



FCC CERTIFICATION TEST REPORT

Applicant	:	SELVAS Healthcare, Inc.
Address of Applicant	:	155, Sinseong-ro, Yuseong-gu, Daejeon, Republic of Korea
Manufacturer	:	SELVAS Healthcare, Inc.
Address of Manufacturer	:	155, Sinseong-ro, Yuseong-gu, Daejeon, Republic of Korea
Equipment under Test	:	Braille eMotion 40
Model No.	:	B340T
FCC ID	:	2AL4D-B340T
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart E, ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01
Report No.	:	DDT-RE23110312-2E05
Issue Date	:	2024/03/18
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

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Equipment under Test	:	Braille eMotion 40
Model No.	:	B340T
Manufacturer	:	SELVAS Healthcare, Inc.
Address of Manufacturer	:	155, Sinseong-ro, Yuseong-gu, Daejeon, Republic of Korea

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart E,
ANSI C63.10:2013,
789033 D02 General U-NII Test Procedures New Rules v02r01,
662911 D01 Multiple Transmitter Output v02r01,

We Declare:

The equipment described above is tested by Guangdong 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 Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE23110312-2E05		
Date of Receipt:	2024/01/17	Date of Test:	2024/01/17~2024/03/18

Prepared By:**Tiger Mo/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 Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2024/03/18	

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e)	/	Pass
2	Output Power	FCC 15.407 (a)	/	Pass
3	Power Spectral Density	FCC 15.407 (a)	/	Pass
4	Frequency Stability Measurement	FCC 15.407 (g)	/	Pass
5	Radiated Emission	FCC 15.407 (b); FCC 15.209; FCC 15.205	/	Pass
6	Band Edge Compliance	FCC 15.407 (b); FCC 15.209; FCC 15.205	/	Pass
7	Power Line Conducted Emissions	FCC Part 15: 15.207(a)	/	Pass
8	Dynamic Frequency Selection	FCC 15.407 (h)	/	Pass
9	Antenna Requirement	FCC Part 15: 15.203	/	Pass
Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.				

2. General Test Information

2.1. Description of EUT

EUT Name	: Braille eMotion 40
Model Number	: B340T
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 5V from external Power supply or DC 3.8V built-in battery, 5000mAh

Note: This EUT support Bluetooth BR/EDR/LE, 2.4 GHz WLAN, 5 GHz WLAN, this report only for 5 GHz WLAN.

Radio Technology	: IEEE 802.11a/n/ac
Operation frequency	: IEEE 802.11a: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5720MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5720MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5710MHz, 5755MHz-5795MHz IEEE 802.11ac VHT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5720MHz, 5745MHz-5825MHz IEEE 802.11ac VHT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5710MHz, 5755MHz-5795MHz IEEE 802.11ac VHT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 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)

Antenna information					
Antenna Type	FPC				
Max Antenna Gain (dBi)	Ant1				
		5150MHz-5250MHz	5250MHz-5350MHz	5470MHz-5725MHz	5725MHz-5850MHz
	IEEE 802.11a	-3.11	-0.67	3.9	4.87
	IEEE 802.11n HT20	-3.11	-0.67	3.9	4.87
	IEEE 802.11n HT40	-3.11	-0.67	3.9	4.87
	IEEE 802.11ac VHT20	-3.11	-0.67	3.9	4.87
	IEEE 802.11ac VHT40	-3.11	-0.67	3.9	4.87
	IEEE 802.11ac VHT80	-3.11	-0.67	3.9	4.87

Channel information		
IEEE 802.11a	IEEE 802.11n (HT40)	IEEE 802.11ac (VHT80)
IEEE 802.11n (HT20)	IEEE 802.11ac (VHT40)	
IEEE 802.11ac (VHT20)		

UNII-1					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	/	/
44	5220	/	/	/	/
48	5240	/	/	/	/
UNII-2A					
52	5260	54	5270	58	5290
56	5280	62	5310		/
60	5300	/	/	/	/
64	5320	/	/	/	/
UNII-2C					
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630	/	/
116	5580	134	5670	/	/
120	5600	142	5710	/	/
124	5620	/	/	/	/
128	5640	/	/	/	/
132	5660	/	/	/	/
136	5680	/	/	/	/
140	5700	/	/	/	/
144	5720				
UNII-3					
149	5745	151	5755	155	5775
153	5765	159	5795	/	/
157	5785	/	/	/	/
161	5805	/	/	/	/
165	5825	/	/	/	/
Note: Band 5600-5650MHz will be disabled when shipped to Canada					

Note : “☑” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

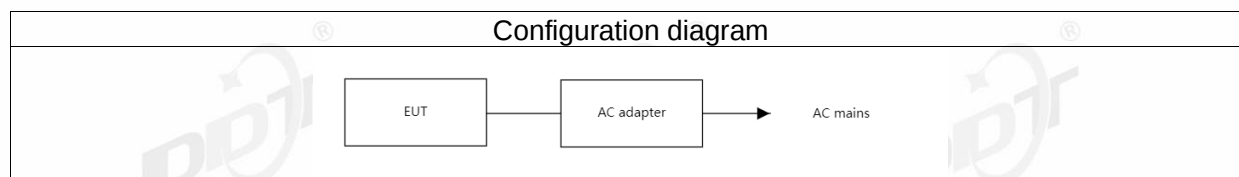
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
-------------	--------------	--------------	-------------

/	/	/	/
---	---	---	---

2.3. Block diagram of EUT configuration for test



2.4. Decision of final test mode

According pre-test, the worst test modes were reported as below:

Test software: QRCT3.exe

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 2 dB (According to the manufacturer's claims)

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	Data rate (Mbps) (see Note)	Channel	Frequency (MHz)
	ANT1			
IEEE 802.11a	Default	6	Low: CH36	5180
	Default	6	Middle: CH40	5200
	Default	6	High: CH48	5240
	Default	6	Low: CH52	5260
	Default	6	Middle: CH56	5280
	Default	6	High: CH64	5320
	Default	6	Low: CH100	5500
	Default	6	Middle: CH116	5580
	Default	6	High: CH140	5700
	Default	6	Straddle: CH144	5720
	Default	6	Low: CH149	5745
	Default	6	Middle: CH157	5785
IEEE 802.11n HT20	Default	MCS 0	Low: CH36	5180
	Default	MCS 0	Middle: CH40	5200
	Default	MCS 0	High: CH48	5240
	Default	MCS 0	Low: CH52	5260
	Default	MCS 0	Middle: CH56	5280
	Default	MCS 0	High: CH64	5320
	Default	MCS 0	Low: CH100	5500
	Default	MCS 0	Middle: CH116	5580
	Default	MCS 0	High: CH140	5700

	Default	MCS 0	Straddle:CH144	5720
	Default	MCS 0	Low: CH149	5745
	Default	MCS 0	Middle: CH157	5785
	Default	MCS 0	High: CH165	5825
IEEE 802.11n 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 VHT20	Default	MCS 0	Low: CH36	5180
	Default	MCS 0	Middle: CH40	5200
	Default	MCS 0	High: CH48	5240
	Default	MCS 0	Low: CH52	5260
	Default	MCS 0	Middle: CH56	5280
	Default	MCS 0	High: CH64	5320
	Default	MCS 0	Low: CH100	5500
	Default	MCS 0	Middle: CH116	5580
	Default	MCS 0	High: CH140	5700
	Default	MCS 0	Straddle:CH144	5720
	Default	MCS 0	Low: CH149	5745
	Default	MCS 0	Middle: CH157	5785
	Default	MCS 0	High: CH165	5825
	Default	MCS 0	High: CH165	5825
IEEE 802.11 ac VHT40	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	Straddle: CH142	5710
	12	MCS 0	Middle: CH151	5755
	12	MCS 0	High: CH159	5795
	12	MCS 0	CH42	5210
IEEE 802.11ac VHT80	12	MCS 0	CH58	5290
	12	MCS 0	CH106	5530
	12	MCS 0	CH122	5610
	12	MCS 0	CH122	5610

12	MCS 0	CH138	5690
12	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:	+15℃ to +35 ℃
Humidity range:	20% to 75%
Pressure range:	86 kPa to 106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, 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, R-20155, G-20118

2.8. Measurement uncertainty

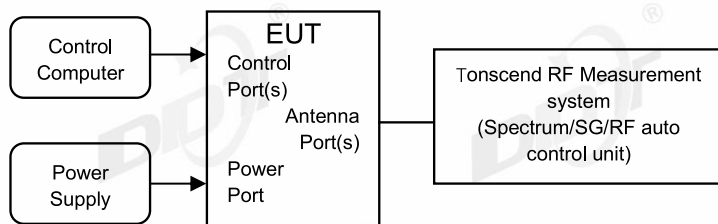
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 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 ($8 \text{ GHz} \leq f < 26.5 \text{ GHz}$)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V) 4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	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	3.34dB (150KHz-30MHz) 3.72dB (9KHz-150KHz)
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 Conductive Test

Equipment	Manufacturer	Model No.	Serial Number	Due Date
☒ RF Connected Test (RF Measurement System 1#)				
SIGNAL ANALYZER	R&S	FSQ26	101272	2024/04/26
Wideband Radio Communication Tester	R&S	CMW500	120259	2024/07/14
MXG Vector Signal Generator	KEYSIGHT	N5182B	MY59100192	2024/04/26
MXG Vector Signal Generator	Agilent	N5182A	MY19060405	2024/04/26
RF Control Unit	Tonsend	JS0806-2	158060010	2024/04/26
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2024/05/14
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A

4. 26dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
26 dB Bandwidth	---	5150 - 5250
	---	5250 - 5350
	---	For FCC: 5470 - 5725 For IC: 5470 - 5600 5650 - 5725

4.3. Test procedure

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

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	approximately 1% of the emission bandwidth.
VBW	> RBW
Trace	Max hold
Sweep	Auto couple

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 relative to the maximum level measured in the fundamental emission.

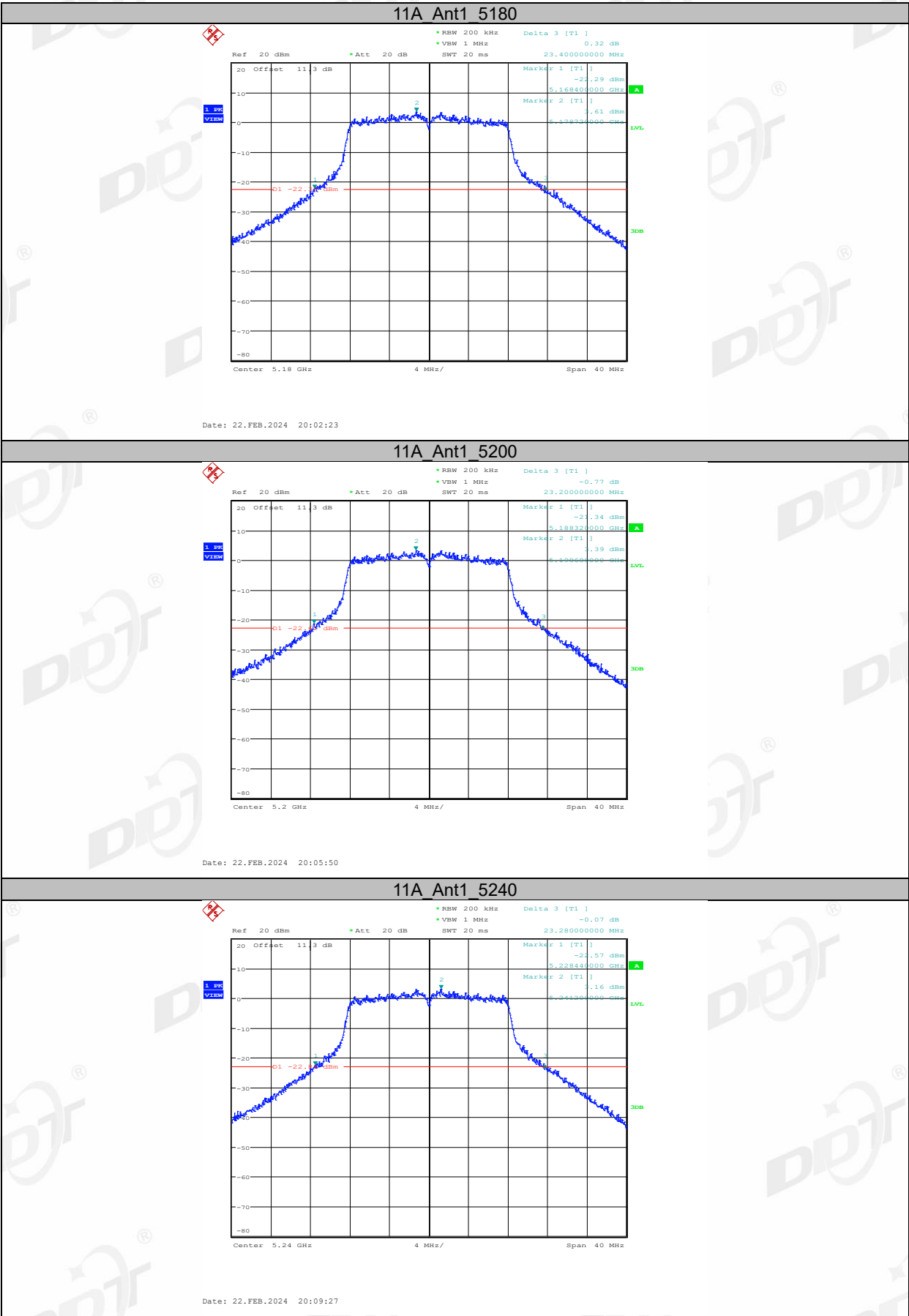
4.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	22.3℃,44.8%RH	Test Date:	2024.01.22-2024.03.12
Test Power Supply:	Battery	EUT:	Braille eMotion 40
Sample Number:	S23110312-01	Model No.:	B340T

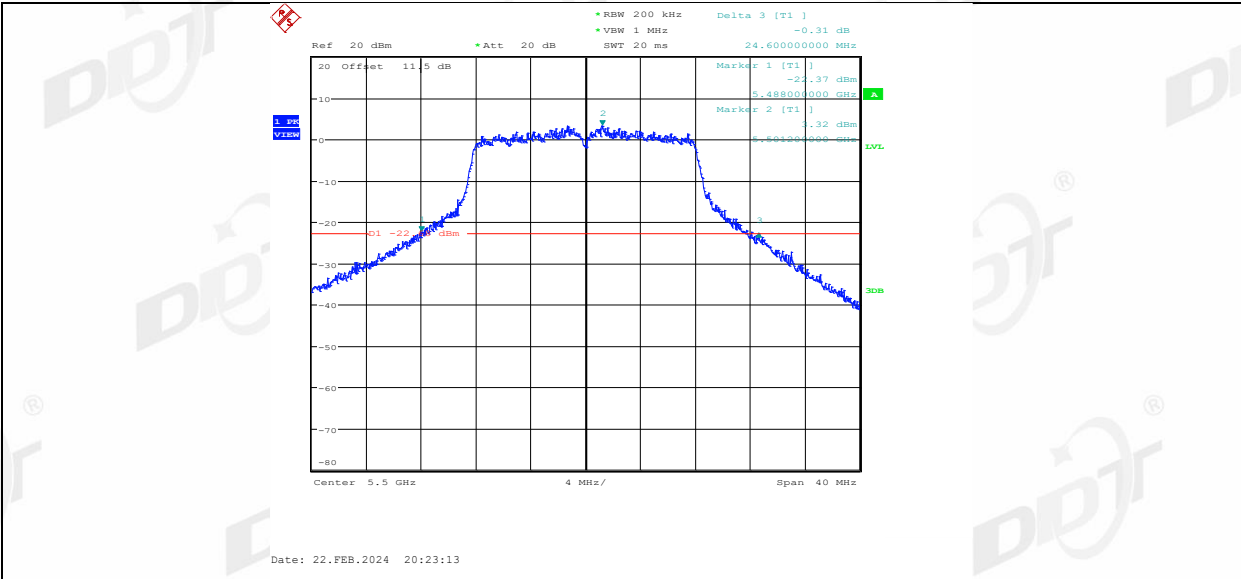
Test Mode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	23.40	5168.40	5191.80	---	---
		5200	23.20	5188.32	5211.52	---	---
		5240	23.28	5228.44	5251.72	---	---
		5260	23.28	5248.32	5271.60	---	---
		5280	23.16	5268.44	5291.60	---	---
		5320	23.64	5307.68	5331.32	---	---
		5500	24.60	5488.00	5512.60	---	---
		5580	24.48	5567.60	5592.08	---	---
		5700	24.84	5687.64	5712.48	---	---
		5720	27.56	5706.76	5734.32	---	---
		5720 UNII-2C	18.24	5706.76	5725	---	---
		5720 UNII-3	9.32	5725	5734.32	---	---
		5745	24.84	5732.24	5757.08	---	---
		5785	23.88	5772.96	5796.84	---	---
		5825	24.12	5812.68	5836.80	---	---
11N20SIS O	Ant1	5180	24.20	5167.84	5192.04	---	---
		5200	24.44	5187.40	5211.84	---	---
		5240	24.32	5228.04	5252.36	---	---
		5260	23.84	5248.04	5271.88	---	---
		5280	23.64	5268.04	5291.68	---	---
		5320	23.72	5308.04	5331.76	---	---
		5500	25.44	5487.36	5512.80	---	---
		5580	25.60	5567.32	5592.92	---	---
		5700	26.72	5686.40	5713.12	---	---
		5720	27.80	5706.28	5734.08	---	---
		5720 UNII-2C	18.72	5706.28	5725	---	---
		5720 UNII-3	9.08	5725	5734.08	---	---
		5745	25.60	5732.20	5757.80	---	---
		5785	24.68	5772.44	5797.12	---	---
		5825	24.72	5812.44	5837.16	---	---
11N40SIS O	Ant1	5190	41.52	5169.20	5210.72	---	---
		5230	41.68	5209.36	5251.04	---	---
		5270	41.60	5249.28	5290.88	---	---
		5310	41.44	5289.44	5330.88	---	---
		5510	44.48	5486.40	5530.88	---	---
		5550	41.76	5529.12	5570.88	---	---
		5670	41.44	5649.12	5690.56	---	---
		5710	41.52	5689.12	5730.64	---	---
		5710 UNII-2C	35.88	5689.12	5725	---	---
		5710 UNII-3	5.64	5725	5730.64	---	---
		5755	41.76	5734.04	5775.80	---	---
		5795	41.44	5774.20	5815.64	---	---
11AC20Si SO	Ant1	5180	23.48	5168.40	5191.88	---	---
		5200	23.80	5188.00	5211.80	---	---
		5240	24.48	5228.24	5252.72	---	---
		5260	24.36	5248.08	5272.44	---	---
		5280	23.64	5268.32	5291.96	---	---
		5320	24.40	5307.44	5331.84	---	---
		5500	24.96	5487.76	5512.72	---	---
		5580	25.84	5566.76	5592.60	---	---
		5700	24.72	5687.40	5712.12	---	---
		5720	27.16	5706.56	5733.72	---	---
		5720 UNII-2C	18.44	5706.56	5725	---	---
		5720 UNII-3	8.72	5725	5733.72	---	---

		5745	24.60	5732.64	5757.24	---	---
		5785	24.08	5772.76	5796.84	---	---
		5825	24.44	5812.44	5836.88	---	---
11AC40SI SO	Ant1	5190	41.52	5169.28	5210.80	---	---
		5230	41.44	5209.60	5251.04	---	---
		5270	41.52	5249.36	5290.88	---	---
		5310	41.04	5289.60	5330.64	---	---
		5510	41.44	5489.36	5530.80	---	---
		5550	41.52	5529.20	5570.72	---	---
		5670	41.52	5649.12	5690.64	---	---
		5710	41.92	5689.04	5730.96	---	---
		5710 UNII-2C	35.96	5689.04	5725	---	---
		5710 UNII-3	5.96	5725	5730.96	---	---
		5755	41.60	5734.12	5775.72	---	---
		5795	41.68	5774.04	5815.72	---	---
		5210	82.72	5168.08	5250.80	---	---
		5290	81.92	5248.72	5330.64	---	---
11AC80SI SO	Ant1	5530	82.24	5488.56	5570.80	---	---
		5610	82.72	5567.92	5650.64	---	---
		5690	83.04	5647.92	5730.96	---	---
		5690 UNII-2C	77.08	5647.92	5725	---	---
		5690 UNII-3	5.96	5725	5730.96	---	---
		5775	82.88	5732.76	5815.64	---	---

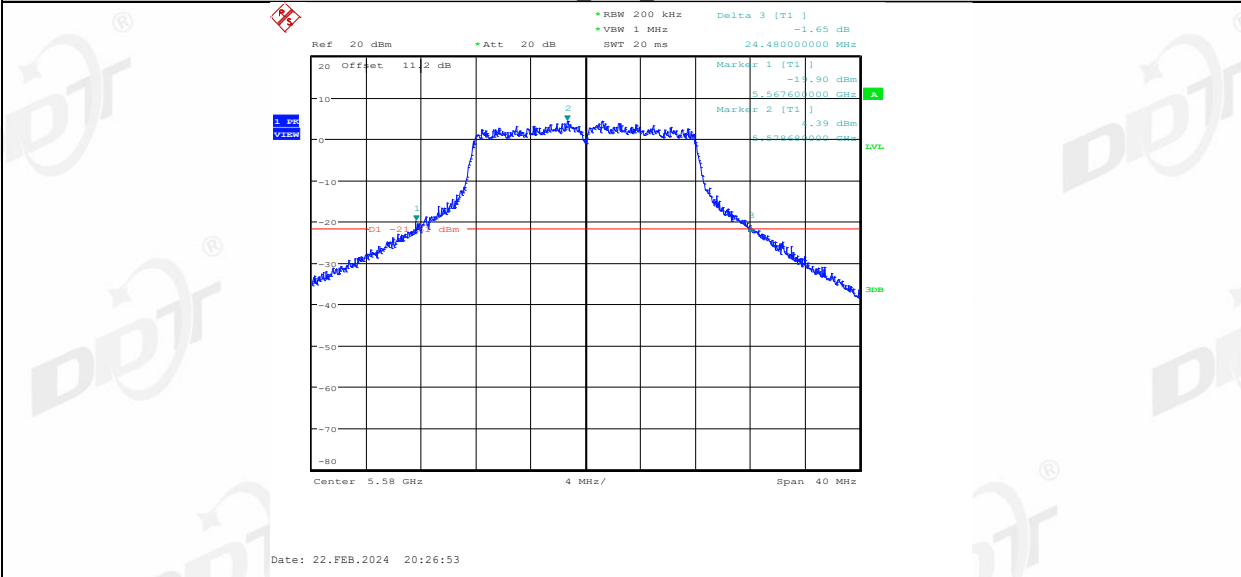
4.5. Test graphs



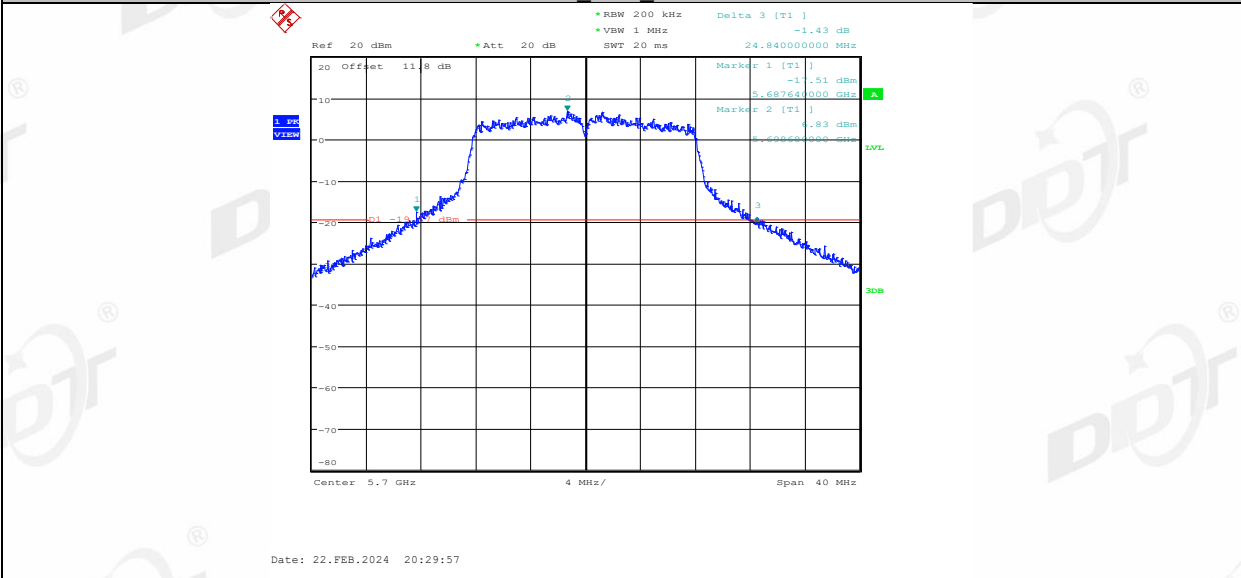




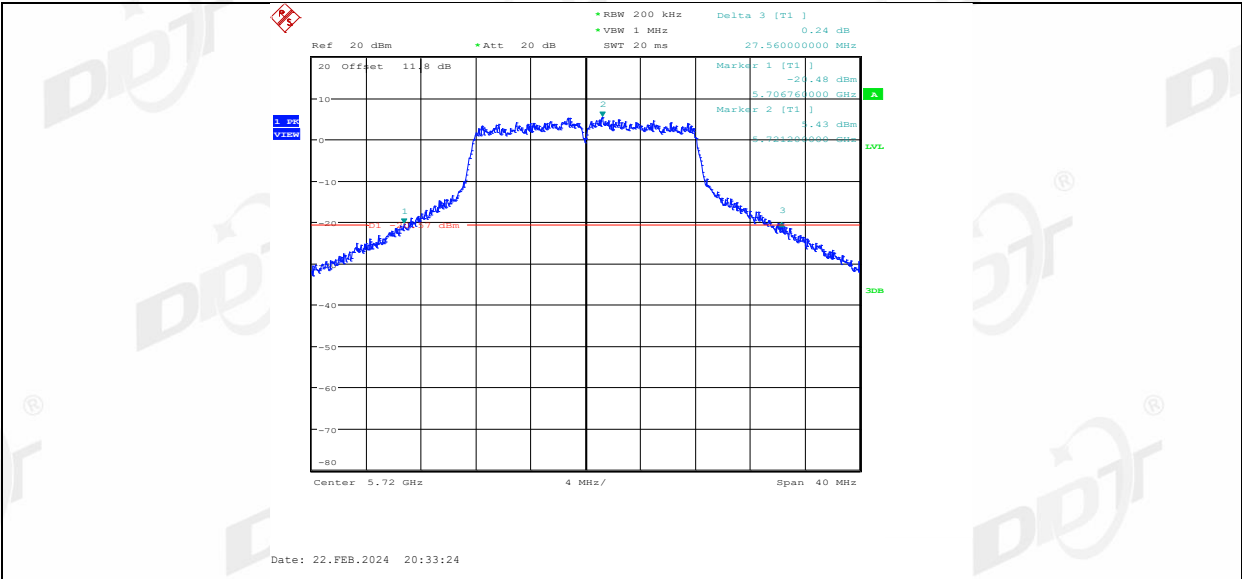
11A Ant1 5580



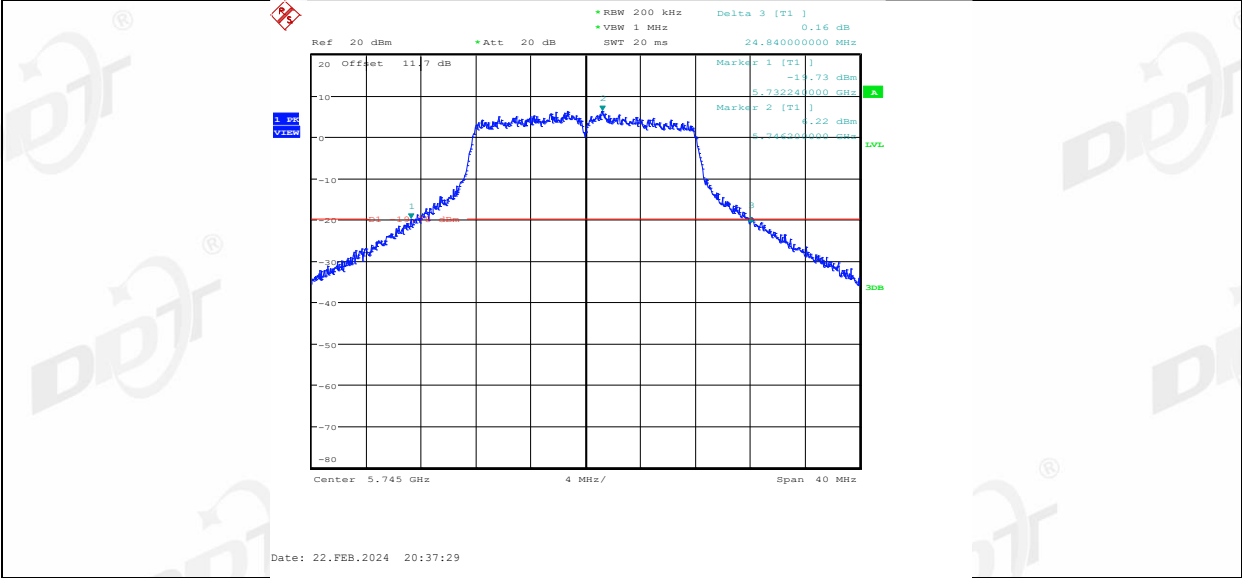
11A Ant1 5700



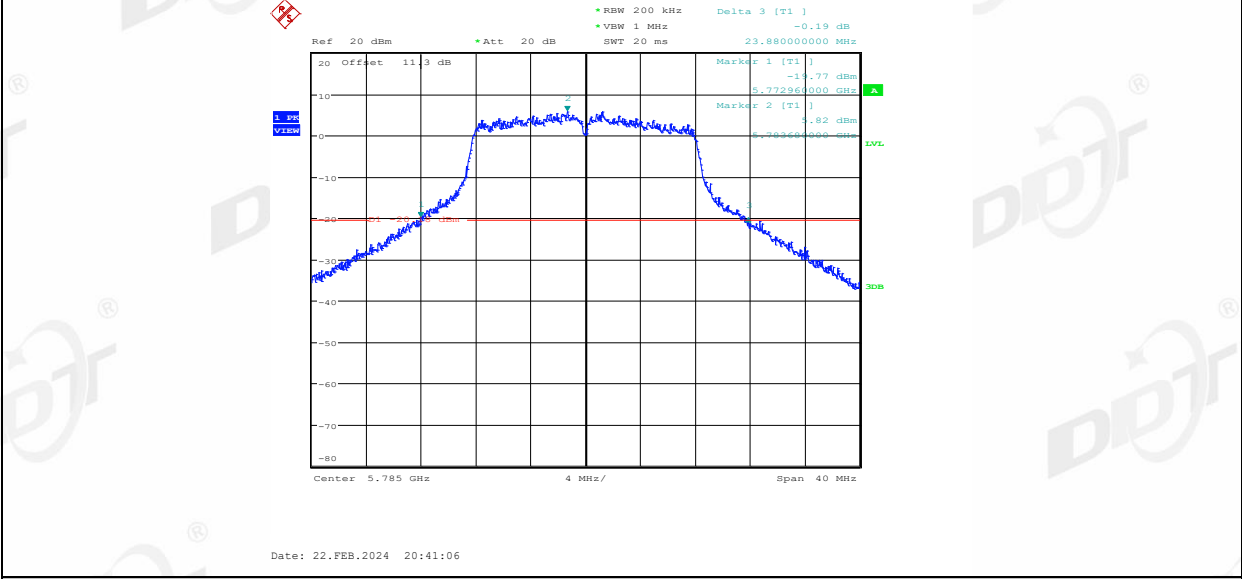
11A Ant1 5720



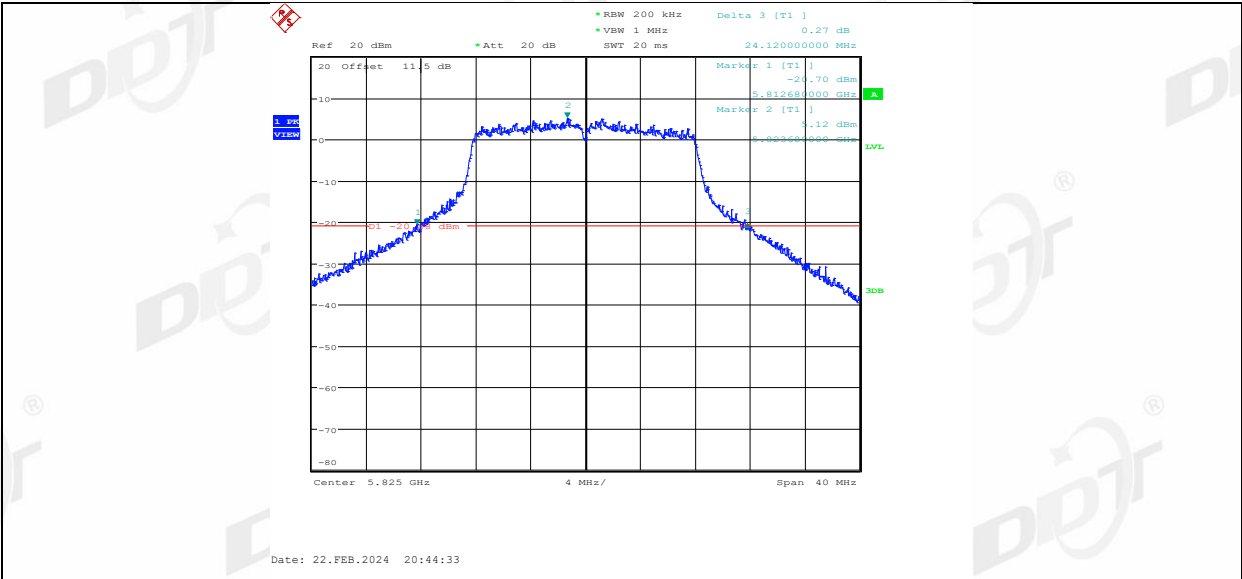
11A Ant1 5745



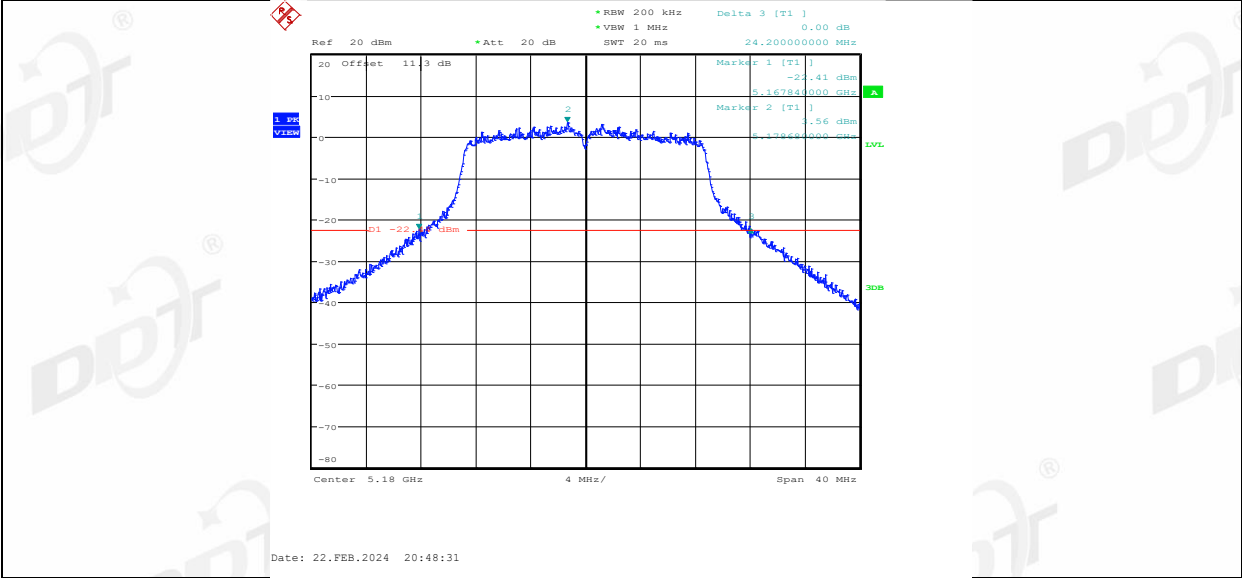
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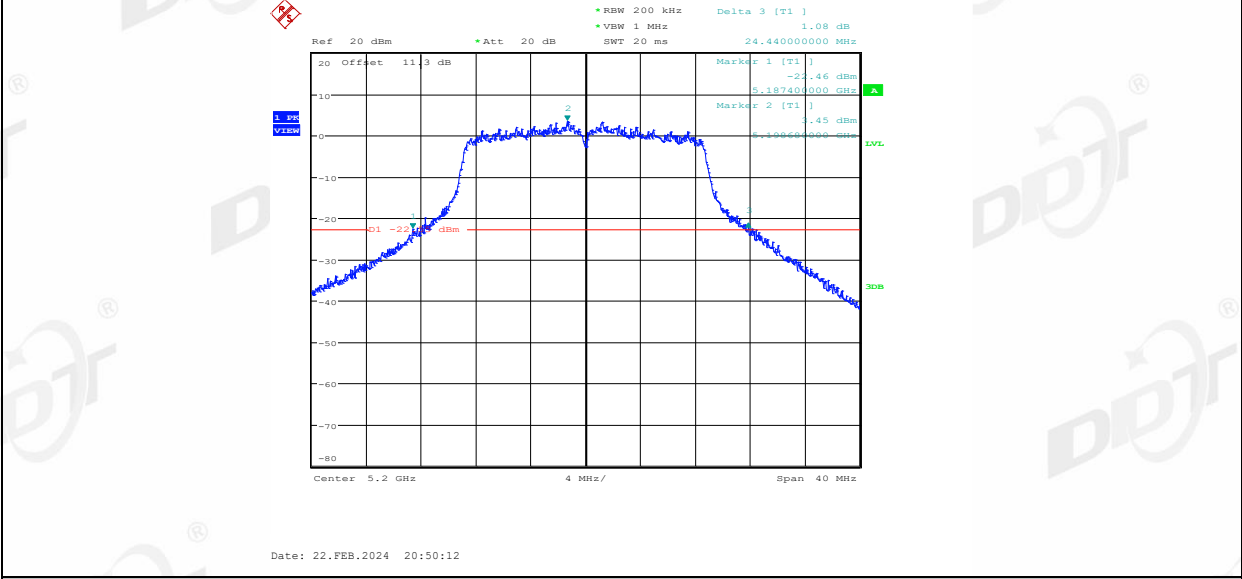
11A Ant1 5825



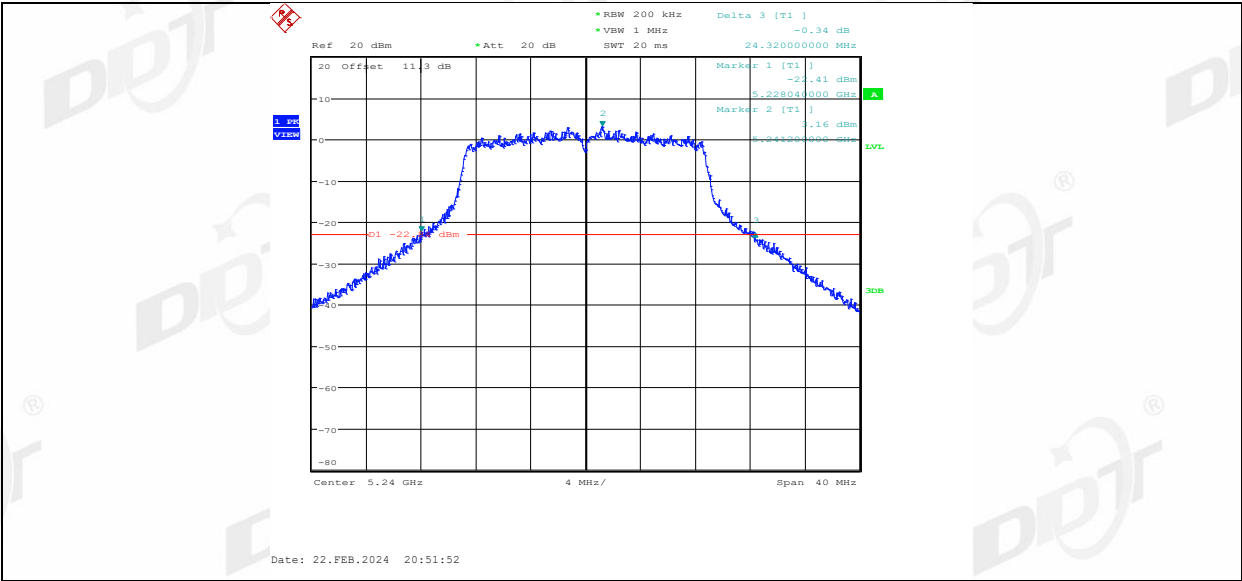
11N20SISO Ant1 5180



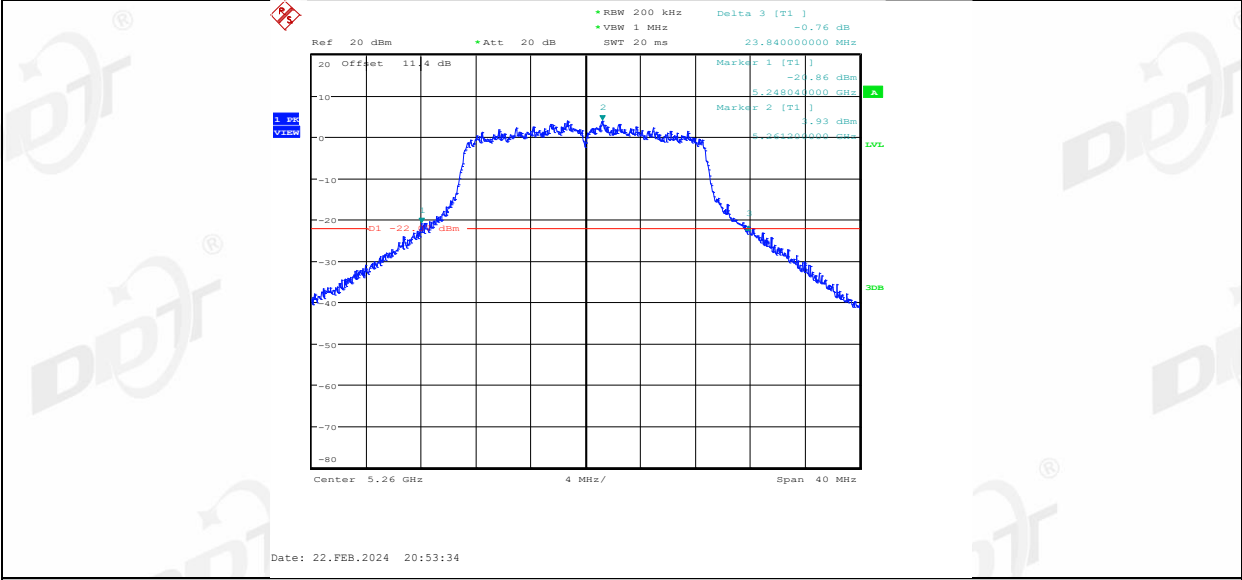
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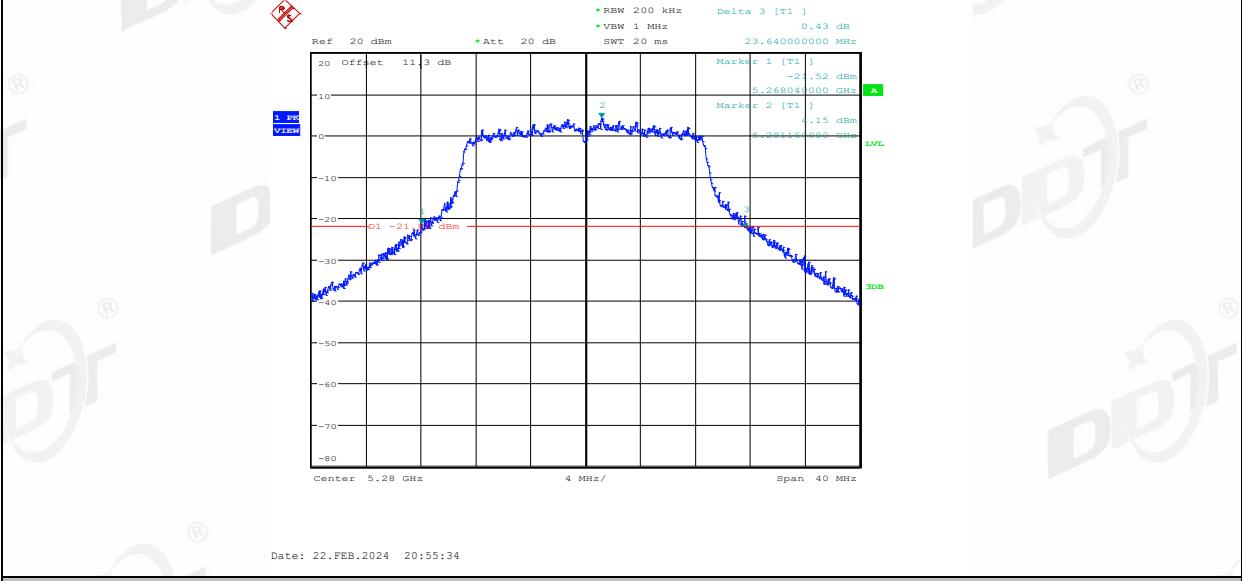
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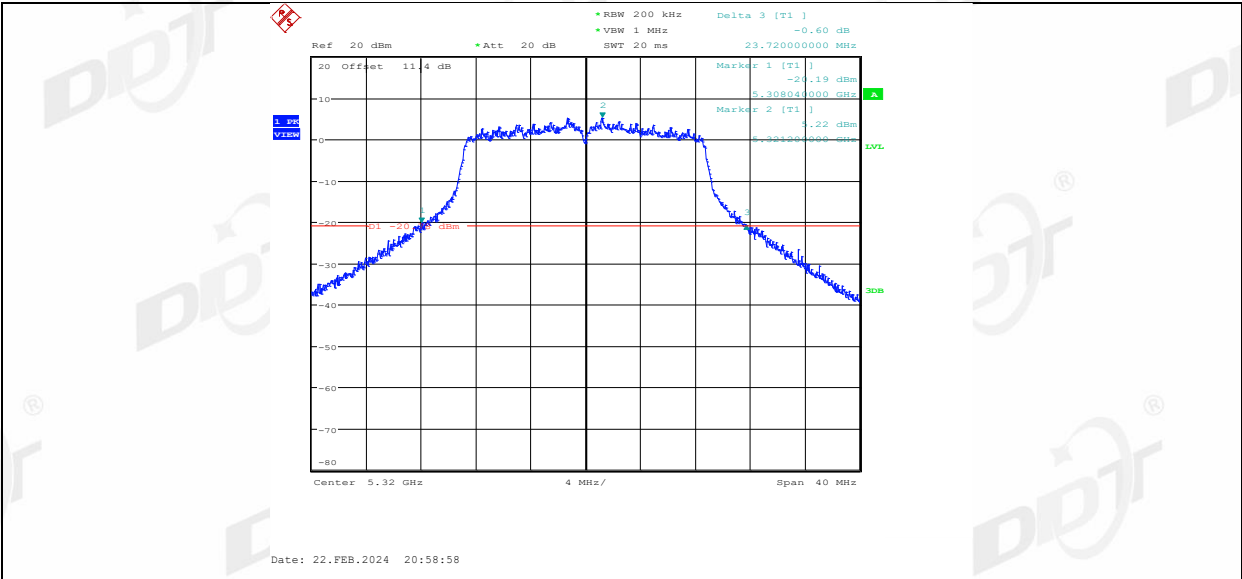
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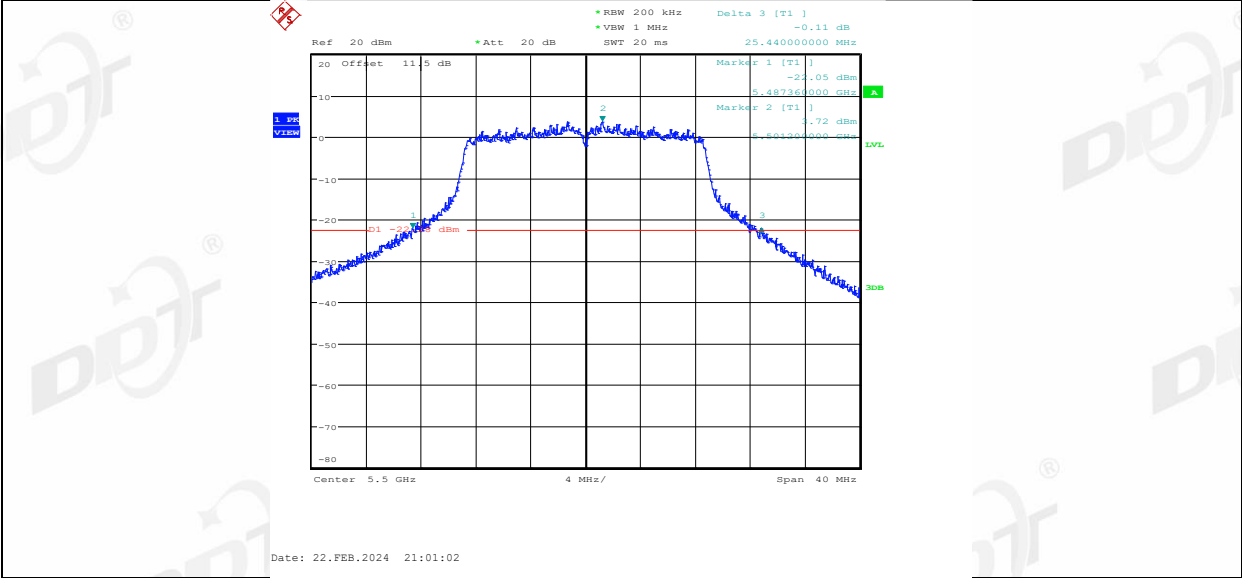
11N20SISO Ant1 5280



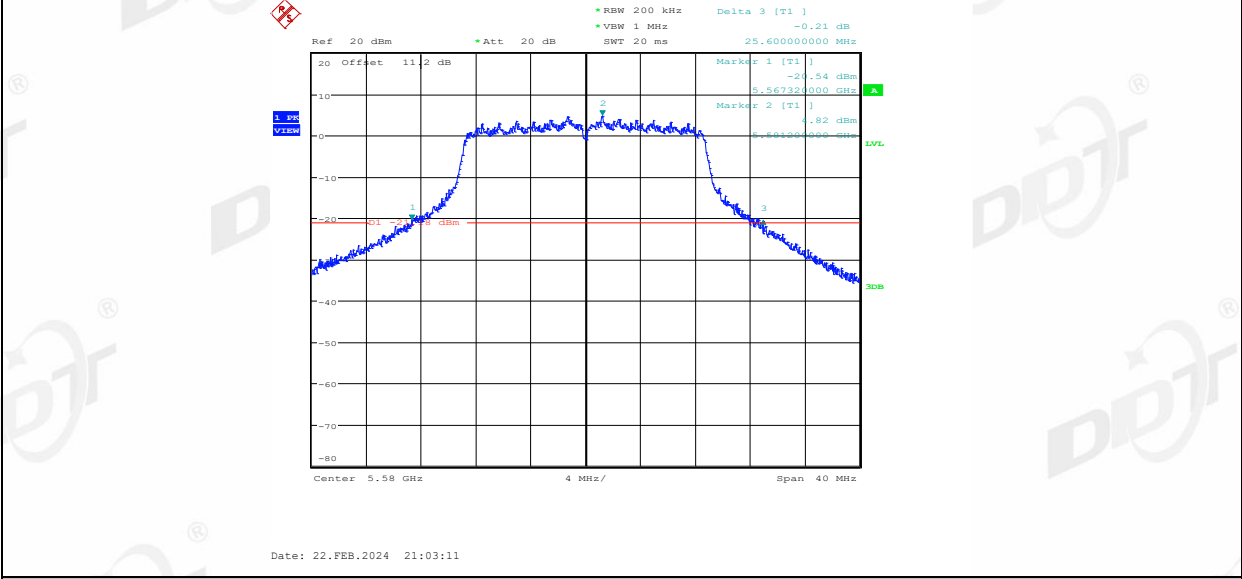
11N20SISO Ant1 5320



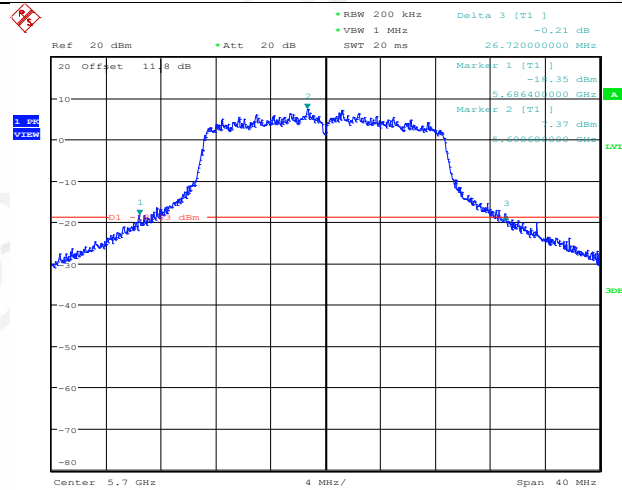
11N20SISO Ant1 5500



11N20SISO Ant1 5580

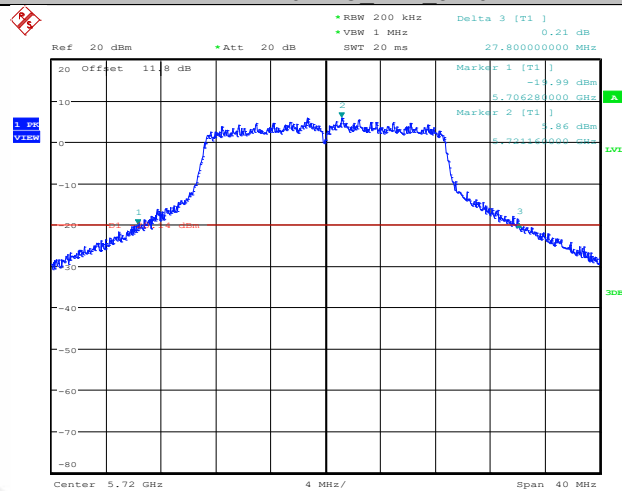


11N20SISO Ant1 5700



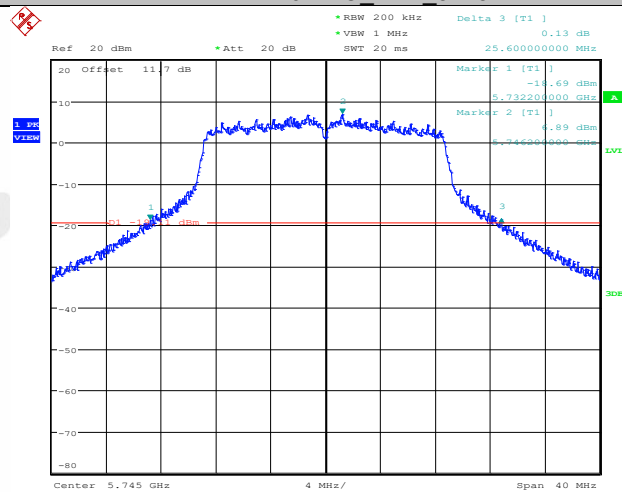
Date: 22.FEB.2024 21:04:53

11N20SISO Ant1 5720



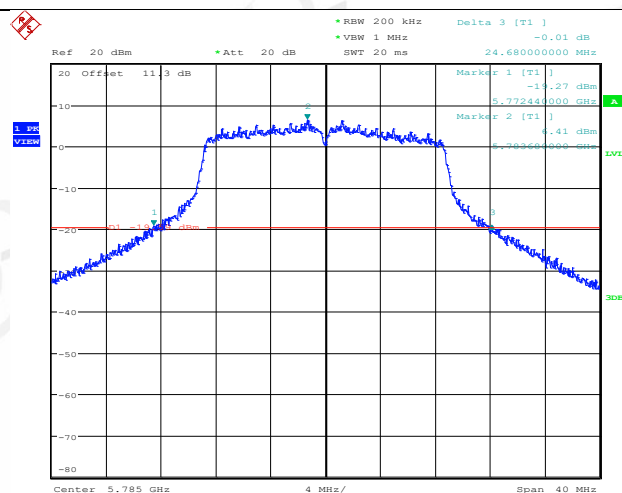
Date: 22.FEB.2024 21:06:53

11N20SISO_Ant1_5745



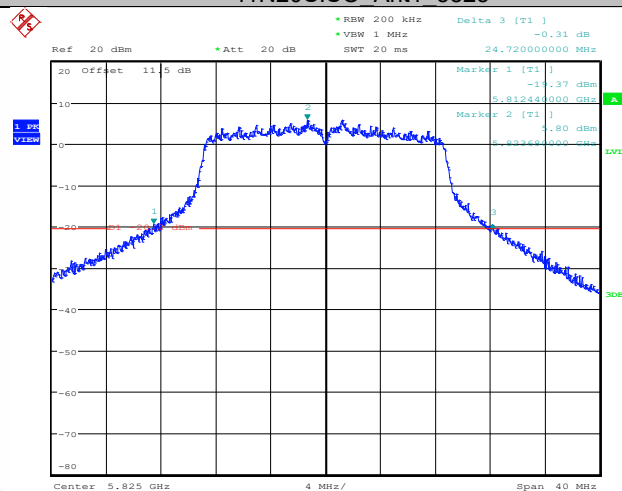
Date: 22.FEB.2024 21:09:46

11N20SISO Ant1 5785



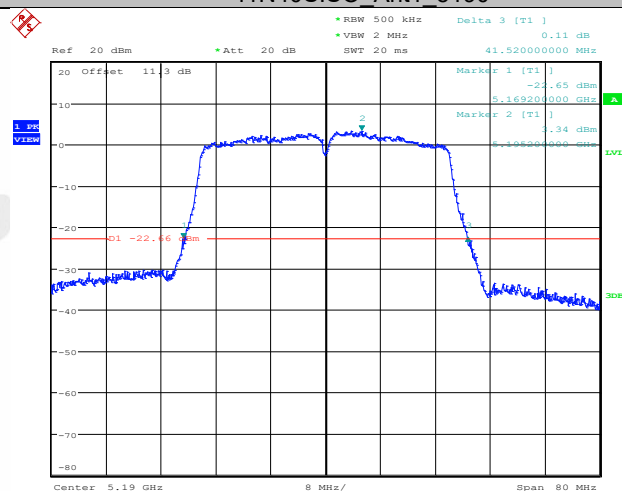
Date: 22.FEB.2024 21:11:52

11N20SISO Ant1 5825



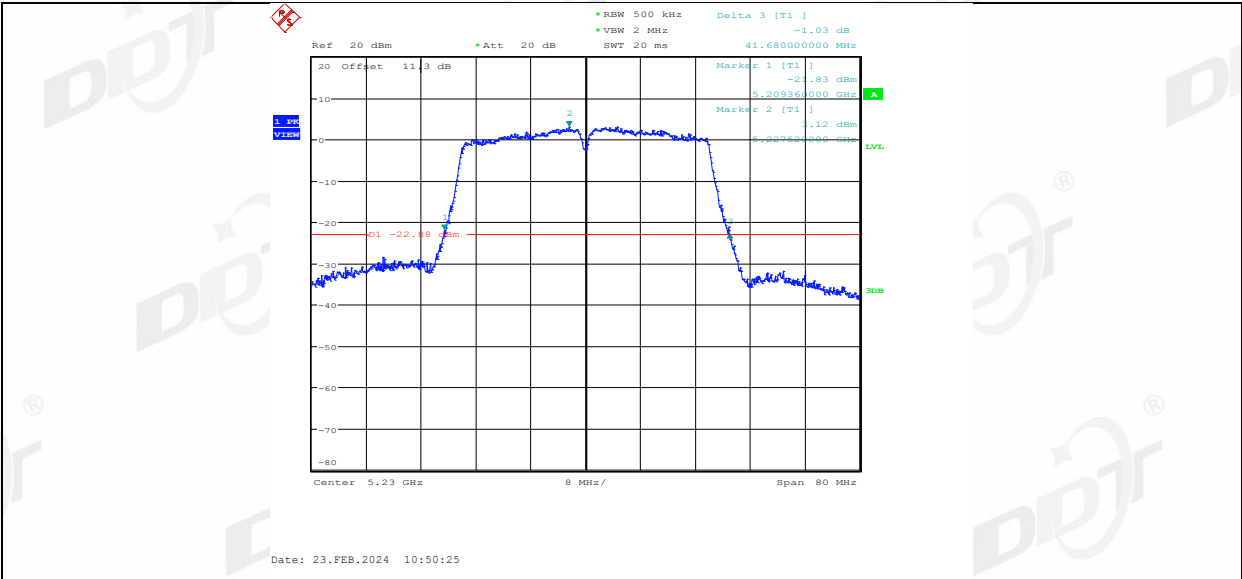
Date: 22.FEB.2024 21:14:15

11N40SISO Ant1 5190

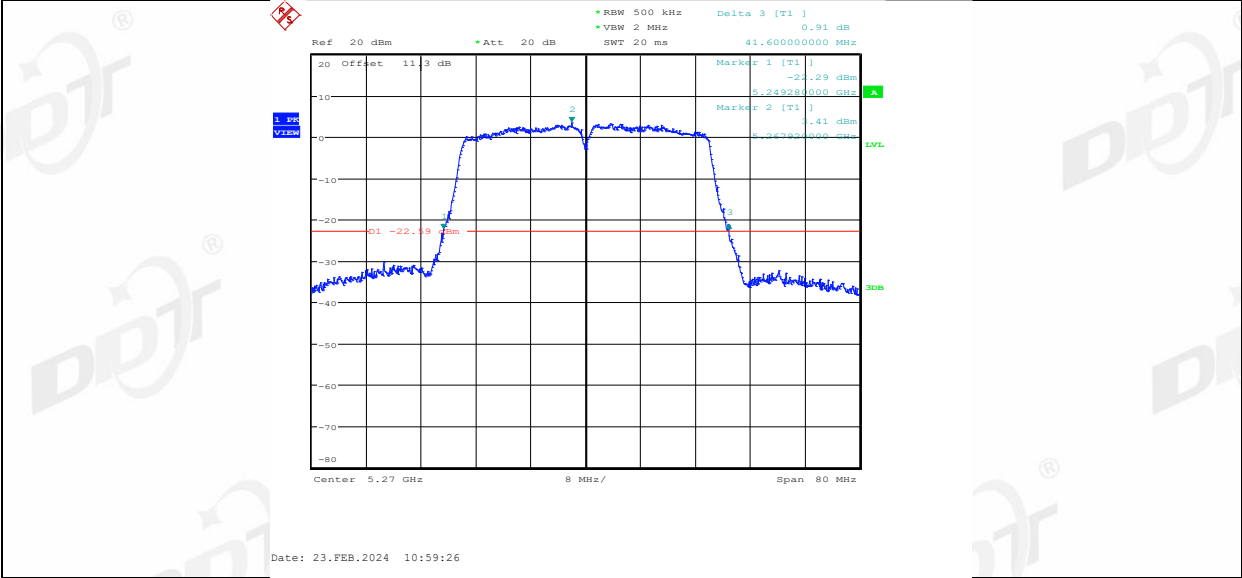


Date: 23.FEB.2024 10:47:08

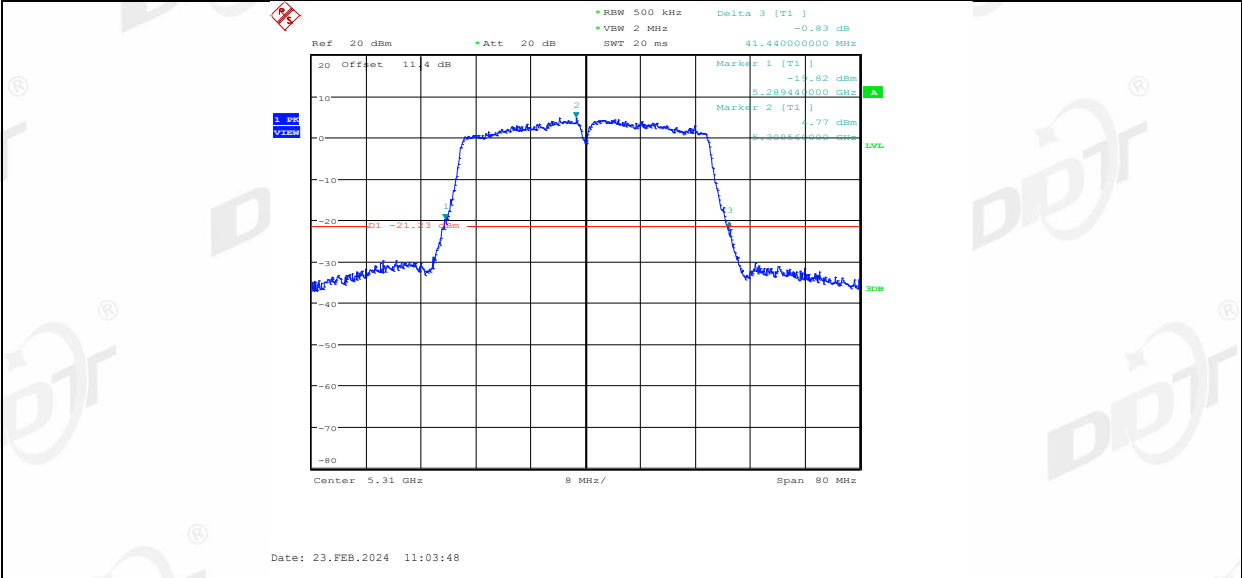
11N40SISO Ant1 5230



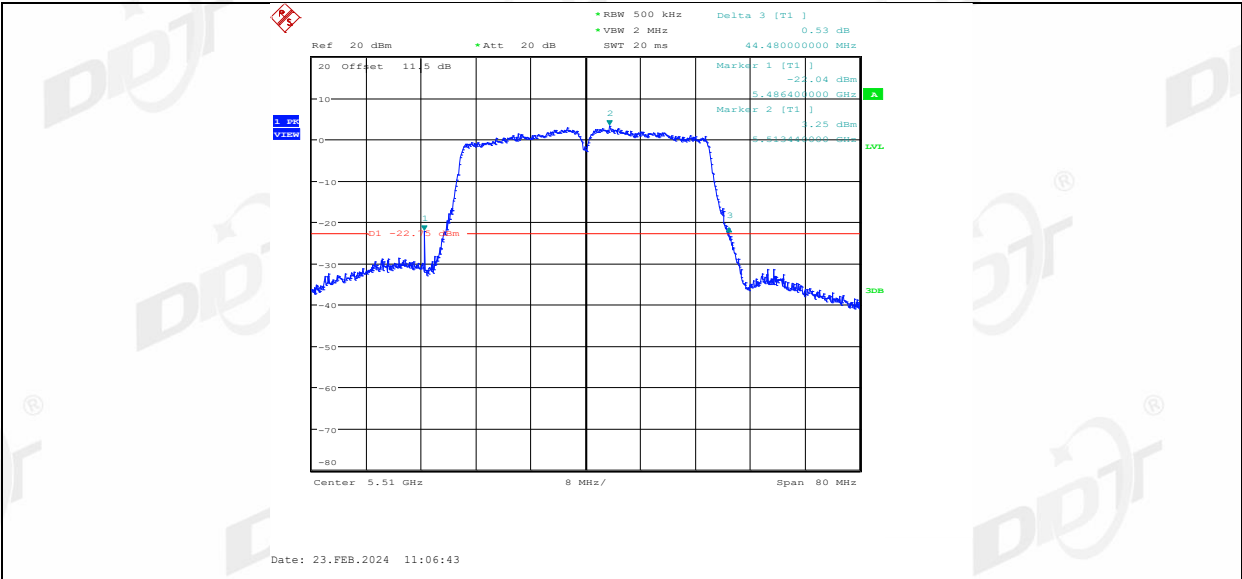
11N40SISO Ant1 5270



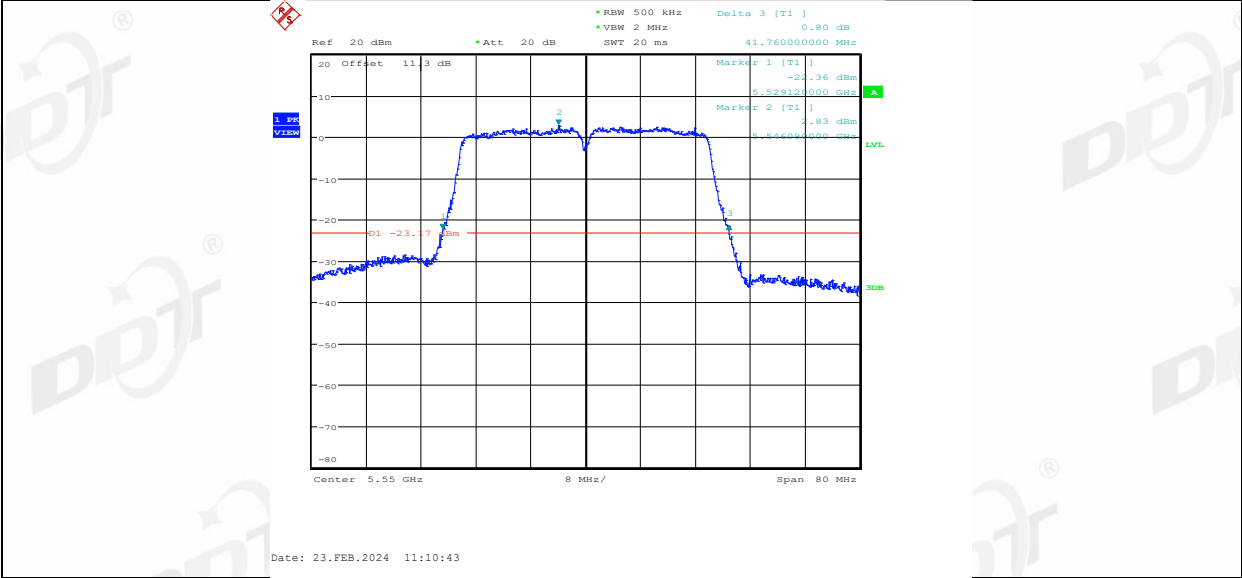
11N40SISO Ant1 5310



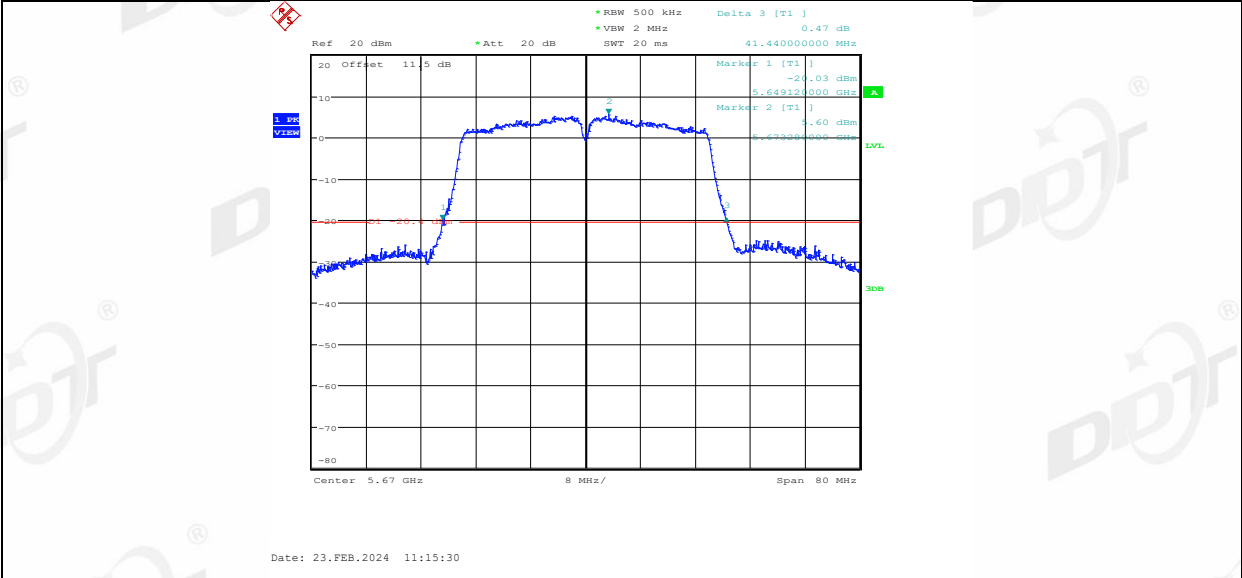
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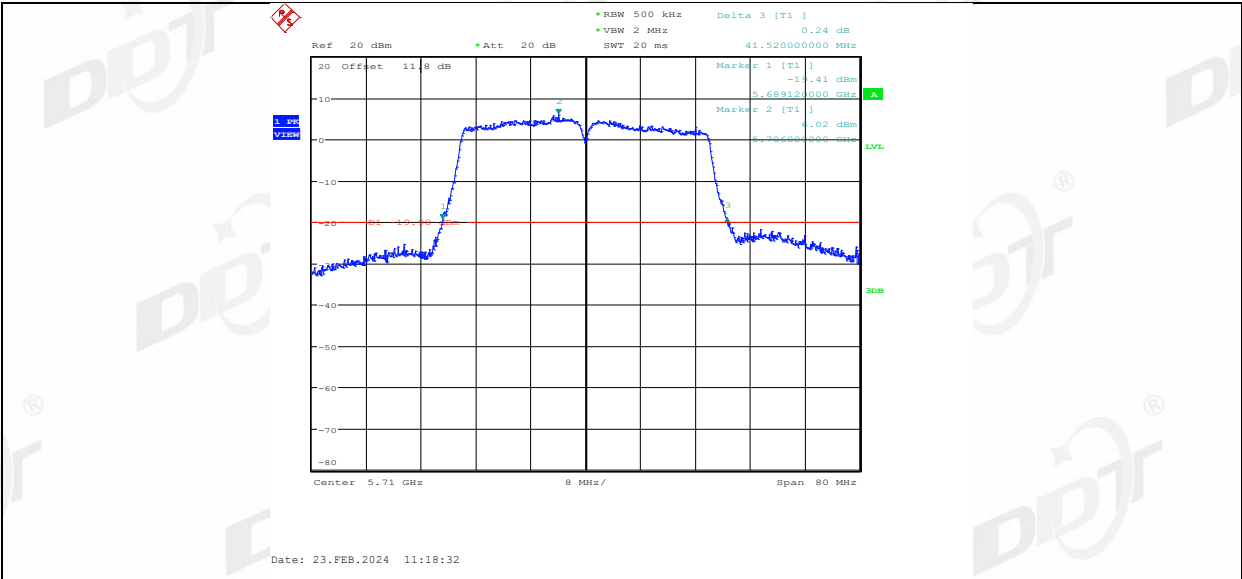
11N40SISO Ant1 5550



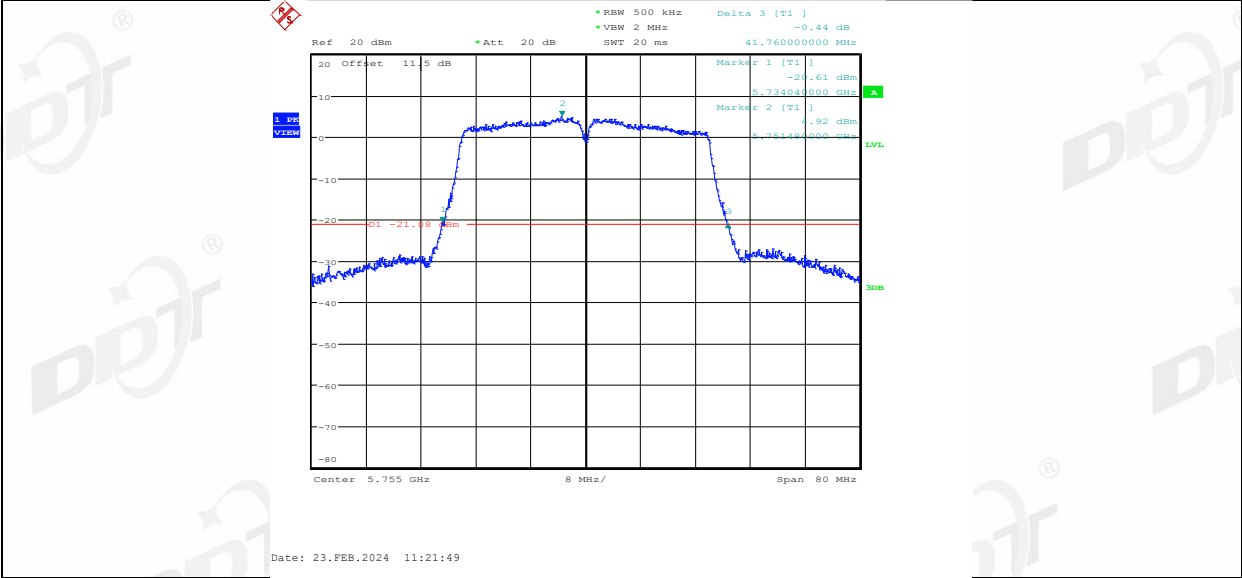
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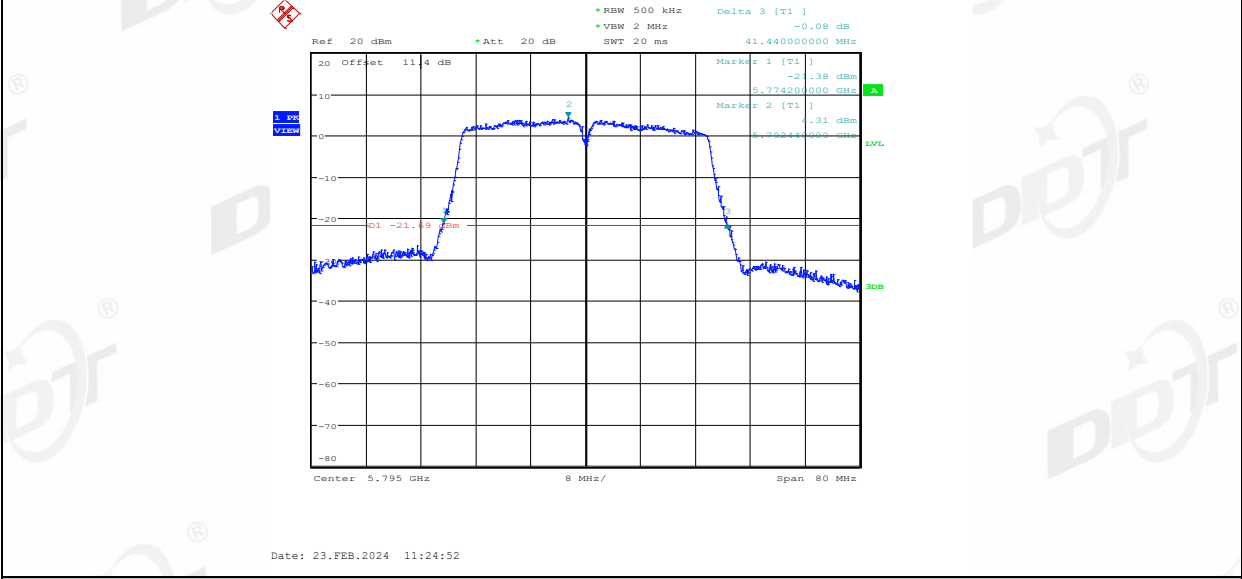
11N40SISO Ant1 5710



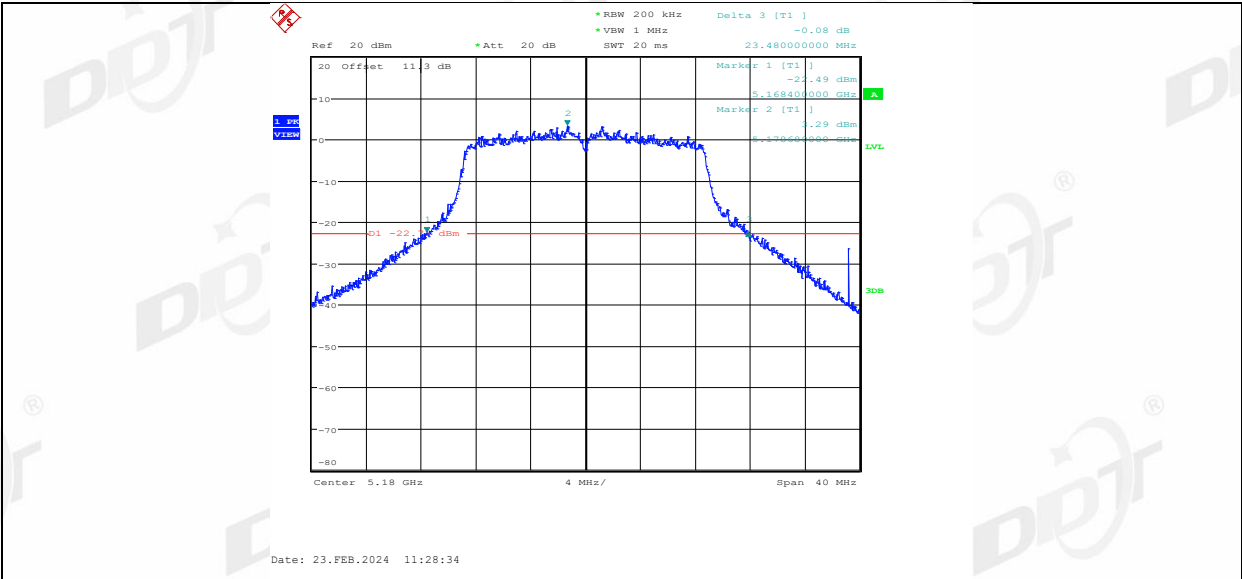
11N40SISO Ant1 5755



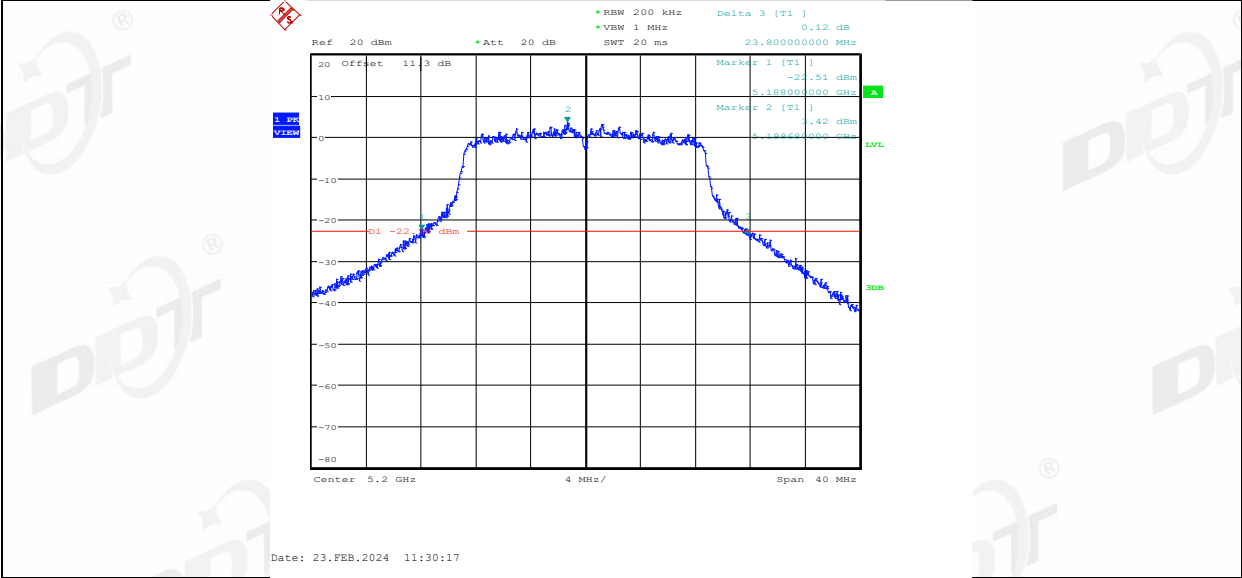
11N40SISO Ant1 5795



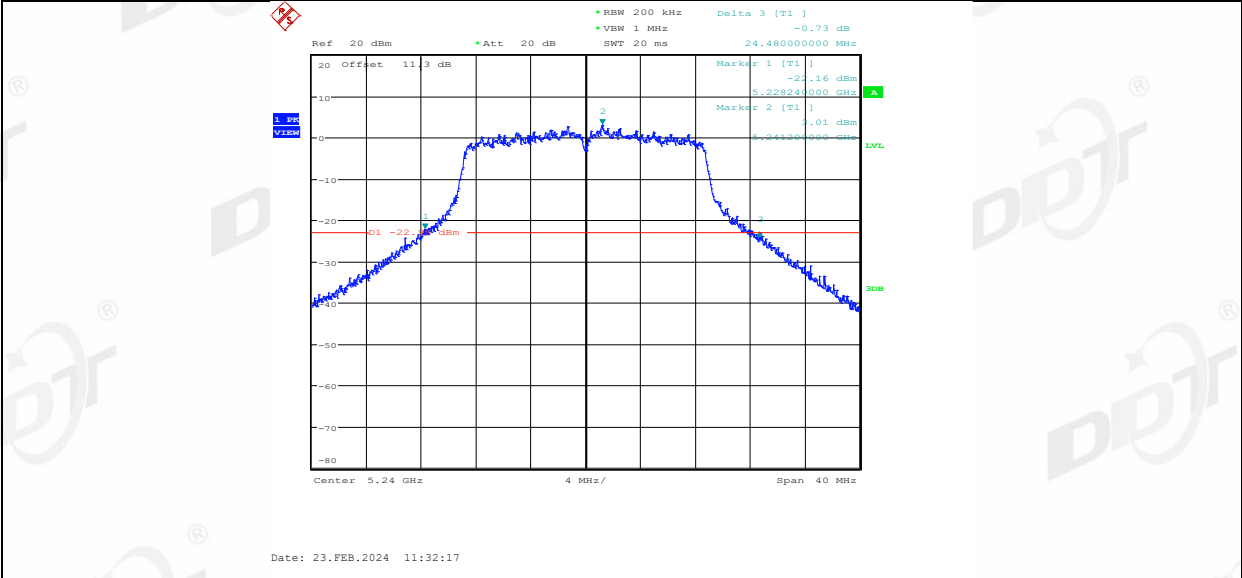
11AC20SISO Ant1 5180



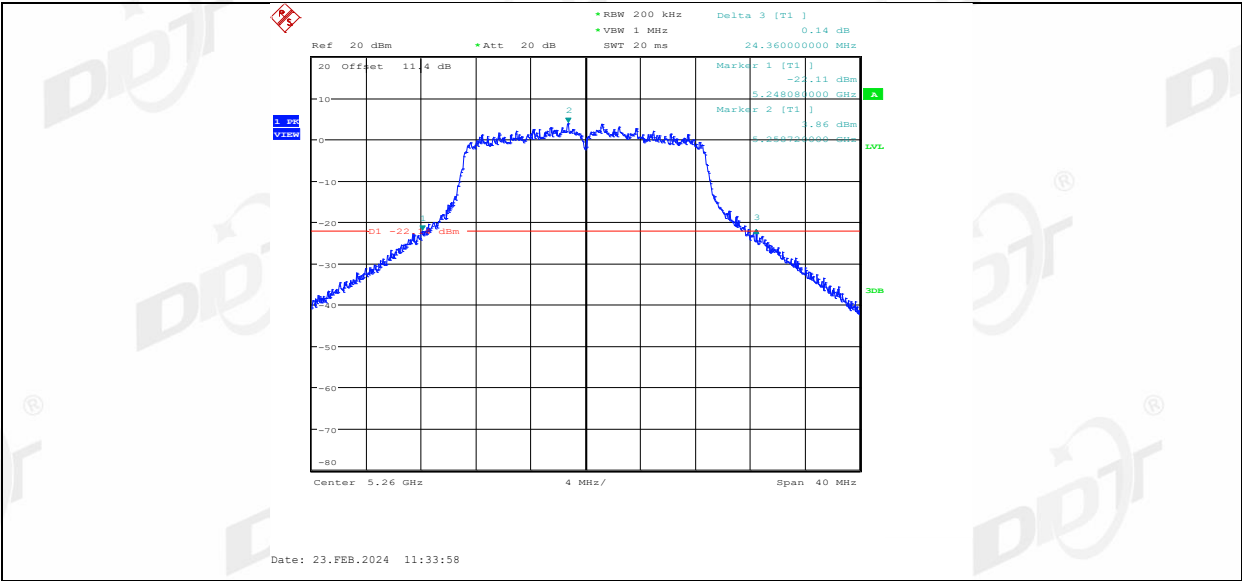
11AC20SISO_Ant1_5200



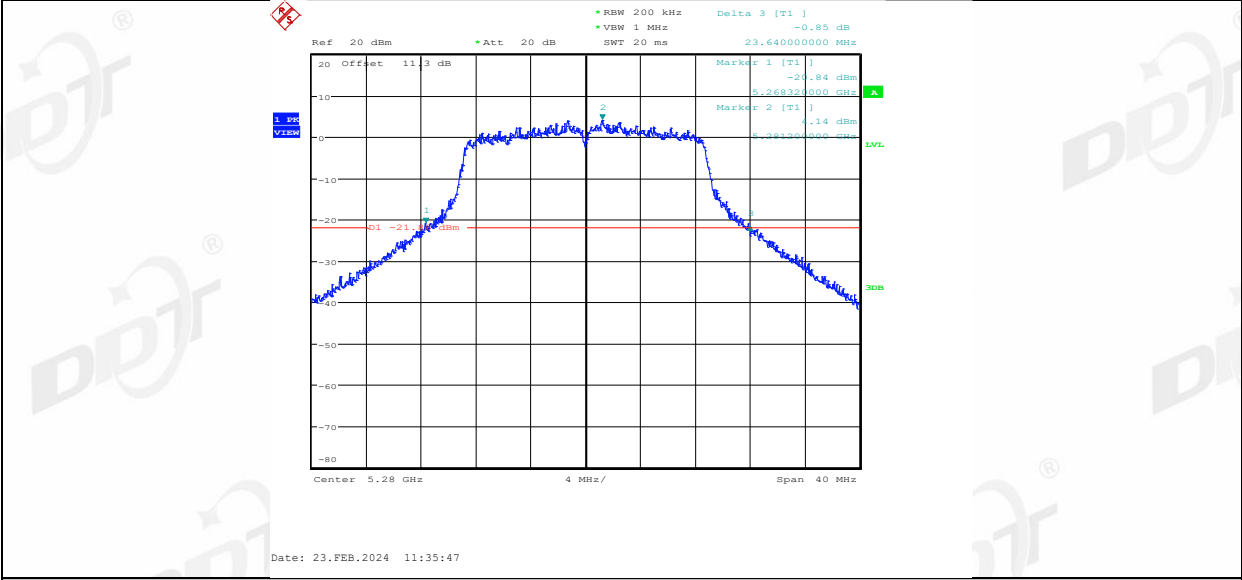
11AC20SISO_Ant1_5240



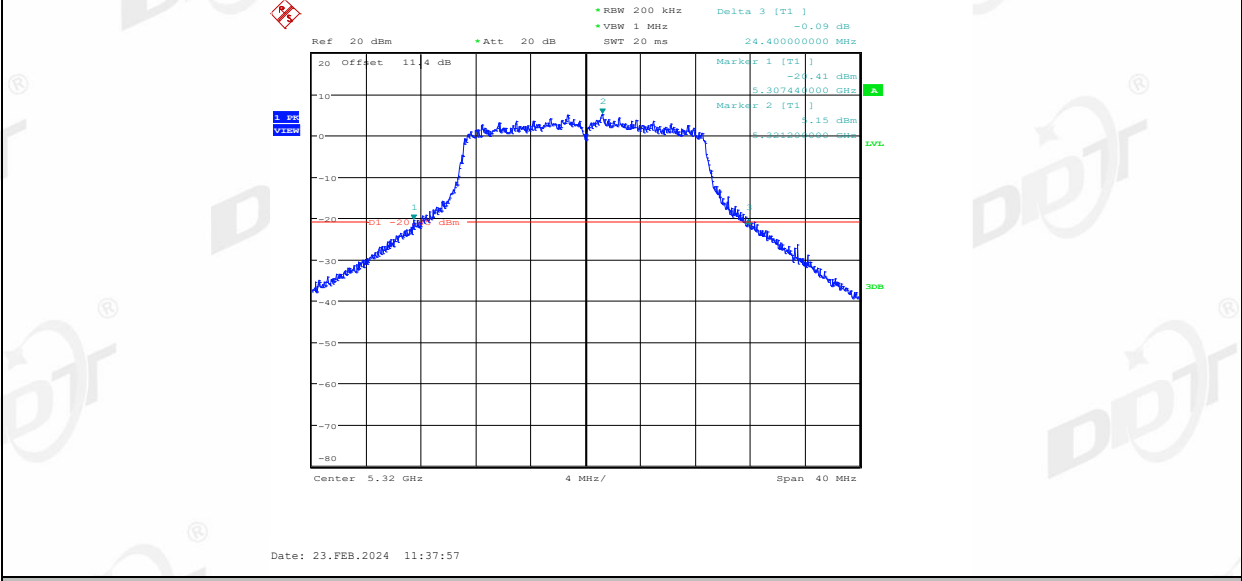
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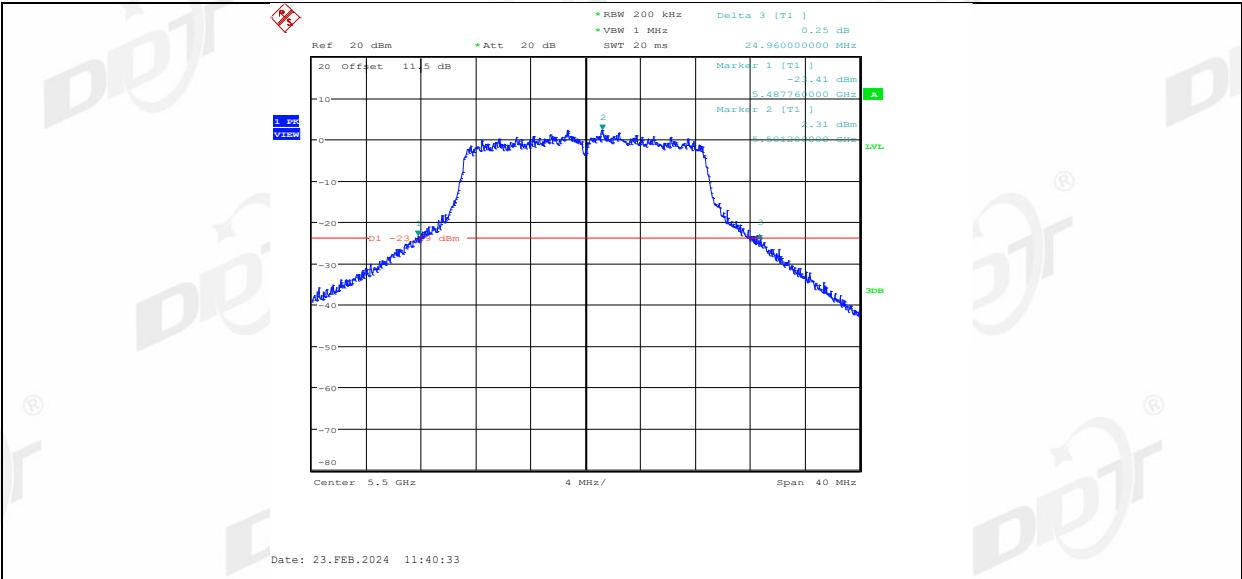
11AC20SISO_Ant1_5280



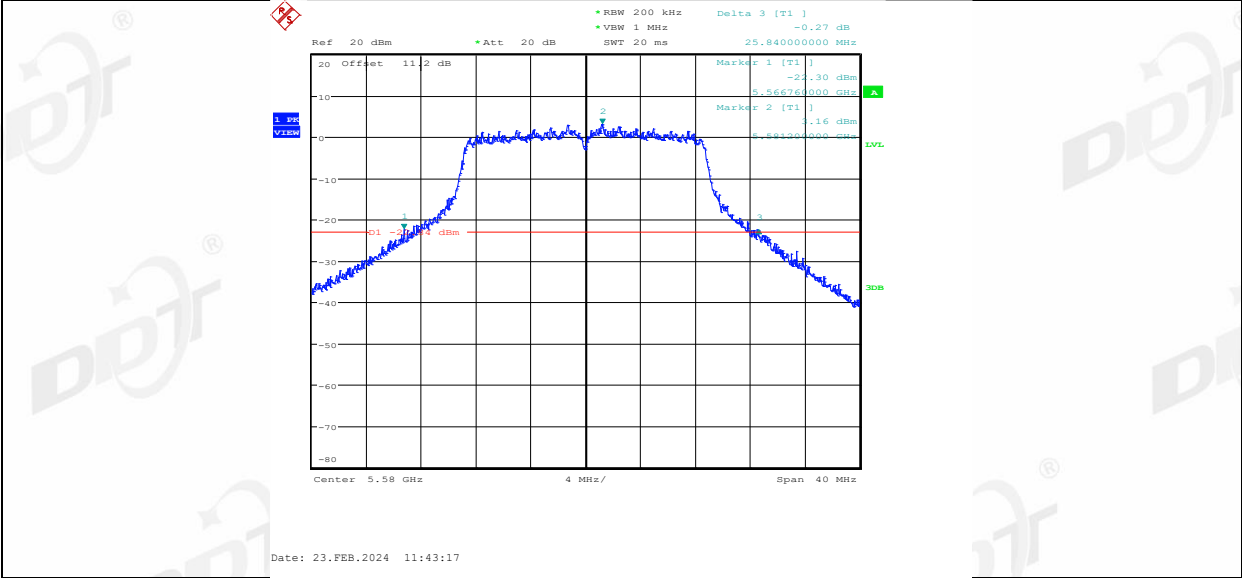
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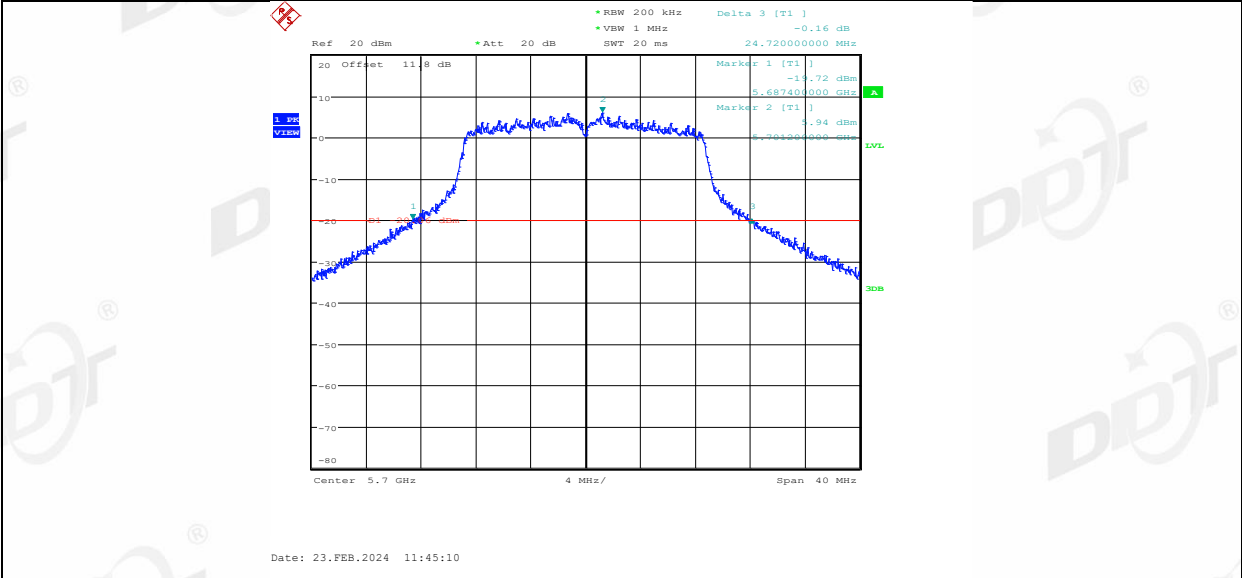
11AC20SISO_Ant1_5500



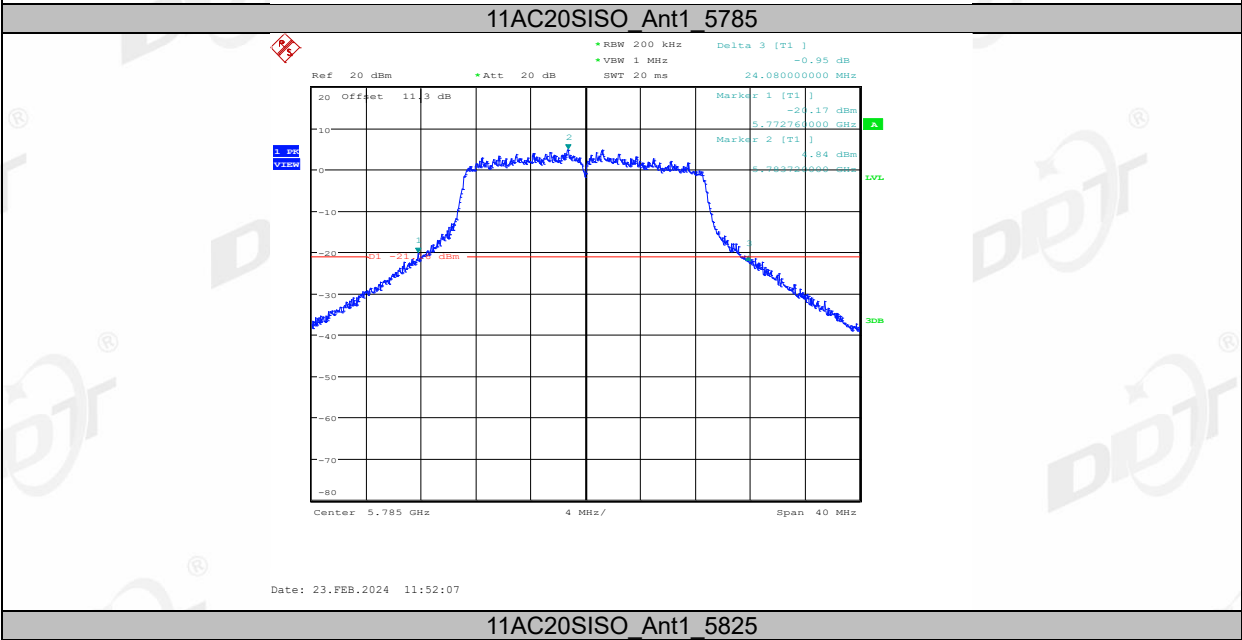
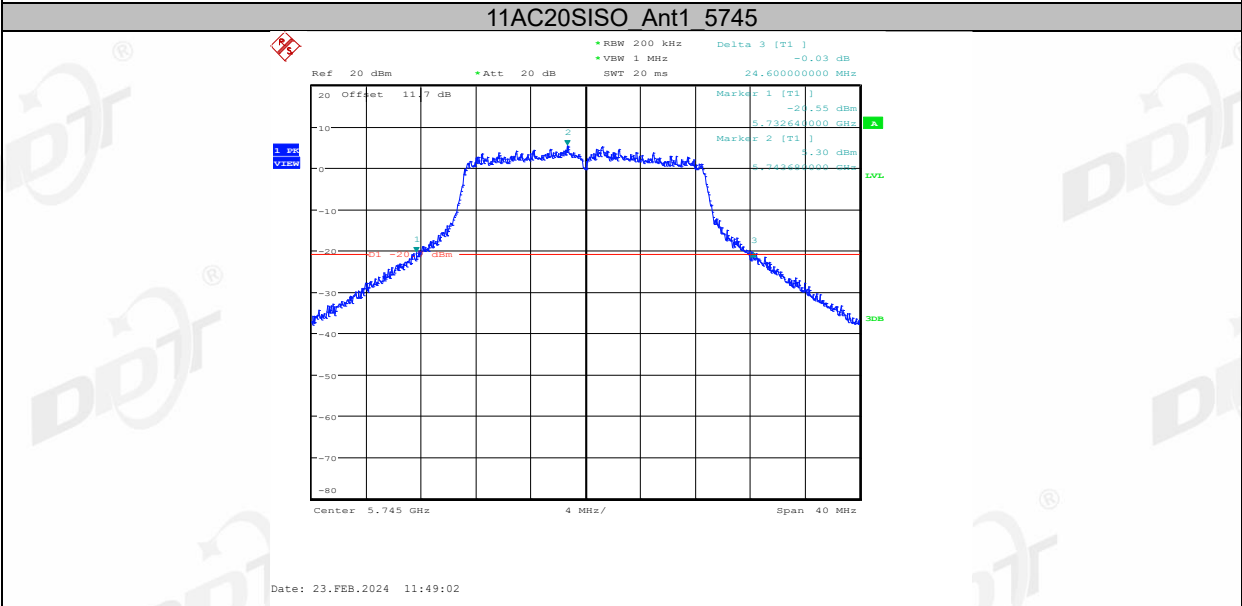
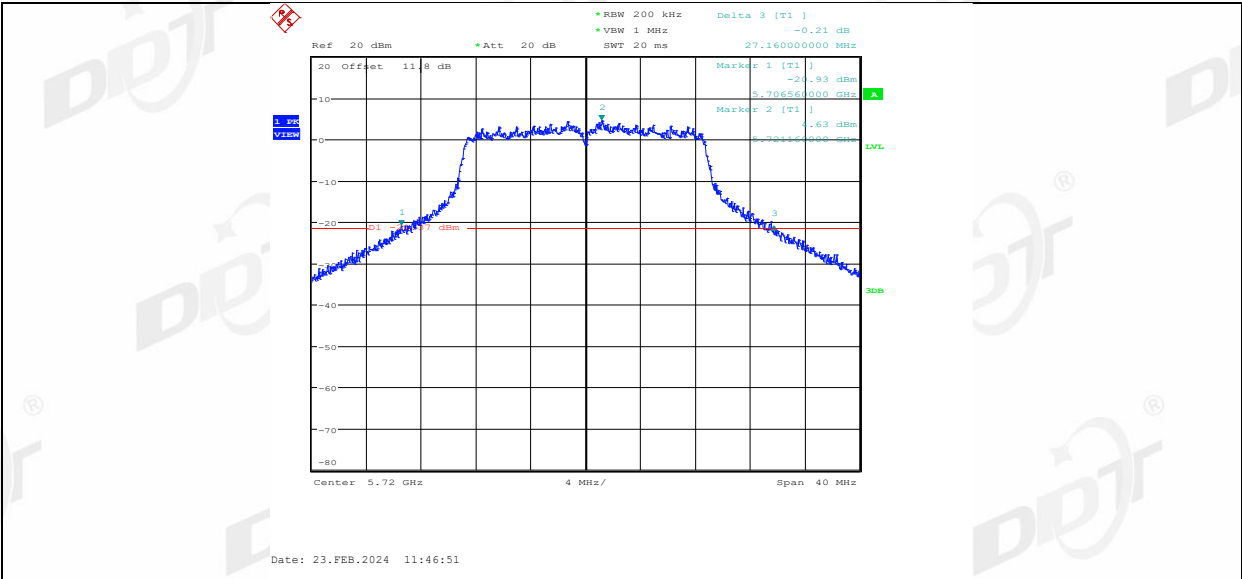
11AC20SISO Ant1 5580

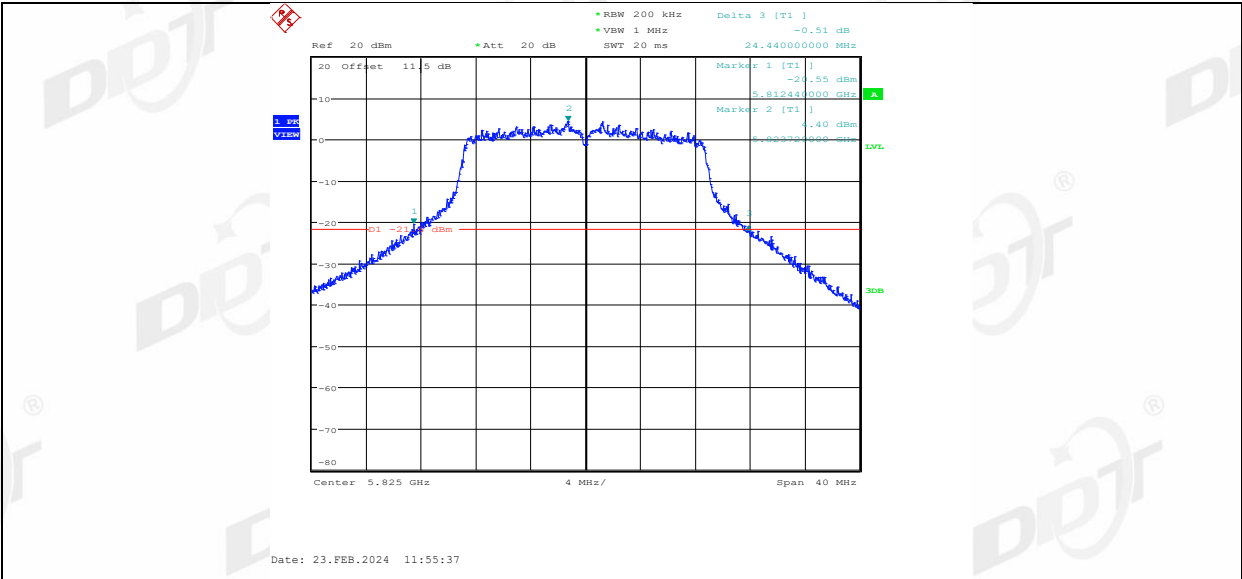


11AC20SISO Ant1 5700

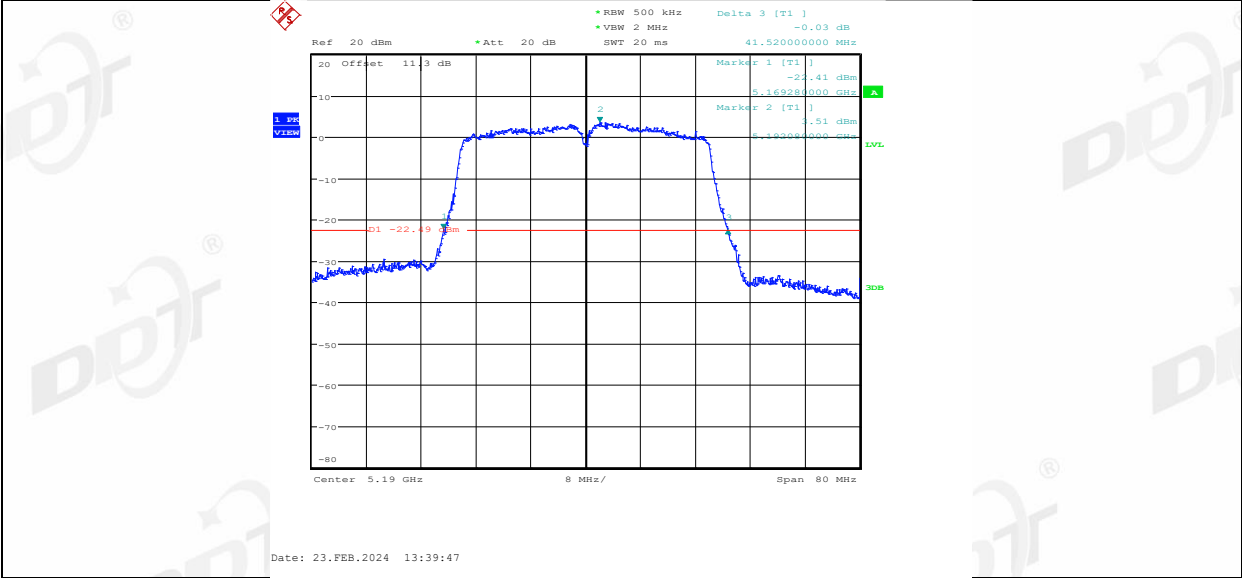


11AC20SISO Ant1 5720

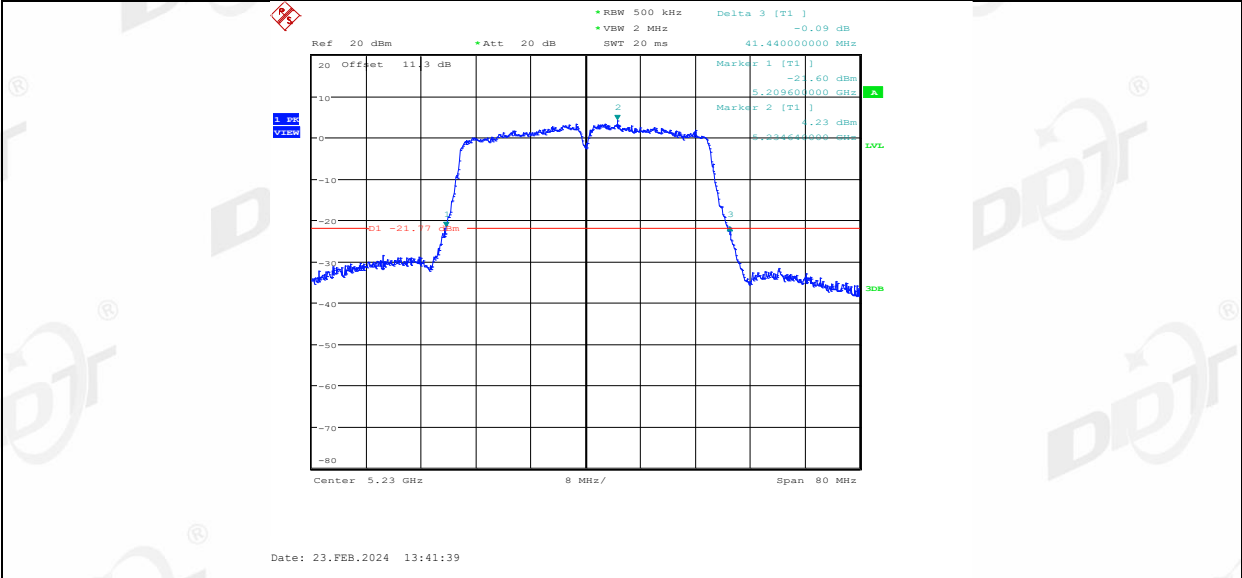




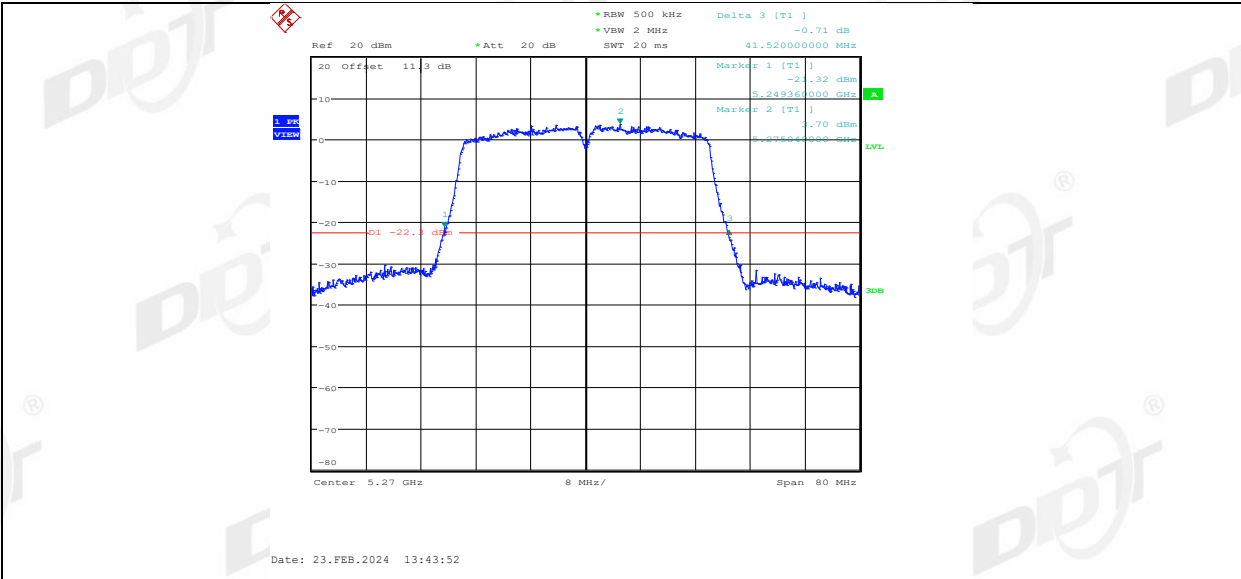
11AC40SISO_Ant1_5190



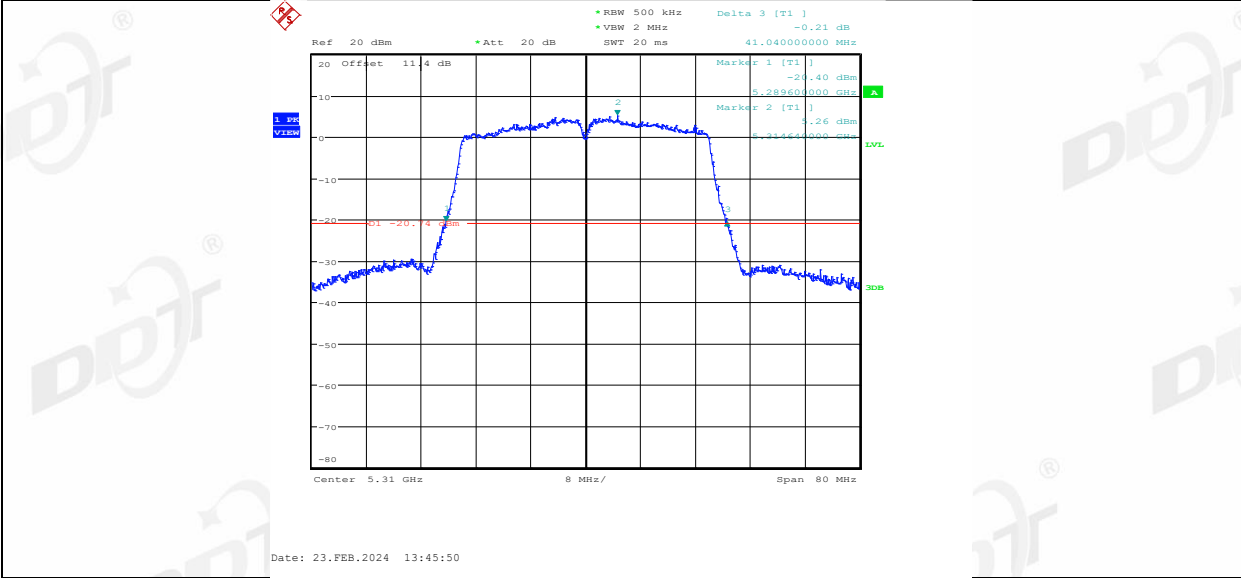
11AC40SISO_Ant1_5230



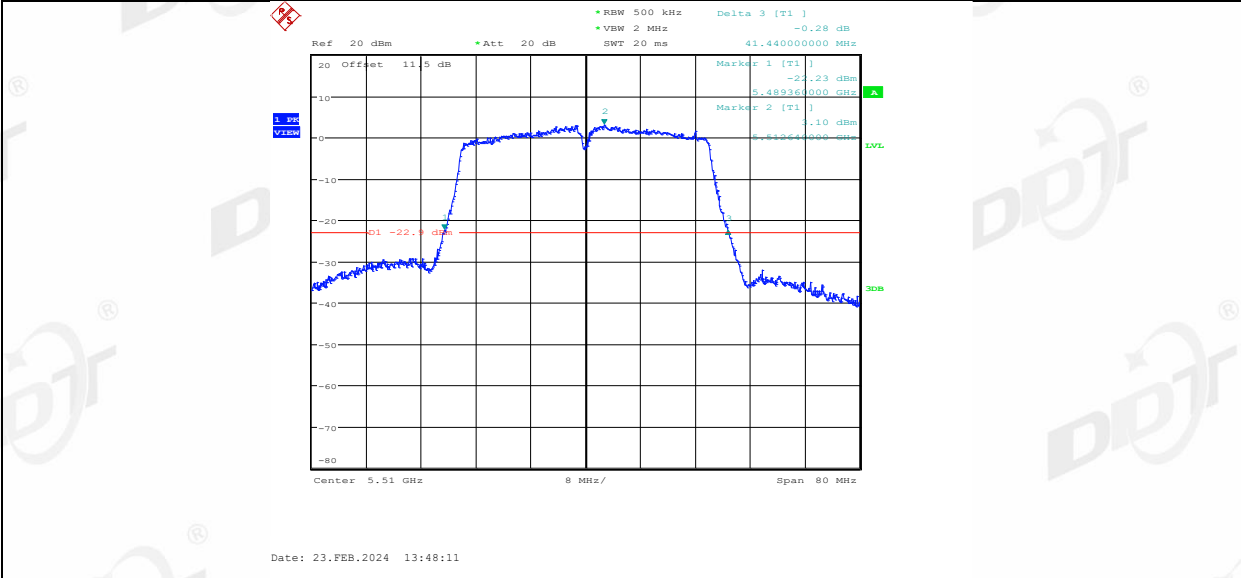
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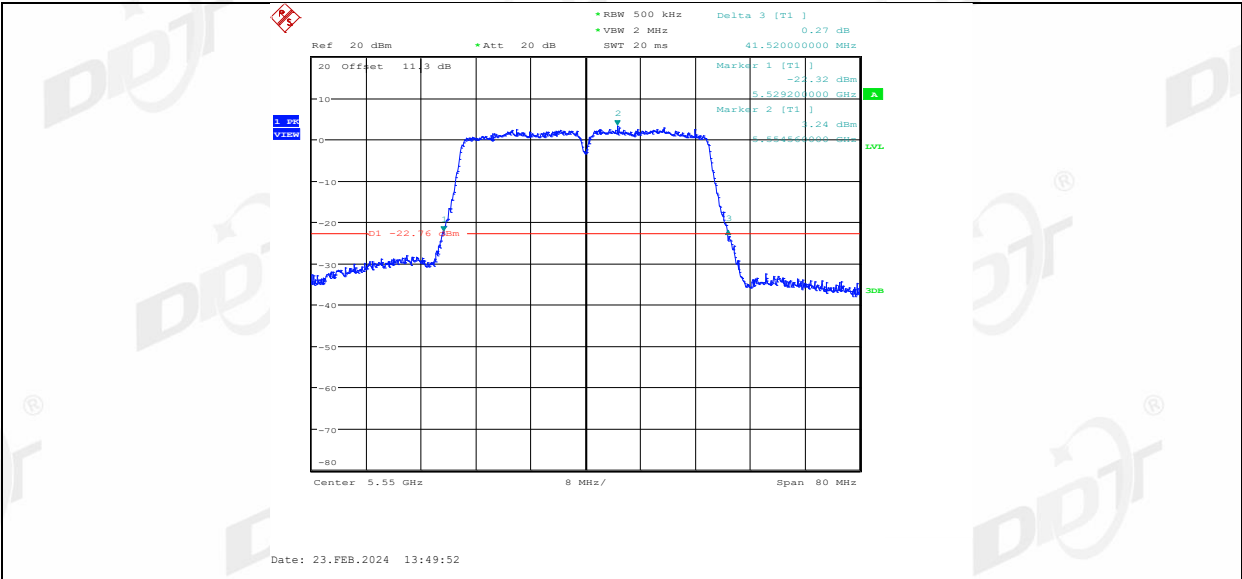
11AC40SISO Ant1 5310



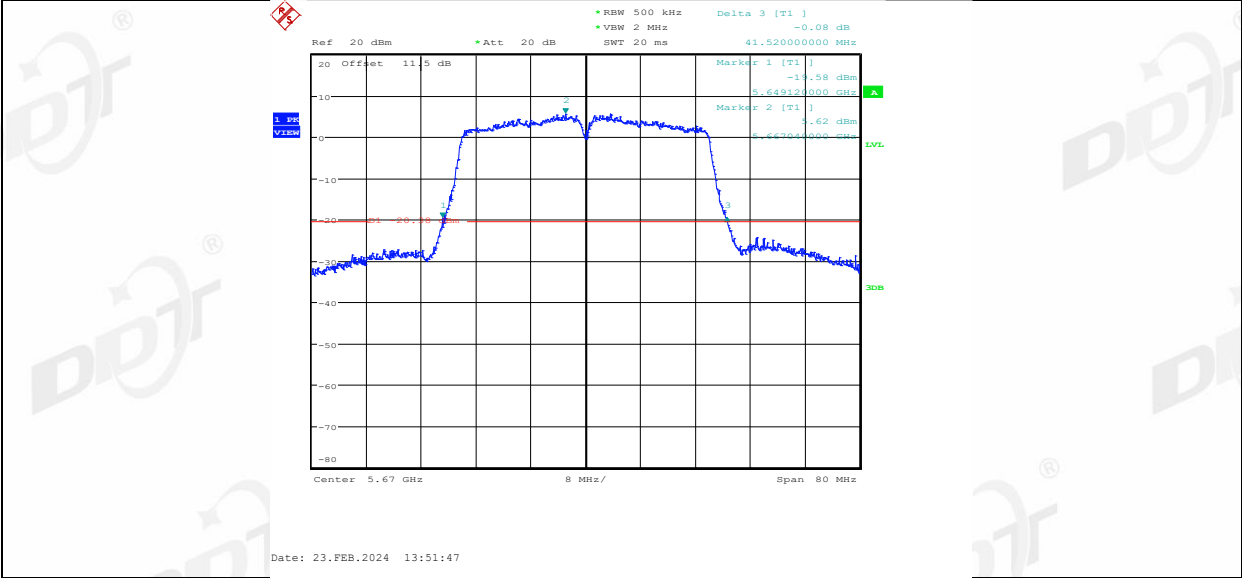
11AC40SISO Ant1 5510



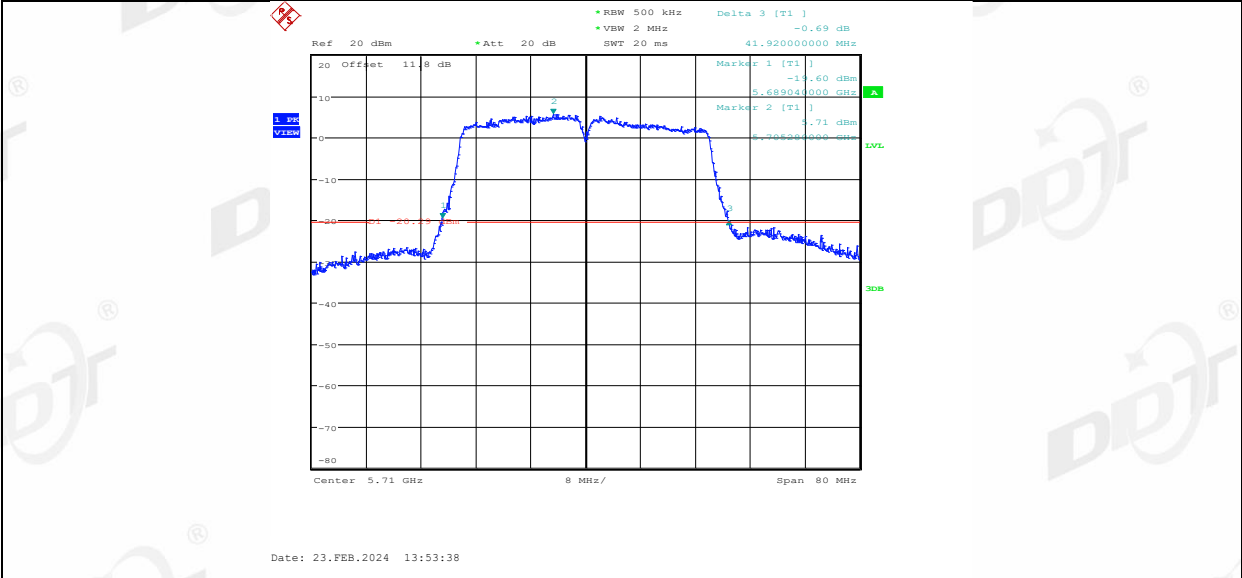
11AC40SISO Ant1 5550



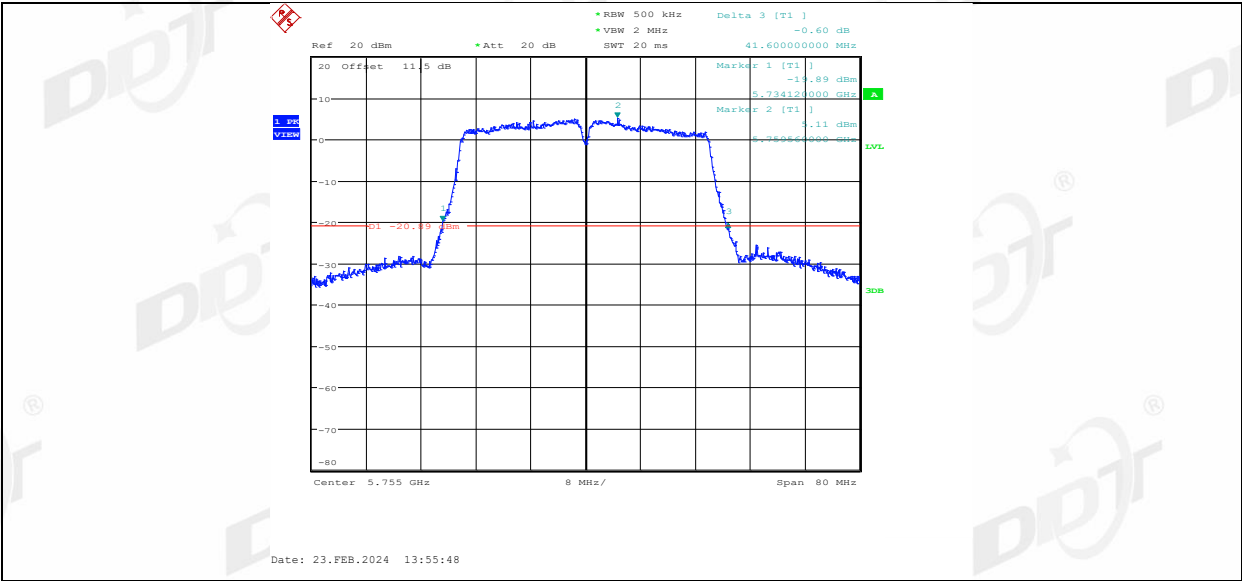
11AC40SISO_Ant1_5670



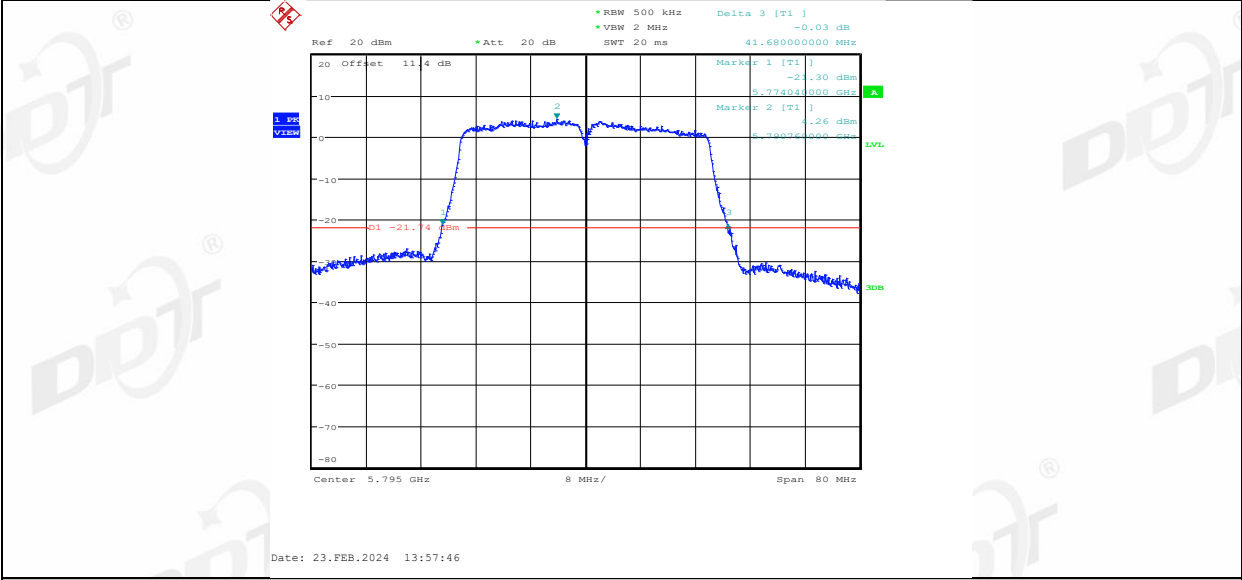
11AC40SISO_Ant1_5710



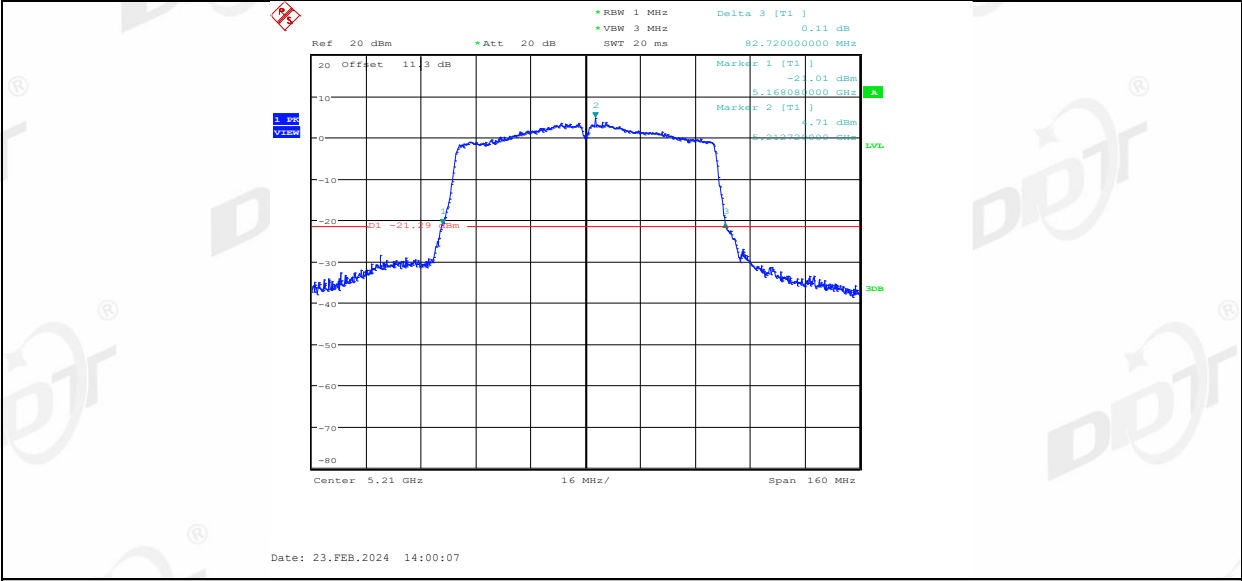
11AC40SISO_Ant1_5755



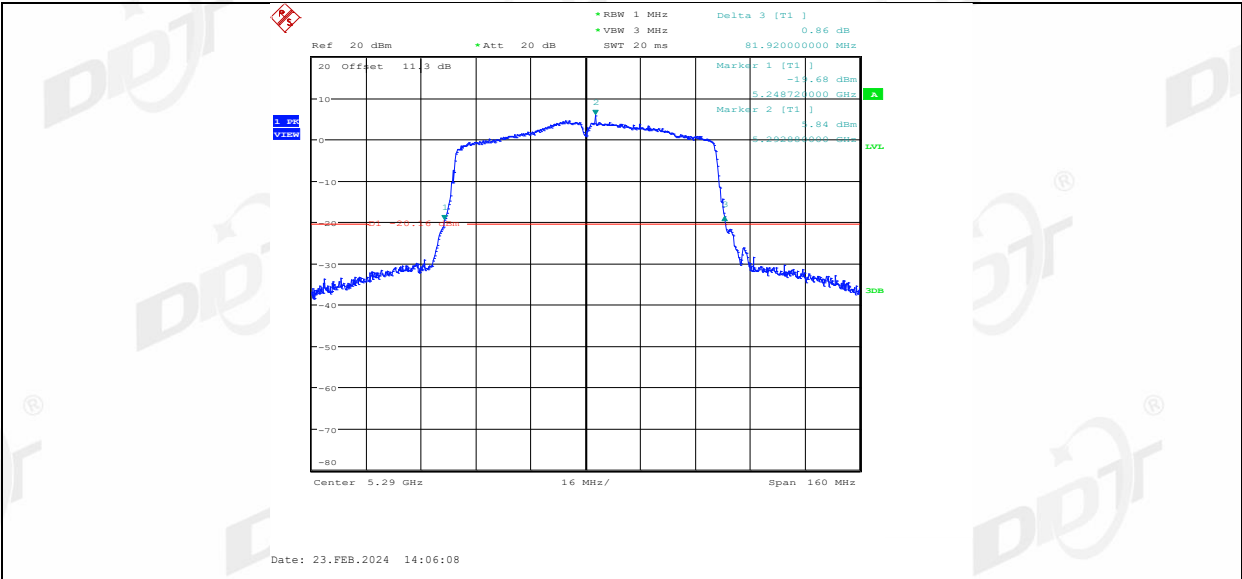
11AC40SISO Ant1 5795



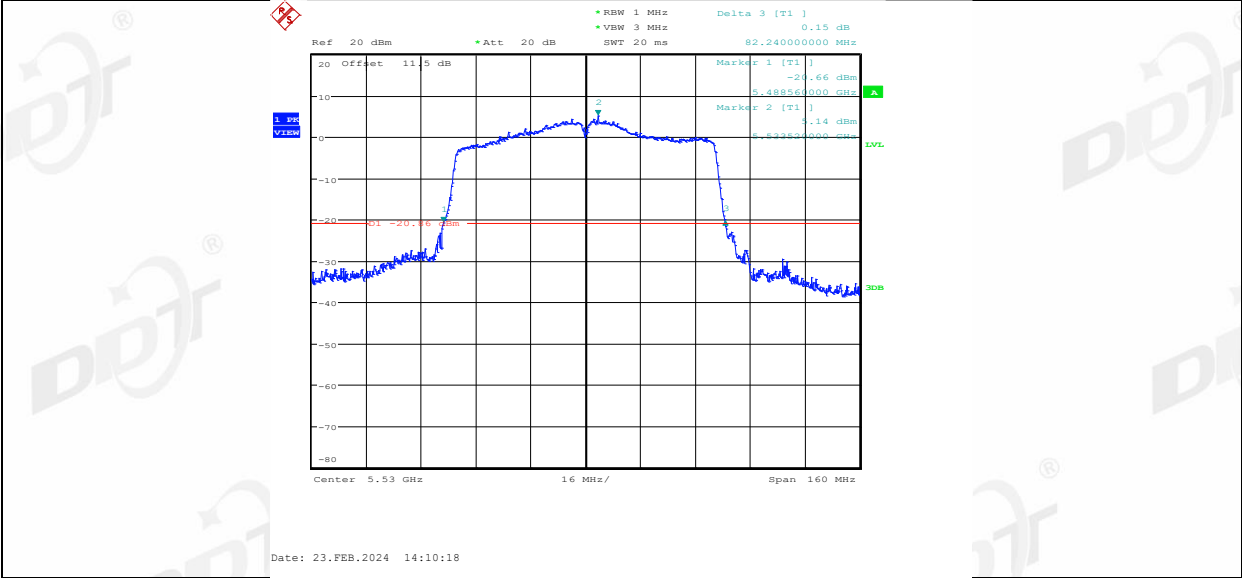
11AC80SISO Ant1 5210



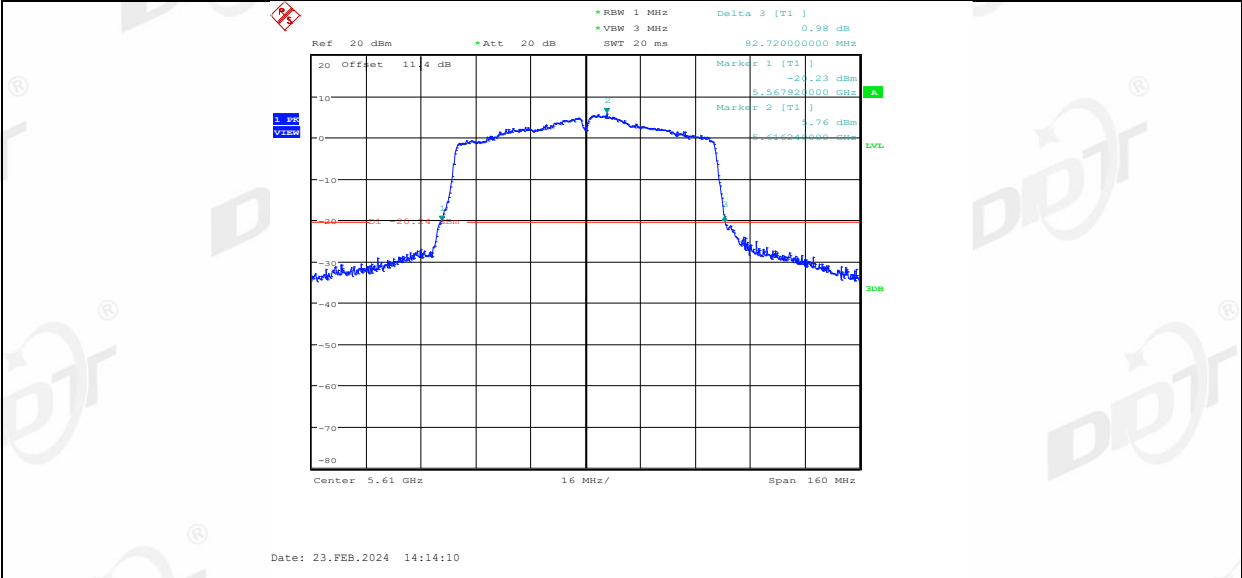
11AC80SISO Ant1 5290



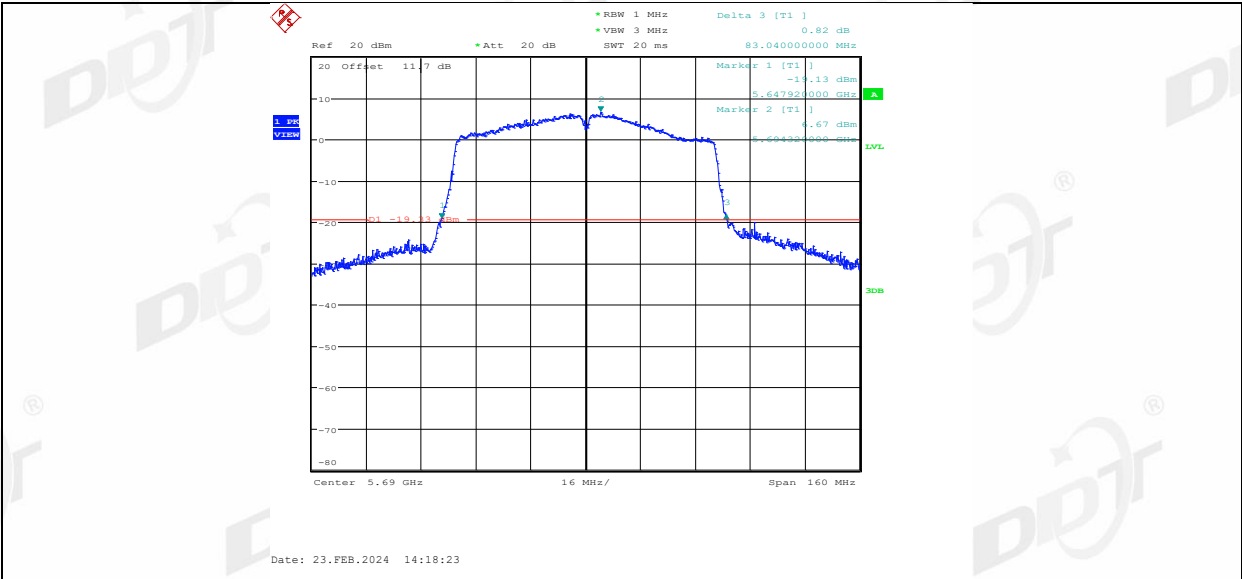
11AC80SISO Ant1 5530



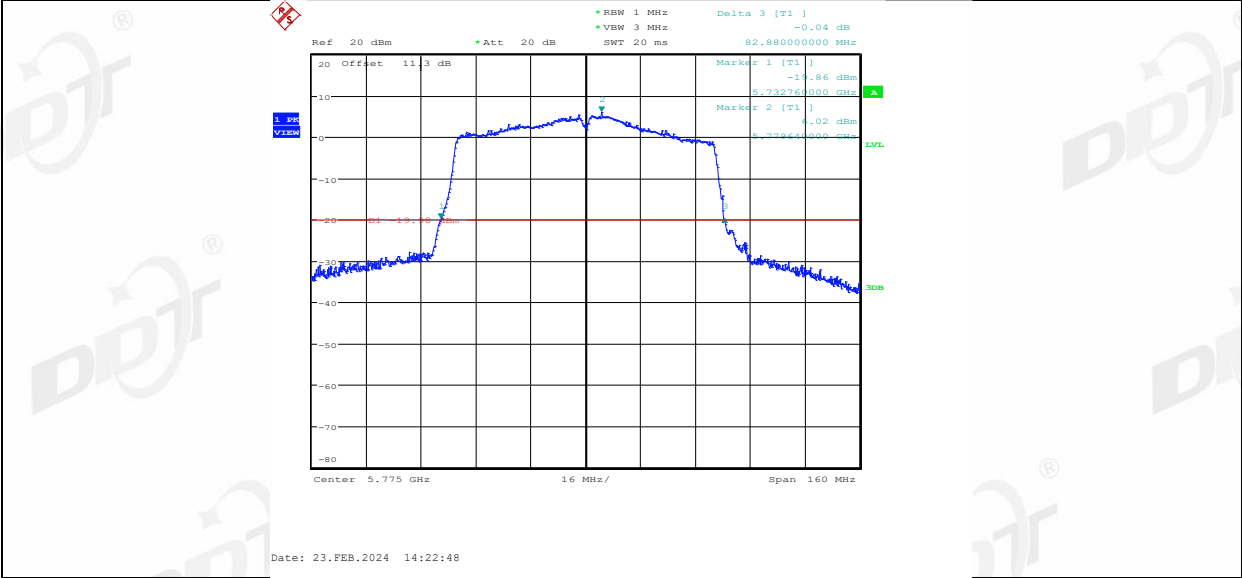
11AC80SISO Ant1 5610



11AC80SISO Ant1 5690

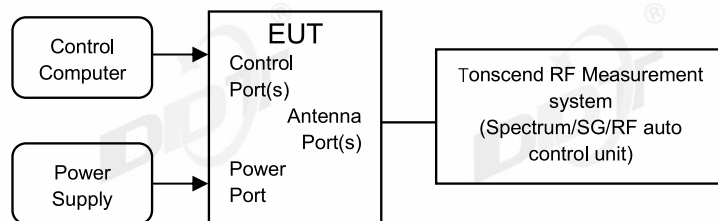


11AC80SISO Ant1 5775



5. 6dB Bandwidth

5.1. Block diagram of test setup



5.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
6 dB Bandwidth	Minimum 500 kHz	5725 - 5850

5.3. Test procedure

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

Center Frequency	The center 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

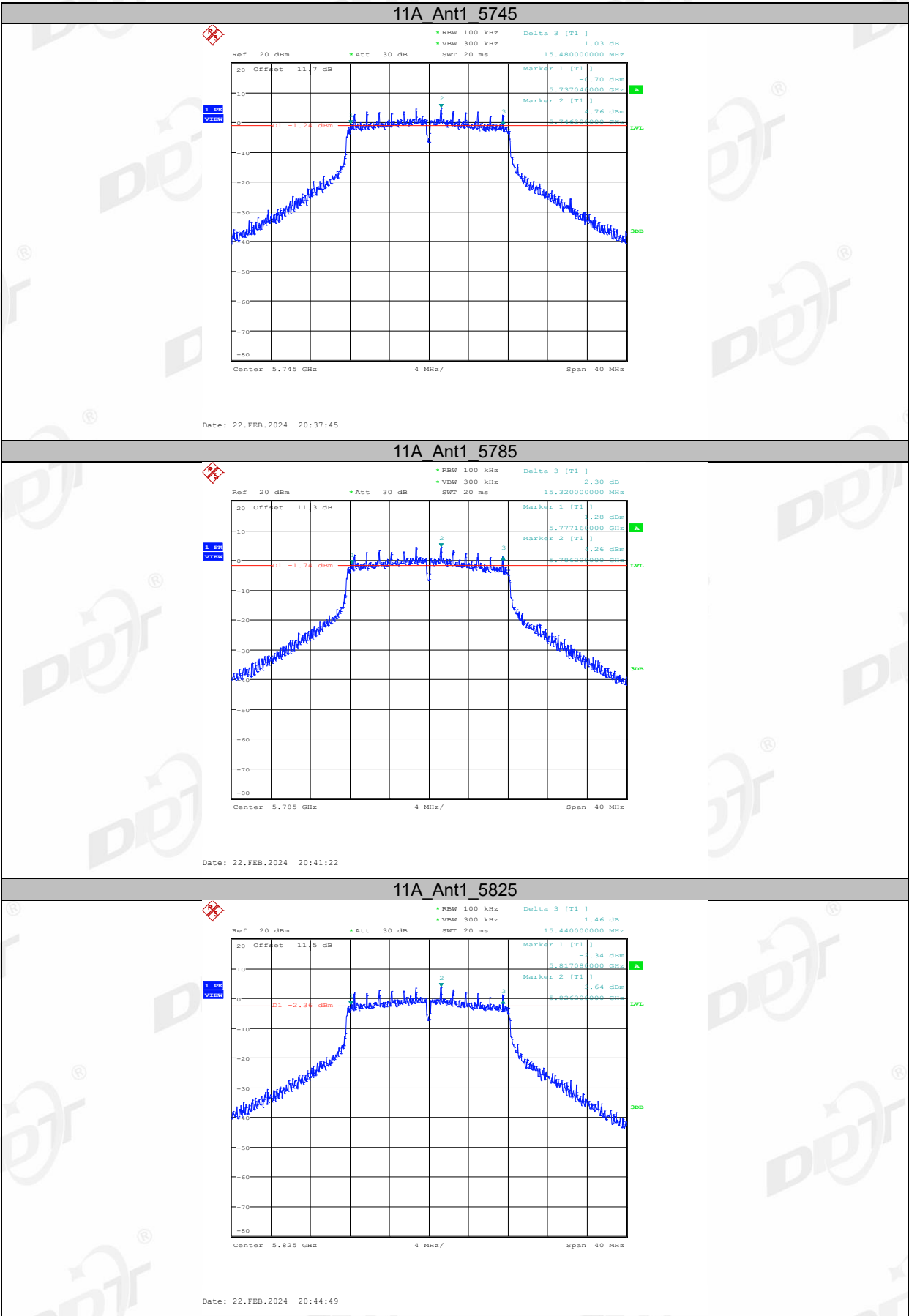
Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

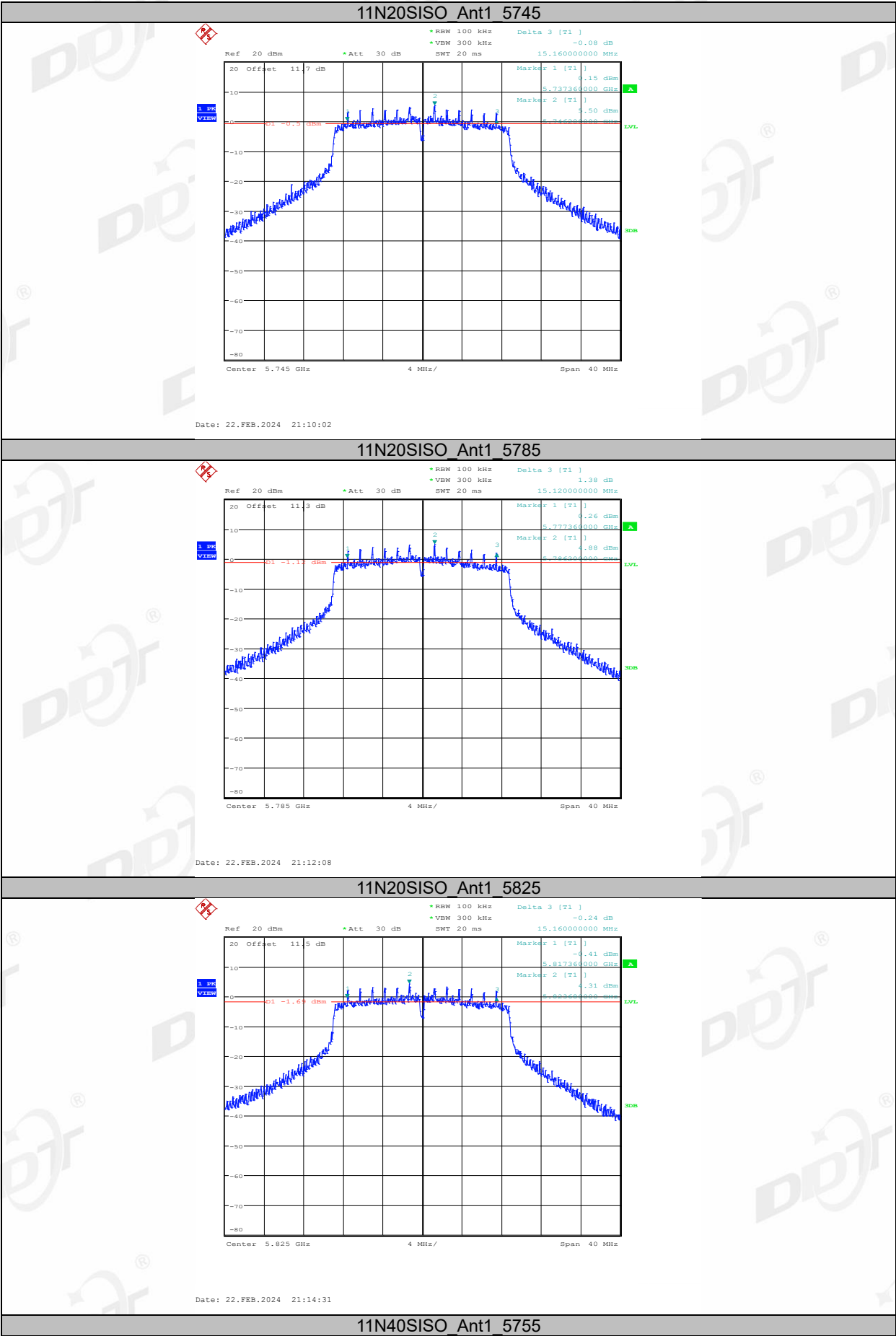
5.4. Test result B4

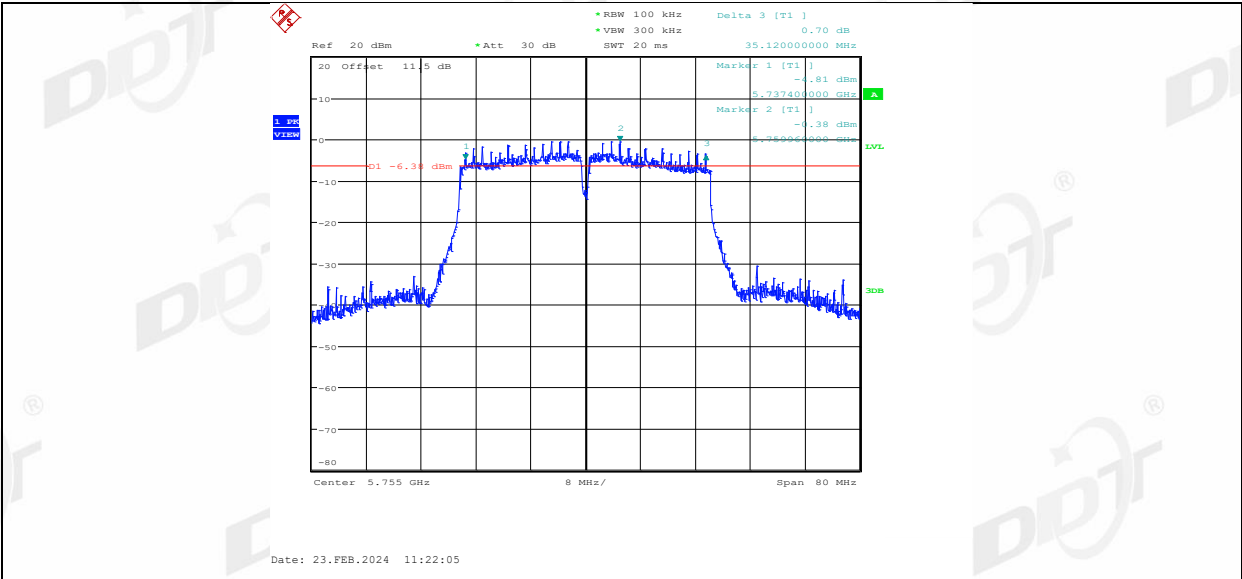
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	22.3℃,44.8%RH	Test Date:	2024.01.22-2024.03.12
Test Power Supply:	Battery	EUT:	Braille eMotion 40
Sample Number:	S23110312-01	Model No.:	B340T

Test Mode	Antenna	Frequenc y[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.48	5737.04	5752.52	0.5	PASS
		5785	15.32	5777.16	5792.48	0.5	PASS
		5825	15.44	5817.08	5832.52	0.5	PASS
11N20SIS O	Ant1	5745	15.16	5737.36	5752.52	0.5	PASS
		5785	15.12	5777.36	5792.48	0.5	PASS
		5825	15.16	5817.36	5832.52	0.5	PASS
11N40SIS O	Ant1	5755	35.12	5737.40	5772.52	0.5	PASS
		5795	35.12	5777.40	5812.52	0.5	PASS
11AC20SI SO	Ant1	5745	15.72	5736.80	5752.52	0.5	PASS
		5785	15.44	5777.04	5792.48	0.5	PASS
		5825	15.16	5817.36	5832.52	0.5	PASS
11AC40SI SO	Ant1	5755	35.12	5737.40	5772.52	0.5	PASS
		5795	35.44	5777.08	5812.52	0.5	PASS
11AC80SI SO	Ant1	5775	72.48	5737.40	5809.88	0.5	PASS

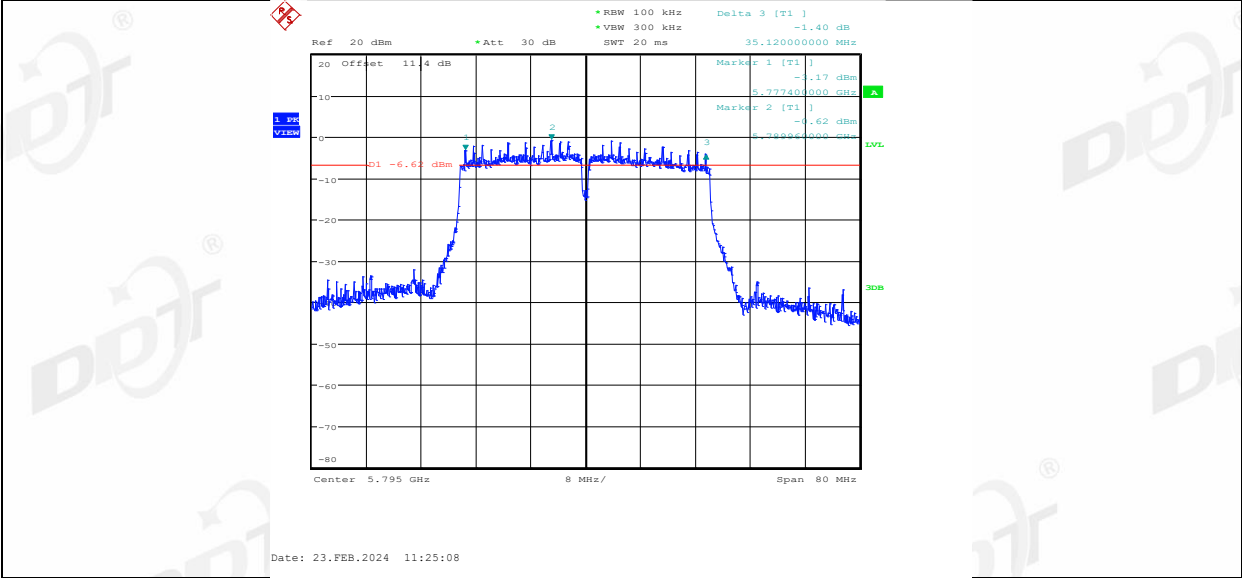
5.5. Test graphs B4



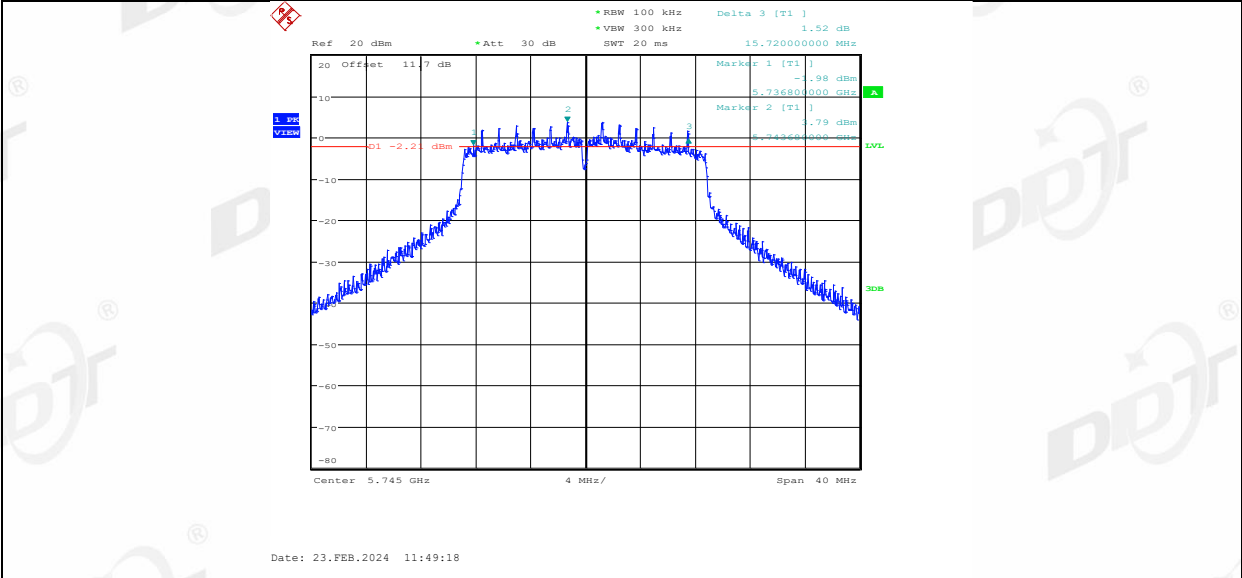




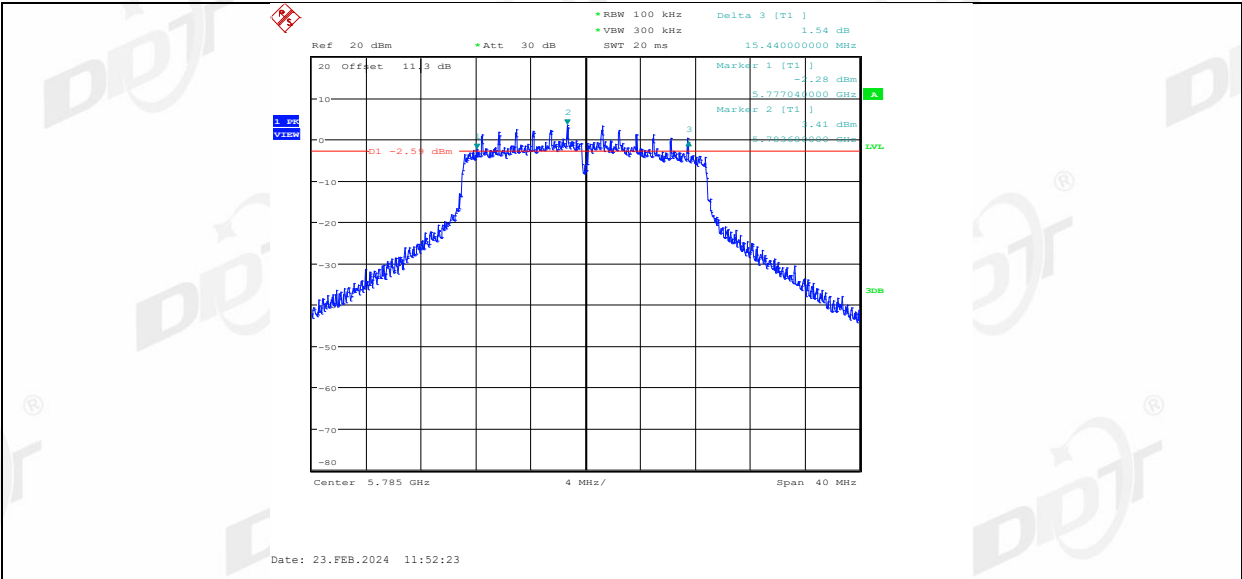
11N40SISO Ant1 5795



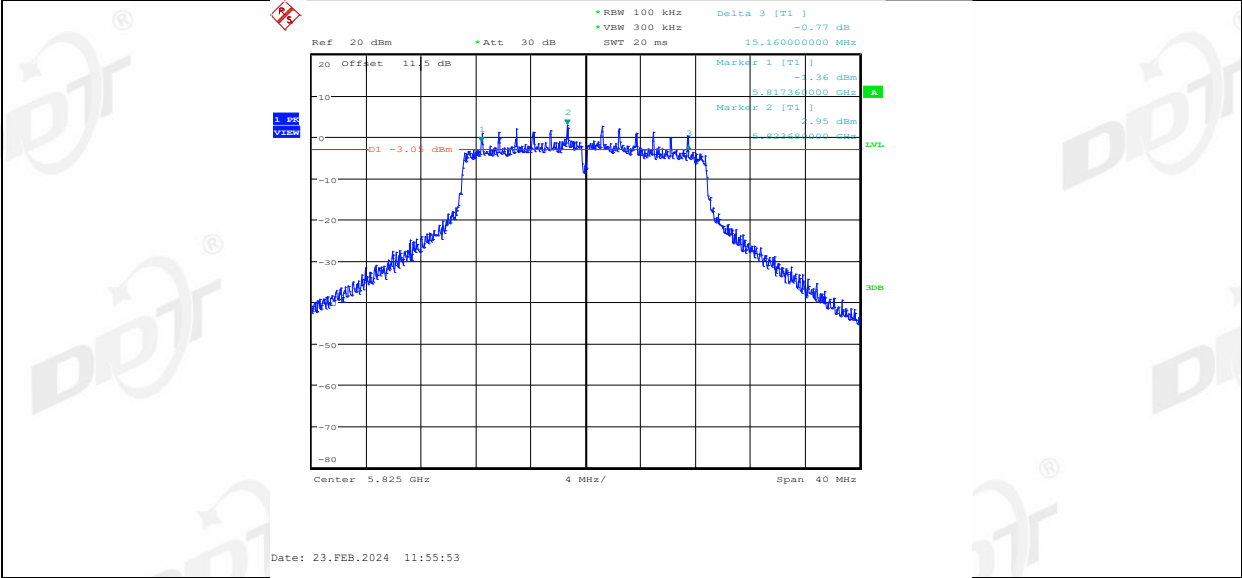
11AC20SISO Ant1 5745



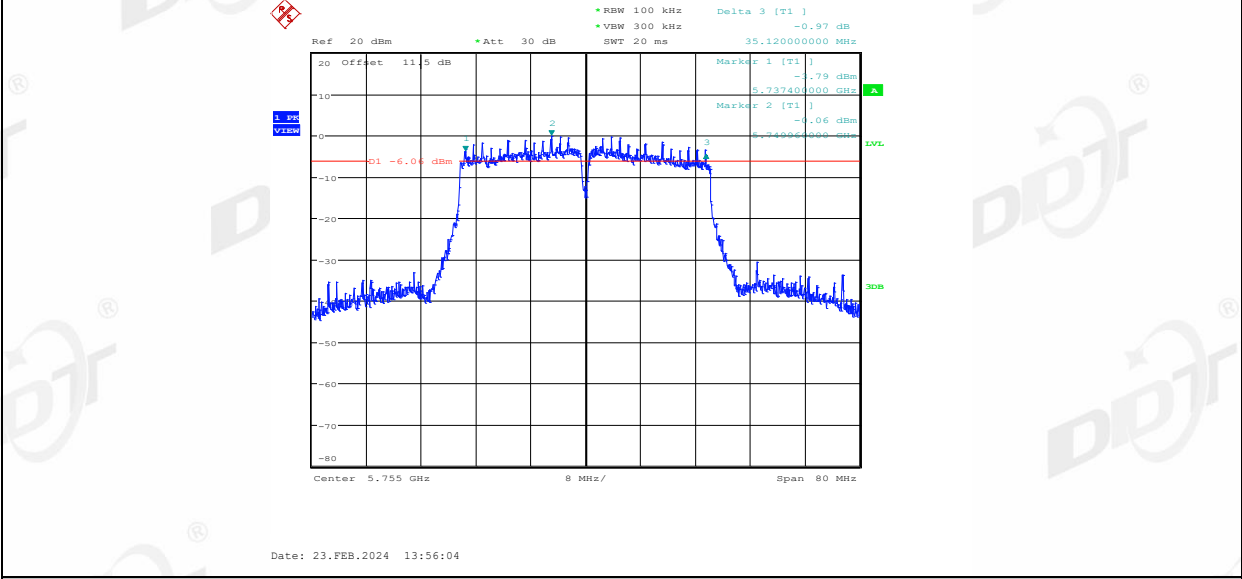
11AC20SISO Ant1 5785



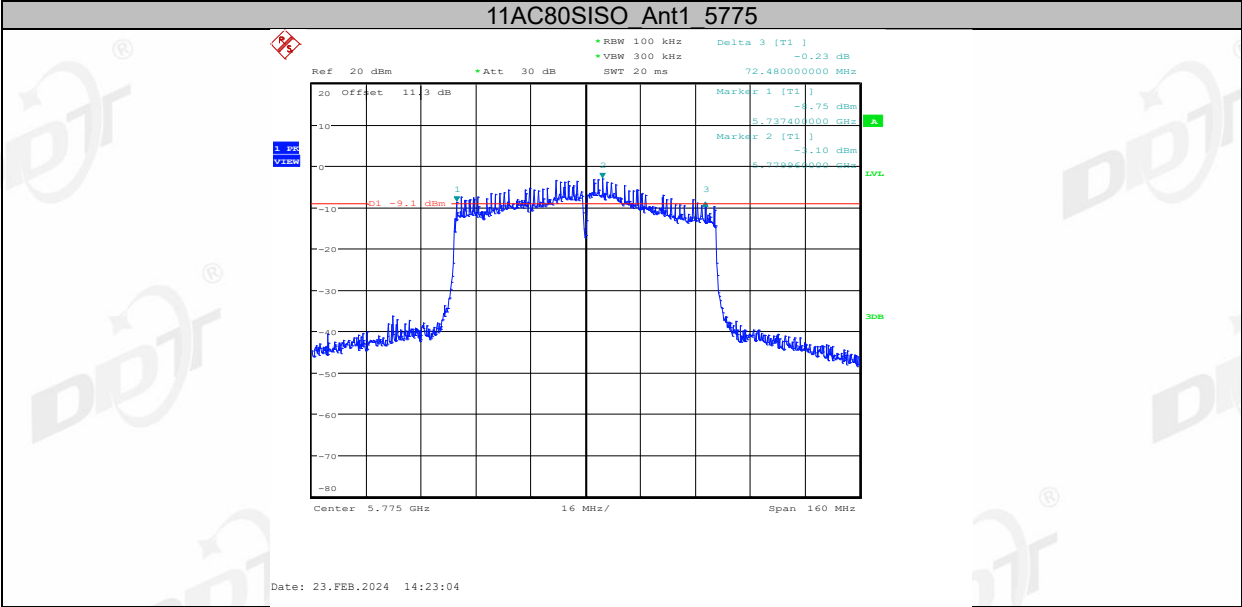
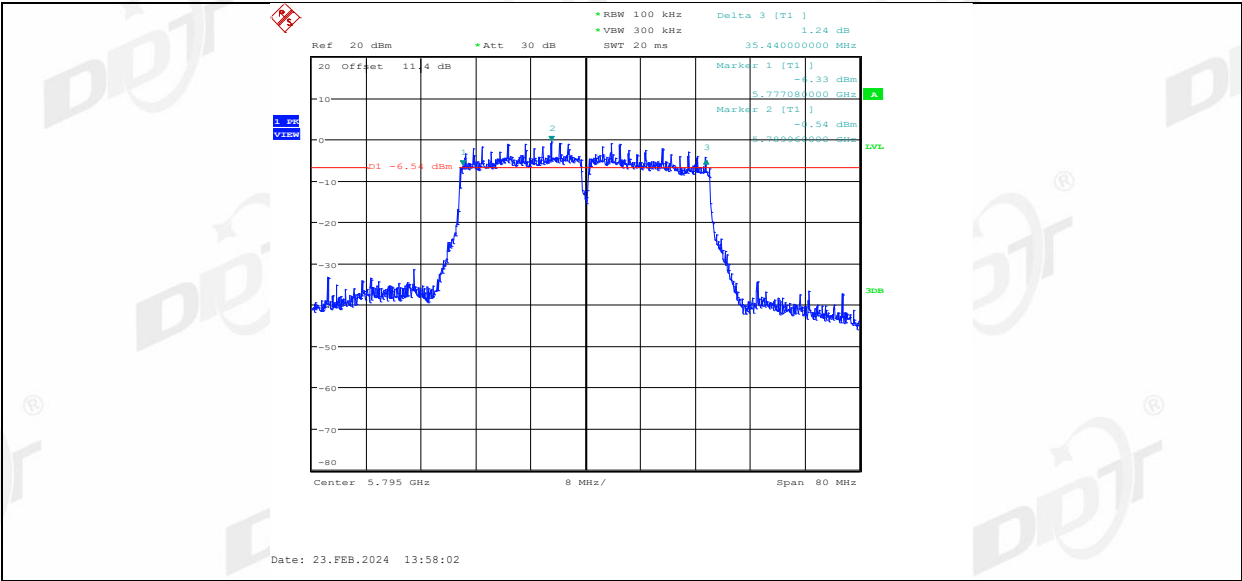
11AC20SISO Ant1 5825



11AC40SISO Ant1 5755

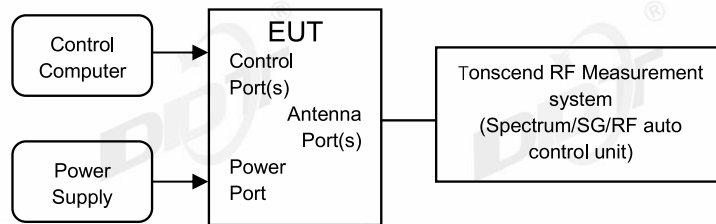


11AC40SISO Ant1 5795



6. 99% Bandwidth

6.1. Block diagram of test setup



6.2. Limits

Just for Report.

6.3. Test procedure

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

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the OBW
VBW	approximately three times the RBW
Trace	Max hold

Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

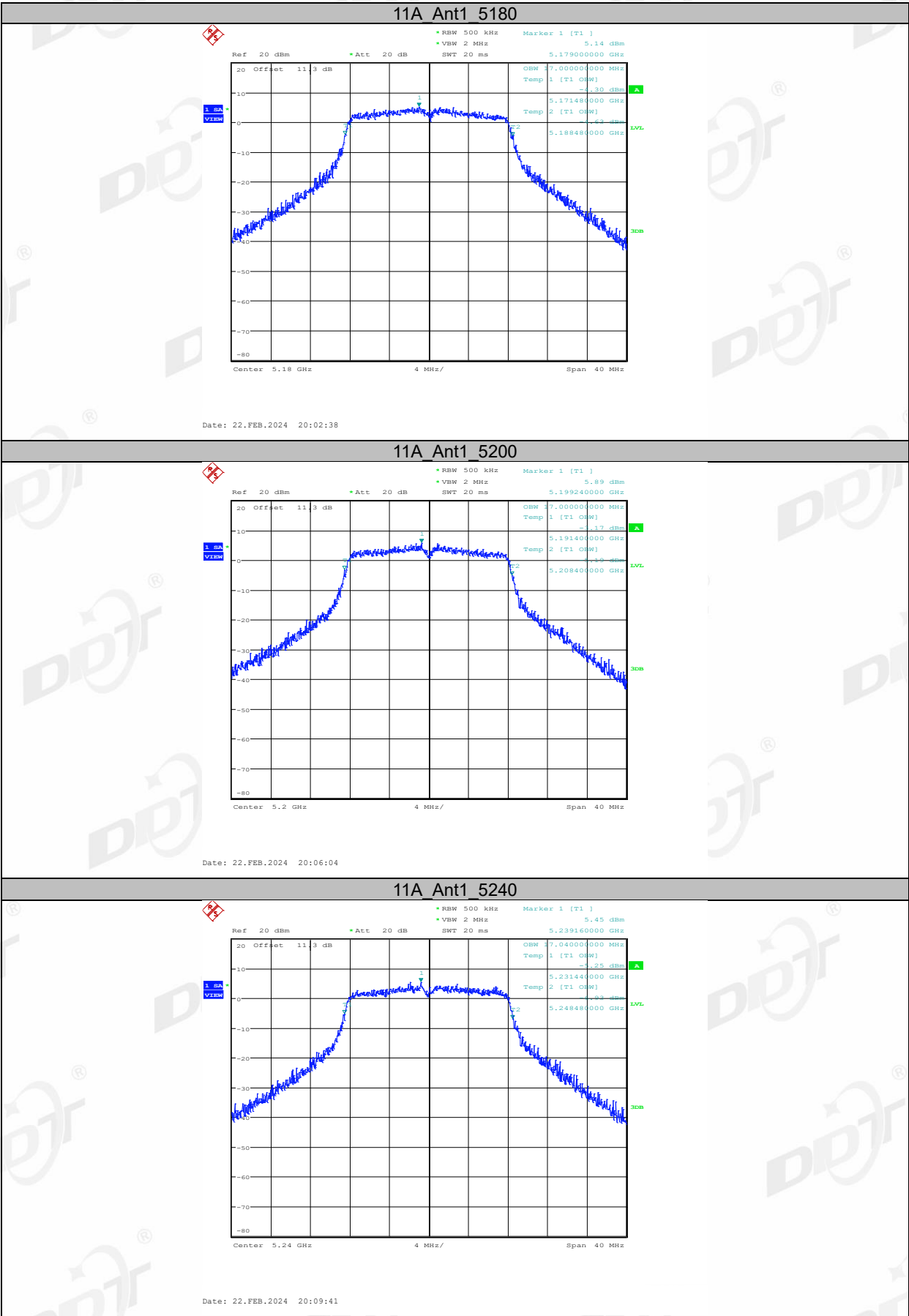
6.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	22.3℃,44.8%RH	Test Date:	2024.01.22-2024.03.12
Test Power Supply:	Battery	EUT:	Braille eMotion 40
Sample Number:	S23110312-01	Model No.:	B340T

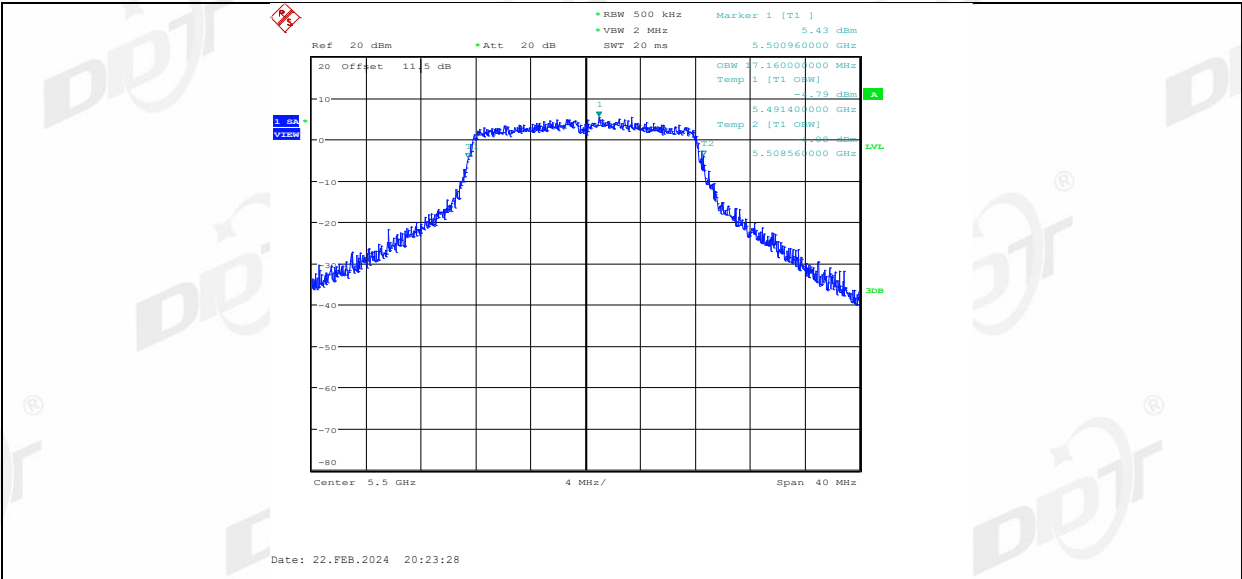
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5180	17	5171.4800	5188.4800	---	---
		5200	17	5191.4000	5208.4000	---	---
		5240	17.04	5231.4400	5248.4800	---	---
		5260	17	5251.4800	5268.4800	---	---
		5280	17.04	5271.4400	5288.4800	---	---
		5320	17.04	5311.4000	5328.4400	---	---
		5500	17.16	5491.4000	5508.5600	---	---
		5580	17.28	5571.2800	5588.5600	---	---
		5700	17.2	5691.3200	5708.5200	---	---
		5720	17.48	5711.2800	5728.7600	---	---
		5720_UN II-2C	13.72	5711.2800	5725	---	---
		5720_UN II-3	3.76	5725	5728.7600	---	---
		5745	17.16	5736.3200	5753.4800	---	---
		5785	17.04	5776.3200	5793.3600	---	---
11N20SISO	Ant1	5825	17.08	5816.3200	5833.4000	---	---
		5180	18.16	5170.8400	5189.0000	---	---
		5200	18.12	5190.8800	5209.0000	---	---
		5240	18.12	5230.8800	5249.0000	---	---
		5260	18.08	5250.9200	5269.0000	---	---
		5280	18.08	5270.9200	5289.0000	---	---
		5320	18.2	5310.8000	5329.0000	---	---
		5500	18.4	5490.7200	5509.1200	---	---
		5580	18.36	5570.7200	5589.0800	---	---
		5700	18.24	5690.8000	5709.0400	---	---
		5720	18.56	5710.7200	5729.2800	---	---
		5720_UN II-2C	14.28	5710.7200	5725	---	---
		5720_UN II-3	4.28	5725	5729.2800	---	---
		5745	18.32	5735.7200	5754.0400	---	---
11N40SISO	Ant1	5785	18.2	5775.7200	5793.9200	---	---
		5825	18.24	5815.7600	5834.0000	---	---
		5190	36.4	5171.7600	5208.1600	---	---
		5230	36.4	5211.7600	5248.1600	---	---
		5270	36.32	5251.8400	5288.1600	---	---
		5310	36.32	5291.8400	5328.1600	---	---
		5510	36.32	5491.8400	5528.1600	---	---
		5550	36.48	5531.6800	5568.1600	---	---
		5670	36.4	5651.7600	5688.1600	---	---
		5710	36.48	5691.6800	5728.1600	---	---
		5710_UN II-2C	33.32	5691.6800	5725	---	---
		5710_UN II-3	3.16	5725	5728.1600	---	---
		5755	36.4	5736.6800	5773.0800	---	---
		5795	36.48	5776.6000	5813.0800	---	---
11AC20SISO	Ant1	5180	18.16	5170.8800	5189.0400	---	---
		5200	18.12	5190.8800	5209.0000	---	---
		5240	18.12	5230.9200	5249.0400	---	---
		5260	18.04	5250.9200	5268.9600	---	---
		5280	18.08	5270.9200	5289.0000	---	---
		5320	18.2	5310.8000	5329.0000	---	---
		5500	18.24	5490.8400	5509.0800	---	---

		5580	18.36	5570.7200	5589.0800	---	---
		5700	18.2	5690.7600	5708.9600	---	---
		5720	18.56	5710.7200	5729.2800	---	---
		5720_UN II-2C	14.28	5710.7200	5725	---	---
		5720_UN II-3	4.28	5725	5729.2800	---	---
		5745	18.24	5735.7600	5754.0000	---	---
		5785	18.12	5775.8000	5793.9200	---	---
		5825	18.16	5815.7600	5833.9200	---	---
11AC40SI SO	Ant1	5190	36.32	5171.7600	5208.0800	---	---
		5230	36.4	5211.7600	5248.1600	---	---
		5270	36.4	5251.8400	5288.2400	---	---
		5310	36.32	5291.8400	5328.1600	---	---
		5510	36.48	5491.7600	5528.2400	---	---
		5550	36.48	5531.6800	5568.1600	---	---
		5670	36.32	5651.7600	5688.0800	---	---
		5710	36.56	5691.6800	5728.2400	---	---
		5710_UN II-2C	33.32	5691.6800	5725	---	---
		5710_UN II-3	3.24	5725	5728.2400	---	---
		5755	36.4	5736.6800	5773.0800	---	---
		5795	36.48	5776.6000	5813.0800	---	---
11AC80SI SO	Ant1	5210	75.36	5172.4000	5247.7600	---	---
		5290	75.04	5252.5600	5327.6000	---	---
		5530	75.2	5492.4000	5567.6000	---	---
		5610	75.36	5572.2400	5647.6000	---	---
		5690	75.2	5652.2400	5727.4400	---	---
		5690_UN II-2C	72.76	5652.2400	5725	---	---
		5690_UN II-3	2.44	5725	5727.4400	---	---
		5775	75.2	5737.0800	5812.2800	---	---

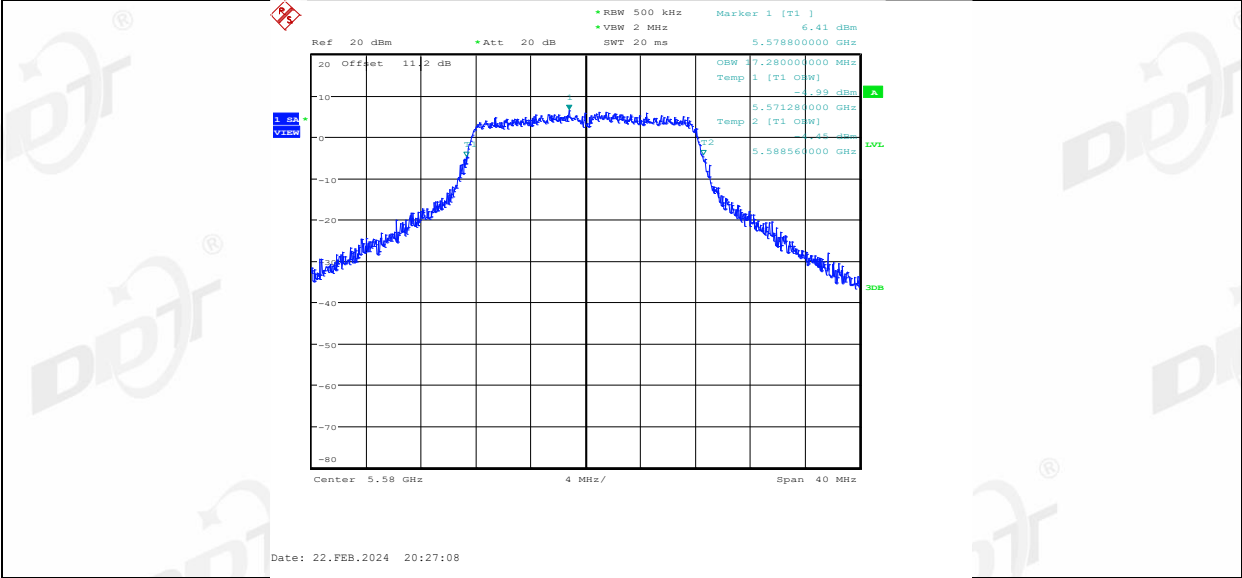
6.5. Test graphs



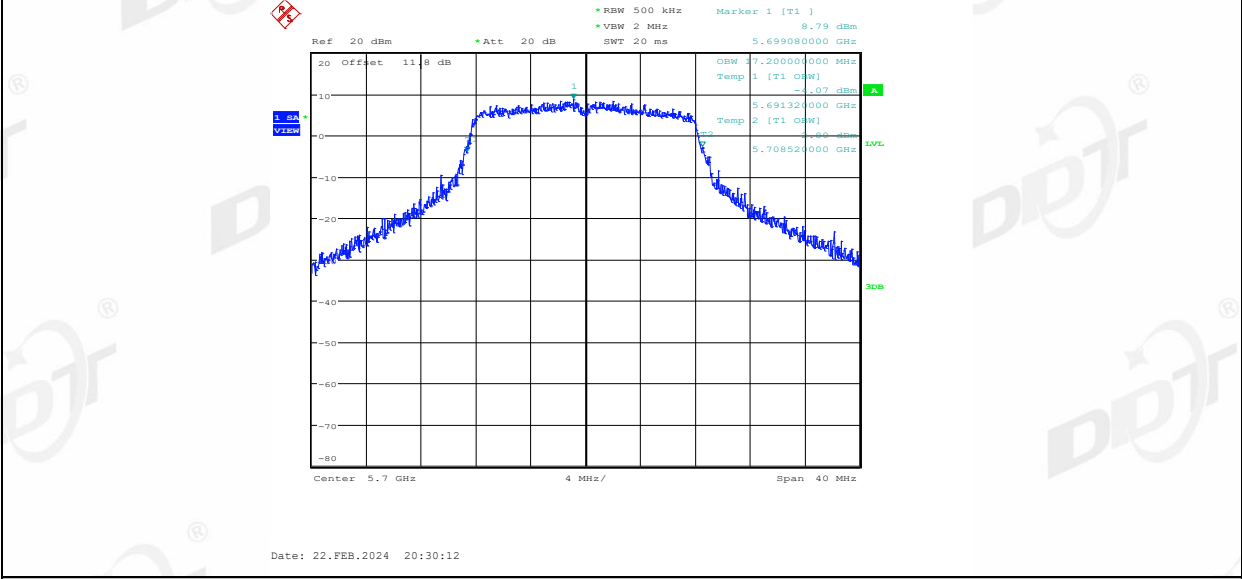




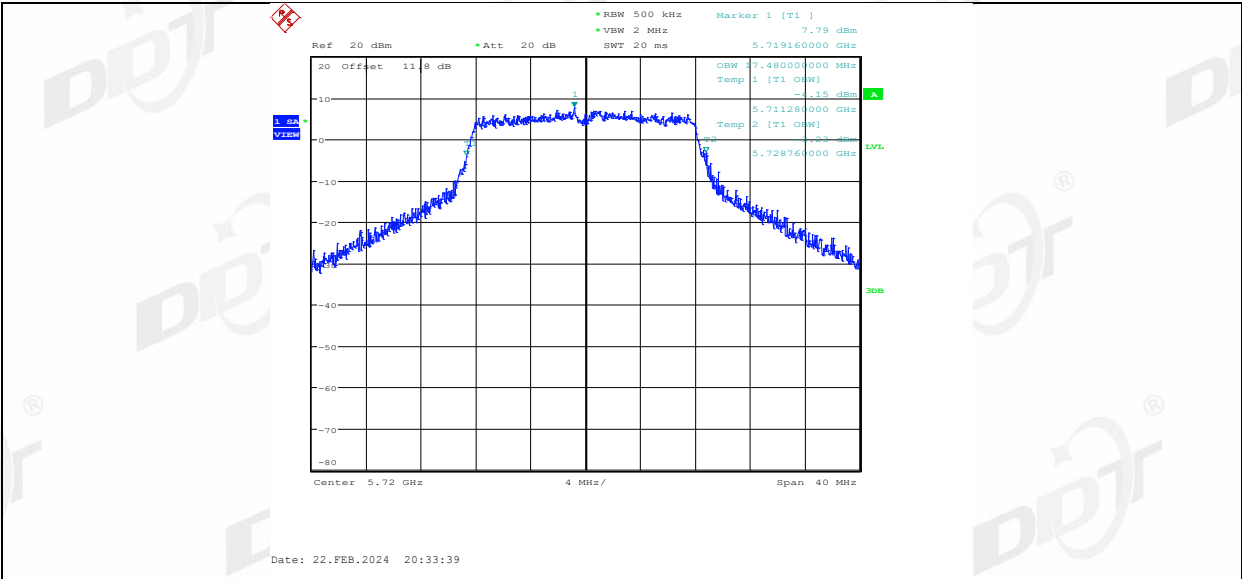
11A Ant1 5580



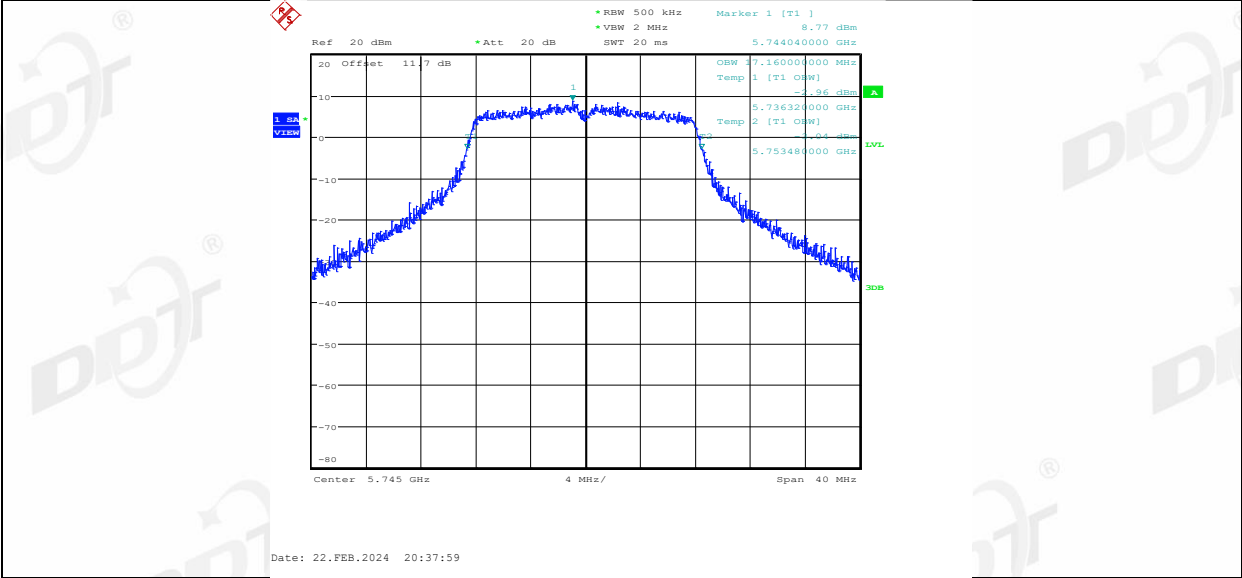
11A Ant1 5700



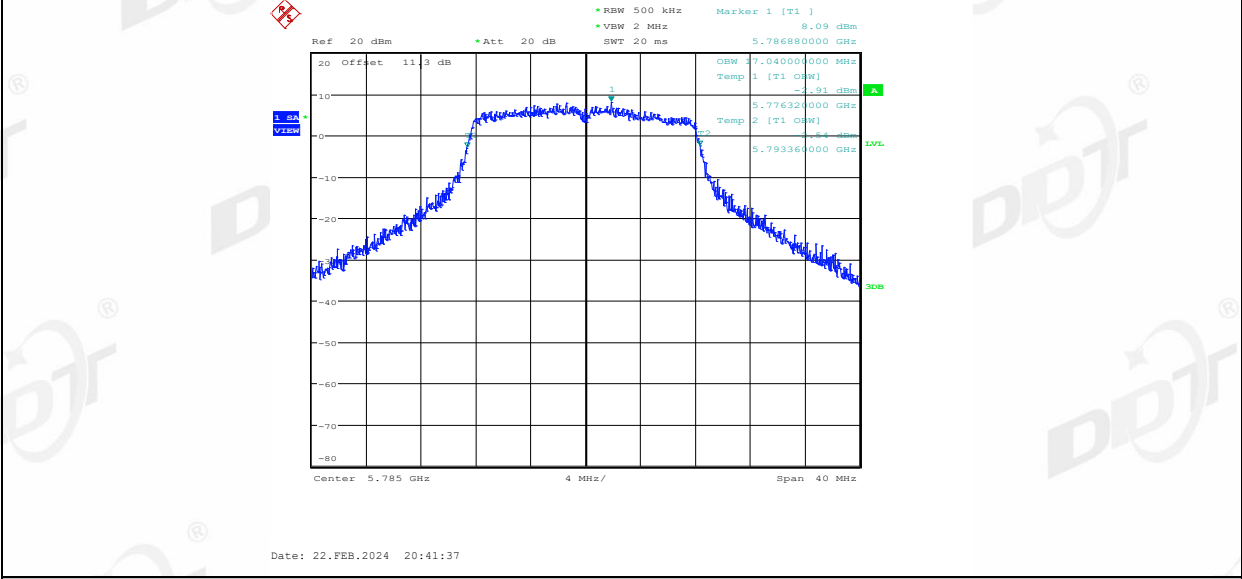
11A Ant1 5720



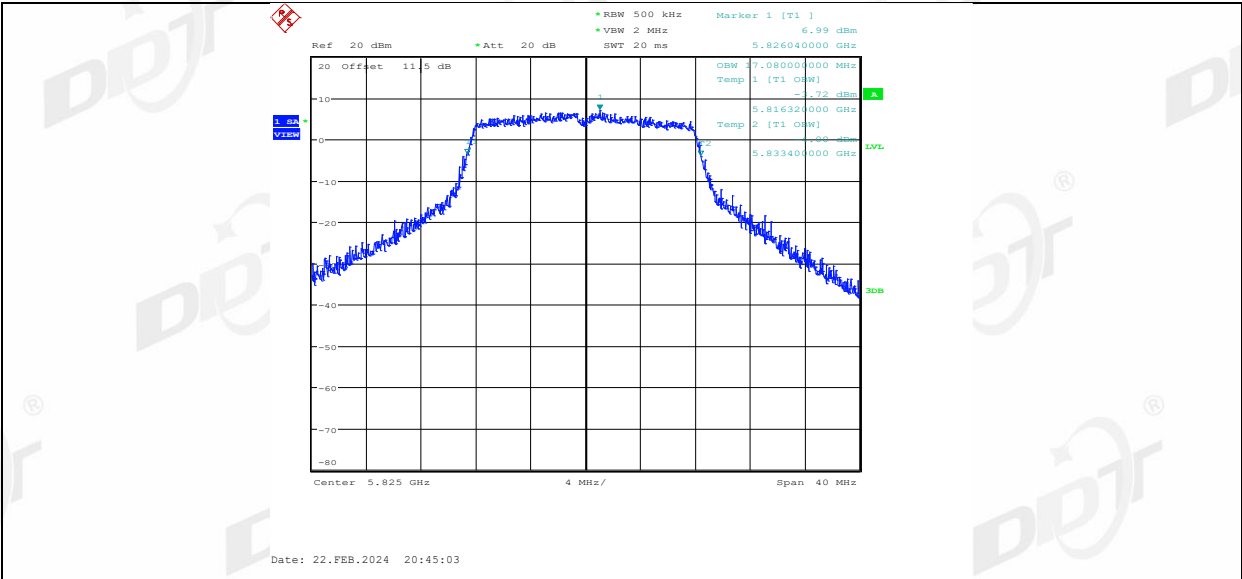
11A Ant1_5745



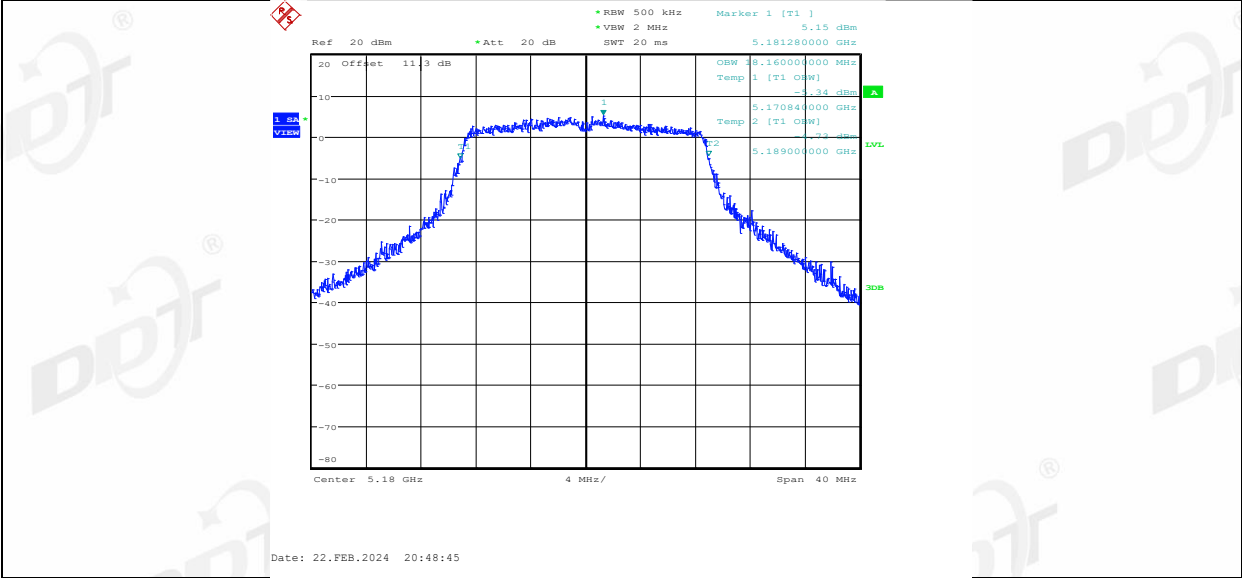
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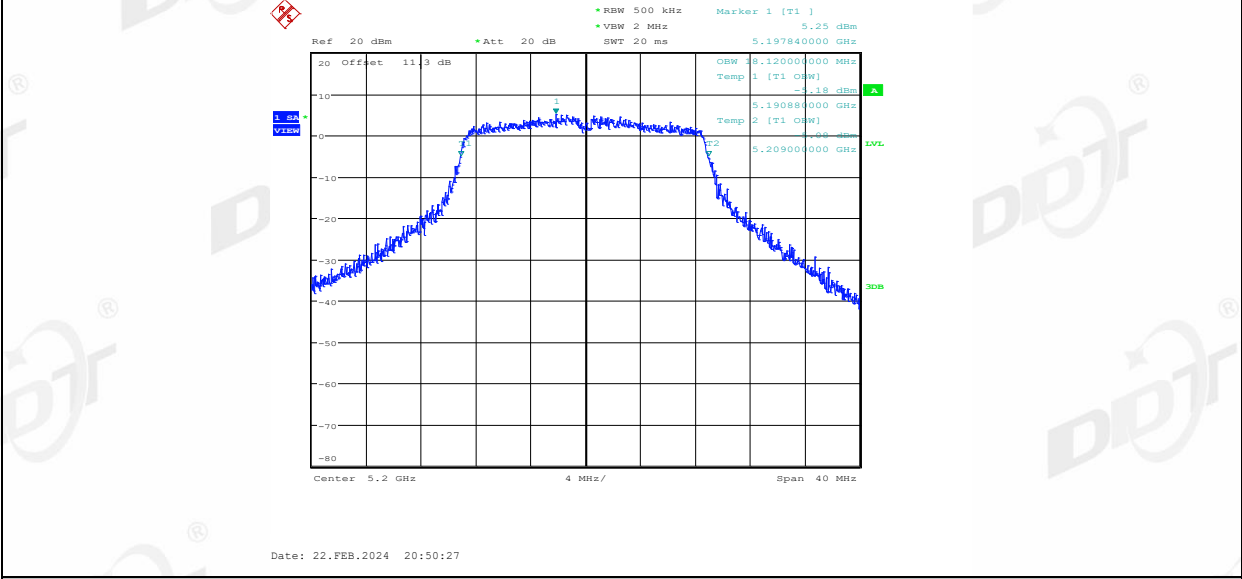
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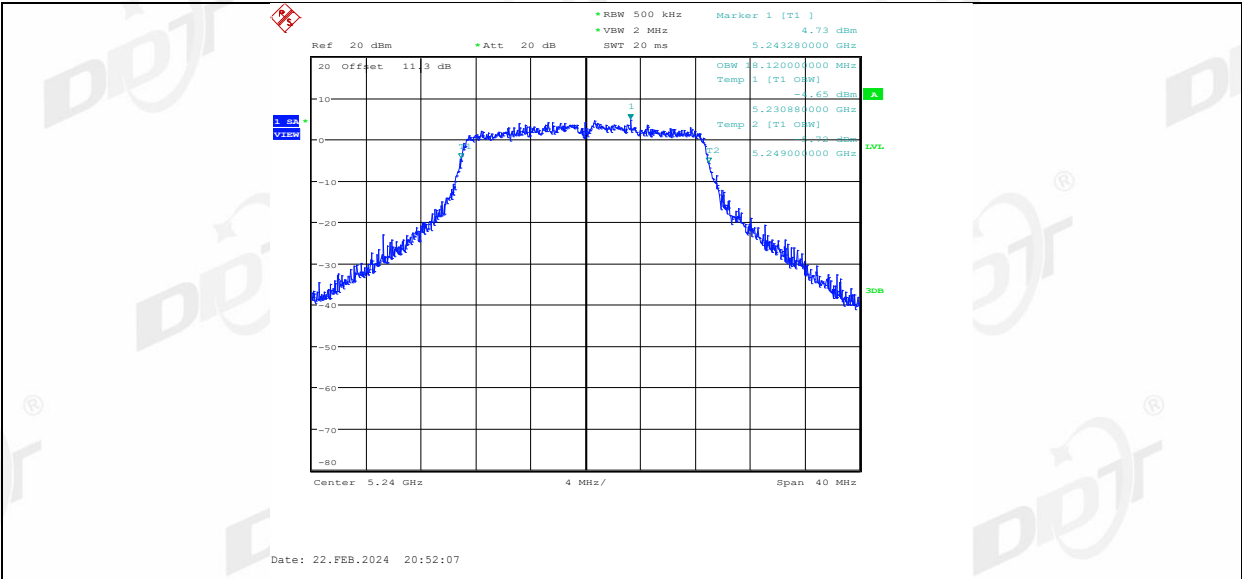
11N20SISO Ant1 5180



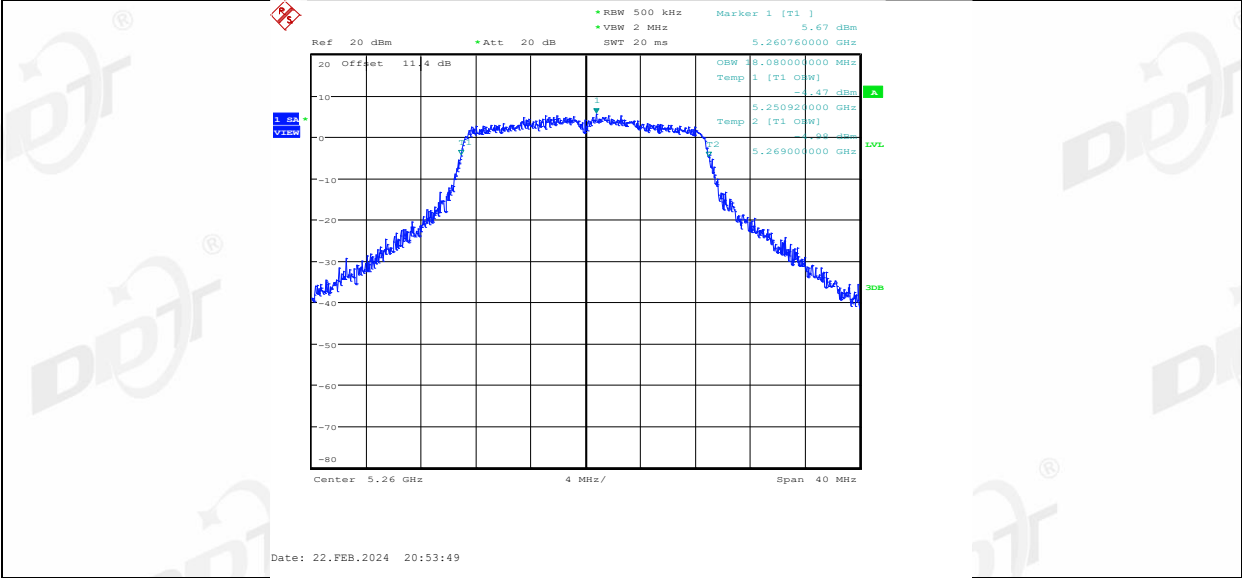
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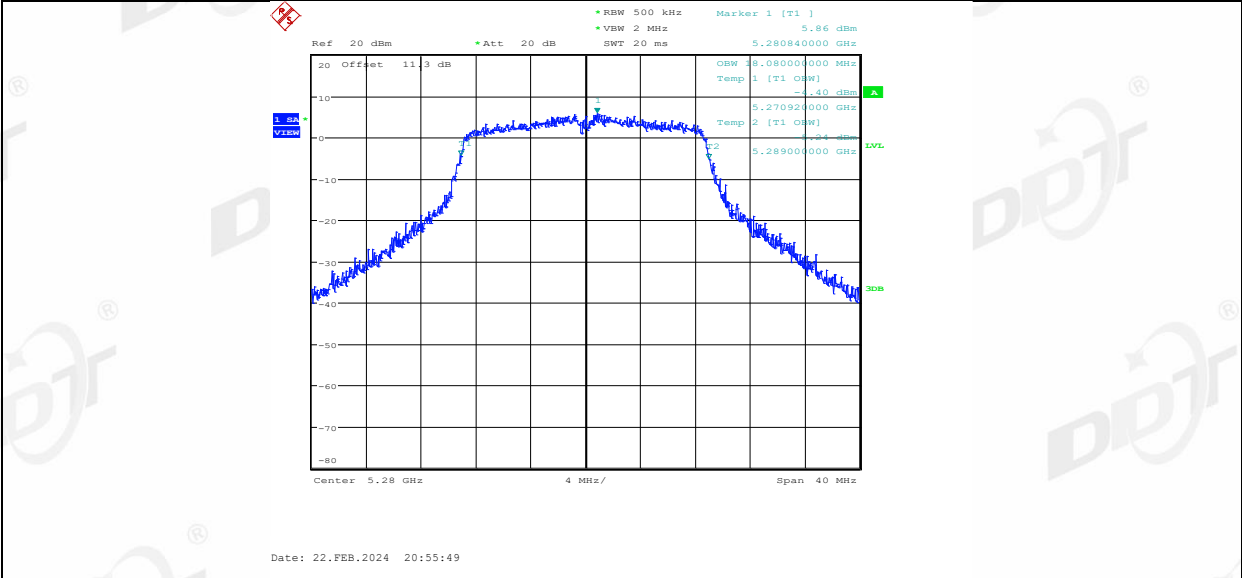
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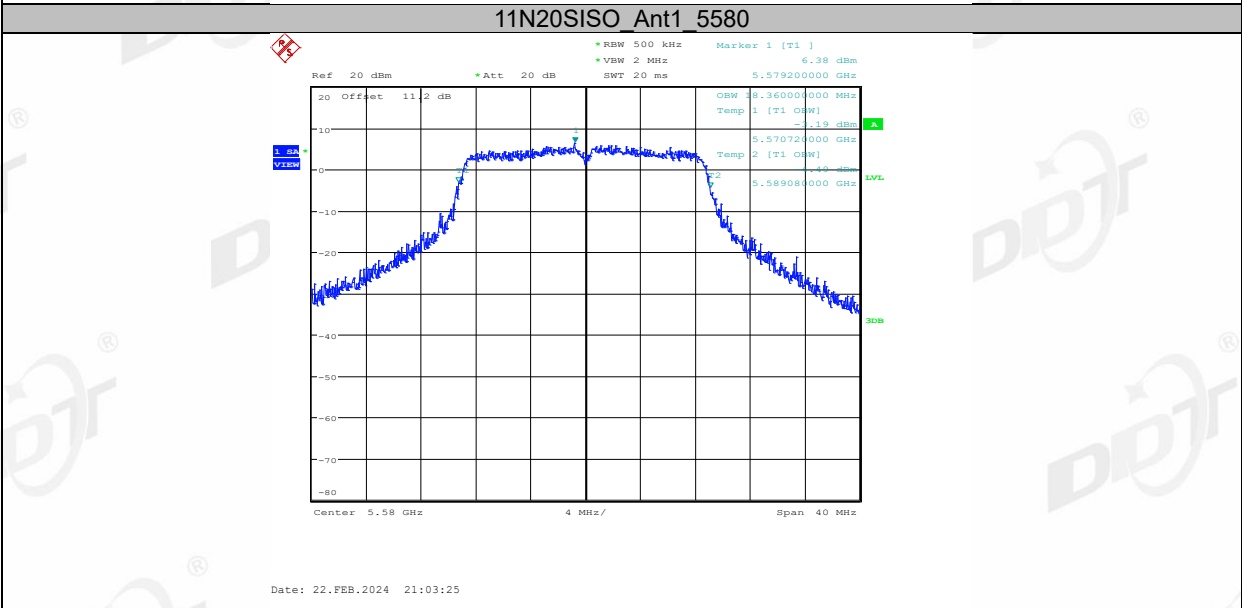
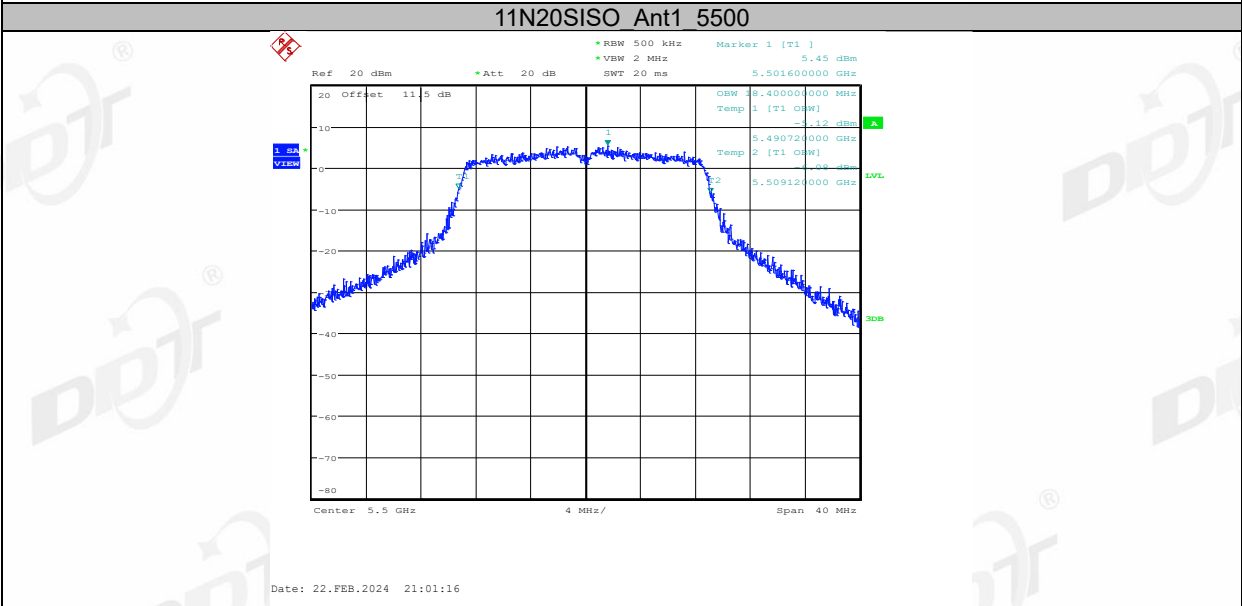
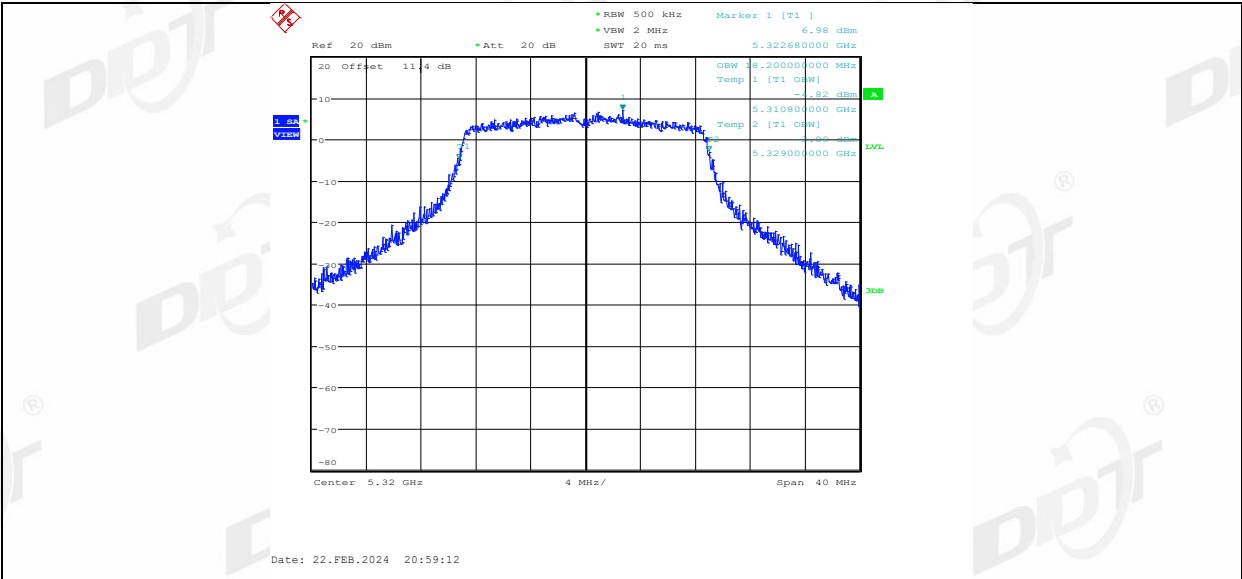
11N20SISO Ant1 5260

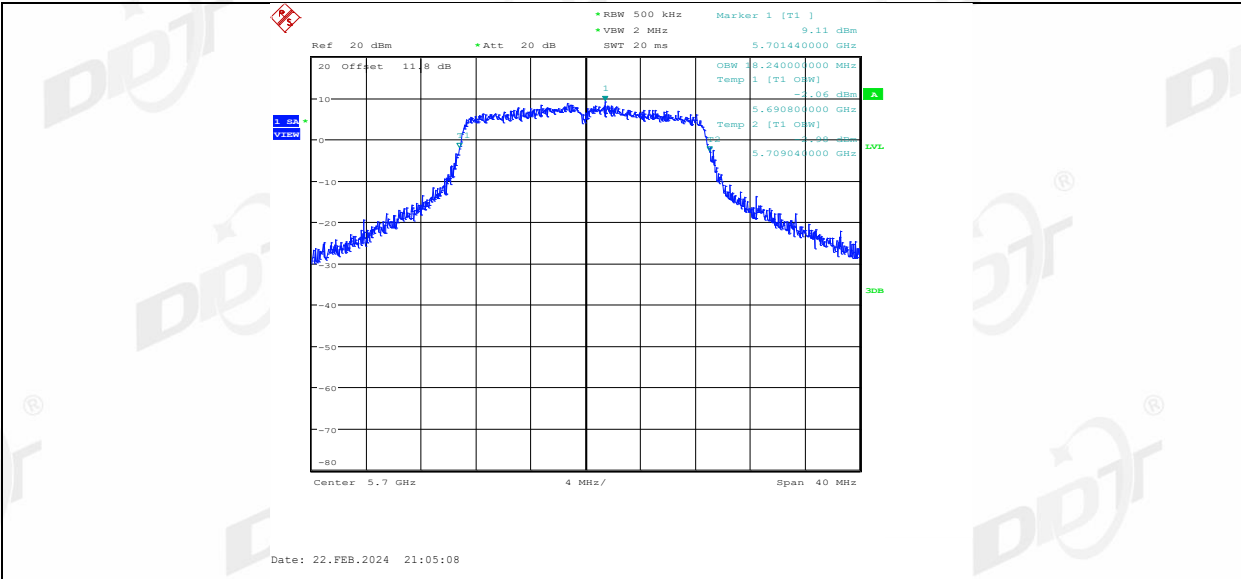


11N20SISO Ant1 5280

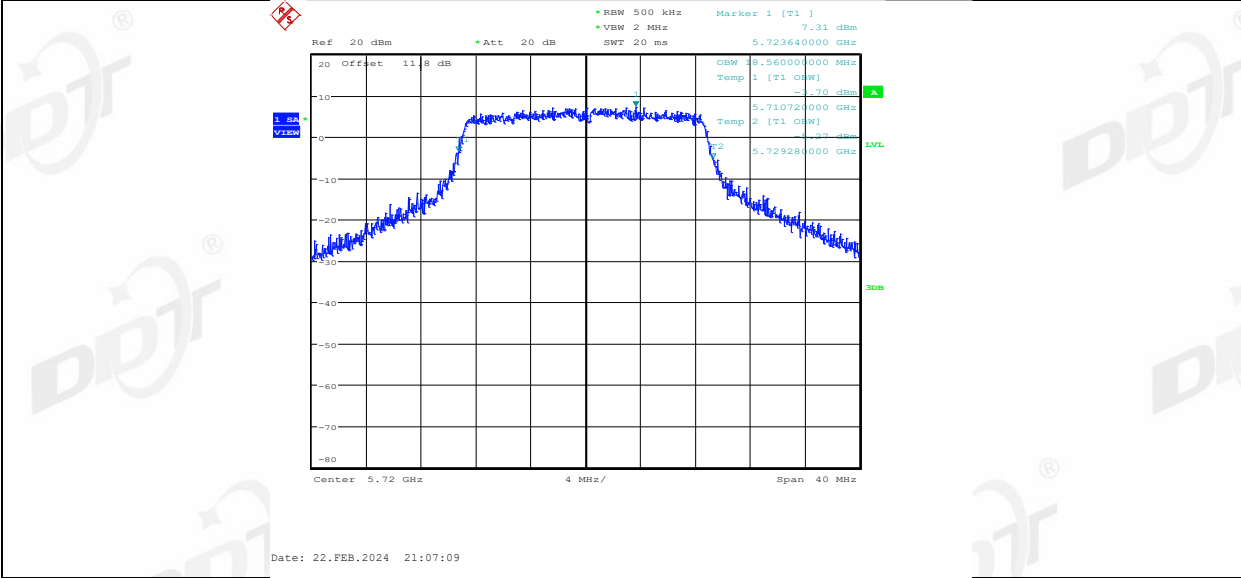


11N20SISO Ant1 5320

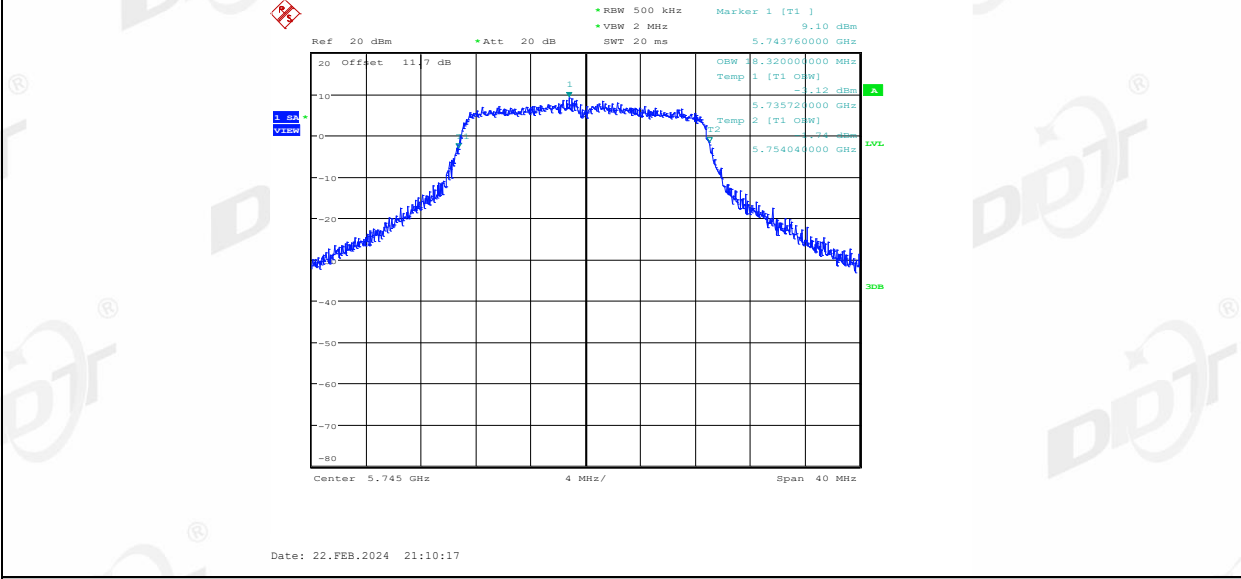




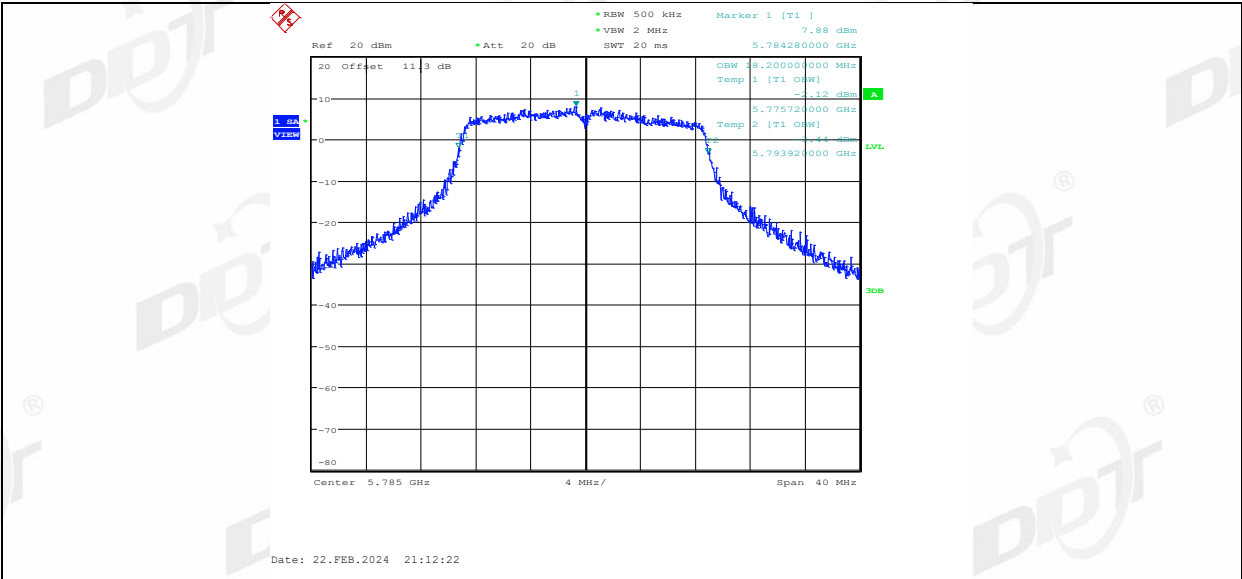
11N20SISO Ant1 5720



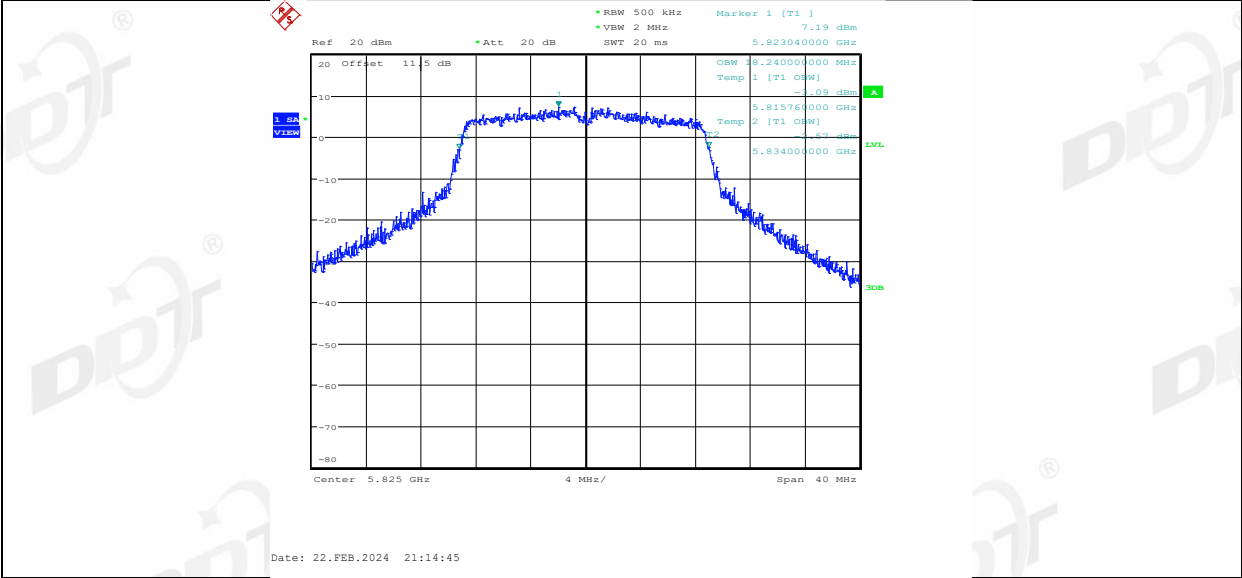
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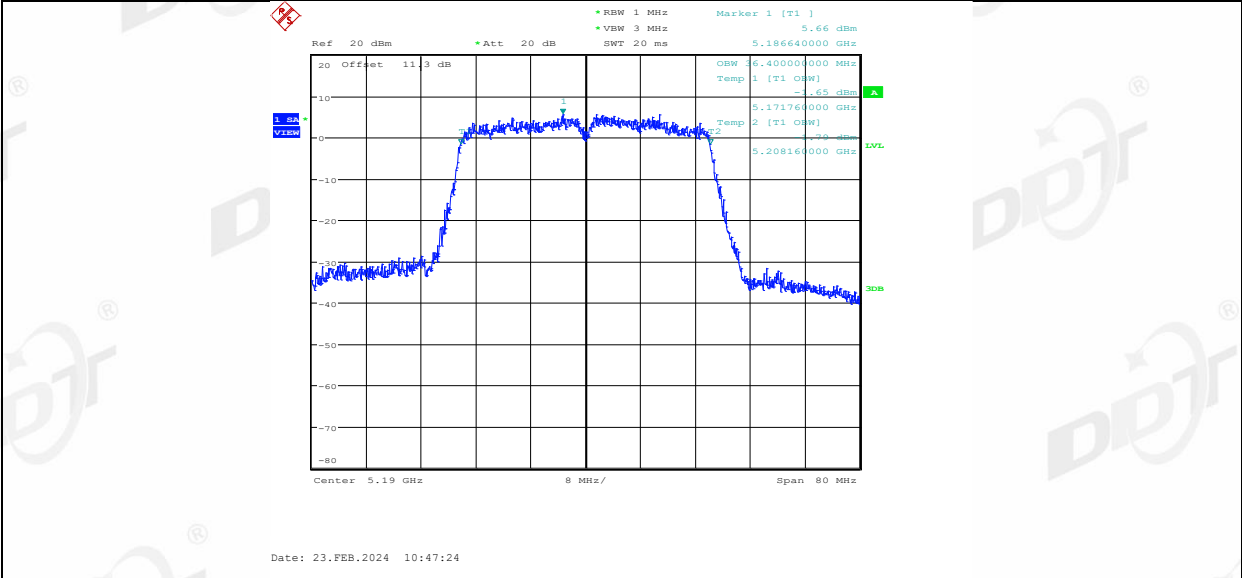
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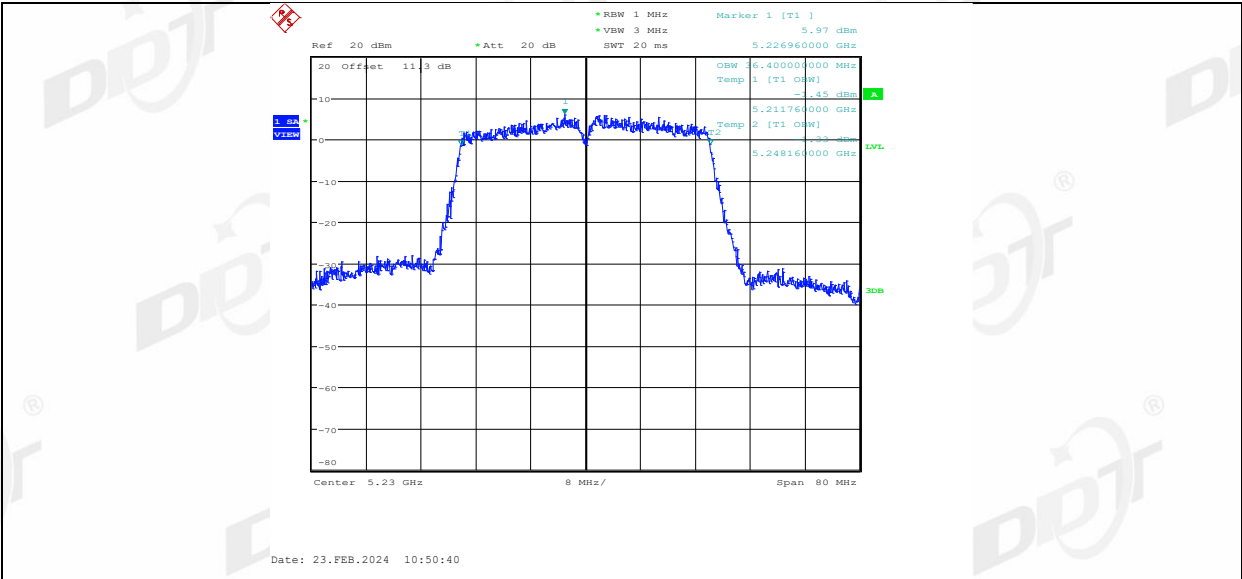
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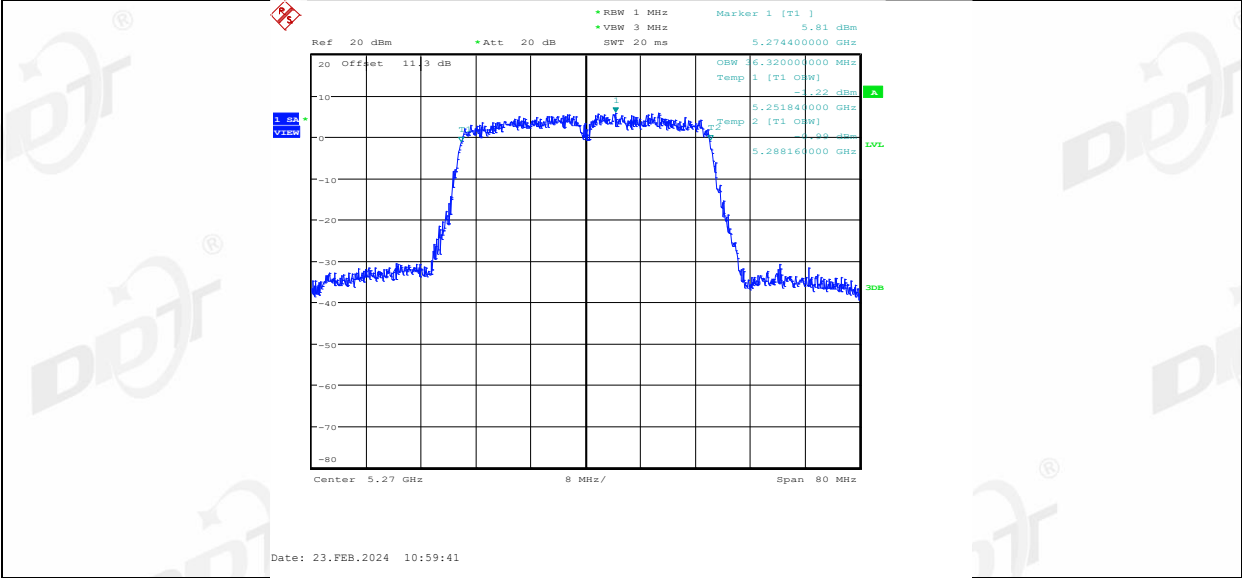
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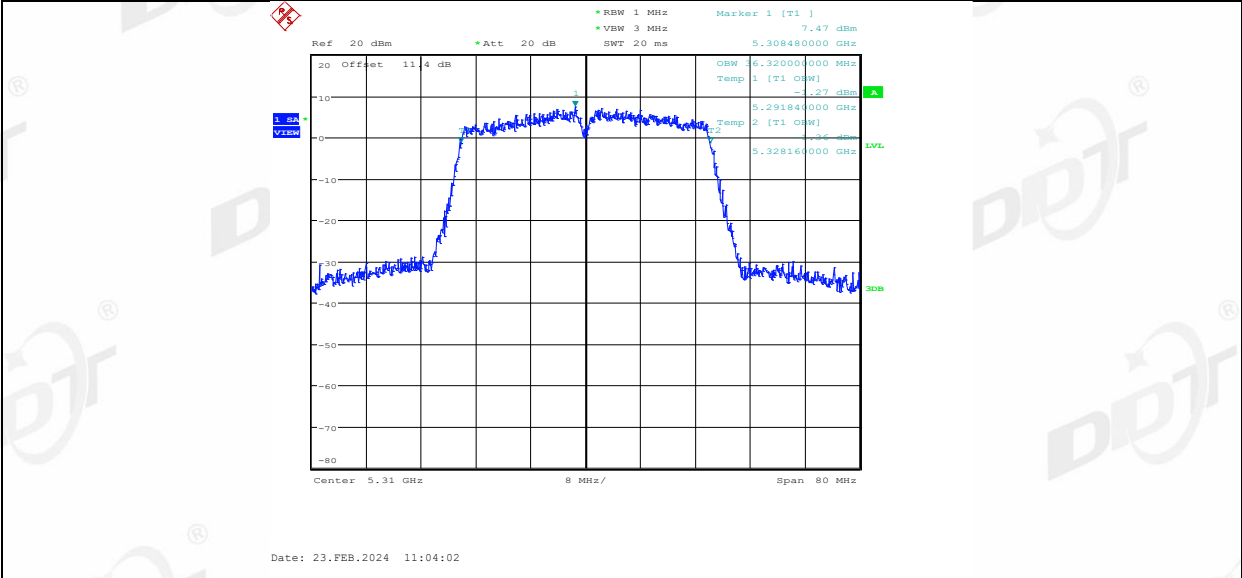
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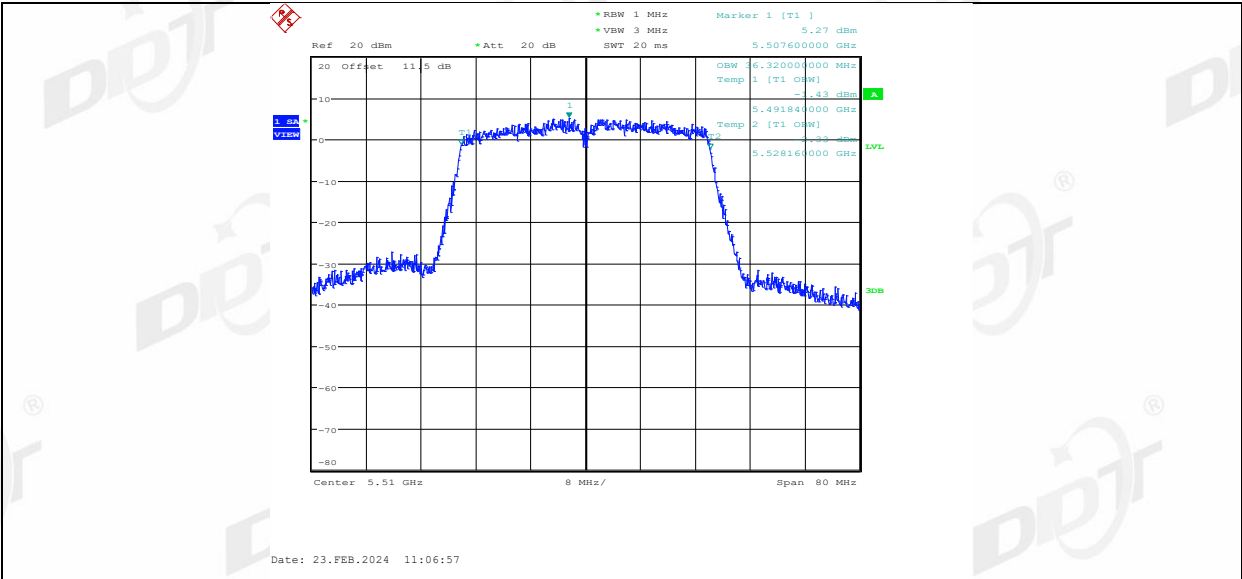
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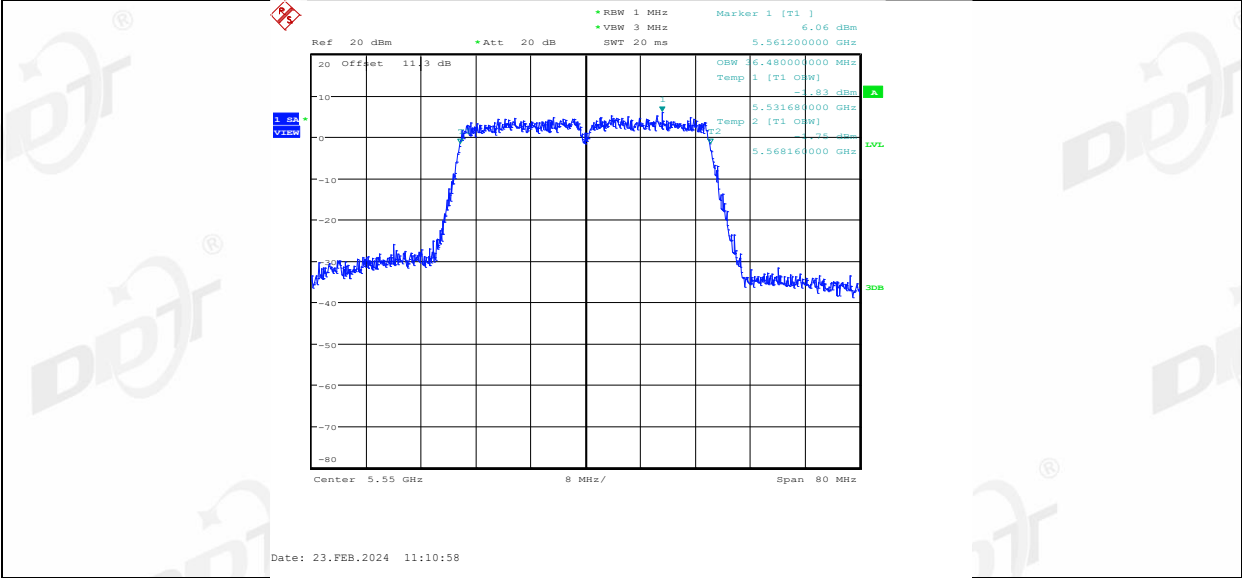
11N40SISO Ant1 5310



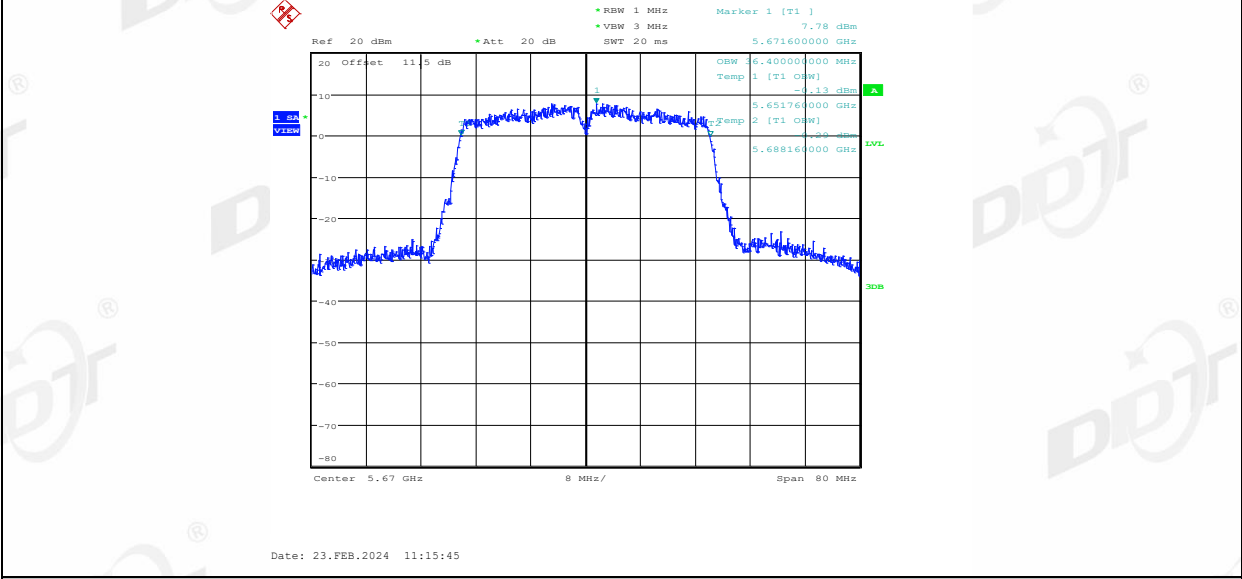
11N40SISO Ant1 5510



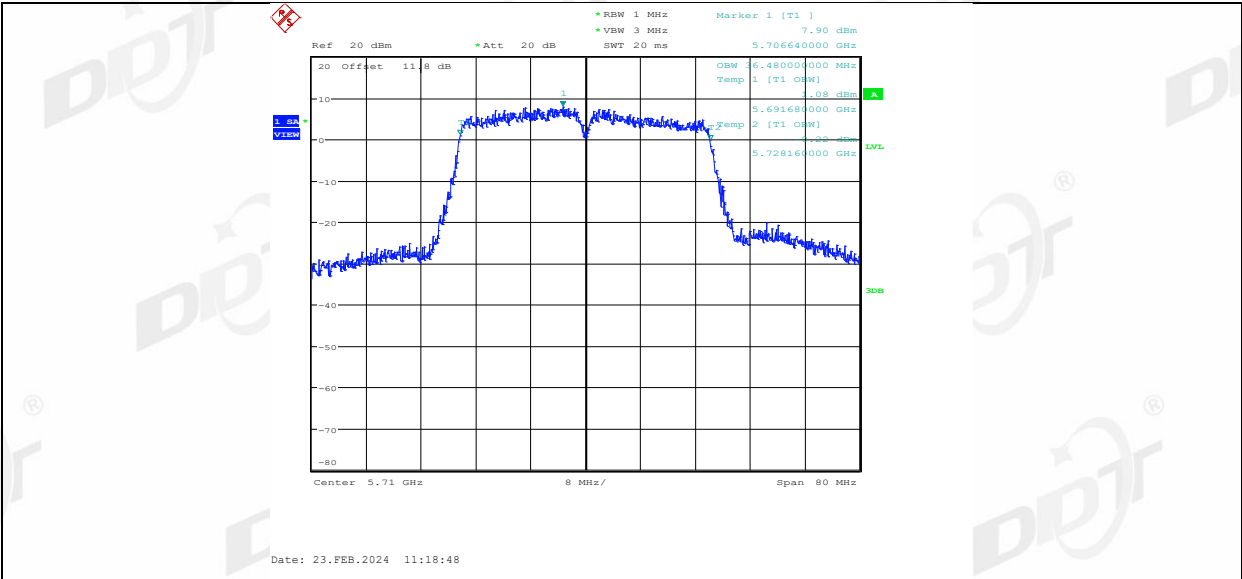
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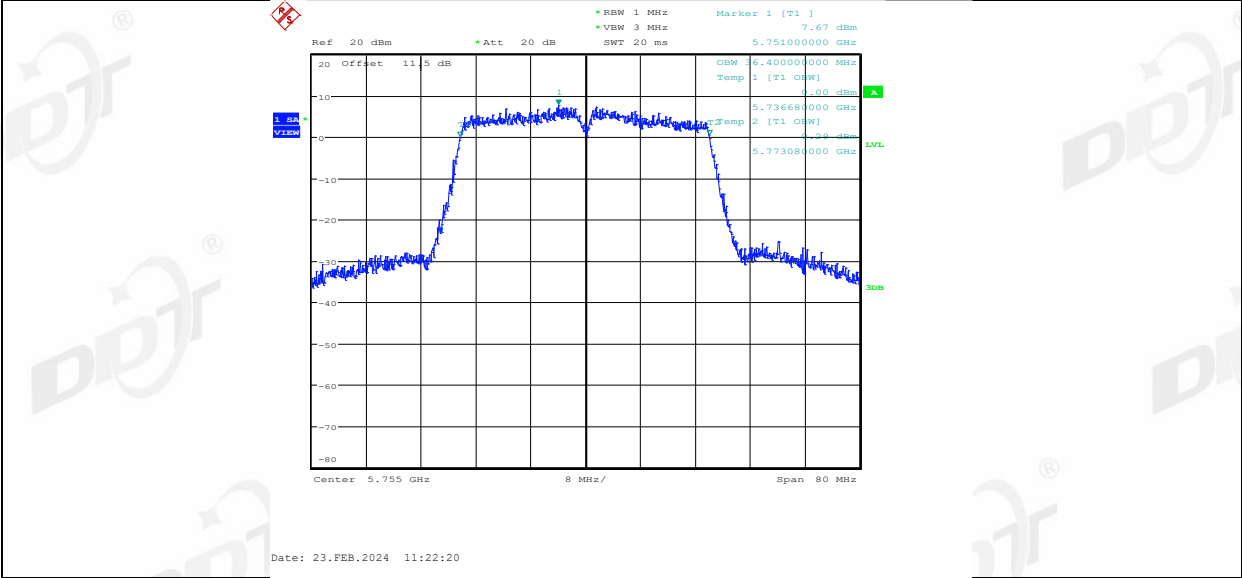
11N40SISO Ant1 5670



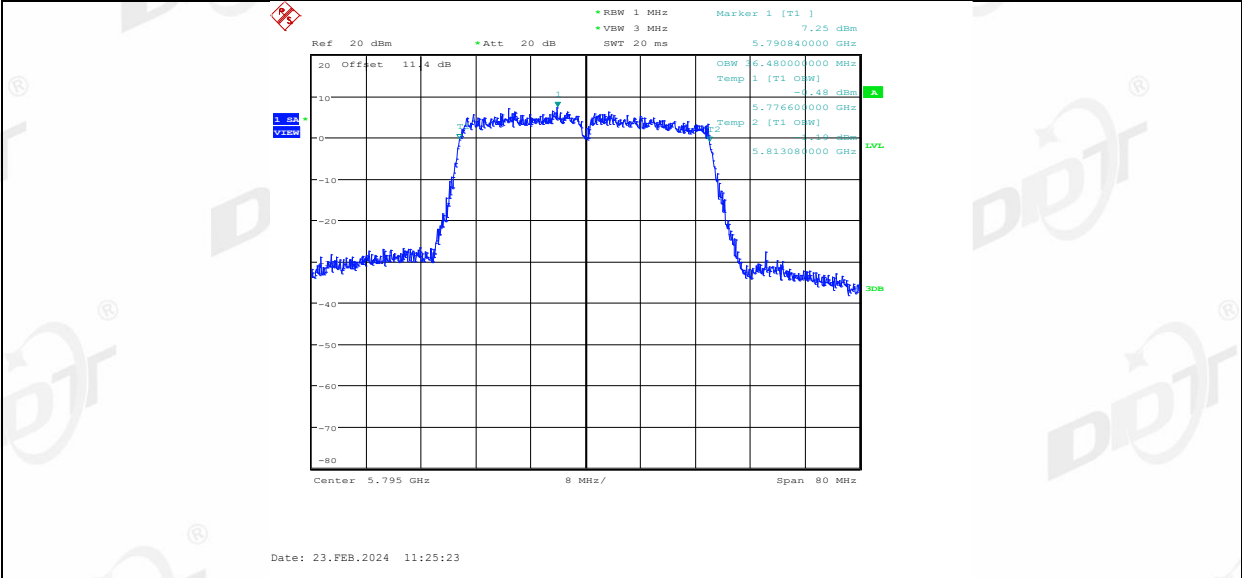
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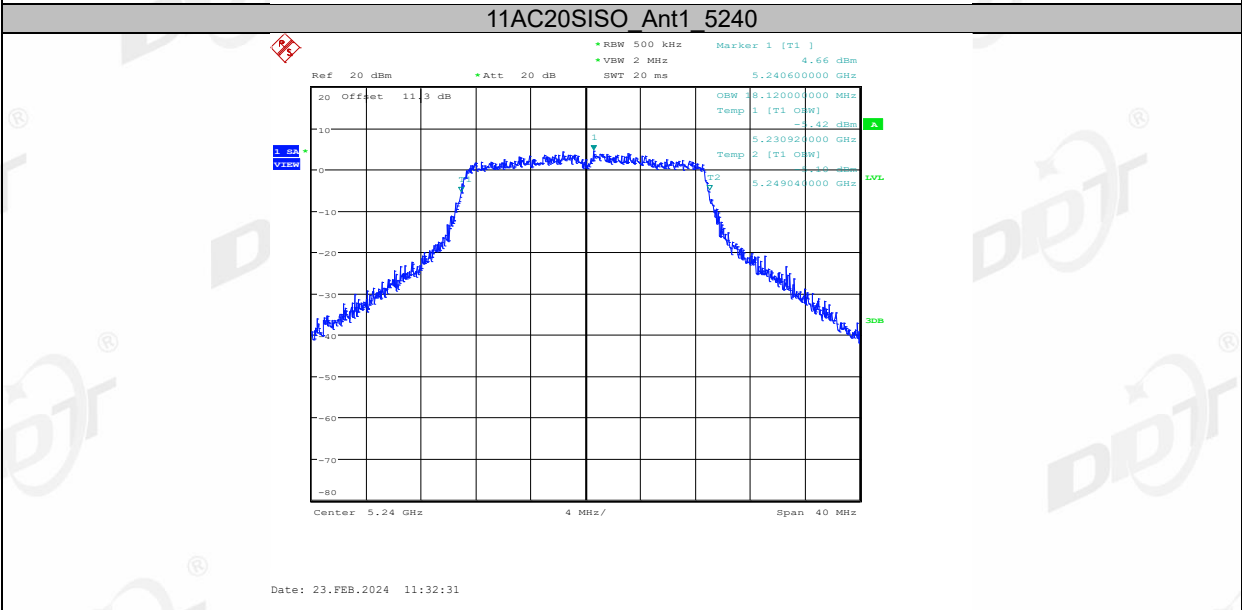
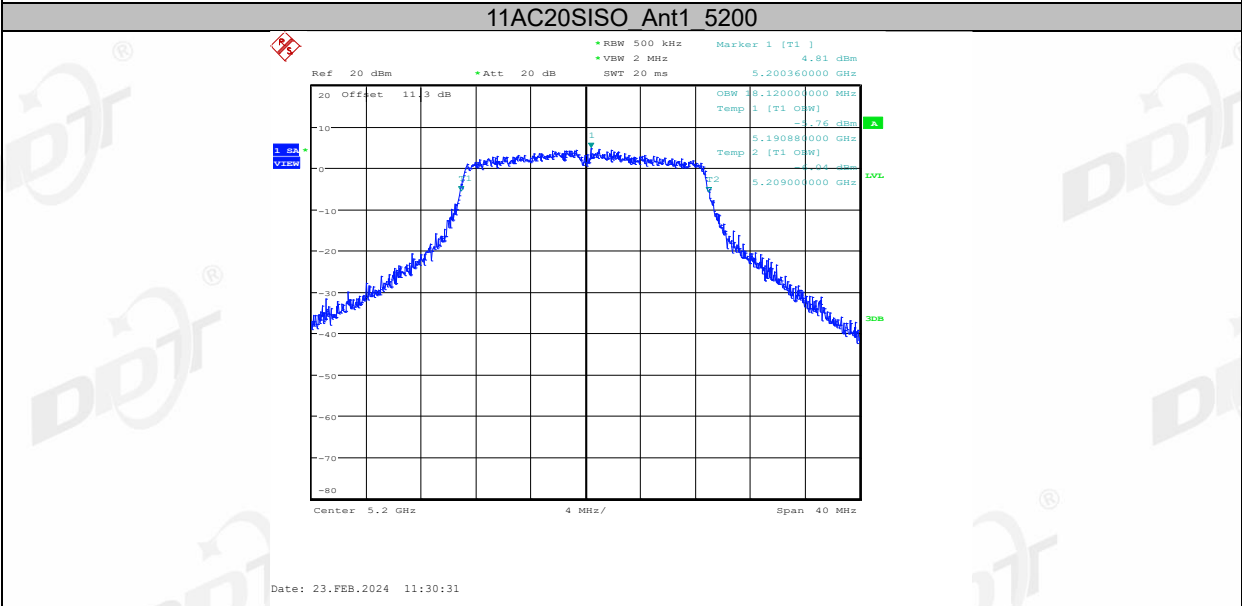
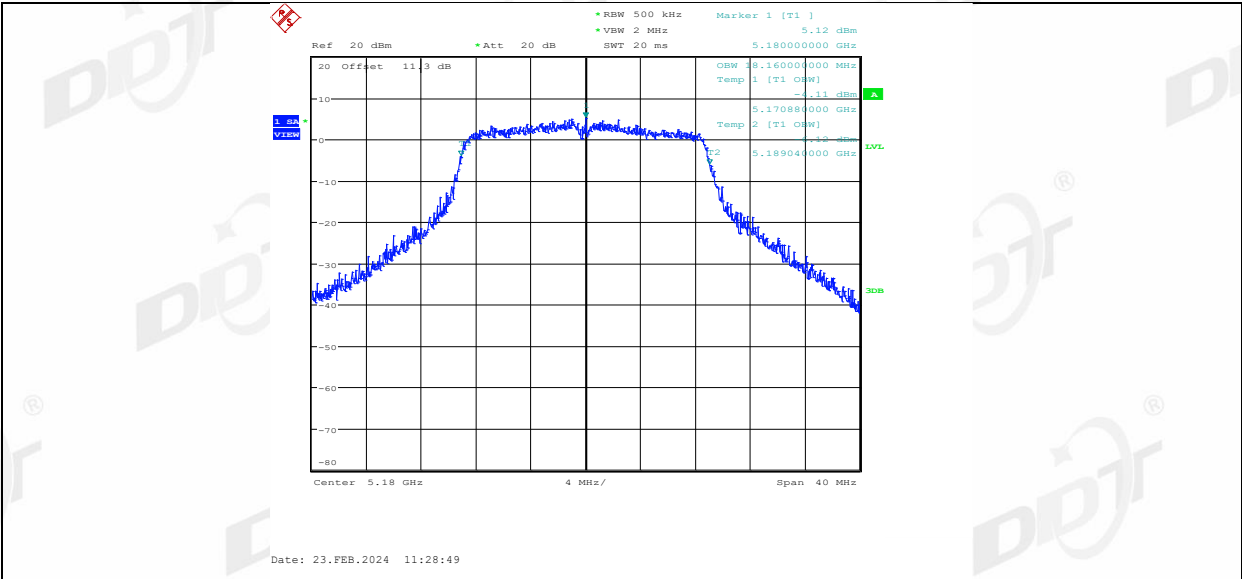
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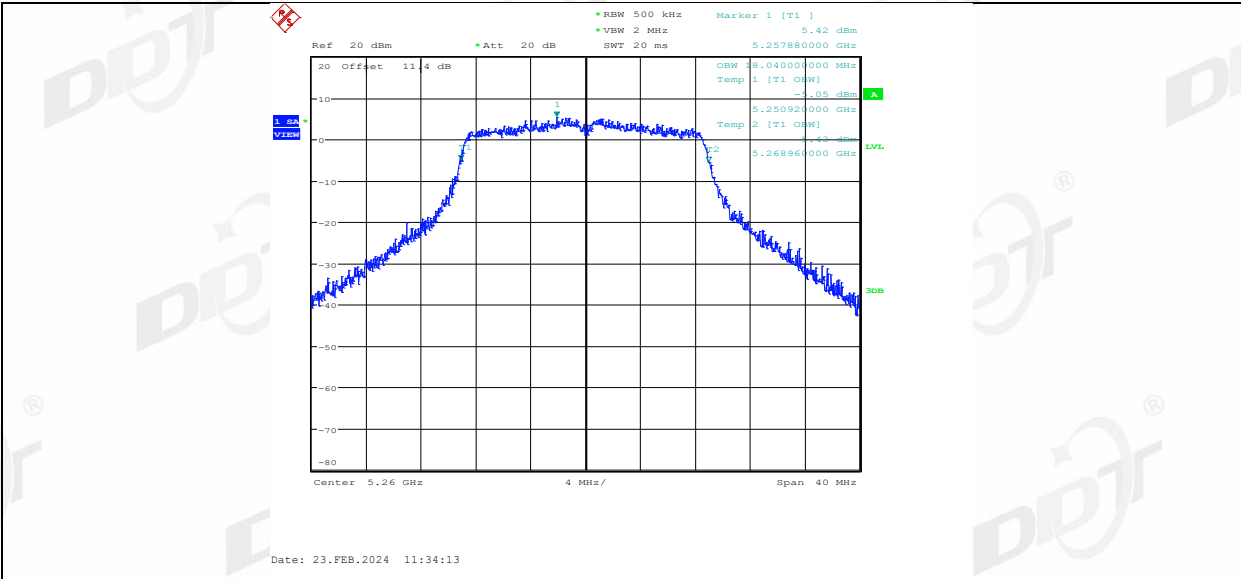
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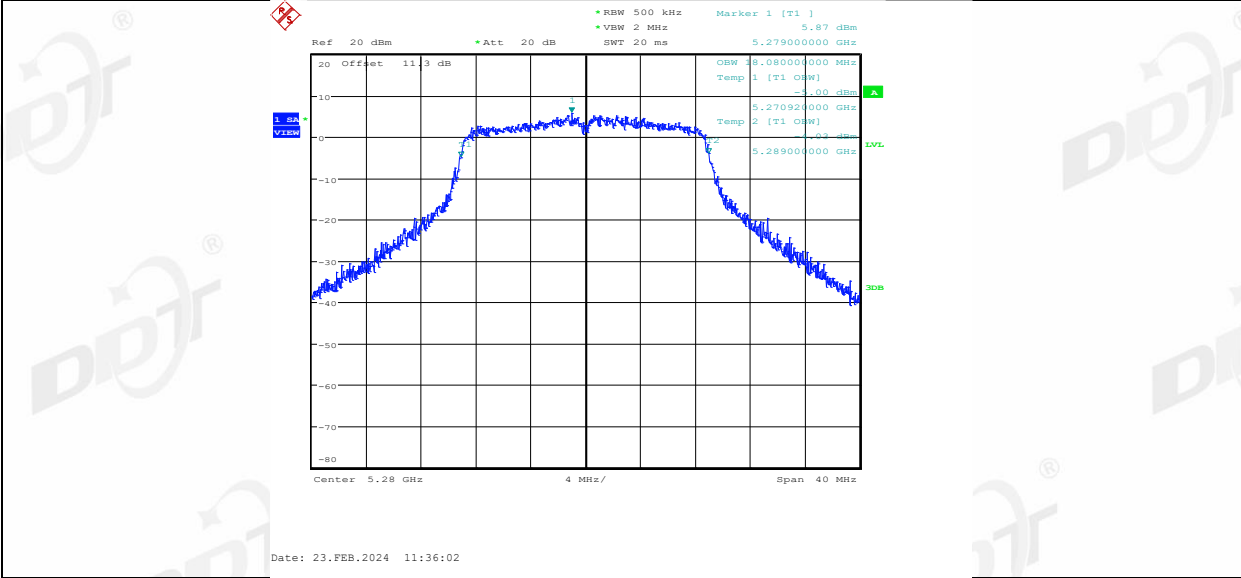
11AC20SISO Ant1 5180



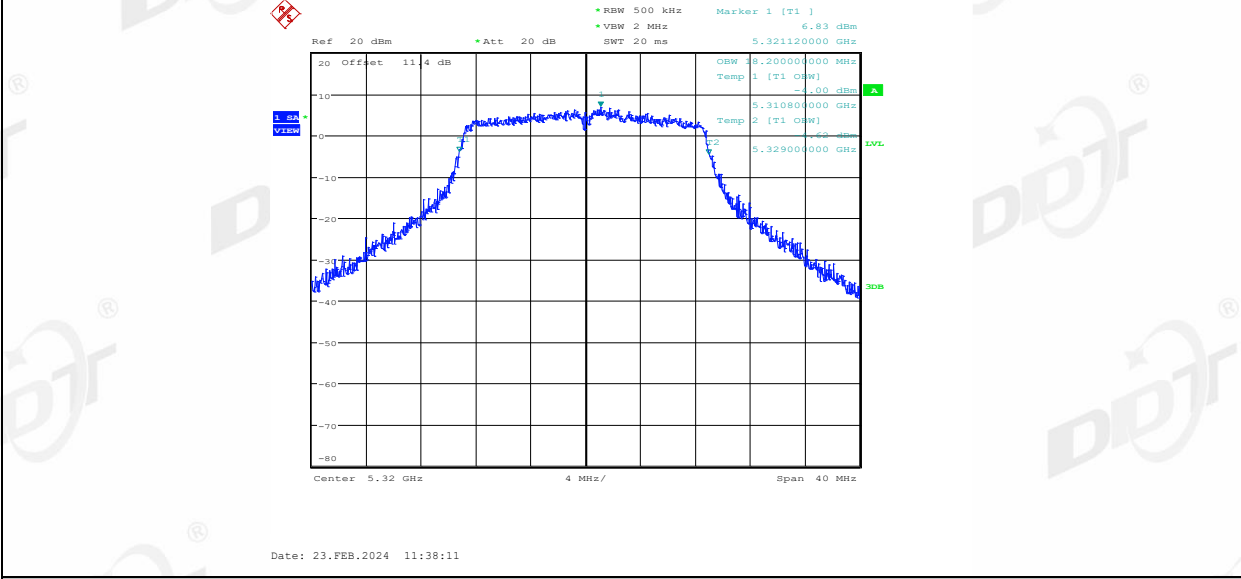
11AC20SISO_Ant1_5260



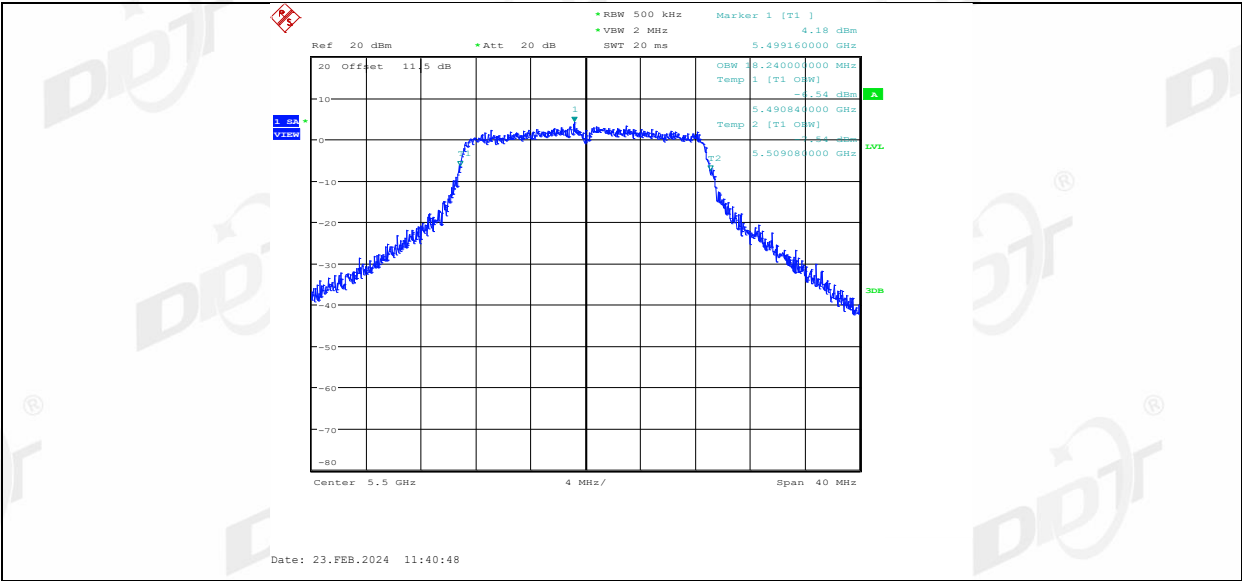
11AC20SISO_Ant1_5280



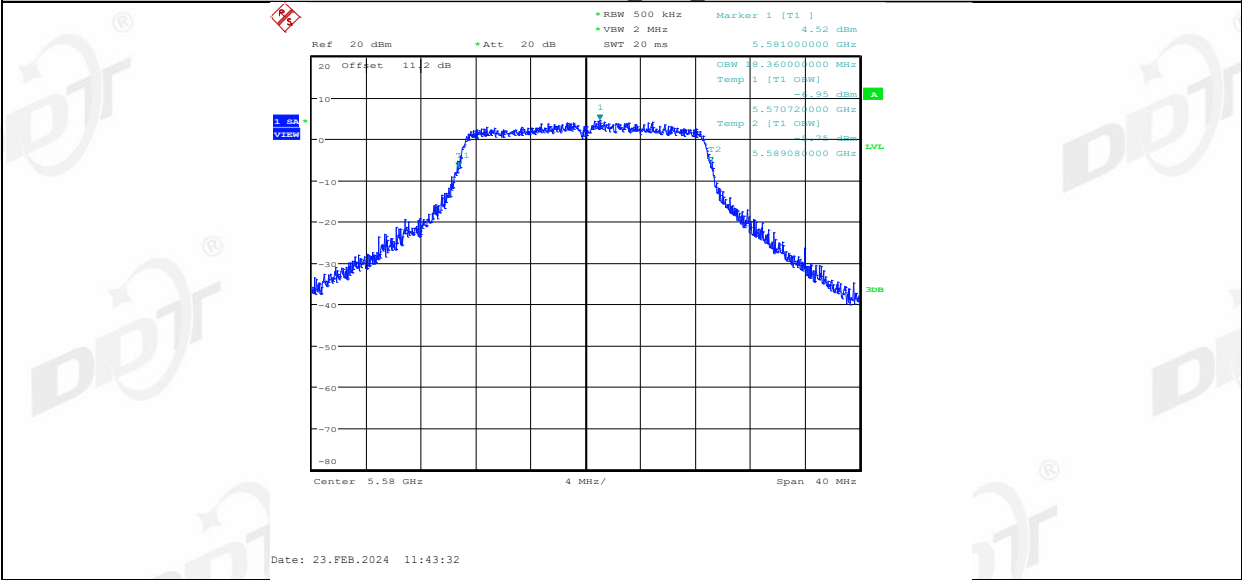
11AC20SISO_Ant1_5320



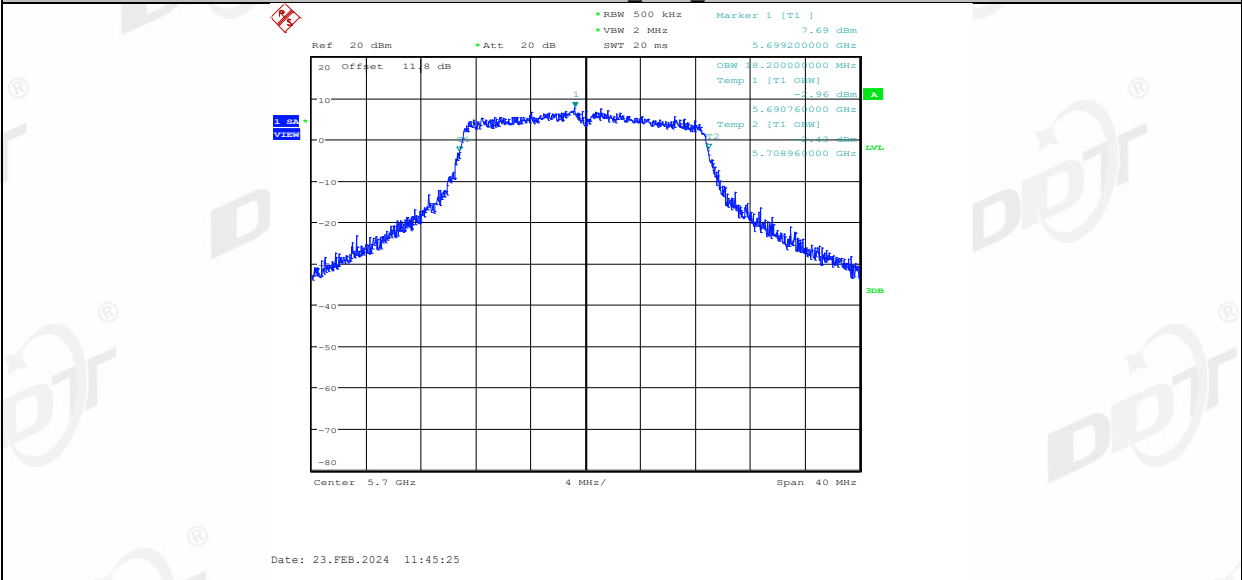
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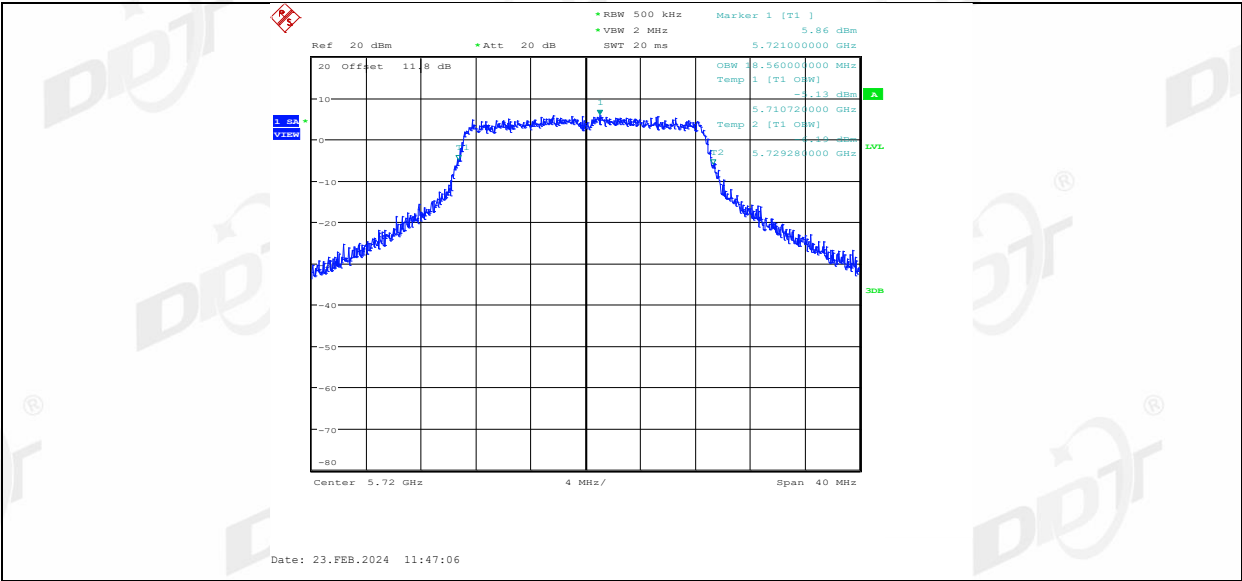
11AC20SISO_Ant1_5580



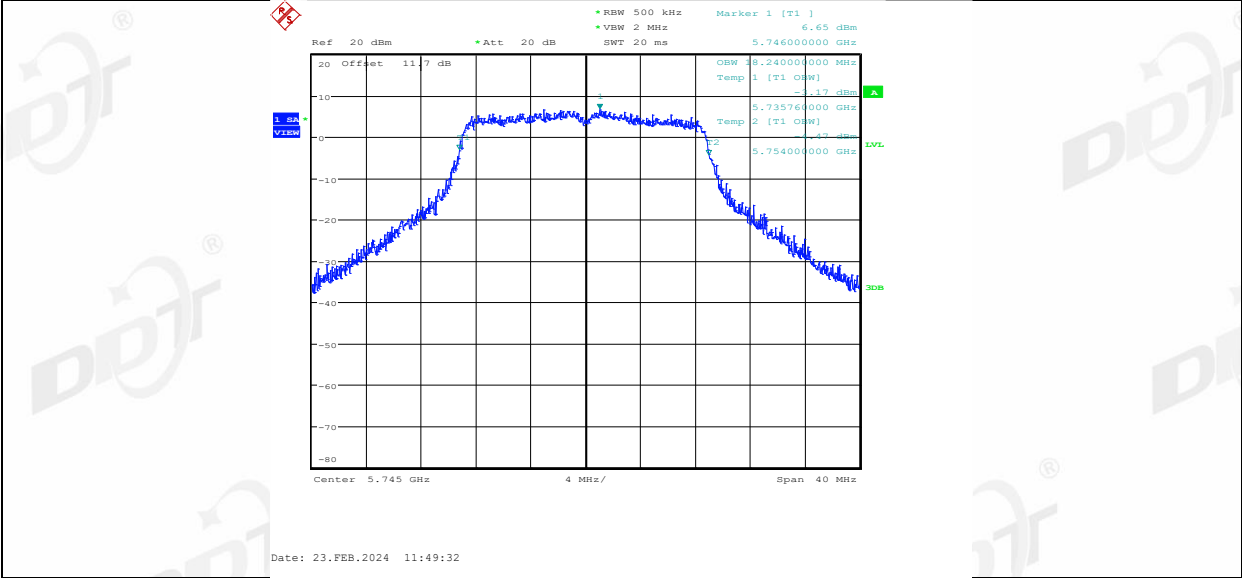
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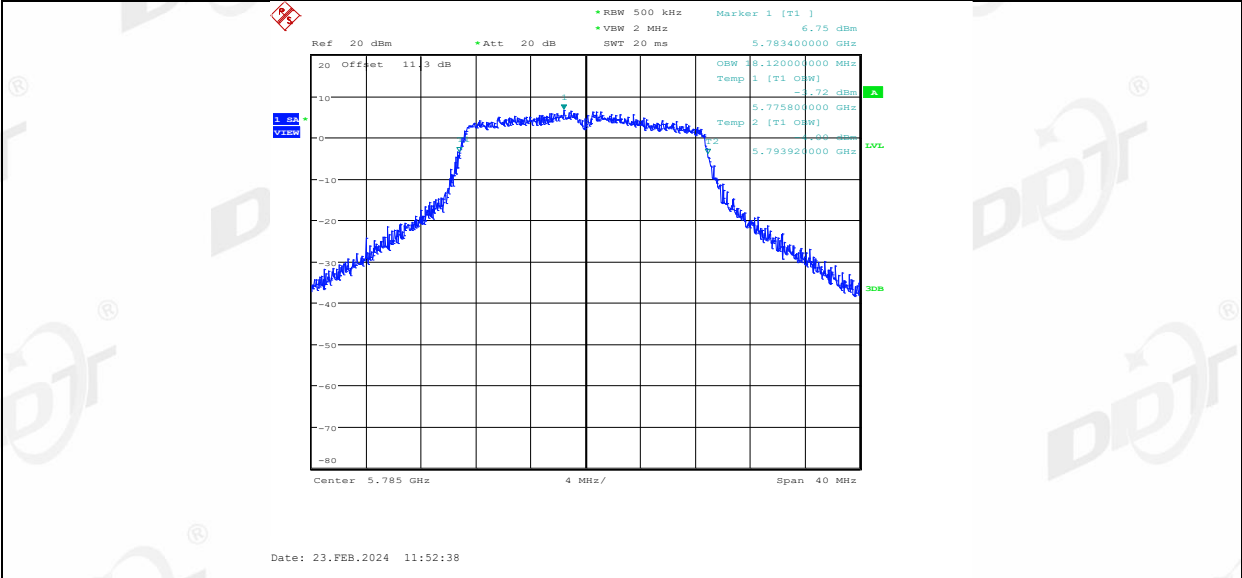
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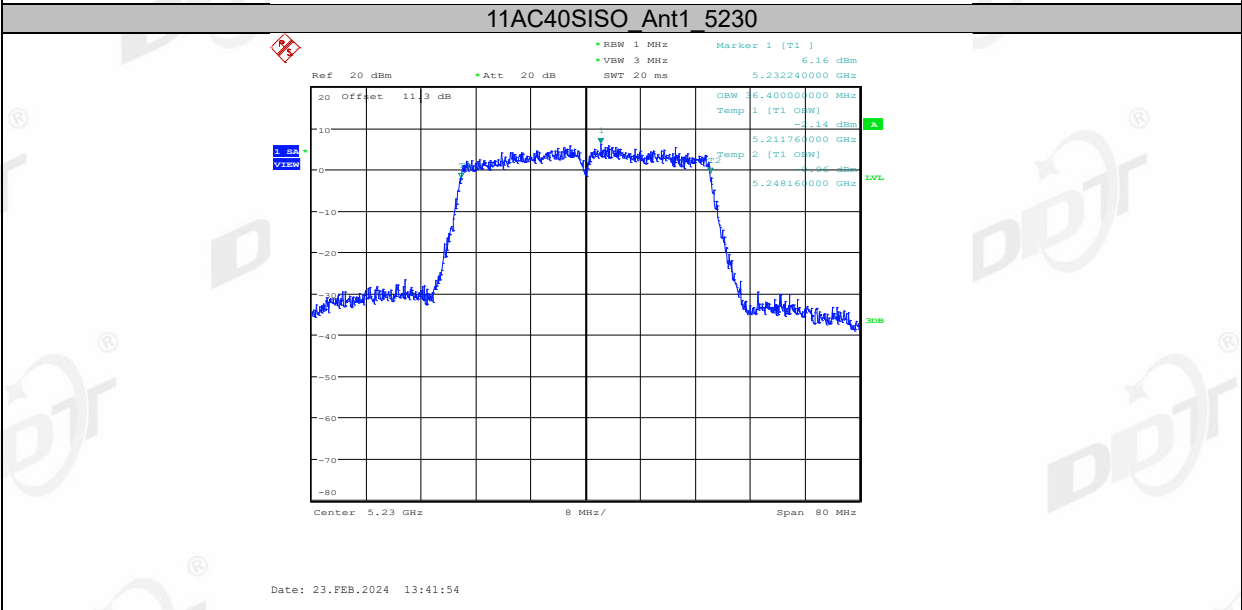
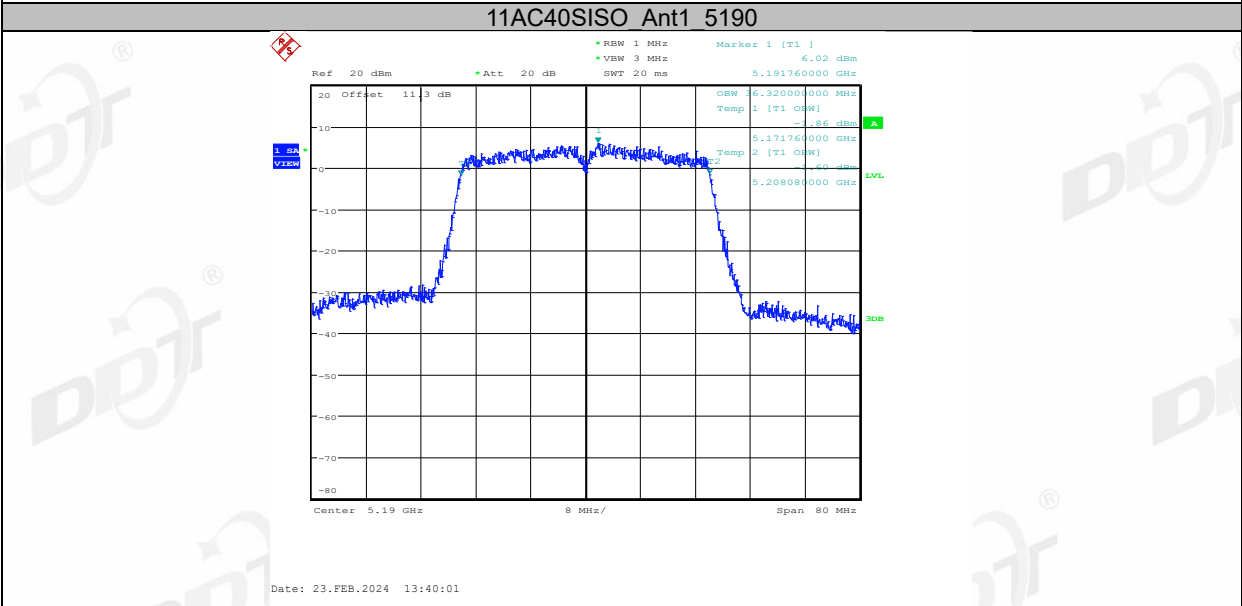
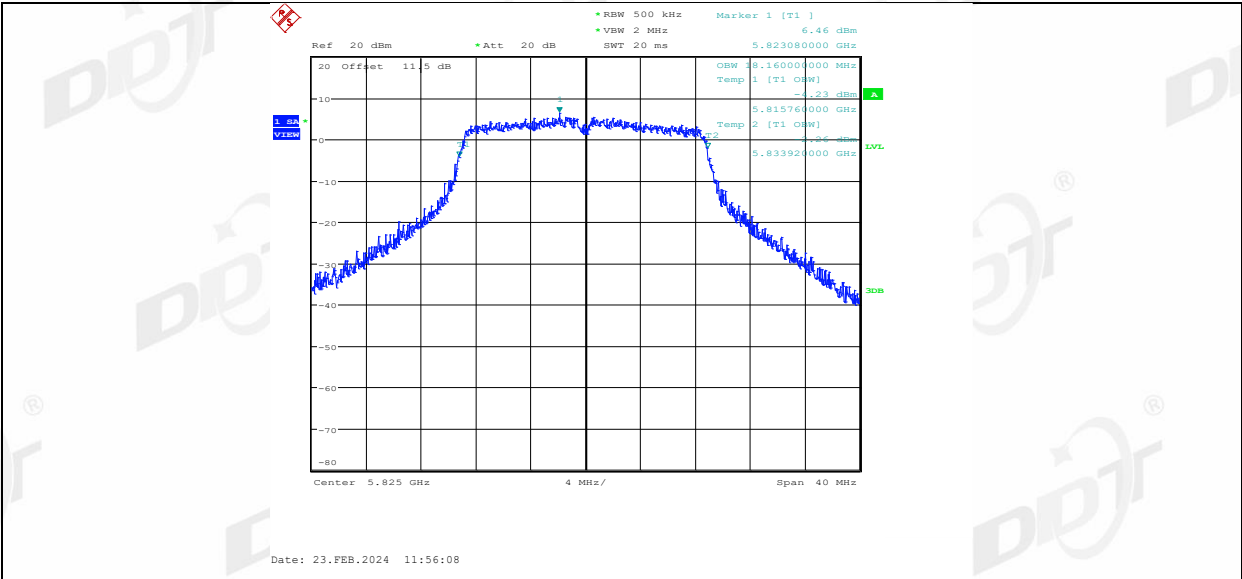
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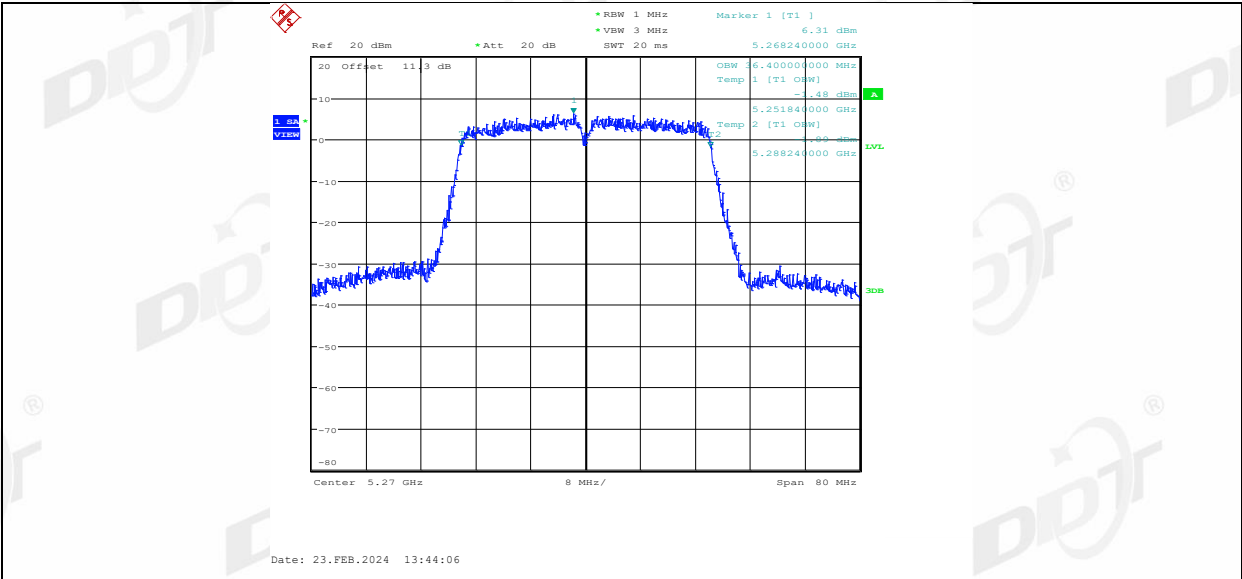
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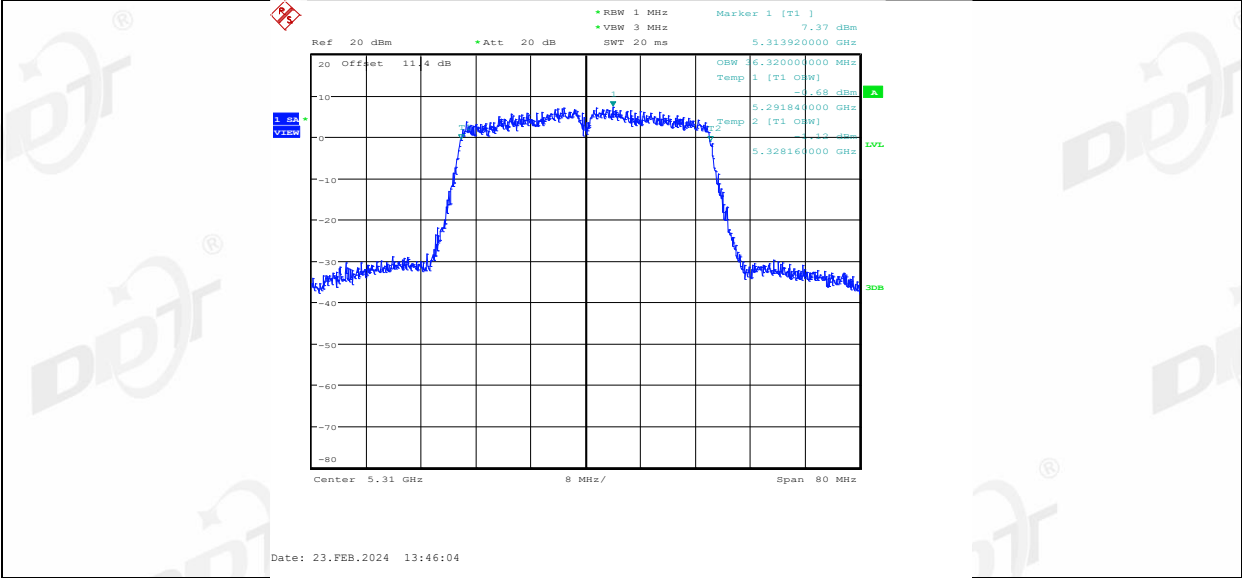
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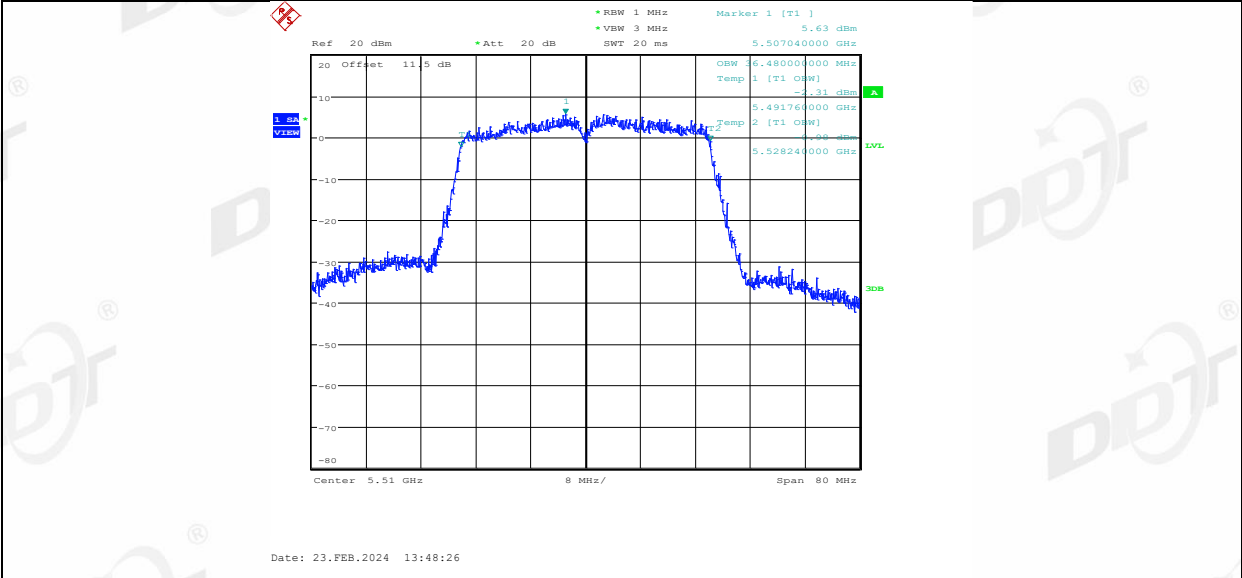
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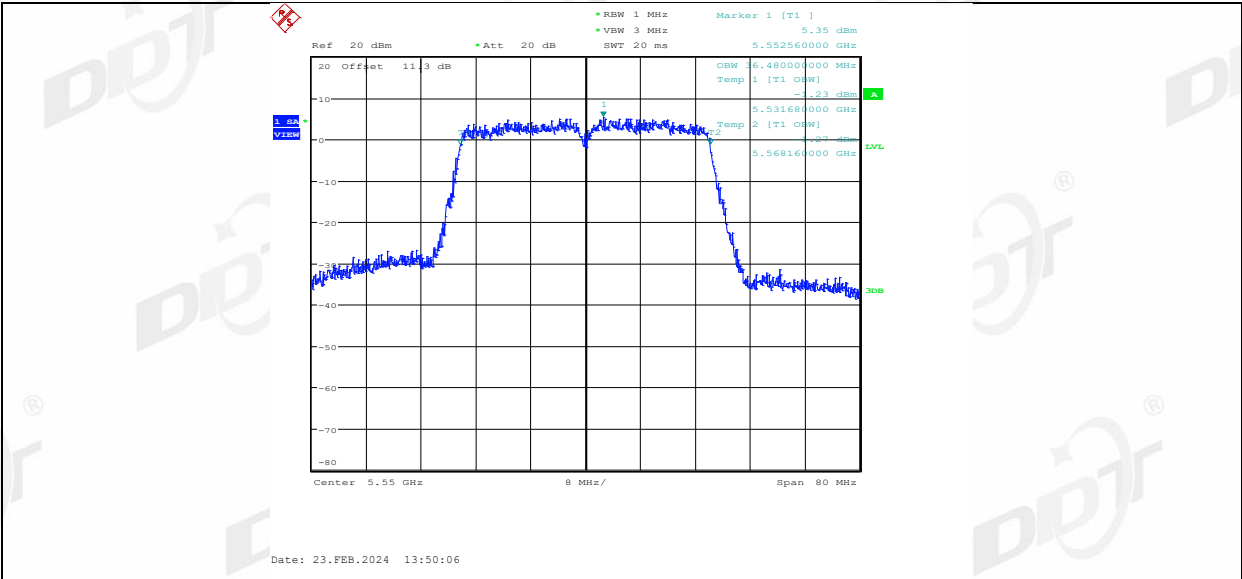
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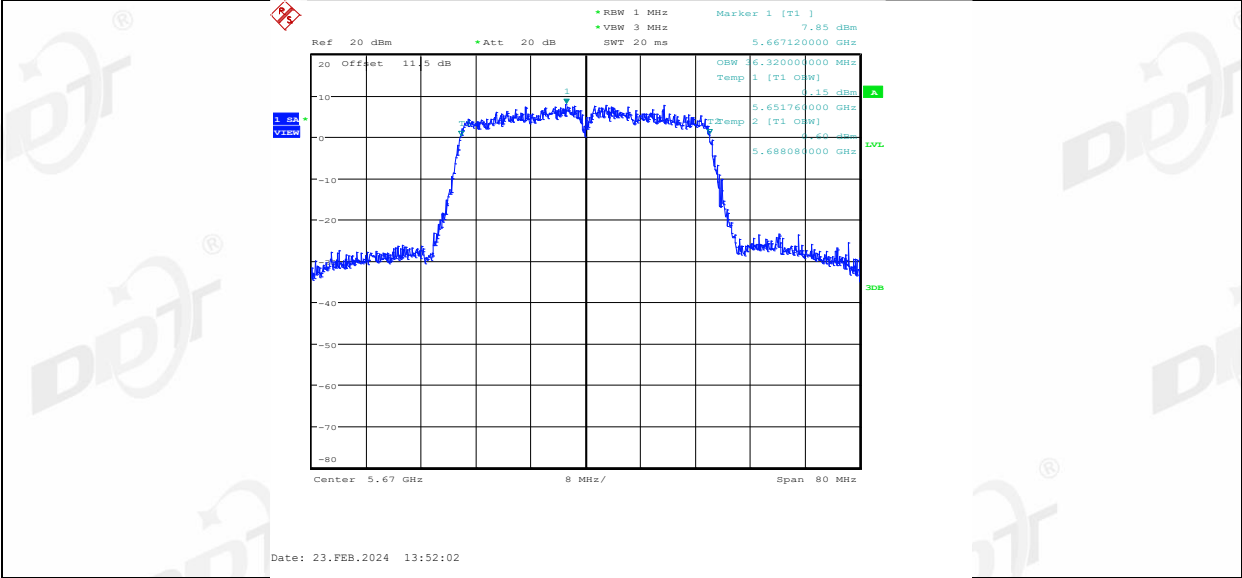
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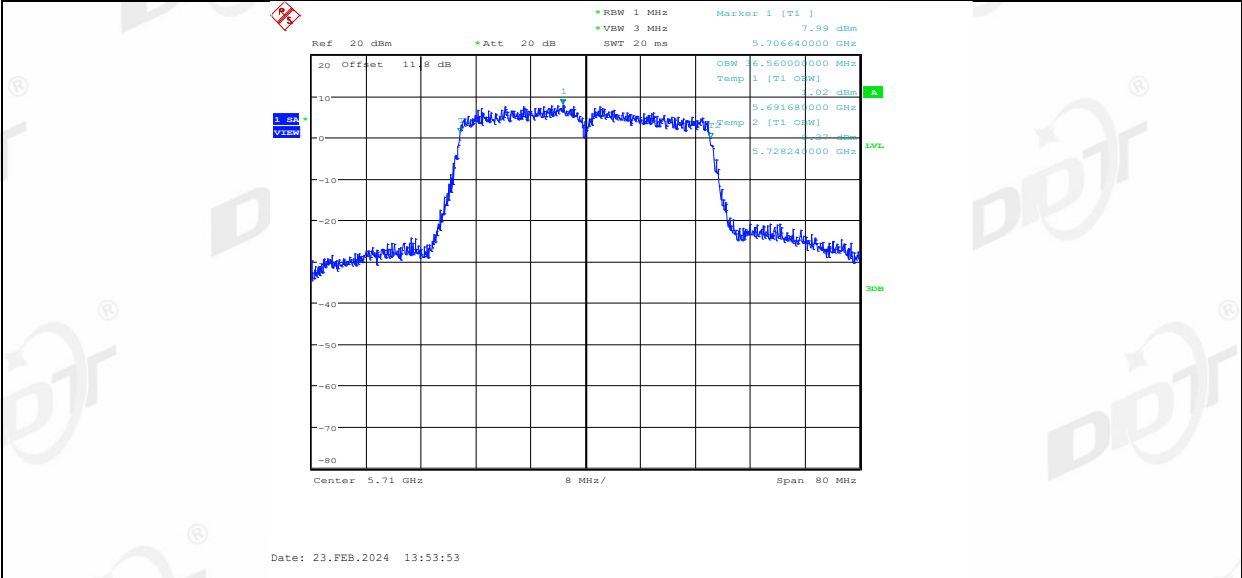
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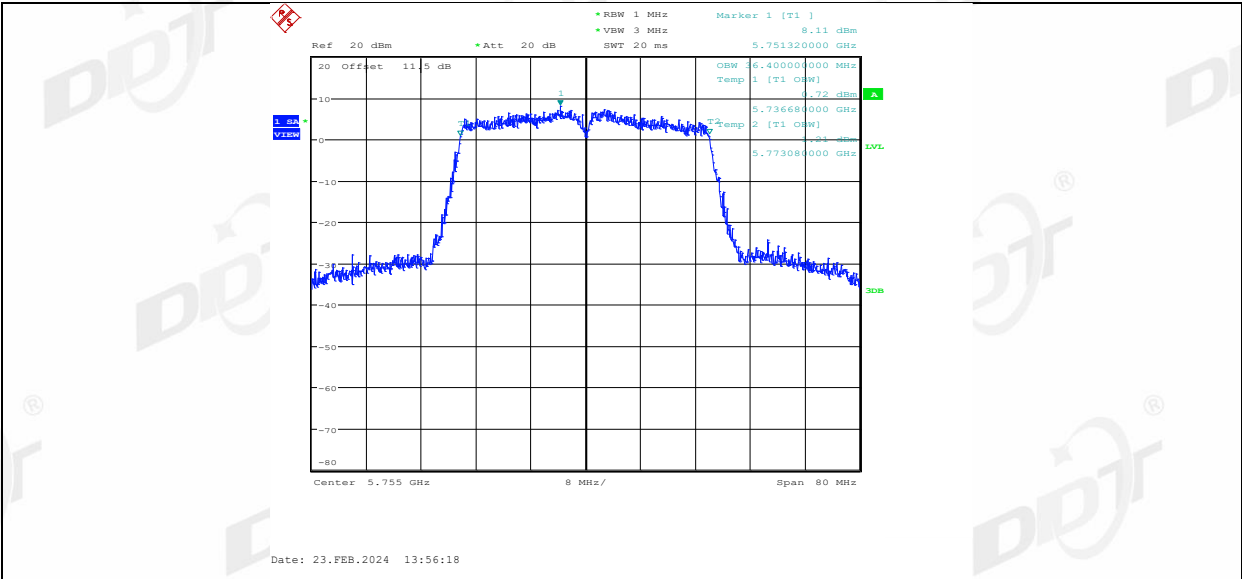
11AC40SISO_Ant1_5670



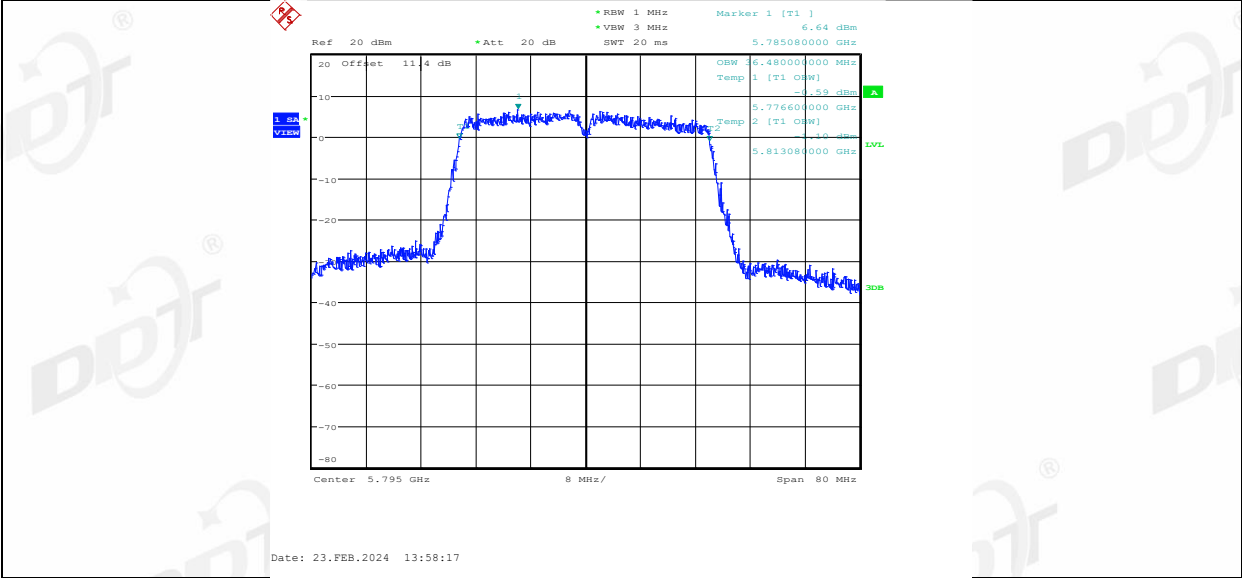
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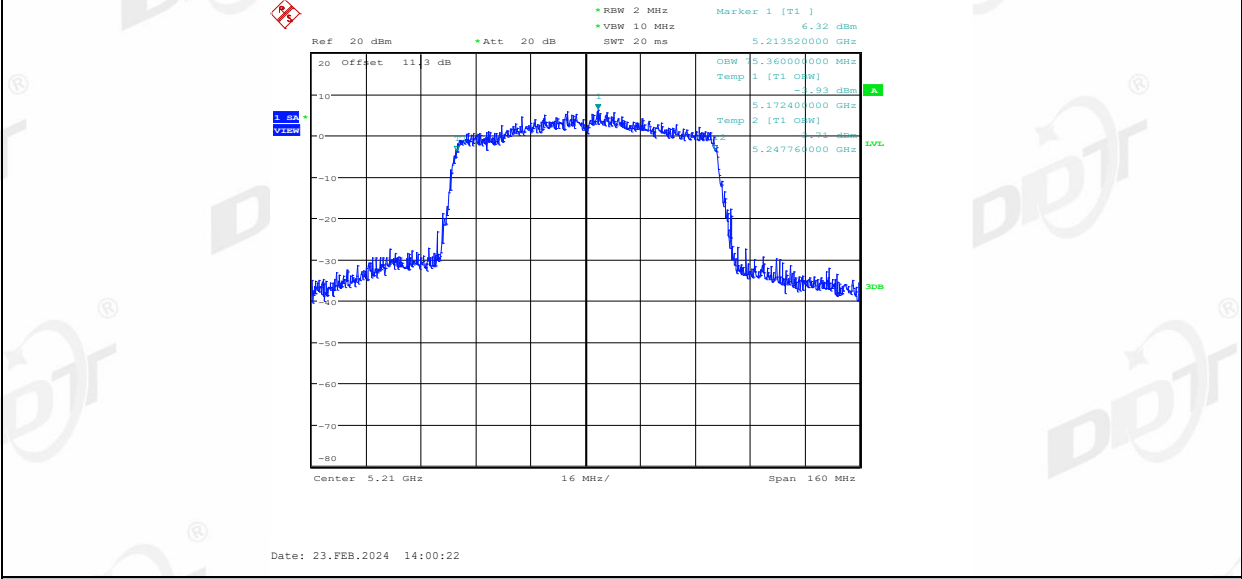
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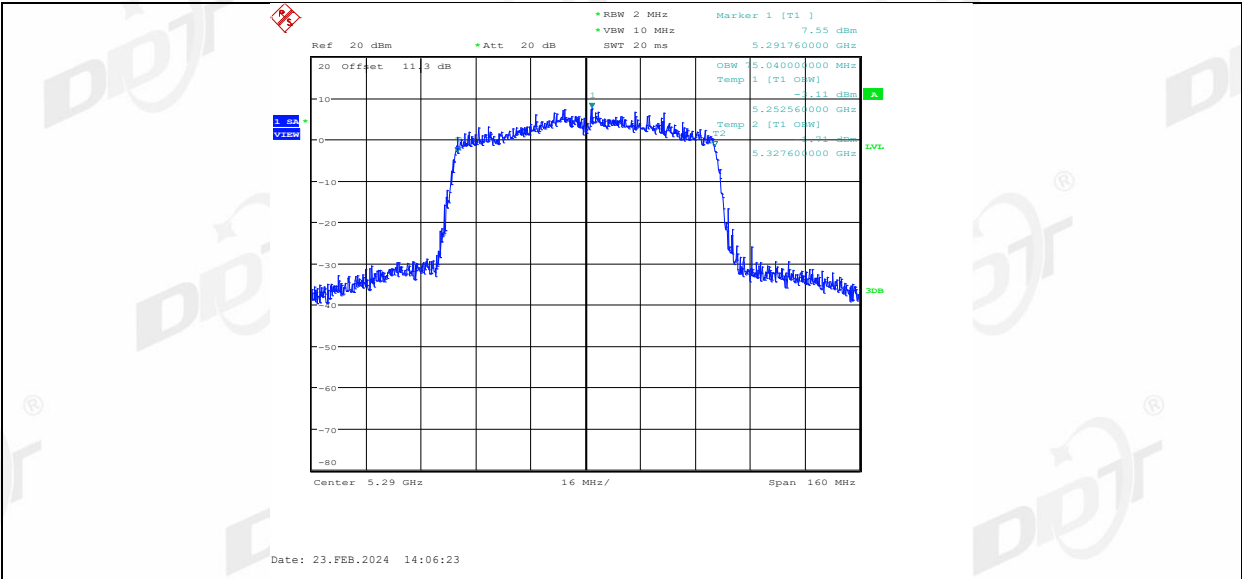
11AC40SISO_Ant1_5795



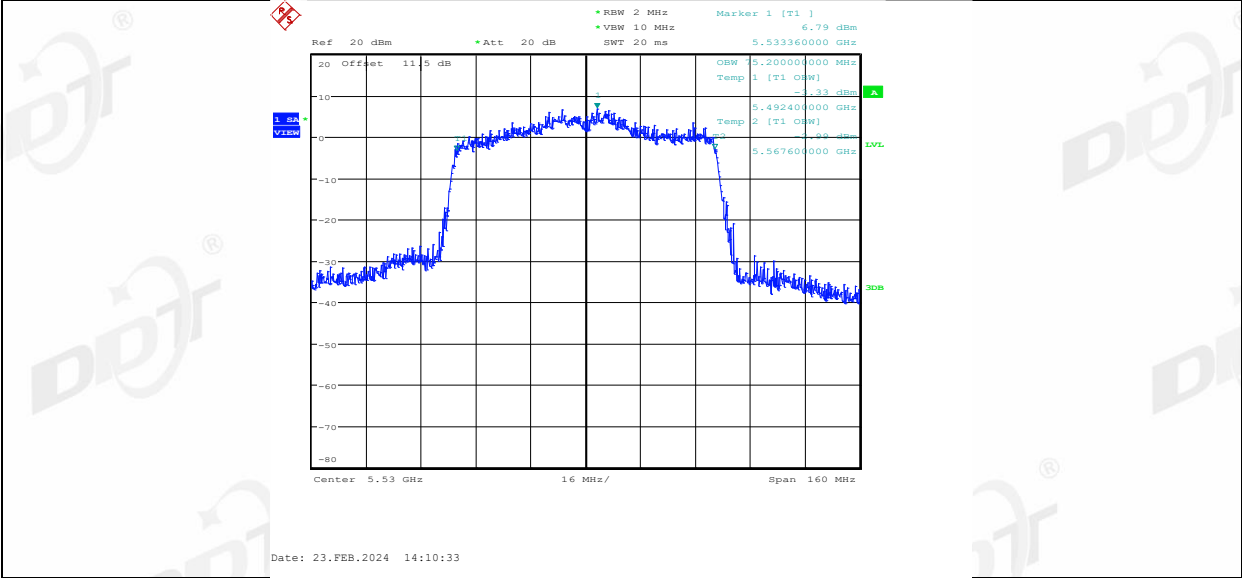
11AC80SISO_Ant1_5210



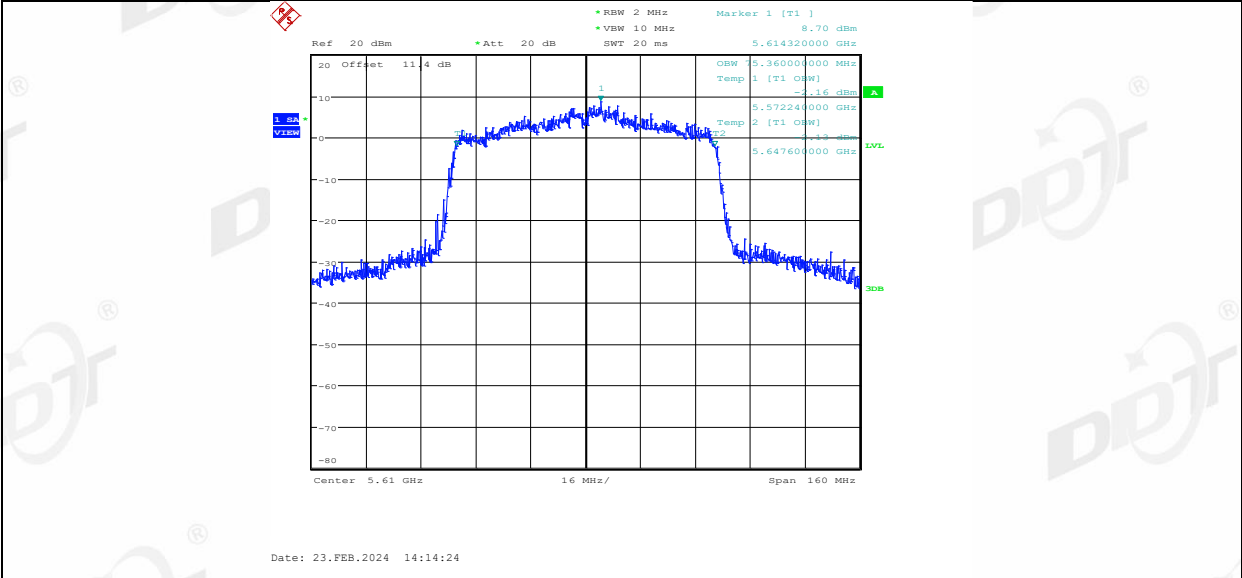
11AC80SISO_Ant1_5290



11AC80SISO_Ant1_5530



11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5690

