



FCC RADIO TEST REPORT

FCC ID : 2AUWUFP6
Equipment : Fairphone (Gen.6)
Brand Name : Fairphone
Model Name : FP6
Applicant : FairPhone B.V.
Van Diemenstraat 200, 1013 CP, Amsterdam,
The Netherlands
Manufacturer : FairPhone B.V.
Van Diemenstraat 200, 1013 CP, Amsterdam,
The Netherlands
Standard : FCC Part 15 Subpart E §15.407

The product was received on Apr. 21, 2025 and testing was performed from Apr. 29, 2025 to Jul. 29, 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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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.	Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC)	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: Dara Chiu



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs GSM/WCDMA/LTE/5GNR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11a/ax, FM Receiver, NFC, and GNSS.	
Antenna Type WLAN: IFA Antenna	

Antenna information		
5925 MHz ~ 6425 MHz	Peak Gain (dBi)	Ant. 10: 1 Ant. 9: 1.4
6425 MHz ~ 6525 MHz	Peak Gain (dBi)	Ant. 10: -1.8 Ant. 9: 0.9
6525 MHz ~ 6875 MHz	Peak Gain (dBi)	Ant. 10: 0.6 Ant. 9: 0.9
6875 MHz ~ 7125 MHz	Peak Gain (dBi)	Ant. 10: 0.8 Ant. 9: 0.4

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333 TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. DF02-HY
Temperature	20.1 ~ 23.8 °C
Humidity	45.2 ~ 54.6 %
Test Engineer	Kai Liao

FCC designation No.: TW1190



1.4 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 Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point (APC)

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 v03.

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.

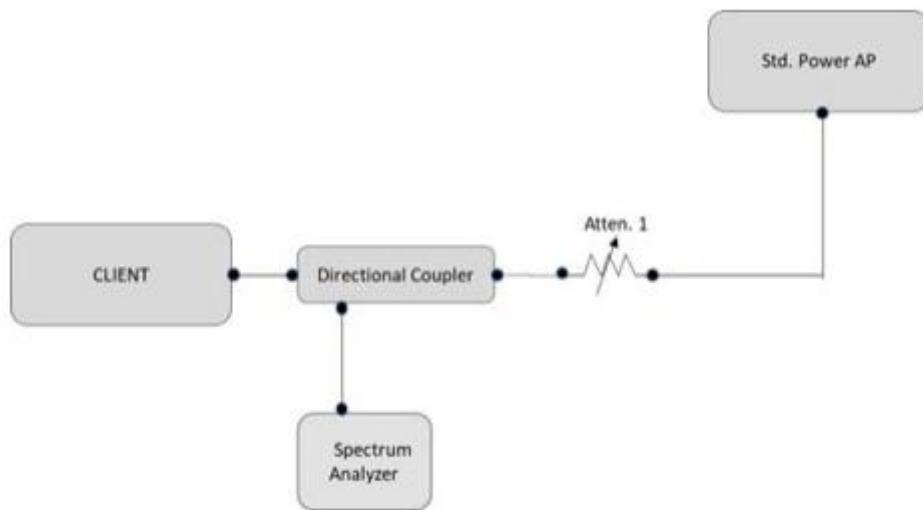


Figure 7. Test setup for conducted testing

2.1.5 Test Result Summary

Companion Standard Power AP: Brand name: Qualcomm, Model name: Wakiki
802.11ax 20MHz bandwidth

Test channel 37

	Client Conducted Power (dBm)			Client EIRP (dBm)	AP EIRP (dBm)	AP to client EIRP Delta (dB)
	Ant 10	Ant 9	MIMO			
Maximum EIRP	14.99	15.47	18.25	19.65	30.8	10.75
Midpoint EIRP	11.94	13.03	15.53	16.93	23.9	6.97
Lowest EIRP	10.2	10.8	13.52	14.92	21.0	6.08
Requirement						At least 6 dB
Result						Pass

Note: Client EIRP = Client MIMO conducted power + antenna gain (1.4dBi)



2.1.6 Test Result Plot

Measured highest power

AP EIRP 30.8dBm

Testcase Name: CT_AFC_SP_AP_AFCDSA31_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 37 bandwidth 20

Test case selected - 1

- FCC_AFC_DUT test - v1: rev1
- AFC capability - Required Frequency
- AFC capability - Required Channel
- AFC capability - Server Notifications
- SSID Min Channel Width

Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD) , SP limits (17.8 dBm/MHz PSD, 30.8 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies

Pass (0%) Fail (0%) Incomplete (0%) New test (0%) Validator Error (0%)

Client conducted power

Ant 10	Ant 9
14.99dBm	15.47dBm

Ant 10: 14.99dBm

Ant 9: 15.47dBm

1. Result Summary

Channel	Bandwidth	Offset	None	Power
1x1 (Rx)	40.000 MHz	Offset 20.10 dB	BBW 1 MHz	14.99 dBm
Tx Total				14.99 dBm

2. Result Summary

Channel	Bandwidth	Offset	None	Power
1x1 (Rx)	40.000 MHz	Offset 20.00 dB	BBW 1 MHz	15.47 dBm
Tx Total				15.47 dBm



Measured mid-point power

AP EIRP 23.9dBm

The screenshot shows the 'AFC DUT Test Harness' software interface. The left sidebar shows 'DUT Type: Access Point' and 'Test Cases' for 'FCC AFC DUT test - [v1; rev1]'. The main area displays a table of test cases and their results. A central message box states: 'RF Test Equipment monitors the output of the AFC DUT on channel 37 bandwidth 20'. Below this, a sub-message box says: 'Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD), SP limits (10.9 dBm/MHz PSD, 23.9 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies'. A 'Pass' button is highlighted. The table includes columns for 'Testcase Name', 'Objective', 'Measurement', 'Description', 'Value', and 'Result'. One row is highlighted with a yellow background. The bottom of the interface shows a progress bar and the text 'Execution paused for 60 seconds'.

Client conducted power

Ant 10 11.94dBm	Ant 9 13.03dBm
<p>CF 6.135 GHz 2 Result Summary Channel: 40.000 MHz Bandwidth: 80.000 MHz Offset: 1001 pts Power: 11.94 dBm Tx1 (Red): 11.94 dBm Tx2 (Green): -</p>	<p>CF 6.135 GHz 2 Result Summary Channel: 40.000 MHz Bandwidth: 80.000 MHz Offset: 1001 pts Power: 13.03 dBm Tx1 (Red): 13.03 dBm Tx2 (Green): -</p>



Measured lowest power

AP EIRP 21.0dBm

The screenshot shows the 'AFC DUT Test Harness' software interface. The main window displays a table of test cases and their results. A specific test case, 'CT_AFC_SP_AP_AFCDSA31_FrequencyChannel_20MHz_10625_1', is highlighted. The 'Measurement' column shows 'AFC_DUT_SP_OPERATION' with a value of '5GHz' and a result of 'false'. The 'Description' column indicates 'AFC DUT transmit with standard power in the band before the Spectrum Inquiry Response'. A message box in the center states: 'RF Test Equipment monitors the output of the AFC DUT on channel 37 bandwidth 20'. Below this, a note says: 'Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD), SP limits (8.0 dBm/MHz PSD, 21.0 dBm EIRP) in Spectrum Response] and does not exceed limits in adjacent frequencies'. A 'Pass' button is visible. The bottom of the interface shows a log message: 'AFC_DUT_SEND_SPECTRUM_INQUIRYREQUEST_1 : True | AFC DUT sends an Available Spectrum Inquiry Request' and 'CT_AFC_SP_AP_AFCDSA31_FrequencyChannel_20MHz_10625_1 :'. The status bar at the bottom indicates 'Step 6 : RF Test Equipment verification' and 'Execution paused for 60 seconds'.

Client conducted power

Ant 10 10.2dBm	Ant 9 10.8dBm
<p>Ref Level: 27.32 dBm, Offset: 20.40 dB, RSW: 1 MHz, Att: 0 dB, SWT: 1.01 ms, VSW: 3 MHz, Mode: Auto Sweep, TACLR.</p> <p>CF: 6.135 GHz, 2 Result Summary: Channel: Bandwidth: Offset: Power: Tx1 (Red): 40.000 MHz, 10.20 dBm, 10.20 dBm.</p> <p>21:24:51 14.07.2025</p>	<p>Ref Level: 27.32 dBm, Offset: 20.40 dB, RSW: 1 MHz, Att: 0 dB, SWT: 1.01 ms, VSW: 3 MHz, Mode: Auto Sweep, TACLR.</p> <p>CF: 6.135 GHz, 2 Result Summary: Channel: Bandwidth: Offset: Power: Tx1 (Red): 40.000 MHz, 10.80 dBm, 10.80 dBm.</p> <p>21:37:29 14.07.2025</p>



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 v03.

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

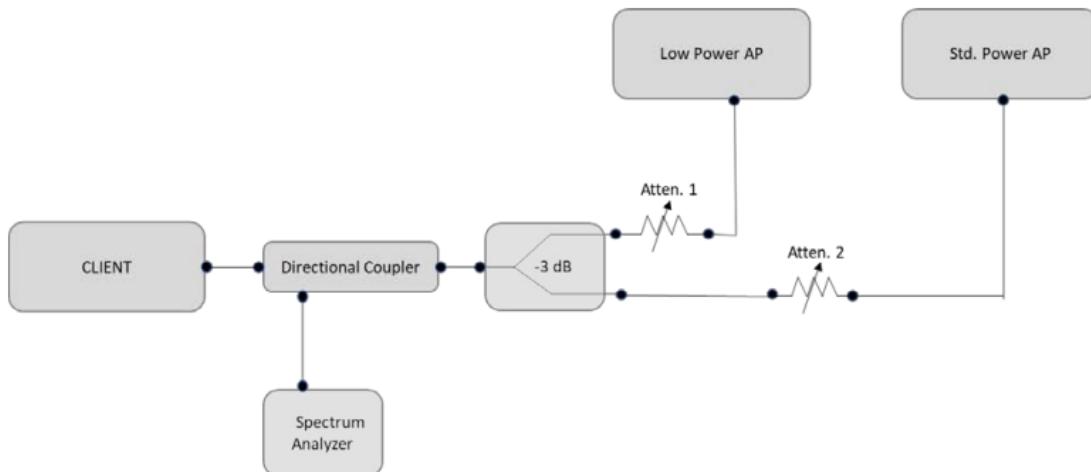


Figure 6. Test setup for conducted testing

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: RT-BE92U

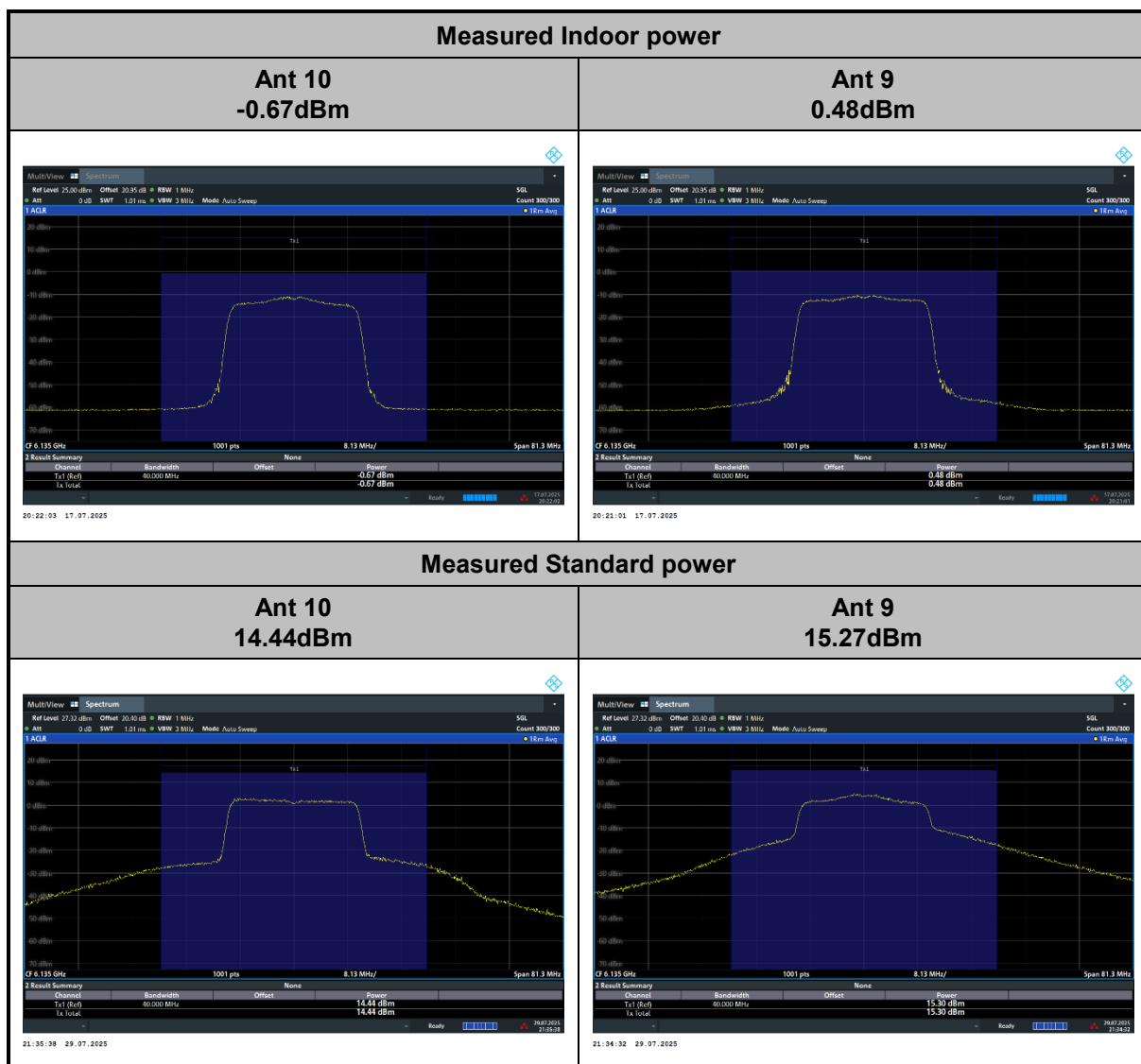
802.11ax 20MHz bandwidth

Test channel 37

	Client Conducted Power (dBm)			Client EIRP (dBm)	Limit EIRP (dBm)	Result
	Ant 10	Ant 9	MIMO			
Indoor EIRP	-0.67	0.48	2.95	4.35	24	Pass
Standard EIRP	14.44	15.3	17.90	19.3	30	Pass

Note: Client EIRP = Client MIMO conducted power + antenna gain (1.4dBi)

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	Apr. 29, 2025 ~ Jul. 29, 2025	Jan. 19, 2026	AFC (DF02-HY)
Coupler	Woken	10dB 30W SMA	DOM5CIW3A 1	0.5-18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MTJ	SMA 2Way Power Divider	MD10003	0.5GHz-6GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MTJ	SMA 2Way Power Divider	MD10007	0.5GHz-6GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
Power Divider	MVE	MVE8546	A700458	0.5GHz-6GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EM	SFL402	30cm-#6	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MTJ	SBF405	30cm-01	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	MTJ	SBF405	30cm-09	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-01	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-03	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-05	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-10	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	100cm-11	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	150cm-#11	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)
RF Cable	EC	SS405	150cm-#15	30 kHz~18GHz	Calibration from System	Apr. 29, 2025 ~ Jul. 29, 2025	Calibration from System	AFC (DF02-HY)