TEST REPORT

Applicant/Manufacturer:	Shenzhen Huafurui Technology Co., Ltd.
Address:	Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China
Report Number:	2601R49433E-RF-22D

Test Standard (s)

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

Sample Description

Product Type:	Smartphone
Model No.:	KINGKONG ES 5
Multiple Model(s) No.:	N/A
Trade Mark:	CUBOT
Date Received:	2026-03-08
Issue Date:	2026-05-29

Test Result:	Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

GaLa Liu

RF Engineer

Approved By:

Jim Cheng

RF Supervisor

Note: 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. Customer model name, addresses, names, trademarks etc. are included.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2601R49433E-RF-22D	Original Report	2026-05-29

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	5180-5240MHz, 5260-5320MHz, 5500-5700MHz
Mode	802.11a/n20/n40/ac20/ac40
Maximum EIRP	5180-5240MHz: 10.76dBm 5260-5320MHz: 13.52dBm 5500-5700MHz: 14.41dBm
Modulation Technique	OFDM
TPC Function	N/A
Beamforming	N/A
Antenna Specification#	Band 1: -2.7dBi; Band 2; -1.50dBi; Band 3: 0.3dBi; (It is provided by the manufacturer)
Voltage Range	DC 5/9V from adapter or DC 3.91V from Battery
Sample serial number	3IUC-9 for Radiated Emissions Test 3IUC-1 for RF Conducted Test (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Normal/Extreme Condition#	N.V.: Nominal Voltage: 3.91V_{DC} L.T.: Low Temperature -10℃ N.T.: Normal Temperature +25℃ H.T.: High Temperature +40℃ Note: the extreme test condition was declared by manufacturer.
Adapter Information	Model: TD-203G200170VF01 Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5V/3A, 9V/3A, 12V/2.5A, 15V/2A, 20V/1.5A PPS: 3.3V-16V/2A, 3.3V-11V/3A

Objective

This test report is 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).

Measurement Uncertainty

Item	Frequency Range		Expanded Measurement uncertainty
Emissions, Radiated	30MHz~1000MHz	Horizontal	5.10dB(k=2, 95% level of confidence)
	30MHz~1000MHz	Vertical	6.28dB(k=2, 95% level of confidence)
	1GHz~6GHz	/	6.18dB(k=2, 95% level of confidence)
	6GHz~18GHz	/	6.62dB(k=2, 95% level of confidence)
	18GHz~40GHz	/	6.66dB(k=2, 95% level of confidence)
Occupied Channel Bandwidth	/		52.29kHz(k=1.96, 95% level of confidence)
Radio frequency	/		81.235Hz(k=1.96, 95% level of confidence)
RF output power, Conducted	/		1.57dB(k=1.96, 95% level of confidence)
Power Spectral Density, conducted	/		2.09dB(k=1.96, 95% level of confidence)
Unwanted Emission, conducted	/		2.48dB(k=1.96, 95% level of confidence)
Temperature	/		±0.4℃
Time	/		±10%

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

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

Each test item follows test standards and with no deviation

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The device support 802.11a/n20/n40/ac20/ac40 mode, the n20/n40 mode was reduced test as identical parameter with ac20/ac40 mode.

For 5180-5240MHz Band, 6 channels are provided to test:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
38	5190	46	5230
40	5200	48	5240

For 5260-5320MHz Band, 6 channels are provided to test:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
54	5270	62	5310
56	5280	64	5320

For 5500-5700MHz Band, 17 channels are provided to test:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	120	5600
102	5510	124	5620
104	5520	126	5630
108	5540	128	5640
110	5550	132	5660
112	5560	134	5670
114	5570	136	5680
116	5580	140	5700
118	5590	/	/

EUT Exercise Software

Exercise Software#		Engineering mode		
Mode	**Data Rate**	**Channel Frequency (MHz)**	**TPC**	**Power Level#**
802.11a	6Mbps	5180	NA	24
		5240	NA	24
		5260	NA	24
		5320	NA	24
		5500	NA	24
		5700	NA	24
802.11ac20	MSC0	5180	NA	24
		5240	NA	24
		5260	NA	17
		5320	NA	17
		5500	NA	17
		5700	NA	24
802.11ac40	MSC0	5190	NA	24
		5230	NA	24
		5270	NA	16
		5310	NA	16
		5510	NA	16
		5670	NA	24
Note: The worst-case data rates are determined to be as above for each mode based upon investigation by measuring the power and PSD across all data rates bandwidths, and modulations.				

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT.

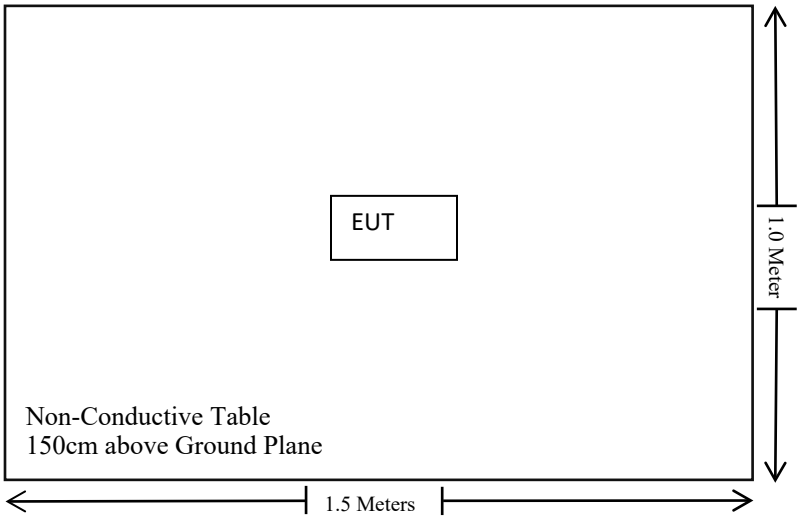
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

Cable Description	Length (m)	From Port	To
/	/	/	/

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

ETSI EN 301 893 V2.2.1 (2024-11)	Description of Test	Test Result
§ 4.2.1	Nominal Centre Frequency	Compliant
§ 4.2.2	Nominal Channel Bandwidth and Occupied Bandwidth	Compliant
§ 4.2.3	RF output power	Compliant
§ 4.2.3	Power Density	Compliant
§ 4.2.4.1	Transmitter unwanted emissions outside the transmitter's operating bands	Compliant
§ 4.2.4.2	Transmitter unwanted emissions within the transmitter's operating bands	Compliant
§ 4.2.5	Receiver spurious emissions	Compliant
§ 4.2.6	Dynamic Frequency Selection (DFS)	Compliant*
§ 4.2.7	Adaptivity (Channel Access Mechanism)	Compliant
§ 4.2.8	Receiver Blocking	Compliant
§ 4.2.9	Adjacent channel selectivity	Compliant
§ 4.2.10	User Access Restrictions (UAR)	Compliant
§B.2.2.11	Country determination capability	Not Applicable*

Note: Compliant*: Please refer to the report 2601R49433E-RF-22H.
Not Applicable –This device of the sub-band 4 power is less than 25mW.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emissions Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2025/09/01	2026/08/31
Sonoma instrument	Pre-amplifier	310 N	186238	2025/09/08	2026/09/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Chamber A Cable	Cable A1	Cable A1	2025/09/08	2026/09/07
Unknown	Chamber A Cable	Cable A2	Cable A2	2025/09/08	2026/09/07
TDK	Chamber	Chamber A	2#	2023/07/12	2026/07/11
COM-POWER	Dipole Antenna	3121C	9209-860	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2025/09/01	2026/08/31
A.H.System	Preamplifier	PAM-0118P	489	2025/09/08	2026/09/07
Schwarzbeck	Horn Antenna	BBHA9120D (1201)	1143	2023/07/26	2026/07/25
The Electro-Mechanics Co.	Horn Antenna	3115	9107-3694	2024/06/06	2027/06/05
Unknown	Chamber B Cable	Cable B1	Cable B1	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B2	Cable B2	2025/09/08	2026/09/07
Unknown	Chamber B Cable	Cable B3	Cable B3	2025/09/08	2026/09/07
Keysight	MXG Vector Signal Generator	N5182B	MY53051503	2025/09/18	2026/09/17
JD	Filter Switch Unit	DT7220FSU	DS79906	2025/08/12	2026/08/11
JD	Multiplex Switch Test Control Set	DT7220SCU	DS79903	2025/08/12	2026/08/11
TDK	Chamber	Chamber B	1#	2023/07/14	2026/07/13
A.H.System	Pre-amplifier	PAM-1840VH	190	2025/09/08	2026/09/07
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	2023/09/18	2026/09/17
Electro-Mechanics Co	Horn Antenna	3116	2026	2025/09/18	2028/09/17
Unknown	Chamber B Cable	Cable B4	Cable B4	2025/09/17	2026/09/16
Unknown	Chamber B Cable	Cable B5	Cable B5	2025/09/17	2026/09/16

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
BACL	Temp&Humi Test Chamber	BTH-150-40	30145	2025/09/11	2026/09/10
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	146520	2025/09/18	2026/09/17
Tonscend	RF control Unit	JS0806-2	19D8060154	2025/07/18	2026/07/17
Tonscend	Test software	JS1120-3	V3.3.38	NCR	NCR
Keysight	MXA Signal Analyzer	N9020A	MY48490106	2025/7/29	2026/7/29
Keysight	MXG Vector Signal Generator	N5182B	MY53051503	2025/09/18	2026/09/17
Agilent	Signal Generator	N5183A	MY50140588	2025/09/18	2026/09/17
Unknown	10dB Attenuator	Unknown	F-03-EM224	2025/06/26	2026/06/25

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

REQUIREMENTS AND TEST PROCEDURES

Nominal Centre Frequencies

Definition

The nominal centre frequency is the centre of the channel.

Limits

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 ≤ g ≤ 9 or 16 ≤ g ≤ 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 Procedure

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

Test method

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

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.

Limits

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 Procedure

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

Test method

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

RF Output Power and Power Density

Definition

RF Output Power:

The RF output power is the mean equivalent is otropically 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.

Limits

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

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.

Limits

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

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.

Limits

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

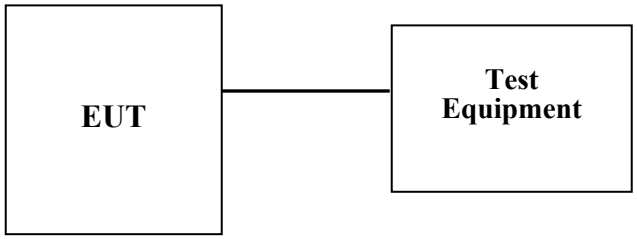
Test Procedure

- ☒ 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 Set up Block diagram



Receiver Spurious Emissions

Definition

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

Limits

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

Adaptivity (Channel Access Mechanism)

Definition

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

Test Setup Block diagram

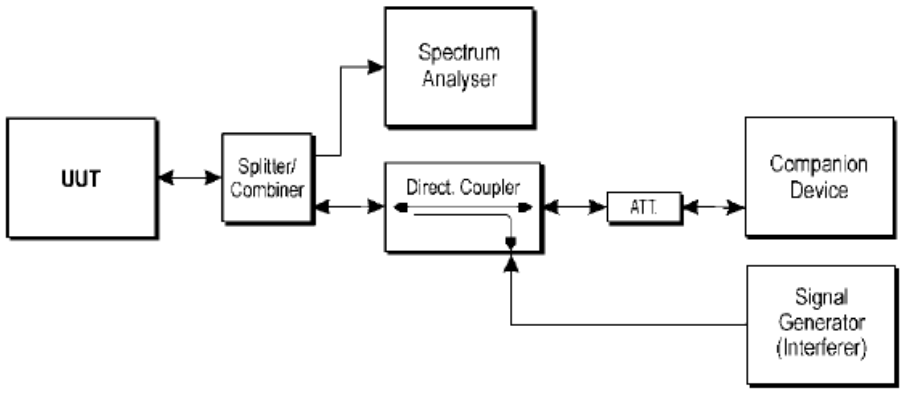


Figure 13: Example Test Set-up for verifying the adaptivity of an equipment

Receiver Blocking

Definition

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

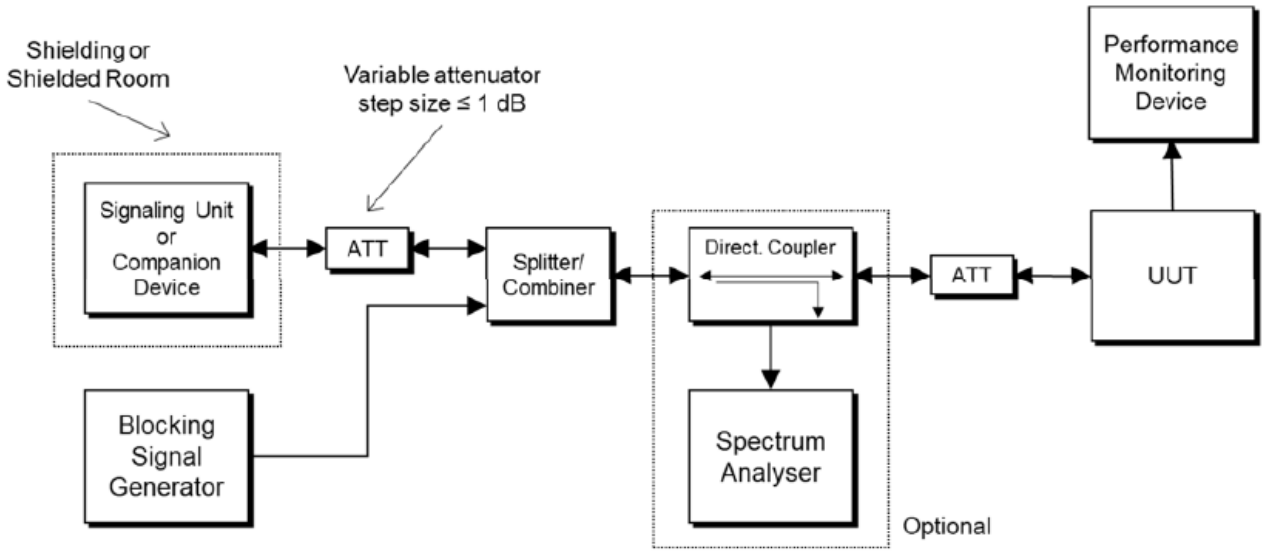


Figure 21: Test setup for receiver blocking

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

User Access Restrictions (UAR)

Definition

As certain parameters are deemed to be critical in the mitigation of interference to other radio services, these parameters are subject to User Access Restrictions (UAR).
UAR are intended to ensure that the defined value or range of values, settings and functions for the identified parameters cannot be altered by any software or hardware element in the field by the user to any value that falls outside the range of values detailed in the appropriate clauses within the present document.

NOTE: The user should be understood as to include the end user, the operator or any person not responsible for the conformity of the equipment against the requirements in the present document.

In addition, any hardware element that can be activated by the user to change the identified parameters is also subject to the requirements of the clause.

Requirements

The equipment shall be so constructed that settings (hardware and/or software) are not accessible to the user if changing those settings result in the equipment no longer being conformant to the following:

• The DFS requirements as specified in clause 4.2.6.

• The adaptivity requirements as specified in clause 4.2.7, in particular the thresholds as defined or referred to in clause 4.2.7.3.1.4 and in clause 4.2.7.3.2.5.

EXAMPLE: The equipment does not allow the user to change the country of operation and/or the operating frequency band if that results in the equipment no longer being conformant to the DFS and/or the adaptivity requirements.

Test Procedure

According to ETSI EN 301 893 V2.2.1 (2024-11) §5.4.12

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 AND RESULTS

Transmitter Unwanted Emissions Outside The 5 GHz RLAN Bands

Environmental Conditions

Temperature (℃)	24.9-25.8	**Relative Humidity (%)**	48-51
ATM Pressure (kPa):	100.3-100.6	**Test engineer:**	Anson Su &Wing K Ji
Test date:	2026.03.27-2026.03.30		
EUT operation mode:	Transmitting		
Note:	Test Result: Compliant, please refer to the below table for the worst case.		

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H / V)	Substituted			Absolute Level (dBm)	EN 301 893	
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)		Limit (dBm)	Margin (dB)
802.11a, 5180 MHz								
80.34	42.15	H	-72.24	0.75	0.00	-71.49	-36.00	35.49
154.58	32.15	V	-71.91	0.84	0.00	-71.07	-36.00	35.07
10360.00	46.36	H	-54.54	2.8	11.8	-45.54	-30.00	15.54
10360.00	46.04	V	-54.76	2.8	11.8	-45.76	-30.00	15.76
802.11a, 5260 MHz								
80.85	43.28	H	-71.11	0.75	0.00	-70.36	-36.00	34.36
163.36	31.25	V	-72.81	0.84	0.00	-71.97	-36.00	35.97
10520.00	46.55	H	-53.95	3	11.8	-45.15	-30.00	15.15
10520.00	45.23	V	-55.17	3	11.8	-46.37	-30.00	16.37
802.11a, 5500 MHz								
80.12	42.20	H	-72.19	0.75	0.00	-71.44	-36.00	35.44
152.69	32.05	V	-72.01	0.84	0.00	-71.17	-36.00	35.17
11000.00	43.97	H	-54.43	2.9	12.3	-45.03	-30.00	15.03
11000.00	41.85	V	-56.15	2.9	12.3	-46.75	-30.00	16.75

Note:
1) Absolute Level = Substituted Level - Cable loss + Antenna Gain
2) Margin = Limit- Absolute Level
3) Below 1G antenna gain unit is dBd, above 1G antenna gain unit is dBi

Receiver spurious emissions

Environmental Conditions

Temperature (℃)	24.9-25.8	**Relative Humidity (%)**	48-51
ATM Pressure (kPa):	100.3-100.6	**Test engineer:**	Anson Su &Wing K Ji
Test date:	2026.03.30-2026.03.27		
EUT operation mode:	Receiving		
Note:	Test Result: Compliant, please refer to the below table for the worst case.		

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	EN 301 893	
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)		Limit (dBm)	Margin (dB)
802.11a mode, 5180 MHz								
80.43	42.05	H	-72.34	0.75	0.00	-71.59	-57.00	14.59
152.61	32.14	V	-71.92	0.84	0.00	-71.08	-57.00	14.08
1245.61	50.00	H	-64.20	1.10	6.70	-58.60	-47.00	11.60
1425.61	49.21	V	-65.79	0.90	7.80	-58.89	-47.00	11.89
802.11a mode, 5260 MHz								
80.51	42.57	H	-71.82	0.75	0.00	-71.07	-57.00	14.07
148.82	31.80	V	-72.26	0.84	0.00	-71.42	-57.00	14.42
1215.61	50.55	H	-63.65	1.10	6.70	-58.05	-47.00	11.05
1319.64	49.53	V	-65.77	1.00	7.30	-59.47	-47.00	12.47
802.11a mode, 5500 MHz								
80.34	42.28	H	-72.11	0.75	0.00	-71.36	-57.00	14.36
156.55	32.18	V	-71.88	0.84	0.00	-71.04	-57.00	14.04
1215.63	50.19	H	-64.01	1.10	6.70	-58.41	-47.00	11.41
1316.29	49.87	V	-65.43	1.00	7.30	-59.13	-47.00	12.13

Note:
1) Absolute Level = Substituted Level - Cable loss + Antenna Gain
2) Margin = Limit- Absolute Level
3) Below 1G antenna gain unit is dBd, above 1G antenna gain unit is dBi

RF Conducted data

Project No.:	**2601R49433E-RF**
EUT Number:	3IUC-1
Operating Mode:	**Transmitting/Receiving**
Test Conditions:	Low Temperature: 0 °C Normal Temperature: 24.9-26.7 °C High Temperature: 50-55 °C Relative Humidity: 46-56 % ATM Pressure: 101.0 kPa
Test Engineer:	Ciel .Jiang
Test Date:	**2026.04.01**

Carrier frequencies

Test Result

Test Condition	Test Mode	Antenna	Freq.(MHz)	F1(MHz)	F2(MHz)	Result[ppm]	Limit[ppm]	Verdict
NTNV	11A	Ant1	5180	5171.68	5188.28	-3.86100	±20	PASS
			5260	5251.68	5268.28	-3.80228	±20	PASS
			5500	5491.68	5508.28	-3.63636	±20	PASS
	11AC20SISO	Ant1	5180	5171.08	5188.88	-3.86100	±20	PASS
			5260	5251.04	5268.88	-7.60456	±20	PASS
			5500	5491.08	5508.88	-3.63636	±20	PASS
	11AC40SISO	Ant1	5190	5171.76	5208.24	0.00000	±20	PASS
			5270	5251.76	5288.24	0.00000	±20	PASS
			5510	5491.76	5528.24	0.00000	±20	PASS
LTNV	11A	Ant1	5180	5171.68	5188.28	-3.86100	±20	PASS
			5260	5251.68	5268.28	-3.80228	±20	PASS
			5500	5491.68	5508.24	-7.27273	±20	PASS
	11AC20SISO	Ant1	5180	5171.08	5188.88	-3.86100	±20	PASS
			5260	5251.08	5268.88	-3.80228	±20	PASS
			5500	5491.08	5508.88	-3.63636	±20	PASS
	11AC40SISO	Ant1	5190	5171.76	5208.24	0.00000	±20	PASS
			5270	5251.76	5288.24	0.00000	±20	PASS
			5510	5491.76	5528.24	0.00000	±20	PASS
HTNV	11A	Ant1	5180	5171.68	5188.28	-3.86100	±20	PASS
			5260	5251.68	5268.28	-3.80228	±20	PASS
			5500	5491.68	5508.24	-7.27273	±20	PASS
	11AC20SISO	Ant1	5180	5171.08	5188.88	-3.86100	±20	PASS
			5260	5251.08	5268.88	-3.80228	±20	PASS
			5500	5491.08	5508.88	-3.63636	±20	PASS
	11AC40SISO	Ant1	5190	5171.76	5208.24	0.00000	±20	PASS
			5270	5251.76	5288.24	0.00000	±20	PASS
			5510	5491.76	5528.24	0.00000	±20	PASS

RF Output Power

Test Result

Test Condition	Test Mode	Antenna	Freq.(MHz)	EIRP [dBm]	EIRP Limit [dBm]	Verdict
NTNV	11A	Ant1	5180	9.60	23	PASS
			5240	10.45	23	PASS
			5260	12.56	20	PASS
			5320	13.33	20	PASS
			5500	14.25	20	PASS
			5700	9.28	20	PASS
	11AC20SISO	Ant1	5180	9.47	23	PASS
			5240	10.45	23	PASS
			5260	11.81	20	PASS
			5320	12.57	20	PASS
			5500	13.93	20	PASS
			5700	9.61	20	PASS
	11AC40SISO	Ant1	5190	10.13	23	PASS
			5230	10.59	23	PASS
			5270	11.71	20	PASS
			5310	12.28	20	PASS
			5510	13.17	20	PASS
			5670	11.20	20	PASS
LTNV	11A	Ant1	5180	9.75	23	PASS
			5240	10.63	23	PASS
			5260	12.74	20	PASS
			5320	13.52	20	PASS
			5500	14.41	20	PASS
			5700	9.43	20	PASS
	11AC20SISO	Ant1	5180	9.64	23	PASS
			5240	10.62	23	PASS
			5260	11.97	20	PASS
			5320	12.75	20	PASS
			5500	14.08	20	PASS
			5700	9.79	20	PASS
	11AC40SISO	Ant1	5190	10.28	23	PASS
			5230	10.76	23	PASS
			5270	11.87	20	PASS
			5310	12.47	20	PASS
			5510	13.36	20	PASS
			5670	11.38	20	PASS
HTNV	11A	Ant1	5180	9.42	23	PASS
			5240	10.29	23	PASS
			5260	12.40	20	PASS
			5320	13.17	20	PASS

			5500	14.10	20	PASS
			5700	9.10	20	PASS
	11AC20SISO	Ant1	5180	9.32	23	PASS
			5240	10.29	23	PASS
			5260	11.65	20	PASS
			5320	12.41	20	PASS
			5500	13.75	20	PASS
			5700	9.43	20	PASS
	11AC40SISO	Ant1	5190	9.97	23	PASS
			5230	10.44	23	PASS
			5270	11.55	20	PASS
			5310	12.12	20	PASS
			5510	13.01	20	PASS
			5670	11.04	20	PASS

Note: The antenna gain is Band 1: -2.7dBi; Band 2: -1.50dBi; Band 3: 0.3dBi; Duty cycle Factor which was added into the final test.

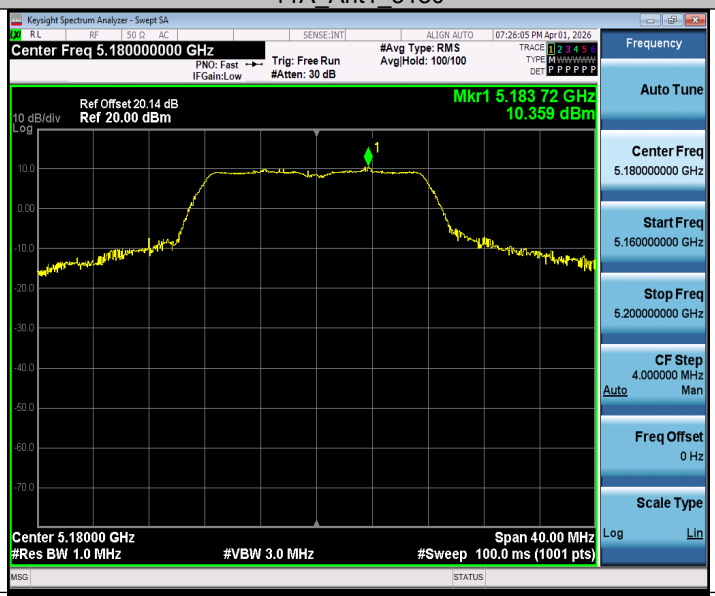
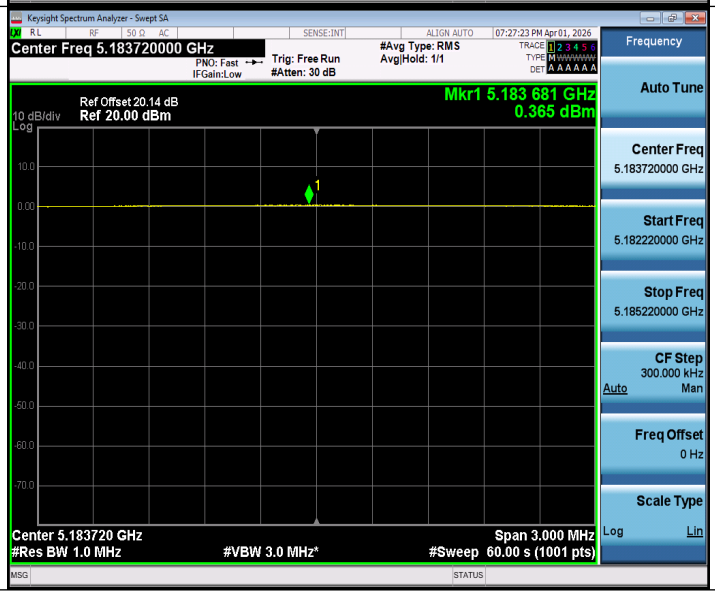
Power Spectral Density

Test Result

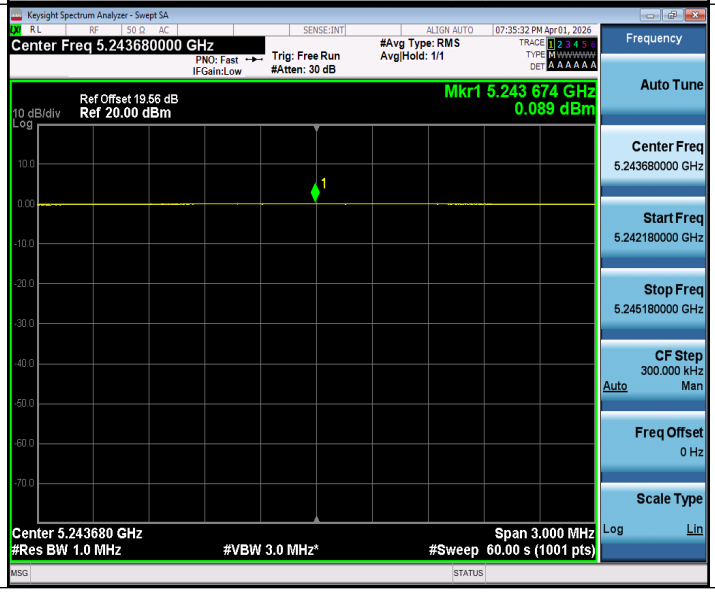
Test Mode	Antenna	Freq.(MHz)	PD [dBm/MHz]	DC Factor [dB]	Gain [dBi]	EIRP PSD [dBm/MHz]	Limit [dBm]	Verdict
11A	Ant1	5180	0.37	0.51	-2.70	-1.82	10	PASS
		5240	0.09	0.54	-2.70	-2.07	10	PASS
		5260	1.23	0.51	-1.50	0.24	7	PASS
		5320	2.55	0.51	-1.50	1.56	7	PASS
		5500	0.89	0.51	0.30	1.70	7	PASS
		5700	-4.28	0.54	0.30	-3.44	7	PASS
11AC20SISO	Ant1	5180	-0.20	0.63	-2.70	-2.27	10	PASS
		5240	-0.40	0.63	-2.70	-2.47	10	PASS
		5260	0.39	0.63	-1.50	-0.48	7	PASS
		5320	1.47	0.63	-1.50	0.60	7	PASS
		5500	0.21	0.63	0.30	1.14	7	PASS
		5700	-4.14	0.63	0.30	-3.21	7	PASS

Note: EIRP PSD = PD + DC Factor + Gain

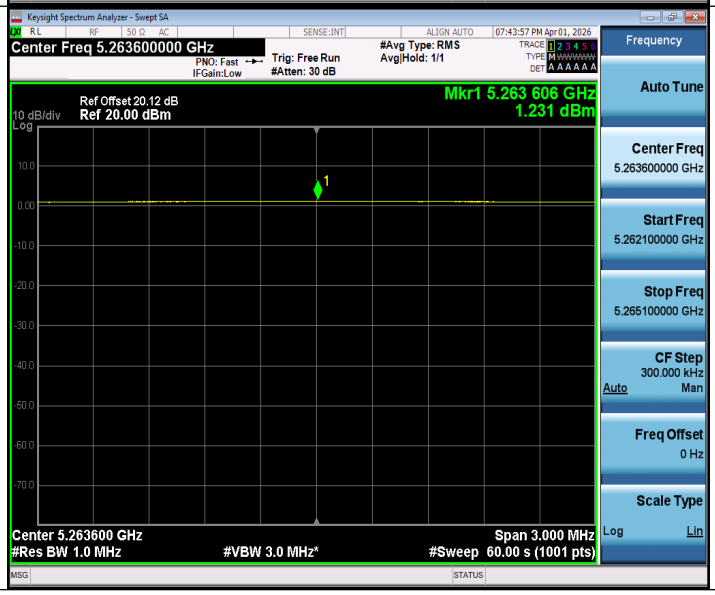
Test Graphs

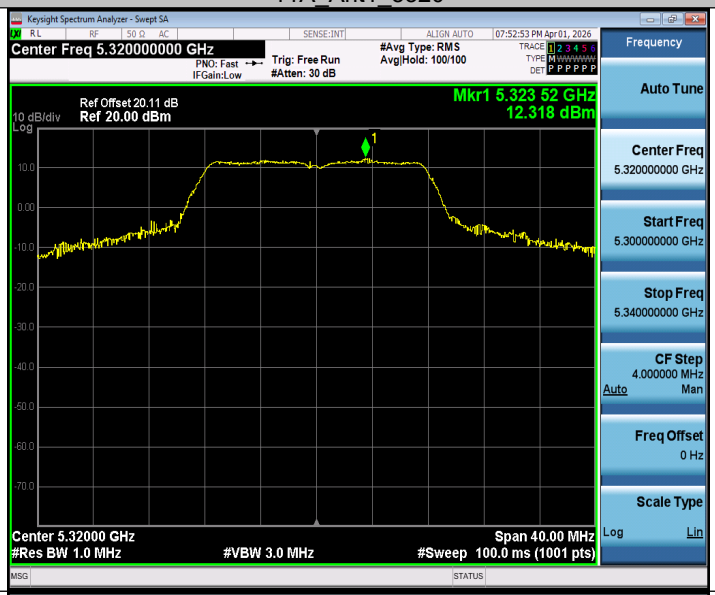
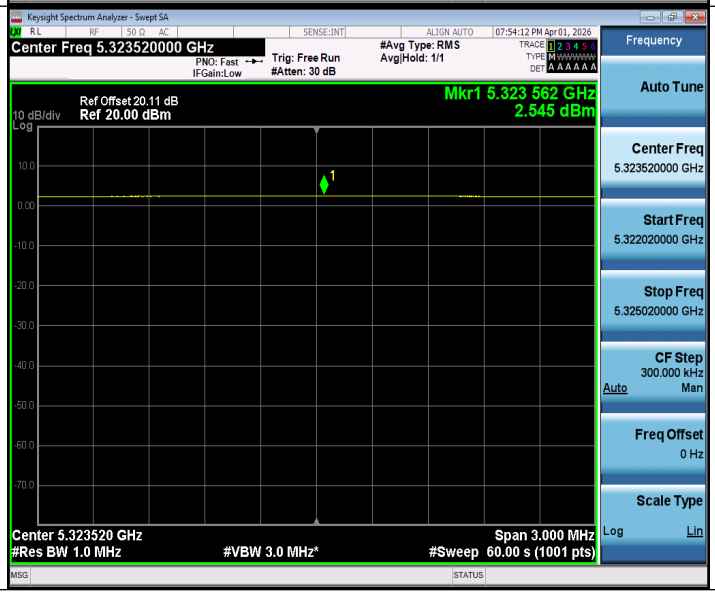
11A_Ant1_5180



11A_Ant1_5240

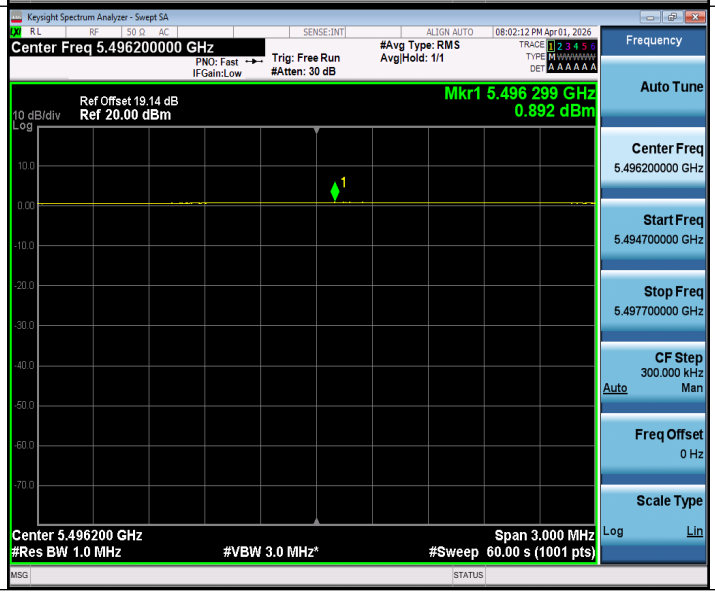


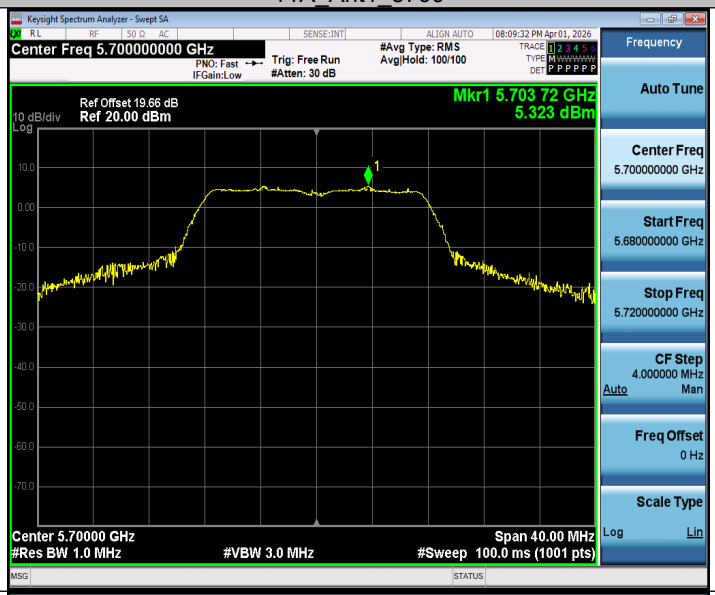
11A_Ant1_5260



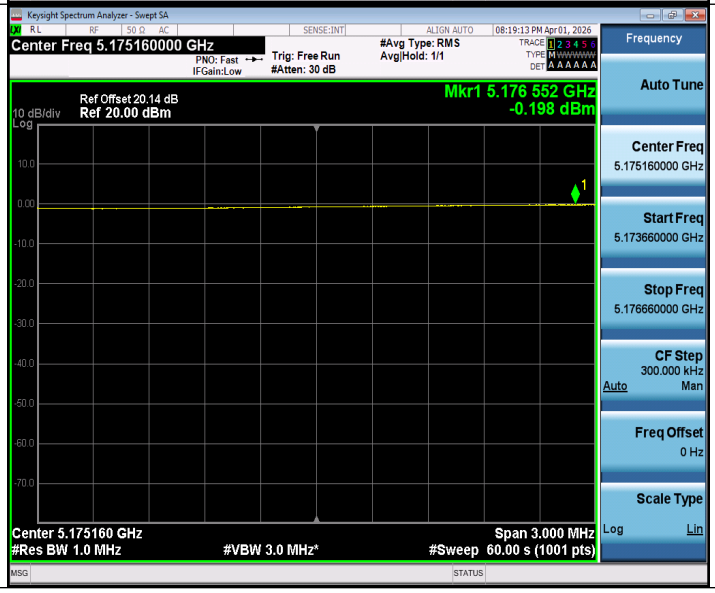
11A_Ant1_5320



11A_Ant1_5500



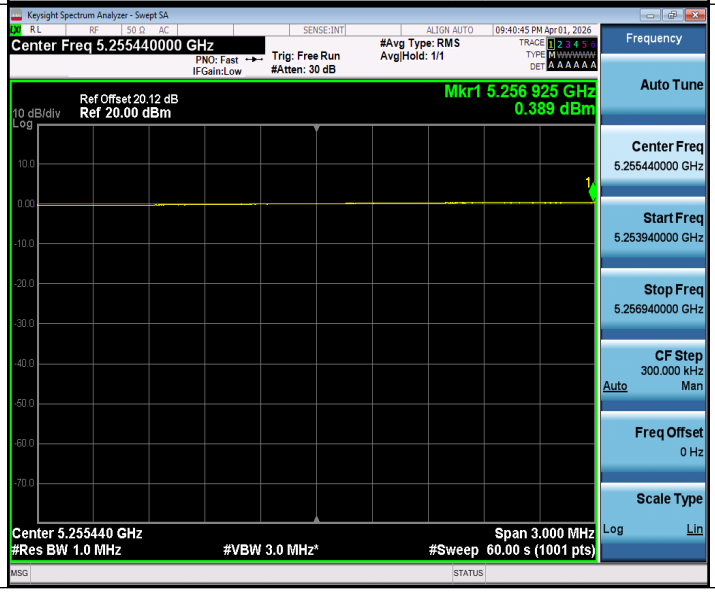
11A_Ant1_5700



11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5240

11AC20SISO_Ant1_5260



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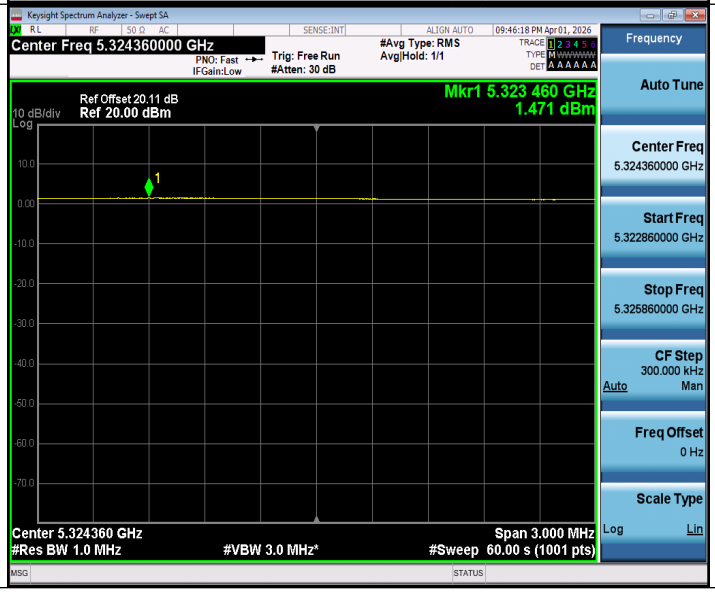


11AC20SISO_Ant1_5500

11AC20SISO_Ant1_5700

Occupied Channel Bandwidth

Test Result

Test Mode	Antenna	Freq(MHz)	OCB[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	16.485	16 to 20	PASS
		5260	16.587	16 to 20	PASS
		5500	16.586	16 to 20	PASS
11AC20SISO	Ant1	5180	17.643	16 to 20	PASS
		5260	17.680	16 to 20	PASS
		5500	17.699	16 to 20	PASS
11AC40SISO	Ant1	5190	36.239	32 to 40	PASS
		5270	36.242	32 to 40	PASS
		5510	36.251	32 to 40	PASS

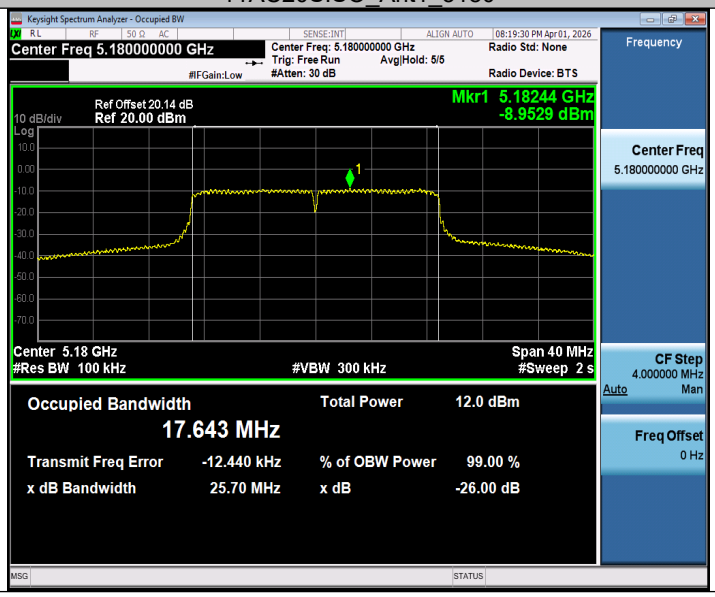
Test Graphs

11A_Ant1_5180

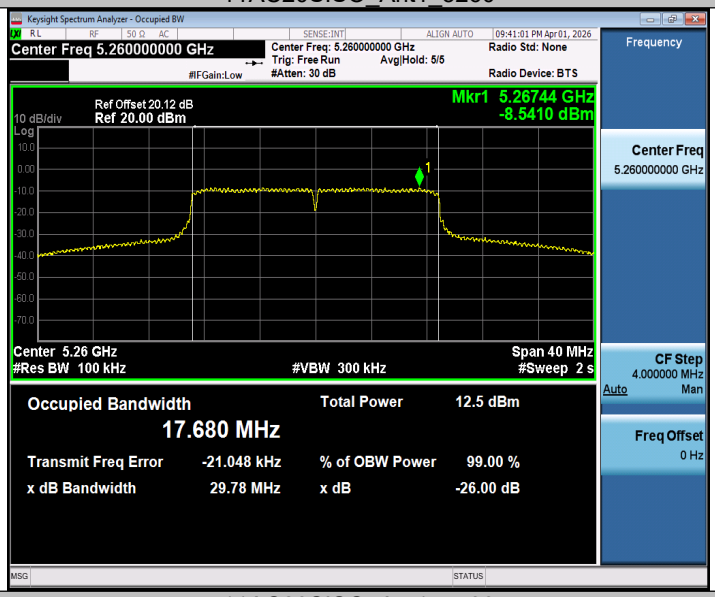
11A_Ant1_5260

11A_Ant1_5500

11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5260



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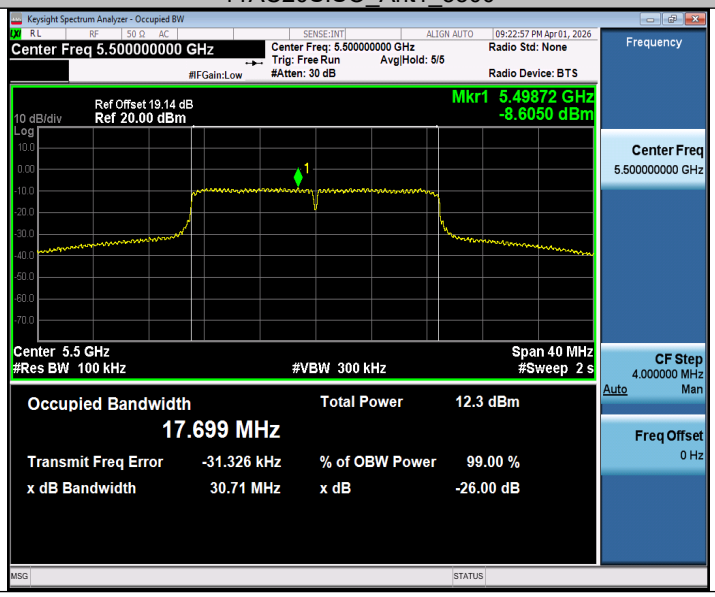
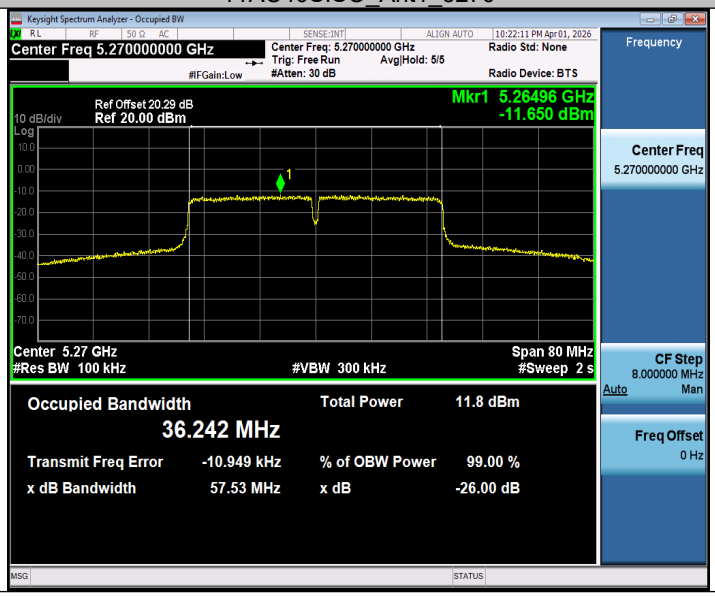


11AC40SISO_Ant1_5190

11AC40SISO_Ant1_5270



11AC40SISO_Ant1_5510

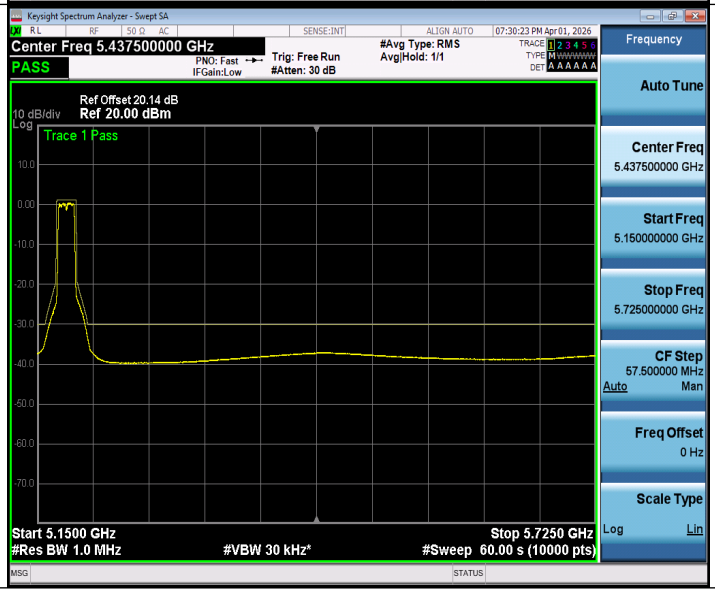
Transmitter unwanted emissions within the 5 GHz RLAN bands

Test Result

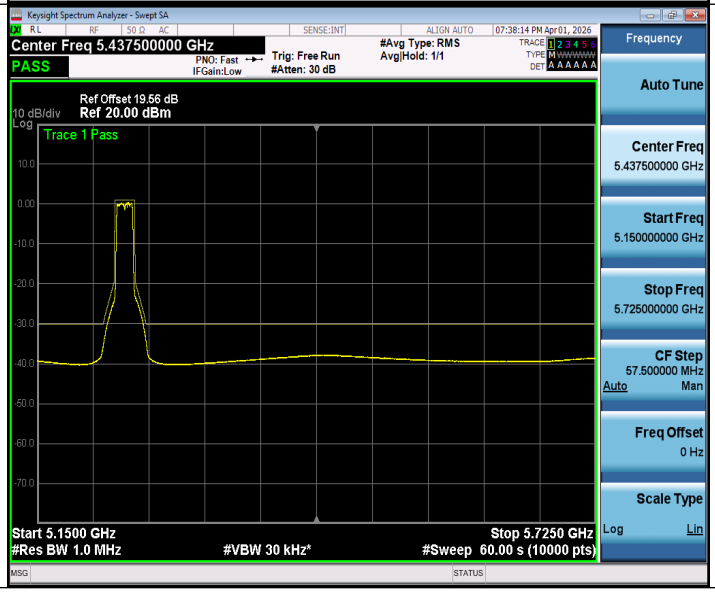
Test Mode	Antenna	Freq.(MHz)	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	See test graph	See test graph	PASS
		5240	See test graph	See test graph	PASS
		5260	See test graph	See test graph	PASS
		5320	See test graph	See test graph	PASS
		5500	See test graph	See test graph	PASS
		5700	See test graph	See test graph	PASS
11AC20SISO	Ant1	5180	See test graph	See test graph	PASS
		5240	See test graph	See test graph	PASS
		5260	See test graph	See test graph	PASS
		5320	See test graph	See test graph	PASS
		5500	See test graph	See test graph	PASS
		5700	See test graph	See test graph	PASS
11AC40SISO	Ant1	5190	See test graph	See test graph	PASS
		5230	See test graph	See test graph	PASS
		5270	See test graph	See test graph	PASS
		5310	See test graph	See test graph	PASS
		5510	See test graph	See test graph	PASS
		5670	See test graph	See test graph	PASS

Test Graphs

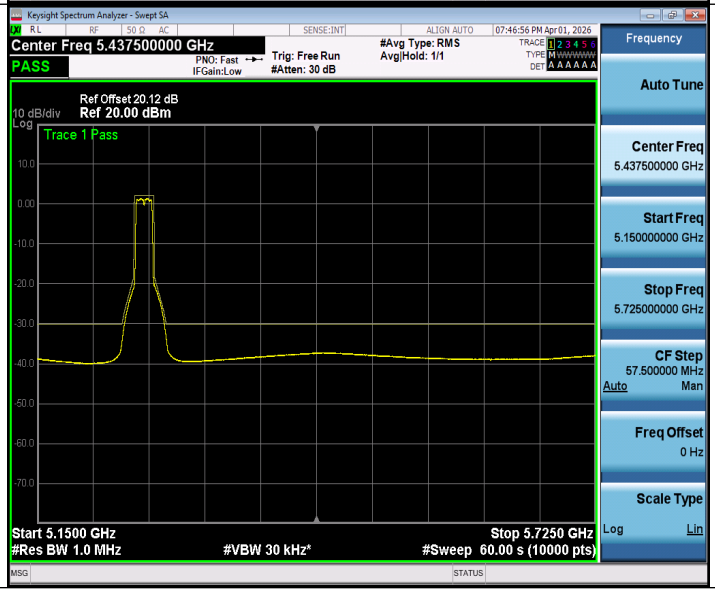
11A_Ant1_5180

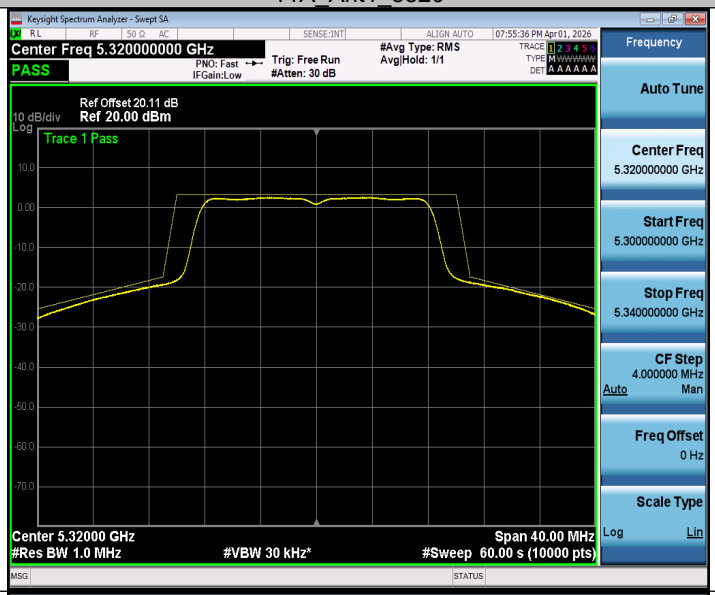
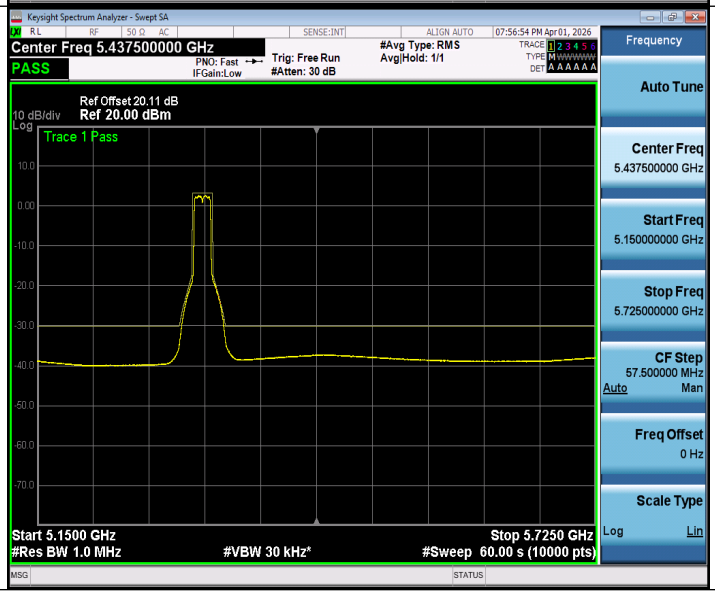


11A_Ant1_5240

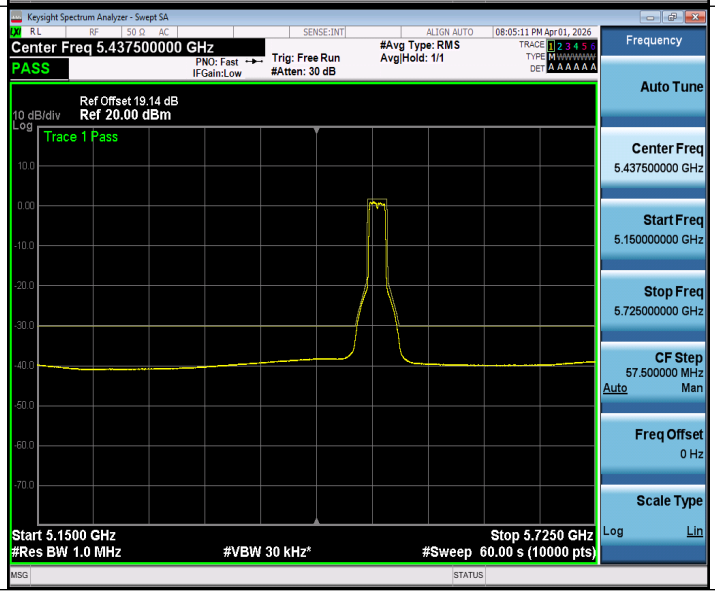


11A_Ant1_5260



11A_Ant1_5320



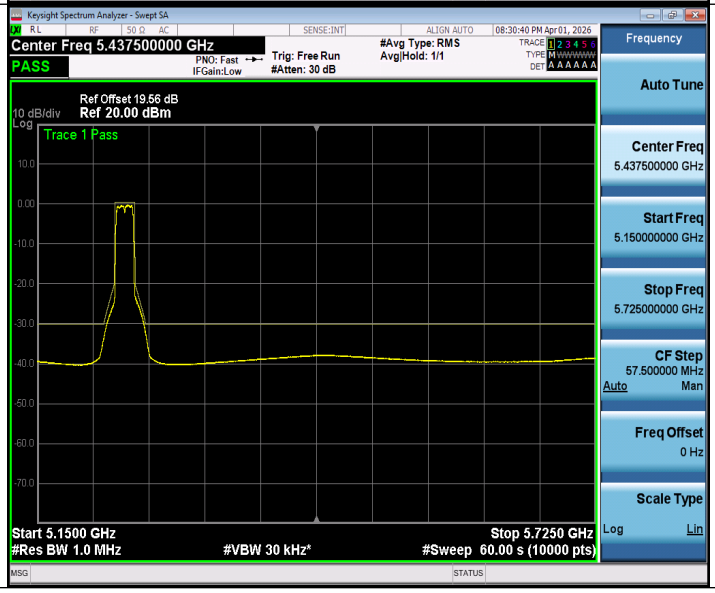
11A_Ant1_5500



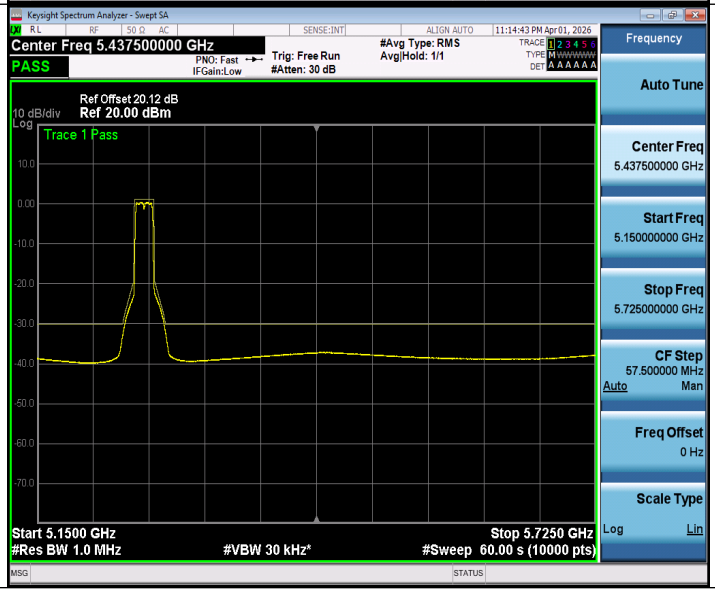
11A_Ant1_5700

11AC20SISO_Ant1_5180

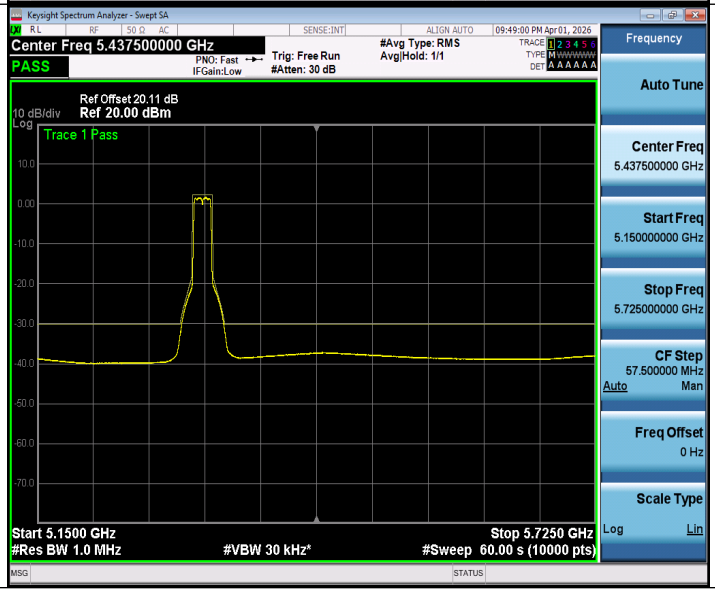
11AC20SISO_Ant1_5240



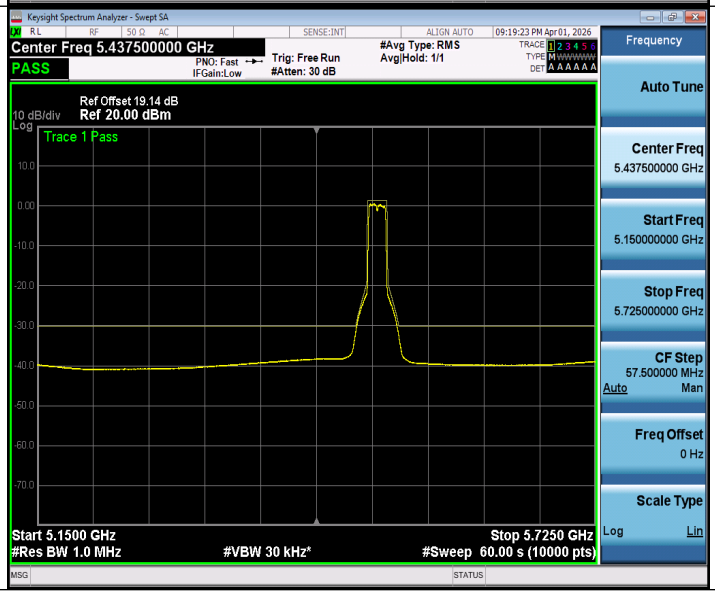
11AC20SISO_Ant1_5260



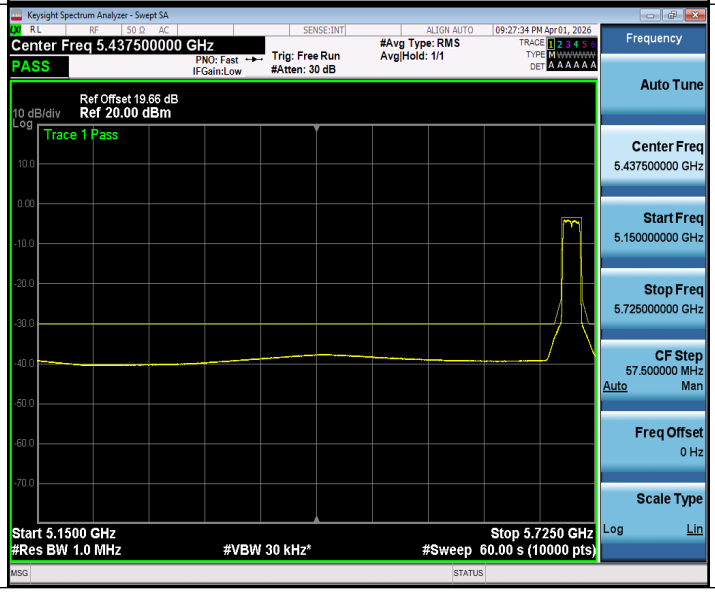
11AC20SISO_Ant1_5320



11AC20SISO_Ant1_5500

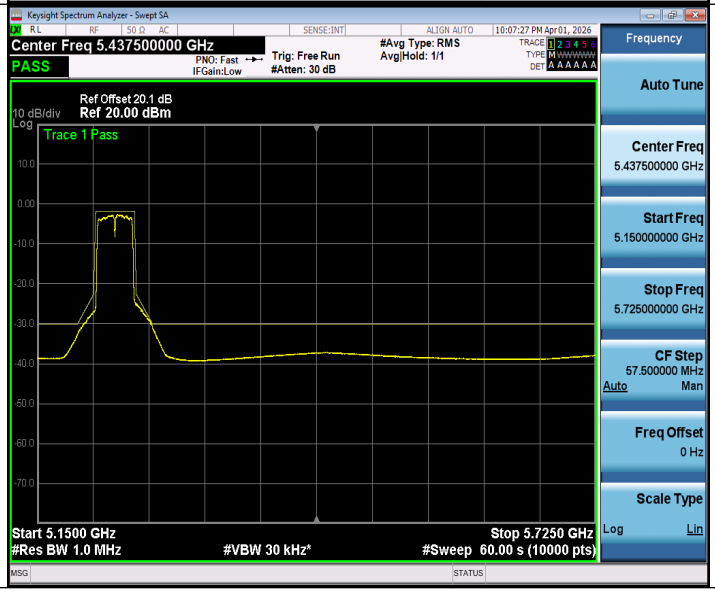


11AC20SISO_Ant1_5700

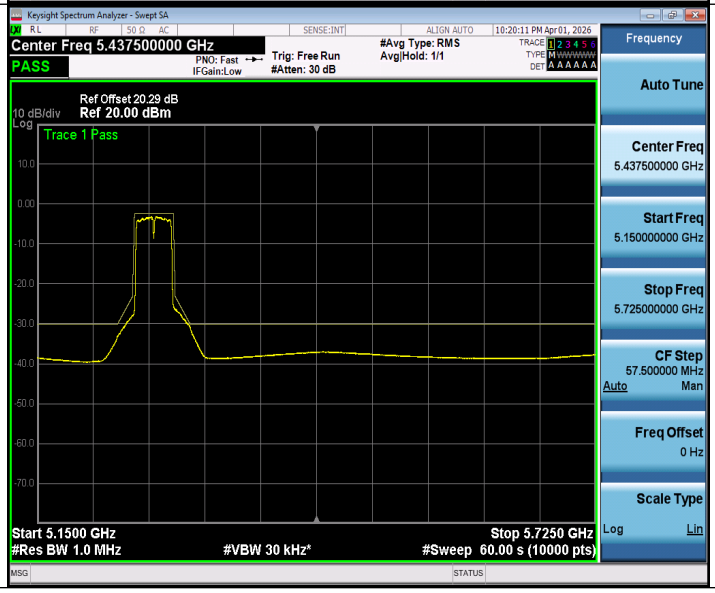


11AC40SISO_Ant1_5190

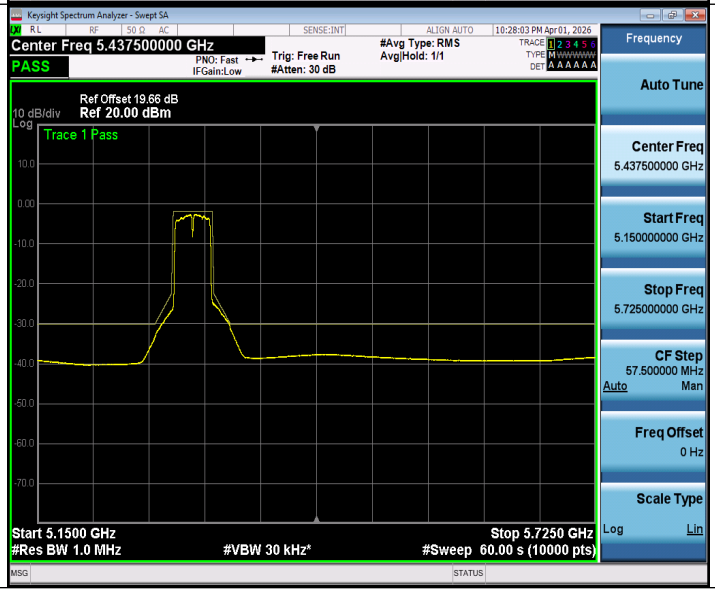
11AC40SISO_Ant1_5230



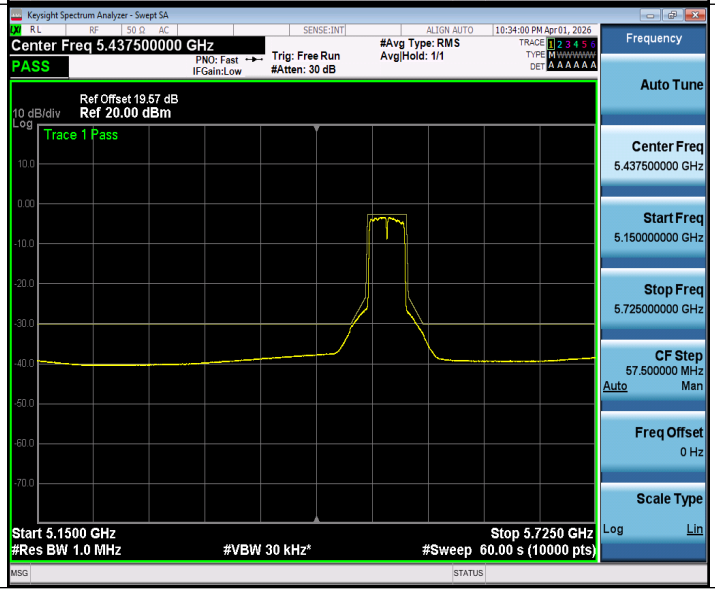
11AC40SISO_Ant1_5270



11AC40SISO_Ant1_5310



11AC40SISO_Ant1_5510



11AC40SISO_Ant1_5670

Receiver Blocking

Test Result

Test Mode	Antenna	Freq. [MHz]	Pmin [dBm]	Wanted signal [dBm]	Freq. [MHz]	CW [dBm]	PER [%]	Limit [%]	Verdict
11A	Ant1	5180	-76.00	-70.00	4900	-53	2.57	≤10	PASS
			-76.00	-70.00	5000	-53	1.52	≤10	PASS
			-76.00	-70.00	5100	-59	2.66	≤10	PASS
			-76.00	-70.00	5975	-53	3.62	≤10	PASS
		5260	-80.00	-74.00	4900	-53	1.72	≤10	PASS
			-80.00	-74.00	5000	-53	3.42	≤10	PASS
			-80.00	-74.00	5100	-59	1.95	≤10	PASS
			-80.00	-74.00	5975	-53	2.65	≤10	PASS
		5500	-77.00	-71.00	4900	-53	3.63	≤10	PASS
			-77.00	-71.00	5000	-53	1.03	≤10	PASS
			-77.00	-71.00	5100	-59	1.51	≤10	PASS
			-77.00	-71.00	5975	-53	2.19	≤10	PASS

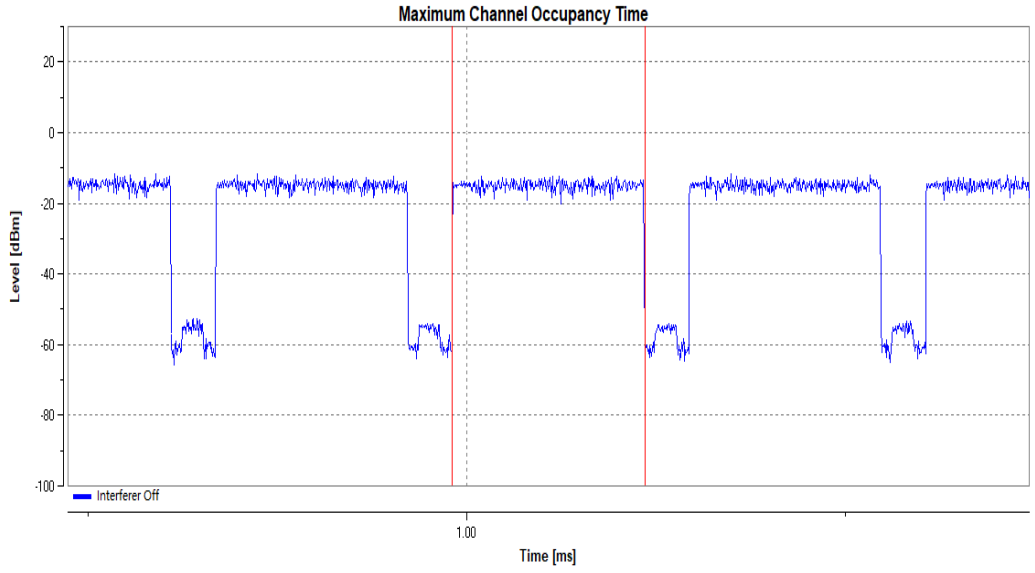
Adaptivity

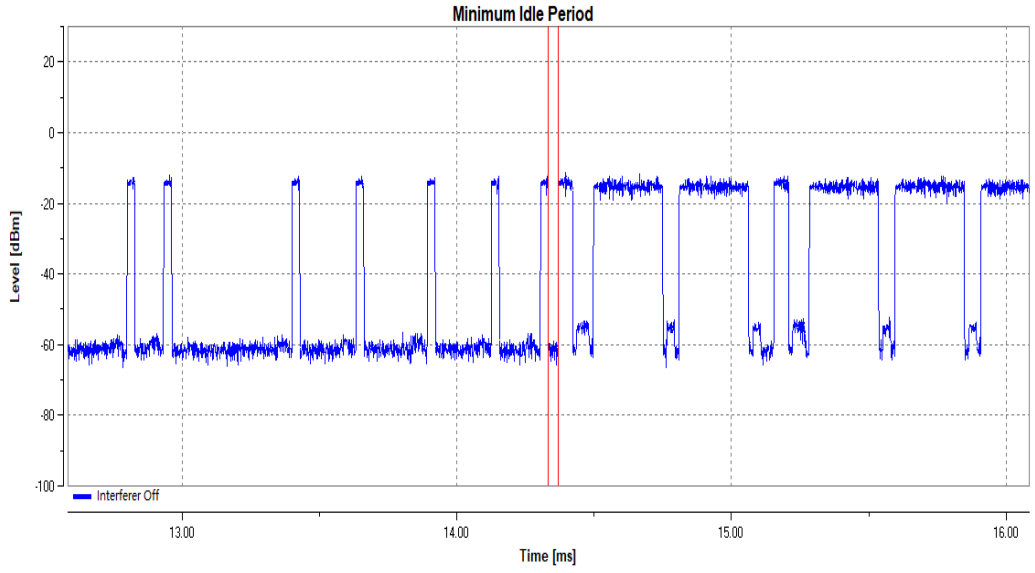
Test Result

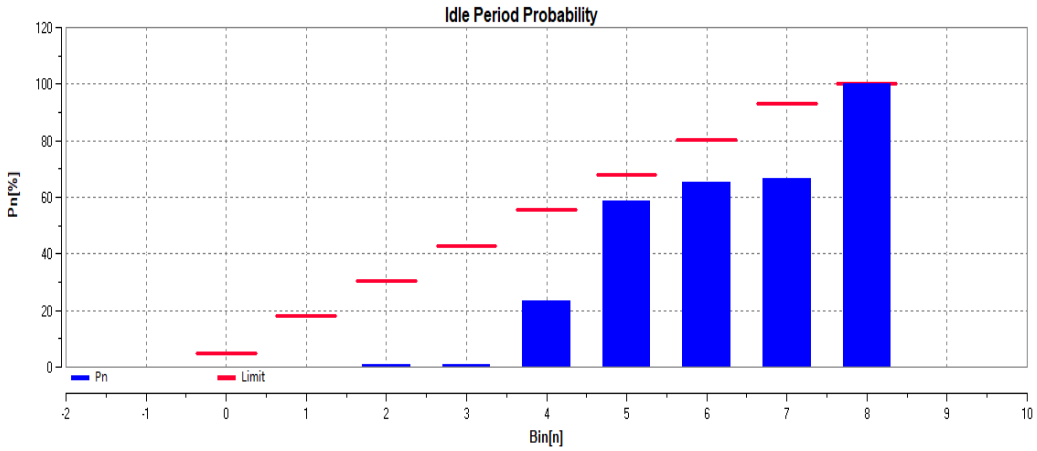
Test Mode	Antenna	Freq.(MHz)	Interference Type	Add interference Time [ms]	Interference Level [dBm/MHz]	Max. Short Control number [n]	Limit [n]	Max. Short ControlTime [ms]	Limit [ms]	Verdict
11A	Ant1	5180	AWGN	2100	-75	0	50	0.00	2.5	PASS
			OFDM	2100	-75	1	50	0.20	2.5	PASS
			LTE	2100	-75	0	50	0.00	2.5	PASS
11AC40SISO	Ant1	5190	AWGN	2100	-75	16	50	2.40	2.5	PASS

Test Graphs

11A_Ant1_5180

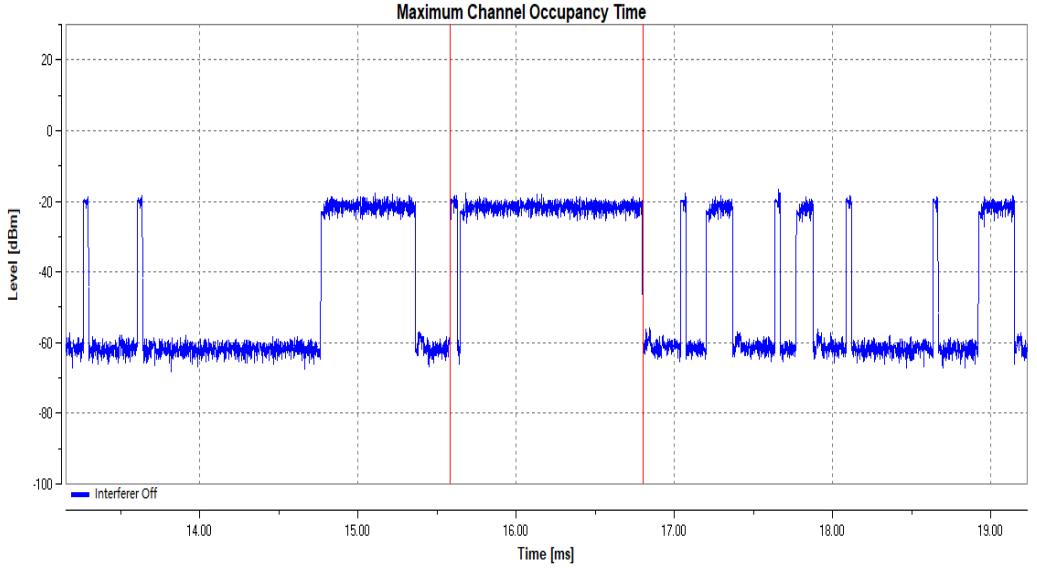


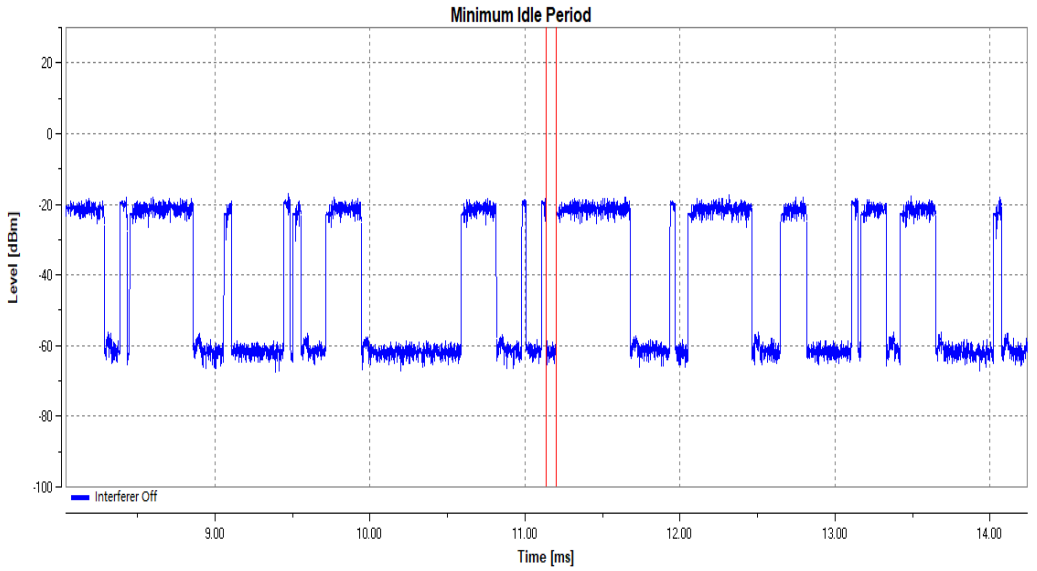


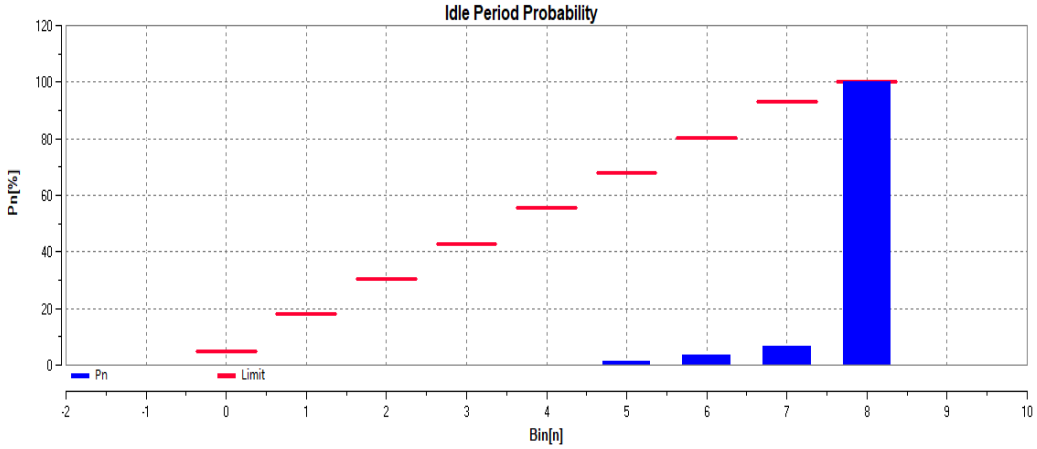


n	0	1	2	3	4	5	6	7	8
B[n]	0	0	5	0	123	194	37	7	182
P[n]	0	0	0.91	0.91	23.36	58.76	65.51	66.79	100
Limit	5	18	30.5	43	55.5	68	80.5	93	100

11AC40SISO_Ant1_5190

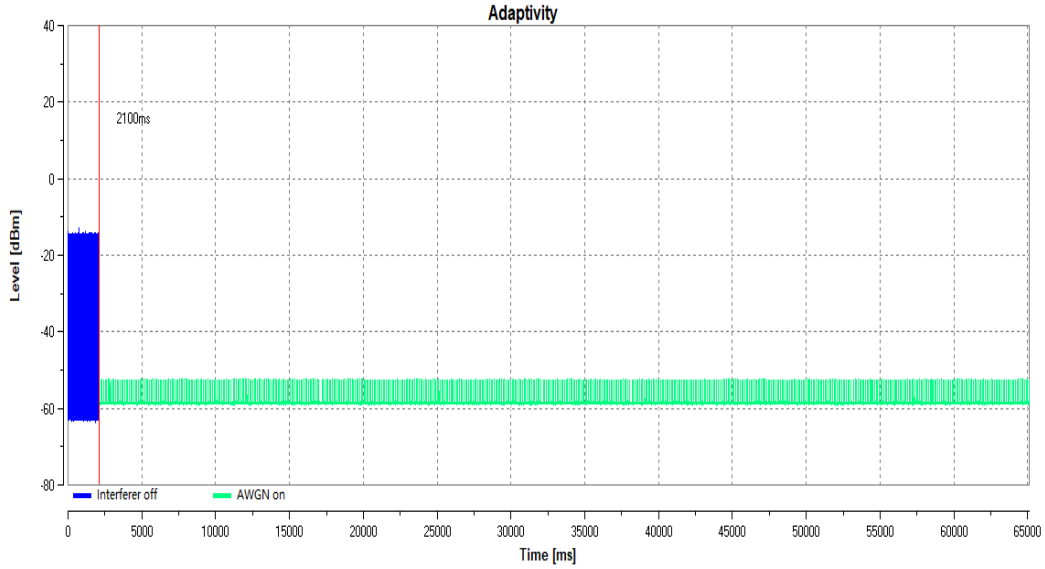


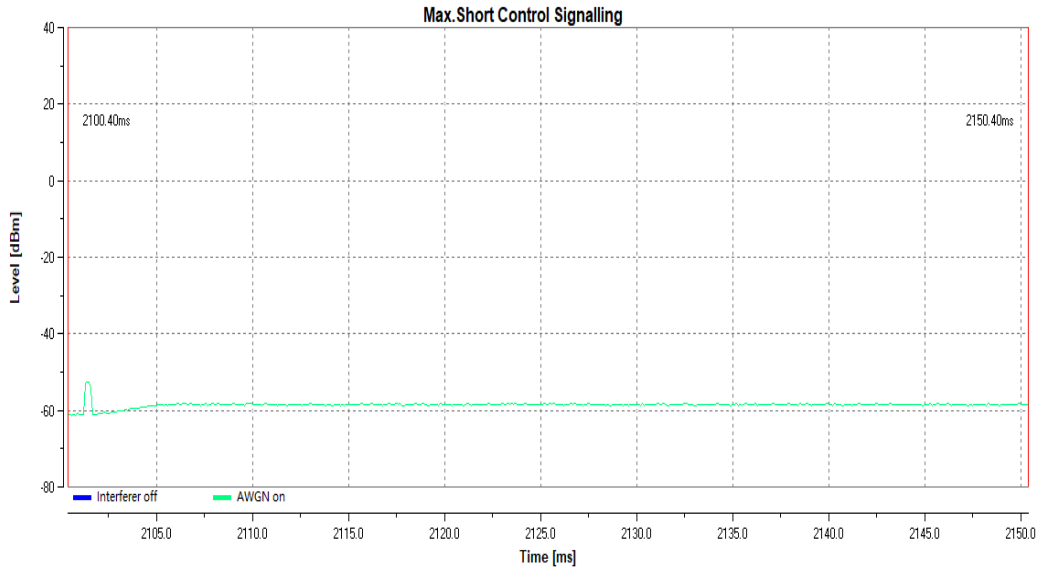




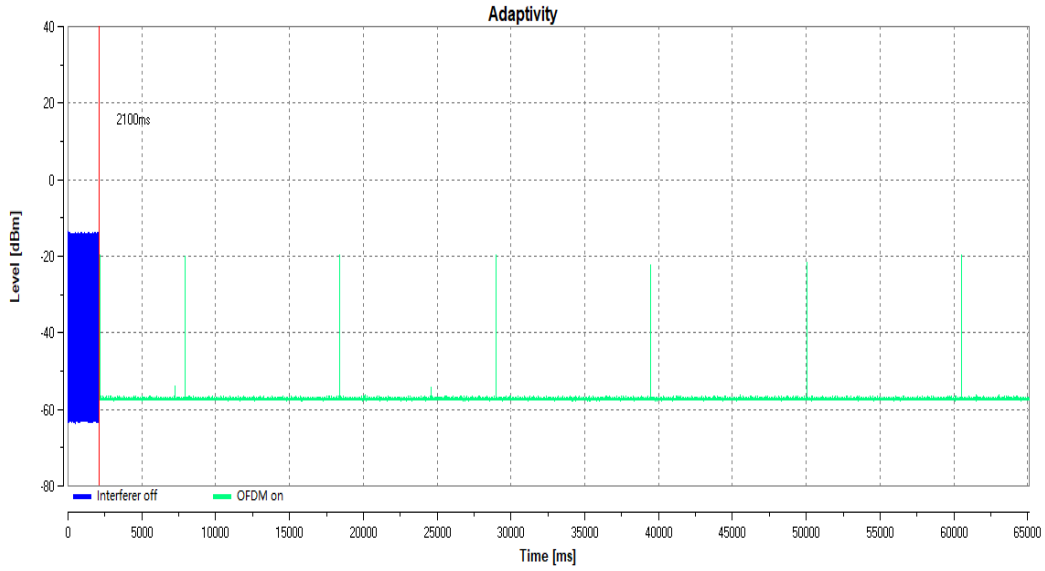
n	0	1	2	3	4	5	6	7	8
B[n]	0	0	0	0	0	7	11	17	496
P[n]	0	0	0	0	0	1.32	3.39	6.59	100
Limit	5	18	30.5	43	55.5	68	80.5	93	100

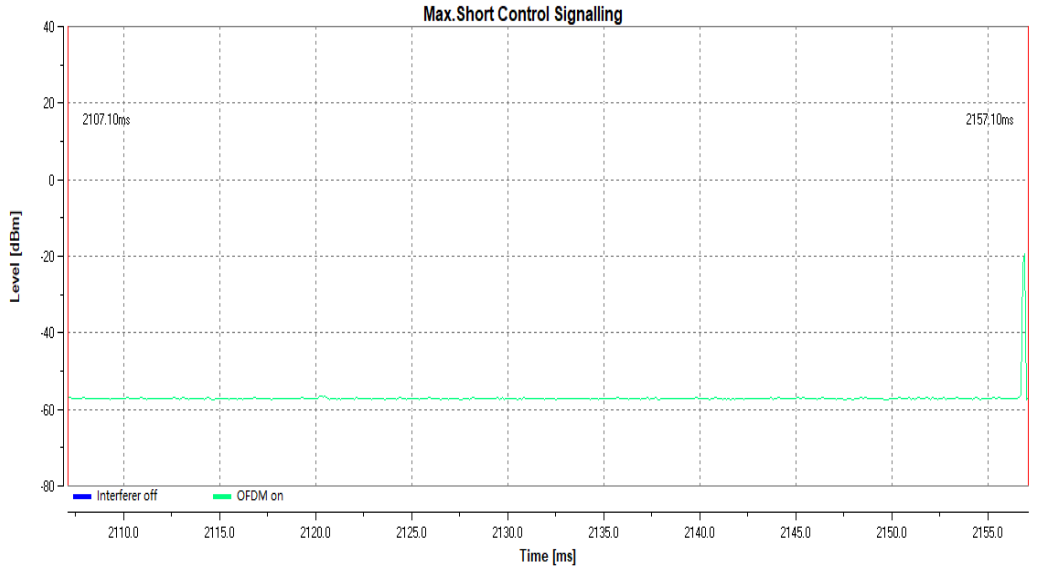
11A_Ant1_5180



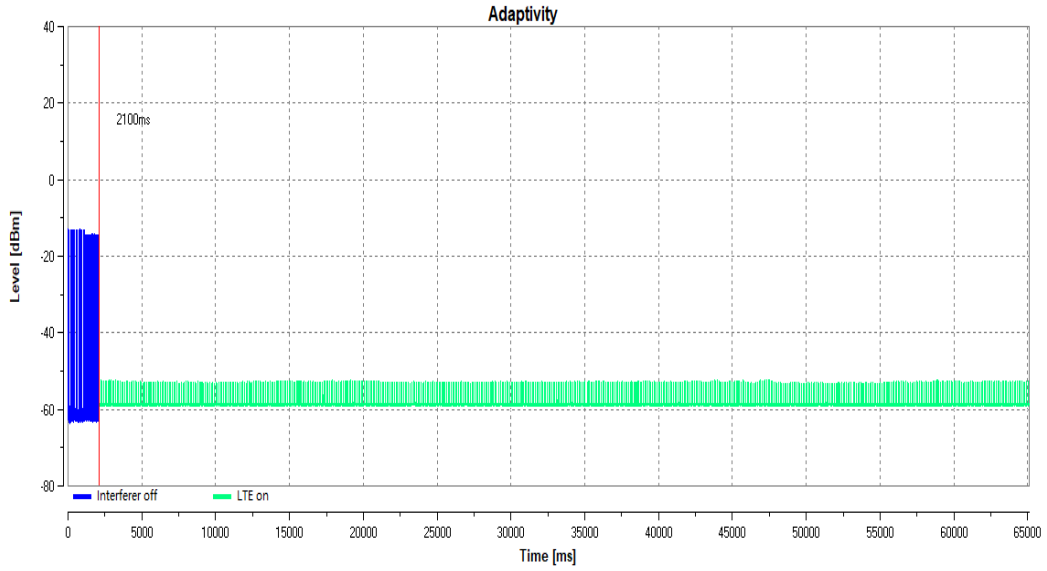


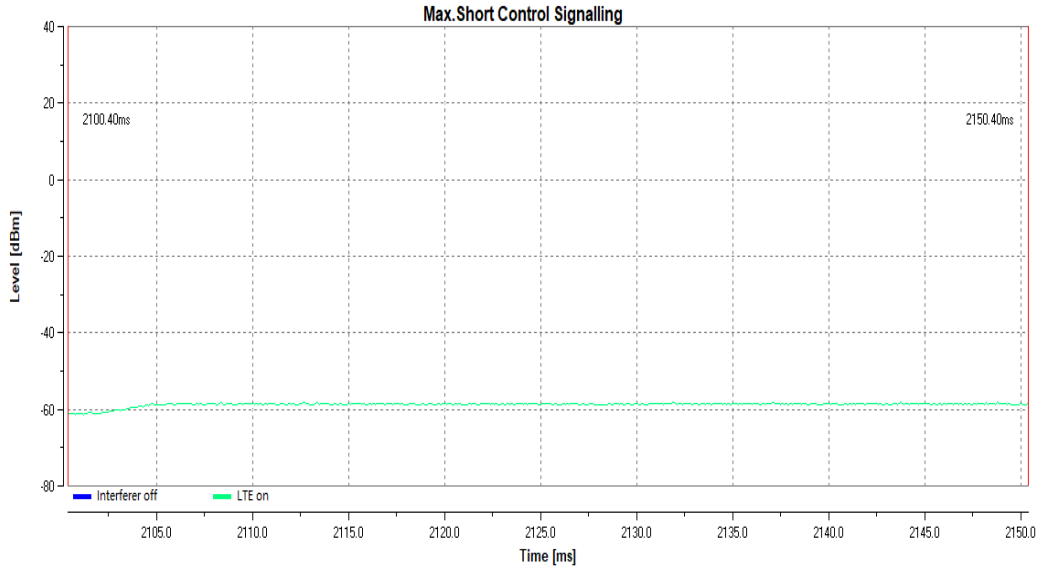
11A_Ant1_5180

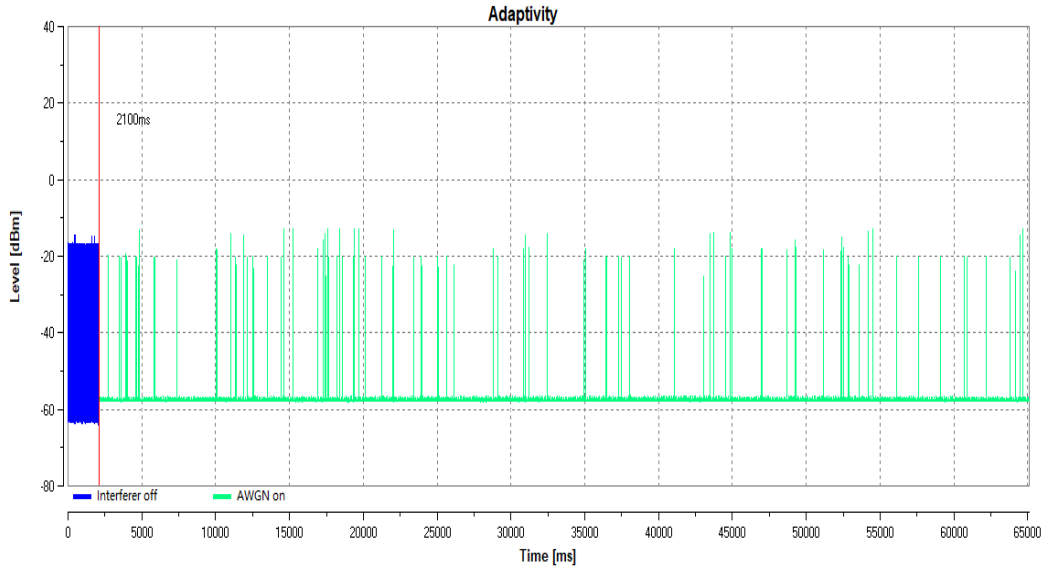
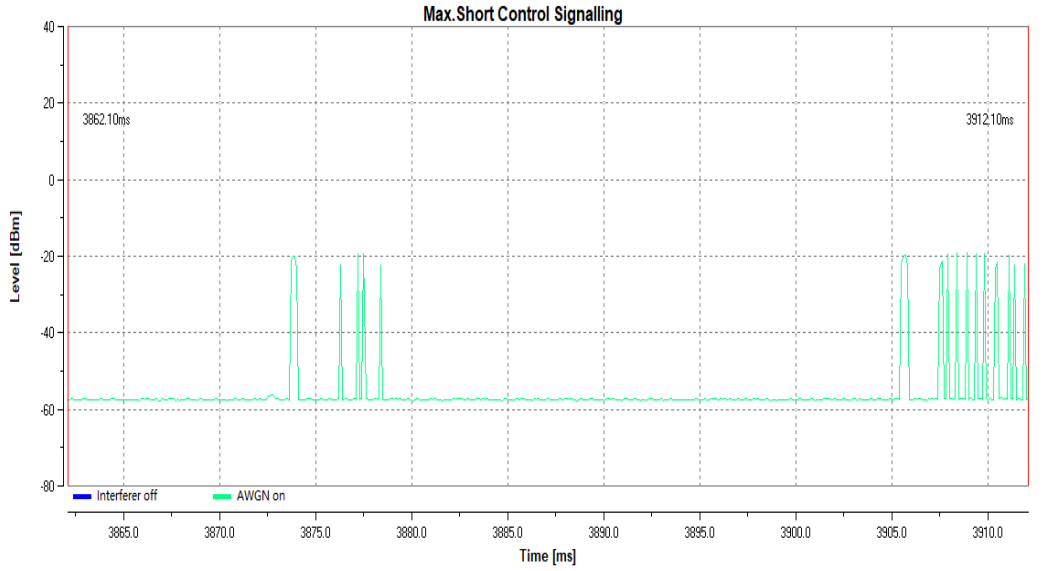




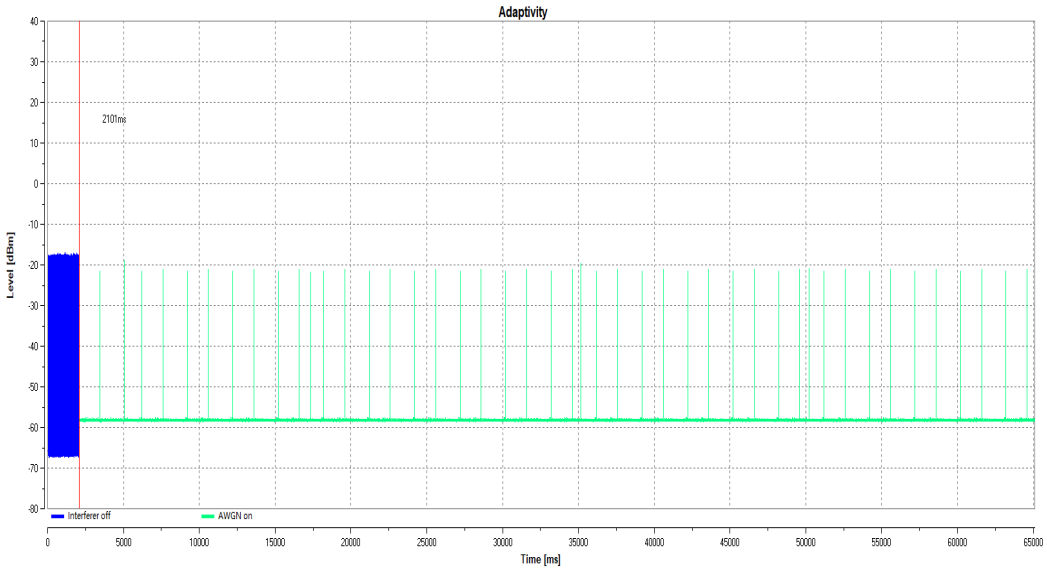
11A_Ant1_5180

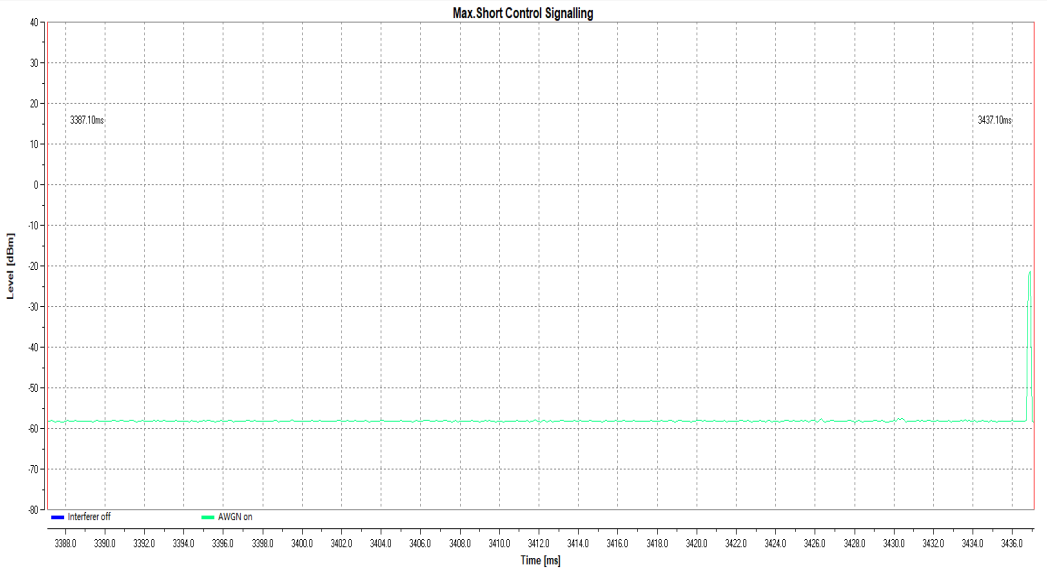


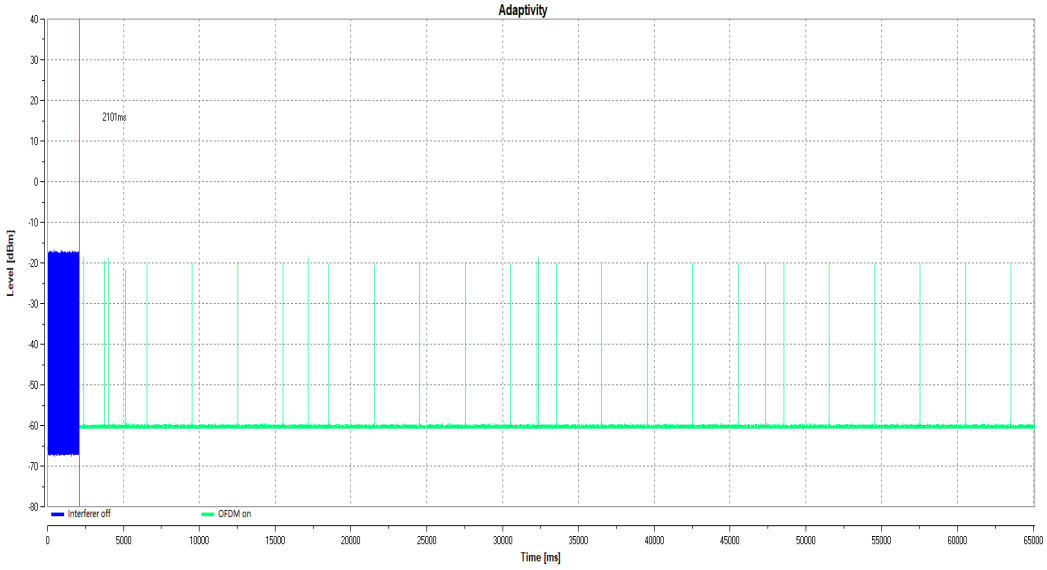
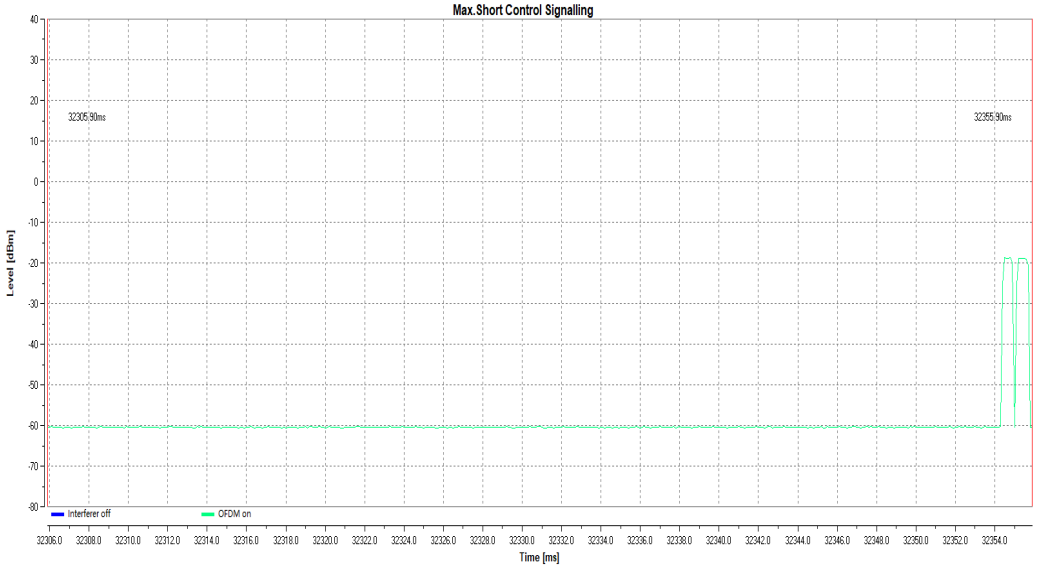


11AC40SISO_Ant1_5190



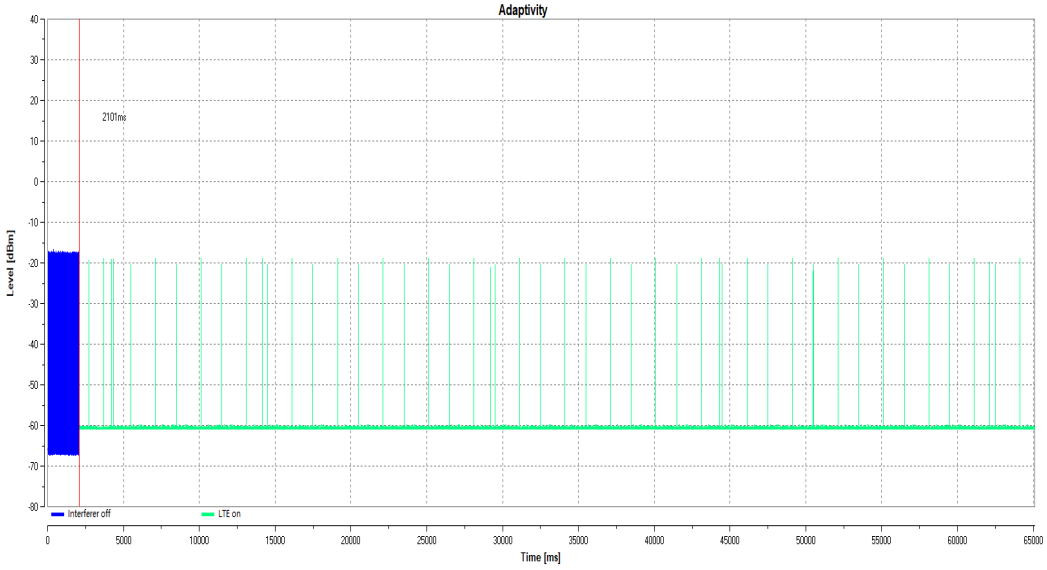
11A_Ant1_5180

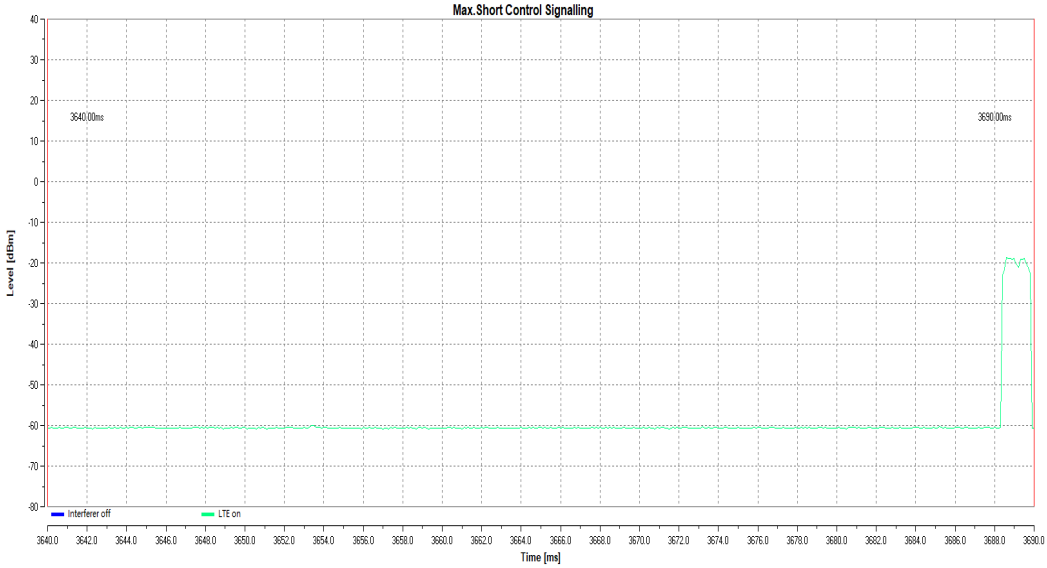




11A_Ant1_5180



11A_Ant1_5180





Duty Cycle

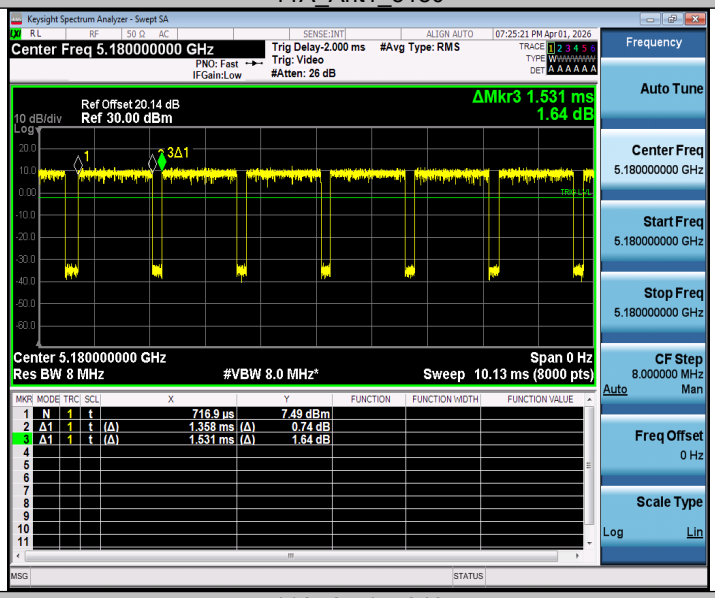
Test Result

Test Mode	Antenna	Freq.(MHz)	TransmissionDuration [ms]	Transmission Period [ms]	Duty Cycle [%]	DC Factor [dB]	Verdict
11A	Ant1	5180	1.36	1.53	88.89	0.51	PASS
		5240	1.36	1.54	88.31	0.54	PASS
		5260	1.36	1.53	88.89	0.51	PASS
		5320	1.36	1.53	88.89	0.51	PASS
		5500	1.36	1.53	88.89	0.51	PASS
		5700	1.36	1.54	88.31	0.54	PASS
11AC20SISO	Ant1	5180	1.15	1.33	86.47	0.63	PASS
		5240	1.15	1.33	86.47	0.63	PASS
		5260	1.15	1.33	86.47	0.63	PASS
		5320	1.15	1.33	86.47	0.63	PASS
		5500	1.15	1.33	86.47	0.63	PASS
		5700	1.15	1.33	86.47	0.63	PASS
11AC40SISO	Ant1	5190	0.58	0.74	78.38	1.06	PASS
		5230	0.58	0.74	78.38	1.06	PASS
		5270	0.58	0.79	73.42	1.34	PASS
		5310	0.58	0.78	74.36	1.29	PASS
		5510	0.58	0.75	77.33	1.12	PASS
		5670	0.58	0.83	69.88	1.56	PASS

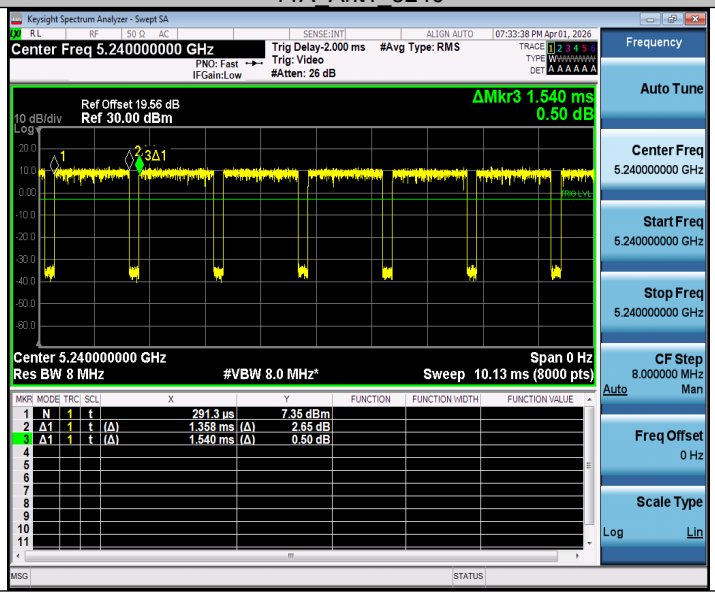
Note: DC Factor = 10* log10(1/x), x=Duty Cycle

Test Graphs

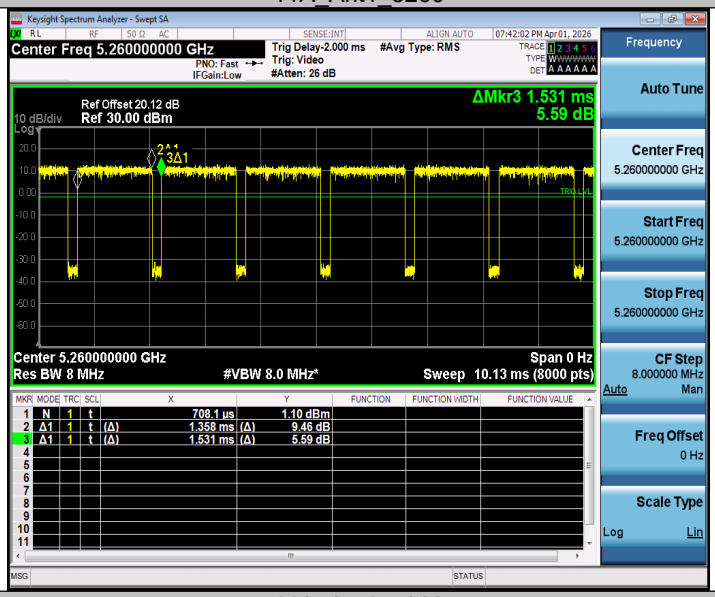
11A_Ant1_5180



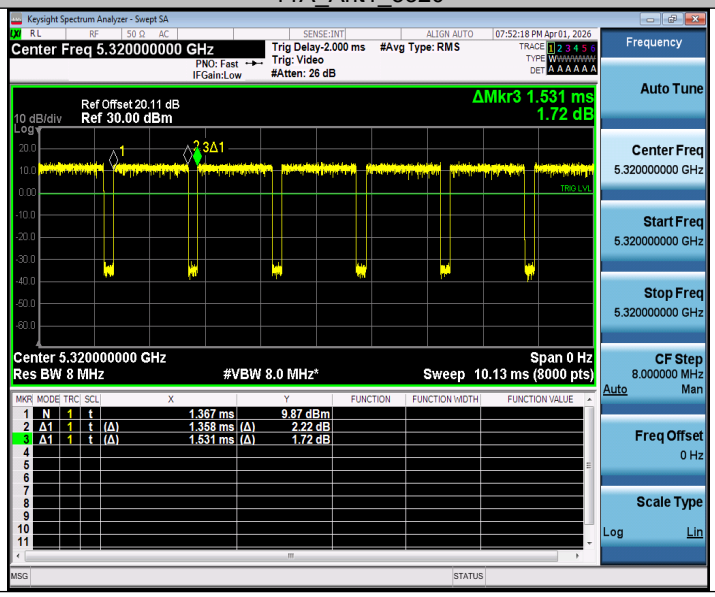
11A_Ant1_5240



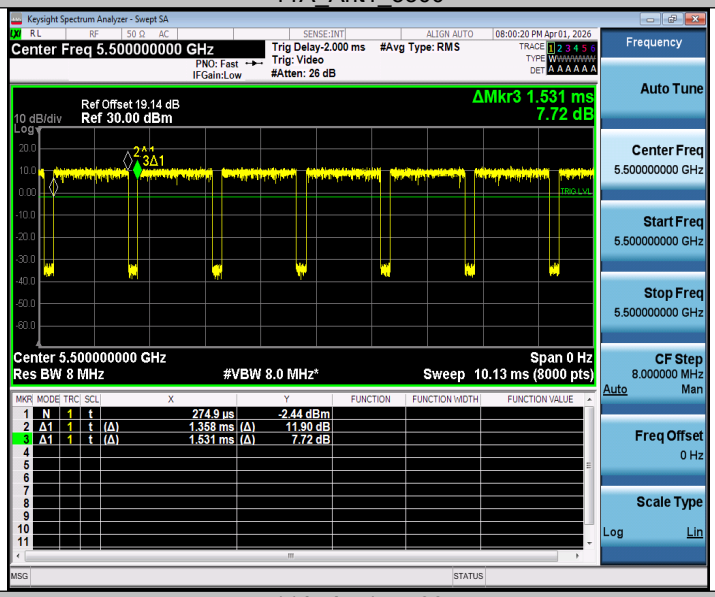
11A_Ant1_5260



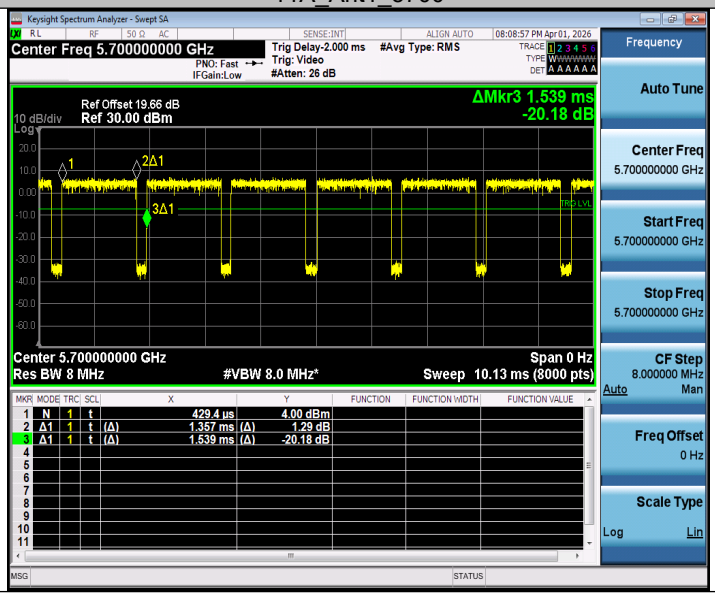
11A_Ant1_5320



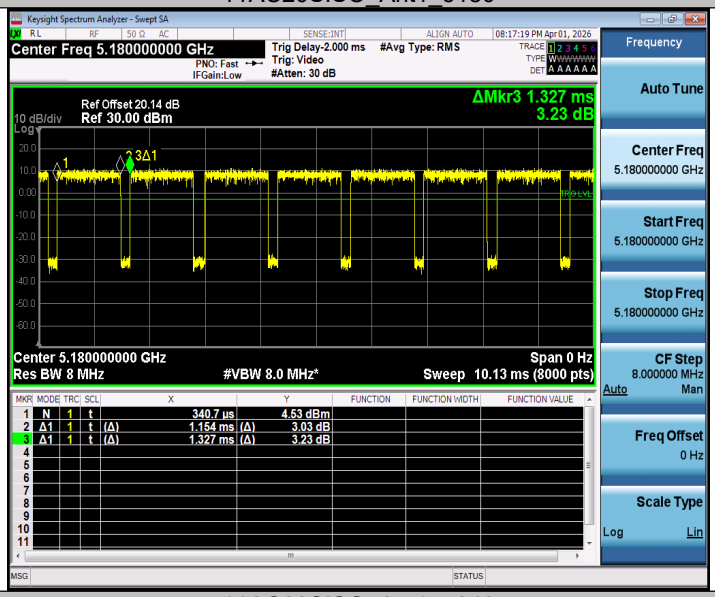
11A_Ant1_5500



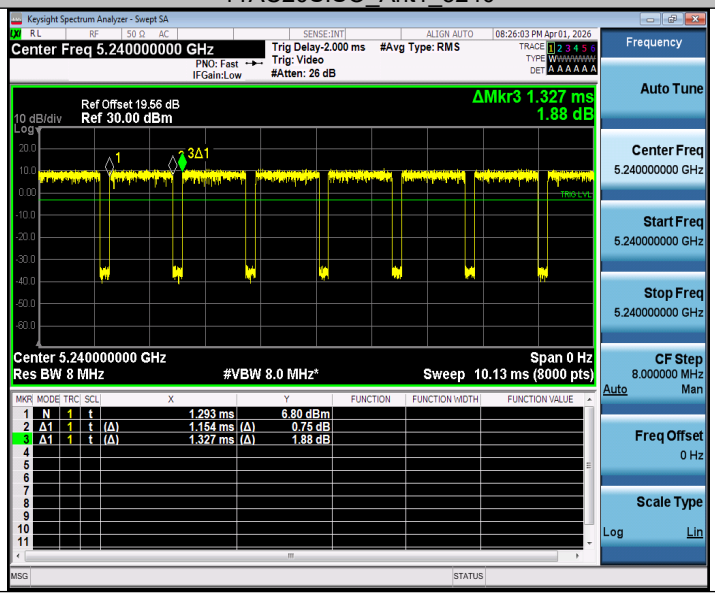
11A_Ant1_5700



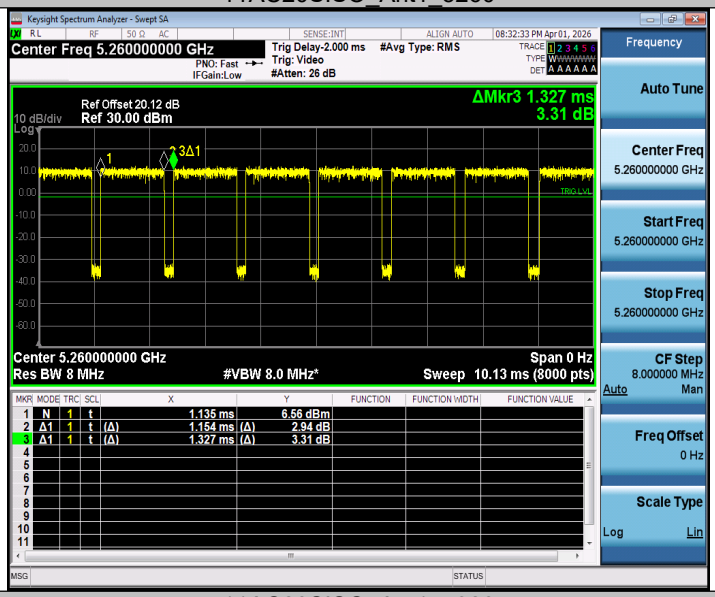
11AC20SISO_Ant1_5180



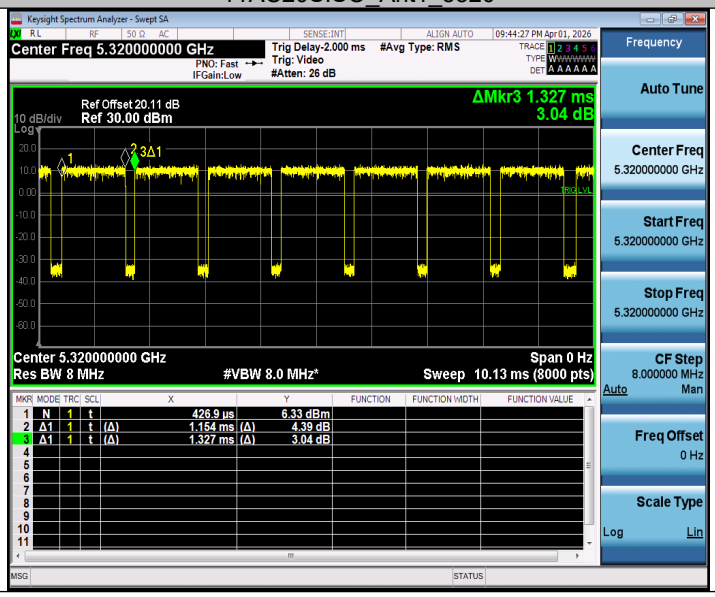
11AC20SISO_Ant1_5240

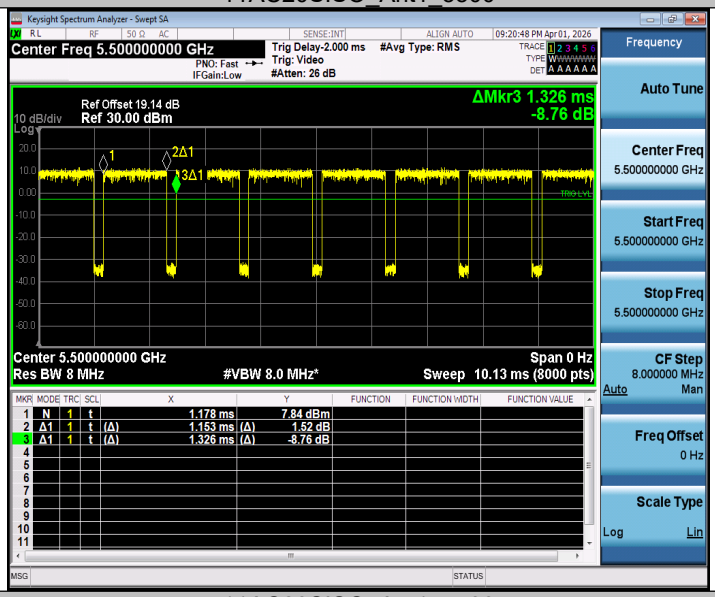


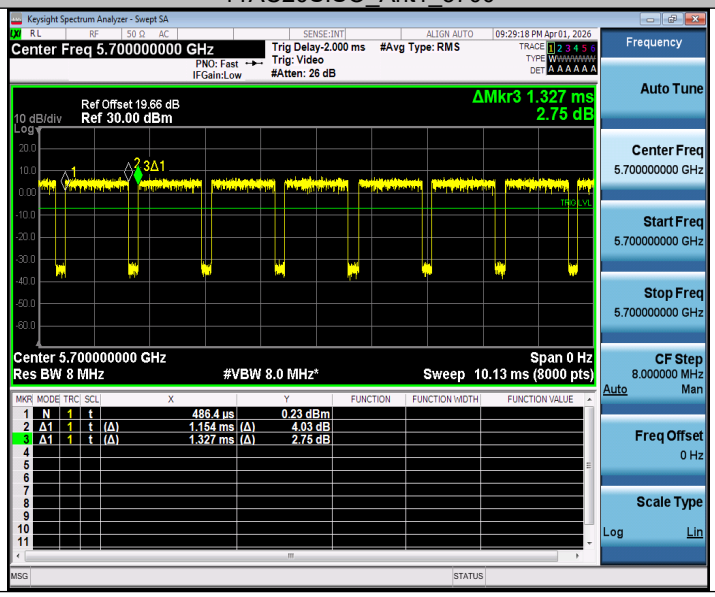
11AC20SISO_Ant1_5260

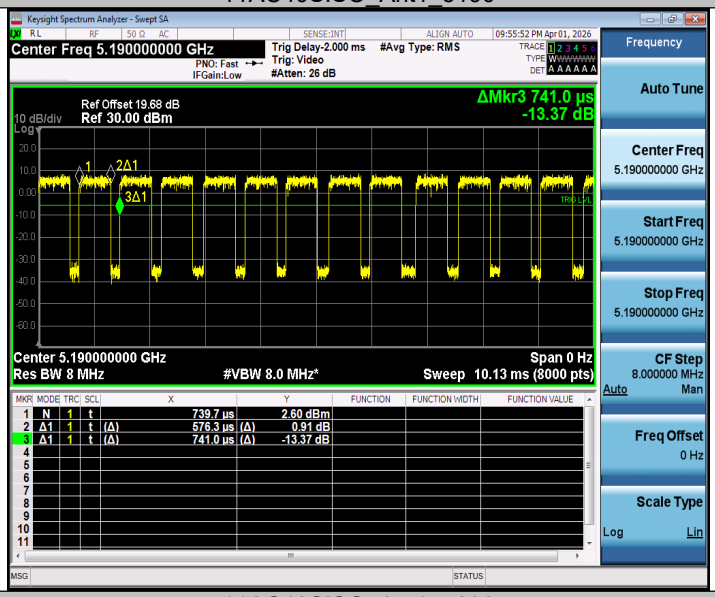


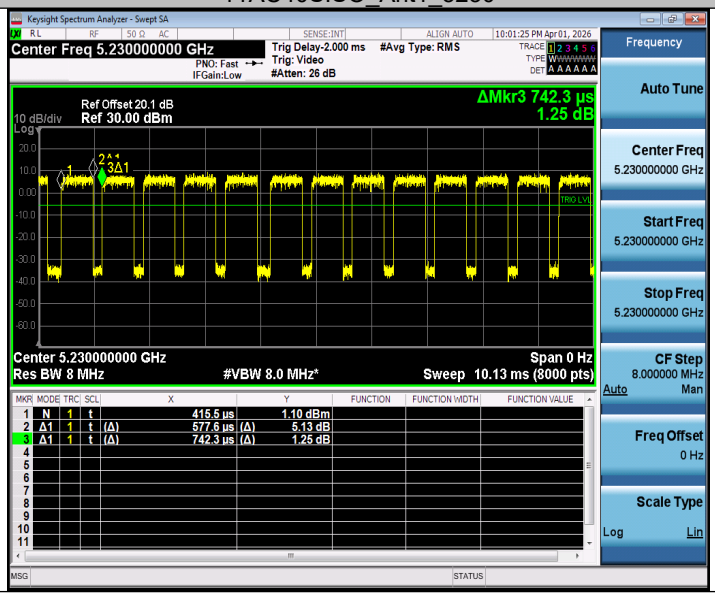
11AC20SISO_Ant1_5320



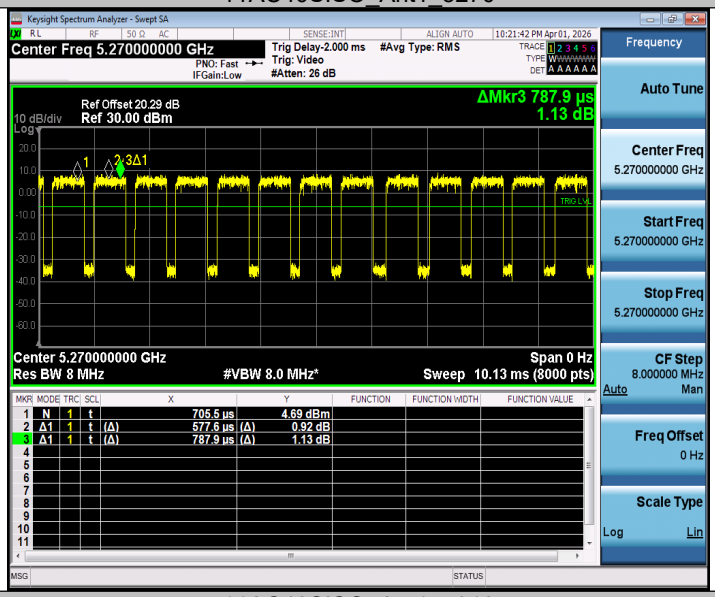
11AC20SISO_Ant1_5500


11AC20SISO_Ant1_5700


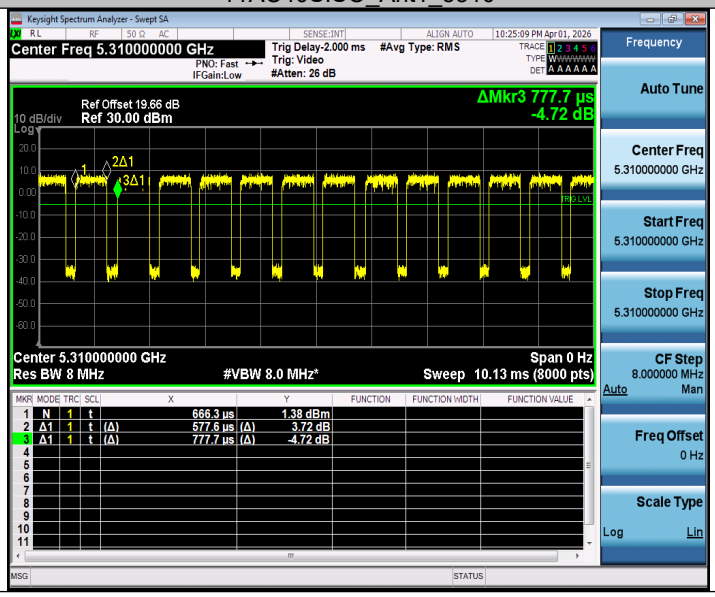
11AC40SISO_Ant1_5190


11AC40SISO_Ant1_5230


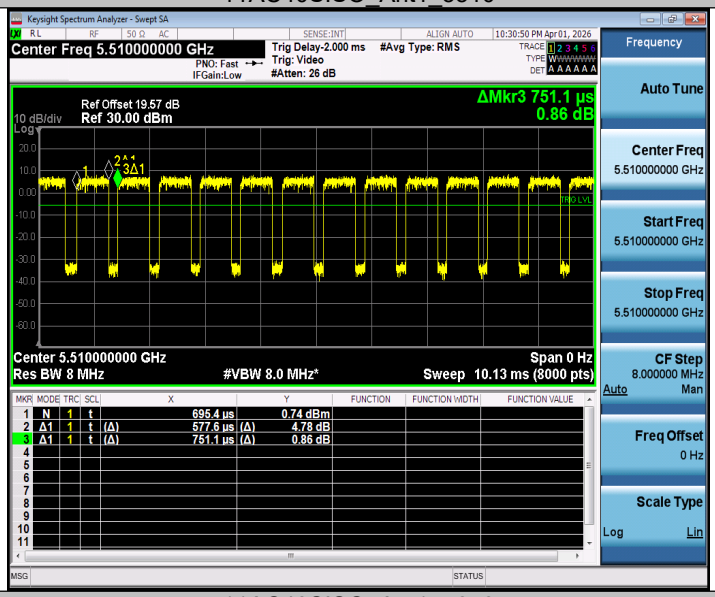
11AC40SISO_Ant1_5270



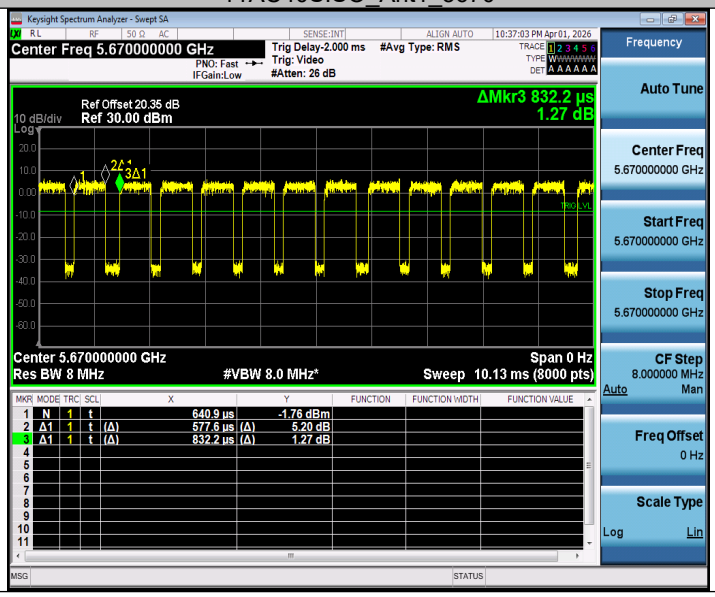
11AC40SISO_Ant1_5310



11AC40SISO_Ant1_5510



11AC40SISO_Ant1_5670



Adjacent channel selectivity

Test Result

Test Mode	Antenna	Freq (MHz)	Pmin (dBm)	Wanted signal Power from companion device (dBm)	Interferer Signal Frequency (MHz)	Interferer Signal Power (dBm)	PER (%)	Limit (%)
11A	Ant1	5180	-89	-79	5159.8	-63	1.3	≤ 10
					5160.2		1.7	
					5199.8		2.2	
					5200.2		2.5	
		5260	-94	-84	5239.8	-68	1.3	≤ 10
					5240.2		2.0	
					5279.8		1.5	
					5280.2		1.9	
		5500	-93	-83	5479.8	-67	1.4	≤ 10
					5480.2		3.2	
					5519.8		3.5	
					5520.2		4.0	

User Access Restrictions (UAR)

Test Result

Port Type	The adaptivity requirements	The DFS requirements
USB-C	the user cannot change settings regarding adaptivity with ED threshold	No applicable

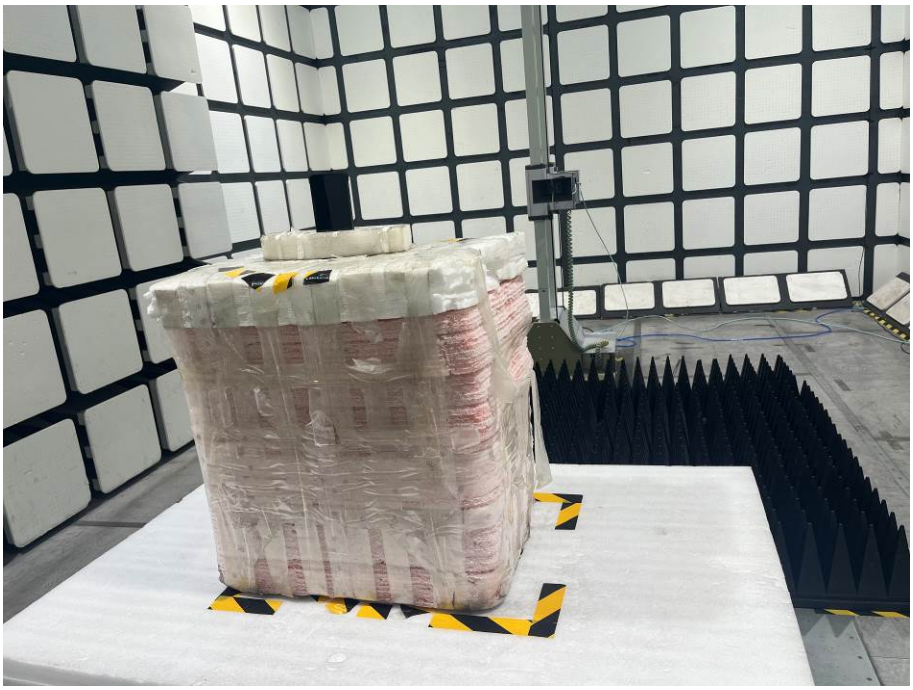
EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the report number is 2601R49433E-EUT.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Radiated Spurious Emissions Test View (Below 1GHz)

Radiated Spurious Emissions Test View (Above 1GHz)



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