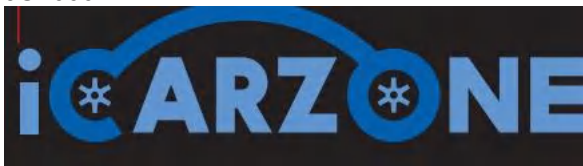


Test Report

Report No.: CQASZ20260100206E-04
Applicant: iCarzone Inc.
Address of Applicant: 5101 Santa Monica Blvd Ste 8 Los Angeles, CA 90029 United States
Equipment Under Test (EUT):
Product: PROFESSIONAL MULTI-SYSTEM CAR DIAGNOSTIC TOOL
Model No.: JU2000 Max
Test Model No.: JU2000 Max
Brand Name: 
FCC ID: 2BMNZ-JU2000MAX
Standards: 47 CFR Part 15, Subpart E
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Date of Receipt: 2026-01-23
Date of Test: 2026-01-23 to 2026-04-01
Date of Issue: 2026-4-27
Test Result: **PASS***

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

Tested By: Lewis Zhou
(Lewis Zhou)

Reviewed By: Timo Lei
(Timo Lei)

Approved By: Jack Ai
(Jack Ai)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20260100206E-04	Rev.01	Initial report	2026-4-27

2 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart E Section 15.207	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
Maximum Conducted Output Power	47 CFR Part 15 Subpart C Section 15.407 (a)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
Emission Bandwidth	47 CFR Part 15 Subpart C Section 15.407 (a)(e)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
Maximum Power Spectral Density	47 CFR Part 15 Subpart E Section 15.407 (a)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
Band Edge Measurements	47 CFR Part 15 Subpart C Section 15.209 & 15.407(b)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
Frequency stability	47 CFR Part 15 Subpart E Section 15.407 (g)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS
Operation in the absence of information to the transmit	47 CFR Part 15 Subpart E Section 15.407 (c)	47 CFR Part 15 Subpart E	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart E Section 15.407 (b)	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024; KDB789033	PASS

Remark:

The tested sample(s) and the sample information are provided by the client.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

CH: In this whole report CH means channel.

Volt: In this whole report Volt means Voltage.

Temp: In this whole report Temp means Temperature.

Humid: In this whole report Humid means humidity.

Press: In this whole report Press means Pressure.

N/A: In this whole report not application

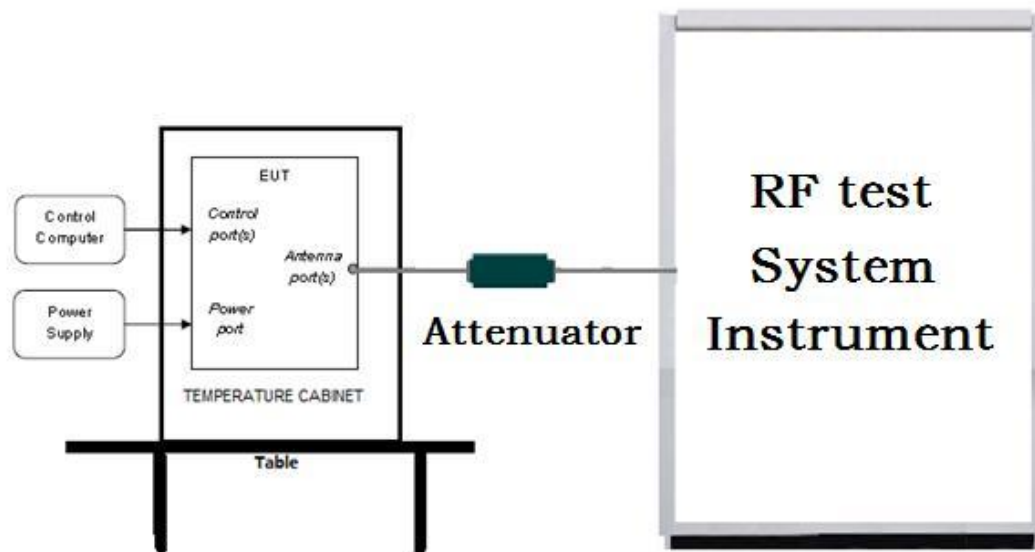
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4 Test Requirement

4.1 Test setup

4.1.1 For Conducted test setup



4.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

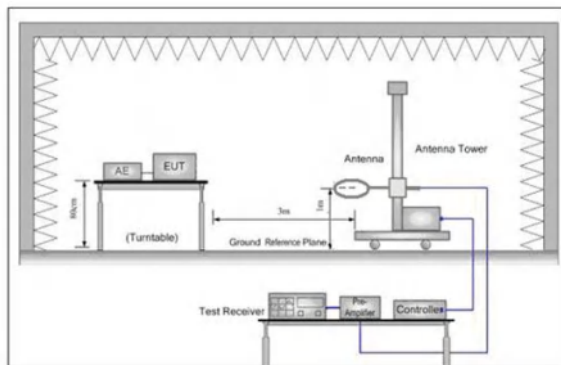


Figure 1. Below 30MHz

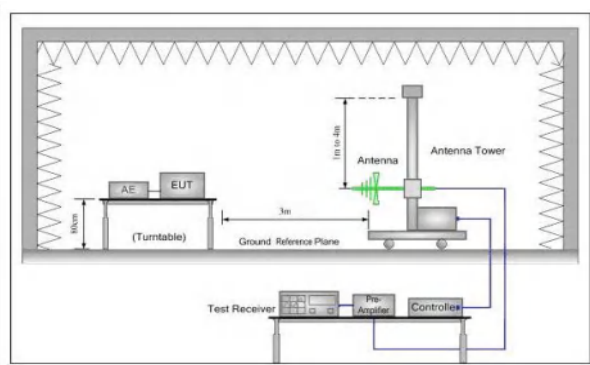


Figure 2. 30MHz to 1GHz

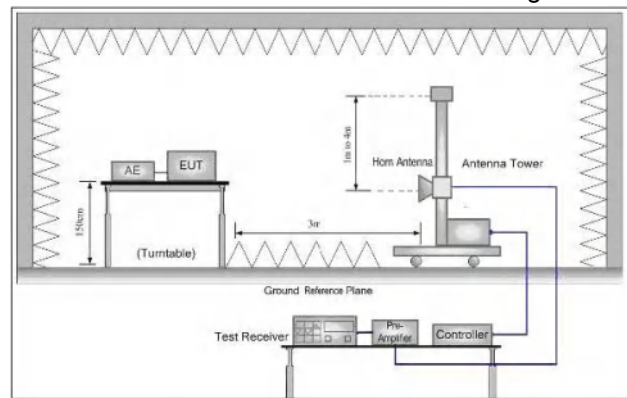
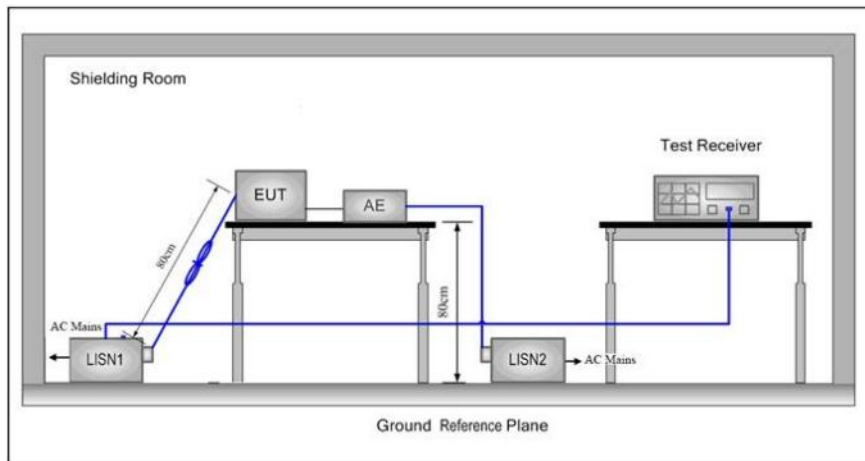


Figure 3. Above 1GHz

4.1.3 For Conducted Emissions test setup

Conducted Emissions setup



4.2 Test Environment

Operating Environment:		
Conducted Emissions:		
Temperature:	25.6 °C	
Humidity:	60 % RH	
Atmospheric Pressure:	1009 mbar	
Radiated Emissions:		
Temperature:	25.5 °C	
Humidity:	54 % RH	
Atmospheric Pressure:	1009mbar	
Radio conducted item test (RF Conducted test room):		
Temperature:	25.3 °C	
Humidity:	50 % RH	
Atmospheric Pressure:	1009 mbar	
Test Condition	Temperature (°C)	Voltage (V)
TN/VN	+15 to +35	3.8
TL/VL	-30	3.42
TH/VL	50	3.42
TL/VH	-30	4.18
TH/VH	50	4.18

Remark:

1)The EUT just work in such extreme temperature of -30 °C to 50 °C and the extreme voltage of 4.18V to 3.42V, so here the EUT is tested in the temperature of -30 °C to 50 °C and the voltage of 4.18V to 3.42V.

2)VN: Normal Voltage; TN: Normal Temperature;

TL: Low Extreme Test Temperature; TH: High Extreme Test Temperature;

VL: Low Extreme Test Voltage; VH: High Extreme Test Voltage.

4.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11a/n/ac(20M)	5150MHz ~5250 MHz	Channel 36	Channel 40	Channel 48
		5180MHz	5200MHz	5240MHz
802.11n/ac(40M)	5150MHz ~5250 MHz	Channel 38	N/A	Channel 46
		5190MHz	N/A	5230MHz
802.11n/ac(80M)	5150MHz ~5250 MHz	N/A	Channel 42	N/A
		N/A	5210MHz	N/A
802.11a/n/ac(20M)	5725MHz ~5850 MHz	Channel 149	Channel 157	Channel 165
		5745MHz	5785MHz	5825MHz
802.11n/ac(40M)	5725MHz ~5850 MHz	Channel 151	N/A	Channel 159
		5755MHz	N/A	5795MHz
802.11n/ac(80M)	5725MHz ~5850 MHz	N/A	Channel 155	N/A
		N/A	5775MHz	N/A

Run Software:

```
管理员: C:\Windows\System32\cmd.exe - adb shell

root@CarPlayBox:/#

root@CarPlayBox:/# rtwpriv wlan0 mp_pwrctlDM 3
rtwpriv wlan0 mp_pwrctlDM 3
wlan0      mp_pwrctlDM:PwrCtlDM start TSSI tracking on

root@CarPlayBox:/#

root@CarPlayBox:/# rtwpriv wlan0 1 0 b 11M 1 2000
rtwpriv wlan0 mp_txpower dbm=20
rtwpriv wlan0 1 0 b 11M 1 2000
rtwpriv wlan0 mp_txpower dbm=20
config packet Period =2000
Packet Pattern = random Byte
wlan0      mp_rate:Set data rate to 3 index 0
wlan0      mp_ant_tx:switch Tx antenna to b
wlan0      mp_bandwidth:No change current BW 0

wlan0      mp_channel:No change current channel:1
wlan0      1:Set PMac Tx Mode OK

root@CarPlayBox:/# rtwpriv wlan0 mp_txpower dbm=20
wlan0      mp_txpower:Path Set power dbm :20.0

root@CarPlayBox:/#

root@CarPlayBox:/#

root@CarPlayBox:/#
```

Test mode:

Pre-scan under all rate at lowest channel for Ant1

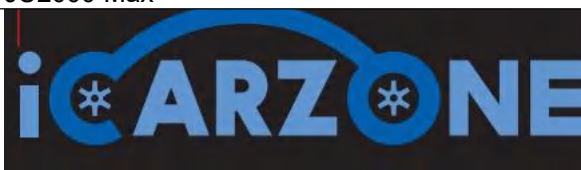
Through Pre-scan, 6Mbps is the worst case of 802.11a (20M); MCS0 is the worst case of 802.11n (20M); MCS0 is the worst case of 802.11ac (20M); MCS0 is the worst case of 802.11n(40M); MCS0 is the worst case of 802.11ac (40M); MCS0 is the worst case of 802.11n(80M); MCS0 is the worst case of 802.11ac (80M)

5 General Information

5.1 Client Information

Applicant:	iCarzone Inc.
Address of Applicant:	5101 Santa Monica Blvd Ste 8 Los Angeles, CA 90029 United States
Manufacturer:	iCarzone Inc.
Address of Manufacturer:	5101 Santa Monica Blvd Ste 8 Los Angeles, CA 90029 United States
Factory:	Dongguan Yongdong Electronic Technology Co., Ltd.
Address of Factory:	No. 10, 4th Street, Zhangyang Fuzhu Industrial Zone, Zhangmutou town, Dongguan City

5.2 General Description of EUT

Product Name:	PROFESSIONAL MULTI-SYSTEM CAR DIAGNOSTIC TOOL
Model No.:	JU2000 Max
Test Model No.:	JU2000 Max
Trade Mark:	
Software Version:	F219 :V1.35
Hardware Version:	System Version:V1.34
EUT Power Supply:	Li-ion battery DC 3.8V 10000mAh, Charge by DC 5V for adapter Adapter: Model No:FX18U-050330K Input:100-240V~50/60Hz 0.5A Output:5.0V~3.0A
EUT Supports Radios application:	U-NII-1: 5.15-5.25GHz;U-NII-3: 5.725-5.850GHz
EUT Type:	Client devices

5.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250 MHz IEEE802.11n/ac(40M): 5150MHz ~5250 MHz IEEE802.11ac(80M): 5150MHz ~5250 MHz IEEE 802.11a/n/ac(20M): 5725MHz ~5850 MHz IEEE802.11n/ac(40M): 5725MHz ~5850 MHz IEEE802.11ac(80M): 5725MHz ~5850 MHz
Channel Numbers:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n/ac(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11ac(80M): 5150MHz ~5250MHz/ 1 channel IEEE 802.11a/n/ac(20M): 5725MHz ~5850MHz/ 5 channel IEEE 802.11n/ac(40M): 5725MHz ~5850MHz/ 2 channel IEEE 802.11ac(80M): 5725MHz ~5850MHz/ 1 channel
Type of Modulation:	IEEE for 802.11a/n/ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)
Sample Type:	☐ Mobile ☒ Portable
Test Software of EUT:	Adb
Antenna Type:	FPC antenna
Antenna gain:	4.02dBi
Cable loss:	1.0 dB

Operation Frequency each of channel

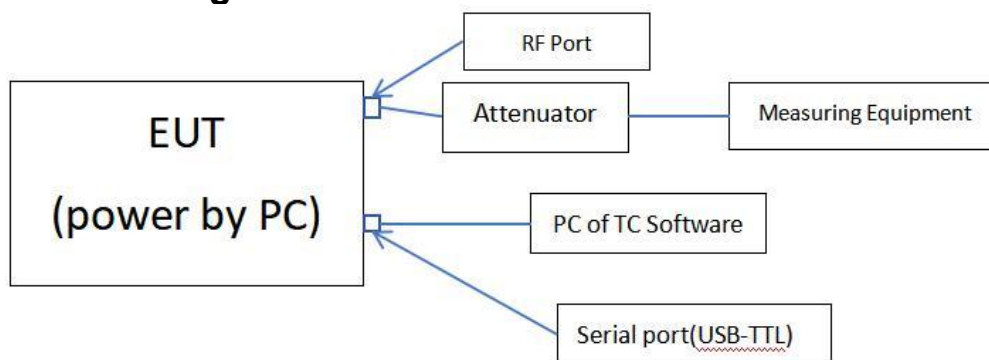
(U-NII-1) 5180MHz-5240MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	36	5180	40	5200
	44	5220	48	5240
40MHz	38	5190	46	5230
80MHz	42	5210	/	/
(U-NII-3) 5745MHz-5825MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	149	5745	153	5765
	157	5785	161	5805
	165	5825	/	/
40MHz	151	5755	159	5795
80MHz	165	5775	/	/

5.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Certification	Supplied by
/	/	/	/	/

5.5 Test configuration



5.6 Test Location

All tests were performed at:

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD

102A, 102B, Building 2, Shanghenglang New Industrial Zone, Shanghenglang Community,
Dalang Street, Longhua District, Shenzhen, Guangdong, People's Republic of China, 518000

5.7 Test Facility

• **A2LA (Certificate No. 4742.01)**

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD, Shenzhen EMC Laboratory is accredited by the

American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

• **FCC Registration No.: 522263**

SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD, Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

5.8 Deviation from Standards

None.

5.9 Abnormalities from Standard Conditions

None.

5.10 Other Information Requested by the Customer

None.

5.11 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	3×10^{-8}
2	RF power, conducted	0.86dB
3	Radiated Spurious emission test	5.12dB (Below 1GHz)
		4.6dB (Above 1GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.8°C
6	Humidity test	2.0%
7	DC power voltages	0.5%

6 Equipment List

Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2025/9/1	2026/8/31
Spectrum analyzer	R&S	FSU26	CQA-038	2025/9/1	2026/8/31
Spectrum analyzer	R&S	FSU40	CQA-075	2025/9/1	2026/8/31
Preamplifier	MITEQ	AFS4-00010300-18-10P-4	CQA-035	2025/9/1	2026/8/31
Preamplifier	MITEQ	AMF-6D-02001800-29-20P	CQA-036	2025/9/1	2026/8/31
Preamplifier	EMCI	EMC184055SE	CQA-089	2025/9/1	2026/8/31
Loop antenna	Schwarzbeck	FMZB1516	CQA-060	2023/9/8	2026/9/7
Bilog Antenna	R&S	HL562	CQA-011	2023/11/01	2026/10/31
Horn Antenna	R&S	HF906	CQA-012	2023/11/01	2026/10/31
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2023/9/7	2026/9/6
Coaxial Cable (Above 1GHz)	CQA	N/A	C007	2025/9/1	2026/8/31
Coaxial Cable (Below 1GHz)	CQA	N/A	C013	2025/9/1	2026/8/31
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2025/9/1	2026/8/31
Antenna Connector	CQA	RFC-01	CQA-080	2025/9/1	2026/8/31
Power Sensor	KEYSIGHT	U2021XA	CQA-30	2025/9/1	2026/8/31
N1918A Power Analysis Manager Power Panel	Agilent	N1918A	CQA-074	2025/9/1	2026/8/31
Power meter	R&S	NRVD	CQA-029	2025/9/1	2026/8/31
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2025/9/1	2026/8/31
EMI Test Receiver	R&S	ESR7	CQA-005	2025/9/1	2026/8/31
LISN	R&S	ENV216	CQA-003	2025/9/1	2026/8/31
Coaxial cable	CQA	N/A	CQA-C009	2025/9/1	2026/8/31
DC power	KEYSIGHT	E3631A	CQA-028	2025/9/1	2026/8/31

Test software:

	Manufacturer	Software brand	Software version
Radiated Emissions test software	Tonscend	JS1120-3	Version:8
Conducted Emissions test software	Audix	e3	Version:9
RF Conducted test software	Audix	e3	V3.5.39

7 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15E	Subpart C-Intentional Radiators
2	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	American National Standard for Testing Unlicensed Wireless Devices
3	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01	Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) device part 15, subpart E

Appendix A): Emission Bandwidth

26dB Emission bandwidth

Test Requirement: 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II C 1

6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart C 15.407 (e)

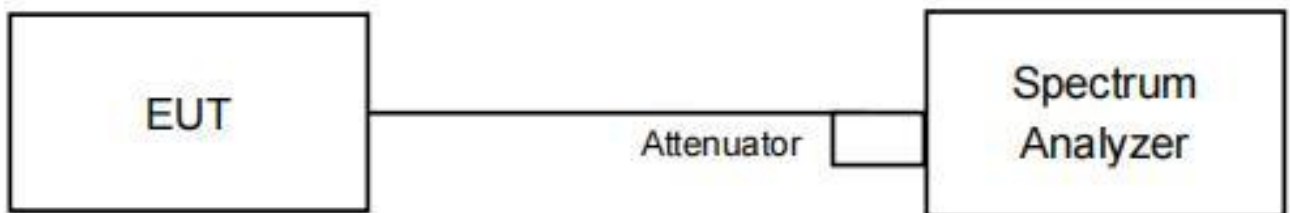
Test Method: KDB 789033 D02 II C 2

Limit: ≥ 500 kHz

Test Procedure:

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

Test Setup Diagram



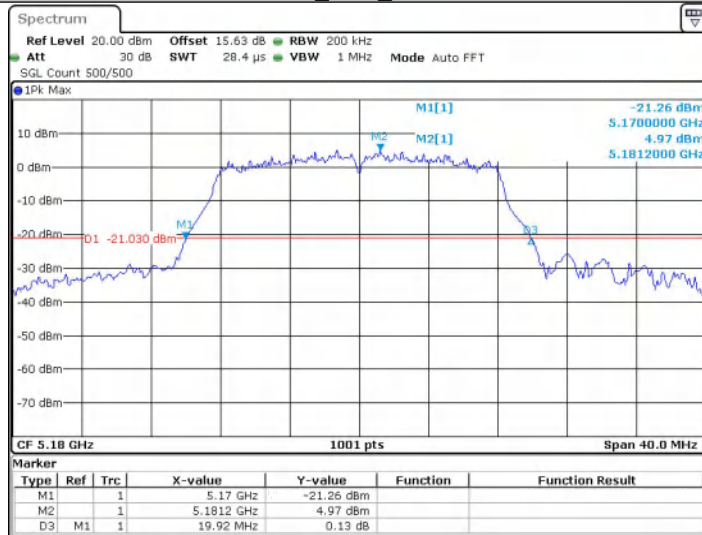
Result Table

TestMode	Freq(MHz)	26db EBW [MHz]	FL[MHz]	FH[MHz]
11A	5180	19.92	5170.00	5189.92
	5200	19.72	5190.04	5209.76
	5240	19.80	5230.12	5249.92
	5745	19.52	5735.16	5754.68
	5785	19.68	5775.20	5794.88
	5825	20.56	5814.44	5835.00
11N20SISO	5180	20.08	5169.76	5189.84
	5200	20.04	5189.96	5210.00
	5240	20.20	5229.92	5250.12
	5745	19.80	5735.08	5754.88
	5785	20.16	5774.96	5795.12
	5825	22.80	5812.20	5835.00
11N40SISO	5190	40.64	5169.44	5210.08
	5230	41.20	5209.28	5250.48
	5755	40.40	5734.28	5774.68
	5795	40.56	5774.68	5815.24
11AC20SISO	5180	20.32	5169.80	5190.12
	5200	20.16	5189.92	5210.08
	5240	20.24	5229.88	5250.12
	5745	19.96	5734.96	5754.92
	5785	20.12	5775.00	5795.12
	5825	20.52	5814.36	5834.88
11AC40SISO	5190	40.16	5169.84	5210.00
	5230	41.36	5209.28	5250.64
	5755	40.80	5734.12	5774.92
	5795	41.20	5774.12	5815.32
11AC80SISO	5210	82.08	5168.88	5250.96
	5775	80.32	5734.68	5815.00

TestMode	Freq(MHz)	6db EBW [MHz]	Limit[MHz]	Verdict
11A	5745	15.08	0.5	PASS
	5785	15.08	0.5	PASS
	5825	15.08	0.5	PASS
11N20SISO	5745	15.12	0.5	PASS
	5785	15.68	0.5	PASS
	5825	15.12	0.5	PASS
11N40SISO	5755	32.56	0.5	PASS
	5795	35.12	0.5	PASS
11AC20SISO	5745	15.12	0.5	PASS
	5785	15.12	0.5	PASS
	5825	15.12	0.5	PASS
11AC40SISO	5755	32.56	0.5	PASS
	5795	35.12	0.5	PASS
11AC80SISO	5775	75.20	0.5	PASS

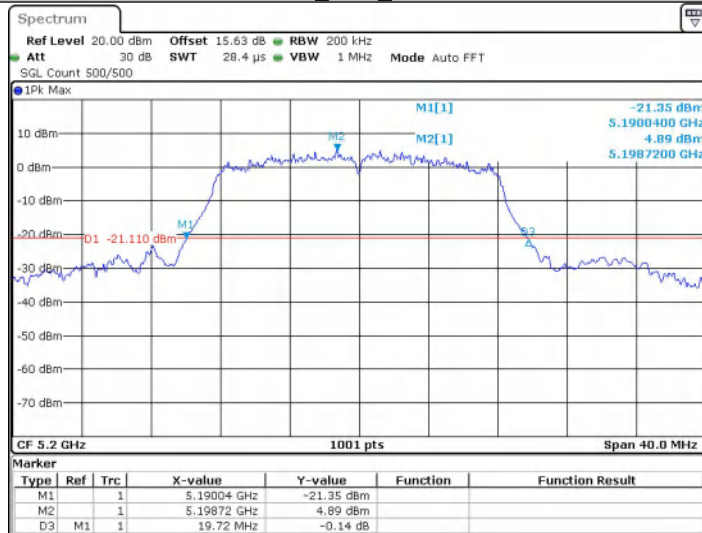
Test Graph

11A_Ant1_5180



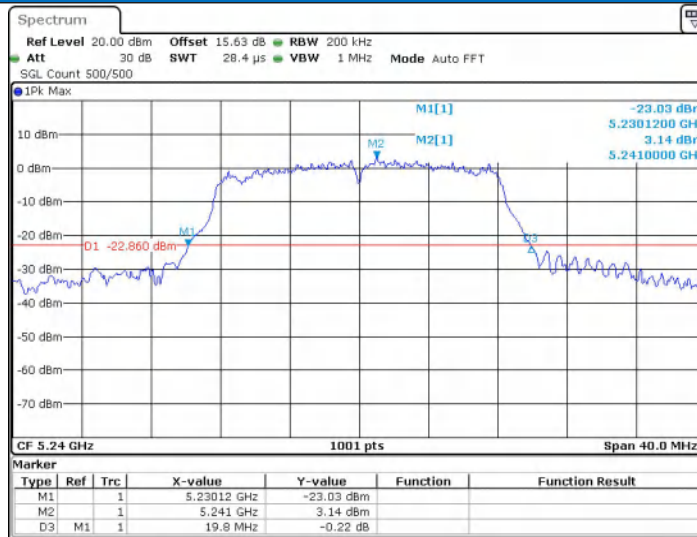
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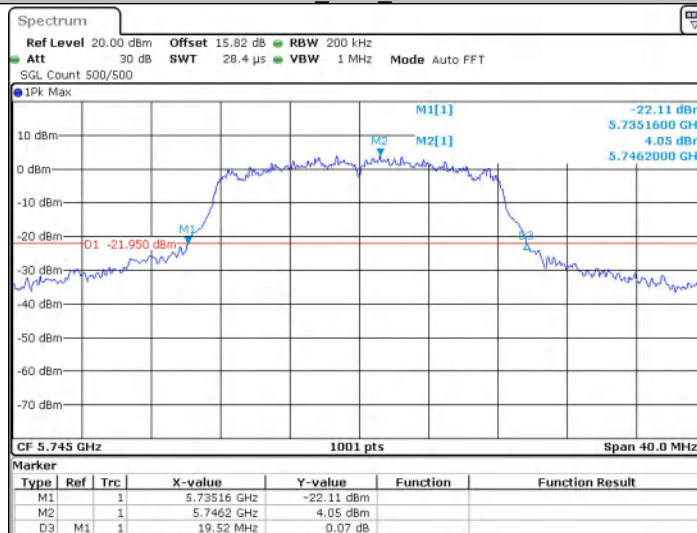
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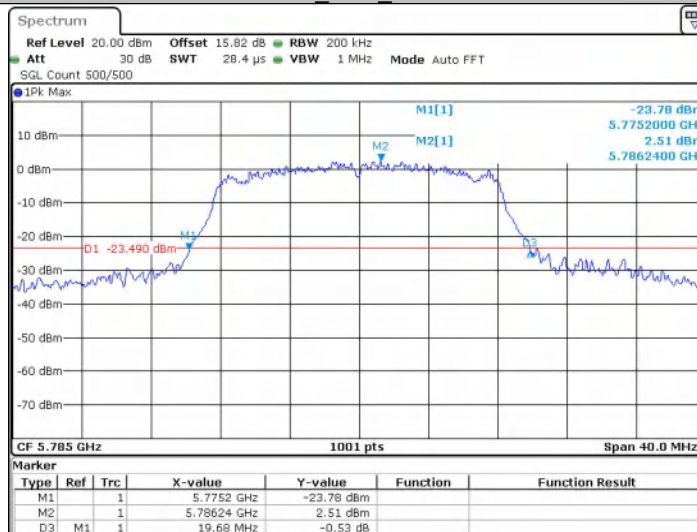
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11A_Ant1_5745



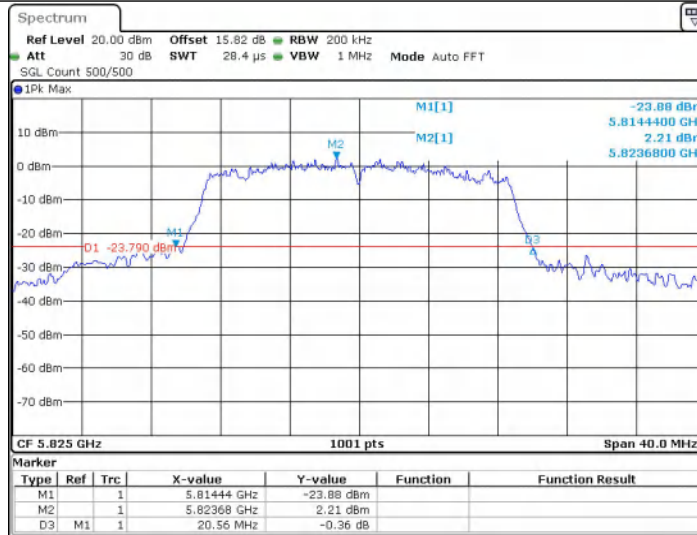
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11A_Ant1_5785



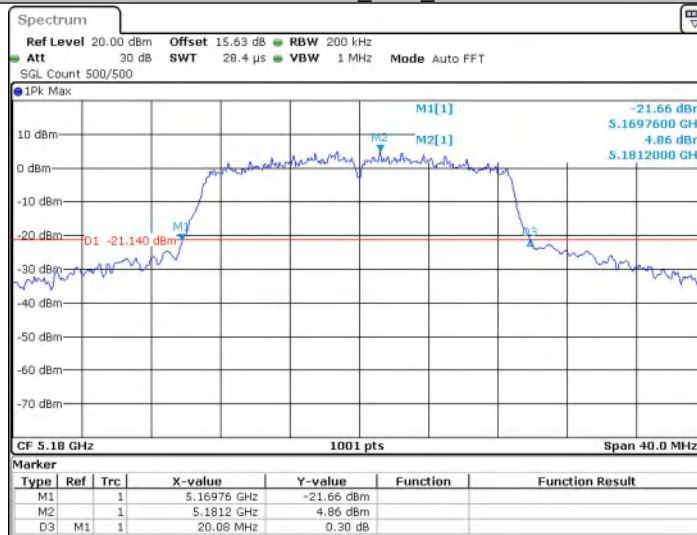
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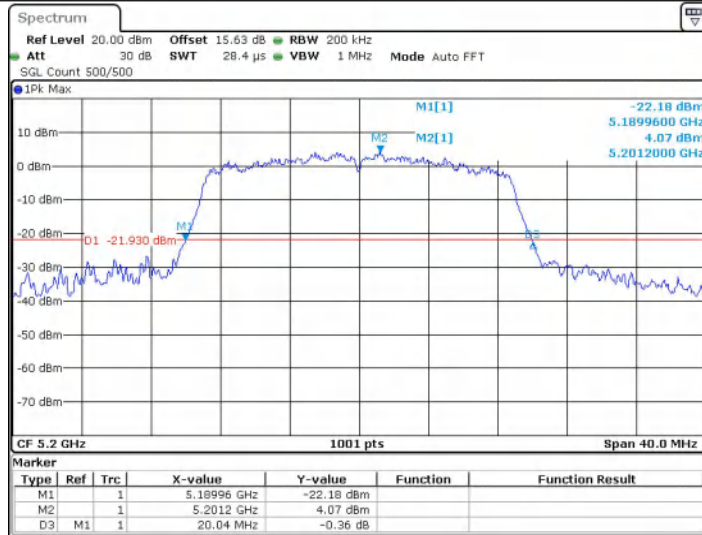
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11N20SISO_Ant1_5180



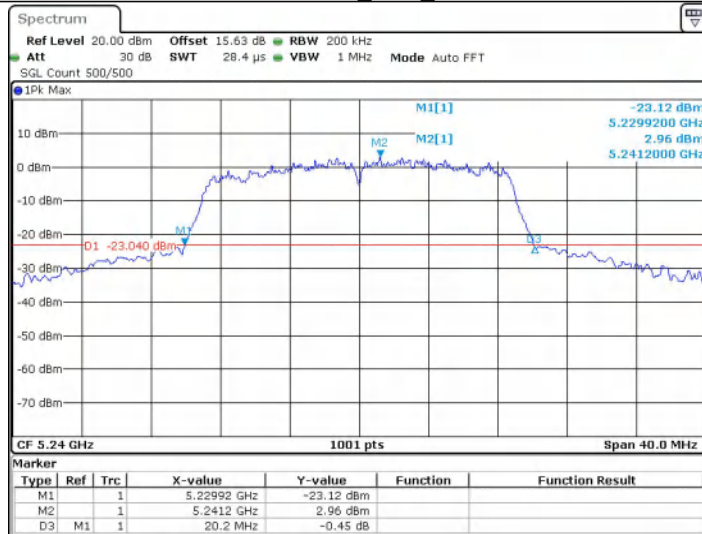
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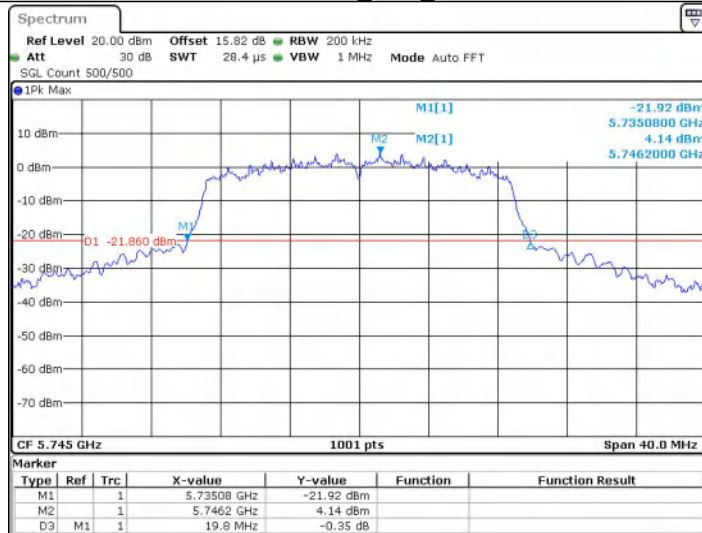
Date: 31.MAR.2026 21:17:45

11N20SISO_Ant1_5240



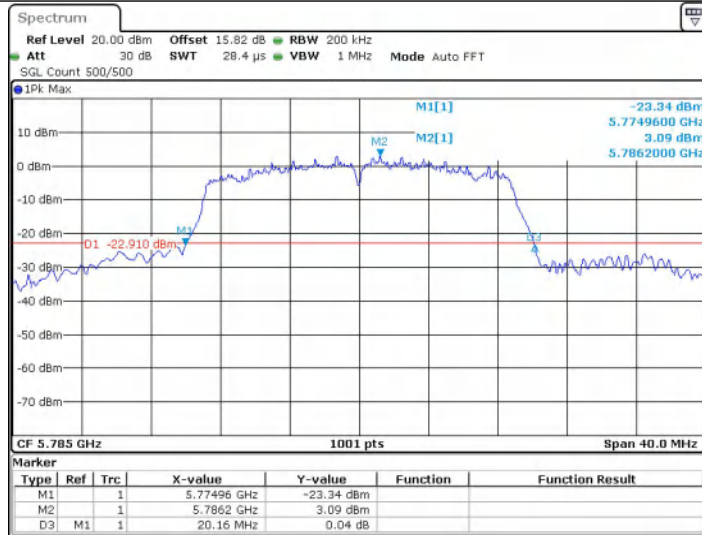
Date: 31.MAR.2026 21:21:35

11N20SISO_Ant1_5745



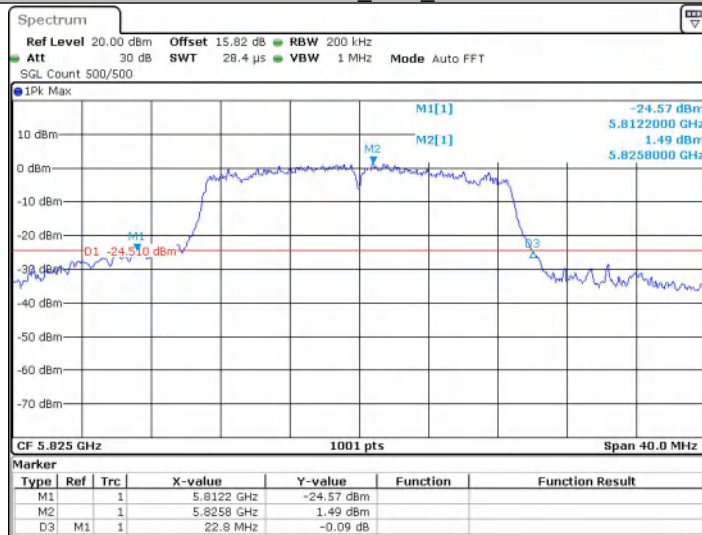
Date: 31.MAR.2026 21:24:48

11N20SISO_Ant1_5785



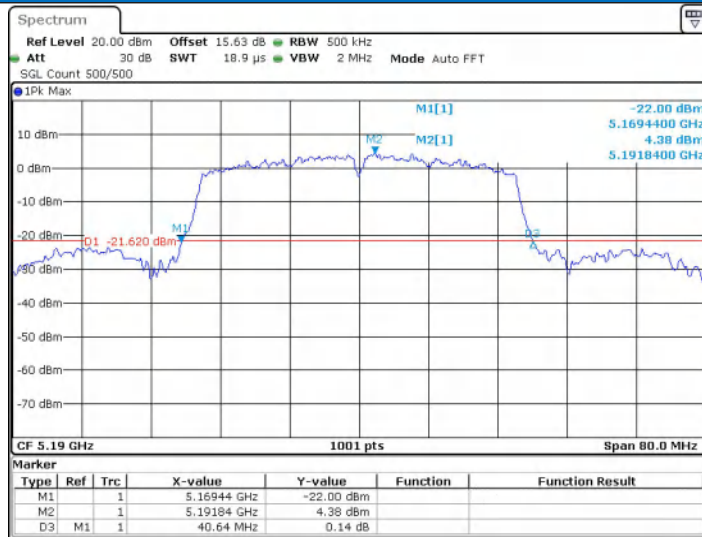
Date: 31.MAR.2026 21:26:35

11N20SISO_Ant1_5825



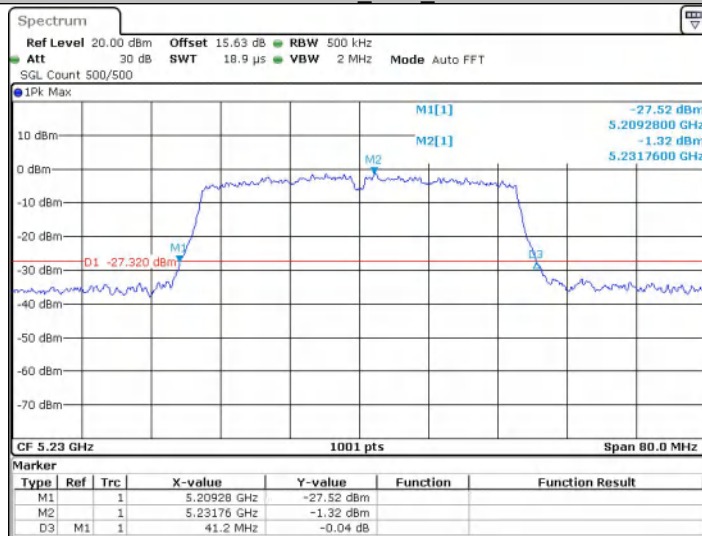
Date: 31.MAR.2026 21:28:32

11N40SISO_Ant1_5190



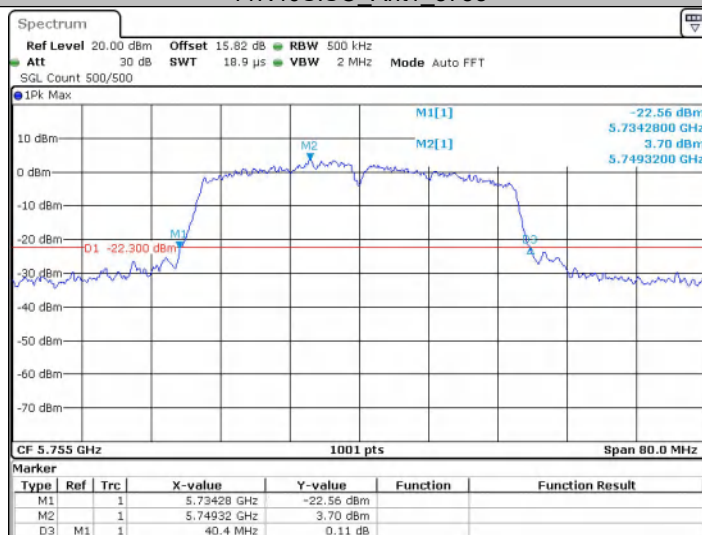
Date: 31.MAR.2026 21:30:56

11N40SISO_Ant1_5230



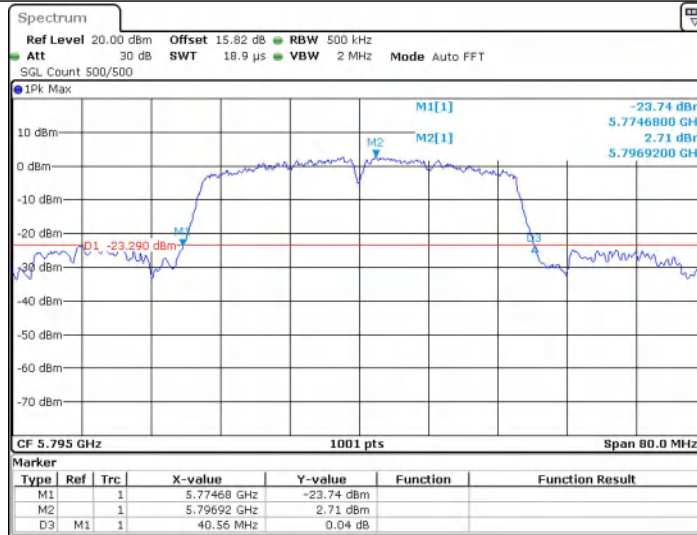
Date: 1.APR.2026 16:29:58

11N40SISO_Ant1_5755



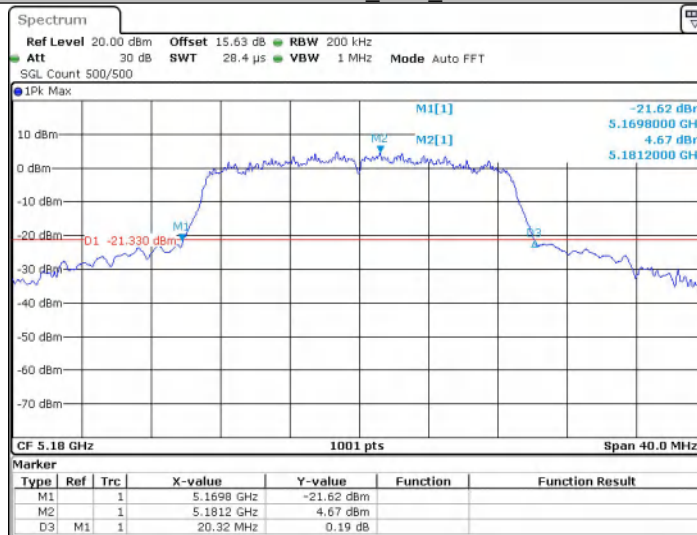
Date: 31.MAR.2026 21:35:38

11N40SISO_Ant1_5795



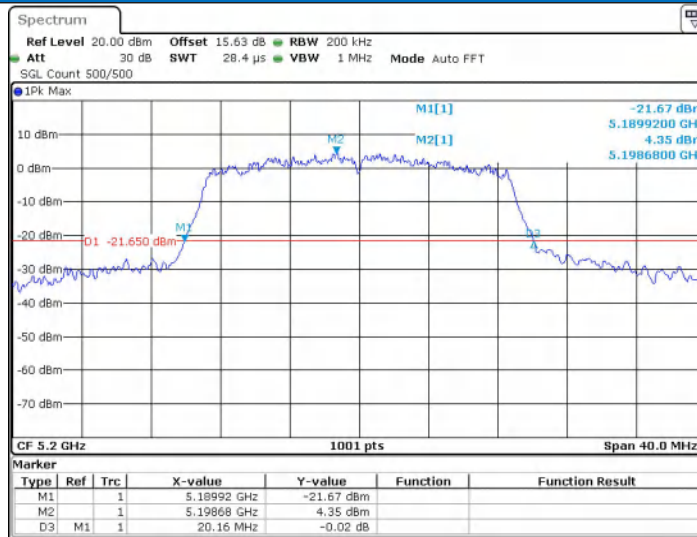
Date: 31.MAR.2026 21:37:54

11AC20SISO_Ant1_5180



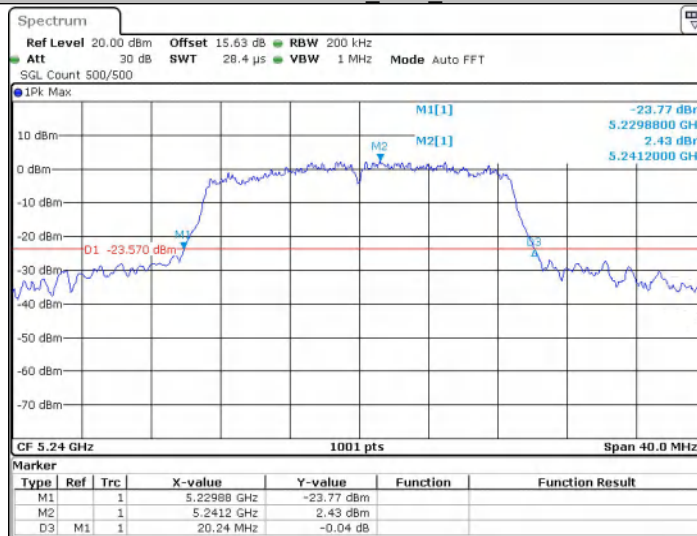
Date: 31.MAR.2026 21:40:34

11AC20SISO_Ant1_5200



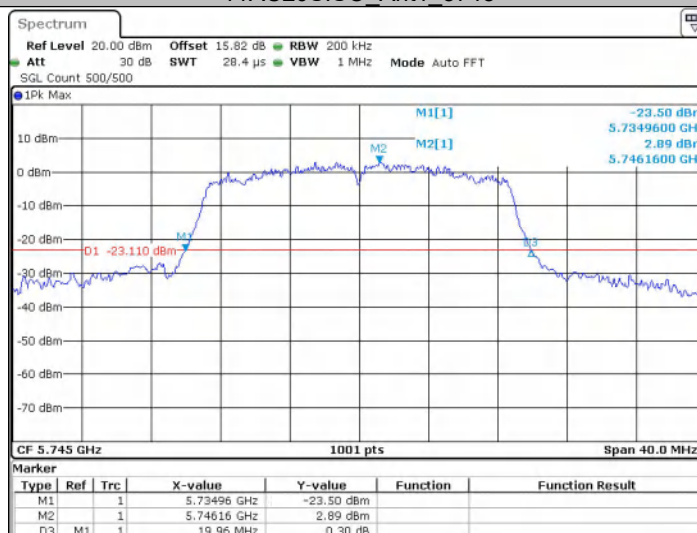
Date: 31.MAR.2026 21:43:57

11AC20SISO_Ant1_5240



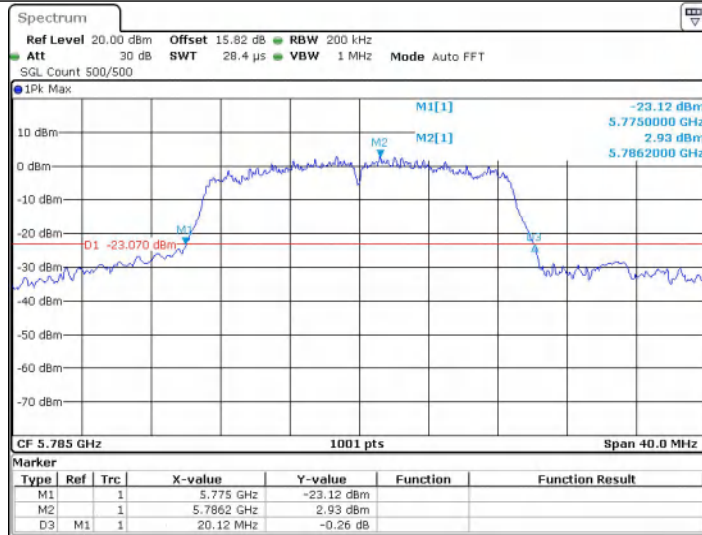
Date: 31.MAR.2026 21:46:01

11AC20SISO_Ant1_5745



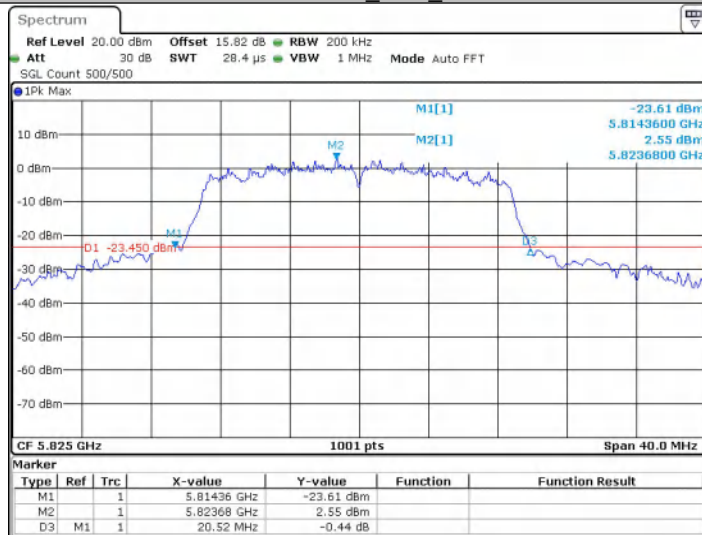
Date: 31.MAR.2026 21:47:55

11AC20SISO_Ant1_5785



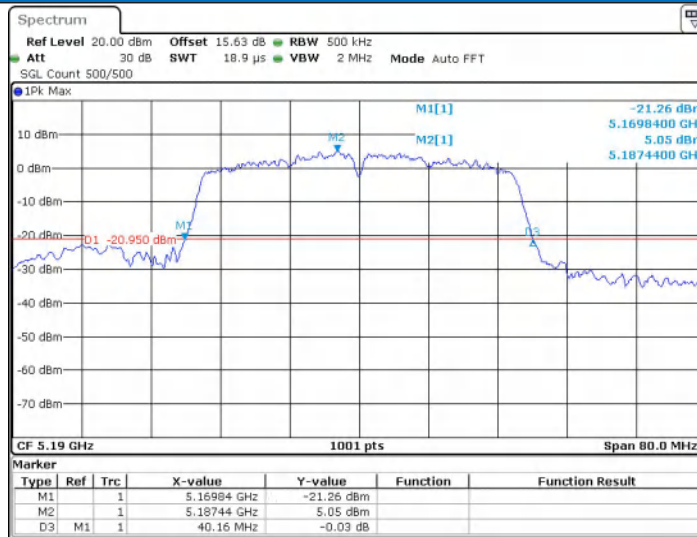
Date: 31.MAR.2026 21:51:40

11AC20SISO_Ant1_5825



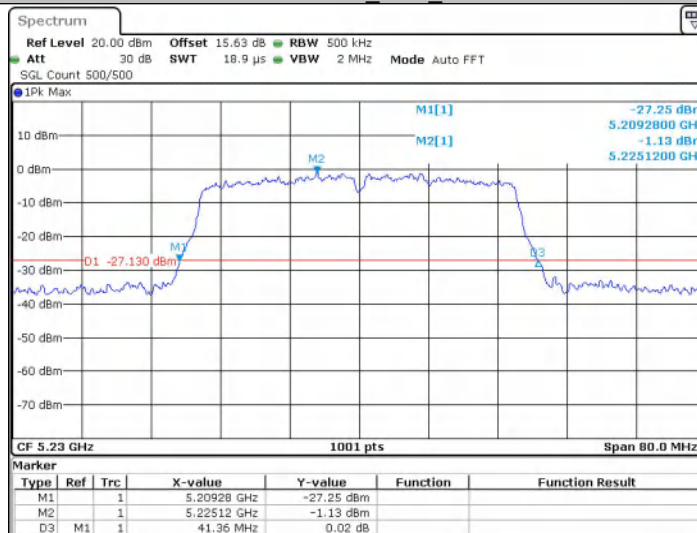
Date: 31.MAR.2026 21:53:17

11AC40SISO_Ant1_5190



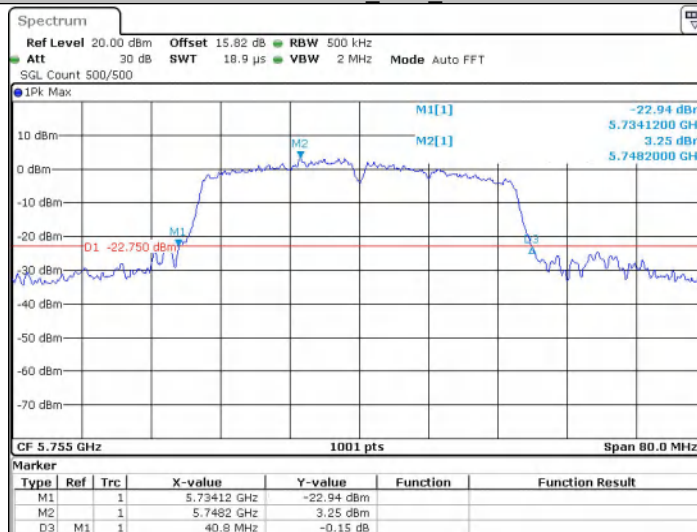
Date: 31.MAR.2026 21:55:16

11AC40SISO_Ant1_5230



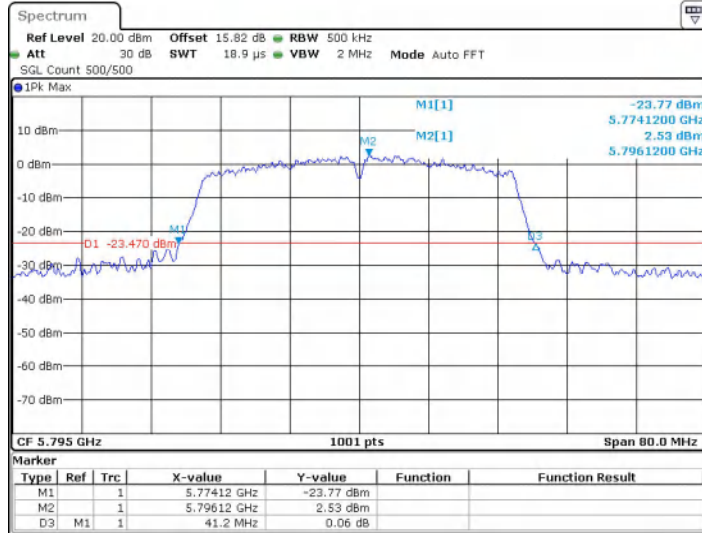
Date: 1.APR.2026 16:30:14

11AC40SISO_Ant1_5755



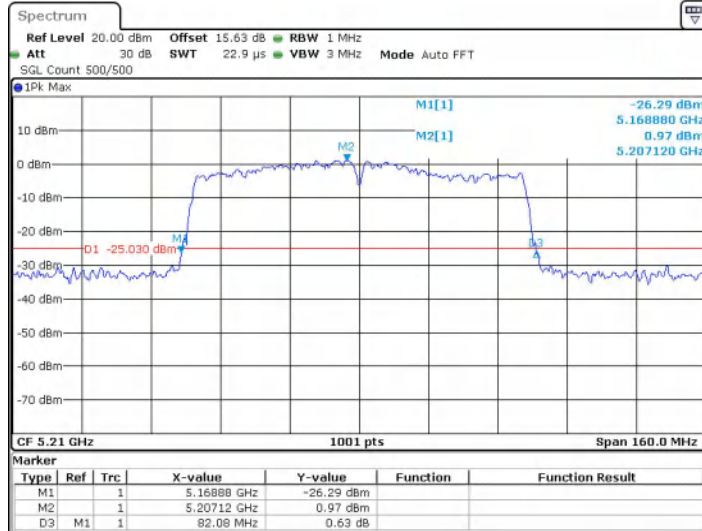
Date: 31.MAR.2026 22:06:02

11AC40SISO_Ant1_5795



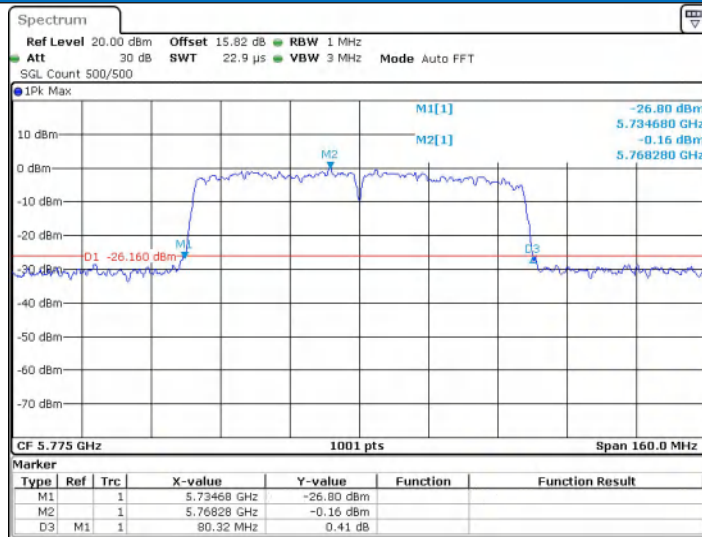
Date: 31.MAR.2026 22:09:38

11AC80SISO_Ant1_5210



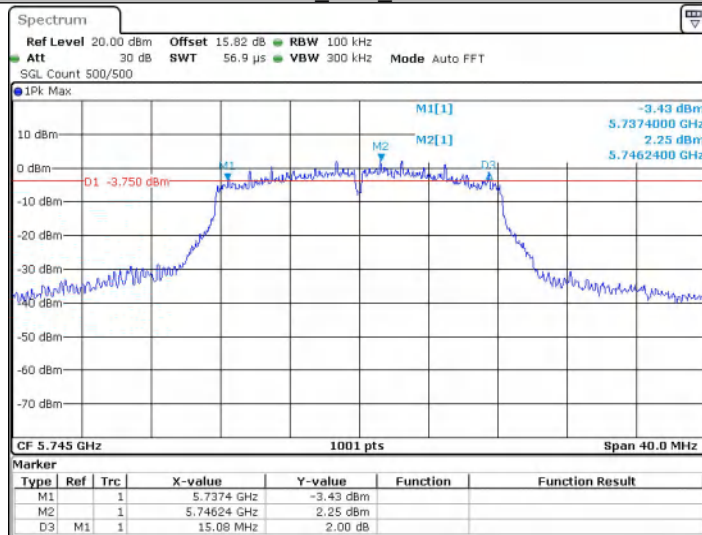
Date: 1.APR.2026 18:17:34

11AC80SISO_Ant1_5775



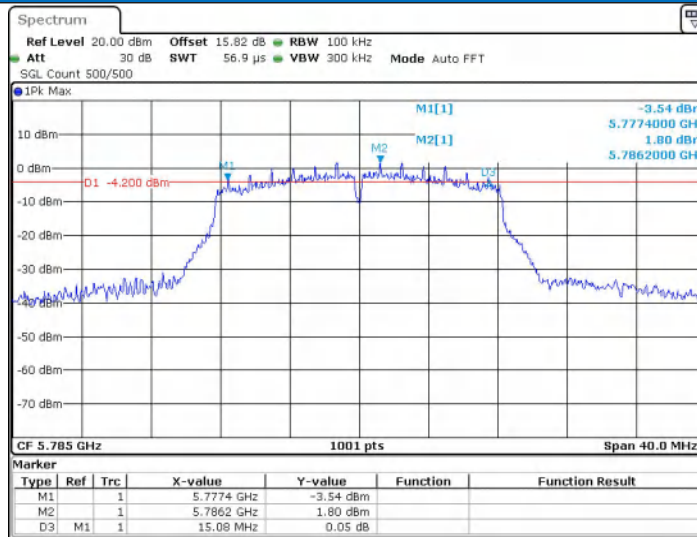
Date: 1 APR 2026 18:16:44

11A_Ant1_5745



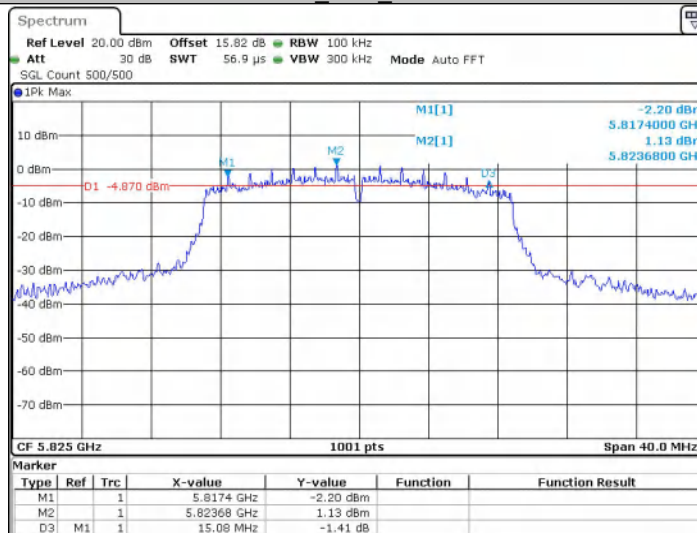
Date: 31 MAR 2026 21:08:13

11A_Ant1_5785



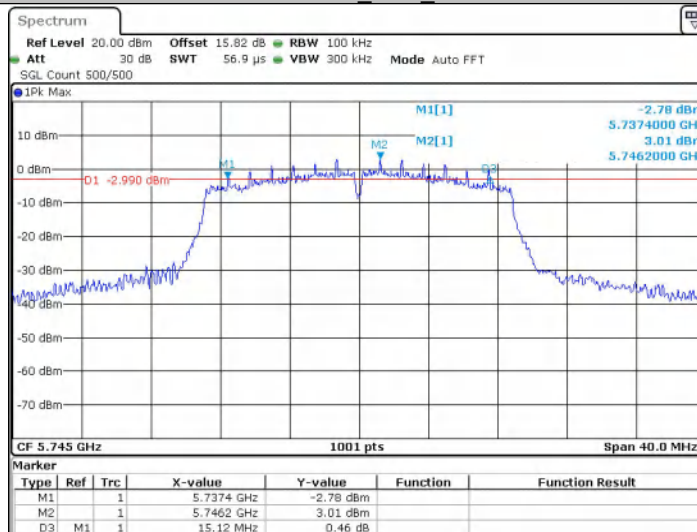
Date: 31.MAR.2026 21:09:53

11A_Ant1_5825



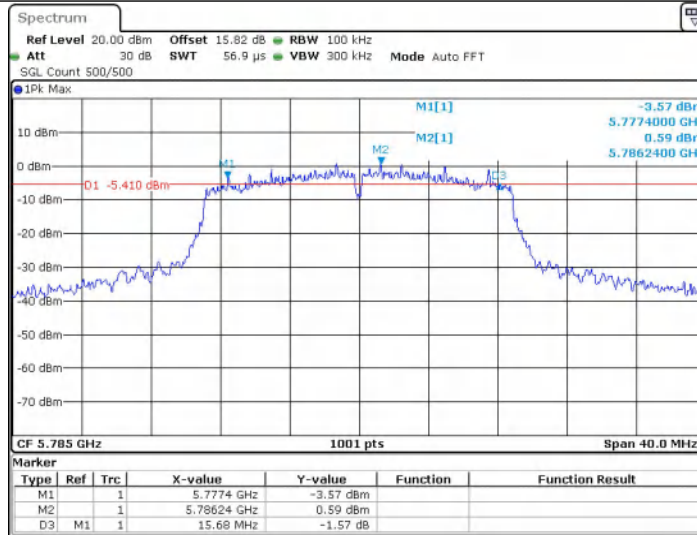
Date: 31.MAR.2026 21:11:38

11N20SISO_Ant1_5745



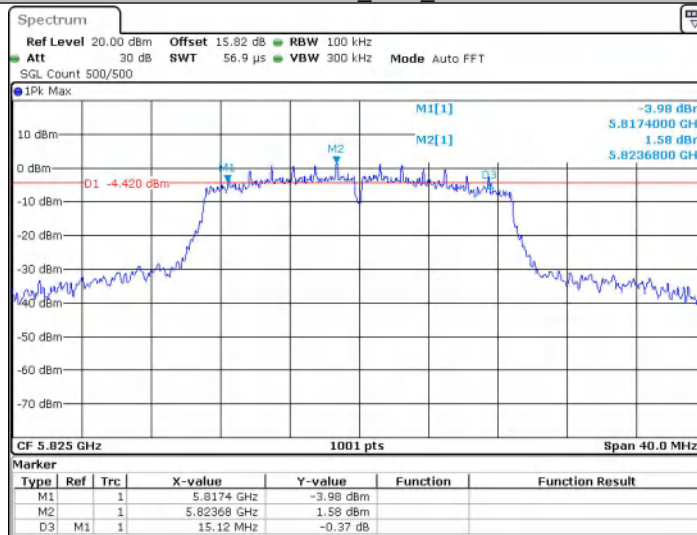
Date: 31.MAR.2026 21:24:55

11N20SISO_Ant1_5785



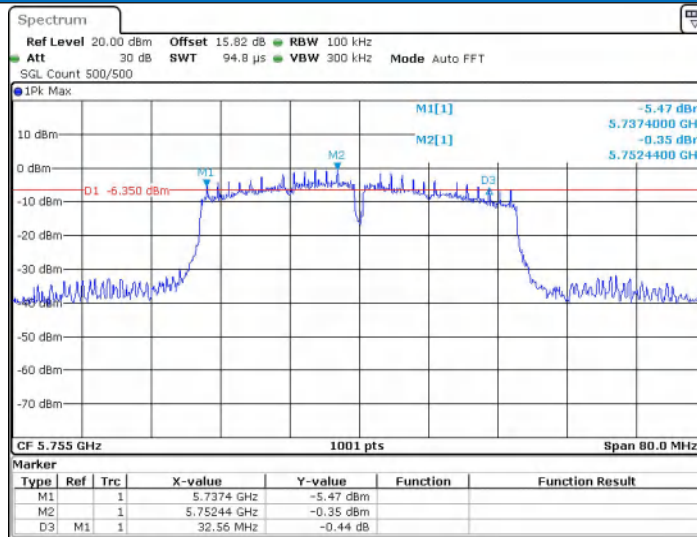
Date: 31.MAR.2026 21:26:43

11N20SISO_Ant1_5825



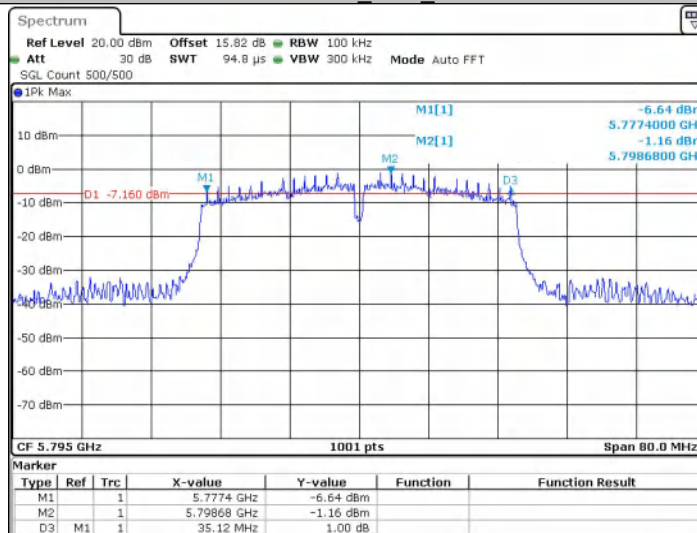
Date: 31.MAR.2026 21:28:40

11N40SISO_Ant1_5755



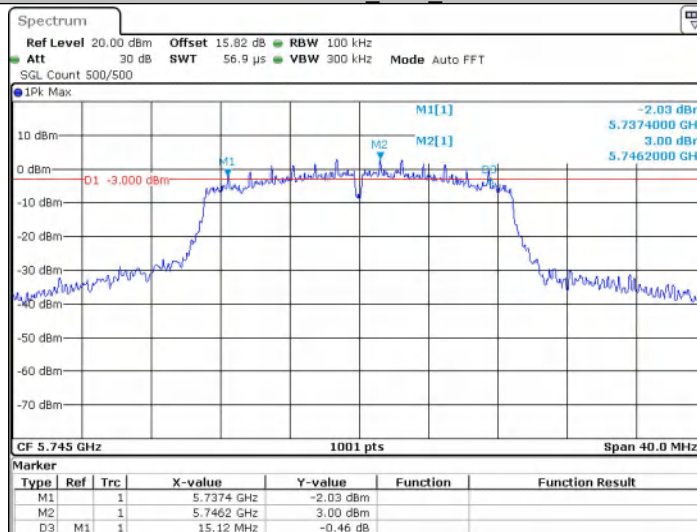
Date: 31.MAR.2026 21:35:47

11N40SISO_Ant1_5795



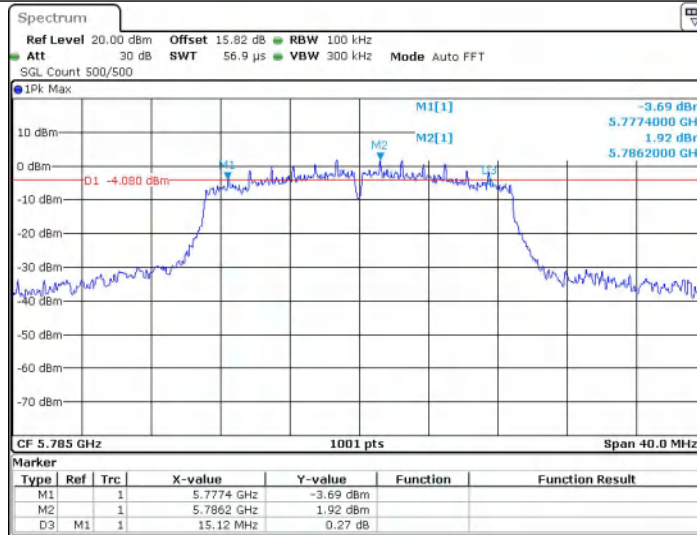
Date: 31.MAR.2026 21:38:04

11AC20SISO_Ant1_5745



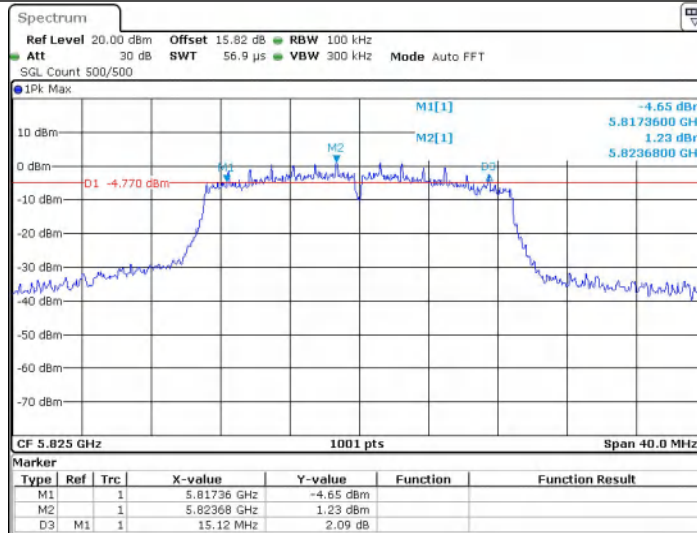
Date: 31.MAR.2026 21:48:03

11AC20SISO_Ant1_5785



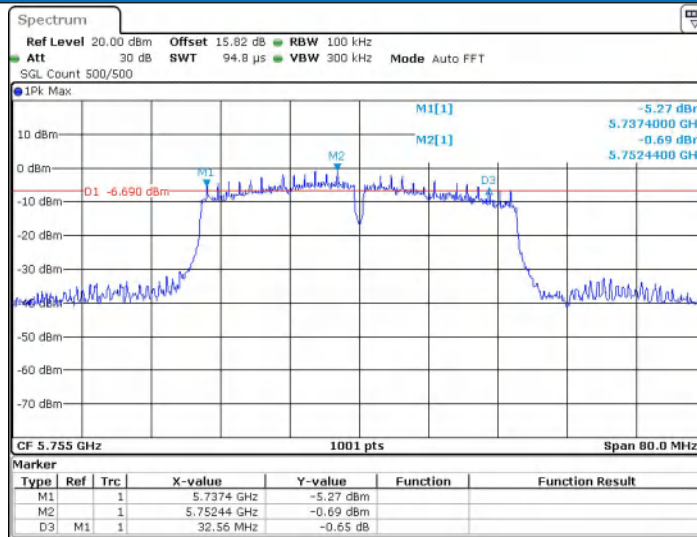
Date: 31.MAR.2026 21:51:48

11AC20SISO_Ant1_5825



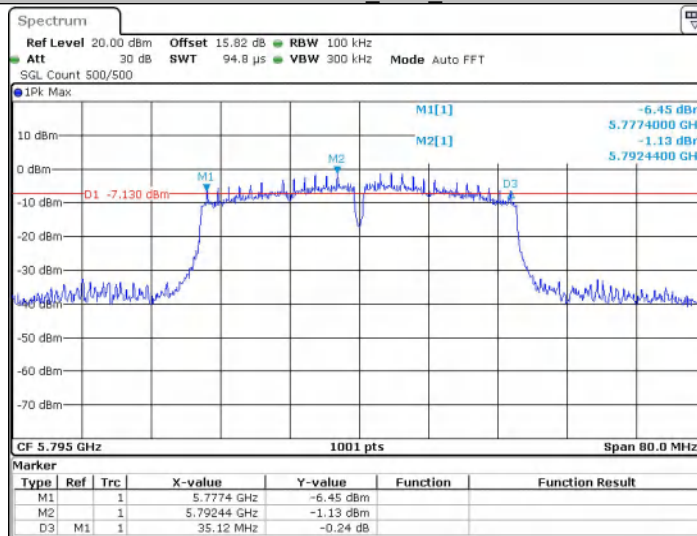
Date: 31.MAR.2026 21:53:25

11AC40SISO_Ant1_5755



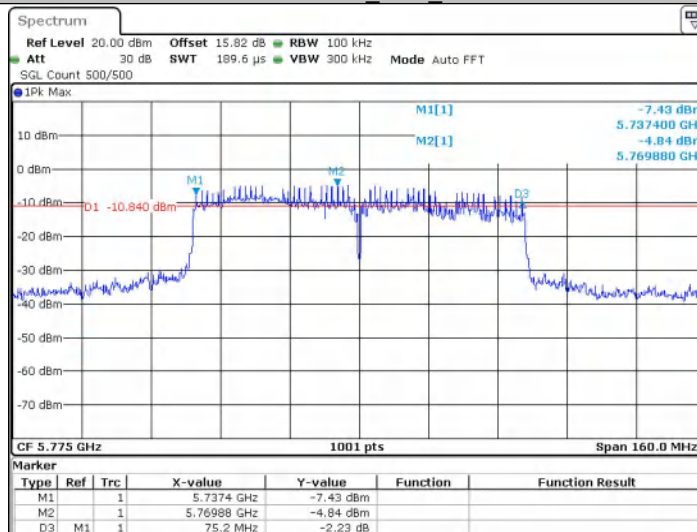
Date: 31.MAR.2026 22:06:12

11AC40SISO_Ant1_5795



Date: 31.MAR.2026 22:08:47

11AC80SISO_Ant1_5775



Date: 31.MAR.2026 22:17:44

Appendix B): Maximum Conduct Output Power

1.Duty Cycle (x)

Test Requirement KDB 789033 D02 II B 1

Test Method: KDB 789033 II B 1

Test Procedure:

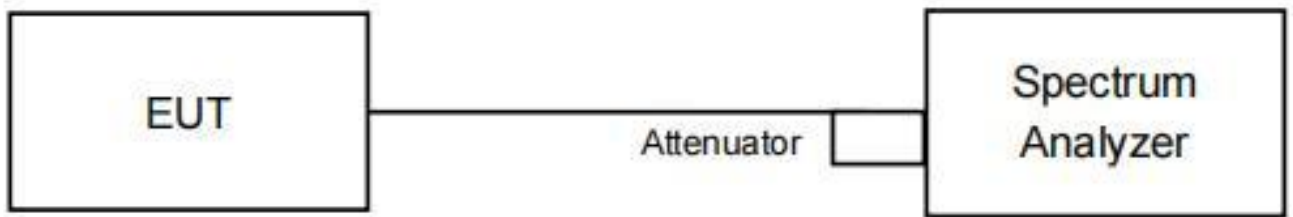
Set RBW = 20MHz

Set VBW = 40MHz

Set detector = peak.

Set span =0Hz

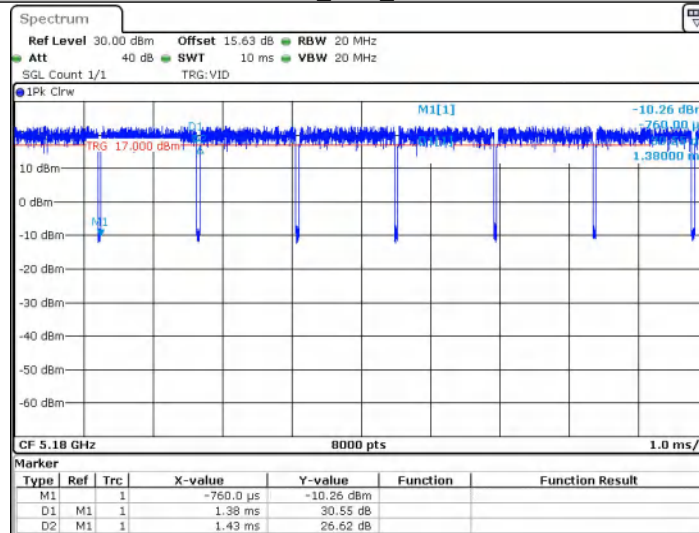
Test Setup Diagram



Measurement Data

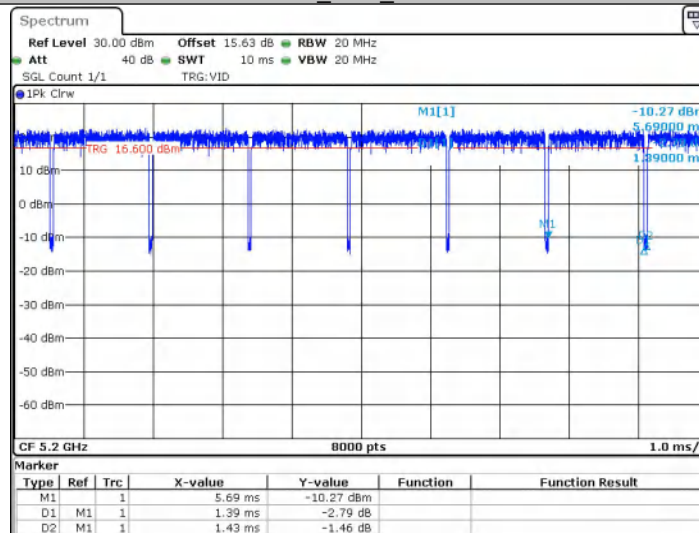
TestMode	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	5180	1.38	1.43	96.50
	5200	1.39	1.43	97.20
	5240	1.38	1.42	97.18
	5745	1.38	1.43	96.50
	5785	1.38	1.42	97.18
	5825	1.29	1.33	96.99
11N20SISO	5180	1.29	1.34	96.27
	5200	1.29	1.34	96.27
	5240	1.29	1.33	96.99
	5745	1.29	1.33	96.99
	5785	1.29	1.34	96.27
	5825	1.29	1.34	96.27
11N40SISO	5190	0.65	0.69	94.20
	5230	0.64	0.69	92.75
	5755	0.64	0.69	92.75
	5795	0.64	0.68	94.12
11AC20SISO	5180	1.29	1.34	96.27
	5200	1.29	1.33	96.99
	5240	1.29	1.34	96.27
	5745	1.29	1.33	96.99
	5785	1.29	1.34	96.27
	5825	1.29	1.34	96.27
11AC40SISO	5190	0.64	0.69	92.75
	5230	0.64	0.68	94.12
	5755	0.64	0.69	92.75
	5795	0.65	0.69	94.20
11AC80SISO	5210	1.06	1.09	97.25
	5775	1.05	1.08	97.22

11A_Ant1_5180



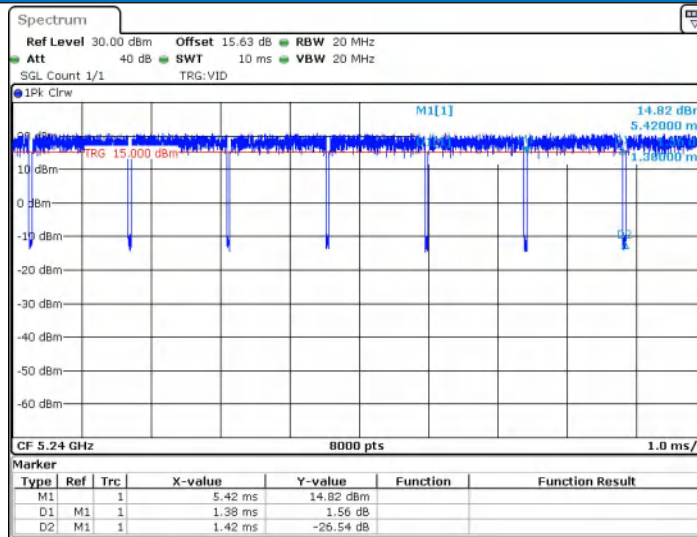
Date: 31.MAR.2026 20:54:16

11A_Ant1_5200



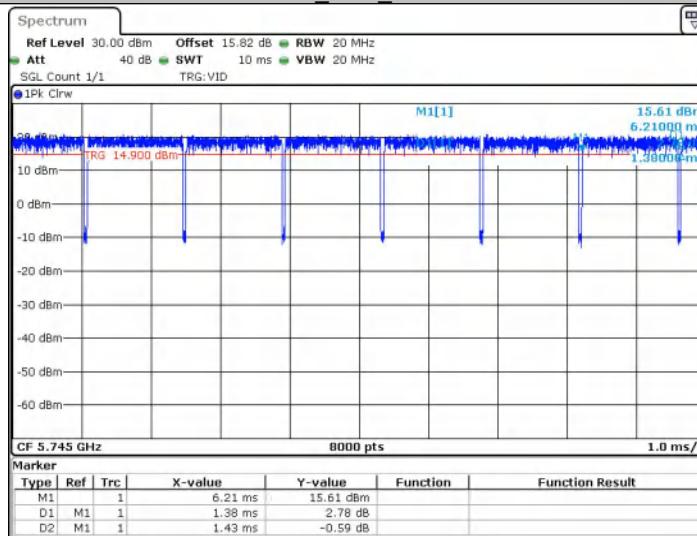
Date: 31.MAR.2026 20:56:33

11A_Ant1_5240



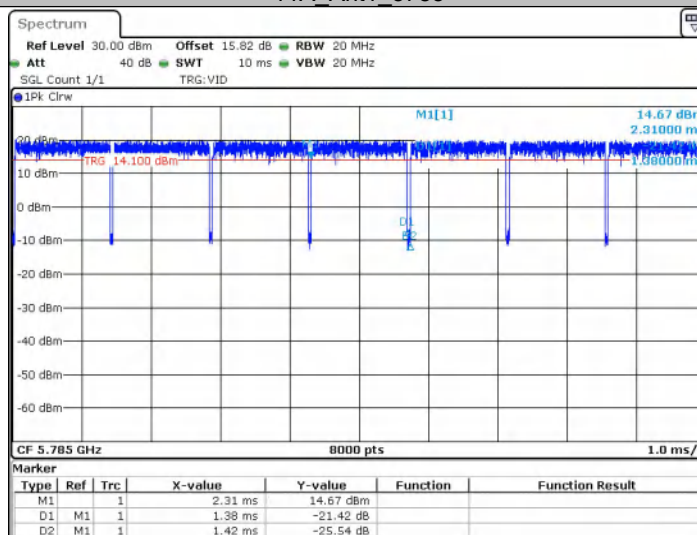
Date: 31.MAR.2026 21:00:32

11A_Ant1_5745



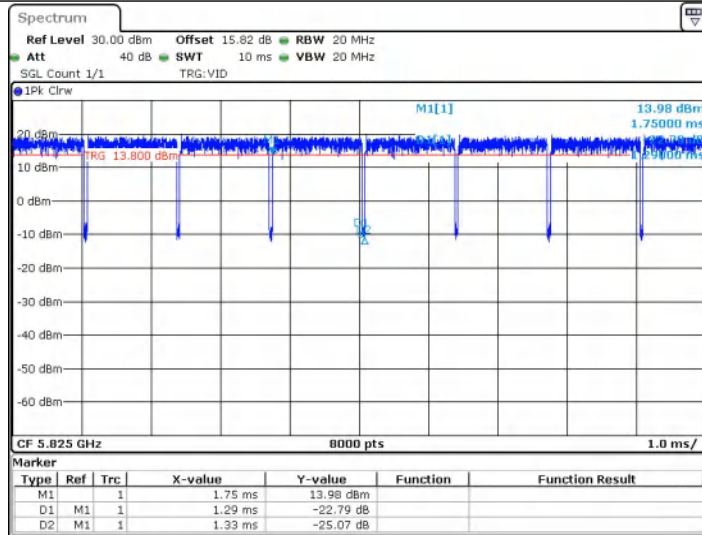
Date: 31.MAR.2026 21:08:31

11A_Ant1_5785



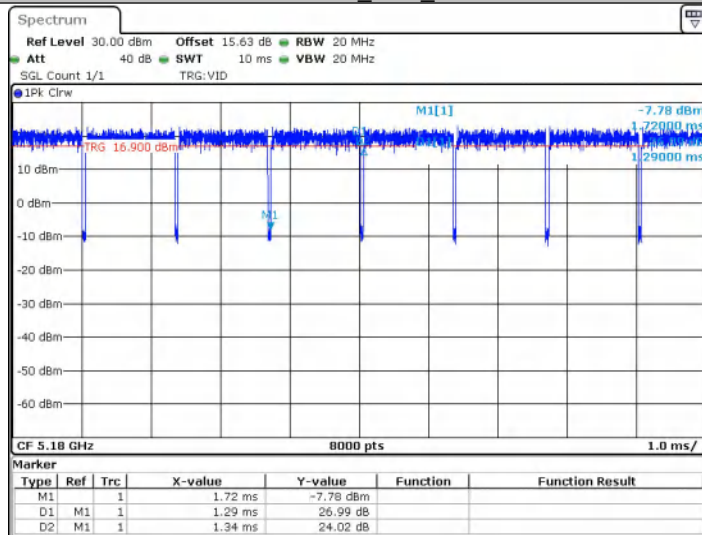
Date: 31.MAR.2026 21:10:11

11A_Ant1_5825



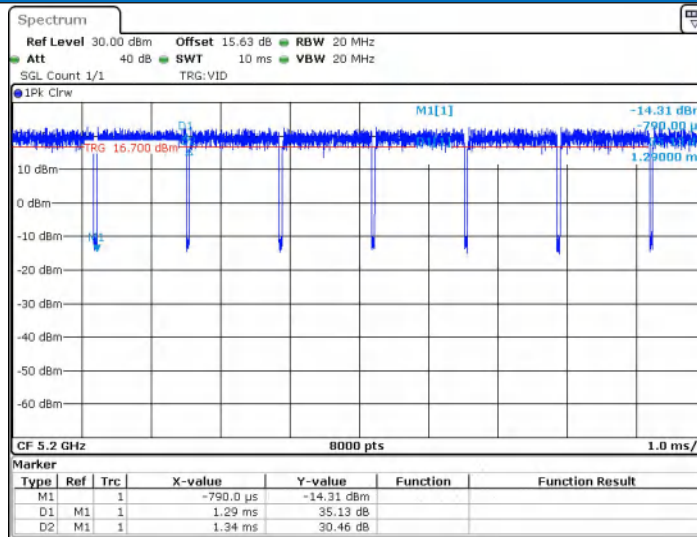
Date: 31.MAR.2026 21:11:56

11N20SISO_Ant1_5180



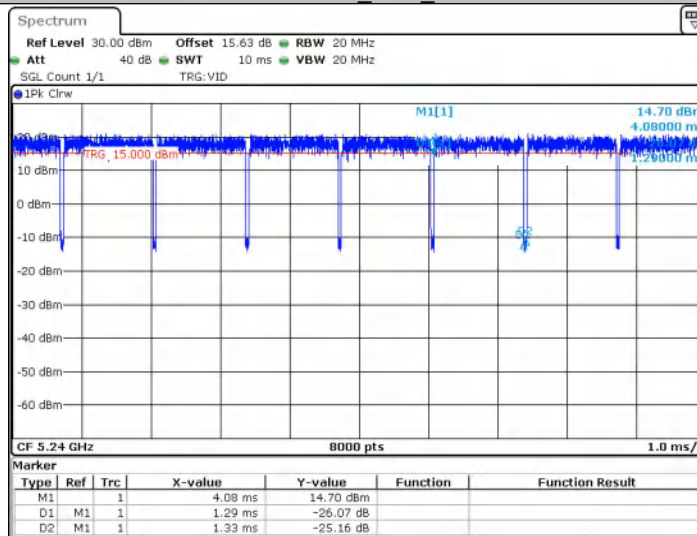
Date: 31.MAR.2026 21:16:05

11N20SISO_Ant1_5200



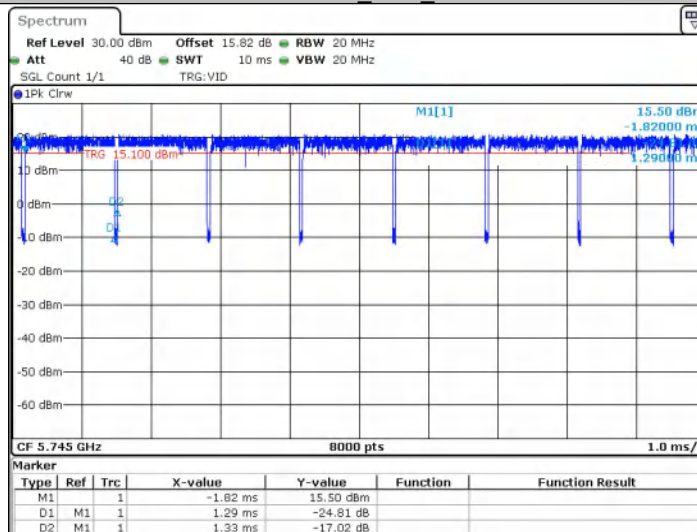
Date: 31.MAR.2026 21:18:03

11N20SISO_Ant1_5240



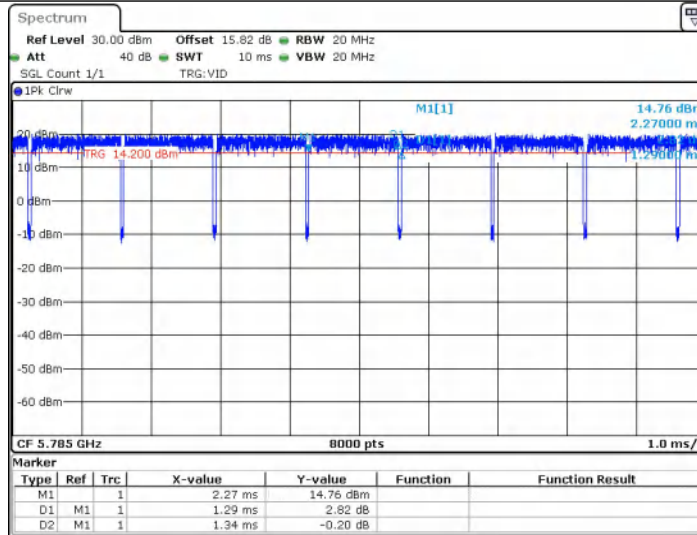
Date: 31.MAR.2026 21:21:54

11N20SISO_Ant1_5745



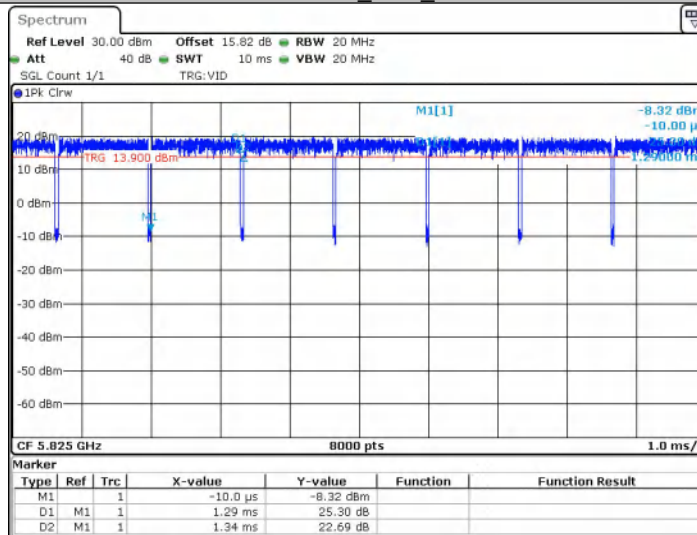
Date: 31.MAR.2026 21:25:14

11N20SISO_Ant1_5785



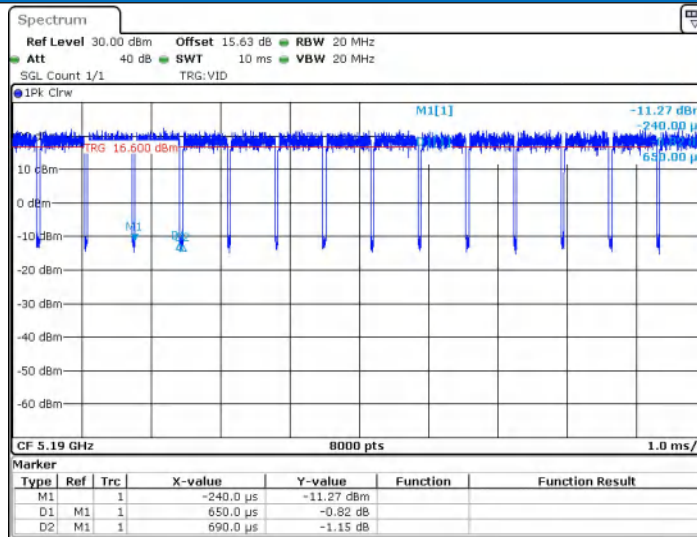
Date: 31.MAR.2026 21:27:01

11N20SISO_Ant1_5825



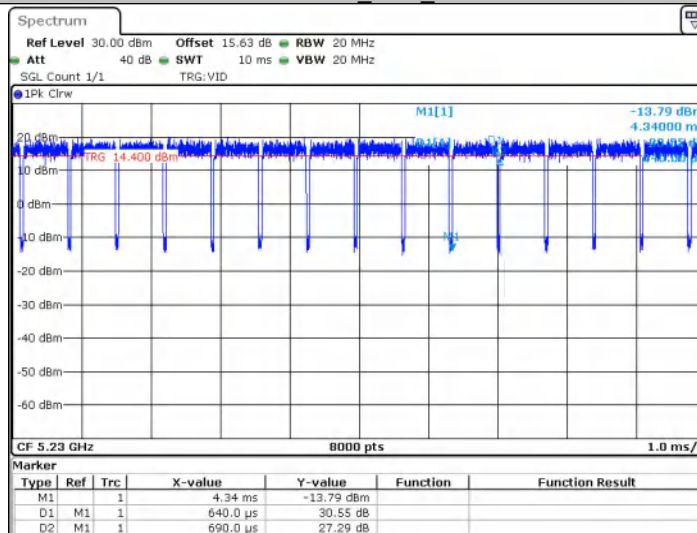
Date: 31.MAR.2026 21:28:58

11N40SISO_Ant1_5190



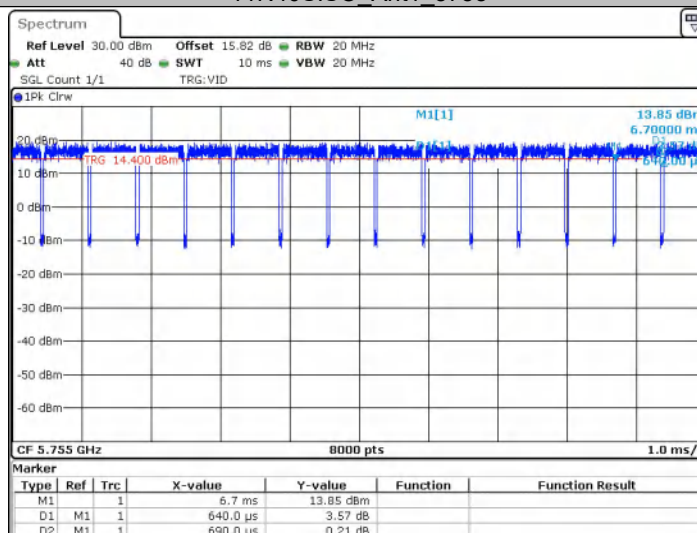
Date: 31.MAR.2026 21:31:17

11N40SISO_Ant1_5230



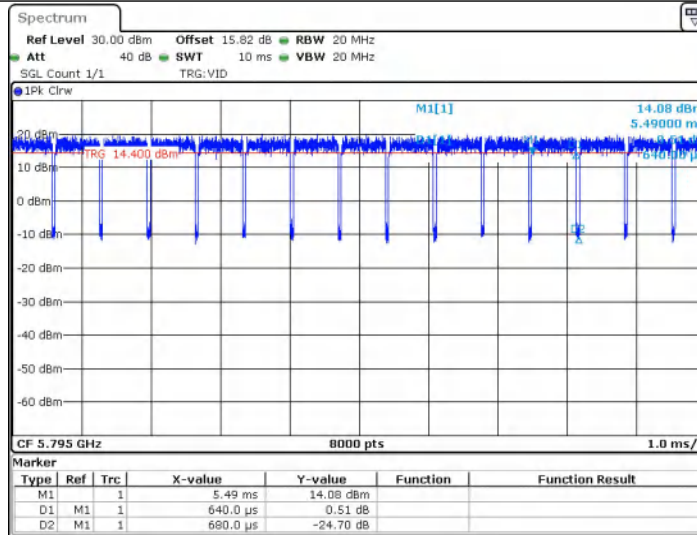
Date: 31.MAR.2026 21:33:16

11N40SISO_Ant1_5755



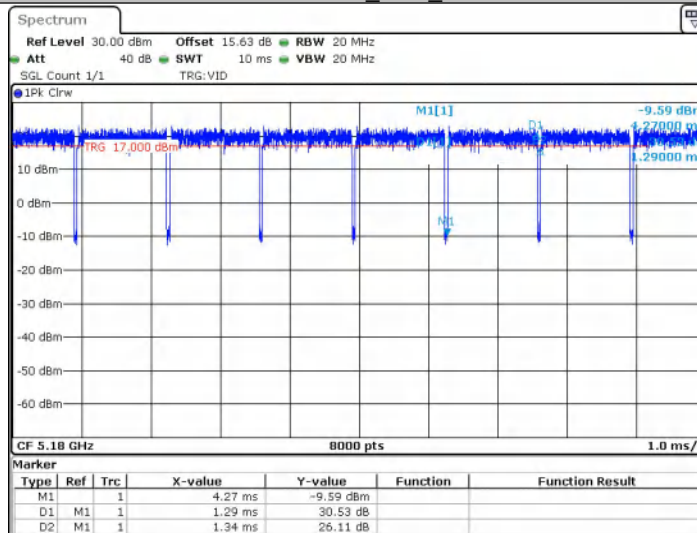
Date: 31.MAR.2026 21:36:08

11N40SISO_Ant1_5795



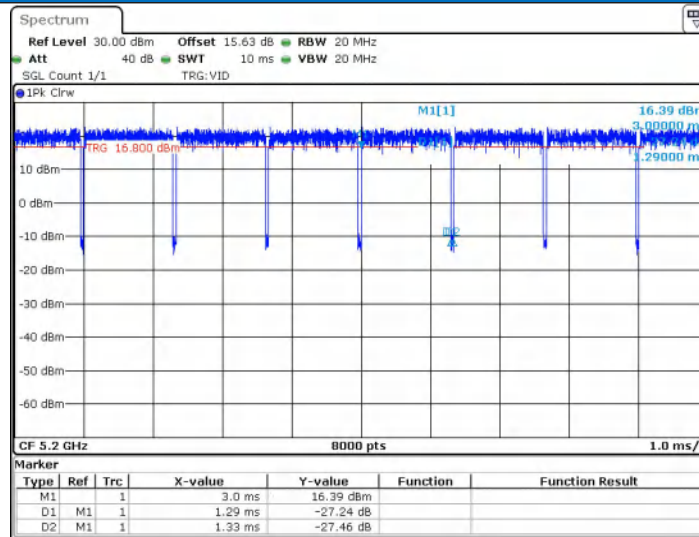
Date: 31.MAR.2026 21:38:25

11AC20SISO_Ant1_5180



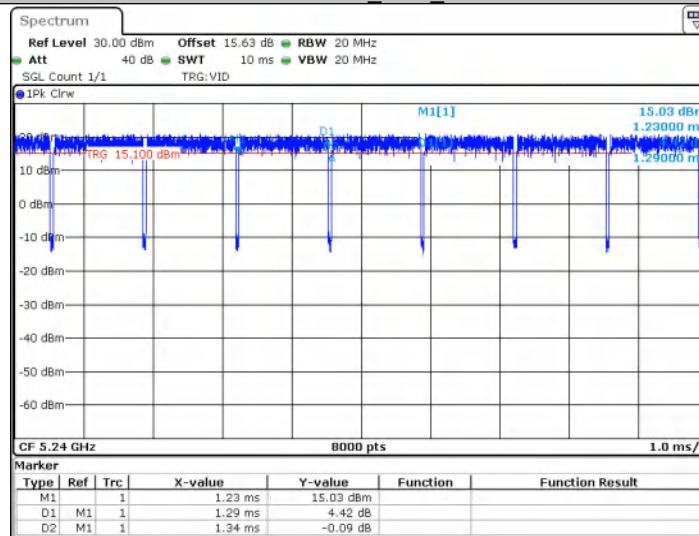
Date: 31.MAR.2026 21:40:53

11AC20SISO_Ant1_5200



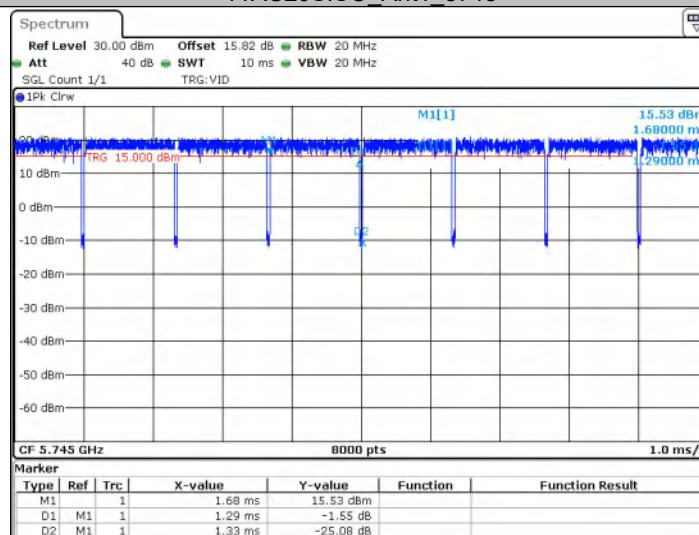
Date: 31.MAR.2026 21:44:16

11AC20SISO_Ant1_5240



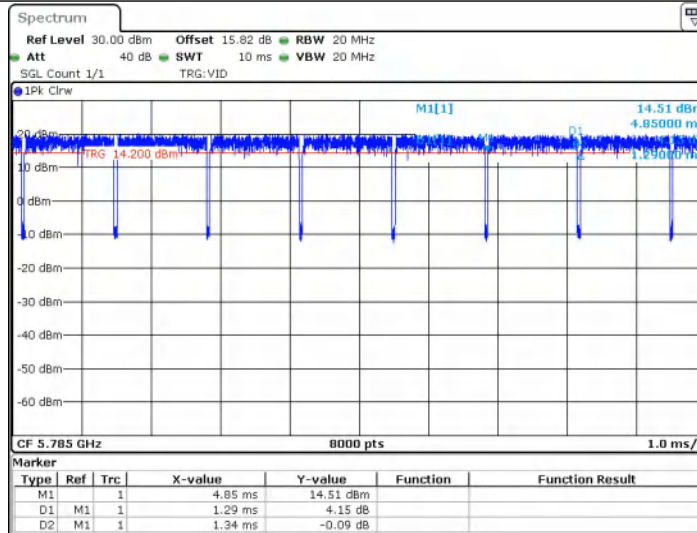
Date: 31.MAR.2026 21:46:20

11AC20SISO_Ant1_5745



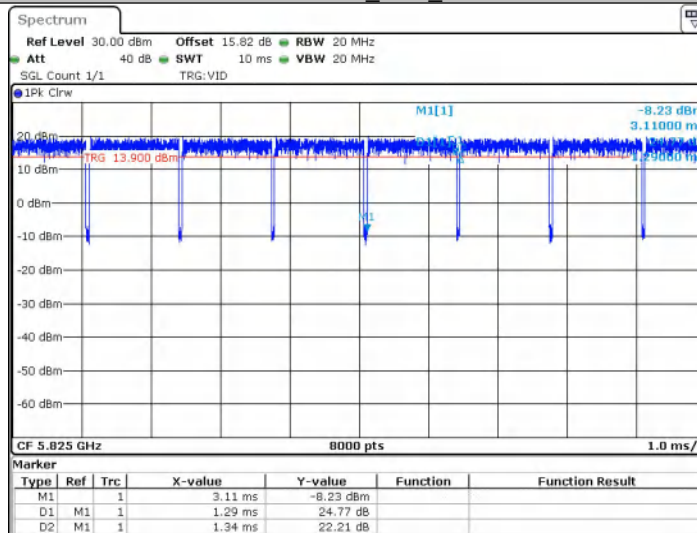
Date: 31.MAR.2026 21:48:21

11AC20SISO_Ant1_5785



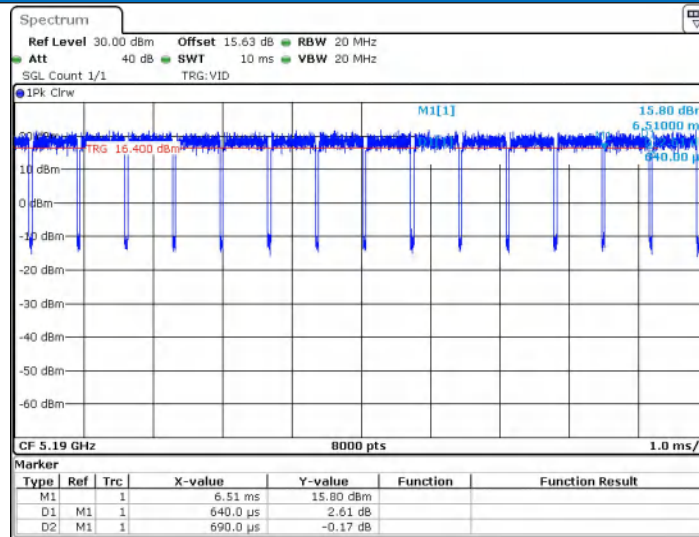
Date: 31.MAR.2026 21:52:06

11AC20SISO_Ant1_5825



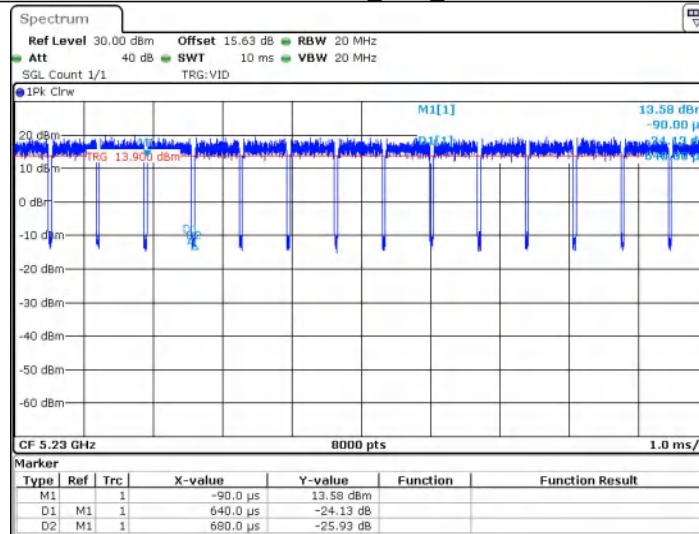
Date: 31.MAR.2026 21:53:43

11AC40SISO_Ant1_5190



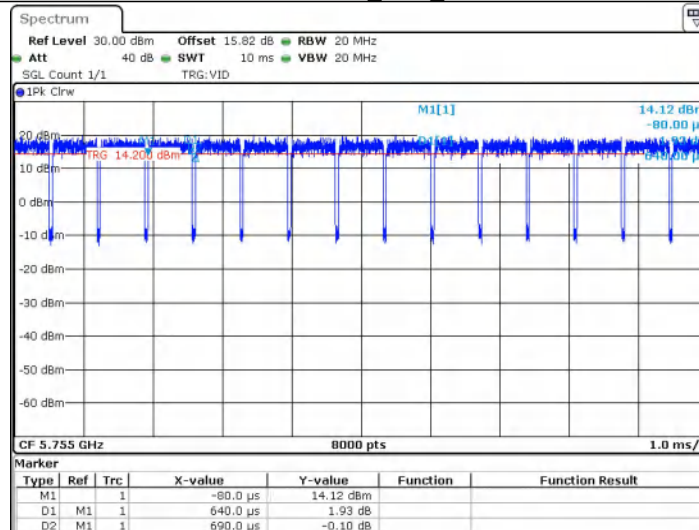
Date: 31.MAR.2026 21:55:38

11AC40SISO_Ant1_5230



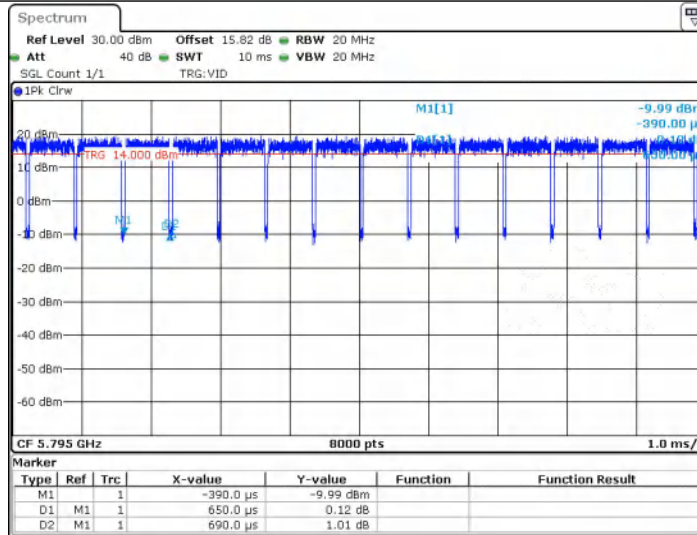
Date: 31.MAR.2026 22:04:40

11AC40SISO_Ant1_5755



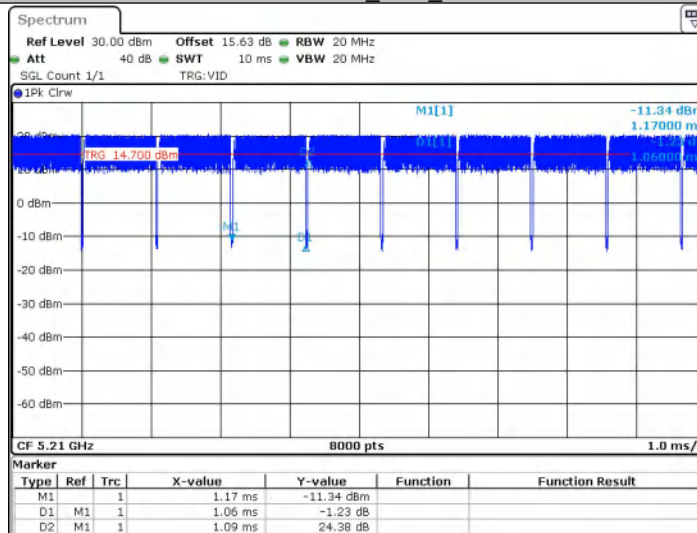
Date: 31.MAR.2026 22:06:33

11AC40SISO_Ant1_5795



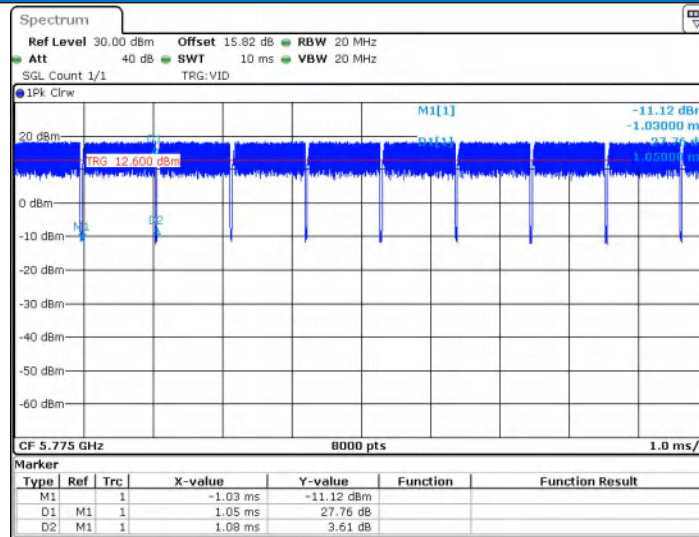
Date: 31.MAR.2026 22:10:08

11AC80SISO_Ant1_5210



Date: 31.MAR.2026 22:15:30

11AC80SISO_Ant1_5775



Date: 31.MAR.2026 22:18:15

2. Maximum Conducted Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

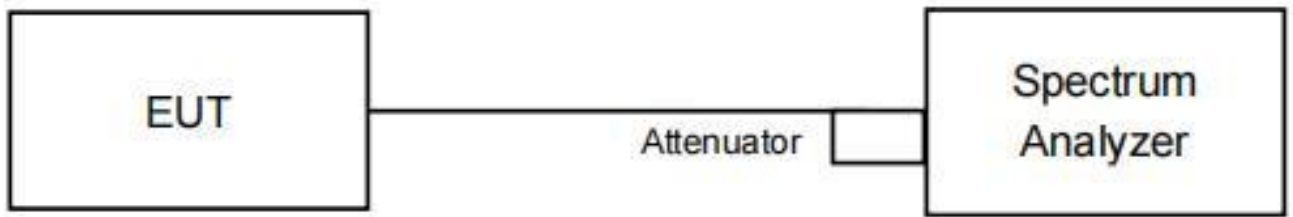
Frequency band(MHz)	Limit
5150-5250	$\leq 1\text{W}(30\text{dBm})$ for master device
	$\leq 250\text{mW}(24\text{dBm})$ for client device
5250-5350	$\leq 250\text{mW}(24\text{dBm})$ for client device or $11\text{dBm}+10\log B^*$
5470-5725	$\leq 250\text{mW}(24\text{dBm})$ for client device or $11\text{dBm}+10\log B^*$
5725-5850	$\leq 1\text{W}(30\text{dBm})$
Remark:	* Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

Test Procedure:

Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- (1) Set RBW = 1 MHz.
- (2) Set VBW ≥ 3 MHz.
- (3) Detector = power average
- (4) Sweep time = auto.
- (5) Add duty cycle to the measured average power.

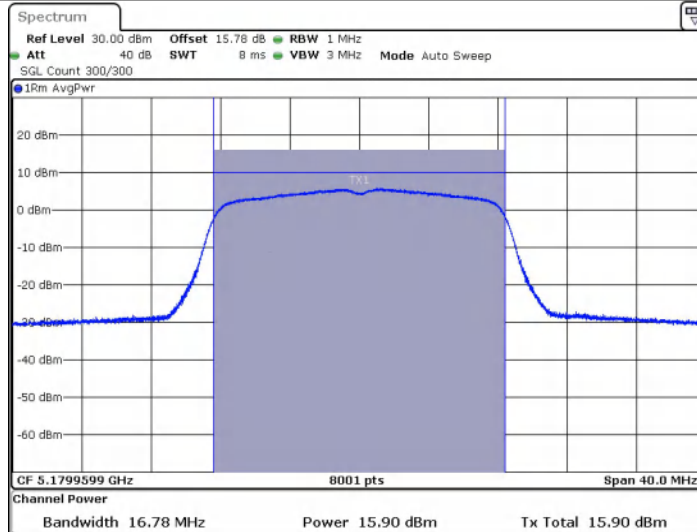
Test Setup Diagram



Measurement Data

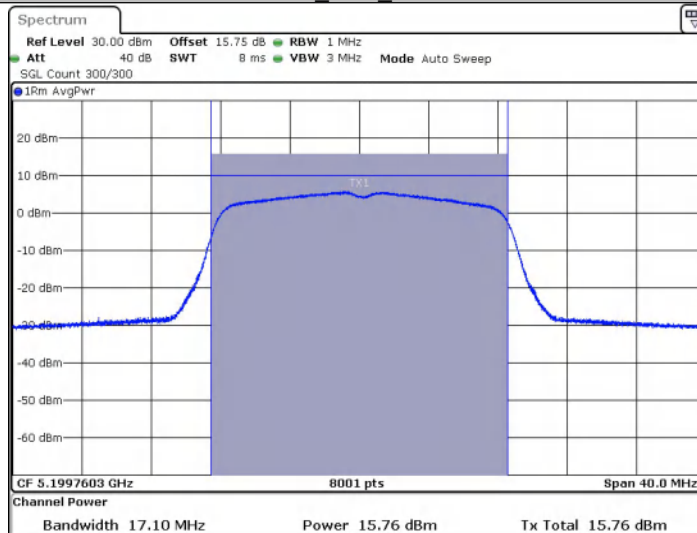
Test Mode	Antenna	Freq(MHz)	Channel Power [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	15.75	96.50	0.15	15.90	≤23.98	PASS
		5200	15.64	97.20	0.12	15.76	≤23.98	PASS
		5240	14.08	97.18	0.12	14.20	≤23.98	PASS
		5745	14.33	96.50	0.15	14.48	≤30.00	PASS
		5785	13.38	97.18	0.12	13.50	≤30.00	PASS
		5825	13.00	96.99	0.13	13.13	≤30.00	PASS
11N20SISO	Ant1	5180	15.76	96.27	0.17	15.93	≤23.98	PASS
		5200	15.56	96.27	0.17	15.73	≤23.98	PASS
		5240	14.04	96.99	0.13	14.17	≤23.98	PASS
		5745	14.25	96.99	0.13	14.38	≤30.00	PASS
		5785	13.33	96.27	0.17	13.50	≤30.00	PASS
		5825	12.90	96.27	0.17	13.07	≤30.00	PASS
11N40SISO	Ant1	5190	15.08	94.20	0.26	15.34	≤23.98	PASS
		5230	13.09	92.75	0.33	13.42	≤23.98	PASS
		5755	13.09	92.75	0.33	13.42	≤30.00	PASS
		5795	13.09	94.12	0.26	13.35	≤30.00	PASS
11AC20SISO	Ant1	5180	15.26	96.27	0.17	15.43	≤23.98	PASS
		5200	15.10	96.99	0.13	15.23	≤23.98	PASS
		5240	13.59	96.27	0.17	13.76	≤23.98	PASS
		5745	13.85	96.99	0.13	13.98	≤30.00	PASS
		5785	12.94	96.27	0.17	13.11	≤30.00	PASS
		5825	12.47	96.27	0.17	12.64	≤30.00	PASS
11AC40SISO	Ant1	5190	14.02	92.75	0.33	14.35	≤23.98	PASS
		5230	12.06	94.12	0.26	12.32	≤23.98	PASS
		5755	12.24	92.75	0.33	12.57	≤30.00	PASS
		5795	12.16	94.20	0.26	12.42	≤30.00	PASS
11AC80SISO	Ant1	5210	13.03	97.25	0.12	13.15	≤23.98	PASS
		5775	11.69	97.22	0.12	11.81	≤30.00	PASS

11A_Ant1_5180



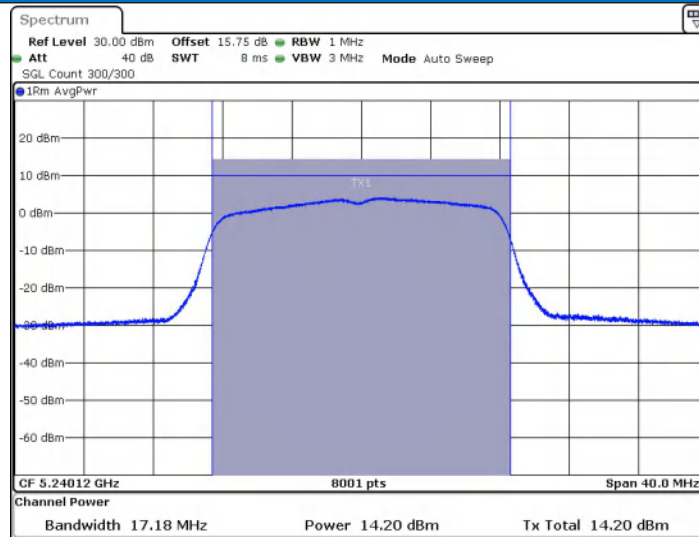
Date: 1 APR 2026 10:38:54

11A_Ant1_5200



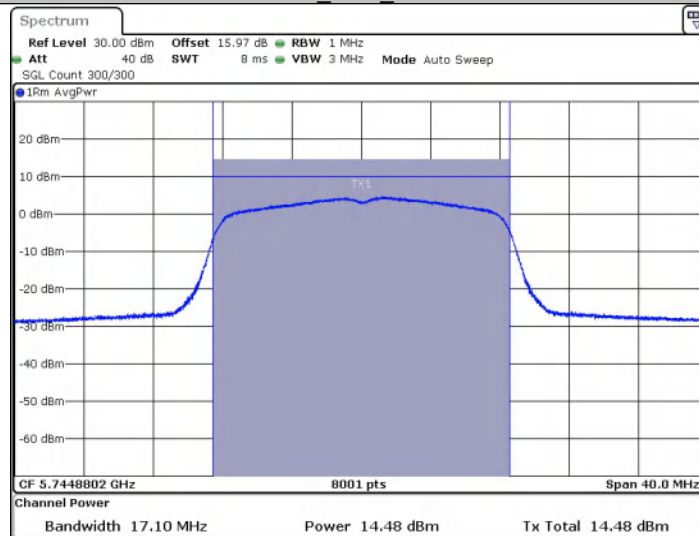
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11A_Ant1_5240



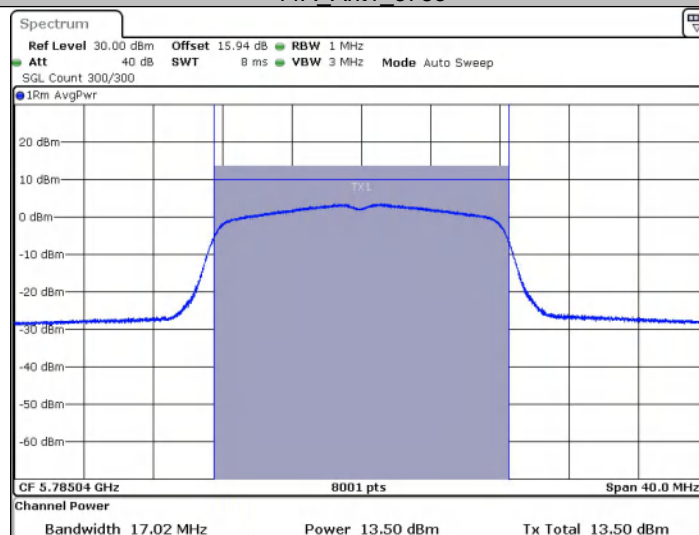
Date: 1 APR 2026 10:39:34

11A_Ant1_5745



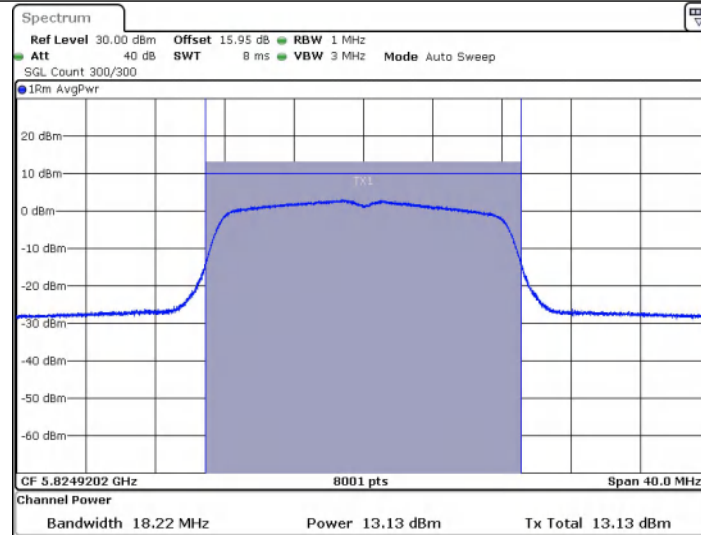
Date: 1 APR 2026 10:40:19

11A_Ant1_5785



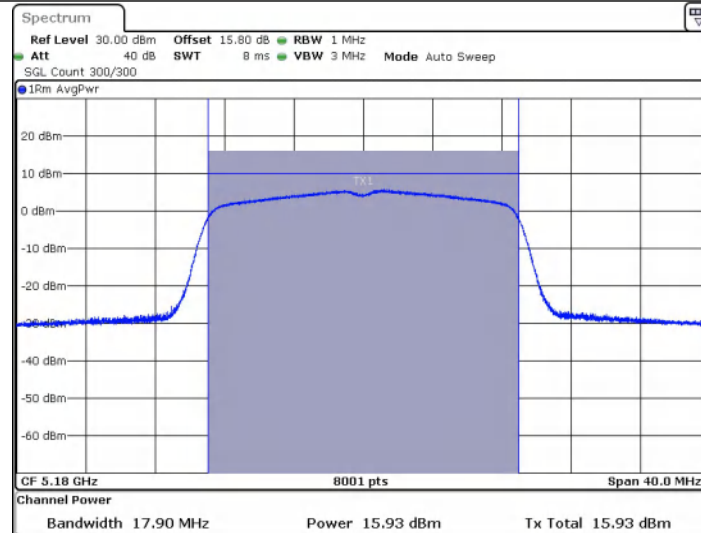
Date: 1 APR 2026 10:40:44

11A_Ant1_5825



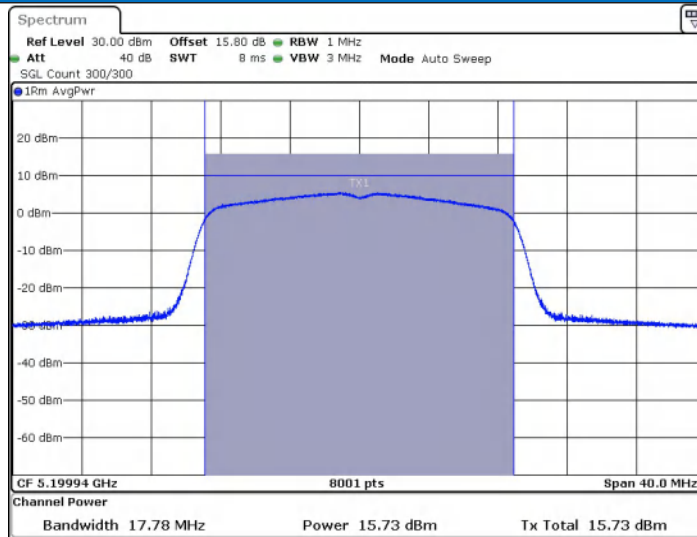
Date: 1.APR.2026 10:41:01

11N20SISO_Ant1_5180



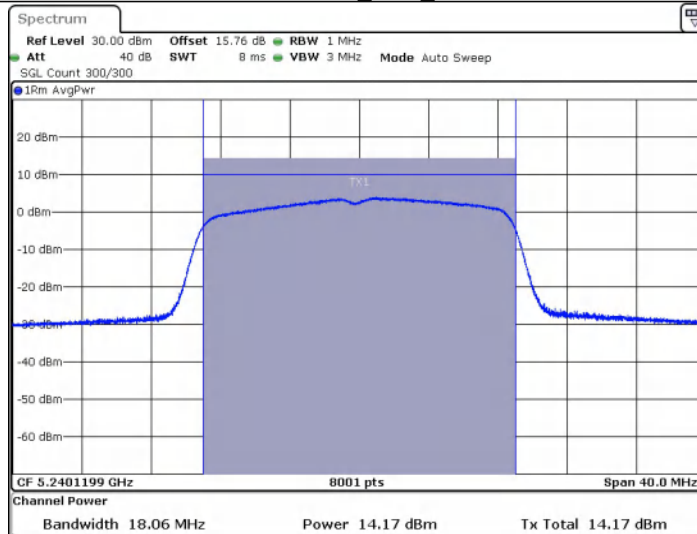
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11N20SISO_Ant1_5200



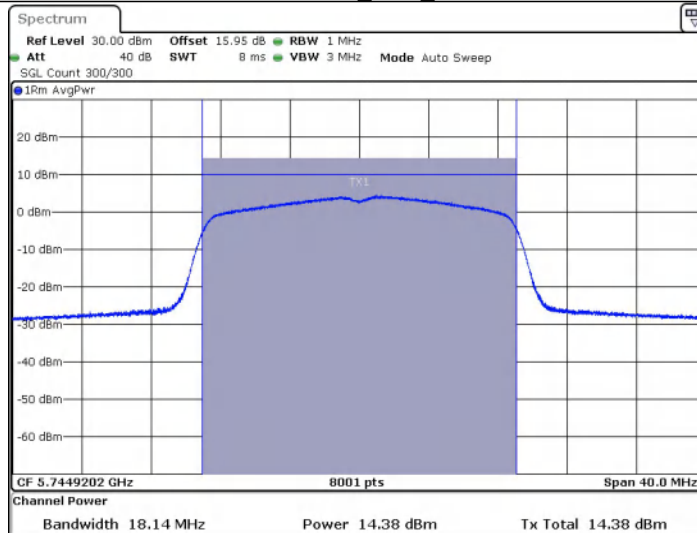
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11N20SISO_Ant1_5240



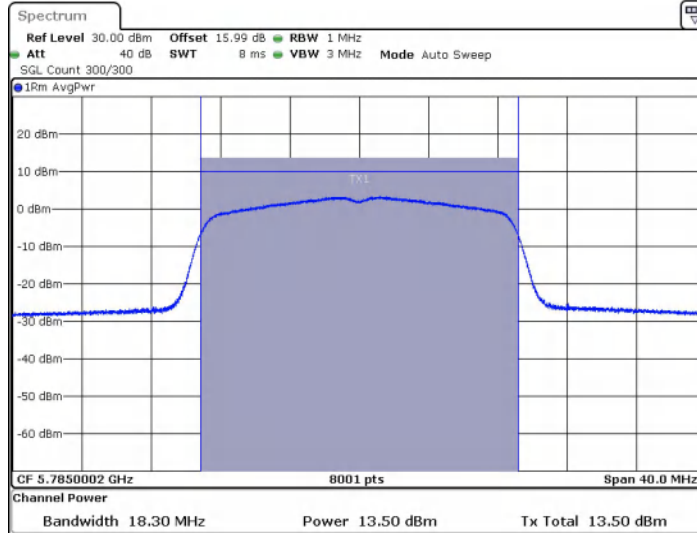
Date: 1 APR 2026 10:42:11

11N20SISO_Ant1_5745



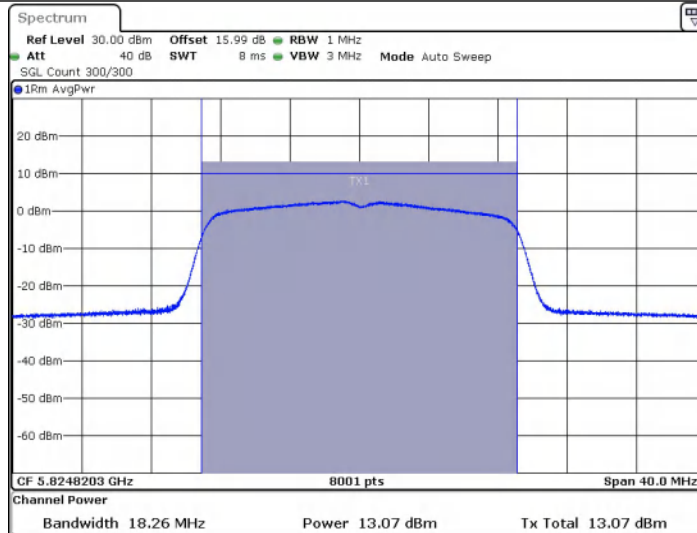
Date: 1 APR 2026 10:42:30

11N20SISO_Ant1_5785



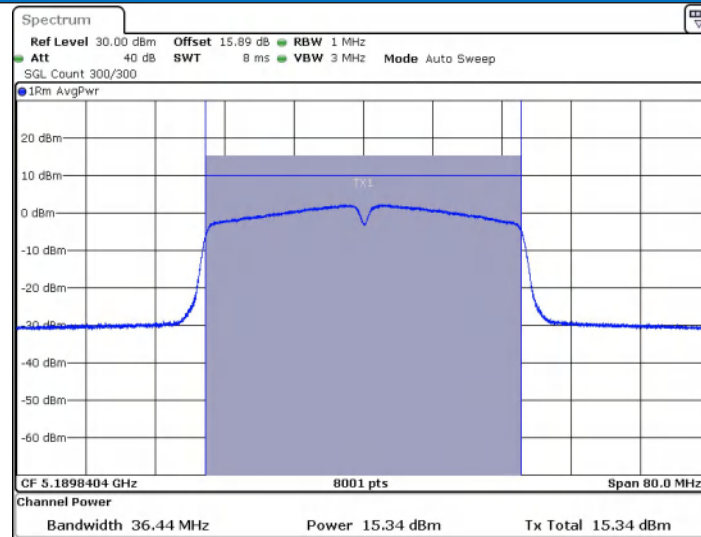
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11N20SISO_Ant1_5825



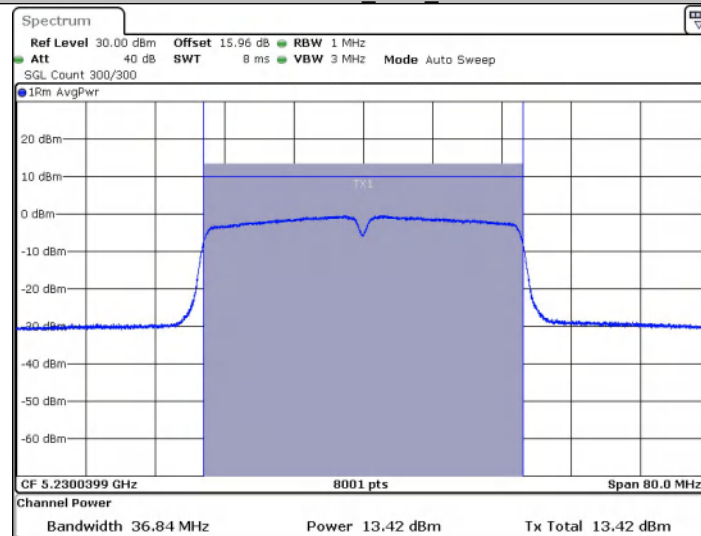
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11N40SISO_Ant1_5190



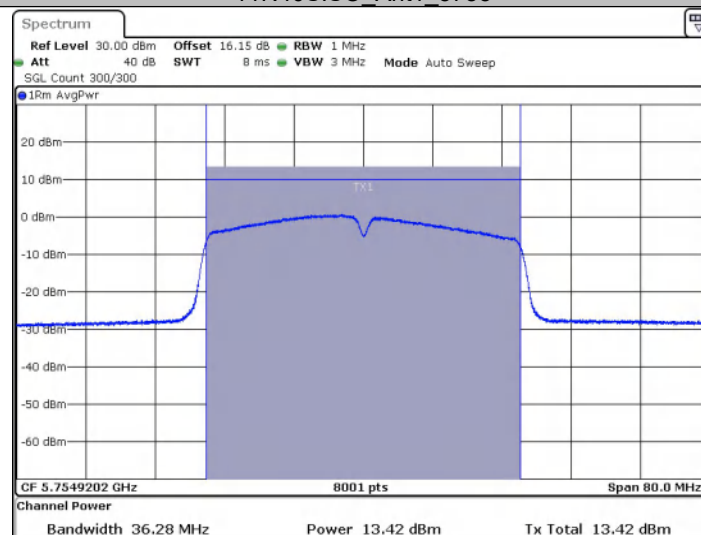
Date: 1 APR 2026 10:43:26

11N40SISO_Ant1_5230



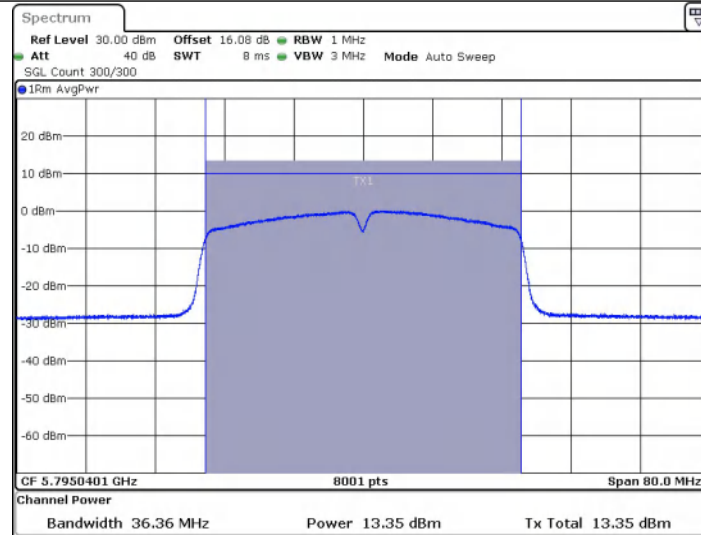
Date: 1 APR 2026 10:43:57

11N40SISO_Ant1_5755



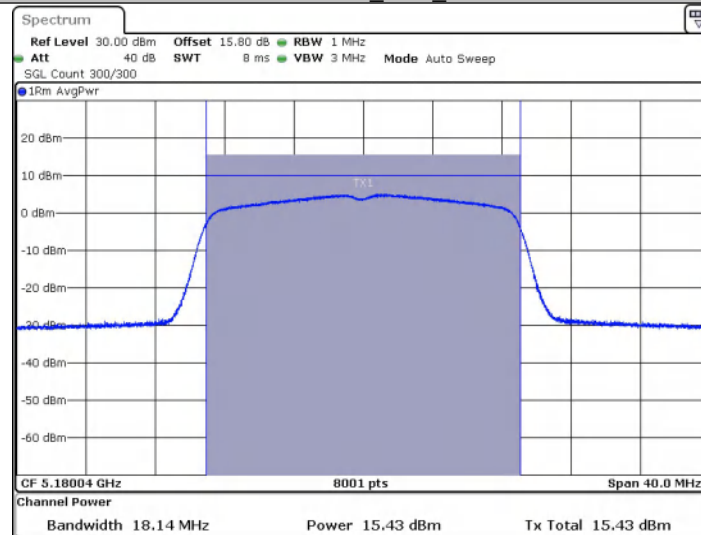
Date: 1 APR 2026 10:44:19

11N40SISO_Ant1_5795



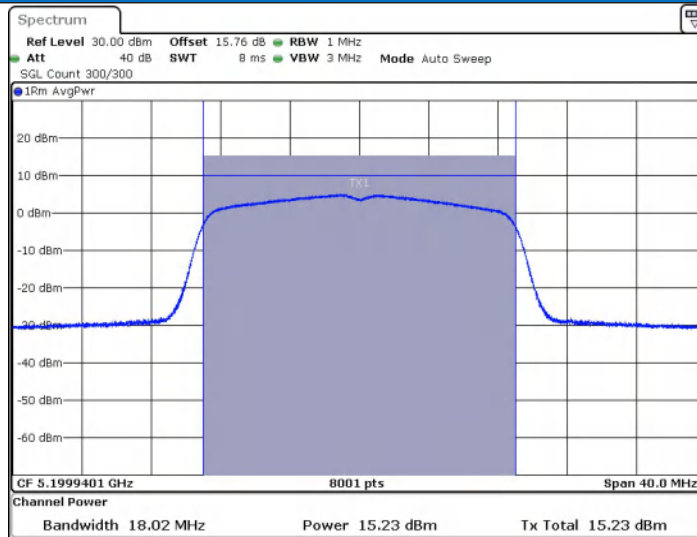
Date: 1.APR.2026 10:44:33

11AC20SISO_Ant1_5180



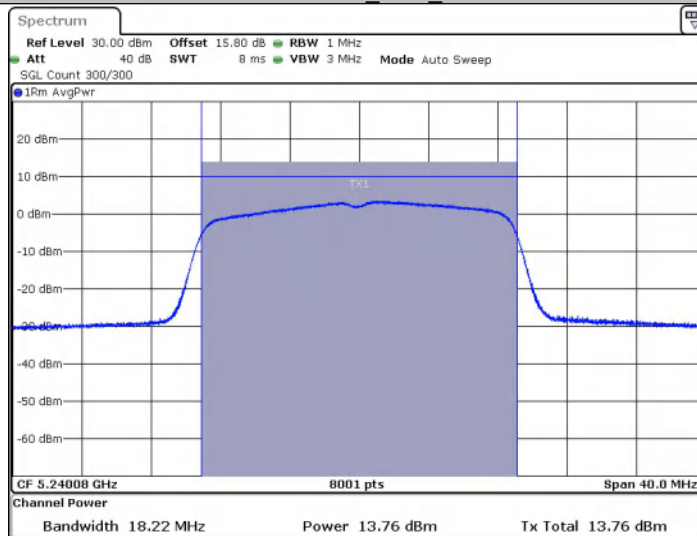
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11AC20SISO_Ant1_5200



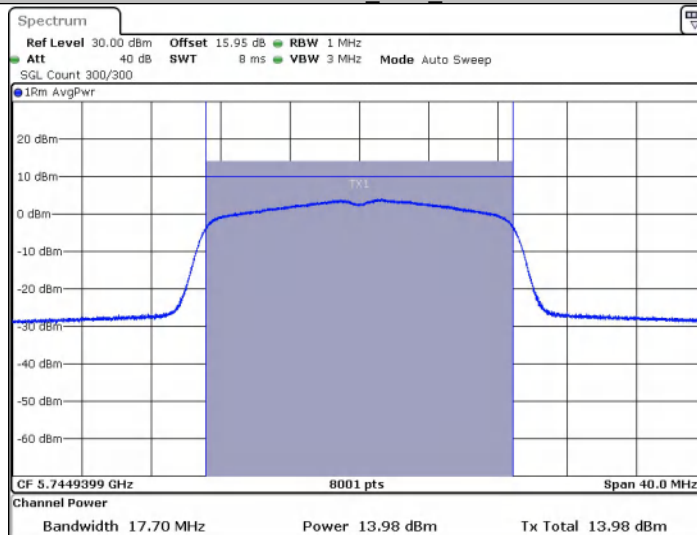
Date: 1 APR 2026 10:46:37

11AC20SISO_Ant1_5240



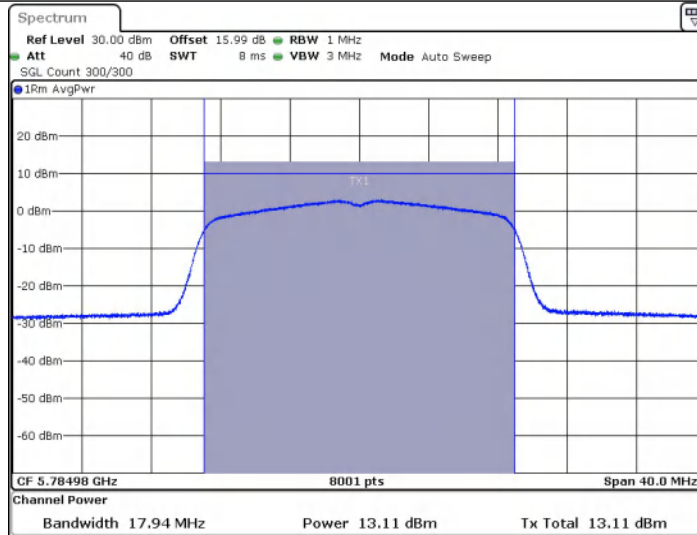
Date: 1 APR 2026 10:46:53

11AC20SISO_Ant1_5745



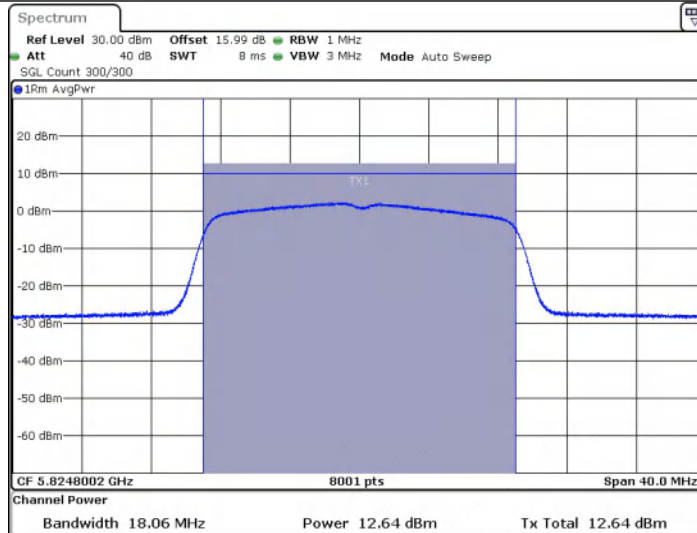
Date: 1 APR 2026 10:47:35

11AC20SISO_Ant1_5785



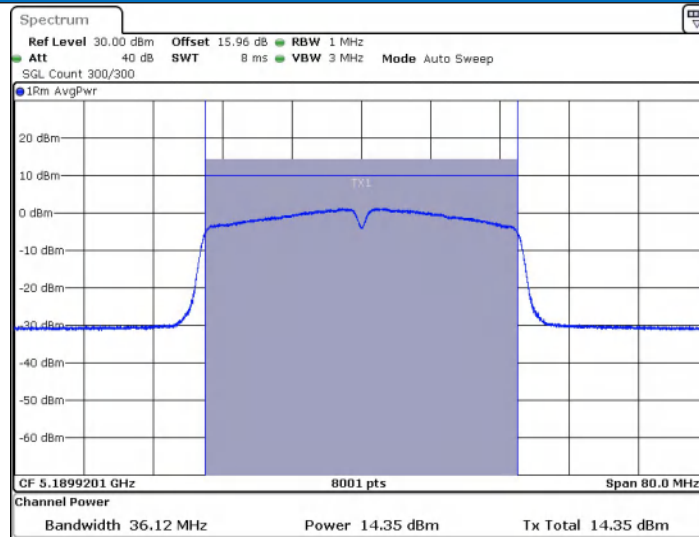
Date: 1.APR.2026 10:47:50

11AC20SISO_Ant1_5825



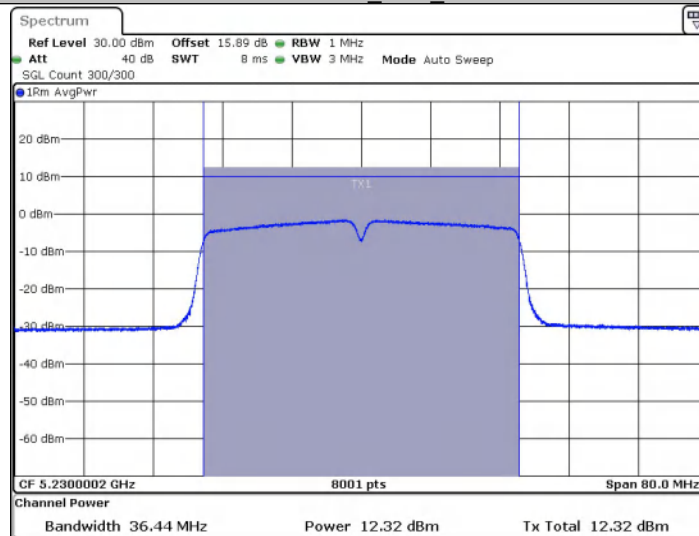
Date: 1.APR.2026 10:48:05

11AC40SISO_Ant1_5190



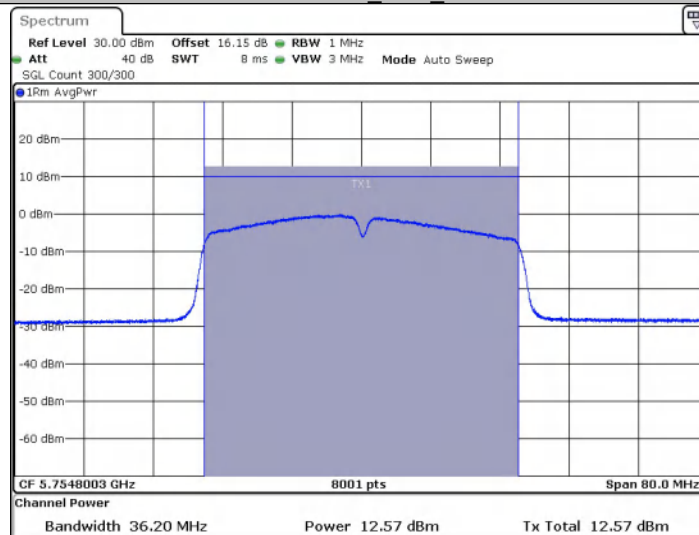
Date: 1 APR 2026 11:05:59

11AC40SISO_Ant1_5230



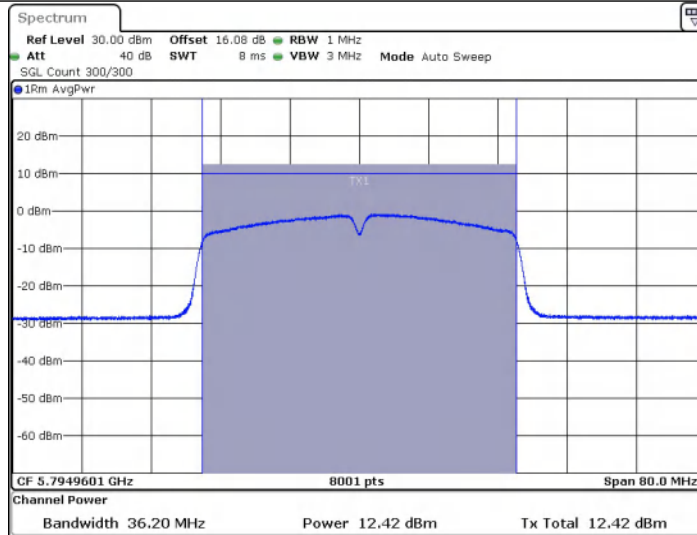
Date: 1 APR 2026 11:06:23

11AC40SISO_Ant1_5755



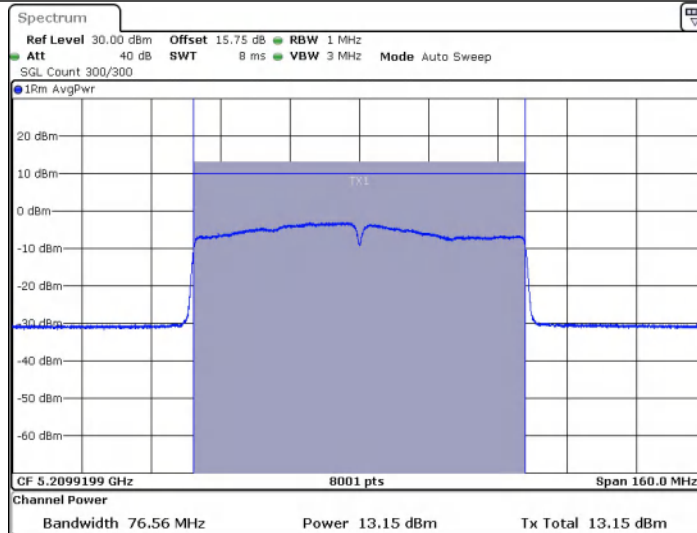
Date: 1 APR 2026 11:06:40

11AC40SISO_Ant1_5795



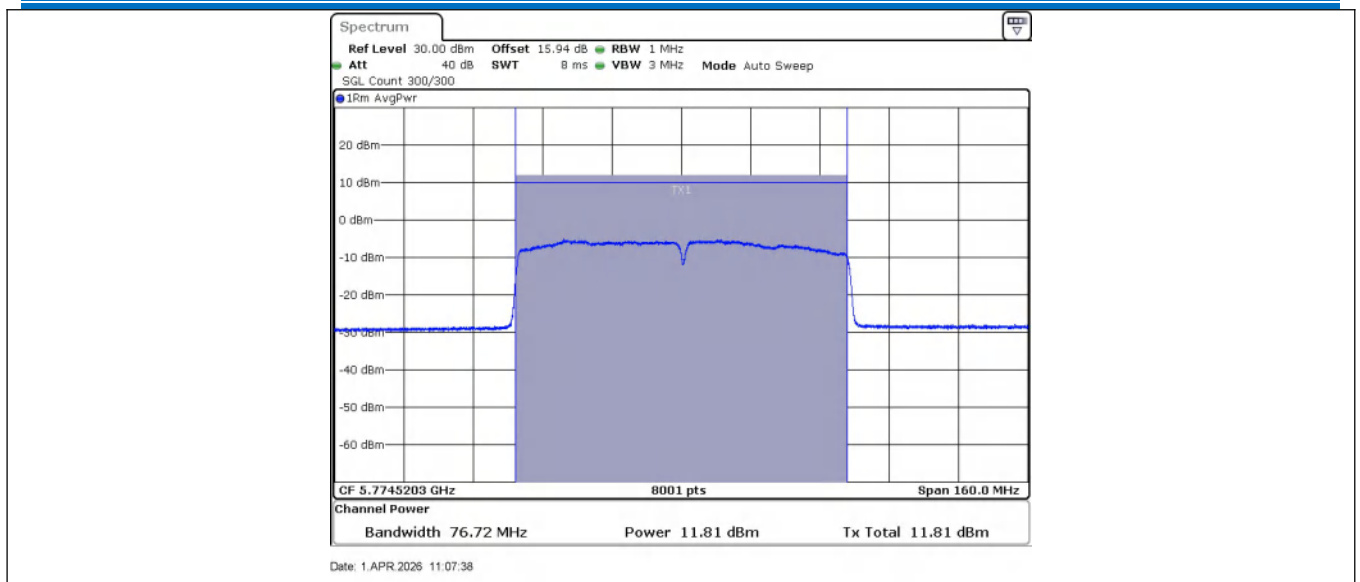
Date: 1.APR.2026 11:06:57

11AC80SISO_Ant1_5210



Date: 1.APR.2026 11:07:17

11AC80SISO_Ant1_5775



Remark:

Av.Power=Meas.Level+10 log (1/duty cycle)

E.i.r.p=Av.Power+G,

G = antenna gain in dBi.

Appendix C): Maximum Power Spectral Density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II F

Test Procedure:

For 5150-5725MHz:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 1MHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.

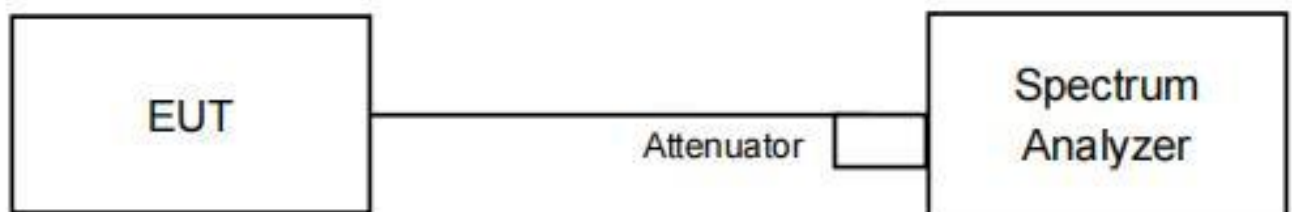
For 5725-5850MHz:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 500KHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.

Limit:

Frequency band(MHz)	Limit
5150-5250	$\leq 17\text{dBm}$ in 1MHz for master device
	$\leq 11\text{dBm}$ in 1MHz for client device
5250-5350	$\leq 11\text{dBm}$ in 1MHz for client device
5470-5725	$\leq 11\text{dBm}$ in 1MHz for client device
5725-5850	$\leq 30\text{dBm}$ in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

Test Setup Diagram



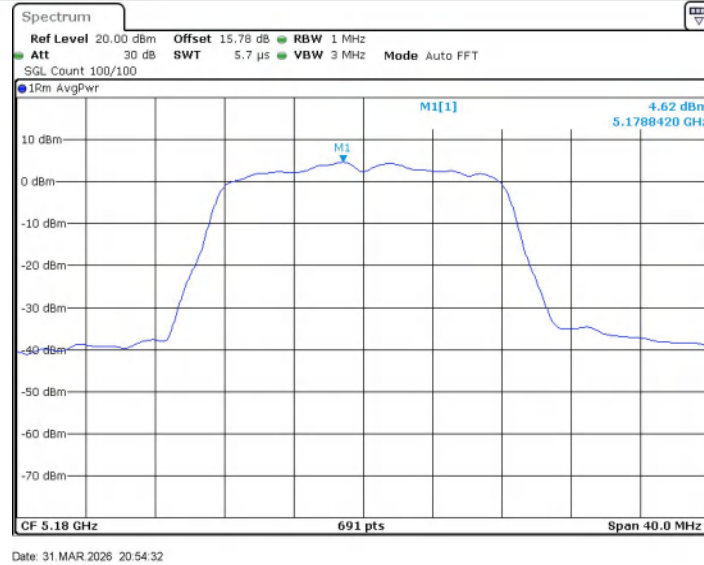
Result Table

TestMode	Freq(MHz)	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	5180	4.62	≤11.00	PASS
	5200	4.04	≤11.00	PASS
	5240	2.56	≤11.00	PASS
	5745	1.01	≤30.00	PASS
	5785	-0.83	≤30.00	PASS
	5825	-1.48	≤30.00	PASS
11N20SISO	5180	4.45	≤11.00	PASS
	5200	3.71	≤11.00	PASS
	5240	1.64	≤11.00	PASS
	5745	-0.31	≤30.00	PASS
	5785	-1.11	≤30.00	PASS
	5825	-1.58	≤30.00	PASS
11N40SISO	5190	1.03	≤11.00	PASS
	5230	-1.65	≤11.00	PASS
	5755	-3.44	≤30.00	PASS
	5795	-4.32	≤30.00	PASS
11AC20SISO	5180	3.92	≤11.00	PASS
	5200	4.13	≤11.00	PASS
	5240	2.08	≤11.00	PASS
	5745	-0.19	≤30.00	PASS
	5785	-0.75	≤30.00	PASS
	5825	-1.31	≤30.00	PASS
11AC40SISO	5190	0.67	≤11.00	PASS
	5230	-1.80	≤11.00	PASS
	5755	-3.83	≤30.00	PASS
	5795	-4.31	≤30.00	PASS
11AC80SISO	5210	-2.06	≤11.00	PASS
	5775	-6.43	≤30.00	PASS

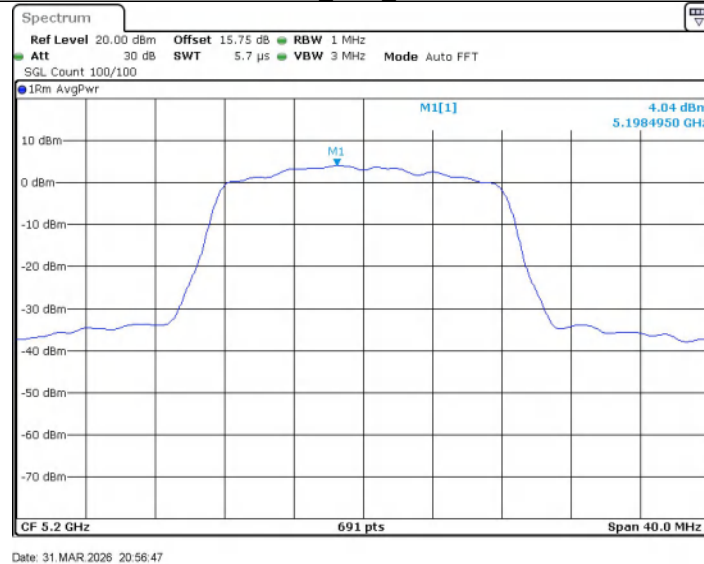
Remark:

PSD = Meas PSD + Duty Cycle Factor

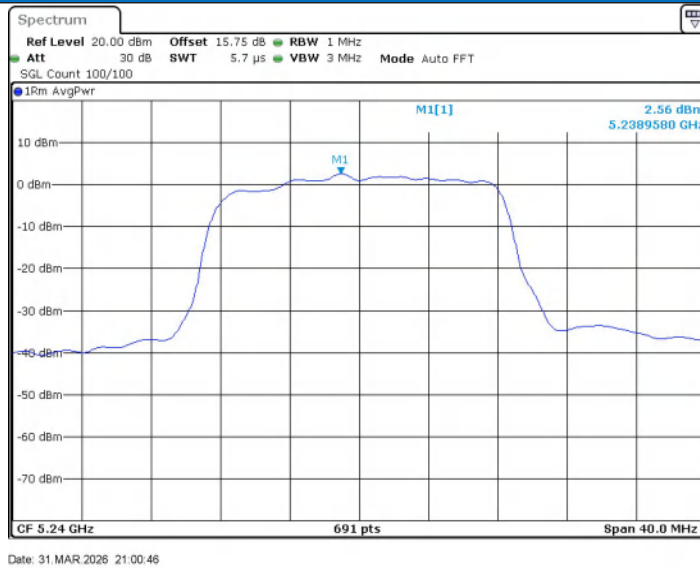
11A_Ant1_5180



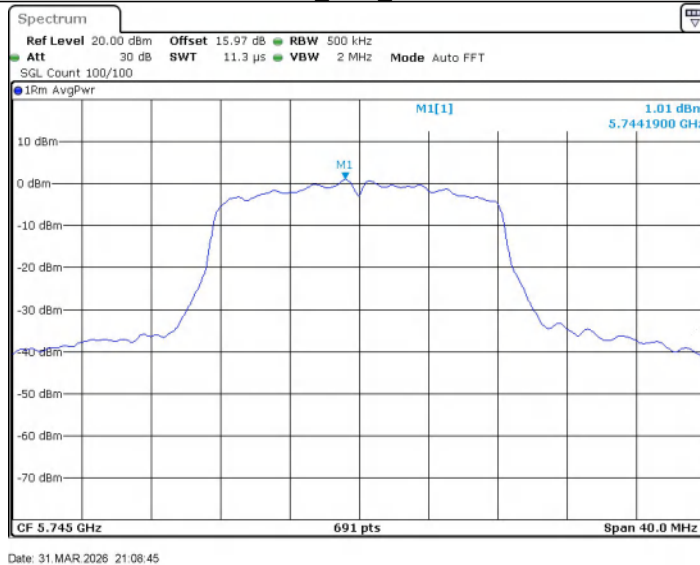
11A_Ant1_5200



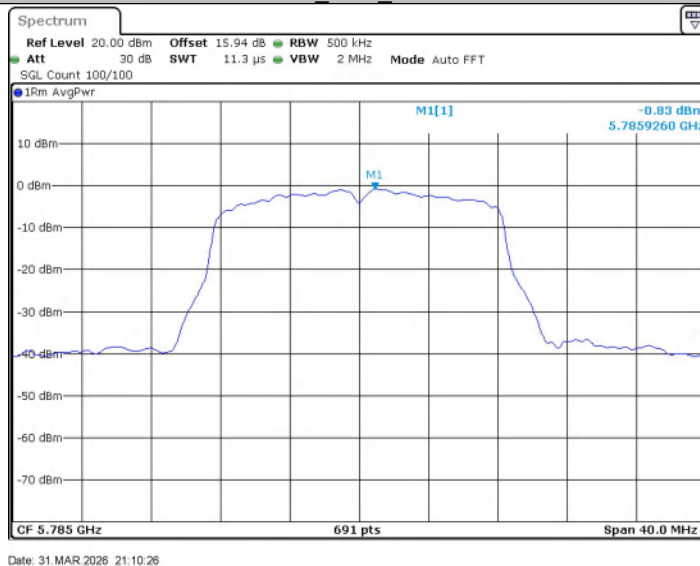
11A_Ant1_5240



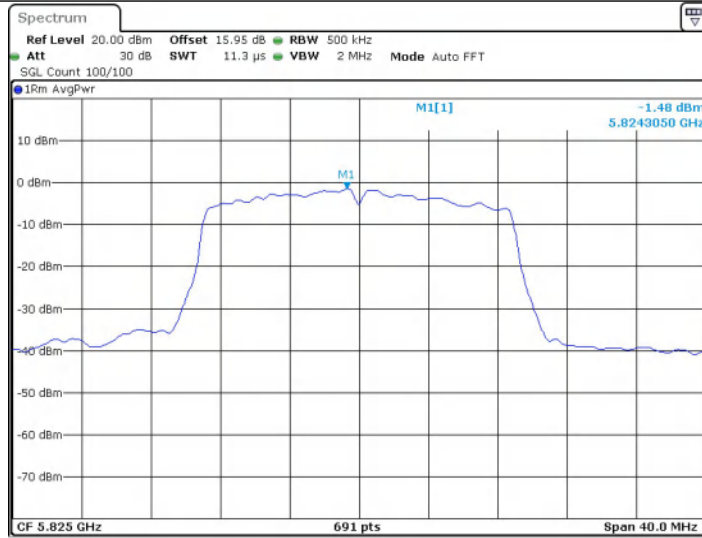
11A_Ant1_5745



11A_Ant1_5785

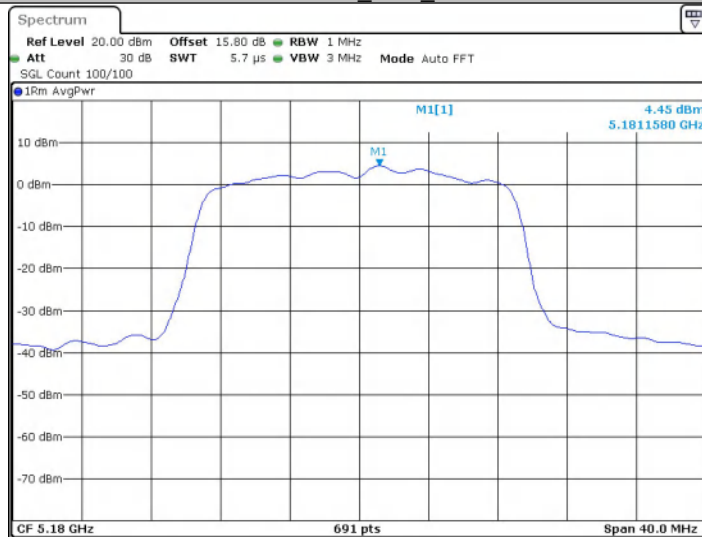


11A_Ant1_5825



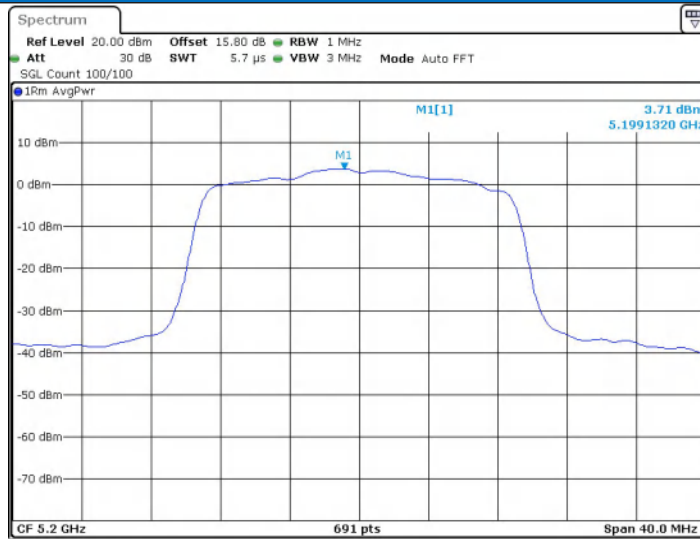
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11N20SISO_Ant1_5180



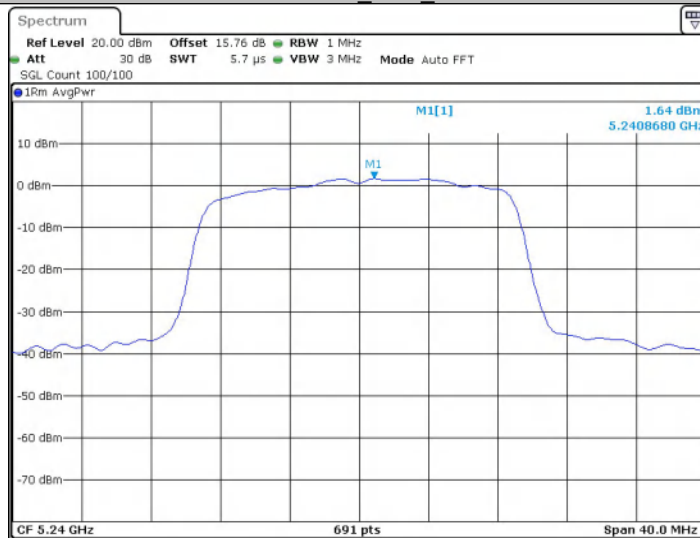
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11N20SISO_Ant1_5200



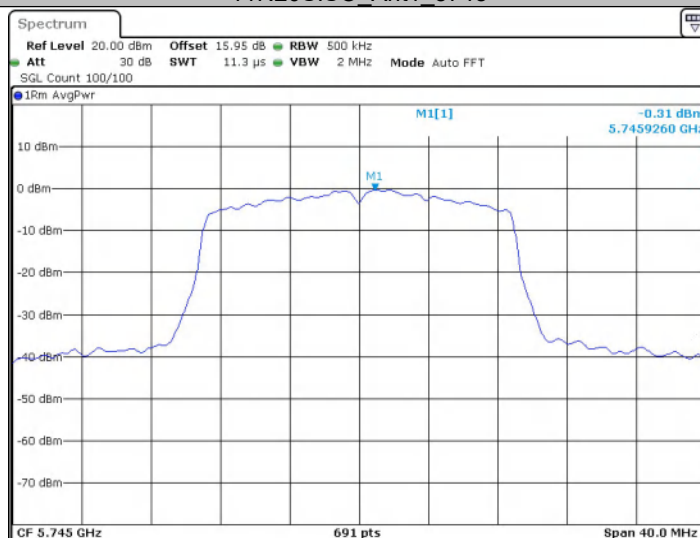
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11N20SISO_Ant1_5240



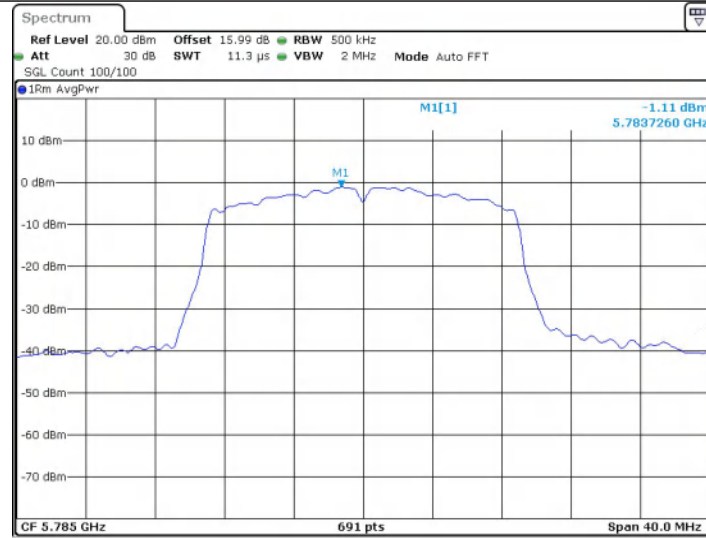
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11N20SISO_Ant1_5745



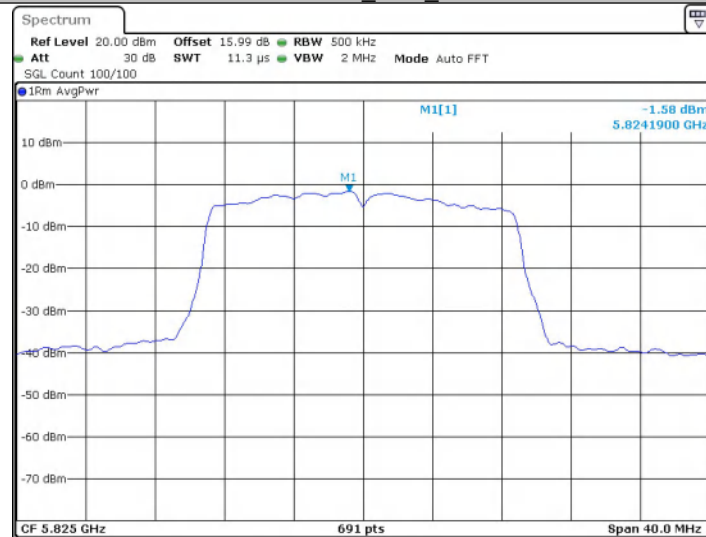
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11N20SISO_Ant1_5785



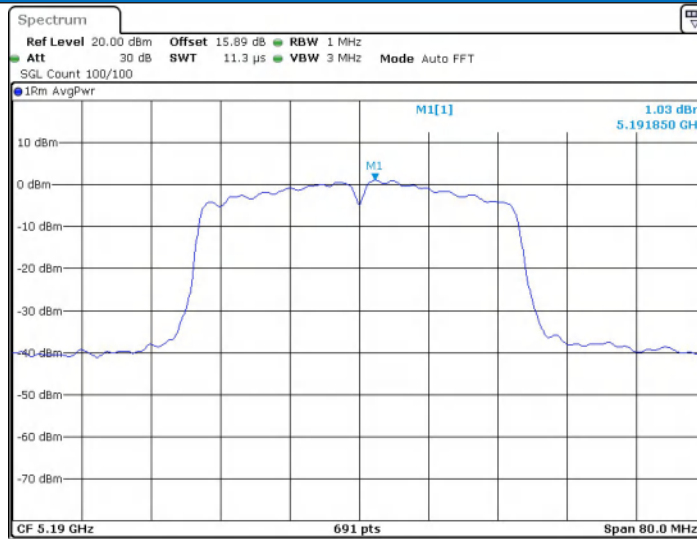
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11N20SISO_Ant1_5825



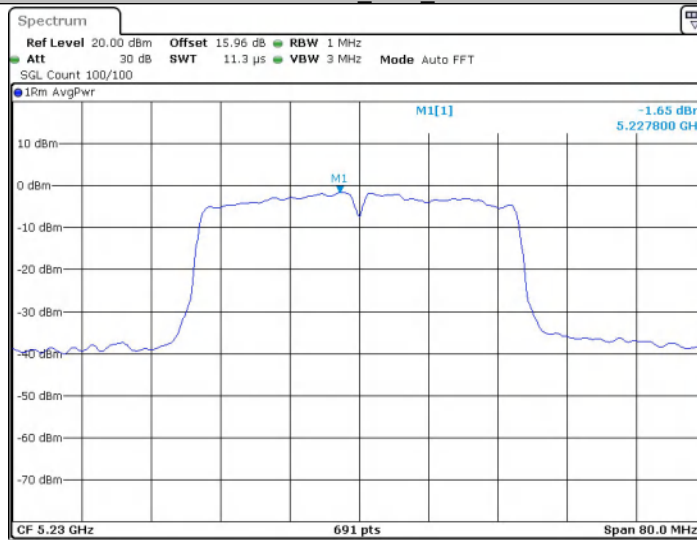
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11N40SISO_Ant1_5190



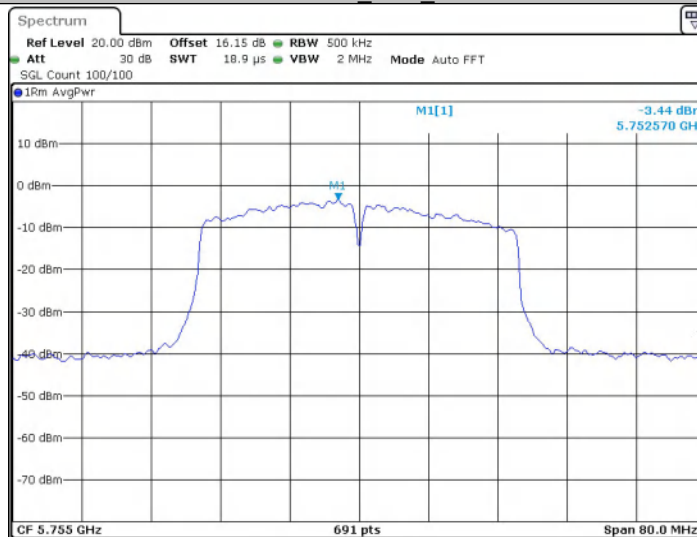
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11N40SISO_Ant1_5230



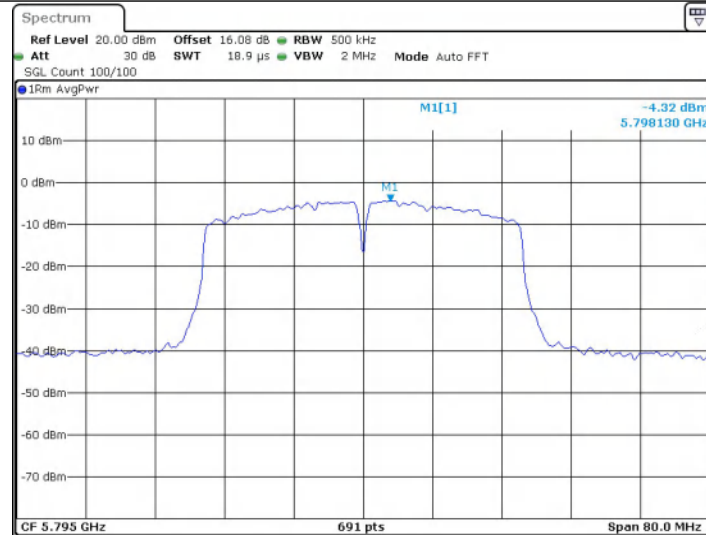
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11N40SISO_Ant1_5755



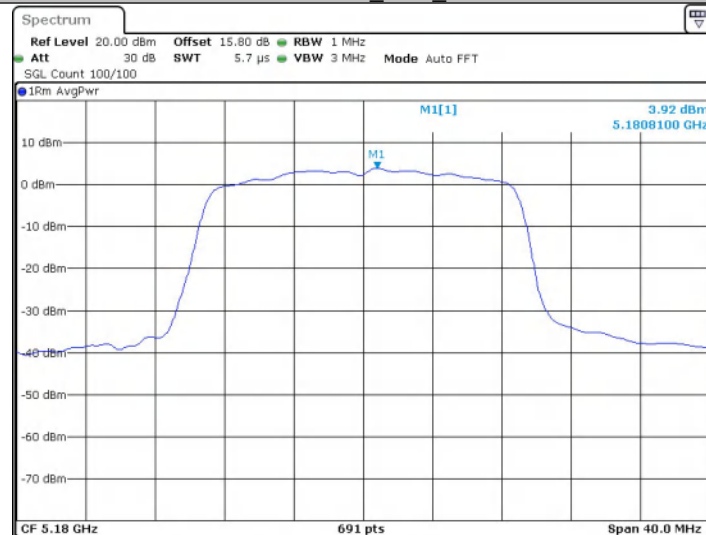
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11N40SISO_Ant1_5795



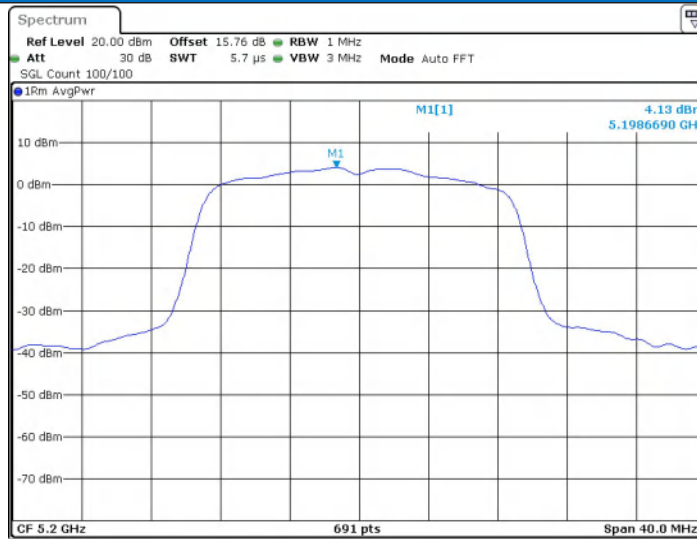
Date: 31.MAR.2026 21:38:40

11AC20SISO_Ant1_5180



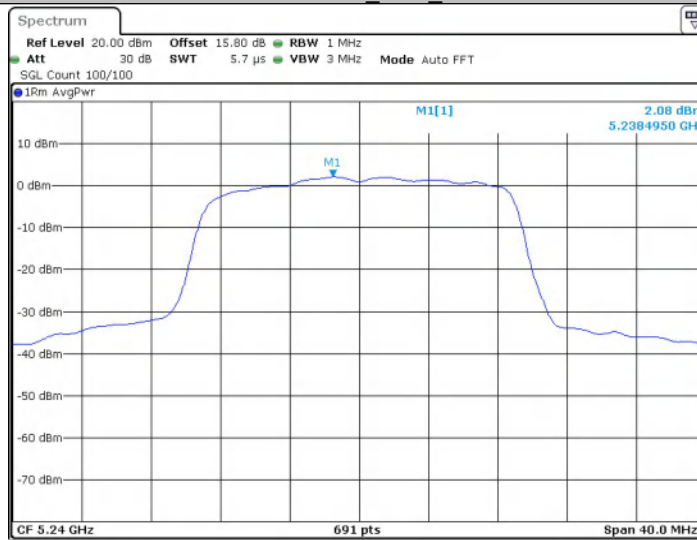
Date: 31.MAR.2026 21:41:08

11AC20SISO_Ant1_5200



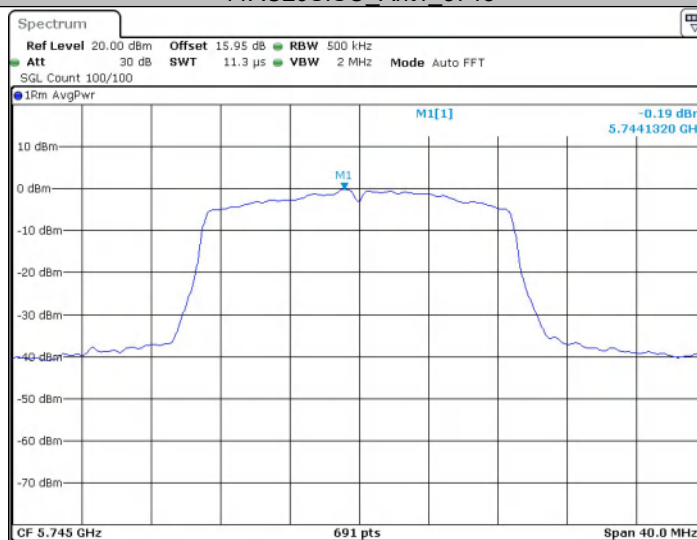
Date: 31.MAR.2026 21:44:30

11AC20SISO_Ant1_5240



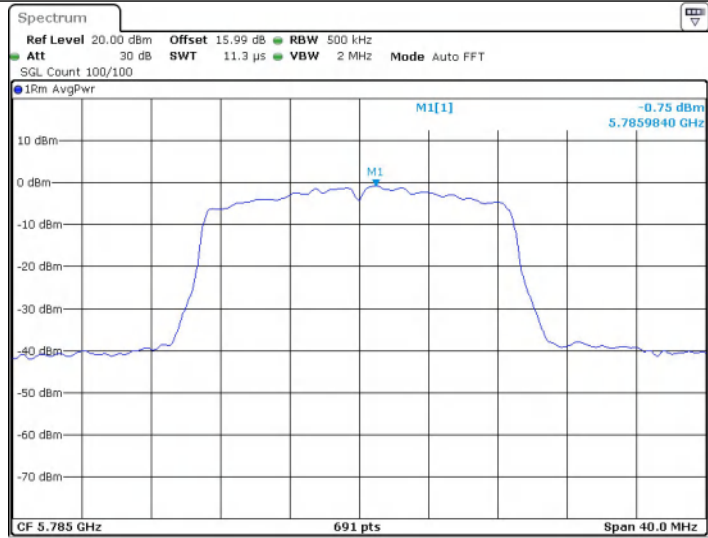
Date: 31.MAR.2026 21:46:34

11AC20SISO_Ant1_5745



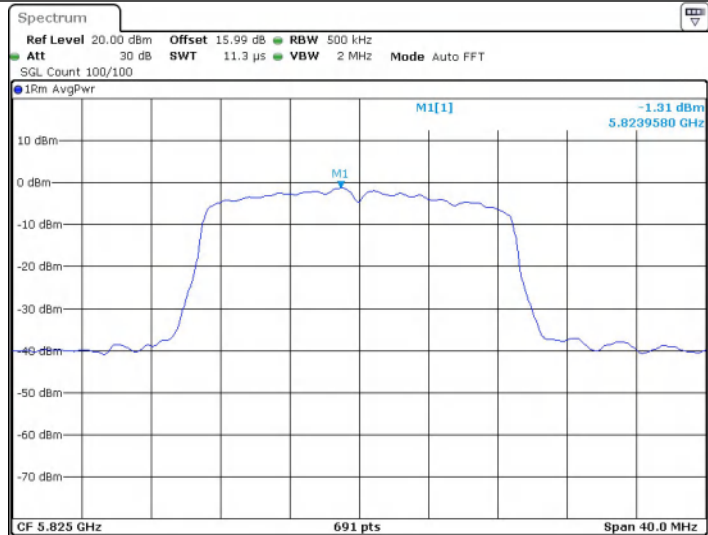
Date: 31.MAR.2026 21:48:36

11AC20SISO_Ant1_5785



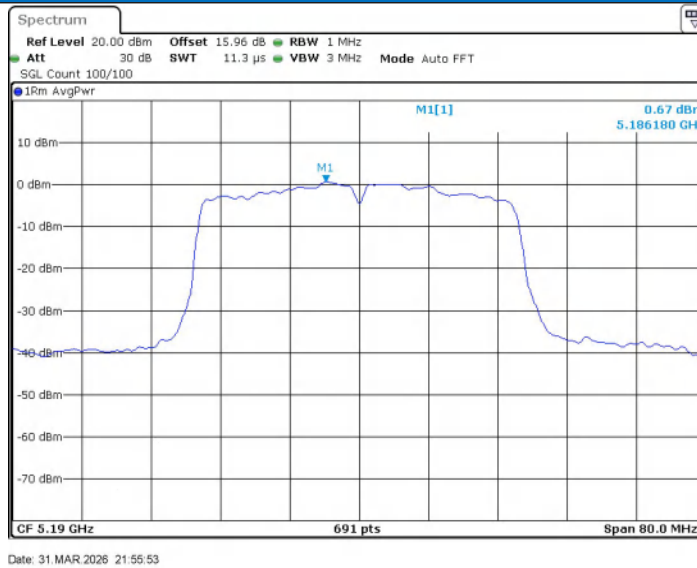
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11AC20SISO_Ant1_5825

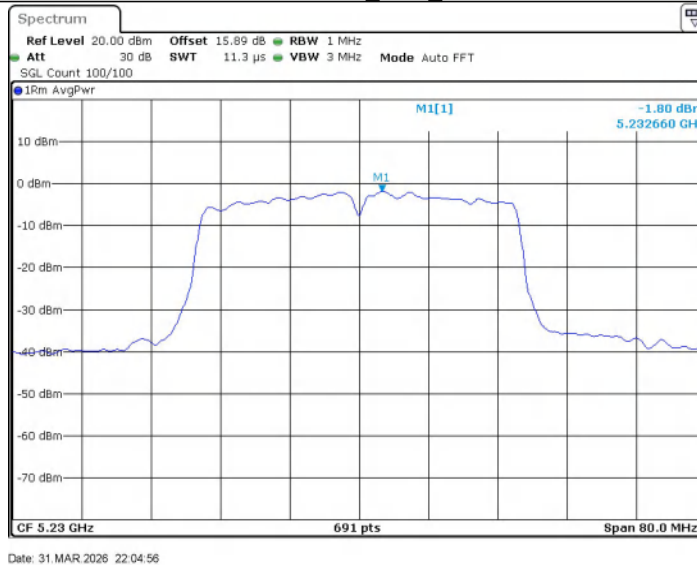


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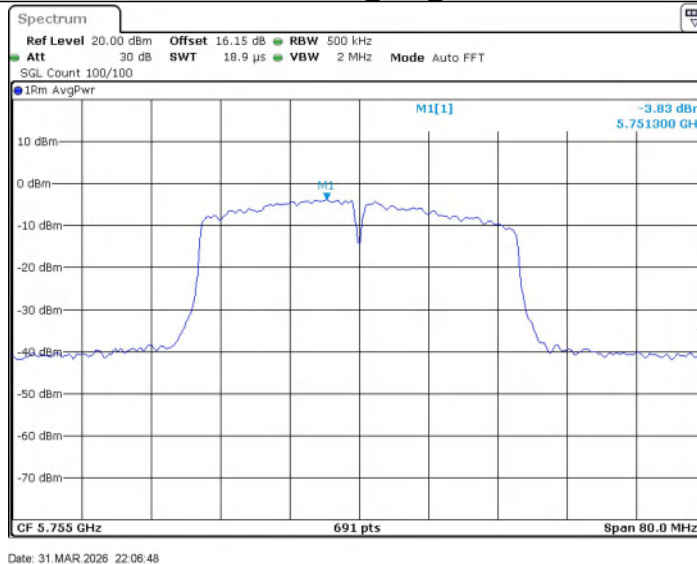
11AC40SISO_Ant1_5190



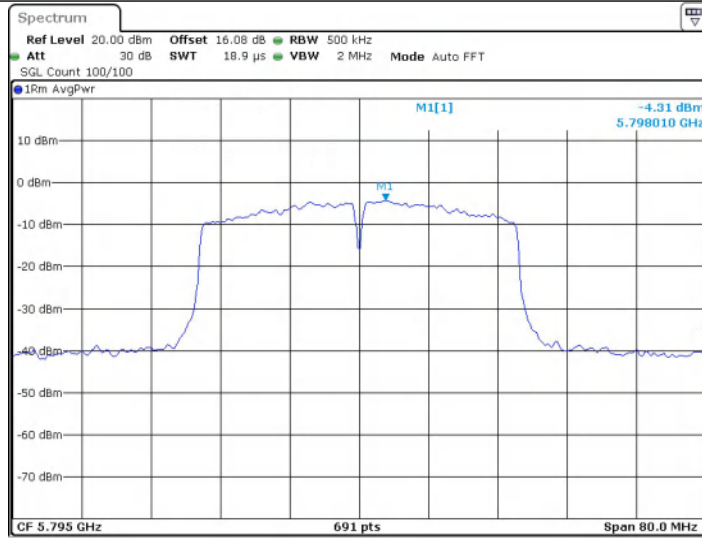
11AC40SISO_Ant1_5230



11AC40SISO_Ant1_5755

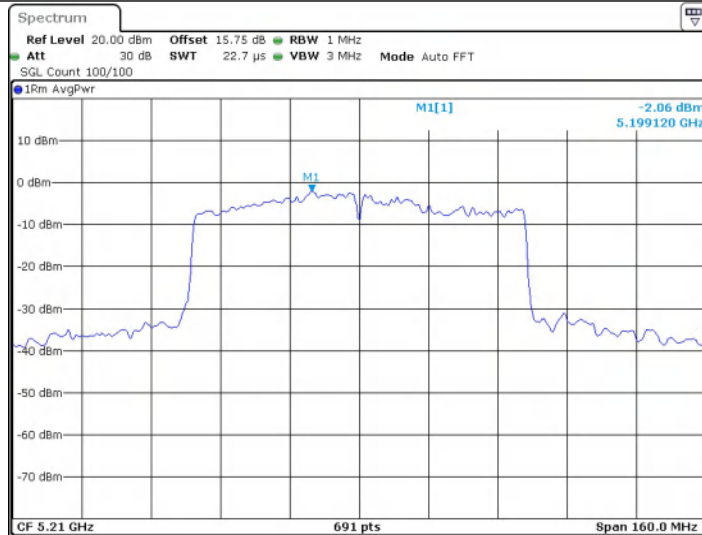


11AC40SISO_Ant1_5795



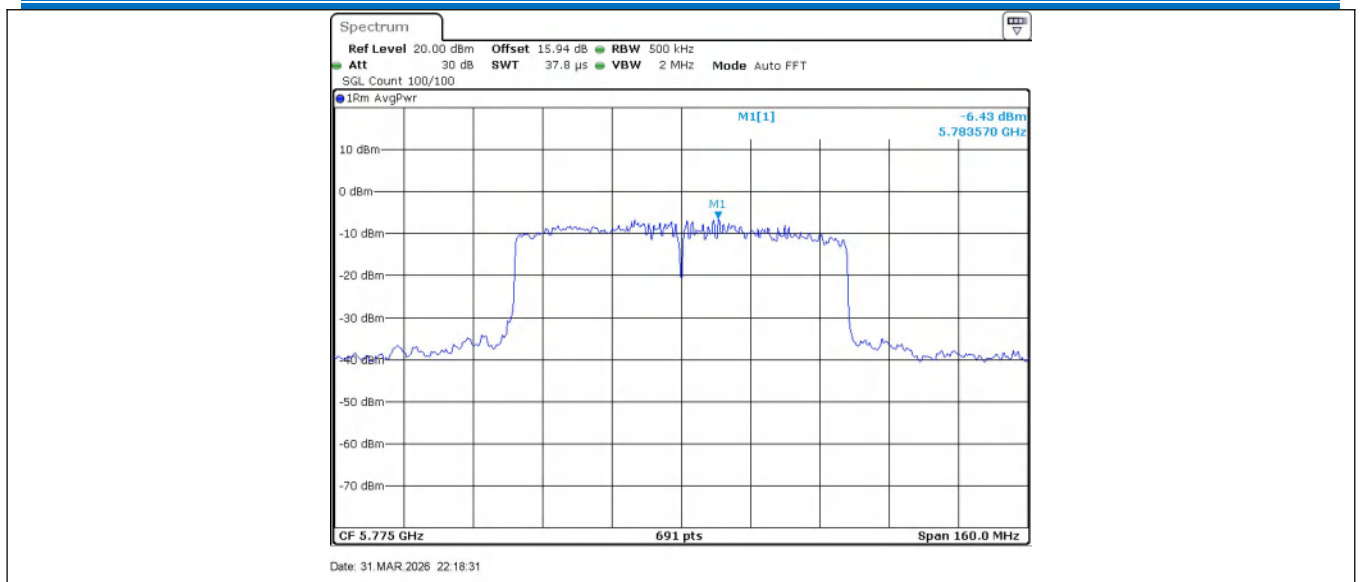
Date: 31.MAR.2026 22:10:23

11AC80SISO_Ant1_5210



Date: 31.MAR.2026 22:15:47

11AC80SISO_Ant1_5775



Appendix D): Band Edge Measurements

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

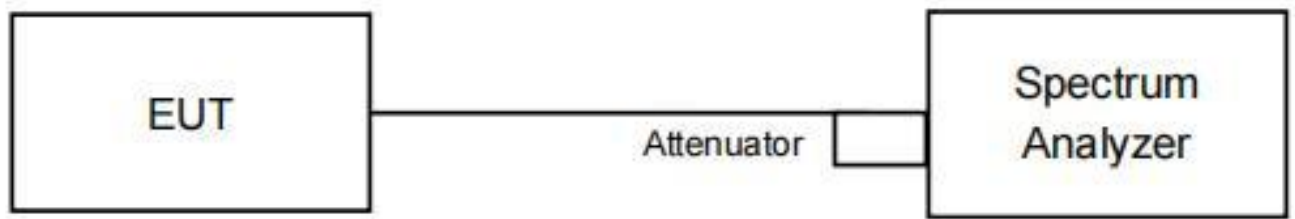
Test Procedure:

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

Limit:

For transmitters operating in the 5.15-5.25 GHz band:	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.25-5.35 GHz band:	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.47-5.725 GHz band:	All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.725-5.85 GHz band:	(i) All emissions shall be limited to a level of -27 dBm/MHz (68.2dBuV/m) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz (105.2dBuV/m) at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz (110.8dBuV/m) at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz (122.2dBuV/m) at the band edge.

Test Setup Diagram



7.1.1 Test Result B1

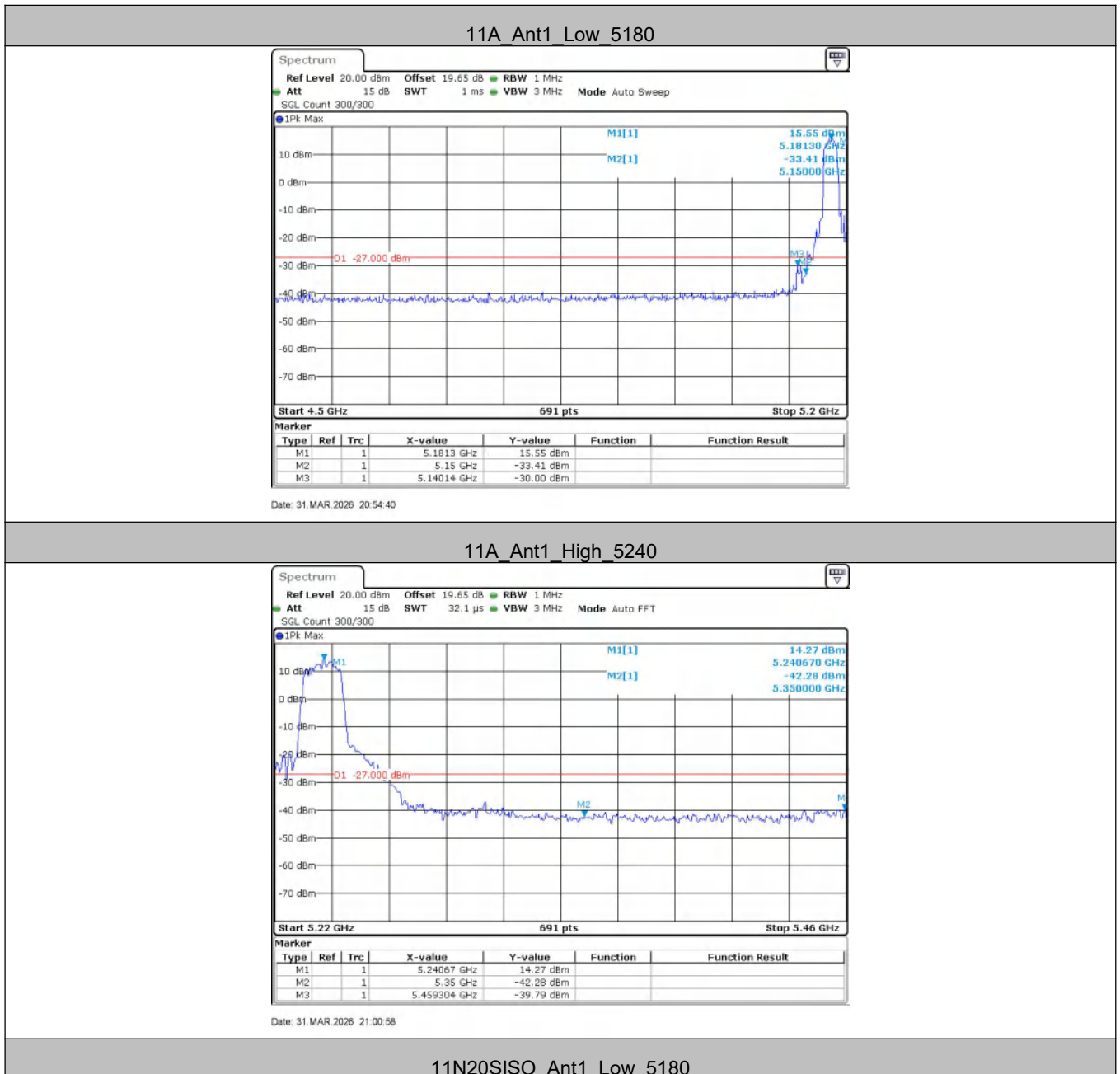
TestMode	ChName	Freq(MHz)	Result[dBm]	Limit[dBm]	Verdict
11A	Low	5180	-30	≤ -27	PASS
	High	5240	-39.79	≤ -27	PASS
11N20SISO	Low	5180	-37.95	≤ -27	PASS
	High	5240	-39.53	≤ -27	PASS
11N40SISO	Low	5190	-36.01	≤ -27	PASS
	High	5230	-39.8	≤ -27	PASS
11AC20SISO	Low	5180	-30.15	≤ -27	PASS
	High	5240	-39.46	≤ -27	PASS
11AC40SISO	Low	5190	-36.58	≤ -27	PASS
	High	5230	-38.82	≤ -27	PASS
11AC80SISO	Low	5210	-37.09	≤ -27	PASS
	High	5210	-36.82	≤ -27	PASS

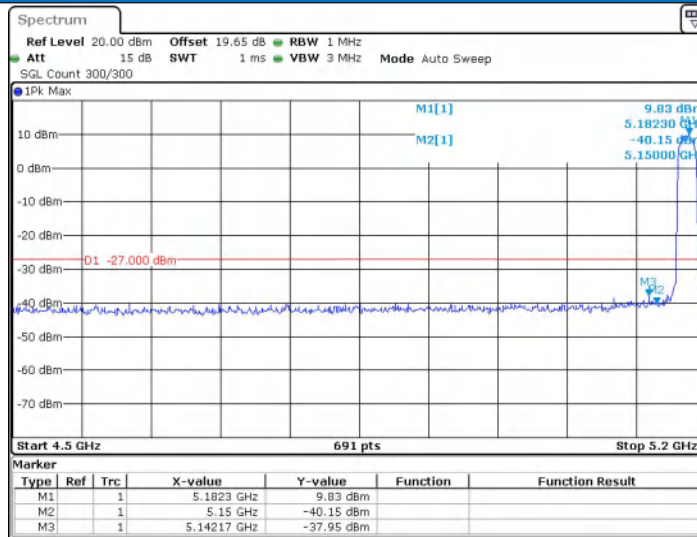
7.1.2 Test Result B4

TestMode	ChName	Freq(MHz)	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Low	5745	5650~5700	-40.74	≤ -26.88	PASS
			5700~5720	-29.21	≤ 15.09	PASS
			5720~5725	-28.86	≤ 17.88	PASS
			5760~5650	-40.13	≤ -27	PASS
	High	5825	5850~5855	-31.95	≤ 19.22	PASS
			5855~5875	-37.91	≤ 10.02	PASS
			5875~5925	-38.87	≤ -26.00	PASS
			5925~5935	-38.72	≤ -27	PASS
11N20SISO	Low	5745	5650~5700	-40.32	≤ -26.14	PASS
			5700~5720	-26.2	≤ 15.18	PASS
			5720~5725	-31.64	≤ 15.98	PASS
			5760~5650	-39.43	≤ -27	PASS
	High	5825	5850~5855	-29.05	≤ 19.22	PASS
			5855~5875	-35.66	≤ 12.43	PASS
			5875~5925	-41.15	≤ -26.73	PASS
			5925~5935	-38.09	≤ -27	PASS
11N40SISO	Low	5755	5650~5700	-40.22	≤ -26.21	PASS
			5700~5720	-27.91	≤ 15.47	PASS

	High	5795	5720~5725	-28.02	≤ 15.90	PASS
			5780~5650	-38.17	≤ -27	PASS
			5850~5855	-30.78	≤ 15.85	PASS
			5855~5875	-31.75	≤ 14.16	PASS
			5875~5925	-39.85	≤ -26.79	PASS
			5925~5935	-38.32	≤ -27	PASS
11AC20SIS O	Low	5745	5650~5700	-38.84	≤ -26.14	PASS
			5700~5720	-32.11	≤ 15.13	PASS
			5720~5725	-28.9	≤ 17.88	PASS
			5760~5650	-39.82	≤ -27	PASS
	High	5825	5850~5855	-31.57	≤ 16.54	PASS
			5855~5875	-33.99	≤ 11.33	PASS
			5875~5925	-40.26	≤ -26.73	PASS
			5925~5935	-37.67	≤ -27	PASS
11AC40SIS O	Low	5755	5650~5700	-39.51	≤ -26.79	PASS
			5700~5720	-25.98	≤ 13.88	PASS
			5720~5725	-26.81	≤ 18.13	PASS
			5780~5650	-39.73	≤ -27	PASS
	High	5795	5850~5855	-36.92	≤ 16.39	PASS
			5855~5875	-36.33	≤ 10.27	PASS
			5875~5925	-39.82	≤ -26.61	PASS
			5925~5935	-38.86	≤ -27	PASS
11AC80SIS O	Low	5775	5650~5700	-31.85	≤ -23.55	PASS
			5700~5720	-17.91	≤ 12.53	PASS
			5720~5725	-17.85	≤ 15.67	PASS
			5800~5650	-32.11	≤ -27	PASS
	High	5775	5850~5855	-23.33	≤ 15.98	PASS
			5855~5875	-23.04	≤ 14.52	PASS
			5875~5925	-31.6	≤ -20.91	PASS
			5925~5935	-34.58	≤ -27	PASS

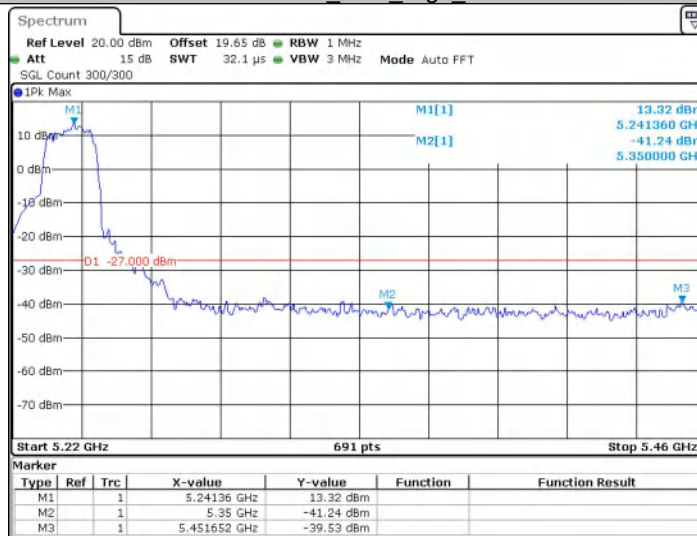
7.1.3 Test Graphs B1





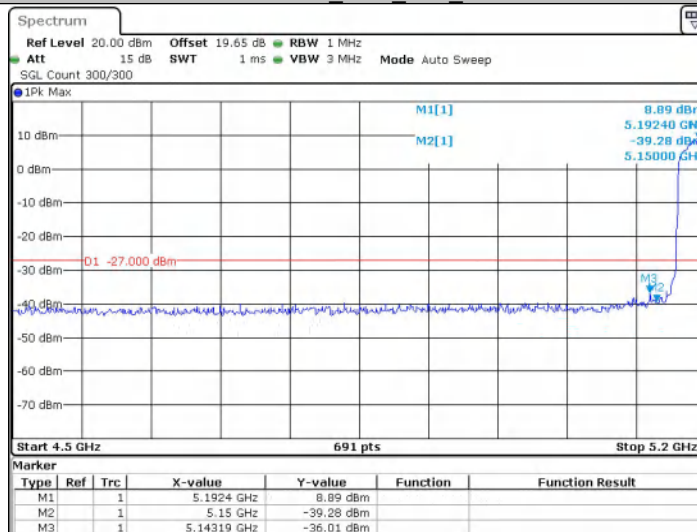
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11N20SISO_Ant1_High_5240



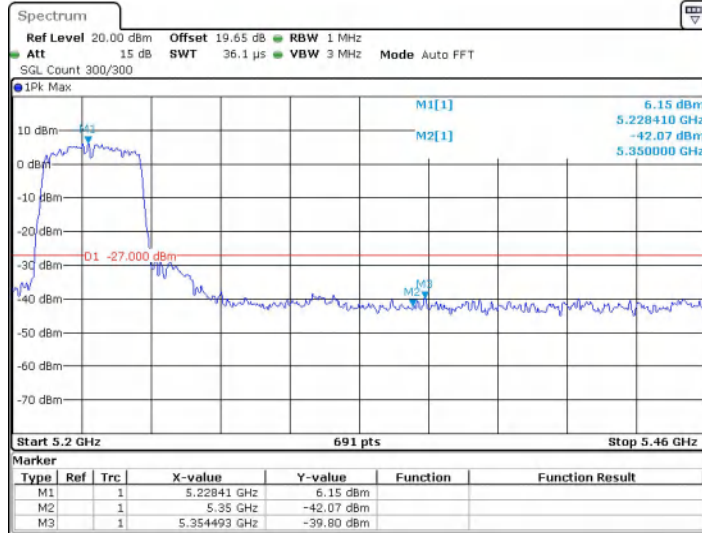
Date: 31 MAR 2026 21:22:20

11N40SISO_Ant1_Low_5190



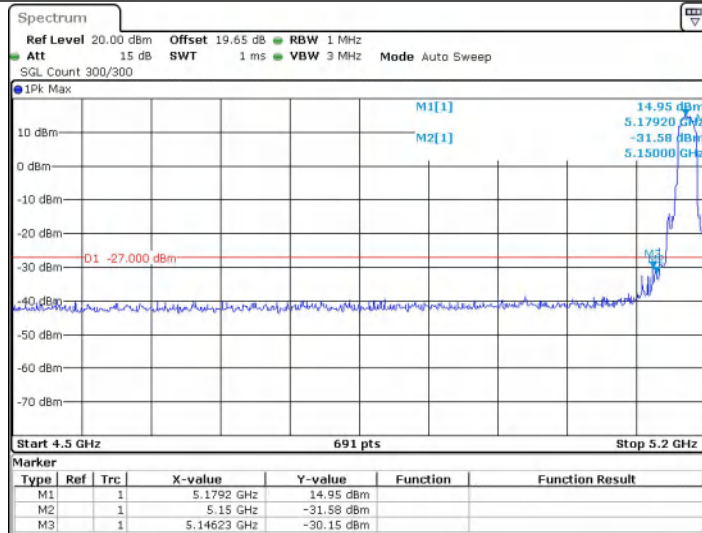
Date: 1 APR 2026 16:31:35

11N40SISO_Ant1_High_5230



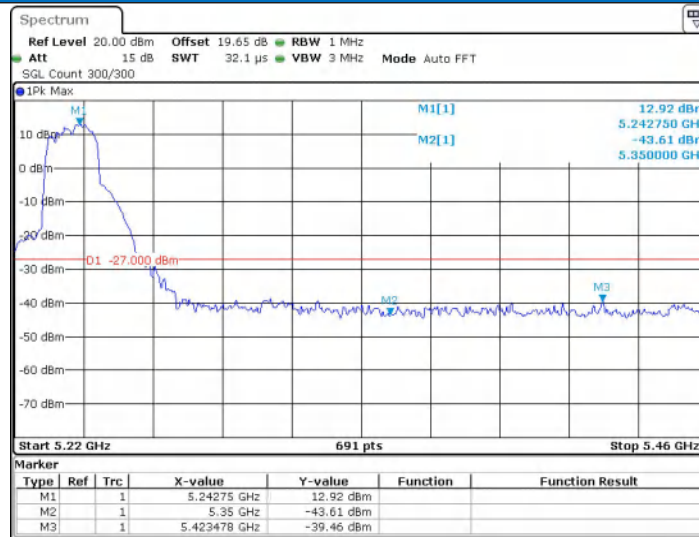
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11AC20SISO_Ant1_Low_5180



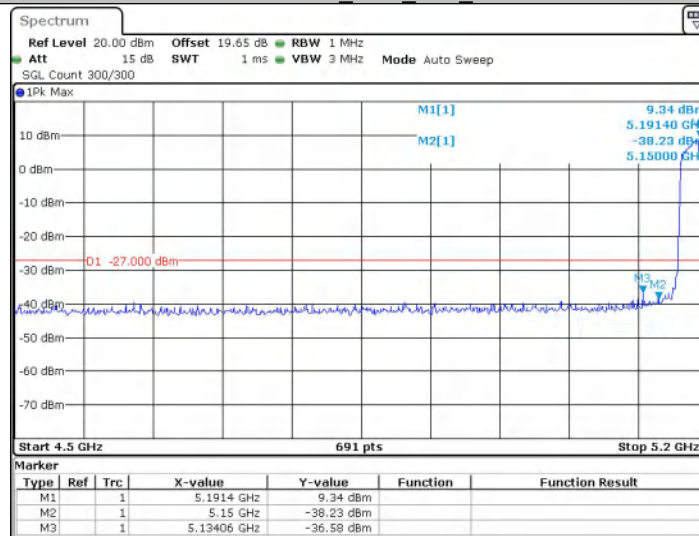
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11AC20SISO_Ant1_High_5240



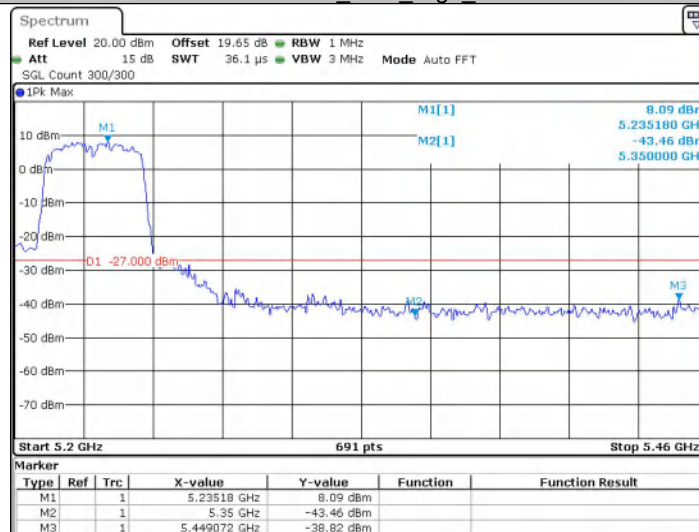
Date: 31.MAR.2026 21:46:46

11AC40SISO_Ant1_Low_5190



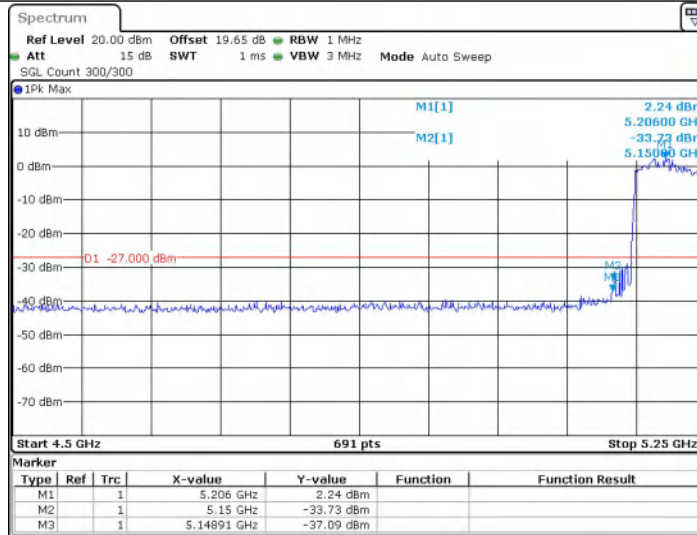
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11AC40SISO_Ant1_High_5230



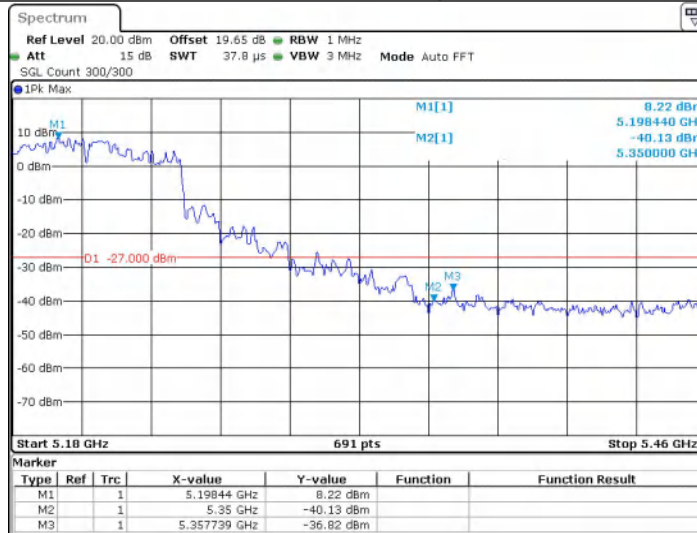
Date: 1.APR.2026 16:33:48

11AC80SISO_Ant1_Low_5210



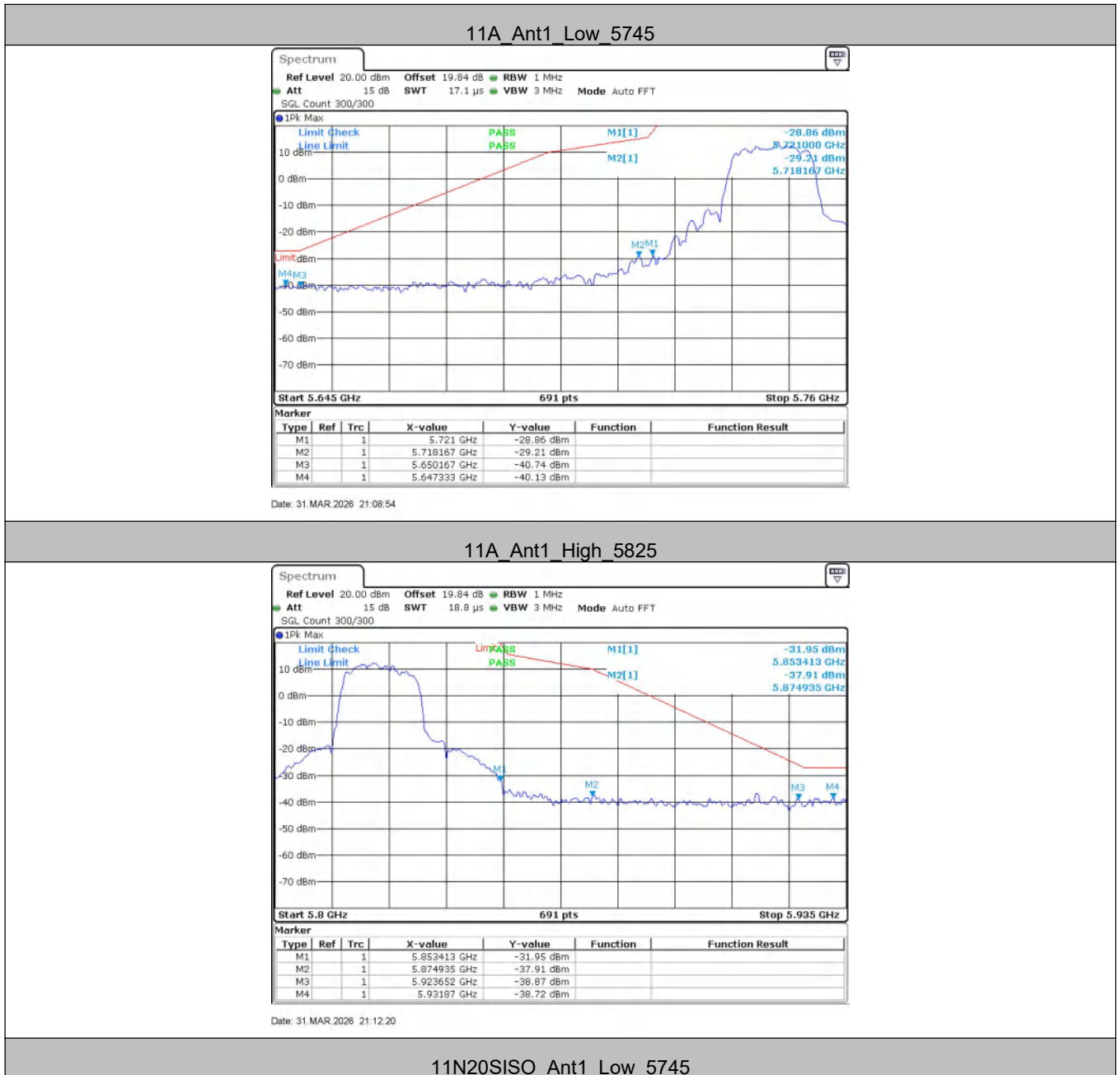
Date: 1.APR.2026 11:13:34

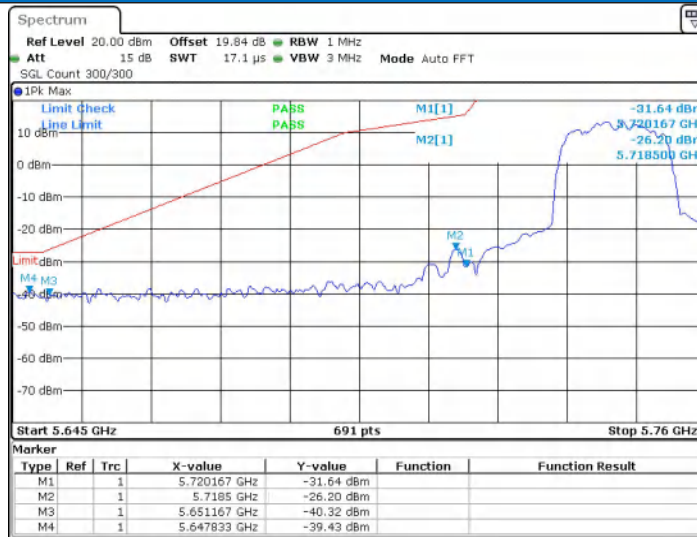
11AC80SISO_Ant1_High_5210



Date: 31.MAR.2026 22:16:10

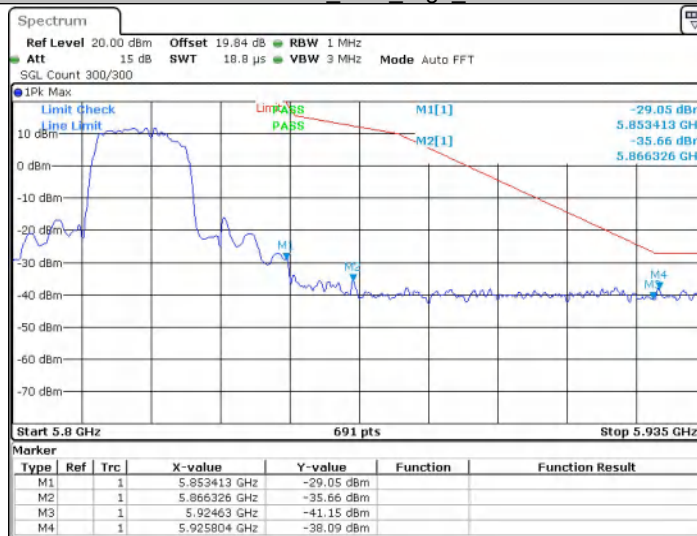
7.1.4 Test Graphs B4





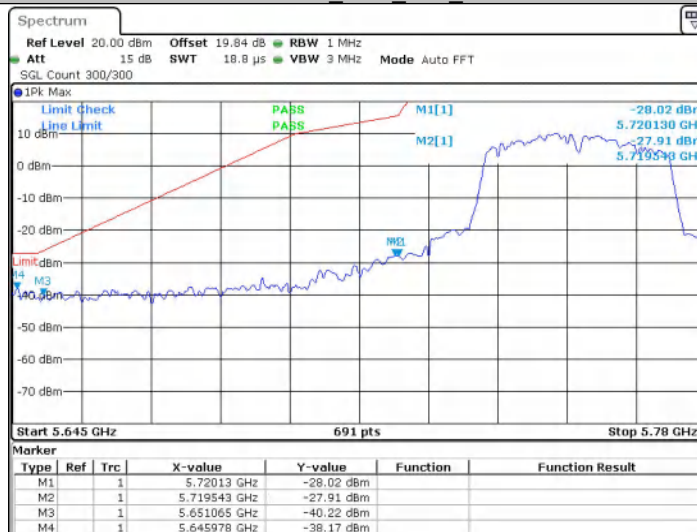
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11N20SISO_Ant1_High_5825



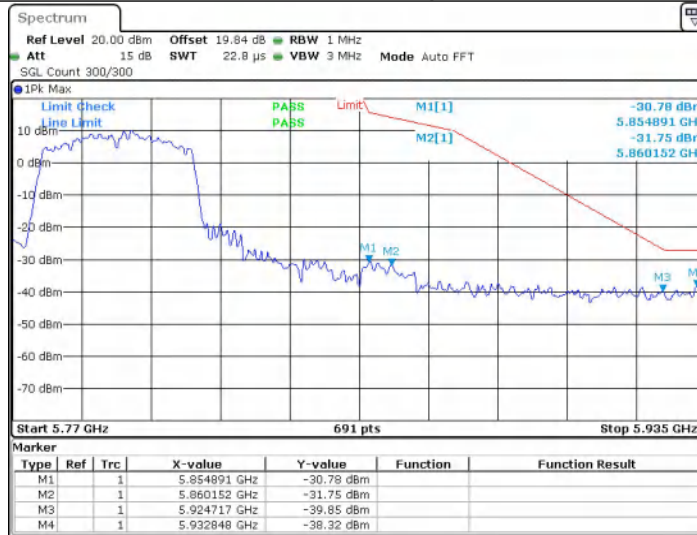
Date: 31.MAR.2026 21:28:22

11N40SISO_Ant1_Low_5755



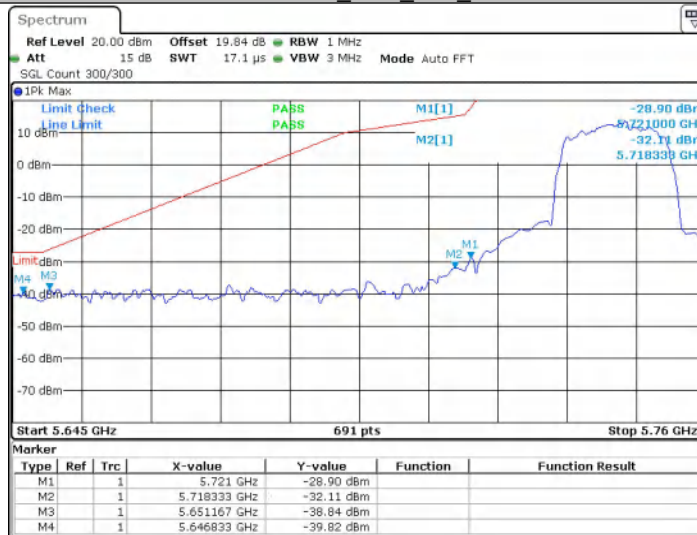
Date: 31.MAR.2026 21:36:33

11N40SISO_Ant1_High_5795



Date: 31.MAR.2026 21:38:50

11AC20SISO_Ant1_Low_5745



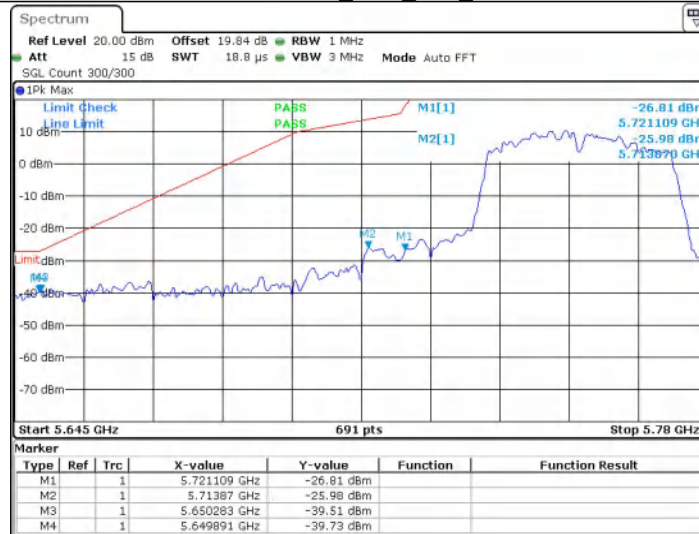
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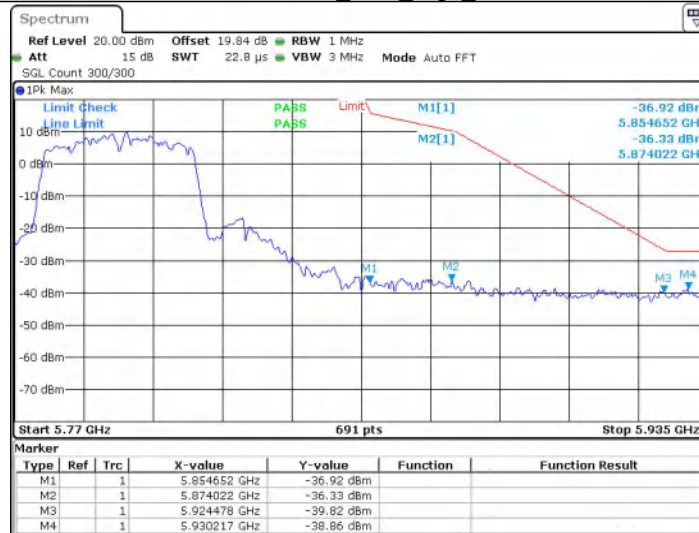
Date: 31.MAR.2026 21:54:07

11AC40SISO_Ant1_Low_5755



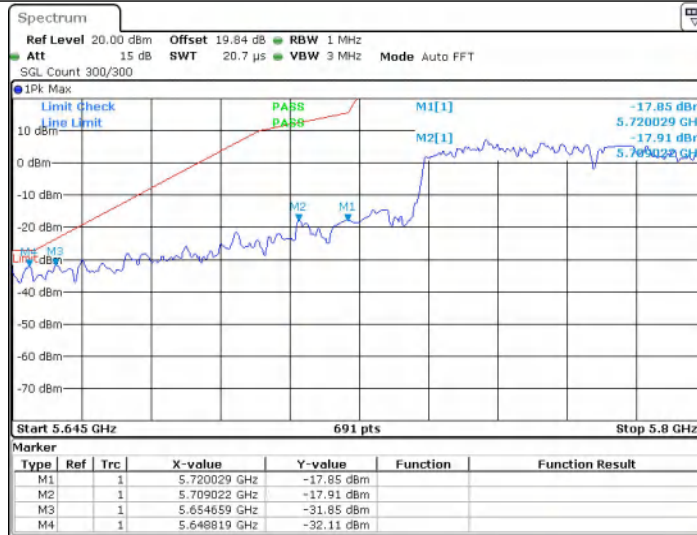
Date: 31.MAR.2026 22:06:57

11AC40SISO_Ant1_High_5795



Date: 31.MAR.2026 22:10:33

11AC80SISO_Ant1_Low_5775



Date: 31.MAR.2026 22:18:41

11AC80SISO_Ant1_High_5775



Date: 31.MAR.2026 22:18:55

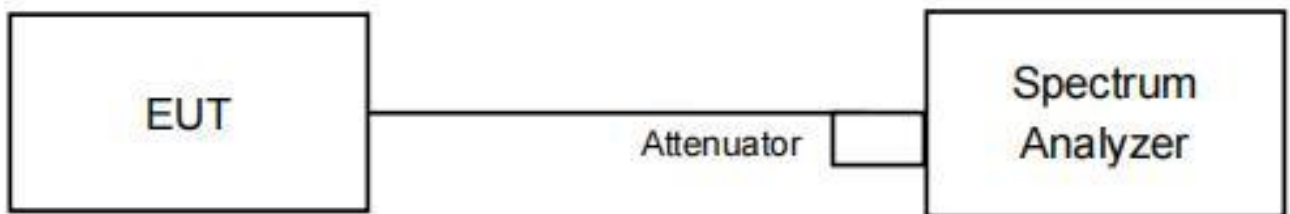
Appendix E): Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)

Test Method: ANSI C63.10 (2020) Section 6.8

Limit: The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

Test Setup Diagram



Measurement Data

Frequency Stability Versus Temp.			
Operating Frequency: 5240 MHz			
Temp	Voltage	Measured Frequency	Limit
(°C)		(MHz)	(MHz)
50	VN	5240.25	5150-5250
40		5240.21	5150-5250
30		5240.14	5150-5250
20		5240.47	5150-5250
10		5240.85	5150-5250
0		5240.44	5150-5250
-10		5240.53	5150-5250
-30		5240.33	5150-5250

Frequency Stability Versus Temp.			
Operating Frequency: 5210 MHz			
Temp.	Voltage	Measured Frequency	Limit
		(MHz)	(MHz)
TN	VL	5210.14	5150-5250
	VN	5210.45	5150-5250
	VH	5210.31	5150-5250

Note: All the modulation and channels had been tested, but only the worst data recorded in the report.

Appendix F): Antenna Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.407(a)(1) (2) requirement:

The conducted output power limit specified in paragraph (a) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (a) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power and the peak power spectral density shall be reduced by the by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is FPC antenna.

The connection/connection type between the antenna to the EUT's antenna port is:
unique coupling.

This is either permanently attachment or a unique coupling that satisfies the requirement.

Appendix G): Operation in the absence of information to the transmit

15.407(c) requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

Operation in the absence of information to the transmit

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission. (manufacturer declare)

Appendix H): AC Power Line Conducted Emission

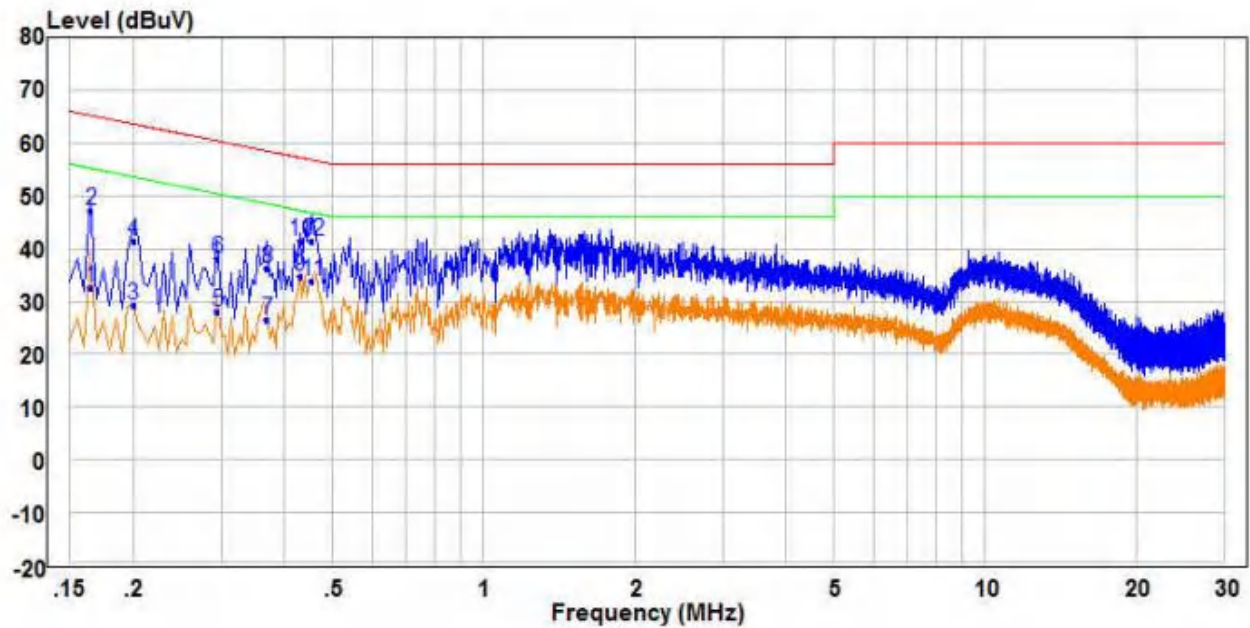
Test Procedure:	Test frequency range :150KHz-30MHz 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.															
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr> <tr> <th>Quasi-peak</th><th>Average</th></tr> </thead> <tbody> <tr> <td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr> <tr> <td>0.5-5</td><td>56</td><td>46</td></tr> <tr> <td>5-30</td><td>60</td><td>50</td></tr> </tbody> </table> * The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE : The lower limit is applicable at the transition frequency		Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)															
	Quasi-peak	Average														
0.15-0.5	66 to 56*	56 to 46*														
0.5-5	56	46														
5-30	60	50														

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

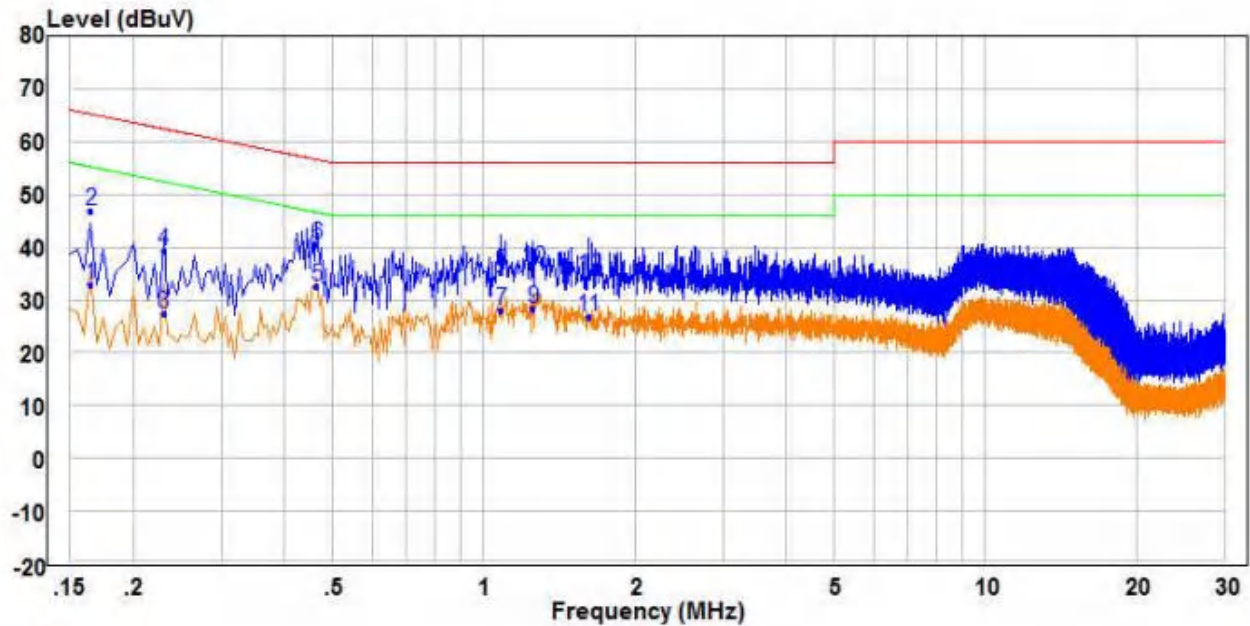
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.165	23.03	9.67	32.70	55.21	-22.51	Average	Line
2	0.165	37.52	9.67	47.19	65.21	-18.02	QP	Line
3	0.200	19.58	9.61	29.19	53.61	-24.42	Average	Line
4	0.200	31.87	9.61	41.48	63.61	-22.13	QP	Line
5	0.295	18.54	9.50	28.04	50.38	-22.34	Average	Line
6	0.295	28.46	9.50	37.96	60.38	-22.42	QP	Line
7	0.370	16.95	9.58	26.53	48.50	-21.97	Average	Line
8	0.370	26.64	9.58	36.22	58.50	-22.28	QP	Line
9 PP	0.430	24.98	9.64	34.62	47.25	-12.63	Average	Line
10	0.430	31.92	9.64	41.56	57.25	-15.69	QP	Line
11	0.455	24.06	9.66	33.72	46.78	-13.06	Average	Line
12 QP	0.455	31.70	9.66	41.36	56.78	-15.42	QP	Line

Neutral line:



	Freq	Read	Factor	Level	Limit	Over	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.165	23.31	9.67	32.98	55.21	-22.23	Average	Neutral
2	0.165	37.17	9.67	46.84	65.21	-18.37	QP	Neutral
3	0.230	17.81	9.56	27.37	52.45	-25.08	Average	Neutral
4	0.230	29.86	9.56	39.42	62.45	-23.03	QP	Neutral
5 PP	0.465	22.89	9.67	32.56	46.60	-14.04	Average	Neutral
6 QP	0.465	30.73	9.67	40.40	56.60	-16.20	QP	Neutral
7	1.085	18.43	9.70	28.13	46.00	-17.87	Average	Neutral
8	1.085	25.72	9.70	35.42	56.00	-20.58	QP	Neutral
9	1.255	18.52	9.71	28.23	46.00	-17.77	Average	Neutral
10	1.255	26.23	9.71	35.94	56.00	-20.06	QP	Neutral
11	1.620	17.05	9.73	26.78	46.00	-19.22	Average	Neutral
12	1.620	24.83	9.73	34.56	56.00	-21.44	QP	Neutral

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. The 6Mbps of rate of 802.11A_5240 is the worst case, only the worst data recorded in the report.

Appendix I): Restricted bands around fundamental frequency (Radiated Emission)

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	Below 1GHz test procedure as below: - The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. - For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel Above 1GHz test procedure as below: - Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre). - Test the EUT in the lowest channel , the Highest channel - The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. - Repeat above procedures until all frequencies measured was complete.				
Limit:	Frequency	Limit (dBμV/m @3cm)	Remark		
	30MHz-88MHz	40.0	Quasi-peak Value		
	88MHz-216MHz	43.5	Quasi-peak Value		
	216MHz-960MHz	46.0	Quasi-peak Value		
	960MHz-1GHz	54.0	Quasi-peak Value		
	Above 1GHz	54.0	Average Value		
		74.0	Peak Value		

Test plot as follows:

Worse case mode:		802.11a		Test channel:		36			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5150.00	59.24	-3.63	55.61	74	-18.39	peak	H	1.5	313
5150.00	44.88	-3.63	41.25	54	-12.75	AVG	H	1.5	329
5150.00	59.69	-3.63	56.06	74	-17.94	peak	V	1.5	121
5150.00	46.96	-3.63	43.33	54	-10.67	AVG	V	1.5	323

Worse case mode:		802.11a		Test channel:		48			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5350.00	59.17	-3.59	55.58	74	-18.42	peak	H	1.5	36
5350.00	44.15	-3.59	40.56	54	-13.44	AVG	H	1.5	89
5350.00	59.34	-3.59	55.75	74	-18.25	peak	V	1.5	319
5350.00	46.24	-3.59	42.65	54	-11.35	AVG	V	1.5	141

Worse case mode:		802.11a		Test channel:		149			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5470.00	58.05	-3.44	54.61	74	-19.39	peak	H	1.5	27
5470.00	44.12	-3.44	40.68	54	-13.32	AVG	H	1.5	11
5470.00	57.96	-3.44	54.52	74	-19.48	peak	V	1.5	164
5470.00	45.65	-3.44	42.21	54	-11.79	AVG	V	1.5	294

Worse case mode:		802.11a		Test channel:		165			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5850.00	58.59	-3.42	55.17	74	-18.83	peak	H	1.5	268
5850.00	44.40	-3.42	40.98	54	-13.02	AVG	H	1.5	111
5850.00	60.06	-3.42	56.64	74	-17.36	peak	V	1.5	329
5850.00	46.27	-3.42	42.85	54	-11.15	AVG	V	1.5	270

Worse case mode:		802.11n(HT20)		Test channel:		36			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5150.00	58.97	-3.63	55.34	74	-18.66	peak	H	1.5	47
5150.00	44.06	-3.63	40.43	54	-13.57	AVG	H	1.5	353
5150.00	59.27	-3.63	55.64	74	-18.36	peak	V	1.5	224
5150.00	46.76	-3.63	43.13	54	-10.87	AVG	V	1.5	207

Worse case mode:		802.11n(HT20)		Test channel:		48			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5350.00	59.16	-3.59	55.57	74	-18.43	peak	H	1.5	52
5350.00	44.25	-3.59	40.66	54	-13.34	AVG	H	1.5	199
5350.00	60.17	-3.59	56.58	74	-17.42	peak	V	1.5	92
5350.00	46.51	-3.59	42.92	54	-11.08	AVG	V	1.5	221

Worse case mode:		802.11n(HT20)		Test channel:		149			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5470.00	58.23	-3.44	54.79	74	-19.21	peak	H	1.5	222
5470.00	44.26	-3.44	40.82	54	-13.18	AVG	H	1.5	112
5470.00	58.20	-3.44	54.76	74	-19.24	peak	V	1.5	298
5470.00	46.35	-3.44	42.91	54	-11.09	AVG	V	1.5	337

Worse case mode:		802.11n(HT20)		Test channel:		165			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5850.00	58.66	-3.42	55.24	74	-18.76	peak	H	1.5	192
5850.00	44.55	-3.42	41.13	54	-12.87	AVG	H	1.5	340
5850.00	59.85	-3.42	56.43	74	-17.57	peak	V	1.5	76
5850.00	46.47	-3.42	43.05	54	-10.95	AVG	V	1.5	285

Worse case mode:		802.11n(HT40)		Test channel:		38			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5150.00	58.67	-3.63	55.04	74	-18.96	peak	H	1.5	0
5150.00	44.54	-3.63	40.91	54	-13.09	AVG	H	1.5	242
5150.00	60.22	-3.63	56.59	74	-17.41	peak	V	1.5	233
5150.00	46.63	-3.63	43.00	54	-11.00	AVG	V	1.5	210

Worse case mode:		802.11n(HT40)		Test channel:		48			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5350.00	59.21	-3.59	55.62	74	-18.38	peak	H	1.5	43
5350.00	44.44	-3.59	40.85	54	-13.15	AVG	H	1.5	319
5350.00	59.89	-3.59	56.30	74	-17.70	peak	V	1.5	284
5350.00	46.17	-3.59	42.58	54	-11.42	AVG	V	1.5	13

Worse case mode:		802.11n(HT40)		Test channel:		149			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5470.00	57.49	-3.44	54.05	74	-19.95	peak	H	1.5	201
5470.00	43.49	-3.44	40.05	54	-13.95	AVG	H	1.5	167
5470.00	57.87	-3.44	54.43	74	-19.57	peak	V	1.5	297
5470.00	46.03	-3.44	42.59	54	-11.41	AVG	V	1.5	351

Worse case mode:		802.11n(HT40)		Test channel:		159			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5850.00	58.79	-3.42	55.37	74	-18.63	peak	H	1.5	64
5850.00	44.39	-3.42	40.97	54	-13.03	AVG	H	1.5	295
5850.00	60.00	-3.42	56.58	74	-17.42	peak	V	1.5	147
5850.00	46.22	-3.42	42.80	54	-11.20	AVG	V	1.5	130

Worse case mode:		802.11ac(VHT20)		Test channel:		36			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5150.00	58.52	-3.63	54.89	74	-19.11	peak	H	1.5	133
5150.00	44.16	-3.63	40.53	54	-13.47	AVG	H	1.5	22
5150.00	60.12	-3.63	56.49	74	-17.51	peak	V	1.5	138
5150.00	46.57	-3.63	42.94	54	-11.06	AVG	V	1.5	258

Worse case mode:		802.11ac(VHT20)		Test channel:		48			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5350.00	59.16	-3.59	55.57	74	-18.43	peak	H	1.5	100
5350.00	44.96	-3.59	41.37	54	-12.63	AVG	H	1.5	249
5350.00	59.61	-3.59	56.02	74	-17.98	peak	V	1.5	8
5350.00	46.24	-3.59	42.65	54	-11.35	AVG	V	1.5	209

Worse case mode:		802.11ac(VHT20)		Test channel:		149			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5470.00	57.69	-3.44	54.25	74	-19.75	peak	H	1.5	105
5470.00	43.92	-3.44	40.48	54	-13.52	AVG	H	1.5	0
5470.00	58.00	-3.44	54.56	74	-19.44	peak	V	1.5	303
5470.00	46.04	-3.44	42.60	54	-11.40	AVG	V	1.5	111

Worse case mode:		802.11ac(VHT20)		Test channel:		165			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5850.00	58.56	-3.42	55.14	74	-18.86	peak	H	1.5	55
5850.00	44.96	-3.42	41.54	54	-12.46	AVG	H	1.5	101
5850.00	59.89	-3.42	56.47	74	-17.53	peak	V	1.5	57
5850.00	46.37	-3.42	42.95	54	-11.05	AVG	V	1.5	255

Worse case mode:		802.11ac(VHT40)		Test channel:		38			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5150.00	58.60	-3.63	54.97	74	-19.03	peak	H	1.5	122
5150.00	44.88	-3.63	41.25	54	-12.75	AVG	H	1.5	36
5150.00	59.87	-3.63	56.24	74	-17.76	peak	V	1.5	92
5150.00	46.20	-3.63	42.57	54	-11.43	AVG	V	1.5	270

Worse case mode:		802.11ac(VHT40)		Test channel:		48			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5350.00	58.55	-3.59	54.96	74	-19.04	peak	H	1.5	39
5350.00	44.89	-3.59	41.30	54	-12.70	AVG	H	1.5	141
5350.00	59.66	-3.59	56.07	74	-17.93	peak	V	1.5	157
5350.00	46.05	-3.59	42.46	54	-11.54	AVG	V	1.5	23

Worse case mode:		802.11ac(VHT40)		Test channel:		149			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5470.00	57.70	-3.44	54.26	74	-19.74	peak	H	1.5	283
5470.00	44.31	-3.44	40.87	54	-13.13	AVG	H	1.5	177
5470.00	58.17	-3.44	54.73	74	-19.27	peak	V	1.5	107
5470.00	46.14	-3.44	42.70	54	-11.30	AVG	V	1.5	159

Worse case mode:		802.11ac(VHT40)		Test channel:		159			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)			(m)	(Degree)
5850.00	58.62	-3.42	55.20	74	-18.80	peak	H	1.5	311
5850.00	44.50	-3.42	41.08	54	-12.92	AVG	H	1.5	159
5850.00	59.35	-3.42	55.93	74	-18.07	peak	V	1.5	344
5850.00	46.40	-3.42	42.98	54	-11.02	AVG	V	1.5	91

Worse case mode:		802.11ac(VHT80)		Test channel:		42			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5150.00	58.25	-3.63	54.62	74	-19.38	peak	H	1.5	21
5150.00	44.65	-3.63	41.02	54	-12.98	AVG	H	1.5	78
5150.00	59.36	-3.63	55.73	74	-18.27	peak	V	1.5	254
5150.00	46.94	-3.63	43.31	54	-10.69	AVG	V	1.5	89

Worse case mode:		802.11ac(VHT80)		Test channel:		42			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5350.00	58.38	-3.59	54.79	74	-19.21	peak	H	1.5	299
5350.00	44.70	-3.59	41.11	54	-12.89	AVG	H	1.5	2
5350.00	59.91	-3.59	56.32	74	-17.68	peak	V	1.5	324
5350.00	46.97	-3.59	43.38	54	-10.62	AVG	V	1.5	44

Worse case mode:		802.11ac(VHT80)		Test channel:		155			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5470.00	58.19	-3.44	54.75	74	-19.25	peak	H	1.5	304
5470.00	43.95	-3.44	40.51	54	-13.49	AVG	H	1.5	251
5470.00	57.52	-3.44	54.08	74	-19.92	peak	V	1.5	203
5470.00	45.88	-3.44	42.44	54	-11.56	AVG	V	1.5	194

Worse case mode:		802.11ac(VHT80)		Test channel:		155			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
5850.00	58.48	-3.42	55.06	74	-18.94	peak	H	1.5	233
5850.00	44.76	-3.42	41.34	54	-12.66	AVG	H	1.5	259
5850.00	59.34	-3.42	55.92	74	-18.08	peak	V	1.5	48
5850.00	46.42	-3.42	43.00	54	-11.00	AVG	V	1.5	269

Note:

1) Through Pre-scan transmitting mode with all kind of modulation and data rate, Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor

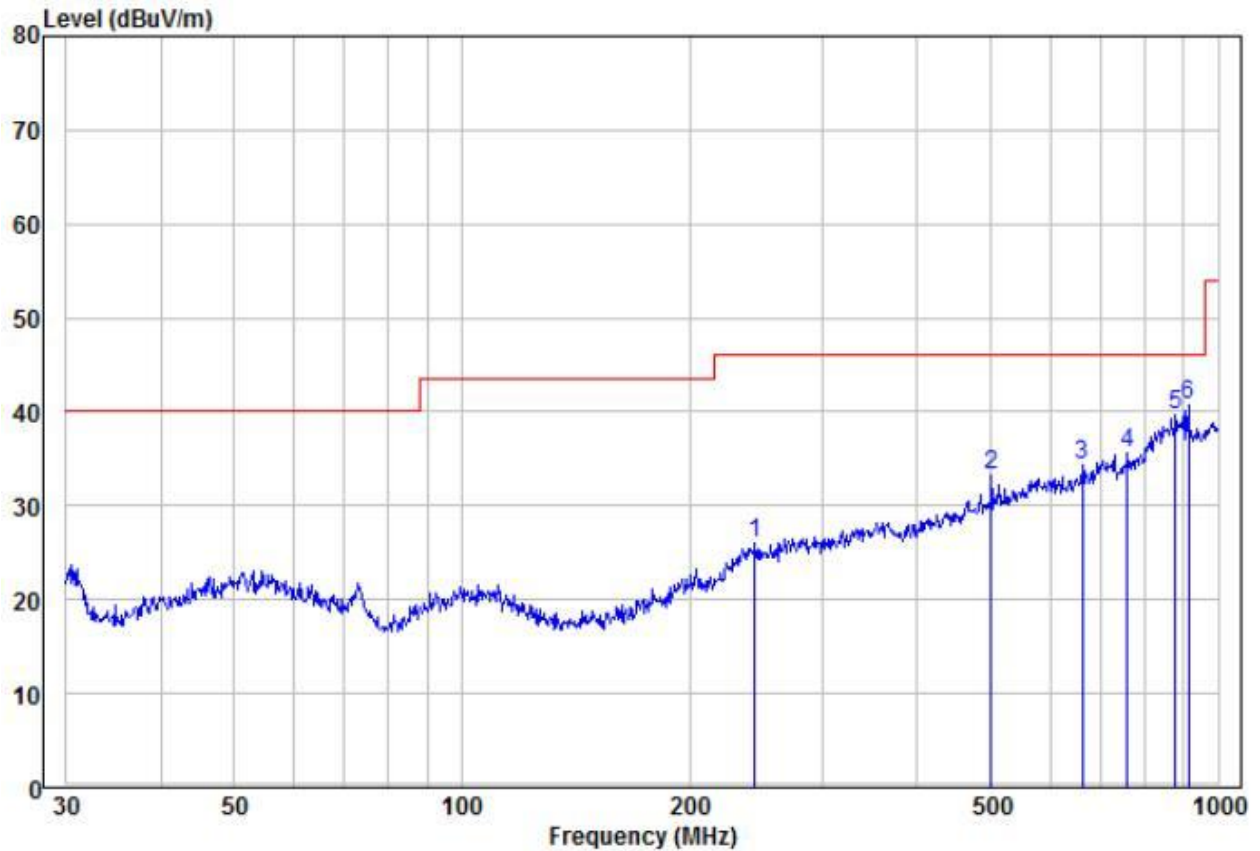
Appendix J): Radiated Spurious Emissions

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:					
Below 1GHz test procedure as below: a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Above 1GHz test procedure as below: g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre) h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. j. Repeat above procedures until all frequencies measured was complete.					
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBµV/cm)	Remark	Measurement distance (cm)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				
Test result: PASS					

Test Data:

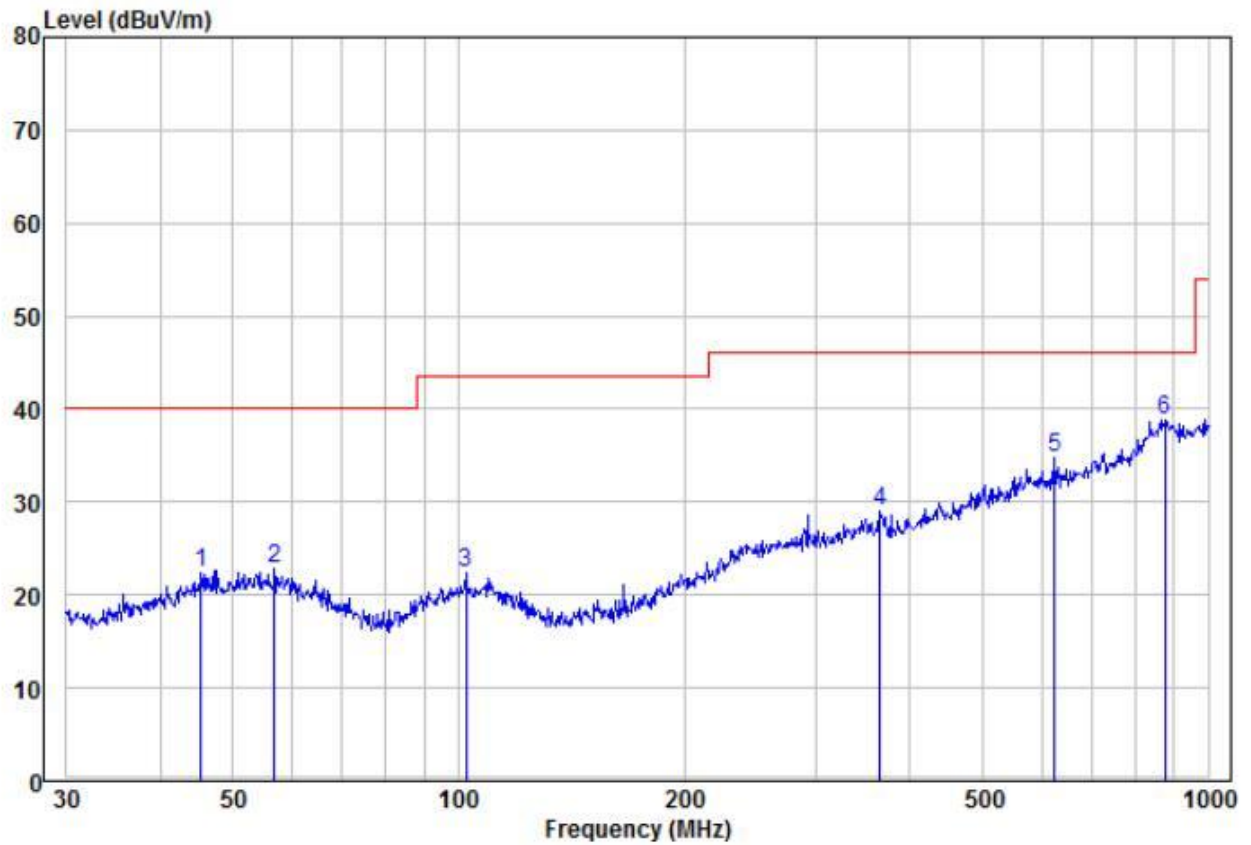
Radiated Emission below 1GHz

30MHz~1GHz		
Test mode:	Transmitting (802.11a 36CH)	Vertical



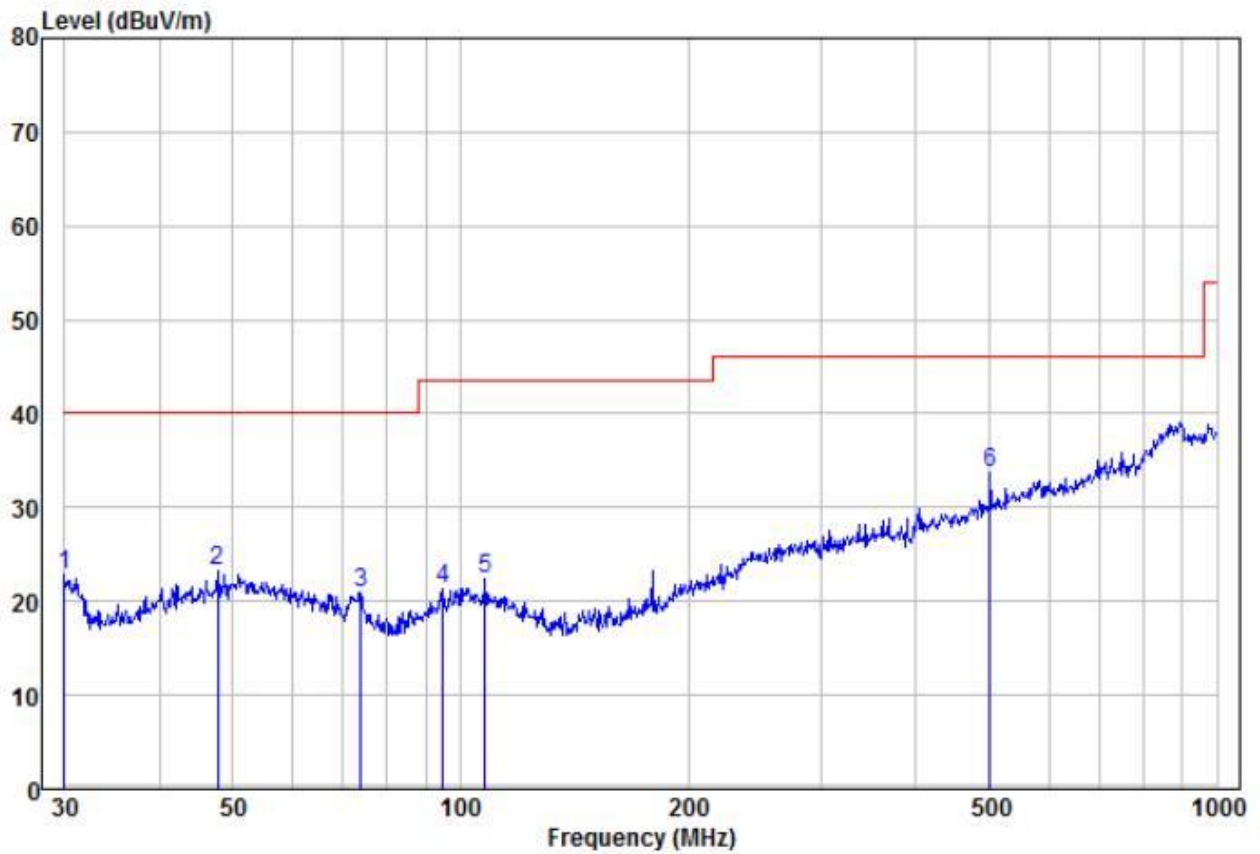
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	244.23	10.59	15.53	26.12	46.00	-19.88	Peak	VERTICAL	100	12
2	501.18	12.44	20.94	33.38	46.00	-12.62	Peak	VERTICAL	100	50
3	661.15	11.37	22.92	34.29	46.00	-11.71	Peak	VERTICAL	100	89
4	758.04	10.71	24.93	35.64	46.00	-10.36	Peak	VERTICAL	100	130
5	878.32	10.82	28.94	39.76	46.00	-6.24	Peak	VERTICAL	100	291
6 pp	912.86	12.86	27.85	40.71	46.00	-5.29	Peak	VERTICAL	100	339

Test mode:	Transmitting (802.11a 36CH)	Horizontal
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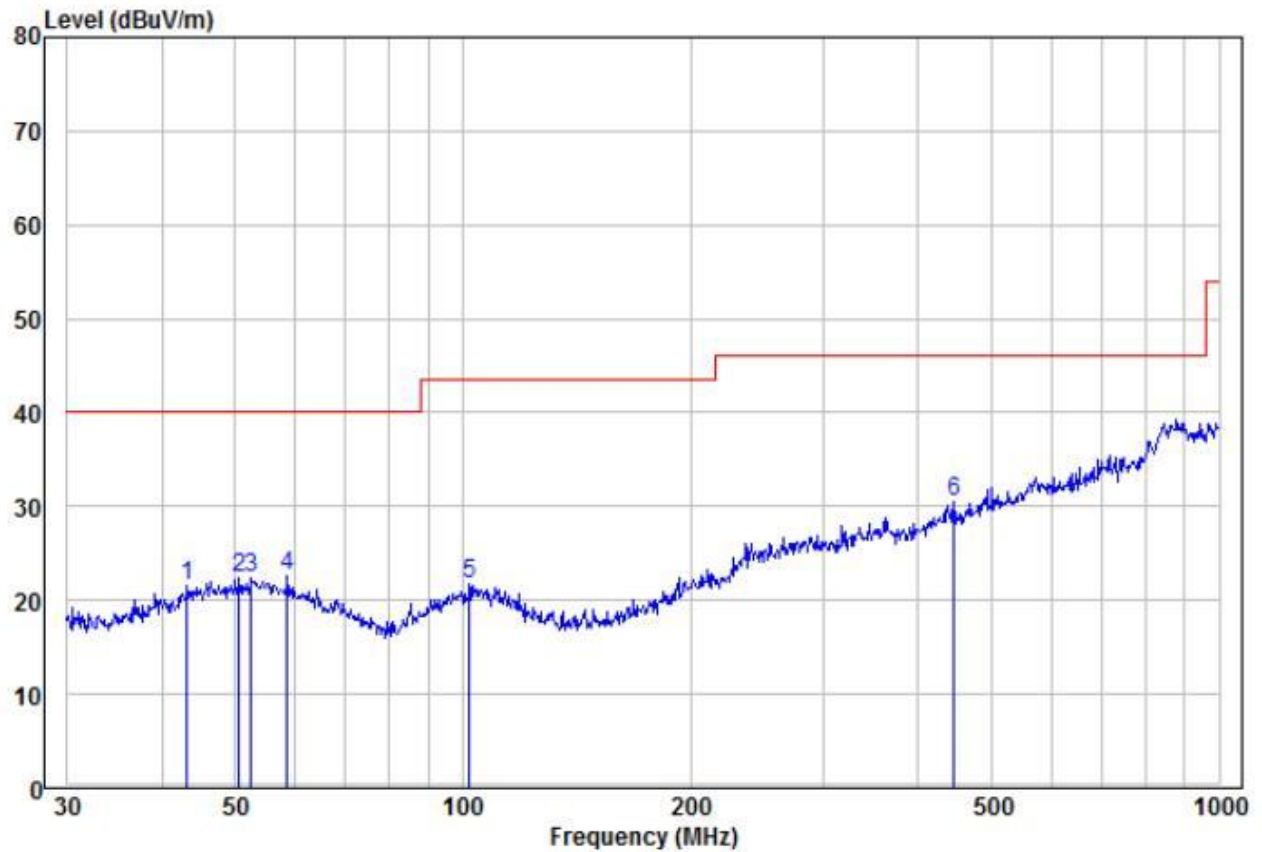
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	45.38	10.31	12.10	22.41	40.00	-17.59	Peak	HORIZONTAL	100	36
2	56.79	10.18	12.55	22.73	40.00	-17.27	Peak	HORIZONTAL	100	70
3	102.36	10.50	11.88	22.38	43.50	-21.12	Peak	HORIZONTAL	100	196
4	365.54	10.48	18.53	29.01	46.00	-16.99	Peak	HORIZONTAL	100	211
5	625.08	12.22	22.56	34.78	46.00	-11.22	Peak	HORIZONTAL	100	247
6 pp	875.25	9.98	28.88	38.86	46.00	-7.14	Peak	HORIZONTAL	100	352

30MHz~1GHz		
Test mode:	Transmitting (802.11a 149CH)	Vertical



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	30.00	14.66	8.11	22.77	40.00	-17.23	Peak	VERTICAL	100	41
2	47.83	10.98	12.35	23.33	40.00	-16.67	Peak	VERTICAL	100	86
3	73.88	11.95	8.89	20.84	40.00	-19.16	Peak	VERTICAL	100	82
4	94.76	10.34	11.00	21.34	43.50	-22.16	Peak	VERTICAL	100	149
5	107.89	10.49	11.85	22.34	43.50	-21.16	Peak	VERTICAL	100	204
6 pp	501.18	12.72	20.94	33.66	46.00	-12.34	Peak	VERTICAL	100	301

Test mode:	Transmitting (802.11a 149CH)	Horizontal
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	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase	APos	TPos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB			cm	deg
1	43.20	10.01	11.56	21.57	40.00	-18.43	Peak	HORIZONTAL	100	46
2	50.59	9.73	12.61	22.34	40.00	-17.66	Peak	HORIZONTAL	100	61
3	52.58	9.76	12.71	22.47	40.00	-17.53	Peak	HORIZONTAL	100	108
4	58.61	10.33	12.28	22.61	40.00	-17.39	Peak	HORIZONTAL	100	155
5	102.00	9.99	11.87	21.86	43.50	-21.64	Peak	HORIZONTAL	100	241
6 pp	446.41	11.08	19.34	30.42	46.00	-15.58	Peak	HORIZONTAL	100	308

Transmitter Emission above 1GHz

Test mode:	802.11a(6Mbps)			Test channel:		36 CH			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
10360	53.50	2.26	55.76	86.2	-30.44	peak	H	1.5	41
10360	37.77	2.26	40.03	54	-13.97	AVG	H	1.5	203
15540	50.82	3.75	54.57	86.2	-31.63	peak	H	1.5	205
15540	38.10	3.75	41.85	54	-12.15	AVG	H	1.5	136
10360	55.78	2.26	58.04	86.2	-28.16	peak	V	1.5	155
10360	39.11	2.26	41.37	54	-12.63	AVG	V	1.5	131
15540	50.35	3.75	54.10	86.2	-32.10	peak	V	1.5	298
15540	36.47	3.75	40.22	54	-13.78	AVG	V	1.5	157

Test mode:	802.11a(6Mbps)			Test channel:		48 CH			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
10480	51.86	2.31	54.17	86.2	-32.03	peak	H	1.5	326
10480	36.86	2.31	39.17	54	-14.83	AVG	H	1.5	220
15720	49.77	3.79	53.56	86.2	-32.64	peak	H	1.5	297
15720	36.32	3.79	40.11	54	-13.89	AVG	H	1.5	289
10480	52.46	2.31	54.77	86.2	-31.43	peak	V	1.5	0
10480	37.49	2.31	39.80	54	-14.20	AVG	V	1.5	100
15720	49.44	3.79	53.23	86.2	-32.97	peak	V	1.5	330
15720	35.37	3.79	39.16	54	-14.84	AVG	V	1.5	191

Test mode:	802.11a(6Mbps)			Test channel:		149			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
11490	51.34	2.54	53.88	86.2	-32.32	peak	H	1.5	335
11490	37.32	2.54	39.86	54	-14.14	AVG	H	1.5	120
17235	49.57	3.94	53.51	86.2	-32.69	peak	H	1.5	30
17235	36.60	3.94	40.54	54	-13.46	AVG	H	1.5	50
11490	53.29	2.54	55.83	86.2	-30.37	peak	V	1.5	16
11490	38.72	2.54	41.26	54	-12.74	AVG	V	1.5	203
17235	50.39	3.94	54.33	86.2	-31.87	peak	V	1.5	173
17235	36.18	3.94	40.12	54	-13.88	AVG	V	1.5	118

Test mode:	802.11a(6Mbps)			Test channel:		165			
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detect or Type	Ant. Pol.	Antenna Height	Table Angle
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)		H/V	(m)	(Degree)
11650	52.23	2.58	54.81	86.2	-31.39	peak	H	1.5	140
11650	38.15	2.58	40.73	54	-13.27	AVG	H	1.5	95
17475	50.07	4.02	54.09	86.2	-32.11	peak	H	1.5	173
17475	37.61	4.02	41.63	54	-12.37	AVG	H	1.5	296
11650	54.51	2.58	57.09	86.2	-29.11	peak	V	1.5	211
11650	37.23	2.58	39.81	54	-14.19	AVG	V	1.5	15
17475	51.23	4.02	55.25	86.2	-30.95	peak	V	1.5	15
17475	36.50	4.02	40.52	54	-13.48	AVG	V	1.5	293

Remark:

- 1) The 802.11a 6Mbps of rate is the worst case, only the worst data recorded in the report.
- 2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 3) Scan from 9kHz to 40GHz, The disturbance above 18GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

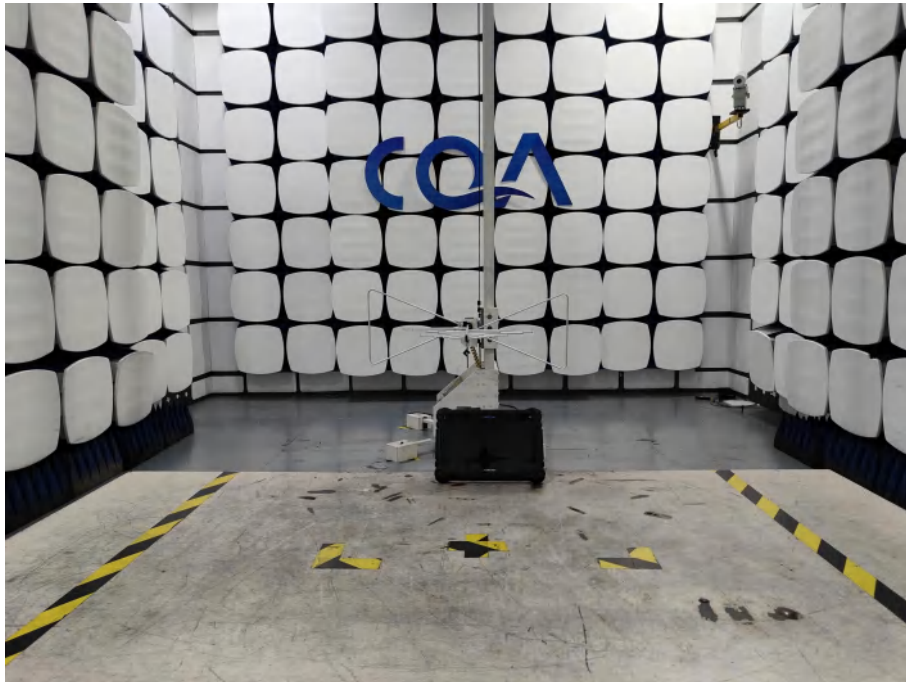
8 Photographs - EUT Test Setup

8.1 Radiated Spurious Emission

9kHz~30MHz:



30MHz~1GHz:



Above 1GHz:



8.2 Conducted Emission



8.3 RF Conducted measurement



9 Photographs - EUT Constructional Details

Refer to PHOTOGRAPHS OF EUT for CQASZ20260100206E-01.

*** END OF REPORT ***