TEST REPORT

Applicant Name :	INFINIX MOBILITY LIMITED
Address :	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT, Hong Kong
Report Number :	SZNS220221-05123E-RF-00D
FCC ID:	2AIZN-X6823

Test Standard (s)

FCC PART 15.407

Sample Description

Product Type:	Mobile Phone
Model No.:	X6823
Multiple Model(s) No.:	N/A
Trade Mark:	Infinix
Date Received:	2022/02/21
Report Date:	2022/04/18

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ting Lü
EMC Engineer

Approved By:

Robert Li
EMC Engineer

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	5G Wi-Fi: 5150-5250MHz; 5725-5850MHz
Mode	802.11a/n20/n40/ac20/ac40/ac80
Maximum Conducted Average Ouput Power	5150-5250 MHz: 7.09dBm 5725-5850 MHz: 5.68dBm
Modulation Technique	OFDM
Antenna Specification*	0.4 dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V from adapter
Sample serial number	SZNS220221-05123E-RF-S1 for Conducted and Radiated Emissions SZNS220221-05123E-RF-S2 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U100XSA Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5.0V, 2.0A

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB789033 D02 General U-NII Test Procedures New Rules v02r01.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		$0.082*10^{-7}$
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz - 26.5GHz	5.06dB
	26.5GHz - 40GHz	4.72dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer.

The device support 802.11a/n20/n40/ac20/ac40/ac80 modes.

For 5150-5250MHz Band, 7 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240
42	5210	/	/

For 802.11a/n20/ac20 mode: channel 36, 40, 48 were tested;
For 802.11n40/ac40 mode: channel 38, 46 were tested;
For 802.11ac80 mode, channel 42 was tested.

For 5725-5850MHz Band, 8 channels are provided to testing:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785
151	5755	159	5795
153	5765	161	5805
155	5775	165	5825

For 802.11a/n20/ac20 mode: channel 149, 157, 165 were tested;
For 802.11n40/ac40 mode: channel 151, 159 were tested;
For 802.11ac80 mode, channel 155 was tested.

EUT Exercise Software

EUT was test in engineering mode.

The worst case was performed under:

U-NII	Mode	Date rate	Power Level*		
			Low Channel	Middle Channel	High Channel
5150 – 5250MHz	802.11a	6Mbps	6	6	6
	802.11n-HT20	MCS0	6	6	6
	802.11n-HT40	MCS0	8	/	8
	802.11ac20	MCS0	6	6	6
	802.11ac40	MCS0	8	/	8
	802.11ac80	MCS0	/	10	/
5725 – 5850MHz	802.11a	6Mbps	6	6	6
	802.11n-HT20	MCS0	6	6	6
	802.11n-HT40	MCS0	8	/	8
	802.11ac20	MCS0	6	6	6
	802.11ac40	MCS0	8	/	8
	802.11ac80	MCS0	/	10	/

The worse-case data rates are determined to be as follows for each mode based upon investigations by measuring the output power and PSD across all data rated bandwidths, and modulations.

The power level was provided by the applicant.

Duty cycle

Test Result: Pass. Please refer to the Appendix.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

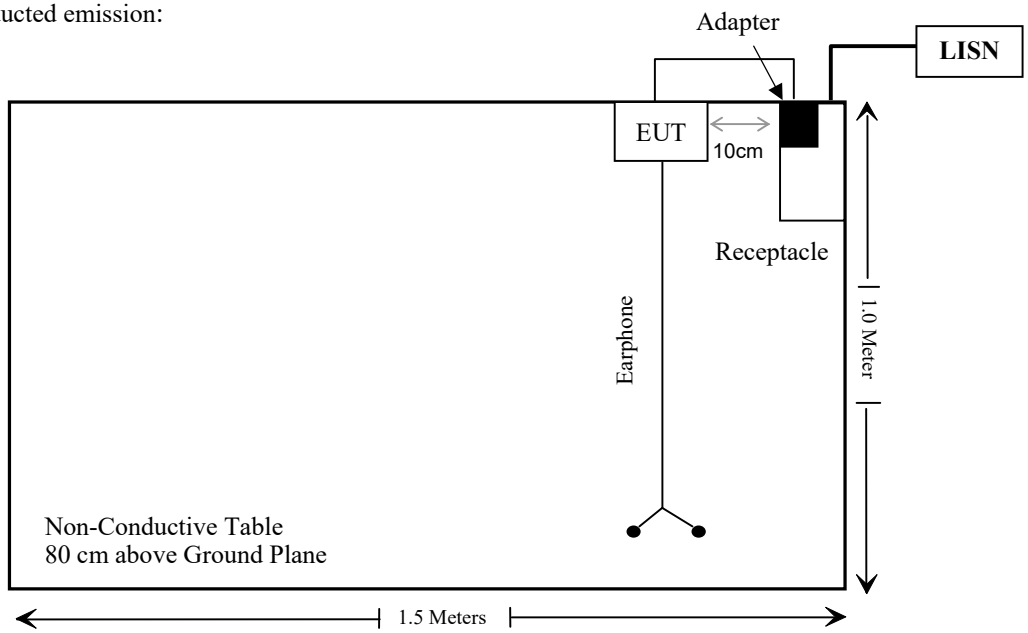
Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

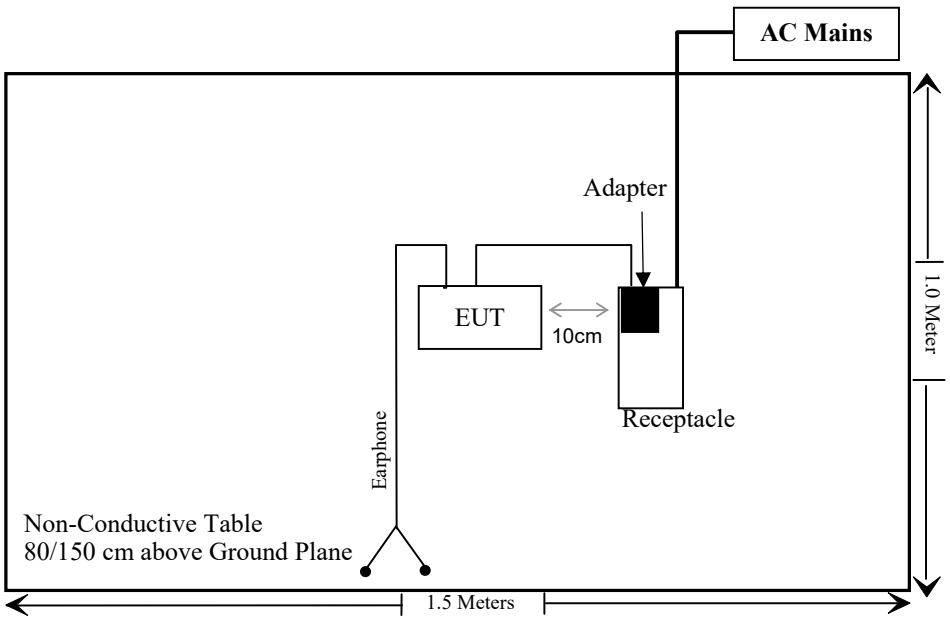
Cable Description	Length (m)	From Port	To
Un-shielding Detachable USB Cable	1.0	EUT	Adapter

Block Diagram of Test Setup

For conducted emission:



For Radiated Emissions:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (1) & §2.1093	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.407(b)(9)& §15.207(a)	Conducted Emissions	Compliant
§15.205& §15.209 &§15.407(b)	Undesirable Emission& Restricted Bands	Compliant
§15.407(a) (e)	26 dB Emission Bandwidth & 6dB Bandwidth	Compliant
§15.407(a)	Conducted Transmitter Output Power	Compliant
§15.407 (a)	Power Spectral Density	Compliant
§15.407 (h)	Transmit Power Control (TPC)	Not Applicable
§15.407 (h)	Dynamic Frequency Selection (DFS)	Not Applicable*

Not Applicable: the EUT has no TPC function which was declarded by the applicant.
Not Applicable*: the EUT not operating within frequency range of 5250-5350MHz&5470-5725MHz.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2021/12/13	2022/12/12
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2021/12/13	2022/12/12
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2021/12/13	2022/12/12
Unknown	RF Coaxial Cable	No.17	N0350	2021/12/14	2022/12/13
Conducted Emission Test Software: e3 19821b (V9)					
Radiated Emissions Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2021/11/11	2022/11/10
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2020/01/05	2023/01/04
Radiated Emission Test Software: e3 19821b (V9)					
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
CD	Band Reject Filter	BRM-5.15/5.35g-45	075	2021/12/14	2022/12/13
CD	Band Reject Filter	BRM-5.725/5.875G-45	065	2021/12/14	2022/12/13

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
SPECTRUM ANALYZER	Rohde & Schwarz	FSU26	200982	2021/07/06	2022/07/05
WEINSCHEL	10dB Attenuator	5324	AU 3842	2021/12/14	2022/12/13
Rohde & Schwarz	Open Switch and Control Unit	OSP120 + OSP-B157	101244 + 100866	2021/12/13	2022/12/12
Unknown	RF Cable	Unknown	Unknown	Each time	/

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307 (b) (1) & §2.1093 – RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

Measurement Result

For worst case:

Mode	Frequency (MHz)	Max tune-up conducted power (dBm)	Max tune-up conducted power (mW)	Distance (mm)	Calculated value	Threshold (1-g SAR)	SAR Test Exclusion
5GHz Wi-Fi	5150-5250	7.5	5.62	5	2.6	3.0	Yes
	5725-5850	6.0	3.98	5	1.9	3.0	Yes

Result: Compliant.

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407 (a), if the transmitting antennas of directional gain greater than 6dBi are used, the transmit power and power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has one internal antenna arrangement for 5G Wi-Fi which were permanently attached. Please refer to the EUT photos.

Type	Antenna Gain	Impedance	Frequency Range
FPC	0.4dBi	50 Ω	5150-5850MHz

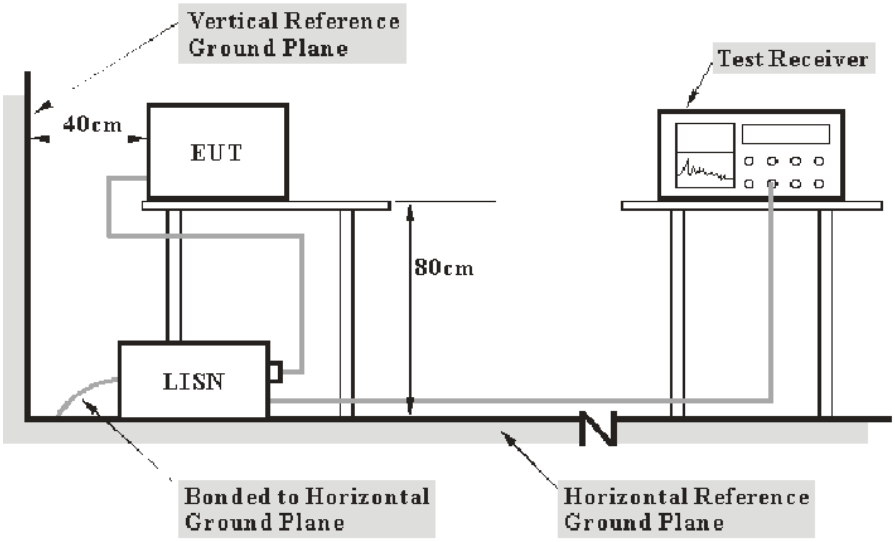
Result: Compliant.

FCC §15.407 (b) (6) §15.207 (a) – CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (6)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and Average detection mode.

Transd Factor & Margin Calculation

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

Factor = LISN VDF + Cable Loss

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level – Limit
Level = Read Level + Factor

Test Data

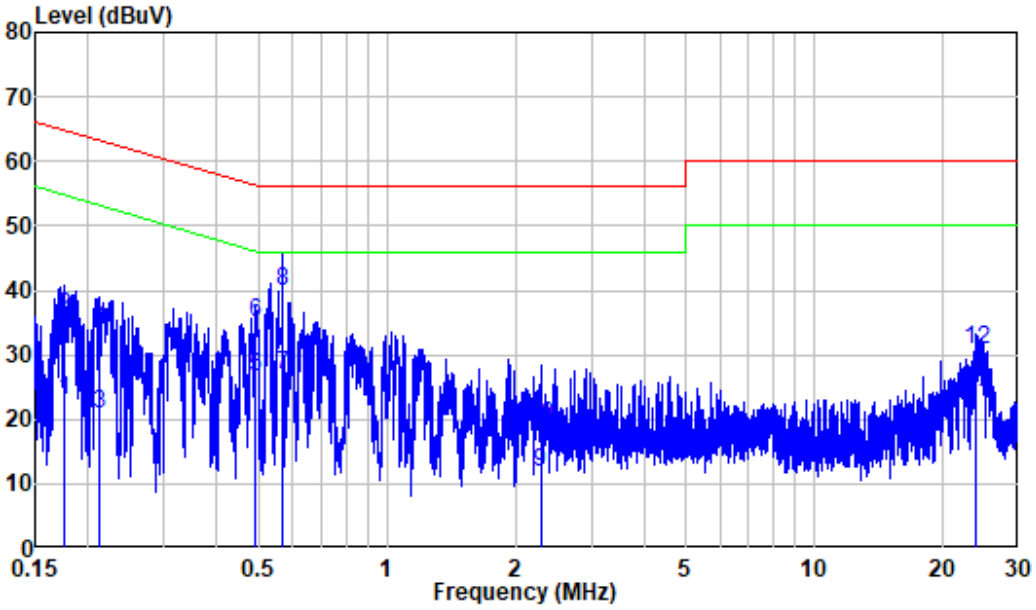
Environmental Conditions

Temperature:	24 ℃
Relative Humidity:	57 %
ATM Pressure:	101.0 kPa

The testing was performed by Caro on 2022-03-22.

EUT operation mode: Transmitting (worst case is 802.11n20, 5180MHz)

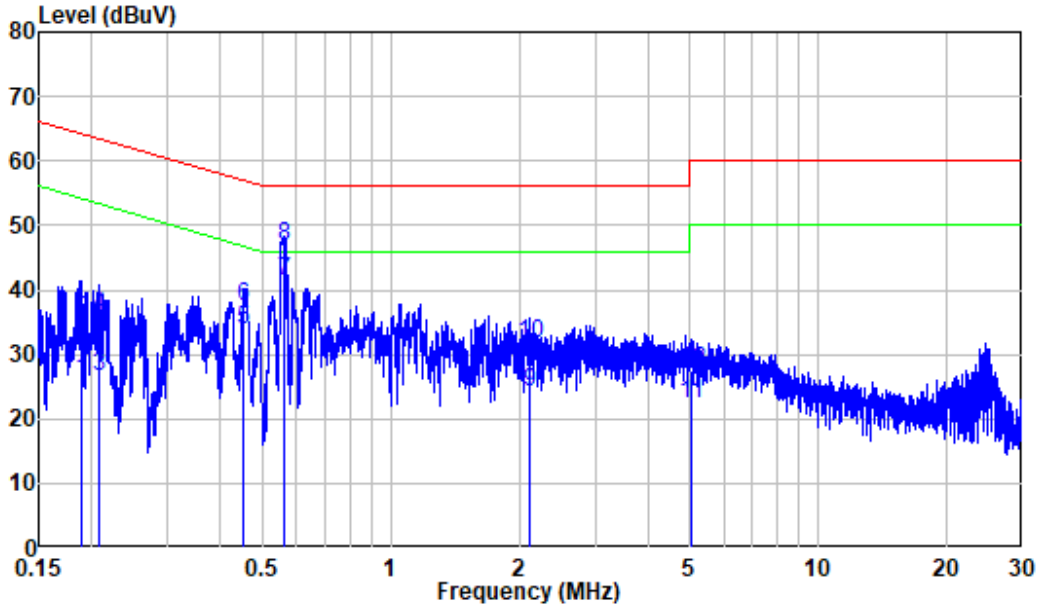
AC 120V/60 Hz, Line:



Site : Shielding Room
Condition: Line
Mode : 5G WIFI
Model : X6823
Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.175	9.80	13.21	23.01	54.70	-31.69	Average
2	0.175	9.80	26.07	35.87	64.70	-28.83	QP
3	0.212	9.80	11.10	20.90	53.13	-32.23	Average
4	0.212	9.80	24.04	33.84	63.13	-29.29	QP
5	0.492	9.80	16.81	26.61	46.13	-19.52	Average
6	0.492	9.80	25.27	35.07	56.13	-21.06	QP
7	0.569	9.81	17.14	26.95	46.00	-19.05	Average
8	0.569	9.81	29.98	39.79	56.00	-16.21	QP
9	2.283	9.82	1.81	11.63	46.00	-34.37	Average
10	2.283	9.82	9.05	18.87	56.00	-37.13	QP
11	23.904	10.04	12.22	22.26	50.00	-27.74	Average
12	23.904	10.04	20.80	30.84	60.00	-29.16	QP

AC 120V/60 Hz, Neutral:



Site : Shielding Room
Condition: Neutral
Mode : 5G WIFI
Model : X6823
Power : AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.189	9.80	16.23	26.03	54.07	-28.04	Average
2	0.189	9.80	25.61	35.41	64.07	-28.66	QP
3	0.207	9.80	16.90	26.70	53.33	-26.63	Average
4	0.207	9.80	26.27	36.07	63.33	-27.26	QP
5	0.454	9.80	24.07	33.87	46.81	-12.94	Average
6	0.454	9.80	27.50	37.30	56.81	-19.51	QP
7	0.561	9.81	31.56	41.37	46.00	-4.63	Average
8	0.561	9.81	36.89	46.70	56.00	-9.30	QP
9	2.107	9.82	14.43	24.25	46.00	-21.75	Average
10	2.107	9.82	21.76	31.58	56.00	-24.42	QP
11	5.031	9.89	12.58	22.47	50.00	-27.53	Average
12	5.031	9.89	17.64	27.53	60.00	-32.47	QP

§15.205 & §15.209 & §15.407(B)– UNDESIRABLE EMISSION

Applicable Standard

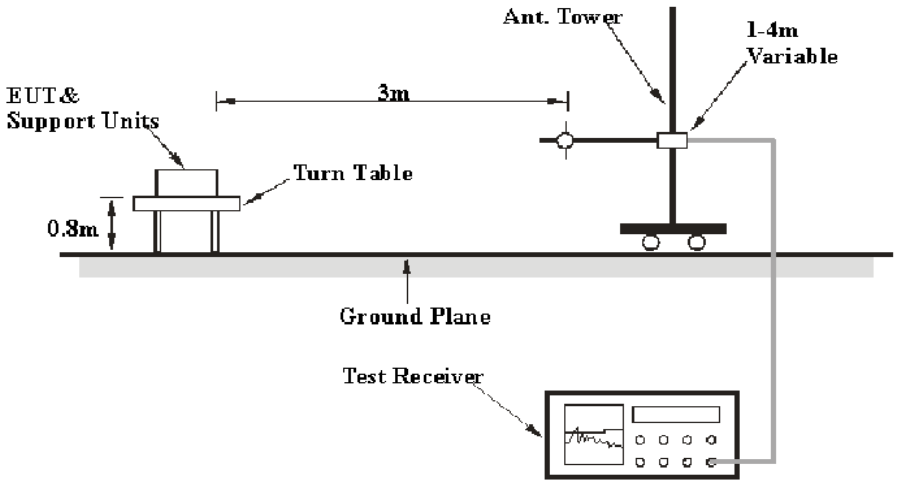
FCC §15.407 (b); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
(i) 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.

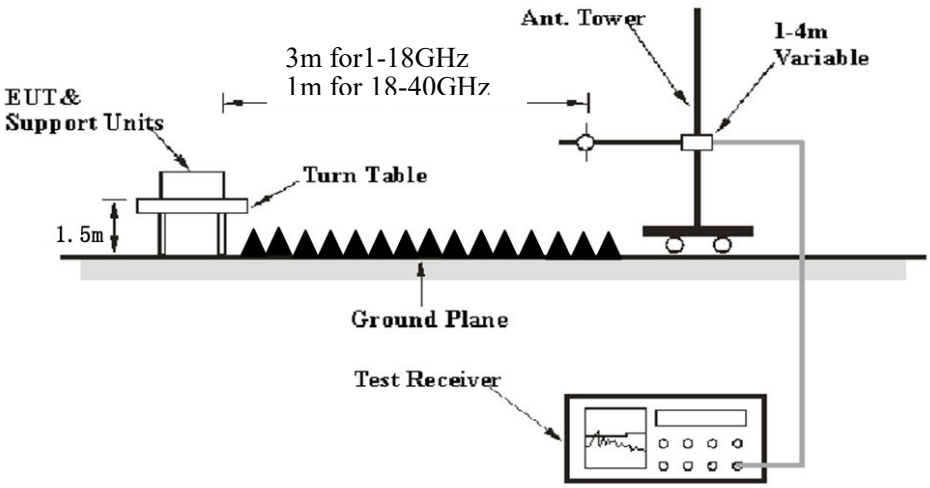
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

Below 1 GHz:



Above 1 GHz:



The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC 15.209 and FCC 15.407 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 40 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	1MHz	10 Hz Note 1	/	Average
	1MHz	＞1/T Note 2	/	Average

Note 1: when duty cycle is no less than 98%
Note 2: when duty cycle is less than 98%

Test Procedure

Radiated Spurious Emission

During the radiated emission test, the adapter was connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all the installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1GHz, peak and Average detection modes for frequencies above 1GHz.

According to ANSI C63.10-2013,9.4: For field strength measurements made at other than the distance at which the applicable limit is specified,extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance). In some cases, a different distance correction factor may be required;

$$E_{\mathrm{SpecLimit}} = E_{\mathrm{Meas}} + 20\log\left(\frac{d_{\mathrm{Meas}}}{d_{\mathrm{SpecLimit}}}\right)$$

where

$E_{\mathrm{SpecLimit}}$	is the field strength of the emission at the distance specified by the limit, in dBμV/m
E_{Meas}	is the field strength of the emission at the measurement distance, in dBμV/m
d_{Meas}	is the measurement distance, in m
$d_{\mathrm{SpecLimit}}$	is the distance specified by the limit, in m

So the extrapolation factor of 1m is 20*log(1/3)= -9.5 dB, for 18-40GHz range, the limit of 1m distance was added by 9.5dB from limit of 3m to compared with the result measurement at 1m distance.

Factor & Margin Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

Test Data

Environmental Conditions

Temperature:	19~27 ℃
Relative Humidity:	58 %
ATM Pressure:	101.0 kPa

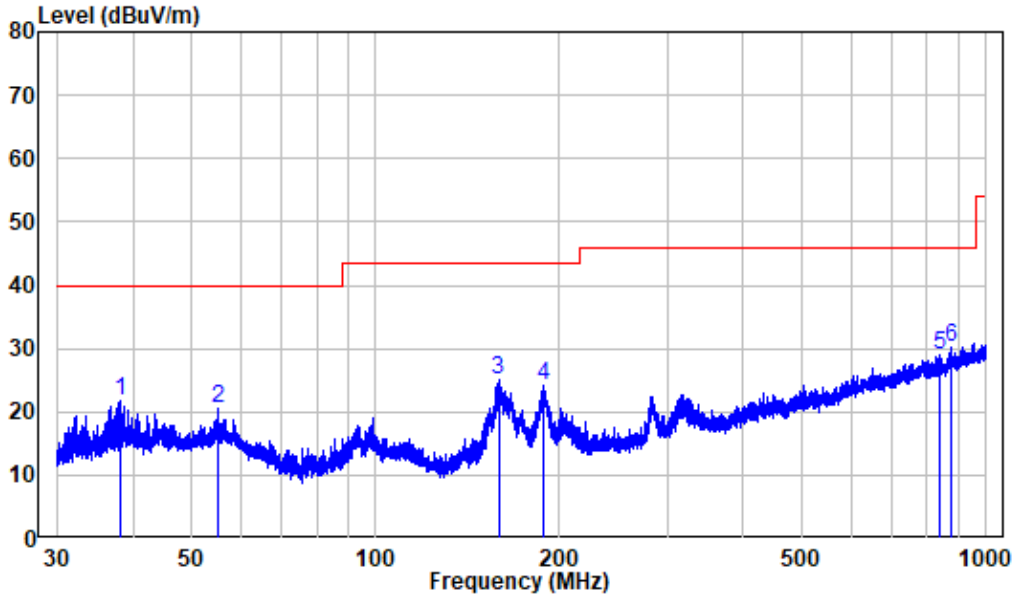
The testing was performed by Joson on 2022-03-22 for below 1GHz, Nick Fang on 2022-03-30 for above 1GHz.

EUT operation mode: Transmitting(Pre-scan in the X,Y and Z axes of orientation, the worst case X-axes of orientation was recorded)

30 MHz – 1 GHz: *(worst case is 802.11n20, 5180MHz)*

Note: When the test result of peak was less than the limit of QP more than 6dB, just peak value were recorded.

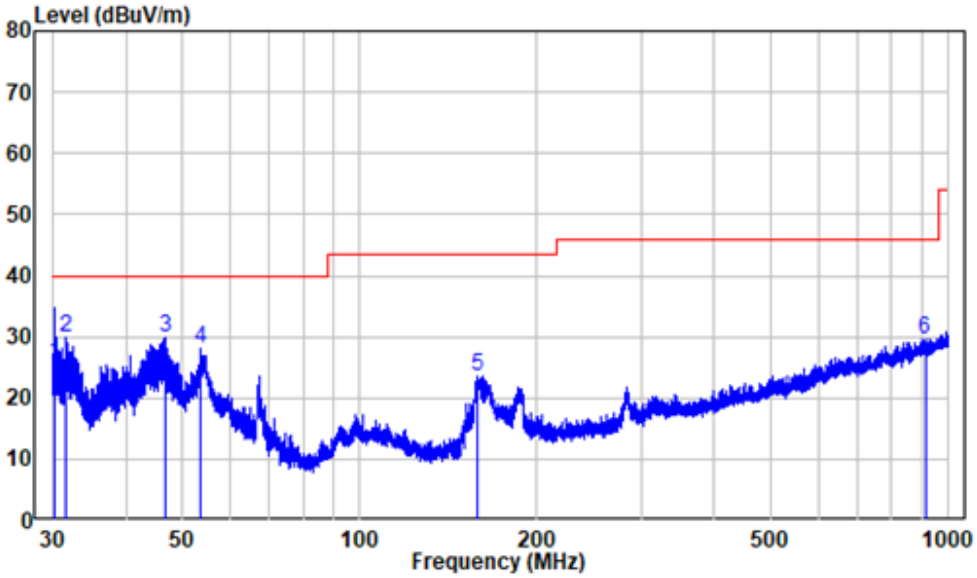
Horizontal



Site : chamber
Condition: 3m HORIZONTAL
Job No. : SZNS220221-05123E-RF
Test Mode: 5G WIFI

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	38.195	-10.77	32.52	21.75	40.00	-18.25	Peak
2	55.100	-10.28	30.84	20.56	40.00	-19.44	Peak
3	158.877	-14.37	39.41	25.04	43.50	-18.46	Peak
4	187.918	-11.83	35.89	24.06	43.50	-19.44	Peak
5	836.978	0.23	28.81	29.04	46.00	-16.96	Peak
6	876.399	1.19	28.99	30.18	46.00	-15.82	Peak

Vertical



Site : chamber
Condition: 3m VERTICAL
Job No. : SZNS220221-05123E-RF
Test Mode: 5G WIFI

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	30.198	-12.38	38.10	25.72	40.00	-14.28	QP
2	31.731	-12.21	42.07	29.86	40.00	-10.14	Peak
3	46.769	-10.00	39.97	29.97	40.00	-10.03	Peak
4	53.623	-10.27	38.27	28.00	40.00	-12.00	Peak
5	158.668	-14.40	38.06	23.66	43.50	-19.84	Peak
6	912.062	1.59	27.91	29.50	46.00	-16.50	Peak

Above 1GHz:

5150-5250 MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part 15.407	
	Reading (dBμV)	PK/QP/AV	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11a									
5180 MHz									
4500	63.10	PK	23	1.4	H	-4.72	58.38	74	-15.62
4500	50.25	AV	23	1.4	H	-4.72	45.53	54	-8.47
4500	63.01	PK	245	1.7	V	-4.72	58.29	74	-15.71
4500	50.20	AV	245	1.7	V	-4.72	45.48	54	-8.52
5150	63.26	PK	48	2.1	H	-2.73	60.53	74	-13.47
5150	50.48	AV	48	2.1	H	-2.73	47.75	54	-6.25
5150	63.15	PK	17	1.2	V	-2.73	60.42	74	-13.58
5150	50.41	AV	17	1.2	V	-2.73	47.68	54	-6.32
10360	58.59	PK	301	2.4	H	8.10	66.69	68.2	-1.51
10360	57.40	PK	146	2.4	V	8.10	65.50	68.2	-2.70
5200 MHz									
10400	57.55	PK	189	1.1	H	8.24	65.79	68.2	-2.41
10400	56.49	PK	122	1.1	V	8.24	64.73	68.2	-3.47
5240 MHz									
5350	64.49	PK	90	1.3	H	-2.33	62.16	74	-11.84
5350	51.10	AV	90	1.3	H	-2.33	48.77	54	-5.23
5350	64.34	PK	52	1.4	V	-2.33	62.01	74	-11.99
5350	51.00	AV	52	1.4	V	-2.33	48.67	54	-5.33
5460	62.92	PK	247	1	H	-2.3	60.62	74	-13.38
5460	51.03	AV	247	1	H	-2.3	48.73	54	-5.27
5460	62.84	PK	329	2	V	-2.3	60.54	74	-13.46
5460	50.91	AV	329	2	V	-2.3	48.61	54	-5.39
10480	56.75	PK	225	1.7	H	8.6	65.35	68.2	-2.85
10480	55.92	PK	119	1.7	V	8.6	64.52	68.2	-3.68

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	PK/QP/AV	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n20									
5180 MHz									
4500	63.24	PK	151	1.2	H	-4.72	58.52	74	-15.48
4500	50.31	AV	151	1.2	H	-4.72	45.59	54	-8.41
4500	63.13	PK	22	1.7	V	-4.72	58.41	74	-15.59
4500	50.22	AV	22	1.7	V	-4.72	45.50	54	-8.50
5150	63.52	PK	146	1.6	H	-2.73	60.79	74	-13.21
5150	50.56	AV	146	1.6	H	-2.73	47.83	54	-6.17
5150	63.41	PK	308	1.6	V	-2.73	60.68	74	-13.32
5150	50.47	AV	308	1.6	V	-2.73	47.74	54	-6.26
10360	58.70	PK	90	1.9	H	8.10	66.80	68.2	-1.40
10360	57.46	PK	255	1.9	V	8.10	65.56	68.2	-2.64
5200 MHz									
10400	58.17	PK	224	2.4	H	8.24	66.41	68.2	-1.79
10400	56.96	PK	91	2.4	V	8.24	65.2	68.2	-3.00
5240 MHz									
5350	64.60	PK	200	1.9	H	-2.33	62.27	74	-11.73
5350	51.15	AV	200	1.9	H	-2.33	48.82	54	-5.18
5350	64.37	PK	21	2.3	V	-2.33	62.04	74	-11.96
5350	51.04	AV	21	2.3	V	-2.33	48.71	54	-5.29
5460	63.04	PK	11	2	H	-2.3	60.74	74	-13.26
5460	51.09	AV	11	2	H	-2.3	48.79	54	-5.21
5460	62.93	PK	280	2	V	-2.3	60.63	74	-13.37
5460	51.02	AV	280	2	V	-2.3	48.72	54	-5.28
10480	57.39	PK	246	1.7	H	8.6	65.99	68.2	-2.21
10480	56.22	PK	329	1.7	V	8.6	64.82	68.2	-3.38

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	PK/QP/AV	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n40									
5190 MHz									
4500	63.21	PK	108	2.4	H	-4.72	58.49	74	-15.51
4500	50.70	AV	108	2.4	H	-4.72	45.98	54	-8.02
4500	63.09	PK	2	1.3	V	-4.72	58.37	74	-15.63
4500	50.61	AV	2	1.3	V	-4.72	45.89	54	-8.11
5150	63.11	PK	247	2	H	-2.73	60.38	74	-13.62
5150	50.95	AV	247	2	H	-2.73	48.22	54	-5.78
5150	63.02	PK	82	1.5	V	-2.73	60.29	74	-13.71
5150	50.90	AV	82	1.5	V	-2.73	48.17	54	-5.83
10380	57.94	PK	125	2.2	H	8.20	66.14	68.2	-2.06
10380	57.08	PK	221	2.2	V	8.20	65.28	68.2	-2.92
5230 MHz									
5350	64.53	PK	229	1.3	H	-2.33	62.2	74	-11.80
5350	51.55	AV	229	1.3	H	-2.33	49.22	54	-4.78
5350	64.40	PK	139	1.6	V	-2.33	62.07	74	-11.93
5350	51.44	AV	139	1.6	V	-2.33	49.11	54	-4.89
5460	63.13	PK	310	1.6	H	-2.3	60.83	74	-13.17
5460	51.48	AV	310	1.6	H	-2.3	49.18	54	-4.82
5460	63.02	PK	128	1.7	V	-2.3	60.72	74	-13.28
5460	51.41	AV	128	1.7	V	-2.3	49.11	54	-4.89
10460	56.77	PK	11	1.7	H	8.43	65.20	68.2	-3.00
10460	55.91	PK	81	1.7	V	8.43	64.34	68.2	-3.86

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	PK/QP/AV	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11ac20									
5180 MHz									
4500	63.20	PK	359	1	H	-4.72	58.48	74	-15.52
4500	50.32	AV	359	1	H	-4.72	45.60	54	-8.40
4500	63.09	PK	130	2.2	V	-4.72	58.37	74	-15.63
4500	50.25	AV	130	2.2	V	-4.72	45.53	54	-8.47
5150	63.46	PK	203	1.1	H	-2.73	60.73	74	-13.27
5150	50.48	AV	203	1.1	H	-2.73	47.75	54	-6.25
5150	63.35	PK	28	1.8	V	-2.73	60.62	74	-13.38
5150	50.41	AV	28	1.8	V	-2.73	47.68	54	-6.32
10360	58.51	PK	308	1	H	8.10	66.61	68.2	-1.59
10360	57.19	PK	11	1	V	8.10	65.29	68.2	-2.91
5200 MHz									
10400	57.87	PK	103	1.7	H	8.24	66.11	68.2	-2.09
10400	56.94	PK	114	1.7	V	8.24	65.18	68.2	-3.02
5240 MHz									
5350	64.64	PK	24	1.2	H	-2.33	62.31	74	-11.69
5350	51.19	AV	24	1.2	H	-2.33	48.86	54	-5.14
5350	64.51	PK	97	2.2	V	-2.33	62.18	74	-11.82
5350	51.08	AV	97	2.2	V	-2.33	48.75	54	-5.25
5460	63.08	PK	246	2.5	H	-2.3	60.78	74	-13.22
5460	51.03	AV	246	2.5	H	-2.3	48.73	54	-5.27
5460	62.99	PK	29	1.7	V	-2.3	60.69	74	-13.31
5460	50.94	AV	29	1.7	V	-2.3	48.64	54	-5.36
10480	57.13	PK	245	1.7	H	8.6	65.73	68.2	-2.47
10480	56.24	PK	212	1.7	V	8.6	64.84	68.2	-3.36

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11ac40									
5190 MHz									
4500	63.33	PK	238	1.8	H	-4.72	58.61	74	-15.39
4500	50.74	AV	238	1.8	H	-4.72	46.02	54	-7.98
4500	63.20	PK	62	1.7	V	-4.72	58.48	74	-15.52
4500	50.67	AV	62	1.7	V	-4.72	45.95	54	-8.05
5150	63.47	PK	71	1.5	H	-2.73	60.74	74	-13.26
5150	51.06	AV	71	1.5	H	-2.73	48.33	54	-5.67
5150	63.31	PK	246	1.7	V	-2.73	60.58	74	-13.42
5150	50.95	AV	246	1.7	V	-2.73	48.22	54	-5.78
10380	58.26	PK	161	1.6	H	8.20	66.46	68.2	-1.74
10380	57.20	PK	128	1.6	V	8.20	65.40	68.2	-2.80
5230 MHz									
5350	64.77	PK	117	2.1	H	-2.33	62.44	74	-11.56
5350	51.60	AV	117	2.1	H	-2.33	49.27	54	-4.73
5350	64.63	PK	110	1.1	V	-2.33	62.3	74	-11.70
5350	51.49	AV	110	1.1	V	-2.33	49.16	54	-4.84
5460	63.25	PK	262	1.2	H	-2.3	60.95	74	-13.05
5460	51.62	AV	262	1.2	H	-2.3	49.32	54	-4.68
5460	63.09	PK	113	1	V	-2.3	60.79	74	-13.21
5460	51.50	AV	113	1	V	-2.3	49.2	54	-4.80
10460	57.09	PK	284	1.7	H	8.43	65.52	68.2	-2.68
10460	56.18	PK	320	1.7	V	8.43	64.61	68.2	-3.59

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11ac80									
5210MHz									
4500	65.58	PK	228	2.1	H	-4.72	60.86	74	-13.14
4500	53.99	AV	228	2.1	H	-4.72	49.27	54	-4.73
4500	65.40	PK	186	2.3	V	-4.72	60.68	74	-13.32
4500	53.96	AV	186	2.3	V	-4.72	49.24	54	-4.76
5150	63.16	PK	125	1.1	H	-2.73	60.43	74	-13.57
5150	52.42	AV	125	1.1	H	-2.73	49.69	54	-4.31
5150	62.99	PK	40	1.6	V	-2.73	60.26	74	-13.74
5150	51.91	AV	40	1.6	V	-2.73	49.18	54	-4.82
5350	64.41	PK	36	1.4	H	-2.33	62.08	74	-11.92
5350	52.44	AV	36	1.4	H	-2.33	50.11	54	-3.89
5350	64.27	PK	69	2.4	V	-2.33	61.94	74	-12.06
5350	52.35	AV	69	2.4	V	-2.33	50.02	54	-3.98
5460	64.22	PK	245	1.6	H	-2.3	61.92	74	-12.08
5460	51.96	AV	245	1.6	H	-2.3	49.66	54	-4.34
5460	63.76	PK	81	2	V	-2.3	61.46	74	-12.54
5460	52.18	AV	81	2	V	-2.3	49.88	54	-4.12
10420	58.09	PK	38	1.7	H	8.32	66.41	68.2	-1.79
10420	56.92	PK	240	1.7	V	8.32	65.24	68.2	-2.96

5725-5850 MHz:

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11a									
5745 MHz									
5650	65.80	PK	118	1.5	H	-1.95	63.85	68.2	-4.35
5650	65.63	PK	33	1.7	V	-1.95	63.68	68.2	-4.52
5700	65.94	PK	358	1.6	H	-2.02	63.92	105.2	-41.28
5700	65.85	PK	28	1.3	V	-2.02	63.83	105.2	-41.37
5720	65.88	PK	115	2	H	-1.97	63.91	110.8	-46.89
5720	65.74	PK	259	2.2	V	-1.97	63.77	110.8	-47.03
5725	66.53	PK	114	1.3	H	-1.96	64.57	122.2	-57.63
5725	66.27	PK	359	2.4	V	-1.96	64.31	122.2	-57.89
11490	52.39	PK	31	2.3	H	6.63	59.02	74	-14.98
11490	46.80	AV	31	2.3	H	6.63	53.43	54	-0.57
11490	52.88	PK	218	1.4	V	6.63	59.51	74	-14.49
11490	46.91	AV	218	1.4	V	6.63	53.54	54	-0.46
5785 MHz									
11570	53.39	PK	325	2.4	H	6.59	59.98	74	-14.02
11570	47.15	AV	325	2.4	H	6.59	53.74	54	-0.26
11570	54.36	PK	356	2.1	V	6.59	60.95	74	-13.05
11570	47.29	AV	356	2.1	V	6.59	53.88	54	-0.12
5825 MHz									
5850	67.51	PK	40	2.4	H	-1.81	65.70	122.2	-56.50
5850	67.16	PK	279	1.6	V	-1.81	65.35	122.2	-56.85
5855	67.13	PK	252	1.3	H	-1.81	65.32	110.8	-45.48
5855	66.87	PK	57	1.3	V	-1.81	65.06	110.8	-45.74
5875	66.83	PK	225	1.7	H	-1.84	64.99	105.2	-40.21
5875	66.66	PK	19	2.3	V	-1.84	64.82	105.2	-40.38
5925	66.56	PK	255	1.1	H	-1.82	64.74	68.2	-3.46
5925	66.45	PK	34	2.2	V	-1.82	64.63	68.2	-3.57
11650	52.57	PK	251	1.7	H	6.67	59.24	74	-14.76
11650	46.95	AV	251	1.7	H	6.67	53.62	54	-0.38
11650	52.82	PK	218	2.4	V	6.67	59.49	74	-14.51
11650	47.07	AV	218	2.4	V	6.67	53.74	54	-0.26

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n20									
5745 MHz									
5650	65.69	PK	29	1.6	H	-1.95	63.74	68.2	-4.46
5650	65.58	PK	289	1.6	V	-1.95	63.63	68.2	-4.57
5700	65.90	PK	281	2	H	-2.02	63.88	105.2	-41.32
5700	65.79	PK	230	1.3	V	-2.02	63.77	105.2	-41.43
5720	66.24	PK	132	1.4	H	-1.97	64.27	110.8	-46.53
5720	66.09	PK	101	1.4	V	-1.97	64.12	110.8	-46.68
5725	70.91	PK	106	1.7	H	-1.96	68.95	122.2	-53.25
5725	69.40	PK	124	2.1	V	-1.96	67.44	122.2	-54.76
11490	52.31	PK	325	1.5	H	6.63	58.94	74	-15.06
11490	47.05	AV	325	1.5	H	6.63	53.68	54	-0.32
11490	53.23	PK	189	2.3	V	6.63	59.86	74	-14.14
11490	47.15	AV	189	2.3	V	6.63	53.78	54	-0.22
5785 MHz									
11570	54.39	PK	176	2.3	H	6.59	60.98	74	-13.02
11570	47.30	AV	176	2.3	H	6.59	53.89	54	-0.11
11570	54.43	PK	296	1.7	V	6.59	61.02	74	-12.98
11570	47.36	AV	296	1.7	V	6.59	53.95	54	-0.05
5825 MHz									
5850	67.66	PK	88	1	H	-1.81	65.85	122.2	-56.35
5850	67.40	PK	301	1.2	V	-1.81	65.59	122.2	-56.61
5855	66.93	PK	161	2.3	H	-1.81	65.12	110.8	-45.68
5855	66.82	PK	303	1.2	V	-1.81	65.01	110.8	-45.79
5875	66.84	PK	306	1.7	H	-1.84	65.00	105.2	-40.20
5875	66.78	PK	50	1.4	V	-1.84	64.94	105.2	-40.26
5925	66.73	PK	301	2.2	H	-1.82	64.91	68.2	-3.29
5925	66.60	PK	98	1	V	-1.82	64.78	68.2	-3.42
11650	53.24	PK	34	1.8	H	6.67	59.91	74	-14.09
11650	47.15	AV	34	1.8	H	6.67	53.82	54	-0.18
11650	52.62	PK	55	1.5	V	6.67	59.29	74	-14.71
11650	46.91	AV	55	1.5	V	6.67	53.58	54	-0.42

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11n40									
5755 MHz									
5650	65.42	PK	279	1.6	H	-1.95	63.47	68.2	-4.73
5650	65.31	PK	350	1.7	V	-1.95	63.36	68.2	-4.84
5700	65.64	PK	31	2.3	H	-2.02	63.62	105.2	-41.58
5700	65.55	PK	224	1.3	V	-2.02	63.53	105.2	-41.67
5720	66.21	PK	264	2.2	H	-1.97	64.24	110.8	-46.56
5720	66.12	PK	282	1.5	V	-1.97	64.15	110.8	-46.65
5725	67.12	PK	111	1.3	H	-1.96	65.16	122.2	-57.04
5725	66.90	PK	137	2.5	V	-1.96	64.94	122.2	-57.26
11510	52.22	PK	321	1.7	H	6.59	58.81	74	-15.19
11510	47.06	AV	321	1.7	H	6.59	53.65	54	-0.35
11510	53.16	PK	247	2	V	6.59	59.75	74	-14.25
11510	47.25	AV	247	2	V	6.59	53.84	54	-0.16
5795 MHz									
5850	67.54	PK	203	2.4	H	-1.81	65.73	122.2	-56.47
5850	67.29	PK	223	1.7	V	-1.81	65.48	122.2	-56.72
5855	67.15	PK	256	2	H	-1.81	65.34	110.8	-45.46
5855	66.96	PK	342	1.3	V	-1.81	65.15	110.8	-45.65
5875	67.06	PK	321	2.5	H	-1.84	65.22	105.2	-39.98
5875	66.90	PK	307	1.8	V	-1.84	65.06	105.2	-40.14
5925	66.68	PK	232	1.3	H	-1.82	64.86	68.2	-3.34
5925	66.56	PK	135	2.2	V	-1.82	64.74	68.2	-3.46
11590	52.56	PK	8	2	H	6.57	59.13	74	-14.87
11590	47.21	AV	8	2	H	6.57	53.78	54	-0.22
11590	52.89	PK	230	2.5	V	6.57	59.46	74	-14.54
11590	47.23	AV	230	2.5	V	6.57	53.80	54	-0.20

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11ac20									
5745 MHz									
5650	65.76	PK	352	1.6	H	-1.95	63.81	68.2	-4.39
5650	65.65	PK	225	2.5	V	-1.95	63.70	68.2	-4.50
5700	66.19	PK	263	2.4	H	-2.02	64.17	105.2	-41.03
5700	66.03	PK	309	2.4	V	-2.02	64.01	105.2	-41.19
5720	66.41	PK	97	1.4	H	-1.97	64.44	110.8	-46.36
5720	66.29	PK	48	2.3	V	-1.97	64.32	110.8	-46.48
5725	71.19	PK	198	1.7	H	-1.96	69.23	122.2	-52.97
5725	70.14	PK	300	2.3	V	-1.96	68.18	122.2	-54.02
11490	52.43	PK	52	1	H	6.63	59.06	74	-14.94
11490	46.95	AV	52	1	H	6.63	53.58	54	-0.42
11490	53.52	PK	71	2	V	6.63	60.15	74	-13.85
11490	47.12	AV	71	2	V	6.63	53.75	54	-0.25
5785 MHz									
11570	54.20	PK	205	1.2	H	6.59	60.79	74	-13.21
11570	47.18	AV	205	1.2	H	6.59	53.77	54	-0.23
11570	54.35	PK	320	1.5	V	6.59	60.94	74	-13.06
11570	47.30	AV	320	1.5	V	6.59	53.89	54	-0.11
5825 MHz									
5850	67.86	PK	84	1.1	H	-1.81	66.05	122.2	-56.15
5850	67.63	PK	38	1.6	V	-1.81	65.82	122.2	-56.38
5855	67.14	PK	197	1.7	H	-1.81	65.33	110.8	-45.47
5855	67.02	PK	212	2.2	V	-1.81	65.21	110.8	-45.59
5875	67.08	PK	27	2.5	H	-1.84	65.24	105.2	-39.96
5875	66.90	PK	211	1.4	V	-1.84	65.06	105.2	-40.14
5925	66.78	PK	64	1.4	H	-1.82	64.96	68.2	-3.24
5925	66.62	PK	294	1.6	V	-1.82	64.80	68.2	-3.40
11650	53.55	PK	101	2.2	H	6.67	60.22	74	-13.78
11650	47.12	AV	101	2.2	H	6.67	53.79	54	-0.21
11650	52.94	PK	263	2.3	V	6.67	59.61	74	-14.39
11650	46.97	AV	263	2.3	V	6.67	53.64	54	-0.36

Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11ac40									
5755 MHz									
5650	65.57	PK	181	2.1	H	-1.95	63.62	68.2	-4.58
5650	65.48	PK	228	2	V	-1.95	63.53	68.2	-4.67
5700	65.79	PK	34	1.7	H	-2.02	63.77	105.2	-41.43
5700	65.70	PK	56	1.9	V	-2.02	63.68	105.2	-41.52
5720	66.45	PK	69	2.2	H	-1.97	64.48	110.8	-46.32
5720	66.31	PK	218	1.1	V	-1.97	64.34	110.8	-46.46
5725	67.27	PK	45	1.7	H	-1.96	65.31	122.2	-56.89
5725	67.07	PK	255	1.2	V	-1.96	65.11	122.2	-57.09
11510	52.53	PK	69	1.3	H	6.59	59.12	74	-14.88
11510	47.15	AV	69	1.3	H	6.59	53.74	54	-0.26
11510	53.46	PK	23	1.3	V	6.59	60.05	74	-13.95
11510	47.28	AV	23	1.3	V	6.59	53.87	54	-0.13
5795 MHz									
5850	67.82	PK	356	1.6	H	-1.81	66.01	122.2	-56.19
5850	67.60	PK	160	1.1	V	-1.81	65.79	122.2	-56.41
5855	67.36	PK	344	1.8	H	-1.81	65.55	110.8	-45.25
5855	67.16	PK	46	1.2	V	-1.81	65.35	110.8	-45.45
5875	67.13	PK	12	1.3	H	-1.84	65.29	105.2	-39.91
5875	66.98	PK	75	1.9	V	-1.84	65.14	105.2	-40.06
5925	66.72	PK	226	1.1	H	-1.82	64.90	68.2	-3.30
5925	66.58	PK	28	1.6	V	-1.82	64.76	68.2	-3.44
11590	52.48	PK	234	1	H	6.57	59.05	74	-14.95
11590	47.22	AV	234	1	H	6.57	53.79	54	-0.21
11590	52.75	PK	153	2.3	V	6.57	59.32	74	-14.68
11590	47.25	AV	153	2.3	V	6.57	53.82	54	-0.18

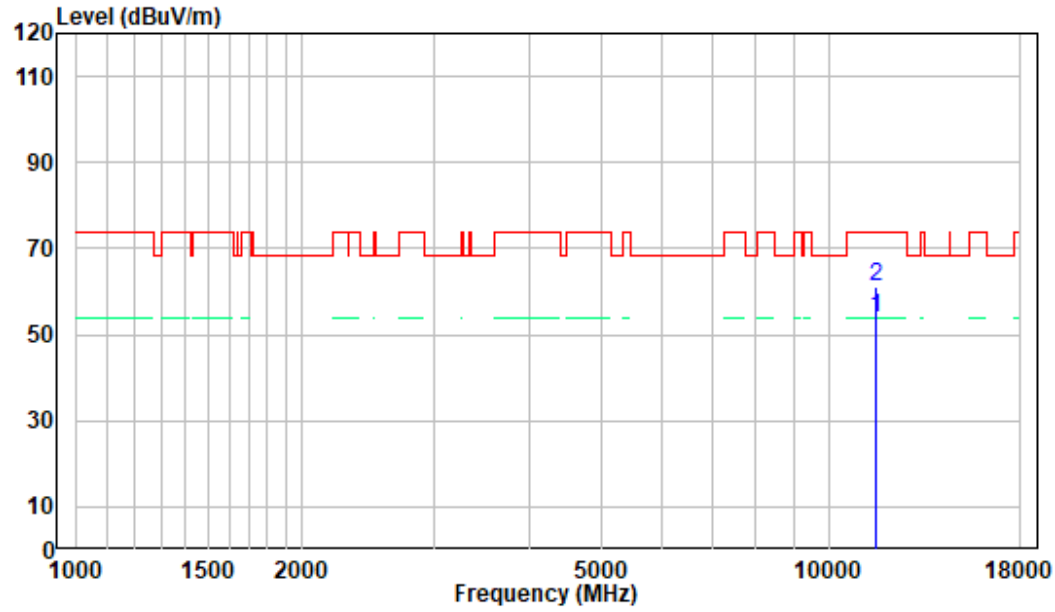
Frequency (MHz)	Receiver		Turn-Table	Rx Antenna		Corrected Factor (dB/m)	Corrected Amplitude (dBμV/m)	FCC Part15.407	
	Reading (dBμV)	Detector (PK/QP/AV)	Angle Degree	Height (m)	Polar (H / V)			Limit (dBμV/m)	Margin (dB)
802.11ac80									
5775 MHz									
5650	65.69	PK	25	1.4	H	-1.95	63.74	68.2	-4.46
5650	65.58	PK	25	1.6	V	-1.95	63.63	68.2	-4.57
5700	65.70	PK	186	1.3	H	-2.02	63.68	105.2	-41.52
5700	65.58	PK	302	1.8	V	-2.02	63.56	105.2	-41.64
5720	66.23	PK	31	1.8	H	-1.97	64.26	110.8	-46.54
5720	66.08	PK	323	1.5	V	-1.97	64.11	110.8	-46.69
5725	66.83	PK	70	2.3	H	-1.96	64.87	122.2	-57.33
5725	66.63	PK	201	2	V	-1.96	64.67	122.2	-57.53
5850	67.16	PK	118	2.4	H	-1.81	65.35	122.2	-56.85
5850	66.94	PK	353	1.9	V	-1.81	65.13	122.2	-57.07
5855	66.87	PK	93	2.2	H	-1.81	65.06	110.8	-45.74
5855	66.72	PK	96	2	V	-1.81	64.91	110.8	-45.89
5875	66.96	PK	271	1.9	H	-1.84	65.12	105.2	-40.08
5875	66.84	PK	241	2.1	V	-1.84	65.00	105.2	-40.20
5925	66.65	PK	165	2.2	H	-1.82	64.83	68.2	-3.37
5925	66.56	PK	218	2.1	V	-1.82	64.74	68.2	-3.46
11550	52.34	PK	149	2.1	H	6.61	58.95	74	-15.05
11550	47.16	AV	149	2.1	H	6.61	53.77	54	-0.23
11550	52.97	PK	278	1	V	6.61	59.58	74	-14.42
11550	47.25	AV	278	1	V	6.61	53.86	54	-0.14

Note:
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Corrected Factor + Reading
Margin = Corrected. Amplitude - Limit
The other spurious emission which is in the noise floor level was not recorded.

1 GHz - 18 GHz: (Pre-Scan plots)

802.11 n20, 5785MHz

Horizontal



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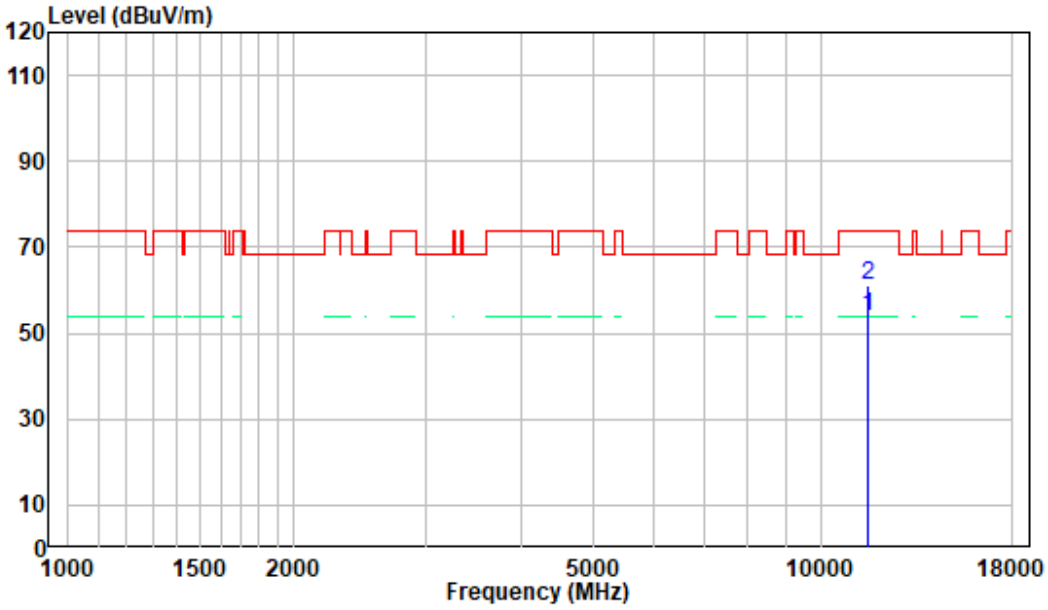
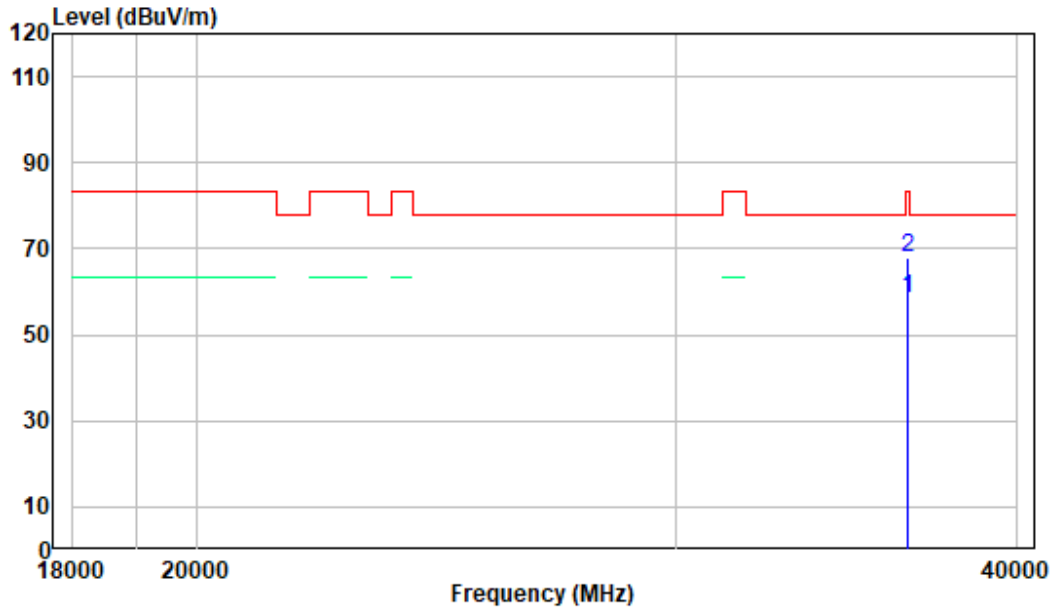


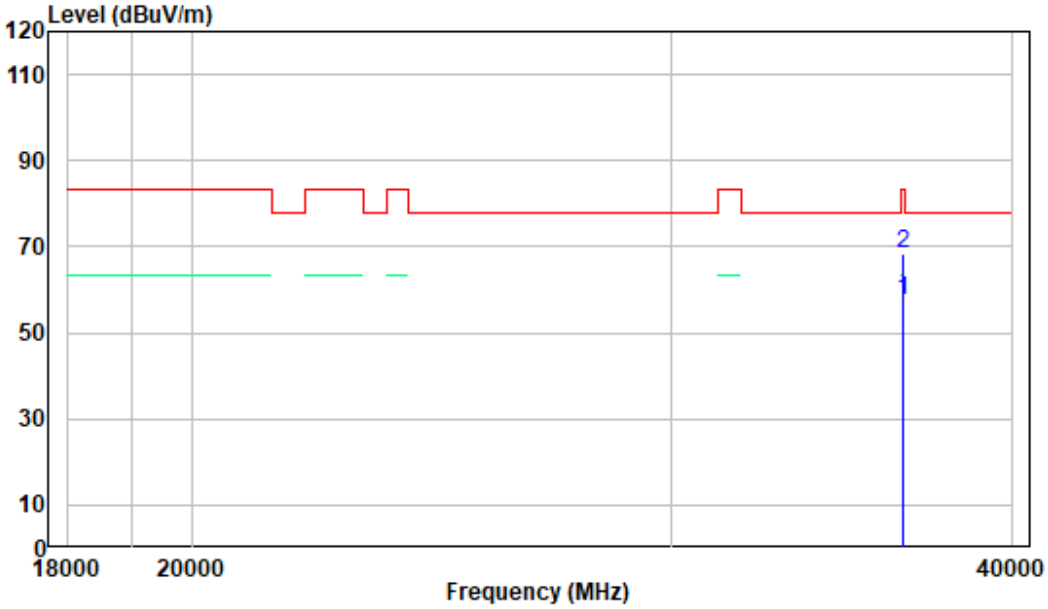
18-40GHz: (Pre-Scan plots)

802.11 n20, 5785MHz

Horizontal



Vertical



FCC §15.407(a),(e) – 26 dB & 6dB EMISSION BANDWIDTH

Applicable Standard

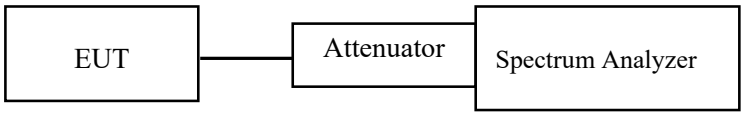
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

1. Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

2. **Minimum Emission Bandwidth for the band 5.725-5.85 GHz**
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 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.



Test Data

Environmental Conditions

Temperature:	26.8 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Key Pei on 2022-04-05 and 2022-04-18.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

FCC §15.407(a) – CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

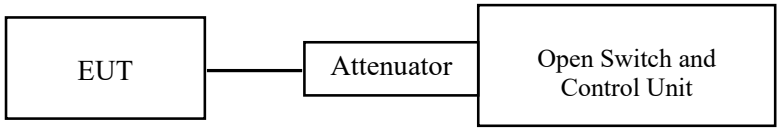
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

c. Place the EUT on a bench and set it in transmitting mode.

d. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.

e. Add a correction factor to the display.



Note: the Open Switch and Control Unit has a built-in power sensor.

Test Data

Environmental Conditions

Temperature:	26.8 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Key Pei on 2022-04-05

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

FCC §15.407(a) - POWER SPECTRAL DENSITY

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

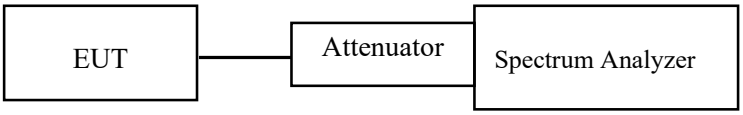
For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

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 $\geqslant$ 1/T, where T is defined in section II.B.l.a).
b) Set VBW $\geqslant$ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/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 10 log (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.



Test Data

Environmental Conditions

Temperature:	26.8 ℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Key Pei on 2022-04-05

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the Appendix.

APPENDIX

Appendix A: Emission Bandwidth

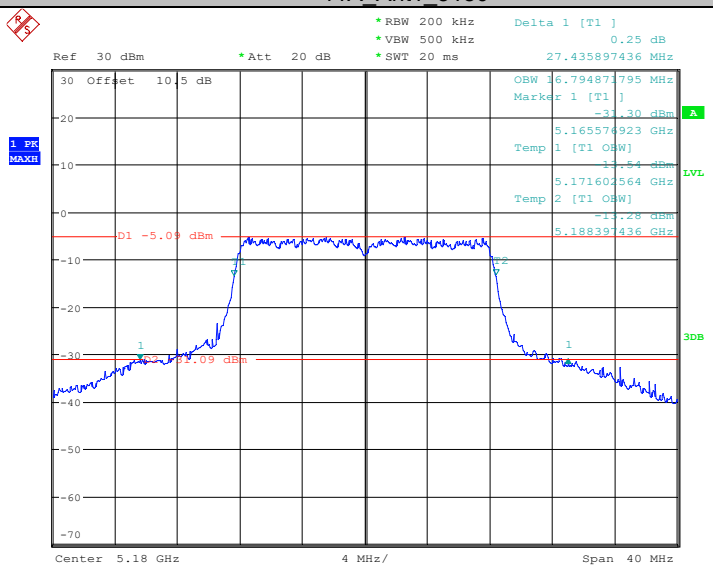
5150 MHz - 5250 MHz:

Frequency (MHz)	Antenna Port	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Remark
802.11a				No transmitted signal in the 99% bandwidth extends into the U-NII-2A band
5180	Ant1	27.436	16.795	
5200	Ant1	28.077	16.795	
5240	Ant1	28.462	16.859	
802.11n20				
5180	Ant1	31.474	17.821	
5200	Ant1	30.897	17.885	
5240	Ant1	30.705	17.821	
802.11n40				
5190	Ant1	51.538	36.410	
5230	Ant1	48.077	36.282	
802.11ac20				
5180	Ant1	33.205	17.885	
5200	Ant1	32.308	17.885	
5240	Ant1	33.462	17.885	
802.11ac40				
5190	Ant1	48.333	36.410	
5230	Ant1	47.564	36.282	
802.11ac80				
5210	Ant1	87.949	75.641	

5725 MHz – 5850 MHz:

Frequency (MHz)	Antenna Port	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)	Remark
802.11a					No transmitted signal in the 99% bandwidth extends into the U-NII-2A band
5745	Ant1	16.410	17.115	0.5	
5785	Ant1	16.410	17.051	0.5	
5825	Ant1	16.474	17.115	0.5	
802.11n20					
5745	Ant1	17.500	18.077	0.5	
5785	Ant1	17.500	18.013	0.5	
5825	Ant1	17.500	18.013	0.5	
802.11n40					
5755	Ant1	36.154	36.282	0.5	
5795	Ant1	36.538	36.410	0.5	
802.11ac20					
5745	Ant1	17.500	17.949	0.5	
5785	Ant1	17.564	18.013	0.5	
5825	Ant1	17.500	18.013	0.5	
802.11ac40					
5755	Ant1	36.026	36.410	0.5	
5795	Ant1	36.026	36.282	0.5	
11ac80					
5775	Ant1	75.897	75.897	0.5	

11A_Ant1_5180



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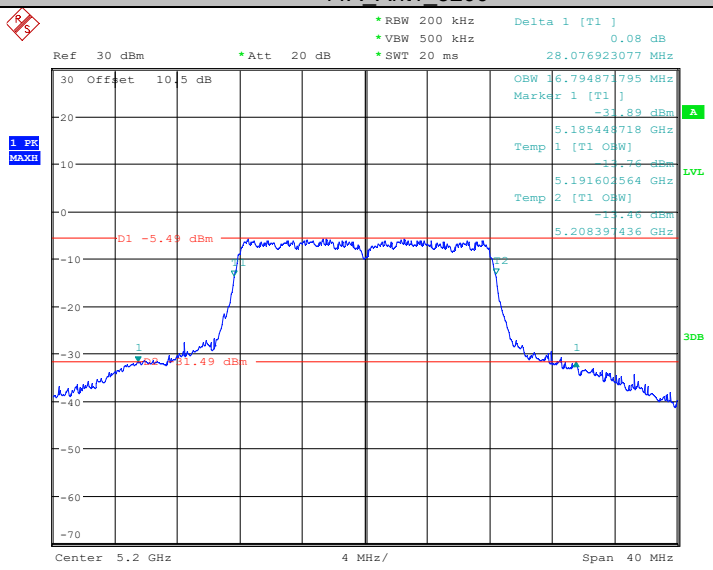
11A_Ant1_5200



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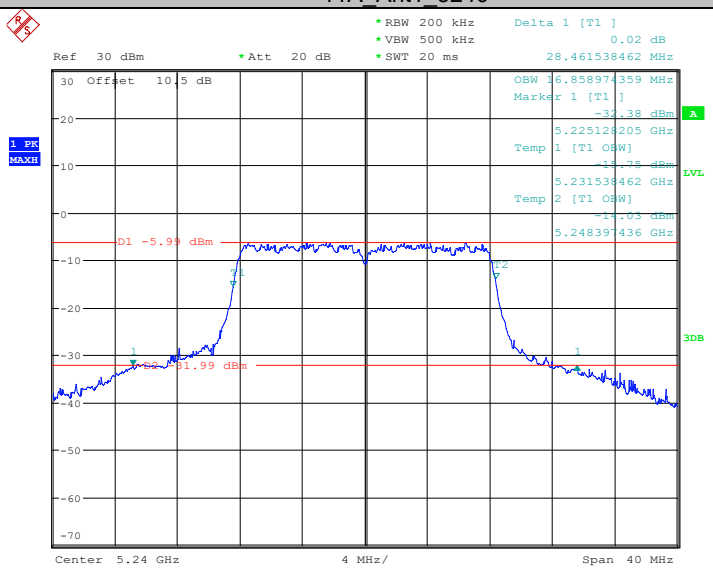
11A_Ant1_5240



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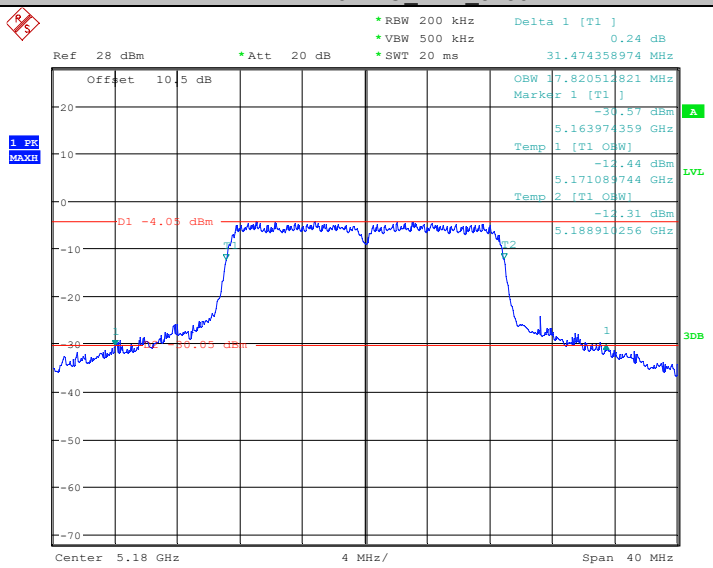
11N20SISO_Ant1_5180



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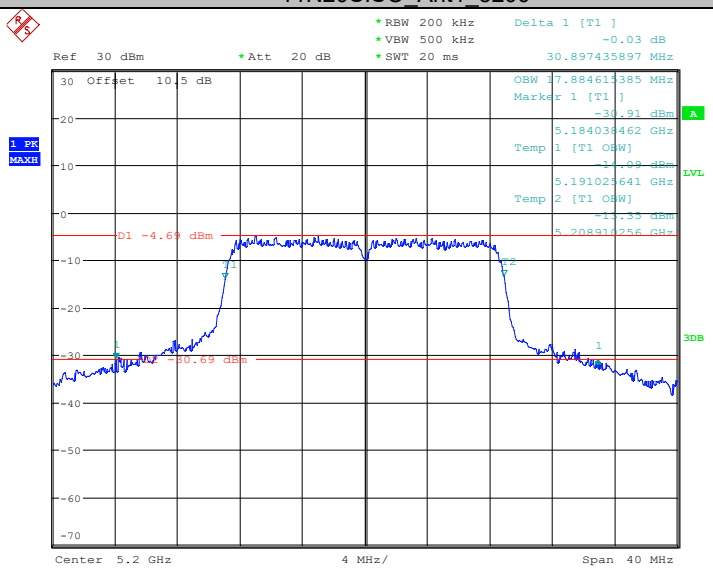

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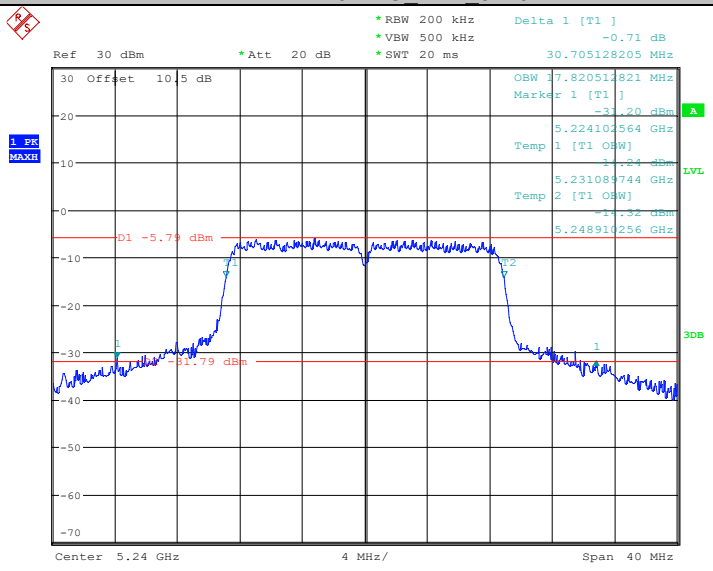

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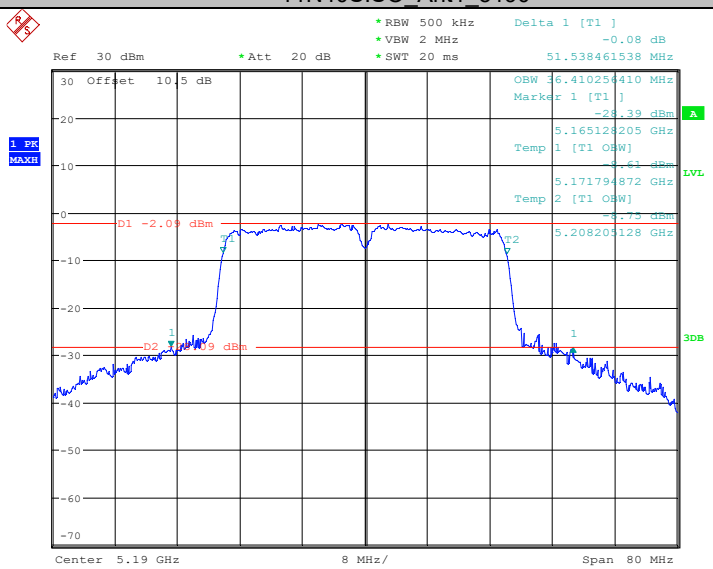
11N40SISO_Ant1_5190



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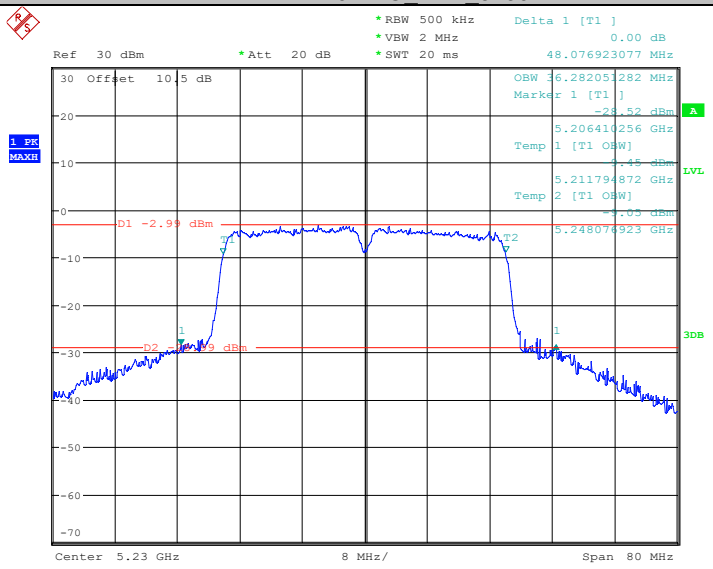

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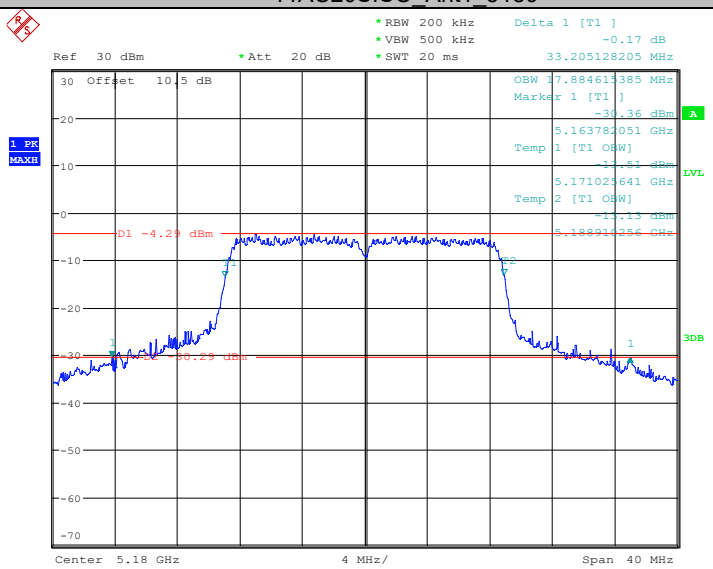

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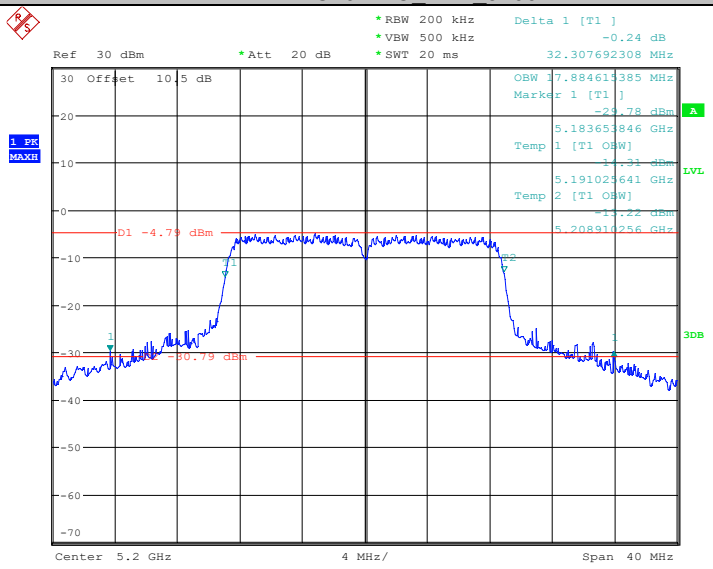

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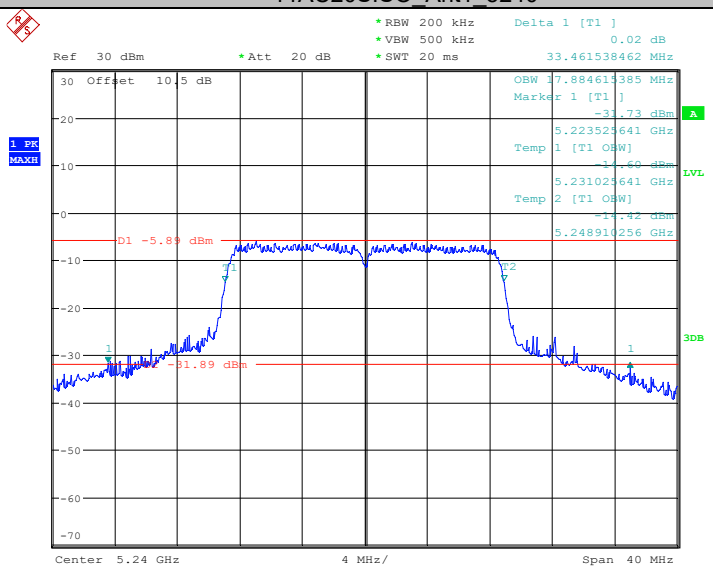

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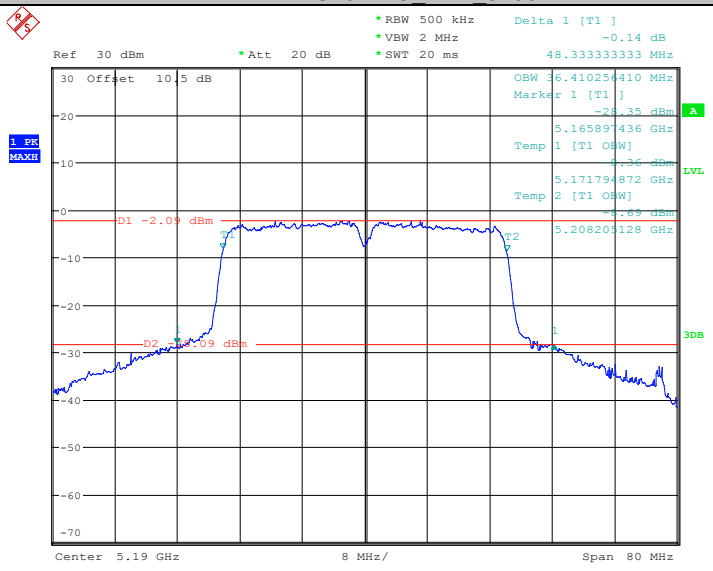

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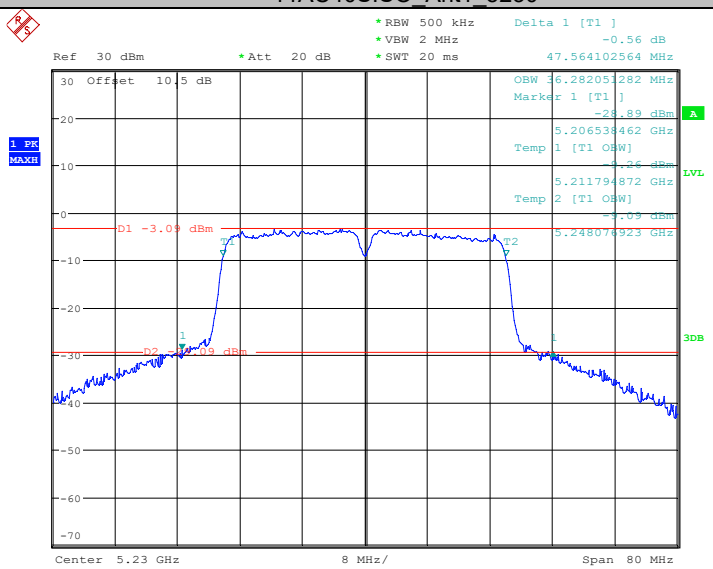

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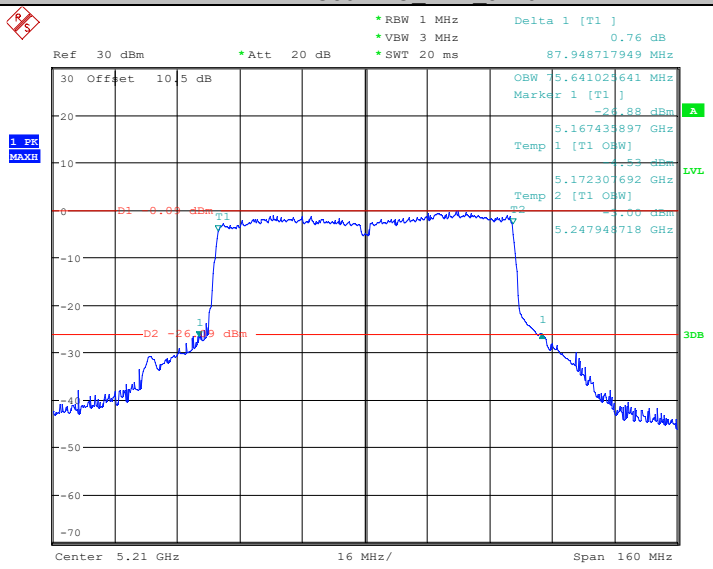

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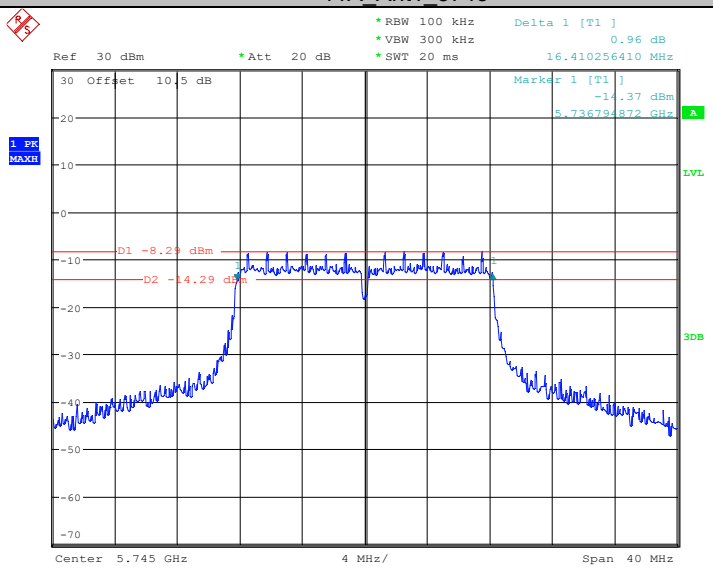
11A_Ant1_5745



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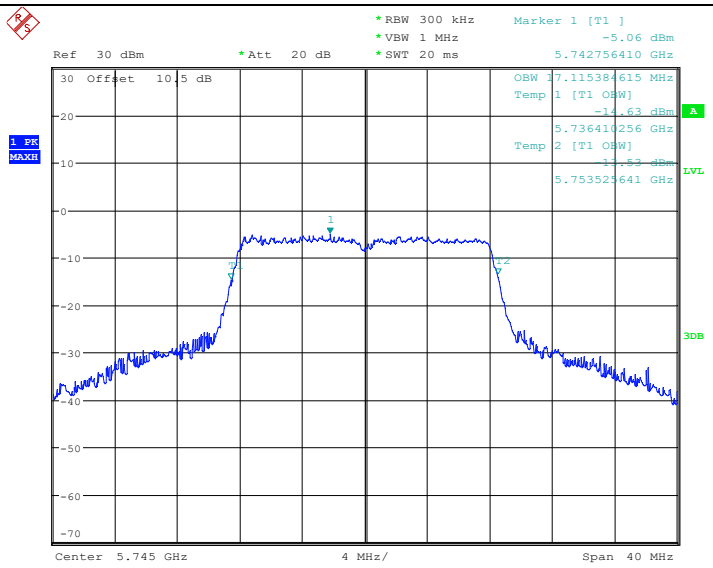

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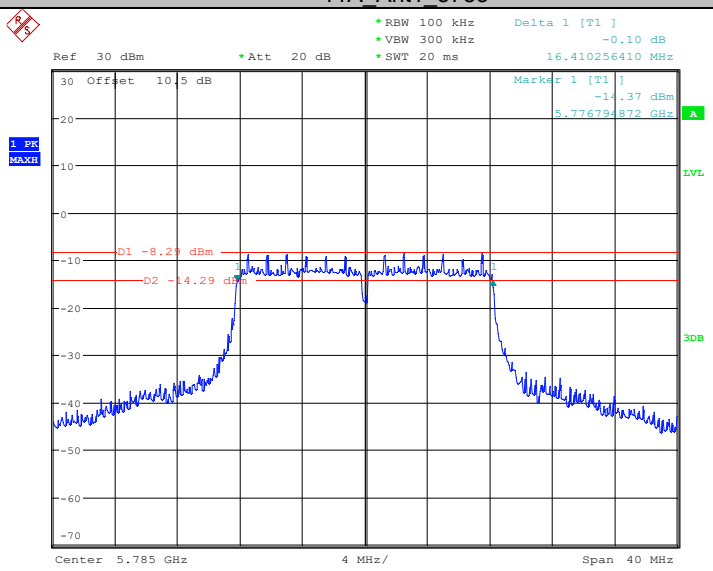
11A_Ant1_5785



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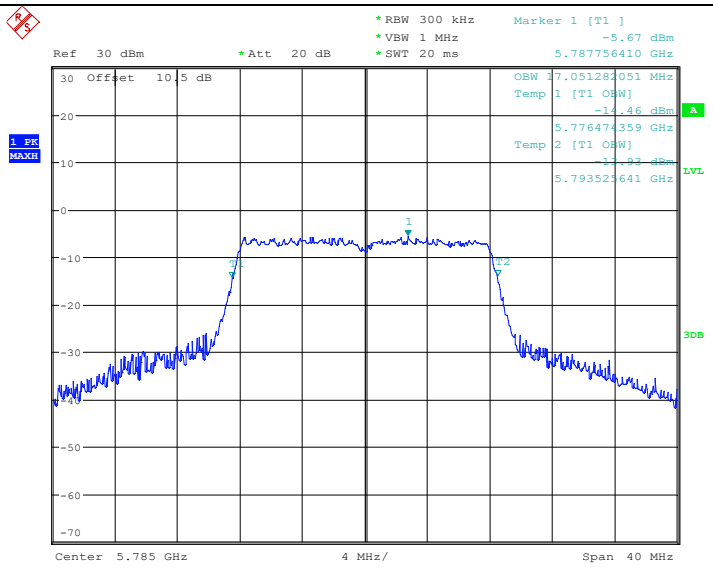

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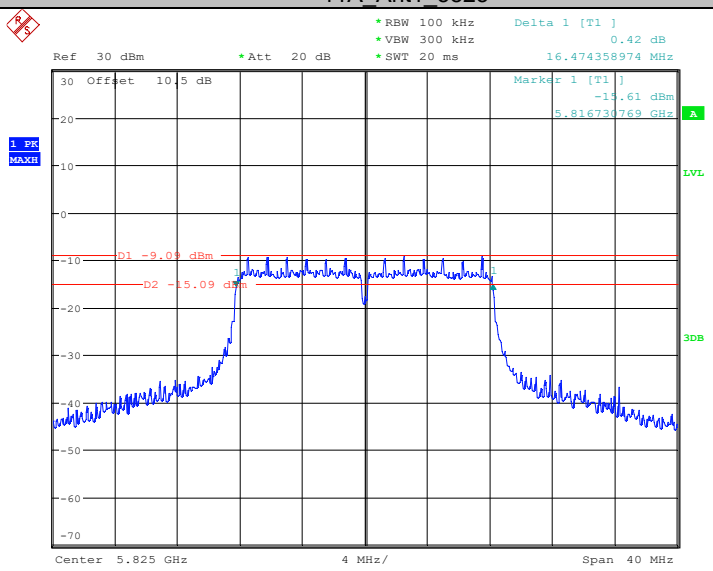
11A_Ant1_5825



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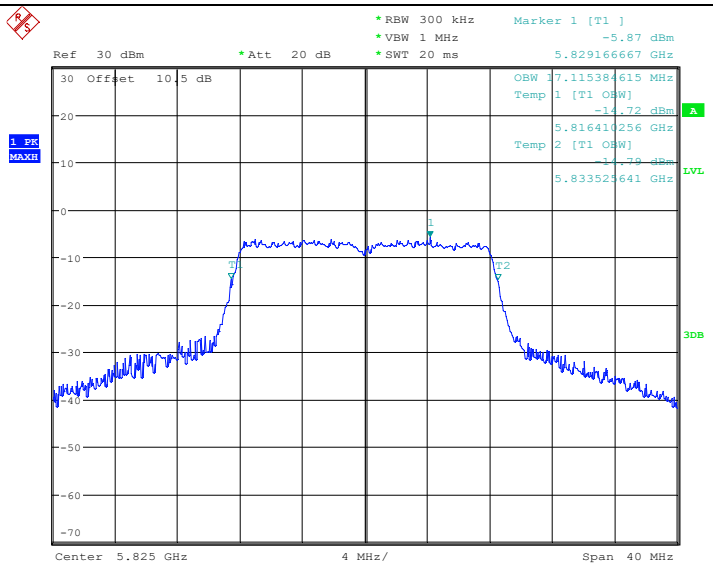

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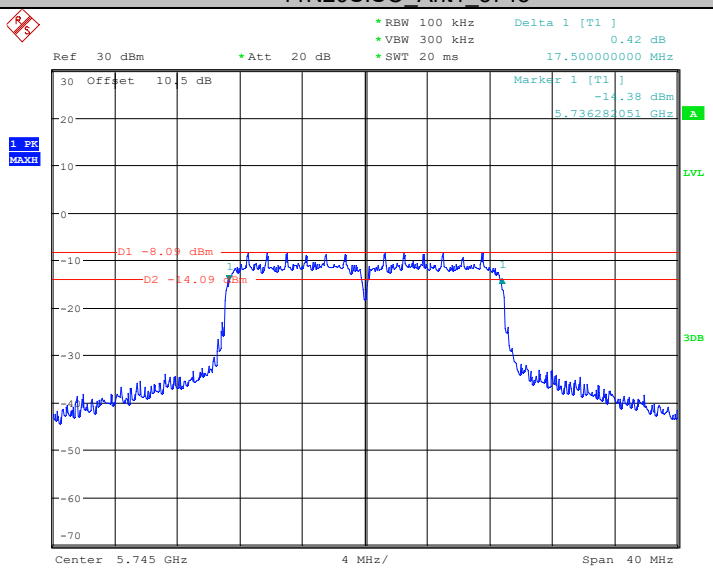

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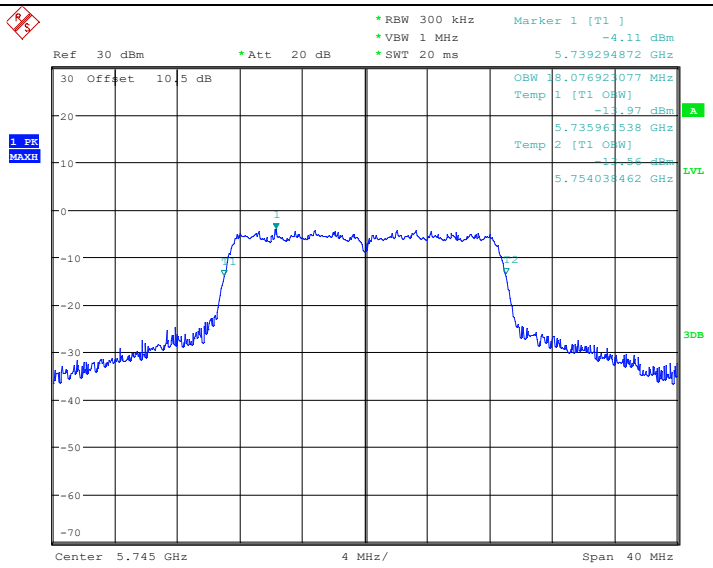

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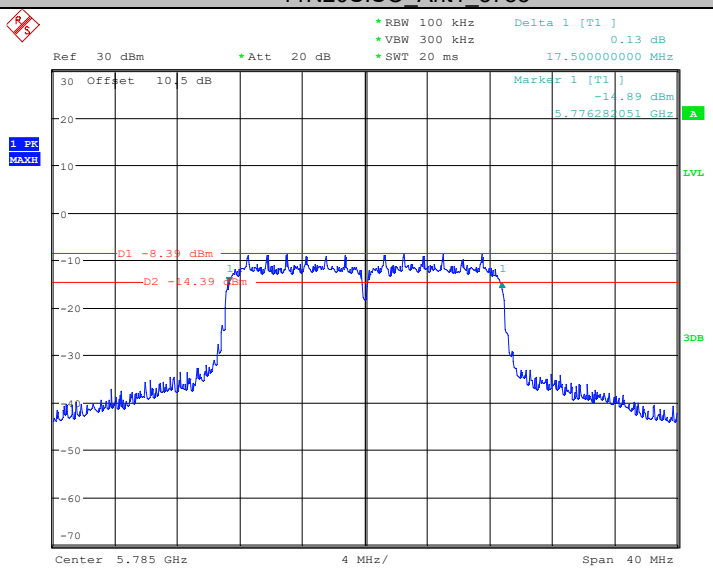

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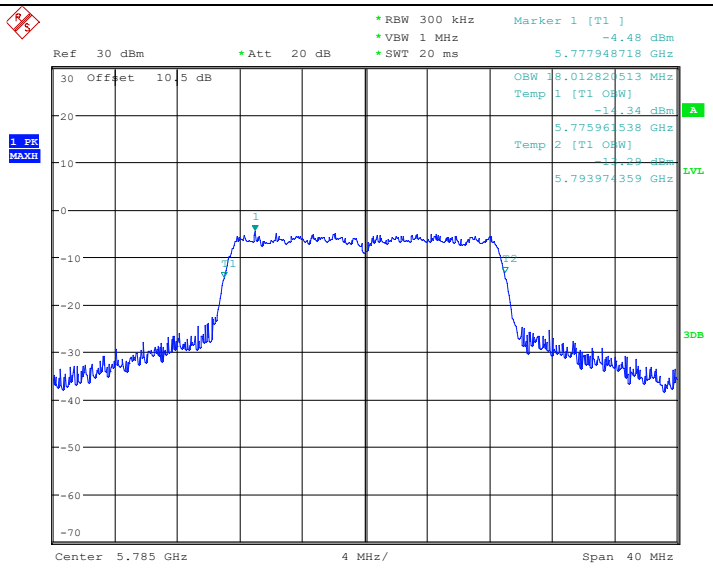

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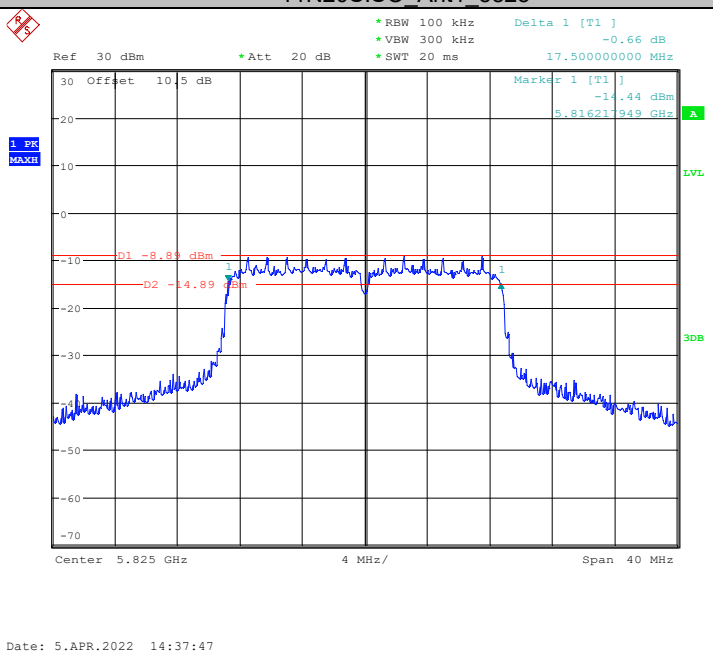

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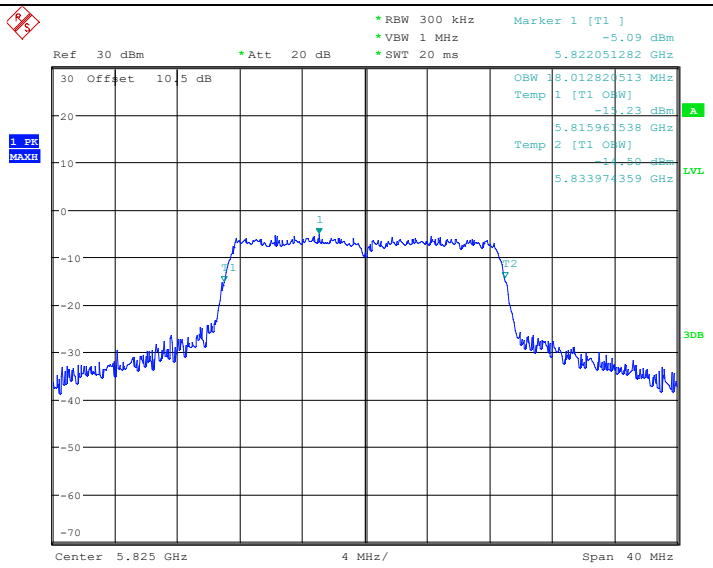

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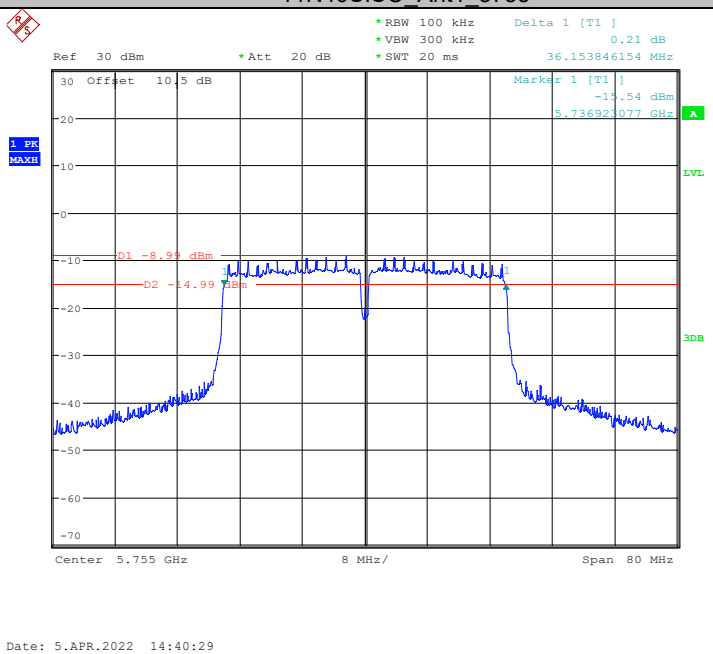

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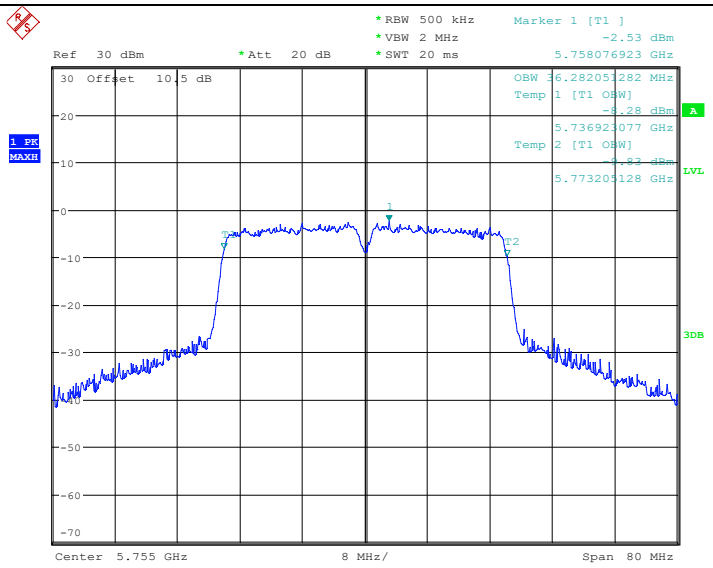

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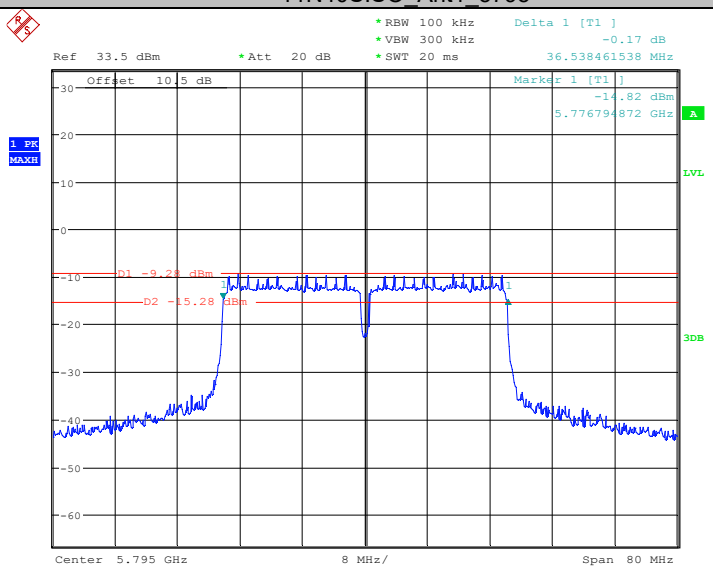

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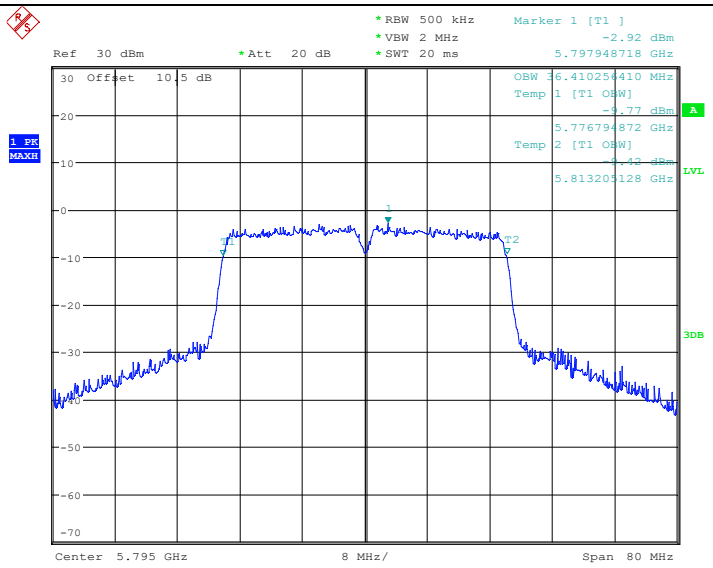

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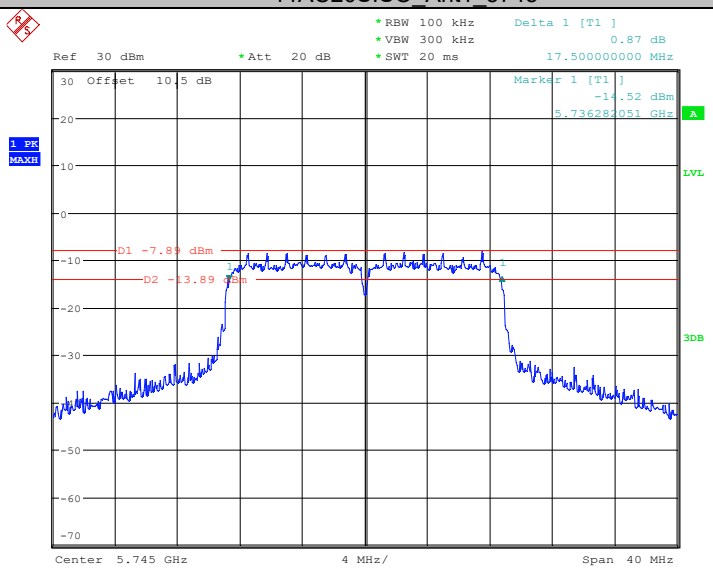

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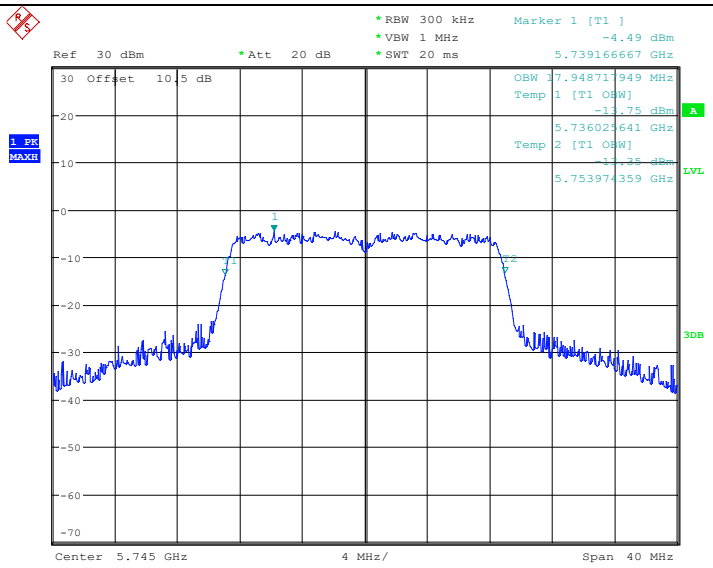

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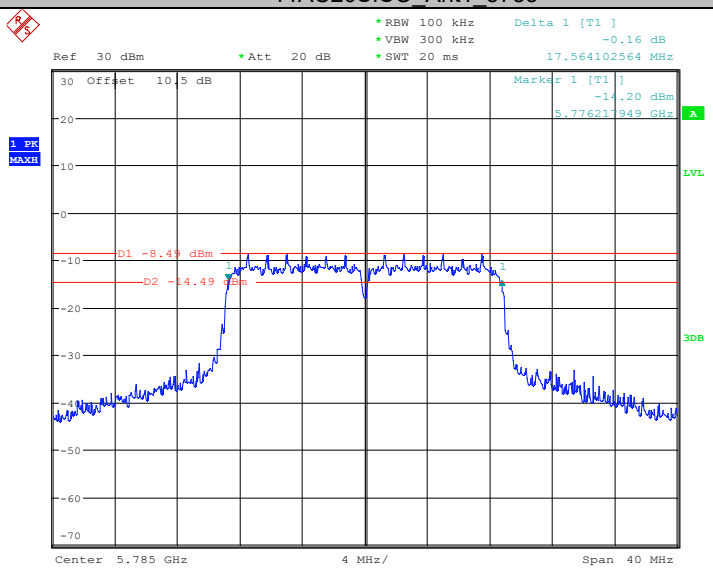

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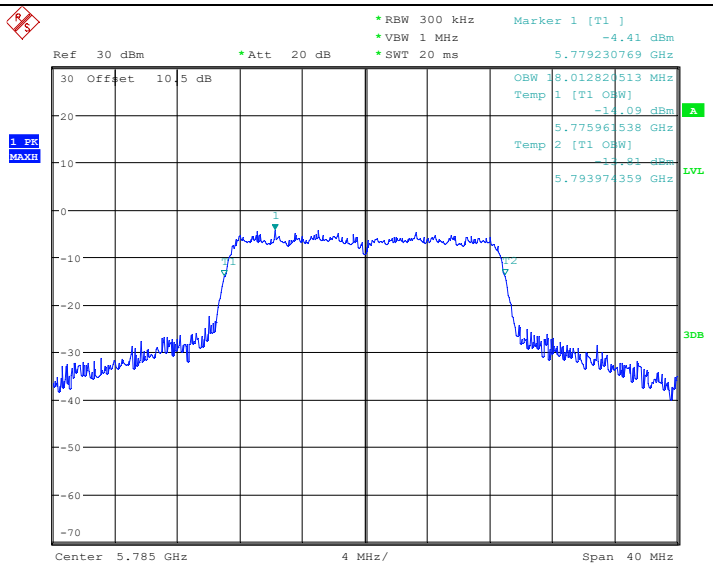

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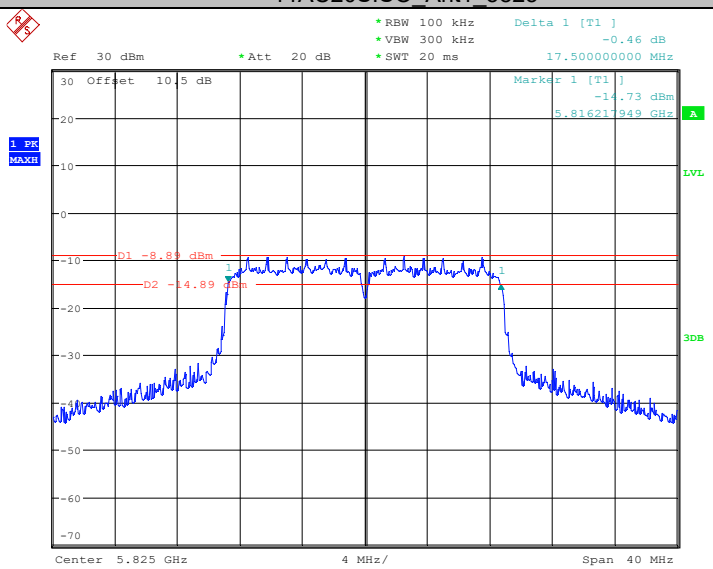

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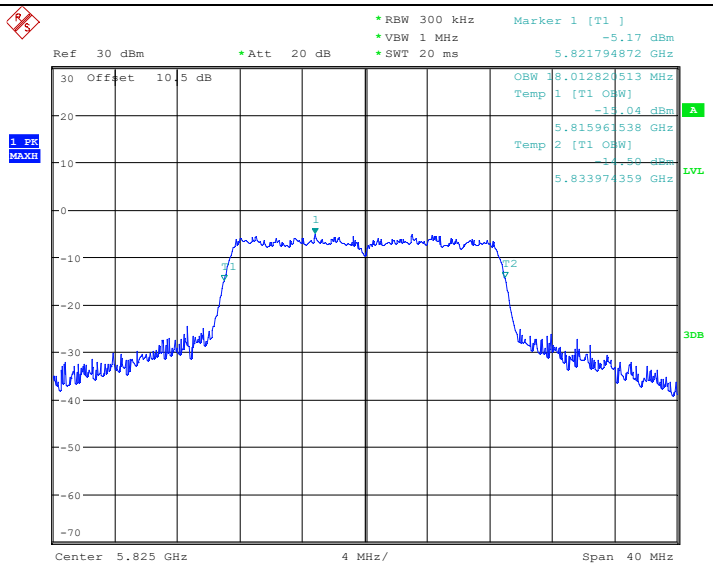

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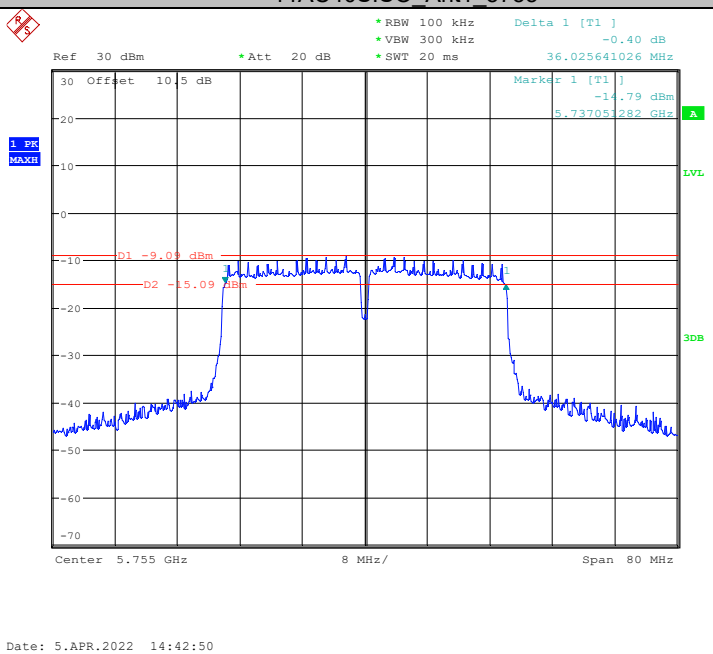

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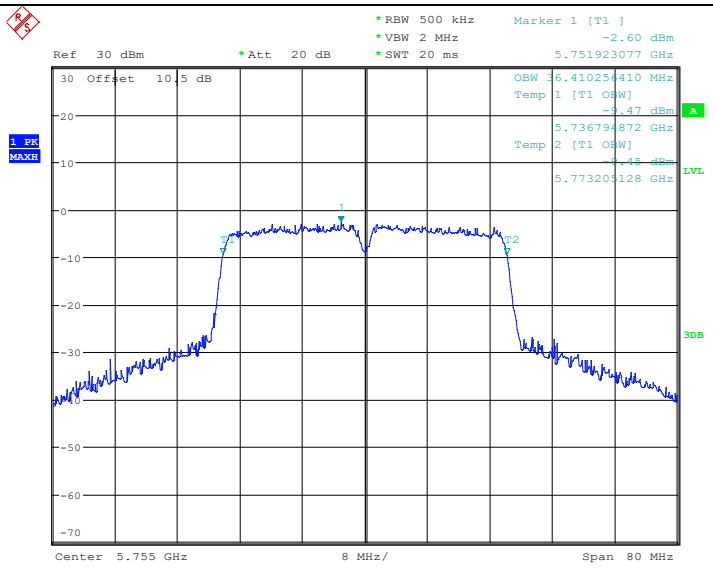

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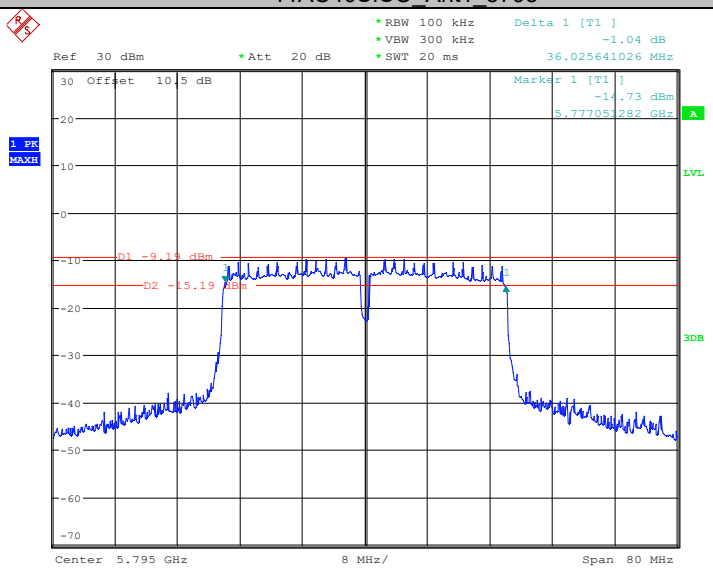

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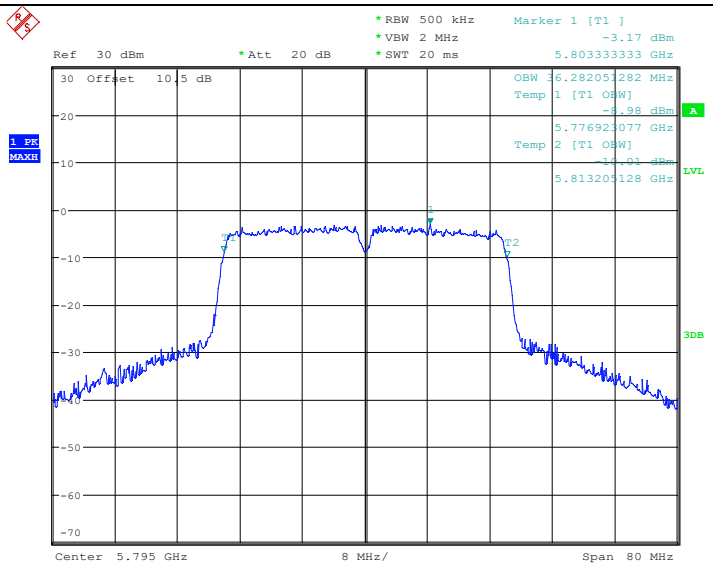

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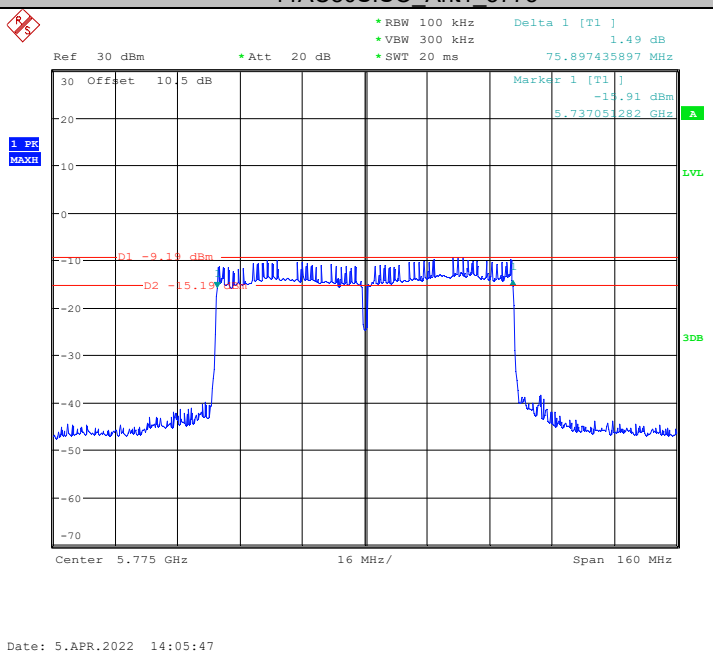

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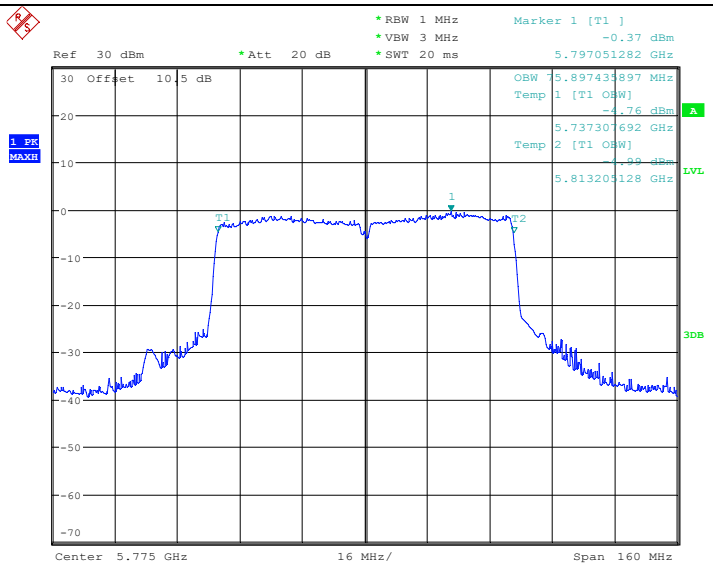


Date: 5.APR.2022 14:07:58

Appendix B: Maximum conducted output power
Test Result

5150 MHz – 5250 MHz

Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
802.11a		
5180	6.83	24
5200	6.72	
5240	6.46	
802.11n20		
5180	7.09	24
5200	6.67	
5240	6.42	
802.11n40		
5190	6.34	24
5230	6.18	
802.11ac20		
5180	6.79	24
5200	6.64	
5240	6.49	
802.11ac40		
5190	6.35	24
5230	6.04	
802.11ac80		
5210	6.17	24

5725 MHz – 5850 MHz:

Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
802.11a		
5745	5.68	30
5785	5.52	
5825	5.37	
802.11n20		
5745	5.63	30
5785	5.46	
5825	5.31	
802.11n40		
5755	5.28	30
5795	5.05	
802.11ac20		
5745	5.58	30
5785	5.54	
5825	5.35	
802.11ac40		
5755	5.23	30
5795	5.11	
802.11ac80		
5775	5.09	30

Appendix C: Maximum power spectral density

Test Result

5150 MHz – 5250 MHz:

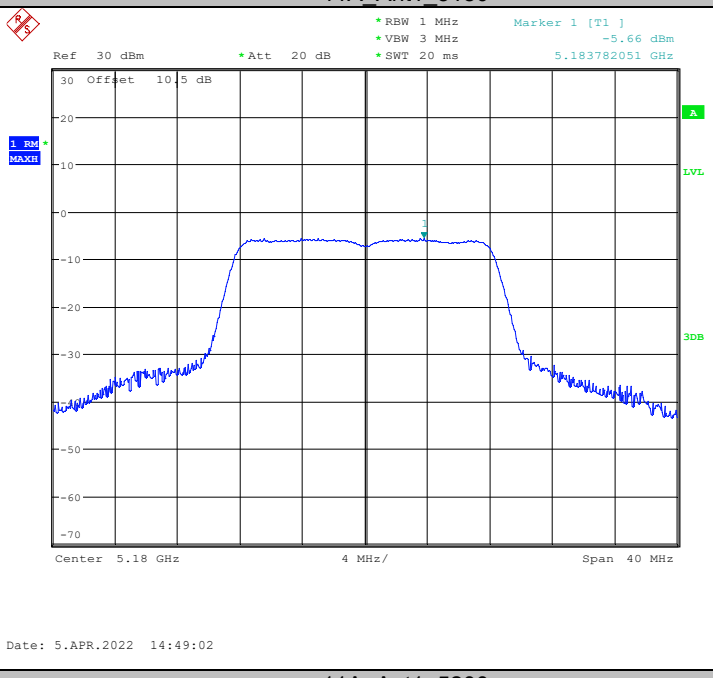
Frequency (MHz)	Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)
802.11a		
5180	-5.66	11
5200	-5.94	
5240	-7.17	
802.11n20		
5180	-5.22	11
5200	-6.00	
5240	-7.25	
802.11n40		
5190	-8.63	11
5230	-9.46	
802.11ac20		
5180	-5.59	11
5200	-6.05	
5240	-7.10	
802.11ac40		
5190	-8.38	11
5230	-9.46	
802.11ac80		
5210	-9.31	11

5725 MHz – 5850MHz:

Frequency (MHz)	Power Spectral Density (dBm/500kHz)	Limit (dBm/500kHz)
802.11a		
5745	-9.38	30
5785	-10.23	
5825	-10.32	
802.11n20		
5745	-9.46	30
5785	-9.95	
5825	-10.55	
802.11n40		
5755	-10.91	30
5795	-11.34	
802.11ac20		
5745	-9.69	30
5785	-9.81	
5825	-10.47	
802.11ac40		
5755	-10.97	30
5795	-11.10	
802.11ac80		
5775	-11.19	30

Test Graphs

11A_Ant1_5180



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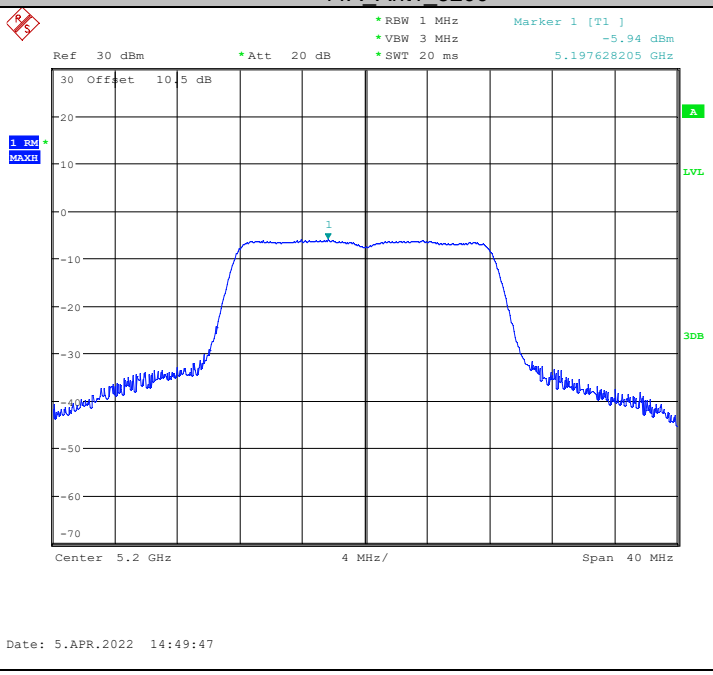

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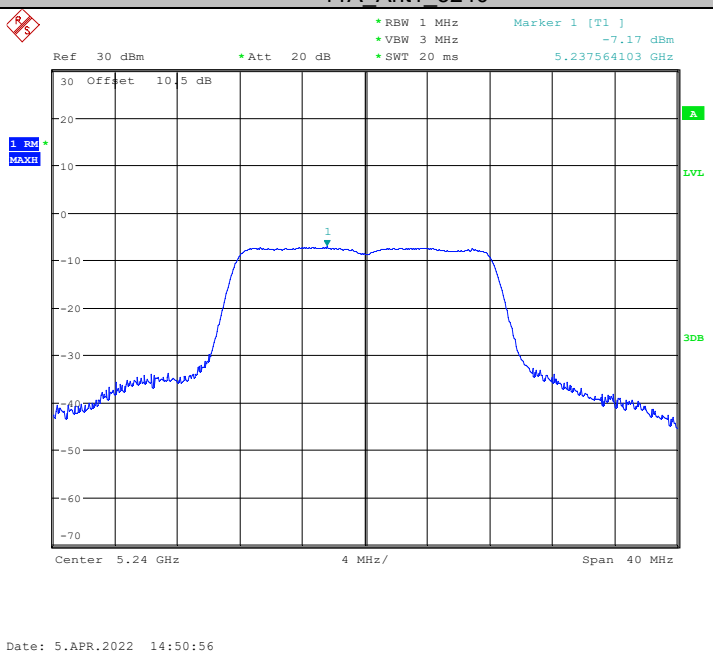

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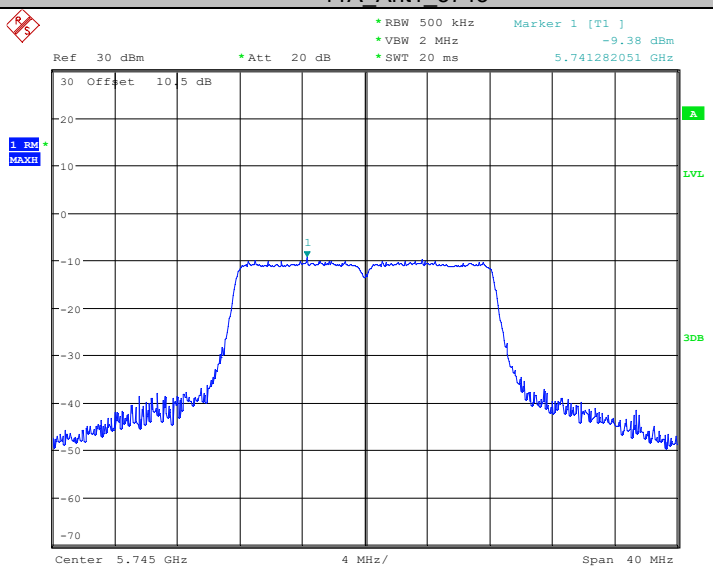

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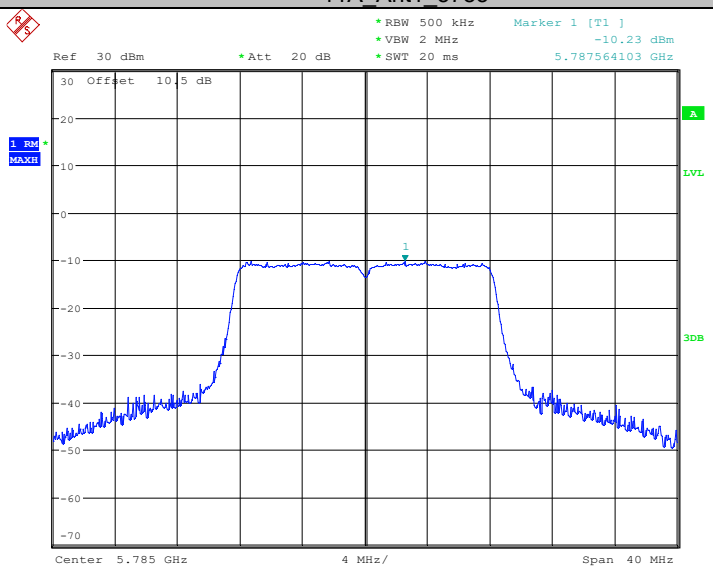

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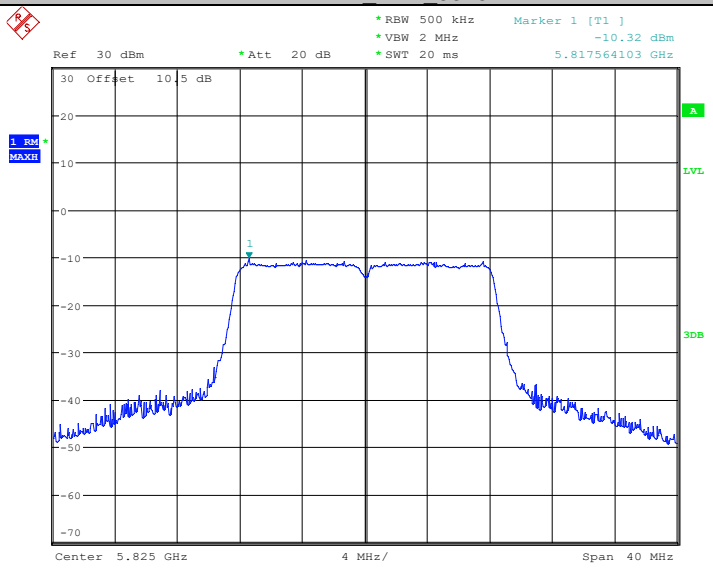

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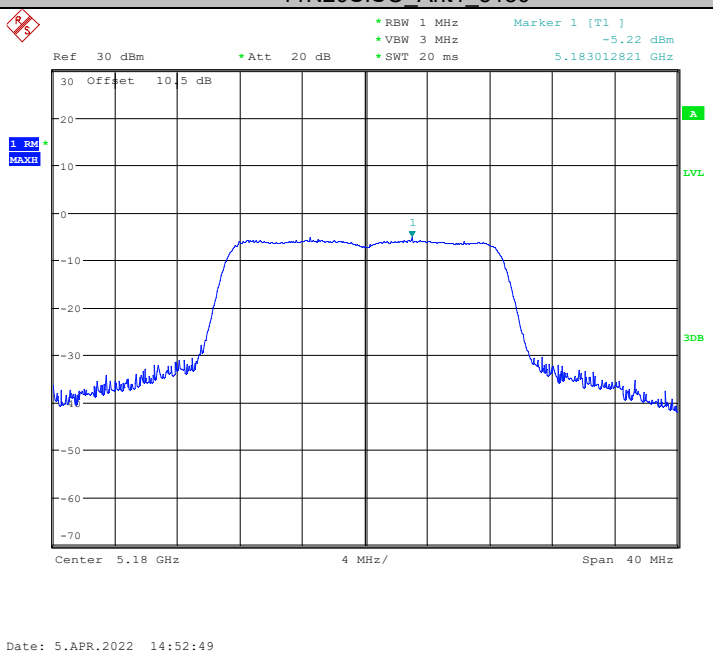

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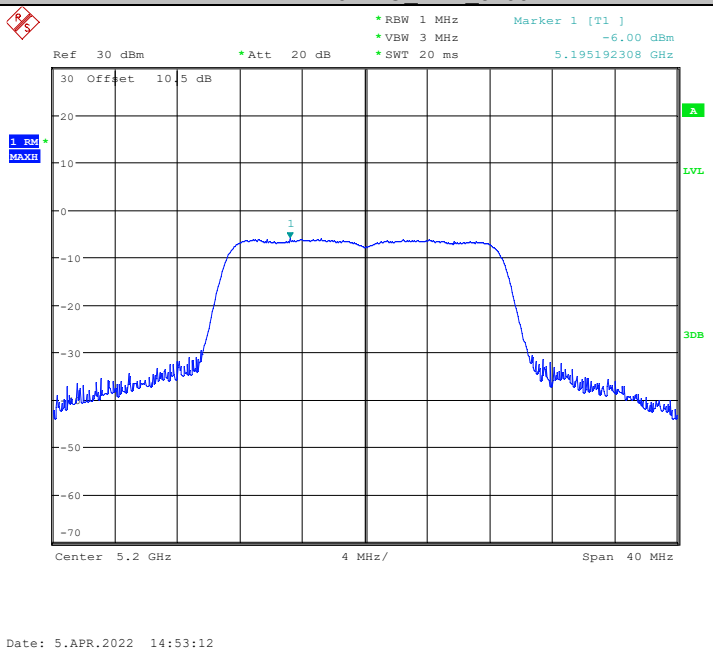

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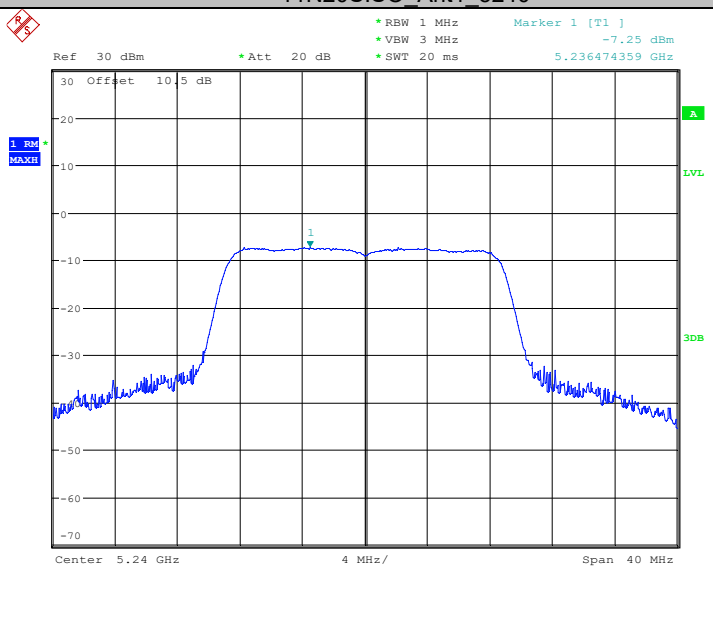

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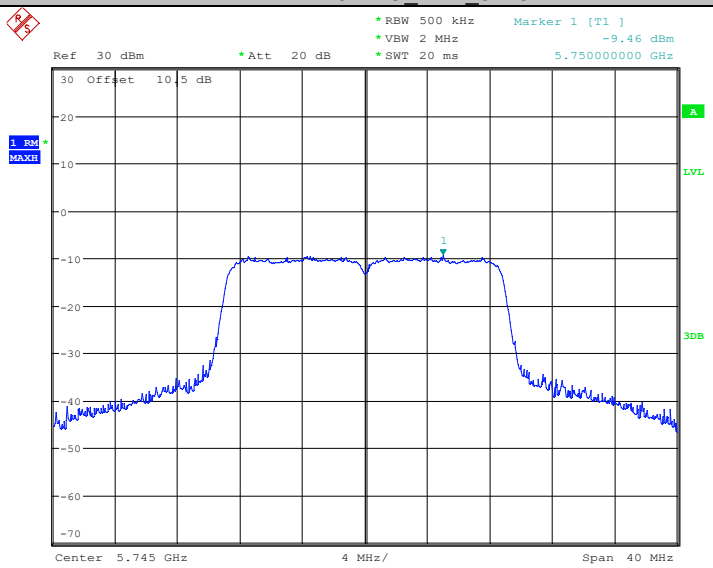

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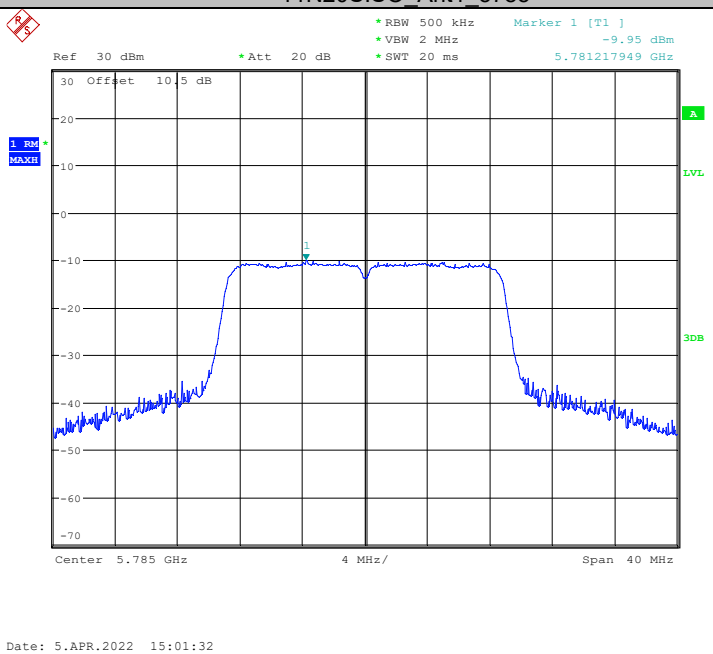

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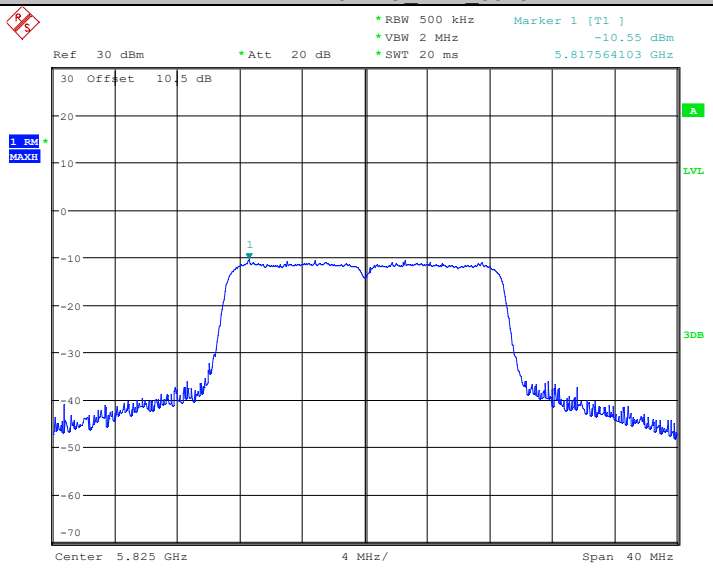
11N20SISO_Ant1_5825



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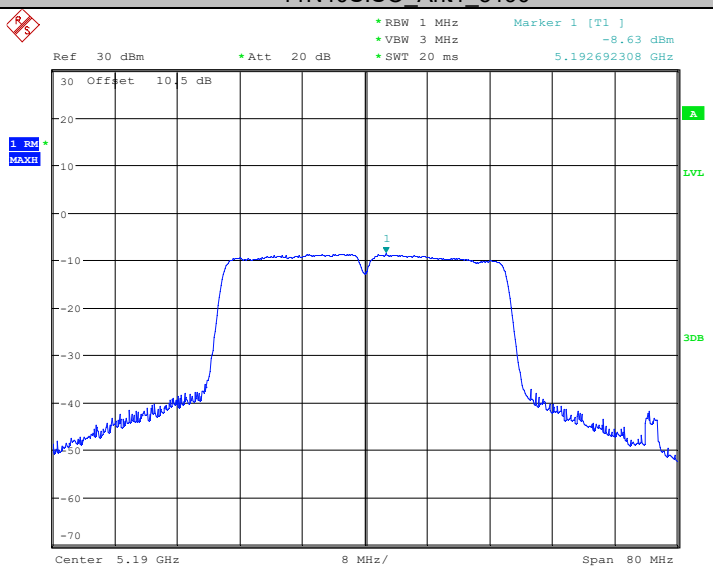

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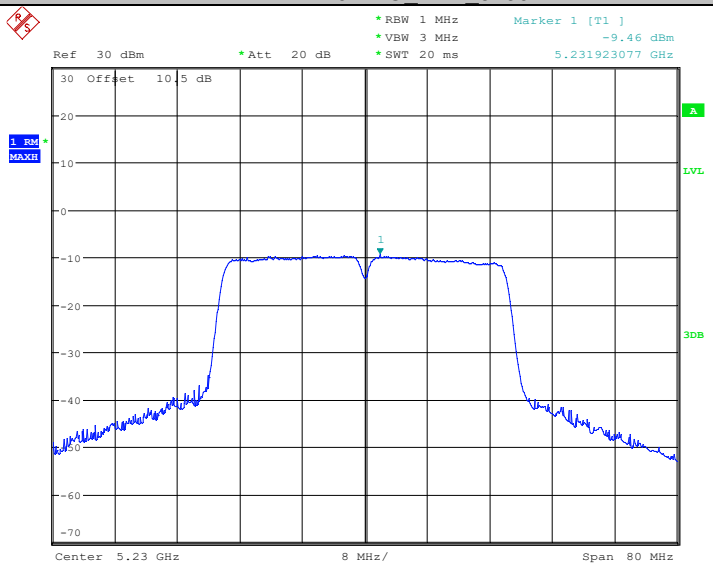

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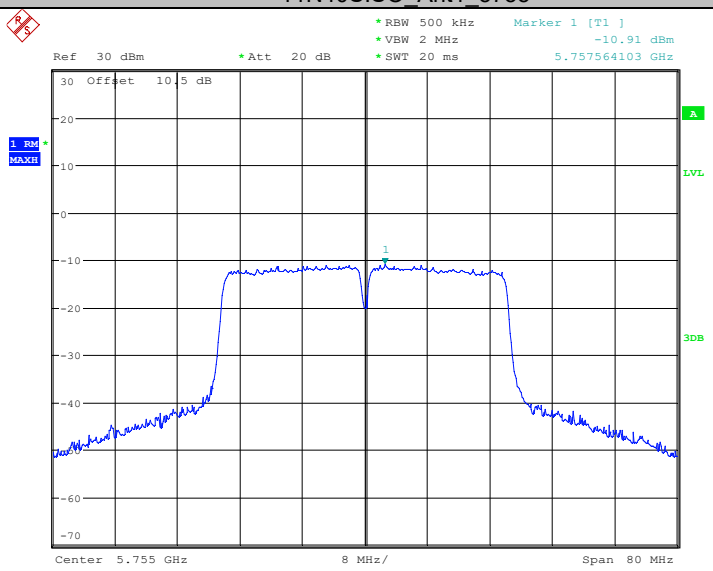

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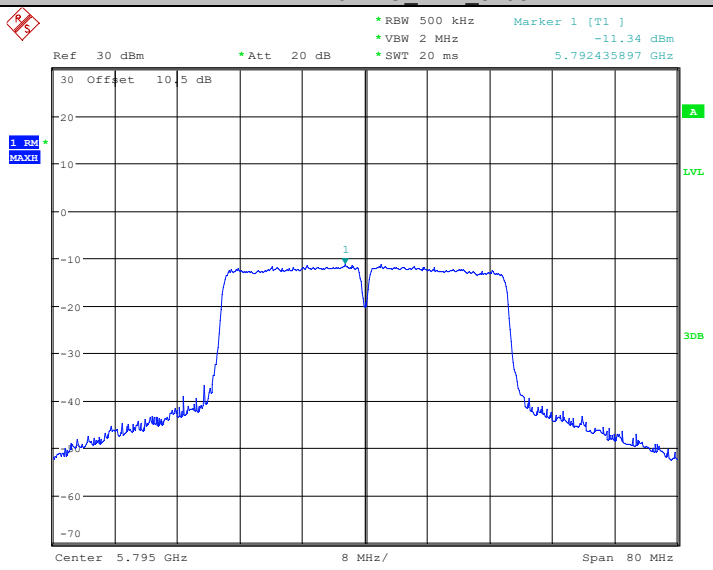

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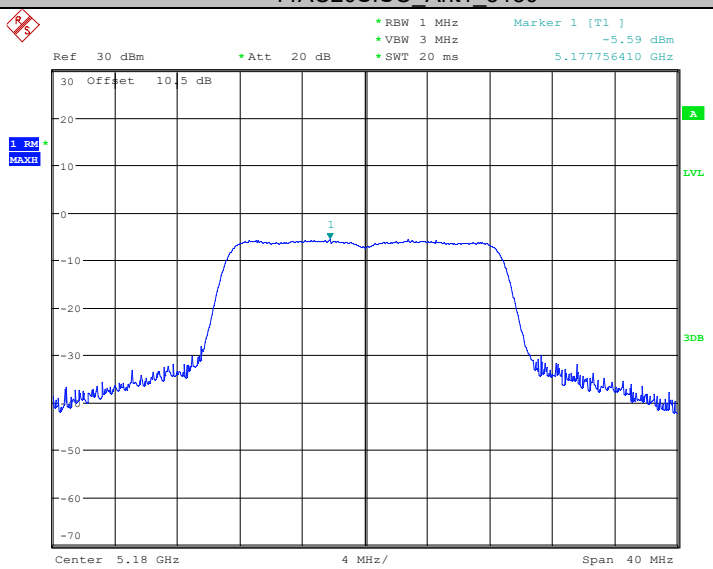

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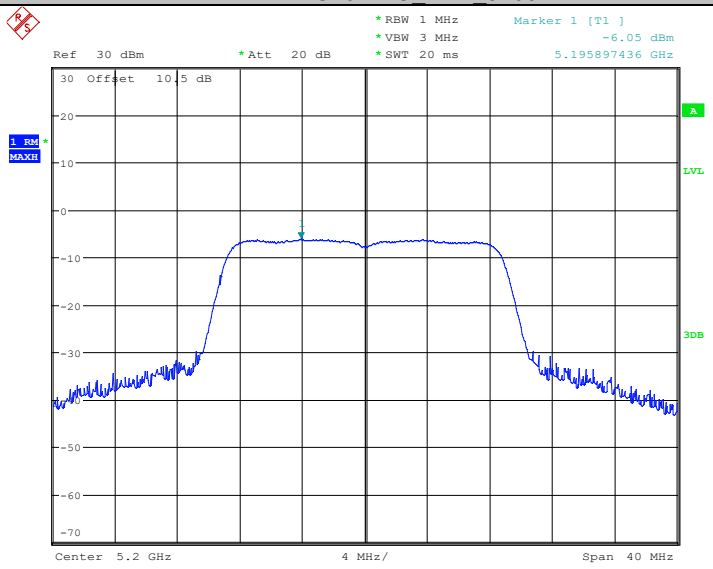

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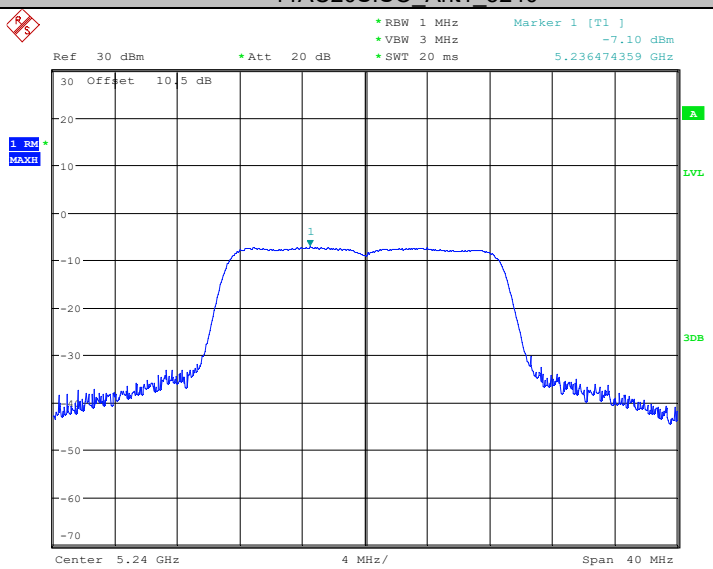

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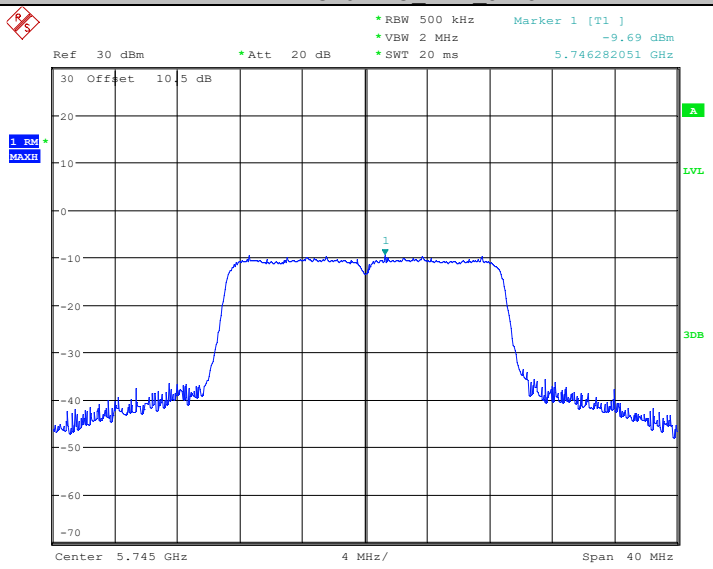

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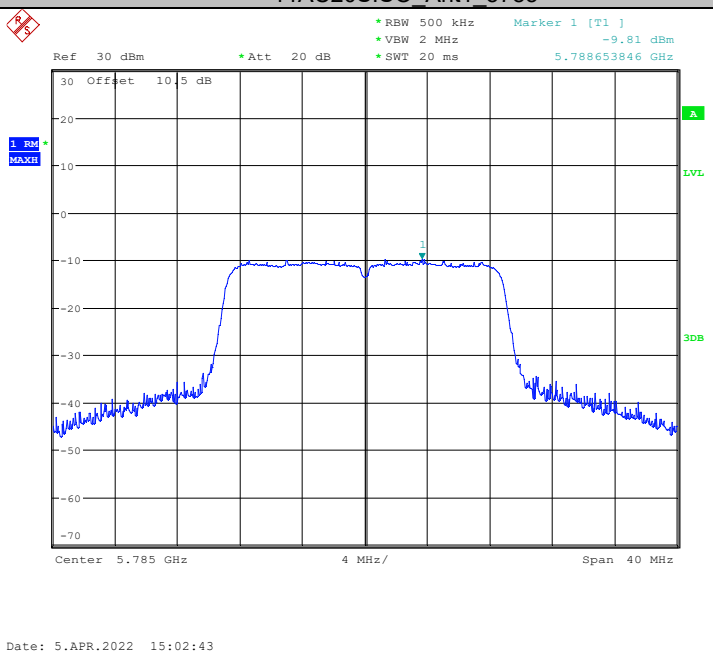

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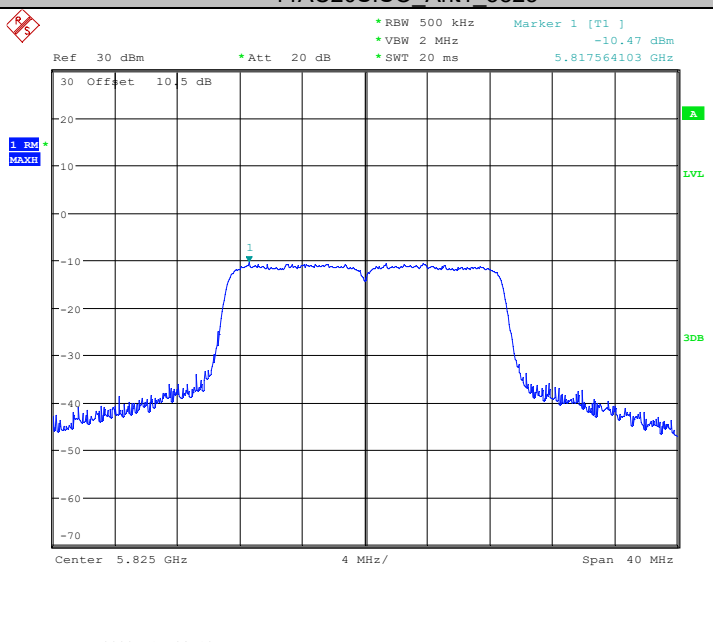

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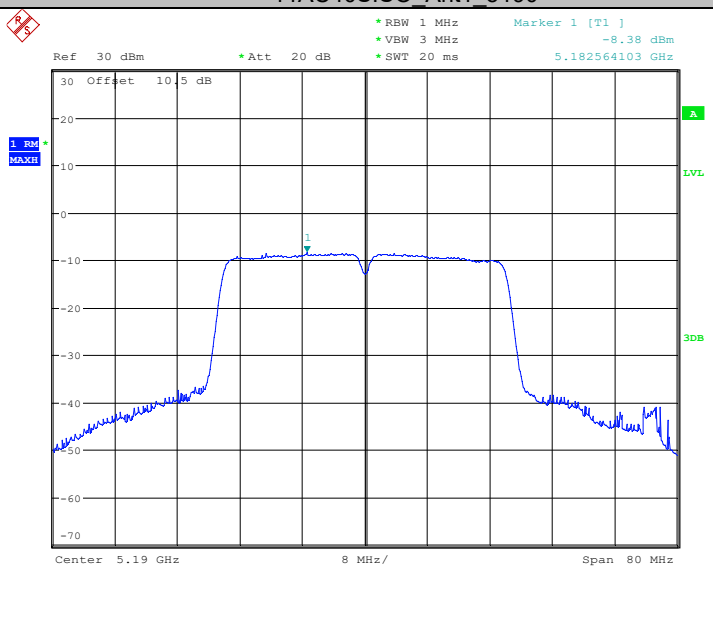

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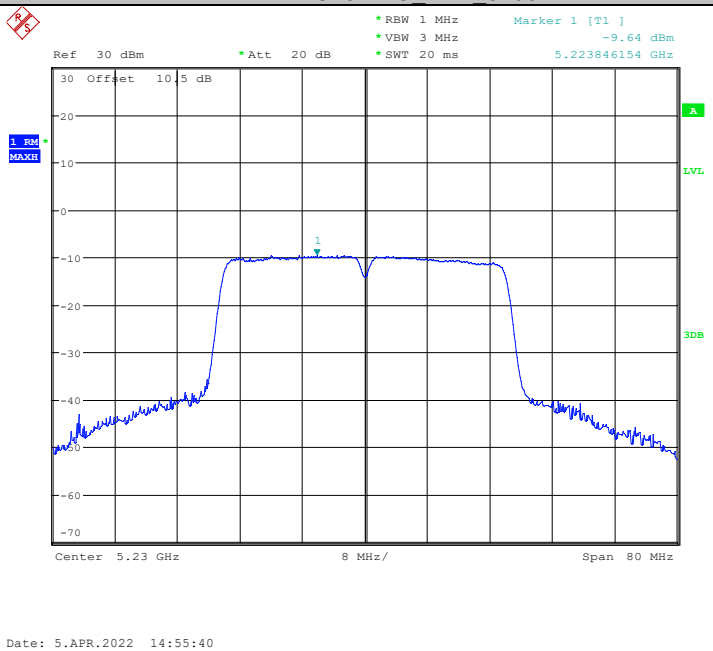

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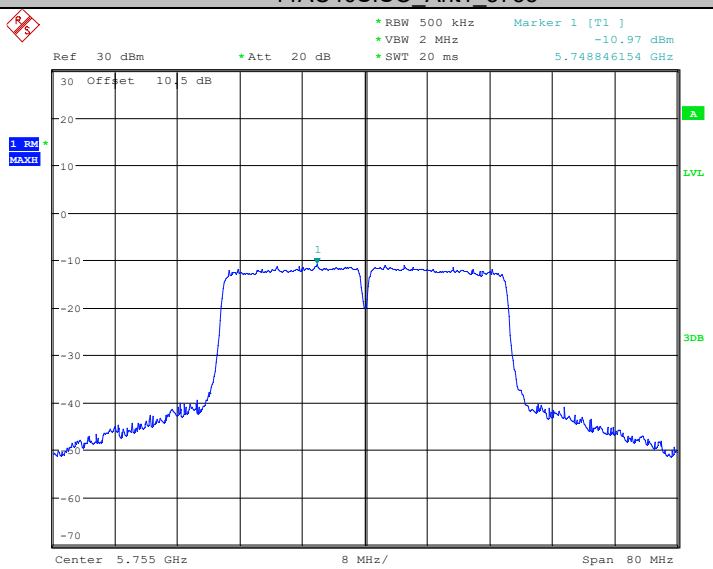

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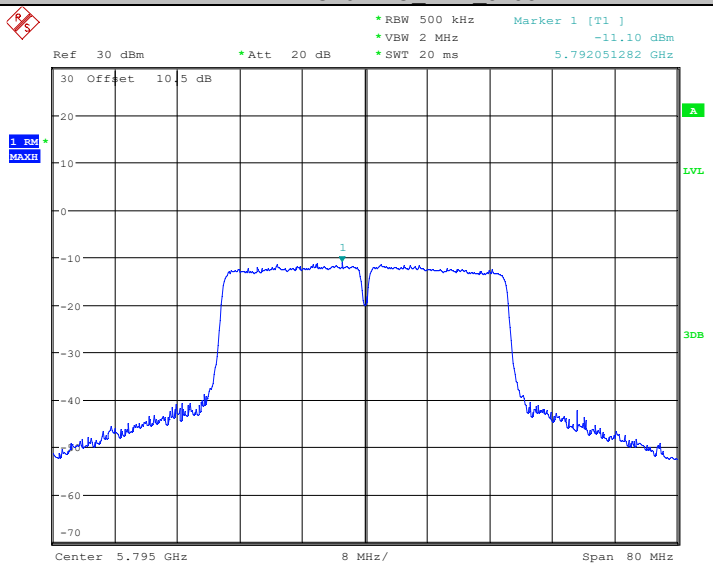

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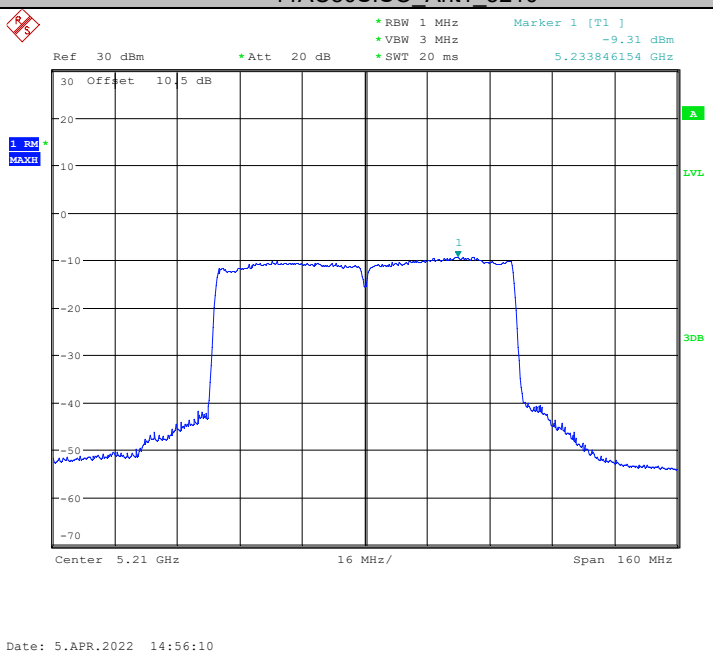

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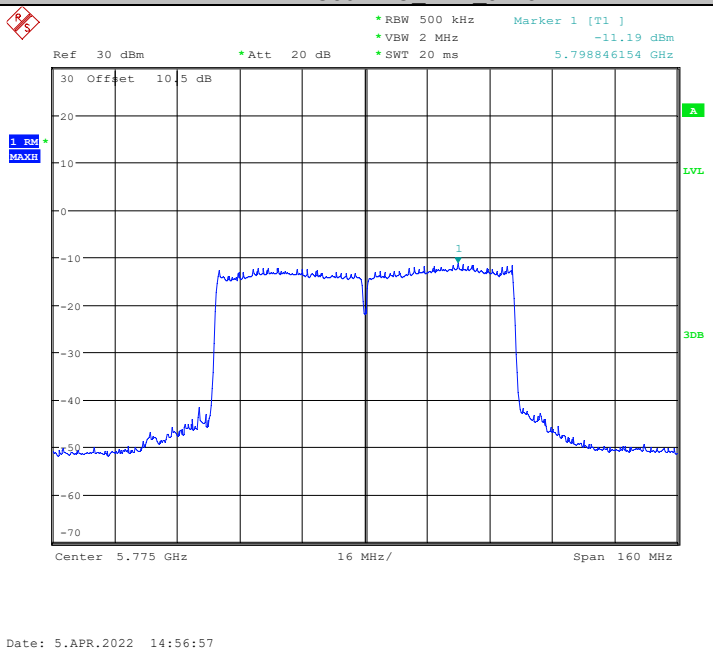
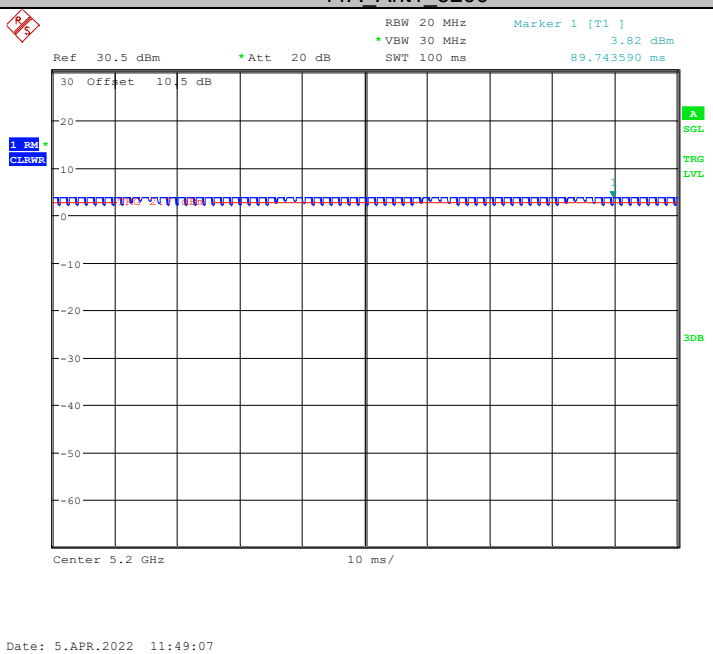


Appendix D: Duty Cycle

Test Graphs

11A_Ant1_5200



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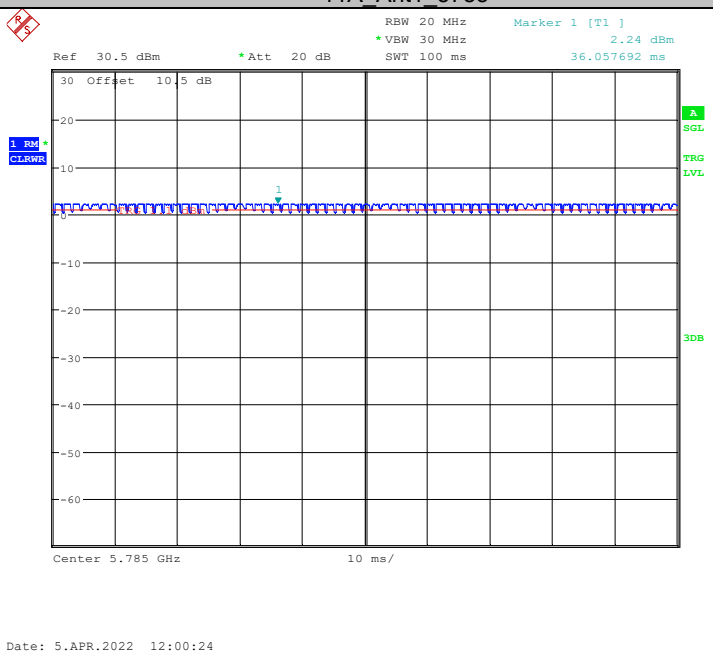

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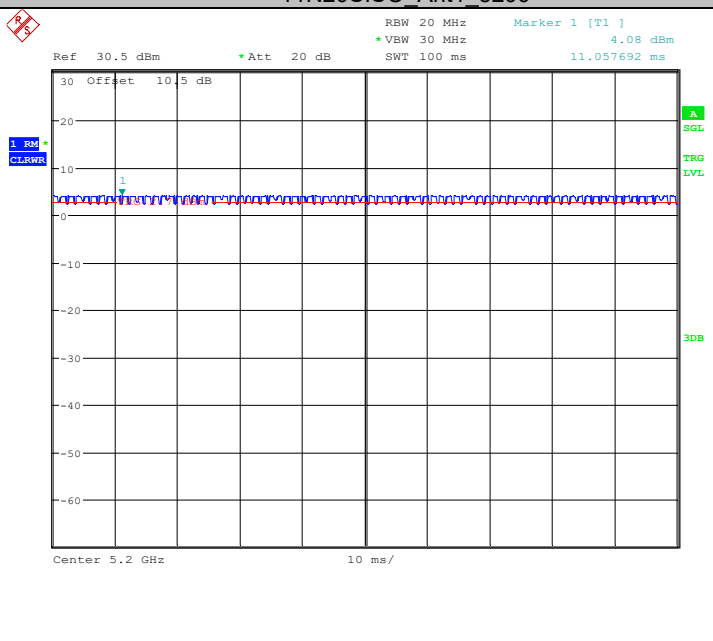

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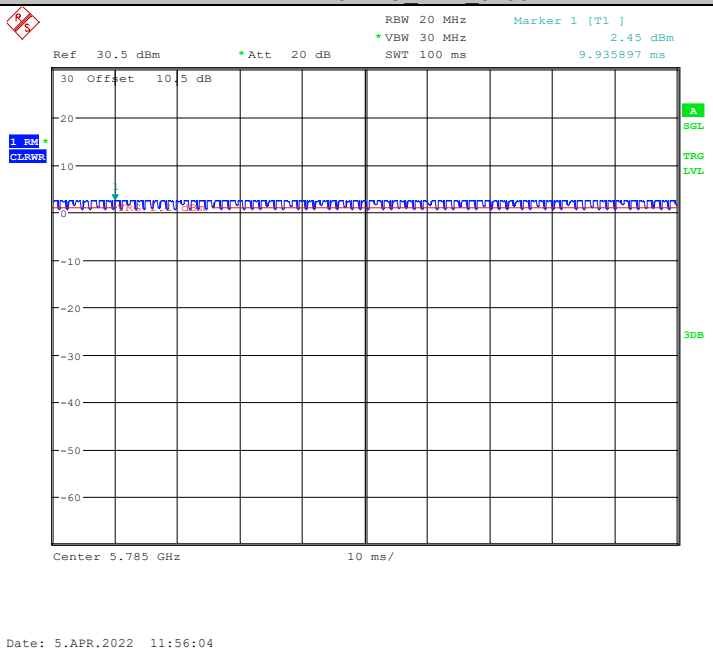

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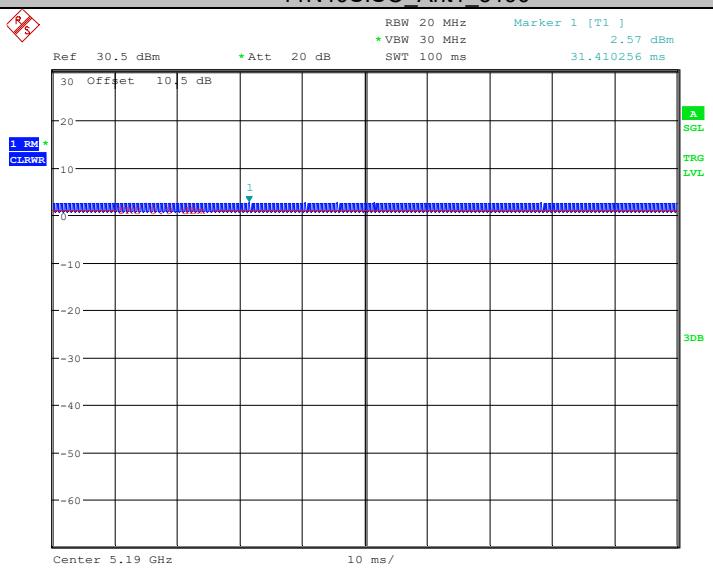

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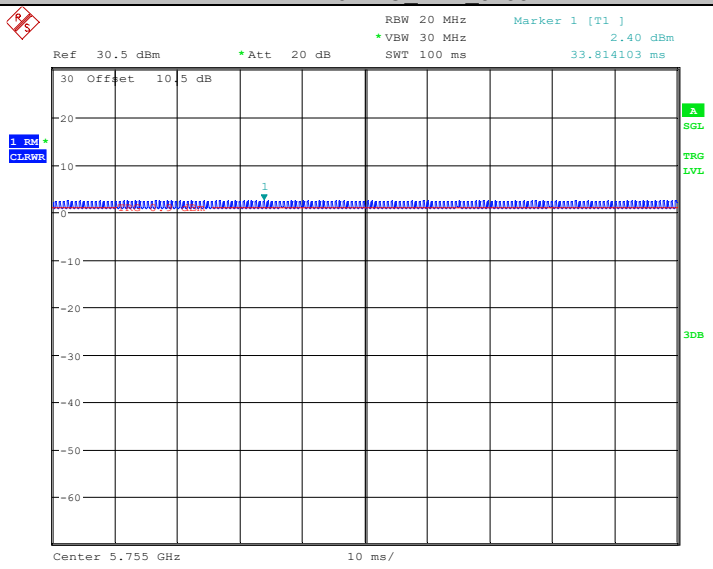

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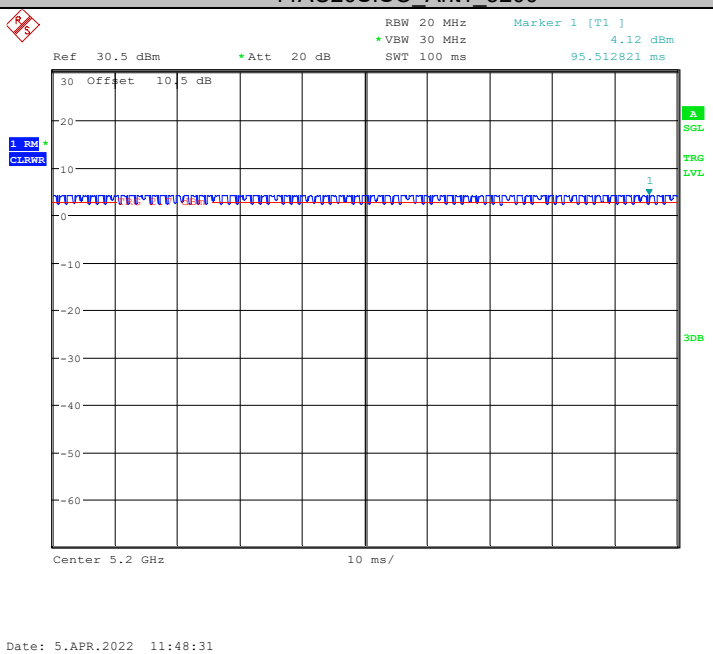

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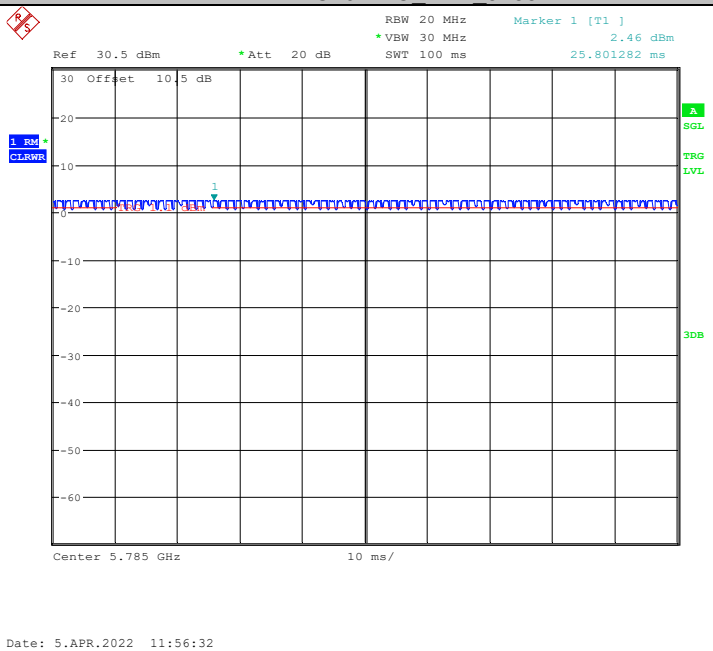

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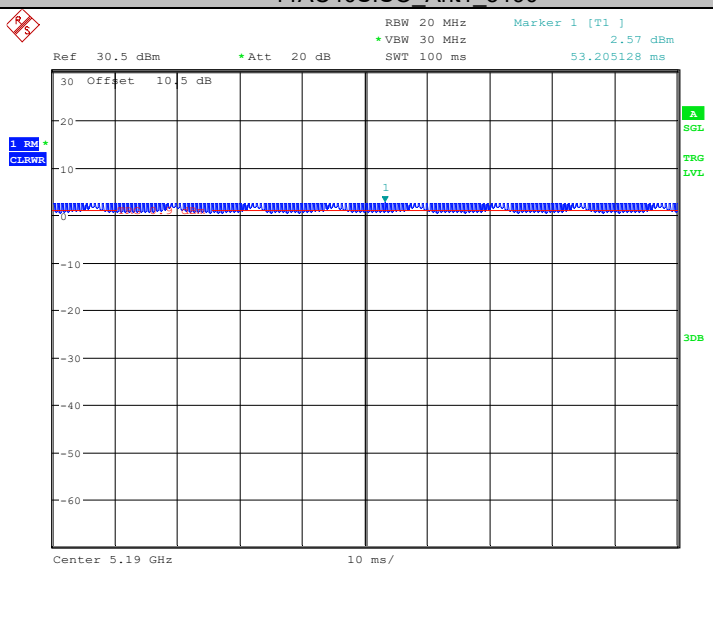

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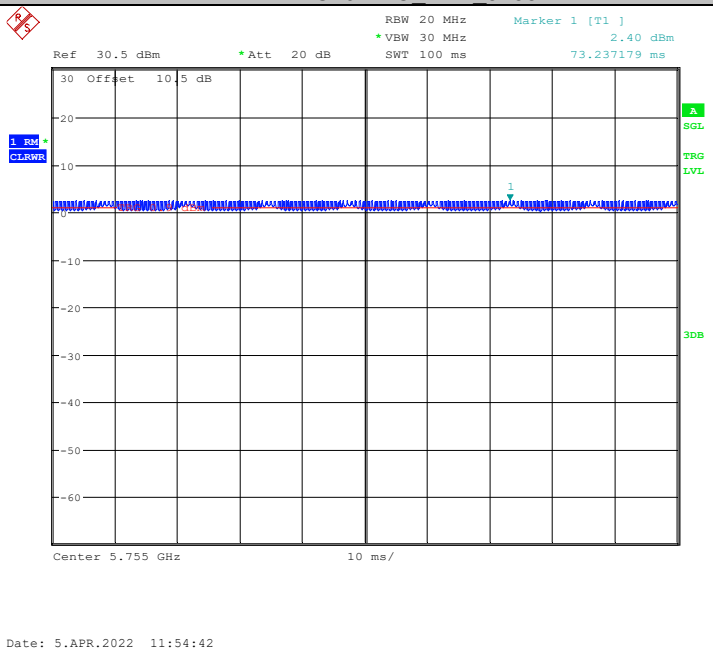

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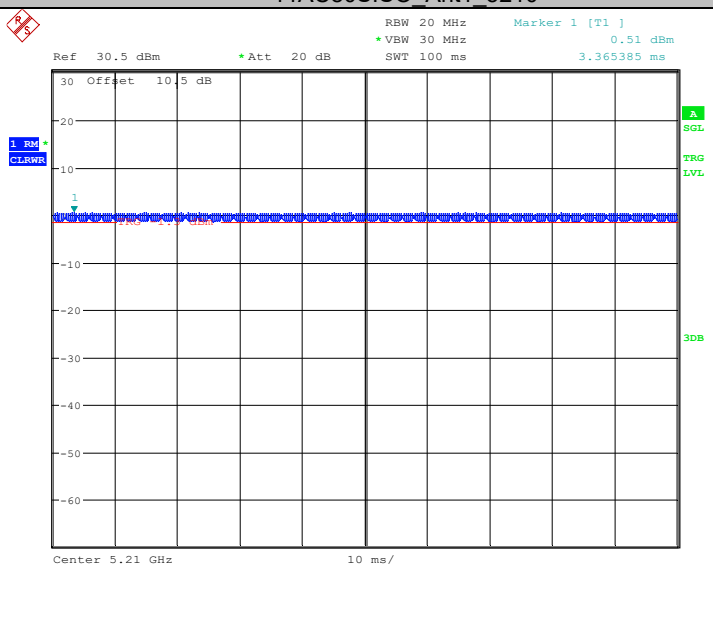

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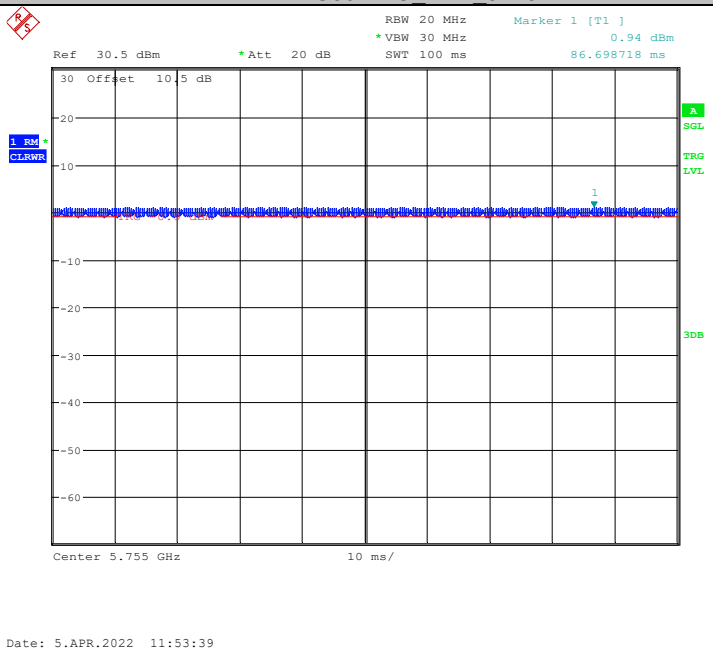

******* END OF REPORT *******