



427 West 12800 South
 Draper, UT 84020

Test Report Certification

FCC ID	SWX-WAVELR
IC ID	6545A-WAVELR
Equipment Under Test	Wave-LR
Test Report Serial Number	TR6999_01
Date of Test(s)	23, 25 February and 1, 15, 24, 25 March 2022
Report Issue Date	11 May 2022

Test Specification	Applicant
47 CFR FCC Part 15, Subpart C	Ubiquiti Inc. 685 Third Avenue, 27 th Floor New York, NY 10019 U.S.A.



NVLAP LAB CODE 600241-0

Certification of Engineering Report

This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart C. This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	airFiber
Model Number	Wave-LR
FCC ID	SWX-WAVELR
IC ID	6545A-WAVELR

On this 11th day of May 2022, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete, and correct to the best of my knowledge and are made in good faith.

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Unified Compliance Laboratory



Written By: Joseph W. Jackson



Reviewed By: Alex Macon

Revision History		
Revision	Description	Date
01	Original Report Release	11 May 2022

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1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue, 27 th Floor New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue, 27 th Floor New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	airFiber
Model Number	Wave-LR
Serial Number	245A4C2F9F38
Dimensions (cm)	42.4 x 42.4 x 6.6

2.2 Description of EUT

The Wave-LR is a 60 GHz point-to-multipoint customer premise equipment that features wave technology with a 1.5+ Gbps throughput rate. The Wave-LR is also equipped with a 5 GHz WiFi 6 backup radio to sustain connectivity during a 60 GHz link disruption caused by inclement weather conditions. A Bluetooth LE transceiver is included for device management. The Wave-LR is an outdoor device and has an Ethernet port which is used for data transfer and to provide power using an Ubiquiti U-POE-at 48 volt PoE power adapter.

This report covers the circuitry of the device subject to FCC Part 15, Subpart C. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory test report.

2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name Model Number Serial Number	Description	Name of Interface Ports / Interface Cables
BN: airFiber MN: Wave-LR (Note 1) SN: 245A4C2F9F38	Wireless Access Point	See Section 2.4
BN: Ubiquiti MN: U-POE-at SN: N/A	PoE Power Adapter	Shielded or Un-shielded cat 5e cable
BN: Dell MN: XPS 13 SN: N/A	Laptop Computer	Shielded or Un-shielded cat 5e cable

Notes: (1) EUT

(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
AC (PoE Injector)	1	3 conductor power cord/80cm
LAN (PoE Injector)	1	Shielded or Un-shielded cat 5e cable/1 meter
Data	1	Shielded or Un-shielded cat 5e cable/1 meter

2.5 Operating Environment

Power Supply	120 Volts ac to 48 Volts PoE
AC Mains Frequency	60 Hz
Temperature	21.9 – 22.6 °C
Humidity	16.8 – 30.8 %
Barometric Pressure	1017 mBar

2.6 Operating Modes

The Wave-LR was connected to a personal computer laptop and tested using test software in order to enable to constant duty cycle greater or equal to 98% of the WiFi transceiver.

2.7 EUT Exercise Software

EUT firmware version 1.0 was used to operate the transmitter using a constant transmit mode.

2.8 Block Diagram of Test Configuration

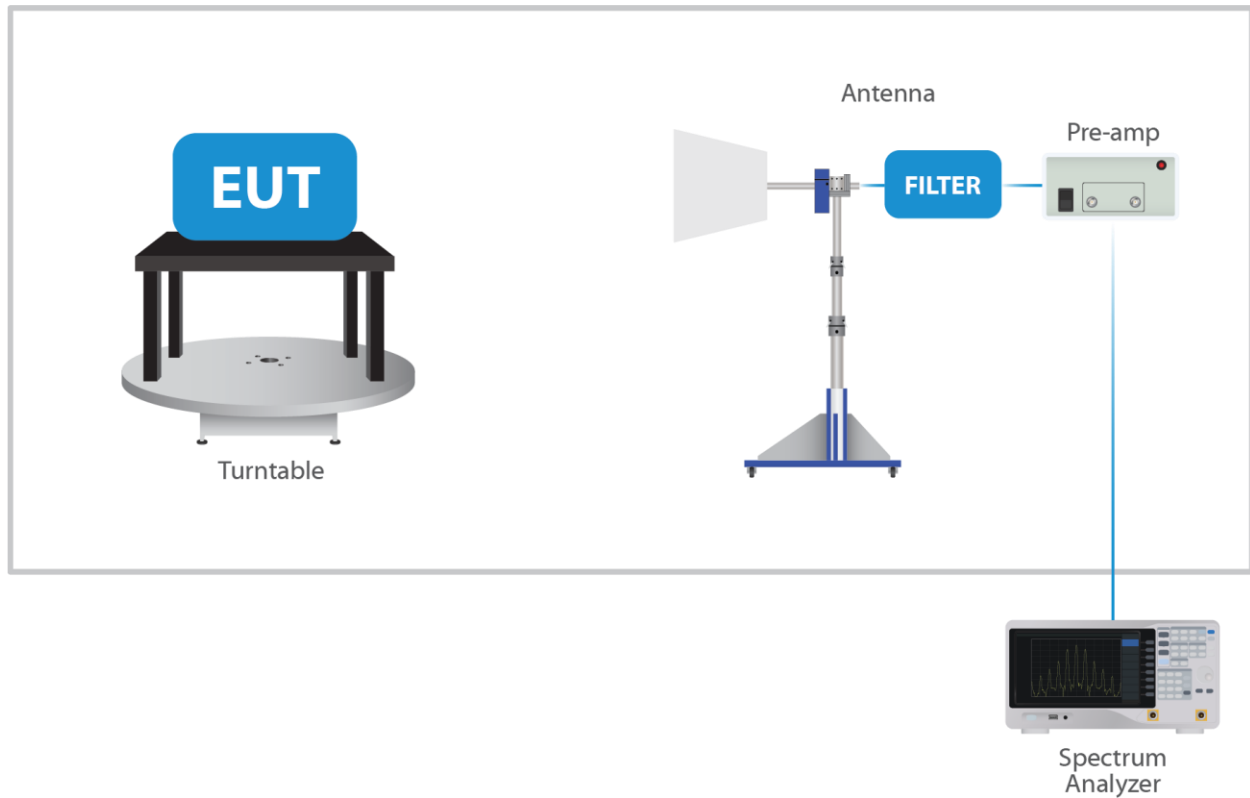


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

There were no modifications made to the EUT during testing to comply with the specification.

2.10 Deviation, Opinions Additional Information or Interpretations from Test Standard

There were no deviations, opinions, additional information or interpretations from the test specification.

3 Test Specification, Method and Procedures

3.1 Test Specification

Title	47 CFR FCC Part 15, Subpart C 15.203, 15.207 and 15.255 Limits and methods of measurement of radio interference characteristics of radio frequency devices.
Purpose of Test	The tests were performed to demonstrate initial compliance

3.2 Methods & Procedures

3.2.1 47 CFR FCC Part 15 Section 15.203

See test standard for details.

3.2.2 47 CFR FCC Part 15 Section 15.207

See test standard for details.

3.2.3 47 CFR FCC Part 15 Section 15.255

See test standard for details.

3.3 FCC Part 15, Subpart C

3.3.1 Summary of Tests

FCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.203	N/A	Antenna requirements	Structural Requirement	Compliant
15.207	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	Compliant
15.255 (e)	RSS-210 § J.4	Bandwidth Requirement	57000 - 71000	Compliant
15.255 (c)	RSS-210 § J.4	Peak Output Power	57000 - 71000	Compliant
15.255 (d)	RSS-210 § J.3	Antenna Conducted Spurious Emissions	0.009 to 40000	Compliant
15.255 (d)	RSS-210 § J.3	Radiated Spurious Emissions	0.009 to 200000	Compliant
15.255 (c)	RSS-210 § J.4	Peak Power Spectral Density	57000 - 71000	Compliant
15.255 (f)	RSS-210 § J.6	Frequency Stability	57000 - 71000	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 558074 and 47 CFR Part 15.				

3.4 Results

In the configuration tested, the EUT complied with the requirements of the specification.

3.5 Test Location

Testing was performed at the Unified Compliance Laboratory 3-Meter and 10-Meter chambers located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2022. This site has also been registered with Innovations, Science and Economic Development (ISED) department and was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346, effective until 30 June 2022. Unified Compliance Laboratory has been assigned Conformity Assessment Number US0223 by ISED.

4 Test Equipment

4.1 Conducted Emissions at Mains Ports

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	AFJ	FFT3010	UCL-6754	12/8/2021	12/8/2022
LISN	AFJ	LS16C/10	UCL-6749	12/6/2021	12/6/2023
Cat6 ISN	Teseq	ISN T8-Cat6	UCL-2971	1/30/2022	1/30/2023
ISN	Teseq	ISN T800	UCL-2974	6/4/2021	6/4/2022
LISN	Com-Power	LIN-120C	UCL-2612	1/6/2022	1/6/2023
AC Power Source	Laplace Instruments	AC1000A	UCL-2857	N/A	N/A
Test Software	UCL	Revision 1	UCL-3107	N/A	N/A

Table 1: List of equipment used for Conducted Emissions Testing at Mains Port

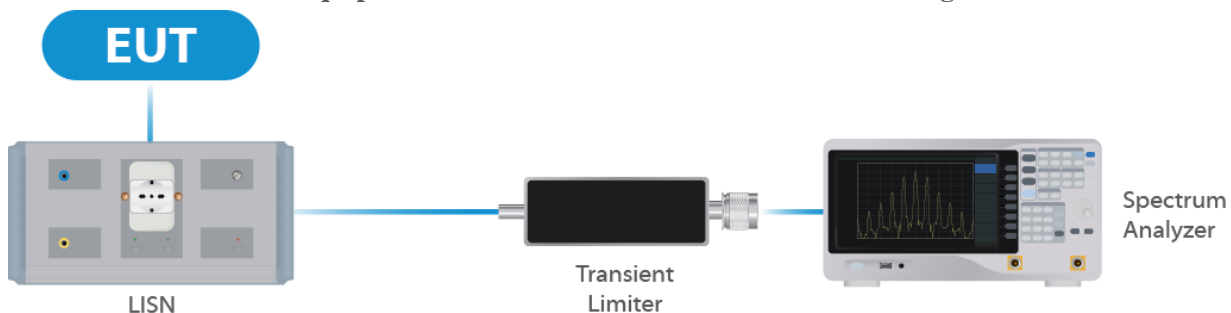


Figure 1: Conducted Emissions Test

4.2 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	Keysight	N9038A	UCL-2778	6/21/2021	6/21/2022
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	10/7/2021	10/7/2022
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	7/8/2021	7/8/2022
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	11/16/2020	11/16/2022
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	5/21/2020	5/21/2022
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	10/7/2021	10/7/2022
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A
Conical Horn Antenna	VDI	WR15CH	UCL-5774	N/A	N/A

Conical Horn Antenna	VDI	WR12CH	UCL-4869	N/A	N/A
Conical Horn Antenna	VDI	WR19CH	UCL-4873	N/A	N/A
Conical Horn Antenna	VDI	WR5.1CH	UCL-4880	N/A	N/A
Conical Horn Antenna	VDI	WR8.0CH	UCL-4886	N/A	N/A
Spectrum Analyzer Extension Module	VDI	SAX 705	UCL-4887	N/A	N/A
Spectrum Analyzer Extension Module	VDI	SAX 706	UCL-4883	N/A	N/A
USB Switch	Keysight	U1816C	UCL-4957	N/A	N/A
Spectrum Analyzer	Keysight	N9041B	UCL-4964	1/28/2022	1/27/2023

Table 2: List of equipment used for Radiated Emissions

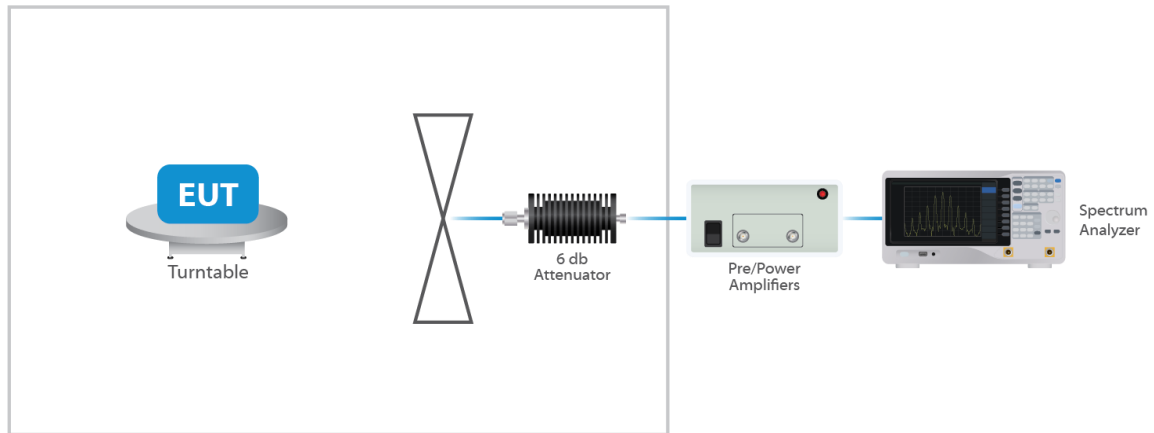


Figure 2: Radiated Emissions Test

4.3 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.4 Measurement Uncertainty

Test	Uncertainty (\pm dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	4.38	95
Radiated Emissions (1 GHz to 18 GHz)	4.37	95
Radiated Emissions (18 GHz to 40 GHz)	3.93	95
Direct Connect Tests	K Factor	Value
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB

5 Test Results

5.1 §15.203 Antenna Requirements

The EUT uses an integral dish antenna. The maximum gain of the antenna per chain is 46 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

Results

The EUT complied with the specification

5.2 Conducted Emissions at Mains Ports Data

Frequency (MHZ)	AC Mains Lead	Detector	Measured Level (dBμV)	Limit (dBμV)	Margin (dB)
0.540	Hot Lead	Quasi-Peak (Note 2)	47.3	56.0	- 8.70
0.153	Hot Lead	Quasi-Peak (Note 2)	52.0	65.9	- 13.90
0.531	Hot Lead	Average (Note 2)	40.0	46.0	- 6.00
0.540	Neutral Lead	Quasi-Peak (Note 2)	47.8	56.0	- 8.20
0.150	Neutral Lead	Quasi-Peak (Note 2)	50.7	66.0	- 15.30
0.546	Neutral Lead	Average (Note 2)	40.9	46.0	- 5.10

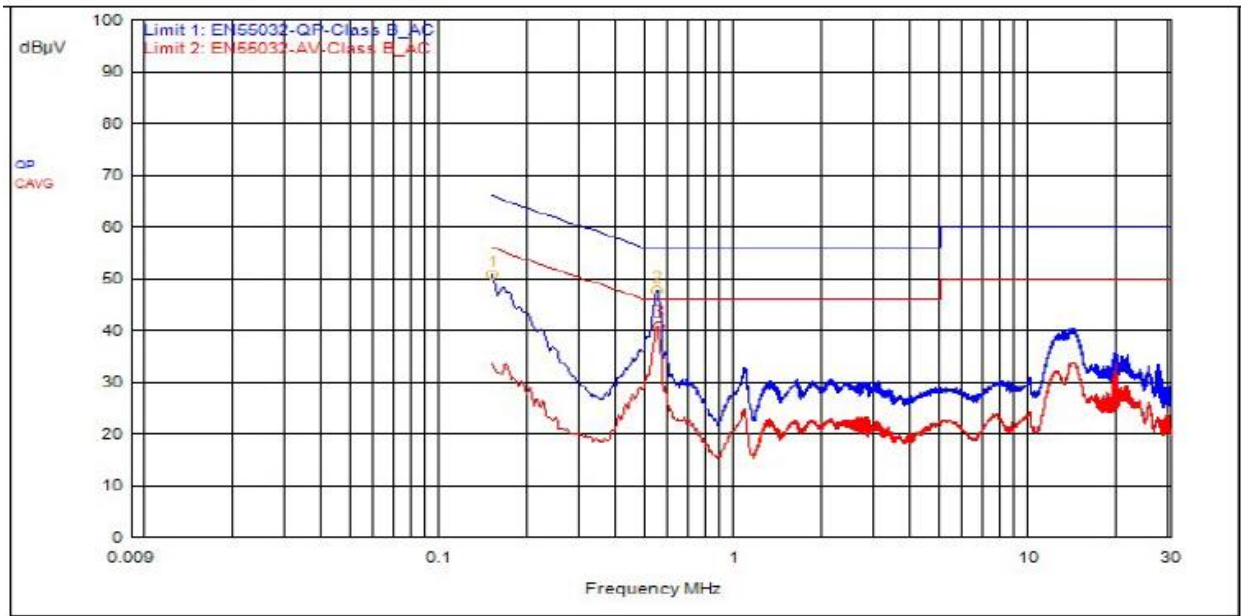
Note 1: The reference detector used for the measurements was Quasi-Peak or Peak and the data was compared to the average limit: therefore, the EUT was deemed to meet both the average and quasi-peak limits.

Note 2: The reference detector used for the measurements was quasi-peak and average and the data was compared to the respective limits.

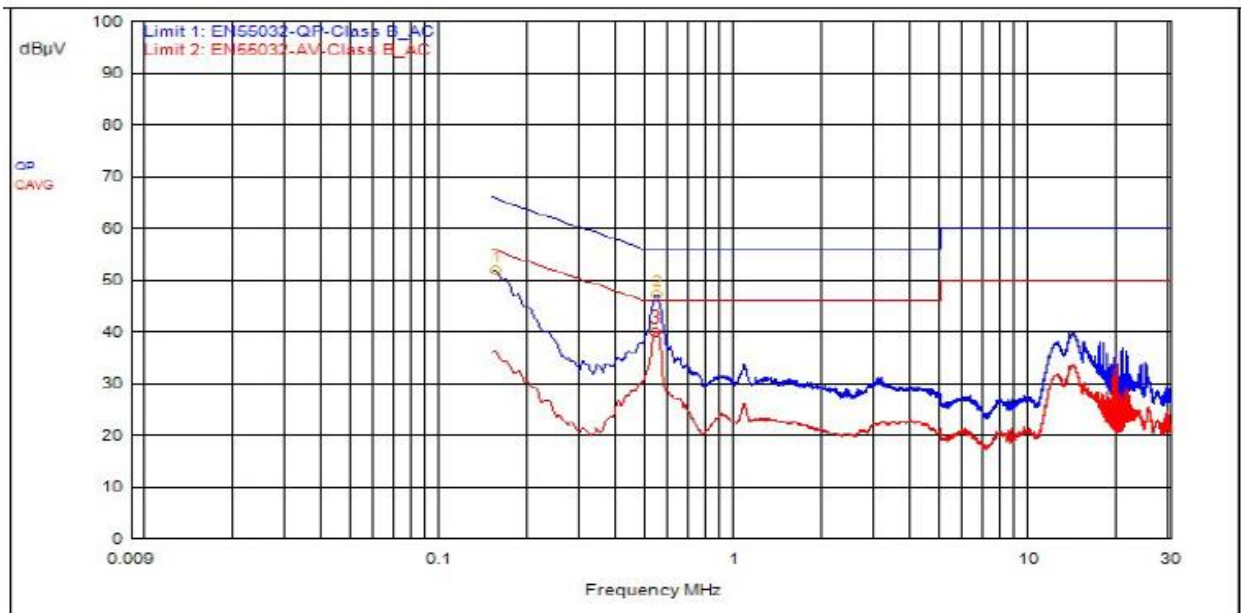
Note 3: The device the transceiver is in is a Class A device and the limits shown are from §15.207 which are the same as the limits for a Class B device under §15.107. These emissions were investigated and were found to be at the same level regardless of whether the transceivers of the device were not powered, powered and idle, or powered and active, therefore, the conducted emissions of the transceivers were deemed compliant with the requirements of the standard.

Result

The EUT complied with the specification limit.



Graph 1: Conducted Emissions Plot - Neutral



Graph 2: Conducted Emissions Plot - Line 1

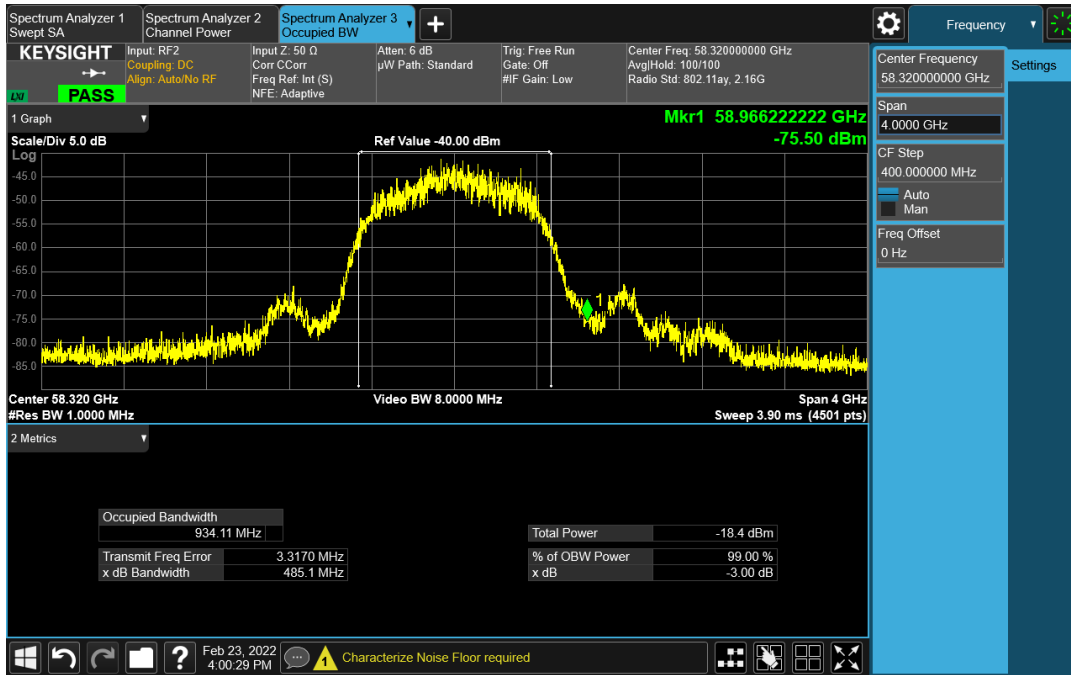
5.3 Emissions Bandwidth

Channel Width (GHz)	Frequency (MHz)	Emissions 99% Bandwidth (MHz)
1.06	58320	934.11
	63720	920.07
	69120	917.98
	70200	933.05
2.16	58320	1852.5
	63720	1868.1
	69120	1875.1

Result

All chains were tested and the highest bandwidth per chain is reported above.

In the configuration tested, the 99% bandwidth was greater than 500 kHz; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plot below).



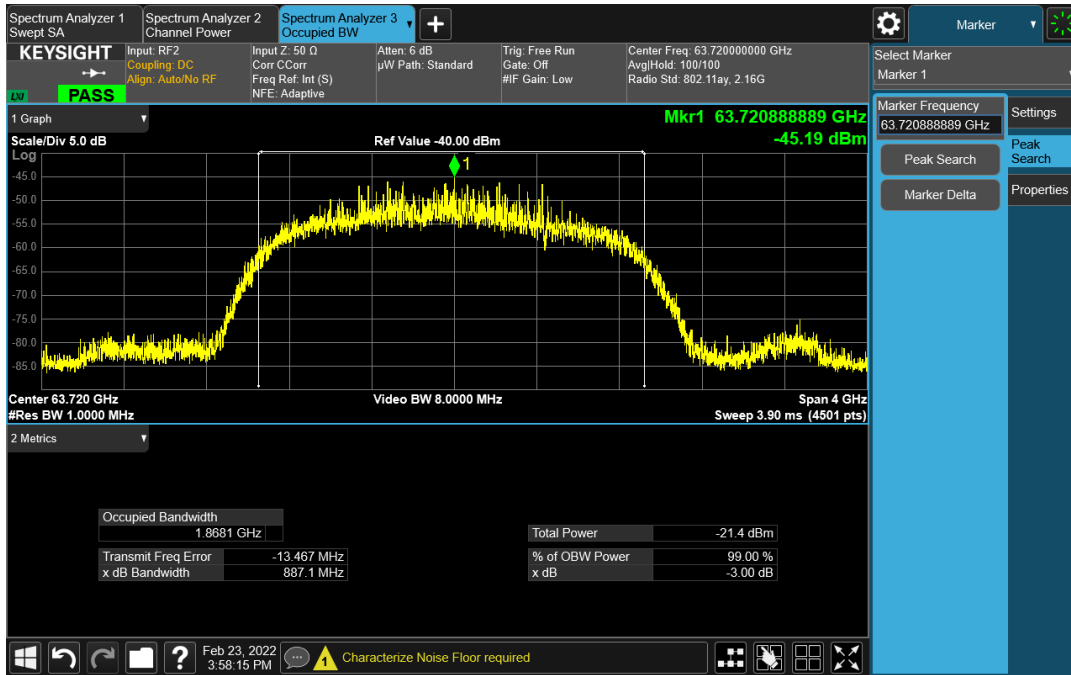
Occupancy Channel Bandwidth Low Channel 1 GHz Bandwidth



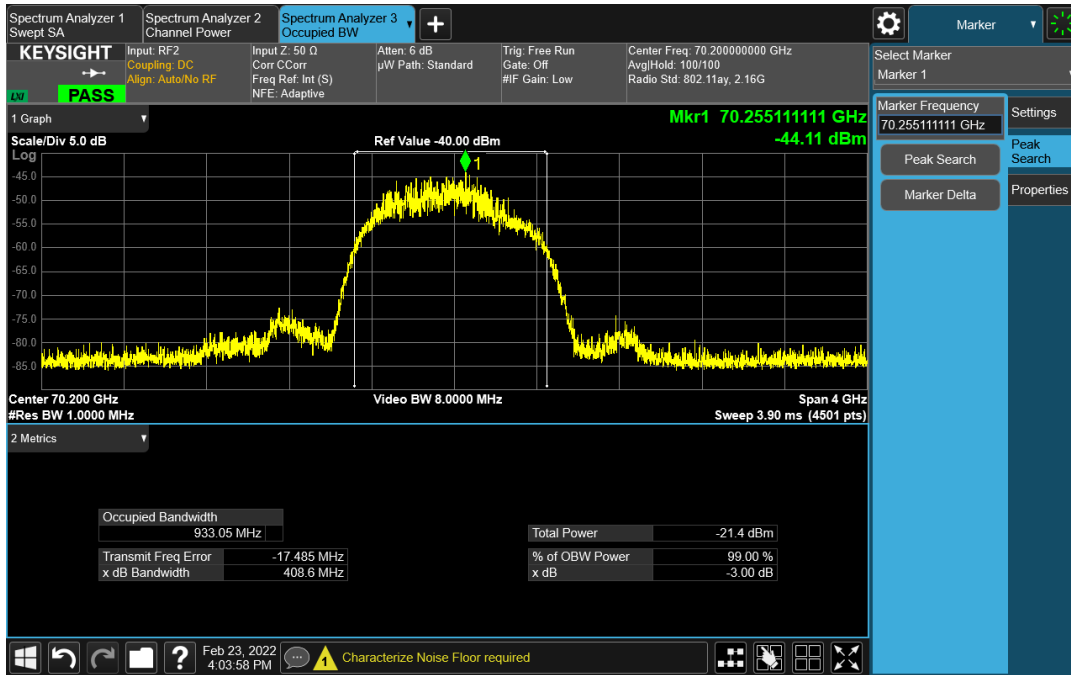
Occupancy Channel Bandwidth Low Channel 2 GHz Bandwidth



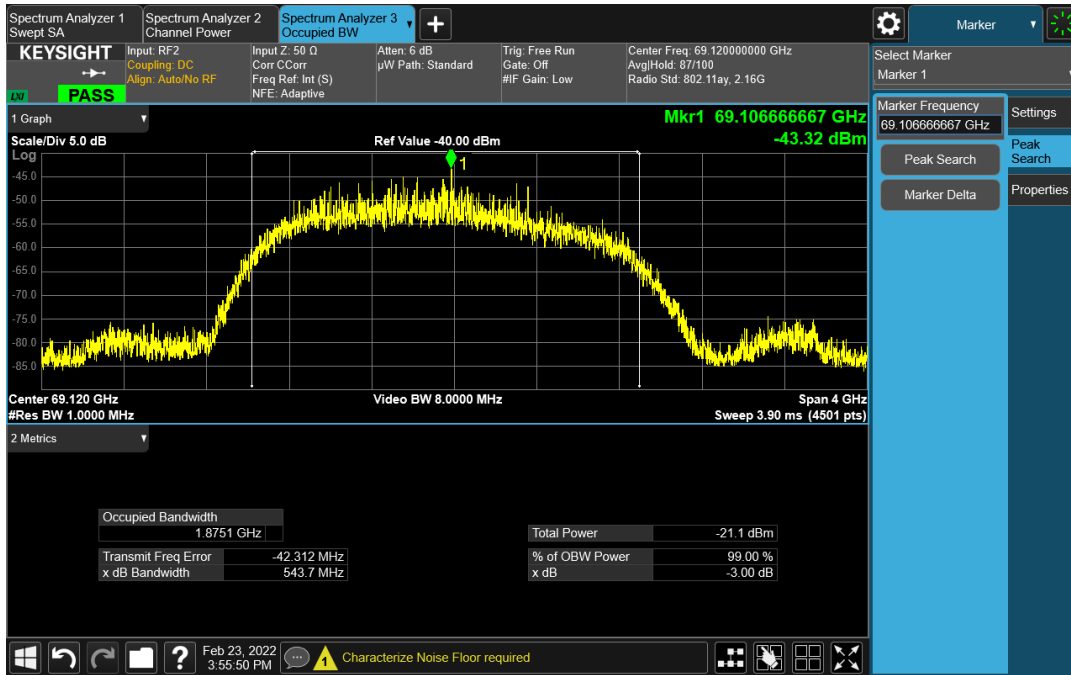
Occupancy Channel Bandwidth Mid Channel 1 GHz Bandwidth



Occupancy Channel Bandwidth Mid Channel 2 GHz Bandwidth



Occupy Channel Bandwidth High Channel 1 GHz Bandwidth



Occupy Channel Bandwidth High Channel 2 GHz Bandwidth

5.4 §15.255(c)(1)(i) Maximum Average Output Power

The maximum average RF EIRP measured for this device was 24.0 dBm or 0.25 Watts.

For fixed point-to-point transmitters located outdoors, the average power of any emission shall not exceed 82 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dBi. The peak power of any emission shall not exceed 85 dBm, and shall be reduced by 2 dB for every dB that the antenna gain is less than 51 dB. The antenna has a gain of 46 dBi.

Nominal BW	Frequency (MHz)	Air Path Loss (dB)	Total Correction	Peak SA Reading	Conducted Peak	Peak Conducted Limit	EIRP Peak	Peak EIRP Limit
1.08	58320	77.6	56.4	-18.4	23.0	27	69.0	75
	63720	78.4	56.8	-19.2	22.6	27	68.6	75
	69120	79.1	57.5	-18.5	24.0	27	70.0	75
	70200	79.2	57.3	-21.4	20.9	27	66.9	75
2.16	58320	77.6	56.4	-20.6	20.8	27	66.8	75
	63720	78.4	56.8	-21.4	20.4	27	66.4	75
	69120	79.1	57.3	-21.1	21.2	27	67.2	75

Nominal BW	Frequency (MHz)	Air Path Loss (dB)	Total Correction	AvG SA Reading	EIRP Avg	Avg EIRP Limit	Avg Delta
1.08	58320	77.6	56.4	-23.4	59.0	64.0	72
	63720	78.4	56.8	-25.0	57.8	62.8	72
	69120	79.1	57.5	-23.9	59.6	64.6	72
	70200	79.2	57.3	-25.0	58.3	63.3	72
2.16	58320	77.6	56.4	-24.1	58.4	63.4	72
	63720	78.4	56.8	-25.0	57.8	62.8	72
	69120	79.1	57.3	-24.0	59.3	64.3	72

Result

In the configuration tested, the maximum average RF EIRP was less than 75 dBm; therefore, the EUT complied with the requirements of the specification.

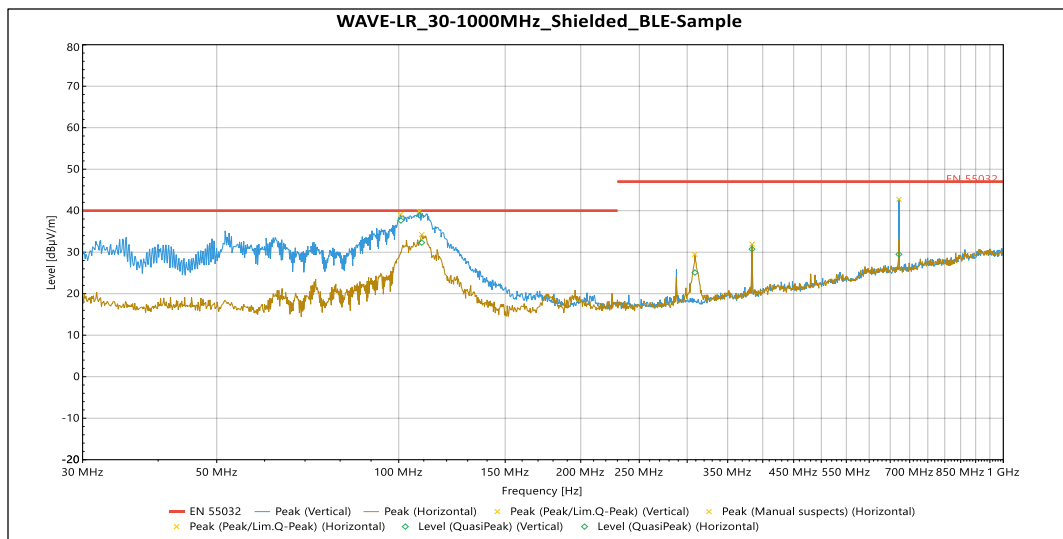
5.5 §15.255(d) Spurious Emissions

5.5.1 Radiated Spurious Emissions in the Restricted Bands of §15.205

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental emissions was investigated to measure any radiated emissions in the restricted bands. The following tables show measurements of any emissions that fell into the restricted bands of §15.205. The tables show the worst-case emissions measured from the EUT. For frequencies between 18.0 and 40 GHz, a measurement distance of 1 meter was used. The noise floor was a minimum of 6 dB below the limits. The emissions in the restricted bands must meet the limits specified in §15.209. Tabular data for each of the spurious emissions is shown below for each of the units. The BLE radio and 60 GHz radio are active during all plots. The limit above 40 GHz is 90pW/cm². The measurement distance above 40 GHz was 3 meters.

Result

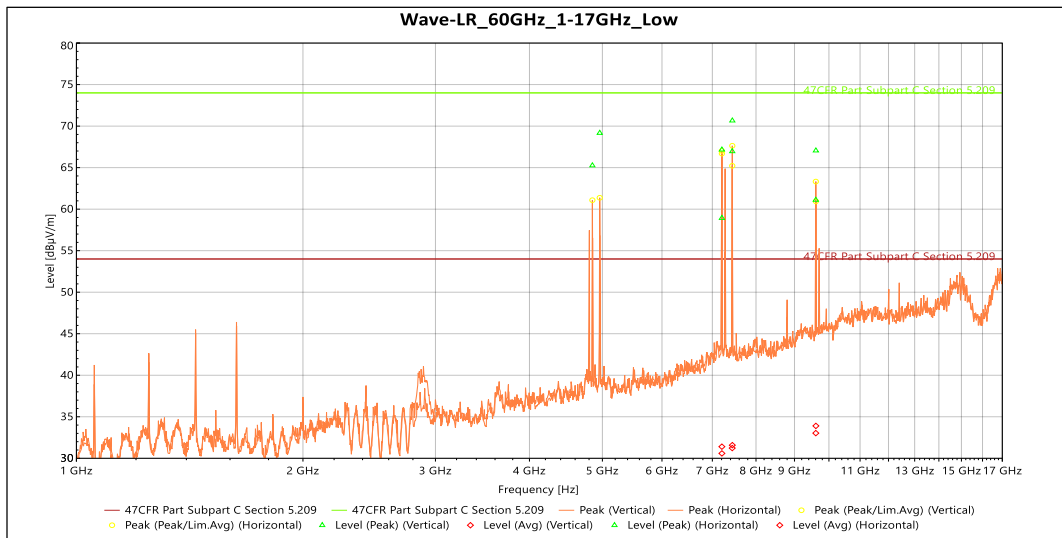
All emissions in the restricted bands of §15.205 met the limits specified in §15.209. All emissions met the limits set out in 15.255(d) therefore, the EUT complies with the specification.



QuasiPeak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin	Azimuth (°)	Height	Pol.	Correction (dB)
100.83 MHz	37.627	40	-2.373	340	1.378	Vertical	-12.8
108.29 MHz	38.899	40	-1.101	102	1.053	Vertical	-13.591
671.94 MHz	29.487	47	-17.513	301	2.656	Vertical	-4.084
109.13 MHz	32.305	40	-7.695	56	3.826	Horizontal	-13.784
308.98 MHz	25.1	47	-21.9	183	2.535	Horizontal	-11.098
383.97 MHz	30.743	47	-16.257	163	1.791	Horizontal	-9.171

Table 3: 30 – 1000 MHz (worst case)



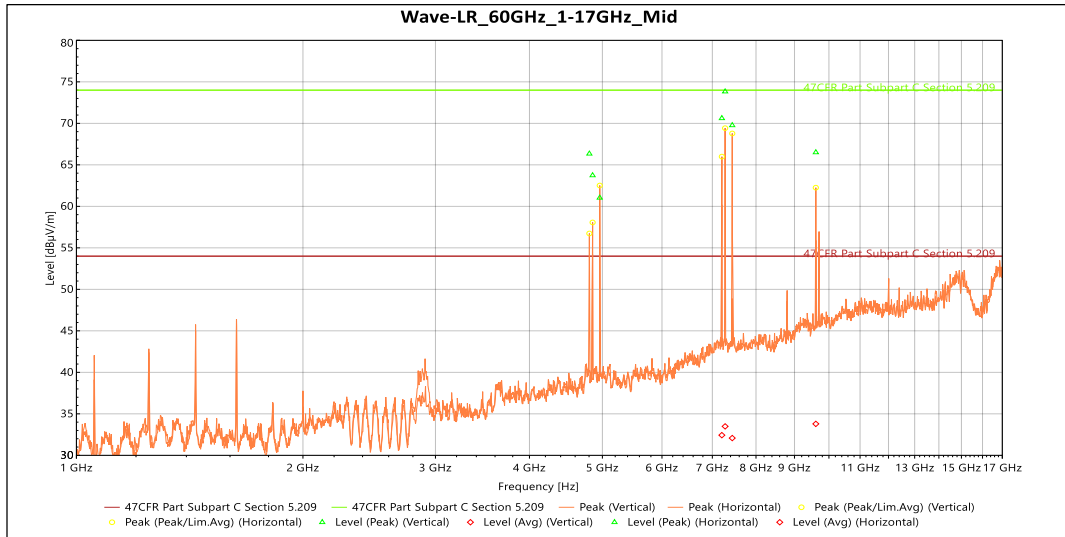
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
4.9596 GHz	69.165	74	-4.835	330	1.5	Vertical	-11.954
7.2071 GHz	67.157	74	-6.843	16	2.65	Vertical	-5.525
7.4412 GHz	70.658	74	-3.342	304	3.158	Vertical	-5.155
9.6091 GHz	67.053	74	-6.947	325	1.829	Vertical	-0.83
4.849 GHz	65.255	74	-8.745	319	2.325	Horizontal	-12.374
7.2075 GHz	58.93	74	-15.07	68	2.146	Horizontal	-5.508
7.4391 GHz	66.956	74	-7.044	31	2.146	Horizontal	-5.115
9.6069 GHz	61.112	74	-12.888	328	2.146	Horizontal	-0.836

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
4.9596 GHz	28.526	54	-25.474	330	1.5	Vertical	-11.954
7.2071 GHz	31.402	54	-22.598	16	2.65	Vertical	-5.525
7.4412 GHz	31.583	54	-22.417	304	3.158	Vertical	-5.155
9.6091 GHz	33.895	54	-20.105	325	1.829	Vertical	-0.83
4.849 GHz	24.464	54	-29.536	319	2.325	Horizontal	-12.374
7.2075 GHz	30.594	54	-23.406	68	2.146	Horizontal	-5.508
7.4391 GHz	31.23	54	-22.77	31	2.146	Horizontal	-5.115
9.6069 GHz	33.03	54	-20.97	328	2.146	Horizontal	-0.836

Table 4: Transmitting at the Lowest Frequency 1 – 17 GHz



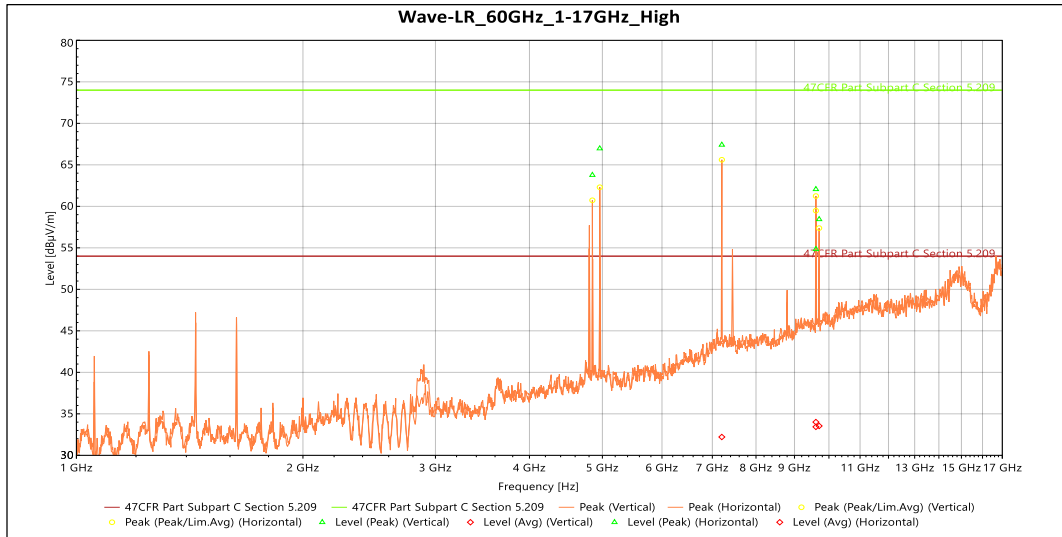
Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
4.8523 GHz	63.726	74	-10.274	359	3.302	Vertical	-12.368
7.2064 GHz	70.612	74	-3.388	285	2.816	Vertical	-5.555
7.4391 GHz	69.76	74	-4.24	300	2.325	Vertical	-5.115
9.6075 GHz	66.501	74	-7.499	340	2.655	Vertical	-0.834
4.8044 GHz	66.341	74	-7.659	326	3.798	Horizontal	-11.924
4.9591 GHz	61.031	74	-12.969	331	3.798	Horizontal	-11.962
7.2791 GHz	73.829	74	-0.171	303	2.816	Horizontal	-4.807

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
4.8523 GHz	25.782	54	-28.218	359	3.302	Vertical	-12.368
7.2064 GHz	32.426	54	-21.574	285	2.816	Vertical	-5.555
7.4391 GHz	32.081	54	-21.919	300	2.325	Vertical	-5.115
9.6075 GHz	33.788	54	-20.212	340	2.655	Vertical	-0.834
4.8044 GHz	27.613	54	-26.387	326	3.798	Horizontal	-11.924
4.9591 GHz	26.649	54	-27.351	331	3.798	Horizontal	-11.962
7.2791 GHz	33.491	54	-20.509	303	2.816	Horizontal	-4.807

Table 5: Transmitting at the Middle Frequency 1 – 17 GHz

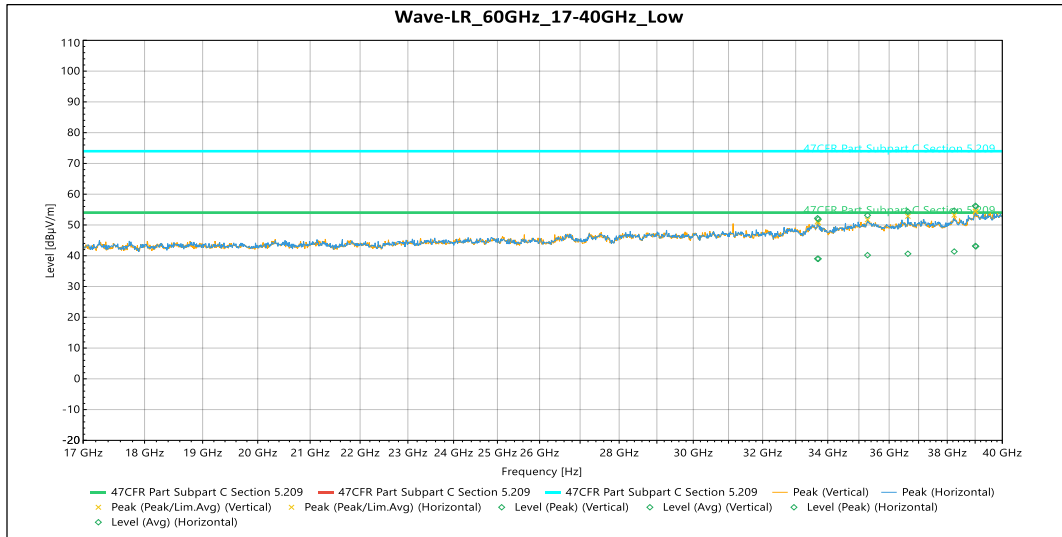

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
4.8488 GHz	63.767	74	-10.233	358	3.302	Vertical	-12.375
9.6098 GHz	54.827	74	-19.173	3	2.816	Vertical	-0.829
9.7054 GHz	58.439	74	-15.561	341	2.325	Vertical	-0.767
4.9595 GHz	66.973	74	-7.027	337	3.798	Horizontal	-11.955
7.2058 GHz	67.409	74	-6.591	301	2.811	Horizontal	-5.581
9.6092 GHz	62.063	74	-11.937	313	1.833	Horizontal	-0.83

Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Correction (dB)
4.8488 GHz	25.783	54	-28.217	358	3.302	Vertical	-12.375
9.6098 GHz	33.43	54	-20.57	3	2.816	Vertical	-0.829
9.7054 GHz	33.538	54	-20.462	341	2.325	Vertical	-0.767
4.9595 GHz	28.677	54	-25.323	337	3.798	Horizontal	-11.955
7.2058 GHz	32.213	54	-21.787	301	2.811	Horizontal	-5.581
9.6092 GHz	34.014	54	-19.986	313	1.833	Horizontal	-0.83

Table 6: Transmitting at the Highest Frequency 1 – 17 GHz

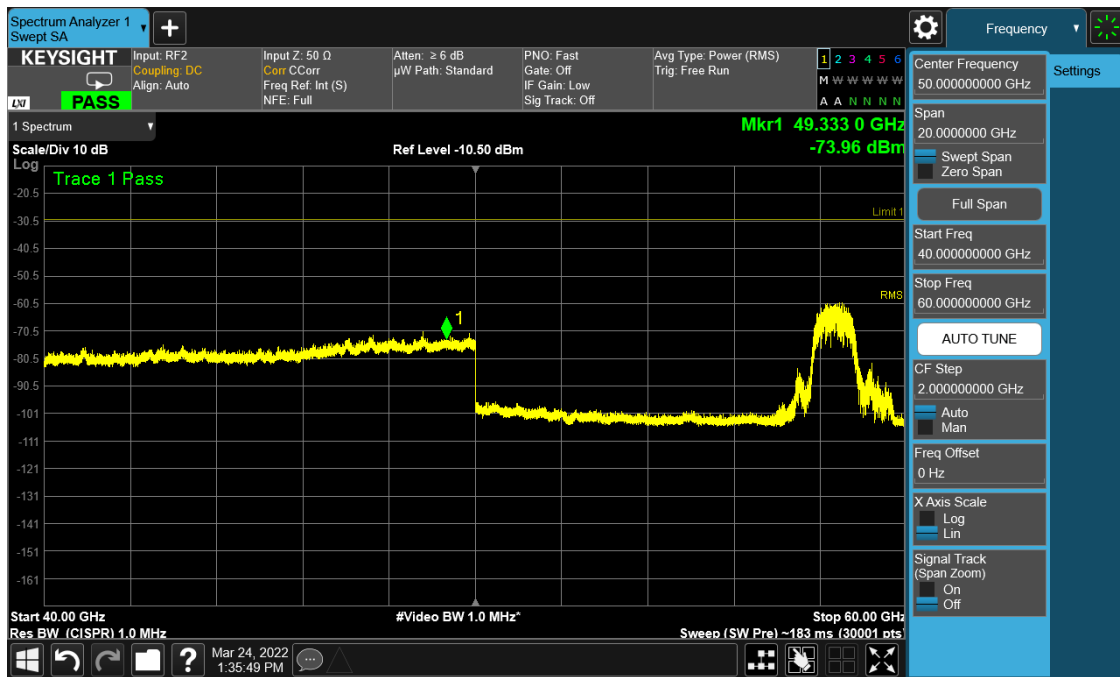

Peak

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
33.704 GHz	51.869	74	-22.131	246	Vertical	1.423
35.283 GHz	53.143	74	-20.857	158	Vertical	1.022
38.249 GHz	54.658	74	-19.342	315	Vertical	1.252
39.01 GHz	56.228	74	-17.772	201	Vertical	3.376
33.678 GHz	52.188	74	-21.812	290	Horizontal	1.408
36.634 GHz	54.274	74	-19.726	213	Horizontal	0.646
39.027 GHz	56.001	74	-17.999	226	Horizontal	3.292

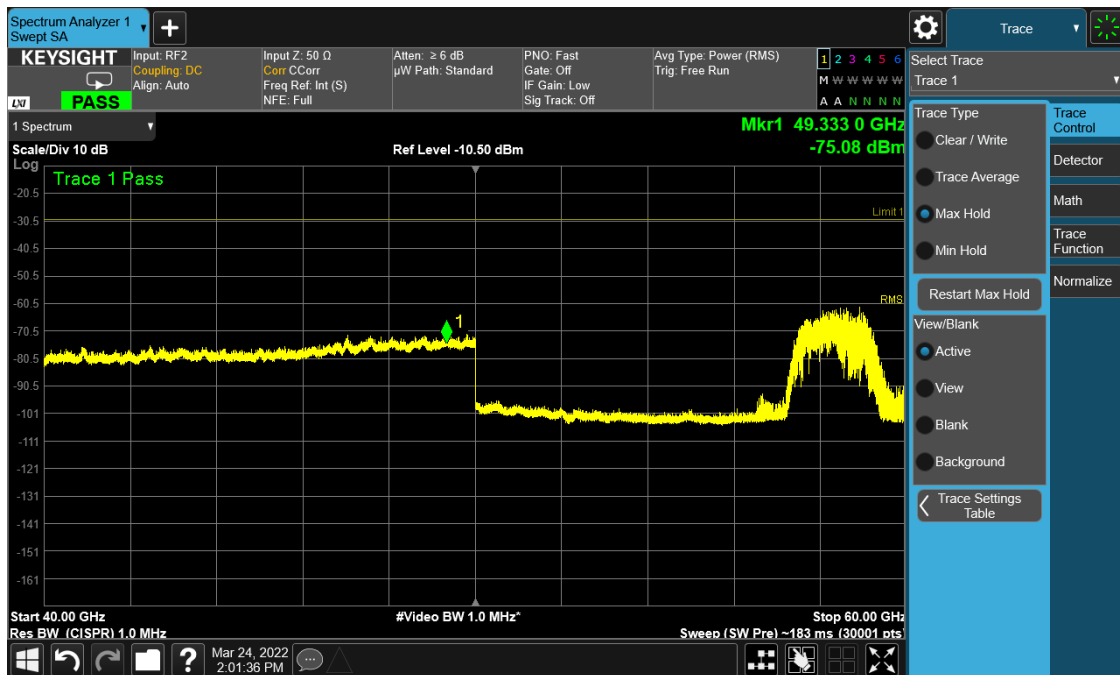
Avg

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Pol.	Correction (dB)
33.704 GHz	39.004	54	-14.996	246	Vertical	1.423
35.283 GHz	40.19	54	-13.81	158	Vertical	1.022
38.249 GHz	41.372	54	-12.628	315	Vertical	1.252
39.01 GHz	43.182	54	-10.818	201	Vertical	3.376
33.678 GHz	39.017	54	-14.983	290	Horizontal	1.408
36.634 GHz	40.639	54	-13.361	213	Horizontal	0.646
39.027 GHz	43.03	54	-10.97	226	Horizontal	3.292

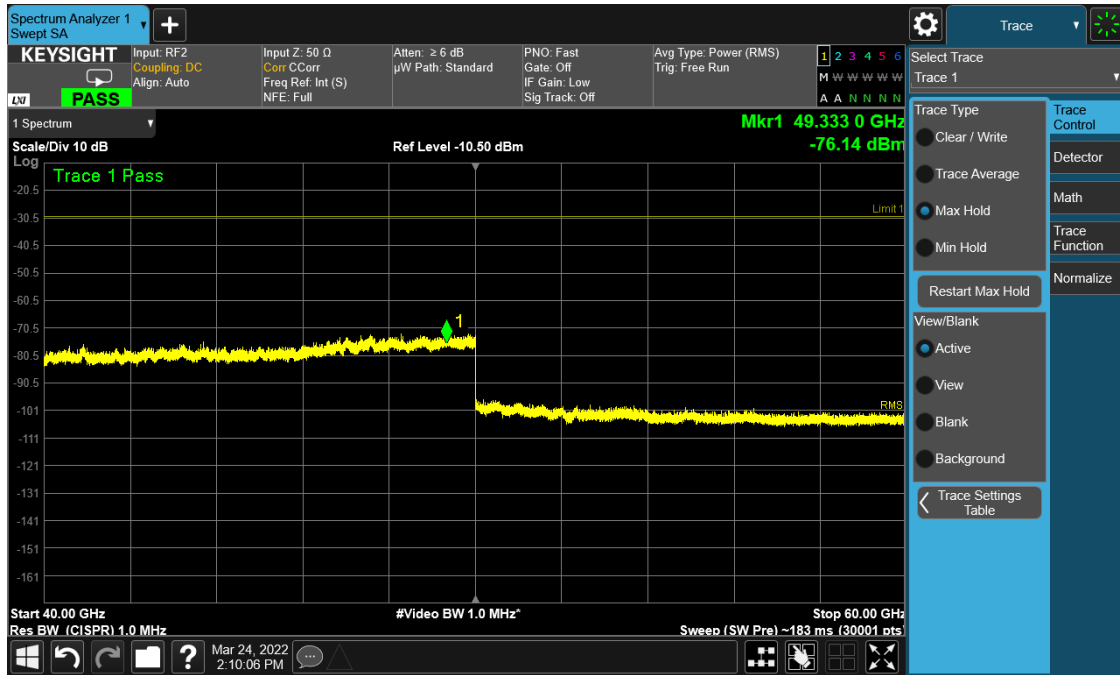
Table 7: Transmitting at the Lowest Frequency 17 – 40 GHz (worst case)



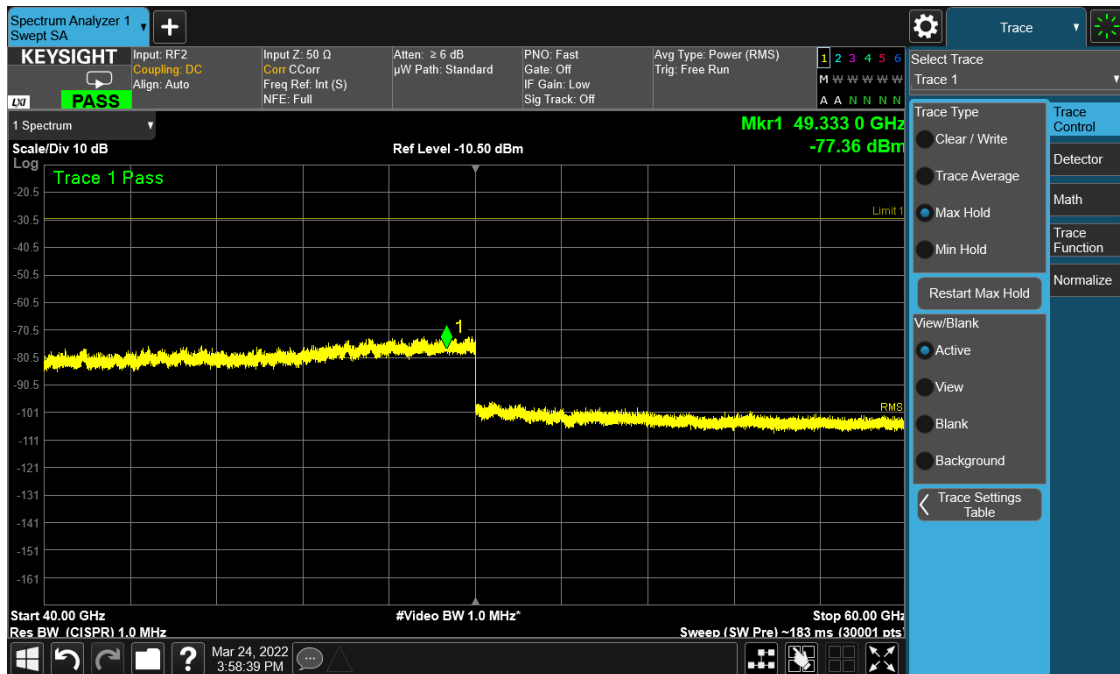
Low Channel 40 – 60 GHz 1 GHz Bandwidth



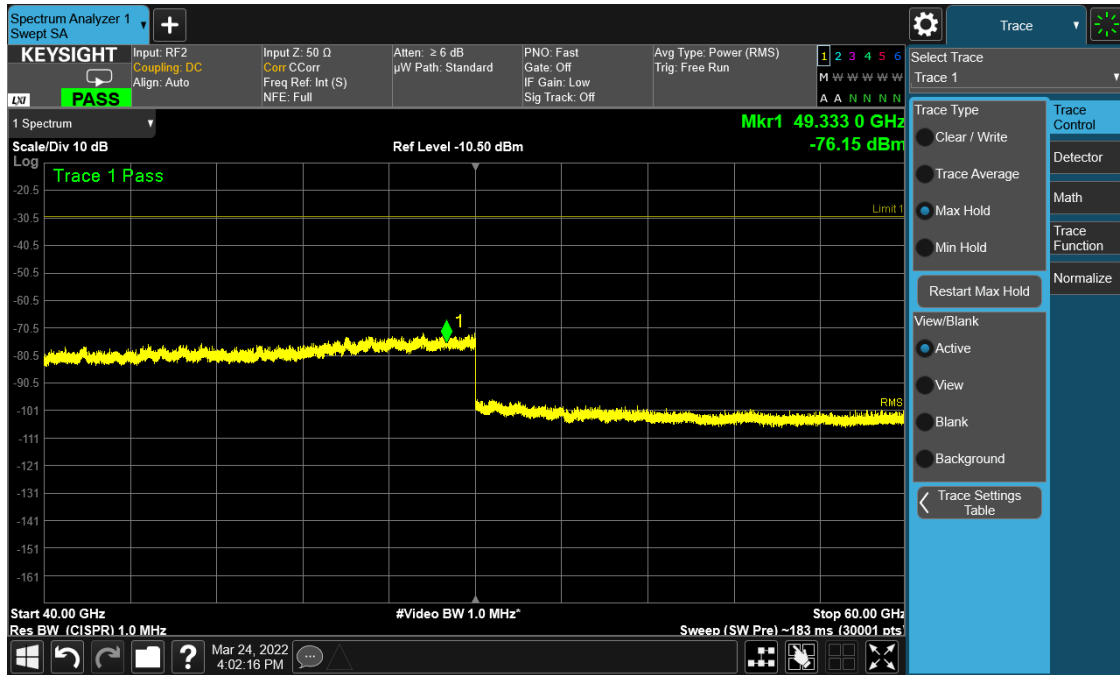
Low Channel 40 – 60 GHz 2 GHz Bandwidth



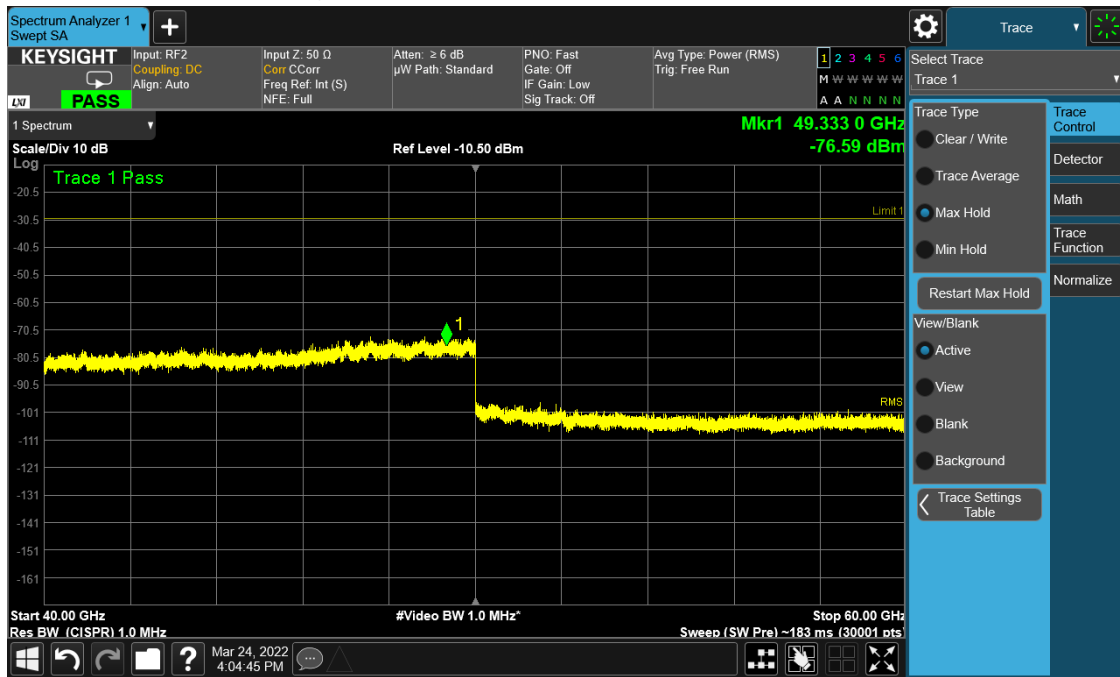
Mid Channel 40 – 60 GHz 1 GHz Bandwidth



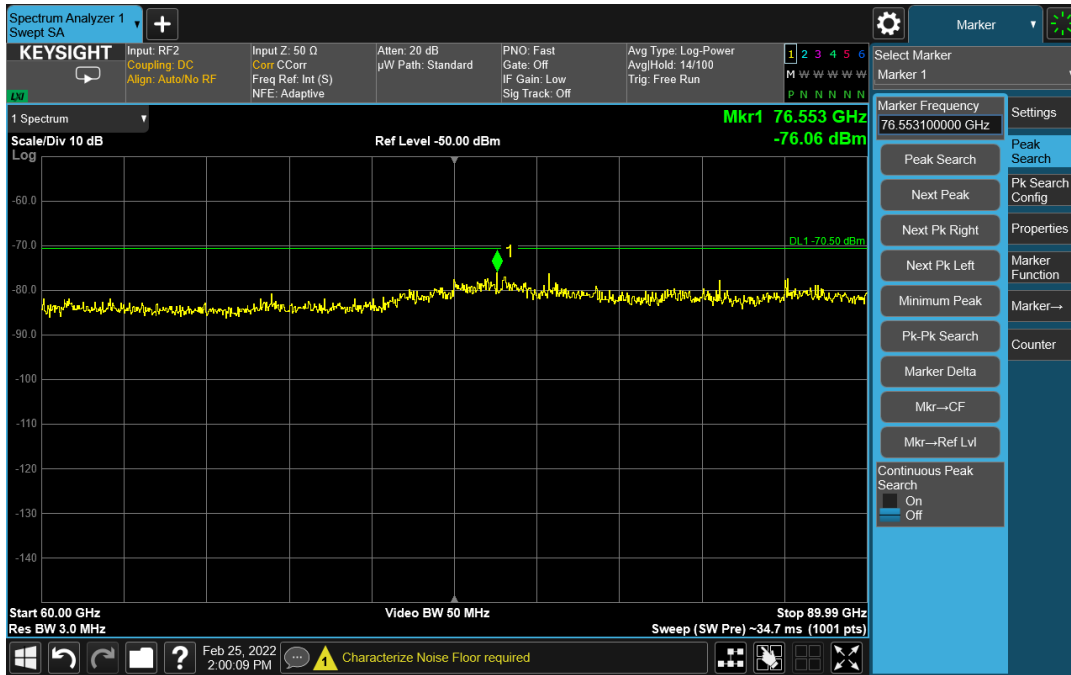
Mid Channel 40 – 60 GHz 2 GHz Bandwidth



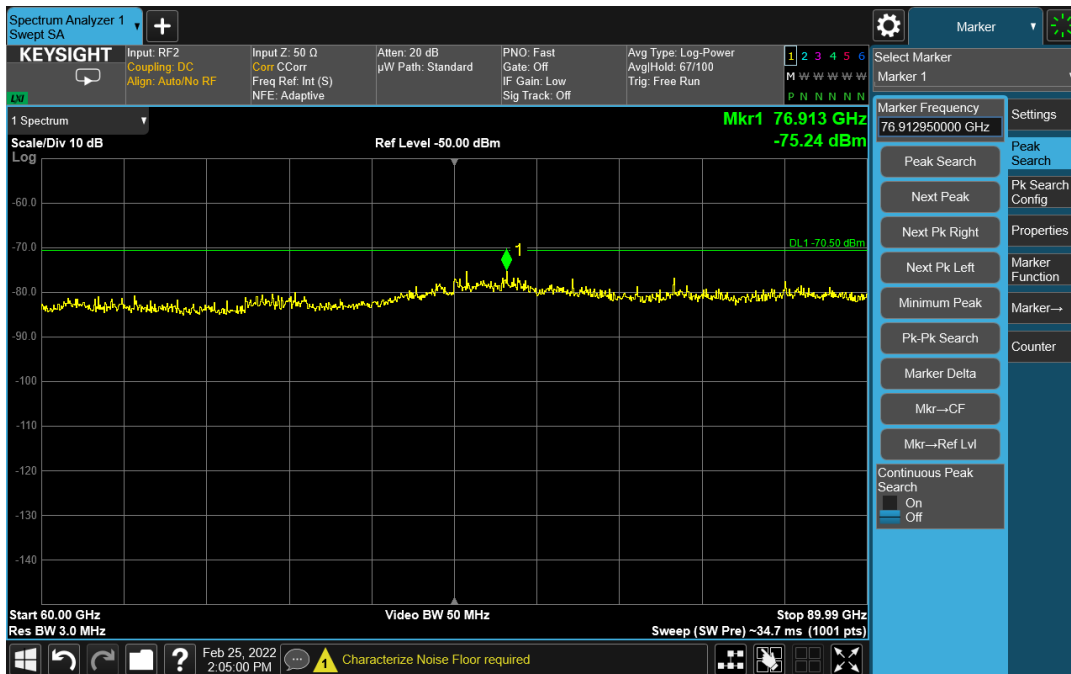
High Channel 40 – 60 GHz 1 GHz Bandwidth



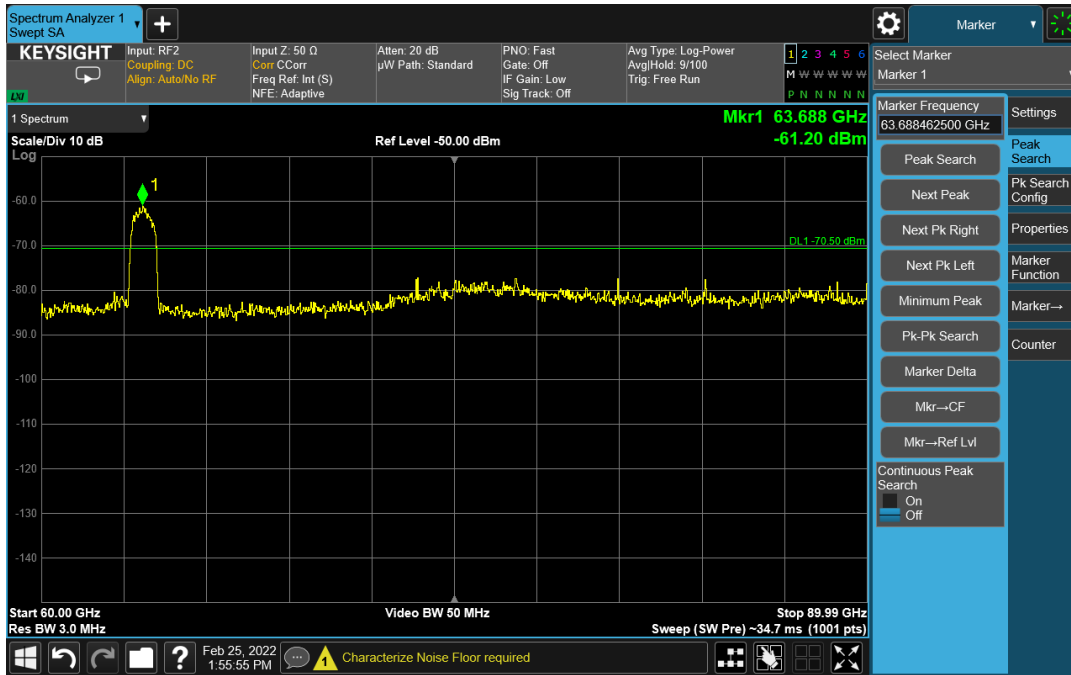
High Channel 40 – 60 GHz 2 GHz Bandwidth



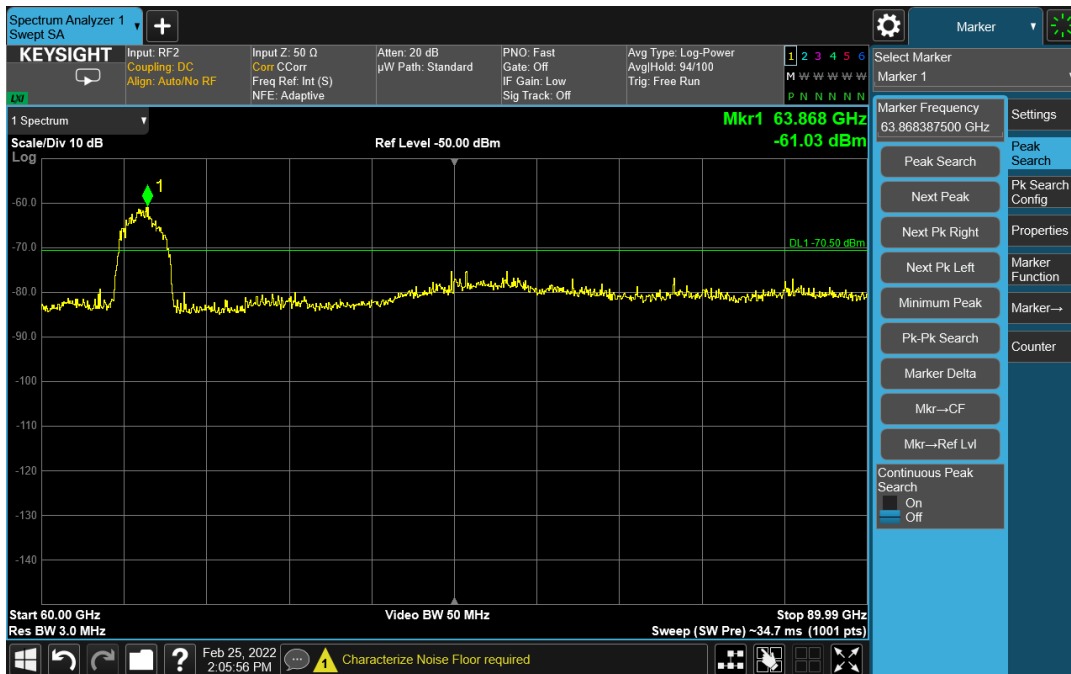
Low Channel 60 – 90 GHz 1 GHz Bandwidth



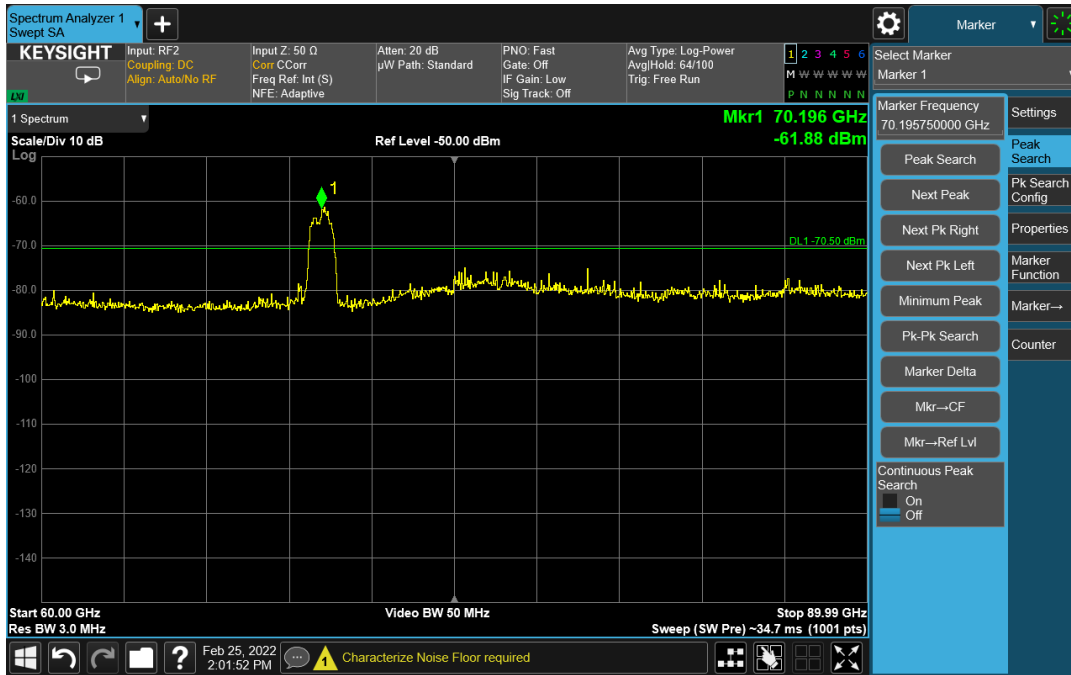
Low Channel 60 – 90 GHz 2 GHz Bandwidth



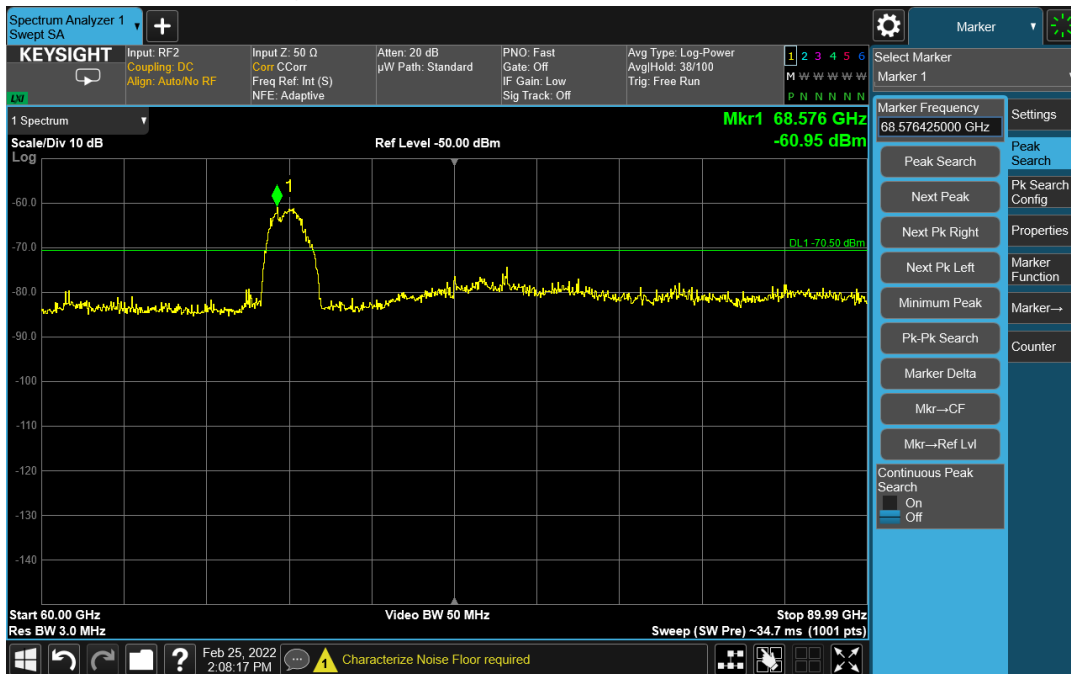
Mid Channel 60 – 90 GHz 1 GHz Bandwidth



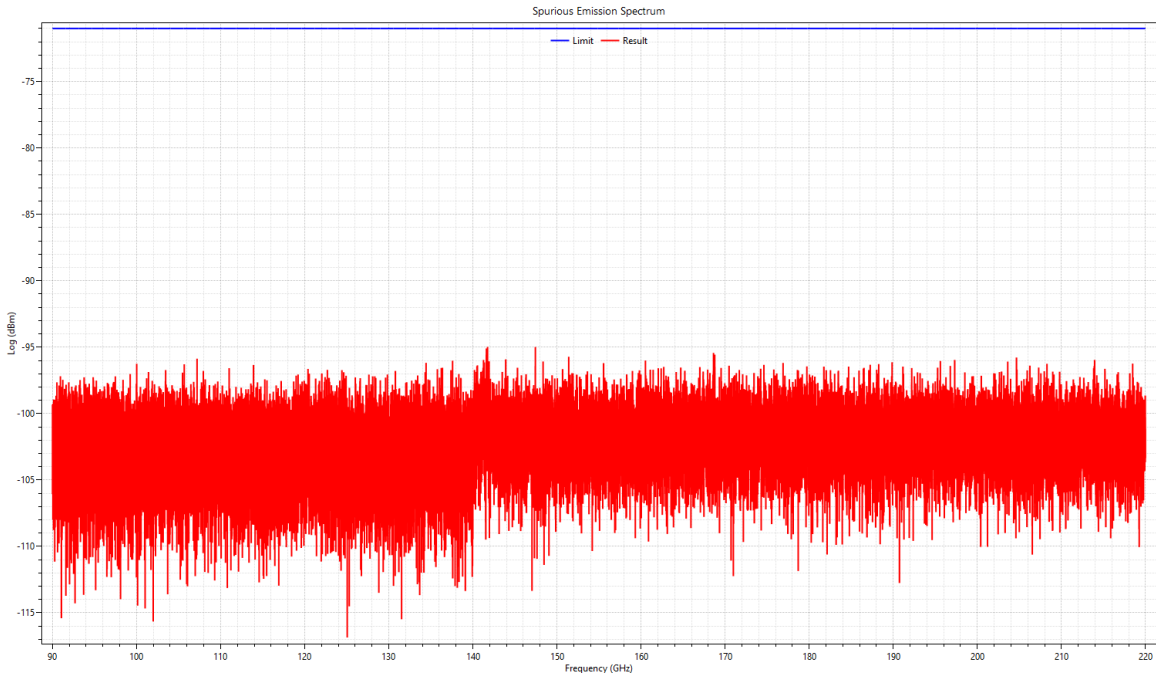
Mid Channel 60 – 90 GHz 2 GHz Bandwidth



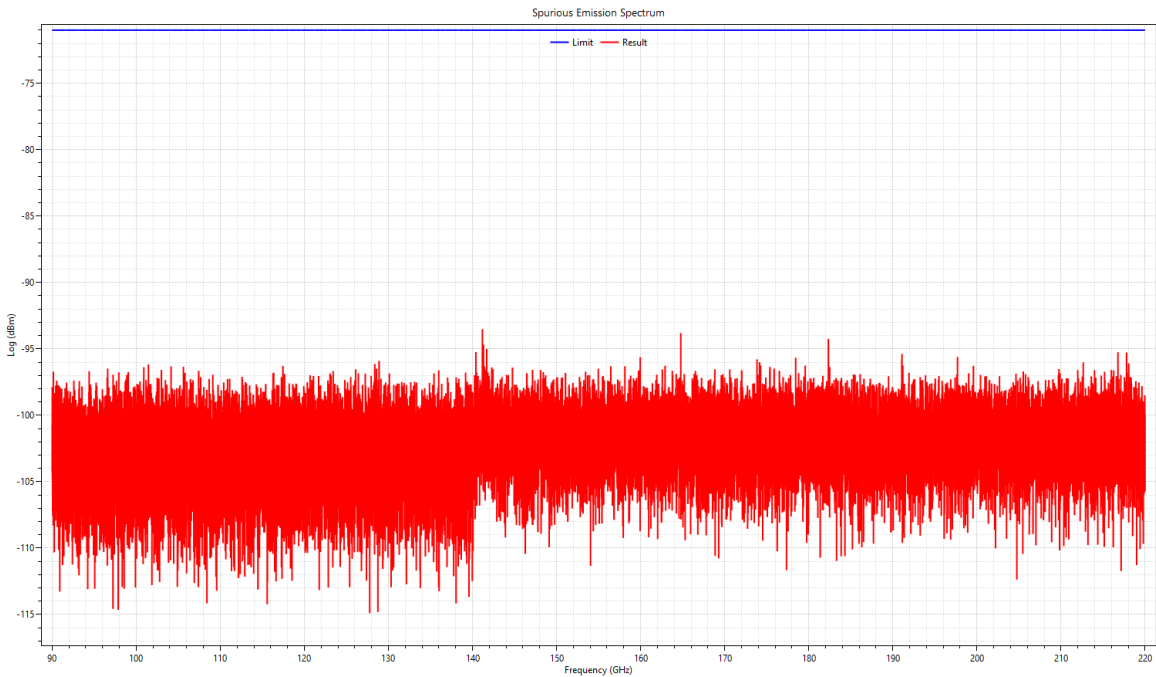
High Channel 60 – 90 GHz 1 GHz Bandwidth



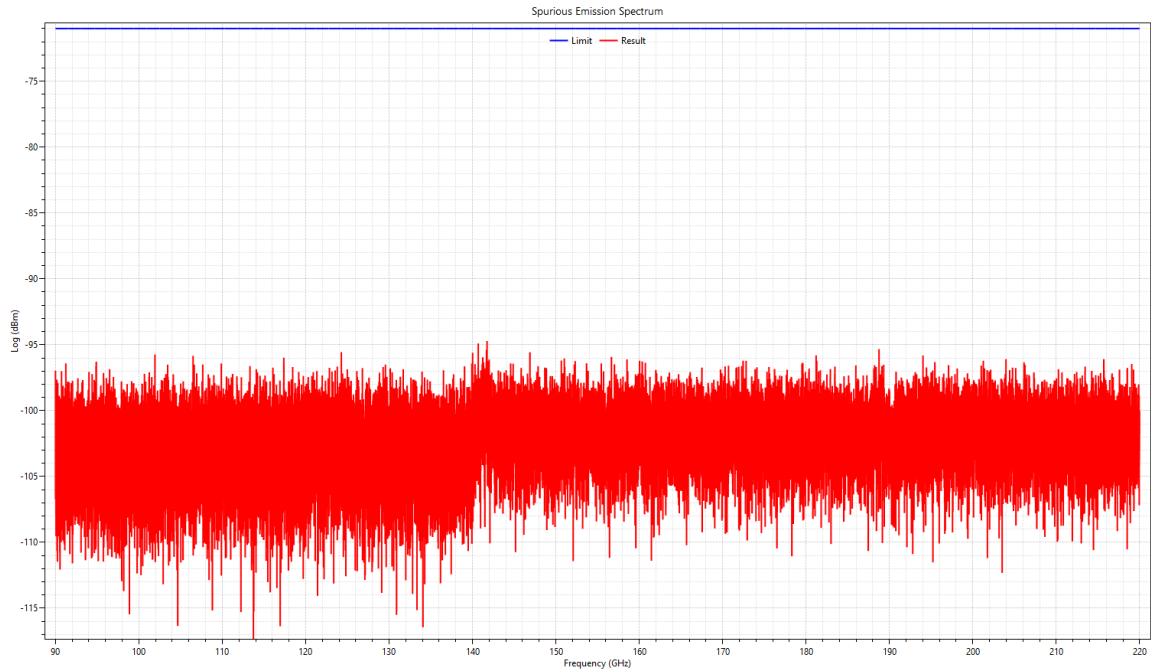
High Channel 60 – 90 GHz 2 GHz Bandwidth



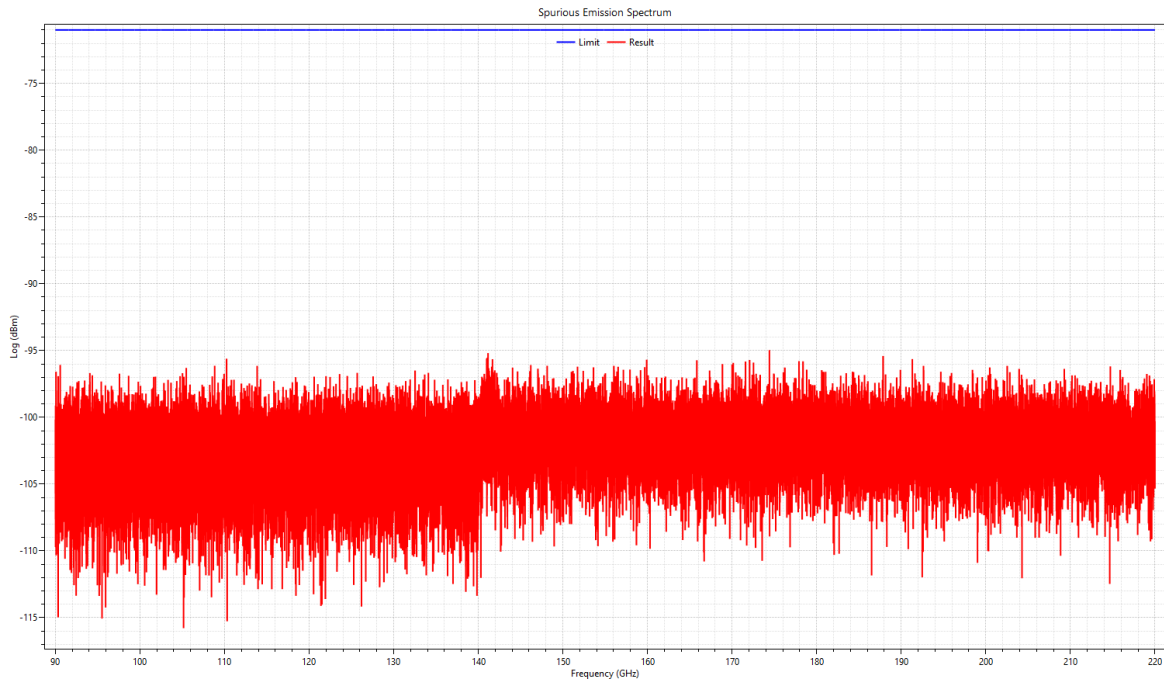
Low Channel 90 – 220 GHz 1 GHz Bandwidth



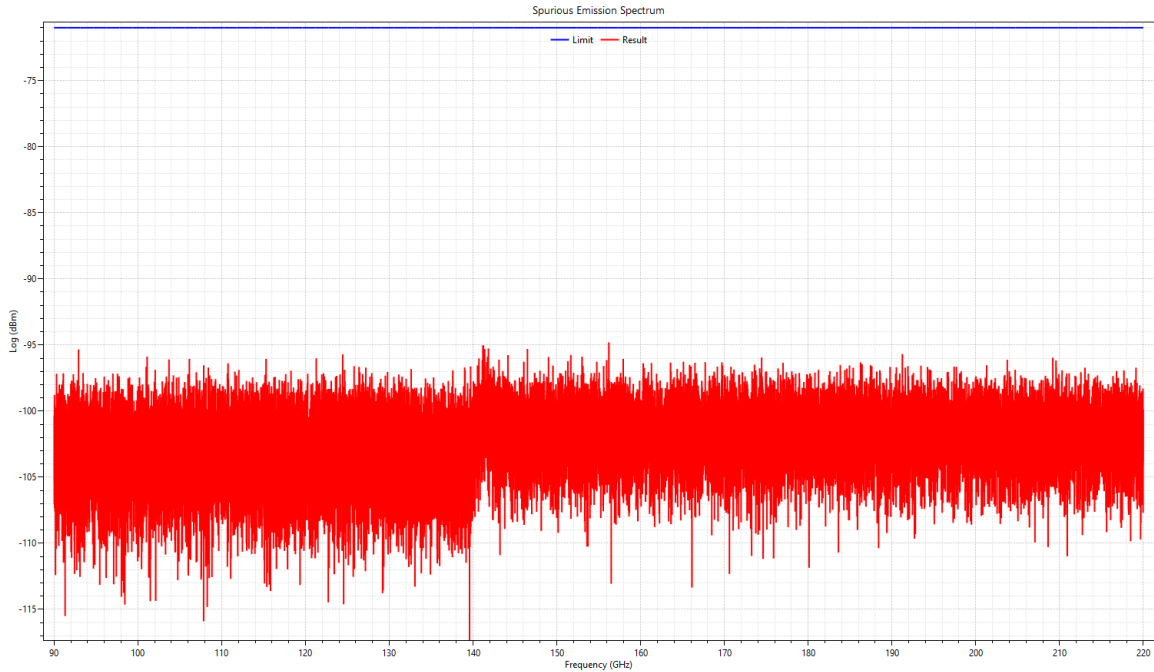
Low Channel 90 – 220 GHz 2 GHz Bandwidth



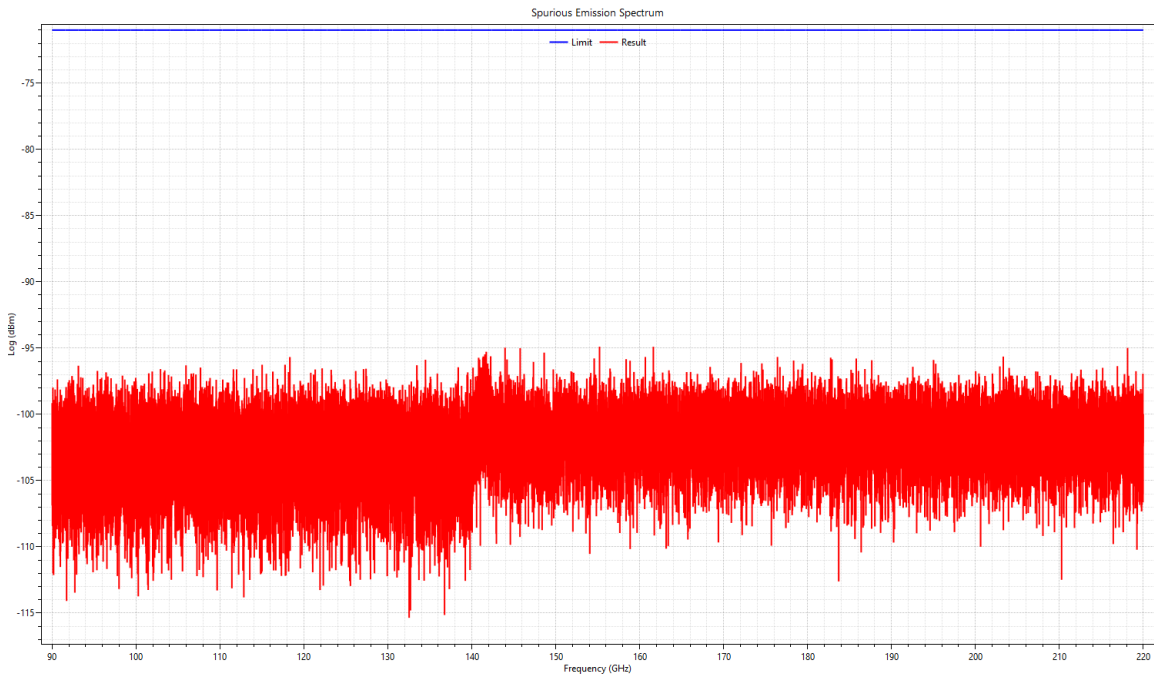
Mid Channel 90 – 220 GHz 1 GHz Bandwidth



Mid Channel 90 – 220 GHz 2 GHz Bandwidth

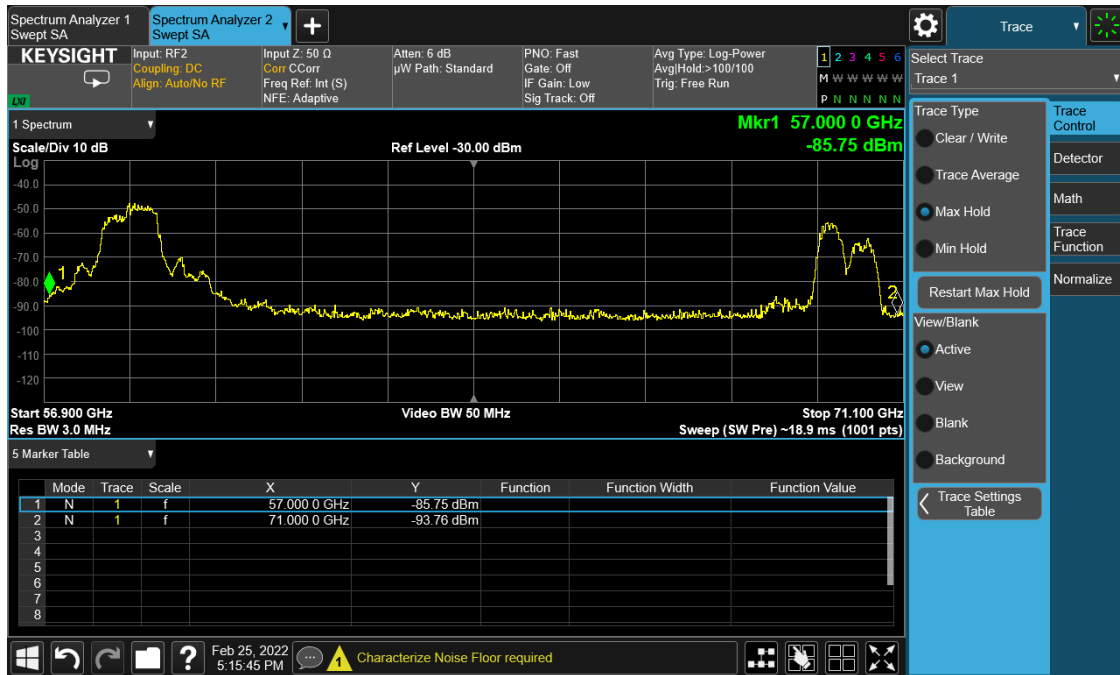


High Channel 90 – 220 GHz 1 GHz Bandwidth



High Channel 90 – 220 GHz 2 GHz Bandwidth

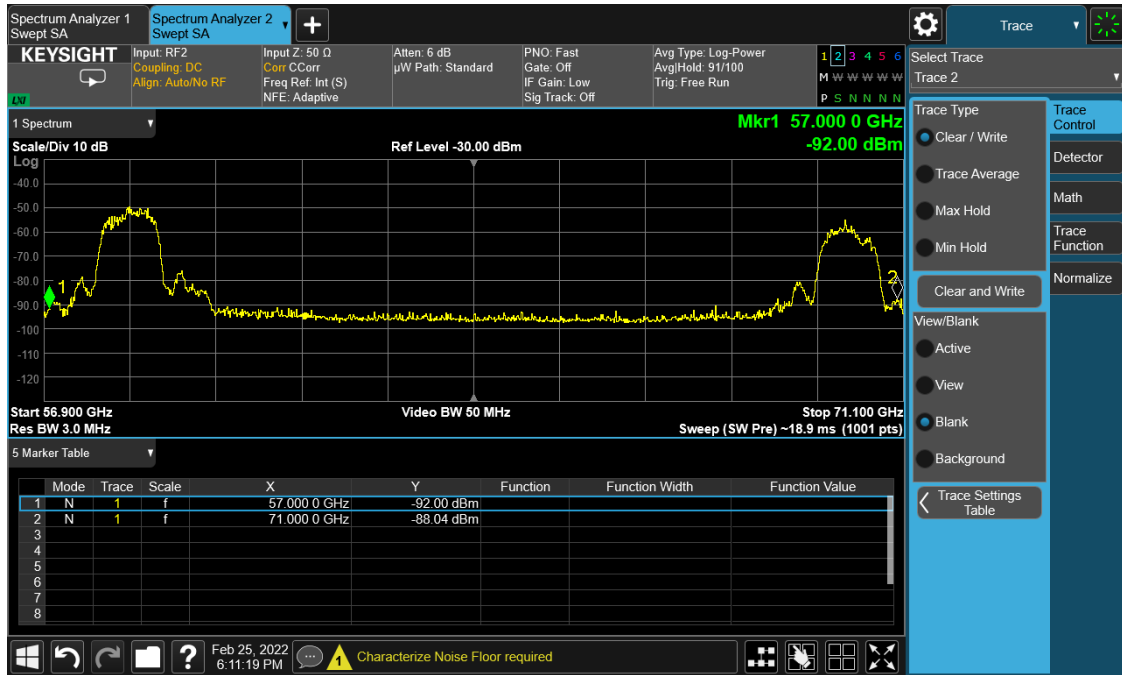
5.6 §15.255(f) Frequency Stability



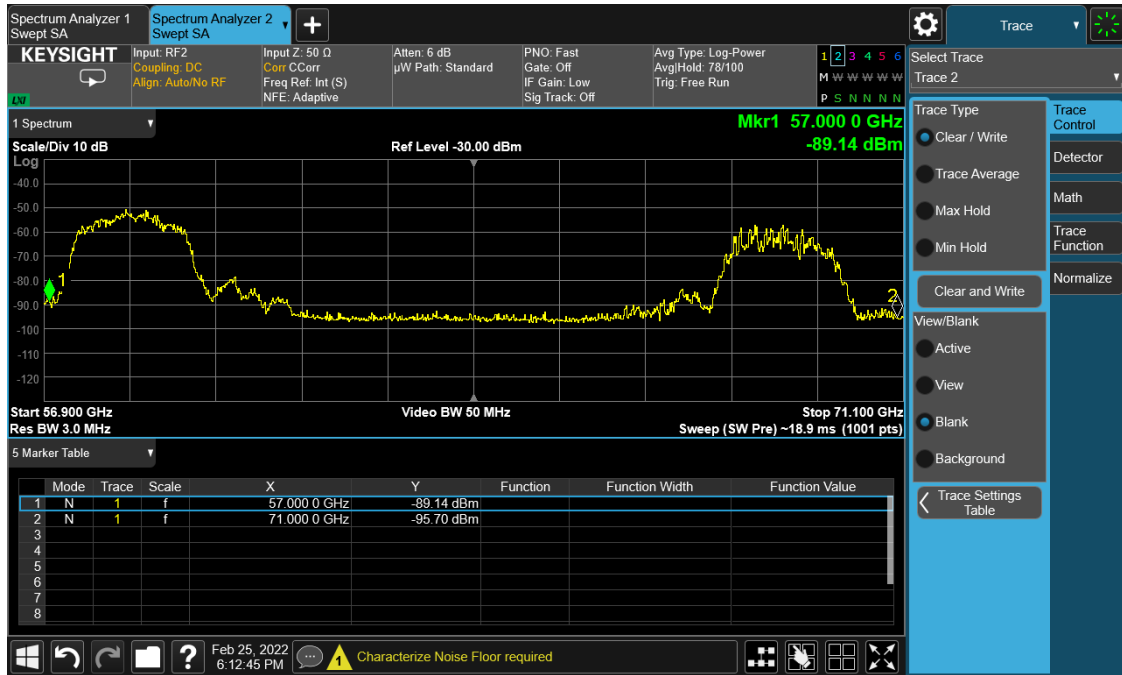
Frequency Stability -40 degrees 1 GHz Bandwidth



Frequency Stability -40 degrees 2 GHz Bandwidth



Frequency Stability +60 degrees 1 GHz Bandwidth



Frequency Stability +60 degrees 2 GHz Bandwidth

-- End of Test Report --