

Annex 1: Measurement diagrams 20-1-0018201T008a-A1

Number of pages:	111	Date of Report:	2023-Mar-03
Testing company:	cetecom advanced GmbH Im Teelbruch 116 45219 Essen Germany Tel. + 49 (0) 20 54 / 95 19-0 Fax: + 49 (0) 20 54 / 95 19-150	Applicant:	Brose Fahrzeugteile SE & Co. KG, Bamberg
Product: Model:	Kick Sensor (HfA) R-HFA GEN1		
FCC ID:	2AHV8-G45476	IC:	29958-G45476
Testing has been carried out in accordance with:	FCC Regulations Title 47 CFR, Chapter I, Subchapter D, Part 95 Subpart M The 76-81 GHz Band Radar Service § 95.3367 76-81 GHz Band Radar Service radiated power limits § 95.3379 76-81 GHz Band Radar Service unwanted emissions limits ISED-Regulations Radio Standards Specification RSS-251, Issue 2 Vehicular Radar and Airport Fixed or Mobile Radar in the 76-81 GHz Frequency Band		

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1 Measurement diagrams

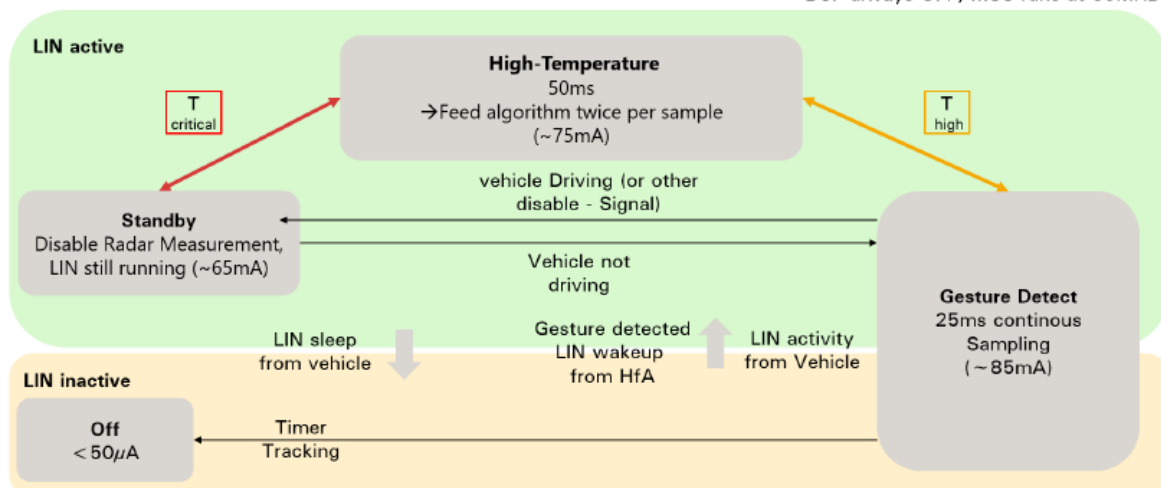
All Fundamental Measurements have been performed on Two Operating mode (Gesture Detect, High Temperature) where RADAR is ON, check below customer declared operating mode,

Mode	Current (@12V)	LIN	Radar
Sleep/Off	<50 μ A	OFF	OFF
Standby	~65mA	ON	OFF
Gesture Detect	~85mA	ON	ON (25ms Sampling)
High-Temperature	~75mA	ON	ON (50ms Sampling)

Powerstates HfA (AWR1843)

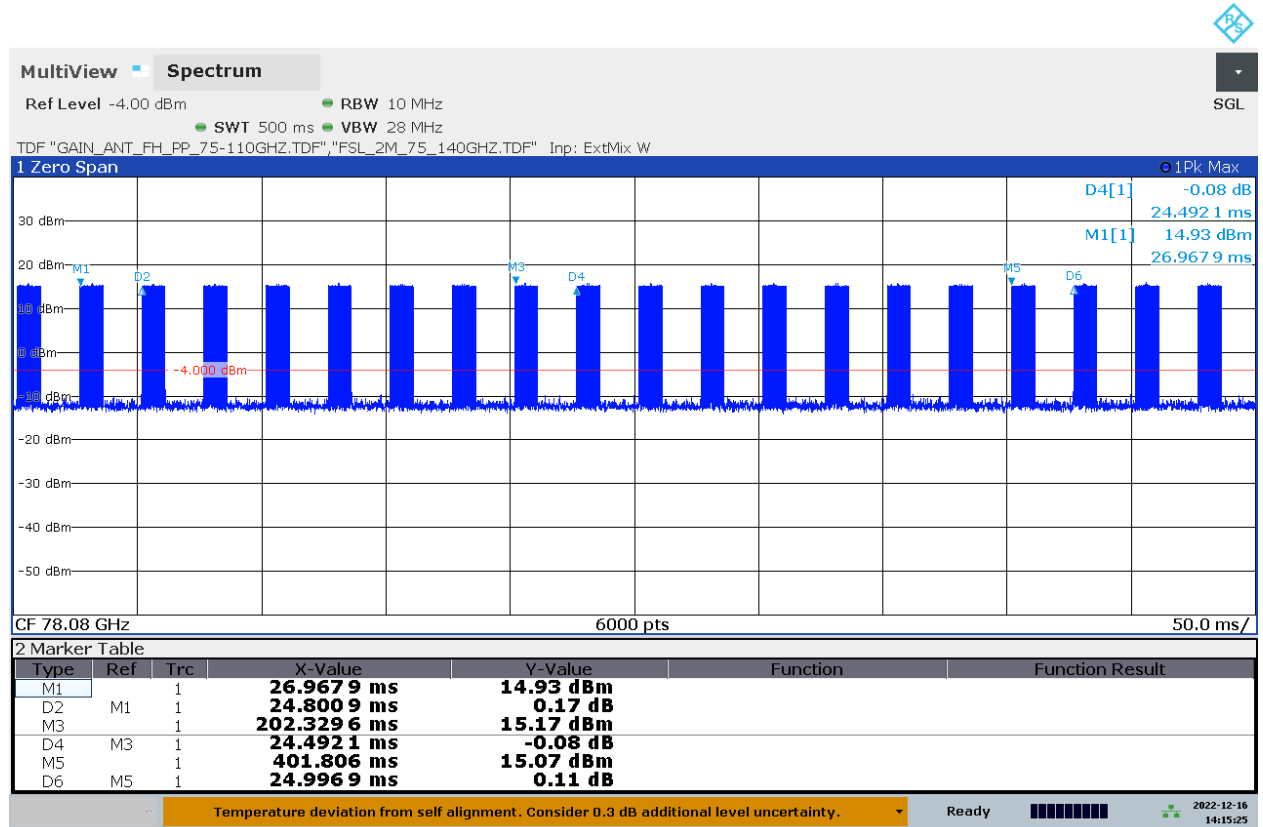
brose
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*DSP always OFF, MSS runs at 60MHz



Measurement time investigation GD mode:

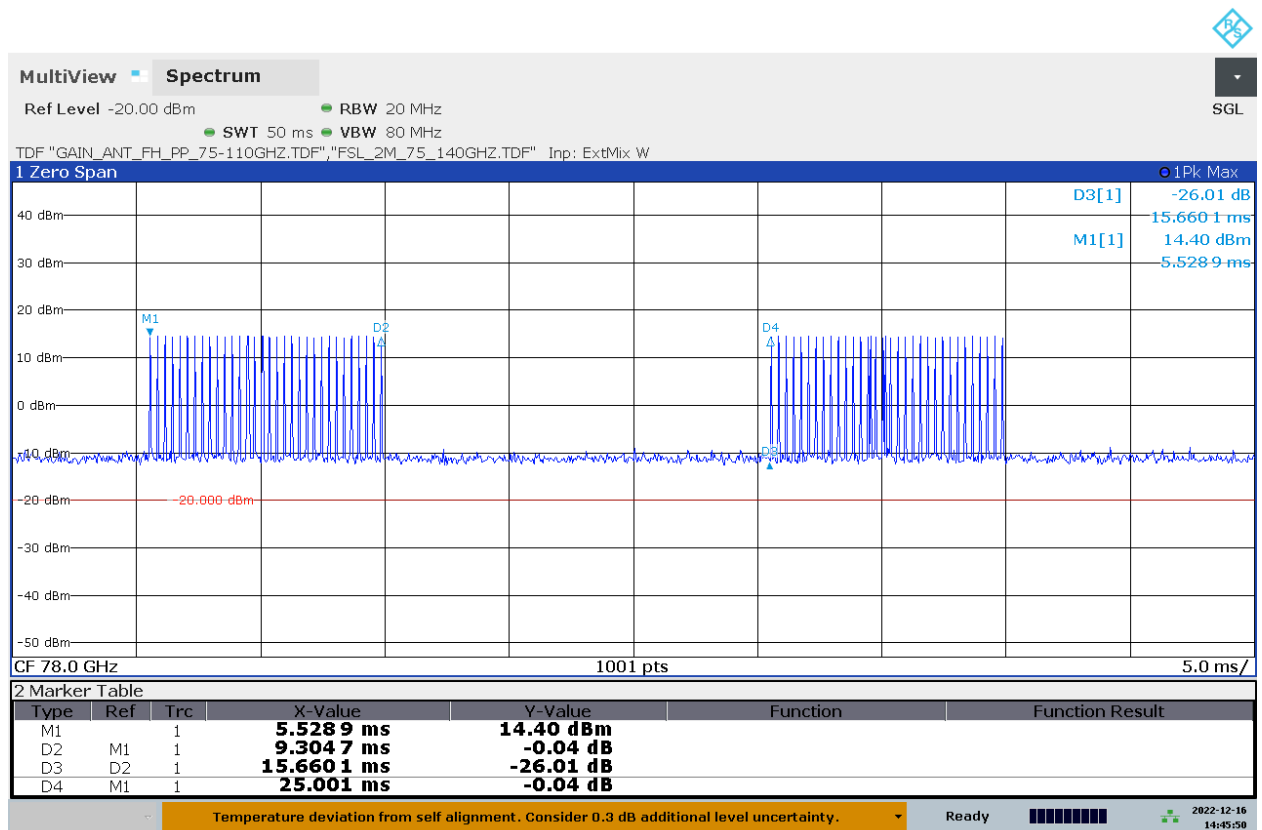
D105_T08_MT_investigation_EUT_87_TT_0_Ant_V_S40_RBW_1MHz_GD_mode



02:15:25 PM 12/16/2022

EUT'S 1 Cycle Time =~25 ms (verified)

Non Pulsed RADAR: Frequency Modulated Continuous Wave (FMCW)



02:45:51 PM 12/16/2022

D107_T08_Signal_ON_OFF_EUT_87_Ant_V_S40_single_signal_on_off_time_GD_mode

Remark: Signal ON / OFF time,

Signal on time = ~9.3 ms,

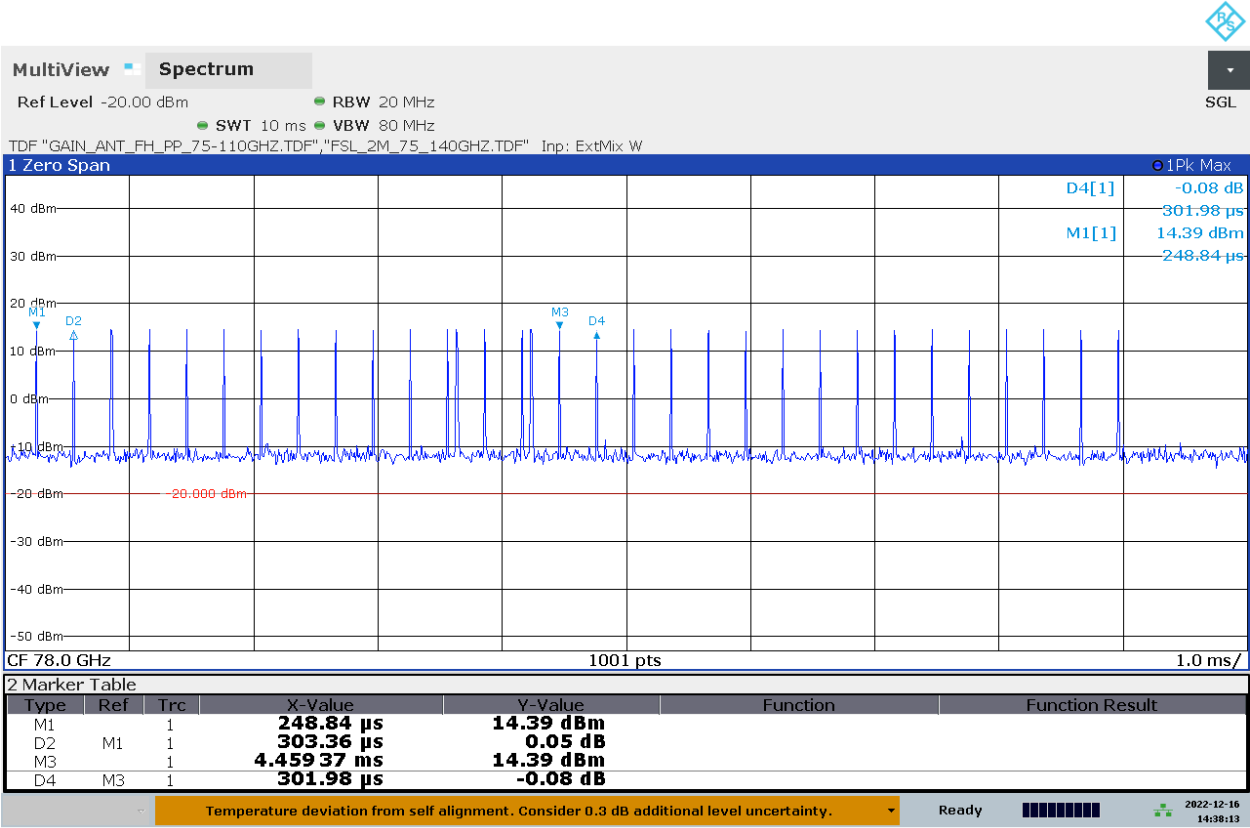
Signal off time = ~15.7 ms

EUT'S 1 Cycle Time = ~25 ms

32 Chirps per RADAR Cycle.

Modulation: Frequency Modulated Continuous Wave (FMCW)

D106_T08_Tchirp_EUT_87_Ant_V_S40_single_chirp_on_off_time_GD_mode

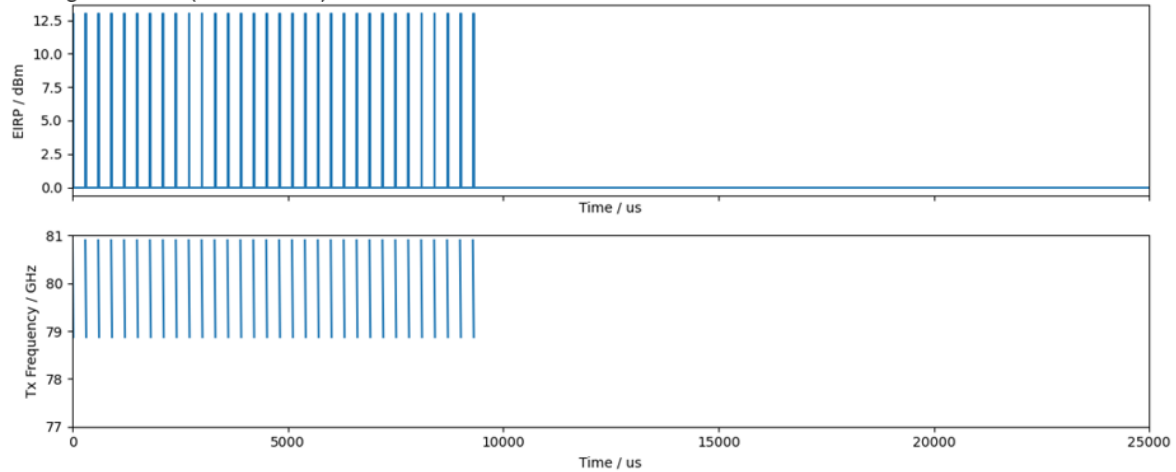


02:38:14 PM 12/16/2022

32 Chirps per RADAR Cycle.

Customer declaration,

Radar	
Min Frequency	77,050GHz
Max Frequency	78,950GHz
Modulation (32 Chirps per radar cycle)	Chirp Sequence FMCW
Sampling rate	2.5MSps
Chirp Slope	-100MHz/ μ s
Peak transmit power at boresight (EIRP)	+13dBm

Timing Overview (25ms frame):**Additional calculation:**

Radar cycle: $T = 25 \text{ ms}$;

Transmission time: $t = 20.26 \mu\text{s} * 32 \text{ ramps} = 648 \mu\text{s}$;

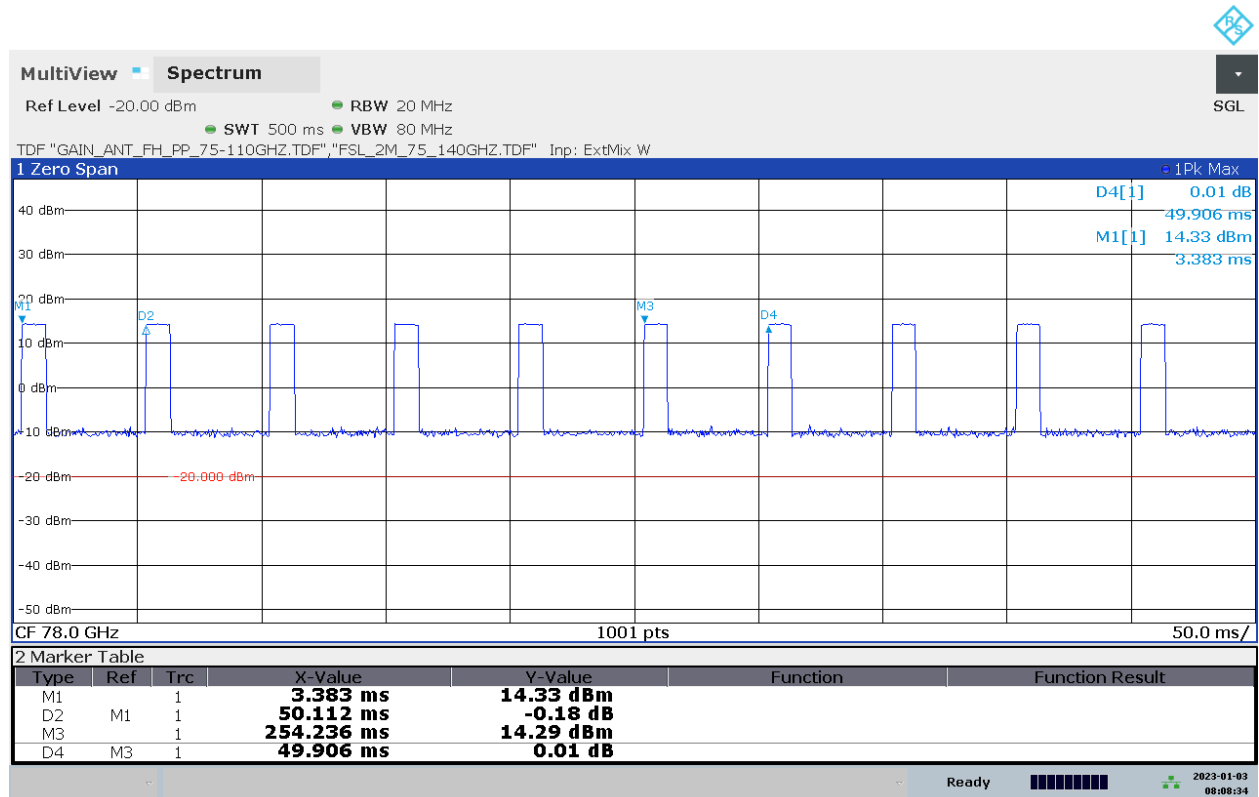
Duty cycle: $t / T = 0.648\text{ms} / 25\text{ms} = 0.025 = 2.5\%$.

For more information, please check below documents provided by Customer,

- BROSE R-HfA-Datasheet-221006
- Antenna 2022_11_23
- CANape_mode_settings_Radar-HfA - updated

Measurement time investigation HT mode:

D105_T08_MT_investigation_EUT_87_TT_0_Ant_V_S40_RBW_1MHz_HT_mode

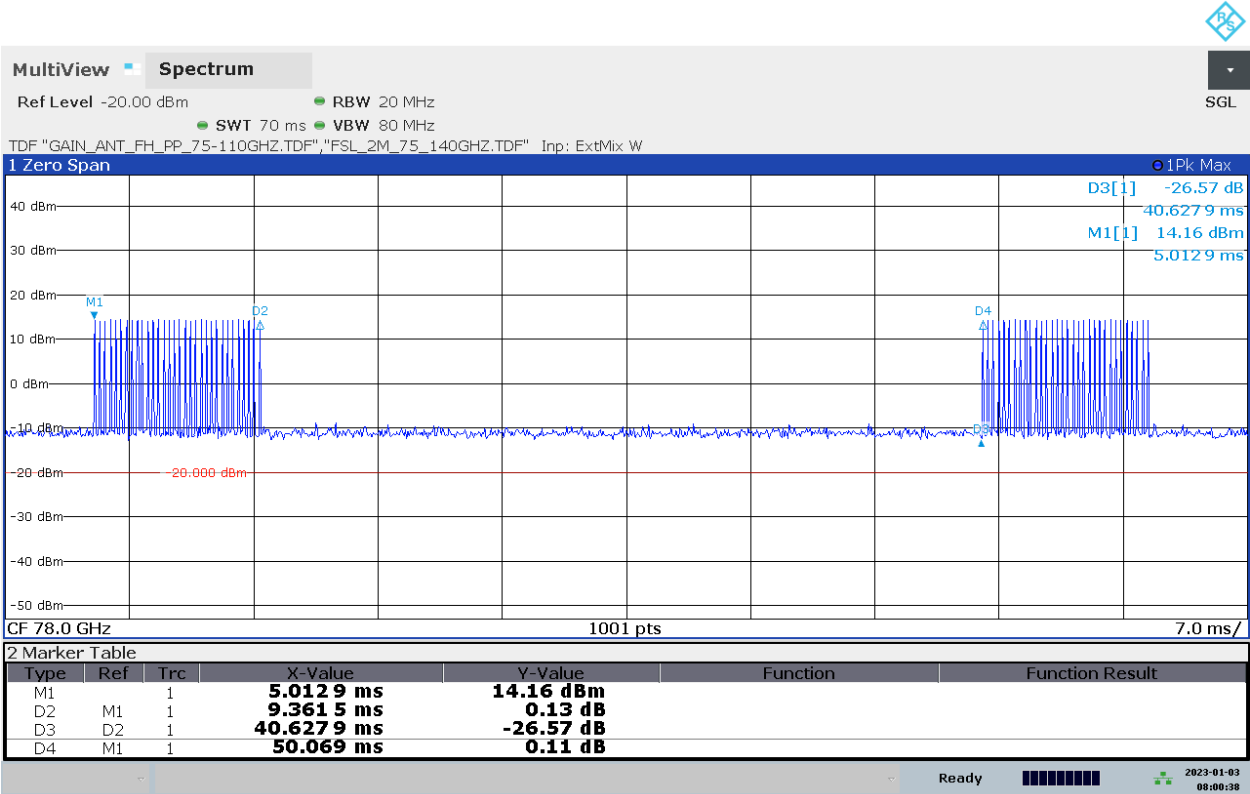


08:08:35 AM 01/03/2023

EUT'S Duty Cycle ≈ 50 ms (verified)

Modulation: Frequency Modulated Continuous Wave (FMCW)

D107_T08_Signal_ON_OFF_EUT_87_Ant_V_S40_single_signal_on_off_time_HT_mode



08:00:38 AM 01/03/2023

Remark: Signal ON / OFF time,

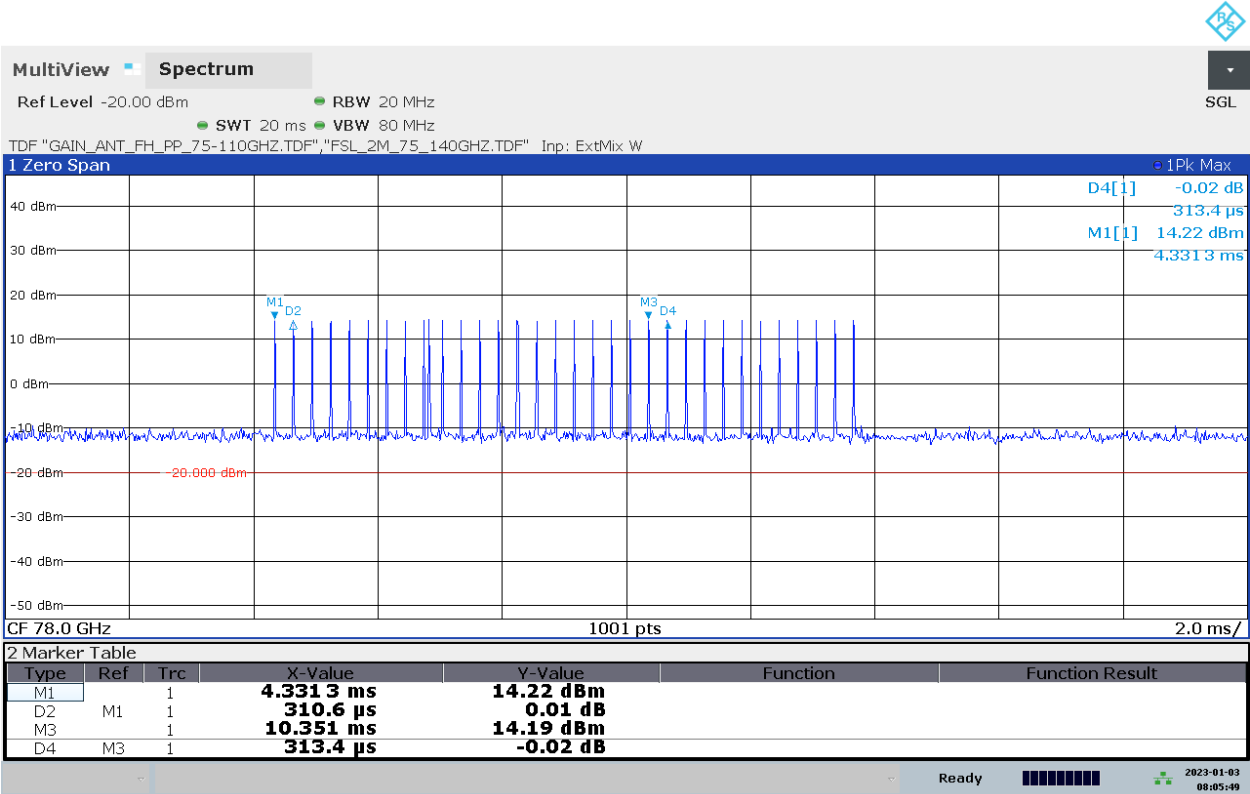
Signal on time = ~9.4 ms,
Signal off time = ~40.6 ms

EUT's Duty cycle= ~50 ms

32 Chirps per RADAR Cycle.

Modulation: Frequency Modulated Continuous Wave (FMCW)

D106_T08_Tchirp_EUT_87_Ant_V_S40_single_chirp_on_off_time_HT_mode



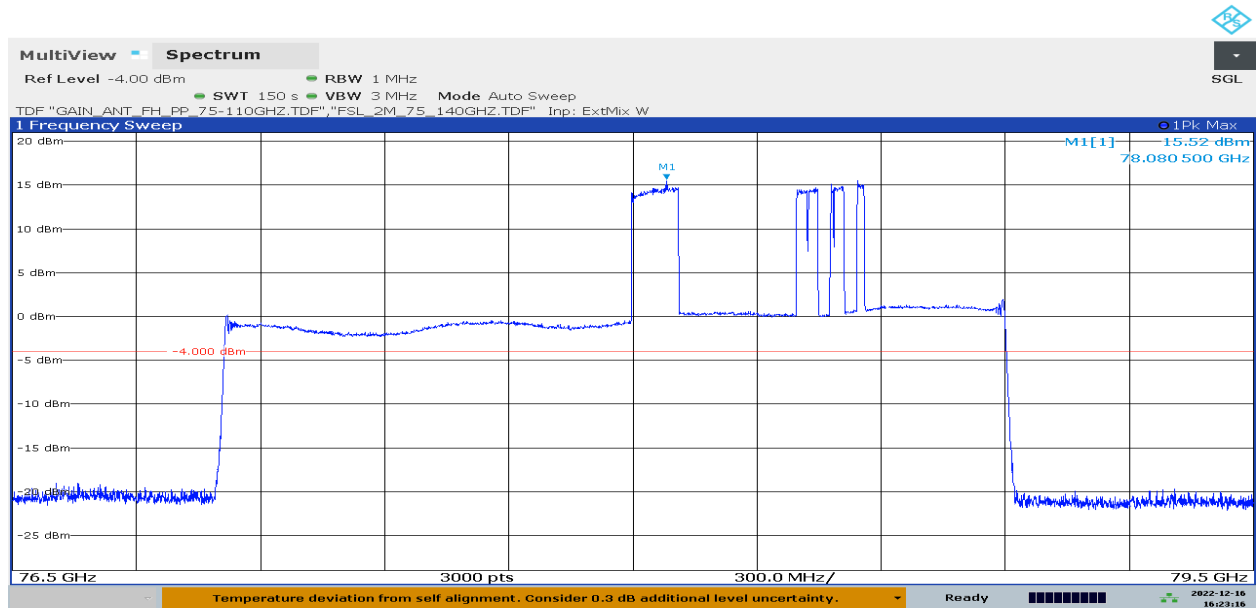
08:05:50 AM 01/03/2023

32 Chirps per RADAR Cycle.

2 The maximum peak power EIRP / peak EIRP spectral density / average EIRP.

2.1 Peak Detector, T_{nom}/V_{nom_GD} Mode

D118_01a_R01_T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_1MHz_GD_mode

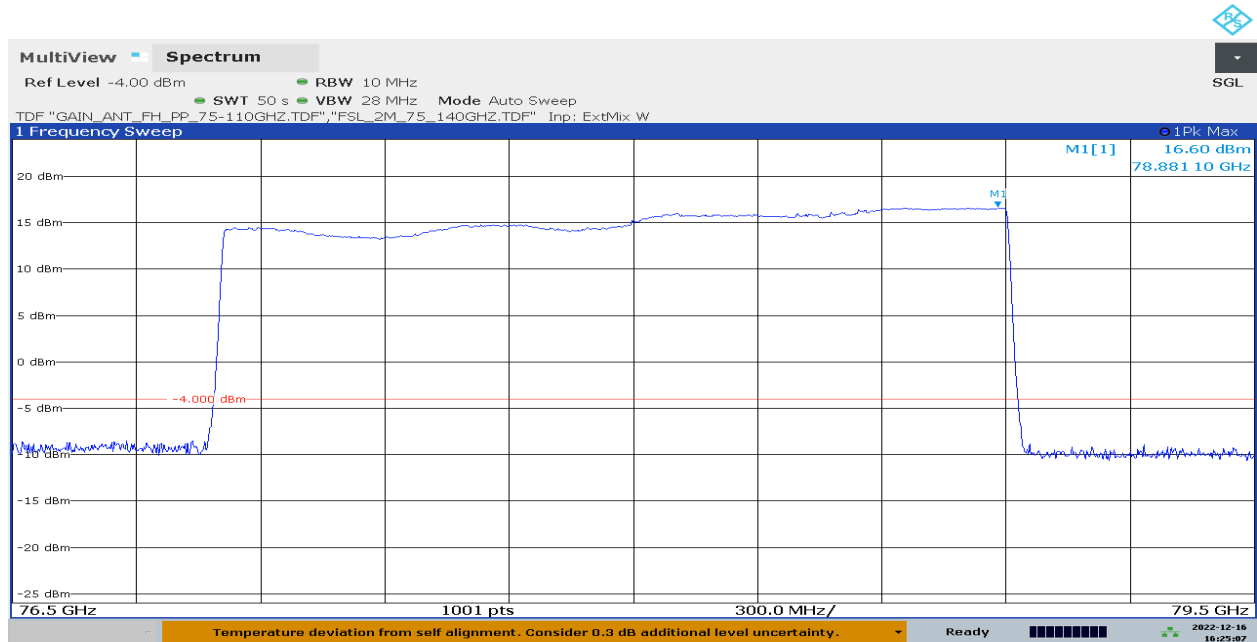


04:23:16 PM 12/16/2022

Remark: Only for information, not for assessment.

EUT Transmitting FMCW signal is too fast, therefore Spectrum Analyzer cannot measure correctly with 1 MHz RBW, so that 10 MHz RBW has been taken for this measurement, check below diagram.

D118_02a_R01_T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_GD_mode



04:25:08 PM 12/16/2022

Remark: Used FMCW Peak Desensitization correction factor, RBW 10MHz has been taken to perform Maximum PEAK Power measurement to receive maximum Emission from the EUT

Maximum Radiated Power: 16.60 dBm

Measurement Antenna polarization: Vertical

D118_03a_R01_T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_20MHz_GD_mode



04:26:32 PM 12/16/2022

Remark:

Only for information, not for assessment, RBW: 20MHz

Maximum Radiated Power: 17.13 dBm

Measurement Antenna polarization: Vertical

D119_02a_R01_T08_PEAK_Power_Tnom_Vnom_EUT_78_TT_35_Ant_H_MaxH_S40_RBW_10MHz_GD_mode



12:12:27 PM 12/19/2022

Maximum Radiated Power: 5.65 dBm

Measurement Antenna polarization: Horizontal

Remark: The radiated power is measured with horizontal and vertical polarizations.

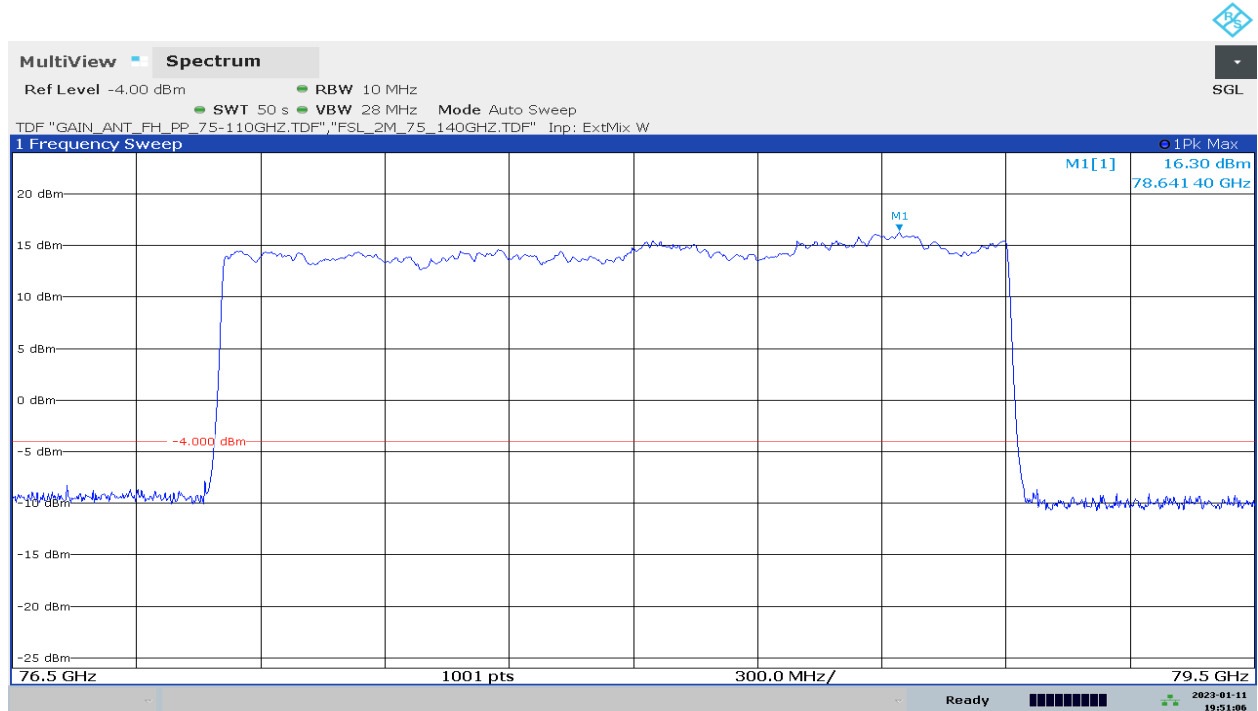
The highest level of the radiated power is found at vertical polarization.

Check diagrams 118_02a and D119_02a.

Therefore the following measurements are done with vertical polarization.

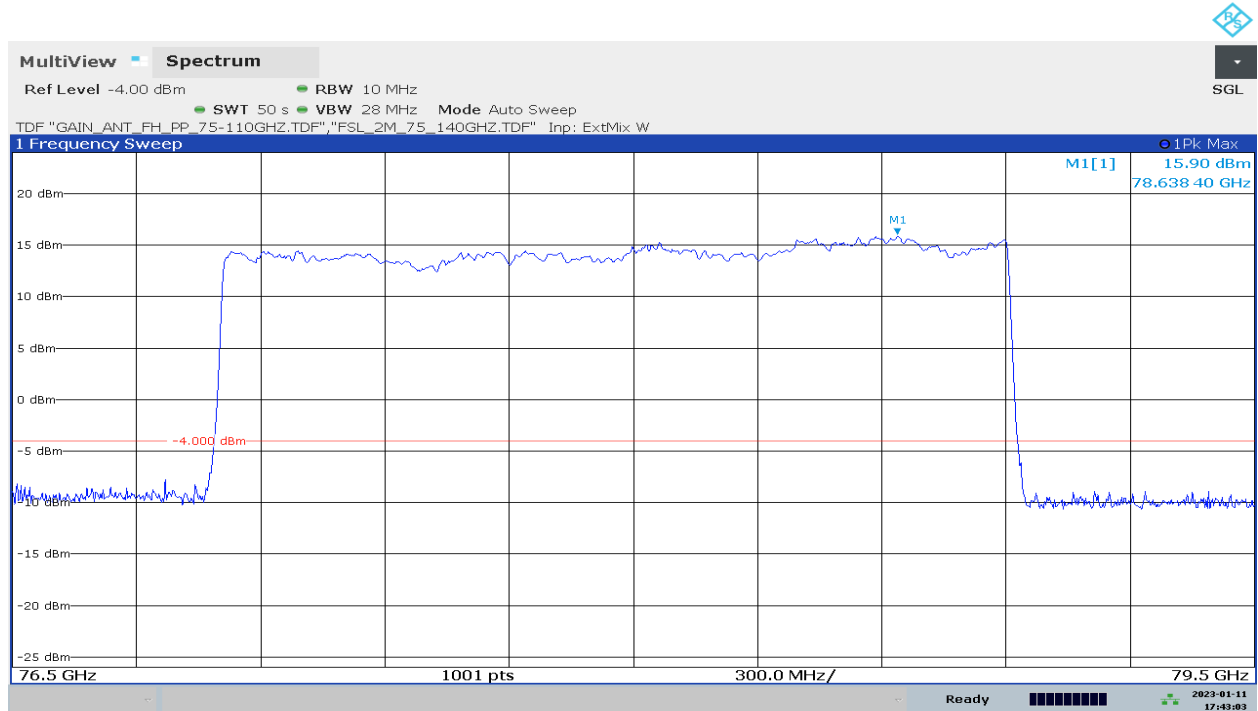
2.2 Peak Detector, Tnom/Vmin_GD Mode

D118_11a_R01_T08_PEAK_Power_Tnom_Vmin_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_GD_mode



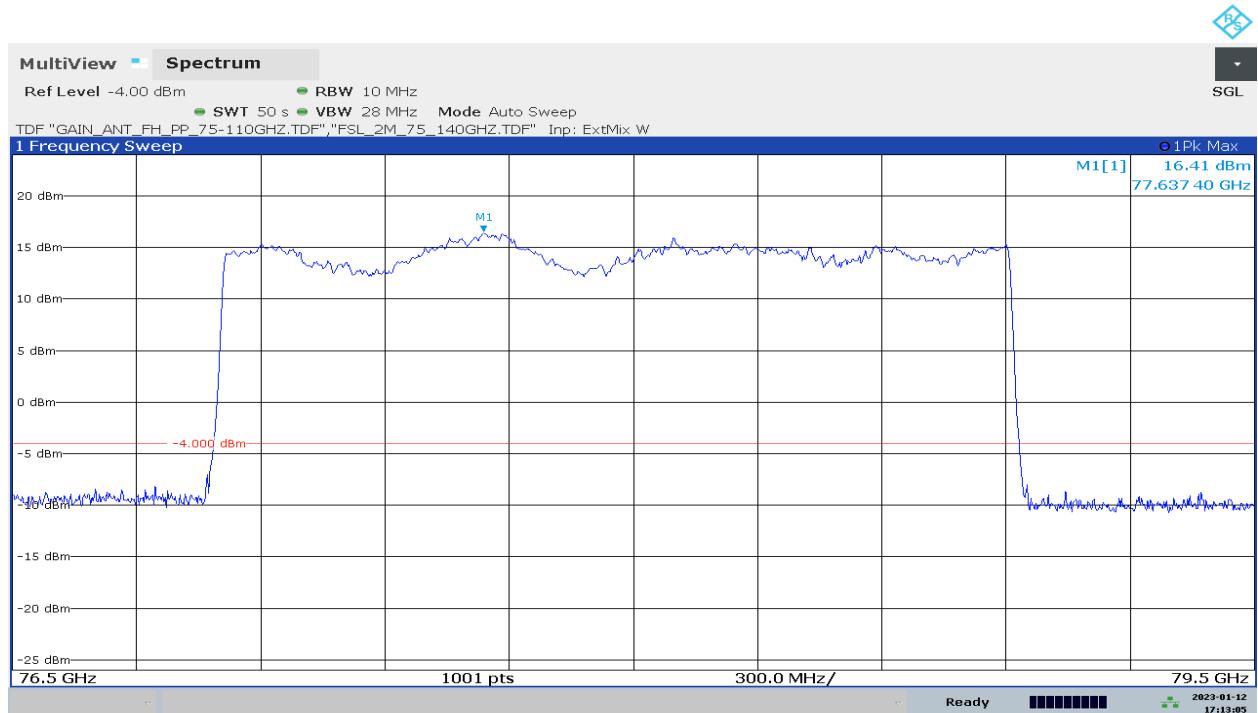
2.3 Peak Detector, Tnom/Vmax_GD Mode

D118_09a_R01_T08_PEAK_Power_Tnom_Vmax_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_GD_mode



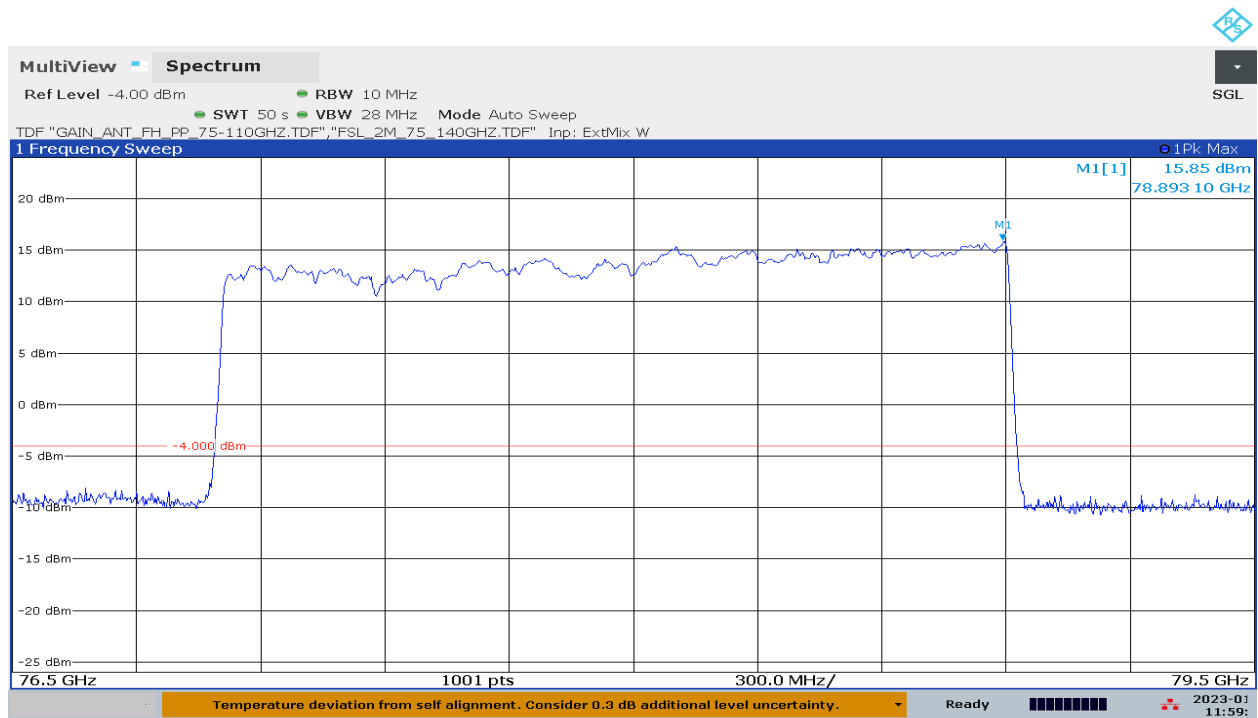
2.4 Peak Detector, Vnom/Tmin_GD Mode

D118_05a_R01_T08_PEAK_Power_Vnom_Tmin_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_GD_mode



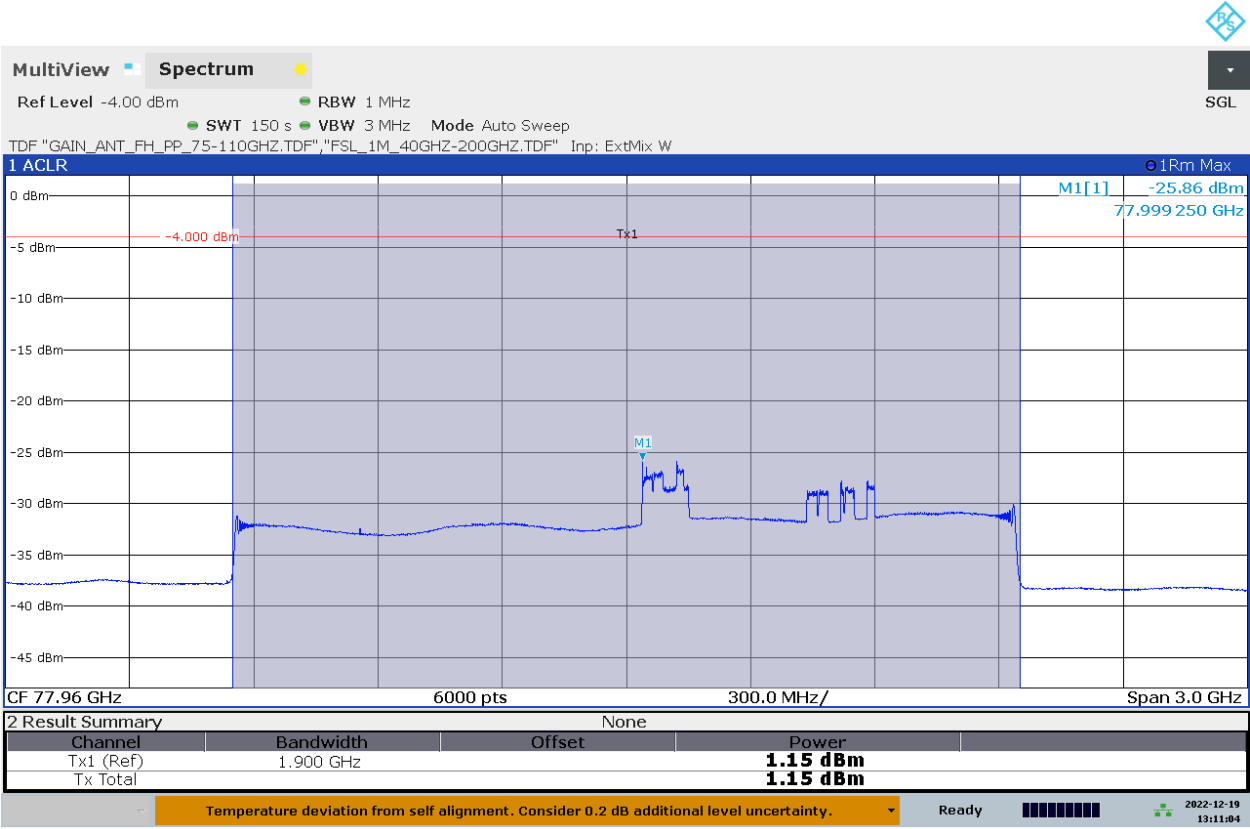
2.5 Peak Detector, Vnom/Tmax_GD Mode

D118_07a_R01_T08_PEAK_Power_Vnom_Tmax_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_GD_mode



2.6 RMS Detector, Tnom/Vnom_GD Mode

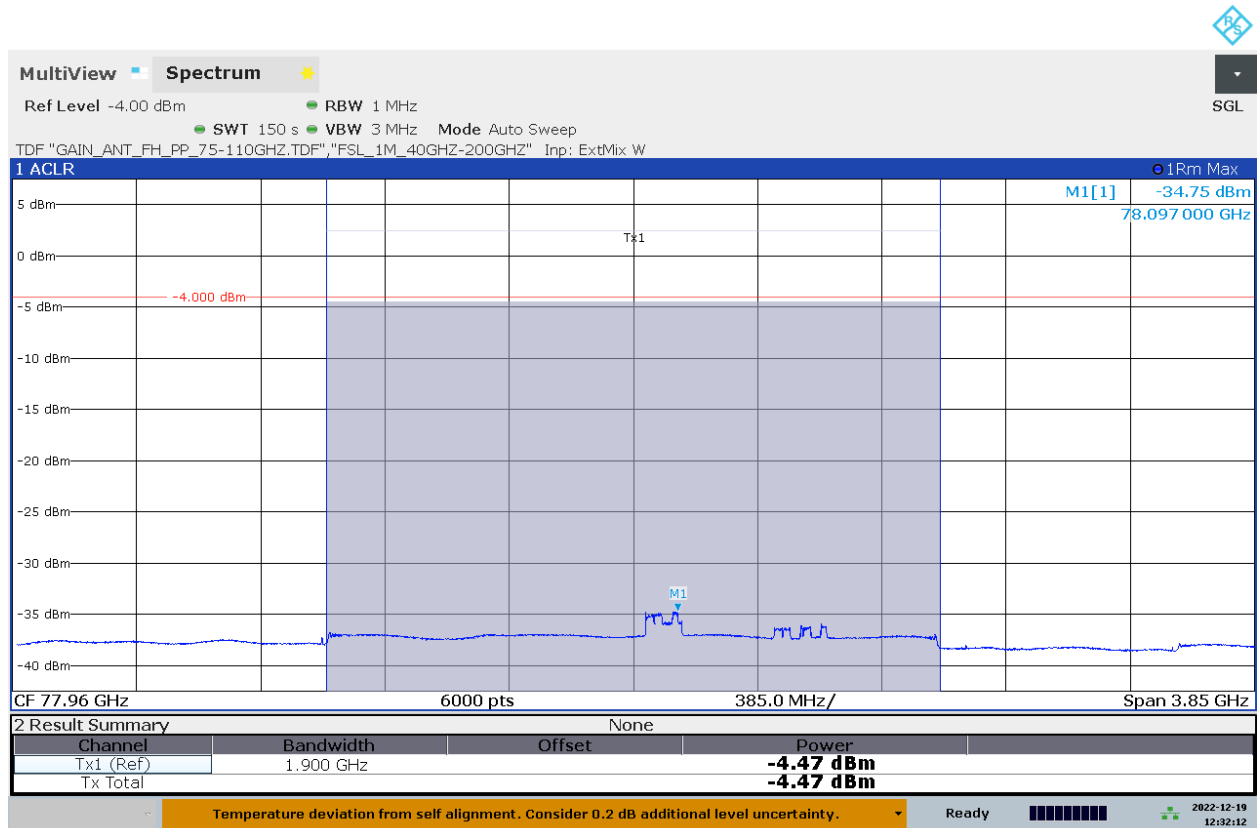
D113_01a_R01T08_Channel_Power_RMS_Tnom_Vnom_Ant_V_S40_GD_mode



01:11:04 PM 12/19/2022

Total Channel Power = 1.15 dBm,
Maximum Mean Power = -25.86 dBm/MHz,
Measurement Antenna polarization: Vertical.

D114_01a_R01T08_Channel_Power_RMS_Tnom_Vnom_Ant_H_S40_GD_mode



12:32:12 PM 12/19/2022

Total Channel Power = -4.47 dBm,
 Maximum Mean Power = -34.75 dBm/MHz,
 Measurement Antenna polarization: Horizontal.

Remark: The Total channel power is measured with horizontal and vertical polarizations.
 The highest Channel power is found at vertical polarization.
 Check diagrams 113_01a and D114_01a for GD mode.
The following measurements are done with vertical polarization only.

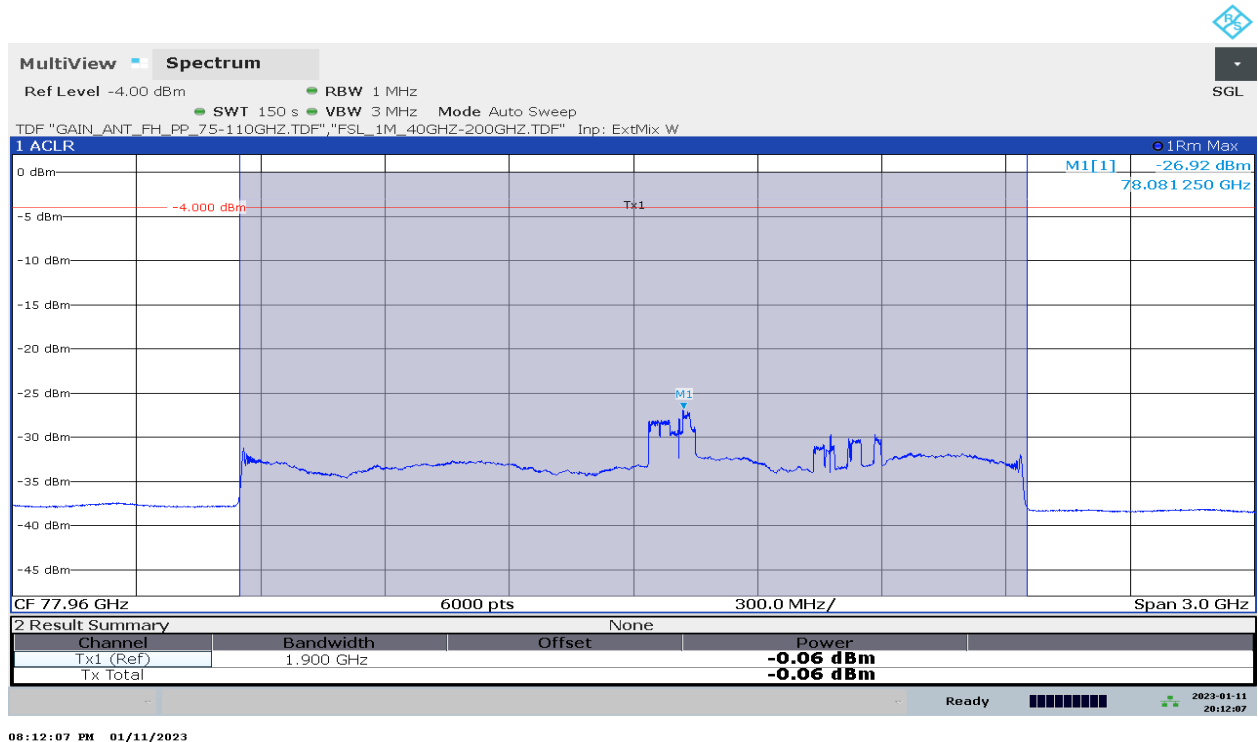
2.7 RMS Detector, T_{nom}/V_{min_GD} Mode

D113_04a_R01T08_Channel_Power_RMS_Tnom_Vmin_Ant_V_S40_GD_mode



2.8 RMS Detector, T_{nom}/V_{max_GD} Mode

D113_05a_R01T08_Channel_Power_RMS_Tnom_Vmax_Ant_V_S40_GD_mode



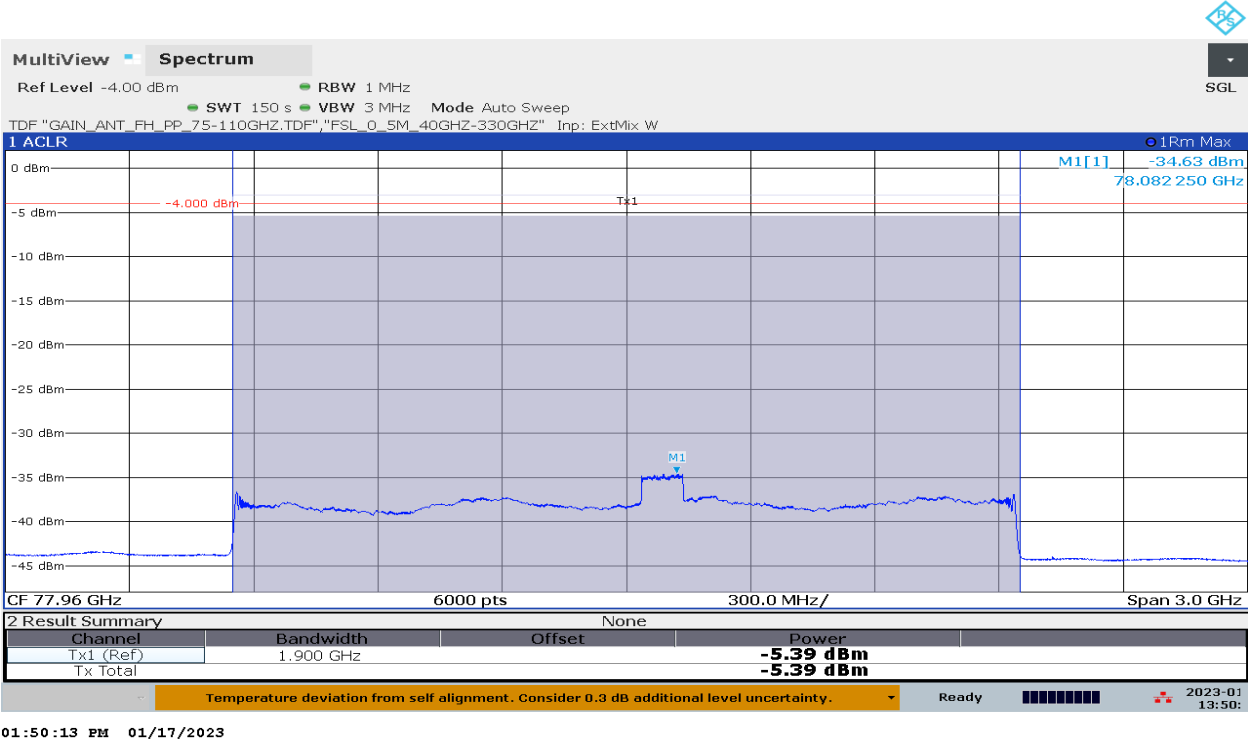
2.9 RMS Detector, Vnom/Tmin_GD Mode

D113_02a_R01T08_Channel_Power_RMS_Vnom_Tmin_Ant_V_S40_GD_mode



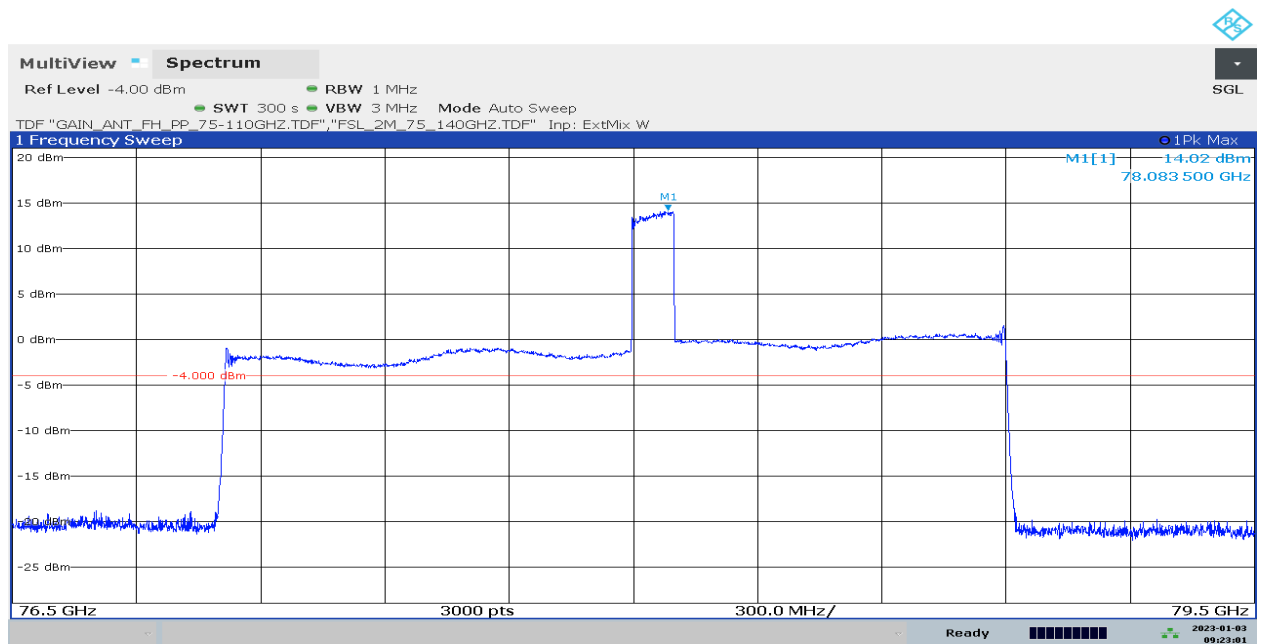
2.10 RMS Detector, Vnom/Tmax_GD Mode

D113_03a_R01T08_Channel_Power_RMS_Vnom_Tmax_Ant_V_S40_GD_mode



2.11 Peak Detector, T_{nom}/V_{nom_HT} Mode

D118_01b_R01_T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_1MHz_HT_mode

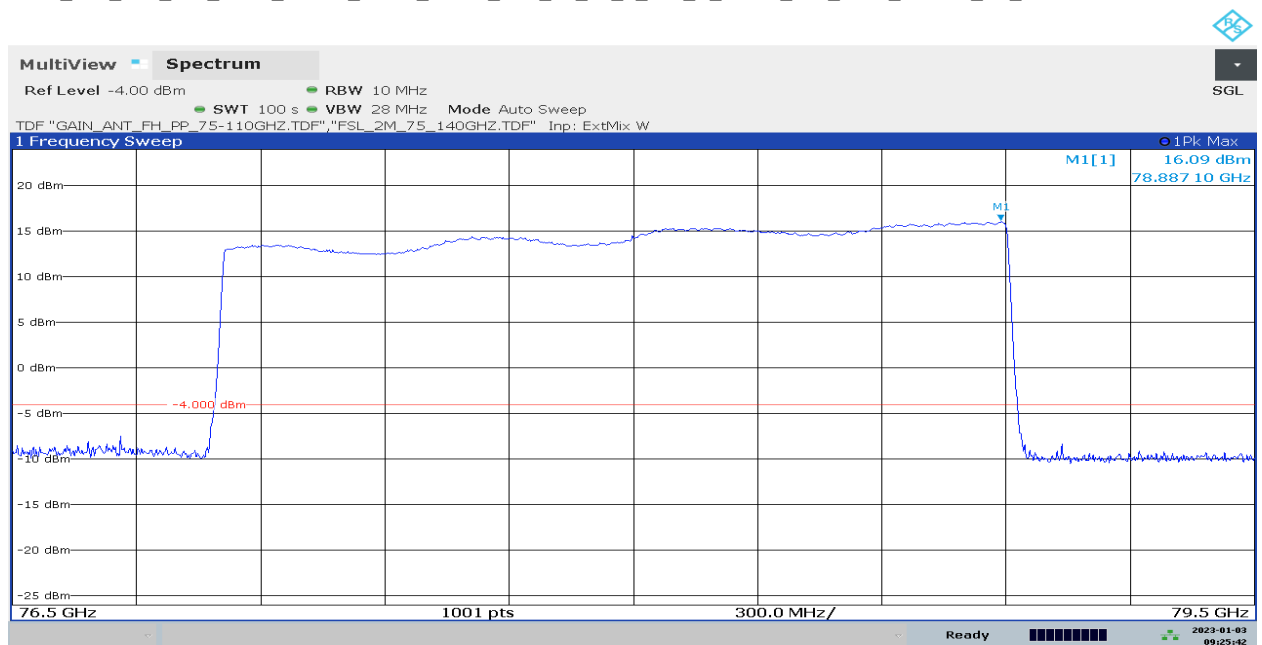


09:23:01 AM 01/03/2023

Remark: Only for information, not for assessment.

EUT Transmitting FMCW signal is too fast, therefore Spectrum Analyzer cannot measure correctly with 1 MHz RBW, Desensitization factor has been used to perform Maximum PEAK Power measurement, check below diagram.

D118_02b_R01_T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_HT_mode



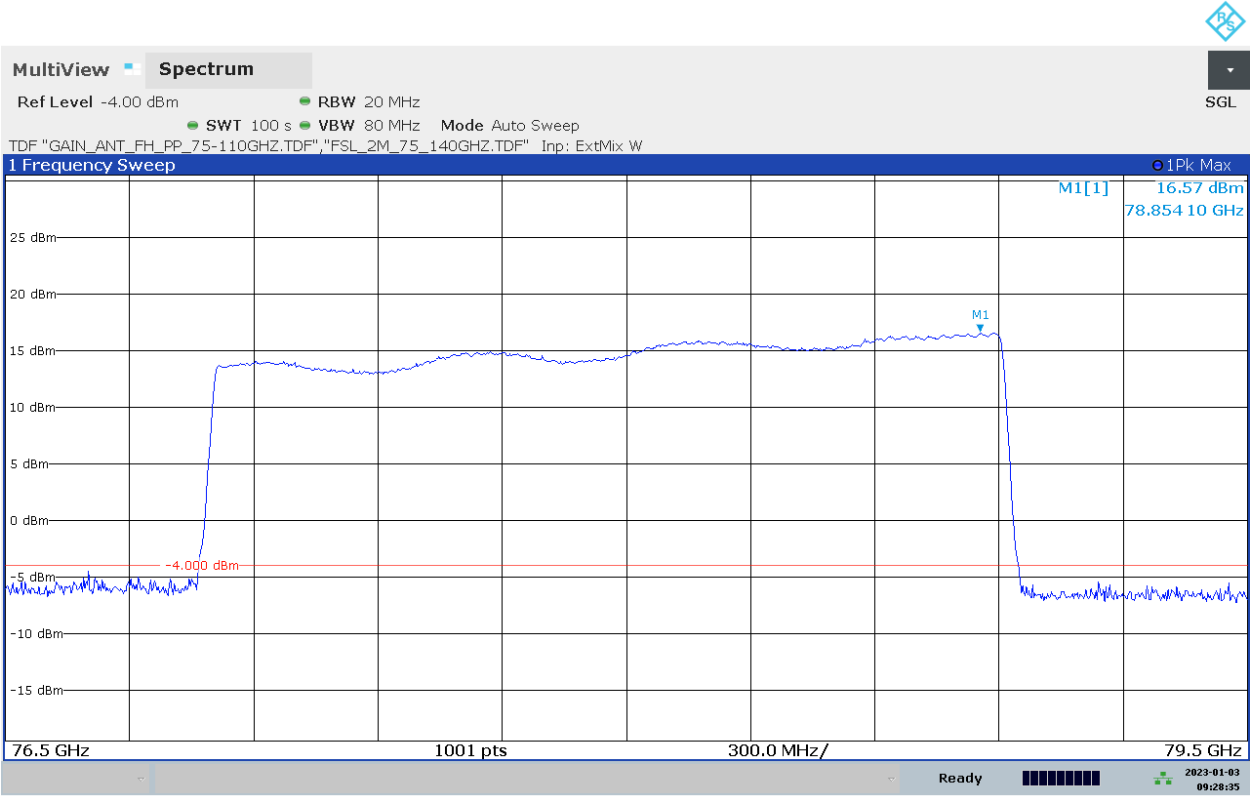
09:25:42 AM 01/03/2023

Desensitization correction factor has been used to perform Maximum PEAK Power measurement, Therefore RBW is 10MHz.

Maximum Radiated Power: 16.09 dBm

Measurement Antenna polarization: Vertical

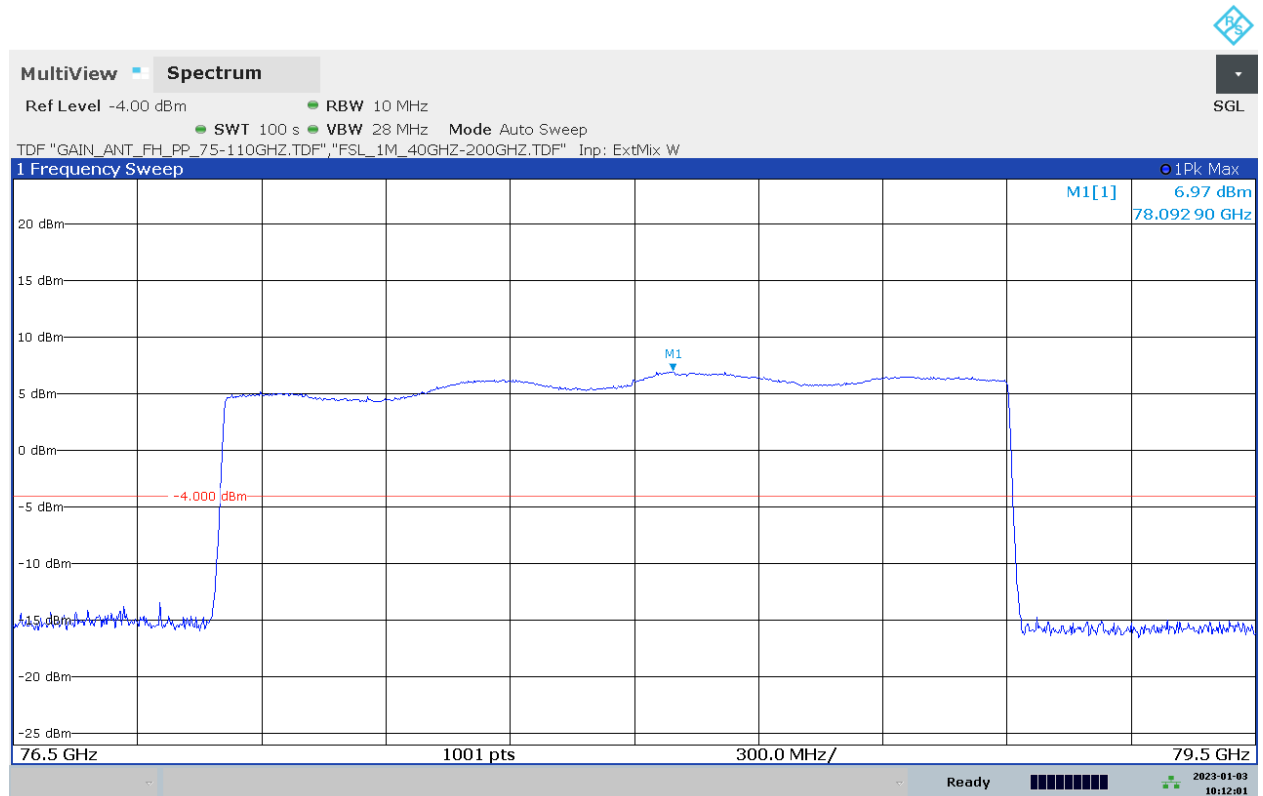
D118_03b_R01_T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_20MHz_HT_mode



09:28:36 AM 01/03/2023

Remark: RBW 20 MHz
Only for information, not for assessment.

D119_02b_R01_T08_PEAK_Power_Tnom_Vnom_EUT_78_TT_35_Ant_H_MaxH_S40_RBW_10MHz_HT_mode



10:12:01 AM 01/03/2023

Maximum Radiated Power: 6.97 dBm

Measurement Antenna polarization: Horizontal

Remark: Radiated power is measured with horizontal and vertical polarizations.

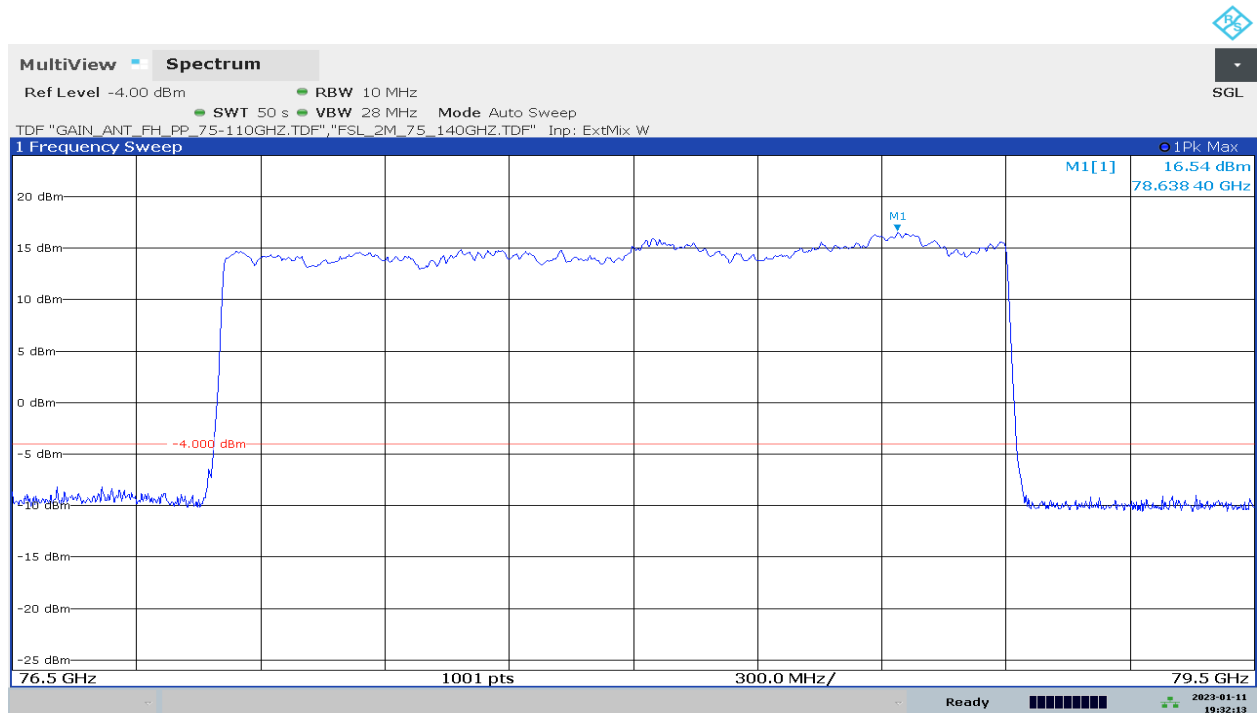
The highest level of the radiated power is found at vertical polarization.

Check diagrams 118_02 and D119_02 for HT mode.

Therefore the following measurements are done with vertical polarization.

2.12 Peak Detector, Tnom/Vmin_HT Mode

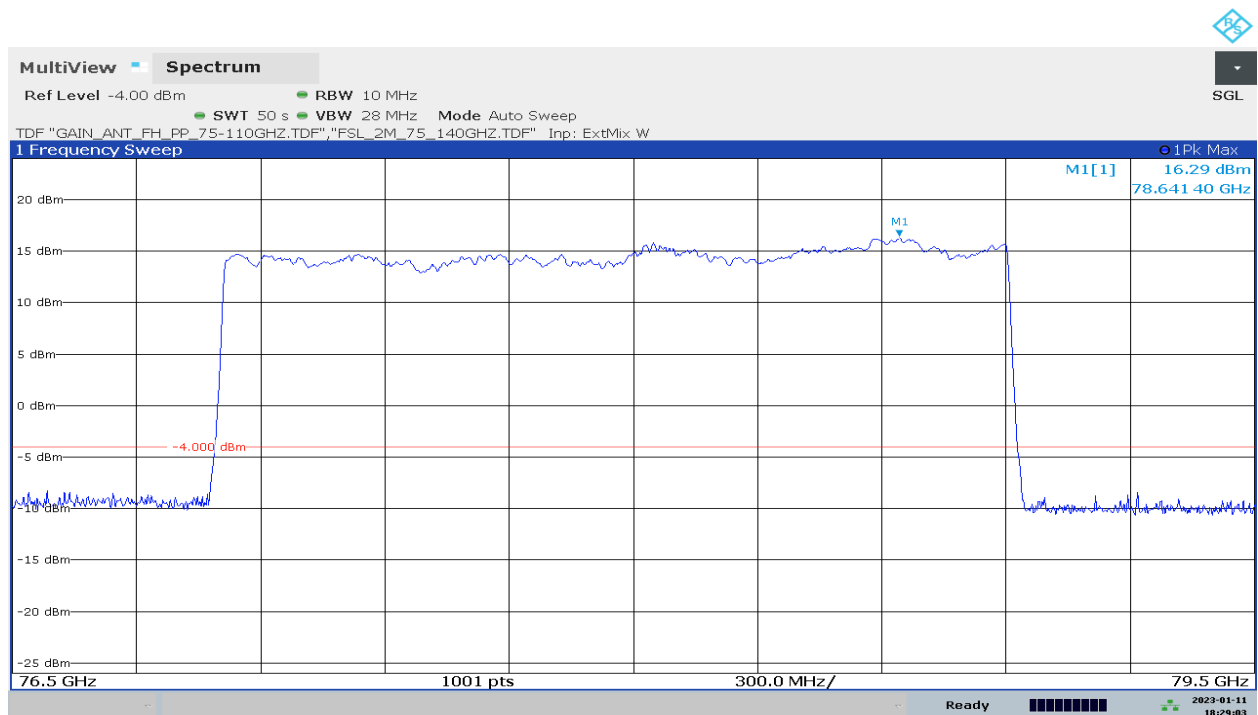
D118_11b_R01_T08_PEAK_Power_Tnom_Vmin_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_HT_mode



07:32:14 PM 01/11/2023

2.13 Peak Detector, Tnom/Vmax_HT Mode

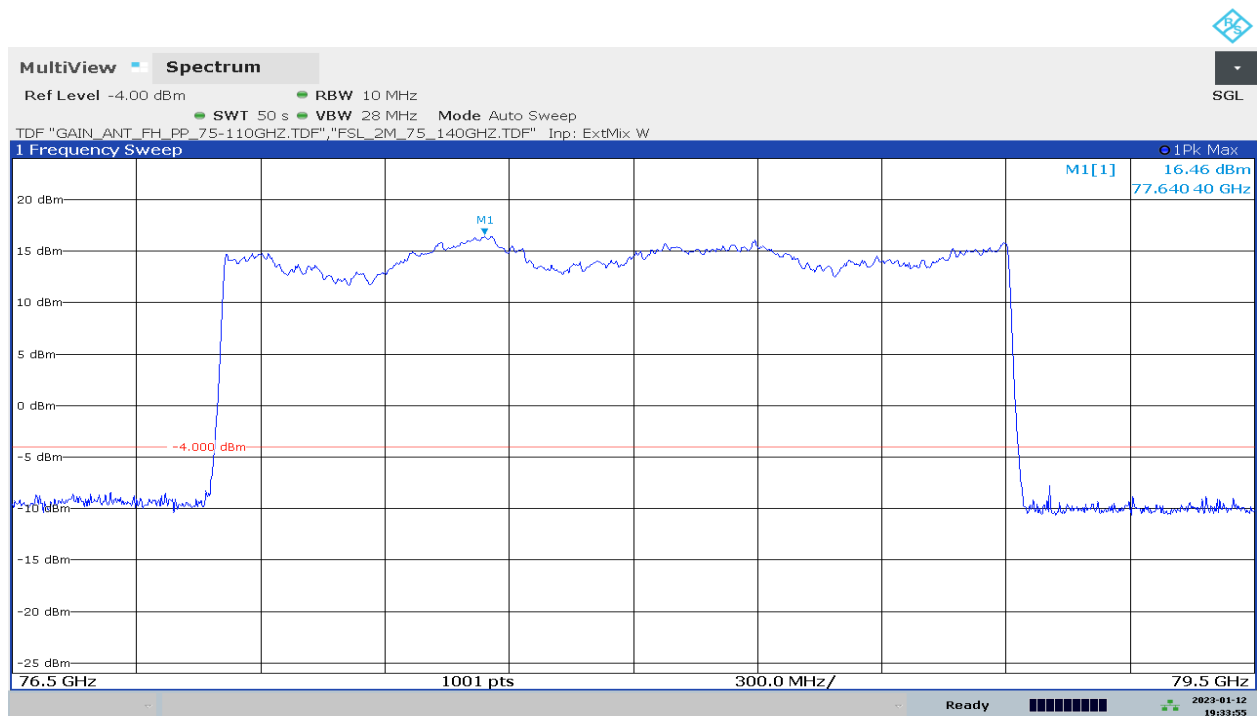
D118_09b_R01_T08_PEAK_Power_Tnom_Vmax_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_HT_mode



06:29:03 PM 01/11/2023

2.14 Peak Detector, Vnom/Tmin_HT Mode

D118_05b_R01_T08_PEAK_Power_Vnom_Tmin_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_HT_mode



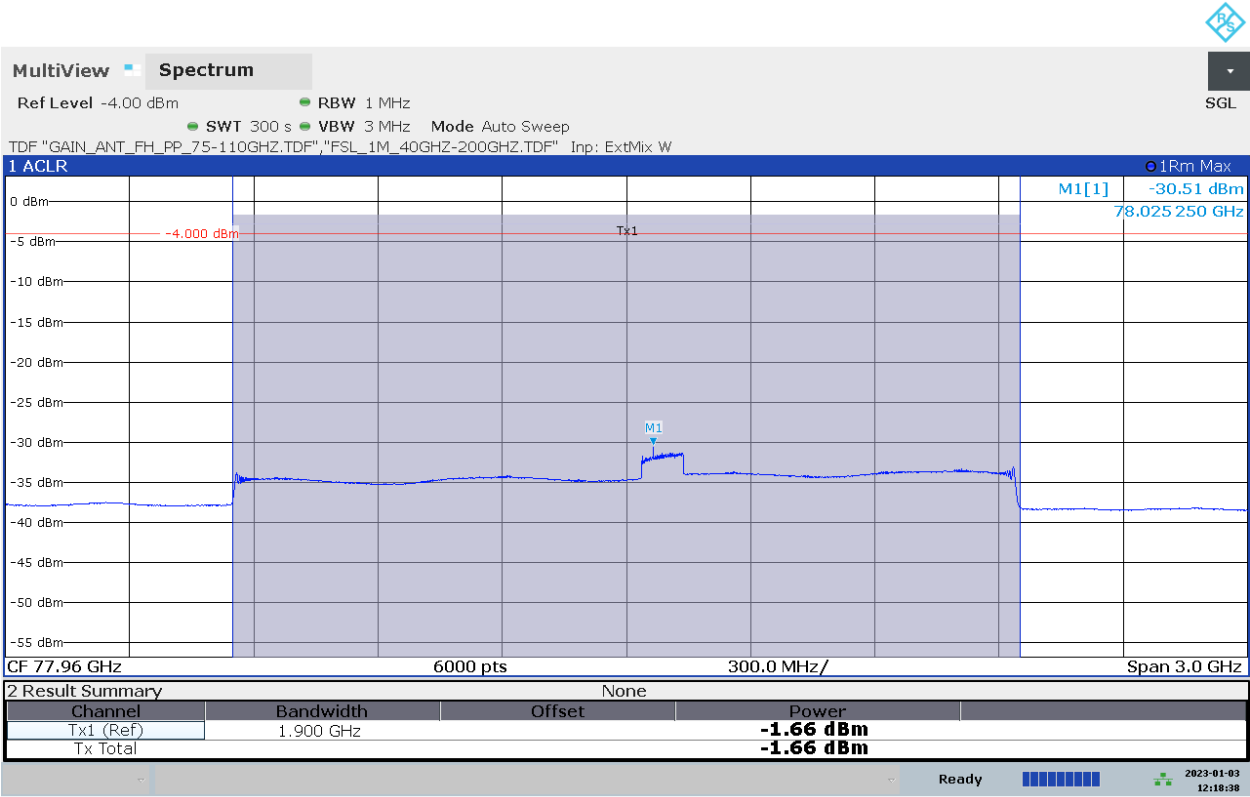
2.15 Peak Detector, Vnom/Tmax_HT Mode

D118_07b_R01_T08_PEAK_Power_Vnom_Tmax_EUT_87_TT_0_Ant_V_MaxH_S40_RBW_10MHz_HT_mode



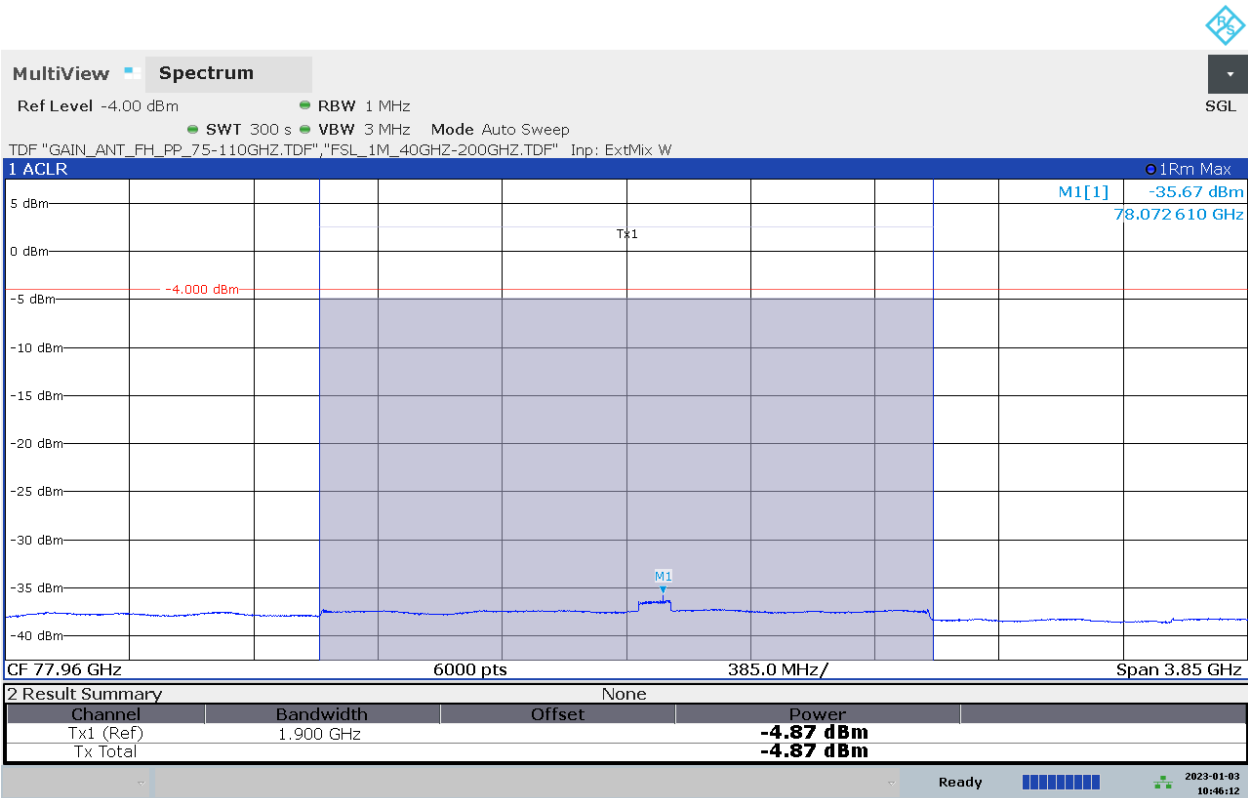
2.16 RMS Detector, Tnom/Vnom_HT Mode

D113_01b_R01T08_Channel_Power_RMS_Tnom_Vnom_Ant_V_S40_HT_mode_300s



Total Channel Power = -1.66 dBm,
Maximum Mean Power = -30.51 dBm/MHz,
Measurement Antenna polarization: Vertical.

D114_01b_R01T08_Channel_Power_RMS_Tnom_Vnom_Ant_H_S40_HT_mode



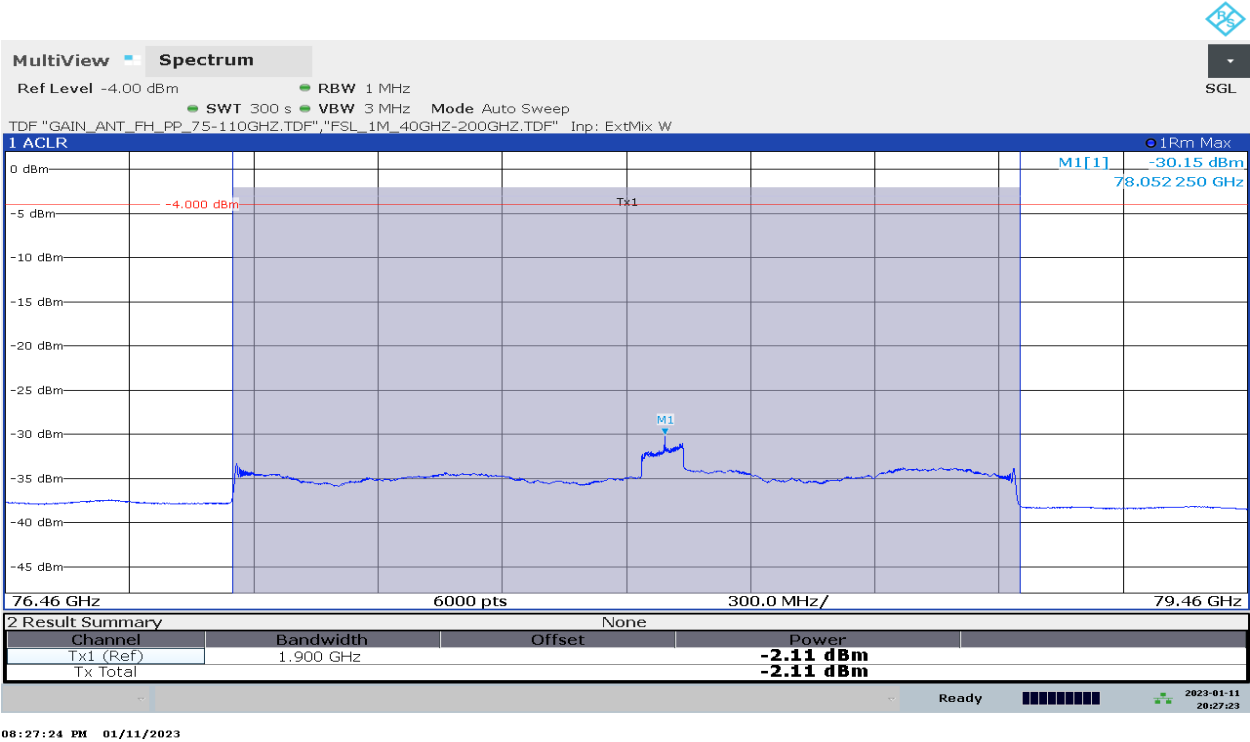
10:46:12 AM 01/03/2023

Total Channel Power = -4.87 dBm,
Maximum Mean Power = -35.67 dBm/MHz,
Measurement Antenna polarization: Horizontal.

Remark: The Total channel power is measured with horizontal and vertical polarizations.
The highest Channel power is found at vertical polarization.
Check diagrams D113_01b and D114_01b for HT mode.
Therefore the following measurements are done with vertical polarization only.

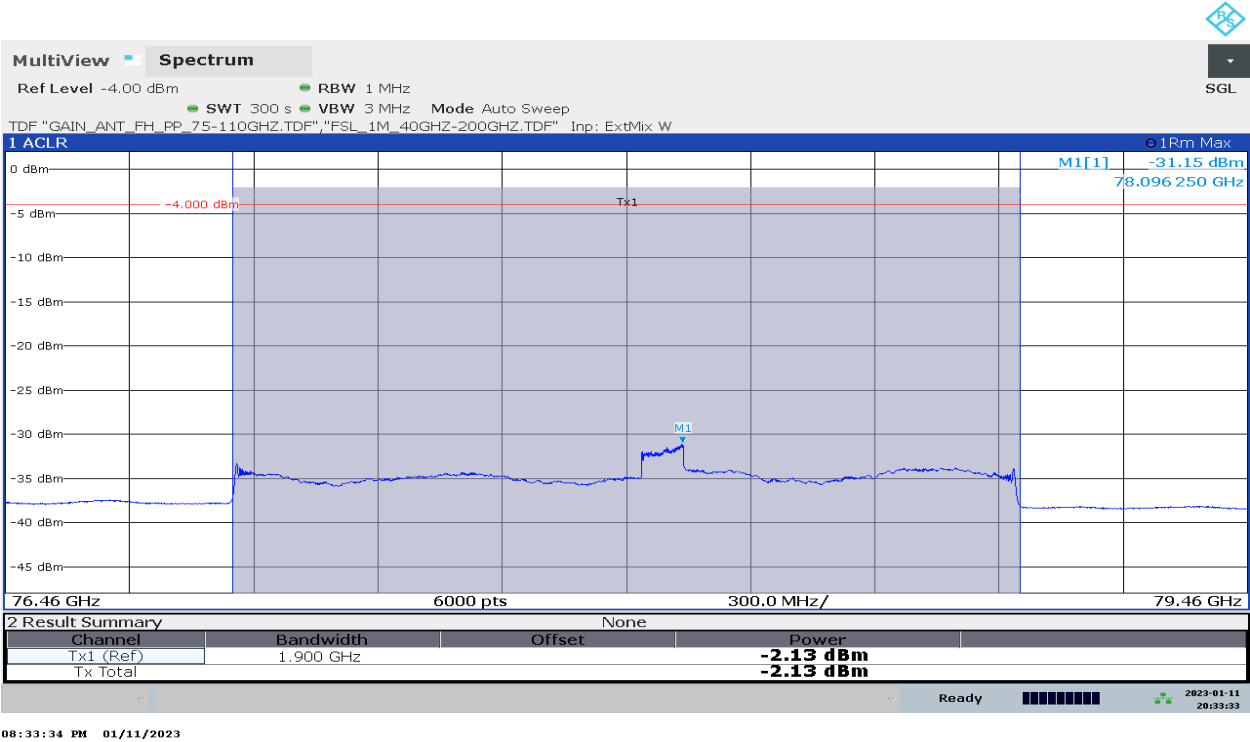
2.17 RMS Detector, T_{nom}/V_{min}_HT Mode

D113_04b_R01T08_Channel_Power_RMS_Tnom_Vmin_Ant_V_S40_HT_mode



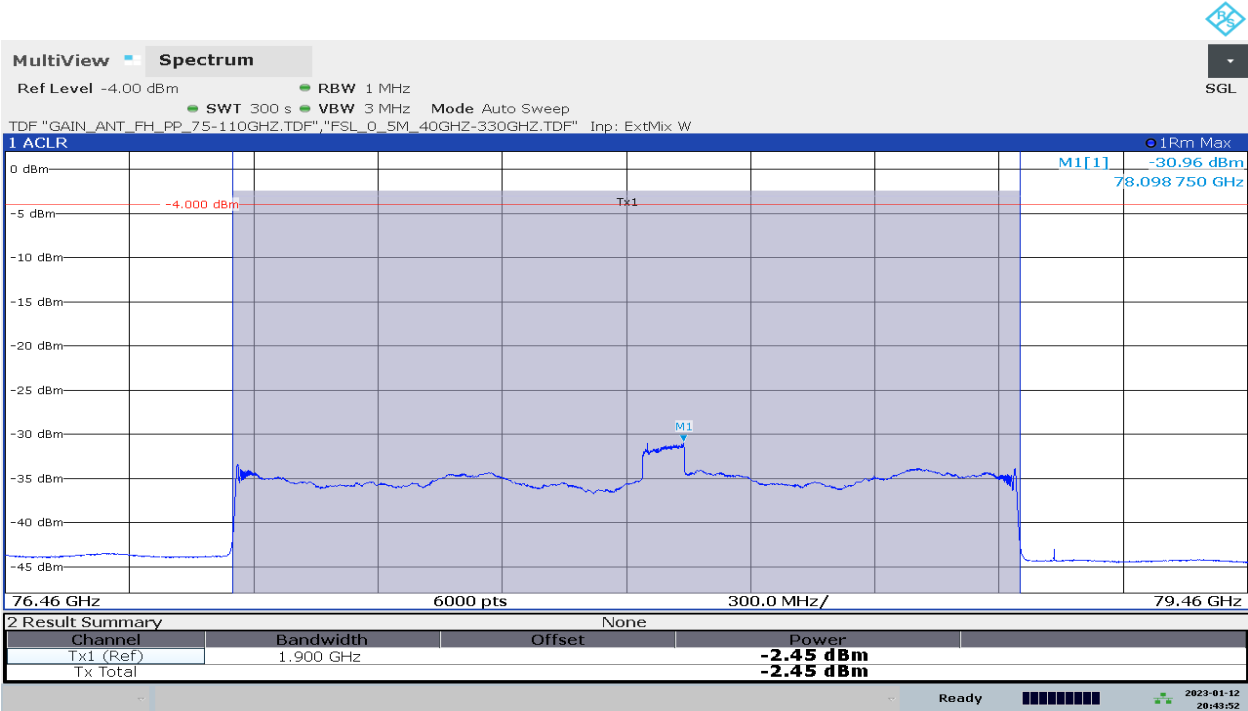
2.18 RMS Detector, T_{nom}/V_{max}_HT Mode

D113_05b_R01T08_Channel_Power_RMS_Tnom_Vmax_Ant_V_S40_HT_mode



2.19 RMS Detector, Vnom/Tmin_HT Mode

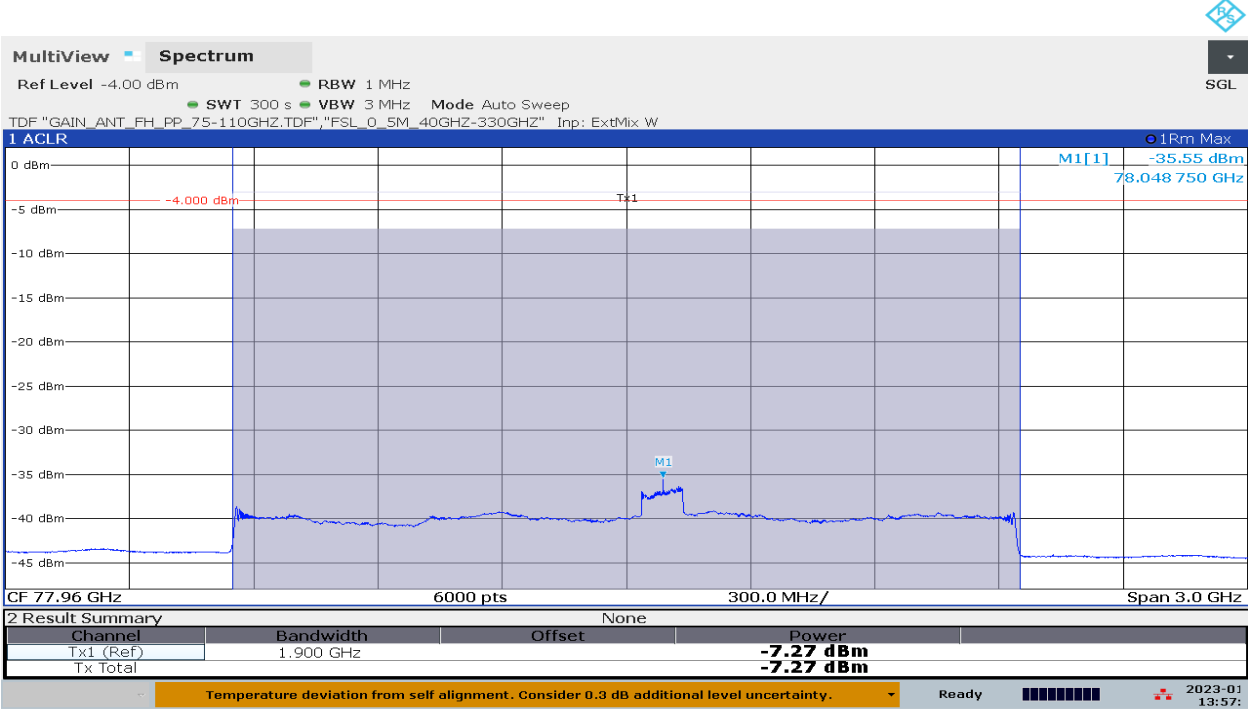
D113_02b_R01T08_Channel_Power_RMS_Vnom_Tmin_Ant_V_S40_HT_mode



08:43:52 PM 01/12/2023

2.20 RMS Detector, Vnom/Tmax_HT Mode

D113_03b_R01T08_Channel_Power_RMS_Vnom_Tmax_Ant_V_S40_HT_mode



01:57:26 PM 01/17/2023

3 Modulation characteristics

3.1 Peak Detector, V_{nom}/T_{nom} _GD Mode

See diagram D118_02a

3.2 Peak Detector, V_{nom}/T_{min} _GD Mode

See diagram D118_05a

3.3 Peak Detector, V_{nom}/T_{max} _GD Mode

See diagram D118_07a

3.4 Peak Detector, T_{nom}/V_{max} _GD Mode

See diagram D118_09a

3.5 Peak Detector, T_{nom}/V_{min} _GD Mode

See diagram D118_11a

3.6 Peak Detector, V_{nom}/T_{nom} _HT Mode

See diagram D118_02b

3.7 Peak Detector, V_{nom}/T_{min} _HT Mode

See diagram D118_05b

3.8 Peak Detector, V_{nom}/T_{max} _HT Mode

See diagram D118_07b

3.9 Peak Detector, T_{nom}/V_{max} _HT Mode

See diagram D118_09b

3.10 Peak Detector, T_{nom}/V_{min} _HT Mode

See diagram D118_11b

Remark: for Sweep characteristics, please check below diagrams Nr. (Page Number: 4 to 11),

GD mode:

D105_T08_MT_investigation_EUT_87_TT_0_Ant_V_S40_RBW_1MHz_GD_mode

D107_T08_Signal_ON_OFF_EUT_87_Ant_V_S40_single_signal_on_off_time_GD_mode

D106_T08_Tchirp_EUT_87_Ant_V_S40_single_chirp_on_off_time_GD_mode

HT mode:

D105_T08_MT_investigation_EUT_87_TT_0_Ant_V_S40_RBW_1MHz_HT_mode

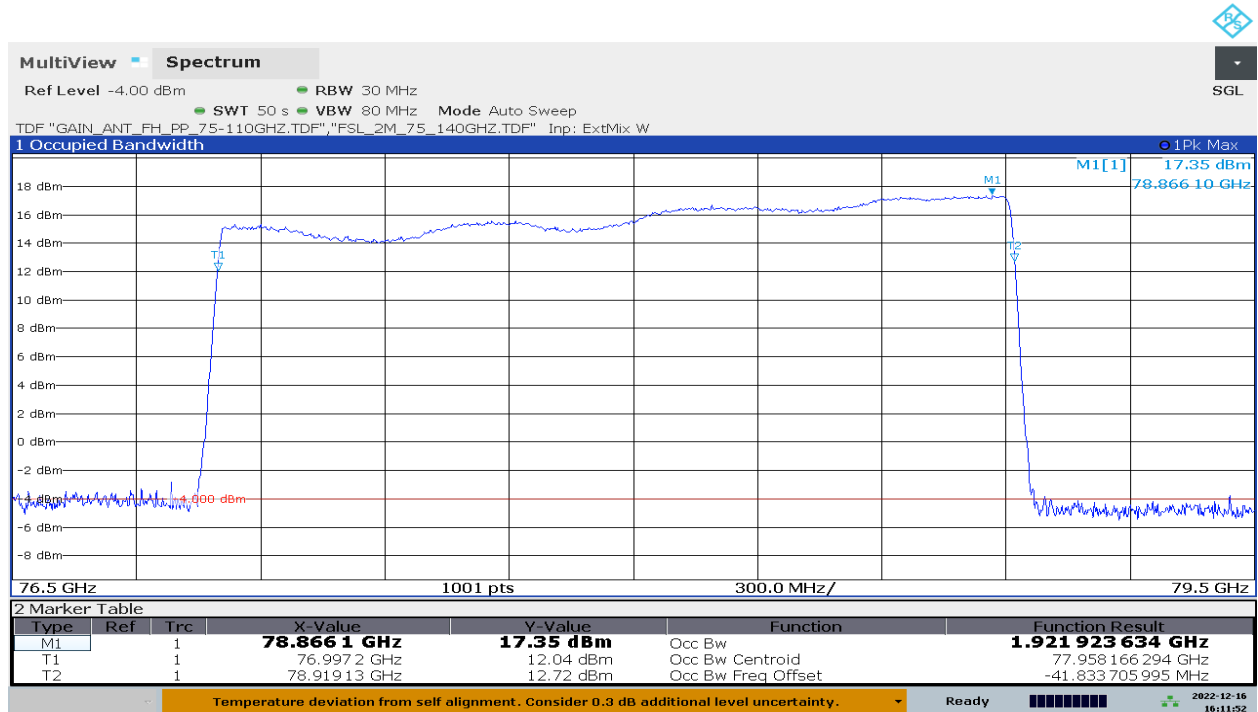
D107_T08_Signal_ON_OFF_EUT_87_Ant_V_S40_single_signal_on_off_time_HT_mode

D106_T08_Tchirp_EUT_87_Ant_V_S40_single_chirp_on_off_time_HT_mode

4 Occupied bandwidth

4.1 Peak Detector, T_{nom}/V_{nom_GD} Mode

D108_02a_R01T08_99%OBW_Tnom_Vnom_Ant_V_S40_RBW_30MHz_GD_mode

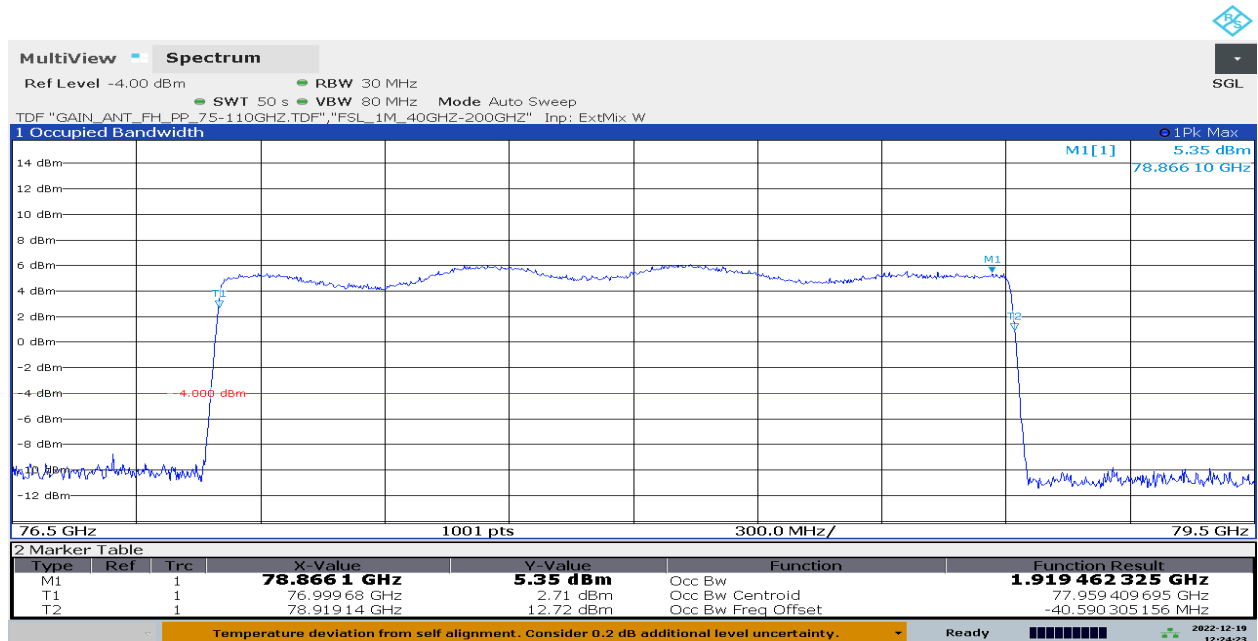


04:11:53 PM 12/16/2022

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_02a_R01T08_99%OBW_Tnom_Vnom_Ant_H_S40_RBW_30MHz_GD_mode



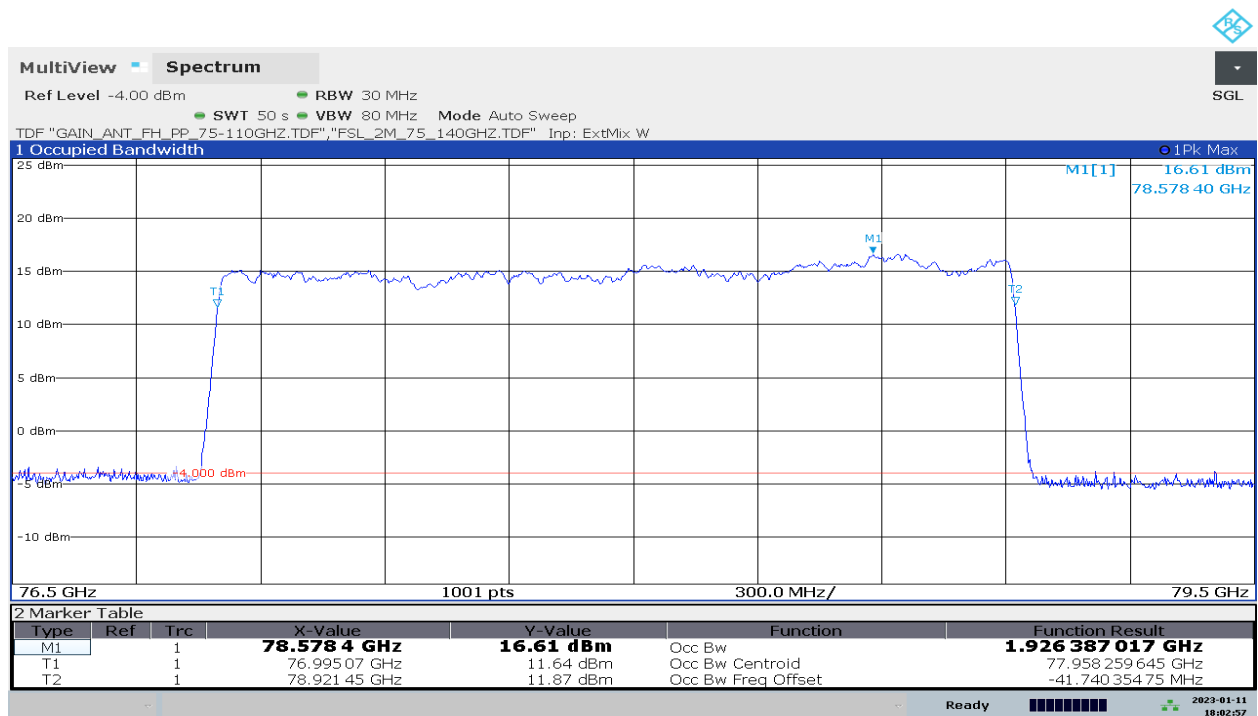
12:24:23 PM 12/19/2022

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

4.2 Peak Detector, Tnom/Vmin_GD Mode

D108_11a_R01T08_99%OBW_Tnom_Vmin_Ant_V_S40_RBW_30MHz_GD_mode

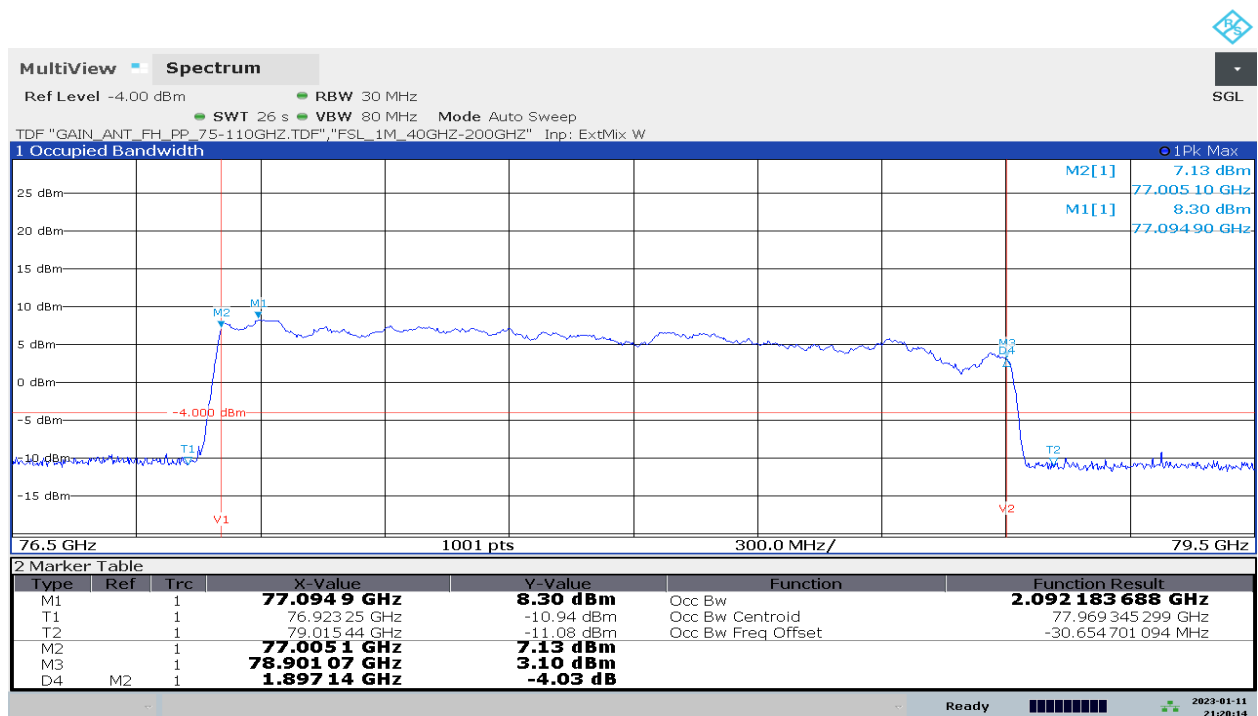


06:02:58 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_10a_R01T08_99%OBW_Tnom_Vmin_Ant_H_S40_RBW_30MHz_GD_mode



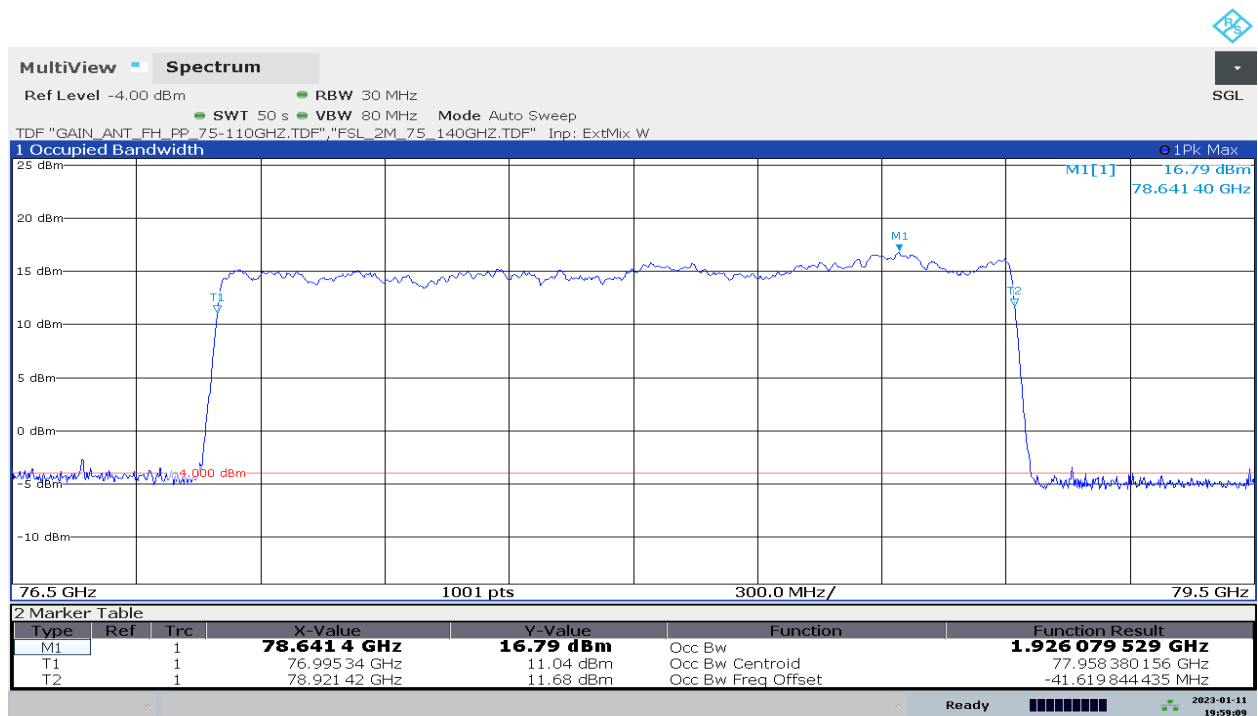
09:20:14 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

4.3 Peak Detector, Tnom/Vmax_GD Mode

D108_13a_R01T08_99%OBW_Tnom_Vmax_Ant_V_S40_RBW_30MHz_GD_mode



07:59:09 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_12a_R01T08_99%OBW_Tnom_Vmax_Ant_H_S40_RBW_30MHz_GD_mode



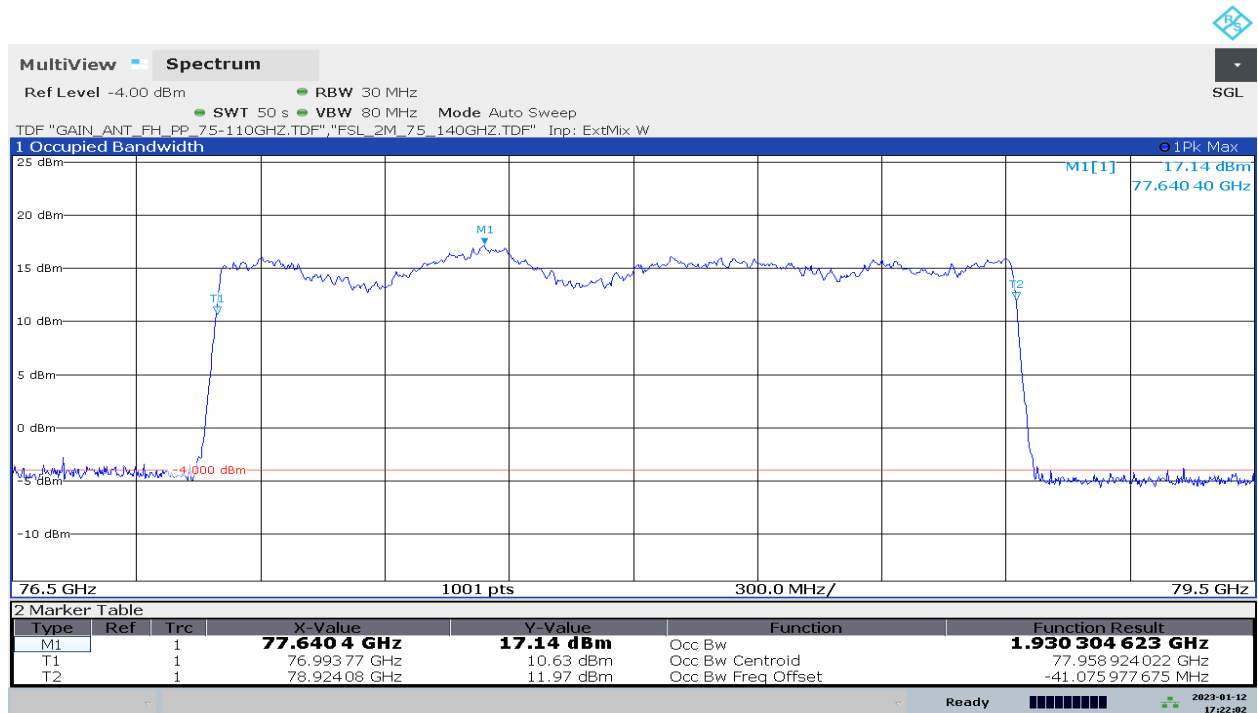
09:31:14 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

4.4 Peak Detector, Vnom/Tmin_GD Mode

D108_07a_R01T08_99%OBW_Vnom_Tmin_Ant_V_S40_RBW_30MHz_GD_mode



05:22:03 PM 01/12/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_06a_R01T08_99%OBW_Vnom_Tmin_Ant_H_S40_RBW_30MHz_GD_mode



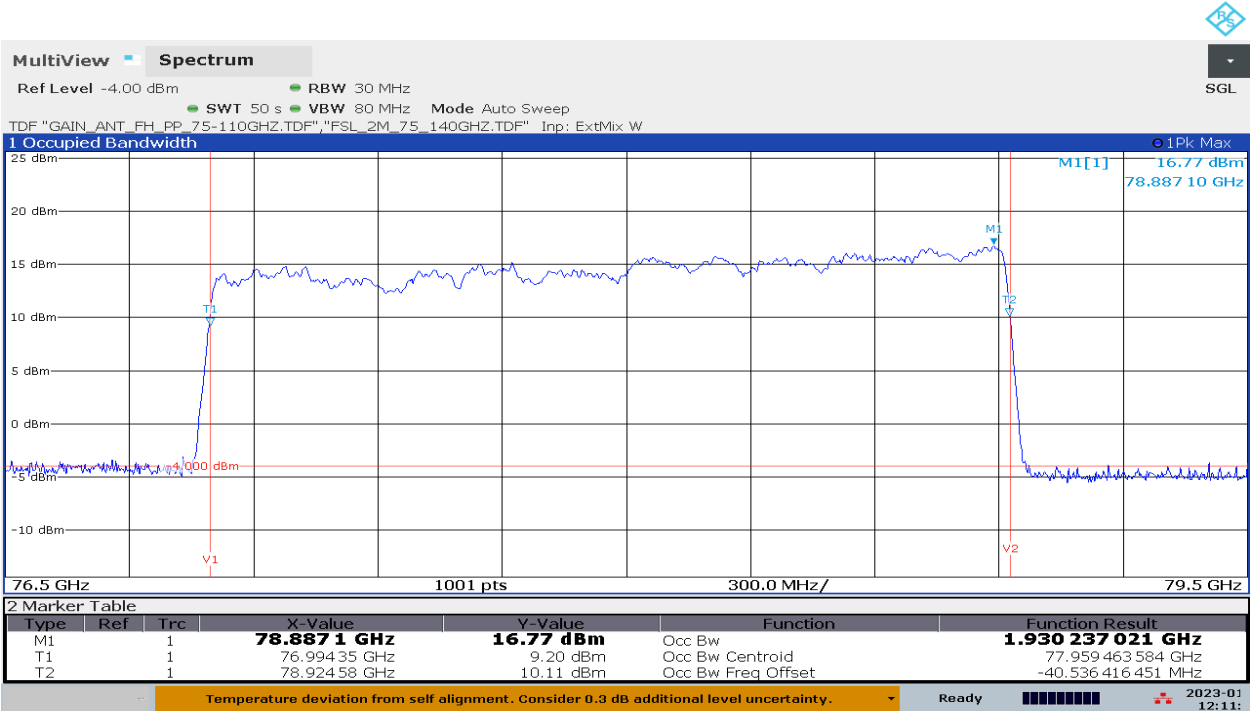
05:45:23 PM 01/12/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

4.5 Peak Detector, Vnom/Tmax_GD Mode

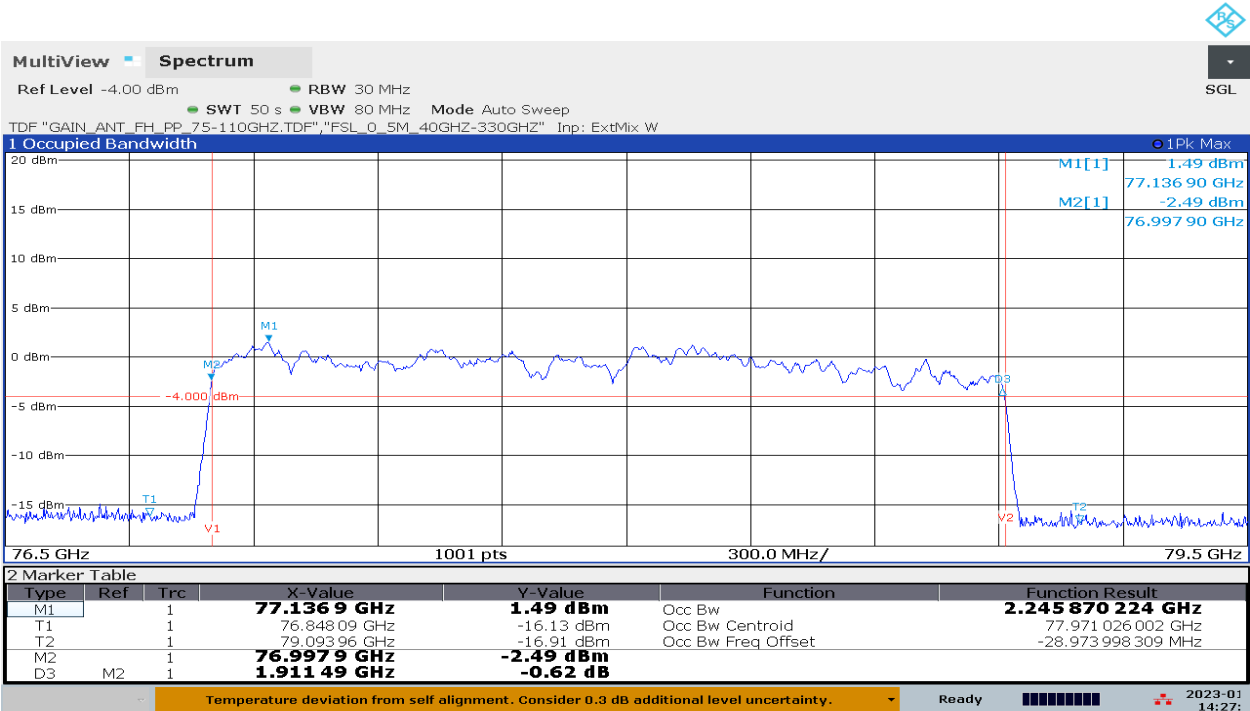
D108_09a_R01T08_99%OBW_Vnom_Tmax_Ant_V_S40_RBW_30MHz_GD_mode



12:11:33 PM 01/17/2023

OBW = ~1.9 GHz Measurement Antenna Polarization: Vertical.

D109_08a_R01T08_99%OBW_Vnom_Tmax_Ant_H_S40_RBW_30MHz_GD_mode



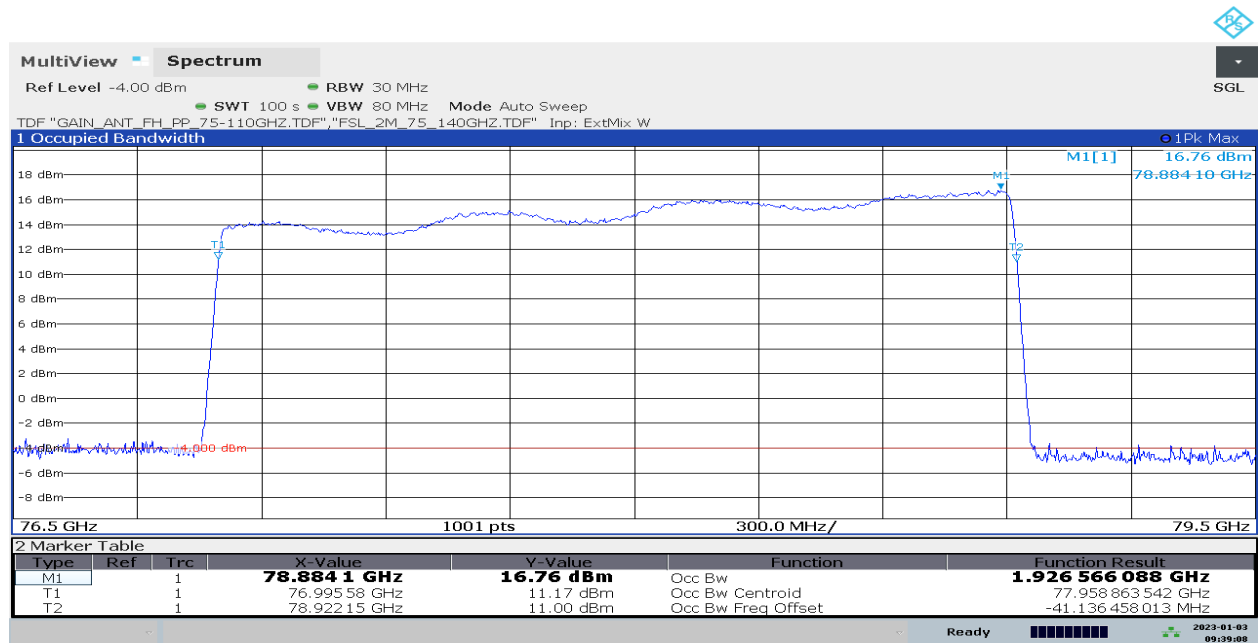
02:27:16 PM 01/17/2023

OBW = ~1.9 GHz Measurement Antenna Polarization: Horizontal.

5 Occupied bandwidth / Frequency stability (99% OBW with PEAK Detector)

5.1 Peak Detector, T_{nom}/V_{nom_HT} Mode

D108_02b_R01T08_99%OBW_Tnom_Vnom_Ant_V_S40_RBW_30MHz_HT_mode

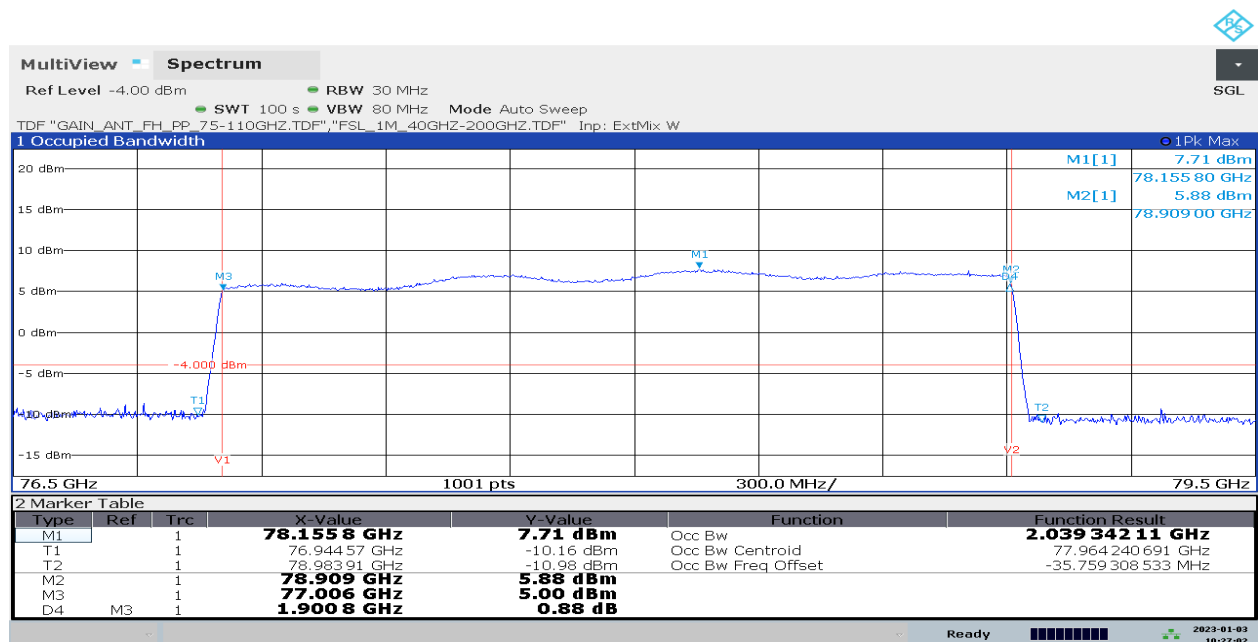


09:39:09 AM 01/03/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_02b_R01T08_99%OBW_Tnom_Vnom_Ant_H_S40_RBW_30MHz_HT_mode



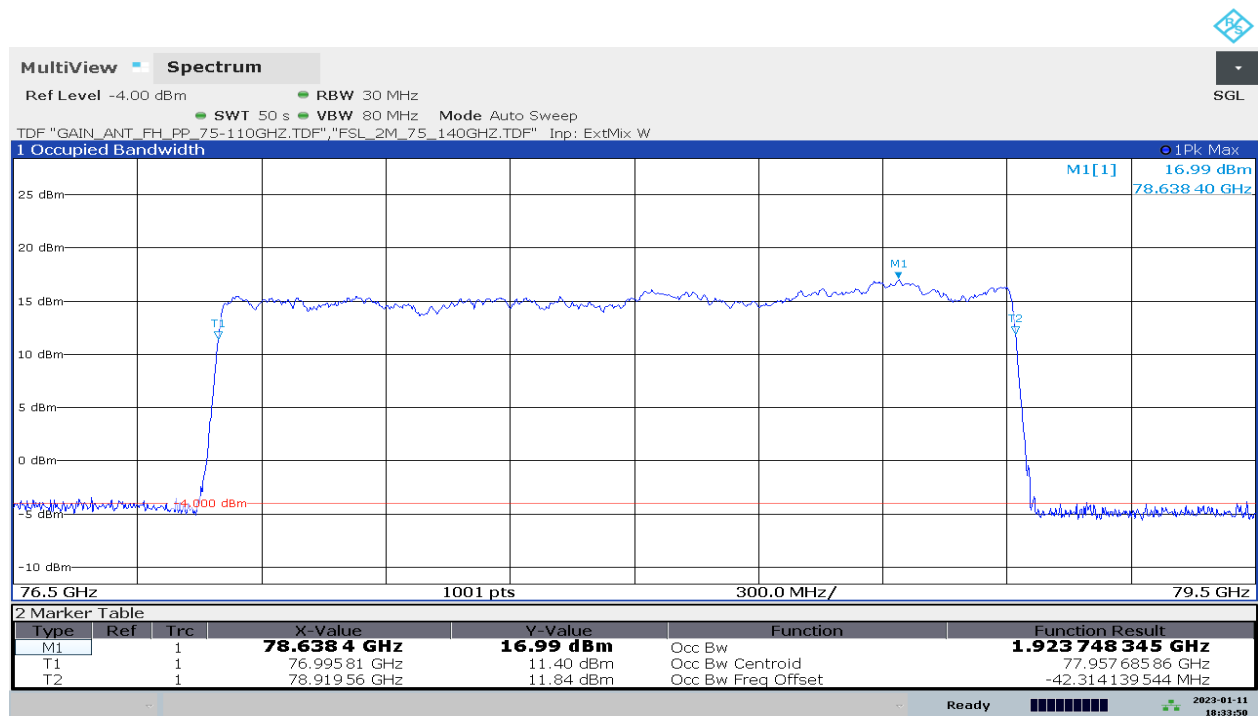
10:27:02 AM 01/03/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

5.2 Peak Detector, Tnom/Vmin_HT Mode

D108_11b_R01T08_99%OBW_Tnom_Vmin_Ant_V_S40_RBW_30MHz_HT_mode



06:33:51 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_10b_R01T08_99%OBW_Tnom_Vmin_Ant_H_S40_RBW_30MHz_HT_mode



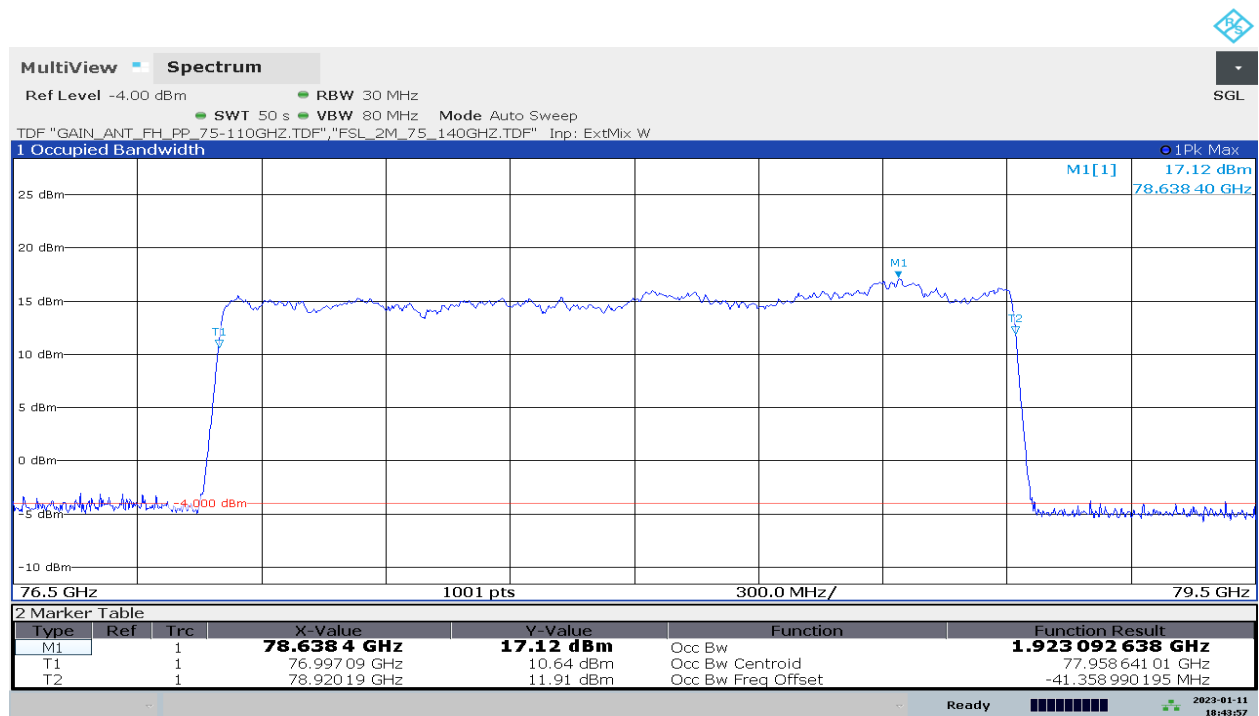
09:41:29 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

5.3 Peak Detector, Tnom/Vmax_HT Mode

D108_13b_R01T08_99%OBW_Tnom_Vmax_Ant_V_S40_RBW_30MHz_HT_mode



06:43:57 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_12b_R01T08_99%OBW_Tnom_Vmax_Ant_H_S40_RBW_30MHz_HT_mode



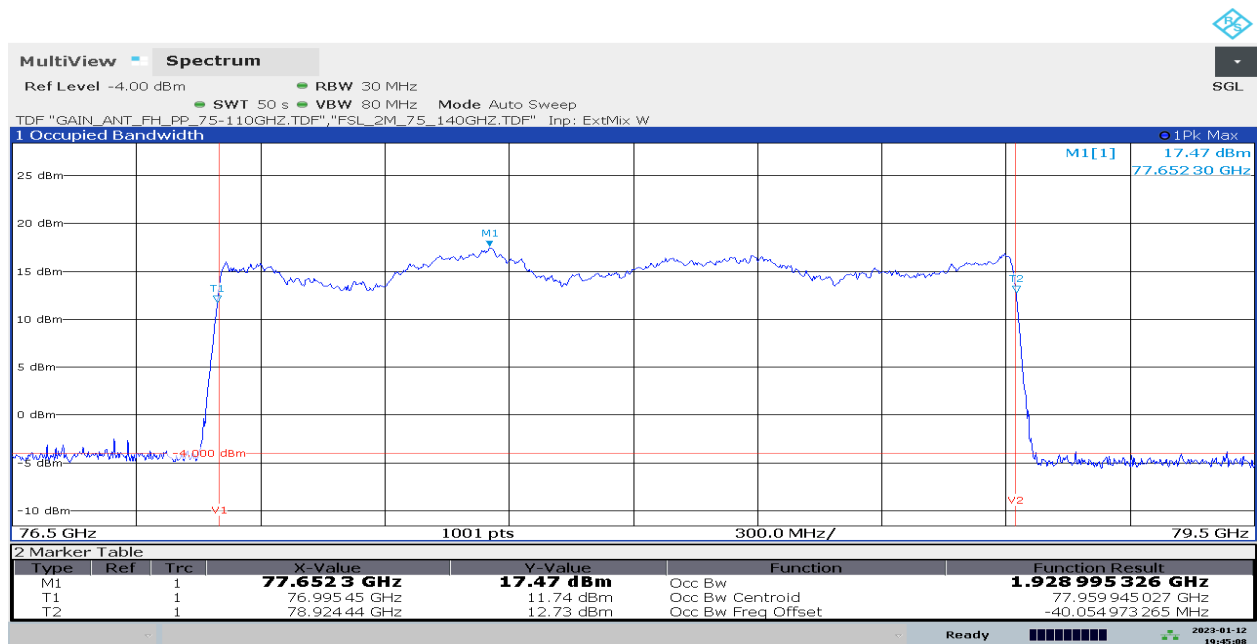
09:48:57 PM 01/11/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

5.4 Peak Detector, Vnom/Tmin_HT Mode

D108_05b_R01T08_99%OBW_Vnom_Tmin_Ant_V_S40_RBW_30MHz_HT_mode

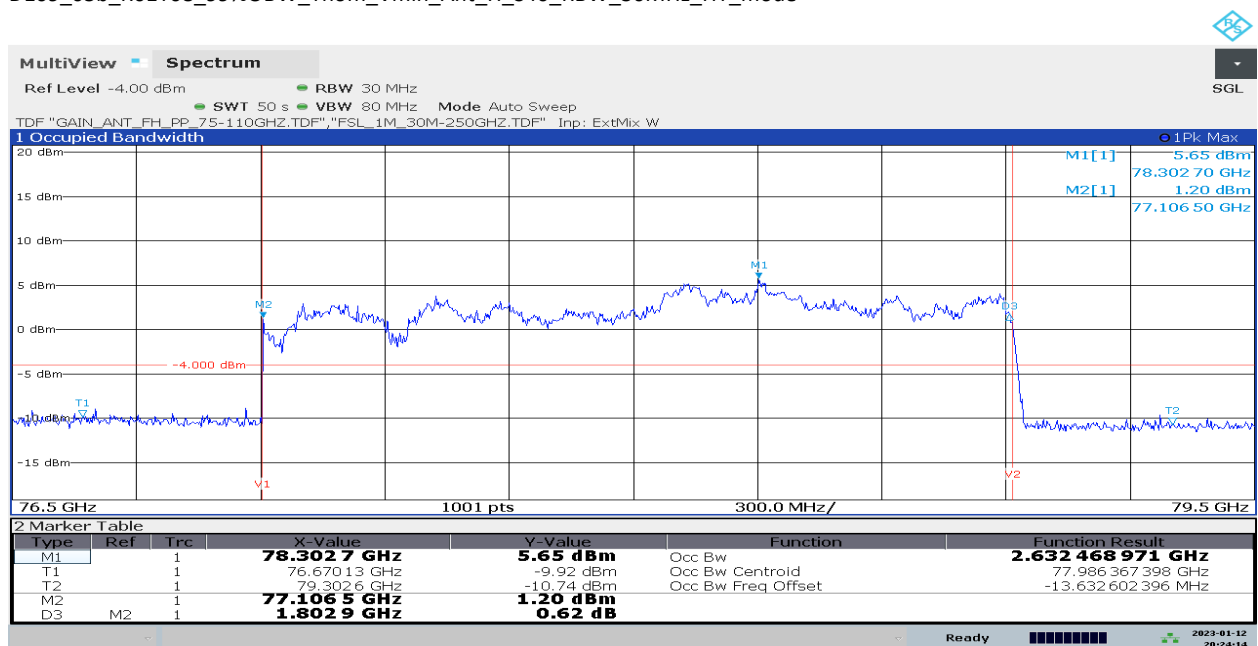


07:45:08 PM 01/12/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109_05b_R01T08_99%OBW_Tnom_Vmin_Ant_H_S40_RBW_30MHz_HT_mode



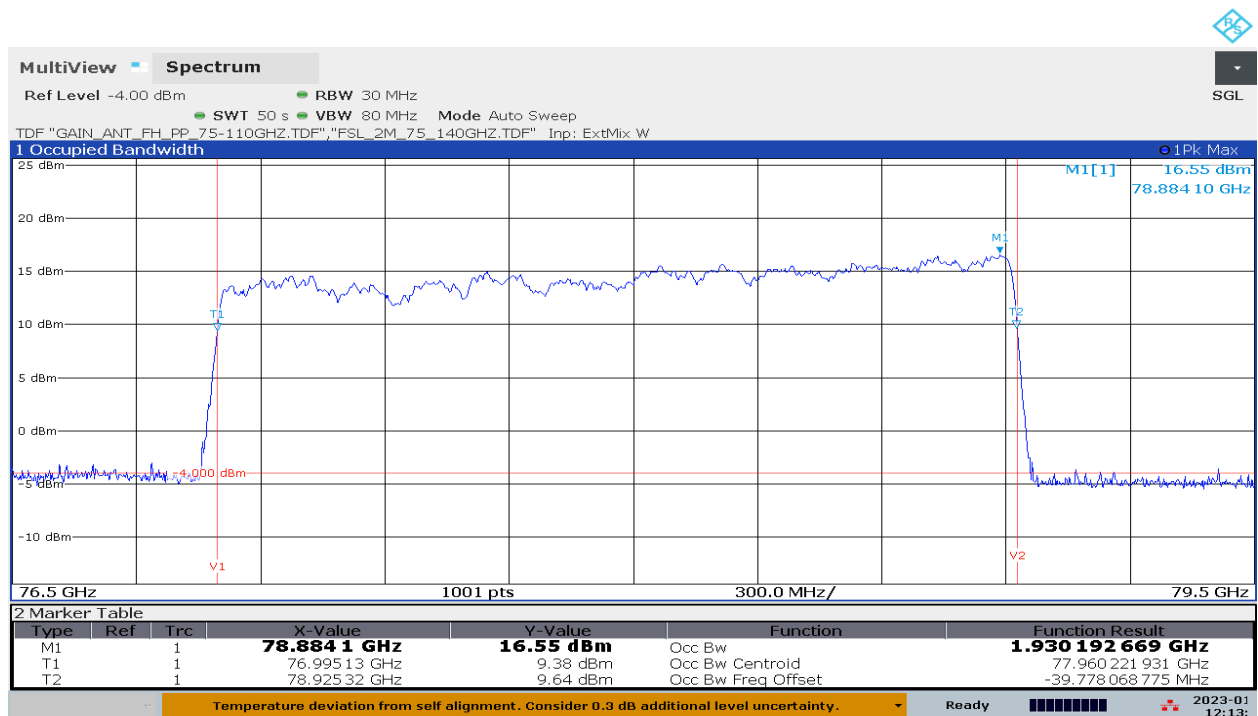
08:24:14 PM 01/12/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

5.5 Peak Detector, Vnom/Tmax_HT Mode

D108_09b_R01T08_99%OBW_Vnom_Tmax_Ant_V_S40_RBW_30MHz_HT_mode

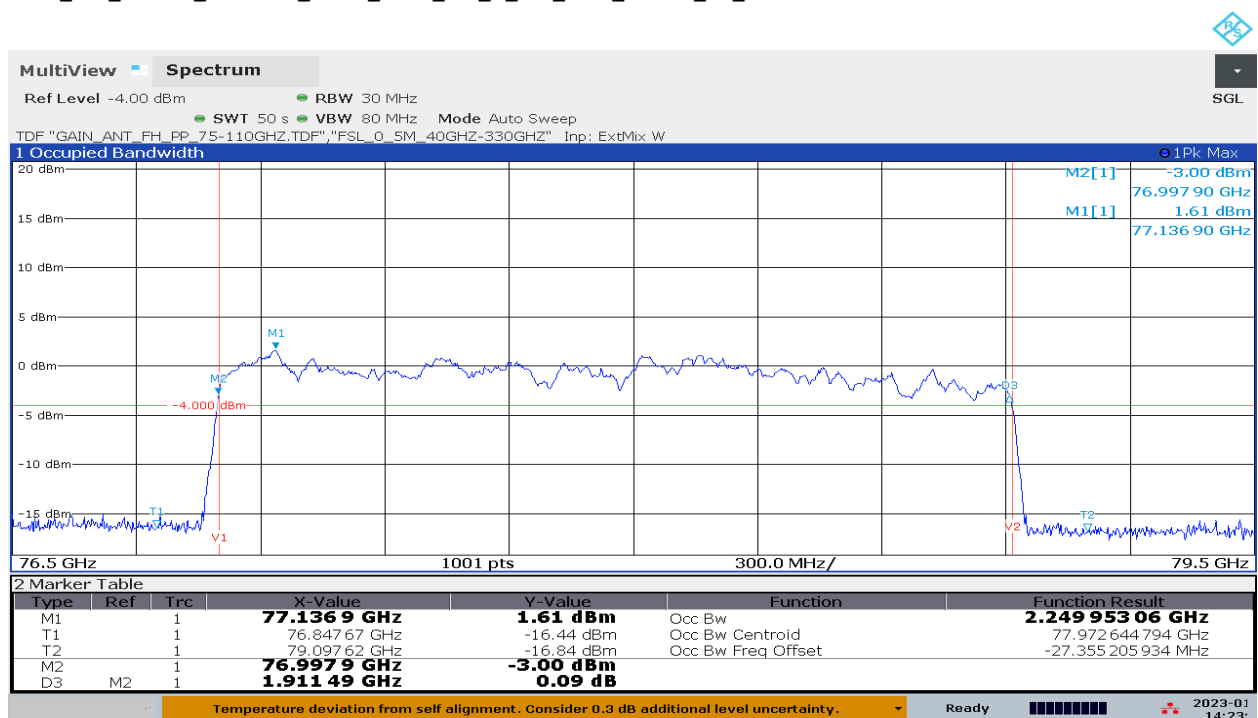


12:13:34 PM 01/17/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Vertical.

D109 08b R01T08 99%OBW Vnom Tmax Ant H S40 RBW 30MHz HT mode



02:23:22 PM 01/17/2023

OBW = ~1.9 GHz

Measurement Antenna Polarization: Horizontal.

6 Field strength of emissions (Radiated Spurious Emissions) below 40 GHz

Remark on test mode:

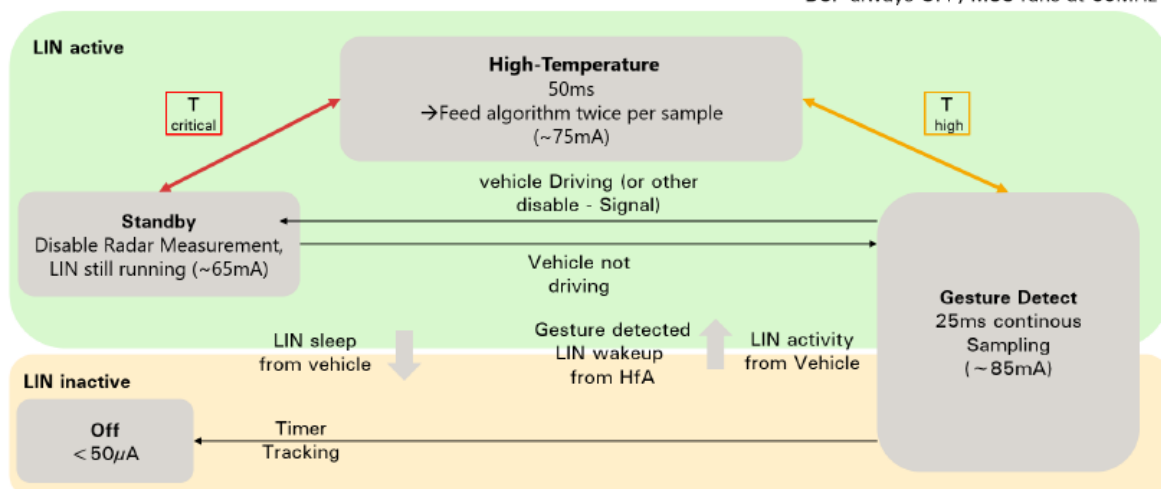
Radiated Spurious Emission from 9k to 40 GHz (below 40 GHz) have been performed with both Operating modes (Gesture detect and High Temperature mode) where RADAR is active.

Mode	Current (@12V)	LIN	Radar
Sleep/Off	<50 μ A	OFF	OFF
Standby	~65mA	ON	OFF
Gesture Detect	~85mA	ON	ON (25ms Sampling)
High-Temperature	~75mA	ON	ON (50ms Sampling)

Powerstates HfA (AWR1843)

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*DSP always OFF, MSS runs at 60MHz



6.1.1 Frequency range 9 kHz – 30 MHz (Standing) – GD mode

2.01_R01T08_RSE_TX_RADAR_GD_mode_EUT_Standing

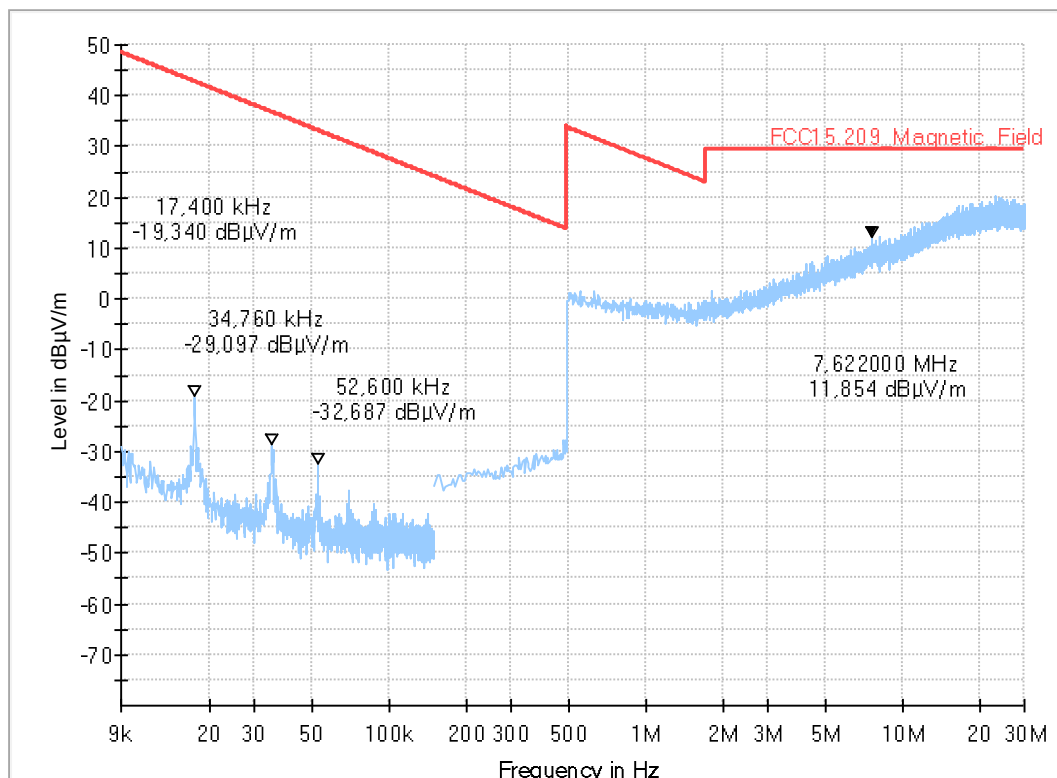
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AHo
Operating Mode:	Gesture mode (RADAR Active)
Power during tests:	12V DC
Environmental Conditions:	Humidity : 45%rH; Temperature: 20°C
EUT Setup:	EUT Standing
Verdict:	Passed

EUT Information

PMT number	20-1-00182S40_C01
Comment:	12 VDC

Full Spectrum



6.1.2 Frequency range 9 kHz – 30 MHz (Laying) – GD mode

2.02_R01T08_RSE_TX_RADAR_GD_mode_EUT_Laying

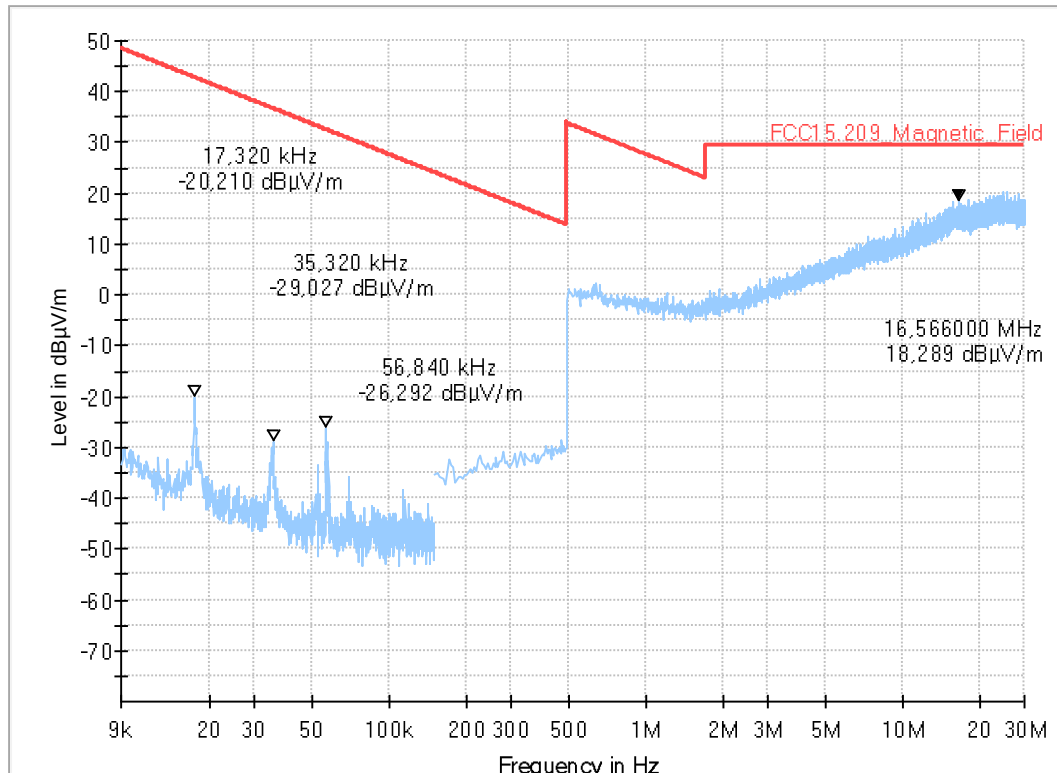
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AHo
Operating Mode:	High Temperature mode (RADAR Active)
Power during tests:	12V DC
Environmental Conditions:	Humidity : 45%rH; Temperature: 20°C
EUT Setup:	EUT Laying
Verdict:	Passed

EUT Information

PMT number	20-1-00182S40_C01
Comment:	12 VDC

Full Spectrum



6.1.3 Frequency range 9 kHz – 30 MHz (Standing) – HT mode

2.03_R01T08_RSE_TX_RADAR_HT_mode_EUT_Standing

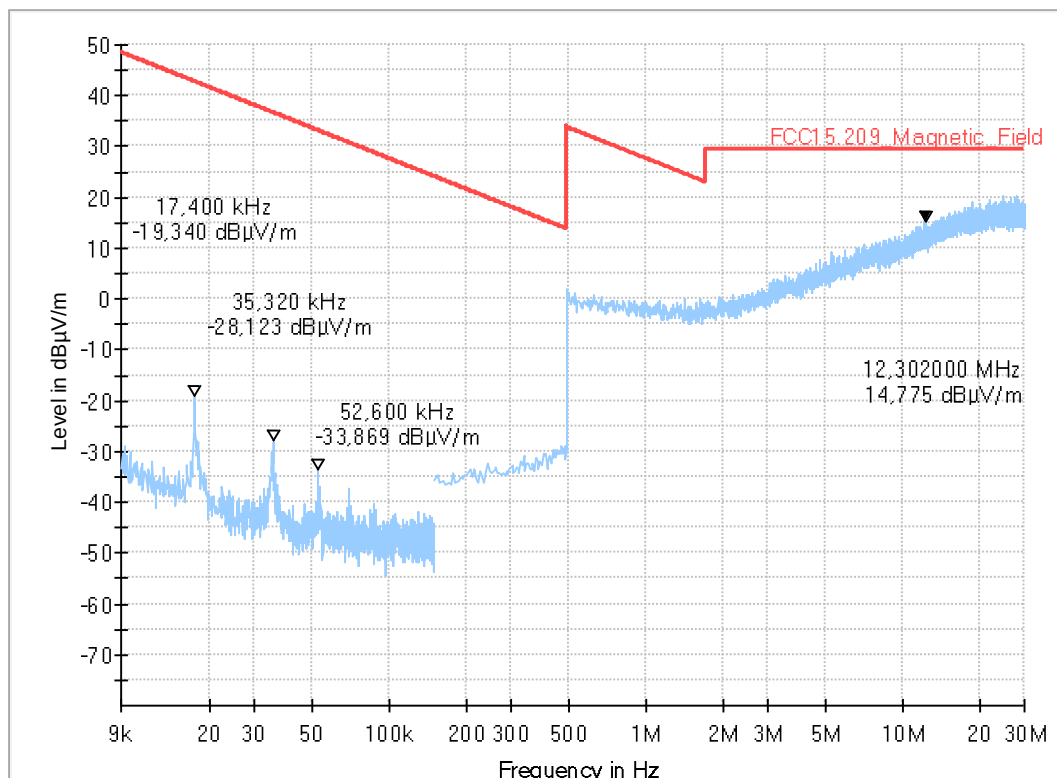
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AHo
Operating Mode:	High Temperature mode (RADAR Active)
Power during tests:	12V DC
Environmental Conditions:	Humidity : 45%rH; Temperature: 20°C
EUT Setup:	EUT Standing
Verdict:	Passed

EUT Information

PMT number	20-1-00182S40_C01
Comment:	12 VDC

Full Spectrum



6.1.4 Frequency range 9 kHz – 30 MHz (Laying) – HT mode

2.04_R01T08_RSE_TX_RADAR_HT_mode_EUT_Laying

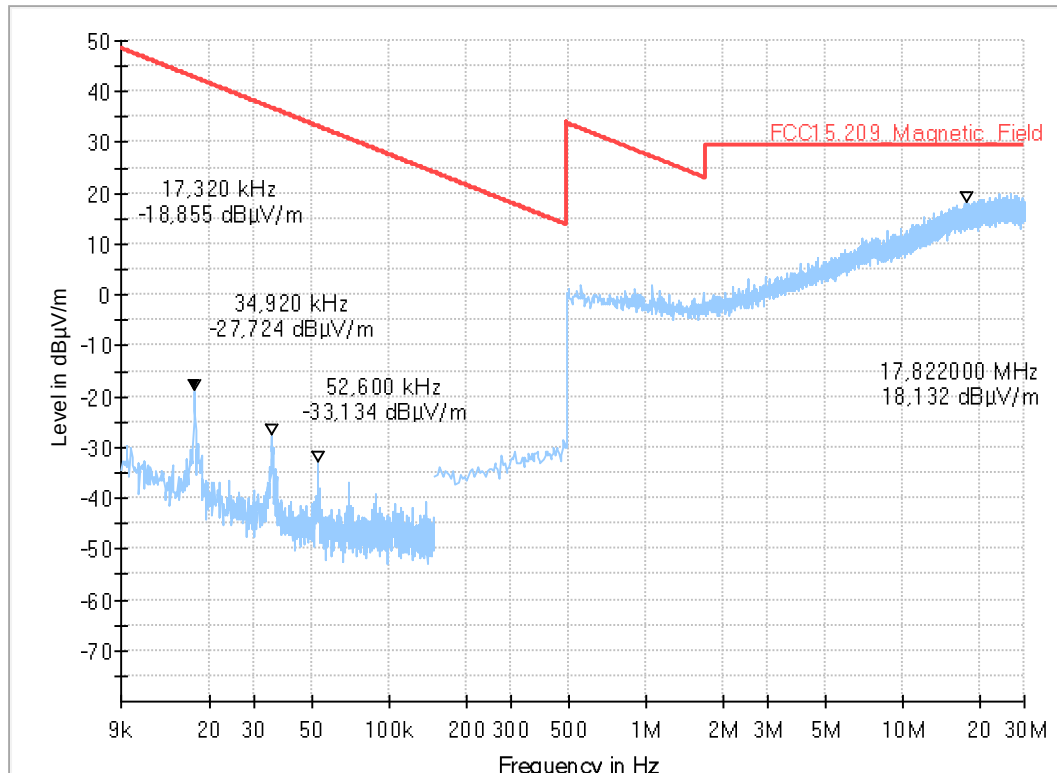
Common Information

Test description:	Magnetic Field Strength Measurement related to 30/300 m distance
Test Site Location:	Ref.-Nr. 441 Semi Anechoic Chamber (SAC1) with 3 m measurement distance
Version of Testsoftware:	EMC32 V10.50.0
Distance correction:	used accord. table, pls. see test report
Technical Data:	Please see page 2 for detailed data of measurement setup
Rec. antenna (pre-scan):	height 1.00 m, parallel and 90° to EUT polarisation
Used filter:	bypass
Test Standard:	FCC 15.205 § 15.209; RSS-Gen: Issue 4
Operator:	AHo
Operating Mode:	High Temperature mode (RADAR Active)
Power during tests:	12V DC
Environmental Conditions:	Humidity : 45%rH; Temperature: 20°C
EUT Setup:	EUT Laying
Verdict:	Passed

EUT Information

PMT number	20-1-00182S40_C01
Comment:	12 VDC

Full Spectrum



6.1.5 Frequency range 30 MHz – 1 GHz (Standing) – GD mode

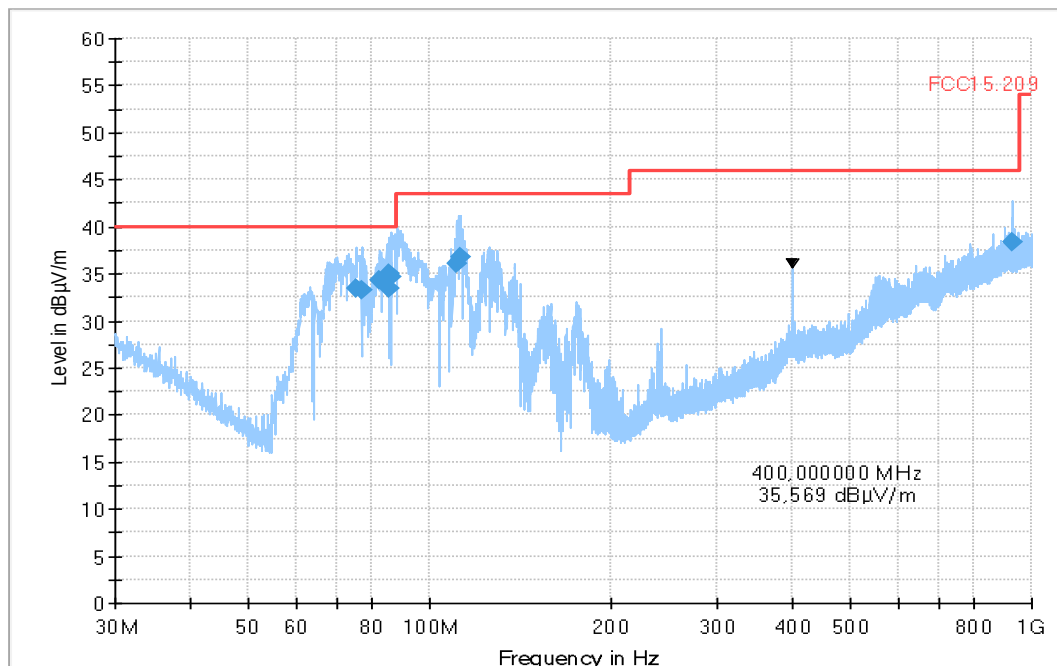
3.01_R01T8_RSE_TX_RADAR_fc_78GHz_GD_mode_FCC_EUT_Standing

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 45%rH; Temperature: 20°C
Operator Name:	AHo
Operating Mode:	Gesture mode + RADAR Active
Power supply:	12 V DC
Verdict:	Passed
Comment:	EUT Standing (front, rear, left, right)

EUT Information

PMT number:	20-1-00182S40_C01
	Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)
75.670000	33.47	40.00	6.53	120.000	105.0	V	17.0	6.4	0.0	0.9
77.290000	33.24	40.00	6.76	120.000	125.0	V	34.0	6.6	0.0	0.9
82.770000	34.32	40.00	5.68	120.000	153.0	V	338.0	7.3	0.0	1.0
85.270000	33.42	40.00	6.58	120.000	127.0	V	15.0	7.5	0.0	0.9
85.750000	34.98	40.00	5.02	120.000	112.0	V	2.0	7.6	0.0	0.9
86.210000	34.75	40.00	5.25	120.000	154.0	V	2.0	7.7	0.0	0.9
111.070000	36.06	43.50	7.44	120.000	109.0	V	328.0	7.7	0.0	1.2
112.790000	36.77	43.50	6.73	120.000	112.0	V	320.0	7.6	0.0	1.1
926.430000	38.31	46.00	7.69	120.000	269.0	V	253.0	27.0	0.0	3.4

(continuation of the "Final_Result" table from column 18 ...)

Frequency (MHz)	Trd Corr. (dB/m)	Raw Rec (dBμV)	Comment
75.670000	5.5	27.0	17:08:08 - 13.01.2023
77.290000	5.7	26.7	16:26:38 - 13.01.2023
82.770000	6.3	27.0	16:30:44 - 13.01.2023
85.270000	6.6	25.9	16:36:04 - 13.01.2023
85.750000	6.7	27.4	16:40:49 - 13.01.2023
86.210000	6.8	27.1	16:45:20 - 13.01.2023
111.070000	6.5	28.3	16:57:51 - 13.01.2023
112.790000	6.5	29.1	17:02:35 - 13.01.2023
926.430000	23.6	11.3	17:13:42 - 13.01.2023

6.1.6 Frequency range 30 MHz – 1 GHz (Laying) – GD mode

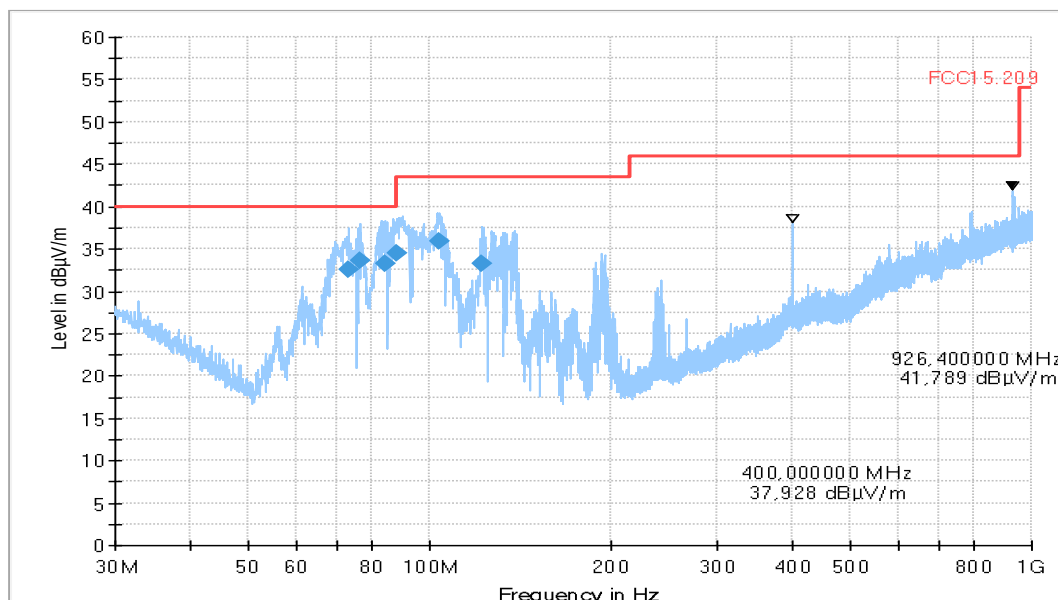
3.02_R01T8_RSE_TX_RADAR_fc_78GHz_GD_mode_FCC_SED_EUT_Laying

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 45%rH; Temperature: 20°C
Operator Name:	AHo
Operating Mode:	Gesture mode + RADAR Active
Power supply:	12 V DC
Verdict:	Passed
Comment:	EUT Laying (top, bottom, left, right)

EUT Information

PMT number:	20-1-00182S40_C01
	Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)
73.130000	32.60	40.00	7.40	120.000	108.0	V	49.0	6.2	0.0	0.8
76.570000	33.56	40.00	6.44	120.000	144.0	V	36.0	6.5	0.0	0.9
84.090000	33.33	40.00	6.67	120.000	109.0	V	53.0	7.5	0.0	0.9
87.830000	34.43	40.00	5.57	120.000	117.0	V	74.0	7.8	0.0	0.9
103.630000	35.83	43.50	7.67	120.000	242.0	H	15.0	7.7	0.0	1.0
122.110000	33.23	43.50	10.27	120.000	111.0	V	253.0	7.3	0.0	1.0

(continuation of the "Final_Result" table from column 18 ...)

Frequency (MHz)	Trd Corr. (dB/m)	Raw Rec (dBμV)	Comment
73.130000	5.4	26.4	17:56:40 - 13.01.2023
76.570000	5.6	27.1	18:01:20 - 13.01.2023
84.090000	6.6	25.9	18:06:11 - 13.01.2023
87.830000	6.9	26.6	18:16:53 - 13.01.2023
103.630000	6.7	28.1	17:51:38 - 13.01.2023
122.110000	6.3	25.9	18:11:23 - 13.01.2023

6.1.7 Frequency range 30 MHz – 1 GHz (Standing) – HT mode

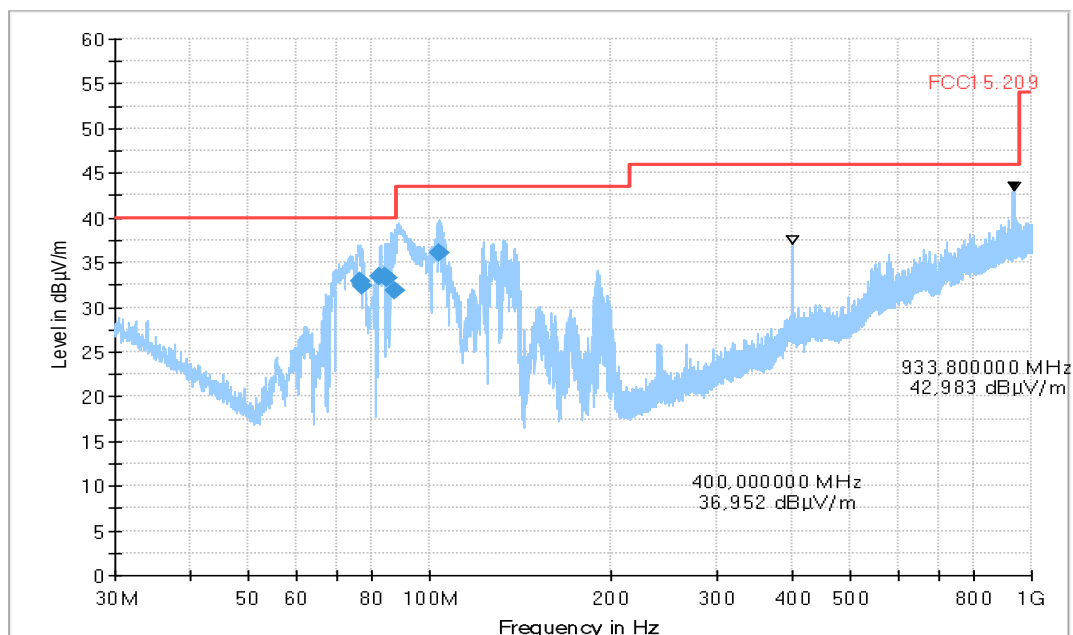
3.03_R01T8_RSE_TX_RADAR_fc_78GHz_HT_mode_FCC_Standing

Common Information

Test Description:	Radiated field strength emission in 3m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC 15.205&15.209 & RSS Gen. Issue 5
Antenna polarisation:	horizontal/vertical
Environmental Conditions::	Humidity : 45%rH; Temperature: 20°C
Operator Name:	AHo
Operating Mode:	Gesture mode + RADAR Active
Power supply:	12 V DC
Verdict:	Passed
Comment:	EUT Standing (front, rear, left, right)

EUT Information

PMT number:	20-1-00182S40_C01
	Full Spectrum



Remark: Worst case position has been found at EUT Standing position, therefore 30M to 1GHz test of HT mode has been carried out with EUT Standing Position.

Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Sig Path (dB)	Preamp (dB)
76.330000	32.98	40.00	7.02	120.000	109.0	V	46.0	6.5	0.0	0.9
77.030000	32.44	40.00	7.56	120.000	117.0	V	11.0	6.5	0.0	0.9
82.750000	33.37	40.00	6.63	120.000	130.0	V	0.0	7.3	0.0	1.0
84.350000	33.44	40.00	6.56	120.000	109.0	V	6.0	7.5	0.0	0.9
85.230000	33.31	40.00	6.69	120.000	138.0	V	8.0	7.5	0.0	0.9
87.550000	31.93	40.00	8.07	120.000	145.0	V	81.0	7.7	0.0	0.9
103.490000	36.03	43.50	7.47	120.000	223.0	H	16.0	7.7	0.0	1.0

(continuation of the "Final_Result" table from column 18 ...)

Frequency (MHz)	Trd Corr. (dB/m)	Raw Rec (dBμV)	Comment
76.330000	5.6	26.5	19:08:29 - 13.01.2023
77.030000	5.6	25.9	19:13:11 - 13.01.2023
82.750000	6.3	26.0	19:17:52 - 13.01.2023
84.350000	6.6	26.0	19:32:39 - 13.01.2023
85.230000	6.6	25.8	19:22:47 - 13.01.2023
87.550000	6.8	24.2	19:27:35 - 13.01.2023
103.490000	6.7	28.3	19:03:28 - 13.01.2023

6.1.8 Frequency range 1 GHz – 12.4 GHz – GD mode

D127_01_R01T08_TX_RSE_1G_12.4GHz_GD_mode

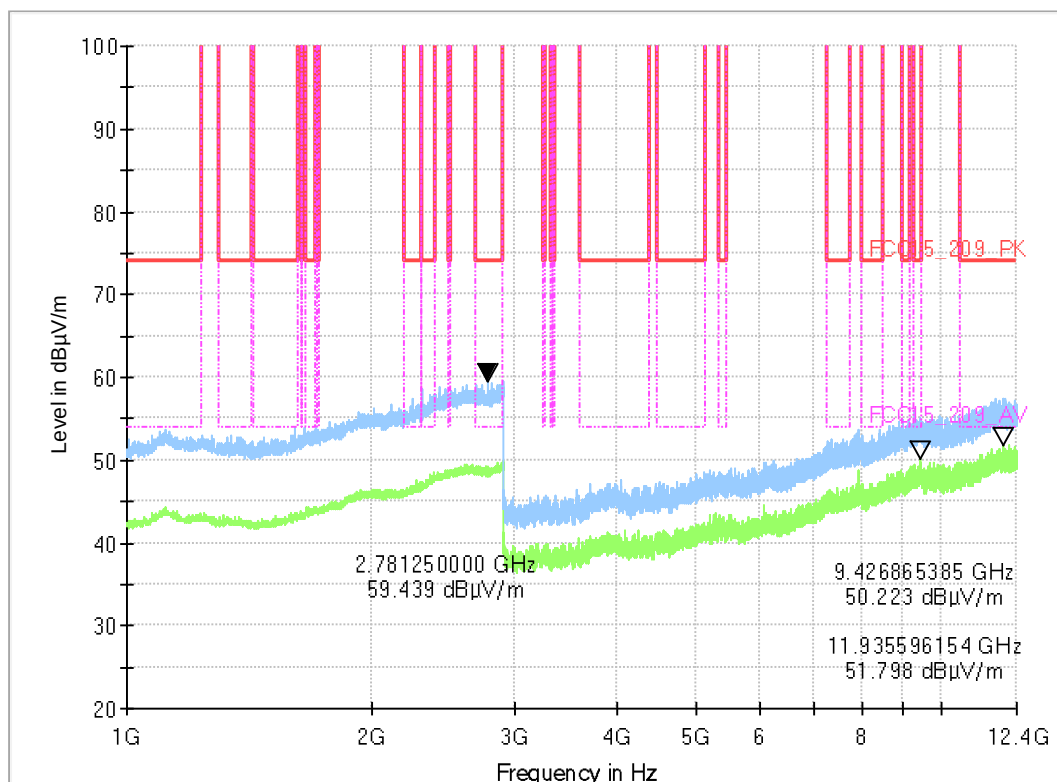
Common Information

Test Description:	Radiated Field Strength Emission@3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC 15.209 & RSS-Gen, Issue 5
Operating Mode:	GD mode + RADAR ON
Environmental Conditions:	Humidity: 50%rH; Temperature: 21°C
SW-Version:	EMC32 V10.60.20
Operator:	AHo
Verdict:	Passed

EUT Information

PMT Sample Nr. 20-1-00182S40_C01

Full Spectrum



6.1.9 Frequency range 1 GHz – 12.4 GHz – HT mode

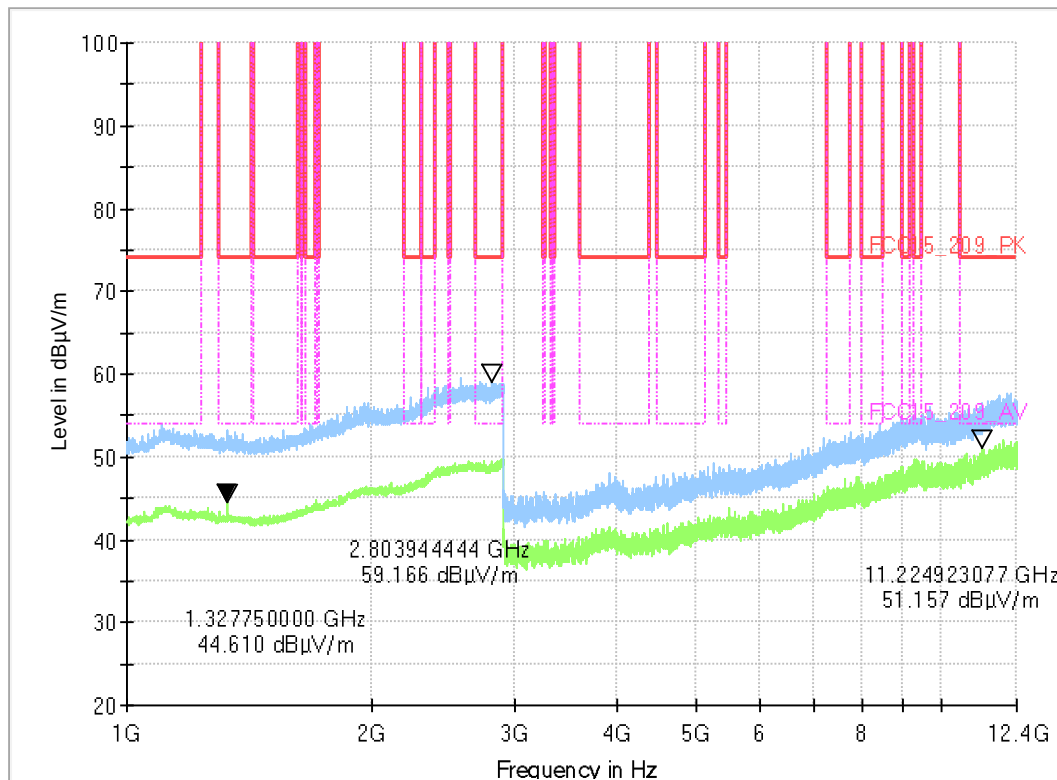
D128_01_R01T08_TX_RSE_1G_12.4GHz_HT_mode_FCC

Common Information

Test Description:	Radiated Field Strength Emission@3m distance
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR2)
Test Standard:	FCC 15.209 & RSS-Gen, Issue 5
Operating Mode:	HT mode + RADAR ON
Environmental Conditions:	Humidity: 46%rH; Temperature: 20.5°C
SW-Version:	EMC32 V10.60.20
Operator:	AHo
Verdict:	Passed

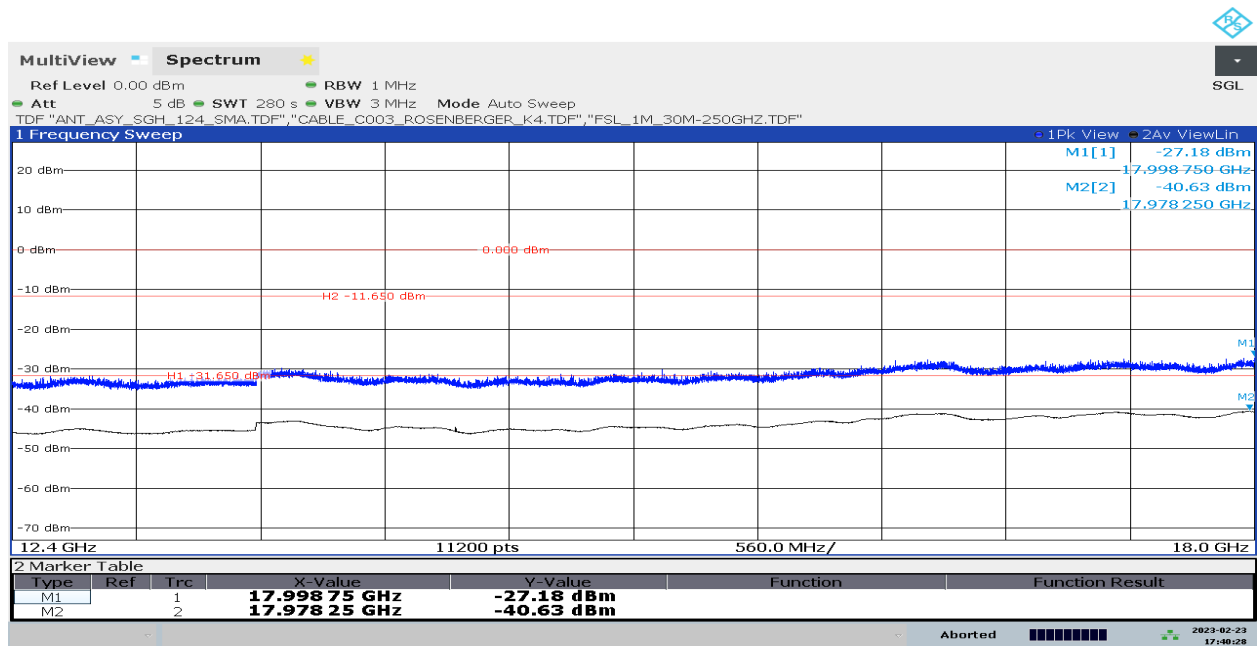
EUT Information

PMT Sample Nr.	20-1-00182S40_C01
	Full Spectrum



6.1.10 Frequency range 12.4 GHz – 18 GHz - Antenna-Vertical – GD mode

D127_05a_R01T08_TX_RSE_12.4G_18GHz_ANT_V_GD_mode_FCC



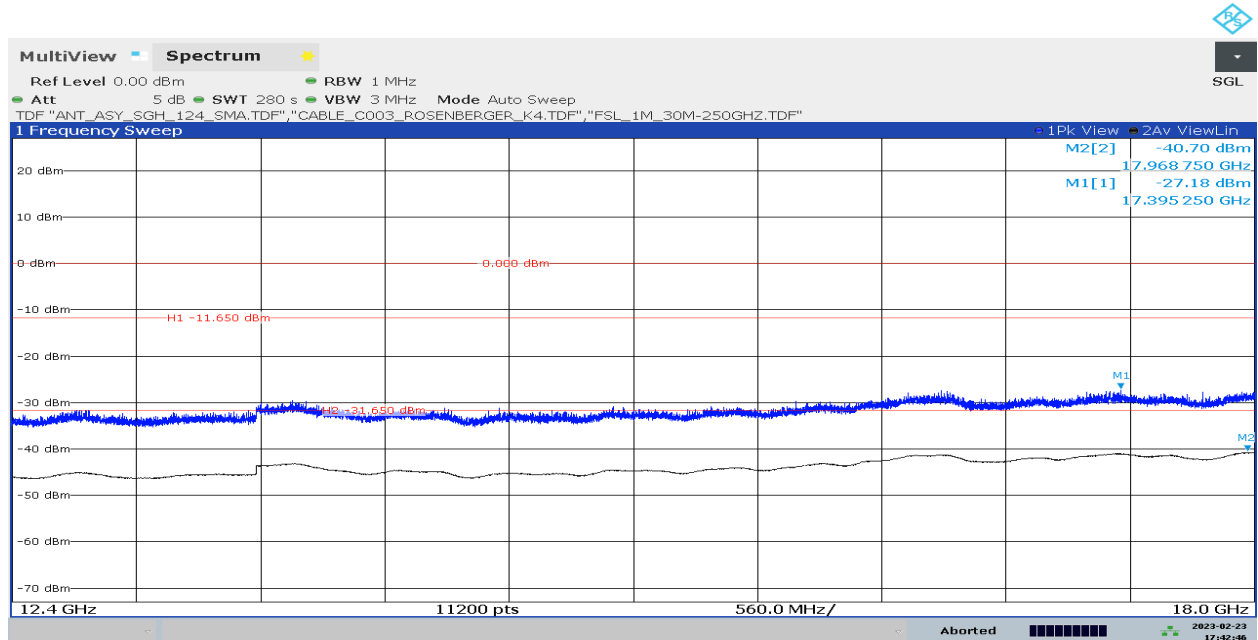
05:40:28 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

6.1.11 Frequency range 12.4 GHz – 18 GHz - Antenna-Horizontal – GD mode

D127_02a_R01T08_TX_RSE_12.4G_18GHz_ANT_H_GD_mode_FCC



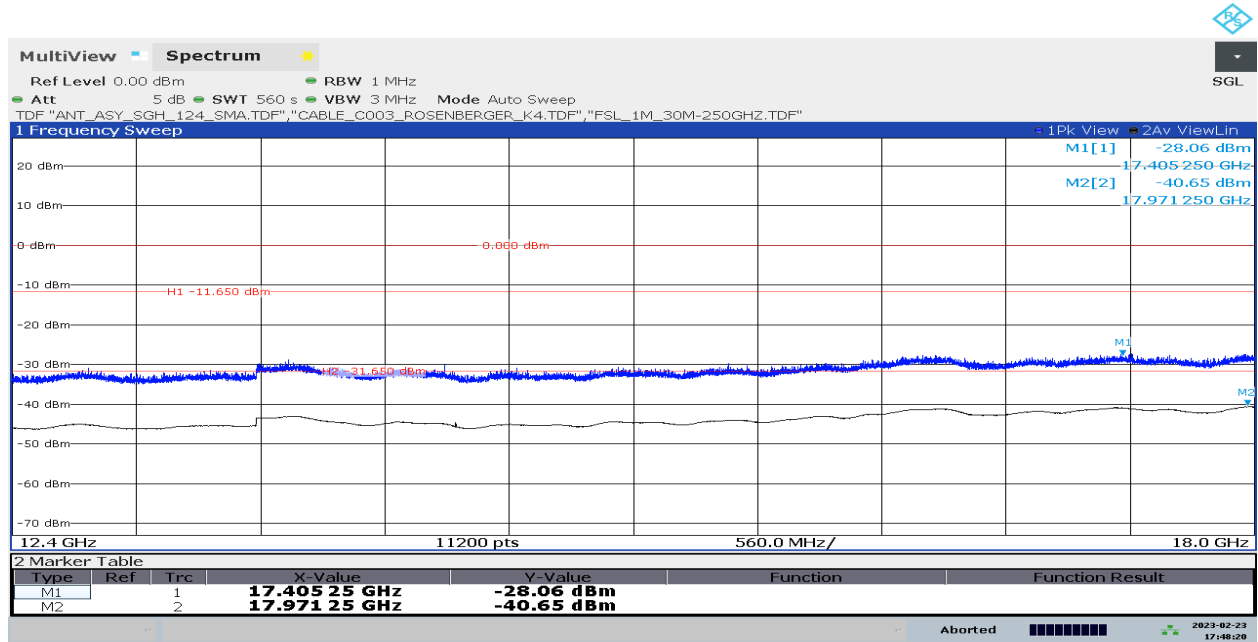
05:42:46 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

6.1.12 Frequency range 12.4 GHz – 18 GHz - Antenna-Vertical – HT mode

D127_05b_R01T08_TX_RSE_12.4G_18GHz_ANT_V_HT_mode_FCC



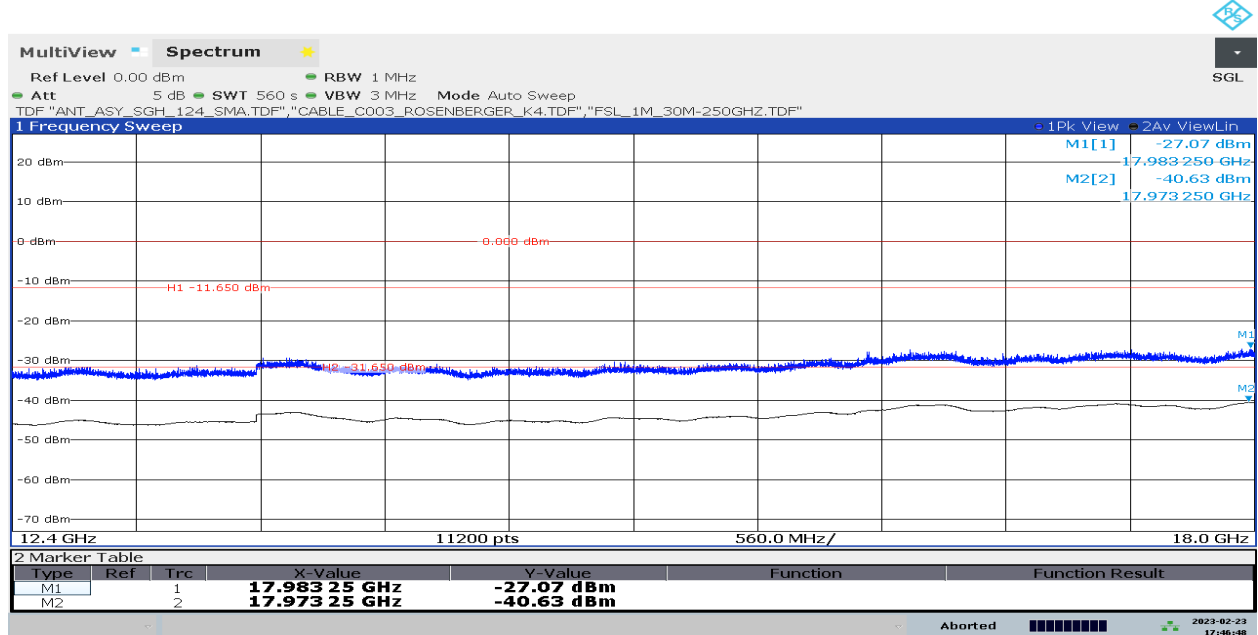
05:48:21 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

6.1.13 Frequency range 12.4 GHz – 18 GHz - Antenna-Horizontal – HT mode

D127_02b_R01T08_TX_RSE_12.4G_18GHz_ANT_H_HT_mode_FCC



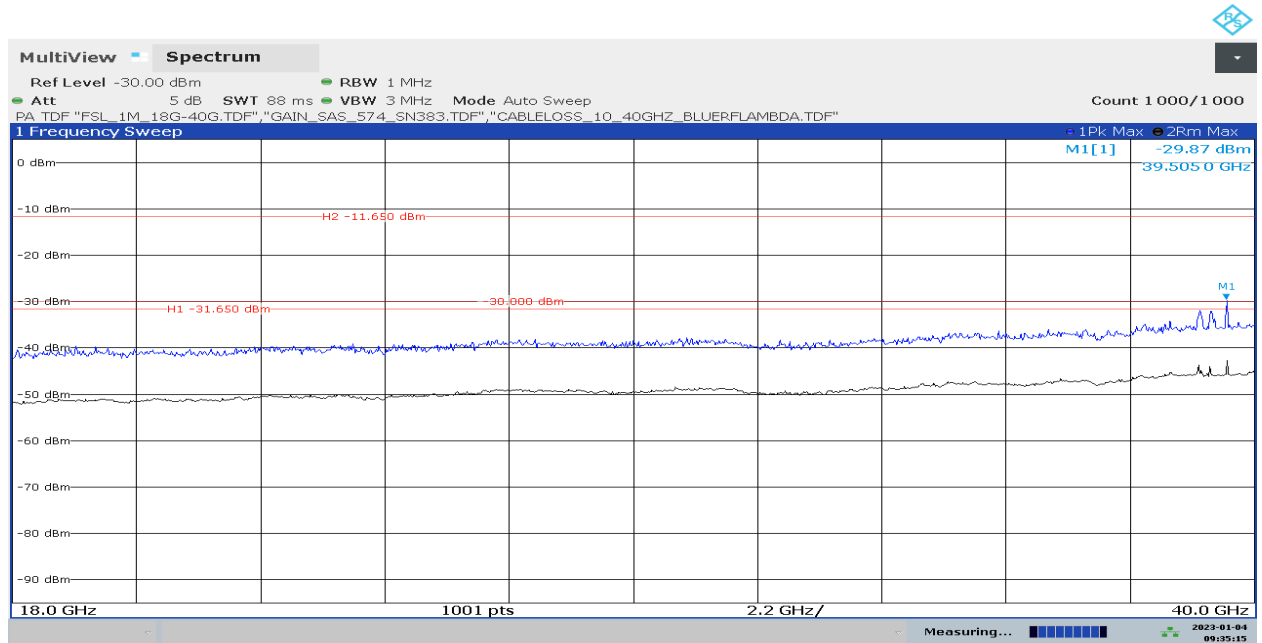
05:46:49 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

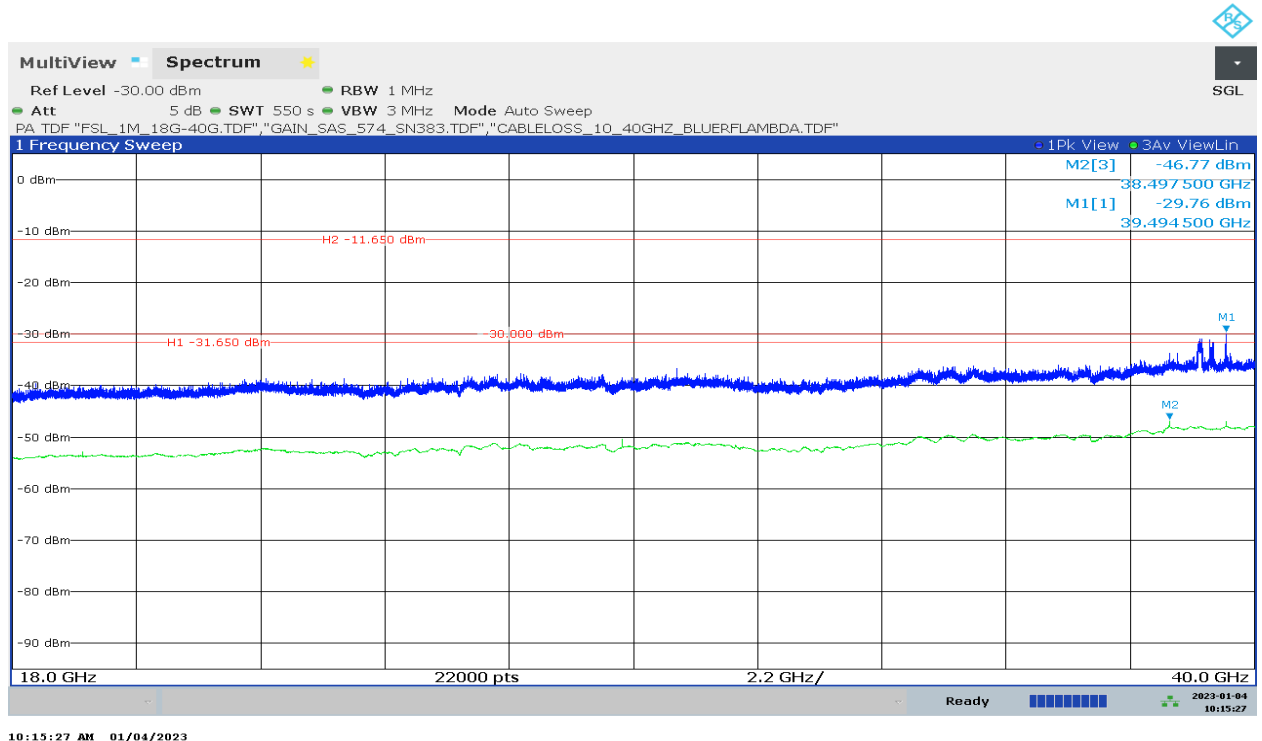
6.1.14 Frequency range 18 GHz – 40 GHz – Measurement Antenna Vertical_GD mode

D130_R01T08_TX_RSE_18G_40GHz_EUT_90_Ant_V_detector_S40_TT_0_360_sweep_auto_GD_mode_pretest



Remark: Pretest has been performed with Peak detector to find the EUT and Turn Table Worst case position.

D130_01_R01T08_TX_RSE_18G_40GHz_EUT_90_Ant_V_TT_0_S40_GD_mode_fcc

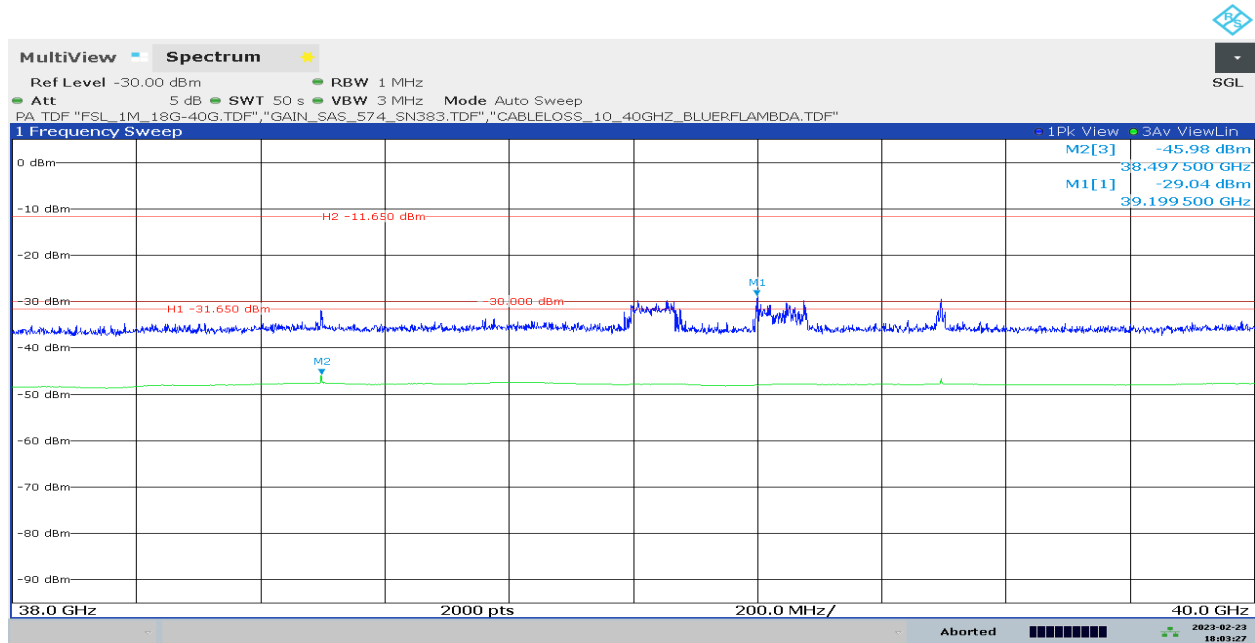


Remark: Final Test – No critical Emission found – Limit Line: -11.65 dBm (Peak), -31.65 dBm (Avg.) – Result: Passed.

Final test has been carried out on worst case position of EUT = 90° and TT = 0°

Small Span – 38G to 40 GHz

D130_02_T01_TX_RSE_38G_40GHz_EUT_90_Ant_V_TT_0-360_S40_GD_mode_final_TT356

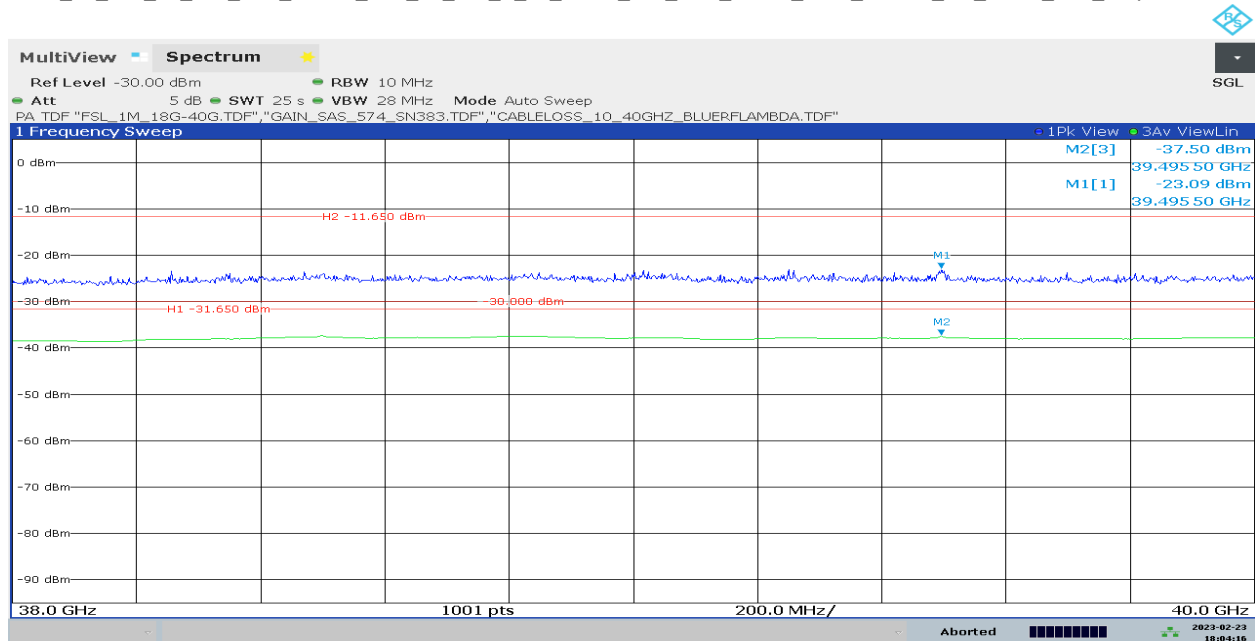


06:03:28 PM 02/23/2023

Remark: Final Test – No critical Emission found – Limit Line: -11.65 dBm (Peak), -31.65 dBm (Avg.) – Result: Passed.

Due to Desensitization factor, another test with RBW 10 MHz has been performed, No critical issue found,

D130_03_T01_TX_RSE_38G_40GHz_EUT_90_Ant_V_TT_0-360_S40_final_TT356_RBW_10MHz_GD_mode_info_only



06:04:17 PM 02/23/2023

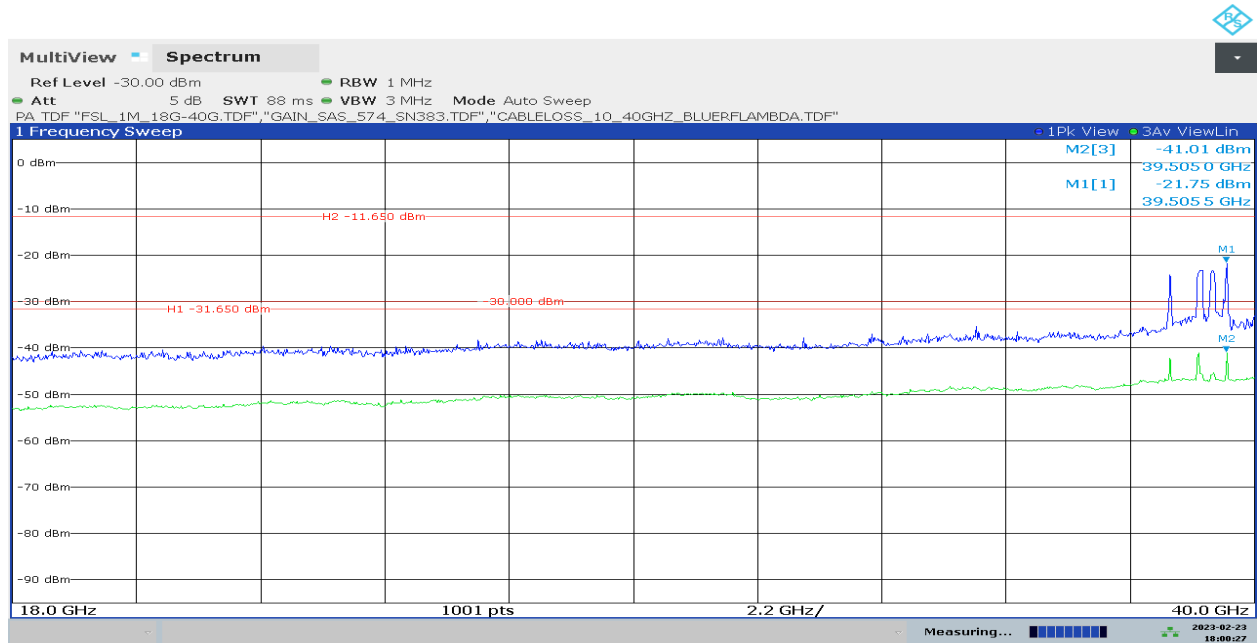
Remark: No critical Emission found – Only for information – RBW 10 MHz.

Due to Desensitization factor RBW has been taken 10 MHz. No Critical frequency found, Results: Passed

Desensitization factor has been considered only for PEAK Power

6.1.15 Frequency range 18 GHz – 40 GHz – Measurement Antenna Horizontal_GD mode

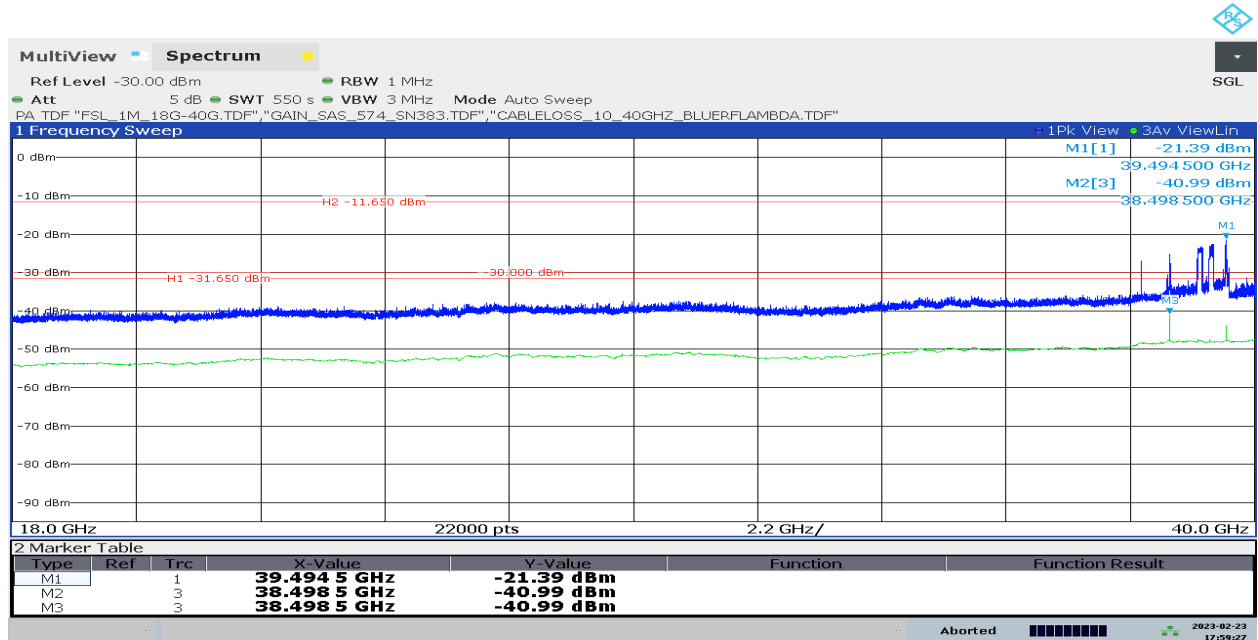
D129_R01T08_TX_RSE_18G_40GHz_EUT_90_Ant_H_S40_TT_0_360_sweep_auto_GD_mode_pretest



06:00:27 PM 02/23/2023

Remark: Pretest has been performed with Peak detector to find the EUT and Turn Table Worst case position.

D129_01_R01T08_TX_RSE_18G_40GHz_Ant_H_S40_GD_mode_EUT_90_TT_33_final_test



05:59:28 PM 02/23/2023

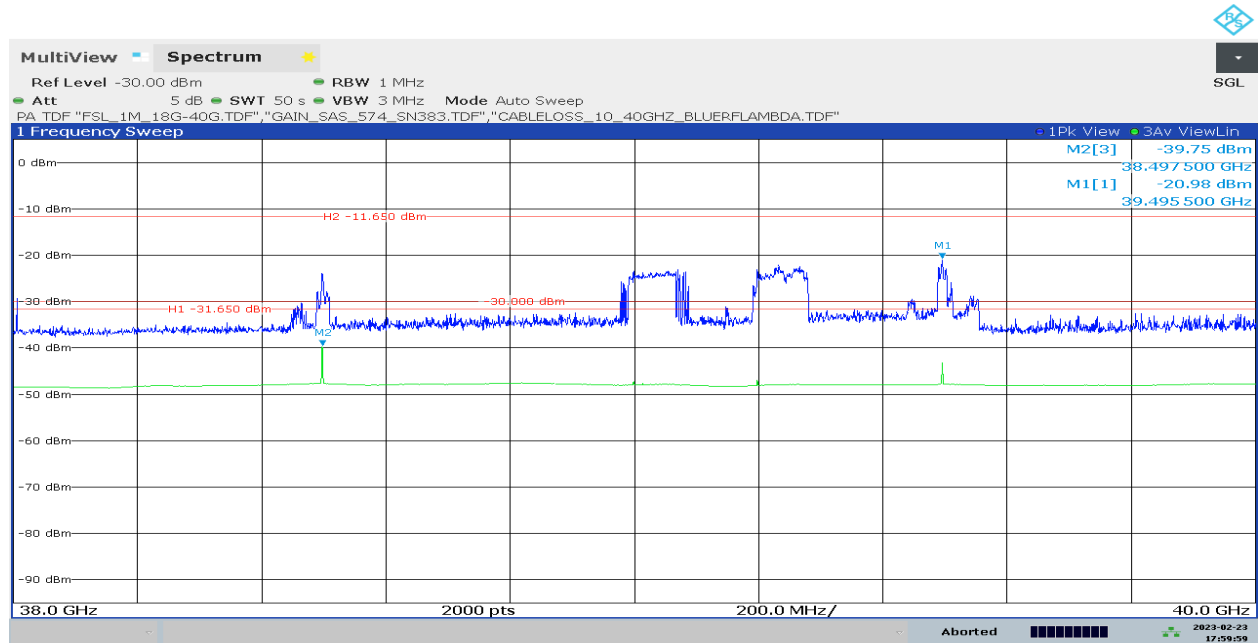
Remark: Final Test – No critical Emission found – Limit Line: -11.65 dBm (Peak), -31.65 dBm (Avg.) – Result: Passed.

Final test has been carried out on worst case position of EUT = 90° and TT = 33°

More measurements have been performed in small span, 38G to 40GHz, check below Diagrams,

Small Span – 38G to 40 GHz

D129_02_T01_TX_RSE_38G_40GHz_Ant_H_S40_f_EUT_90_TT_33_final_test



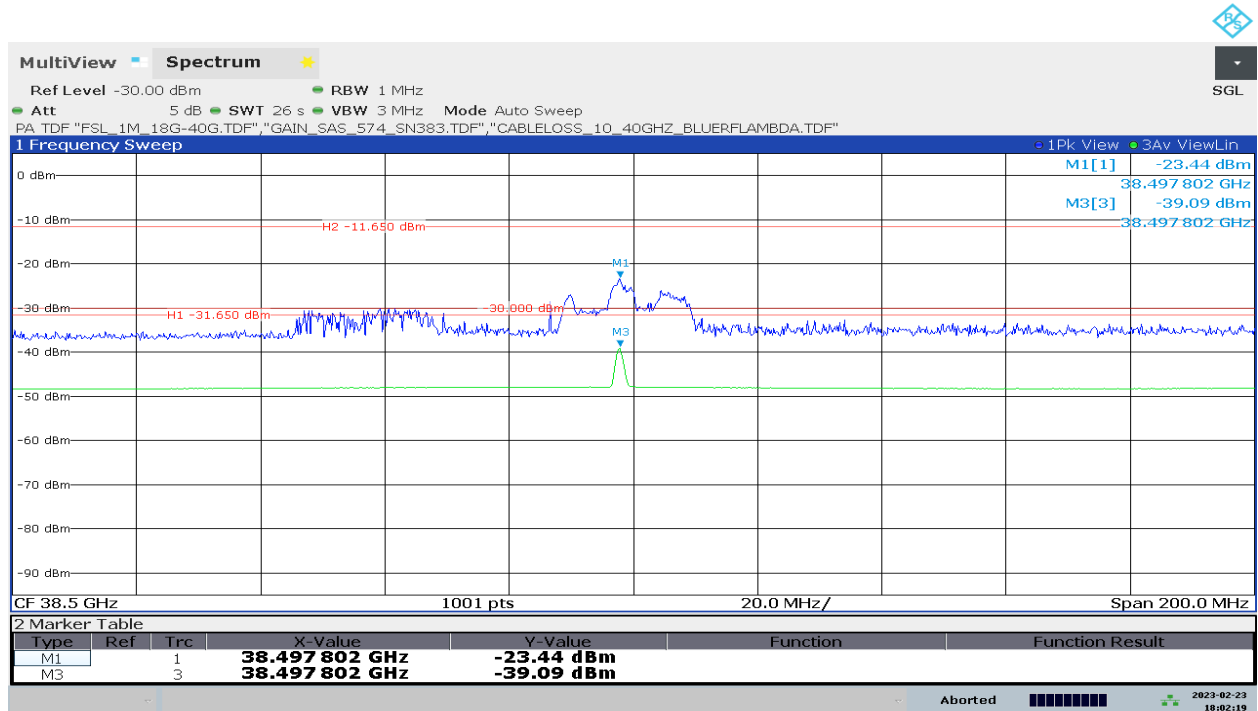
06:00:00 PM 02/23/2023

Remark: Critical Frequency found @ 38.5 GHz and 39.5 GHz,

More measurements are performed on critical frequencies in a small span, check below diagrams,

Small Span – 200 MHz @38.5GHz

D129_04_T01_TX_RSE_38.5GHz_Ant_H_S40_GD_mode_final_test_EUT_90_TT_33



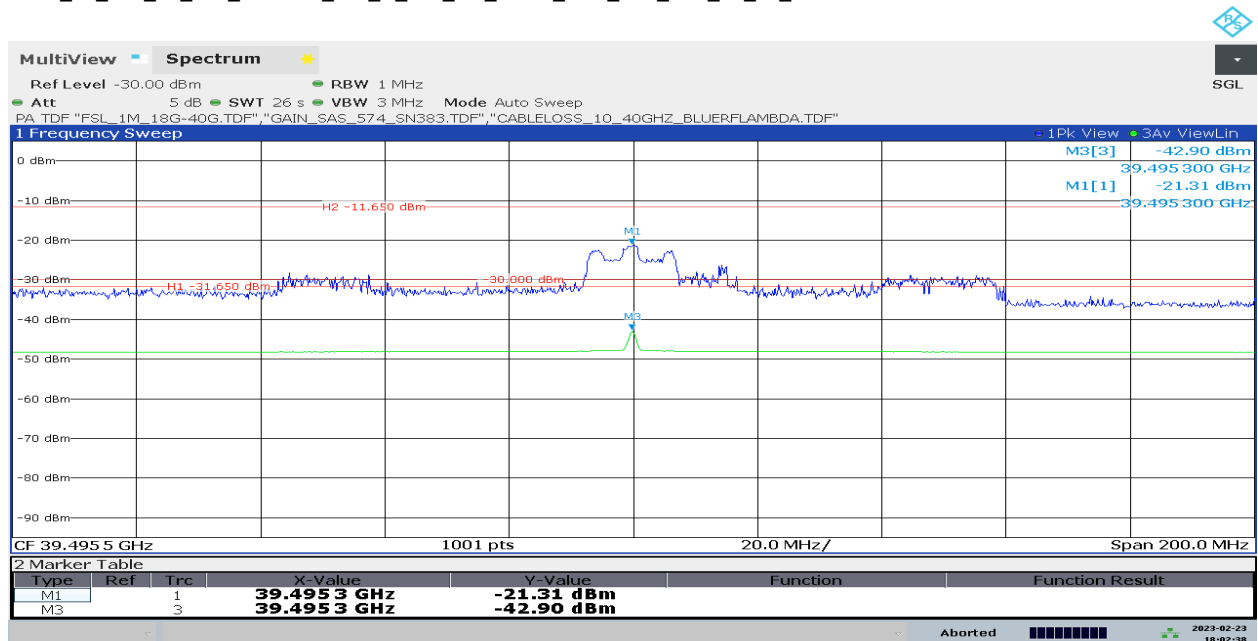
06:02:20 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

Small Span – 200 MHz @39.5GHz

D129_05_T01_TX_RSE_39.5GHz_Ant_H_S40_GD_mode_final_test_EUT_90_TT_33

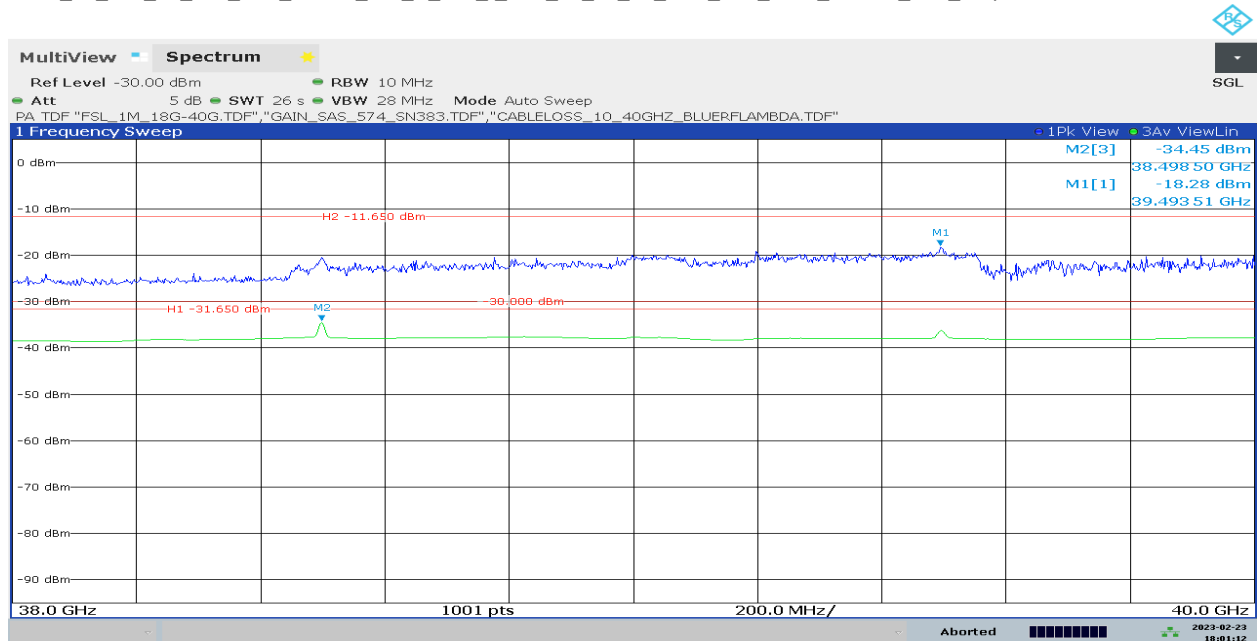


06:02:39 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

Due to Desensitization factor, another test with RBW 10 MHz has been performed, No critical issue found,
D129_03_T01_TX_RSE_38G_40GHz_Ant_H_S40_f_EUT_90_TT_33_final_test_RBW_10MHz_info_only

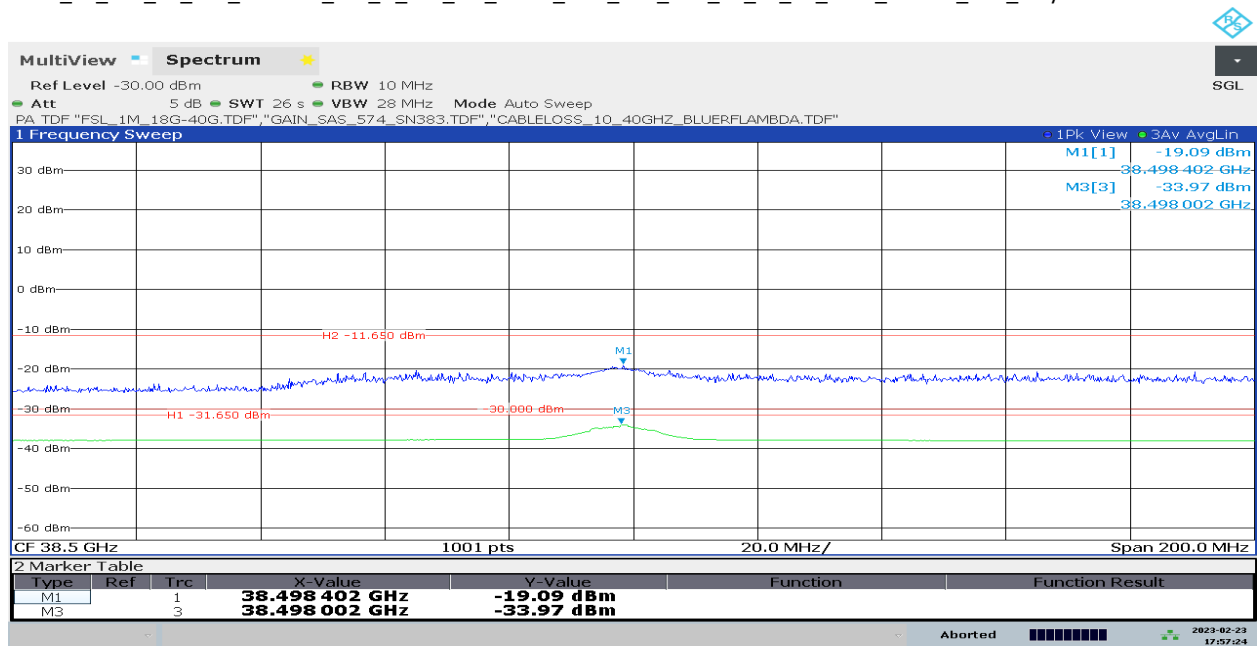


06:01:13 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.
Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

Desensitization factor has been considered only for PEAK Power

Due to Desensitization factor, another test with RBW 10 MHz has been performed, No critical issue found,
D129_06_T01_TX_RSE_38.5GHz_Ant_H_S40_GD_mode_final_test_EUT_90_TT_33_RBW_10MHz_info_only



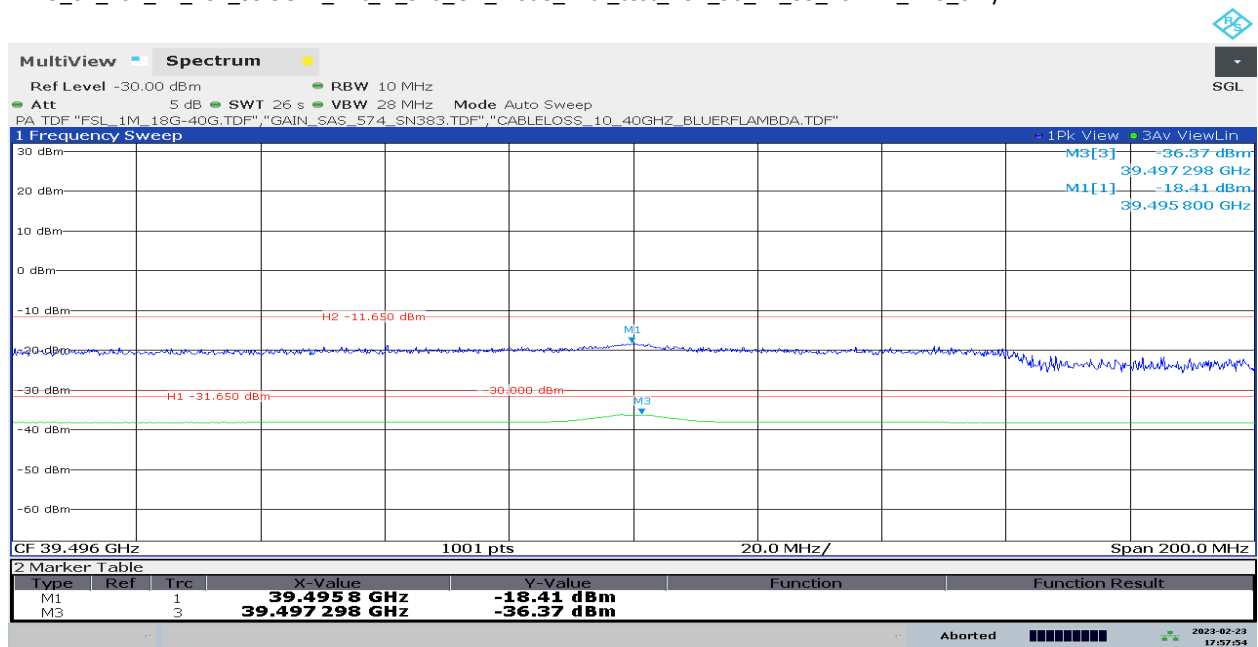
05:57:25 PM 02/23/2023

Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

Desensitization factor has been considered only for PEAK Power

D129_07_T01_TX_RSE_39.5GHz_Ant_H_S40_GD_mode_final_test_EUT_90_TT_33_10MHz_info_only



05:57:55 PM 02/23/2023

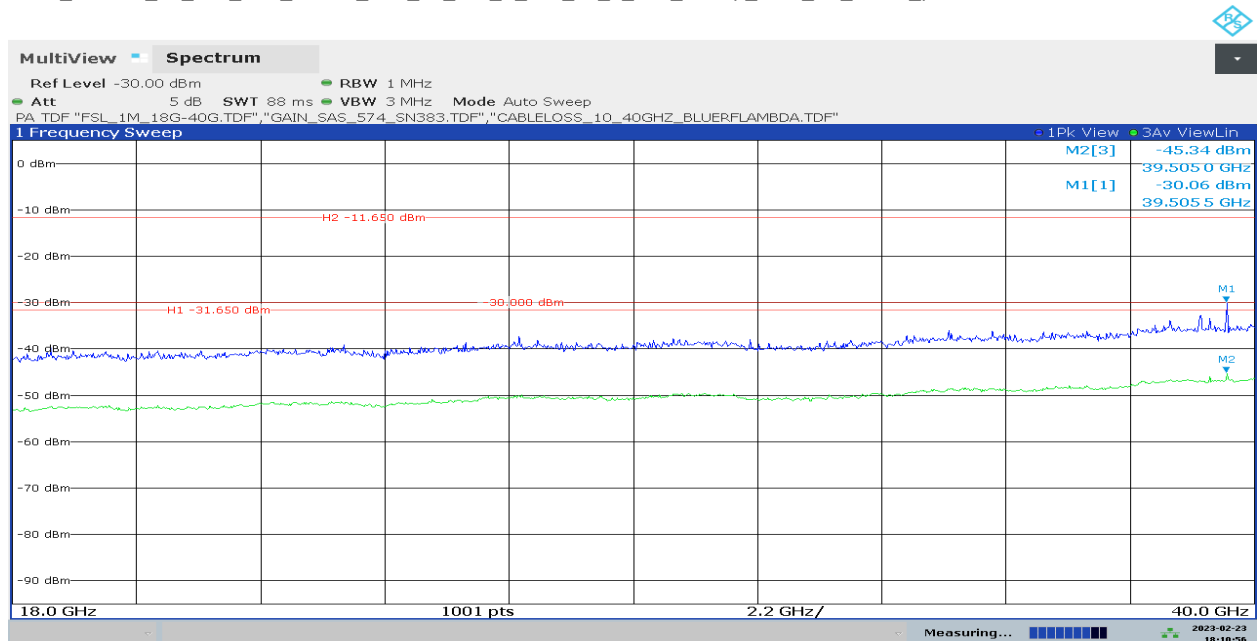
Remark: Peak and Average Power both are below the limit line, Results: Passed.

Peak Limit: -11.65 dBm, Average Limit: -31.65 dBm

Desensitization factor has been considered only for PEAK Power

6.1.16 Frequency range 18 GHz – 40 GHz – Measurement Antenna Vertical_HT mode

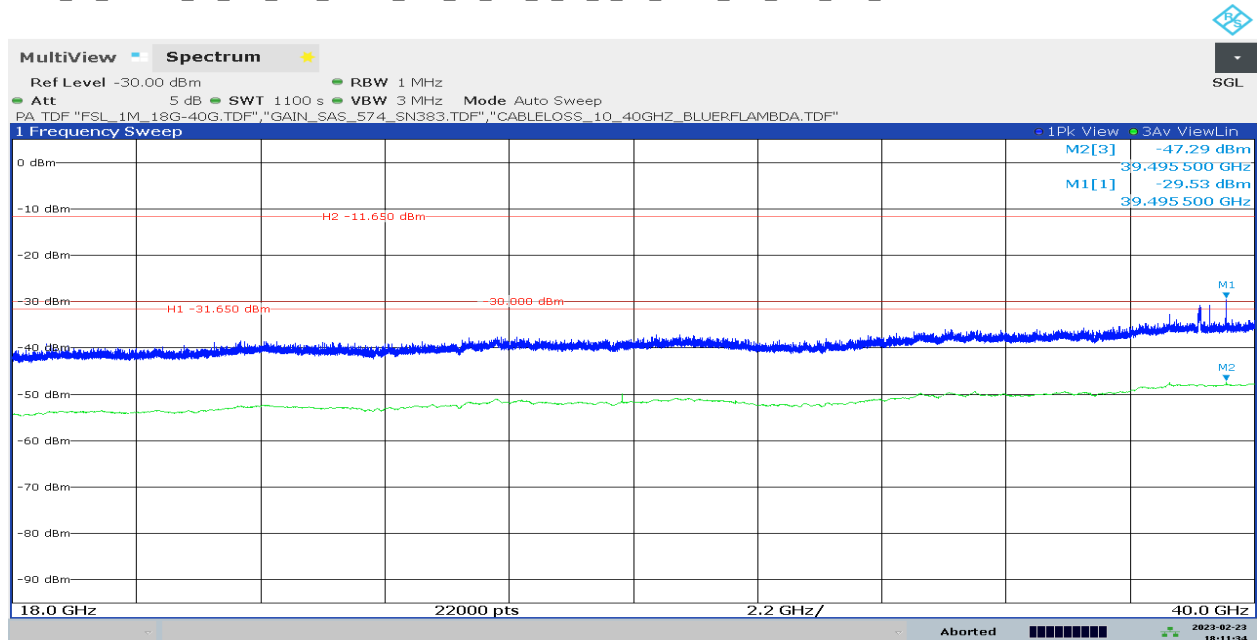
D150_R01T08_TX_RSE_18G_40GHz_EUT_90_Ant_V_S40_TT_0_360_sweep_auto_HT_mode_pretest



06:10:57 PM 02/23/2023

Remark: Pretest has been performed with Peak detector to find the EUT and Turn Table Worst case position.

D150_01_R01T08_TX_RSE_18G_40GHz_EUT_90_Ant_V_TT_0_HT_mode_S40_final_test_1100s

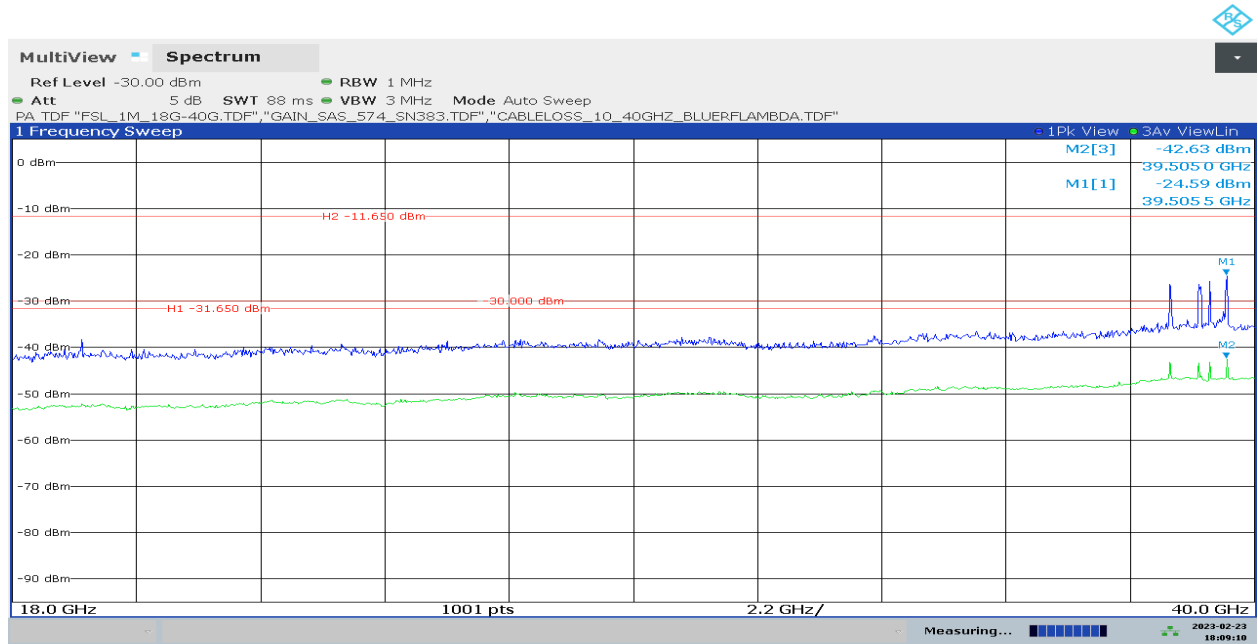


06:11:35 PM 02/23/2023

Final test has been carried out on worst case position of EUT = 90° and TT = 0°

6.1.17 Frequency range 18 GHz – 40 GHz – Measurement Antenna Horizontal_HT mode

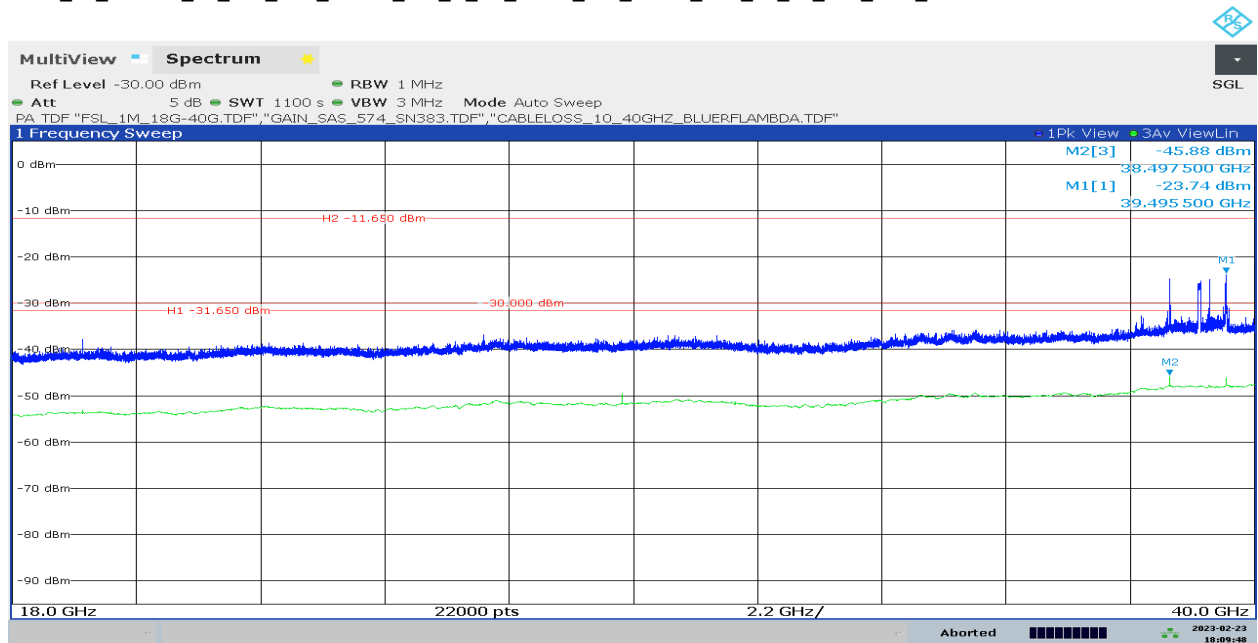
D151_R01T08_TX_RSE_18G_40GHz_EUT_90_Ant_H_S40_TT_0_360_sweep_auto_HT_mode_pretest_fcc



06:09:11 PM 02/23/2023

Remark: Pretest has been performed with Peak detector to find the EUT and Turn Table Worst case position.

D151_01_R01T08_TX_RSE_18G_40GHz_Ant_H_HT_mode_S40_1100s_EUT_97_TT_139_final_test

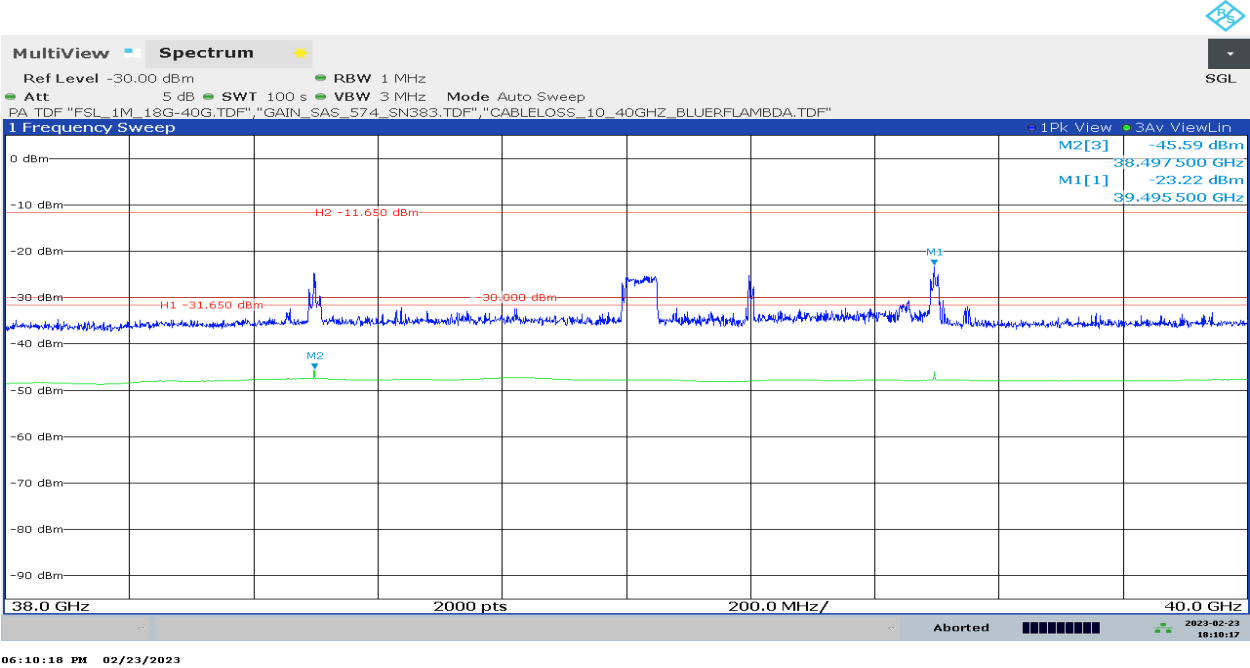


06:09:49 PM 02/23/2023

Remark: Final Test – No critical Emission found – Limit Line: -11.65 dBm (Peak), -31.65 dBm (Avg.) – Result: Passed.

Final test has been carried out on worst case position of EUT = 97° and TT = 139°

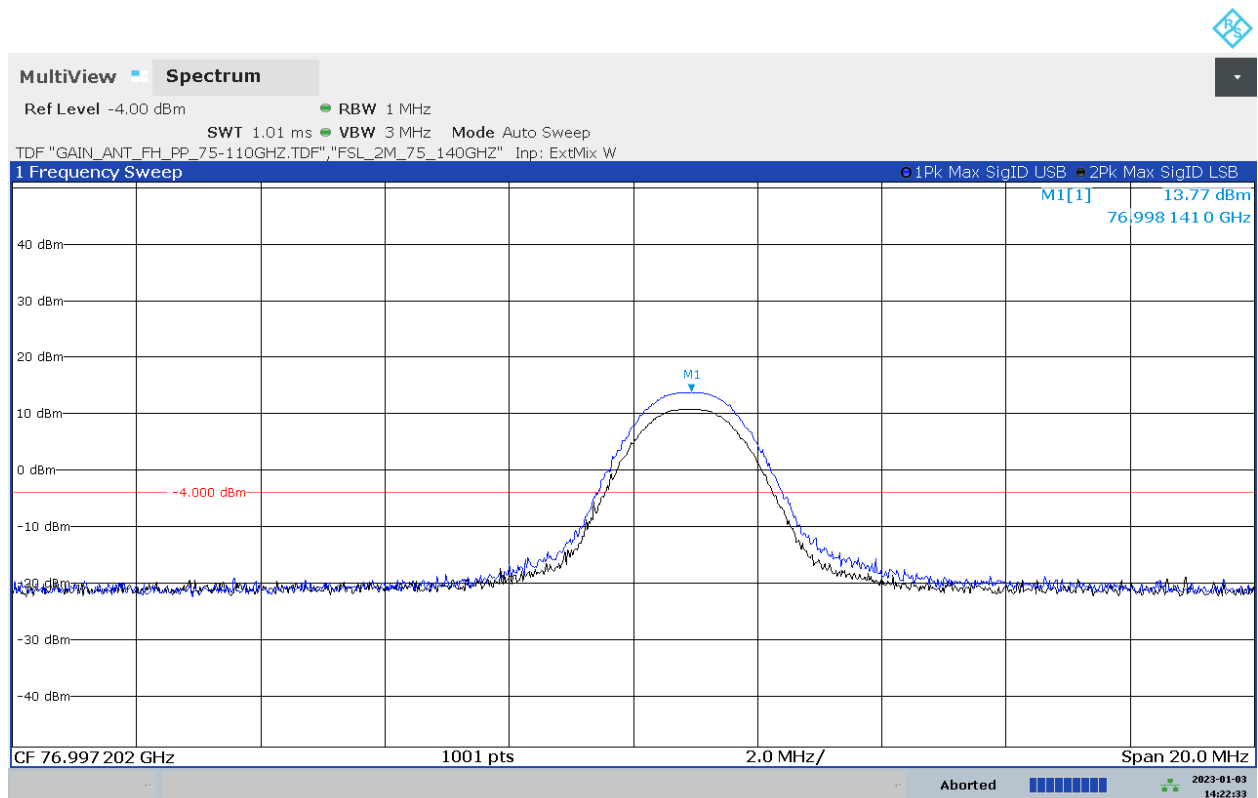
D151_02_T01_TX_RSE_38G_40GHz_Ant_H_S40_EUT_97_TT_139_final_test_RBW_1MHz



7 Radiated Spurious Emission above 40GHz

- Spurious Emission above 40 GHz has been performed with CW mode sample,
- Three Samples on CW_Low, CW_Mid, CW_High channels are configured from Customer on three different Frequencies,
- Maximum Peak Power measurements have performed on Three different sample on three different Positions,
- Maximum Power has been found at CW_mid, check below Diagrams,
- Therefore all Spurious Emission above 40 GHz have been performed with CW_mode_mid_channel.

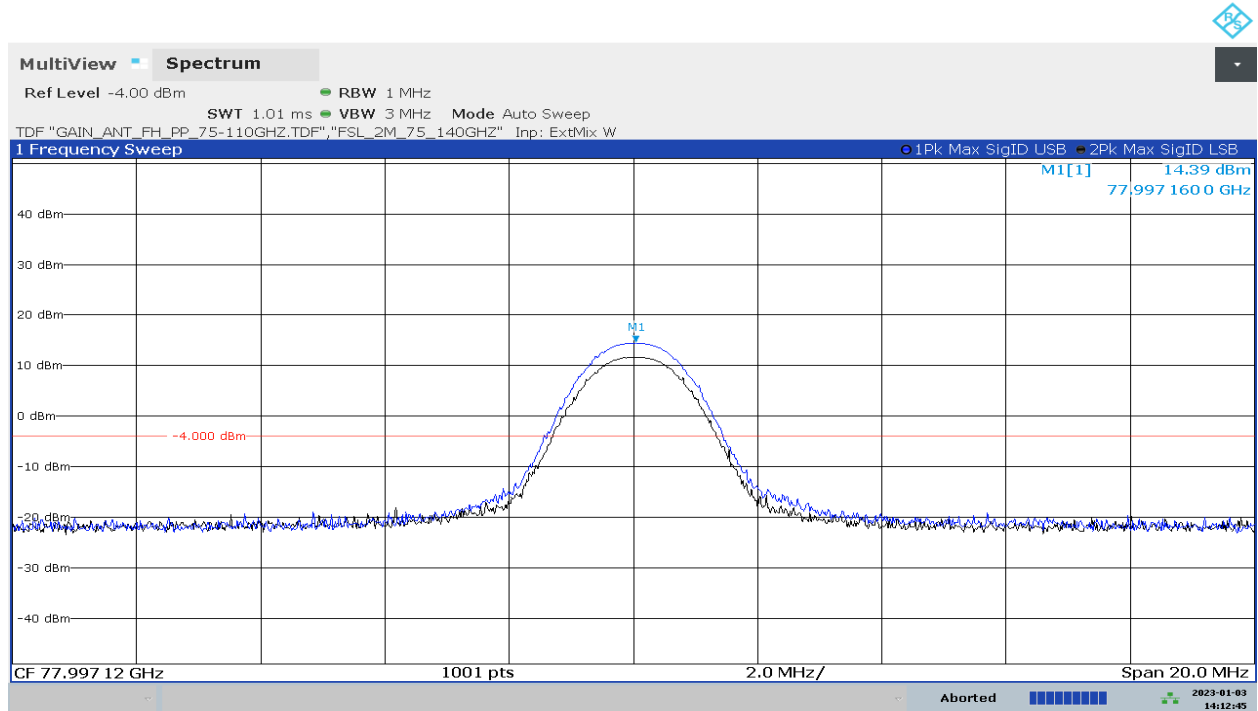
D005_R01T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_CW_mode_low_77GHz_13.77dBm



02:22:33 PM 01/03/2023

Remark: CW mode low Channel, Maximum Peak Power: 13.77 dBm

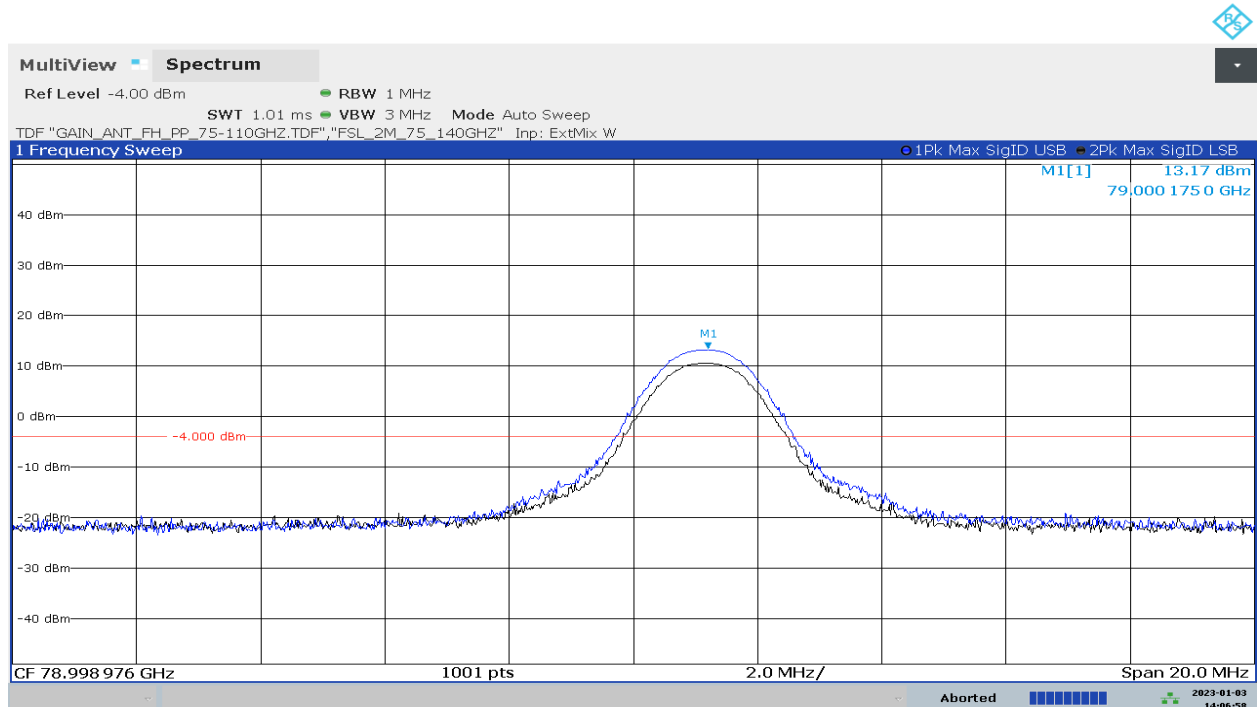
D006_R01T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_CW_mode_mid_78GHz_14.39dBm



02:12:45 PM 01/03/2023

Remark: CW mode mid Channel, Maximum Peak Power: 14.39 dBm

D007_R01T08_PEAK_Power_Tnom_Vnom_EUT_87_TT_0_Ant_V_MaxH_S40_CW_mode_high_79GHz_13.17dBm

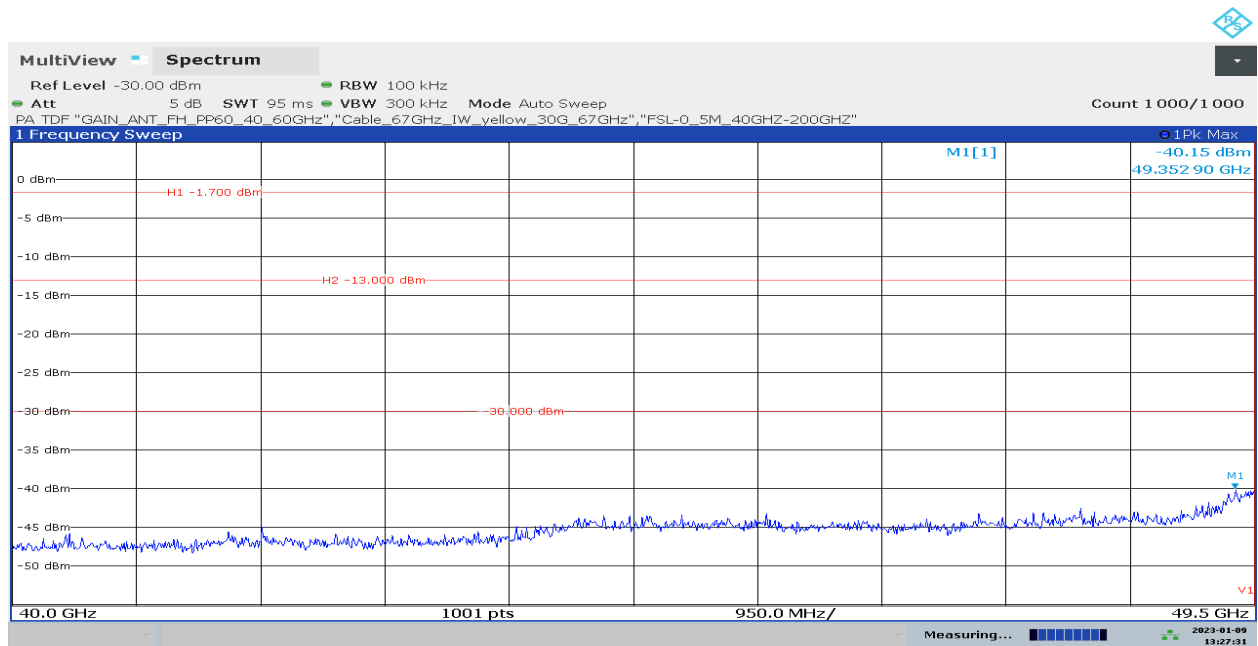


02:06:58 PM 01/03/2023

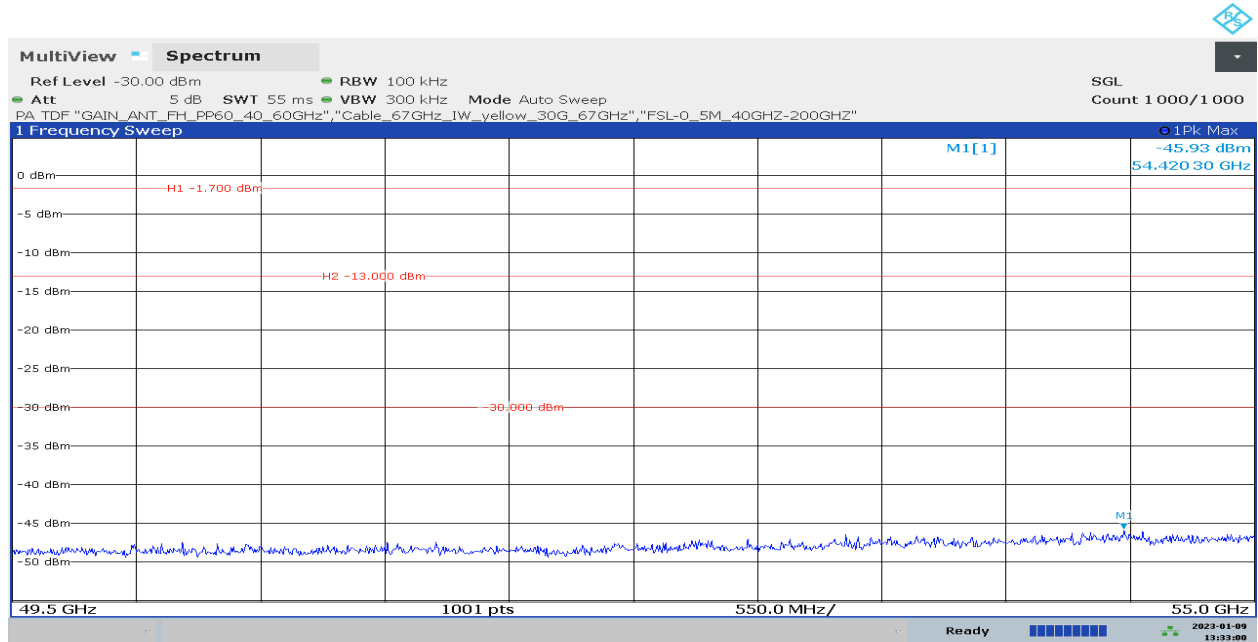
Remark: CW mode high Channel, Maximum Peak Power: 13.17 dBm

7.1.1 Frequency range 40 GHz – 55 GHz – Measurement Antenna Vertical

D131_01_R01T08_TX_RSE_40G_49.5GHz_EUT_90_Ant_V_CW_mode_FCC_ISED



D131_02_R01T08_TX_RSE_49.5G_55GHz_EUT_90_Ant_V_CW_mode_FCC_ISED



Remark:

No critical Emission found during premeasurements, Measurement mode: Continuous sweep with PEAK detector.

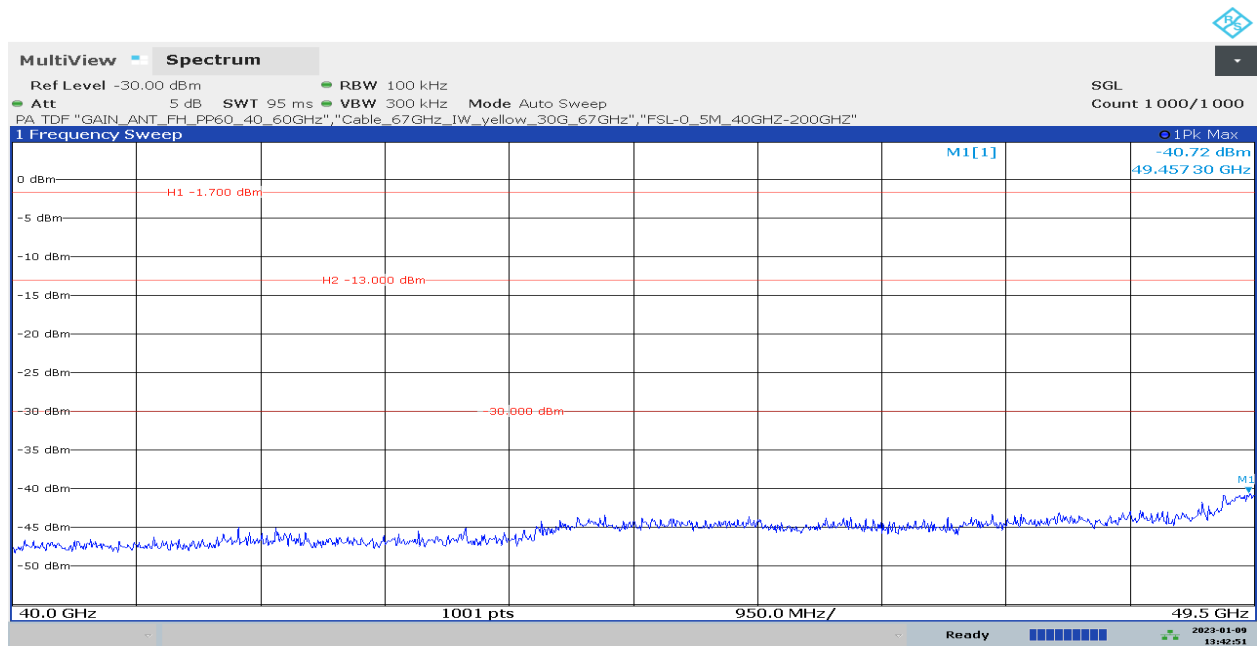
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

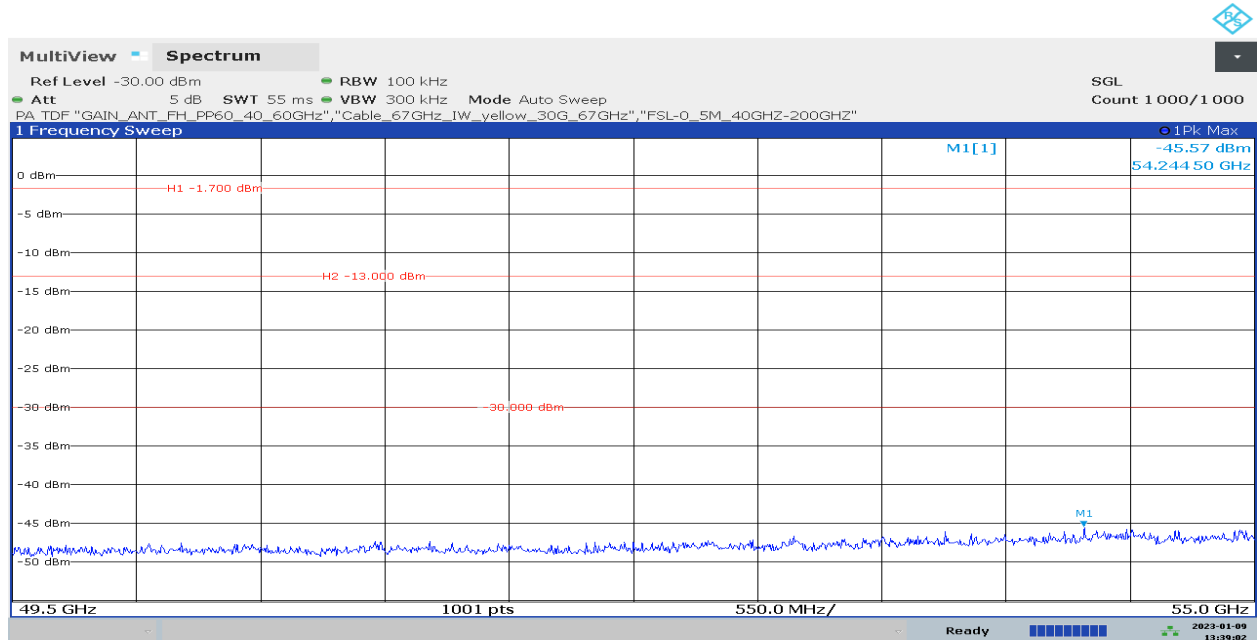
7.1.2 Frequency range 40 GHz – 55 GHz – Measurement Antenna Horizontal

D132_01_R01T08_TX_RSE_40G_49.5GHz_EUT_90_Ant_H_CW_mode_FCC_ISED



01:42:51 PM 01/09/2023

D132_02_R01T08_TX_RSE_49.5G_55GHz_EUT_90_Ant_H_CW_mode_FCC_ISED



01:39:02 PM 01/09/2023

Remark:

No critical Emission found during premeasurements, Measurement mode: Continuous sweep with PEAK detector.

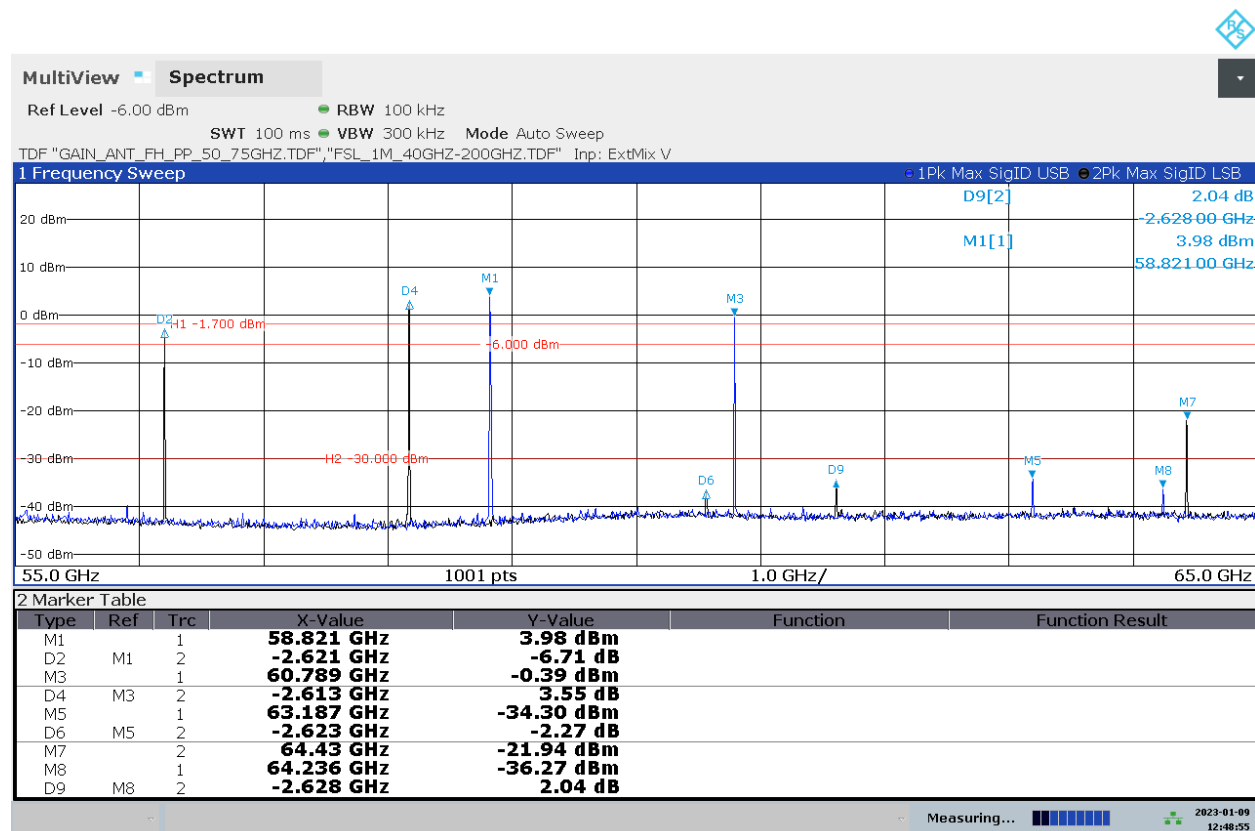
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.3 Frequency range 55 GHz – 65 GHz – Measurement Antenna Vertical

D133_01_R01T08_TX_RSE_55G_65GHz_EUT_90_Ant_V_CW_mode_FCC_ISED



12:48:55 PM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

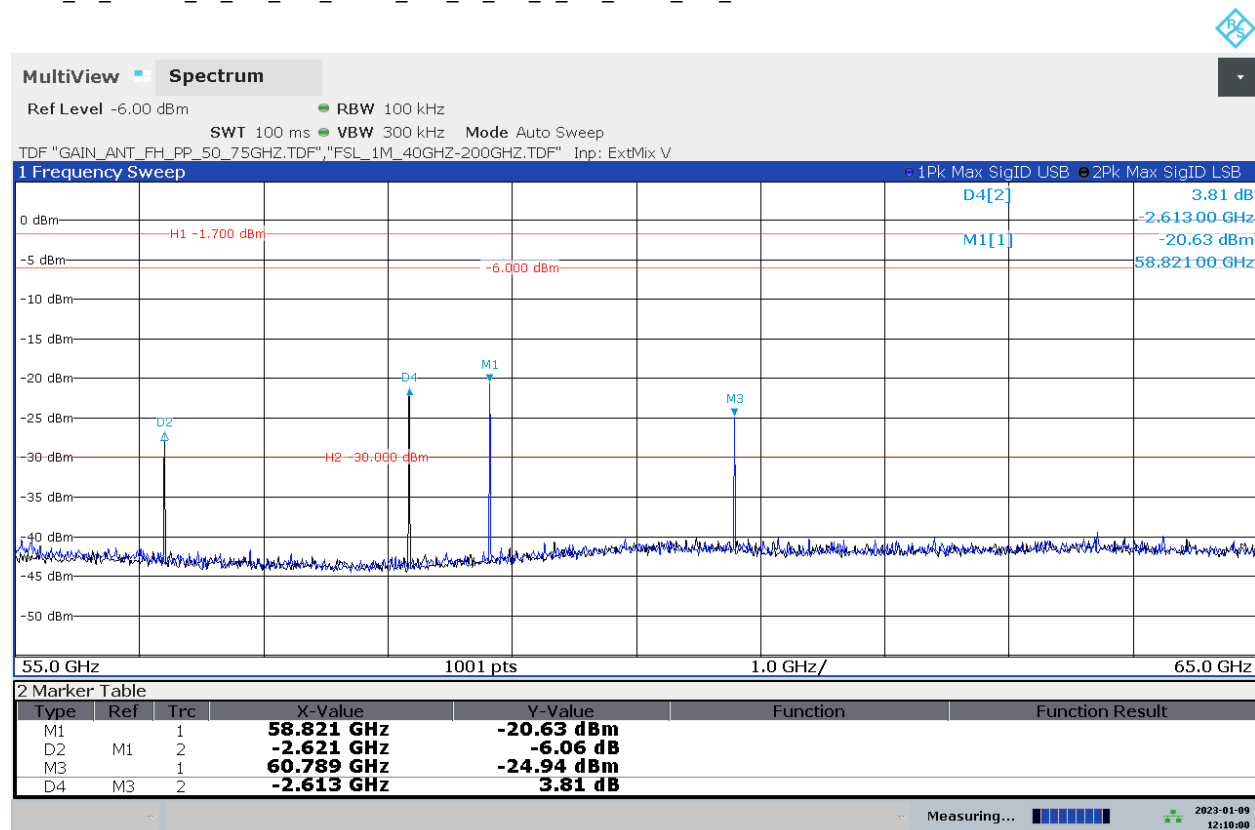
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.4 Frequency range 55 GHz – 65 GHz – Measurement Antenna Horizontal

D134_01_R01T08_TX_RSE_55G_65GHz_EUT_90_Ant_H_CW_mode_FCC_ISED



12:10:00 PM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

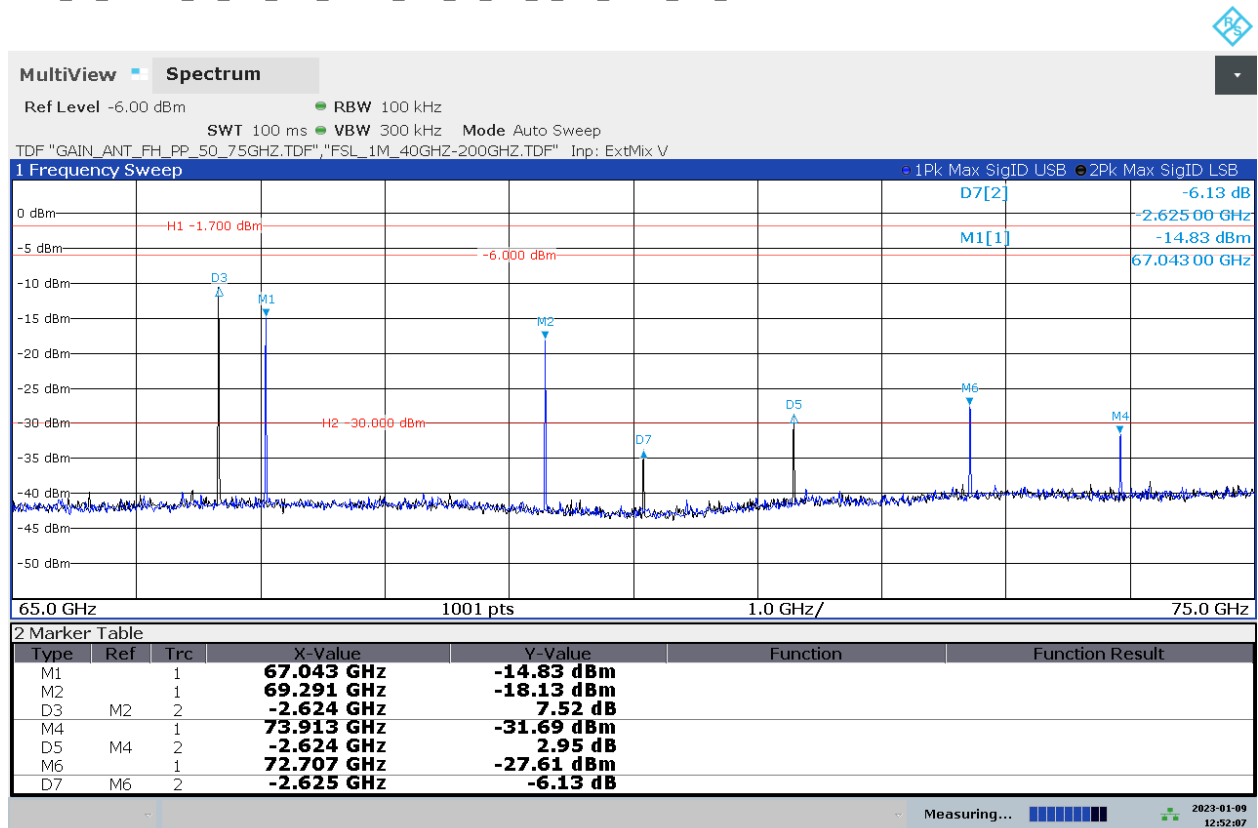
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.5 Frequency range 65 GHz – 75 GHz – Measurement Antenna Vertical

D133_02_R01T08_TX_RSE_65G_75GHz_EUT_90_Ant_V_CW_mode_FCC_ISED



12:52:07 PM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

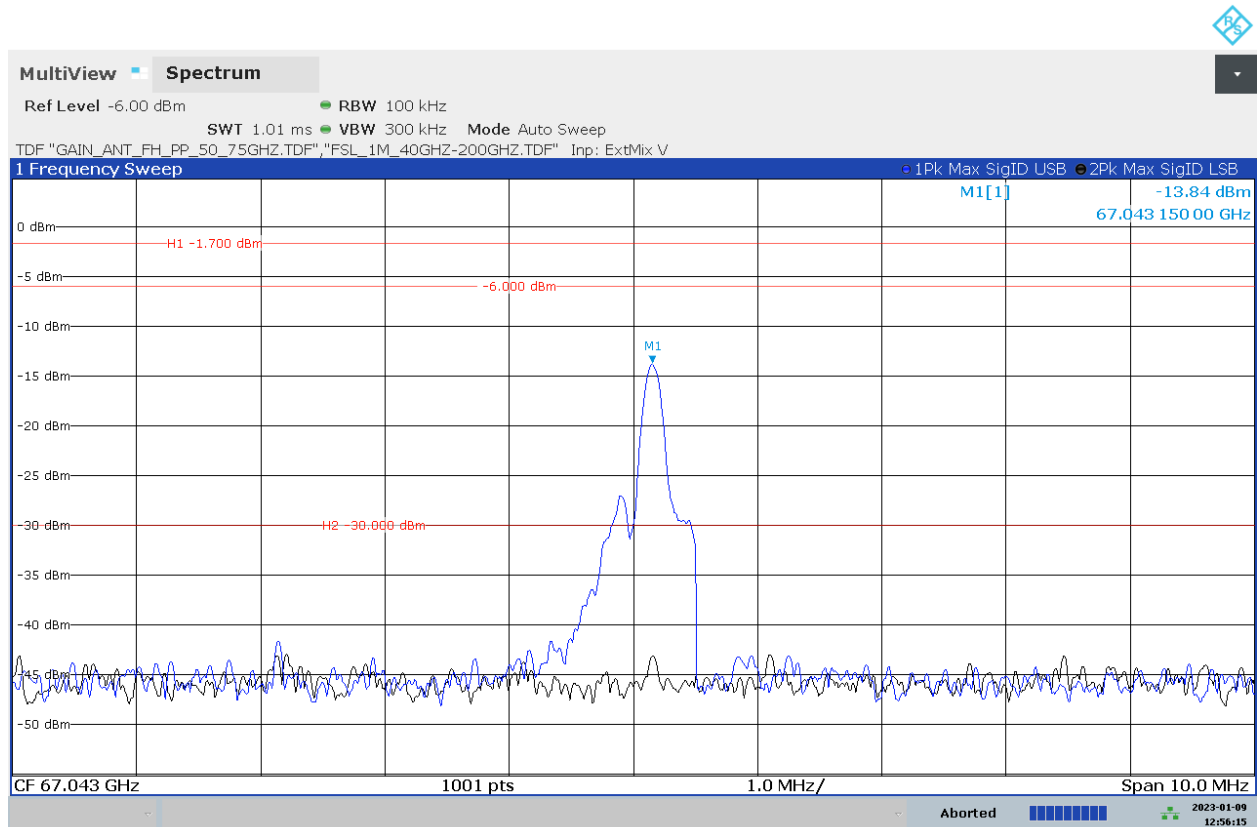
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

D133_03_R01T08_TX_RSE_65G_75GHz_EUT_90_Ant_V_CW_mode_M1_info_only_FCC_ISED



12:56:16 PM 01/09/2023

Remarks: Final test has been carried out at Marker 1 @ ~67 GHz.

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

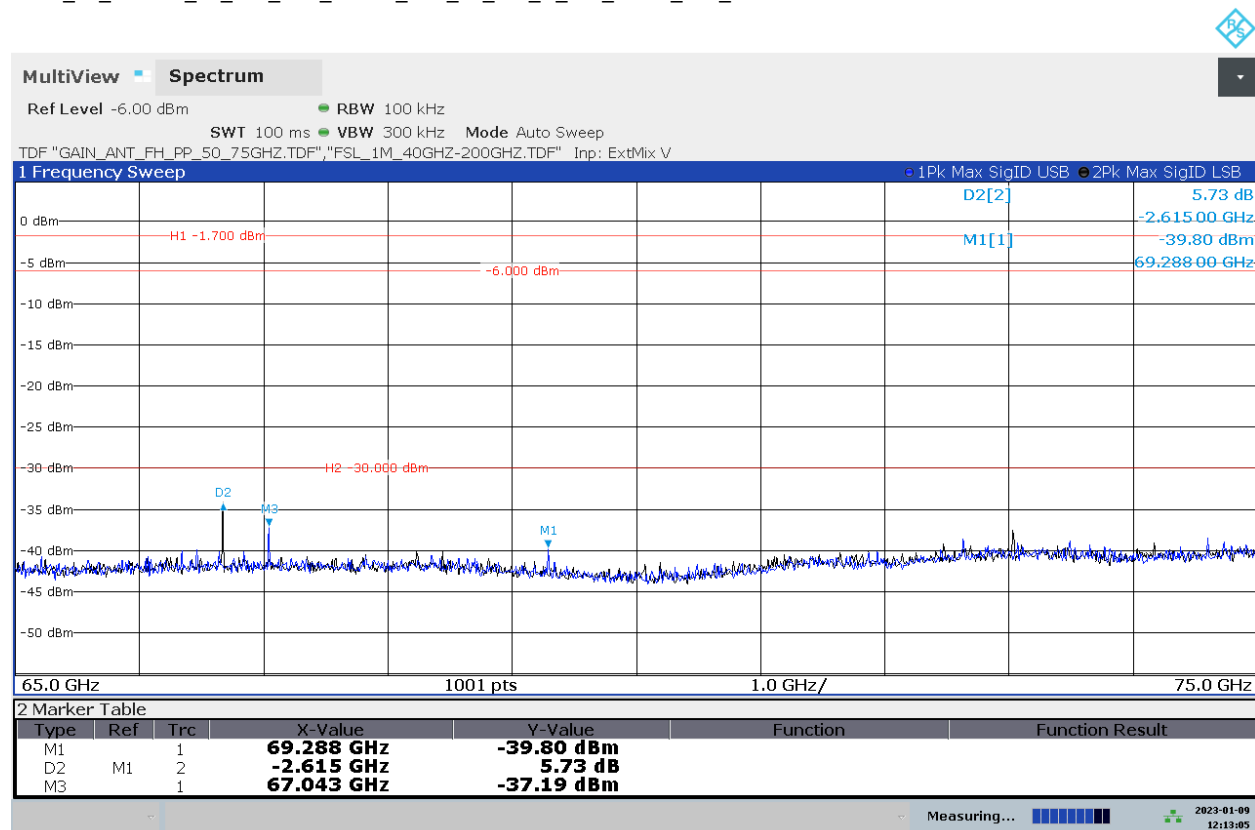
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.6 Frequency range 65 GHz – 75 GHz – Measurement Antenna Horizontal

D134_02_R01T08_TX_RSE_65G_75GHz_EUT_90_Ant_H_CW_mode_FCC_ISED



12:13:05 PM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

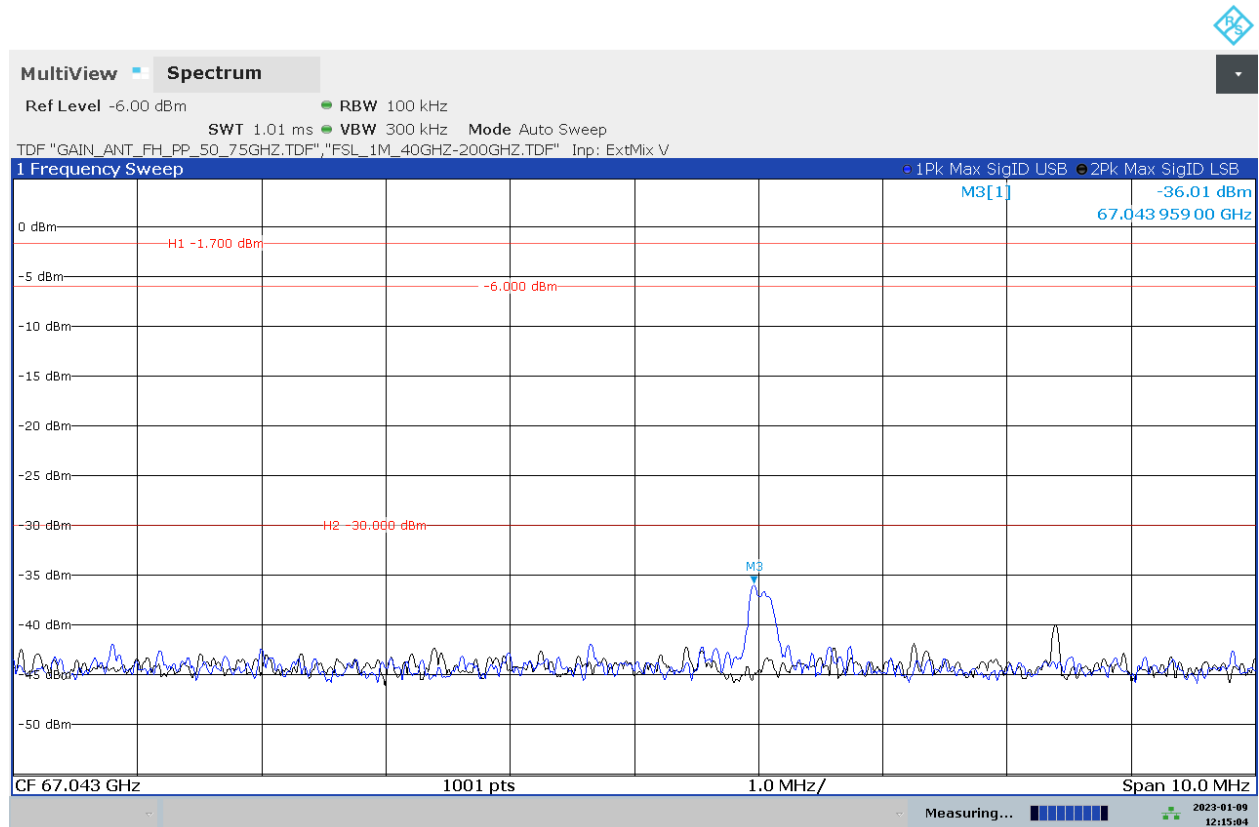
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISSED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

D134_03_R01T08_TX_RSE_65G_75GHz_EUT_90_Ant_H_CW_mode_M3_info_only_FCC_ISD



12:15:04 PM 01/09/2023

Remarks: Final test has been carried out at Marker 1 @ ~67 GHz.

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

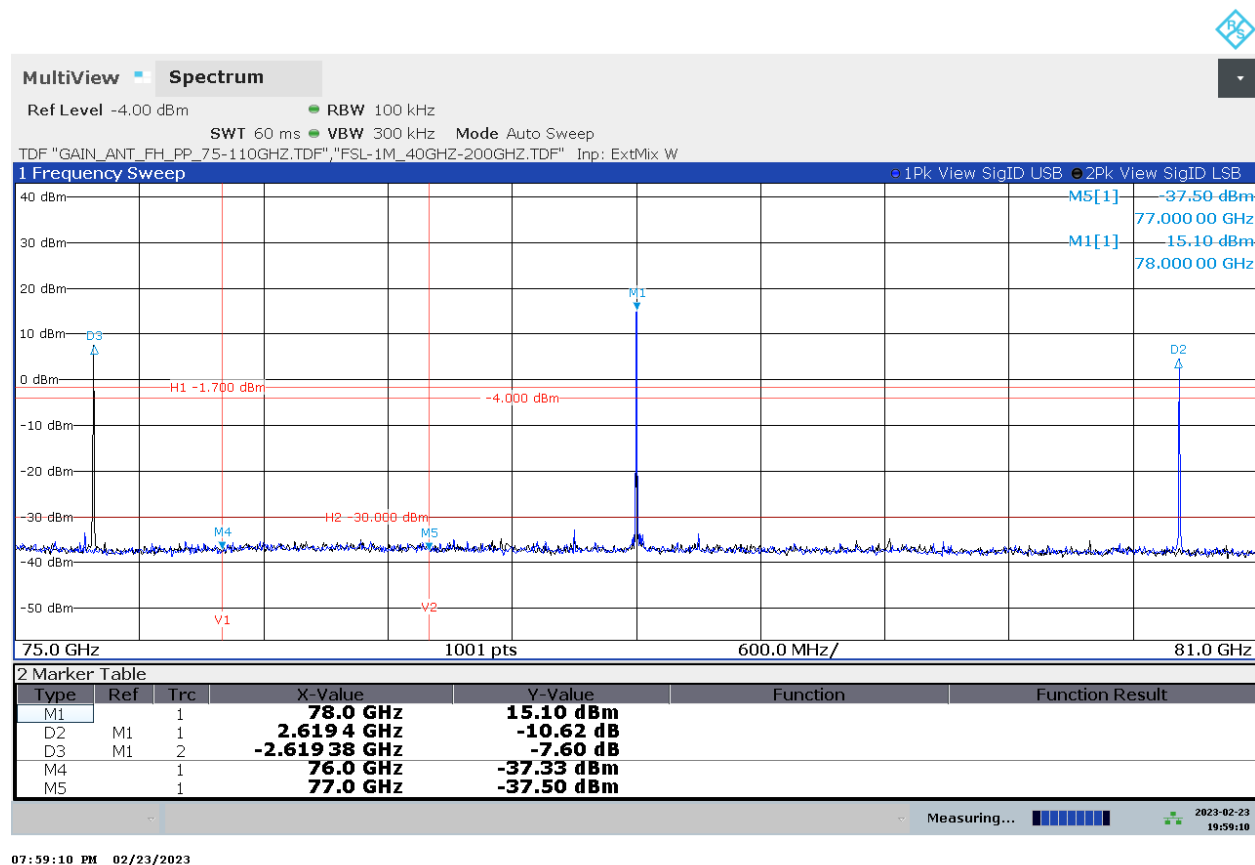
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISDE: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.7 Frequency range 75 GHz – 81 GHz – Measurement Antenna Vertical

D002_R01T08_Overview_75G_81GHz_Ant_V_info_only_CW_mode_mid_FCC_ISD



07:59:10 PM 02/23/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

75G to 76GHz (M4):

Limit line for FCC: -1.7 dBm – Results: Passed,

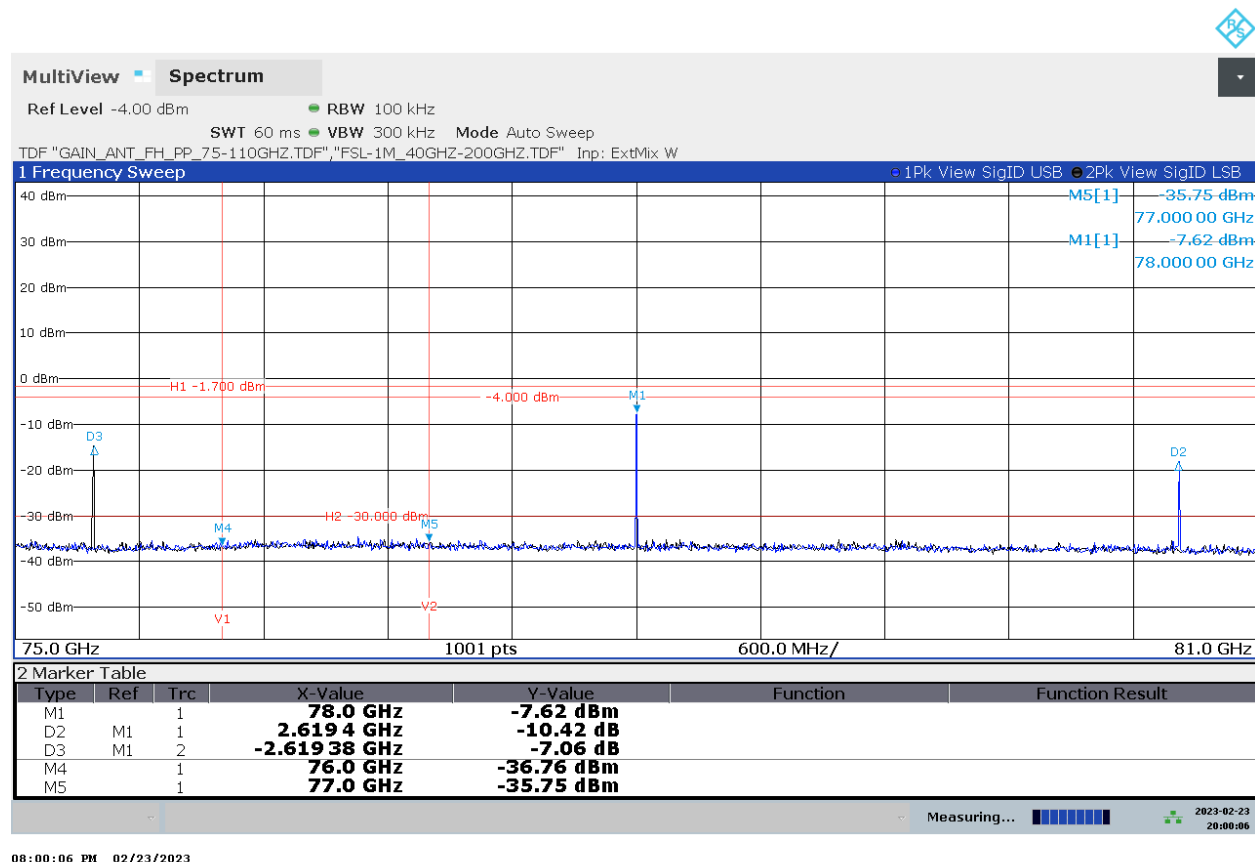
Limit line for ISD: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

Emission at 78 GHz is overlapping and over the limit line, but not related to Assessment, 78 GHz is the Transmit frequency, CW mode on mid Channel.

7.1.8 Frequency range 75 GHz – 81 GHz – Measurement Antenna Horizontal

D004_R01T08_Overview_75G_81GHz_Ant_H_info_only_CW_mode_mid_FCC_ISD



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

75G to 76GHz (M4):

Limit line for FCC: -1.7 dBm – Results: Passed,

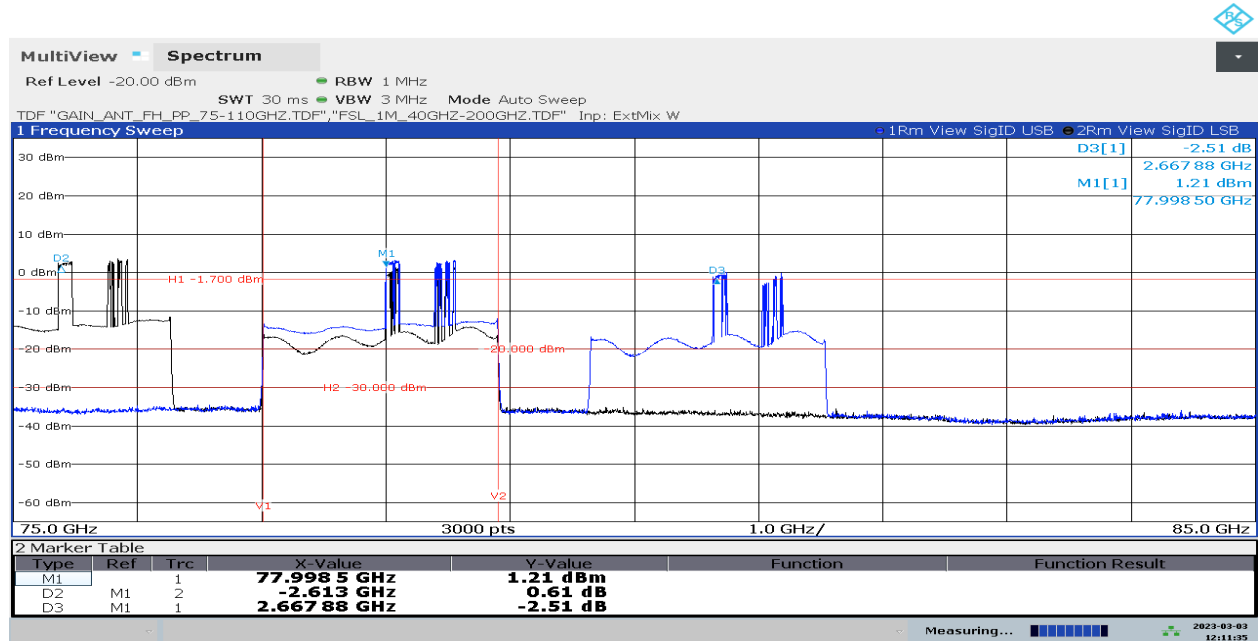
Limit line for ISD: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

Emission at 78 GHz is overlapping and over the limit line, but not related to Assessment, 78 GHz is the Transmit frequency, CW mode on mid Channel.

7.1.9 Frequency range 75 GHz – 85 GHz – Measurement Antenna Vertical – GD mode_overview

D006_R01T08_Oberview_75G_85GHz_Ant_V_info_only_GD_mode_fcc_isd

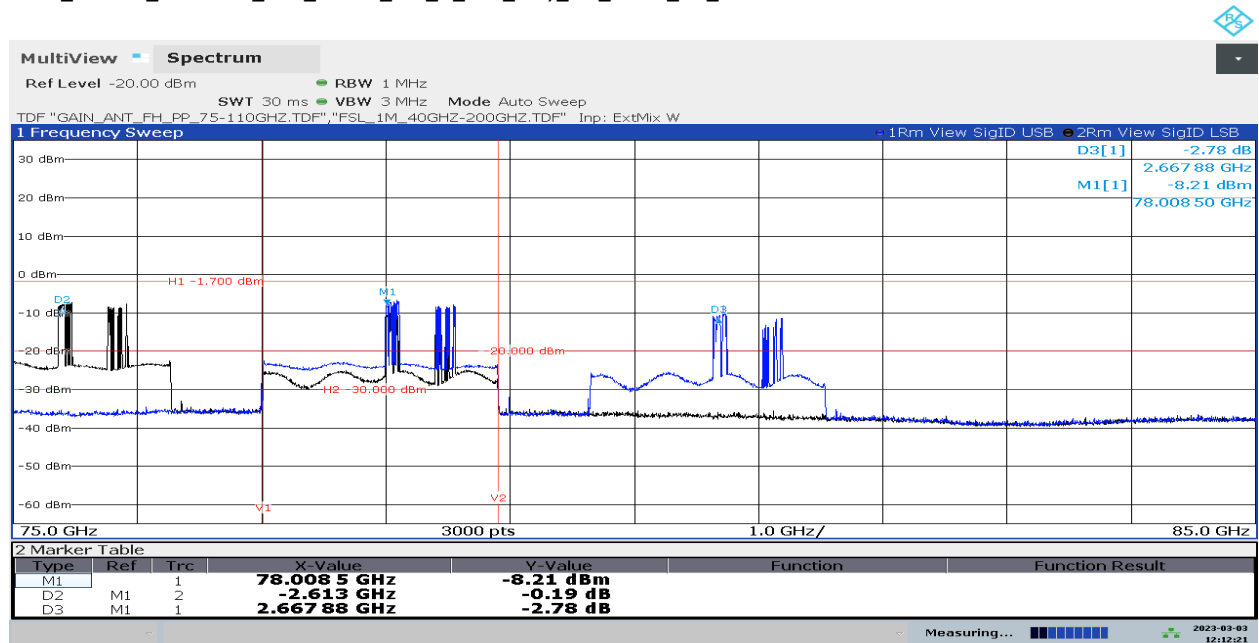


12:11:36 PM 03/03/2023

Remark: Only for information – Overview 75G to 85GHz with GD mode

7.1.10 Frequency range 75 GHz – 81 GHz – Measurement Antenna Horizontal – GD mode_overview

D007_R01T08_Oberview_75G_85GHz_Ant_H_info_only_GD_mode_fcc_isd

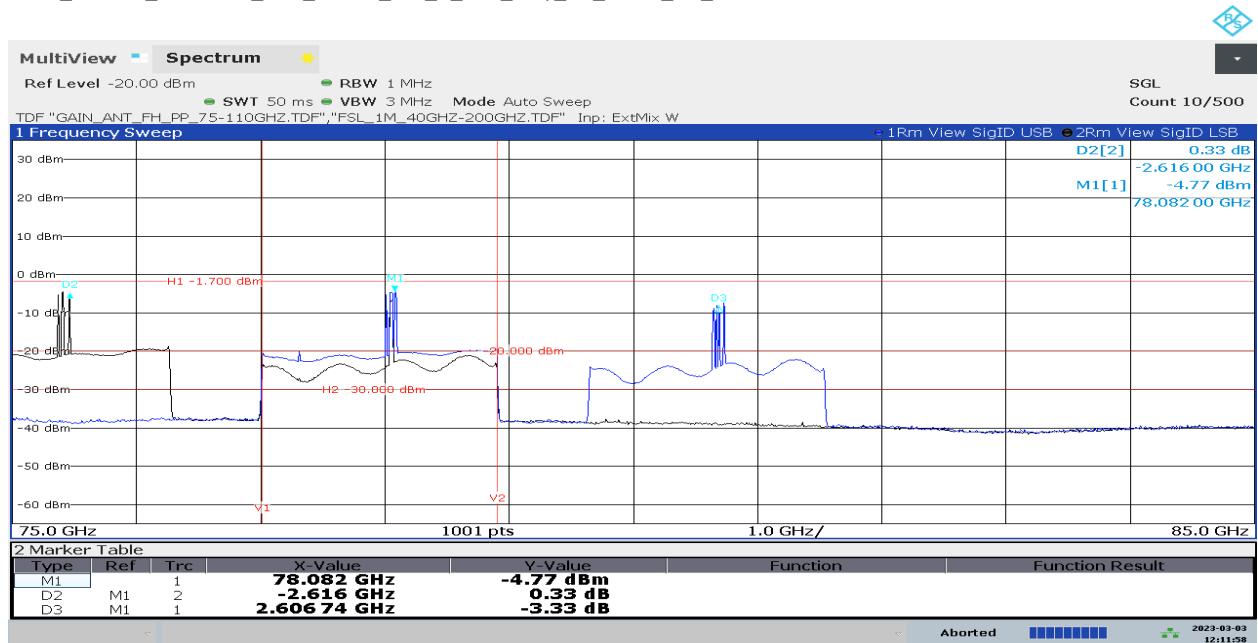


12:12:22 PM 03/03/2023

Remark: Only for information – Overview 75G to 85GHz with GD mode

7.1.11 Frequency range 75 GHz – 81 GHz – Measurement Antenna Vertical – HT mode_overview

D008_R01T08_Overview_75G_85GHz_Ant_V_info_only_HT_mode_fcc_isd

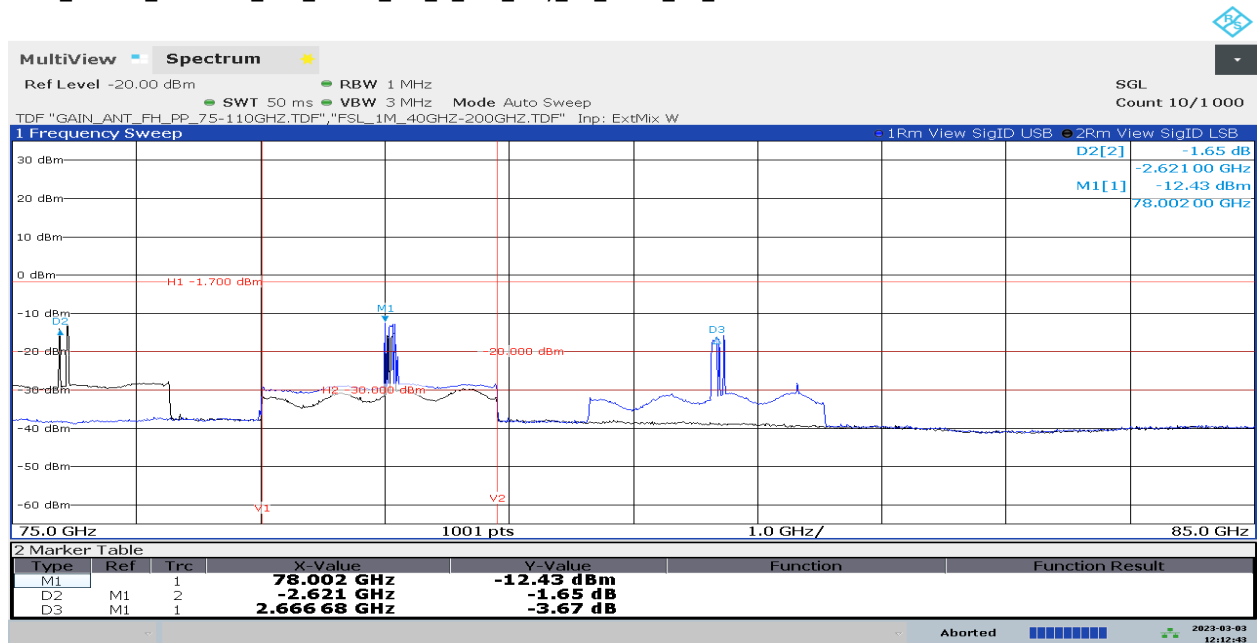


12:11:59 PM 03/03/2023

Remark: Only for information – Overview 75G to 85GHz with HT mode

7.1.12 Frequency range 75 GHz – 81 GHz – Measurement Antenna Horizontal – HT mode_overview

D009_R01T08_Overview_75G_85GHz_Ant_H_info_only_HT_mode_fcc_isd

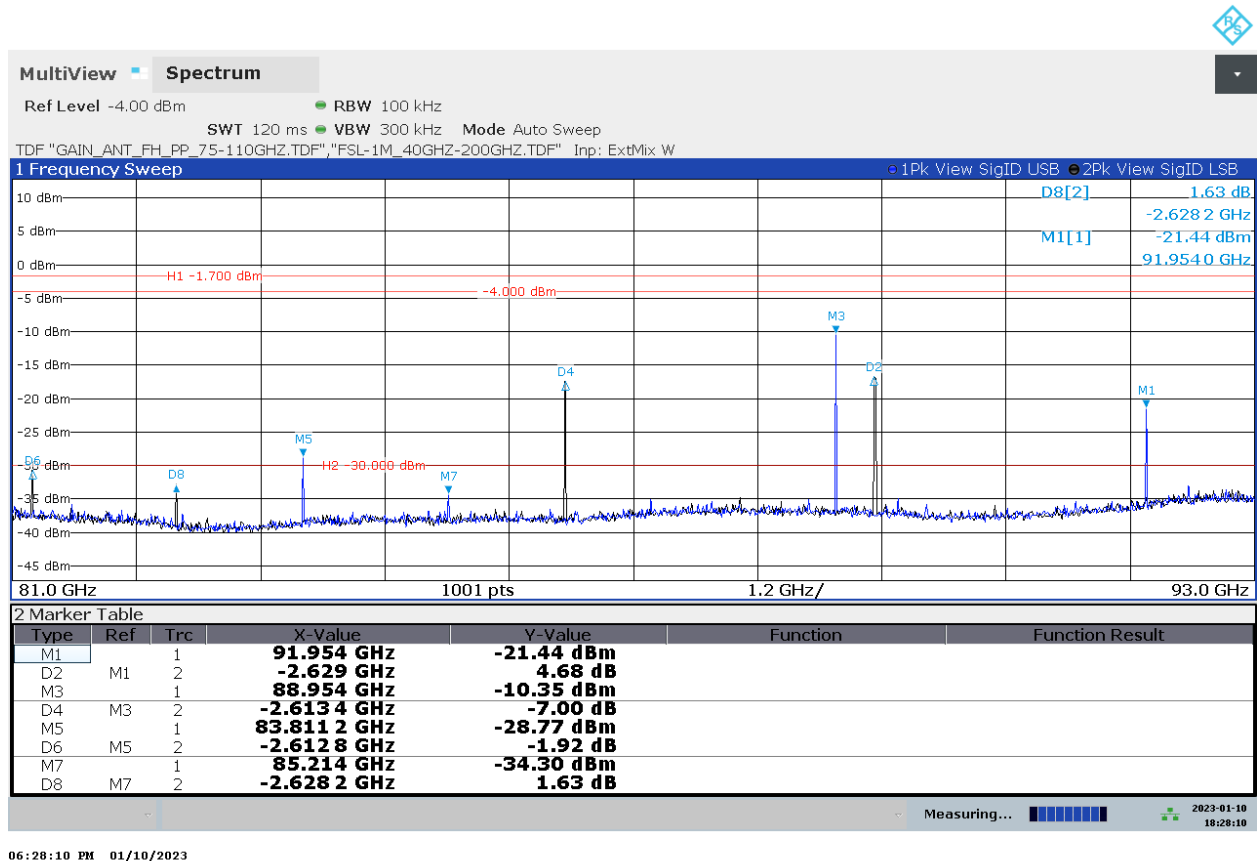


12:12:44 PM 03/03/2023

Remark: Only for information – Overview 75G to 85GHz with HT mode

7.1.13 Frequency range 81 GHz – 93 GHz – Measurement Antenna Vertical

D135_R01T08_TX_RSE_81G_93GHz_EUT_90_Ant_V_CW_mode_mid_FCC_ISED



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

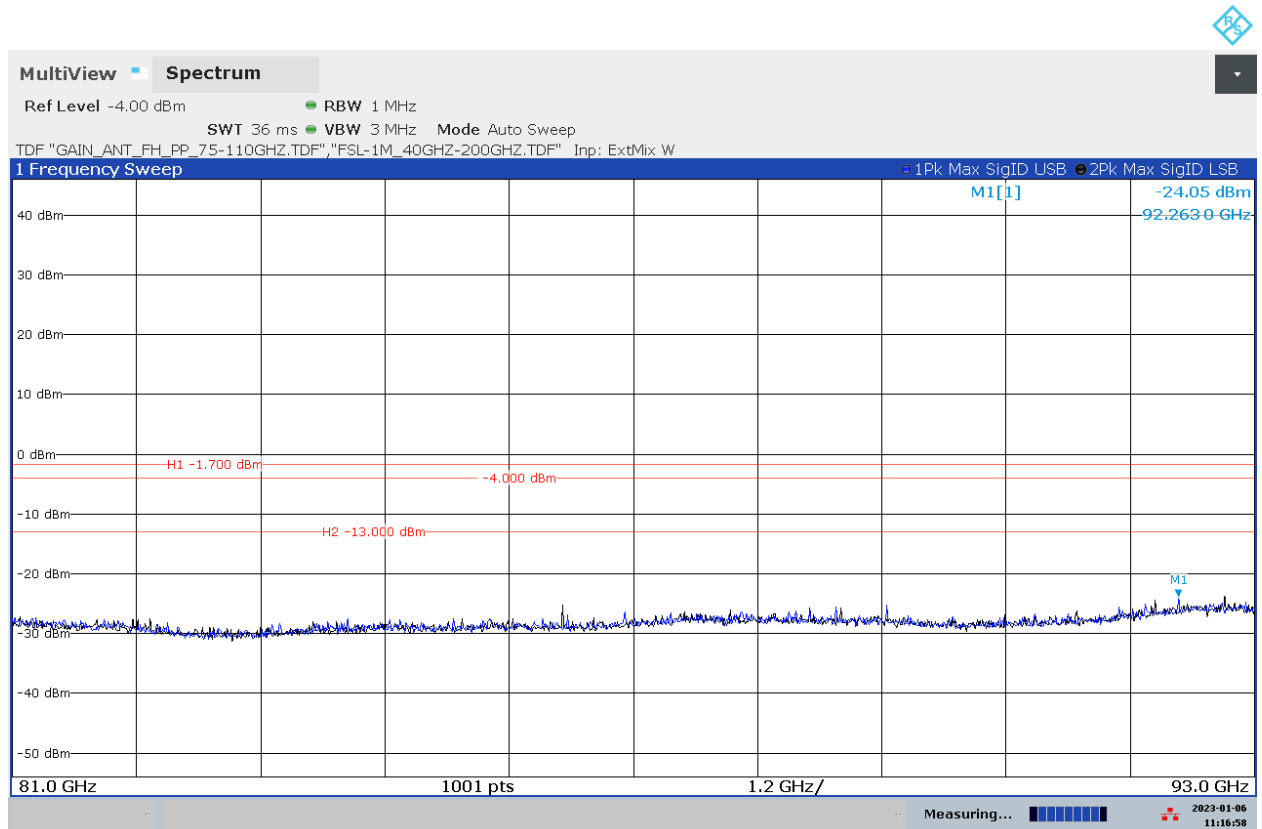
Limit line for FCC: -1.7 dBm – Results: Passed,

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.14 Frequency range 81 GHz – 93 GHz – Measurement Antenna Horizontal

D136a_R01T08_TX_RSE_81G_93GHz_EUT_90_Ant_H_CW_mode_mid_FCC



11:16:58 AM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

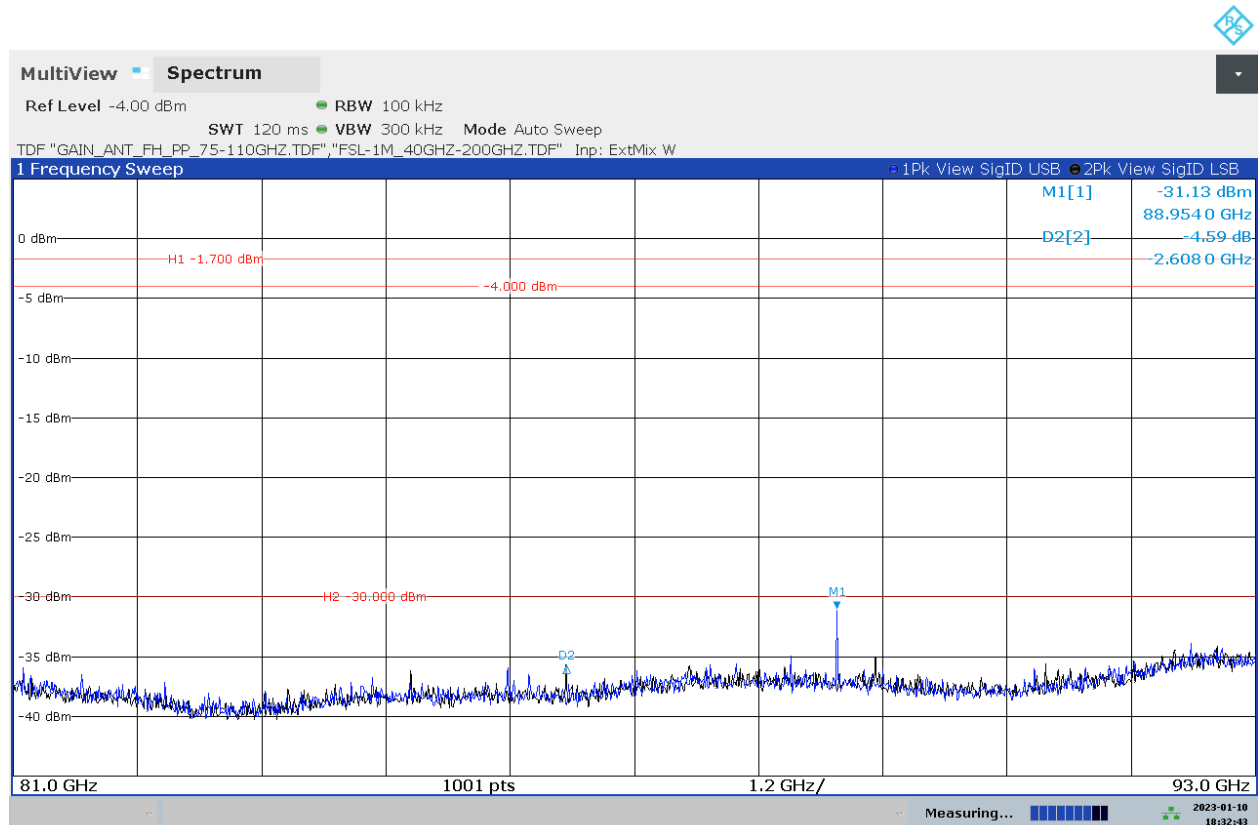
The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for FCC: -1.7 dBm – Results: Passed,

Other Limit lines are not related to this measurement.

D136b_R01T08_TX_RSE_81G_93GHz_EUT_90_Ant_H_CW_mode_mid_ISED



06:32:43 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

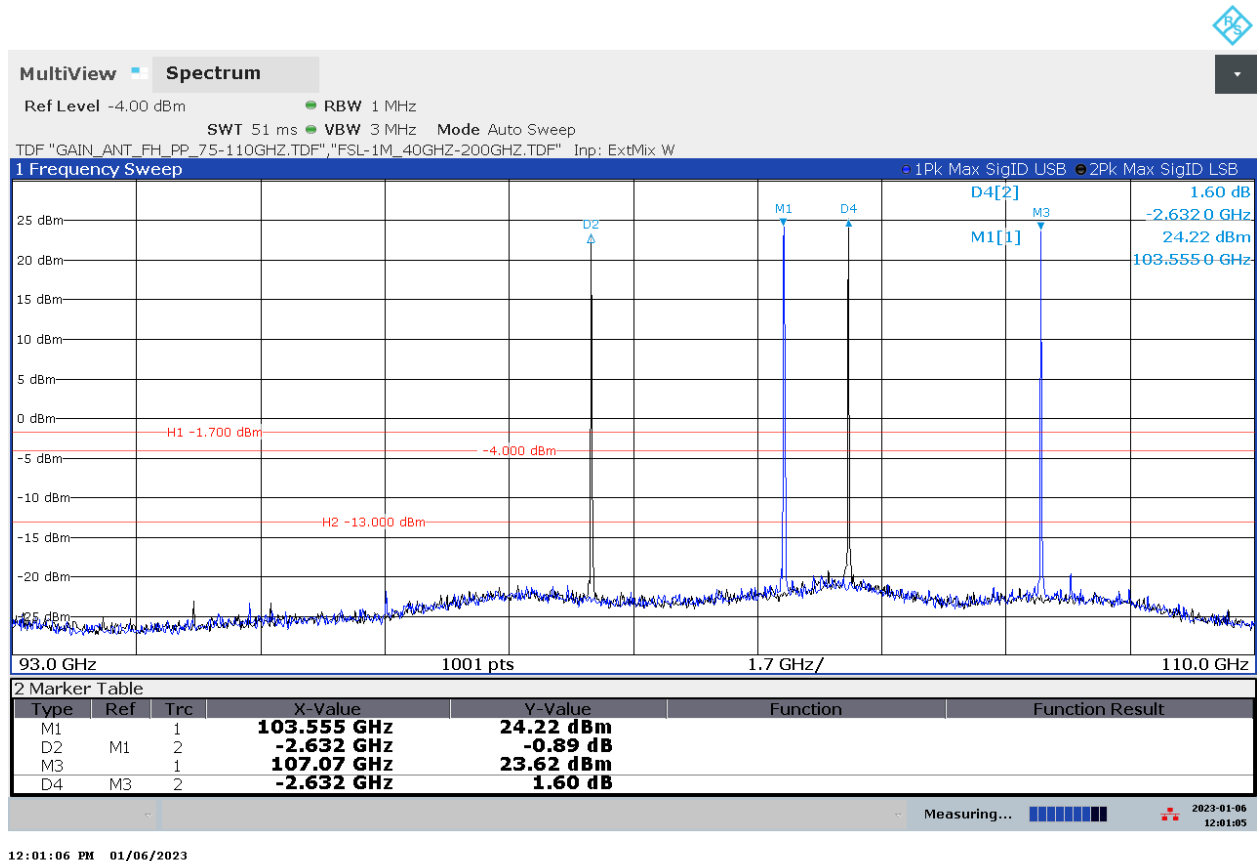
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.15 Frequency range 93 GHz – 110 GHz – Measurement Antenna Vertical

D137a_R01T08_TX_RSE_93G_110GHz_EUT_90_Ant_V_CW_mode_FCC



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

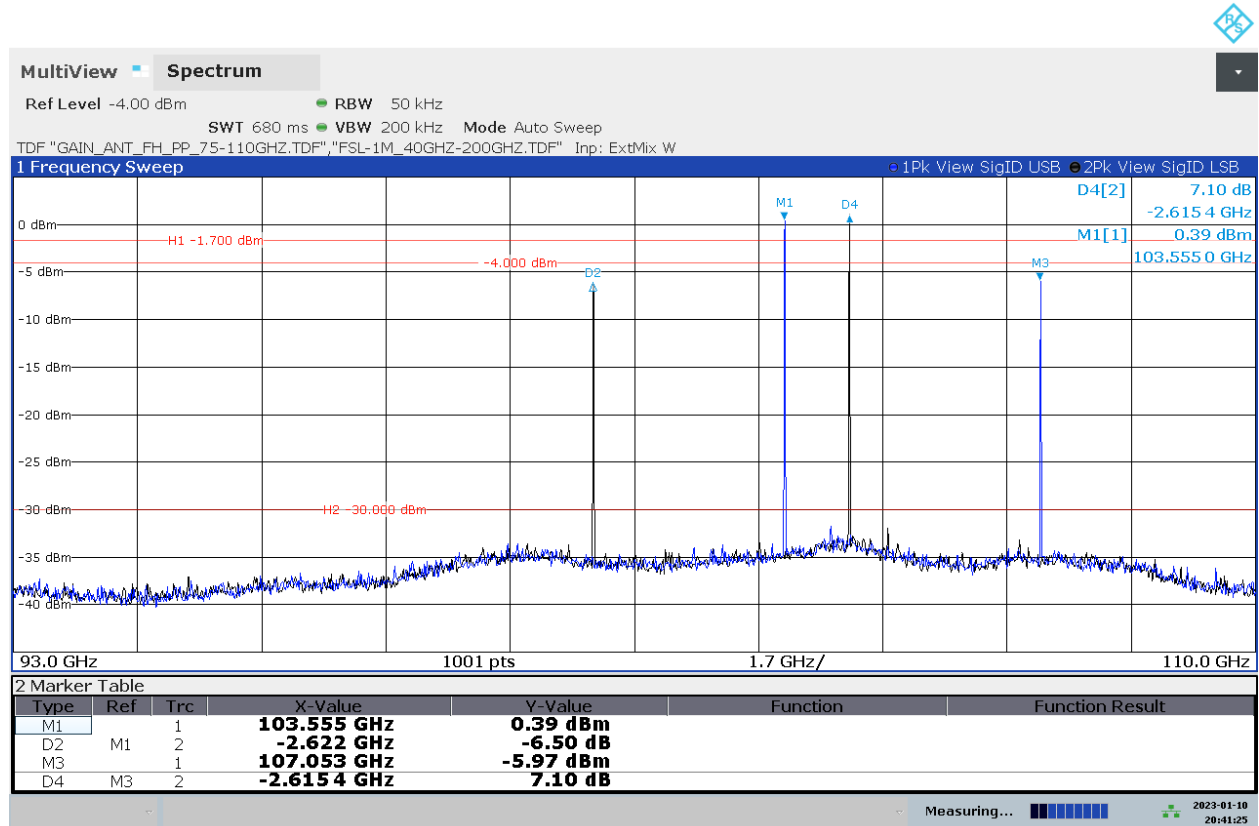
The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for FCC: -1.7 dBm – Results: Passed,
Other Limit lines are not related to this measurement.

D137b_R01T08_TX_RSE_93G_110GHz_EUT_90_Ant_V+H_CW_mode_ISED



08:41:25 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

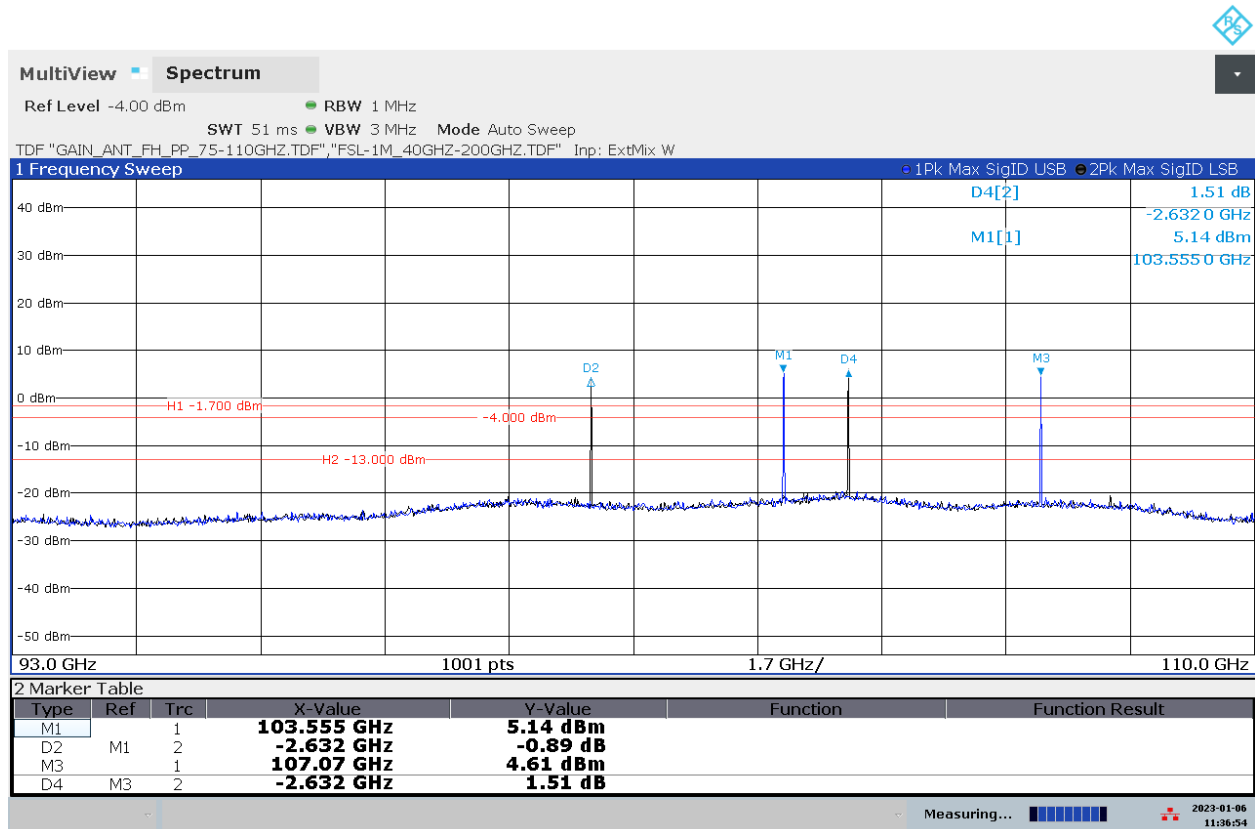
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.16 Frequency range 93 GHz – 110 GHz – Measurement Antenna Horizontal

D138_R01T08_TX_RSE_93G_110GHz_EUT_90_Ant_H_CW_mode_FCC



11:36:55 AM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

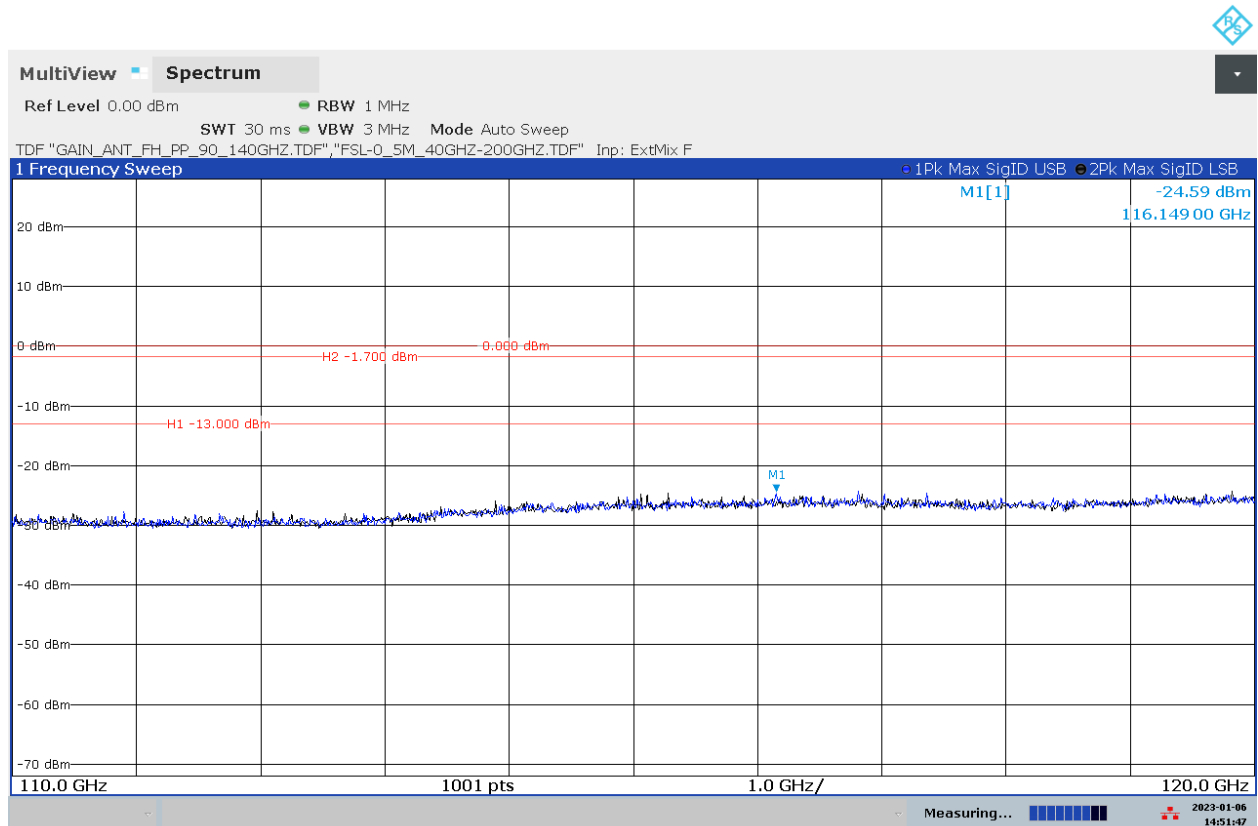
Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

7.1.17 Frequency range 110 GHz – 120 GHz – Measurement Antenna Vertical

D139_01a_R01T08_TX_RSE_110G_120GHz_EUT_90_Ant_V_CW_mode_FCC



02:51:47 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

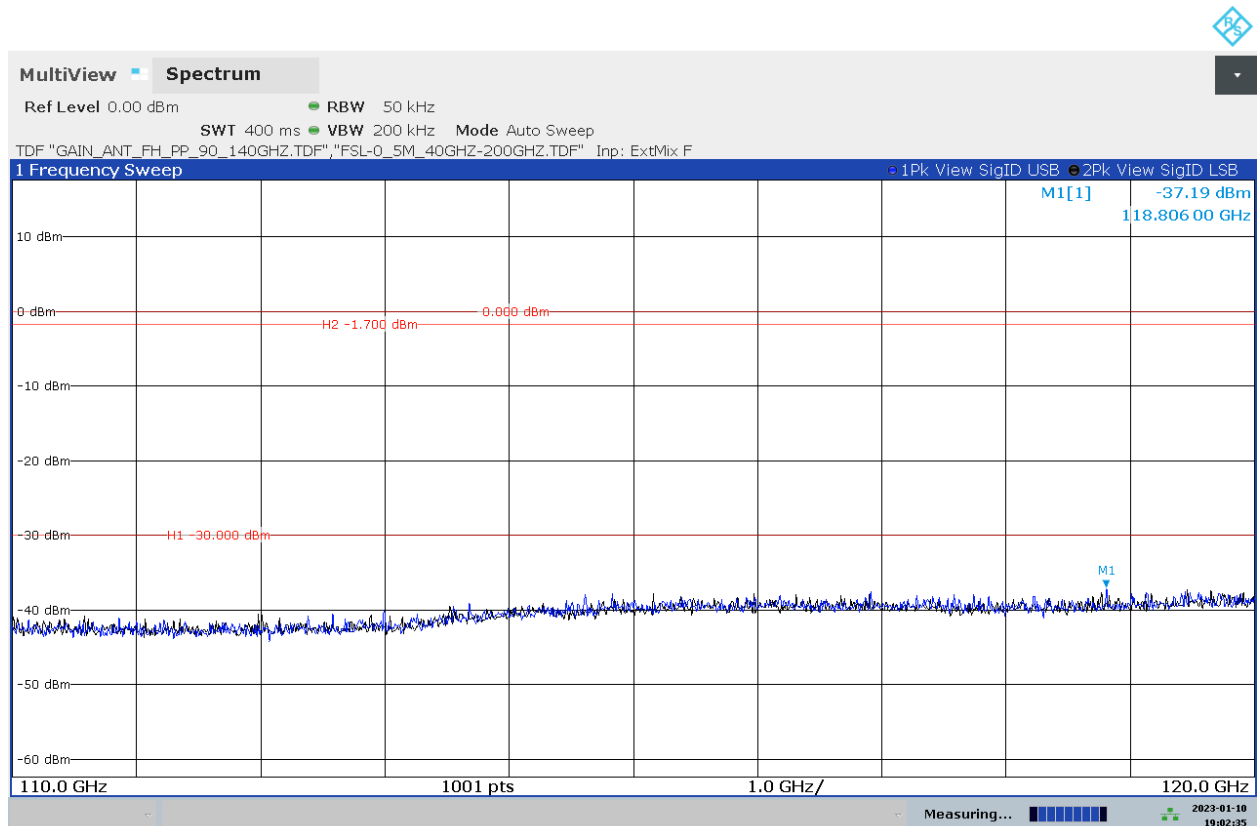
The signals which are overlapping are real signals and related to Assessment.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D139_01b_R01T08_TX_RSE_110G_120GHz_EUT_90_Ant_V_CW_mode_ISED



07:02:35 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

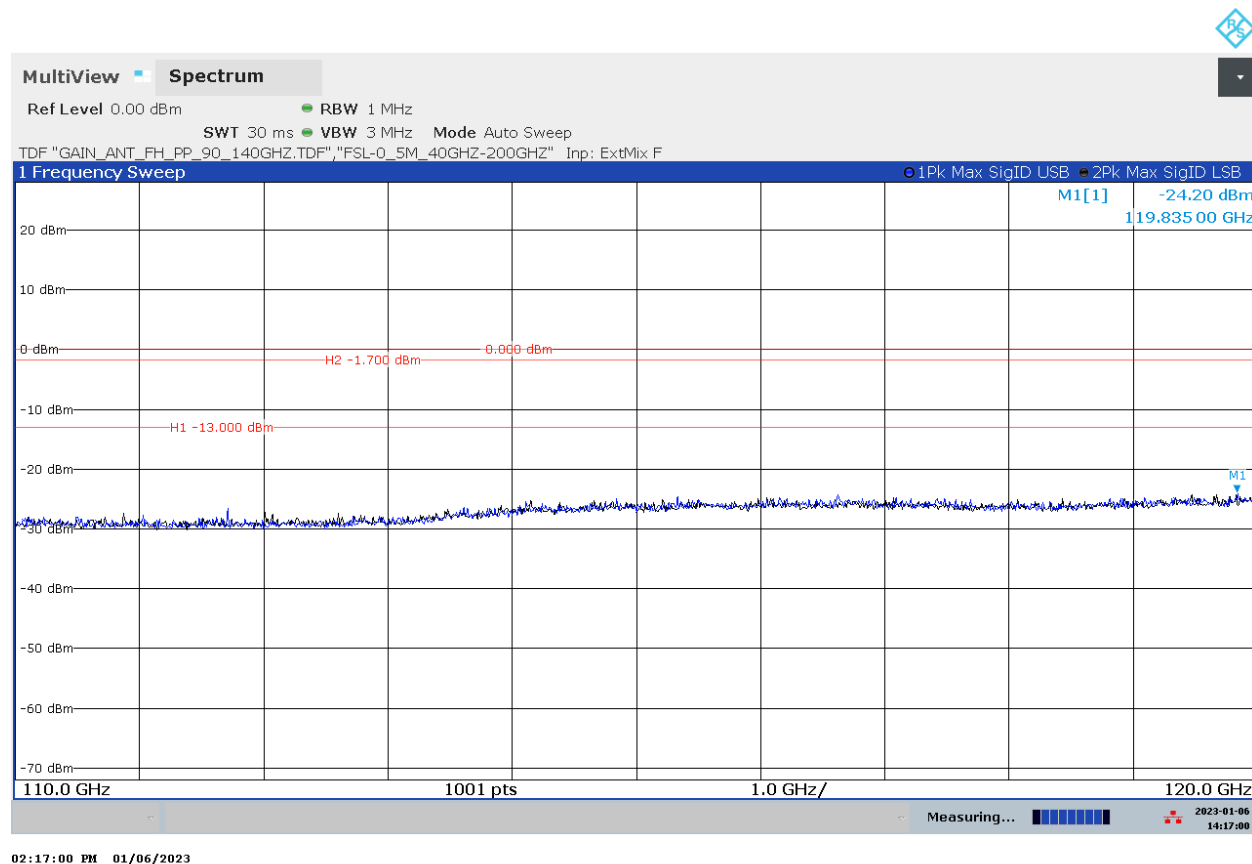
The signals which are overlapping are real signals and related to Assessment.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.18 Frequency range 110 GHz – 120 GHz – Measurement Antenna Horizontal

D140_01a_R01T08_TX_RSE_110G_120GHz_EUT_90_Ant_H_CW_mode_FCC



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

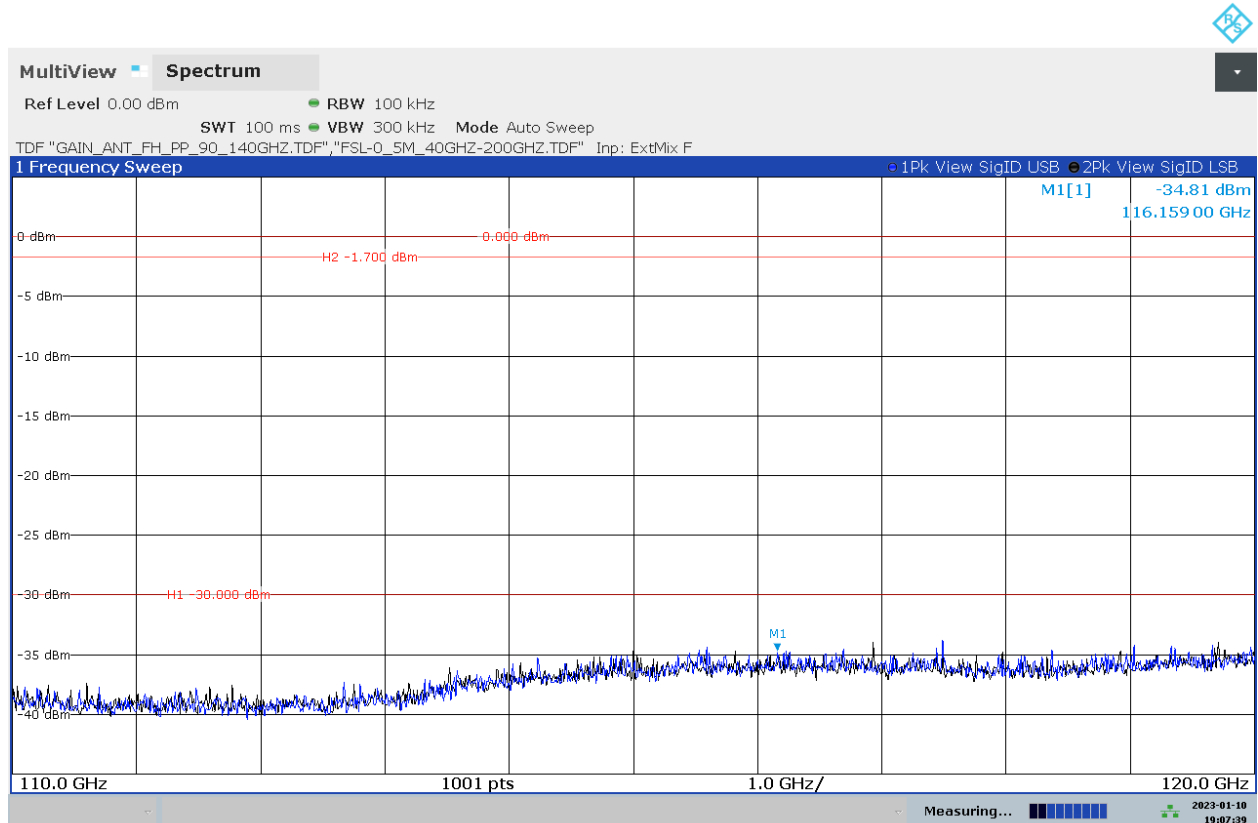
The signals which are overlapping are real signals and related to Assessment.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D140_01b_R01T08_TX_RSE_110G_120GHz_EUT_90_Ant_H_CW_mode_ISED



07:07:39 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

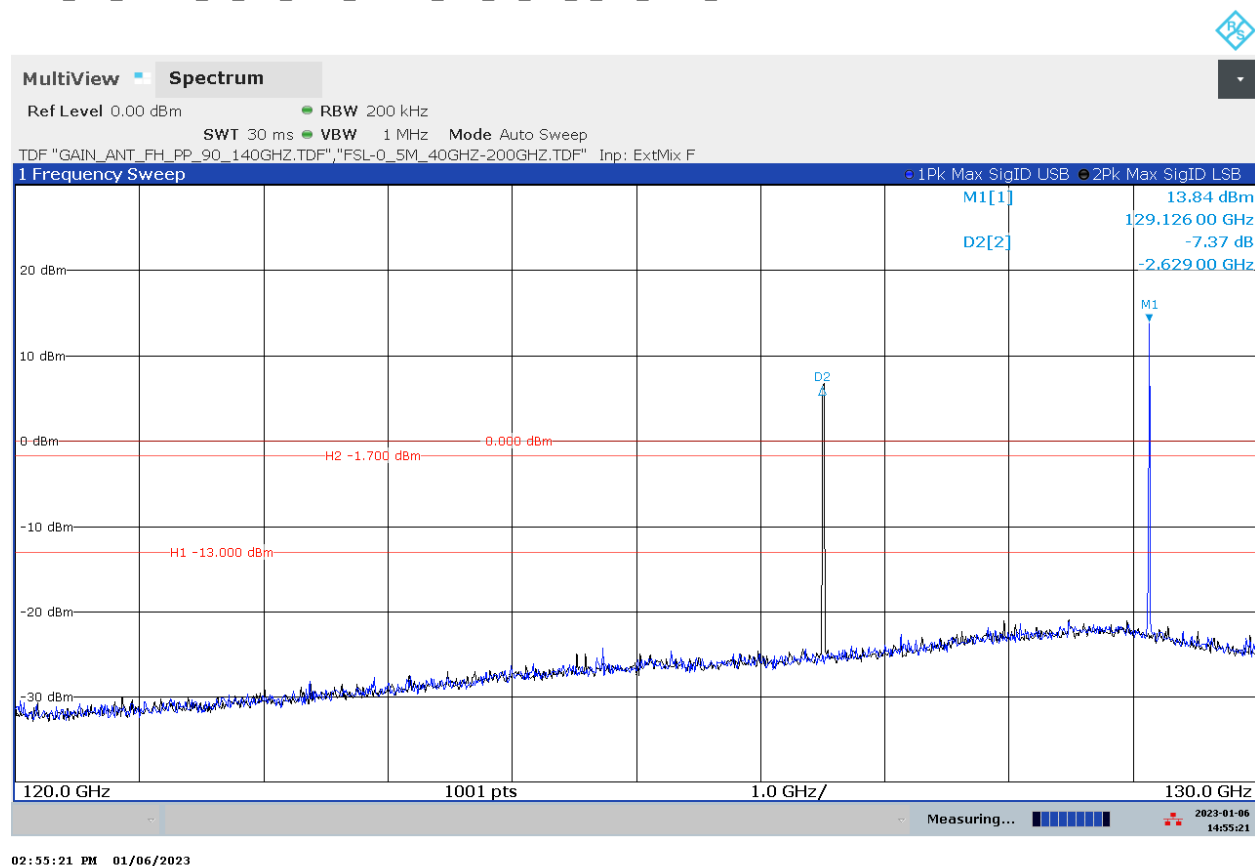
The signals which are overlapping are real signals and related to Assessment.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.19 Frequency range 120 GHz – 130 GHz – Measurement Antenna Vertical

D139_02a_R01T08_TX_RSE_120G_130GHz_EUT_90_Ant_V_CW_mode_FCC



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

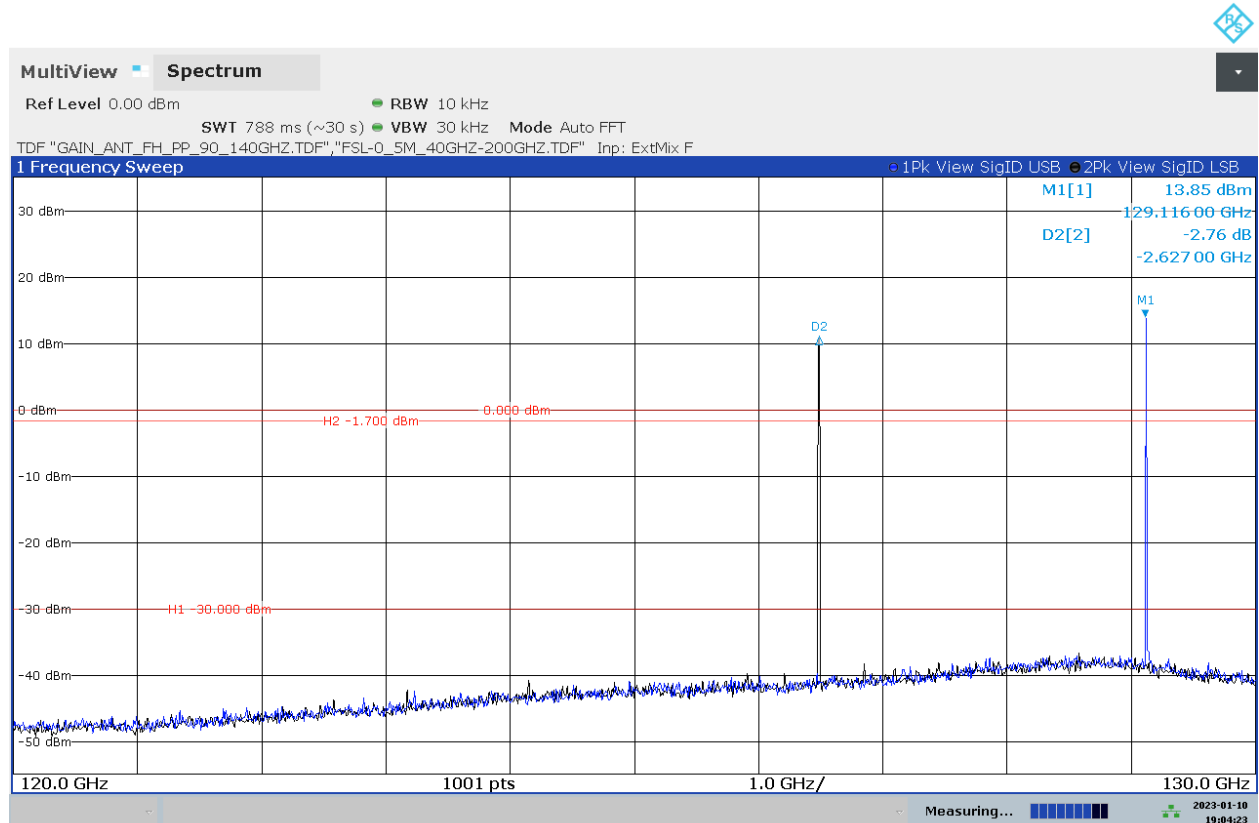
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D139_02b_R01T08_TX_RSE_120G_130GHz_EUT_90_Ant_V+H_CW_mode_ISED



07:04:23 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

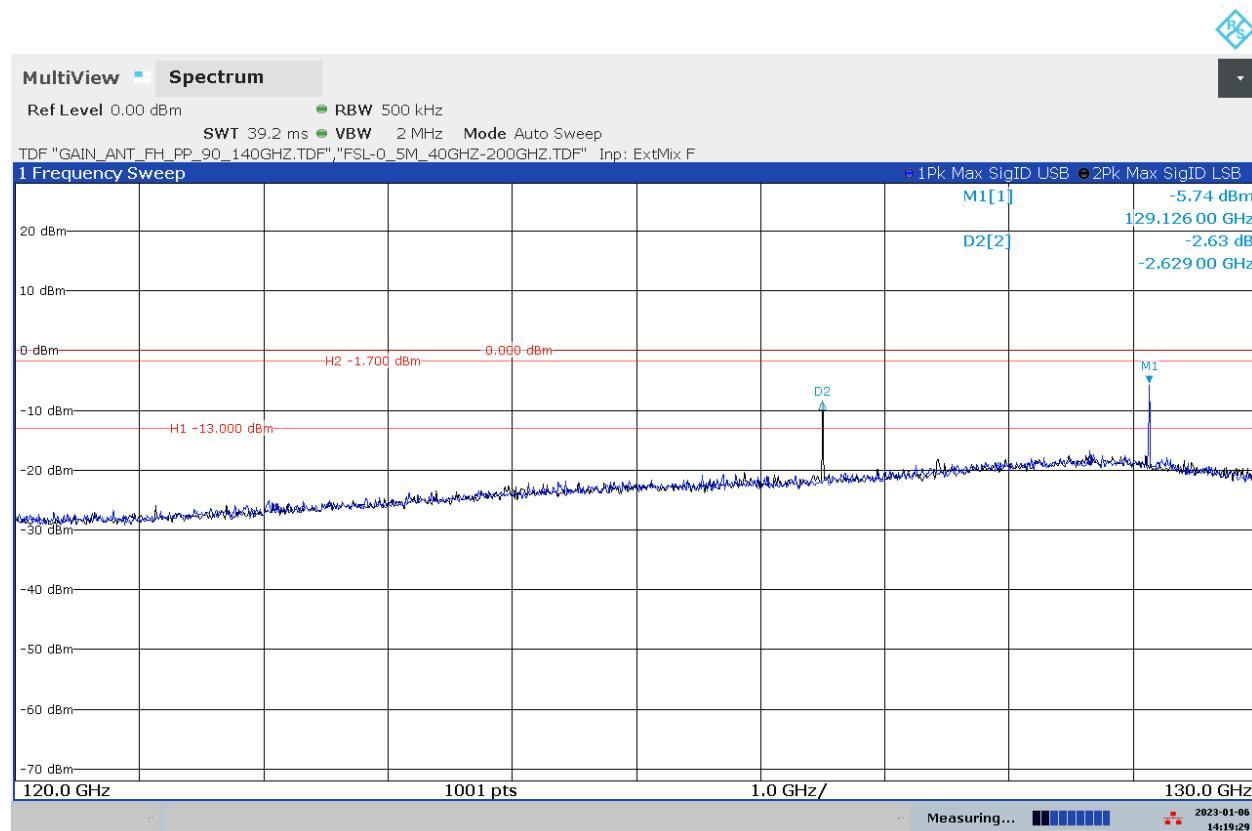
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.20 Frequency range 120 GHz – 130 GHz – Measurement Antenna Horizontal

D140_02a_R01T08_TX_RSE_120G_130GHz_EUT_90_Ant_H_CW_mode_FCC



02:19:29 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

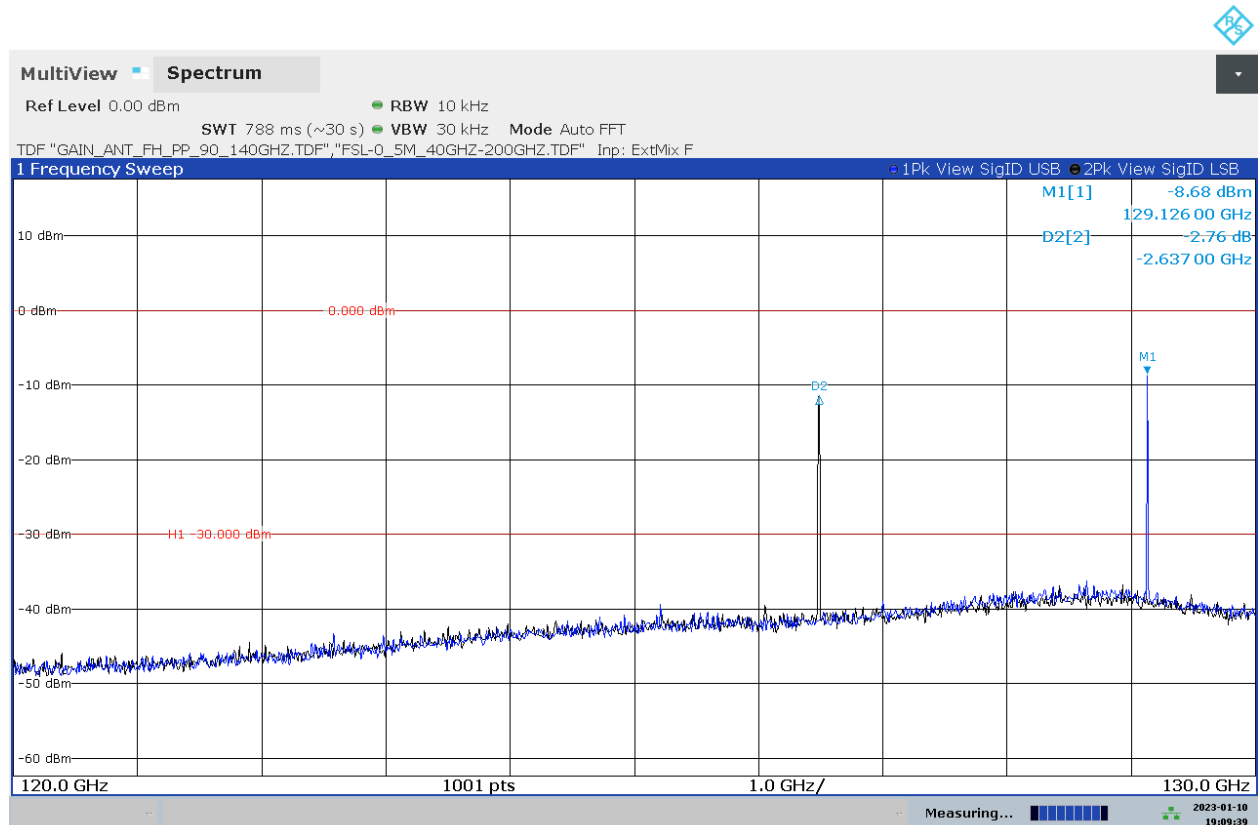
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D140_02b_R01T08_TX_RSE_120G_130GHz_EUT_90_Ant_H_CW_mode_ISED



07:09:39 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

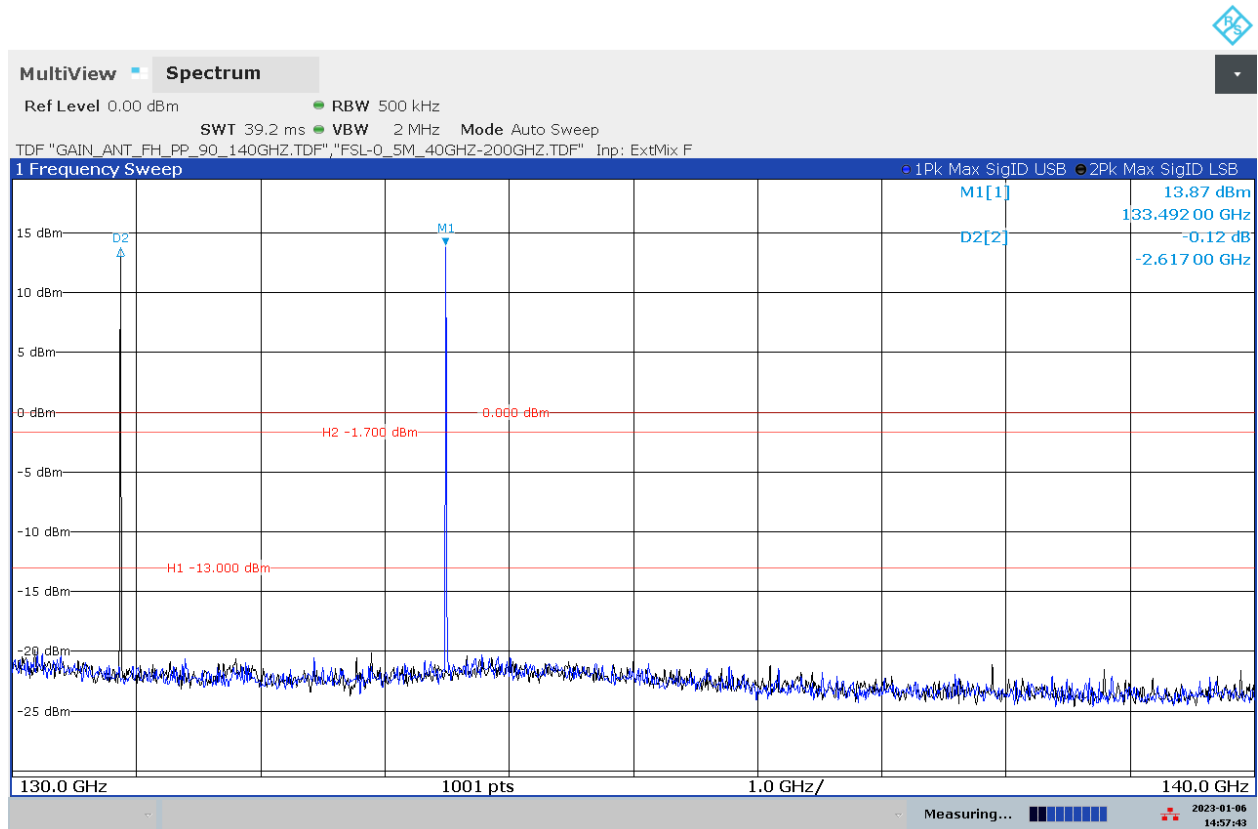
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.21 Frequency range 130 GHz – 140 GHz – Measurement Antenna Vertical

D139_03a_R01T08_TX_RSE_130G_140GHz_EUT_90_Ant_V_CW_mode_FCC



02:57:43 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

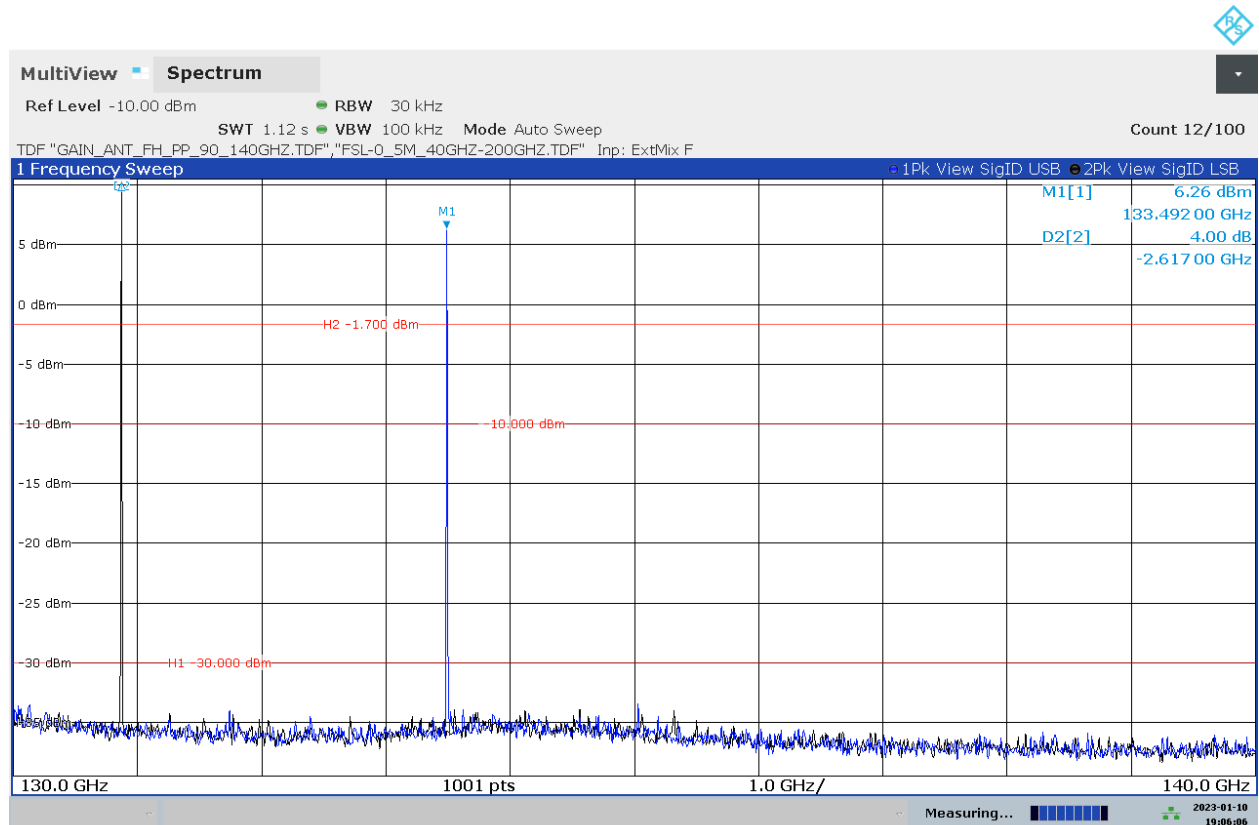
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D139_03b_R01T08_TX_RSE_130G_140GHz_EUT_90_Ant_V_CW_mode_ISED



07:06:06 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

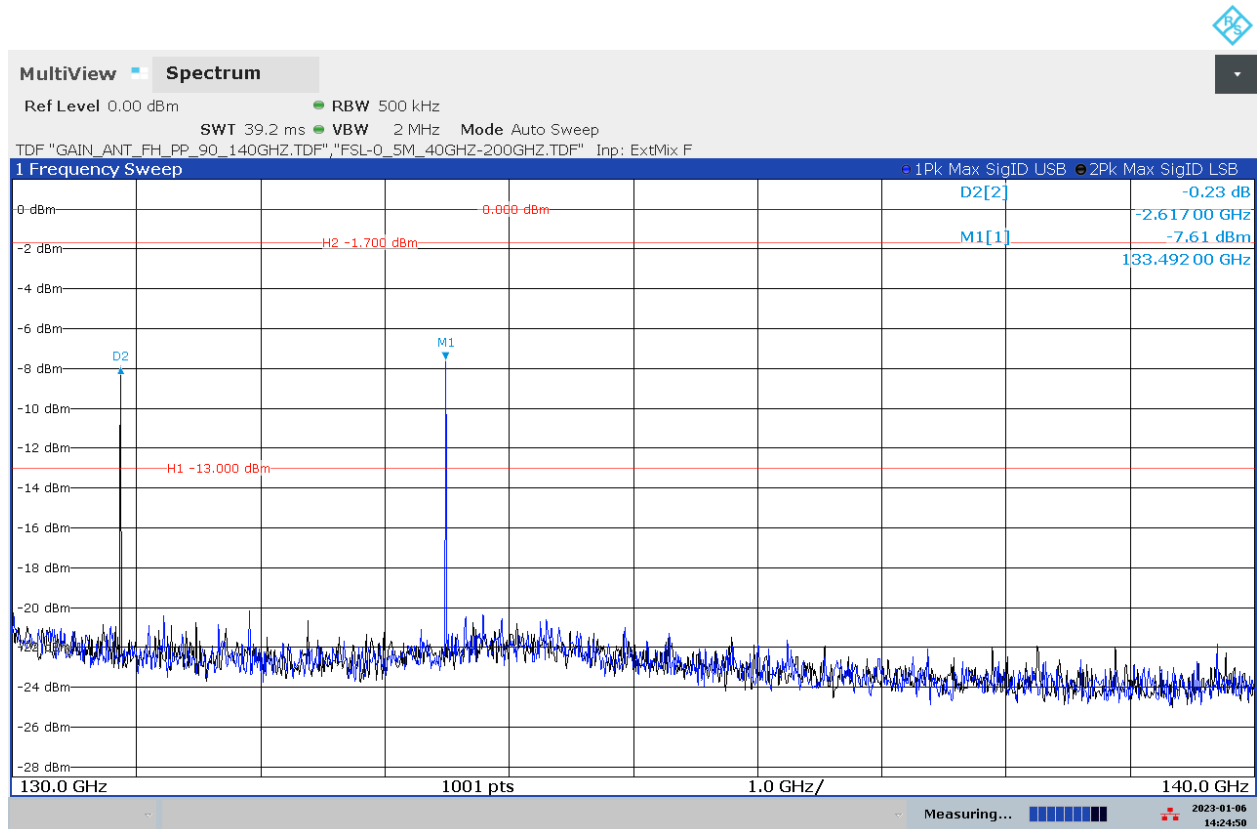
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.22 Frequency range 130 GHz – 140 GHz – Measurement Antenna Horizontal

D140_03a_R01T08_TX_RSE_130G_140GHz_EUT_90_Ant_H_CW_mode_FCC



02:24:50 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

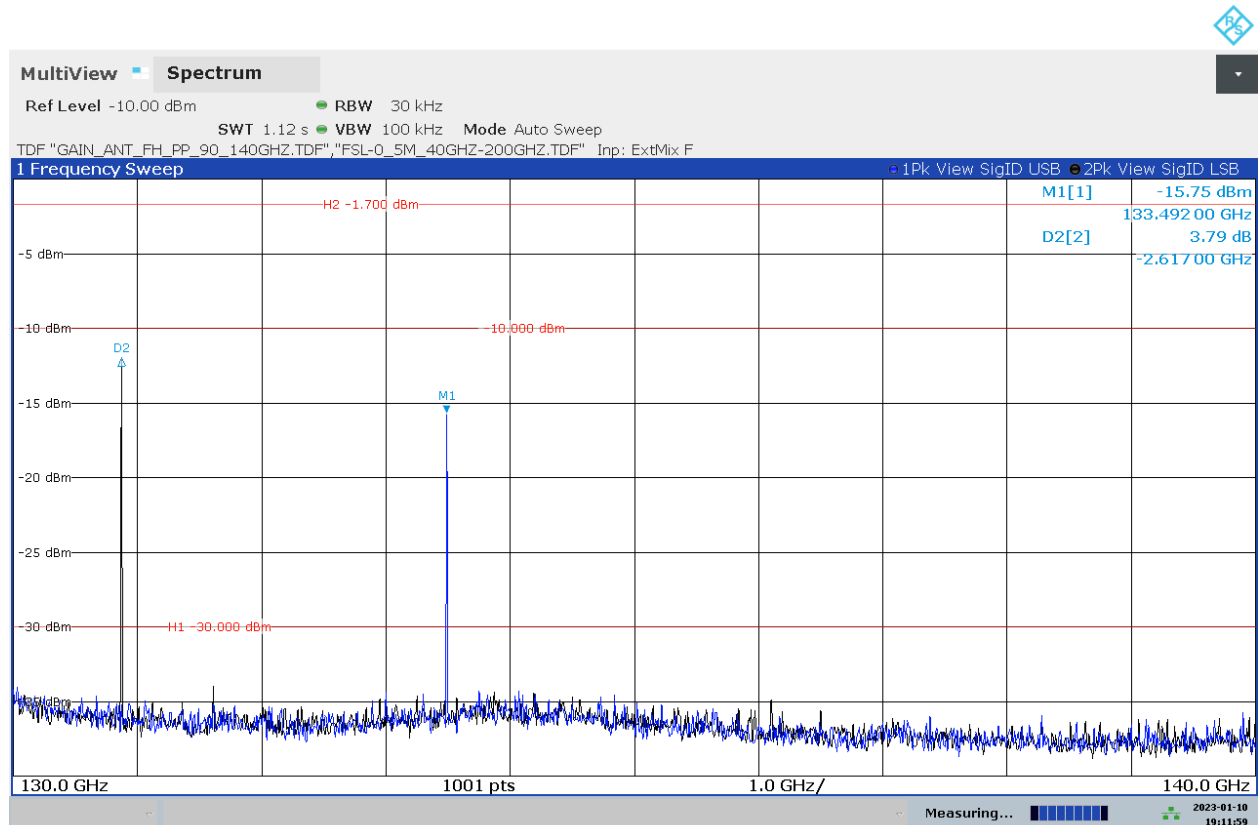
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D140_03b_R01T08_TX_RSE_130G_140GHz_EUT_90_Ant_H_CW_mode_ISED



07:11:59 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

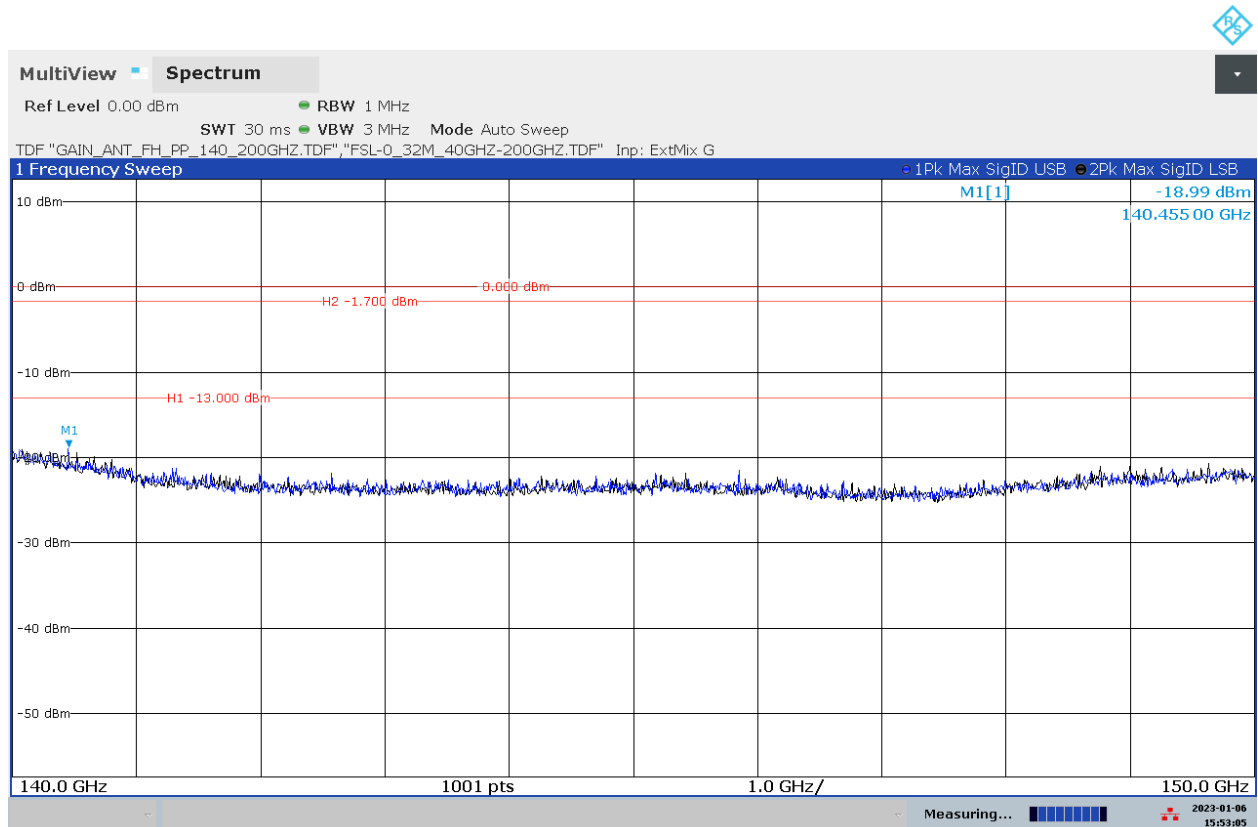
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.23 Frequency range 140 GHz – 150 GHz – Measurement Antenna Vertical

D141_01_R01T08_TX_RSE_140G_150GHz_EUT_90_Ant_V_CW_mode_FCC



03:53:06 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

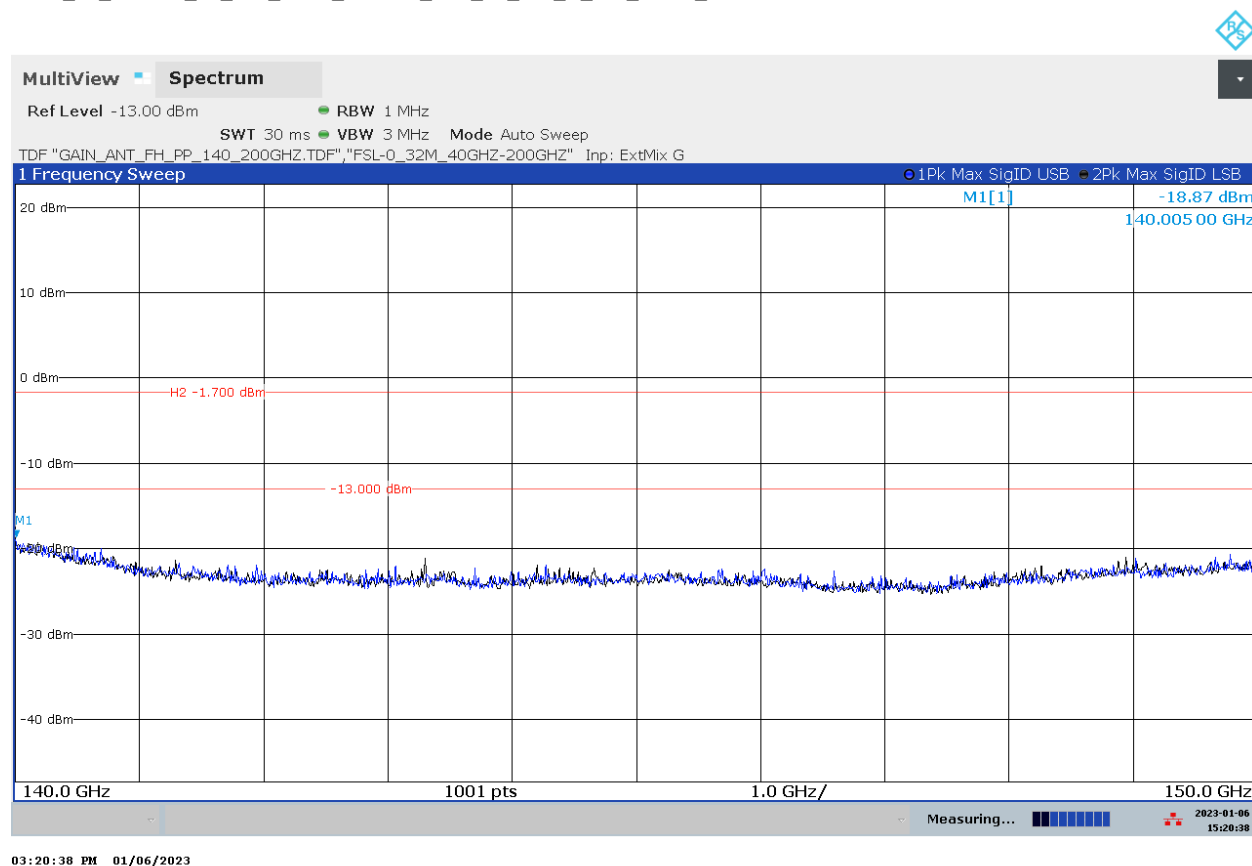
Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

7.1.24 Frequency range 140 GHz – 150 GHz – Measurement Antenna Horizontal

D142_01_R01T08_TX_RSE_140G_150GHz_EUT_90_Ant_H_CW_mode_FCC



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

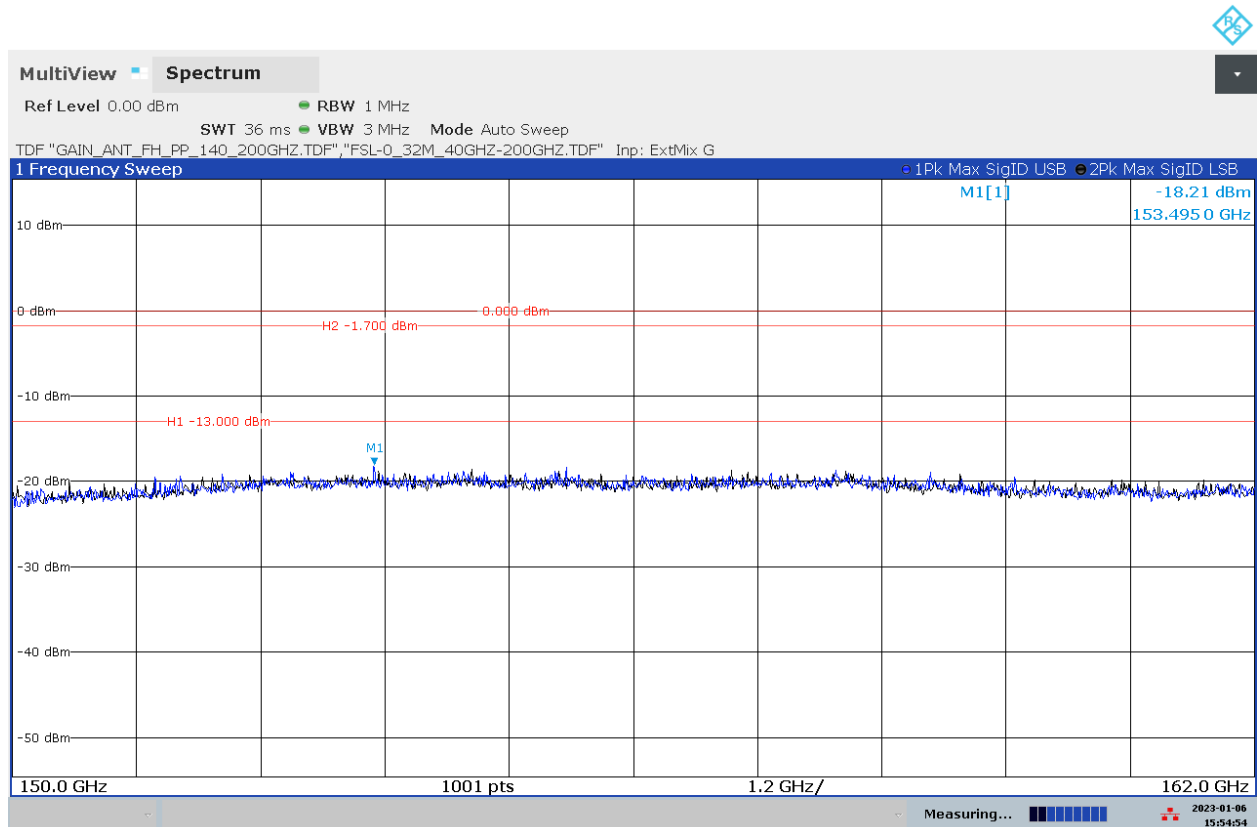
Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

7.1.25 Frequency range 150 GHz – 162 GHz – Measurement Antenna Vertical

D141_02_R01T08_TX_RSE_150G_162GHz_EUT_90_Ant_V_CW_mode_FCC



03:54:54 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

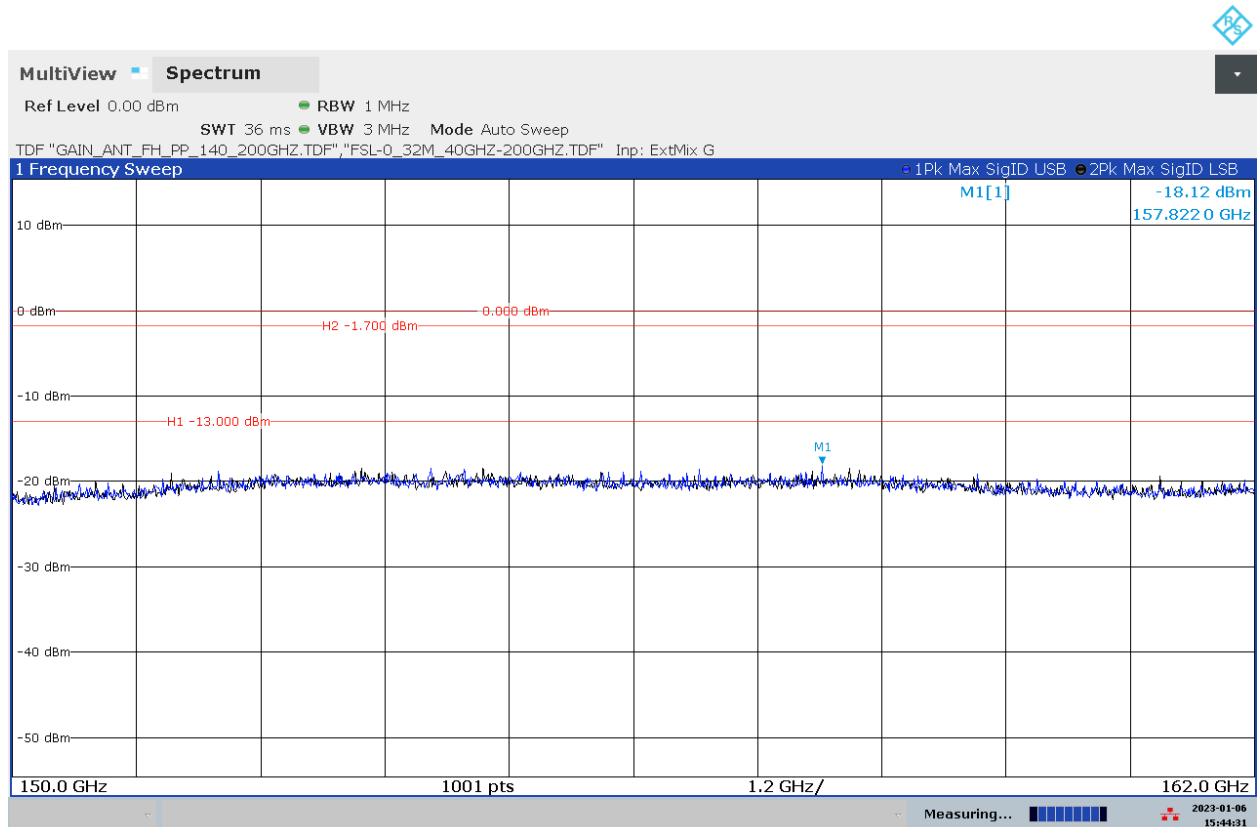
Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

7.1.26 Frequency range 150 GHz – 162 GHz – Measurement Antenna Horizontal

D142_02_R01T08_TX_RSE_150G_162GHz_EUT_90_Ant_H_CW_mode_FCC



03:44:31 PM 01/06/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

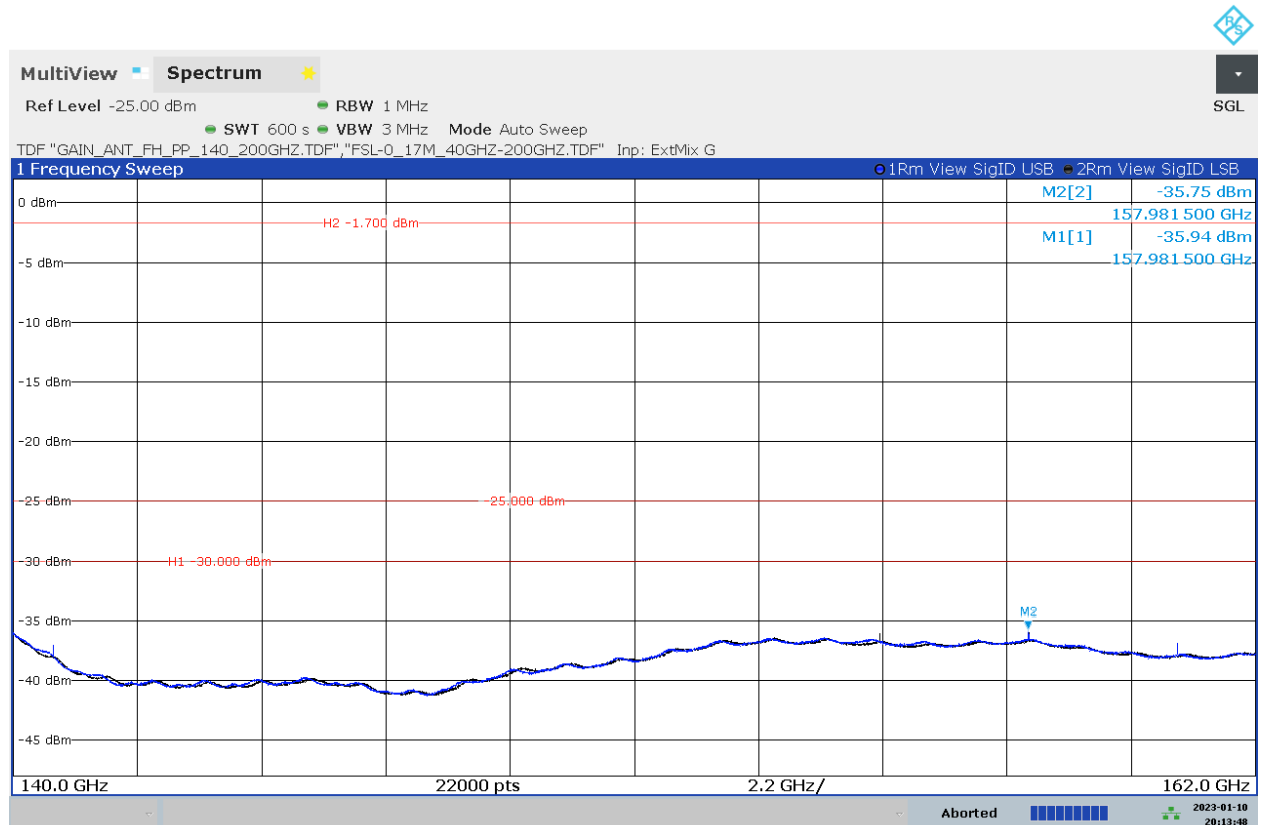
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: -1.7 dBm.

Results: Passed

Other Limit lines are not related to this measurement.

D141_03_R01T08_TX_RSE_140G_162GHz_EUT_90_Ant_V_CW_mode_ISED



08:13:48 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

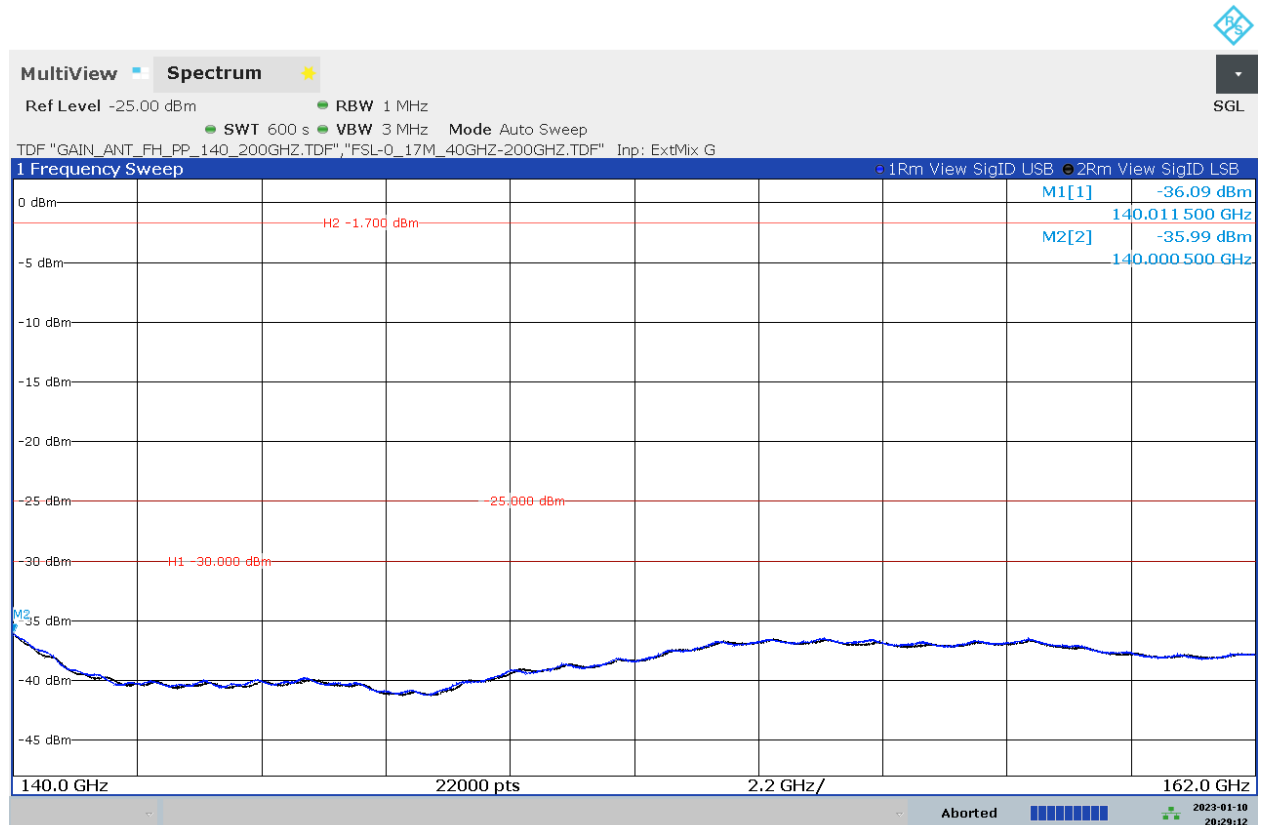
The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

D142_03_R01T08_TX_RSE_140G_162GHz_EUT_90_Ant_H_CW_mode_ISED



08:29:12 PM 01/10/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment.

The signals which are overlapping are real signals and related to Assessment.

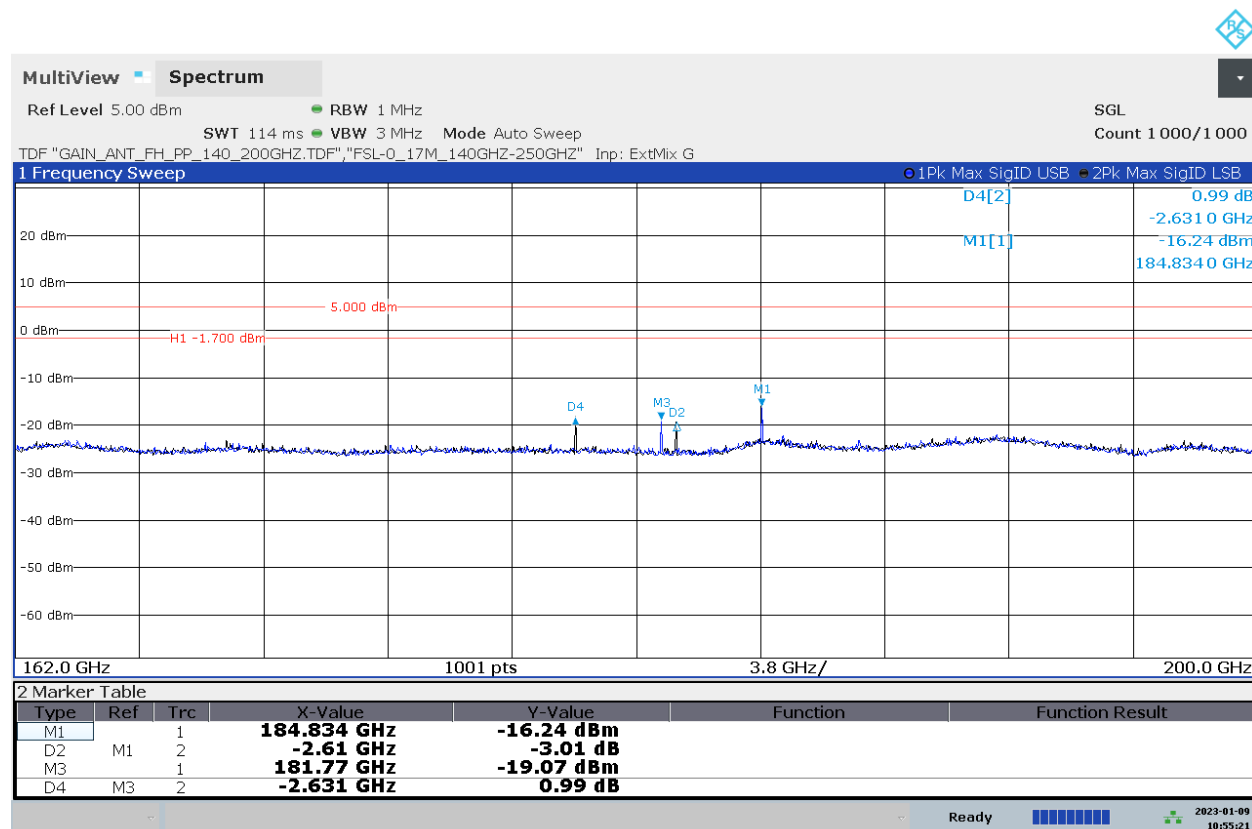
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line for ISED: -30 dBm – Results: Passed

Other Limit lines are not related to this measurement.

7.1.27 Frequency range 162 GHz – 200 GHz – Measurement Antenna Vertical

D143 R01T08 TX RSE 162G 200GHz EUT 90 Ant V CW mode



10:55:21 AM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

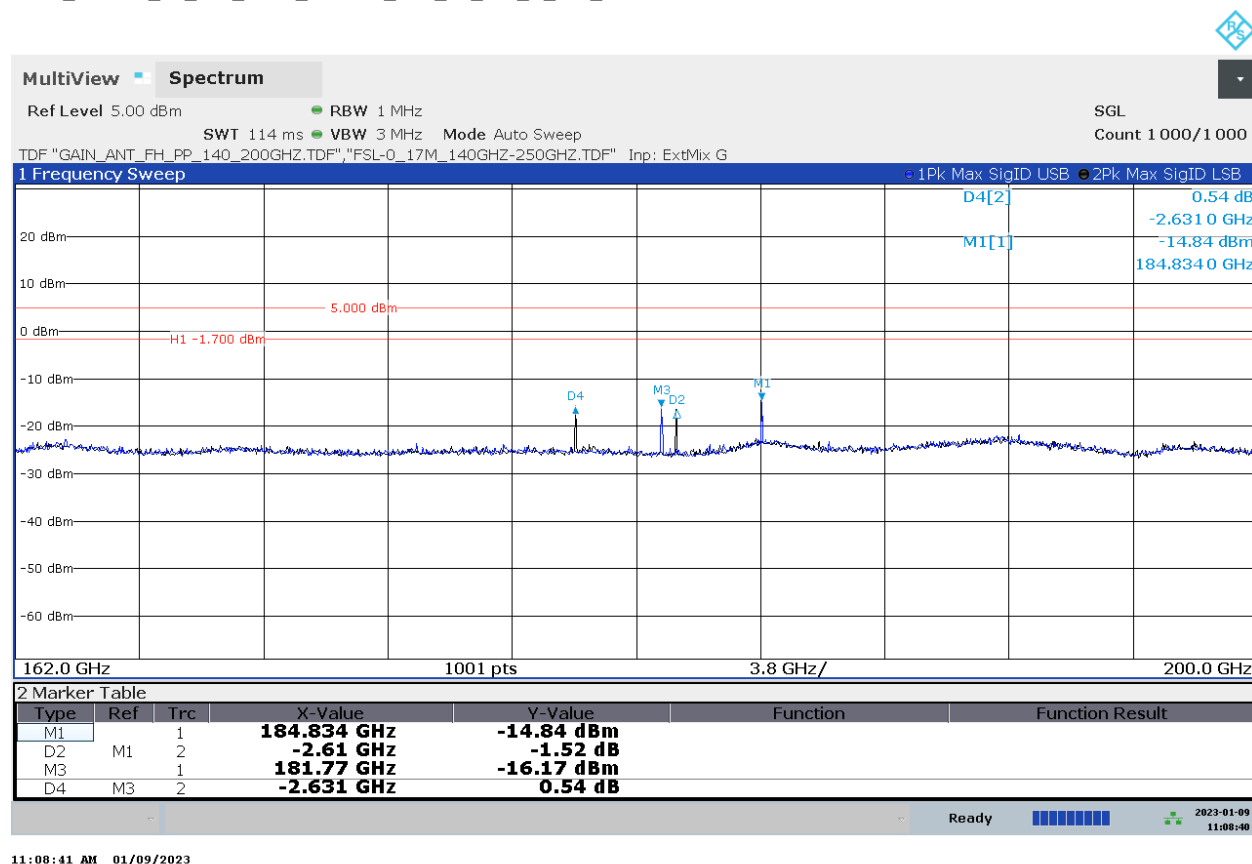
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: -1.7 dBm. Results: Passed

5 dBm is the Ref level of Spectrum Analyzer.

7.1.28 Frequency range 162 GHz – 200 GHz – Measurement Antenna Horizontal

D145_R01T08_TX_RSE_162G_200GHz_EUT_90_Ant_H_CW_mode



Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

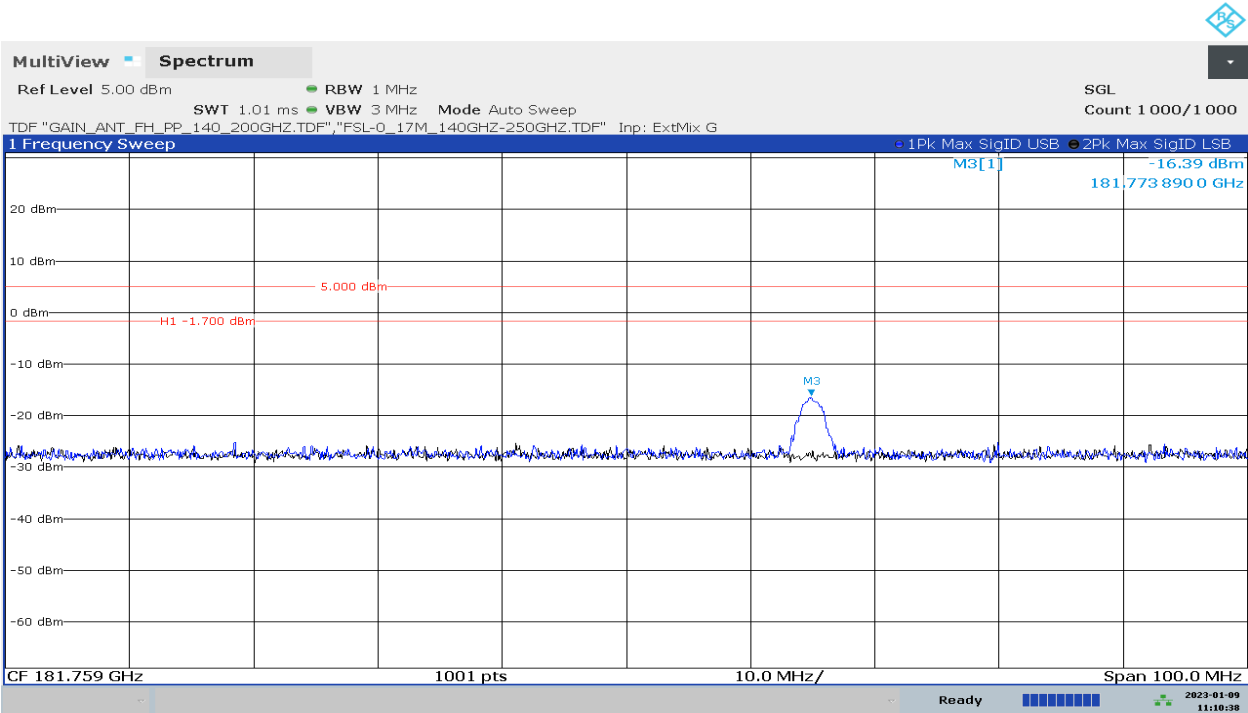
Limit line: -1.7 dBm.

Results: Passed

5 dBm is the Ref level of Spectrum Analyzer.

Two measurements have been performed at M1 and M3 and found no critical Emission, check below Diagrams, Diagram D145_01 and D145_02

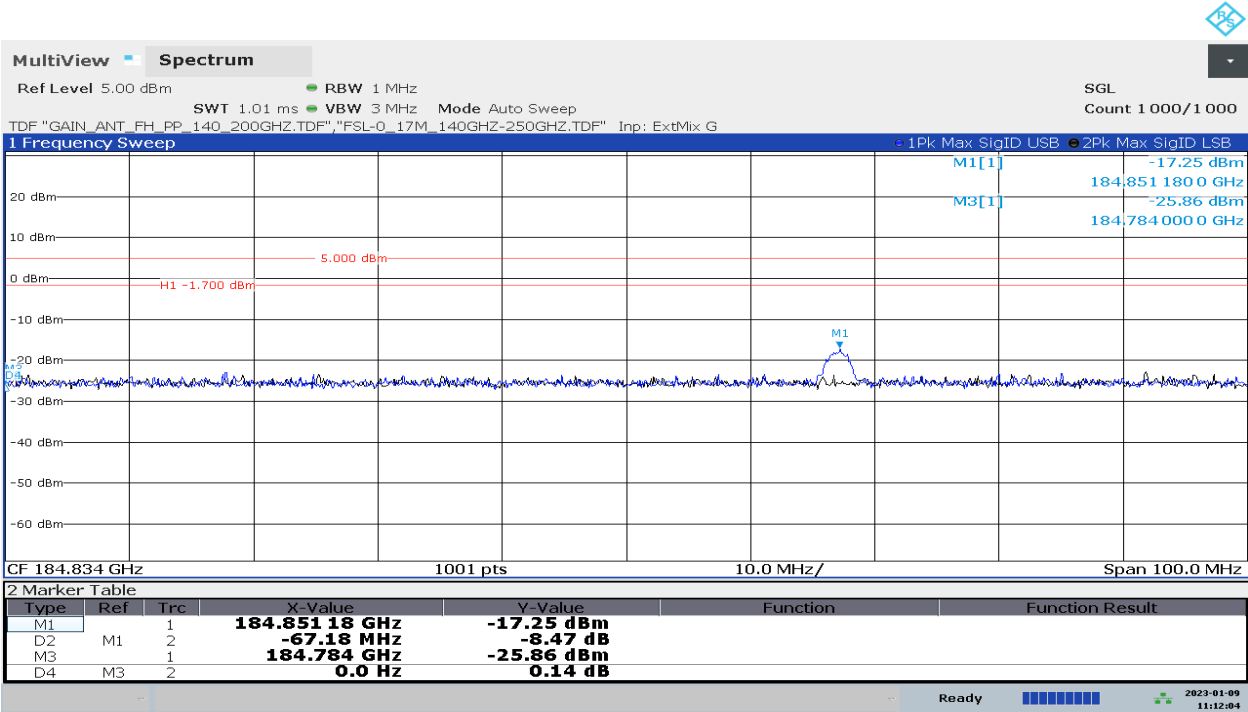
D145_01_R01T08_TX_RSE_162G_200GHz_EUT_90_Ant_H_CW_mode_M3_info_only



11:10:38 AM 01/09/2023

Remark: Final Measurement performed at Marker 3 @181.77GHz, this is a ghost signal, not related to Results.

D145_02_R01T08_TX_RSE_162G_200GHz_EUT_90_Ant_H_CW_mode_M1_info_only

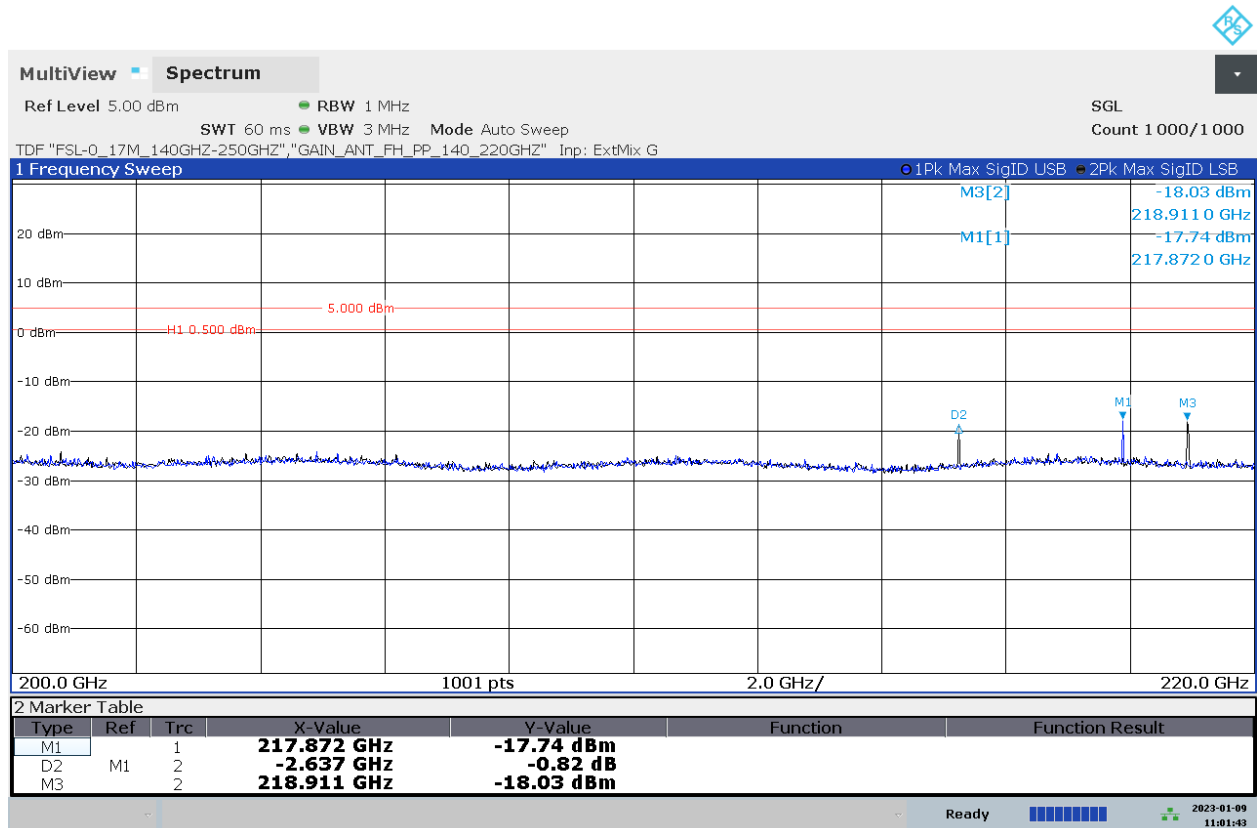


11:12:04 AM 01/09/2023

Remark: Final Measurement performed at Marker 1 @184.85GHz, this is a ghost signal, not related to Results.

7.1.29 Frequency range 200 GHz – 220 GHz – Measurement Antenna Vertical

D144_R01T08_TX_RSE_200G_220GHz_EUT_90_Ant_V_CW_mode



11:01:43 AM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

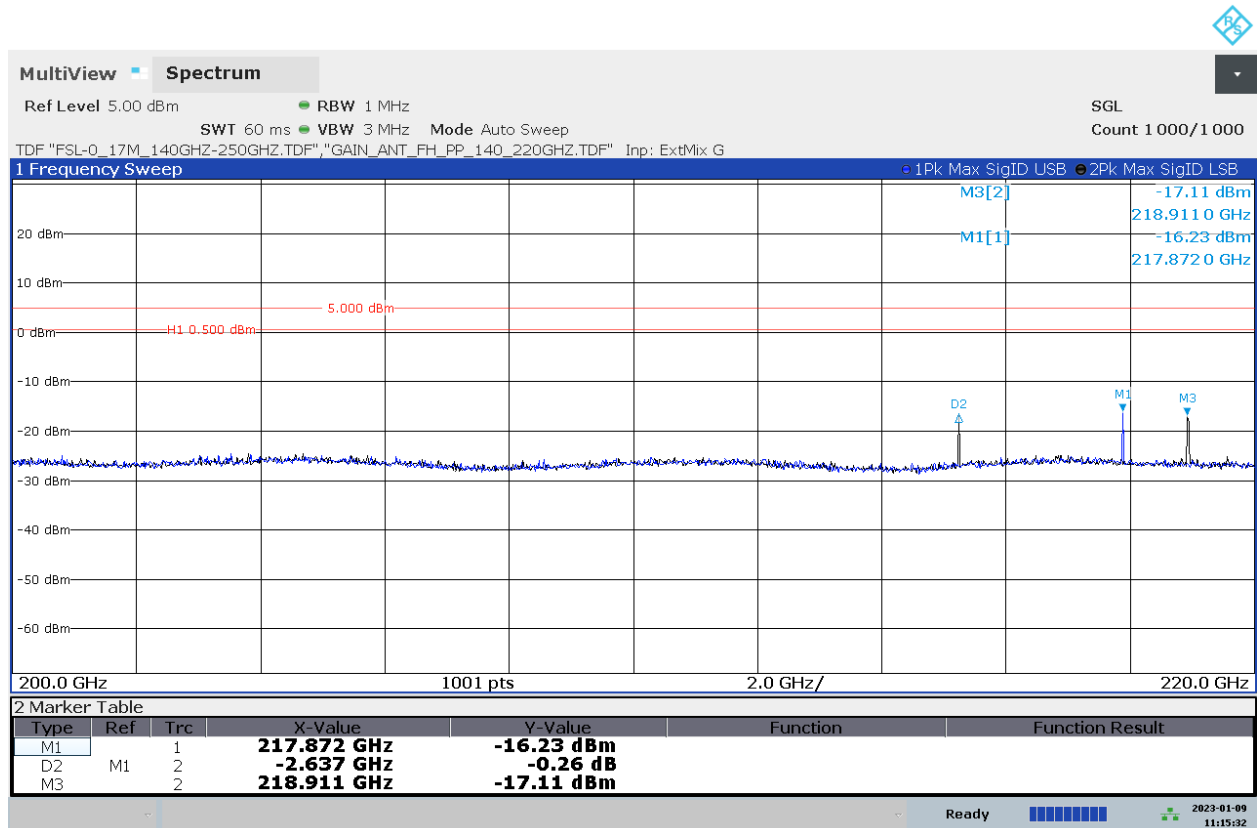
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: 0.5 dBm – Result: Passed.

5 dBm is the Ref level of Spectrum Analyzer.

7.1.30 Frequency range 200 GHz – 220 GHz – Measurement Antenna Horizontal

D146_R01T08_TX_RSE_200G_220GHz_EUT_90_Ant_H_CW_mode



11:15:32 AM 01/09/2023

Remarks:

Since the Signal ID (Image Signal) function of Spectrum Analyzer has been activated, therefore there are many Ghost signals.

The Signals which are not overlapping are ghost signals, therefore not related to Assessment. Every Ghost Signal are verified separately during measurements.

The signals which are overlapping are real signals and related to Assessment.

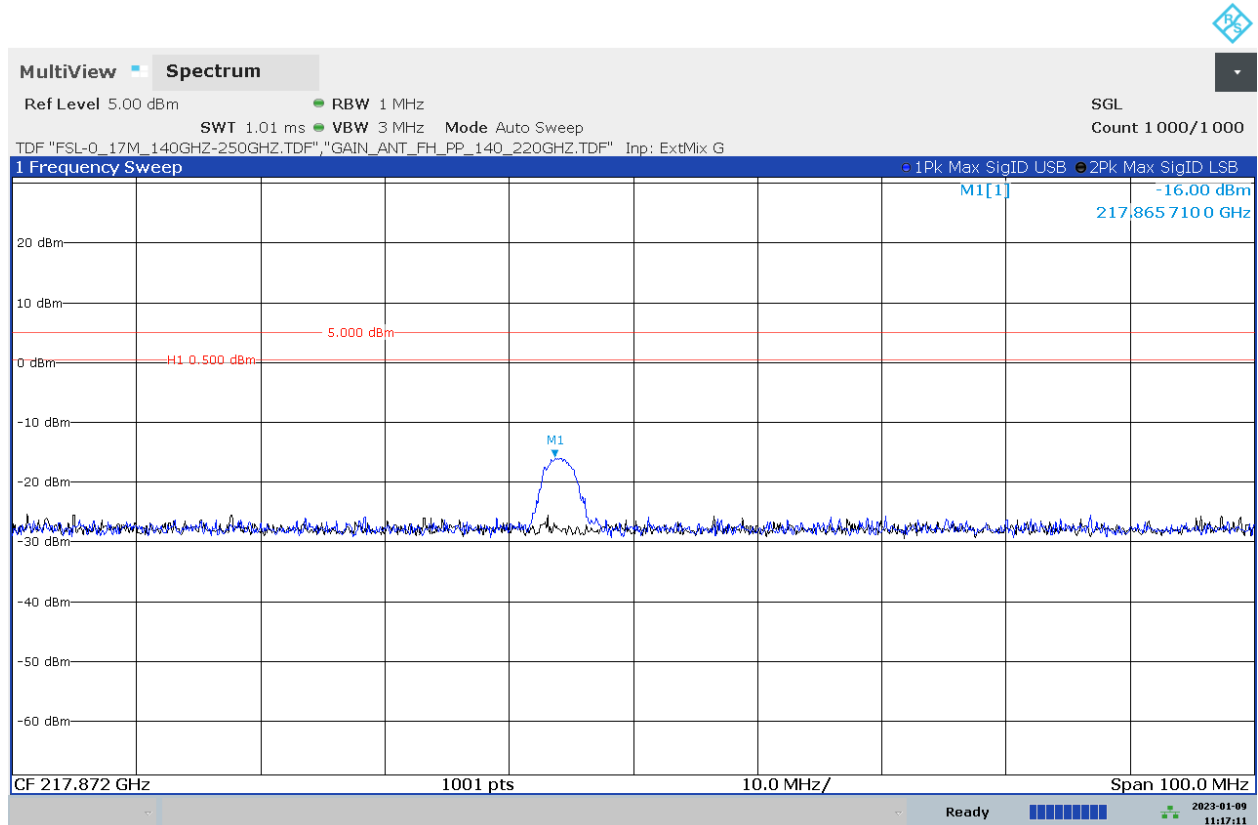
In this Diagram which are over the Limit line are Ghost signals. Not related to Results.

Limit line: 0.5 dBm – Result: Passed.

5 dBm is the Ref level of Spectrum Analyzer.

Two measurements have been performed at M1 and M3 and found no critical Emission, check below Diagrams, Diagram D146_01

D146_01_R01T08_TX_RSE_200G_220GHz_EUT_90_Ant_H_CW_mode_M1_info_only



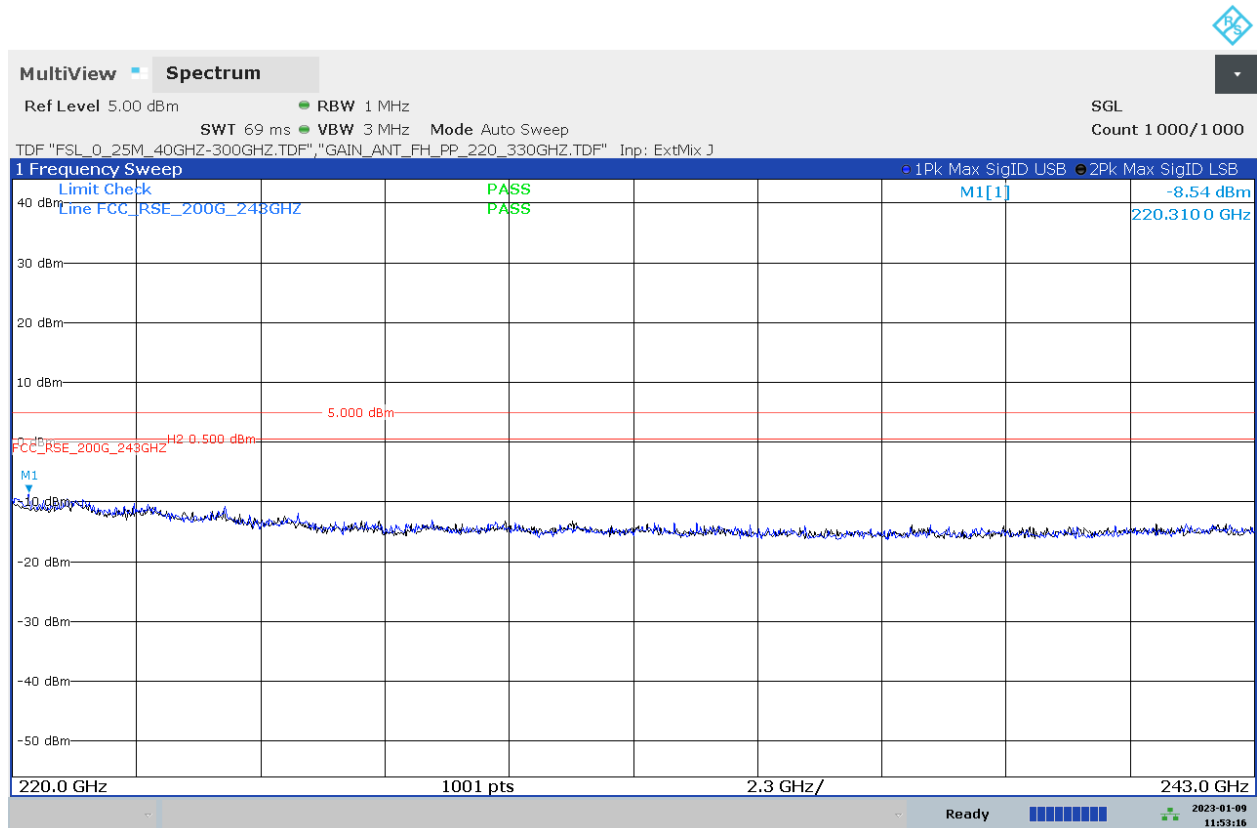
11:17:11 AM 01/09/2023

Remark: Final Measurement performed at Marker 1 @217.87GHz, this is a ghost signal, not related to Results.

Limit line: 0.5 dBm – Result: Passed.
5 dBm is the Ref level of Spectrum Analyzer.

7.1.31 Frequency range 220 GHz – 243 GHz – Measurement Antenna Vertical

D147_R01T08_TX_RSE_220G_243GHz_EUT_90_Ant_V_CW_mode



11:53:16 AM 01/09/2023

Remarks:

Signal ID (Image Signal) function of Spectrum Analyzer has been activated to distinguish Ghost and Real signals.

No Critical Emission found.

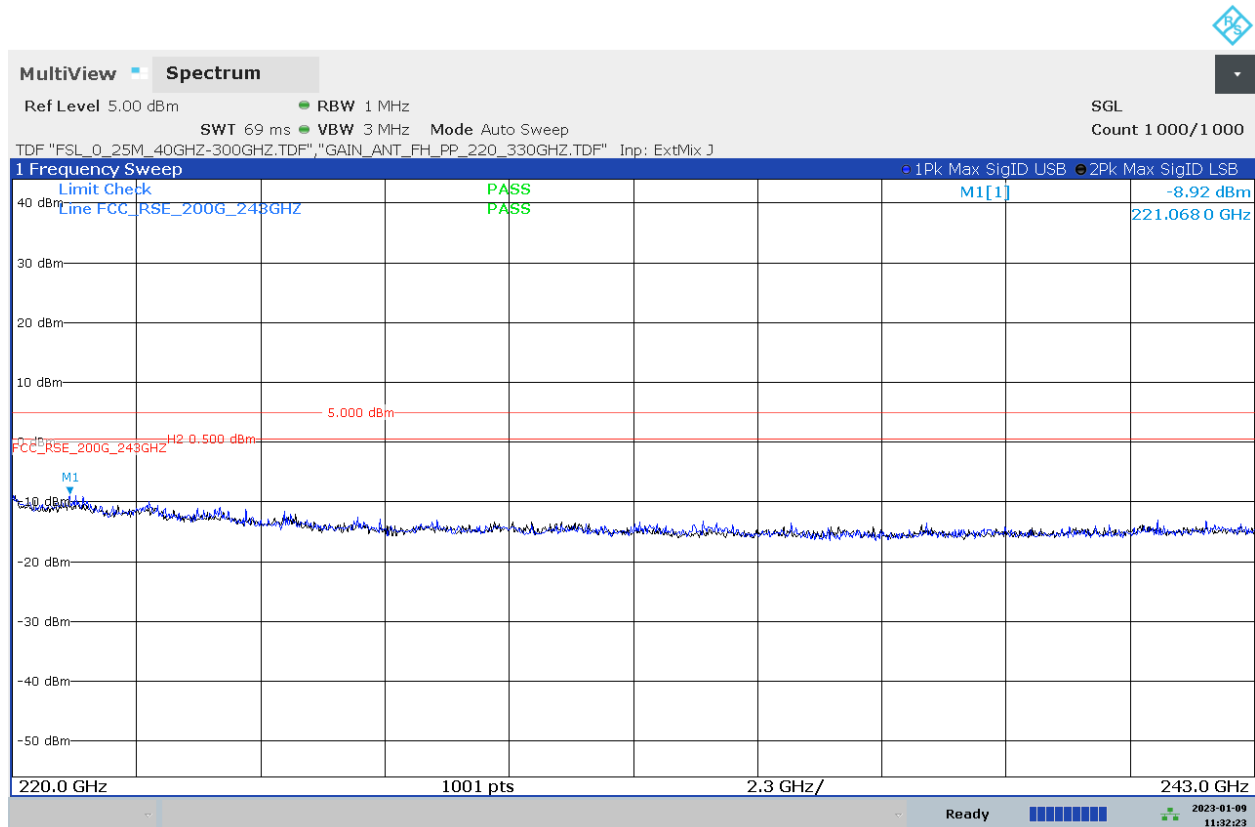
Limit line: 0.5 dBm.

Results: Passed

5 dBm is the Ref level of Spectrum Analyzer.

7.1.32 Frequency range 220 GHz – 243 GHz – Measurement Antenna Horizontal

D148_R01T08_TX_RSE_220G_243GHz_EUT_90_Ant_H_CW_mode



11:32:23 AM 01/09/2023

Remarks:

Signal ID (Image Signal) function of Spectrum Analyzer has been activated to distinguish Ghost and Real signals.

No Critical Emission found.

Limit line: 0.5 dBm.

Results: Passed

5 dBm is the Ref level of Spectrum Analyzer.

End of the Annex