



FCC RF Test Report

APPLICANT : Guangdong OPPO Mobile Telecommunications Corp., Ltd.
EQUIPMENT : Mobile Phone
BRAND NAME : OPPO
MODEL NAME : CPH2689
FCC ID : R9C-OP24222
STANDARD : 47 CFR Part 22, 27
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : Oct. 15, 2024

We, Sporton International Inc. (ShenZhen), 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. (ShenZhen), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (ShenZhen)

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People's Republic of China



TABLE OF CONTENTS

REVISION HISTORY	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Product Specification of Equipment Under Test	5
1.5 Modification of EUT	5
1.6 Testing Location	6
1.7 Test Software	6
1.8 Applicable Standards	6
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	7
2.1 Test Mode	7
2.2 Connection Diagram of Test System	8
2.3 Support Unit used in test configuration and system	8
2.4 Frequency List of Low/Middle/High Channels	9
3 RADIATED TEST ITEMS	13
3.1 Measuring Instruments	13
3.2 Test Setup	13
3.3 Test Result of Radiated Test	14
3.4 Radiated Spurious Emission	15
4 LIST OF MEASURING EQUIPMENT	17
5 MEASUREMENT UNCERTAINTY	18
APPENDIX A. TEST RESULTS OF CONDUCTED TEST	
APPENDIX B. TEST RESULTS OF RADIATED TEST	
APPENDIX C. TEST SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG491807I	Rev. 01	Initial issue of report	Nov. 12, 2024



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1053 §22.917(a) §27.53(l)(2)	Radiated Spurious Emission (5G NR n5) (5G NR n78(27O))	$< 43 + 10\log_{10}(P[\text{Watts}])$	PASS	Under limit 26.04 dB at 10178.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (5G NR n7, n41)	$< 55 + 10\log_{10}(P[\text{Watts}])$		
	§2.1053 §27.53 (n)(2)	Radiated Spurious Emission (5G NRn78(27Q))	-13dBm/MHz		

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

Guangdong OPPO Mobile Telecommunications Corp., Ltd.

NO.18 HaiBin Road, Wusha Village, Chang'an Town, DongGuan City, Guangdong Province, P.R. China

1.2 Manufacturer

Guangdong OPPO Mobile Telecommunications Corp., Ltd.

NO.18 HaiBin Road, Wusha Village, Chang'an Town, DongGuan City, Guangdong Province, P.R. China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	OPPO
Model Name	CPH2689
FCC ID	R9C-OP24222
IMEI Code	Radiation : 863233070022531/863233070022523
HW Version	11
SW Version	ColorOS 15.0
EUT Stage	Production Unit

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification						
Tx Frequency	5G NR n5 : 824 MHz ~ 849 MHz					
	5G NR n7 : 2500 MHz ~ 2570 MHz					
	5G NR n41 : 2496 MHz ~ 2690 MHz					
	5G NR n78 : 3450 MHz ~ 3550 MHz; 3700 MHz ~ 3800 MHz					
Rx Frequency	5G NR n5 : 869 MHz ~ 894 MHz					
	5G NR n7 : 2620 MHz ~ 2690 MHz					
	5G NR n41 : 2496 MHz ~ 2690 MHz					
	5G NR n78 : 3450 MHz ~ 3550 MHz; 3700 MHz ~ 3800 MHz					
Uplink CA Bands	<table><tr><td>n5A-n78A</td><td>n7A-n78A</td><td>n41A-n78A</td></tr></table>			n5A-n78A	n7A-n78A	n41A-n78A
	n5A-n78A	n7A-n78A	n41A-n78A			
	Remark:78(3450 MHz ~ 3550 MHz)(27Q)					
	<table><tr><td>n5A-n78A</td><td>n7A-n78A</td><td>n41A-n78A</td></tr></table>			n5A-n78A	n7A-n78A	n41A-n78A
n5A-n78A	n7A-n78A	n41A-n78A				
Remark: 78(3700 MHz ~ 3800 MHz)(27O)						
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. (ShenZhen) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International Inc. (ShenZhen)		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City, Guangdong Province 518103 People's Republic of China TEL: +86-755-86066985		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH01-SZ	CN1256	421272

1.7 Test Software

Item	Site	Manufacture	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24

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 22, 27
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03r01
- ♦ 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

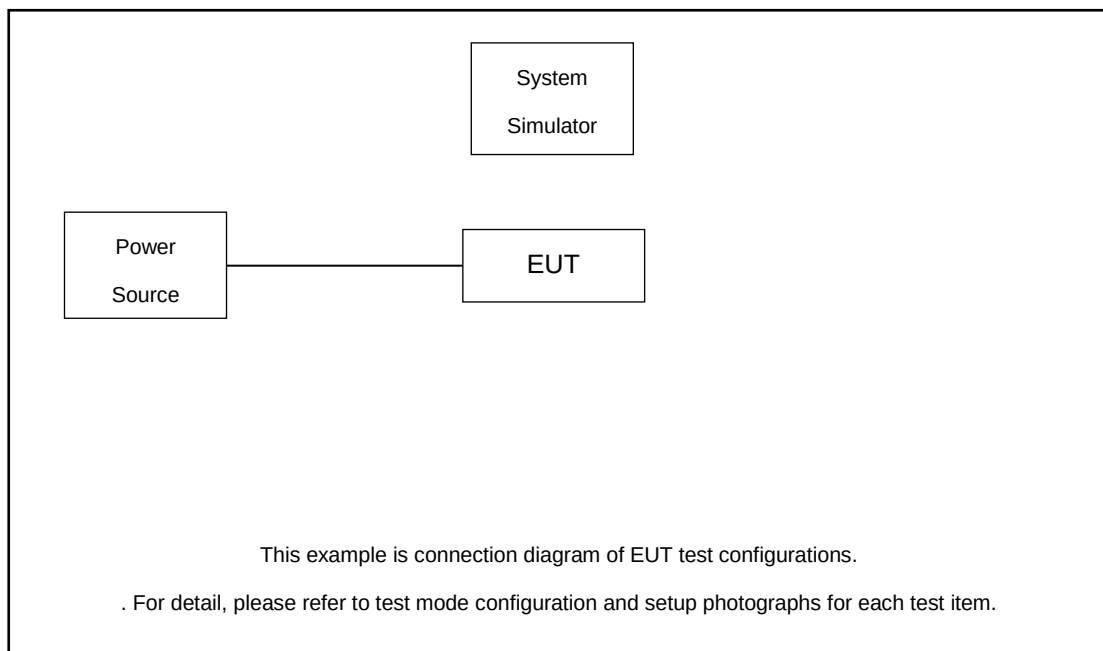
2.1 Test Mode

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

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission. (Z-Plane)

Test Items	Band	Bandwidth (MHz)	Modulation	RB #			Test Channel		
		eg. 5M, 10M, 15M, 20M	eg. PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	1	Half	Full	L	M	H
	Part 27Q								
	n5A-n78A	Worst Case					v	v	v
	n7A-n78A	Worst Case					v	v	v
	n41A-n78A	Worst Case					v	v	v
	Part 27O								
	n5A-n78A	Worst Case					v	v	v
	n7A-n78A	Worst Case					v	v	v
	n41A-n78A	Worst Case					v	v	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.	DC Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8 m
3.	NR Base Station	Anritsu	MT8000A	N/A	N/A	Unshielded, 1.8 m



2.4 Frequency List of Low/Middle/High Channels

5G NR n5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	166800	167300	167800
	Frequency	834	836.5	839
15	Channel	166300	167300	168300
	Frequency	831.5	836.5	841.5
10	Channel	165800	167300	168800
	Frequency	829	836.5	844
5	Channel	165300	167300	169300
	Frequency	826.5	836.5	846.5

5G NR n7 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
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 NR n41 Channel and Frequency List for SCS 30k				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	509202	518598	528000
	Frequency	2546.01	2592.99	2640
90	Channel	508200	518598	528996
	Frequency	2541	2592.99	2644.98
80	Channel	507204	518598	529998
	Frequency	2536.02	2592.99	2649.99
70	Channel	506202	518598	531000
	Frequency	2531.01	2592.99	2655
60	Channel	505200	518598	531996
	Frequency	2526	2592.99	2659.98
50	Channel	504204	518598	532998
	Frequency	2521.02	2592.99	2664.99
40	Channel	503202	518598	534000
	Frequency	2516.01	2592.99	2670
30	Channel	502200	518598	534996
	Frequency	2511	2592.99	2674.98
20	Channel	501204	518598	535998
	Frequency	2506.02	2592.99	2679.99



5G n78 Channel and Frequency List (Part 27Q)				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	-	633334	-
	Frequency	-	3500.01	-
90	Channel	633000	633334	633666
	Frequency	3495	3500.01	3504.99
80	Channel	632668	633334	634000
	Frequency	3490.02	3500.01	3510
70	Channel	632334	633334	634332
	Frequency	3485.01	3500.01	3514.98
60	Channel	632000	633334	634666
	Frequency	3480	3500.01	3519.99
50	Channel	631668	633334	635000
	Frequency	3475.02	3500.01	3525
40	Channel	631334	633334	635332
	Frequency	3470.01	3500.01	3529.98
30	Channel	631000	633334	635666
	Frequency	3465	3500.01	3534.99
20	Channel	630668	633334	636000
	Frequency	3460.02	3500.01	3540



5G n78 Channel and Frequency List (Part 270)				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
100	Channel	650000		
	Frequency	3750		
90	Channel	649668	650000	650332
	Frequency	3745.02	3750	3754.98
80	Channel	649334	650000	650666
	Frequency	3740.01	3750	3759.99
70	Channel	649000	650000	651000
	Frequency	3735	3750	3765
60	Channel	648668	650000	651332
	Frequency	3730.02	3750	3769.98
50	Channel	648334	650000	651666
	Frequency	3725.01	3750	3774.99
40	Channel	648000	650000	652000
	Frequency	3720	3750	3780
30	Channel	647668	650000	652332
	Frequency	3715.02	3750	3784.98
20	Channel	647334	650000	652666
	Frequency	3710.01	3750	3789.99

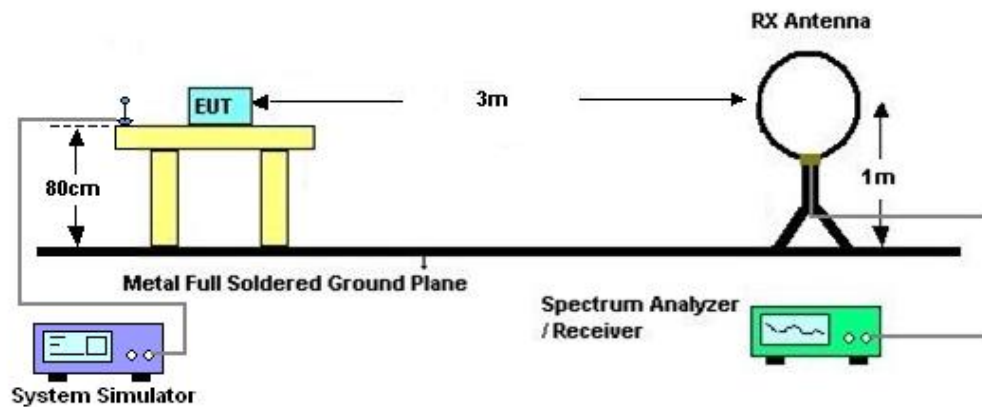
3 Radiated Test Items

3.1 Measuring Instruments

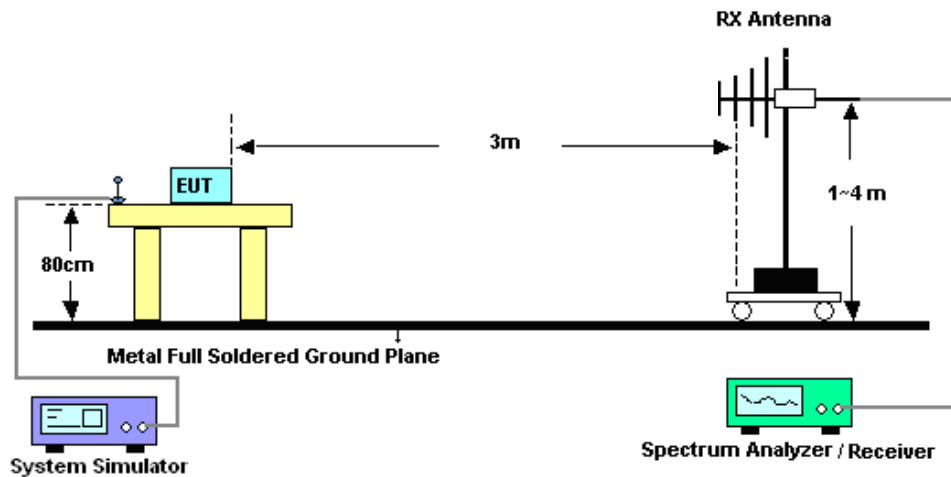
See list of measuring instruments of this test report.

3.2 Test Setup

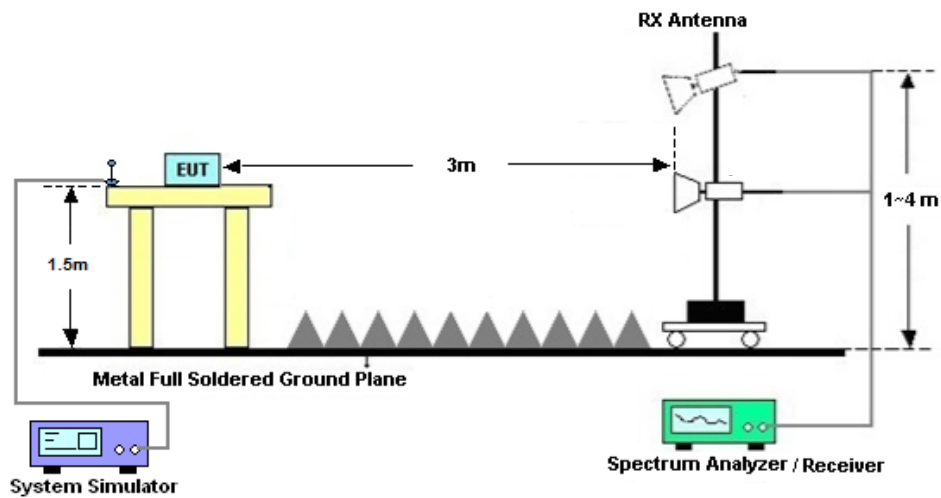
3.2.1 For radiated test below 30MHz



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 A.

3.4 Radiated Spurious Emission

3.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI C63.26. For 5G NR n5, n78(27O)

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 $43 + 10 \log (P)$ dB.

For 5G NR n7, n41

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 (27Q)

The power of any emission outside of the authorized operating frequency ranges shall not exceed -13 dBm/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. $EIRP\ (dBm) = S.G.\ Power - Tx\ Cable\ Loss + Tx\ Antenna\ Gain$
11. $ERP\ (dBm) = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

For 5G NR n5, n78:

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)]\ (dB)$$

$$= [30 + 10\log(P)]\ (dBm) - [43 + 10\log(P)]\ (dB)$$

$$= -13dBm.$$

13. For 5G NR n7, n41:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 27, 2023	Oct. 15, 2024	Dec. 26, 2024	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2E	101141	9kHz~30MHz	Dec. 29, 2023	Oct. 15, 2024	Dec. 28, 2024	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18,2023	Oct. 15, 2024	Oct. 17,2024	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Oct. 24, 2023	Oct. 15, 2024	Oct. 23, 2025	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 04, 2024	Oct. 15, 2024	Jul. 03, 2025	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09,2024	Oct. 15, 2024	Apr. 08,2025	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 09, 2024	Oct. 15, 2024	Apr. 08, 2025	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 18,2023	Oct. 15, 2024	Oct. 17,2024	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 03, 2024	Oct. 15, 2024	Jul. 02, 2025	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	Oct. 18,2023	Oct. 15, 2024	Oct. 17,2024	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Oct. 15, 2024	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Oct. 15, 2024	NCR	Radiation (03CH01-SZ)

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% ($U = 2U_c(y)$)	2.48 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.53 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.02 dB
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----- THE END -----



Appendix A. Test Results of Radiated Test

Radiated Spurious Emission

Test Engineer :	Jia Kuang	Temperature :	22~25°C
		Relative Humidity :	48~52%

ULCA_n5A-n78A(27Q) (ANT0+9)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA. Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
5G NR n78 Max BW Middle 1RB0,QPSK	6901.50	-55.18	-13	-42.18	-81.38	-58.48	8.30	11.60	H
	10352.25	-51.81	-13	-38.81	-83.03	-53.33	10.48	12.00	H
	13803.00	-50.42	-13	-37.42	-82.55	-52.12	11.80	13.50	H
	6901.50	-53.92	-13	-40.92	-81.4	-57.22	8.30	11.60	V
	10352.25	-49.78	-13	-36.78	-82.8	-51.30	10.48	12.00	V
	13803.00	-51.20	-13	-38.20	-82.14	-52.90	11.80	13.50	V
5G NR n5 Max BW Middle 1RB0,QPSK	1654.5	-64.37	-13	-51.37	-76.50	-67.62	4.00	9.40	H
	2481.75	-59.52	-13	-46.52	-78.77	-63.09	4.88	10.60	H
	3309	-58.31	-13	-45.31	-79.46	-63.24	5.52	12.60	H
	1654.5	-63.57	-13	-50.57	-76.34	-66.82	4.00	9.40	V
	2481.75	-59.20	-13	-46.20	-78.77	-62.77	4.88	10.60	V
	3309	-57.22	-13	-44.22	-79.07	-62.15	5.52	12.60	V

ULCA_n7A-n78A(27Q) (ANT5+9)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA. Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
5G NR n78 Max BW Middle 1RB0,QPSK	6901.50	-55.30	-13	-42.30	-81.50	-58.60	8.30	11.60	H
	10352.25	-52.01	-13	-39.01	-83.23	-53.53	10.48	12.00	H
	13803.00	-50.54	-13	-37.54	-82.67	-52.24	11.80	13.50	H
	6901.50	-54.07	-13	-41.07	-81.55	-57.37	8.30	11.60	V
	10352.25	-49.99	-13	-36.99	-83.01	-51.51	10.48	12.00	V
	13803.00	-51.74	-13	-38.74	-82.68	-53.44	11.80	13.50	V
5G NR n7 Max BW Middle 1RB0,QPSK	5033.00	-57.51	-25	-32.51	-81.37	-63.07	7.14	12.70	H
	7549.50	-55.34	-25	-30.34	-82.16	-58.64	8.30	11.60	H
	10066.00	-53.30	-25	-28.30	-84.18	-54.82	10.48	12.00	H
	5033.00	-56.13	-25	-31.13	-81.44	-61.69	7.14	12.70	V
	7549.50	-55.31	-25	-30.31	-82.12	-58.61	8.30	11.60	V
	10066.00	-52.18	-25	-27.18	-83.87	-53.70	10.48	12.00	V



ULCA_n41A-n78A(27Q) (ANT5+9)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA. Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
5G NR n78 Max BW Middle 1RB0,QPSK	6901.50	-55.32	-13	-42.32	-81.52	-58.62	8.30	11.60	H
	10352.25	-51.48	-13	-38.48	-82.70	-53.00	10.48	12.00	H
	13803.00	-50.76	-13	-37.76	-82.89	-52.46	11.80	13.50	H
	6901.50	-53.77	-13	-40.77	-81.25	-57.07	8.30	11.60	V
	10352.25	-49.62	-13	-36.62	-82.64	-51.14	10.48	12.00	V
	13803.00	-51.57	-13	-38.57	-82.51	-53.27	11.80	13.50	V
5G NR n41 Max BW Middle 1RB0,QPSK	5033.00	-57.17	-25	-32.17	-81.03	-62.73	7.14	12.70	H
	7549.50	-54.96	-25	-29.96	-81.78	-58.26	8.30	11.60	H
	10066.00	-53.11	-25	-28.11	-83.99	-54.63	10.48	12.00	H
	5033.00	-55.80	-25	-30.80	-81.11	-61.36	7.14	12.70	V
	7549.50	-54.95	-25	-29.95	-81.76	-58.25	8.30	11.60	V
	10066.00	-52.53	-25	-27.53	-84.22	-54.05	10.48	12.00	V

ULCA_n5A-n78A(27O) (ANT0+9)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA. Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
5G NR n78 Max BW Middle 1RB0,QPSK	7401.00	-54.33	-13	-41.33	-81.71	-57.63	8.30	11.60	H
	11101.50	-50.10	-13	-37.10	-83.44	-51.62	10.48	12.00	H
	14802.00	-48.43	-13	-35.43	-82.37	-50.13	11.80	13.50	H
	7401.00	-54.21	-13	-41.21	-81.56	-57.51	8.30	11.60	V
	11101.50	-48.03	-13	-35.03	-83.3	-49.55	10.48	12.00	V
	14802.00	-48.06	-13	-35.06	-82.28	-49.76	11.80	13.50	V
5G NR n5 Max BW Middle 1RB0,QPSK	1654.5	-65.86	-13	-52.86	-77.99	-69.11	4.00	9.40	H
	2481.75	-60.81	-13	-47.81	-80.06	-64.38	4.88	10.60	H
	3309	-59.58	-13	-46.58	-80.73	-64.51	5.52	12.60	H
	1654.5	-65.03	-13	-52.03	-77.80	-68.28	4.00	9.40	V
	2481.75	-60.65	-13	-47.65	-80.22	-64.22	4.88	10.60	V
	3309	-58.65	-13	-45.65	-80.50	-63.58	5.52	12.60	V

ULCA_n7A-n78A(27O) (ANT5+9)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA. Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
5G NR n78 Max BW Middle 1RB0,QPSK	7401.00	-53.88	-13	-40.88	-81.26	-57.18	8.30	11.60	H
	11101.50	-49.61	-13	-36.61	-82.95	-51.13	10.48	12.00	H
	14802.00	-48.14	-13	-35.14	-82.08	-49.84	11.80	13.50	H
	7401.00	-53.53	-13	-40.53	-80.88	-56.83	8.30	11.60	V
	11101.50	-47.02	-13	-34.02	-82.29	-48.54	10.48	12.00	V
	14802.00	-47.80	-13	-34.80	-82.02	-49.50	11.80	13.50	V
5G NR n7 Max BW Middle 1RB0,QPSK	5033.00	-57.14	-25	-32.14	-81.00	-62.70	7.14	12.70	H
	7549.50	-55.07	-25	-30.07	-81.89	-58.37	8.30	11.60	H
	10066.00	-53.03	-25	-28.03	-83.91	-54.55	10.48	12.00	H
	5033.00	-56.00	-25	-31.00	-81.31	-61.56	7.14	12.70	V
	7549.50	-55.01	-25	-30.01	-81.82	-58.31	8.30	11.60	V
	10066.00	-52.14	-25	-27.14	-83.83	-53.66	10.48	12.00	V



ULCA_n41A-n78A(270) (ANT5+9)									
Channel	Frequency (MHz)	ERP/EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA. Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
5G NR n78 Max BW Middle 1RB0,QPSK	7401.00	-54.00	-13	-41.00	-81.38	-57.30	8.30	11.60	H
	11101.50	-47.42	-13	-34.42	-80.76	-48.94	10.48	12.00	H
	14802.00	-48.03	-13	-35.03	-81.97	-49.73	11.80	13.50	H
	7401.00	-51.76	-13	-38.76	-79.11	-55.06	8.30	11.60	V
	11101.50	-44.68	-13	-31.68	-79.95	-46.20	10.48	12.00	V
	14802.00	-47.71	-13	-34.71	-81.93	-49.41	11.80	13.50	V
5G NR n41 Max BW Middle 1RB0,QPSK	5089.00	-57.01	-25	-32.01	-81.29	-62.57	7.14	12.70	H
	7633.50	-55.38	-25	-30.38	-81.92	-58.68	8.30	11.60	H
	10178.00	-52.40	-25	-27.40	-83.42	-53.92	10.48	12.00	H
	5089.00	-56.16	-25	-31.16	-81.42	-61.72	7.14	12.70	V
	7633.50	-54.54	-25	-29.54	-81.76	-57.84	8.30	11.60	V
	10178.00	-51.04	-25	-26.04	-83.28	-52.56	10.48	12.00	V