

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Product: Commercial Kiosk Tablet

Model No.: INF431

Trademark: GLORYSTAR

Test Standards: FCC Part 15 Subpart E, Paragraph 15.407

Test Result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10, FCC Part 15 Subpart C, Paragraph 15.247 for the evaluation of electromagnetic

compatibility

Approved By

Terry long

Terry Tang

Manager

Dated: January 20, 2025

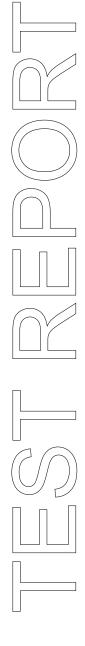
Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com



Date: 2025-01-20



Page 2 of 96

# **Special Statement:**

# FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

# Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

# A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

CAB identifier: CN0033

Page 3 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



# **Test Report Conclusion**

### Content

1.0	General Details	4
1.1	Test Lab Details.	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Submitted Sample	5
1.5	Test Duration.	5
1.6	Test Uncertainty.	5
1.7	Test By	6
2.0	List of Measurement Equipment.	6
3.0	Technical Details	7
3.1	Summary of Test Results	7
3.2	Test Standards.	7
4.0	EUT Modification.	7
5.0	Power Line Conducted Emission Test.	8
5.1	Schematics of the Test.	8
5.2	Test Method and Test Procedure.	8
5.3	Configuration of the EUT	8
5.4	EUT Operating Condition.	9
5.5	Conducted Emission Limit.	9
5.6	Test Result.	9
6.0	Undesirable Emission and Restrict band.	12
7.0	Bandwidth Measurement.	31
8.0	Peak Transmit Power Measurement.	66
9.0	Peak Power Spectral Density Measurement	70
10.0	Frequency Stability	91
11.0	Antenna Requirement	93
12.0	FCC ID Label	94
13.0	Photo of Test Setup and EUT View.	95

Date: 2025-01-20



# Page 4 of 96

#### 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site Listed with Federal Communications commission (FCC)

Registration Number: 744189 For 3m Anechoic Chamber

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-02

For 3m Anechoic Chamber

#### 1.2 Applicant Details

Applicant: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: Bldg., 9, 4/F., Zong Yuntai Technology Industrial Park, Songbai Road, Shiyan Street, Baoan,

Shenzhen, China

#### 1.3 Description of EUT

Product: Commercial Kiosk Tablet

Manufacturer: GLORY STAR TECHNICS (SHENZHEN) CO., LTD.

Address: Bldg., 9, 4/F., Zong Yuntai Technology Industrial Park, Songbai Road, Shiyan Street,

Baoan, Shenzhen, China

Trademark: GLORYSTAR

Additional Trademark: N/A
Model Number: INF431
Additional Model Number: N/A

Type of Modulation IEEE 802.11a/n (HT20/HT40): OFDM (64QAM, 16QAM, QPSK, BPSK);

IEEE 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

Frequency Band 1: 5180MHz-5240MHz

Channel Separation 802.11a/802.11n20:20MHz, 802.11n40:40MHz, 802.11ac: 80MHz

Air Data Rate IEEE 802.11a: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n/HT20: mcs0: 6.5Mbps, mcs1:13Mbps, mcs2:19.5Mbps, mcs3:26Mbps,

mcs4:39Mbps, mcs5:52Mbps, mcs6:58.5Mbps, mcs7:65Mbps

IEEE 802.11n/HT40: mcs0:15Mbps, mcs1:30Mbps, mcs2:45Mbps, mcs3:60Mbps,

mcs4:90Mbps, mcs5:120Mbps, mcs6:135Mbps, mcs7:150Mbps

IEEE 802.11ac: Up to 433.3Mbps

Antenna: Two Dipole antennas used.

Antenna Gain: 1.56dBi for each one. (Get from the antenna specification)

The report refers only to the sample tested and does not apply to the bulk.

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Date: 2025-01-20



Page 5 of 96

Test Mode: During testing, EUT was set to 100% duty cycle. 6Mbps air data rate was the worst case

for 802.11a mode; mcs0 air data rate was the worst case for 802.11n mode; 23.9Mbps air

data rate was the worst case for 802.11ac mode.

Frequency Selection By software

Rating: Input: 100-240V~, 50/60Hz, 150W(MAX)

Each Channel Operation Frequency

	Band 1							
802.11a / 11n HT2	20 / 802.11ac VHT20	802.11n HT4	0 / 802.11acVHT40	802.11a	c VHT80			
Channel	Frequency	Channel	Frequency	Channel	Frequency			
36	5180MHz	38	5190 MHz	42	5210 MHz			
40	5200 MHz	46	5230 MHz					
44	5220 MHz							
48	5240 MHz							

The selected test channels as follows:

	Band 1							
802.11a /	11n HT20	802.11n HT40		802.11ac VHT80				
Channel	Frequency	Channel	Frequency	Channel	Frequency			
36	5180MHz	38	5190 MHz	42	5210 MHz			
40	5200 MHz	46	5230 MHz					
48	5240 MHz							

Note: 802.11ac VHT20/VHT40 is similar with 802.11n HT20/HT40. 802.11a is SISO mode,other modulations are MIMO mode. When test RE, Ant 1 and ANT 2 all have been tested for SISO mode and only report worse case; Ant 1+ Ant 2 simultaneously Transmitter is tested for MIMO mode.

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2024-12-16 to 2025-01-20

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

The sample tested by

Andy -xing

Print Name: Andy Xing

Page 6 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100253	2024-07-12	2025-07-11
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2024-07-12	2025-07-11
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17
Spectrum	R&S	FSIQ26	100292	2024-07-12	2025-07-11
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17
Horn Antenna	R&S	BBHA 9120D	9120D-631	2024-07-12	2025-07-11
Power meter	Anritsu	ML2487A	6K00003613	2024-07-12	2025-07-11
Power sensor	Anritsu	MA2491A	32263	2024-07-12	2025-07-11
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25
EMI Test Receiver	RS	ESVB	826156/011	2024-07-12	2025-07-11
EMI Test Receiver	RS	ESCS 30	834115/006	2024-07-12	2025-07-11
Spectrum	HP/Agilent	E4407B	MY50441392	2024-07-12	2025-07-11
Spectrum	RS	FSP 4.50 SP4	1164.4391.38	2024-07-12	2025-07-11
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	1	2024-07-12	2025-07-11
RF Cable	Zhengdi	7m		2024-07-12	2025-07-11
Pre-Amplifier	Schwarebeck	BBV9743	#218	2024-07-12	2025-07-11
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2024-07-12	2025-07-11
LISN	SCHAFFNER	NNB42	00012	2024-07-12	2025-07-11
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11

#### 2.2 Automation Test Software

# For Conducted Emission Test

Name	Version
EZ-EMC	Ver.EMC-CON 3A1.1

#### For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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adopt any other remedies which may be appropriate.

Page 7 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



#### **Technical Details** 3.0

#### 3.1 **Summary of test results**

The EUT has been tested according to the following specifications:					
Standard	Test Type	Result	Notes		
FCC Part 15, Paragraph 15.107 & 15.407	<b>Conducted Emission Test</b>	Pass	Complies		
FCC Part 15 Subpart E Paragraph 15.407 (b1/4/5/6/7), Part 15.205 and Part 15.209	Undesirable Emission and Restrict band	Pass	Complies		
FCC Part 15, Paragraph 15.407 (a1/2/3)	Peak Transmit Power	Pass	Complies		
FCC Part 15, Paragraph 15.407 (a)(6)	Peak Power Excursion	Pass	Complies		
FCC Part 15, Paragraph 15.407 (a/1/2/3)	Peak Power Spectral Density	Pass	Complies		
FCC Part 15, Paragraph 15.407(g)	Frequency Stability	Pass	Complies		

#### 3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247, ANSI C63.10:2013, ANSI C63.4:2014 789033 D02 General UNII Test Procedures New Rules v01r04

#### 4.0 **EUT Modification**

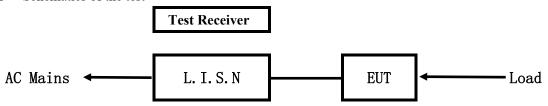
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES.

Date: 2025-01-20



#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

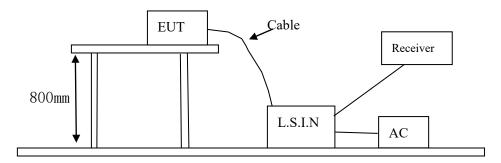


**EUT: Equipment Under Test** 

#### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2009. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



#### 5.3 Configuration of the EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

#### A. EUT

Device	Manufacturer	Model	FCC ID	
Commercial Kiosk Tablet	GLORY STAR TECHNICS	INF431	2AACS-INF431	
Commercial Klosk Tablet	(SHENZHEN) CO., LTD.	11117431	ZAACS-INF451	

Report No.: TW2412174-04E Page 9 of 96

Date: 2025-01-20



#### B. Internal Device

Device	Manufacturer	Model	Rating

#### C. Peripherals

Device Wallufacturer Wioder Rating		Manufacturer	Model	Rating
------------------------------------	--	--------------	-------	--------

5.4 **EUT Operating Condition** 

Operating condition is according to ANSI C63.10 -2013.

- A Setup the EUT and simulators as shown on follow
- В Enable AF signal and confirm EUT active to normal condition
- 5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB $\mu$ V)			
(MHz)	Quasi-peak Level	Average Level		
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*		
$0.50 \sim 5.00$	56.0	46.0		
$5.00 \sim 30.00$	60.0	50.0		

Notes:

- 1. \*Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

#### 5.6 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

Date: 2025-01-20



# A: Conducted Emission on Live Terminal (150kHz to 30MHz)

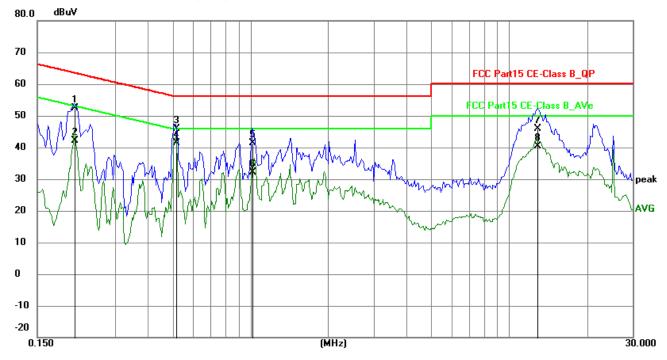
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Keeping WIFI Transmitting** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2085	42.08	10.32	52.40	63.26	-10.86	QP	Р
2	0.2085	31.80	10.32	42.12	53.26	-11.14	AVG	Р
3	0.5166	35.39	10.40	45.79	56.00	-10.21	QP	Р
4	0.5166	31.06	10.40	41.46	46.00	-4.54	AVG	Р
5	1.0158	30.93	10.51	41.44	56.00	-14.56	QP	Р
6	1.0158	21.68	10.51	32.19	46.00	-13.81	AVG	Р
7	12.9060	31.39	14.58	45.97	60.00	-14.03	QP	Р
8	12.9060	25.69	14.58	40.27	50.00	-9.73	AVG	Р

Date: 2025-01-20



# B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

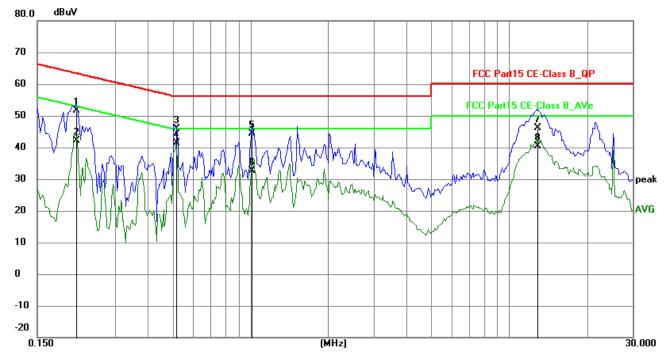
**EUT Operating Environment** 

Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Keeping WIFI Transmitting** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2124	41.43	10.32	51.75	63.11	-11.36	QP	Р
2	0.2124	31.92	10.32	42.24	53.11	-10.87	AVG	Р
3	0.5166	35.57	10.40	45.97	56.00	-10.03	QP	Р
4	0.5166	31.06	10.40	41.46	46.00	-4.54	AVG	Р
5	1.0119	33.87	10.51	44.38	56.00	-11.62	QP	Р
6	1.0119	22.20	10.51	32.71	46.00	-13.29	AVG	Р
7	12.8475	31.48	14.57	46.05	60.00	-13.95	QP	Р
8	12.8475	25.80	14.57	40.37	50.00	-9.63	AVG	Р

Date: 2025-01-20



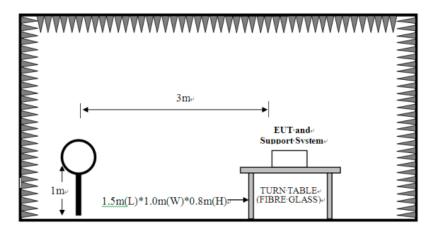
#### 6 Undesirable Emission and Restrict band

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 40 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. For measurement above 1GHz, peak values with RBW=1MHz, VBW=3MHz and PK detector.

  Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization: Vertical polarization and Horizontal polarization.

#### **Block diagram of Test setup**

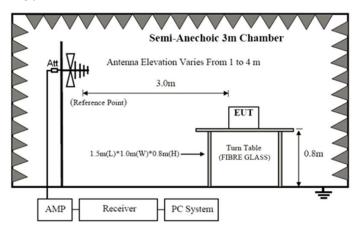
For radiated emissions from 9kHz to 30MHz



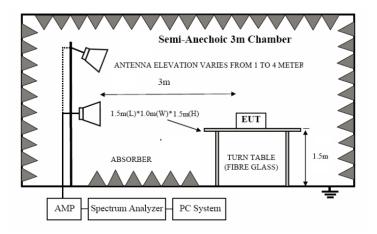
Date: 2025-01-20



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of The EUT
  Same as section 5.3 of this report
- 6.3 EUT Operating Condition

  Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Report No.: TW2412174-04E Page 14 of 96

Date: 2025-01-20



### Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

- (1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27dBm/MHz
- (2) For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27dBm/MHz.

Note: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

Date: 2025-01-20



Page 15 of 96

Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

**EUT set Condition: Keeping WIFI Transmitting** 

**Results: Pass** 

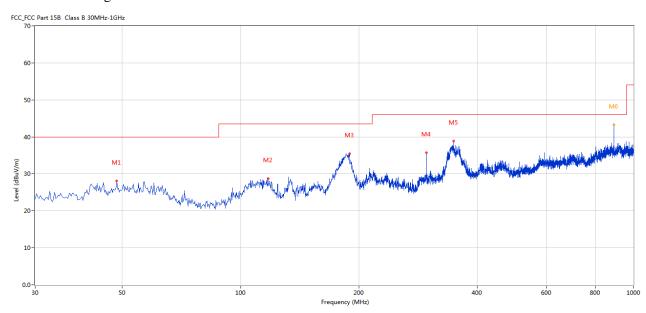
Page 16 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### Test Figure



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	48.425	28.06	-5.29	40.0	11.94	Peak	326.00	100	Horizontal	Pass
2	117.521	28.72	-7.41	43.5	14.78	Peak	1.00	100	Horizontal	Pass
3	189.283	35.52	-7.46	43.5	7.98	Peak	2.00	100	Horizontal	Pass
4	296.926	35.78	-4.01	46.0	10.22	Peak	11.00	100	Horizontal	Pass
5	348.808	38.93	-2.61	46.0	7.07	Peak	359.00	100	Horizontal	Pass
6*	890.902	43.25	4.89	46.0	2.75	QP	61.00	100	Horizontal	Pass

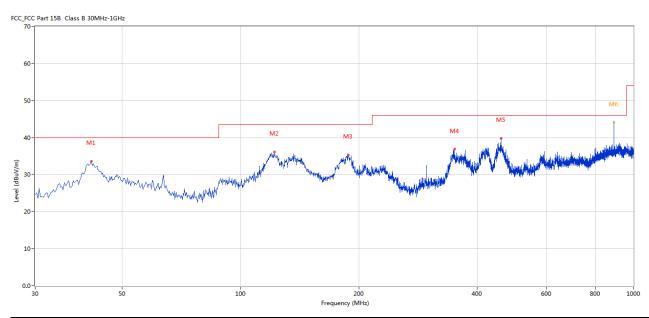
Page 17 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### Test Figure



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	41.637	33.58	-5.75	40.0	6.42	Peak	131.00	100	Vertical	Pass
2	122.127	36.17	-7.95	43.5	7.33	Peak	356.00	100	Vertical	Pass
3	187.828	35.30	-7.32	43.5	8.20	Peak	46.00	100	Vertical	Pass
4	350.747	36.85	-2.41	46.0	9.15	Peak	360.00	100	Vertical	Pass
5	460.572	39.77	-0.95	46.0	6.23	Peak	296.00	100	Vertical	Pass
6*	890.902	44.03	4.89	46.0	1.97	QP	255.00	100	Vertical	Pass

Report No.: TW2412174-04E Page 18 of 96

Date: 2025-01-20



# Operation Mode: Keeping Transmitting under CH36 for 11a at 6Mbps

o k						
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)			
5180.00	82.30 (PK)	Н	Evando montal Engavon av			
5180.00	87.61 (PK)	V	Fundamental Frequency			
10360		Н	74(Peak)/ 54(AV)			
10360		V	74(Peak)/ 54(AV)			
15540		V	74(Peak)/ 54(AV)			
20720		H/V	74(Peak)/ 54(AV)			
25900		H/V	74(Peak)/ 54(AV)			
31080		H/V	74(Peak)/ 54(AV)			
36260		H/V	74(Peak)/ 54(AV)			

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11a mode 6Mbps

## Operation Mode: Keeping Transmitting under CH40 for 11a at 6Mbps

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \( \mu \text{V/m} \)
5200.00	82.45 (PK)	Н	Evandom outol Europy on ove
5200.00	87.42 (PK)	V	Fundamental Frequency
10400	1	Н	74(Peak)/ 54(AV)
10400	1	V	74(Peak)/ 54(AV)
15600	1	V	74(Peak)/ 54(AV)
20800	1	H/V	74(Peak)/ 54(AV)
26000	1	H/V	74(Peak)/ 54(AV)
31200	-	H/V	74(Peak)/ 54(AV)
36400		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11a mode 6Mbps

Page 19 of 96 Report No.: TW2412174-04E

Date: 2025-01-20



# Operation Mode: Keeping Transmitting under CH48 for 11a at 6Mbps

- F						
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \text{V/m} \)			
5240.00	82.24 (PK)	Н	Evan dominantal Englavior			
5240.00	87.22 (PK)	V	Fundamental Frequency			
10480		Н	74(Peak)/ 54(AV)			
10480		V	74(Peak)/ 54(AV)			
15720		H/V	74(Peak)/ 54(AV)			
20960		H/V	74(Peak)/ 54(AV)			
26200		H/V	74(Peak)/ 54(AV □			
31440		H/V	74(Peak)/ 54(AV)			
36680		H/V	74(Peak)/ 54(AV)			

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

<sup>2.</sup> Remark "---" means that the emissions level is too low to be measured

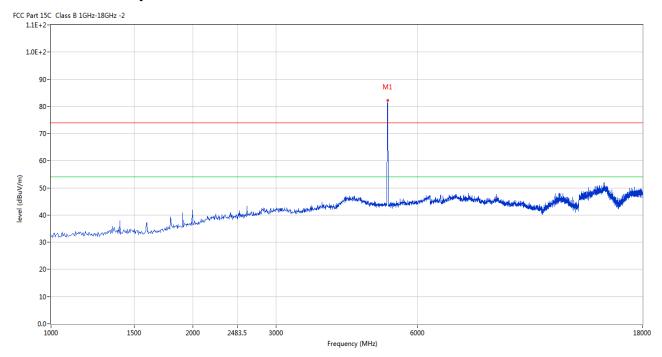
<sup>3.</sup> For 802.11a mode 6Mbps

Date: 2025-01-20

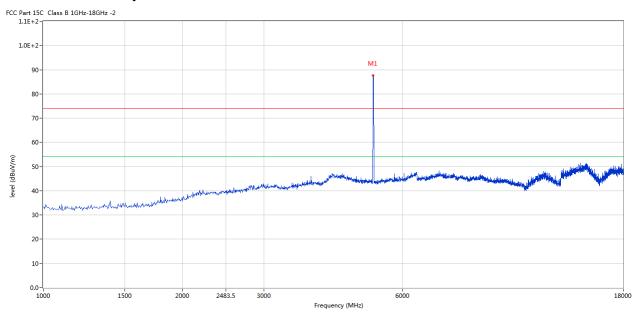


Please refer to the following test plots for details:

#### CH36 for 11a at 6Mbps: Horizontal



#### CH36 for 11a at 6Mbps: Vertical



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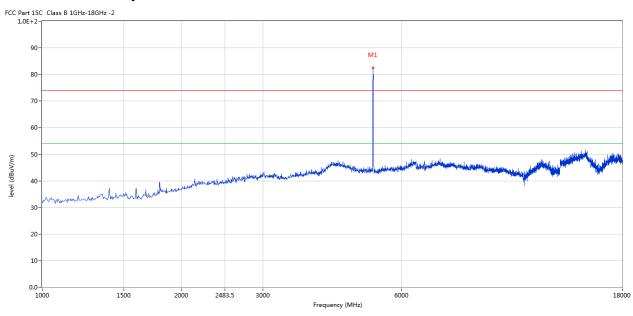
Page 21 of 96

Report No.: TW2412174-04E

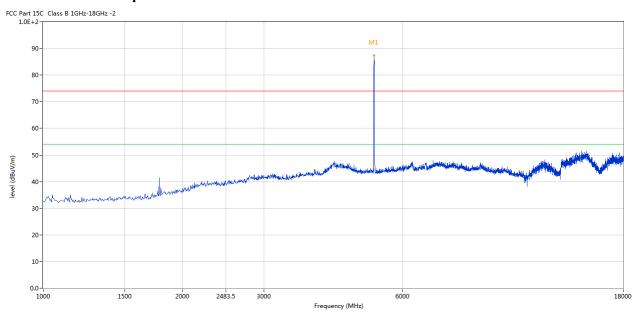
Date: 2025-01-20



### CH40 for 11a at 6Mbps: Horizontal



### CH40 for 11a at 6Mbps: Vertical



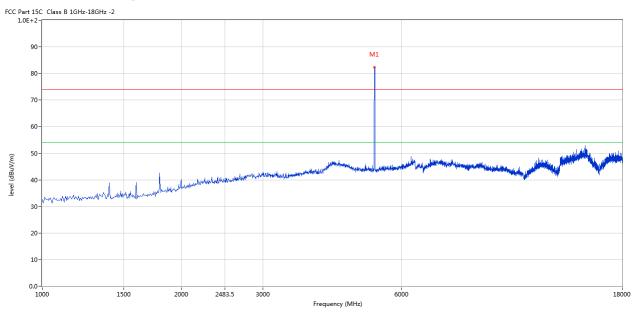
Page 22 of 96

Report No.: TW2412174-04E

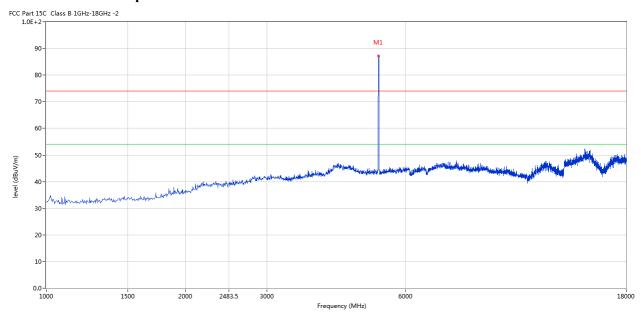
Date: 2025-01-20



# CH48 for 11a at 6Mbps: Horizontal



### CH48 for 11a at 6Mbps: Vertical



Note: 1. For radiated Emissions from 18-40GHz and below 30MHz, it is only the floor noise.

2. 802.11a is the worst case.

Date: 2025-01-20



Restricted band Measurement							
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 36 (5180MHz)-11a			
Mode	Keeping	Transmitting	Input Voltage	120V~			
Temperature	24 deg. C,		Humidity	56% RH			
Test Result:		Pass	Detector	PK			
5150	PK (dBµV/m)	43.9(PK)	T ::4	27 ID /MII-			
	EIRP (dBm)	-51.3	Limit	-27dBm/MHz			
Polarity	Horizontal						

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 43.9 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=43.9-95.2=-51.3dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement							
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 36 (5180MHz)-11a			
Mode	Keeping	g Transmitting	Input Voltage	120V~			
Temperature	24 deg. C,		Humidity	56% RH			
Test Result:		Pass	Detector	PK			
5150	PK (dBµV/m)	44.7 (PK)	T	27.15 /2.41			
	EIRP (dBm)	-50.5	Limit	-27dBm/MHz			
Polarity	Vertical						

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 44.7 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=44.7-95.2=-50.5dBm$ 

2. RBW=1MHz, VBW=3MHz

Page 24 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement							
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 48 (5240MHz)-11a			
Mode	Keeping Transmitting		Input Voltage	120V~			
Temperature	24 deg. C,		Humidity	56% RH			
Test Result:		Pass	Detector	PK			
5250	PK (dBµV/m)	43.5 (PK)	T : '4	27 ID /MII			
	EIRP (dBm)	-51.7	Limit	-27dBm/MHz			
Polarity	Horizontal						

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 43.5 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=43.5 - 95.2=-51.7dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement							
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 48 (5240MHz)-11a			
Mode	Keeping	g Transmitting	Input Voltage	120V~			
Temperature	24 deg. C,		Humidity	56% RH			
Test Result:		Pass	Detector	PK			
5250	PK (dBµV/m)	44.0 (PK)	T	27.15 /2.41			
	EIRP (dBm)	-51.2	Limit	-27dBm/MHz			
Polarity	Vertical						

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 44.0dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=44.0-95.2=-51.2dBm$ 

2. RBW=1MHz, VBW=3MHz

Page 25 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement							
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 36			
				(5180MHz)-11n/HT20			
Mode	Keeping Transmitting		Input Voltage	120V~			
Temperature	24 deg. C,		Humidity	56% RH			
Test Result:		Pass	Detector	PK			
5150	PK (dBµV/m)	46.1(PK)	T * */	27 ID / MI			
	EIRP (dBm)	-49.1	Limit	-27dBm/MHz			
Polarity	Horizontal						

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 46.1 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=46.1-95.2=-49.1dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 36		
				(5180MHz)-11n/HT20		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5150	PK (dBµV/m)	48.3(PK)	T ::4	27 ID AMI-		
	EIRP (dBm) -46.9		Limit	-27dBm/MHz		
Polarity	V	/ertical				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 48.3dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2 = 48.3 - 95.2 = -46.9 dBm$ 

2. RBW=1MHz, VBW=3MHz

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Page 26 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement						
EUT	Commercial Kiosk Tablet		Test Mode:	Channel 48 (5240MHz)-		
				11n/HT20		
Mode	Keeping	g Transmitting	Input Voltage	120V∼		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5350	PK (dBµV/m)	45.1(PK)	T ' '4	27.10 /2.41		
	EIRP (dBm) -50.1		Limit	-27dBm/MHz		
Polarity	Horizontal					

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 45.1 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=45.1-95.2=-50.1dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement						
EUT	Commercial Kiosk Tablet		Test Mode:	Channel 48 (5240MHz)-		
				11n/HT20		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5350	PK (dBµV/m)	47.2(PK)	T	27.10 (2.41)		
	EIRP (dBm) -48.0		Limit	-27dBm/MHz		
Polarity	1	Vertical				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 47.2 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=47.2-95.2=-48.0dBm$ 

2. RBW=1MHz, VBW=3MHz

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Page 27 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement						
EUT	Commercial Kiosk Tablet		Test Mode:	Channel 38		
				(5190MHz)-11n/HT40		
Mode	Keeping	Transmitting	Input Voltage	120V∼		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5150	PK (dBμV/m) 44.1(PK)		Ŧ	25 10 / 251		
	EIRP (dBm) -51.1		Limit	-27dBm/MHz		
Polarity	Но	orizontal				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 44.1 dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=44.1-95.2=-51.1dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 38		
				(5190MHz)-11n/HT40		
Mode	Keeping	Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5150	PK (dBµV/m)	48.9 (PK)	T * */	27 ID /MII		
	EIRP (dBm) -46.3		Limit	-27dBm/MHz		
Polarity	7	Vertical				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 48.9dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=48.9-95.2=-46.3dBm$ 

2. RBW=1MHz, VBW=3MHz

The report refers only to the sample tested and does not apply to the bulk.

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Page 28 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 46 (5230MHz)-		
				11n/HT40		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5350	PK (dBµV/m)	(dBμV/m) 45.3(PK)		27 10 / 444		
	EIRP (dBm) -49.9		Limit	-27dBm/MHz		
Polarity	Horizontal					

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 45.3dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=45.3-95.2=-49.9Bm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement						
EUT	Commercial Kiosk Tablet		Test Mode:	Channel 46 (5230MHz)-		
				11n/HT40		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5350	PK (dBµV/m)	47.6(PK)	T :	27.10 (241)		
	EIRP (dBm) -47.6		Limit	-27dBm/MHz		
Polarity	7	Vertical				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 47.6dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=47.6-95.2=-47.6dBm$ 

2. RBW=1MHz, VBW=3MHz

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Page 29 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 42		
				(5210MHz)-11ac/VHT80		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5150	PK (dBµV/m)	46.6 (PK)	T : ',	25 15 25 45		
	EIRP (dBm) -48.6		Limit	-27dBm/MHz		
Polarity	Н	orizontal				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 46.6dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=46.6-95.2=-48.6dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 42 (5210MHz)-		
				11ac/VHT80		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5150	PK (dBµV/m)	48.4(PK)	T :!4	27 ID/MII-		
	EIRP (dBm) -46.8		Limit	-27dBm/MHz		
Polarity	V	Vertical		-		

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 48.4dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=48.4-95.2=-46.8dBm$ 

2. RBW=1MHz, VBW=3MHz

The report refers only to the sample tested and does not apply to the bulk.

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Page 30 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 42 (5210MHz)-		
				11ac/VHT80		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5350	PK (dBµV/m)	47.7(PK)	<b>.</b>	27.10		
	EIRP (dBm) -47.5		Limit	-27dBm/MHz		
Polarity	Но	orizontal				

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 47.7dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=47.7-95.2=-47.5dBm$ 

2. RBW=1MHz, VBW=3MHz

Restricted band Measurement						
EUT	Commerc	ial Kiosk Tablet	Test Mode:	Channel 42		
				(5210MHz)-11ac/VHT80		
Mode	Keeping	g Transmitting	Input Voltage	120V~		
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:		Pass	Detector	PK		
5350	PK (dBμV/m) 48.9 (PK)		T * *	27.10 (2.41)		
	EIRP (dBm) -46.3		Limit	-27dBm/MHz		
Polarity	V	Vertical		1		

Remark: 1. According to KDB 789033 D02 General UNII Test Procedures New Rules v01 section G) d) (ii), for measurement above 1000MHz@3m distance, the limit of EIRP is calculated as follows:

 $EIRP[dBm] = E[dB\mu V/m] - 95.2$ 

For Example, if  $E[dB\mu V/m] = 48.9dB\mu V/m$ ,

 $EIRP[dBm] = E[dB\mu V/m] - 95.2=48.9-95.2=-46.3dBm$ 

2. RBW=1MHz, VBW=3MHz

The report refers only to the sample tested and does not apply to the bulk.

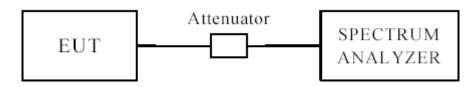
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Date: 2025-01-20



#### 7.0 Emission Bandwidth

## 7.1 Test Setup



#### 7.3 Test Procedure for Emission Bandwidth

- 1. Set RBW = approximately 1% of the emission bandwidth.
- 2. Set VBW> RBW
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

# 7.4 Test Procedure for Minimum Bandwidth for the Band 5725-5850MHz

- 1. Set RBW = 100 kHz.
- 2. Set  $VBW \ge 3 \times RBW$ .
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

#### 7.5 Test Procedure for 99% Bandwidth

- 1. Set center frequency to the nominal EUT channel center frequency
- 2. Set span = 1.5 times to 5.0 times OBW
- 3. Set RBW= 1% TO 5% of the OBW
- 4. Set  $VBW \ge 3 \times RBW$
- 5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Other, peak detection and max mode (until trace stabilizes) shall be used.
- 6. Use the 99% power bandwidth function of the instrument

The report refers only to the sample tested and does not apply to the bulk.

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Report No.: TW2412174-04E Page 32 of 96

Date: 2025-01-20



# 7.6 Test Result

EUT		Comi	mercial Kio	sk Tablet	Model	INF431
Mode			802.11a		Input Voltage	120V~
Temperati	ure		24 deg. (	Ξ,	Humidity	56% RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	Bandwidth (MHz)	Minimum Limit (MHz)	Pass/ Fail
26dB Bar	ndwidth					
36		5180	6	22.68		Pass
40		5200	6	22.68		Pass
48		5240	6	22.80		Pass
99% Ban	dwidth					
36		5180	6	16.92		Pass
40		5200	6	16.92		Pass
48		5240	6	16.92		Pass

Note: Two antennas (Ant 1 and Ant 2) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 33 of 96

Report No.: TW2412174-04E

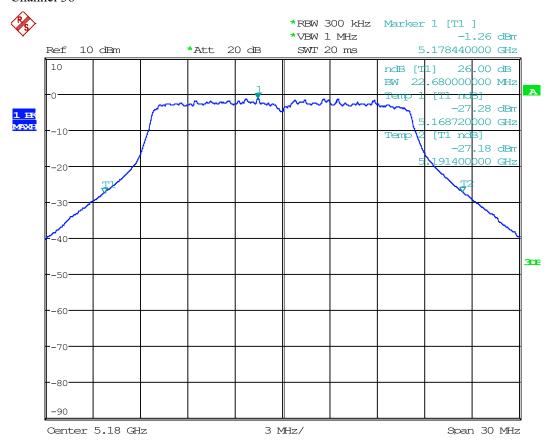
Date: 2025-01-20



Test Figure:

#### **26dB Bandwidth**

#### Channel 36



Date: 16.JAN.2025 16:21:43

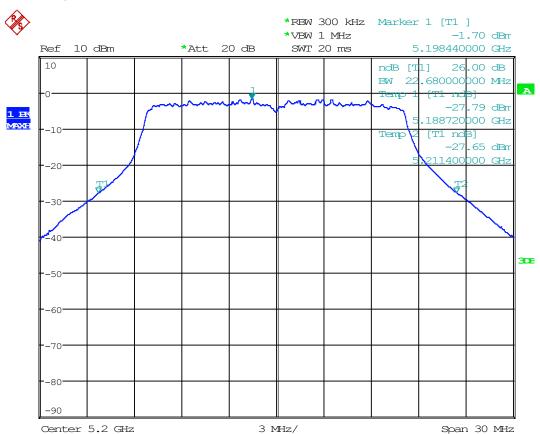
Page 34 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### Channel 40



Date: 16.JAN.2025 16:22:21

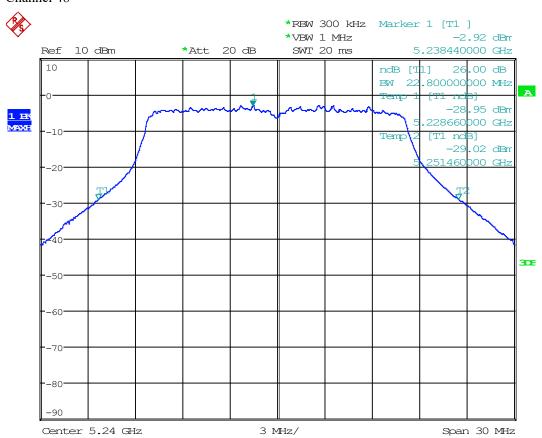
Page 35 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### Channel 48



Date: 16.JAN.2025 16:22:58

Page 36 of 96

Report No.: TW2412174-04E

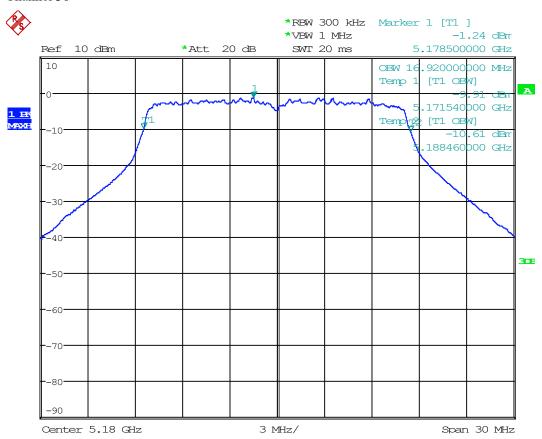
Date: 2025-01-20



Test Figure:

#### 99% Bandwidth

#### Channel 36



Date: 16.JAN.2025 16:30:58

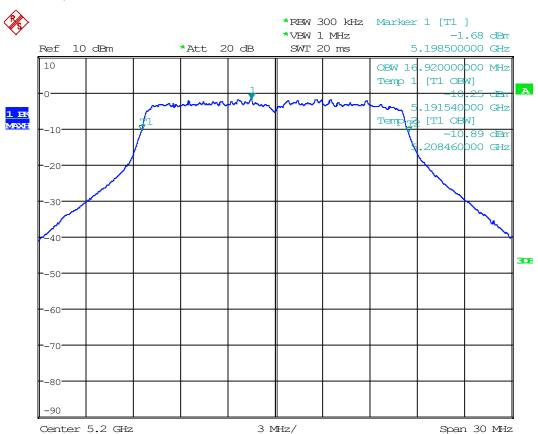
Page 37 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 40



Date: 16.JAN.2025 16:30:02

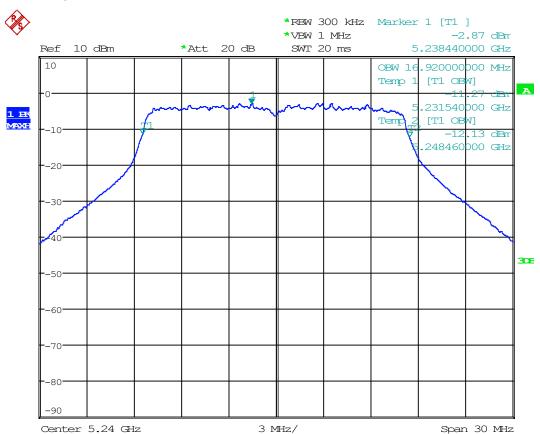
Page 38 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 48



Date: 16.JAN.2025 16:29:09

Report No.: TW2412174-04E Page 39 of 96

Date: 2025-01-20



EUT		Com	mercial Ki	osk Tablet	Model	INF431
Mode			802.11n H	IT20	Input Voltage	120V~
Temperati	ure		24 deg.	C,	Humidity	56% RH
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	Bandwidth (MHz)	Minimum Limit (MHz)	Pass/ Fail
26dB Bar	ndwidth					
36	5180		mcs0	23.70		Pass
40		5200	mcs0	23.64		Pass
48		5240	mcs0	23.76		Pass
99% Ban	dwidth					
36		5180		18.12		Pass
40	5200		mcs0	18.12		Pass
48	5240		mcs0	18.18		Pass

Note: Two antennas (Ant 1 and Ant 2) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 40 of 96

Report No.: TW2412174-04E

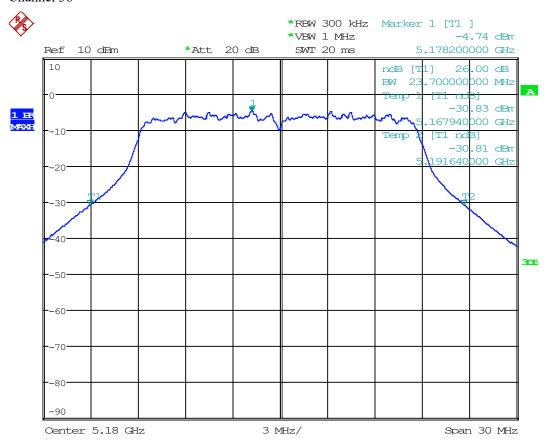
Date: 2025-01-20



# Test Configure

### **26dB Bandwidth**

### Channel 36



Date: 16.JAN.2025 17:32:33

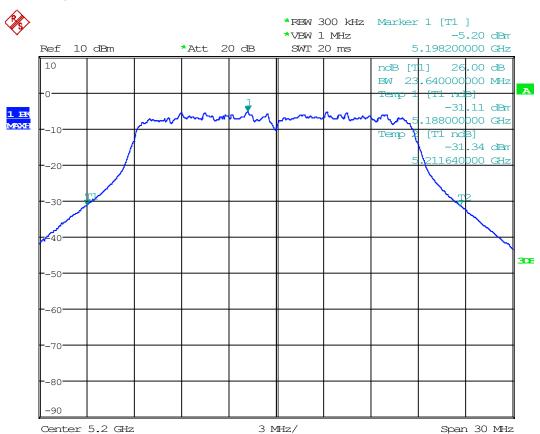
Page 41 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 40



Date: 16.JAN.2025 17:30:48

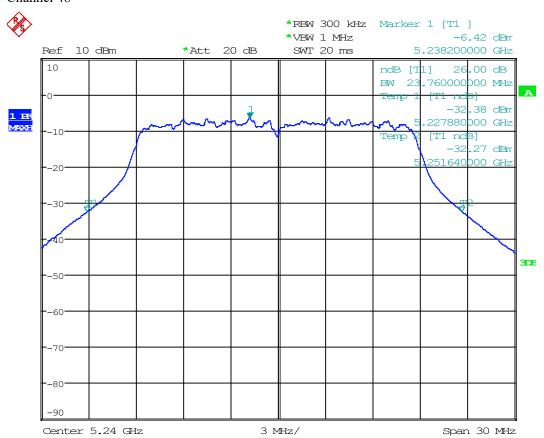
Page 42 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 48



Date: 16.JAN.2025 17:29:53

Page 43 of 96

Report No.: TW2412174-04E

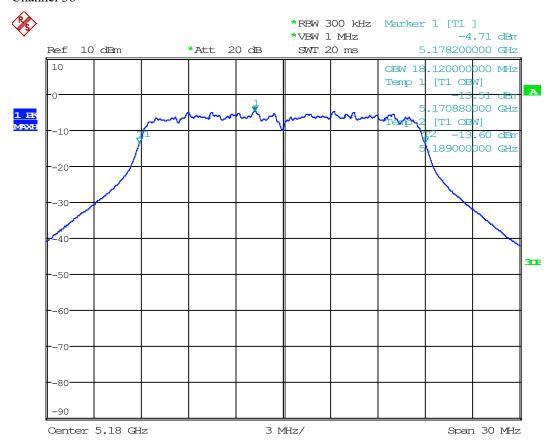
Date: 2025-01-20



# Test Configure

### 99% Bandwidth

### Channel 36



Date: 16.JAN.2025 17:50:58

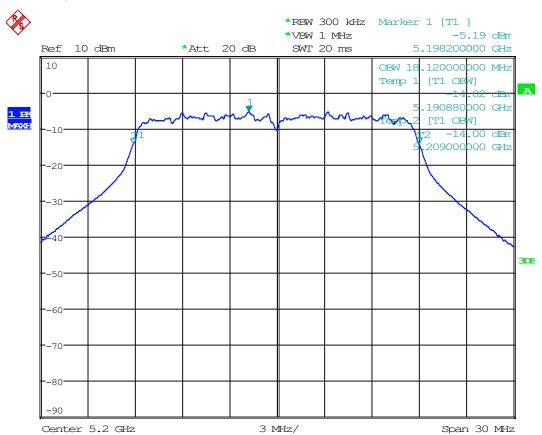
Page 44 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 40



Date: 16.JAN.2025 17:52:54

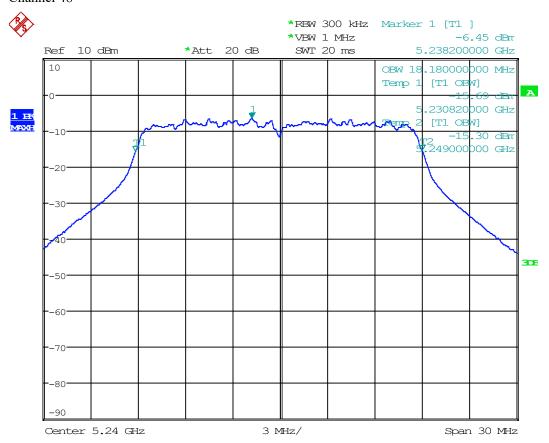
Page 45 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 48



Date: 16.JAN.2025 17:54:50

Page 46 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



EUT		Com	mercial Ki	osk Tablet	Model	INF431
Mode			802.11n H	T40	Input Voltage	120V~
Temperati	ure		24 deg.	C,	Humidity	56% RH
Channel	Channel Frequency (MHz)		Data Transfer Rate (MHz) (Mbps)		Minimum Limit (MHz)	Pass/ Fail
26dB Bar	ndwidth					
38	5190		mcs0	45.96		Pass
46		5230	mcs0	46.08		Pass
99% Ban	dwidth					
38	5190		mcs0	37.44		Pass
46	5230		5230 mcs0			Pass

Note: Two antennas (Ant 1 and Ant 2) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 47 of 96

Report No.: TW2412174-04E

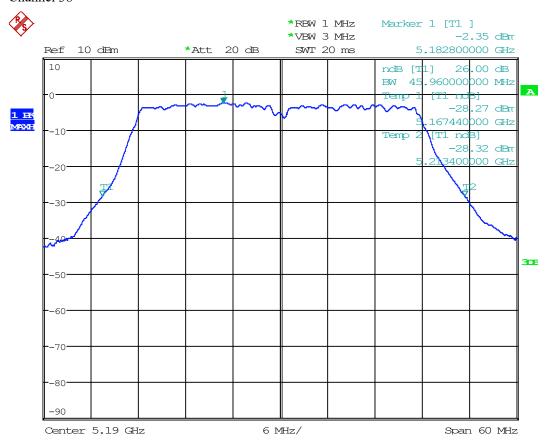
Date: 2025-01-20



# Test Configure

### **26dB Bandwidth**

### Channel 38



Date: 16.JAN.2025 17:33:40

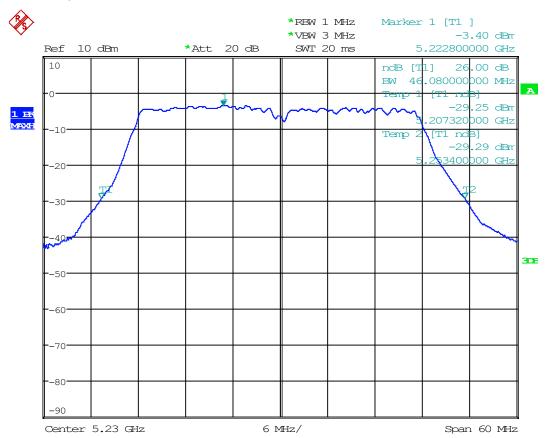
Page 48 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 46



Date: 16.JAN.2025 17:34:35

Page 49 of 96

Report No.: TW2412174-04E

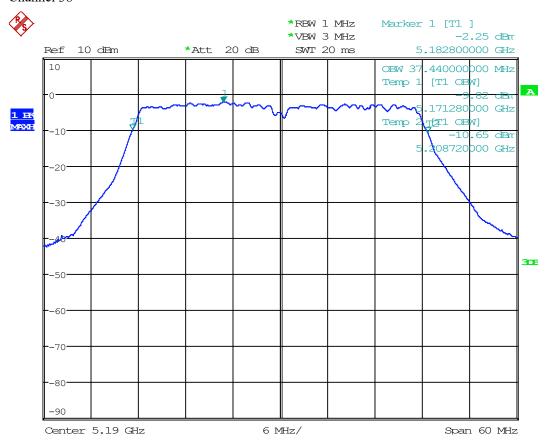
Date: 2025-01-20



## Test Configure

### 99% Bandwidth

### Channel 38



Date: 16.JAN.2025 17:47:16

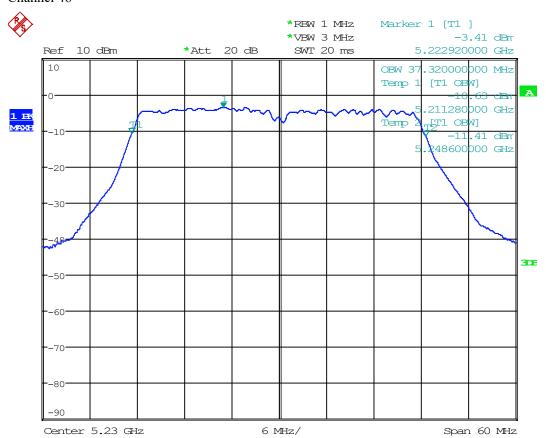
Page 50 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 46



Date: 16.JAN.2025 17:43:31

Page 51 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



EUT		Cor	nmercial K	iosk Tablet	Model	INF431
Mode			802.11ac V	/HT20	Input Voltage	120V~
Temperati	ure		24 deg.	. С,	Humidity	56% RH
Channel		el Frequency (MHz)	Data Transfer Rate (MHz) (Mbps)		Minimum Limit (MHz)	Pass/ Fail
26dB Bar	ıdwidth					
36		5180 mcs0		24.12		Pass
40		5200	mcs0	24.12		Pass
48		5240	mcs0	24.18		Pass
99% Ban	dwidth					
36	5180		mcs0	18.24		Pass
40	5200		mcs0	18.24		Pass
48		5240	mcs0 18.24			Pass

Note: Two antennas (Ant 1 and Ant 2) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 52 of 96

Report No.: TW2412174-04E

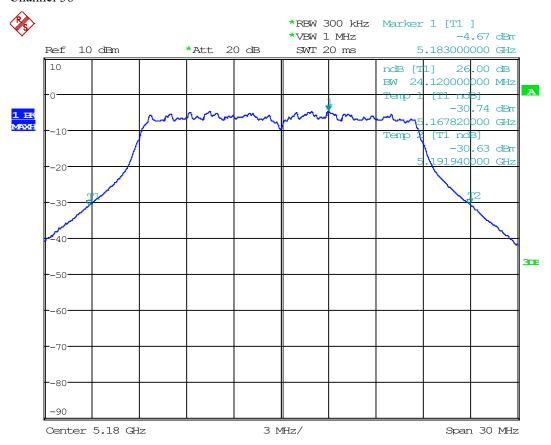
Date: 2025-01-20



## Test Configure

### **26dB Bandwidth**

### Channel 36



Date: 17.JAN.2025 10:19:55

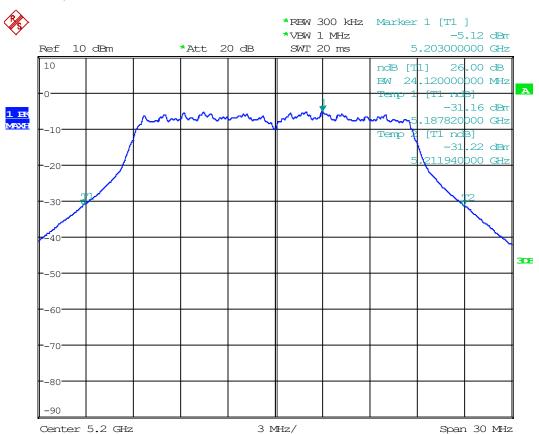
Page 53 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 40



Date: 17.JAN.2025 10:22:58

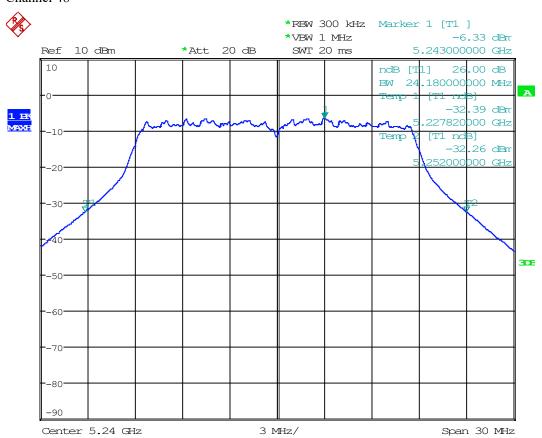
Page 54 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 48



Date: 17.JAN.2025 10:25:20

Page 55 of 96

Report No.: TW2412174-04E

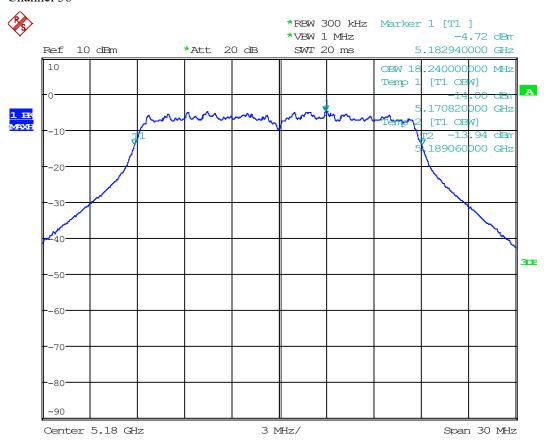
Date: 2025-01-20



# Test Configure

### 99% Bandwidth

### Channel 36



Date: 17.JAN.2025 11:24:06

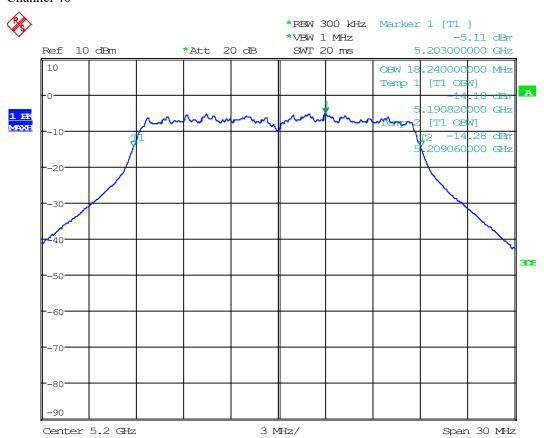
Page 56 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 40



Date: 17.JAN.2025 11:23:39

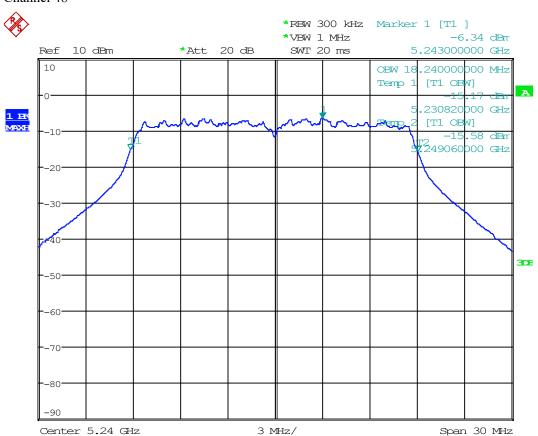
Page 57 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 48



Date: 17.JAN.2025 11:22:57

Page 58 of 96 Report No.: TW2412174-04E

Date: 2025-01-20



EUT		Com	mercial Ki	osk Tablet	Model	INF431
Mode		!	802.11ac V	HT40	Input Voltage	120V~
Temperati	ure		24 deg.	C,	Humidity	56% RH
Channel	Channel Frequency (MHz)		Data Transfer Rate (MHz) (Mbps)		Minimum Limit (MHz)	Pass/ Fail
26dB Bar	ndwidth					
38	5190		5190 mcs0			Pass
46		5230	mcs0	45.36		Pass
99% Ban	dwidth					
38	5190		mcs0	37.20		Pass
46	5230		mcs0	37.20		Pass

Note: Two antennas (Ant 1 and Ant 2) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 59 of 96

Report No.: TW2412174-04E

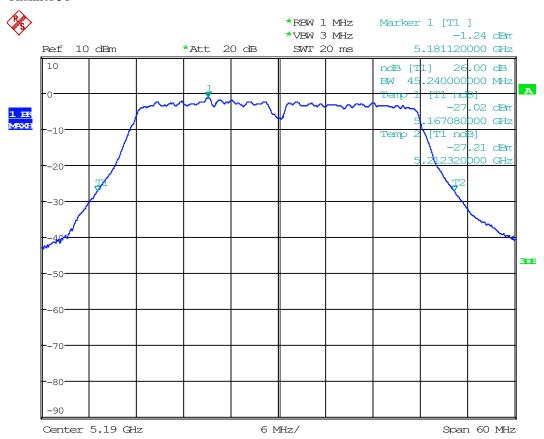
Date: 2025-01-20



# Test Configure

### **26dB Bandwidth**

### Channel 38



Date: 17.JAN.2025 10:50:35

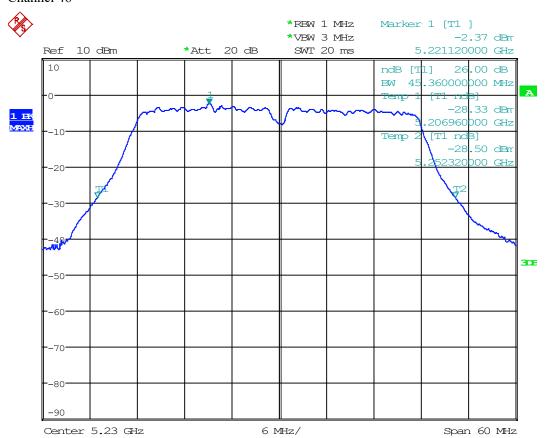
Page 60 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 46



Date: 17.JAN.2025 10:51:16

Page 61 of 96

Report No.: TW2412174-04E

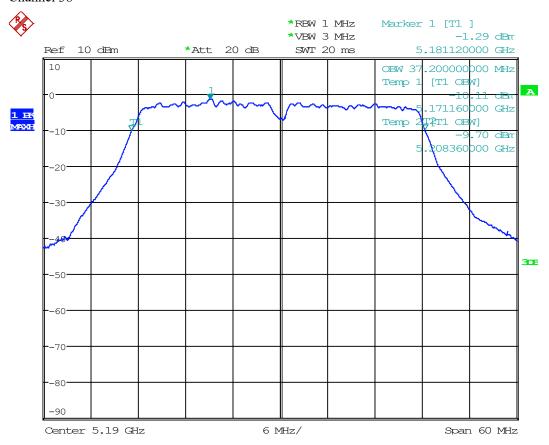
Date: 2025-01-20



# Test Configure

### 99% Bandwidth

### Channel 38



Date: 17.JAN.2025 11:12:08

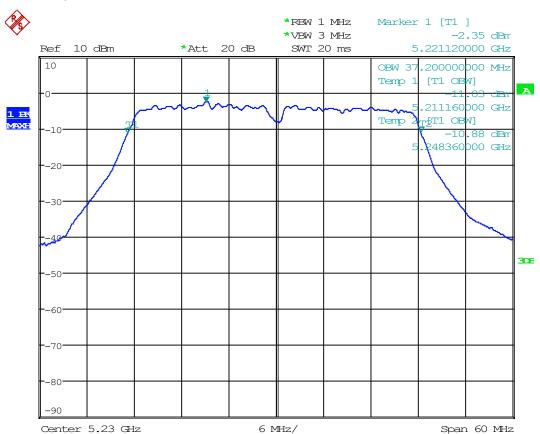
Page 62 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



## Channel 46



Date: 17.JAN.2025 11:11:07

Report No.: TW2412174-04E Page 63 of 96

Date: 2025-01-20



EUT		Com	mercial Ki	osk Tablet	Model	INF431				
Mode			802.11ac V	HT80	Input Voltage	120V~				
Temperati	ure		24 deg.	C,	Humidity	56% RH				
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	Bandwidth (MHz)	Minimum Limit (MHz)	Pass/ Fail				
26dB Bar	ndwidth									
42		5210	mcs0	86.16		Pass				
99% Bandwidth										
42		5210	mcs0	76.32		Pass				

Note: Two antennas (Ant 1 and Ant 2) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 64 of 96

Report No.: TW2412174-04E

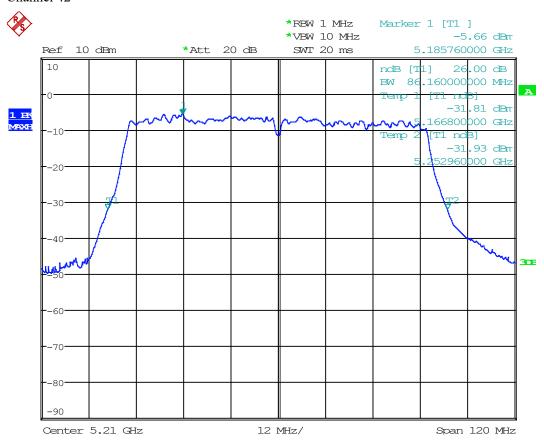
Date: 2025-01-20



# Test Configure

### **26dB Bandwidth**

### Channel 42



Date: 17.JAN.2025 10:48:43

Page 65 of 96

Report No.: TW2412174-04E

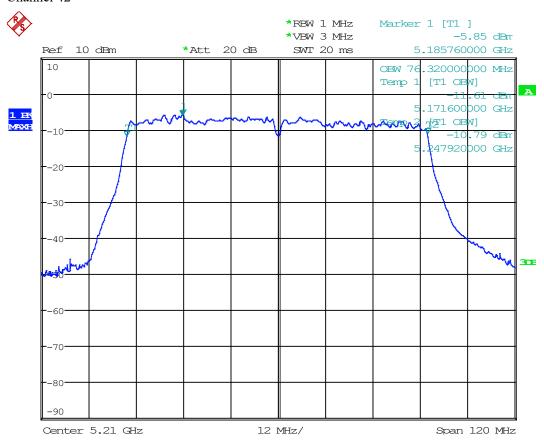
Date: 2025-01-20



# Test Configure

### 99% Bandwidth

### Channel 42



Date: 17.JAN.2025 11:13:22

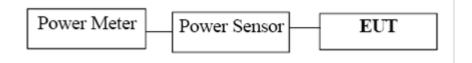
Report No.: TW2412174-04E Page 66 of 96

Date: 2025-01-20



## 8.0 Transmit Power Measurement

## 8.1 Test Setup



## 8.2 Limits of Transmit Power Measurement

For client devices in the 5.15-5.25 GHz band	250mW (24 dBm)

### 8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: the average power was measured

Report No.: TW2412174-04E

Date: 2025-01-20



### **8.4Test Results**

EU	T		Commercia	l Kiosk Table	t		Model		INF431  120V~  56% RH  Limit (dBm) Pass/ Fail  24 Pass  24 Pass		
Mod	de		802	2.11a	Test V				120V~	~	
Temper	rature		24 d	24 deg. C,			Humidity		56% RH		
Channel	Frequency		A	nt 2		A	nt 1		Limit (dBm)	Pass/ Fail	
	(MHz	Z)	dBm	mW	dB	m mW					
36	5180	)	1.99	1.58	0.8	55	1.22		24	Pass	
40	5200		1.59	1.44	0.93		1.24		24	Pass	
48	5240		0.43	1.10	0.0	2	1.00		24	Pass	

Note: 1. At finial test to get the worst-case emission at 6Mbps for CH36, CH40 and CH48

2. The result basic equation calculation as follow:

Average Power Output = AV Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EU	T		Commercia	al Kiosk Tabl	et		Model			INF431		
Mod	de		802.1	1n HT20		Test Voltage				120V~		
Temper	Temperature			deg. C,			Humidity		56% RH			
Channel	l Frequency (MHz)		A	nt 2		An	nt 1	Total Power-MIMO (dBm)		Limit Pass/ I		
			dBm	mW	dBm		mW			(dBm)		
36	5180	)	-2.07	0.62	-2.93		0.51		0.53	24	Pass	
40	5200		-2.53	0.56	-3.25		0.47		0.14	24	Pass	
48	5240		-3.78	0.42	-4.69		0.34		-1.20	24	Pass	

Note: 1. At finial test to get the worst-case emission at mcs0 for CH36, CH40 and CH48

2. The result basic equation calculation as follow:

Average Power Output = AV Power Reading + Cable loss + Attenuator

3. The worse case was recorded

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Page 68 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



EU	T		Commerci	ial Kiosk Tab	olet	Model			INF431	
Mod	de		802.	11n HT40		Test Voltag	ge			
Temper	rature		24	deg. C,		Humidity				
Channel	Freque (MH:	•	A	Ant 2		Ant 1	Don	Total /er-MIMO	Limit	Pass/ Fail
	(1711)	<i>L)</i>	dBm	mW	dBm	mW		(dBm)	(dBm)	
38	5190	0	-4.18	0.38	-5.38	0.29		-1.73	24	Pass
46	5230	)	-5.36	0.29	-6.76	0.21		-2.99	24	Pass

Note: 1. At finial test to get the worst-case emission at mcs0 for CH38 and CH46

2. The result basic equation calculation as follow: Average Power Output = AV Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EU	T		Commercia	ıl Kiosk Tabl	et		Model		INF431		
Mo	de		802.11	ac VHT20	Test Voltage				120V~		
Temperature 24 deg. C,					Humidity 56% RH						
Channel	Frequency (MHz)		Ai	nt 2		Ar	nt 1	Pou	Total	Limit	Pass/ Fail
			dBm	mW	dBm		mW	(dBm)		(dBm)	
36	5180	)	-2.23	0.60	-2.86		0.52		0.48	24	Pass
40	5200		-2.73	0.53	-3.34		0.46		-0.01	24	Pass
48	5240		-3.88	0.41	-4.69	1	0.34		-1.26	24	Pass

Note: 1. At finial test to get the worst-case emission at mcs0 for CH36, CH40 and CH48

2. The result basic equation calculation as follow:

Average Power Output = AV Power Reading + Cable loss + Attenuator

3. The worse case was recorded

Page 69 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



EU	T		Commercia	ıl Kiosk Tabl	et		Model			INF431	
Mod	de		802.11	ac VHT40		Test Voltage					
Temper	mperature		24 deg. C,			Humidity			56% RH		
Channel	Freque (MH:	-	Ai	nt 2		A	nt 1	Dow	Total ver-MIMO	Limit	Pass/ Fail
	(MH)	Z)	dBm	mW	dBm		mW		(dBm)	(dBm)	
38	5190	)	-4.48	0.36	-5.97		0.25		-2.15	24	Pass
46	5230	)	-5.61	0.27	-6.81		0.21		-3.16	24	Pass

Note: 1. At finial test to get the worst-case emission at mcs0 for CH38 and CH46

2. The result basic equation calculation as follow: Average Power Output = AV Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EU'	Т		Commerci	al Kiosk Tab	let	Model		INF431				
Mod	le		Mode		802.11	lac VHT80		Test Voltage	:	120V~		
Temper	ature		24	deg. C,		Humidity		56% RH				
Channel	Freque (MH:	-	Aı	nt 2		Ant 1	Total Power-MIMO	Limit	Pass/ Fail			
	(11111)	<i>L)</i>	dBm	mW	dBm	mW	(dBm)	(dBm)				
42	5210	0	-7.70	0.17	-8.64	0.14	-5.13	24	Pass			

Note: 1. At finial test to get the worst-case emission at mcs0 s for CH42

2. The result basic equation calculation as follow: Average Power Output = AV Power Reading + Cable loss + Attenuator

3. The worse case was recorded

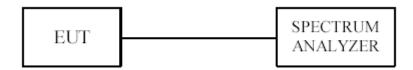
Report No.: TW2412174-04E Page 70 of 96

Date: 2025-01-20



# 9. Power Spectral Density Measurement

## 9.1 Test Setup



# 9.2 Limits of Power Spectral Density Measurement

Operation Band	Limit		
U-NII-1	11dBm/MHz		

### 9.3 Test Procedure

- 1. The EUT was directly connected to the spectrum analyzer
- 2. Set the RBW = 1MHz.
- 3. Set the VBW = 3MHz.
- 4. Set the span to encompass the entire emissions bandwidth (EBW) of the signal
- 5. Detector = RMS
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.

Report No.: TW2412174-04E Page 71 of 96

Date: 2025-01-20



### 9.4Test Result

EUT Con		Con	nmercial Kiosk Tablet	Model	INF431		
Mode			802.11a	Test Voltage	120V~		
Temperature		24 deg. C,		Humidity	56% RH		
Channel		requency Power Spect (MHz)		ral Density(dBm/MH	(z)	Limit (dBm)	Pass/ Fail
36	5	5180		-7.51		11	Pass
40	5:	200			11	Pass	
48	5:	240	-9.29			11	Pass

Note: Two antennas (Ant 2 and Ant 1) were tested and only the worst cased was recorded in the test report. Ant 2 was the worst case.

Page 72 of 96

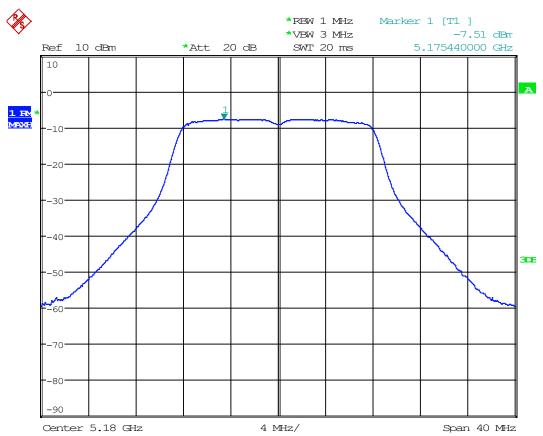
Report No.: TW2412174-04E

Date: 2025-01-20



## 9.5 Plots of Power Spectral Density Measurement

1.802.11a at CH36



Date: 16.JAN.2025 17:06:45

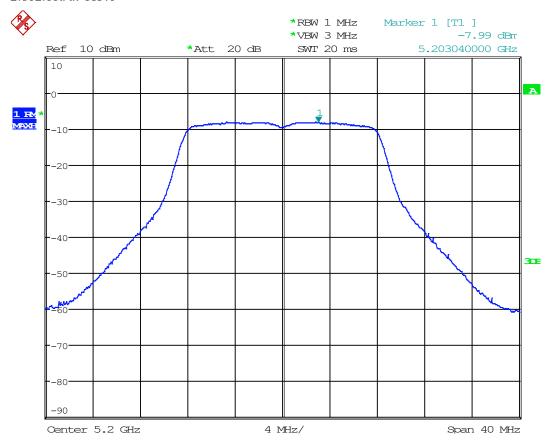
Page 73 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 2.802.11a at CH40



Date: 16.JAN.2025 17:07:24

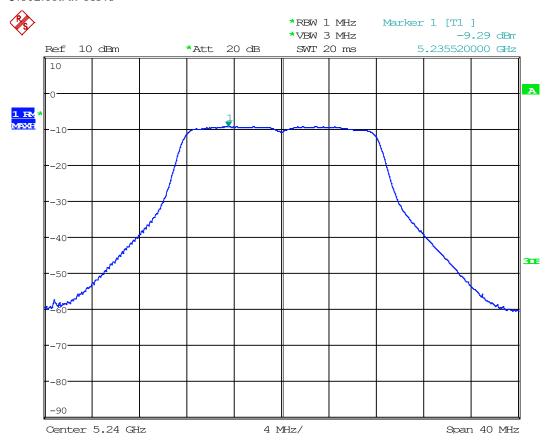
Page 74 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 3.802.11a at CH48



Date: 16.JAN.2025 17:09:10

Report No.: TW2412174-04E Page 75 of 96

Date: 2025-01-20



EUT		Commercial Kiosk Tablet		Mod	del		INF431		
Mode		802.11n HT20		Test Vo	Test Voltage		120V~		
Tempera	Temperature 24		24 deg. C,	Humi	Humidity		56% RH		
Channel	_	uency Hz)	Power Spectral Density(dBm/MHz)	Factor	Total Spectral Density-MIMO (dBm/MHz)		Limit (dBm/MHz)	Pass/ Fail	
36	51	.80	-7.67	3.01	-4.66		11	Pass	
40	52	200	-8.07	3.01		-5.06	11	Pass	
48	52	240	-9.43	3.01		-6.42	11	Pass	

Page 76 of 96

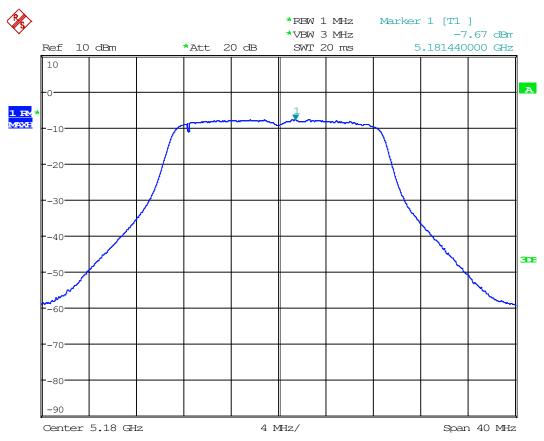
Report No.: TW2412174-04E

Date: 2025-01-20



#### **Test Plots**

1.802.11n at CH36



Date: 17.JAN.2025 11:25:21

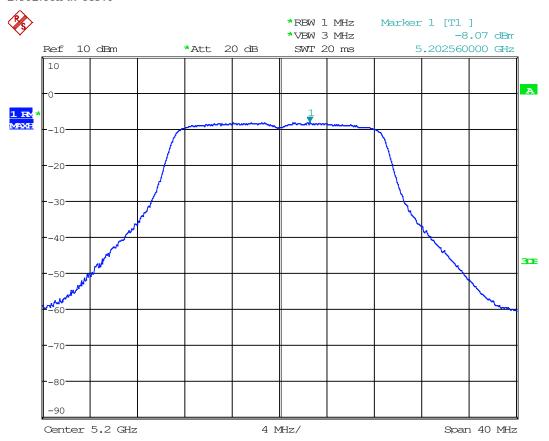
Page 77 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 2.802.11n at CH40



Date: 17.JAN.2025 11:25:48

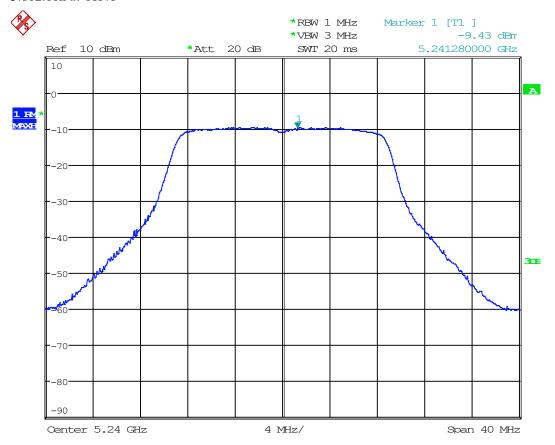
Page 78 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 3.802.11n at CH48



Date: 17.JAN.2025 11:26:08

Report No.: TW2412174-04E Page 79 of 96

Date: 2025-01-20



EUT	EUT Com		nmercial Kiosk Tablet	Mod	Model		INF431		
Mode			802.11n HT40	Test Voltage		120V~			
Temperature			24 deg. C,	Humidity		56% RH			
Channel	Frequency		Power Spectral	Factor	Total Spectral		Limit	Pass/	
	(MHz)		Density(dBm/MHz)		Density-MIMO		(dBm/MHz)	Fail	
					(dl	3m/MHz)			
38	51	90	-10.93	3.01		-7.92	11	Pass	
46	52	30	-11.76	3.01		-8.75	11	Pass	

Page 80 of 96

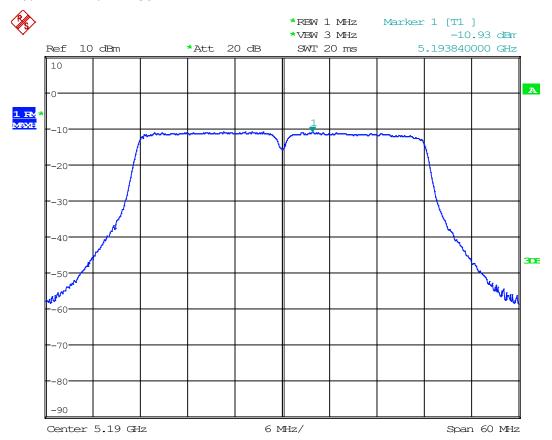
Report No.: TW2412174-04E

Date: 2025-01-20



#### **Test Plots**

### 1.802.11n HT40 at CH38



Date: 17.JAN.2025 11:26:32

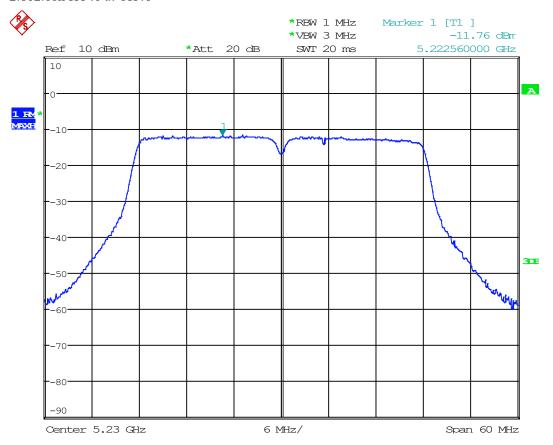
Page 81 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 2.802.11n HT40 at CH46



Date: 17.JAN.2025 11:26:53

Report No.: TW2412174-04E Page 82 of 96

Date: 2025-01-20



EUT	EUT Cor		nmercial Kiosk Tablet	Mod	del	INF431			
Mode	Mode		802.11ac VHT20	Test Vo	Test Voltage		120V~		
Temperat	Temperature 24 deg. C,		Humi	Humidity		56% RH			
Channel	_	luency IHz)	Power Spectral Density(dBm/MHz)	Factor	Densit	Spectral y-MIMO n/MHz)	Limit (dBm/MHz)	Pass/ Fail	
36	5	180	-7.72	3.01	-4	1.71	11	Pass	
40	52	200	-8.09	3.01	-4	5.08	11	Pass	
48	52	240	-9.10	3.01	-(	5.09	11	Pass	

Page 83 of 96

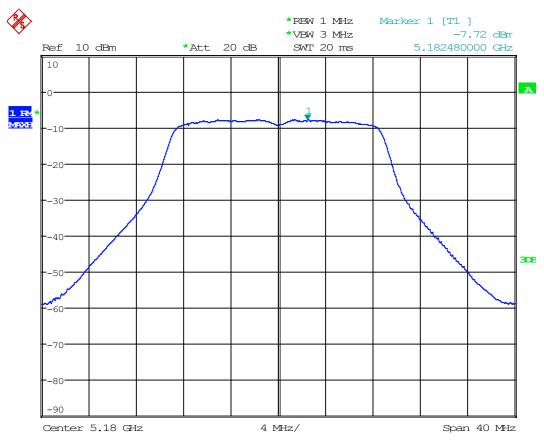
Report No.: TW2412174-04E

Date: 2025-01-20



#### **Test Plots**

1.802.11ac at CH36



Date: 17.JAN.2025 13:44:55

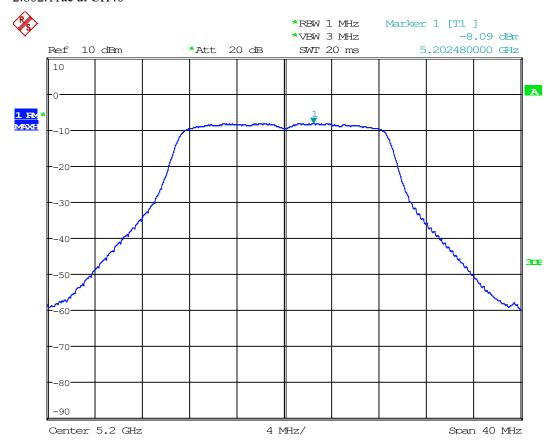
Page 84 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 2.802.11ac at CH40



Date: 17.JAN.2025 13:46:05

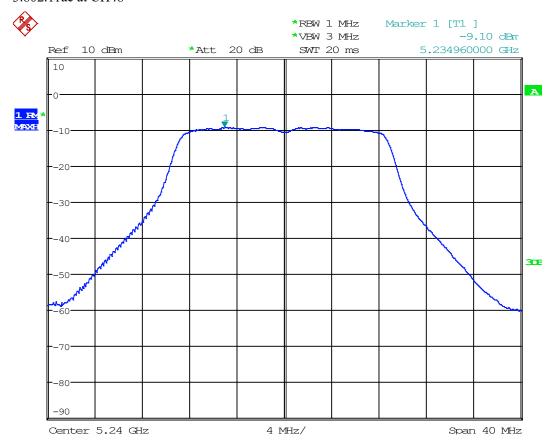
Page 85 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 3.802.11ac at CH48



Date: 17.JAN.2025 13:47:20

Report No.: TW2412174-04E Page 86 of 96

Date: 2025-01-20



EUT		Cor	nmercial Kiosk Tablet	Mod	Model		INF431	
Mode			802.11ac VHT40	Test Vo	Test Voltage		120V~	
Temperature			24 deg. C,	Humi	Humidity		56% RH	
Channel		luency IHz)	Power Spectral Density(dBm/MHz)	Factor		Spectral y-MIMO	Limit (dBm/MHz)	Pass/ Fail
					(dBn	n/MHz)		
38	5	190	-10.85	3.01	-7	7.84	11	Pass
46	5	230	-11.59	3.01	-8	3.58	11	Pass

Page 87 of 96

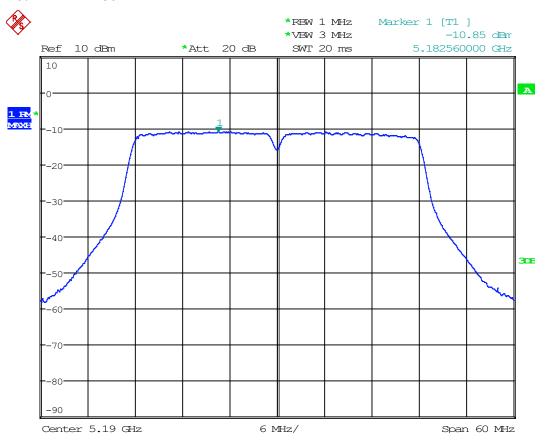
Report No.: TW2412174-04E

Date: 2025-01-20



#### **Test Plots**

### 1.802.11ac at CH38



Date: 17.JAN.2025 13:43:30

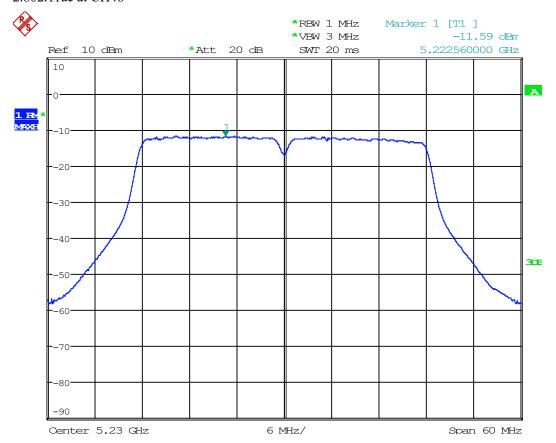
Page 88 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 2.802.11ac at CH46



Date: 17.JAN.2025 13:42:14

Report No.: TW2412174-04E Page 89 of 96

Date: 2025-01-20



EUT	EUT Com		nmercial Kiosk Tablet	Mod	Model		INF431		
Mode			802.11ac VHT80	Test Vo	ltage	120V~			
Temperature			24 deg. C,	Humi	Humidity		56% RH		
Channel	Frequency (MHz)		Power Spectral Density(dBm/MHz)	Factor	Dens	al Spectral sity-MIMO Bm/MHz)	Limit (dBm/MHz)	Pass/ Fail	
42	5210 -14.50		-14.50	3.01		-11.49	11	Pass	

Page 90 of 96

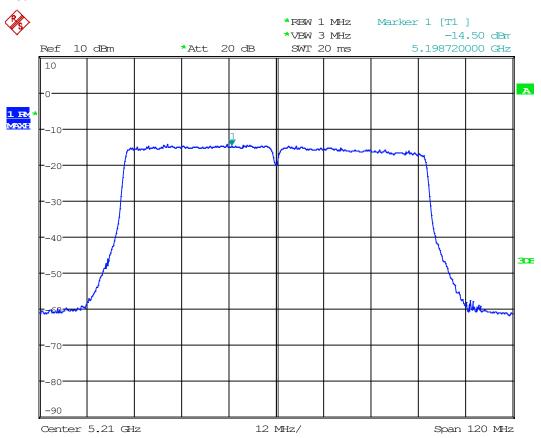
Report No.: TW2412174-04E

Date: 2025-01-20



#### **Test Plots**

1.802.11ac at CH42



Date: 17.JAN.2025 13:31:34

Report No.: TW2412174-04E

Date: 2025-01-20



# Page 91 of 96

# 10.0 Frequency Stability

### 10.1 Limits of Frequency Stability Measurement

The frequency tolerance of the carrier signal shall be maintained within  $\pm$ 0.02% of the operating frequency over a temperature variation of  $\pm$ 30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees

### 10.2 Test Procedure

- 1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
- 2. Turn the EUT on and couple its output to a spectrum analyzer.
- 3. Turn the EUT off and set the chamber to the highest temperature specified.
- 4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- 5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- 6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

Page 92 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



### 10.3 Test Result

# **Channel 36 (5180MHz)**

# Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)
120V	5180.0358
108V	5180.0364
138V	5180.0369
Max. Deviation (MHz)	0.0351
Max. Deviation (ppm)	6.78

Rated Temperature: 20℃

# Temperature vs. Frequency Stability

Temperature ( $^{\circ}$ C)	Measurement Frequency (MHz)
-30	5180.0325
-20	5180.0341
-10	5180.0335
0	5180.0382
10	5180.0331
20	5180.0328
30	5180.0374
40	5180.0301
50	5180.0367
Max. Deviation (MHz)	0.0361
Max. Deviation (ppm)	6.98

Rated working voltage: 120V~

Report No.: TW2412174-04E

Date: 2025-01-20



Page 93 of 96

# 11.0 Antenna Requirement

# 11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

#### 11.2 Antenna Connected construction

Two Dipole antennas used. The maximum Gain is 1.56dBi for each one.

Report No.: TW2412174-04E Page 94 of 96

Date: 2025-01-20



#### 12.0 FCC Label

# FCC ID: 2AACS-INF431

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

#### Mark Location:



**Label Location** 

Page 95 of 96

Report No.: TW2412174-04E

Date: 2025-01-20



#### 13.0 **Photo of testing**

Conducted Emission Test Setup:

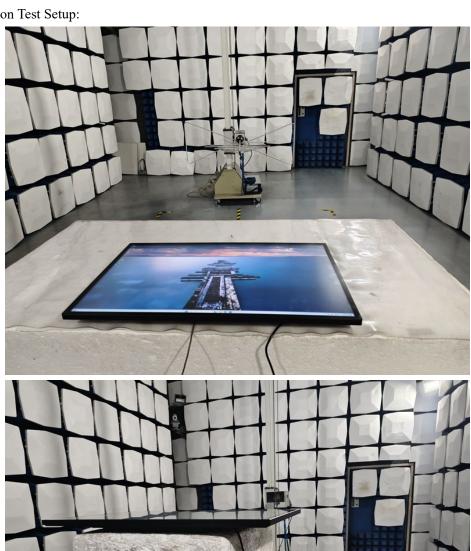


Report No.: TW2412174-04E

Date: 2025-01-20



# Radiated Emission Test Setup:





Please see test report TW2412174-01E

-- End of the report--

The report refers only to the sample tested and does not apply to the bulk.

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