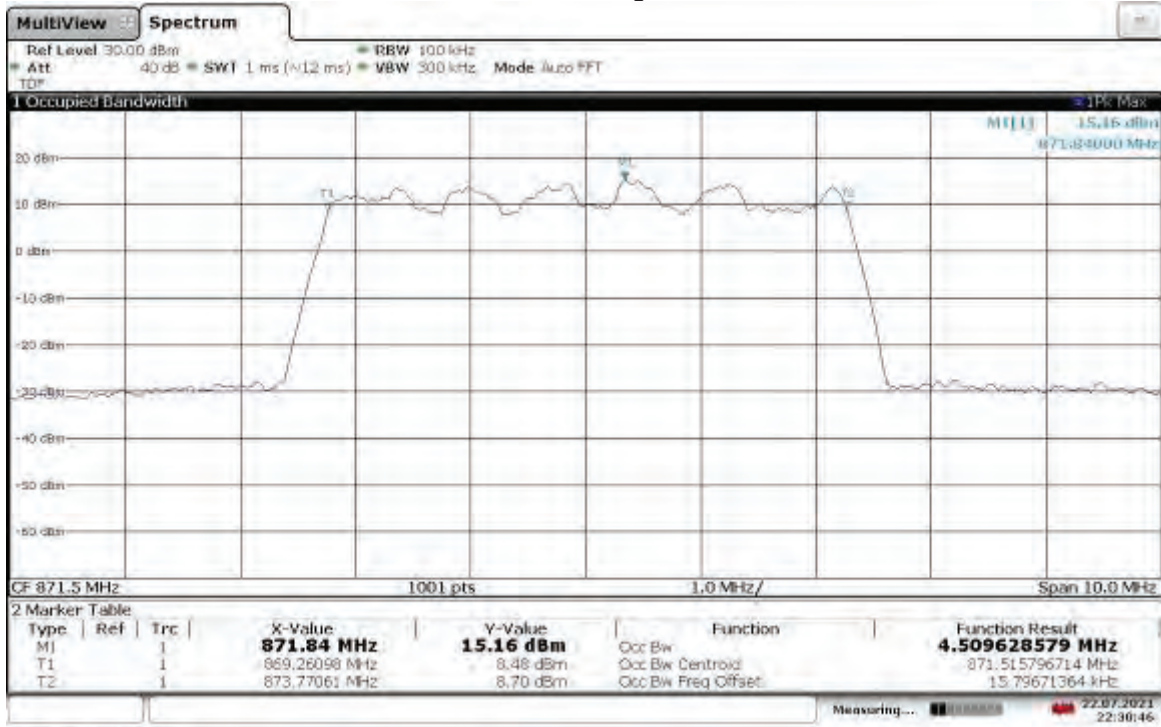
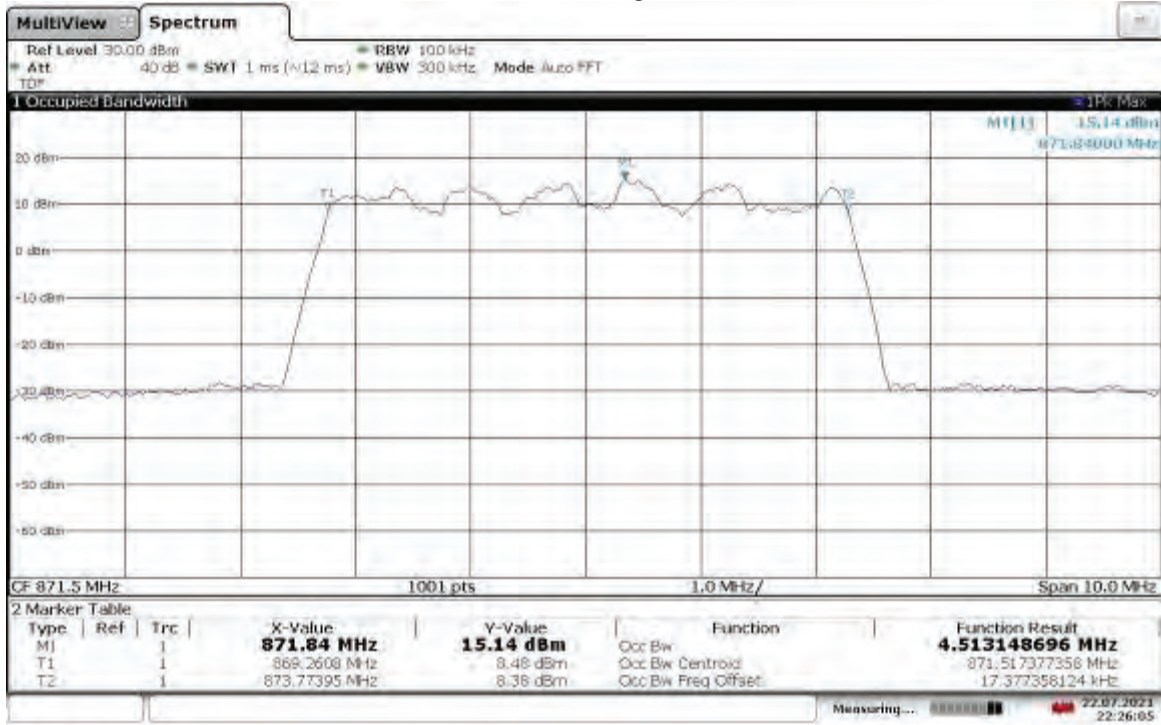


Slot 0 (Band 5), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, Low Channel,
Lower Extreme Voltage: 41.1VDC



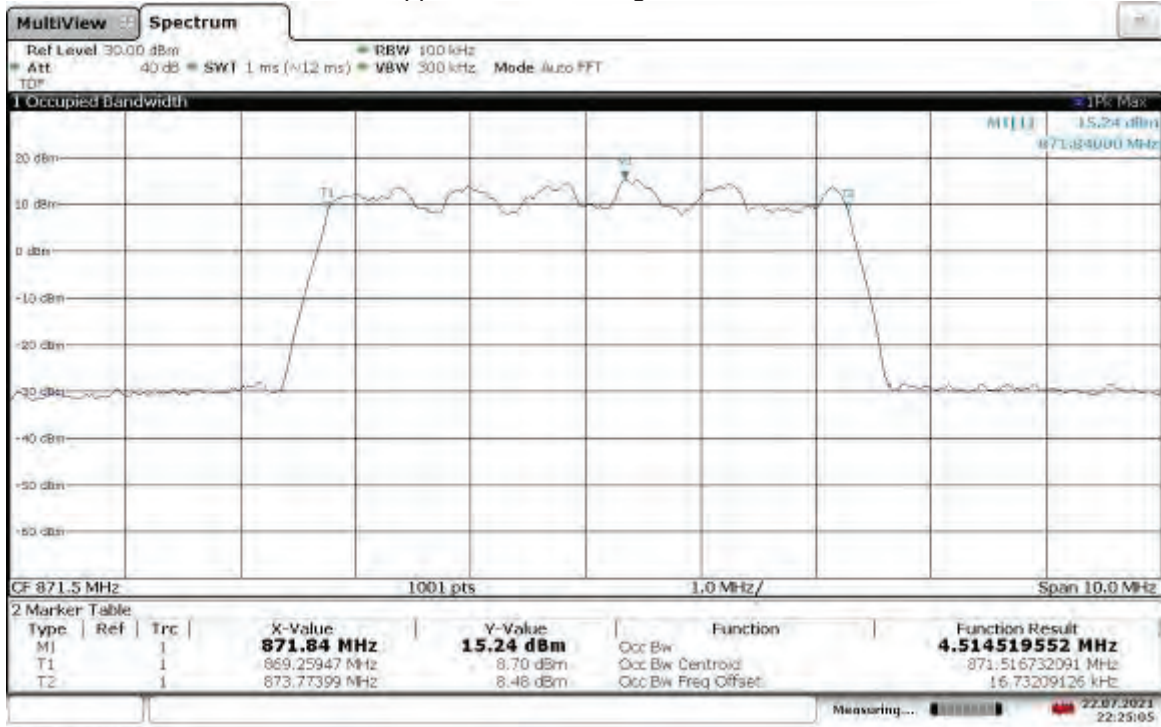
22:30:47 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, High Channel,
Lower Extreme Voltage: 41.1VDC



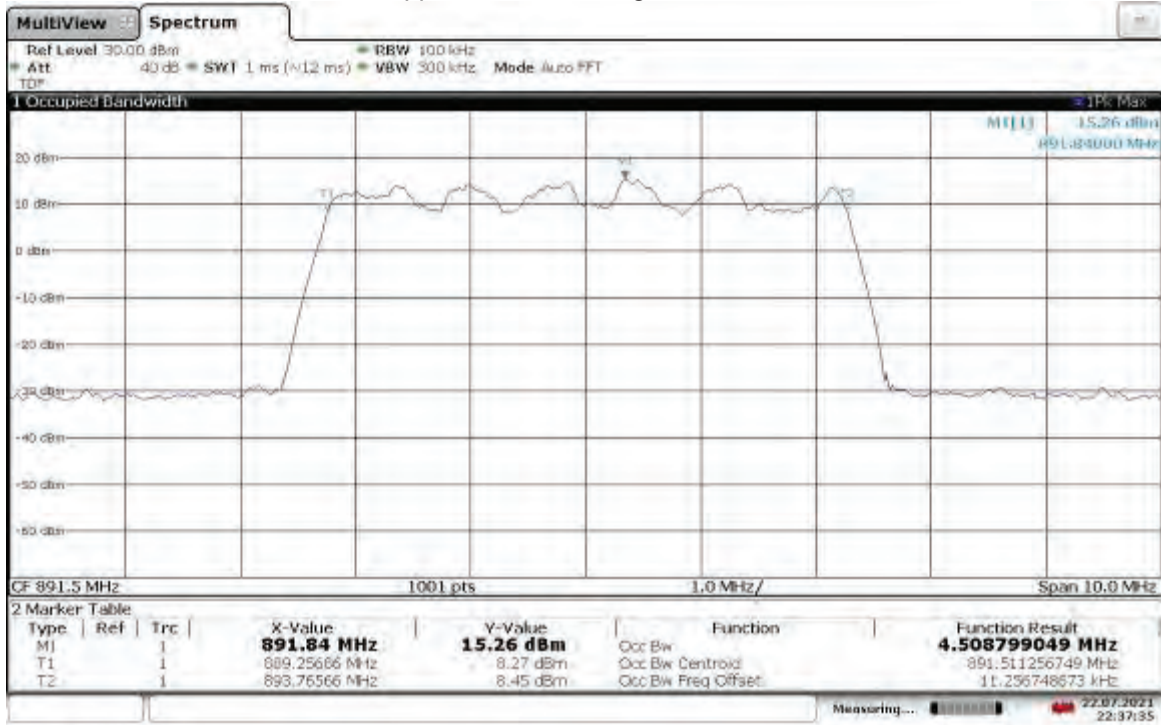
22:26:05 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, Low Channel,
Upper Extreme Voltage: 57.0VDC



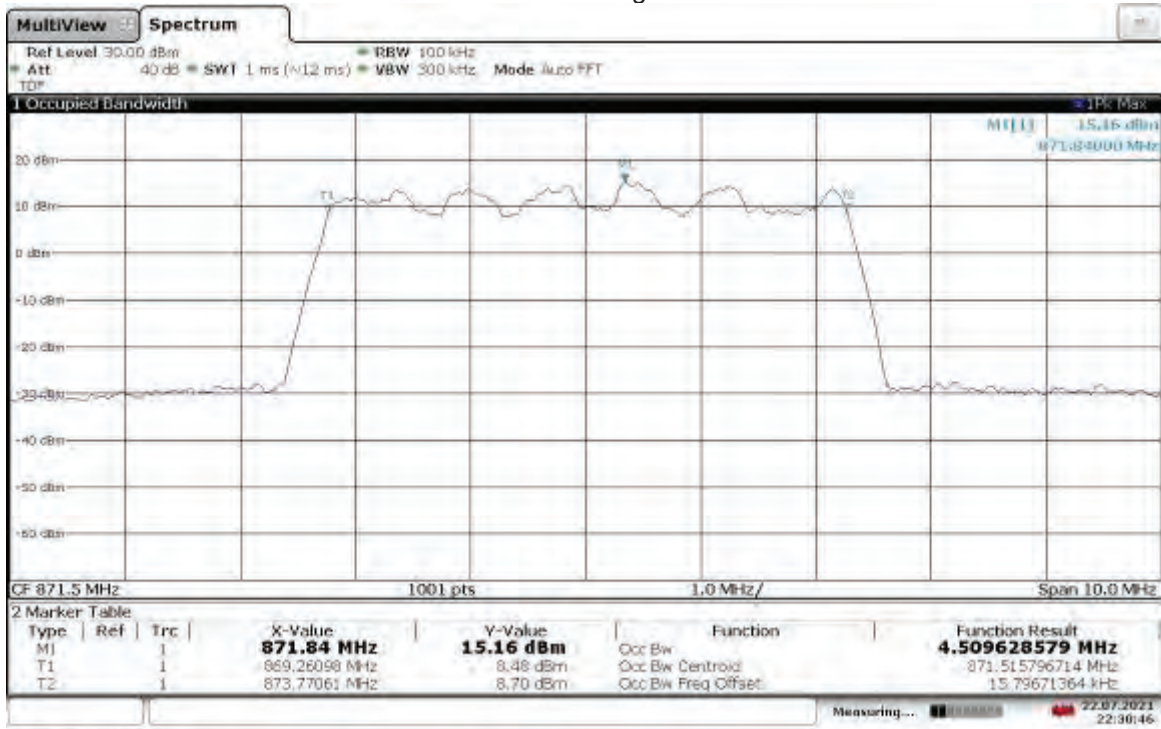
22:25:05 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: QPSK, Bandwidth: 5 MHz, High Channel,
Upper Extreme Voltage: 57.0VDC



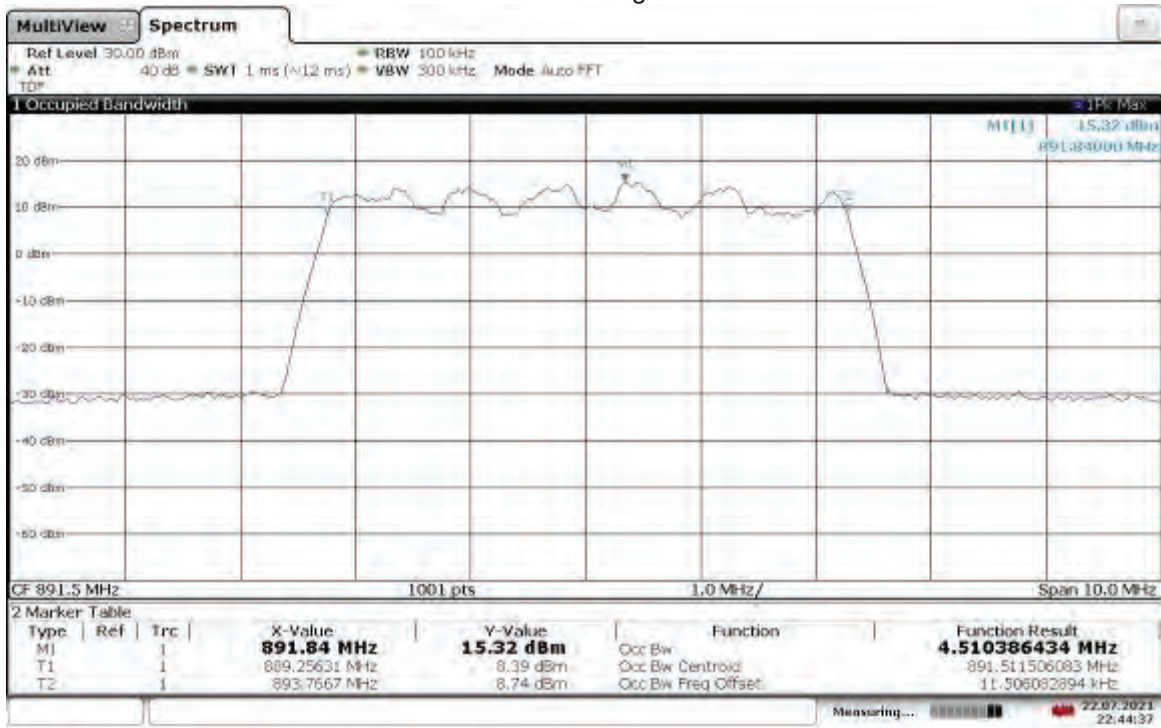
22:37:35 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: QPSK, Bandwidth: 20 MHz, Low Channel,
Lower Extreme Voltage: 41.1VDC



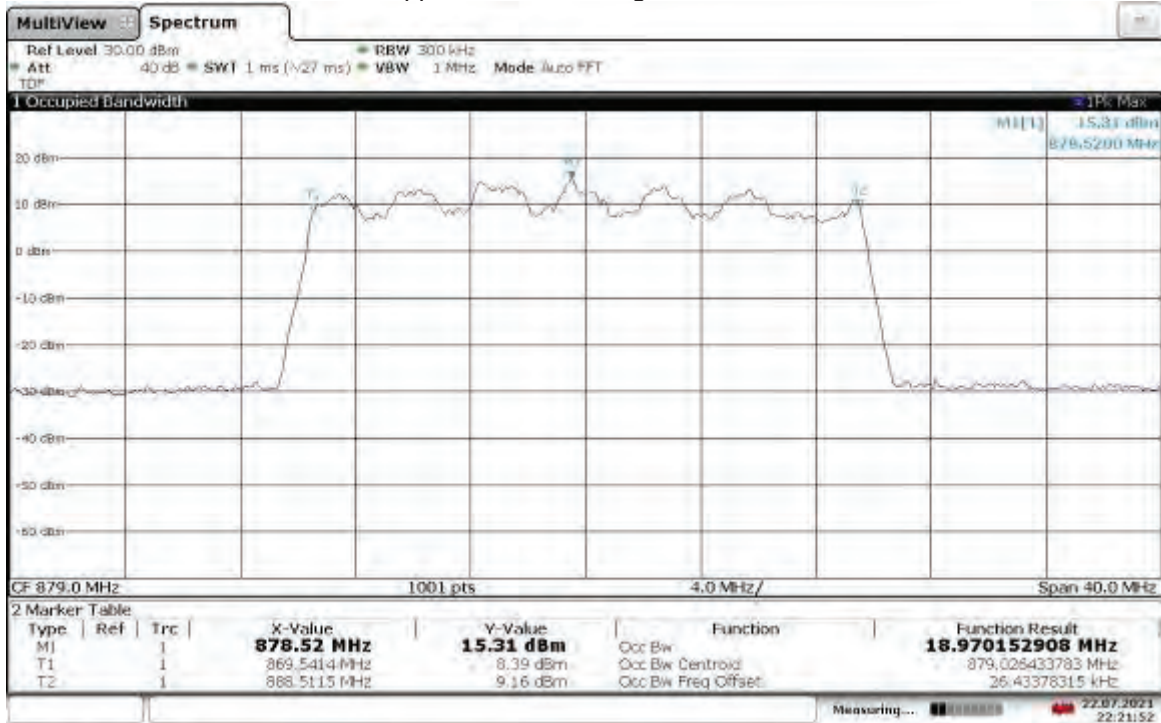
22:30:47 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: QPSK, Bandwidth: 20 MHz, High Channel,
Lower Extreme Voltage: 41.1VDC



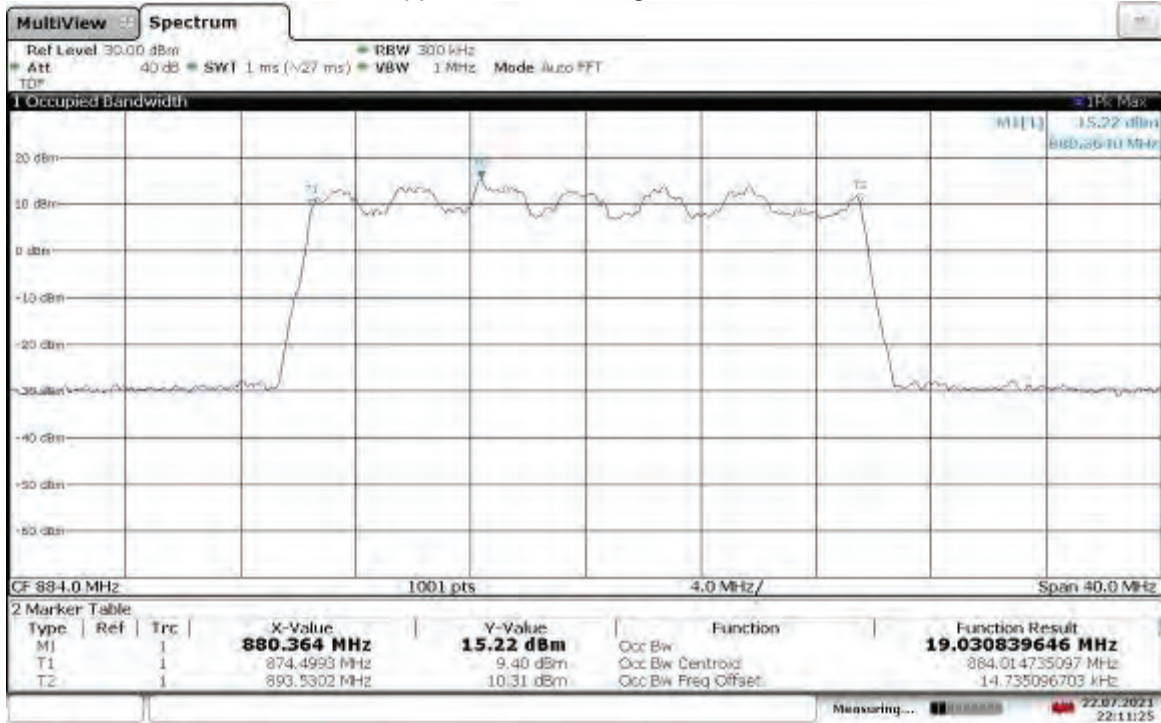
22:44:38 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: QPSK, Bandwidth: 20 MHz, Low Channel,
Upper Extreme Voltage: 57.0VDC



22:21:52 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: QPSK, Bandwidth: 20 MHz, High Channel,
Upper Extreme Voltage: 57.0VDC




22:11:25 22.07.2021

Intertek

Report Number: 104751739BOX-009

Issued: 10/12/2021
Revised: 02/02/2022

Test Personnel: Vathana Ven 
Supervising/Reviewing
Engineer:
(Where Applicable) N/A
Product Standard: FCC Part 22
Input Voltage: 48VDC (POE)
Pretest Verification w/
Ambient Signals or
BB Source: N/A

Test Date: 07/22/2021, 08/19/2021,
08/31/2021

Limit Applied: See report section 10.3

Ambient Temperature: 22, 22, 23 °C

Relative Humidity: 41, 44, 34 %

Atmospheric Pressure: 1011, 1002, 1005 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 22.

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)	Ucispr
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 dB μ V
 AF = 7.4 dB/m
 CF = 1.6 dB
 AG = 29.0 dB
 FS = 32 dB μ V/m

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

$UF = 10^{(NF / 20)}$ where UF = Net Reading in μ V
 NF = Net Reading in dB μ 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 Shwartz	FSW43	100646	10/27/2020	10/27/2021
DAV005'	Weather Station	Davis	6250	MS19121808 3	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	09/02/2020	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	MS19121200 3	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.

§22.917(a)(b): 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

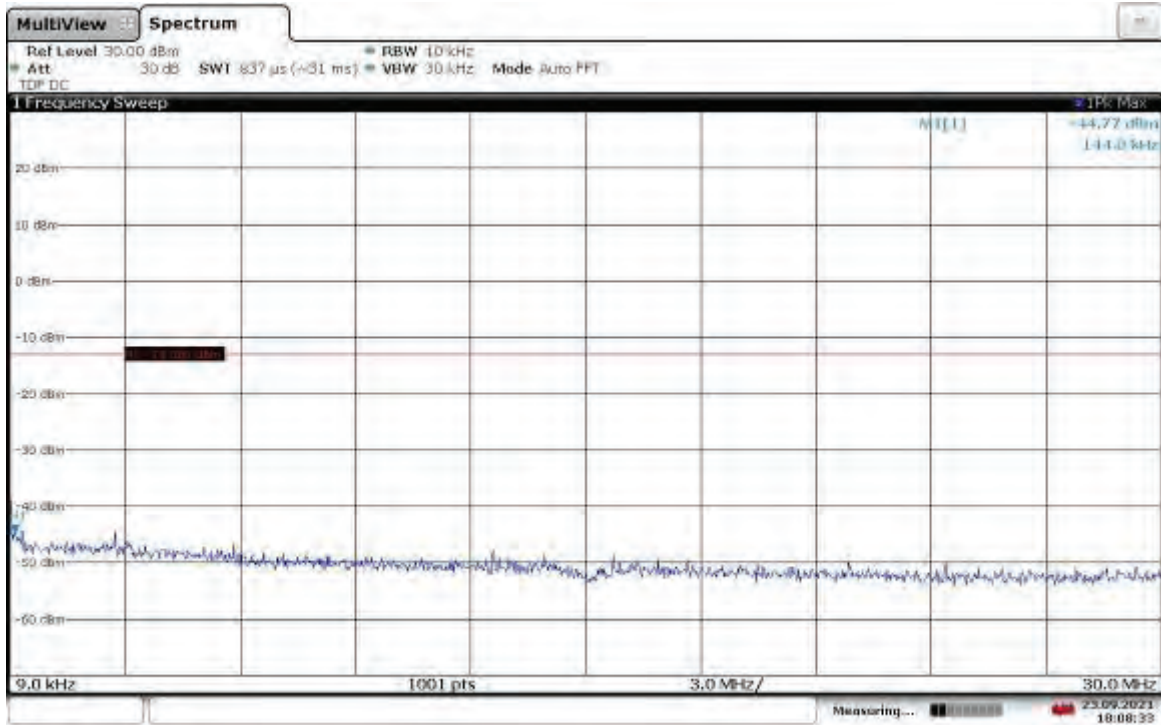
Photographs are available in a separate exhibit

Antenna Port Conducted Test Setup

Photographs are available in a separate exhibit

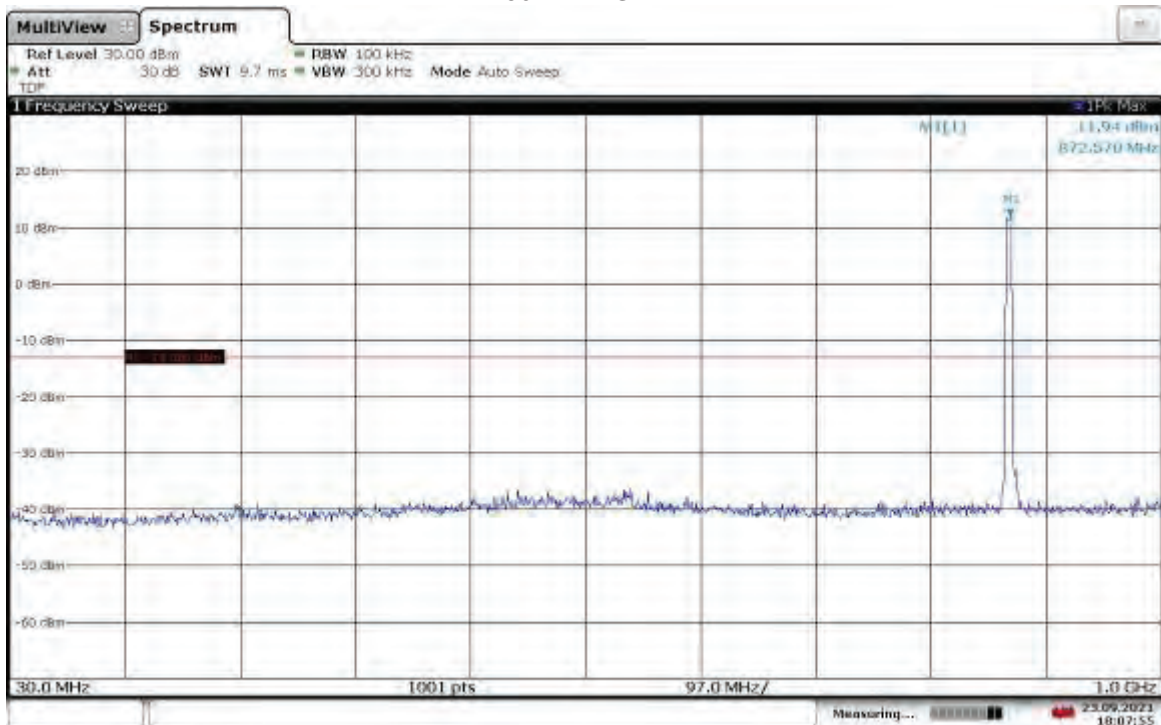
11.5 Plots/Data:

Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 871.5 MHz
9kHz-30MHz



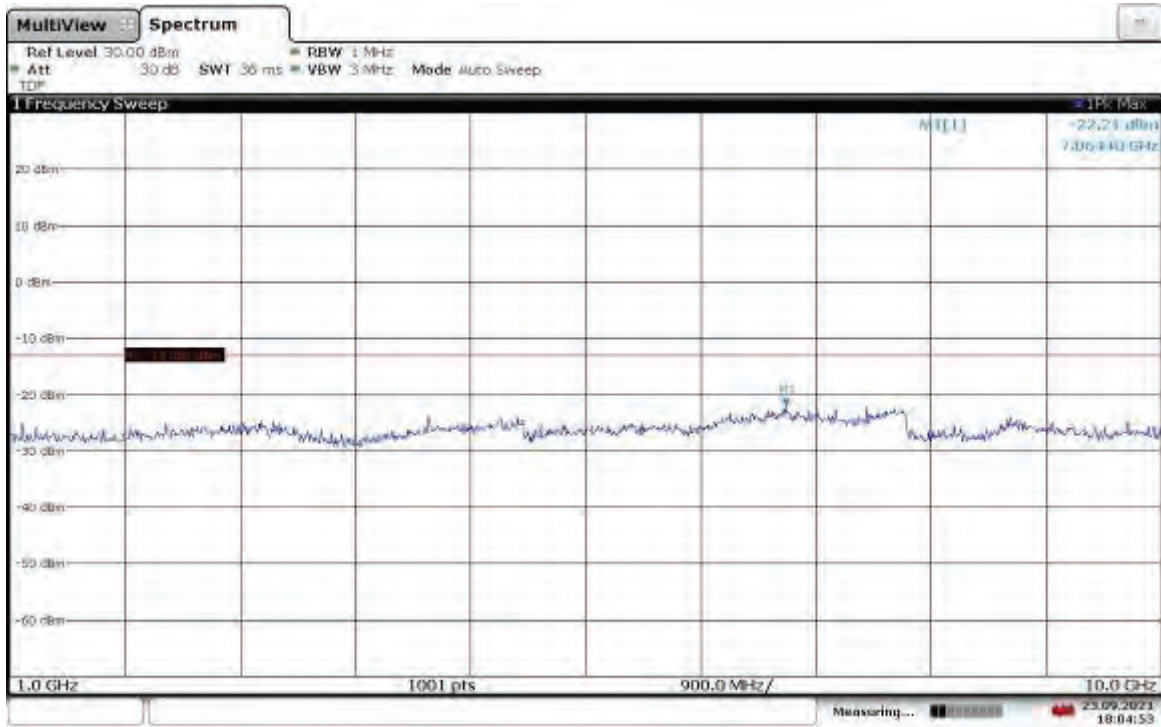
18:08:34 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 871.5 MHz
30MHz-1GHz

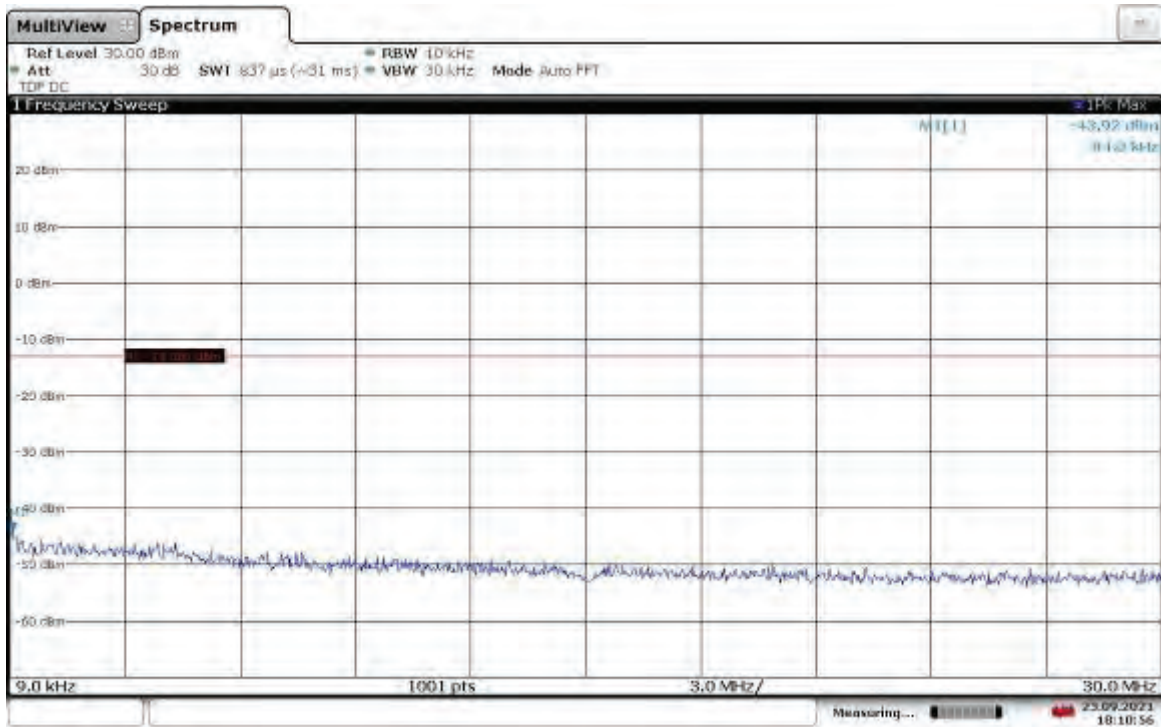


18:07:56 23.09.2021

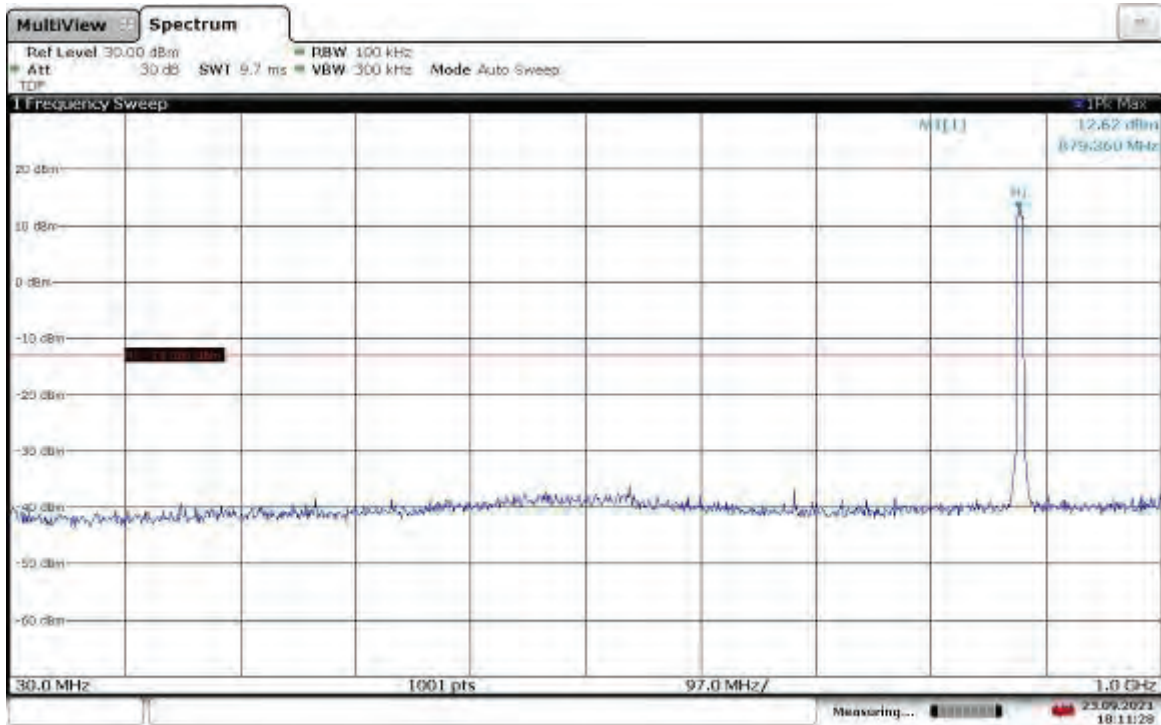
Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 871.5 MHz
1-10 GHz



Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 881 MHz
9kHz-MHz

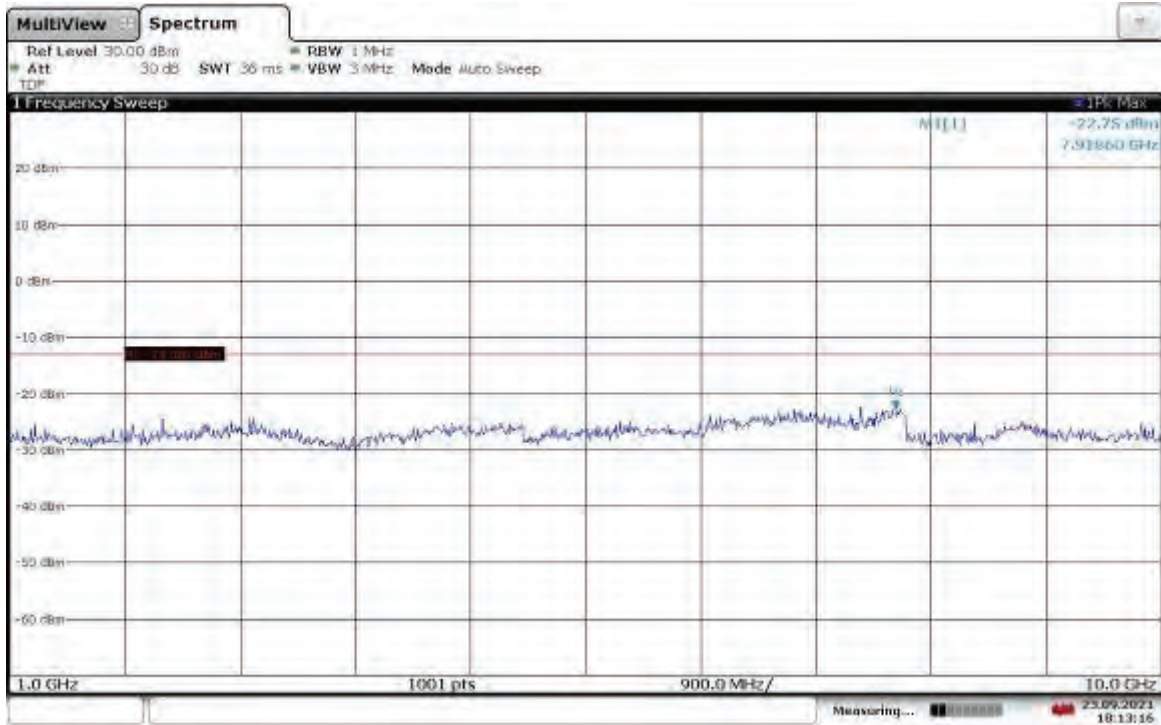


Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 881 MHz
30MHz-1GHz



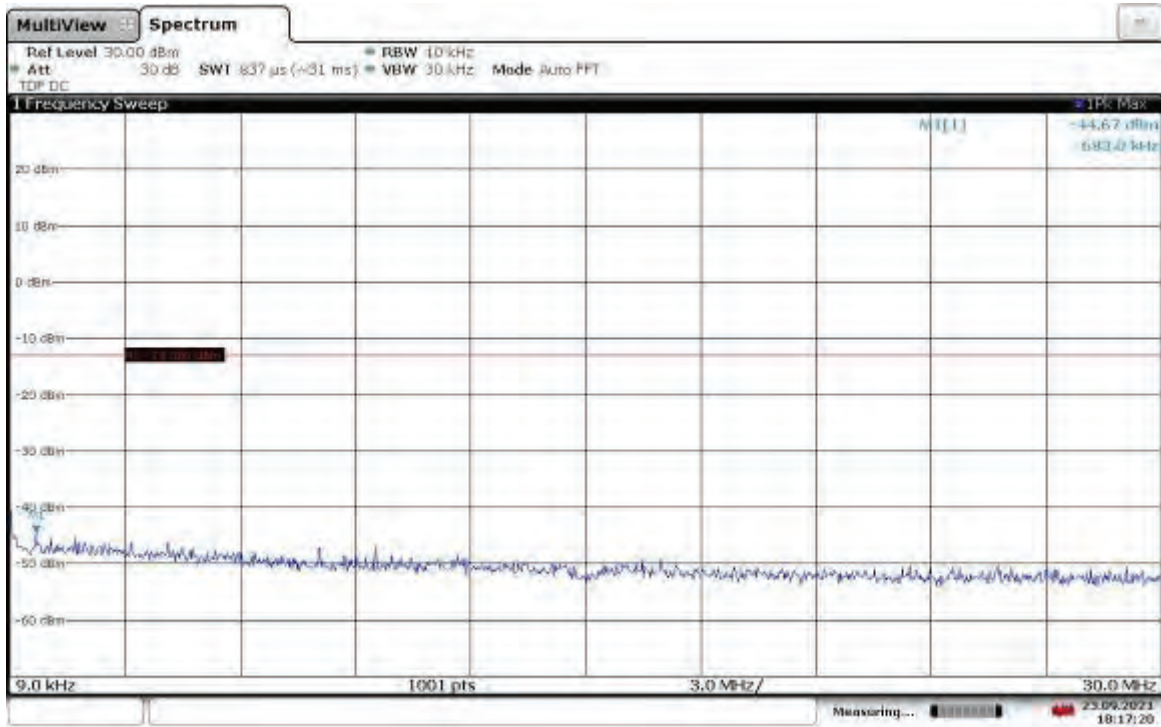
18:11:28 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 1960 MHz
1-10GHz



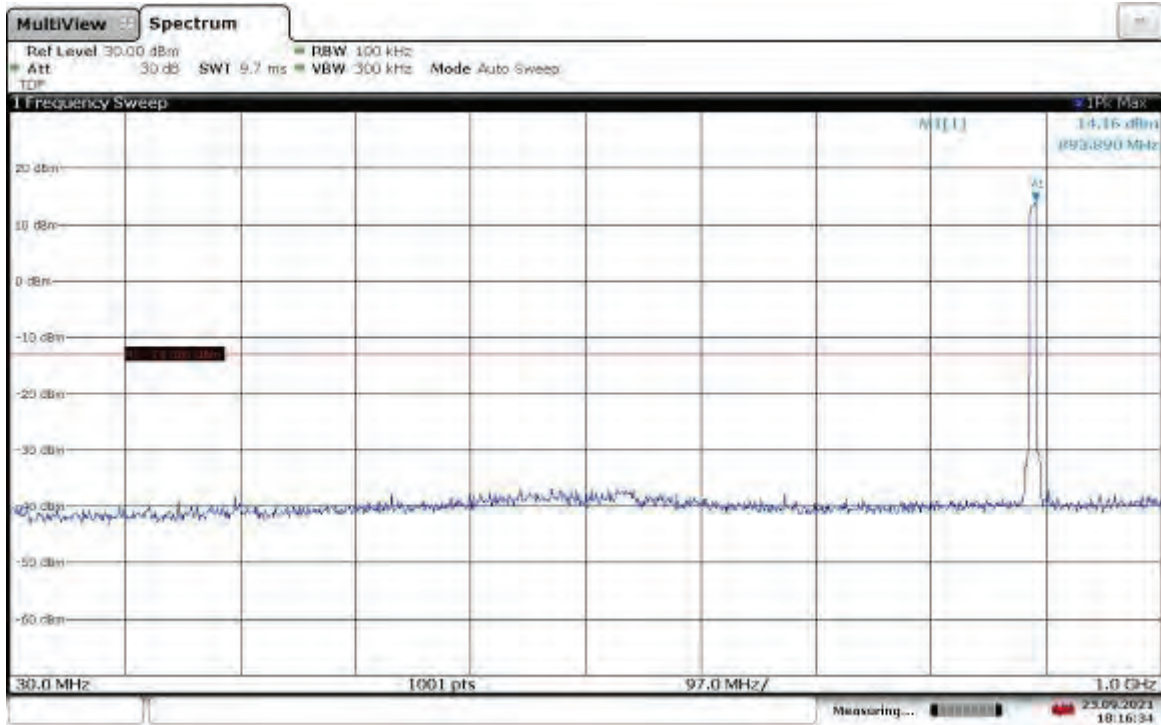
18:13:16 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 891.5 MHz
9kHz-30MHz



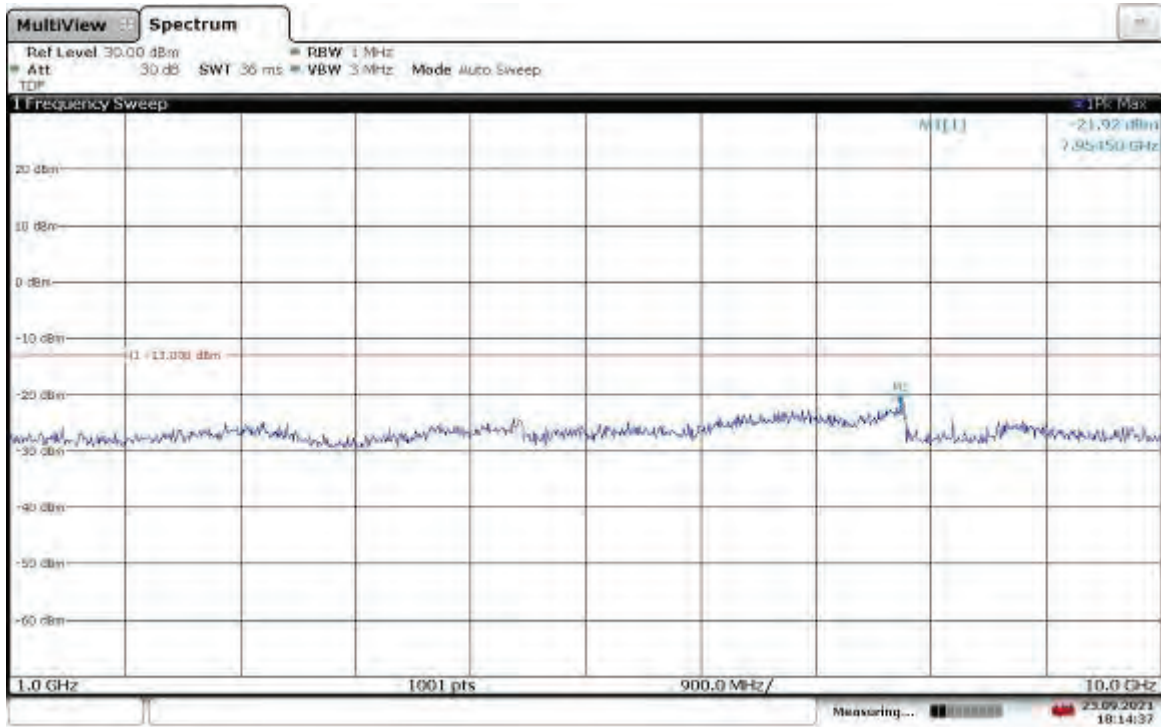
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Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 891.5 MHz
30MHz-1GHz



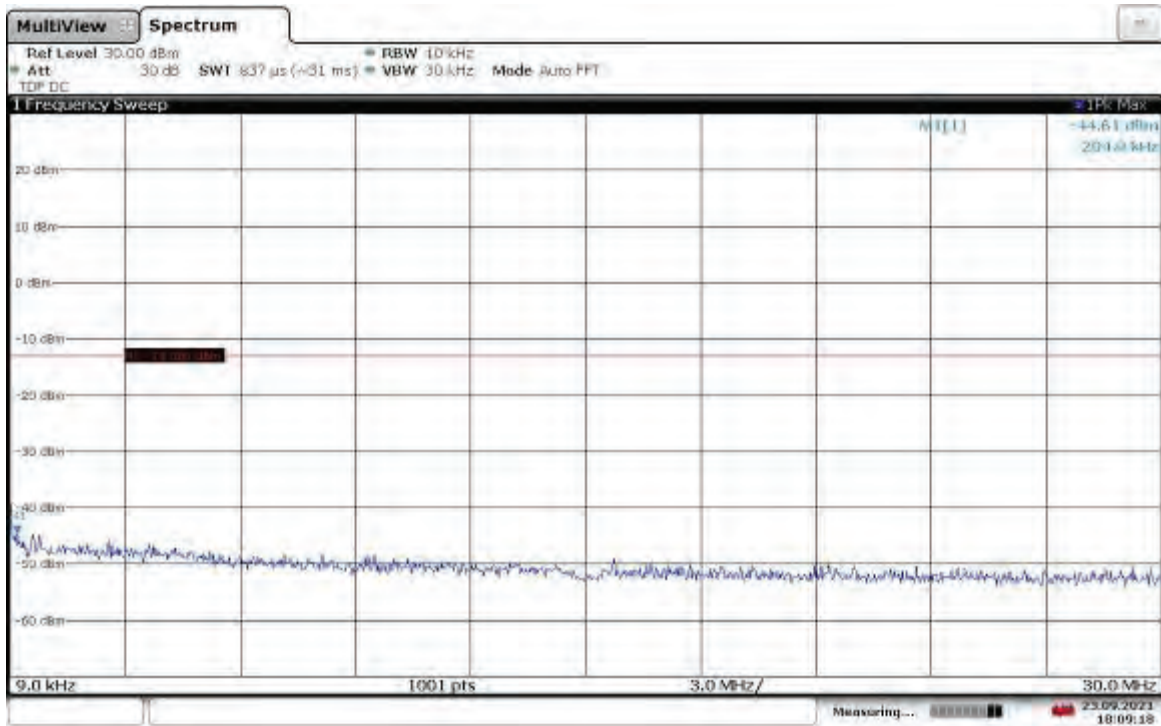
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Slot 0 (Band 5), ANT0, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 876.5 MHz
1-10GHz



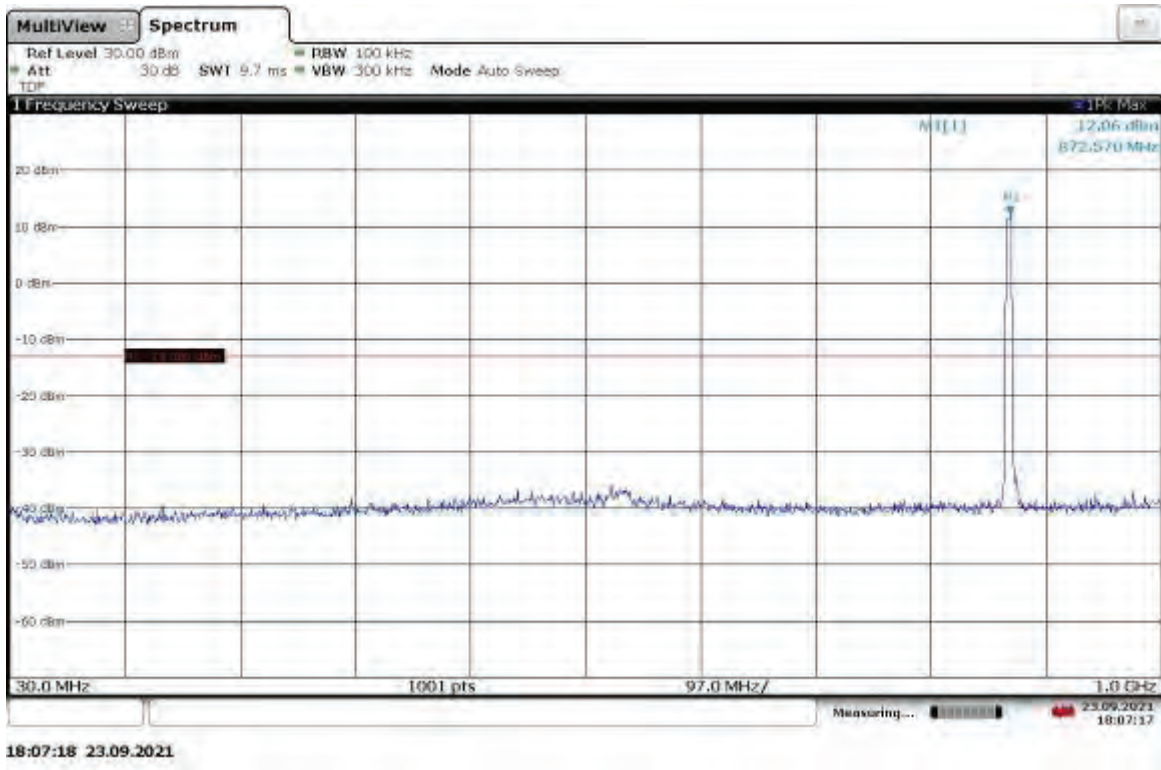
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Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 871.5 MHz
9kHz-30MHz

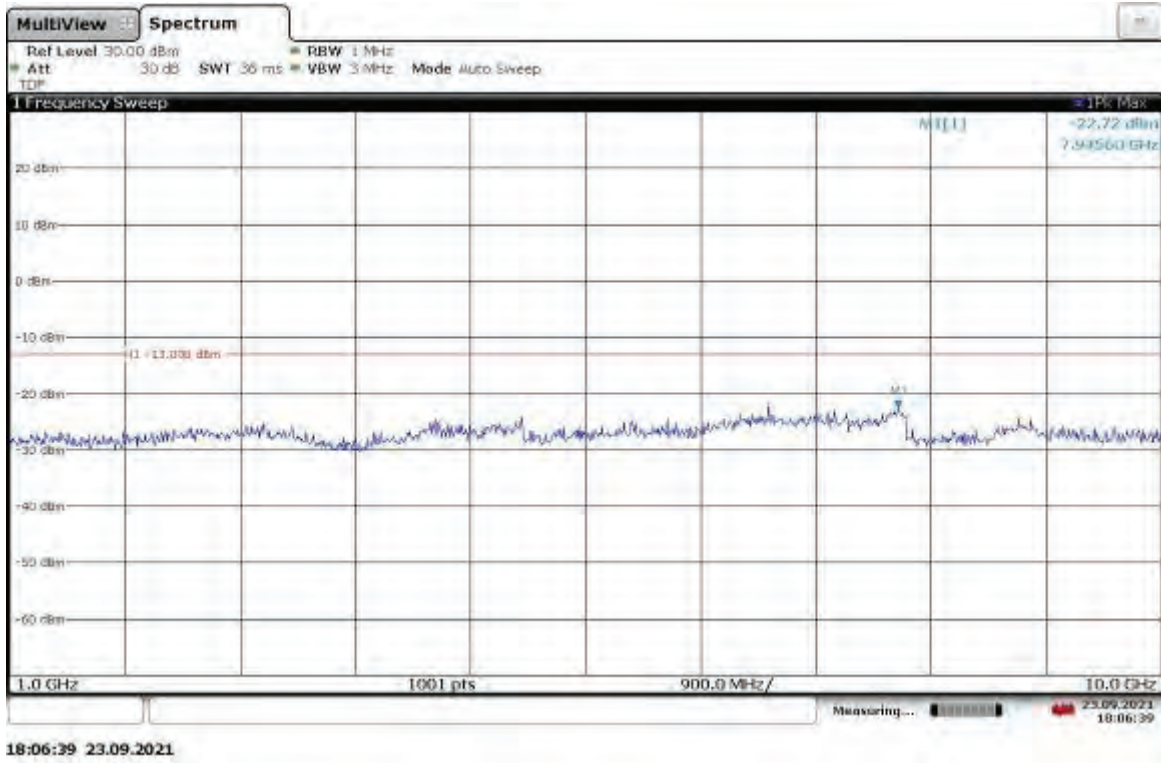


18:09:18 23.09.2021

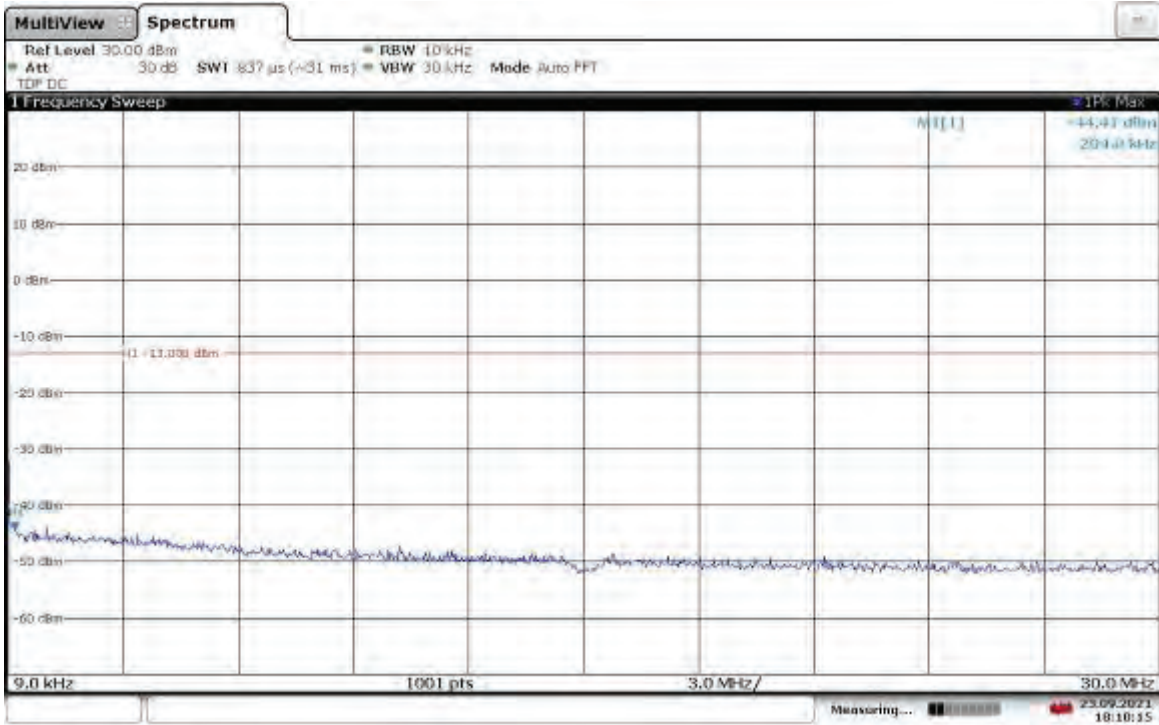
Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 871.5 MHz
30MHz-1GHz



Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Low Channel 8715 MHz
1-10GHz

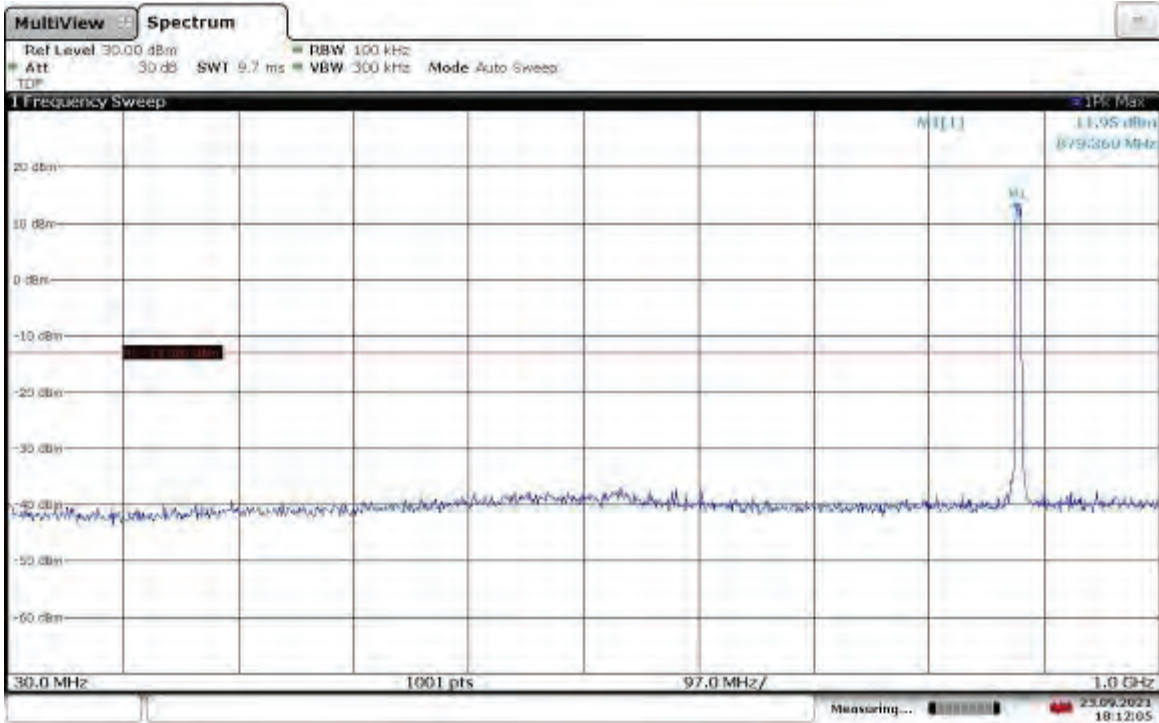


Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 881 MHz
9kHz-30MHz



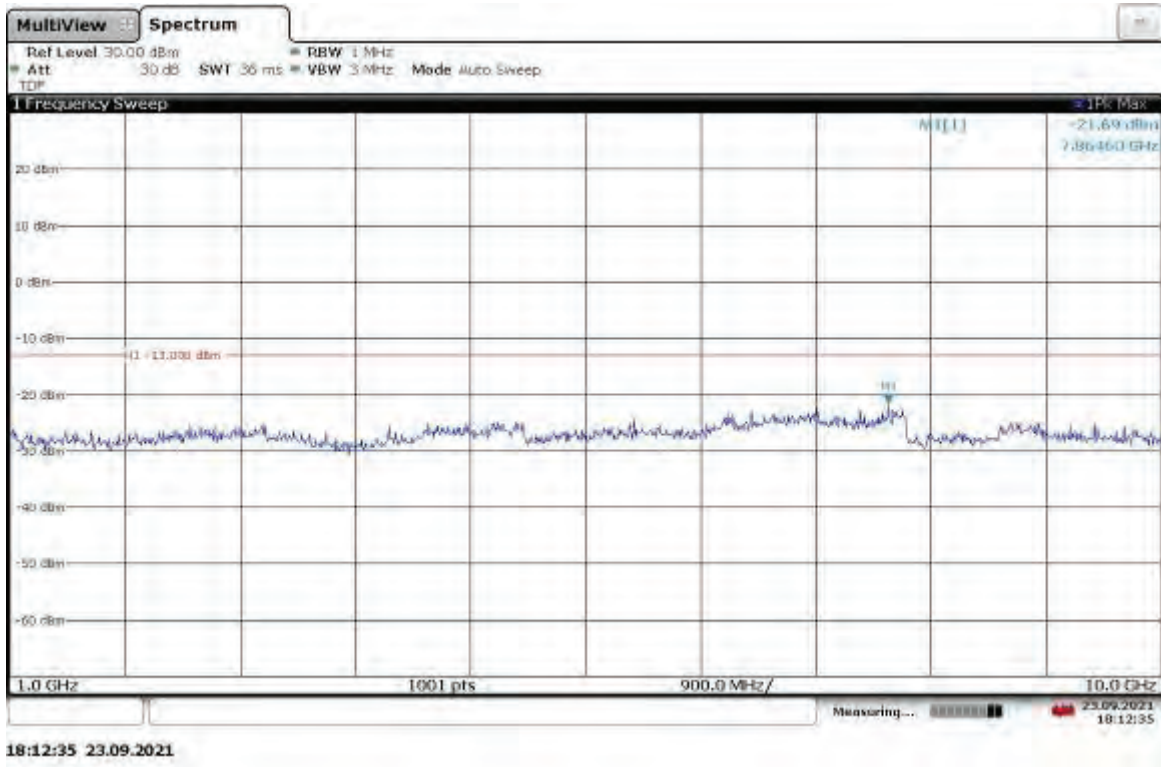
18:10:15 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 881 MHz
30MHz-1GHz

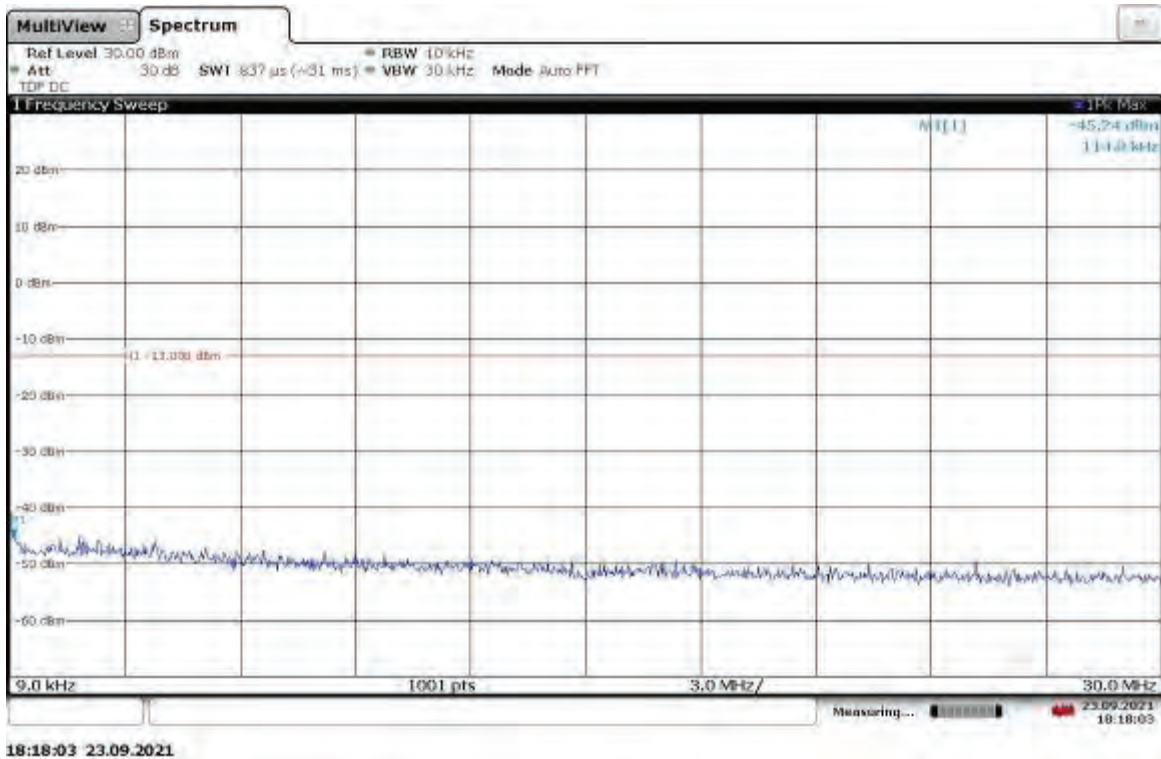


18:12:06 23.09.2021

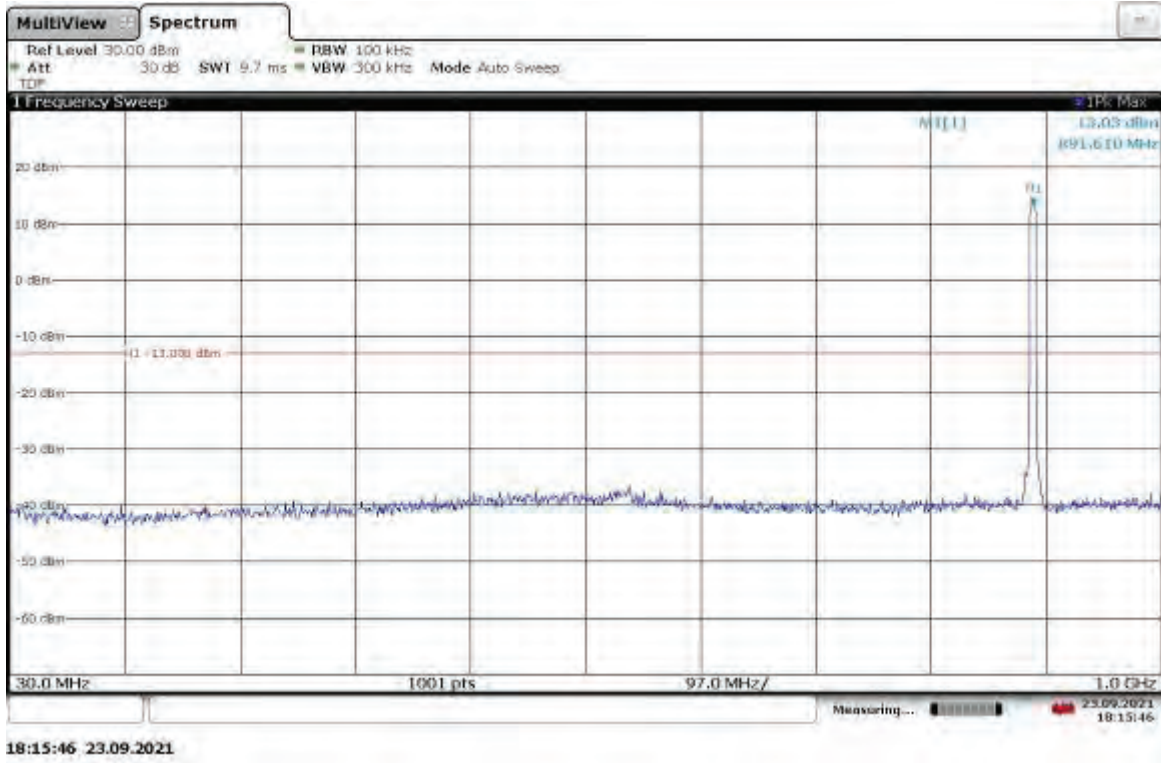
Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, Mid Channel 881 MHz
1-10GHz



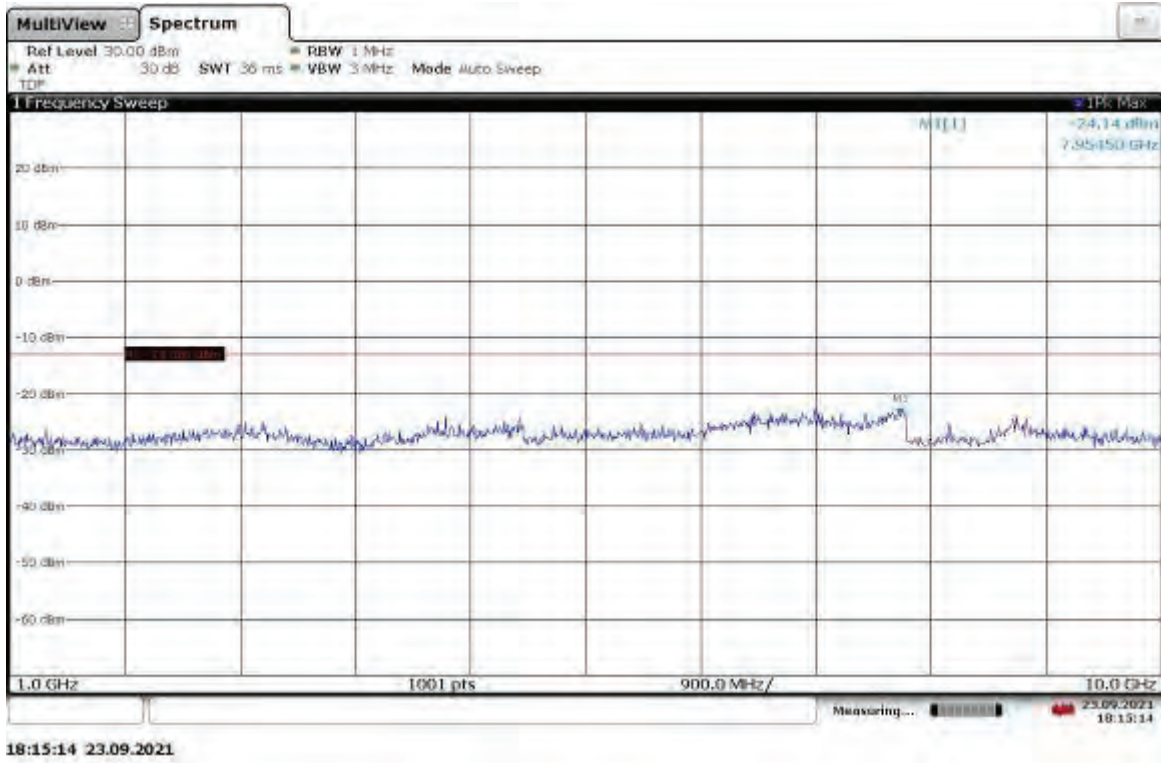
Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 891.5 MHz
9kHz-30MHz



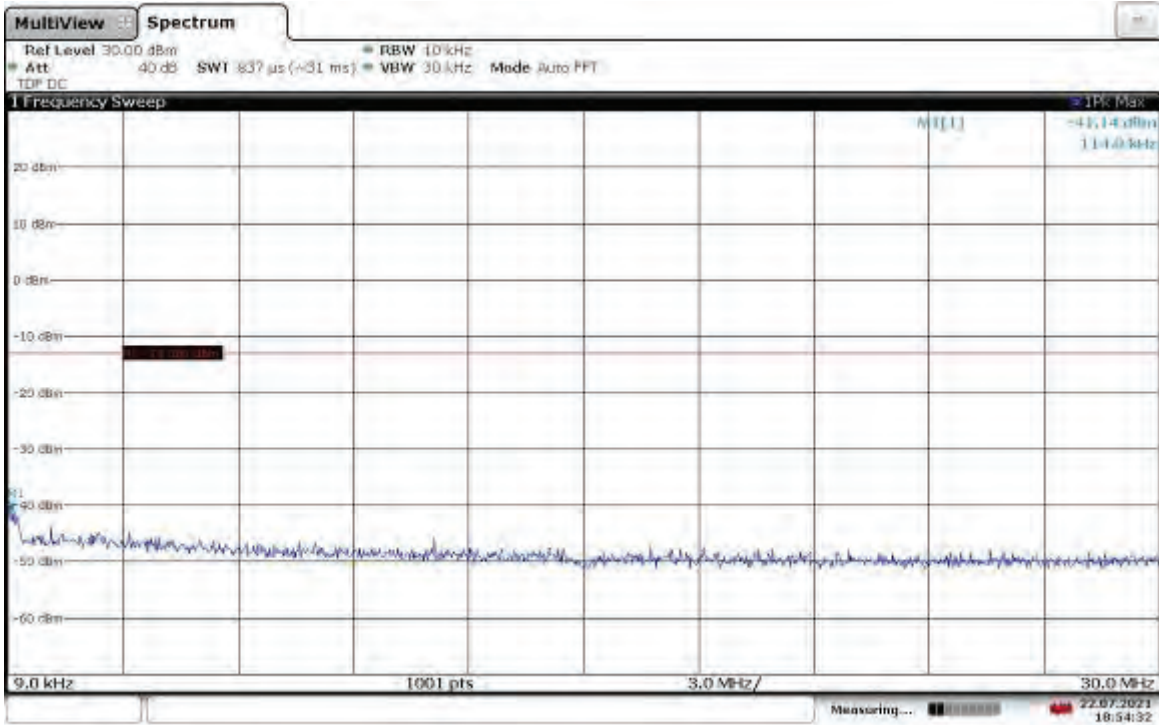
Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 1987.5 MHz
30MHz-1GHz



Slot 0 (Band 5), ANT1, Modulation: TM1.1-QPSK, Bandwidth: 5 MHz, High Channel 891.5 MHz
1-10GHz

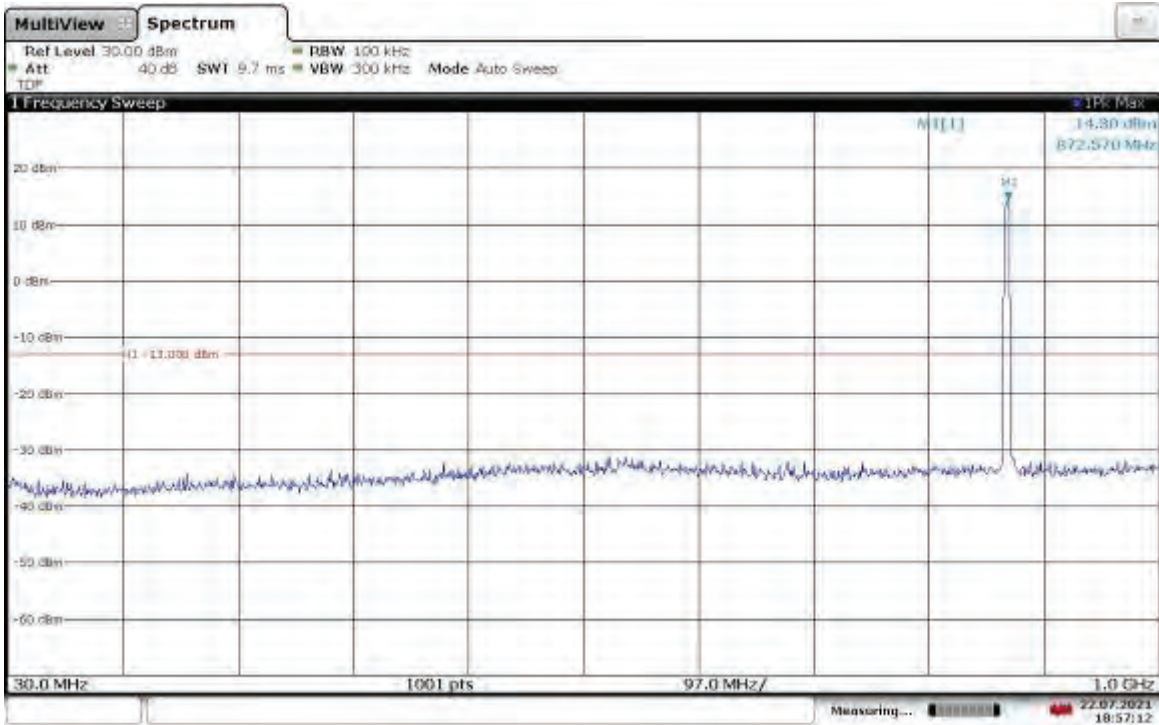


Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



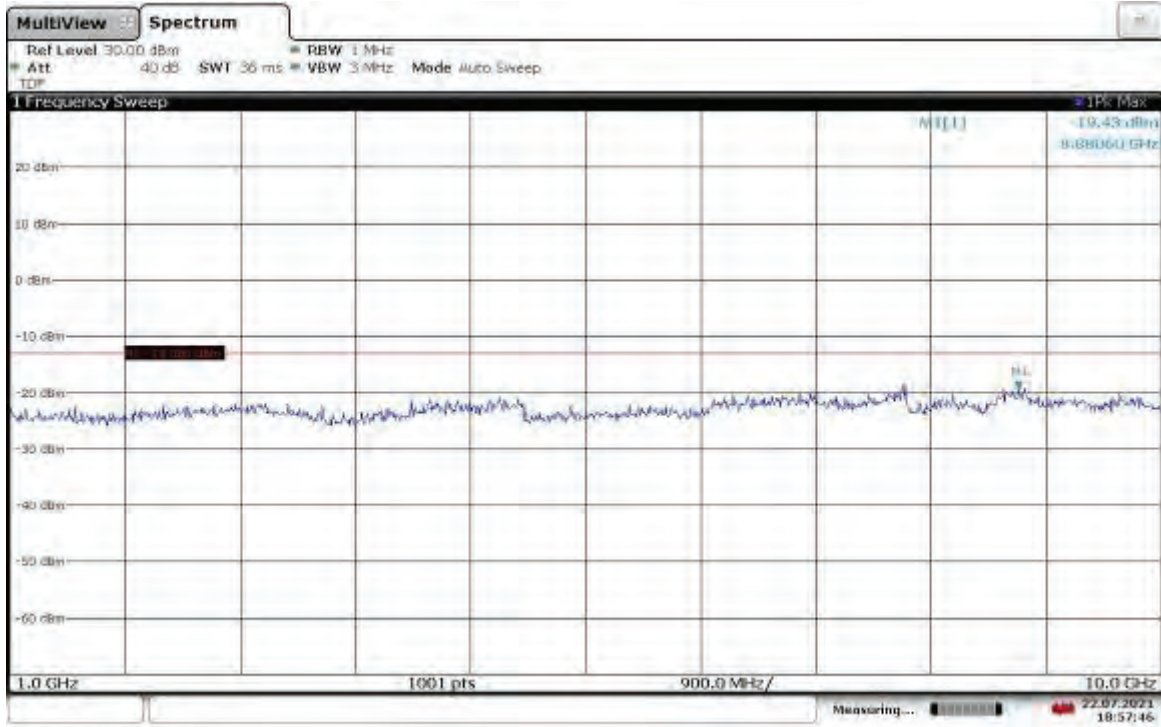
18:54:32 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



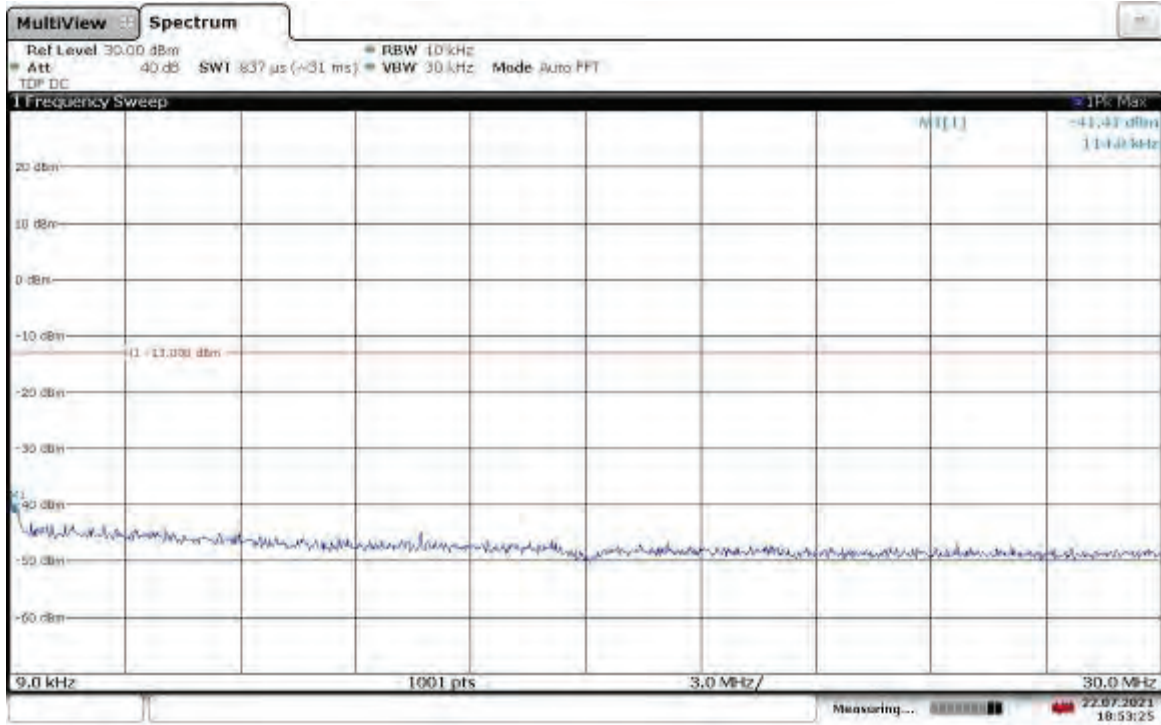
18:57:12 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
1-10GHz



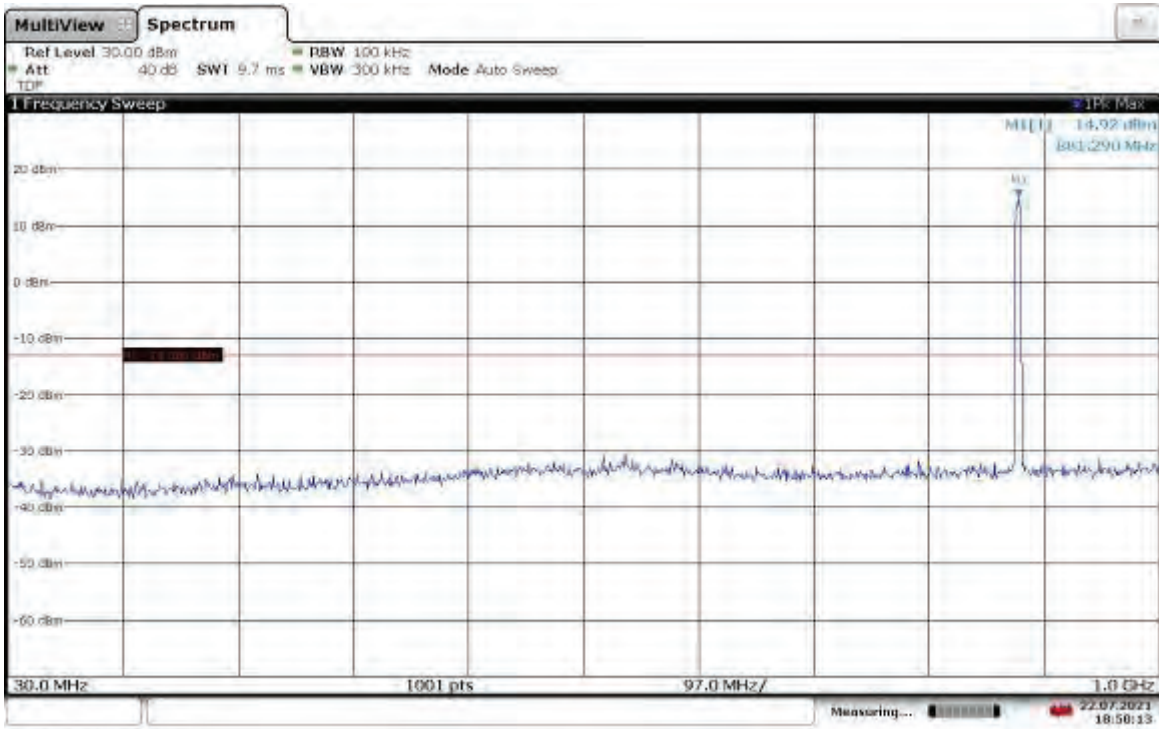
18:57:47 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



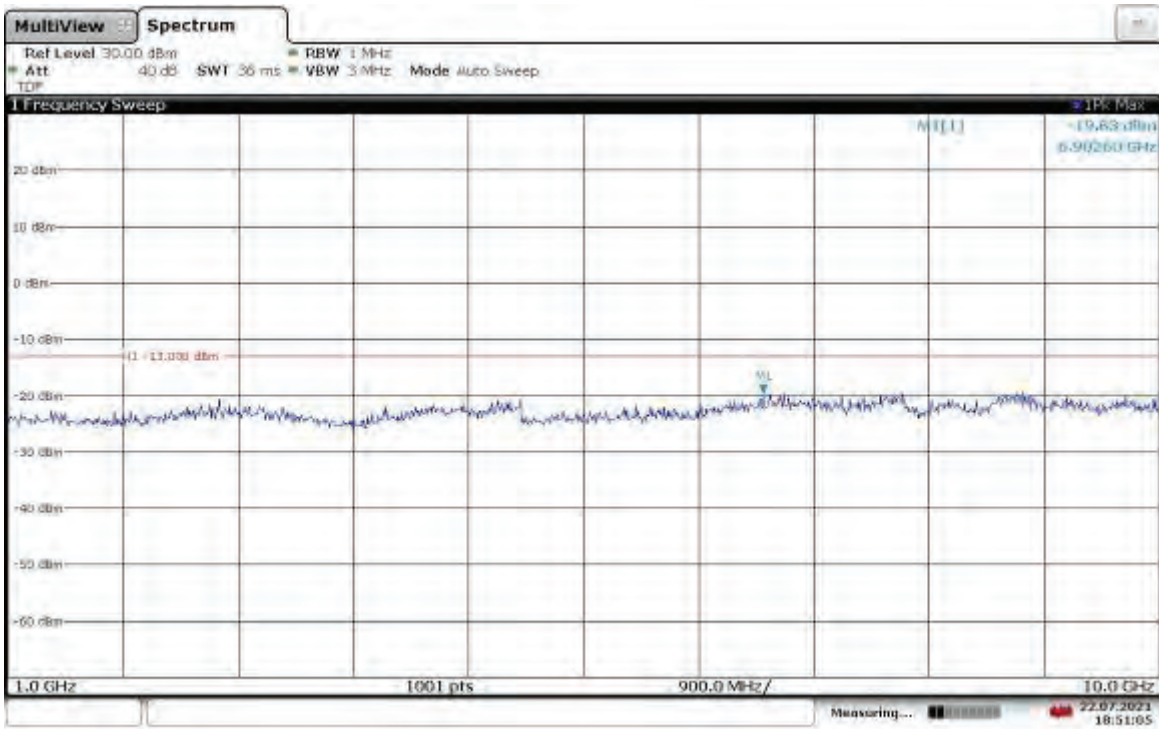
18:53:25 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



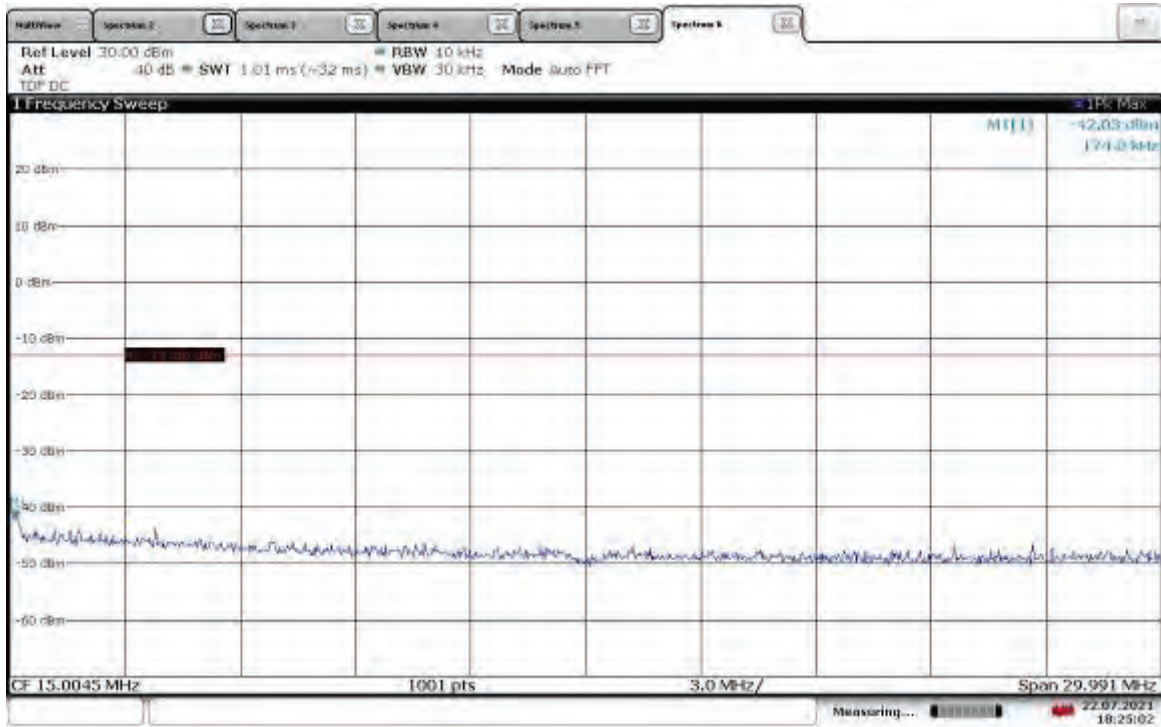
18:50:13 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
1-10GHz



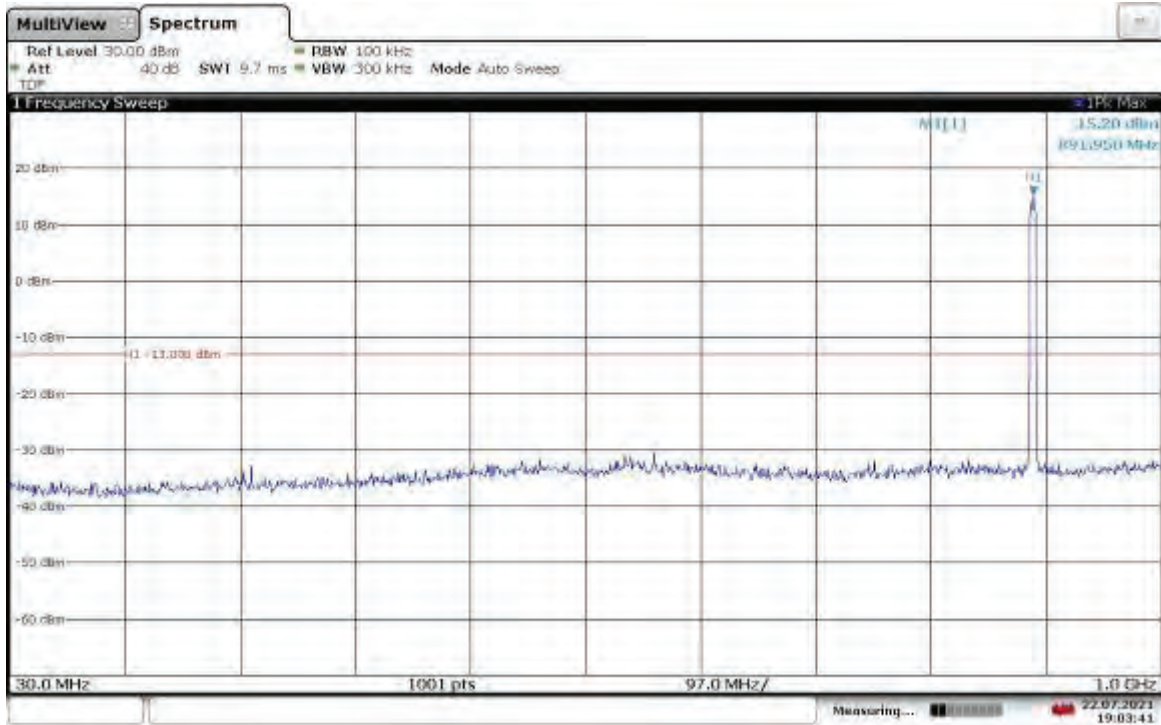
18:51:05 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



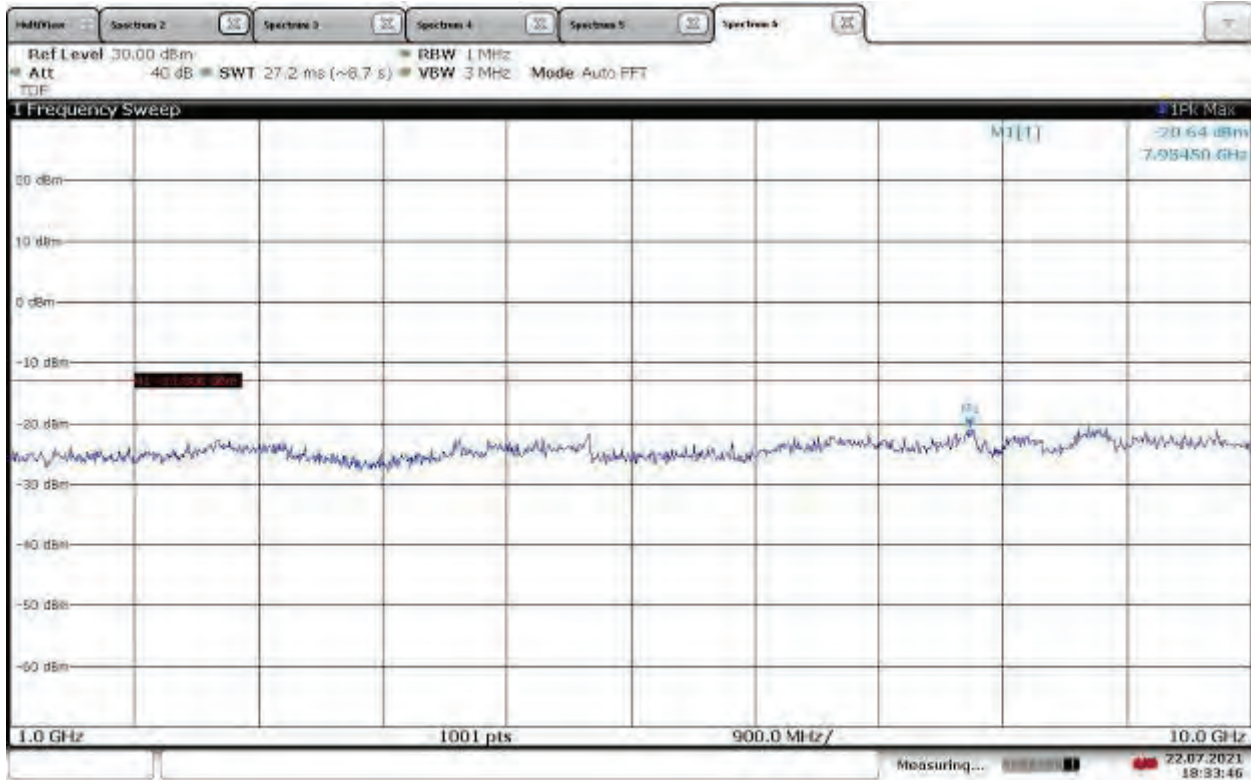
18:25:03 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



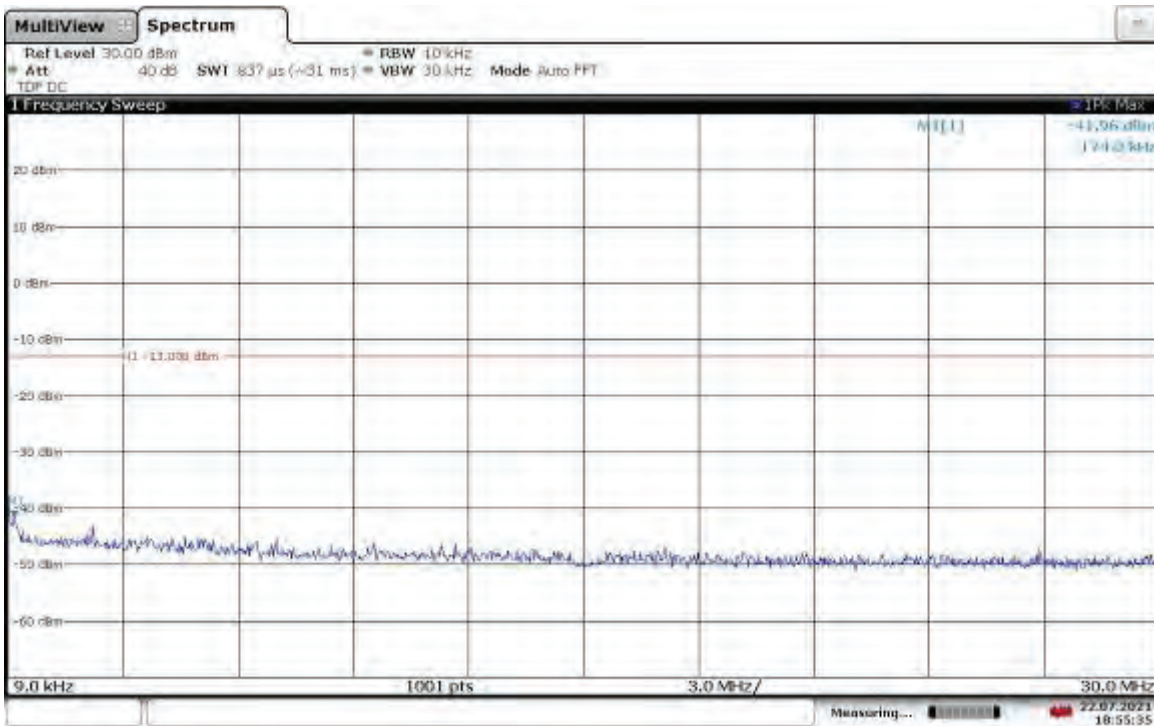
19:03:41 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
1-10GHz



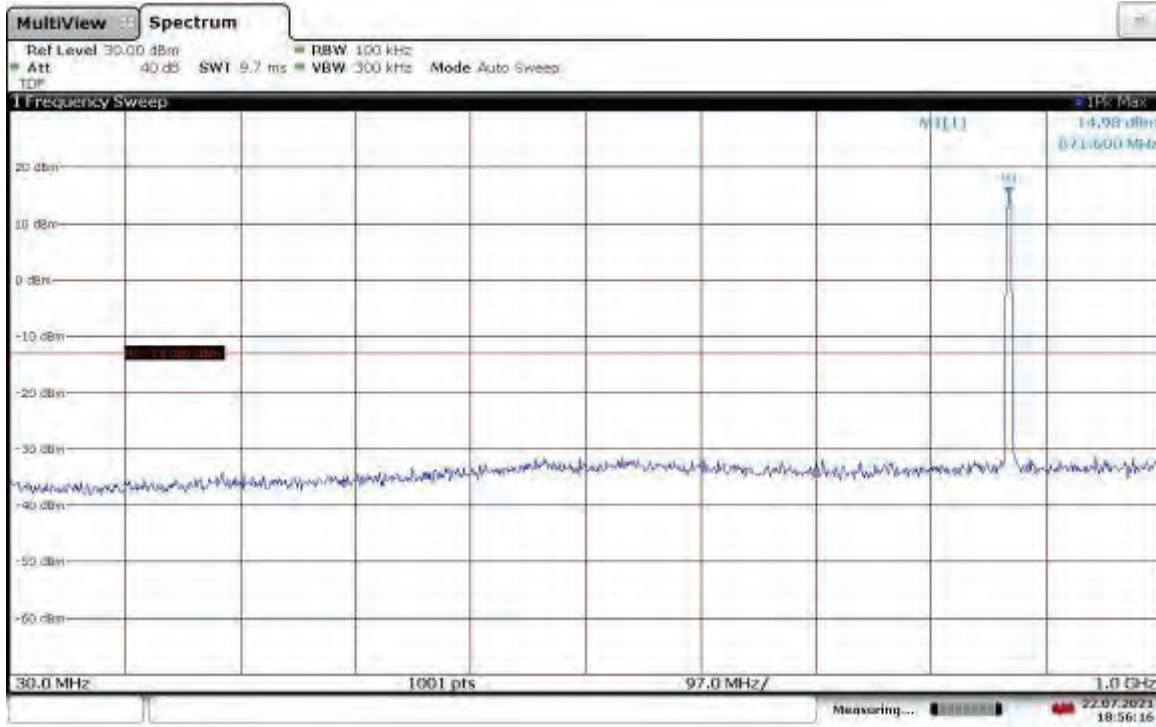
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Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz

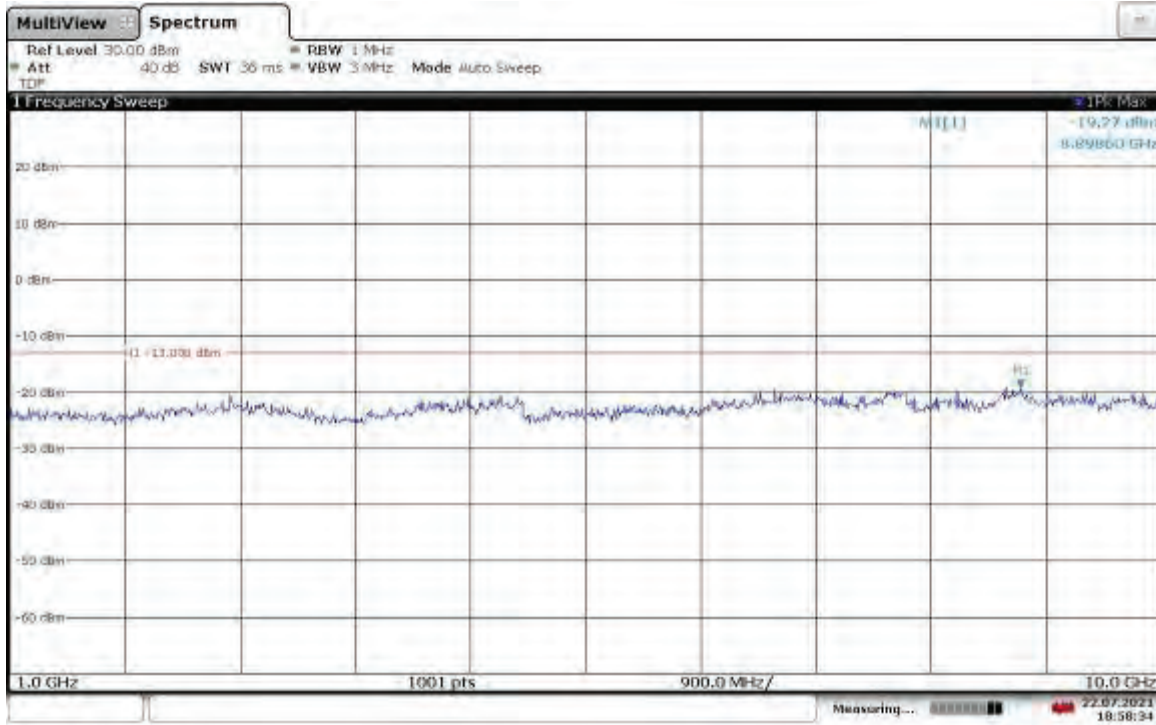


18:55:35 22.07.2021

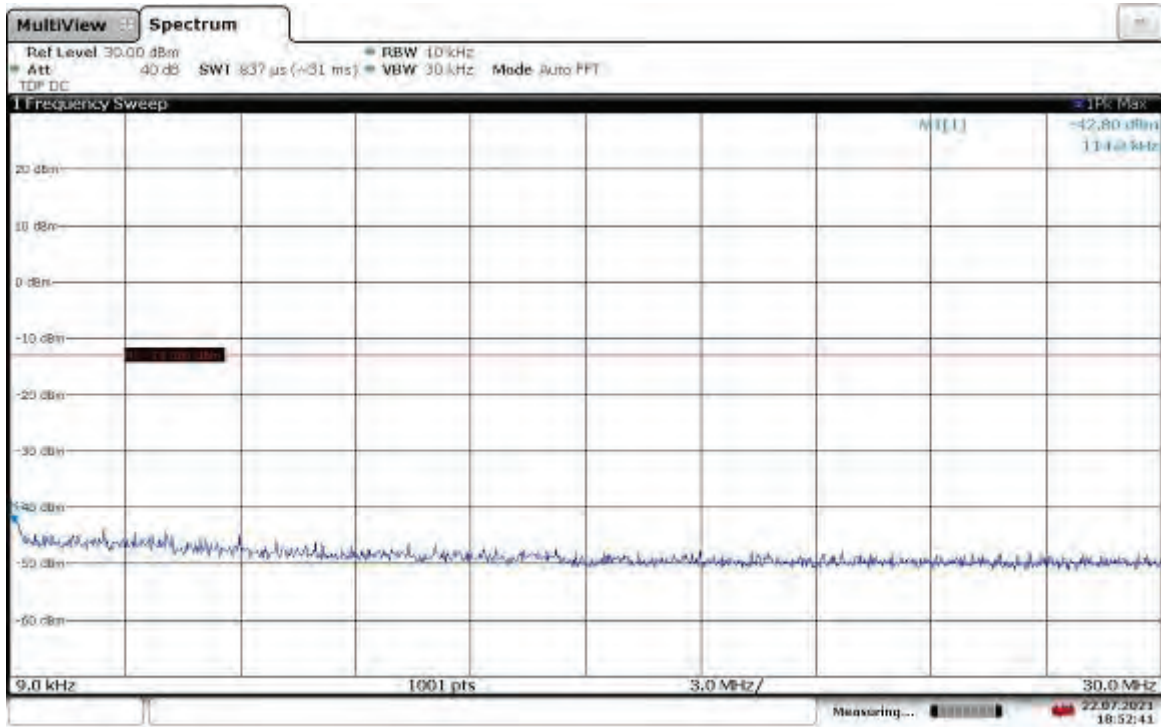
Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Low Channel
1-10GHz

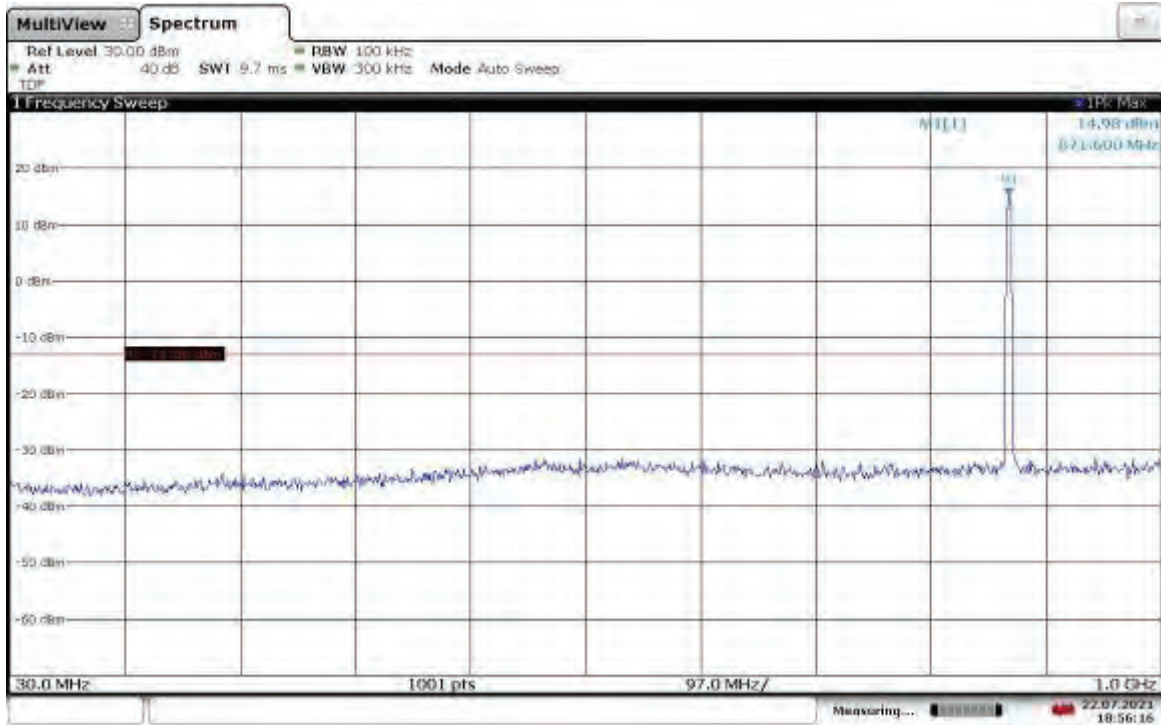


Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel 9kHz-30MHz



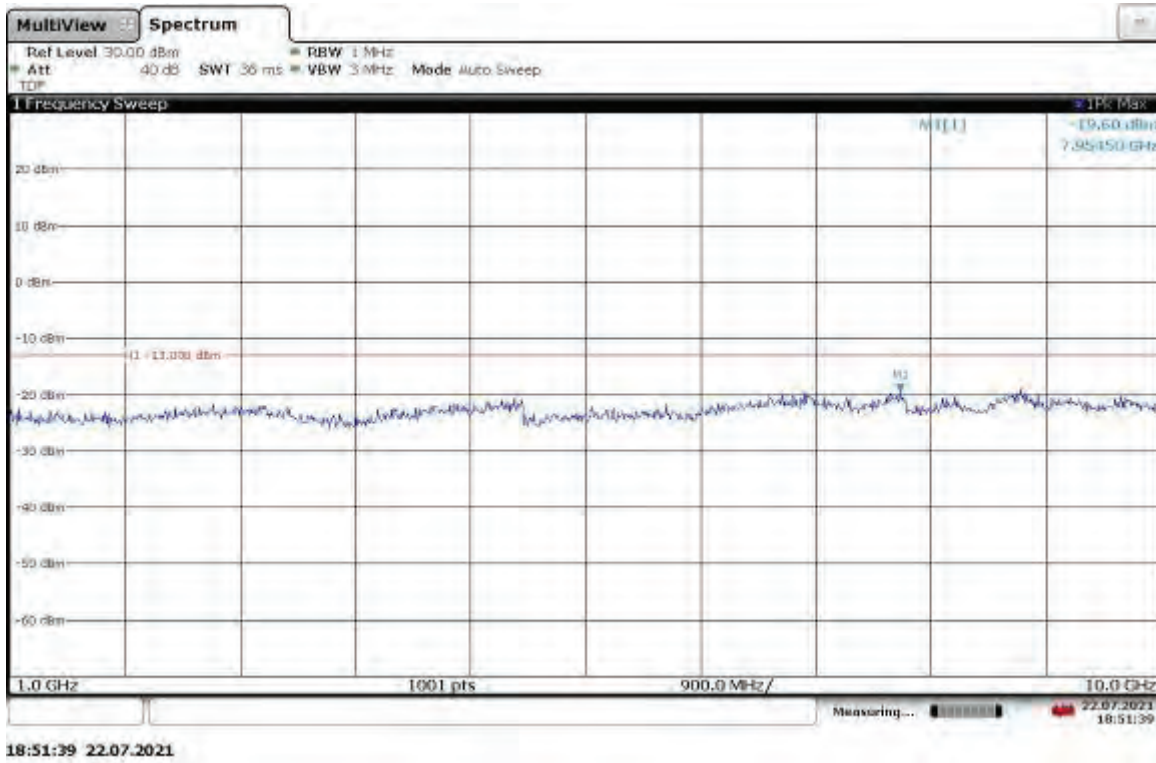
18:52:42 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel 30MHz-1GHz

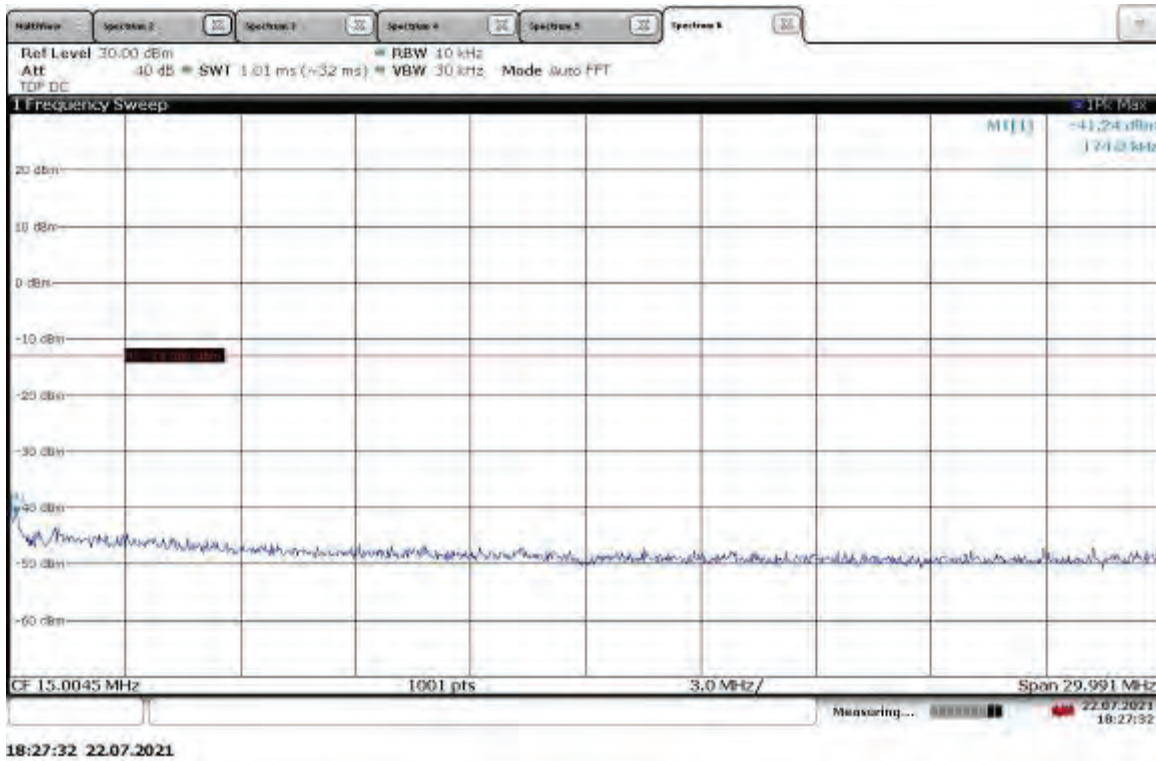


18:56:16 22.07.2021

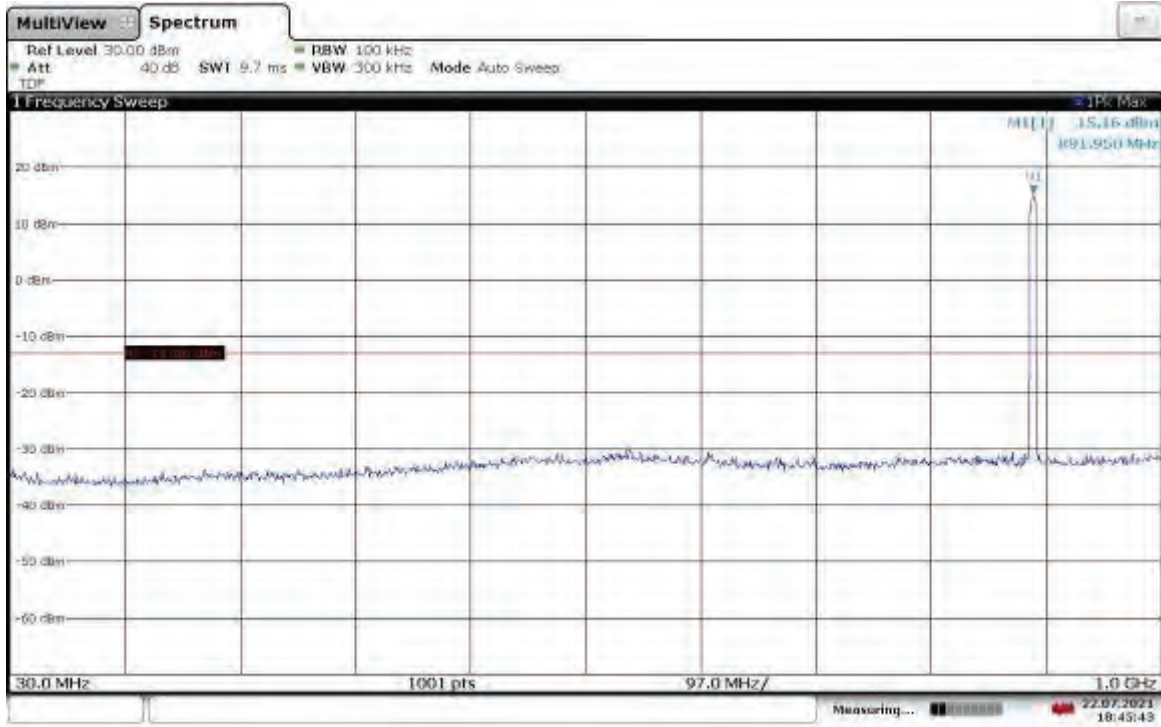
Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, Mid Channel
1-10GHz



Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz

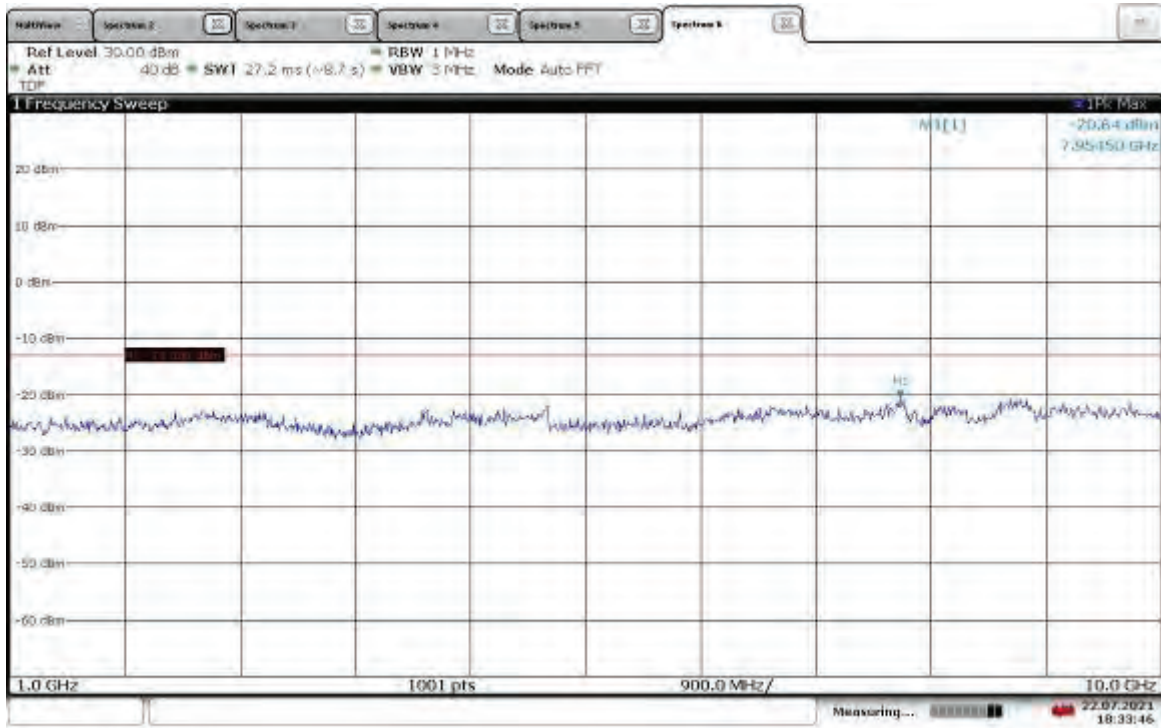


Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



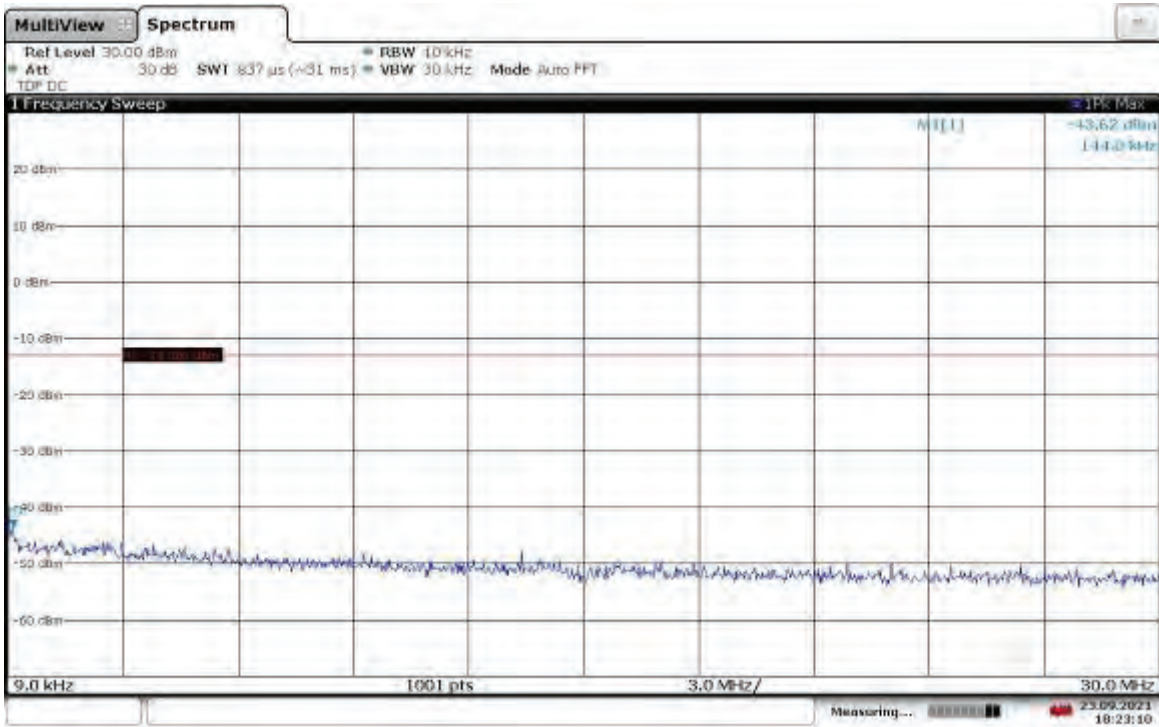
18:45:44 22.07.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.2-16QAM, Bandwidth: 5 MHz, High Channel 1-10GHz



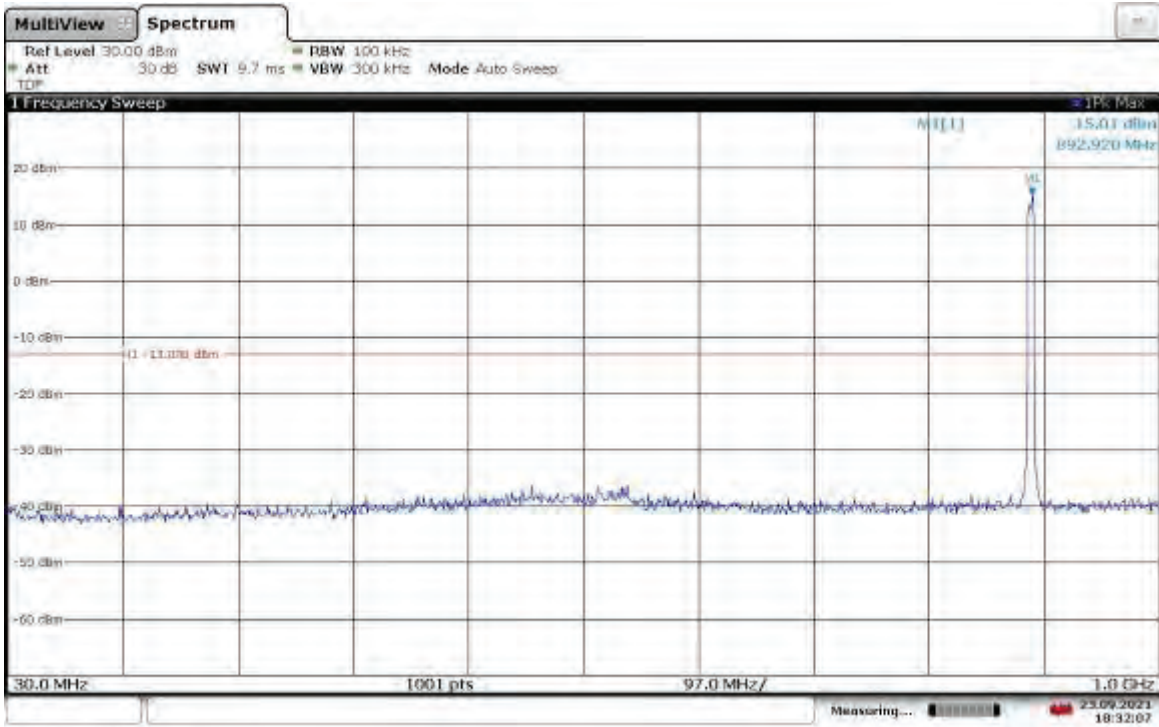
18:33:47 22.07.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



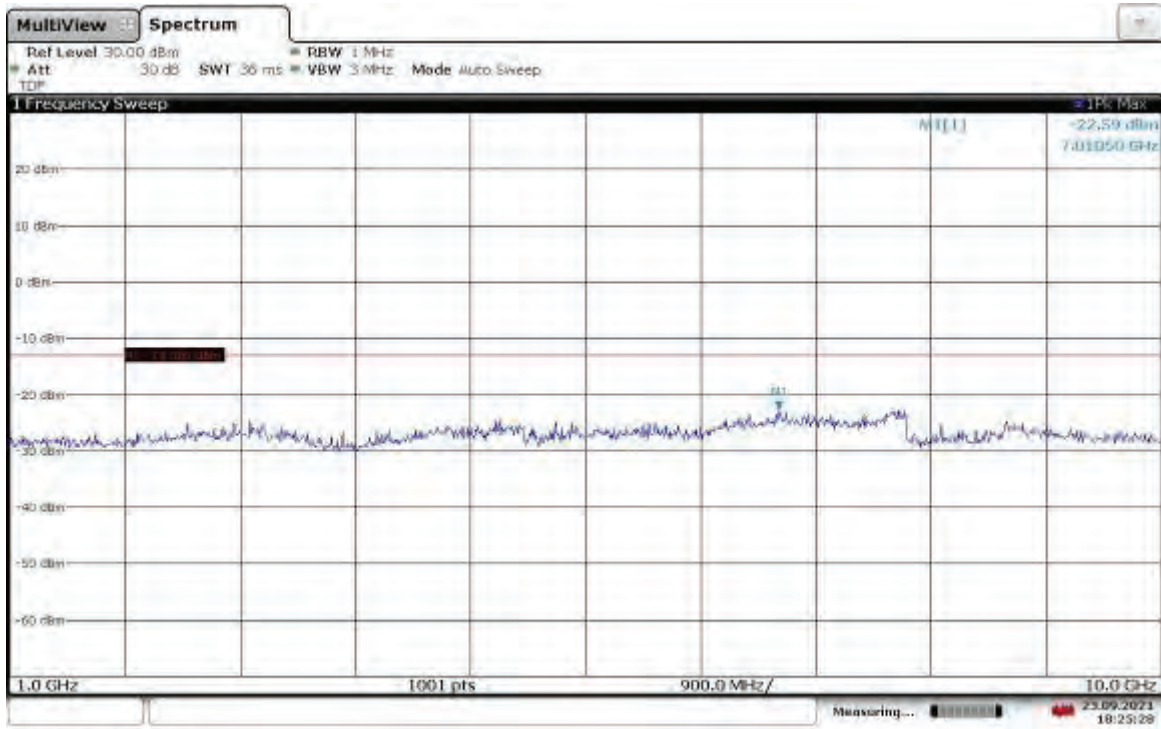
18:23:11 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



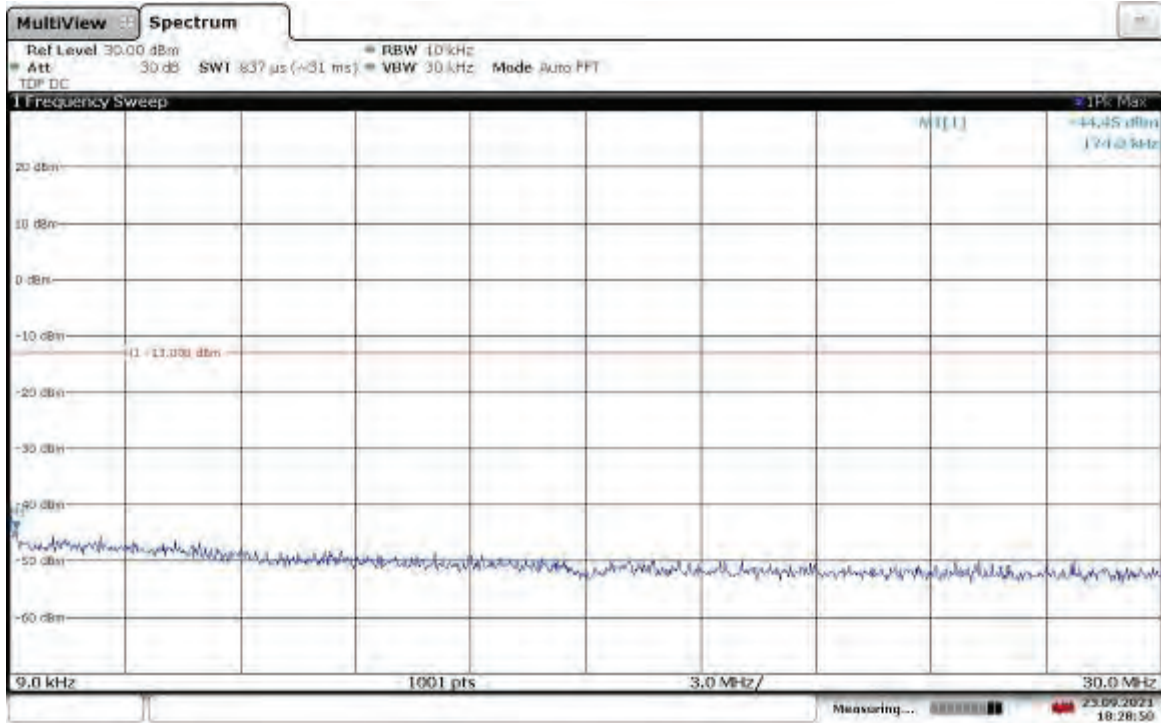
18:32:07 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
1-10GHz



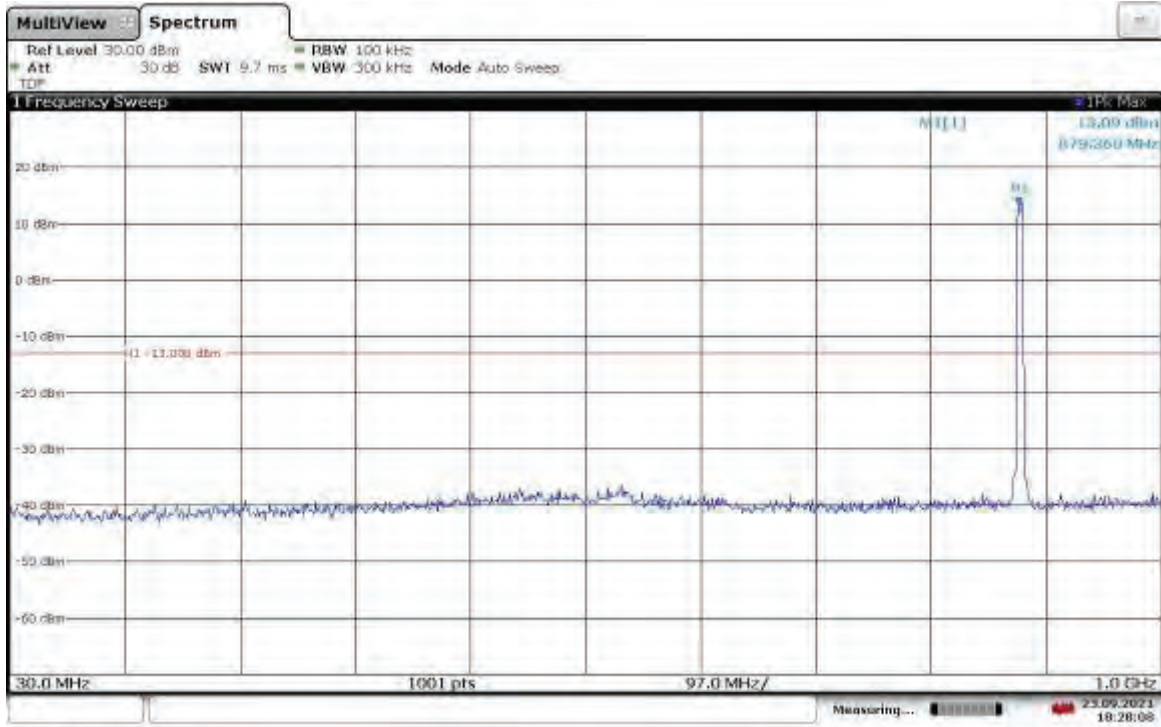
18:25:28 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



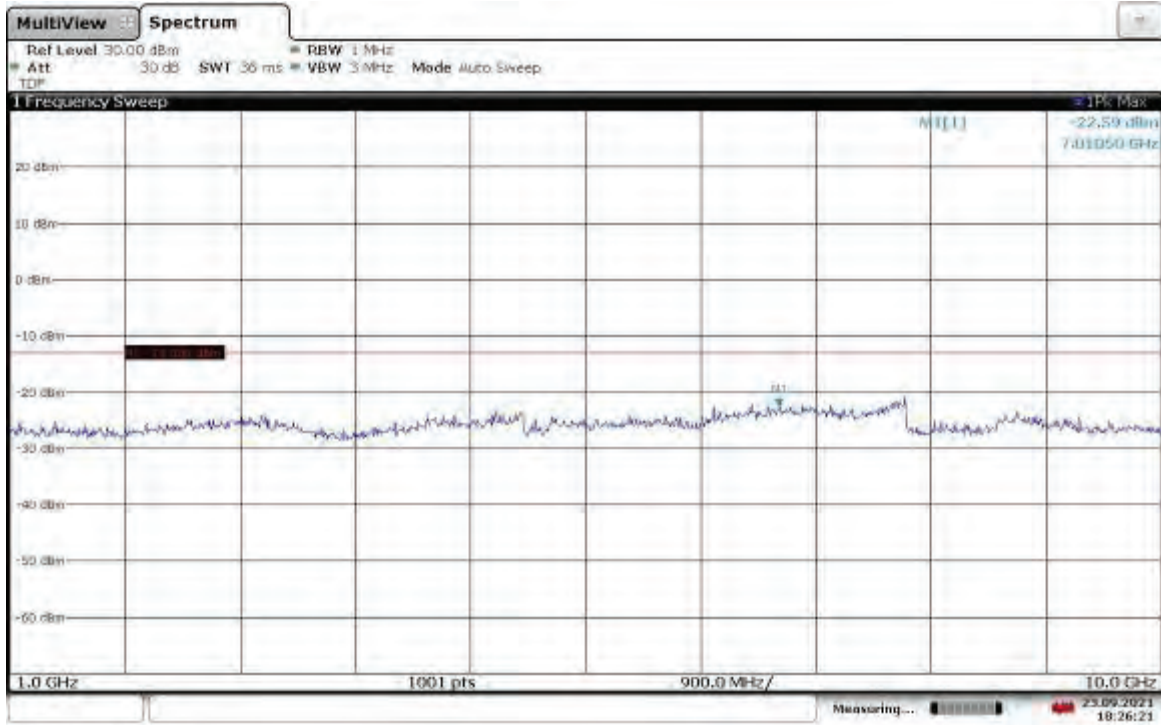
18:28:51 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel 30MHz-1GHz



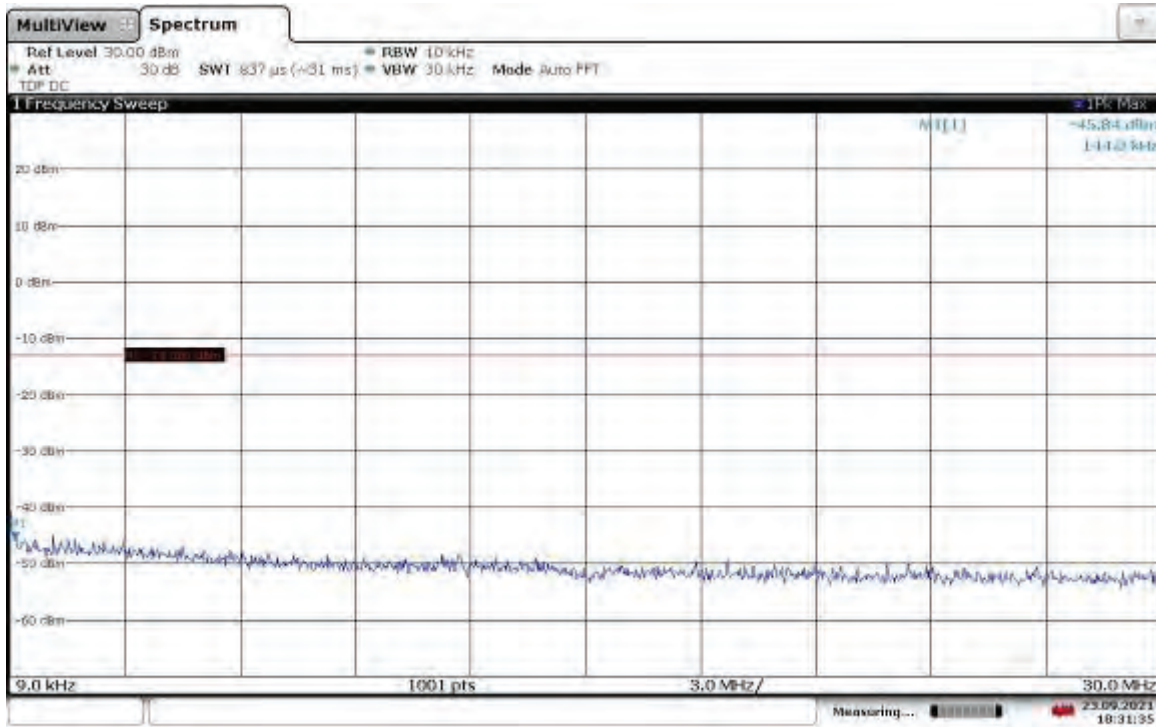
18:28:08 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel 1-10GHz



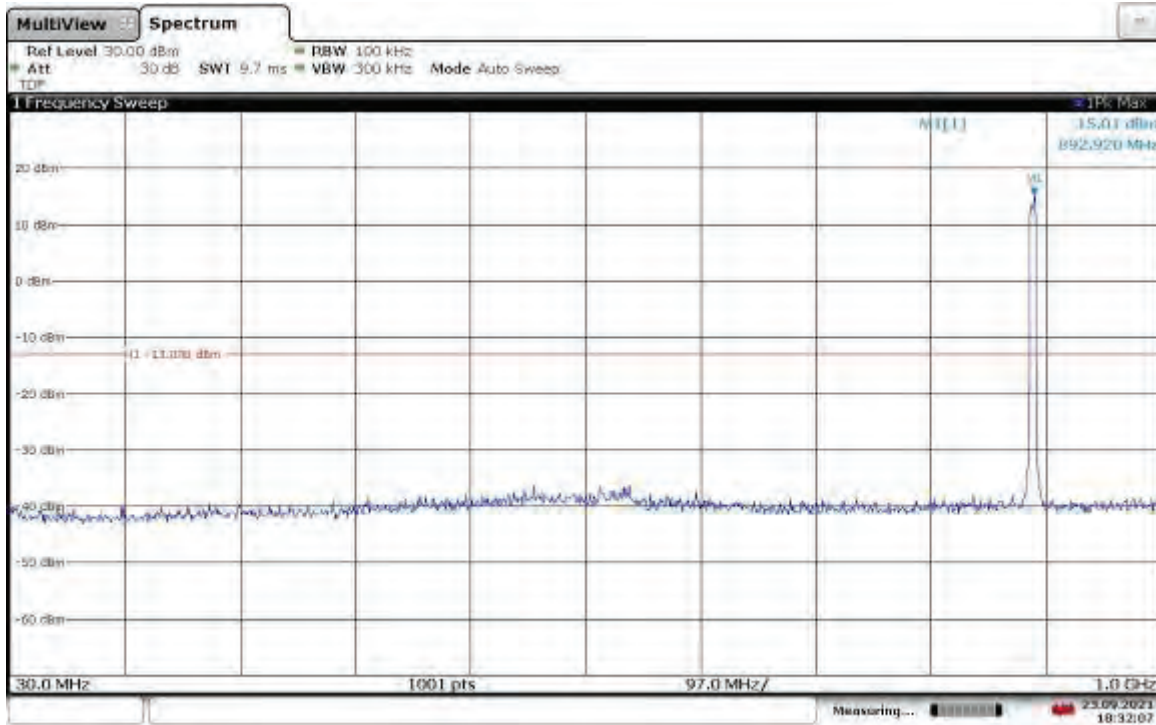
18:26:22 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



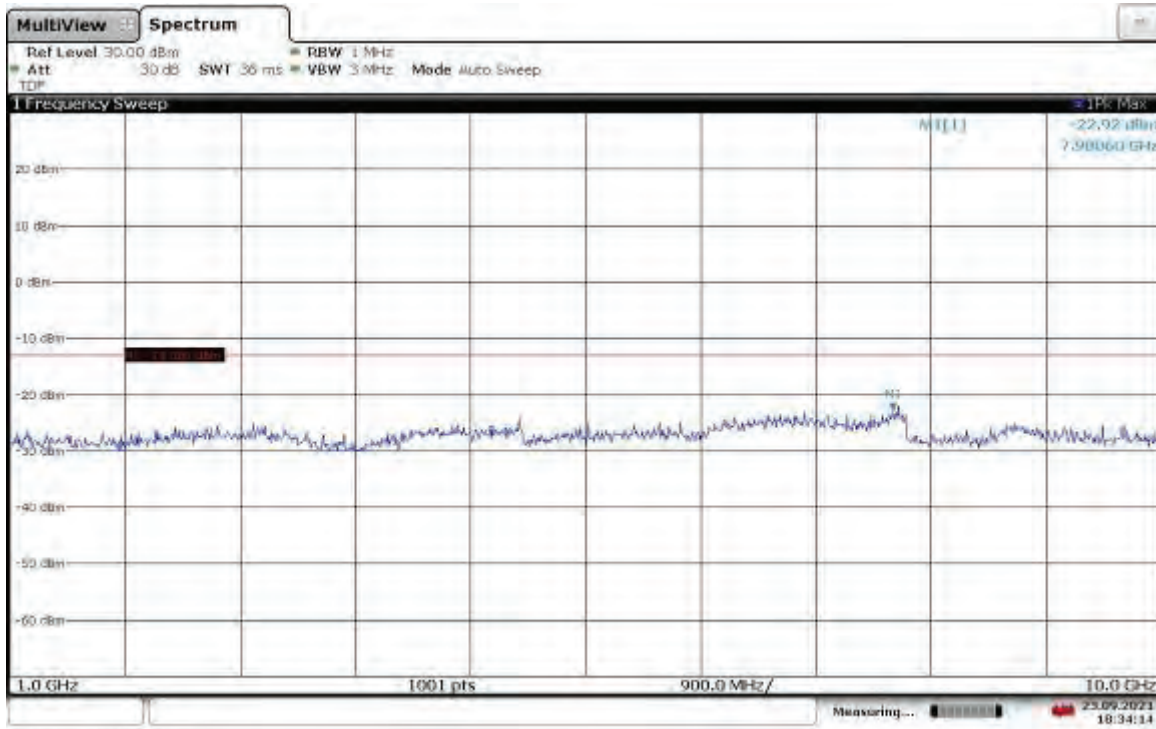
18:31:36 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



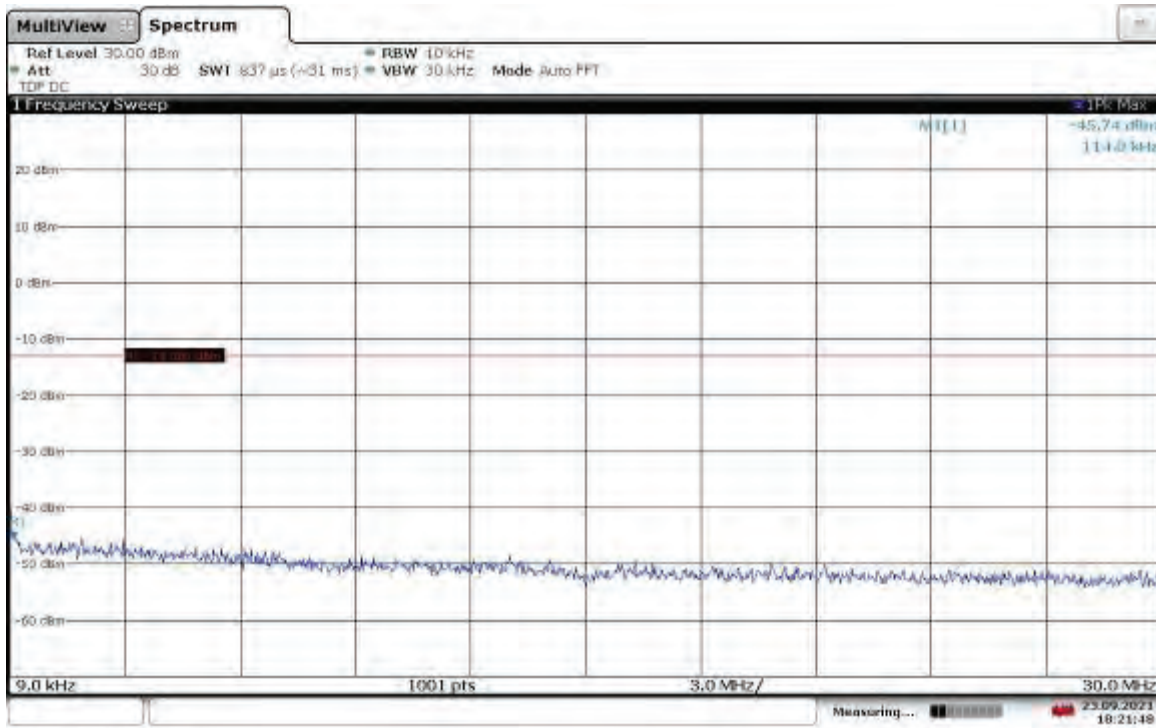
18:32:07 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
1-10GHz



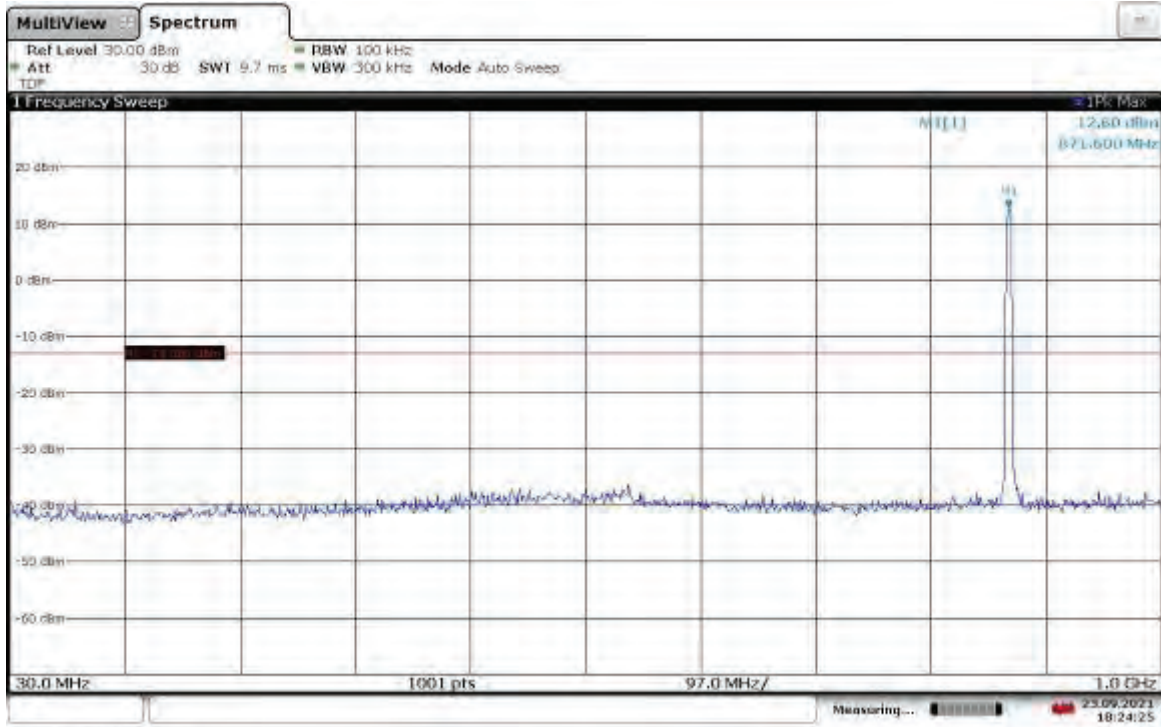
18:34:14 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



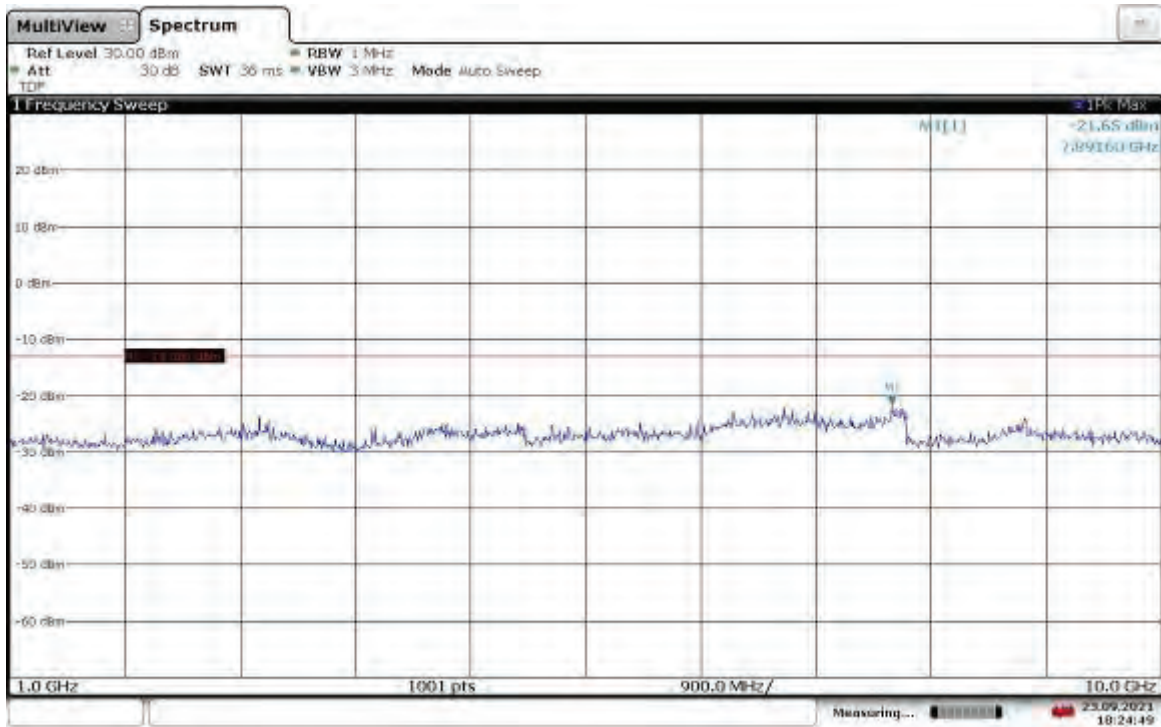
18:21:48 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



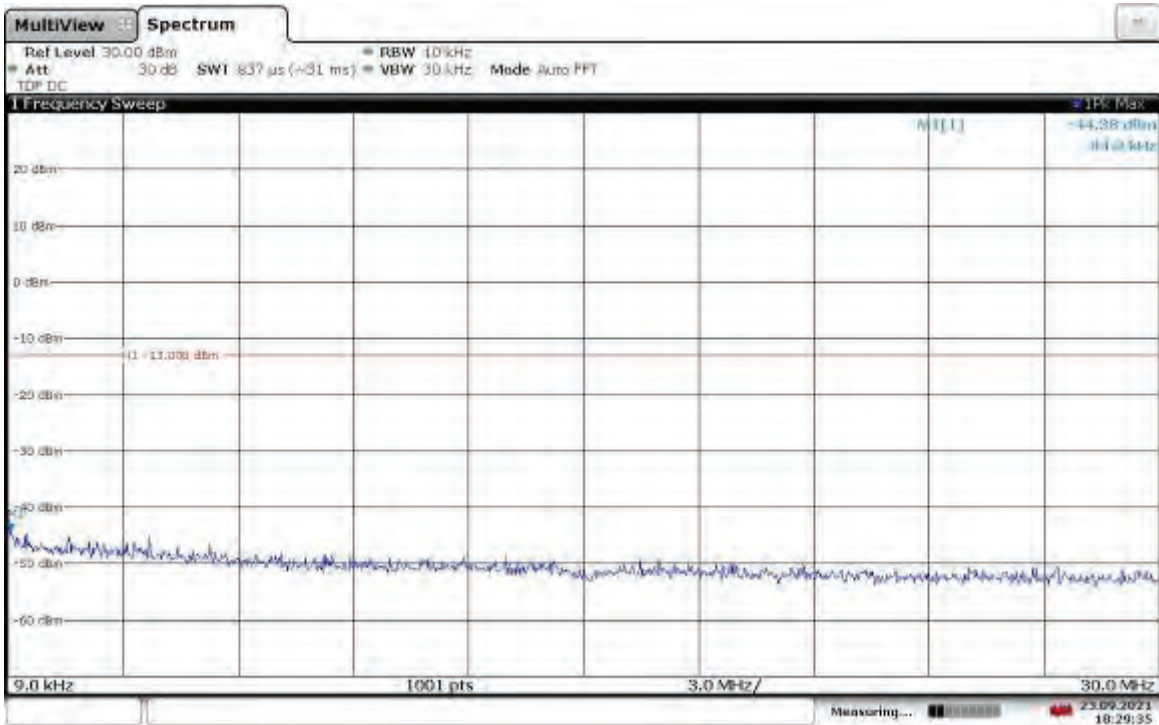
18:24:25 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Low Channel
1-10GHz



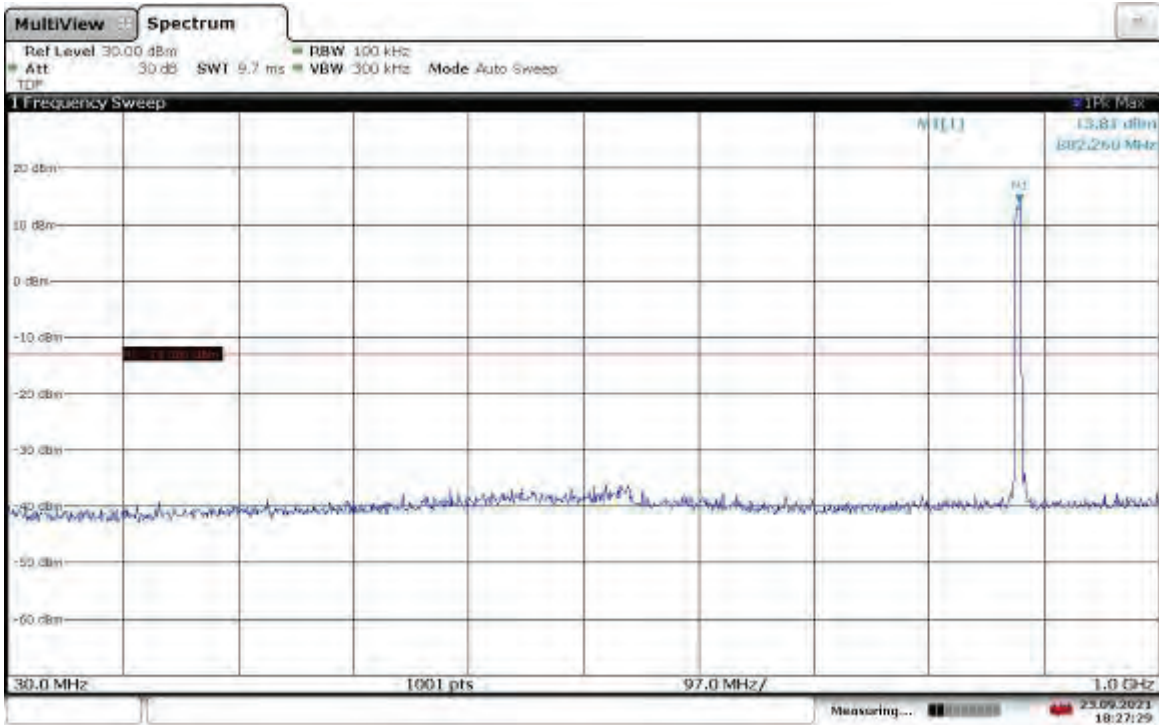
18:24:50 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel 9kHz-30MHz



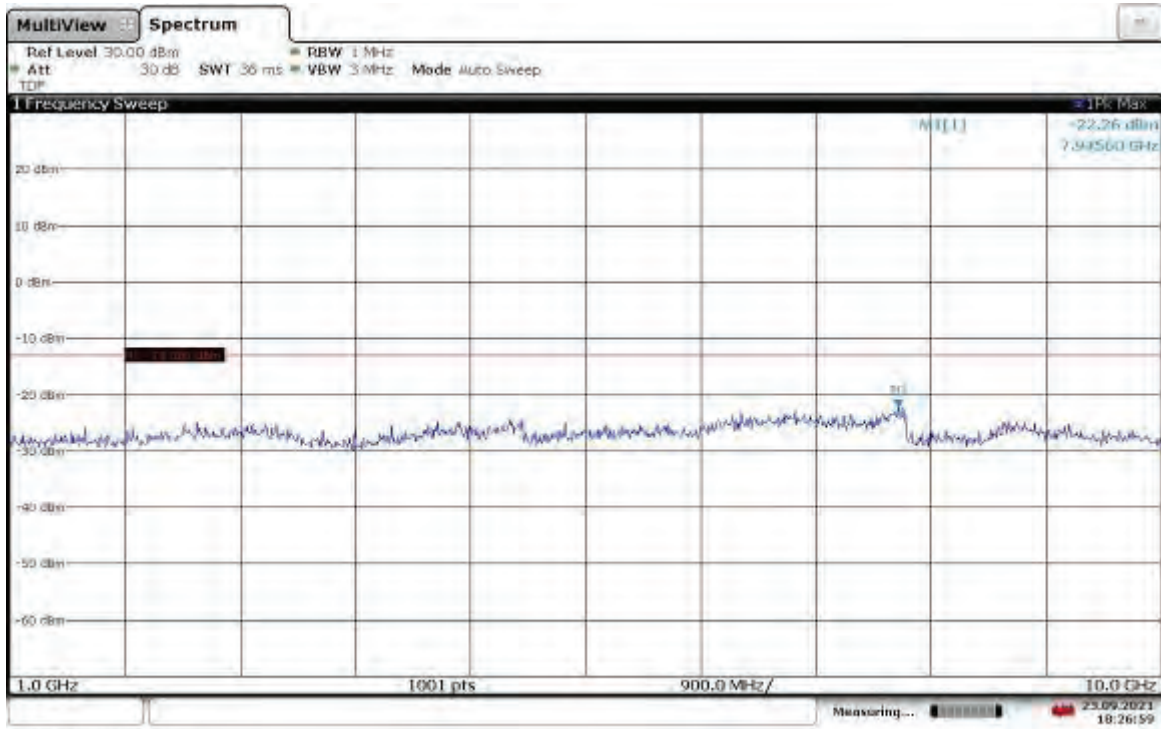
18:29:35 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel 30MHz-1GHz



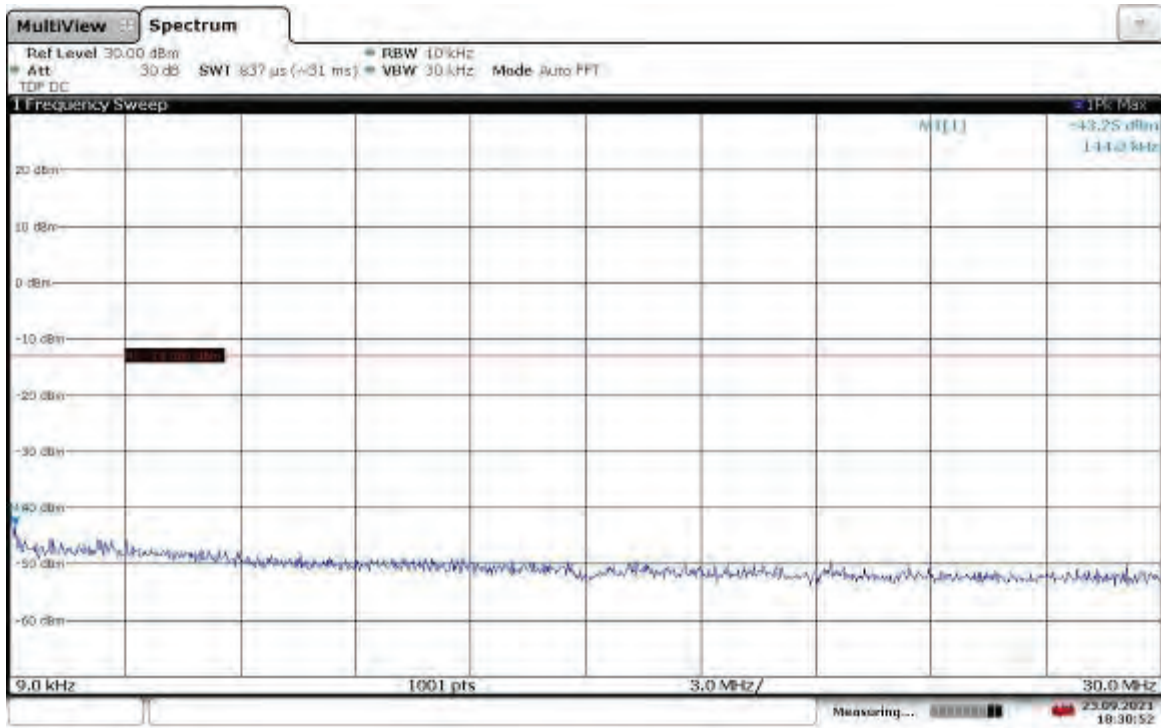
18:27:30 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, Mid Channel
1-10GHz



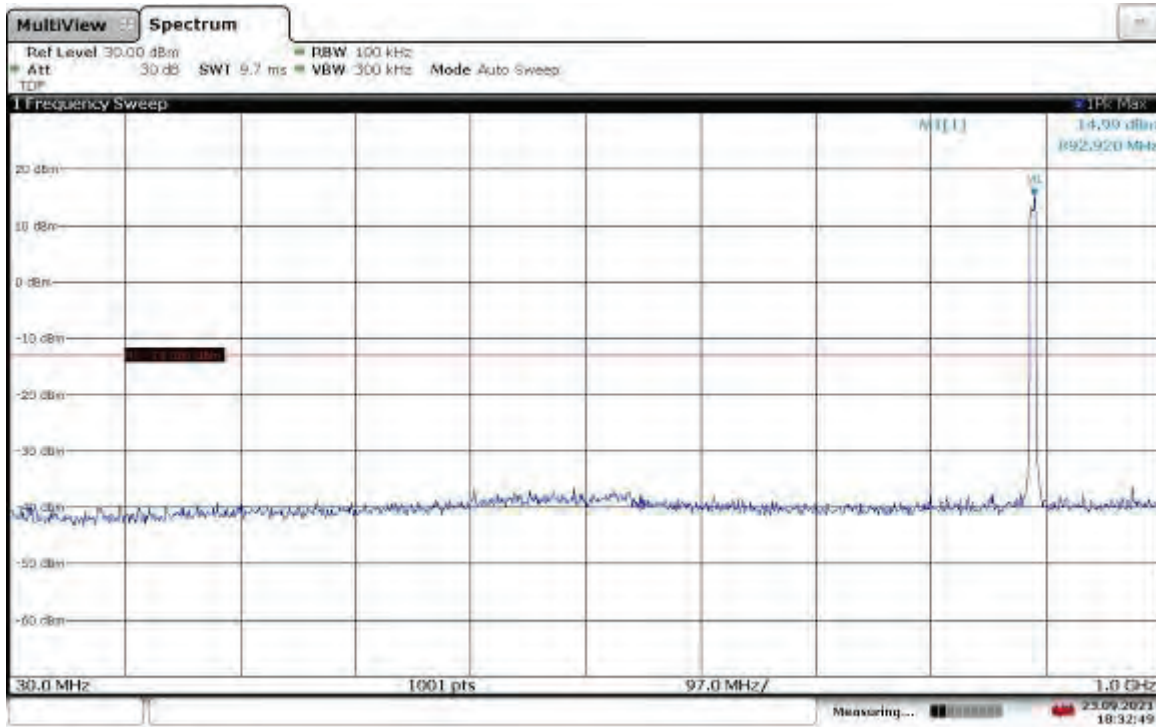
18:27:00 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



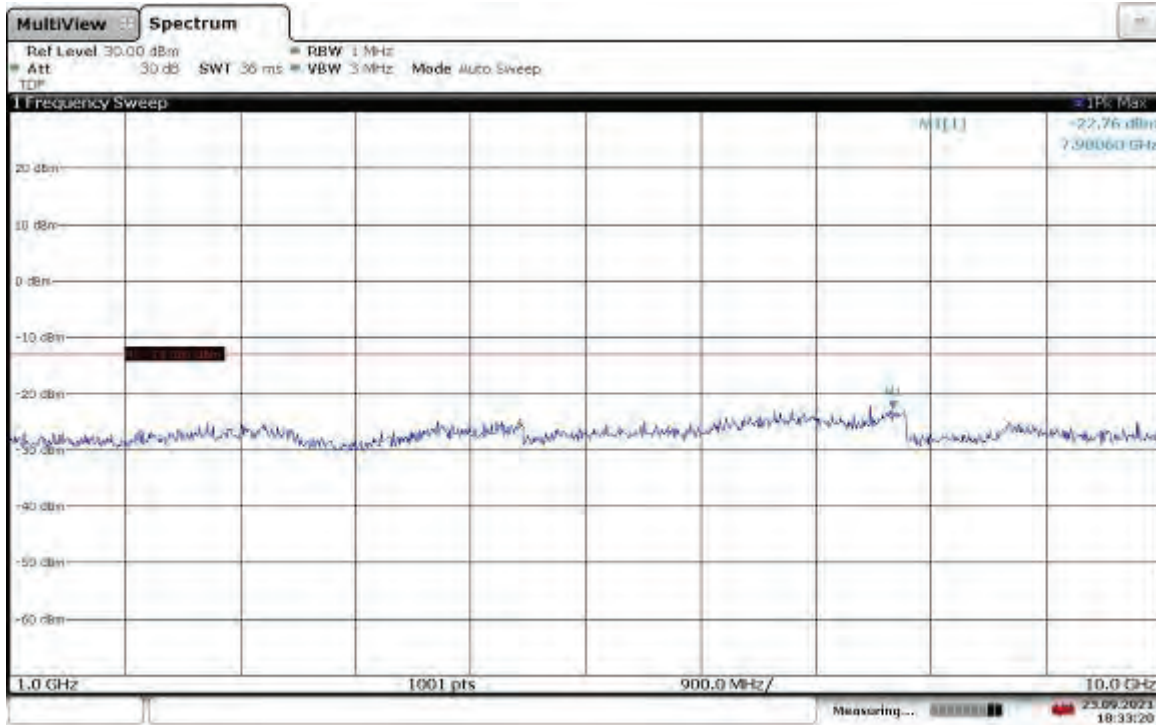
18:30:52 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel 30MHz-1GHz



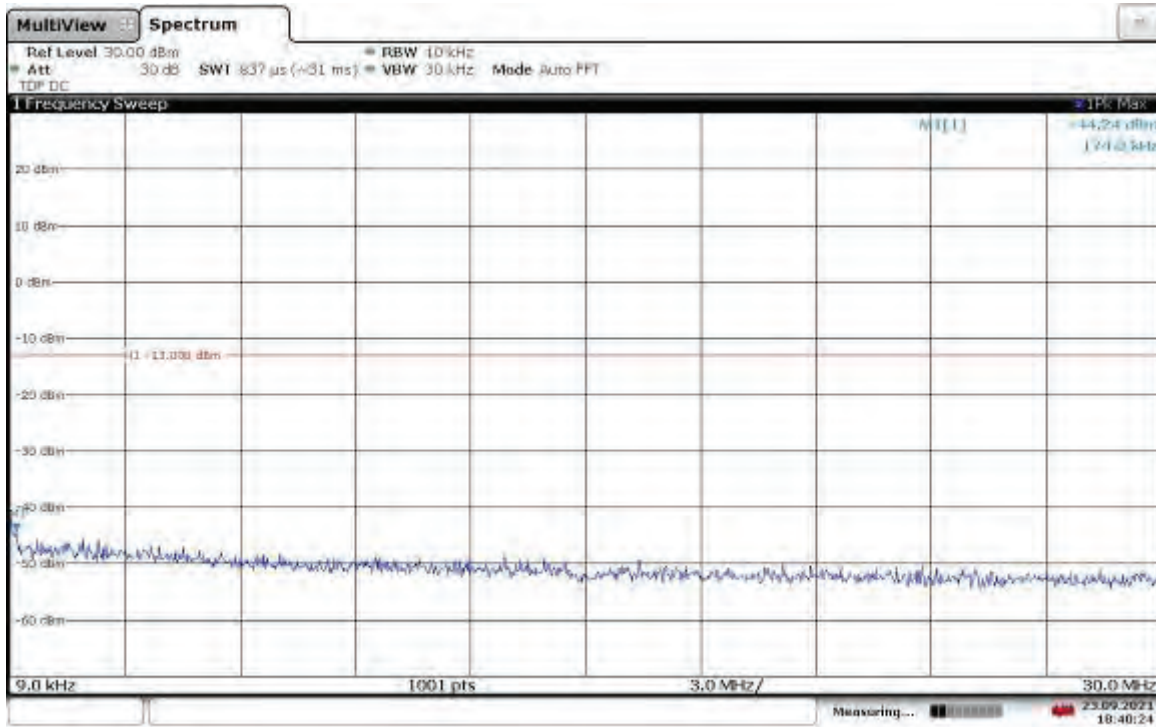
18:32:49 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1-64QAM, Bandwidth: 5 MHz, High Channel 1-10GHz



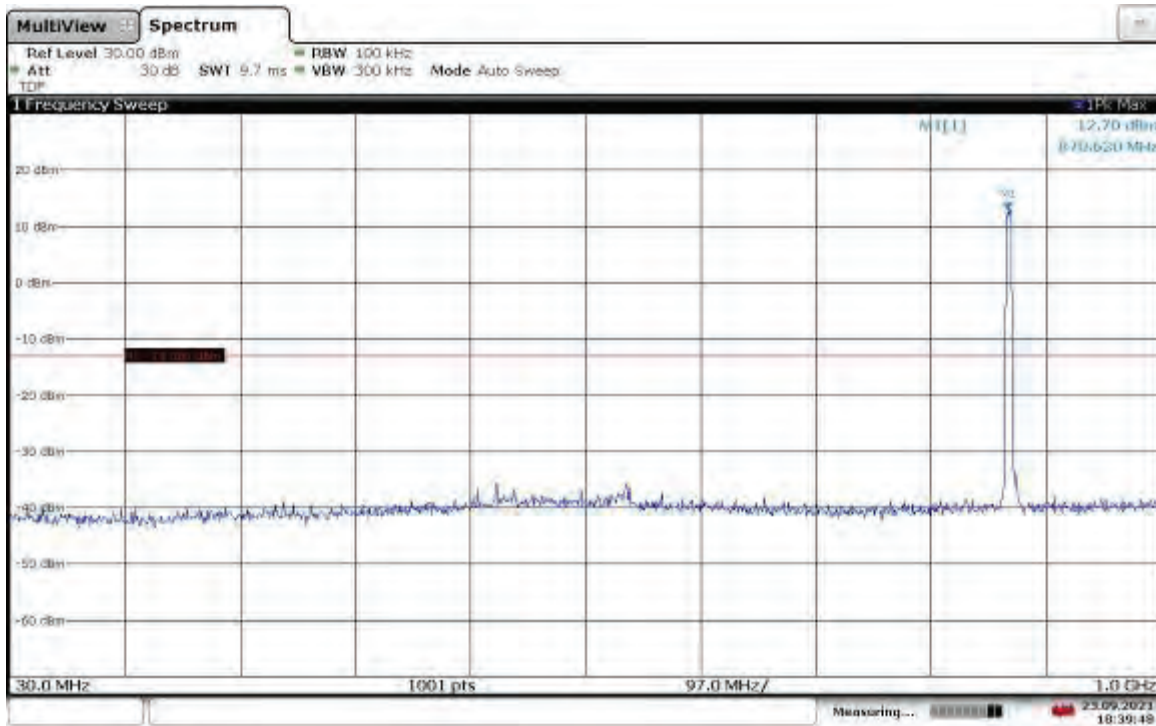
18:33:20 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz



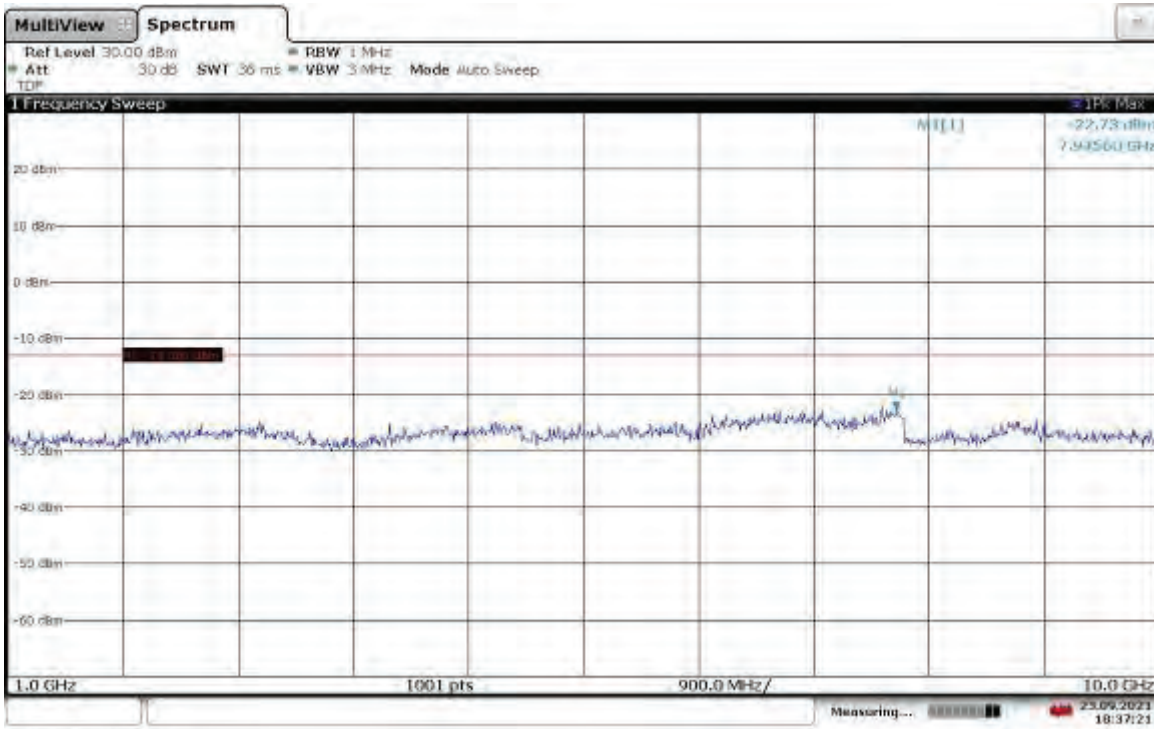
18:40:24 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



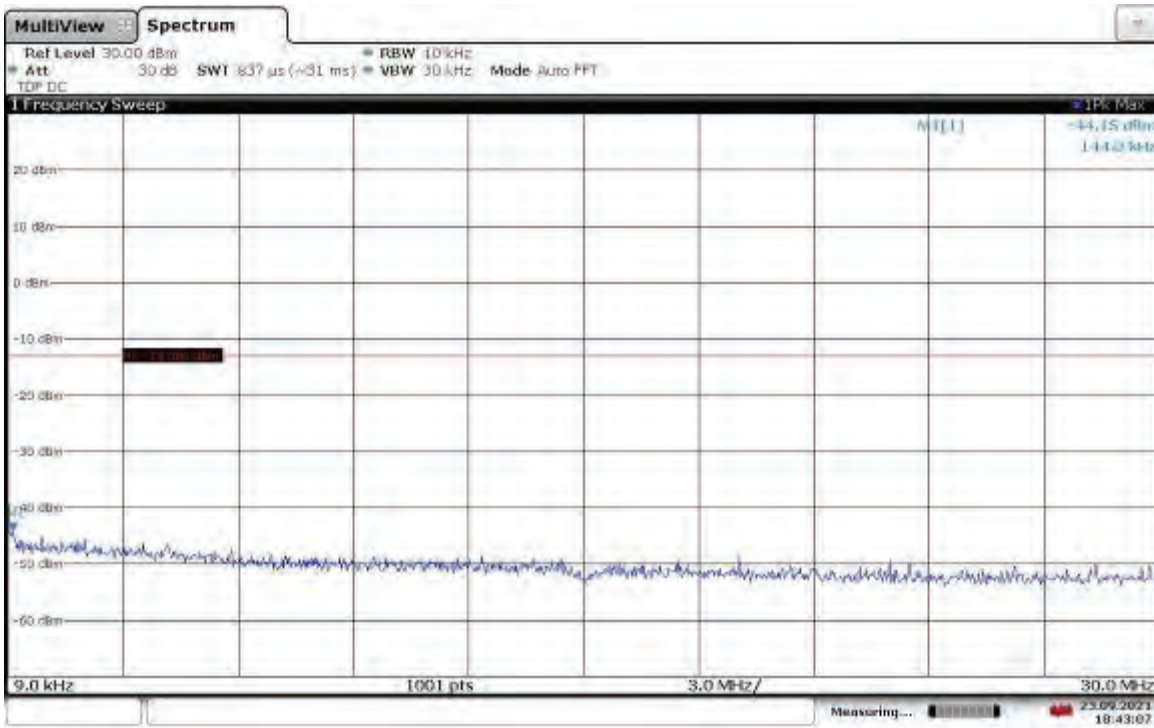
18:39:49 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
1-10GHz



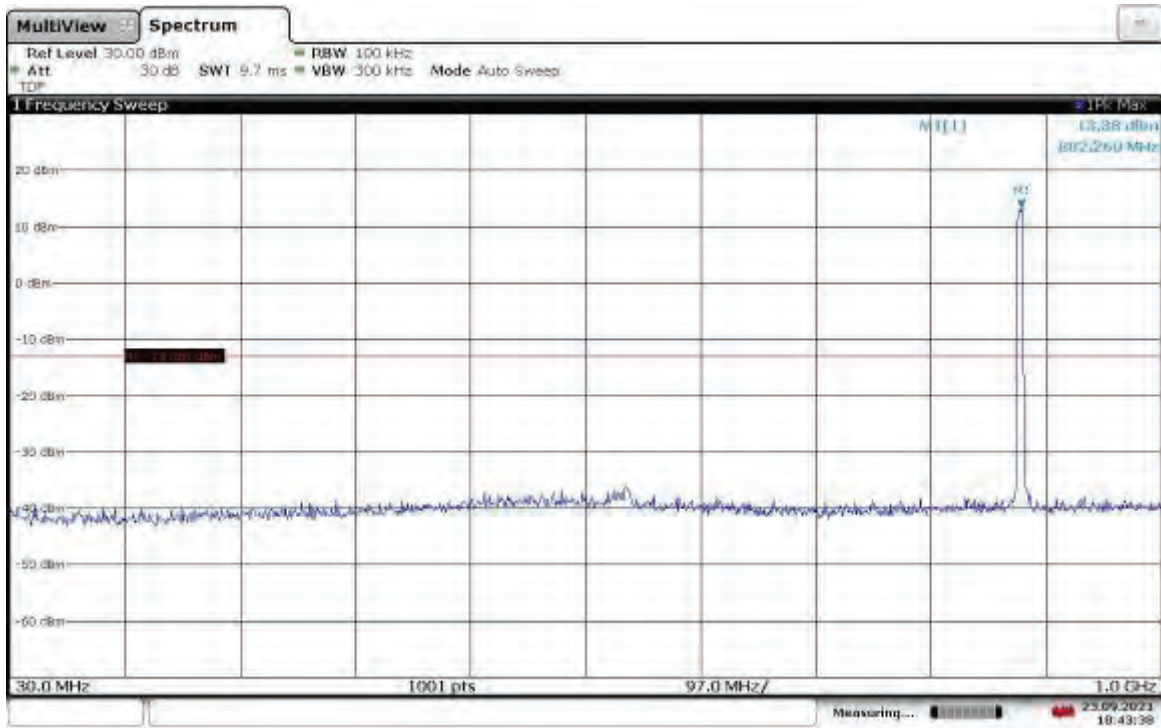
18:37:22 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



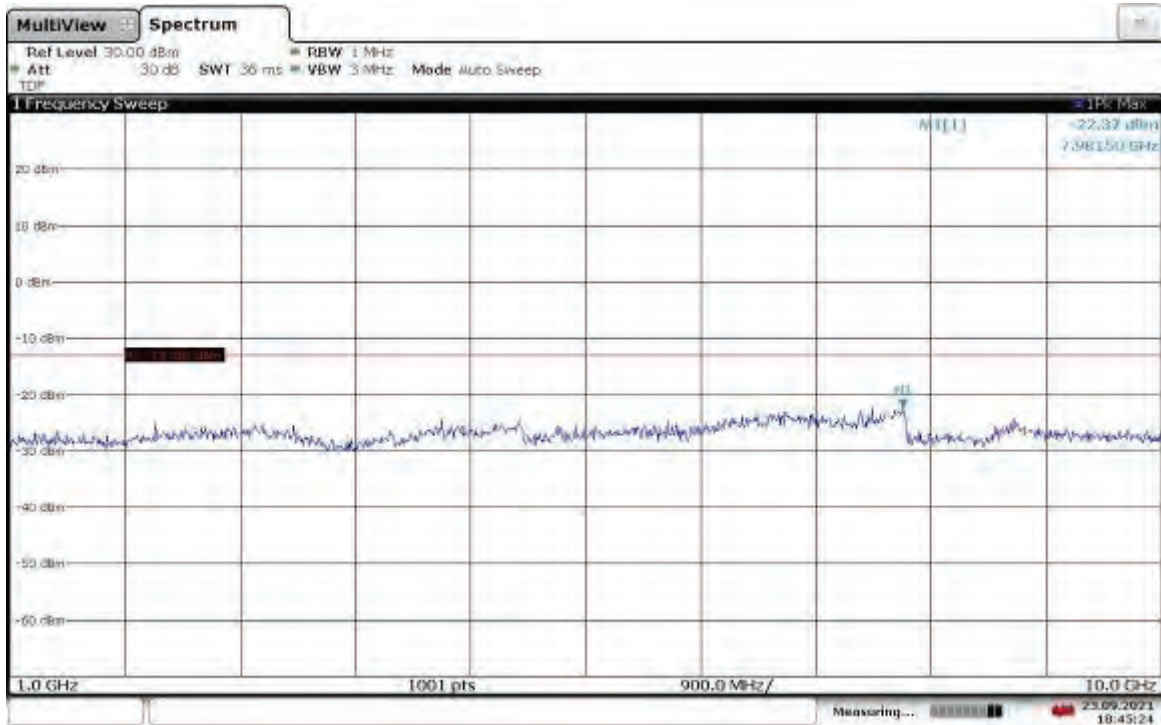
18:43:08 23.09.2021

Slot 0 (Band 2), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



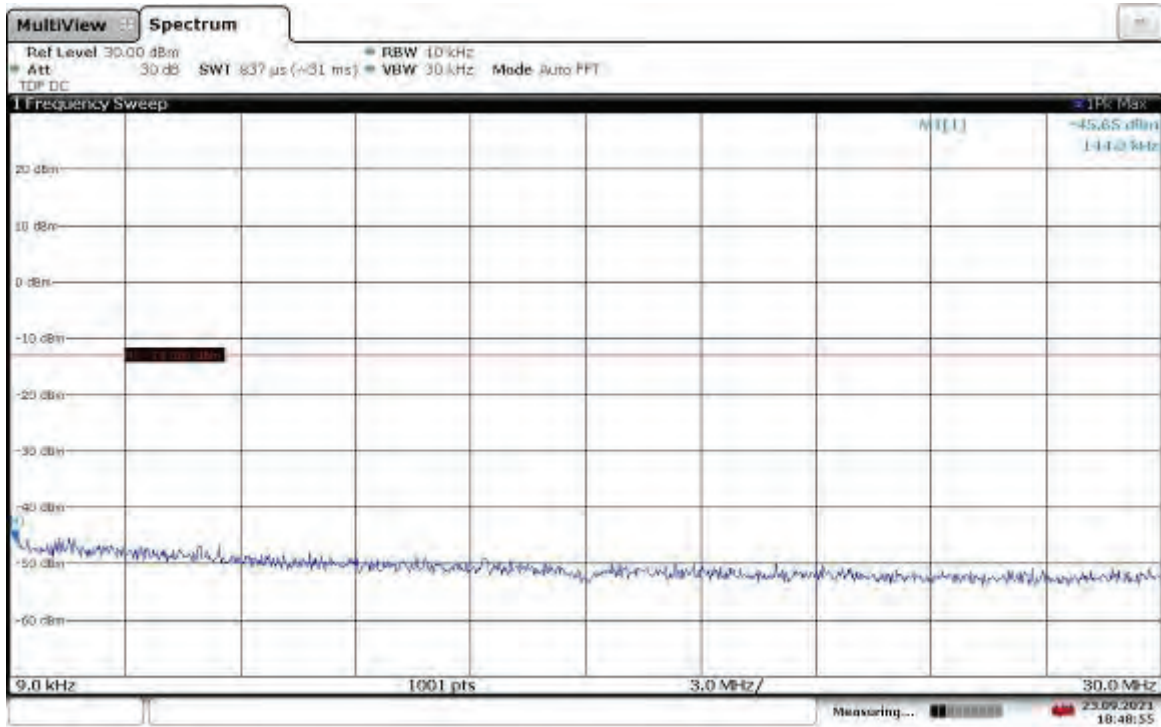
18:43:39 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-25QAM, Bandwidth: 5 MHz, Mid Channel 1-10GHz



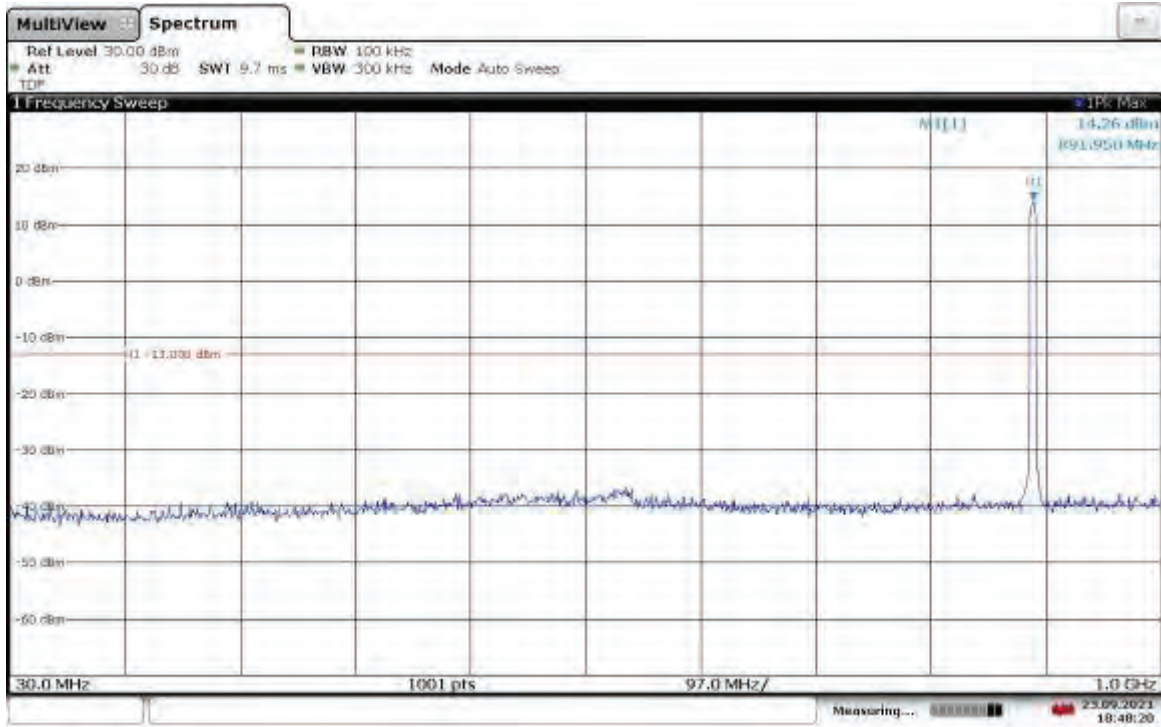
18:45:24 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
9kHz-30MHz



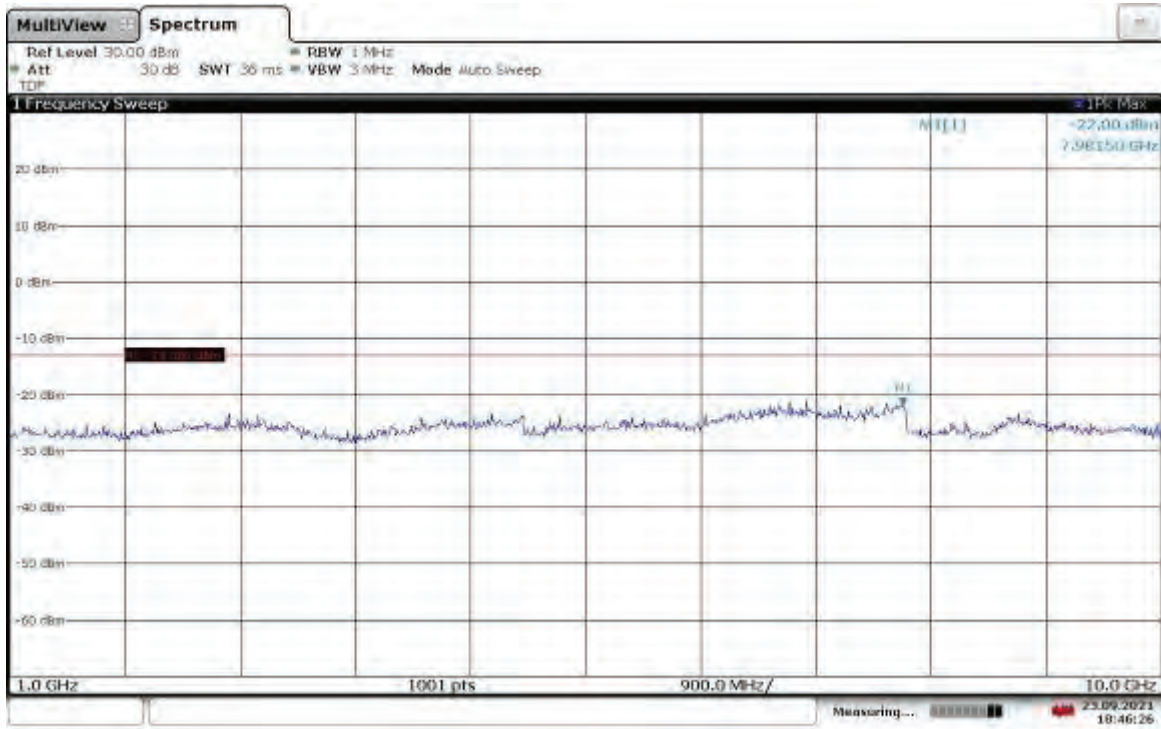
18:48:55 23.09.2021

Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz

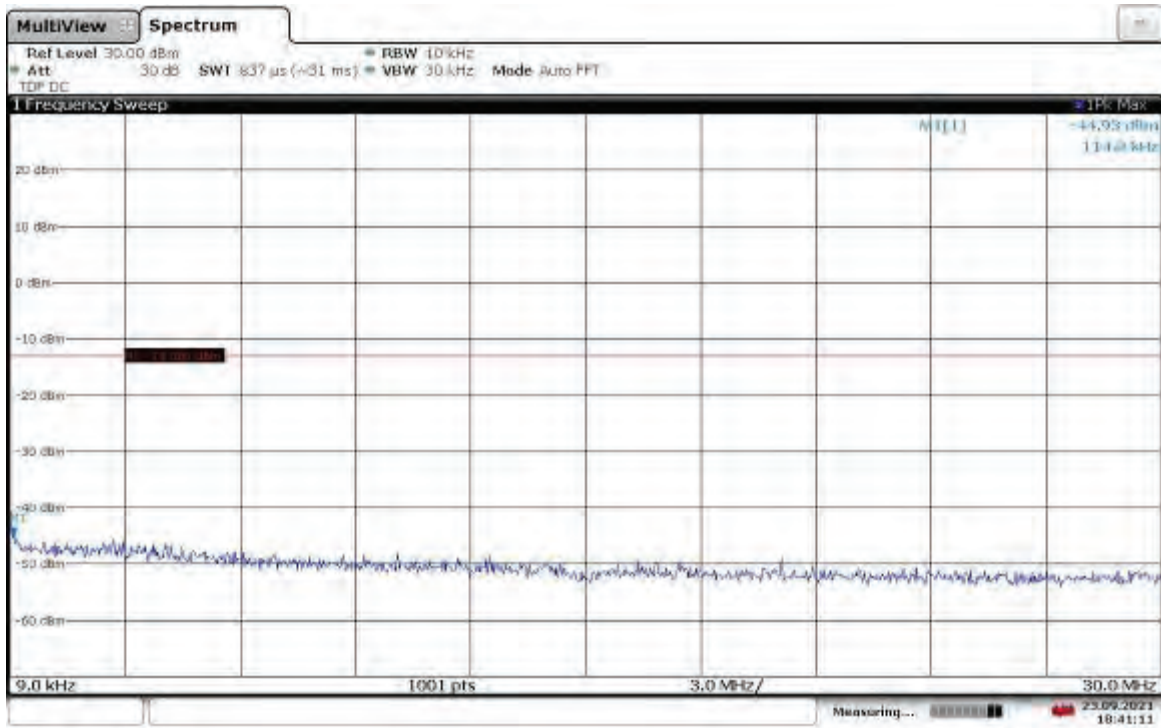


18:48:21 23.09.2021

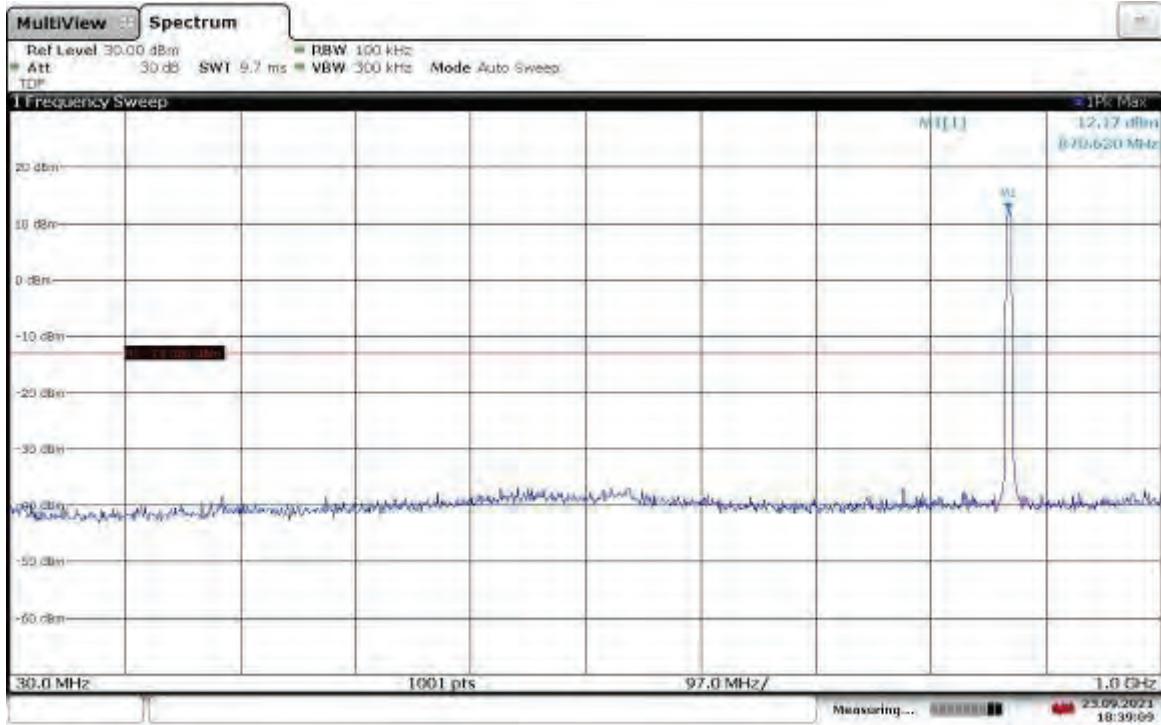
Slot 0 (Band 5), ANT0, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
1-10GHz



Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
9kHz-30MHz

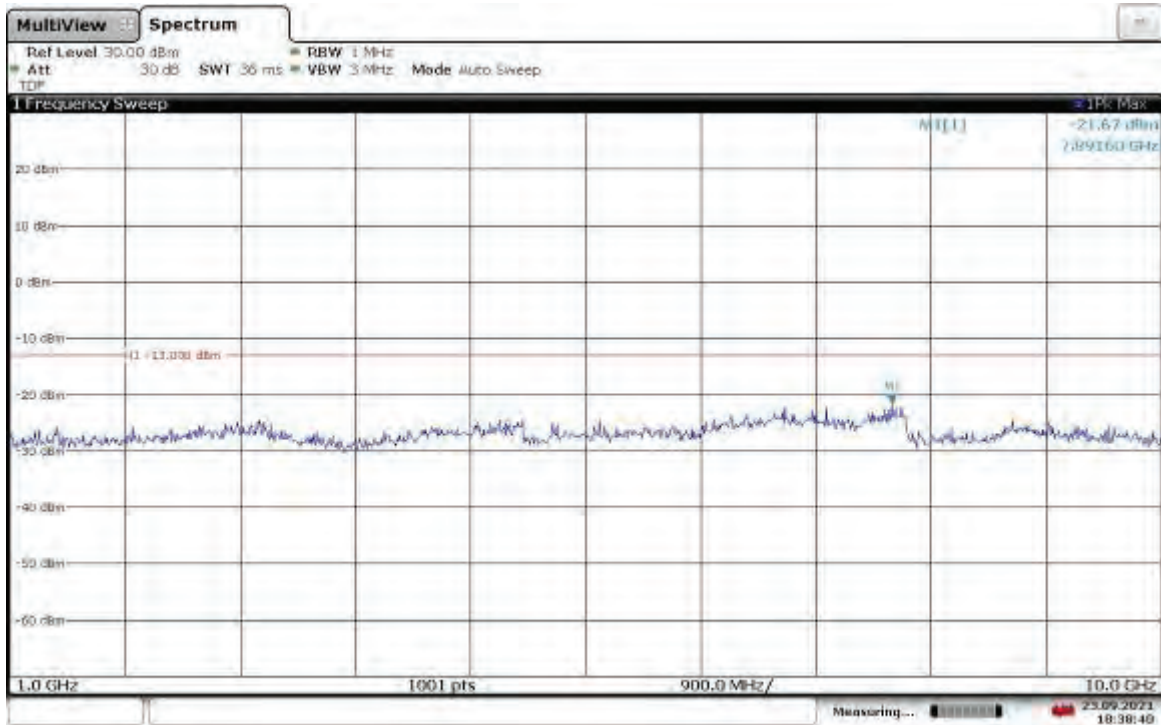


Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel
30MHz-1GHz



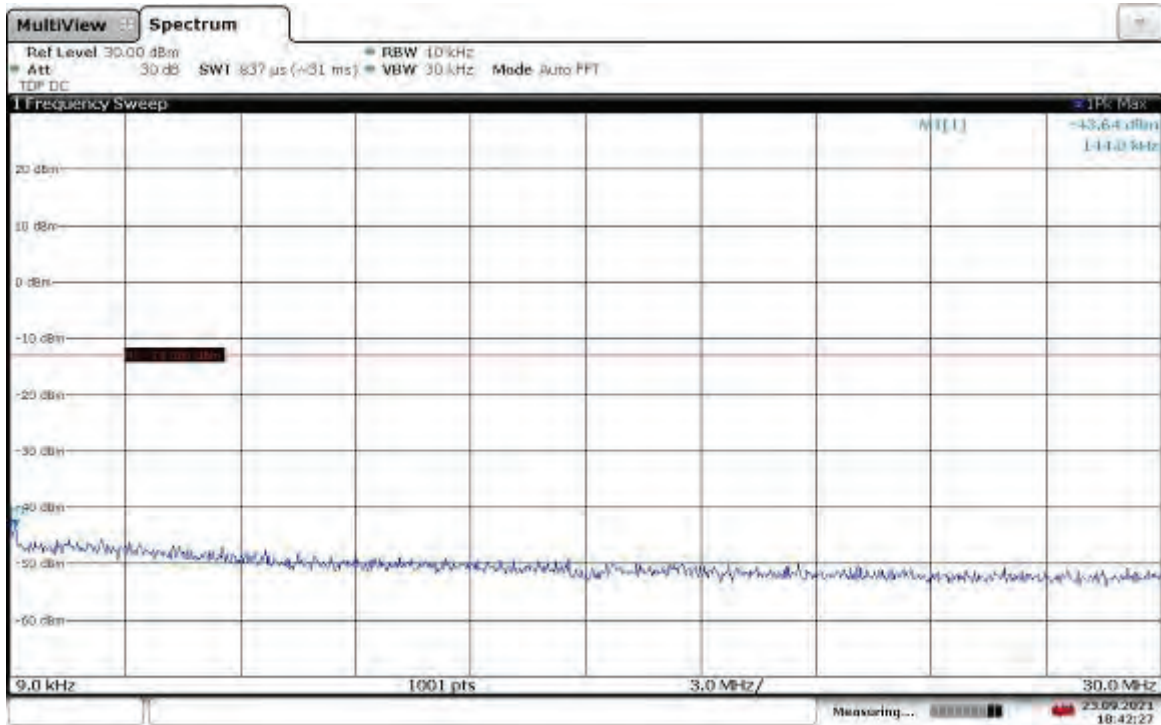
18:39:10 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Low Channel 1-10GHz



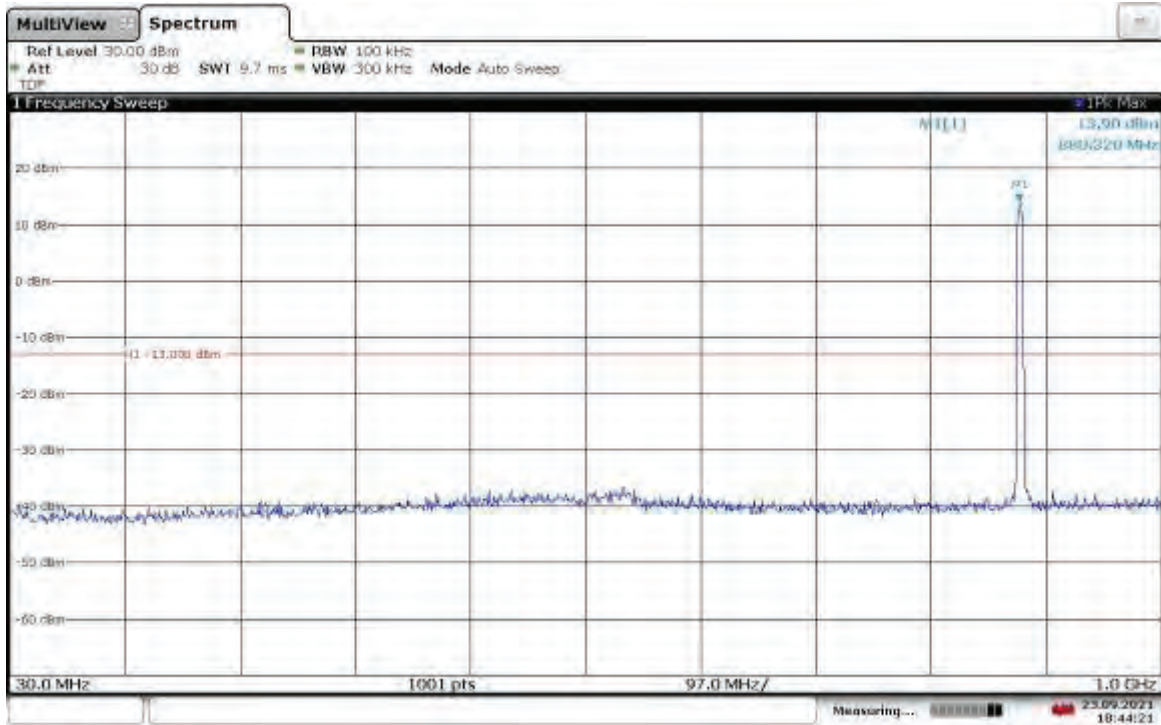
18:38:41 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
9kHz-30MHz



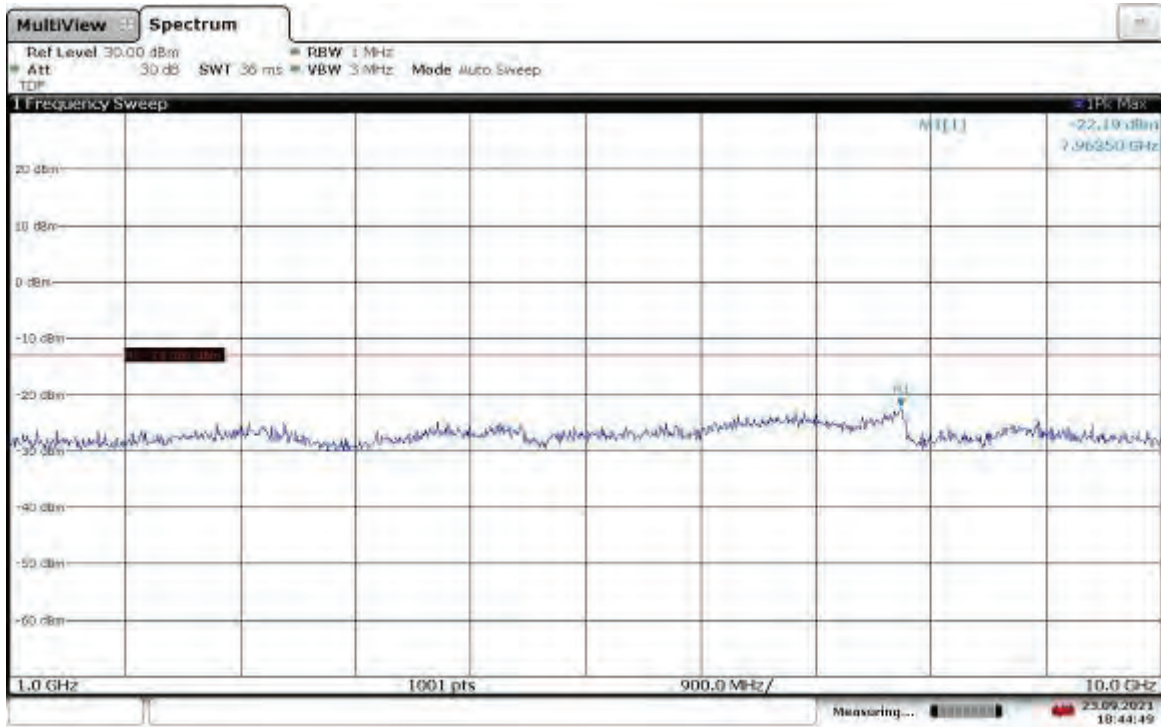
18:42:28 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel
30MHz-1GHz



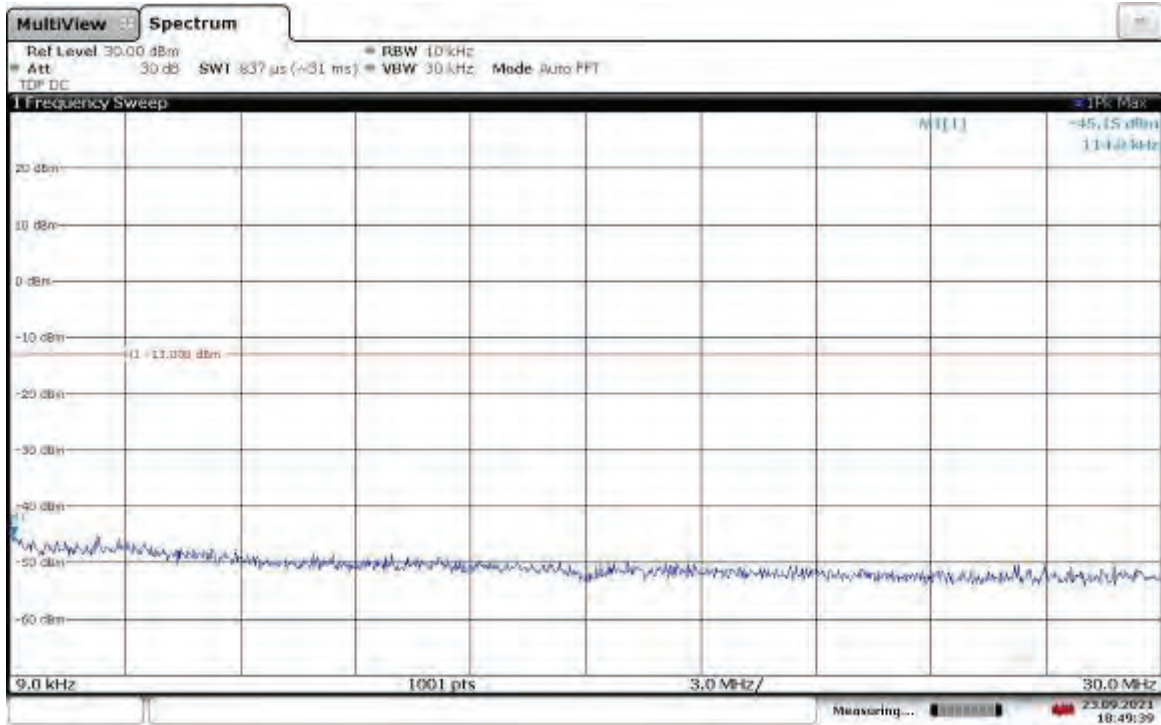
18:44:22 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, Mid Channel 1-10GHz



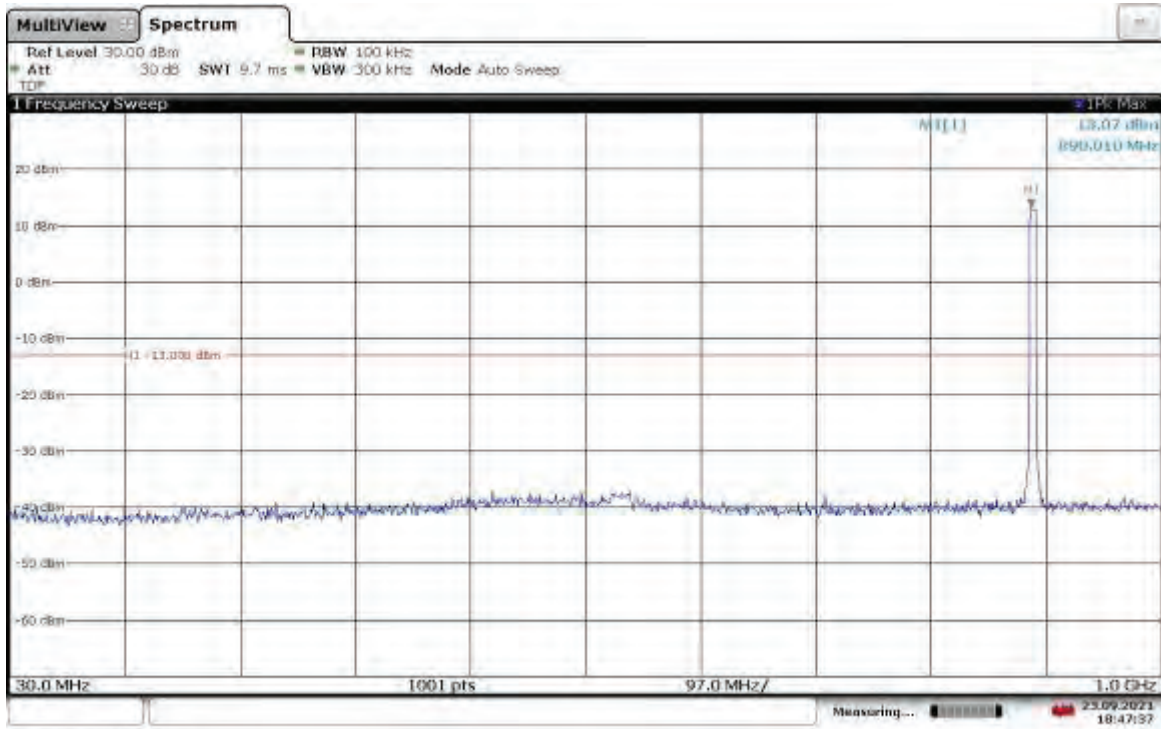
18:44:50 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel 9kHz-30MHz



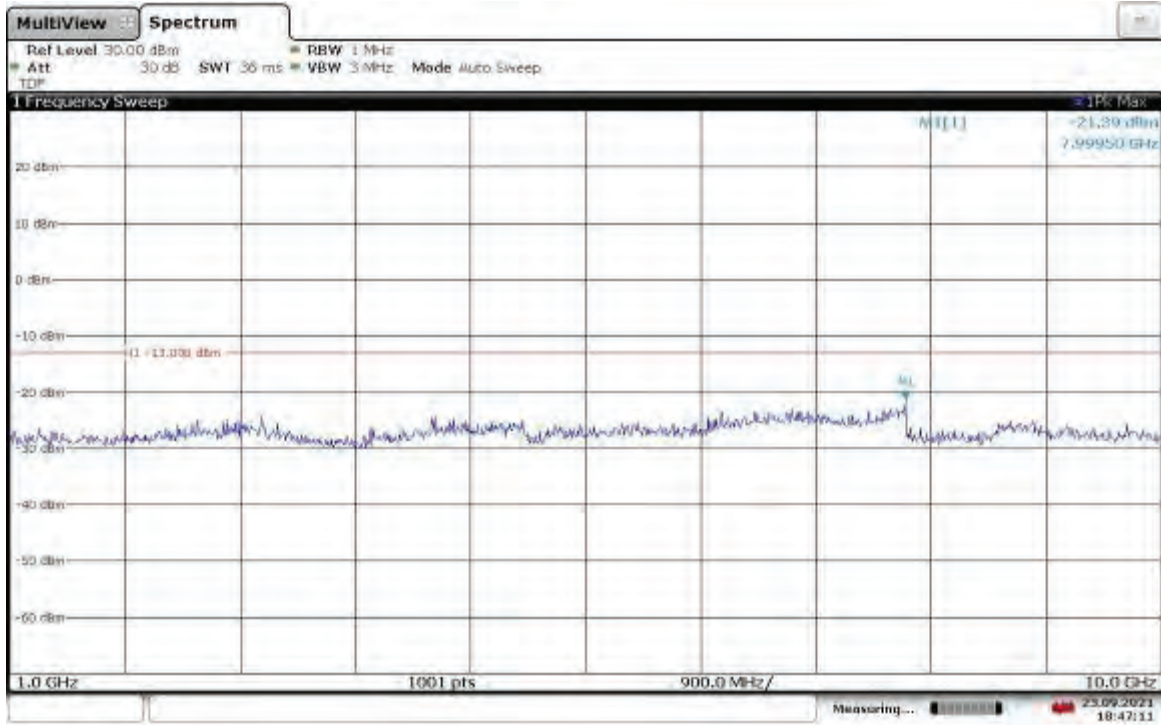
18:49:39 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
30MHz-1GHz



18:47:37 23.09.2021

Slot 0 (Band 5), ANT1, Modulation: TM3.1a-256QAM, Bandwidth: 5 MHz, High Channel
1-10GHz



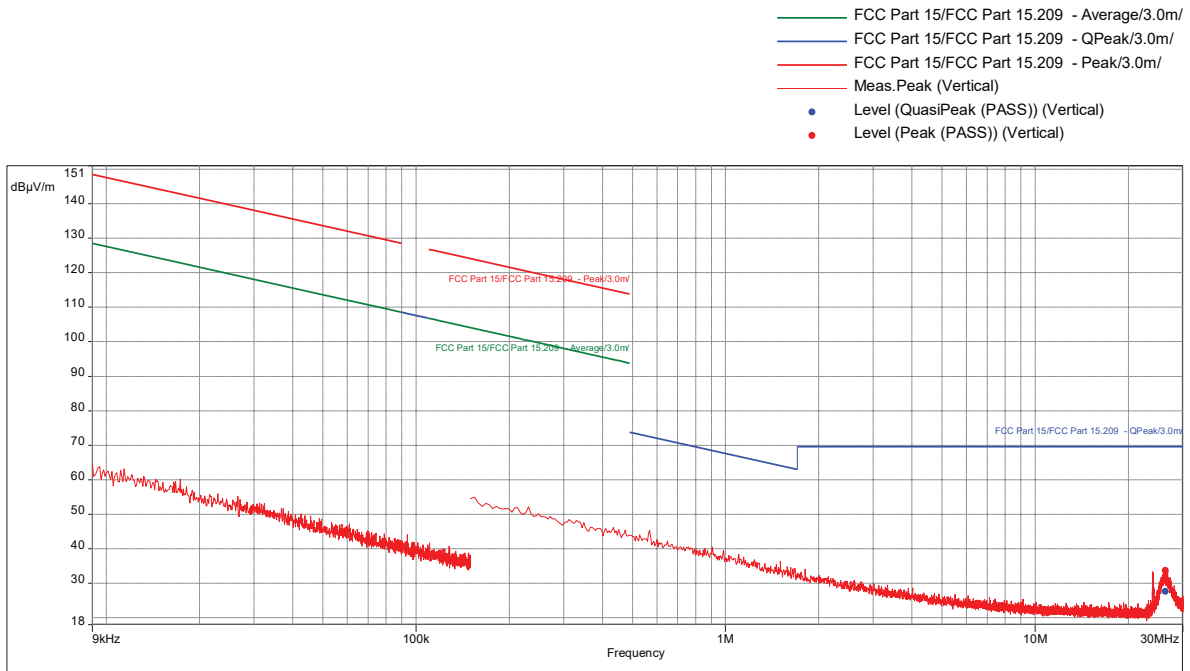
18:47:11 23.09.2021

Radiated Emissions, 9k-30 MHz
Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/24/2021 10:53:16 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 9kHz-30MHz_POE_Band 5 TM1.1_Tx Low CH 871.5MHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.35065789	33.73	69.54	-35.81	104.00	1.00	Vertical	9000.00	10.36

QuasiPeak (PASS) (1)

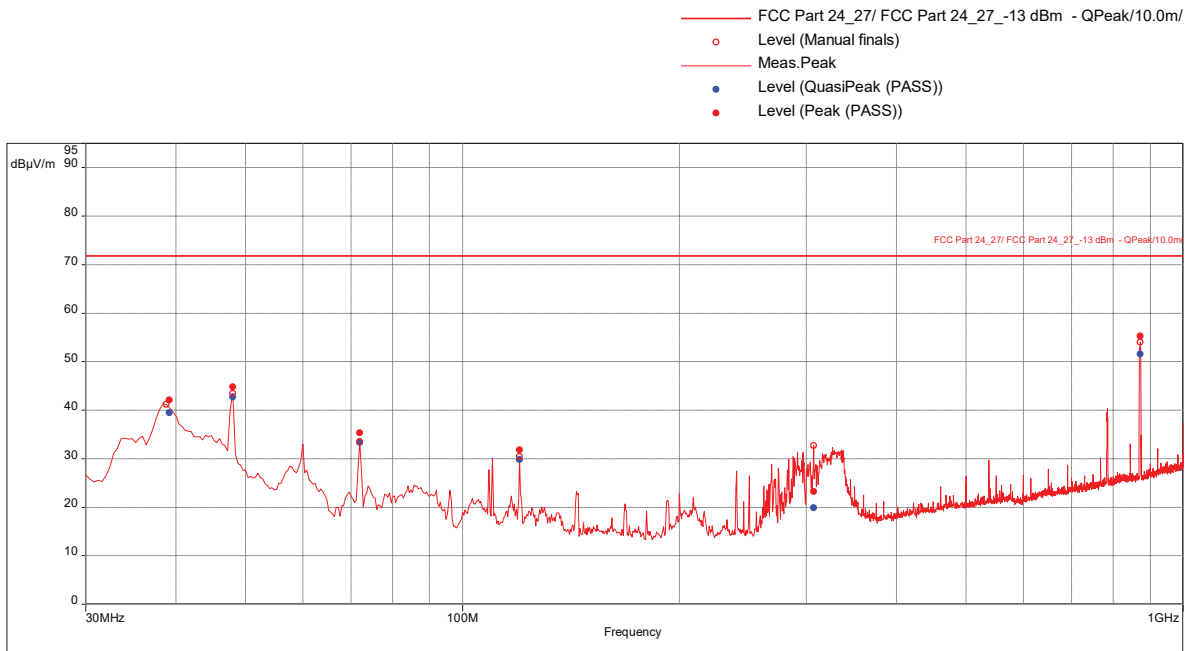
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.35065789	27.65	69.54	-41.89	104.00	1.00	Vertical	9000.00	10.36

Radiated Emissions, 30-1000 MHz
Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/24/2021 6:52:17 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 30-1000MHz_POE Band 5 5MHz BW_TM3.1 Tx Low CH 871.5MHz

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.02105263	42.13	-42.67	-13.00	-29.67	192.00	1.00	Vertical	120000.00	-18.88
48	44.81	-39.99	-13.00	-26.99	213.00	1.00	Vertical	120000.00	-24.52
72	35.31	-49.49	-13.00	-36.49	337.00	1.80	Vertical	120000.00	-24.85
120.0315789	31.79	-53.01	-13.00	-40.01	287.00	1.00	Vertical	120000.00	-18.77
307.2	23.23	-61.57	-13.00	-48.57	258.00	2.73	Horizontal	120000.00	-18.08
872.5684211	55.30	-29.50	-13.00	-16.50	53.00	1.97	Vertical	120000.00	-7.08

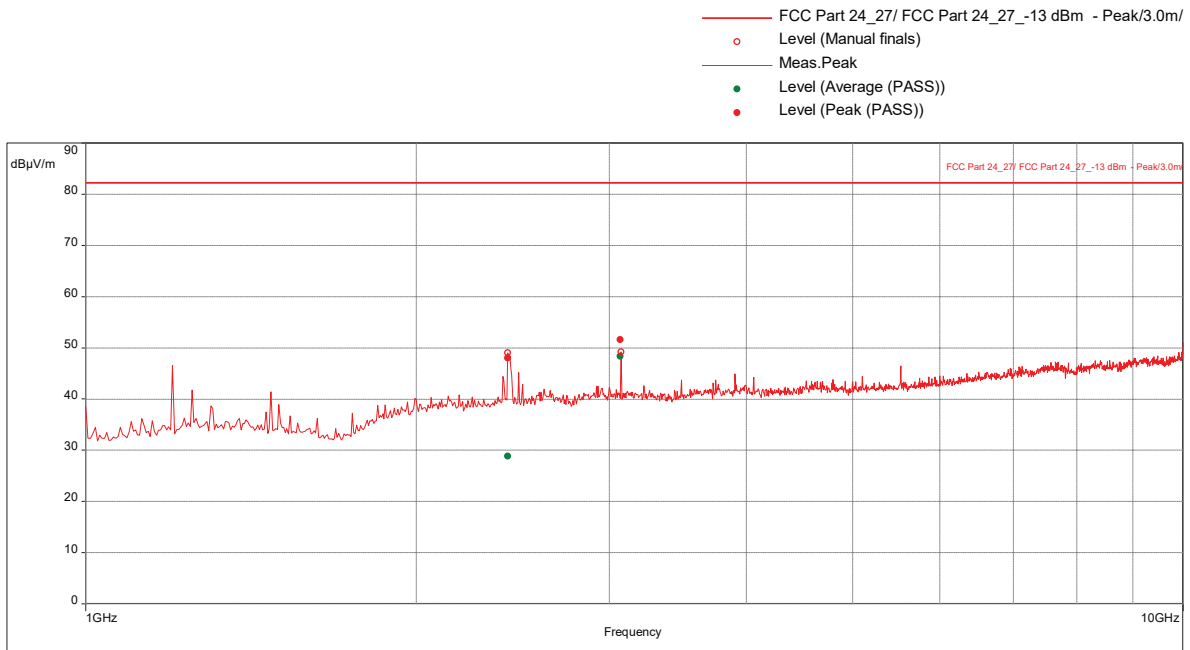
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz
Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/26/2021 9:59:05 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM1.1_Tx Low CH 871.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (2)

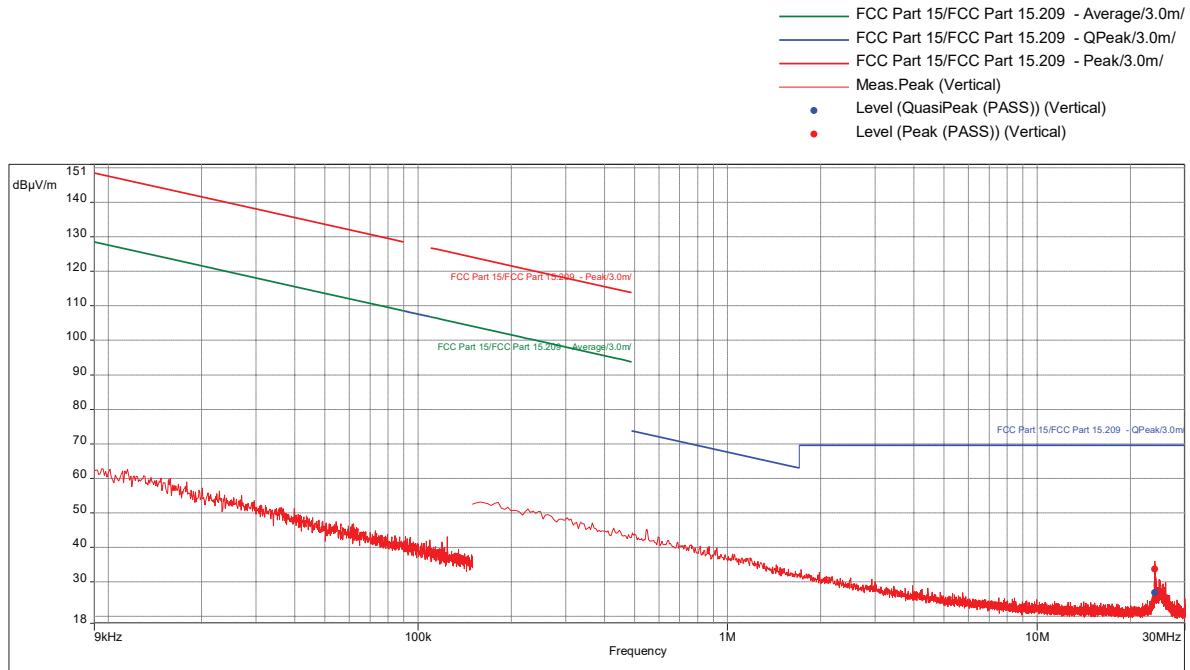
Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2425.789474	47.96	-47.30	-13.00	-34.30	122.00	1.00	Vertical	1000000.00	-3.43
3072.105263	51.63	-43.63	-13.00	-30.63	108.00	1.50	Vertical	1000000.00	-2.23

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

Radiated Emissions, 9kHz-30 MHz Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/26/2021 4:27:18 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 5 TM1.1 Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
23.99194737	33.67	69.54	-35.87	151.00	1.00	Vertical	9000.00	10.70

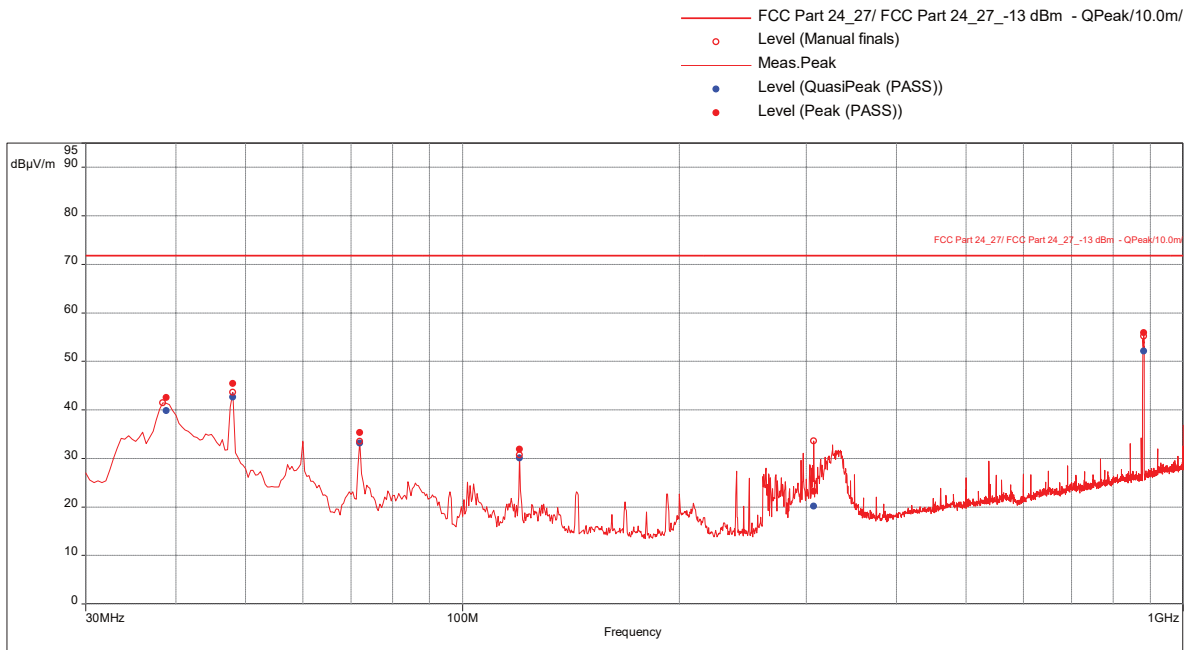
QuasiPeak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
23.99194737	26.87	69.54	-42.67	151.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/24/2021 7:38:56 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM3.1_Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
38.84210526	42.53	42.53	-13.00	-29.27	83.00	1.00	Vertical	120000.00	-18.75
48	45.45	-45.45	-13.00	-26.35	141.00	1.00	Vertical	120000.00	-24.52
72	35.36	-35.36	-13.00	-36.44	251.00	1.70	Vertical	120000.00	-24.85
120.0315789	31.91	-52.89	-13.00	-39.89	317.00	1.97	Vertical	120000.00	-18.77
307.2	23.26	-61.54	-13.00	-48.54	133.00	3.53	Horizontal	120000.00	-18.08
882.0631579	55.94	-28.86	-13.00	-15.86	39.00	1.86	Vertical	120000.00	-6.99

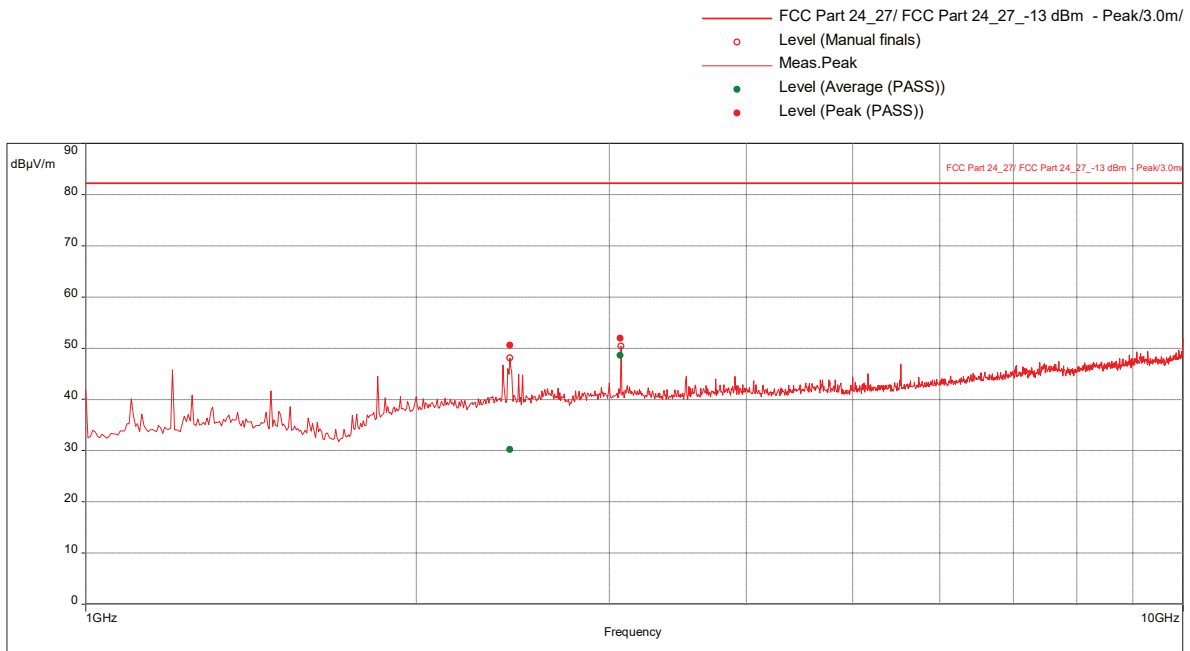
$$\text{Level EIRP (dBm)} = \text{Level Peak (dBuV/m)} - 84.8$$

Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/26/2021 9:41:52 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM1.1 Tx Mid CH 881MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2433.421053	50.53	-44.73	-13.00	-31.73	174.00	1.00	Vertical	1000000.00	-3.48
3072.105263	51.92	-43.34	-13.00	-30.34	122.00	1.40	Vertical	1000000.00	-2.23

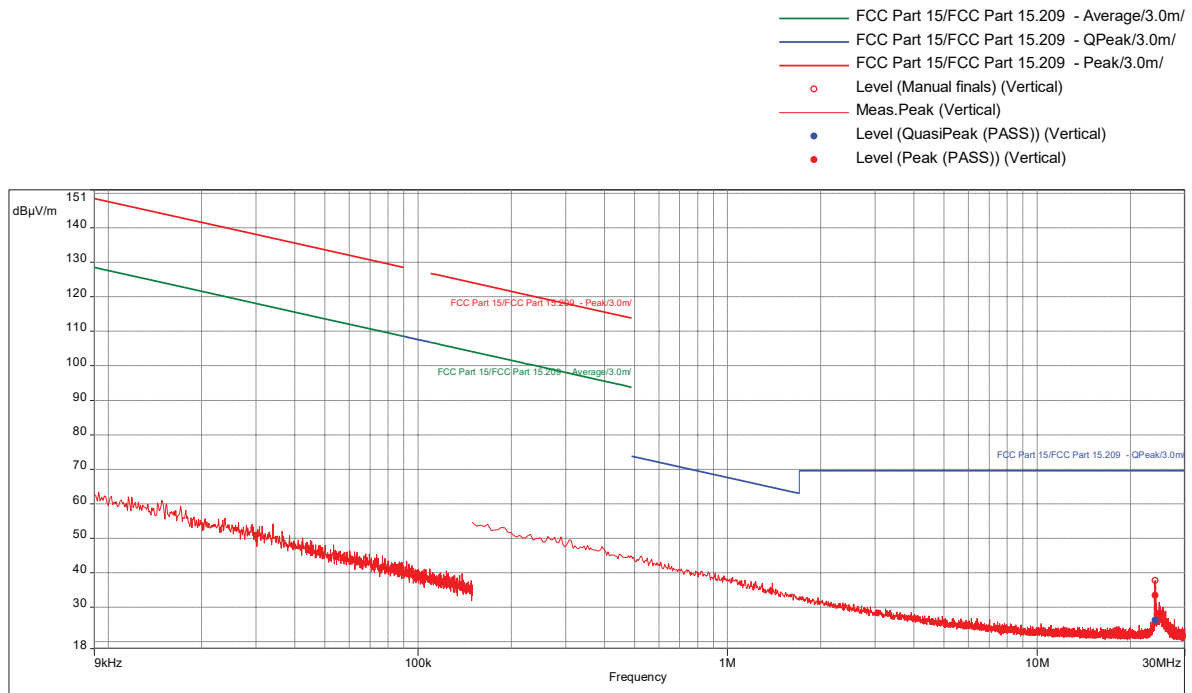
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

Radiated Emissions, 9kHz-30 MHz
Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/26/2021 5:00:23 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 5 TM1.1_Tx High CH 891.5MHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.06773684	33.43	69.54	-36.11	348.00	1.00	Vertical	9000.00	10.70

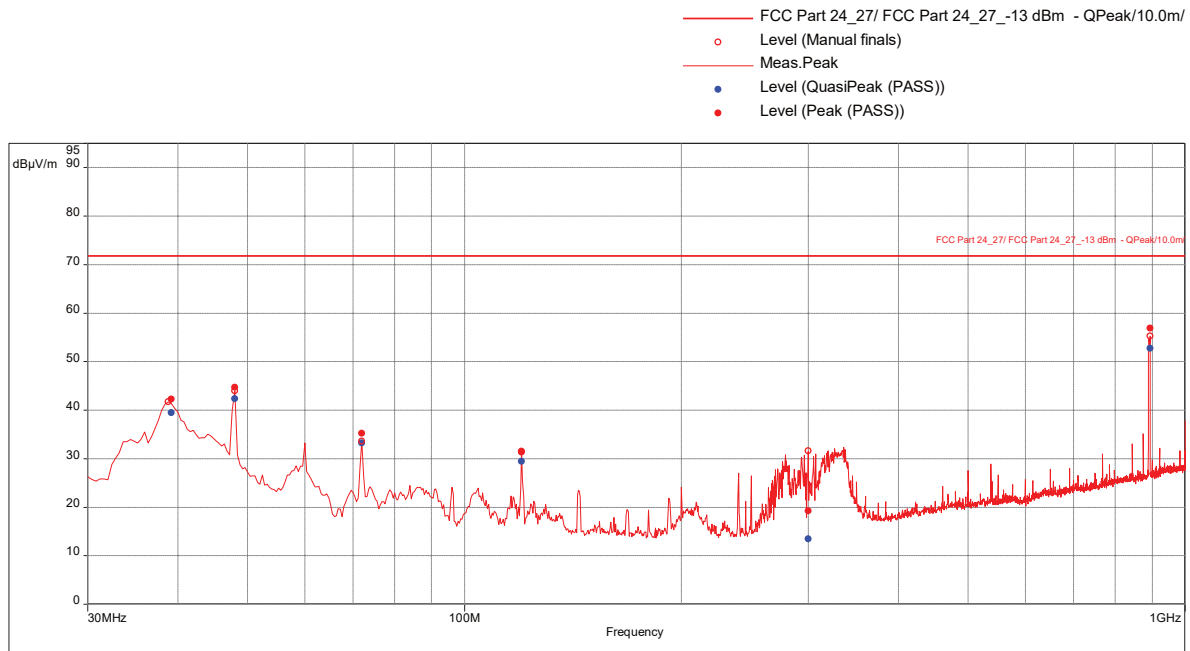
QuasiPeak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.06773684	26.27	69.54	-43.27	348.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/24/2021 6:03:36 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM1.1_Tx High CH 891.5MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.17894737	42.29	-42.51	-13.00	-29.51	97.00	1.00	Vertical	120000.00	-19.00
48	44.72	-40.08	-13.00	-27.08	149.00	1.00	Vertical	120000.00	-24.52
72	35.21	-49.59	-13.00	-36.59	74.00	1.85	Vertical	120000.00	-24.85
120.0315789	31.32	-53.48	-13.00	-40.48	300.00	2.14	Vertical	120000.00	-18.77
300.0315789	19.22	-65.58	-13.00	-52.58	10.00	2.74	Horizontal	120000.00	-18.32
893.4736842	56.86	-27.94	-13.00	-14.94	60.00	1.81	Vertical	120000.00	-6.84

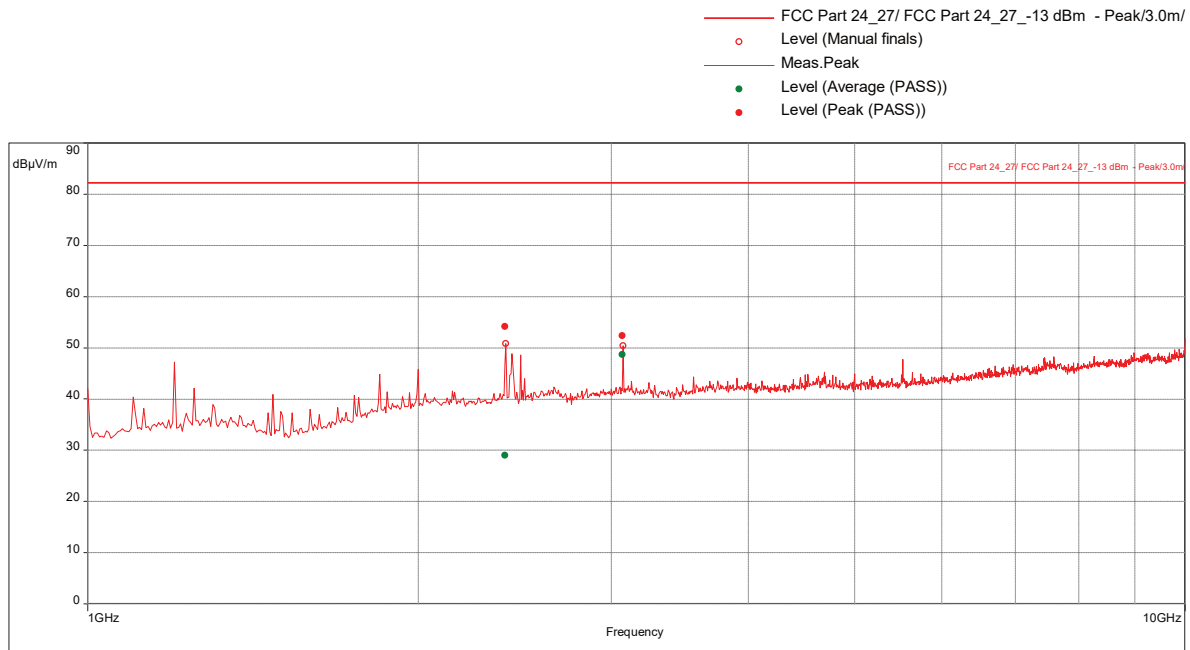
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM1.1-QPSK, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/26/2021 9:21:33 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM1.1_Tx High CH 891.5MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

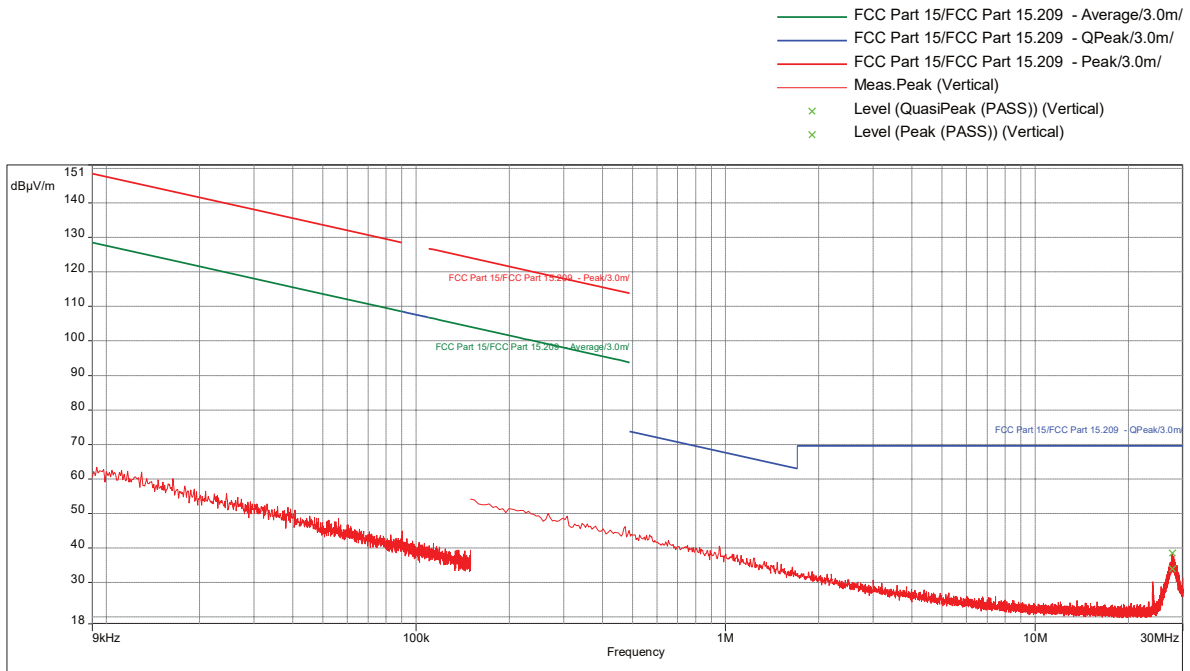
Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2402.105263	54.15	-41.11	-13.00	-28.11	0.00	1.45	Vertical	1000000.00	-3.30
3072.105263	52.34	-42.92	-13.00	-29.92	108.00	1.01	Vertical	1000000.00	-2.23

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

Radiated Emissions, 9kHz-30 MHz Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/20/2021 5:01:32 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 9kHz-30MHz POE Band 5 TM3.2 Tx Low CH 871.5MHz

Graph:

Results:

QuasiPeak (PASS) (1)

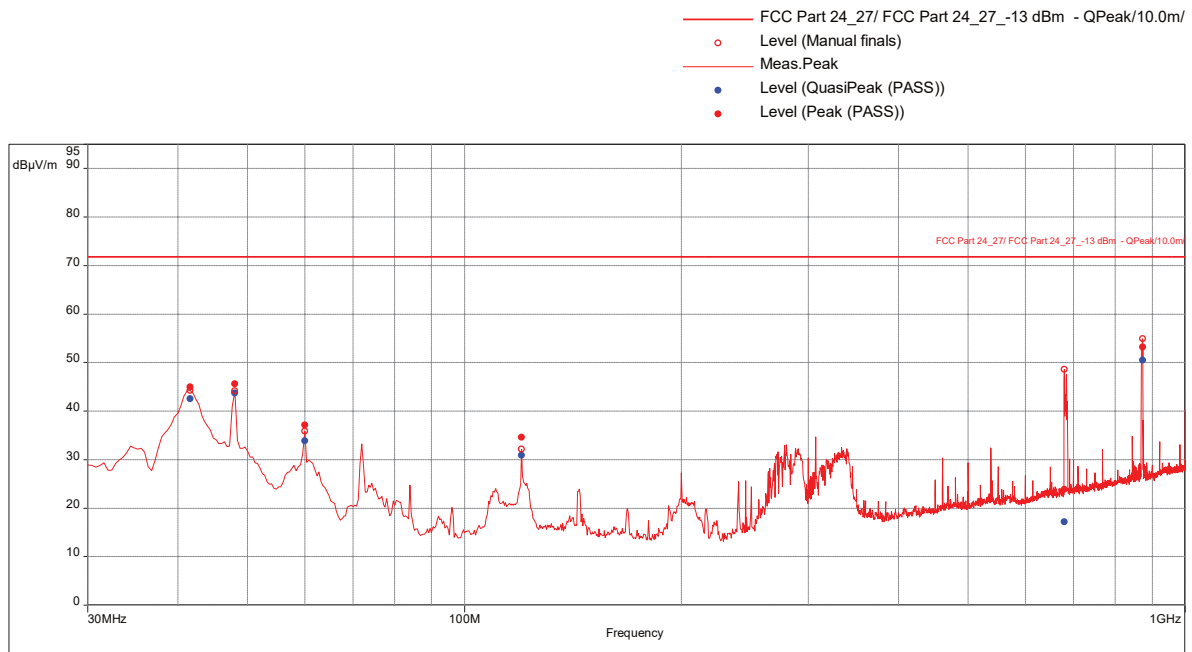
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
27.75939474	33.95	69.54	-35.59	141.00	1.00	Vertical	9000.00	10.15

Radiated Emissions, 30-1000 MHz
Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/20/2021 8:29:36 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 30-1000MHz POE Band 5 5MHz BW TM3.2 Tx Low CH 871.5MHz

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
41.66315789	45.00	-39.80	-13.00	-26.80	82.00	1.00	Vertical	120000.00	-20.84
48	45.62	-39.18	-13.00	-26.18	201.00	1.00	Vertical	120000.00	-24.52
60	37.08	-47.72	-13.00	-34.72	68.00	2.37	Vertical	120000.00	-25.58
120.0315789	34.63	-50.17	-13.00	-37.17	194.00	1.00	Vertical	120000.00	-18.77
679.6947368	23.87	-60.93	-13.00	-47.93	324.00	1.91	Vertical	120000.00	-10.22
872.6421053	53.17	-31.63	-13.00	-18.63	75.00	1.74	Vertical	120000.00	-7.07

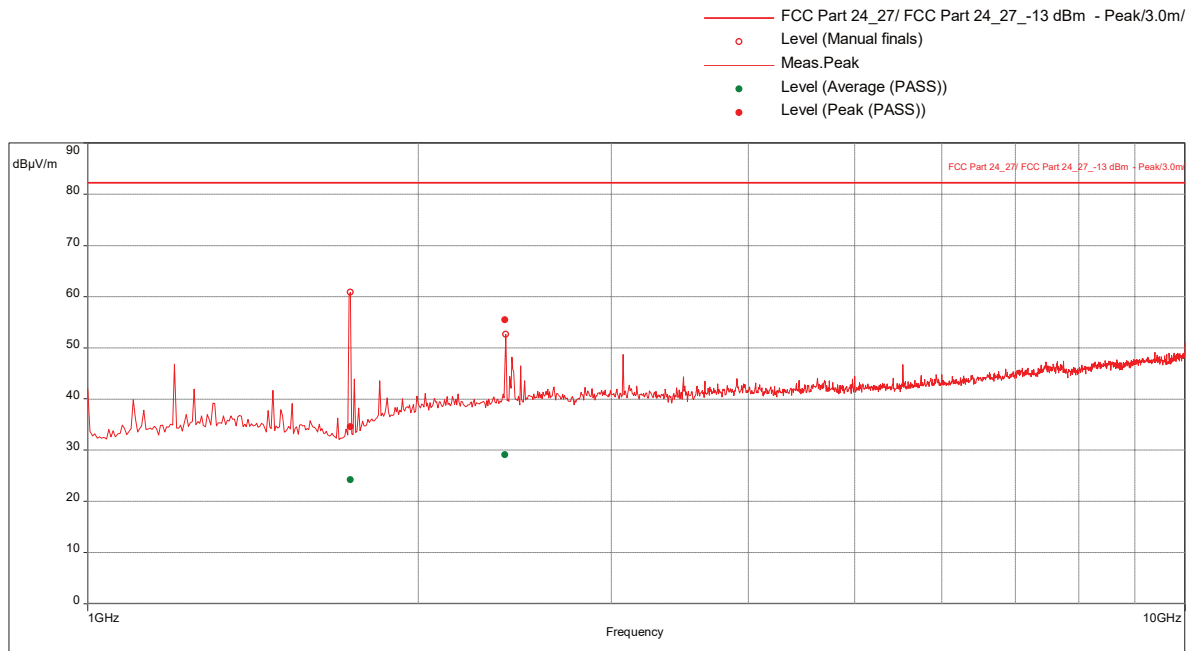
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/26/2021 11:59:40 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.2_Tx Low CH 871.5MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1736.842105	34.59	-60.67	-13.00	-47.67	149.00	3.94	Vertical	1000000.00	-6.55
2401.842105	55.45	-39.81	-13.00	-26.81	49.00	1.15	Vertical	1000000.00	-3.30

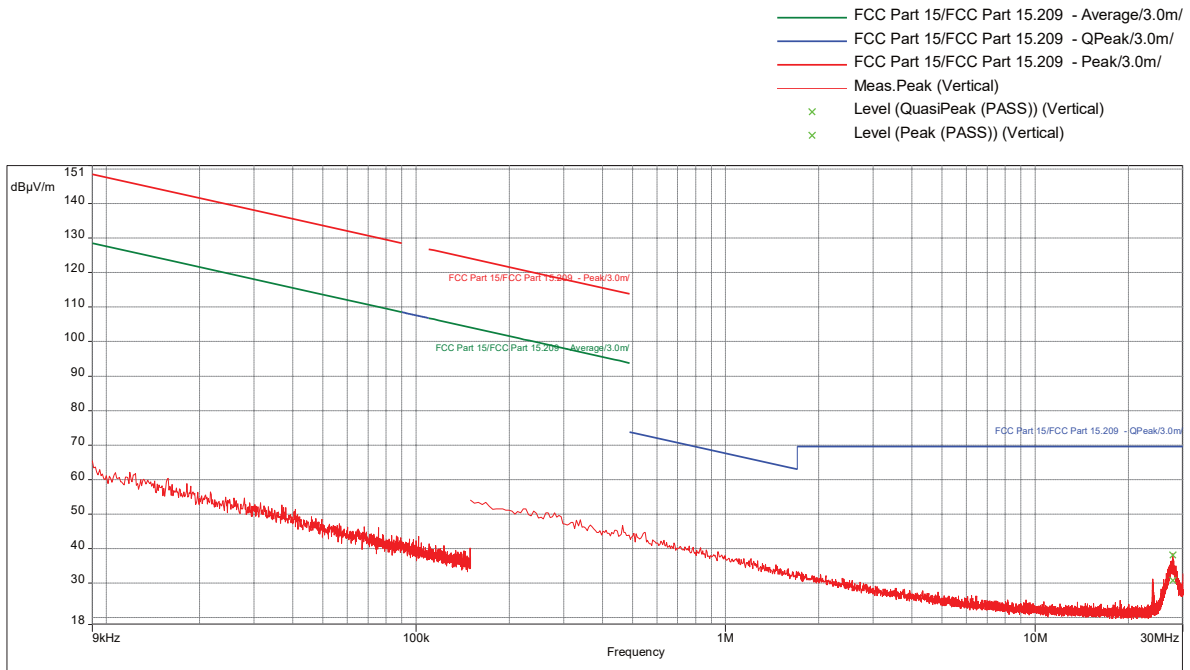
$$\text{Level EIRP (dBm)} = \text{Level Peak (dBuV/m)} - 95.20$$

Radiated Emissions, 9kHz-30 MHz
Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/20/2021 5:35:08 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 9kHz-30MHz_POE_Band 5 TM3.2_Tx Mid CH 881MHz_Worst-case output power

Graph:



Results:

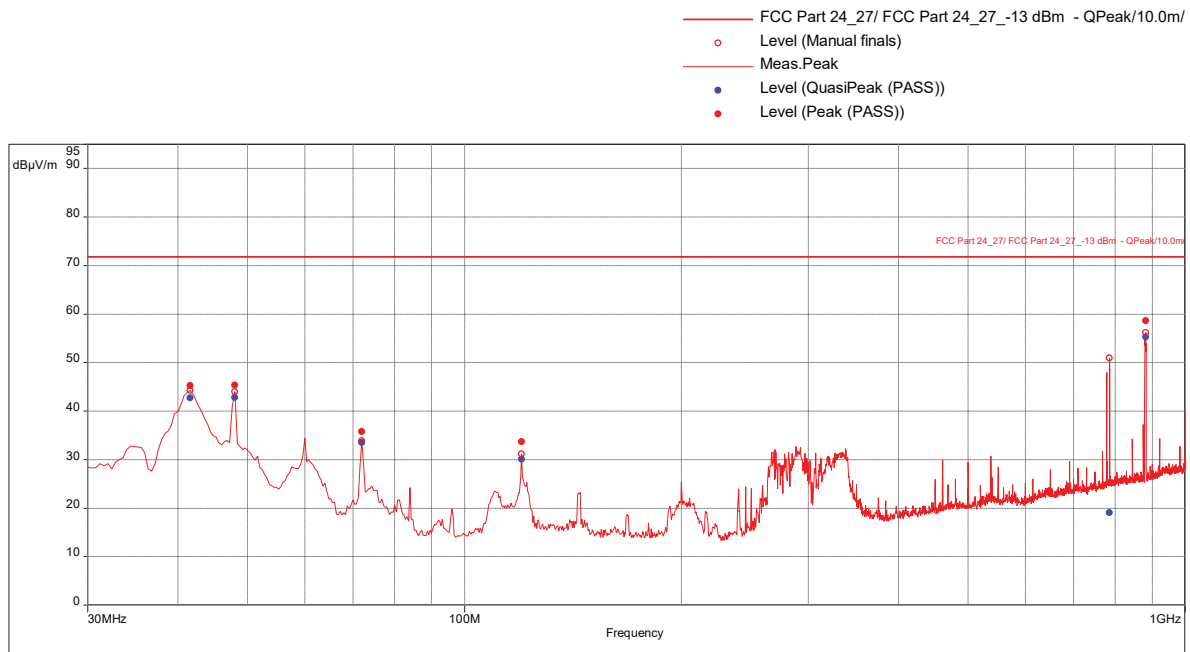
QuasiPeak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
27.81126316	30.73	69.54	-38.81	266.00	1.00	Vertical	9000.00	10.14

Radiated Emissions, 30-1000 MHz Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/20/2021 7:37:17 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM3.2_Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
41.69473684	45.22	-39.58	-13.00	-26.58	75.00	1.00	Vertical	120000.00	-20.87
48	45.35	-39.45	-13.00	-26.45	323.00	1.00	Vertical	120000.00	-24.52
72	35.78	-49.02	-13.00	-36.02	118.00	1.87	Vertical	120000.00	-24.85
120.0315789	33.65	-51.15	-13.00	-38.15	171.00	1.85	Vertical	120000.00	-18.77
785.2842105	25.17	-59.63	-13.00	-46.63	69.00	3.07	Vertical	120000.00	-8.24
881.3263158	58.61	-26.19	-13.00	-13.19	62.00	1.69	Vertical	120000.00	-6.92

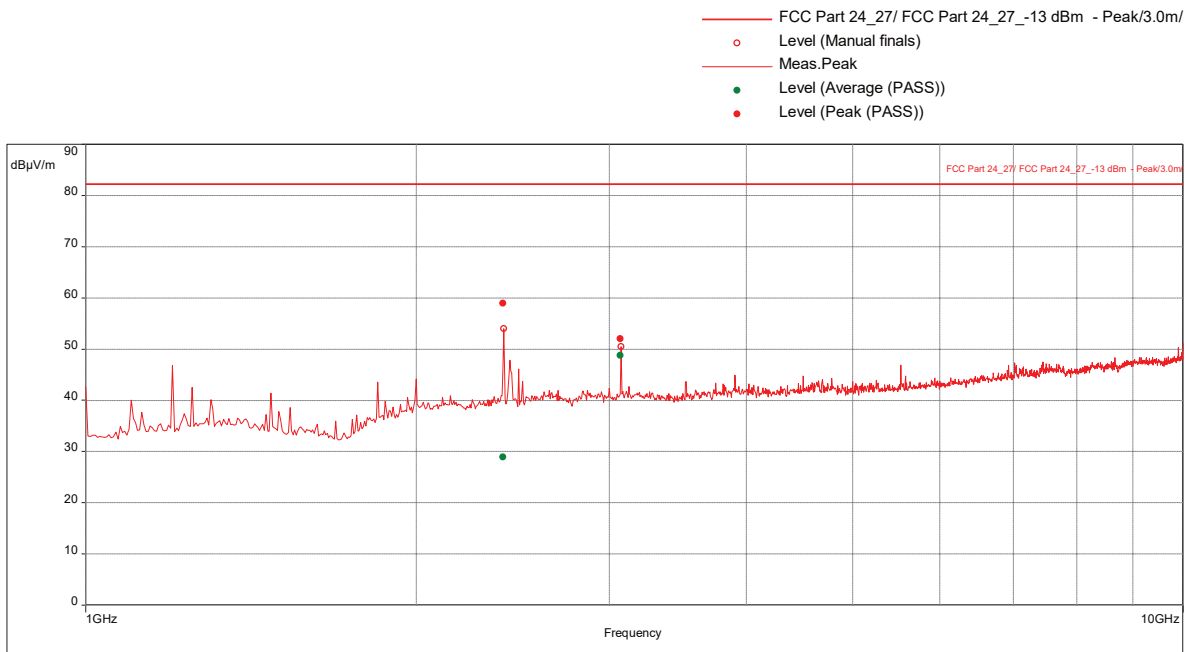
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/26/2021 12:18:06 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz POE Band 5 5MHz BW TM3.2 Tx Mid CH 881MHz RP5200 host

Graph:

Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2402.105263	58.98	-36.28	-13.00	-23.28	230.00	1.05	Vertical	1000000.00	-3.30
3072.105263	52.06	-43.20	-13.00	-30.20	112.00	1.35	Vertical	1000000.00	-2.23

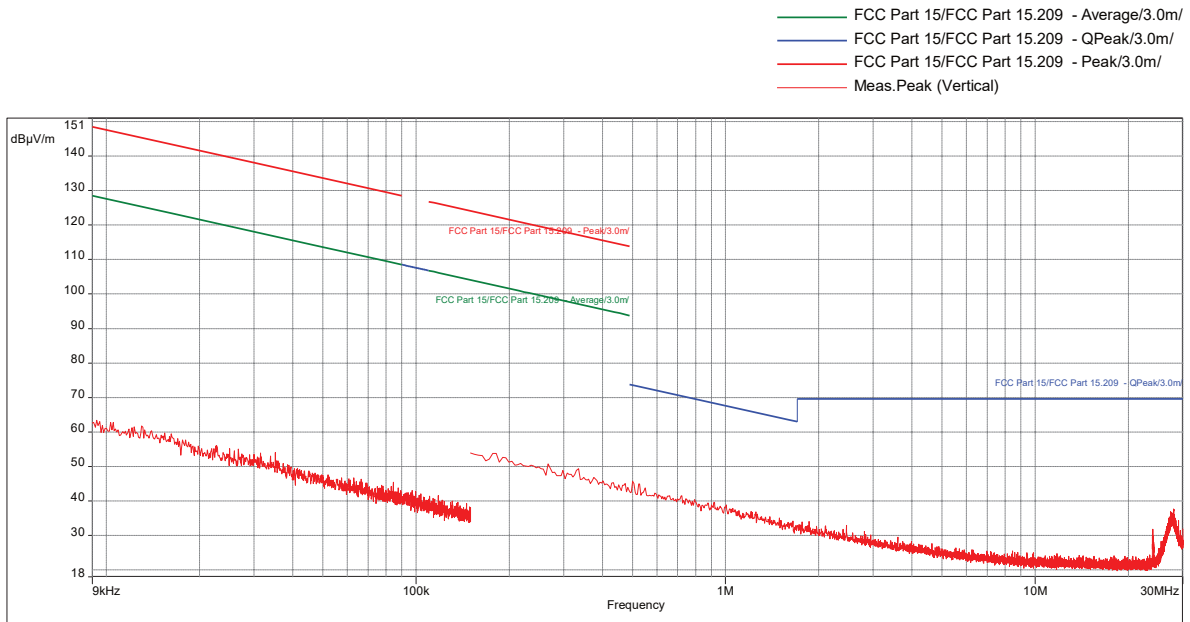
$$\text{Level EIRP (dBm)} = \text{Level Peak (dBuV/m)} - 95.20$$

Radiated Emissions, 9kHz-30 MHz
Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/20/2021 6:07:05 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 9kHz-30MHz POE Band 5 TM3.2 Tx High CH 891.5MHz

Graph:



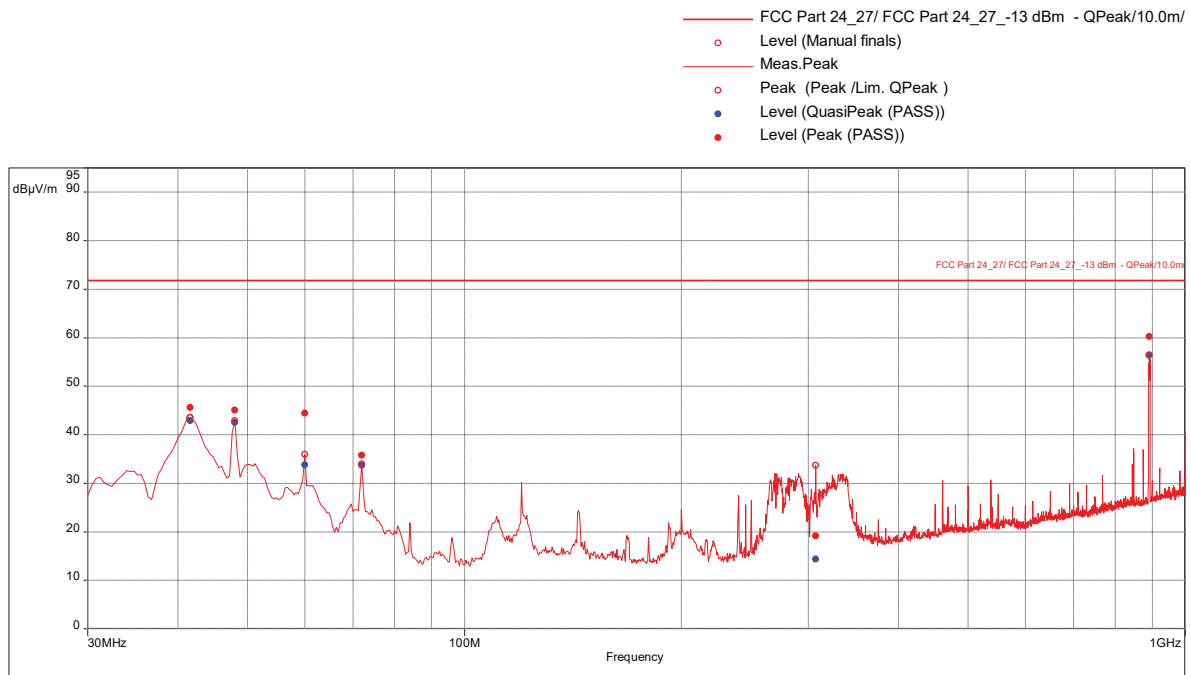
Results: No emission was detected.

Radiated Emissions, 30-1000 MHz

Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/20/2021 6:45:12 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 30-1000MHz_POE_Band 5 TM3.2 Tx High CH 891.5MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
41.63157895	45.61	-39.19	-13.00	-26.19	98.00	1.00	Vertical	120000.00	-20.82
48	45.04	-39.76	-13.00	-26.76	294.00	2.13	Vertical	120000.00	-24.52
60	44.45	-40.35	-13.00	-27.35	75.00	1.90	Vertical	120000.00	-25.58
72	35.80	-49.00	-13.00	-36.00	54.00	1.88	Vertical	120000.00	-24.85
307.1684211	19.12	-65.68	-13.00	-52.68	47.00	3.35	Horizontal	120000.00	-18.08
891.3263158	60.25	-24.55	-13.00	-11.55	259.00	1.69	Vertical	120000.00	-6.85

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

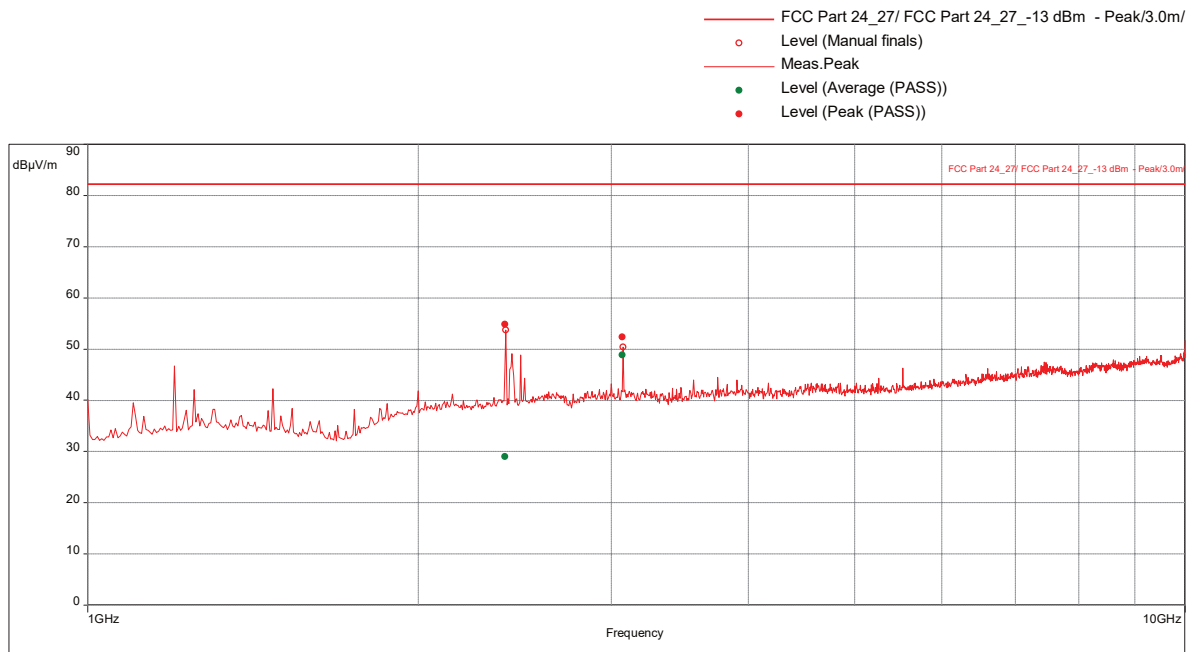
Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM3.2-16QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/26/2021 12:35:09 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.2_Tx High CH 891.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (2)

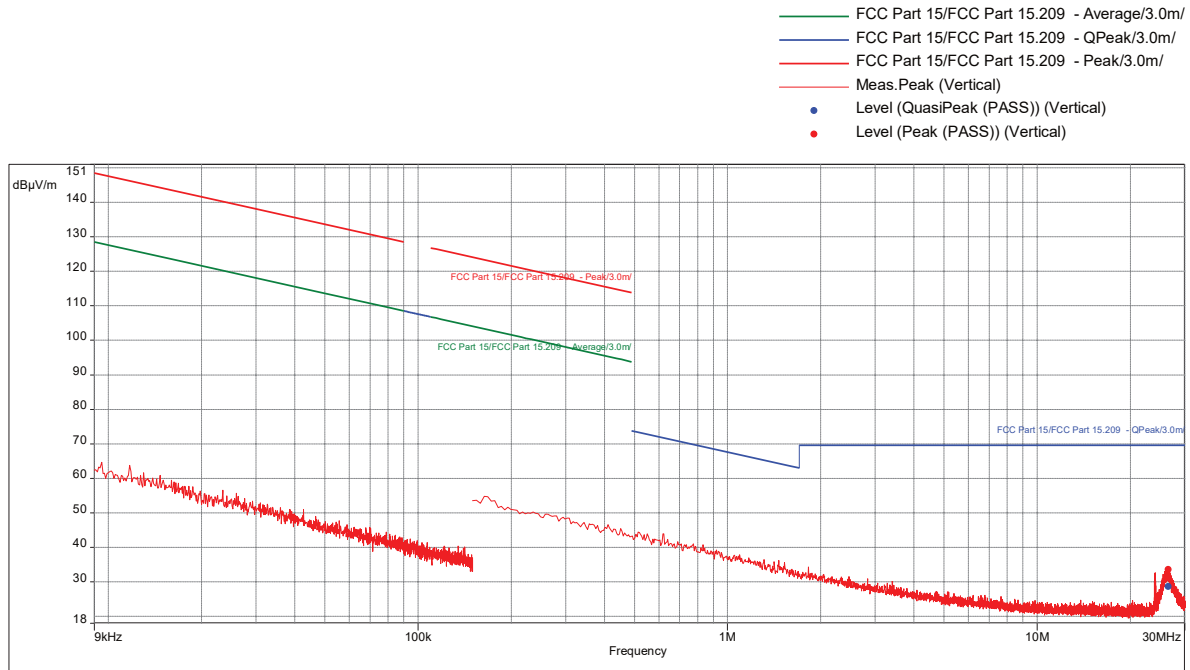
Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2401.842105	54.82	-40.44	82.26	-27.44	193.00	1.00	Vertical	1000000.00	-3.30
3072.105263	52.34	-42.92	82.26	-29.92	115.00	1.65	Vertical	1000000.00	-2.23

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

Radiated Emissions, 9kHz-30 MHz Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/24/2021 10:21:34 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 9kHz-30MHz_POE Band 5 TM3.1 Tx Low CH 871.5MHz

Graph:

Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.52213158	33.62	69.54	-35.92	252.00	1.00	Vertical	9000.00	10.33

QuasiPeak (PASS) (1)

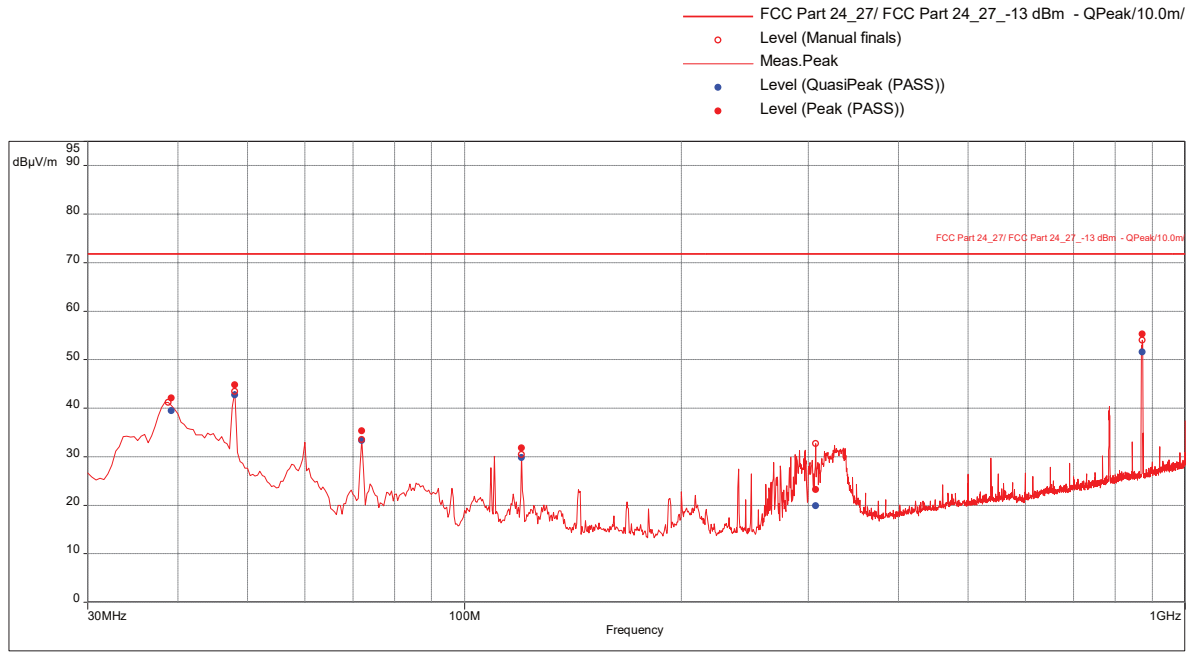
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.52213158	28.57	69.54	-40.97	252.00	1.00	Vertical	9000.00	10.33

Radiated Emissions, 30-1000 MHz
Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/24/2021 6:52:17 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 30-1000MHz_POE Band 5 5MHz BW_TM3.1 Tx Low CH 871.5MHz

Graph:



Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.02105263	42.13	-42.67	-13.00	-29.67	192.00	1.00	Vertical	120000.00	-18.88
48	44.81	-39.99	-13.00	-26.99	213.00	1.00	Vertical	120000.00	-24.52
72	35.31	-49.49	-13.00	-36.49	337.00	1.80	Vertical	120000.00	-24.85
120.0315789	31.79	-53.01	-13.00	-40.01	287.00	1.00	Vertical	120000.00	-18.77
307.2	23.23	-61.57	-13.00	-48.57	258.00	2.73	Horizontal	120000.00	-18.08
872.5684211	55.30	-29.50	-13.00	-16.50	53.00	1.97	Vertical	120000.00	-7.08

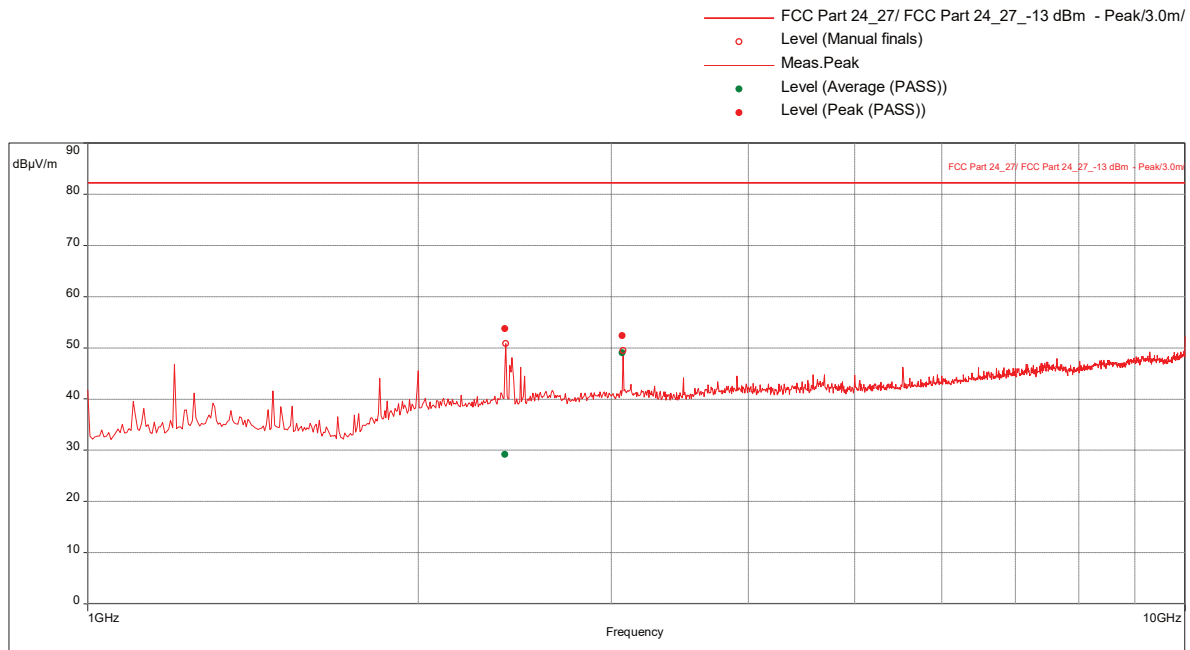
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	9/26/2021 10:14:06 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.1_Tx Low CH 871.5MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

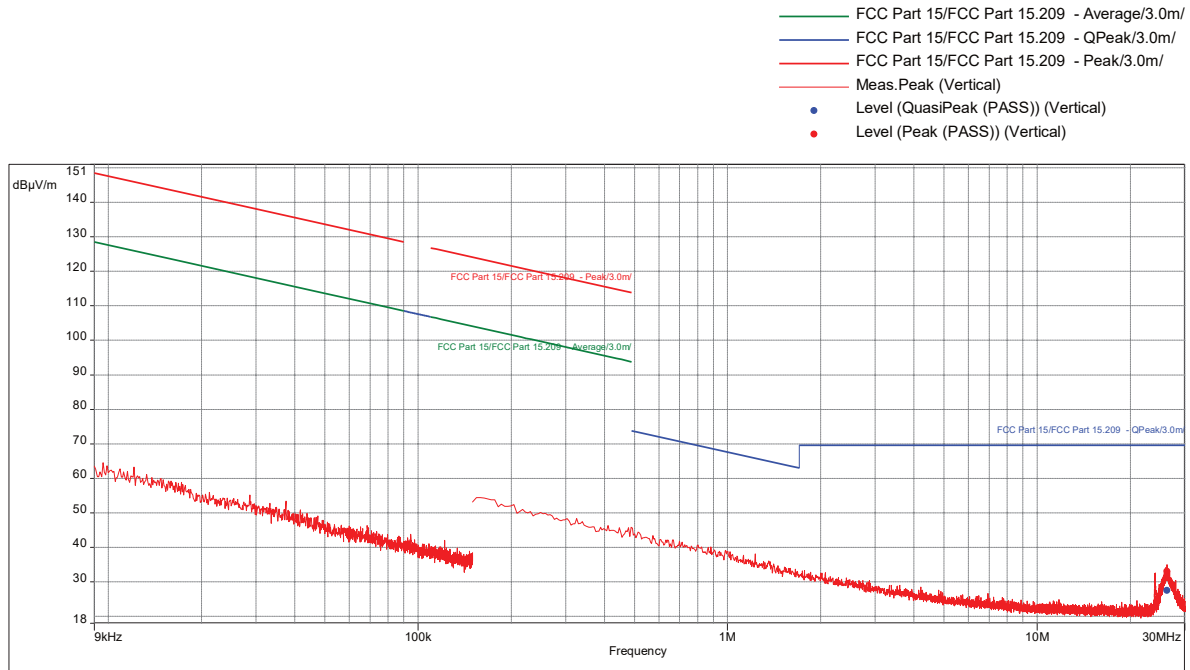
Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2401.842105	53.76	-41.50	-13.00	-28.50	320.00	1.00	Vertical	1000000.00	-3.30
3072.105263	52.34	-42.92	-13.00	-29.92	107.00	1.35	Vertical	1000000.00	-2.23

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

Radiated Emissions, 9kHz-1000 MHz Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/24/2021 9:49:15 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 9kHz-30MHz_POE Band 5 TM3.1 Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.29121053	33.00	69.54	-36.54	0.00	1.00	Vertical	9000.00	10.37

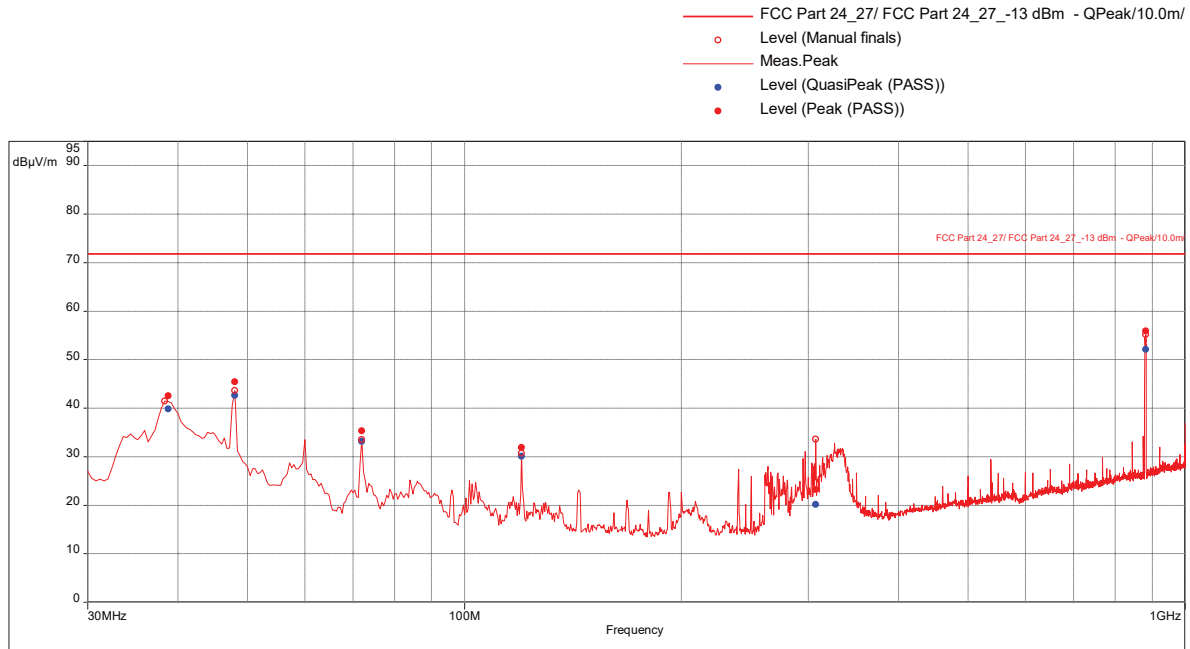
QuasiPeak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.29121053	27.47	69.54	-42.07	0.00	1.00	Vertical	9000.00	10.37

Radiated Emissions, 30-1000 MHz Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	8/24/2021 7:38:56 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM3.1_Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
38.84210526	42.53	42.53	-13.00	-29.27	83.00	1.00	Vertical	120000.00	-18.75
48	45.45	-45.45	-13.00	-26.35	141.00	1.00	Vertical	120000.00	-24.52
72	35.36	-35.36	-13.00	-36.44	251.00	1.70	Vertical	120000.00	-24.85
120.0315789	31.91	-52.89	-13.00	-39.89	317.00	1.97	Vertical	120000.00	-18.77
307.2	23.26	-61.54	-13.00	-48.54	133.00	3.53	Horizontal	120000.00	-18.08
882.0631579	55.94	-28.86	-13.00	-15.86	39.00	1.86	Vertical	120000.00	-6.99

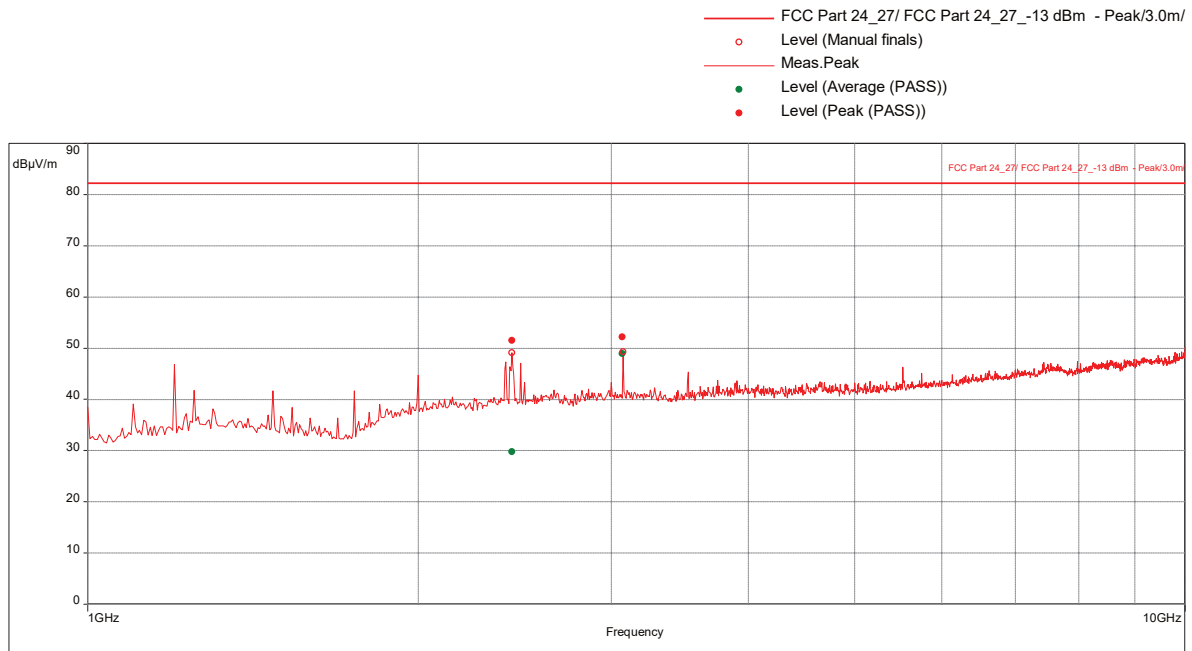
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ Mid Channel

Test Information:

Date and Time	9/26/2021 10:35:29 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.1_Tx Mid CH 881MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2434.473684	51.51	-43.75	-13.00	-30.75	164.00	2.40	Vertical	1000000.00	-3.48
3072.105263	52.20	-43.06	-13.00	-30.06	119.00	1.55	Vertical	1000000.00	-2.23

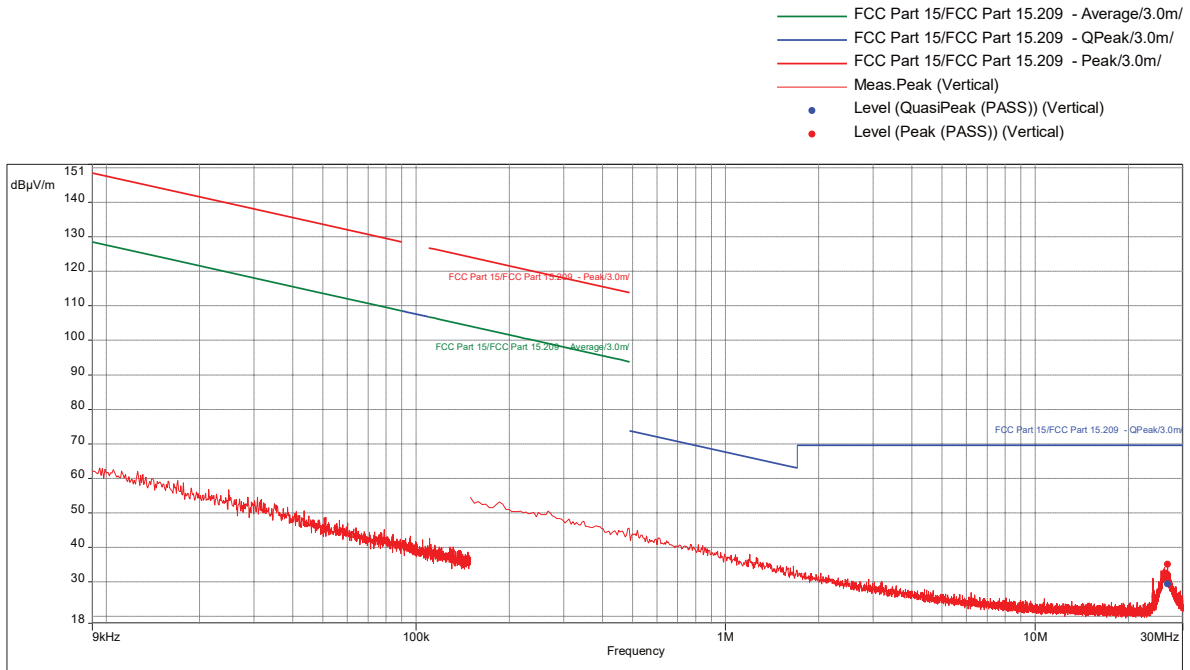
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

Radiated Emissions, 9kHz-30 MHz
Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/24/2021 9:16:39 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 9kHz-30MHz_POE Band 5 TM3.1 Tx High CH 891.5MHz

Graph:



Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.76939474	35.13	69.54	-34.41	273.00	1.00	Vertical	9000.00	10.29

QuasiPeak (PASS) (1)

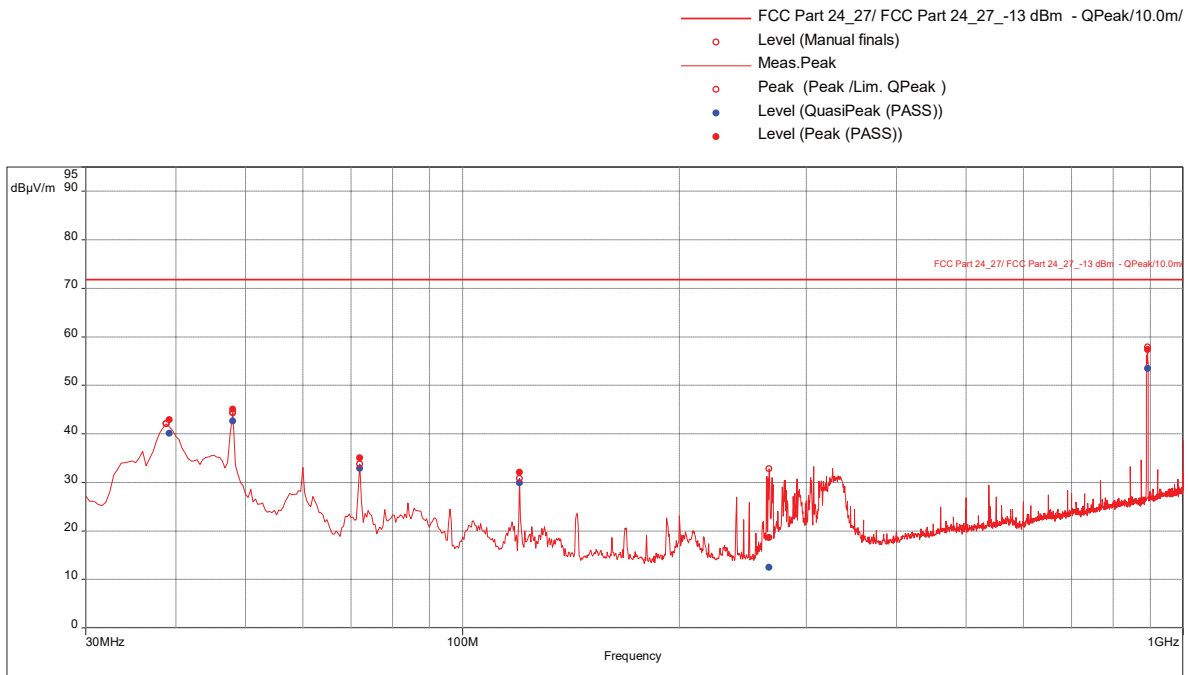
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
26.76939474	29.44	69.54	-40.10	273.00	1.00	Vertical	9000.00	10.29

Radiated Emissions, 30-1000 MHz

Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	8/24/2021 8:25:22 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	28 deg C
Humidity	42%
Atmospheric Pressure	1003 mB
Comments	RE 30-1000MHz_POE Band 5 5MHz BW_TM3.1 Tx Mid CH 891.5MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
39.11578947	42.87	-41.93	-13.00	-28.93	345.00	1.00	Vertical	120000.00	-18.95
48	45.03	-39.77	-13.00	-26.77	214.00	1.00	Vertical	120000.00	-24.52
72	35.05	-49.75	-13.00	-36.75	324.00	1.86	Vertical	120000.00	-24.85
120	32.04	-52.76	-13.00	-39.76	316.00	1.00	Vertical	120000.00	-18.77
266.5263158	18.62	-66.18	-13.00	-53.18	250.00	1.94	Horizontal	120000.00	-19.01
892.5578947	57.31	-27.49	-13.00	-14.49	54.00	1.86	Vertical	120000.00	-6.89

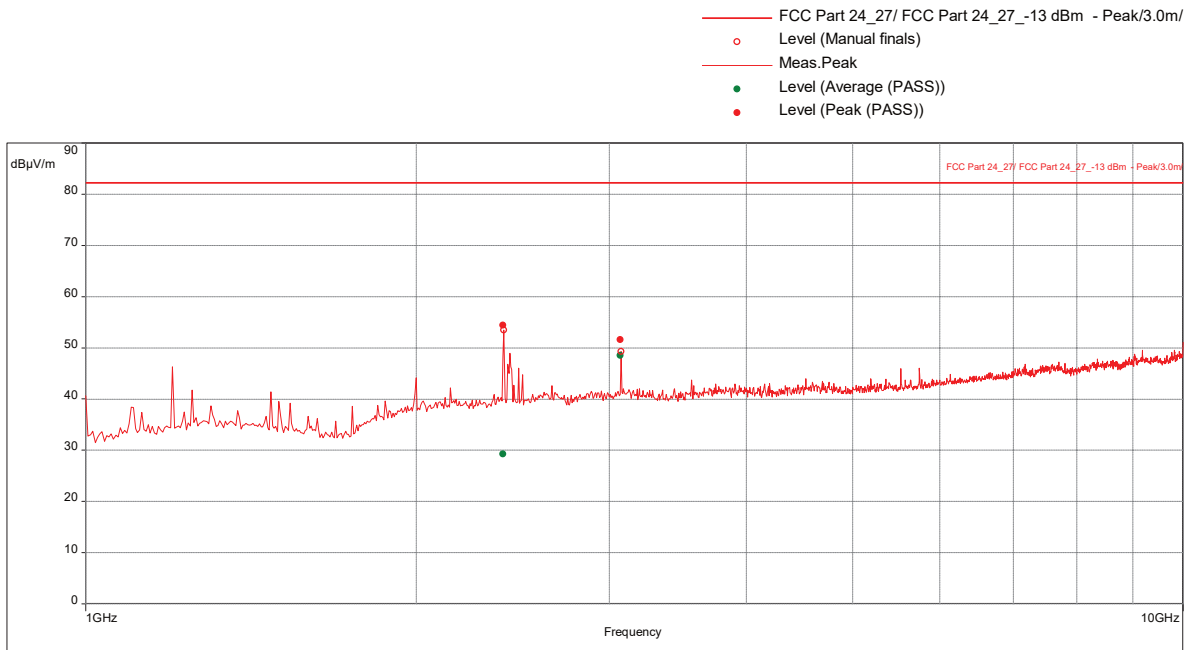
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz
Slot 0 (Band 5), Modulation: TM3.1-64QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/26/2021 10:50:54 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.1_Tx High CH 891.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
2402.105263	54.42	-40.84	-13.00	-27.84	82.00	1.15	Vertical	1000000.00	-3.30
3072.105263	51.63	-43.63	-13.00	-30.63	111.00	1.65	Vertical	1000000.00	-2.23

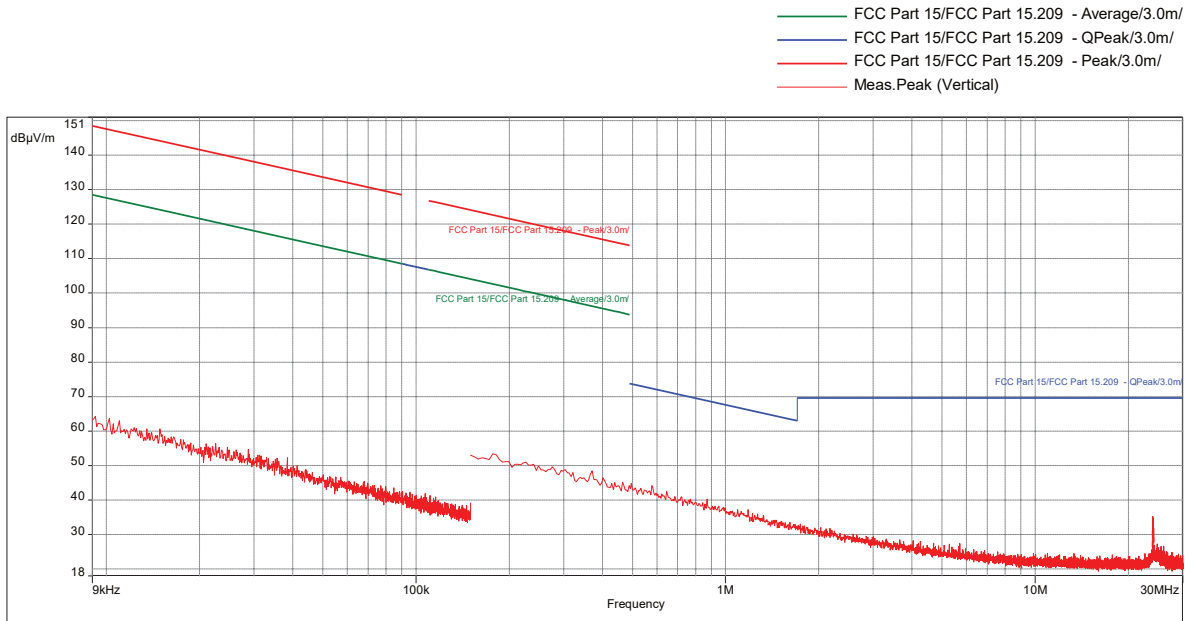
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

Radiated Emissions, 9kHz-30 MHz
Slot 0 (Band 5), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ Low Channel

Test Information:

Date and Time	8/26/2021 6:06:22 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 5 TM3.1a_Tx Low CH 871.5MHz

Graph:



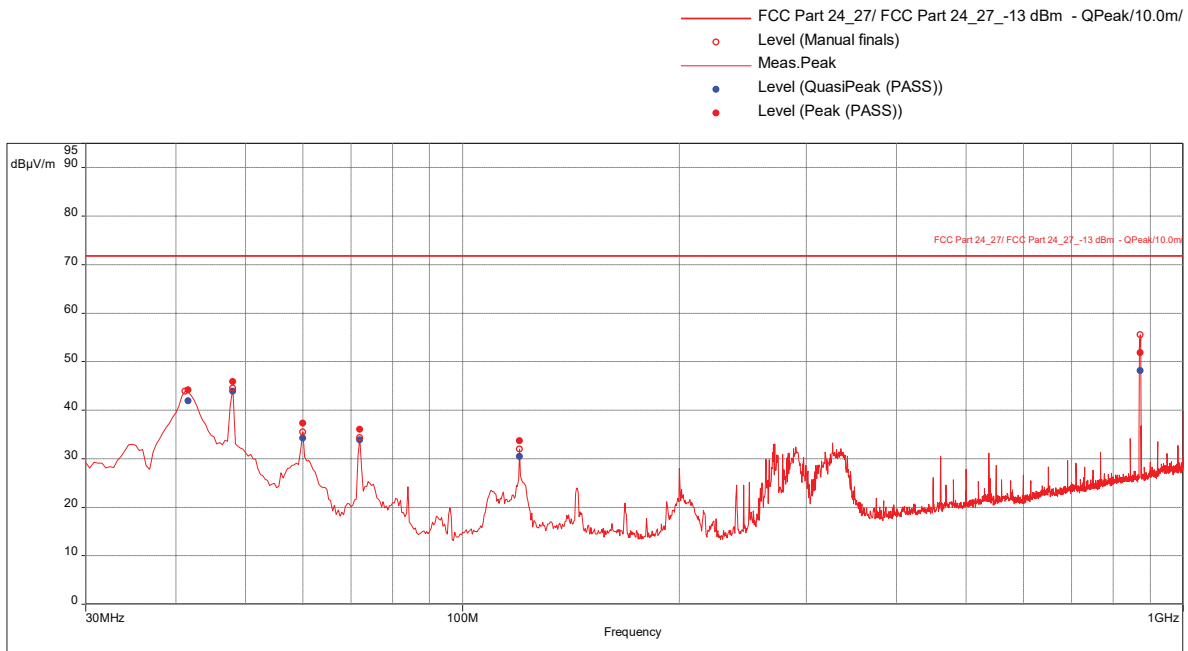
Results: No emissions detected.

Radiated Emissions, 30-1000 MHz

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

Test Information:

Date and Time	8/20/2021 9:18:14 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM3.1a_Tx Low CH 871.5MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
41.48421053	44.21	-40.59	-13.00	-27.59	74.00	1.35	Vertical	120000.00	-20.70
48	45.85	-38.95	-13.00	-25.95	281.00	1.00	Vertical	120000.00	-24.52
60	37.33	-47.47	-13.00	-34.47	98.00	1.51	Vertical	120000.00	-25.58
72	36.04	-48.76	-13.00	-35.76	53.00	1.76	Vertical	120000.00	-24.85
120.0315789	33.65	-51.15	-13.00	-38.15	140.00	1.00	Vertical	120000.00	-18.77
871.6315789	51.88	-32.92	-13.00	-19.92	61.00	1.72	Vertical	120000.00	-7.10

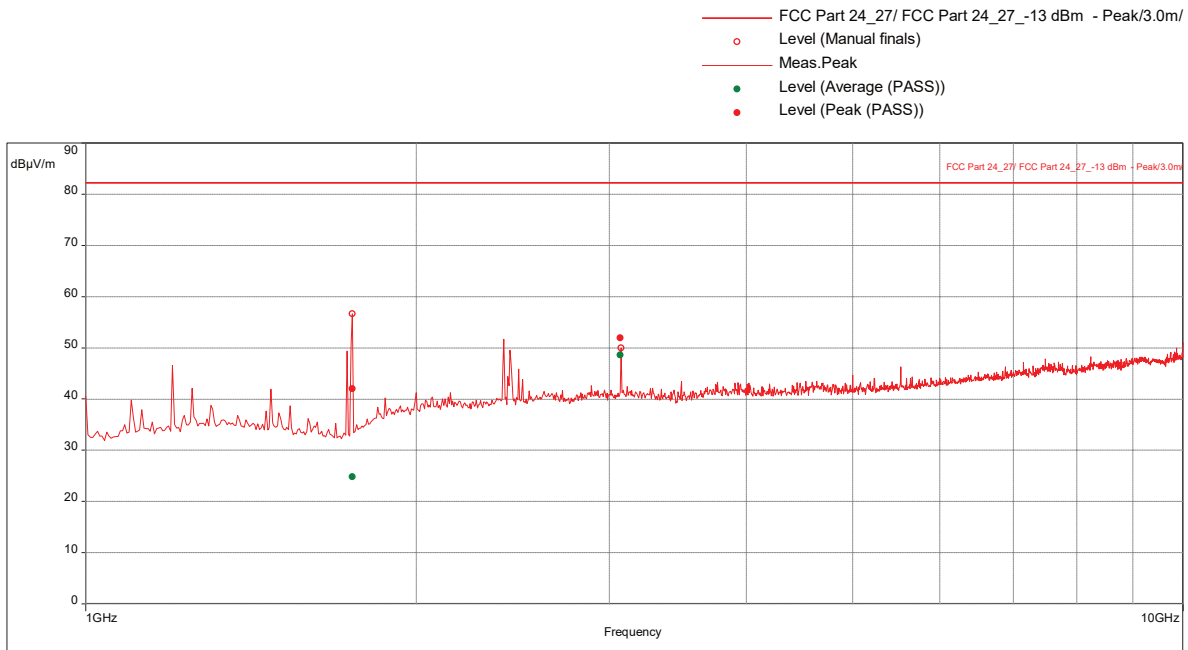
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

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

Test Information:

Date and Time	9/26/2021 11:08:01 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.1a_Tx Low CH 871.5MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
1749.736842	42.03	-53.23	-13.00	-40.23	187.00	1.01	Vertical	1000000.00	-6.34
3071.842105	51.91	-43.35	-13.00	-30.35	108.00	1.31	Vertical	1000000.00	-2.23

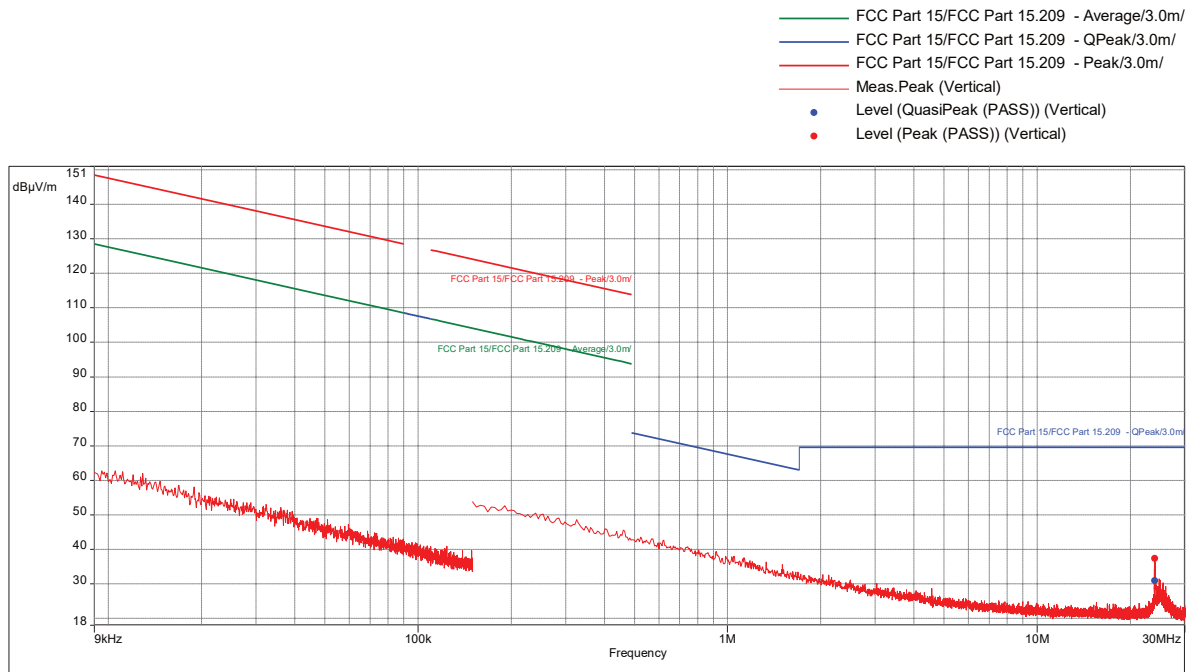
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

Radiated Emissions, 9kHz-30 MHz

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

Test Information:

Date and Time	8/26/2021 6:37:20 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 5 TM3.1a_Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.02084211	37.35	69.54	-32.19	125.00	1.00	Vertical	9000.00	10.70

QuasiPeak (PASS) (1)

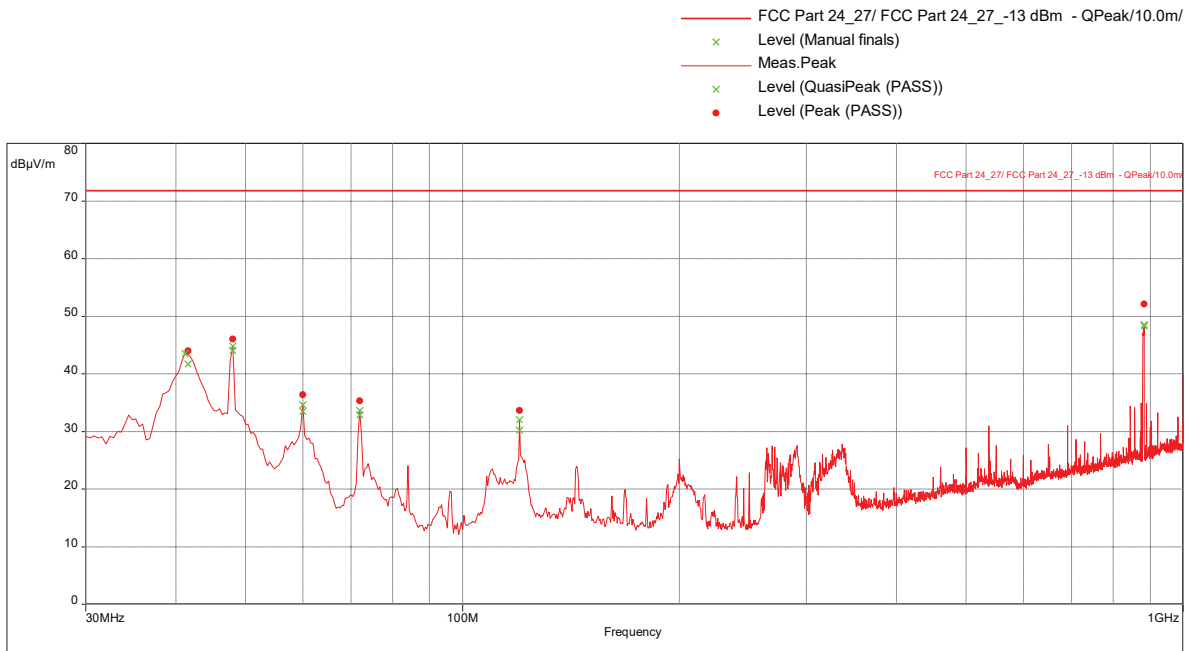
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.02084211	30.89	69.54	-38.65	125.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz

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

Test Information:

Date and Time	8/20/2021 10:05:52 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM3.1a_Tx Mid CH 881MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
41.48421053	43.94	-40.86	-13.00	-27.86	98.00	1.76	Vertical	120000.00	-20.70
48	46.01	-38.79	-13.00	-25.79	332.00	1.00	Vertical	120000.00	-24.52
60	36.36	-48.44	-13.00	-35.44	39.00	3.08	Vertical	120000.00	-25.58
72	35.31	-49.49	-13.00	-36.49	0.00	2.26	Vertical	120000.00	-24.85
120.0315789	33.65	-51.15	-13.00	-38.15	148.00	1.00	Vertical	120000.00	-18.77
882.9263158	52.10	-32.70	-13.00	-19.70	76.00	1.75	Vertical	120000.00	-6.98

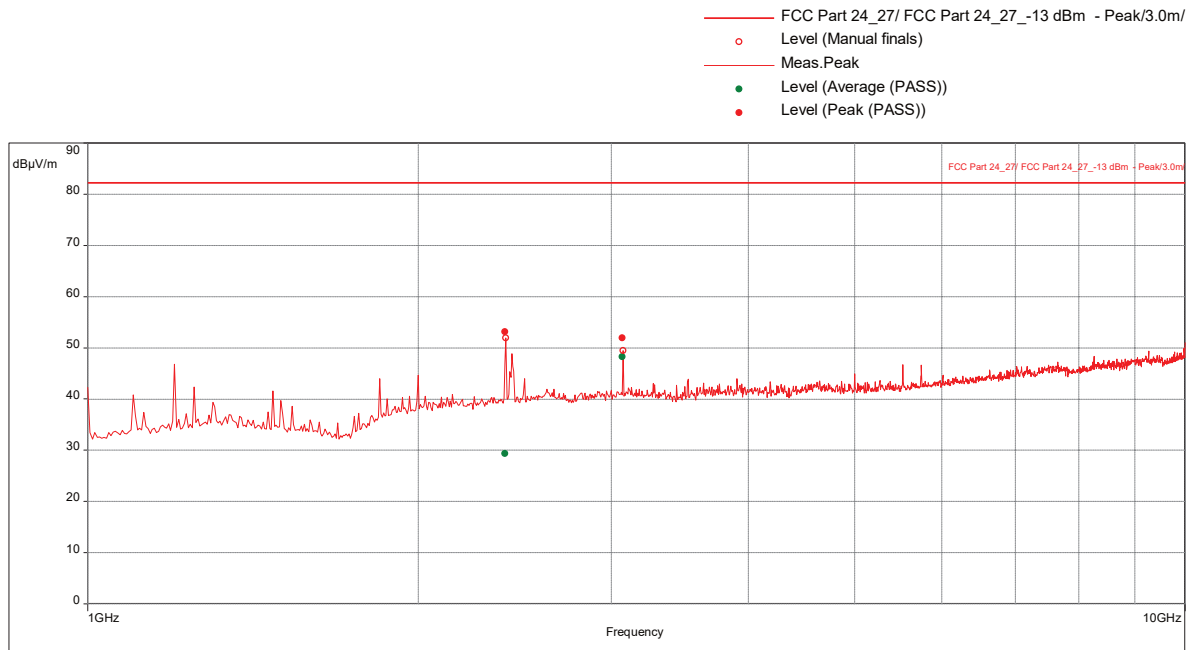
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz

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

Test Information:

Date and Time	9/26/2021 11:24:24 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.1a_Tx Mid CH 881MHz_RP5200 host

Graph:

Results:

Peak (PASS) (2)

Frequency (MHz)	Level (dBuV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°) (dB)	Height (m) (dB)	Pol. (dB)	RBW (dB)	Correction (dB)
2401.842105	53.11	-42.15	-13.00	-29.15	48.00	1.25	Vertical	1000000.00	-3.30
3071.842105	51.91	-43.35	-13.00	-30.35	124.00	1.45	Vertical	1000000.00	-2.23

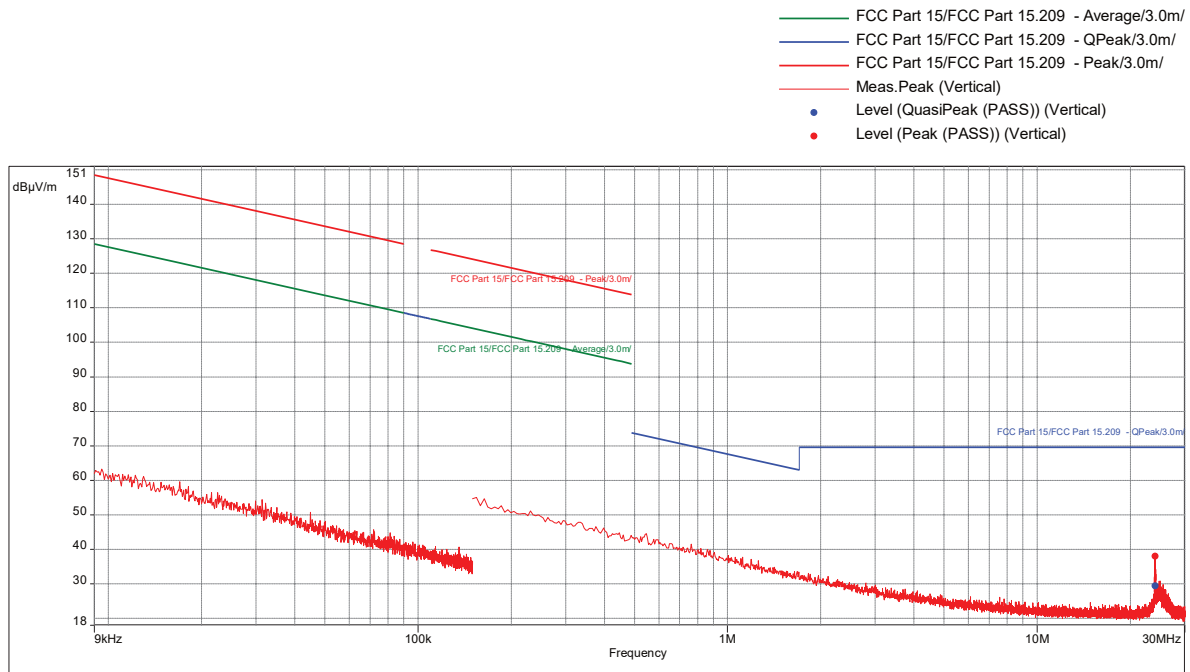
Level EIRP (dBm) = Level Peak (dBuV/m) – 95.20

Radiated Emissions, 9kHz-30 MHz

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

Test Information:

Date and Time	8/26/2021 7:10:10 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 5 TM3.1a_Tx High CH 891.5MHz

Graph:

Results:

Peak (PASS) (1)

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.06252632	37.96	69.54	-31.58	144.00	1.00	Vertical	9000.00	10.70

QuasiPeak (PASS) (1)

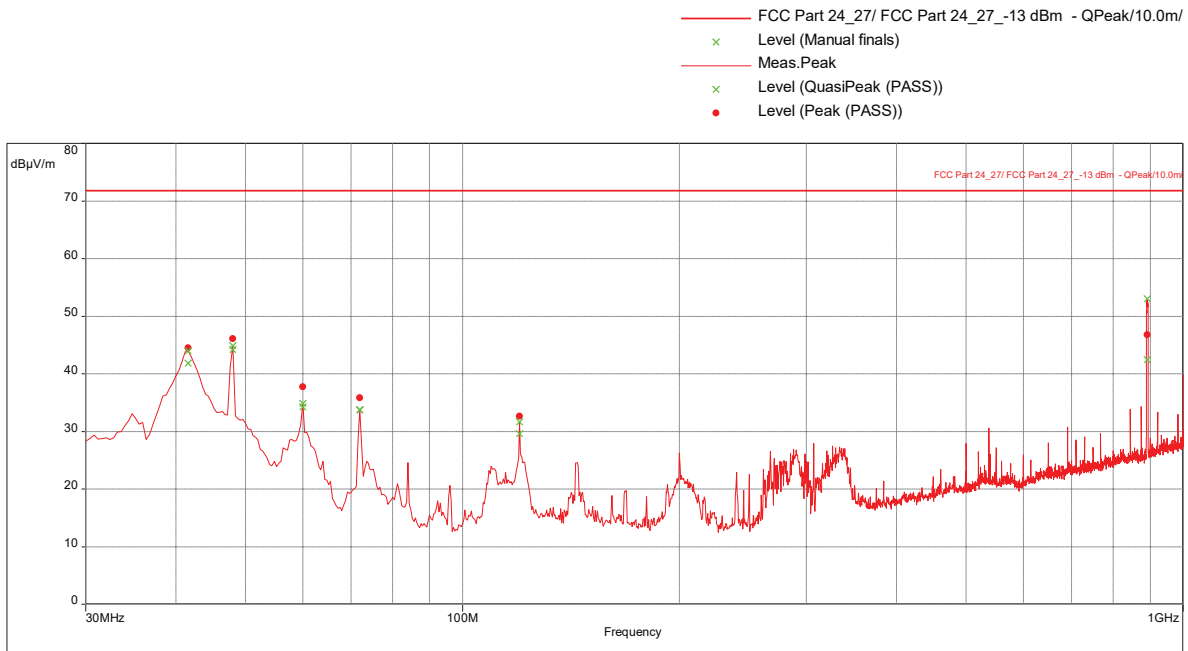
Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
24.06252632	29.38	69.54	-40.16	144.00	1.00	Vertical	9000.00	10.70

Radiated Emissions, 30-1000 MHz

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

Test Information:

Date and Time	8/20/2021 10:31:53 PM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	26 deg C
Humidity	42%
Atmospheric Pressure	1002 mB
Comments	RE 30-1000MHz_POE_Band 5 5MHz BW_TM3.1a_Tx High CH 891.5MHz

Graph:

Results:

Peak (PASS) (6)

Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	RBW (Hz)	Correction (dB)
41.63157895	44.47	-40.33	-13.00	-27.33	75.00	1.00	Vertical	120000.00	-20.82
48	46.08	-38.72	-13.00	-25.72	339.00	1.00	Vertical	120000.00	-24.52
60	37.70	-47.10	-13.00	-34.10	333.00	2.34	Vertical	120000.00	-25.58
72	35.86	-48.94	-13.00	-35.94	0.00	1.73	Vertical	120000.00	-24.85
120	32.64	-52.16	-13.00	-39.16	142.00	1.30	Vertical	120000.00	-18.77
892.0631579	46.80	-38.00	-13.00	-25.00	76.00	1.64	Vertical	120000.00	-6.85

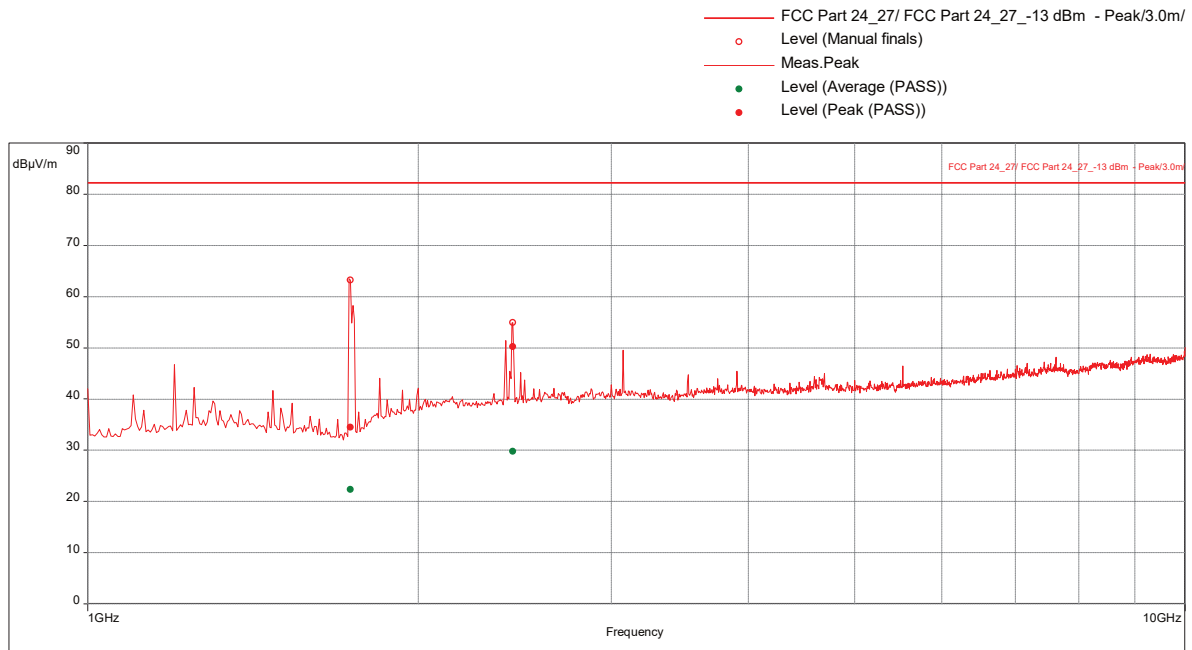
Level EIRP (dBm) = Level Peak (dBuV/m) – 84.8

Radiated Emissions, 1-10 GHz
Slot 0 (Band 5), Modulation: TM3.1a-256QAM, Bandwidth 5 MHz, Transmit @ High Channel

Test Information:

Date and Time	9/26/2021 11:41:59 AM
Client and Project Number	CommScope_G104751739
Engineer	Vathana Ven
Temperature	23 deg C
Humidity	48%
Atmospheric Pressure	999 mB
Comments	RE 1 to 10 GHz_POE_Band 5 5MHz BW_TM3.1a_Tx High CH 891.5MHz_RP5200 host

Graph:



Results:

Peak (PASS) (2)


Frequency (MHz)	Level (dBµV/m)	Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (°) (dB)	Height (m) (dB)	Pol. (dB)	RBW (dB)	Correction (dB)
1737.105263	34.45	-60.81	-13.00	-47.81	339.00	1.15	Vertical	1000000.00	-6.54
2439.473684	50.22	-45.04	-13.00	-32.04	111.00	1.01	Vertical	1000000.00	-3.51

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

Intertek

Report Number: 104751739BOX-009

Issued: 10/12/2021
Revised: 02/02/2022

Test Personnel: Vathana Ven 
Supervising/Reviewing
Engineer:
(Where Applicable) N/A
Product Standard: FCC Part 22
Input Voltage: 48 VDC (POE)
Pretest Verification w/
Ambient Signals or
BB Source: N/A

Test Date: 08/20/2021, 08/24/2021, 08/26/2021,
09/26/2021

Limit Applied: See report section 11.3

Ambient Temperature: 26, 28, 31, 23 °C

Relative Humidity: 42, 42, 39, 48 %

Atmospheric Pressure: 1002, 1003, 1007, 999 mbars

Deviations, Additions, or Exclusions: None

12 Revision History

Revision Level	Date	Report Number	Prepared By	Reviewed By	Notes
0	10/12/2021	104751739BOX-009	VFV <i>VFV</i>	KPS <i>KPS</i>	Original Issue
1	01/12/2022	104751739BOX-009	VFV <i>VFV</i>	KPS <i>KPS</i>	Removed test setup photos, referenced the original LTE and new 5G NR capabilities of this device in product description
2	02/02/2022	104751739BOX-009	VFV <i>VFV</i>	KPS <i>KPS</i>	worst case for spurious emissions on page 288