ETSI EN 301 893 V2.2.1 (2024-11)

TEST REPORT

For

Renesas Design Korea Inc.

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Tested Model: RRQ61001-009
Multiple Models: RRQ61001-010

Report Type:	**Product Type:**
Original Report	RRQ61001 Module

Report Number:	2602P42655E-22C
Report Date:	2026/3/11
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2602P42655E-22C	Original Report	2026/3/11

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name:	RRQ61001 Module
EUT Model:	RRQ61001-009
Multiple Models:	RRQ61001-010
Model Difference:	Refer to Dos
Rated Input Voltage:	1.8~3.6Vdc (Typical:3.3Vdc)
Serial Number:	3GD9-1 (For Radiated Test) 3GD9-2 (For RF Conducted Test)
EUT Received Date:	2026/1/20
EUT Received Status:	Good

Technical Specification

Operation Frequency Range (MHz):		802.11 a/n20/ac20/ax20: 5180-5240, 5260-5320, 5500-5700
RF Output Power (EIRP) (dBm):		5.2G: 21.154 5.3G: 21.356 5.6G: 20.468
Number of Chains	**Transmit:**	1
	Receive:	1
Antenna Gain (dBi)_5.2G▲:		4.4
Antenna Gain (dBi)_5.3G▲:		4.4
Antenna Gain (dBi)_5.6G▲:		4.4
Modulation Type:		OFDM, OFDMA

Note:
1.The manufacturer declares that the 802.11 ax HE mode only supports full RU and doesn't support partial RU.
2. The manufacturer declares that the EUT is a secondary device (client device) and without radar detection but with TPC function.

Objective

This report is prepared on behalf of ***Renesas Design Korea Inc.*** in accordance with ETSI EN 301 893 V2.2.1 (2024-11), 5 GHz WAS/RLAN;Harmonised Standard for access to radio spectrum.

The objective is to determine the compliance of EUT with: ETSI EN 301 893 V2.2.1 (2024-11).

Test Methodology

All measurements contained in this report were conducted with ETSI EN 301 893 V2.2.1 (2024-11), 5 GHz WAS/RLAN;Harmonised Standard for access to radio spectrum.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

Measurement Uncertainty

Parameter	F_{lab}	Maximum allow uncertainty
RF Frequency	$\pm 0.076\times10^{-6}$	$\pm 1\times10^{-5}$
RF power conducted	±0.55dB	±1,5dB
RF power radiated	±5.19dB	±6dB
Spurious emissions, conducted	±2.47dB	±3dB
Spurious emissions, radiated	30MHz~1GHz: ±5.12 dB, 1GHz~18GHz: ±5.61 dB	±6dB
Temperature	±1℃	±2℃
Humidity	±5%	±5%
Time	1%	±10%

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

Declarations

The information marked ▲ is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in engineering mode, which was provided by manufacture. The system support 802.11a/n ht20/ac vht20/ax he20.

For 5150~5250 MHz band (W52), 802.11a /n ht20/ac vht20/ax he20 mode was tested with 5180MHz and 5240MHz:

Frequency (MHz)	Frequency (MHz)
5180	5220
5200	5240

For 5250~5350 MHz band (W53), 802.11a /n ht20/ac vht20/ax he20 mode was tested with 5260MHz and 5320MHz:

Frequency (MHz)	Frequency (MHz)
5260	5300
5280	5320

For 5470~5725 MHz band (W56), 802.11a /n ht20/ac vht20/ax he20 mode was tested with 5500MHz and 5700MHz:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	124	5620
104	5520	128	5640
108	5540	132	5660
112	5560	136	5680
116	5580	140	5700
120	5600	/	/

Test condition as below:
NT: Normal Temperature 25℃, LT: Low Temperature -40℃, HT: High Temperature +85℃

Note:
1, For conducted test items, testing was performed connecting to the antenna connectors.
2, The product support TPC function, RF output power with TPC limits applied.

EUT Exercise Software

Software "Tera Term 5▲" was used and the power level was configured as below. The worst-case data rates are determined to be as follows for each mode based upon investigation by measuring the average power and PSD across all data rates, bandwidths, and modulations▲.

Band	Mode	Frequency (MHz)	Data rate (Mbps)	Power level
5150-5250	802.11 a	5180	6 Mbps	13
		5240	6 Mbps	13
	802.11 n20	5180	HT MCS0	13
		5240	HT MCS0	13
	802.11 ac20	5180	VHT MCS0	12
		5240	VHT MCS0	12
	802.11 ax20	5180	HE MCS0	12
		5240	HE MCS0	12
5250-5350	802.11 a	5260	6 Mbps	13
		5320	6 Mbps	12
	802.11 n20	5260	HT MCS0	13
		5320	HT MCS0	12
	802.11 ac20	5260	VHT MCS0	12
		5320	VHT MCS0	12
	802.11 ax20	5260	HE MCS0	12
		5320	HE MCS0	12
5470-5725	802.11 a	5500	6 Mbps	12
		5700	6 Mbps	12
	802.11 n20	5500	HT MCS0	13
		5700	HT MCS0	13
	802.11 ac20	5500	VHT MCS0	12
		5700	VHT MCS0	12
	802.11 ax20	5500	HE MCS0	12
		5700	HE MCS0	12

TPC

Band	Mode	Frequency (MHz)	Data rate (Mbps)	Power level
5250-5350	802.11 a	5260	6 Mbps	6
		5320	6 Mbps	5
	802.11 n20	5260	HT MCS0	6
		5320	HT MCS0	5
	802.11 ac20	5260	VHT MCS0	5
		5320	VHT MCS0	5
	802.11 ax20	5260	HE MCS0	5
		5320	HE MCS0	5
5470-5725	802.11 a	5500	6 Mbps	5
		5700	6 Mbps	5
	802.11 n20	5500	HT MCS0	6
		5700	HT MCS0	6
	802.11 ac20	5500	VHT MCS0	5
		5700	VHT MCS0	5
	802.11 ax20	5500	HE MCS0	5
		5700	HE MCS0	5

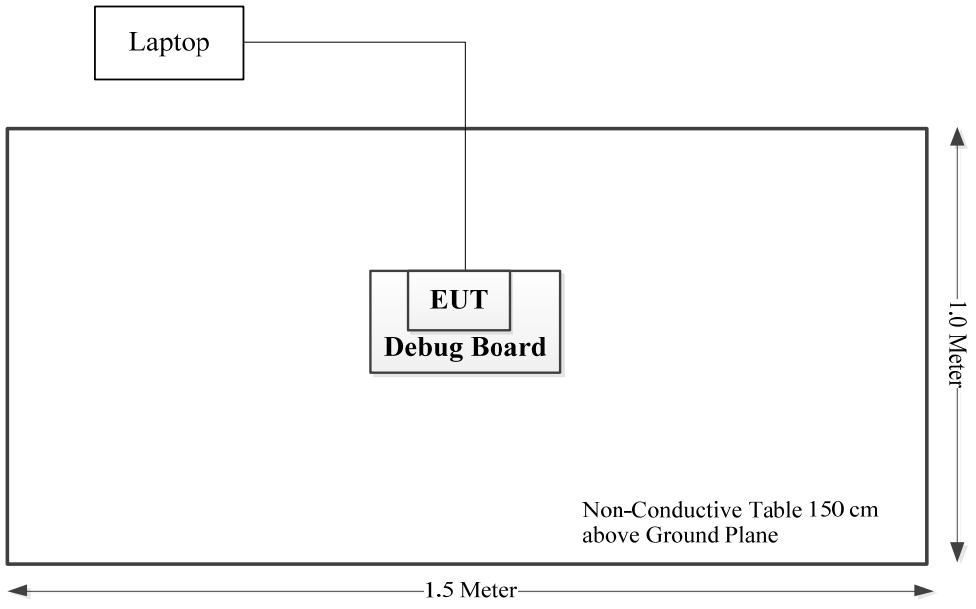
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
unknown	Debug Board	unknown	2YVE-8
Azeyoo	Laptop	AL141U	unknown

Support Cable List and Details

Cable Description	Shielding Cable	Ferrite Core	Length (m)	From Port	To
USB Cable	NO	NO	1.1	Debug Board	Laptop

Block Diagram of Test Setup



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated emissions below 1GHz					
Sunol Sciences	Hybrid Antenna	JB3	A060611-2	2024/4/16	2027/4/15
Narda	Coaxial Attenuator	757C-6dB	34010	2024/4/16	2027/4/15
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-01	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-01	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-1400-01	2025/7/1	2026/6/30
Sonoma	Amplifier	310N	372193	2025/7/30	2026/7/29
R&S	EMI Test Receiver	ESCI	100035	2025/6/25	2026/6/24
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
Micro-Coax	Coaxial Cable	UFA210B	99G1448	2025/9/4	2026/9/3
Agilent	Signal Generator	E8247C	MY43321350	2025/7/28	2026/7/27
Radiated emissions above 1GHz					
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
AH	Horn Antenna	SAS-571	1177	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-02 1304	2023/2/22	2026/2/21
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-03 1304	2023/2/22	2026/2/21
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J -10M	20231117004 #0001	2025/11/17	2026/11/16
Xinhang Macrowave	Coaxial Cable	XH360A-2.92/J-2.92/ J-6M-A	20231208001 #0001	2025/11/14	2026/11/13
Micro-Coax	Coaxial Cable	UFA210B	99G1448	2025/9/4	2026/9/3
Agilent	Signal Generator	E8247C	MY43321350	2025/7/28	2026/7/27
AH	Preamplifier	PAM-0118P	469	2025/4/11	2026/4/10
AH	Preamplifier	PAM-1840VH	191	2025/7/31	2026/7/30
R&S	Spectrum Analyzer	FSV40	101944	2025/8/8	2026/8/7
Decentest	Multiplex Switch Test Control Set & Filter Switch Unit	DT7220SCU & DT7220FSU	DS79902 & DS79905	2025/8/25	2026/8/24
RF conducted					
R&S	Spectrum Analyzer	FSV40	101589	2025/7/28	2026/7/27
JD	Test Software	JD Auto Test System	V1.0	N/A	N/A
JD	Broadband Wireless Access Device Test Control box	DT2400MCU	DS78804	2025/5/23	2026/5/22
R&S	Wideband Radio Communication Tester	CMW500	149216	2025/7/28	2026/7/27
Agilent	MXG Vector Signal Generator	N5182B	MY51350142	2026/1/14	2027/1/13
GLOBAL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2025/08/01	2026/07/31
JD	MPS Multi-channel Power Acquisition Device	DT2400MPS	DS78730	2025/05/23	2026/05/22
RF conducted(Adaptivity)					
Keysight	MXA Signal Analyzer	N9020A	MY48490106	2025/7/29	2026/7/28
Agilent	MXG Vector Signal Generator	N5182A	MY49060274	2025/7/29	2026/7/28
Tonscend	RF Control Unit	JS0806-2	19G8060171	2025/7/29	2026/7/28

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Eastsheep	Coaxial Attenuator	2W-SMA-JK-6G-10dB	F-08-EM509	2025/6/6	2026/6/5
Mini-Circuits	Coaxial DC Block	BLK-18-S+	15542	2025/2/28	2026/2/27

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Environmental Conditions

Test Item:	Radiated emissions (below 1GHz)	Radiated emissions (above 1GHz)	RF conducted	RF conducted (Adaptivity)
Temperature:	23.8 ℃	21.8 ℃	21.7~23.1℃	25.8℃
Relative Humidity:	42.0 %	42.0 %	59~60%	41%
ATM Pressure:	101.9 kPa	101.5 kPa	101.4~101.5kPa	101.5kPa
Tester:	Lancer Zhang	Willem Qiu, Leo Xiao	Cooper Zhou	Harper Shen
Test Date:	2026/2/2	2026/2/10	2026/1/26~2026/1/27	2026/1/29

SUMMARY OF TEST RESULTS

SN	Rule and Clause	Description of Test	Test Result
1	EN 301 893 Clause 4.2.1	Nominal centre frequency	Compliant
2	EN 301 893 Clause 4.2.2	Nominal channel bandwidth and occupied bandwidth	Compliant
3	EN 301 893 Clause 4.2.3	RF output power	Compliant
		Power Spectral Density (PSD)	Compliant
4	EN 301 893 Clause 4.2.4.1	Transmitter unwanted emissions outside the transmitter's operating bands	Compliant
5	EN 301 893 Clause 4.2.4.2	Transmitter unwanted emissions within the transmitter's operating bands	Compliant
6	EN 301 893 Clause 4.2.5	Receiver spurious emissions	Compliant
7	EN 301 893 Clause 4.2.6	DFS	Compliant**
8	EN 301 893 Clause 4.2.7.3.2	Adaptivity (channel access mechanism)	Compliant
9	EN 301 893 Clause 4.2.8	Receiver blocking	Compliant
10	EN 301 893 Clause 4.2.9	Adjacent channel selectivity	Compliant
11	EN 301 893 Clause 4.2.10	User Access Restrictions (UAR)	Compliant*
12	EN 301 893 Clause B.2.2.11	Country determination capability	Not applicable

Note:
Compliant*: Please refer to the product information declared by the manufacturer.
Compliant**: Please refer to DFS report.

1 –NOMINAL CENTRE FREQUENCY

Definition

The nominal centre frequency is the centre of the channel.

Limit

The nominal centre frequencies (fc) for channels whose nominal channel bandwidth falls partly or completely within sub-band 1, sub-band 2 or sub-band 3 shall be defined by equation (1).

fc = 5 160 MHz + (g × 20 MHz) ± fc_offset, with g integer and $0 \leq g \leq 9$ or $16 \leq g \leq 28$ (1)

Operation on the channel with g = 28 is only permitted where operation in sub-band 4 by RLAN devices is allowed by national frequency usage conditions.

An offset (fc_offset) is permitted for each nominal centre frequency. The offset may be different for each nominal centre frequency, but it shall not be greater than 200 kHz. Where an offset is applied, the nominal centre frequencies used by the equipment shall be noted in the test report (see clause 5.4.1, item a)).

The nominal centre frequency for any given channel shall be maintained within the range of fc ± 0,002 %.

Equipment may have simultaneous transmissions on more than one channel.

Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.2

Test Data

Test Result: *Compliant.*

Band1

Test Condition: NT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5180	5179.99385	-1.19	± 20	Pass

Test Condition: LT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5180	5179.98524	-2.85	± 20	Pass

Test Condition: HT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5180	5179.99863	-0.26	± 20	Pass

Band2

Test Condition: NT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5260	5259.99355	-1.23	± 20	Pass

Test Condition: LT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5260	5259.98962	-1.97	± 20	Pass

Test Condition: HT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5260	5259.99728	-0.52	± 20	Pass

Band3

Test Condition: NT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5500	5499.99295	-1.28	± 20	Pass

Test Condition: LT/NV

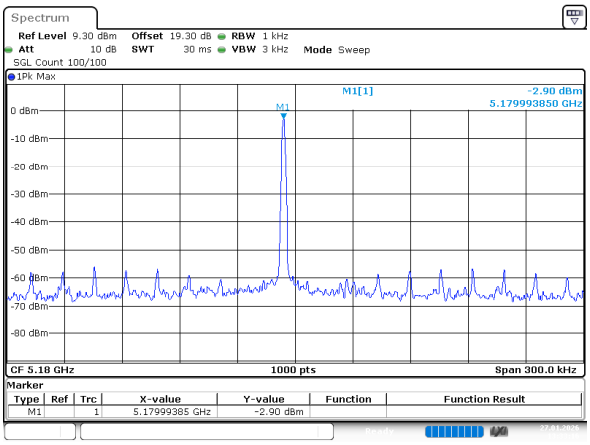
Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5500	5499.98956	-1.90	± 20	Pass

Test Condition: HT/NV

Test Mode	Antenna	Frequency (MHz)	Measure Frequency(MHz)	Result (ppm)	Limit (ppm)	Verdict
802.11a	Chain 0	5500	5499.99564	-0.79	± 20	Pass

Band1, Test Condition: NT/NV

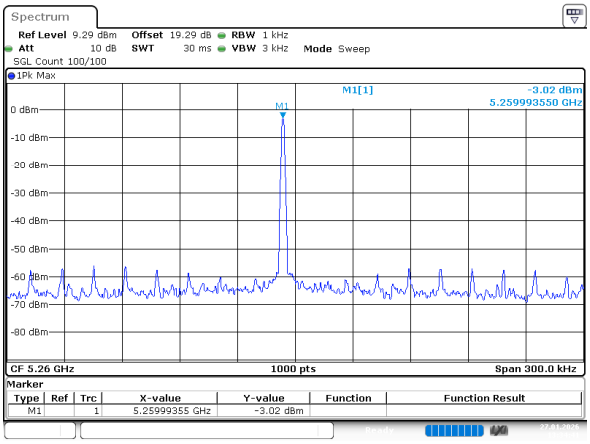
802.11a_5180MHz



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Band2, Test Condition: NT/NV

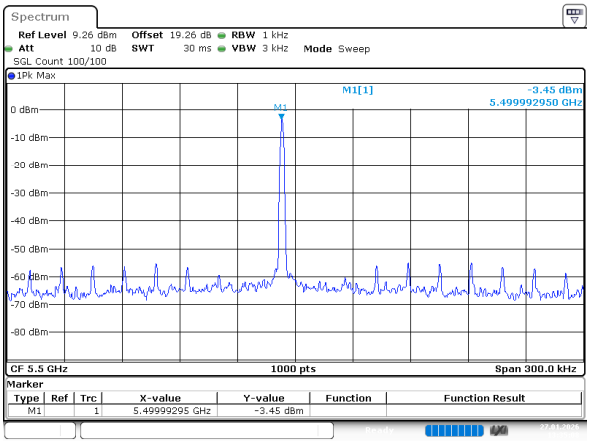
802.11a_5260MHz



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Date: 27.JAN.2026 13:34:42

Band3, Test Condition: NT/NV

802.11a_5500MHz



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 13:35:09

2 –NOMINAL CHANNEL BANDWIDTH AND OCCUPIED BANDWIDTH

Definition

The nominal channel bandwidth is the widest band of frequencies, inclusive of guard bands, assigned to a channel.

The occupied bandwidth is the bandwidth within the nominal channel bandwidth containing 99 % of the power of the signal.

When RLAN devices have simultaneous transmissions in adjacent channels, these transmissions are considered as one signal with a total bandwidth (N) of n times the nominal channel bandwidth of an individual channel where n is the number of adjacent channels. When equipment has simultaneous transmissions in non-adjacent channels, each power envelope is considered separately.

Limit

The nominal channel bandwidth for a single channel shall be 20 MHz.

Alternatively, equipment may implement a lower nominal channel bandwidth with a minimum of 5 MHz, providing it still conforms to the limits defined for nominal centre frequencies (20 MHz raster).

For channels whose nominal channel bandwidth falls partly or completely within sub-band 2 or sub-band 3, the occupied bandwidth shall not be less than 80 % of the nominal channel bandwidth. During a Channel Occupancy Time (COT), equipment may operate temporarily with an occupied bandwidth of less than 80 % of its nominal channel bandwidth. The occupied bandwidth shall not be less than 2 MHz.

For channels whose nominal channel bandwidth falls completely outside sub-band 2 and sub-band 3, the occupied bandwidth shall be equal or less than the nominal channel bandwidth.

In case of smart antenna systems (devices with multiple transmit chains) each of the transmit chains shall meet the requirements specified in this clause.

The occupied bandwidth might change with time/payload.

Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.3

Test Data

Test Result: *Compliant.*

Band1

Test Mode	Antenna	Freq. (MHz)	OCB (MHz)	F_L (MHz)	F_H (MHz)	OCB Limit (MHz)	Verdict
802.11a	Chain 0	5180	17.08	5171.58	5188.66	≤ 20	Pass
802.11n20	Chain 0	5180	17.76	5171.14	5188.90	≤ 20	Pass
802.11ac20	Chain 0	5180	17.68	5171.14	5188.82	≤ 20	Pass
802.11ax20_RU_Full	Chain 0	5180	18.84	5170.58	5189.42	≤ 20	Pass

Band2

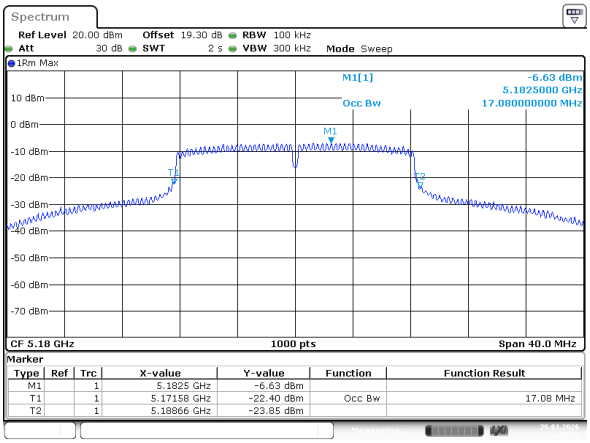
Test Mode	Antenna	Freq. (MHz)	OCB (MHz)	F_L (MHz)	F_H (MHz)	OCB Limit (MHz)	Verdict
802.11a	Chain 0	5260	17.08	5251.50	5268.58	16 to 20	Pass
802.11n20	Chain 0	5260	17.80	5251.10	5268.90	16 to 20	Pass
802.11ac20	Chain 0	5260	17.68	5251.14	5268.82	16 to 20	Pass
802.11ax20_RU_Full	Chain 0	5260	18.88	5250.54	5269.42	16 to 20	Pass

Band3

Test Mode	Antenna	Freq. (MHz)	OCB (MHz)	F_L (MHz)	F_H (MHz)	OCB Limit (MHz)	Verdict
802.11a	Chain 0	5500	16.52	5491.74	5508.26	16 to 20	Pass
802.11n20	Chain 0	5500	17.80	5491.10	5508.90	16 to 20	Pass
802.11ac20	Chain 0	5500	17.68	5491.14	5508.82	16 to 20	Pass
802.11ax20_RU_Full	Chain 0	5500	18.88	5490.54	5509.42	16 to 20	Pass

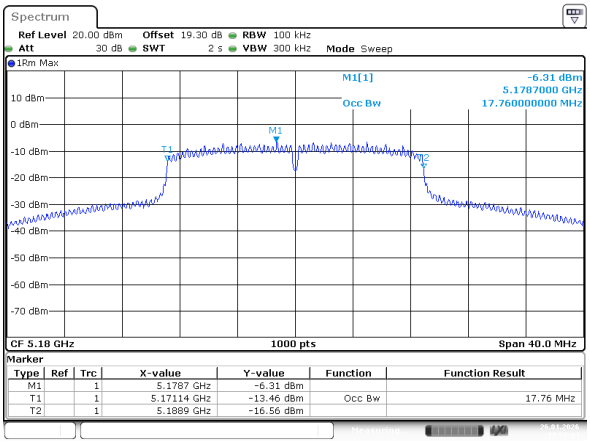
Band1, Test Condition: Normal

802.11a_5180MHz



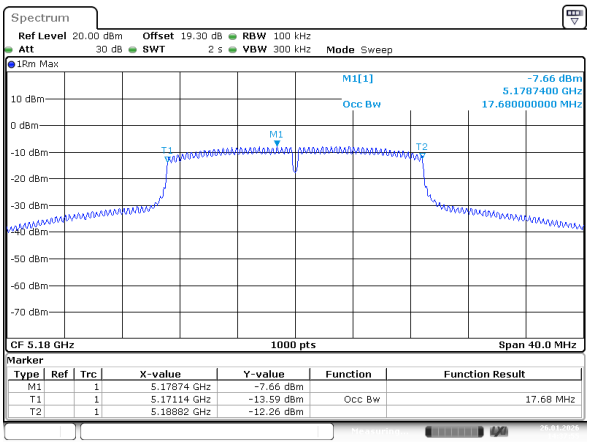
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Date: 26.JAN.2026 13:47:54

802.11n20_5180MHz



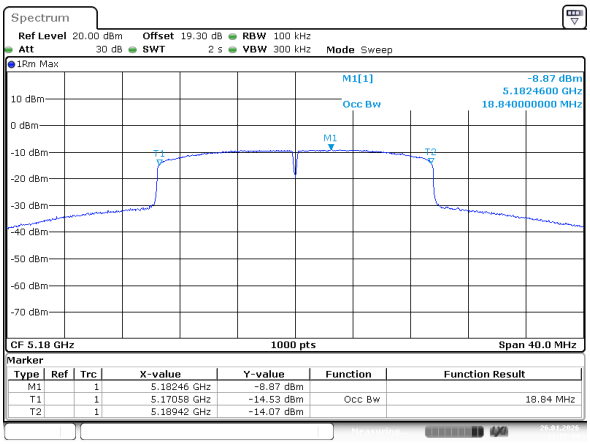
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802.11ac20_5180MHz



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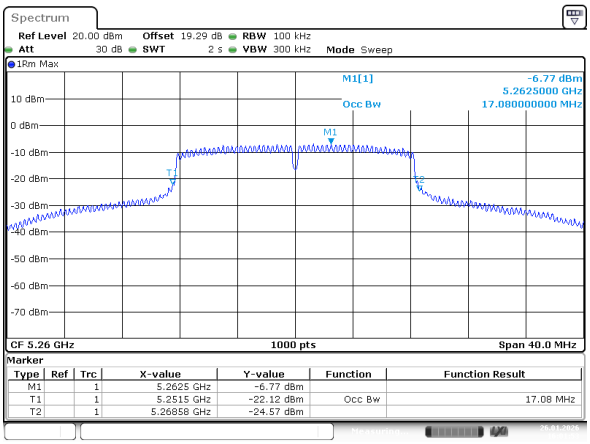
802.11ax20_5180MHz_RU_Full



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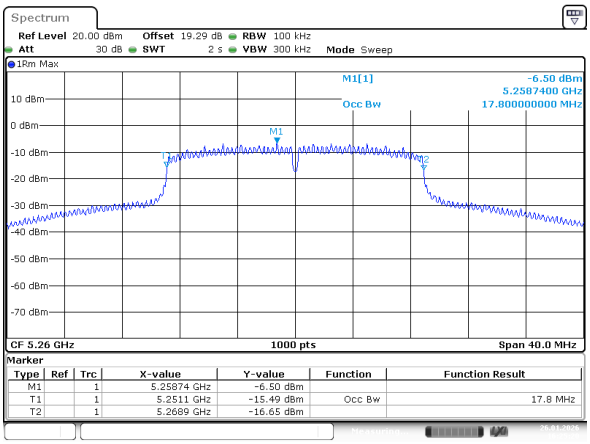
Band2, Test Condition: Normal

802.11a_5260MHz



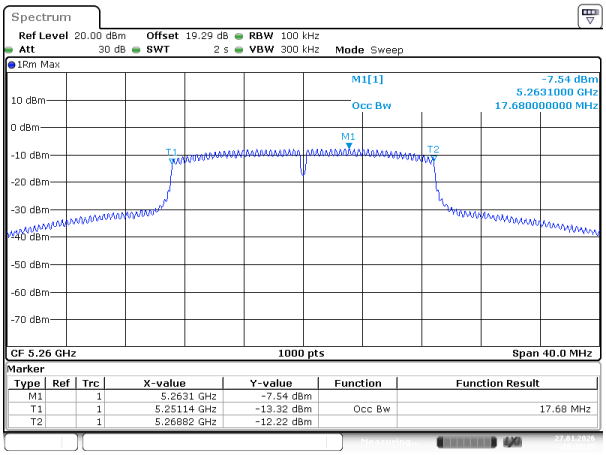
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802.11n20_5260MHz



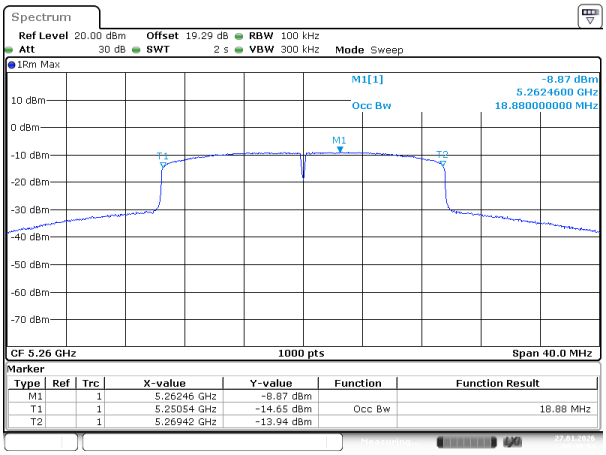
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802.11ac20_5260MHz



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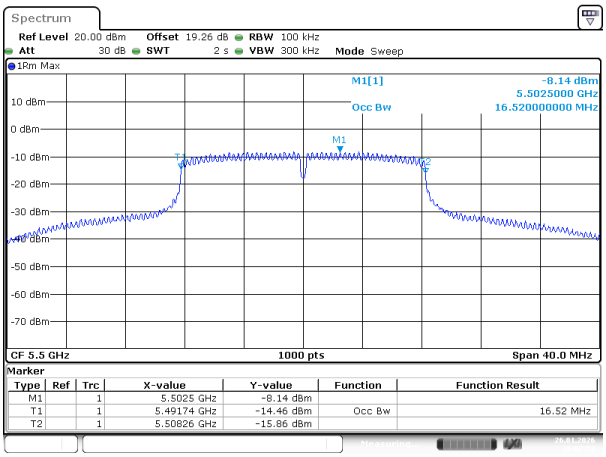
802.11ax20_5260MHz_RU_Full



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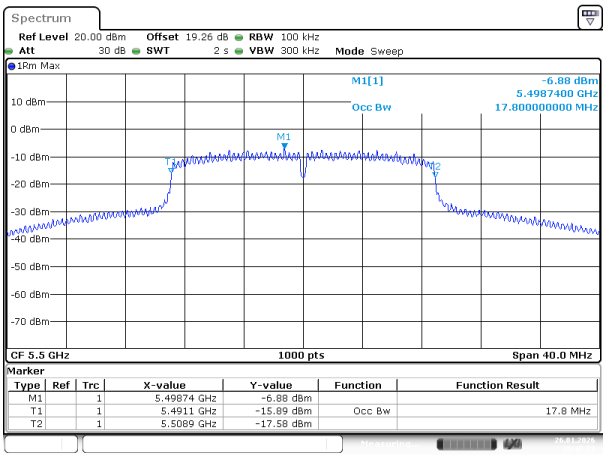
Band3, Test Condition: Normal

802.11a_5500MHz



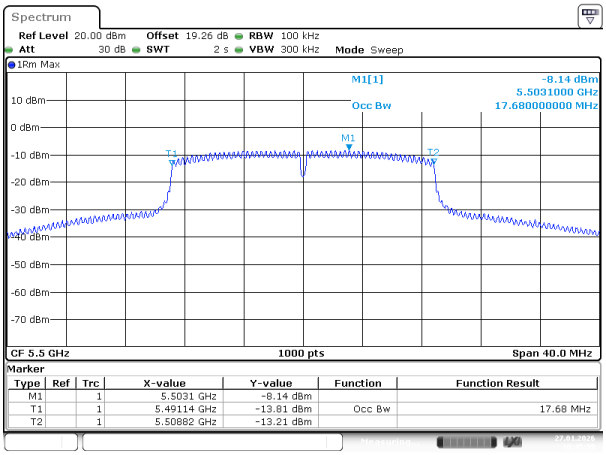
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802.11n20_5500MHz



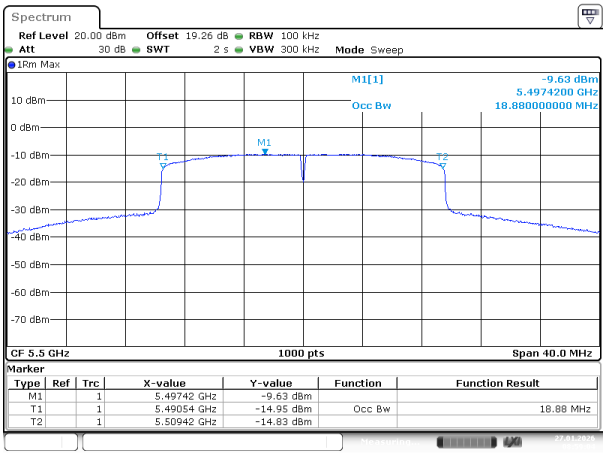
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802.11ac20_5500MHz



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 10:45:40

802.11ax20_5500MHz_RU_Full



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 08:59:04

3 – RF OUTPUT POWER, TRANSMIT POWER CONTROL (TPC), POWER DENSITY

Definition

RF Output Power:

The RF output power is the mean equivalent isotropically radiated power (EIRP) during a transmission burst.

Transmit Power Control (TPC):

Transmit Power Control (TPC) is a mechanism to ensure a mitigation factor of at least 3 dB on the aggregate power from a large number of devices, which implies a TPC range of at least 6 dB. The RF output power limit and the PSD limit might depend on whether an RLAN device operates with or without TPC.

Power Spectral Density (PSD):

The Power Spectral Density (PSD) is the mean EIRP density during a transmission burst.

Limit

The maximum RF output power $P_{H,sb}$ and the PSD in sub-band sb shall not exceed the limits given in table 2 for that sub-band. If the device uses TPC, $P_{H,sb}$ is the RF output power in sub-band sb at the highest power level of the TPC range in sub-band sb. In case of multiple (adjacent or non-adjacent) channels, the limits for the maximum RF output power and the PSD apply per sub-band.

NOTE: According to ECC/DEC/(04)08 [i.6] as well as Commission Implementing Decision (EU) 2022/179 [i.7] amended by Commission Implementing Decision (EU) 2022/2307 [i.8], for certain installations, the RF output power limit and the PSD limit might be lower than given in table 2.

Table 2: RF output power and PSD limits

Sub-band	RF output power limit (dBm)		PSD limit (dBm/MHz)	
	with TPC (see note 3)	without TPC	with TPC	without TPC
Sub-band 1	23	23	10	10
Sub-band 2	23	20	10	7
Sub-band 3 (see note 2)	30 (see note 1)	27 (see note 1)	17 (see note 1)	14 (see note 1)

NOTE 1: Secondary devices without radar detection operating in sub-band 3 shall conform to the limits for sub-band 2.
NOTE 2: National frequency usage conditions may allow devices to operate in sub-band 3 on a channel with a nominal channel bandwidth that extends into sub-band 4.
NOTE 3: If TPC is used, the RF output power in sub-band sb at the lowest power level of the TPC range in sub-band sb ($P_{L,sb}$) shall be at least 6 dB less than the applicable RF output power limit with TPC.

Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.4

Test Data

Test Result: *Compliant.*

RF output power

Band1

Test Condition: NT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5180	20.761	23	Pass
		5240	20.186	23	Pass
802.11n20	Chain 0	5180	20.610	23	Pass
		5240	20.059	23	Pass
802.11ac20	Chain 0	5180	19.479	23	Pass
		5240	18.898	23	Pass
802.11ax20_RU_Full	Chain 0	5180	19.901	23	Pass
		5240	19.386	23	Pass

Test Condition: LT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5180	21.154	23	Pass
		5240	20.508	23	Pass
802.11n20	Chain 0	5180	20.772	23	Pass
		5240	20.431	23	Pass
802.11ac20	Chain 0	5180	19.864	23	Pass
		5240	19.076	23	Pass
802.11ax20_RU_Full	Chain 0	5180	20.207	23	Pass
		5240	19.722	23	Pass

Test Condition: HT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5180	20.503	23	Pass
		5240	20.004	23	Pass
802.11n20	Chain 0	5180	20.301	23	Pass
		5240	19.838	23	Pass
802.11ac20	Chain 0	5180	19.304	23	Pass
		5240	18.748	23	Pass
802.11ax20_RU_Full	Chain 0	5180	19.638	23	Pass
		5240	19.246	23	Pass

Band2

Test Condition: NT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5260	21.011	23	Pass
		5320	19.368	23	Pass
802.11n20	Chain 0	5260	20.759	23	Pass
		5320	19.505	23	Pass
802.11ac20	Chain 0	5260	19.789	23	Pass
		5320	18.957	23	Pass
802.11ax20_RU_Full	Chain 0	5260	20.361	23	Pass
		5320	19.475	23	Pass

Test Condition: LT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5260	21.356	23	Pass
		5320	19.564	23	Pass
802.11n20	Chain 0	5260	20.929	23	Pass
		5320	19.802	23	Pass
802.11ac20	Chain 0	5260	20.108	23	Pass
		5320	19.292	23	Pass
802.11ax20_RU_Full	Chain 0	5260	20.531	23	Pass
		5320	19.763	23	Pass

Test Condition: HT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5260	20.751	23	Pass
		5320	19.046	23	Pass
802.11n20	Chain 0	5260	20.551	23	Pass
		5320	19.174	23	Pass
802.11ac20	Chain 0	5260	19.453	23	Pass
		5320	18.751	23	Pass
802.11ax20_RU_Full	Chain 0	5260	20.152	23	Pass
		5320	19.179	23	Pass

Band3

Test Condition: NT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5500	19.122	23	Pass
		5700	18.391	23	Pass
802.11n20	Chain 0	5500	20.143	23	Pass
		5700	19.204	23	Pass
802.11ac20	Chain 0	5500	18.846	23	Pass
		5700	18.072	23	Pass
802.11ax20_RU_Full	Chain 0	5500	19.351	23	Pass
		5700	18.790	23	Pass

Test Condition: LT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5500	19.278	23	Pass
		5700	18.577	23	Pass
802.11n20	Chain 0	5500	20.468	23	Pass
		5700	19.578	23	Pass
802.11ac20	Chain 0	5500	19.128	23	Pass
		5700	18.456	23	Pass
802.11ax20_RU_Full	Chain 0	5500	19.726	23	Pass
		5700	19.147	23	Pass

Test Condition: HT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5500	18.964	23	Pass
		5700	18.259	23	Pass
802.11n20	Chain 0	5500	19.796	23	Pass
		5700	19.037	23	Pass
802.11ac20	Chain 0	5500	18.719	23	Pass
		5700	17.908	23	Pass
802.11ax20_RU_Full	Chain 0	5500	19.081	23	Pass
		5700	18.648	23	Pass

Transmit Power Control (TPC)

Band2

Test Condition: NT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5260	14.537	17	Pass
		5320	12.649	17	Pass
802.11n20	Chain 0	5260	14.048	17	Pass
		5320	12.902	17	Pass
802.11ac20	Chain 0	5260	13.581	17	Pass
		5320	12.330	17	Pass
802.11ax20_RU_Full	Chain 0	5260	13.748	17	Pass
		5320	12.570	17	Pass

Test Condition: LT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5260	14.897	17	Pass
		5320	13.456	17	Pass
802.11n20	Chain 0	5260	14.131	17	Pass
		5320	12.957	17	Pass
802.11ac20	Chain 0	5260	13.602	17	Pass
		5320	12.367	17	Pass
802.11ax20_RU_Full	Chain 0	5260	13.801	17	Pass
		5320	13.198	17	Pass

Test Condition: HT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5260	14.256	17	Pass
		5320	12.467	17	Pass
802.11n20	Chain 0	5260	13.929	17	Pass
		5320	12.235	17	Pass
802.11ac20	Chain 0	5260	12.847	17	Pass
		5320	12.204	17	Pass
802.11ax20_RU_Full	Chain 0	5260	13.559	17	Pass
		5320	12.386	17	Pass

Band3

Test Condition: NT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5500	12.694	17	Pass
		5700	11.701	17	Pass
802.11n20	Chain 0	5500	13.521	17	Pass
		5700	12.691	17	Pass
802.11ac20	Chain 0	5500	12.232	17	Pass
		5700	11.530	17	Pass
802.11ax20_RU_Full	Chain 0	5500	13.037	17	Pass
		5700	11.968	17	Pass

Test Condition: LT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5500	12.742	17	Pass
		5700	11.835	17	Pass
802.11n20	Chain 0	5500	13.811	17	Pass
		5700	13.113	17	Pass
802.11ac20	Chain 0	5500	12.352	17	Pass
		5700	11.712	17	Pass
802.11ax20_RU_Full	Chain 0	5500	13.193	17	Pass
		5700	12.954	17	Pass

Test Condition: HT/NV

Test Mode	Antenna	Freq. (MHz)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
802.11a	Chain 0	5500	12.513	17	Pass
		5700	11.674	17	Pass
802.11n20	Chain 0	5500	12.818	17	Pass
		5700	12.357	17	Pass
802.11ac20	Chain 0	5500	12.133	17	Pass
		5700	11.398	17	Pass
802.11ax20_RU_Full	Chain 0	5500	12.405	17	Pass
		5700	11.861	17	Pass

Power Density

Band1

Test Mode	Antenna	Freq. (MHz)	Reading (dBm/MHz)	DC Factor (dB)	Gain (dBi)	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11a	Chain 0	5180	1.67	0.17	4.40	6.24	10	Pass
		5240	0.80	0.17	4.40	5.37	10	Pass
802.11n20	Chain 0	5180	0.89	0.38	4.40	5.67	10	Pass
		5240	0.80	0.38	4.40	5.58	10	Pass
802.11ac20	Chain 0	5180	0.85	0.04	4.40	5.29	10	Pass
		5240	0.55	0.04	4.40	4.99	10	Pass

Note:
1. PSD = Reading + DC Factor + Gain
2. DC Factor refer to Duty Cycle.

Test Mode	Freq (MHz)	Ru Size	Ru Index	Reading (dBm/MHz)	DC Factor (dB)	Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax20_RU_Full	5180	/	RUFull	0.41	0.05	4.40	4.86	10	Pass
	5240	/	RUFull	0.27	0.05	4.40	4.72	10	Pass

Note:
1. EIRP PSD = Reading + DC Factor + Gain
2. DC Factor refer to Duty Cycle.

Band2

Test Mode	Antenna	Freq. (MHz)	Reading (dBm/MHz)	DC Factor (dB)	Gain (dBi)	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11a	Chain 0	5260	1.39	0.17	4.40	5.96	10	Pass
		5320	0.32	0.17	4.40	4.89	10	Pass
802.11n20	Chain 0	5260	0.97	0.38	4.40	5.75	10	Pass
		5320	-0.08	0.38	4.40	4.70	10	Pass
802.11ac20	Chain 0	5260	0.77	0.04	4.40	5.21	10	Pass
		5320	0.52	0.04	4.40	4.96	10	Pass

Note:
1. PSD = Reading + DC Factor + Gain
2. DC Factor refer to Duty Cycle.

Test Mode	Freq (MHz)	Ru Size	Ru Index	Reading (dBm/MHz)	DC Factor (dB)	Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax20_RU_Full	5260	/	RUFull	0.55	0.05	4.40	5.00	10	Pass
	5320	/	RUFull	0.29	0.05	4.40	4.74	10	Pass

Note:
1. EIRP PSD = Reading + DC Factor + Gain
2. DC Factor refer to Duty Cycle.

Band3

Test Mode	Antenna	Freq. (MHz)	Reading (dBm/MHz)	DC Factor (dB)	Gain (dBi)	PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11a	Chain 0	5500	0.08	0.17	4.40	4.65	10	Pass
		5700	0.01	0.17	4.40	4.58	10	Pass
802.11n20	Chain 0	5500	0.34	0.38	4.40	5.12	10	Pass
		5700	0.01	0.38	4.40	4.79	10	Pass
802.11ac20	Chain 0	5500	0.22	0.04	4.40	4.66	10	Pass
		5700	0.20	0.04	4.40	4.64	10	Pass

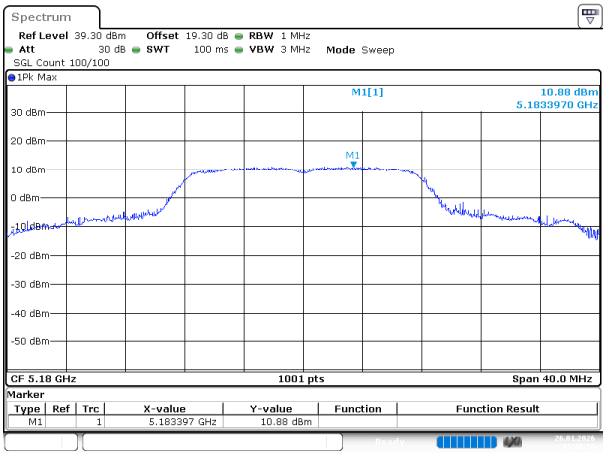
Note:
1. PSD = Reading + DC Factor + Gain
2. DC Factor refer to Duty Cycle.

Test Mode	Freq (MHz)	Ru Size	Ru Index	Reading (dBm/MHz)	DC Factor (dB)	Gain (dBi)	EIRP PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
802.11ax20_RU_Full	5500	/	RUFull	0.01	0.05	4.40	4.46	10	Pass
	5700	/	RUFull	-0.03	0.05	4.40	4.42	10	Pass

Note:
1. EIRP PSD = Reading + DC Factor + Gain
2. DC Factor refer to Duty Cycle.

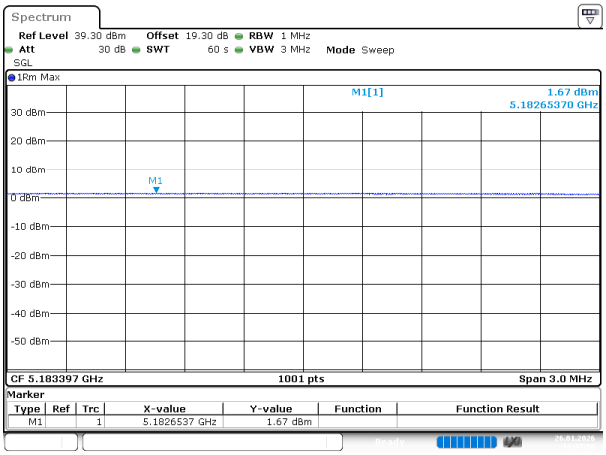
Band1

802.11a_5180MHz



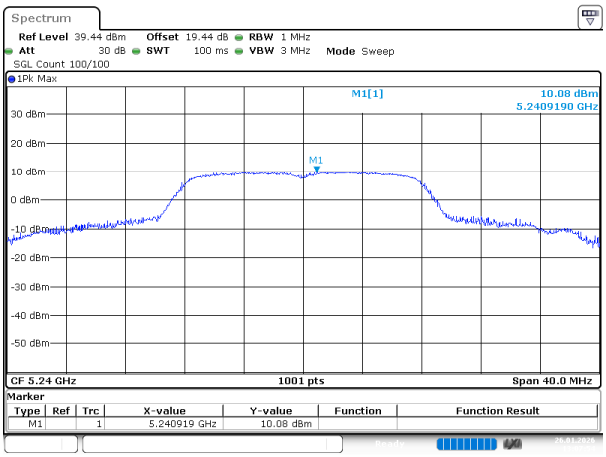
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802.11a_5180MHz



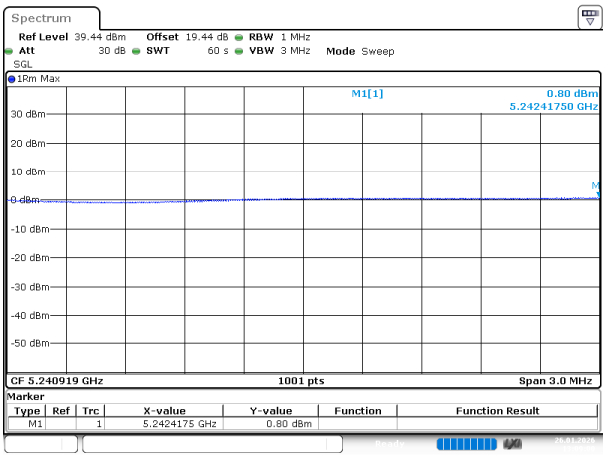
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802.11a_5240MHz



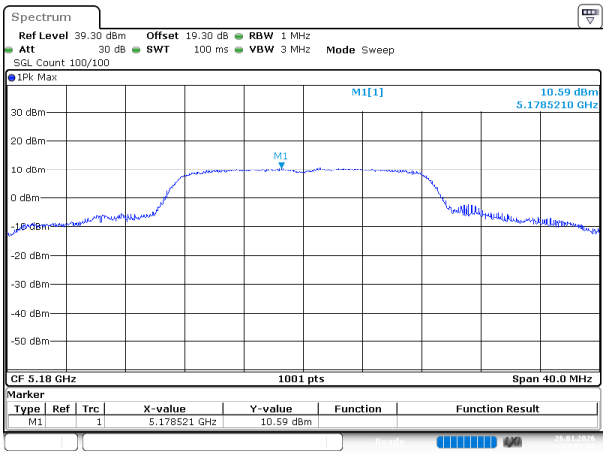
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802.11a_5240MHz



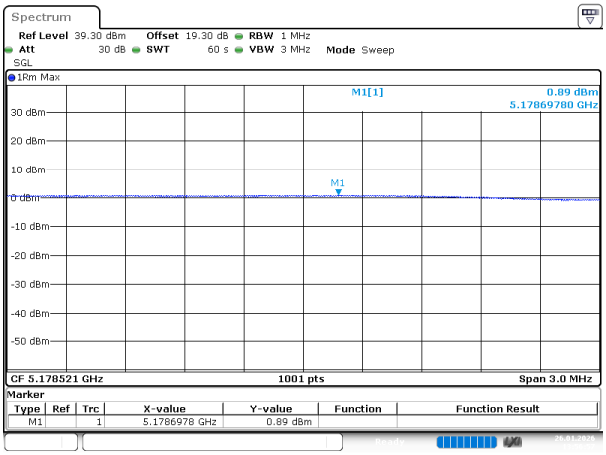
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802.11n20_5180MHz



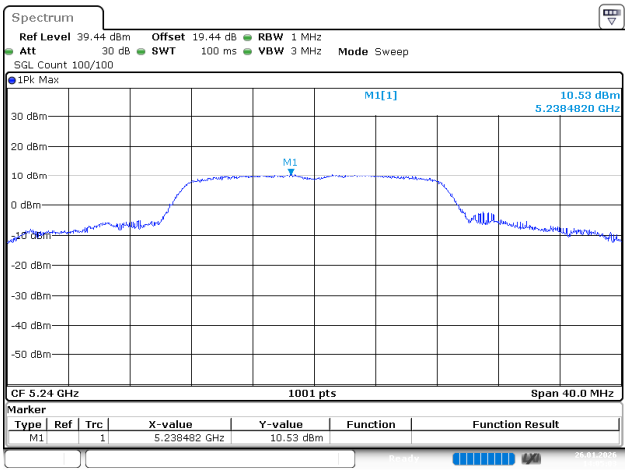
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802.11n20_5180MHz



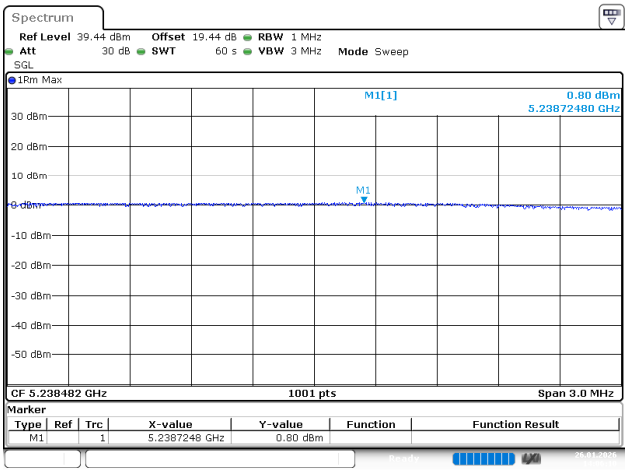
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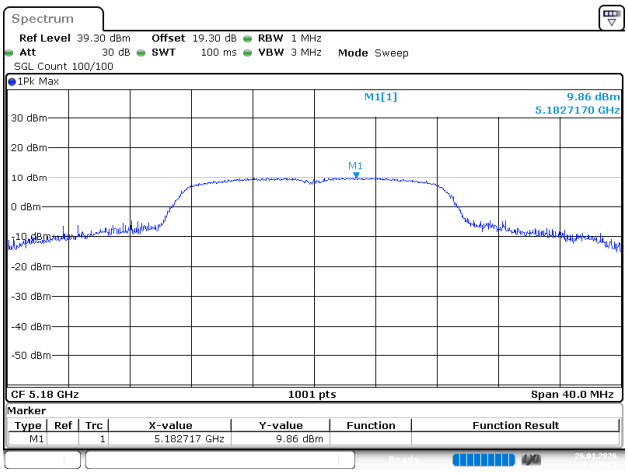
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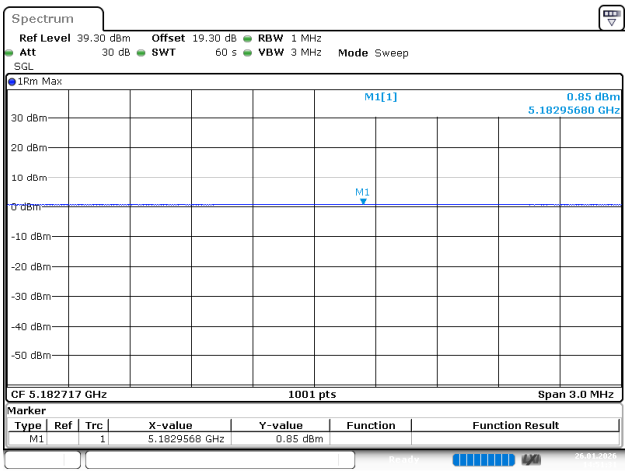
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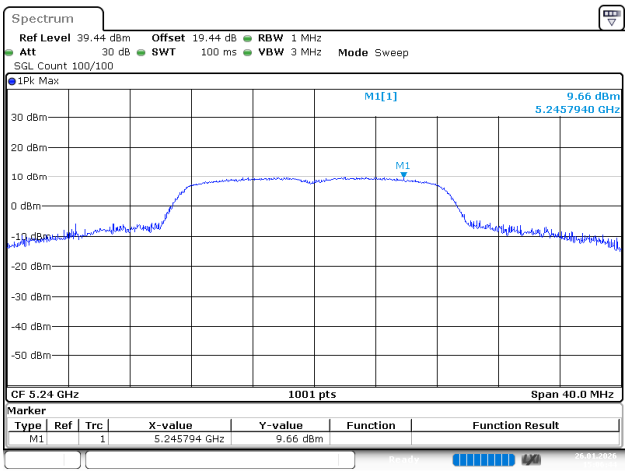
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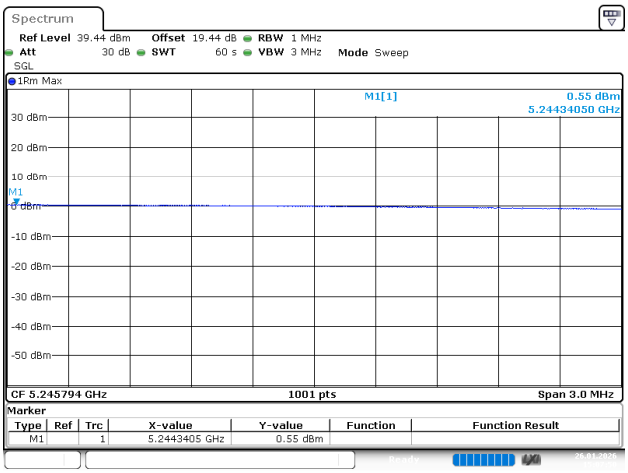
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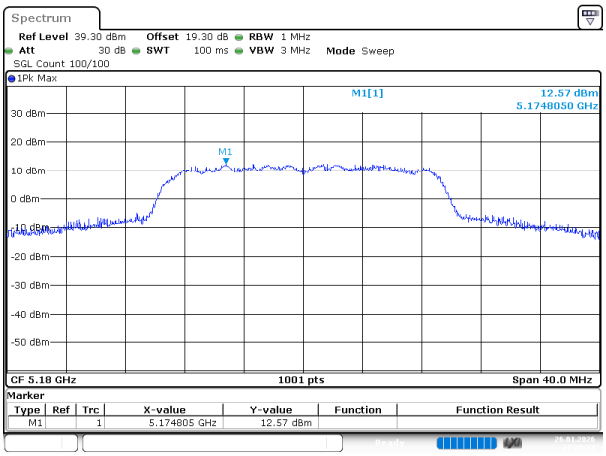
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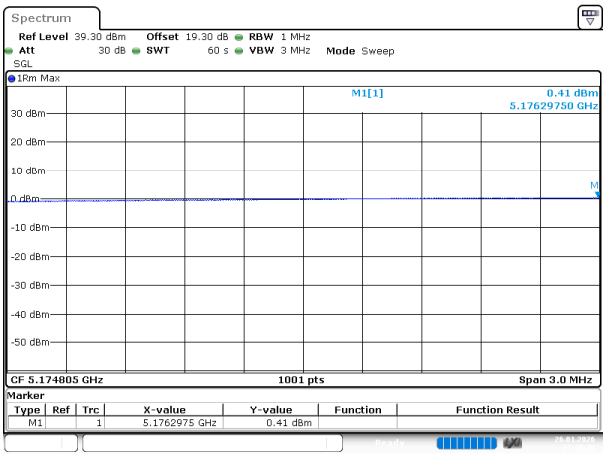
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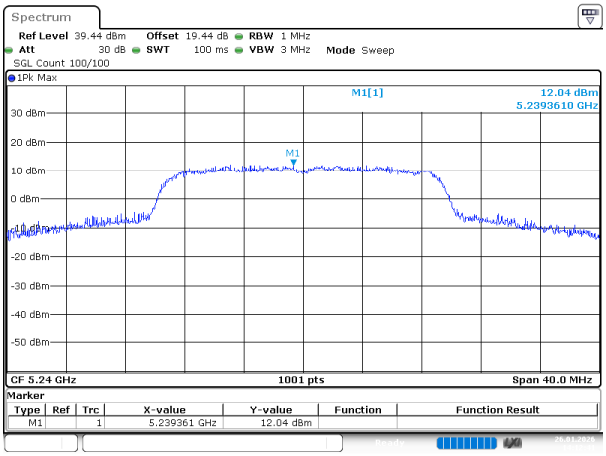
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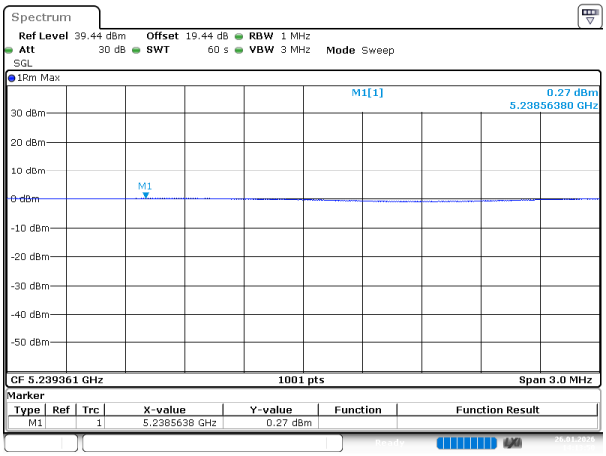
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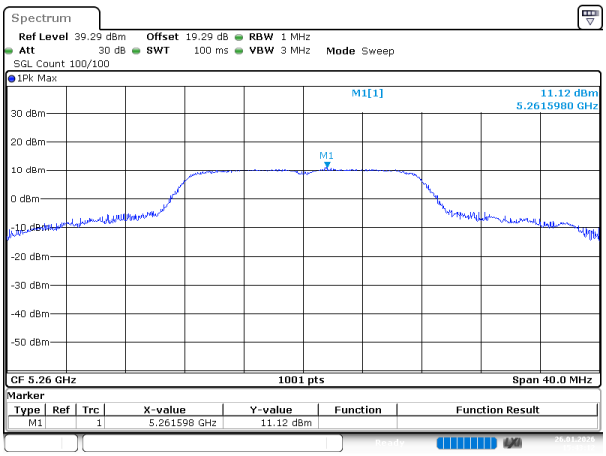
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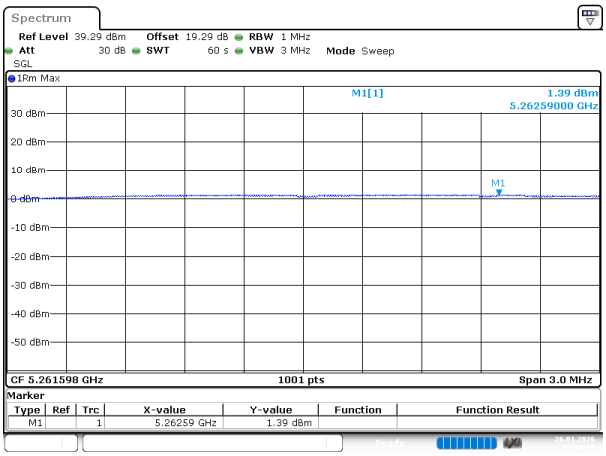
Band2

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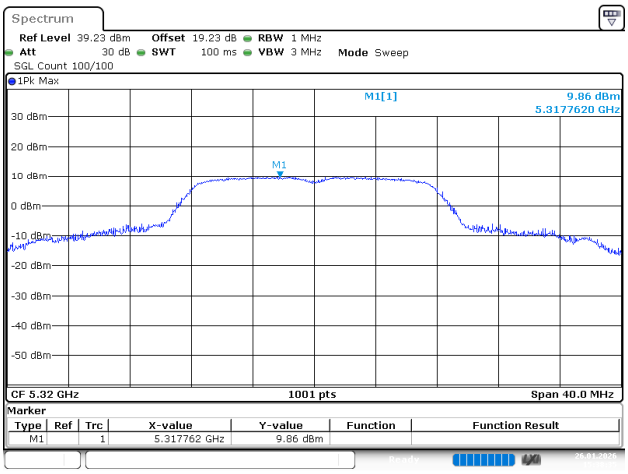
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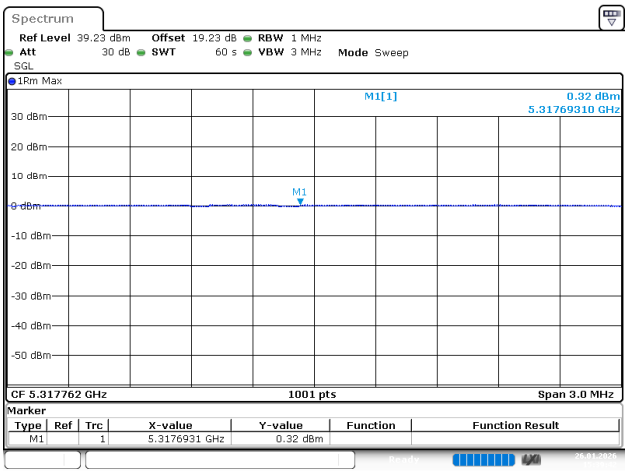
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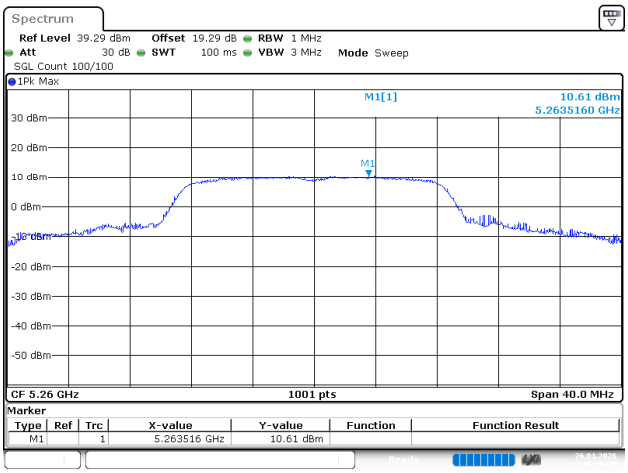
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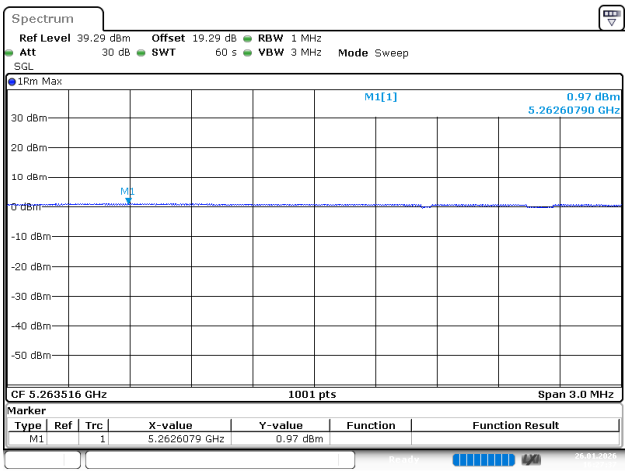
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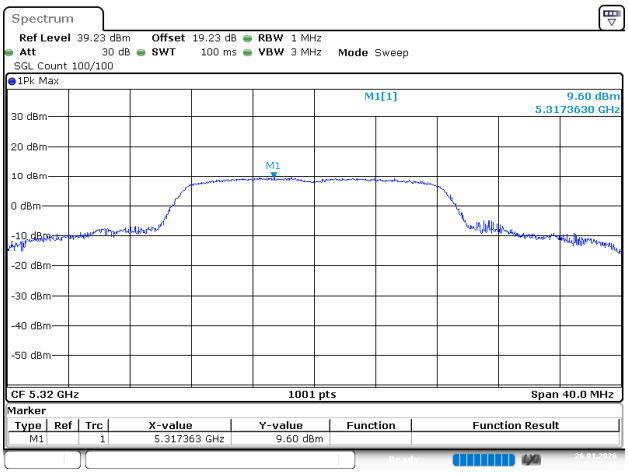
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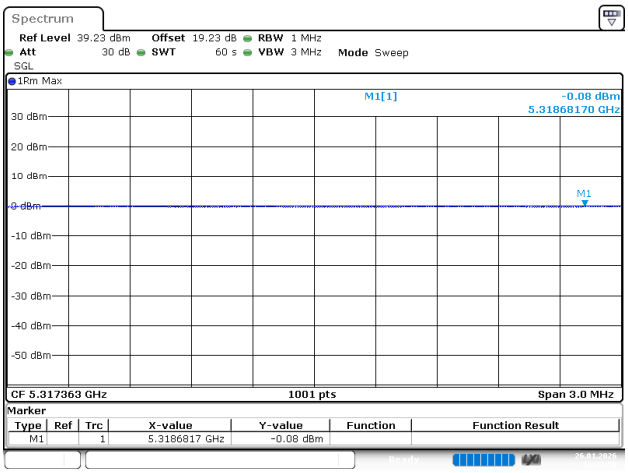
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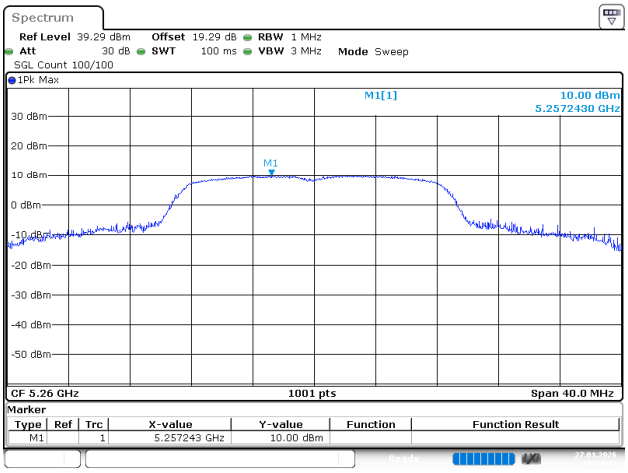
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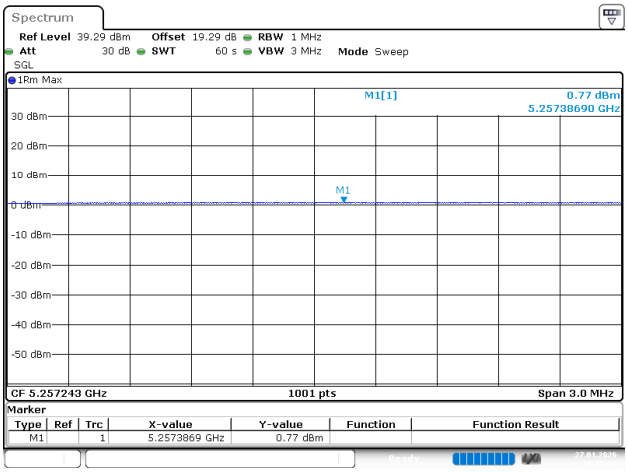
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802.11ac20_5260MHz



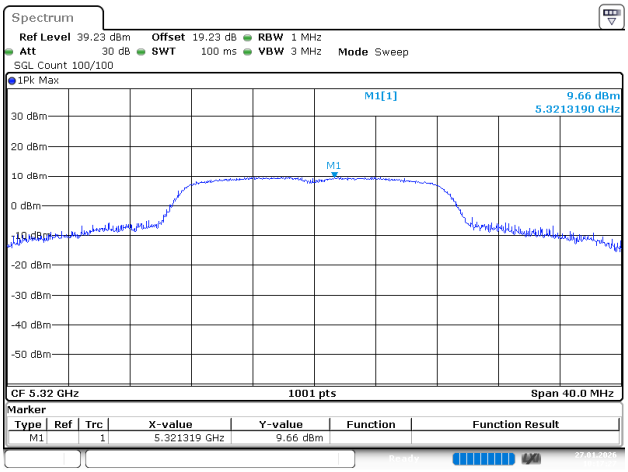
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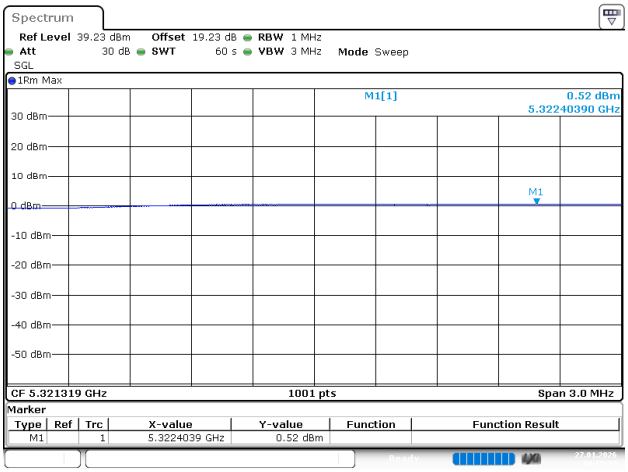
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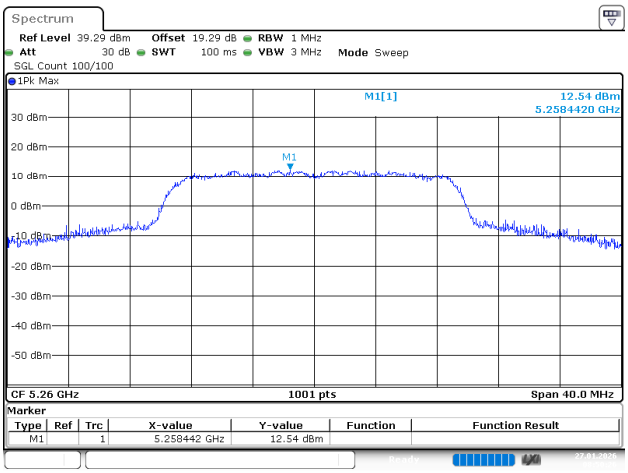
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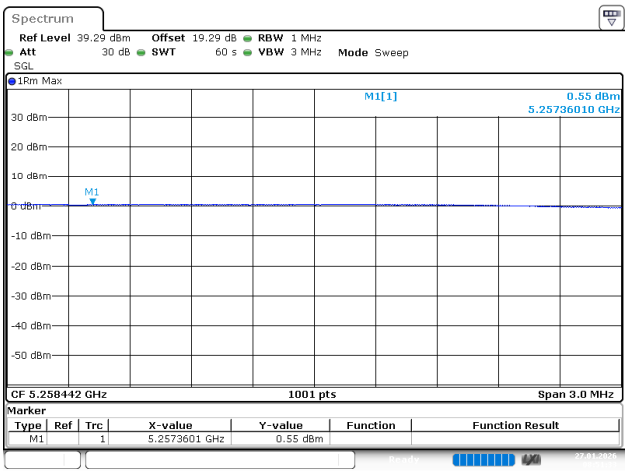
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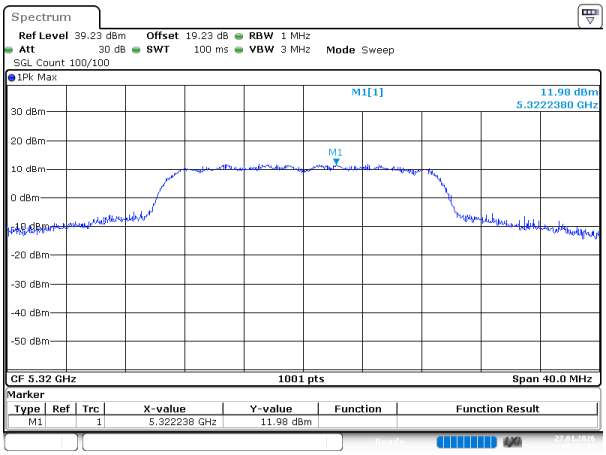
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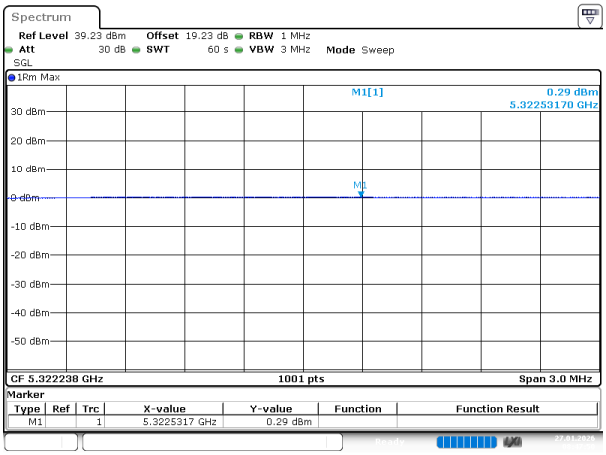
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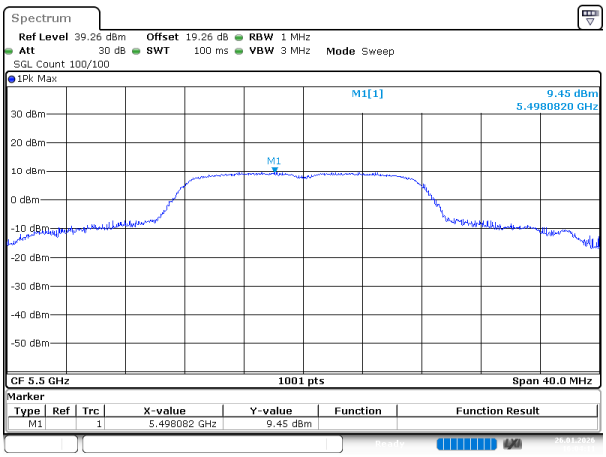
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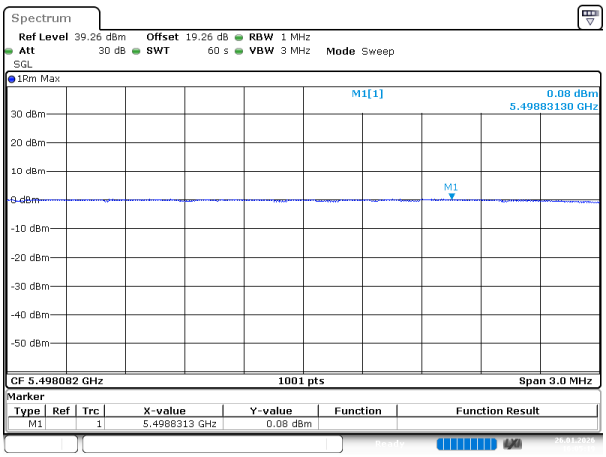
Band3

802.11a_5500MHz



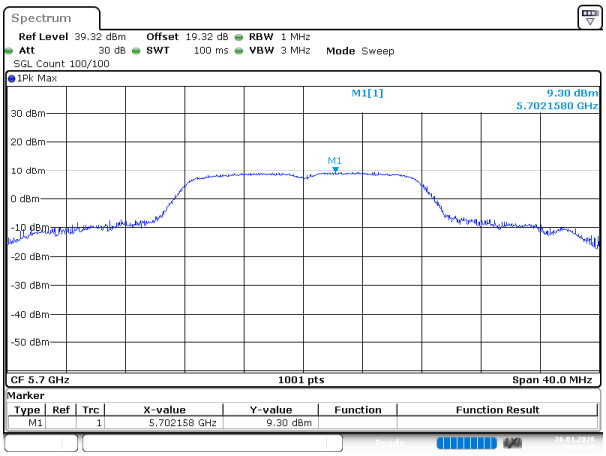
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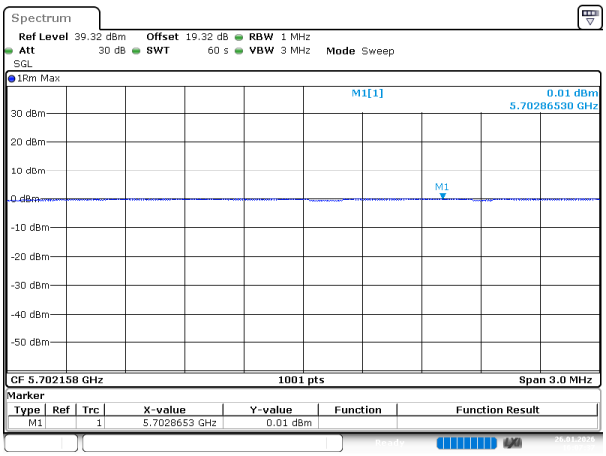
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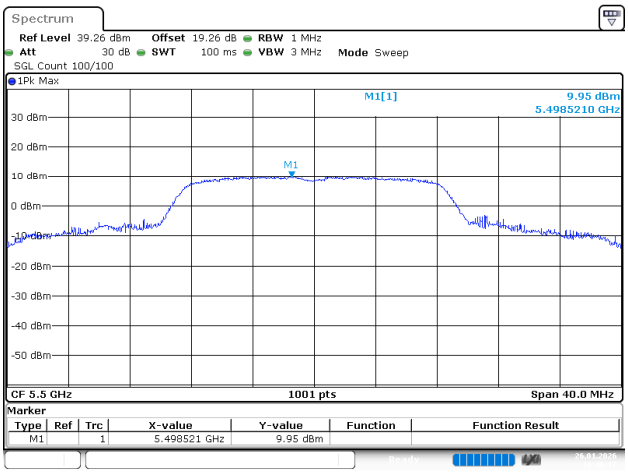
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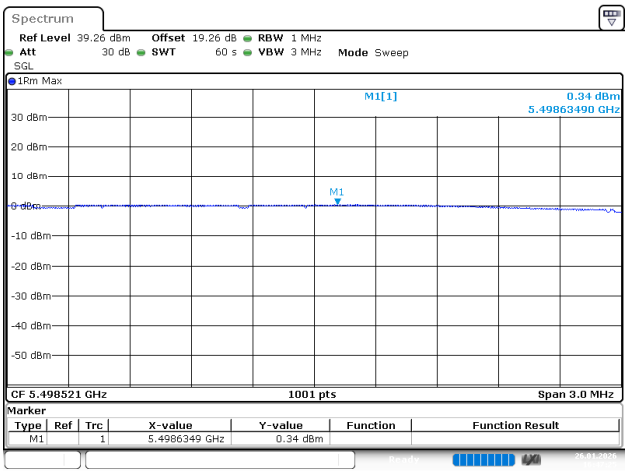
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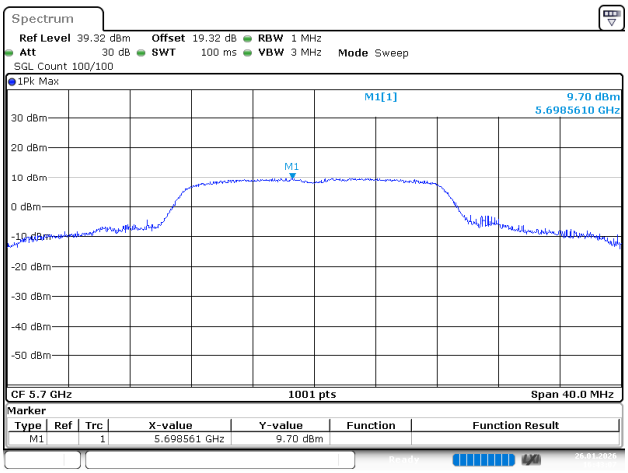
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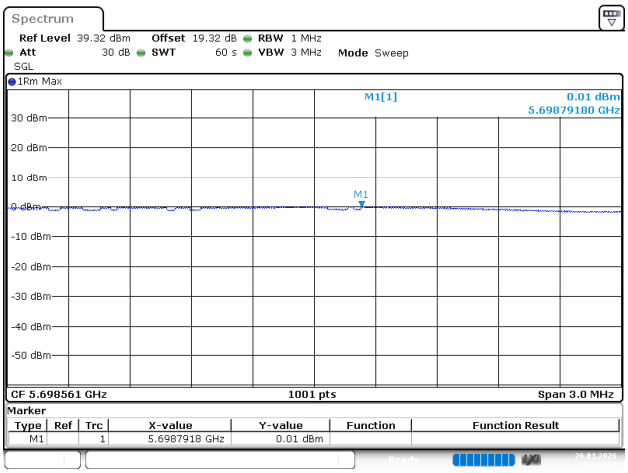
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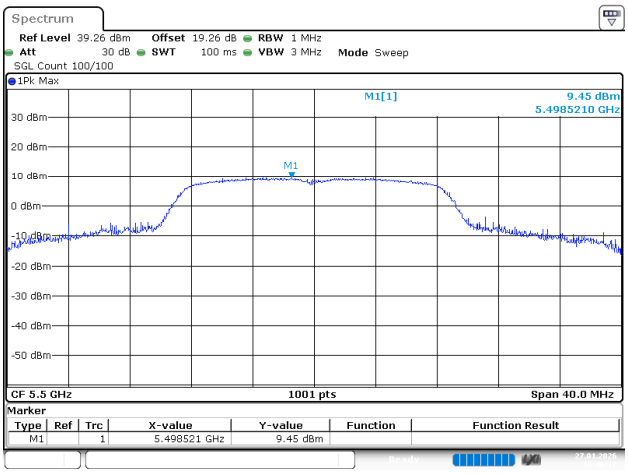
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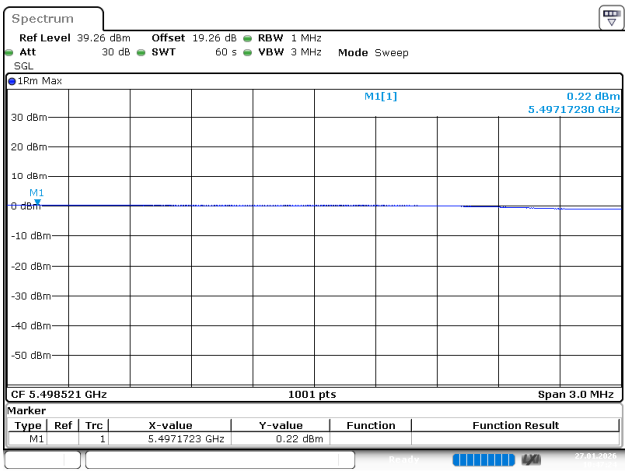
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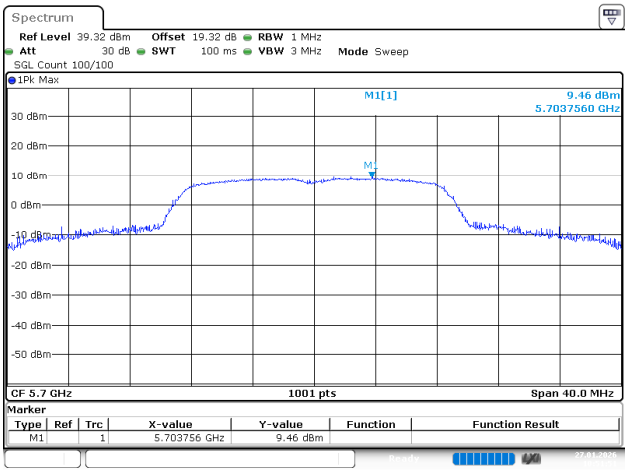
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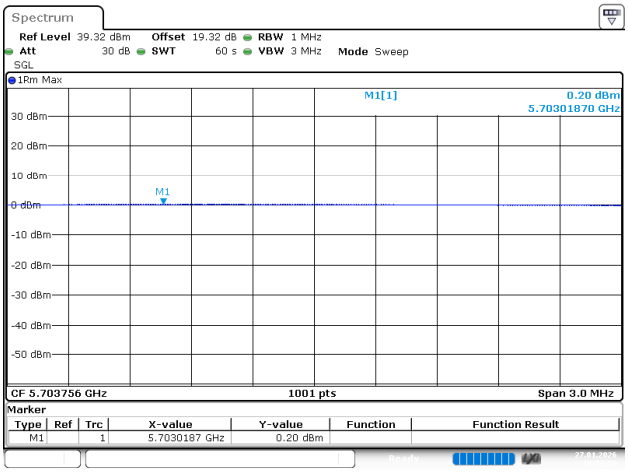
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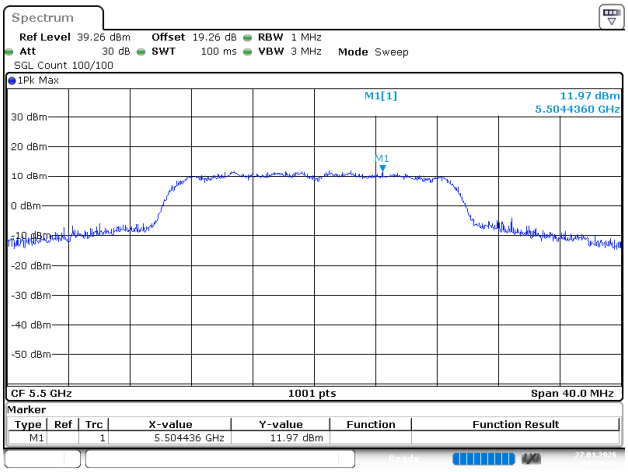
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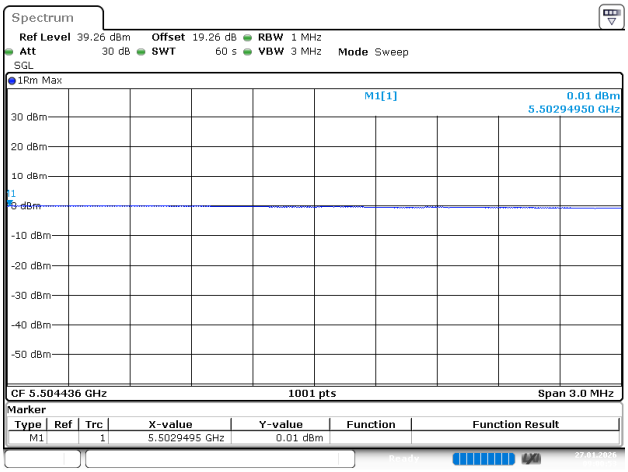
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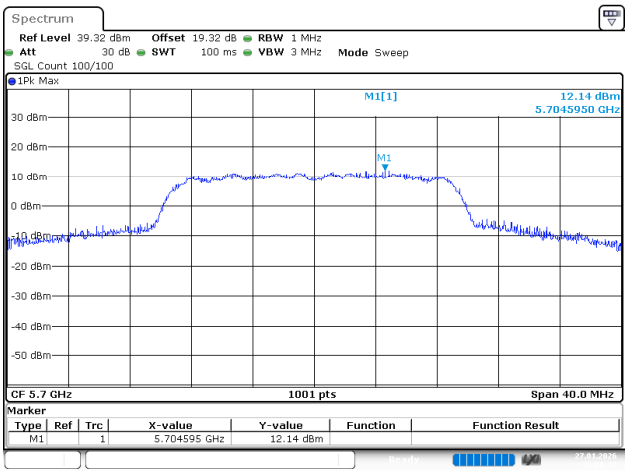
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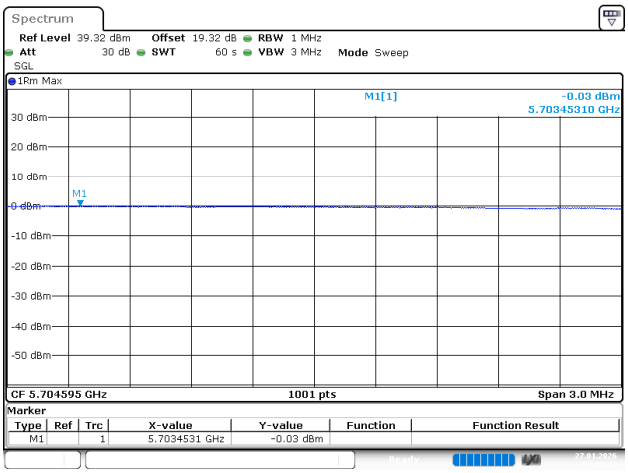
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802.11ax20_5700MHz_RU_Full



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802.11ax20_5700MHz_RU_Full



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Duty Cycle

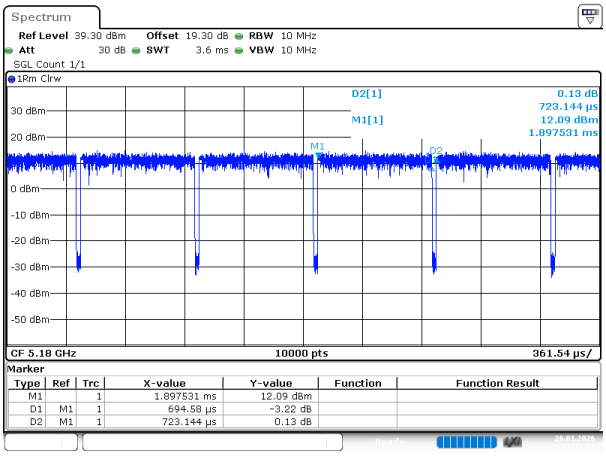
Band1

Test Mode	Antenna	Freq. (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)
802.11a	Chain 0	5180	0.695	0.723	96.13	0.17
802.11n20	Chain 0	5180	0.292	0.319	91.54	0.38
802.11ac20	Chain 0	5180	3.745	3.776	99.18	0.04
802.11ax20_RU_Full	Chain 0	5180	2.840	2.870	98.95	0.05

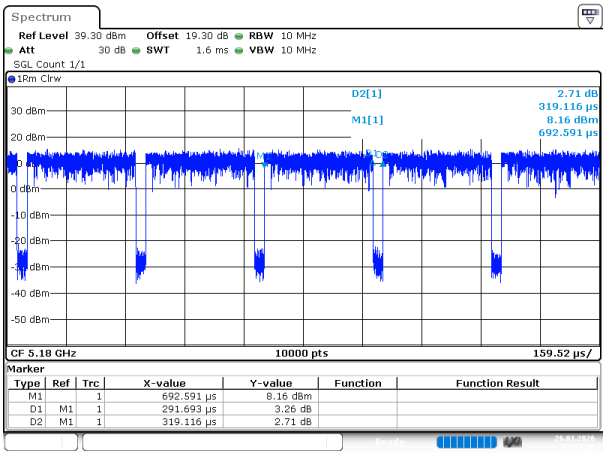
Note:
Duty Cycle Factor = 10*log(1/Duty Cycle).

Band1

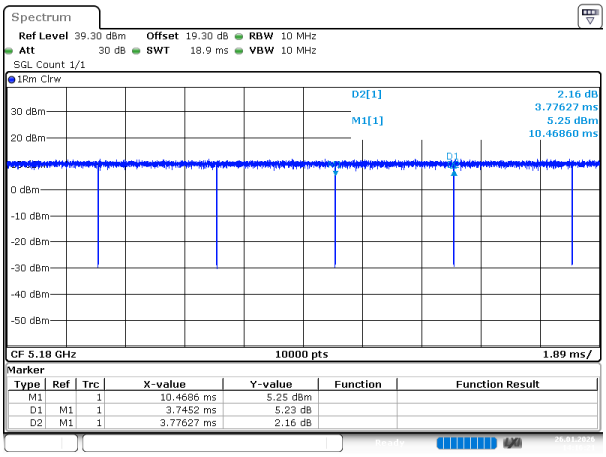
802.11a_5180MHz



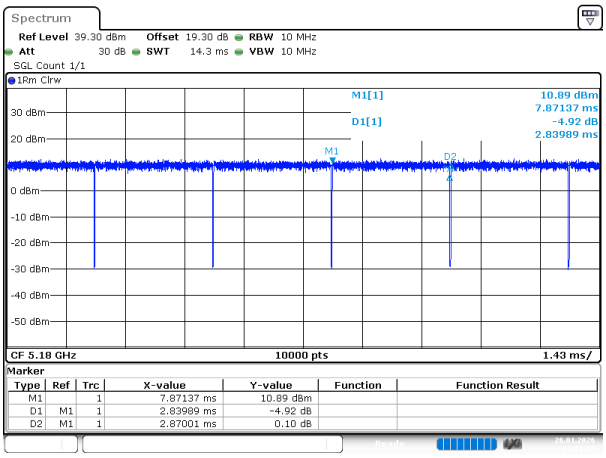
802.11n20_5180MHz



802.11ac20_5180MHz



802.11ax20_5180MHz_RU_Full



4 –TRANSMITTER UNWANTED EMISSIONS OUTSIDE THE TRANSMITTER'S OPERATING BANDS

Definition

Transmitter unwanted emissions outside the transmitter's operating bands are radio frequency emissions outside the sub-bands of the 5 GHz RLAN band.

Limit

The level of transmitter unwanted emissions outside the transmitter's operating bands shall not exceed the limits given in table 3.
In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are ERP for emissions up to 1 GHz and EIRP for emissions above 1 GHz.

Table 3: Transmitter unwanted emission limits outside the transmitter's operating bands

Frequency range	Maximum power	Measurement bandwidth
30 MHz ≤ f < 87,5 MHz	-36 dBm	100 kHz
87,5 MHz ≤ f ≤ 118 MHz	-54 dBm	100 kHz
118 MHz < f < 174 MHz	-36 dBm	100 kHz
174 MHz ≤ f ≤ 230 MHz	-54 dBm	100 kHz
230 MHz < f < 470 MHz	-36 dBm	100 kHz
470 MHz ≤ f ≤ 694 MHz	-54 dBm	100 kHz
694 MHz < f ≤ 1 GHz	-36 dBm	100 kHz
1 GHz < f ≤ 26 GHz	-30 dBm	1 MHz
NOTE: Information in this table is based on ERC Recommendation 74-01 [i.13], Annex 2, Table 6.		

Test method

- ☐ Conducted with connector on UUT
- ☒ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.5

Test Data

Test Result: *Compliant. Pre-scan all modes, worst case please refer to following tables.*

Radiated Emissions:

802.11 a **5180 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
107.52	H	46.95	-64.27	0.00	0.13	-64.40	-54.00	10.40
189.96	V	47.25	-70.56	0.00	0.17	-70.73	-54.00	16.73
10360.00	H	48.46	-55.17	11.34	1.40	-45.23	-30.00	15.23
10360.00	V	48.30	-55.95	11.34	1.40	-46.01	-30.00	16.01
4856.70	H	57.56	-53.98	10.57	0.91	-44.32	-30.00	14.32
4856.70	V	62.72	-48.35	10.57	0.91	-38.69	-30.00	8.69

802.11 a **5320 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
103.62	H	47.99	-63.79	0.00	0.13	-63.92	-54.00	9.92
109.66	V	48.51	-69.25	0.00	0.13	-69.38	-54.00	15.38
10640.00	H	47.97	-55.54	11.14	1.48	-45.88	-30.00	15.88
10640.00	V	48.01	-56.14	11.14	1.48	-46.48	-30.00	16.48
4930.70	H	56.65	-54.49	10.48	0.92	-44.93	-30.00	14.93
4930.70	V	63.80	-46.92	10.48	0.92	-37.36	-30.00	7.36

802.11 a **5500 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
107.42	H	46.75	-64.49	0.00	0.13	-64.62	-54.00	10.62
101.36	V	49.62	-69.14	0.00	0.13	-69.27	-54.00	15.27
11000.00	H	48.54	-55.37	11.00	1.63	-46.00	-30.00	16.00
11000.00	V	48.37	-56.00	11.00	1.63	-46.63	-30.00	16.63
4468.80	H	51.66	-61.31	10.99	0.89	-51.21	-30.00	21.21
4468.80	V	60.19	-52.51	10.99	0.89	-42.41	-30.00	12.41
4812.70	V	59.49	-51.89	10.62	0.91	-42.18	-30.00	12.18
6533.90	V	58.04	-51.64	11.38	1.12	-41.38	-30.00	11.38

Note 1:The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.
Note 2:
Absolute Level = Substituted Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level

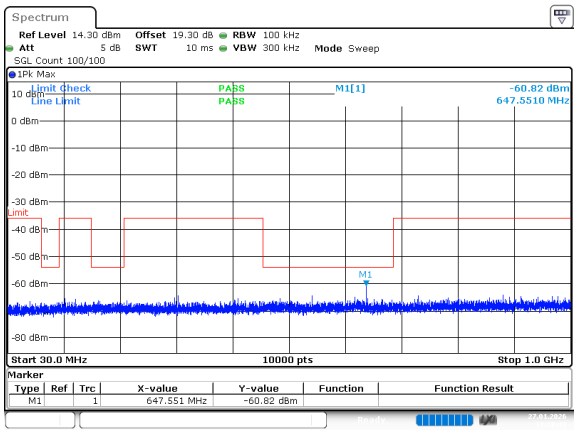
Conducted Emissions:

Mode	Freq.	Test Band (RBW)	Frequency (MHz)	Result (dBm)	Limit	Verdict
802.11a	5180	Band I (100kHz)	647.551	-60.82	See test graph	Pass
		Band II (1MHz)	4856	-36.28	See test graph	Pass
	5320	Band I (100kHz)	665.011	-60.18	See test graph	Pass
		Band II (1MHz)	4988	-37.66	See test graph	Pass
	5500	Band I (100kHz)	993.55	-64.10	See test graph	Pass
		Band II (1MHz)	5156	-39.21	See test graph	Pass

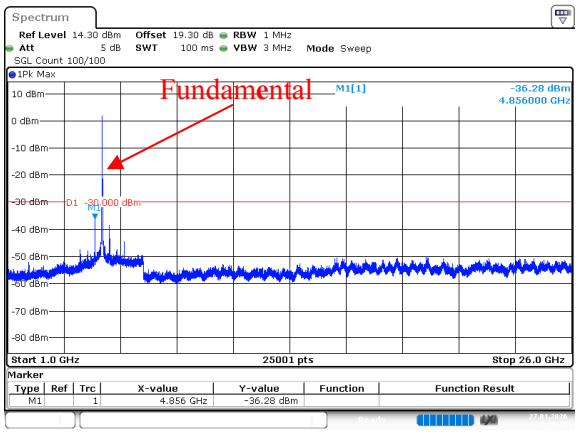
Note:
Band I (100kHz): 30MHz~1GHz
Band II (1MHz): 1GHz~26GHz

Band1, Test Condition: Normal

802.11a_5180MHz(30MHz~1GHz)

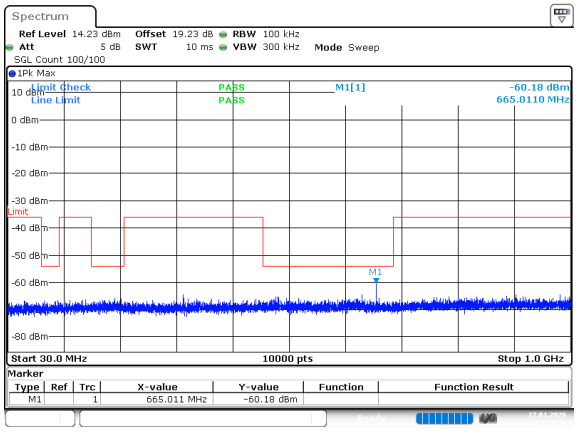


802.11a_5180MHz(1GHz~26GHz)

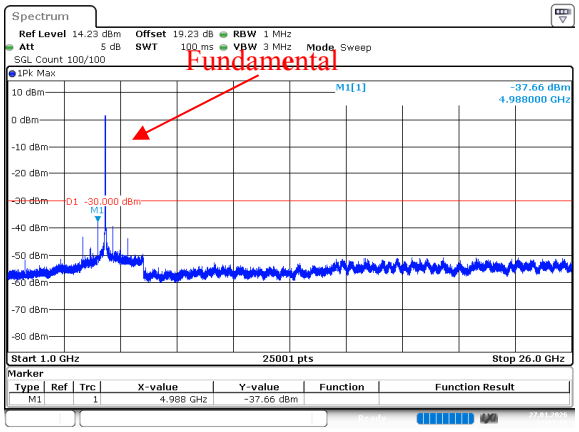


Band2, Test Condition: Normal

802.11a_5320MHz(30MHz~1GHz)

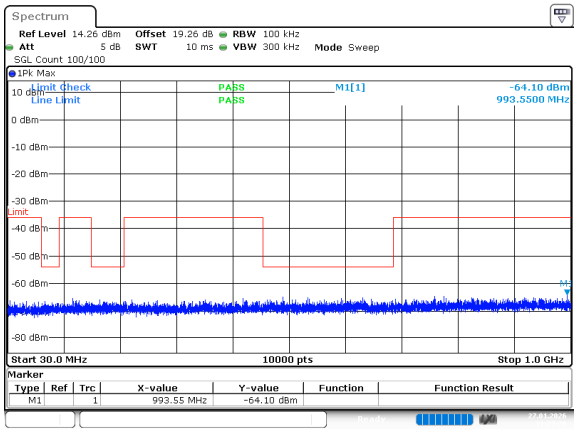


802.11a_5320MHz(1GHz~26GHz)

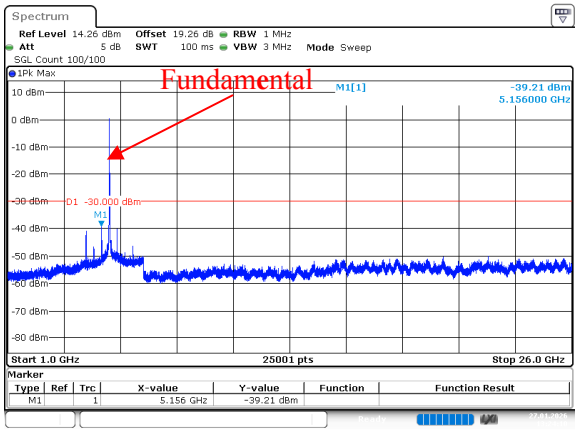


Band3, Test Condition: Normal

802.11a_5500MHz(30MHz~1GHz)



802.11a_5500MHz(1GHz~26GHz)



5 –TRANSMITTER UNWANTED EMISSIONS WITHIN THE TRANSMITTER'S OPERATING BANDS

Definition

Transmitter unwanted emissions within the transmitter's operating bands are radio frequency emissions within the sub-bands of the 5 GHz RLAN band, excluding emissions within the nominal channel bandwidth of channels used for transmission.

Limit

According to ETSI EN 301 893 V2.2.1 (2024-11) § 4.2.4.2.2

Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.6

Test Data

Test Result: *Compliant.*

Band1

Test Mode	Antenna	Freq.	Result (dBm)	Limit (dBm)	Verdict
802.11a	Chain 0	5180	See test graph	See test graph	Pass
		5240	See test graph	See test graph	Pass
802.11n20	Chain 0	5180	See test graph	See test graph	Pass
		5240	See test graph	See test graph	Pass
802.11ac20	Chain 0	5180	See test graph	See test graph	Pass
		5240	See test graph	See test graph	Pass
802.11ax20_RU_Full	Chain 0	5180	See test graph	See test graph	Pass
		5240	See test graph	See test graph	Pass

Band2

Test Mode	Antenna	Freq.	Result (dBm)	Limit (dBm)	Verdict
802.11a	Chain 0	5260	See test graph	See test graph	Pass
		5320	See test graph	See test graph	Pass
802.11n20	Chain 0	5260	See test graph	See test graph	Pass
		5320	See test graph	See test graph	Pass

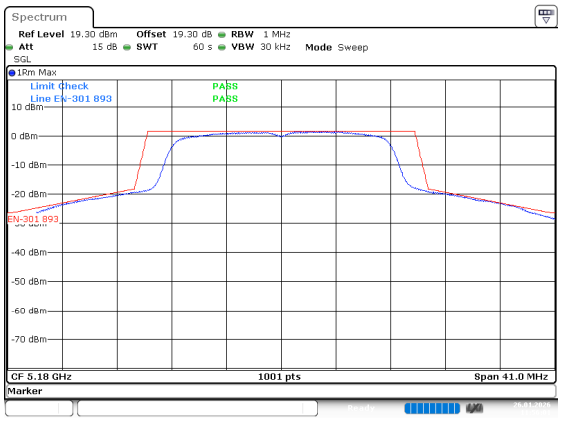
Test Mode	Antenna	Freq.	Result (dBm)	Limit (dBm)	Verdict
802.11ac20	Chain 0	5260	See test graph	See test graph	Pass
		5320	See test graph	See test graph	Pass
802.11ax20_RU_Full	Chain 0	5260	See test graph	See test graph	Pass
		5320	See test graph	See test graph	Pass

Band3

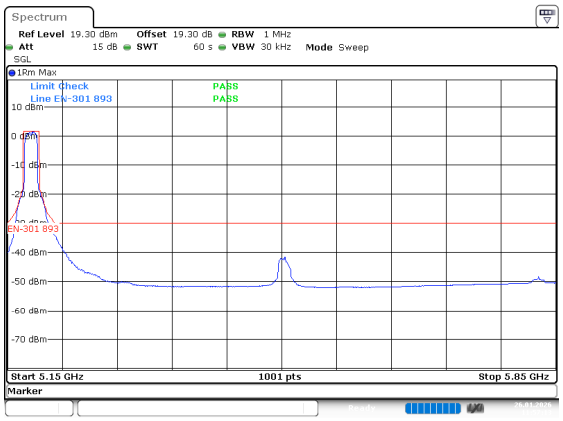
Test Mode	Antenna	Freq.	Result (dBm)	Limit (dBm)	Verdict
802.11a	Chain 0	5500	See test graph	See test graph	Pass
		5700	See test graph	See test graph	Pass
802.11n20	Chain 0	5500	See test graph	See test graph	Pass
		5700	See test graph	See test graph	Pass
802.11ac20	Chain 0	5500	See test graph	See test graph	Pass
		5700	See test graph	See test graph	Pass
802.11ax20_RU_Full	Chain 0	5500	See test graph	See test graph	Pass
		5700	See test graph	See test graph	Pass

Band1, Test Condition: Normal

802.11a_5180MHz

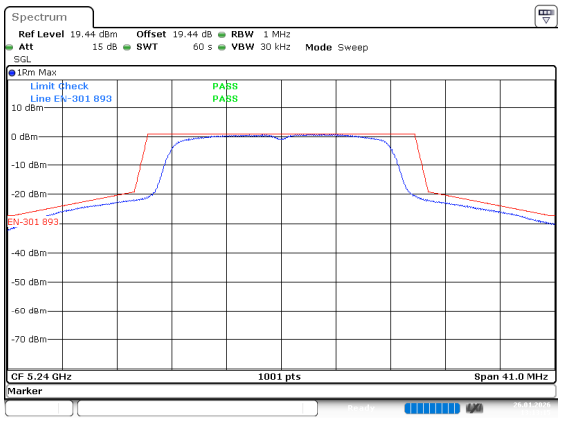


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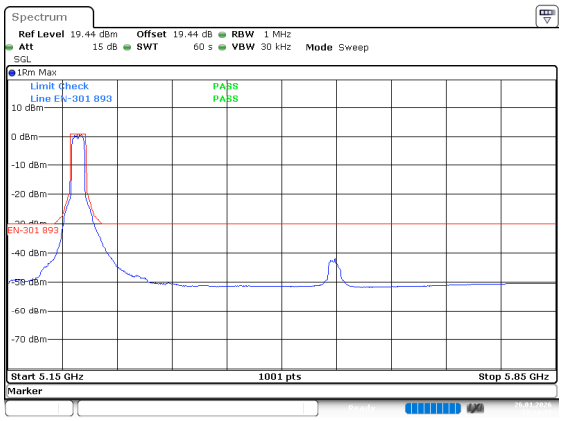


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Date: 26.JAN.2026 11:57:13

802.11a_5240MHz

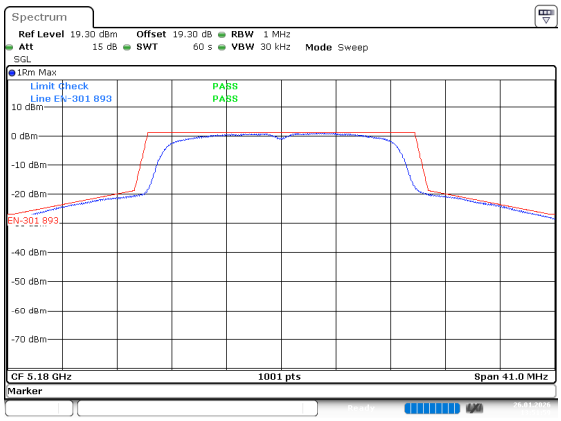


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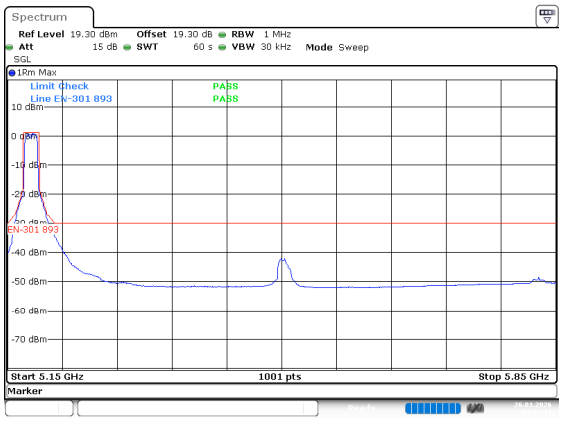


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802.11n20_5180MHz

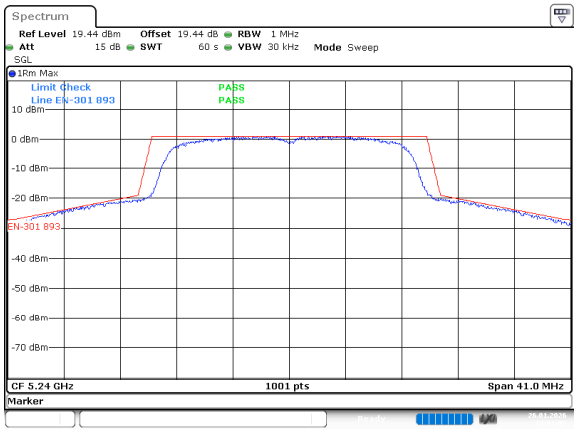


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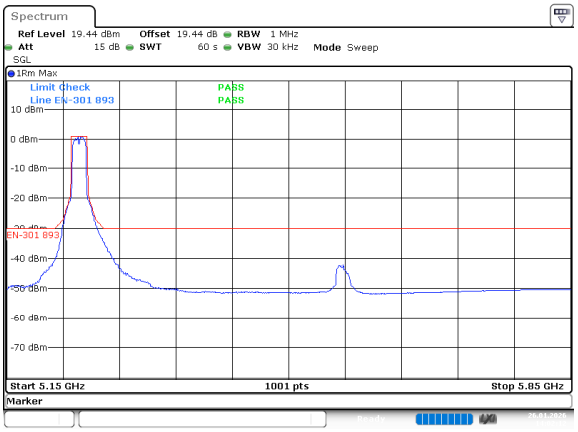


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802.11n20_5240MHz

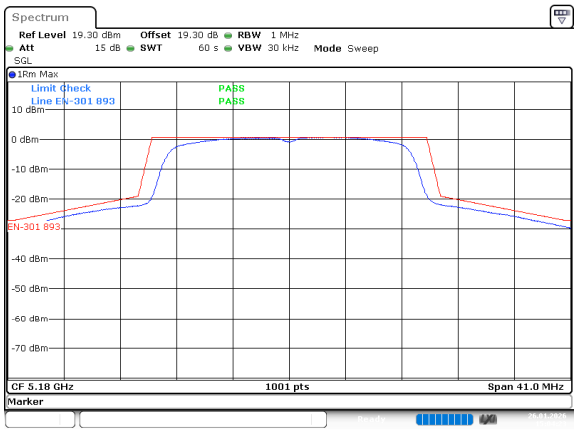


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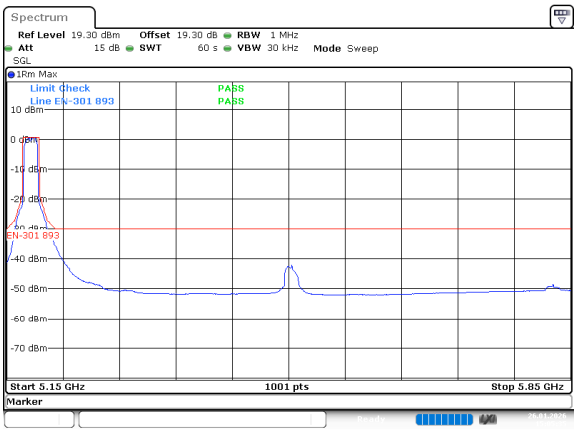


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802.11ac20_5180MHz

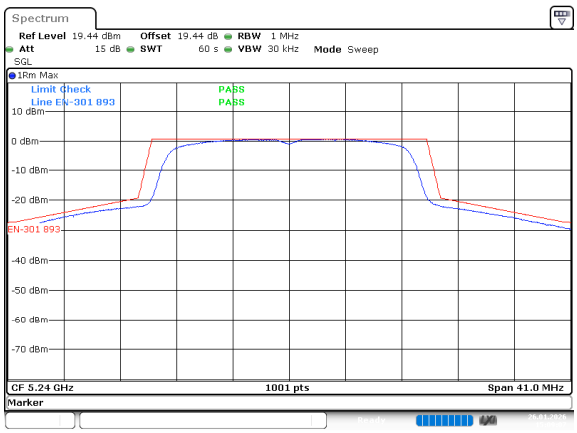


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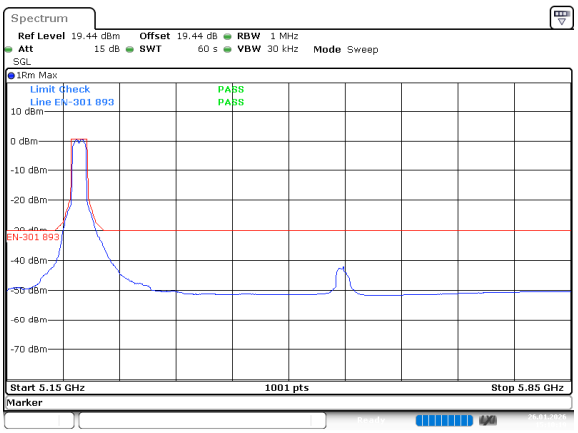


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802.11ac20_5240MHz

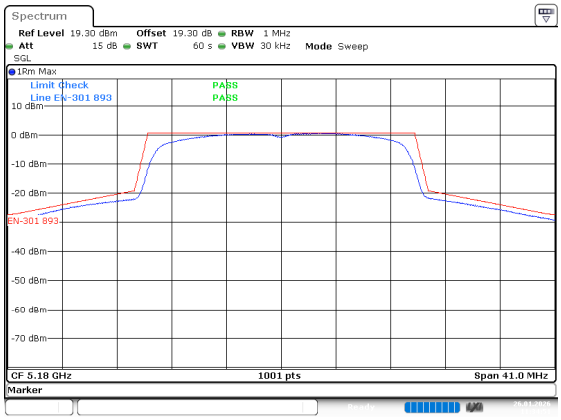


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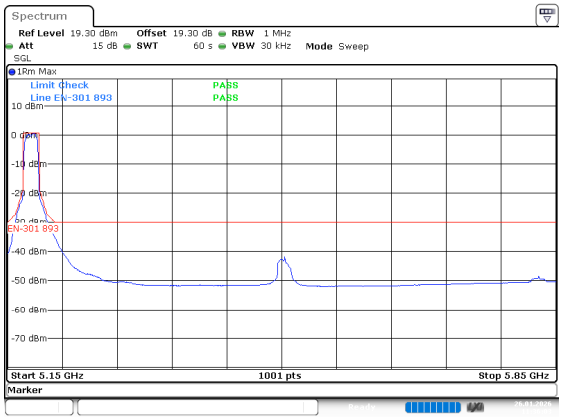


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802.11ax20_5180MHz_RU_Full

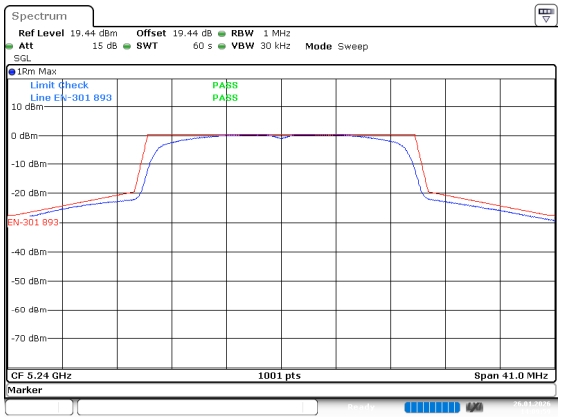


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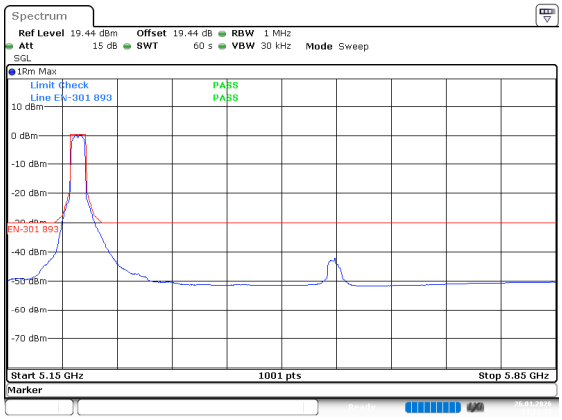


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Date: 26.JAN.2026 11:36:04

802.11ax20_5240MHz_RU_Full



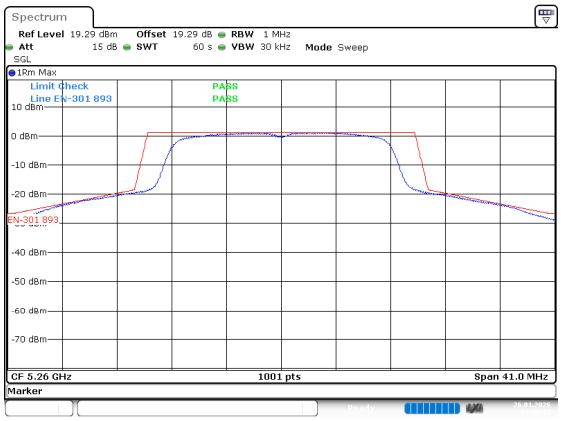
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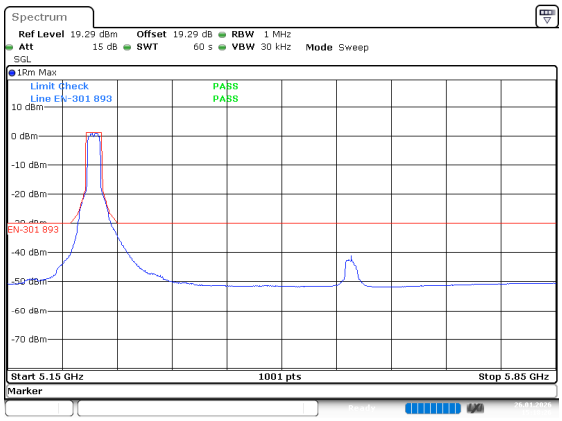
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Date: 26.JAN.2026 14:11:12

Band2, Test Condition: Normal

802.11a_5260MHz

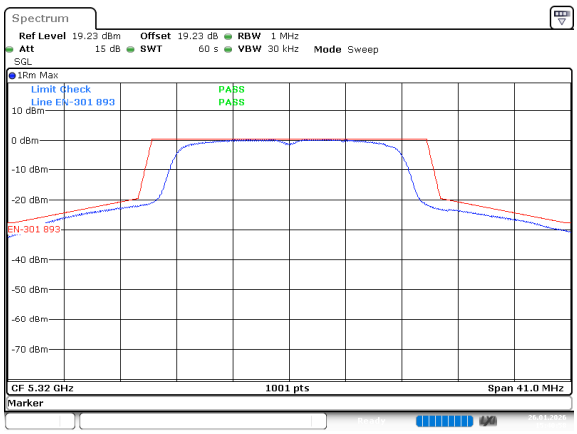


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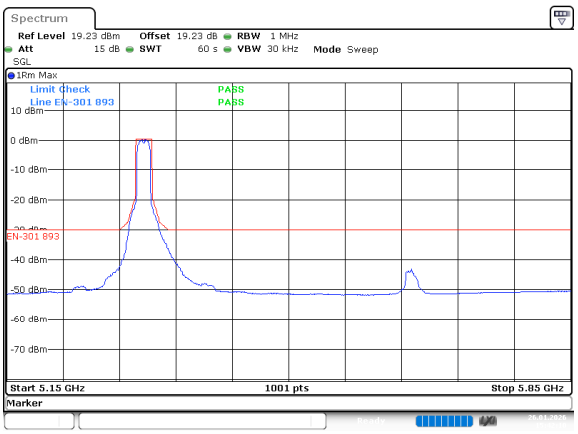


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802.11a_5320MHz

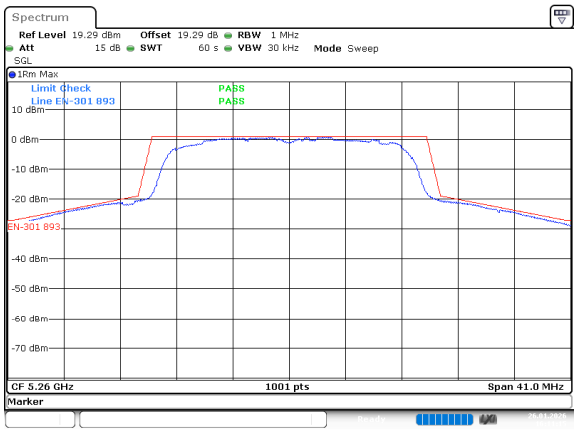


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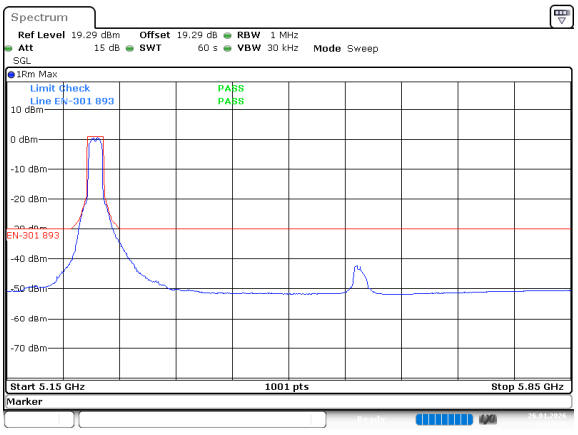


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Date: 26.JAN.2026 15:42:10

802.11n20_5260MHz

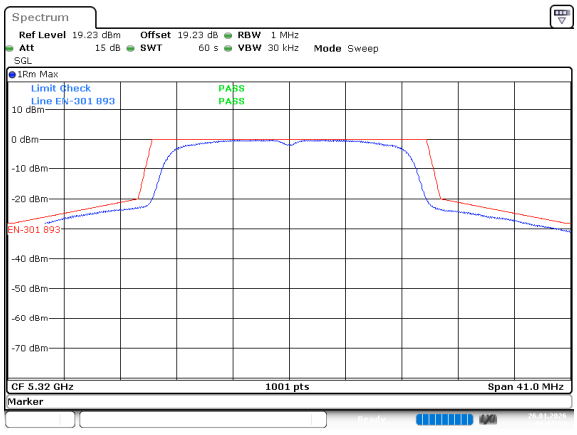


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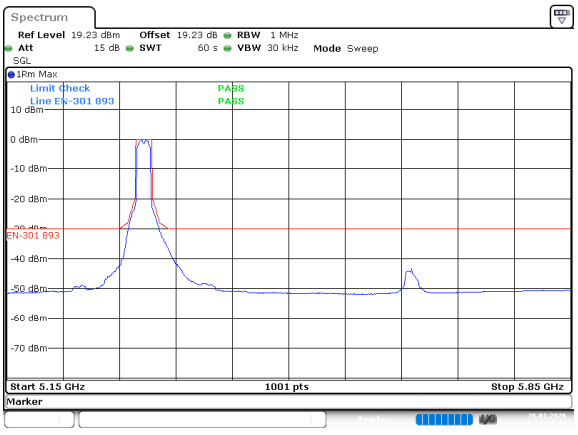


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Date: 26.JAN.2026 16:12:27

802.11n20_5320MHz

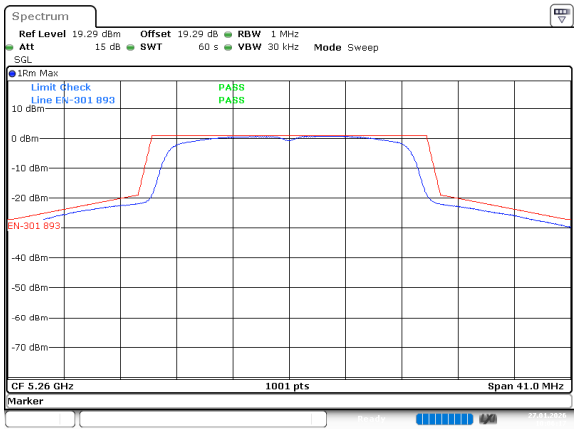


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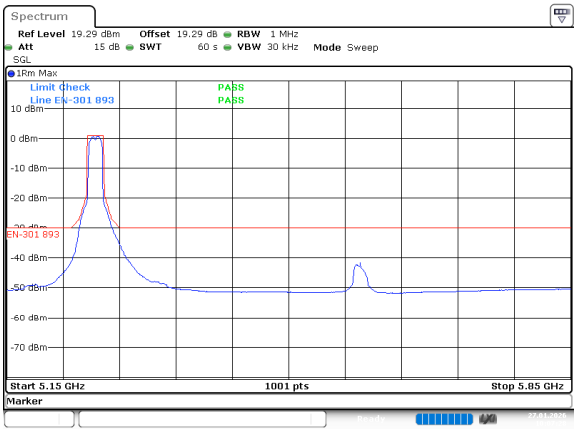


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Date: 26.JAN.2026 16:19:04

802.11ac20_5260MHz

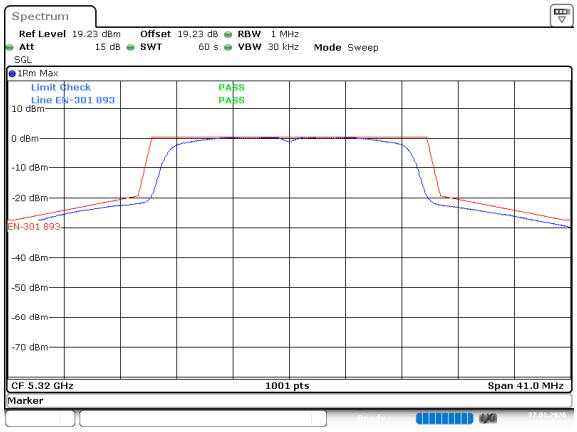


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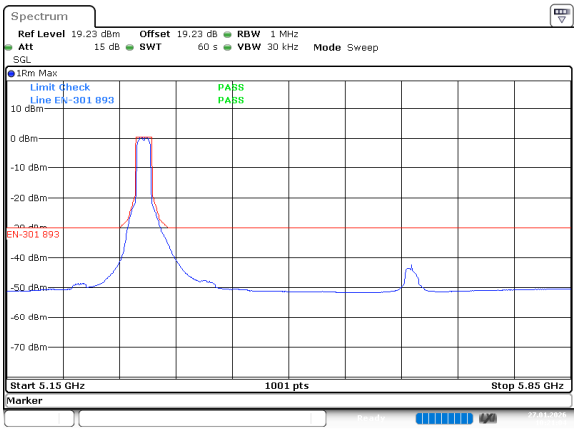


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Date: 27.JAN.2026 10:07:28

802.11ac20_5320MHz

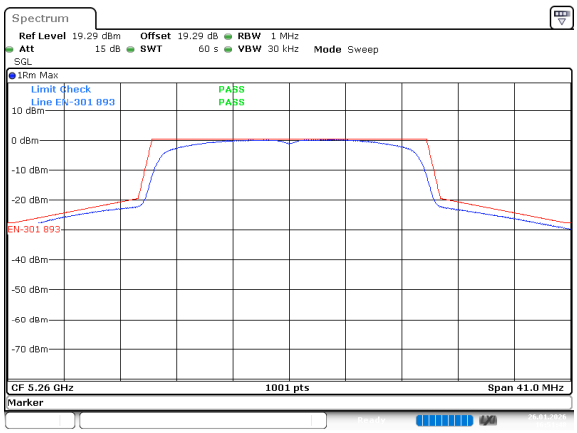


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 10:19:52

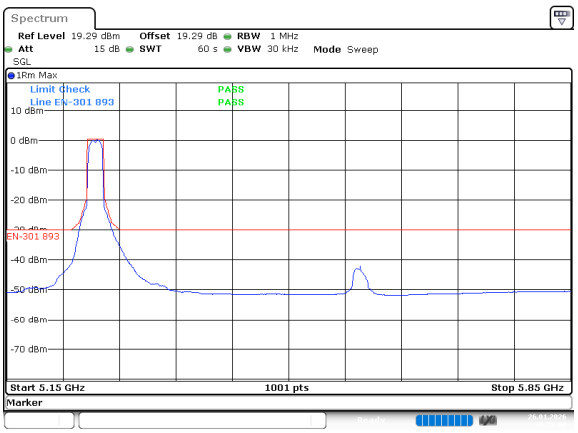


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 10:21:04

802.11ax20_5260MHz_RU_Full

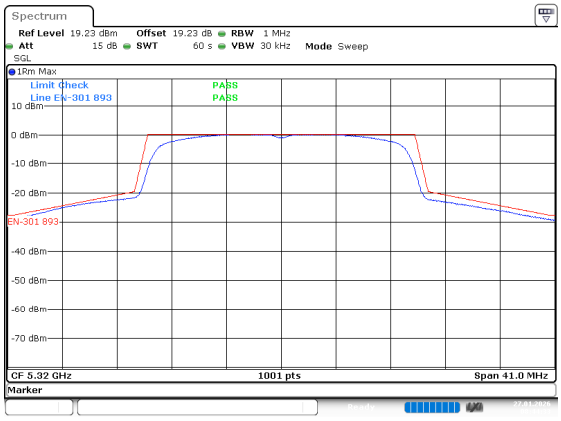


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 26.JAN.2026 16:51:48

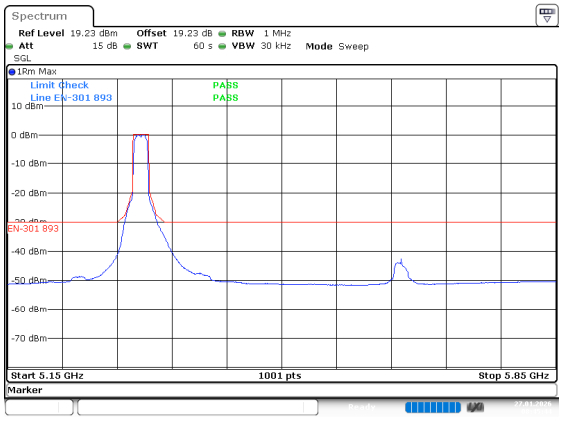


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 26.JAN.2026 16:53:00

802.11ax20_5320MHz_RU_Full



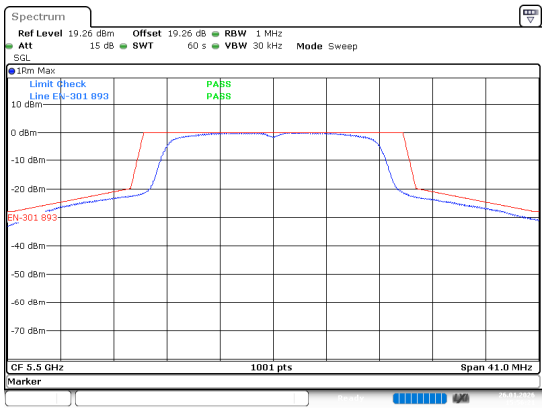
ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 08:44:33



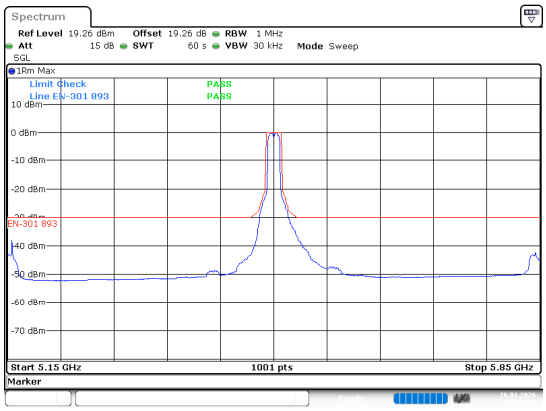
ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 08:45:44

Band3, Test Condition: Normal

802.11a_5500MHz

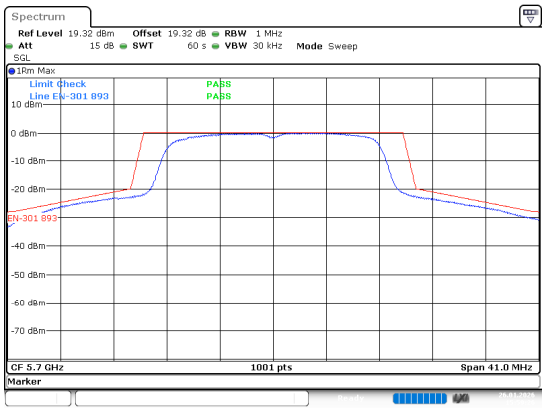


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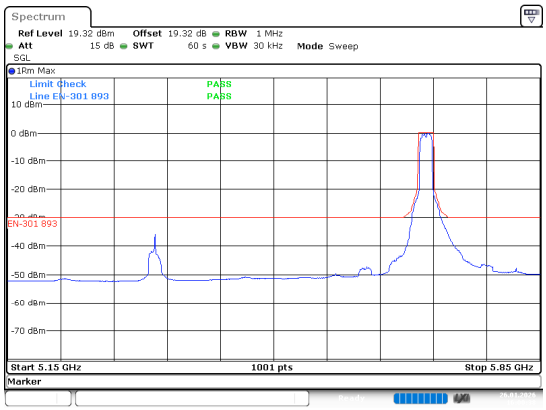


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 26.JAN.2026 15:57:32

802.11a_5700MHz

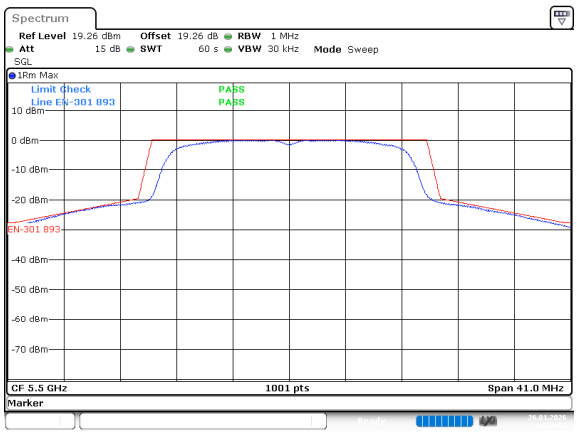


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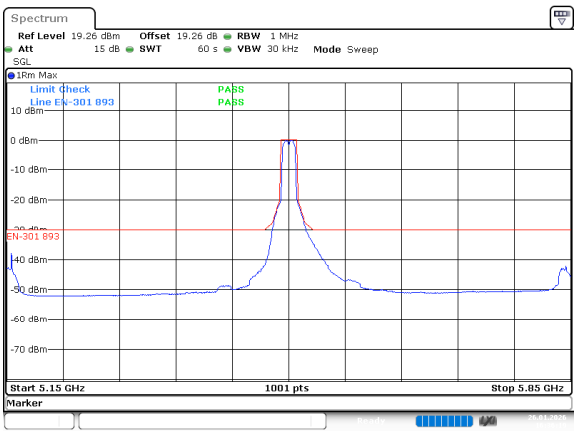


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 26.JAN.2026 16:00:38

802.11n20_5500MHz

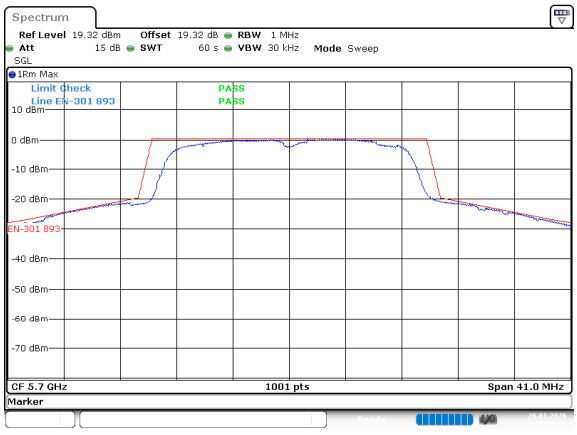


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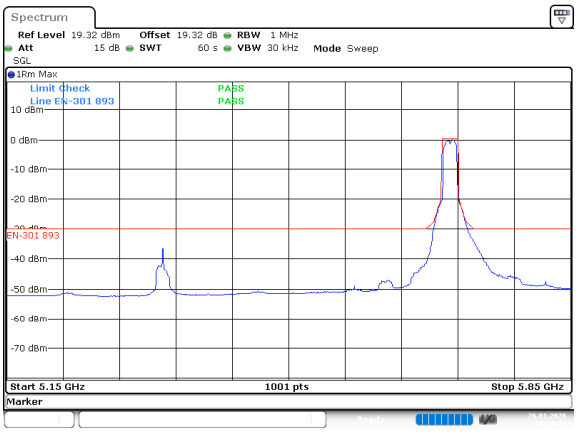


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 26.JAN.2026 16:36:19

802.11n20_5700MHz

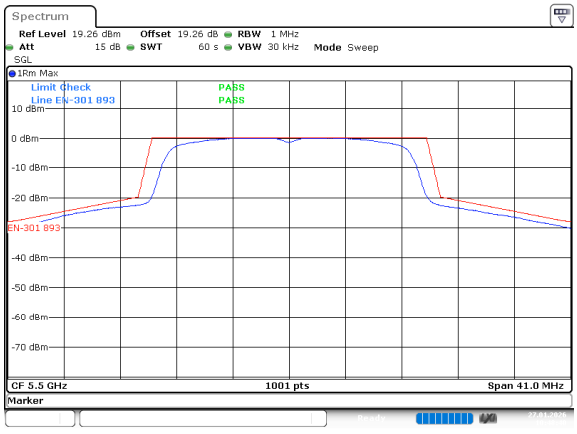


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Date: 26.JAN.2026 16:38:17

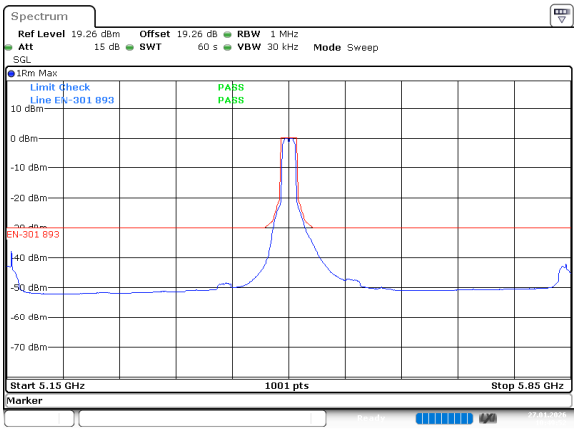


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 26.JAN.2026 16:39:28

802.11ac20_5500MHz

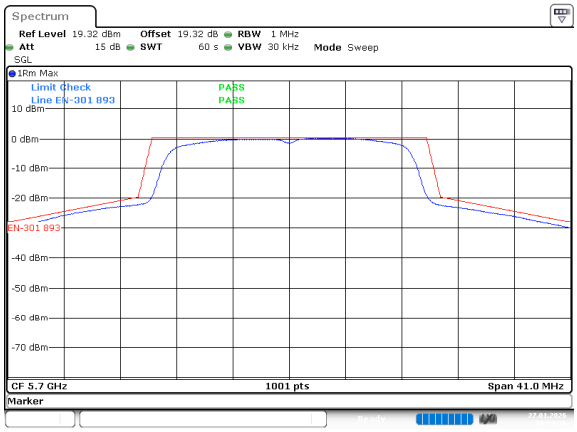


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Date: 27.JAN.2026 10:48:40

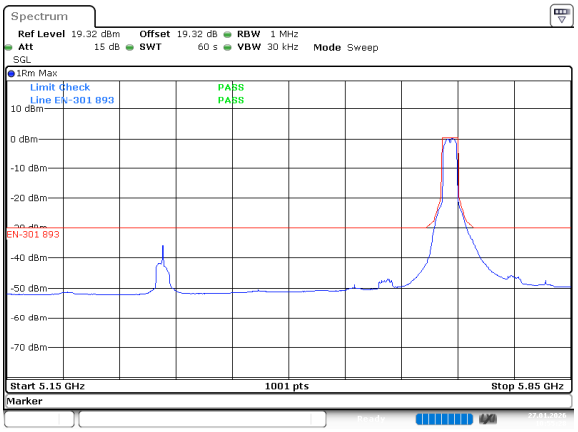


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 10:49:52

802.11ac20_5700MHz

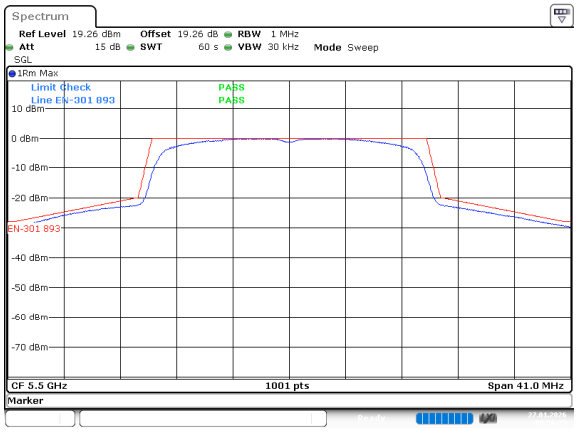


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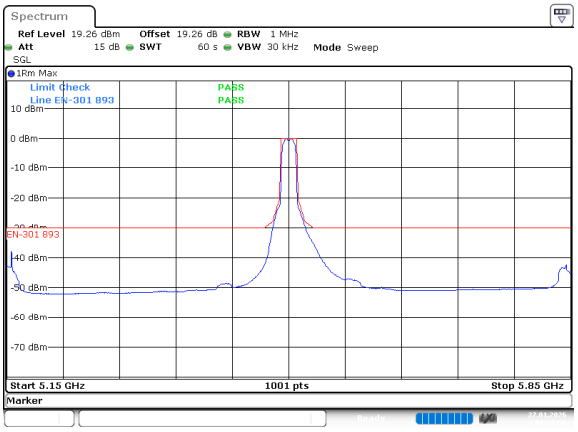


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 10:55:28

802.11ax20_5500MHz_RU_Full

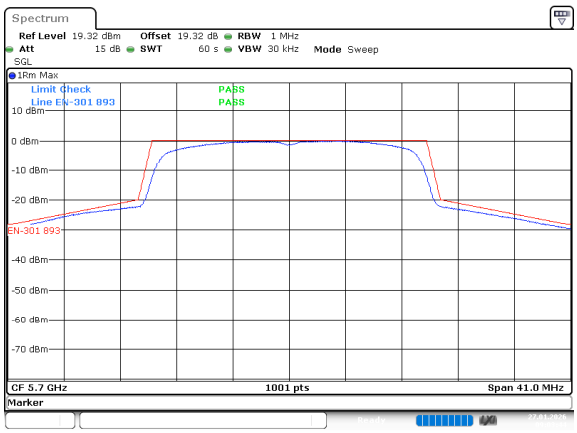


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 08:56:25

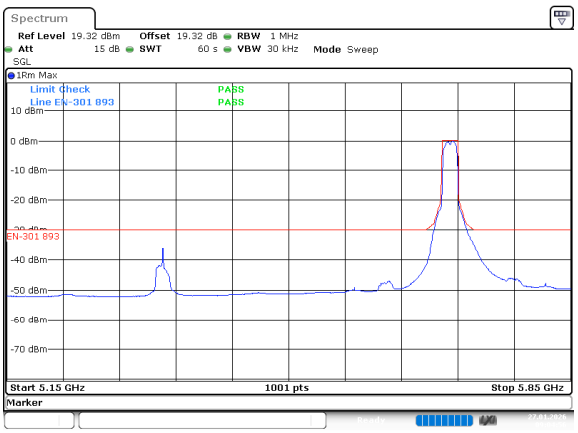


ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 08:57:36

802.11ax20_5700MHz_RU_Full



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 09:03:44



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 09:04:56

6 – RECEIVER SPURIOUS EMISSIONS

Definition

Receiver spurious emissions are emissions at any frequency when the equipment is in receive mode.

Limit

The receiver spurious emissions shall not exceed the limits given in table 4.
In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are ERP for emissions up to 1 GHz and EIRP for emissions above 1 GHz.

Table 4: Spurious radiated emission limits

Frequency range	Maximum power	Measurement bandwidth
30 MHz ≤ f ≤ 1 GHz	-57 dBm	100 kHz
1 GHz < f ≤ 26 GHz	-47 dBm	1 MHz
NOTE: Information in this table is based on ERC Recommendation 74-01 [i.13], Annex 2, Table 6.		

Test method

- ☐ Conducted with connector on UUT
- ☒ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.7

Test Data

Test Result: *Compliant. Pre-scan all modes, worst case please refer to following tables.*

802.11 a **5180 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
114.72	H	40.64	-69.56	0.00	0.14	-69.70	-57.00	12.70
115.94	V	41.25	-75.74	0.00	0.14	-75.88	-57.00	18.88
1682.96	H	50.21	-65.84	9.49	0.45	-56.80	-47.00	9.80
1671.60	V	50.12	-66.82	9.47	0.45	-57.80	-47.00	10.80

802.11 a **5320 MHz**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
105.96	H	39.76	-71.69	0.00	0.13	-71.82	-57.00	14.82
111.62	V	41.36	-76.16	0.00	0.14	-76.30	-57.00	19.30
1389.60	H	49.86	-65.80	8.56	0.38	-57.62	-47.00	10.62
1677.50	V	50.24	-66.64	9.48	0.45	-57.61	-47.00	10.61

802.11 a **5500 MHz**

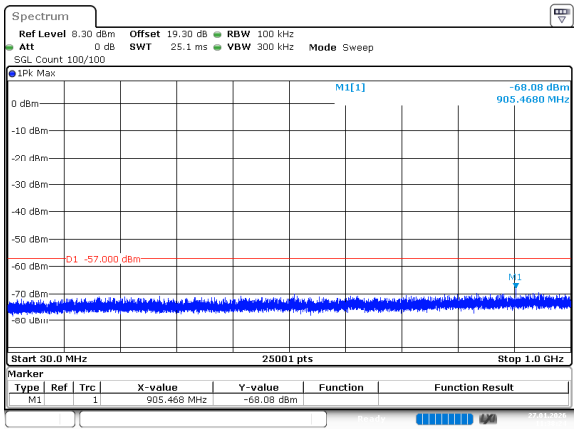
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
109.62	H	40.25	-70.67	0.00	0.13	-70.80	-57.00	13.80
101.52	V	40.18	-78.57	0.00	0.13	-78.70	-57.00	21.70
1695.60	H	49.78	-66.22	9.51	0.46	-57.17	-47.00	10.17
1687.20	V	50.23	-66.55	9.50	0.45	-57.50	-47.00	10.50

Note 1:The unit of antenna gain is dBd for frequency below 1GHz and is dBi for frequency above 1GHz.
Note 2:
Absolute Level = Substituted Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level

Mode	Freq. (MHz)	Test Band (RBW)	Frequency Range		Result (dBm)	Result (nW)	Limit (dBm)	Verdict
			Start(MHz)	Stop(MHz)				
802.11a	5180	Band I (100kHz)	30	1000	-68.08	0.156	-57	Pass
		Band II (1MHz)	1000	26000	-51.56	6.975	-47	Pass
	5320	Band I (100kHz)	30	1000	-69.13	0.122	-57	Pass
		Band II (1MHz)	1000	26000	-51.38	7.278	-47	Pass
	5500	Band I (100kHz)	30	1000	-68.84	0.131	-57	Pass
		Band II (1MHz)	1000	26000	-51.70	6.753	-47	Pass

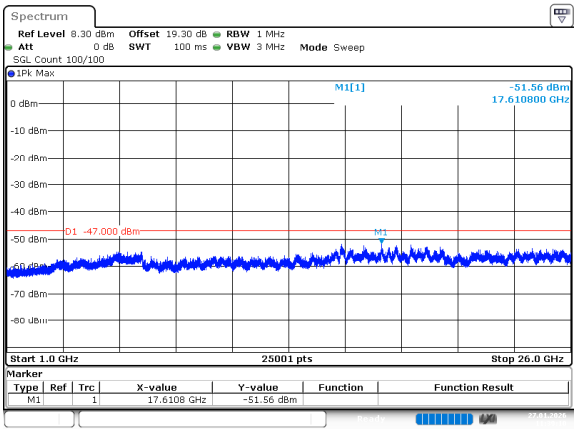
Band1, Test Condition: Normal

802.11a_5180MHz(30MHz~1GHz)



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 11:38:24

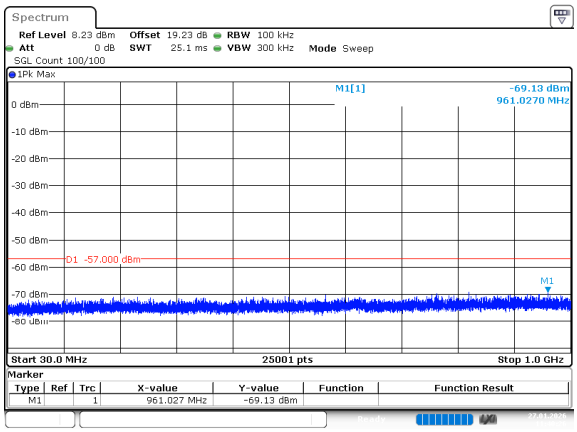
802.11a_5180MHz(1GHz~26GHz)



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 11:39:10

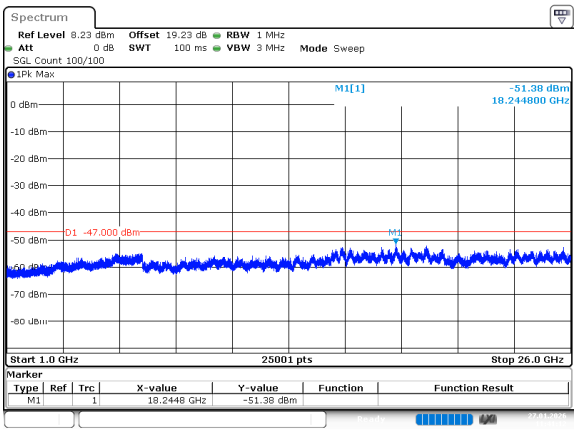
Band2, Test Condition: Normal

802.11a_5320MHz(30MHz~1GHz)



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 11:40:26

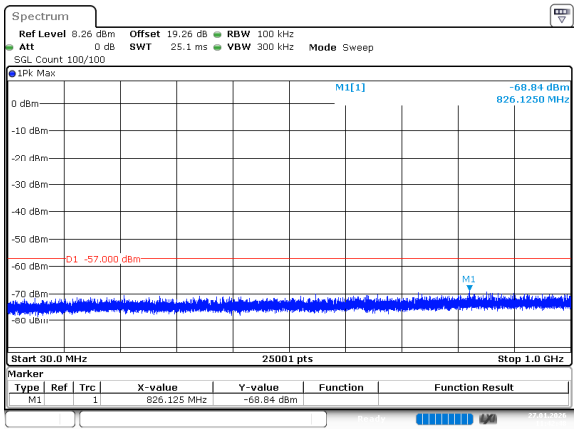
802.11a_5320MHz(1GHz~26GHz)



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 11:41:12

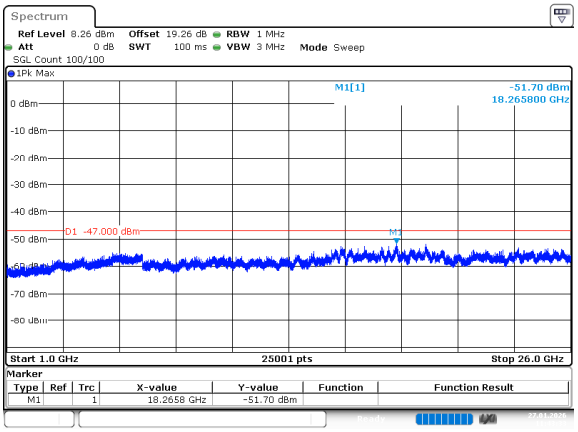
Band3, Test Condition: Normal

802.11a_5500MHz(30MHz~1GHz)



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 11:42:48

802.11a_5500MHz(1GHz~26GHz)



ProjectNo.:2602P42655E-RF Tester:Cooper Zhou
Date: 27.JAN.2026 11:43:33

8 –ADAPTIVITY (CHANNEL ACCESS MECHANISM)

Applicable Standard

Adaptivity (Channel Access Mechanism) is an automatic mechanism by which a device limits its transmissions and gains access to an Operating Channel.

§4.2.7.3.1 Frame Based Equipment:

Frame Based Equipment shall implement a Listen Before Talk (LBT) based Channel Access Mechanism to detect the presence of other RLAN transmissions on an Operating Channel.

§4.2.7.3.2 Load Based Equipment:

Load based Equipment shall implement a Listen Before Talk (LBT) based Channel Access Mechanism to detect the presence of other RLAN transmissions on an Operating Channel.

Limit

According to ETSI EN 301 893 V2.2.1 (2024-11) §4.2.7.3.1&§4.2.7.3.2

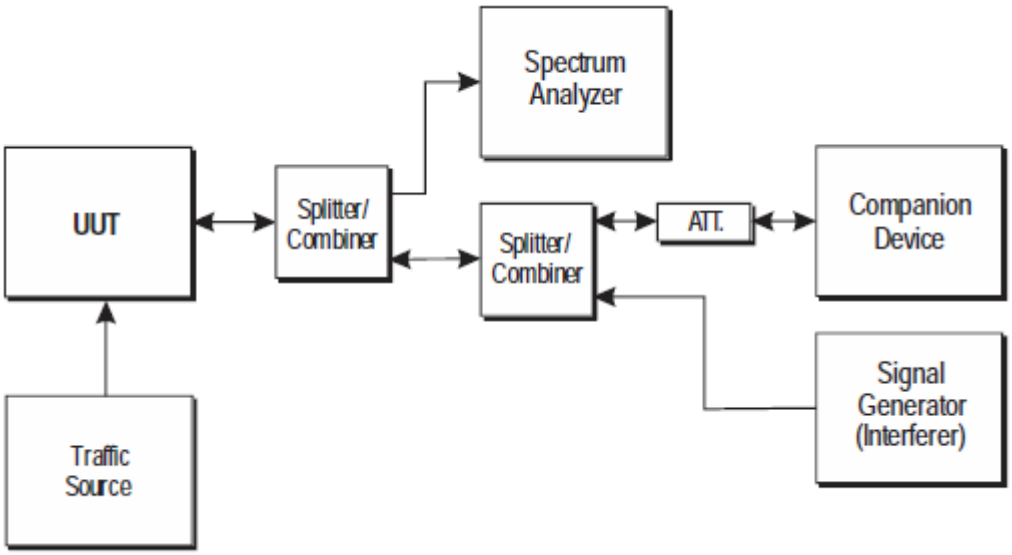
Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.9

Block Diagram of Test Setup



Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T430	AA887-03
Tenda	Router	W18E	E9382010341000028

Test Data

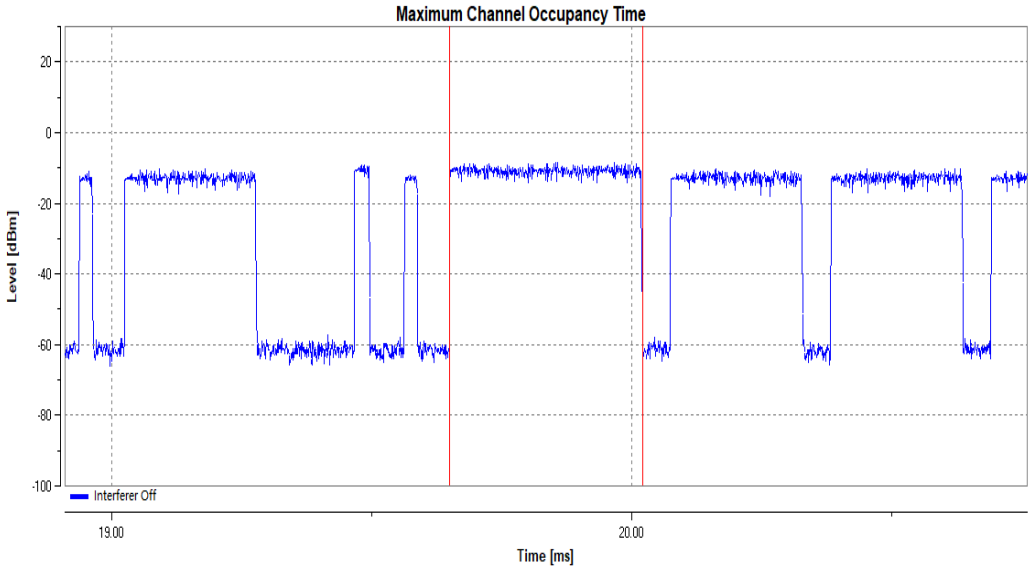
Test Result: *Compliant. Please refer to following tables.*

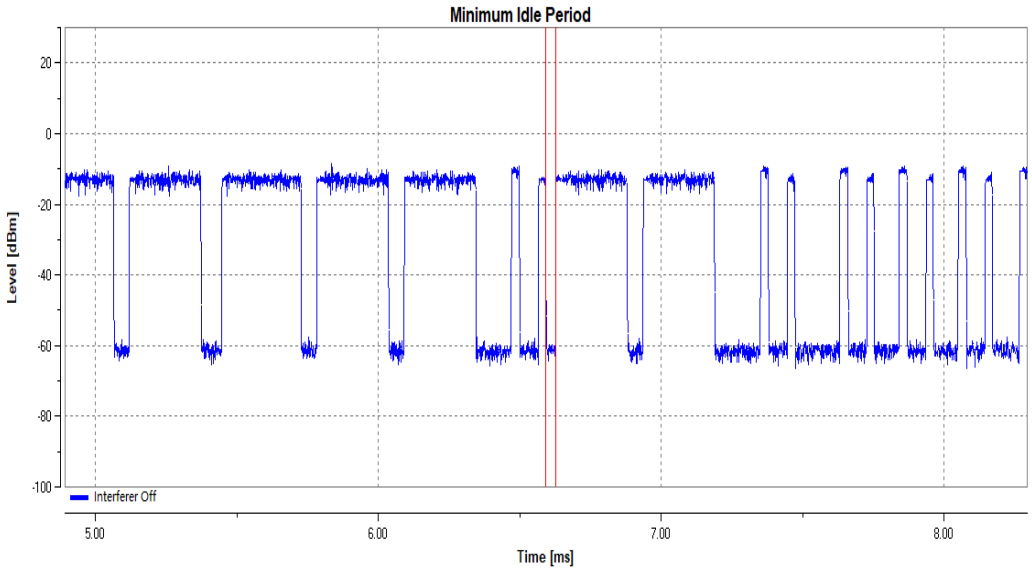
Test Mode	Ant.	Channel	Priority Class	Max. COT [ms]	Limit [ms]	Min.Idle Time[ms]	Limit [ms]	Idle Period probability	Verdict
11A	Ant1	5180	3	0.370	4.000	0.034	0.027	See the graph	PASS

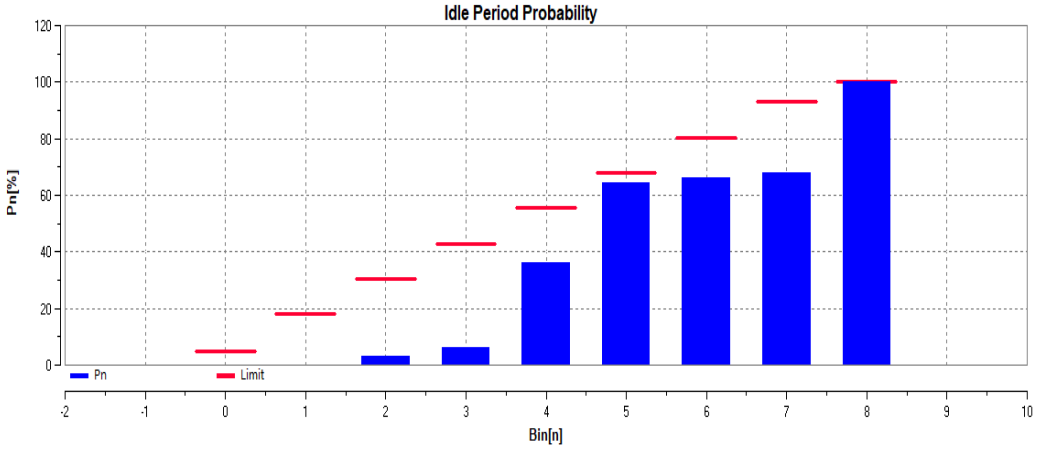
Test Mode	Ant.	Channel	Interference Type	Add interference Time[ms]	Interference Level [dBm/MHz]	Max.Short Control number[n]	Limit [n]	Max.Short Control Time[ms]	Limit [ms]	Verdict
11A	Ant1	5180	AWGN	2100	-70.60	3	50	1.30	2.5	PASS
			OFDM	2100	-70.60	2	50	2.30	2.5	PASS
			LTE	2100	-70.60	1	50	2.50	2.5	PASS

Please refer to following plots:

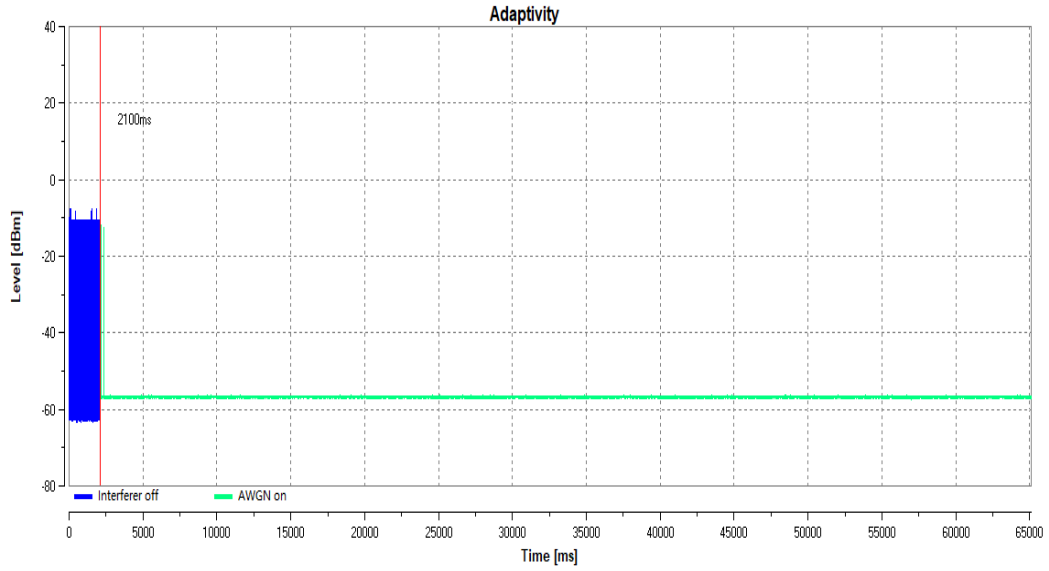
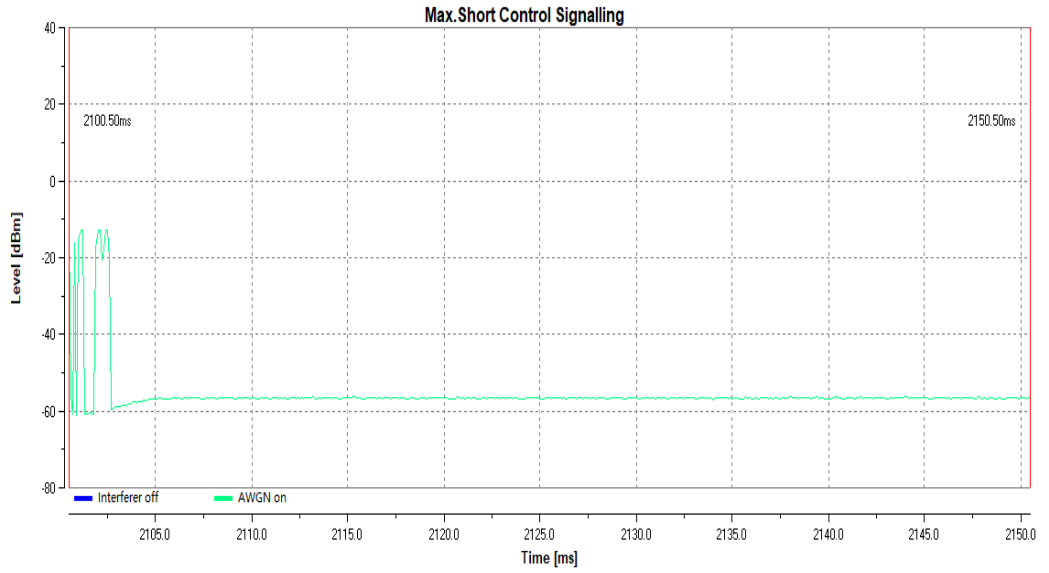
11A_Ant1_5180

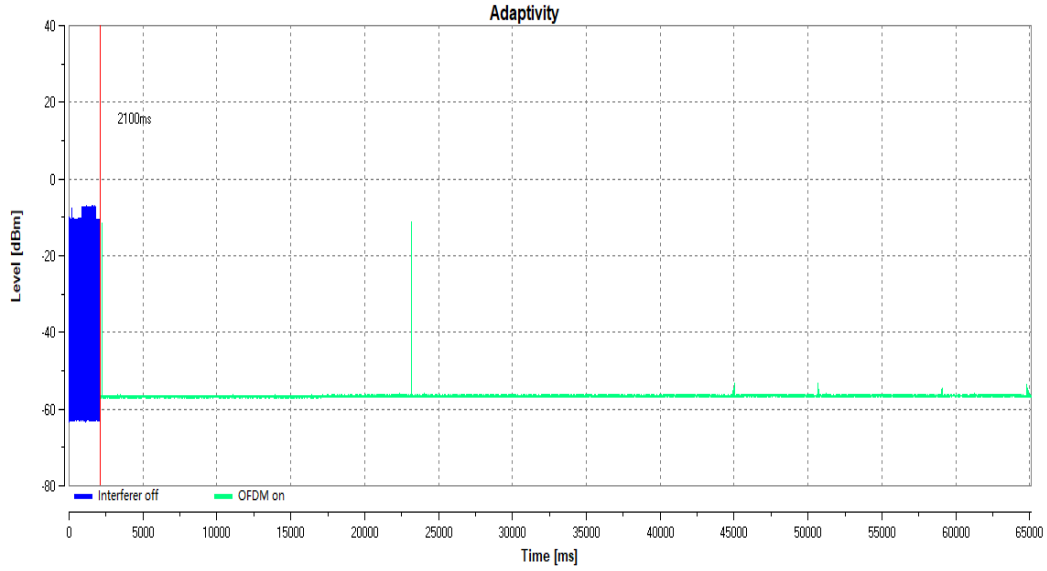
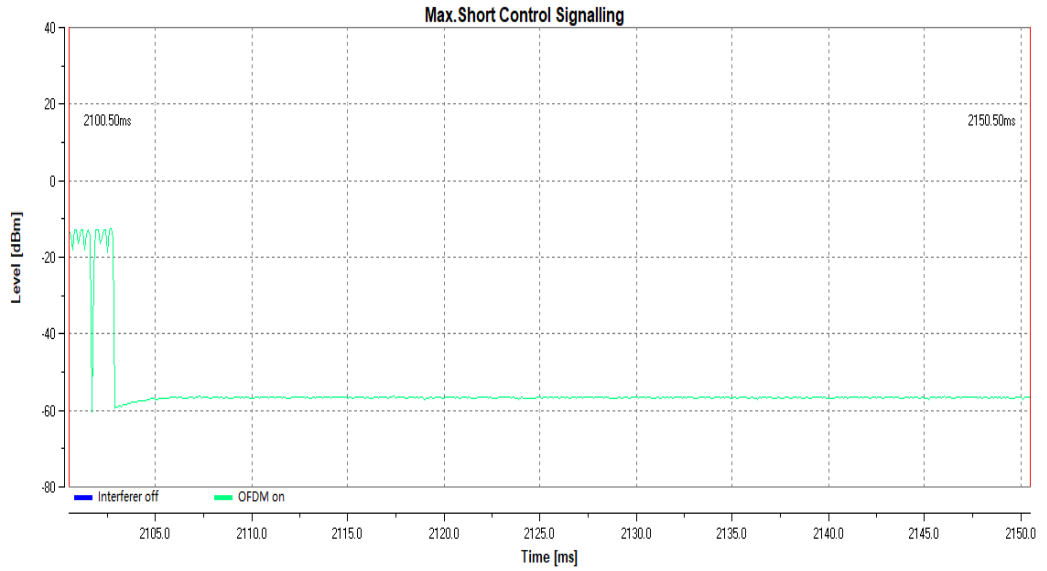


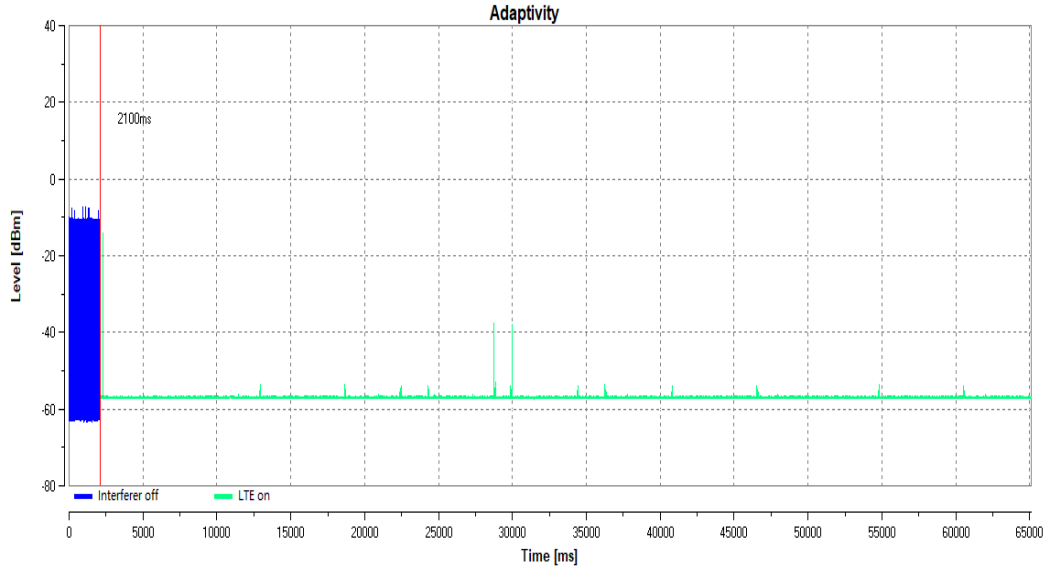
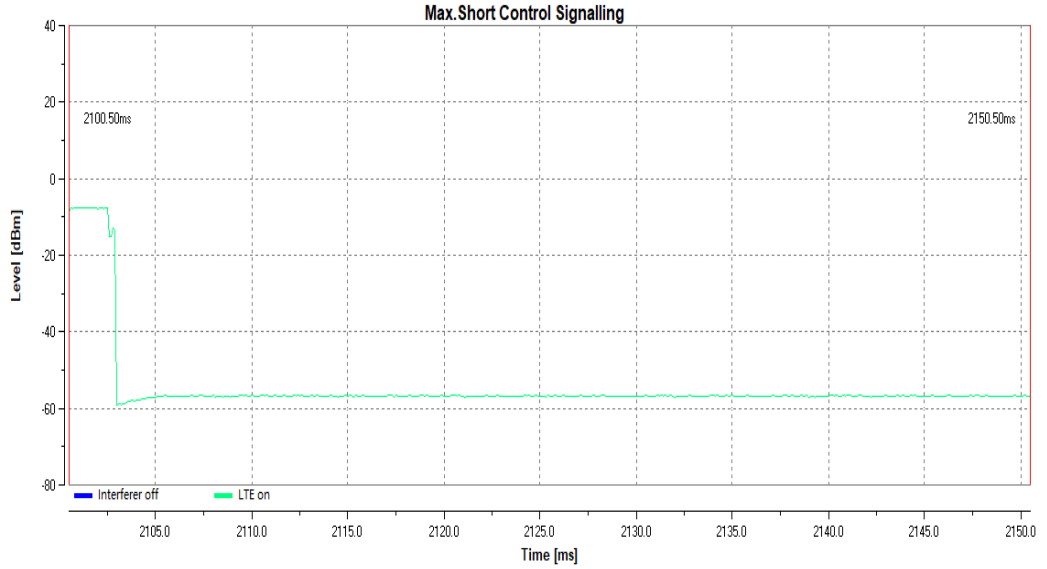




n	0	1	2	3	4	5	6	7	8
B[n]	0	0	32	30	304	284	19	14	325
P[n]	0	0	3.17	6.15	36.31	64.48	66.37	67.76	100
Limit	5	18	30.5	43	55.5	68	80.5	93	100

11A_Ant1_5180



11A_Ant1_5180



11A_Ant1_5180



9 – RECEIVER BLOCKING

Applicable Standard

Receiver blocking is a measure of the capability of the equipment to receive a wanted signal on its usable channels without exceeding a given degradation due to the presence of an unwanted input signal (blocking signal) on frequencies other than those of the operating bands.

Limit

For equipment that supports a PER or FER test to be performed, the minimum performance criterion shall be a PER or FER less than or equal to 10 %.
For equipment that does not support a PER or a FER test to be performed, the minimum performance criterion shall be no loss of the wireless transmission function needed for the intended use of the equipment.

While maintaining the minimum performance criteria as defined in clause 4.2.8.3, the blocking levels at specified frequency offsets shall be equal to or greater than the limits given in table 8.

Table 8: Receiver blocking parameters

Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power		Type of blocking signal
		Primary device or secondary device with radar detection (see note 2 in table D.2) (dBm)	Secondary device without radar detection (see note 2 in table D.2) (dBm)	
P_{min} + 6 dB	5 100	-53	-59	Continuous wave
P_{min} + 6 dB	4 900 5 000 5 975	-47	-53	Continuous wave
NOTE: P_{min} is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined clause 4.2.8.3 in the absence of any blocking signal.				

Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.10

Block Diagram of Test Setup

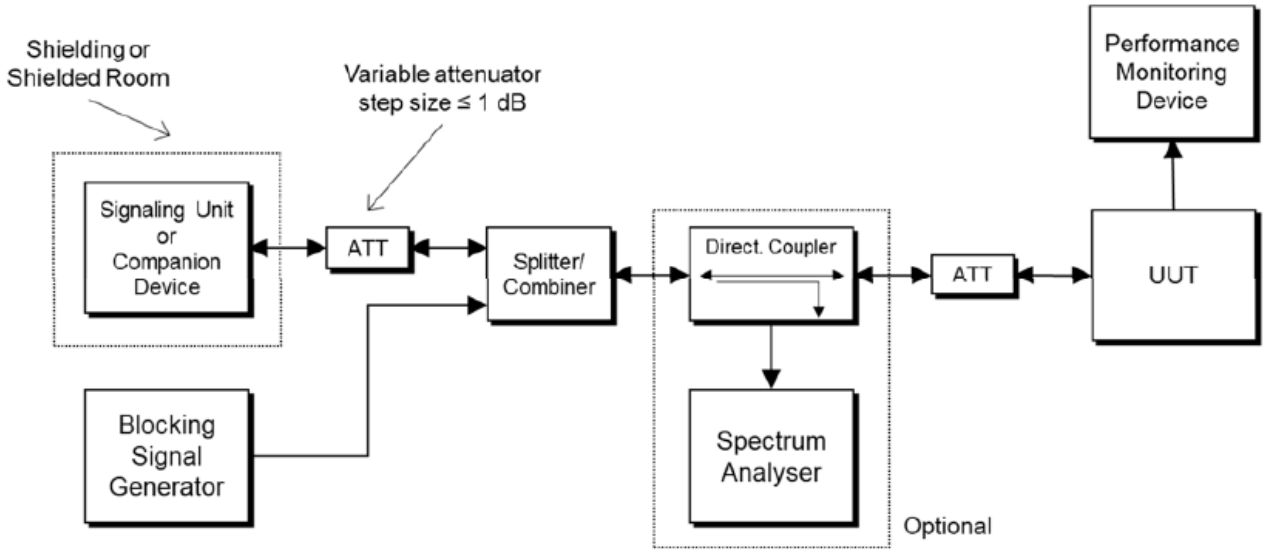


Figure 21: Test setup for receiver blocking

Test Data

Test Result: *Compliant. Please refer to following tables.*

Note: CMW500 was used to monitor the PER, and the worst case as below.

Test Mode	Test Frequency (MHz)	Pmin (dBm)	Wanted signal Power from companion device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)	Max Blocking Signal Power (dBm)	PER (%)	Limit (%)
802.11 a	5180	-85	-79	5100	-59	-51	2.8	≤ 10
				4900	-53	-48	3.8	
				5000	-53	-49	4.1	
				5975	-53	-42	5.2	
	5260	-80	-74	5100	-59	-49	3.5	≤ 10
				4900	-53	-45	4.5	
				5000	-53	-42	5.3	
				5975	-53	-45	4.7	
	5500	-82	-76	5100	-59	-52	2.8	≤ 10
				4900	-53	-43	4.8	
				5000	-53	-45	3.7	
				5975	-53	-46	5.2	

10 – ADJACENT CHANNEL SELECTIVITY

Applicable Standard

Adjacent channel selectivity is a measure of the capability of the equipment to receive a wanted signal on its usable channels without exceeding a given degradation due to the presence of an interfering signal in an adjacent channel.

Limit

For equipment that supports a PER or FER test to be performed, the minimum performance criterion shall be a PER or FER less than or equal to 10 %.

For equipment that does not support a PER or a FER test to be performed, the minimum performance criterion shall be no loss of the wireless transmission function needed for the intended use of the equipment.

The limits defined in this clause apply when the equipment receives the wanted signal on a single channel and the occupied bandwidth of the interfering signal falls completely within a channel adjacent to this channel. Both channels have a nominal channel bandwidth as defined in clause 4.2.2.

While maintaining the minimum performance criteria as defined in clause 4.2.9.3, the adjacent channel interferer level shall be equal to or greater than the limit given in table 9 corresponding to a frequency offset within the range specified in table 9.

Table 9: Adjacent channel selectivity parameters

Wanted signal mean power from companion device (dBm)	Interferer signal frequency offset range (MHz)	Interferer signal power (dBm) (see note 2)	Type of interferer signal
P_{min} + 10 dB	20 ± 0,2	P_{min} + 26 dB	Same as the wanted signal with an equivalent occupied bandwidth
NOTE 1: P_{min} is the minimum level of the wanted signal (in dBm) required to meet the minimum performance criteria as defined clause 4.2.9.3 in the absence of any interfering signal. NOTE 2: The level specified for the interferer signal applies at the lowest data rate.			

Test method

- ☒ Conducted with connector on UUT
- ☐ Radiated
- ☐ Test fixture relative
- ☐ Test fixture normalized
- ☐ Test fixture level independent

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.11

Test Data

Test Result: *Compliant. Please refer to following tables.*

Test Mode	Test Frequency (MHz)	Pmin (dBm)	Wanted signal Power from companion device (dBm)	Interferer Signal Frequency (MHz)	Interferer Signal Power (dBm)	PER (%)	Limit (%)
802.11 a	5180	-85	-75	5159.8	-59	4.4	≤ 10
				5160.2		3.8	
				5199.8		5.7	
				5200.2		2.9	
	5260	-80	-70	5239.8	-54	4.5	≤ 10
				5240.2		5.2	
				5279.8		3.5	
				5280.2		4.8	
	5500	-82	-72	5479.8	-56	2.8	≤ 10
				5480.2		4.8	
				5519.8		3.1	
				5520.2		4.3	

12 – COUNTRY DETERMINATION CAPABILITY

Applicable Standard

Country determination capability is a feature of an RLAN device which enables the device to be configured automatically according to the regulatory requirements applicable at the location where the device operates.

This includes implementations where the country determination capability is present in the RLAN device itself or in external equipment associated with the device.

Details of which CEPT countries permit use of WAS/RLAN in sub-band 4 or parts thereof are found in ECO Report 06 [i.15].

Requirements

Before the RLAN device starts transmitting in sub-band 4 with an RF output power of greater than 25 mW EIRP, the RLAN device shall use the country determination capability to identify the country where it is located. The RLAN device shall not transmit in sub-band 4 with an RF output power of greater than 25 mW EIRP, if any of the following applies:

- The RLAN device is in a country where regulatory requirements prohibit transmitting in sub-band 4 with an RF output power of greater than 25 mW EIRP.

- The RLAN device cannot identify the country where the RLAN device is located.

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §B.3.4.13

Test Data

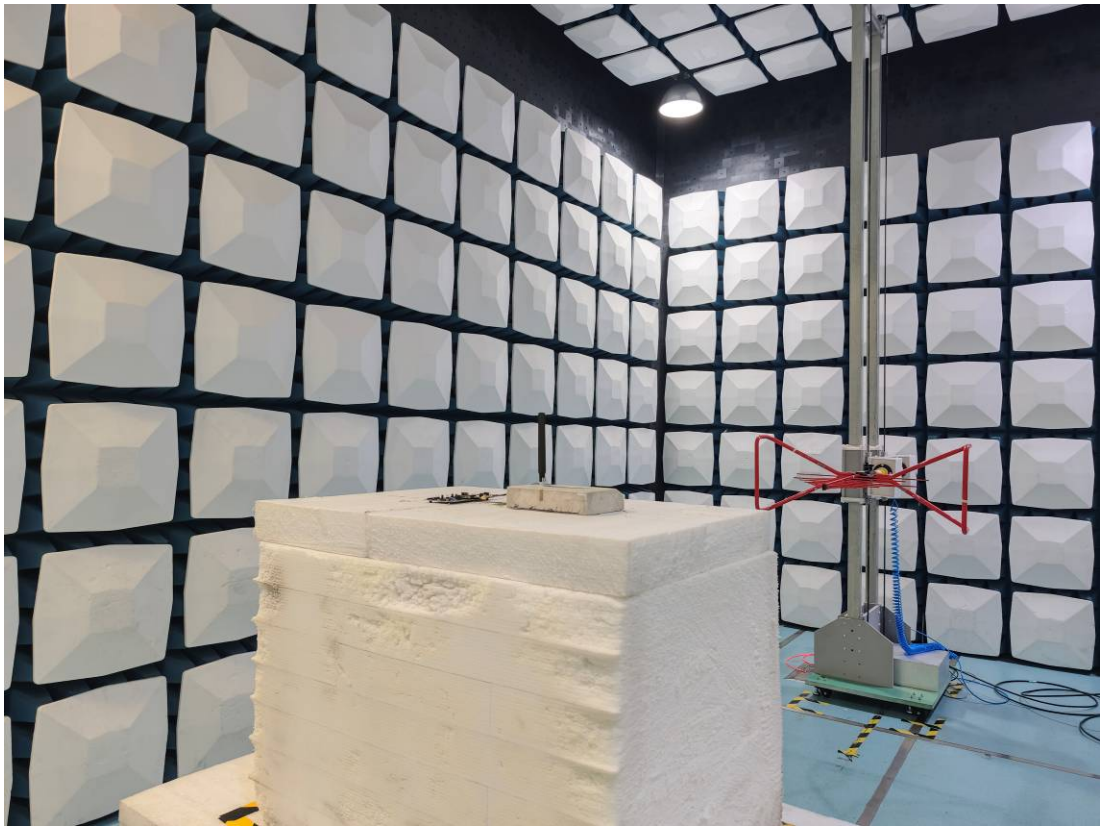
Test Result: N/A. Only required for RLAN devices that are capable of applying an RF output power of greater than 25 mW EIRP in sub-band 4, the output power is less than 25 mW EIRP in sub-band 4 refer to report 2602P42655E-22B.

EXHIBIT A – EUT PHOTOGRAPHS

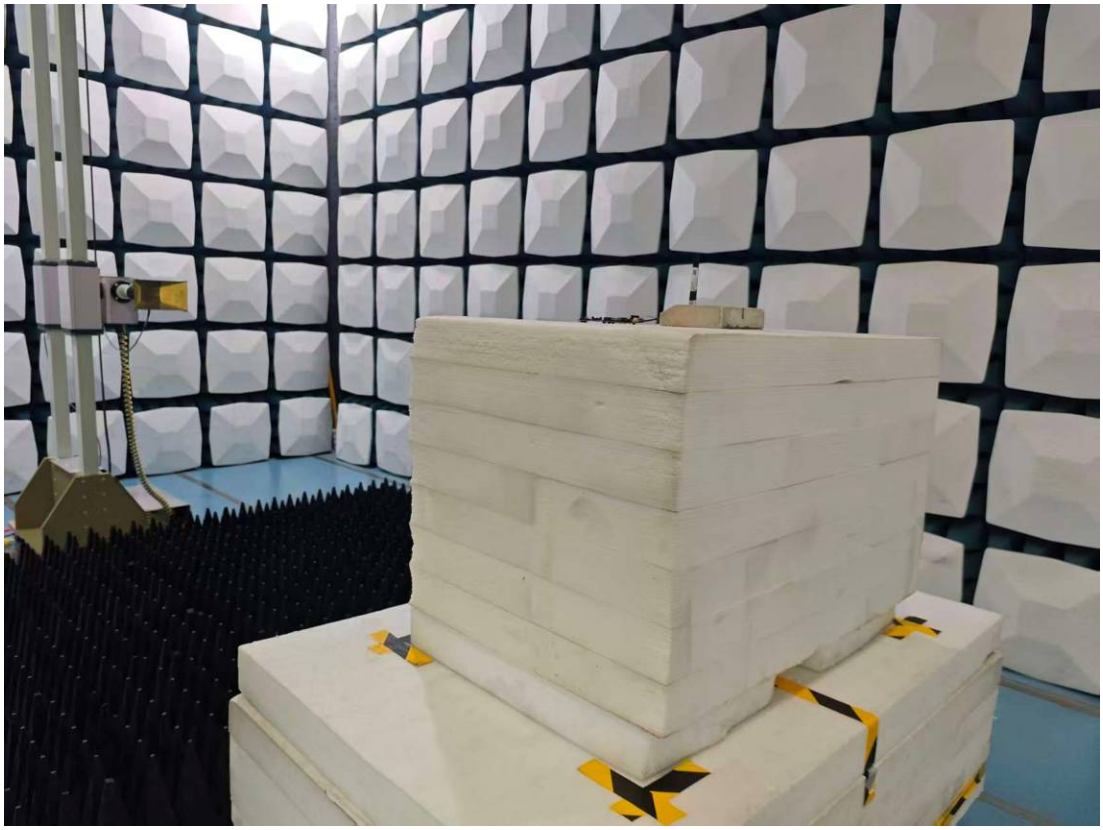
For photos in this section, please refer to report No.: 2602P42655E-22A EXHIBIT A.

EXHIBIT B – TEST SET UP PHOTOGRAPHS

Radiated Emission Below 1GHz View



Radiated Emission Above 1GHz View



DECLARATION OF SIMILARITY LETTER

Renesas Design Korea Inc.
Add: 7th SiliconPark, 35 Pangyo-ro 255 beon-gil Bundang-gu, Seongnam-si, Gyeonggi-do, 13486 Republic of Korea
Tel: + 82-2-567-1903
Email: kn.kim.pv@renesas.com

DECLARATION OF SIMILARITY

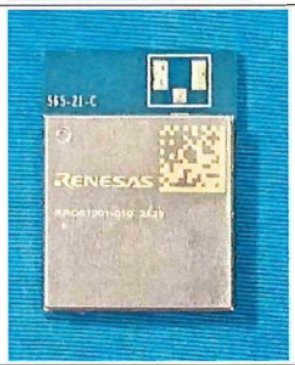
Date: 2026-01-19

To whom it may concern

Dear Sir or Madam:

We, Renesas Design Korea Inc., hereby declare that the product, named RRQ61001 Module, model RRQ61001-010 is electrically similar with the model RRQ61001-009 which was tested by Bay Area Compliance Laboratories Corp.(Dongguan).

The differences between those models and that are declared similar are as follows:

Model	Difference		Other
RRQ61001-009		With external antenna port	Only the different model name and with or without external antenna port. The software is same.
RRQ61001-010		Without external antenna port	

Please contact me should there be need for any additional clarification or information.

Best Regards,

Signature:
Printed Name: Kui Nam Kim
Title: Vice President

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