

FCC AND IC CERTIFICATION TEST REPORT

FOR

Applicant	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES
Equipment under Test	:	SOUNDBAR
Model No.	:	BAR 5.1 CNTR
HVIN	:	JBL BAR5.1 CNTR
Trade Mark	:	JBL
FCC ID	:	APIBAR51CNTRM
IC	:	6132A-BAR51CNTRM
Manufacturer	:	Harman International Industries, Inc.
Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

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REPORT

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Test Report Declare

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Address	:	8500 Balboa Boulevard, Northridge, CA 91329, UNITED STATES

Test Standard Used: FCC Rules and Regulations Part 15 Subpart E, RSS-247 Issue 2 February 2017.

Test procedure used: ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, RSS-Gen Issue 5, Apr. 2018, 662911 D01 Multiple Transmitter Output v02r01

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC&IC standards.

Report No:	DDT-R21050705-2E04		
Date of Receipt:	May 15, 2021	Date of Test:	May 15, 2021 ~ Jun. 09, 2021

Prepared By:

Sam Li
Sam Li/Engineer

Approved By:


Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jun. 09, 2021	

1. Summary of test results

The EUT have been tested according to the applicable standards as referenced below.

Description of Test Item	Standard	Results
6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e) RSS-247 Clause 6.2	PASS
Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Frequency Stability Measurement	FCC 15.407 (g)	PASS
Emissions in restricted frequency bands	FCC 15.407 (a) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Band Edge Compliance	FCC 15.407 (a) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	PASS
Antenna requirement	FCC 15.203 RSS-GEN Clause 8.3	PASS
Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.3	PASS

2. General test information

2.1. Description of EUT

EUT* Name	: SOUNDBAR
Model Number	: BAR 5.1 CNTR
HVIN	: JBL BAR5.1 CNTR
EUT function description	: Please reference user manual of this device
Power supply	: 100-240V~, 50/60Hz, 175W
Radio Technology	: IEEE 802.11a/n/ac
FCC Operation frequency	: IEEE 802.11a: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5755MHz IEEE 802.11ac HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11ac HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5755MHz IEEE 802.11ac HT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5775MHz
Modulation	: IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	: IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: 14.4, 28.9, 43.3, 57.8, 86.7, 115.6, 130.0, 144.4 Mbps IEEE 802.11n HT40: 30, 60, 90, 120, 180, 240, 270, 300 Mbps IEEE 802.11ac HT20: 14.4, 28.8, 43.4, 57.8, 86.6, 115.6, 130, 144.4, 173.4 Mbps IEEE 802.11ac HT40: 30, 60, 90, 120, 180, 240, 270, 300, 360, 400 Mbps IEEE 802.11ac HT80: 65, 130, 195, 260, 390, 520, 585, 650, 780, 866.6 Mbps
Antenna Type	: Antenna 1: External FPC antenna, maximum PK gain: 3.32 dBi Antenna 2: External FPC antenna, maximum PK gain: 3.68 dBi
Sample Type	: Series production
Serial number	: TL0990-DL0141795 for conductive test TL0990-DL0141797 for radiation test

Note: EUT is the ab. of equipment under test.

Antenna information			
	Ant1 gain	Ant2 gain	MIMO
IEEE 802.11a	3.32	3.68	/
IEEE 802.11n HT20	3.32	3.68	6.51
IEEE 802.11n HT40	3.32	3.68	6.51
IEEE 802.11ac VHT20	3.32	3.68	6.51
IEEE 802.11ac VHT40	3.32	3.68	6.51
IEEE 802.11ac VHT80	3.32	3.68	6.51

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Serial No.	Other
AC cable	Harman	N/A	N/A	Length: 1.5m, unshielded
HDMI cable	Harman	N/A	N/A	Length: 1.2m, shielded, two core

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
Notebook	DELL	Latitude D610	FCC DOC	00045-534-136-300
Wireless LAN Access Point	HUAWEI	AP6050	21500829352SC5000371	FCC ID: QISAP6050DN6150DN

2.4. Block diagram of EUT configuration for test



EUT was connected to control to provide by manufacturer which has a standard LAN port connector to connect to Notebook, and the Notebook will run a special test software “adb.EXE” provided by manufacturer to control EUT work in Continuous Tx mode (>98% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11a	14	6	Low: CH36	5180
	14	6	Middle: CH40	5200
	14	6	High: CH48	5240
	14	6	Low: CH52	5260
	14	6	Middle: CH56	5280
	14	6	High: CH64	5320
	14	6	Low: CH100	5500
	14	6	Middle: CH116	5580
	14	6	High: CH140	5700
	14	6	Low: CH149	5745
	14	6	Middle: CH157	5785
	14	6	High: CH165	5825
IEEE 802.11n HT20	10	MCS 8	Low: CH36	5180
	10	MCS 8	Middle: CH40	5200
	10	MCS 8	High: CH48	5240
	13	MCS 8	Low: CH52	5260
	13	MCS 8	Middle: CH56	5280
	13	MCS 8	High: CH64	5320
	13	MCS 8	Low: CH100	5500
	13	MCS 8	Middle: CH116	5580
	13	MCS 8	High: CH140	5700
	13	MCS 8	Low: CH149	5745
	13	MCS 8	Middle: CH157	5785
	13	MCS 8	High: CH165	5825
IEEE 802.11n HT40	12	MCS 8	Low: CH38	5190
	12	MCS 8	Middle: CH46	5230
	12	MCS 8	High: CH54	5270
	12	MCS 8	Low: CH62	5310
	12	MCS 8	Middle: CH102	5510
	12	MCS 8	High: CH110	5550
	12	MCS 8	Low: CH134	5670
	12	MCS 8	Middle: CH151	5755
	12	MCS 8	High: CH159	5795
IEEE 802.11ac HT20	10	MCS 0	Low: CH36	5180
	10	MCS 0	Middle: CH40	5200
	10	MCS 0	High: CH48	5240
	13	MCS 0	Low: CH52	5260
	13	MCS 0	Middle: CH56	5280
	13	MCS 0	High: CH64	5320
	13	MCS 0	Low: CH100	5500
	13	MCS 0	Middle: CH116	5580
	13	MCS 0	High: CH140	5700
	13	MCS 0	Low: CH149	5745
	13	MCS 0	Middle: CH157	5785
	13	MCS 0	High: CH165	5825

IEEE 802.11ac HT40	12	MCS 0	Low: CH38	5190
	12	MCS 0	Middle: CH46	5230
	12	MCS 0	High: CH54	5270
	12	MCS 0	Low: CH62	5310
	12	MCS 0	Middle: CH102	5510
	12	MCS 0	High: CH110	5550
	12	MCS 0	Low: CH134	5670
	12	MCS 0	Middle: CH151	5755
	12	MCS 0	High: CH159	5795
IEEE 802.11ac HT80	11	MCS 0	CH42	5210
	11	MCS 0	CH58	5290
	11	MCS 0	CH106	5530
	11	MCS 0	CH122	5610
	11	MCS 0	CH155	5775

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

2.5. Deviations of test standard

No Deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25°C
Humidity range:	40-75%
Pressure range:	86-106 kPa

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City,
Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Frequencies Stability	6.7×10^{-8} (Antenna couple method) 5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.40 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$) 1.66 dB ($8 \text{ GHz} \leq f < 22 \text{ GHz}$)
Uncertainty for radio frequency (RBW<20kHz)	3×10^{-8}
Temperature	0.4℃
Humidity	2%
Uncertainty for Radiation Emission test (30MHz-1GHz)	4.70 dB (Antenna Polarize: V) 4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz-40GHz)	4.10 dB (1-6 GHz) 4.40 dB (6 GHz-18 GHz) 3.54 dB (18 GHz-26 GHz) 4.30 dB (26 GHz-40 GHz)
Uncertainty for Power line conduction emission test	3.32 dB (150 kHz-30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

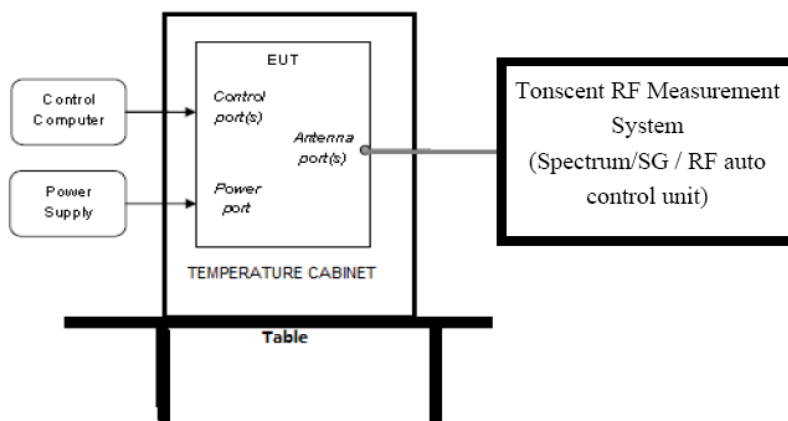
3. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☐ RF Connected Test (Tonscend RF Measurement System 1#)					
Spectrum analyzer	R&S	FSU26	101272	Jul. 01, 2020	1 Year
Spectrum analyzer	Agilent	N9020D	MY49100362	Sep. 28, 2020	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jul. 01, 2020	1 Year
Vector Signal Generator	Agilent	E8267D	US49060192	Sep. 24, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Jul. 01, 2020	1 Year
Power Sensor	Agilent	U2021XA	MY55150010	Jul. 01, 2020	1 Year
Power Sensor	Agilent	U2021XA	MY55150011	Jul. 01, 2020	1 Year
RF Cable	Micable	C10-01-01-1	100309	Sep. 28, 2020	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-15 OL	ZX170110-A	Jul. 01, 2020	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
☒ RF Connected Test (Tonscend RF Measurement System 2#)					
Spectrum analyzer	R&S	FSU26	200071	Sep. 25, 2020	1 Year
Spectrum analyzer	Agilent	N9020D	MY49100362	Sep. 28, 2020	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jul. 01, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY19060405	Jul. 01, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180912	Jul. 01, 2020	1 Year
RF Control Unit	Tonsend	JS0806-2	DDT-ZC01449	Jul. 01, 2020	1 Year
RF Cable	Micable	C10-01-01-1	100309	Sep. 28, 2020	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-15 OL	ZX170110-A	Jul. 01, 2020	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
☐ Radiation 1#chamber					
EMI Test Receiver	R&S	ESU8	100316	Sep. 24, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jul. 01, 2020	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Nov. 13, 2020	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Nov. 18, 2020	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Nov. 13, 2020	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 07, 2021	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Sep. 28, 2020	1 Year
RF Cable	HUBSER	CP-X2+ CP-X1	W11.03+ W12.02	Sep. 24, 2020	1 Year
RF Cable	N/A	5m+6m+1m	06270619	Sep. 30, 2020	1 Year
MI Cable	HUBSER	C10-01-01-1 M	1091629	Sep. 30, 2020	1 Year

Test software	Audix	E3	V 6.11111b	N/A	N/A
☑Radiation 2#chamber					
EMI Test Receiver	R&S	ESCI	101364	Sep. 28, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jul. 01, 2020	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	9163-994	Nov. 13, 2020	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Nov. 18, 2020	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120	02108	Jul. 11, 2020	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 07, 2021	1 Year
Pre-amplifier	TERA-MW	TRLA-0040 G35	1013 03	Sep. 28, 2020	1 Year
RF Cable	N/A	14+1.5m	06270619	Sep. 28, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
☑Power Line Conducted Emissions Test 1#					
EMI Test Receiver	R&S	ESU8	100316	Sep. 24, 2020	1 Year
LISN 1	R&S	ENV216	101109	Sep. 28, 2020	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 28, 2020	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Sep. 24, 2020	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Sep. 24, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
☐Power Line Conducted Emissions Test 2#					
Test Receiver	R&S	ESPI	101761	Sep. 24, 2020	1 Year
LISN 1	R&S	ENV216	101170	Sep. 28, 2020	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 28, 2020	1 Year
Pulse Limiter	R&S	KH43101	43101180156 8-12#	Jul. 01, 2020	1 Year
CE Cable 2	HUBSER	N/A	W11.02	Sep. 24, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. 26dB Bandwidth, 6dB Bandwidth and 99% Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Bandwidth	26 dB Bandwidth	5150-5250
	26 dB Bandwidth	5250-5350
	26 dB Bandwidth	For FCC:5470-5725 For IC:5470-5600 5650-5725
	Minimum 500kHz 6dB Bandwidth	5725-5850

4.3. Test Procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: RBW=100 kHz For 26 dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6 dB Bandwidth: VBW=300 kHz For 26 dB Bandwidth: >3 RBW
Trace	Max hold
Sweep	Auto couple

(2) Allow the trace to stabilize, 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 26 dB and 6 dB relative to the maximum level measured in the fundamental emission.

4.4. Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.8	5171.560	5188.360	---	PASS
	Ant2	5180	16.84	5171.560	5188.400	---	PASS
	Ant1	5200	16.8	5191.560	5208.360	---	PASS
	Ant2	5200	16.84	5191.520	5208.360	---	PASS
	Ant1	5240	16.8	5231.560	5248.360	---	PASS
	Ant2	5240	16.76	5231.600	5248.360	---	PASS
	Ant1	5260	16.8	5251.600	5268.400	---	PASS
	Ant2	5260	16.84	5251.560	5268.400	---	PASS
	Ant1	5280	16.8	5271.560	5288.360	---	PASS
	Ant2	5280	16.84	5271.560	5288.400	---	PASS
	Ant1	5320	16.84	5311.560	5328.400	---	PASS
	Ant2	5320	16.8	5311.560	5328.360	---	PASS
	Ant1	5500	16.92	5491.480	5508.400	---	PASS
	Ant2	5500	16.96	5491.480	5508.440	---	PASS
	Ant1	5580	16.92	5571.480	5588.400	---	PASS
	Ant2	5580	16.96	5571.480	5588.440	---	PASS
	Ant1	5700	16.88	5691.520	5708.400	---	PASS
	Ant2	5700	16.88	5691.520	5708.400	---	PASS
	Ant1	5745	16.84	5736.520	5753.360	---	PASS
	Ant2	5745	16.88	5736.520	5753.400	---	PASS
	Ant1	5785	16.8	5776.560	5793.360	---	PASS
	Ant2	5785	16.88	5776.520	5793.400	---	PASS
	Ant1	5825	16.8	5816.560	5833.360	---	PASS
	Ant2	5825	16.88	5816.480	5833.360	---	PASS
11N20MIMO	Ant1	5180	17.68	5171.160	5188.840	---	PASS
	Ant2	5180	17.64	5171.160	5188.800	---	PASS
	Ant1	5200	17.72	5191.120	5208.840	---	PASS
	Ant2	5200	17.64	5191.160	5208.800	---	PASS
	Ant1	5240	17.68	5231.160	5248.840	---	PASS
	Ant2	5240	17.6	5231.200	5248.800	---	PASS
	Ant1	5260	17.72	5251.160	5268.880	---	PASS
	Ant2	5260	17.72	5251.160	5268.880	---	PASS
	Ant1	5280	17.72	5271.120	5288.840	---	PASS
	Ant2	5280	17.64	5271.160	5288.800	---	PASS
	Ant1	5320	17.68	5311.160	5328.840	---	PASS
	Ant2	5320	17.64	5311.160	5328.800	---	PASS
	Ant1	5500	17.72	5491.120	5508.840	---	PASS
	Ant2	5500	17.72	5491.120	5508.840	---	PASS
	Ant1	5580	16.92	5571.480	5588.400	---	PASS
	Ant2	5580	17.8	5571.080	5588.880	---	PASS
	Ant1	5700	17.72	5691.160	5708.880	---	PASS
	Ant2	5700	17.72	5691.120	5708.840	---	PASS
	Ant1	5745	17.68	5736.160	5753.840	---	PASS
	Ant2	5745	17.72	5736.120	5753.840	---	PASS
	Ant1	5785	17.68	5776.160	5793.840	---	PASS
	Ant2	5785	17.72	5776.120	5793.840	---	PASS
	Ant1	5825	17.72	5816.160	5833.880	---	PASS

	Ant2	5825	17.76	5816.080	5833.840	---	PASS
11N40MIMO	Ant1	5190	36.56	5171.680	5208.240	---	PASS
	Ant2	5190	36.48	5171.680	5208.160	---	PASS
	Ant1	5230	36.56	5211.760	5248.320	---	PASS
	Ant2	5230	36.48	5211.760	5248.240	---	PASS
	Ant1	5270	36.56	5251.680	5288.240	---	PASS
	Ant2	5270	36.64	5251.680	5288.320	---	PASS
	Ant1	5310	36.56	5291.760	5328.320	---	PASS
	Ant2	5310	36.56	5291.680	5328.240	---	PASS
	Ant1	5510	36.72	5491.600	5528.320	---	PASS
	Ant2	5510	36.64	5491.600	5528.240	---	PASS
	Ant1	5550	36.64	5531.600	5568.240	---	PASS
	Ant2	5550	36.16	5531.920	5568.080	---	PASS
	Ant1	5670	36.64	5651.680	5688.320	---	PASS
	Ant2	5670	36.64	5651.680	5688.320	---	PASS
	Ant1	5755	36.56	5736.680	5773.240	---	PASS
	Ant2	5755	36.56	5736.680	5773.240	---	PASS
	Ant1	5795	36.64	5776.600	5813.240	---	PASS
	Ant2	5795	36.48	5776.680	5813.160	---	PASS
11AC20MIMO	Ant1	5180	17.68	5171.160	5188.840	---	PASS
	Ant2	5180	17.52	5171.240	5188.760	---	PASS
	Ant1	5200	17.72	5191.120	5208.840	---	PASS
	Ant2	5200	17.56	5191.200	5208.760	---	PASS
	Ant1	5240	17.56	5231.200	5248.760	---	PASS
	Ant2	5240	17.52	5231.240	5248.760	---	PASS
	Ant1	5260	17.68	5251.160	5268.840	---	PASS
	Ant2	5260	17.56	5251.240	5268.800	---	PASS
	Ant1	5280	17.72	5271.120	5288.840	---	PASS
	Ant2	5280	17.56	5271.240	5288.800	---	PASS
	Ant1	5320	17.68	5311.160	5328.840	---	PASS
	Ant2	5320	17.52	5311.240	5328.760	---	PASS
	Ant1	5500	17.8	5491.080	5508.880	---	PASS
	Ant2	5500	17.68	5491.160	5508.840	---	PASS
	Ant1	5580	17.84	5571.080	5588.920	---	PASS
	Ant2	5580	17.76	5571.120	5588.880	---	PASS
	Ant1	5700	17.76	5691.120	5708.880	---	PASS
	Ant2	5700	17.76	5691.120	5708.880	---	PASS
	Ant1	5745	17.76	5736.080	5753.840	---	PASS
	Ant2	5745	17.64	5736.160	5753.800	---	PASS
	Ant1	5785	17.8	5776.080	5793.880	---	PASS
	Ant2	5785	17.8	5776.080	5793.880	---	PASS
	Ant1	5825	17.84	5816.040	5833.880	---	PASS
	Ant2	5825	17.68	5816.160	5833.840	---	PASS
11AC40MIMO	Ant1	5190	36.4	5171.760	5208.160	---	PASS
	Ant2	5190	36.72	5171.600	5208.320	---	PASS
	Ant1	5230	36.48	5211.760	5248.240	---	PASS
	Ant2	5230	36.72	5211.600	5248.320	---	PASS
	Ant1	5270	36.32	5251.840	5288.160	---	PASS
	Ant2	5270	36.72	5251.680	5288.400	---	PASS
	Ant1	5310	36.4	5291.840	5328.240	---	PASS
	Ant2	5310	36.8	5291.600	5328.400	---	PASS

	Ant1	5510	36.88	5491.520	5528.400	---	PASS
	Ant2	5510	36.88	5491.520	5528.400	---	PASS
	Ant1	5550	36.4	5531.760	5568.160	---	PASS
	Ant2	5550	36.88	5531.520	5568.400	---	PASS
	Ant1	5670	36.56	5651.760	5688.320	---	PASS
	Ant2	5670	36.88	5651.600	5688.480	---	PASS
	Ant1	5755	36.4	5736.760	5773.160	---	PASS
	Ant2	5755	36.88	5736.520	5773.400	---	PASS
	Ant1	5795	36.48	5776.680	5813.160	---	PASS
	Ant2	5795	36.8	5776.520	5813.320	---	PASS
11AC80MIMO	Ant1	5210	76	5171.920	5247.920	---	PASS
	Ant2	5210	75.68	5172.080	5247.760	---	PASS
	Ant1	5290	76	5251.920	5327.920	---	PASS
	Ant2	5290	75.52	5252.240	5327.760	---	PASS
	Ant1	5530	76	5491.760	5567.760	---	PASS
	Ant2	5530	75.68	5492.080	5567.760	---	PASS
	Ant1	5610	76.16	5571.760	5647.920	---	PASS
	Ant2	5610	75.84	5572.080	5647.920	---	PASS
	Ant1	5775	76	5736.760	5812.760	---	PASS
	Ant2	5775	75.68	5737.080	5812.760	---	PASS

Test Mode	Antenna	Channel	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	19.880	5170.000	5189.880	---	PASS
	Ant2	5180	19.760	5170.080	5189.840	---	PASS
	Ant1	5200	20.000	5189.920	5209.920	---	PASS
	Ant2	5200	19.760	5190.040	5209.800	---	PASS
	Ant1	5240	19.880	5230.040	5249.920	---	PASS
	Ant2	5240	19.760	5230.080	5249.840	---	PASS
	Ant1	5260	20.160	5249.960	5270.120	---	PASS
	Ant2	5260	20.200	5249.920	5270.120	---	PASS
	Ant1	5280	20.120	5269.920	5290.040	---	PASS
	Ant2	5280	20.280	5269.920	5290.200	---	PASS
	Ant1	5320	20.240	5309.920	5330.160	---	PASS
	Ant2	5320	20.160	5309.920	5330.080	---	PASS
	Ant1	5500	20.360	5489.840	5510.200	---	PASS
	Ant2	5500	20.840	5489.440	5510.280	---	PASS
	Ant1	5580	20.360	5569.840	5590.200	---	PASS
	Ant2	5580	20.920	5569.360	5590.280	---	PASS
	Ant1	5700	20.240	5689.880	5710.120	---	PASS
	Ant2	5700	20.280	5689.920	5710.200	---	PASS
	Ant1	5745	19.760	5735.080	5754.840	---	PASS
	Ant2	5745	20.040	5735.080	5755.120	---	PASS
	Ant1	5785	19.920	5775.080	5795.000	---	PASS
	Ant2	5785	19.800	5775.080	5794.880	---	PASS
	Ant1	5825	19.840	5815.080	5834.920	---	PASS
	Ant2	5825	19.760	5815.080	5834.840	---	PASS
11N20MIMO	Ant1	5180	20.160	5169.920	5190.080	---	PASS
	Ant2	5180	20.080	5169.960	5190.040	---	PASS
	Ant1	5200	20.240	5189.880	5210.120	---	PASS
	Ant2	5200	20.080	5189.960	5210.040	---	PASS

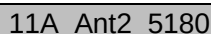
	Ant1	5240	20.160	5229.920	5250.080	---	PASS
	Ant2	5240	20.000	5230.040	5250.040	---	PASS
	Ant1	5260	20.440	5249.800	5270.240	---	PASS
	Ant2	5260	20.400	5249.840	5270.240	---	PASS
	Ant1	5280	20.480	5269.760	5290.240	---	PASS
	Ant2	5280	20.320	5269.880	5290.200	---	PASS
	Ant1	5320	20.440	5309.800	5330.240	---	PASS
	Ant2	5320	20.400	5309.760	5330.160	---	PASS
	Ant1	5500	20.440	5489.800	5510.240	---	PASS
	Ant2	5500	25.080	5486.000	5511.080	---	PASS
	Ant1	5580	20.400	5569.800	5590.200	---	PASS
	Ant2	5580	25.200	5566.000	5591.200	---	PASS
	Ant1	5700	20.400	5689.840	5710.240	---	PASS
	Ant2	5700	20.280	5689.880	5710.160	---	PASS
	Ant1	5745	20.240	5734.880	5755.120	---	PASS
	Ant2	5745	20.280	5734.880	5755.160	---	PASS
	Ant1	5785	20.200	5774.960	5795.160	---	PASS
	Ant2	5785	20.200	5774.920	5795.120	---	PASS
	Ant1	5825	20.240	5814.880	5835.120	---	PASS
	Ant2	5825	21.040	5814.840	5835.880	---	PASS
11N40MIMO	Ant1	5190	41.200	5169.360	5210.560	---	PASS
	Ant2	5190	40.560	5169.680	5210.240	---	PASS
	Ant1	5230	41.280	5209.360	5250.640	---	PASS
	Ant2	5230	40.560	5209.760	5250.320	---	PASS
	Ant1	5270	41.040	5249.520	5290.560	---	PASS
	Ant2	5270	40.640	5249.680	5290.320	---	PASS
	Ant1	5310	41.280	5289.440	5330.720	---	PASS
	Ant2	5310	40.720	5289.600	5330.320	---	PASS
	Ant1	5510	41.280	5489.360	5530.640	---	PASS
	Ant2	5510	40.560	5489.760	5530.320	---	PASS
	Ant1	5550	41.040	5529.520	5570.560	---	PASS
	Ant2	5550	40.640	5529.680	5570.320	---	PASS
	Ant1	5670	41.280	5649.520	5690.800	---	PASS
	Ant2	5670	40.560	5649.760	5690.320	---	PASS
	Ant1	5755	40.960	5734.520	5775.480	---	PASS
	Ant2	5755	40.480	5734.760	5775.240	---	PASS
	Ant1	5795	41.120	5774.440	5815.560	---	PASS
	Ant2	5795	40.400	5774.760	5815.160	---	PASS
11AC20MIMO	Ant1	5180	20.160	5169.920	5190.080	---	PASS
	Ant2	5180	20.080	5169.960	5190.040	---	PASS
	Ant1	5200	20.520	5189.720	5210.240	---	PASS
	Ant2	5200	20.120	5189.920	5210.040	---	PASS
	Ant1	5240	20.240	5229.840	5250.080	---	PASS
	Ant2	5240	20.160	5229.880	5250.040	---	PASS
	Ant1	5260	20.440	5249.800	5270.240	---	PASS
	Ant2	5260	20.120	5249.960	5270.080	---	PASS
	Ant1	5280	20.480	5269.760	5290.240	---	PASS
	Ant2	5280	20.120	5269.960	5290.080	---	PASS
	Ant1	5320	20.520	5309.760	5330.280	---	PASS
	Ant2	5320	20.160	5309.880	5330.040	---	PASS
	Ant1	5500	20.800	5489.760	5510.560	---	PASS

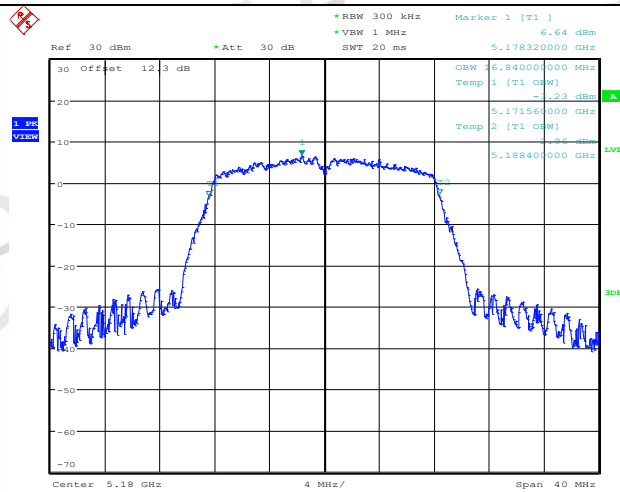
	Ant2	5500	26.800	5487.280	5514.080	---	PASS
	Ant1	5580	21.520	5569.200	5590.720	---	PASS
	Ant2	5580	26.760	5567.280	5594.040	---	PASS
	Ant1	5700	24.560	5689.320	5713.880	---	PASS
	Ant2	5700	20.480	5689.800	5710.280	---	PASS
	Ant1	5745	20.920	5734.640	5755.560	---	PASS
	Ant2	5745	21.320	5734.320	5755.640	---	PASS
	Ant1	5785	20.760	5774.720	5795.480	---	PASS
	Ant2	5785	20.920	5774.520	5795.440	---	PASS
	Ant1	5825	21.640	5814.080	5835.720	---	PASS
	Ant2	5825	26.360	5812.520	5838.880	---	PASS
	Ant1	5190	40.800	5169.520	5210.320	---	PASS
11AC40MIMO	Ant2	5190	40.720	5169.680	5210.400	---	PASS
	Ant1	5230	40.320	5209.840	5250.160	---	PASS
	Ant2	5230	40.560	5209.760	5250.320	---	PASS
	Ant1	5270	40.880	5249.520	5290.400	---	PASS
	Ant2	5270	40.480	5249.760	5290.240	---	PASS
	Ant1	5310	40.960	5289.520	5330.480	---	PASS
	Ant2	5310	40.640	5289.760	5330.400	---	PASS
	Ant1	5510	40.560	5489.680	5530.240	---	PASS
	Ant2	5510	40.880	5489.520	5530.400	---	PASS
	Ant1	5550	40.480	5529.760	5570.240	---	PASS
	Ant2	5550	40.480	5529.760	5570.240	---	PASS
	Ant1	5670	40.880	5649.600	5690.480	---	PASS
	Ant2	5670	40.960	5649.520	5690.480	---	PASS
	Ant1	5755	40.880	5734.520	5775.400	---	PASS
	Ant2	5755	40.480	5734.760	5775.240	---	PASS
	Ant1	5795	40.960	5774.440	5815.400	---	PASS
	Ant2	5795	40.880	5774.440	5815.320	---	PASS
11AC80MIMO	Ant1	5210	82.400	5168.880	5251.280	---	PASS
	Ant2	5210	80.960	5169.520	5250.480	---	PASS
	Ant1	5290	82.400	5249.040	5331.440	---	PASS
	Ant2	5290	82.560	5248.880	5331.440	---	PASS
	Ant1	5530	82.560	5488.720	5571.280	---	PASS
	Ant2	5530	80.960	5489.520	5570.480	---	PASS
	Ant1	5610	82.560	5568.880	5651.440	---	PASS
	Ant2	5610	81.120	5569.520	5650.640	---	PASS
	Ant1	5775	81.120	5734.360	5815.480	---	PASS
	Ant2	5775	80.640	5734.680	5815.320	---	PASS

Test Mode	Antenna	Channel	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.160	5737.440	5752.600	0.5	PASS
	Ant2	5745	15.200	5737.400	5752.600	0.5	PASS
	Ant1	5785	15.200	5777.400	5792.600	0.5	PASS
	Ant2	5785	15.200	5777.400	5792.600	0.5	PASS
	Ant1	5825	15.160	5817.440	5832.600	0.5	PASS
	Ant2	5825	15.200	5817.400	5832.600	0.5	PASS
11N20MIMO	Ant1	5745	15.200	5737.400	5752.600	0.5	PASS
	Ant2	5745	15.200	5737.400	5752.600	0.5	PASS
	Ant1	5785	15.200	5777.400	5792.600	0.5	PASS

4.5. Original test data

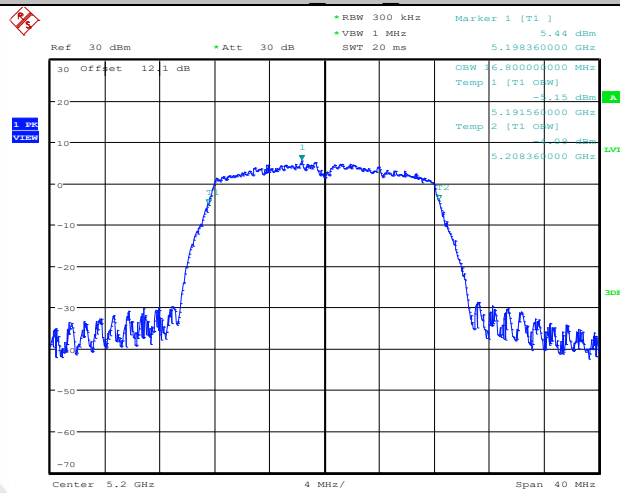
11A Ant1 5180





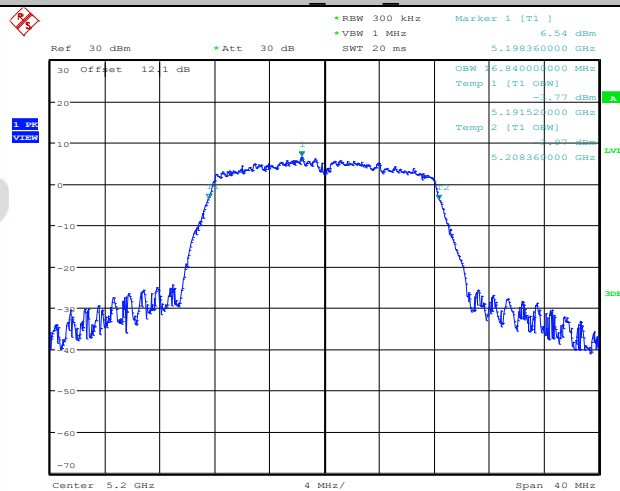
Date: 25.MAY.2021 11:05:21

11A Ant1 5200



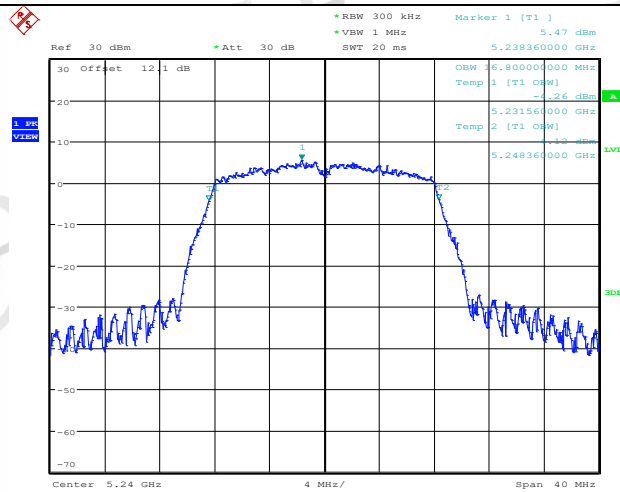
Date: 25.MAY.2021 10:37:26

11A Ant2 5200



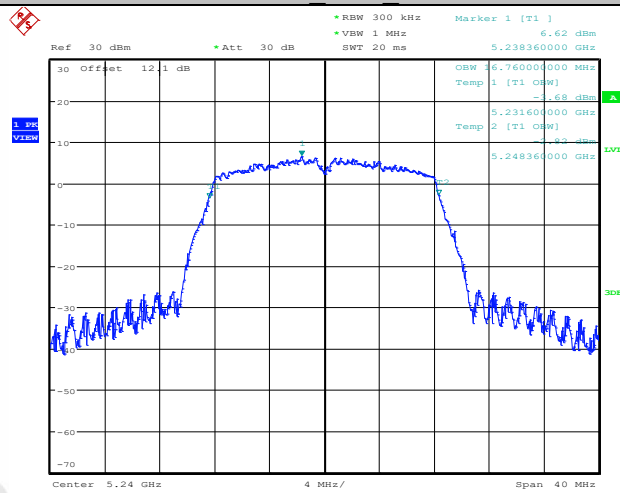
Date: 25.MAY.2021 11:08:50

11A Ant1 5240



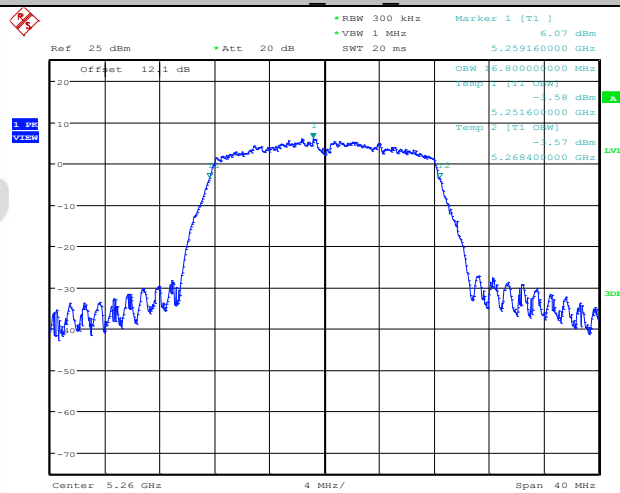
Date: 25.MAY.2021 10:40:33

11A Ant2 5240



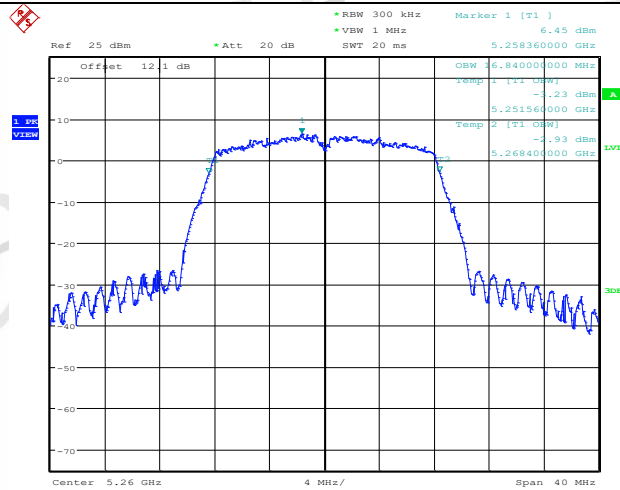
Date: 25.MAY.2021 11:12:07

11A Ant1 5260

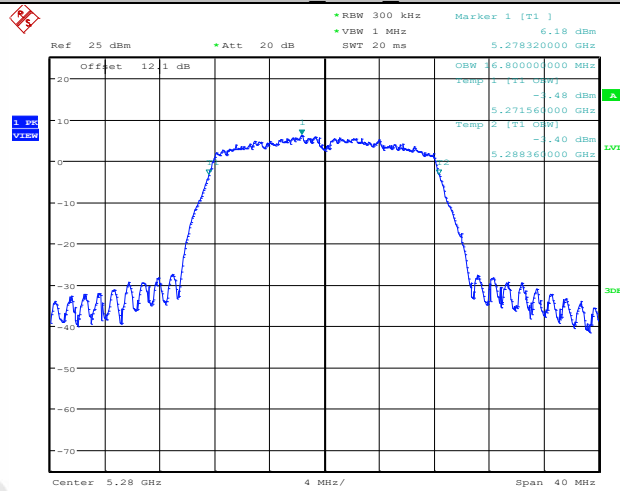


Date: 25.MAY.2021 22:31:39

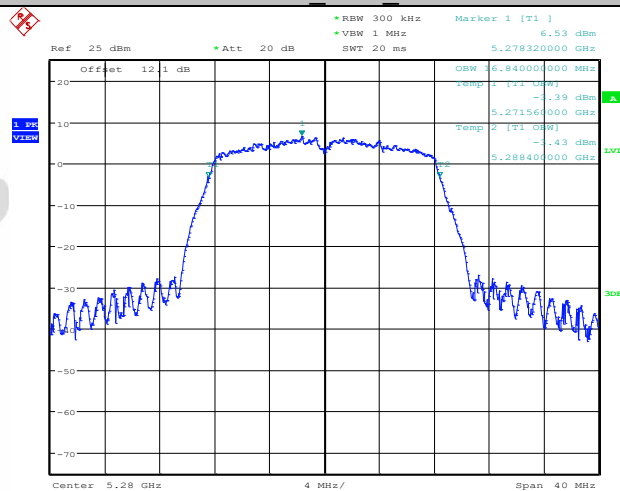
11A Ant2 5260



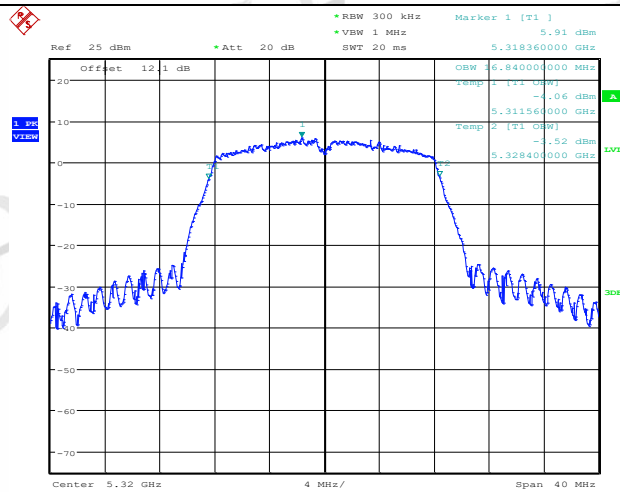
11A Ant1 5280



11A Ant2 5280

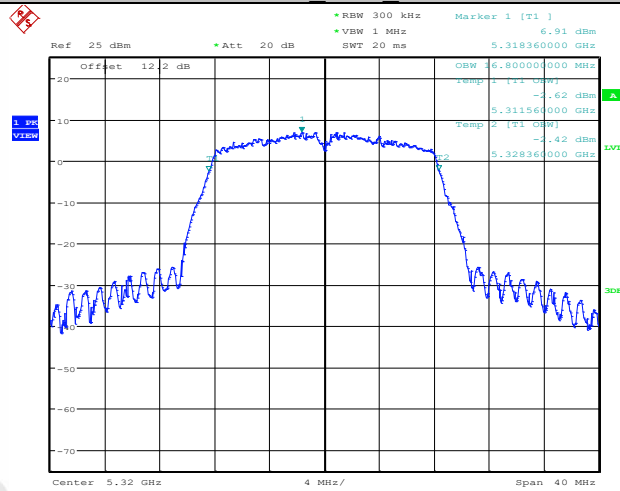


11A Ant1 5320



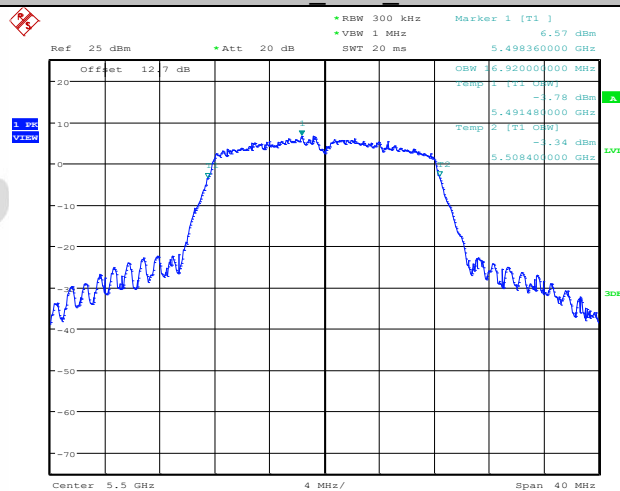
Date: 25.MAY.2021 22:42:02

11A_Ant2_5320



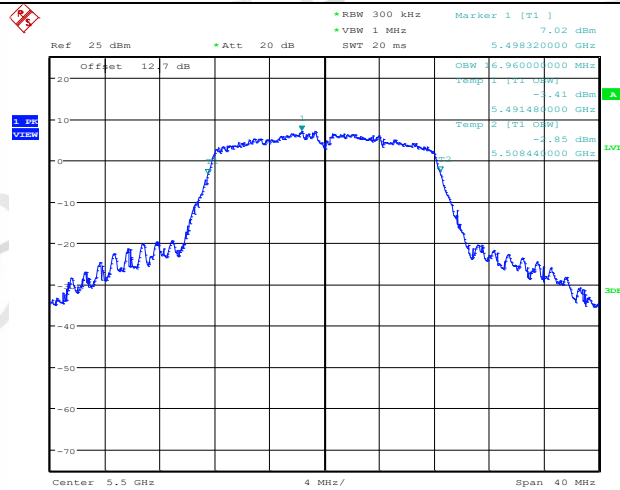
Date: 25.MAY.2021 23:17:42

11A_Ant1_5500



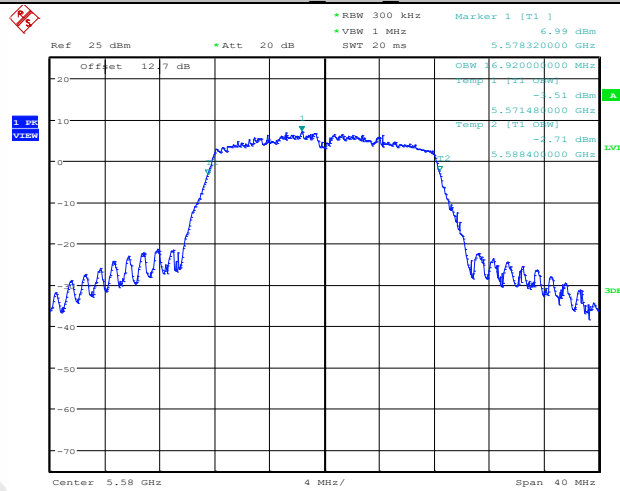
Date: 25.MAY.2021 22:48:07

11A_Ant2_5500



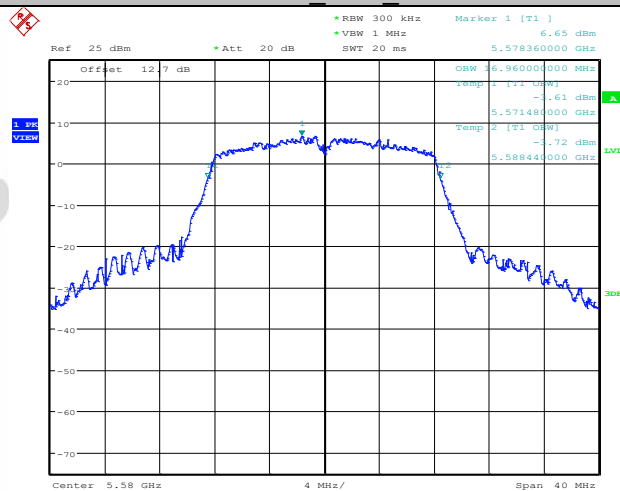
Date: 25.MAY.2021 23:21:18

11A Ant1 5580



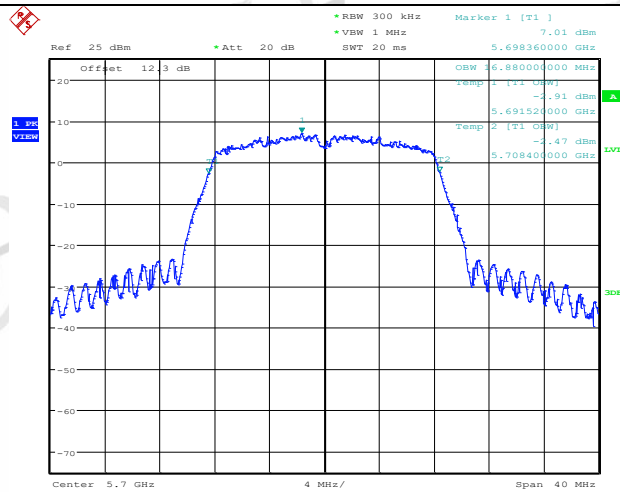
Date: 25.MAY.2021 22:52:01

11A Ant2 5580



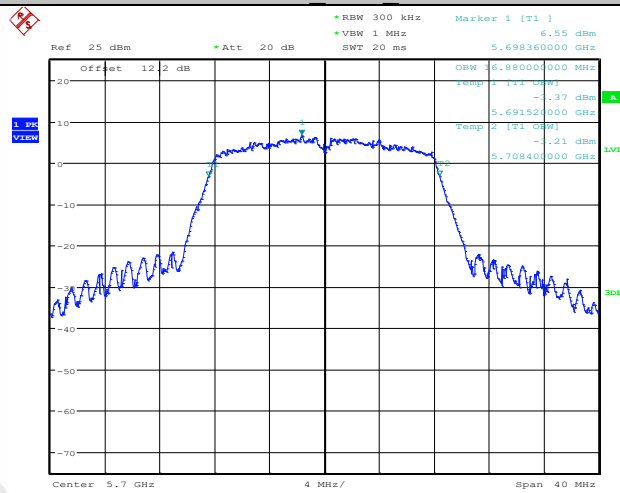
Date: 25.MAY.2021 23:25:06

11A Ant1 5700



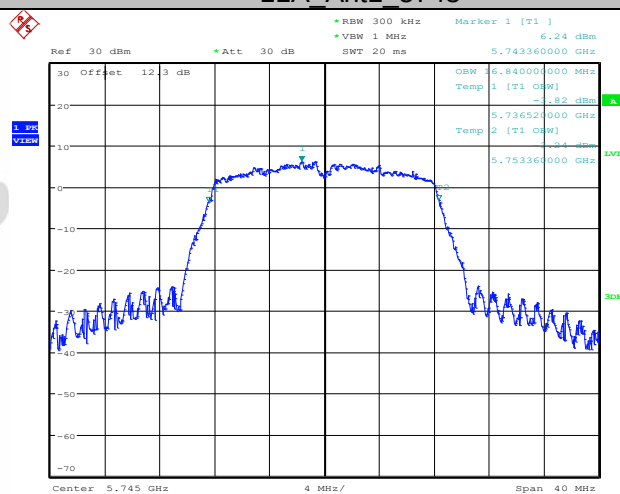
Date: 25.MAY.2021 22:55:18

11A Ant2 5700



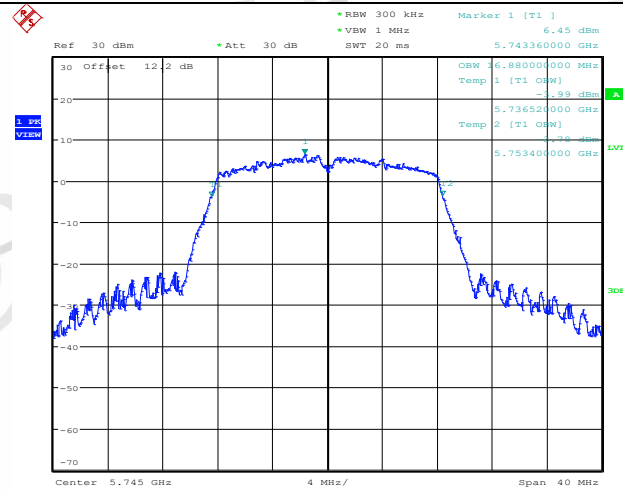
Date: 25.MAY.2021 23:29:04

11A Ant1 5745



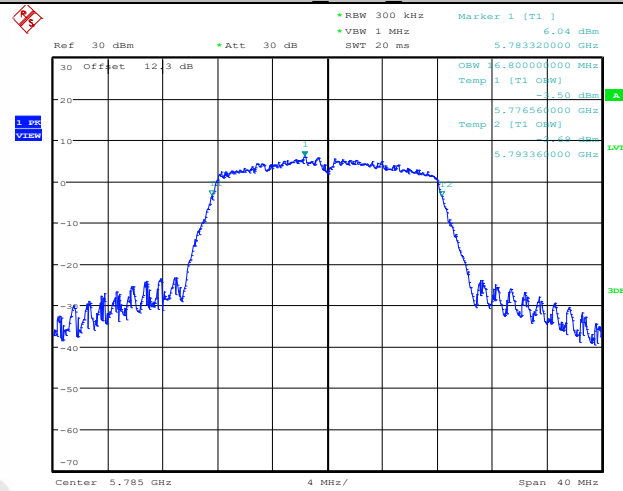
Date: 25.MAY.2021 10:49:30

11A Ant2 5745



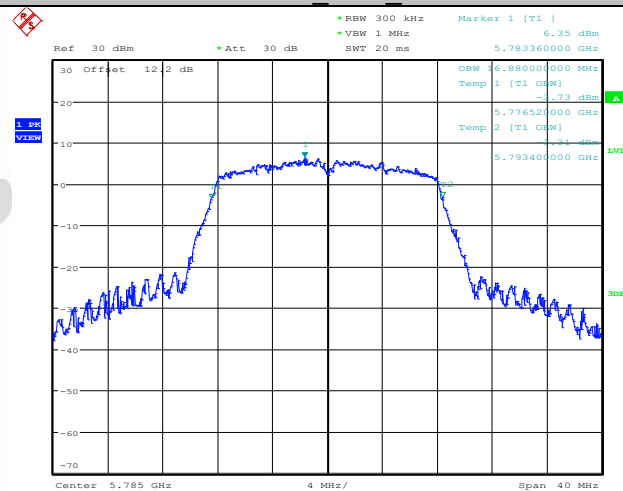
Date: 25.MAY.2021 11:16:24

11A_Ant1_5785



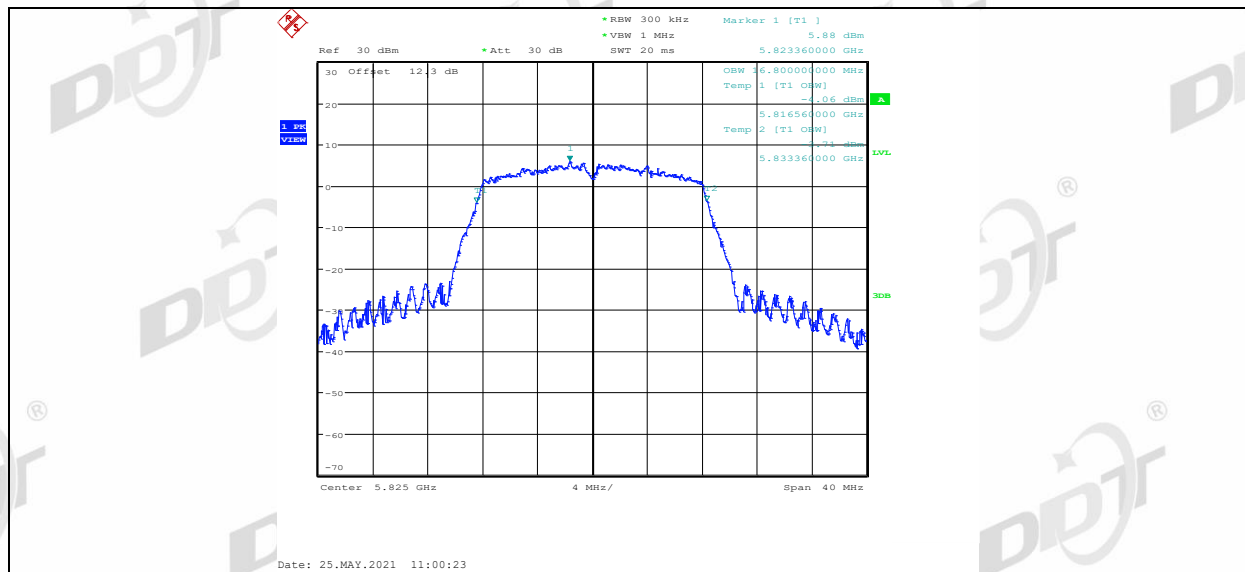
Date: 25.MAY.2021 10:57:13

11A_Ant2_5785

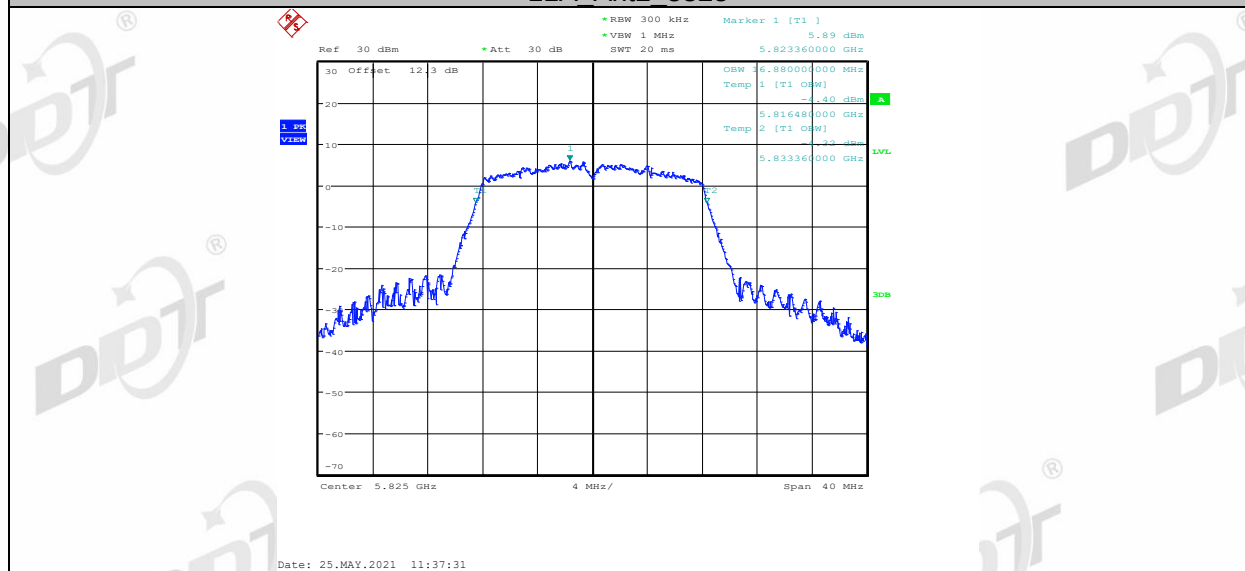


Date: 25.MAY.2021 11:34:26

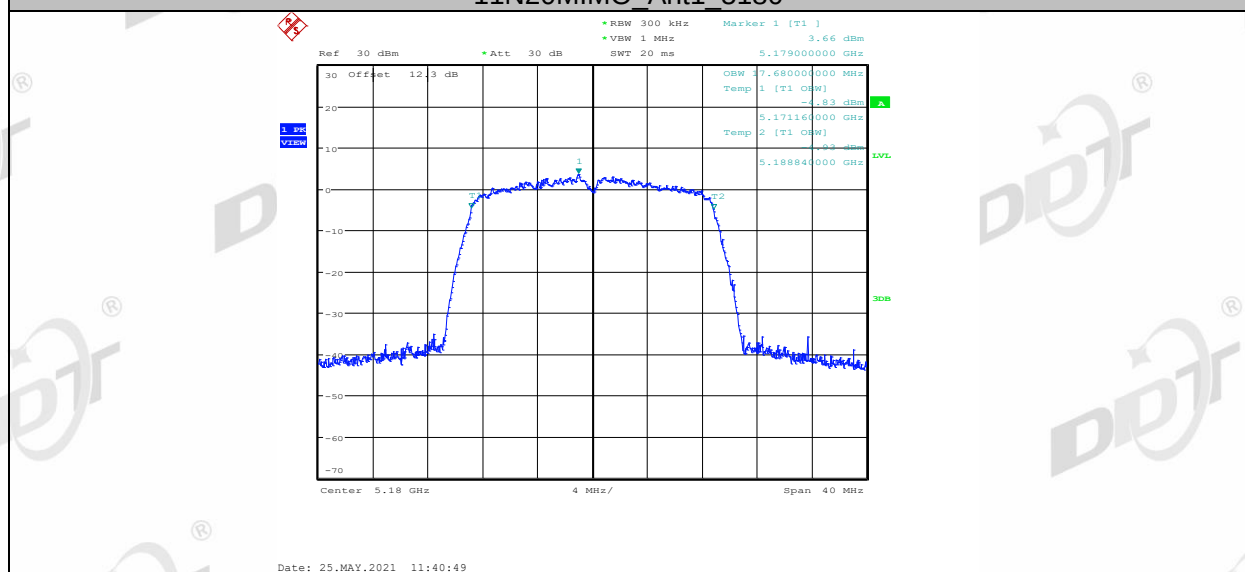
11A_Ant1_5825



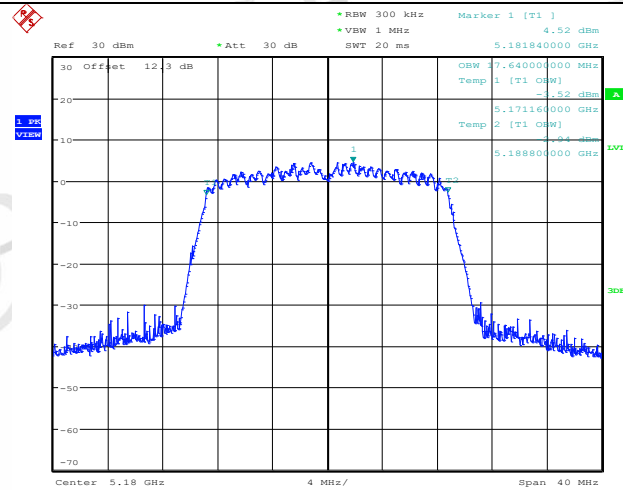
11A_Ant2_5825



11N20MIMO_Ant1_5180

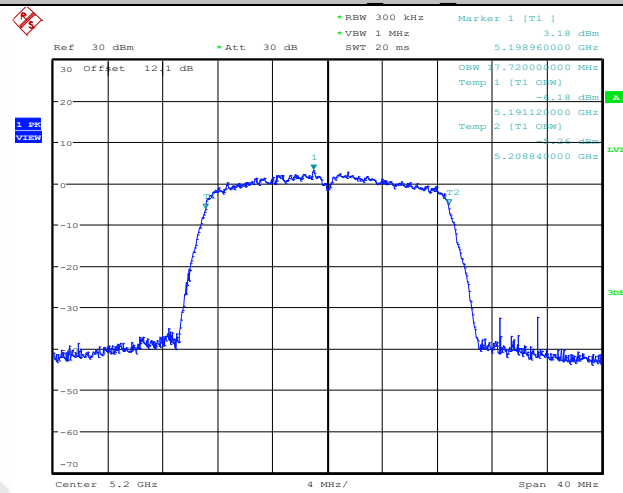


11N20MIMO_Ant2_5180



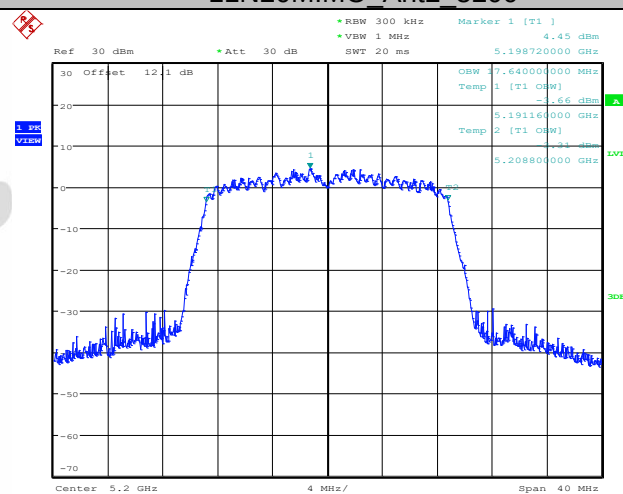
Date: 25.MAY.2021 11:44:53

11N20MIMO_Ant1_5200



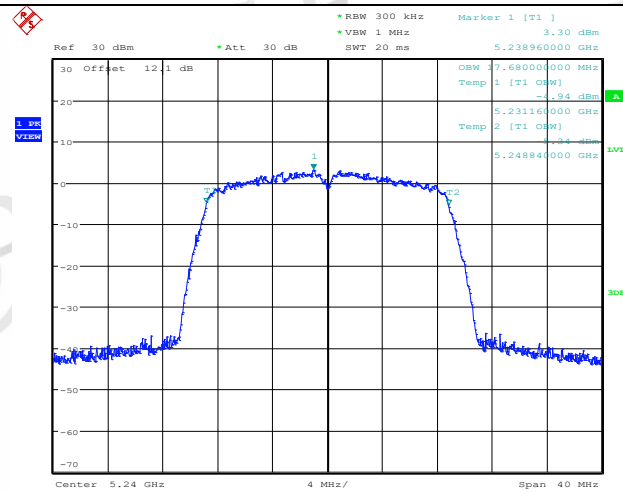
Date: 25.MAY.2021 11:48:26

11N20MIMO_Ant2_5200

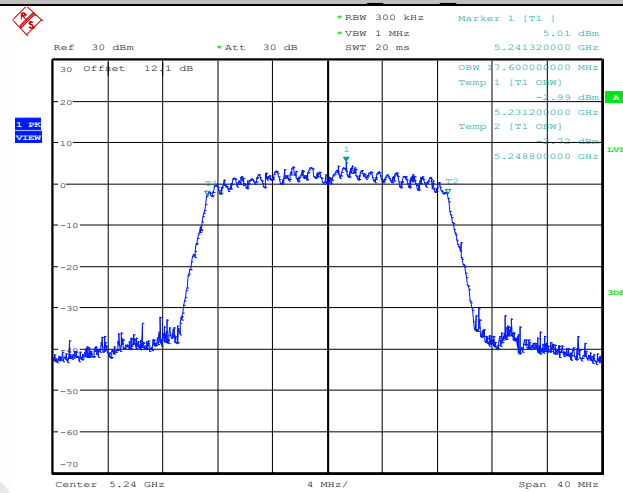


Date: 25.MAY.2021 11:54:42

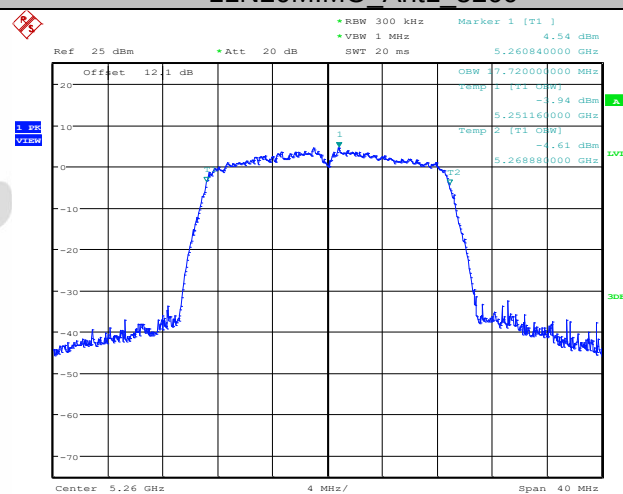
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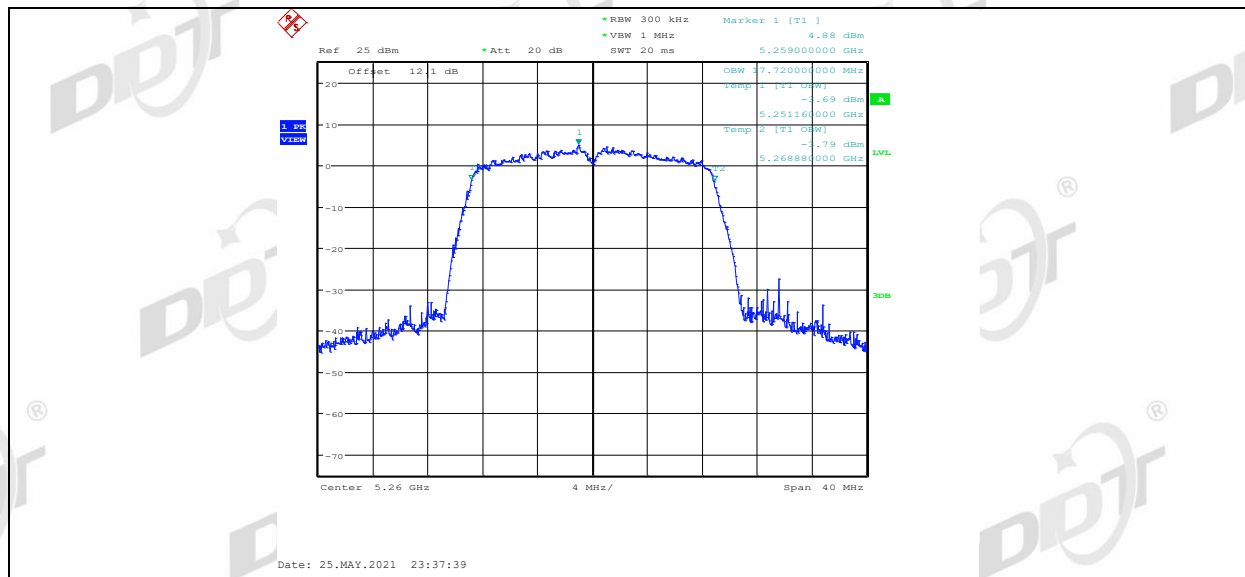
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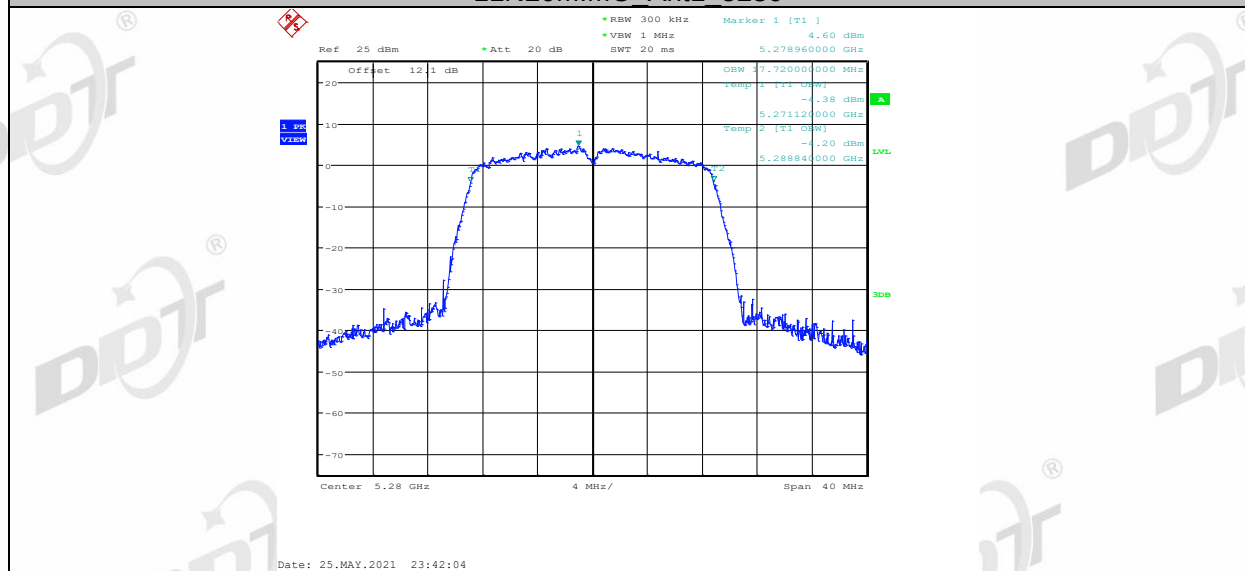
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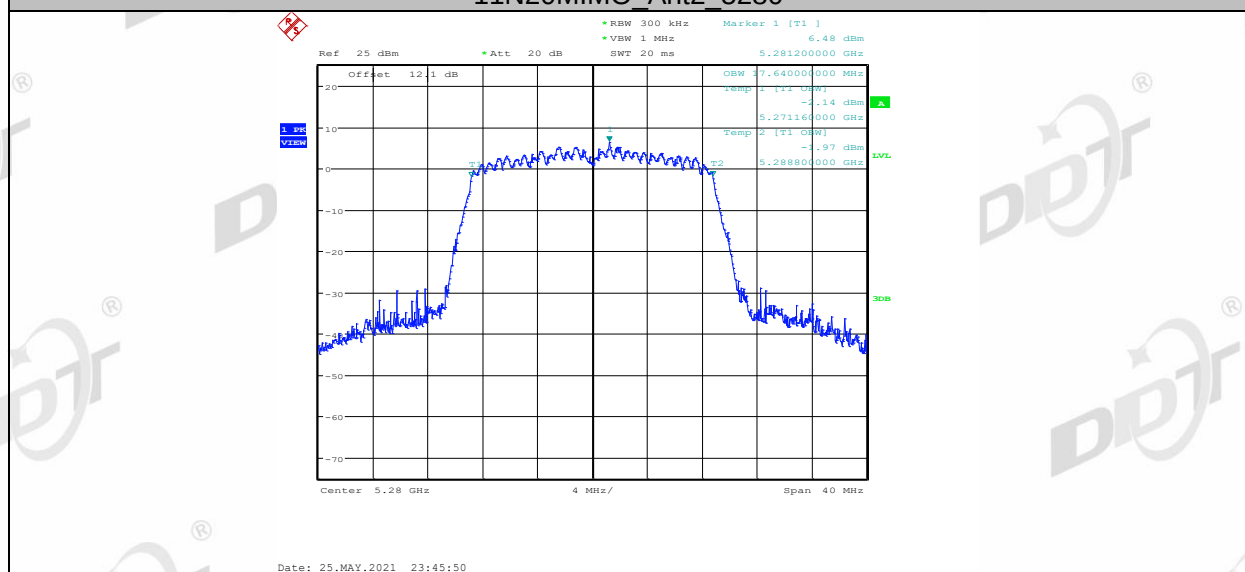
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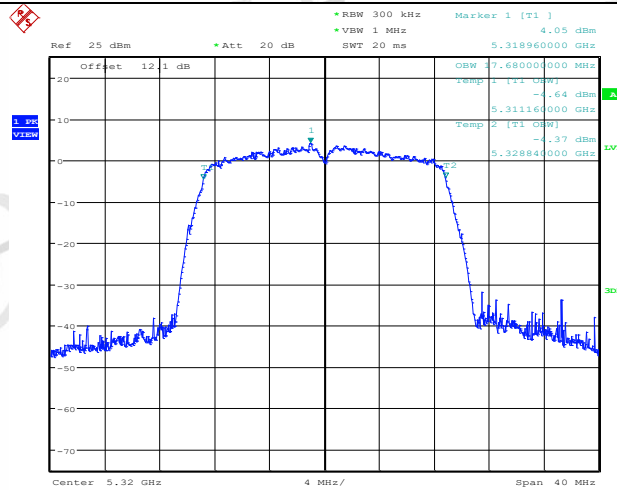
11N20MIMO Ant1 5280



11N20MIMO Ant2 5280

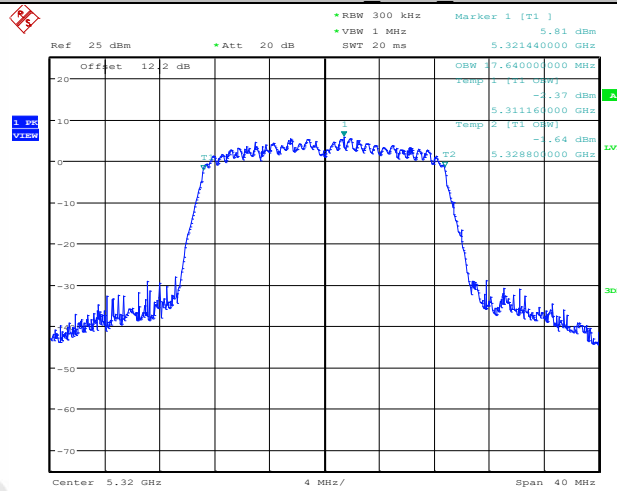


11N20MIMO Ant1 5320



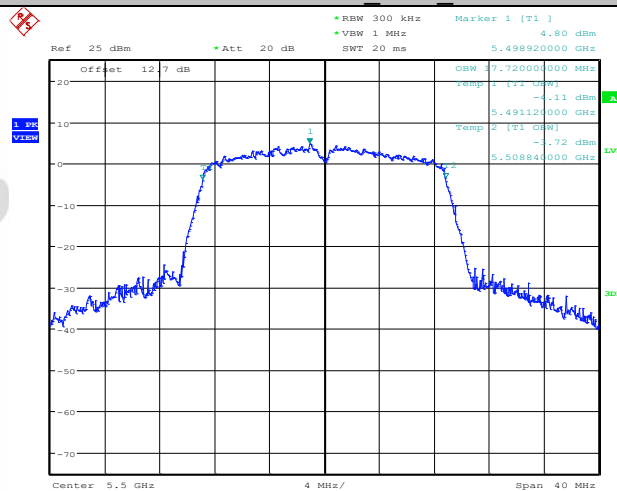
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11N20MIMO_Ant2_5320



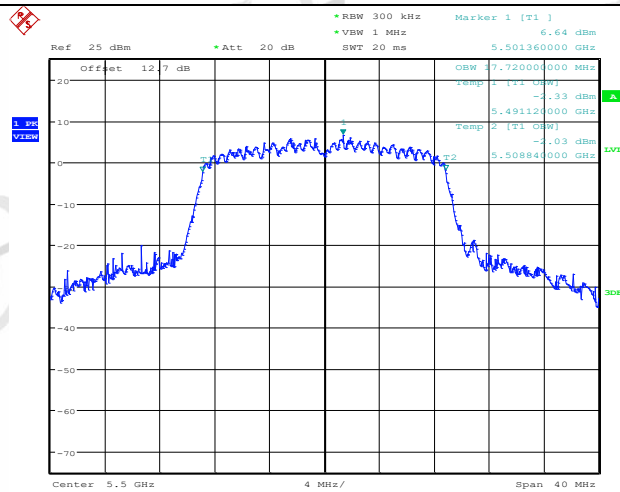
Date: 26.MAY.2021 10:43:35

11N20MIMO_Ant1_5500



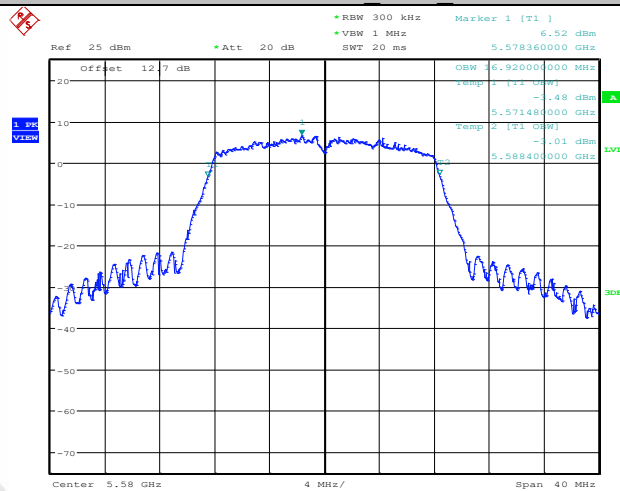
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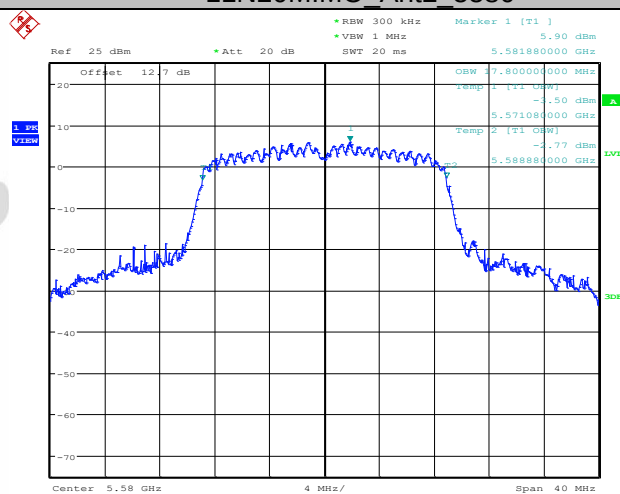
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11N20MIMO_Ant1_5580



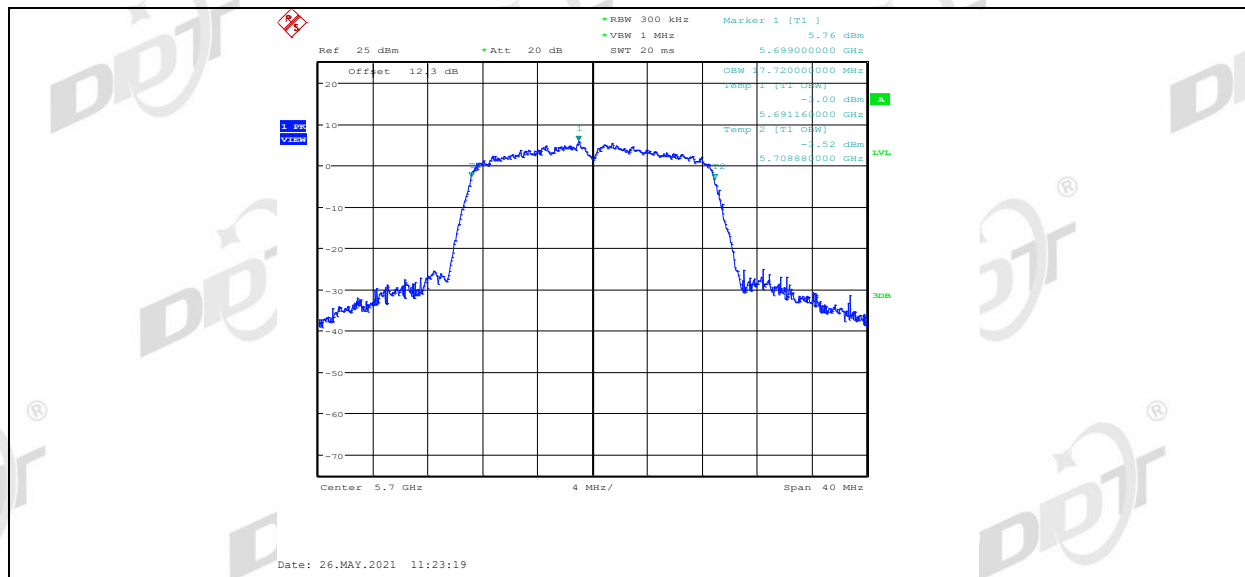
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11N20MIMO Ant2 5580

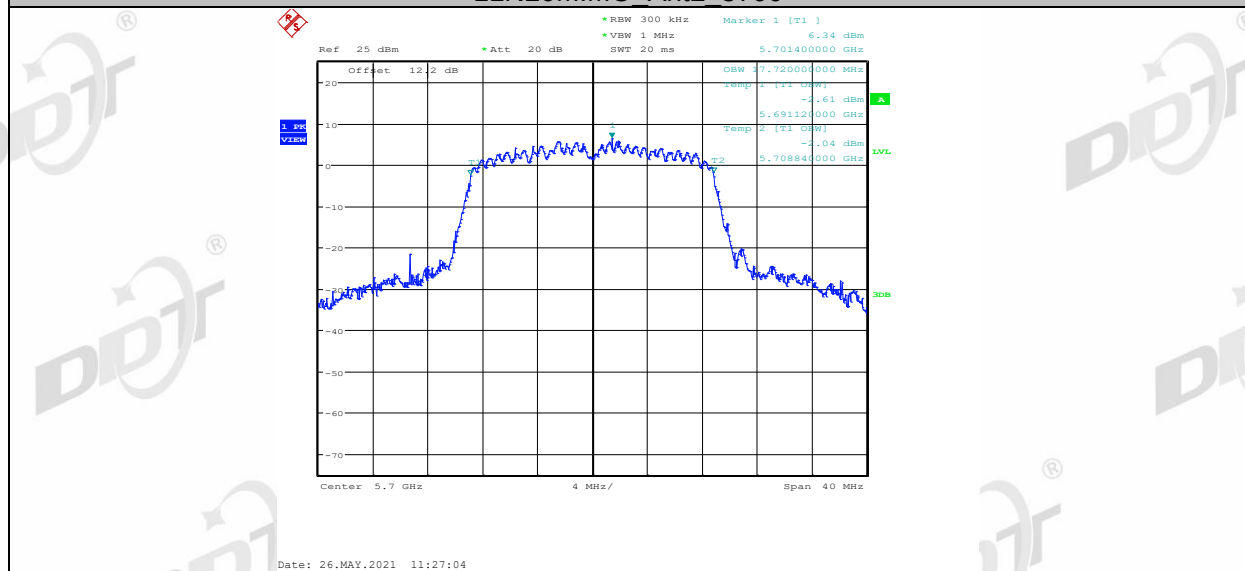


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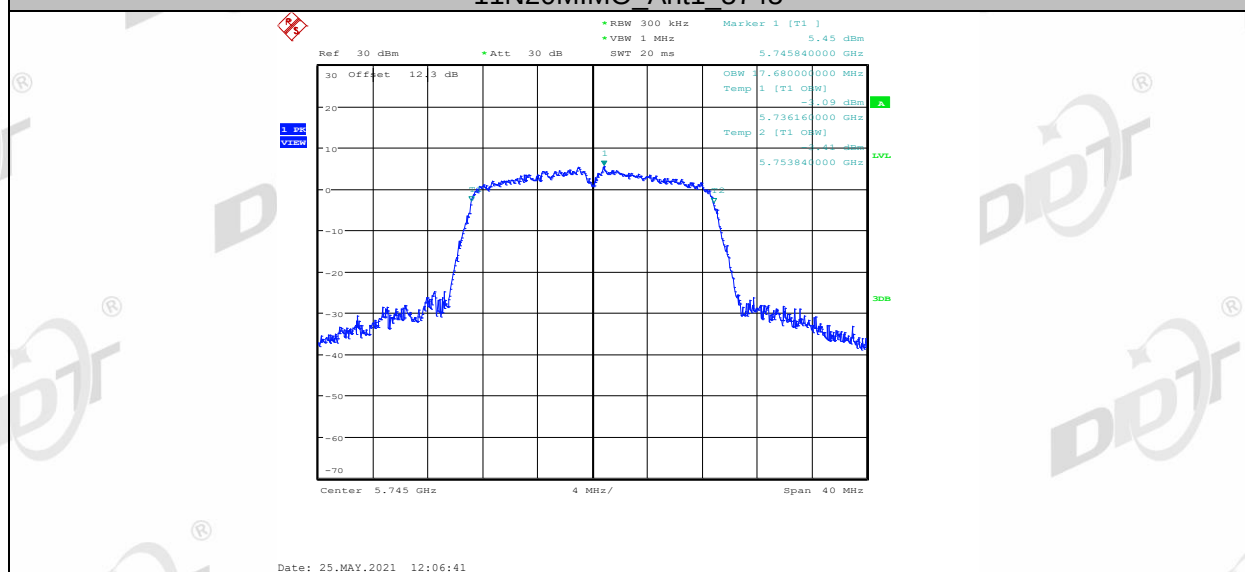
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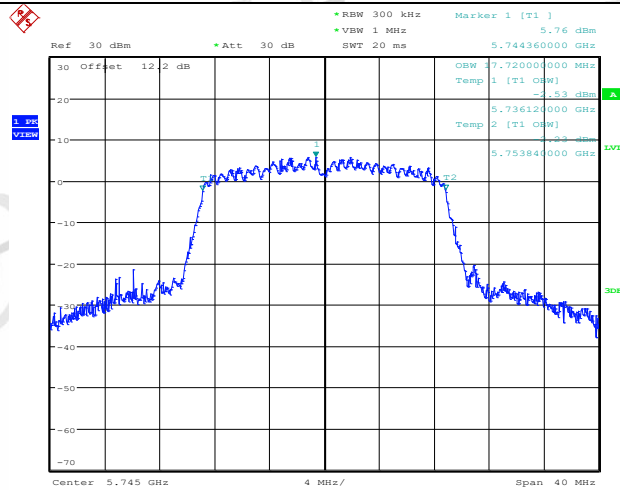
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11N20MIMO_Ant1_5745

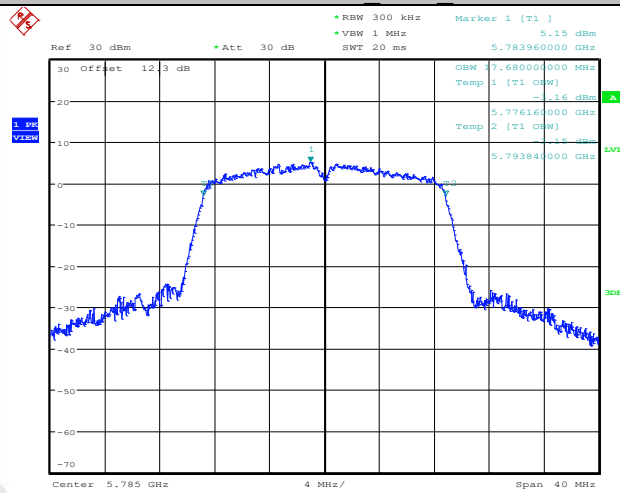


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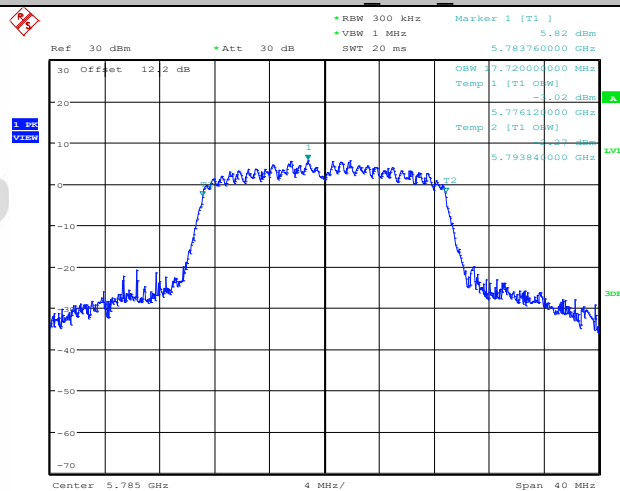
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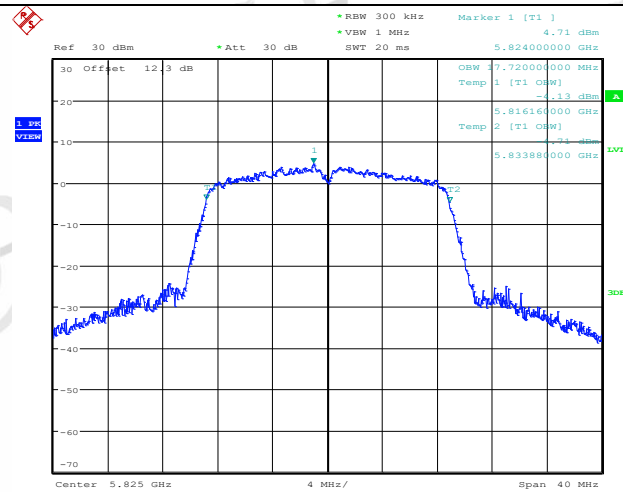
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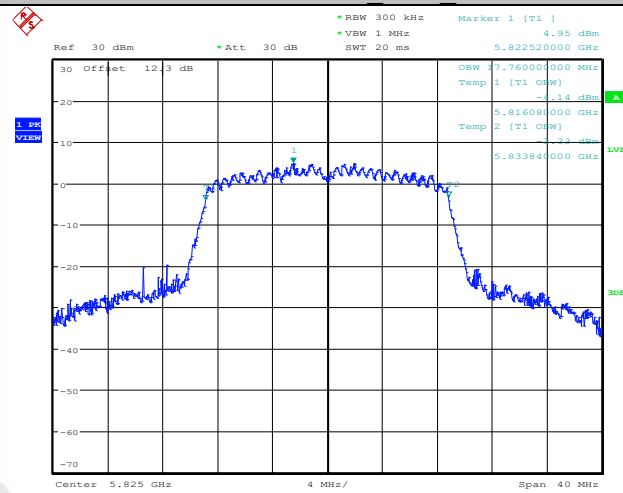
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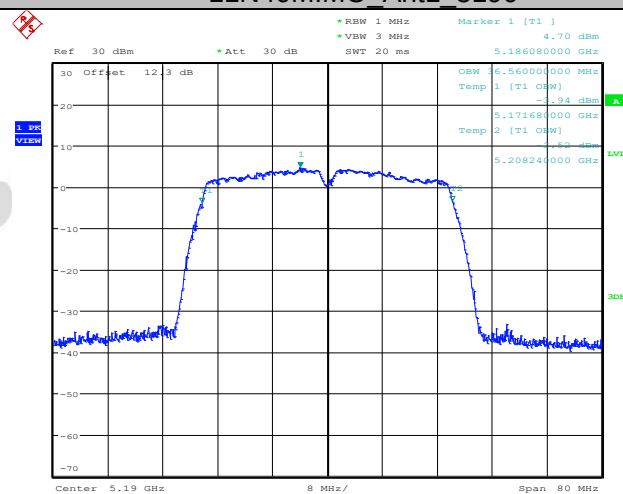
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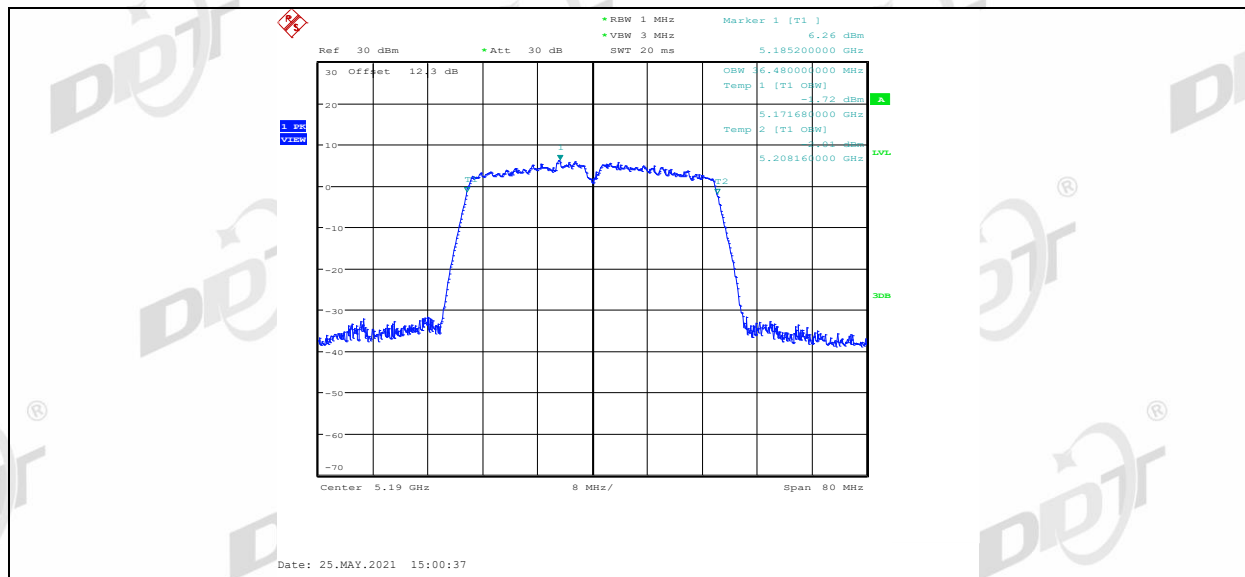
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11N40MIMO Ant1 5190

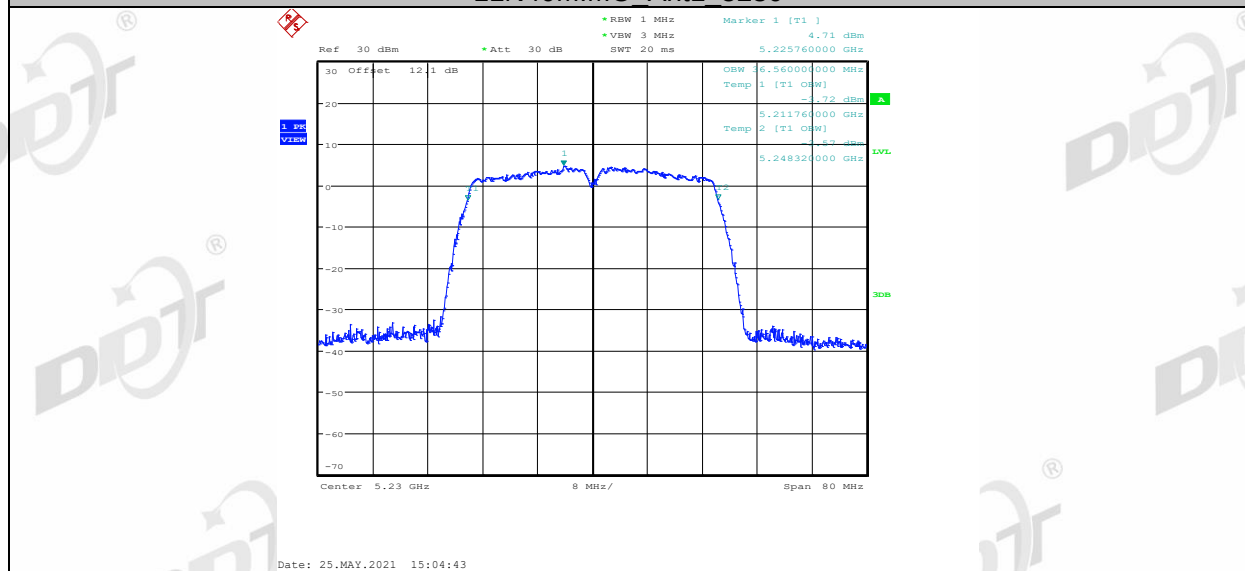


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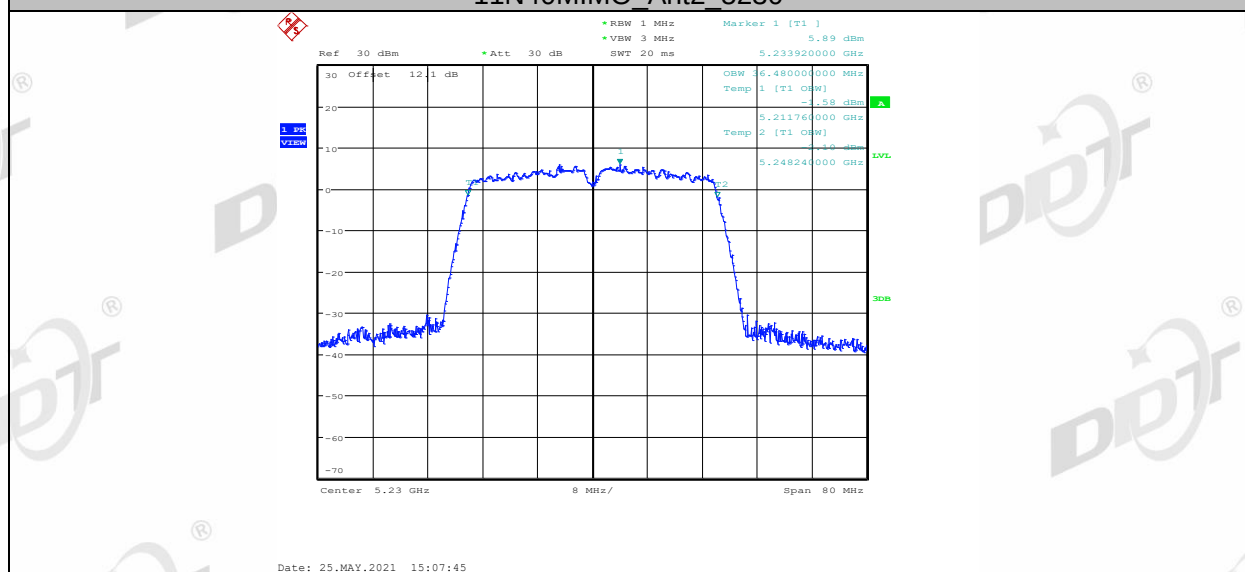
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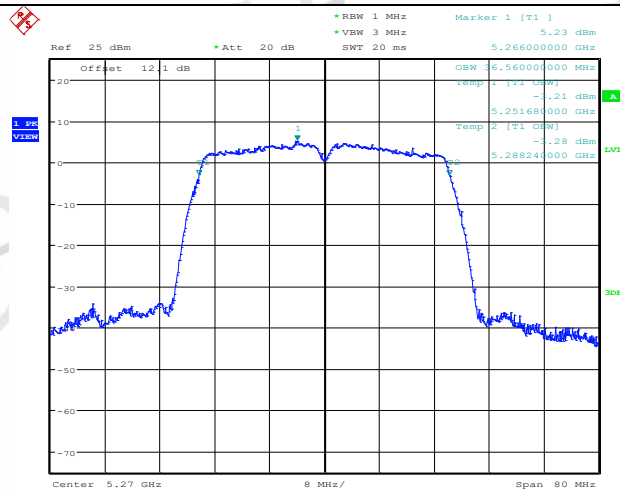
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11N40MIMO Ant2 5230

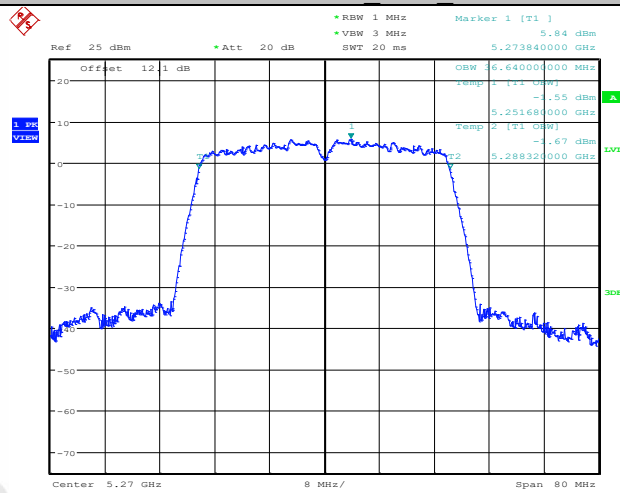


11N40MIMO Ant1 5270



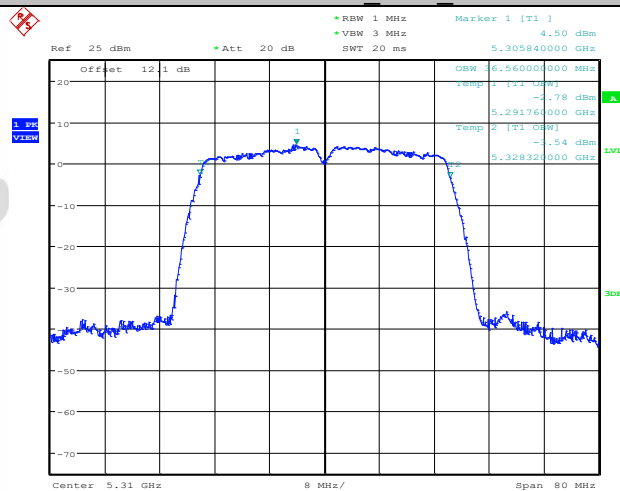
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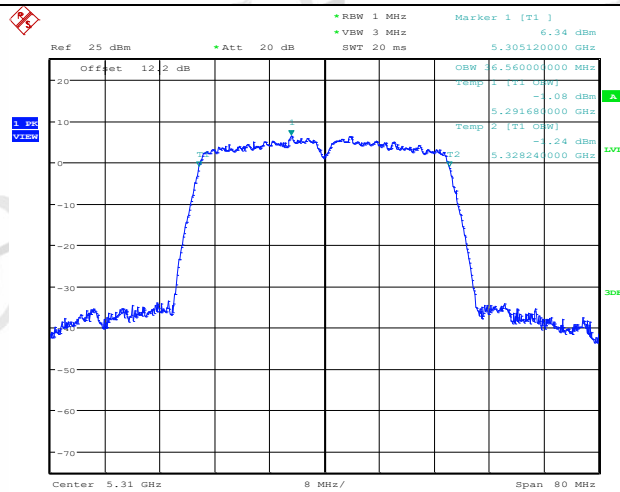
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11N40MIMO_Ant1_5310



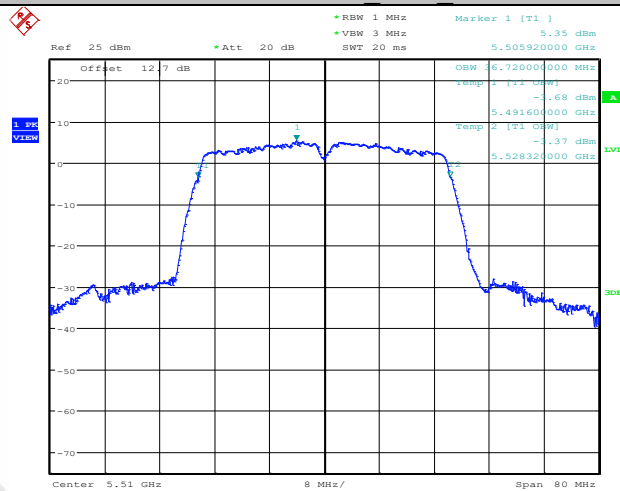
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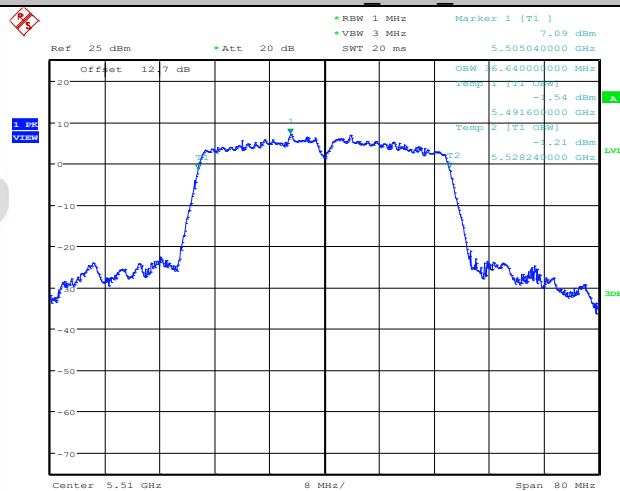
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11N40MIMO_Ant1_5510



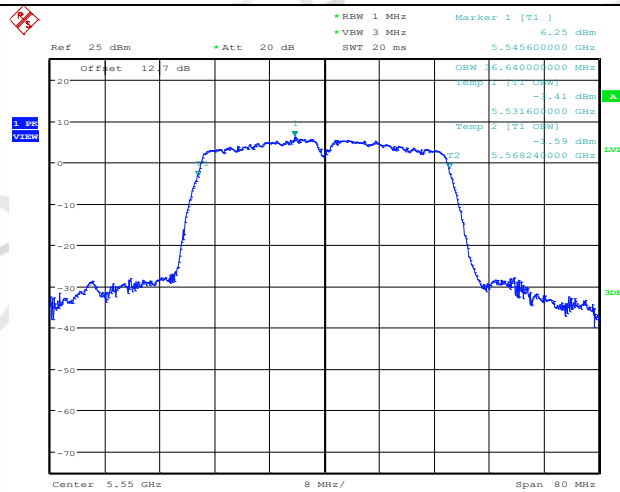
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11N40MIMO_Ant2_5510



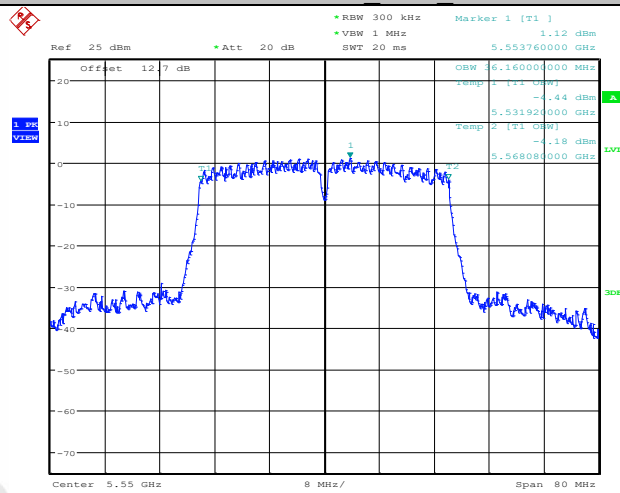
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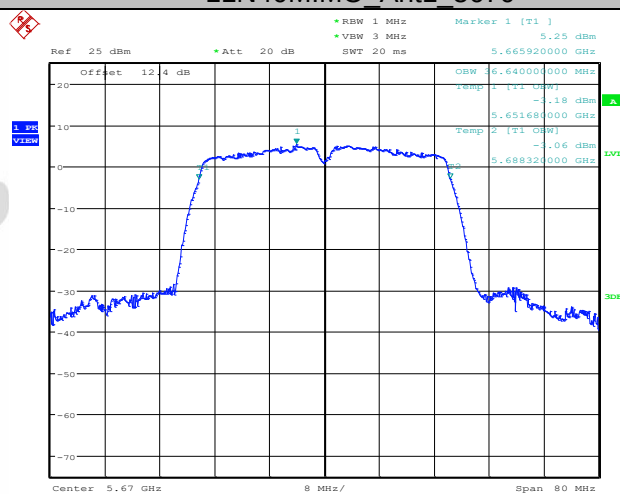
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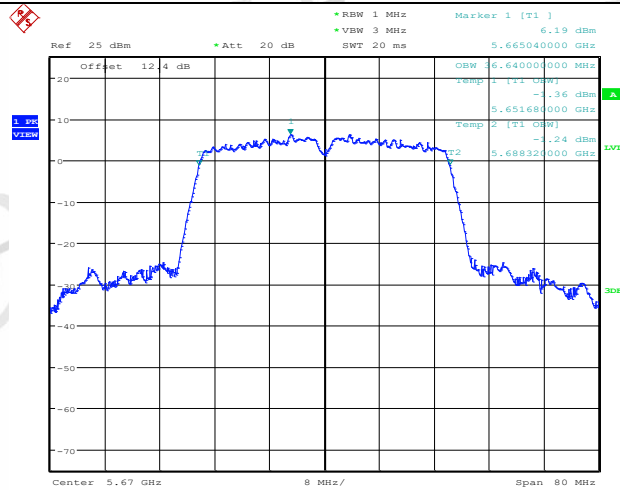
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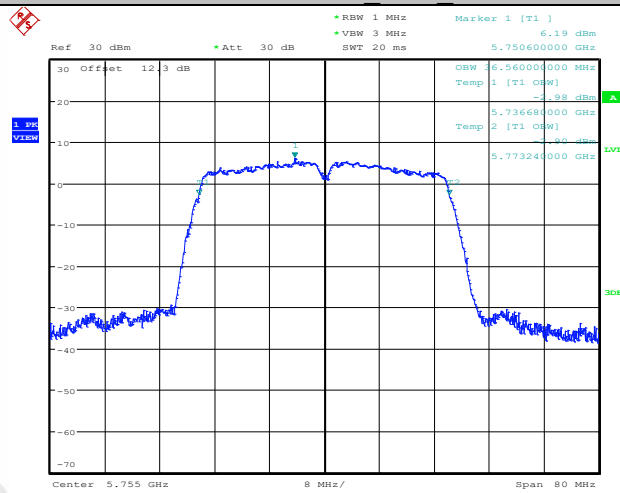
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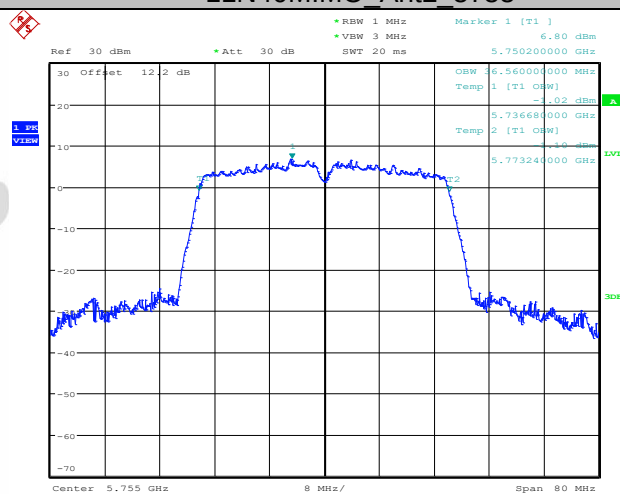
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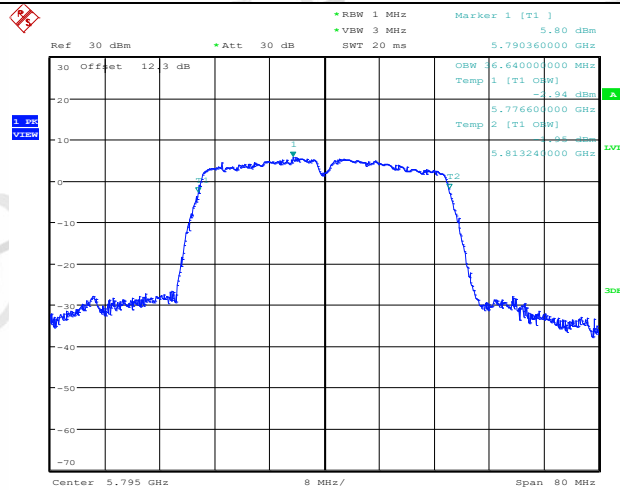
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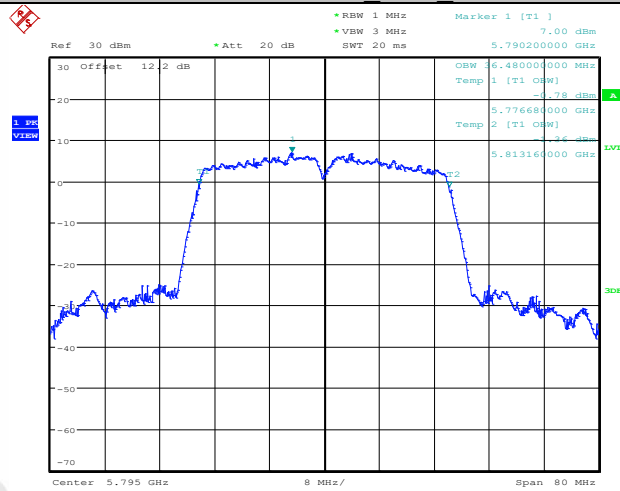
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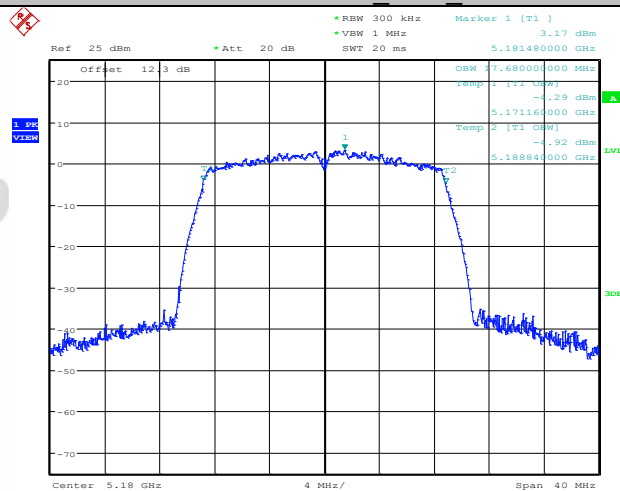
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11N40MIMO_Ant2_5795



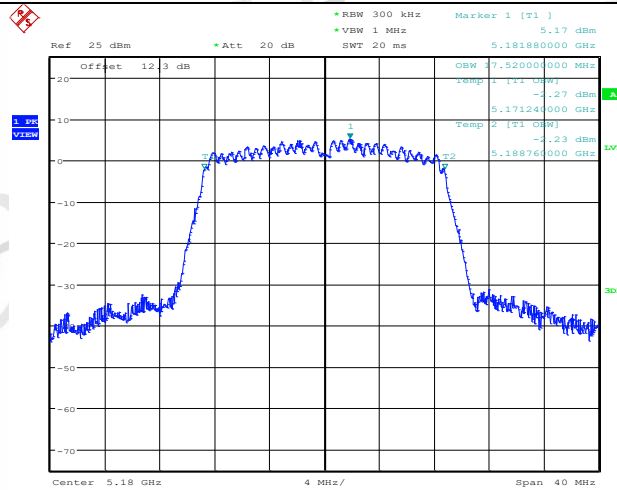
Date: 25.MAY.2021 20:35:37

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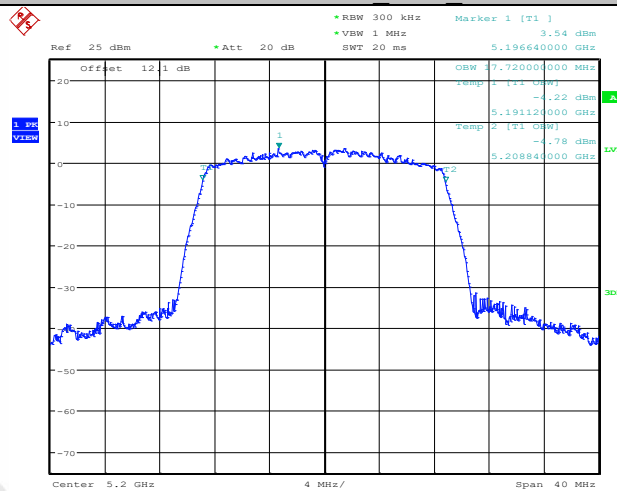
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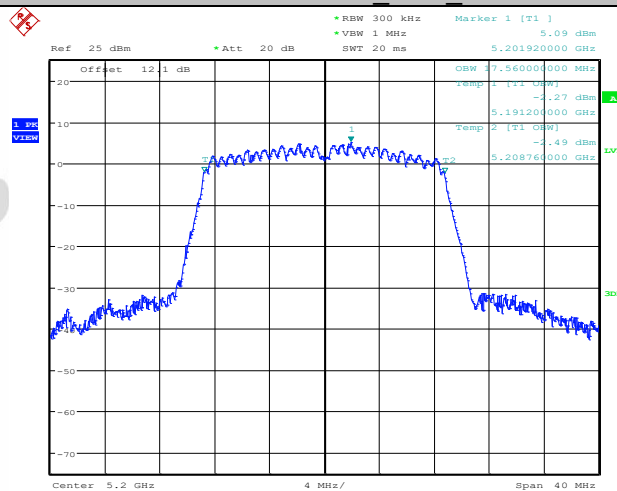
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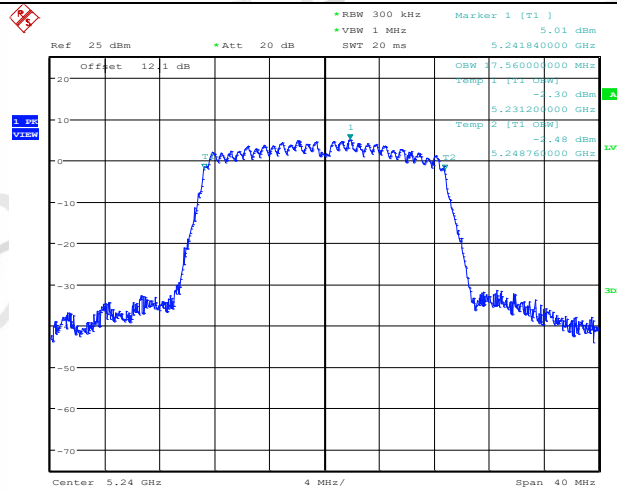
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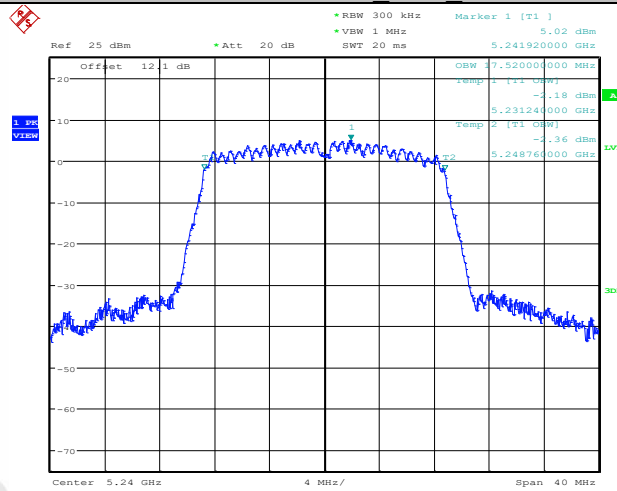
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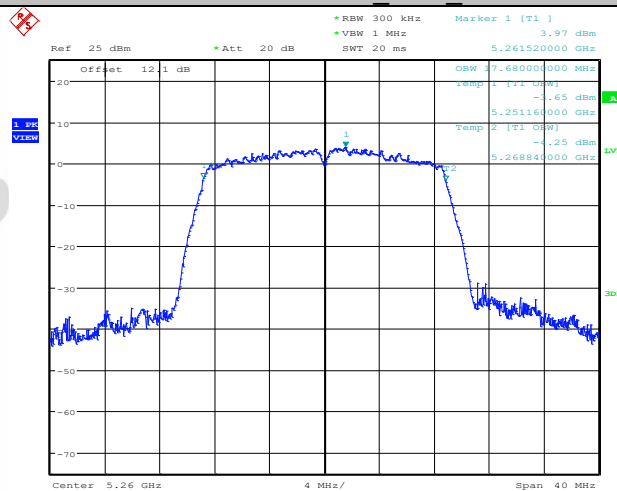
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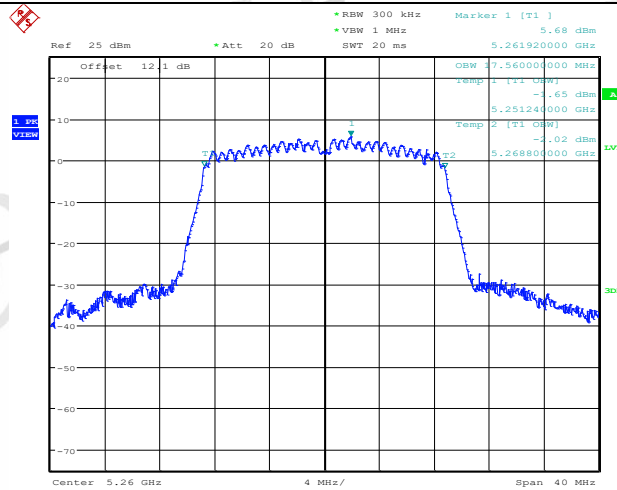
Date: 25.MAY.2021 21:00:47

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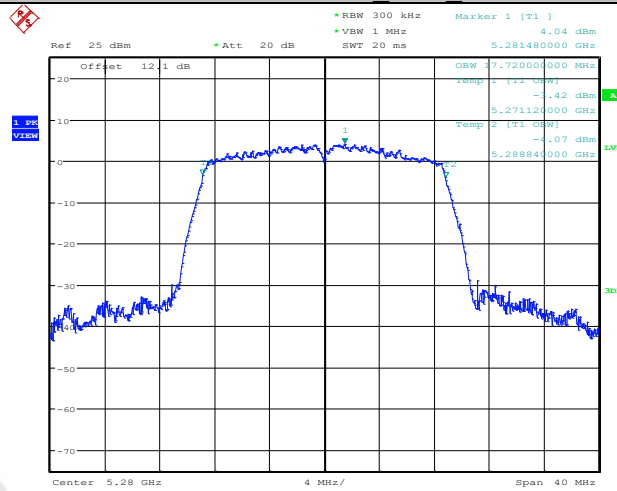
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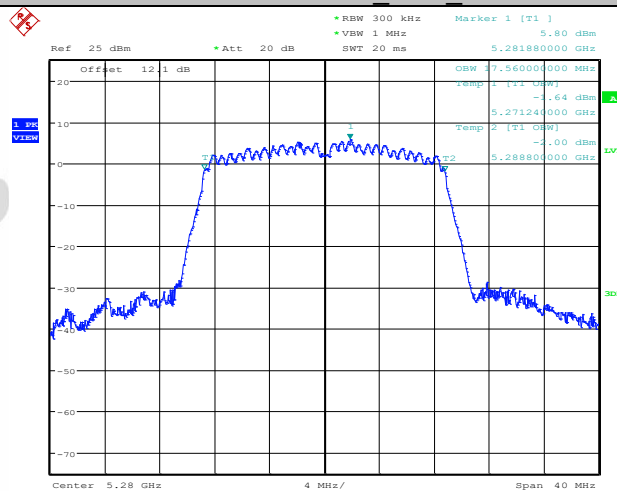
Date: 26.MAY.2021 18:58:29

11AC20MIMO_Ant1_5280



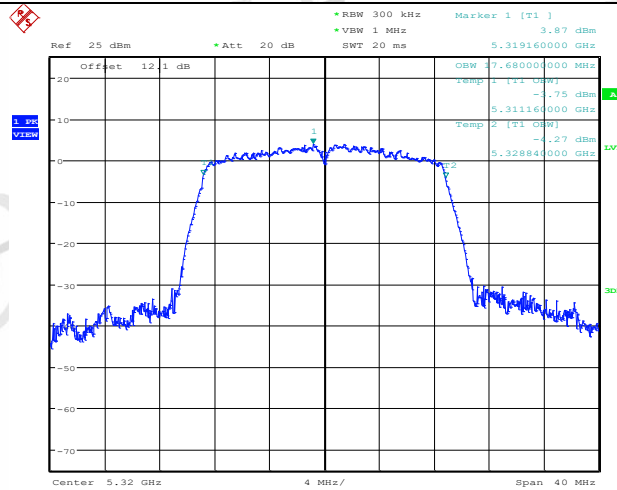
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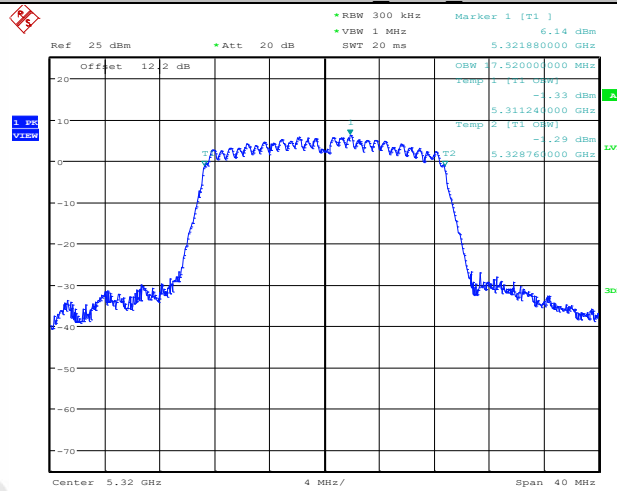
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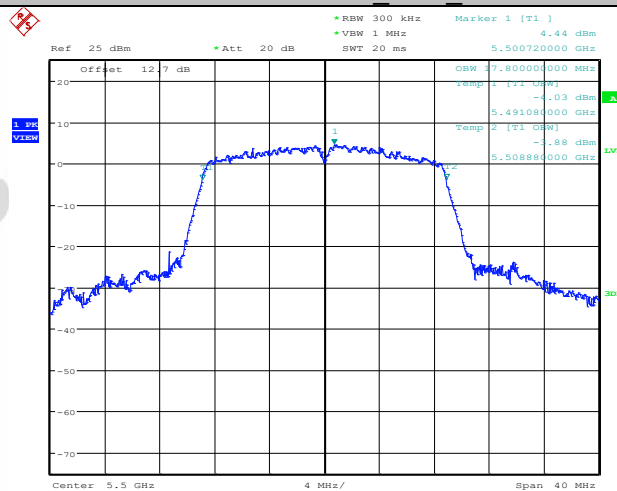
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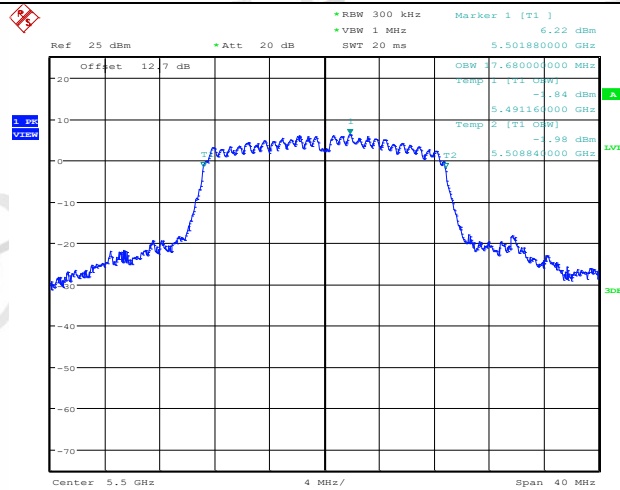
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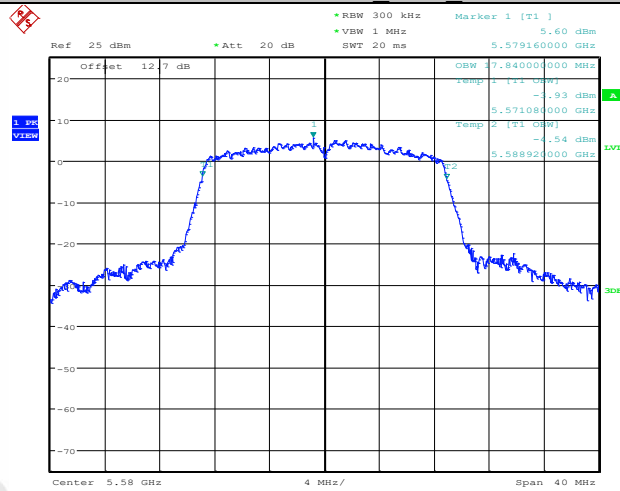
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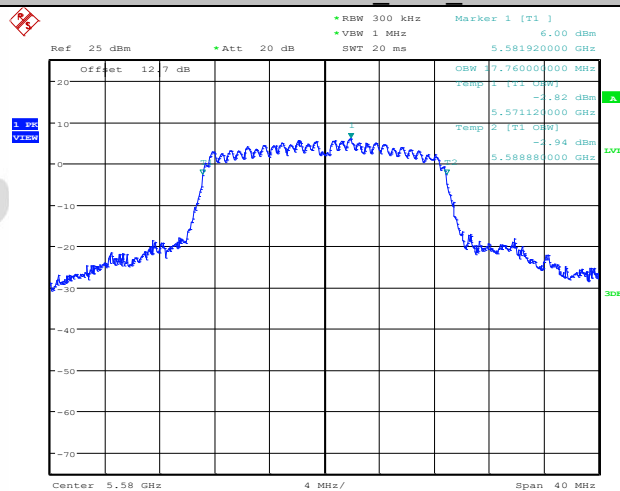
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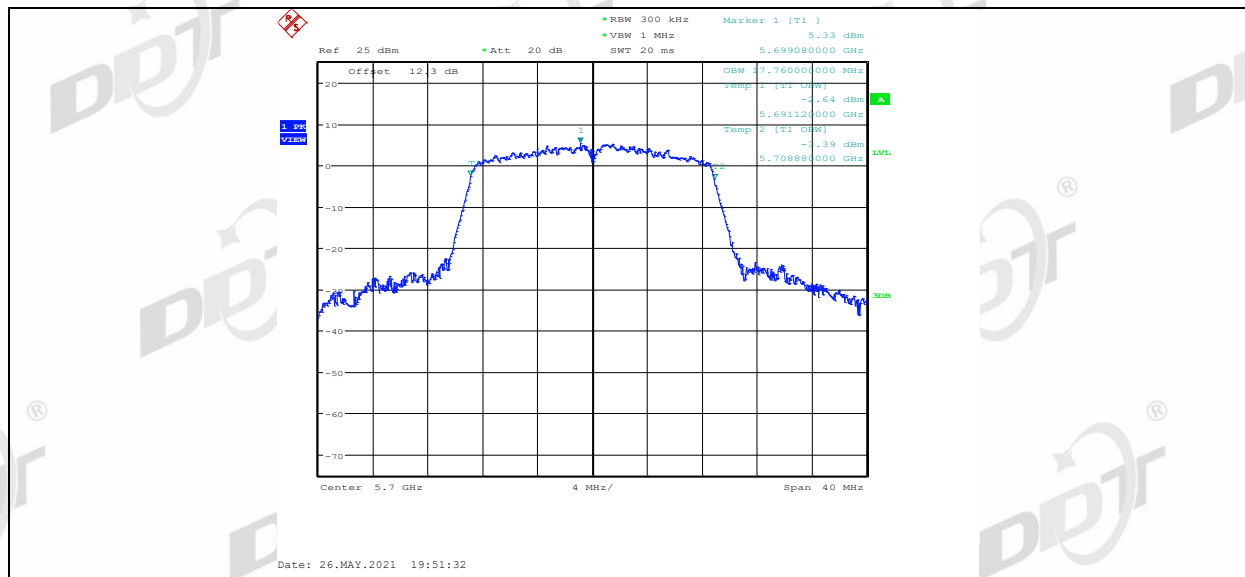
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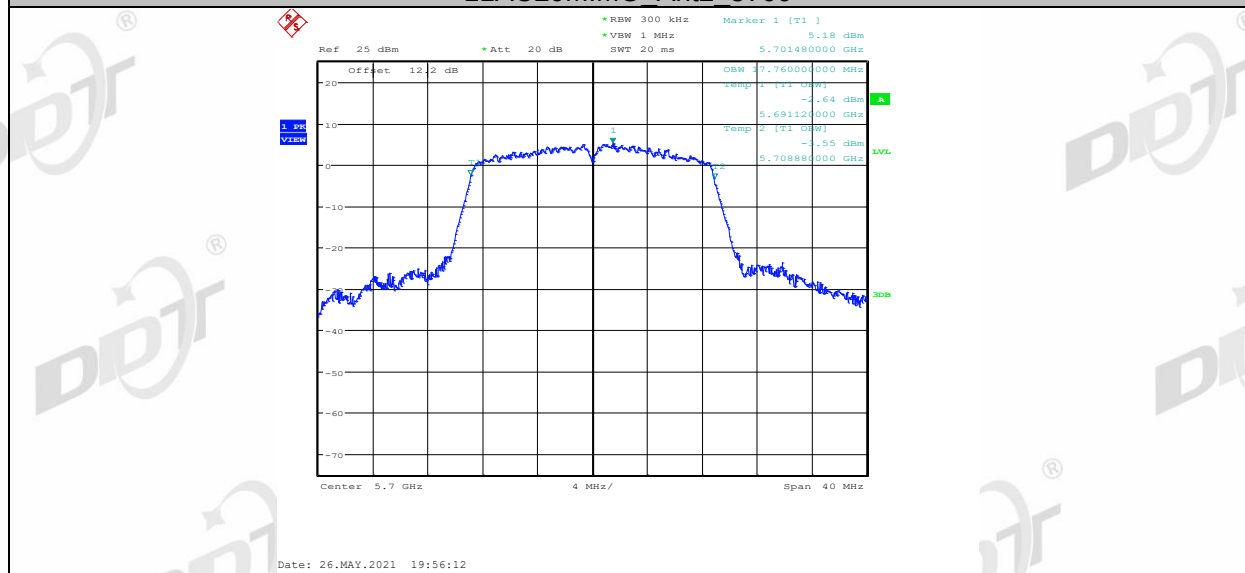


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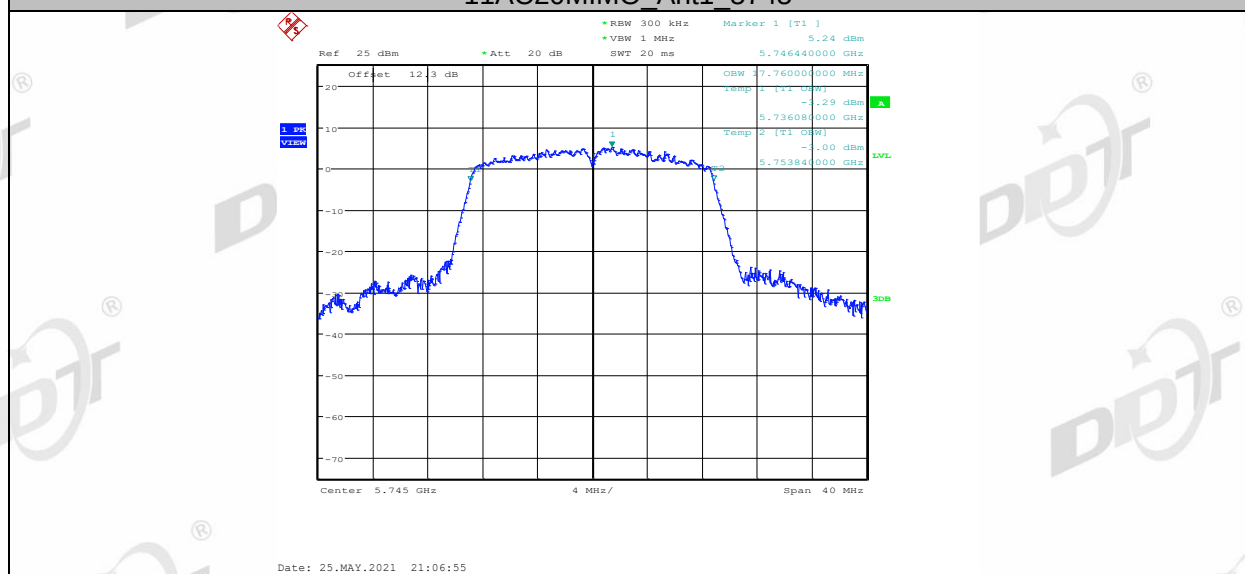
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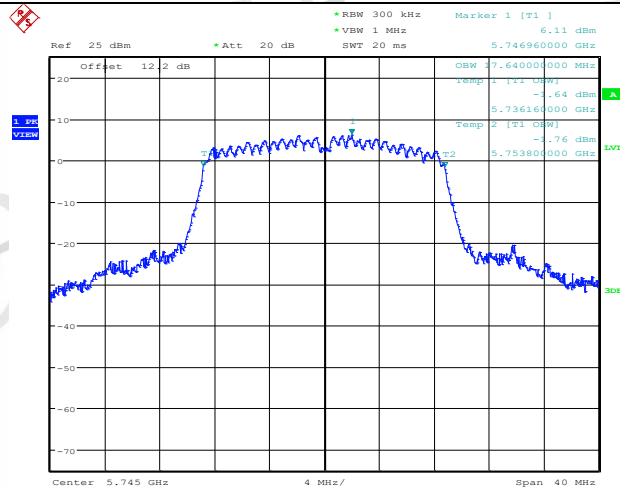
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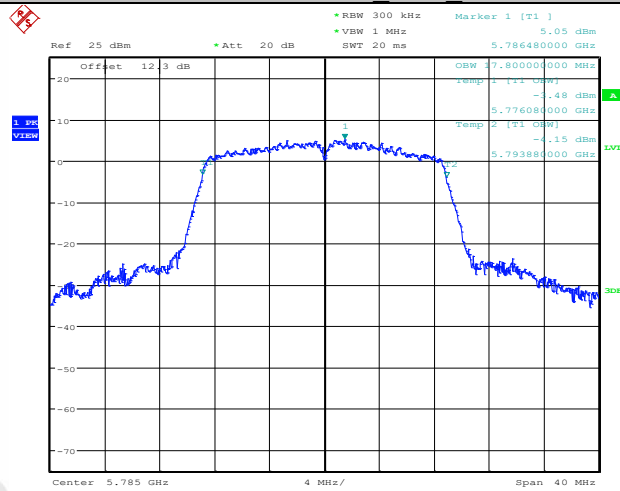


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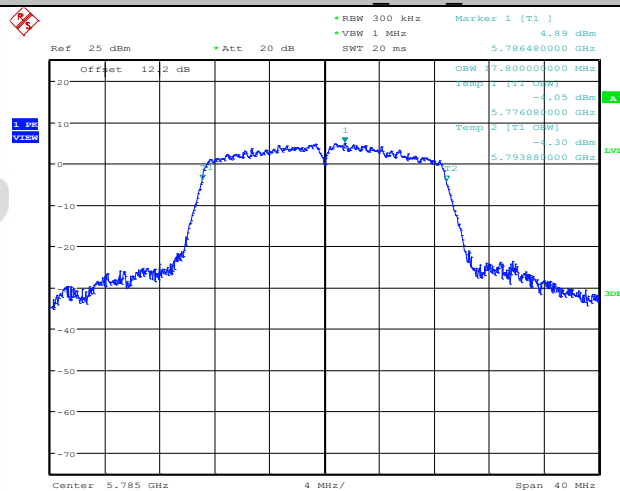
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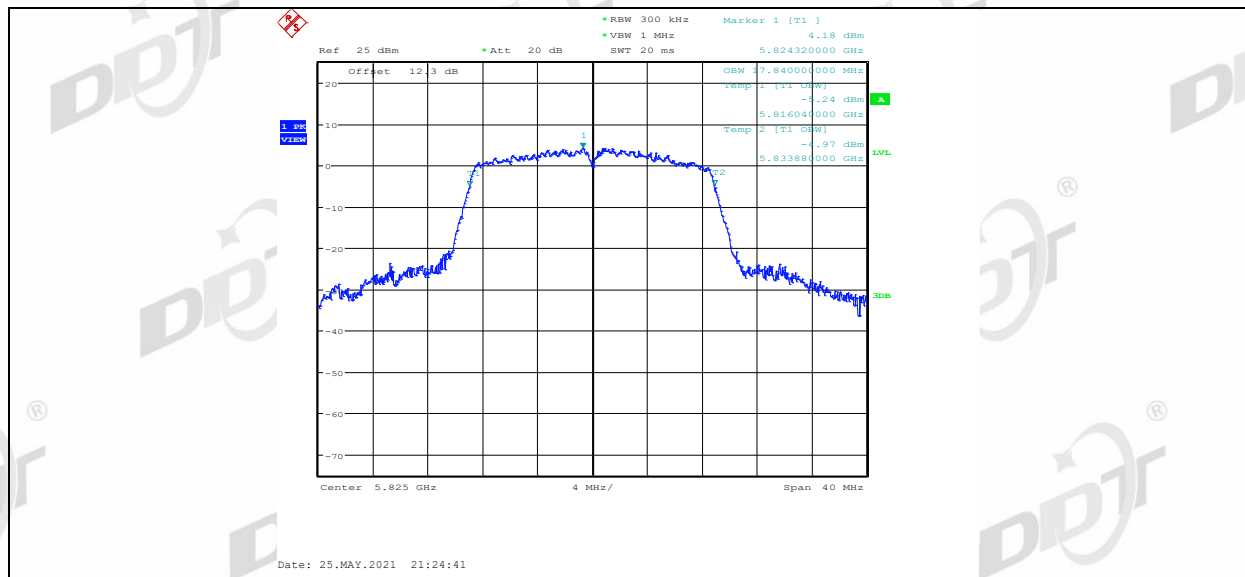
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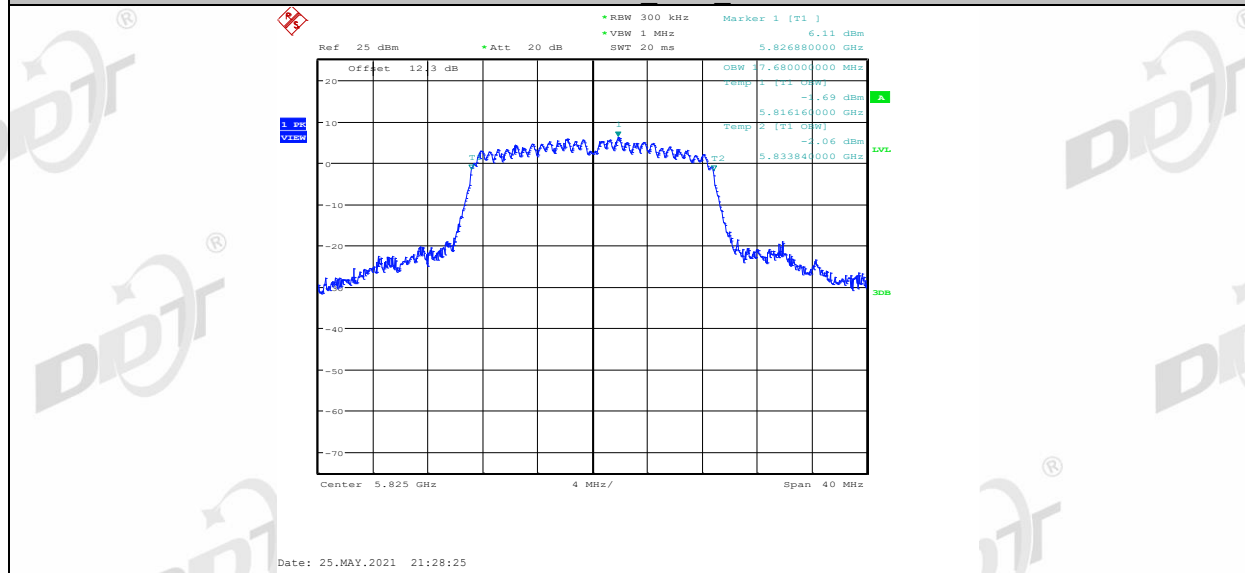


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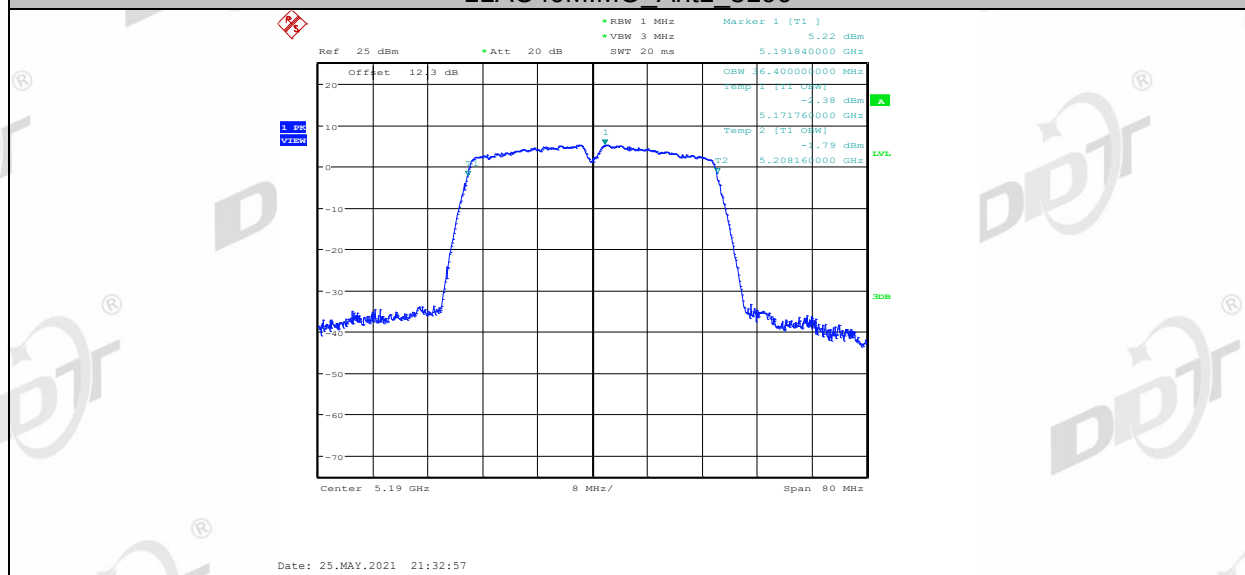
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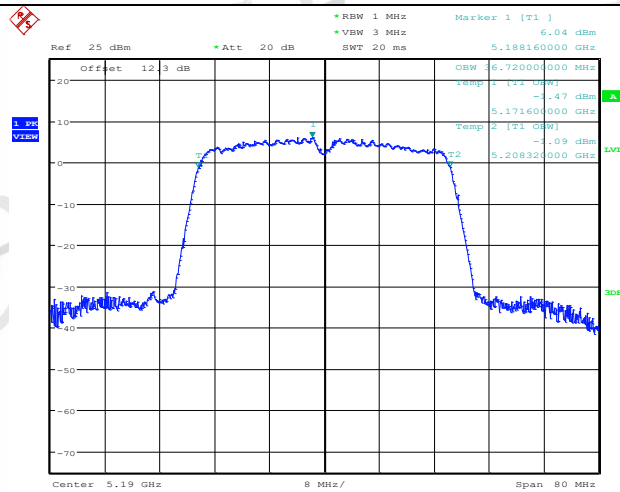
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11AC40MIMO Ant1 5190

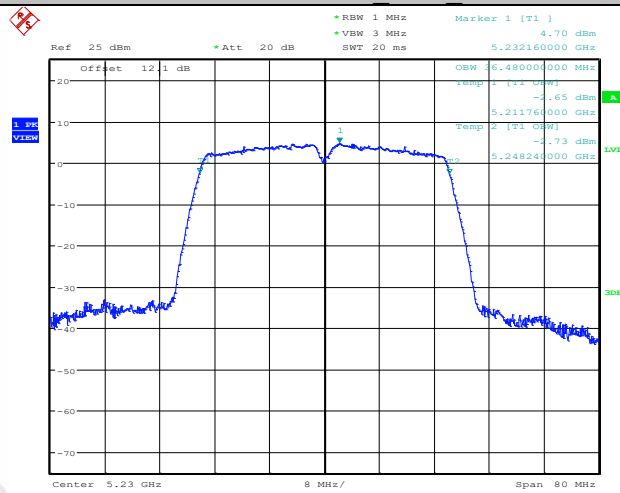


11AC40MIMO Ant2 5190



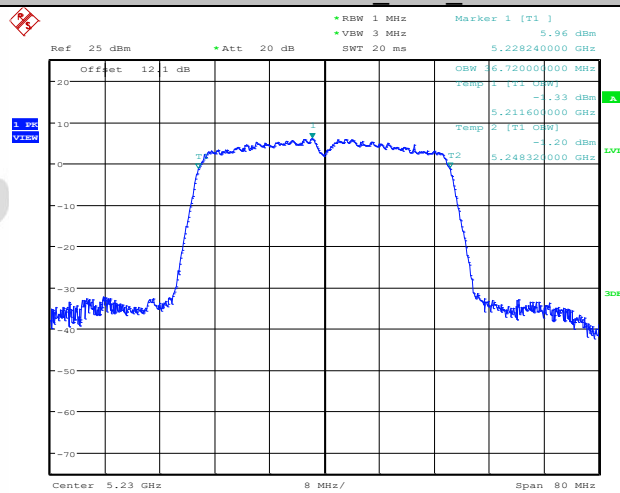
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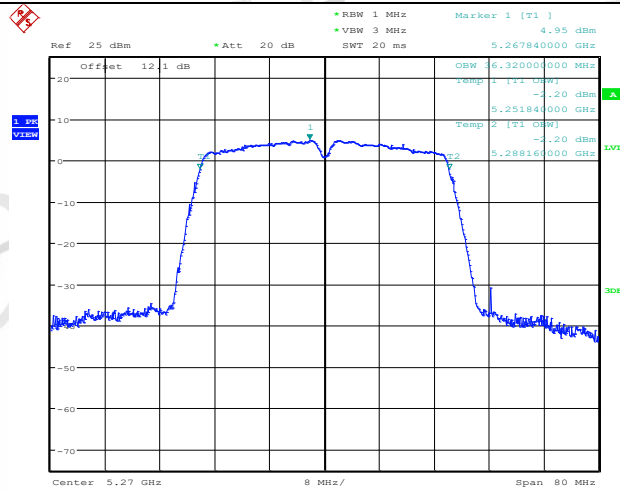
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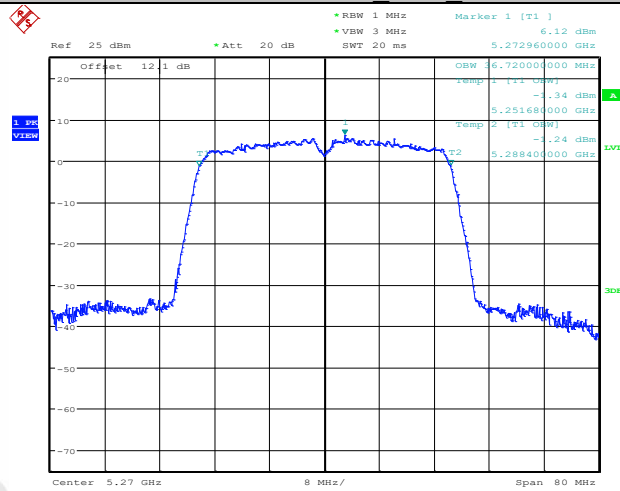
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11AC40MIMO_Ant1_5270



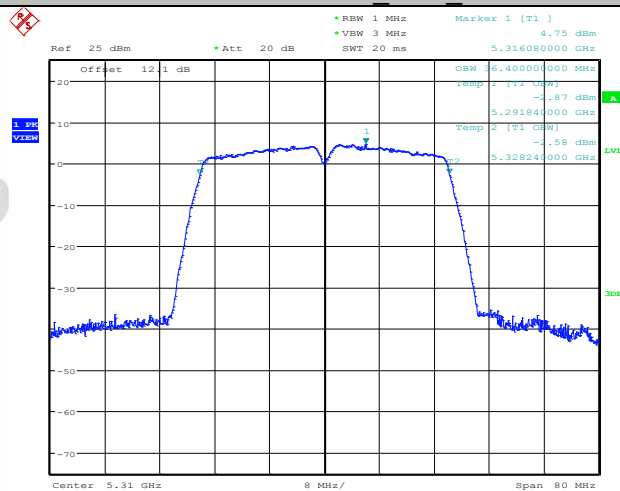
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11AC40MIMO Ant2 5270



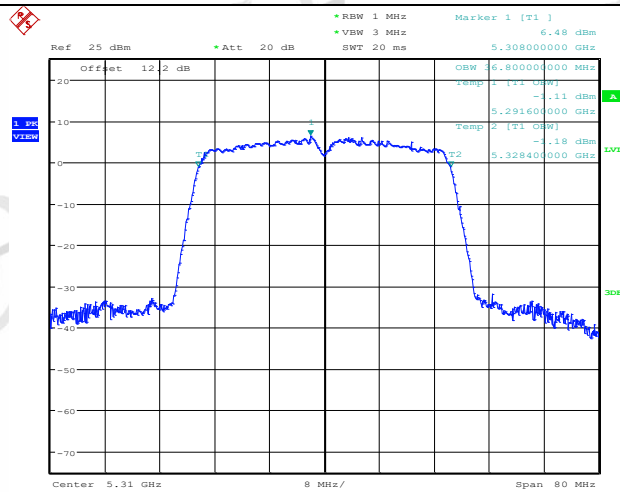
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11AC40MIMO Ant1 5310



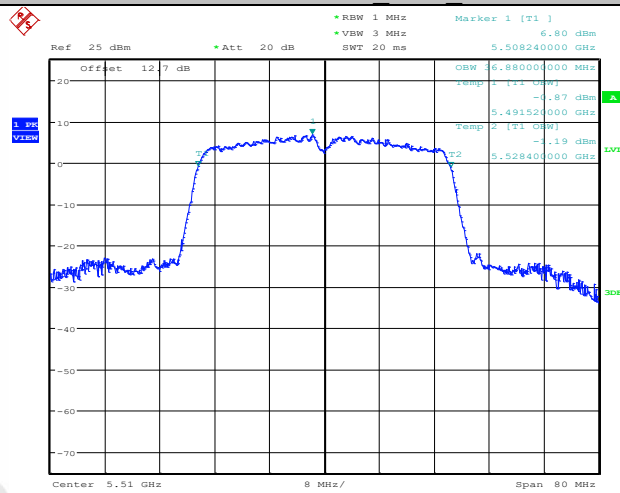
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11AC40MIMO Ant2 5310



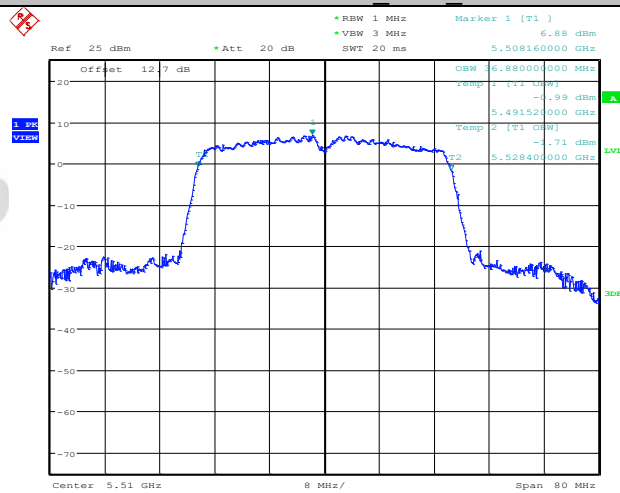
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11AC40MIMO_Ant1_5510



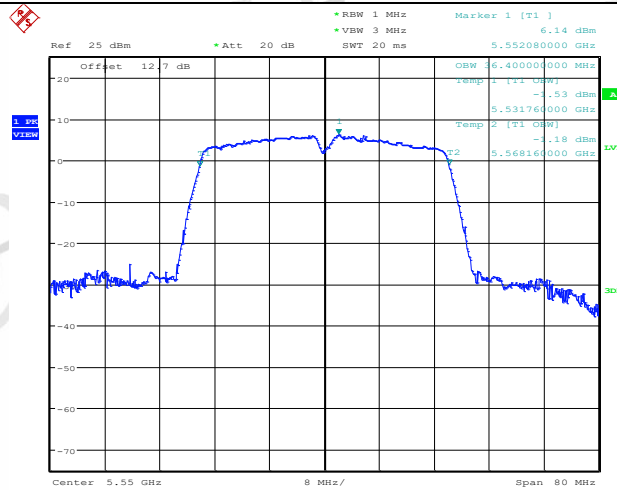
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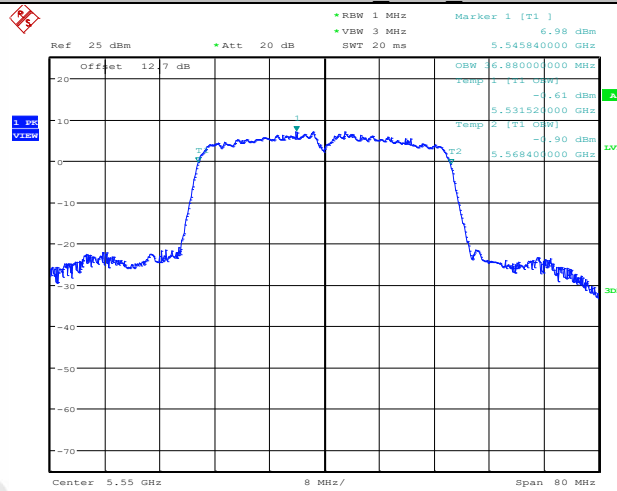
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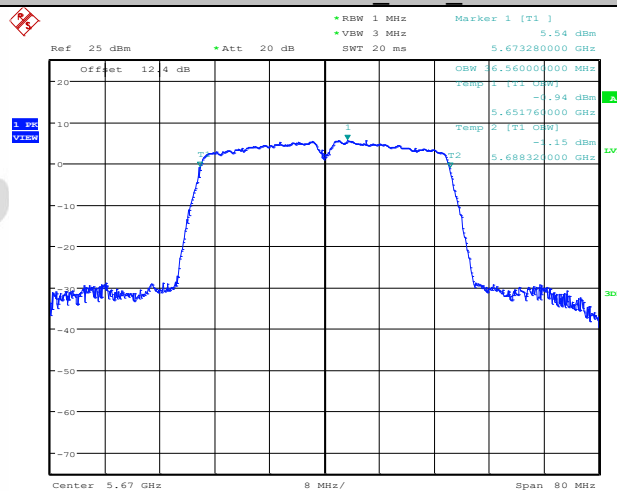
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11AC40MIMO Ant2 5550



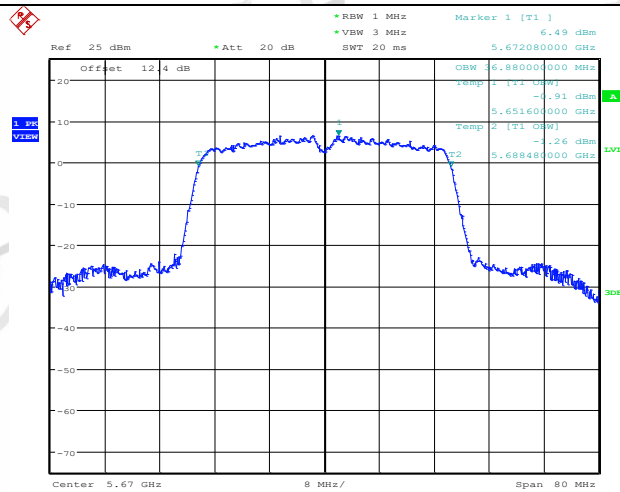
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11AC40MIMO Ant1 5670



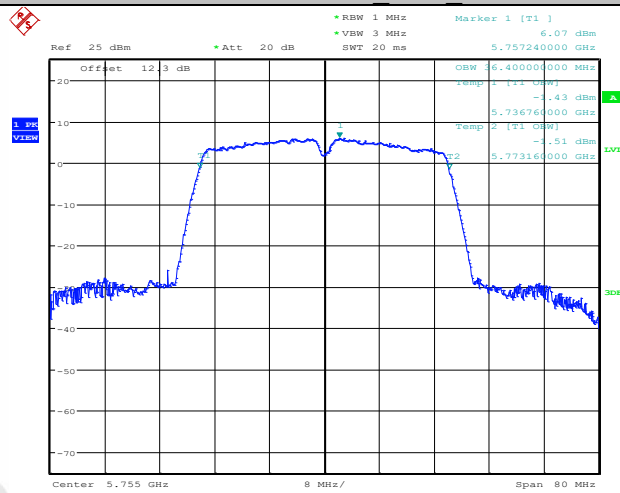
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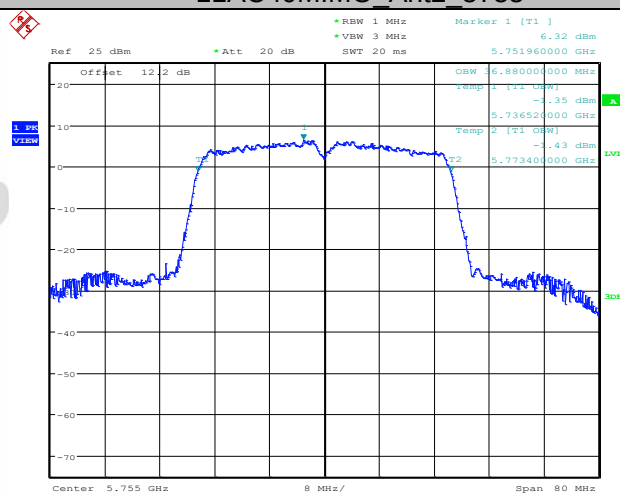
Date: 26.MAY.2021 20:42:27

11AC40MIMO_Ant1_5755



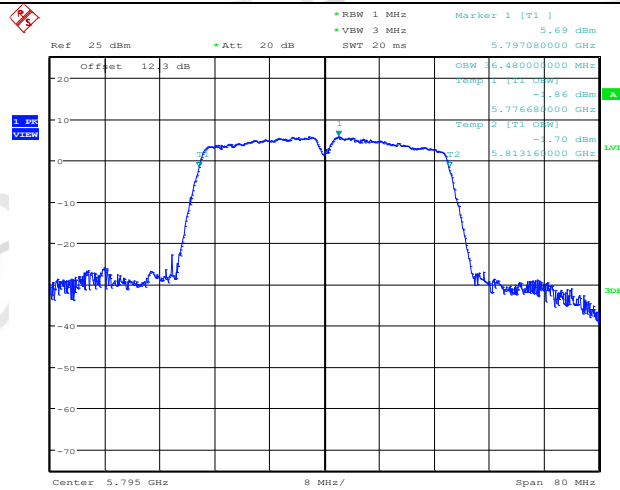
Date: 25.MAY.2021 21:48:12

11AC40MIMO Ant2 5755



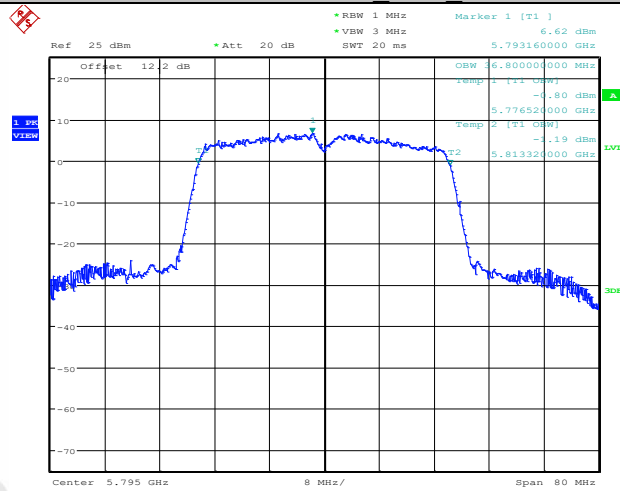
Date: 25.MAY.2021 21:52:29

11AC40MIMO Ant1 5795



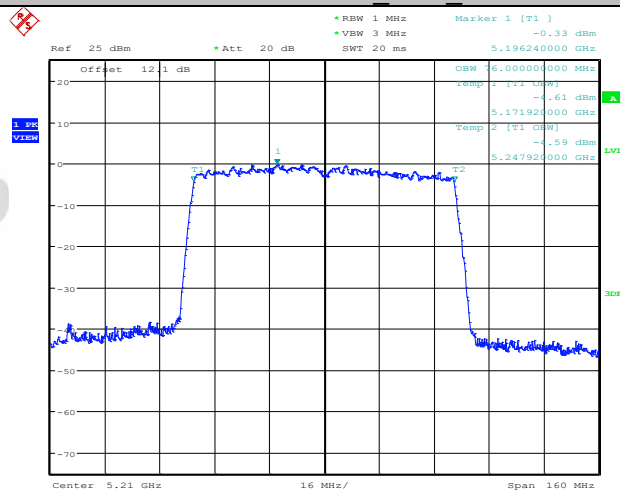
Date: 25.MAY.2021 21:56:37

11AC40MIMO Ant2 5795



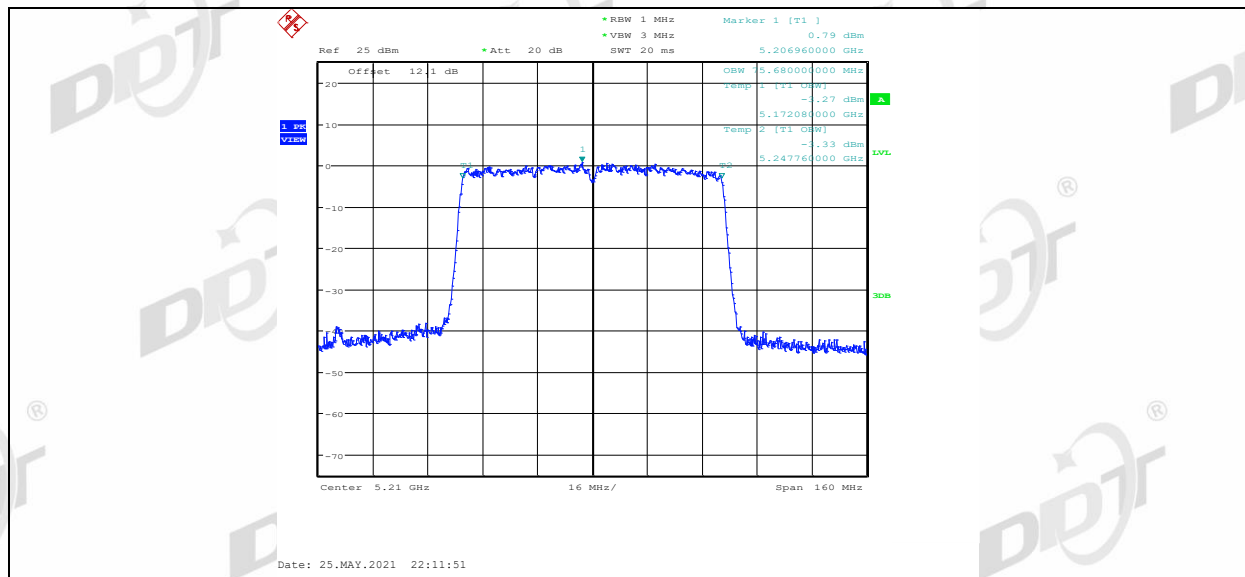
Date: 25.MAY.2021 22:02:20

11AC80MIMO Ant1 5210

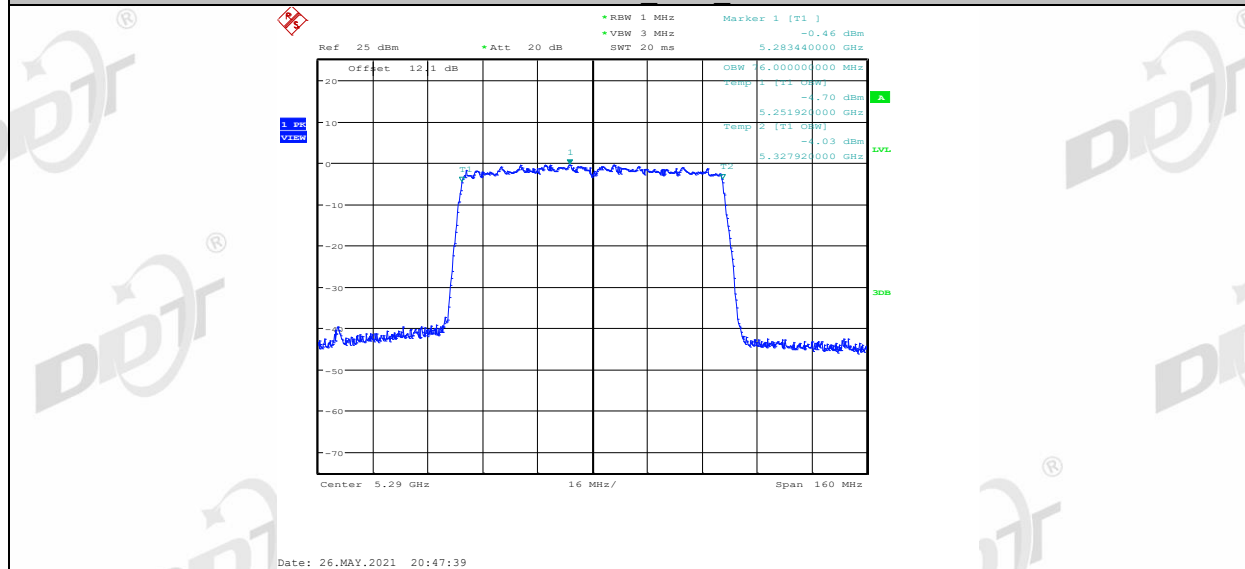


Date: 25.MAY.2021 22:08:11

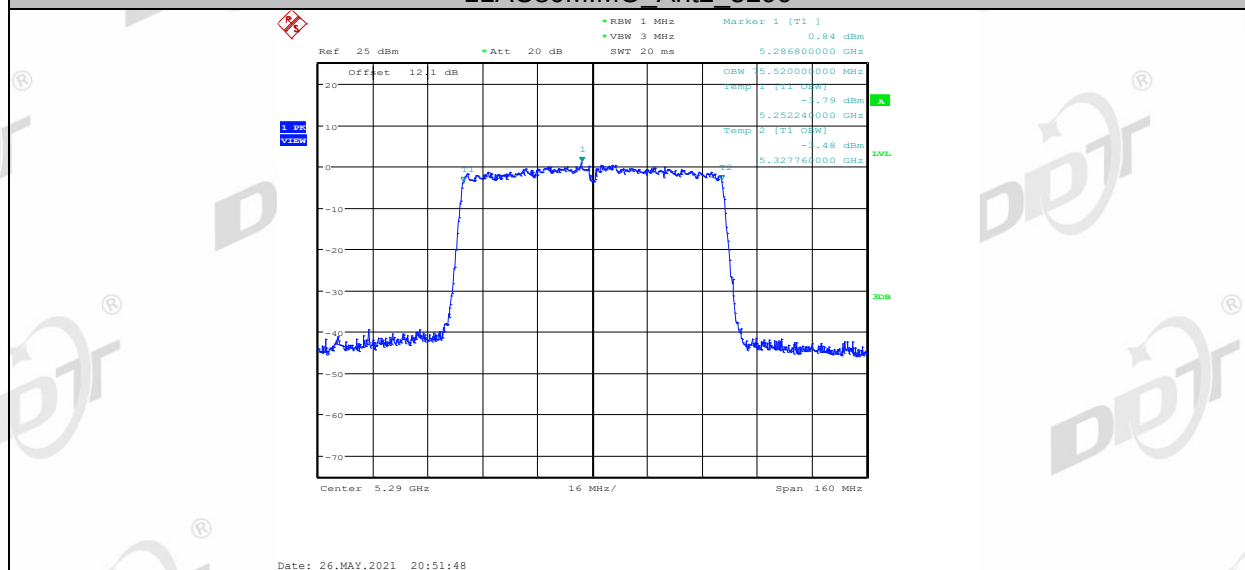
11AC80MIMO Ant2 5210



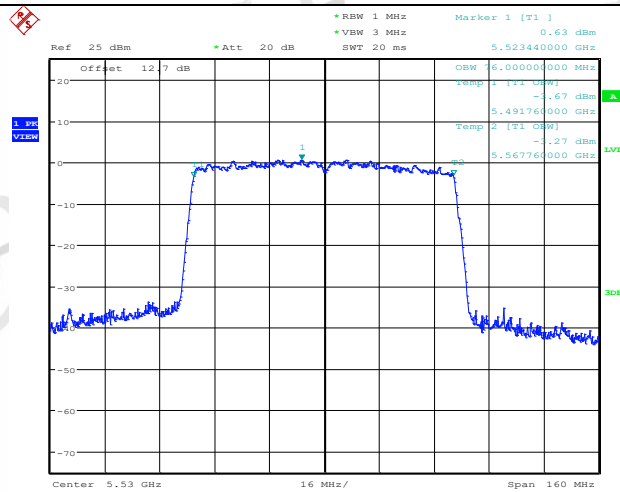
11AC80MIMO_Ant1_5290



11AC80MIMO_Ant2_5290

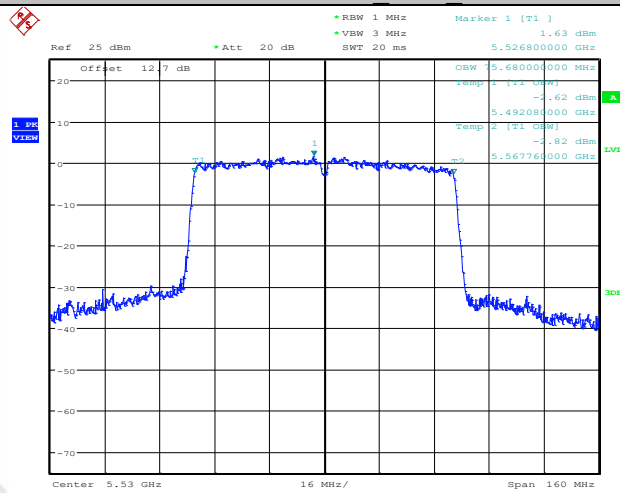


11AC80MIMO_Ant1_5530



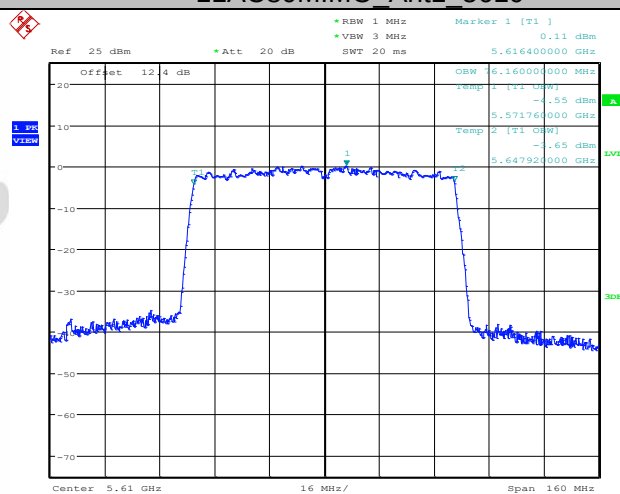
Date: 26.MAY.2021 20:56:30

11AC80MIMO_Ant2_5530



Date: 26.MAY.2021 21:00:18

11AC80MIMO Ant1 5610



Date: 26.MAY.2021 21:04:35

11AC80MIMO Ant2 5610

[illegible]

Date: 25.MAY.2021 22:15:58

*RBW 1 MHz
 *VBW 3 MHz
 *SWT 20 ms

Ref 25 dBm
 *Att 20 dB

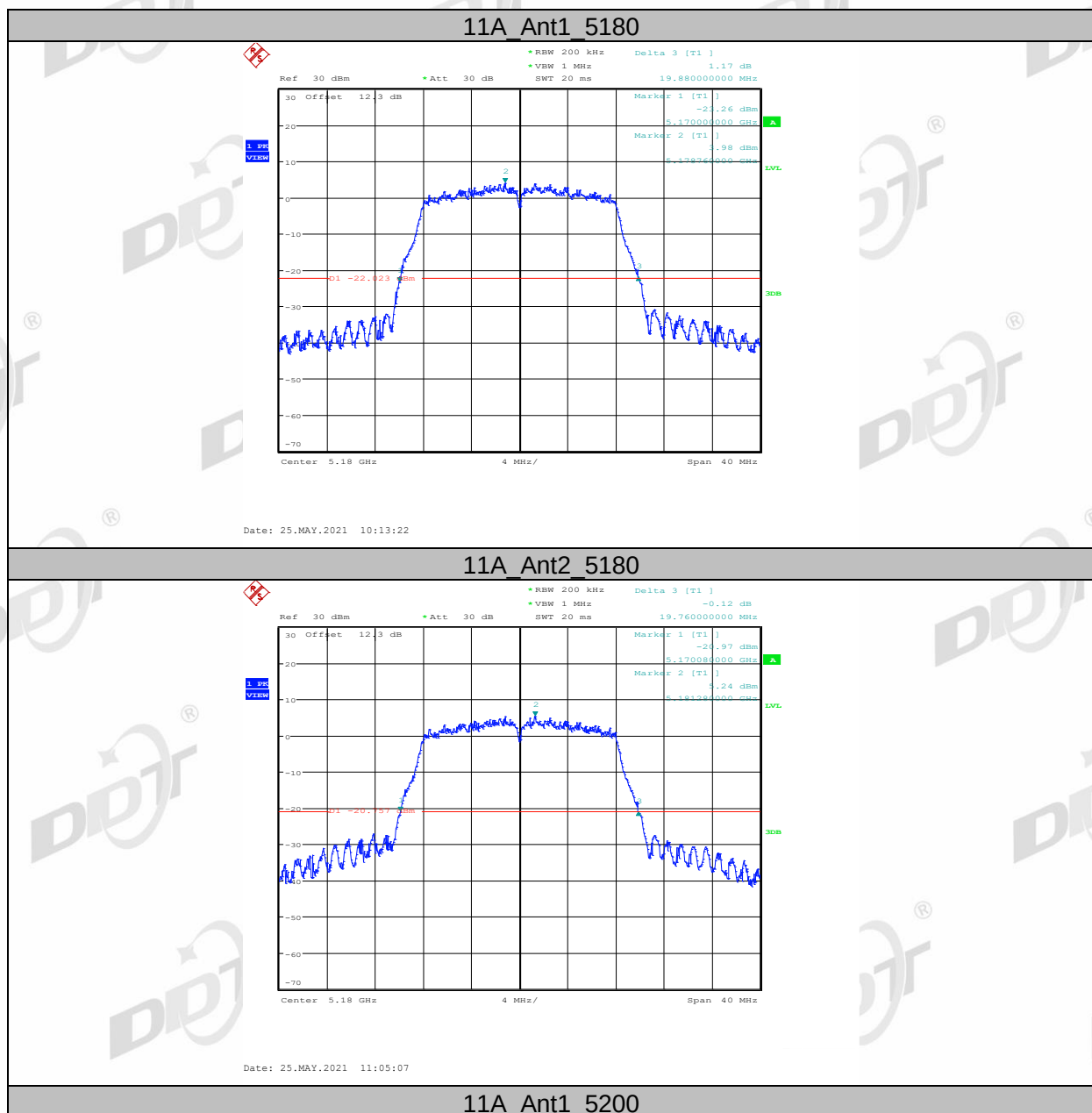
Marker 1 [T1]
 1.50 dBm
 5.775800000 GHz

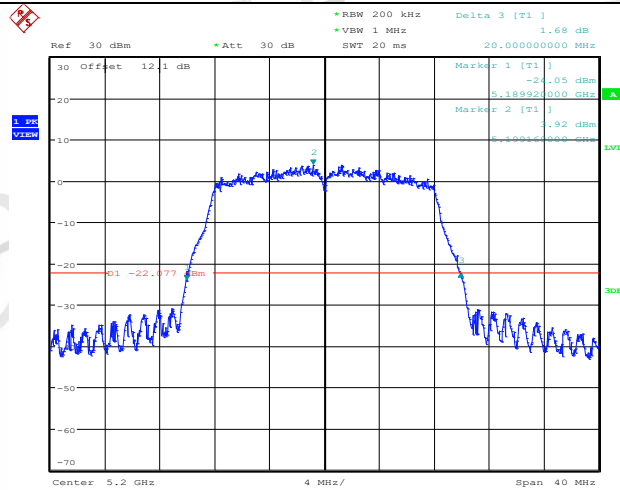
Offset 12.2 dB
 0 dBm
 5.680000000 MHz
 Temp 1 [T1 GHz] -1.74 dBm
 5.737098000 GHz
 Temp 2 [T1 GHz] -1.34 dBm
 5.812760000 GHz

Center 5.775 GHz
 16 MHz/
 Span 160 MHz

Date: 25.MAY.2021 22:20:10

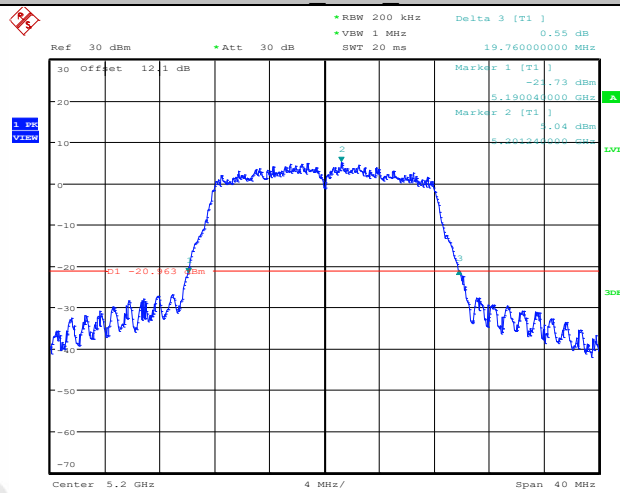
26db EBW:





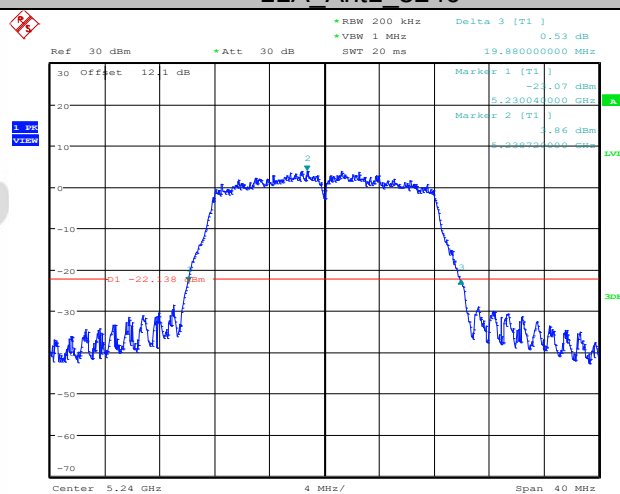
Date: 25.MAY.2021 10:37:11

11A Ant2 5200



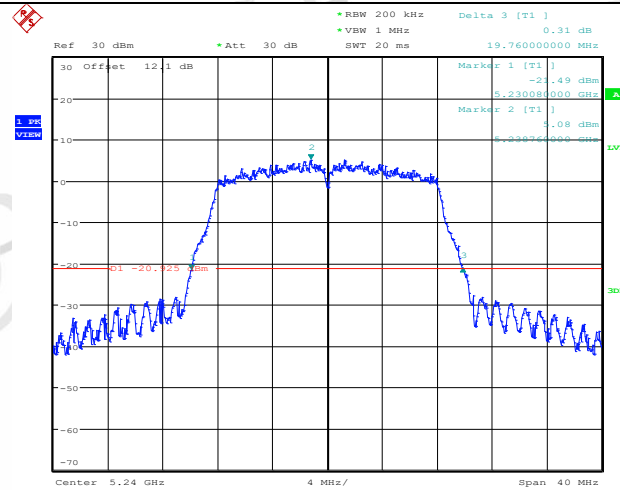
Date: 25.MAY.2021 11:08:36

11A Ant1 5240



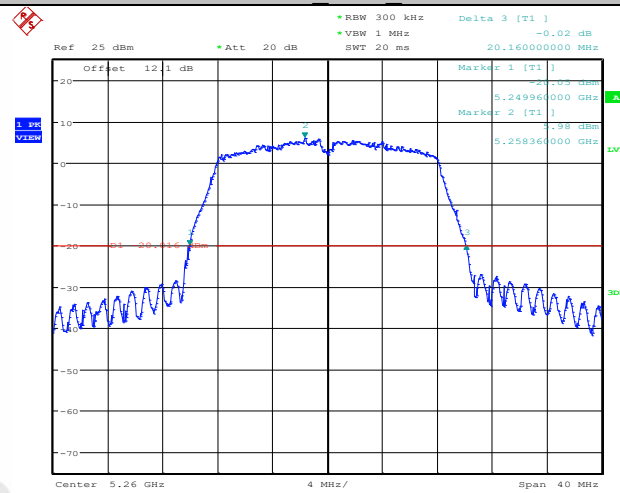
Date: 25.MAY.2021 10:40:16

11A Ant2 5240



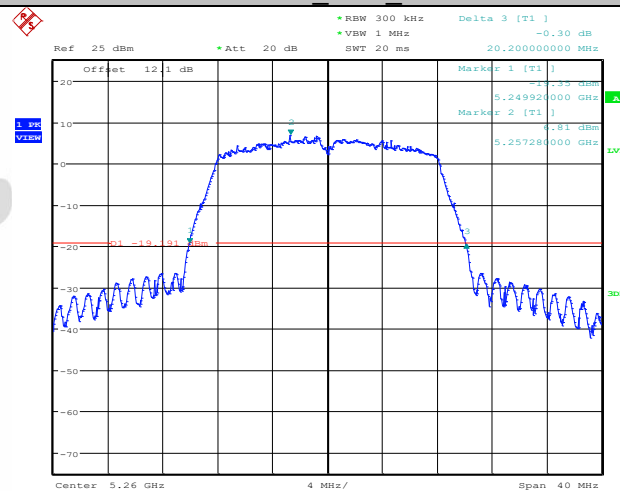
Date: 25.MAY.2021 11:11:52

11A Ant1 5260



Date: 25.MAY.2021 22:31:21

11A Ant2 5260



Date: 25.MAY.2021 23:08:53

11A Ant1 5280



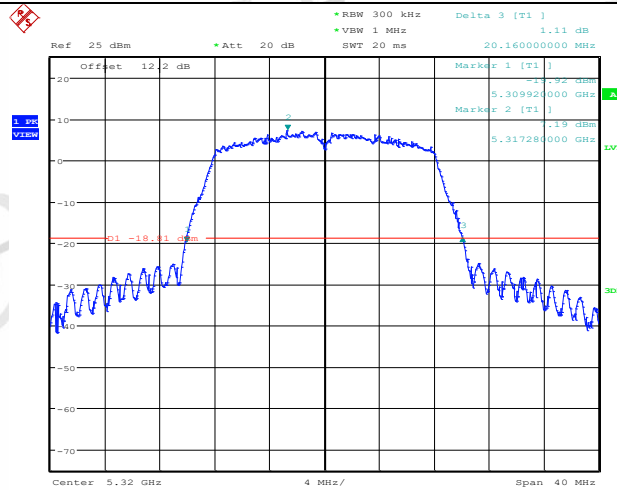
11A Ant2 5280



11A Ant1 5320

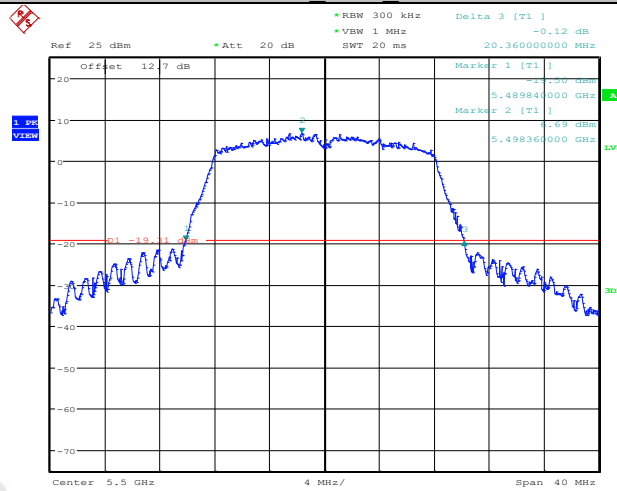


11A Ant2 5320



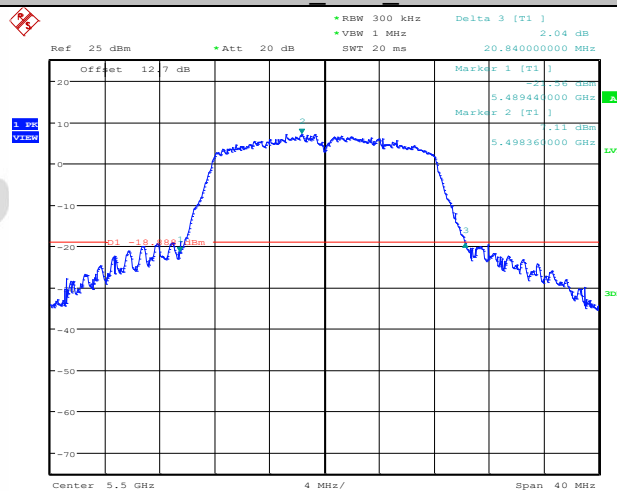
Date: 25.MAY.2021 23:17:20

11A Ant1 5500



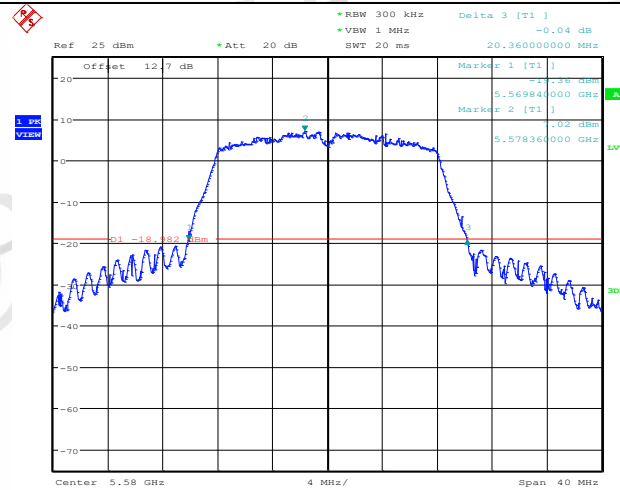
Date: 25.MAY.2021 22:47:45

11A Ant2 5500



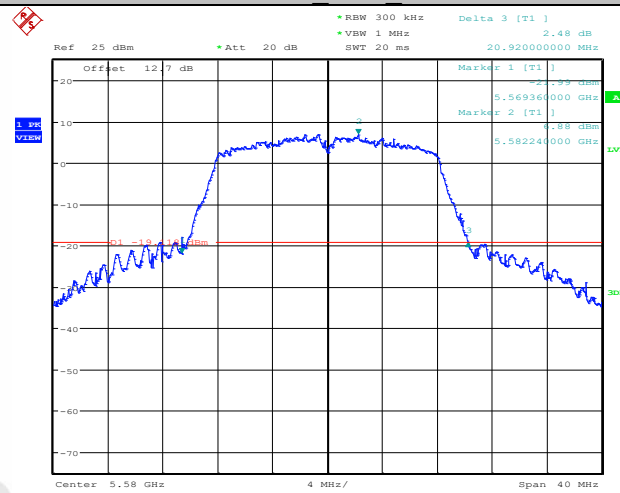
Date: 25.MAY.2021 23:20:56

11A Ant1 5580



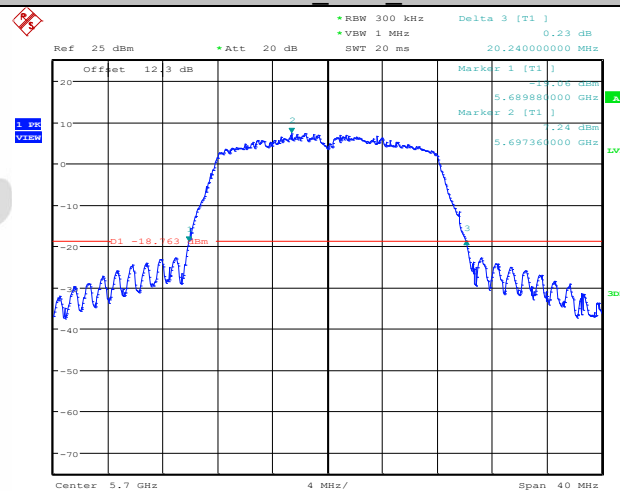
Date: 25.MAY.2021 22:51:39

11A Ant2 5580



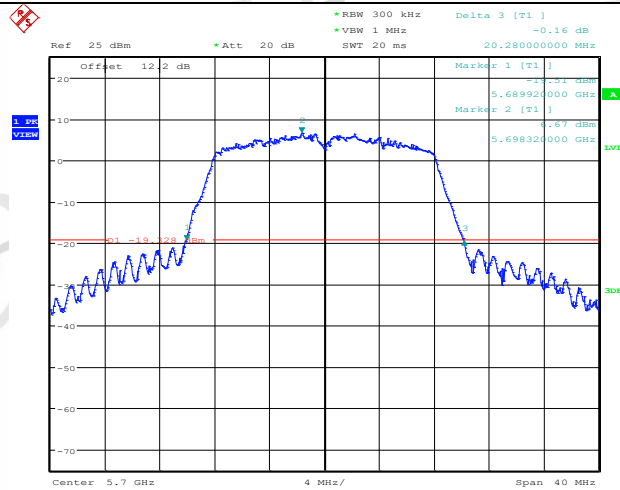
Date: 25.MAY.2021 23:24:45

11A Ant1 5700

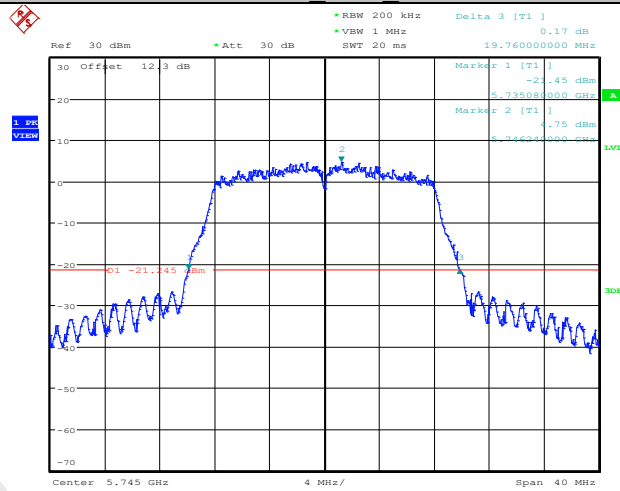


Date: 25.MAY.2021 22:54:56

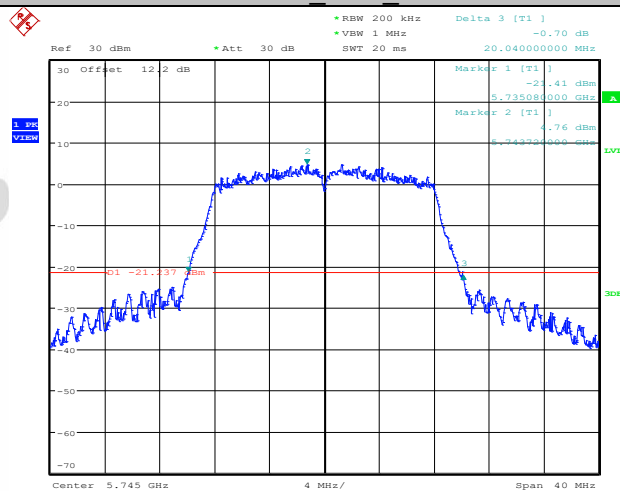
11A Ant2 5700



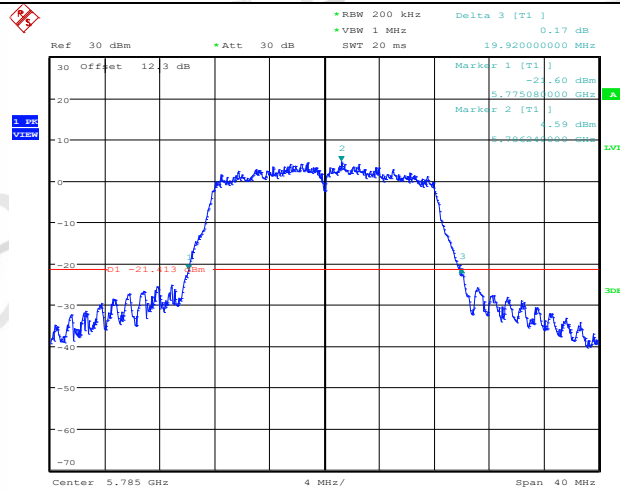
11A_Ant1_5745



11A_Ant2_5745

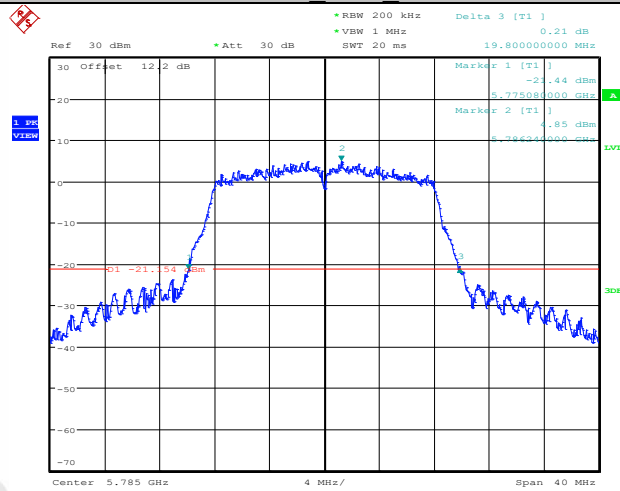


11A_Ant1_5785



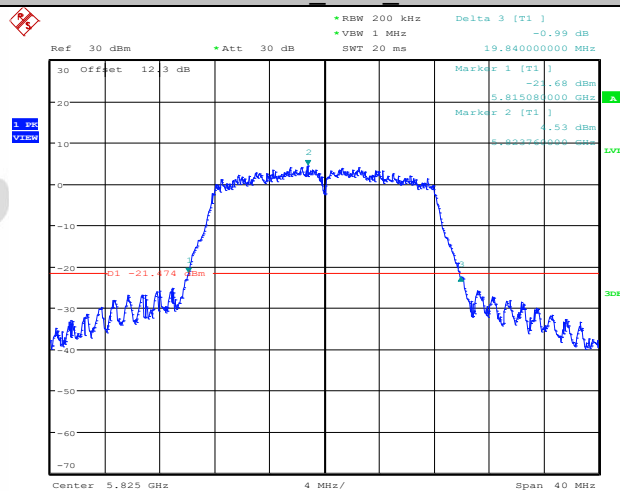
Date: 25.MAY.2021 10:56:35

11A Ant2 5785



Date: 25.MAY.2021 11:28:49

11A Ant1 5825



Date: 25.MAY.2021 10:59:46

11A Ant2 5825



*RBW 200 kHz
 *VSW 1 MHz
 Delta 3 [T1] -0.14 dB
 Ref 30 dBm
 *Att 30 dB
 SWT 20 ms
 20.160000000 MHz

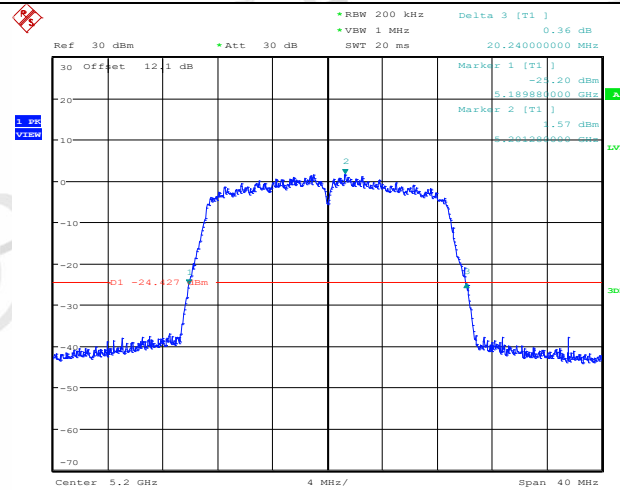
30 Offset 12.3 dB
 Marker 1 [T1] -24.11 dBm
 5.169920000 GHz
 Marker 2 [T1] -24.92 dBm
 5.179720000 GHz
 Q1 -24.076 dBm
 Center 5.18 GHz
 4 MHz/
 Span 40 MHz

Date: 25.MAY.2021 11:40:31

RBW 200 kHz
 VBW 1 MHz
 SWT 20 ms
 Delta 3 [T1] 0.02 dB
 20.080000000 MHz
 Ref 30 dBm
 Att 30 dB
 Offset 12.13 dB
 Marker 1 [T1] -23.24 dBm 5.169960000 GHz
 Marker 2 [T1] -23.39 dBm 5.180000000 GHz
 G1 -23.41 dBm
 Center 5.18 GHz
 Span 40 MHz

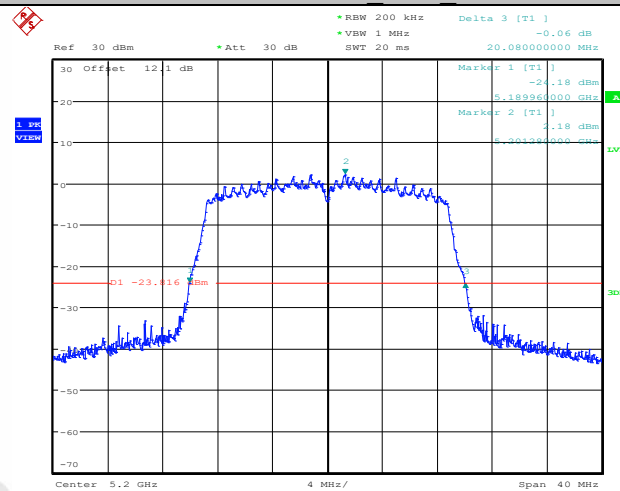
Date: 25.MAY.2021 11:44:38

11N20MIMO Ant1 5200



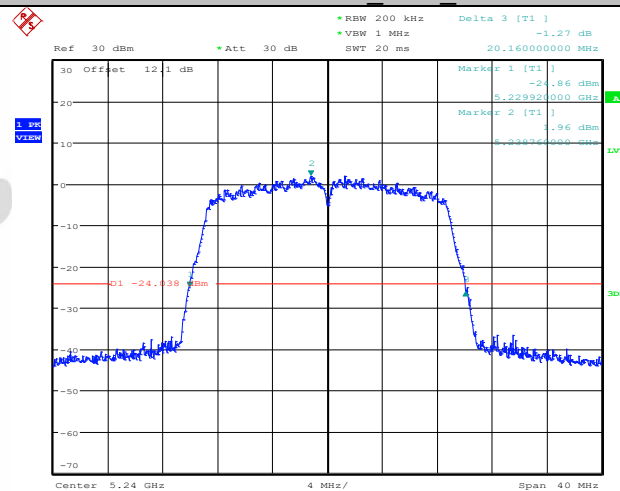
Date: 25.MAY.2021 11:48:11

11N20MIMO_Ant2_5200



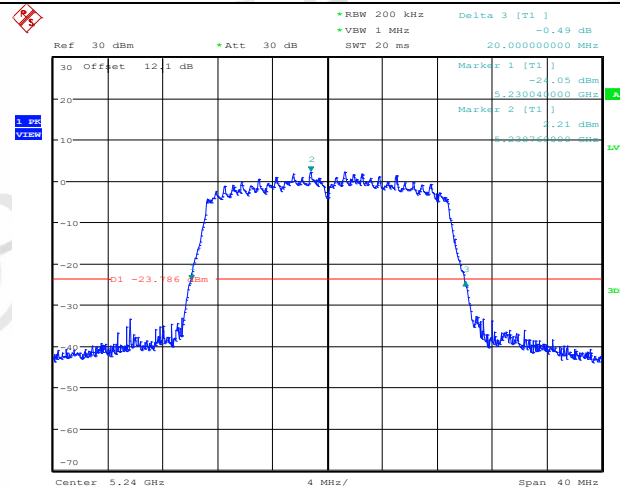
Date: 25.MAY.2021 11:54:27

11N20MIMO_Ant1_5240



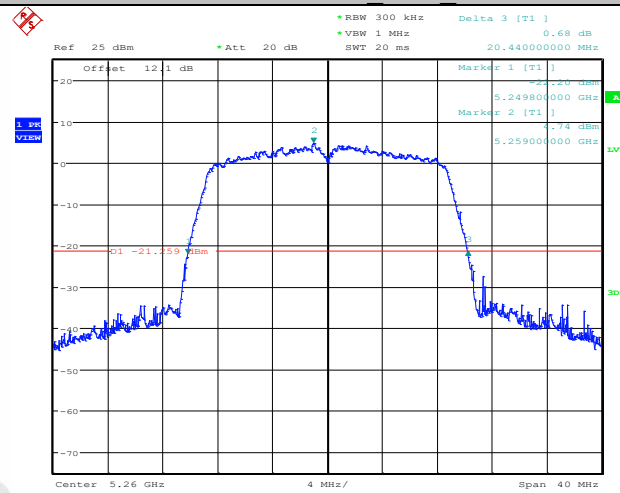
Date: 25.MAY.2021 11:57:16

11N20MIMO_Ant2_5240



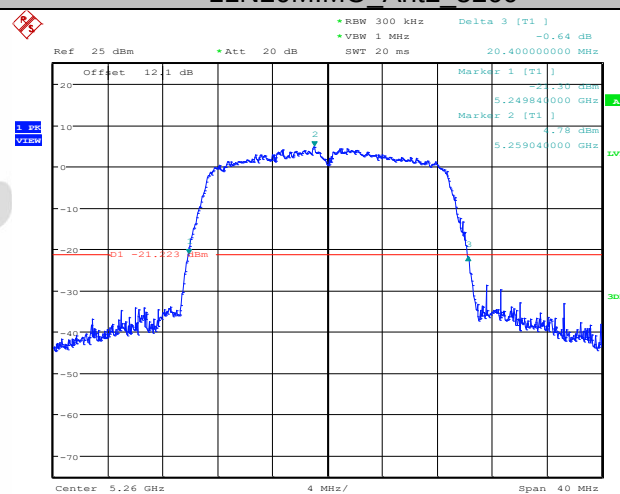
Date: 25.MAY.2021 12:00:33

11N20MIMO Ant1 5260



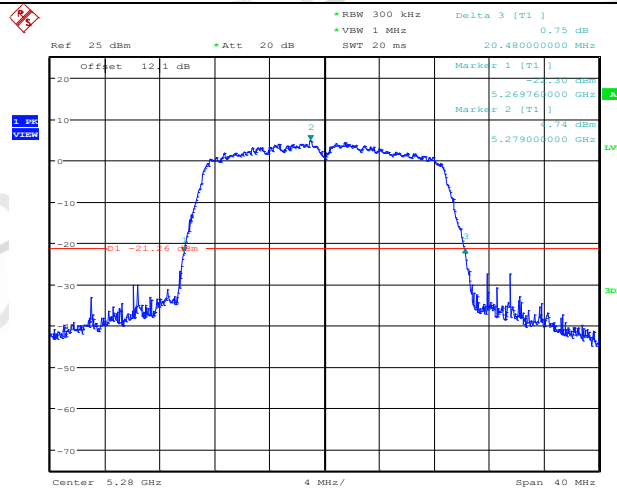
Date: 25.MAY.2021 23:32:58

11N20MIMO Ant2 5260



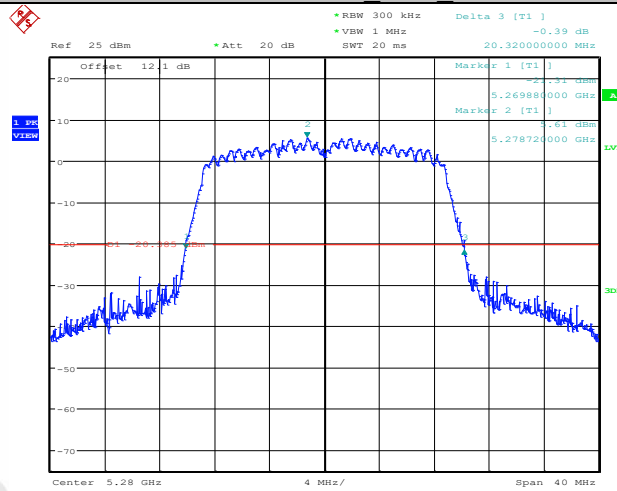
Date: 25.MAY.2021 23:37:16

11N20MIMO Ant1 5280



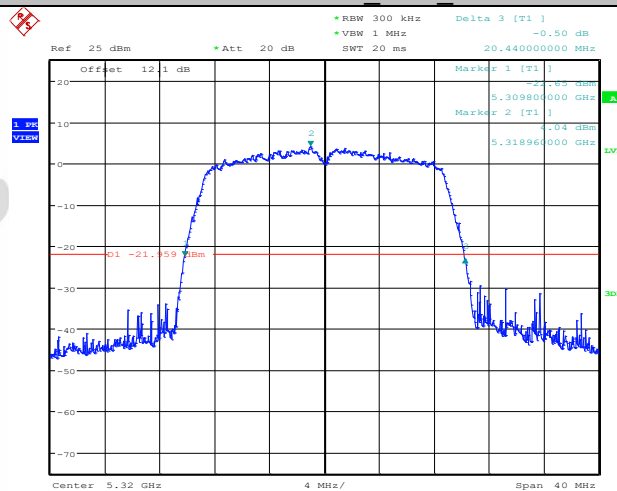
Date: 25.MAY.2021 23:41:42

11N20MIMO_Ant2_5280



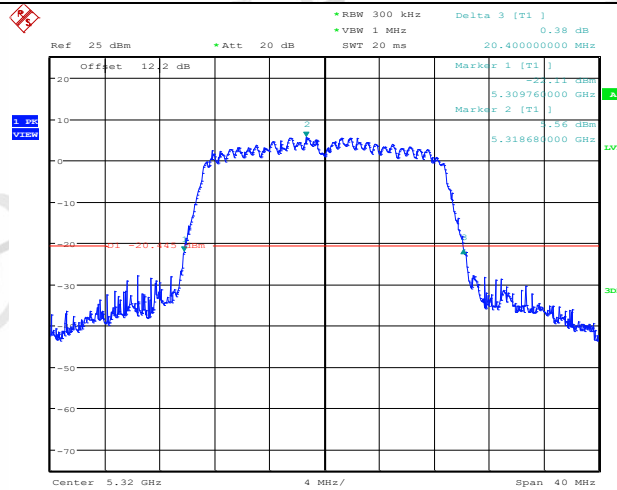
Date: 25.MAY.2021 23:45:28

11N20MIMO_Ant1_5320



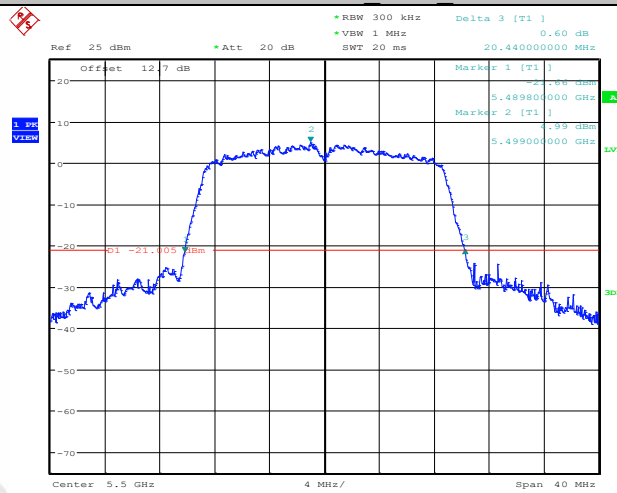
Date: 26.MAY.2021 10:37:49

11N20MIMO_Ant2_5320



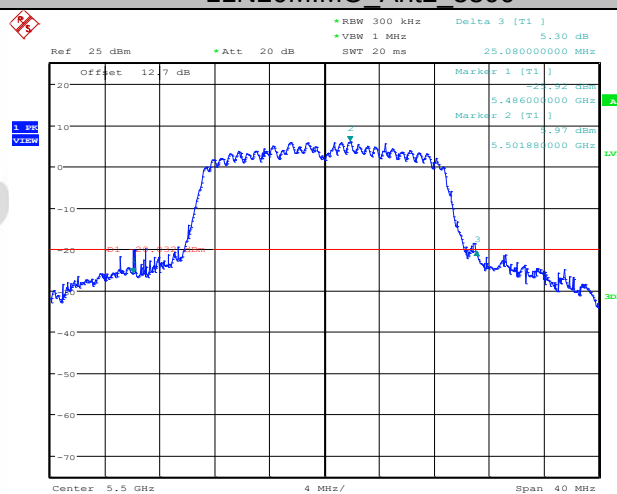
Date: 26.MAY.2021 10:43:13

11N20MIMO_Ant1_5500



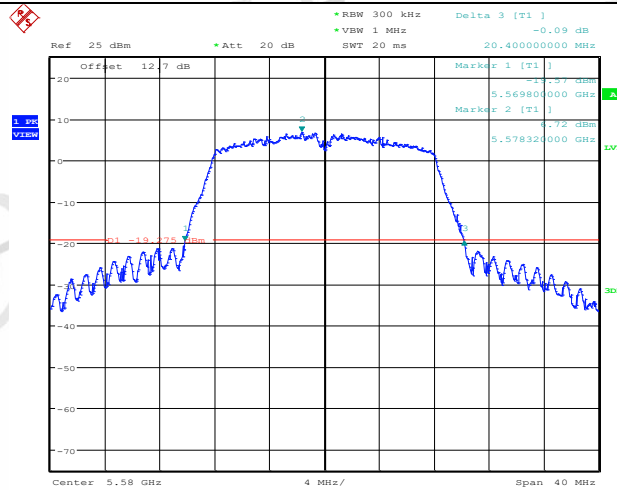
Date: 26.MAY.2021 10:47:33

11N20MIMO_Ant2_5500



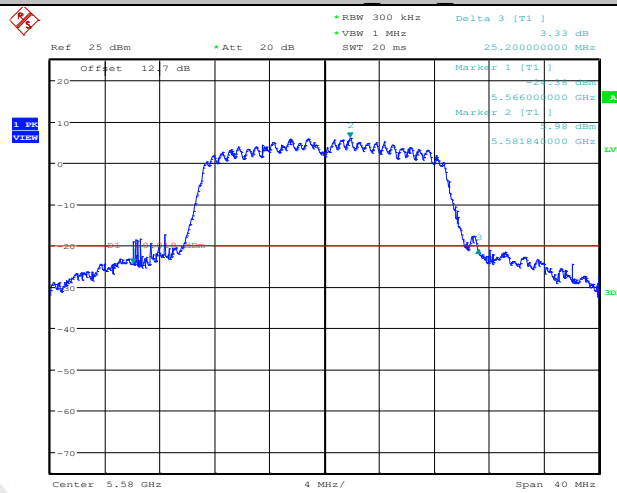
Date: 26.MAY.2021 10:51:15

11N20MIMO_Ant1_5580



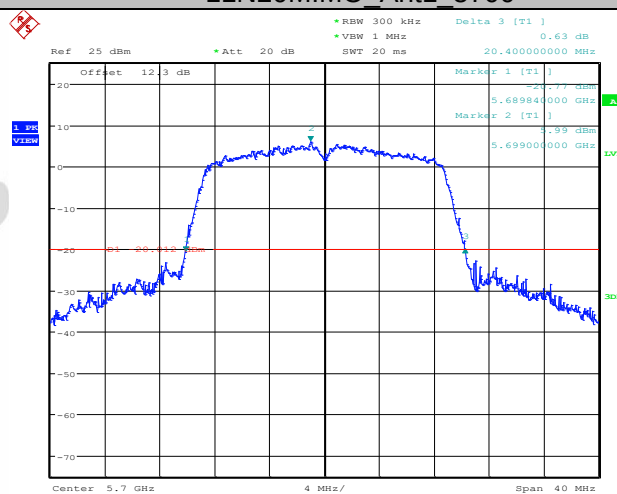
Date: 26.MAY.2021 11:00:15

11N20MIMO_Ant2_5580



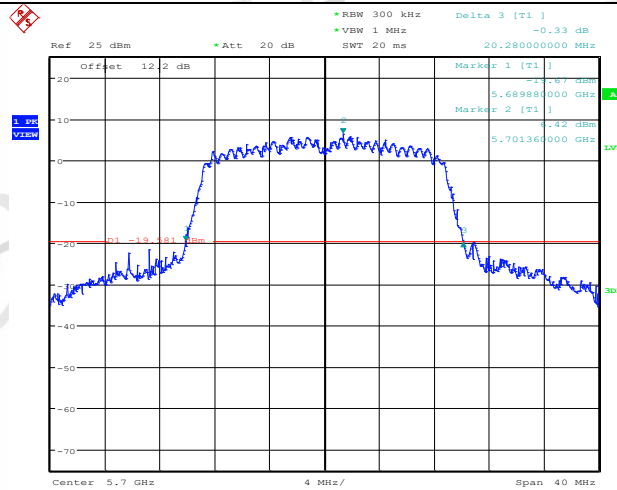
Date: 26.MAY.2021 11:19:38

11N20MIMO_Ant1_5700



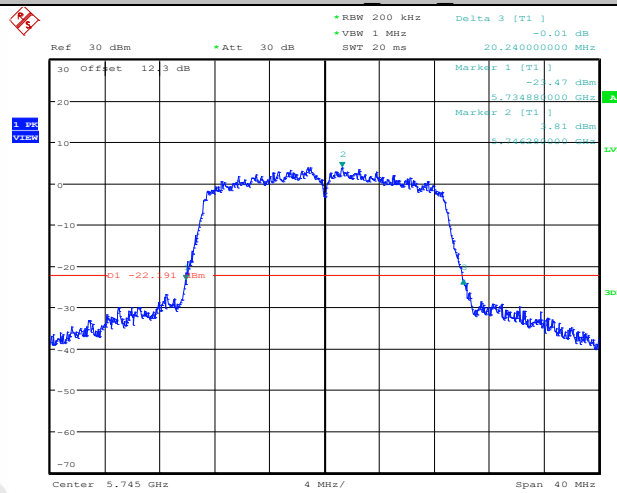
Date: 26.MAY.2021 11:22:57

11N20MIMO_Ant2_5700



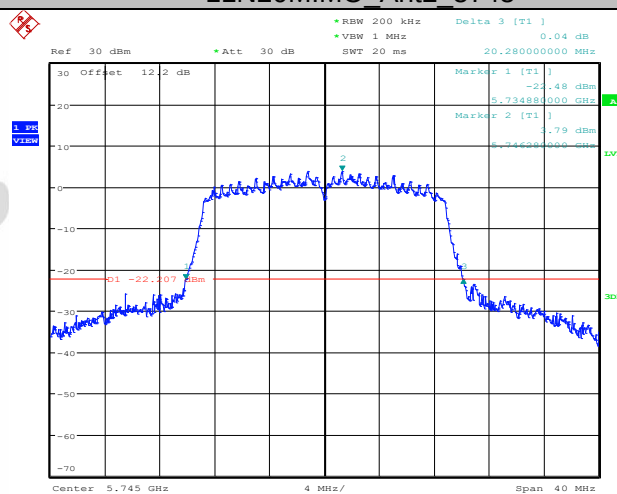
Date: 26.MAY.2021 11:26:42

11N20MIMO_Ant1_5745



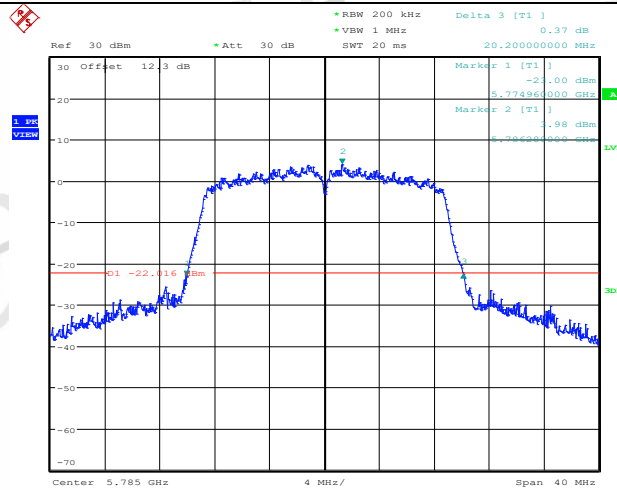
Date: 25.MAY.2021 12:03:58

11N20MIMO_Ant2_5745



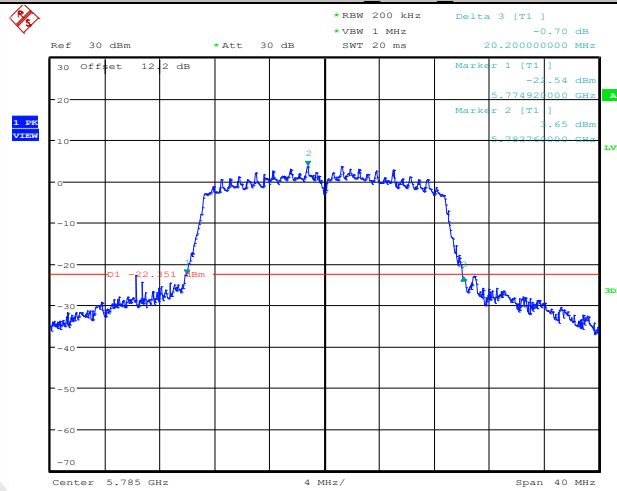
Date: 25.MAY.2021 12:10:33

11N20MIMO_Ant1_5785



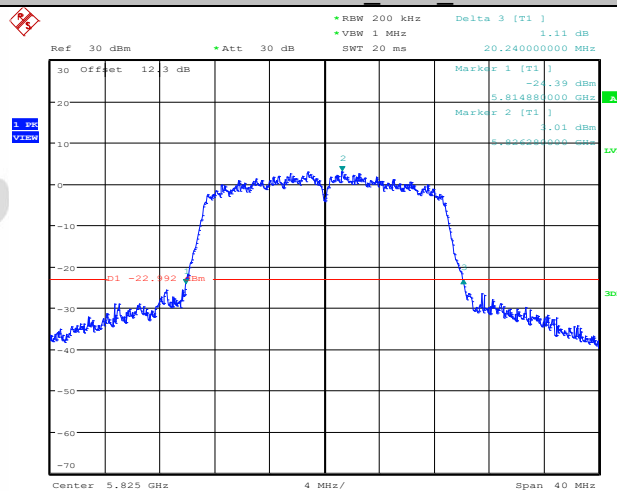
Date: 25.MAY.2021 12:14:35

11N20MIMO Ant2 5785



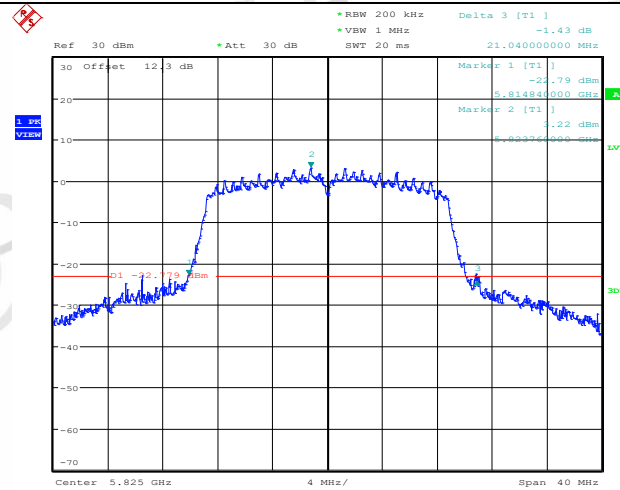
Date: 25.MAY.2021 12:18:33

11N20MIMO Ant1 5825

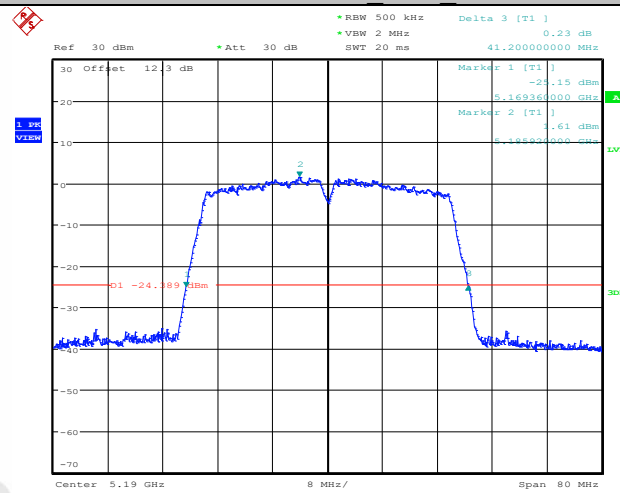


Date: 25.MAY.2021 12:21:52

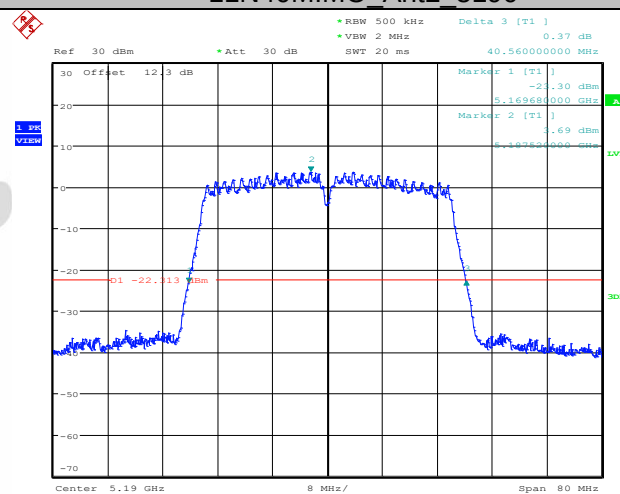
11N20MIMO Ant2 5825



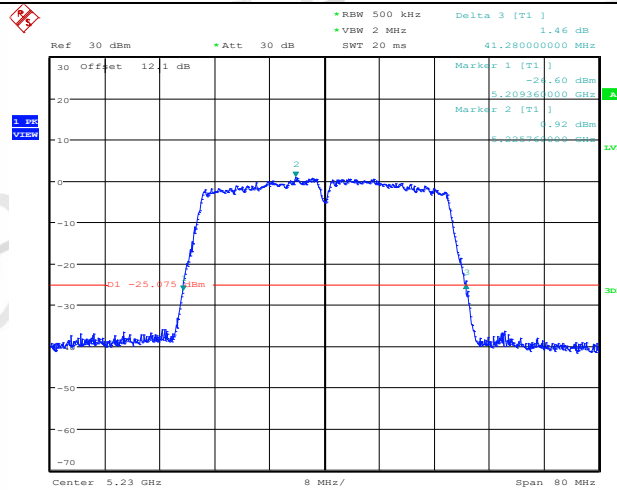
11N40MIMO Ant1 5190



11N40MIMO Ant2 5190

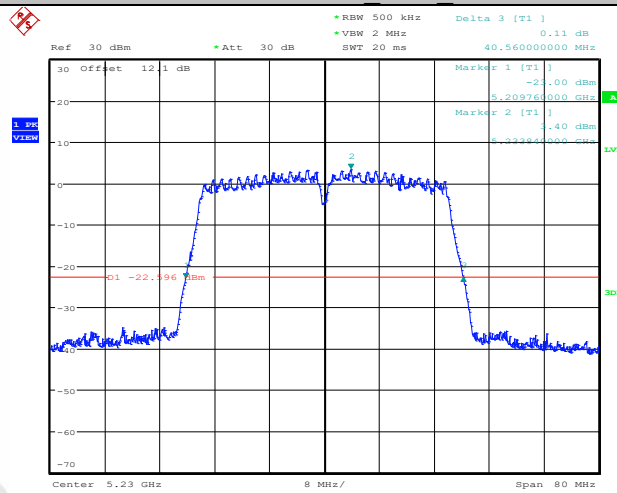


11N40MIMO Ant1 5230



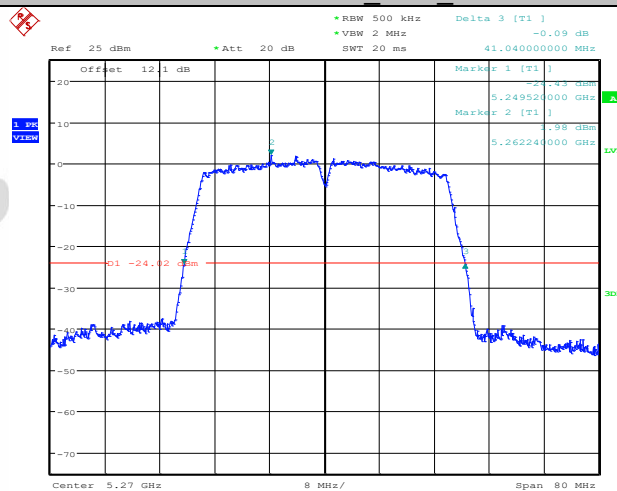
Date: 25.MAY.2021 15:04:28

11N40MIMO_Ant2_5230



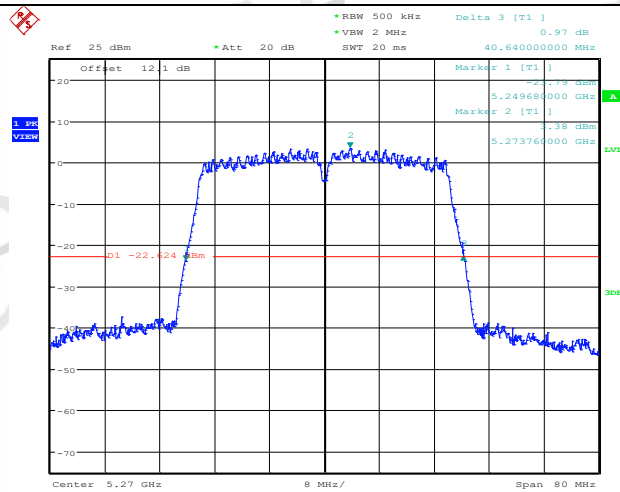
Date: 25.MAY.2021 15:07:30

11N40MIMO_Ant1_5270

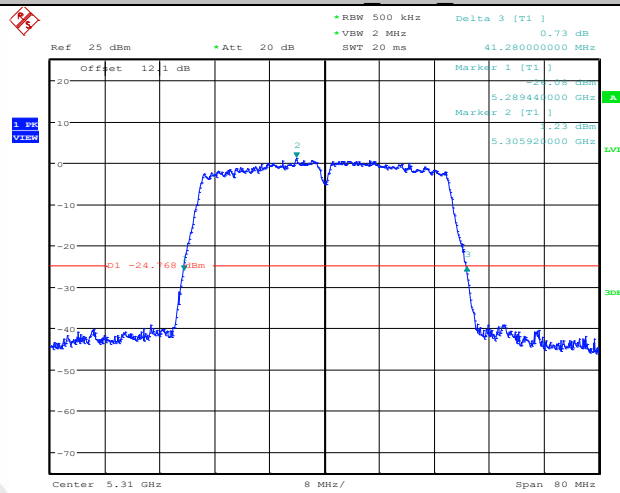


Date: 26.MAY.2021 11:44:22

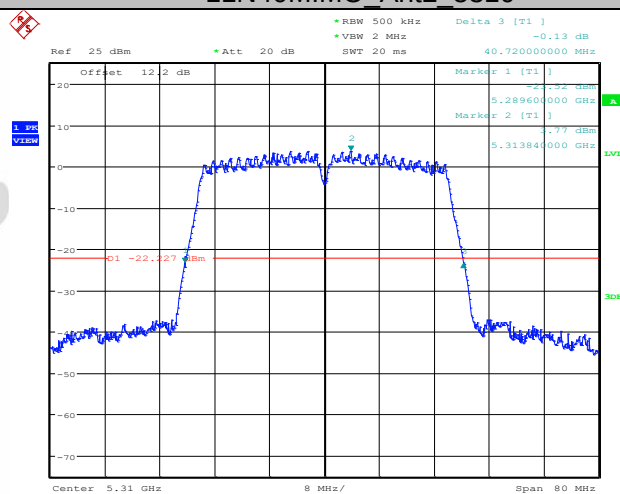
11N40MIMO_Ant2_5270



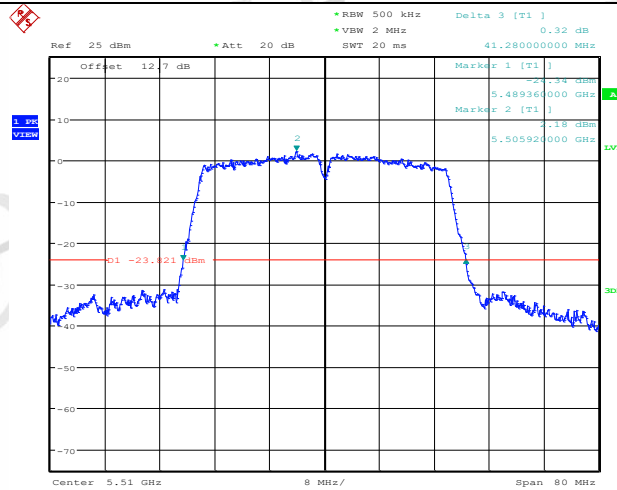
11N40MIMO Ant1 5310



11N40MIMO Ant2 5310

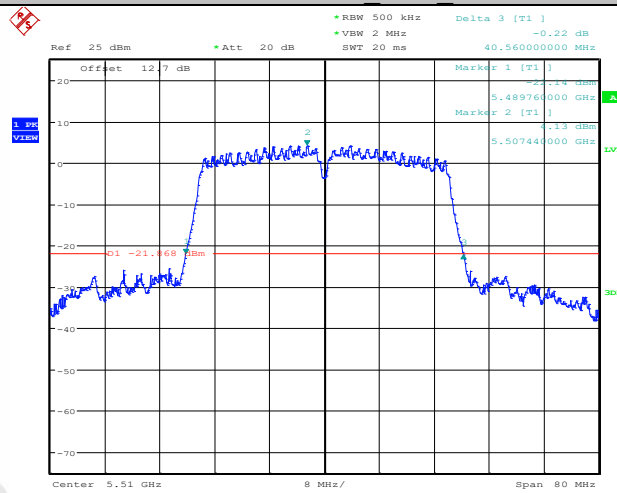


11N40MIMO Ant1 5510



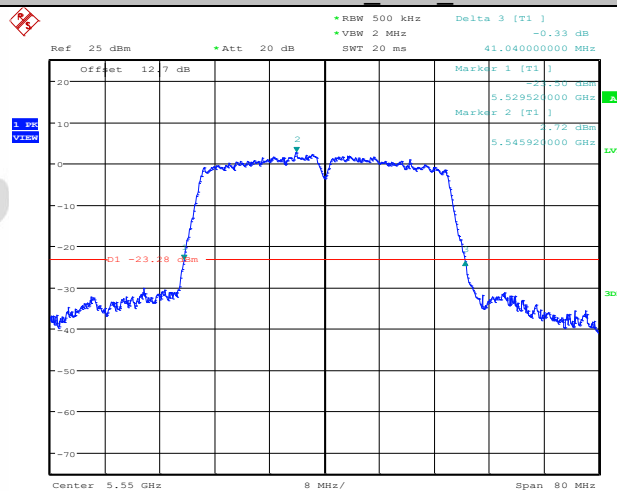
Date: 26.MAY.2021 11:58:11

11N40MIMO_Ant2_5510



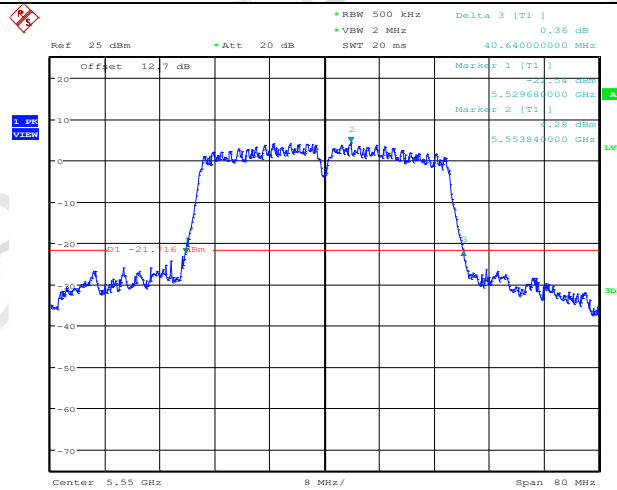
Date: 26.MAY.2021 18:31:53

11N40MIMO_Ant1_5550



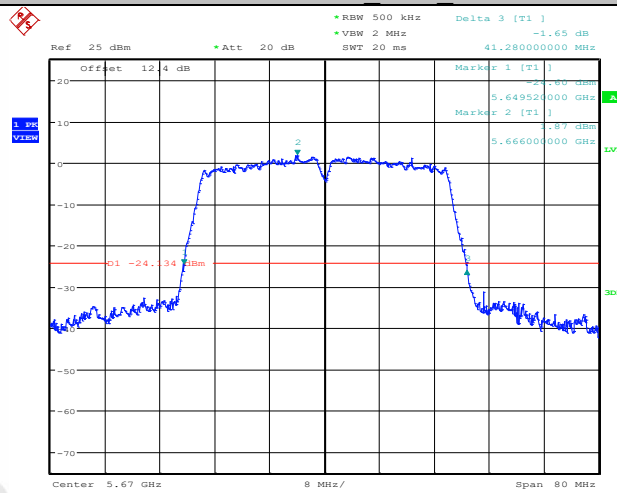
Date: 26.MAY.2021 18:37:21

11N40MIMO_Ant2_5550



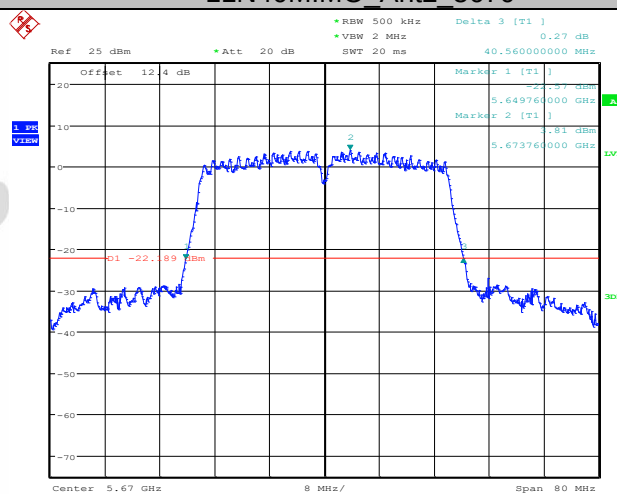
Date: 26.MAY.2021 18:40:59

11N40MIMO_Ant1_5670



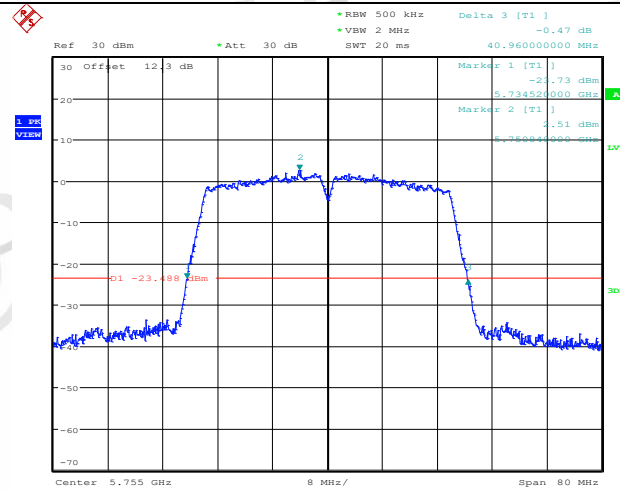
Date: 26.MAY.2021 18:44:22

11N40MIMO_Ant2_5670

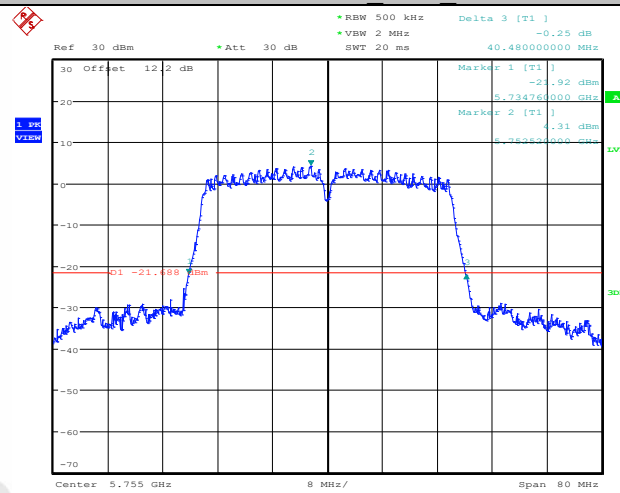


Date: 26.MAY.2021 18:47:54

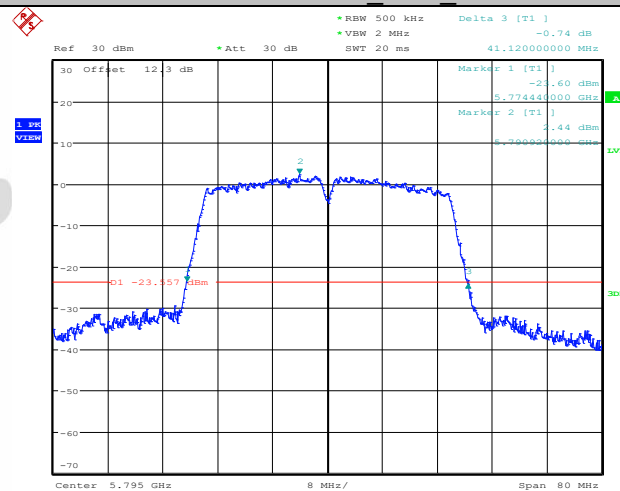
11N40MIMO_Ant1_5755



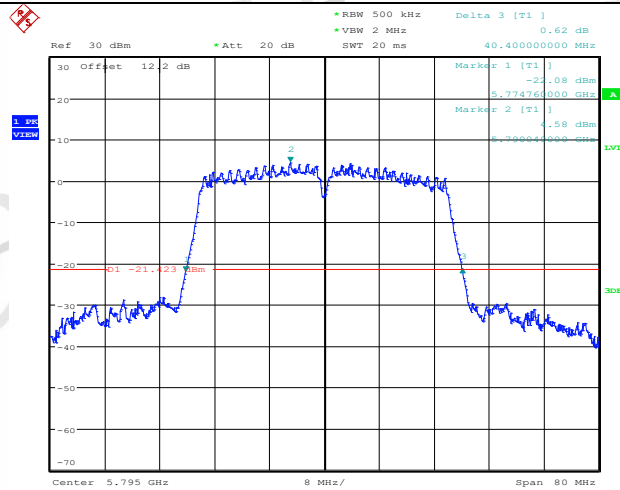
11N40MIMO_Ant2_5755



11N40MIMO_Ant1_5795

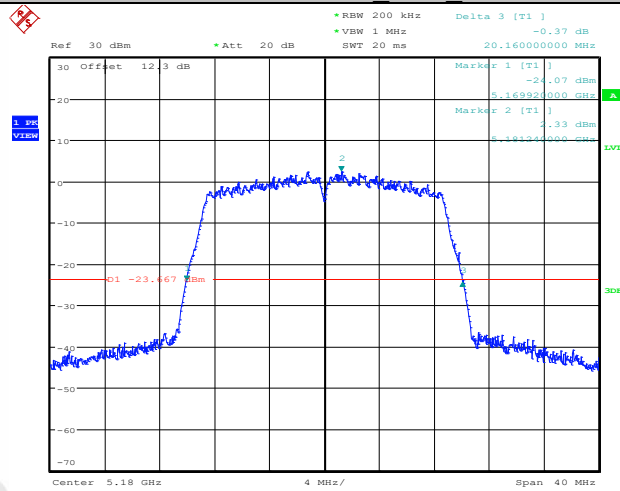


11N40MIMO_Ant2_5795



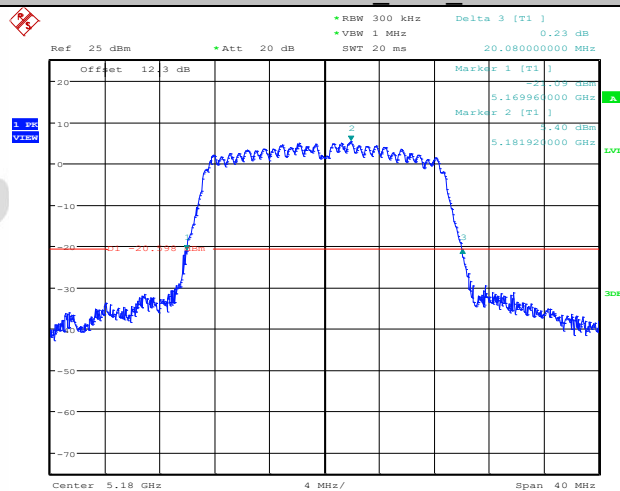
Date: 25.MAY.2021 20:34:59

11AC20MIMO_Ant1_5180



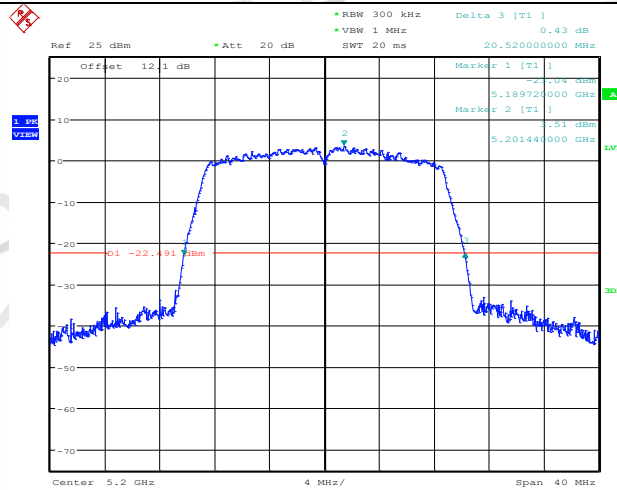
Date: 25.MAY.2021 20:39:25

11AC20MIMO_Ant2_5180



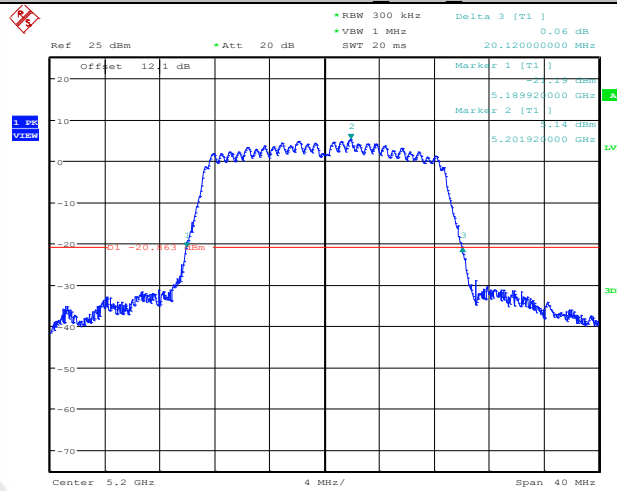
Date: 25.MAY.2021 20:45:23

11AC20MIMO_Ant1_5200



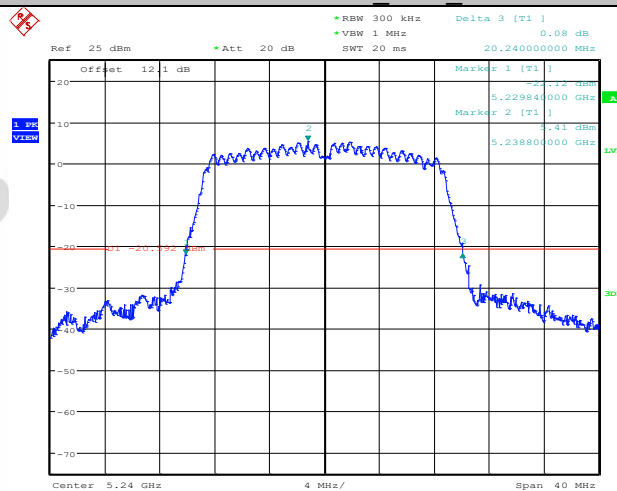
Date: 25.MAY.2021 20:48:46

11AC20MIMO_Ant2_5200



Date: 25.MAY.2021 20:52:35

11AC20MIMO_Ant1_5240



Date: 25.MAY.2021 20:57:00

11AC20MIMO_Ant2_5240



• RBW 300 kHz
 • VBW 1 MHz
 • SWF 20 ms
 Delta 3 [T1]
 -0.35 dB
 20.440000000 MHz

Ref 25 dBm
 *Att 20 dB

Offset 12.1 dB
 Marker 1 [T1]
 5.249800000 GHz
 -12.1 dBm
 Marker 2 [T1]
 5.261480000 GHz
 -21.8 dBm

-21.849 dBm
 -21.849 dBm
 -21.849 dBm

Center 5.26 GHz
 4 MHz/
 Span 40 MHz

Date: 26.MAY.2021 18:52:24

5.9% VDSM

RBW 300 kHz VBW 1 MHz SWT 20 ms Delta 3 [T1] -0.00 dB

Ref 25 dBm *Att 20 dB 20.126000000 MHz

Offset 12.1 dB

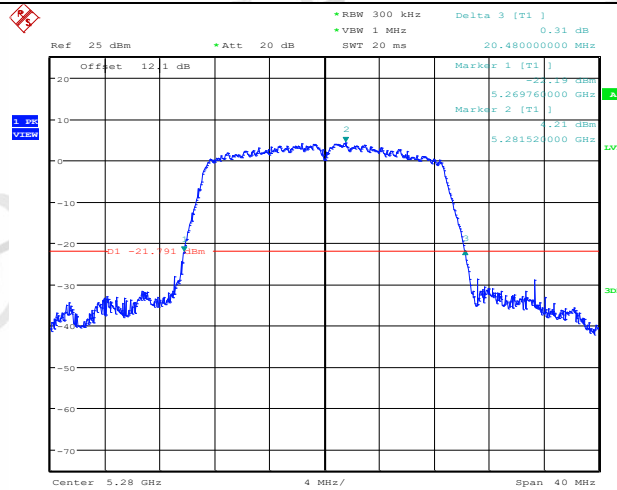
Marker 1 [T1] 5.24996 GHz -20.58 dBm

Marker 2 [T1] 5.26188 GHz -17.74 dBm

Center 5.26 GHz 4 MHz/ Span 40 MHz

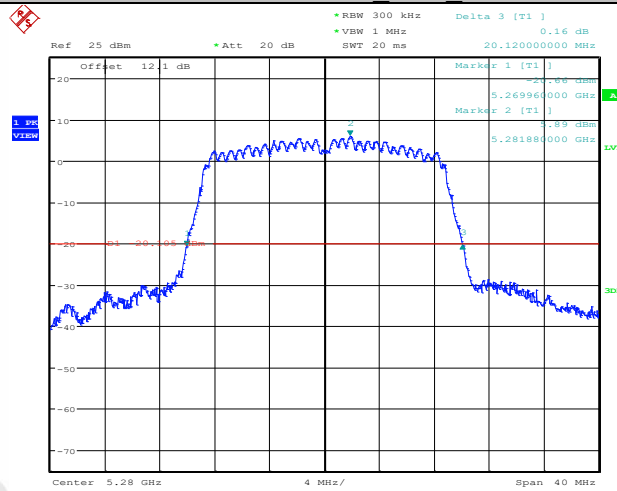
Date: 26.MAY.2021 18:58:07

11AC20MIMO Ant1 5280



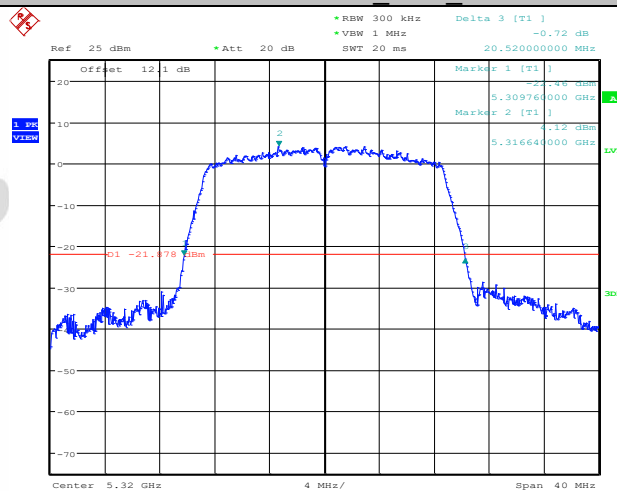
Date: 26.MAY.2021 19:03:17

11AC20MIMO_Ant2_5280



Date: 26.MAY.2021 19:15:06

11AC20MIMO_Ant1_5320



Date: 26.MAY.2021 19:23:10

11AC20MIMO_Ant2_5320

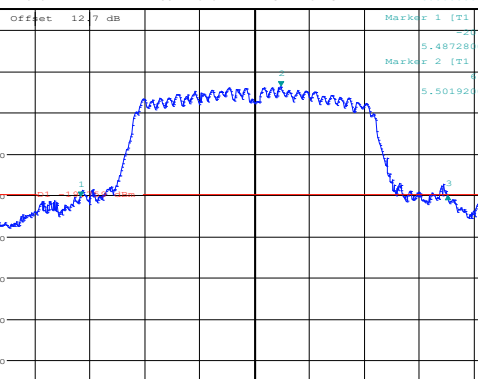


• RBW 300 kHz
 • VBW 1 MHz
 • Att 20 dB
 • Span 40 MHz
 • Delta 3 [T1]

Ref 25 dBm
 Offset 12.7 dB
 Marker 1 [T1]
 Marker 2 [T1]

5.48970000 GHz
 5.49792000 GHz

Center 5.5 GHz
 4 MHz/
 Span 40 MHz



• RBW 300 kHz
 • VBW 1 MHz
 • SWT 20 ms

Delta 3 [T1]
 0.23 dB
 26.800000000 MHz

Ref 25 dBm
 *Att 20 dB

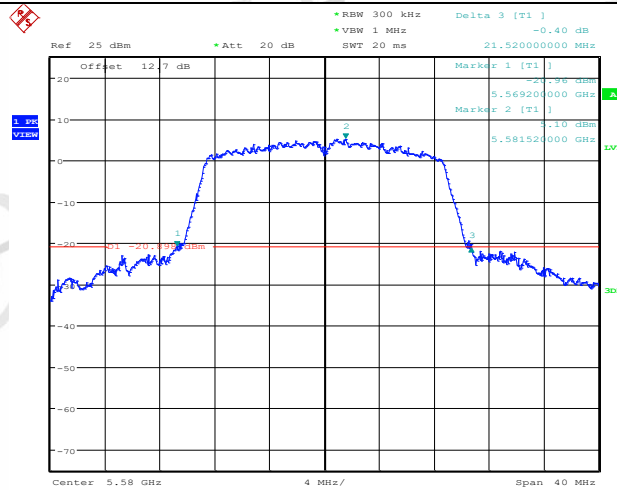
Offset 12.7 dB

Marker 1 [T1]
 -20.56 dBm
 5.487280000 GHz

Marker 2 [T1]
 -24.44 dBm
 5.501920000 GHz

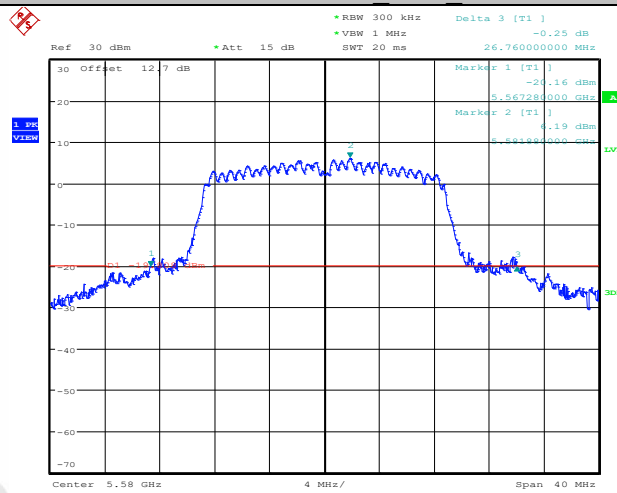
Center 5.5 GHz
 4 MHz/
 Span 40 MHz

11AC20MIMO Ant1 5580



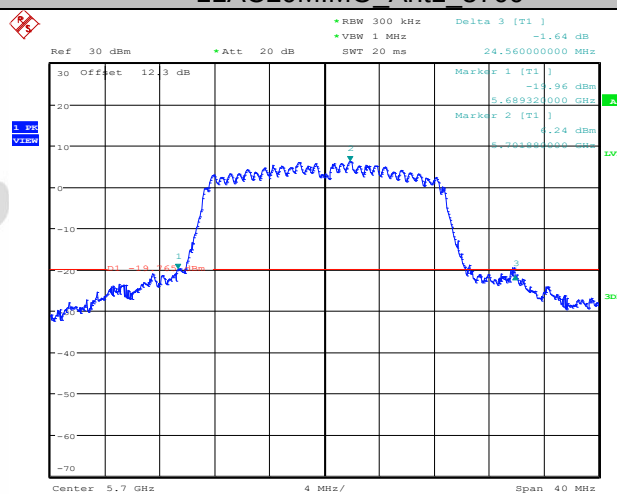
Date: 26.MAY.2021 19:38:54

11AC20MIMO_Ant2_5580



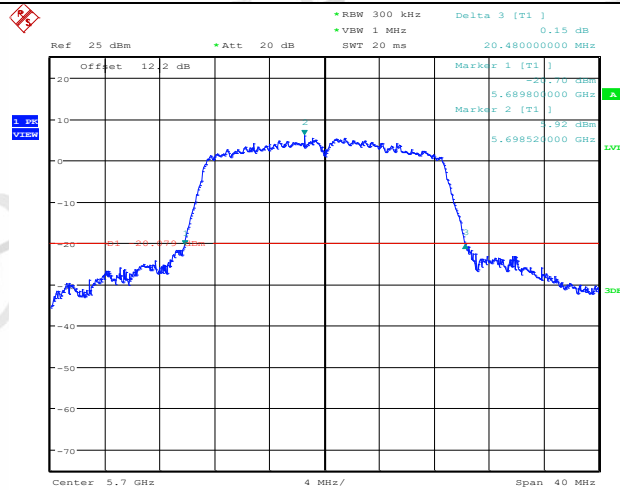
Date: 26.MAY.2021 19:44:33

11AC20MIMO_Ant1_5700



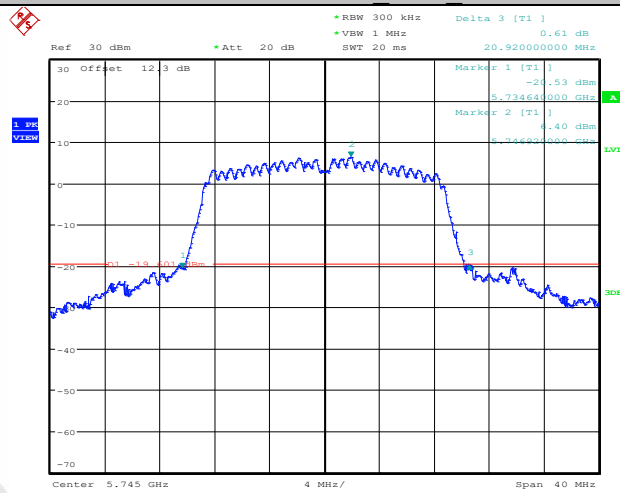
Date: 26.MAY.2021 19:51:10

11AC20MIMO_Ant2_5700



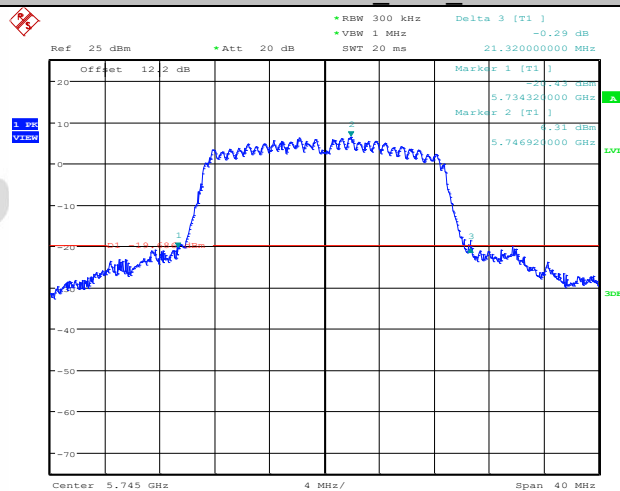
Date: 26.MAY.2021 19:55:50

11AC20MIMO_Ant1_5745



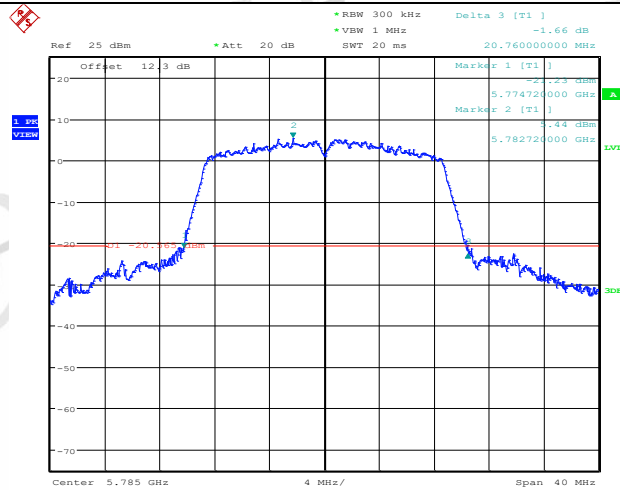
Date: 25.MAY.2021 21:06:15

11AC20MIMO_Ant2_5745



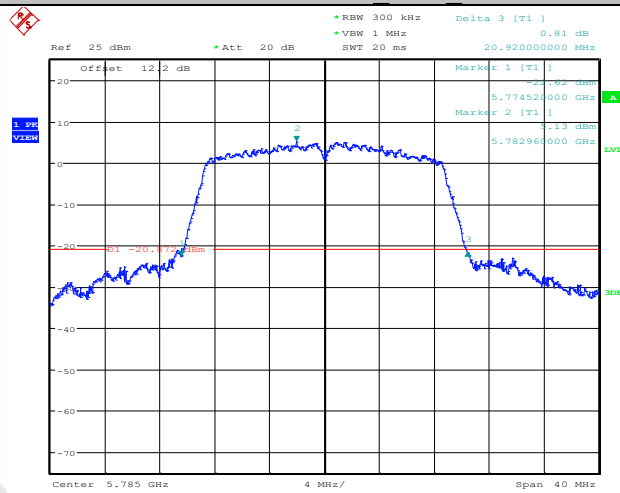
Date: 25.MAY.2021 21:10:18

11AC20MIMO_Ant1_5785



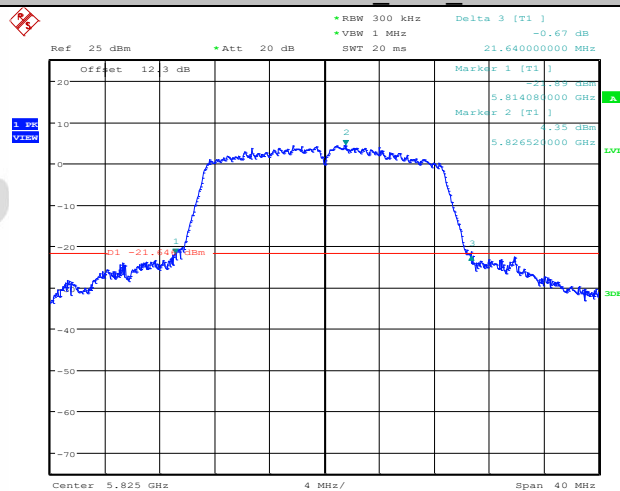
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11AC20MIMO_Ant2_5785



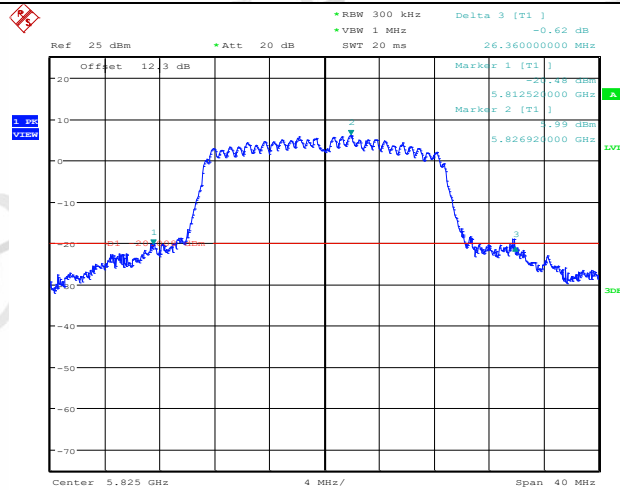
Date: 25.MAY.2021 21:20:21

11AC20MIMO_Ant1_5825



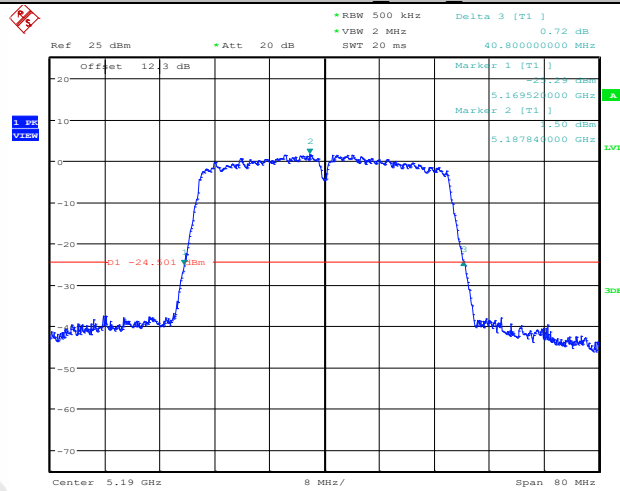
Date: 25.MAY.2021 21:24:00

11AC20MIMO_Ant2_5825



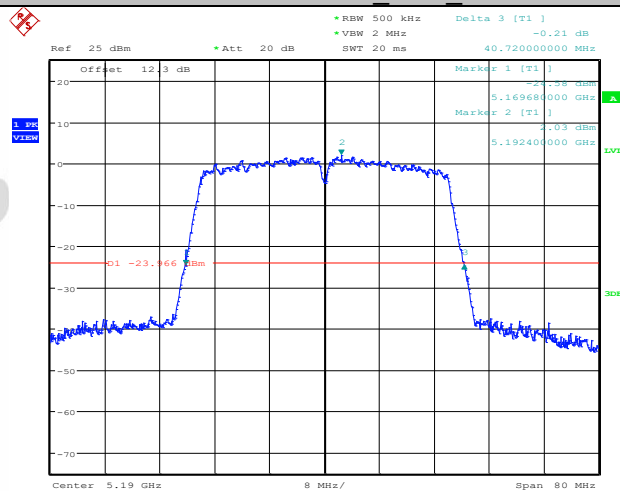
Date: 25.MAY.2021 21:27:44

11AC40MIMO_Ant1_5190



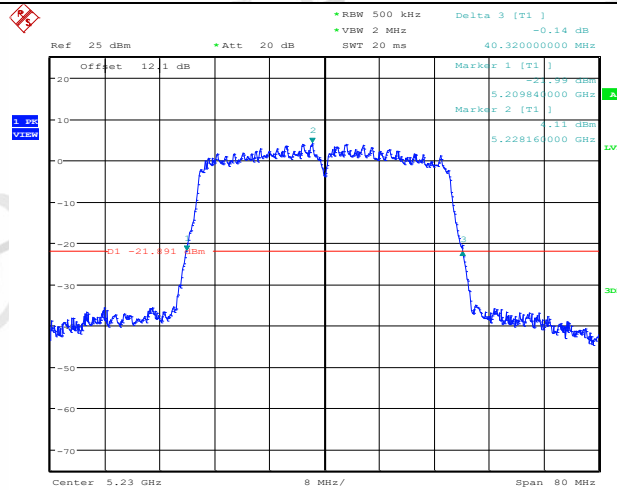
Date: 25.MAY.2021 21:32:39

11AC40MIMO_Ant2_5190



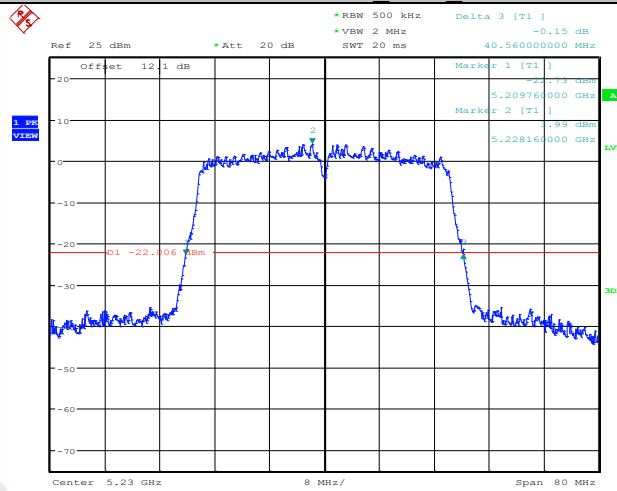
Date: 25.MAY.2021 21:36:15

11AC40MIMO_Ant1_5230



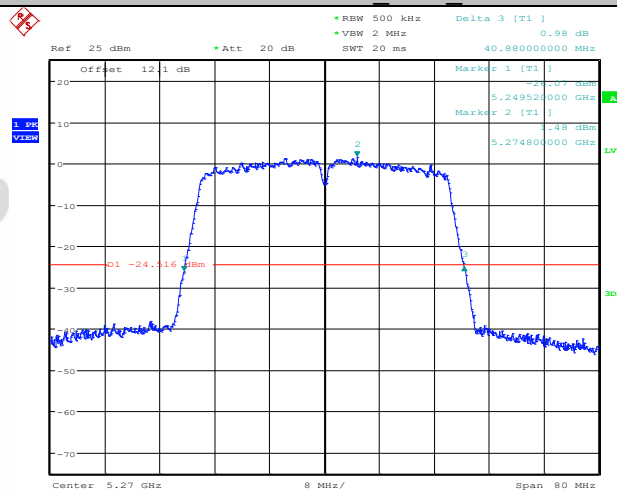
Date: 25.MAY.2021 21:39:54

11AC40MIMO_Ant2_5230



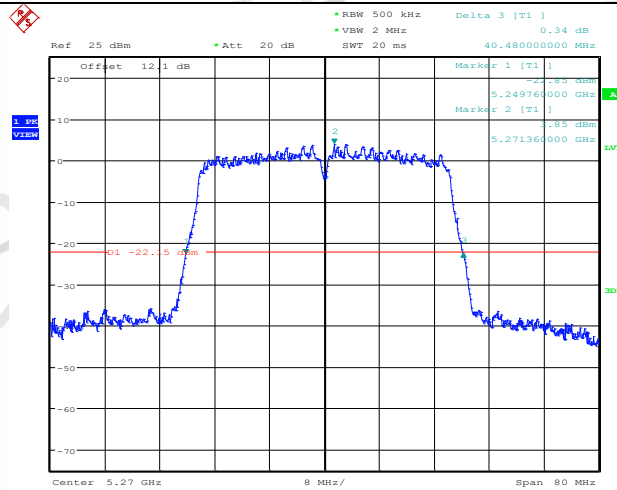
Date: 25.MAY.2021 21:43:35

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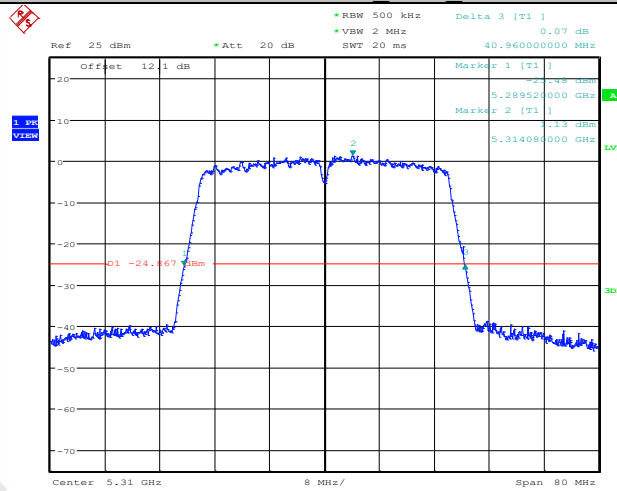
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11AC40MIMO_Ant2_5270



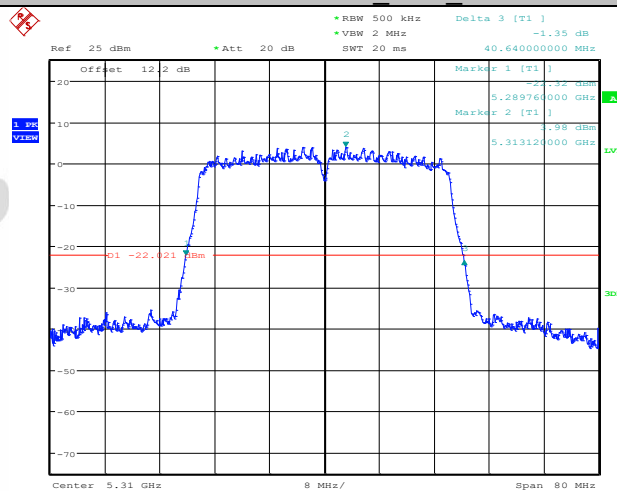
Date: 26.MAY.2021 20:05:40

11AC40MIMO_Ant1_5310



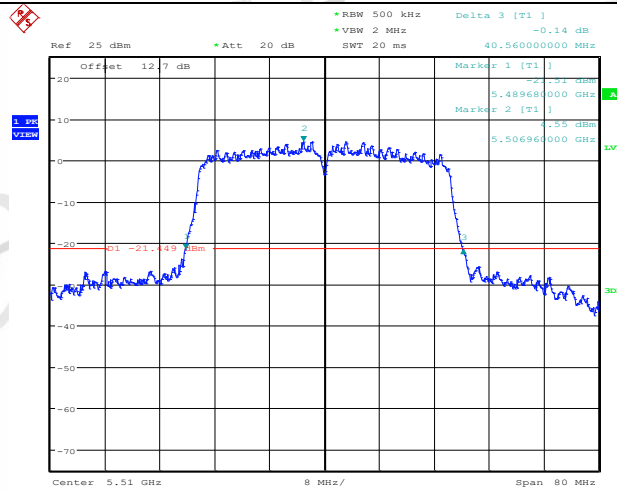
Date: 26.MAY.2021 20:12:49

11AC40MIMO_Ant2_5310

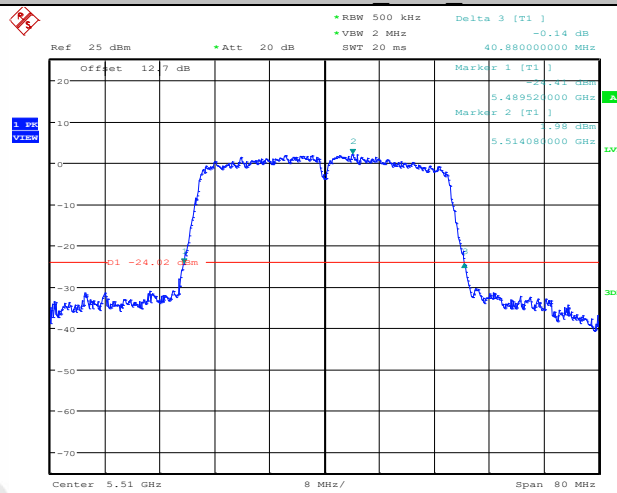


Date: 26.MAY.2021 20:16:34

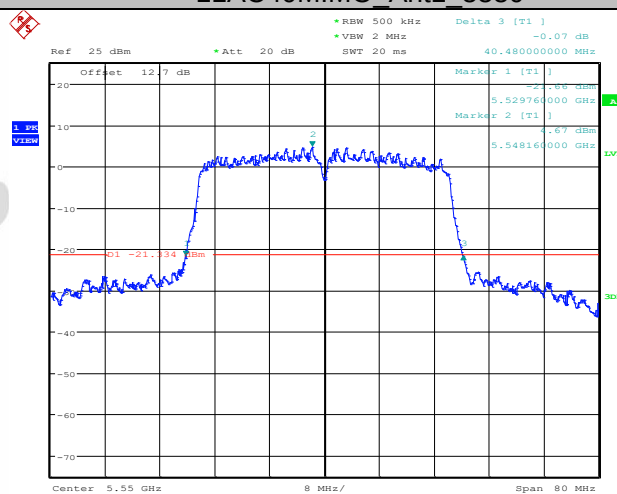
11AC40MIMO_Ant1_5510



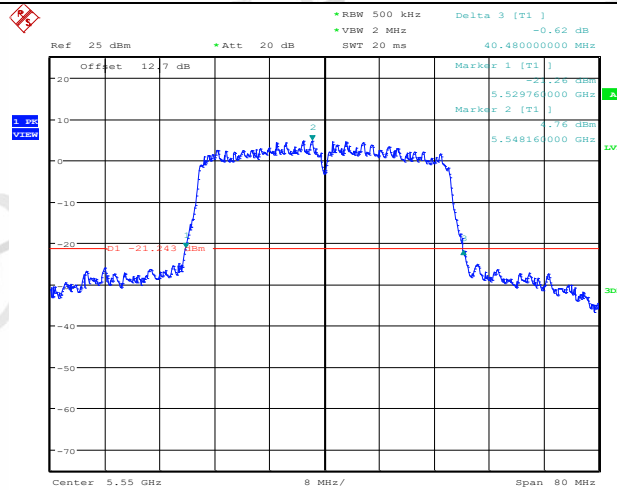
11AC40MIMO_Ant2_5510



11AC40MIMO_Ant1_5550

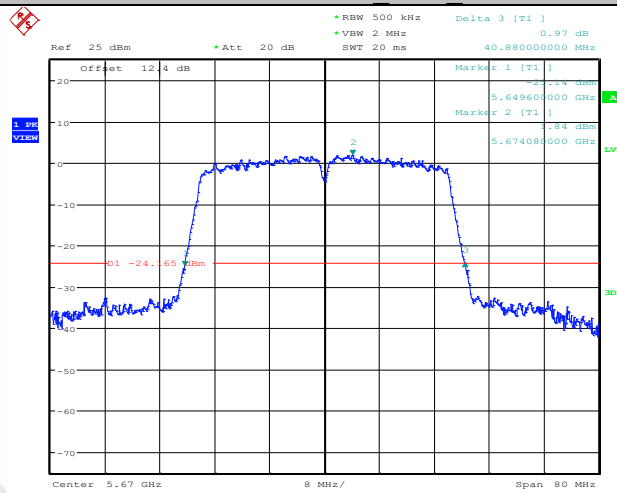


11AC40MIMO_Ant2_5550



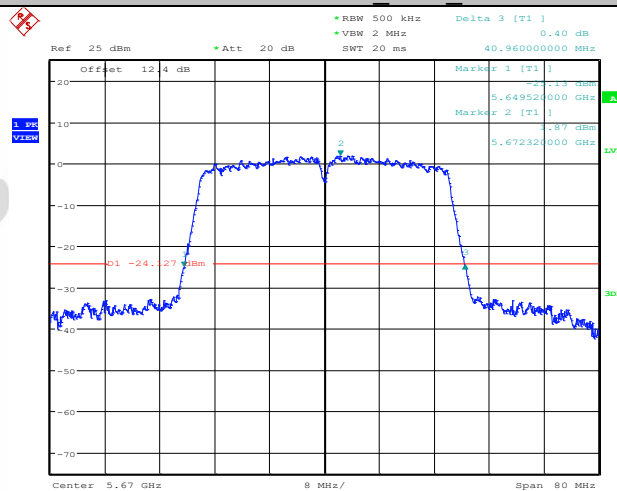
Date: 26.MAY.2021 20:33:53

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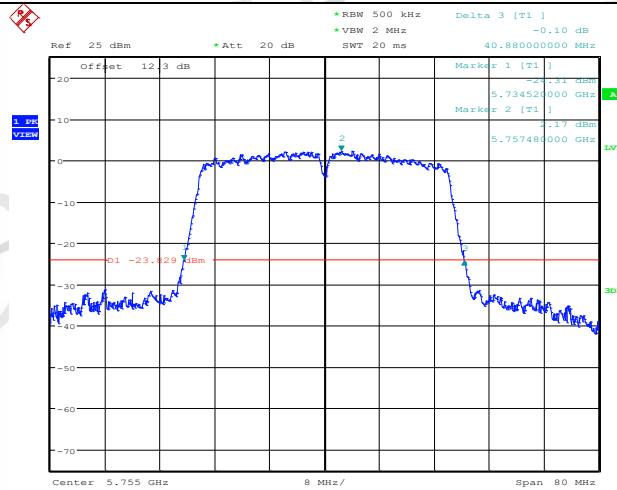
Date: 26.MAY.2021 20:38:10

11AC40MIMO_Ant2_5670



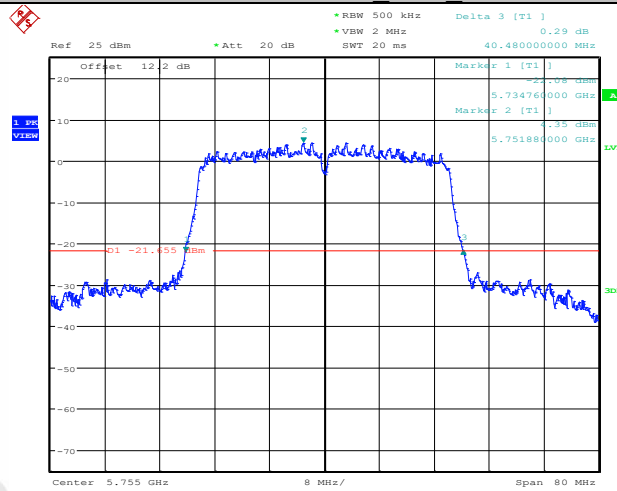
Date: 26.MAY.2021 20:42:07

11AC40MIMO_Ant1_5755



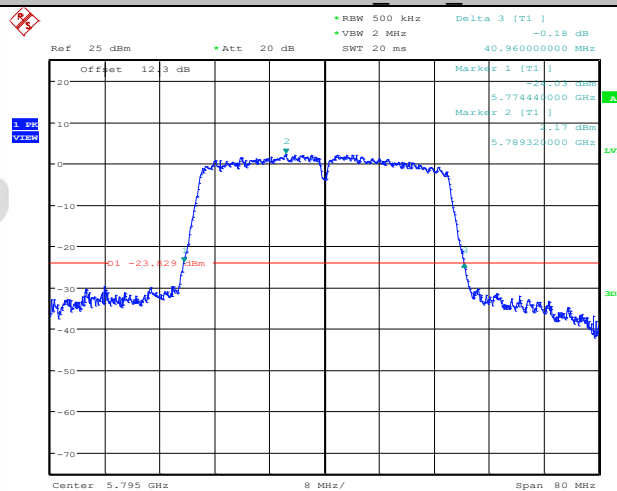
Date: 25.MAY.2021 21:47:31

11AC40MIMO_Ant2_5755



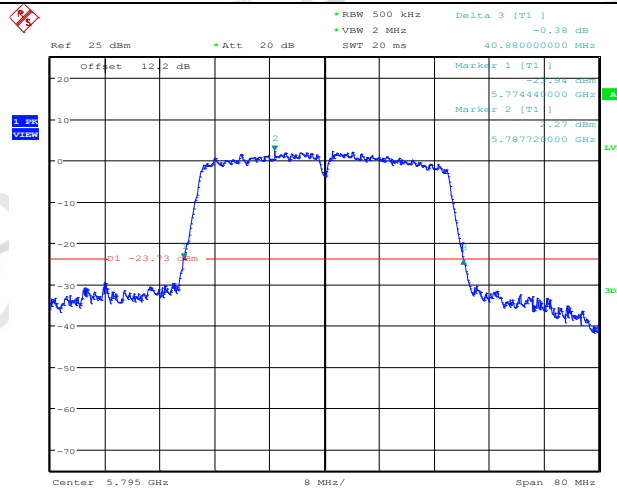
Date: 25.MAY.2021 21:51:49

11AC40MIMO_Ant1_5795



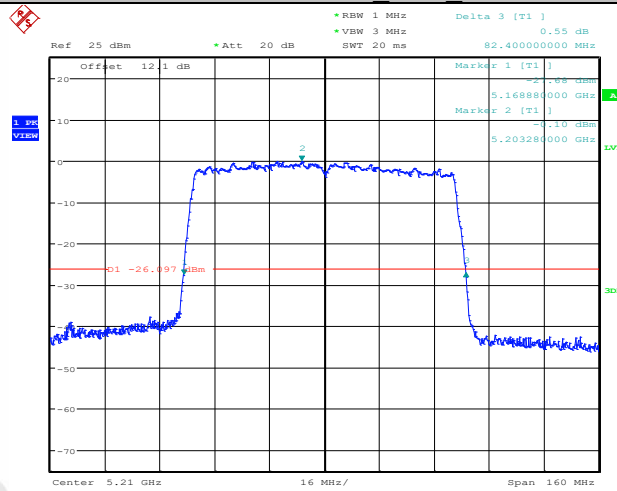
Date: 25.MAY.2021 21:55:56

11AC40MIMO_Ant2_5795



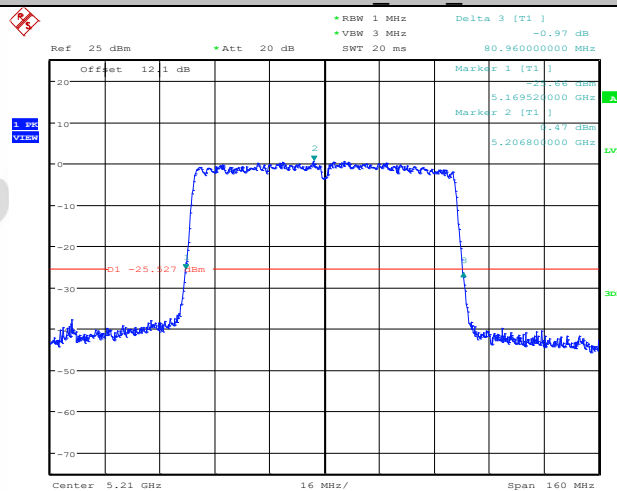
Date: 25.MAY.2021 22:01:39

11AC80MIMO_Ant1_5210



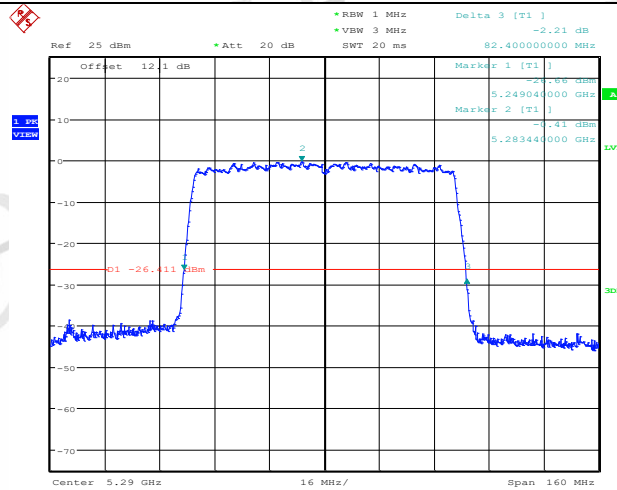
Date: 25.MAY.2021 22:07:53

11AC80MIMO_Ant2_5210



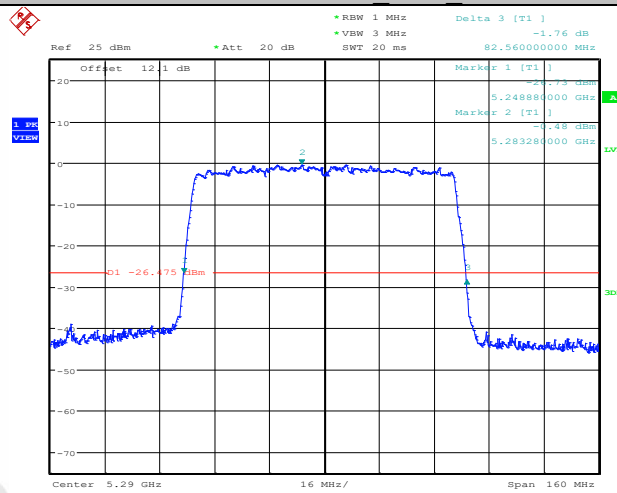
Date: 25.MAY.2021 22:11:33

11AC80MIMO_Ant1_5290



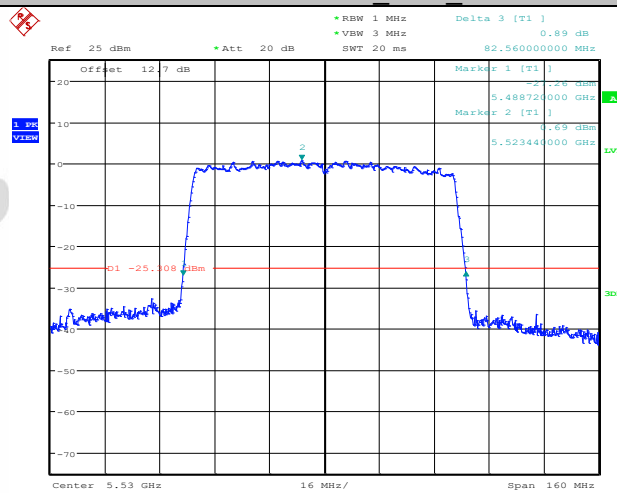
Date: 26.MAY.2021 20:47:17

11AC80MIMO_Ant2_5290



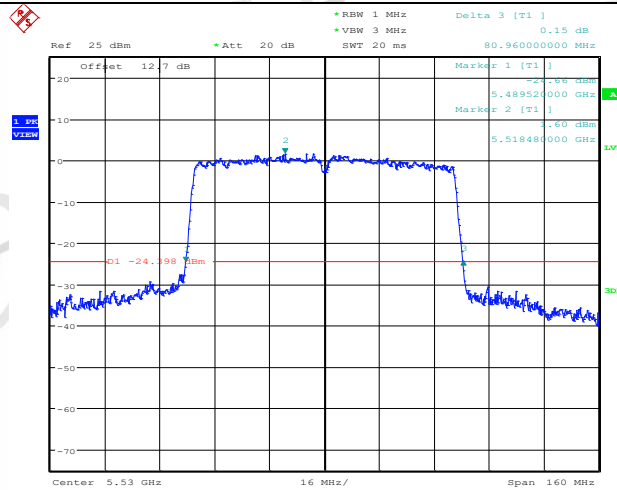
Date: 26.MAY.2021 20:51:26

11AC80MIMO_Ant1_5530

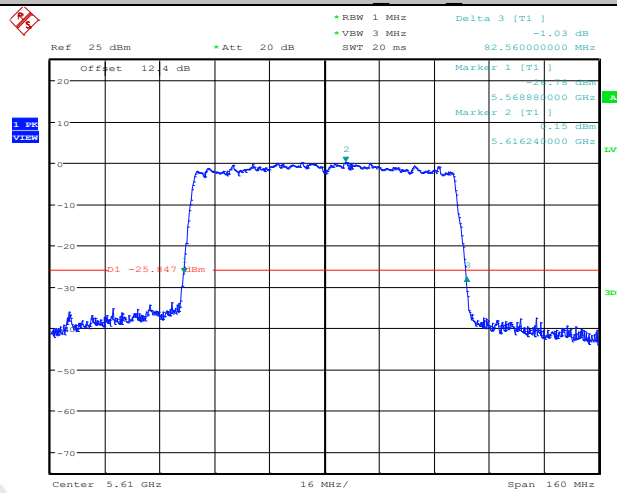


Date: 26.MAY.2021 20:56:08

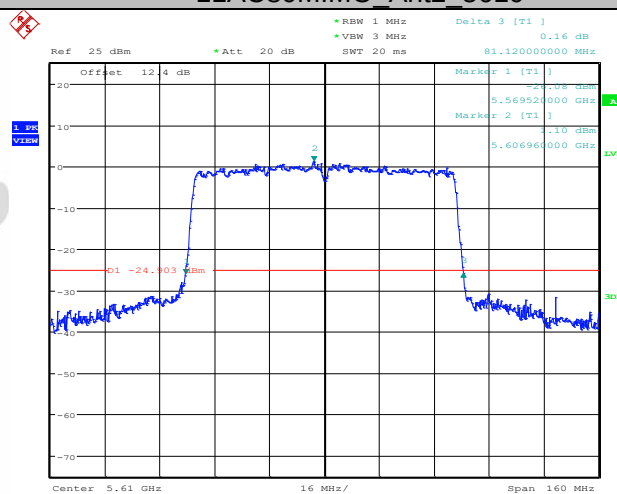
11AC80MIMO_Ant2_5530



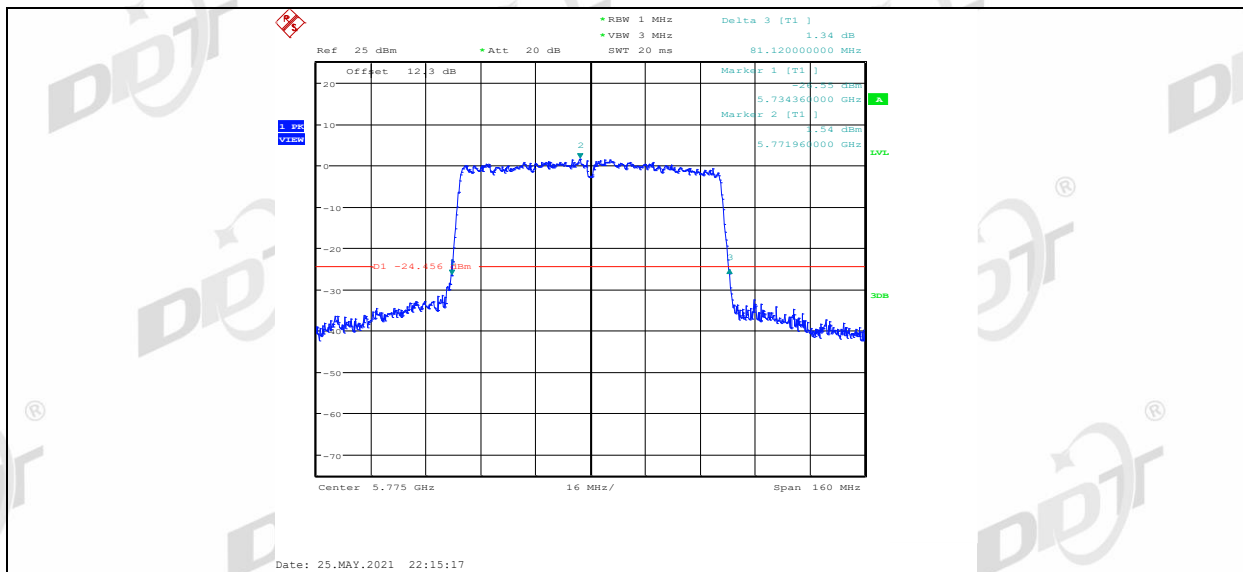
11AC80MIMO_Ant1_5610



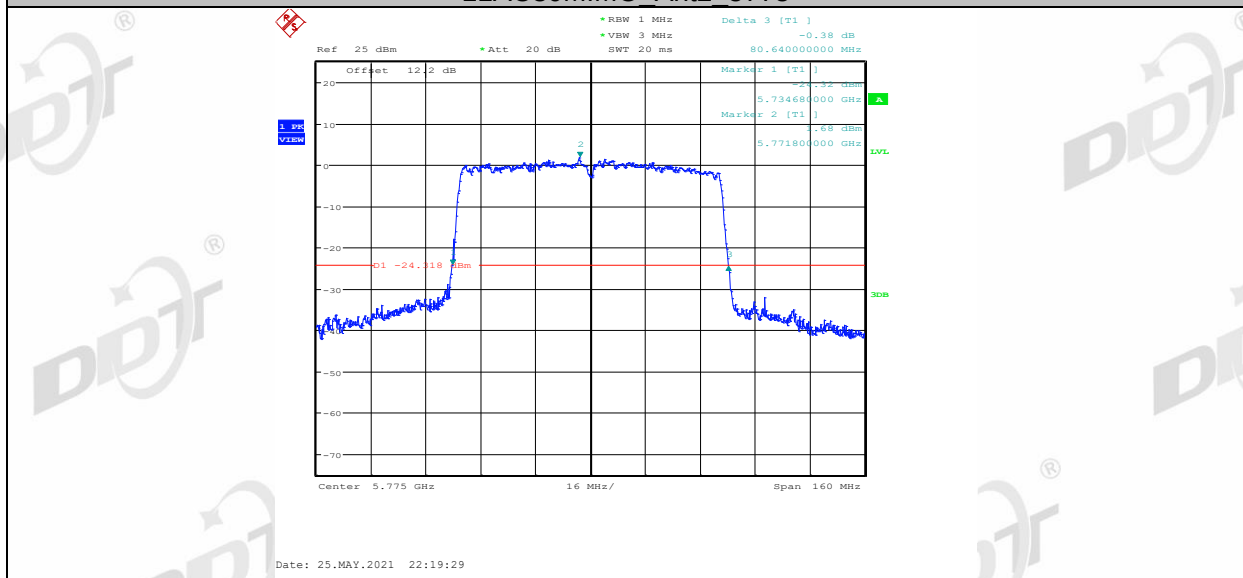
11AC80MIMO_Ant2_5610



11AC80MIMO_Ant1_5775

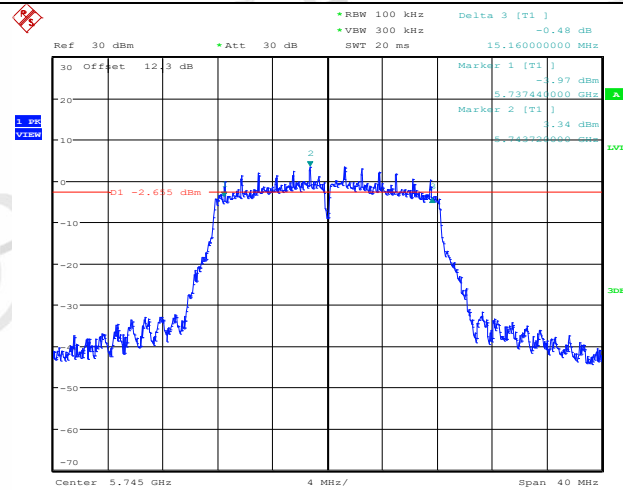


11AC80MIMO Ant2 5775

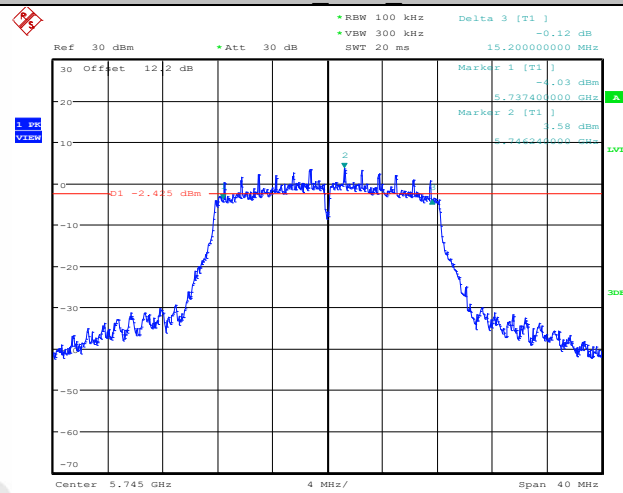


6db EBW:

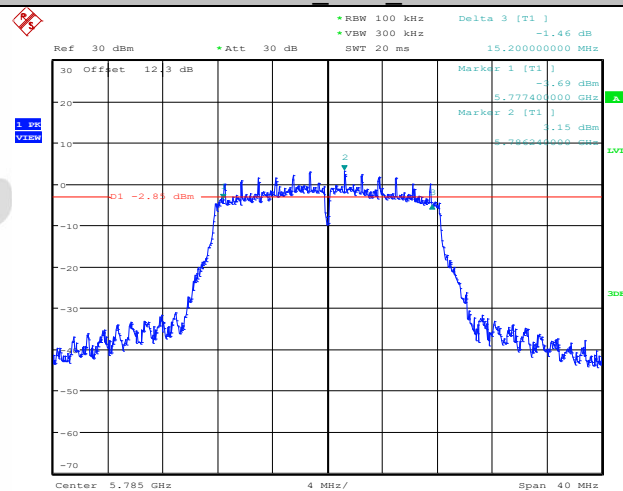
11A_Ant1_5745



11A Ant2 5745



11A Ant1 5785



11A Ant2 5785