FCC CERTIFICATION TEST REPORT

Applicant	:	BYD Auto Industry Company Limited
Address of Applicant	:	No.3001, 3007, HengPing Road, Pingshan, Shenzhen, Guangdong, P.R. China
Manufacturer	:	BYD Auto Industry Company Limited
Address of Manufacturer	:	No.3001, 3007, HengPing Road, Pingshan, Shenzhen, Guangdong, P.R. China
Equipment under Test	:	In-vehicle Multimedia Host
Model No.	:	MTCJ06-A03
FCC ID	:	SD4- MTCJ06-A03
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart C, ANSI C63.10:2020
Report No.	:	DDT-RE24122405-5E03
Issue Date	:	2025/03/17
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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Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C,

ANSI C63.10:2020

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-RE24122405-5E03		
Date of Receipt:	2025/01/03	**Date of Test:**	2025/01/03 - 2025/03/07

Created: Jacky Huang	Reviewed: Ella Gong	Approved: Damon Hu
Jacky Huang	Ella Gong	GUANGDONG DONGDIAN TESTING SERVICE CO.,LTD. 广东东电检测技术有限公司 Damon Hu Certificate and Report Seal 检验检测专用章
2025/03/17	2025/03/17	2025/03/17

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	2025/03/17	

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	6 dB Bandwidth and 99% Bandwidth	FCC Part 15: 15.247(a)(2)	/	Pass
2	Peak Output Power	FCC Part 15: 15.247(b)(3)	/	Pass
3	Power Spectral Density	FCC Part 15:15.247(e)	/	Pass
4	RF Conducted Spurious Emissions	FCC Part 15: 15.247(d)	/	Pass
5	Radiated Emission	FCC Part 15: 15.205, FCC Part 15: 15.209, FCC Part 15: 15.247(d)	/	Pass
6	Band Edge Compliance	FCC Part 15: 15.205, FCC Part 15: 15.209, FCC Part 15: 15.247(d)	/	Pass
7	Power Line Conducted Emissions	FCC Part 15: 15.207(a)	/	N/A
8	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	:	In-vehicle Multimedia Host
Model Number	:	MTCJ06-A03
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 12V

WLAN (2.4 GHz) Antenna information		
Antenna Type	External PCB antenna	
Antenna Gain (dBi)	Ant1	Ant2
	3.16	3.16
Note: This product does not support beamforming and MIMO.		

Radio Technology	:	IEEE 802.11b/g/n/ax
Operation frequency	:	IEEE 802.11b: 2412MHz to 2462MHz IEEE 802.11g: 2412MHz to 2462MHz IEEE 802.11n HT20: 2412MHz to 2462MHz IEEE 802.11n HT40: 2422MHz to 2452MHz IEEE 802.11ax HE20: 2412MHz to 2462MHz IEEE 802.11ax HE40: 2422MHz to 2452MHz
Modulation	:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax: OFDM, OFDMA (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)

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

Channel information					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	/	/

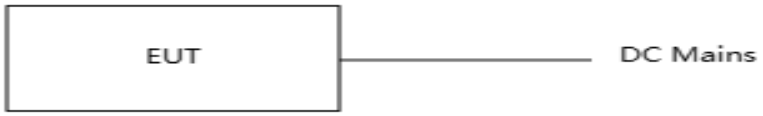
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's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

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
Connecting cable	N/A	N/A	length: 2.0m, unshielded
Bluetooth/WIFI antenna	N/A	N/A	length: 1.80m, shielded
FM/AM antenna	N/A	N/A	length: 3.15m, shielded
GNSS antenna	N/A	N/A	length: 2.0m, shielded

2.3. Block diagram of EUT configuration for test

Configuration diagram



2.4. Decision of final test mode

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

Test software: QRCT.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: 0.5dB (According to the manufacturer's claims)

Tested mode, Tx Power Setting, Data rate, Channel, and Frequency					
Tested mode	Tx Power Setting		Data rate (Mbps) (see Note)	Test Channel	Frequency (MHz)
	ANT1	ANT2			
IEEE 802.11b	10	10	1	LCH: CH1	2412
	10	10	1	MCH: CH6	2437
	10	10	1	HCH: CH11	2462
IEEE 802.11g	10	10	6	LCH: CH1	2412
	10	10	6	MCH: CH6	2437
	10	10	6	HCH: CH11	2462
IEEE 802.11n HT20	10	10	MCS 8	LCH: CH1	2412
	10	10	MCS 8	MCH: CH6	2437
	10	10	MCS 8	HCH: CH11	2462
IEEE 802.11n HT40	10	10	MCS 8	LCH: CH3	2422
	10	10	MCS 8	MCH: CH6	2437
	10	10	MCS 8	HCH: CH9	2452

IEEE 802.11ax HE20	SU: 10 RU: 9	SU: 10 RU: 9	MCS 0	LCH: CH1	2412
	SU: 10 RU: 9	SU: 10 RU: 9	MCS 0	MCH: CH6	2437
	SU: 10 RU: 9	SU: 10 RU: 9	MCS 0	HCH: CH11	2462
IEEE 802.11ax HE40	SU: 10 RU: 9	SU: 10 RU: 9	MCS 0	LCH: CH3	2422
	SU: 10 RU: 9	SU: 10 RU: 9	MCS 0	MCH: CH6	2437
	SU: 10 RU: 9	SU: 10 RU: 9	MCS 0	HCH: CH9	2452
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 to106 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-20240, G-20118

2.8. Measurement uncertainty

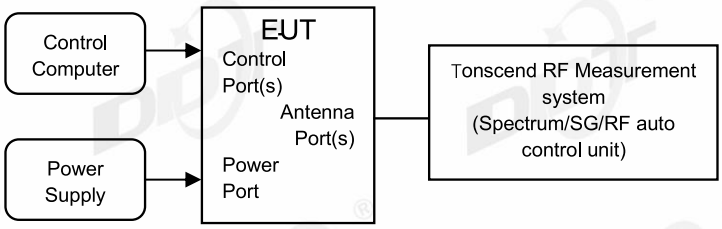
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 26.5 GHz)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 ℃
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	Cal. Interval
☒ RF Connected Test (RF Measurement System 1#)					
SIGNAL ANALYZER	R&S	FSQ26	101272	2025/03/31	1 Year
Wideband Radio Communication Tester	R&S	CMW500	120259	2025/07/08	1 Year
MXG Vector Signal Generator	KEYSIGHT	N5182B	MY59100192	2025/03/31	1 Year
MXG Vector Signal Generator	Agilent	N5182A	MY19060405	2025/03/31	1 Year
RF Control Unit	Tonsend	JS0806-2	158060010	2025/03/31	1 Year
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2025/04/22	1 Year
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A	N/A

4. 6dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

4.3. Test procedure

(1) The test according to ANSI C63.10-2020 clause 11.8.

(2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously

(4) Use the following spectrum analyzer settings for 6 dB Bandwidth:

RBW:	100 kHz
VBW:	≥ [3 × RBW]
Detector Mode:	peak
Sweep time:	auto
Trace mode	max hold

(5) Allow the trace to stabilize, measure the 6 dB bandwidth of signal, and record the results in the report.

4.4. Test result

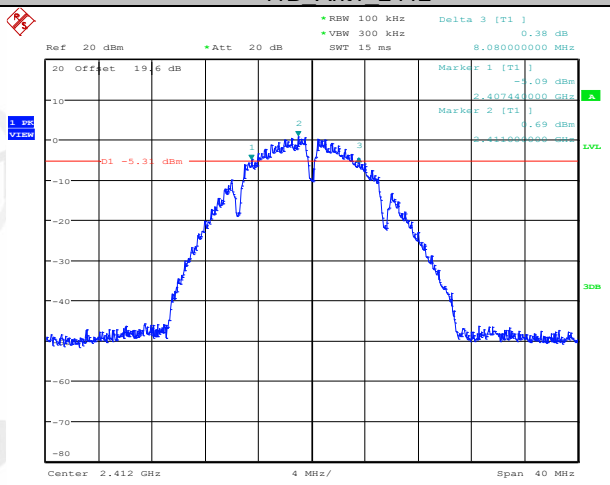
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.6℃, 45%RH	Test Date:	2025.01.21-2025.02.21
Test Power Supply:	DC 12V	Sample Number:	S24122405-001

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	8.08	2407.44	2415.52	0.5	PASS
	Ant2	2412	8.08	2407.96	2416.04	0.5	PASS
	Ant1	2437	8.56	2432.96	2441.52	0.5	PASS
	Ant2	2437	8.48	2432.48	2440.96	0.5	PASS
	Ant1	2462	8.48	2457.48	2465.96	0.5	PASS
	Ant2	2462	8.08	2457.96	2466.04	0.5	PASS
11G	Ant1	2412	15.68	2403.84	2419.52	0.5	PASS
	Ant2	2412	15.72	2404.44	2420.16	0.5	PASS
	Ant1	2437	15.72	2429.44	2445.16	0.5	PASS
	Ant2	2437	15.92	2428.84	2444.76	0.5	PASS
	Ant1	2462	15.96	2453.80	2469.76	0.5	PASS
	Ant2	2462	16.28	2453.84	2470.12	0.5	PASS
11N20SISO	Ant1	2412	16.28	2403.20	2419.48	0.5	PASS
	Ant2	2412	16.24	2404.52	2420.76	0.5	PASS
	Ant1	2437	16.32	2429.44	2445.76	0.5	PASS
	Ant2	2437	16.32	2428.20	2444.52	0.5	PASS
	Ant1	2462	16.28	2453.20	2469.48	0.5	PASS
	Ant2	2462	16.92	2453.60	2470.52	0.5	PASS
11N40SISO	Ant1	2422	36.32	2403.84	2440.16	0.5	PASS
	Ant2	2422	35.04	2404.48	2439.52	0.5	PASS
	Ant1	2437	34.96	2419.56	2454.52	0.5	PASS

	Ant2	2437	35.68	2418.84	2454.52	0.5	PASS
	Ant1	2452	24.96	2435.76	2460.72	0.5	PASS
	Ant2	2452	35.92	2433.84	2469.76	0.5	PASS
11AX20SISO	Ant1	2412	16.84	2402.68	2419.52	0.5	PASS
	Ant2	2412	16.88	2404.48	2421.36	0.5	PASS
	Ant1	2437	17.00	2429.44	2446.44	0.5	PASS
	Ant2	2437	18.64	2427.48	2446.12	0.5	PASS
	Ant1	2462	18.72	2452.52	2471.24	0.5	PASS
	Ant2	2462	18.72	2452.68	2471.40	0.5	PASS
11AX40SISO	Ant1	2422	38.08	2402.96	2441.04	0.5	PASS
	Ant2	2422	35.04	2404.48	2439.52	0.5	PASS
	Ant1	2437	31.52	2421.96	2453.48	0.5	PASS
	Ant2	2437	36.48	2418.04	2454.52	0.5	PASS
	Ant1	2452	35.04	2434.48	2469.52	0.5	PASS
	Ant2	2452	38.00	2432.96	2470.96	0.5	PASS

4.5. Test graphs

11B_Ant1_2412



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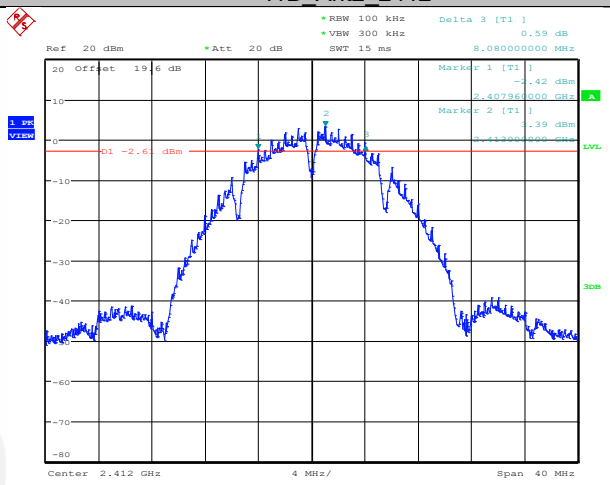

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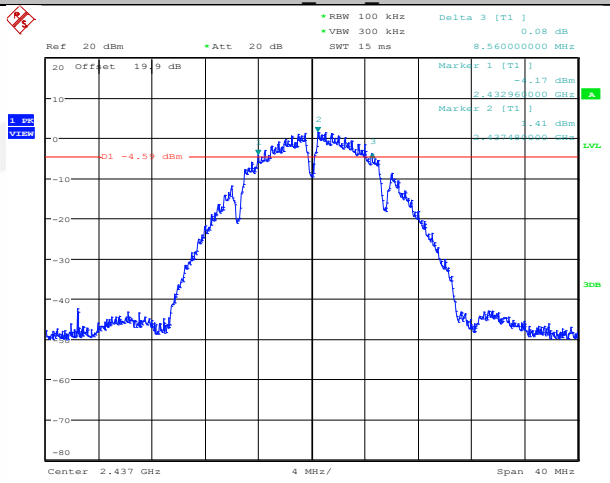

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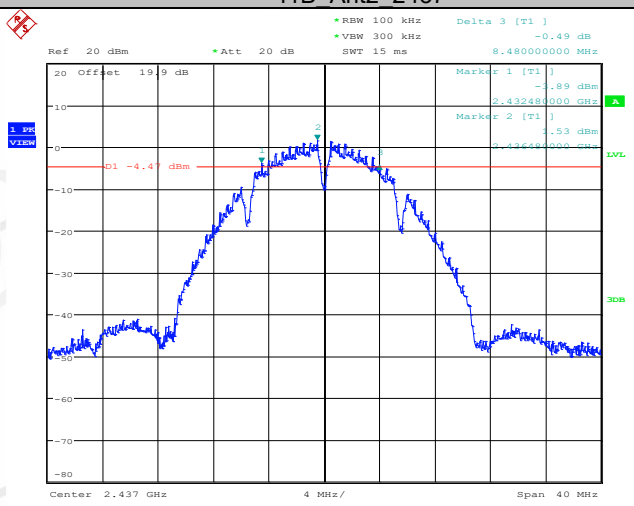

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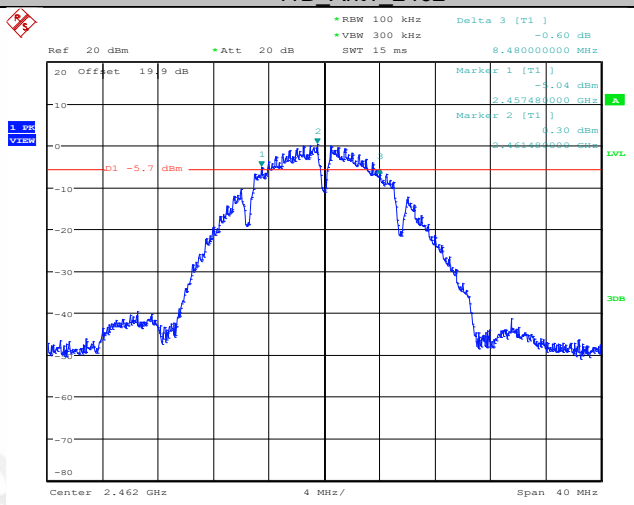

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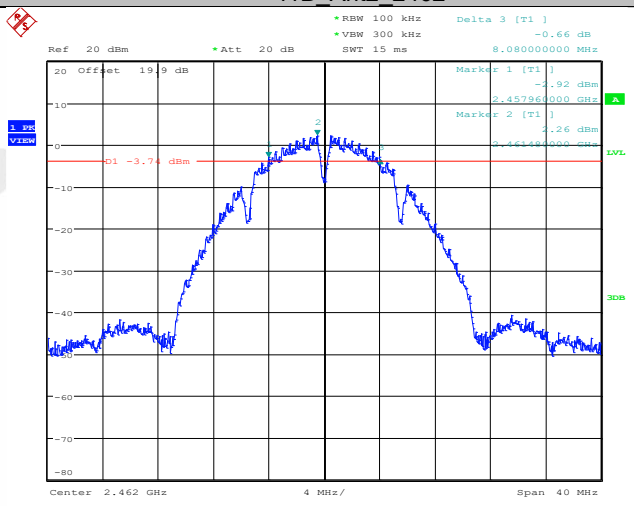

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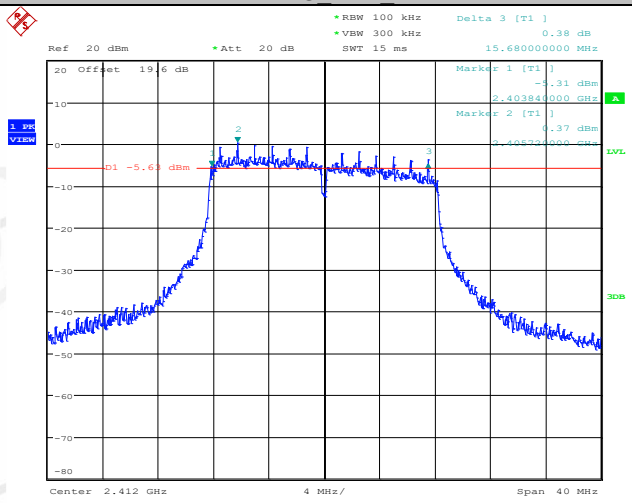

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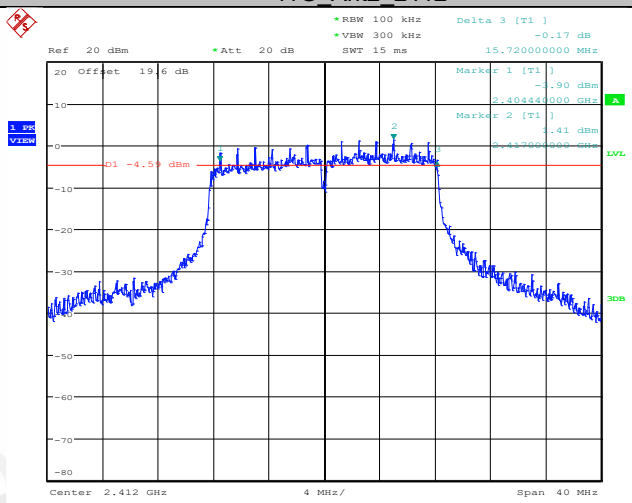

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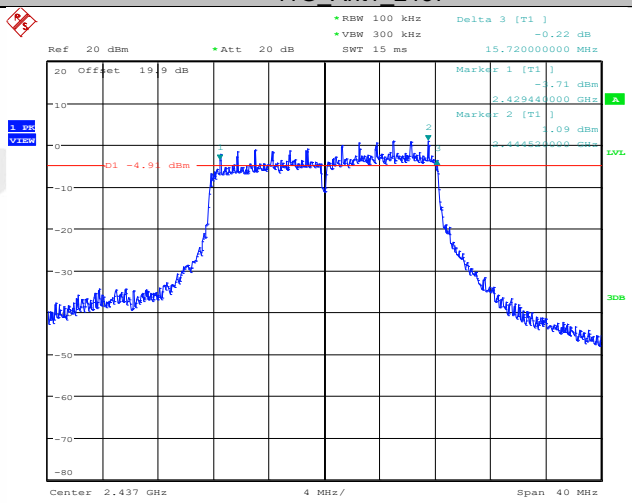

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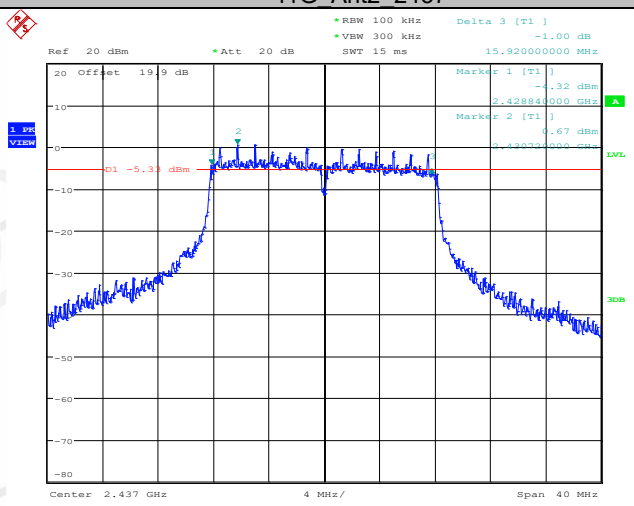

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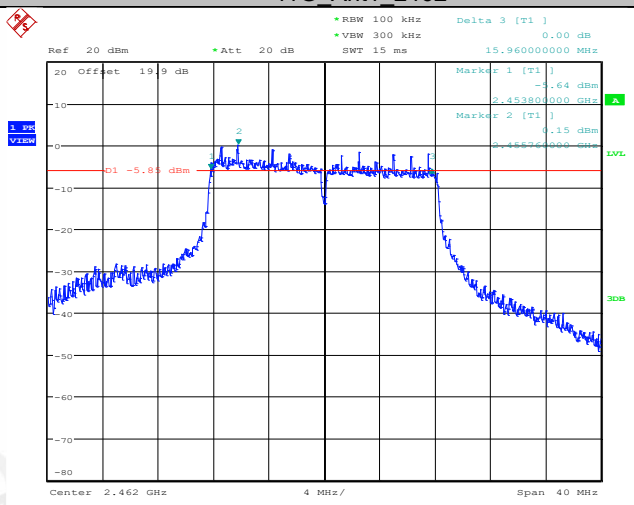

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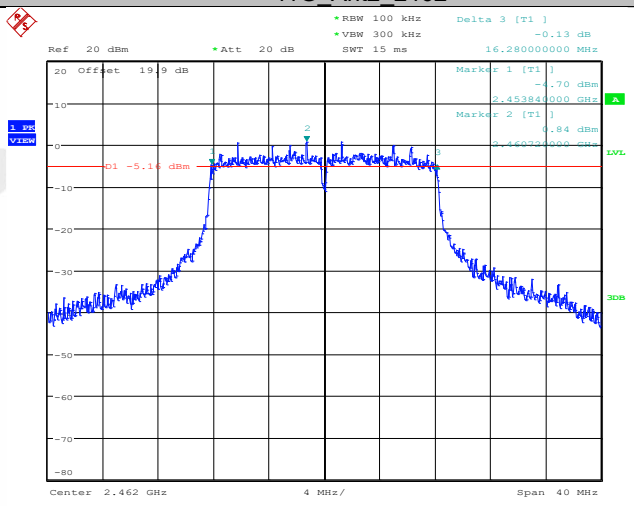

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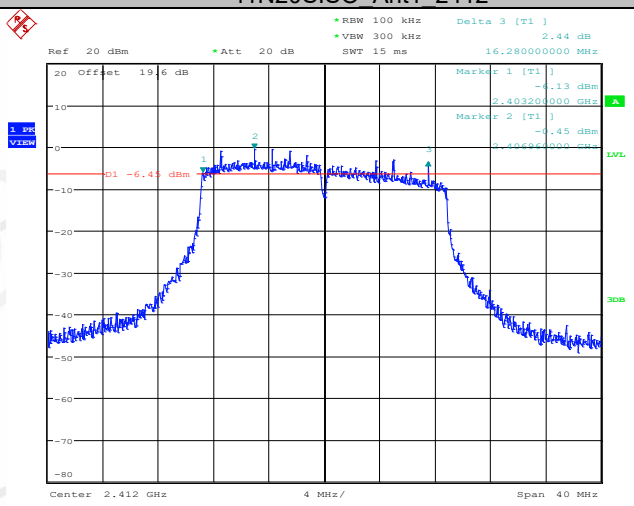

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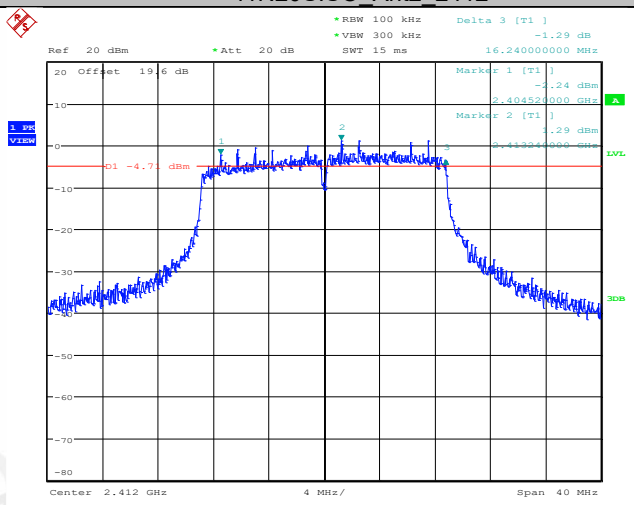

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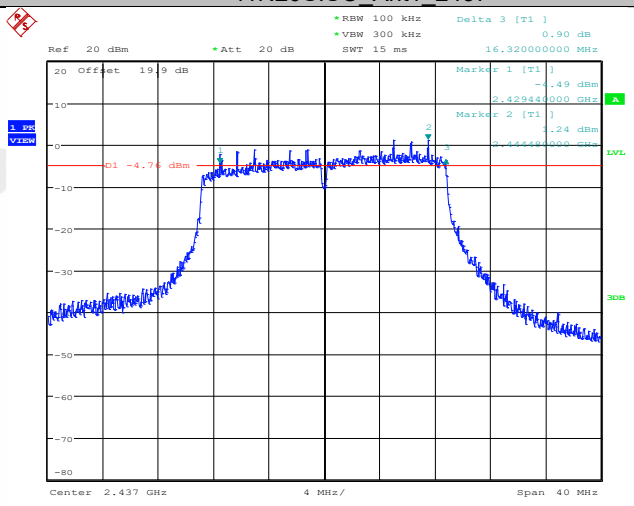

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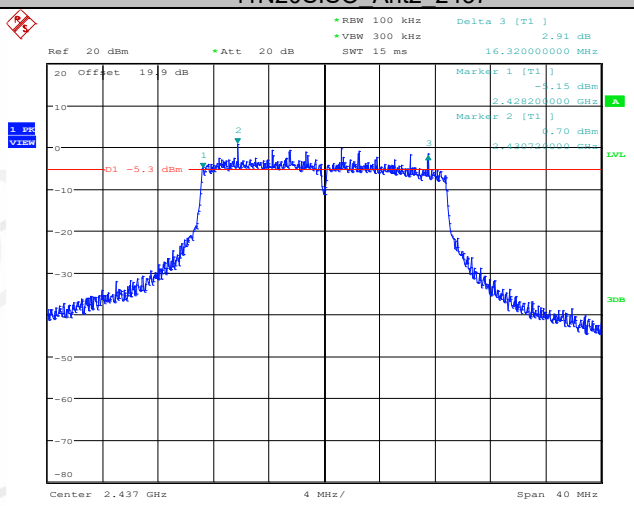

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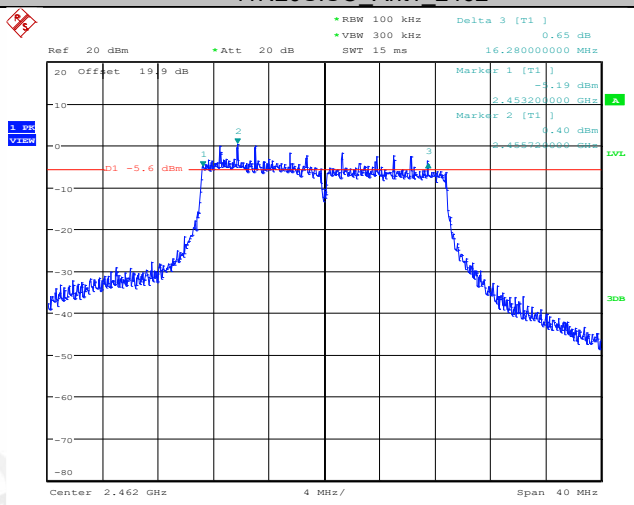

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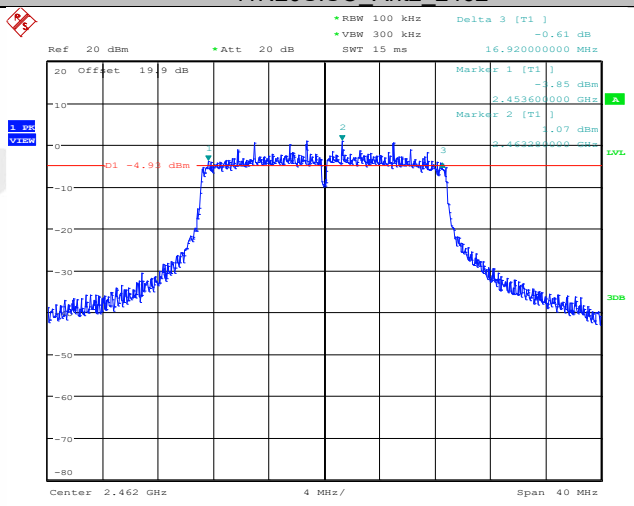

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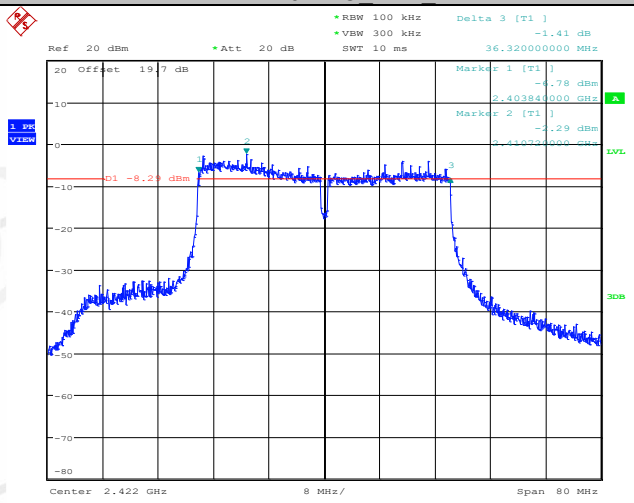

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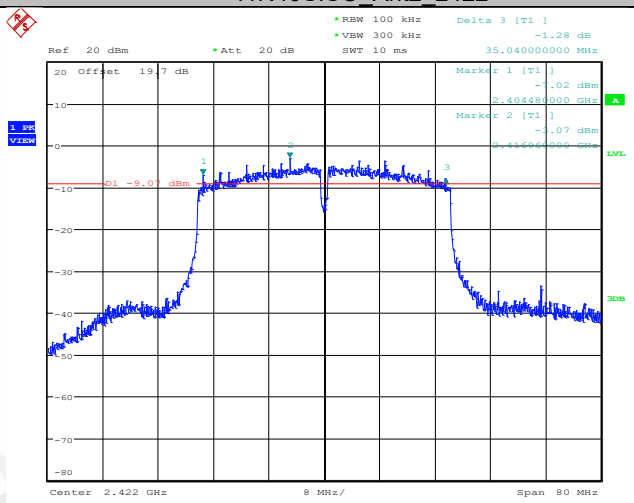

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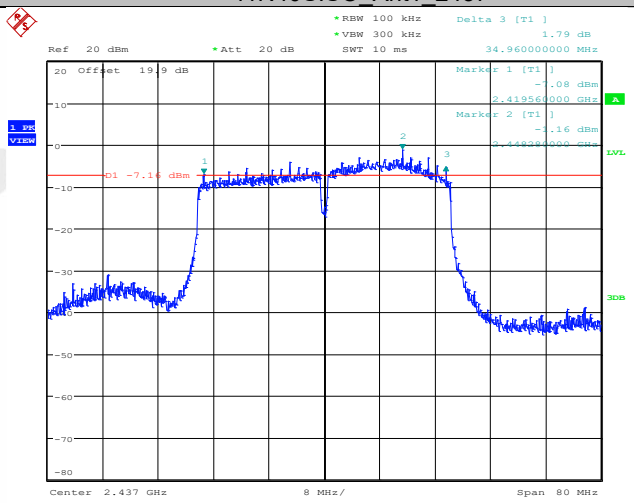

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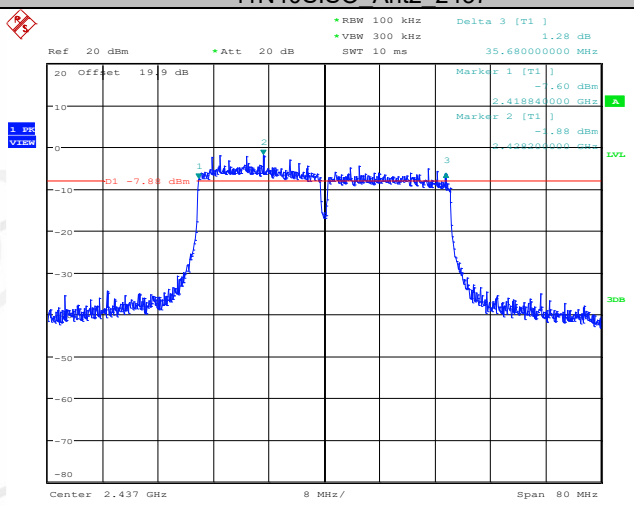

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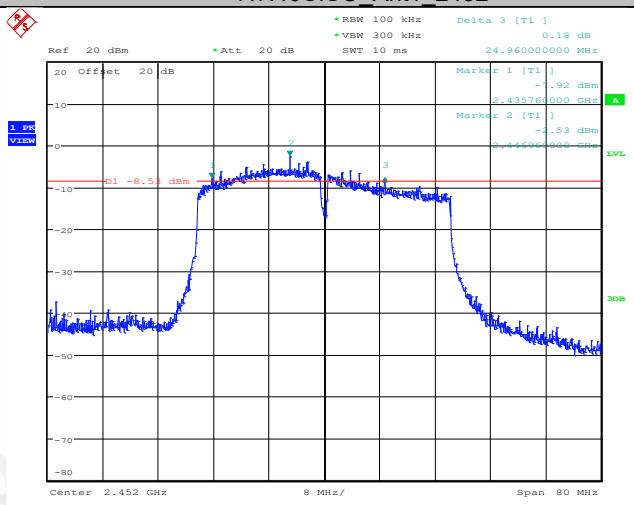

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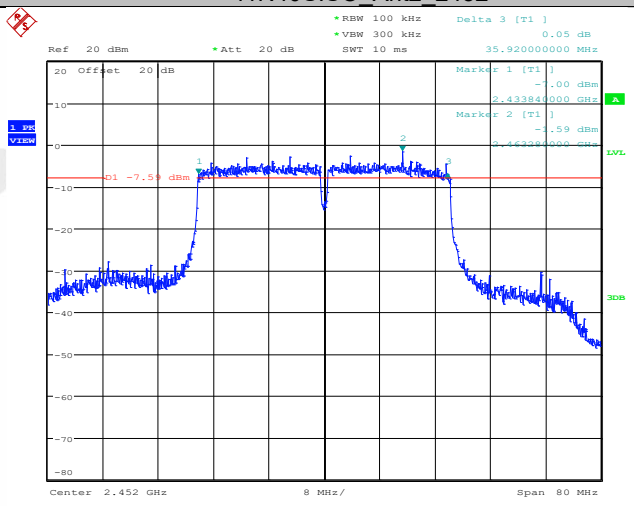

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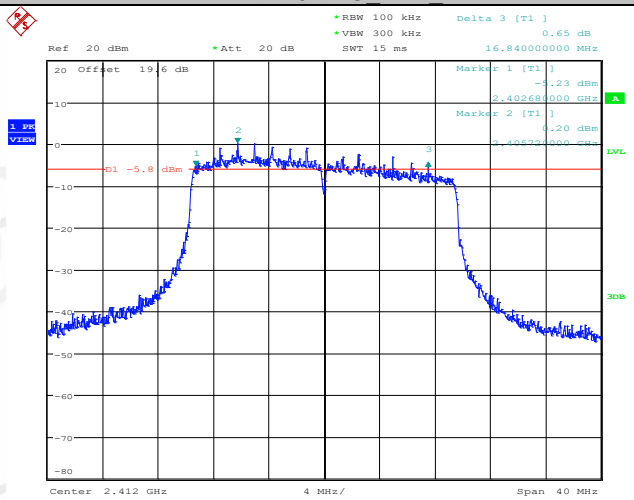

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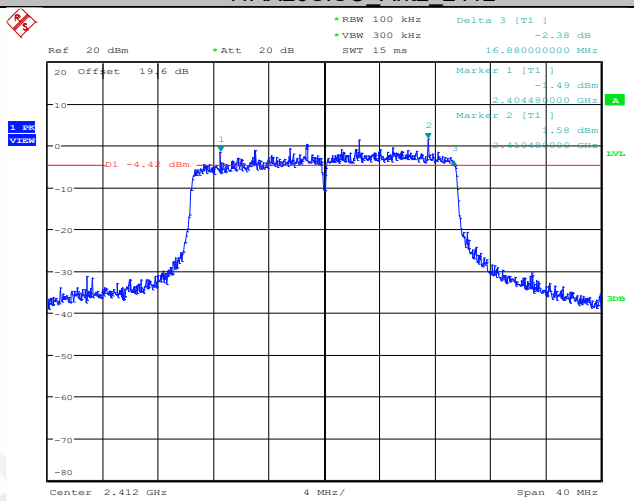

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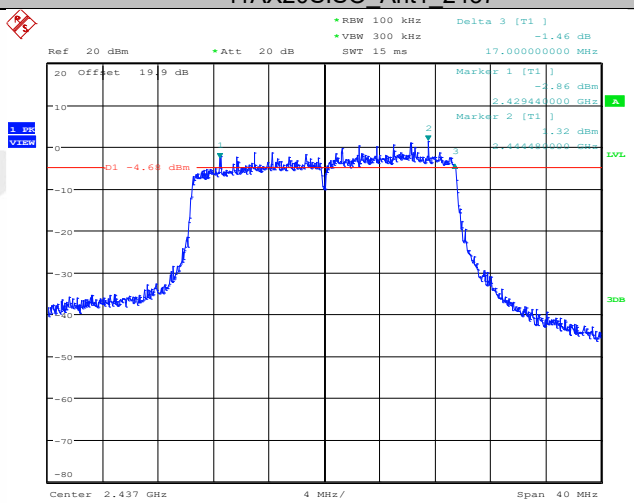

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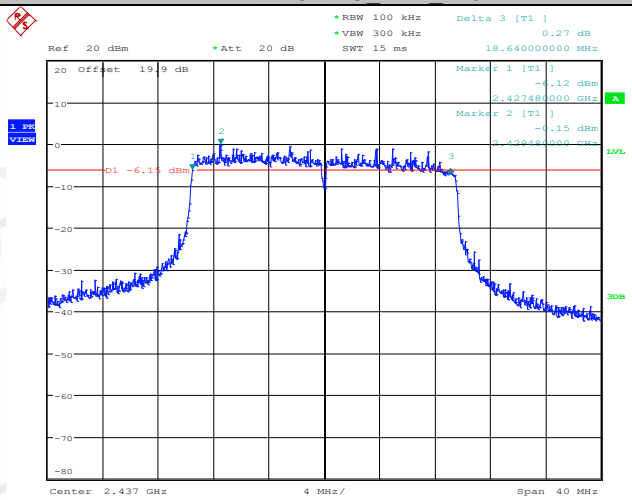

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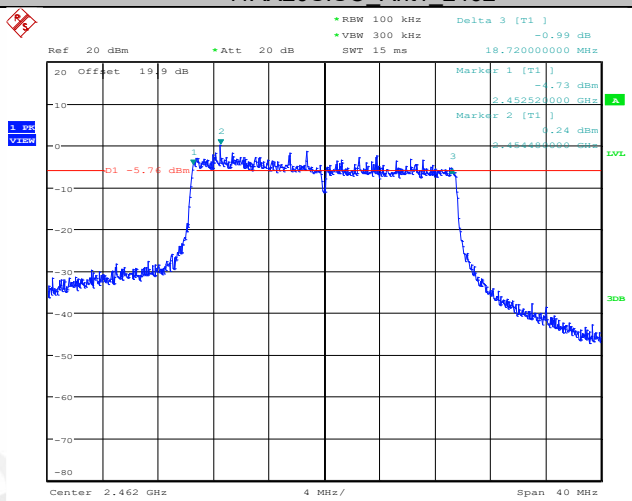

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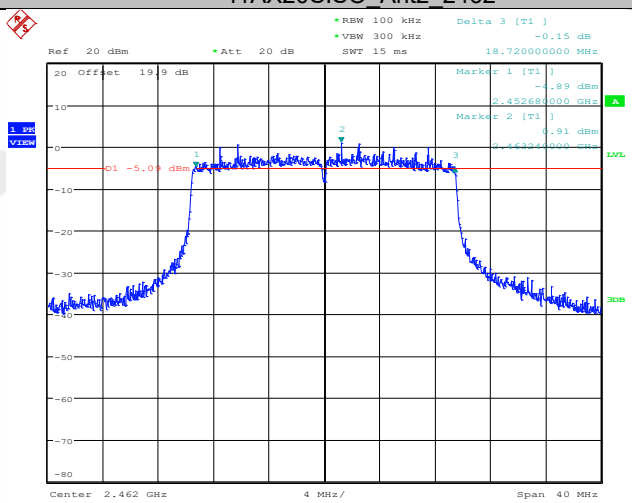

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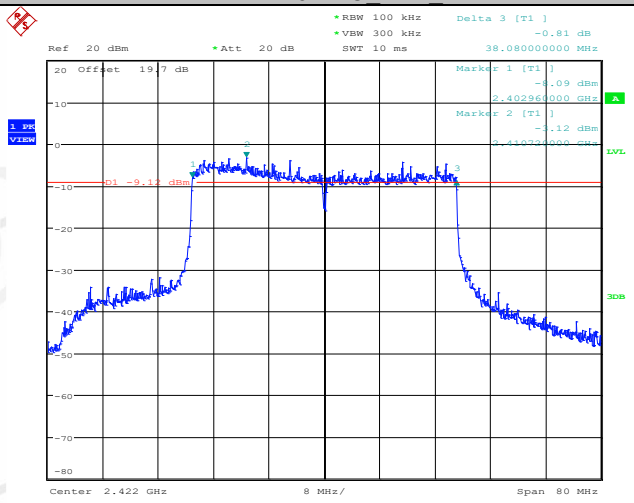

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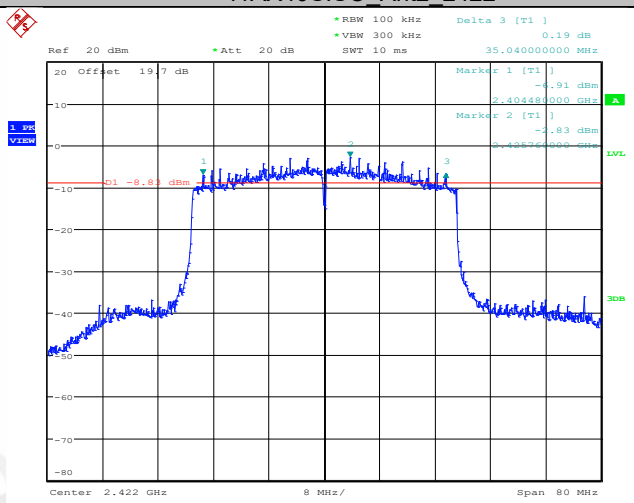

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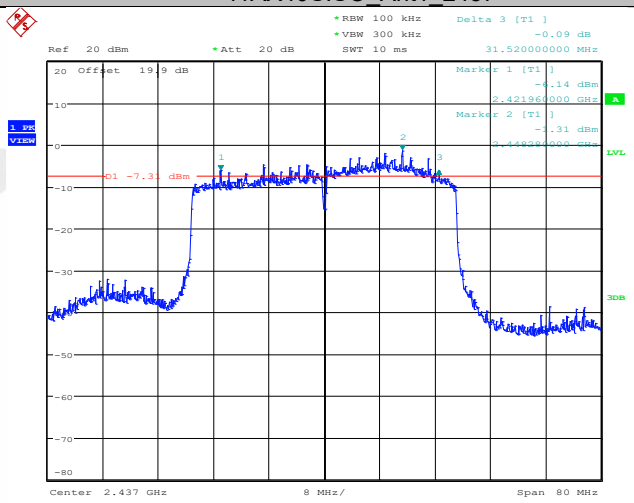

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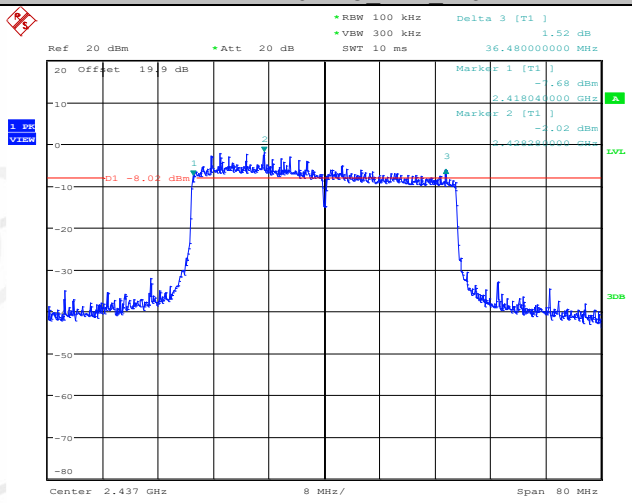

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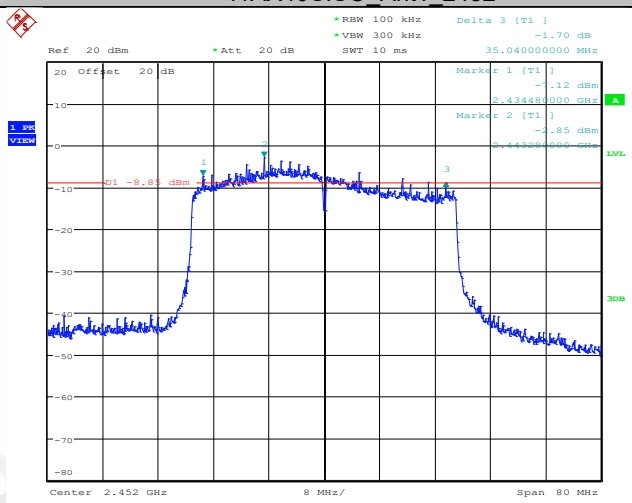

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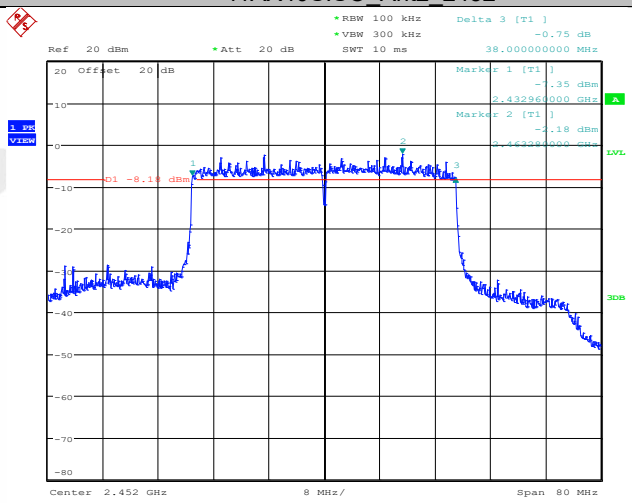
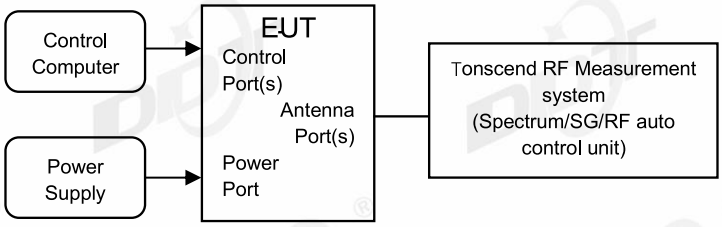


5. 99% Bandwidth

5.1. Block diagram of test setup



5.2. Limits

Just for Report.

5.3. Test procedure

(1) The test according to ANSI C63.10-2020 clause 6.9.3.

(2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously

(4) Use the following spectrum analyzer settings for the 99% Bandwidth:

RBW:	1% to 5% of the OBW
VBW:	approximately three times RBW
Span:	between 1.5 times and 5.0 times the OBW
Detector Mode:	peak
Sweep time:	auto
Trace mode	max hold

(5) Allow the trace to stabilize, measure the 99% bandwidth of signal, and record the results in the report.

5.4. Test result

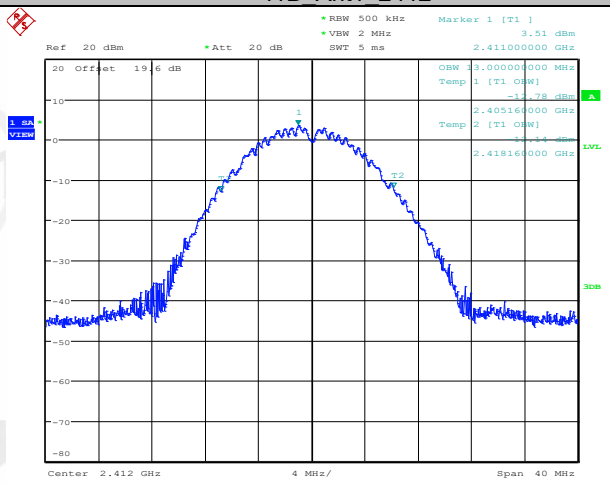
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.6℃, 45%RH	Test Date:	2025.01.21-2025.02.21
Test Power Supply:	DC 12V	Sample Number:	S24122405-001

Test Mode	Antenna	Channel Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	13.00	2405.1600	2418.1600	---	---
	Ant2	2412	13.48	2405.5200	2419.0000	---	---
	Ant1	2437	13.28	2430.7200	2444.0000	---	---
	Ant2	2437	13.56	2430.0000	2443.5600	---	---
	Ant1	2462	13.60	2454.9600	2468.5600	---	---
	Ant2	2462	13.32	2455.3200	2468.6400	---	---
11G	Ant1	2412	16.64	2403.5200	2420.1600	---	---
	Ant2	2412	16.80	2403.7200	2420.5200	---	---
	Ant1	2437	16.76	2428.7200	2445.4800	---	---
	Ant2	2437	16.80	2428.4800	2445.2800	---	---
	Ant1	2462	17.04	2453.2800	2470.3200	---	---
	Ant2	2462	16.76	2453.6000	2470.3600	---	---
11N20SISO	Ant1	2412	17.80	2402.9600	2420.7600	---	---
	Ant2	2412	18.00	2403.1200	2421.1200	---	---
	Ant1	2437	17.88	2428.1600	2446.0400	---	---
	Ant2	2437	18.00	2427.8800	2445.8800	---	---
	Ant1	2462	18.20	2452.7200	2470.9200	---	---
	Ant2	2462	17.92	2453.0400	2470.9600	---	---
11N40SISO	Ant1	2422	36.64	2403.6000	2440.2400	---	---
	Ant2	2422	36.00	2404.0000	2440.0000	---	---
	Ant1	2437	36.16	2418.9200	2455.0800	---	---

	Ant2	2437	36.40	2418.6800	2455.0800	---	---
	Ant1	2452	36.00	2433.9200	2469.9200	---	---
	Ant2	2452	36.48	2433.6800	2470.1600	---	---
11AX20SISO	Ant1	2412	19.04	2402.3600	2421.4000	---	---
	Ant2	2412	19.12	2402.4800	2421.6000	---	---
	Ant1	2437	19.08	2427.5200	2446.6000	---	---
	Ant2	2437	19.16	2427.3200	2446.4800	---	---
	Ant1	2462	19.32	2452.2400	2471.5600	---	---
	Ant2	2462	19.16	2452.4000	2471.5600	---	---
11AX40SISO	Ant1	2422	38.40	2402.7200	2441.1200	---	---
	Ant2	2422	37.84	2403.1200	2440.9600	---	---
	Ant1	2437	37.84	2418.0400	2455.8800	---	---
	Ant2	2437	38.08	2417.8000	2455.8800	---	---
	Ant1	2452	37.76	2433.0400	2470.8000	---	---
	Ant2	2452	38.08	2432.8800	2470.9600	---	---

5.5. Test graphs

11B_Ant1_2412



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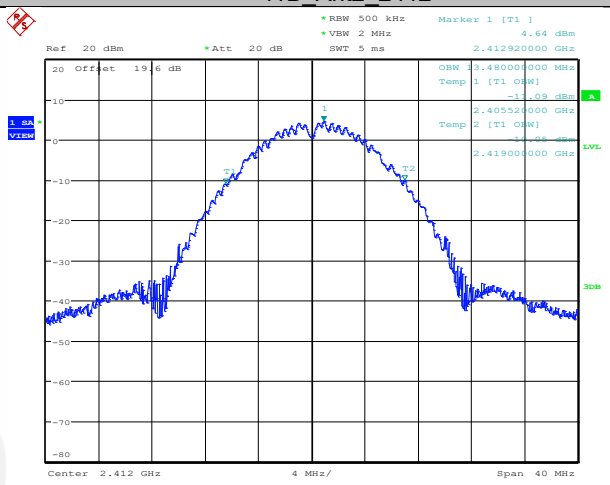

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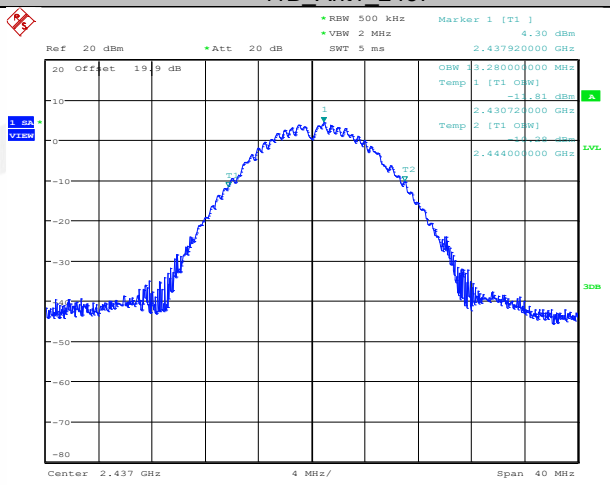

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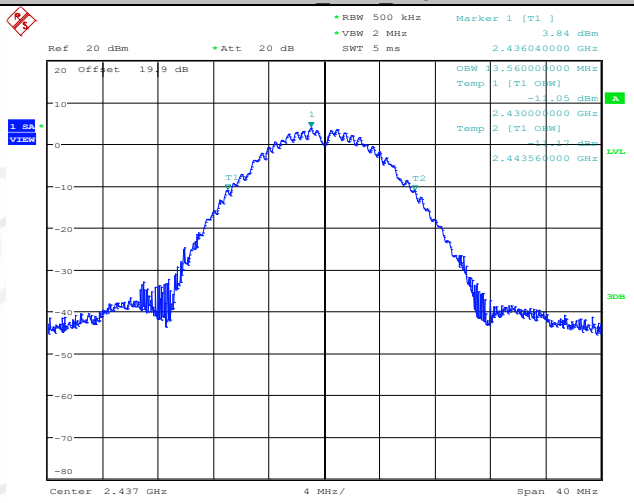

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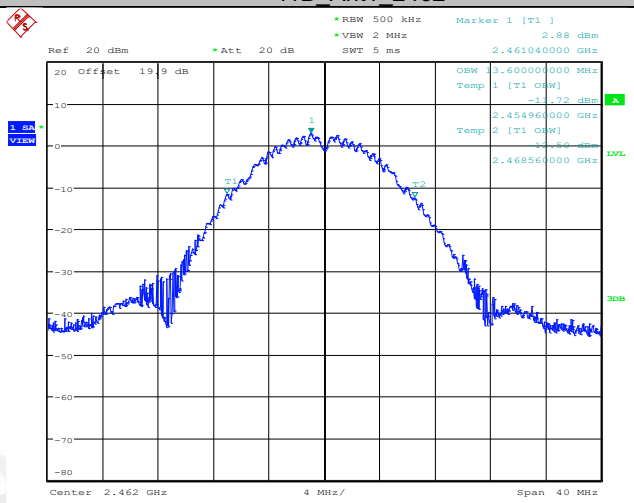

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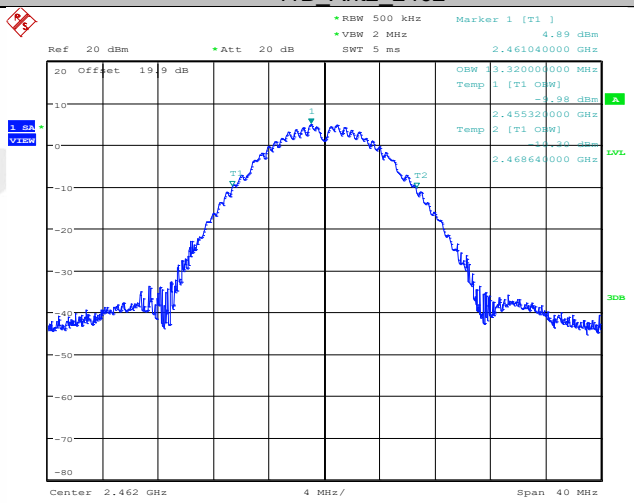

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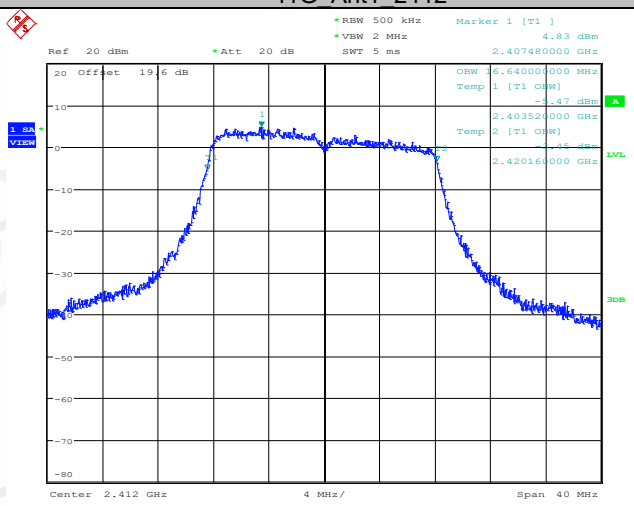

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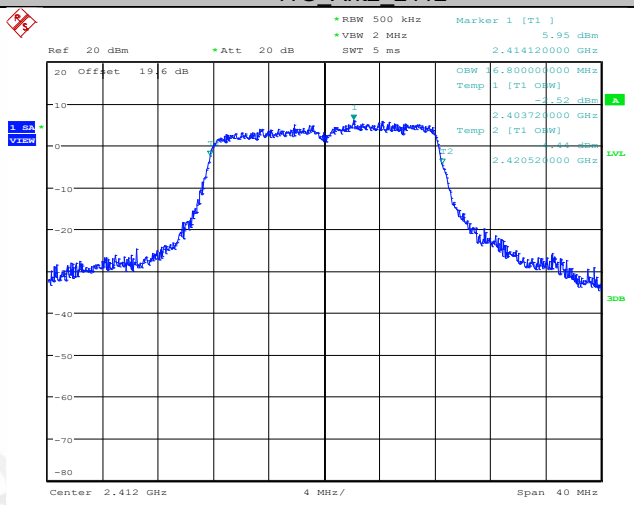

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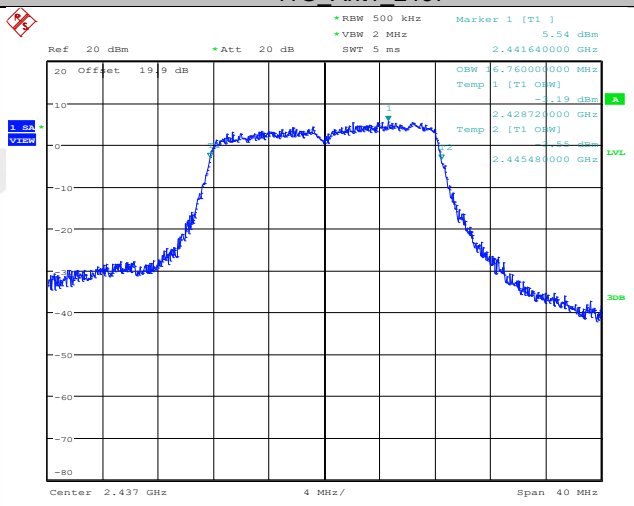

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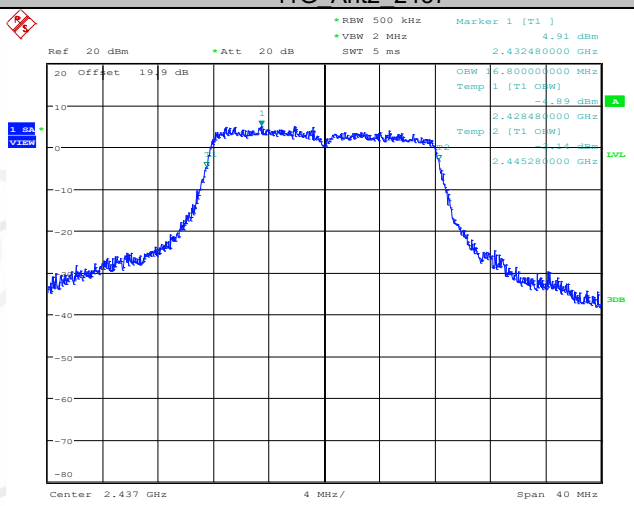

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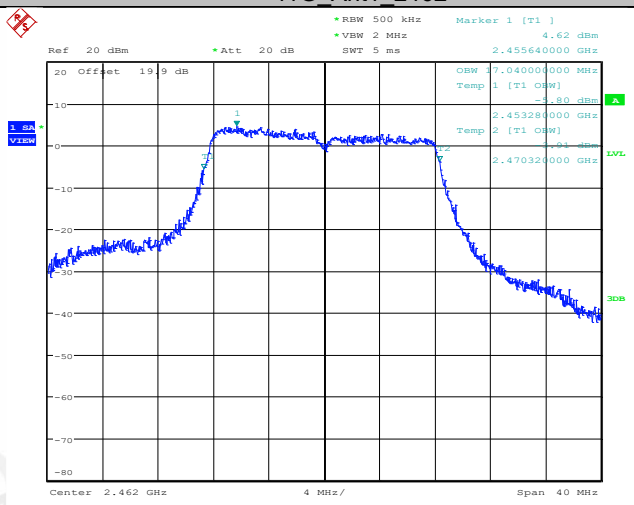

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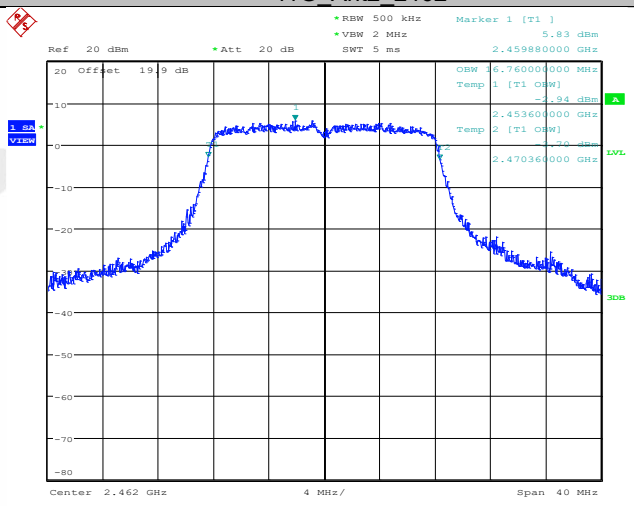

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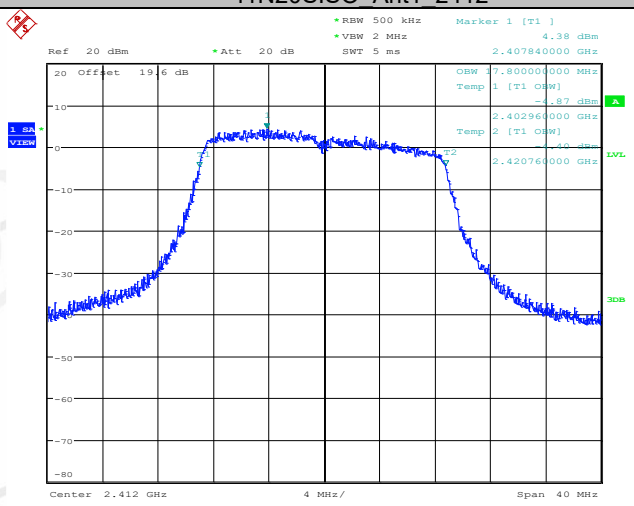

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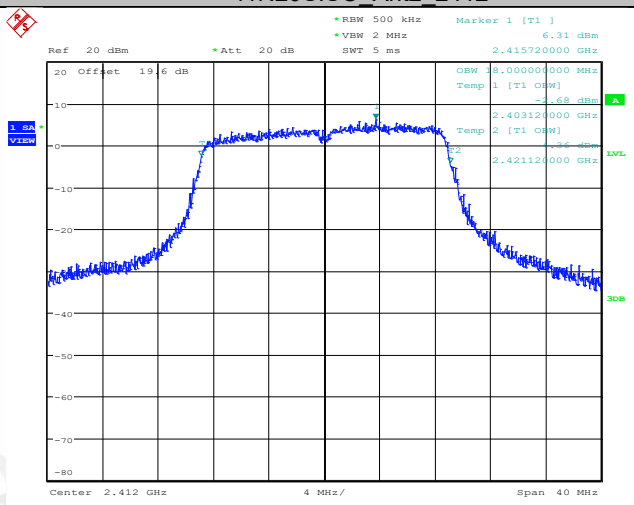

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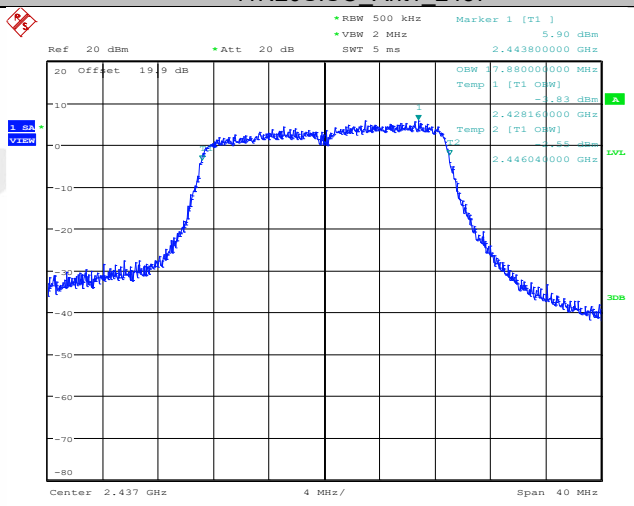

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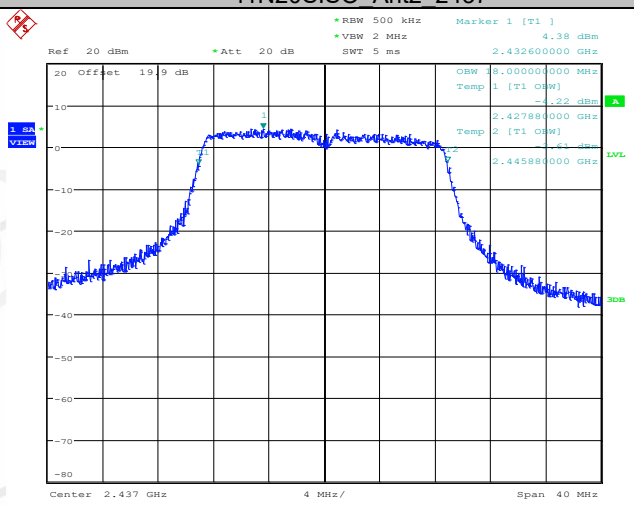

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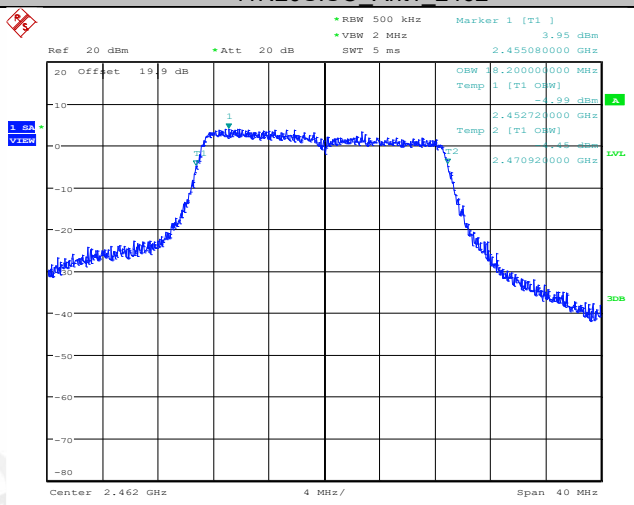

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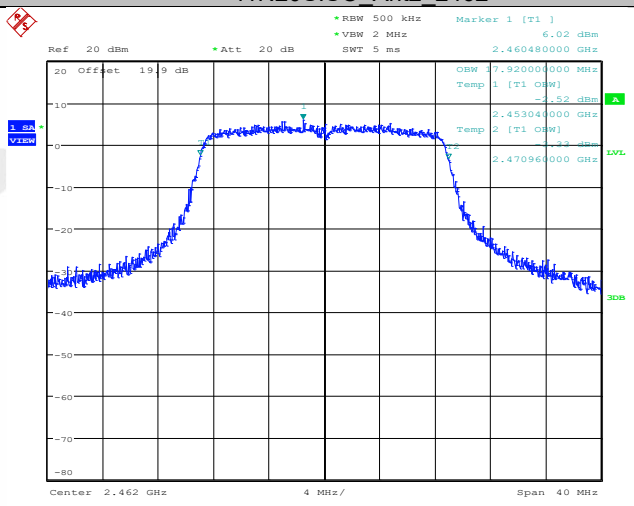

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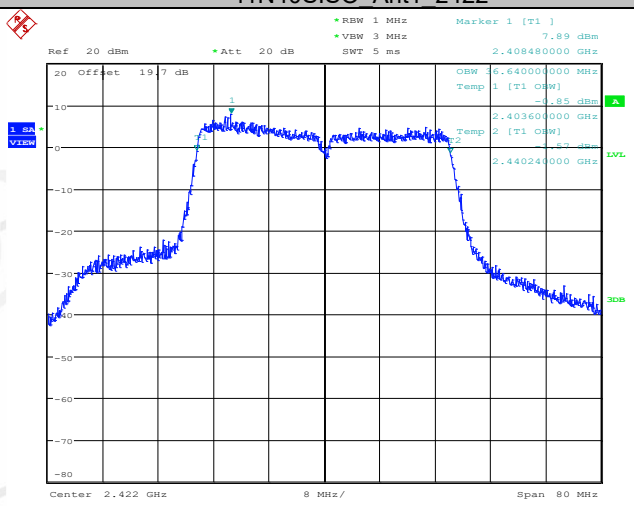

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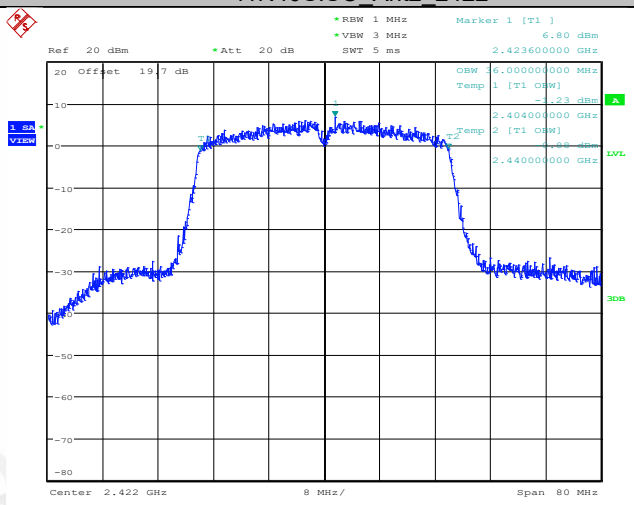

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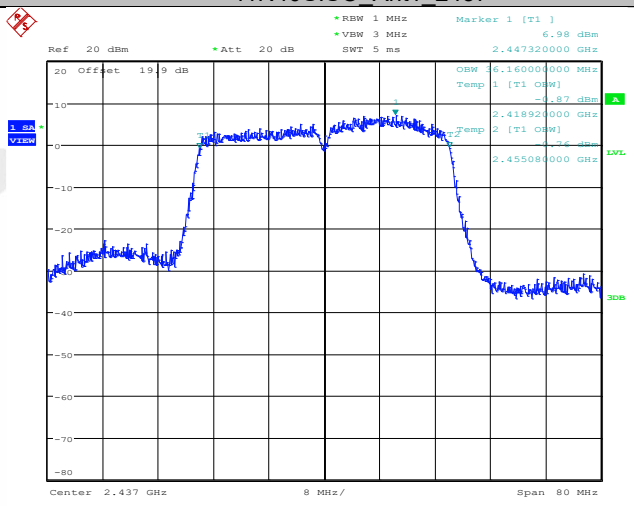

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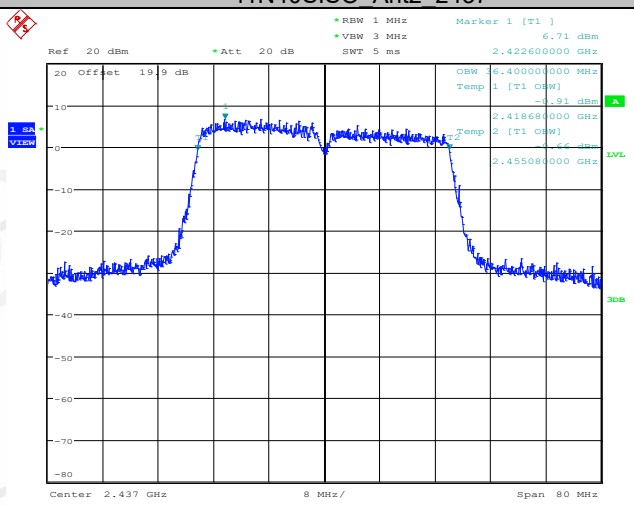

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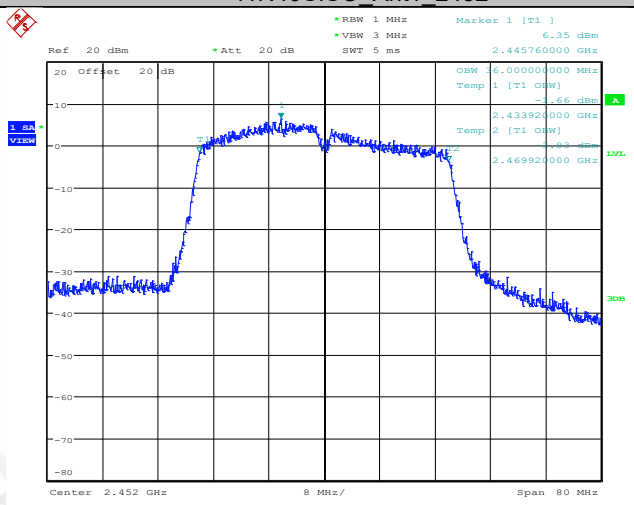

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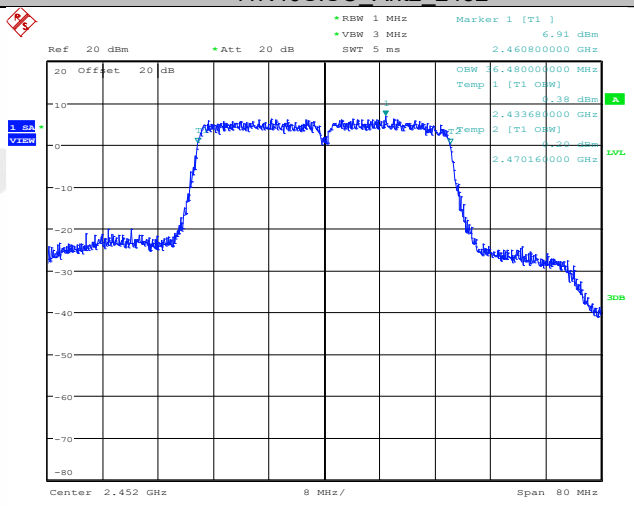

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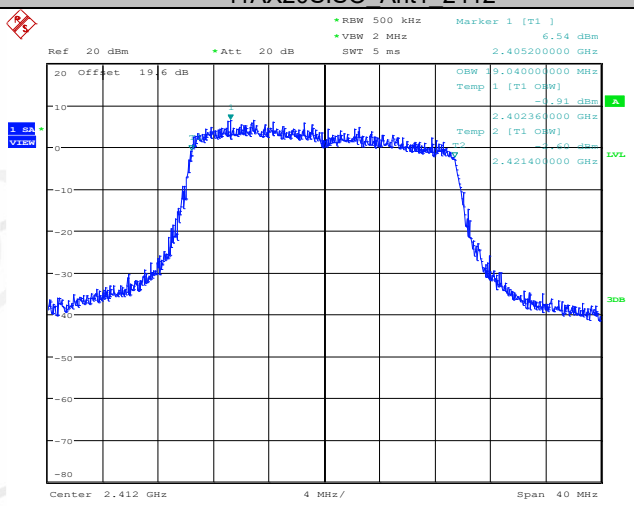

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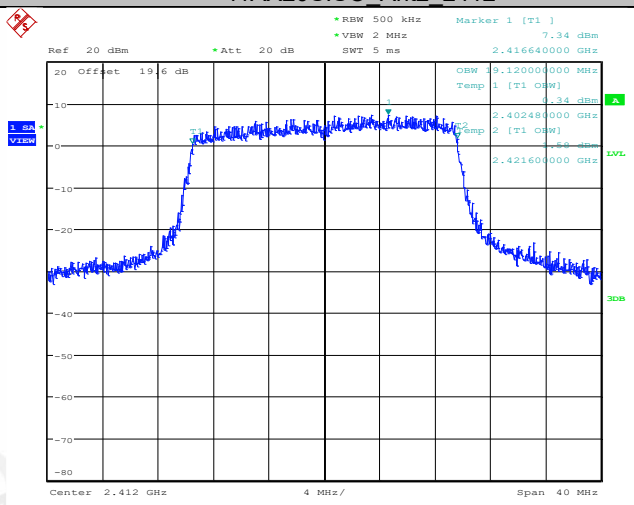

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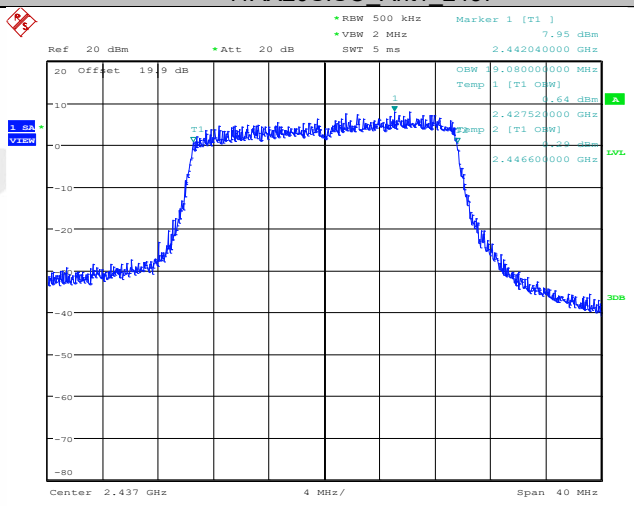
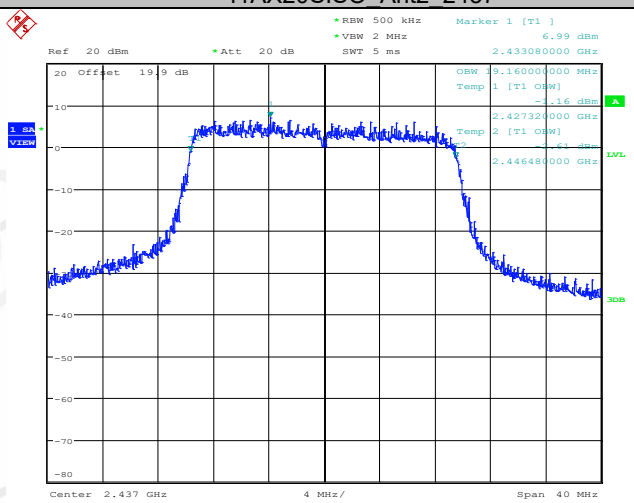
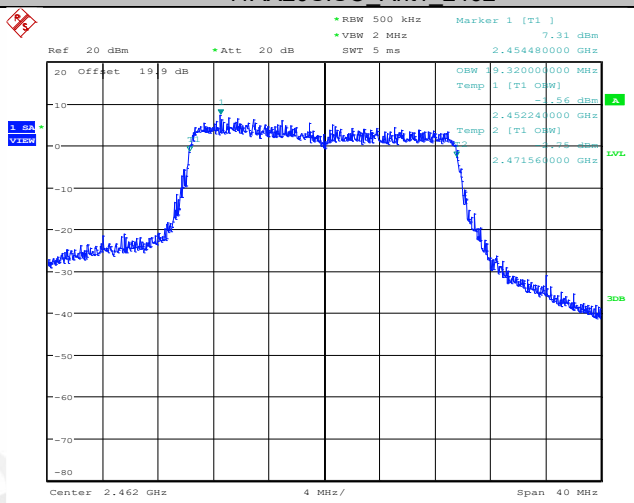


Date: 19.FEB.2025 10:36:25

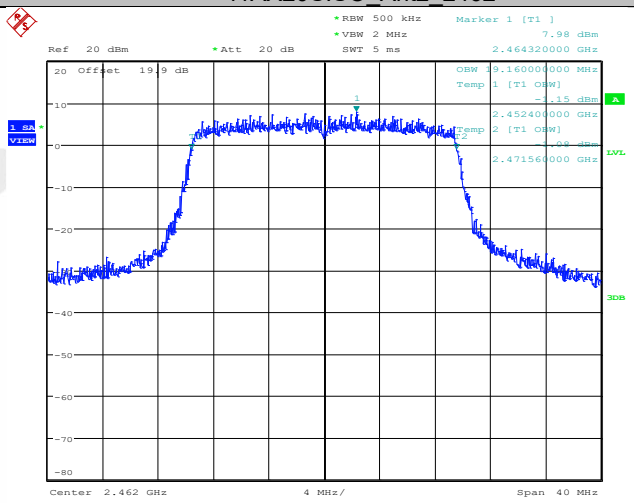
11AX20SISO_Ant2_2437



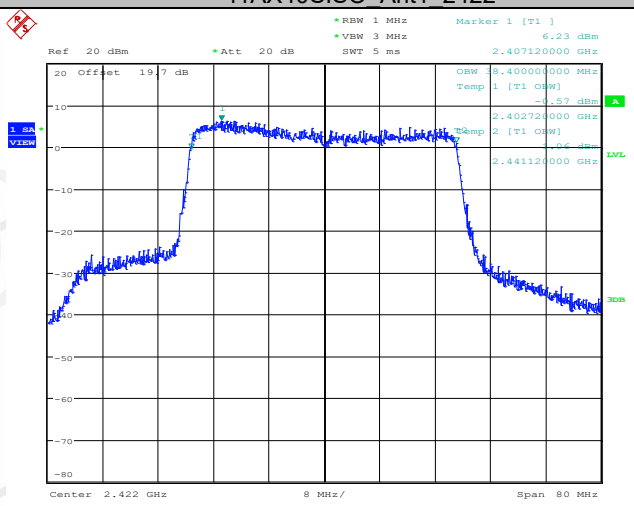
11AX20SISO_Ant1_2462



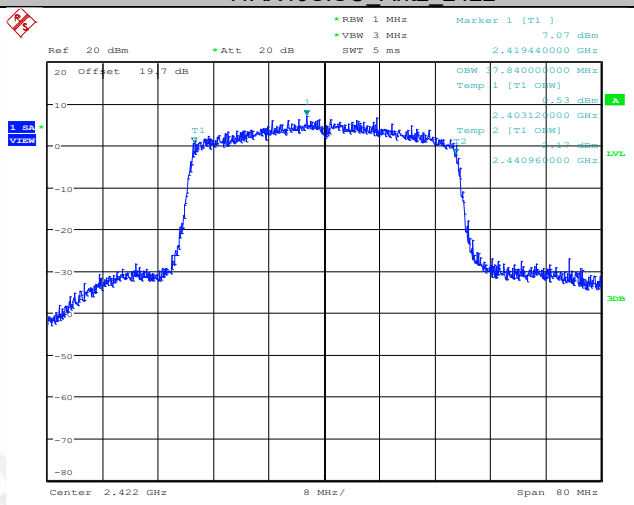
11AX20SISO_Ant2_2462



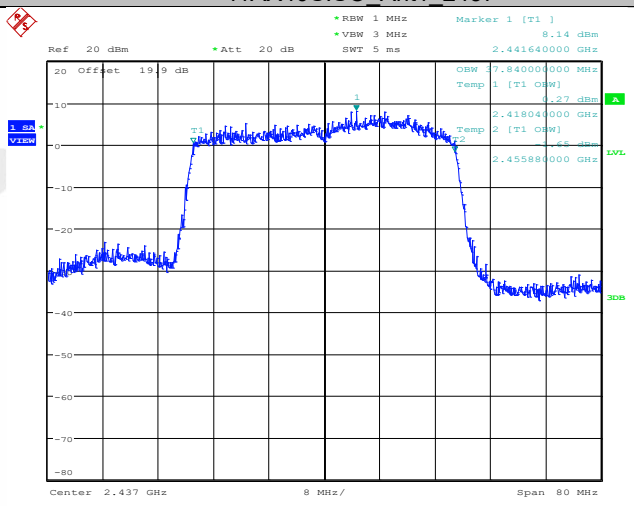
11AX40SISO_Ant1_2422



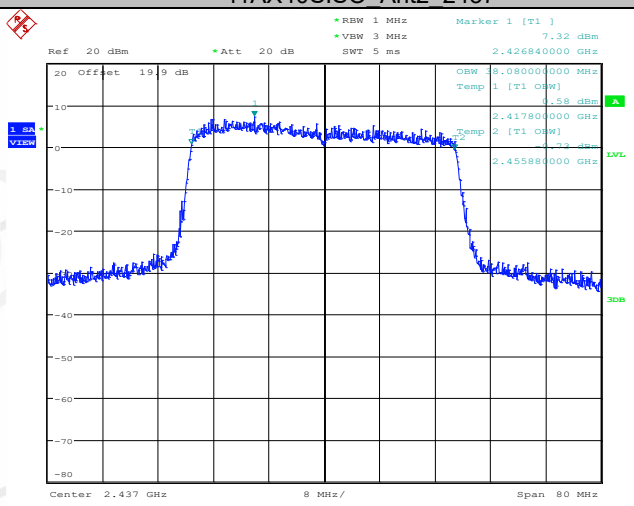
11AX40SISO_Ant2_2422



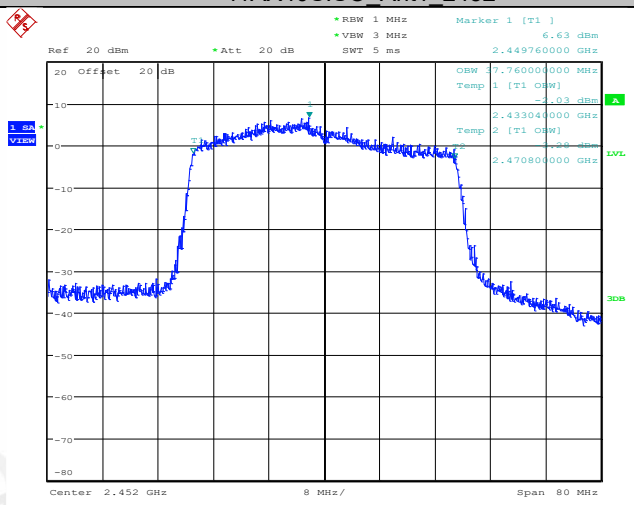
11AX40SISO_Ant1_2437



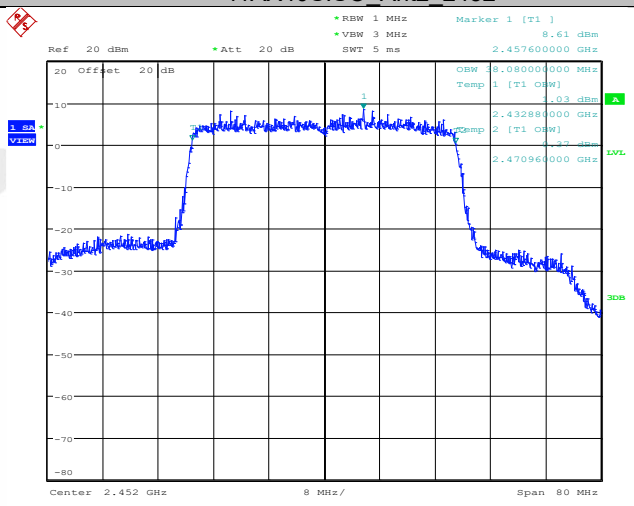
11AX40SISO_Ant2_2437



11AX40SISO_Ant1_2452

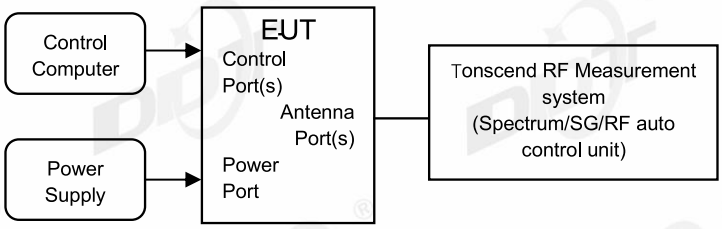


11AX40SISO_Ant2_2452



6. Conducted Output Power

6.1. Block diagram of test setup



6.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3. Test procedure

(1) The test according to ANSI C63.10-2020 clause 11.9.2.3.

(2) Connect EUT's antenna output to RF power meter by RF cable, the path loss was compensated to the results.

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously, If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal.

(4) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.

(5) Adjust the measurement in dBm by adding [10 log (1 / D)], where D is the duty cycle.

(6) Record the RF average power of each antenna port.

6.4. Test result average

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.6℃, 45%RH	Test Date:	2025.01.21-2025.02.21
Test Power Supply:	DC 12V	Sample Number:	S24122405-001

Test Mode	Antenna	Frequency [MHz]	Average power [dBm]	Duty Cycle [%]	DC Factor [dB]	Result [dBm]	Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	10.89	97.18	0.12	11.01	≤30.00	14.17	≤36.00	PASS
	Ant2	2412	12.18	98.57	0.06	12.24	≤30.00	15.40	≤36.00	PASS
	Ant1	2437	10.90	97.18	0.12	11.02	≤30.00	14.18	≤36.00	PASS
	Ant2	2437	10.57	97.18	0.12	10.69	≤30.00	13.85	≤36.00	PASS
	Ant1	2462	10.13	98.57	0.06	10.19	≤30.00	13.35	≤36.00	PASS
	Ant2	2462	12.39	98.57	0.06	12.45	≤30.00	15.61	≤36.00	PASS
11G	Ant1	2412	10.87	99.06	0.04	10.91	≤30.00	14.07	≤36.00	PASS
	Ant2	2412	12.51	99.53	0.02	12.53	≤30.00	15.69	≤36.00	PASS
	Ant1	2437	11.28	99.06	0.04	11.32	≤30.00	14.48	≤36.00	PASS
	Ant2	2437	10.83	99.06	0.04	10.87	≤30.00	14.03	≤36.00	PASS
	Ant1	2462	10.80	99.06	0.04	10.84	≤30.00	14.00	≤36.00	PASS
	Ant2	2462	12.46	99.53	0.02	12.48	≤30.00	15.64	≤36.00	PASS
11N20SISO	Ant1	2412	10.55	100.00	0.00	10.55	≤30.00	13.71	≤36.00	PASS
	Ant2	2412	12.27	99.63	0.02	12.29	≤30.00	15.45	≤36.00	PASS
	Ant1	2437	11.07	100.00	0.00	11.07	≤30.00	14.23	≤36.00	PASS
	Ant2	2437	10.52	100.00	0.00	10.52	≤30.00	13.68	≤36.00	PASS
	Ant1	2462	10.48	100.00	0.00	10.48	≤30.00	13.64	≤36.00	PASS
	Ant2	2462	12.21	99.63	0.02	12.23	≤30.00	15.39	≤36.00	PASS
11N40SISO	Ant1	2422	11.54	100.00	0.00	11.54	≤30.00	14.70	≤36.00	PASS
	Ant2	2422	11.17	99.63	0.02	11.19	≤30.00	14.35	≤36.00	PASS
	Ant1	2437	11.44	100.00	0.00	11.44	≤30.00	14.60	≤36.00	PASS
	Ant2	2437	11.25	100.00	0.00	11.25	≤30.00	14.41	≤36.00	PASS
	Ant1	2452	9.92	100.00	0.00	9.92	≤30.00	13.08	≤36.00	PASS
	Ant2	2452	12.57	100.00	0.00	12.57	≤30.00	15.73	≤36.00	PASS
11AX20SISO	Ant1	2412	10.62	100.00	0.00	10.62	≤30.00	13.78	≤36.00	PASS
	Ant2	2412	12.52	99.64	0.02	12.54	≤30.00	15.70	≤36.00	PASS
	Ant1	2437	11.30	99.64	0.02	11.32	≤30.00	14.48	≤36.00	PASS

	Ant2	2437	10.72	99.64	0.02	10.74	≤30.00	13.90	≤36.00	PASS
	Ant1	2462	10.83	99.64	0.02	10.85	≤30.00	14.01	≤36.00	PASS
	Ant2	2462	12.29	100.00	0.00	12.29	≤30.00	15.45	≤36.00	PASS
11AX40SISO	Ant1	2422	11.16	100.00	0.00	11.16	≤30.00	14.32	≤36.00	PASS
	Ant2	2422	10.85	99.64	0.02	10.87	≤30.00	14.03	≤36.00	PASS
	Ant1	2437	10.94	100.00	0.00	10.94	≤30.00	14.10	≤36.00	PASS
	Ant2	2437	10.94	100.00	0.00	10.94	≤30.00	14.10	≤36.00	PASS
	Ant1	2452	9.37	99.64	0.02	9.39	≤30.00	12.55	≤36.00	PASS
	Ant2	2452	12.16	100.00	0.00	12.16	≤30.00	15.32	≤36.00	PASS

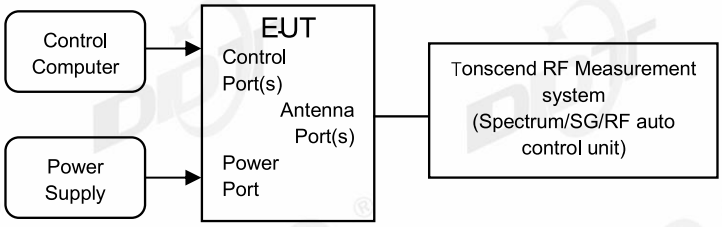
Test Mode	Antenna	Frequency [MHz]	Ru Size	Ru Index	Peak Powert [dBm]	Conducted Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11AX20SISO	Ant1	2412	26Tone	RU0	12.51	≤30.00	3.16	15.67	≤36.00	PASS
				RU4	11.08	≤30.00	3.16	14.24	≤36.00	PASS
				RU8	8.95	≤30.00	3.16	12.11	≤36.00	PASS
			52Tone	RU37	12.71	≤30.00	3.16	15.87	≤36.00	PASS
				RU39	11.08	≤30.00	3.16	14.24	≤36.00	PASS
				RU40	8.99	≤30.00	3.16	12.15	≤36.00	PASS
			106Tone	RU53	12.56	≤30.00	3.16	15.72	≤36.00	PASS
				RU54	9.51	≤30.00	3.16	12.67	≤36.00	PASS
	Ant2	2412	26Tone	RU0	11.43	≤30.00	3.16	14.59	≤36.00	PASS
				RU4	12.44	≤30.00	3.16	15.60	≤36.00	PASS
				RU8	13.91	≤30.00	3.16	17.07	≤36.00	PASS
			52Tone	RU37	11.44	≤30.00	3.16	14.60	≤36.00	PASS
				RU39	13.03	≤30.00	3.16	16.19	≤36.00	PASS
				RU40	13.71	≤30.00	3.16	16.87	≤36.00	PASS
			106Tone	RU53	11.68	≤30.00	3.16	14.84	≤36.00	PASS
				RU54	13.46	≤30.00	3.16	16.62	≤36.00	PASS
	Ant1	2437	26Tone	RU0	10.05	≤30.00	3.16	13.21	≤36.00	PASS
				RU4	10.99	≤30.00	3.16	14.15	≤36.00	PASS
				RU8	13.91	≤30.00	3.16	17.07	≤36.00	PASS
			52Tone	RU37	10.02	≤30.00	3.16	13.18	≤36.00	PASS
				RU39	12.11	≤30.00	3.16	15.27	≤36.00	PASS
				RU40	13.70	≤30.00	3.16	16.86	≤36.00	PASS
			106Tone	RU53	10.29	≤30.00	3.16	13.45	≤36.00	PASS
				RU54	13.10	≤30.00	3.16	16.26	≤36.00	PASS
	Ant2	2437	26Tone	RU0	12.31	≤30.00	3.16	15.47	≤36.00	PASS
				RU4	10.81	≤30.00	3.16	13.97	≤36.00	PASS

				RU8	11.03	≤30.00	3.16	14.19	≤36.00	PASS
			52Tone	RU37	12.05	≤30.00	3.16	15.21	≤36.00	PASS
				RU39	10.66	≤30.00	3.16	13.82	≤36.00	PASS
				RU40	10.86	≤30.00	3.16	14.02	≤36.00	PASS
			106Tone	RU53	11.67	≤30.00	3.16	14.83	≤36.00	PASS
				RU54	10.76	≤30.00	3.16	13.92	≤36.00	PASS
	Ant1	2462	26Tone	RU0	13.77	≤30.00	3.16	16.93	≤36.00	PASS
				RU4	10.30	≤30.00	3.16	13.46	≤36.00	PASS
				RU8	11.33	≤30.00	3.16	14.49	≤36.00	PASS
			52Tone	RU37	13.14	≤30.00	3.16	16.30	≤36.00	PASS
				RU39	10.00	≤30.00	3.16	13.16	≤36.00	PASS
				RU40	10.86	≤30.00	3.16	14.02	≤36.00	PASS
			106Tone	RU53	12.52	≤30.00	3.16	15.68	≤36.00	PASS
				RU54	10.43	≤30.00	3.16	13.59	≤36.00	PASS
	Ant2	2462	26Tone	RU0	12.92	≤30.00	3.16	16.08	≤36.00	PASS
				RU4	12.62	≤30.00	3.16	15.78	≤36.00	PASS
				RU8	12.56	≤30.00	3.16	15.72	≤36.00	PASS
			52Tone	RU37	12.80	≤30.00	3.16	15.96	≤36.00	PASS
				RU39	12.57	≤30.00	3.16	15.73	≤36.00	PASS
				RU40	12.44	≤30.00	3.16	15.60	≤36.00	PASS
			106Tone	RU53	12.80	≤30.00	3.16	15.96	≤36.00	PASS
				RU54	12.54	≤30.00	3.16	15.70	≤36.00	PASS
11AX40SISO	Ant1	2422	242Tone	RU61	12.88	≤30.00	3.16	16.04	≤36.00	PASS
				RU62	10.68	≤30.00	3.16	13.84	≤36.00	PASS
	Ant2	2422	242Tone	RU61	11.48	≤30.00	3.16	14.64	≤36.00	PASS
				RU62	11.05	≤30.00	3.16	14.21	≤36.00	PASS
	Ant1	2437	242Tone	RU61	9.84	≤30.00	3.16	13.00	≤36.00	PASS
				RU62	12.65	≤30.00	3.16	15.81	≤36.00	PASS
	Ant2	2437	242Tone	RU61	12.16	≤30.00	3.16	15.32	≤36.00	PASS
				RU62	10.71	≤30.00	3.16	13.87	≤36.00	PASS
	Ant1	2452	242Tone	RU61	10.73	≤30.00	3.16	13.89	≤36.00	PASS
				RU62	8.30	≤30.00	3.16	11.46	≤36.00	PASS
	Ant2	2452	242Tone	RU61	12.55	≤30.00	3.16	15.71	≤36.00	PASS
				RU62	12.86	≤30.00	3.16	16.02	≤36.00	PASS

Note: EIRP (dBm)=Conducted Output Power (dBm)+ Antenna Gain (dBi)

7. Power Spectral Density

7.1. Block diagram of test setup



7.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

7.3. Test procedure

(1) The test according to ANSI C63.10-2020 clause 11.10.5.

(2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.

(3) Set the EUT as maximum power setting and enable the EUT transmit continuously.

(4) Use the following spectrum analyzer settings for Power Spectral Density measurement:

Center frequency	DTS Channel center frequency
RBW:	3 kHz ≤ RBW ≤ 100 kHz
VBW:	≥ 3RBW
Span	1.5 times the DTS bandwidth
Detector Mode:	RMS
Sweep time:	auto
Trace mode	max hold
Trace	Employ trace averaging (rms) mode over a minimum of 100 traces.

(5) Add [10 log (1 / D)], where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.

(6) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

7.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.6℃, 45%RH	Test Date:	2025.01.21-2025.02.21
Test Power Supply:	DC 12V	Sample Number:	S24122405-001

Test Mode	Antenna	Frequency [MHz]	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-13.31	≤8.00	PASS
	Ant2	2412	-14.00	≤8.00	PASS
	Ant1	2437	-14.29	≤8.00	PASS
	Ant2	2437	-12.41	≤8.00	PASS
	Ant1	2462	-16.36	≤8.00	PASS
	Ant2	2462	-12.21	≤8.00	PASS
11G	Ant1	2412	-18.36	≤8.00	PASS
	Ant2	2412	-16.72	≤8.00	PASS
	Ant1	2437	-16.54	≤8.00	PASS
	Ant2	2437	-17.00	≤8.00	PASS
	Ant1	2462	-17.96	≤8.00	PASS
	Ant2	2462	-17.08	≤8.00	PASS
11N20SISO	Ant1	2412	-17.55	≤8.00	PASS
	Ant2	2412	-15.12	≤8.00	PASS
	Ant1	2437	-15.45	≤8.00	PASS
	Ant2	2437	-17.38	≤8.00	PASS
	Ant1	2462	-15.77	≤8.00	PASS
	Ant2	2462	-15.40	≤8.00	PASS
11N40SISO	Ant1	2422	-25.25	≤8.00	PASS
	Ant2	2422	-25.90	≤8.00	PASS
	Ant1	2437	-24.85	≤8.00	PASS
	Ant2	2437	-25.53	≤8.00	PASS
	Ant1	2452	-26.21	≤8.00	PASS
	Ant2	2452	-24.99	≤8.00	PASS
11AX20SISO	Ant1	2412	-17.57	≤8.00	PASS
	Ant2	2412	-16.46	≤8.00	PASS
	Ant1	2437	-15.05	≤8.00	PASS
	Ant2	2437	-17.89	≤8.00	PASS

	Ant1	2462	-18.04	≤8.00	PASS
	Ant2	2462	-16.26	≤8.00	PASS
11AX40SISO	Ant1	2422	-26.71	≤8.00	PASS
	Ant2	2422	-26.88	≤8.00	PASS
	Ant1	2437	-26.09	≤8.00	PASS
	Ant2	2437	-27.26	≤8.00	PASS
	Ant1	2452	-27.79	≤8.00	PASS
	Ant2	2452	-26.95	≤8.00	PASS

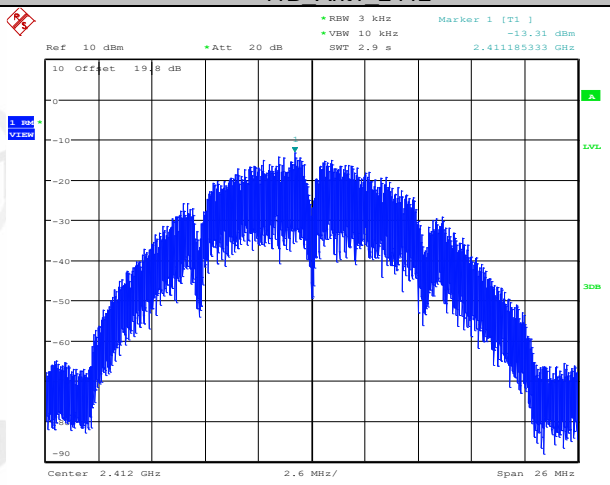
Test Mode	Antenna	Frequency [MHz]	Ru Size	Ru Index	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11AX20SISO	Ant1	2412	26Tone	RU0	-5.54	≤8.00	PASS
				RU4	-7.96	≤8.00	PASS
				RU8	-10.68	≤8.00	PASS
			52Tone	RU37	-10.12	≤8.00	PASS
				RU39	-8.77	≤8.00	PASS
				RU40	-11.39	≤8.00	PASS
			106Tone	RU53	-12.65	≤8.00	PASS
				RU54	-15.04	≤8.00	PASS
	Ant2	2412	26Tone	RU0	-9.41	≤8.00	PASS
				RU4	-7.96	≤8.00	PASS
				RU8	-4.82	≤8.00	PASS
			52Tone	RU37	-12.41	≤8.00	PASS
				RU39	-10.11	≤8.00	PASS
				RU40	-8.96	≤8.00	PASS
			106Tone	RU53	-13.80	≤8.00	PASS
				RU54	-11.43	≤8.00	PASS
	Ant1	2437	26Tone	RU0	-11.00	≤8.00	PASS
				RU4	-8.06	≤8.00	PASS
				RU8	-4.29	≤8.00	PASS
			52Tone	RU37	-11.20	≤8.00	PASS
				RU39	-9.89	≤8.00	PASS
				RU40	-9.10	≤8.00	PASS
			106Tone	RU53	-14.45	≤8.00	PASS
				RU54	-11.41	≤8.00	PASS
	Ant2	2437	26Tone	RU0	-7.64	≤8.00	PASS
				RU4	-9.79	≤8.00	PASS
				RU8	-8.31	≤8.00	PASS
			52Tone	RU37	-10.18	≤8.00	PASS

				RU39	-10.58	≤8.00	PASS
				RU40	-10.28	≤8.00	PASS
			106Tone	RU53	-12.43	≤8.00	PASS
				RU54	-15.11	≤8.00	PASS
	Ant1	2462	26Tone	RU0	-6.45	≤8.00	PASS
				RU4	-9.75	≤8.00	PASS
				RU8	-8.82	≤8.00	PASS
			52Tone	RU37	-9.49	≤8.00	PASS
				RU39	-12.54	≤8.00	PASS
				RU40	-10.10	≤8.00	PASS
			106Tone	RU53	-12.80	≤8.00	PASS
				RU54	-14.38	≤8.00	PASS
	Ant2	2462	26Tone	RU0	-6.16	≤8.00	PASS
				RU4	-7.06	≤8.00	PASS
				RU8	-7.18	≤8.00	PASS
			52Tone	RU37	-10.44	≤8.00	PASS
				RU39	-10.15	≤8.00	PASS
				RU40	-9.57	≤8.00	PASS
			106Tone	RU53	-12.38	≤8.00	PASS
				RU54	-12.86	≤8.00	PASS
11AX40SISO	Ant1	2422	242Tone	RU61	-14.70	≤8.00	PASS
				RU62	-17.70	≤8.00	PASS
	Ant2	2422	242Tone	RU61	-17.80	≤8.00	PASS
				RU62	-15.65	≤8.00	PASS
	Ant1	2437	242Tone	RU61	-18.75	≤8.00	PASS
				RU62	-16.33	≤8.00	PASS
	Ant2	2437	242Tone	RU61	-14.82	≤8.00	PASS
				RU62	-17.55	≤8.00	PASS
	Ant1	2452	242Tone	RU61	-17.82	≤8.00	PASS
				RU62	-20.74	≤8.00	PASS
	Ant2	2452	242Tone	RU61	-14.94	≤8.00	PASS
				RU62	-15.88	≤8.00	PASS

Note：The Duty Cycle Factor is compensated in the graph.

7.5. Test graphs

11B_Ant1_2412



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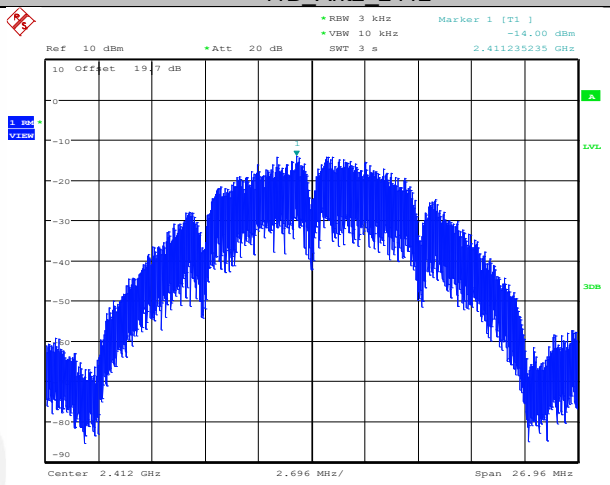
11B_Ant2_2412



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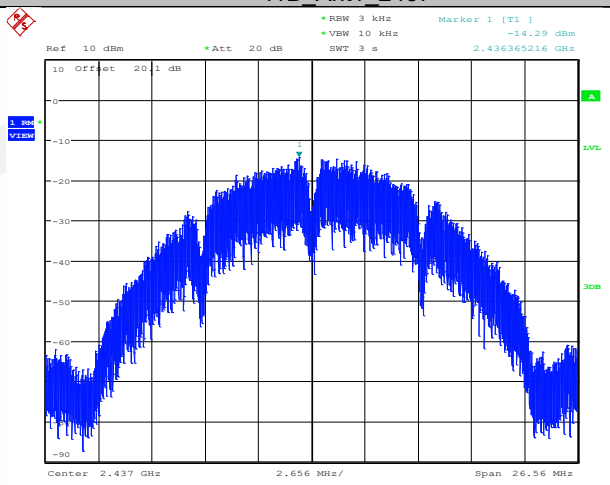
11B_Ant1_2437



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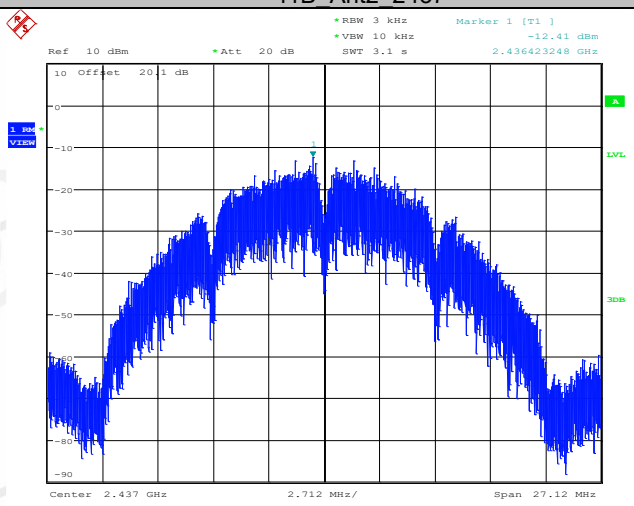

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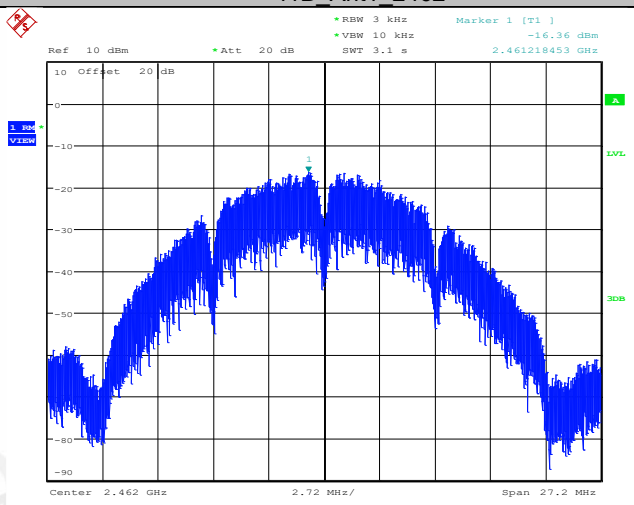

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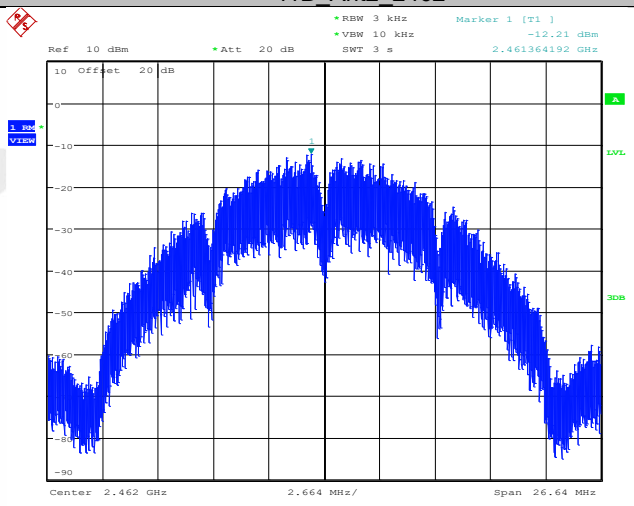

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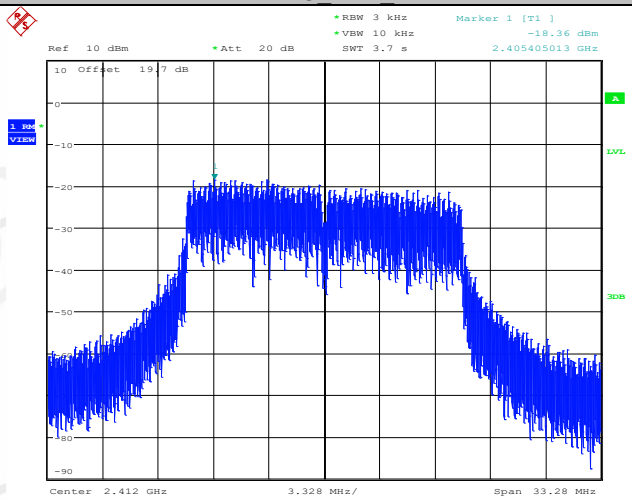

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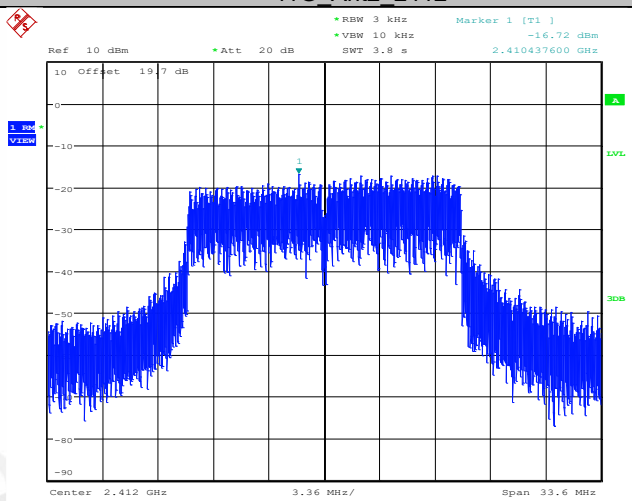

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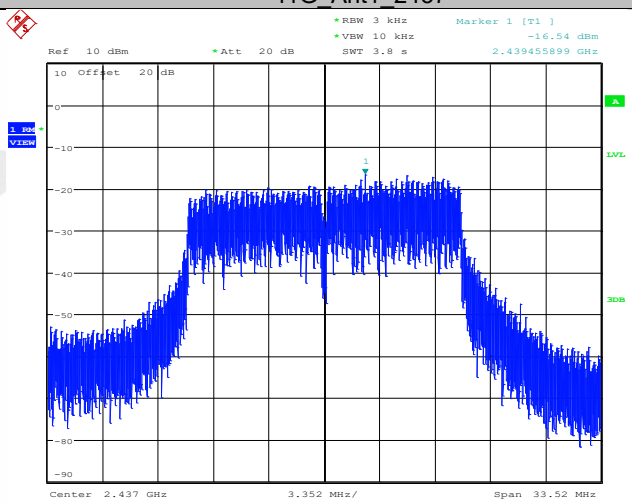

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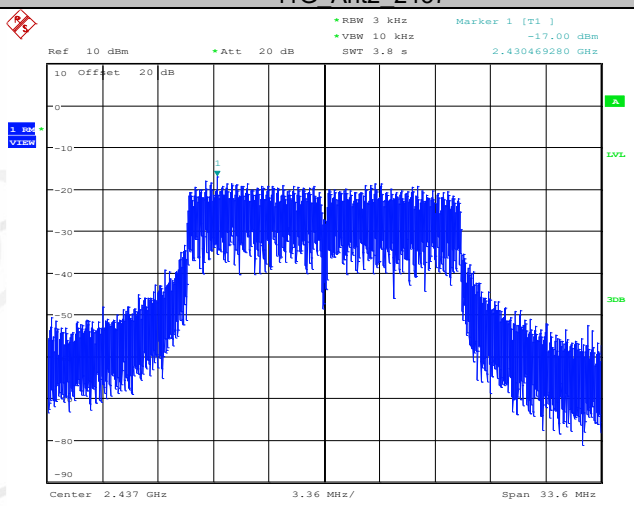

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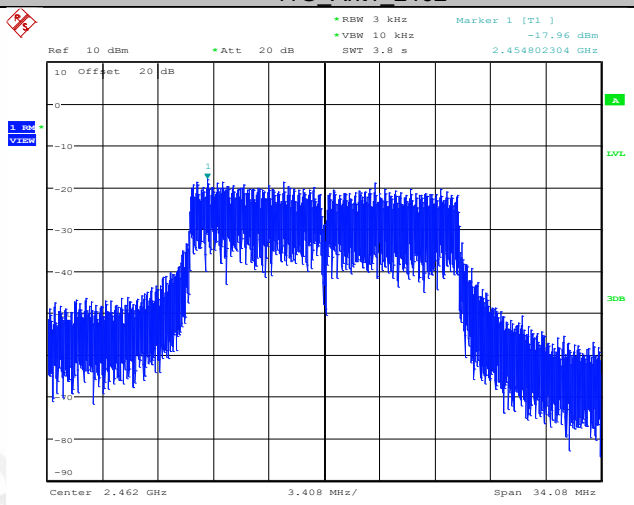

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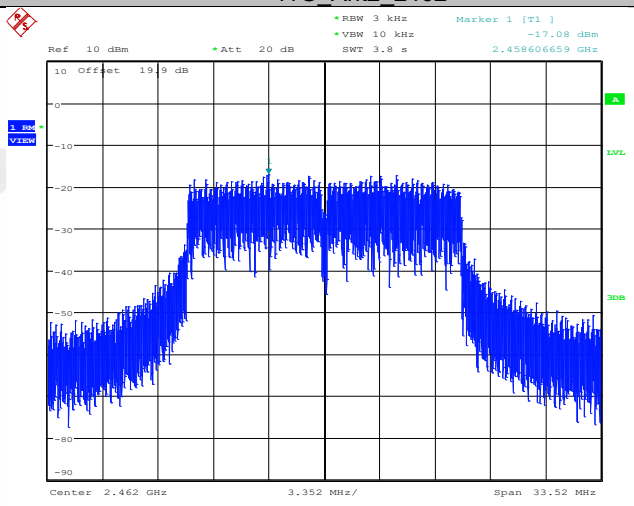

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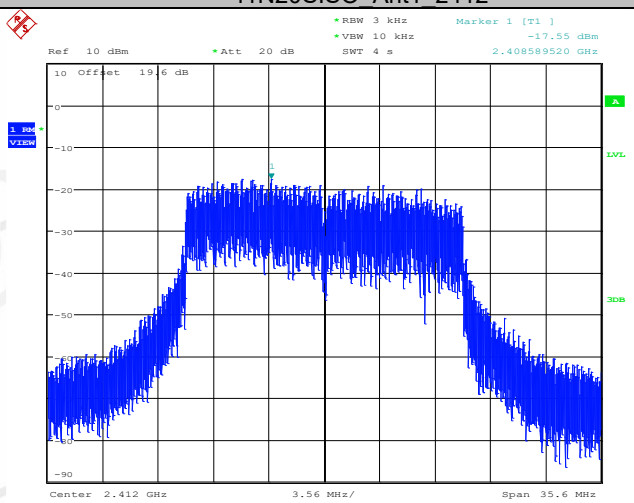

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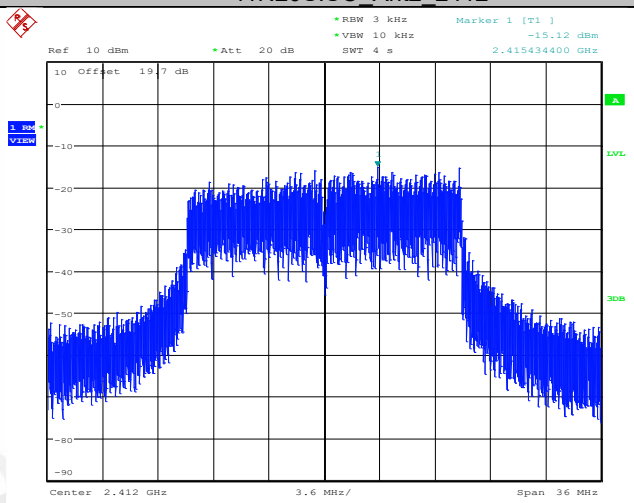

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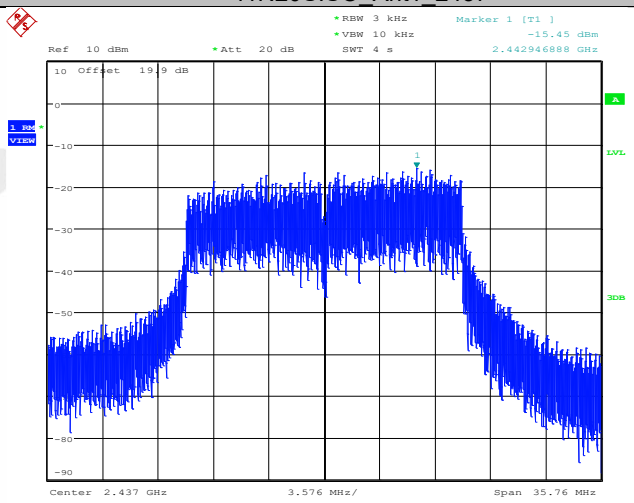

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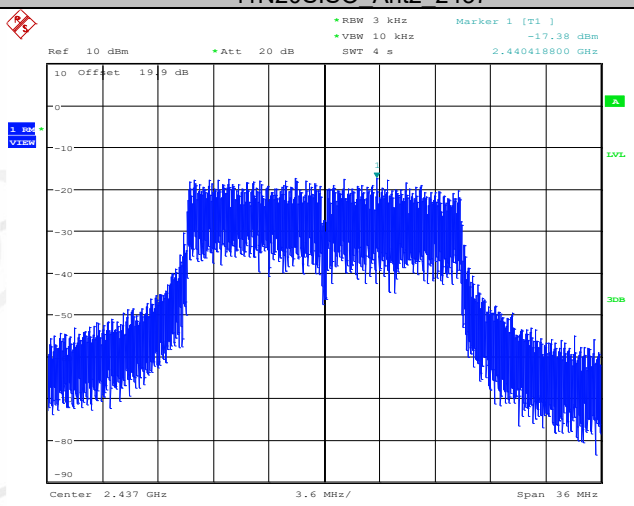

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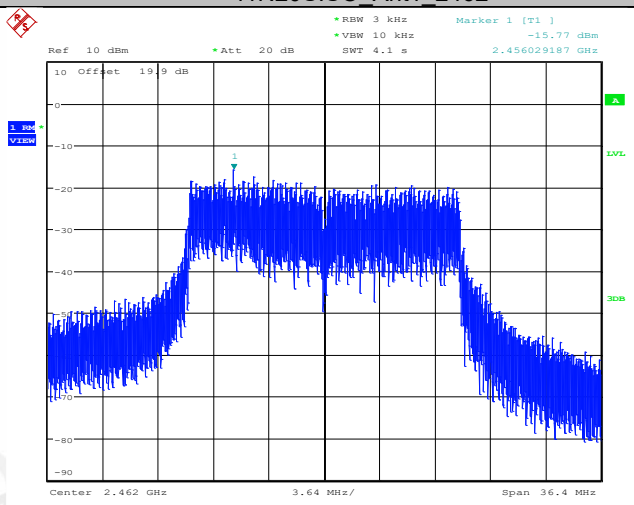

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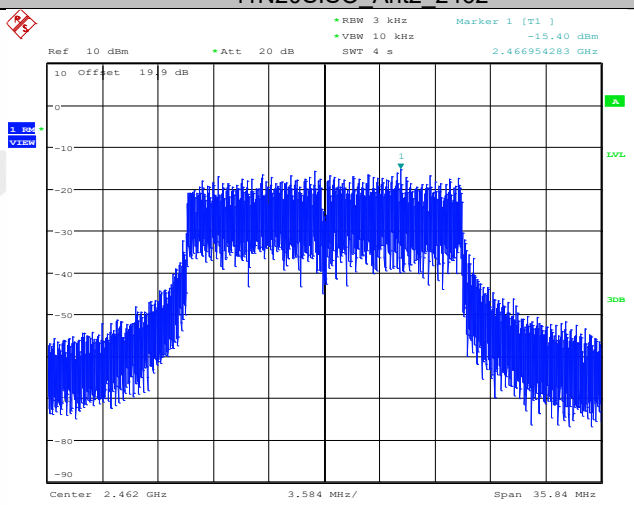

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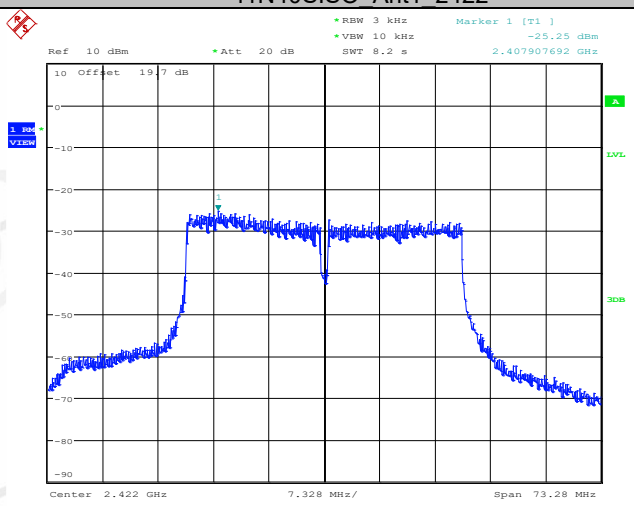

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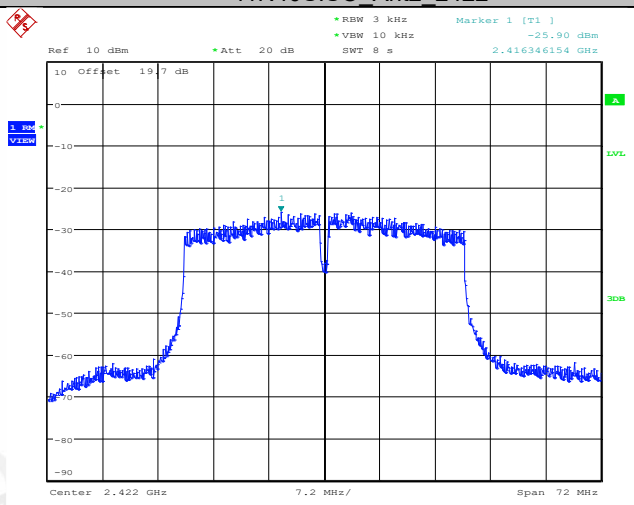

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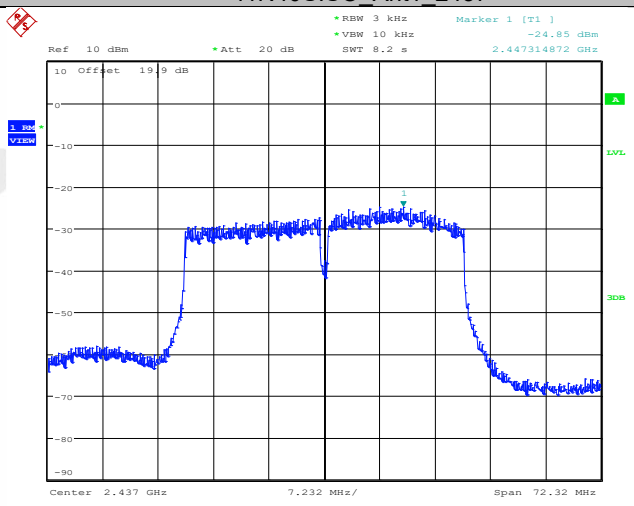

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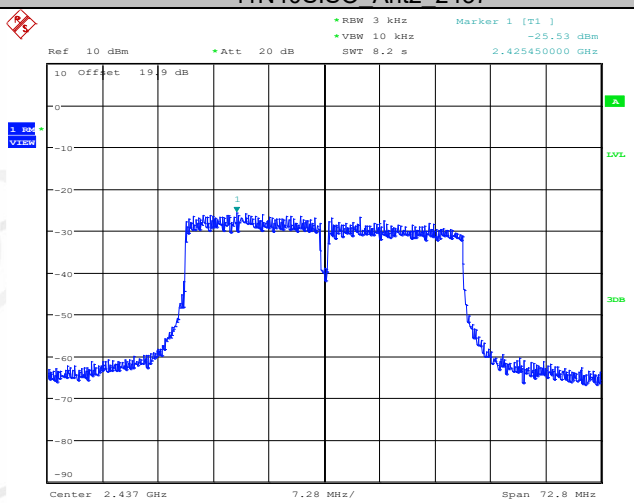

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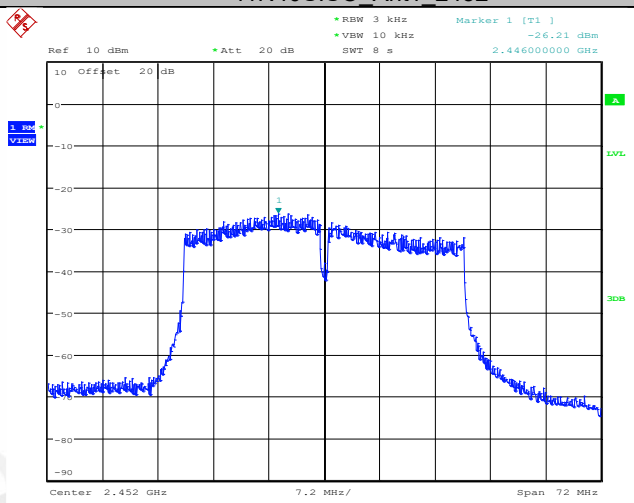

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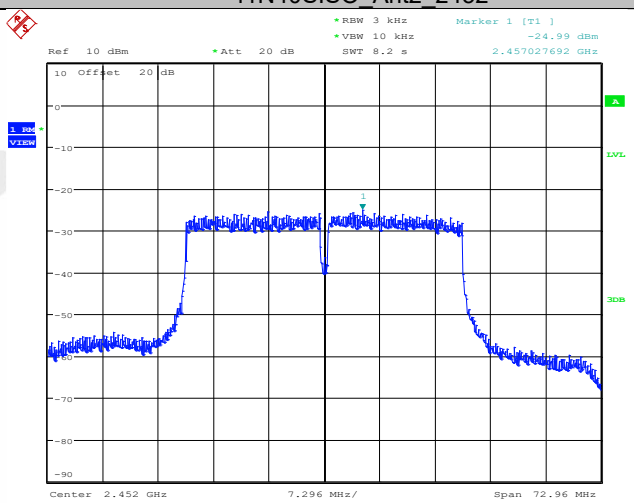

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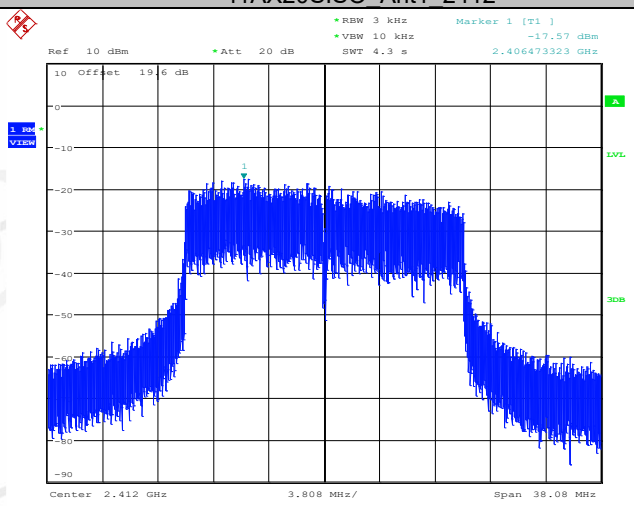

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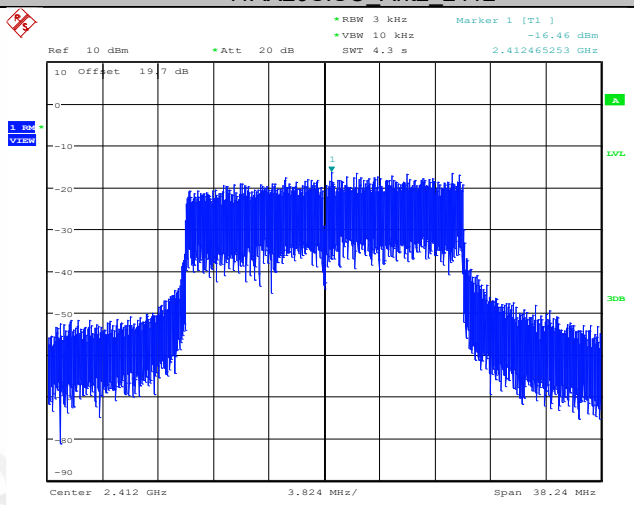

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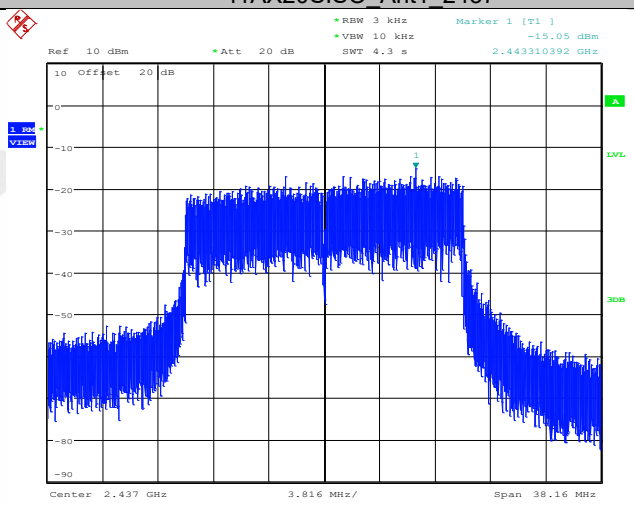

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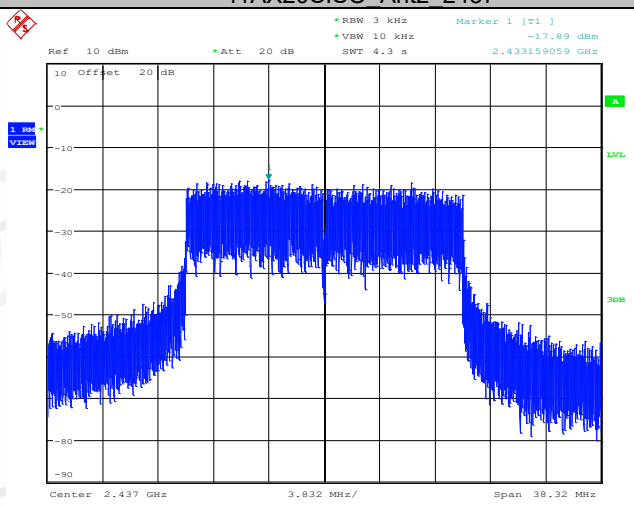

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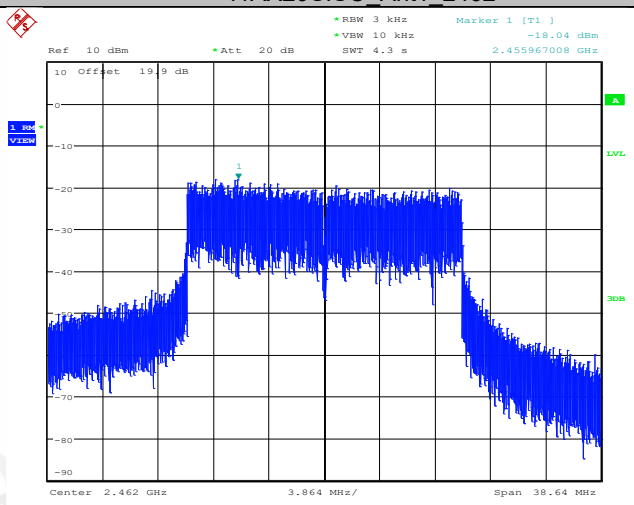

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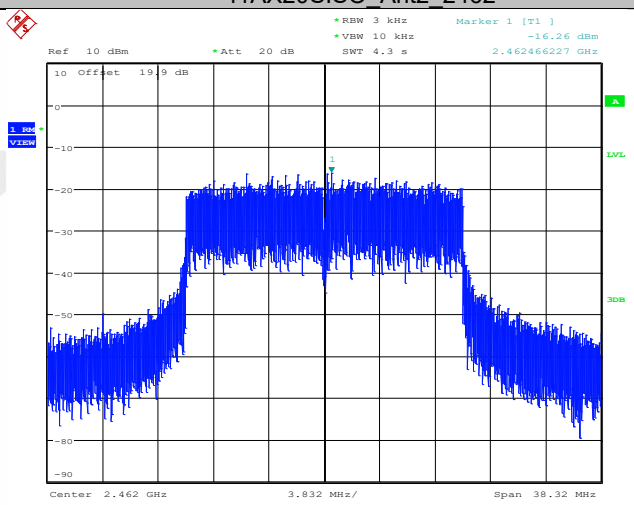

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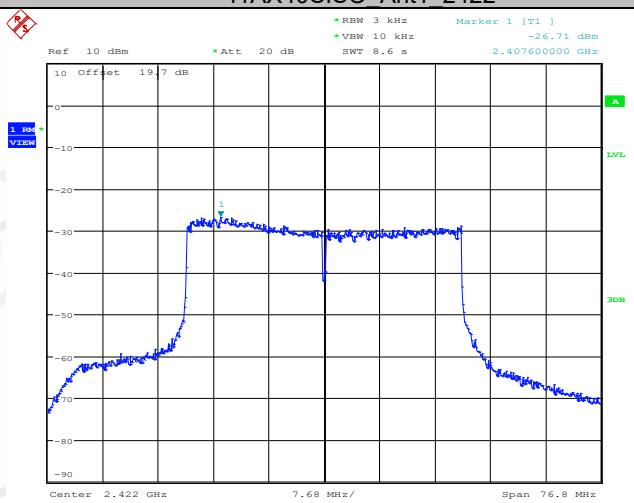

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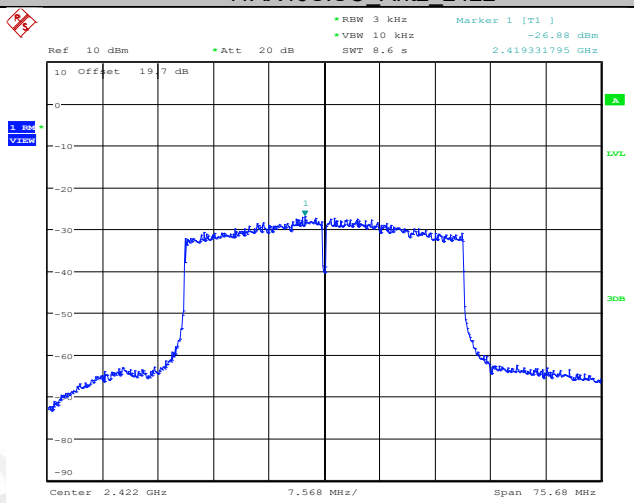

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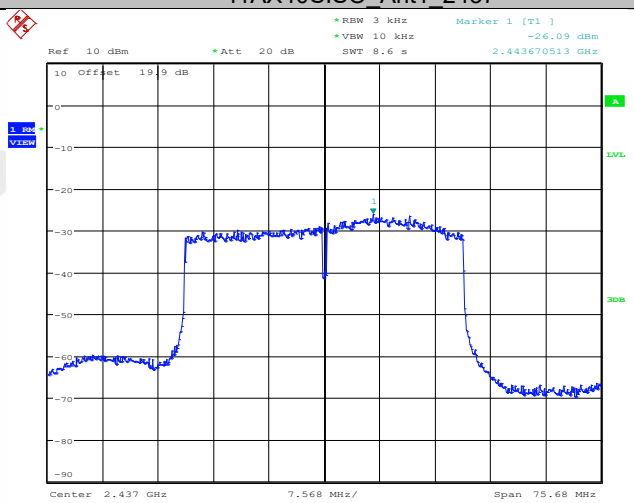

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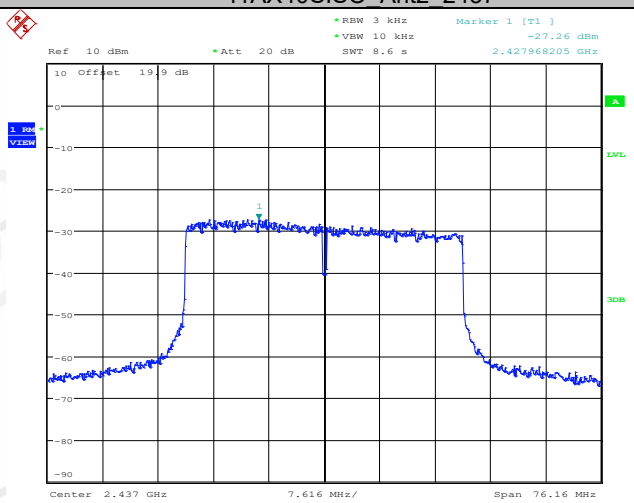

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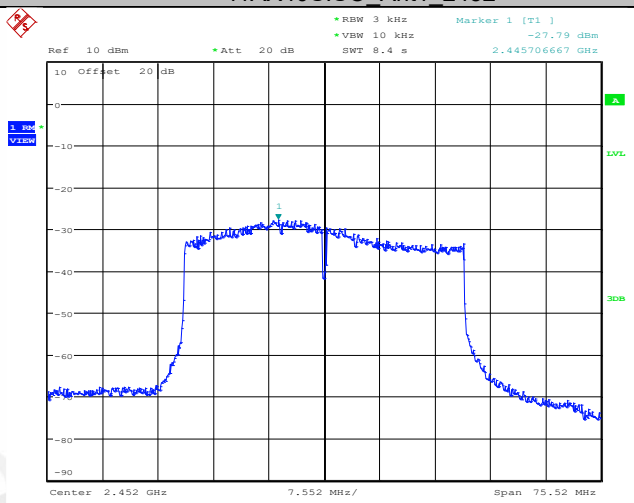

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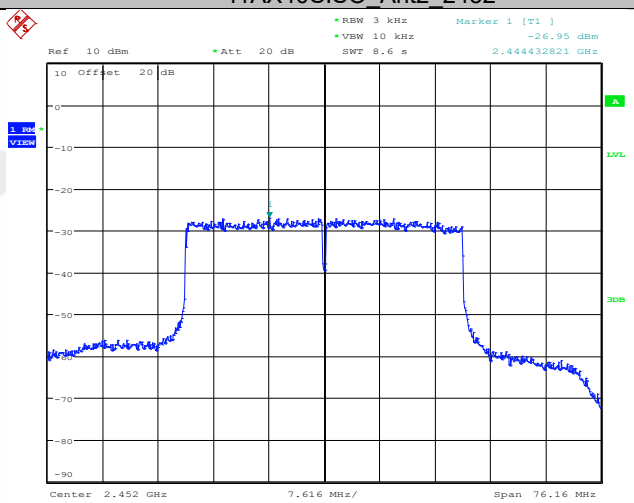

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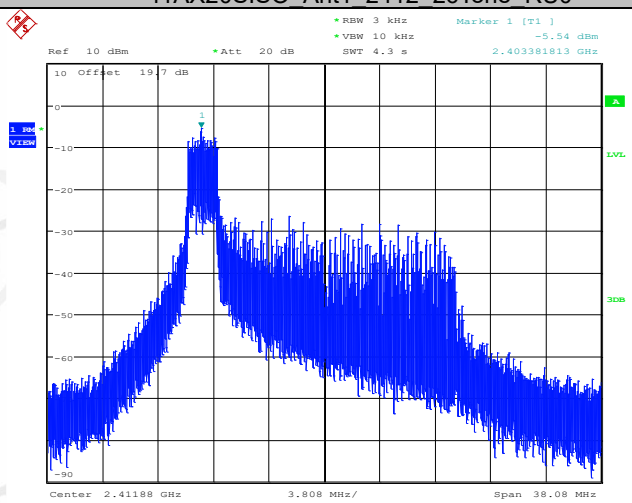

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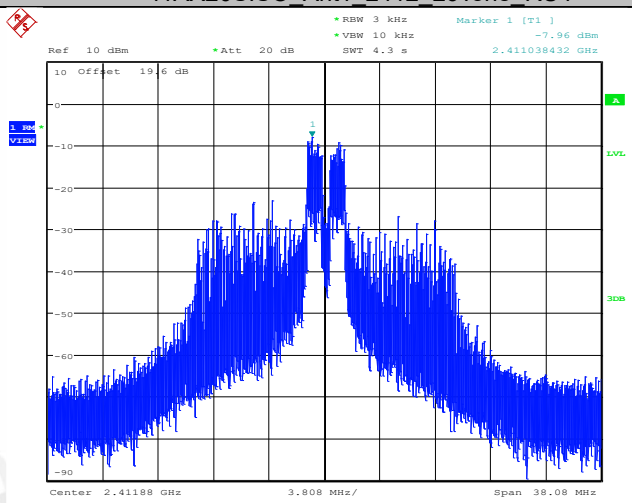

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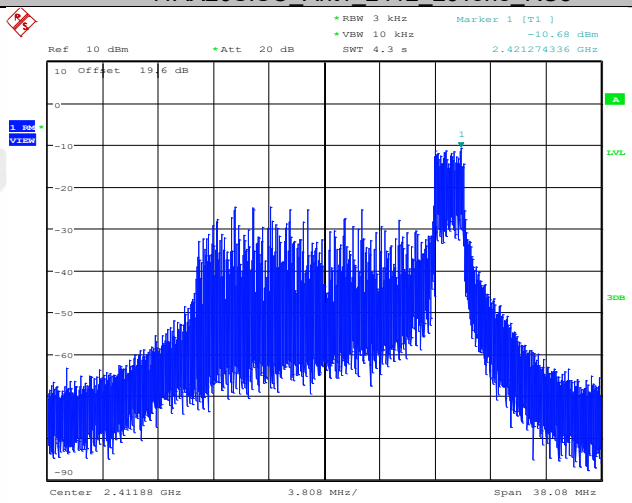

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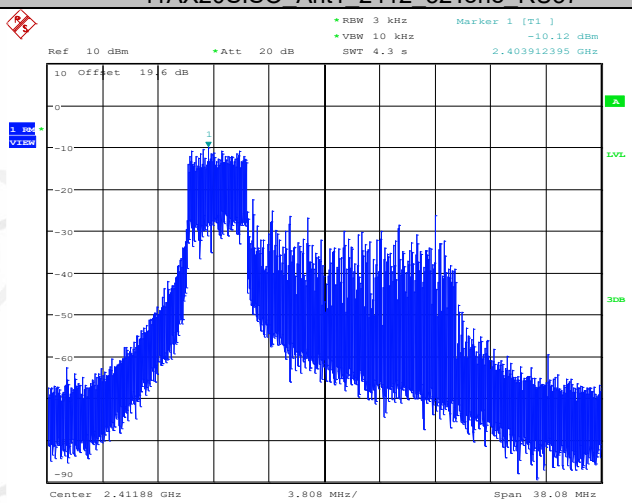

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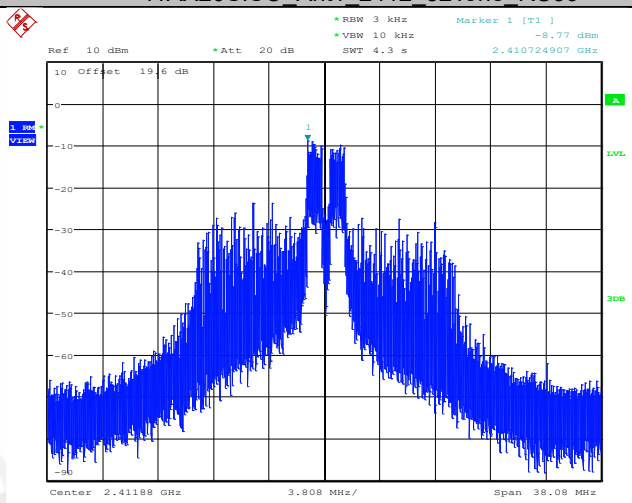

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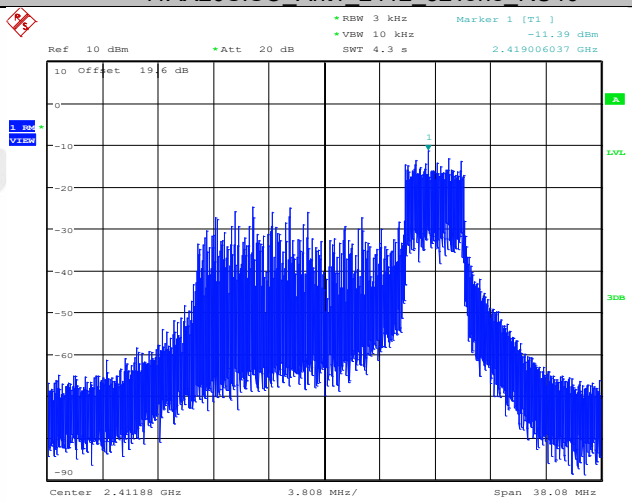

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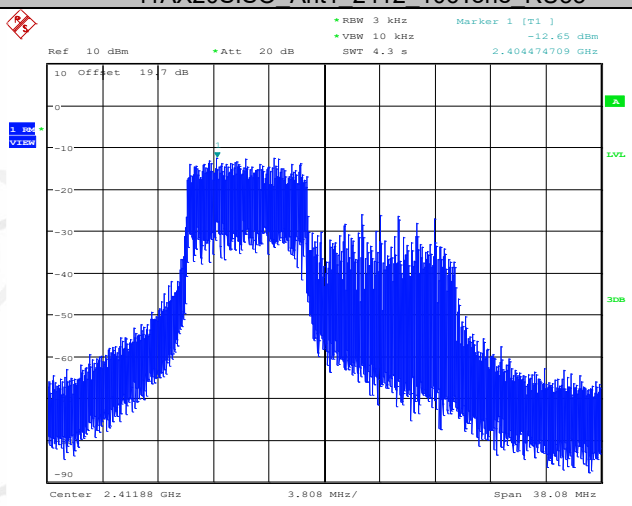

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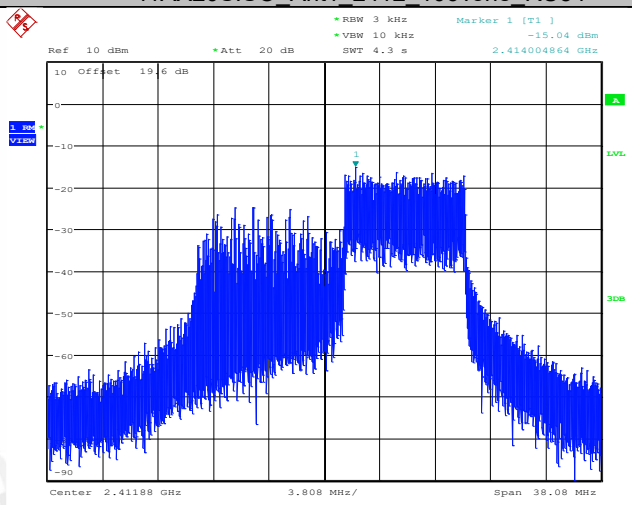

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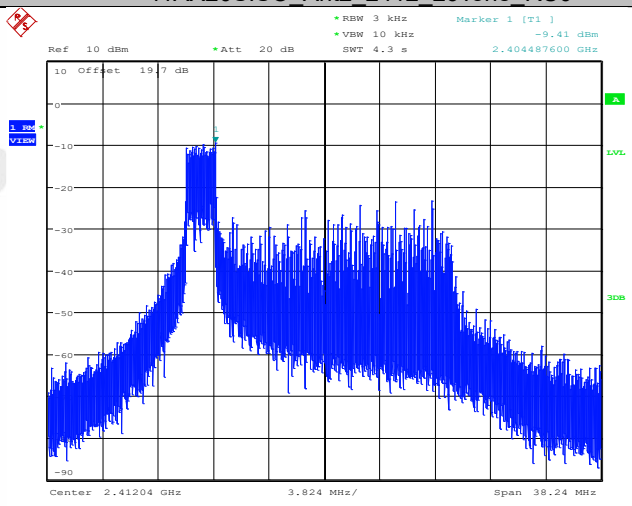

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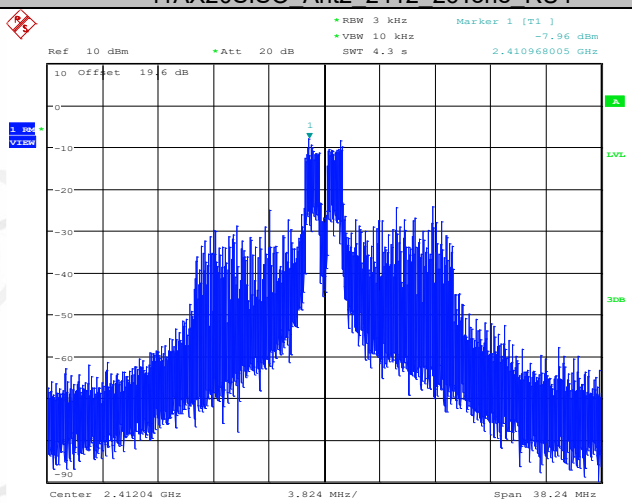

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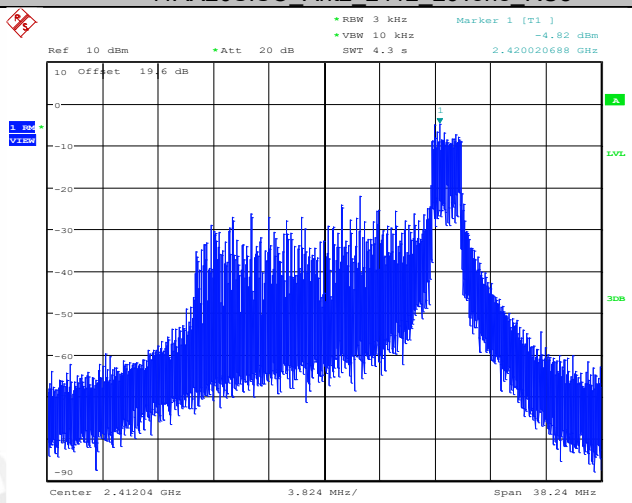

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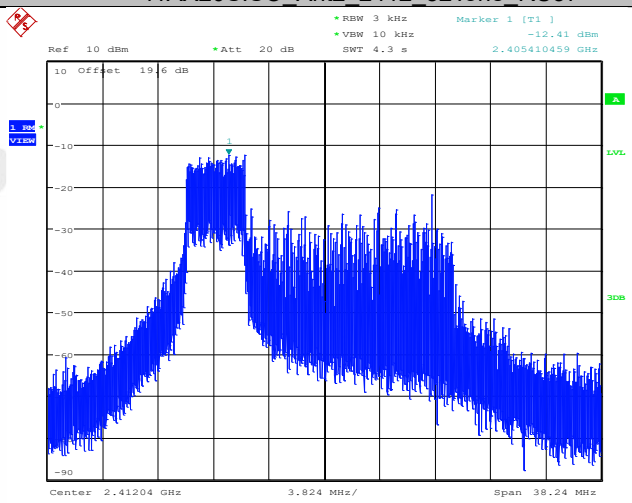

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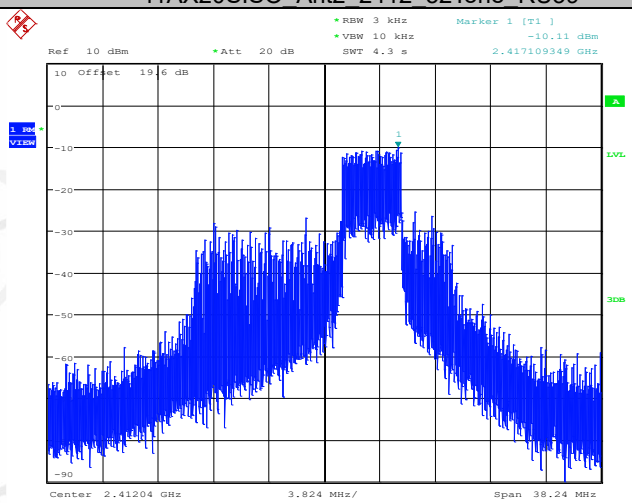

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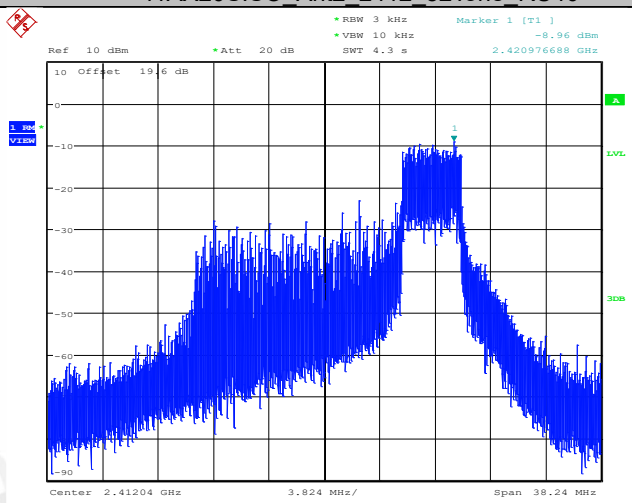

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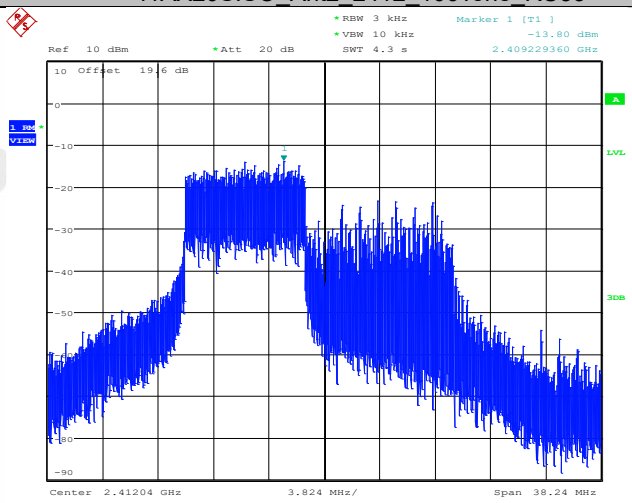

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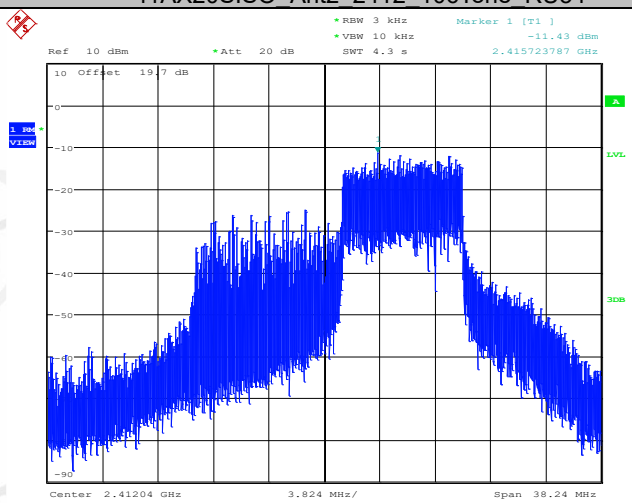
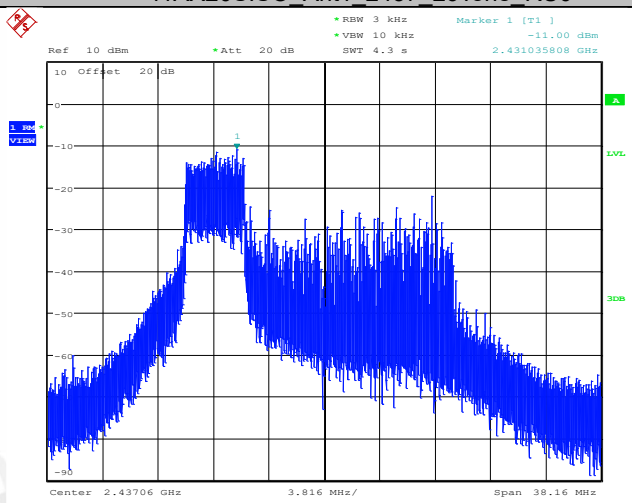
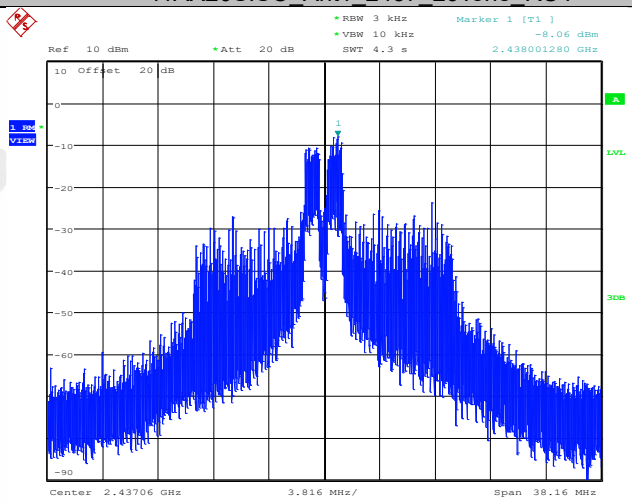


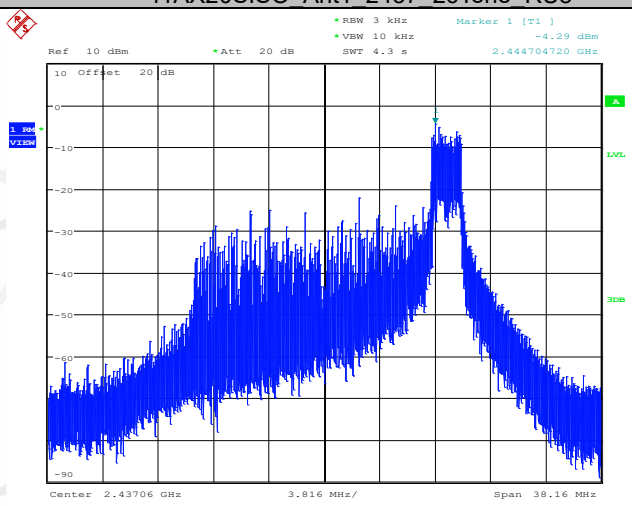
11AX20SISO_Ant1_2437_26Tone_RU0



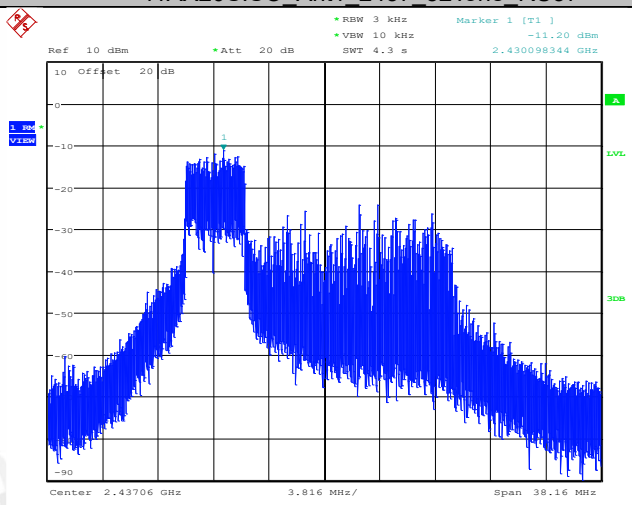
11AX20SISO_Ant1_2437_26Tone_RU4



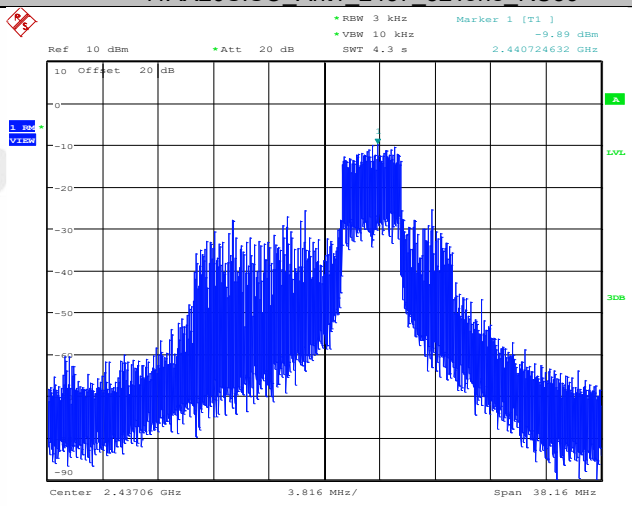
11AX20SISO_Ant1_2437_26Tone_RU8



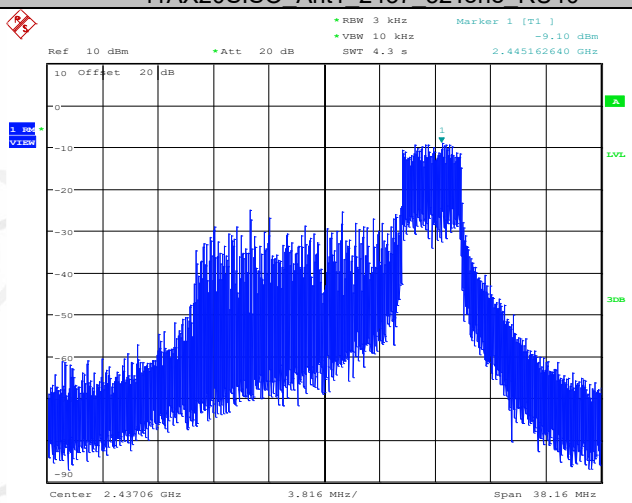
11AX20SISO_Ant1_2437_52Tone_RU37



11AX20SISO_Ant1_2437_52Tone_RU39



11AX20SISO_Ant1_2437_52Tone_RU40



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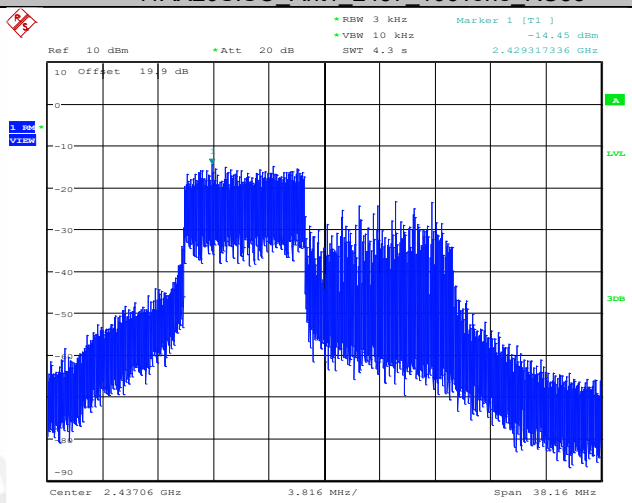
11AX20SISO_Ant1_2437_106Tone_RU53



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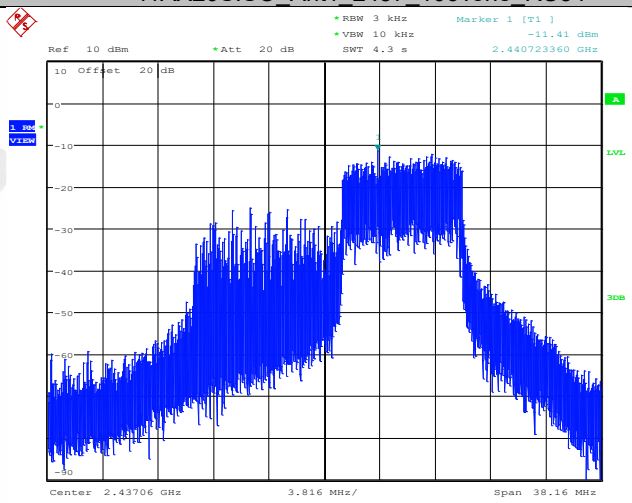
11AX20SISO_Ant1_2437_106Tone_RU54



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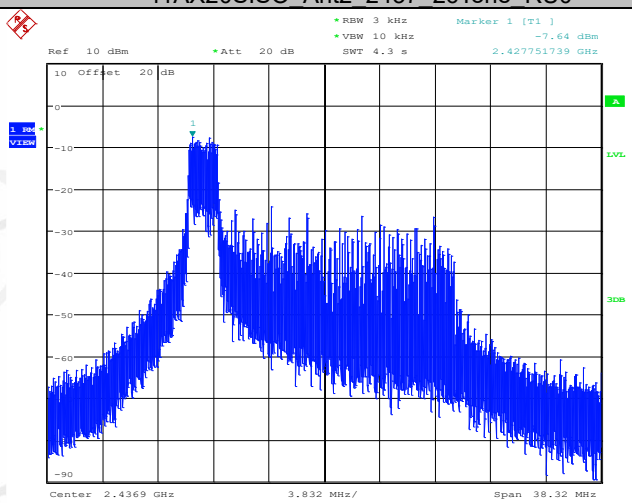
11AX20SISO_Ant2_2437_26Tone_RU0



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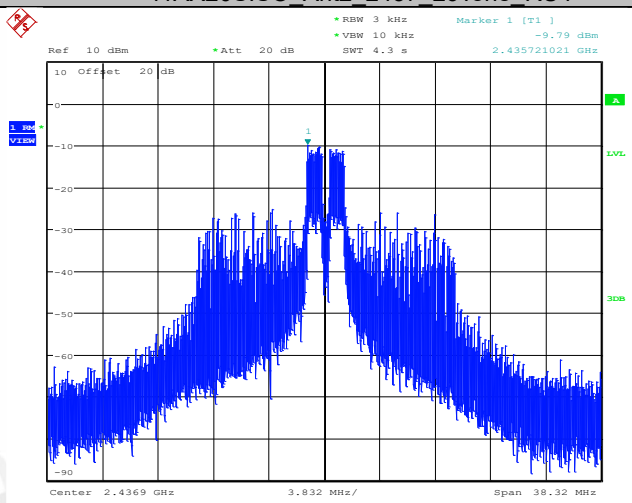
11AX20SISO_Ant2_2437_26Tone_RU4



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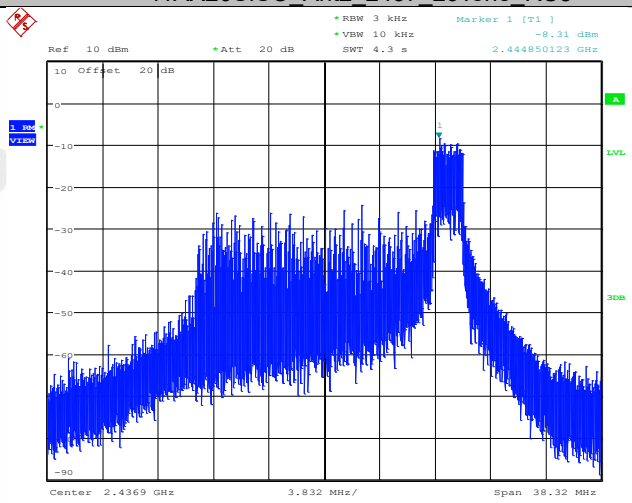
11AX20SISO_Ant2_2437_26Tone_RU8



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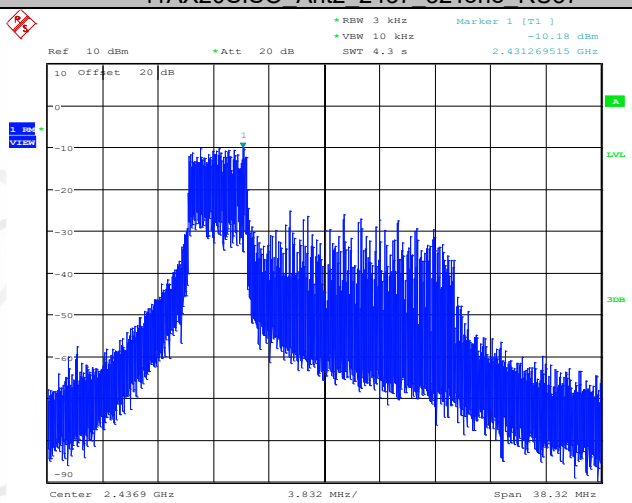
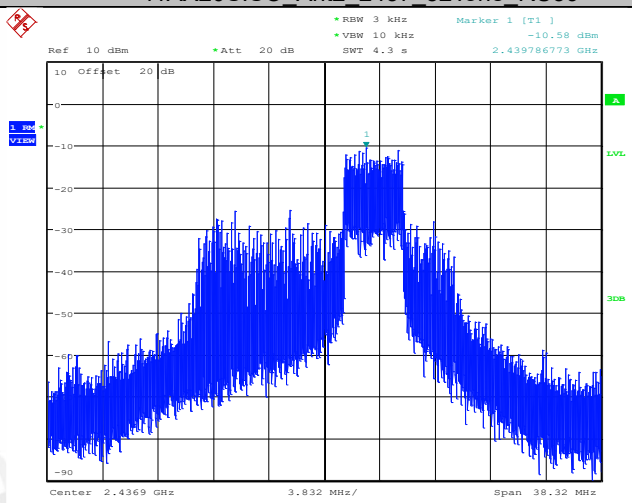
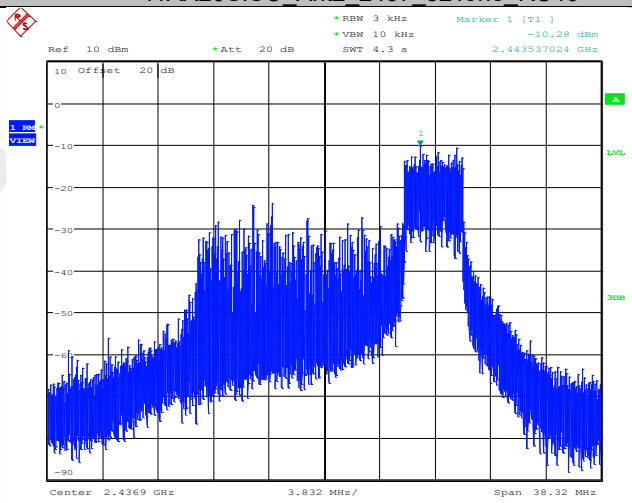
11AX20SISO_Ant2_2437_52Tone_RU37



11AX20SISO_Ant2_2437_52Tone_RU39



11AX20SISO_Ant2_2437_52Tone_RU40



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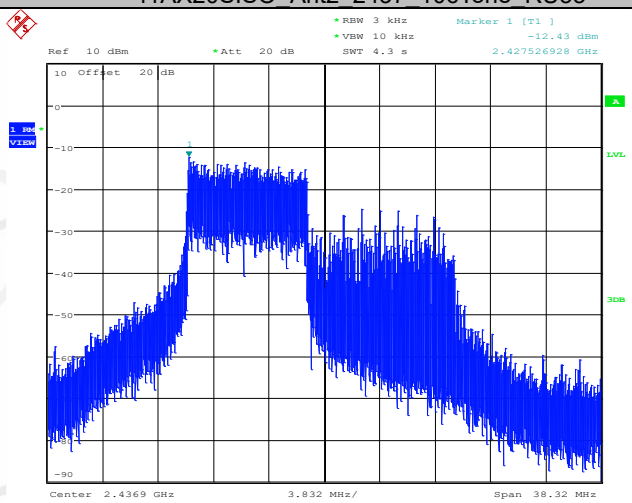

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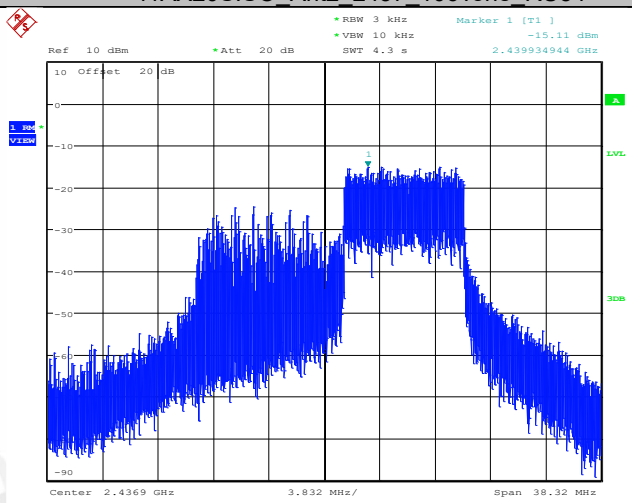
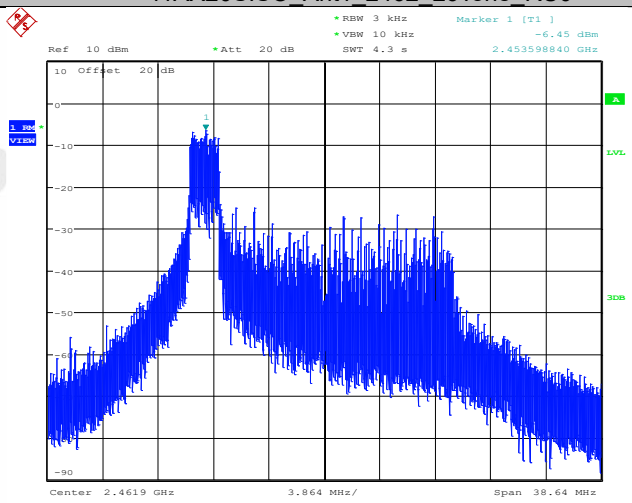
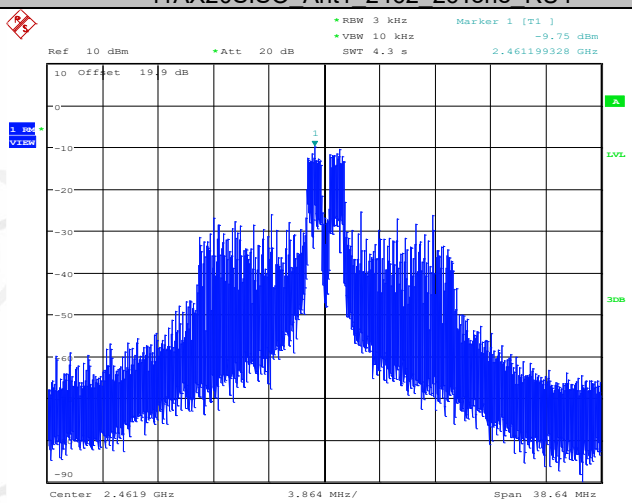


11AX20SISO_Ant1_2462_26Tone_RU0



11AX20SISO_Ant1_2462_26Tone_RU4



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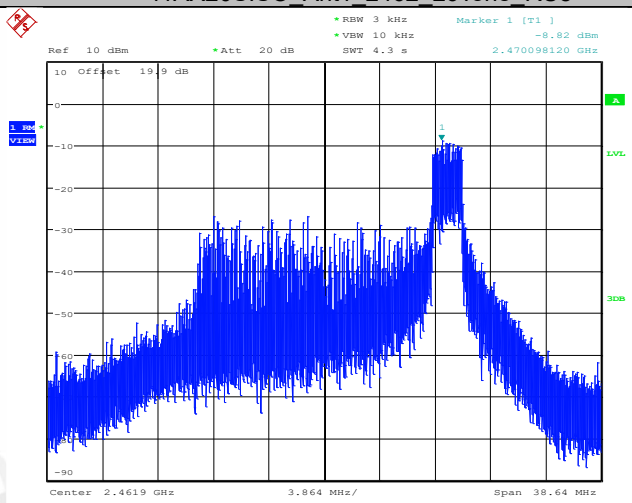
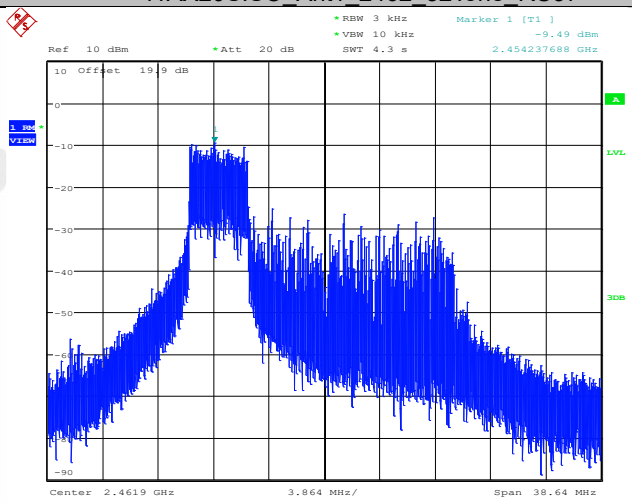
11AX20SISO_Ant1_2462_26Tone_RU8



Date: 21.FEB.2025 16:21:30

11AX20SISO_Ant1_2462_52Tone_RU37



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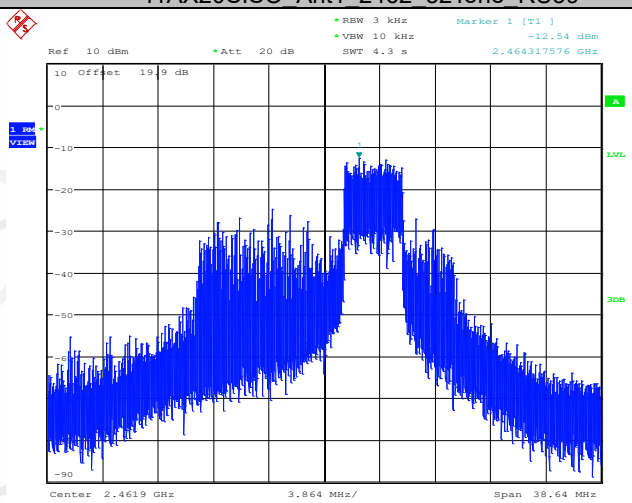
11AX20SISO_Ant1_2462_52Tone_RU39



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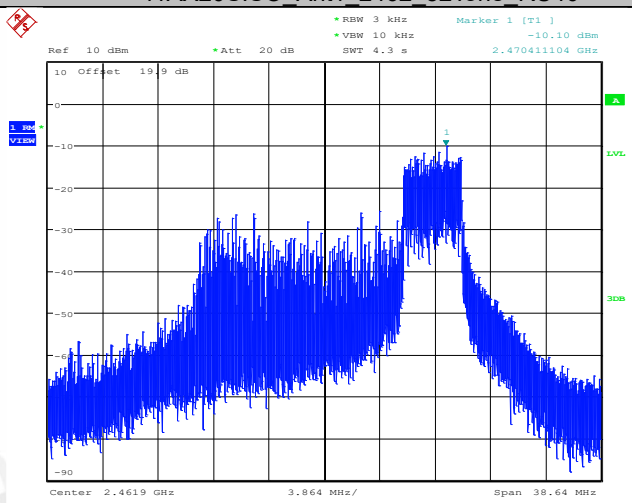
11AX20SISO_Ant1_2462_52Tone_RU40



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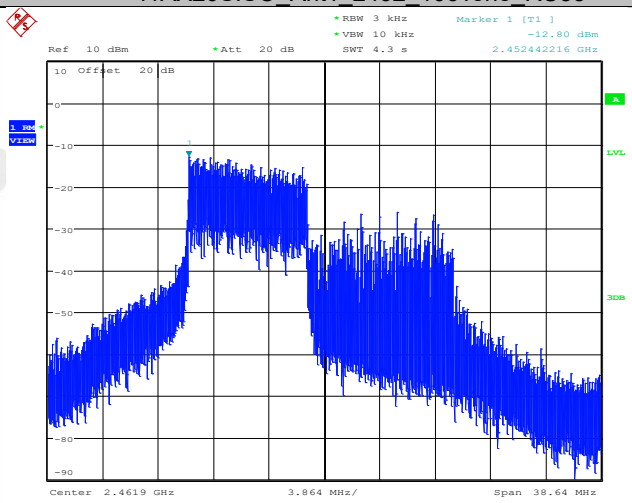
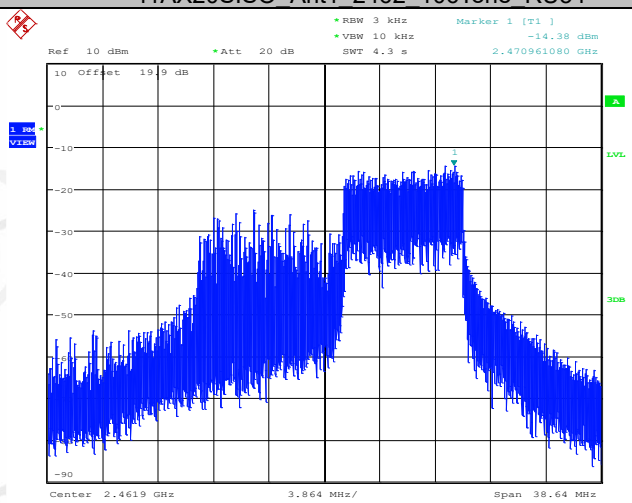


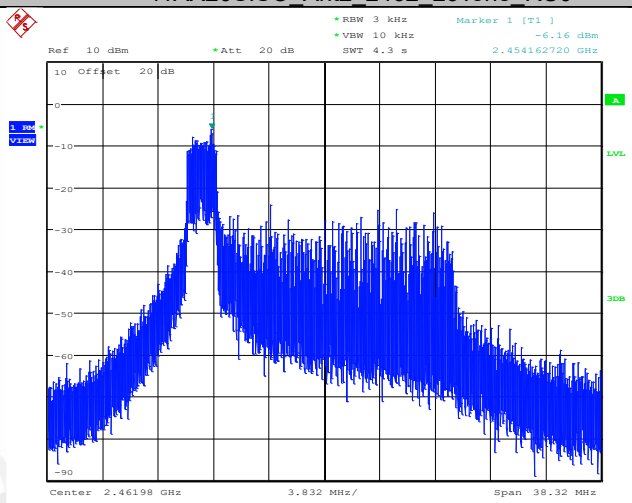
Date: 21.FEB.2025 16:31:03

11AX20SISO_Ant1_2462_106Tone_RU54



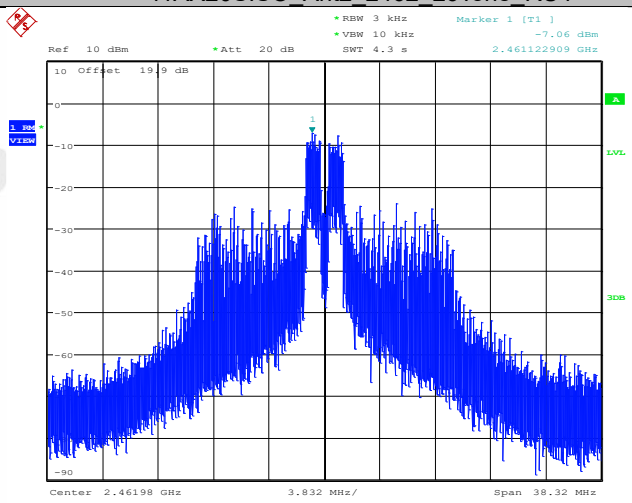
Date: 21.FEB.2025 16:31:56

11AX20SISO_Ant2_2462_26Tone_RU0



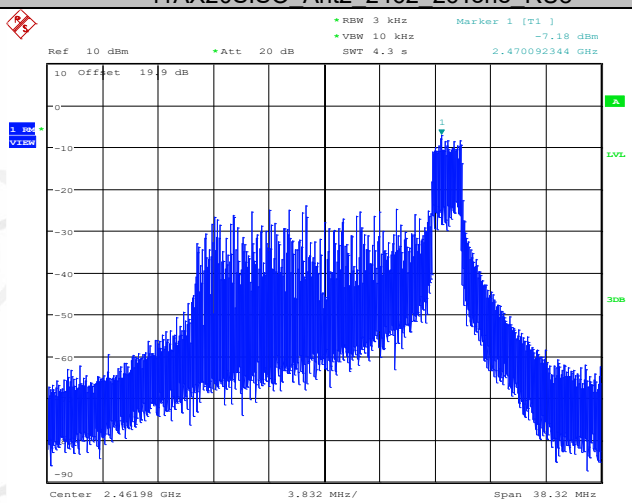
Date: 21.FEB.2025 16:59:33

11AX20SISO_Ant2_2462_26Tone_RU4



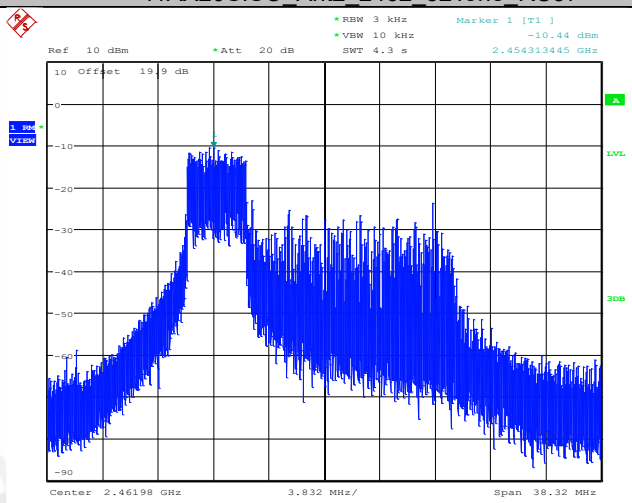
Date: 21.FEB.2025 17:00:32

11AX20SISO_Ant2_2462_26Tone_RU8



Date: 21.FEB.2025 17:01:24

11AX20SISO_Ant2_2462_52Tone_RU37



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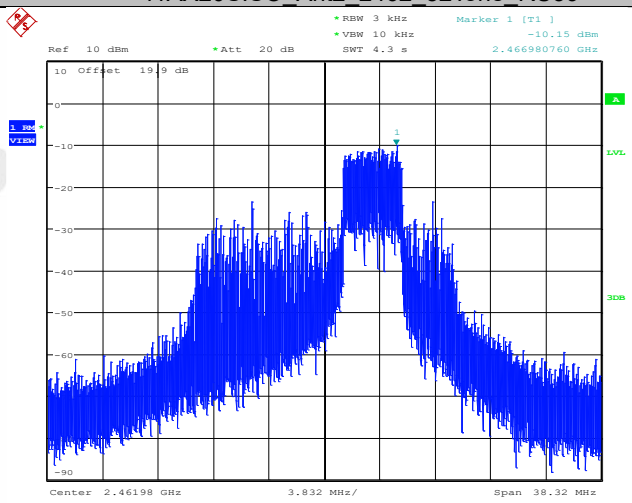
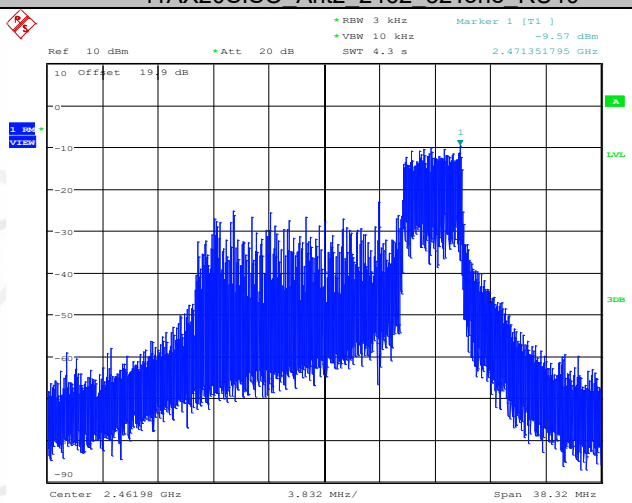
11AX20SISO_Ant2_2462_52Tone_RU39



Date: 21.FEB.2025 17:04:34

11AX20SISO_Ant2_2462_52Tone_RU40



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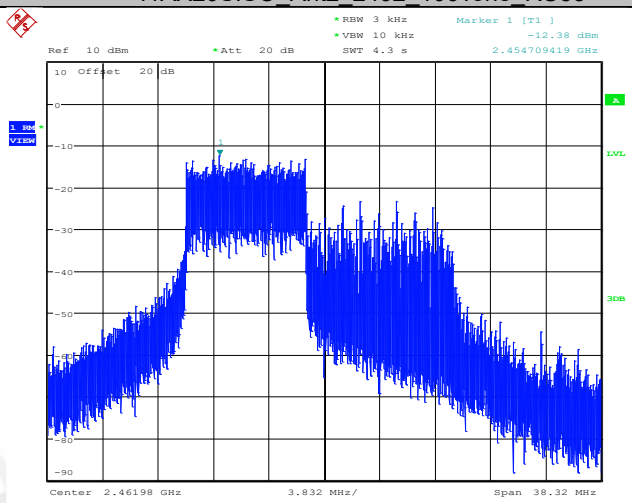
11AX20SISO_Ant2_2462_106Tone_RU53



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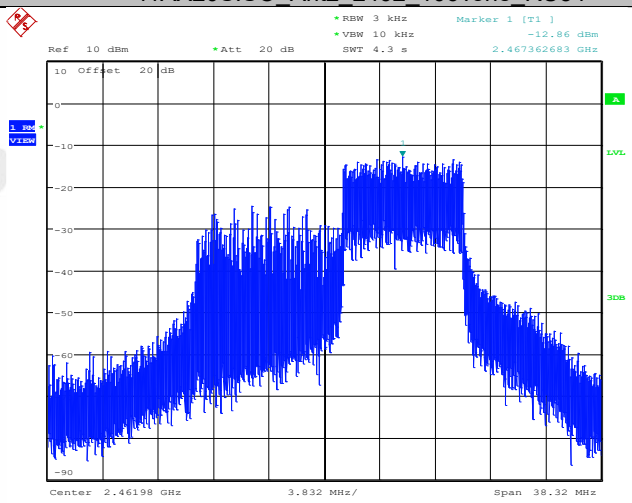
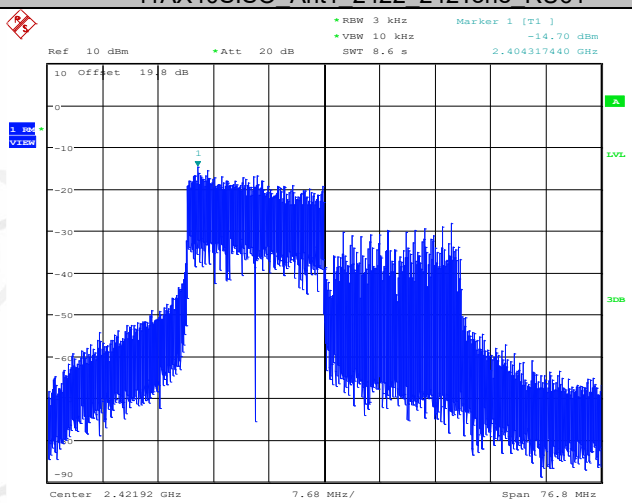


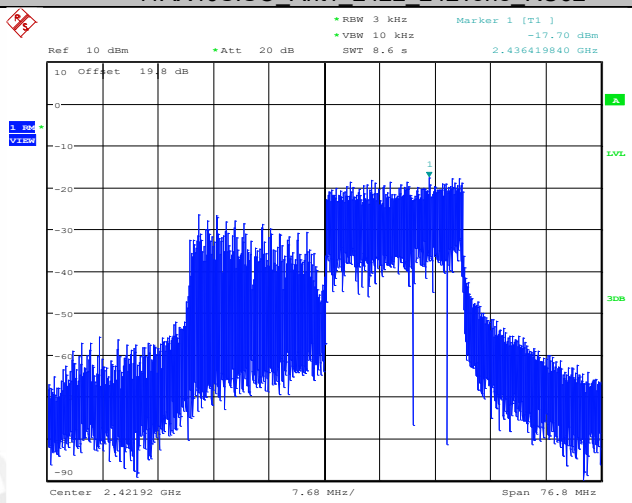
Date: 21.FEB.2025 17:08:01

11AX40SISO_Ant1_2422_242Tone_RU61



Date: 21.FEB.2025 16:33:24

11AX40SISO_Ant1_2422_242Tone_RU62



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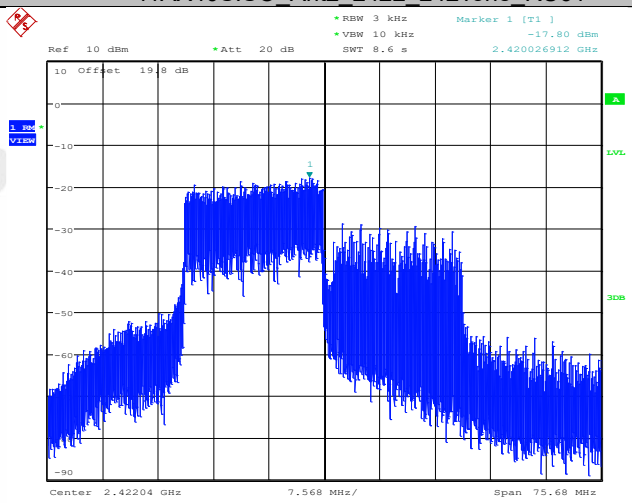

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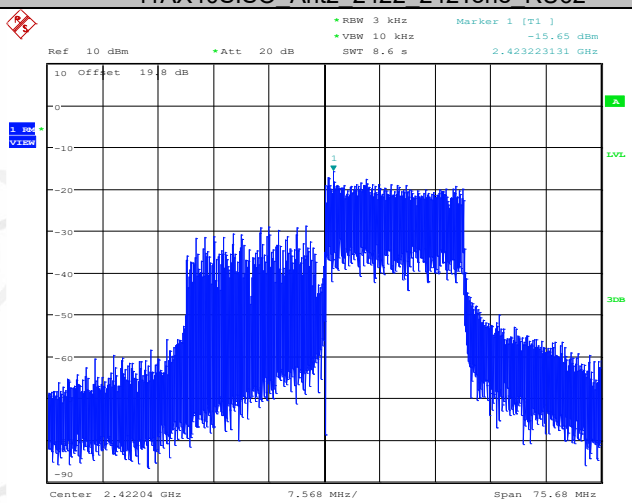

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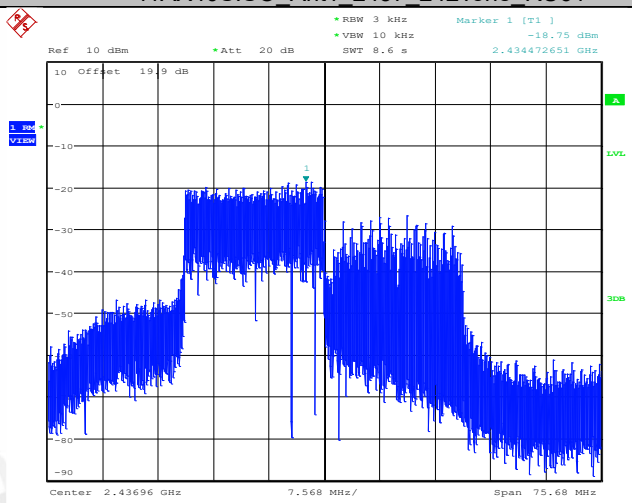
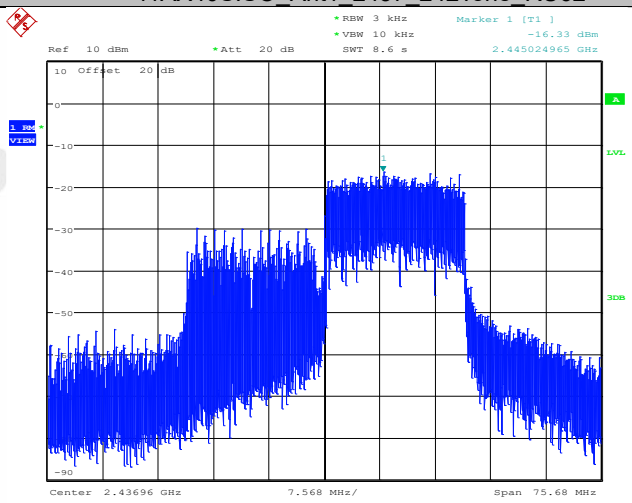
11AX40SISO_Ant1_2437_242Tone_RU61



Date: 21.FEB.2025 16:35:55

11AX40SISO_Ant1_2437_242Tone_RU62



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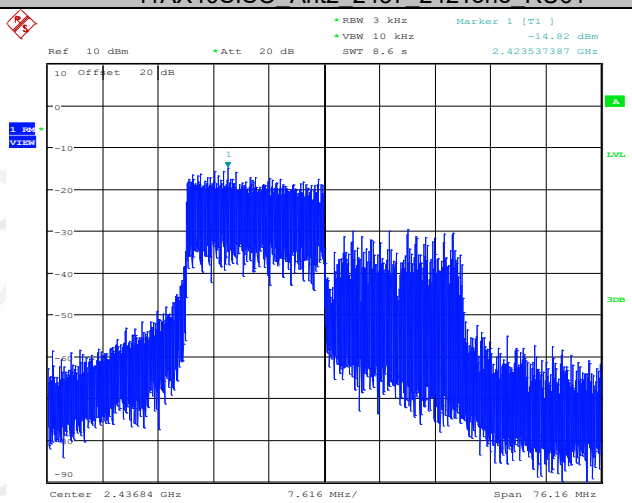
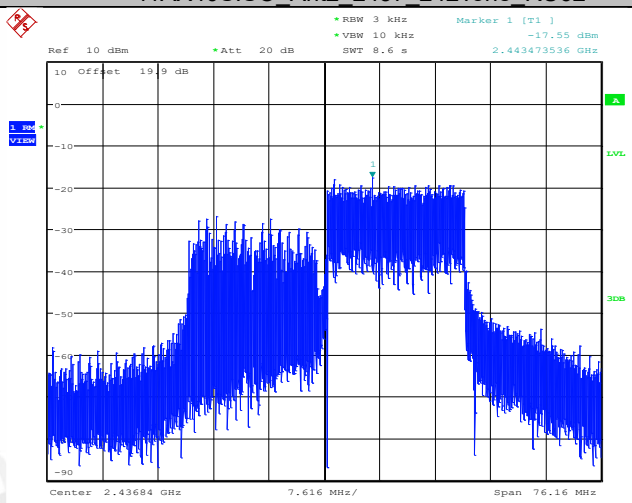
11AX40SISO_Ant2_2437_242Tone_RU61



11AX40SISO_Ant2_2437_242Tone_RU62



11AX40SISO_Ant1_2452_242Tone_RU61