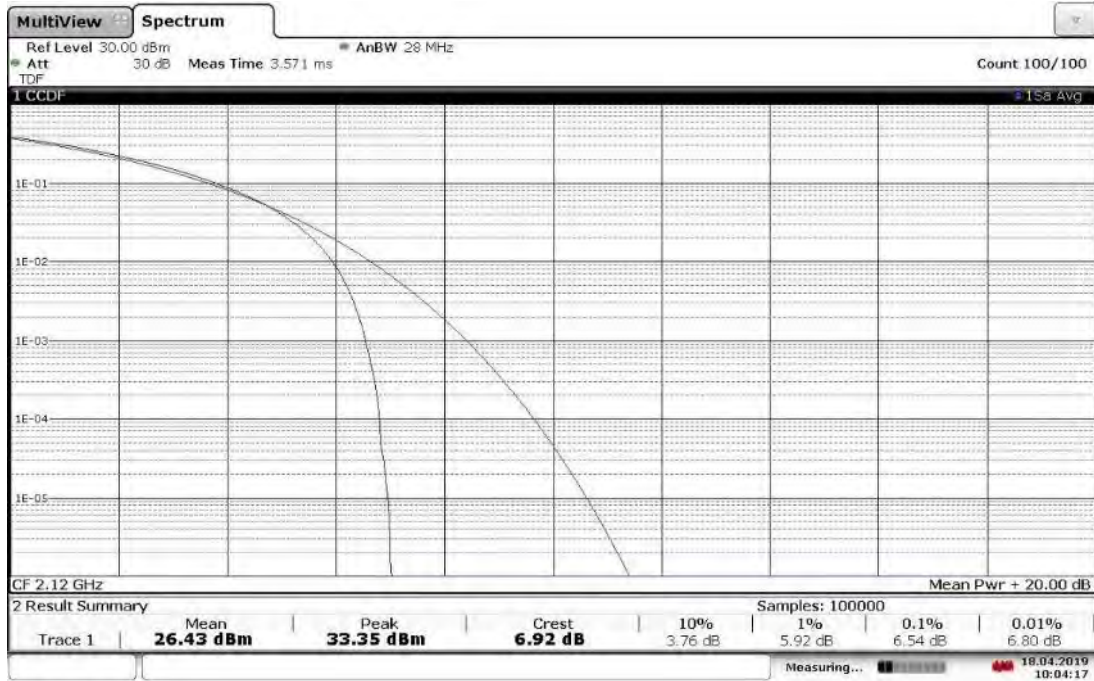


TM3.1-64QAM_20 MHz Bandwidth

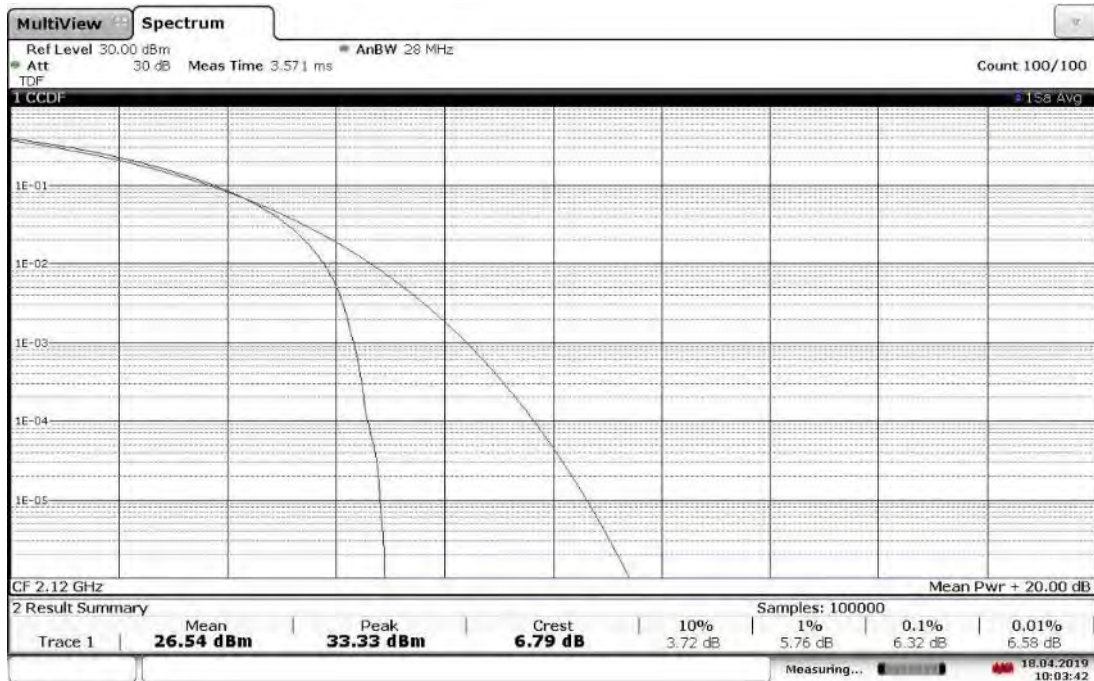
Slot 1 (Band 66), ANT0, Low Channel 2120 MHz, PAPR = 6.92 dB



10:04:17 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

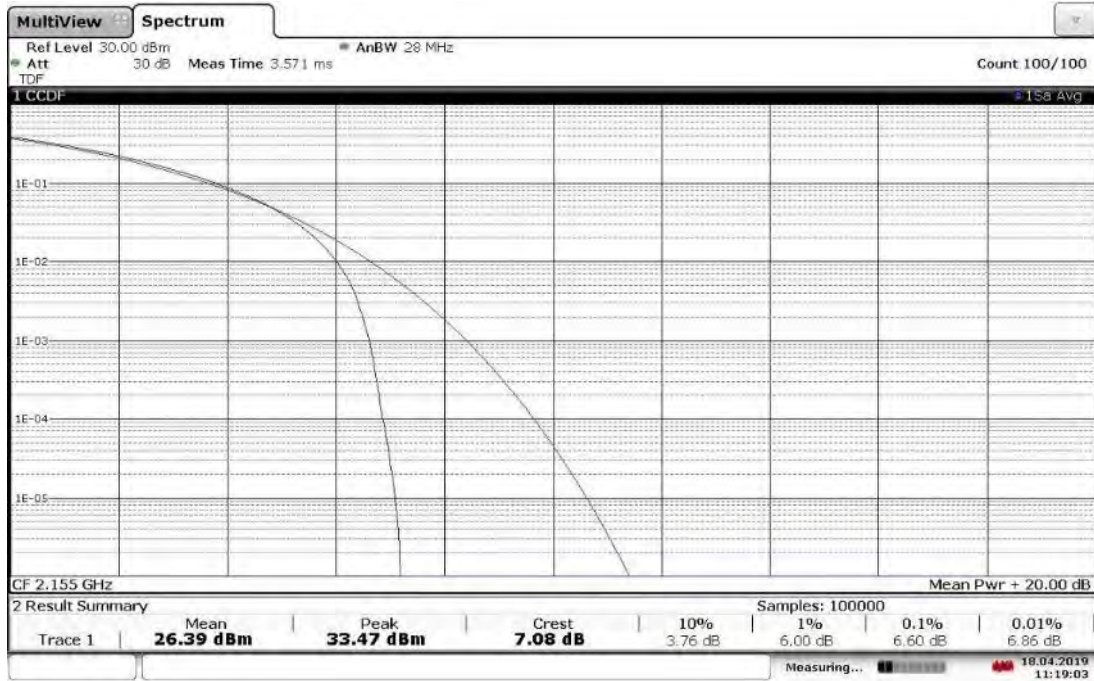
Slot 1 (Band 66), ANT1, Low Channel 2120 MHz, PAPR = 6.79 dB



10:03:42 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

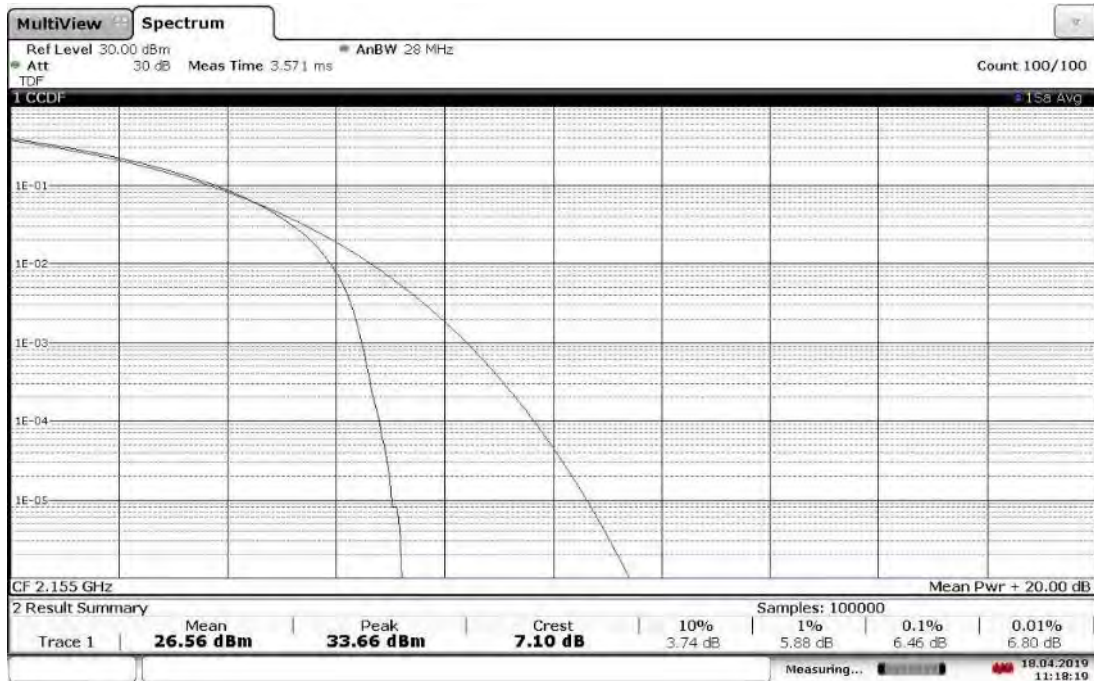
Slot 1 (Band 66), ANT0, Mid Channel 2155 MHz, PAPR = 7.08 dB



11:19:03 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

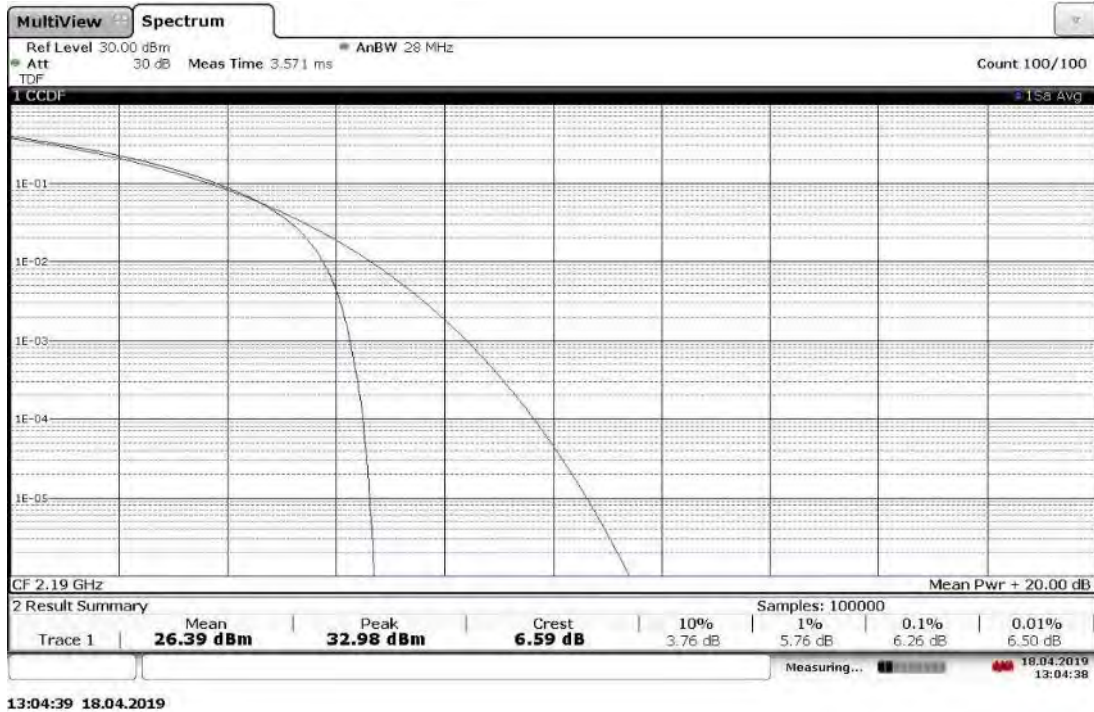
Slot 1 (Band 66), ANT1, Mid Channel 2155 MHz, PAPR = 7.10 dB



11:18:20 18.04.2019

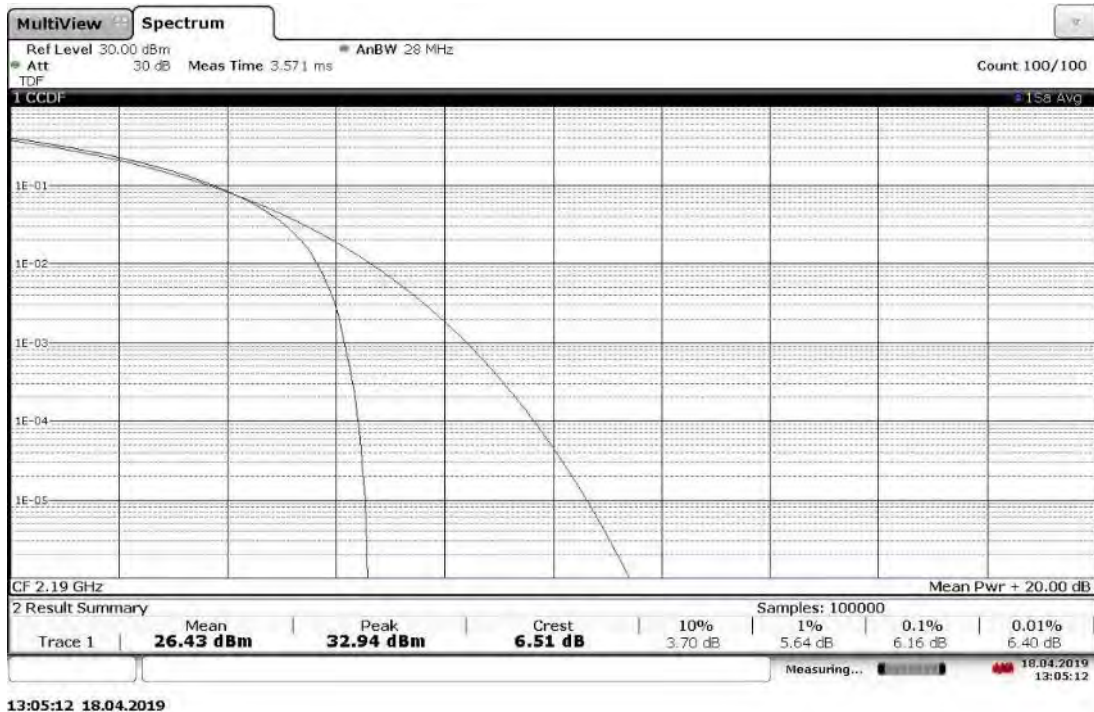
TM3.1-64QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel 2190MHz, PAPR = 6.59 dB



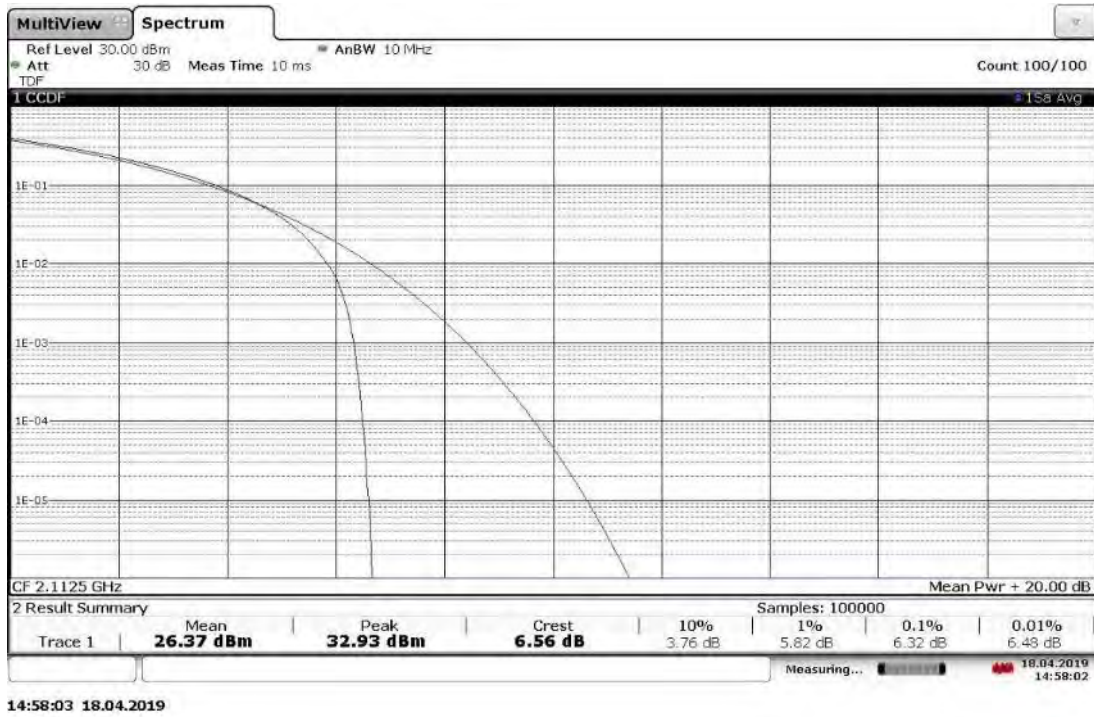
TM3.1-64QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel 2190 MHz, PAPR = 6.51 dB



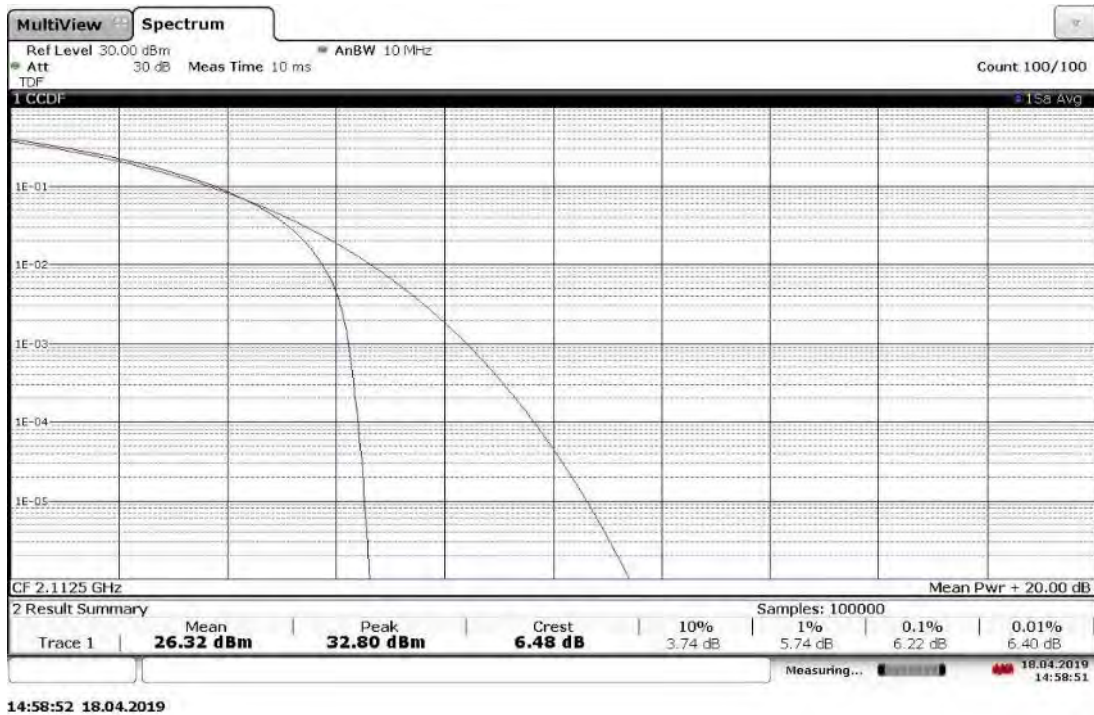
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel 2112.5 MHz, PAPR = 6.56 dB



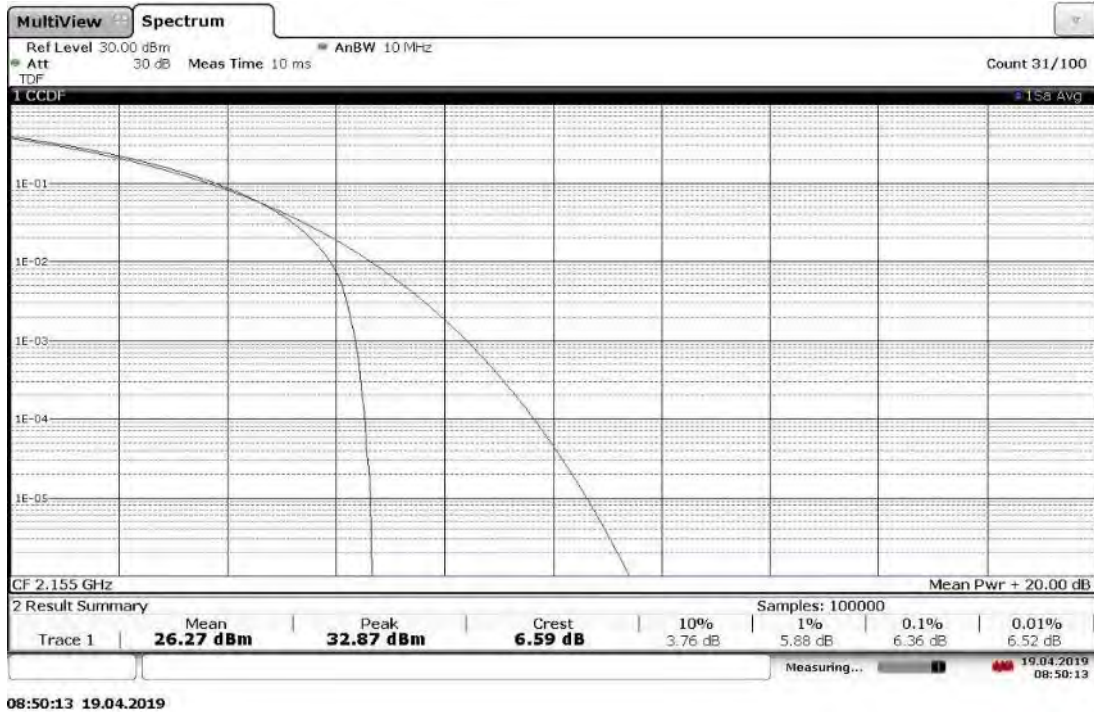
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel 2112.5 MHz, PAPR = 6.48 dB



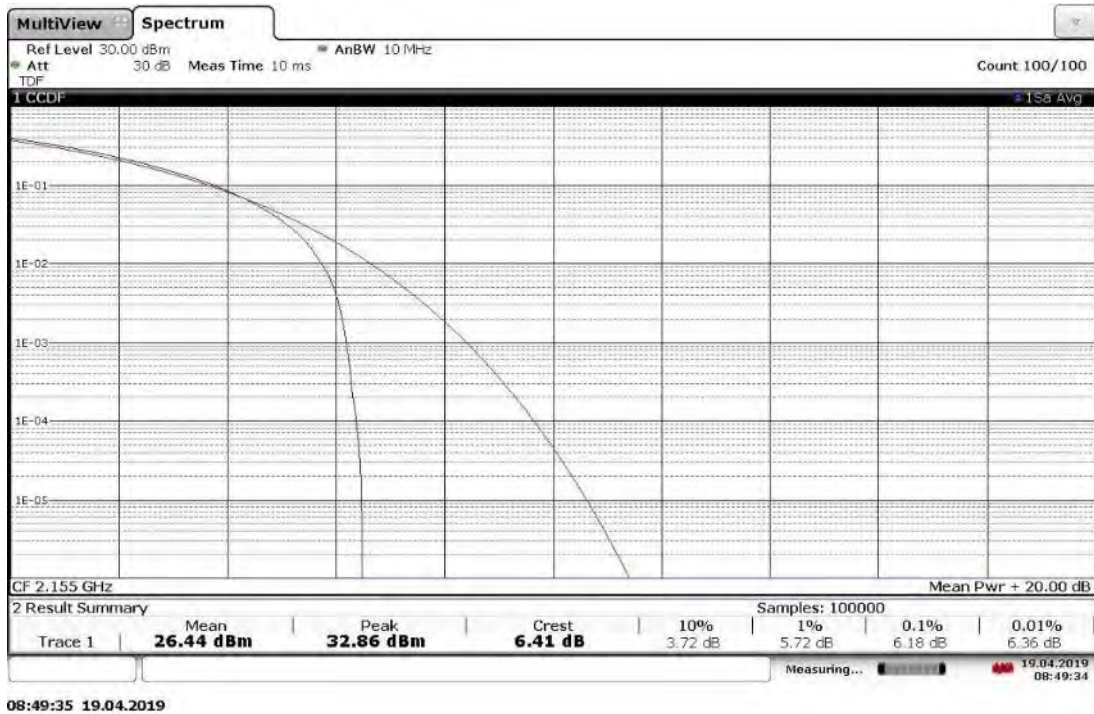
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel 2155 MHz, PAPR = 6.59 dB



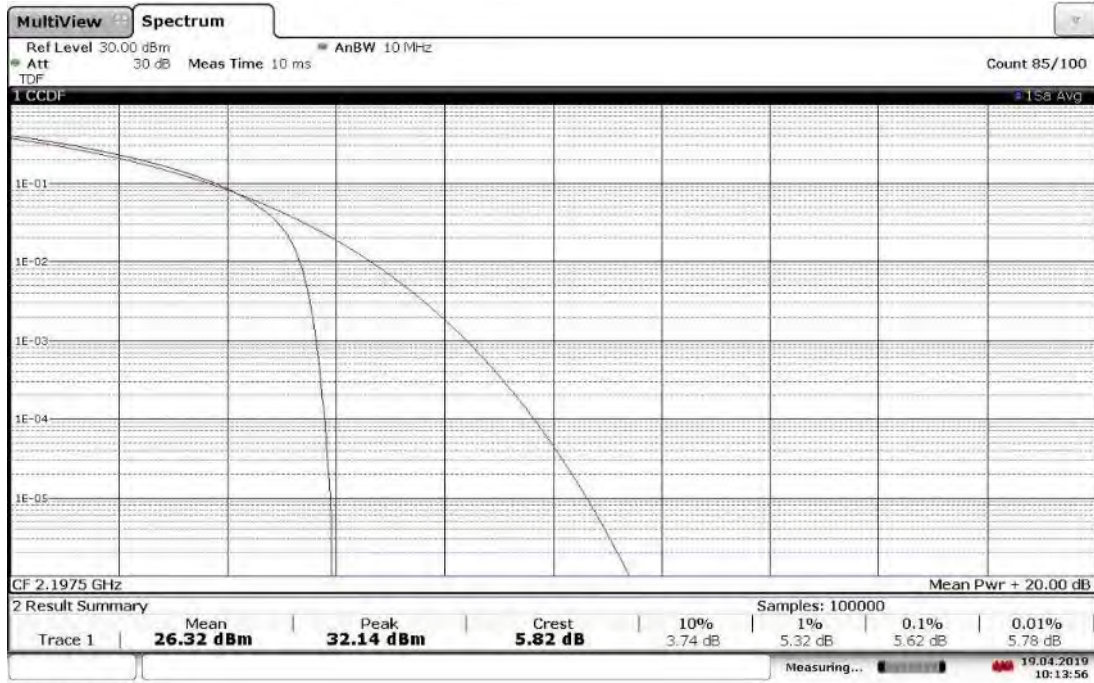
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel 2155 MHz, PAPR = 6.41 dB



TM3.1a-256QAM_5 MHz Bandwidth

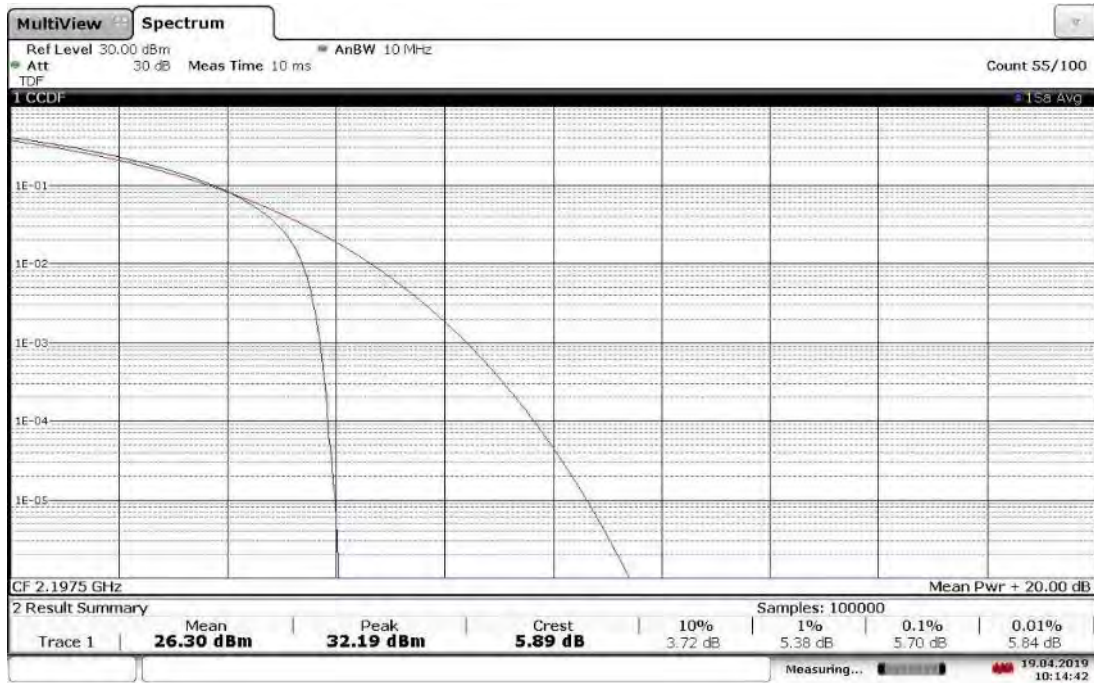
Slot 1 (Band 66), ANT0, High Channel 2197.5 MHz, PAPR = 5.82 dB



10:13:57 19.04.2019

TM3.1a-256QAM_5 MHz Bandwidth

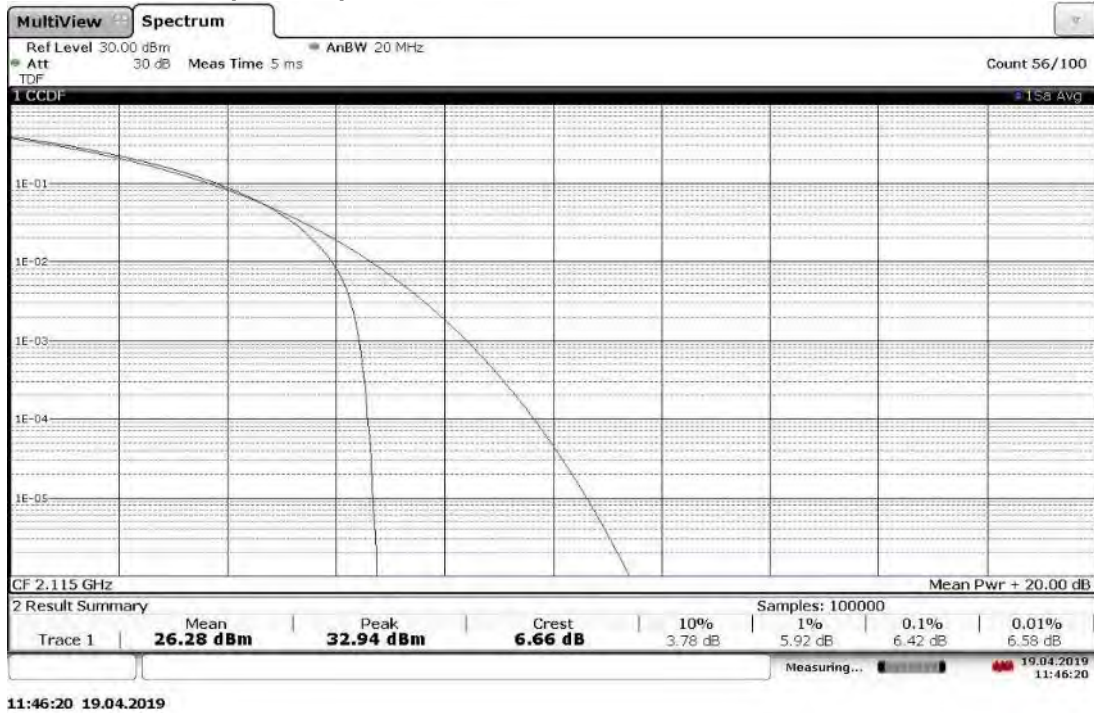
Slot 1 (Band 66), ANT1, High Channel 2197.5 MHz, PAPR = 5.89 dB



10:14:42 19.04.2019

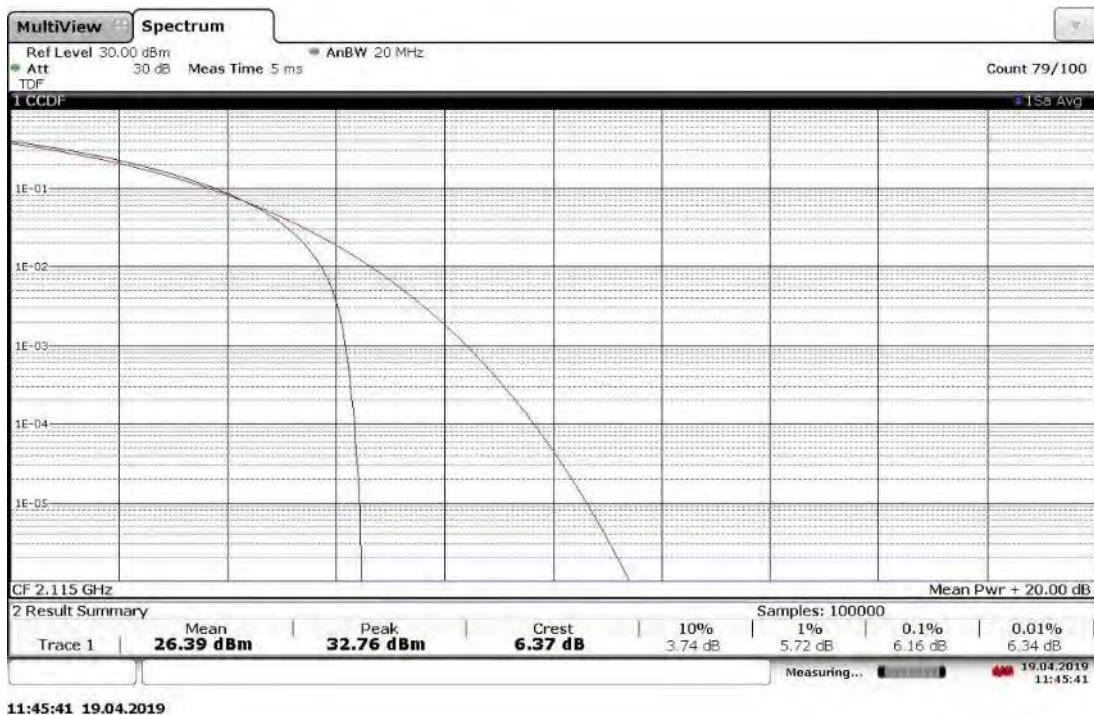
TM3.1a-256QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel 2115 MHz, PAPR = 6.66 dB



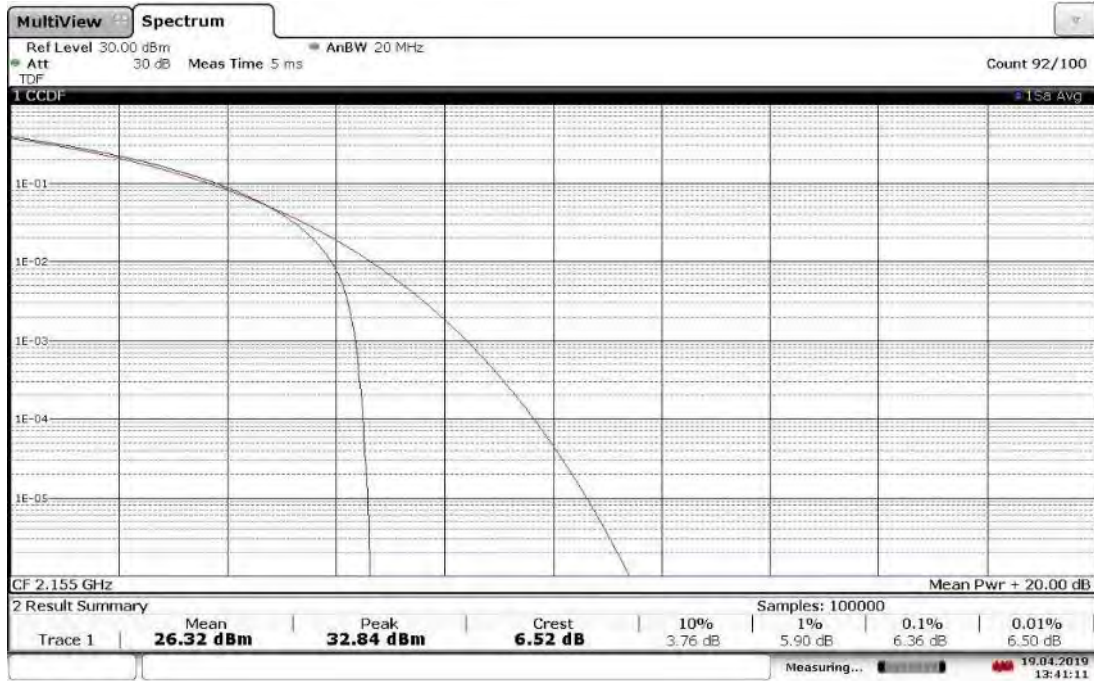
TM3.1a-256QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel 2115 MHz, PAPR = 6.37 dB



TM3.1a-256QAM_10 MHz Bandwidth

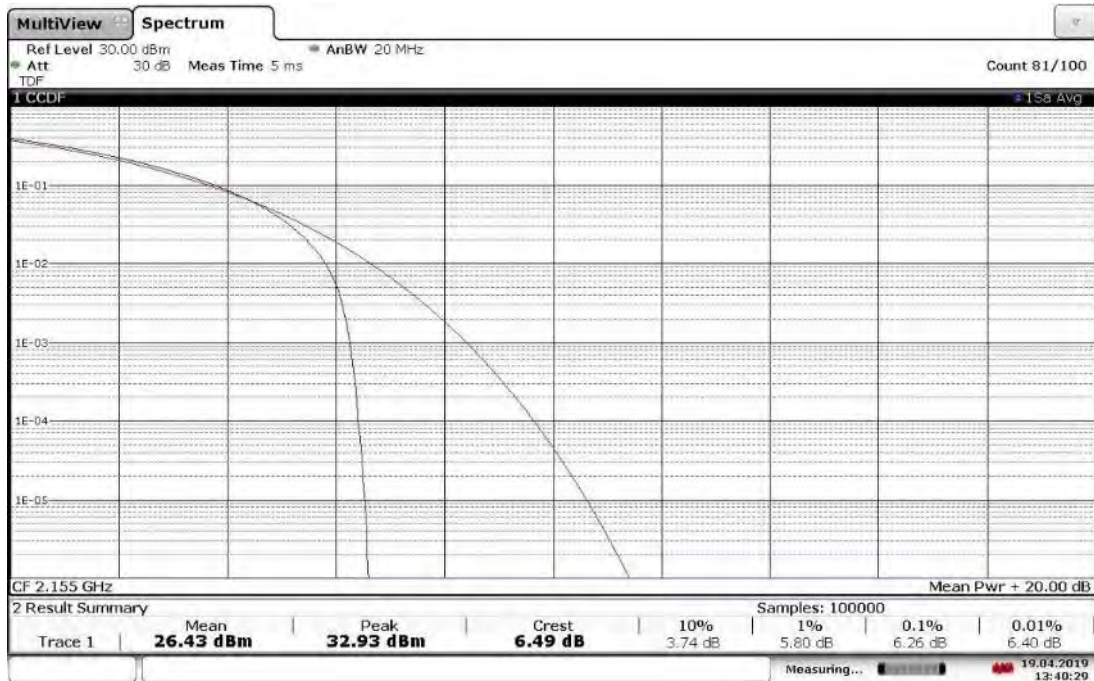
Slot 1 (Band 66), ANT0, Mid Channel 2155 MHz, PAPR = 6.52 dB



13:41:12 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

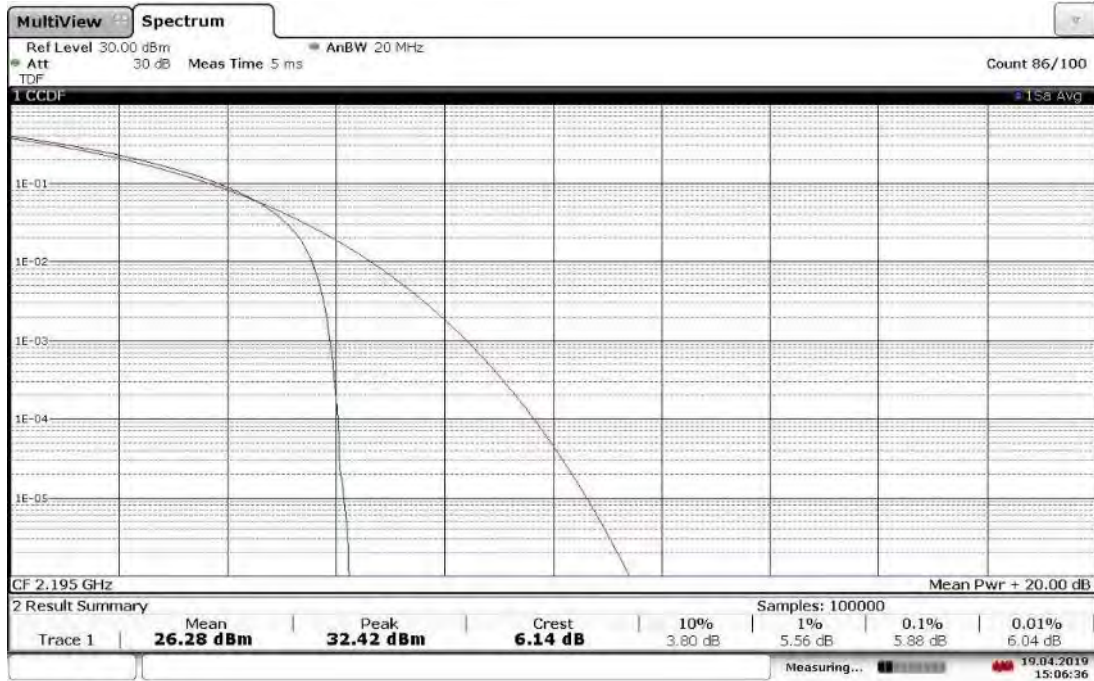
Slot 1 (Band 66), ANT1, Mid Channel 2155 MHz, PAPR = 6.49 dB



13:40:30 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

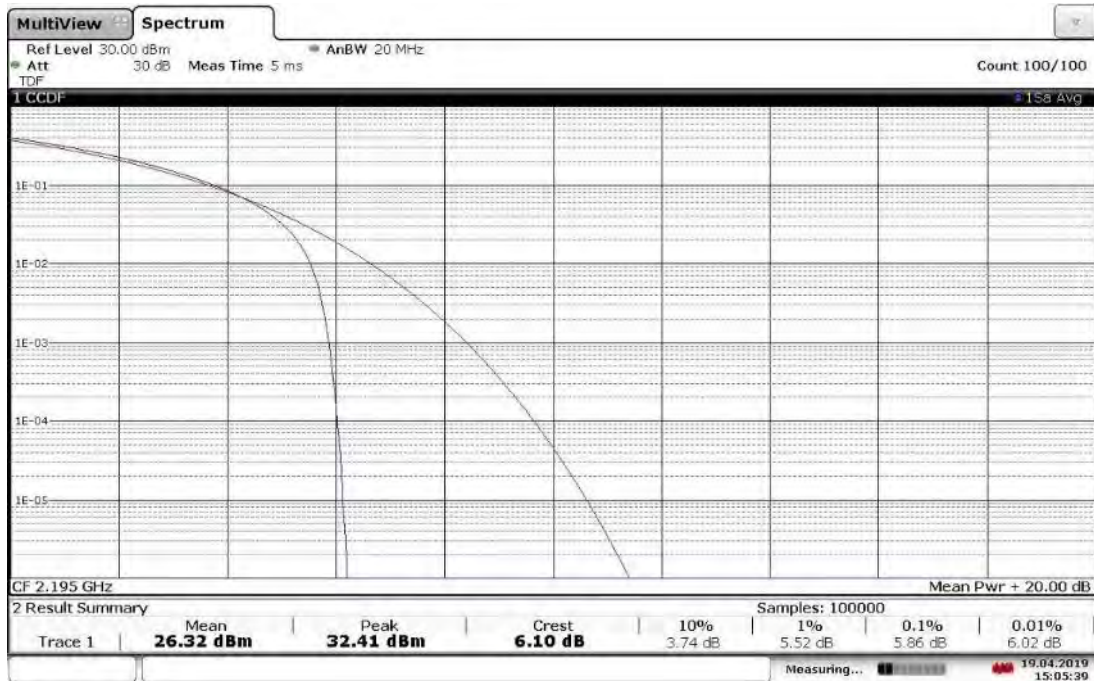
Slot 1 (Band 66), ANT0, High Channel 2195 MHz, PAPR = 6.14 dB



15:06:36 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

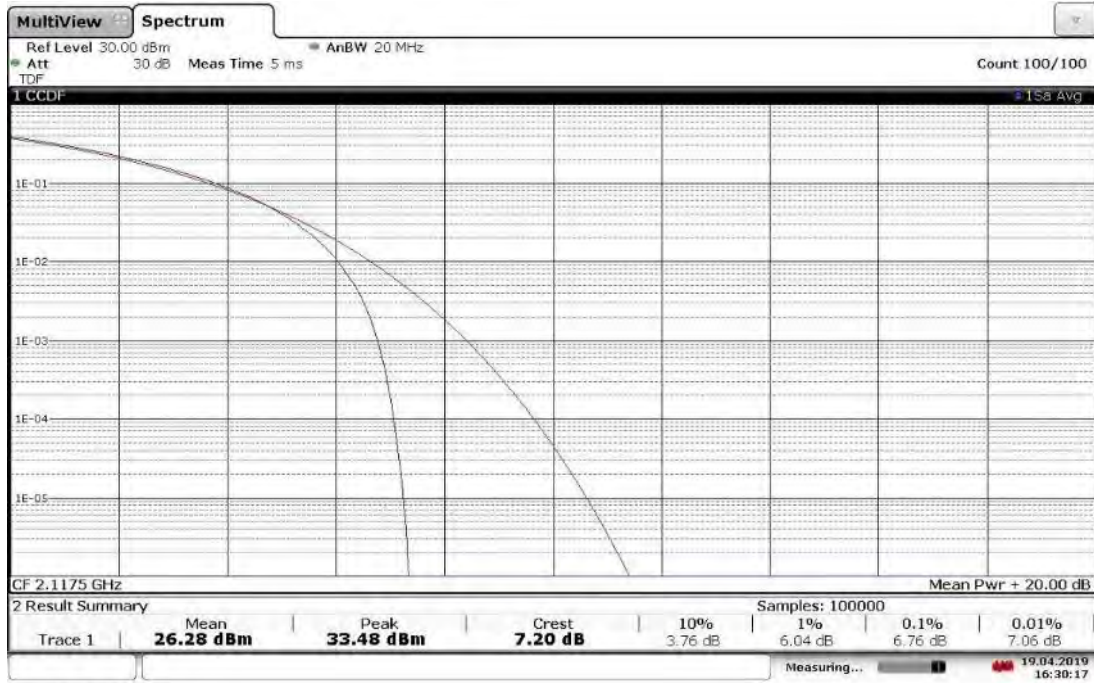
Slot 1 (Band 66), ANT1, High Channel 2195 MHz, PAPR = 6.10 dB



15:05:39 19.04.2019

TM3.1a-256QAM_15 MHz Bandwidth

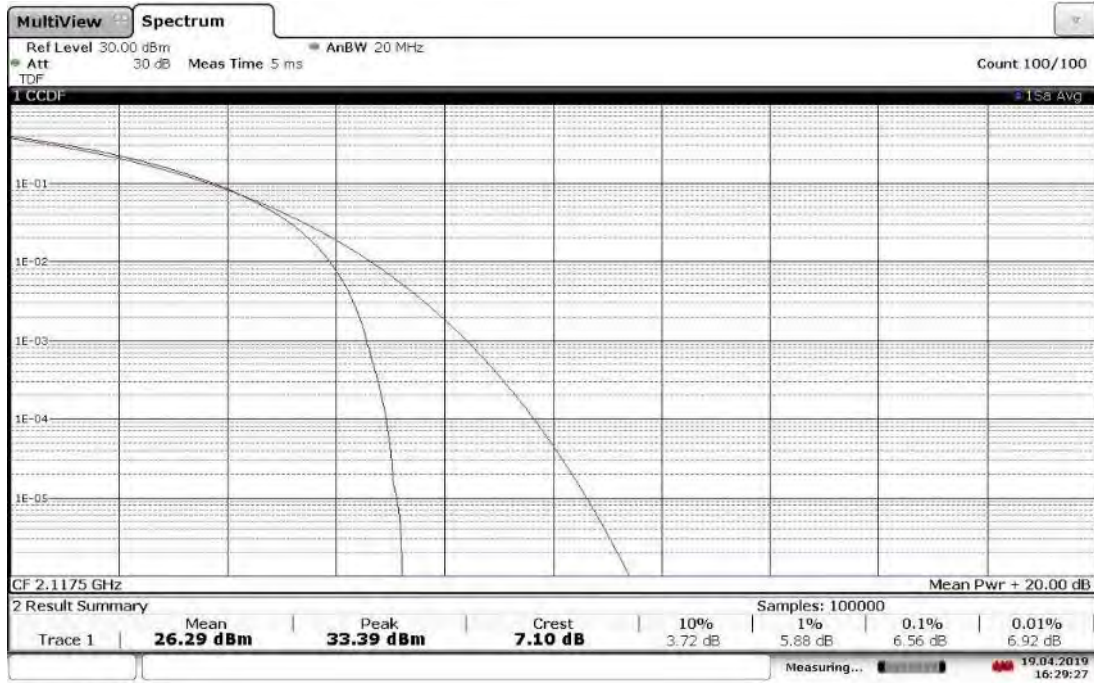
Slot 1 (Band 66), ANT0, Low Channel 2117.5 MHz, PAPR = 7.20 dB



16:30:17 19.04.2019

TM3.1a-256QAM_15 MHz Bandwidth

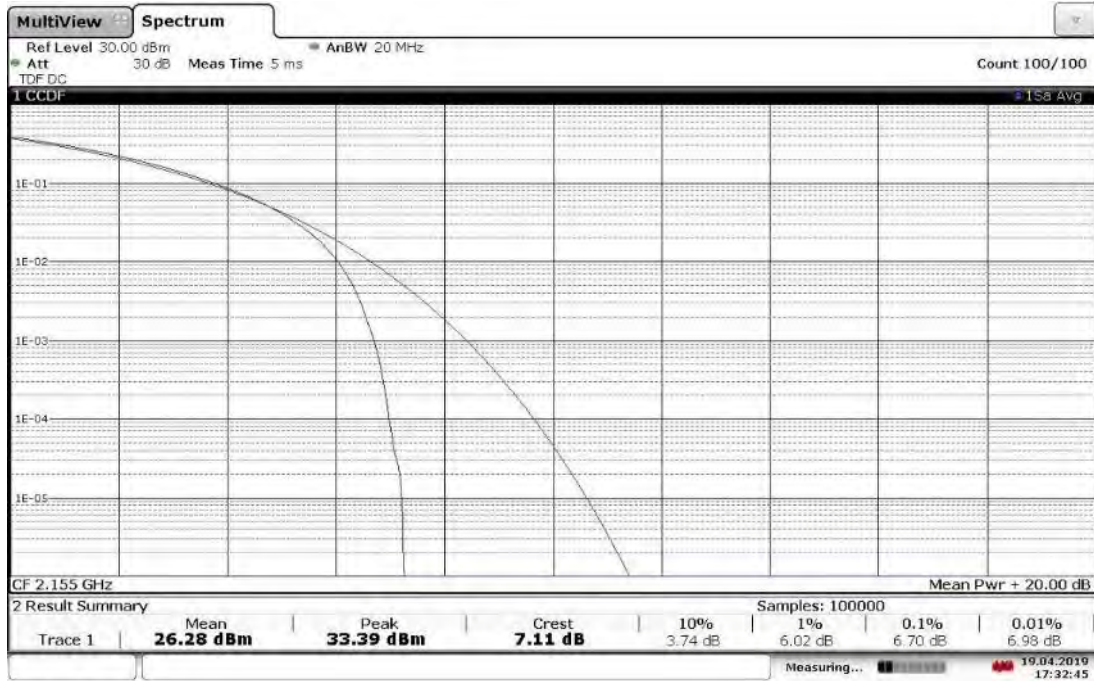
Slot 1 (Band 66), ANT1, Low Channel 2117.5 MHz, PAPR = 7.10 dB



16:29:28 19.04.2019

TM3.1a-256QAM_15 MHz Bandwidth

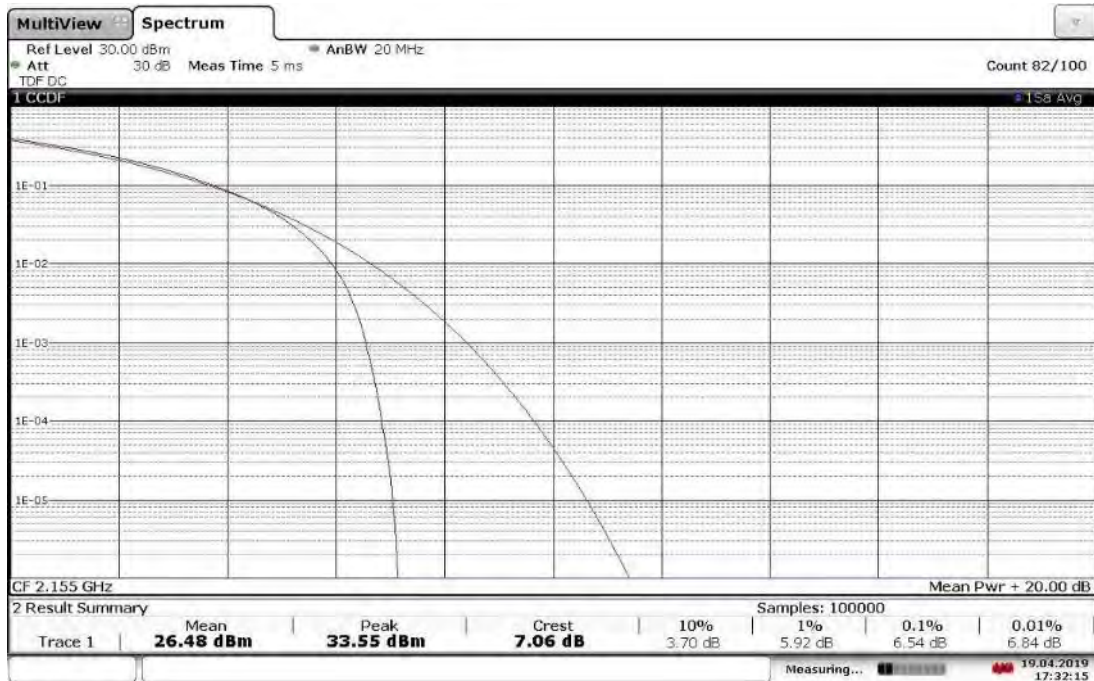
Slot 1 (Band 66), ANT0, Mid Channel 2155 MHz, PAPR = 7.11 dB



17:32:45 19.04.2019

TM3.1a-256QAM_15 MHz Bandwidth

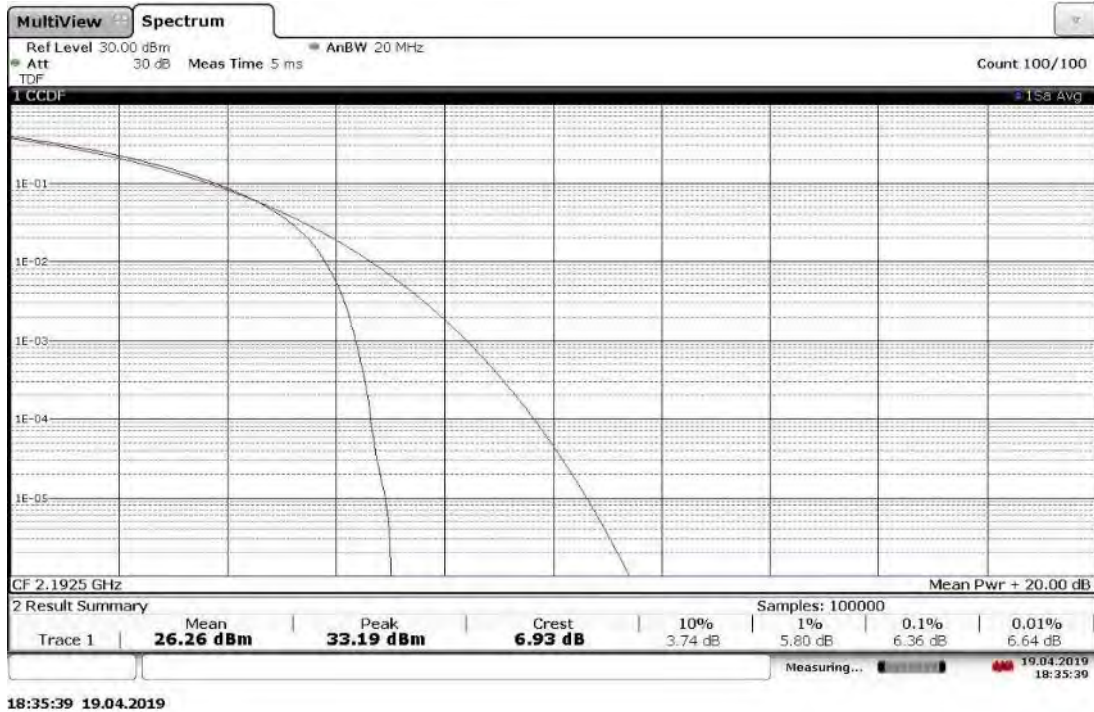
Slot 1 (Band 66), ANT1, Mid Channel 2155 MHz, PAPR = 7.06 dB



17:32:16 19.04.2019

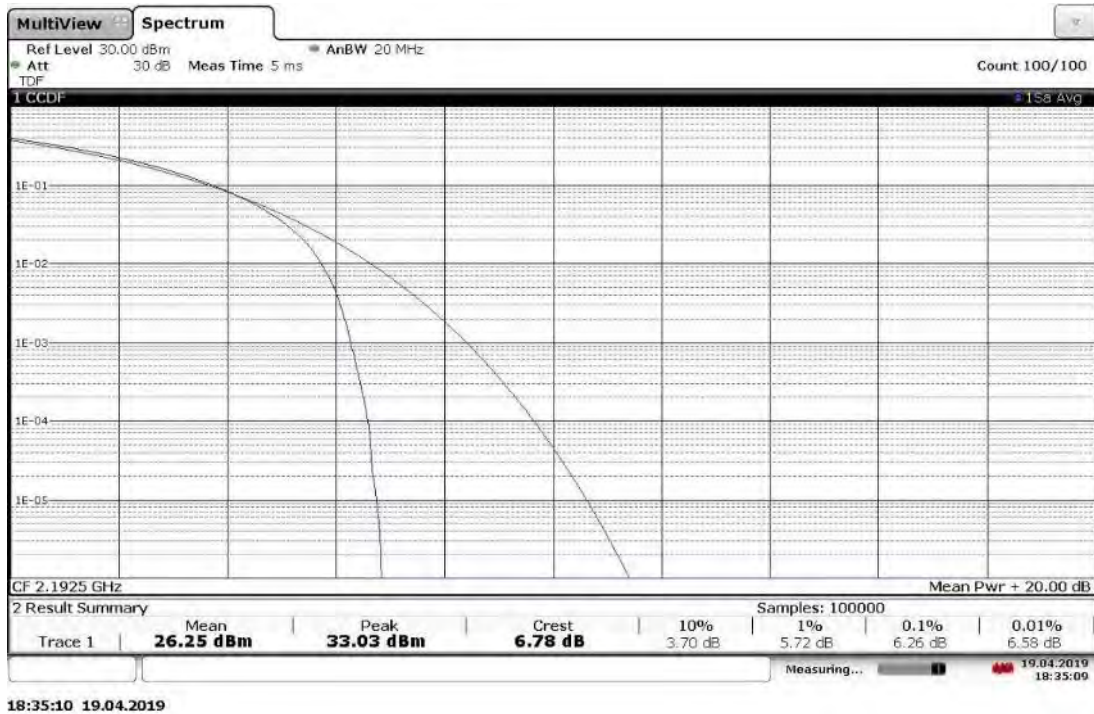
TM3.1a-256QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel 2192.5 MHz, PAPR = 6.93 dB



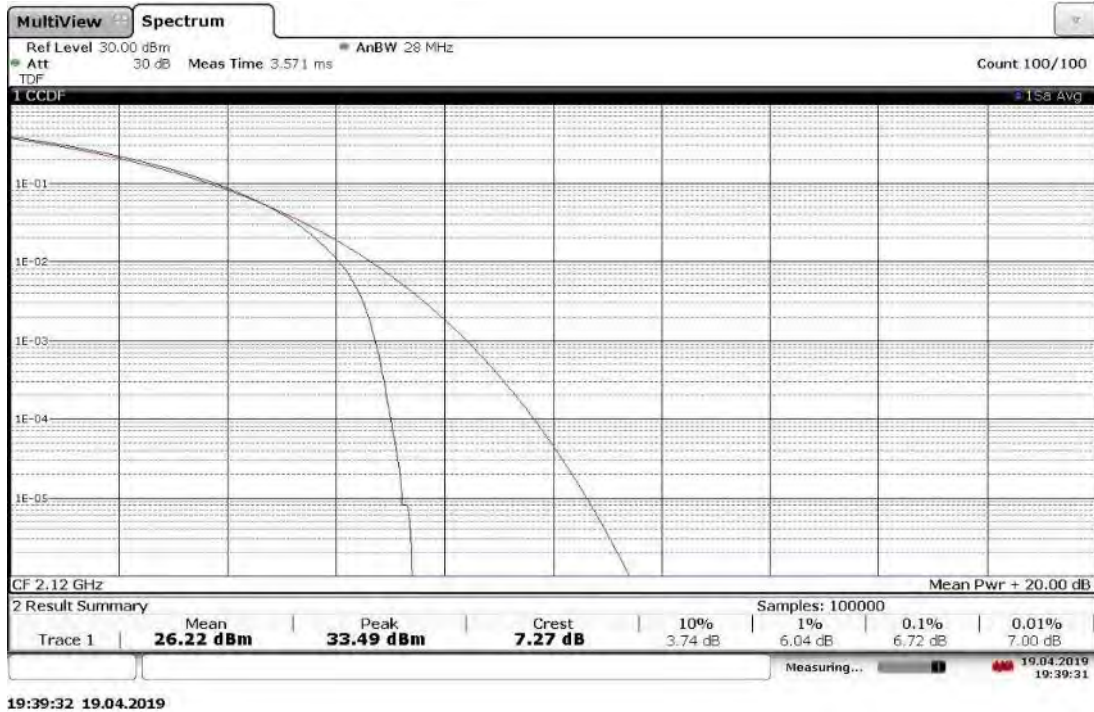
TM3.1a-256QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel 2192.5 MHz, PAPR = 6.78 dB



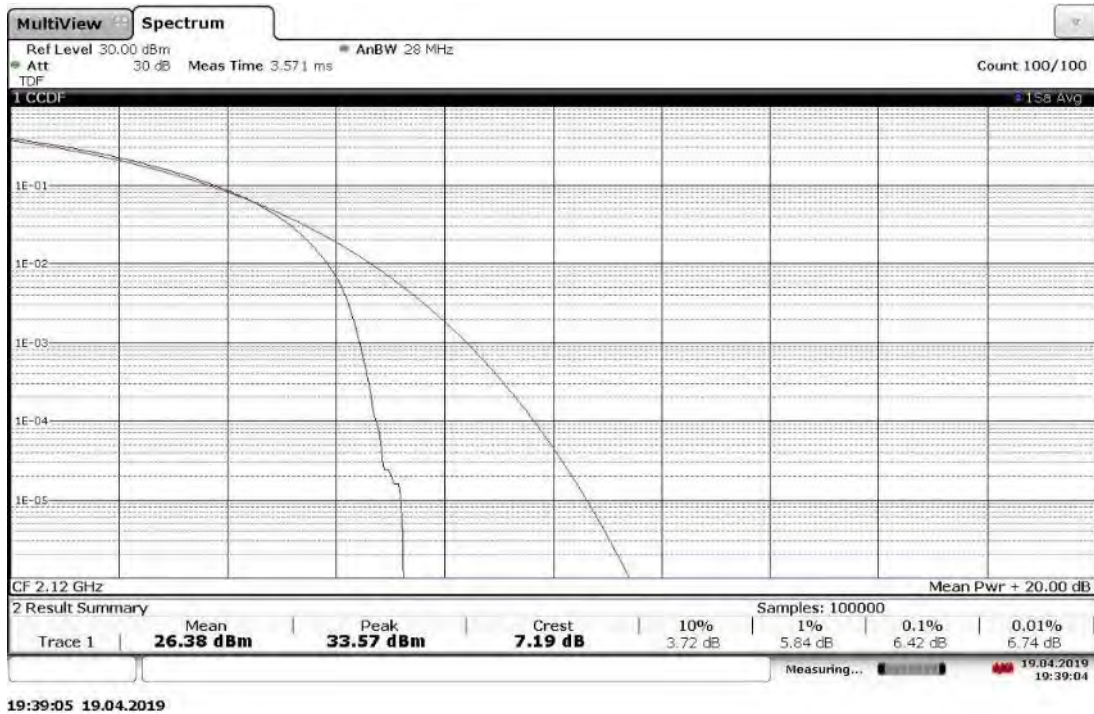
TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel 2120 MHz, PAPR = 7.27 dB



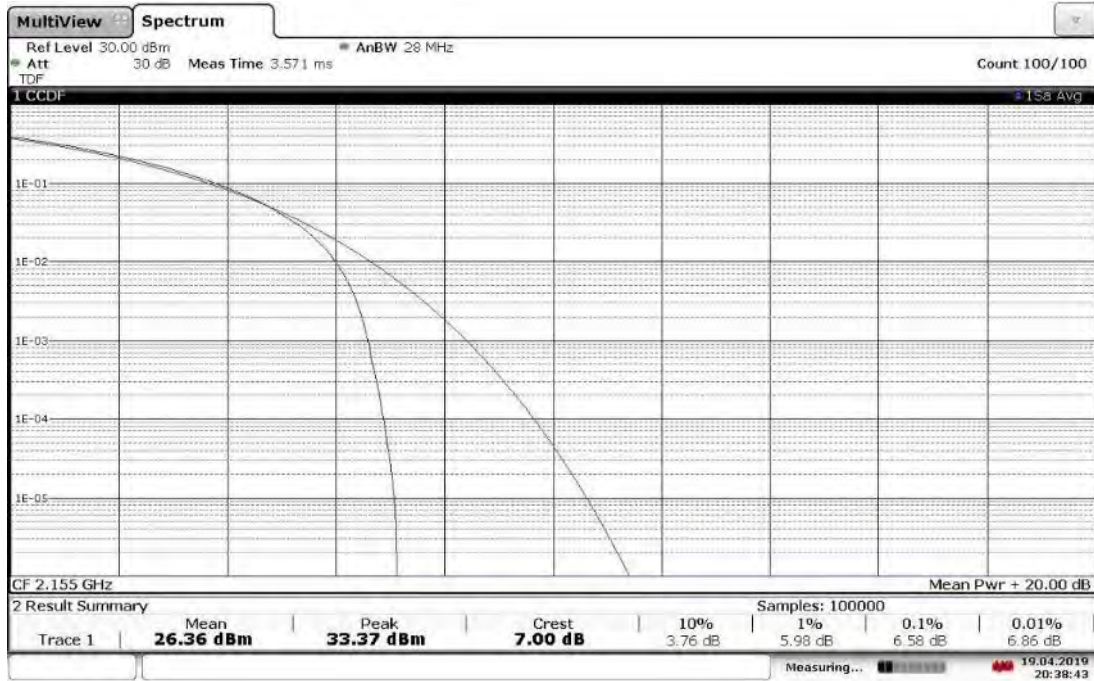
TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel 2120 MHz, PAPR = 7.19 dB



TM3.1a-256QAM_20 MHz Bandwidth

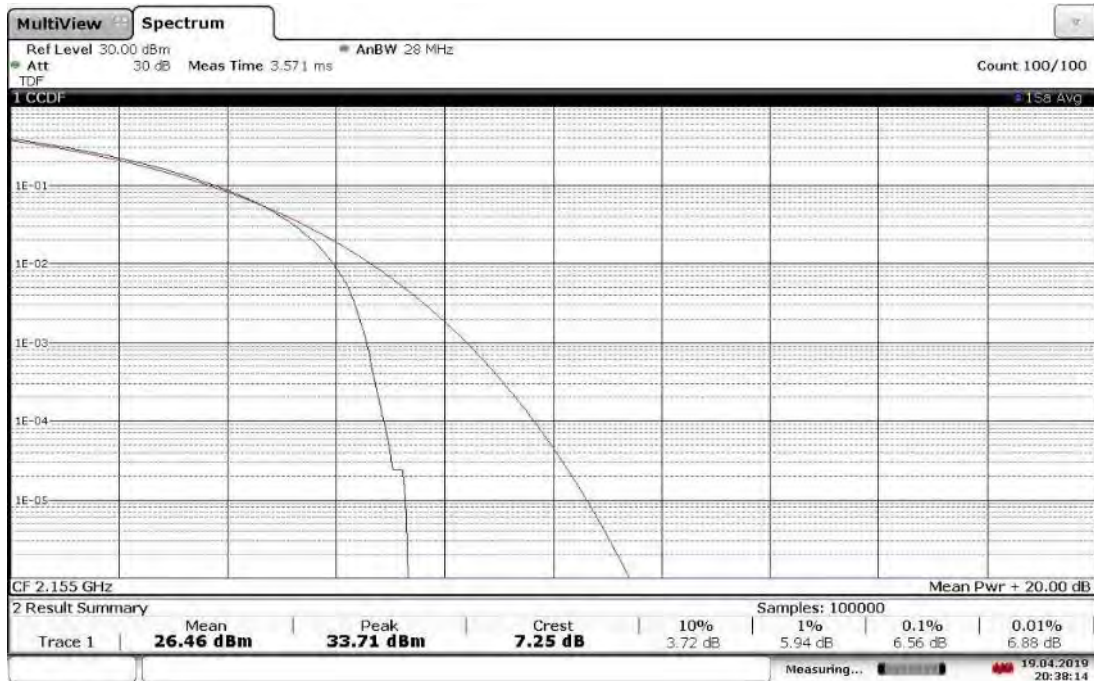
Slot 1 (Band 66), ANT0, Mid Channel 2155 MHz, PAPR = 7.00 dB



20:38:43 19.04.2019

TM3.1a-256QAM_20 MHz Bandwidth

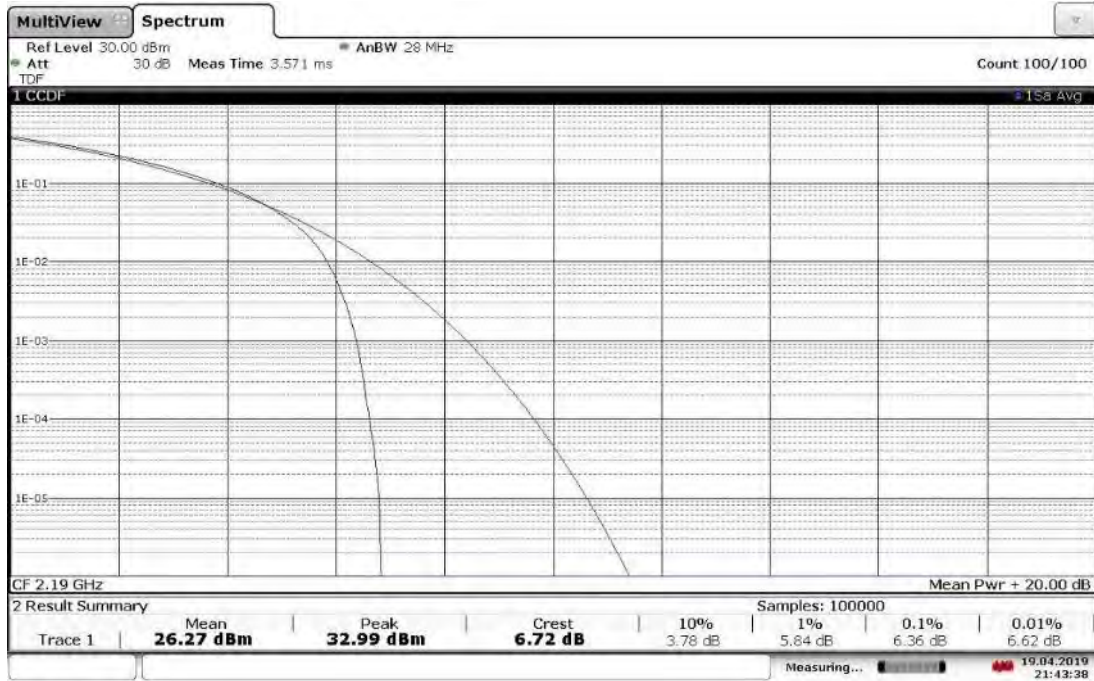
Slot 1 (Band 66), ANT1, Mid Channel 2155 MHz, PAPR = 7.25 dB



20:38:15 19.04.2019

TM3.1a-256QAM_20 MHz Bandwidth

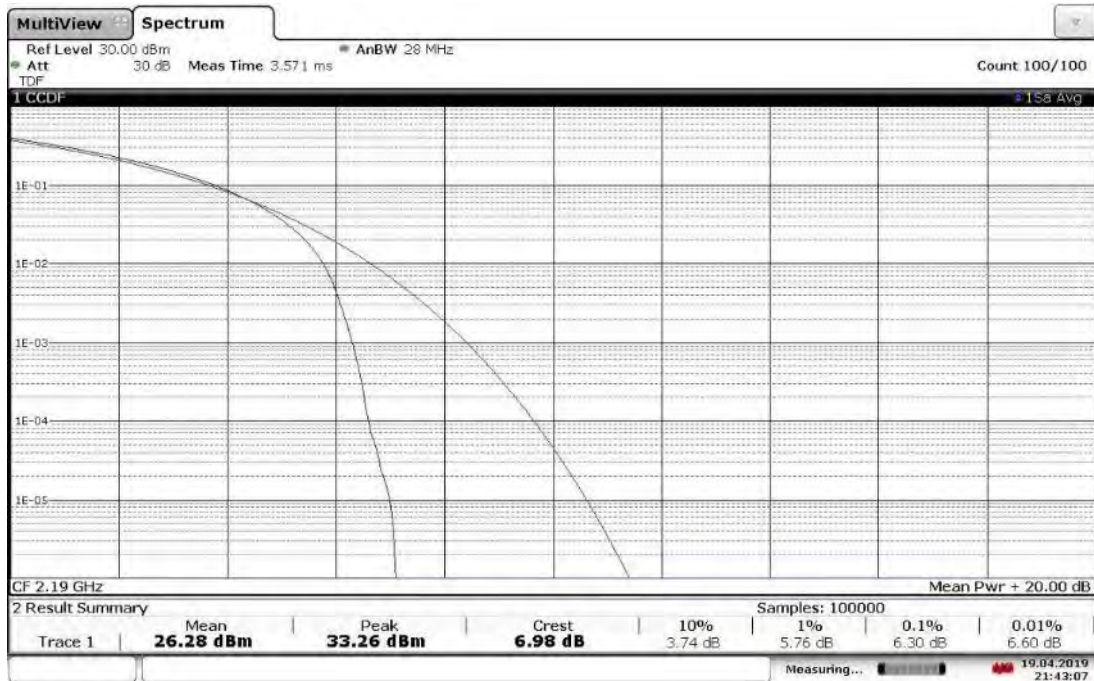
Slot 1 (Band 66), ANT0, High Channel 2190 MHz, PAPR = 6.72 dB



21:43:38 19.04.2019

TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel 2190 MHz, PAPR = 6.98 dB



21:43:07 19.04.2019

Test Personnel:	Kouma Sinn <i>KPS</i>	Test Date:	04/10/2019, 04/11/2019, 04/12/2019, 04/15/2019, 04/16/2019, 04/17/2019, 04/18/2019, 04/19/2019, 04/26/2019, 04/30/2019
Supervising/Reviewing Engineer:			
(Where Applicable)	N/A		
Product Standard:	FCC Part 27	Limit Applied:	See report section 7.3
Input Voltage:	48 VDC (POE)		
Pretest Verification w/ Ambient Signals or BB Source:	N/A	Ambient Temperature:	22, 23, 23, 23, 23, 22, 22, 22, 20, 22 °C
		Relative Humidity:	21, 15, 26, 47, 20, 22, 23, 47, 42, 35 %
		Atmospheric Pressure:	1004, 1013, 1004, 980, 1001, 1011, 1014, 1000, 996, 1017 mbars

Deviations, Additions, or Exclusions: None

8 26 dB Bandwidth and Occupied Bandwidth

8.1 Method

Tests are performed in accordance with ANSI C63.26 and CFR47 FCC Parts 2.1049 and 27.

TEST SITE: EMC Lab

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

8.2 Test Equipment Used:

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
CEN001'	DC-40GHz attenuator 20dB	Centric RF	C411-20	CEN001	02/01/2019	02/01/2020
CBLHF2012-2M-1'	2m 9kHz-40GHz Coaxial Cable - SET1	Huber & Suhner	SF102	252675001	02/01/2019	02/01/2020
ROS005-1'	Signal and Spectrum Analyzer	Rohde & Schwarz	FSW43	100646	10/15/2018	10/15/2019
DS40'	Temp, humidity, pressure gauge	Digi Sense	68000-49	181717625	11/06/2018	11/06/2019

Software Utilized:

Name	Manufacturer	Version
None	--	--

8.3 Results:

The sample tested was found to Comply.

§27.53(h)(3): 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.

§2.1049: The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Slot 1 (Band 66), Bandwidth: 5 MHz, Modulation: TM1.1-QPSK

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2112.50	ANT0	4.531	5.21
		ANT1	4.541	5.01
Mid	2155.00	ANT0	4.542	5.00
		ANT1	4.532	5.05
High	2197.50	ANT0	4.531	5.26
		ANT1	4.547	5.08

Slot 1 (Band 66), Bandwidth: 10 MHz, Modulation: TM1.1-QPSK

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2115.00	ANT0	8.999	9.95
		ANT1	8.992	9.98
Mid	2155.00	ANT0	8.996	9.94
		ANT1	9.007	9.89
High	2195.00	ANT0	8.983	10.01
		ANT1	9.006	10.01

Slot 1 (Band 66), Bandwidth: 15 MHz, Modulation: TM1.1-QPSK

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2117.50	ANT0	13.510	14.77
		ANT1	13.475	14.72
Mid	2155.00	ANT0	13.551	14.80
		ANT1	13.526	14.79
High	2192.50	ANT0	13.518	14.80
		ANT1	13.467	14.77

Slot 1 (Band 66), Bandwidth: 20 MHz, Modulation: TM1.1-QPSK

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2120.00	ANT0	17.939	19.39
		ANT1	17.907	19.31
Mid	2155.00	ANT0	17.911	19.72
		ANT1	17.911	19.61
High	2190.00	ANT0	17.905	19.49
		ANT1	17.905	19.74

Slot 1 (Band 66), Bandwidth: 5 MHz, Modulation: TM3.2-16QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2112.50	ANT0	4.544	5.14
		ANT1	4.556	5.23
Mid	2155.00	ANT0	4.553	5.16
		ANT1	4.516	4.55
High	2197.50	ANT0	4.539	5.11
		ANT1	4.560	5.49

Slot 1 (Band 66), Bandwidth: 10 MHz, Modulation: TM3.2-16QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2115.00	ANT0	9.014	9.91
		ANT1	8.985	9.91
Mid	2155.00	ANT0	9.004	9.91
		ANT1	9.018	9.89
High	2195.00	ANT0	9.021	9.91
		ANT1	9.023	9.94

Slot 1 (Band 66), Bandwidth: 15 MHz, Modulation: TM3.2-16QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2117.50	ANT0	13.524	14.48
		ANT1	13.453	14.47
Mid	2155.00	ANT0	13.488	14.47
		ANT1	13.548	14.51
High	2192.50	ANT0	13.485	14.37
		ANT1	13.466	14.58

Slot 1 (Band 66), Bandwidth: 20 MHz, Modulation: TM3.2-16QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2120.00	ANT0	17.945	19.11
		ANT1	17.892	19.51
Mid	2155.00	ANT0	17.868	19.62
		ANT1	17.933	19.48
High	2190.00	ANT0	17.933	19.03
		ANT1	17.910	19.56

Slot 1 (Band 66), Bandwidth: 5 MHz, Modulation: TM3.1-64QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2112.50	ANT0	4.567	4.99
		ANT1	4.520	5.08
Mid	2155.00	ANT0	4.524	5.06
		ANT1	4.580	5.04
High	2197.50	ANT0	4.585	5.31
		ANT1	4.579	5.49

Slot 1 (Band 66), Bandwidth: 10 MHz, Modulation: TM3.1-64QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2115.00	ANT0	8.996	9.90
		ANT1	9.022	9.92
Mid	2155.00	ANT0	8.993	9.90
		ANT1	8.982	9.90
High	2195.00	ANT0	8.996	9.94
		ANT1	9.000	9.98

Slot 1 (Band 66), Bandwidth: 15 MHz, Modulation: TM3.1-64QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2117.50	ANT0	13.518	14.59
		ANT1	13.501	14.65
Mid	2155.00	ANT0	13.468	14.70
		ANT1	13.440	14.67
High	2192.50	ANT0	13.479	14.62
		ANT1	13.470	14.82

Slot 1 (Band 66), Bandwidth: 20 MHz, Modulation: TM3.1-64QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2120.00	ANT0	17.865	19.53
		ANT1	17.913	19.46
Mid	2150.00	ANT0	17.869	19.30
		ANT1	17.911	19.38
High	2190.00	ANT0	17.915	19.48
		ANT1	17.930	19.65

Slot 1 (Band 66), Bandwidth: 5 MHz, Modulation: TM3.1a-256QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2112.50	ANT0	4.553	5.04
		ANT1	4.551	5.08
Mid	2155.00	ANT0	4.536	5.10
		ANT1	4.575	5.04
High	2197.50	ANT0	4.557	5.19
		ANT1	4.550	5.14

Slot 1 (Band 66), Bandwidth: 10 MHz, Modulation: TM3.1a-256QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2115.00	ANT0	8.967	9.85
		ANT1	9.007	9.84
Mid	2155.00	ANT0	8.983	9.79
		ANT1	8.963	9.87
High	2195.00	ANT0	8.989	9.90
		ANT1	8.968	9.84

Slot 1 (Band 66), Bandwidth: 15 MHz, Modulation: TM3.1a-256QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2117.50	ANT0	13.445	14.70
		ANT1	13.505	14.23
Mid	2155.00	ANT0	13.495	14.53
		ANT1	13.440	14.67
High	2192.50	ANT0	13.479	14.75
		ANT1	13.470	14.73

Slot 1 (Band 66), Bandwidth: 20 MHz, Modulation: TM3.1a-256QAM

Channel	Frequency (MHz)	Antenna Port	Occupied BW (MHz)	26 dB BW (MHz)
Low	2120.00	ANT0	17.848	19.42
		ANT1	17.928	19.49
Mid	2150.00	ANT0	17.971	19.65
		ANT1	17.915	19.58
High	2190.00	ANT0	17.913	19.57
		ANT1	17.871	20.03

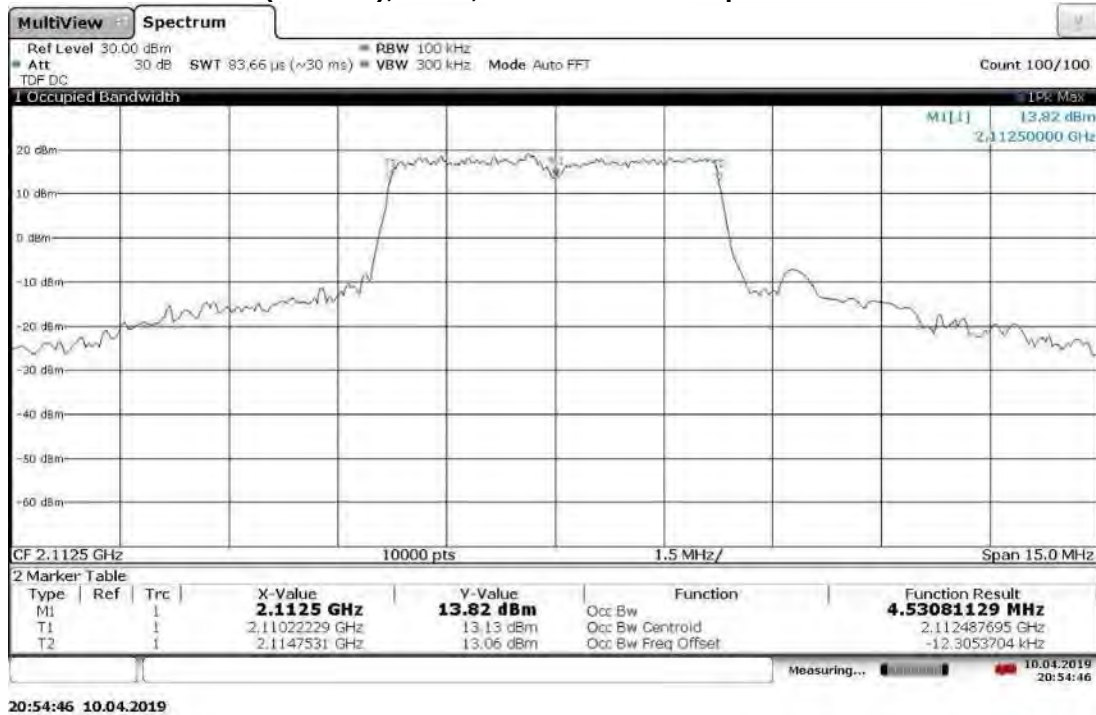
8.4 Setup Photograph:



8.5 Plots/Data:

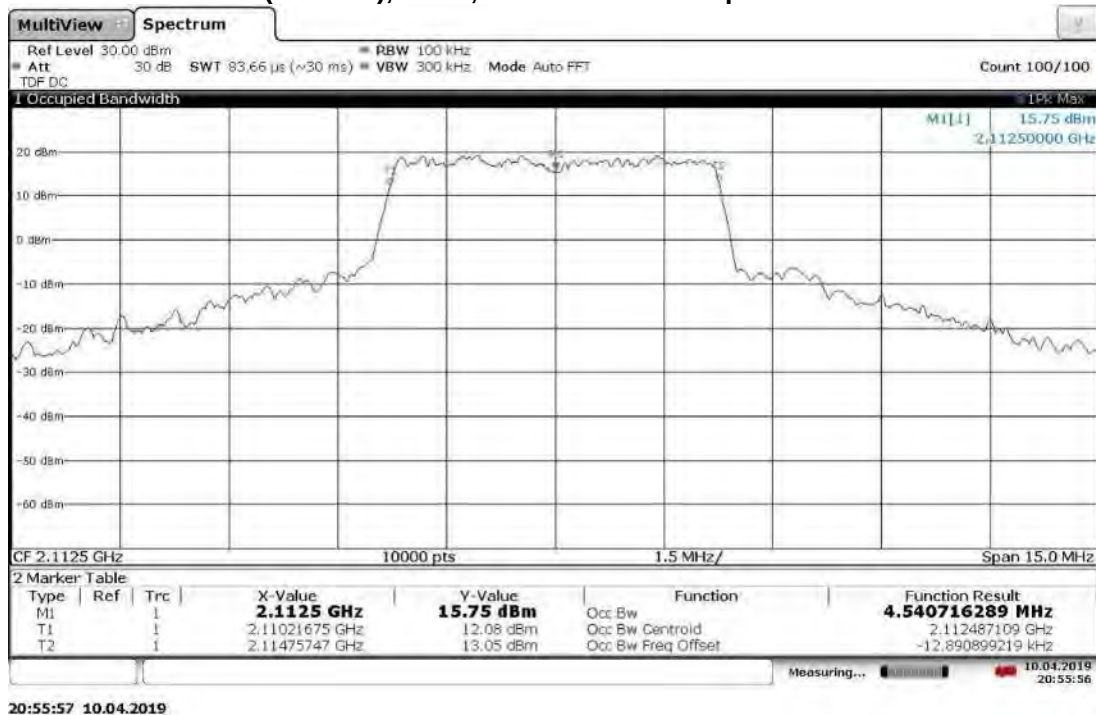
TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



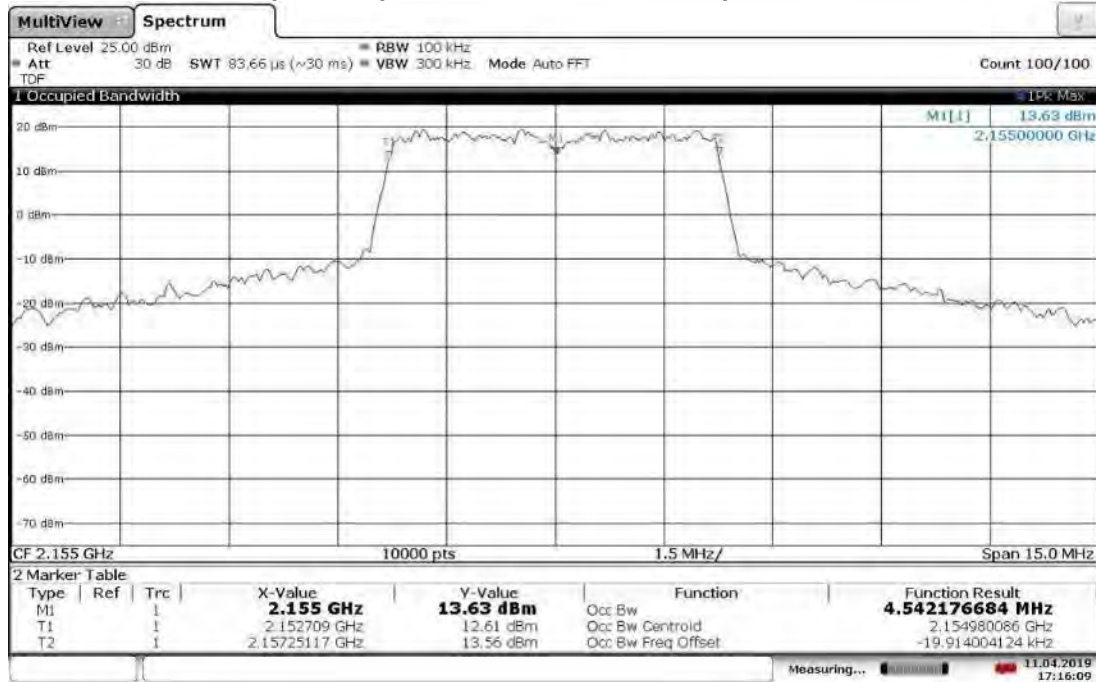
TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



TM1.1-QPSK_5 MHz Bandwidth

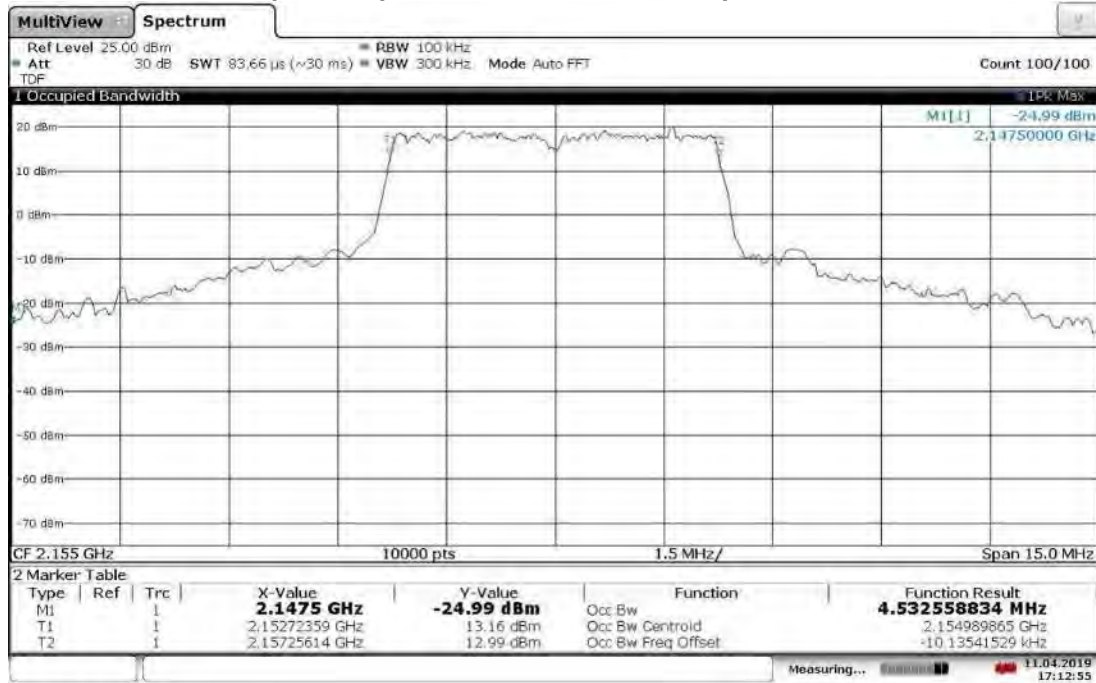
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



17:16:10 11.04.2019

TM1.1-QPSK_5 MHz Bandwidth

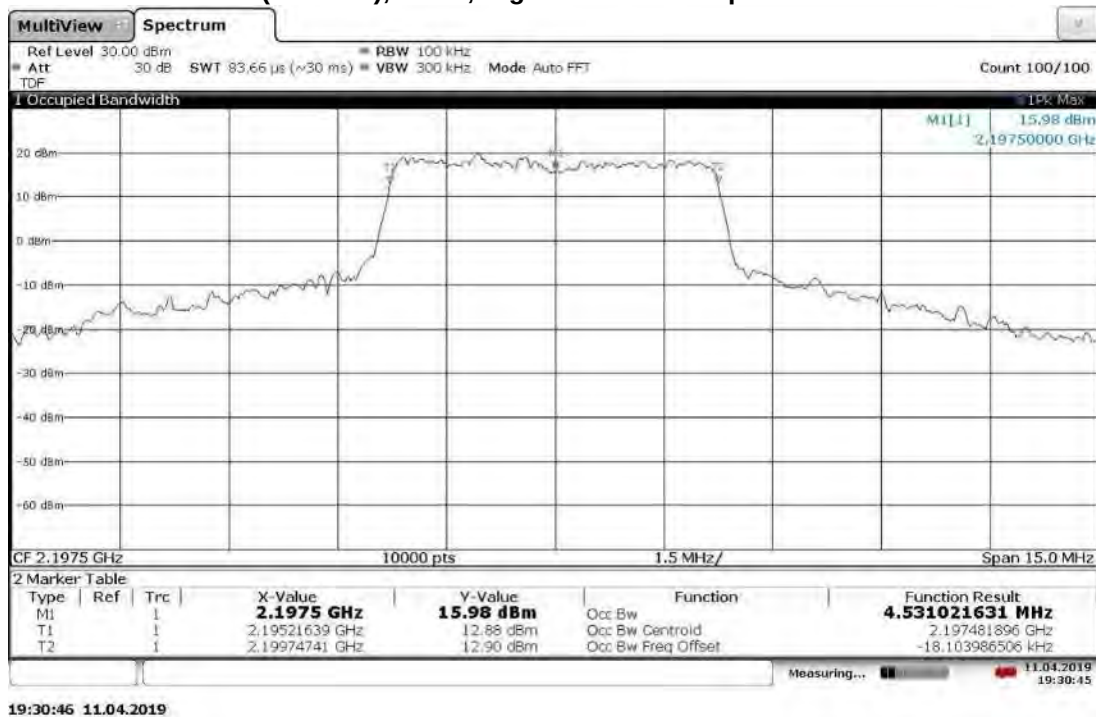
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



17:12:56 11.04.2019

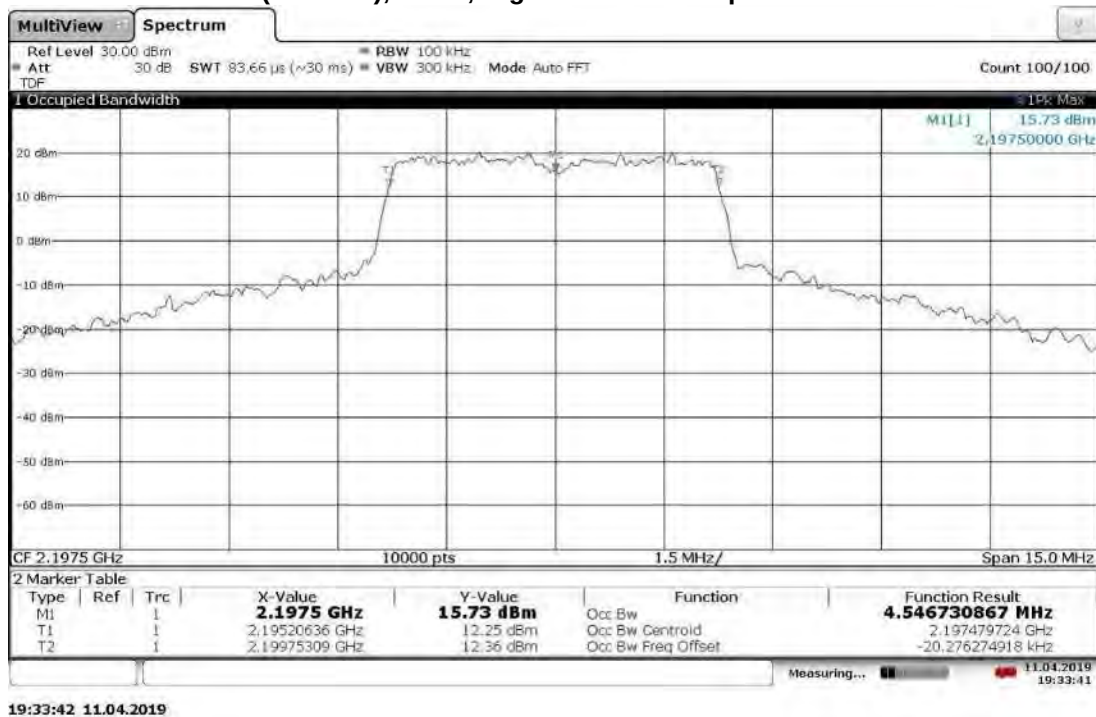
TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



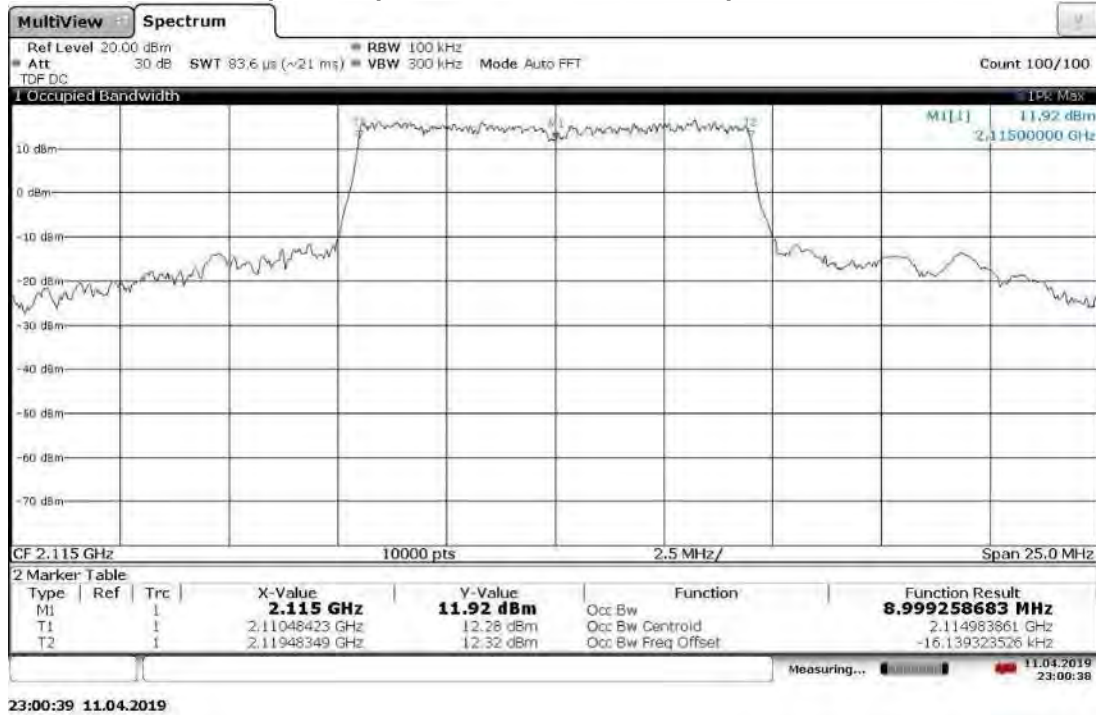
TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



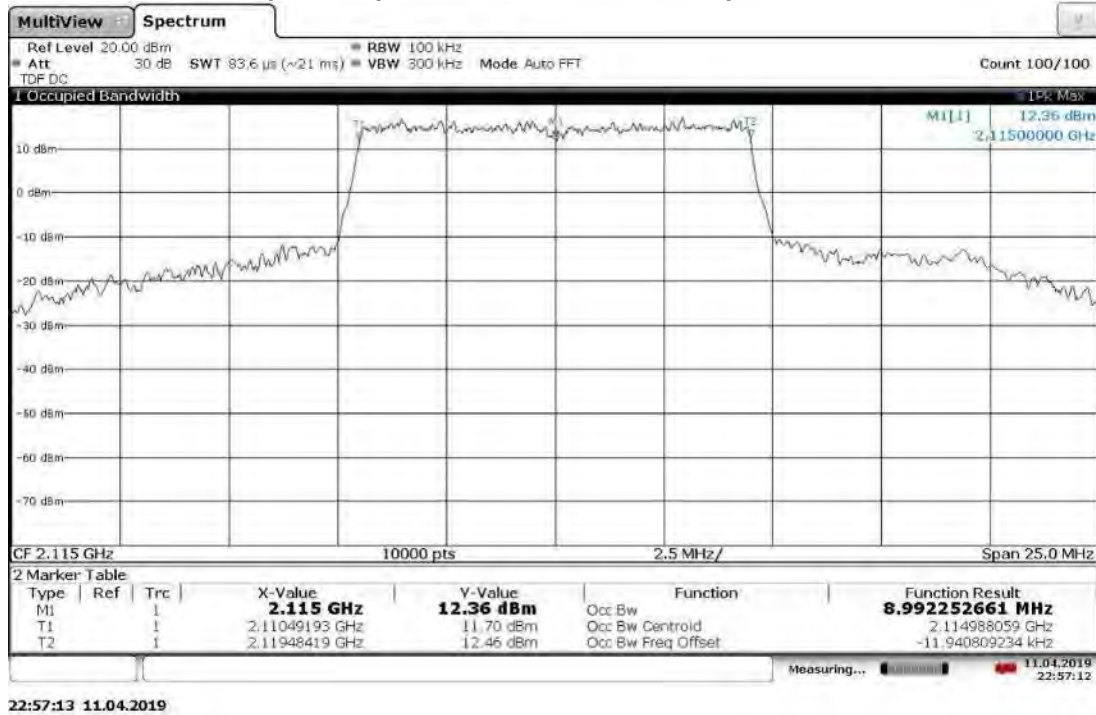
TM1.1-QPSK_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



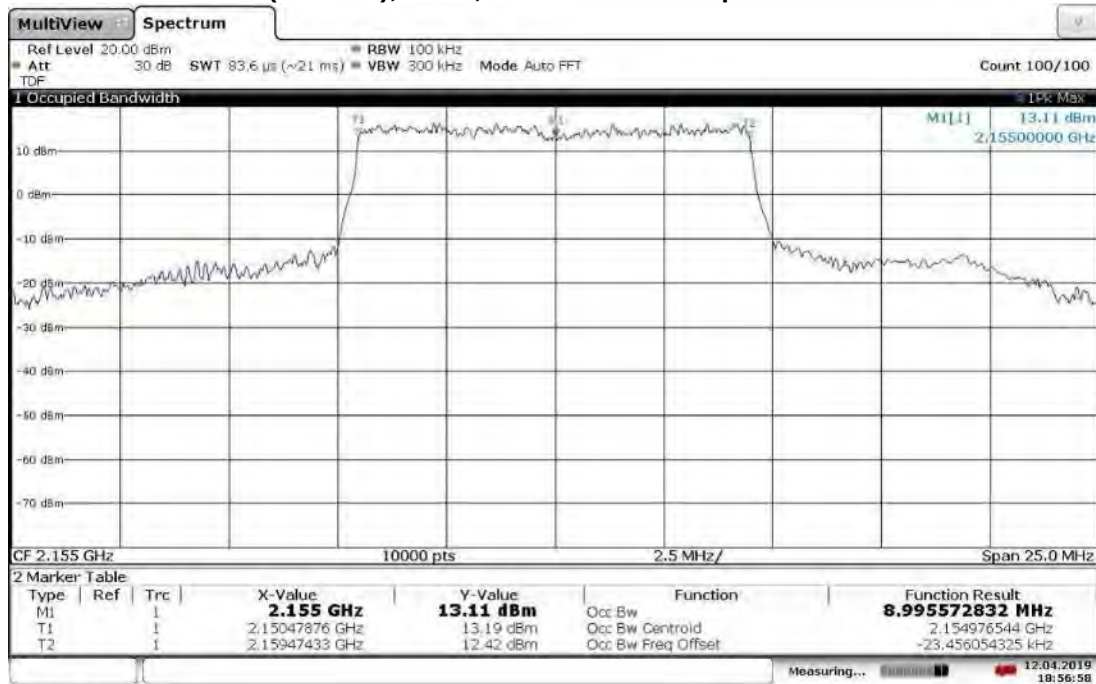
TM1.1-QPSK_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



TM1.1-QPSK_10 MHz Bandwidth

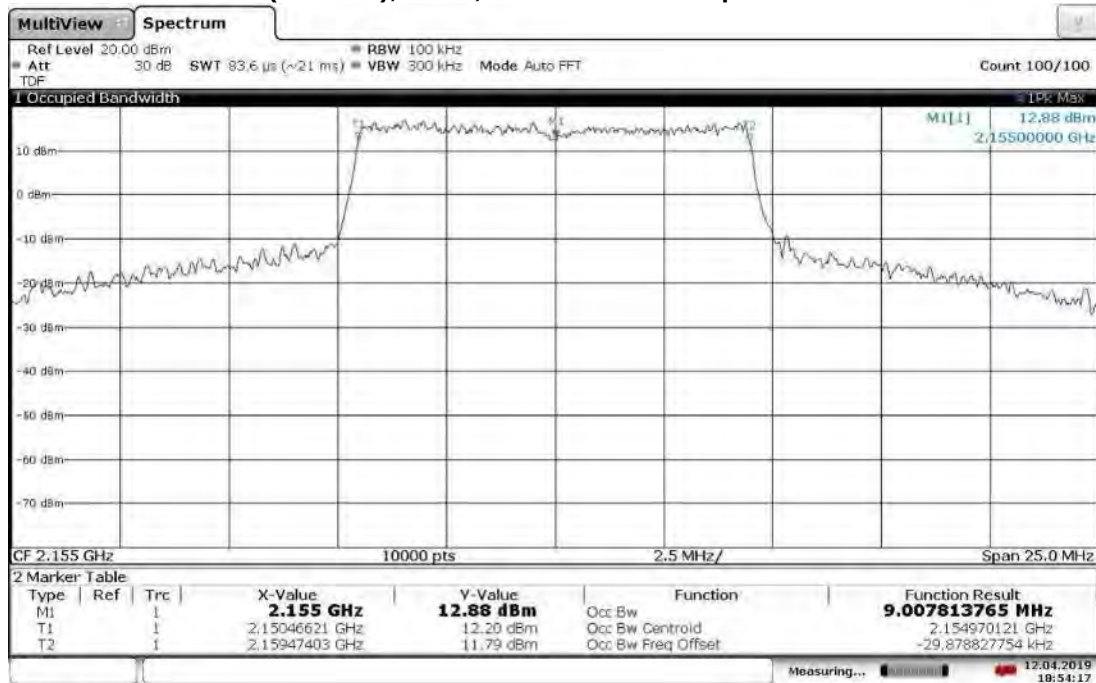
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



18:56:58 12.04.2019

TM1.1-QPSK_10 MHz Bandwidth

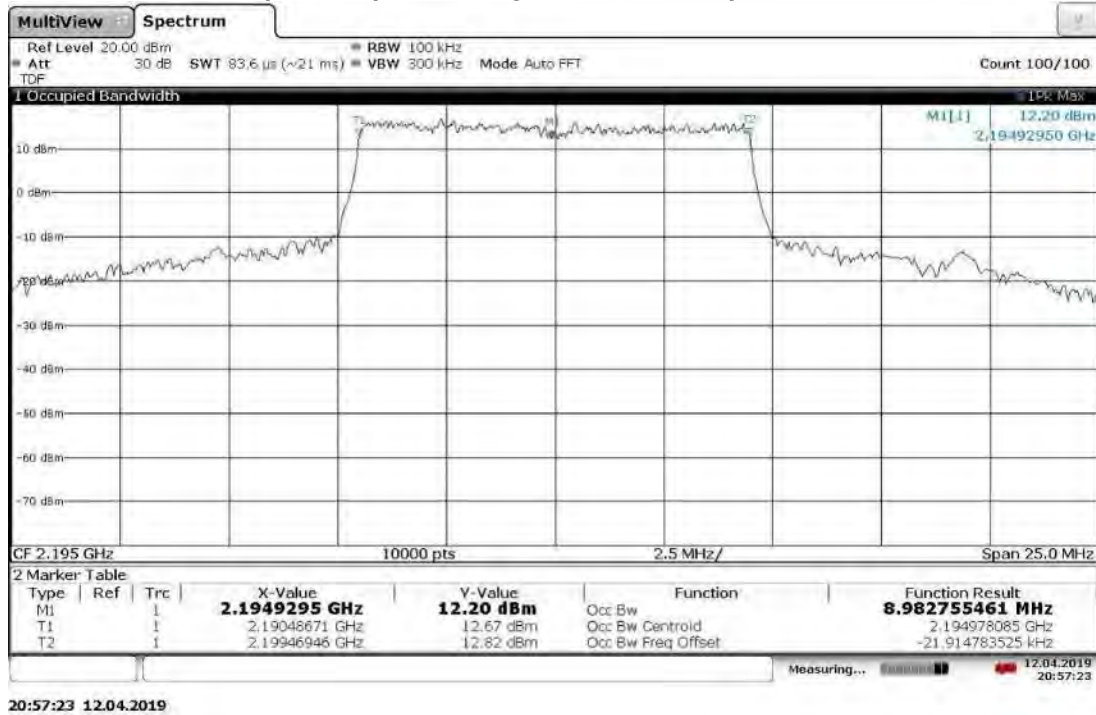
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



18:54:19 12.04.2019

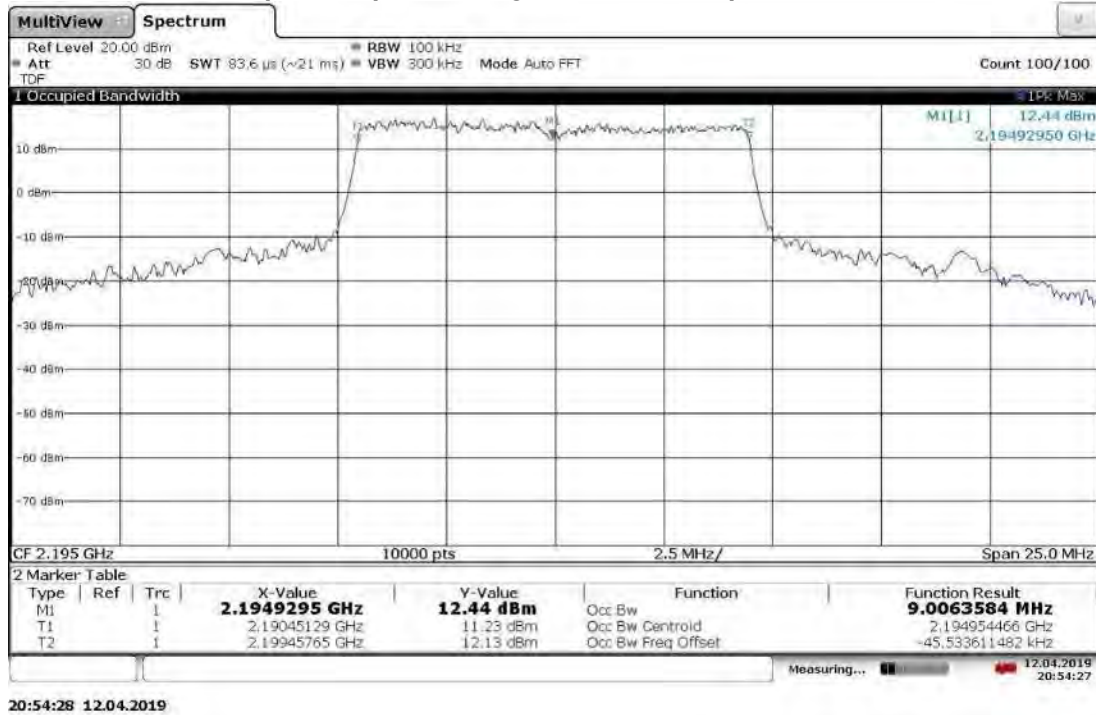
TM1.1-QPSK_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



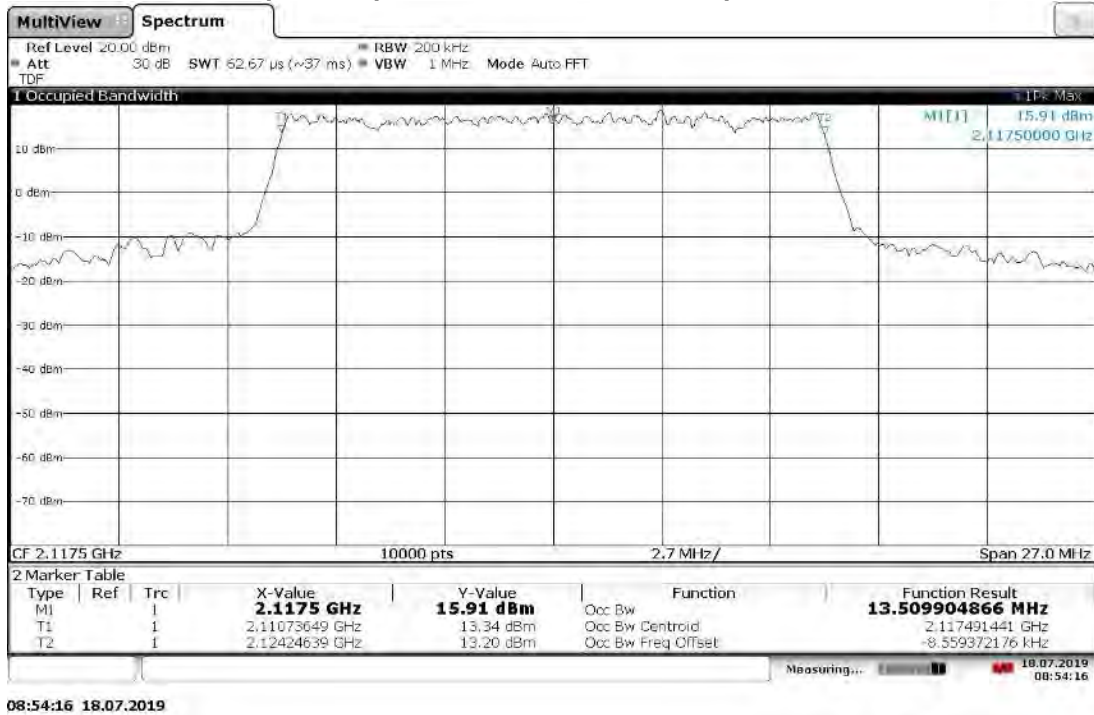
TM1.1-QPSK_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



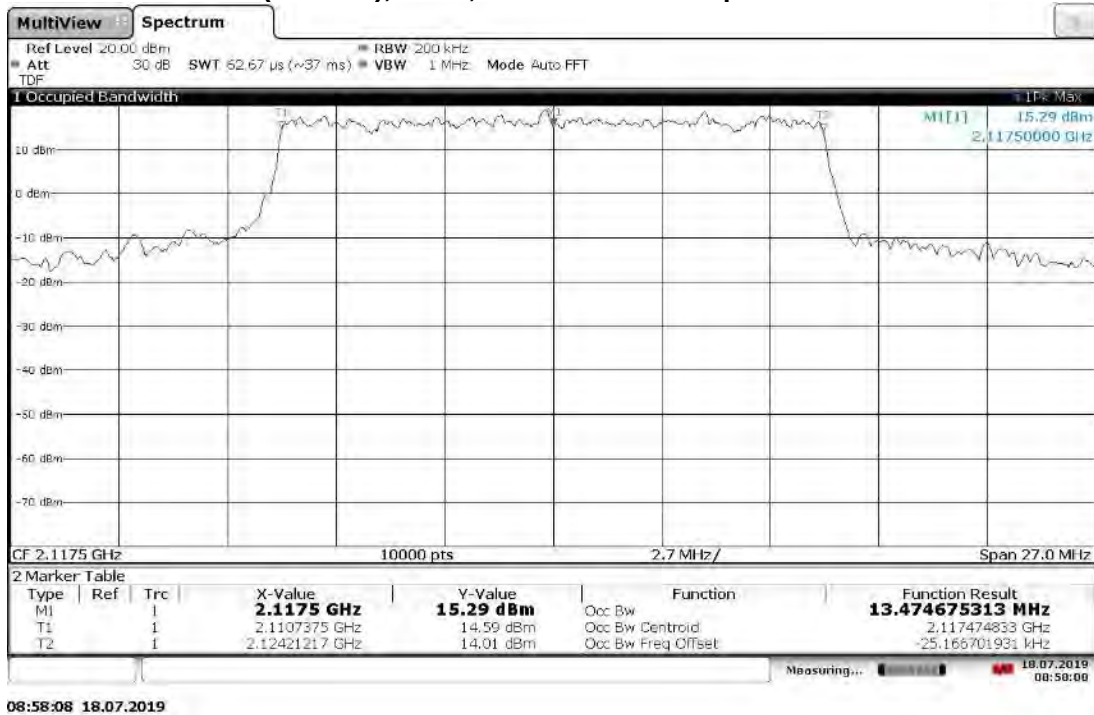
TM1.1-QPSK_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



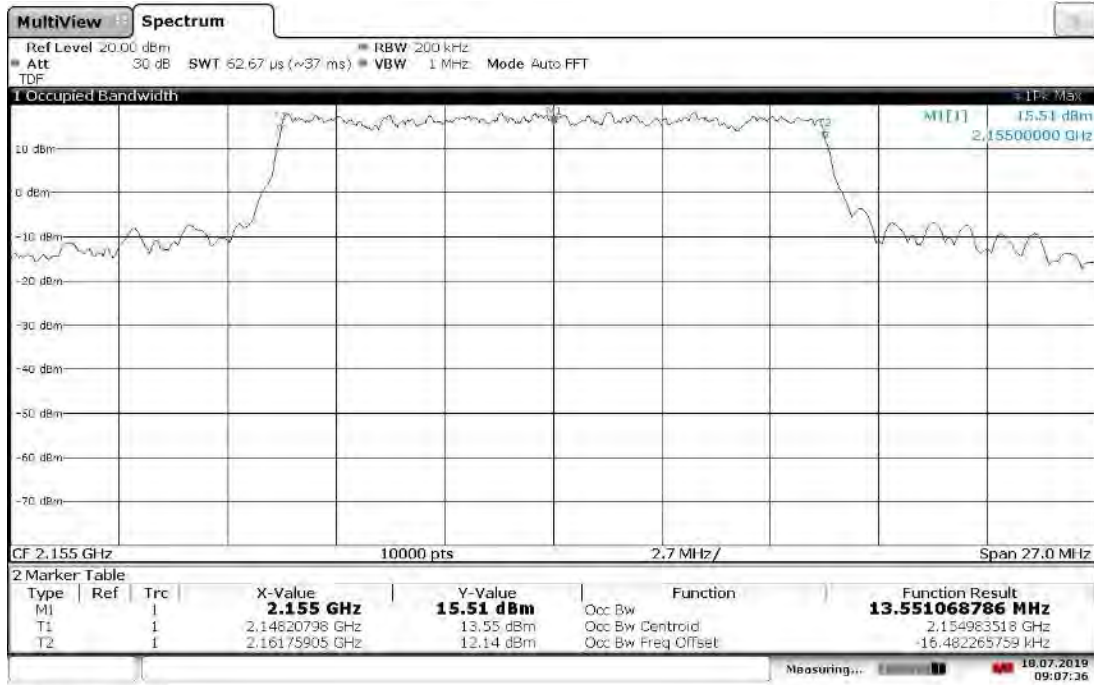
TM1.1-QPSK_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



TM1.1-QPSK_15 MHz Bandwidth

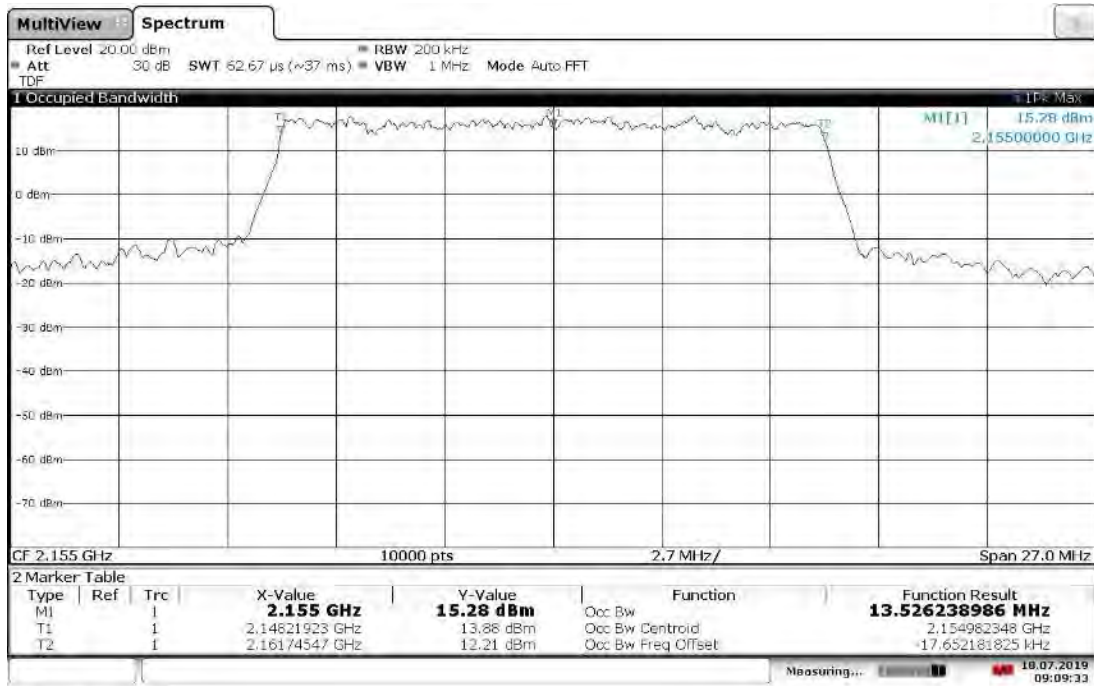
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



09:07:36 18.07.2019

TM1.1-QPSK_15 MHz Bandwidth

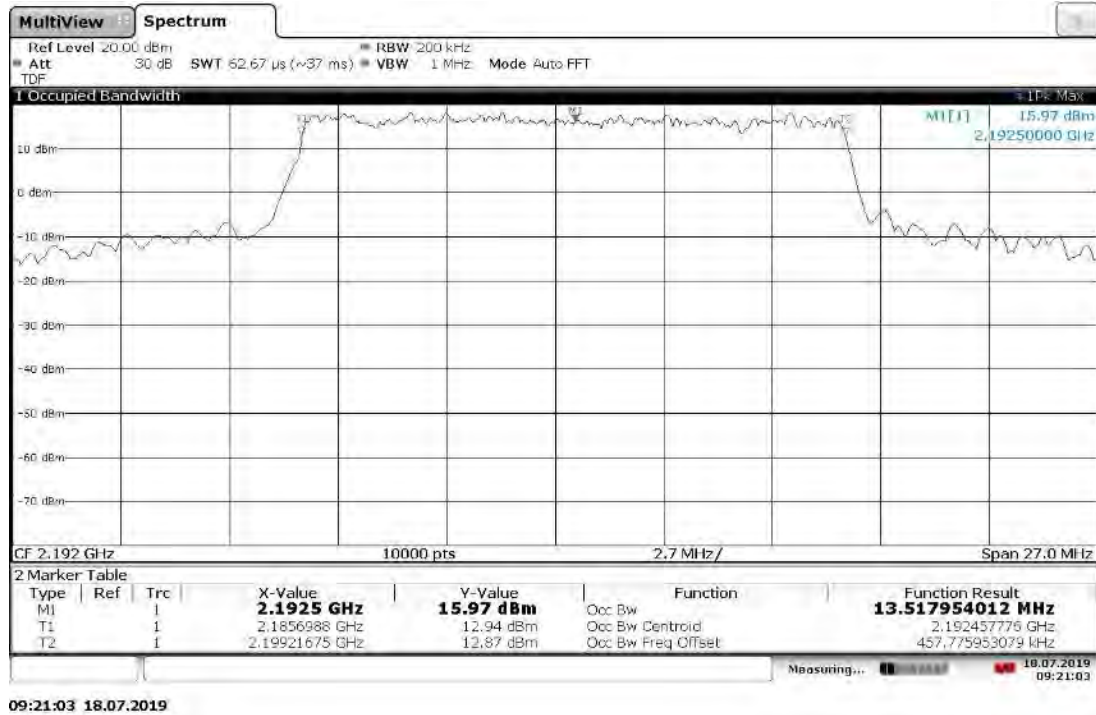
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



09:09:34 18.07.2019

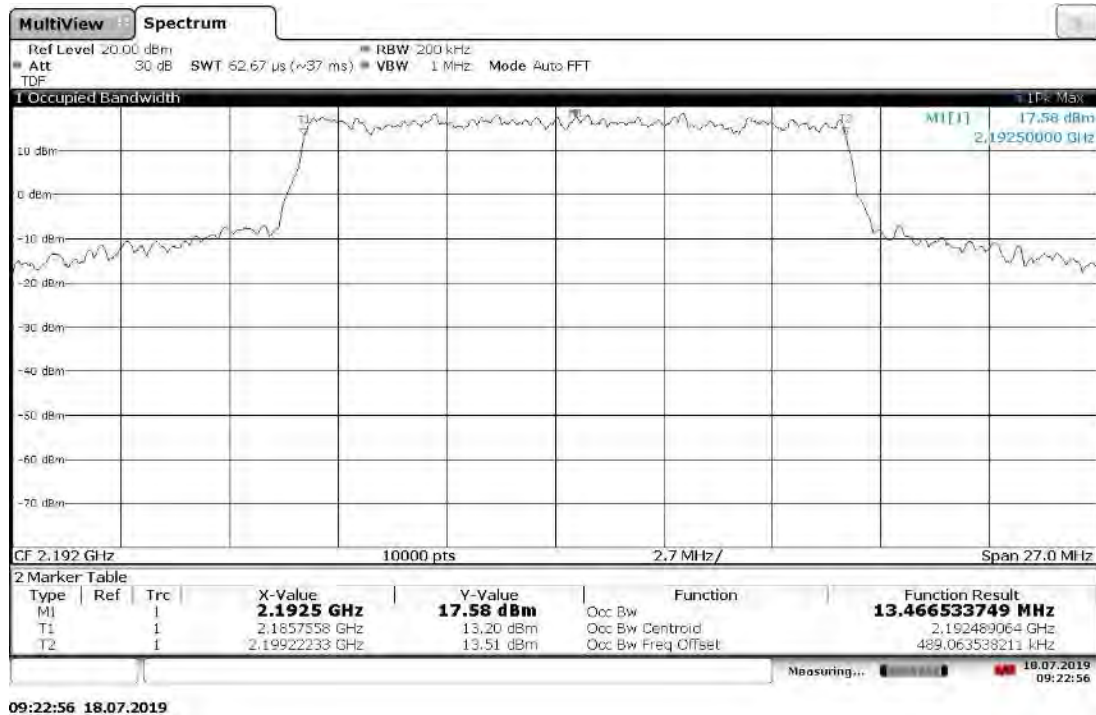
TM1.1-QPSK_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



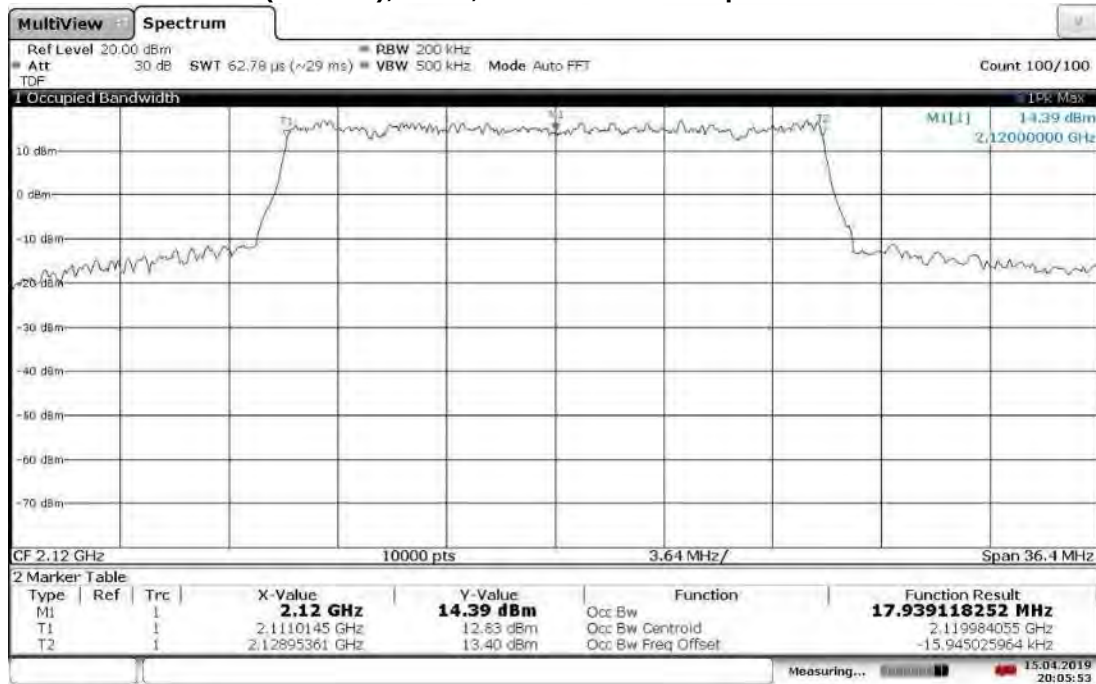
TM1.1-QPSK_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



TM1.1-QPSK_20 MHz Bandwidth

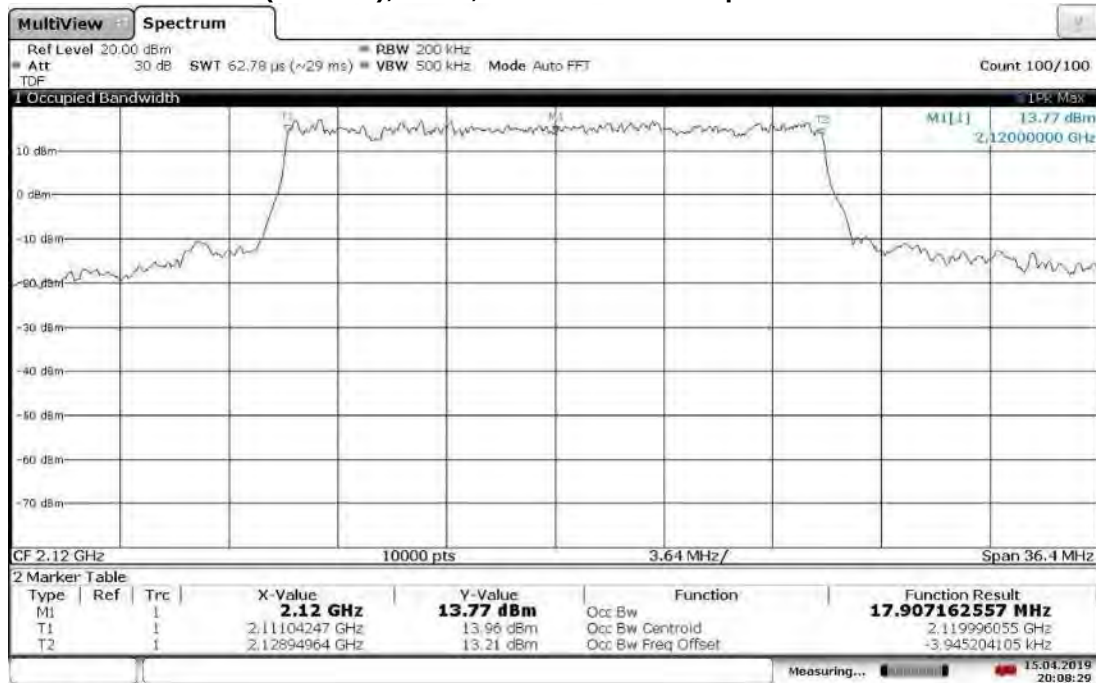
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



20:05:54 15.04.2019

TM1.1-QPSK_20 MHz Bandwidth

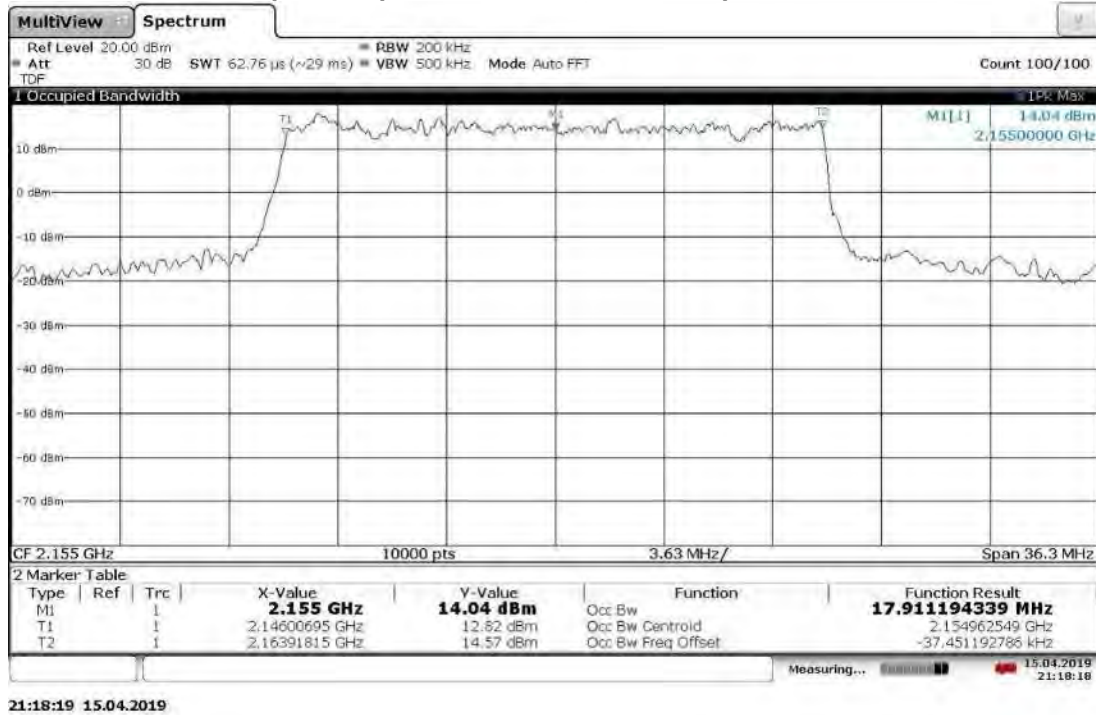
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



20:08:29 15.04.2019

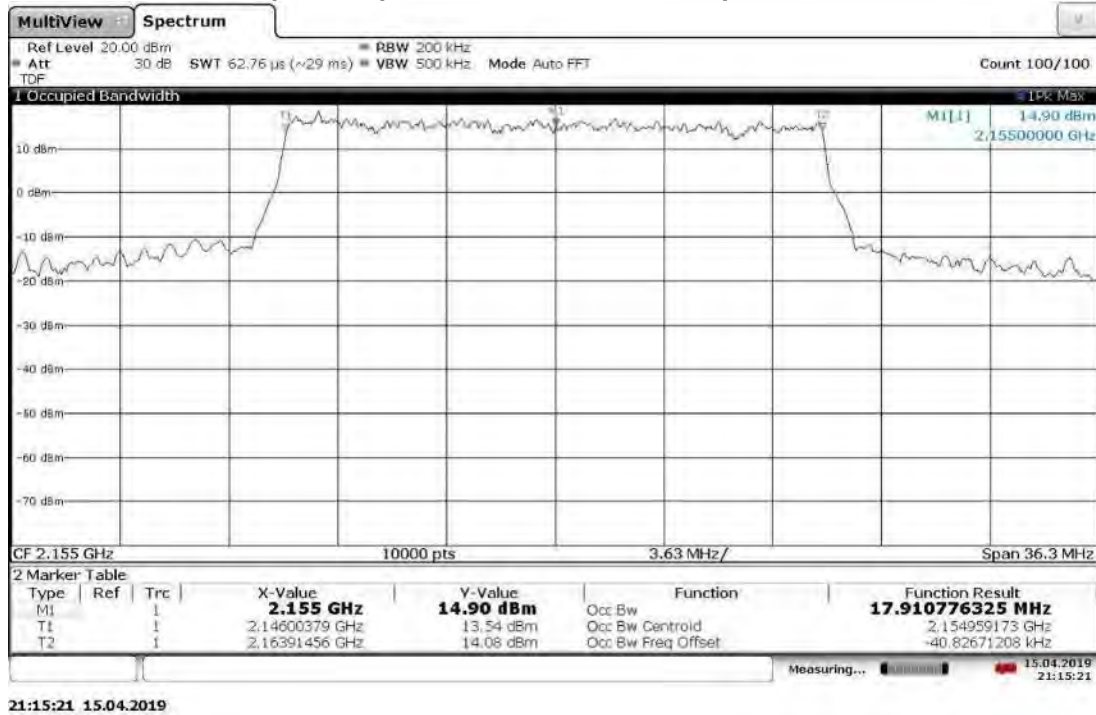
TM1.1-QPSK_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



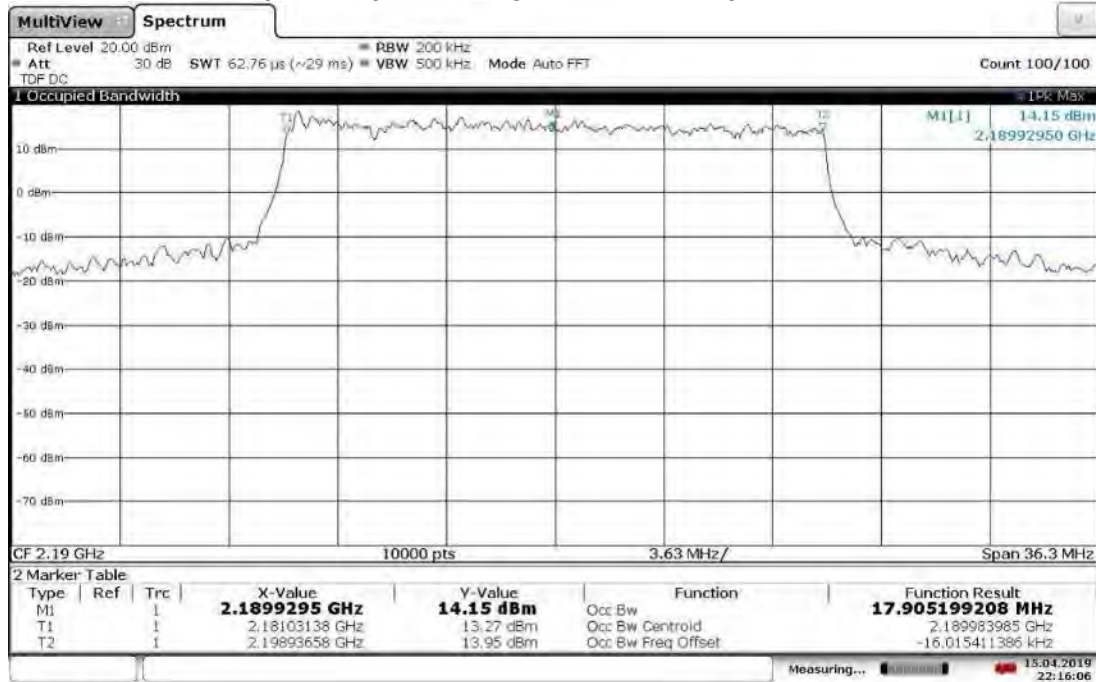
TM1.1-QPSK_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



TM1.1-QPSK_20 MHz Bandwidth

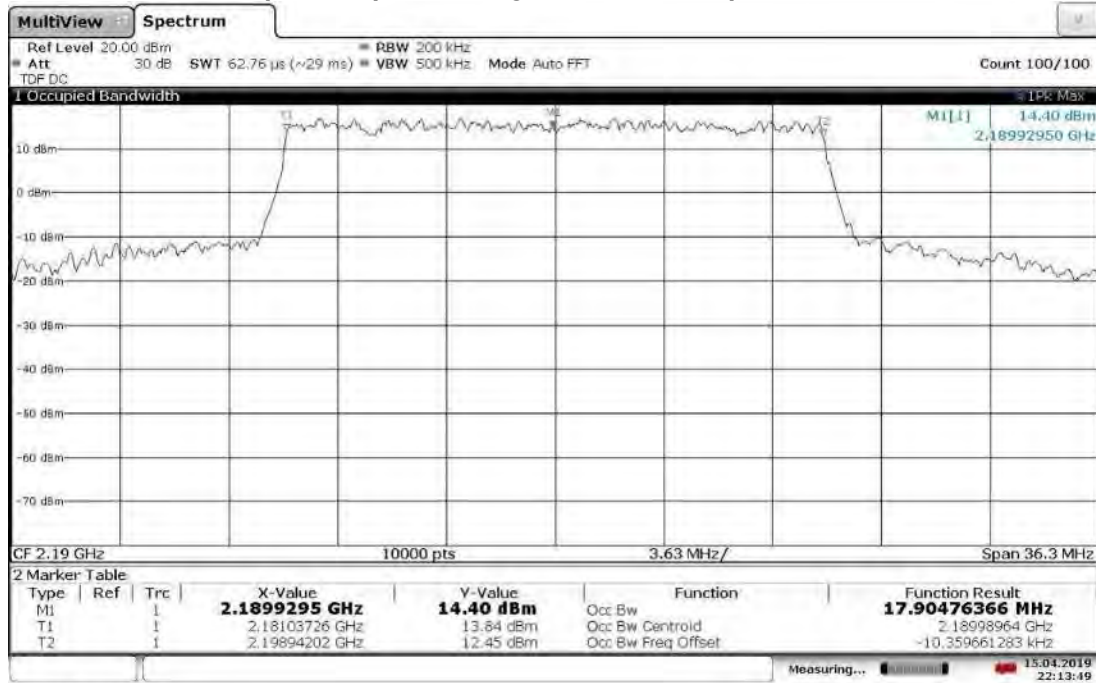
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



22:16:07 15.04.2019

TM1.1-QPSK_20 MHz Bandwidth

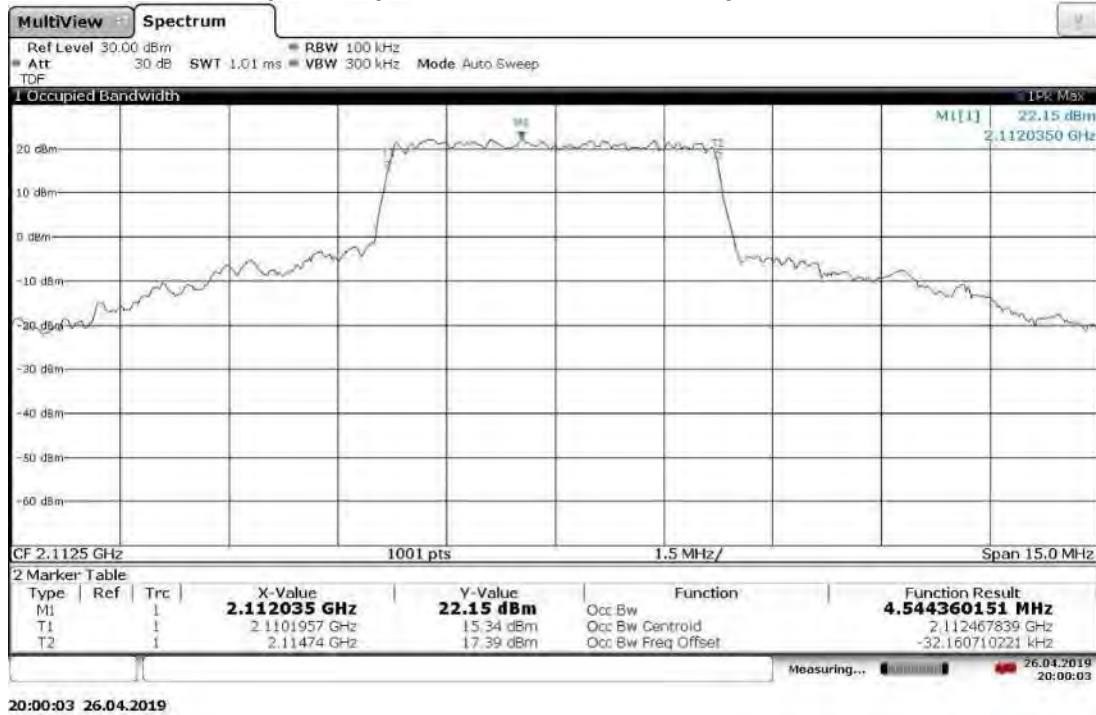
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



22:13:50 15.04.2019

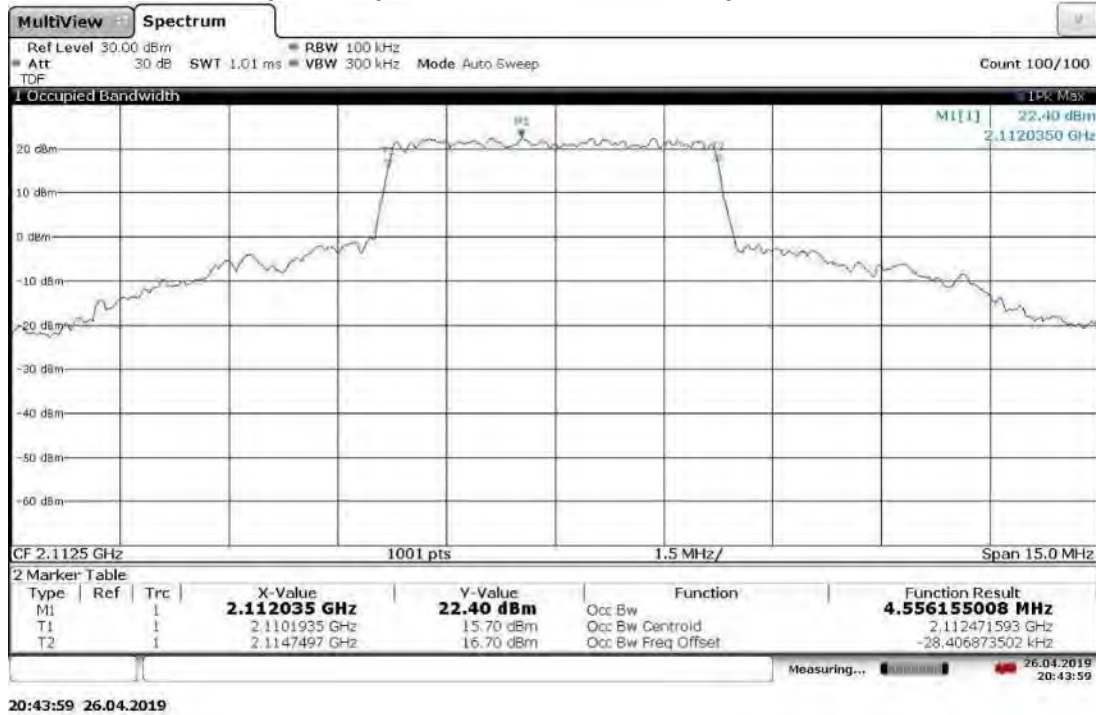
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



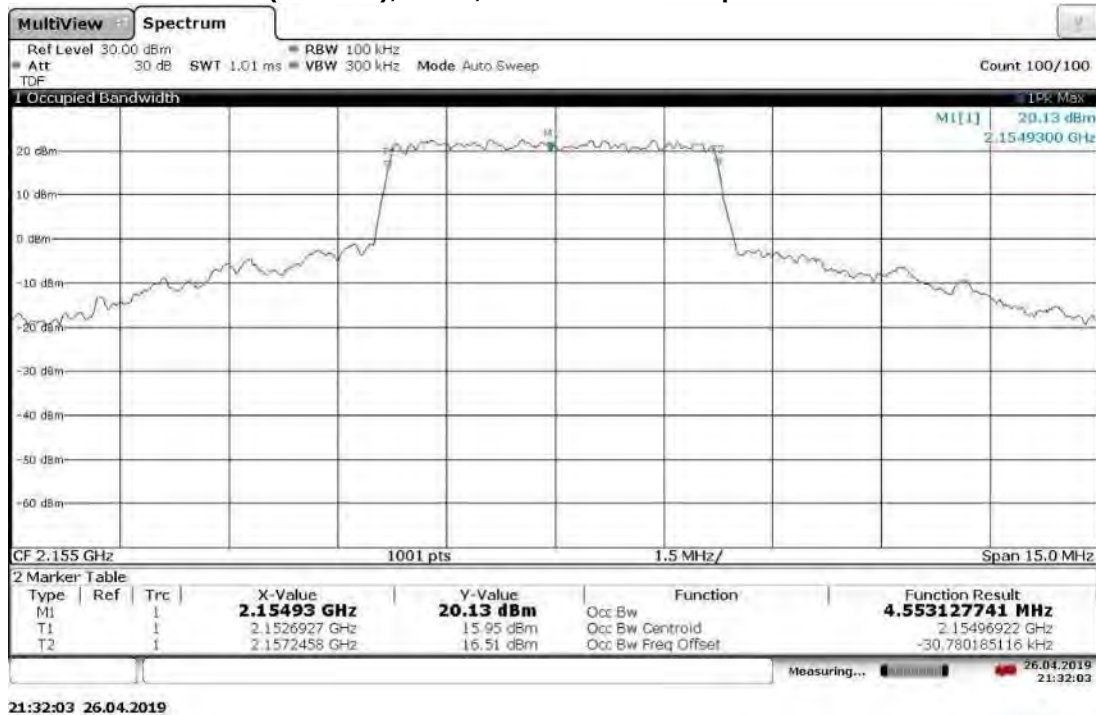
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



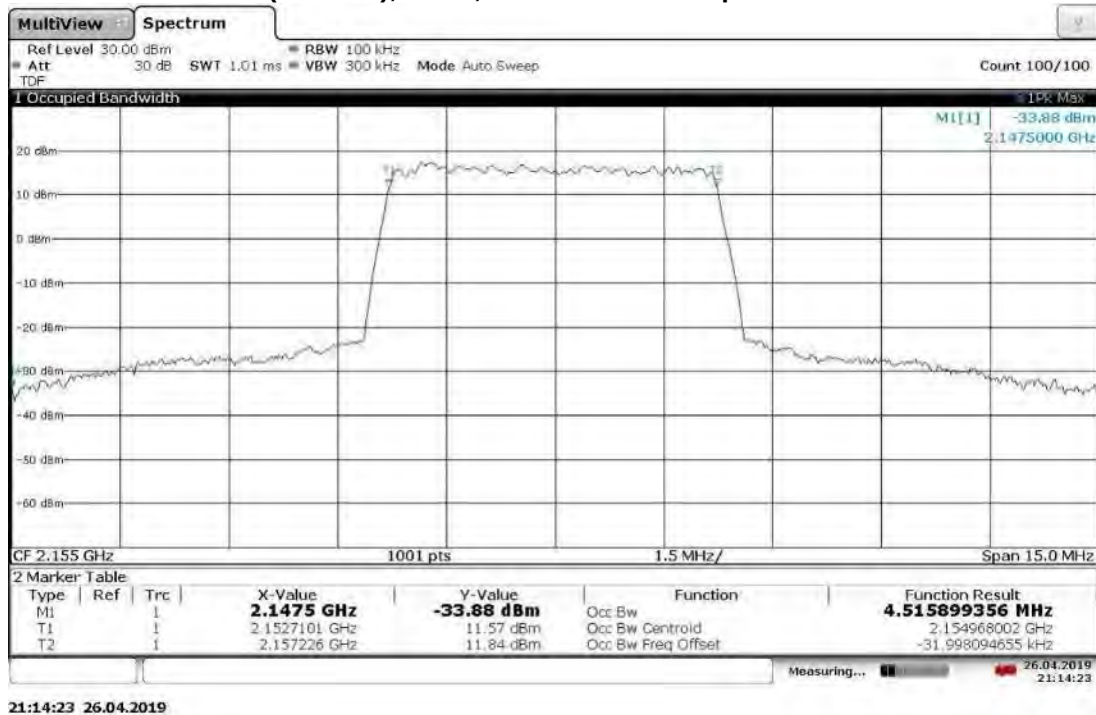
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



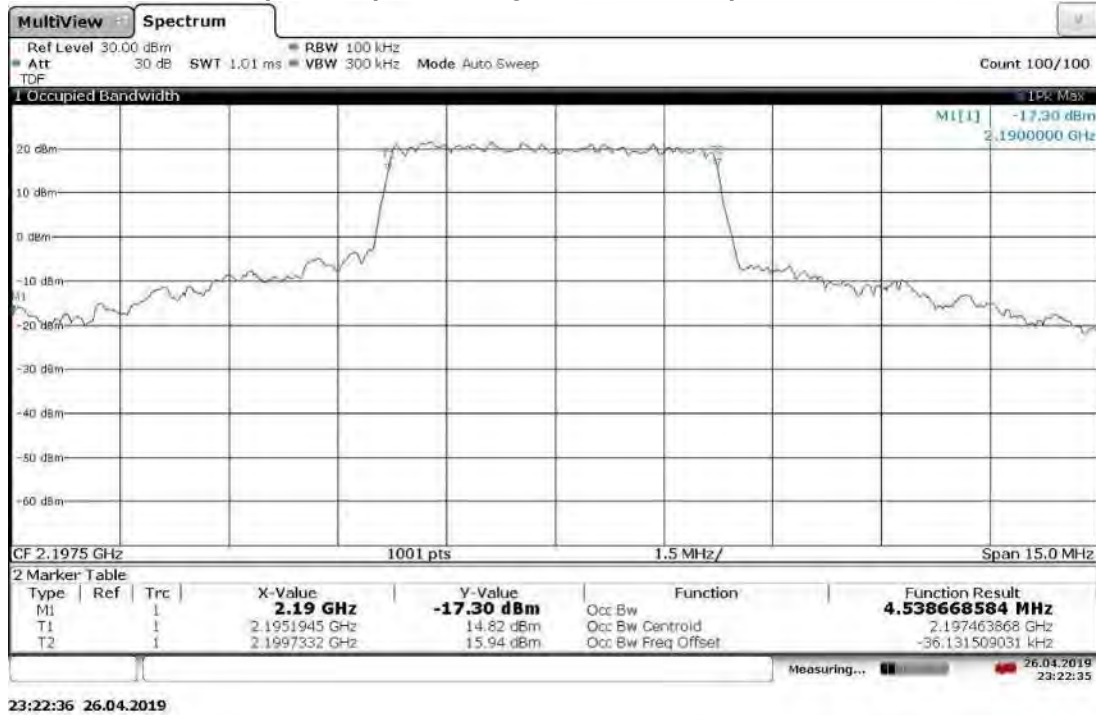
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



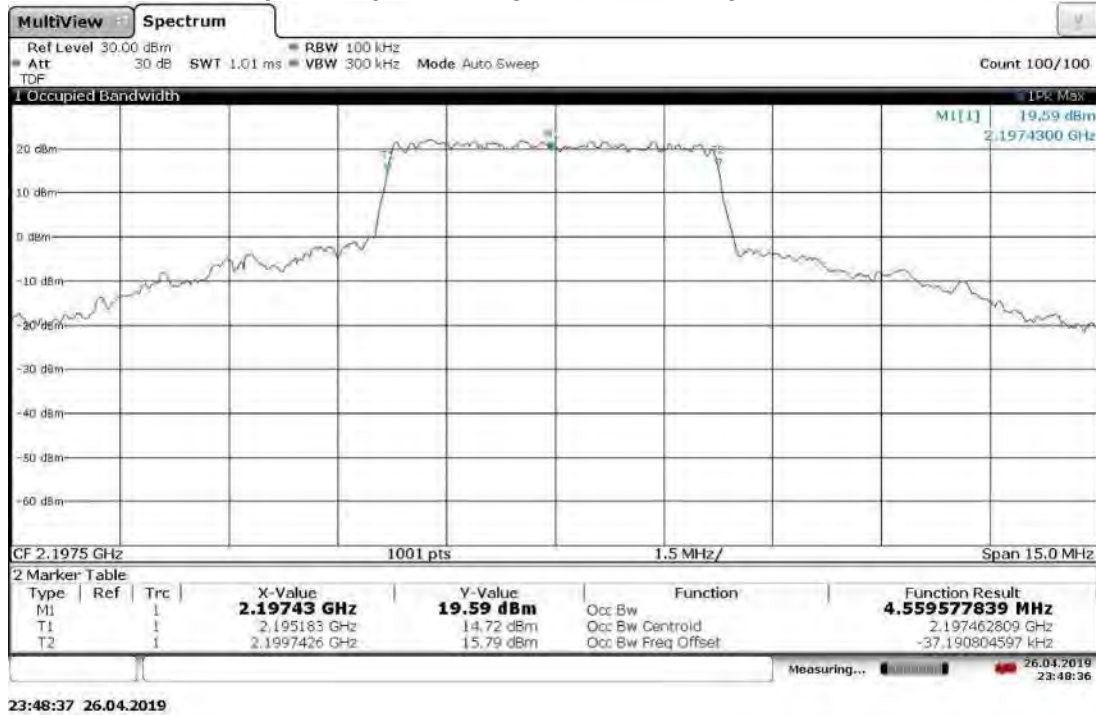
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



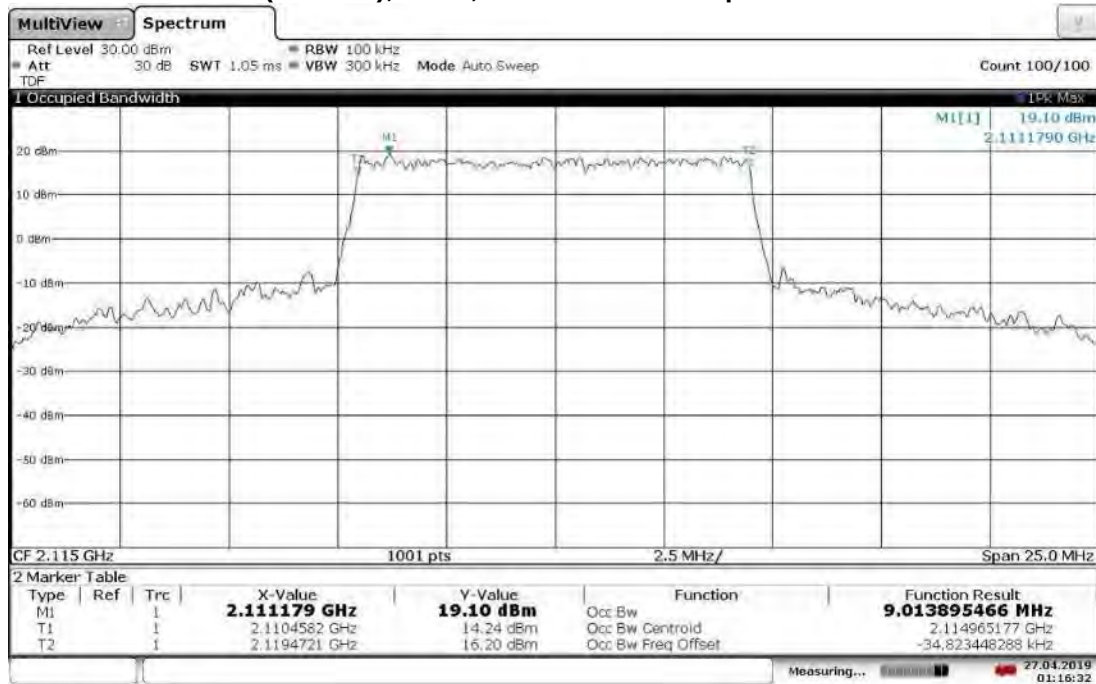
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



TM3.2-16QAM_10 MHz Bandwidth

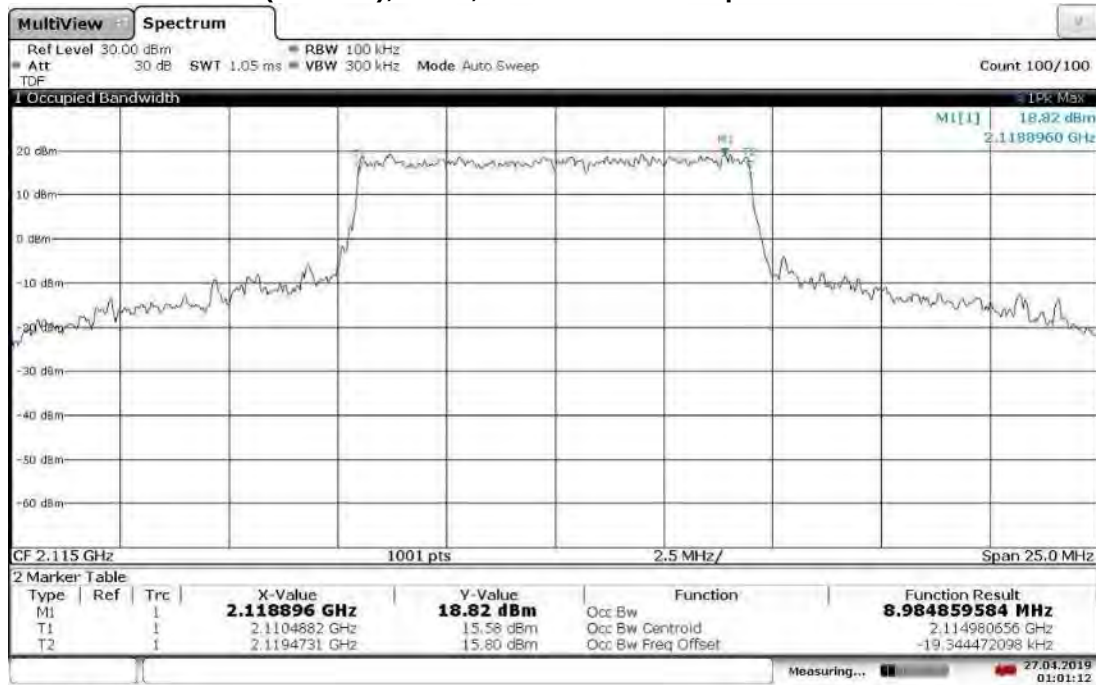
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



01:16:32 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

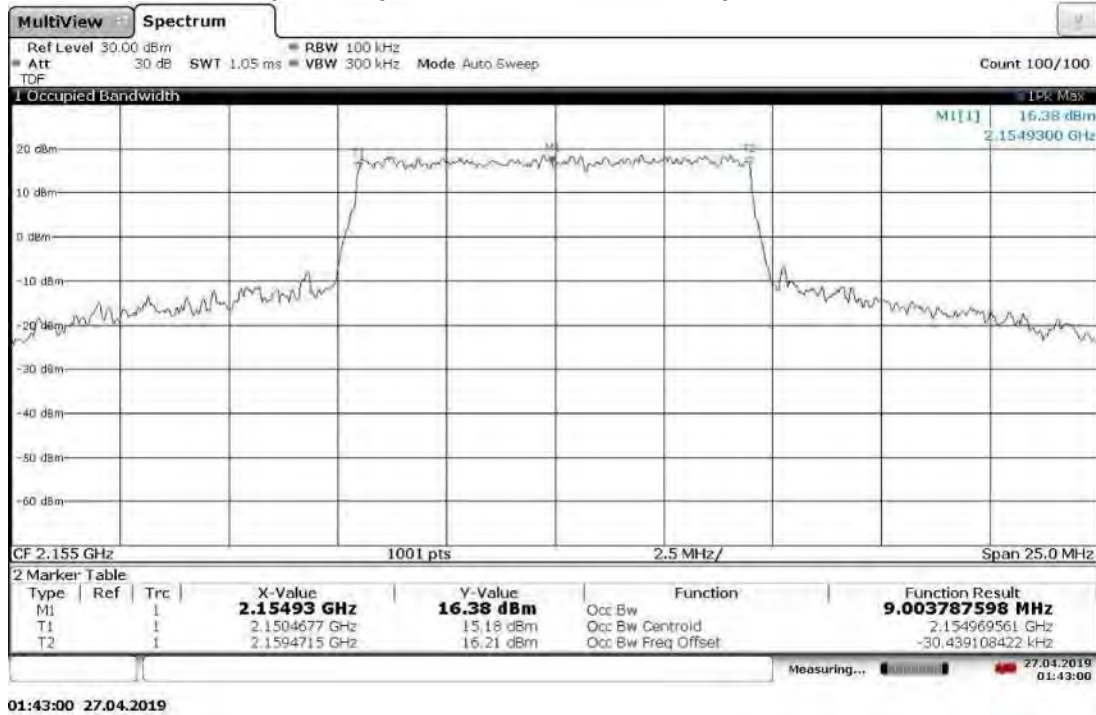
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



01:01:12 27.04.2019

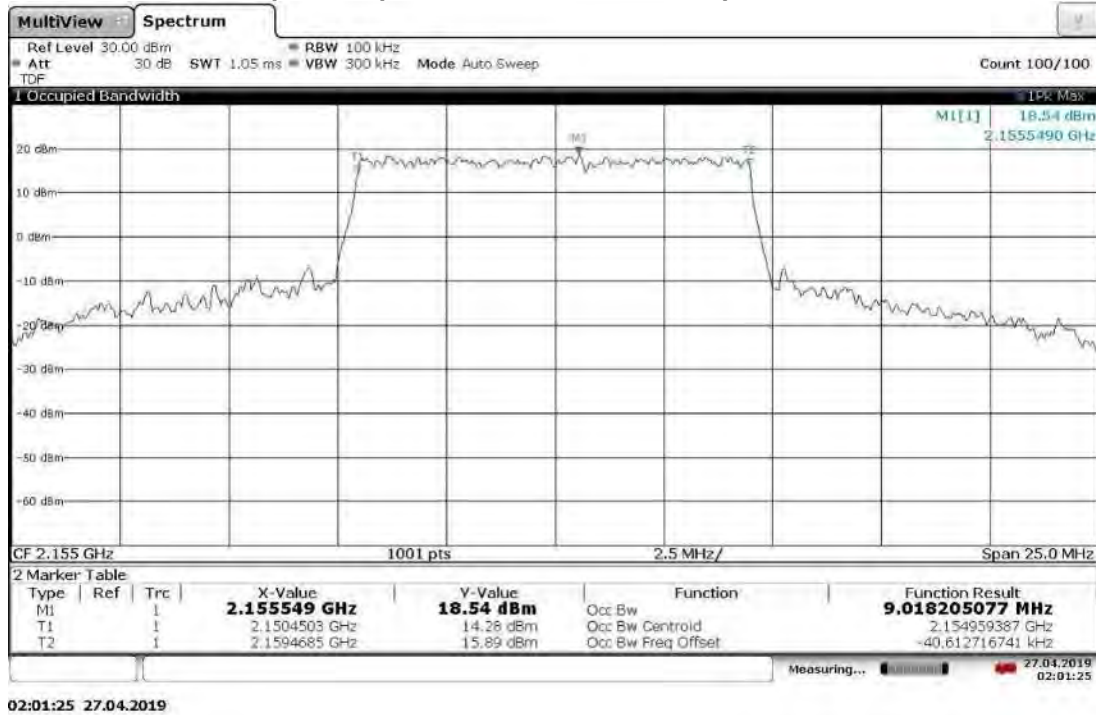
TM3.2-16QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



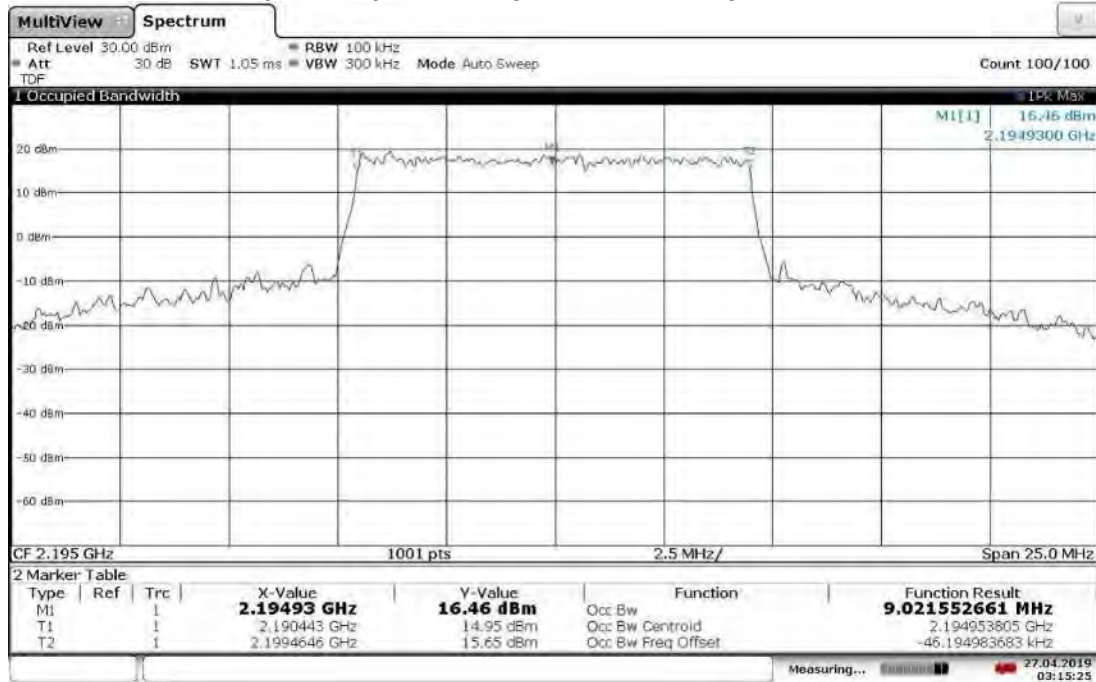
TM3.2-16QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



TM3.2-16QAM_10 MHz Bandwidth

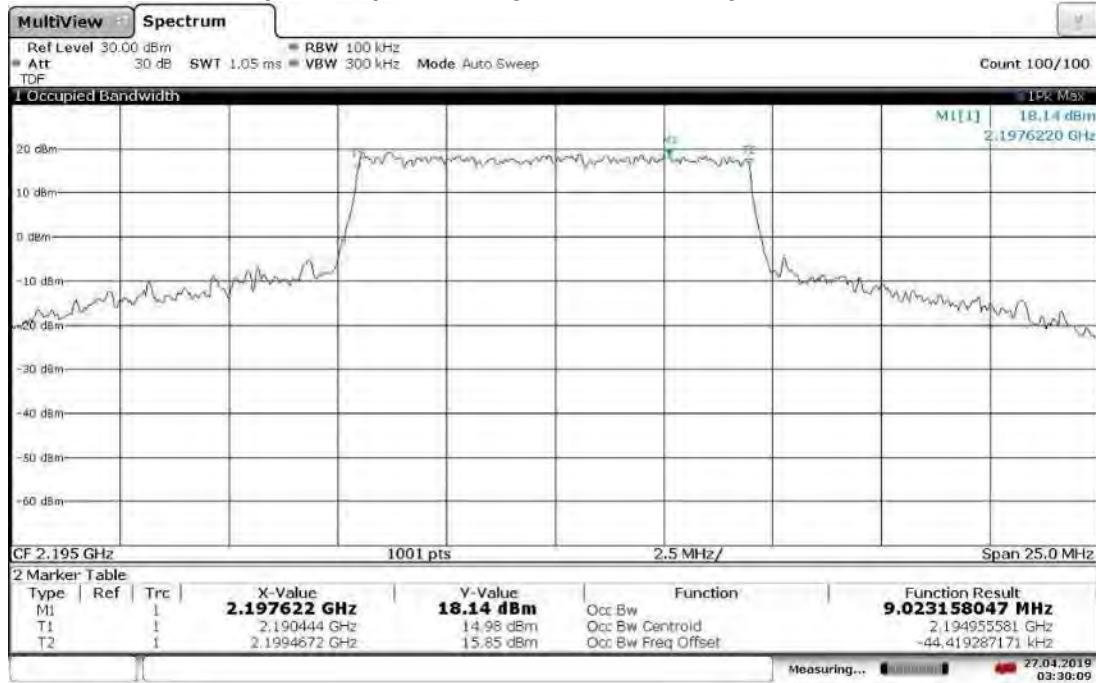
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



03:15:25 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

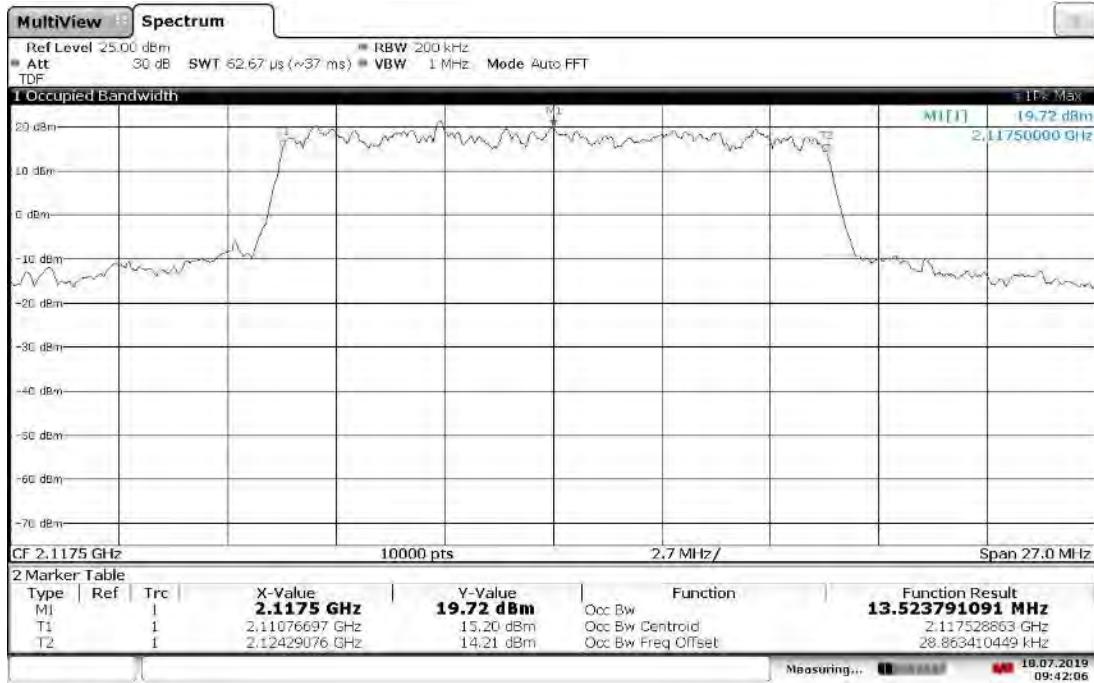
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



03:30:10 27.04.2019

TM3.2-16QAM_15 MHz Bandwidth

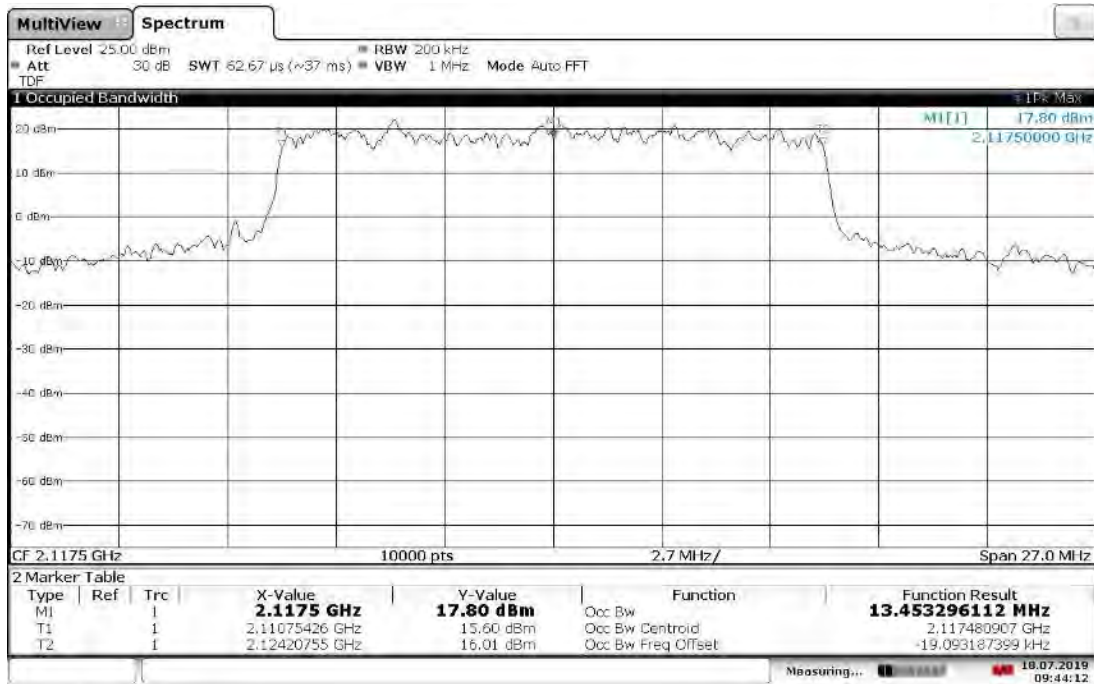
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



09:42:06 18.07.2019

TM3.2-16QAM_15 MHz Bandwidth

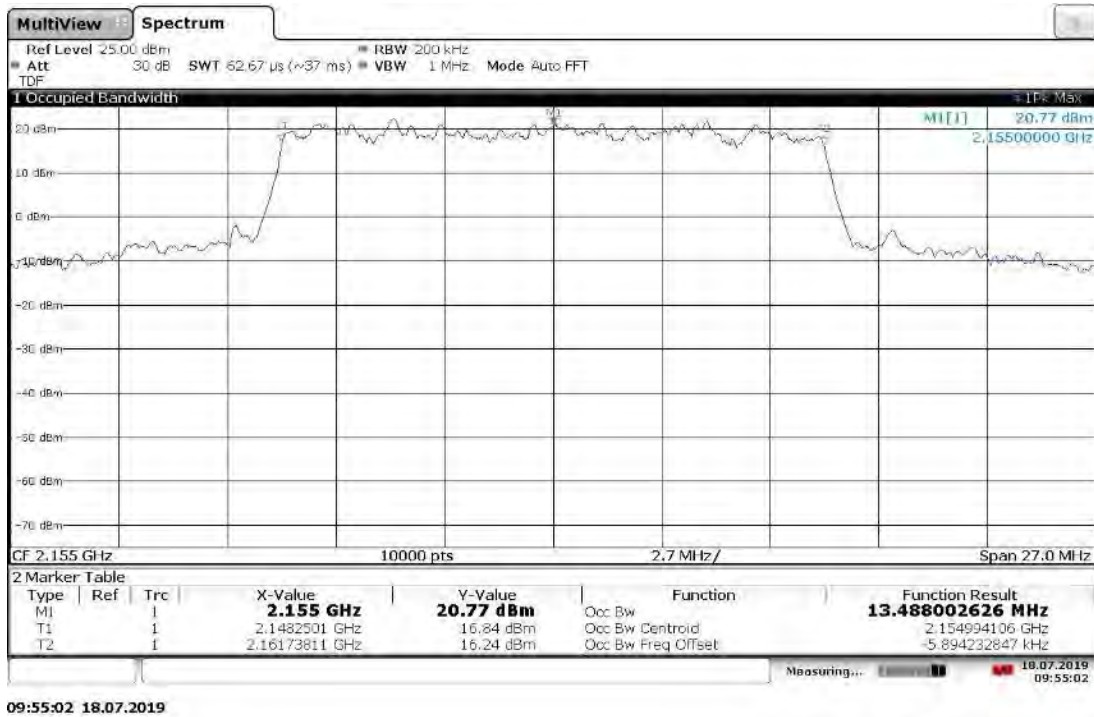
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



09:44:13 18.07.2019

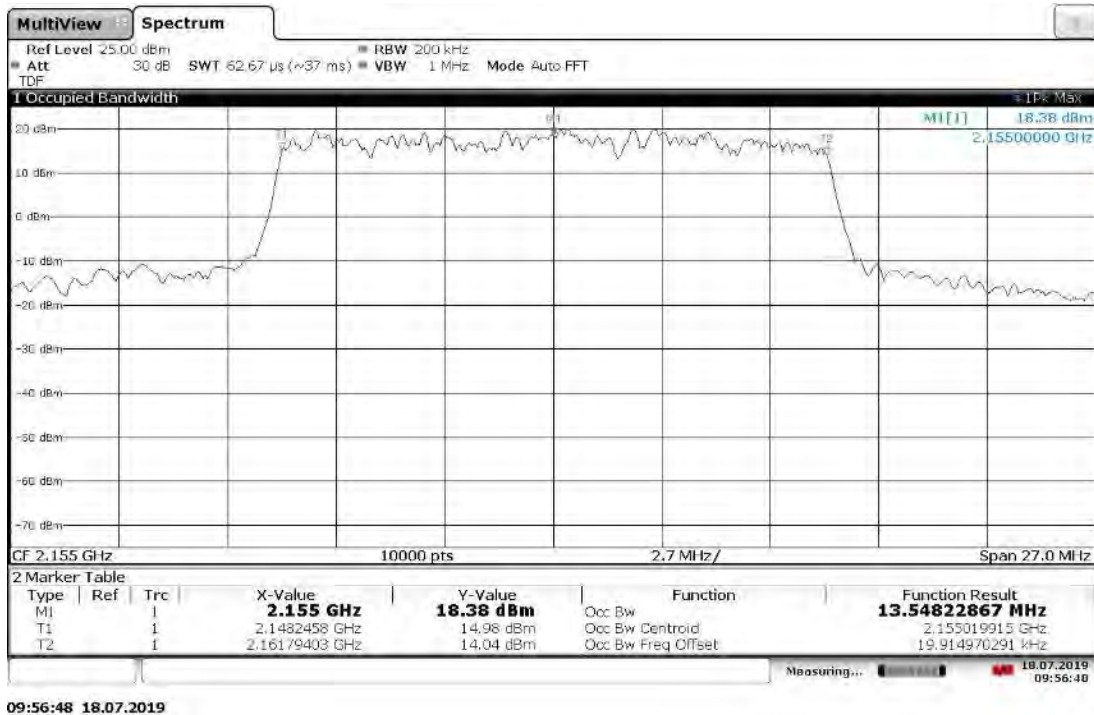
TM3.2-16QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



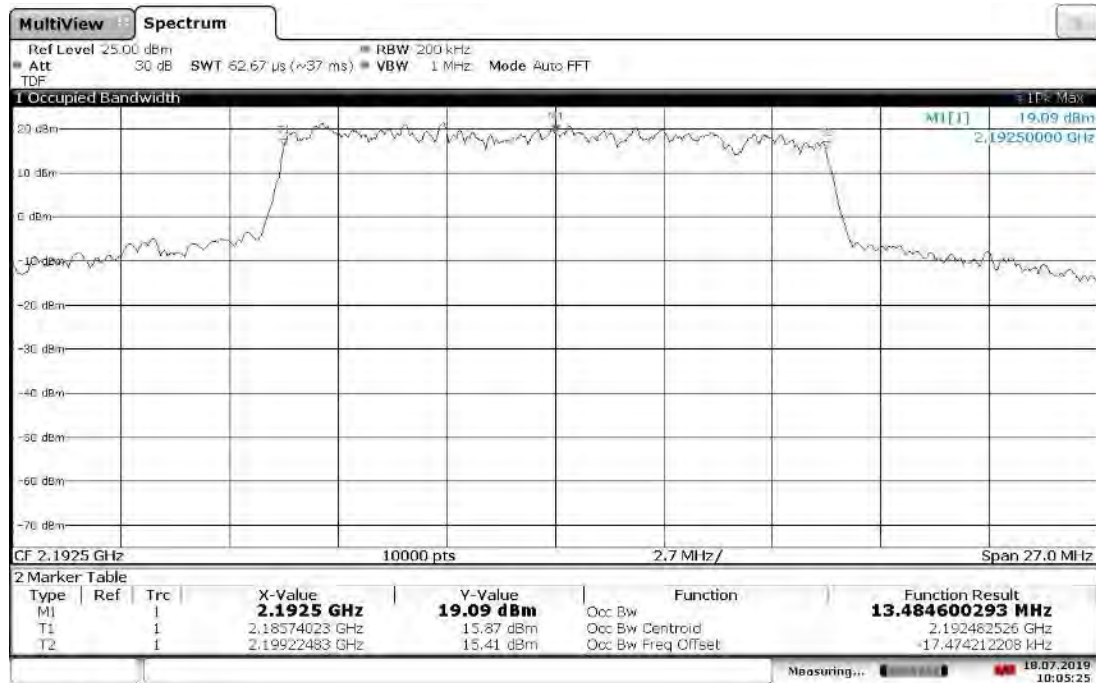
TM3.2-16QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



TM3.2-16QAM_15 MHz Bandwidth

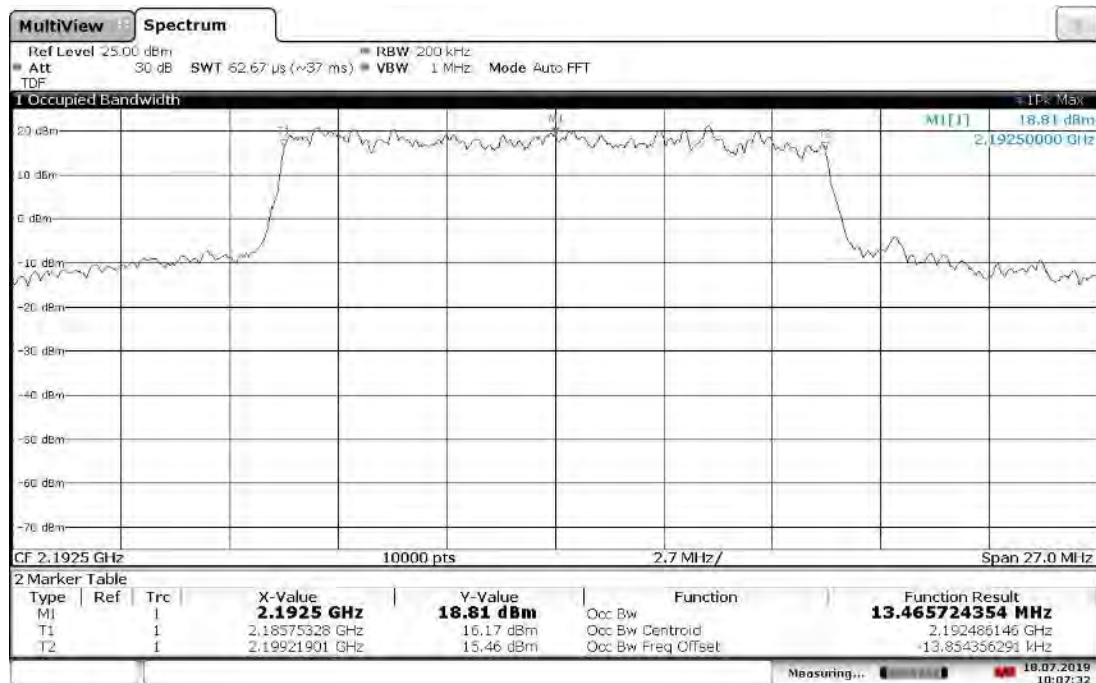
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



10:05:25 18.07.2019

TM3.2-16QAM_15 MHz Bandwidth

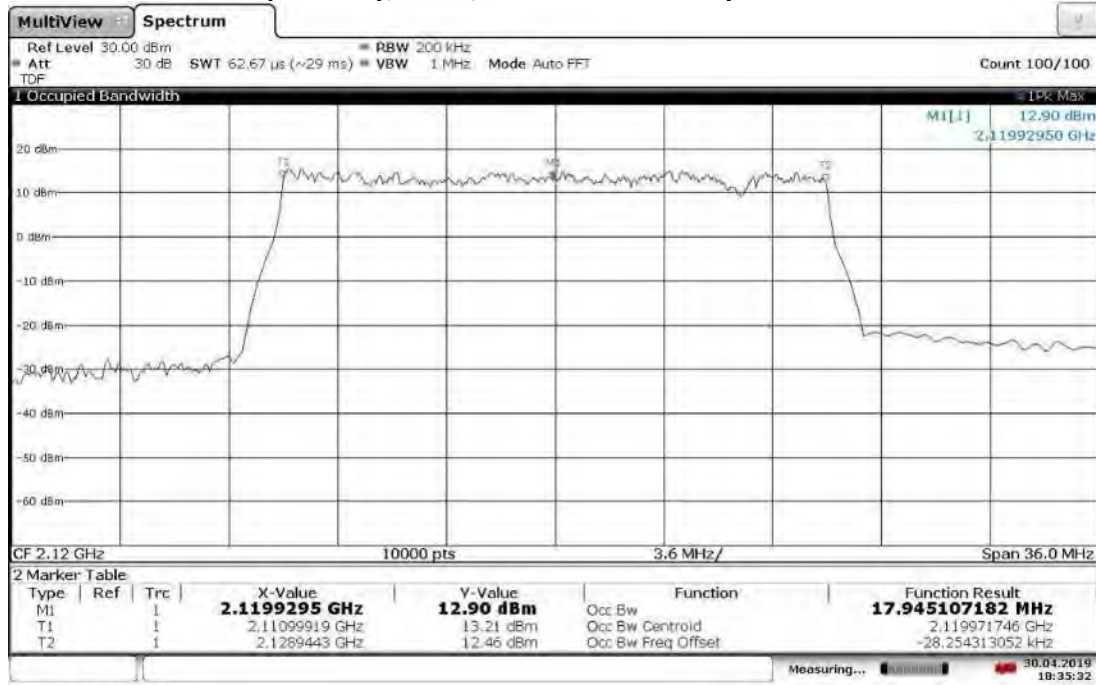
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



10:07:32 18.07.2019

TM3.2-16QAM_20 MHz Bandwidth

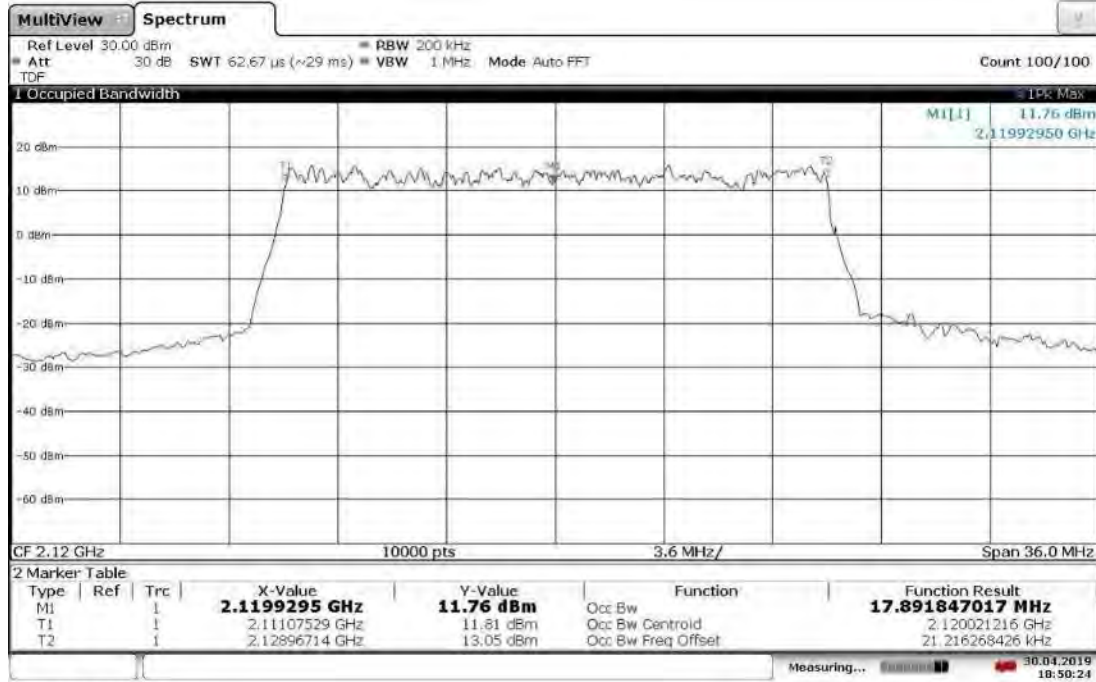
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



18:35:33 30.04.2019

TM3.2-16QAM_20 MHz Bandwidth

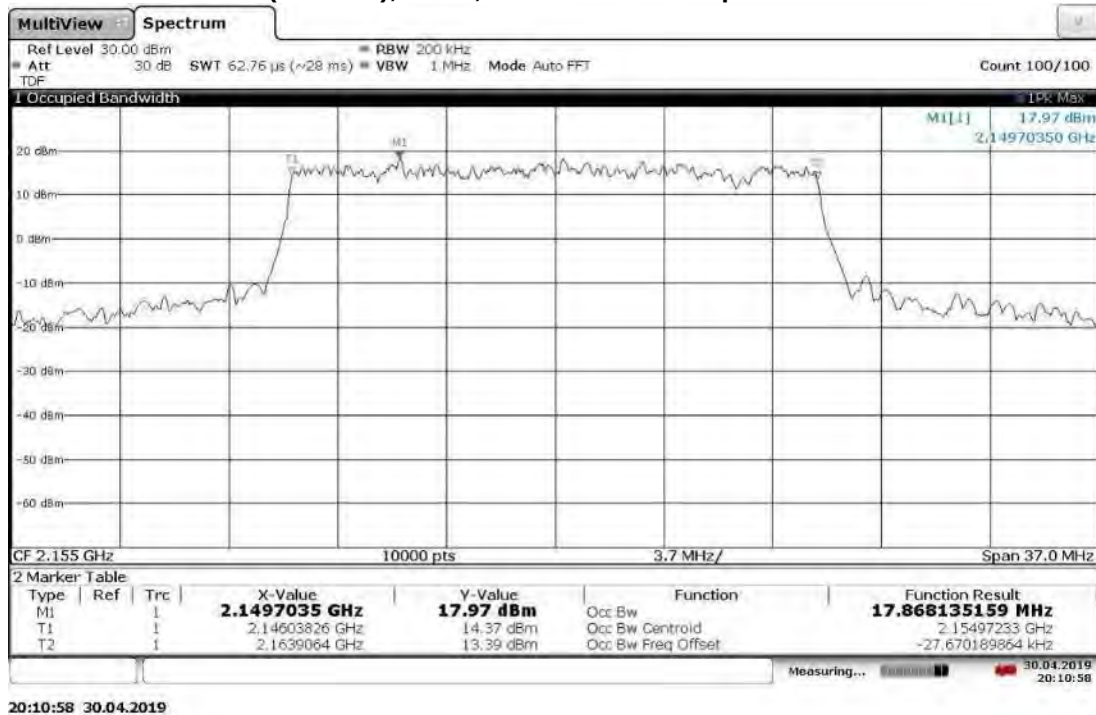
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



18:50:24 30.04.2019

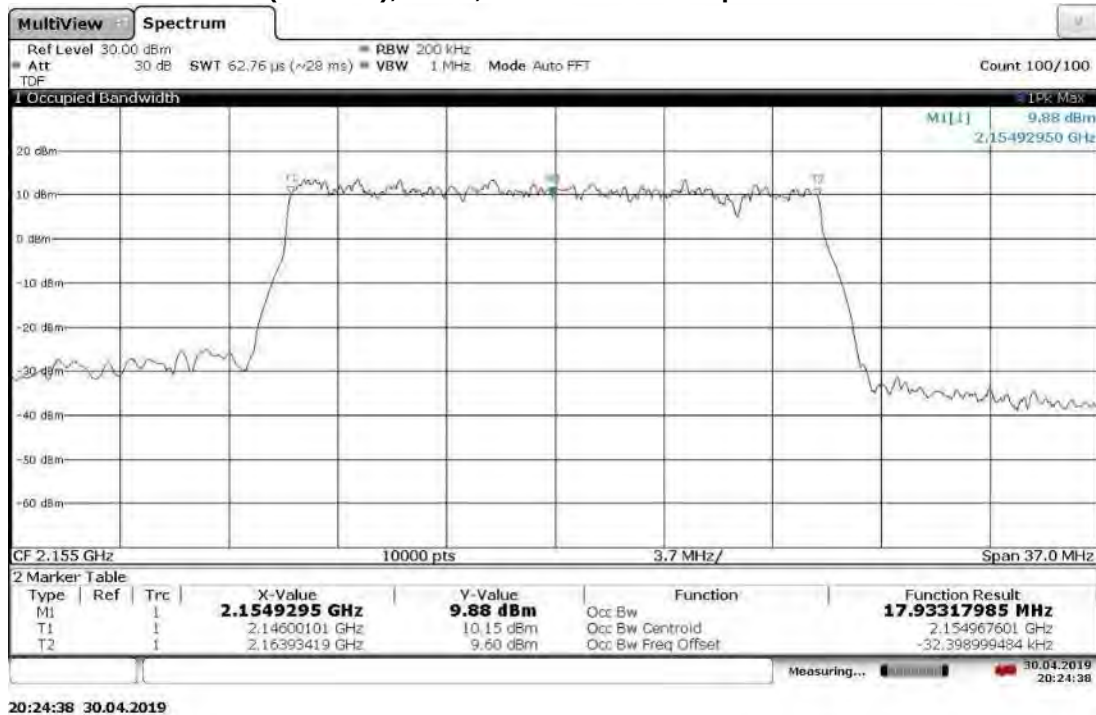
TM3.2-16QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



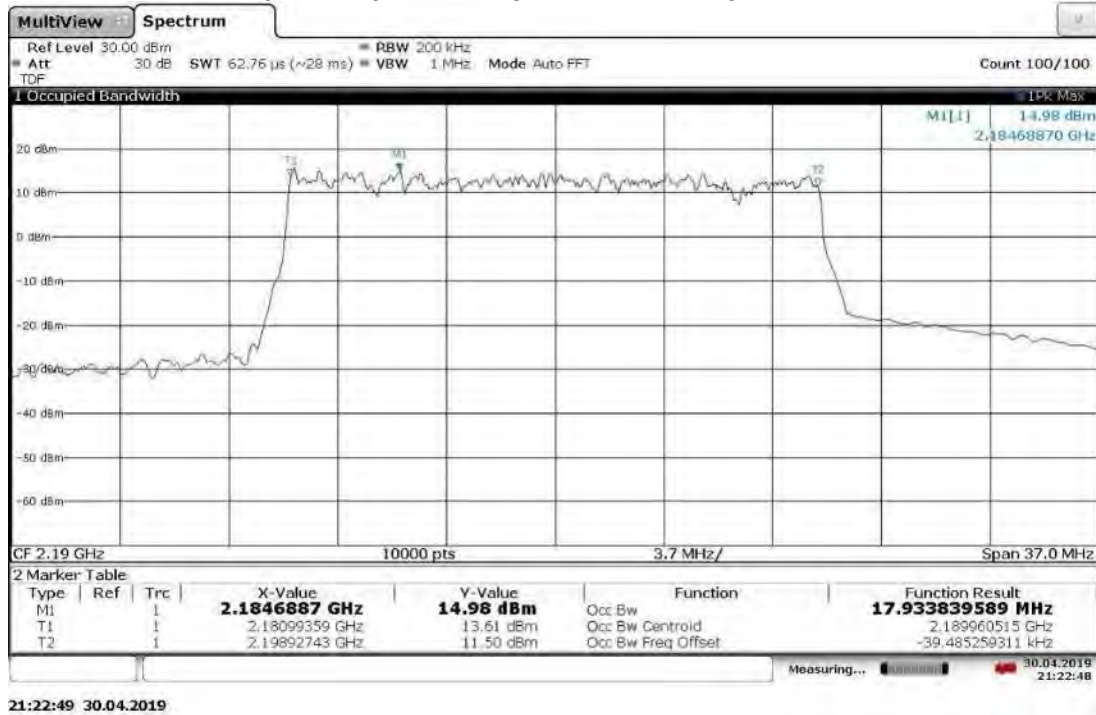
TM3.2-16QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



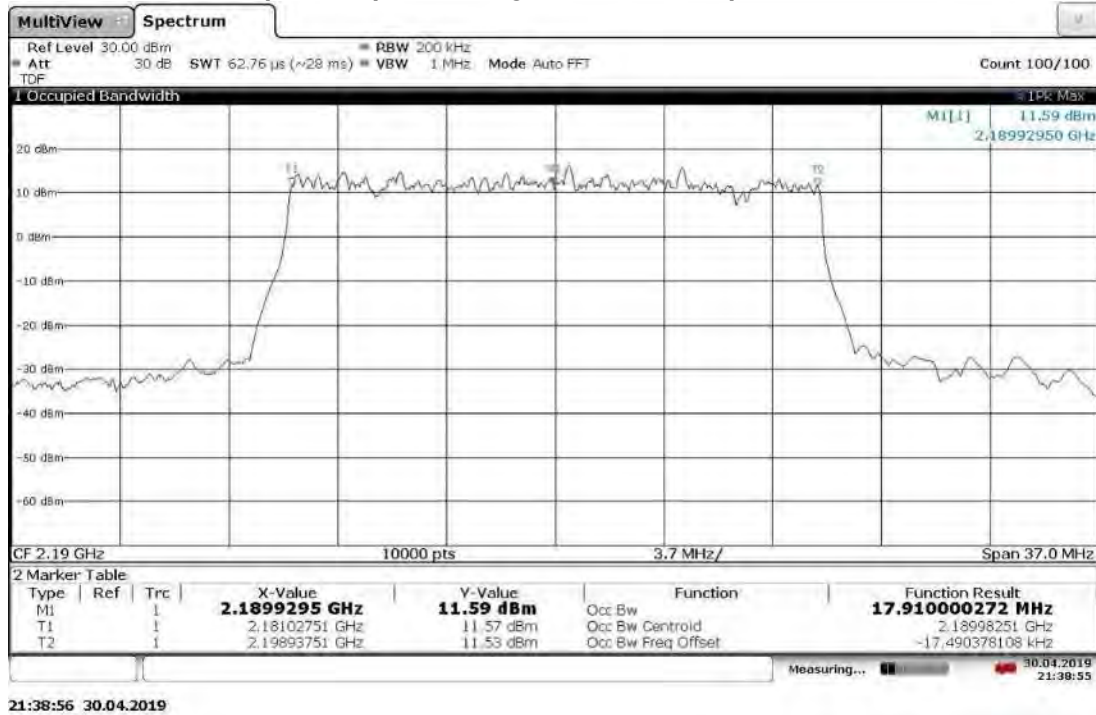
TM3.2-16QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



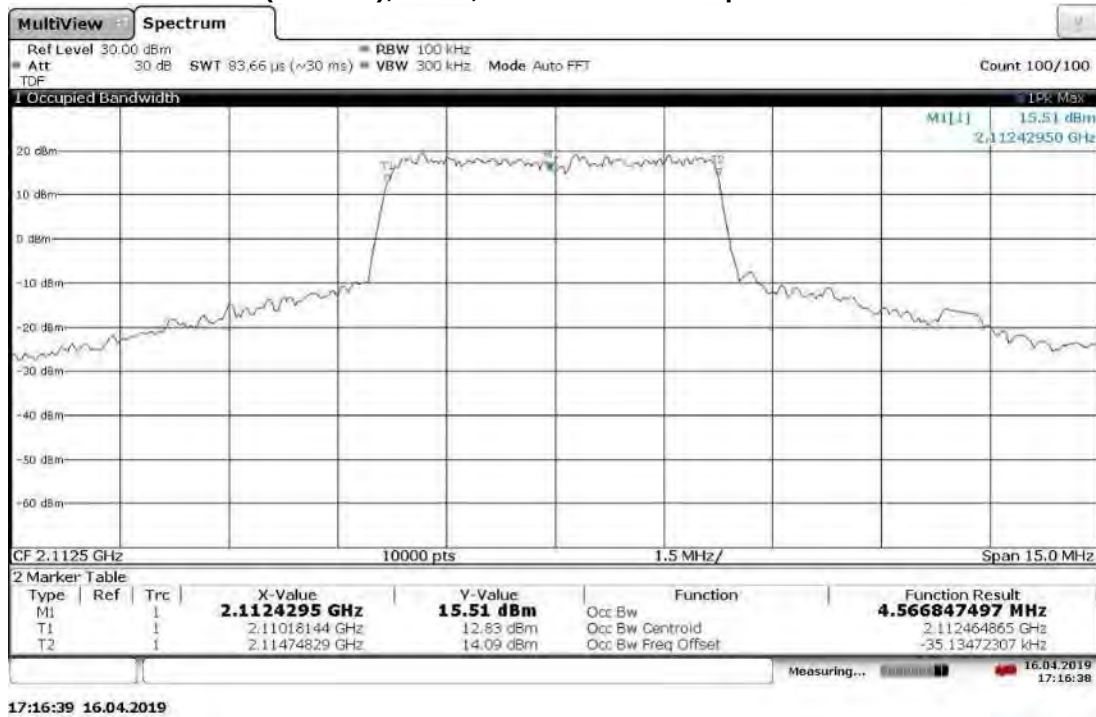
TM3.2-16QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



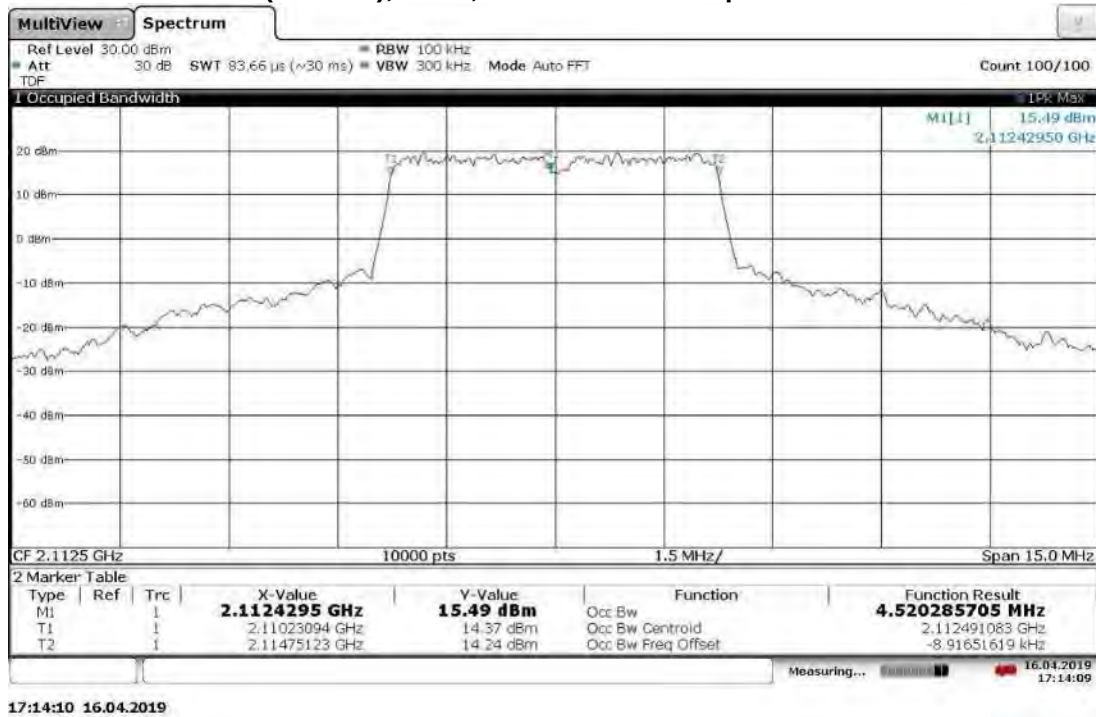
TM3.1-64QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



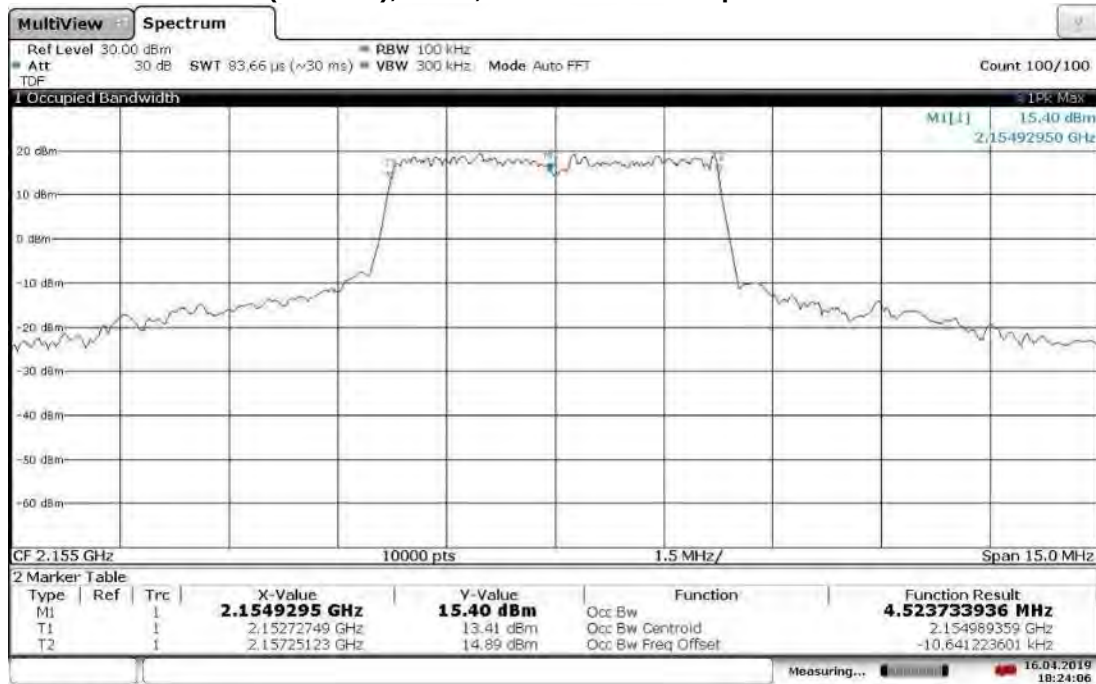
TM3.1-64QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



TM3.1-64QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



18:24:06 16.04.2019

TM3.1-64QAM_5 MHz Bandwidth

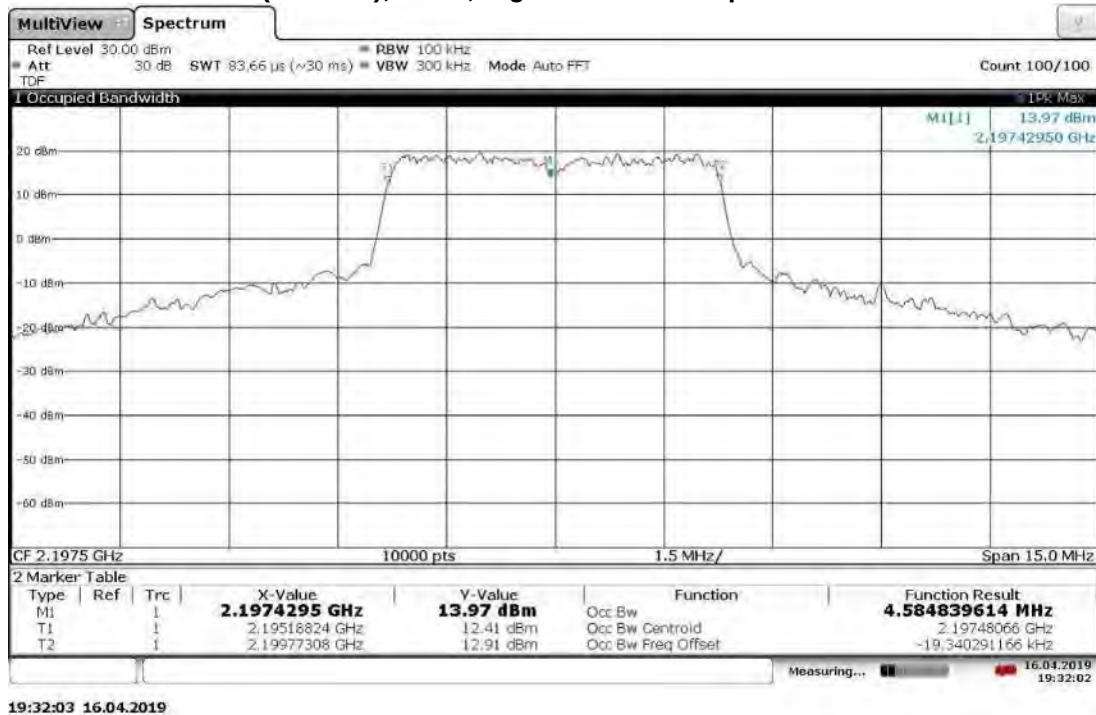
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



18:21:16 16.04.2019

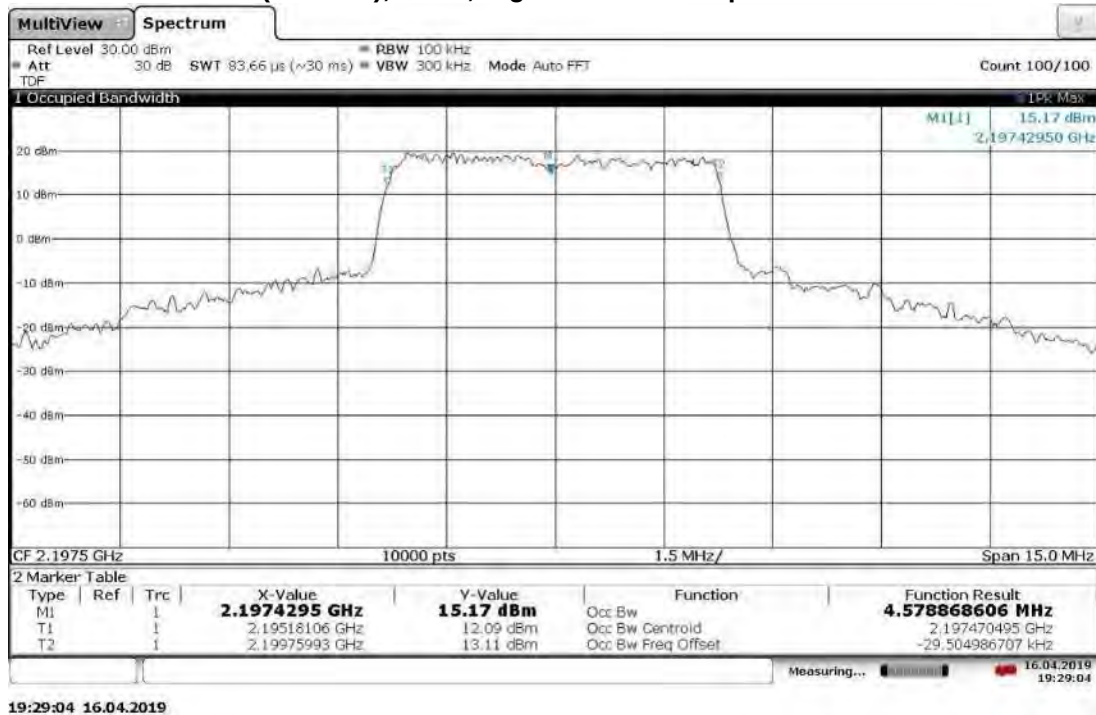
TM3.1-64QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



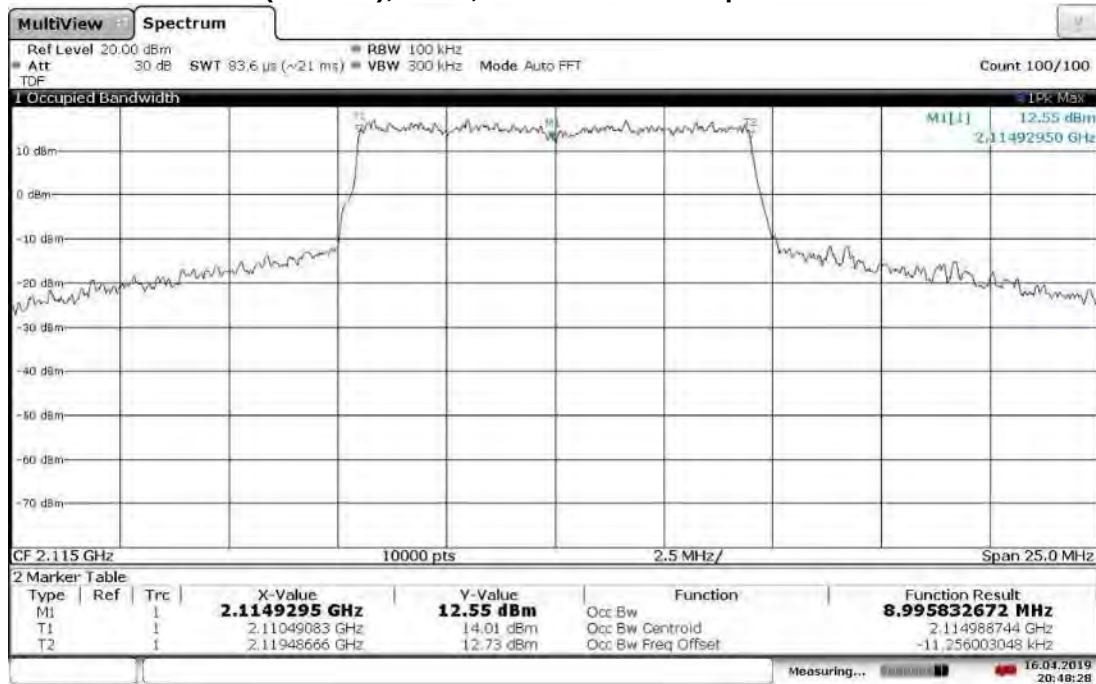
TM3.1-64QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



TM3.1-64QAM_10 MHz Bandwidth

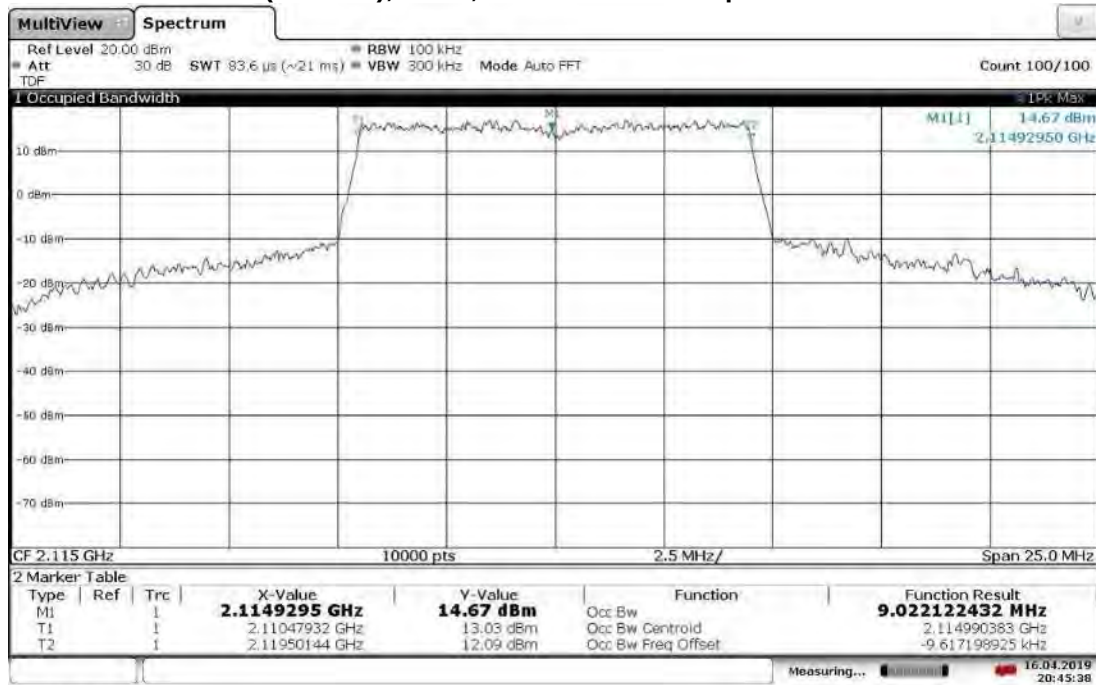
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



20:48:29 16.04.2019

TM3.1-64QAM_10 MHz Bandwidth

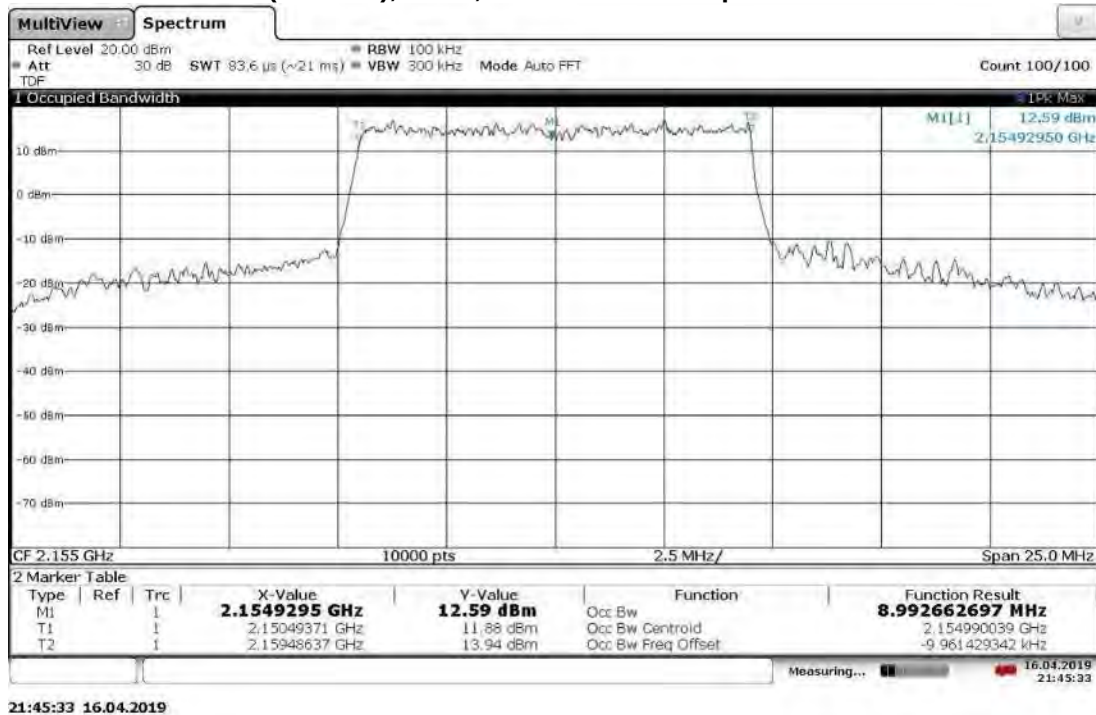
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



20:45:39 16.04.2019

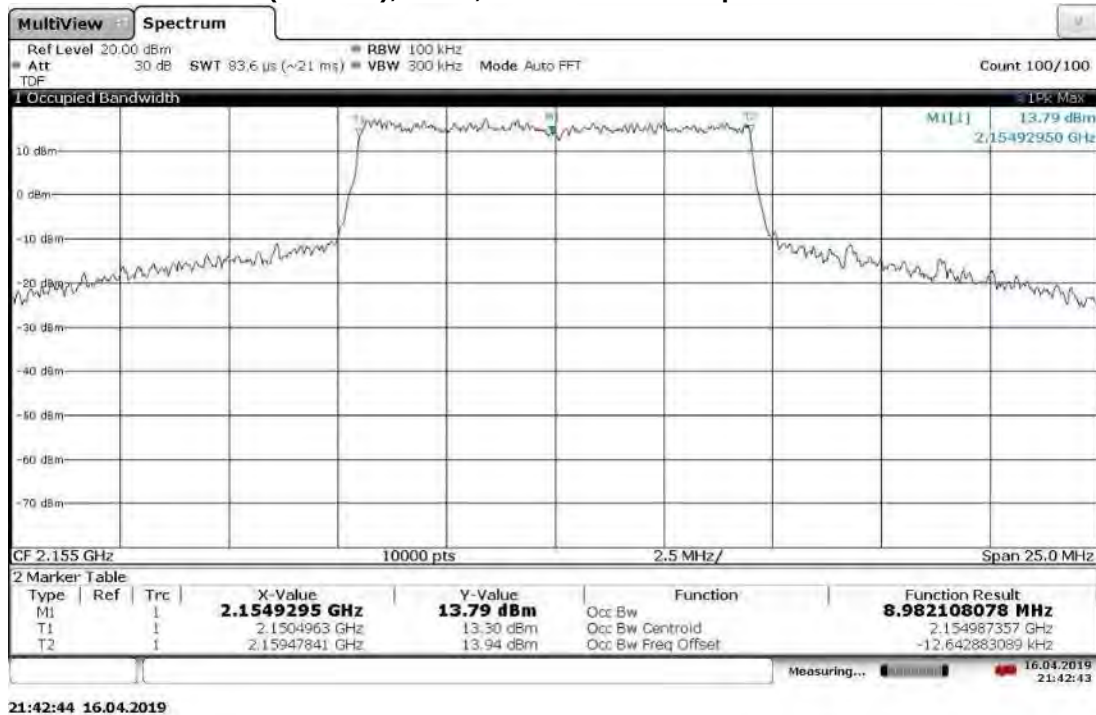
TM3.1-64QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



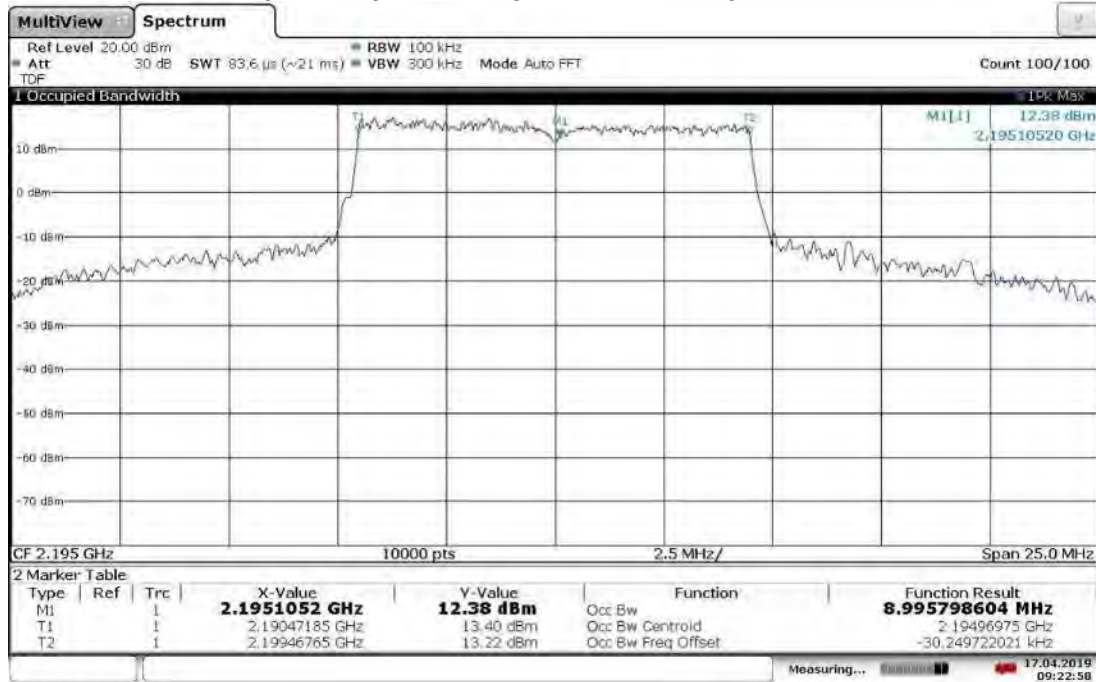
TM3.1-64QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



TM3.1-64QAM_10 MHz Bandwidth

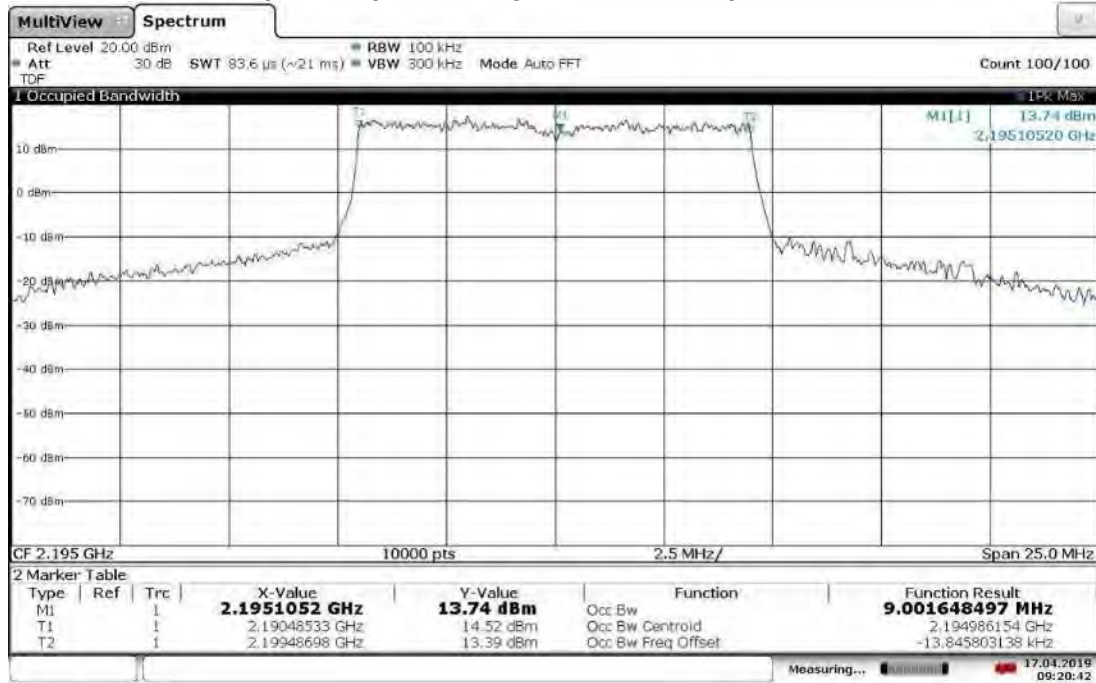
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



09:22:59 17.04.2019

TM3.1-64QAM_10 MHz Bandwidth

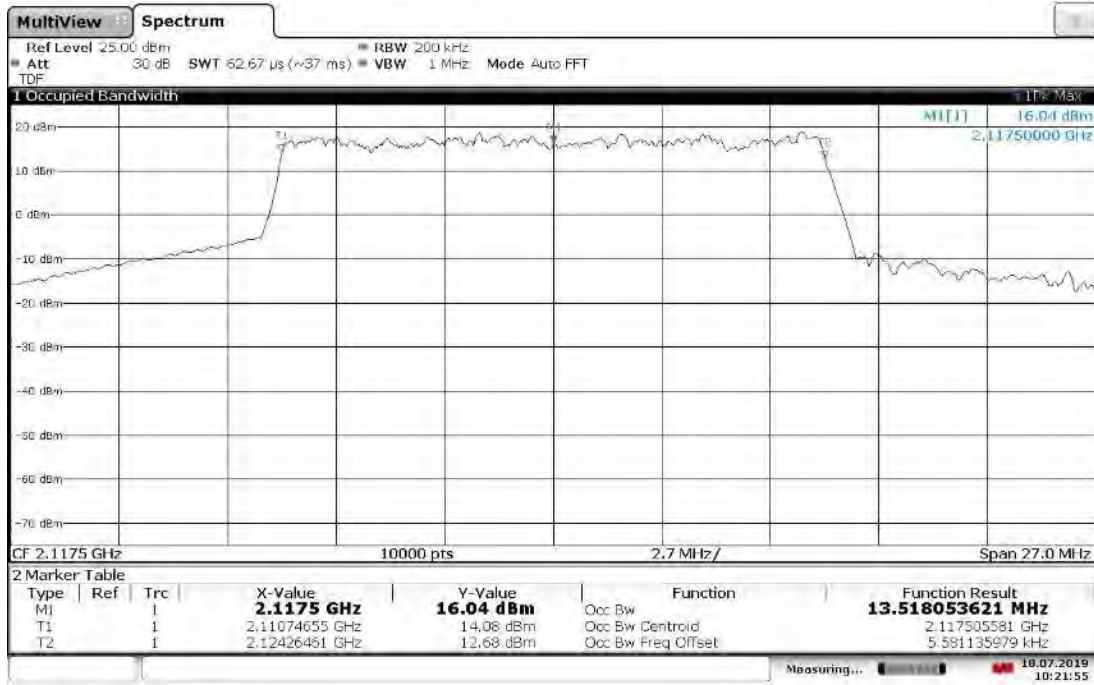
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



09:20:43 17.04.2019

TM3.1-64QAM_15 MHz Bandwidth

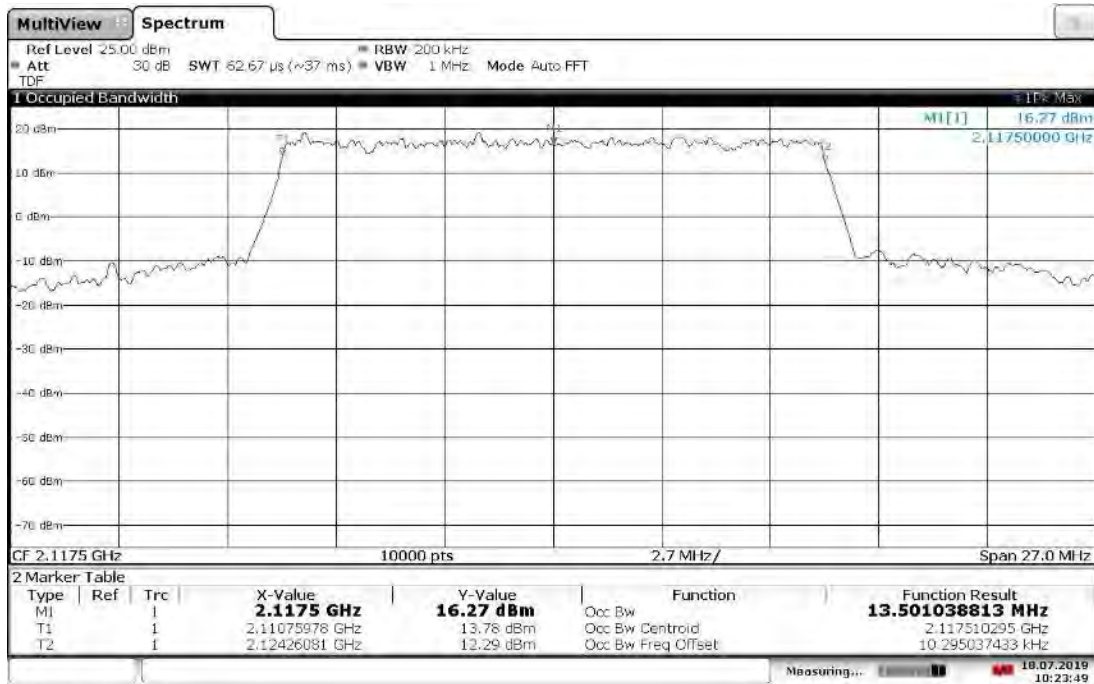
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



10:21:55 18.07.2019

TM3.1-64QAM_15 MHz Bandwidth

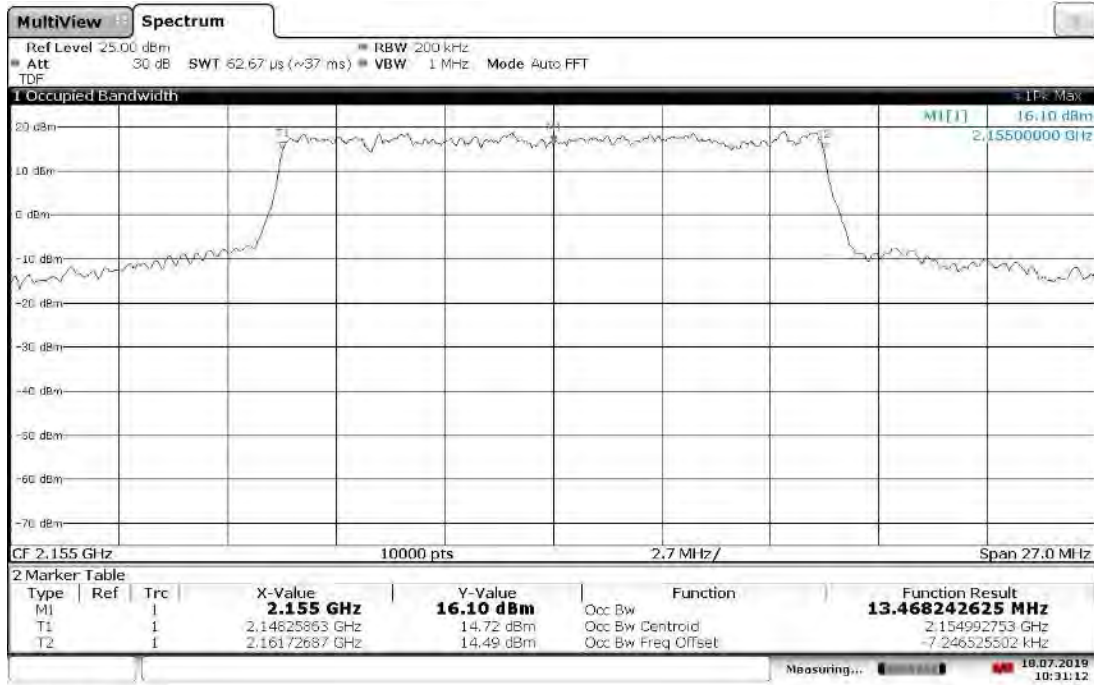
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



10:23:50 18.07.2019

TM3.1-64QAM_15 MHz Bandwidth

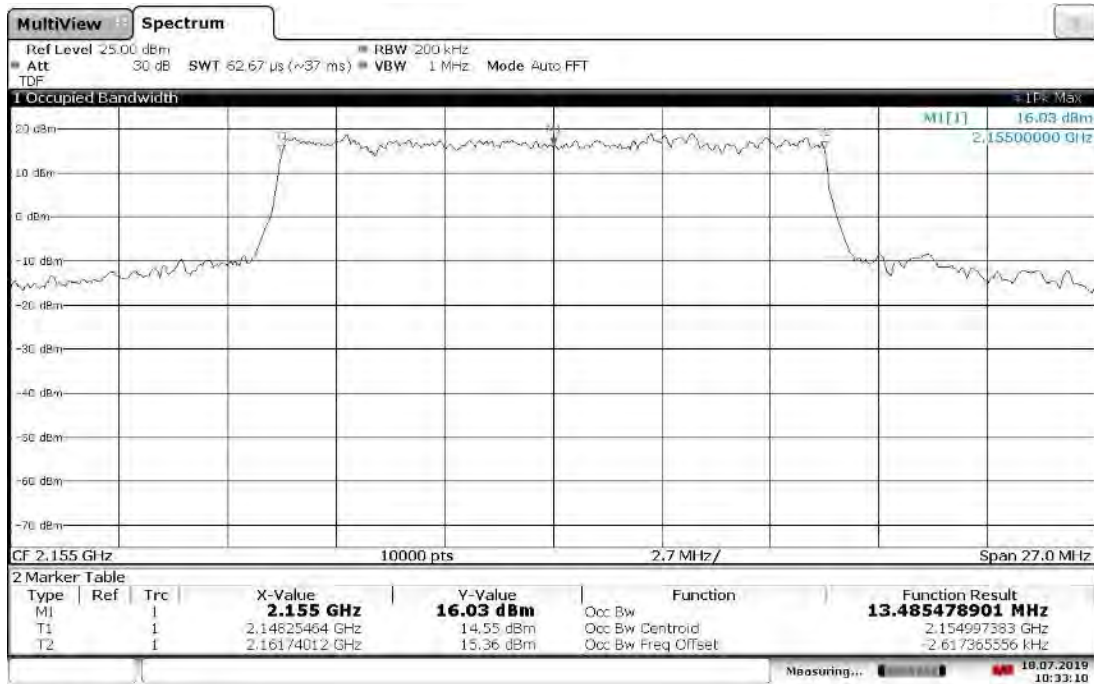
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



10:31:13 18.07.2019

TM3.1-64QAM_15 MHz Bandwidth

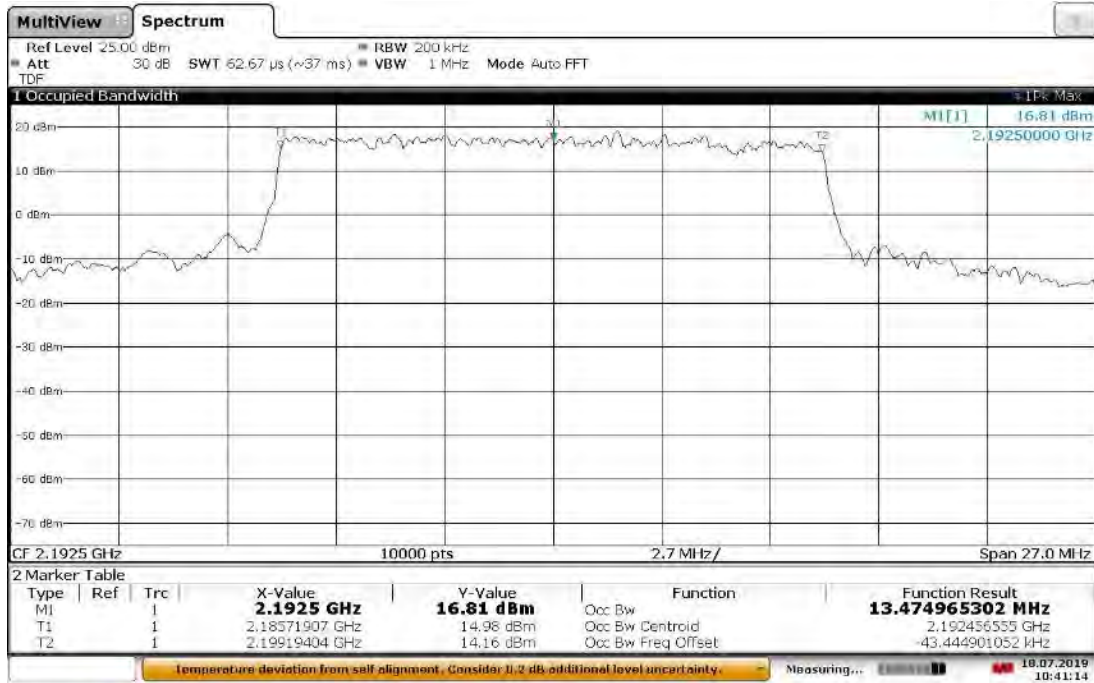
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



10:33:10 18.07.2019

TM3.1-64QAM_15 MHz Bandwidth

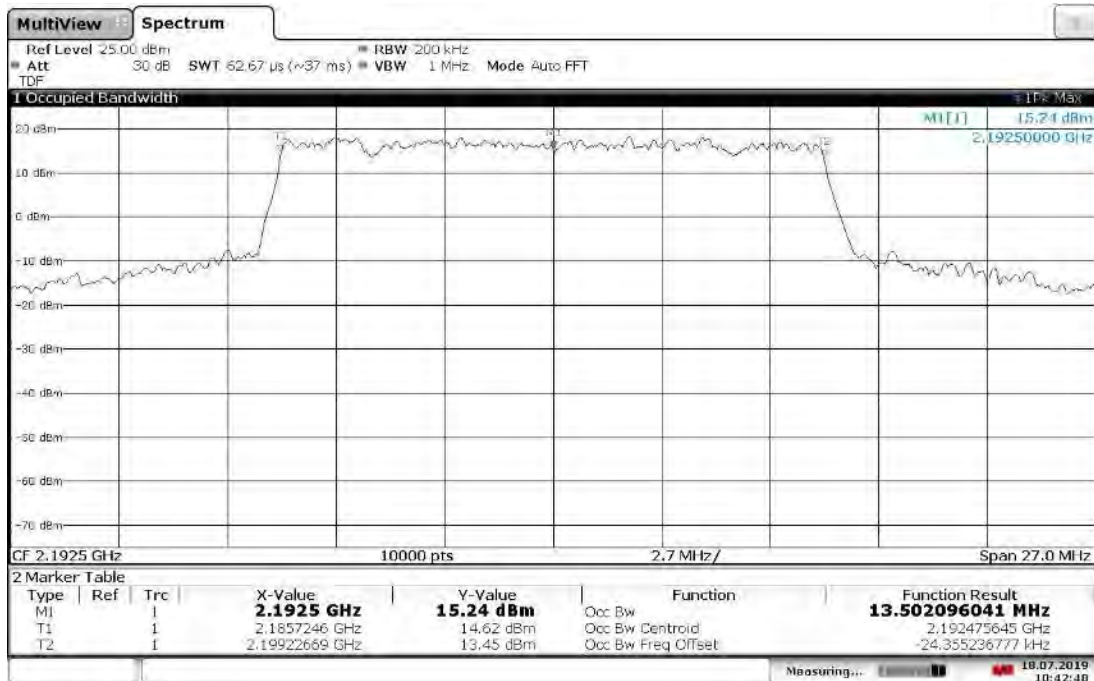
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



10:41:14 18.07.2019

TM3.1-64QAM_15 MHz Bandwidth

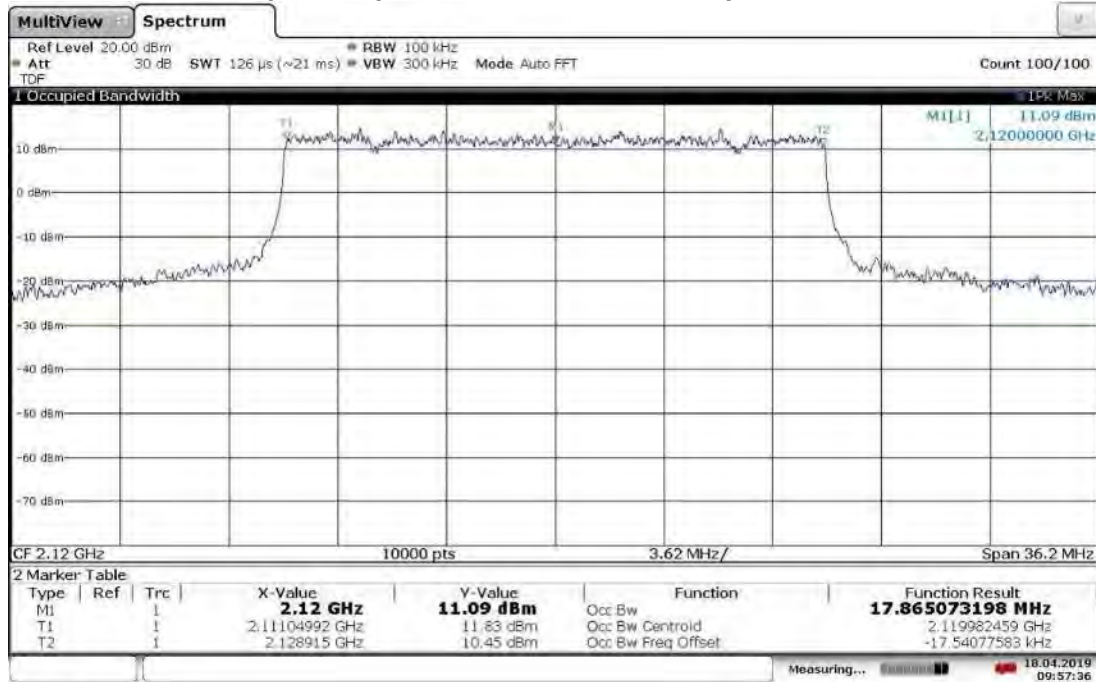
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



10:42:48 18.07.2019

TM3.1-64QAM_20 MHz Bandwidth

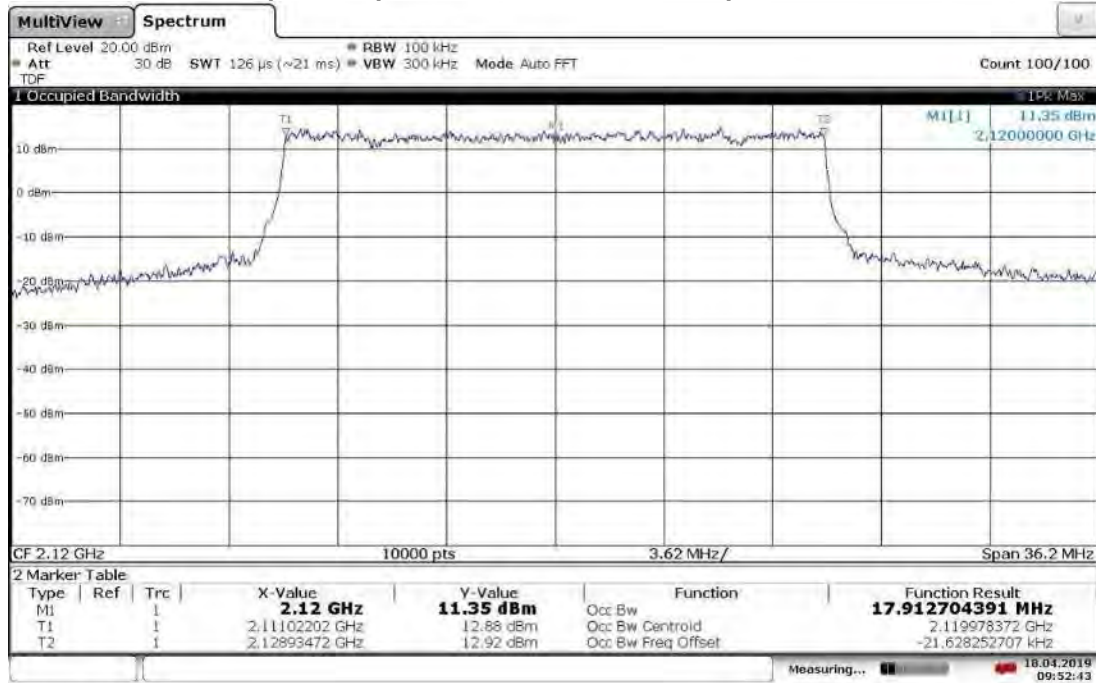
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



09:57:37 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

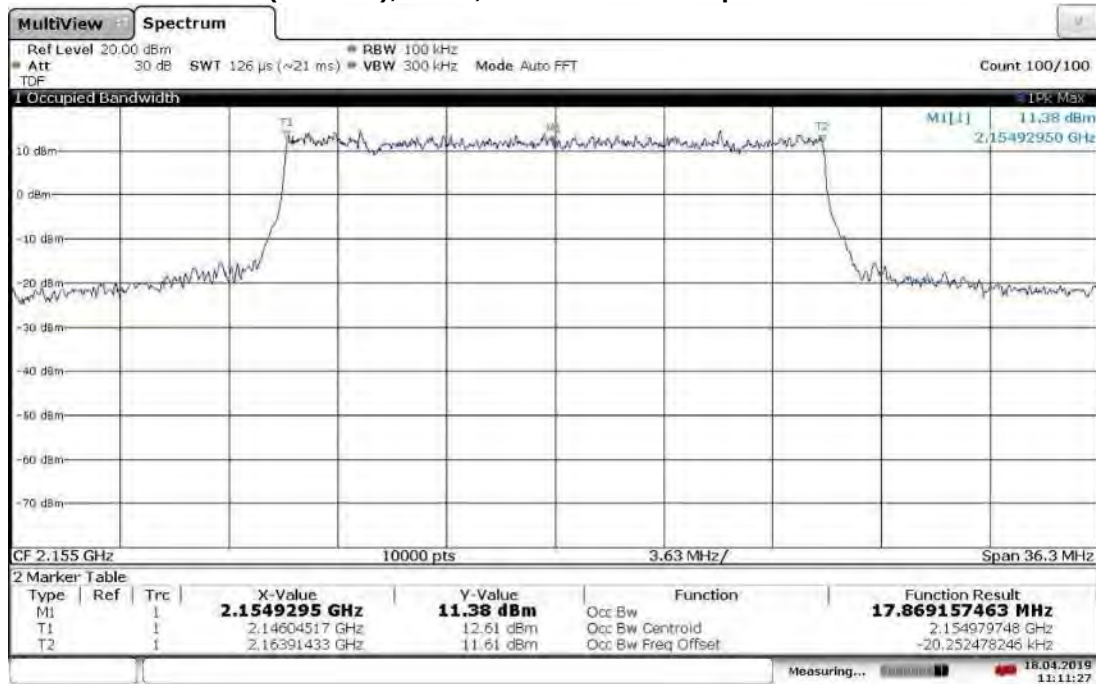
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



09:52:43 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

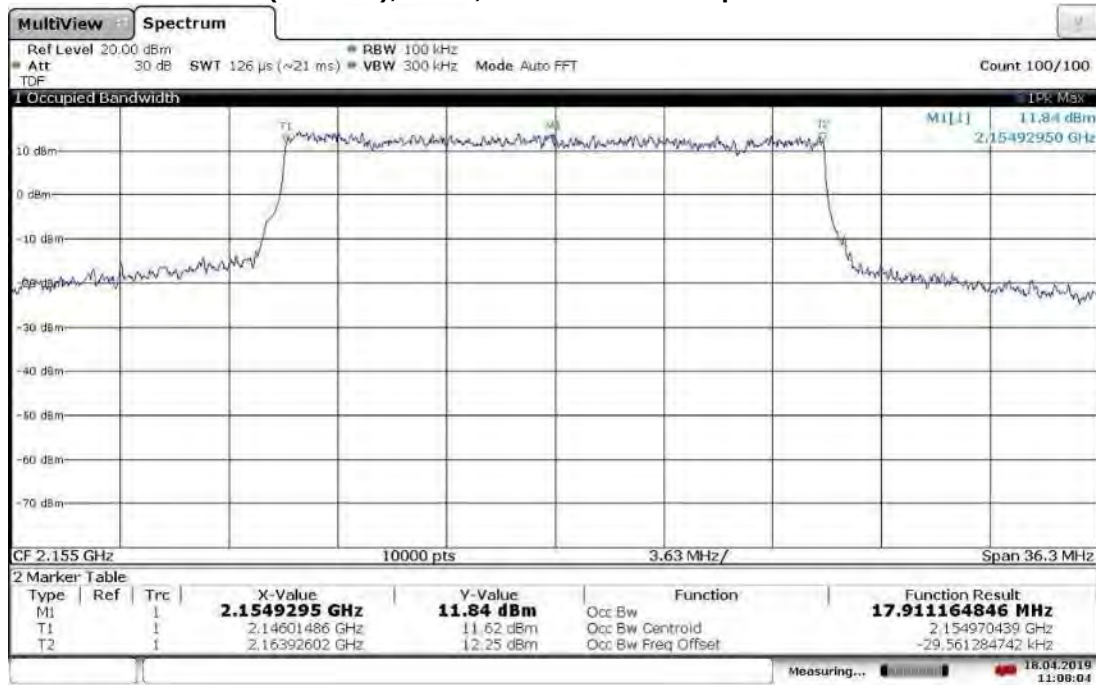
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



11:11:28 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

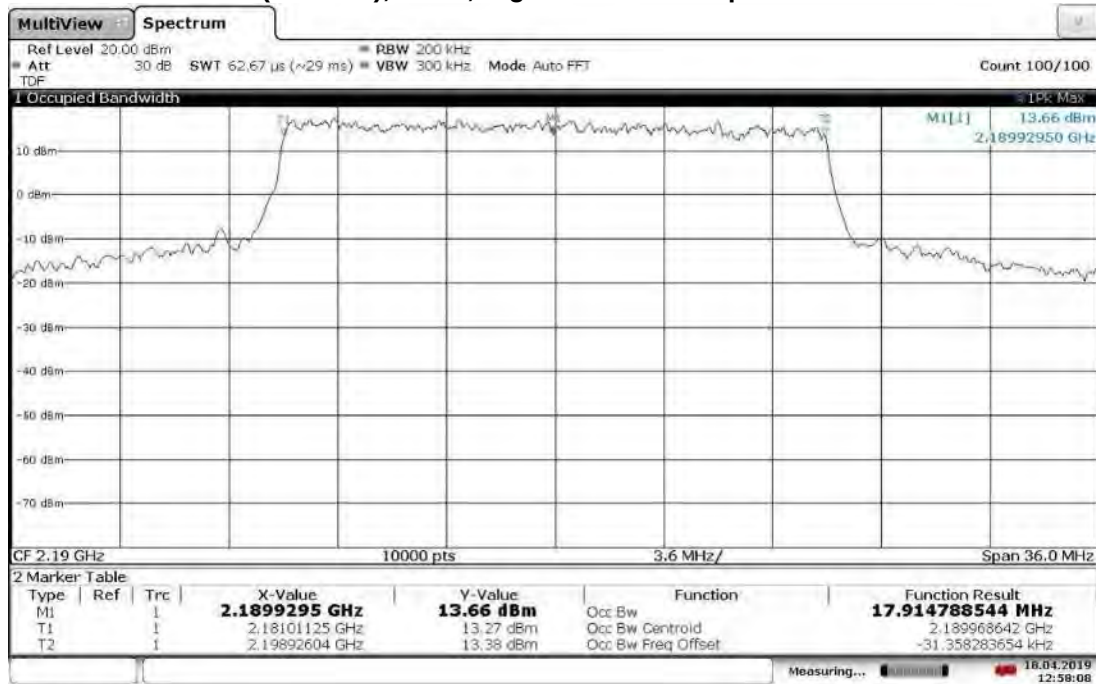
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



11:08:04 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

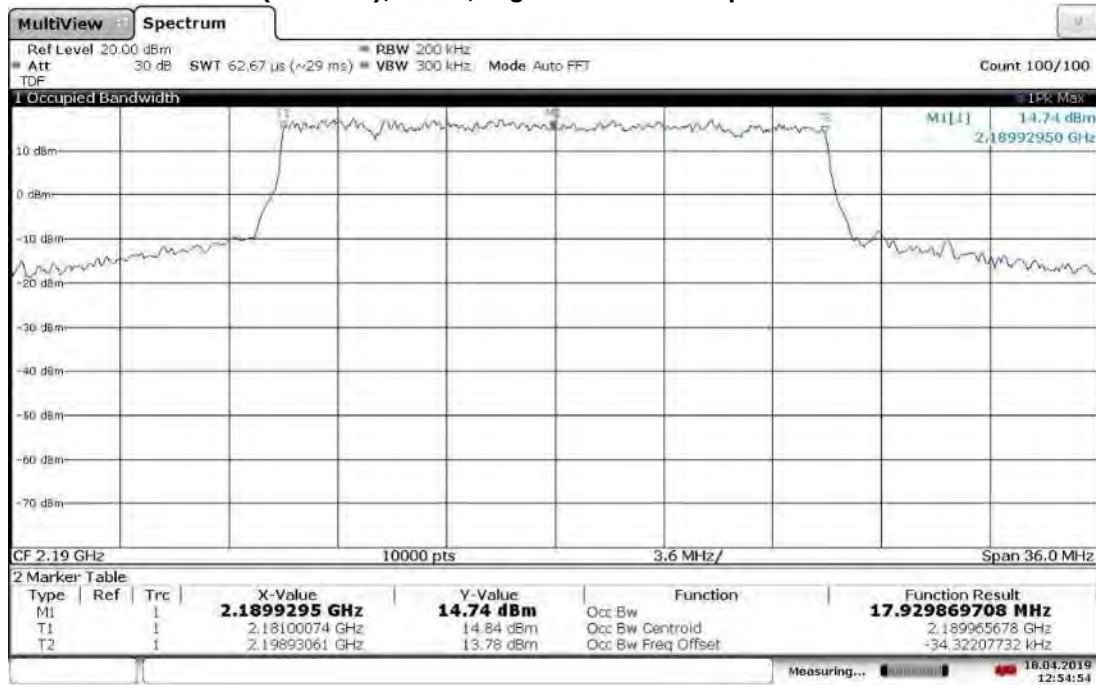
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



12:58:08 18.04.2019

TM3.1-64QAM_20 MHz Bandwidth

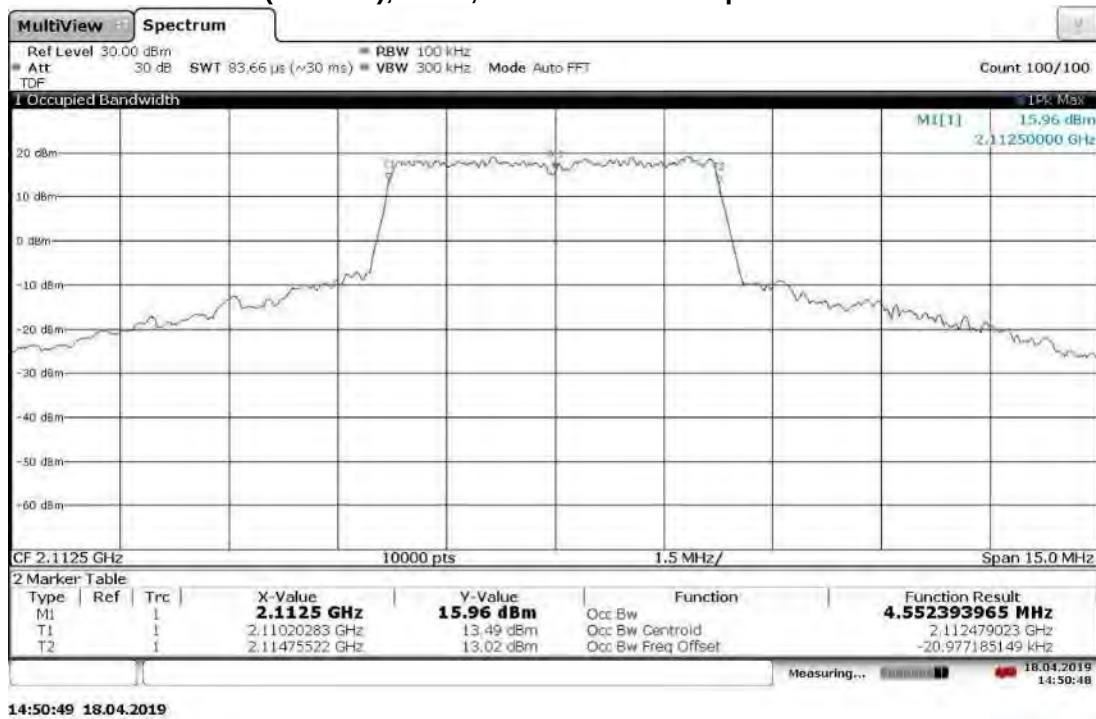
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



12:54:55 18.04.2019

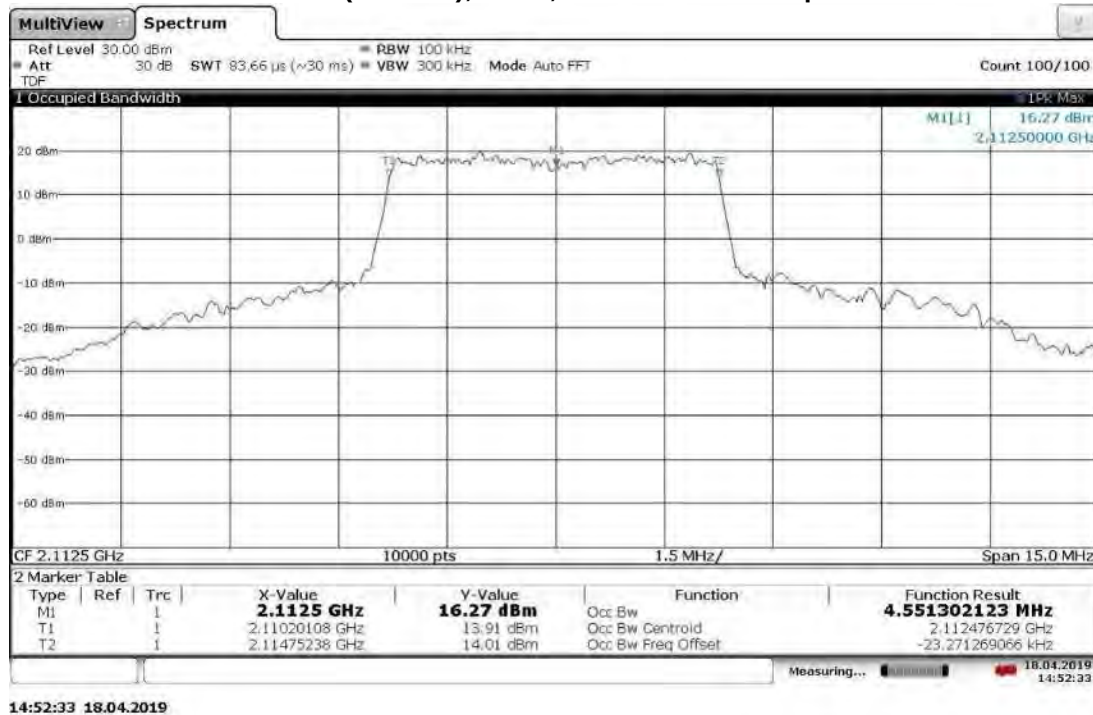
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



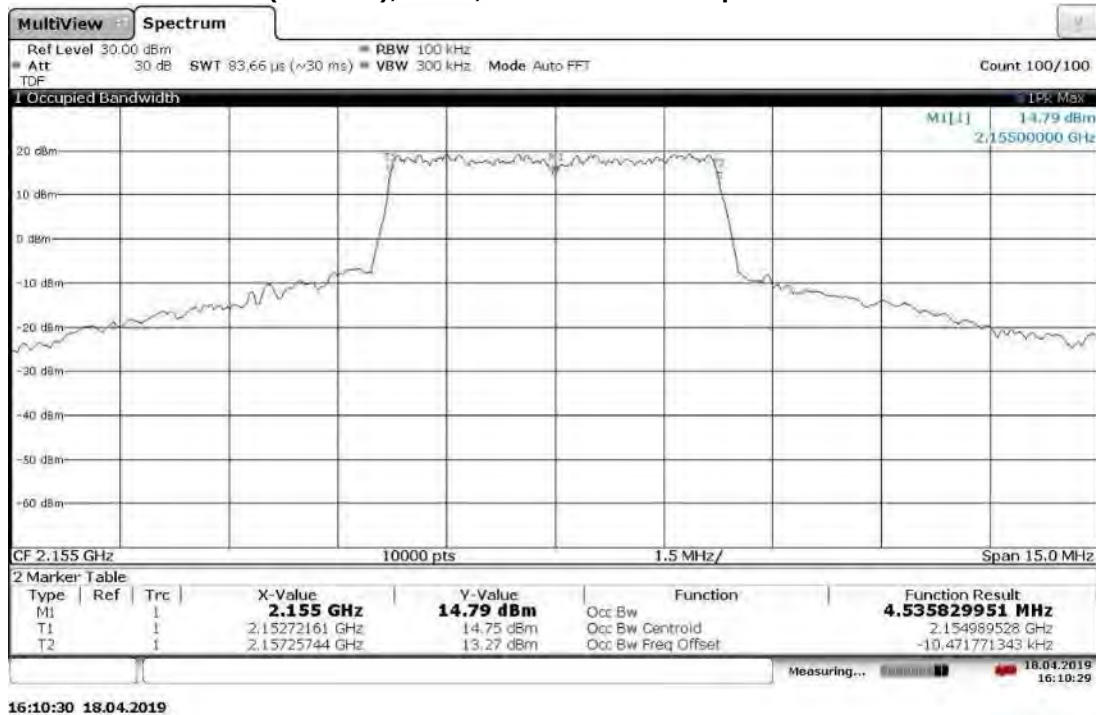
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



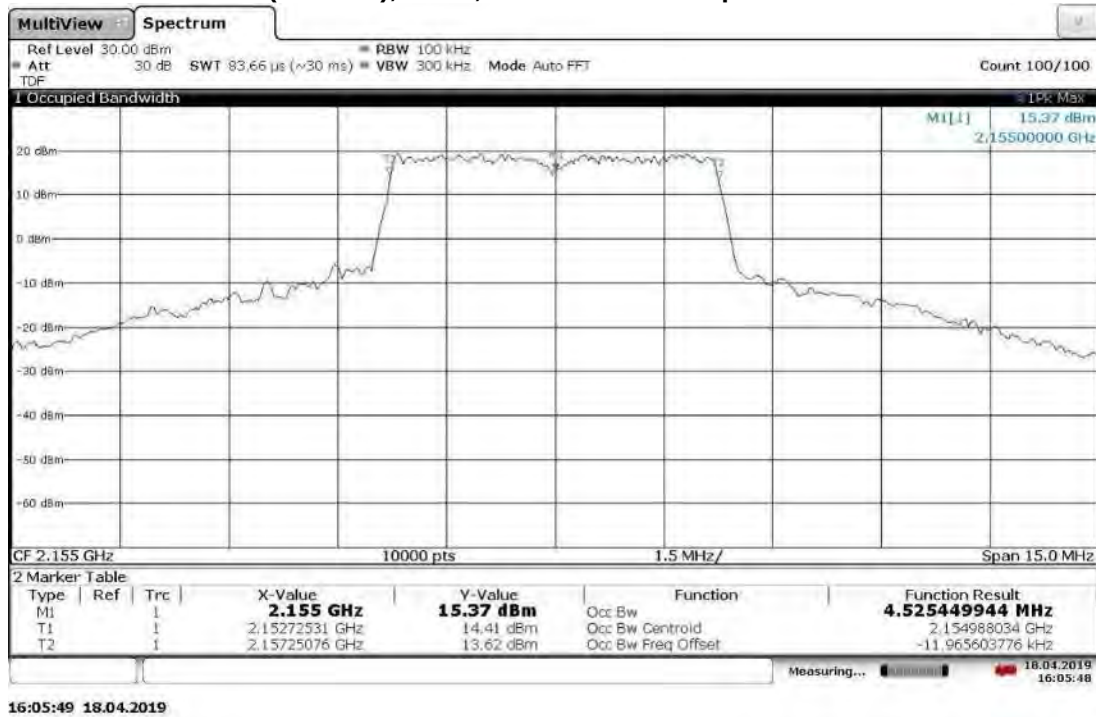
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



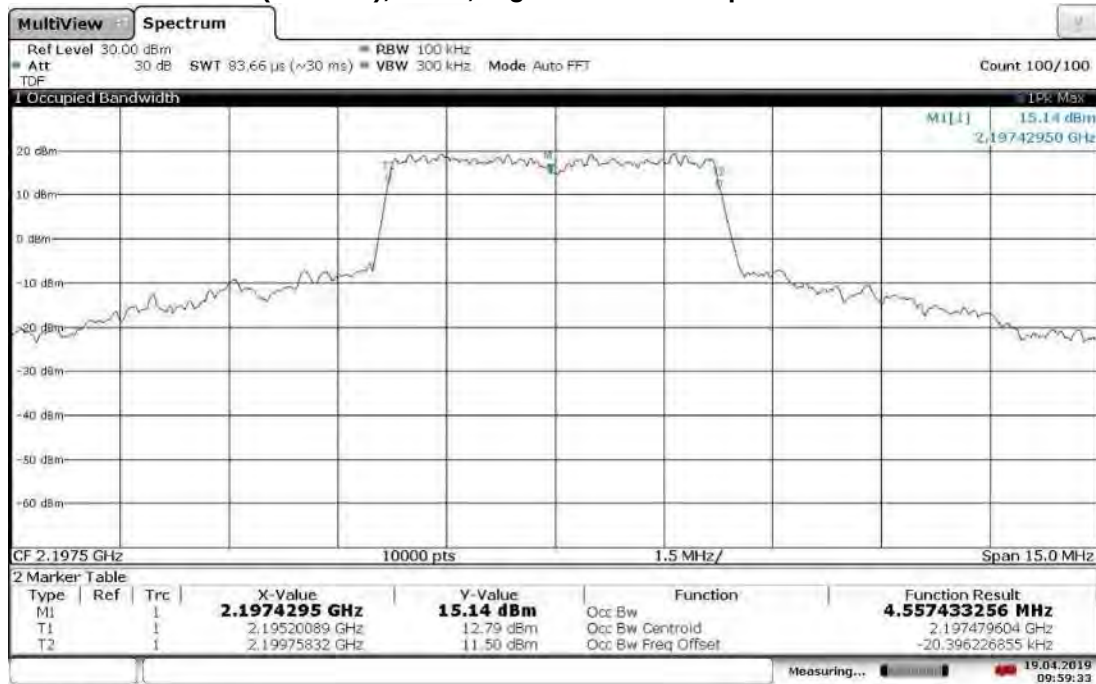
TM3.1a-256QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



TM3.1a-256QAM_5 MHz Bandwidth

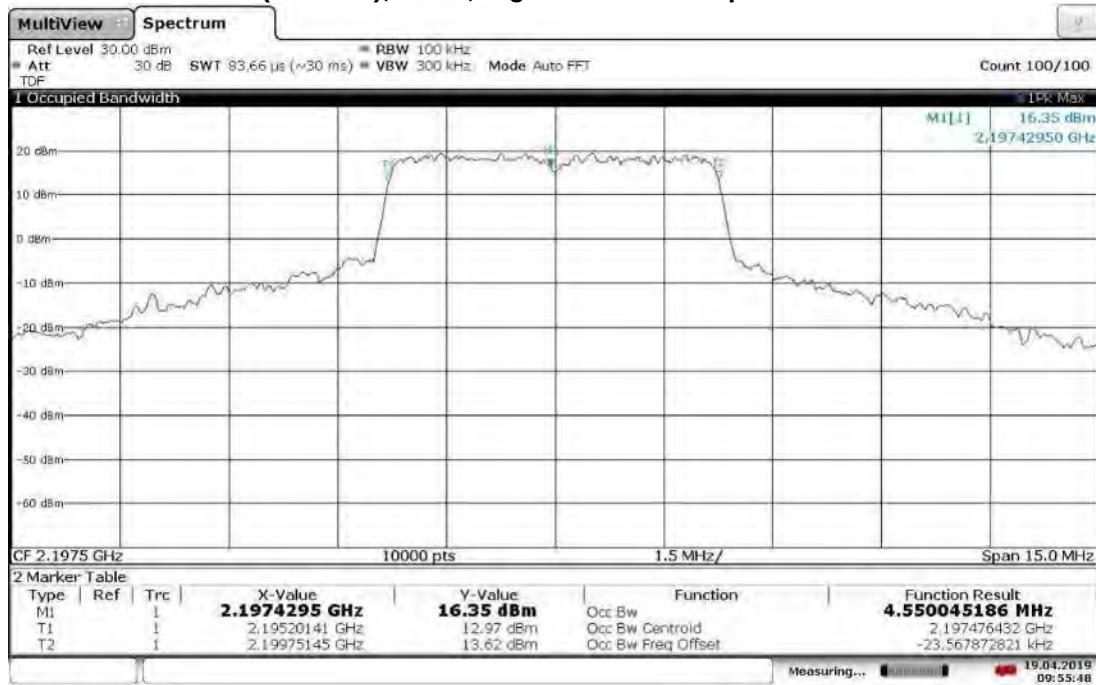
Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



09:59:34 19.04.2019

TM3.1a-256QAM_5 MHz Bandwidth

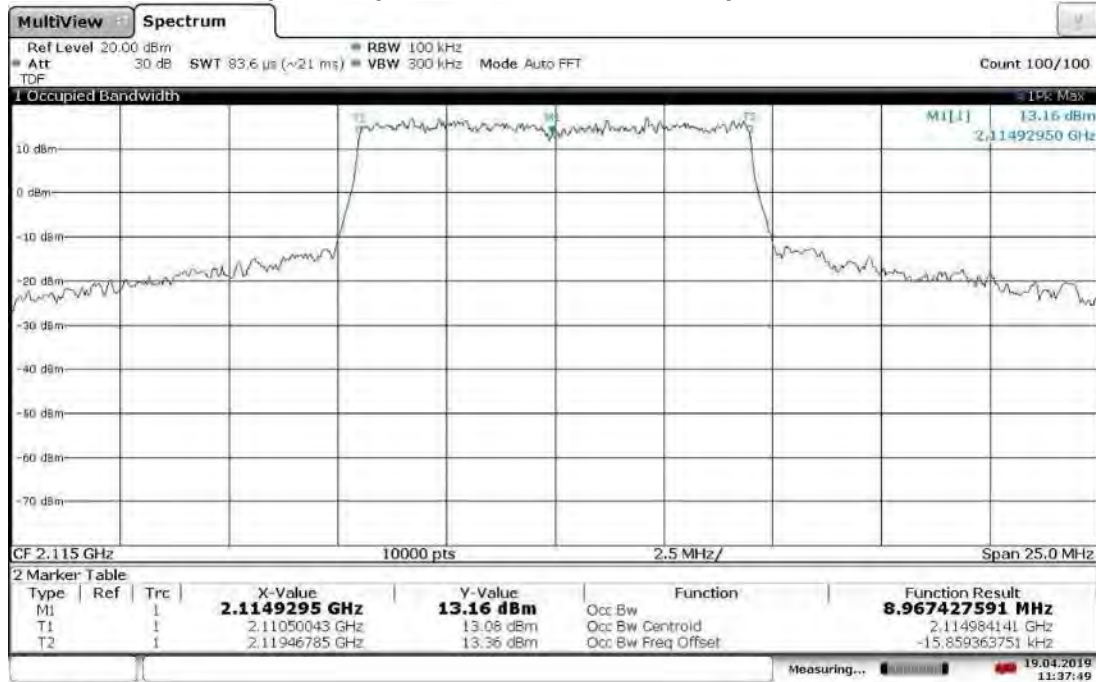
Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



09:55:49 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

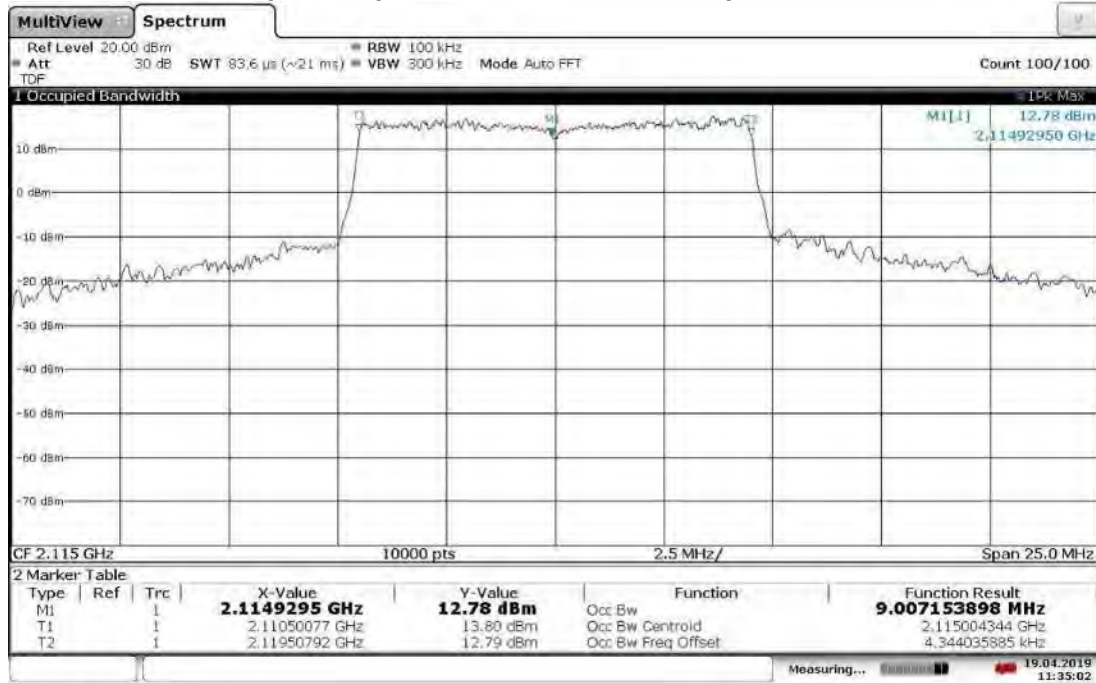
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



11:37:50 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

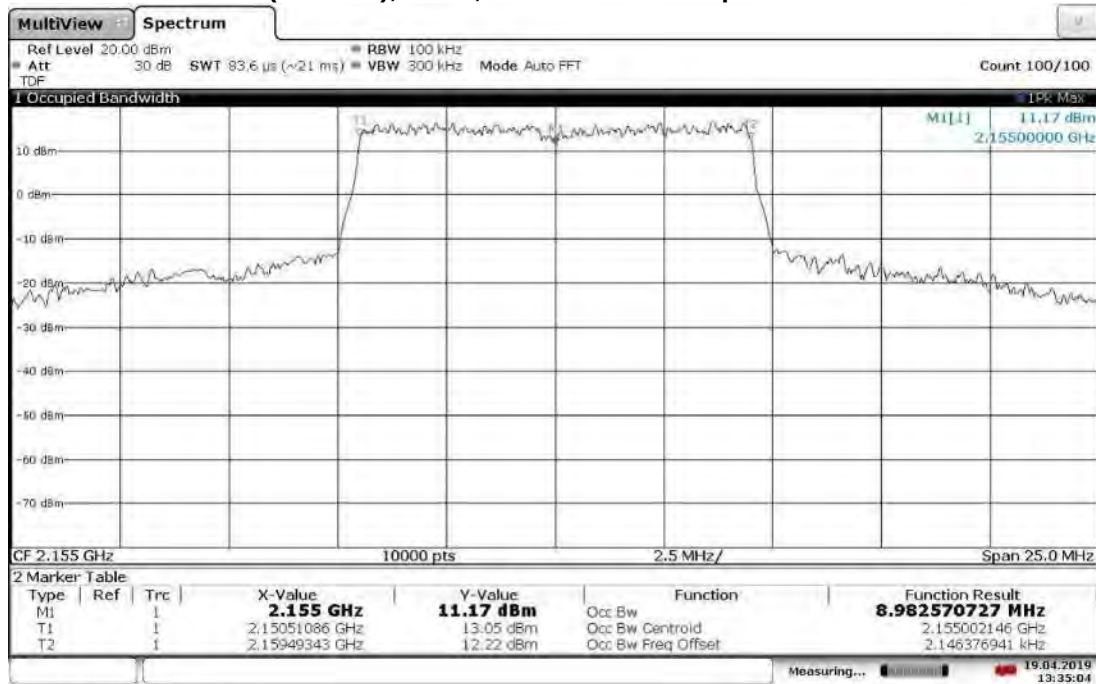
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



11:35:03 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

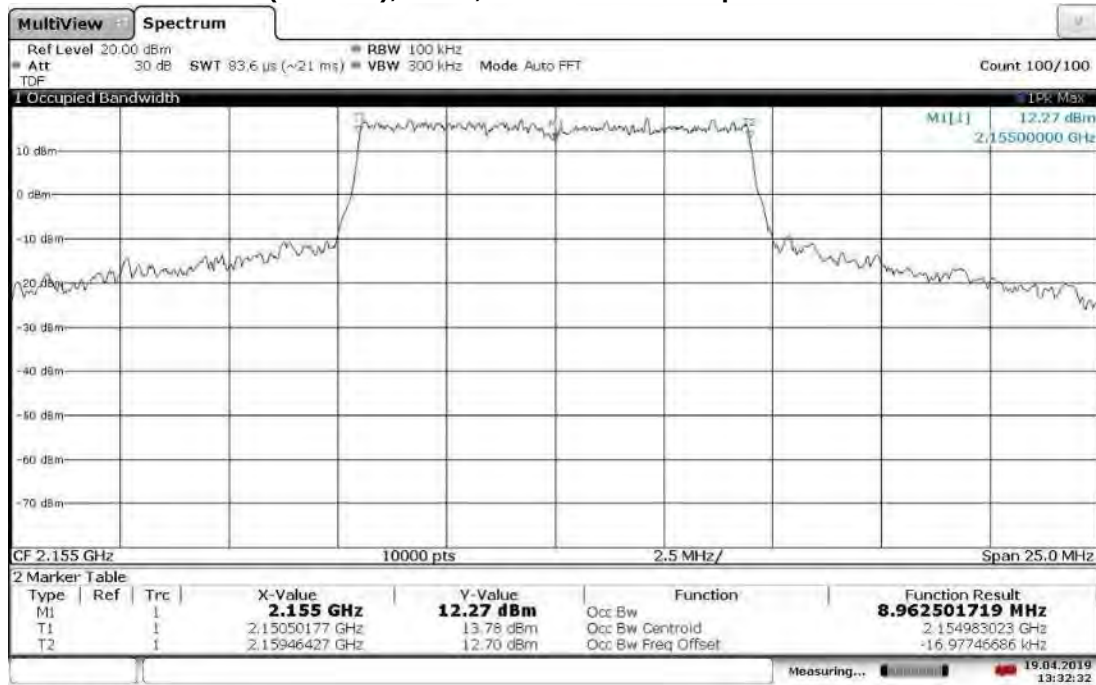
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



13:35:04 19.04.2019

TM3.1a-256QAM_10 MHz Bandwidth

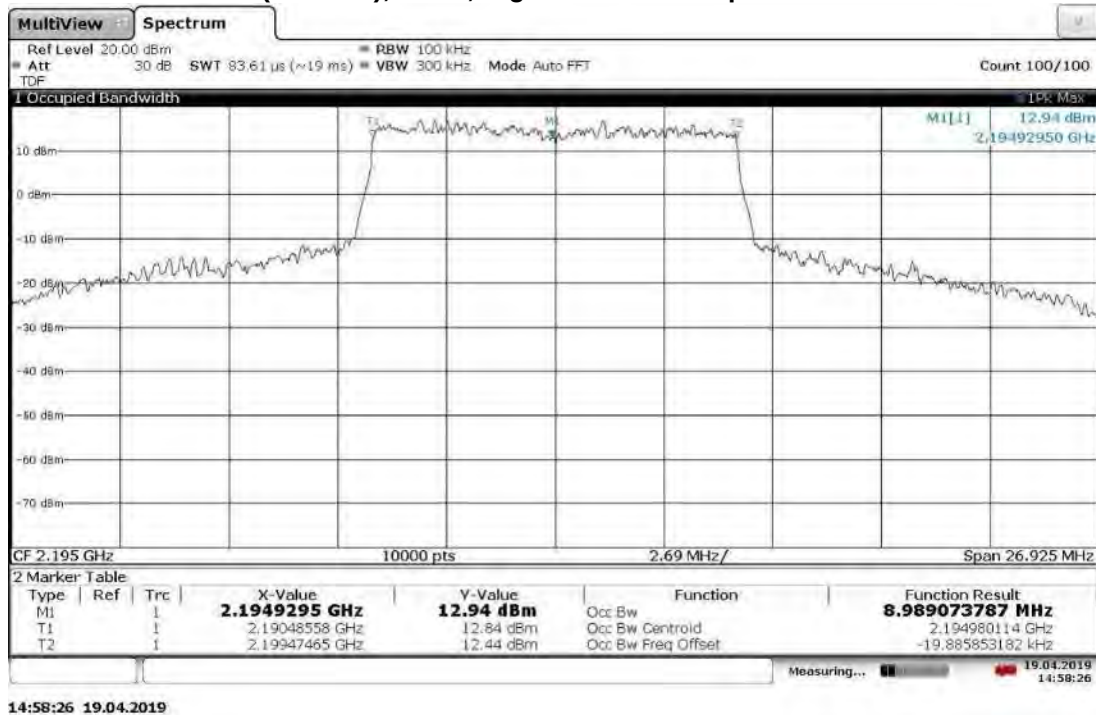
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



13:32:32 19.04.2019

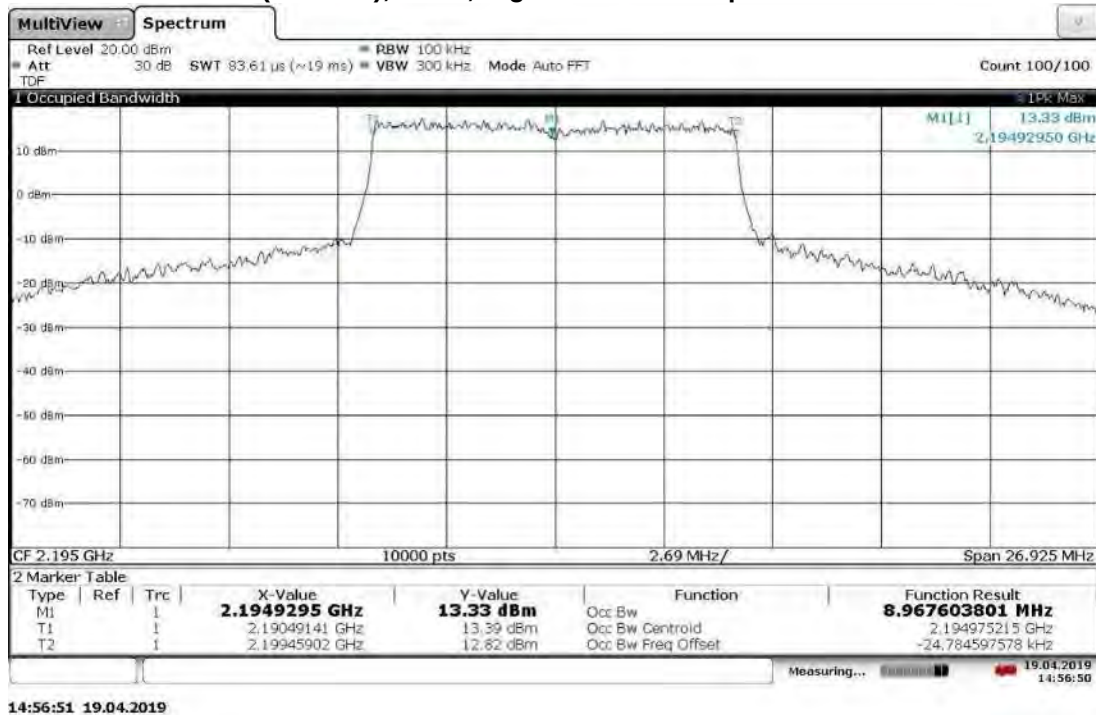
TM3.1a-256QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



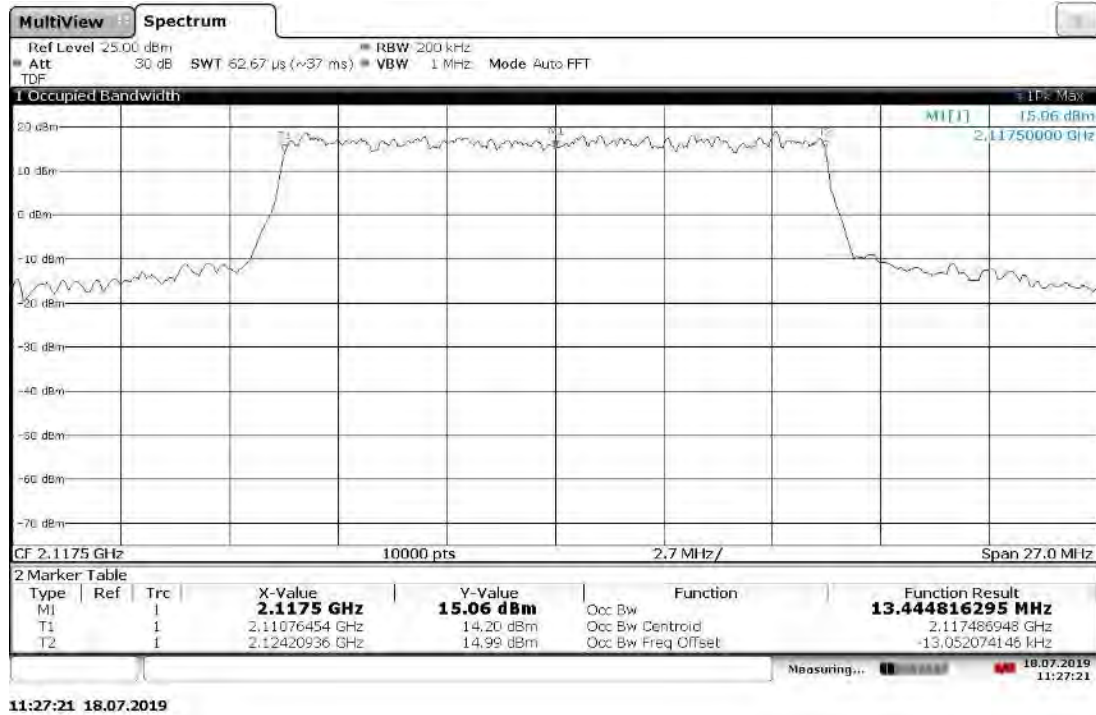
TM3.1a-256QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



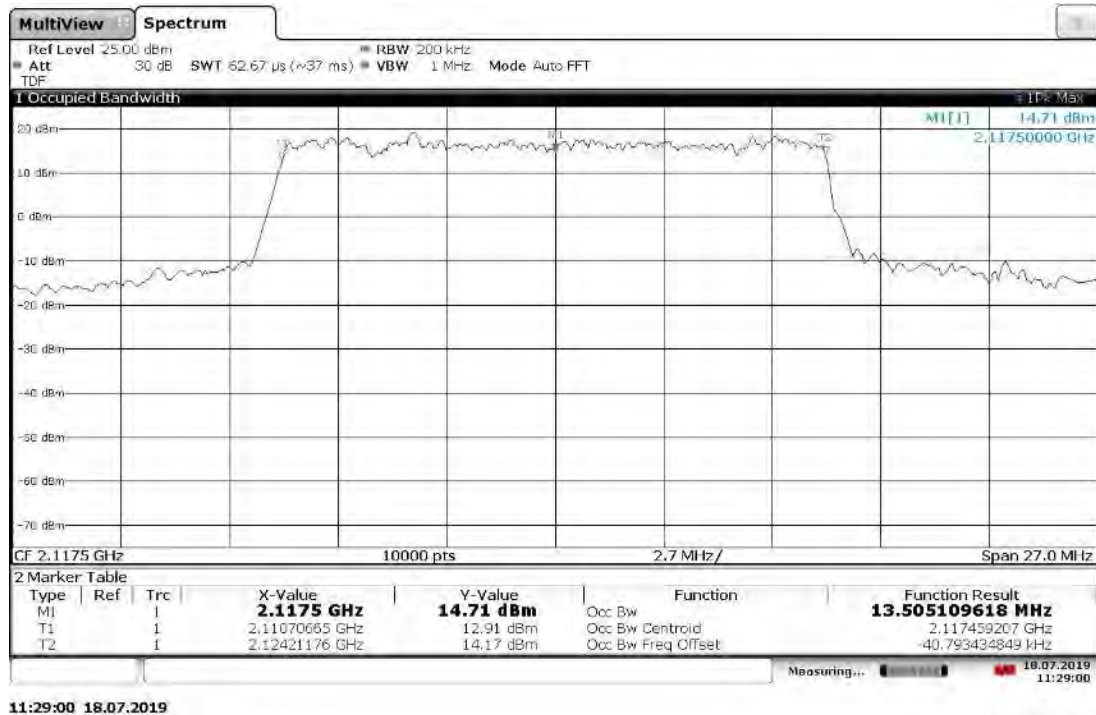
TM3.1a-256QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



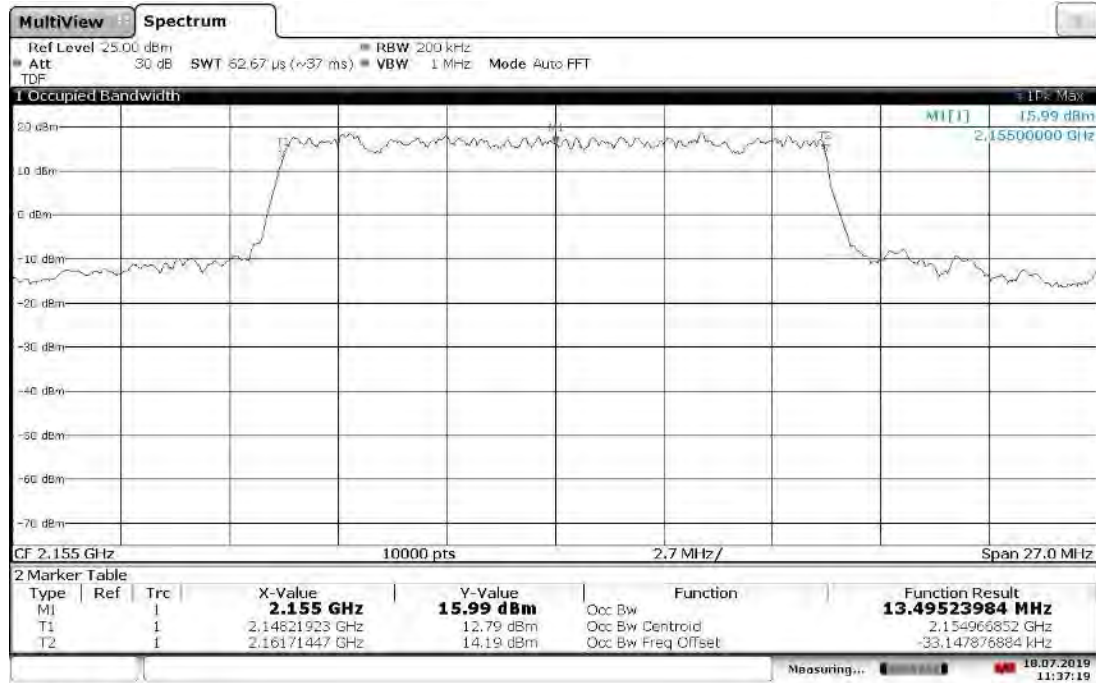
TM3.1a-256QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



TM3.1a-256QAM_15 MHz Bandwidth

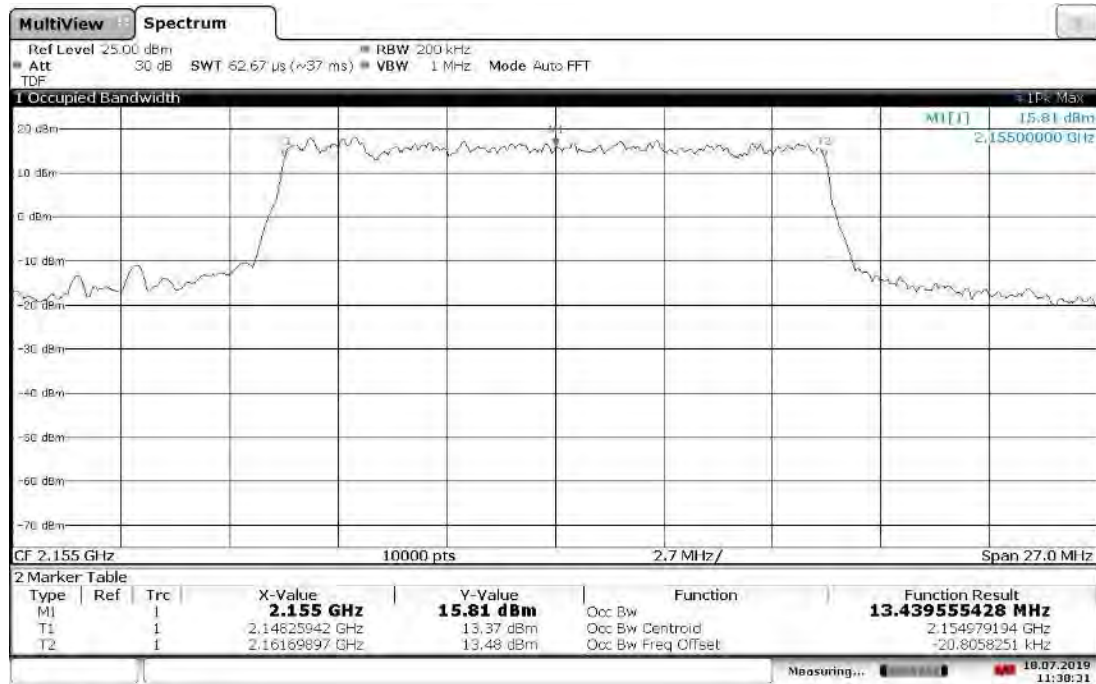
Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



11:37:19 18.07.2019

TM3.1a-256QAM_15 MHz Bandwidth

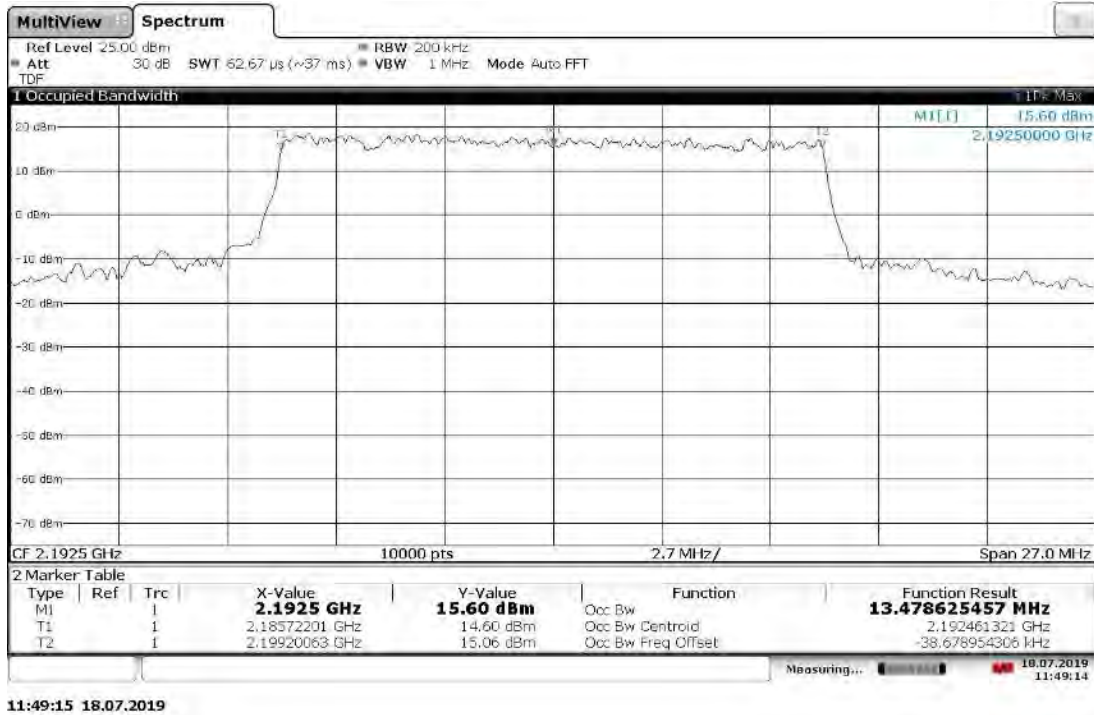
Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



11:38:32 18.07.2019

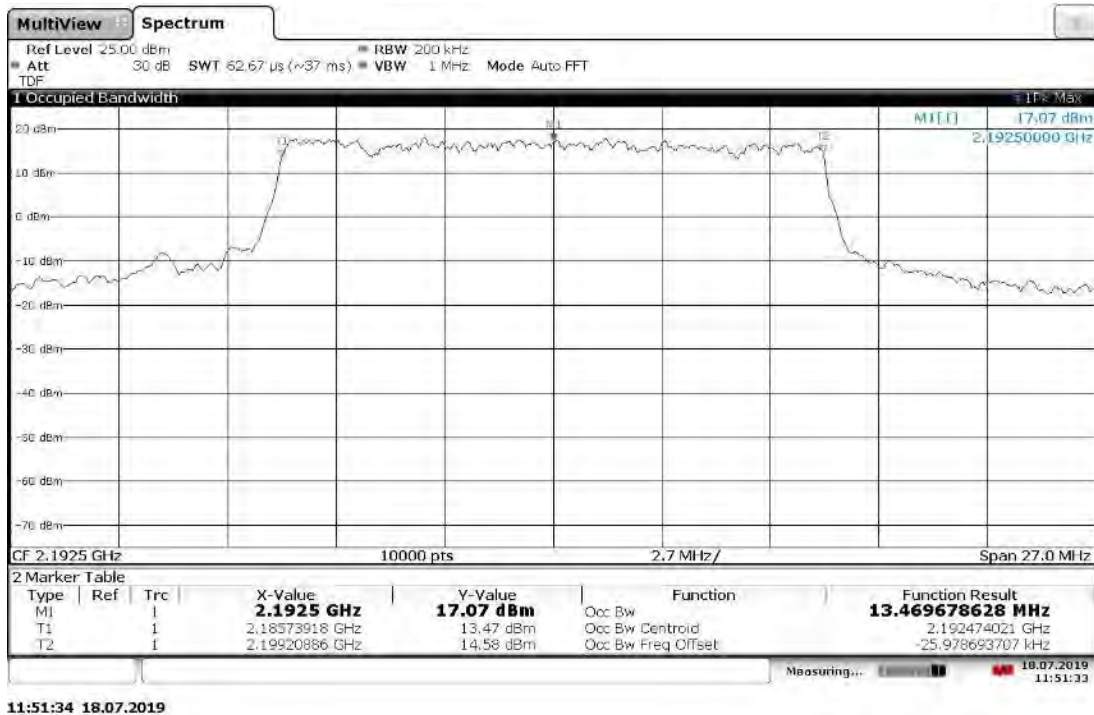
TM3.1a-256QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



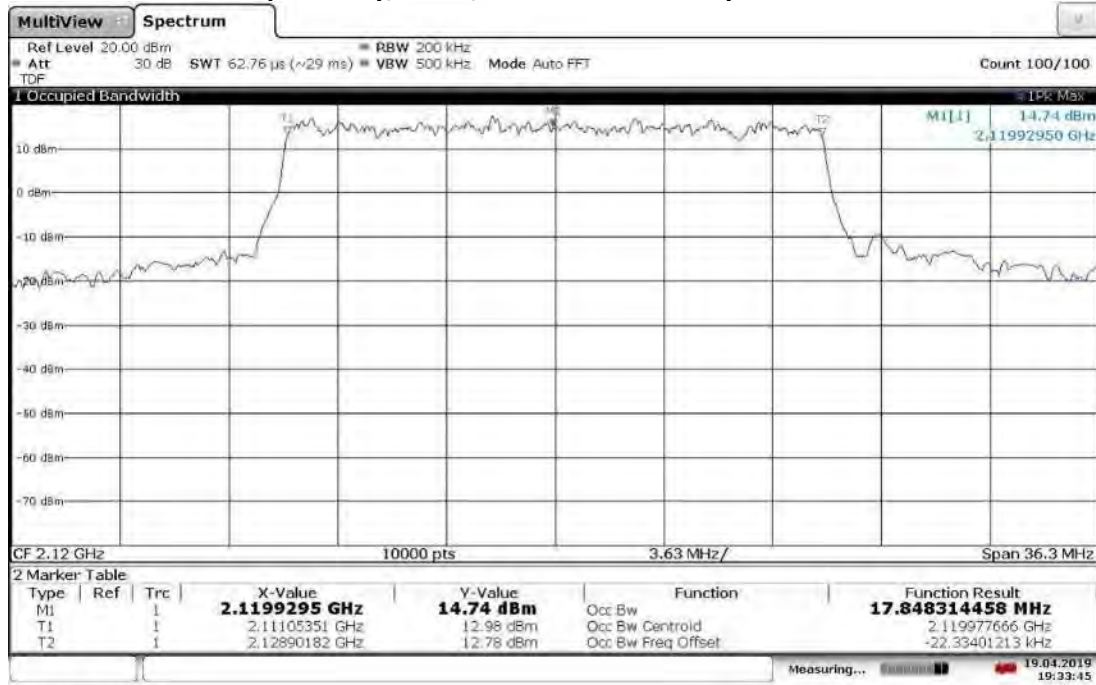
TM3.1a-256QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



TM3.1a-256QAM_20 MHz Bandwidth

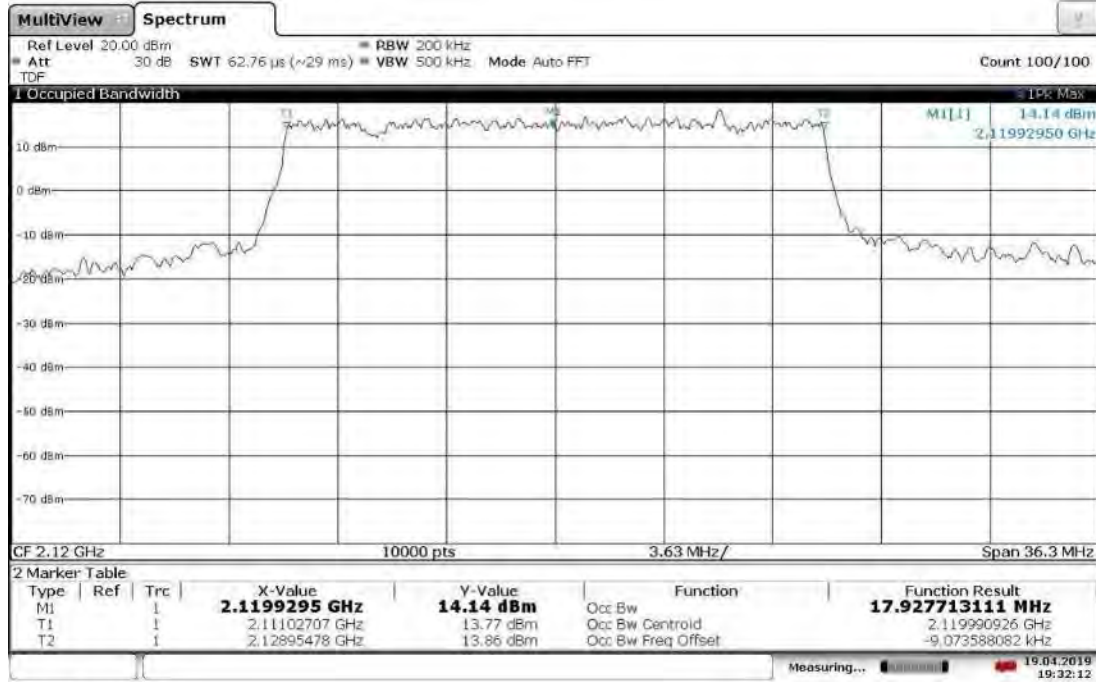
Slot 1 (Band 66), ANT0, Low Channel Occupied Bandwidth



19:33:45 19.04.2019

TM3.1a-256QAM_20 MHz Bandwidth

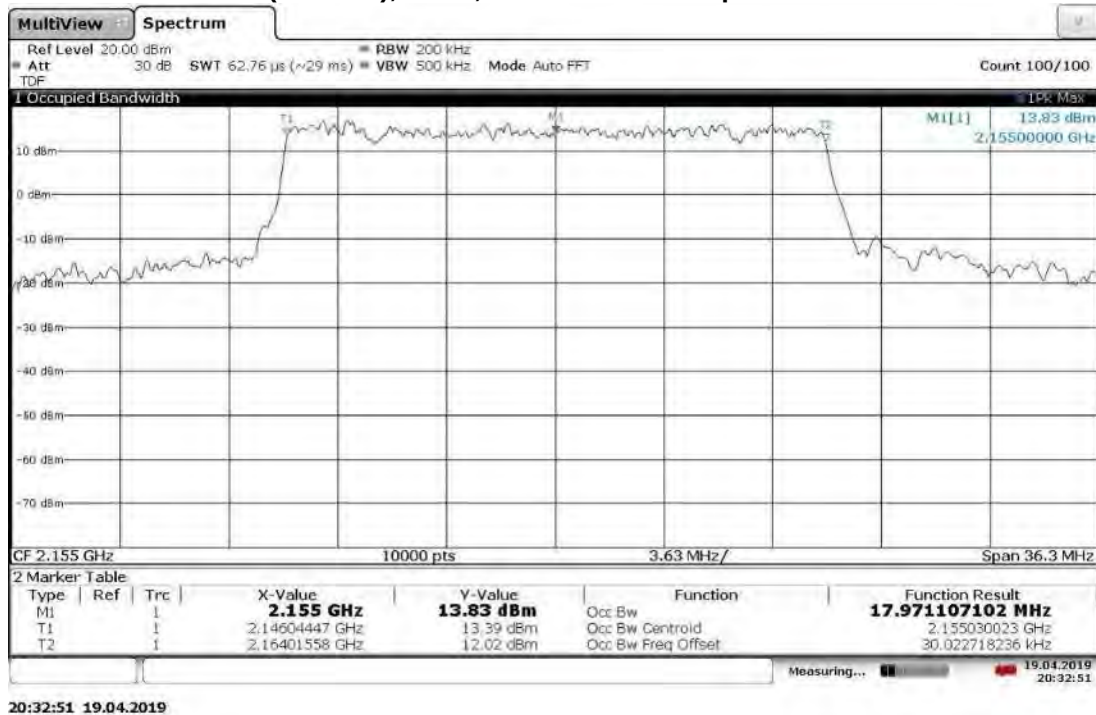
Slot 1 (Band 66), ANT1, Low Channel Occupied Bandwidth



19:32:12 19.04.2019

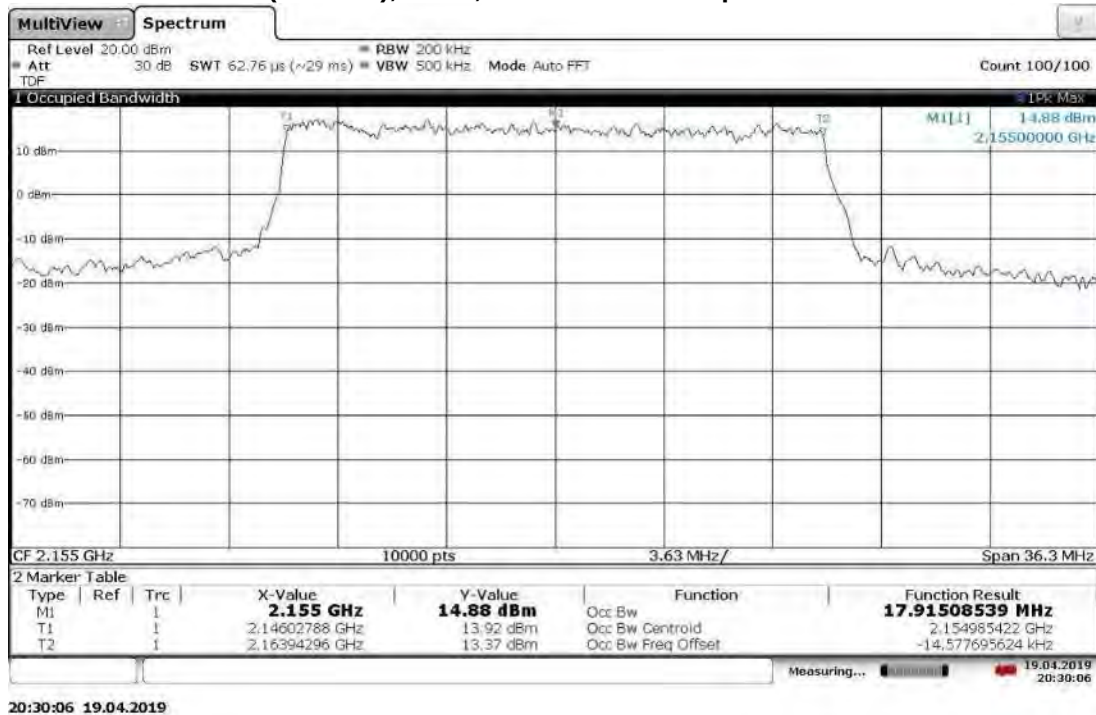
TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel Occupied Bandwidth



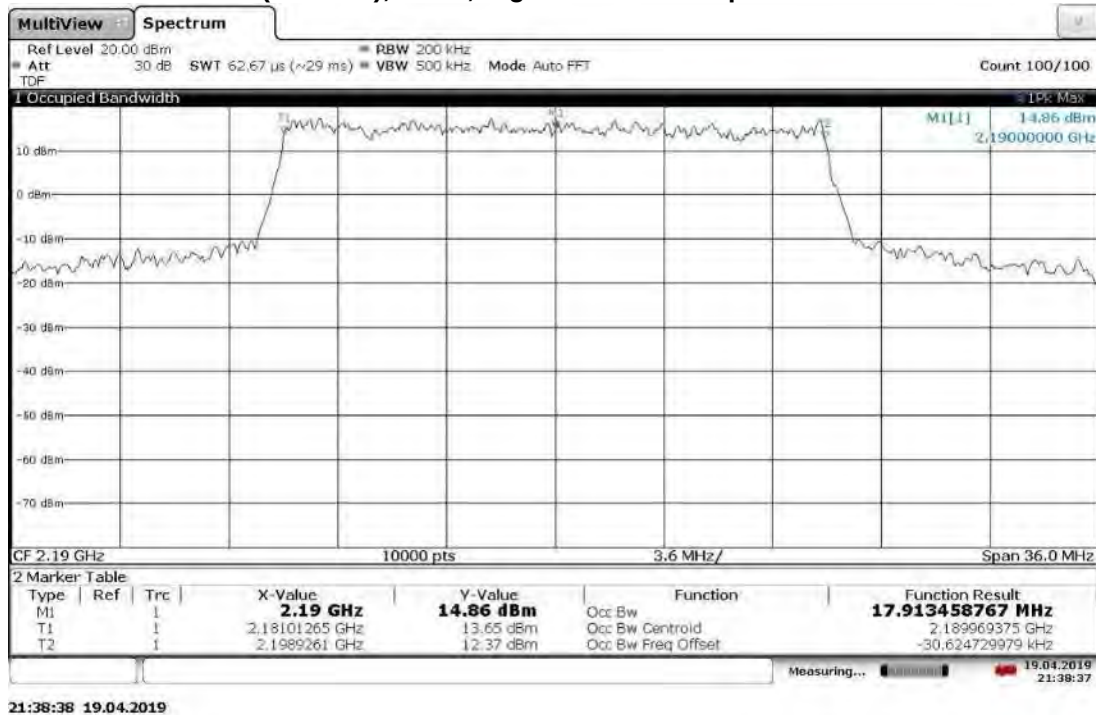
TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel Occupied Bandwidth



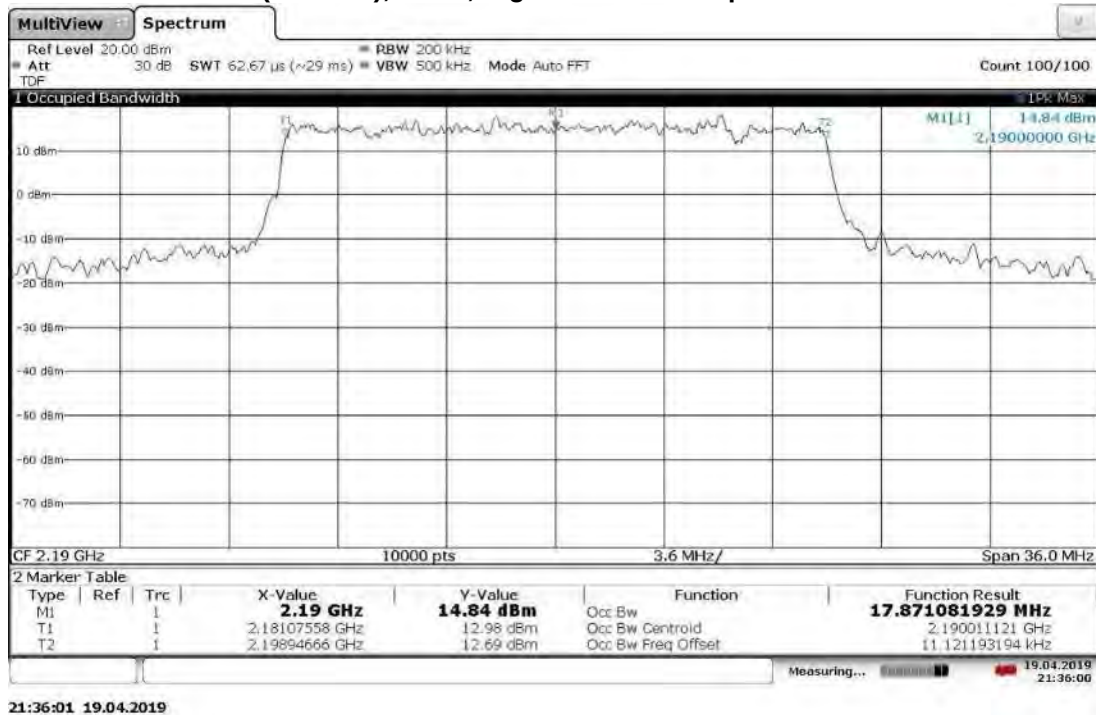
TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel Occupied Bandwidth



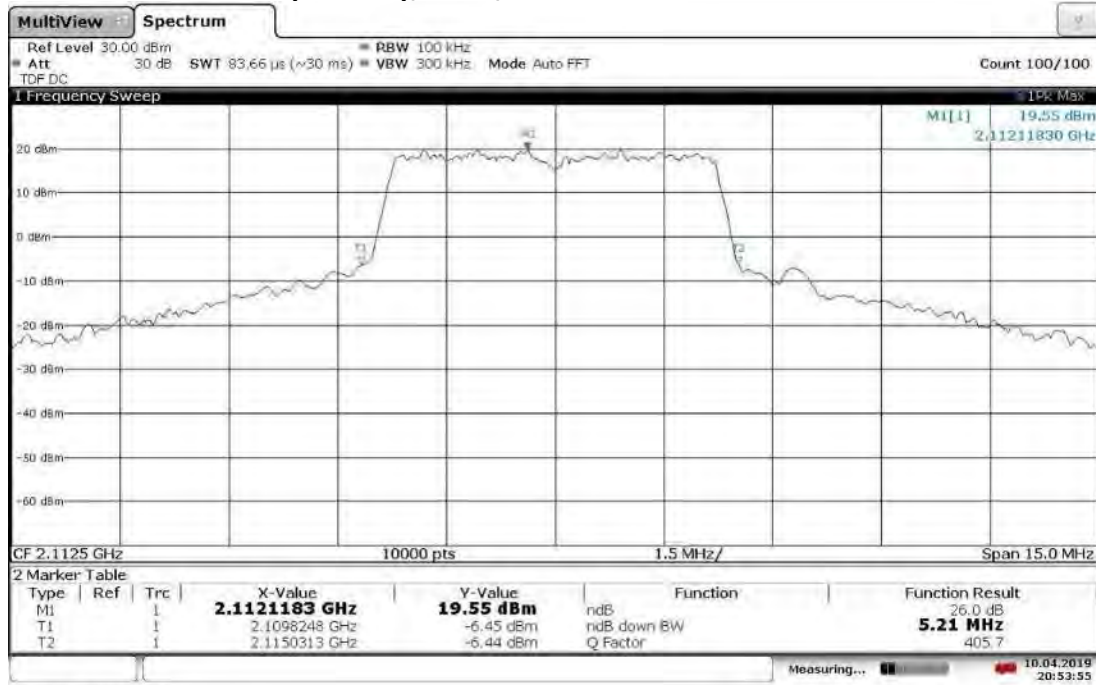
TM3.1a-256QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel Occupied Bandwidth



TM1.1-QPSK_5 MHz Bandwidth

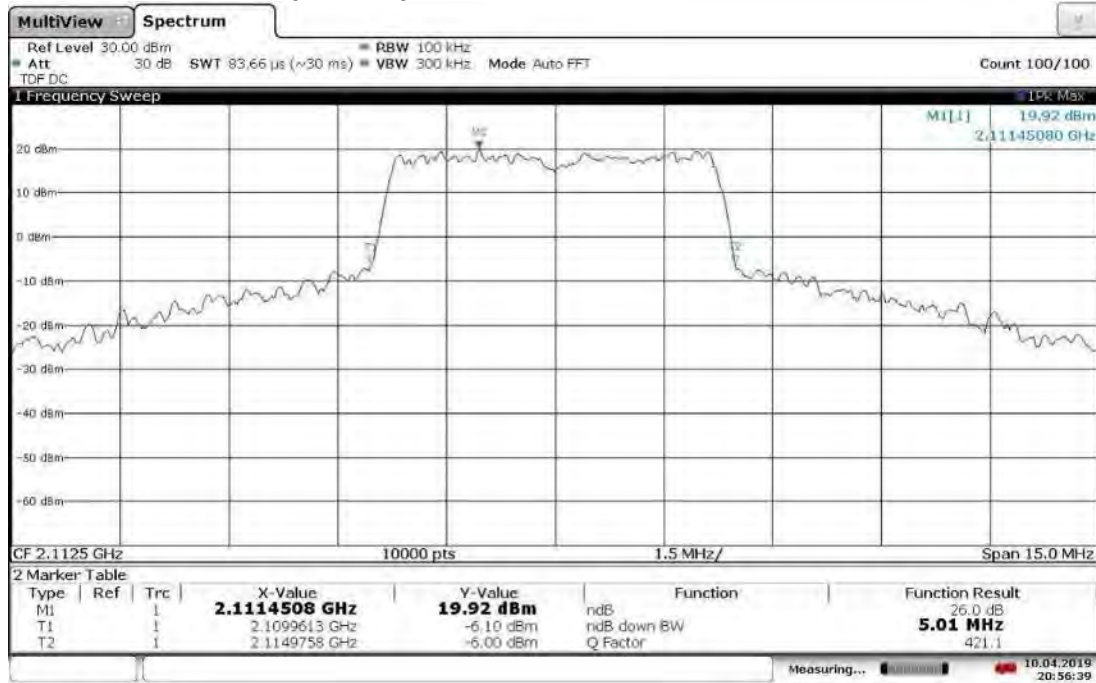
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



20:53:55 10.04.2019

TM1.1-QPSK_5 MHz Bandwidth

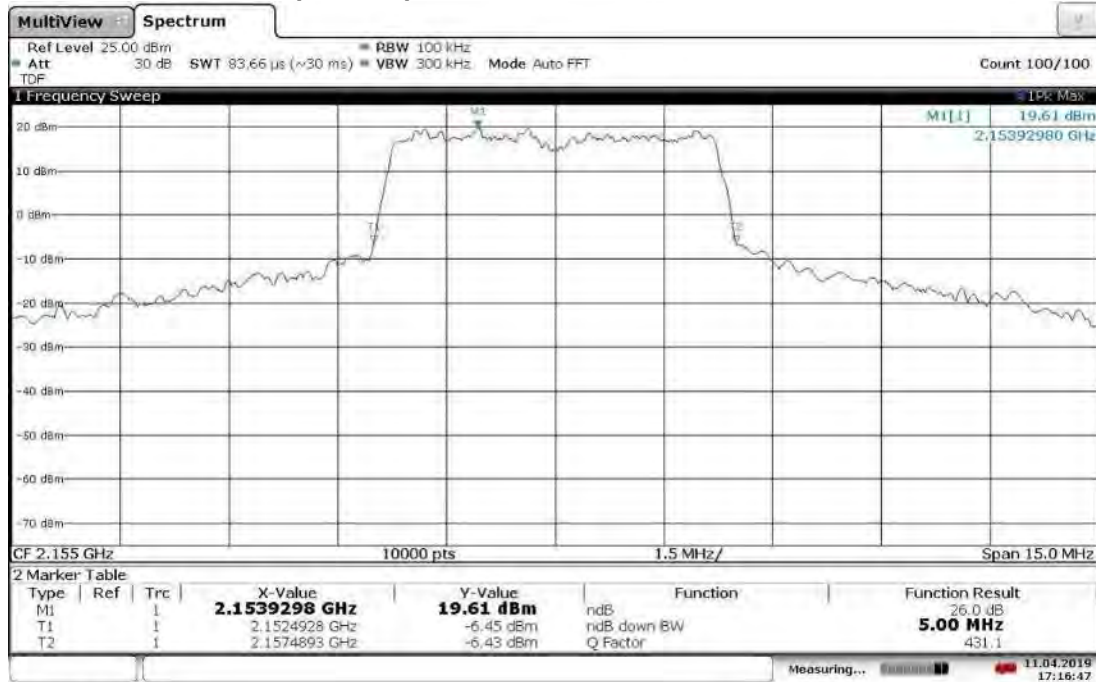
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



20:56:39 10.04.2019

TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



17:16:48 11.04.2019

TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



17:14:45 11.04.2019

TM1.1-QPSK_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



19:31:47 11.04.2019

TM1.1-QPSK_5 MHz Bandwidth

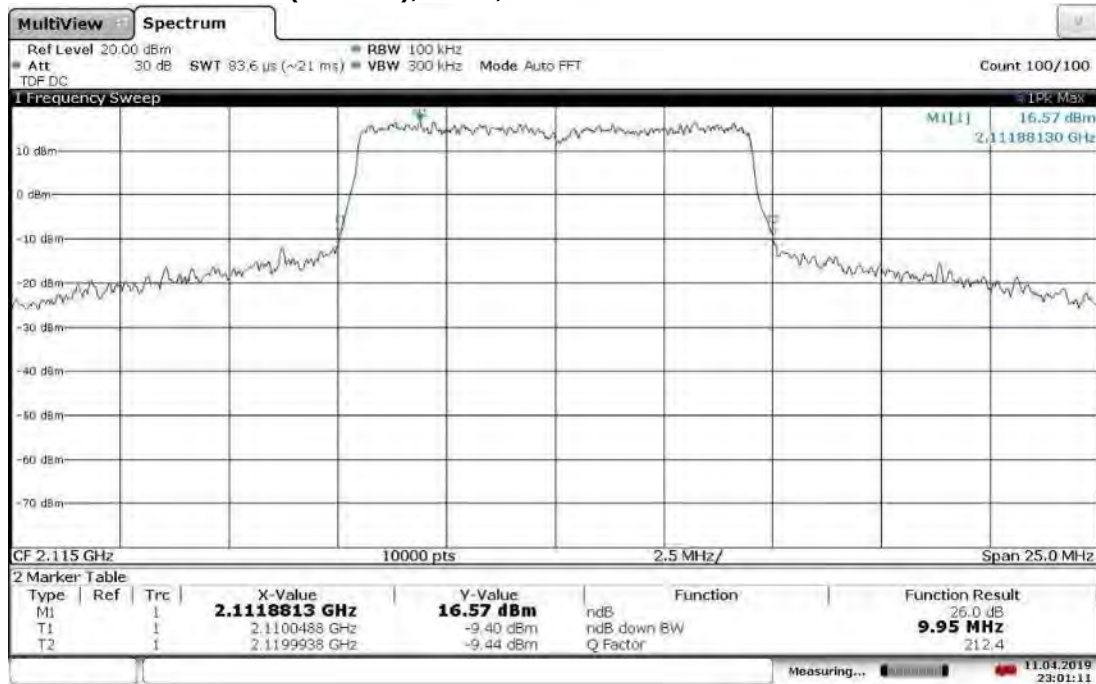
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



19:35:39 11.04.2019

TM1.1-QPSK_10 MHz Bandwidth

Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



23:01:12 11.04.2019

TM1.1-QPSK_10 MHz Bandwidth

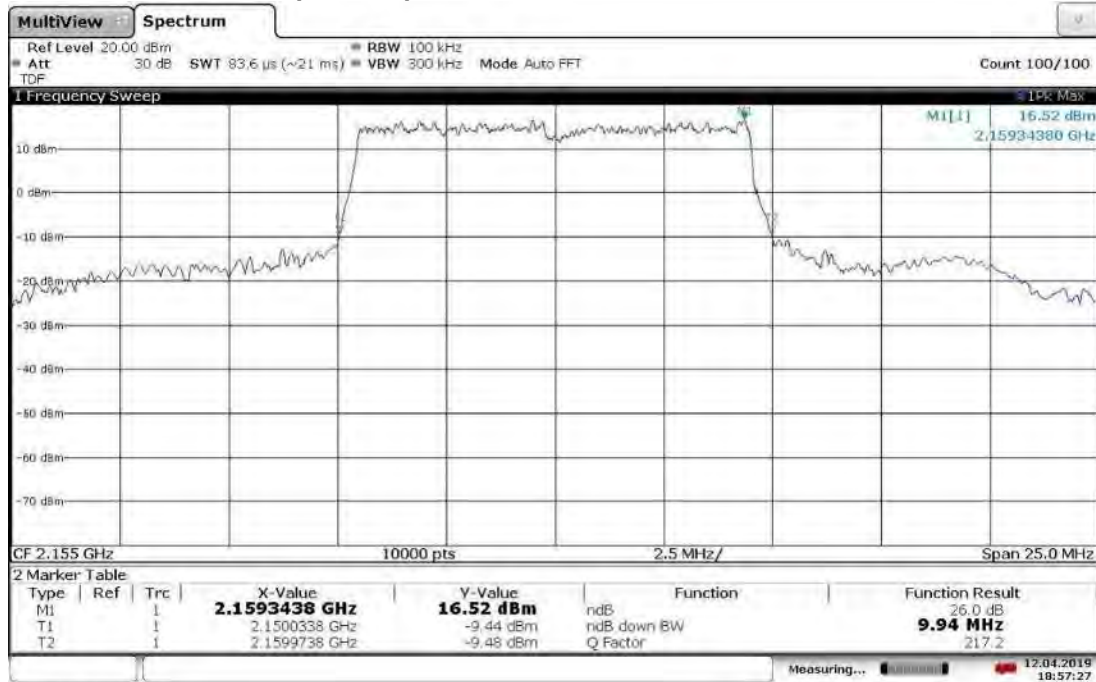
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



22:59:31 11.04.2019

TM1.1-QPSK_10 MHz Bandwidth

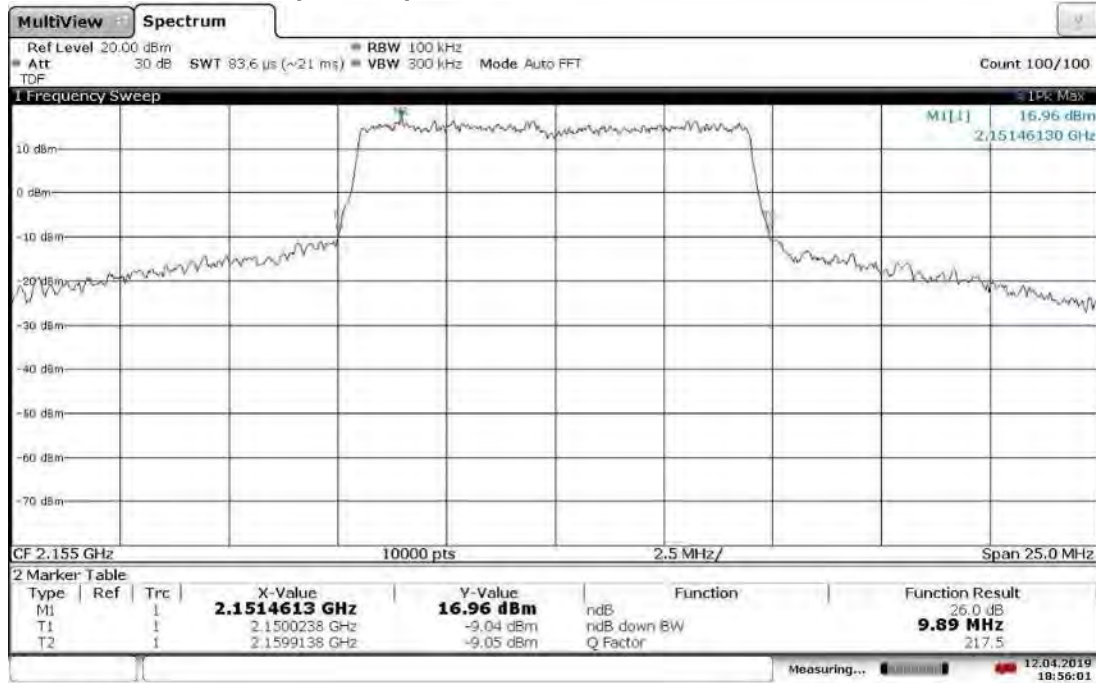
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



18:57:27 12.04.2019

TM1.1-QPSK_10 MHz Bandwidth

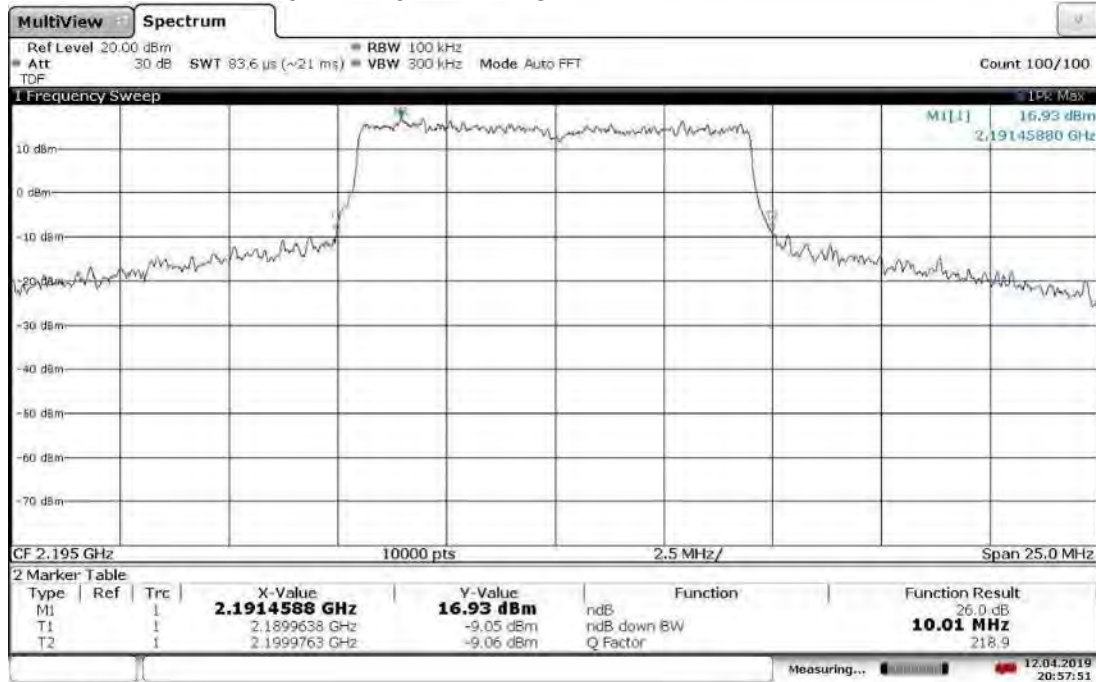
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



18:56:02 12.04.2019

TM1.1-QPSK_10 MHz Bandwidth

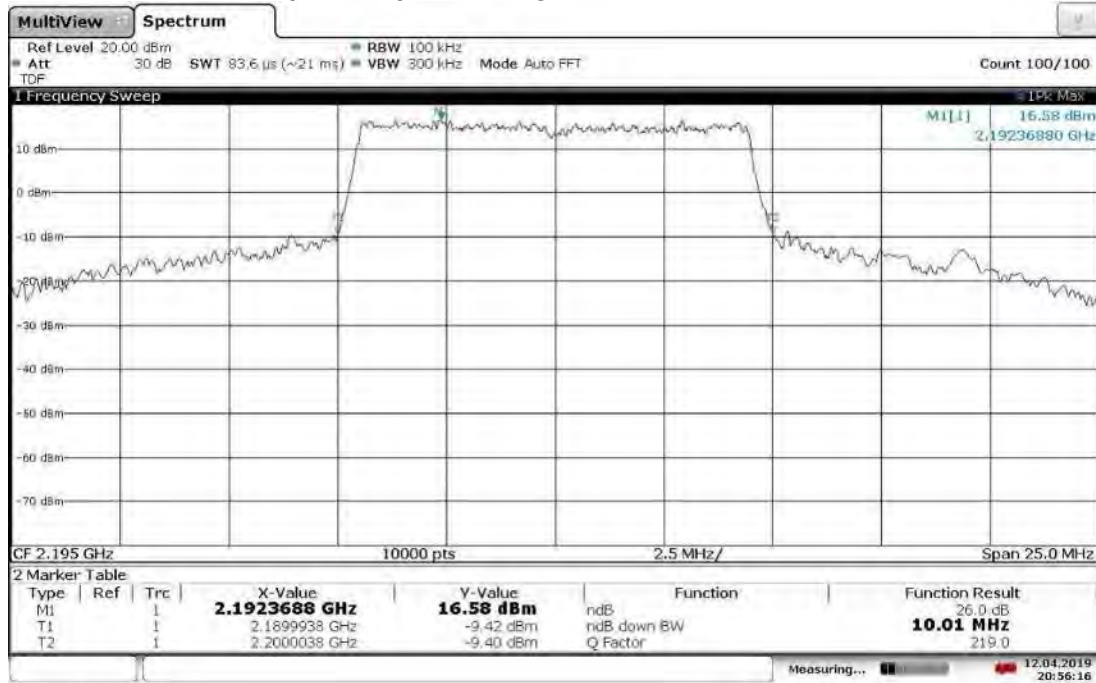
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



20:57:52 12.04.2019

TM1.1-QPSK_10 MHz Bandwidth

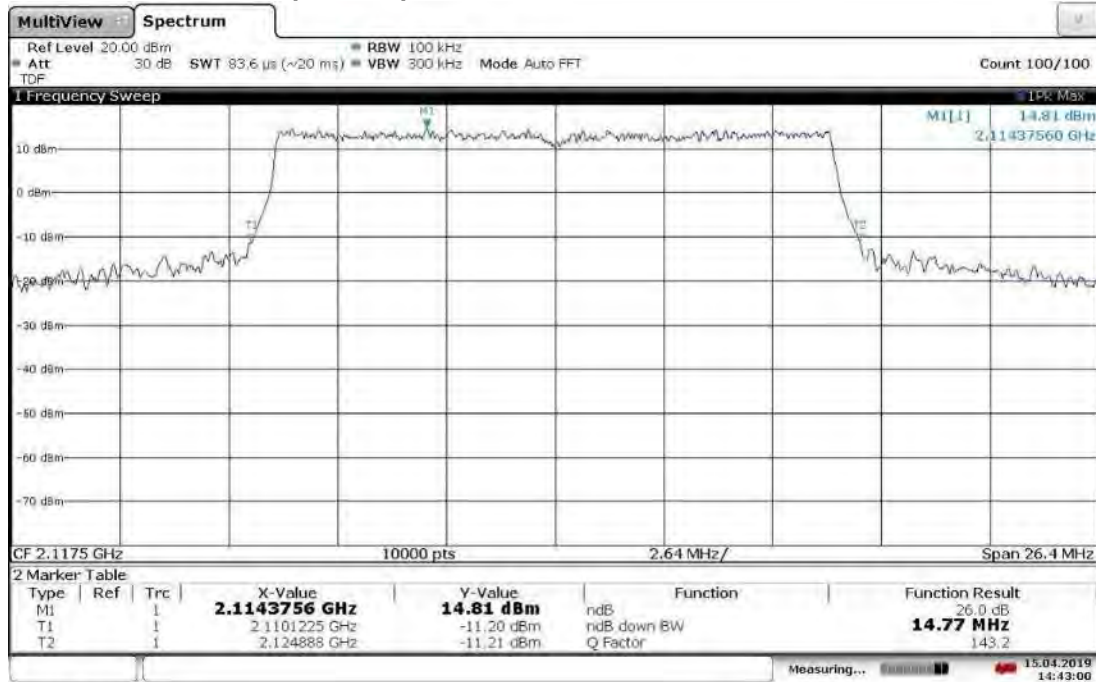
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



20:56:16 12.04.2019

TM1.1-QPSK_15 MHz Bandwidth

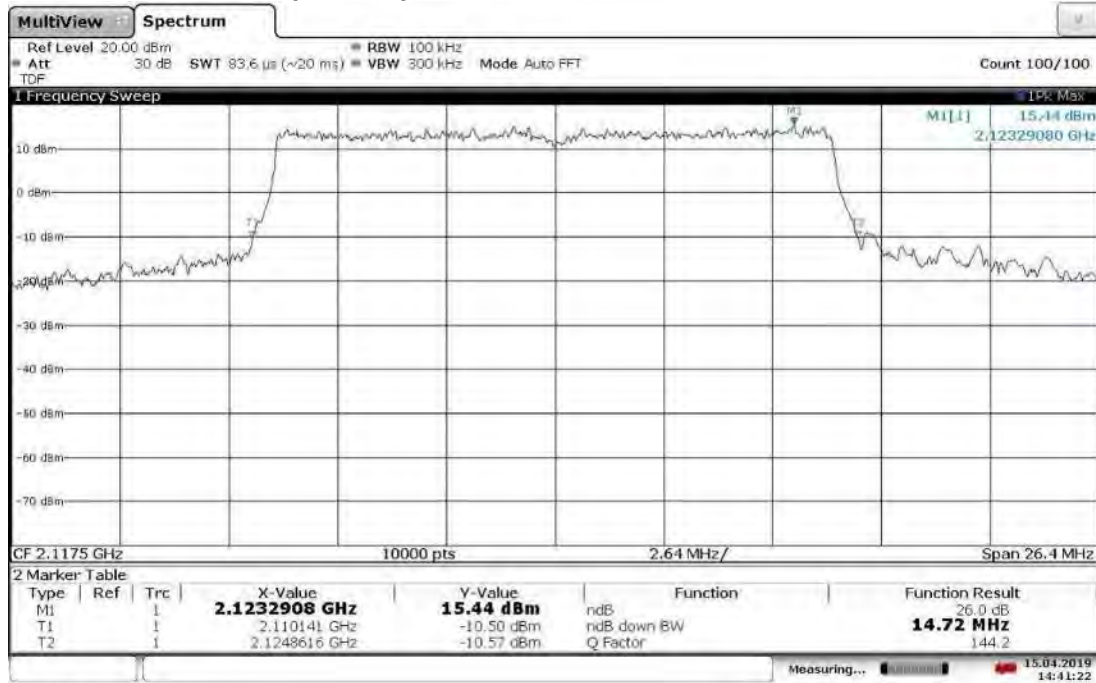
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



14:43:00 15.04.2019

TM1.1-QPSK_15 MHz Bandwidth

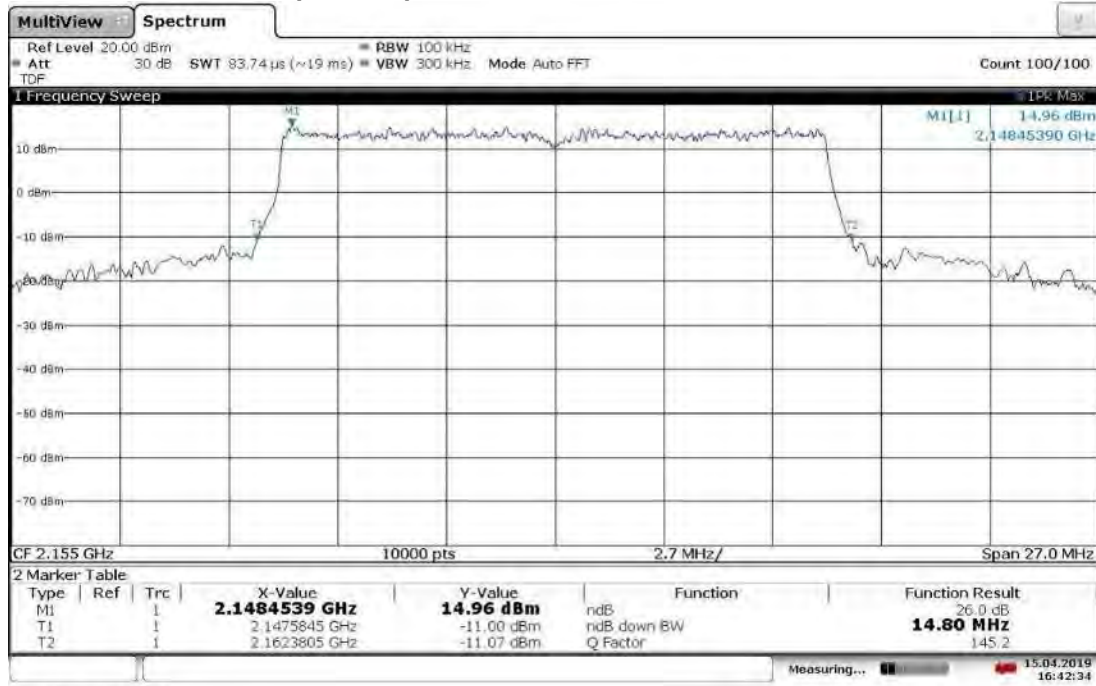
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



14:41:23 15.04.2019

TM1.1-QPSK_15 MHz Bandwidth

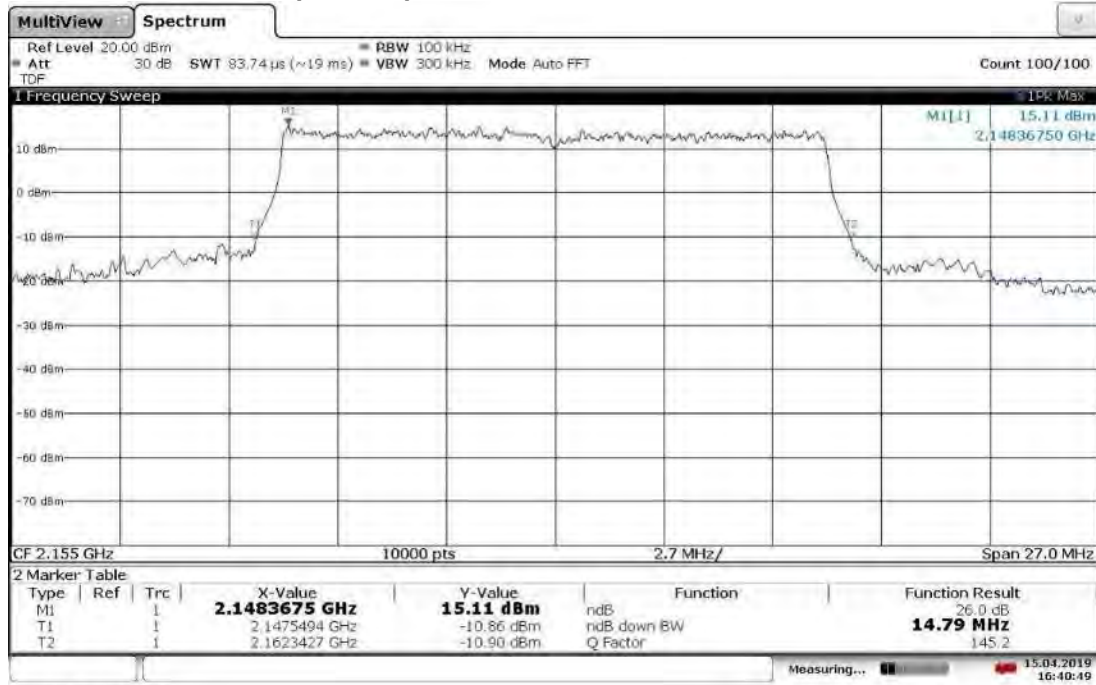
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



16:42:34 15.04.2019

TM1.1-QPSK_15 MHz Bandwidth

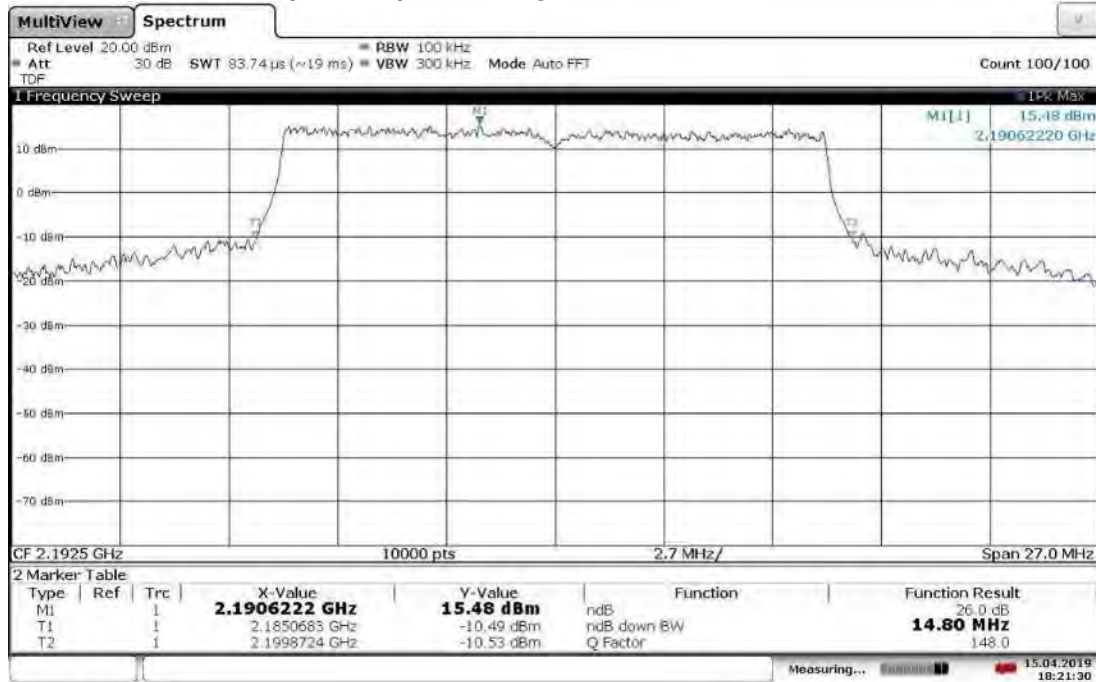
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



16:40:50 15.04.2019

TM1.1-QPSK_15 MHz Bandwidth

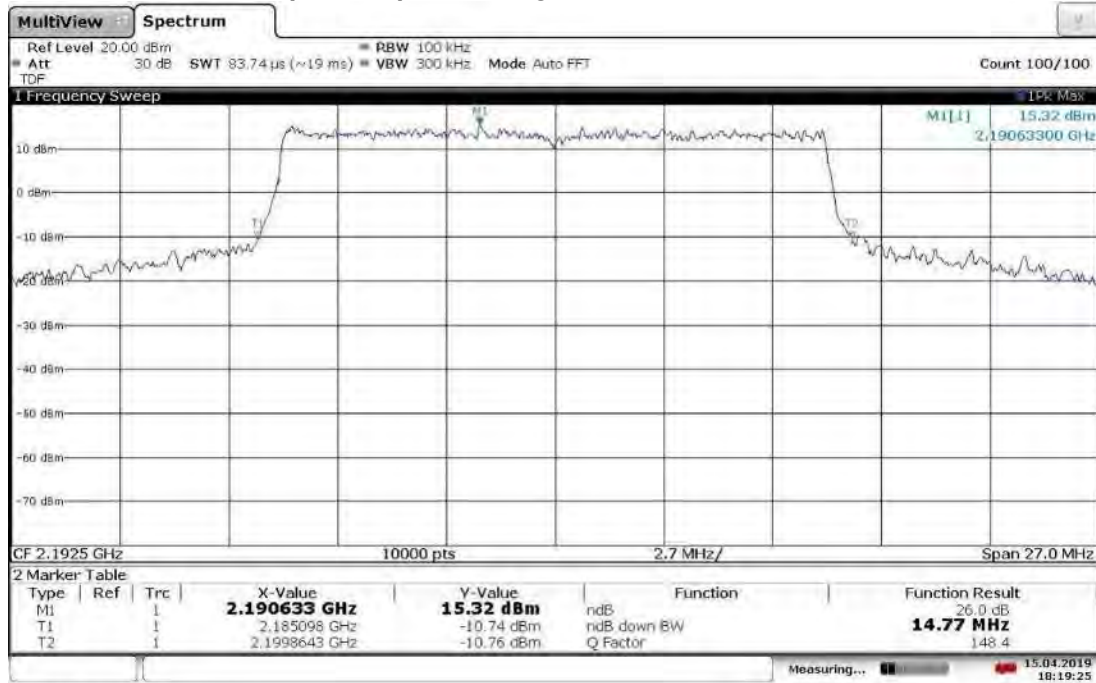
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



18:21:30 15.04.2019

TM1.1-QPSK_15 MHz Bandwidth

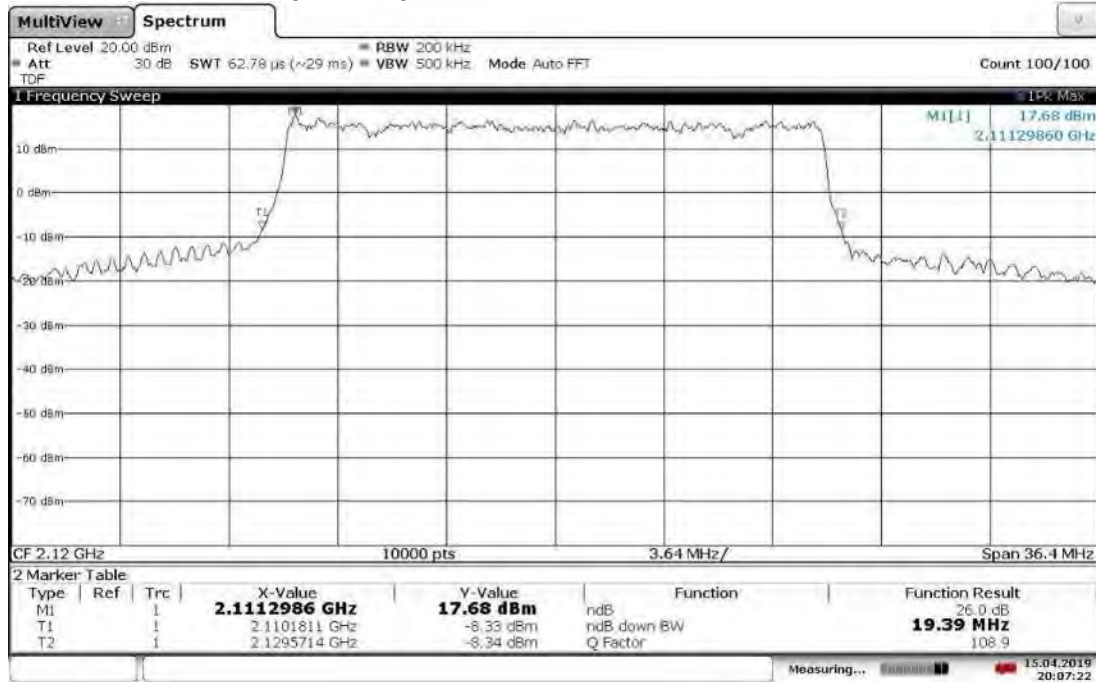
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



18:19:25 15.04.2019

TM1.1-QPSK_20 MHz Bandwidth

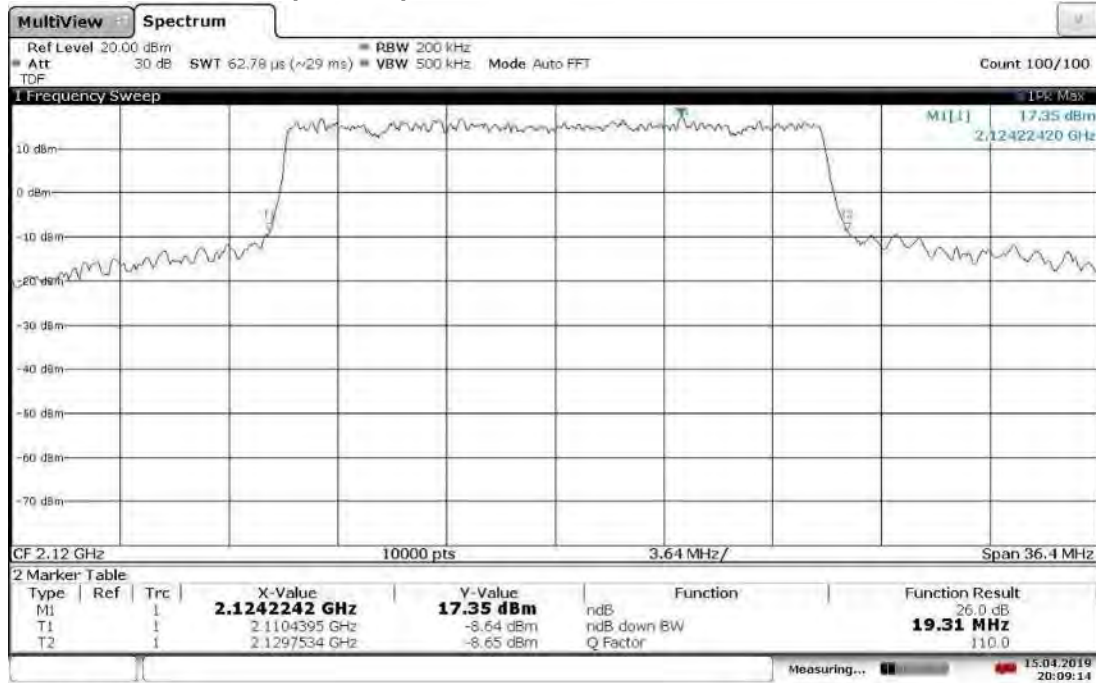
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



20:07:22 15.04.2019

TM1.1-QPSK_20 MHz Bandwidth

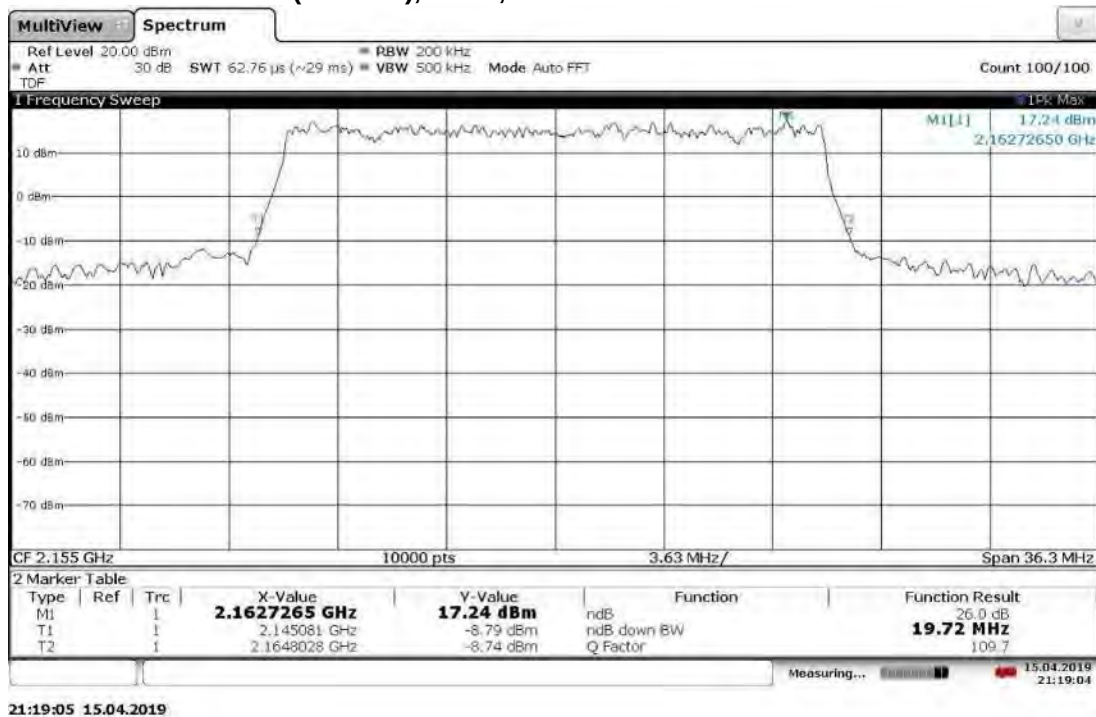
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



20:09:15 15.04.2019

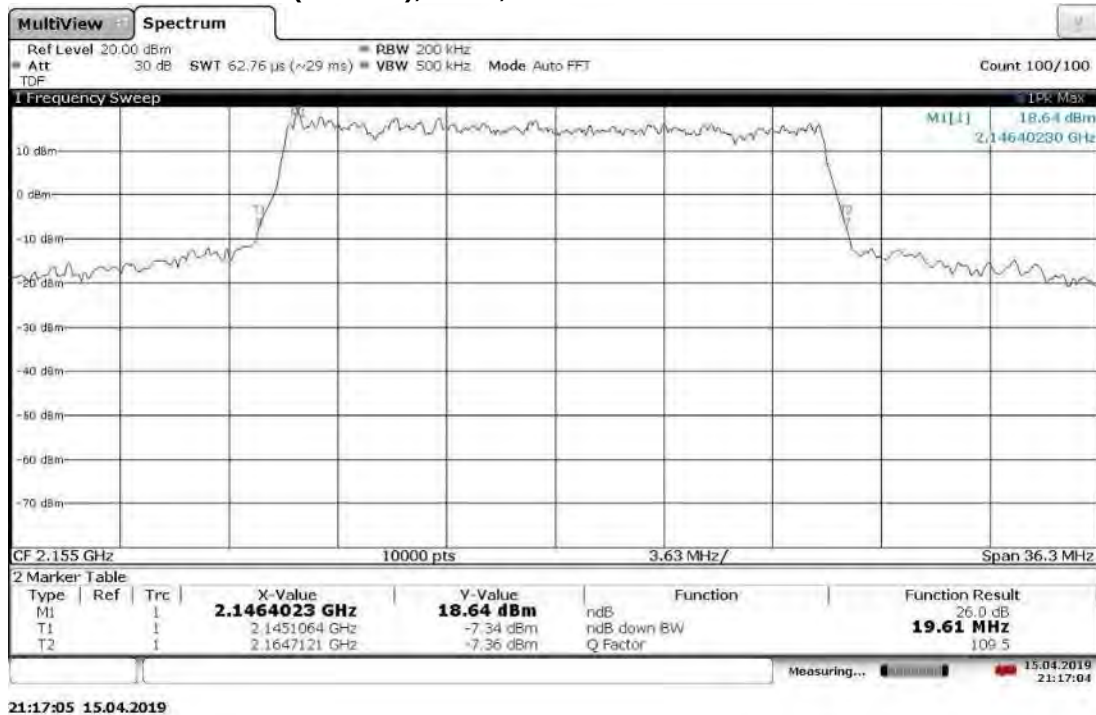
TM1.1-QPSK_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



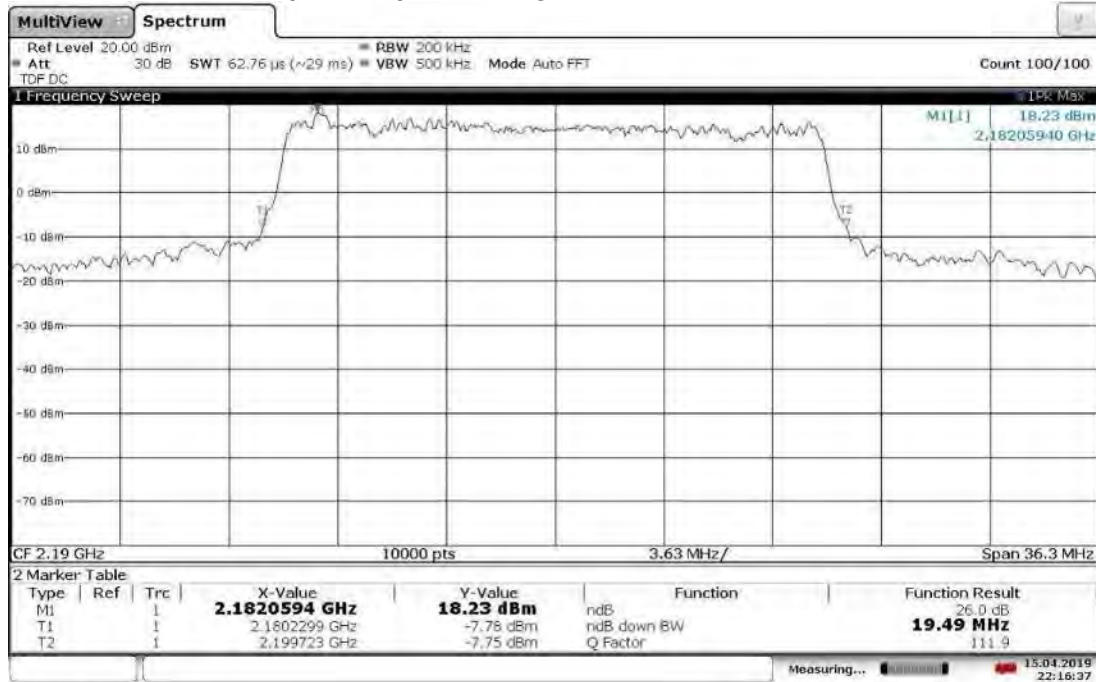
TM1.1-QPSK_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



TM1.1-QPSK_20 MHz Bandwidth

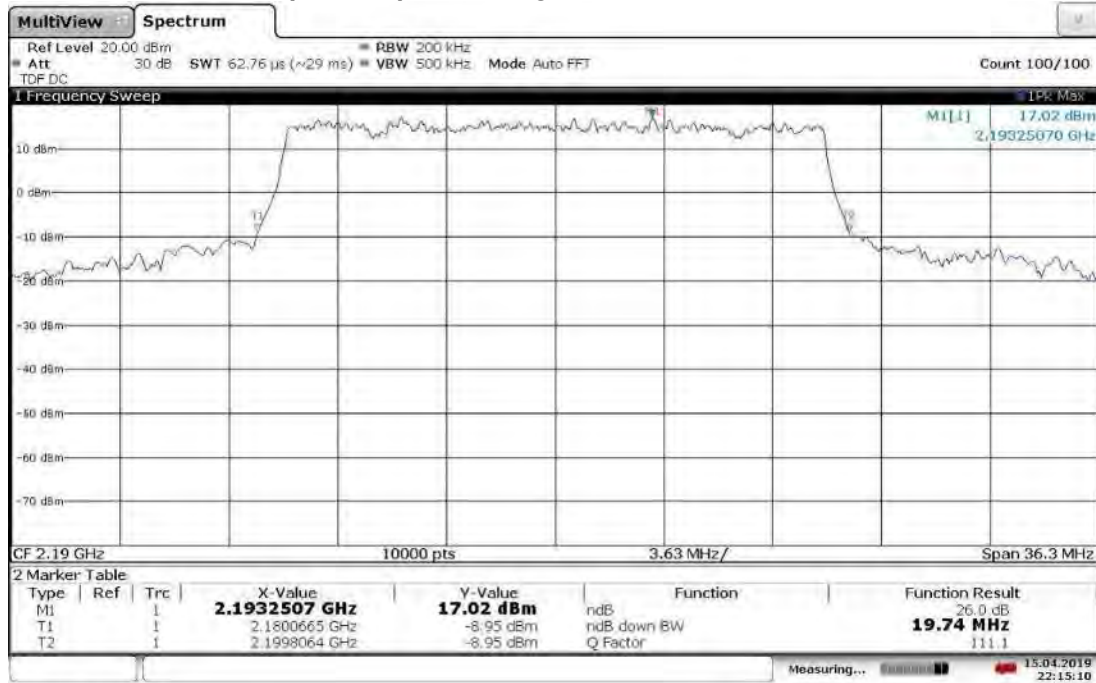
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



22:16:38 15.04.2019

TM1.1-QPSK_20 MHz Bandwidth

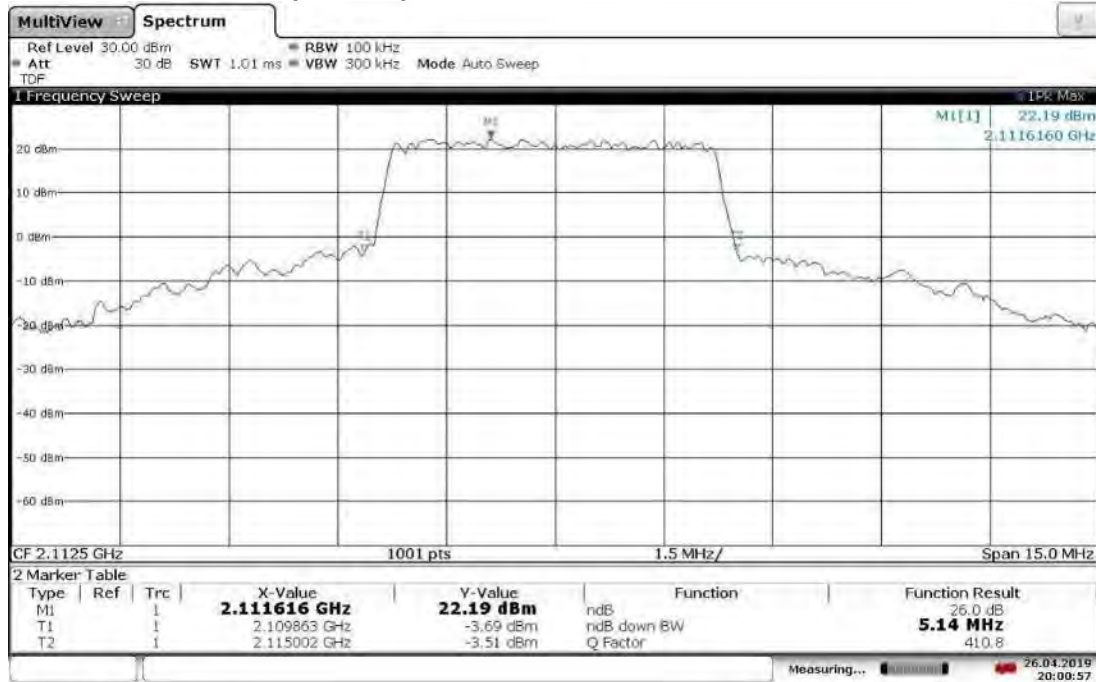
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



22:15:11 15.04.2019

TM3.2-16QAM_5 MHz Bandwidth

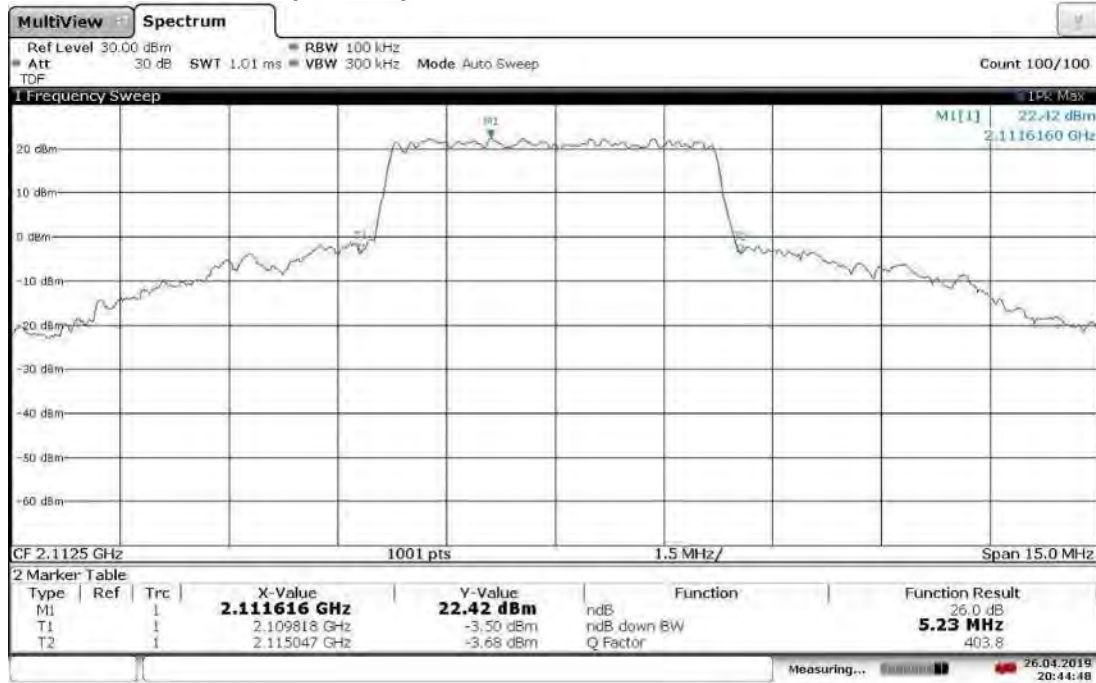
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



20:00:58 26.04.2019

TM3.2-16QAM_5 MHz Bandwidth

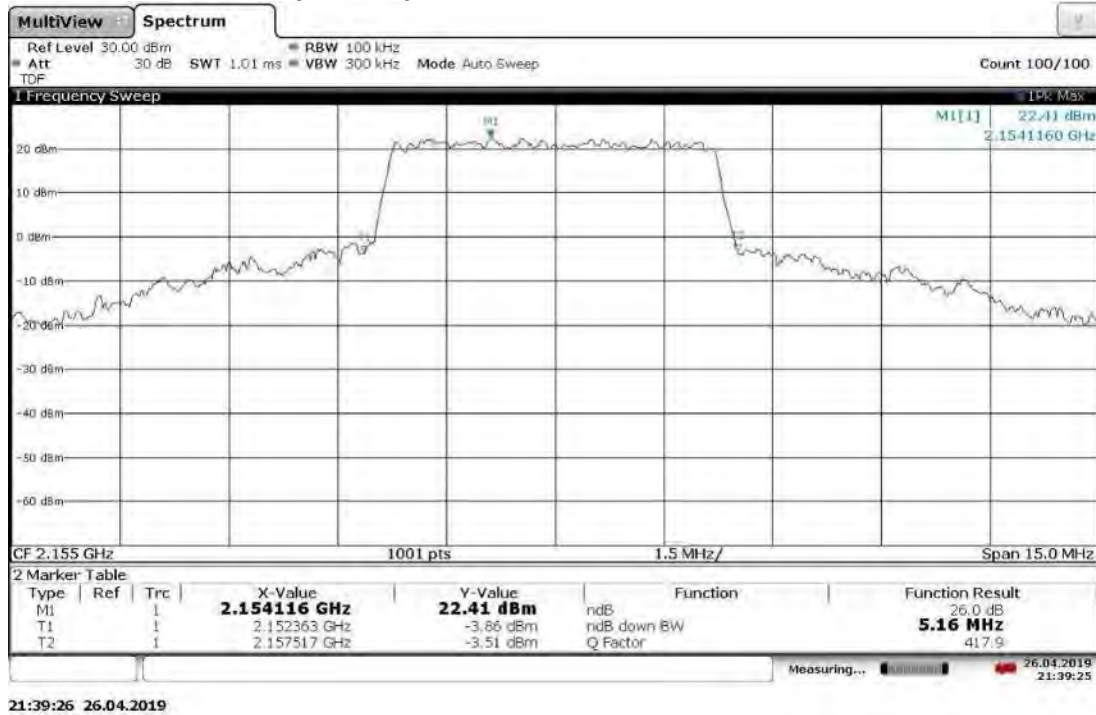
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



20:44:48 26.04.2019

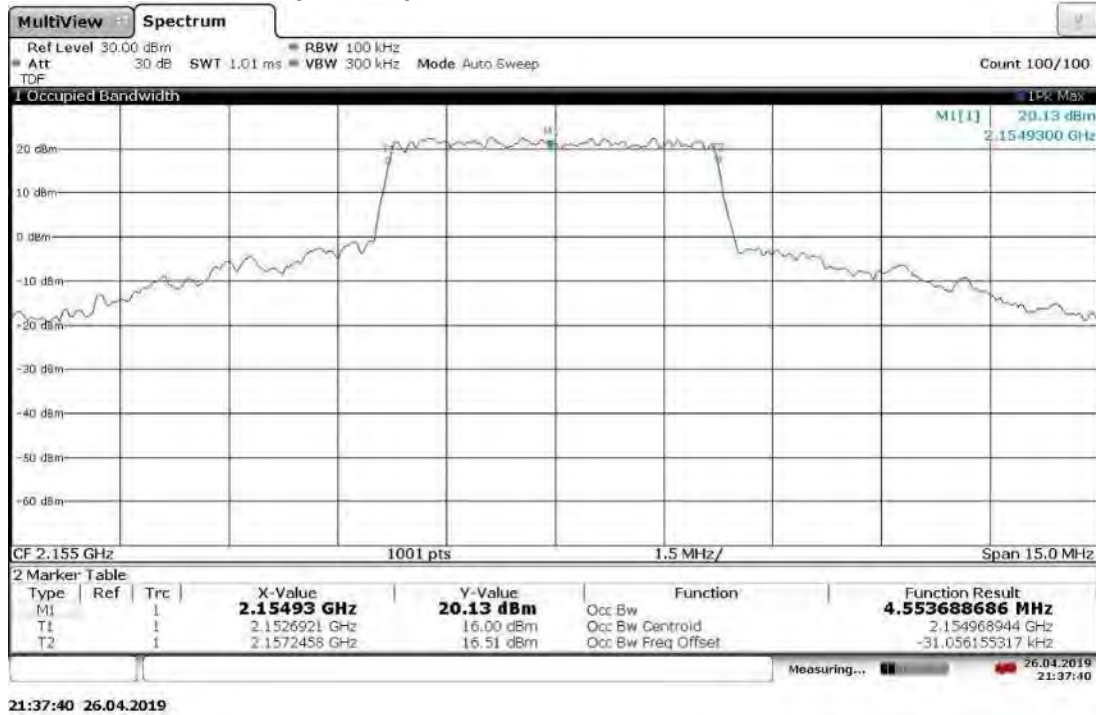
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



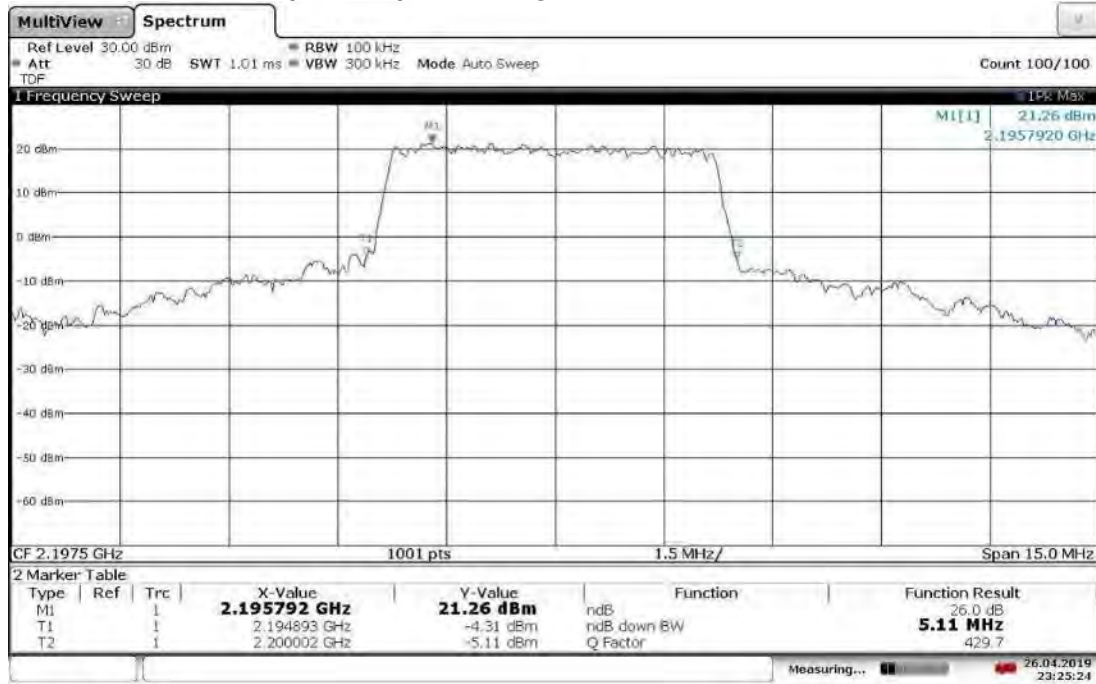
TM3.2-16QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



TM3.2-16QAM_5 MHz Bandwidth

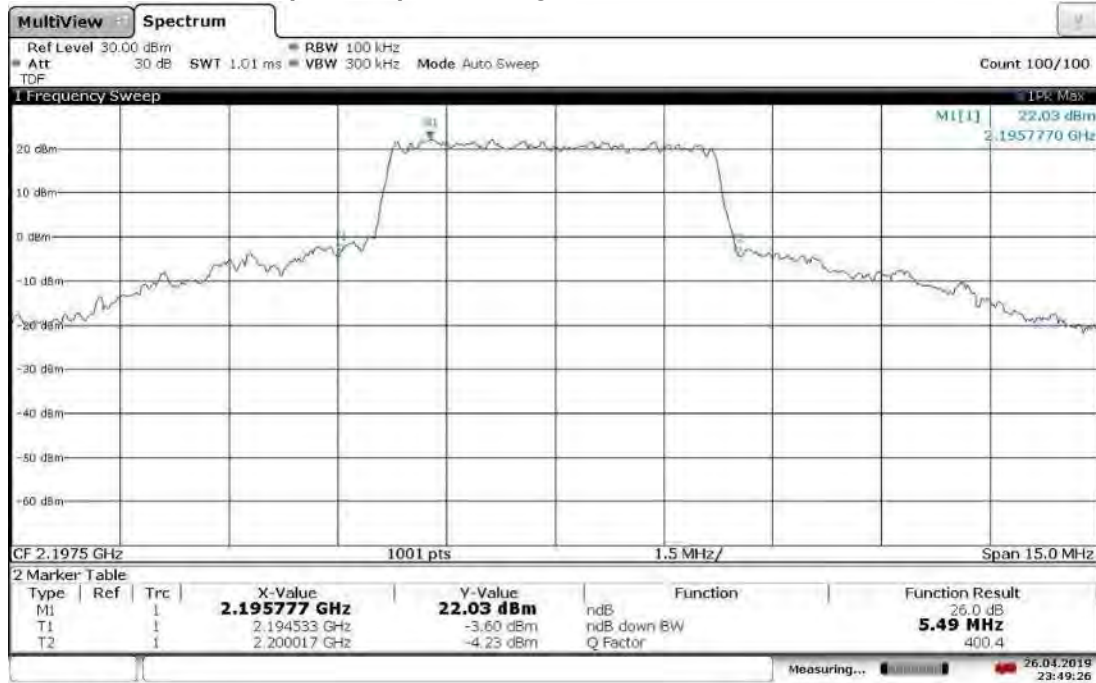
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



23:25:25 26.04.2019

TM3.2-16QAM_5 MHz Bandwidth

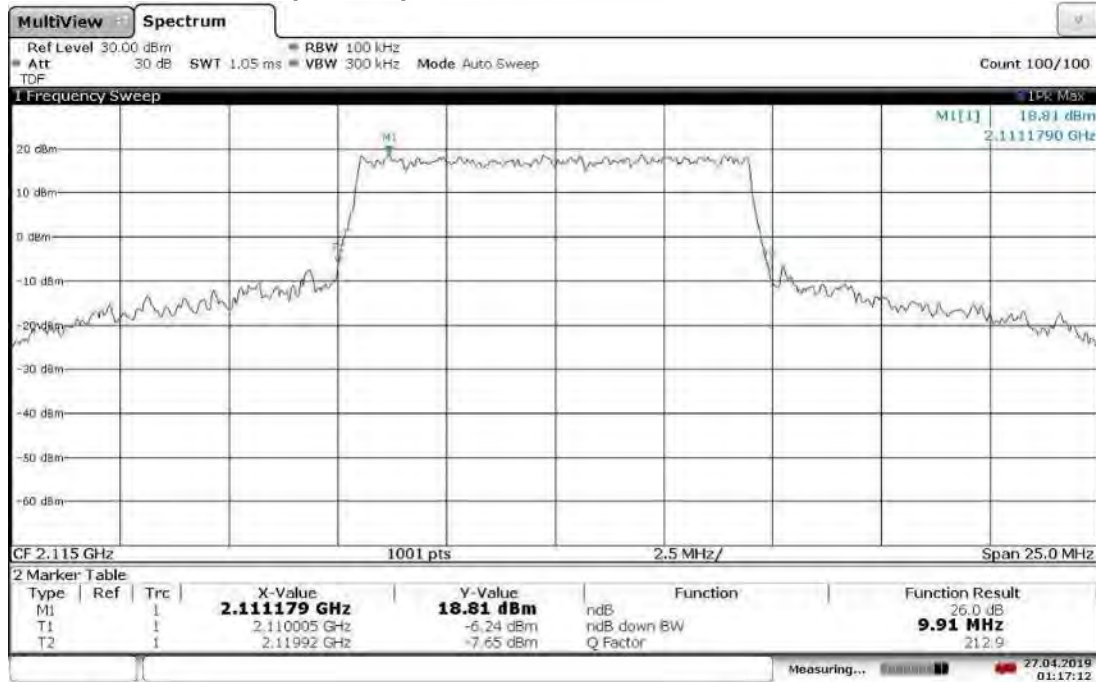
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



23:49:26 26.04.2019

TM3.2-16QAM_10 MHz Bandwidth

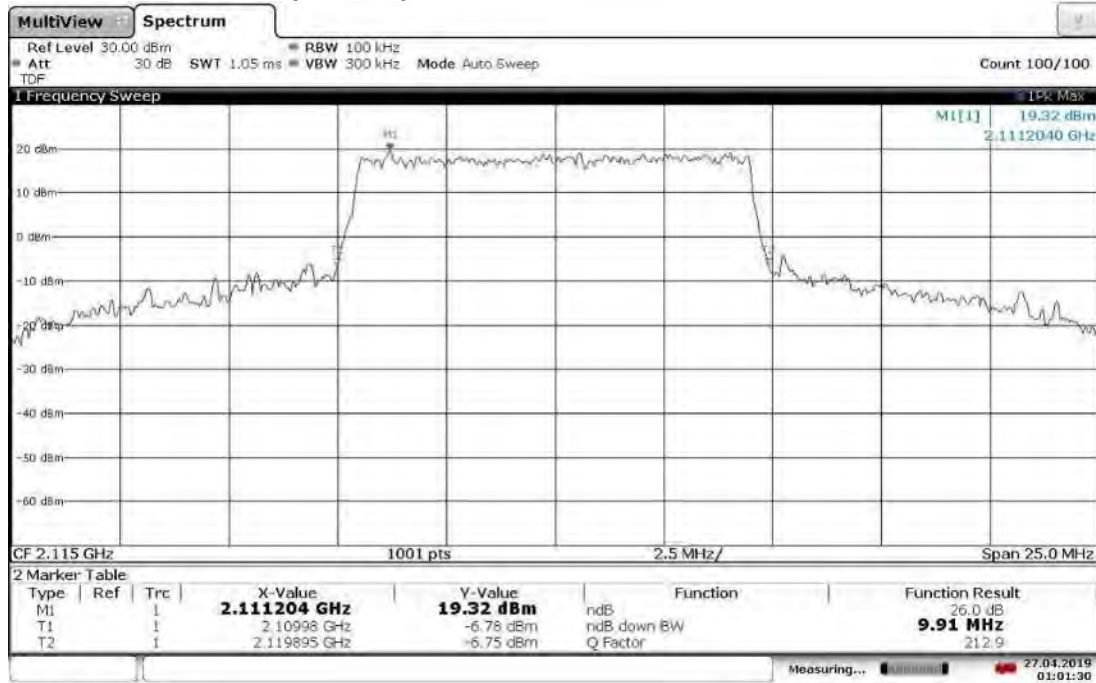
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



01:17:12 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

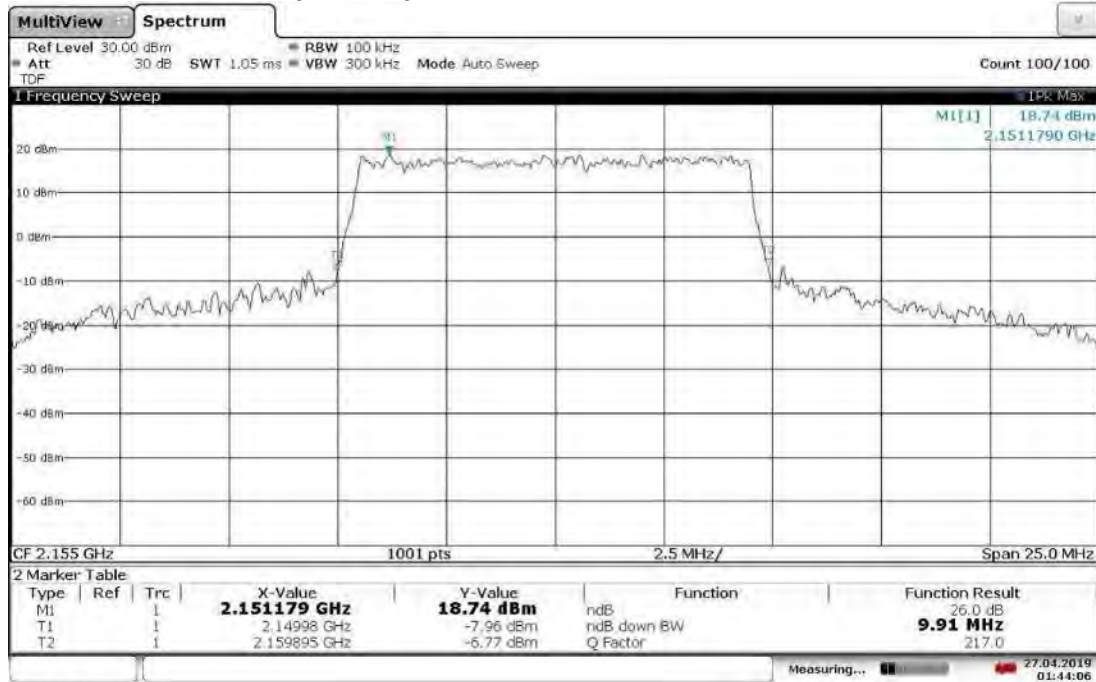
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



01:01:30 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

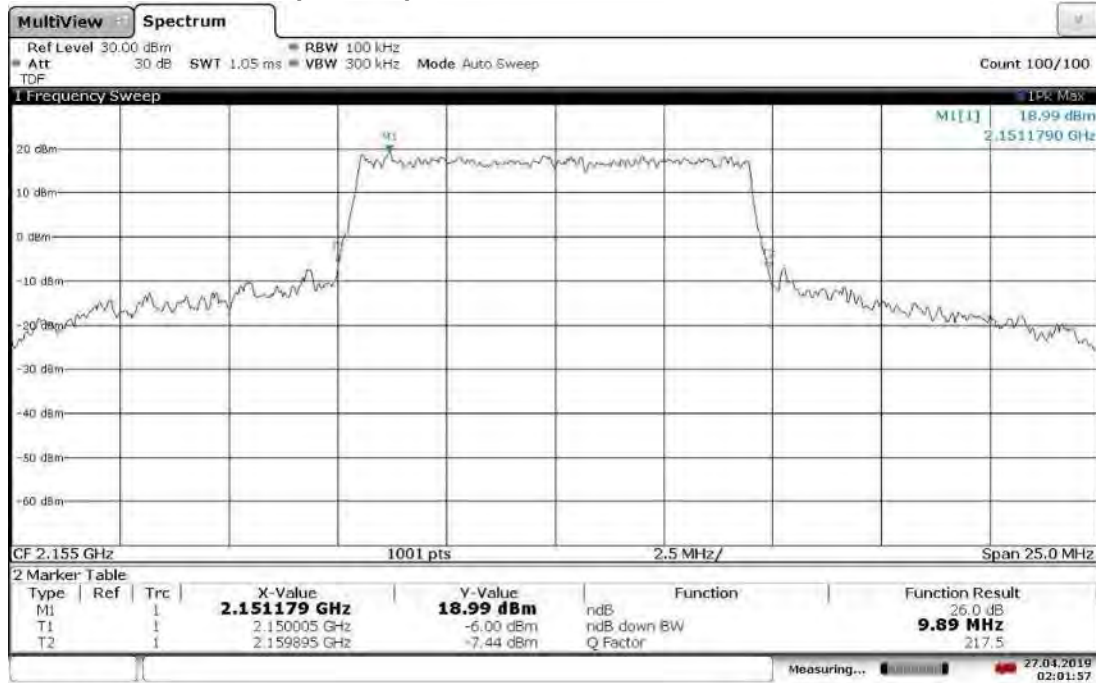
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



01:44:06 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

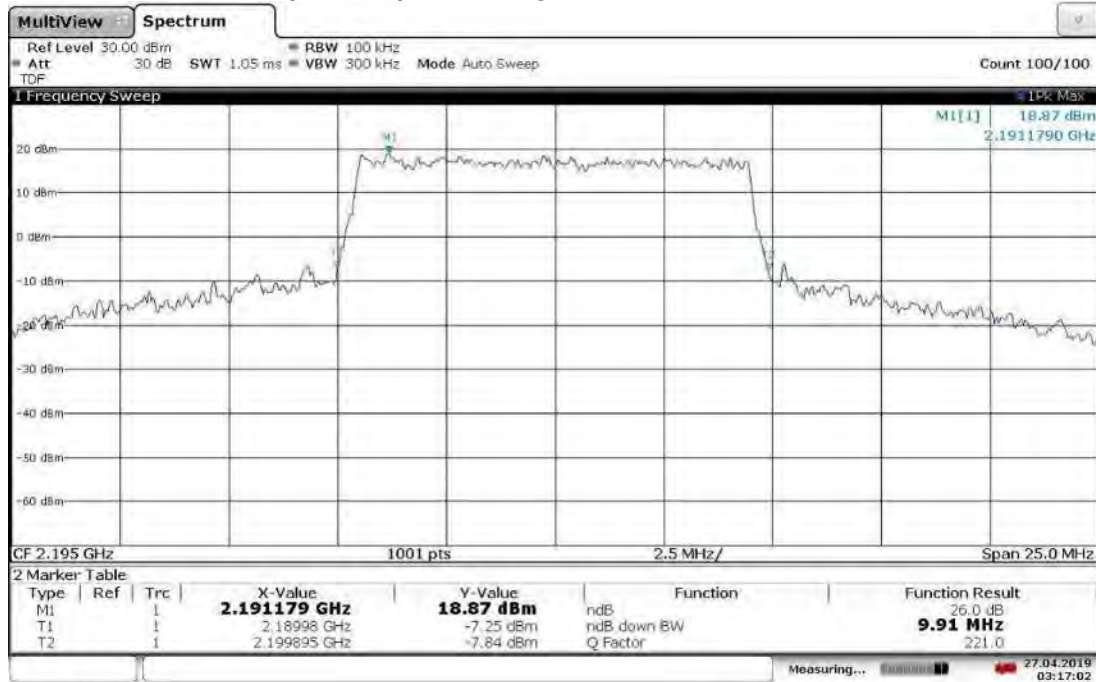
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



02:01:57 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

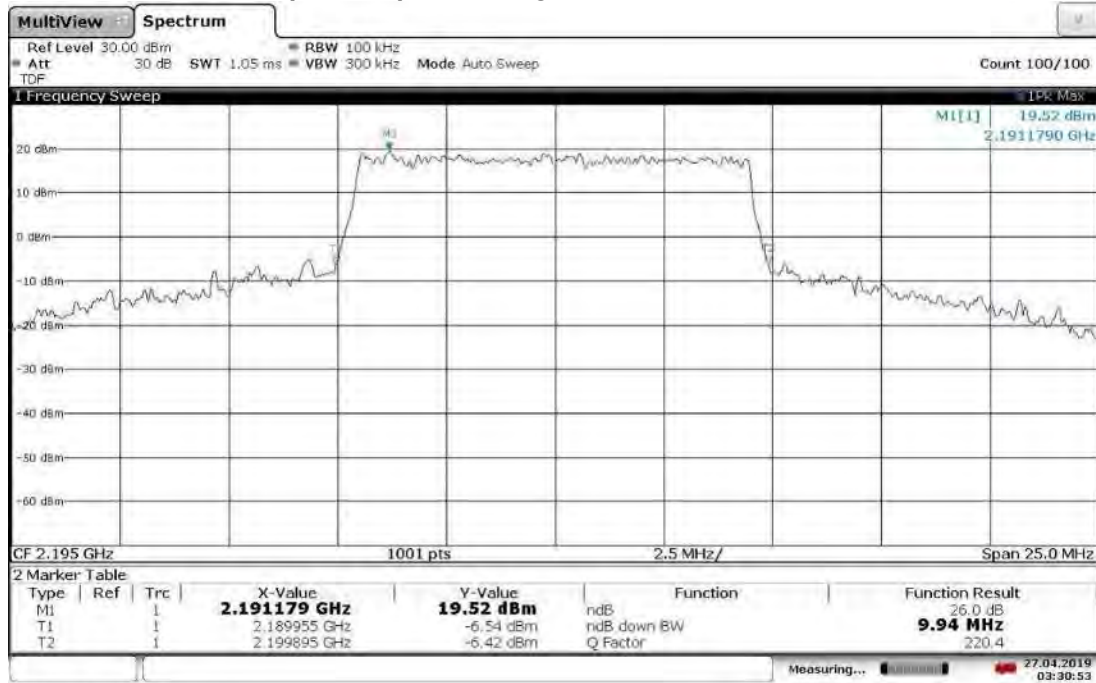
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



03:17:03 27.04.2019

TM3.2-16QAM_10 MHz Bandwidth

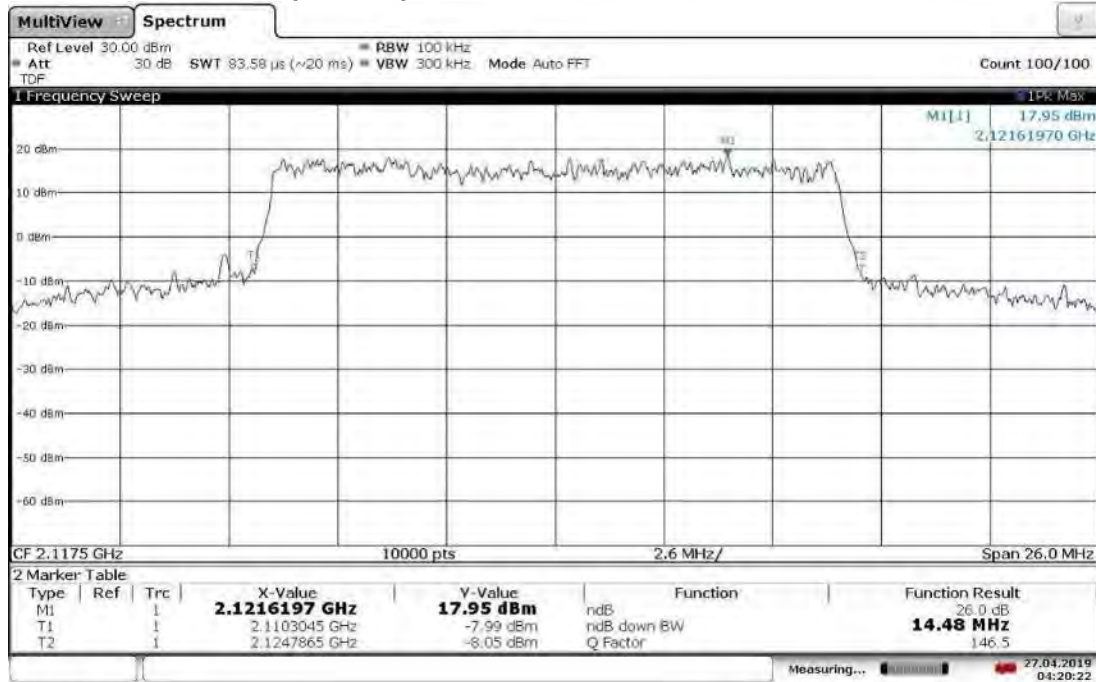
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



03:30:54 27.04.2019

TM3.2-16QAM_15 MHz Bandwidth

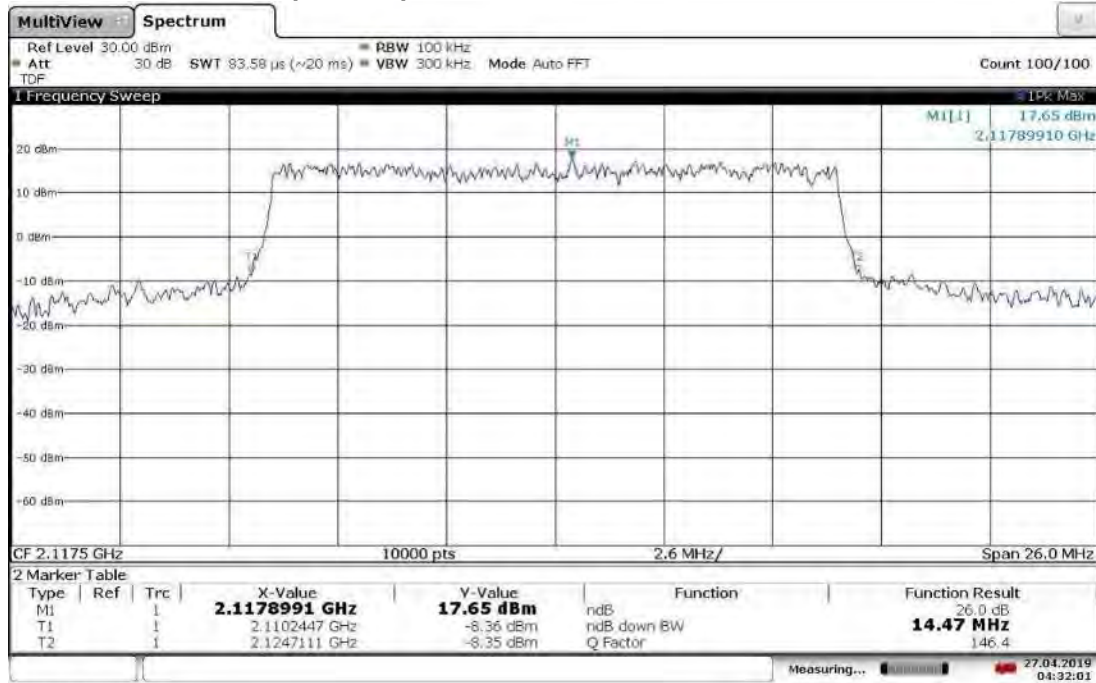
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



04:20:22 27.04.2019

TM3.2-16QAM_15 MHz Bandwidth

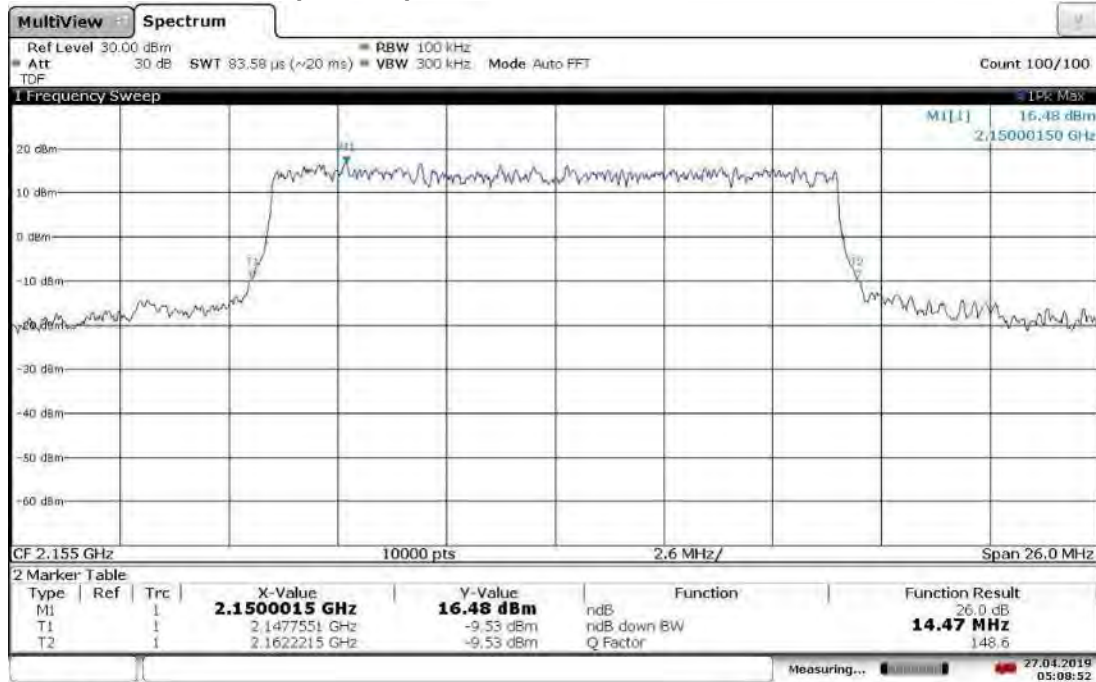
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



04:32:02 27.04.2019

TM3.2-16QAM_15 MHz Bandwidth

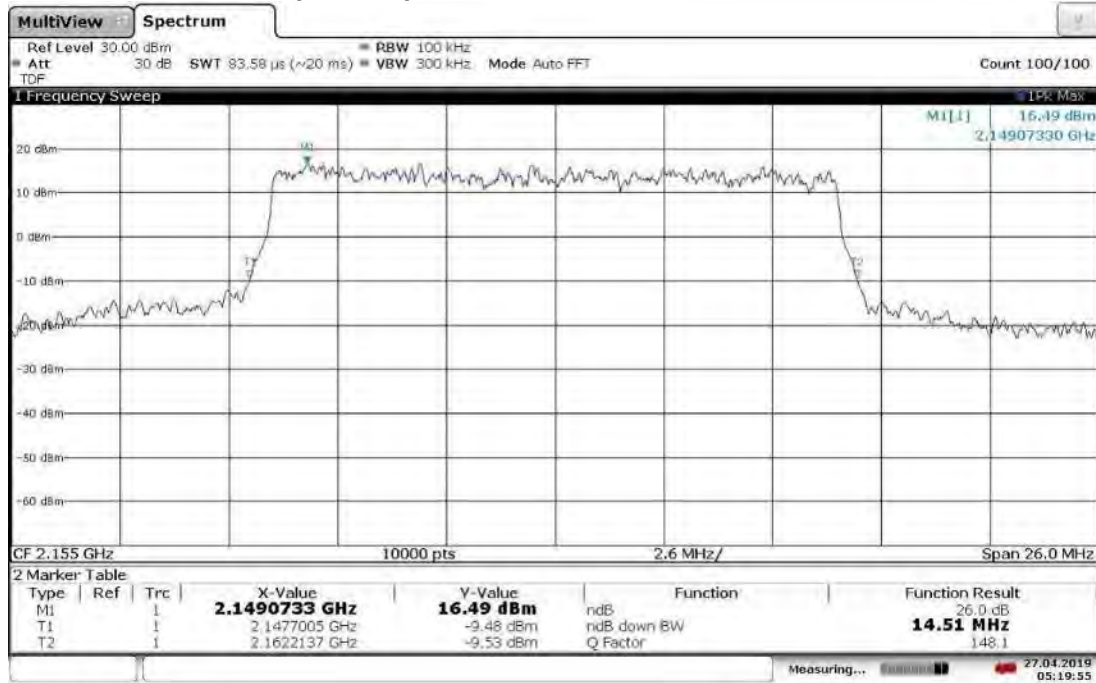
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



05:08:52 27.04.2019

TM3.2-16QAM_15 MHz Bandwidth

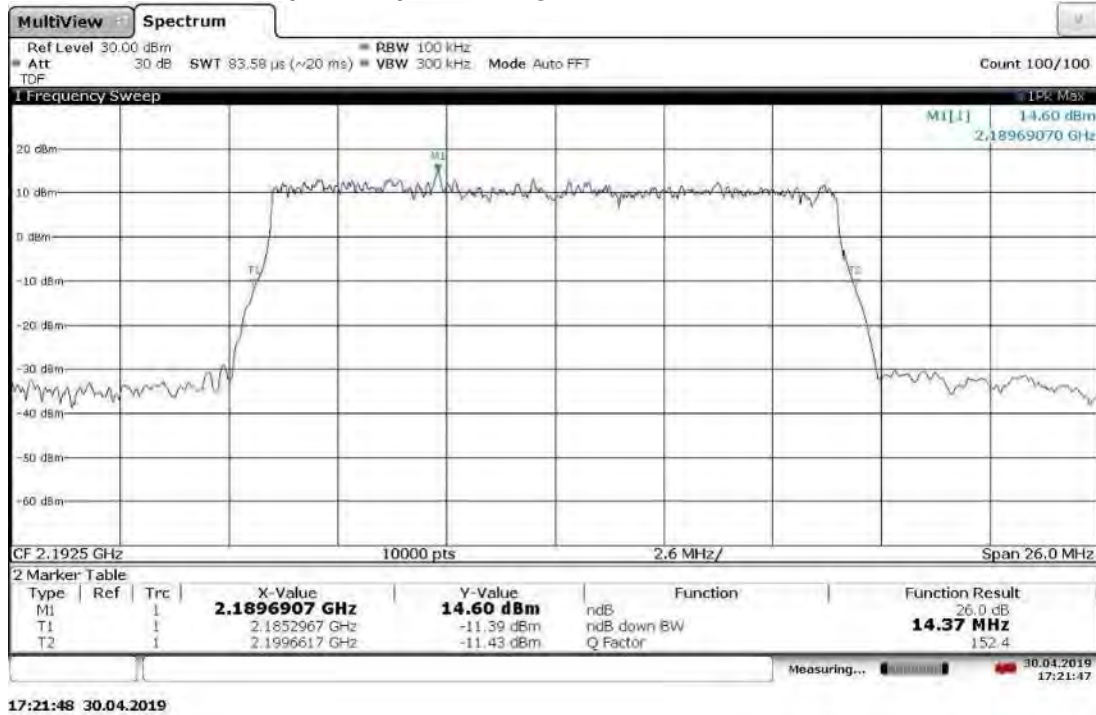
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



05:19:55 27.04.2019

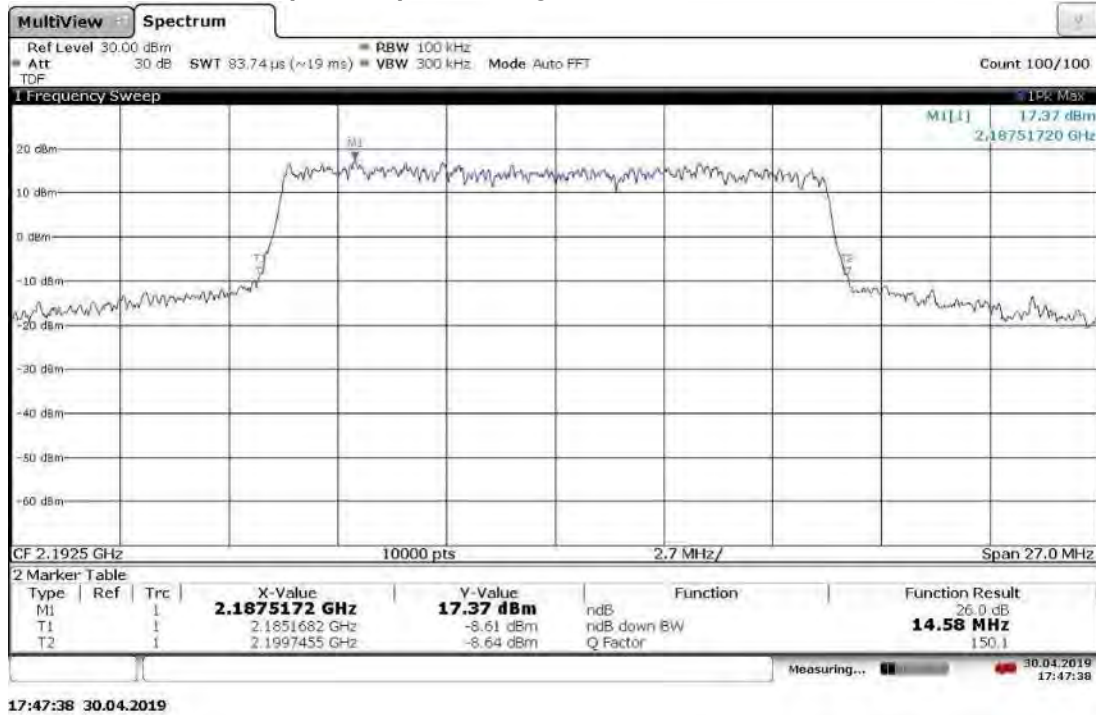
TM3.2-16QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



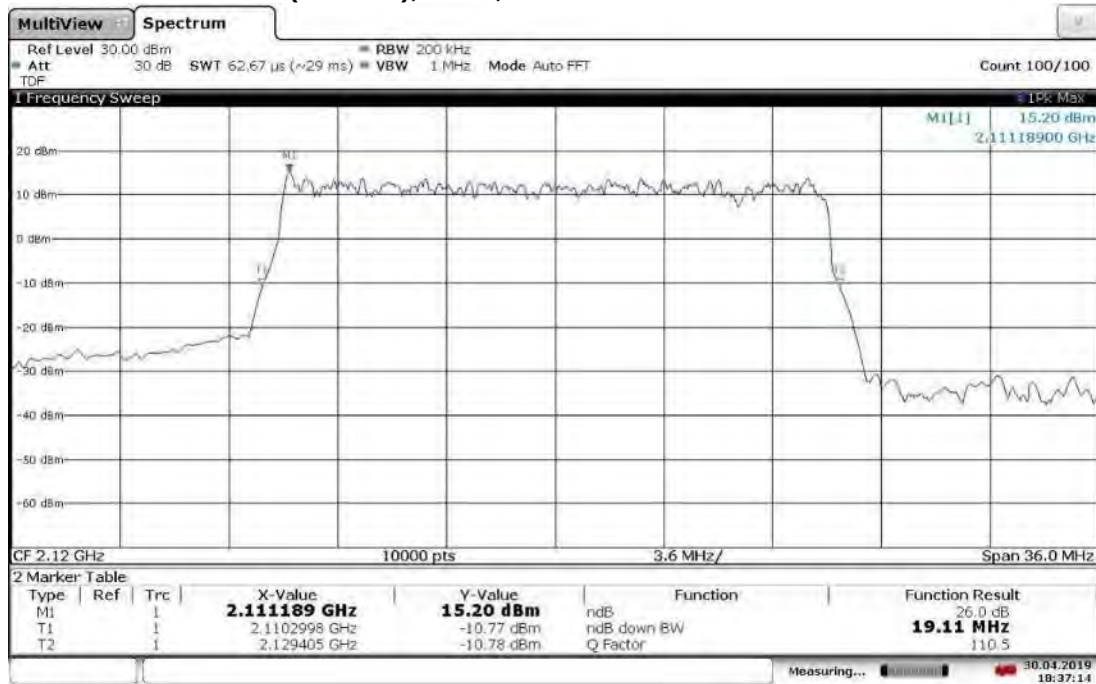
TM3.2-16QAM_15 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



TM3.2-16QAM_20 MHz Bandwidth

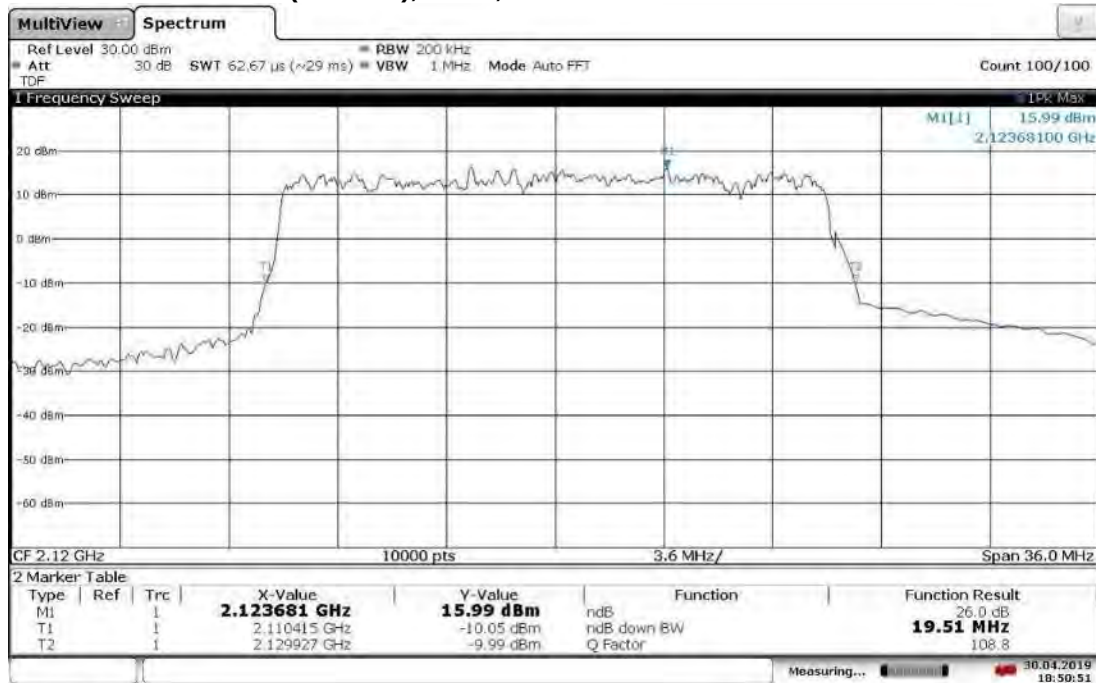
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



18:37:15 30.04.2019

TM3.2-16QAM_20 MHz Bandwidth

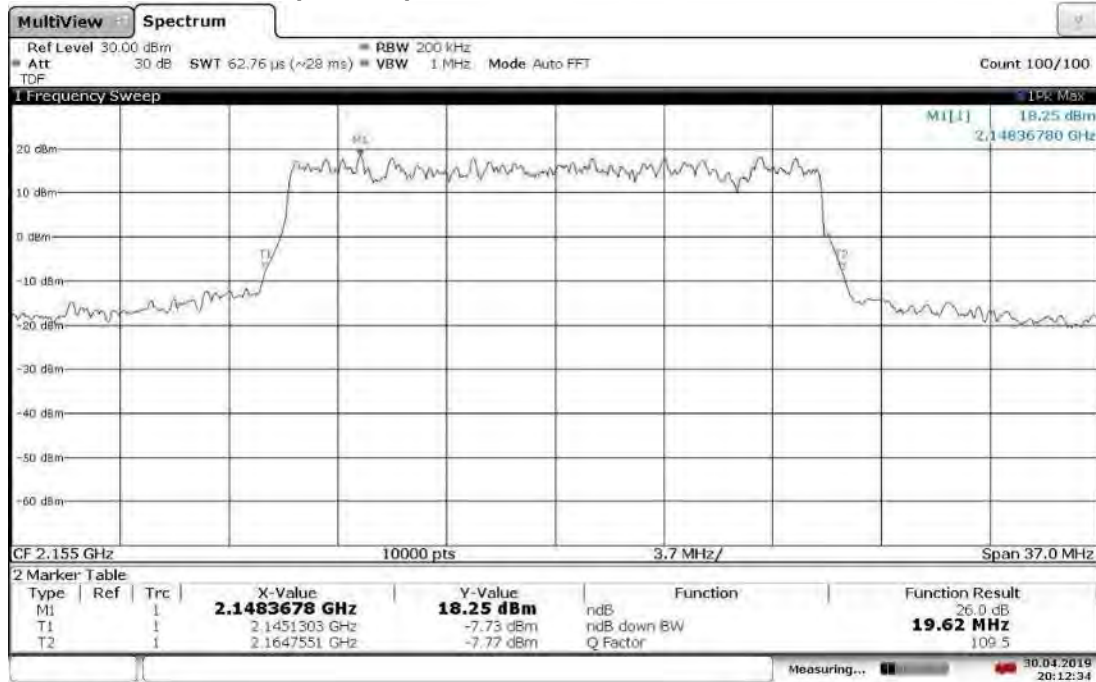
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



18:50:52 30.04.2019

TM3.2-16QAM_20 MHz Bandwidth

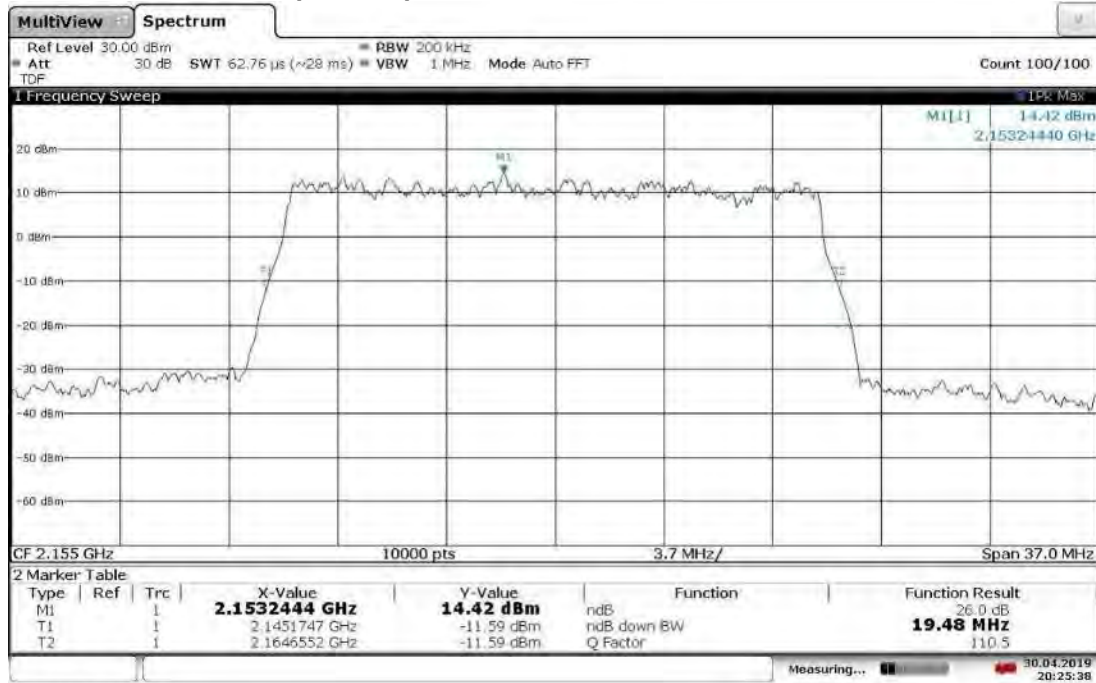
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



20:12:34 30.04.2019

TM3.2-16QAM_20 MHz Bandwidth

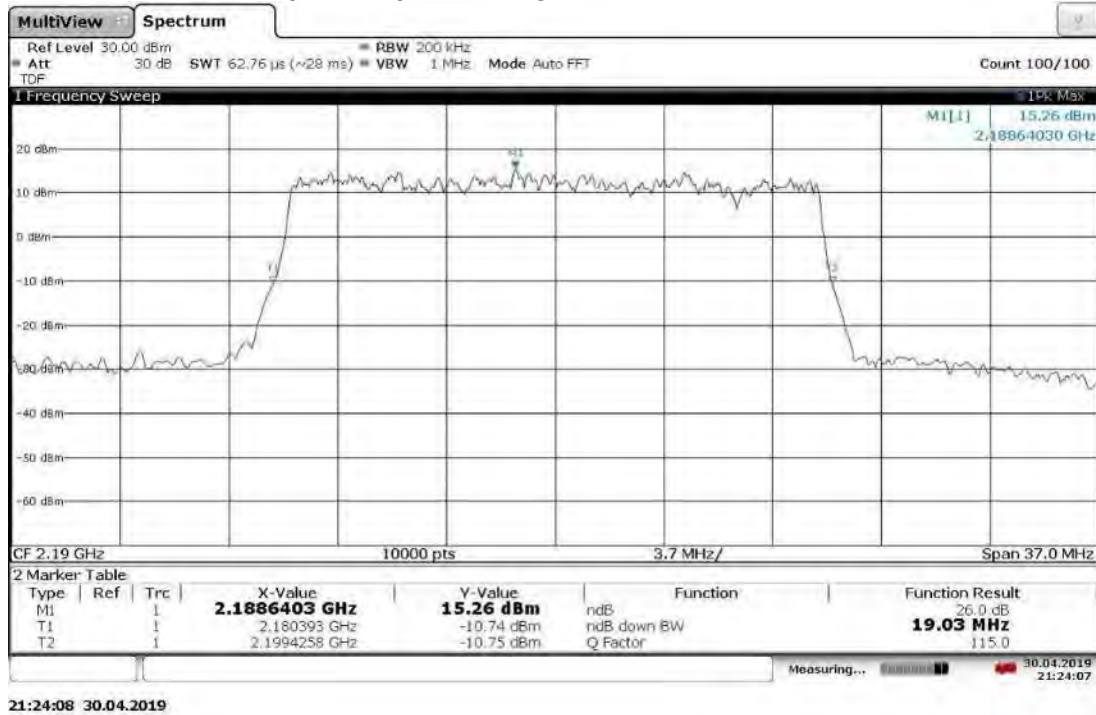
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



20:25:38 30.04.2019

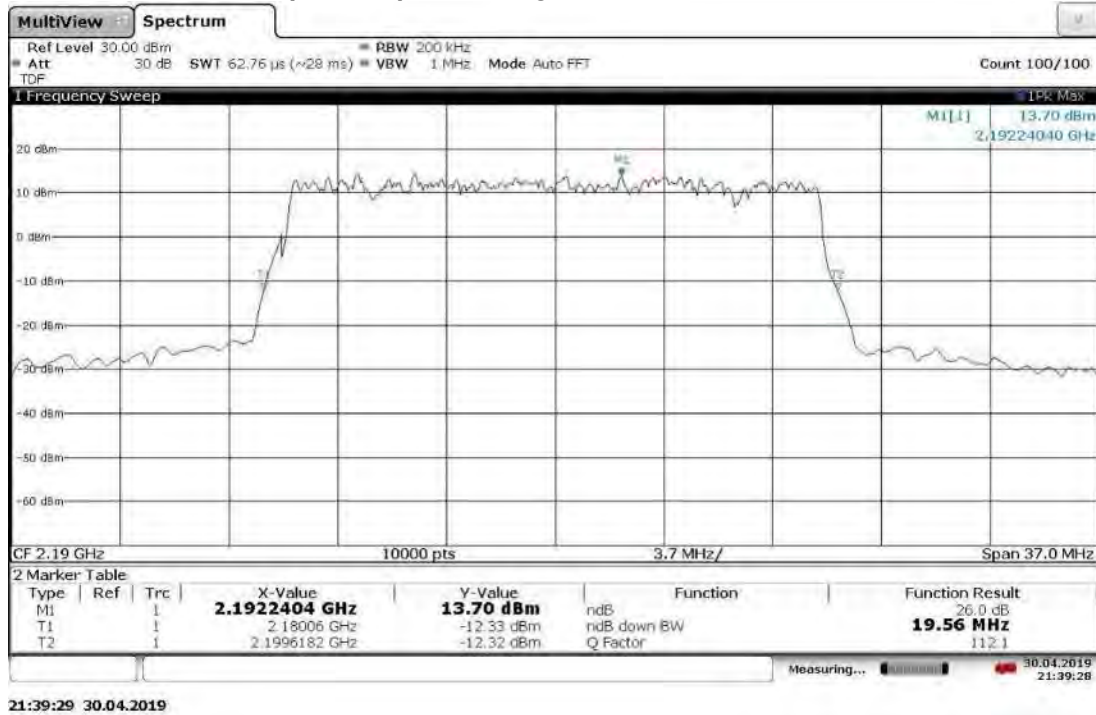
TM3.2-16QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



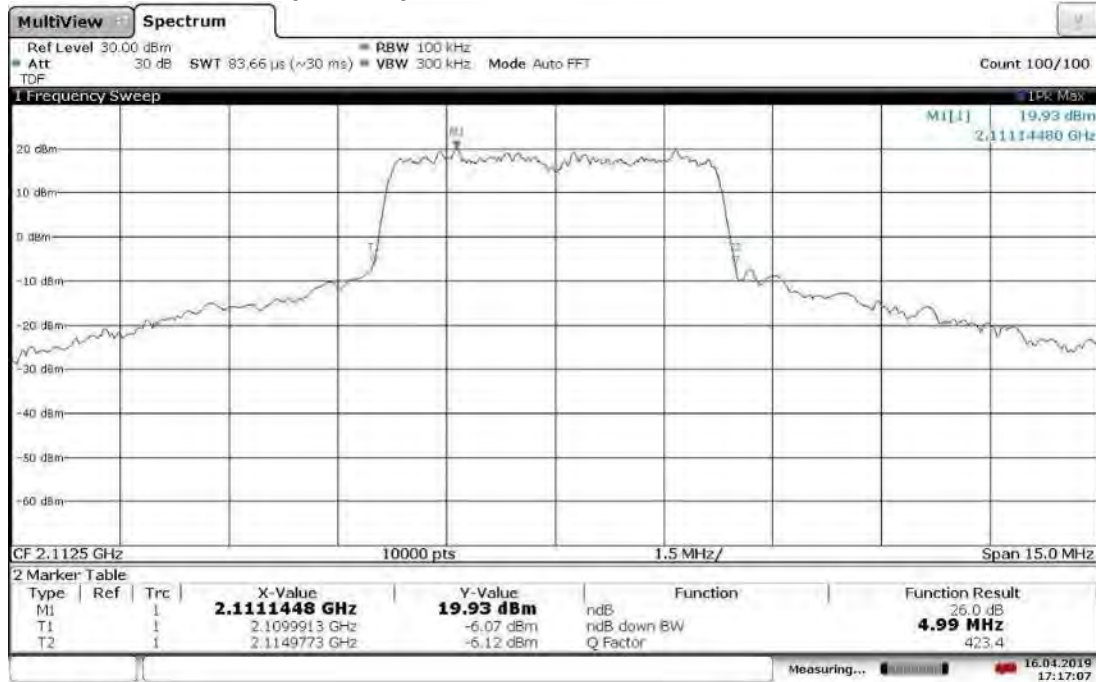
TM3.2-16QAM_20 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



TM3.1-64QAM_5 MHz Bandwidth

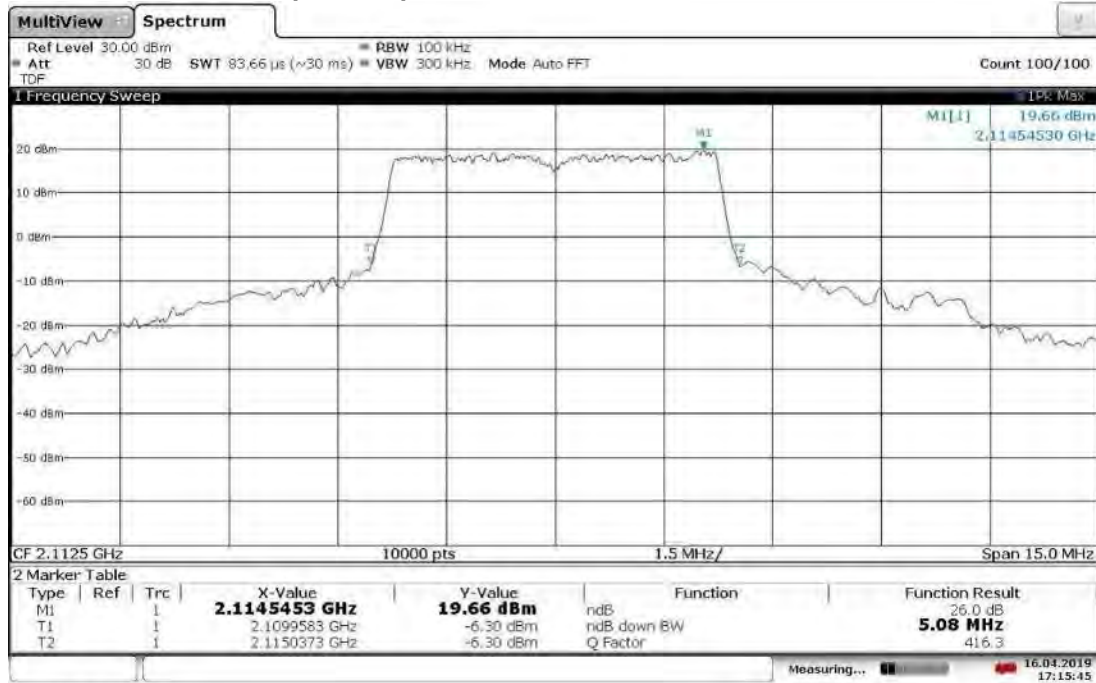
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



17:17:08 16.04.2019

TM3.1-64QAM_5 MHz Bandwidth

Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



17:15:45 16.04.2019

TM3.1-64QAM_5 MHz Bandwidth

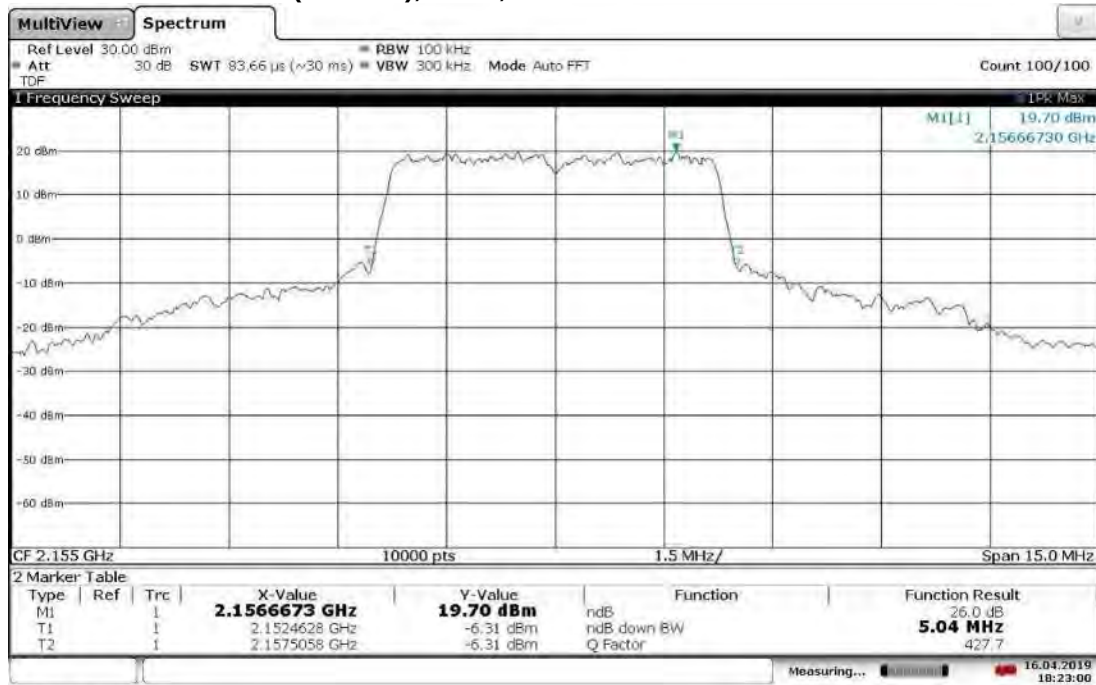
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



18:24:45 16.04.2019

TM3.1-64QAM_5 MHz Bandwidth

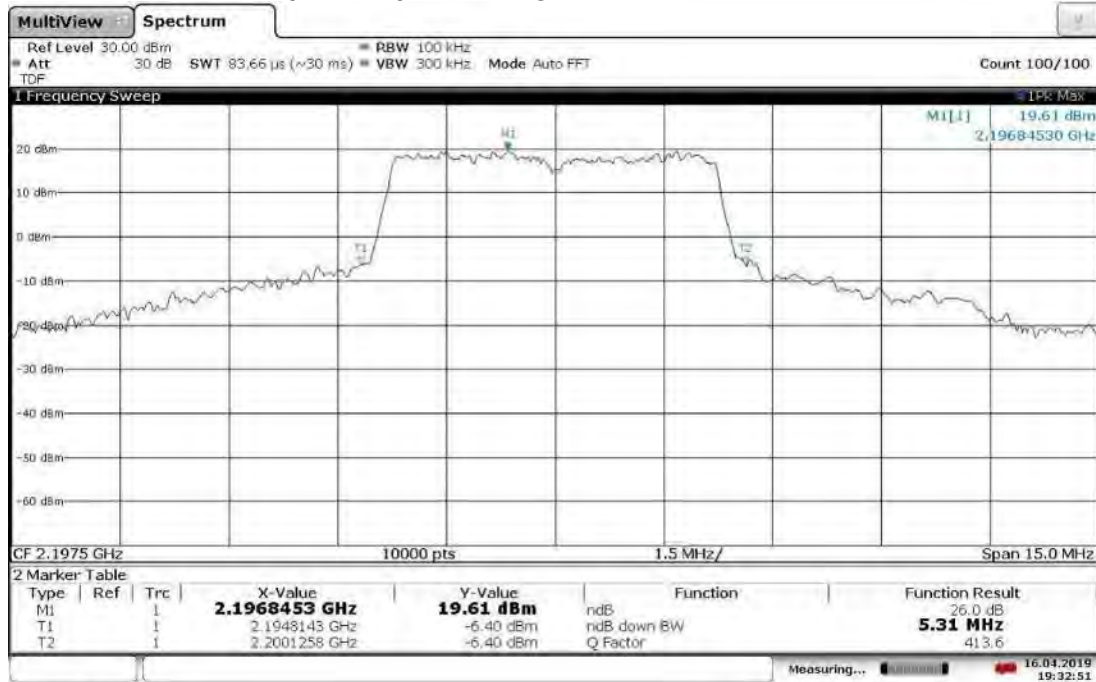
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



18:23:00 16.04.2019

TM3.1-64QAM_5 MHz Bandwidth

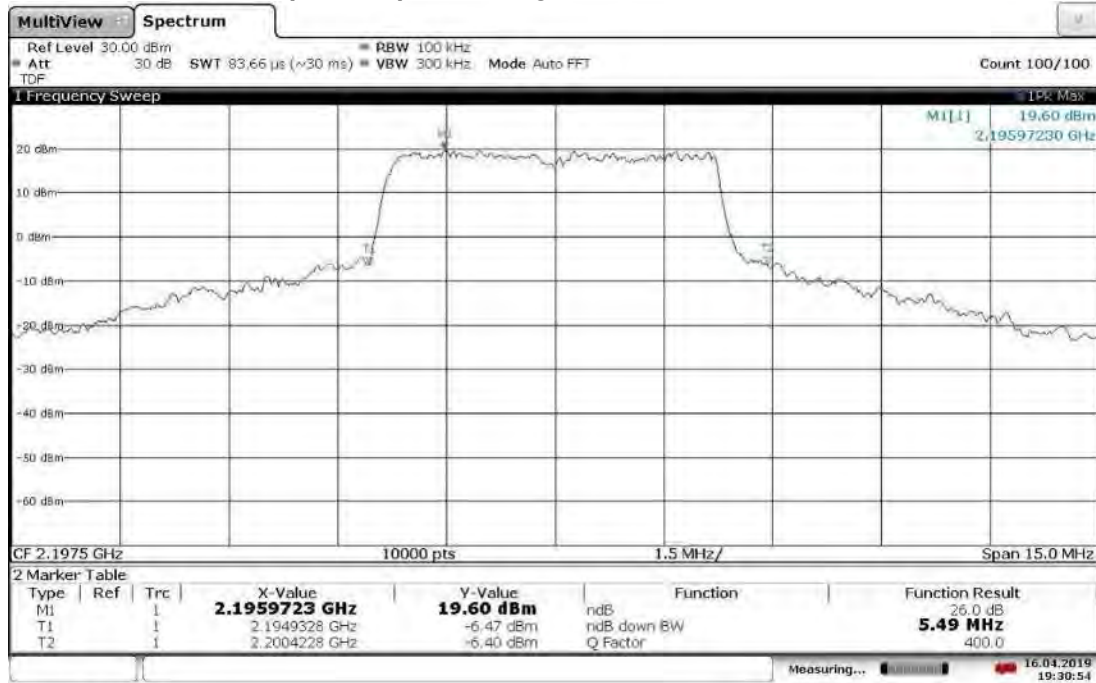
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



19:32:51 16.04.2019

TM3.1-64QAM_5 MHz Bandwidth

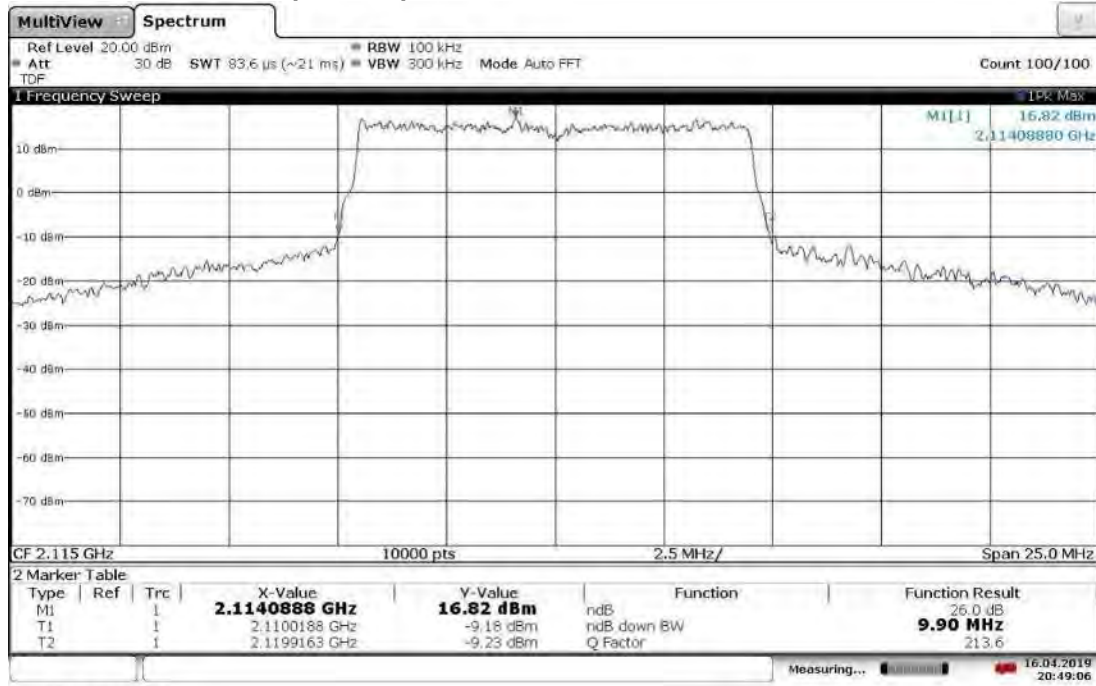
Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



19:30:54 16.04.2019

TM3.1-64QAM_10 MHz Bandwidth

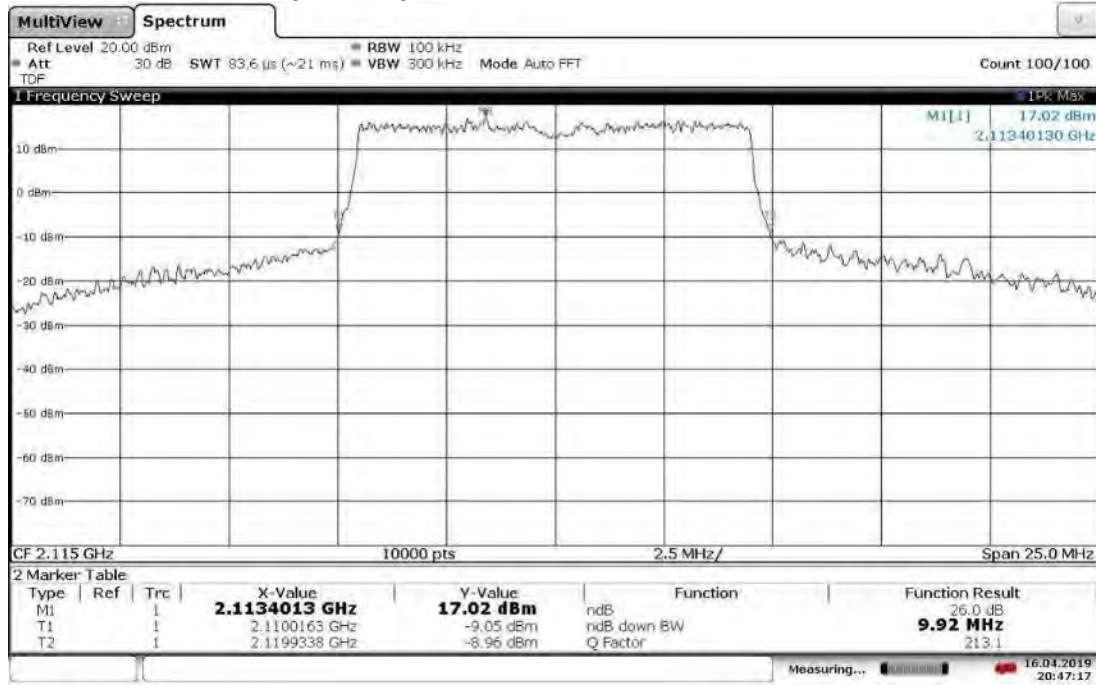
Slot 1 (Band 66), ANT0, Low Channel 26 dB Bandwidth



20:49:06 16.04.2019

TM3.1-64QAM_10 MHz Bandwidth

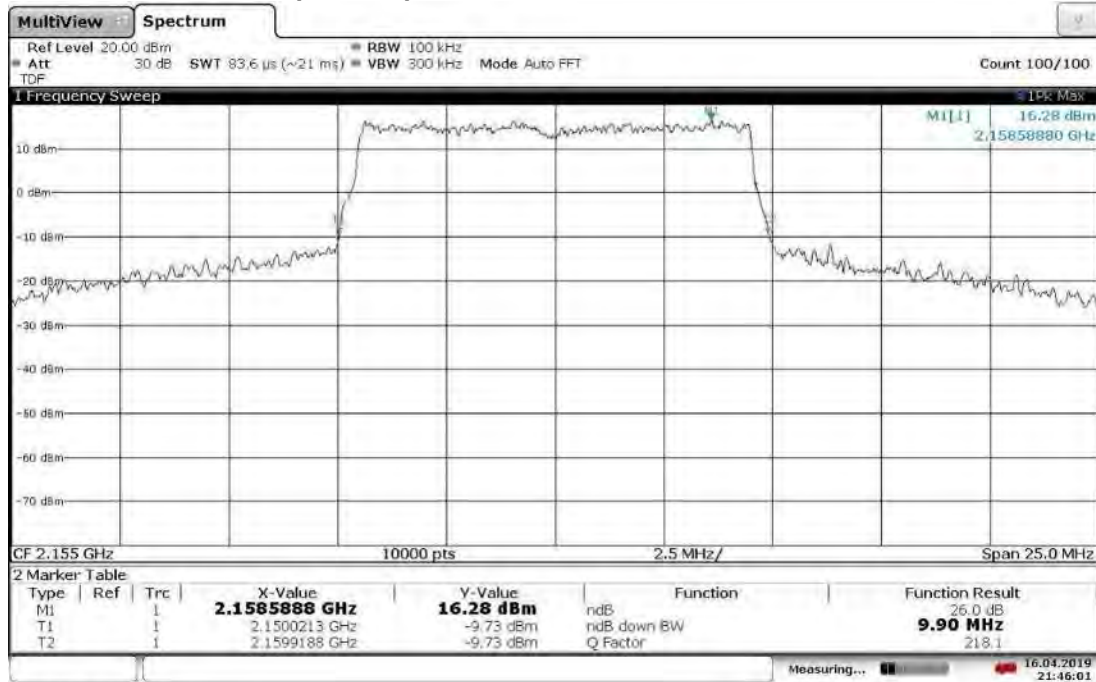
Slot 1 (Band 66), ANT1, Low Channel 26 dB Bandwidth



20:47:18 16.04.2019

TM3.1-64QAM_10 MHz Bandwidth

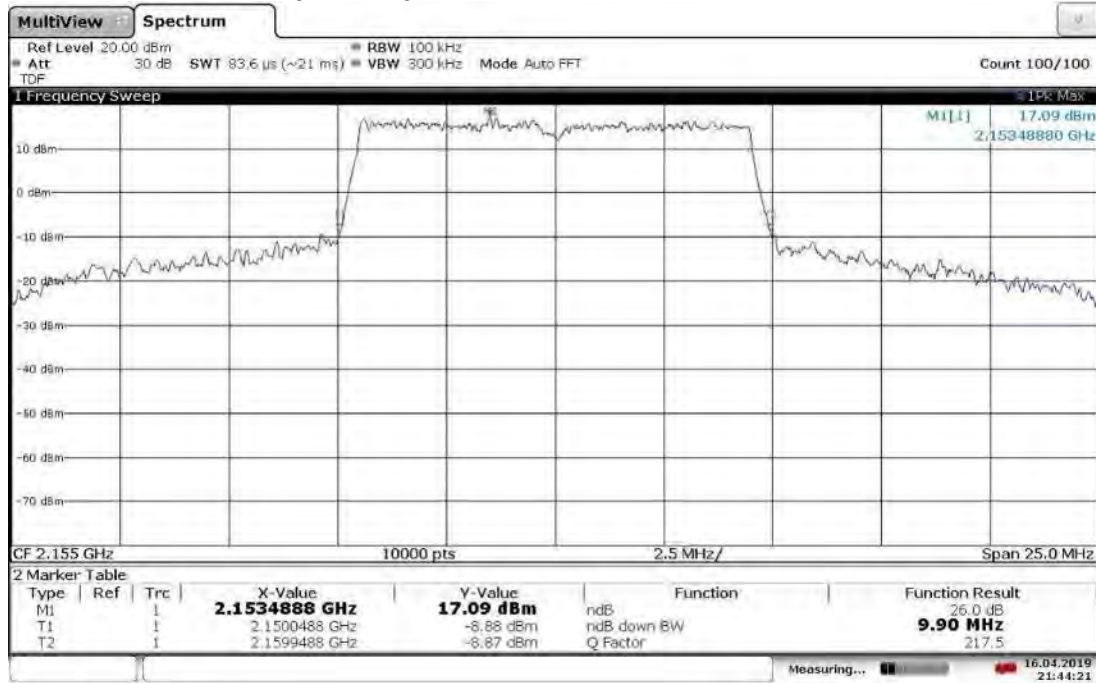
Slot 1 (Band 66), ANT0, Mid Channel 26 dB Bandwidth



21:46:02 16.04.2019

TM3.1-64QAM_10 MHz Bandwidth

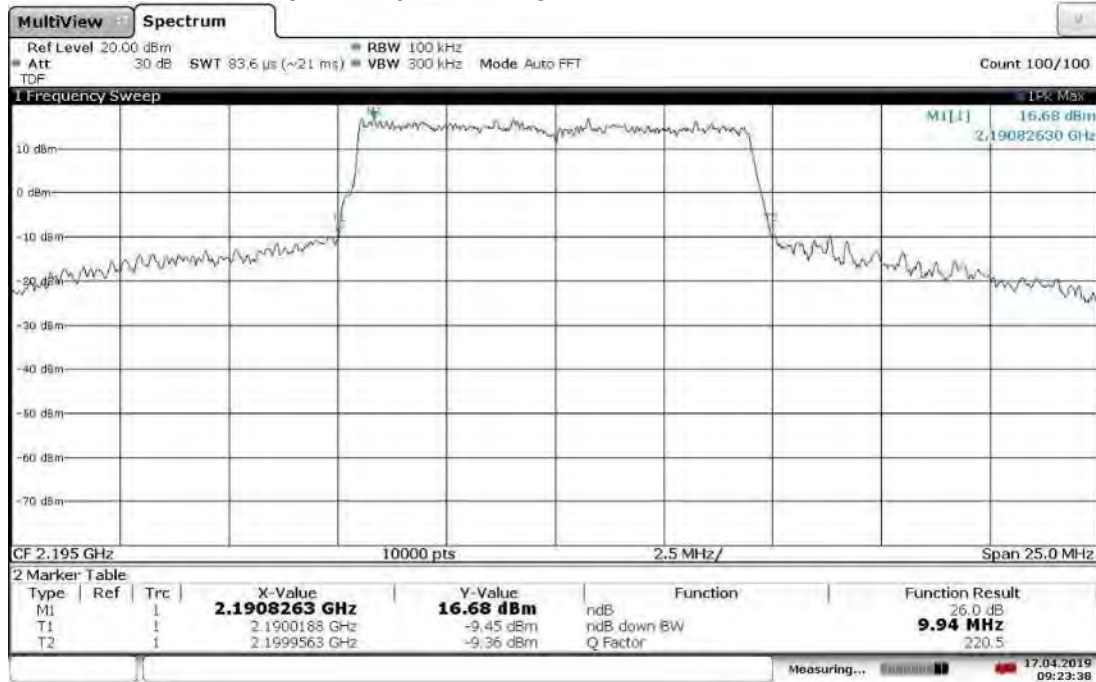
Slot 1 (Band 66), ANT1, Mid Channel 26 dB Bandwidth



21:44:22 16.04.2019

TM3.1-64QAM_10 MHz Bandwidth

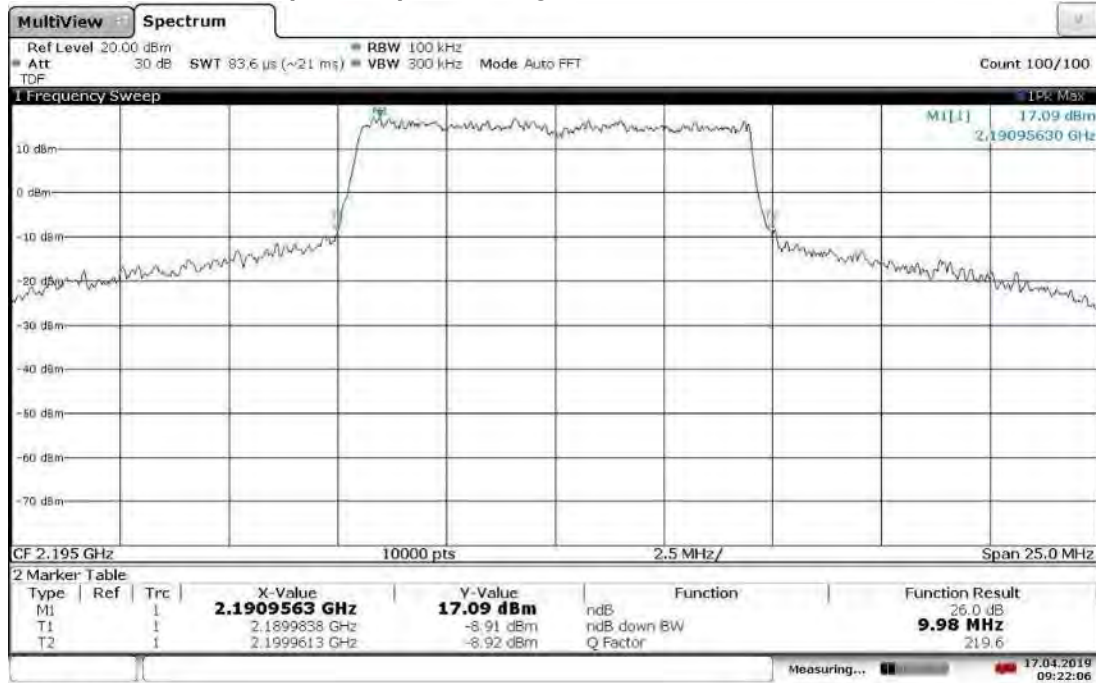
Slot 1 (Band 66), ANT0, High Channel 26 dB Bandwidth



09:23:38 17.04.2019

TM3.1-64QAM_10 MHz Bandwidth

Slot 1 (Band 66), ANT1, High Channel 26 dB Bandwidth



09:22:06 17.04.2019