



# FCC RADIO TEST REPORT

**FCC ID** : UZ7TC2205  
**Equipment** : Touch Computer  
**Brand Name** : Zebra  
**Model Name** : TC2205  
**Applicant** : Zebra Technologies Corporation  
3 Overlook Point, Lincolnshire, IL 60069 USA  
**Manufacturer** : Zebra Technologies Corporation  
3 Overlook Point, Lincolnshire, IL 60069 USA  
**Standard** : FCC Part 15 Subpart E §15.407

The product was received on Mar. 26, 2025 and testing was performed from Jul. 21, 2025 to Jul. 24, 2025. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

**Sportun International Inc. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



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### Appendix A. Setup Photographs



## History of this test report



## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2.1	15.407 KDB 987594 D02 Section II. L.	Standard Client Proper Power Adjustment Measurement	Pass	-
2.2	15.407 KDB 987594 D02 Section II. K.	Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP	Pass	-

**Conformity Assessment Condition:**

The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

**Reviewed by: Wei Chen**

**Report Producer: Clio Lo**



## 1 General Description

### 1.1 Product Feature of Equipment Under Test

Product Feature	
<b>Equipment</b>	Touch Computer
<b>Brand Name</b>	Zebra
<b>Model Name</b>	TC2205
<b>FCC ID</b>	UZ7TC2205
<b>EUT supports Radios application</b>	NFC/RFID WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
<b>HW Version</b>	EV2
<b>SW Version</b>	14-27-30.00-UG-U00-PRD-ATH-04
<b>MFD</b>	30MAR25
<b>EUT Stage</b>	Identical Prototype

Remark: The EUT's information above is declared by manufacturer.

Specification of Accessories				
<b>Adapter 1 (USB A) USB Wall Charger</b>	<b>Brand Name</b>	Zebra	<b>Part Number</b>	PWR-WUA5V12W0US
<b>Adapter 2 (USB C) USB Wall Charger</b>	<b>Brand Name</b>	Zebra	<b>Part Number</b>	PWR-WUA5V45W1US
<b>Battery</b>	<b>Brand Name</b>	Zebra	<b>Part Number</b>	BT-000380-05
<b>Earphone USB-C Audio Headset</b>	<b>Brand Name</b>	Zebra	<b>Part Number</b>	HDST-USBC-PTT1-01
<b>USB Cable 1 (Type A to Type C)</b>	<b>Brand Name</b>	Zebra	<b>Part Number</b>	CBL-TC5X-USBC2A-01
<b>USB Cable 2 (Type C to Type C)</b>	<b>Brand Name</b>	Zebra	<b>Part Number</b>	CBL-EC5X-USBC3A-01



## 1.2 Product Specification of Equipment Under Test

Product Specification is subject to this standard	
<b>Tx/Rx Channel Frequency Range</b>	5925 MHz ~ 6425 MHz 6525 MHz ~ 6875 MHz
<b>Antenna Type / Gain</b>	<b>&lt;5925 MHz ~ 6425 MHz&gt;</b> <Ant. 0>: IFA Antenna with gain 3.38 dBi <Ant. 1>: IFA Antenna with gain 3.14 dBi <b>&lt;6525 MHz ~ 6875 MHz&gt;</b> <Ant. 0>: IFA Antenna with gain 2.55 dBi <Ant. 1>: IFA Antenna with gain 2.69 dBi
<b>Type of Modulation</b>	802.11a : OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ax : OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)

**Remark:** The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

## 1.3 Modification of EUT

No modifications made to the EUT during the testing.



## 1.4 Testing Location

<b>Test Site</b>	Sportun International Inc. EMC & Wireless Communications Laboratory
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
<b>Test Site No.</b>	<b>Sportun Site No.</b> DF02-HY
<b>Test Engineer</b>	Kai Liao
<b>Temperature (°C)</b>	20.1~24.5
<b>Relative Humidity (%)</b>	45.9~54.8

FCC designation No.: TW1190

## 1.5 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v03
- ♦ ANSI C63.10-2013

### Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.



## 2 Test Result

### 2.1 Standard Client Proper Power Adjustment Measurement

#### 2.1.1 Limit of Standard Client Proper Power Adjustment

15.407 KDB 987594 D02 Section II. L. Power limits for standard client devices

c) The maximum power limits shall remain at least 6 dB below the power levels authorized for the associated standard-power access point

#### 2.1.2 Test Procedures of Standard Client Proper Power Adjustment

The testing follows FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v02r01.

Section L. Proper Power Adjustment

#### 2.1.3 Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point

A client device that connects to a Standard Power AP must limit its power to a minimum of 6 dB lower than its associated Standard Power access point's authorized transmit power. The term "authorized" means the AFC-approved power level for the AP to use on a particular channel.

Test procedure to show that the client device can lower its power accordingly.

#### 2.1.4 Test Procedure:

1. Connect equipment as shown in Figure 7 below.
2. Adjust Atten 1 to Std Power AP so as to facilitate error free communication with the Client but protect the Client receiver from overload or damage.
3. Configure the Client and AP so that they associate and start sending data (stream data). The AP should be configured such that its registered power is 36 dBm EIRP.
4. Verify transmission between Client and Std Power AP. Additional attenuators may be required to protect measurement equipment. Measure the Client RF power using any of the methods in C63.10 for NII devices.
5. Use this power, along with its antenna gain, to calculate the Client EIRP.
6. The Client EIRP should be minimally 6 dB lower than that of the AP.
7. Repeat Steps 2 through 5 at two other selected measurement points – the first at the midpoint and the second at the lowest rated power of the client as declared by the manufacturer.

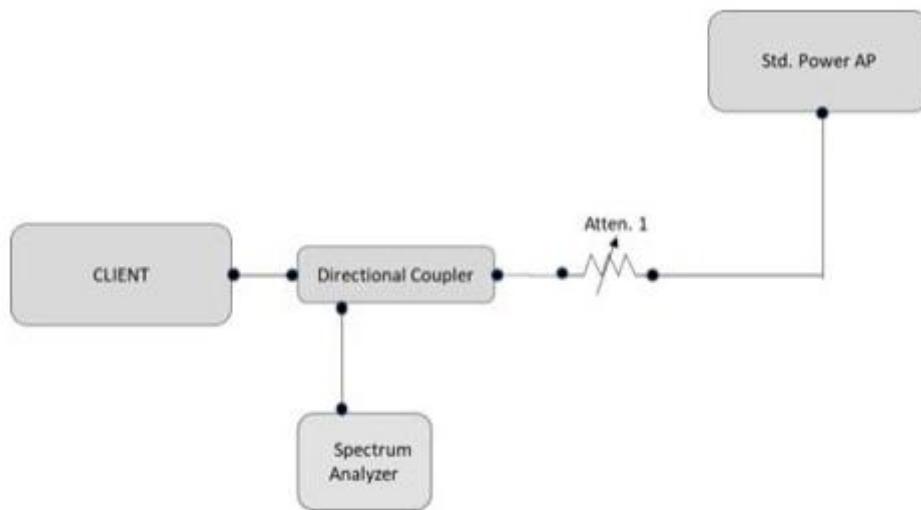


Figure 7. Test setup for conducted testing

### 2.1.5 Test Result Summary

Companion Standard Power AP: Brand name: Qualcomm, Model name: Wakiki

802.11ax 20MHz bandwidth

Test channel 53

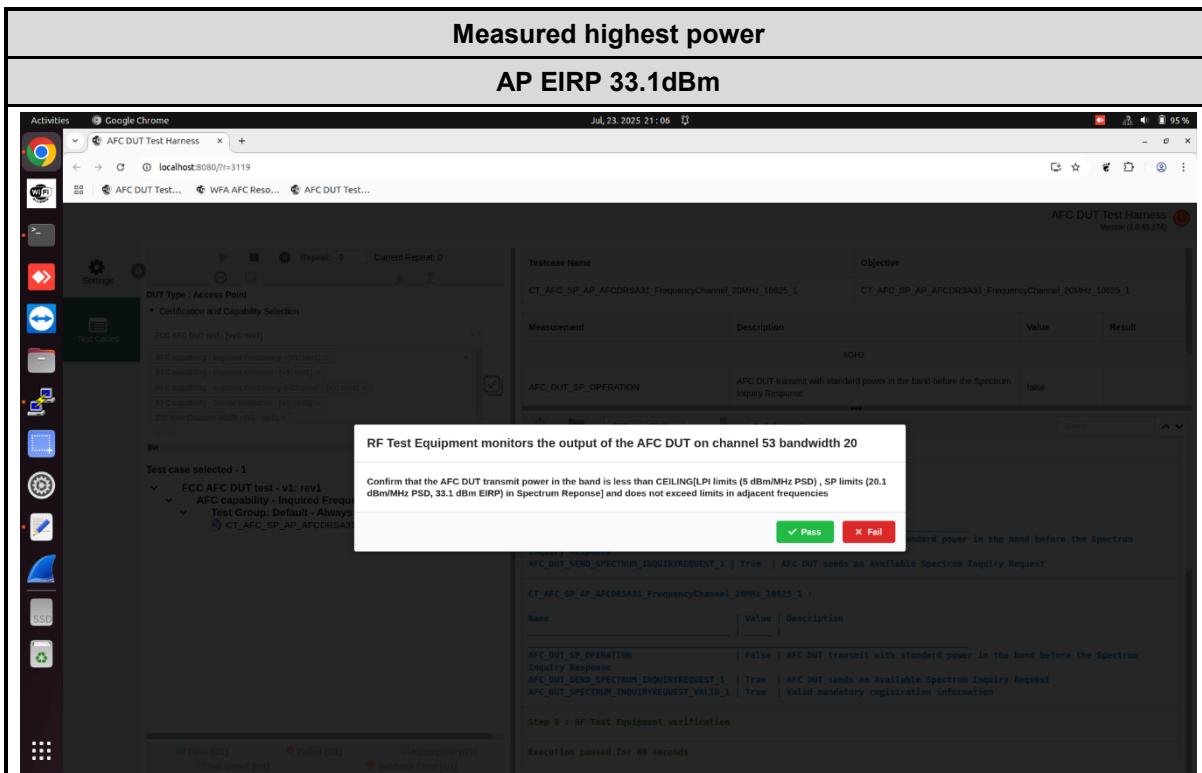
	Client Conducted Power (dBm)			Client EIRP (dBm)	AP EIRP (dBm)	AP to client EIRP Delta (dB)
	Ant0	Ant1	MIMO			
Maximum EIRP	11.45	12.46	14.99	18.37	33.1	14.73
Midpoint EIRP	9.33	10.74	13.10	16.48	22.8	6.32
Lowest EIRP	8.16	9.53	11.91	15.29	21.3	6.01
Requirement						At least 6 dB
Result						Pass

Note: Client EIRP = Client MIMO conducted power + antenna gain (3.38dBi)

## 2.1.6 Test Result Plot

### Measured highest power

AP EIRP 33.1dBm



RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20

Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD), SP limits (20.1 dBm/MHz PSD, 33.1 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

✓ Pass    ✗ Fail

APC\_DUT\_SEND\_SPECTRUM\_INQUIRYREQUEST\_1 : True | APC DUT sends an Available Spectrum Inquiry Request

CT\_AFC\_SP\_AP\_AFCDSA31\_FrequencyChannel\_20MHz\_10625\_1 :

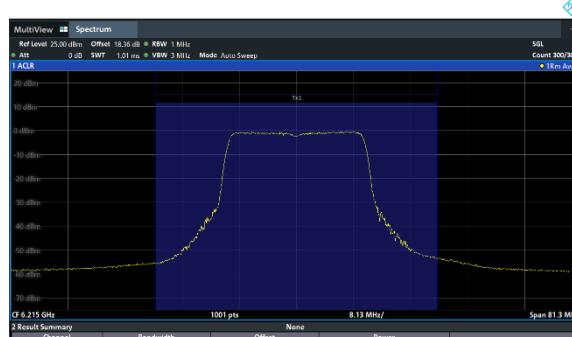
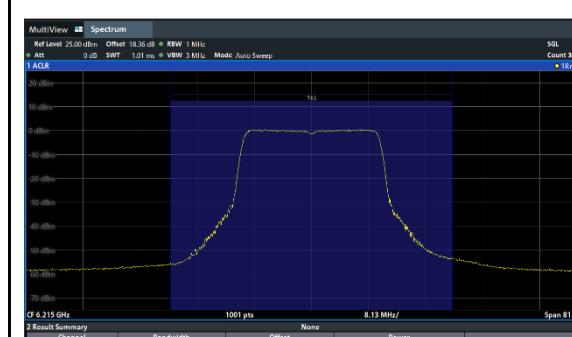
Name	Value	Description
APC_DUT_SP_OPERATION	False	APC DUT transmit with standard power in the band before the Spectrum Inquiry Response
APC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1	True	APC DUT sends an Available Spectrum Inquiry Request
APC_DUT_SPECTRUM_INQUIRYREQUEST_VALID_1	True	Valid mandatory registration information

Step 6 : RF Test Equipment verification

Execution paused for 60 seconds

Pass (0)    Failed (0)    Incomplete (0)    Invalid (0)

### Client conducted power

Ant0 11.45dBm	Ant1 12.46dBm
	



## Measured mid-point power

AP EIRP 22.8dBm

Activities Google Chrome Jul, 24, 2025 1:25 AFC DUT Test Harness x +

localhost:8080/rtr3119

AFC DUT Test... WFA AFC Reso... AFC DUT Test...

AFC DUT Test Harness Version (0.0.0.174)

DUT Type : Access Point

Certification and Capability Selection

FCC AFC DUT Inst - (v1.1 rev1)

AFC capability - Required Frequency - (v1.1 rev1) AFC capability - Required Channel - (v1.1 rev1) AFC capability - Required Frequency & Channel - (v1.1 rev1) AFC capability - Server Validation - (v1.1 rev1) 802.11n Client Width - (v1.1 rev1) 802.11n Client Width - (v1.1 rev1)

Test case selected - 1

FCC AFC DUT test - v1. rev1

AFC Capability - Required Frequency

Test Group: Default - Always

CT\_AFC\_SP\_AP\_AFCDRSA31

RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20

Confirm that the AFC DUT transmit power in the band is less than CEILING(LPI limits (5 dBm/MHz PSD), SP limits (9.8 dBm/MHz PSD, 22.8 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

Pass Fail

Testcase Name Objective

CT\_AFC\_SP\_AP\_AFCDRSA31\_FrequencyChannel\_20MHz\_10028\_3 CT\_AFC\_SP\_AP\_AFCDRSA31\_FrequencyChannel\_20MHz\_10029\_3

Measurement Description Value Result

AFC\_DUT\_SP\_OPERATION AFC.DUT transmit with standard power in the band before the Spectrum Inquiry Response SCH2 false

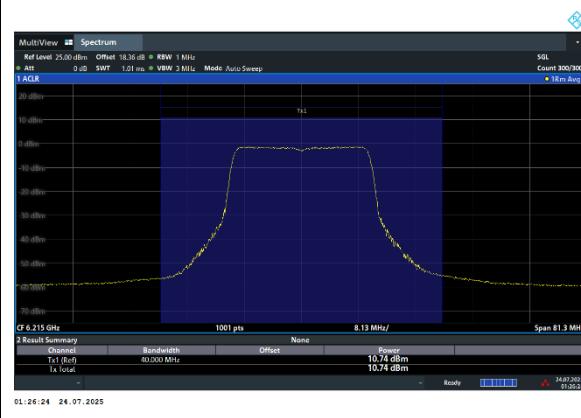
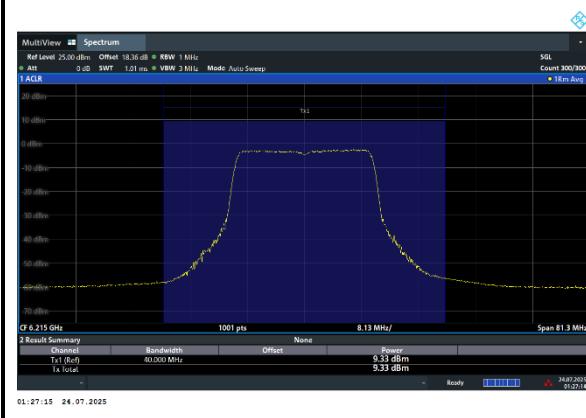
Step 8 : RF Test Equipment verification

Execution paused for 60 seconds

## Client conducted power

Ant0  
9.33dBm

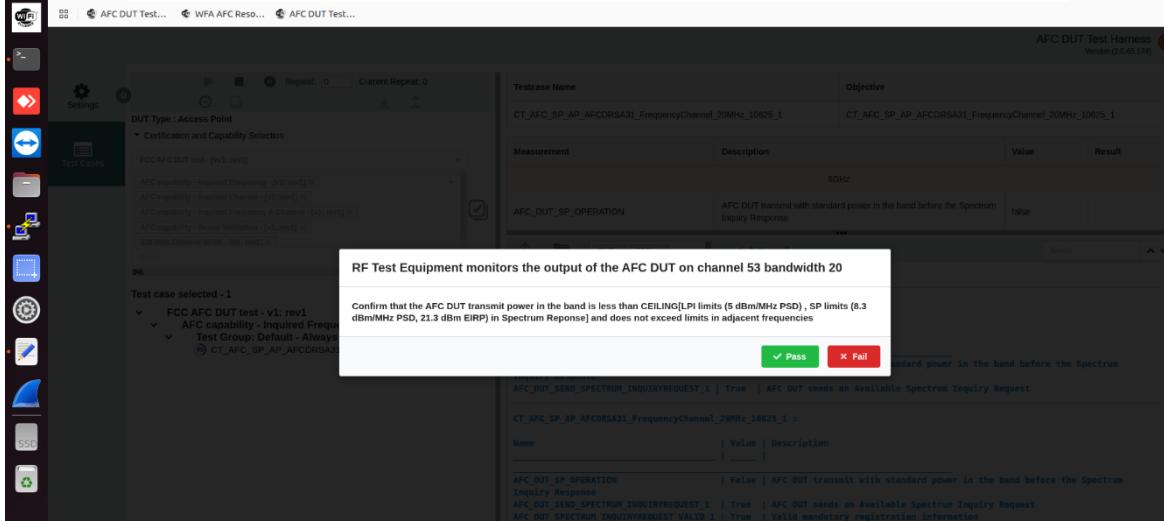
Ant1  
10.74dBm





### Measured lowest power

AP EIRP 21.3dBm



Activities Google Chrome Jul, 23, 2025 19:47

localhost:8080/rf3119

AFC DUT Test Harness

Testcase Name: CT\_AFC\_SP\_AP\_AFCDRSA31\_FrequencyChannel\_20MHz\_10626\_1

Objective: CT\_AFC\_SP\_AP\_AFCDRSA31\_FrequencyChannel\_20MHz\_10625\_1

Measurement: AFC\_DUT\_SP\_OPERATION

Description: AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response

Value: 8GHz

Result: false

RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20

Confirm that the AFC DUT transmit power in the band is less than CEILING[LPi limits (5 dBm/MHz PSD), SP limits (8.3 dBm/MHz PSD, 21.3 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

Pass Fail

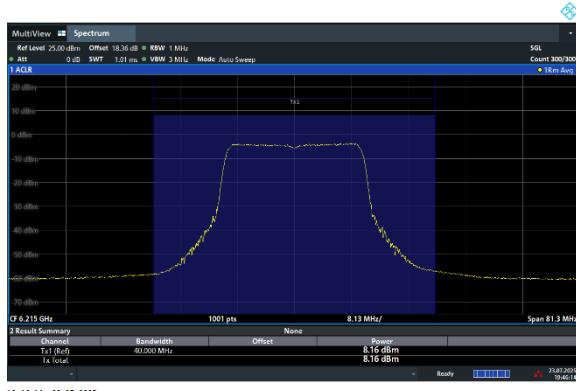
Step 6 : RF Test Equipment verification

Execution paused for 60 seconds

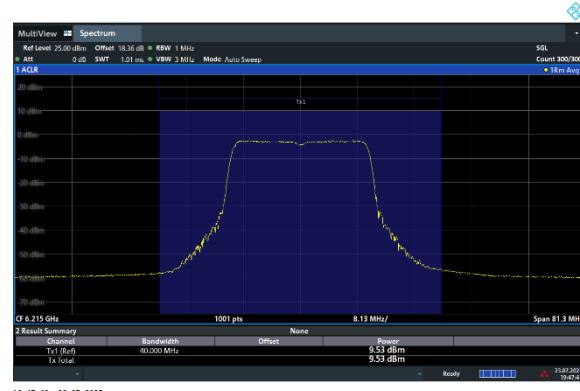
Pass (0) Failed (0) Incomplete (0)

## Client conducted power

Ant0  
8.16dBm



Ant1  
9.53dBm





## 2.2 Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP

### 2.2.1 Limit of Proper Power Adjustment

15.407 KDB 987594 D02 Section II. K. Power limits for standard client devices

A client device may connect to a Standard Power AP with a maximum power level of 30 dBm EIRP. A client may also connect to a Low Power indoor AP, but the power level is limited to a maximum of 24 dBm EIRP.

### 2.2.2 Test Procedures of Standard Client Proper Power Adjustment

The testing follows FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v02r01.

Section K. Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP

### 2.2.3 Test Procedure:

1. Connect equipment as shown in Figure 6 below..
2. Adjust Atten 2 to Std Power AP so as to facilitate error free communication with the Client (Atten 1 should be set to High on the RF path to the Low Power AP)
3. Configure the Client and APs so that they associate and start sending data (stream data). It is important that the client is configured to transmit at its highest power level. Initially, because the attenuation on Atten 1 is set high, the Client will only associate with the Std Power AP.
4. Verify transmission between Client and Std Power AP. Additional attenuators may be required to protect measurement equipment. Measure the Client RF power using any of the methods in C63.10 for NII devices.
5. Gradually increase Atten 2 while at the same time decreasing Atten 1. This simulates the Client moving from outdoors to indoors. At some level of attenuation the Client should associate with the Low Power indoor AP.
6. Verify transmission between Client and Low Power AP.
7. Measure the RF power of the Client device using the same method as in step 4. Verify the power is no more than 24 dBm EIRP

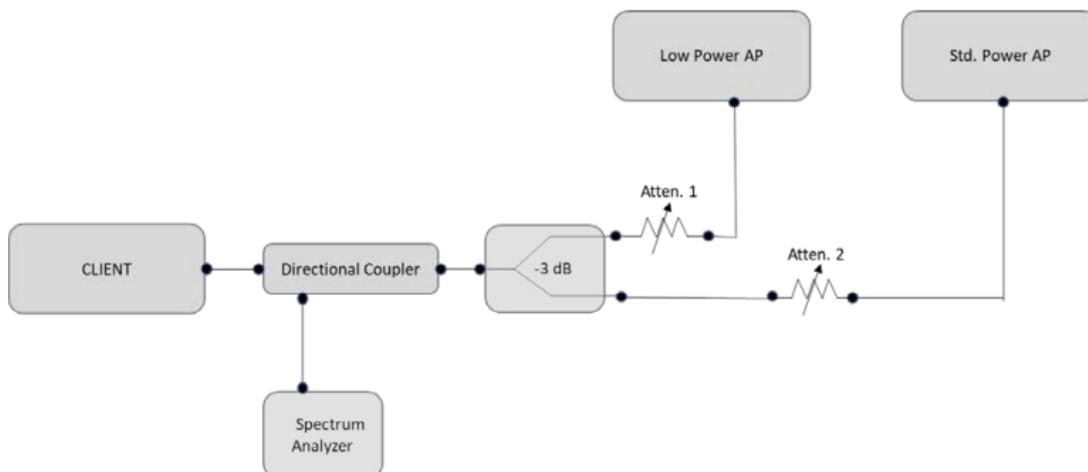


Figure 6. Test setup for conducted testing

## 2.2.4 Test Result Summary

Companion Standard Power AP: Brand name:Qualcomm, Model name:Wakiki

Companion Low Power indoor AP: Brand name: ASUS, Model name: GTAXE11000

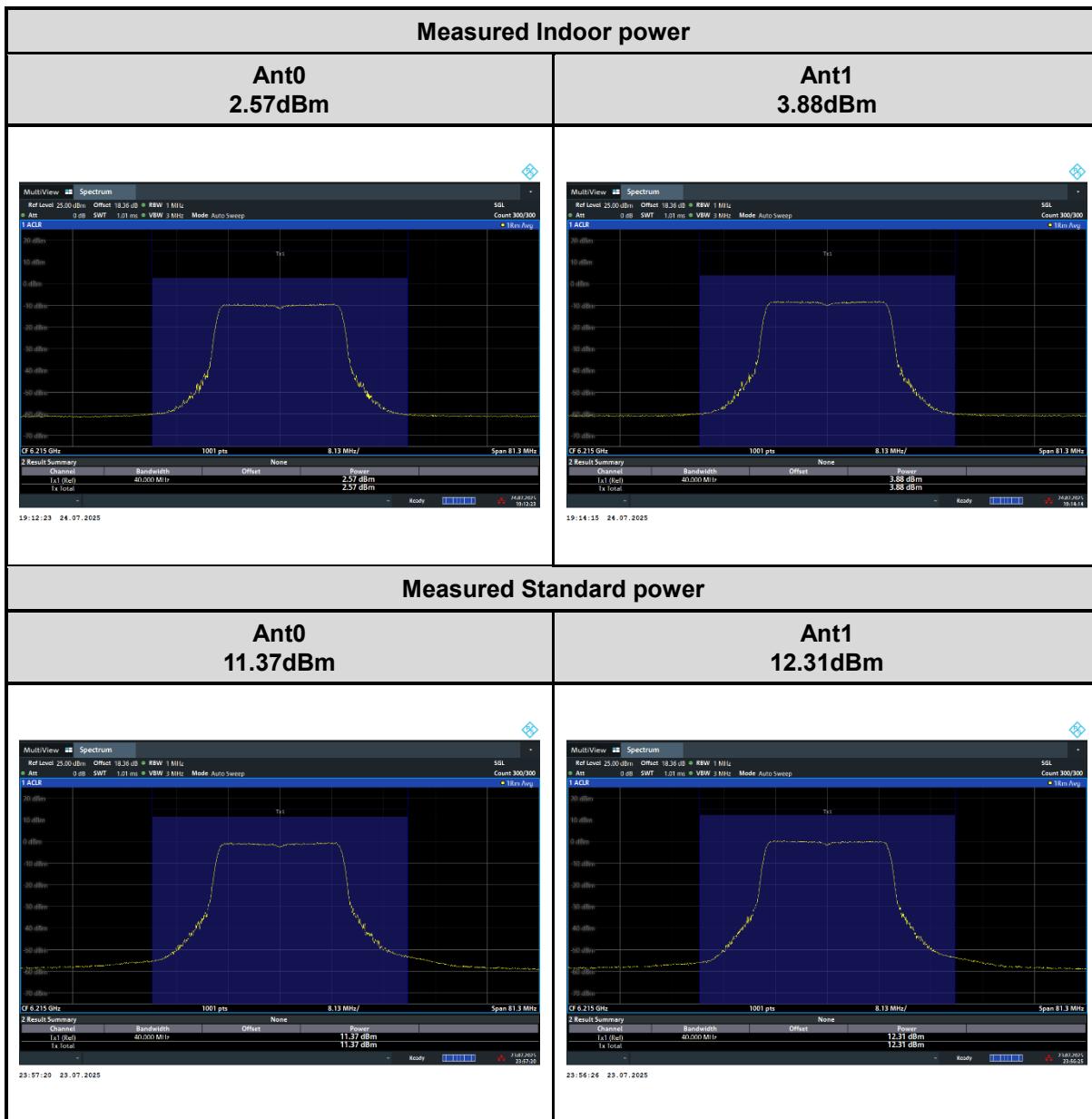
802.11ax 20MHz bandwidth

Test channel 53

	Client Conducted Power (dBm)			Client EIRP (dBm)	Limit EIRP (dBm)	Result
	Ant0	Ant1	MIMO			
Indoor EIRP	2.57	3.88	6.28	9.66	24	Pass
Standard EIRP	11.37	12.31	14.88	18.26	30	Pass

Note: Client EIRP = Client MIMO conducted power + antenna gain (3.38dBi)

## 2.2.5 Test Result Plot





### 3 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSV3013	101549	10Hz~13.6GHz	Jan. 20, 2025	Jul. 21, 2025~ Jul. 24, 2025	Jan. 19, 2026	AFC (DF02-HY)
Coupler	Woken	10dB 30W SMA	DOM5CIW3A 1	0.5-18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MTJ	SMA 2Way Power Divider	MD10003	0.5GHz-6GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MTJ	SMA 2Way Power Divider	MD10007	0.5GHz-6GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MVE	MVE8546	A702438	0.5GHz-6GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EM	SFL402	30cm-#6	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MTJ	SBF405	30cm-01	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MTJ	SBF405	30cm-09	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-01	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-03	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-05	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-10	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-11	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	150cm-#11	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SFL405	150cm-01	30 kHz~18GHz	Calibration from System	Jul. 21, 2025~ Jul. 24, 2025	Calibration from System	AFC (DF02-HY)