47 CFR PART 15 SUBPART E TEST REPORT

for

Hybrid Security System

Model No.: HYGW-Gen2-V1

FCC ID: GX9HYGWGEN2

of

Applicant: CLIMAX TECHNOLOGY CO., LTD.
Address: No. 258, Sinhu 2nd Rd., Neihu District, Taipei City 114, Taiwan (R.O.C.)

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: TW1477, TW1072

Industry Canada filed test laboratory Reg. No.: 20037, 5107A

Report No.: W6R22209-22106-C-54

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1 General Information

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.
The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.
Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.
Neither is there any guarantee that such a test sample will interwork with other genuinely open systems.
The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

Laboratory disclaimer-
1. The test results of this test report relate exclusively to the item tested as specified in 1.5.
2. The test report may only be reproduced or published in full.
3. Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.
4. Antenna gain is provided by applicant and laboratory issue relevant data and results.

Specific Conditions:
Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

Tester:

October 20, 2022		Sora Kuo	Sora
Date	WTS-Lab.	Name	Signature

Technical responsibility for area of testing:

October 20, 2022		Kevin Wang	Kevin Wang
Date	WTS	Name	Signature

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

1.2 Testing laboratory

1.2.1 Location

10m OATS
No.5-1, Lishui, Shuang Sing Village, Wanli Dist.,
New Taipei City 207, Taiwan (R.O.C.)

3 meter semi-anechoic chamber
No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist.,
Taipei City 114, Taiwan (R.O.C.)
Tel: 886-2-6613-0228

Worldwide Testing Services (Taiwan) Co., Ltd.
6F., No. 58, Ln. 188, Ruiguang Rd., Neihu Dist.,
Taipei City 114 , Taiwan (R.O.C.)
Tel: 886-2-6606-8877

1.2.2 Details of accreditation status

Accredited testing laboratory
FCC filed test laboratory Reg. No.: TW1477, TW1072
Industry Canada filed test laboratory Reg. No.: 20037, 5107A

Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :

Name:	./.
Accredited number:	./.
Street:	./.
Town:	./.
Country:	./.

1.3 Details of approval holder

Name:	CLIMAX TECHNOLOGY CO., LTD.
Street:	No. 258, Sinhu 2nd Rd., Neihu District,
Town:	Taipei City 114,
Country:	Taiwan (R.O.C.)

1.4 Manufacturer: (if applicable)

Name:	./.
Street:	./.
Town:	./.
Country:	./.

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

1.5 Application details

Date of receipt of test item: September 06, 2022
Date of test: from September 07, 2022 to October 06, 2022

1.6 General information of Test item

Type of test item: Hybrid Security System
Model number: HYGW-Gen2-V1
Brand name: Alarm.com
Multi-listing model number: ./.
Sample no.: #02
Operating modes: Duplex
Type of modulation: OFDM
Fixed point to point operation: Yes / No
Antenna: Monopole antenna
Antenna gain:

Gain (dBi)	NII-1	NII-2A	NII-2C	NII-3
Antenna A	3	3.59	5.21	5
Antenna B	6.08	6.19	7.5	6.1
Directional Gain	7.69	8.00	9.44	8.58

Power supply: 16~18Va.c.

Duty Cycle

Mode	T_{on} (ms)	$T_{on}+T_{off}$ (ms)	Duty cycle (%)	Duty Factor (dB)	1/T - VBW (KHz)
802.11a	2.075	2.083	99.62%	0.02	0.48
802.11n(HT20)	1.346	1.386	97.11%	0.13	0.74
802.11n(HT40)	0.671	0.764	87.84%	0.56	1.49
802.11ac (VHT80)	0.341	0.431	79.18%	1.01	2.93

Classification:

Fixed Device	☒
Mobile Device (Human Body distance ＞ 20cm)	☐
Portable Device (Human Body distance ＜ 20cm)	☐
Modular Radio Device	☐

Note: This device was functioned as a ☐Master ■Slave device during the DFS

1.6 Test standards

Technical standard : 47 CFR PART 15 SUBPART C § 15.407 (2020-10)

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations were ascertained in the course of the tests performed. ☐

2.2 Test environment

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Details of power supply: 16~18Va.c.

Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission)	Expanded Uncertainty： AMN：1.03 dB Voltage probe：1.05 dB
Estimation Result of Uncertainty of Radiated Emission(3M) (Undesirable emission limits, Radiated Emissions from Receiver Part)	Expanded Uncertainty： 0.009-30 MHz：3.48 dB 30-1000 MHz：4.48 dB 1-18 GHz：4.15 dB 18-40 GHz：3.78 dB
Estimation Result of Uncertainty of Bandwidth Measurement (26dB emission bandwidth, 99% Occupied Bandwidth, 6dB emission bandwidth, 99% Occupied Bandwidth)	Expanded Uncertainty：0.45 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Transmit Power)	Expanded Uncertainty：3.07 dB
Estimation Result of Uncertainty of Power Density Measurement (Peak Power Spectral Density)	Expanded Uncertainty：3.63 dB
Estimation Result of Uncertainty of EIRP Measurement (Equivalent Isotropic Radiated Power (EIRP), Radiated Emissions from Receiver Part)	Expanded Uncertainty： 30-200MHz：3.55 dB 200-1000MHz：3.37 dB 1-18GHz：4.72 dB 18-40GHz：3.83 dB
Estimation Result of Uncertainty of DFS Timing (Dynamic Frequency Selection (DFS), Channel Move Time, Channel Closing Transmission Time)	Expanded Uncertainty：0.6 ms
Estimation Result of Uncertainty of DFS Threshold (Dynamic Frequency Selection (DFS), Channel Move Time, Channel Closing Transmission Time)	Expanded Uncertainty：3.65 dB

The decision rule is: Measurement uncertainty is not included in the calculation of test results.

2.3 Test Equipment List

No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2022/6/22	2023/6/21
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2021/11/9	2022/11/8
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2022/9/16	2023/9/15
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2022/8/3	2023/8/2
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2021/11/8	2022/11/7
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2022/7/29	2023/7/28
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2022/6/21	2023/6/20
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2022/9/16	2023/9/15
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2022/8/18	2023/8/17
ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2022/6/13	2023/6/12
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2022/6/22	2023/6/21
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2022/5/23	2023/5/22
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2022/3/4	2023/3/3
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2022/6/28	2023/6/27
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2022/8/1	2023/7/31
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2022/2/18	2023/2/17
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2022/2/18	2023/2/17
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2022/2/18	2023/2/17
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2022/3/28	2023/3/27
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2022/2/18	2023/2/17
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2022/5/13	2023/5/12
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ETS-Lindgren	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2021/10/27	2022/10/26
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2022/9/16	2023/9/15
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2022/6/9	2023/6/8
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2022/2/18	2023/2/17
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	

ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2022/1/5	2023/1/4
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	2021/10/29	2022/10/28
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2022/6/20	2023/6/19
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2022/8/3	2023/8/2
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2022/8/3	2023/8/2
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2022/2/18	2023/2/17
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2022/8/3	2023/8/2
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2022/8/3	2023/8/2
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2022/5/13	2023/5/12
ETSTW-RE 146	Preamplifier	JPA-10M1G	15090004	JPT	2022/5/27	2023/5/26
ETSTW-RE 152	Bi-log Hybrid Antenna	MCTD 2786B	BLB20J04029	ETC	2022/9/30	2023/9/29
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2022/9/16	2023/9/15
ETSTW-RE 159	Bi-log Hybrid Antenna (30M~1000 MHz)	MCTD 2786B	BLB21N04035	ETC	2021/12/06	2022/12/05
ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2022/7/14	2023/7/13
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2022/6/10	2023/6/9
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2022/3/28	2023/3/27
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2022/5/9	2023/5/8
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2021/10/29	2022/10/28
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2022/1/5	2023/1/4
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2022/1/5	2023/1/4
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5-1875.5/1884.5-32/5SS	3	WI	2022/1/5	2023/1/4
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2022/1/5	2023/1/4
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2022/9/2	2023/9/1
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2022/5/3	2023/5/2
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2022/8/3	2023/8/2
ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test Use NCR	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2022/2/18	2023/2/17
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2022/6/15	2023/6/14
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2022/5/6	2023/5/5
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2022/9/16	2023/9/15
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2022/9/16	2023/9/15
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 （S_Cable 9）	279067	HUBER+SUHNER	2022/2/18	2023/2/17

ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2022/5/13	2023/5/12
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2022/7/1	2023/6/30
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2022/5/27	2023/5/26
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2022/5/13	2023/5/12
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2022/5/27	2023/5/26
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2022/5/13	2023/5/12
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2022/5/13	2023/5/12
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	
WTSTW-SW 006	EMI TEST SOFTWARE	e3	None	AUDIX	Version 9.161014	
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX	Version 2.0.0.1	
ETSTW-TH 002	Thermohygrometer	608-H1	45204317	Testo	2022/9/16	2023/9/15
ETSTW-TH 003	Wireless weather station	GAIA	N/A	TFA	2021/10/18	2022/10/17

2.4 Test Procedure

The test procedures are performed following the test stands ANSI STANDARD C63.10 and FCC 789033 D02 General UNII Test Procedures New Rules v01r04.

■ Minimum Emission Bandwidth for the band 5.150-5.250 GHz, 5.725-5.850 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

■ 99 Percent Occupied Bandwidth

The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section H)3)d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the 6-dB emission bandwidth to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section E). However, the 6-dB bandwidth must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth.

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

■ Maximum conducted output power

(i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
(ii) Set RBW = 1 MHz.
(iii) Set VBW ≥ 3 MHz.
(iv) Number of points in sweep ≥ 2 Span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
(v) Sweep time = auto.
(vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
(vii) If transmit duty cycle < 98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
(viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
(ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

■ Power Density

The rules requires "maximum power spectral density" measurements where the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power…". (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
   a) If Method SA-2 or SA-2 Alternative was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum.
   b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus

a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/T, where T is defined in section II.B.l.a).

b) Set VBW ≥ 3 RBW.

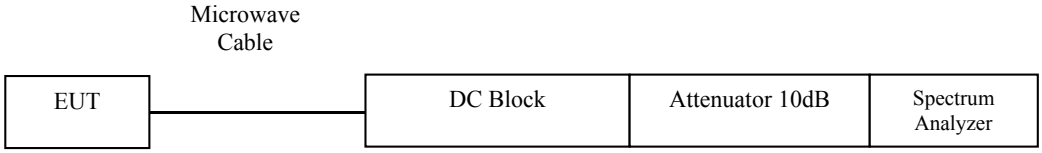
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW=100 kHz is available on nearly all spectrum analyzers.

Conducted measurement test setup



3 Test results (enclosure)

Test case	Para. Number	Required	Test passed	Test failed
Peak Transmit Power	15.407(a)	☒	☒	☐
6-dB emission bandwidth	15.407(a)	☒	☒	☐
26-dB emission bandwidth	15.407(a)	☒	☒	☐
99 % Occupied Bandwidth	789033 D02 General U-NII Test Procedures New Rules v02r01	☒	☒	☐
Peak Power Spectral Density	15.407(a)	☒	☒	☐
Undesirable emission limits	15.407(b)	☒	☒	☐
Radio Frequency Exposure	15.407(f)	☒	☒	☐
Transmit Power Control	15.407(h)	☐	☐	☐
Dynamic Frequency Selection (DFS)	15.407(h)	☒	☒	☐
Channel Move Time, Channel Closing Transmission Time	15.407(i)	☒	☒	☐
Radiated Emission from Receiver Part	15.109	☐	☐	☐
AC Conducted Emissions	15.207	☒	☒	☐

The following is intentionally left blank.

3.1 Peak Transmit Power, FCC 15.407 (a)

According to §15.407(a)

1. For the band 5.15-5.25 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W) for master device and 24 dBm (250 mW) for mobile/portable client device.

2. For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 24 dBm (250 mW) or 11dBm + 10 log B, whichever is lower (B= 26-dB emission BW).

3. For the band 5.725-5.850 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W).

4. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5. According KDB662911 D01 d) i), transmit signals are completely correlated, then
Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi
Directional gain :
= 7.69 dBi (for NII-1)、8.00 dBi (for NII-2A)、9.42 dBi (for NII-2C)、8.58 dBi (for NII-3)

6.

	Frequency	Limit (dBm)	reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	Limit (dBm) (consider directional gain)
NII-1	5.15-5.25 GHz	24	1.69	22.31
NII-2A	5.25-5.35 GHz	24	2.00	22.00
NII-2C	5.47-5.725 GHz	24	3.44	20.56
NII-3	5.725-5.850 GHz	30	2.58	27.42

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

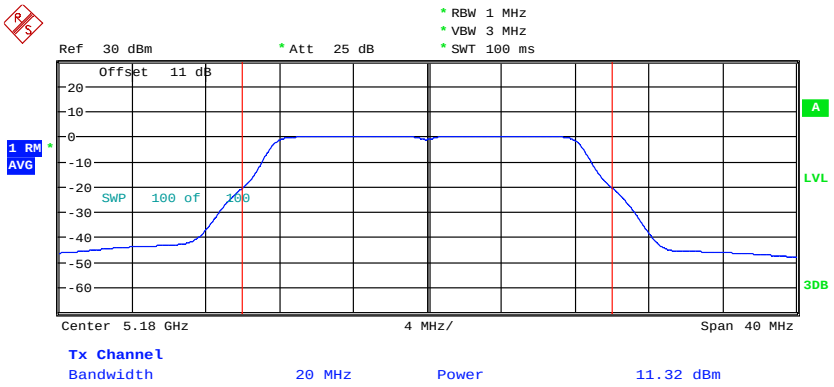
Test date: October 04, 2022
Temperature: 24.6 ˚C
Humidity: 52.3 %
Tester: Sora

Band	Mode	Channel	Conducted power with DF		Combine (dBm)	DF (dB)	Limit
			Antenna A (dBm)	Antenna B (dBm)			
NII-1	802.11a	Ch 36 : 5180 MHz	11.32	11.36	-	0	22.31
		Ch 44 : 5220 MHz	11.75	11.76	-	0	22.31
		Ch 48 : 5240 MHz	11.86	12.1	-	0	22.31
	802.11n 20M	Ch 36 : 5180 MHz	10.09	9.98	13.05	0.13	22.31
		Ch 44 : 5220 MHz	10.48	10.37	13.44	0.13	22.31
		Ch 48 : 5240 MHz	10.6	10.54	13.58	0.13	22.31
	802.11n 40M	Ch 38 : 5190 MHz	8.29	8.26	11.29	0.56	22.31
		Ch 46 : 5230 MHz	8.79	8.68	11.75	0.56	22.31
	802.11ac	Ch 42 : 5210 MHz	6.15	6.21	9.19	1.01	22.31
NII-2A	802.11a	Ch 52 : 5260 MHz	11.72	11.76	-	0	22.00
		Ch 60 : 5300 MHz	11.84	11.78	-	0	22.00
		Ch 64 : 5320 MHz	11.97	11.86	-	0	22.00
	802.11n 20M	Ch 52 : 5260 MHz	10.44	10.72	13.59	0.13	22.00
		Ch 60 : 5300 MHz	10.54	10.77	13.67	0.13	22.00
		Ch 64 : 5320 MHz	10.82	10.81	13.83	0.13	22.00
	802.11n 40M	Ch 54 : 5270 MHz	8.84	9.17	12.02	0.56	22.00
		Ch 62 : 5310 MHz	9.08	9.28	12.19	0.56	22.00
	802.11ac	Ch 58 : 5210 MHz	6.72	6.88	9.81	1.01	22.00
NII-2C	802.11a	Ch 100 : 5500 MHz	11.19	10.99	-	0	20.58
		Ch 116 : 5580 MHz	10.44	10.42	-	0	20.58
		Ch 140 : 5700 MHz	10.83	10.94	-	0	20.58
	802.11n 20M	Ch 100 : 5500 MHz	9.71	9.72	12.73	0.13	20.58
		Ch 116 : 5580 MHz	9.02	9.16	12.10	0.13	20.58
		Ch 140 : 5700 MHz	9.6	9.8	12.71	0.13	20.58
	802.11n 40M	Ch 102 : 5510 MHz	8.16	8.12	11.15	0.56	20.58
		Ch 110 : 5550 MHz	7.56	7.42	10.50	0.56	20.58
		Ch 134 : 5670 MHz	7.84	7.97	10.92	0.56	20.58
	802.11ac	Ch 106 : 5530 MHz	6.24	5.66	8.97	1.01	20.58
		Ch 122 : 5610 MHz	5.74	5.23	8.50	1.01	20.58

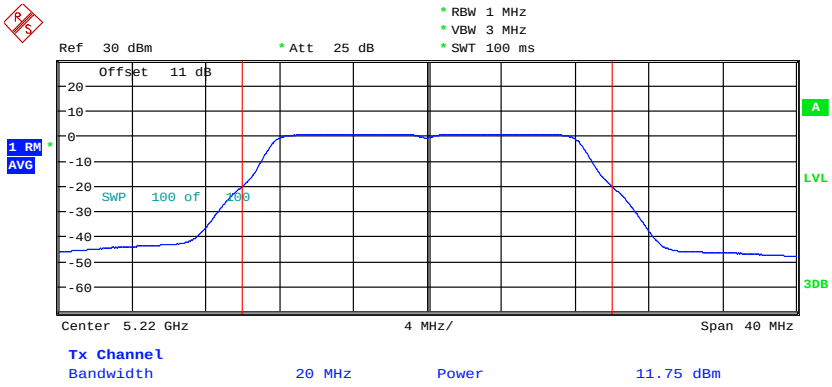
NII-3	802.11a	Ch 149 : 5745 MHz	11.27	11.26	-	0	27.42
		Ch 157 : 5785 MHz	11.36	11.81	-	0	27.42
		Ch 165 : 5825 MHz	10.98	11.46	-	0	27.42
	802.11n 20M	Ch 149 : 5745 MHz	9.95	10.2	13.09	0.13	27.42
		Ch 157 : 5785 MHz	10	10.47	13.25	0.13	27.42
		Ch 165 : 5825 MHz	9.8	10.38	13.11	0.13	27.42
	802.11n 40M	Ch 151 : 5755 MHz	8.29	8.6	11.46	0.56	27.42
		Ch 159 : 5795 MHz	8.53	8.79	11.67	0.56	27.42
	802.11ac	Ch 155: 5775 MHz	6.25	5.89	9.08	1.01	27.42

Note:
Tests were performed under worst case mode 802.11a 6 Mbps, 802.11n 20MHz(MCS0), 802.11n 40MHz(MCS0) and 802.11ac 80MHz(MCS0).

ANTA
5.15 GHz ~ 5.25 GHz

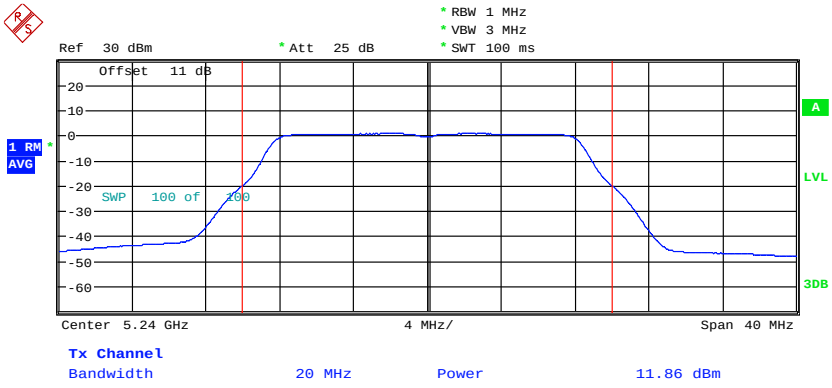


MAXIMUM CONDUCTED POWER ANT1_11aCH36
Date: 4.OCT.2022 15:53:13



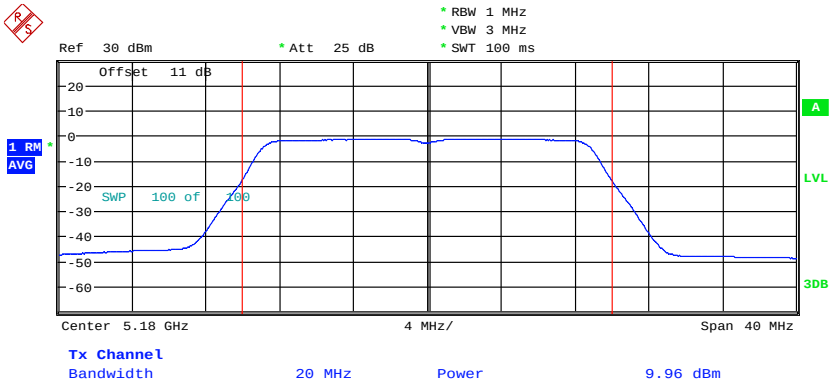
MAXIMUM CONDUCTED POWER ANT1_11aCH44

Date: 4.OCT.2022 16:01:50



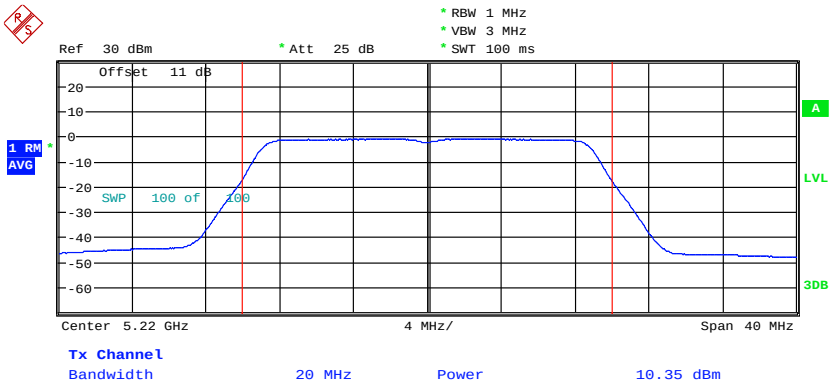
MAXIMUM CONDUCTED POWER ANT1_11aCH48

Date: 4.OCT.2022 16:03:12



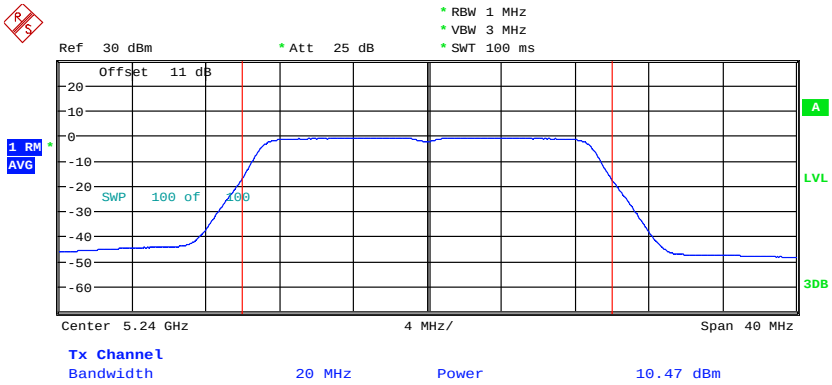
MAXIMUM CONDUCTED POWER ANT1_11n20CH36

Date: 4.OCT.2022 16:13:51



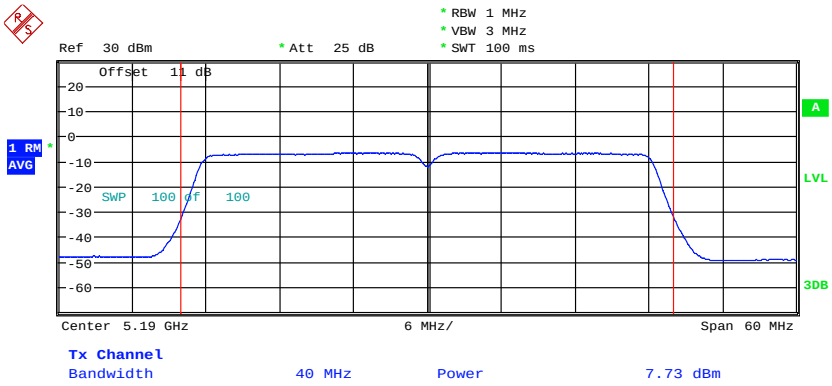
MAXIMUM CONDUCTED POWER ANT1_11n20CH44

Date: 4.OCT.2022 16:14:59



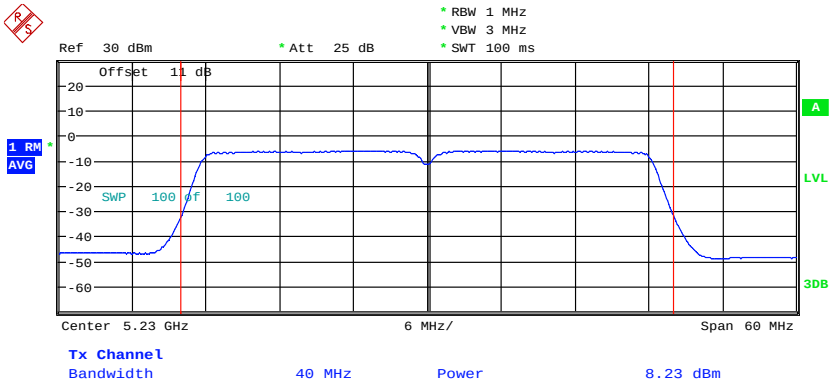
MAXIMUM CONDUCTED POWER ANT1_11n20CH48

Date: 4.OCT.2022 16:16:20



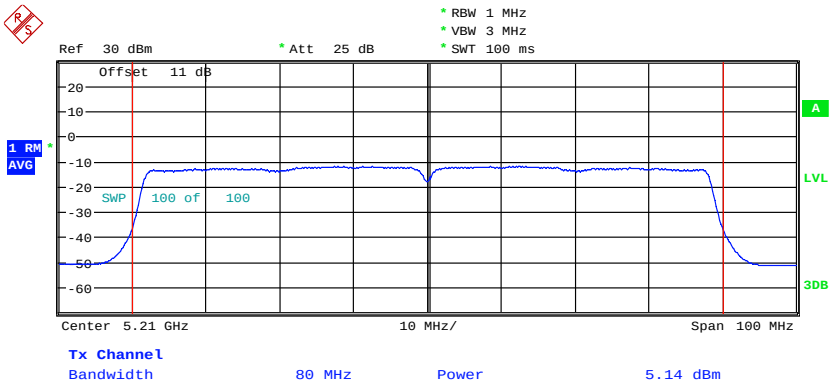
MAXIMUM CONDUCTED POWER ANT1_11n40CH38

Date: 4.OCT.2022 16:18:09



MAXIMUM CONDUCTED POWER ANT1_11n40CH46

Date: 4.OCT.2022 16:19:17

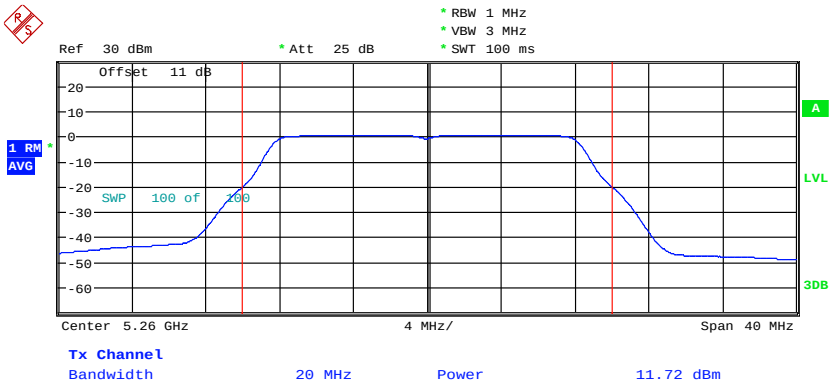


MAXIMUM CONDUCTED POWER ANT1_11ac80CH42

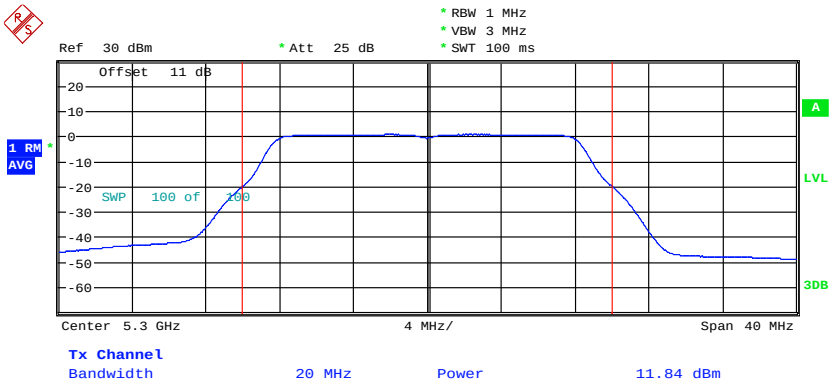
Date: 4.OCT.2022 16:32:39

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

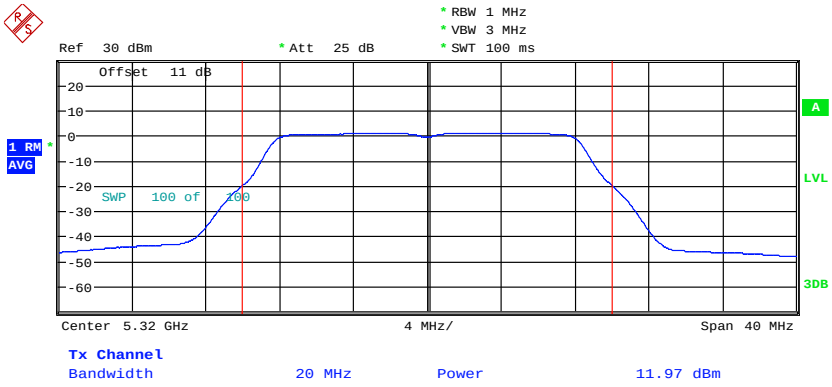
5.25 GHz ~ 5.35 GHz



MAXIMUM CONDUCTED POWER ANT1_11aCH52
Date: 4.OCT.2022 16:05:14

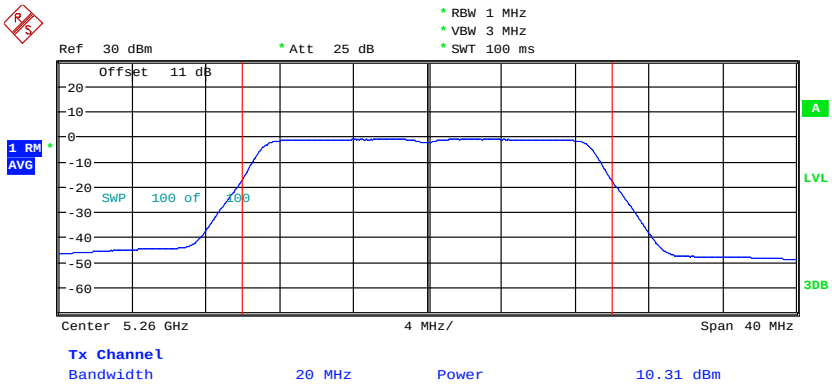


MAXIMUM CONDUCTED POWER ANT1_11aCH60
Date: 4.OCT.2022 16:06:42



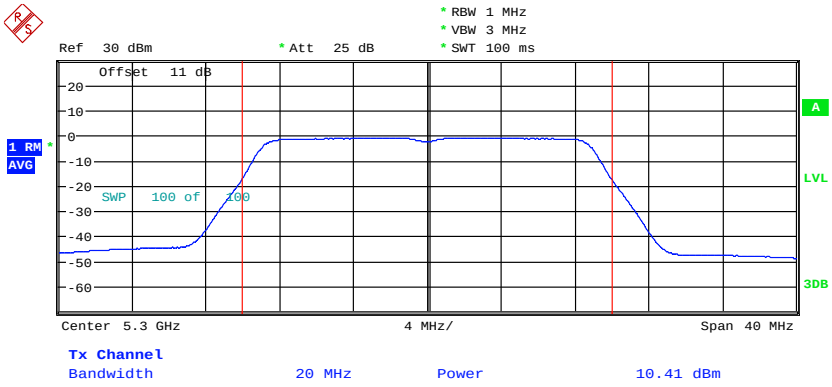
MAXIMUM CONDUCTED POWER ANT1_11aCH64

Date: 4.OCT.2022 16:07:57



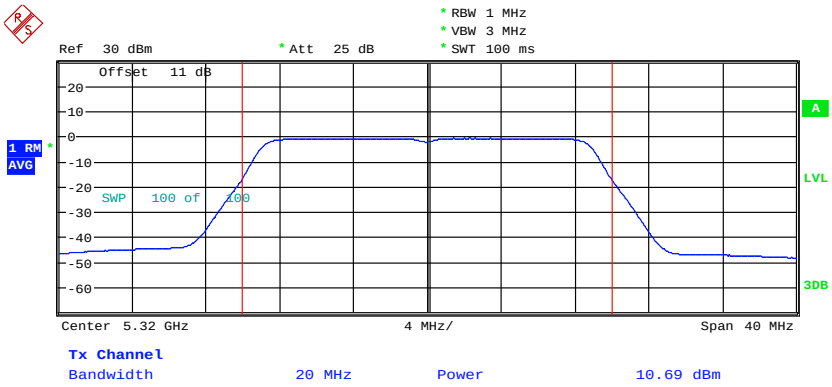
MAXIMUM CONDUCTED POWER ANT1_11n20CH52

Date: 4.OCT.2022 16:09:39



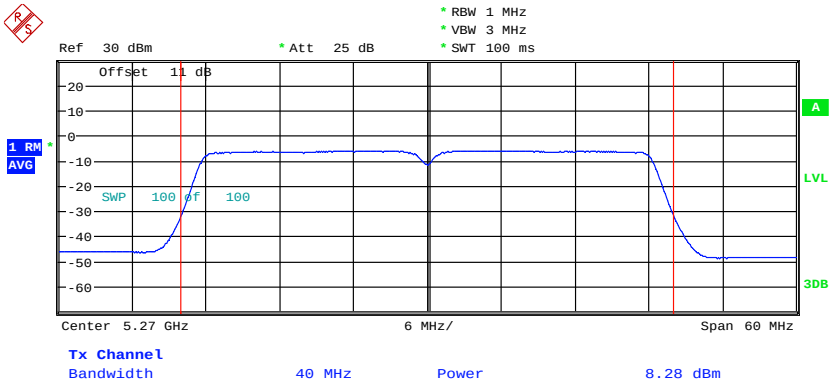
MAXIMUM CONDUCTED POWER ANT1_11n20CH60

Date: 4.OCT.2022 16:11:01



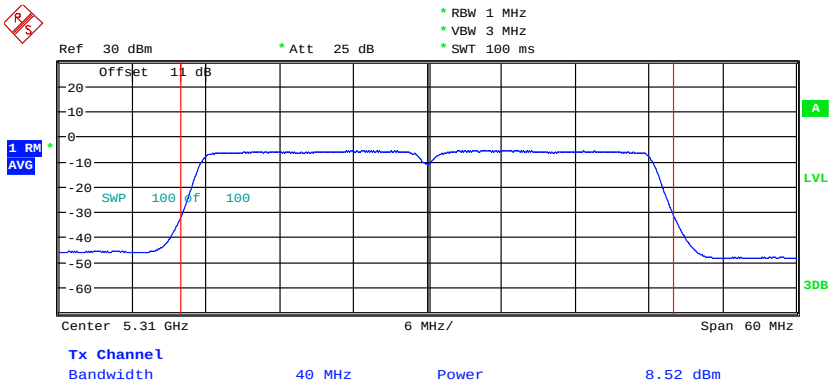
MAXIMUM CONDUCTED POWER ANT1_11n20CH64

Date: 4.OCT.2022 16:12:29



MAXIMUM CONDUCTED POWER ANT1_11n40CH54

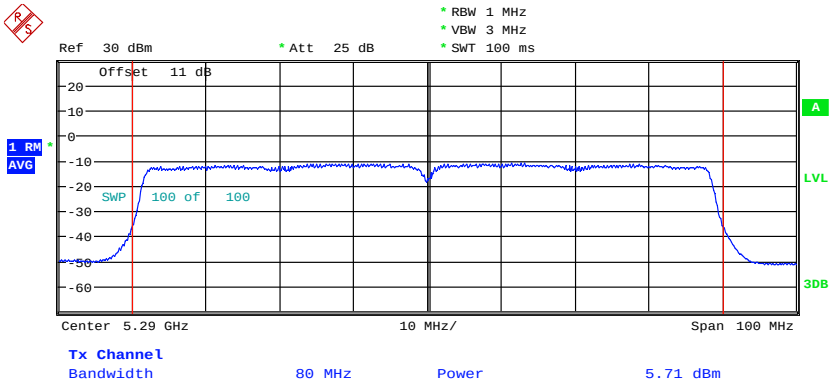
Date: 4.OCT.2022 16:27:06



MAXIMUM CONDUCTED POWER ANT1_11n40CH62

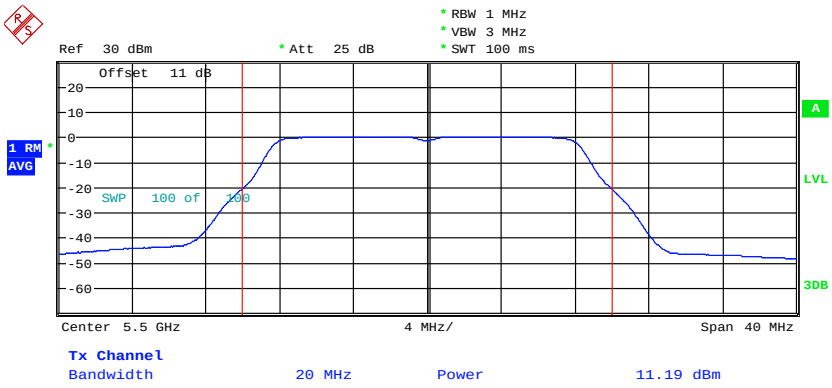
Date: 4.OCT.2022 16:29:36

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

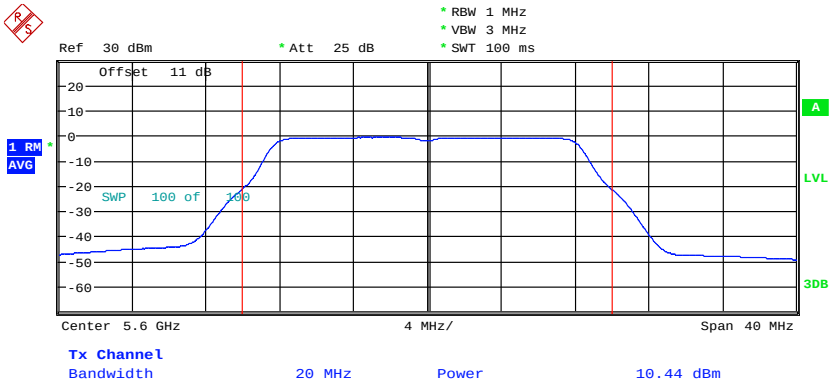


MAXIMUM CONDUCTED POWER ANT1_11ac80CH58
Date: 4.OCT.2022 16:35:36

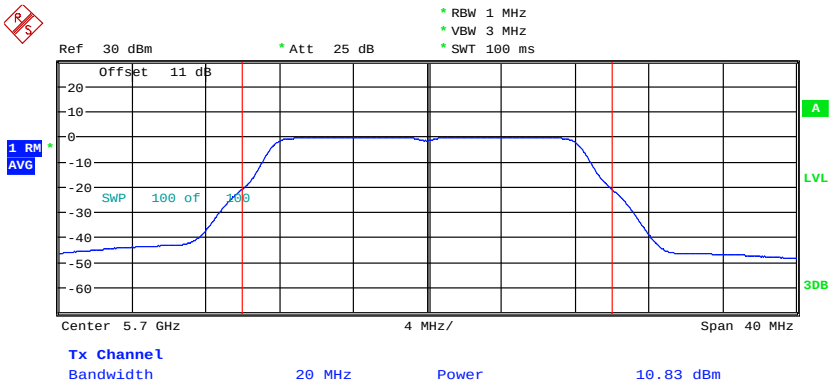
5.47 GHz ~ 5.725 GHz



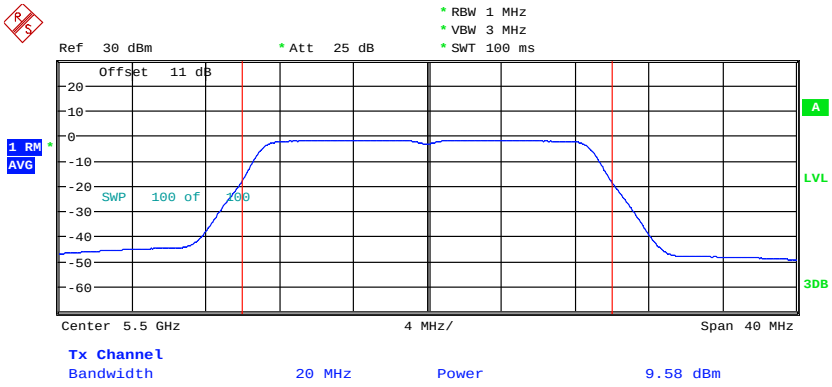
MAXIMUM CONDUCTED POWER ANT1_11aCH100
Date: 4.OCT.2022 16:41:57



MAXIMUM CONDUCTED POWER ANT1_11aCH120
Date: 4.OCT.2022 16:43:05

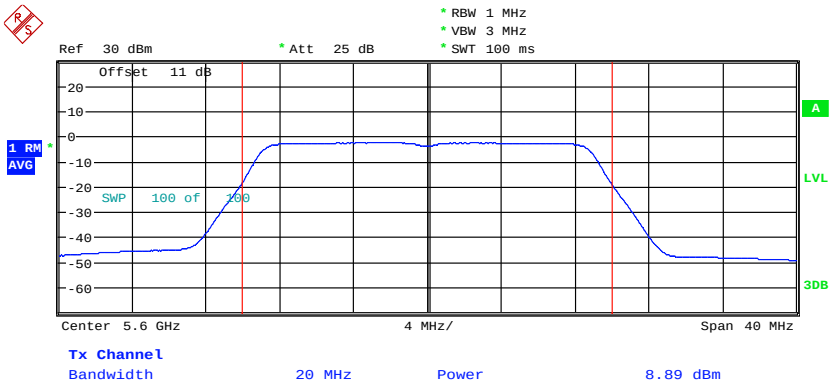


MAXIMUM CONDUCTED POWER ANT1_11aCH140
Date: 4.OCT.2022 16:44:20



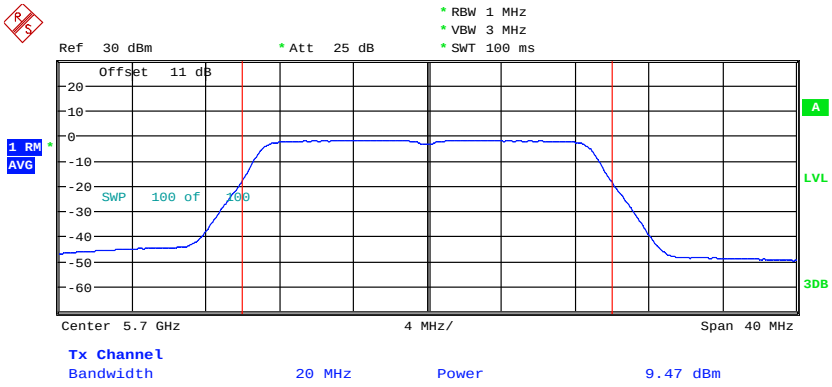
MAXIMUM CONDUCTED POWER ANT1_11n20CH100

Date: 4.OCT.2022 16:46:49



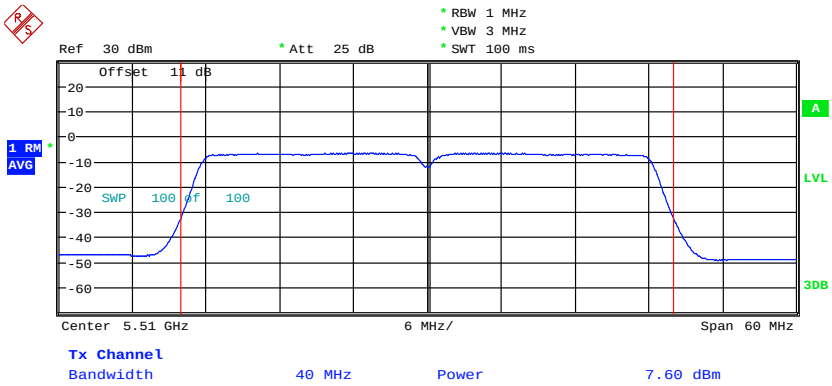
MAXIMUM CONDUCTED POWER ANT1_11n20CH120

Date: 4.OCT.2022 16:48:59



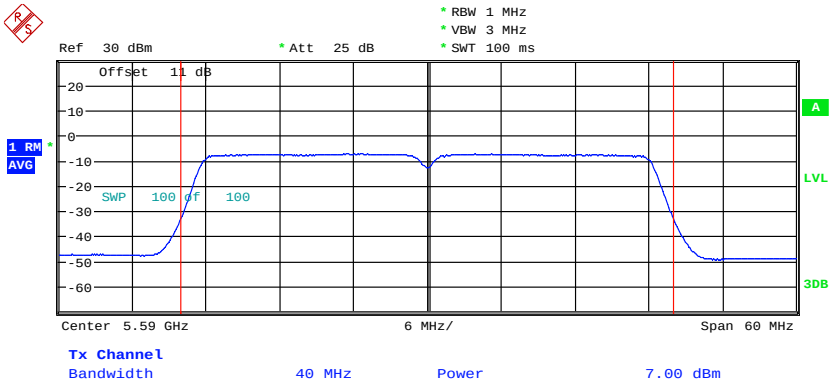
MAXIMUM CONDUCTED POWER ANT1_11n20CH140

Date: 4.OCT.2022 16:50:07



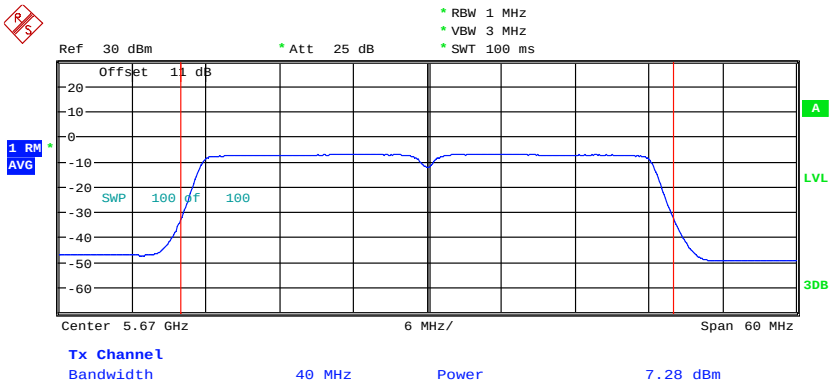
MAXIMUM CONDUCTED POWER ANT1_11n40CH102

Date: 4.OCT.2022 16:53:17



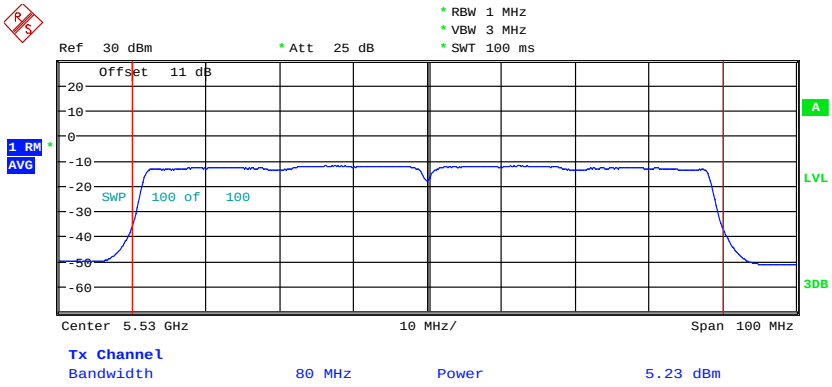
MAXIMUM CONDUCTED POWER ANT1_11n40CH118

Date: 4.OCT.2022 16:54:25



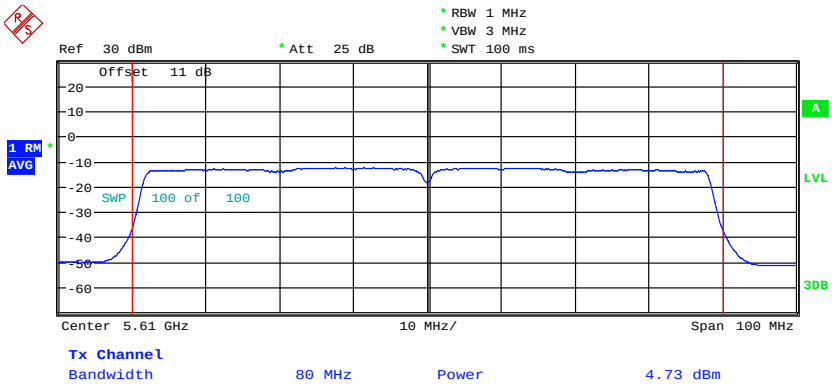
MAXIMUM CONDUCTED POWER ANT1_11n40CH134

Date: 4.OCT.2022 16:55:40



MAXIMUM CONDUCTED POWER ANT1_11ac80CH106

Date: 4.OCT.2022 16:57:29

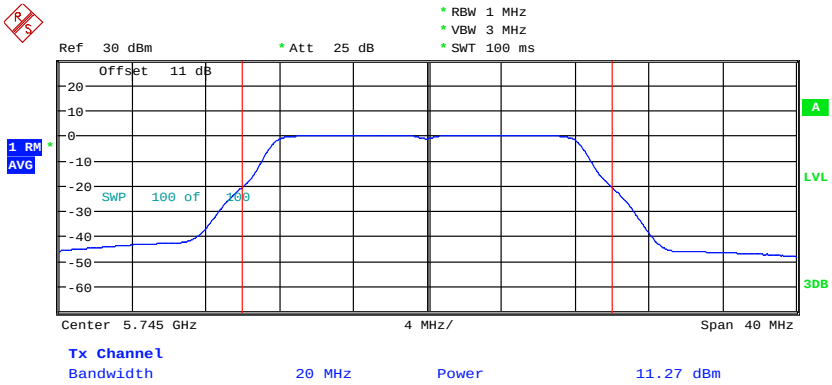


MAXIMUM CONDUCTED POWER ANT1_11ac80CH122

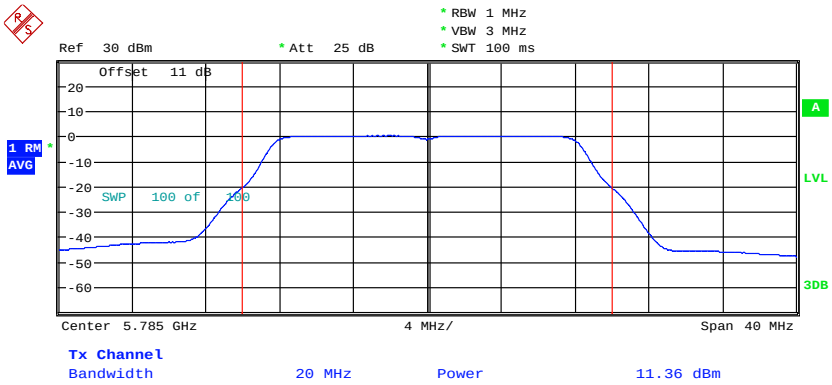
Date: 4.OCT.2022 16:59:31

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

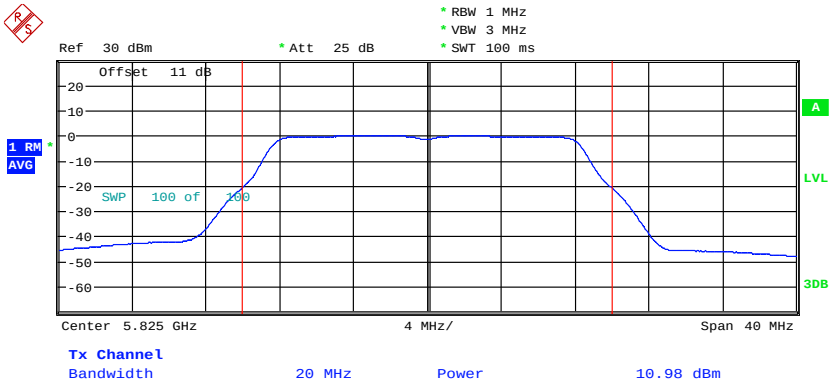
5.725 GHz ~ 5.85 GHz



MAXIMUM CONDUCTED POWER ANT1_11aCH149
Date: 4.OCT.2022 17:02:48

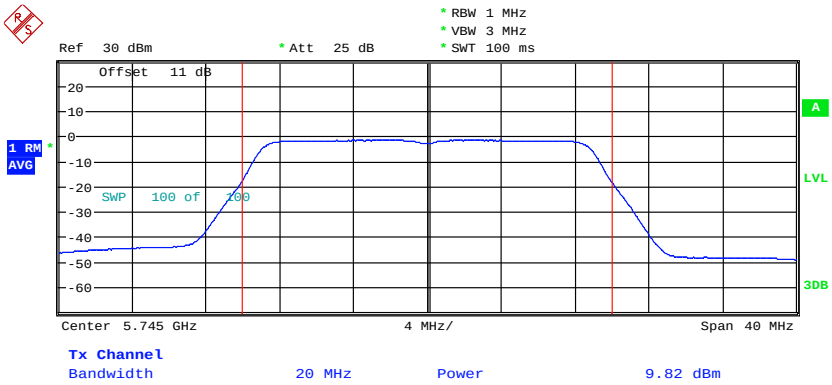


MAXIMUM CONDUCTED POWER ANT1_11aCH157
Date: 4.OCT.2022 17:03:49



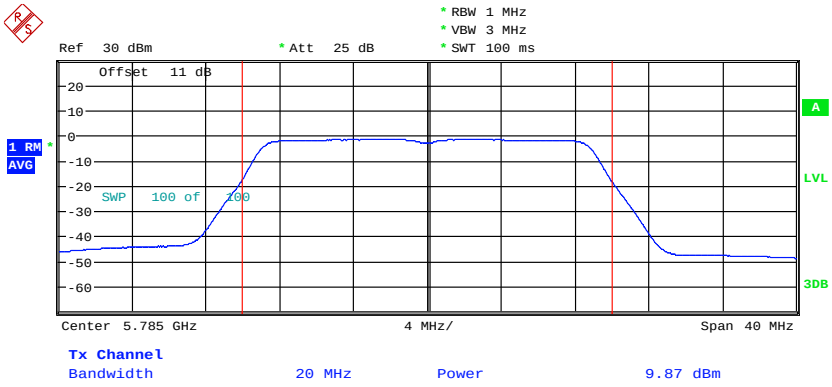
MAXIMUM CONDUCTED POWER ANT1_11aCH165

Date: 4.OCT.2022 17:04:57



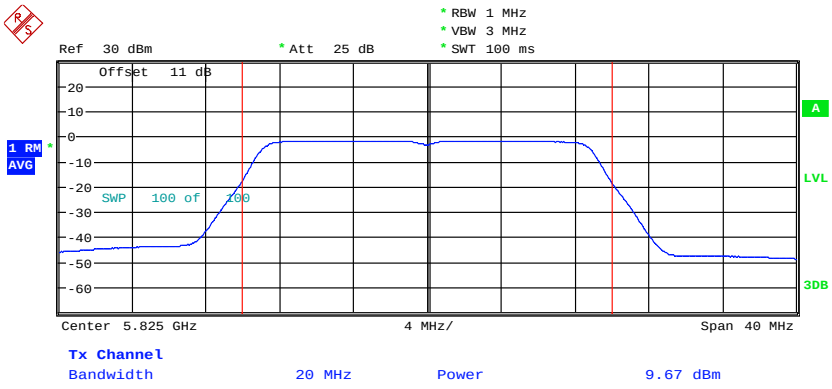
MAXIMUM CONDUCTED POWER ANT1_11n20CH149

Date: 4.OCT.2022 17:06:05



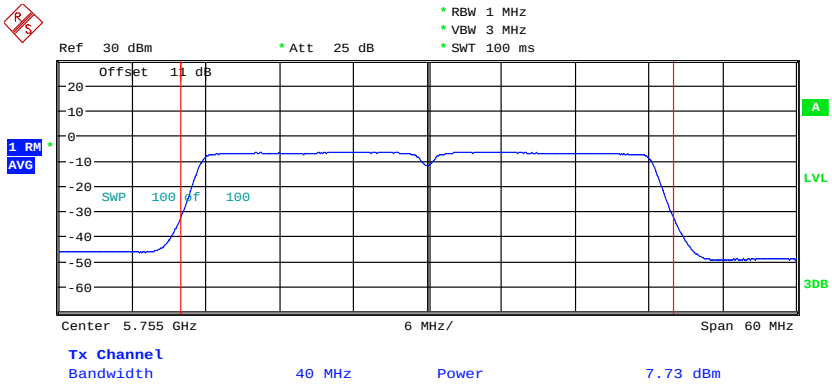
MAXIMUM CONDUCTED POWER ANT1_11n20CH157

Date: 4.OCT.2022 17:07:06



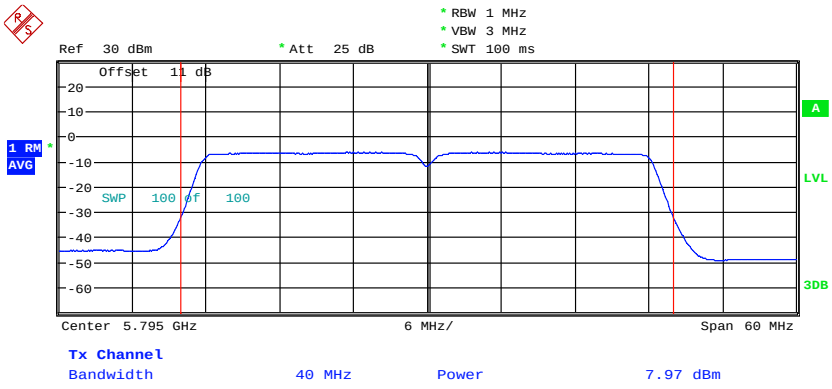
MAXIMUM CONDUCTED POWER ANT1_11n20CH165

Date: 4.OCT.2022 17:08:55



MAXIMUM CONDUCTED POWER ANT1_11n40CH151

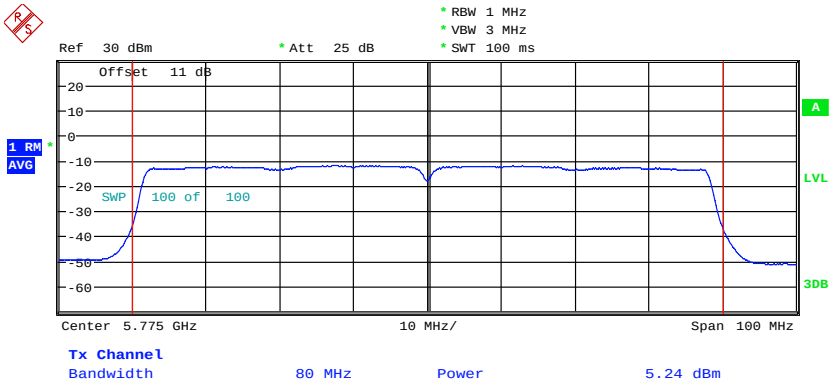
Date: 4.OCT.2022 17:10:24



MAXIMUM CONDUCTED POWER ANT1_11n40CH159

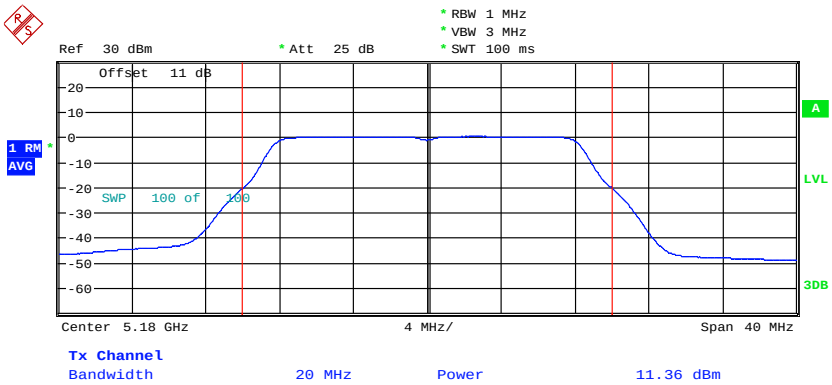
Date: 4.OCT.2022 17:11:38

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

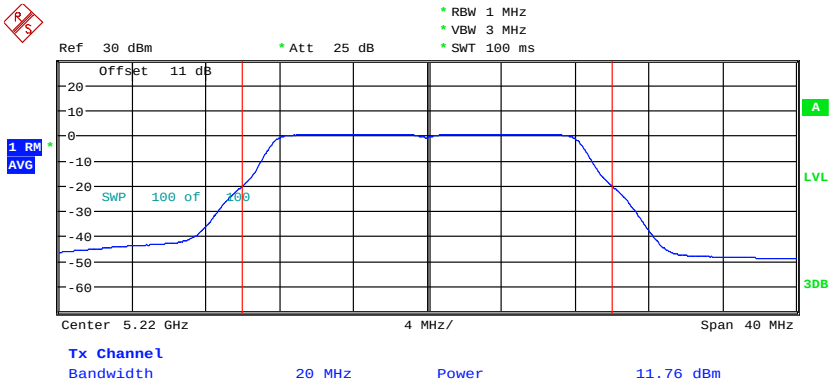


MAXIMUM CONDUCTED POWER ANT1_11ac80CH155
Date: 4.OCT.2022 17:13:27

ANT B
5.15 GHz~5.25 GHz

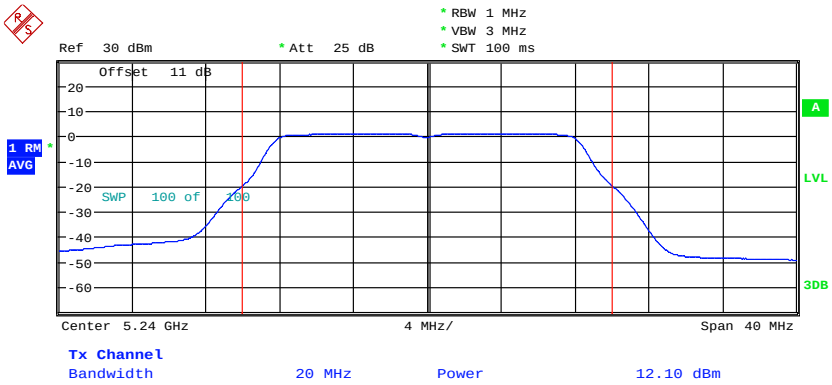


MAXIMUM CONDUCTED POWER ANT2_11aCH36
Date: 4.OCT.2022 18:04:06



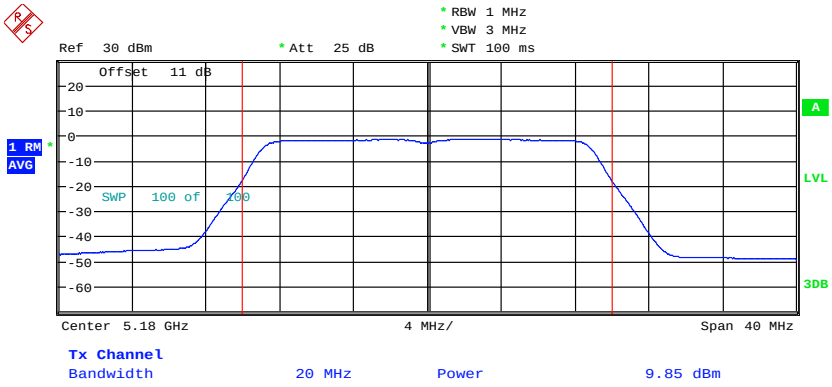
MAXIMUM CONDUCTED POWER ANT2_11aCH44

Date: 4.OCT.2022 18:05:14



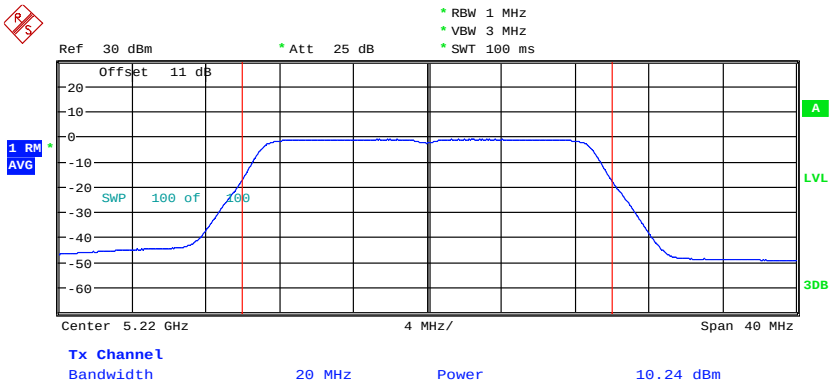
MAXIMUM CONDUCTED POWER ANT2_11aCH48

Date: 4.OCT.2022 18:06:29



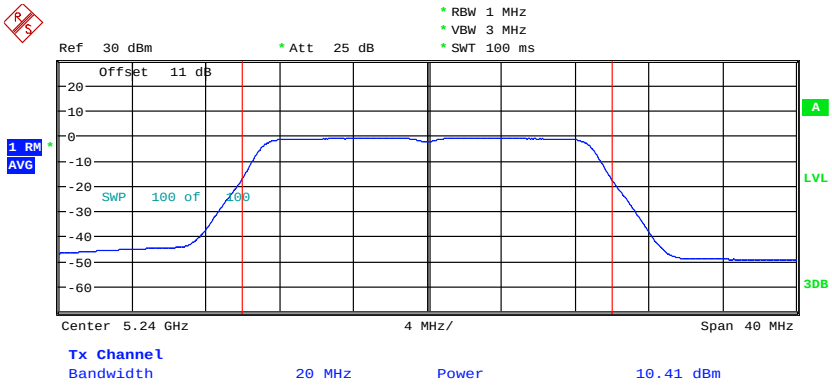
MAXIMUM CONDUCTED POWER ANT2_11n20CH36

Date: 4.OCT.2022 18:17:15



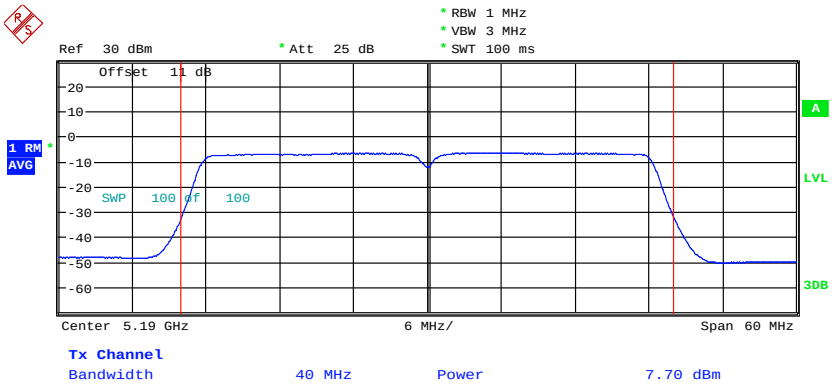
MAXIMUM CONDUCTED POWER ANT2_11n20CH44

Date: 4.OCT.2022 18:18:23



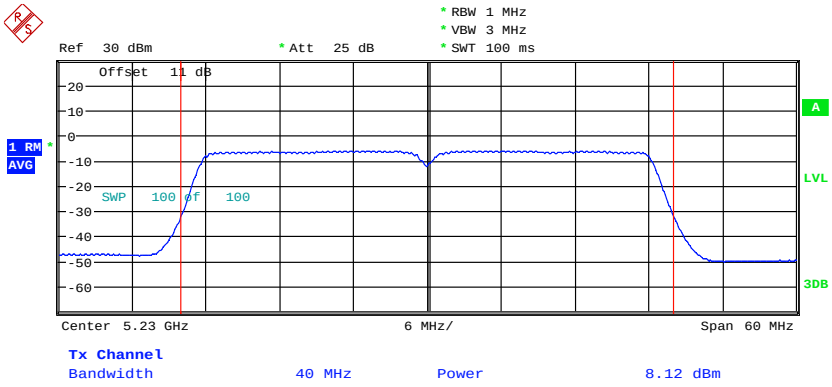
MAXIMUM CONDUCTED POWER ANT2_11n20CH48

Date: 4.OCT.2022 18:19:31



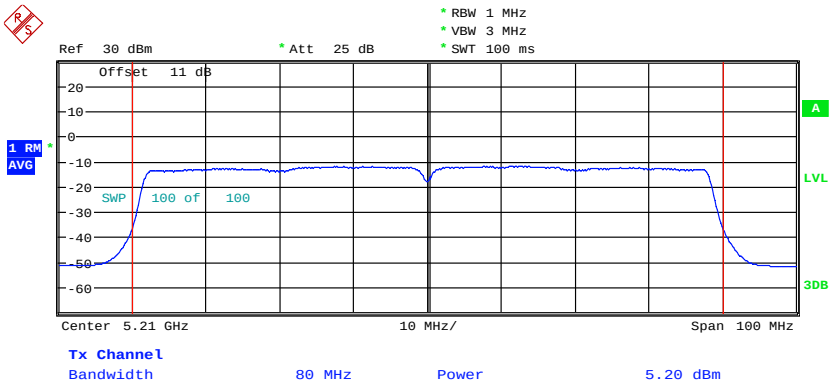
MAXIMUM CONDUCTED POWER ANT2_11n40CH38

Date: 4.OCT.2022 18:20:53



MAXIMUM CONDUCTED POWER ANT2_11n40CH46

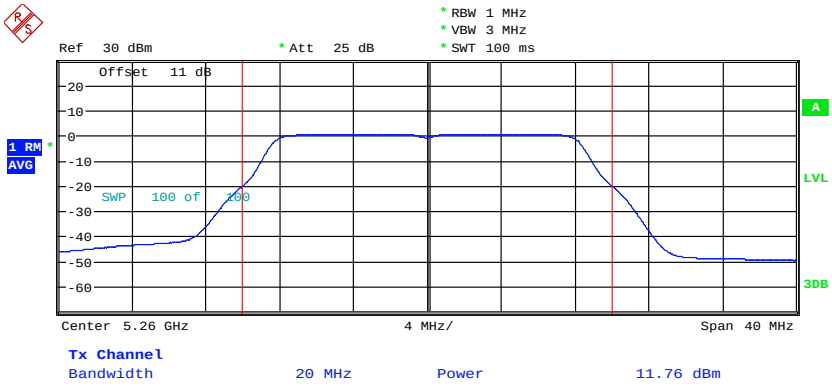
Date: 4.OCT.2022 18:22:01



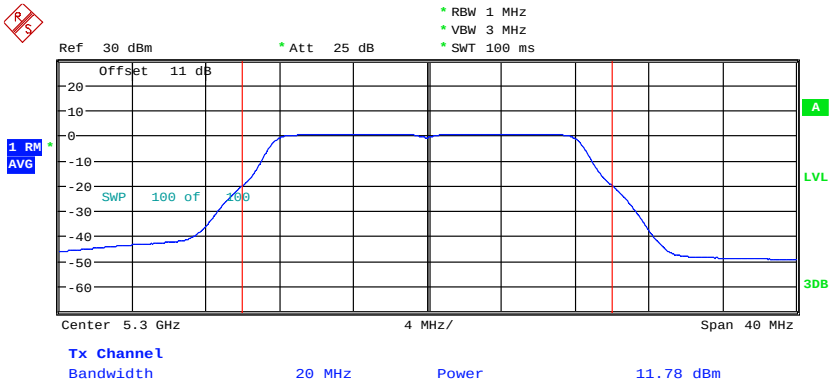
MAXIMUM CONDUCTED POWER ANT2_11ac80CH42

Date: 4.OCT.2022 18:26:12

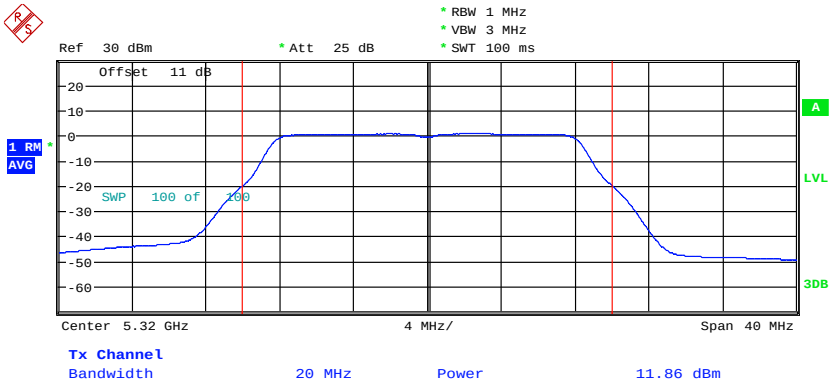
5.25 GHz ~ 5.35 GHz



MAXIMUM CONDUCTED POWER ANT2_11aCH52
Date: 4.OCT.2022 18:07:51

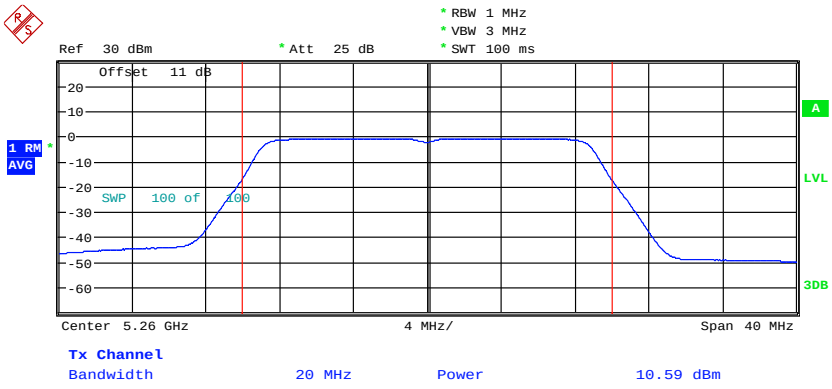


MAXIMUM CONDUCTED POWER ANT2_11aCH60
Date: 4.OCT.2022 18:09:06



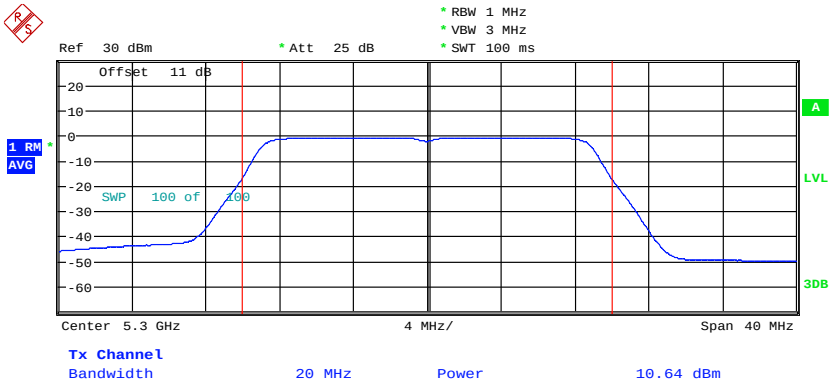
MAXIMUM CONDUCTED POWER ANT2_11aCH64

Date: 4.OCT.2022 18:10:07



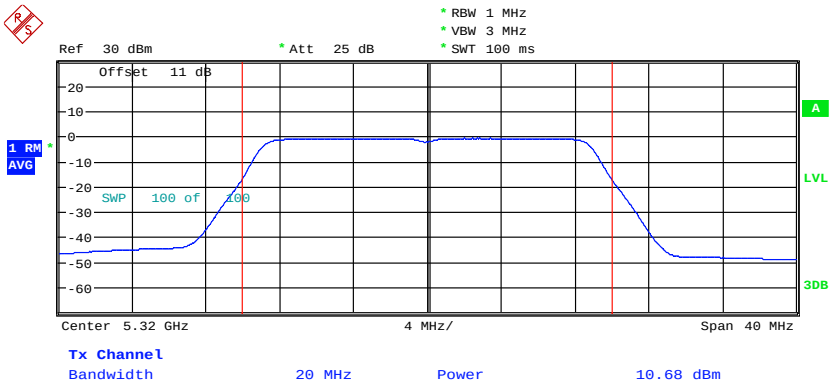
MAXIMUM CONDUCTED POWER ANT2_11n20CH52

Date: 4.OCT.2022 18:11:35



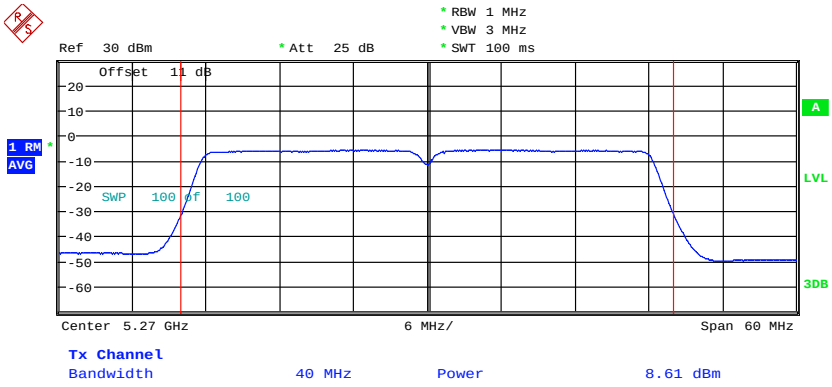
MAXIMUM CONDUCTED POWER ANT2_11n20CH60

Date: 4.OCT.2022 18:13:31



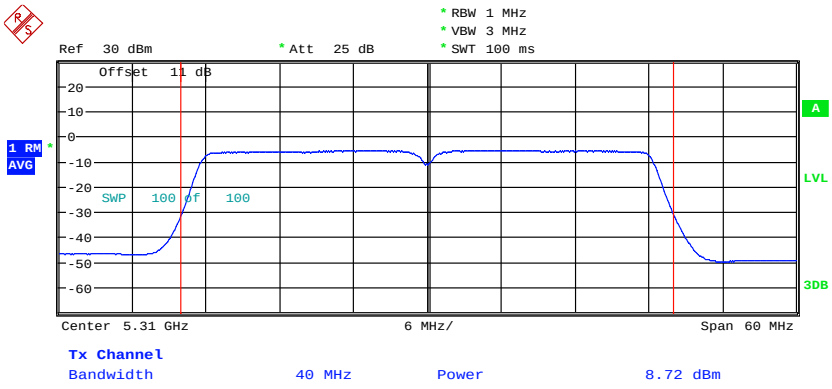
MAXIMUM CONDUCTED POWER ANT2_11n20CH64

Date: 4.OCT.2022 18:14:32



MAXIMUM CONDUCTED POWER ANT2_11n40CH54

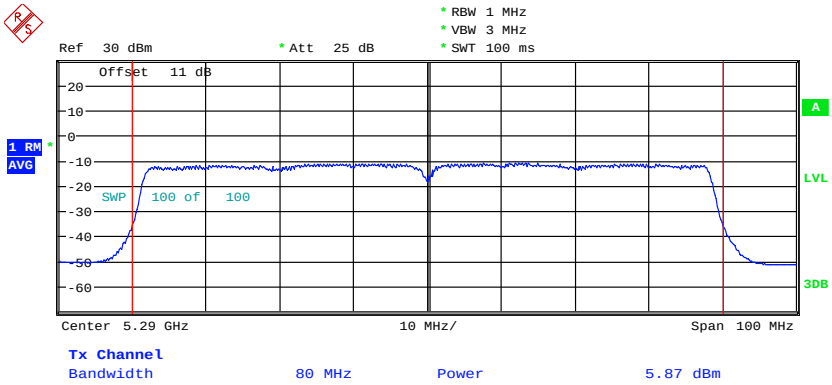
Date: 4.OCT.2022 18:23:22



MAXIMUM CONDUCTED POWER ANT2_11n40CH62

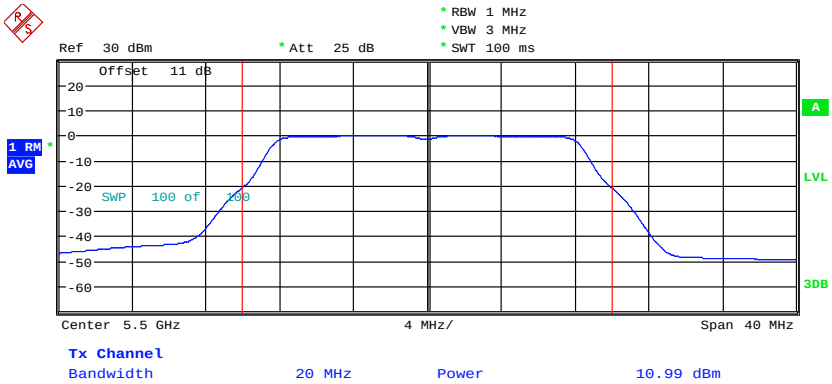
Date: 4.OCT.2022 18:24:24

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

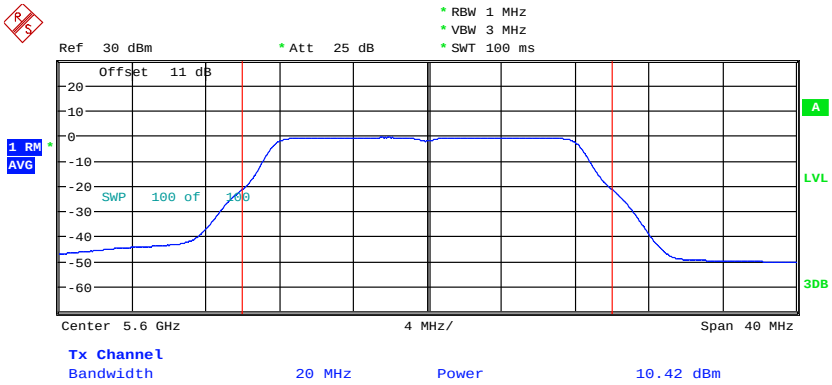


MAXIMUM CONDUCTED POWER ANT2_11ac80CH58
Date: 4.OCT.2022 18:27:48

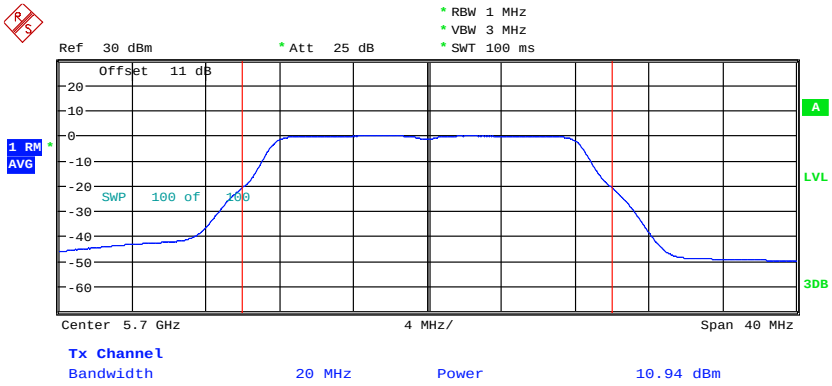
5.47 GHz ~ 5.725 GHz



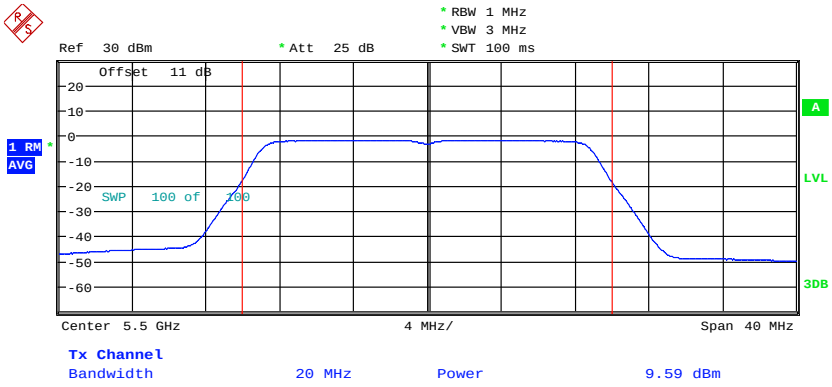
MAXIMUM CONDUCTED POWER ANT2_11aCH100
Date: 4.OCT.2022 17:38:23



MAXIMUM CONDUCTED POWER ANT2_11aCH120
Date: 4.OCT.2022 17:39:31

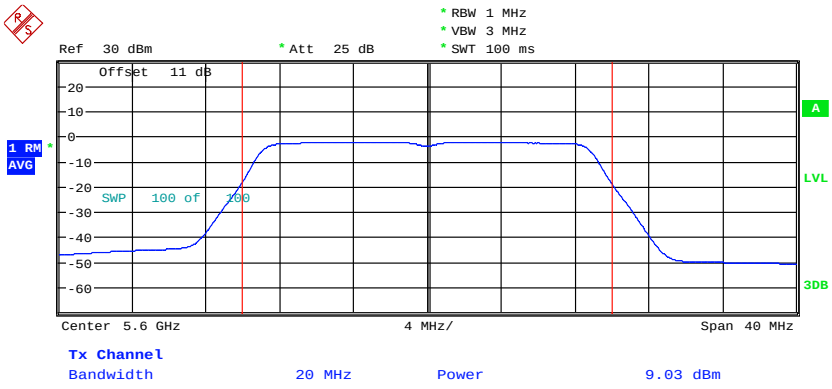


MAXIMUM CONDUCTED POWER ANT2_11aCH140
Date: 4.OCT.2022 17:41:27



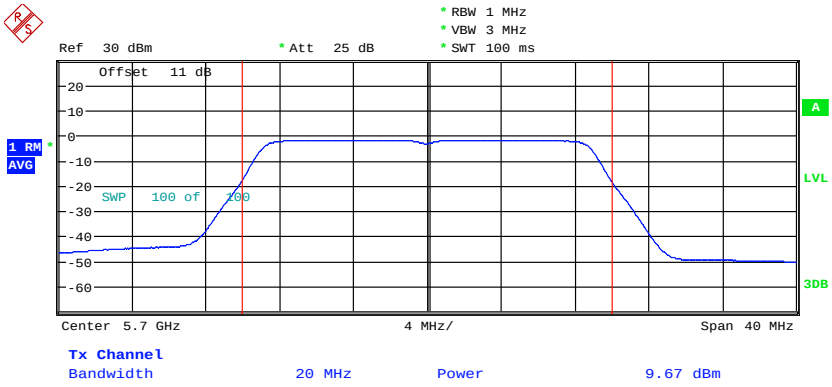
MAXIMUM CONDUCTED POWER ANT2_11n20CH100

Date: 4.OCT.2022 17:42:48



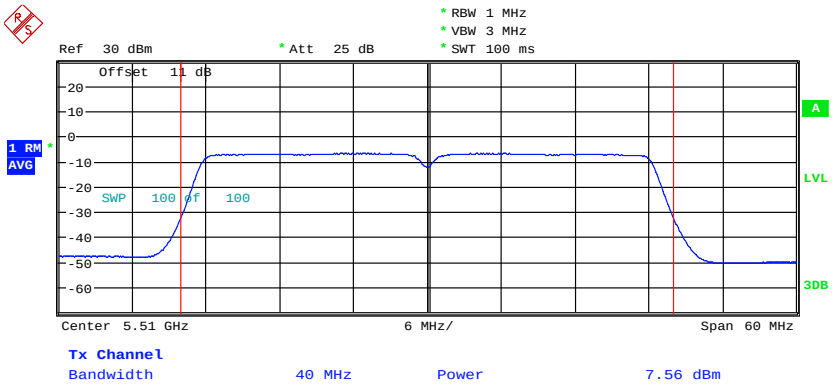
MAXIMUM CONDUCTED POWER ANT2_11n20CH120

Date: 4.OCT.2022 17:43:56



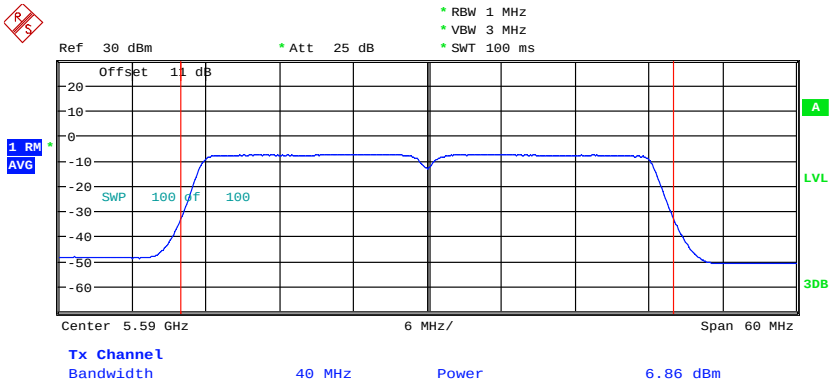
MAXIMUM CONDUCTED POWER ANT2_11n20CH140

Date: 4.OCT.2022 17:45:04



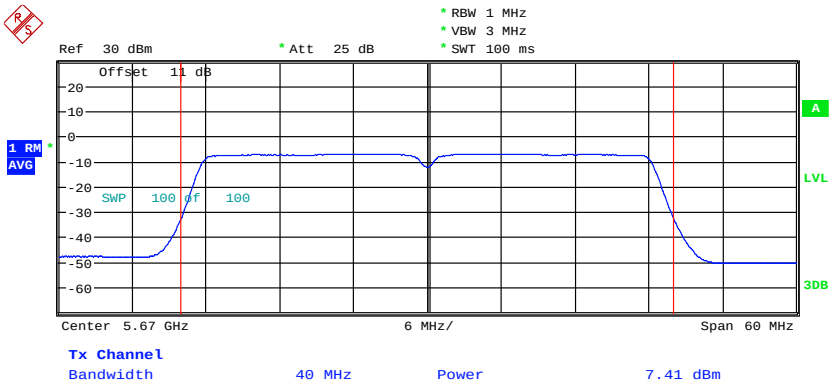
MAXIMUM CONDUCTED POWER ANT2_11n40CH102

Date: 4.OCT.2022 17:46:39



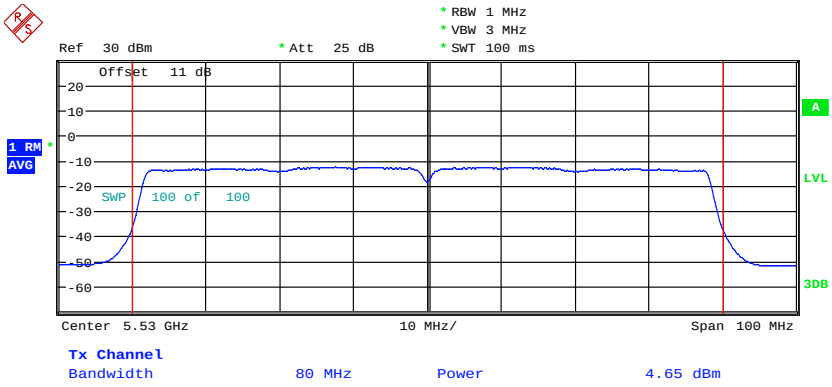
MAXIMUM CONDUCTED POWER ANT2_11n40CH118

Date: 4.OCT.2022 17:48:01



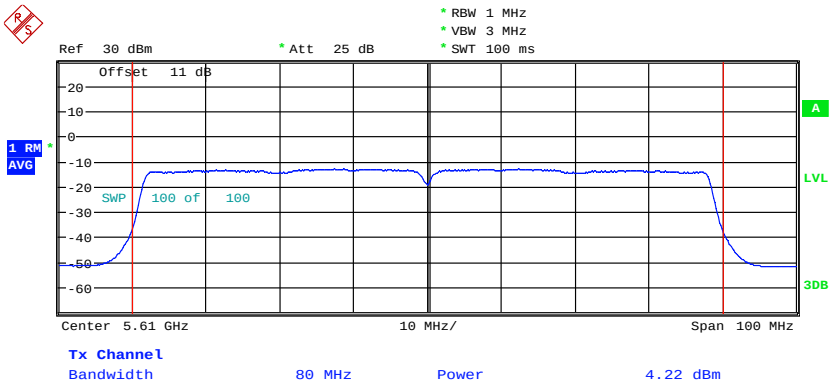
MAXIMUM CONDUCTED POWER ANT2_11n40CH134

Date: 4.OCT.2022 17:53:55



MAXIMUM CONDUCTED POWER ANT2_11ac80CH106

Date: 4.OCT.2022 17:55:43

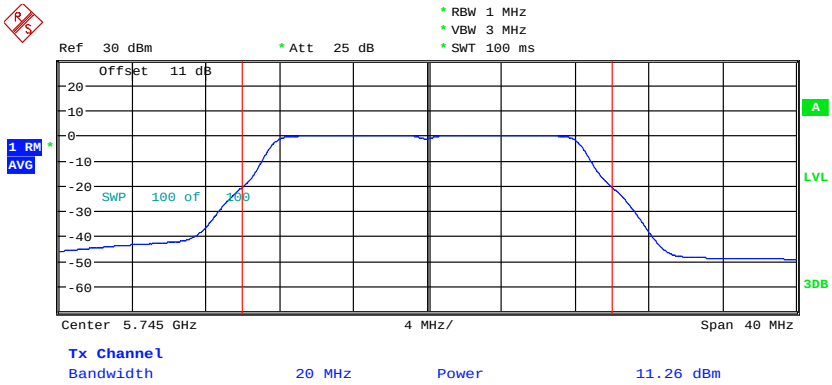


MAXIMUM CONDUCTED POWER ANT2_11ac80CH122

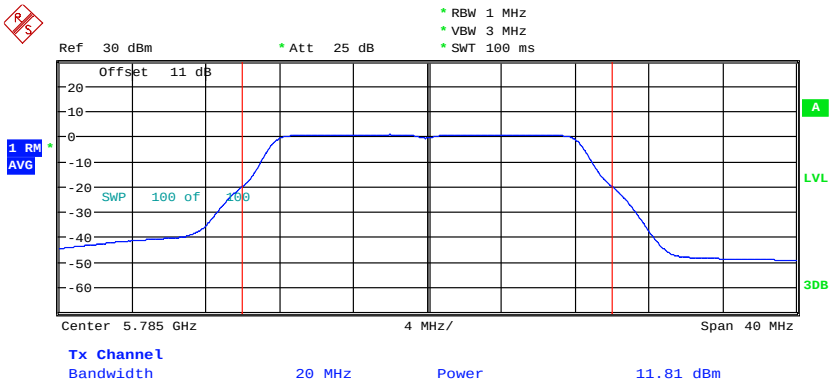
Date: 4.OCT.2022 17:56:58

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

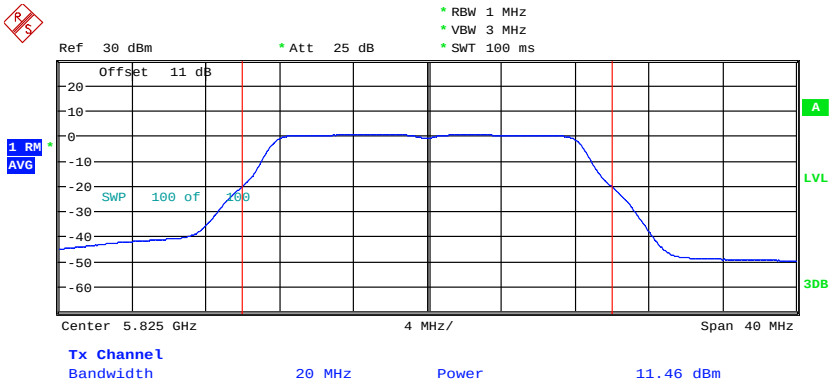
5.725 GHz ~ 5.85 GHz



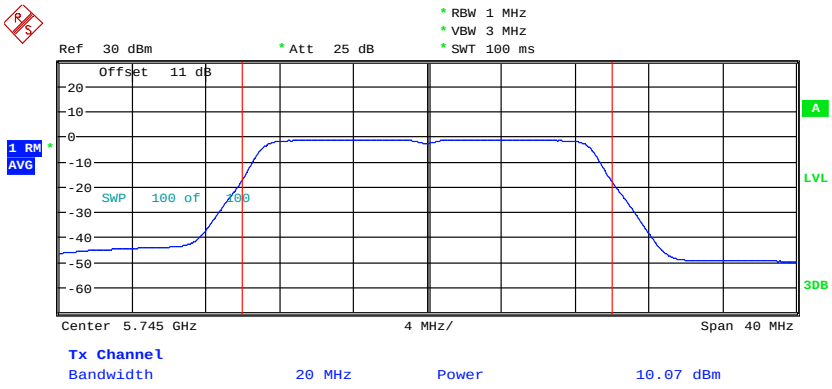
MAXIMUM CONDUCTED POWER ANT2_11aCH149
Date: 4.OCT.2022 17:30:34



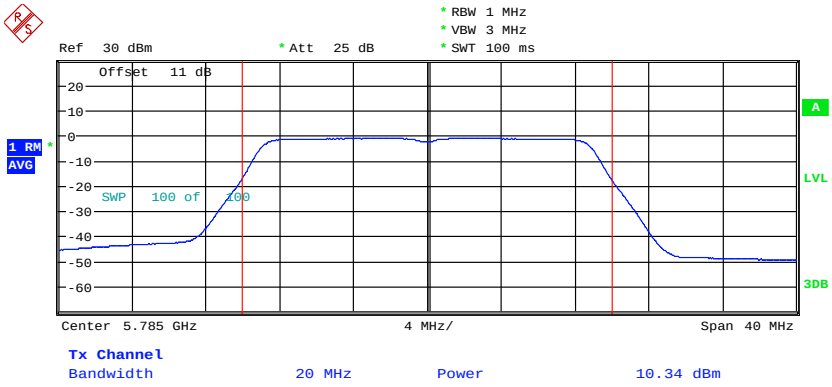
MAXIMUM CONDUCTED POWER ANT2_11aCH157
Date: 4.OCT.2022 17:31:36



MAXIMUM CONDUCTED POWER ANT2_11aCH165
Date: 4.OCT.2022 17:32:43

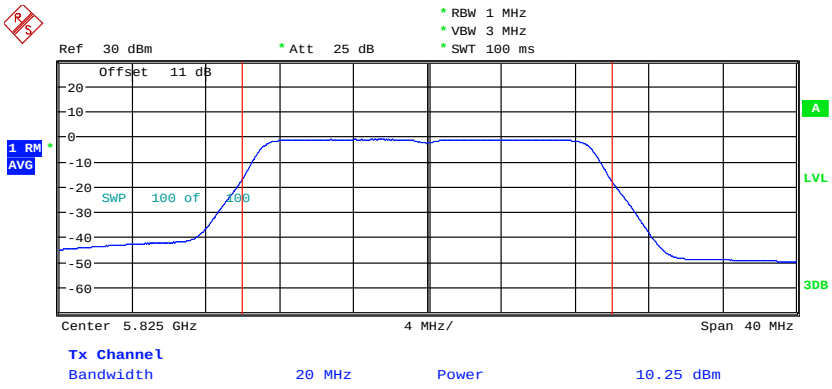


MAXIMUM CONDUCTED POWER ANT2_11n20CH149
Date: 4.OCT.2022 17:25:01



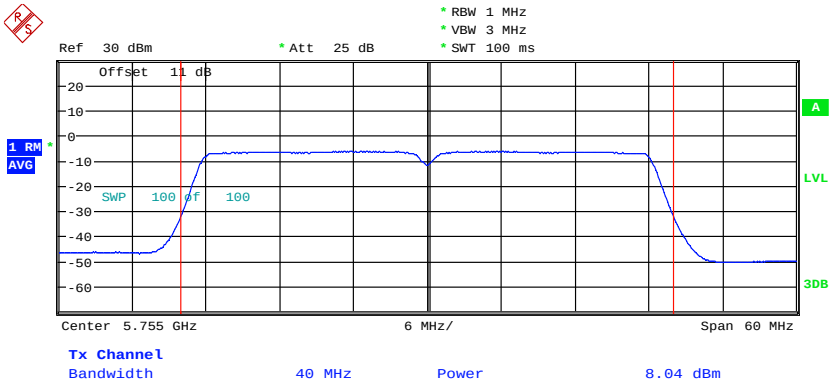
MAXIMUM CONDUCTED POWER ANT2_11n20CH157

Date: 4.OCT.2022 17:26:54



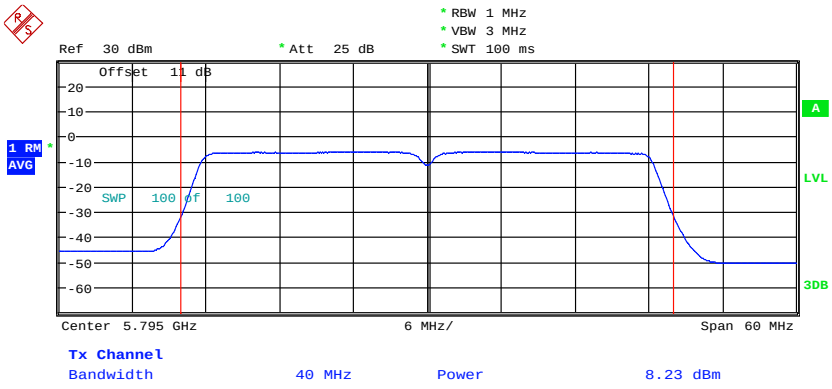
MAXIMUM CONDUCTED POWER ANT2_11n20CH165

Date: 4.OCT.2022 17:29:12



MAXIMUM CONDUCTED POWER ANT2_11n40CH151

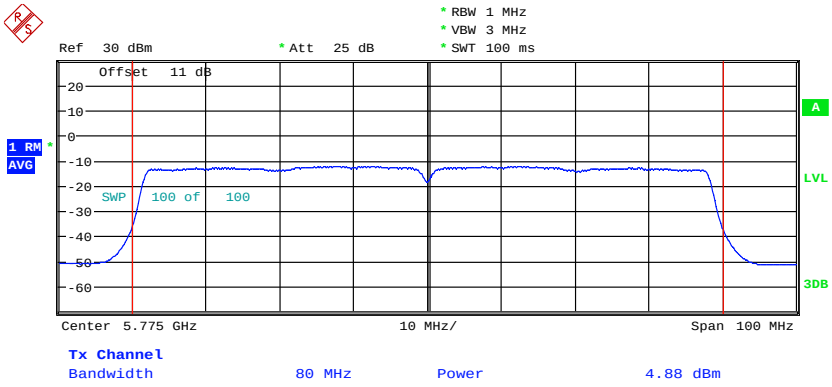
Date: 4.OCT.2022 17:20:08



MAXIMUM CONDUCTED POWER ANT2_11n40CH159

Date: 4.OCT.2022 17:21:16

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



MAXIMUM CONDUCTED POWER ANT2_11ac80CH155
Date: 4.OCT.2022 17:18:06

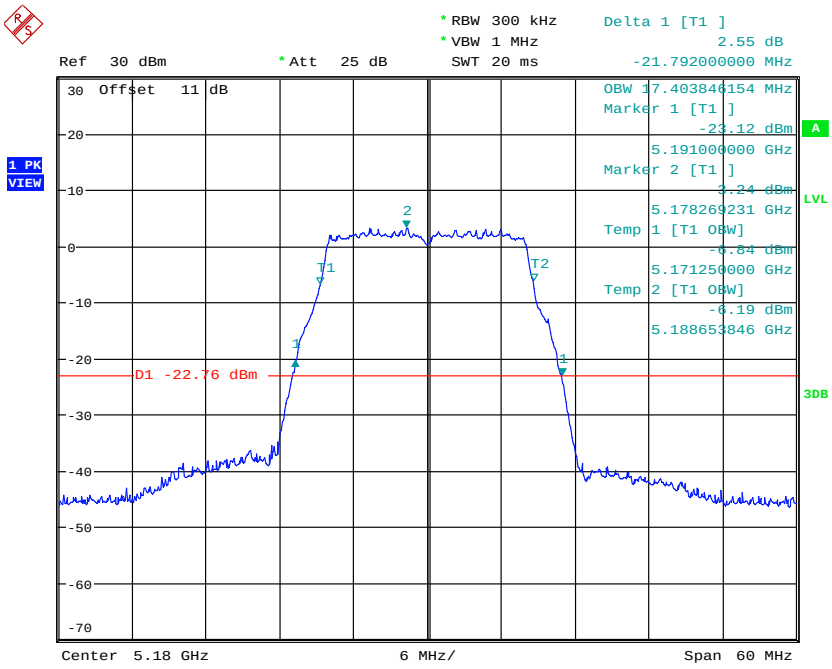
Test equipment used: ETSTW-RE 055, ETSTW-RE 050

3.2 26dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

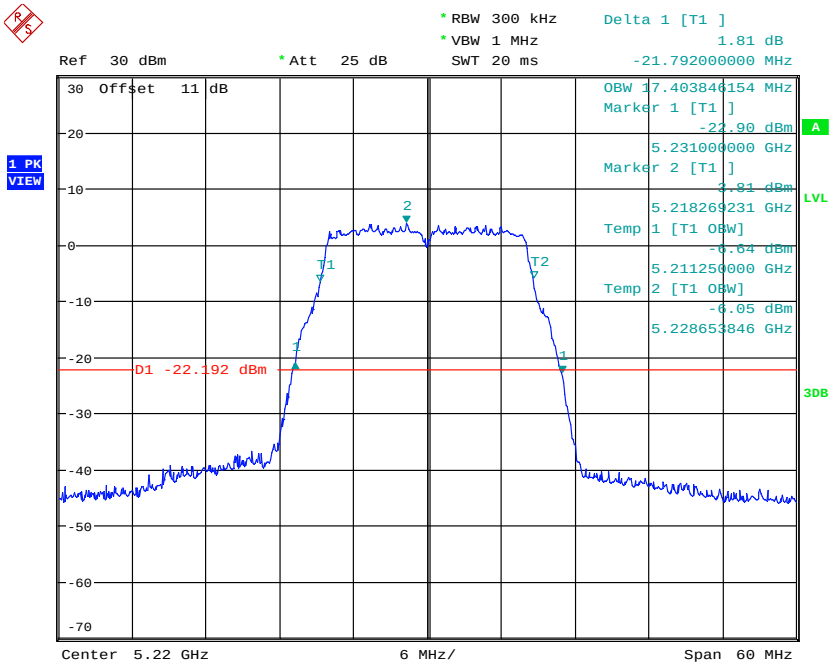
According to §15.407(a). No Limit required.

Result:
Test date: October 04, 2022
Temperature: 24.6 ˚C
Humidity: 52.3 %
Tester: Sora

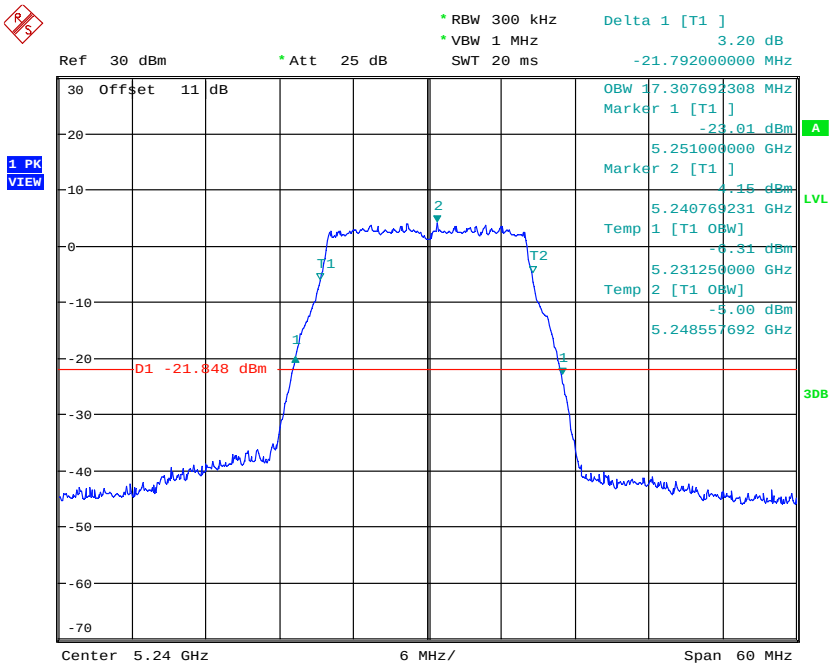
ANT A
5.15 GHz ~ 5.25 GHz



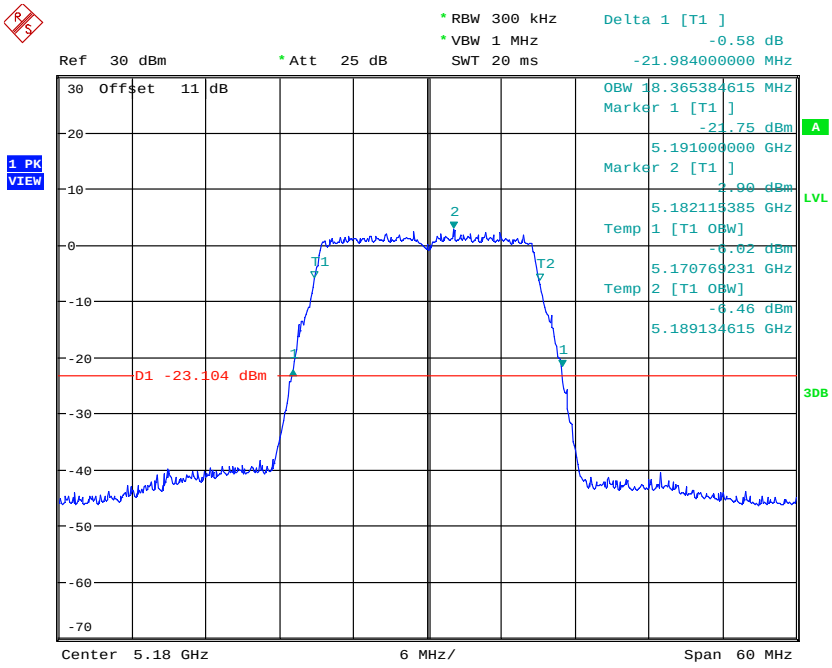
99% OBW & 26DB BANDWIDTH ANT1_11a_CH36
Date: 4.OCT.2022 16:00:31



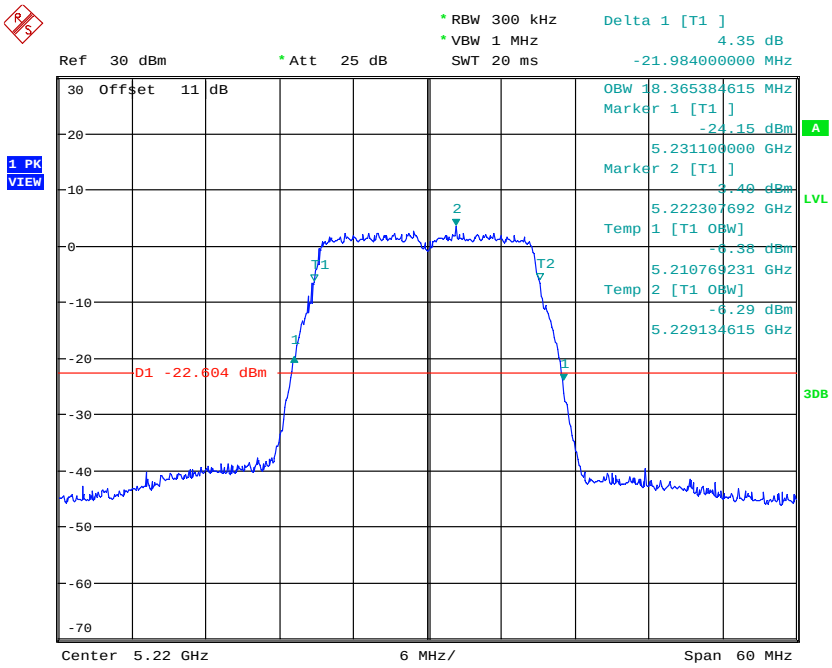
99% OBW & 26DB BANDWIDTH ANT1_11a_CH44
Date: 4.OCT.2022 16:02:26



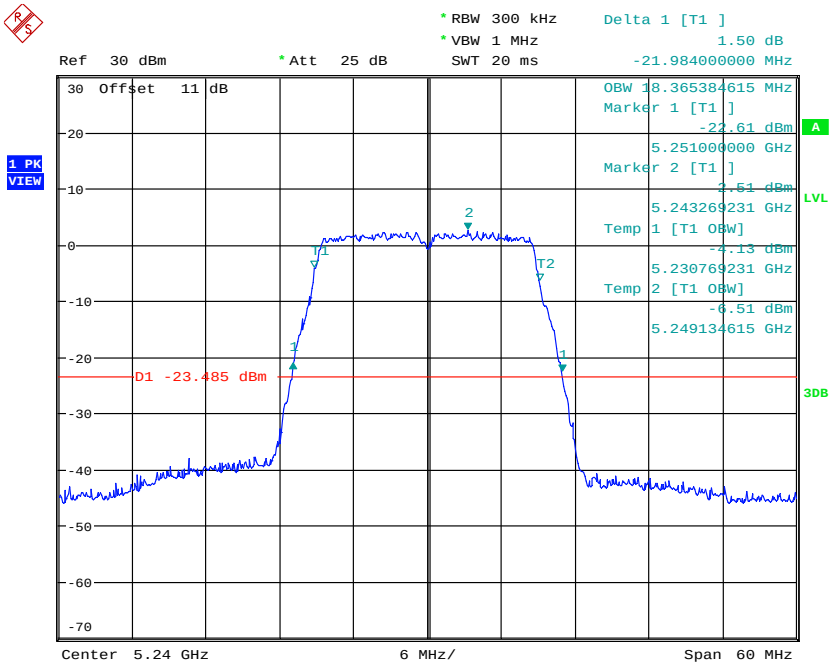
99% OBW & 26DB BANDWIDTH ANT1_11a_CH48
Date: 4.OCT.2022 16:04:00



99% OBW & 26DB BANDWIDTH ANT1_11n20_CH36
Date: 4.OCT.2022 16:14:32

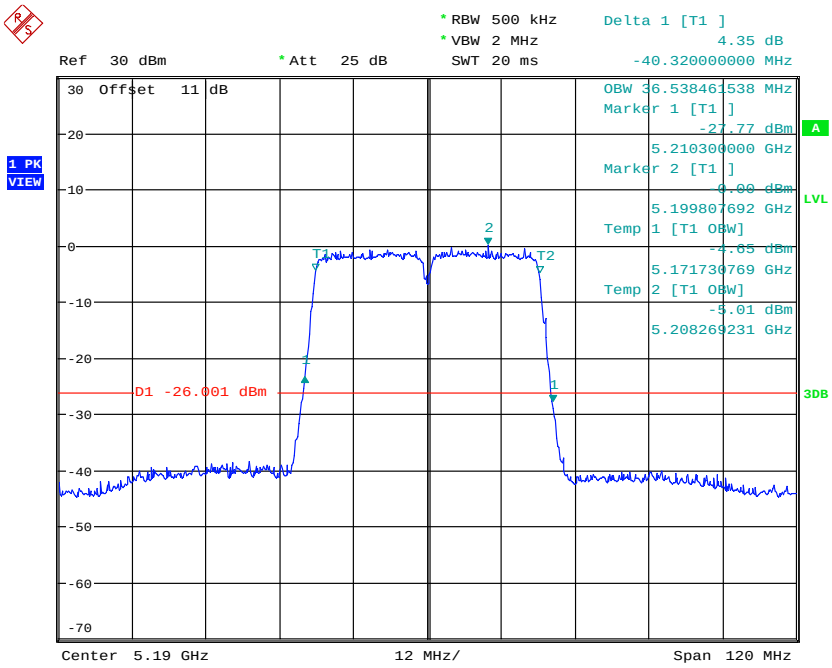


99% OBW & 26DB BANDWIDTH ANT1_11n20_CH44
Date: 4.OCT.2022 16:15:44



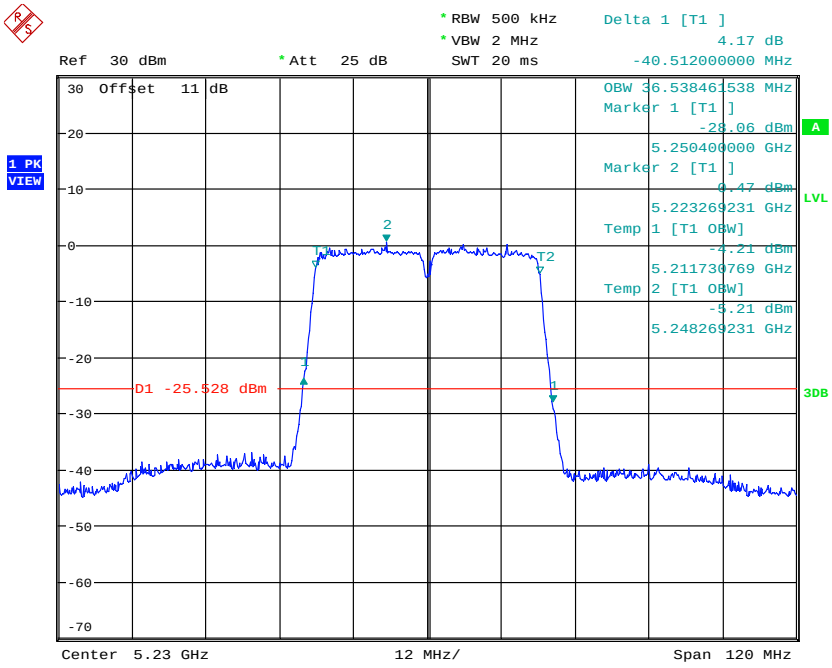
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH48

Date: 4.OCT.2022 16:16:55

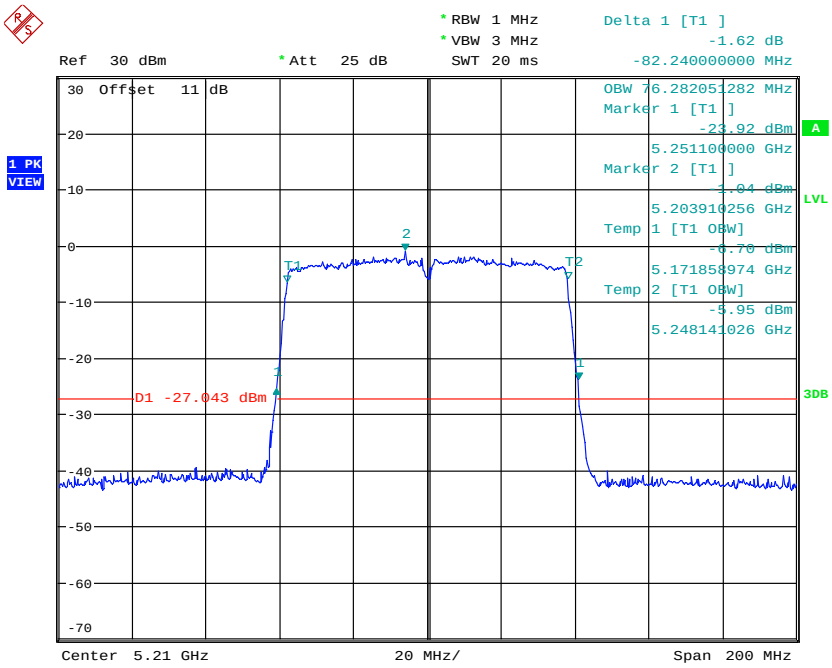


99% OBW & 26DB BANDWIDTH ANT1_11n40_CH38

Date: 4.OCT.2022 16:18:45

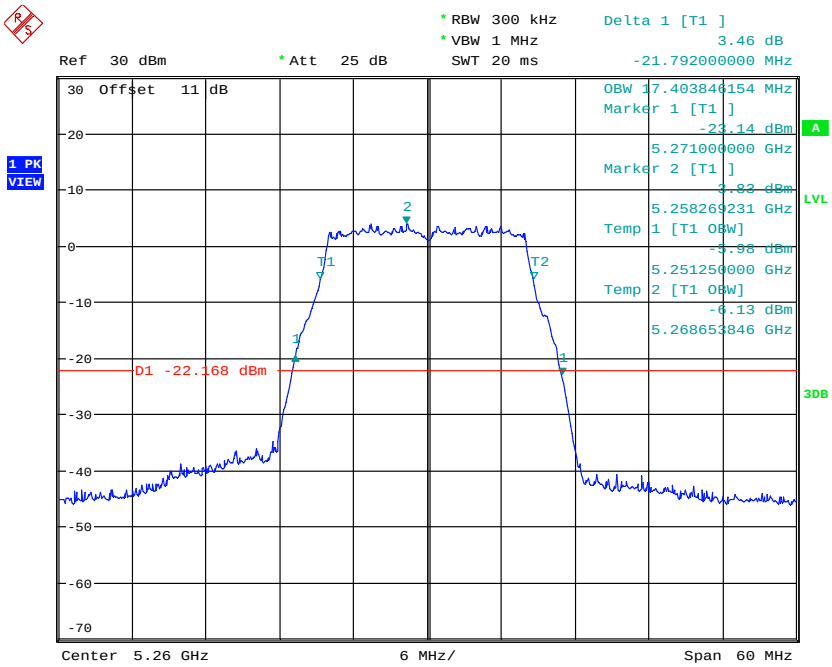


99% OBW & 26DB BANDWIDTH ANT1_11n40_CH46
Date: 4.OCT.2022 16:20:13



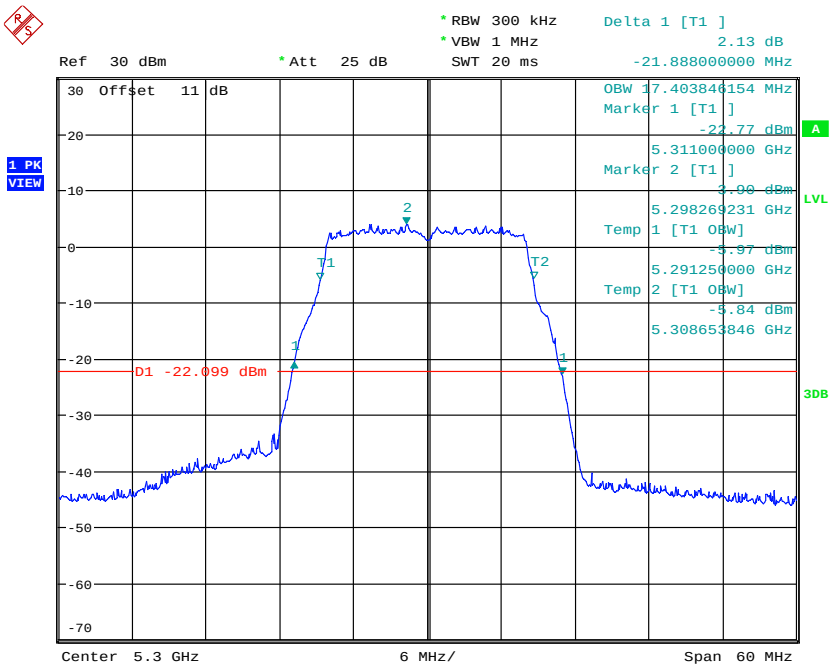
99% OBW & 26DB BANDWIDTH ANT1_11ac80_CH42
Date: 4.OCT.2022 16:33:19

5.25 GHz ~ 5.35 GHz



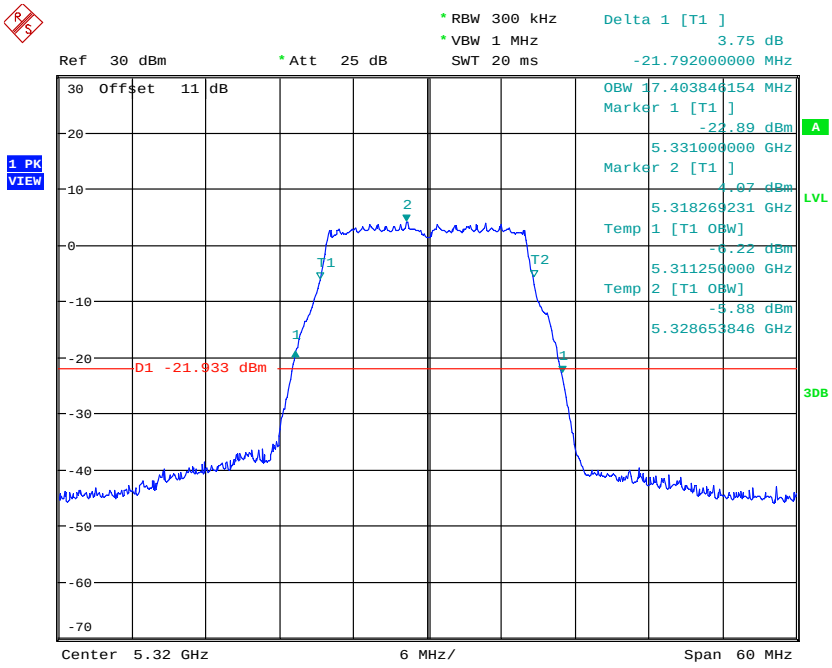
99% OBW & 26DB BANDWIDTH ANT1_11a_CH52

Date: 4.OCT.2022 16:05:55



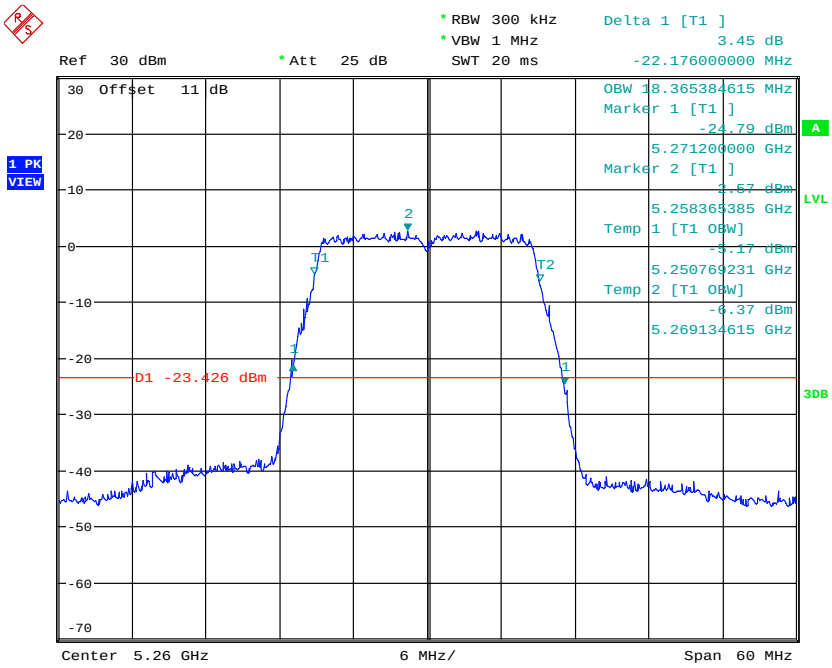
99% OBW & 26DB BANDWIDTH ANT1_11a_CH60

Date: 4.OCT.2022 16:07:23



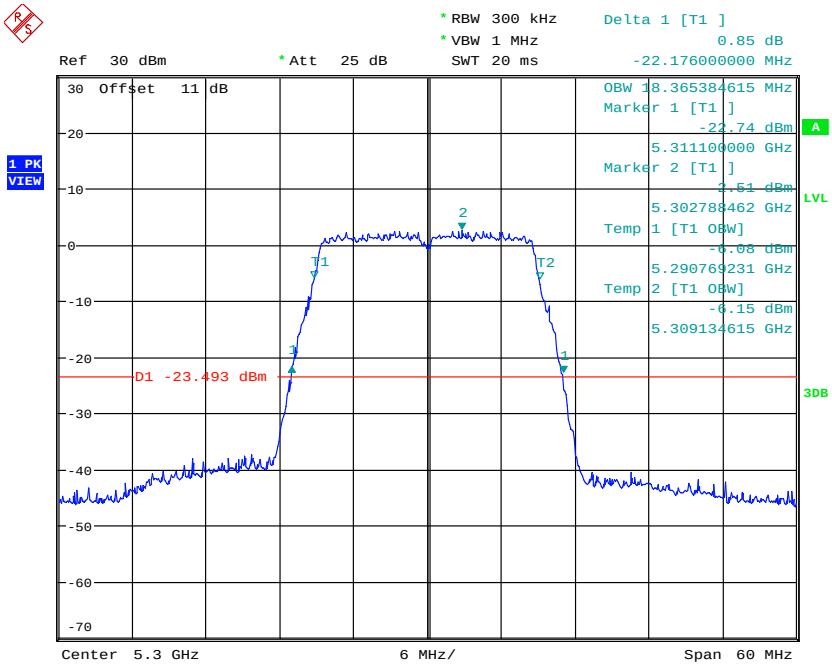
99% OBW & 26DB BANDWIDTH ANT1_11a_CH64

Date: 4.OCT.2022 16:08:35



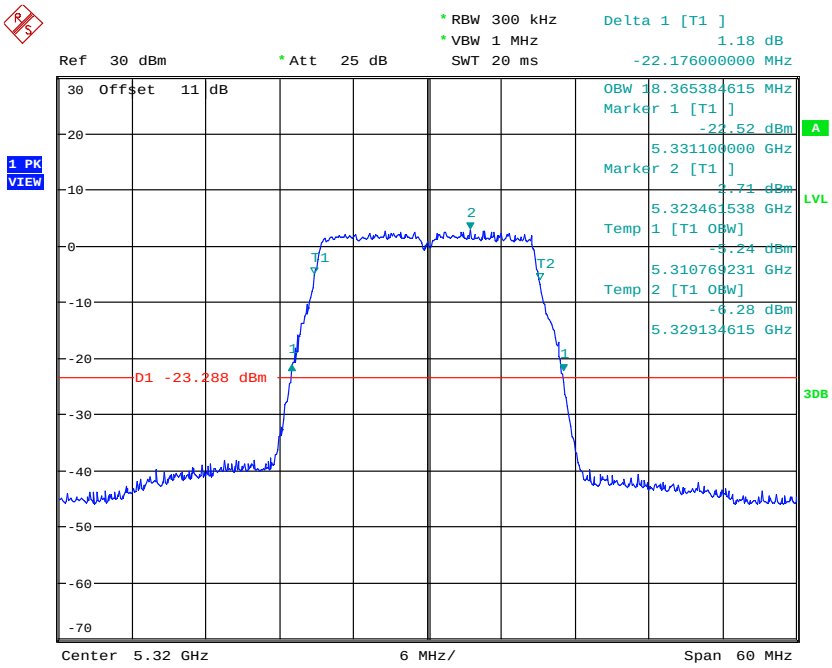
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH52

Date: 4.OCT.2022 16:10:25



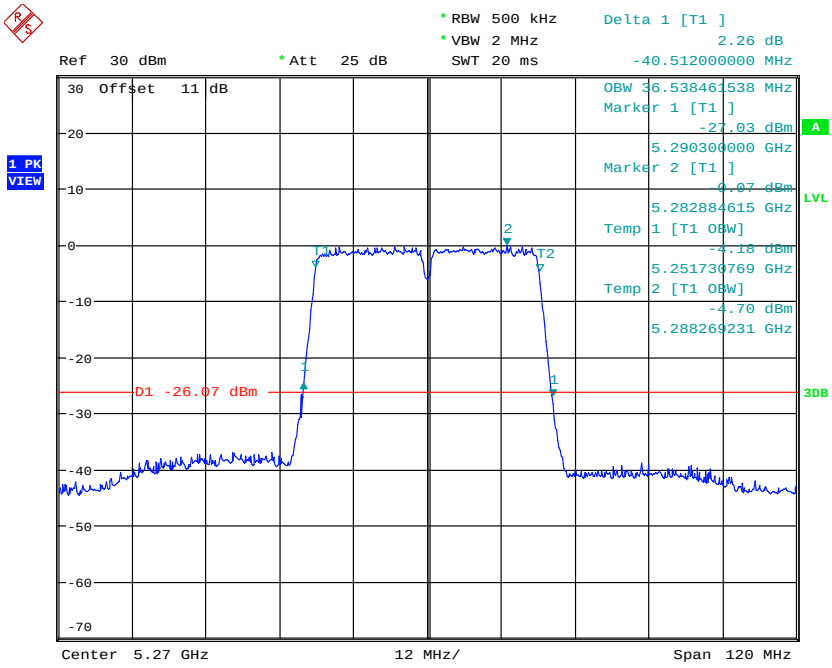
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH60

Date: 4.OCT.2022 16:11:42

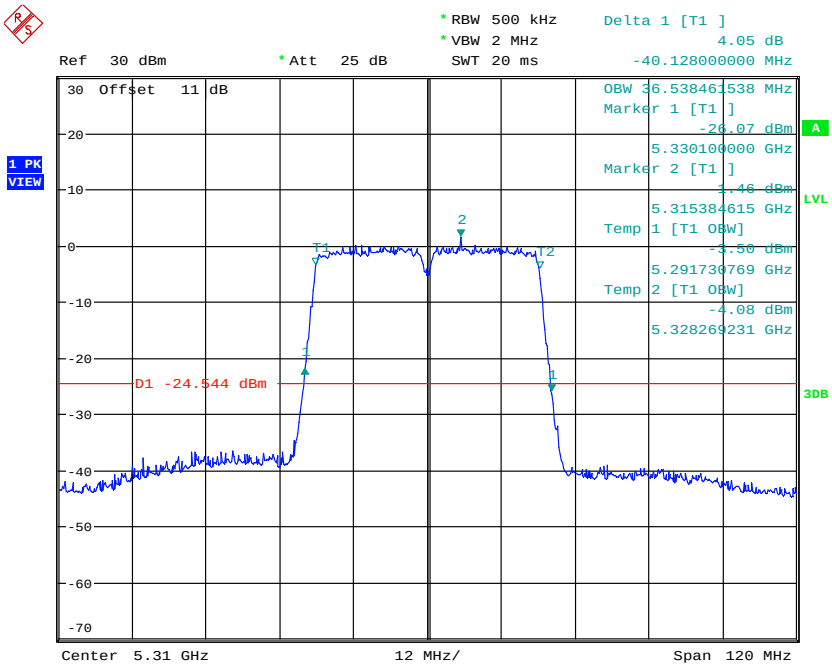


99% OBW & 26DB BANDWIDTH ANT1_11n20_CH64

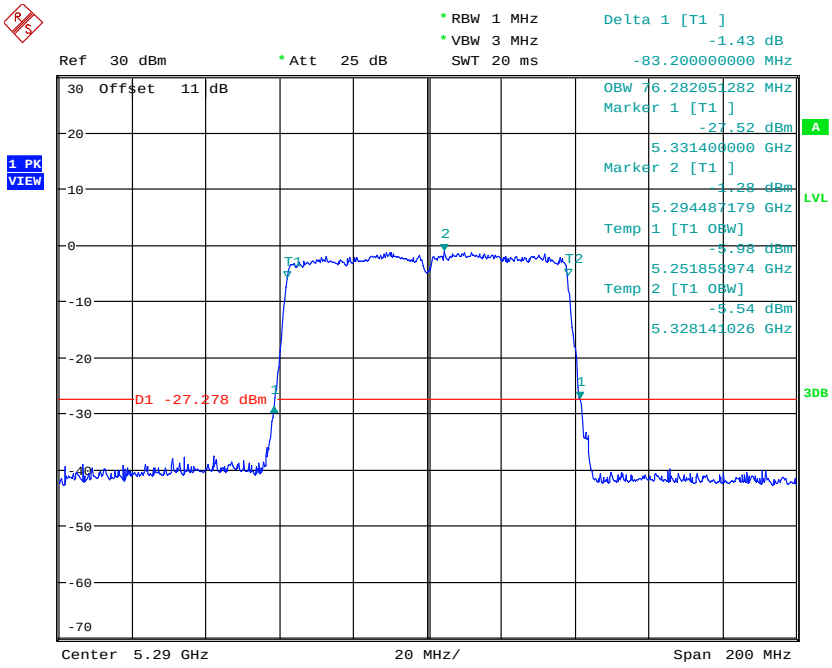
Date: 4.OCT.2022 16:13:04



99% OBW & 26DB BANDWIDTH ANT1_11n40_CH54
Date: 4.OCT.2022 16:27:44

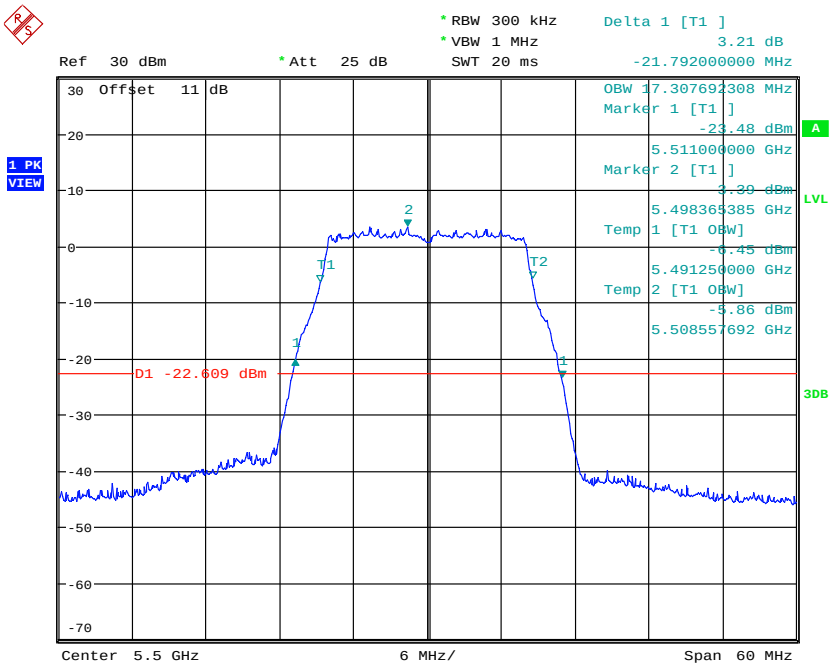


99% OBW & 26DB BANDWIDTH ANT1_11n40_CH62
Date: 4.OCT.2022 16:30:12

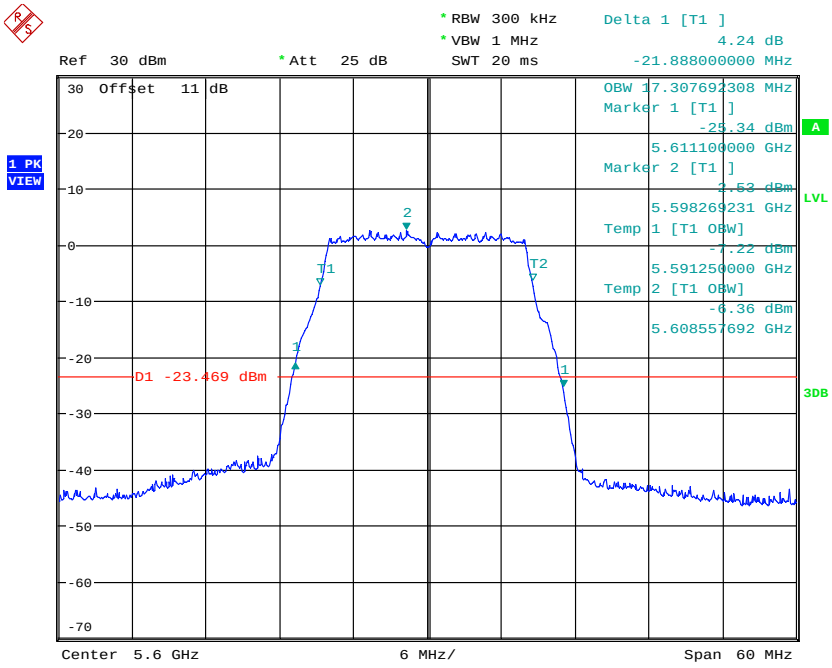


99% OBW & 26DB BANDWIDTH ANT1_11ac80_CH58
Date: 4.OCT.2022 16:36:26

5.47 GHz ~ 5.725 GHz

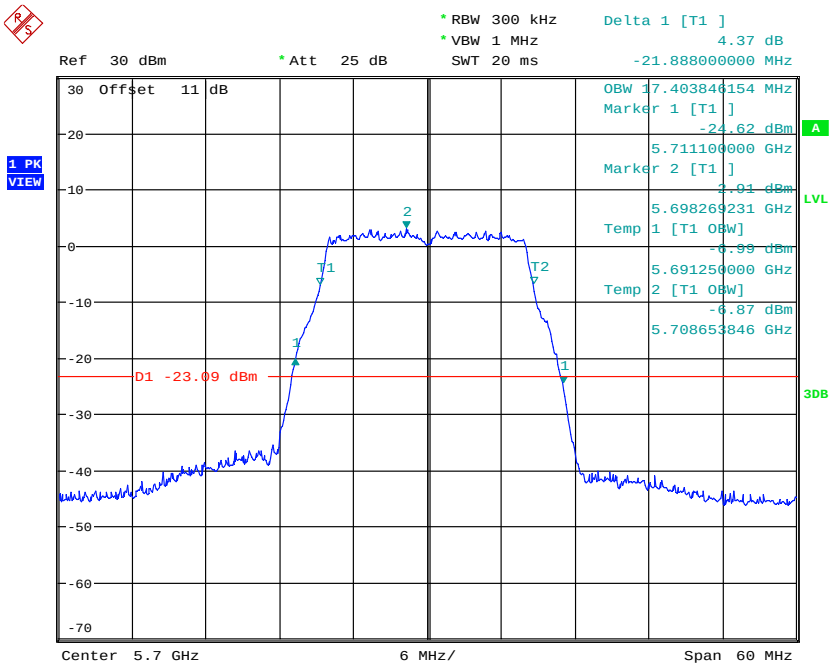


99% OBW & 26DB BANDWIDTH ANT1_11a_CH100
Date: 4.OCT.2022 16:42:35



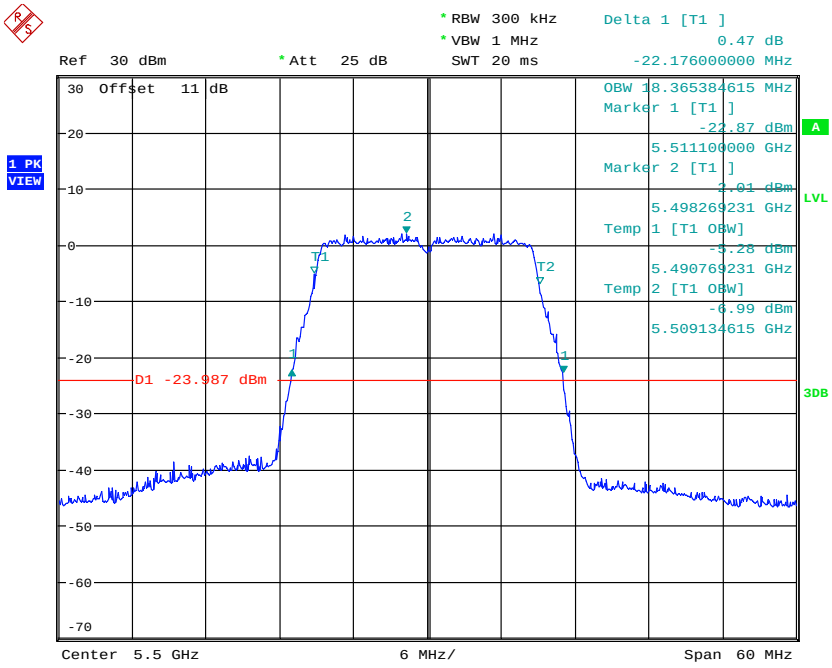
99% OBW & 26DB BANDWIDTH ANT1_11a_CH120

Date: 4.OCT.2022 16:43:52



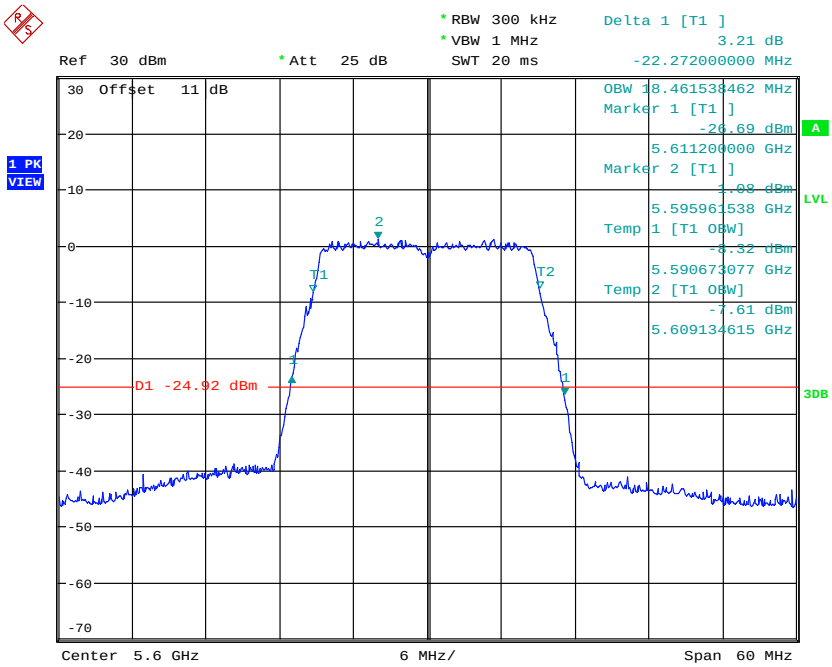
99% OBW & 26DB BANDWIDTH ANT1_11a_CH140

Date: 4.OCT.2022 16:44:58



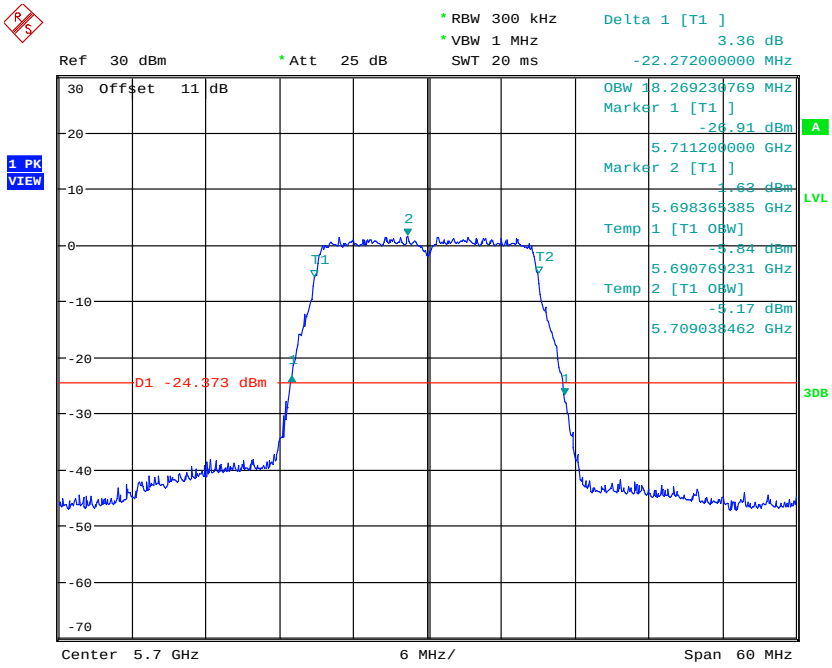
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH100

Date: 4.OCT.2022 16:47:26

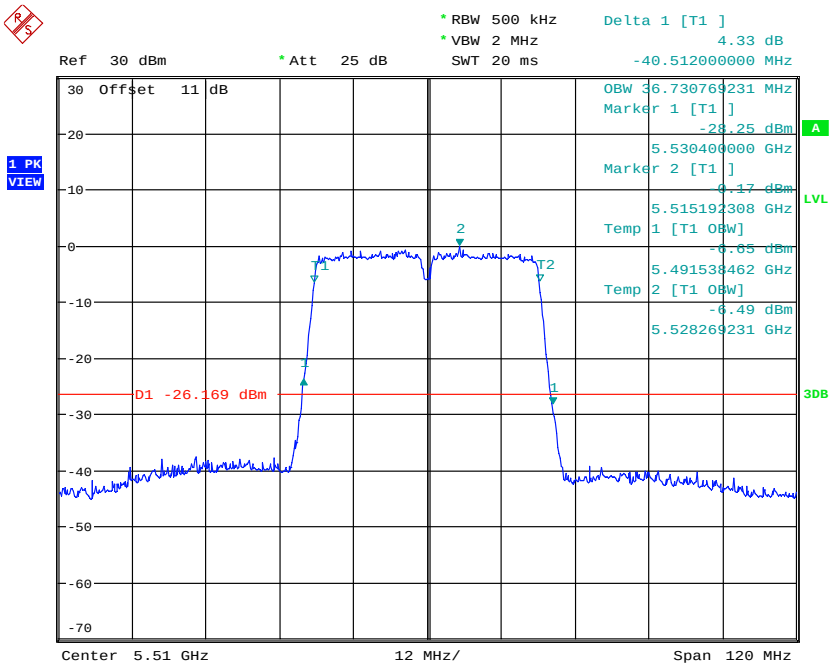


99% OBW & 26DB BANDWIDTH ANT1_11n20_CH120

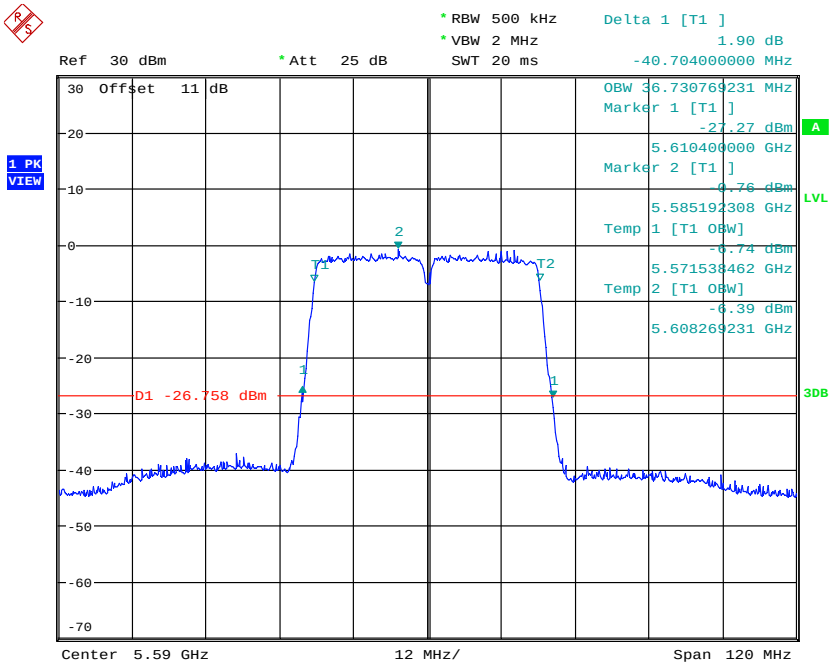
Date: 4.OCT.2022 16:49:38



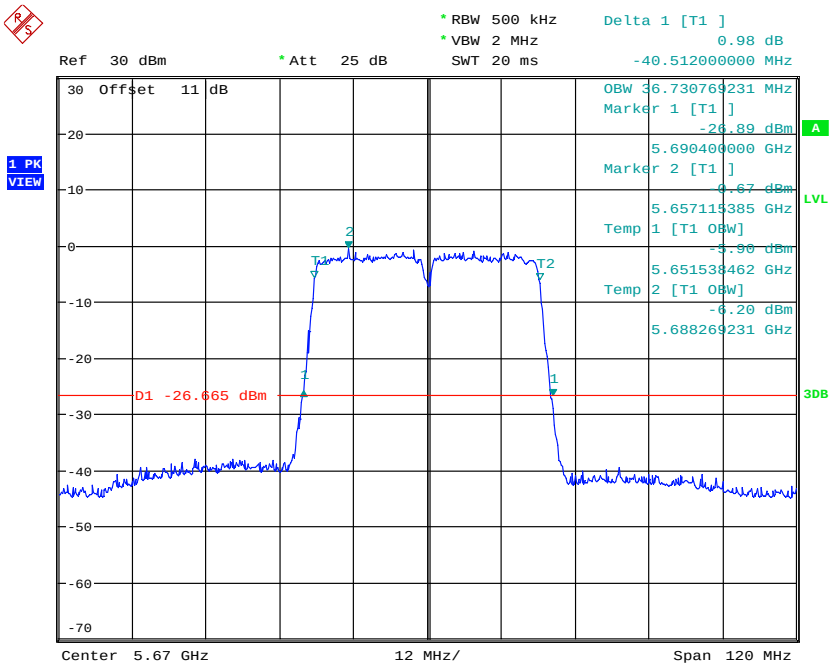
99% OBW & 26DB BANDWIDTH ANT1_11n20_CH140
Date: 4.OCT.2022 16:50:39



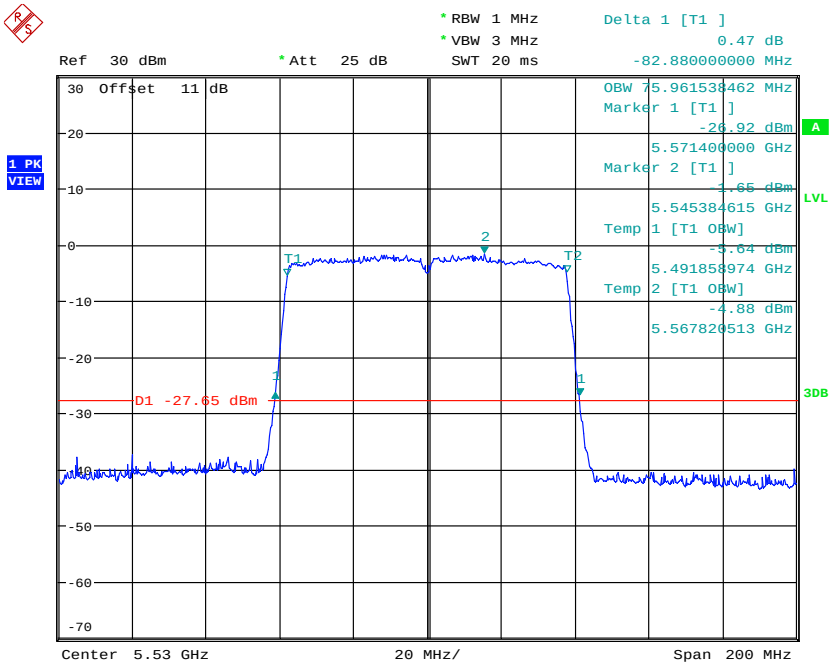
99% OBW & 26DB BANDWIDTH ANT1_11n40_CH102
Date: 4.OCT.2022 16:53:57



99% OBW & 26DB BANDWIDTH ANT1_11n40_CH118
Date: 4.OCT.2022 16:55:08

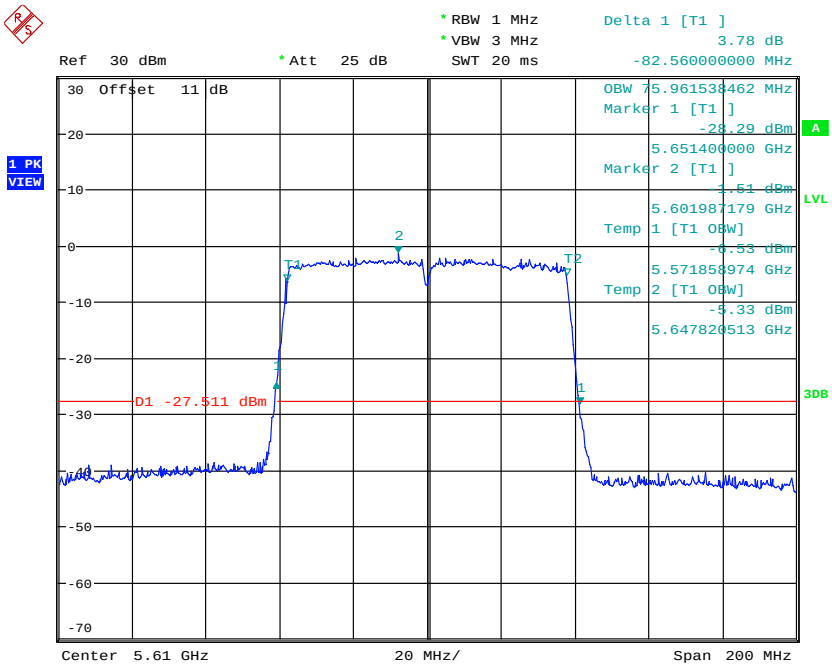


99% OBW & 26DB BANDWIDTH ANT1_11n40_CH134
Date: 4.OCT.2022 16:56:20



99% OBW & 26DB BANDWIDTH ANT1_11ac80_CH106

Date: 4.OCT.2022 16:58:10

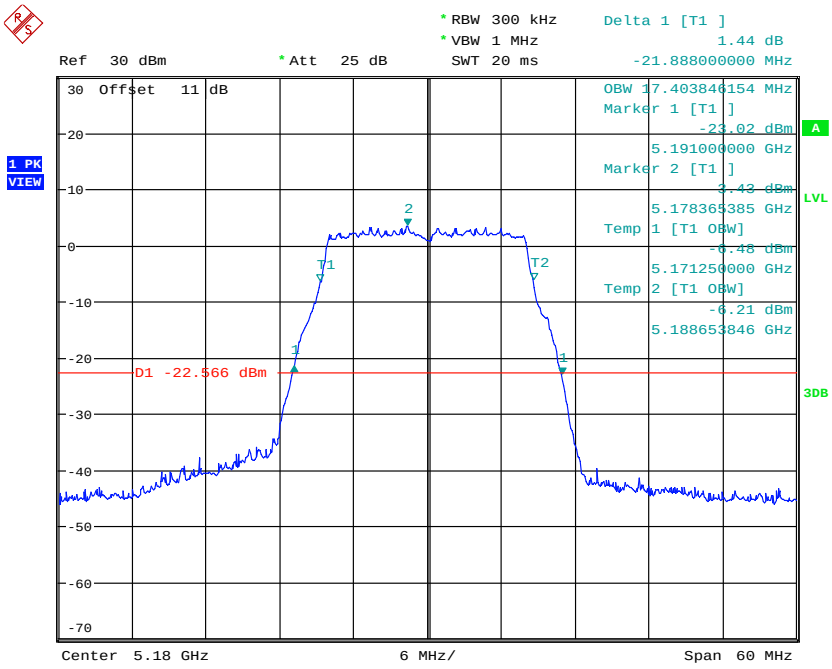


99% OBW & 26DB BANDWIDTH ANT1_11ac80_CH122

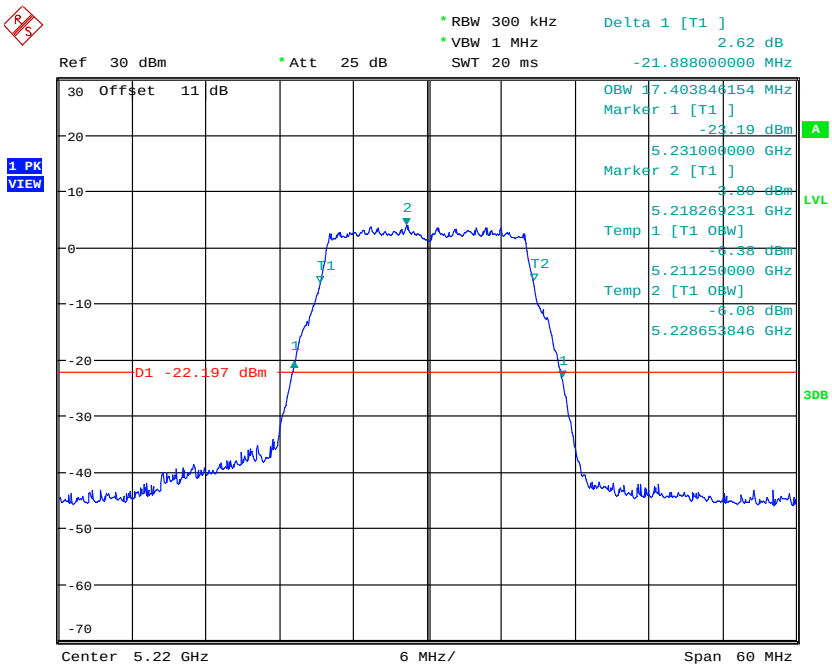
Date: 4.OCT.2022 17:00:16

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

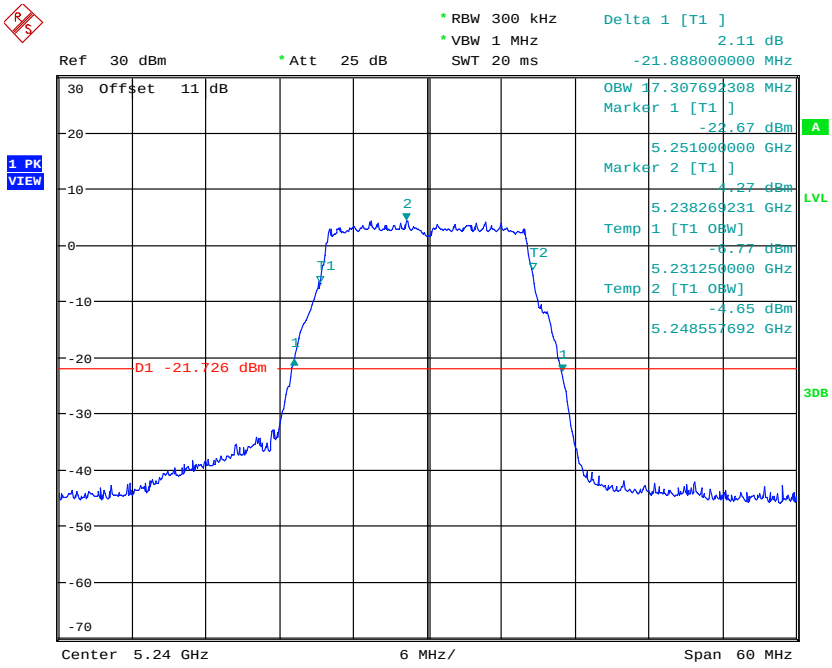
ANT B
5.15 GHz ~ 5.25 GHz



99% OBW & 26DB BANDWIDTH ANT2_11a_CH36
Date: 4.OCT.2022 18:04:42

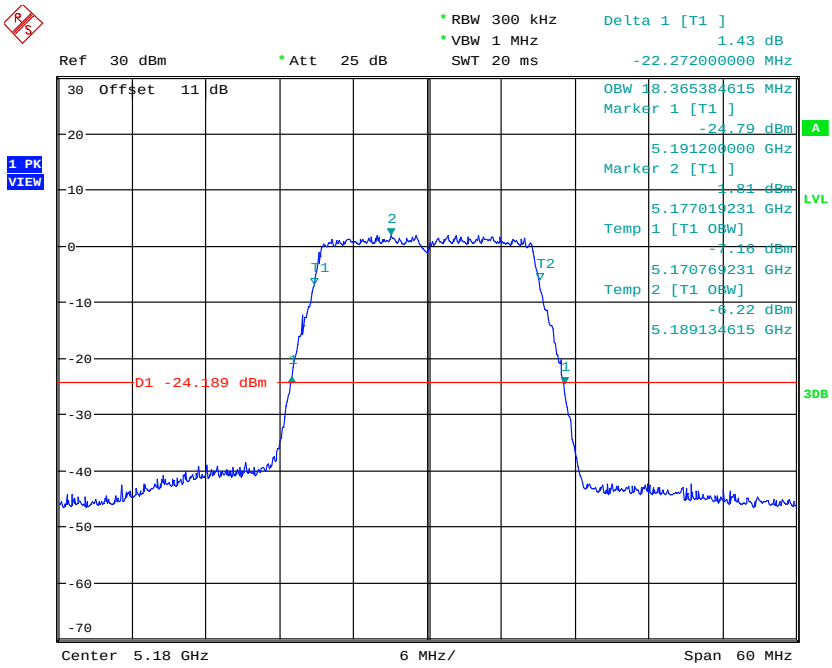


99% OBW & 26DB BANDWIDTH ANT2_11a_CH44
Date: 4.OCT.2022 18:05:54



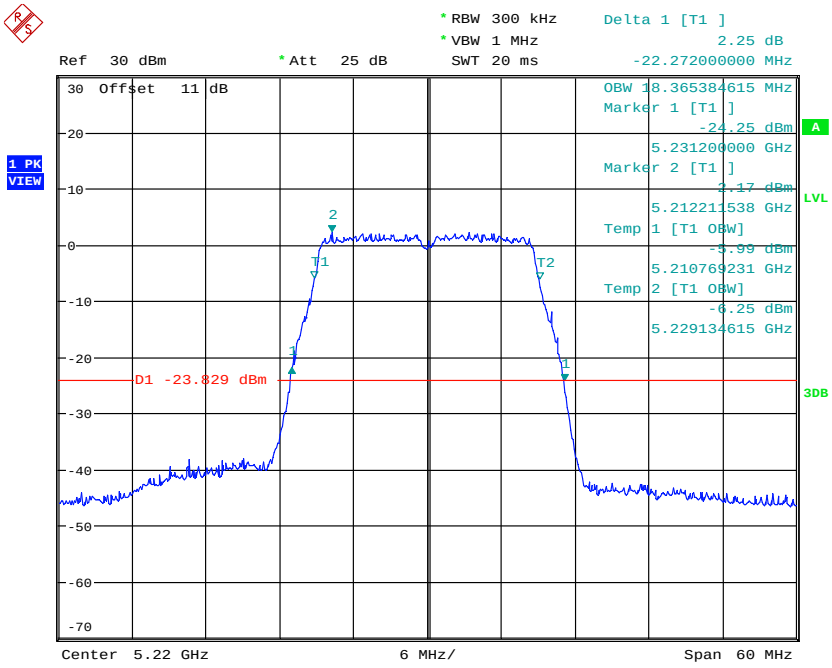
99% OBW & 26DB BANDWIDTH ANT2_11a_CH48

Date: 4.OCT.2022 18:07:05



99% OBW & 26DB BANDWIDTH ANT2_11n20_CH36

Date: 4.OCT.2022 18:17:54



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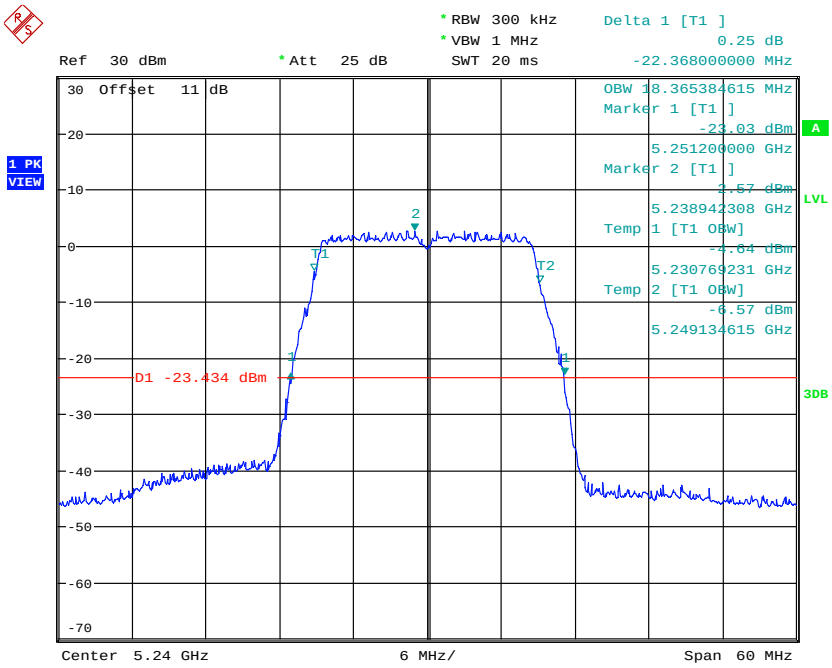
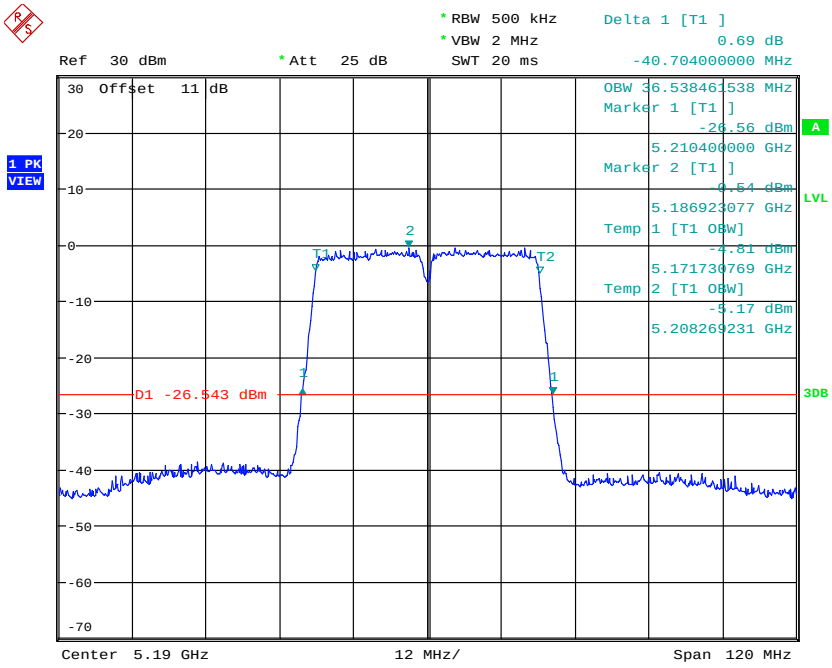
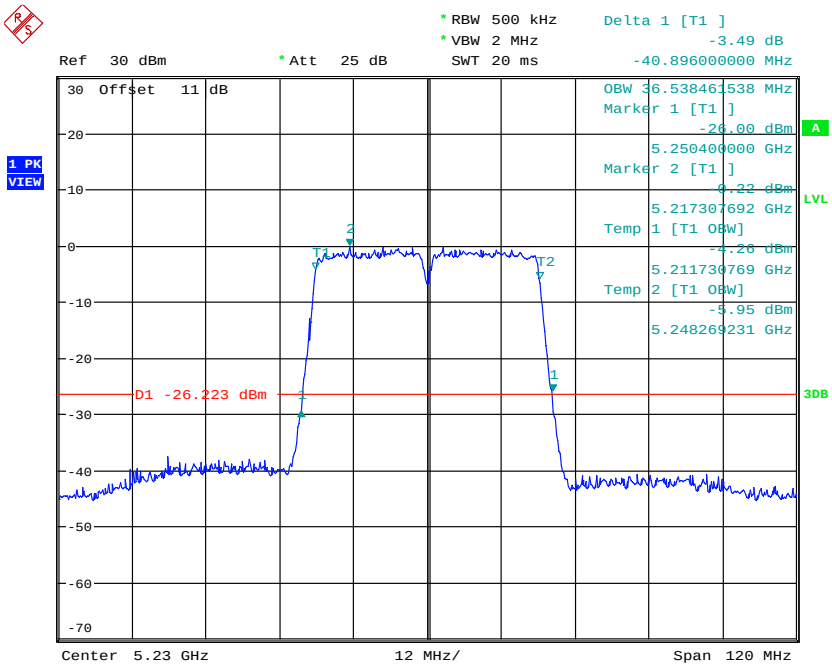
Date: 4.OCT.2022 18:19:00



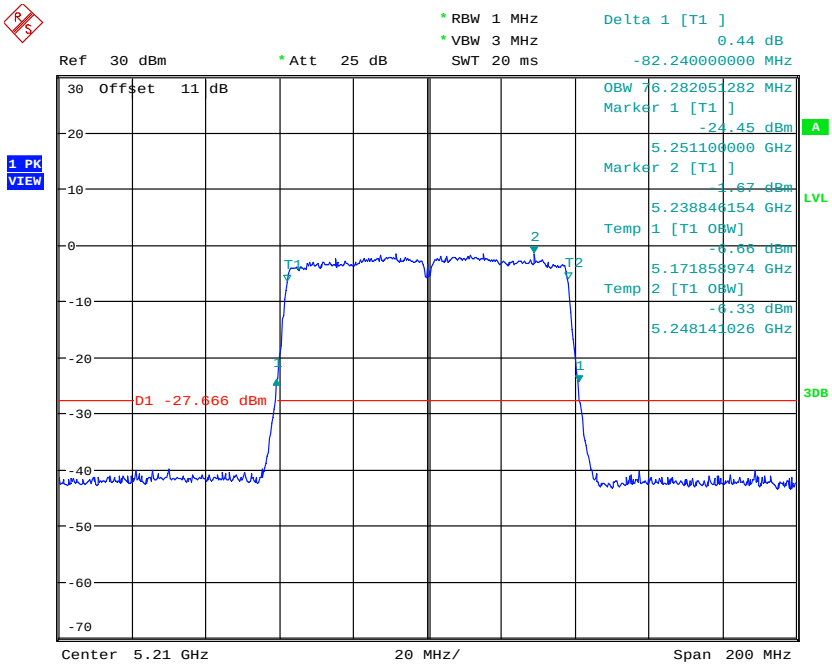
99% OBW & 26DB BANDWIDTH ANT2_11n20_CH48
Date: 4.OCT.2022 18:20:12



99% OBW & 26DB BANDWIDTH ANT2_11n40_CH38
Date: 4.OCT.2022 18:21:29

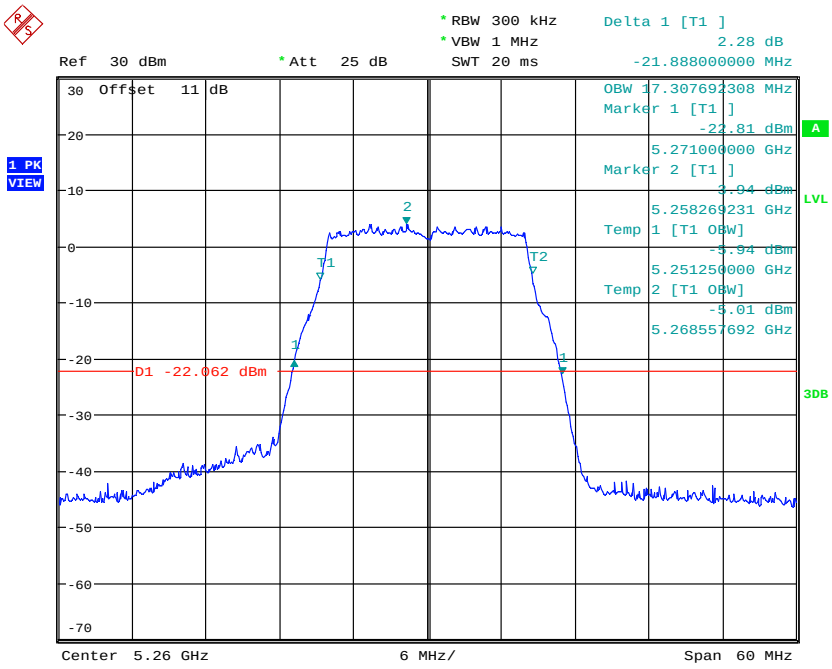


99% OBW & 26DB BANDWIDTH ANT2_11n40_CH46
Date: 4.OCT.2022 18:22:40

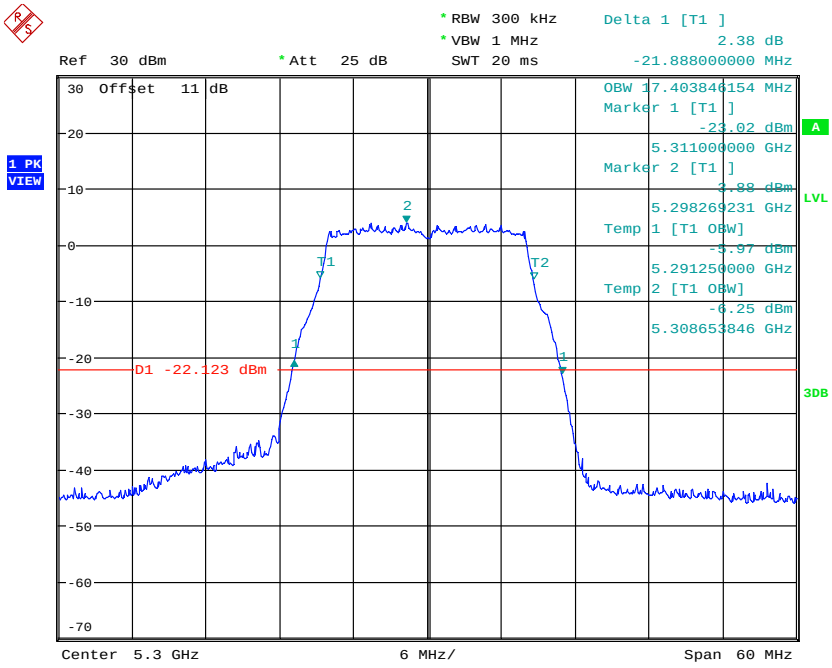


99% OBW & 26DB BANDWIDTH ANT2_11ac80_CH42
Date: 4.OCT.2022 18:26:59

5.25 GHz ~ 5.35 GHz

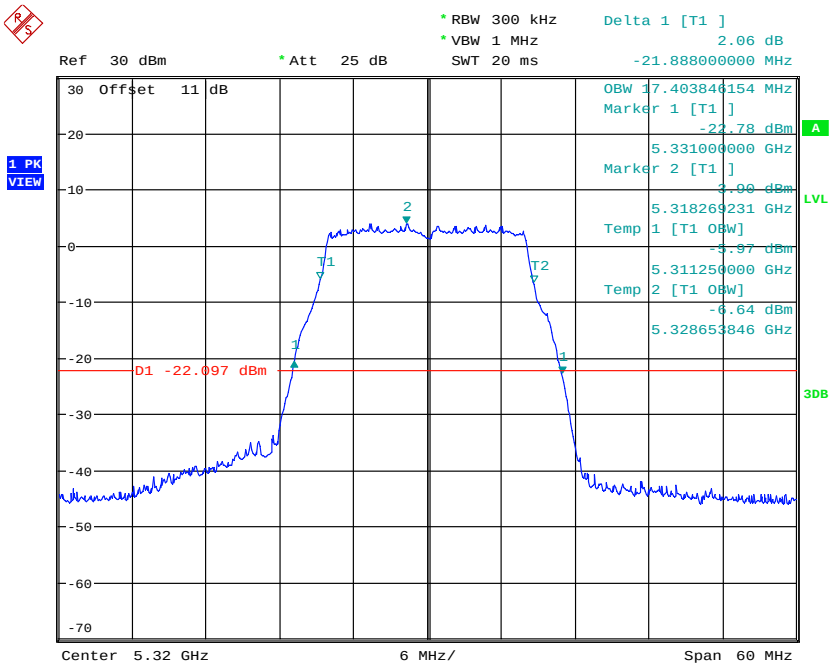


99% OBW & 26DB BANDWIDTH ANT2_11a_CH52
Date: 4.OCT.2022 18:08:28



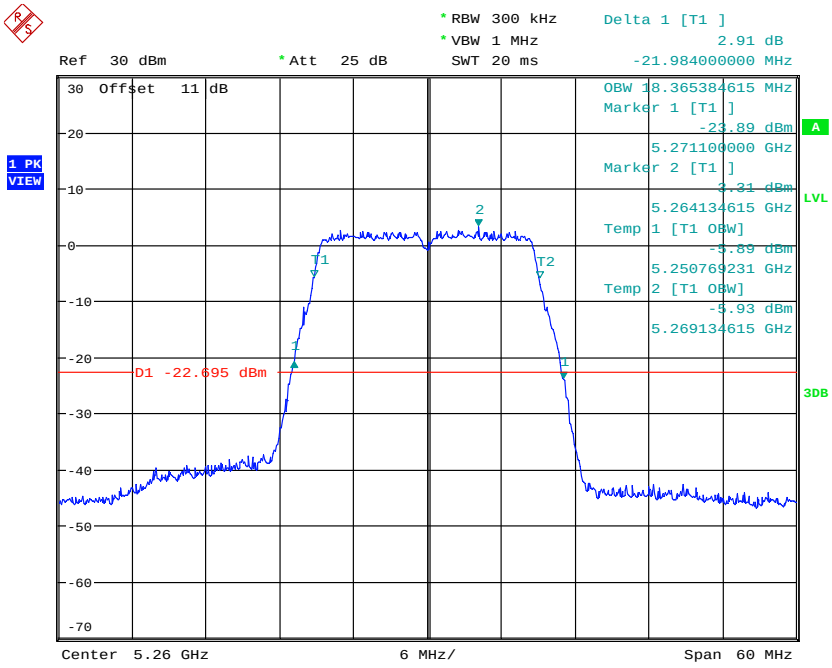
99% OBW & 26DB BANDWIDTH ANT2_11a_CH60

Date: 4.OCT.2022 18:09:39



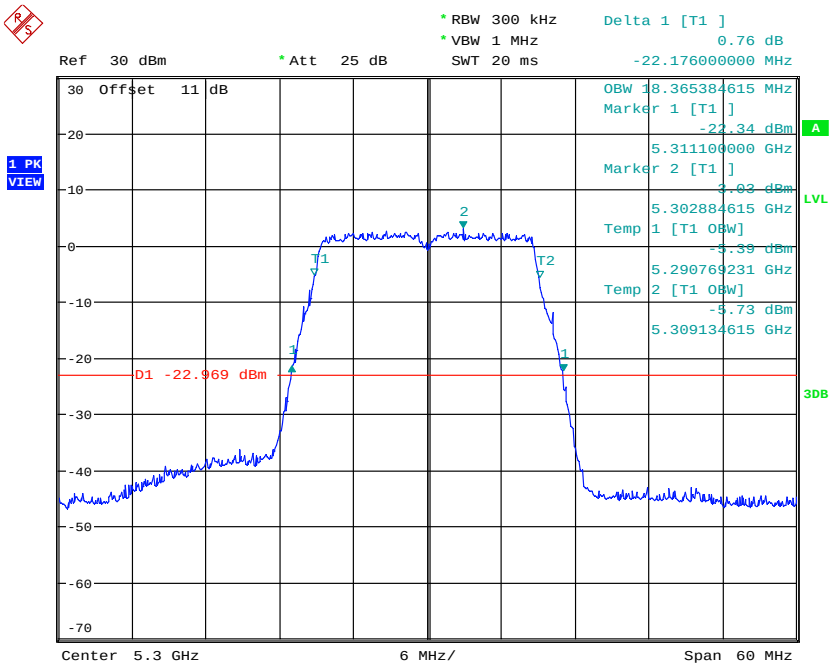
99% OBW & 26DB BANDWIDTH ANT2_11a_CH64

Date: 4.OCT.2022 18:10:45



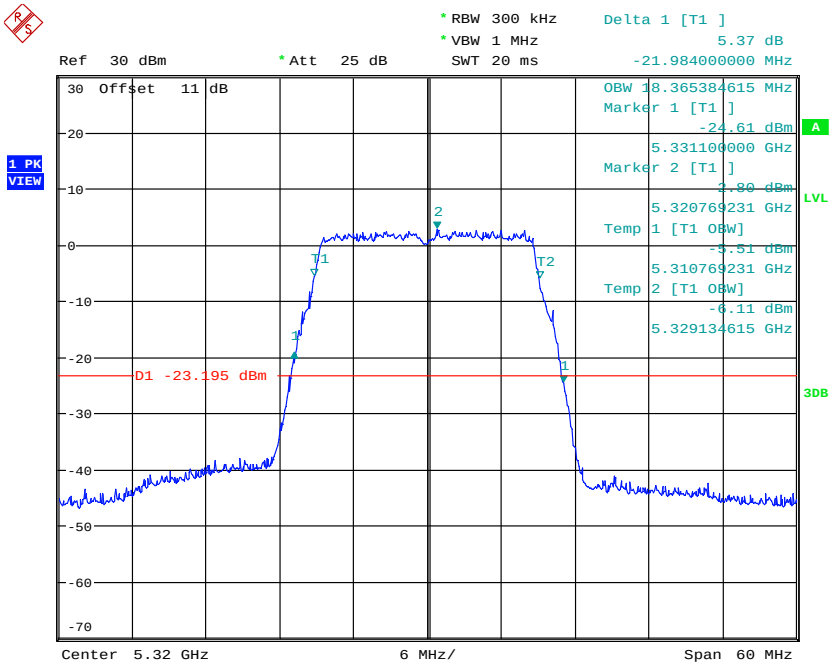
99% OBW & 26DB BANDWIDTH ANT2_11n20_CH52

Date: 4.OCT.2022 18:12:08

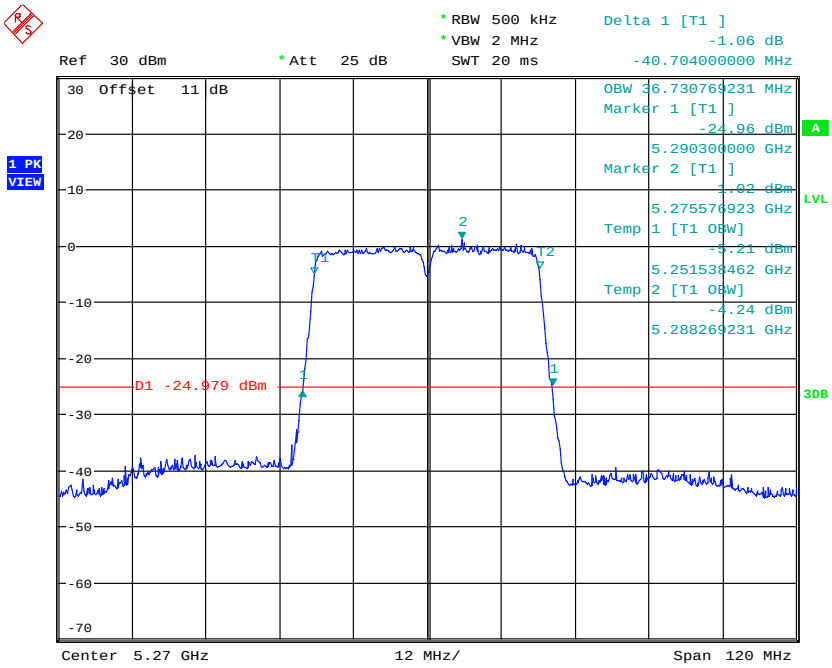


99% OBW & 26DB BANDWIDTH ANT2_11n20_CH60

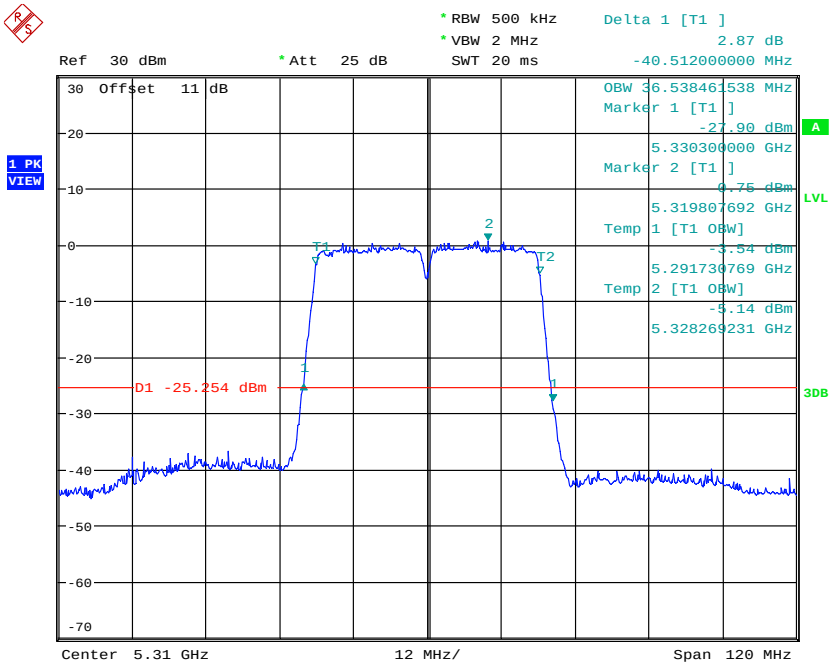
Date: 4.OCT.2022 18:14:03



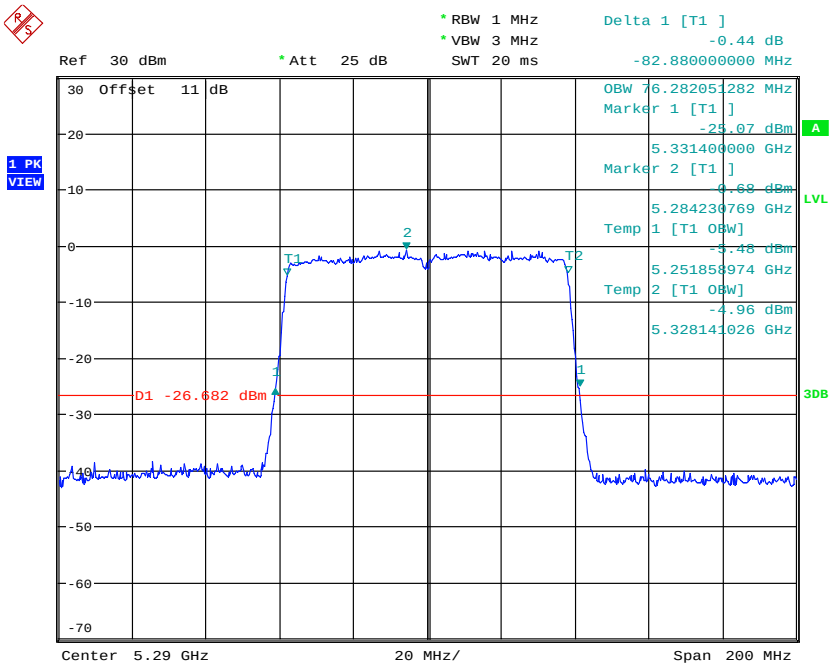
99% OBW & 26DB BANDWIDTH ANT2_11n20_CH64
Date: 4.OCT.2022 18:15:09



99% OBW & 26DB BANDWIDTH ANT2_11n40_CH54
Date: 4.OCT.2022 18:23:57



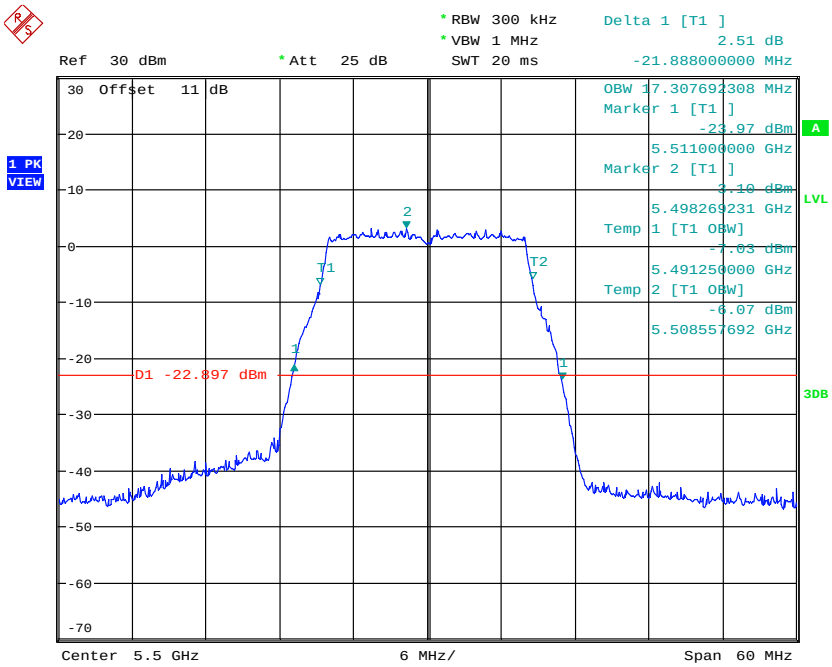
99% OBW & 26DB BANDWIDTH ANT2_11n40_CH62
Date: 4.OCT.2022 18:25:03



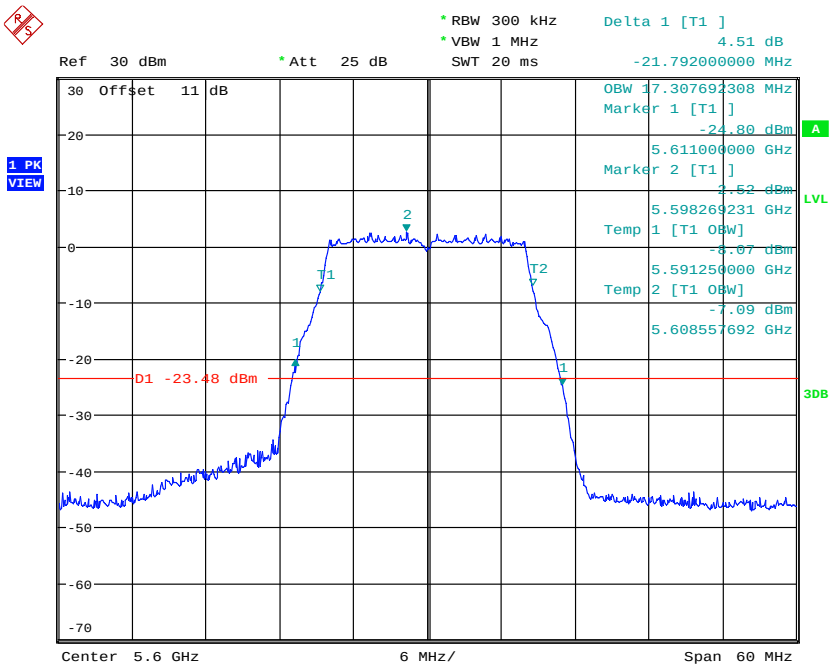
99% OBW & 26DB BANDWIDTH ANT2_11ac80_CH58
Date: 4.OCT.2022 18:28:32

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

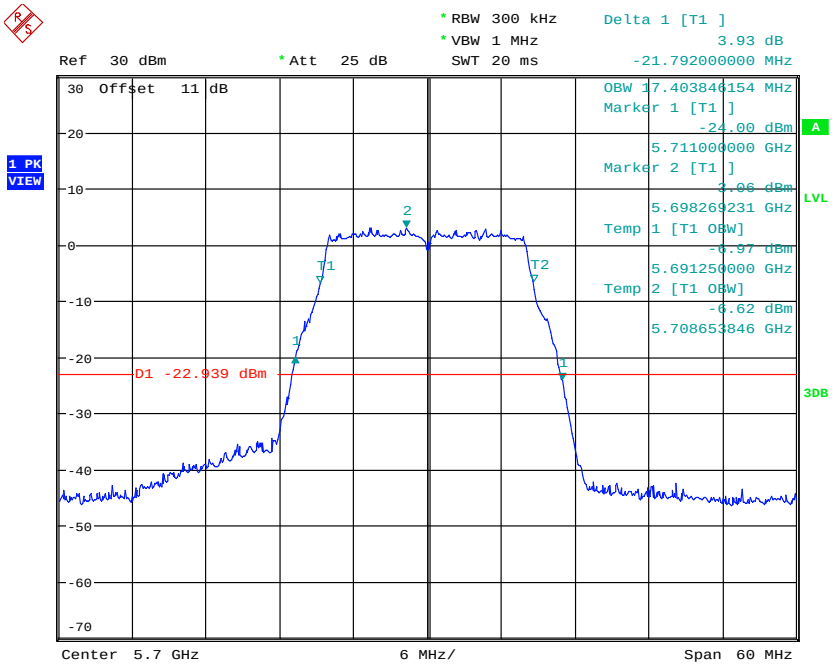
5.47 GHz ~ 5.725 GHz



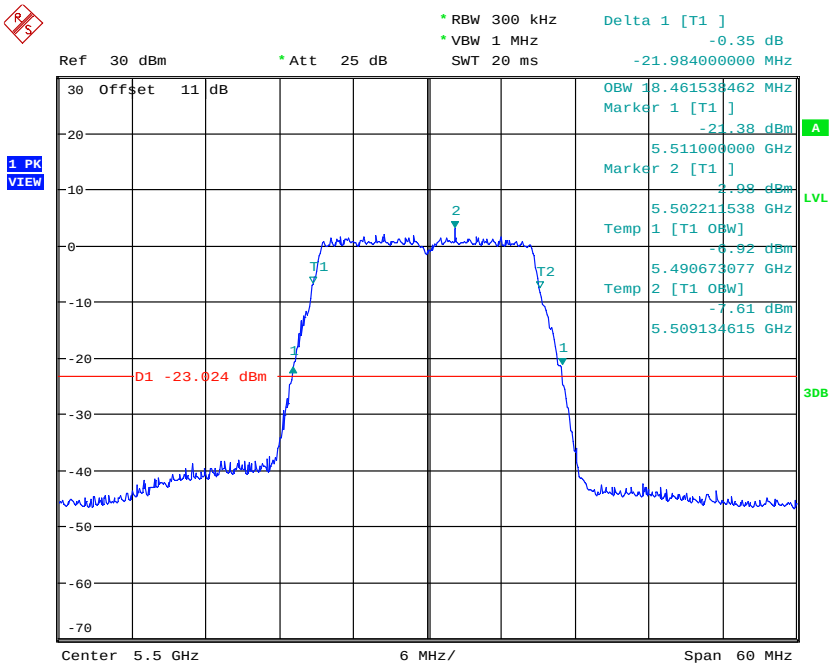
99% OBW & 26DB BANDWIDTH ANT2_11a_CH100
Date: 4.OCT.2022 17:38:57



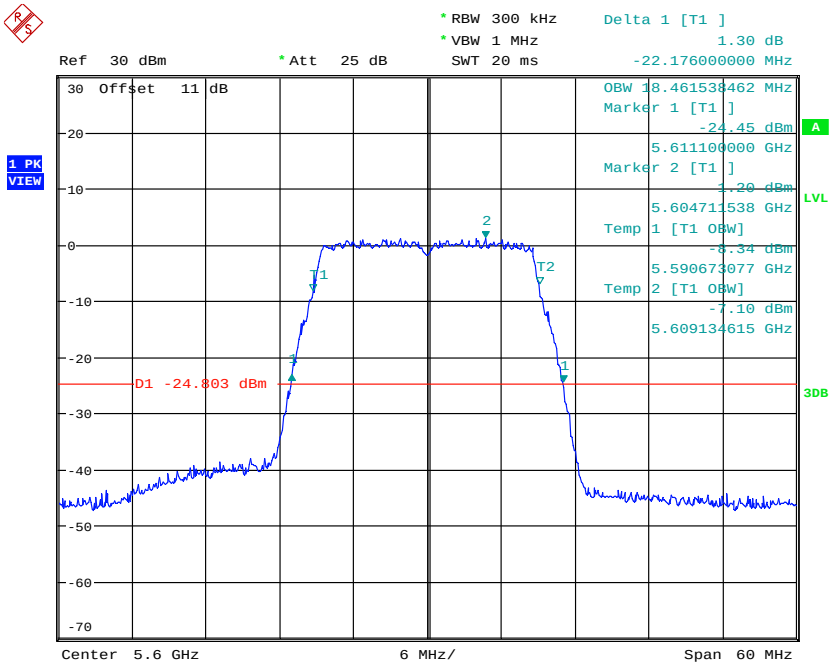
99% OBW & 26DB BANDWIDTH ANT2_11a_CH120
Date: 4.OCT.2022 17:40:09



99% OBW & 26DB BANDWIDTH ANT2_11a_CH140
Date: 4.OCT.2022 17:42:10

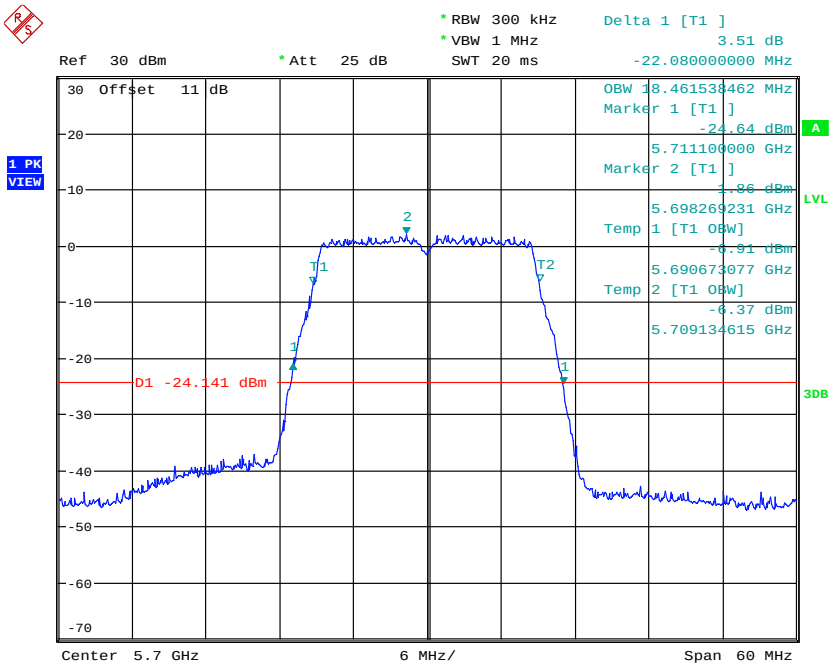


99% OBW & 26DB BANDWIDTH ANT2_11n20_CH100
Date: 4.OCT.2022 17:43:27



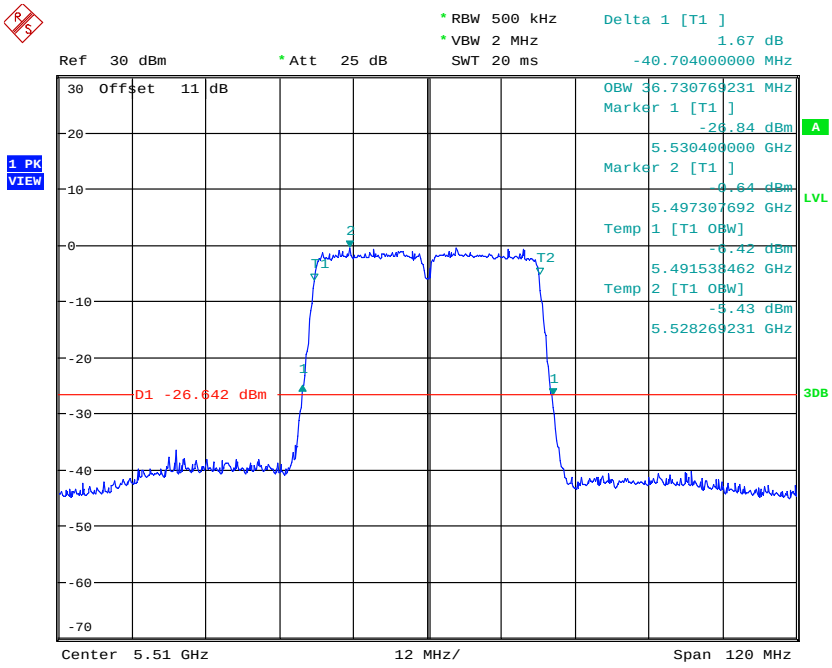
99% OBW & 26DB BANDWIDTH ANT2_11n20_CH120

Date: 4.OCT.2022 17:44:33



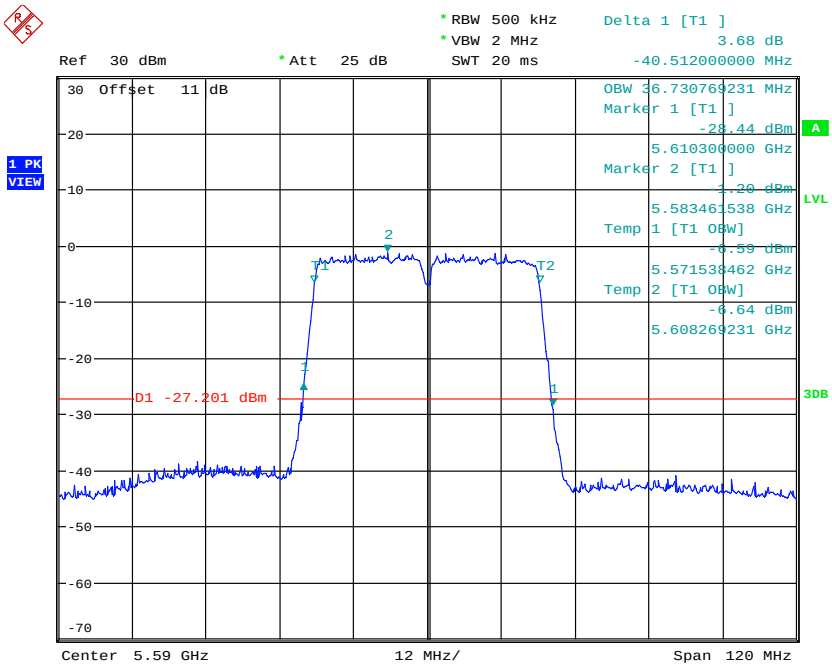
99% OBW & 26DB BANDWIDTH ANT2_11n20_CH140

Date: 4.OCT.2022 17:45:44



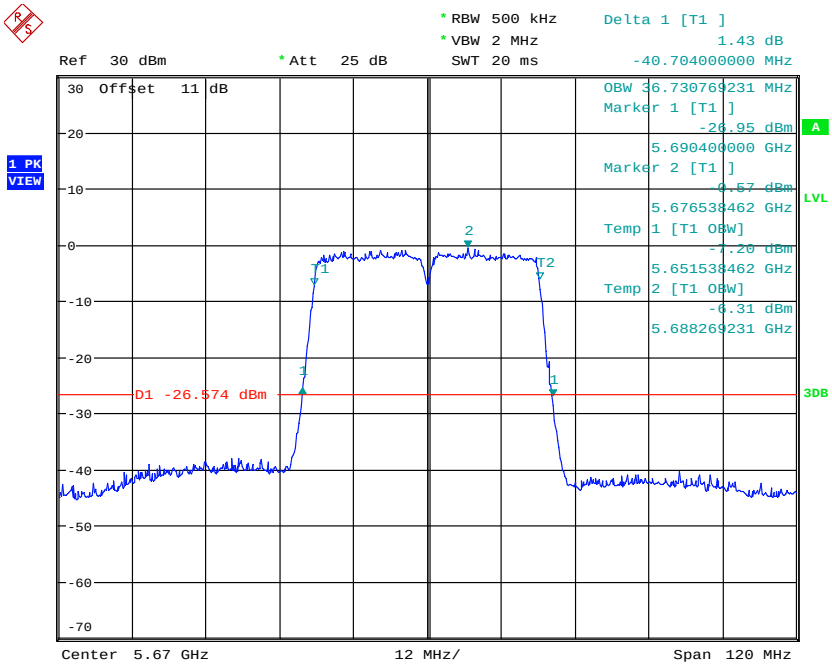
99% OBW & 26DB BANDWIDTH ANT2_11n40_CH102

Date: 4.OCT.2022 17:47:23

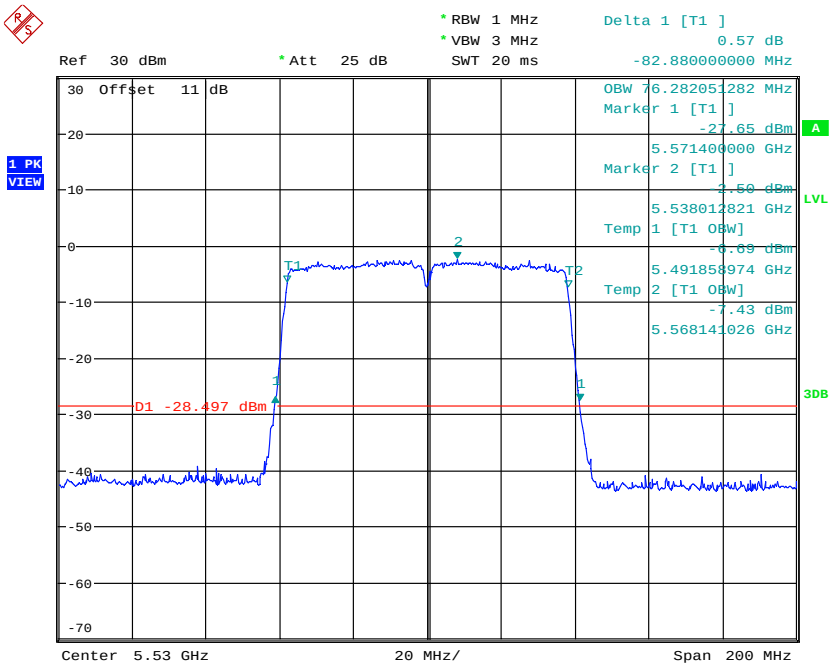


99% OBW & 26DB BANDWIDTH ANT2_11n40_CH118

Date: 4.OCT.2022 17:48:45

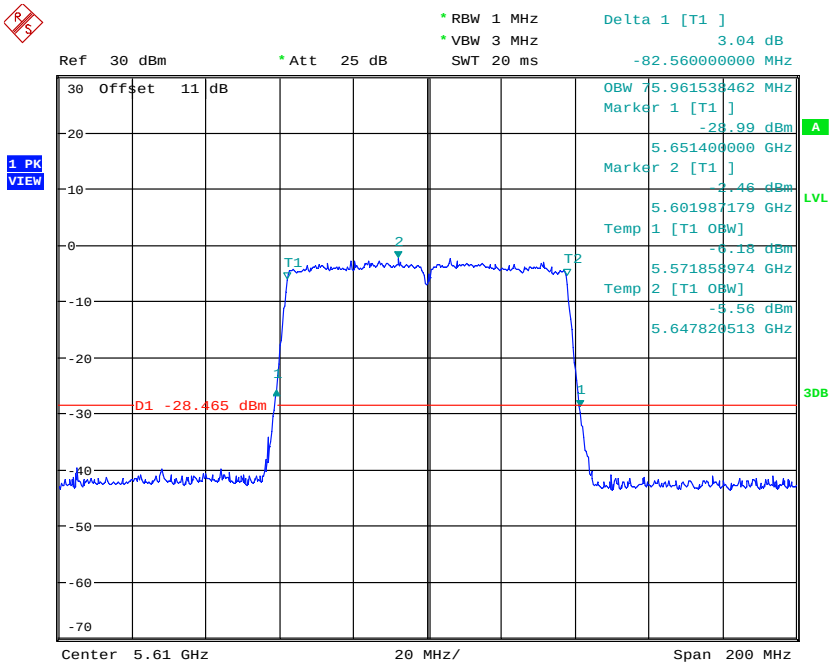


99% OBW & 26DB BANDWIDTH ANT2_11n40_CH134
Date: 4.OCT.2022 17:54:37



99% OBW & 26DB BANDWIDTH ANT2_11ac80_CH106
Date: 4.OCT.2022 17:56:22

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



99% OBW & 26DB BANDWIDTH ANT2_11ac80_CH122
Date: 4.OCT.2022 17:57:39

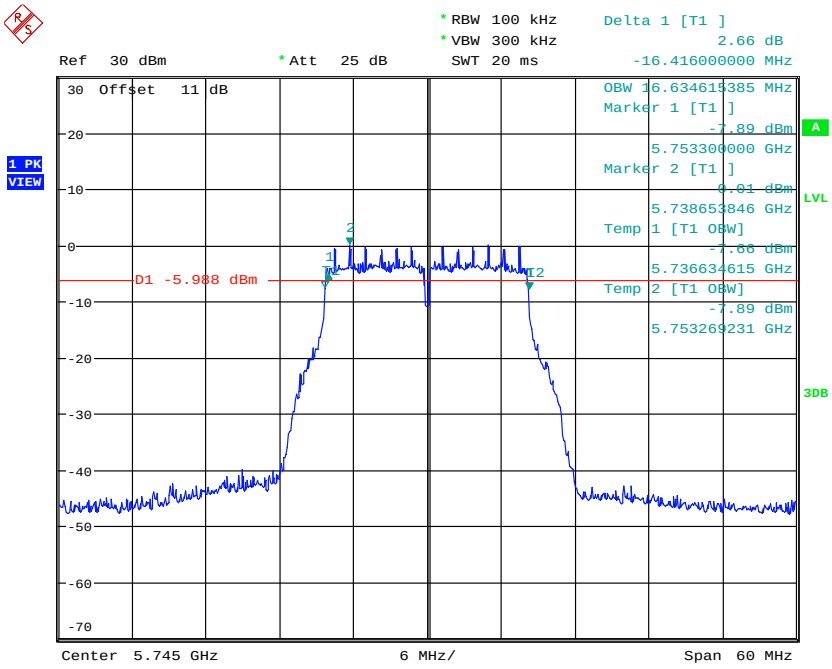
Test equipment used: ETSTW-RE 055, ETSTW-RE 050

3.3 6dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

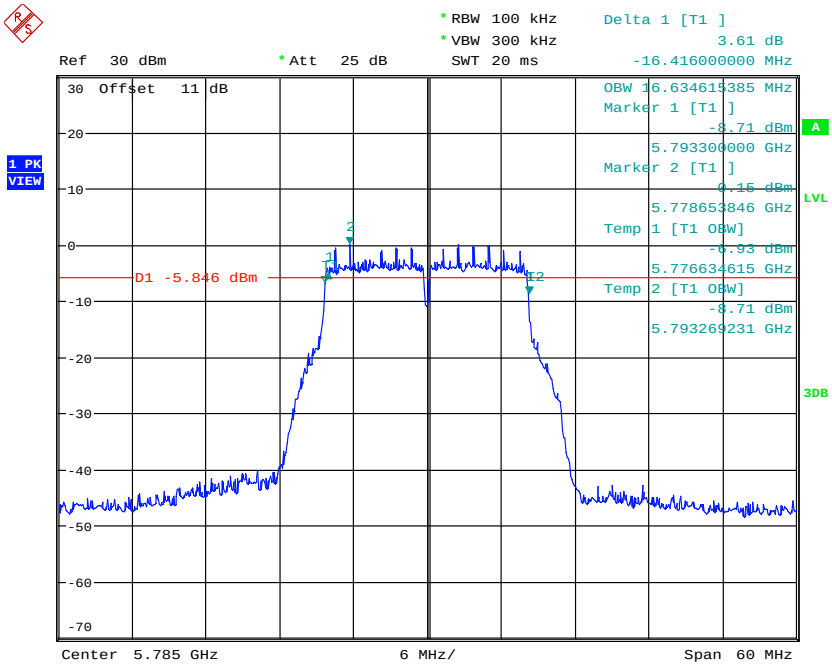
According to §15.407(a). No Limit required.

Result:
Test date: October 04, 2022
Temperature: 24.6 ˚C
Humidity: 52.3 %
Tester: Sora

ANT A

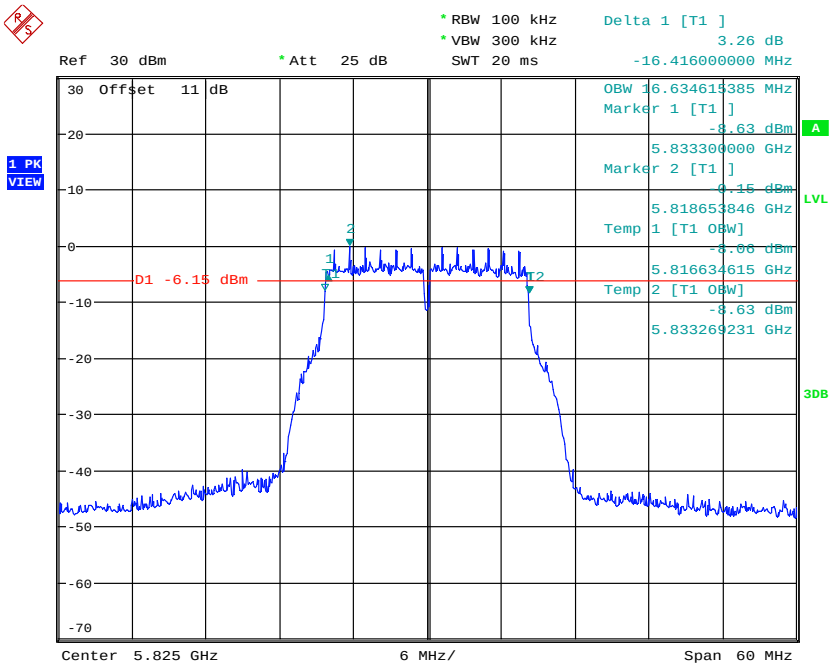


99% OBW & 6DB BANDWIDTH ANT1_11a_CH149
Date: 4.OCT.2022 17:03:23



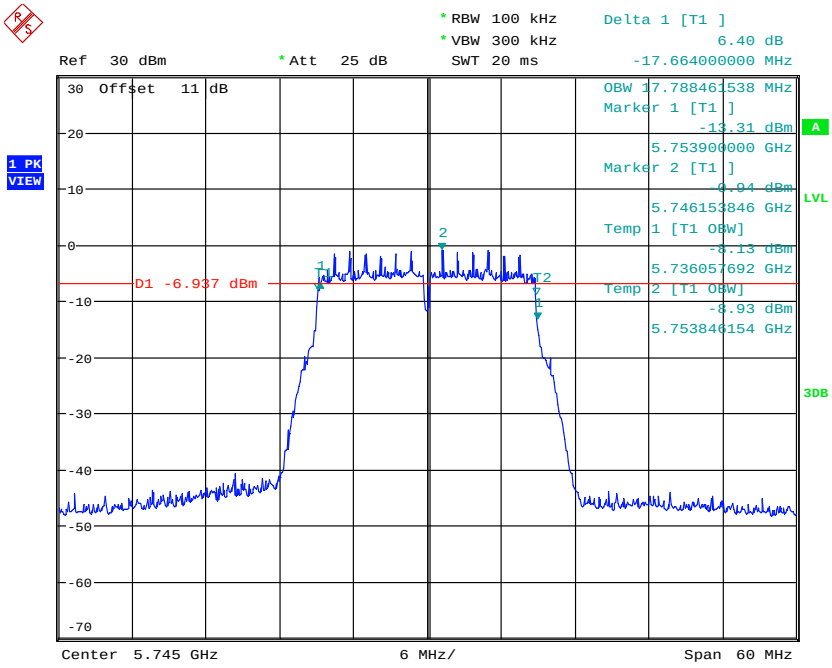
99% OBW & 6DB BANDWIDTH ANT1_11a_CH157

Date: 4.OCT.2022 17:04:24



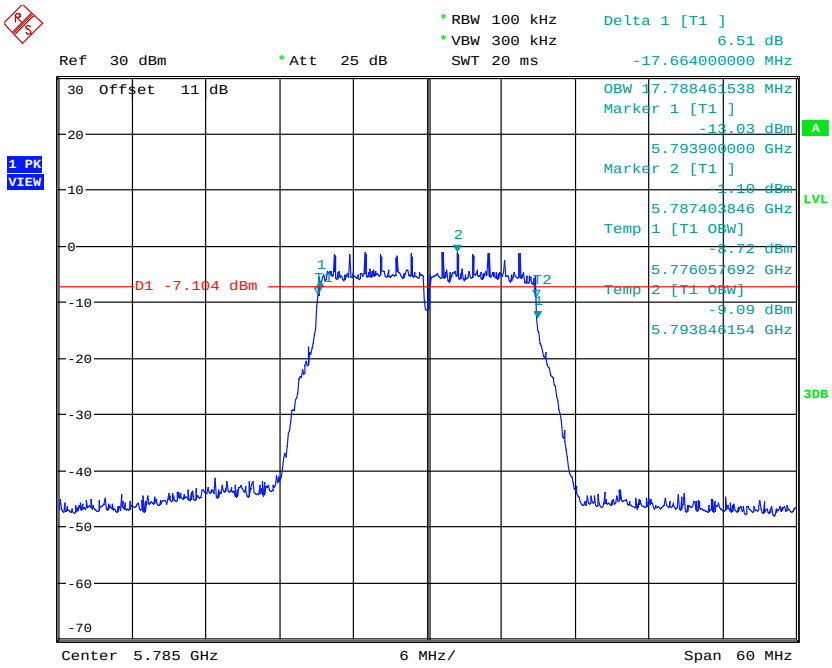
99% OBW & 6DB BANDWIDTH ANT1_11a_CH165

Date: 4.OCT.2022 17:05:30



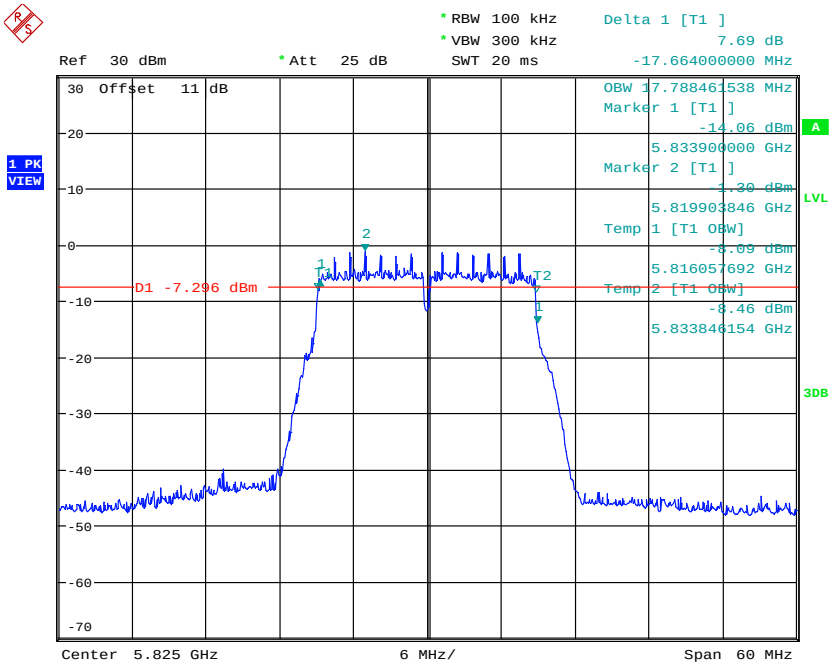
99% OBW & 6DB BANDWIDTH ANT1_11n20_CH149

Date: 4.OCT.2022 17:06:41



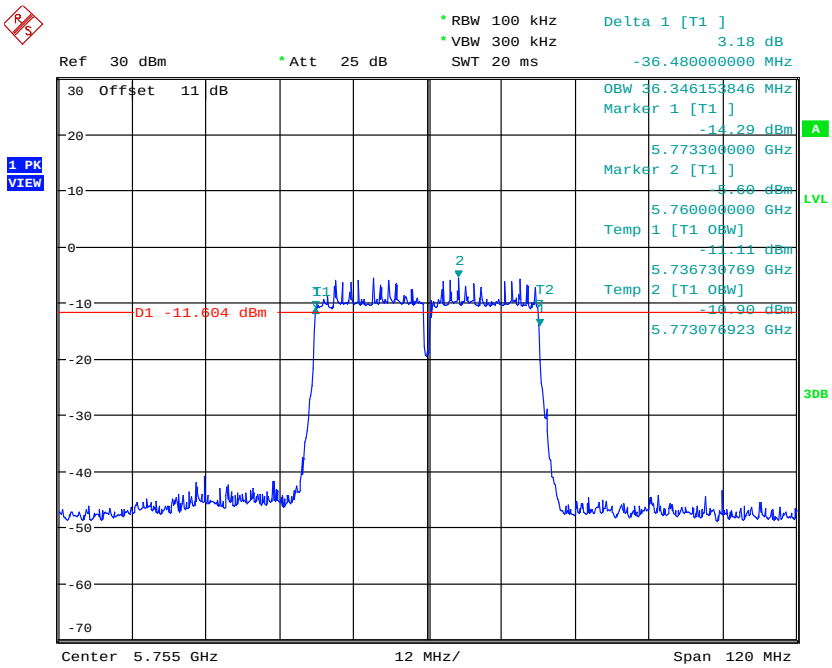
99% OBW & 6DB BANDWIDTH ANT1_11n20_CH157

Date: 4.OCT.2022 17:07:42



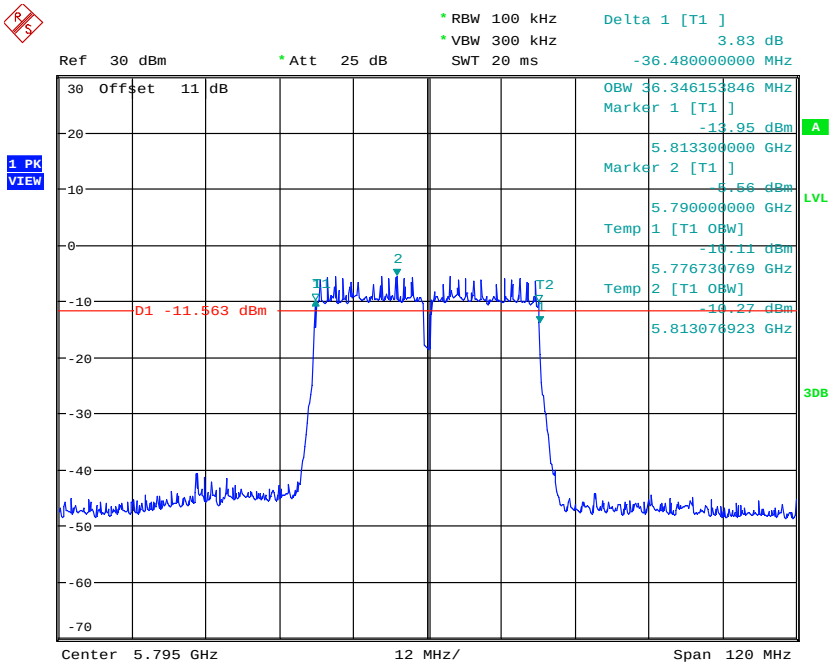
99% OBW & 6DB BANDWIDTH ANT1_11n20_CH165

Date: 4.OCT.2022 17:09:32



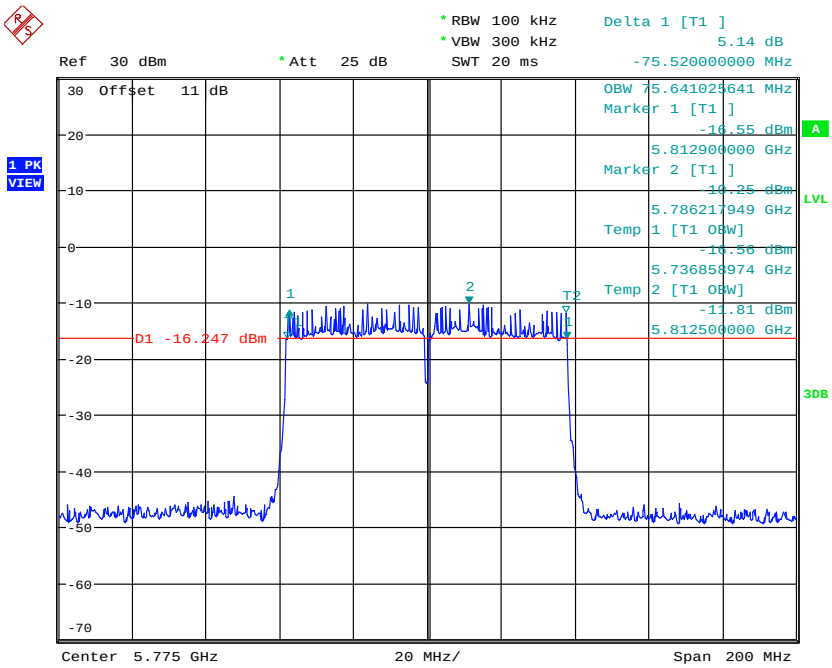
99% OBW & 6DB BANDWIDTH ANT1_11n40_CH151

Date: 4.OCT.2022 17:11:05



99% OBW & 6DB BANDWIDTH ANT1_11n40_CH159

Date: 4.OCT.2022 17:12:22

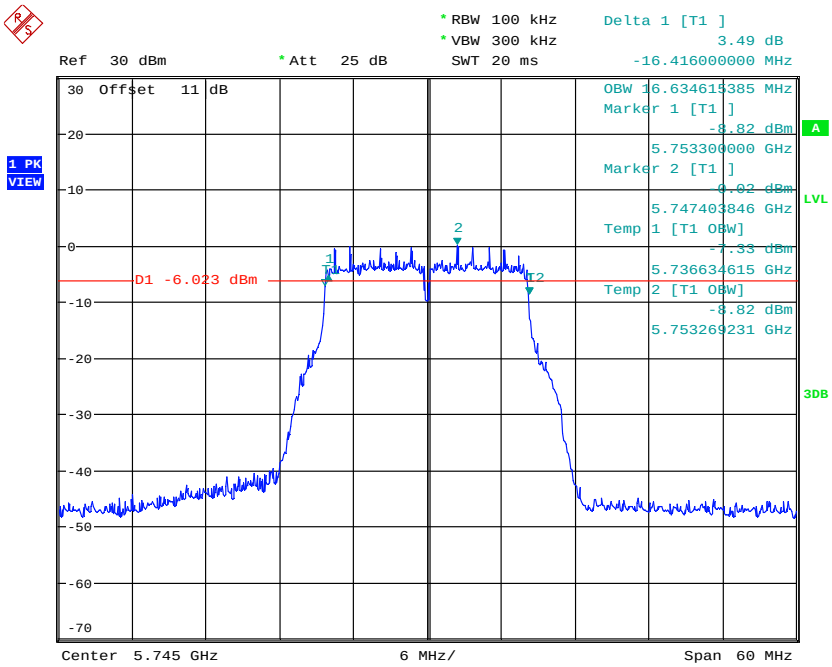


99% OBW & 6DB BANDWIDTH ANT1_11ac80_CH155

Date: 4.OCT.2022 17:14:23

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

ANT B



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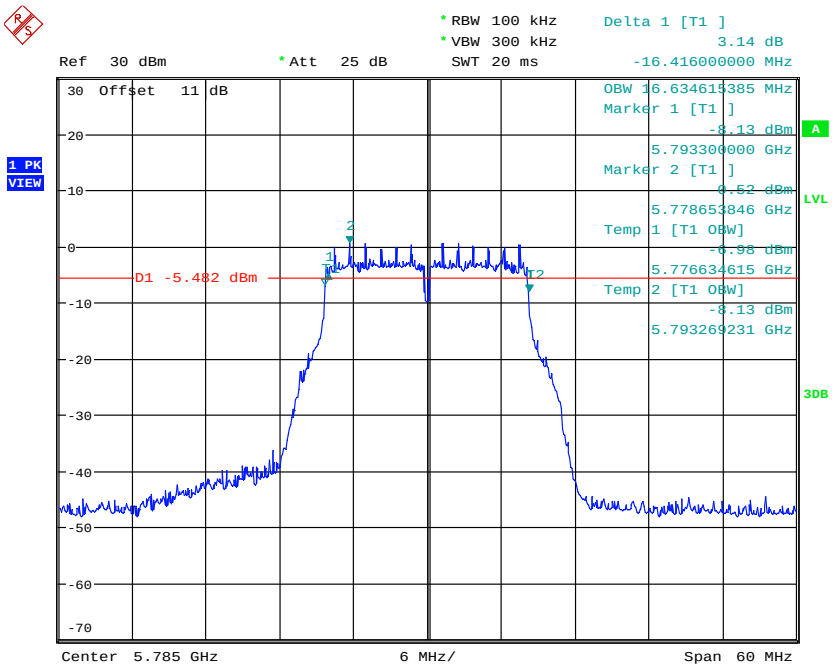
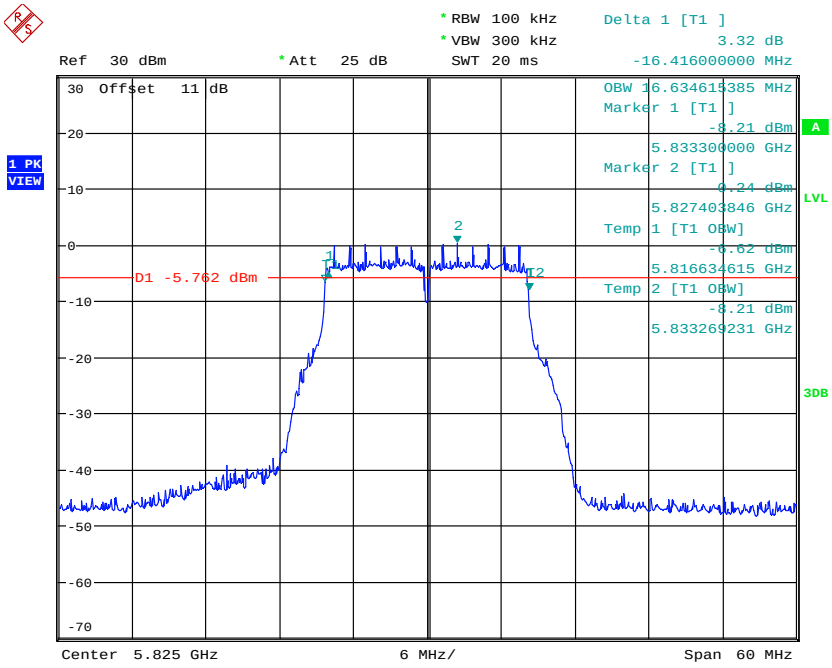
Date: 4.OCT.2022 17:31:10



99% OBW & 6DB BANDWIDTH ANT2_11a_CH157
Date: 4.OCT.2022 17:32:16



99% OBW & 6DB BANDWIDTH ANT2_11a_CH165

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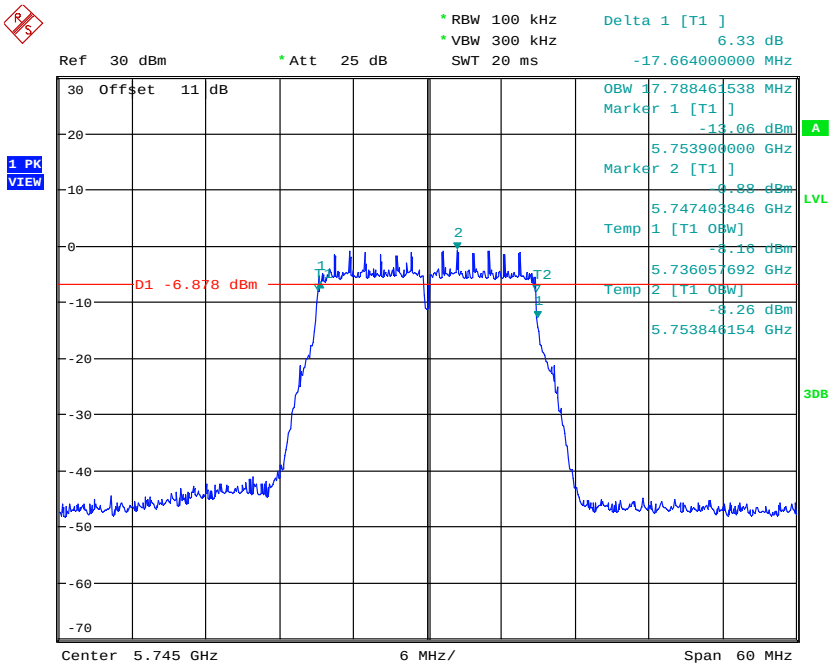
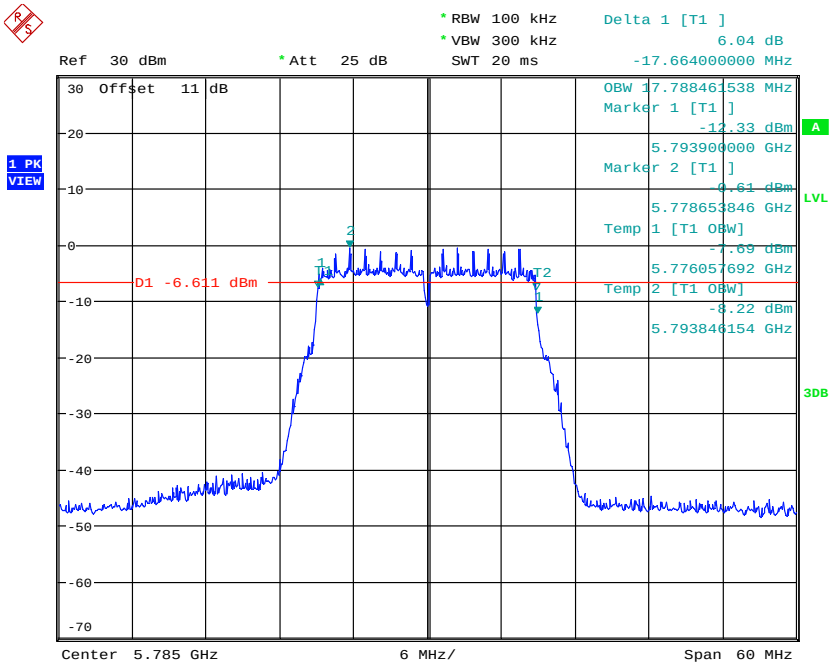


99% OBW & 6DB BANDWIDTH ANT2_11n20_CH149

Date: 4.OCT.2022 17:26:02



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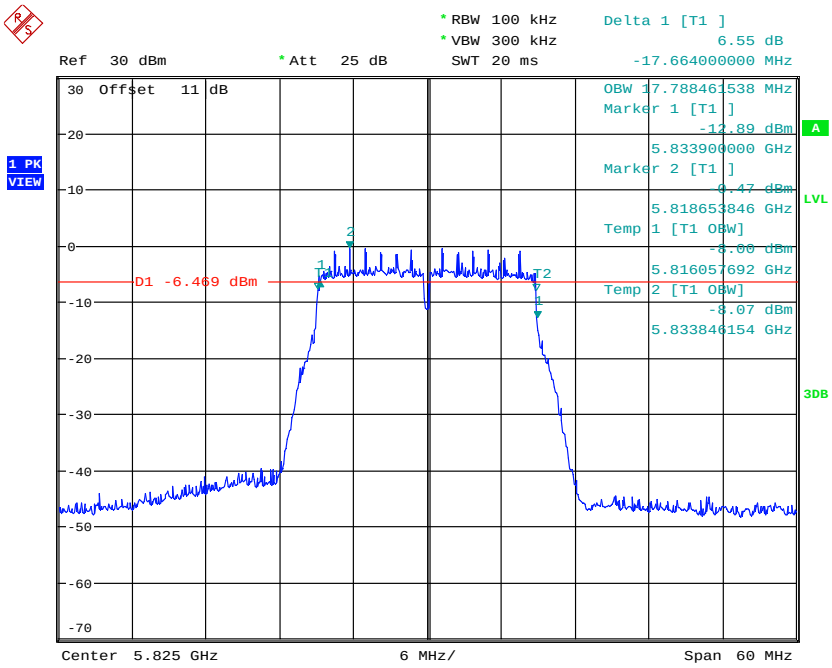

99% OBW & 6DB BANDWIDTH ANT2_11n20_CH165

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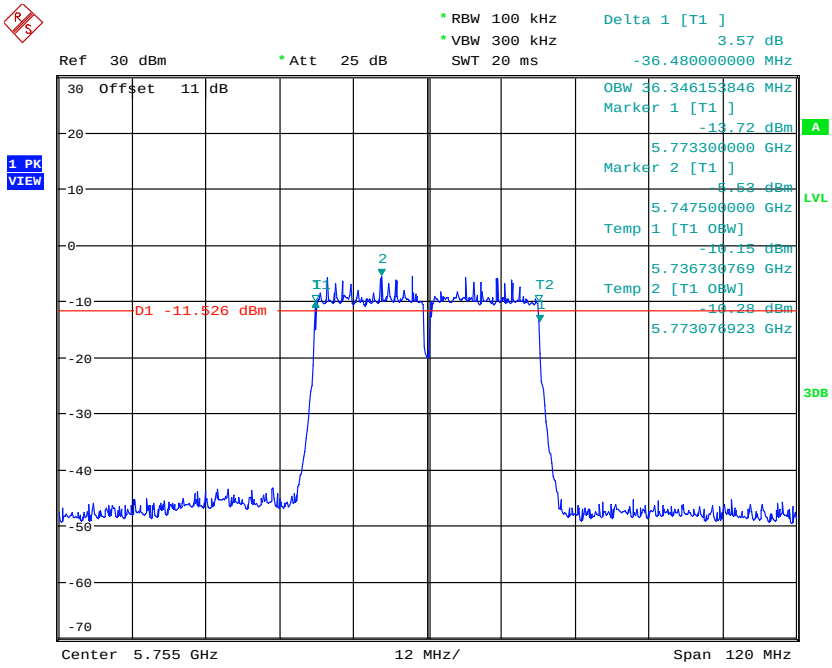

99% OBW & 6DB BANDWIDTH ANT2_11n40_CH151

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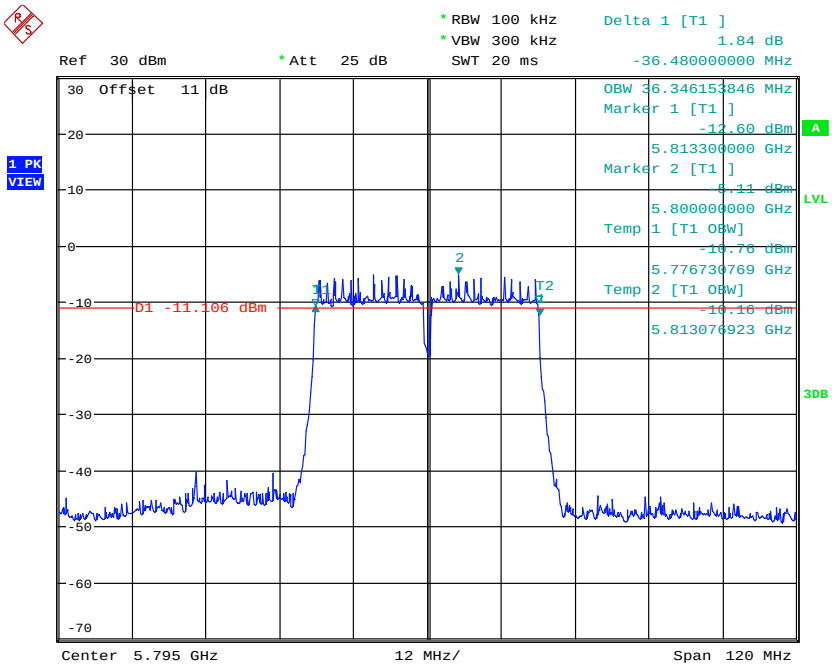
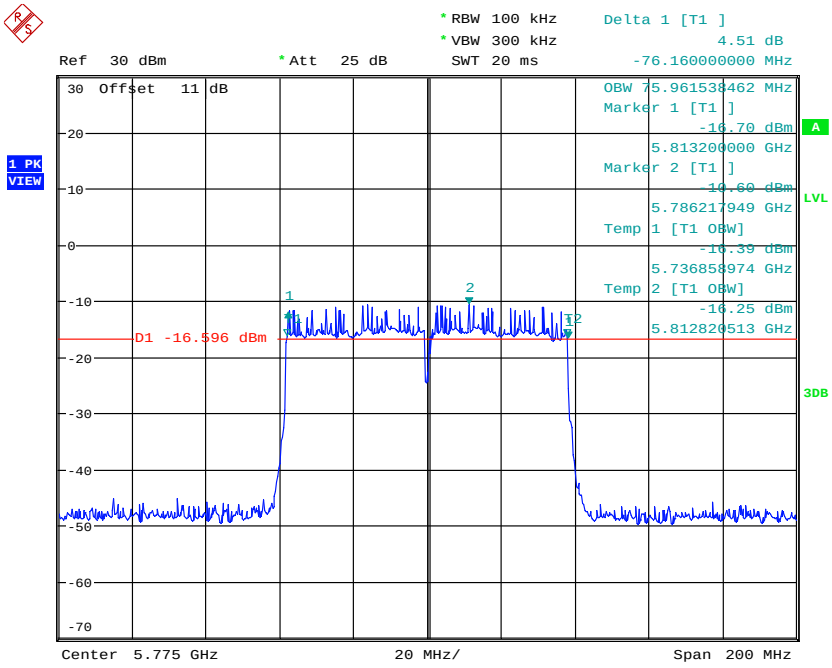


99% OBW & 6DB BANDWIDTH ANT2_11n40_CH159

Date: 4.OCT.2022 17:23:33

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



99% OBW & 6DB BANDWIDTH ANT2_11ac80_CH155
Date: 4.OCT.2022 17:19:04

3.4 Peak Power Spectral Density, FCC 15.407 (a)

According to §15.407(a)

1. For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 17 dBm/MHz for master device and 11 dBm/MHz for mobile/portable client device.
2. For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the peak power spectral density shall not exceed 11 dBm/MHz.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm/500kHz.
4. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
5. According KDB662911 D01 d) i), transmit signals are completely correlated, then
   Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}$] dBi
   Directional gain :
   = 7.69 dBi (for NII-1)、8.00 dBi (for NII-2A)、9.42 dBi (for NII-2C)、8.58 dBi (for NII-3)
6.

	Limit (dBm/MHz)	reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	Limit (dBm/MHz) (consider directional gain)
NII-1	11	1.69	9.31
NII-2A	11	2.00	9.00
NII-2C	11	3.44	7.56
NII-3	30	2.58	27.42
Note : NII-3 Limit is dBm/500kHz			

Test date: October 04, 2022
Temperature: 24.6 ˚C
Humidity: 52.3 %
Tester: Sora

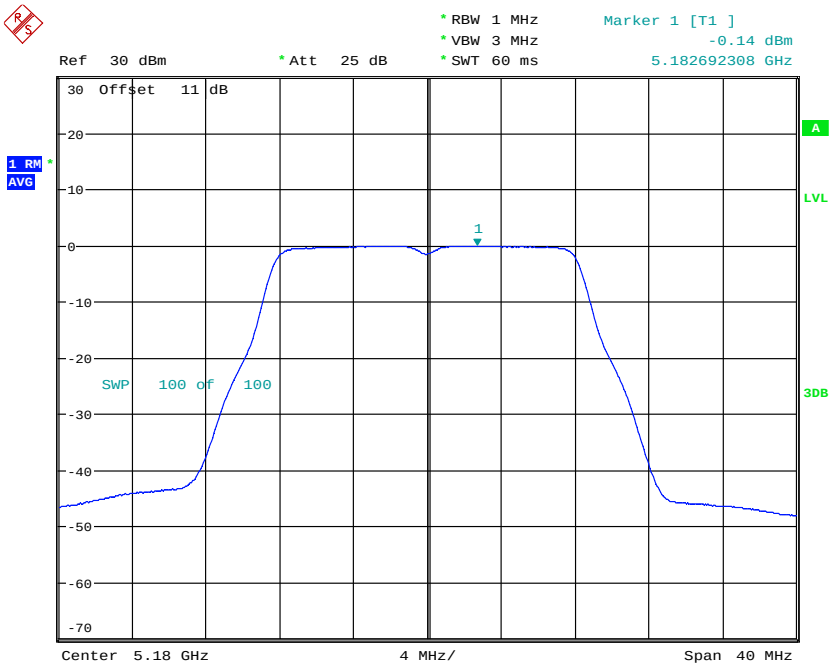
Power Density

Band	Mode	Channel	Power density with DF		Combine (dBm)	DF (dB)	Limit
			Antenna A (dBm)	Antenna B (dBm)			
NII-1	802.11a	Ch 36 : 5180 MHz	-0.14	-0.02	-	0	9.31
		Ch 44 : 5220 MHz	-0.37	0.38	-	0	9.31
		Ch 48 : 5240 MHz	0.47	0.82	-	0	9.31
	802.11n 20M	Ch 36 : 5180 MHz	-1.54	-1.61	1.44	0.13	9.31
		Ch 44 : 5220 MHz	-1.13	-1.29	1.80	0.13	9.31
		Ch 48 : 5240 MHz	-1.04	-1.17	1.91	0.13	9.31
	802.11n 40M	Ch 38 : 5190 MHz	-6.19	-6.22	-3.19	0.56	9.31
		Ch 46 : 5230 MHz	-5.78	-6.03	-2.89	0.56	9.31
	802.11ac	Ch 42 : 5210 MHz	-11.02	-11.11	-8.05	1.01	9.31
NII-2A	802.11a	Ch 52 : 5260 MHz	0.33	0.38	-	0	9.00
		Ch 60 : 5300 MHz	0.44	0.4	-	0	9.00
		Ch 64 : 5320 MHz	0.59	0.5	-	0	9.00
	802.11n 20M	Ch 52 : 5260 MHz	-1.23	-0.97	1.91	0.13	9.00
		Ch 60 : 5300 MHz	-1.1	-0.85	2.04	0.13	9.00
		Ch 64 : 5320 MHz	-0.81	-0.8	2.21	0.13	9.00
	802.11n 40M	Ch 54 : 5270 MHz	-5.82	-5.29	-2.54	0.56	9.00
		Ch 62 : 5310 MHz	-5.26	-5.2	-2.22	0.56	9.00
	802.11ac	Ch 58 : 5210 MHz	-10.58	-10.51	-7.53	1.01	9.00
NII-2C	802.11a	Ch 100 : 5500 MHz	-0.24	-0.38	-	0	7.56
		Ch 116 : 5580 MHz	-0.94	-0.97	-	0	7.56
		Ch 140 : 5700 MHz	-0.57	-0.45	-	0	7.56
	802.11n 20M	Ch 100 : 5500 MHz	-1.92	-1.92	1.09	0.13	7.56
		Ch 116 : 5580 MHz	-2.66	-2.48	0.44	0.13	7.56
		Ch 140 : 5700 MHz	-2.09	-1.93	1.00	0.13	7.56
	802.11n 40M	Ch 102 : 5510 MHz	-6.42	-6.47	-3.43	0.56	7.56
		Ch 110 : 5550 MHz	-6.95	-7.19	-4.06	0.56	7.56
		Ch 134 : 5670 MHz	-6.74	-6.46	-3.59	0.56	7.56
	802.11ac	Ch 106 : 5530 MHz	-11.08	-11.67	-8.35	1.01	7.56
		Ch 122 : 5610 MHz	-11.49	-12.17	-8.81	1.01	7.56
NII-3	802.11a	Ch 149 : 5745 MHz	-3.08	-3.09	-	0	27.42
		Ch 157 : 5785 MHz	-3.02	-2.55	-	0	27.42
		Ch 165 : 5825 MHz	-3.36	-2.95	-	0	27.42
	802.11n 20M	Ch 149 : 5745 MHz	-4.68	-4.42	-1.54	0.13	27.42
		Ch 157 : 5785 MHz	-4.68	-4.21	-1.43	0.13	27.42

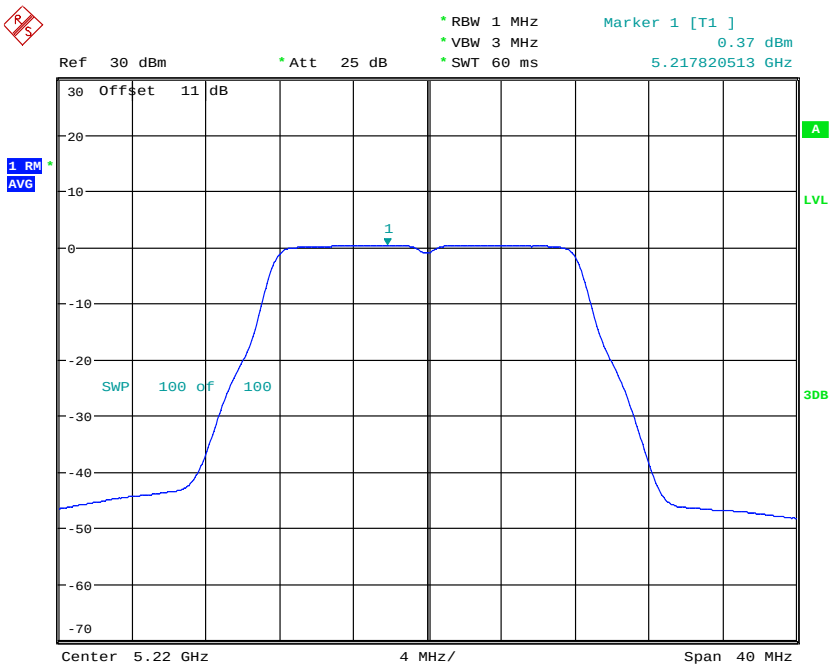
		Ch 165 : 5825 MHz	-4.81	-4.27	-1.52	0.13	27.42
	802.11n 40M	Ch 151 : 5755 MHz	-8.99	-8.7	-5.83	0.56	27.42
		Ch 159 : 5795 MHz	-8.98	-8.68	-5.82	0.56	27.42
	802.11ac	Ch 155: 5775 MHz	-13.96	-14.4	-11.16	1.01	27.42

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

ANTA
5.15 GHz ~ 5.25 GHz



POWER DENSITY AV ANT111aCH36
Date: 4.OCT.2022 16:00:16



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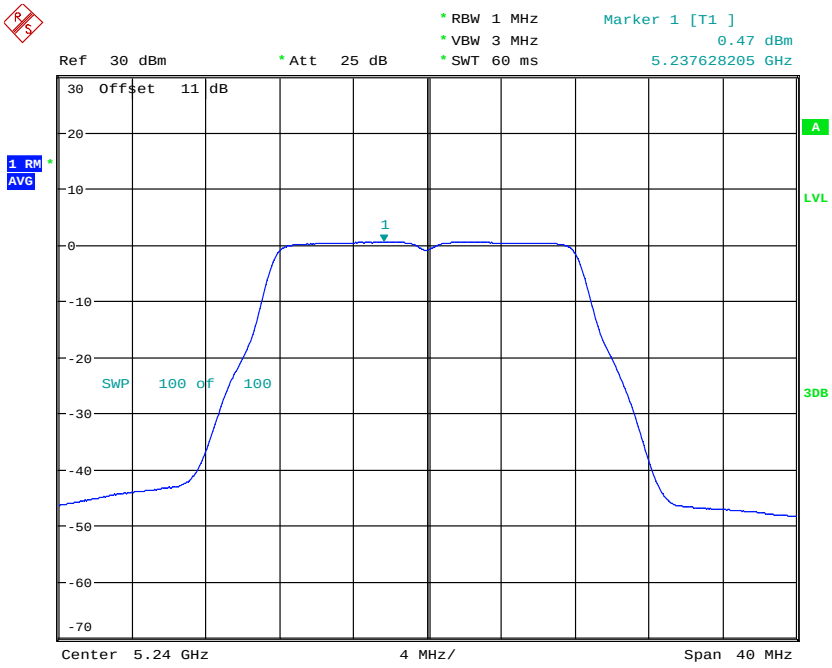
Date: 4.OCT.2022 16:02:13



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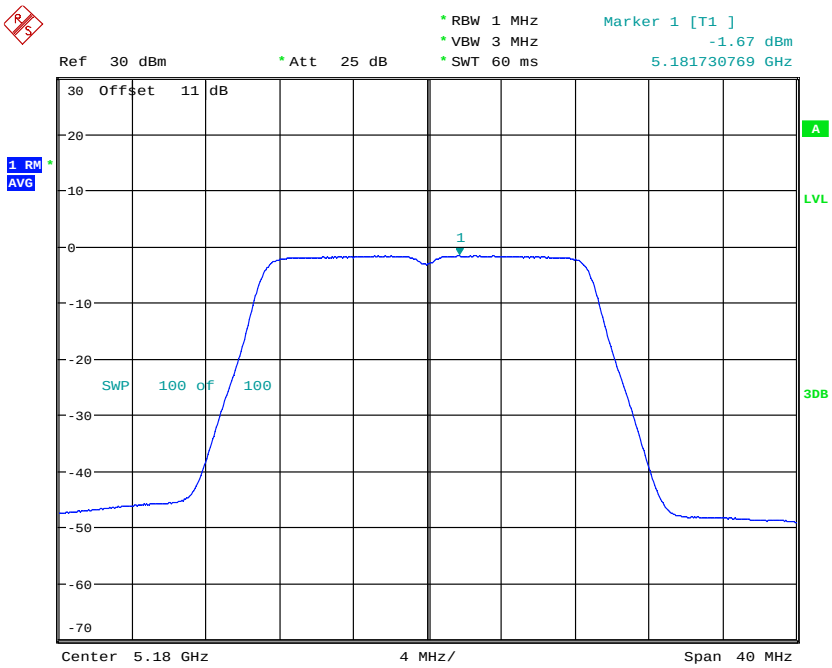
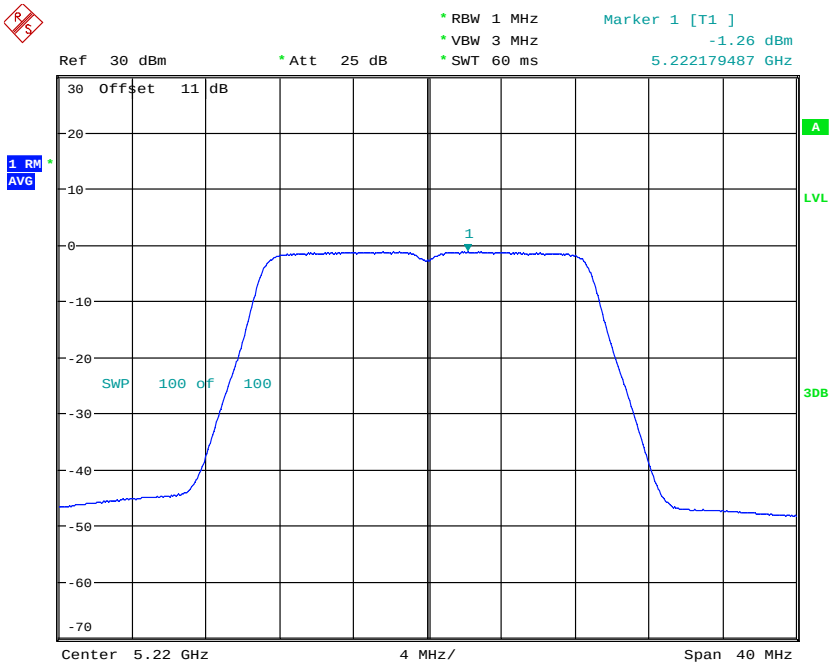
Date: 4.OCT.2022 16:03:44



POWER DENSITY AV ANT111n20CH36
Date: 4.OCT.2022 16:14:14



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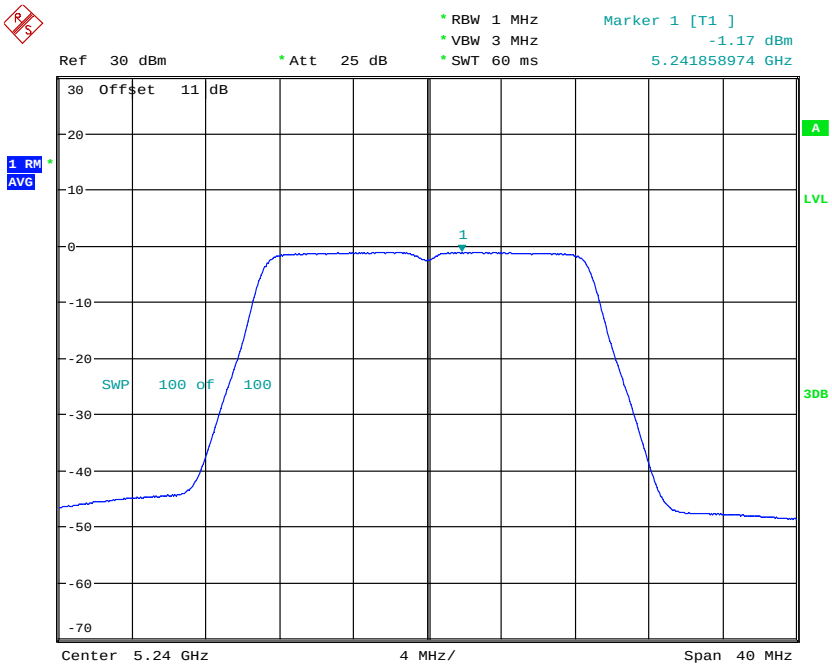
Date: 4.OCT.2022 16:15:26



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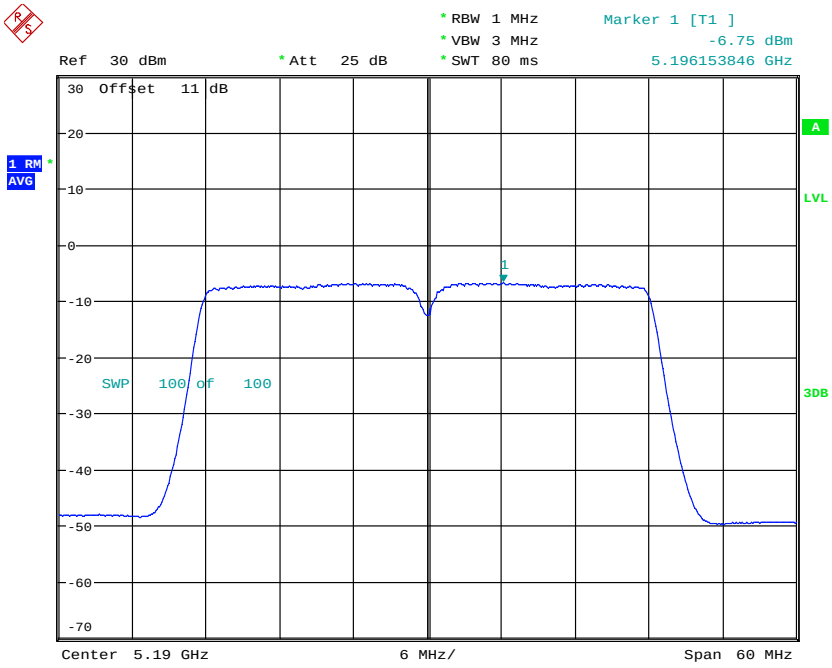
Date: 4.OCT.2022 16:16:37



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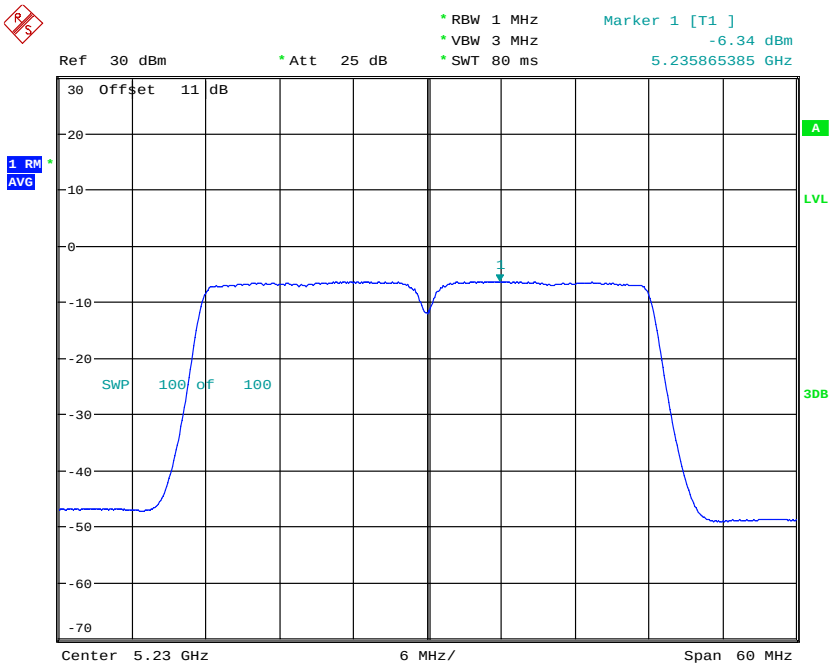
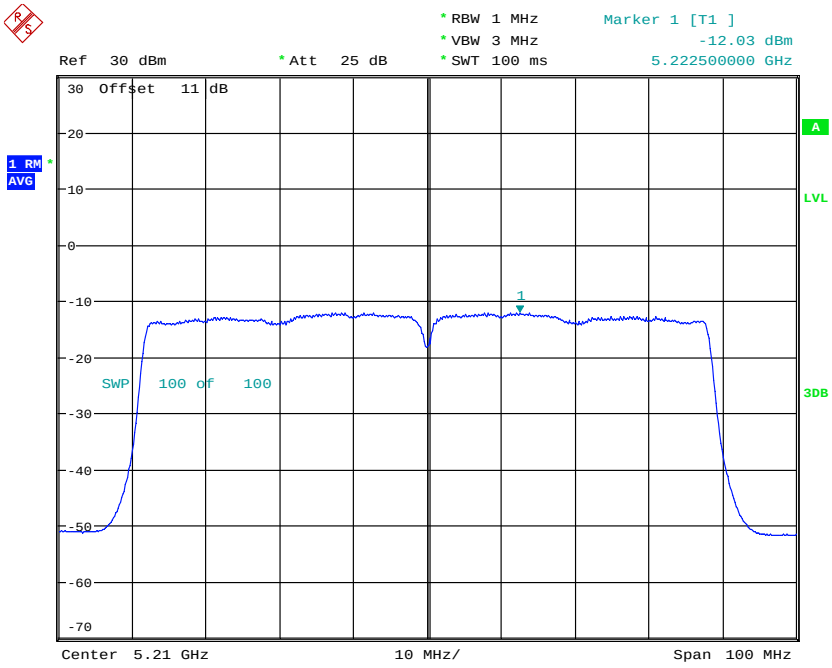
Date: 4.OCT.2022 16:18:28



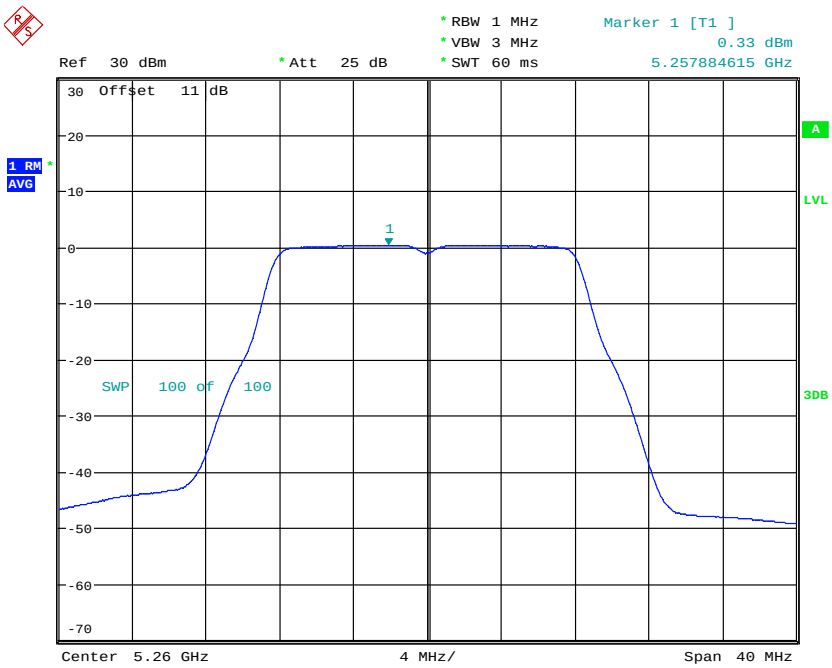
POWER DENSITY AV ANT111n40CH46
Date: 4.OCT.2022 16:19:58

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



POWER DENSITY AV ANT111ac80CH42
Date: 4.OCT.2022 16:33:05

5.25 GHz ~ 5.35 GHz



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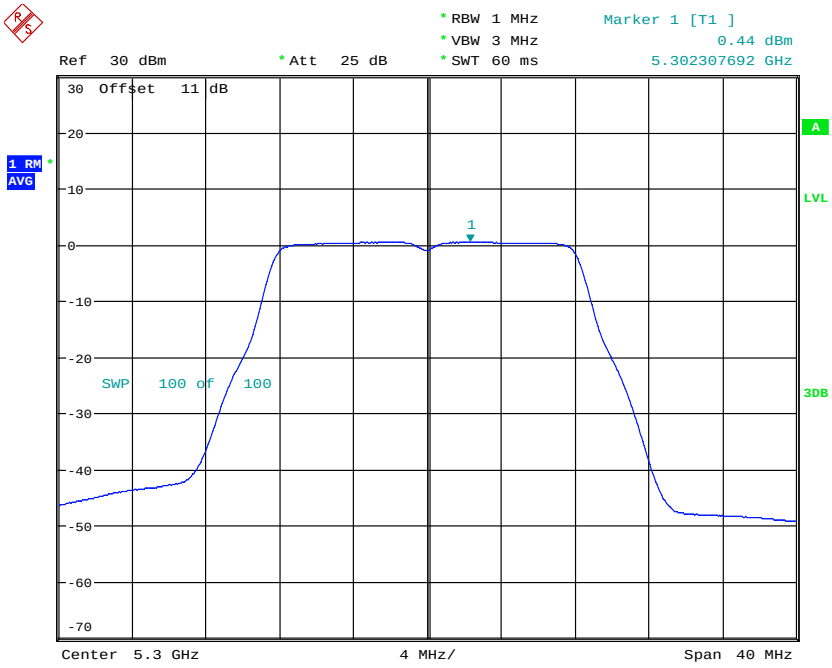
Date: 4.OCT.2022 16:05:41

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



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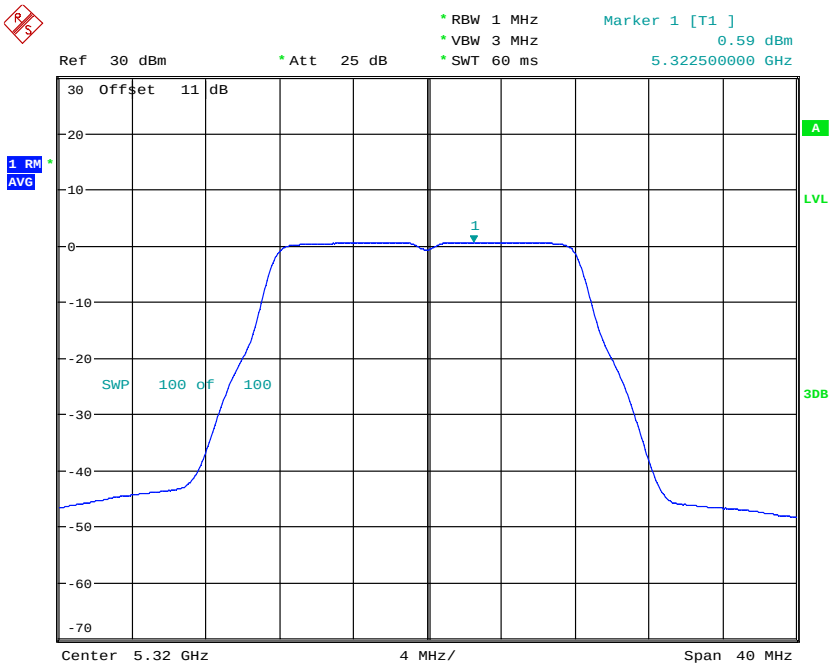
Date: 4.OCT.2022 16:07:05



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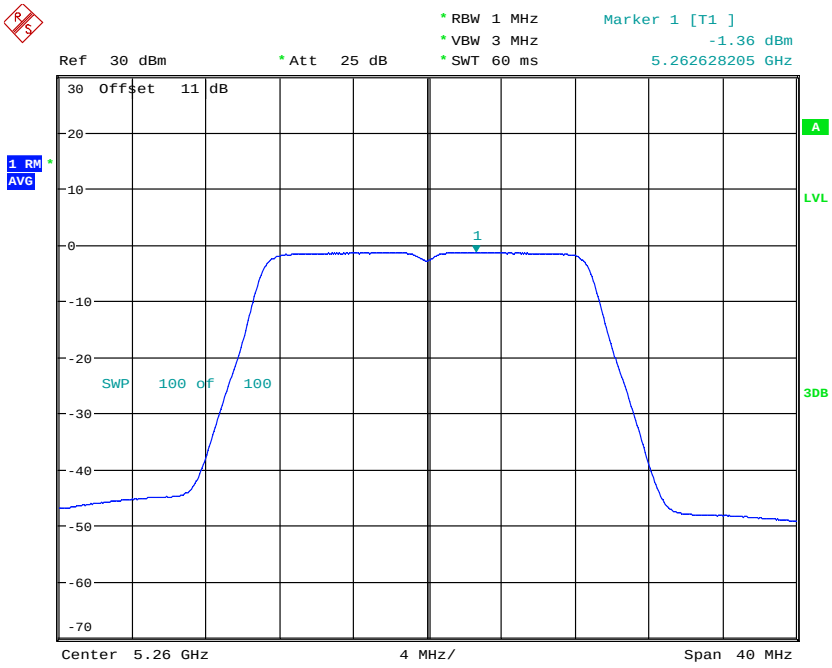
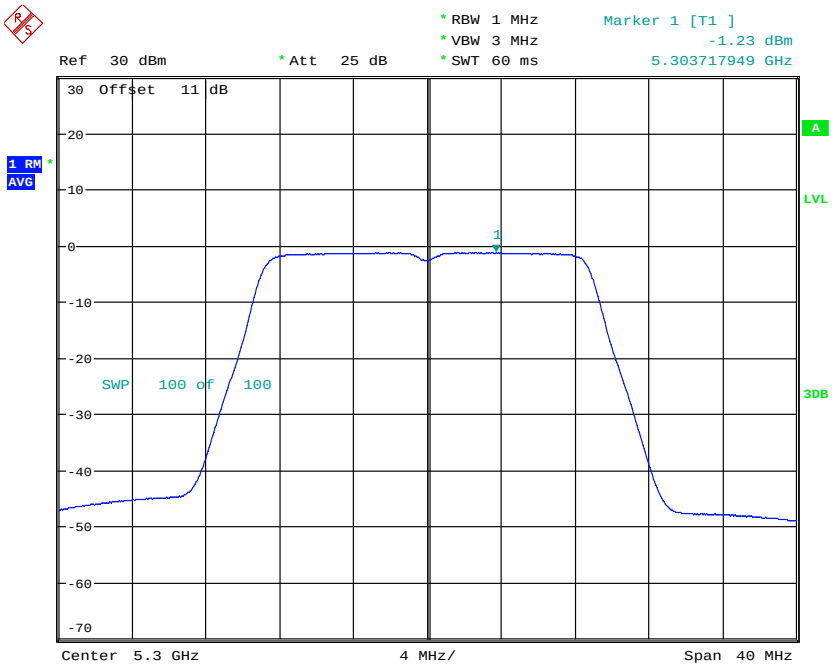
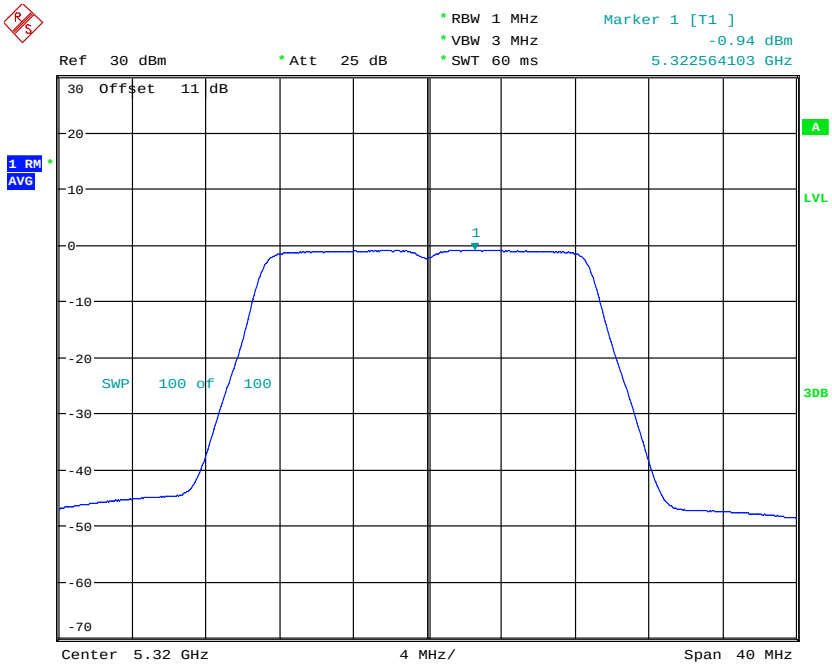
Date: 4.OCT.2022 16:08:17



POWER DENSITY AV ANT111n20CH52
Date: 4.OCT.2022 16:10:07



POWER DENSITY AV ANT111n20CH60
Date: 4.OCT.2022 16:11:25



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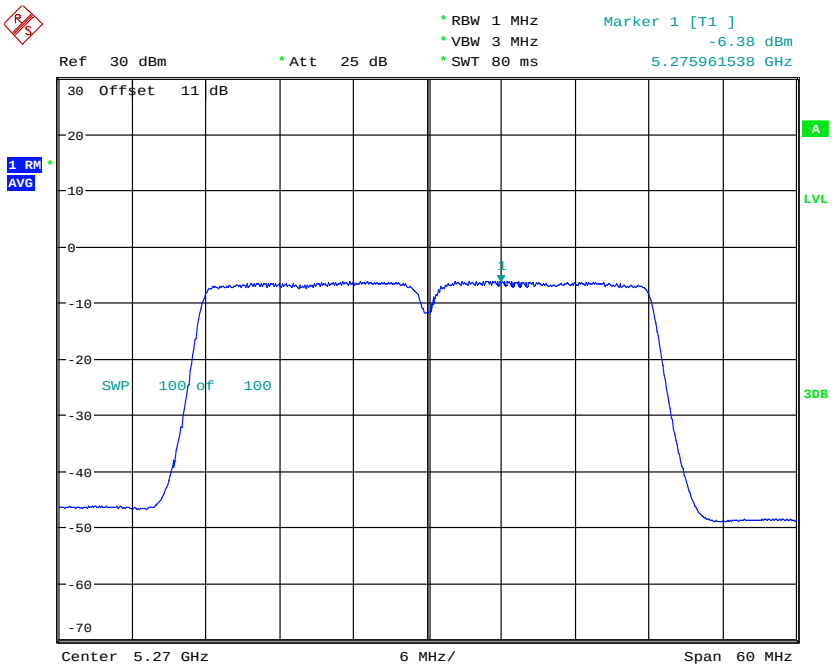
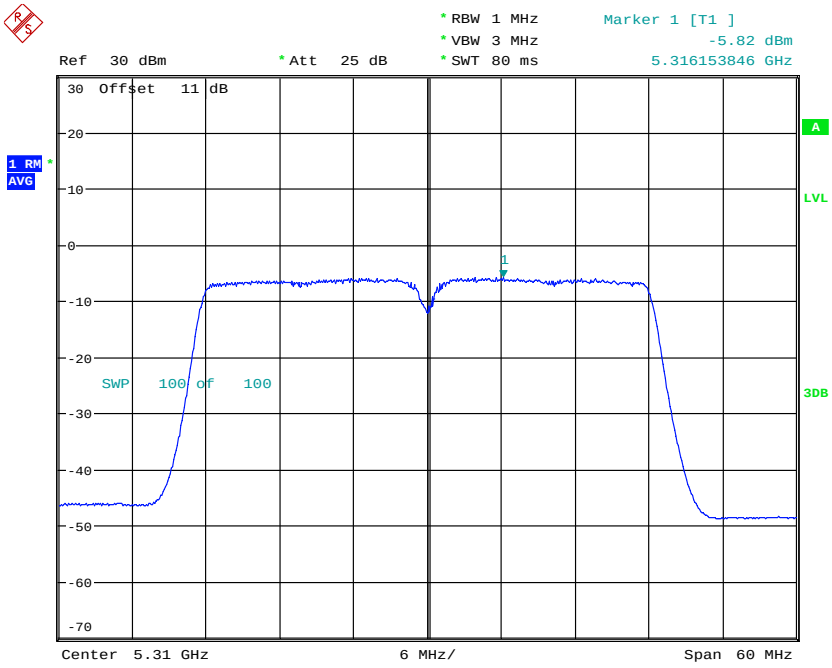
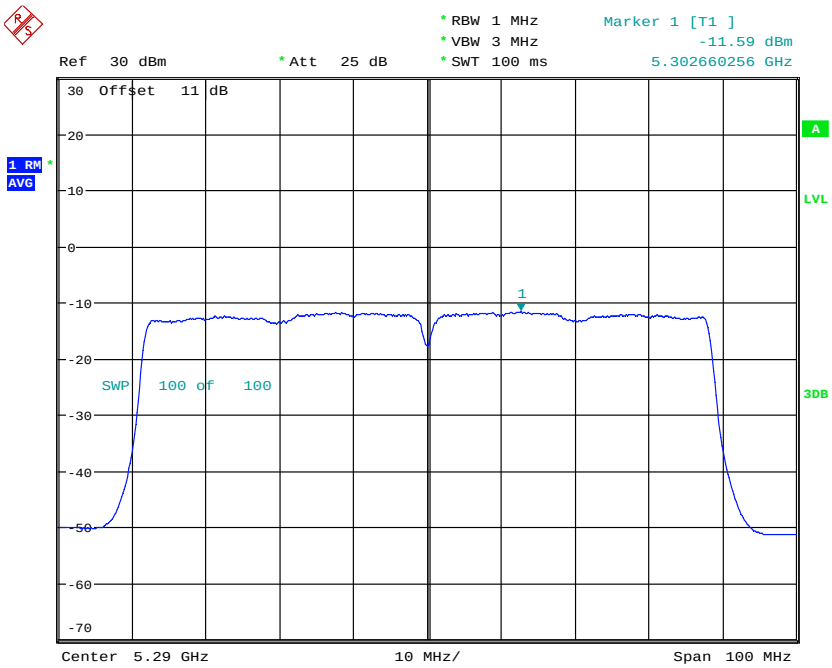
Date: 4.OCT.2022 16:12:50



POWER DENSITY AV ANT111n40CH54
Date: 4.OCT.2022 16:27:28



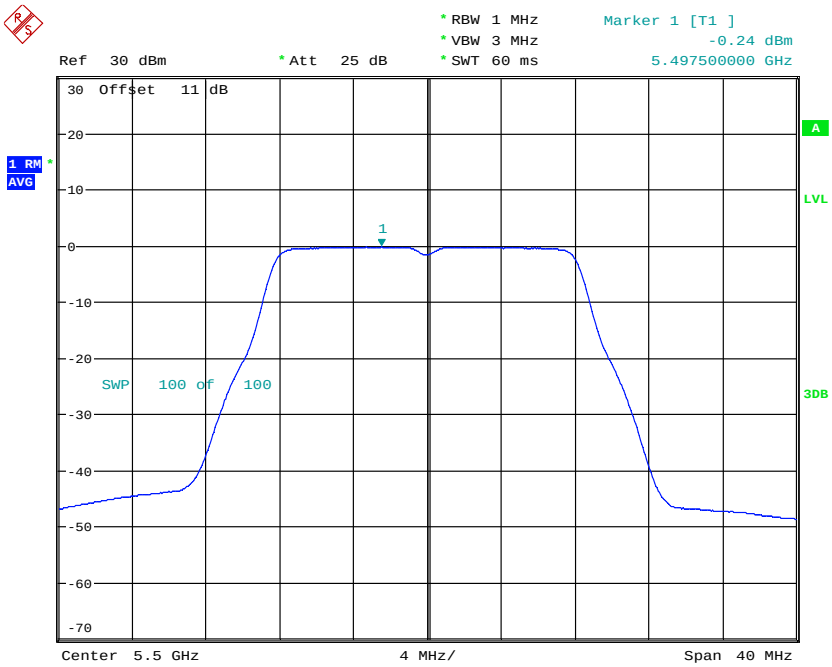
POWER DENSITY AV ANT111n40CH62
Date: 4.OCT.2022 16:29:57



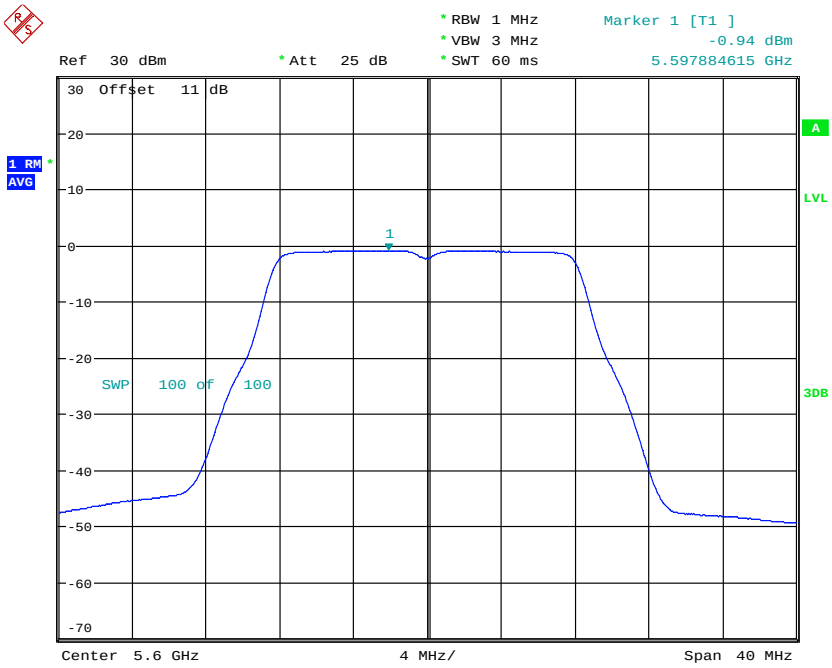
POWER DENSITY AV ANT111ac80CH58
Date: 4.OCT.2022 16:36:12

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

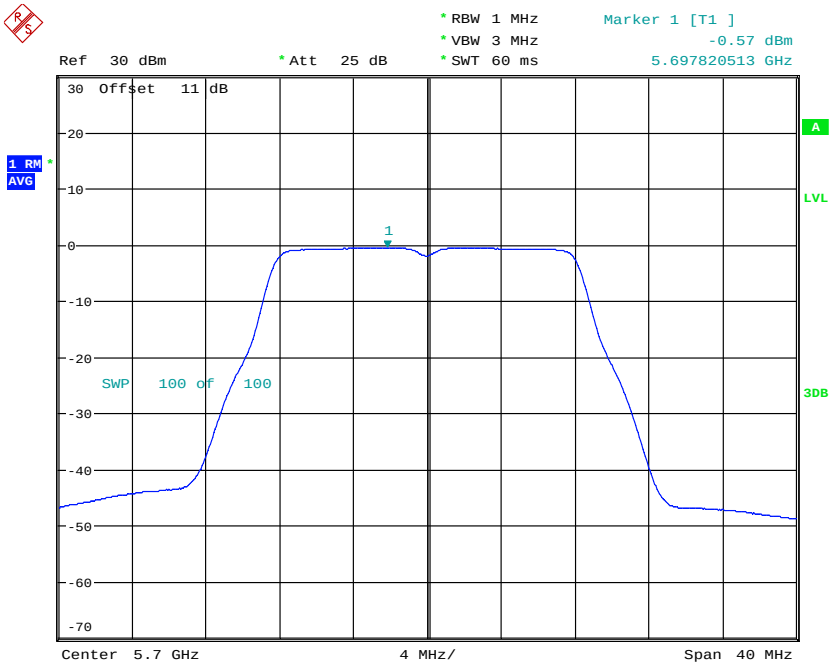
5.47 GHz ~ 5.725 GHz



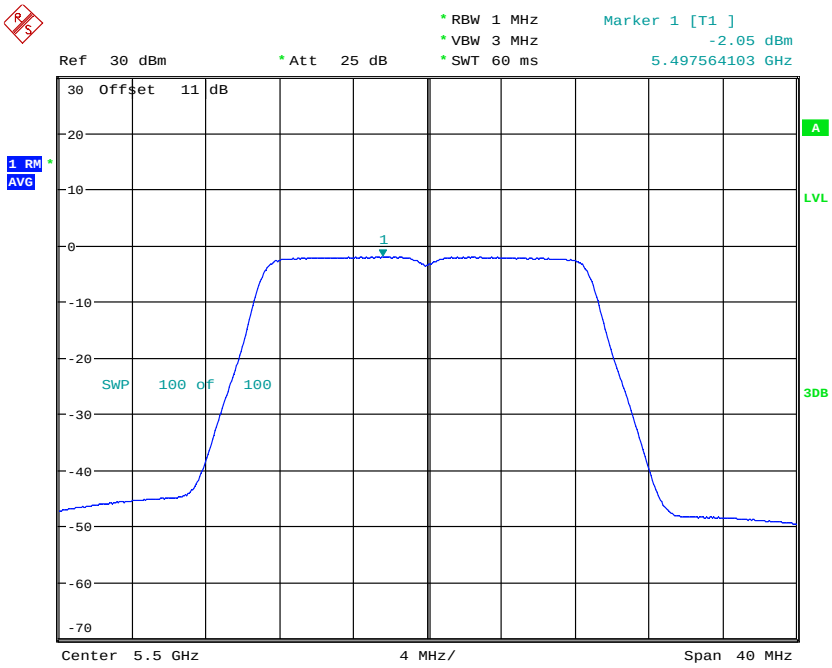
POWER DENSITY AV ANT111aCH100
Date: 4.OCT.2022 16:42:17



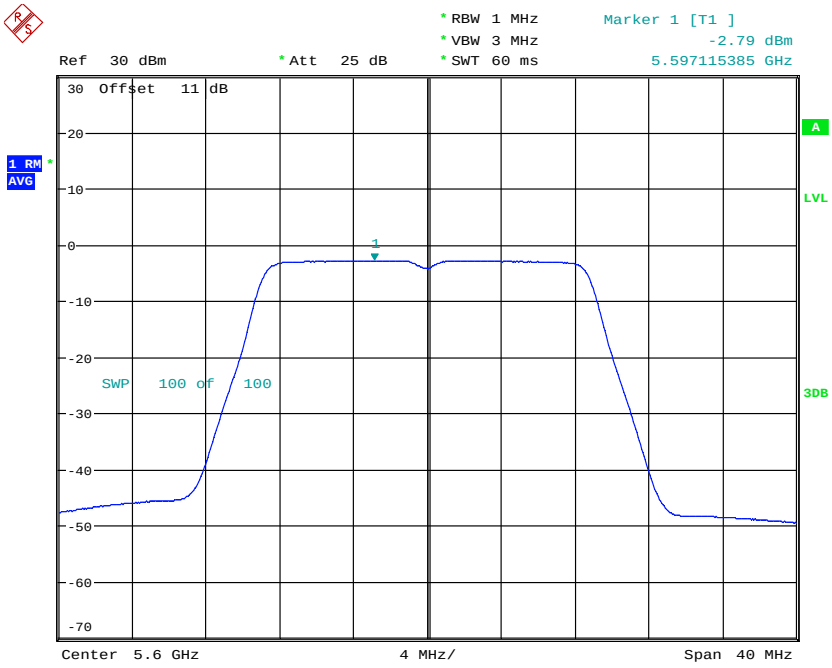
POWER DENSITY AV ANT111aCH120
Date: 4.OCT.2022 16:43:35



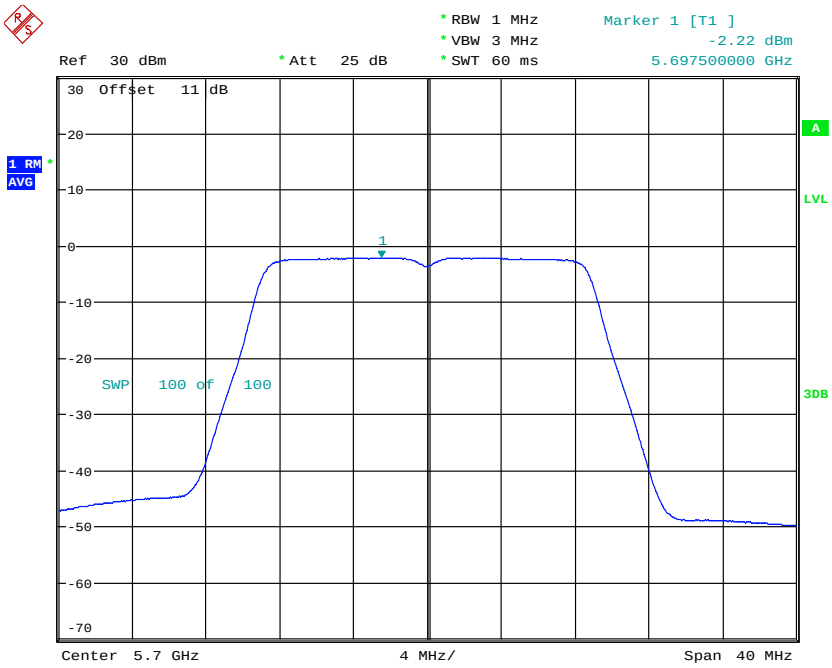
POWER DENSITY AV ANT111aCH140
Date: 4.OCT.2022 16:44:40



POWER DENSITY AV ANT111n20CH100
Date: 4.OCT.2022 16:47:10



POWER DENSITY AV ANT111n20CH120
Date: 4.OCT.2022 16:49:20



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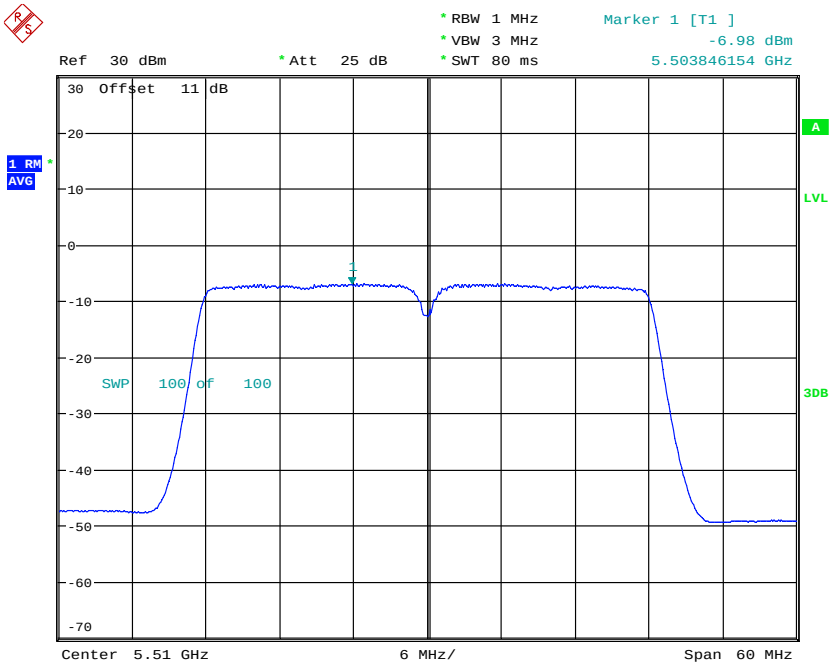
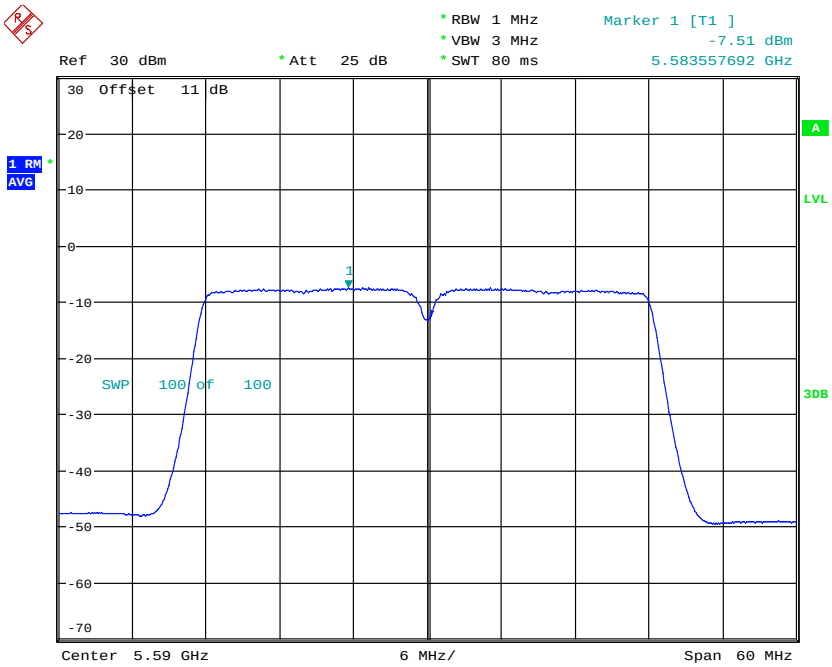
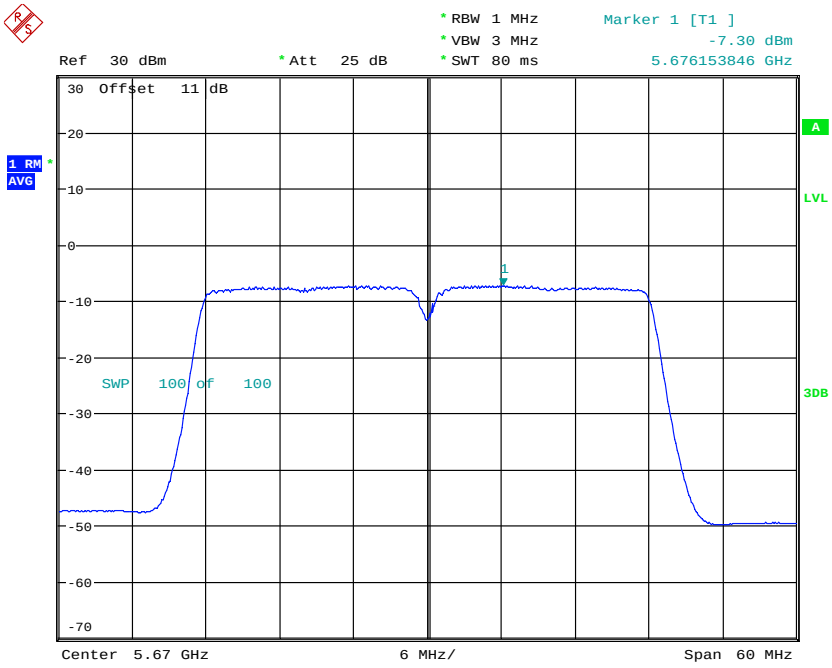
Date: 4.OCT.2022 16:50:25



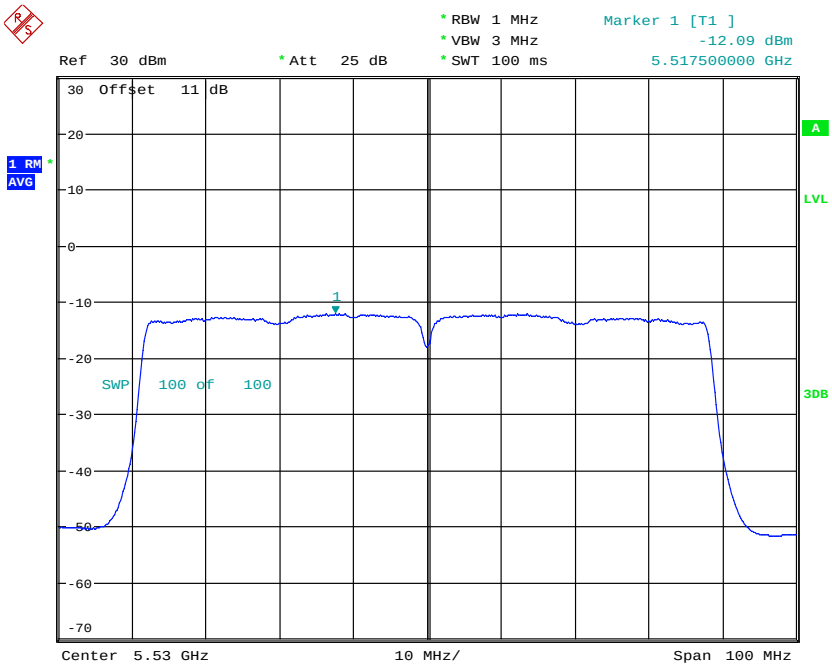
POWER DENSITY AV ANT111n40CH102
Date: 4.OCT.2022 16:53:42



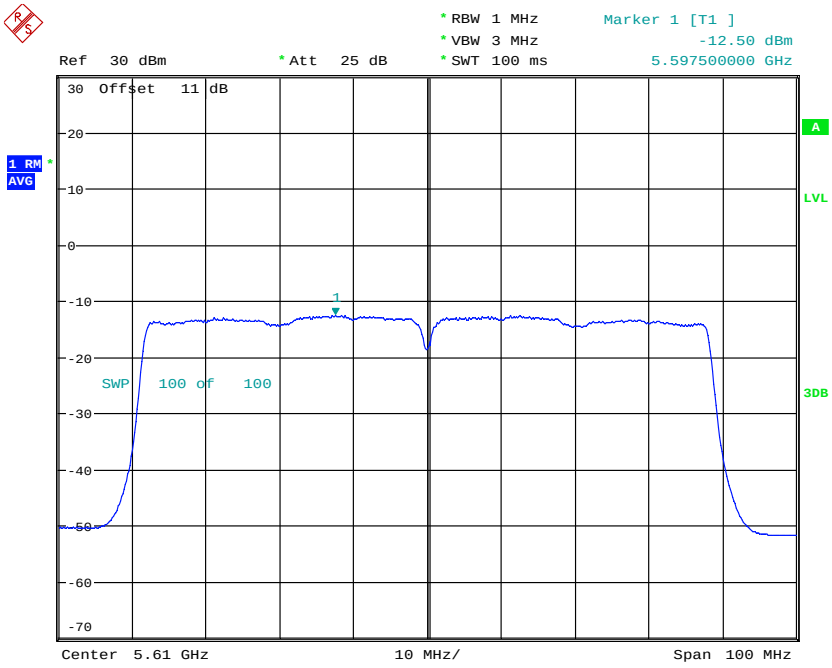
POWER DENSITY AV ANT111n40CH118
Date: 4.OCT.2022 16:54:50



POWER DENSITY AV ANT111n40CH134
Date: 4.OCT.2022 16:56:05

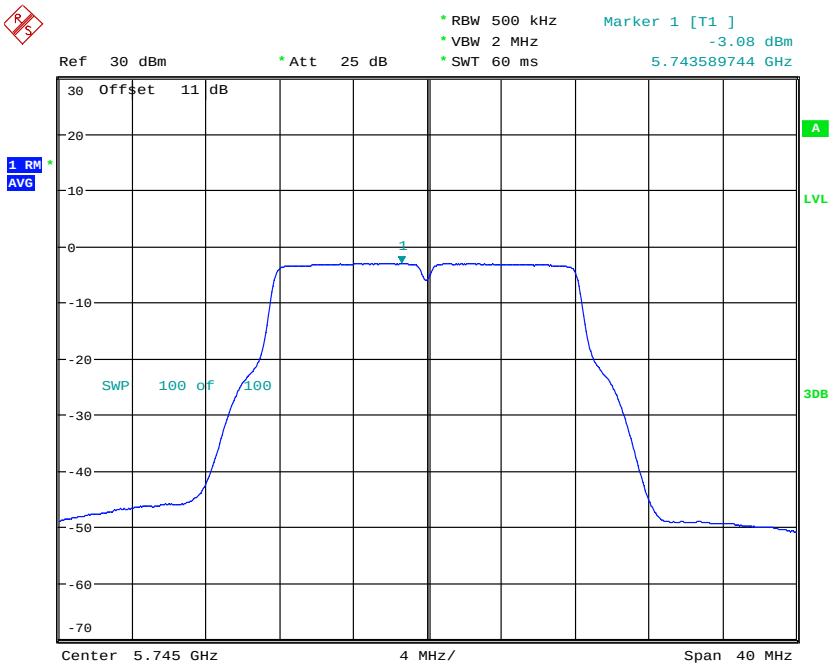


POWER DENSITY AV ANT111ac80CH106
Date: 4.OCT.2022 16:57:52

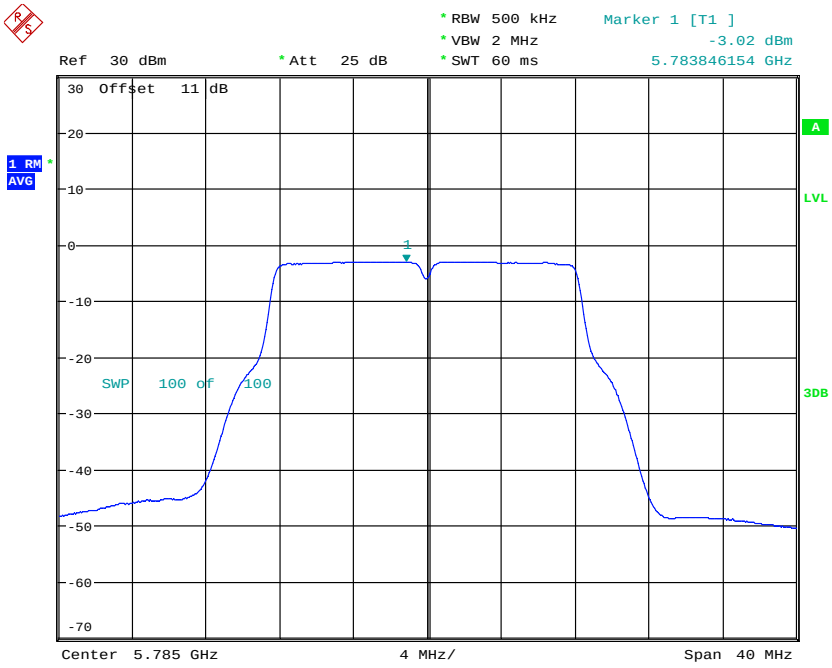


POWER DENSITY AV ANT111ac80CH122
Date: 4.OCT.2022 17:00:00

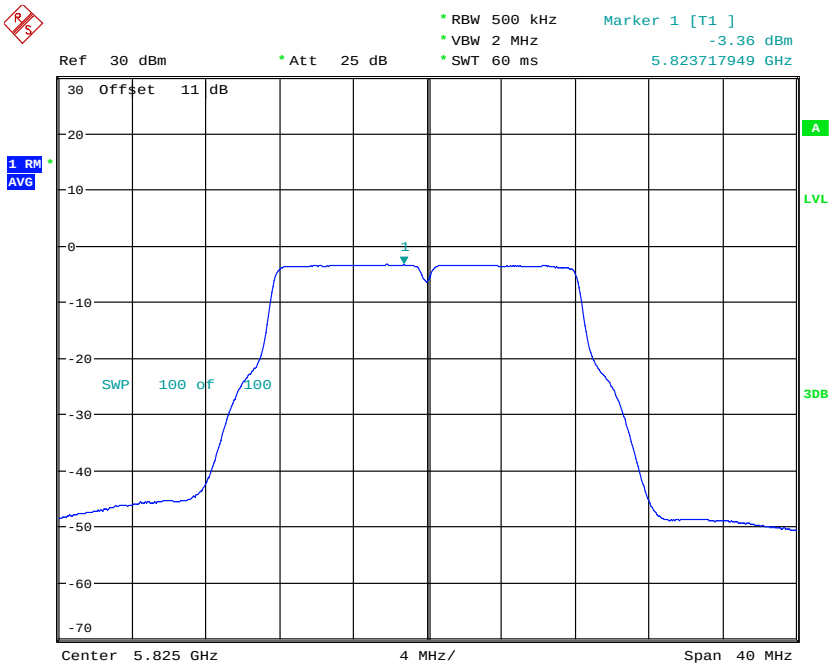
5.725 GHz ~ 5.85 GHz



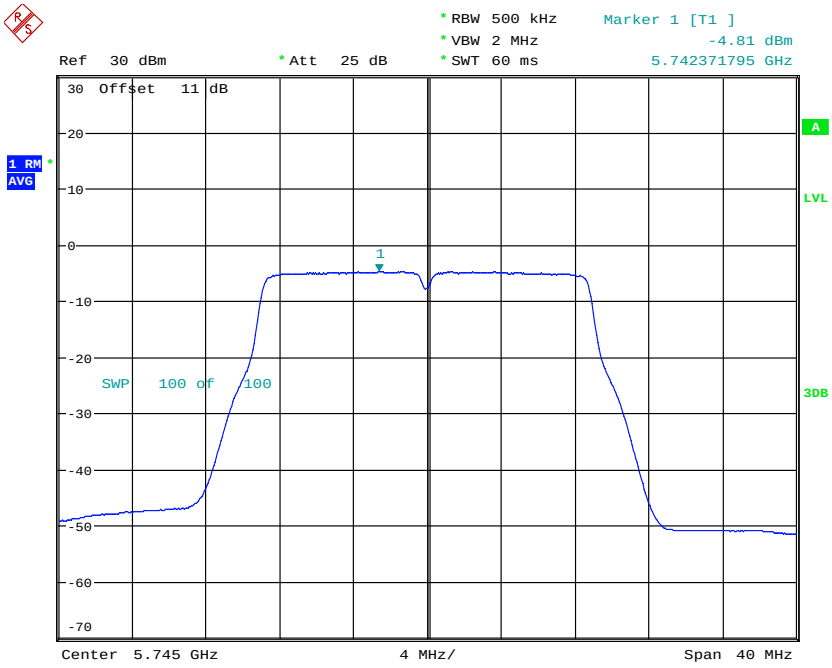
POWER DENSITY AV ANT111aCH149
Date: 4.OCT.2022 17:03:05



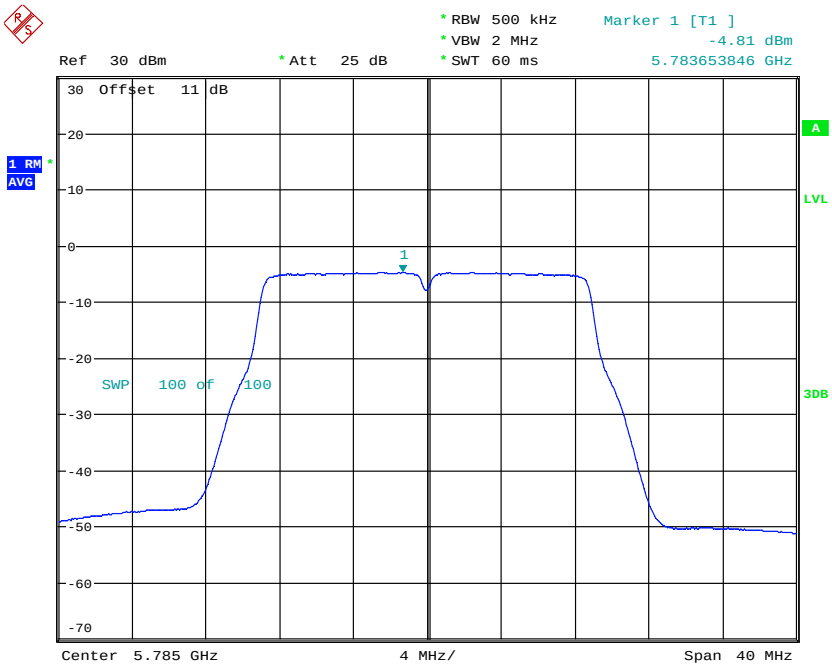
POWER DENSITY AV ANT111aCH157
Date: 4.OCT.2022 17:04:10



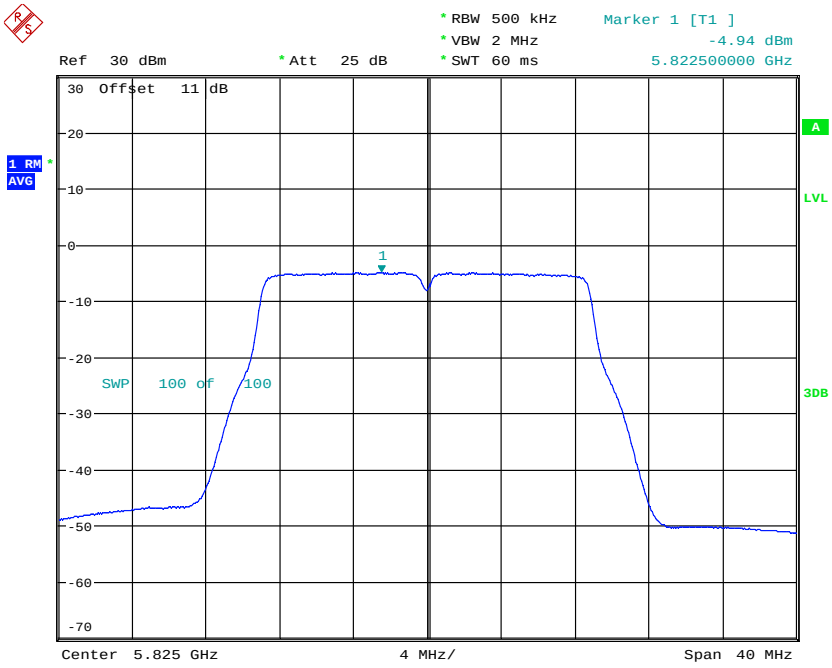
POWER DENSITY AV ANT111aCH165
Date: 4.OCT.2022 17:05:15



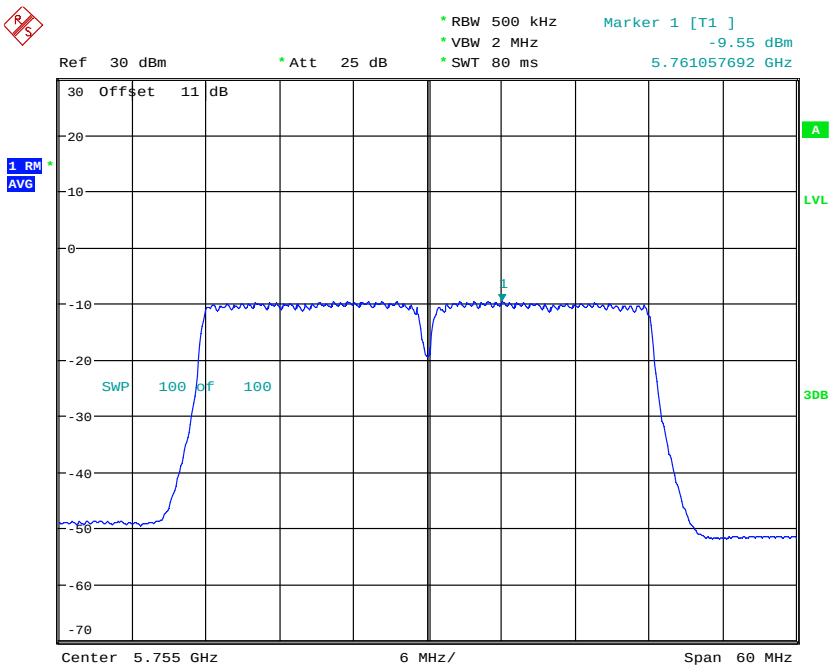
POWER DENSITY AV ANT111n20CH149
Date: 4.OCT.2022 17:06:27



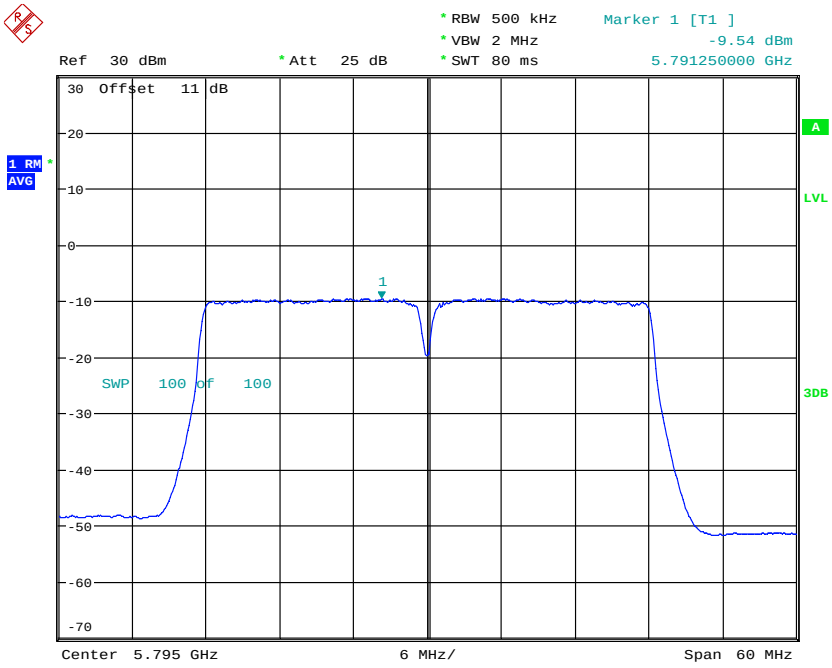
POWER DENSITY AV ANT111n20CH157
Date: 4.OCT.2022 17:07:25



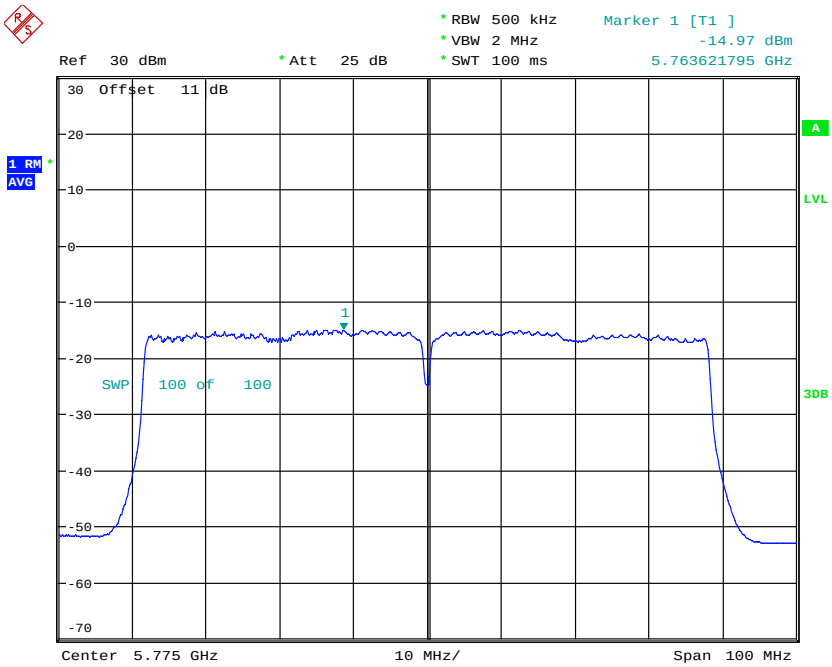
POWER DENSITY AV ANT111n20CH165
Date: 4.OCT.2022 17:09:16



POWER DENSITY AV ANT111n40CH151
Date: 4.OCT.2022 17:10:50



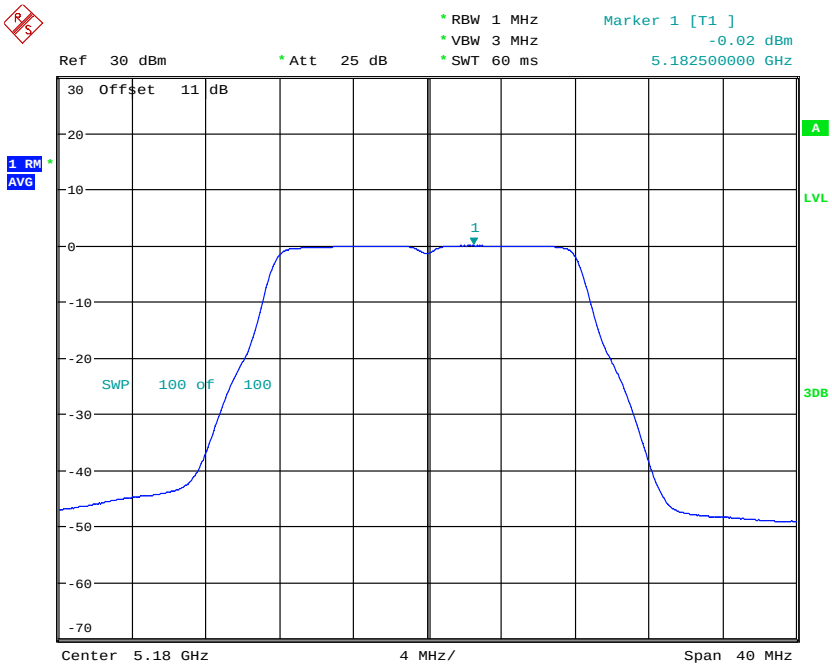
POWER DENSITY AV ANT111n40CH159
Date: 4.OCT.2022 17:12:05



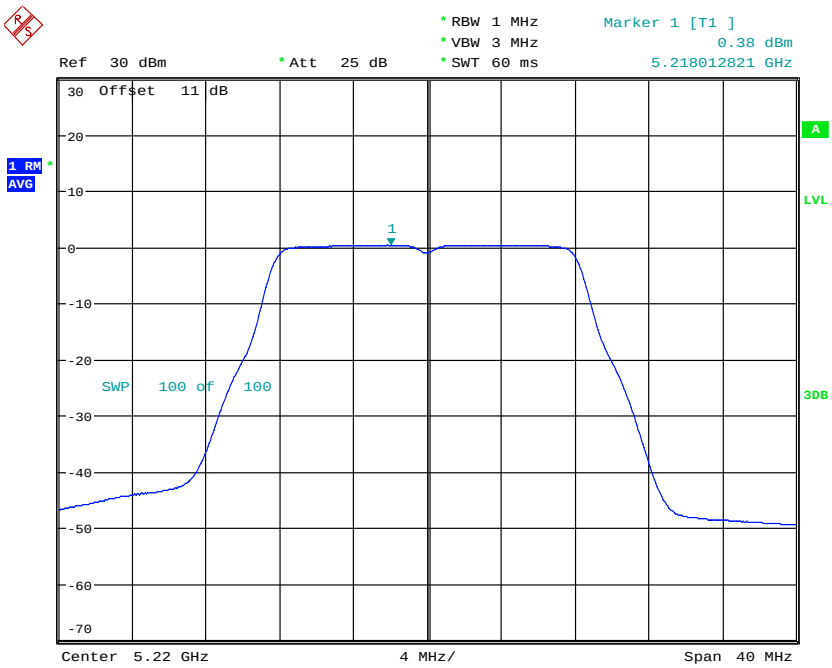
POWER DENSITY AV ANT111ac80CH155
Date: 4.OCT.2022 17:14:10

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

ANTB
5.15 GHz ~ 5.25 GHz

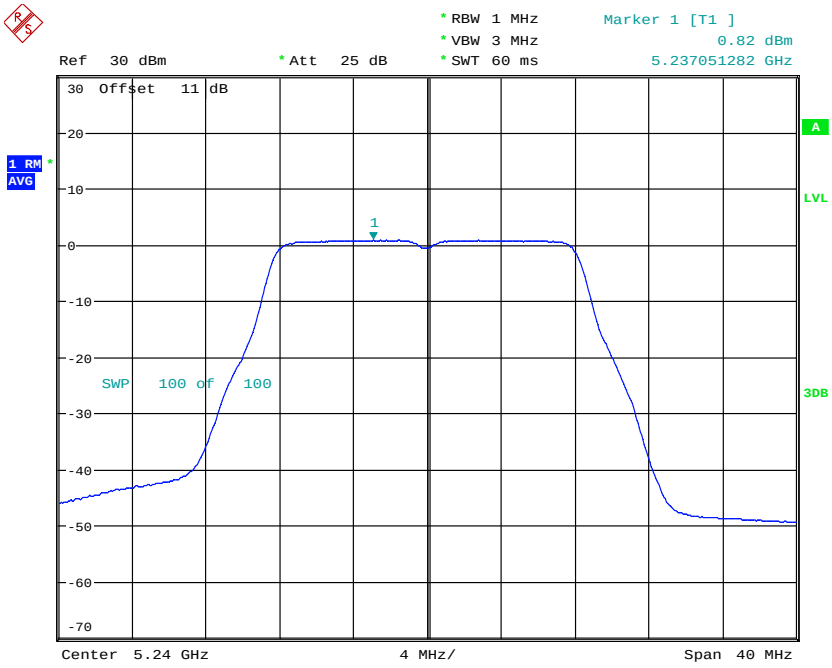


POWER DENSITY AV ANT211aCH36
Date: 4.OCT.2022 18:04:24

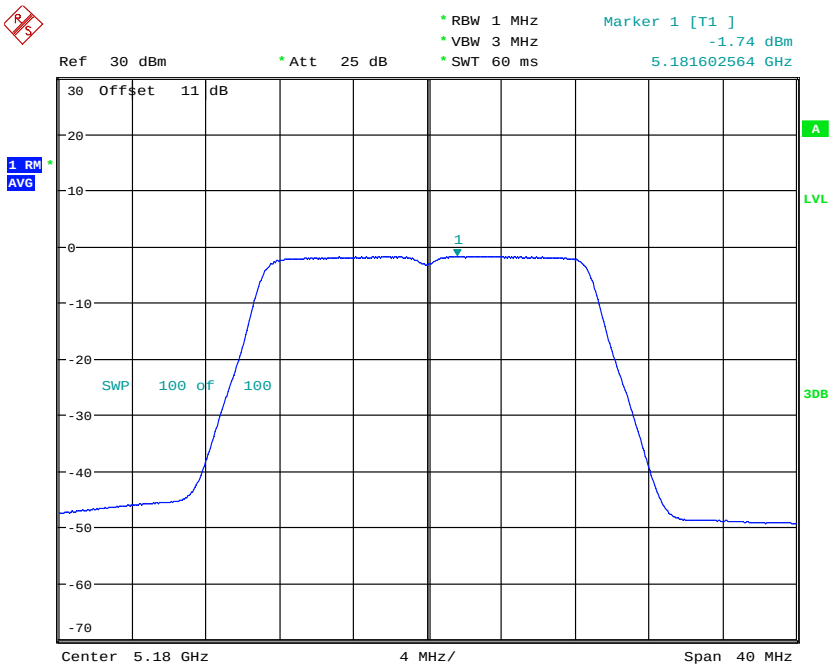


POWER DENSITY AV ANT211aCH44
Date: 4.OCT.2022 18:05:35

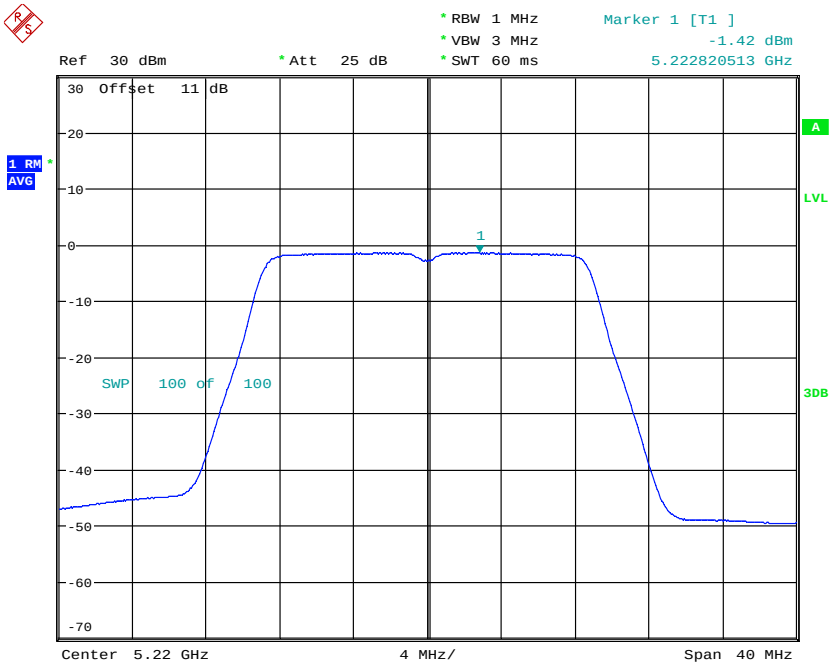
Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



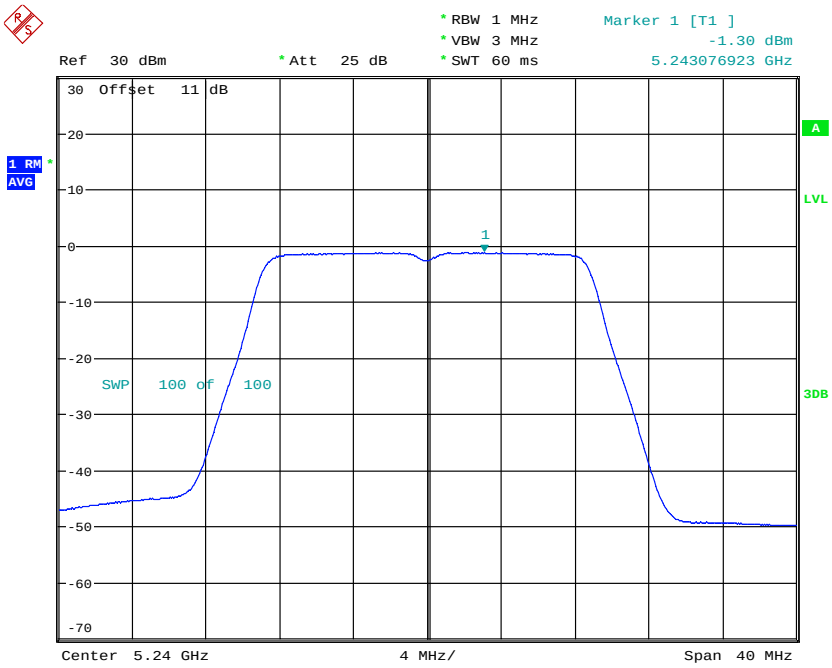
POWER DENSITY AV ANT211aCH48
Date: 4.OCT.2022 18:06:47



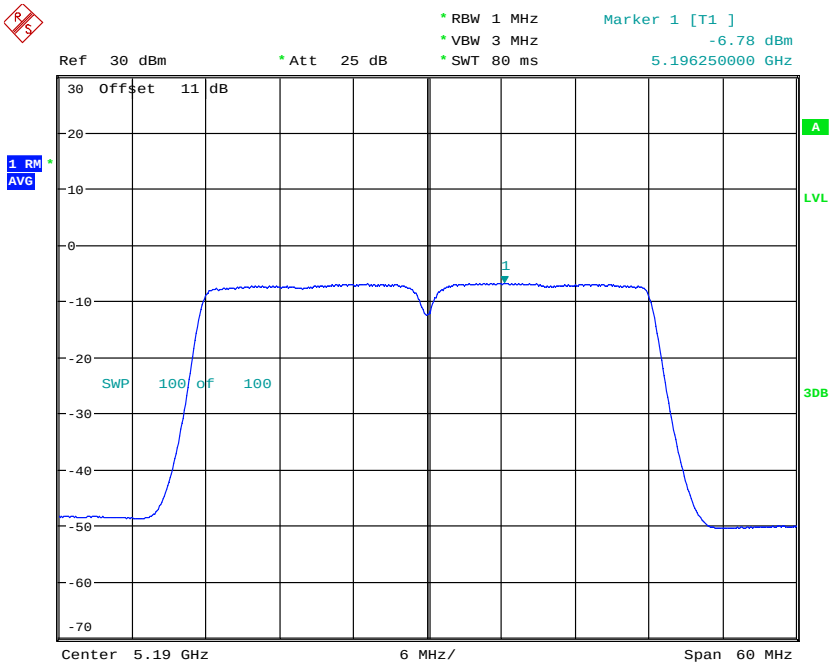
POWER DENSITY AV ANT211n20CH36
Date: 4.OCT.2022 18:17:37



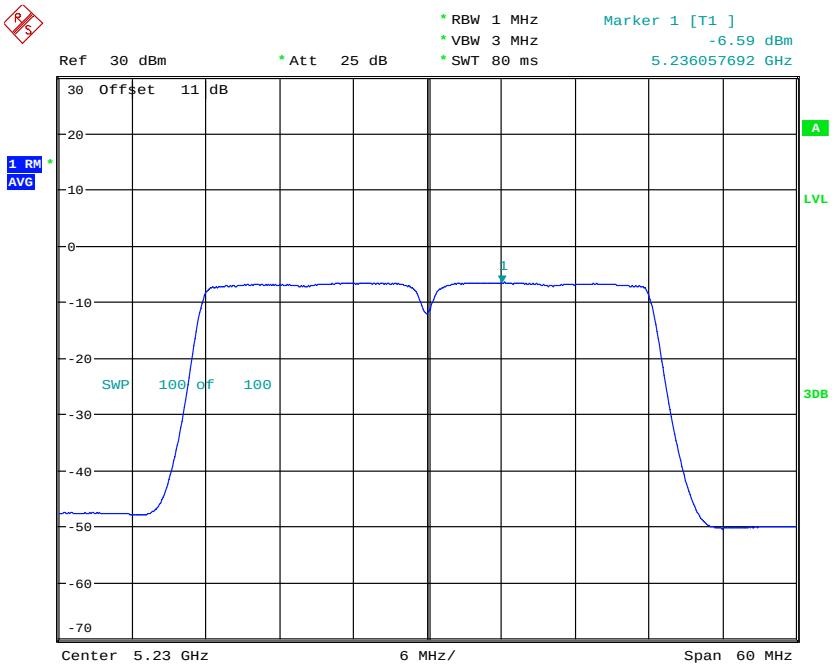
POWER DENSITY AV ANT211n20CH44
Date: 4.OCT.2022 18:18:42



POWER DENSITY AV ANT211n20CH48
Date: 4.OCT.2022 18:19:53

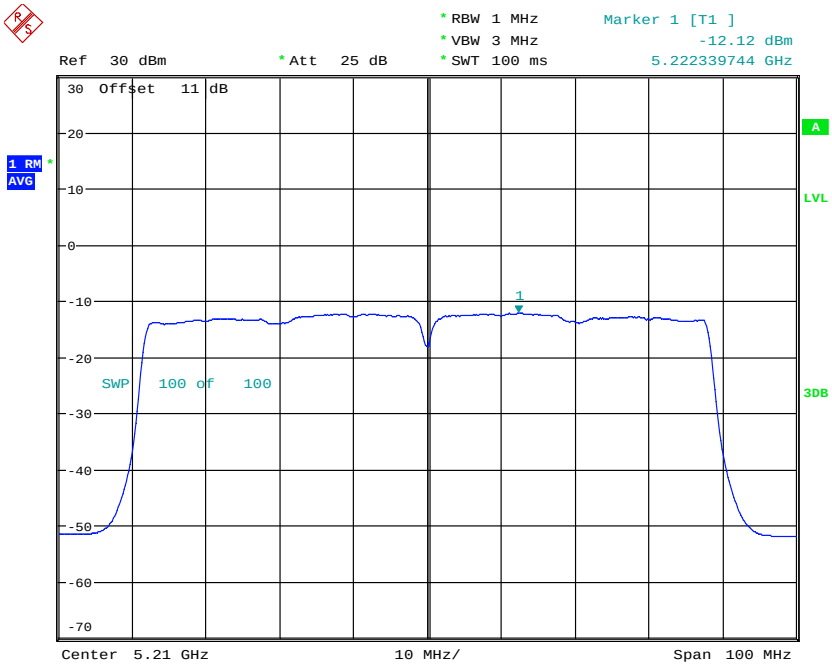


POWER DENSITY AV ANT211n40CH38
Date: 4.OCT.2022 18:21:12



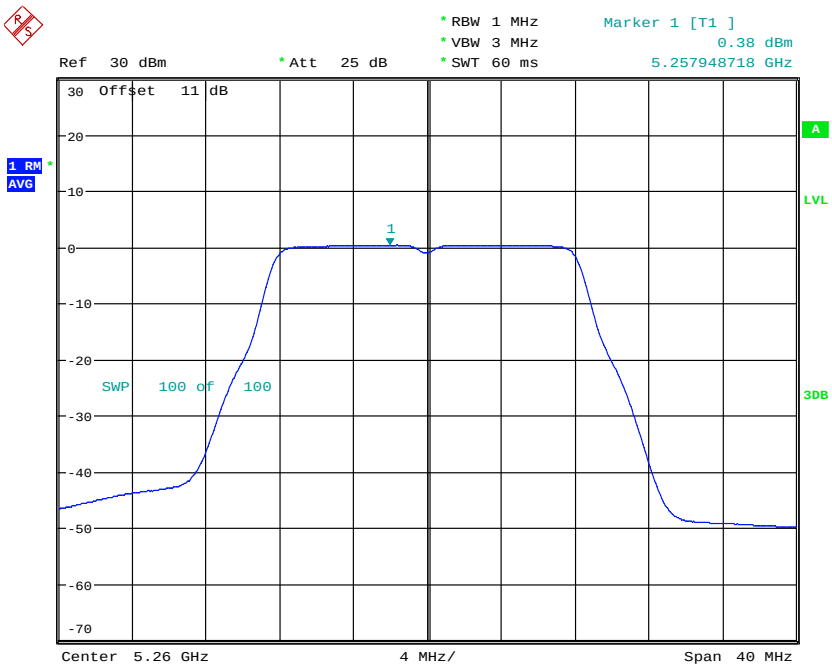
POWER DENSITY AV ANT211n40CH46
Date: 4.OCT.2022 18:22:27

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

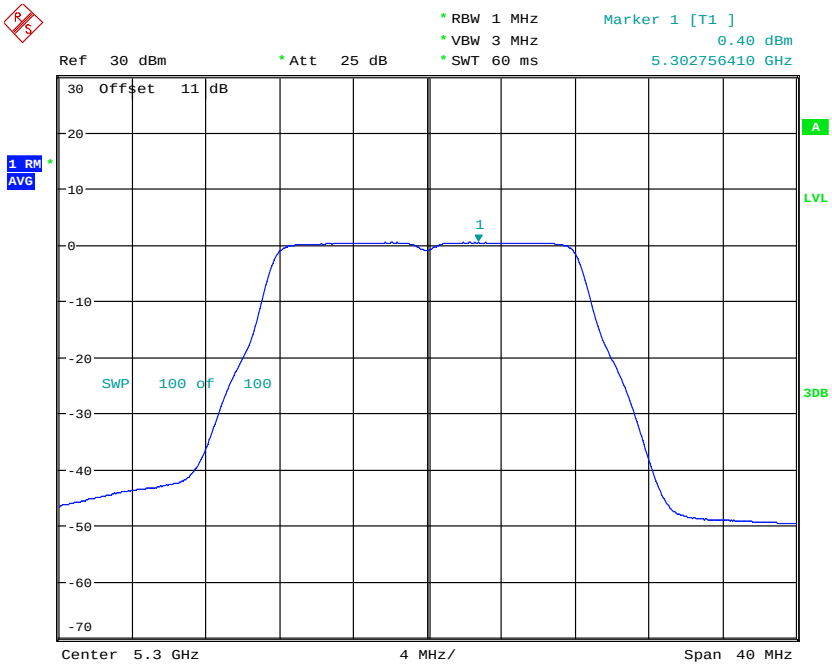


POWER DENSITY AV ANT211ac80CH42
Date: 4.OCT.2022 18:26:41

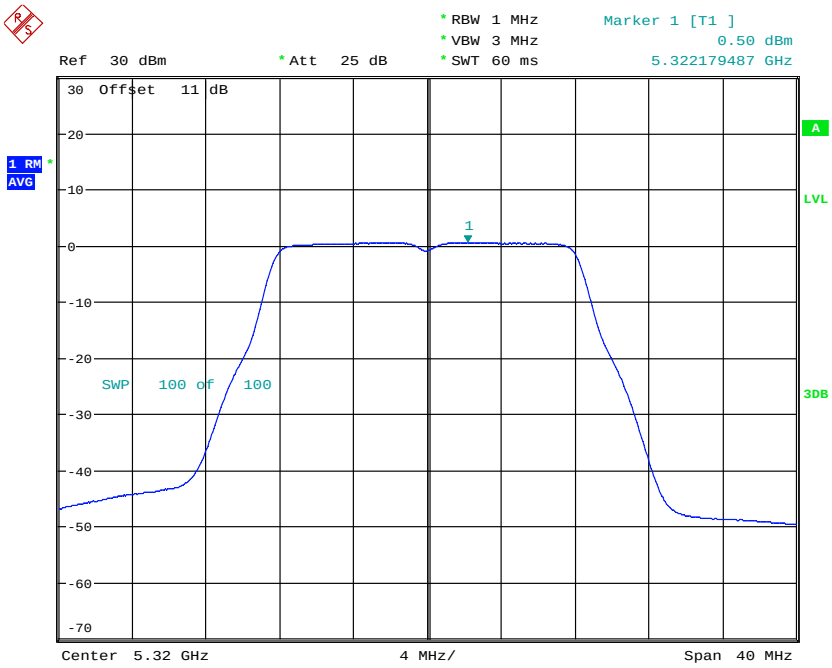
5.25 GHz ~ 5.35 GHz



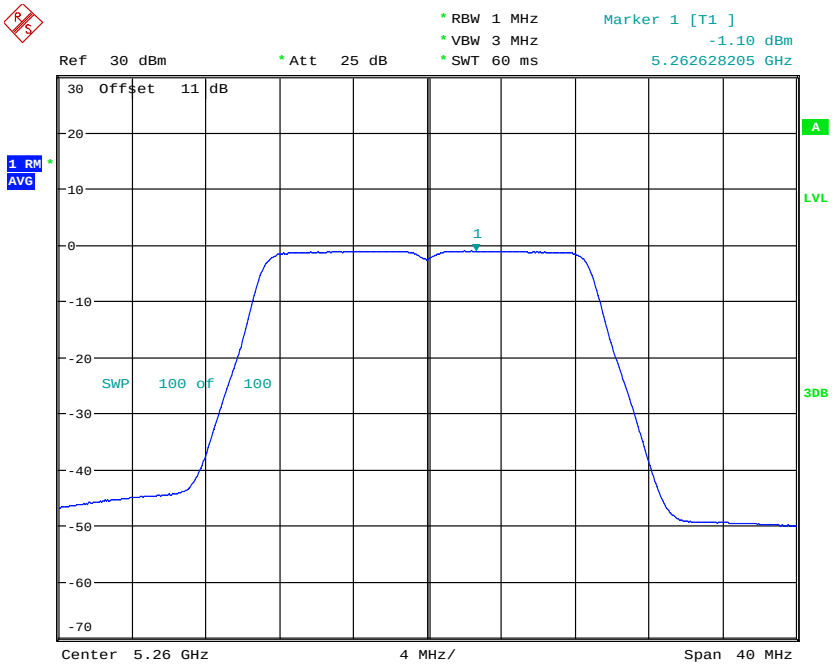
POWER DENSITY AV ANT211aCH52
Date: 4.OCT.2022 18:08:11



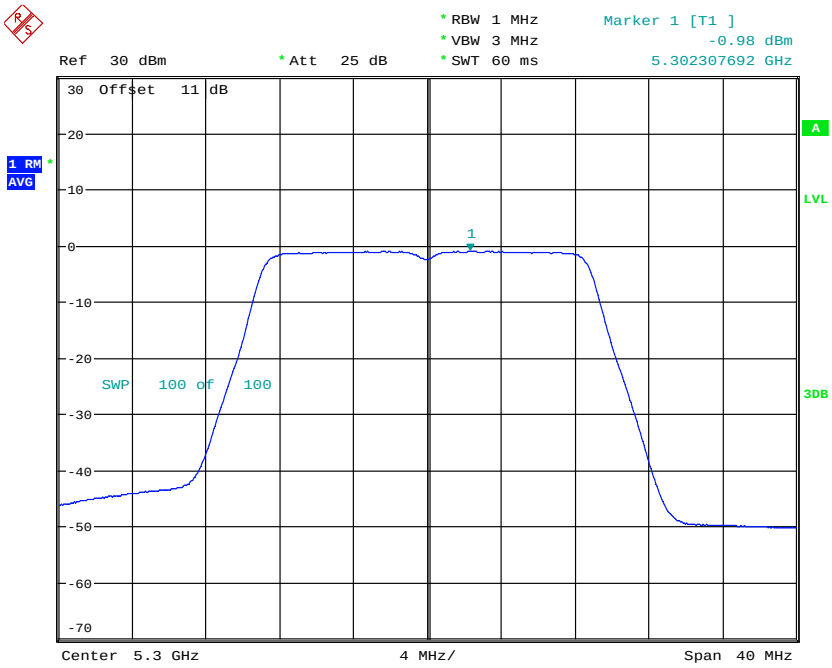
POWER DENSITY AV ANT211aCH60
Date: 4.OCT.2022 18:09:23



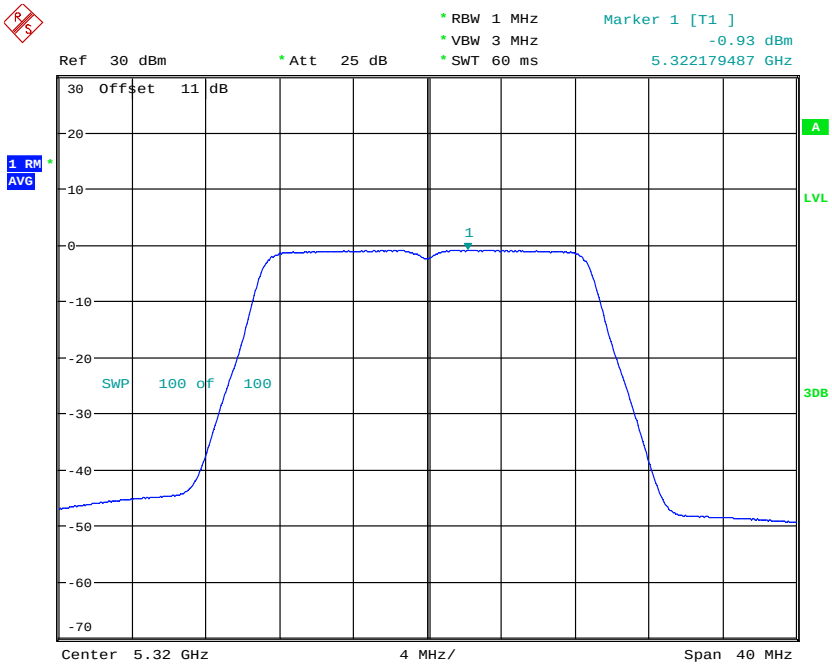
POWER DENSITY AV ANT211aCH64
Date: 4.OCT.2022 18:10:28



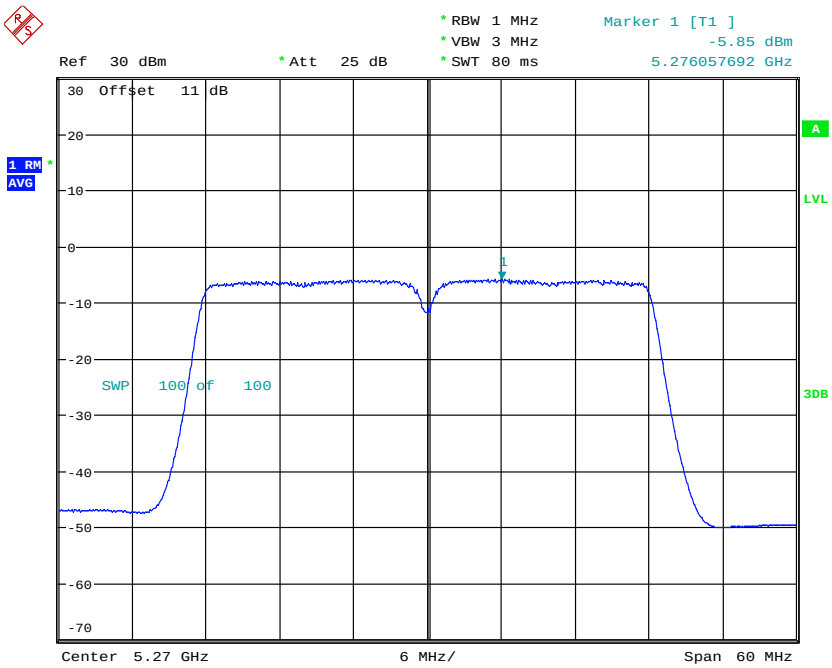
POWER DENSITY AV ANT211n20CH52
Date: 4.OCT.2022 18:11:52



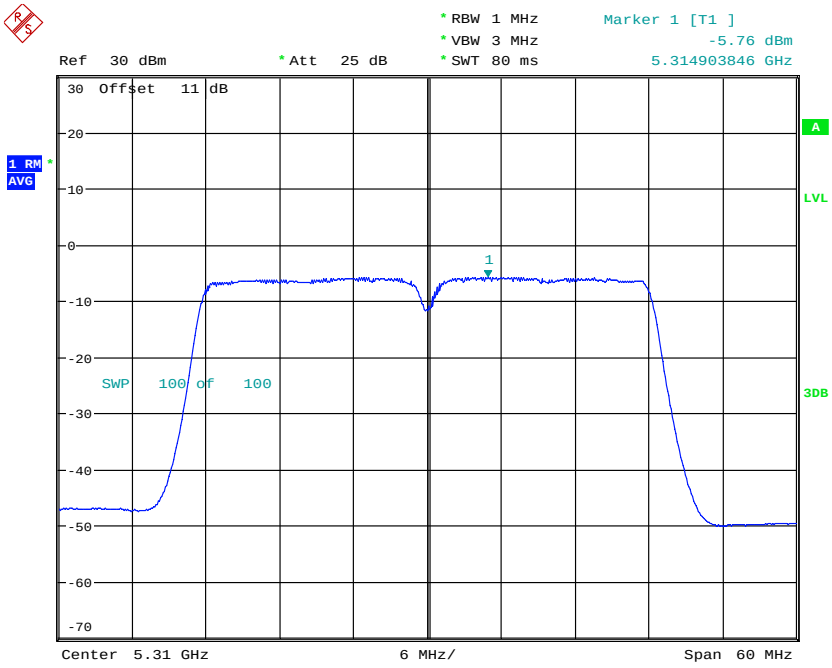
POWER DENSITY AV ANT211n20CH60
Date: 4.OCT.2022 18:13:49



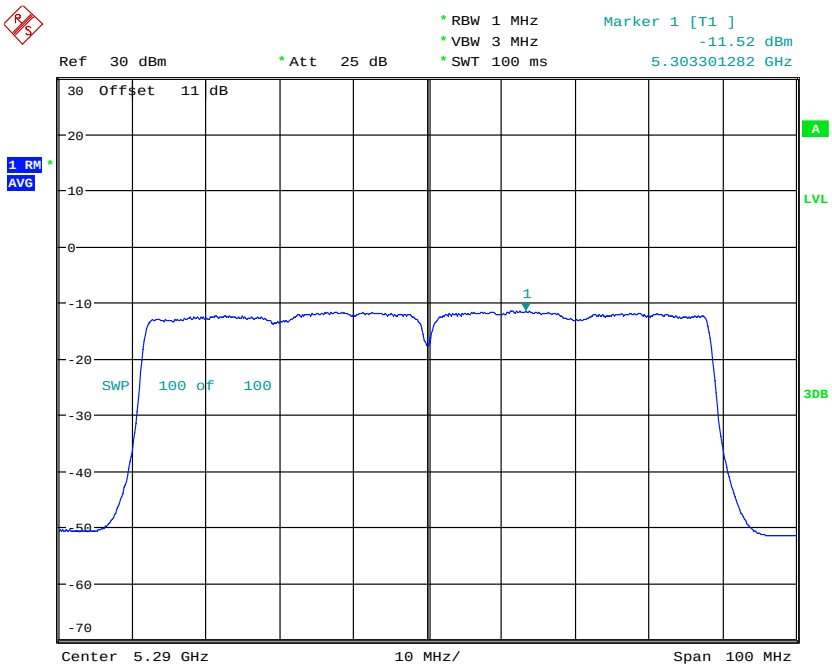
POWER DENSITY AV ANT211n20CH64
Date: 4.OCT.2022 18:14:54



POWER DENSITY AV ANT211n40CH54
Date: 4.OCT.2022 18:23:42



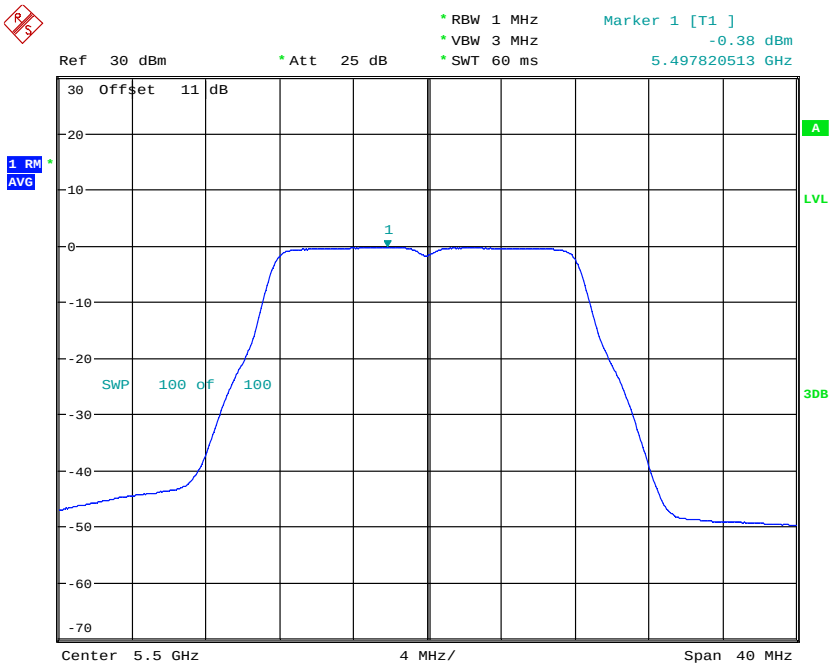
POWER DENSITY AV ANT211n40CH62
Date: 4.OCT.2022 18:24:49



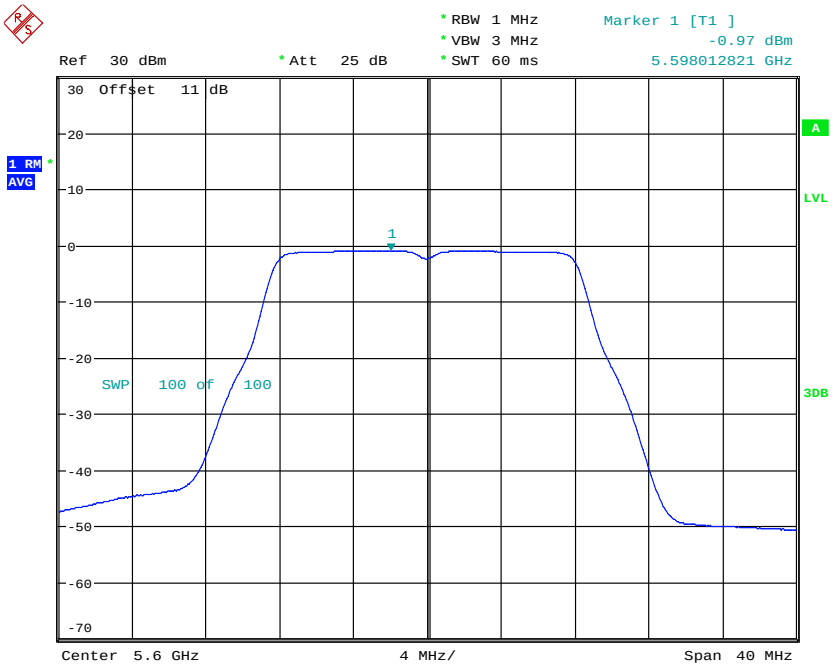
POWER DENSITY AV ANT211ac80CH58
Date: 4.OCT.2022 18:28:15

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

5.47 GHz ~ 5.725 GHz

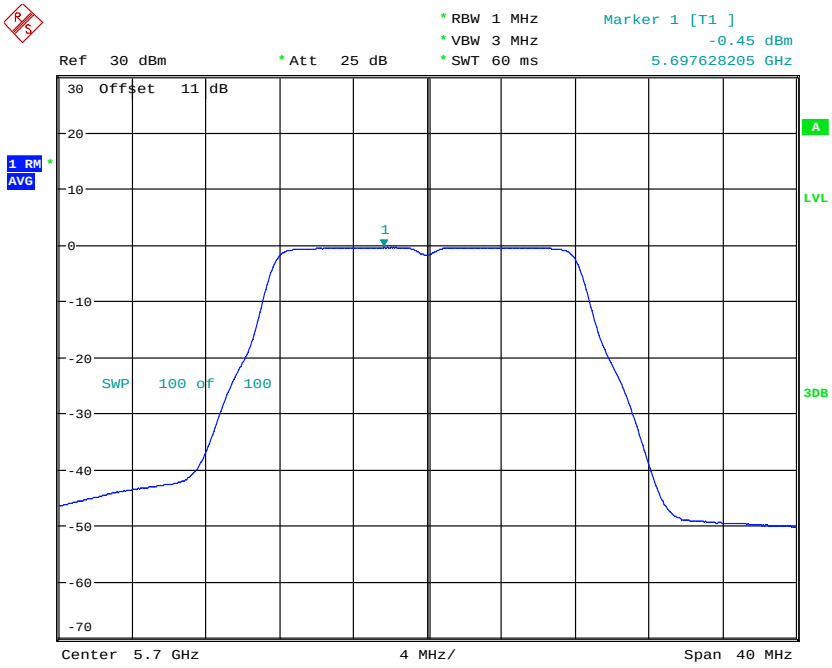


POWER DENSITY AV ANT211aCH100
Date: 4.OCT.2022 17:38:44

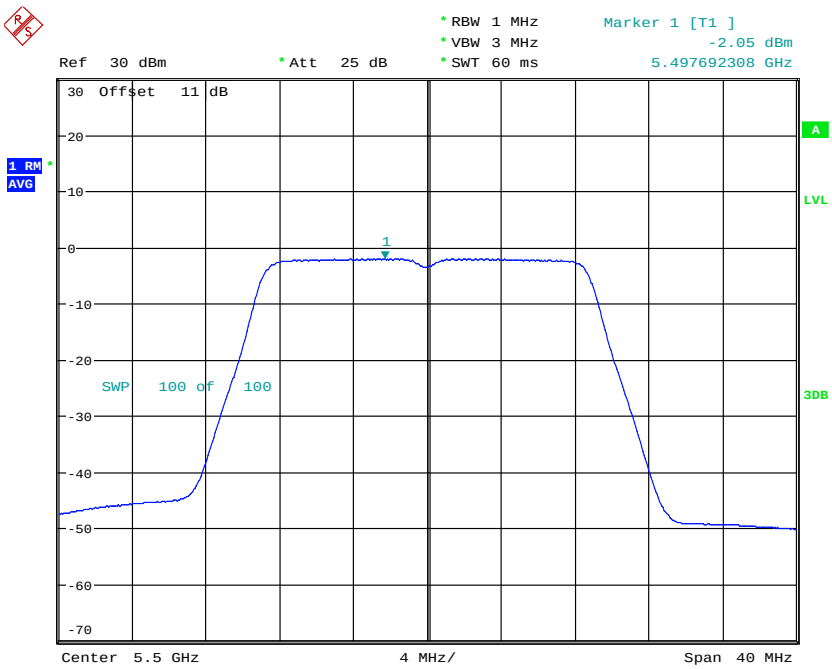


POWER DENSITY AV ANT211aCH120
Date: 4.OCT.2022 17:39:55

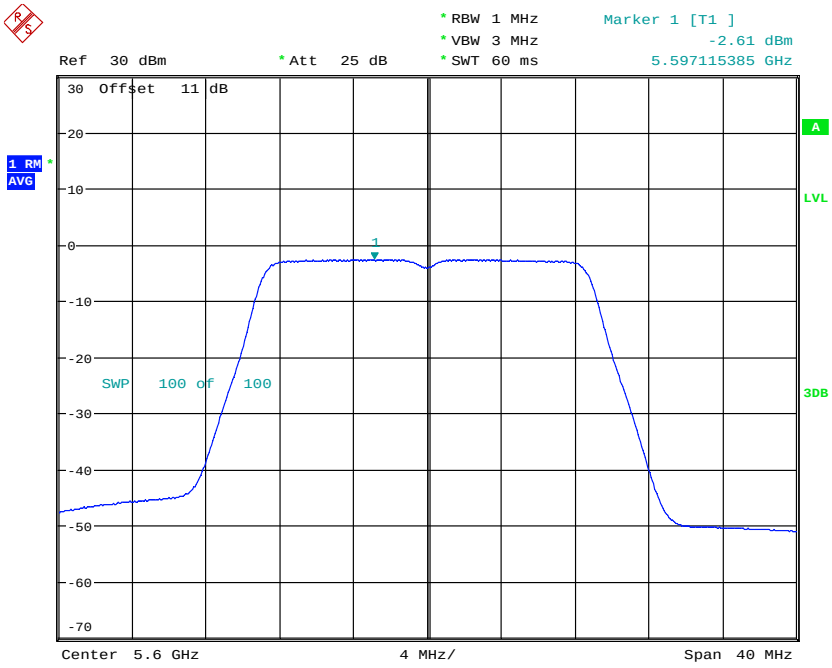
Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



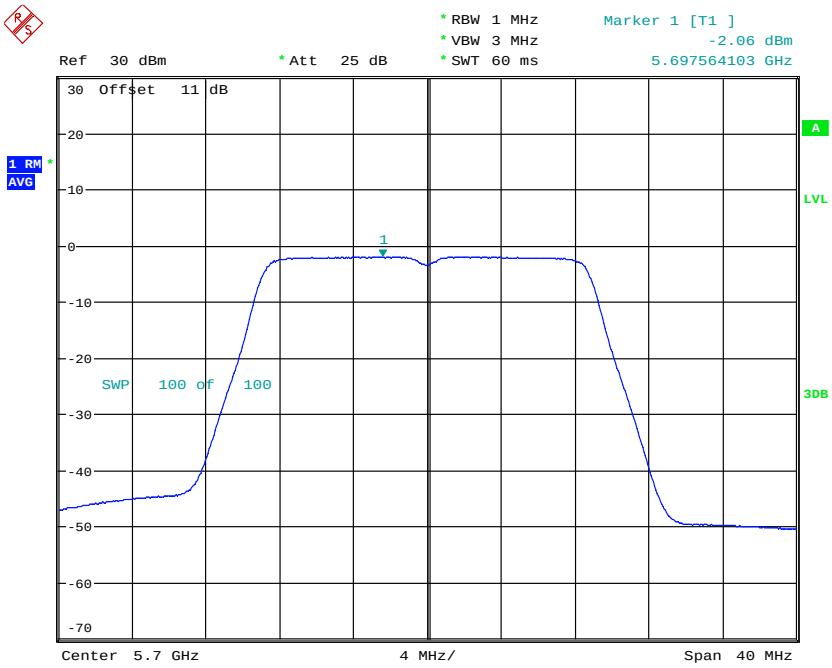
POWER DENSITY AV ANT211aCH140
Date: 4.OCT.2022 17:41:52



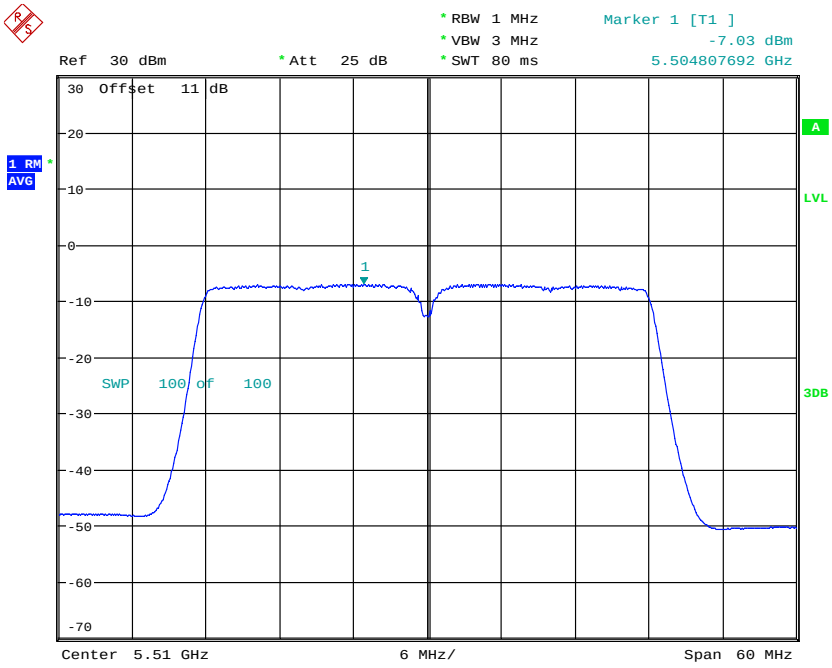
POWER DENSITY AV ANT211n20CH100
Date: 4.OCT.2022 17:43:10



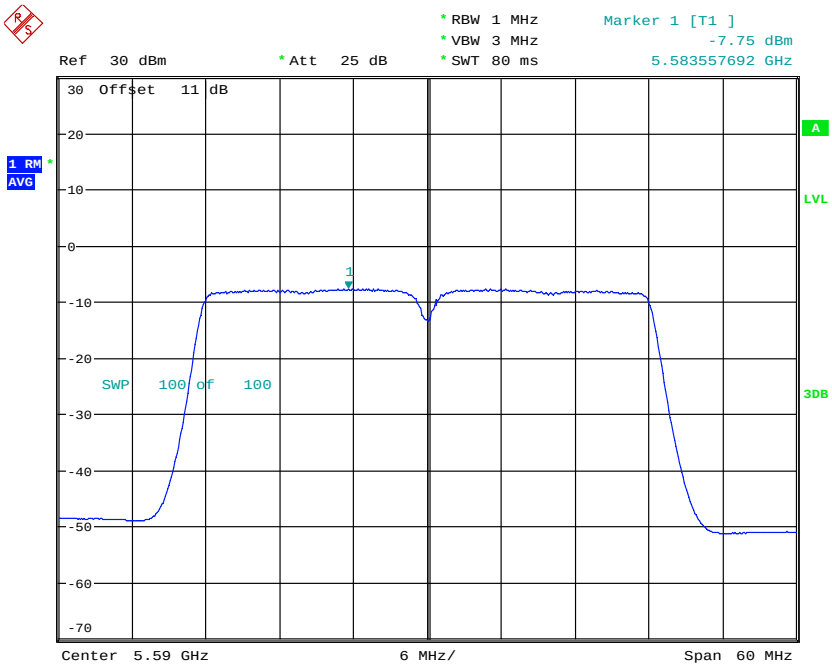
POWER DENSITY AV ANT211n20CH120
Date: 4.OCT.2022 17:44:15



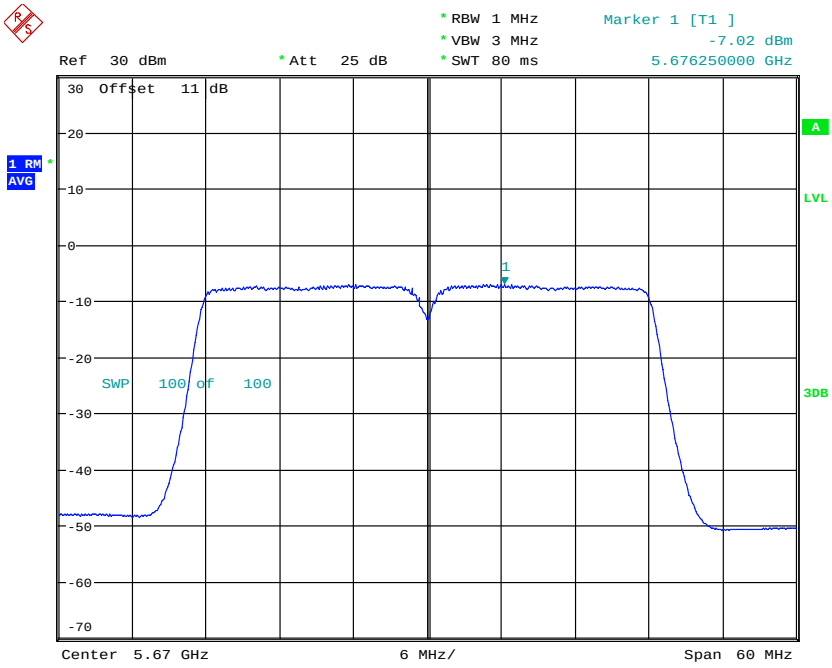
POWER DENSITY AV ANT211n20CH140
Date: 4.OCT.2022 17:45:27



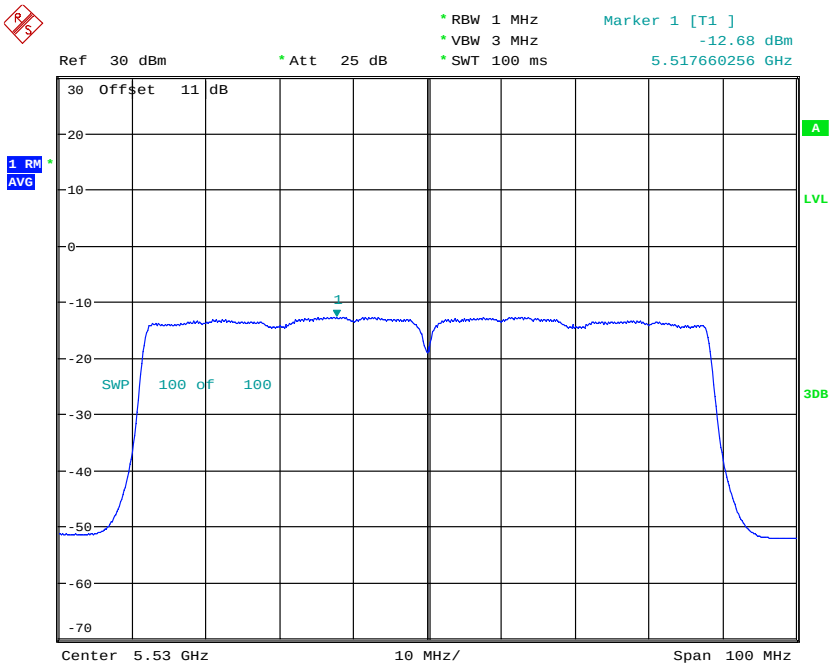
POWER DENSITY AV ANT211n40CH102
Date: 4.OCT.2022 17:47:05



POWER DENSITY AV ANT211n40CH118
Date: 4.OCT.2022 17:48:27

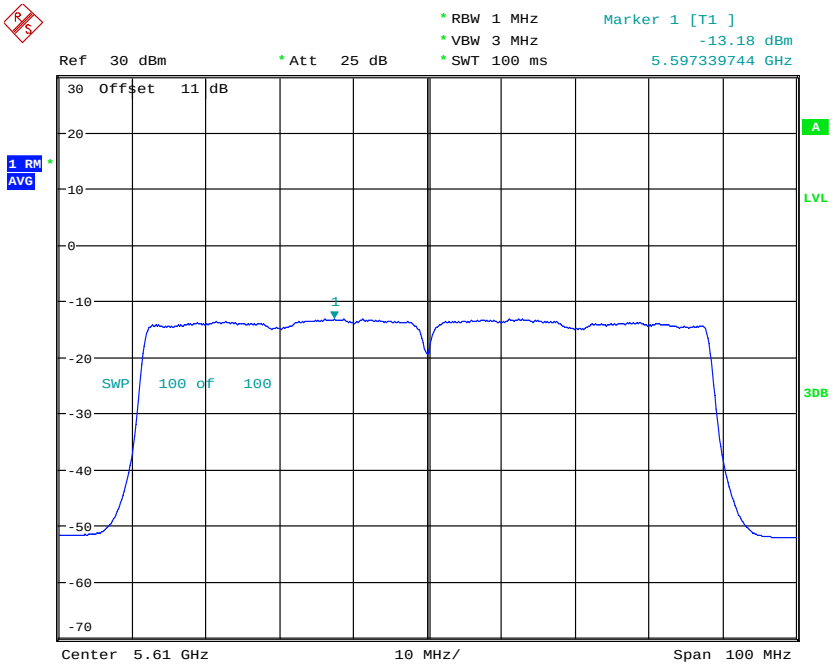


POWER DENSITY AV ANT211n40CH134
Date: 4.OCT.2022 17:54:19



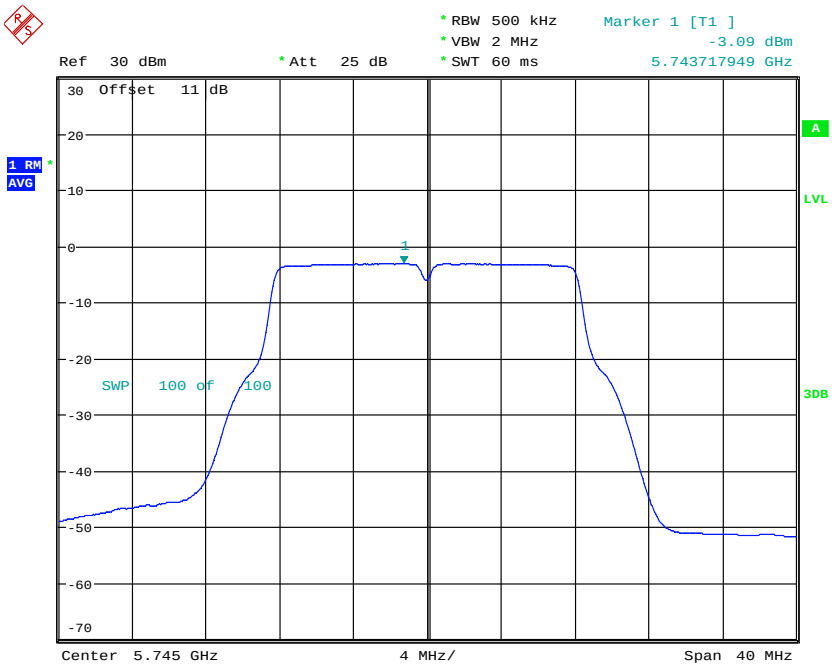
POWER DENSITY AV ANT211ac80CH106
Date: 4.OCT.2022 17:56:05

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

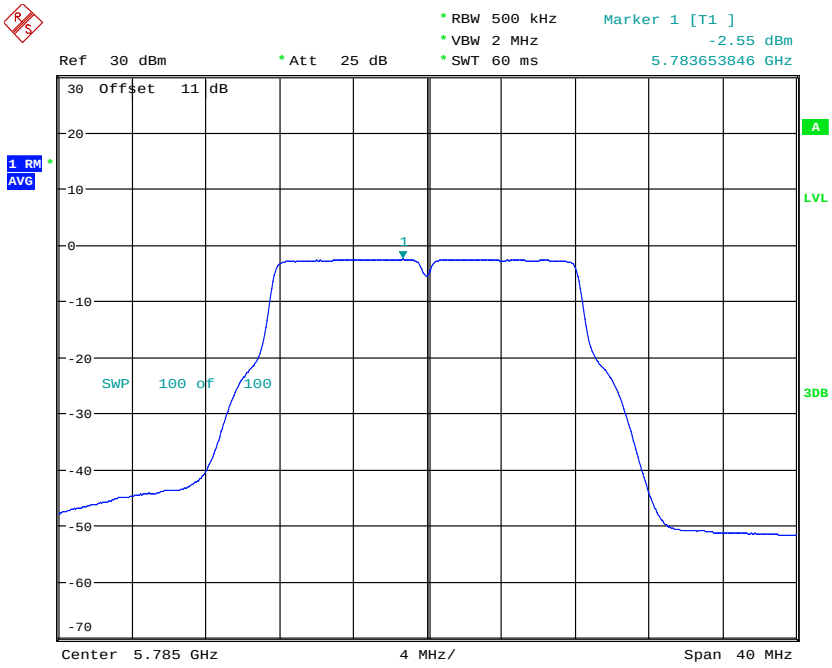


POWER DENSITY AV ANT211ac80CH122
Date: 4.OCT.2022 17:57:22

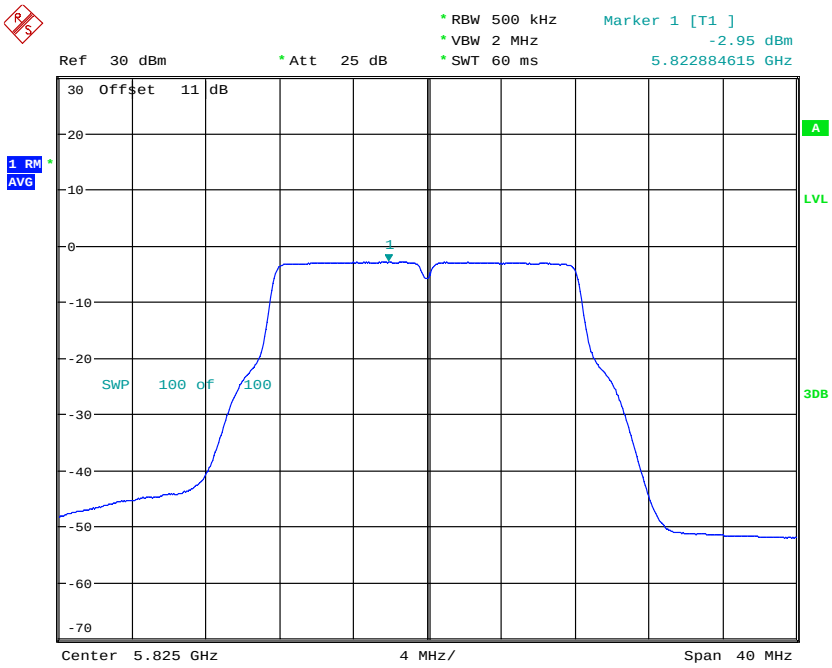
5.725 GHz ~ 5.85 GHz



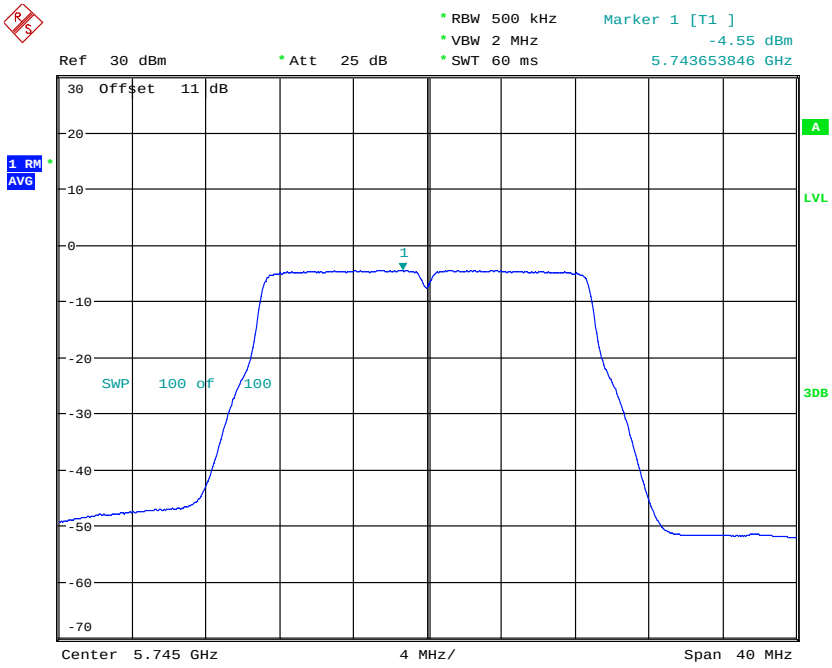
POWER DENSITY AV ANT211aCH149
Date: 4.OCT.2022 17:30:56



POWER DENSITY AV ANT211aCH157
Date: 4.OCT.2022 17:32:01



POWER DENSITY AV ANT211aCH165
Date: 4.OCT.2022 17:33:06



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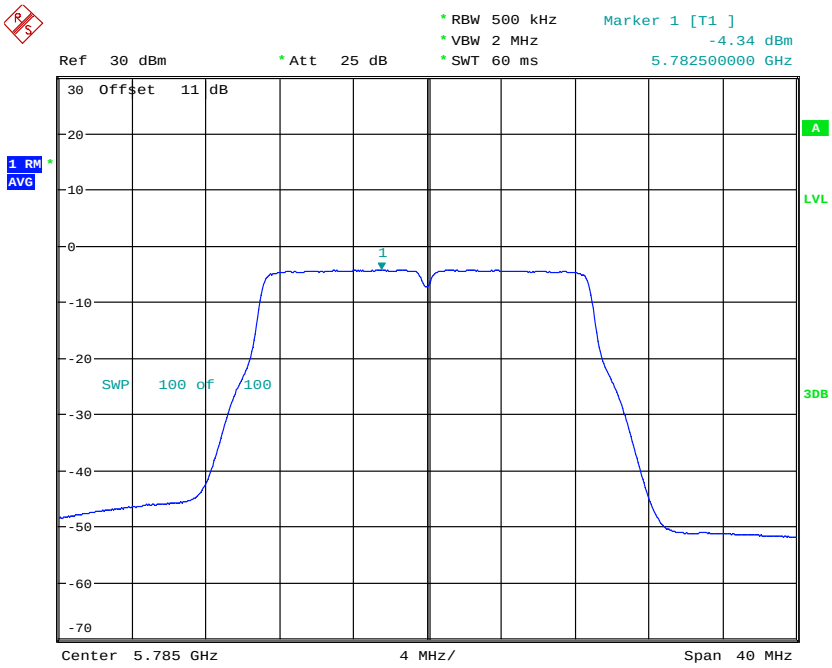
Date: 4.OCT.2022 17:25:44



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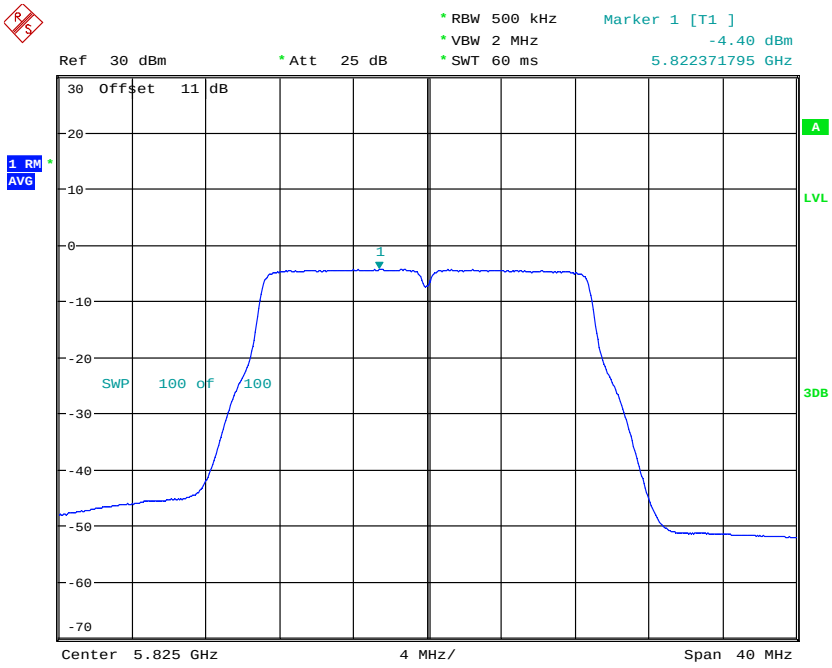

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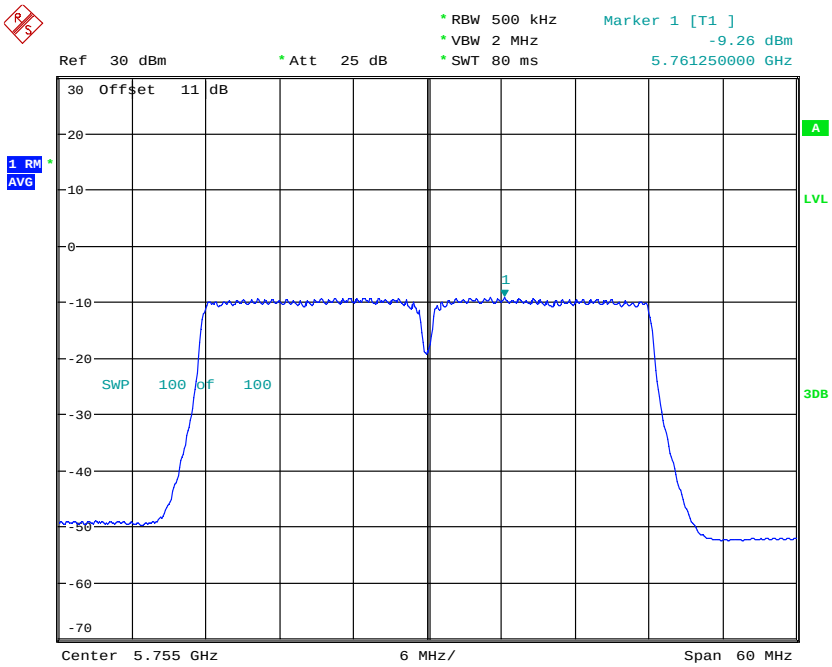
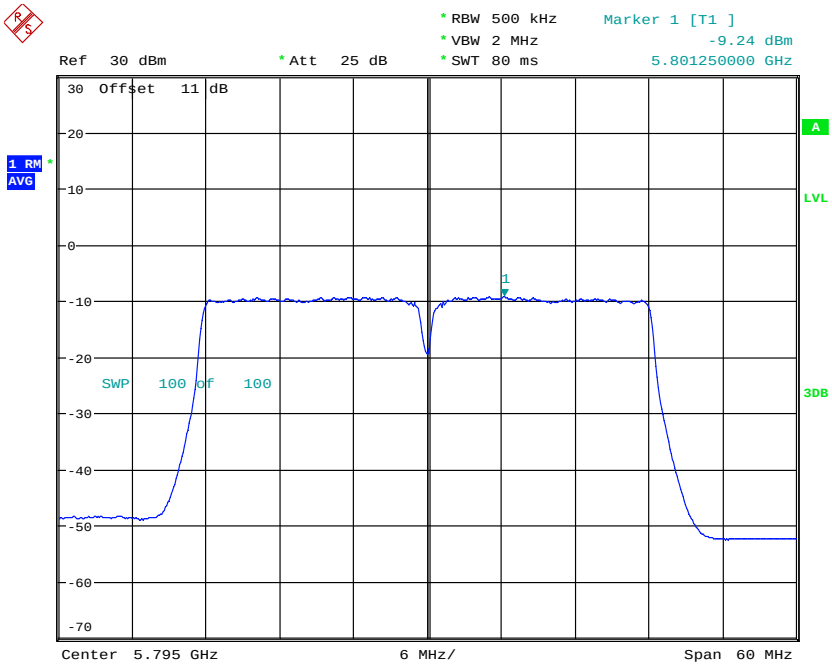
Date: 4.OCT.2022 17:29:31

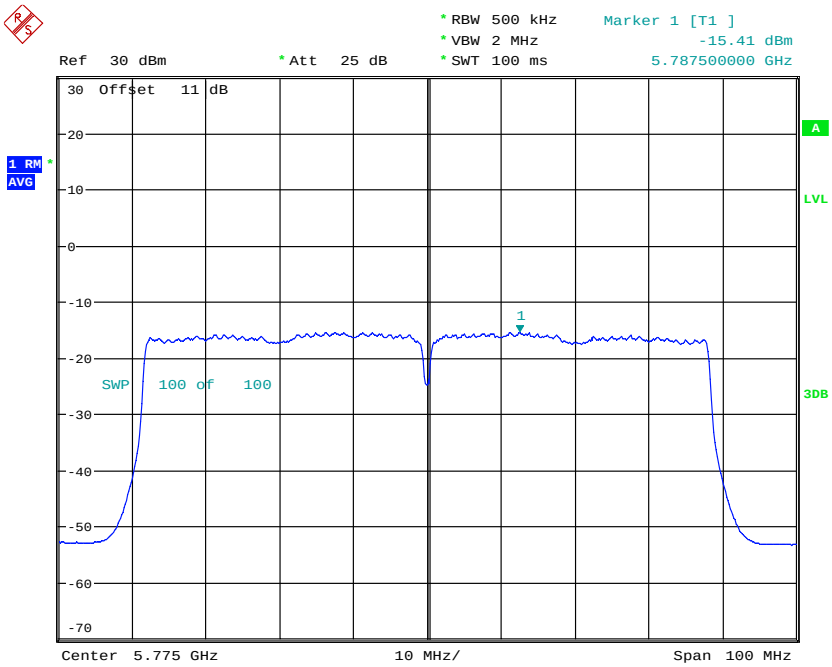


POWER DENSITY AV ANT211n40CH151
Date: 4.OCT.2022 17:20:35

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



POWER DENSITY AV ANT211n40CH159
Date: 4.OCT.2022 17:23:20



POWER DENSITY AV ANT211ac80CH155
Date: 4.OCT.2022 17:18:50

Test equipment used: ETSTW-RE 055, ETSTW-RE 050

3.5 Undesirable emission limits, FCC 15.407 (b)

1. For transmitters operating in the 5.15–5.25 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz.
2. For transmitters operating in the 5.25–5.35 GHz band: all emissions out-side of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz. De-vices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all appli-cable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15–5.25 GHz band.
3. For transmitters operating in the 5.47–5.725 GHz band: all emissions out-side of the 5.47–5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.
4. For transmitters operating in the 5.725–5.850 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
5. The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
6. Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.
7. According to According to KDB 789033 D02 General UNII Test Procedures v01, as specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.
8. If radiated measurements are performed, field strength is then converted to EIRP as follows:
   (i) EIRP = ((E*d)^2) / 30, where: E is the field strength in V/m; d is the measurement distance in meters. EIRP is the equivalent isotropically radiated power in watts.
   (ii) Working in dB units, the above equation is equivalent to: EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77.
   (iii) Or, if d is 3 meters: EIRP[dBm] = E[dBμV/m] - 95.2.

Applicable to	Limit	
☒	FIELD STRENGTH at 3m (dBμV/m)	
	PK	AV
	74	54
☐	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH at 3m (dBμV/m)
	PK	PK
	-27	68.3

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Model:	HYGW-Gen2-V1	Date:	--		
Mode:	--	Temperature:	--	°C	Engineer: --
Polarization:	Horizontal	Humidity:	--	%	

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result (dBuV/m) Peak	Result (dBuV/m) Ave.	Limit (dBuV/m) Peak	Limit (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

Polarization: Vertical

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--

Frequency (MHz)	Reading (dBuV) Peak	Reading (dBuV) Ave.	Factor (dB) Corr.	Result (dBuV/m) Peak	Result (dBuV/m) Ave.	Limit (dBuV/m) Peak	Limit (dBuV/m) Ave.	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 152, ETSTW-RE 088, ETSTW-RE 018

Explanation: After evaluated, the test result in this report adopt the worst case to measure, please see attached diagrams in appendix.

3.6 Automatic Discontinuation of transmission, FCC 15.407 (c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.
This function will be declared by manufacturer.

3.7 Reserved, FCC 15.407 (d)

3.8 Indoor Operation Restriction, FCC 15.407 (e)

Within the 5.15–5.25 GHz band, U- NII devices will be restricted to indoor operations to reduce any potential for harmful interference to co-channel MSS operations. This equipment has to be declared by manufacturer of the final product as content of the user manual.

3.9 Equivalent isotropic radiated power, FCC 15.407 (f)

FCC Rule: 15.407(b)(3)
NII-1
Test exclusion = max. conducted output power + antenna gain
Test exclusion = 13.58 dBm+(7.69 dBi [antenna gain claimed by manufacturer] = 21.27 dBm = 133.97 mW

NII-2A
Test exclusion = max. conducted output power + antenna gain
Test exclusion = 13.83 dBm+(8 dBi [antenna gain claimed by manufacturer] = 21.83 dBm = 152.41 mW

NII-2C
Test exclusion = max. conducted output power + antenna gain
Test exclusion = 12.73 dBm+(9.44 dBi [antenna gain claimed by manufacturer] = 22.17 dBm = 164.82 mW

NII-3
Test exclusion = max. conducted output power + antenna gain e
Test exclusion = 13.25 dBm+(8.58 dBi [antenna gain claimed by manufacturer] = 21.83 dBm = 152.41 mW

Test equipment used: ETSTW-RE 055

3.10 Exemption Limits for Routine Evaluation according to 47 CFR FCC Part 2 Subpart J, section 2.1091

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.
The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20 cm normally can be maintained between the user and the device.

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)
d = Separation distance between radiator and human body (m)
The formula can be changed to mW/m^2.

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

Established separation distance is 20 cm.

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FCC ID: GX9HYGWGEN2

Band	Mode	Channel	Conducted power with DF		Combine (dBm)	Antenna Gain (dBi)	Power density (mW/cm²)	Limit (mW/cm²)	Ratio
			Antenna A (dBm)	Antenna B (dBm)					
NII-1	802.11a	Ch 36 : 5180 MHz	11.32	11.36	-	-	-	-	-
		Ch 44 : 5220 MHz	11.75	11.76	-	-	-	-	-
		Ch 48 : 5240 MHz	11.86	12.1	-	Antenna B: 6.08	Antenna B: 0.0131	1	0.0131
	802.11n 20M	Ch 36 : 5180 MHz	10.09	9.98	13.05	-	-	-	-
		Ch 44 : 5220 MHz	10.48	10.37	13.44	-	-	-	-
		Ch 48 : 5240 MHz	10.6	10.54	13.58	Combine: 7.69	Combine: 0.0266	1	0.0266
	802.11n 40M	Ch 38 : 5190 MHz	8.29	8.26	11.29	-	-	-	-
		Ch 46 : 5230 MHz	8.79	8.68	11.75	Combine: 7.69	Combine: 0.0175	1	0.0175
	802.11ac	Ch 42 : 5210 MHz	6.15	6.21	9.19	Combine: 7.69	Combine: 0.0097	1	0.0097
NII-2A	802.11a	Ch 52 : 5260 MHz	11.72	11.76	-	-	-	-	-
		Ch 60 : 5300 MHz	11.84	11.78	-	-	-	-	-
		Ch 64 : 5320 MHz	11.97	11.86	-	Antenna A: 3.59	Antenna A: 0.0071	1	0.0071
	802.11n 20M	Ch 52 : 5260 MHz	10.44	10.72	13.59	-	-	-	-
		Ch 60 : 5300 MHz	10.54	10.77	13.67	-	-	-	-
		Ch 64 : 5320 MHz	10.82	10.81	13.83	Combine: 8	Combine: 0.0304	1	0.0304
	802.11n 40M	Ch 54 : 5270 MHz	8.84	9.17	12.02	-	-	-	-
		Ch 62 : 5310 MHz	9.08	9.28	12.19	Combine: 8	Combine: 0.0208	1	0.0208
	802.11ac	Ch 58 : 5210 MHz	6.72	6.88	9.81	Combine: 8	Combine: 0.0121	1	0.0121
NII-2C	802.11a	Ch 100 : 5500 MHz	11.19	10.99	-	Antenna A: 5.21	Antenna A: 0.0087	1	0.0087
		Ch 116 : 5580 MHz	10.44	10.42	-	-	-	-	-
		Ch 140 : 5700 MHz	10.83	10.94	-	-	-	-	-
	802.11n 20M	Ch 100 : 5500 MHz	9.71	9.72	12.73	Combine: 9.44	Combine: 0.0327	1	**0.0327**
		Ch 116 : 5580 MHz	9.02	9.16	12.10	-	-	-	-
		Ch 140 : 5700 MHz	9.6	9.8	12.71	-	-	-	-
	802.11n 40M	Ch 102 : 5510 MHz	8.16	8.12	11.15	Combine: 9.44	Combine: 0.0227	1	0.0227
		Ch 110 : 5550 MHz	7.56	7.42	10.50	-	-	-	-
		Ch 134 : 5670 MHz	7.84	7.97	10.92	-	-	-	-
	802.11ac	Ch 106 : 5530 MHz	6.24	5.66	8.97	Combine: 9.44	Combine: 0.0138	1	0.0138
		Ch 122 : 5610 MHz	5.74	5.23	8.50	-	-	-	-

NII-3	**802.11a**	Ch 149 : 5745 MHz	11.27	11.26	-	-	-	-	
		Ch 157 : 5785 MHz	11.36	11.81	-	Antenna B: 6.1	Antenna B: 0.012	1	0.012
		Ch 165 : 5825 MHz	10.98	11.46	-	-	-	-	-
	802.11n 20M	Ch 149 : 5745 MHz	9.95	10.2	13.09	-	-	-	-
		Ch 157 : 5785 MHz	10	10.47	13.25	Combine: 8.58	Combine: 0.0303	1	0.0303
		Ch 165 : 5825 MHz	9.8	10.38	13.11	-	-	-	-
	802.11n 40M	Ch 151 : 5755 MHz	8.29	8.6	11.46				
		Ch 159 : 5795 MHz	8.53	8.79	11.67	Combine: 8.58	Combine: 0.0211	1	0.0211
	802.11ac	Ch 155: 5775 MHz	6.25	5.89	9.08	Combine: 8.58	Combine: 0.0116	1	0.0116

Simultaneous evaluation-
0.0351 (2.4G WLAN)+0.0051 (Zigbee)+0.0327 (5G WLAN)=0.0729＜1

3.11 Transmit Power Control (TPC)

Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

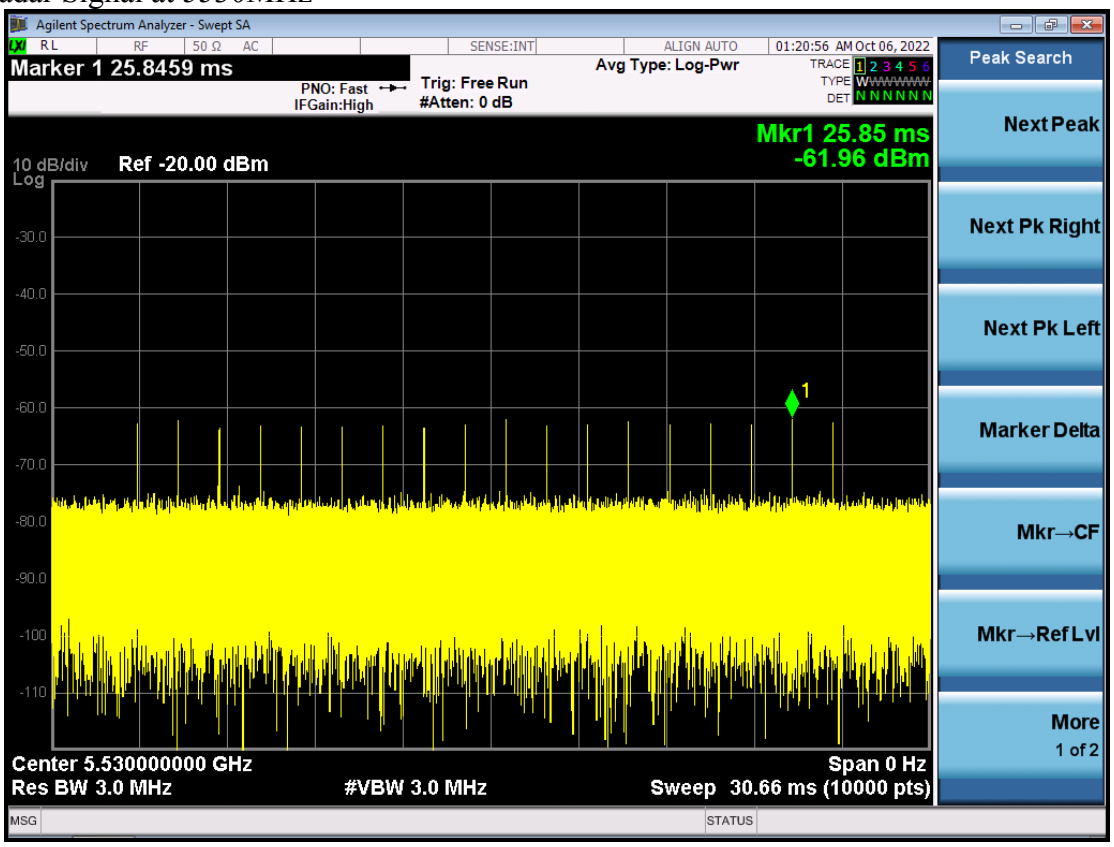
Explanation: Max put power of the EUT is less than 500 mW (27dBm) so this test item is not required.

3.12 Dynamic Frequency Selection (DFS)

3.12.1 DFS Detection Threshold

Test data: October 06, 2022
Temperature: 23.7 ˚C
Humidity: 57.0 %
Tester: Sora

Radar Type
Type0 Radar Signal at 5530MHz



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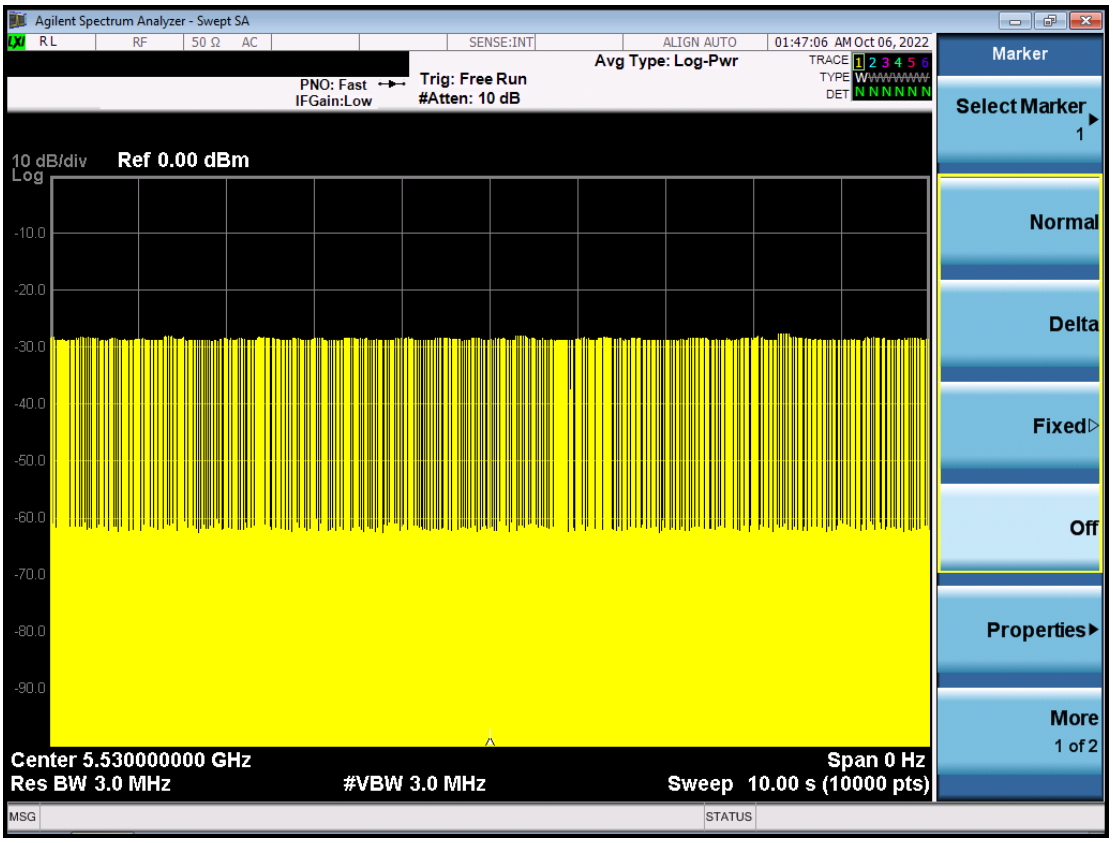
Traffic plot

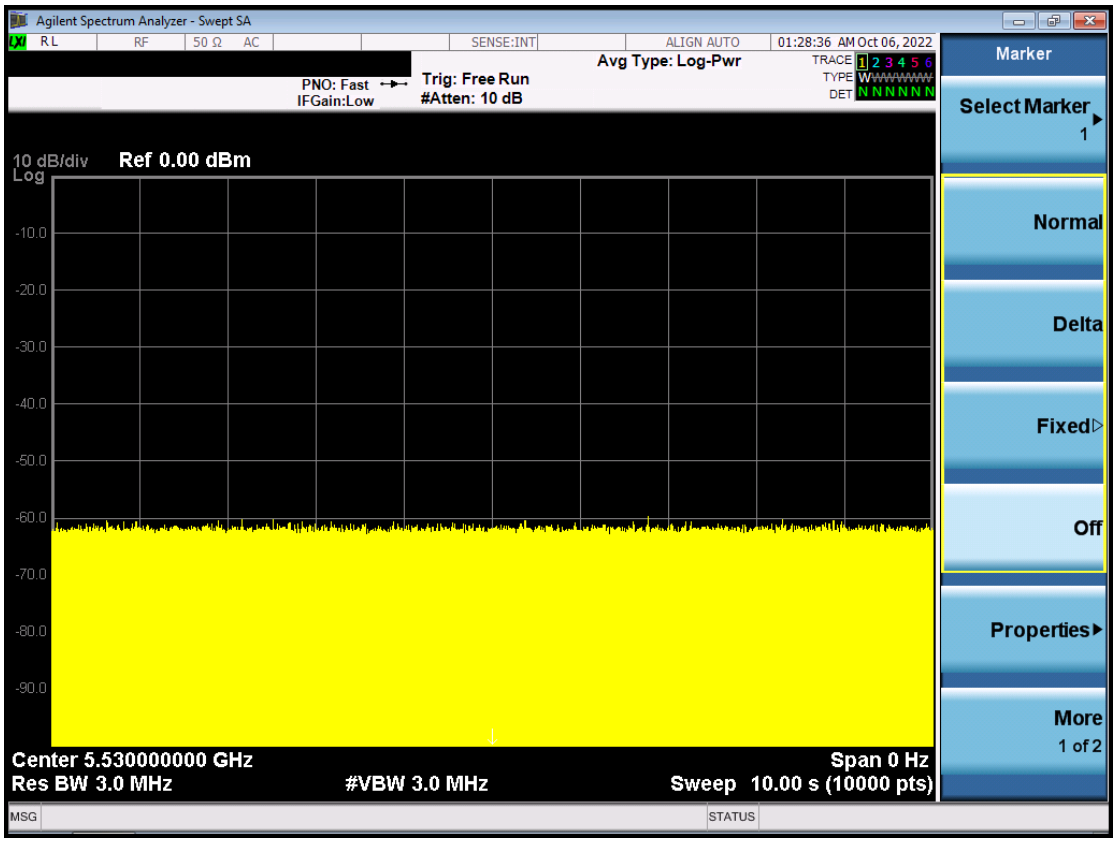
Traffic Plot at 5530MHz



Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

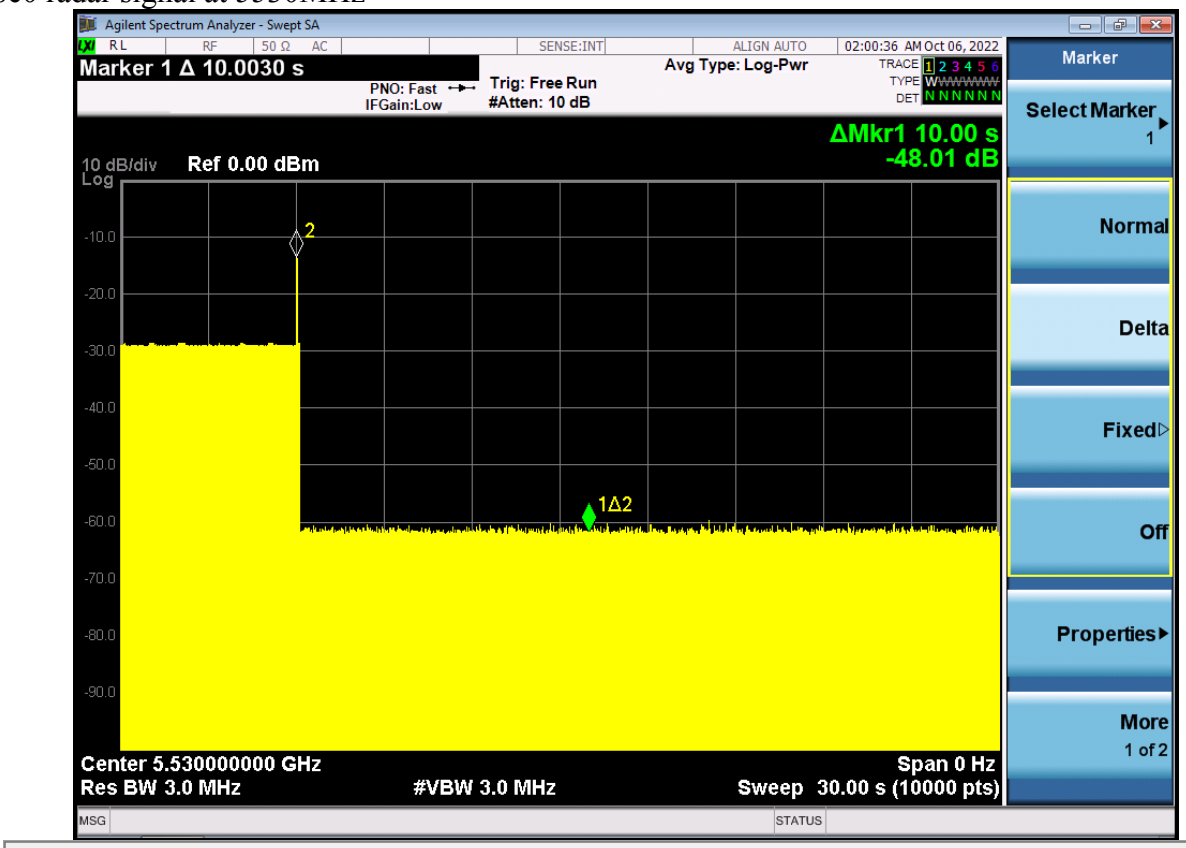
Non Traffic Plot

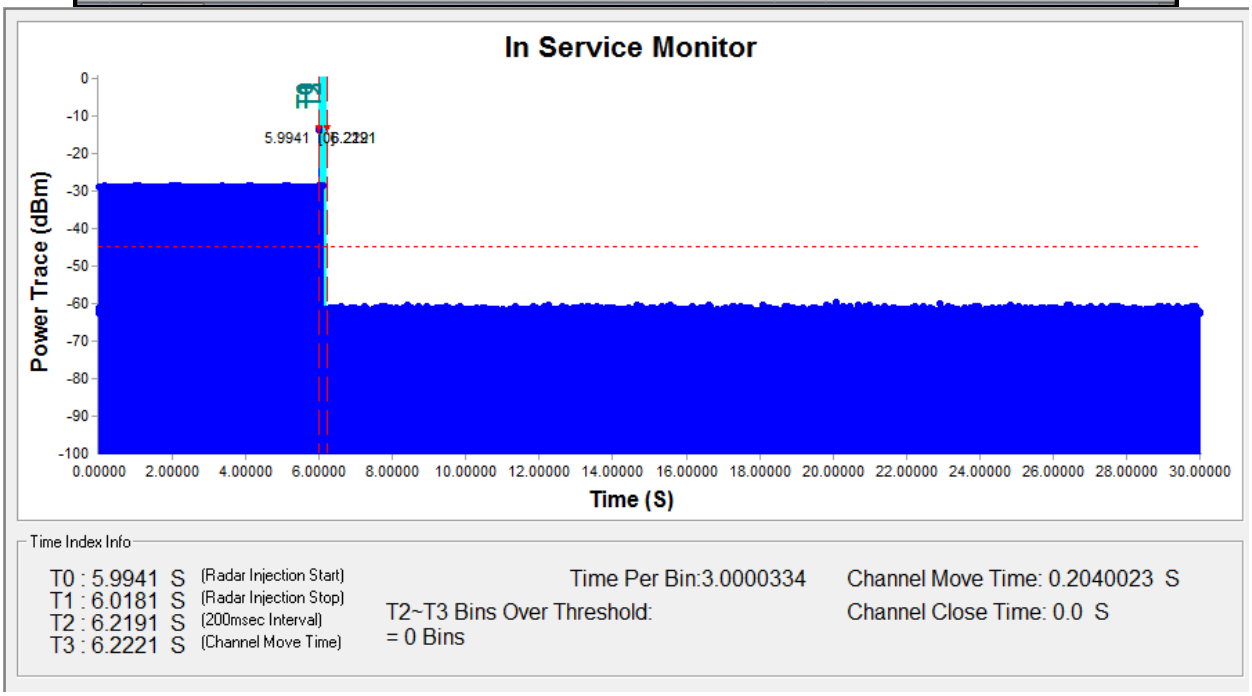
Non-Traffic Plot at 5530MHz



3.12.2 Channel move time plot of Type1 radar waveform on 5530MHz

Test data: October 06, 2022
Temperature: 23.7 ˚C
Humidity: 57.0 %
Tester: Sora
Type0 radar signal at 5530MHz

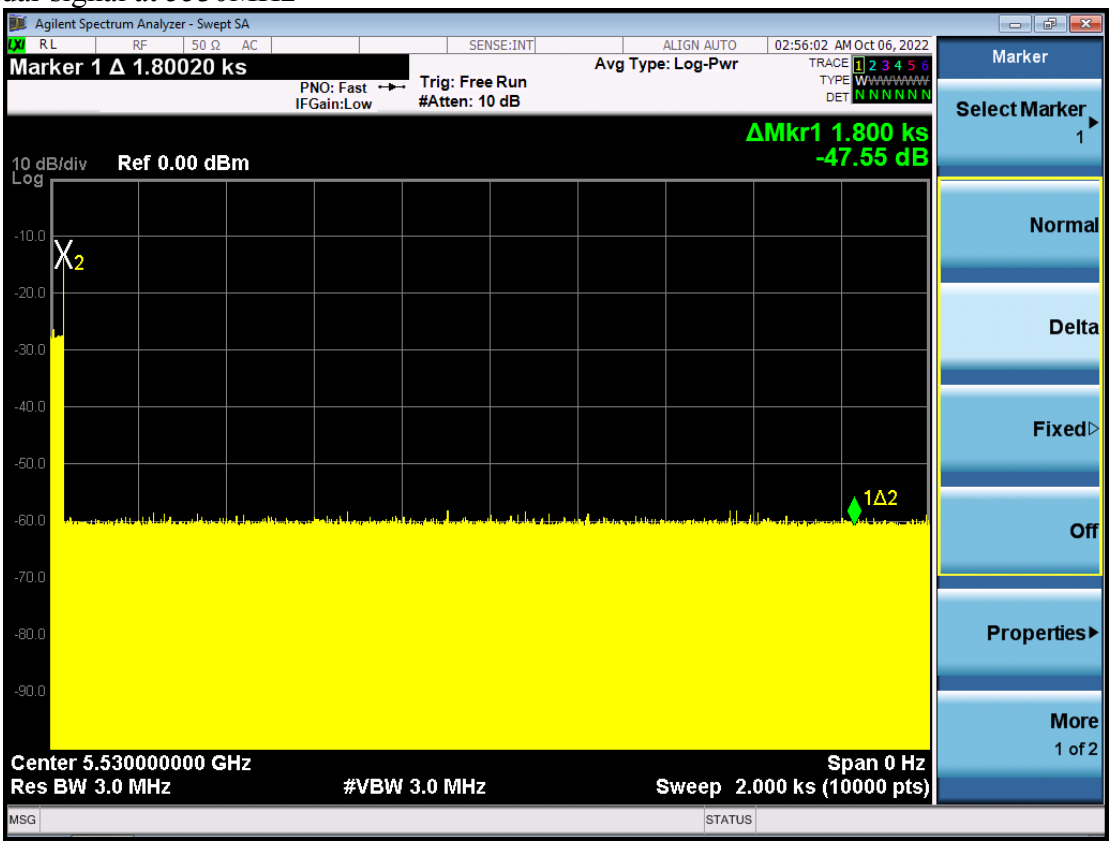




Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

3.12.3 30Minutes Non-Occupancy Time

Test data: October 06, 2022
Temperature: 23.7 ˚C
Humidity: 57.0 %
Tester: Sora
Type0 radar signal at 5530MHz



Test equipment used: ETSTW-RE 133, ETSTW-RE 134

3.13 Channel Move Time, Channel Closing Transmission Time

FCC Rule: 15.407(i)
Test data: October 06, 2022
Temperature: 23.7 ˚C
Humidity: 57.0 %
Tester: Sora

Result :

Parameter (at 5530MHz)	Test Result	Limit
	Type0	
Channel Move Time (ms)	0.204s	<10s
Channel Close Transmission Time (ms)	0ms	< 60ms
30Minutes Non-Occupancy Time	Pass	>1800s

Note: The Channel Close Transmission Time is compromised 200 milliseconds starting at the beginning of the Channel Move Time plus the additional intermittent control signal required to facilitate channel-move operation (an aggregate of 60milliseconds) during the remainder of the 10seconds period.

Test equipment used: ETSTW-RE 133, ETSTW-RE 134

3.14 Radiated Emissions from Receiver Part

FCC Rule: 15.109

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Field Strength (dBmicrovolts/meter)
30 – 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

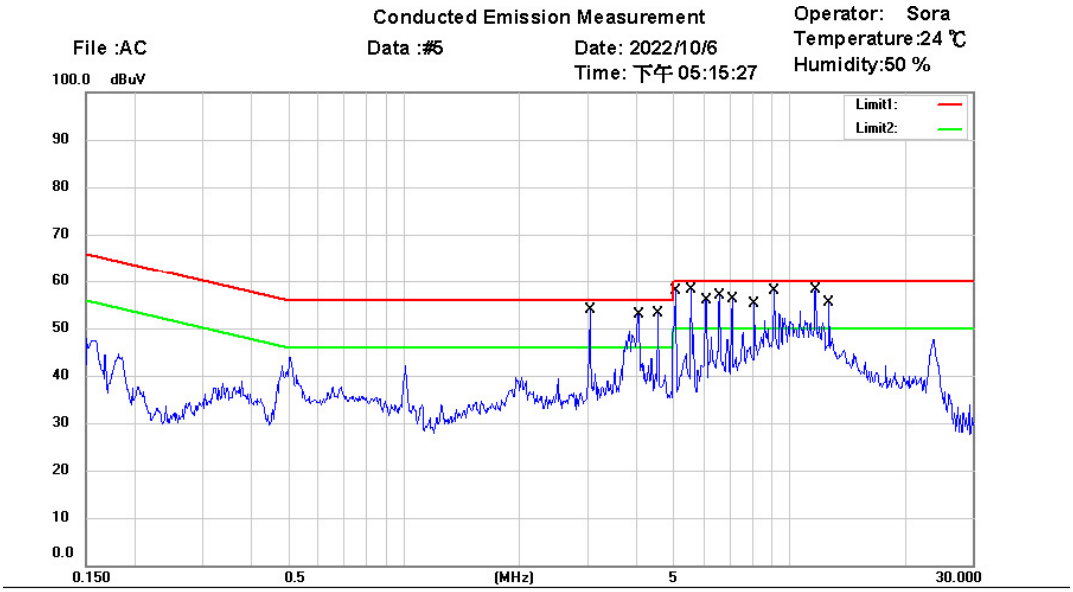
Test equipment used: ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 152, ETSTW-RE 088, ETSTW-RE 018

Explanation: The test results are listed in the separated test report no.: W6R22209-22106-P-15B.

3.15 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the NII-150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.



Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP)
Phase: N
EUT : W6R22209-22106
Power : 18 Va.c.
M/N:
Test Mode :
Note :

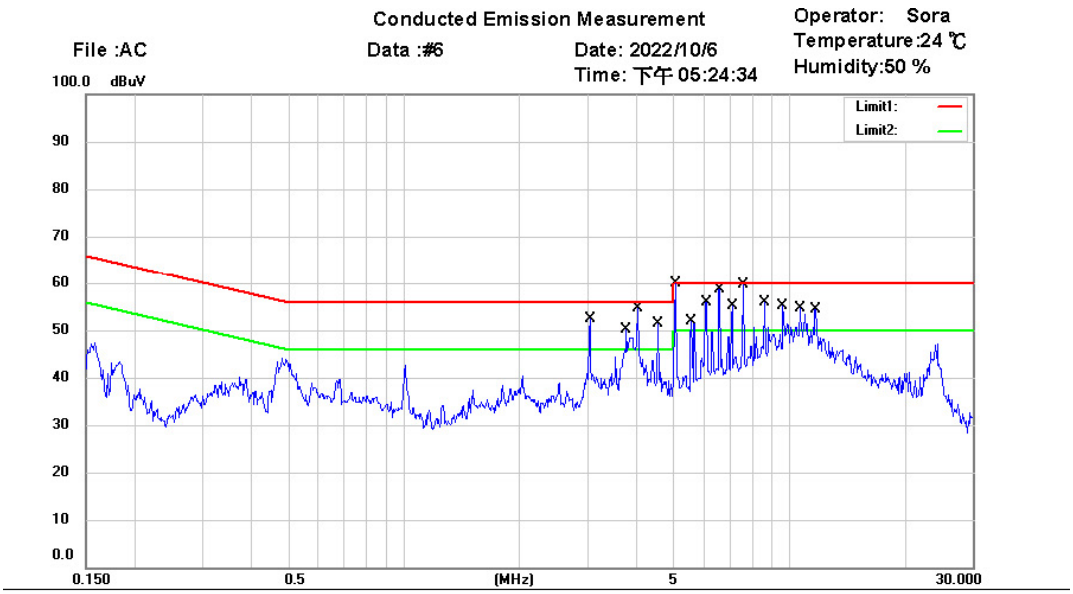
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	3.0325	41.61	QP	9.65	51.26	56.00	-4.74	
	3.0325	23.37	AVG	9.65	33.02	46.00	-12.98	
	4.0445	39.54	QP	9.80	49.34	56.00	-6.66	
	4.0445	26.08	AVG	9.80	35.88	46.00	-10.12	
	4.5533	36.63	QP	10.07	46.70	56.00	-9.30	
	4.5533	18.86	AVG	10.07	28.93	46.00	-17.07	
	5.0520	46.07	QP	10.29	56.36	60.00	-3.64	
	5.0520	28.77	AVG	10.29	39.06	50.00	-10.94	
	5.5600	40.10	QP	10.19	50.29	60.00	-9.71	
	5.5600	28.95	AVG	10.19	39.14	50.00	-10.86	
	6.0675	42.79	QP	10.09	52.88	60.00	-7.12	
	6.0675	32.34	AVG	10.09	42.43	50.00	-7.57	
	6.5710	47.97	QP	10.01	57.98	60.00	-2.02	
	6.5710	36.95	AVG	10.01	46.96	50.00	-3.04	
	7.0750	45.13	QP	9.93	55.06	60.00	-4.94	
	7.0750	34.56	AVG	9.93	44.49	50.00	-5.51	

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP) **Phase:** N
EUT : W6R22209-22106 **Power :** 18 Va.c.
M/N:
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	8.0885	47.28	QP	9.80	57.08	60.00	-2.92	
	8.0885	36.02	AVG	9.80	45.82	50.00	-4.18	
	9.1000	37.57	QP	9.73	47.30	60.00	-12.70	
	9.1000	25.50	AVG	9.73	35.23	50.00	-14.77	
	11.6250	42.87	QP	9.88	52.75	60.00	-7.25	
*	11.6250	38.36	AVG	9.88	48.24	50.00	-1.76	
	12.6355	37.28	QP	9.97	47.25	60.00	-12.75	
	12.6355	33.63	AVG	9.97	43.60	50.00	-6.40	

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2



Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP)
Phase: L1
EUT : W6R22209-22106
Power : 18 Va.c.
M/N:
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	3.0333	40.91	QP	9.62	50.53	56.00	-5.47	
	3.0333	23.29	AVG	9.62	32.91	46.00	-13.09	
	3.7783	32.76	QP	9.72	42.48	56.00	-13.52	
	3.7783	25.97	AVG	9.72	35.69	46.00	-10.31	
	4.0458	40.12	QP	9.77	49.89	56.00	-6.11	
	4.0458	24.82	AVG	9.77	34.59	46.00	-11.41	
	4.5518	35.23	QP	10.03	45.26	56.00	-10.74	
	4.5518	21.62	AVG	10.03	31.65	46.00	-14.35	
*	5.0560	46.99	QP	10.25	57.24	60.00	-2.76	
	5.0560	29.27	AVG	10.25	39.52	50.00	-10.48	
	5.5575	42.78	QP	10.14	52.92	60.00	-7.08	
	5.5575	27.23	AVG	10.14	37.37	50.00	-12.63	
	6.0665	42.75	QP	10.04	52.79	60.00	-7.21	
	6.0665	32.06	AVG	10.04	42.10	50.00	-7.90	
	6.5735	44.07	QP	9.96	54.03	60.00	-5.97	
	6.5735	35.73	AVG	9.96	45.69	50.00	-4.31	

Registration number: W6R22209-22106-C-54
FCC ID: GX9HYGWGEN2

Site : Chamber_03
Condition : FCC Part 15 Class B Conduction (QP) **Phase: L1**
EUT : W6R22209-22106 **Power : 18 Va.c.**
M/N:
Test Mode :
Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	7.0740	43.61	QP	9.88	53.49	60.00	-6.51	
	7.0740	33.74	AVG	9.88	43.62	50.00	-6.38	
	7.5820	44.01	QP	9.81	53.82	60.00	-6.18	
	7.5820	33.86	AVG	9.81	43.67	50.00	-6.33	
	8.5915	43.76	QP	9.70	53.46	60.00	-6.54	
	8.5915	33.92	AVG	9.70	43.62	50.00	-6.38	
	9.6030	41.61	QP	9.68	51.29	60.00	-8.71	
	9.6030	35.14	AVG	9.68	44.82	50.00	-5.18	
	10.6135	42.95	QP	9.72	52.67	60.00	-7.33	
	10.6135	37.51	AVG	9.72	47.23	50.00	-2.77	
	11.6280	39.67	QP	9.79	49.46	60.00	-10.54	
	11.6280	34.54	AVG	9.79	44.33	50.00	-5.67	

Note: 1. The formula of measured value as: Test Result = Reading + Correction Factor
2. The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
3. Detector function in the form : PK = Peak, QP = Quasi Peak, AV = Average
4. All not in the table noted test results are more than 20 dB below the relevant limits.
5. Up Line: QP Limit Line, Down Line: Ave Limit Line.

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Test equipment used: ETSTW-CE 001, ETSTW-CE 016, ETSTW-RE 045.

Appendix

Measurement diagrams

Spurious Emissions radiated

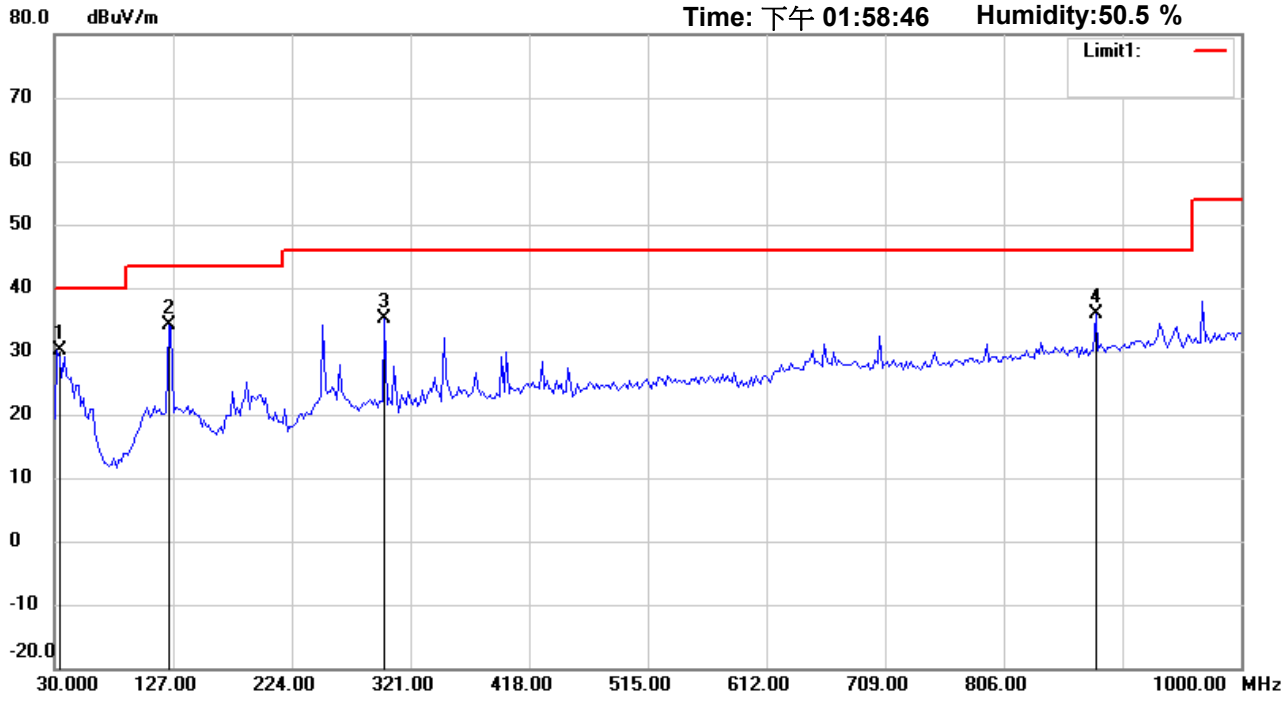
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Vincent

File :1_WiFi 5G_ant1_TX 802 Data :#1 Date: 2022/10/4 Temperature:28.1 ℃

Time: 下午 01:58:46 Humidity:50.5 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Horizontal*

EUT : W6R22209-22106

Power : 18 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	31.9440	38.22	peak	-8.06	30.16	40.00	110	60	-9.84	
*	123.3066	40.45	peak	-6.35	34.10	43.50	120	100	-9.40	
	300.2004	40.93	peak	-5.90	35.03	46.00	150	280	-10.97	
	881.4228	32.46	peak	3.44	35.90	46.00	180	90	-10.10	

*:Maximum data x:Over limit !:over margin

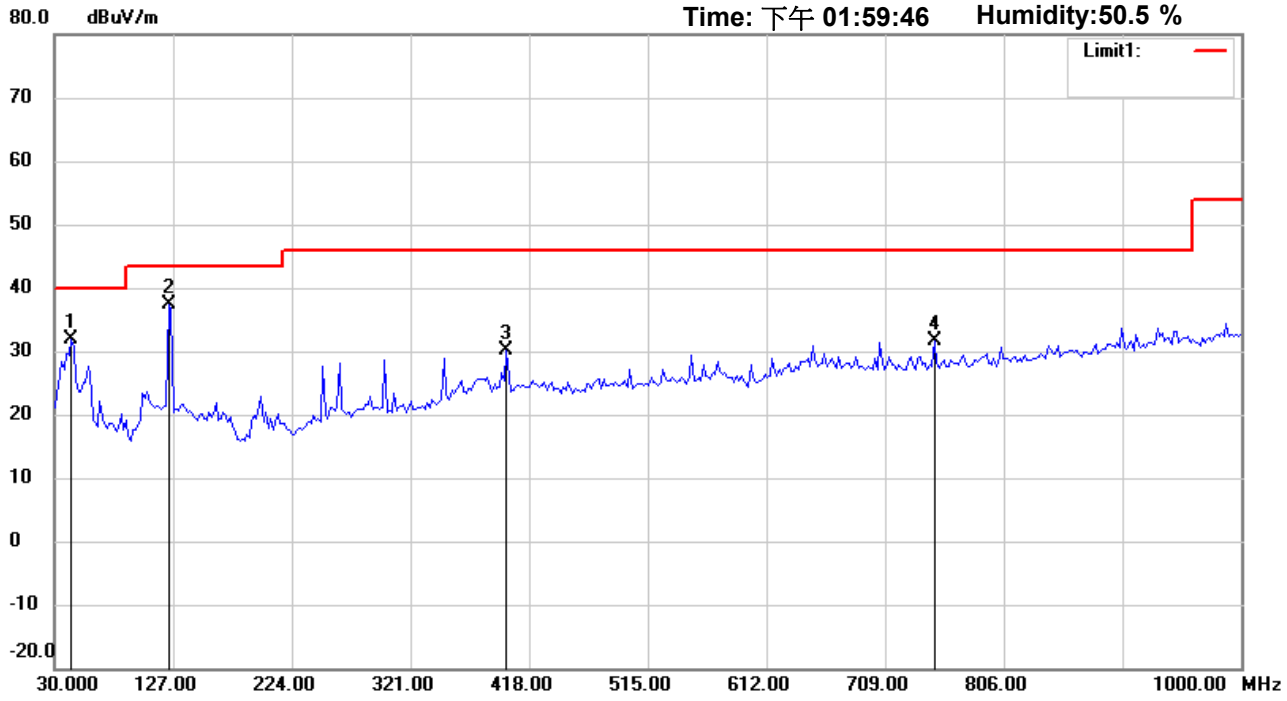
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Vincent

File :1_WiFi 5G_ant1_TX 802 Data :#2 Date: 2022/10/4 Temperature:28.1 ℃

Time: 下午 01:59:46 Humidity:50.5 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Vertical*

EUT : W6R22209-22106

Power : 18 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	43.6072	41.07	peak	-9.25	31.82	40.00	105	210	-8.18	
*	123.3066	43.85	peak	-6.35	37.50	43.50	100	205	-6.00	
	399.3387	33.97	peak	-3.80	30.17	46.00	110	100	-15.83	
	749.2385	31.01	peak	0.63	31.64	46.00	100	190	-14.36	

*:Maximum data x:Over limit !:over margin

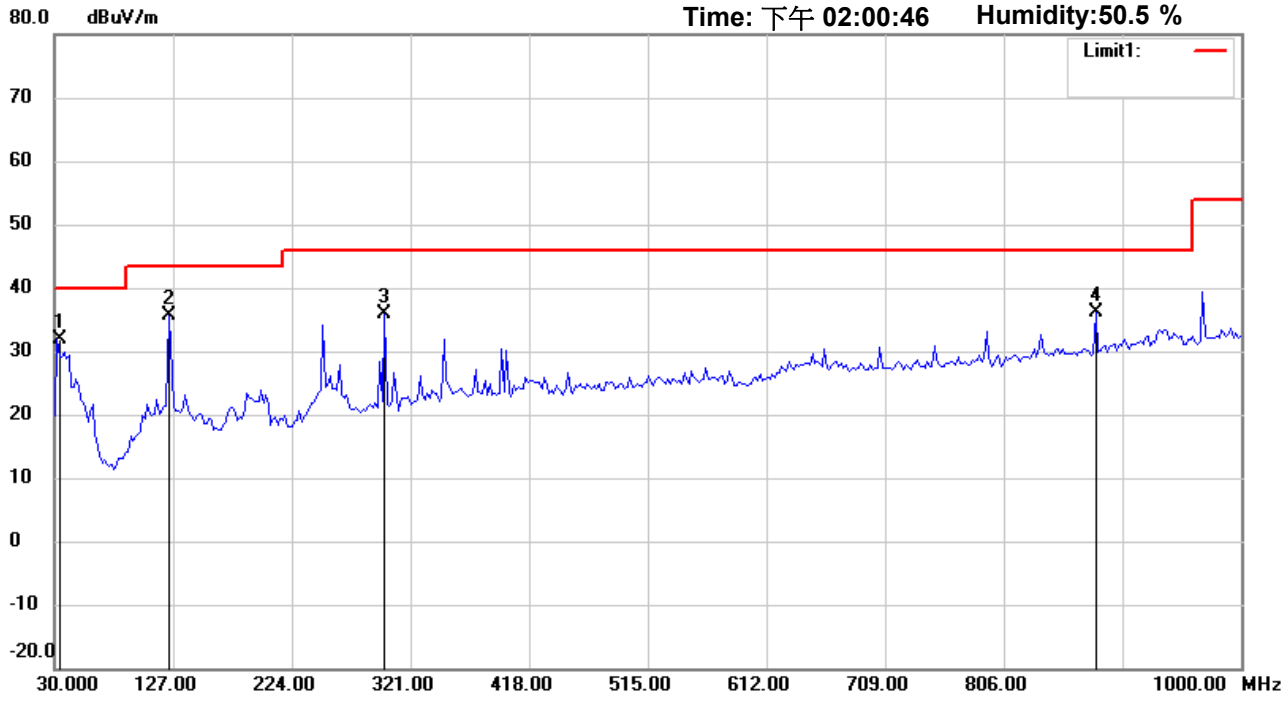
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Vincent

File :1_WiFi 5G_ant2_TX 802 Data :#1 Date: 2022/10/4 Temperature:28.1 ℃

Time: 下午 02:00:46 Humidity:50.5 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Horizontal*

EUT : W6R22209-22106

Power : 18 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	31.9440	39.87	peak	-8.06	31.81	40.00	110	90	-8.19	
*	123.3066	41.88	peak	-6.35	35.53	43.50	105	210	-7.97	
	300.2004	41.70	peak	-5.90	35.80	46.00	130	60	-10.20	
	881.4228	32.63	peak	3.44	36.07	46.00	150	10	-9.93	

*:Maximum data x:Over limit !:over margin

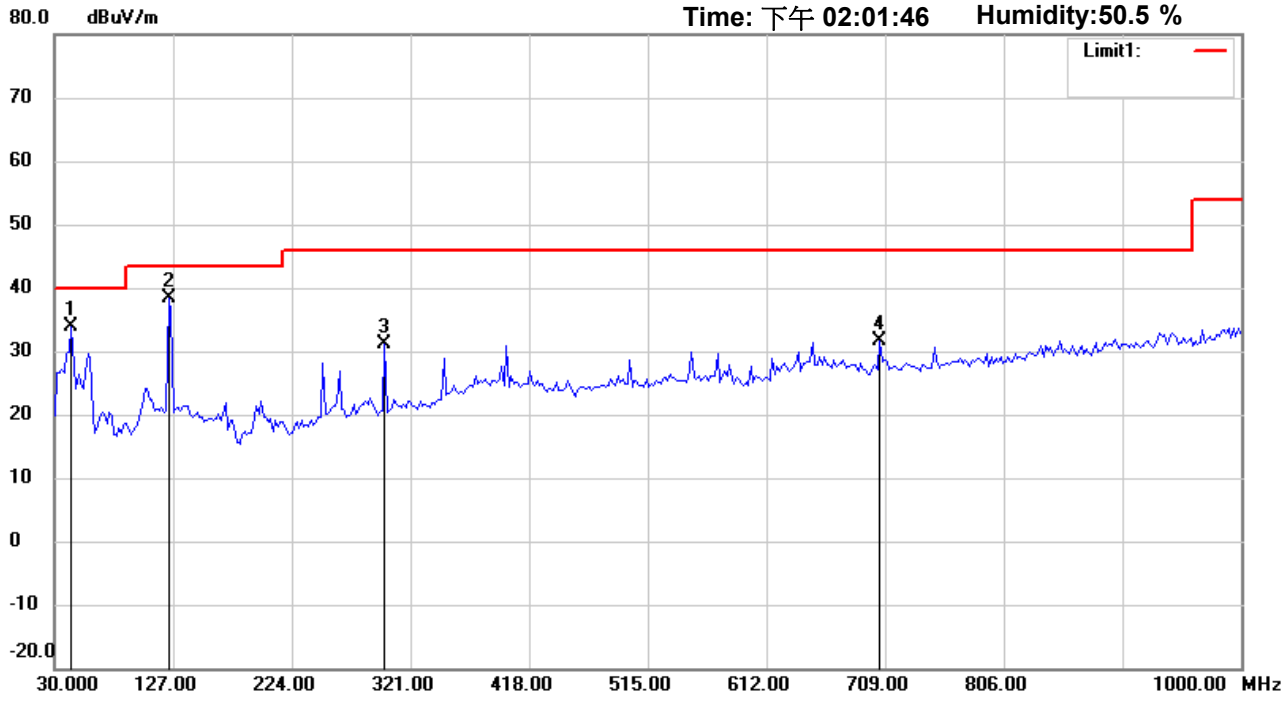
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Vincent

File :1_WiFi 5G_ant2_TX 802 Data :#2 Date: 2022/10/4 Temperature:28.1 ℃

Time: 下午 02:01:46 Humidity:50.5 %



Site : Chamber

Condition : FCC_part 15 RE-Class C_30-1000MHz

Polarization: *Vertical*

EUT : W6R22209-22106

Power : 18 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	43.6072	43.11	peak	-9.25	33.86	40.00	130	125	-6.14	
*	123.3066	44.77	peak	-6.35	38.42	43.50	105	85	-5.08	
	300.2004	37.08	peak	-5.90	31.18	46.00	100	100	-14.82	
	704.5290	31.34	peak	0.20	31.54	46.00	100	90	-14.46	

*:Maximum data x:Over limit !:over margin

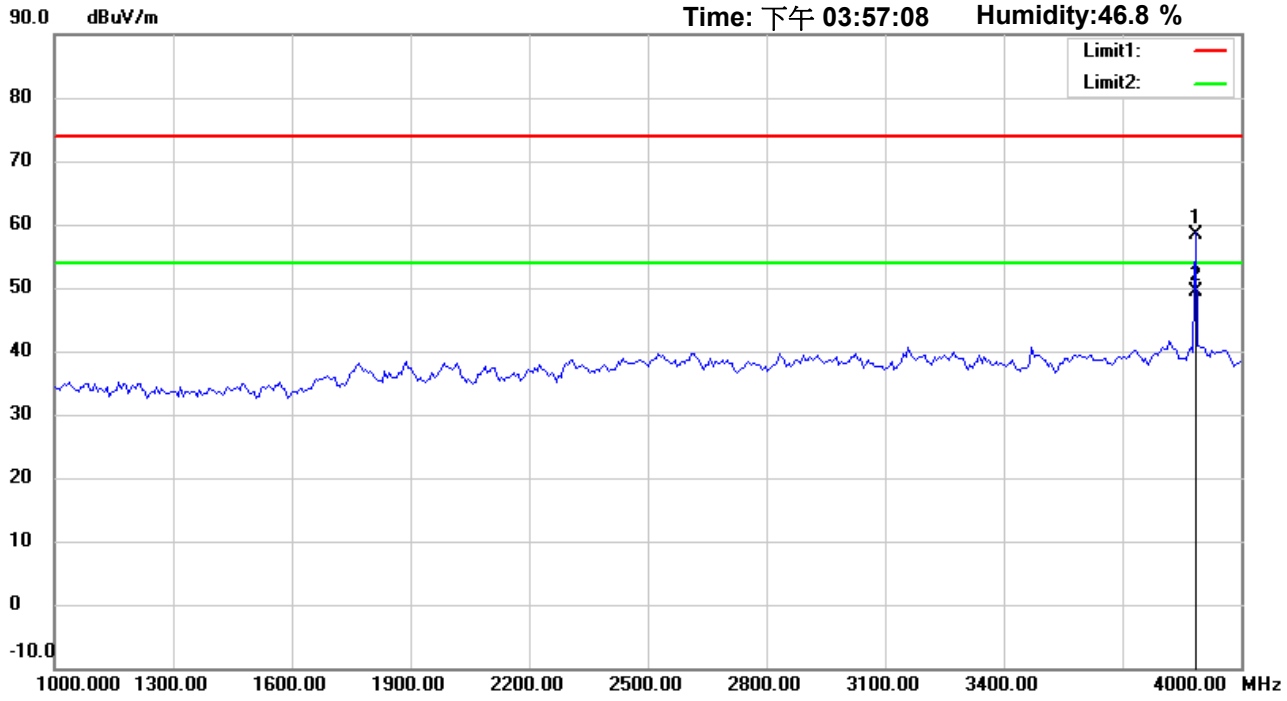
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Vincent

File :3 Data :#1 Date: 2022/10/2 Time: 下午 03:57:08

Temperature:27.9 ℃ Humidity:46.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

EUT : W6R22209-22106

M/N:

Test Mode : TX 802.11a CH36

Note :

Polarization: *Horizontal*

Power : 18 Va.c.

Distance: 3m

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	3885.057	58.61	peak	-0.32	58.29	74.00	229	303	-15.71	
*	3885.057	49.60	AVG	-0.32	49.28	54.00	229	303	-4.72	

*:Maximum data x:Over limit !:over margin

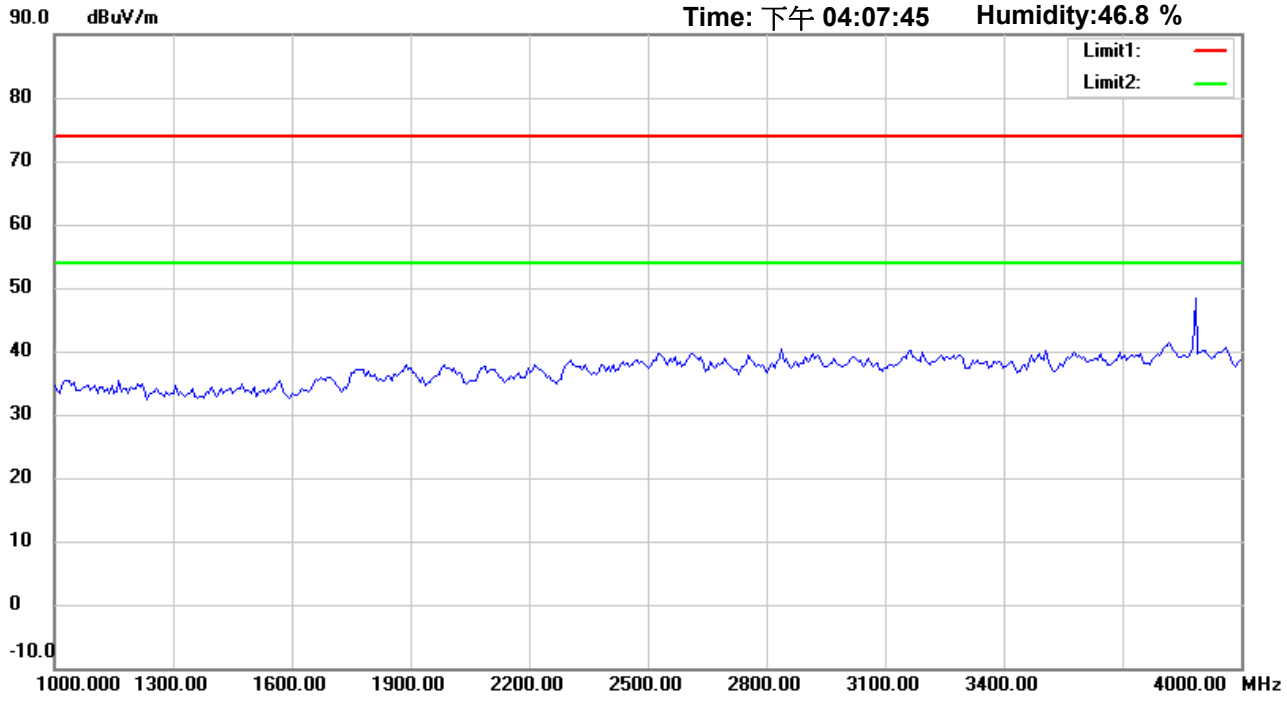
Address:6F.,No.58,Ln 188,Ruey Kuang Rd,Neihu,Taipei
Tel:+886-2-6606-8877
Fax:+886-2-6606-8879

Radiated Emission Measurement

Operator: Vincent

File :3 Data :#7 Date: 2022/10/2 Time: 下午 04:07:45

Temperature:27.9 ℃ Humidity:46.8 %



Site : Chamber

Condition : FCC_part 15E RE_Above 1GHz_PK

Polarization: *Vertical*

EUT : W6R22209-22106

Power : 18 Va.c.

M/N:

Distance: 3m

Test Mode : TX 802.11a CH36

Note :

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment

*:Maximum data x:Over limit !:over margin