



# FCC RF Test Report

**APPLICANT** : FairPhone B.V.  
**EQUIPMENT** : Fairphone (Gen.6)  
**BRAND NAME** : Fairphone  
**MODEL NAME** : FP6  
**FCC ID** : 2AUWUFP6  
**STANDARD** : 47 CFR Part 27(M), 96  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)  
**TEST DATE(S)** : Jul. 23, 2025

We, Sporton International Inc. (KunShan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (KunShan), the test report shall not be reproduced except in full.

Jason Jia

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Approved by: Jason Jia



**Sporton International Inc. (Kunshan)**

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300  
People's Republic of China**



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG521107-01M	Rev. 01	Initial issue of report	Jul. 25, 2025



## SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1051 §96.41	Radiated Spurious Emission (5G NR n78)	-40dBm/MHz	PASS	Under limit 19.09 dB at 10740.00 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7)	$< 55 + 10 \log_{10}(P[\text{Watts}])$		

**Conformity Assessment Condition:**

1. 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/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

**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.

# 1 General Description

## 1.1 Applicant

FairPhone B.V.

Van Diemenstraat 200, 1013 CP, Amsterdam, The Netherlands

## 1.2 Manufacturer

FairPhone B.V.

Van Diemenstraat 200, 1013 CP, Amsterdam, The Netherlands

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Fairphone (Gen.6)
Brand Name	Fairphone
Model Name	FP6
FCC ID	2AUWUFP6
IMEI Code	Radiation : 355870094596159
HW Version	DVT2
SW Version	FP6.DEV.15.66.0
EUT Stage	Identical Prototype

## 1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n78: 3450 MHz ~ 3800 MHz
Rx Frequency	5G NR n7 : 2620 MHz ~ 2690 MHz 5G NR n78: 3450 MHz ~ 3800 MHz
Uplink CA Bands	n7A-n78A
Type of Modulation	CP-OFDM: QPSK / 16QAM / 64QAM / 256QAM DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM

## 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH04-KS	CN1257	314309

## 1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH04-KS	AUDIX	E3	210616

## 1.8 Applicable Standards

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

- 47 CFR Part 24, 96
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- FCC KDB 940660 D01 Part 96 CBRS v03
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

### Remark:

All test items were verified and recorded according to the standards and without any deviation during the test.




## 2 Test Configuration of Equipment Under Test

### 2.1 Test Mode

Antenna port conducted and radiated test items are performed according to KDB 971168 D01 Power Meas License Digital Systems v03r01 with maximum output power.

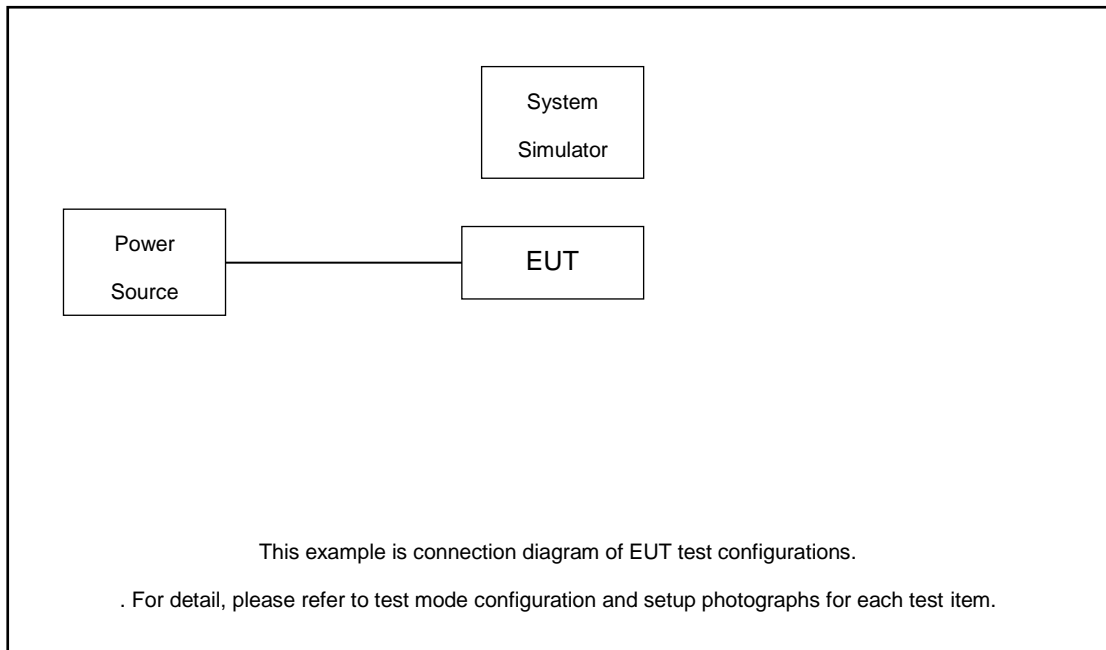
For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.

Orthogonal Planes of EUT	X Plane	Y Plane	Z Plane
			

Test Items	5G NR	Bandwidth (MHz)														Modulation				RB #		Test Channel			
		5	10	15	20	25	30	40	50	60	70	80	90	100	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM	1	Full	L	M	H	
Radiated Spurious Emission	n7A-n78A	Worst Case																					v		
Note	1. The mark “v ” means that this configuration is chosen for testing 2. The mark “-” means that this bandwidth is not supported. 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.																								

## 2.2 Connection Diagram of Test System



The EUT has been configuration operated in a manner tended to maximize its emission characteristics in a typical application.

## 2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m
2.	Adapter	Fairphone B.V	N/A	N/A	N/A	N/A
3.	USB Cable	Fairphone B.V	N/A	N/A	N/A	N/A



## 2.4 Frequency List of Low/Middle/High Channels

5G NR n7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
50	Channel	505000	507000	509000
	Frequency	2525	2535	2545
40	Channel	504000	507000	510000
	Frequency	2520	2535	2550
30	Channel	503000	507000	511000
	Frequency	2515	2535	2555
25	Channel	502500	507000	511500
	Frequency	2512.5	2535	2557.5
20	Channel	502000	507000	512000
	Frequency	2510	2535	2560
15	Channel	501500	507000	512500
	Frequency	2507.5	2535	2562.5
10	Channel	501000	507000	513000
	Frequency	2505	2535	2565
5	Channel	500500	507000	513500
	Frequency	2502.5	2535	2567.5



5G n78 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	640000	641666	643332
	Frequency	3600	3624.99	3649.98
90	Channel	639668	641666	643666
	Frequency	3595.02	3624.99	3654.99
80	Channel	639334	641666	644000
	Frequency	3590.01	3624.99	3660
70	Channel	639000	641666	644332
	Frequency	3585.00	3624.99	3664.98
60	Channel	638668	641666	644666
	Frequency	3580.02	3624.99	3669.99
50	Channel	638334	641666	645000
	Frequency	3575.01	3624.99	3675
40	Channel	638000	641666	645332
	Frequency	3570	3624.99	3679.98
30	Channel	637668	641666	645666
	Frequency	3565.02	3624.99	3684.99
25	Channel	637500	641666	645832
	Frequency	3562.5	3624.99	3687.48
20	Channel	637334	641666	646000
	Frequency	3560.01	3624.99	3690
15	Channel	637168	641666	646166
	Frequency	3557.52	3624.99	3692.49
10	Channel	637000	641666	646332
	Frequency	3555	3624.99	3694.98

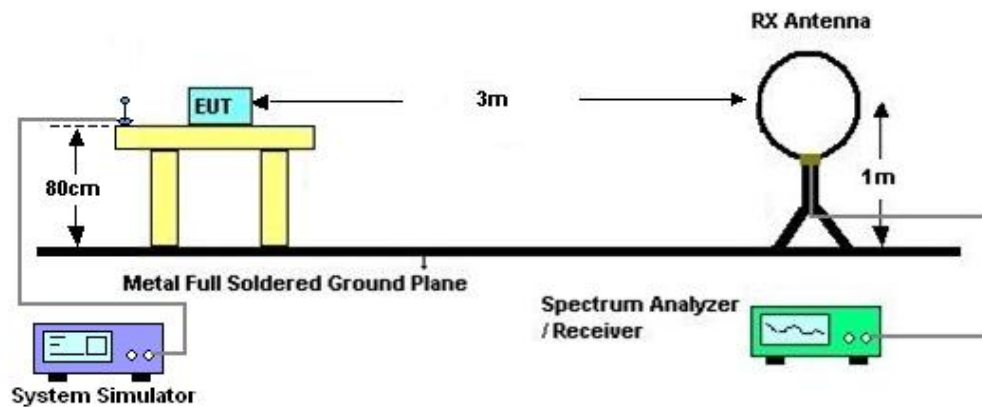
### 3 Radiated Test Items

#### 3.1 Measuring Instruments

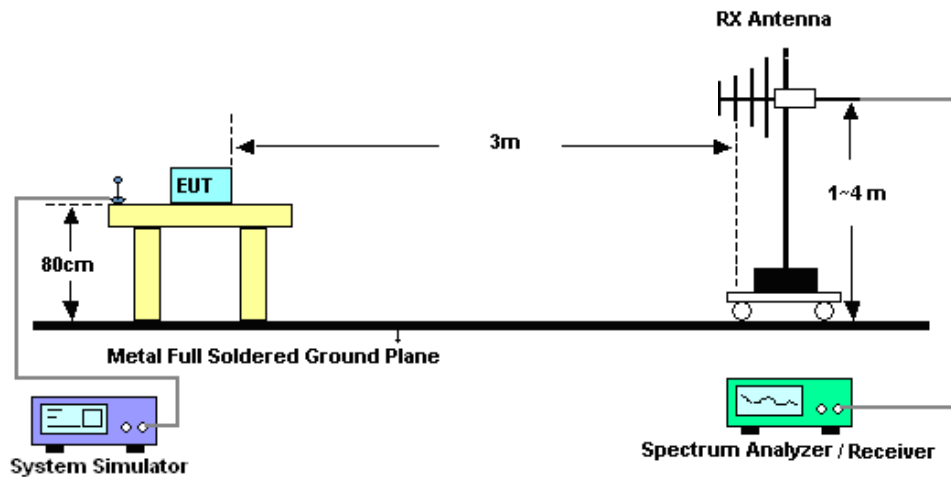
See list of measuring instruments of this test report.

#### 3.2 Test Setup

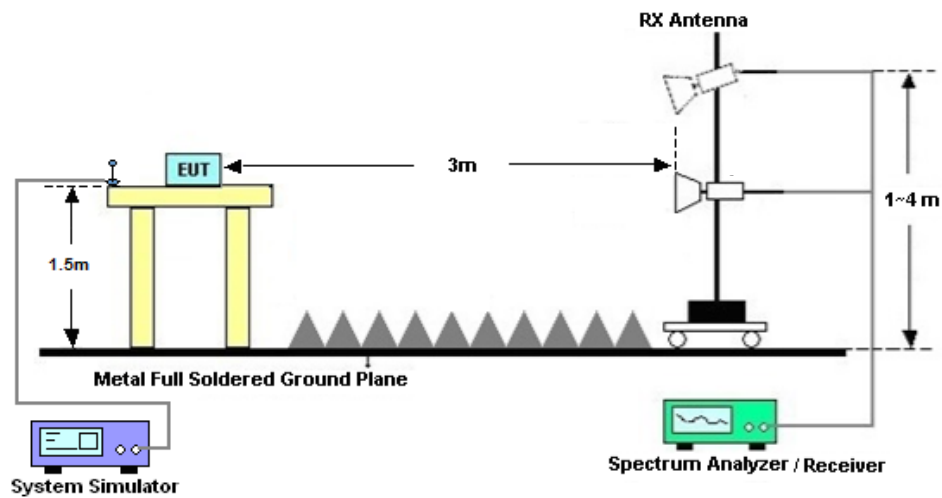
##### 3.2.1 For radiated test below 30MHz



##### 3.2.2 For radiated test from 30MHz to 1GHz



### 3.2.3 For radiated test above 1GHz



### 3.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.

### 3.4 Radiated Spurious Emission

#### 3.4.1 Description of Radiated Spurious Emission

For 5G NR n7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

For 5G NR n78

The radiated spurious emission was measured by substitution method according to ANSI C63.26.

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least -40dBm / MHz.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

#### 3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10.  $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11.  $ERP \text{ (dBm)} = EIRP - 2.15$
12. For 5G NR n7:  
The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)
13. For 5G NR n78:  
The RF fundamental frequency should be excluded against the limit line in the operating frequency band.  
The limit line is -40dBm/MHz



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz-44G,MAX 30dB	Dec. 03, 2024	Jul. 24, 2025	Dec. 02, 2025	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz-1GHz	Nov. 23, 2024	Jul. 24, 2025	Nov. 22, 2025	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00227860	1GHz~18GHz	Aug. 16, 2024	Jul. 24, 2025	Aug. 15, 2025	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101116	18GHz~40GHz	Oct. 22, 2024	Jul. 24, 2025	Oct. 21, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	380826	9KHz-1GHz	Jul. 02, 2025	Jul. 24, 2025	Jul. 01, 2026	Radiation (03CH04-KS)
Amplifier	EM	EM18G40G A	060852	18~40GHz	Jan. 03, 2025	Jul. 24, 2025	Jan. 02, 2026	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz-18Ghz	Oct. 09, 2024	Jul. 24, 2025	Oct. 08, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz-18Ghz	Oct. 09, 2024	Jul. 24, 2025	Oct. 08, 2025	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 24, 2025	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 24, 2025	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 24, 2025	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required



## 5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage  $K=2$  to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.83 dB
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.83 dB
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.82 dB
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----- THE END -----



## Appendix A. Test Results of Radiated Test

### Radiated Spurious Emission

Test Engineer :	Chris	Temperature :	21~25℃
		Relative Humidity :	51~53%

Note: Pre-scanned harmonic for the different antenna combinations, we choose the worst antenna mode to perform final test.

ULCA_n7A-n78A								
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power (dBm)	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
NR n7 Max BW Middle 1RB0,QPSK	5022	-63.72	-25	-38.72	-73.03	2.84	14.30	H
	7542	-63.23	-25	-38.23	-71.32	3.85	14.09	H
	10048	-61.53	-25	-36.53	-70.84	2.84	14.30	H
	5022	-68.38	-25	-43.38	-77.69	2.84	14.30	V
	7542	-67.70	-25	-42.70	-75.79	3.85	14.09	V
	10048	-68.54	-25	-43.54	-77.85	2.84	14.30	V
NR n78 Max BW Middle 1RB0,QPSK	7164	-63.59	-40	-23.59	-75.05	2.84	14.30	H
	10740	-59.09	-40	-19.09	-69.03	3.49	13.43	H
	14316	-59.69	-40	-19.69	-69.93	3.85	14.09	H
	7164	-63.35	-40	-23.35	-74.81	2.84	14.30	V
	10740	-59.39	-40	-19.39	-69.33	3.49	13.43	V
	14316	-59.40	-40	-19.40	-69.64	3.85	14.09	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.