Band 2), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/12/2021 10:10:39 AM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	31 deg C
Humidity	39%
Atmospheric Pressure	1007 mB
Comments	RE 30-1000MHz_POE_Band 2 5MHz BW_TM3.1a _Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
40.09473684	40.02	-44.78	-13.00	-31.78	132.00	1.62	Vertical	120000.00	-19.66
48	38.76	-46.04	-13.00	-33.04	97.00	2.96	Vertical	120000.00	-24.48
72	34.76	-50.04	-13.00	-37.04	148.00	1.51	Vertical	120000.00	-24.77
785.1684211	45.42	-39.38	-13.00	-26.38	0.00	3.91	Vertical	120000.00	-7.88

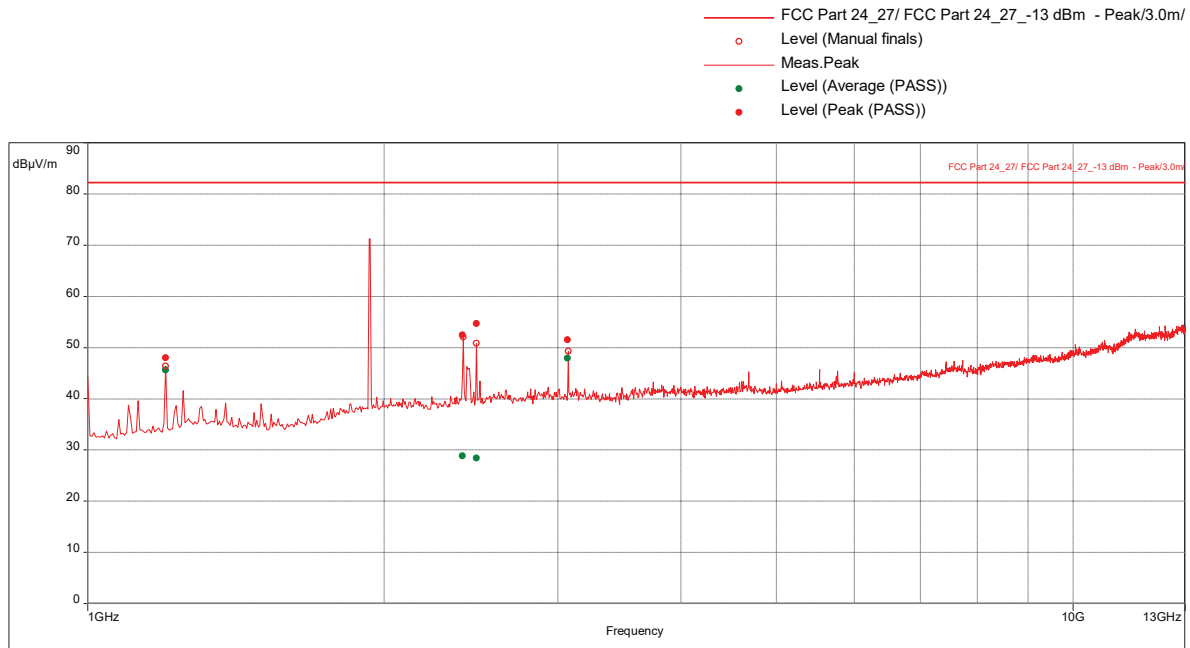
Level EIRP (dBm) = Level Peak (dBuV/m) -84.8

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/21/2021 7:57:45 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.1a_Tx Low CH 1932.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	47.98	-47.28	-13.0	-34.28	358.00	1.00	Horizontal	1000000.00	-8.42
2401.842105	52.44	-42.82	-13.0	-29.82	153.00	1.30	Horizontal	1000000.00	-3.15
2480.263158	54.68	-40.58	-13.0	-27.58	258.00	1.00	Horizontal	1000000.00	-3.26
3072.105263	51.55	-43.71	-13.0	-30.71	112.00	1.05	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

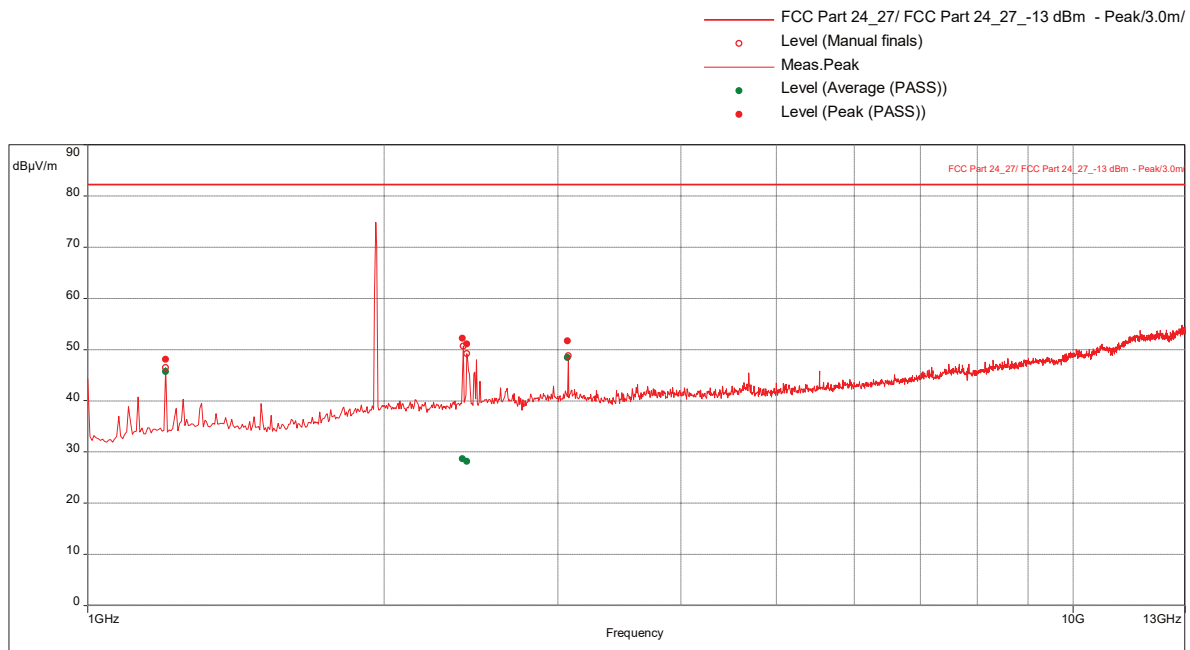
The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

Radiated Emissions, 1-22 GHz
Slot 2 (Band 2), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/21/2021 9:02:22 PM
Client and Project Number	CommScope G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.1a_Tx Mid CH 1960MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.13	-47.13	-13.0	-34.13	359.00	1.00	Horizontal	1000000.00	-8.42
2402.105263	52.17	-43.09	-13.0	-30.09	108.00	3.74	Horizontal	1000000.00	-3.15
2425.789474	51.05	-44.21	-13.0	-31.21	145.00	3.15	Horizontal	1000000.00	-3.27
3072.105263	51.68	-43.58	-13.0	-30.58	115.00	1.65	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

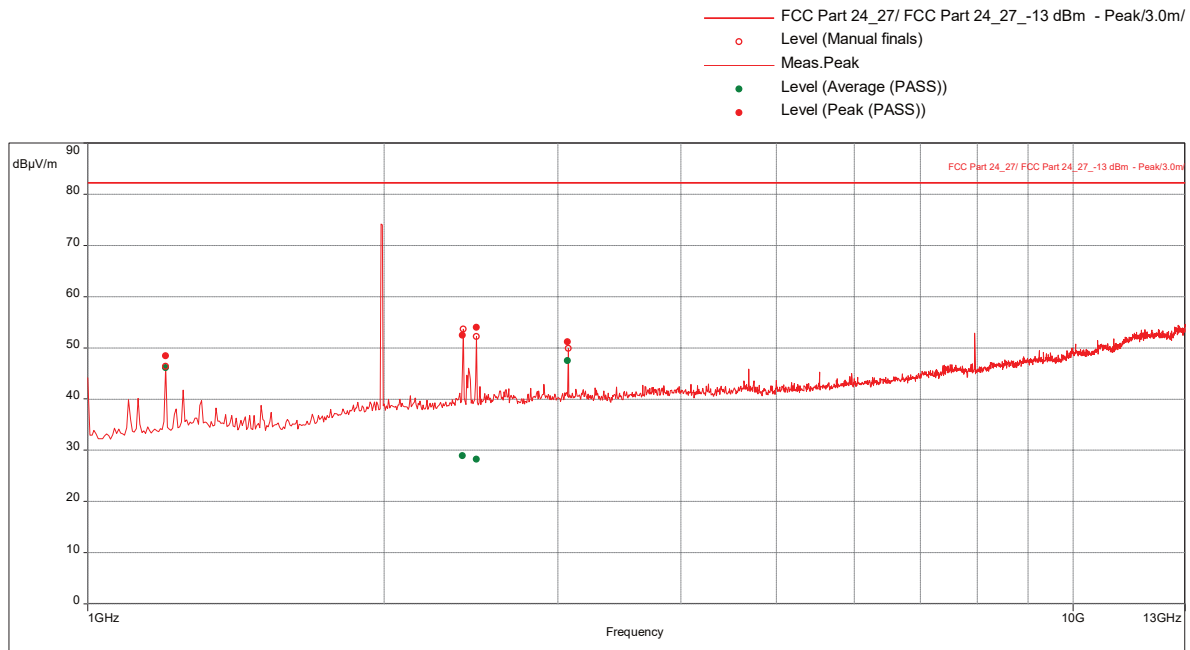
Radiated Emissions, 1-22 GHz

Slot 0 (Band 2), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/21/2021 8:29:59 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	38%
Atmospheric Pressure	1017 mB
Comments	Copy RE 1 to 13 GHz_POE_Band 2 5MHz BW_TM3.1a_Tx High CH 1987.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (4)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1200	48.40	-46.86	-13.0	-33.86	356.00	1.10	Horizontal	1000000.00	-8.42
2402.105263	52.44	-42.82	-13.0	-29.82	137.00	1.05	Horizontal	1000000.00	-3.15
2480.263158	53.98	-41.28	-13.0	-28.28	216.00	1.01	Horizontal	1000000.00	-3.26
3071.842105	51.13	-44.23	-13.0	-31.13	108.00	1.06	Horizontal	1000000.00	-2.07

Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

The highest peak on the plot is from the fundamental frequency. Manual scan was performed from 13 to 22 GHz. No emissions were detected above the measuring equipment noise floor.

Test Personnel:	<u>Vathana Ven </u>	Test Date:	<u>08/20/2021, 08/24/2021, 08/26/2021, 09/21/2021, 09/23/2021</u>
Supervising/Reviewing Engineer:			
(Where Applicable)	<u>N/A</u>		
Product Standard:	<u>FCC Part 24</u>	Limit Applied:	<u>See report section 11.3</u>
Input Voltage:	<u>48 VDC (POE)</u>		
Pretest Verification w/ Ambient Signals or BB Source:	<u>N/A</u>	Ambient Temperature:	<u>26, 28, 31, 26, 23 °C</u>
		Relative Humidity:	<u>42, 42, 39, 38, 59 %</u>
		Atmospheric Pressure:	<u>1002, 1003, 1007, 1017, 1008 mbars</u>

Deviations, Additions, or Exclusions: None

12 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	10/11/2021	104751739BOX-005	VFV <i>VFV</i>	KPS <i>KPS</i>	Original Issue
1	01/10/2022	104751739BOX-005	VFV <i>VFV</i>	KPS <i>KPS</i>	Referenced the original LTE and new 5G NR capabilities of this device in product description
2	01/27/2022	104751739BOX-005	VFV <i>VFV</i>	KPS <i>KPS</i>	Added justification for worst case for spurious emissions on page 291