

FCC RF Test Report

(5G NR)

Applicant: Shen Zhen Conquest Communication Equipment Co., Ltd.

Address of Applicant: 2nd Floor, Building B, Yong xiang Street East on the 17th, Bantian Street, Longgang District, Shen Zhen, Guangdong, China

Equipment Under Test (EUT)

Product Name: 5G digital mobile phone

Model No.: conquest-S20

Trade Mark: CONQUEST

FCC ID: 2AWTK-S20

Applicable Standards: FCC CFR Title 47 Part 2, 22H, 27M&O&Q

Date of Sample Receipt: 09 Mar., 2022

Date of Test: 10 Mar., to 17 Apr., 2022


Date of Report Issued: 18 Apr., 2022

Test Result: PASS

Tested by: Mike DU **Date:** 18 Apr., 2022
Test Engineer

Reviewed by: Wenwen Zhang **Date:** 18 Apr., 2022
Project Engineer

Approved by: Wenwen Zhang **Date:** 18 Apr., 2022
Manager



This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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2. Version

Version No.	Date	Description
00	18 Apr., 2022	Original

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4. General Information

4.1 Client Information

Applicant:	Shen Zhen Conquest Communication Equipment Co., Ltd.
Address:	2nd Floor, Building B, Yong xiang Street East on the 17th, Bantian Street, Longgang District, Shen Zhen, Guangdong, China
Manufacturer/Factory:	Shen Zhen Conquest Communication Equipment Co., Ltd.
Address:	2nd Floor, Building B, Yong xiang Street East on the 17th, Bantian Street, Longgang District, Shen Zhen, Guangdong, China

4.2 General Description of E.U.T.

Product Name:	5G digital mobile phone			
Model No.:	conquest-S20			
	Band n5:	Tx: 824 MHz - 849 MHz	Rx: 869 MHz - 894 MHz	
	Band n41:	Tx: 2496 MHz - 2690 MHz	Rx: 2496 MHz - 2690 MHz	
	Band n77:	Tx: 3450 MHz - 3550 MHz	Rx: 3450 MHz - 3550 MHz	
	Band n77:	Tx: 3700 MHz - 3980 MHz	Rx: 3700 MHz - 3980 MHz	
Modulation Type:	<input checked="" type="checkbox"/> DFT-s-OFDM:	Pi/2-BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM		
	<input checked="" type="checkbox"/> CP-OFDM:	QPSK, 16-QAM, 64-QAM, 256-QAM		
Network Mode:	<input checked="" type="checkbox"/> SA:	n5, n41, n77		
	<input checked="" type="checkbox"/> NSA(EN-DC):	DC_7A_n77A		
SCS Support:	<input checked="" type="checkbox"/> 15 kHz	<input checked="" type="checkbox"/> 30 kHz	<input type="checkbox"/> 60 kHz	<input type="checkbox"/> 120 kHz
Antenna Type:	Internal Antenna			
Antenna Gain:	Band n5:	-0.9dBi (declare by Applicant)		
	Band n41:	1.5 dBi (declare by Applicant)		
	Band n77:	0.8 dBi (declare by Applicant)		
Power Supply:	Rechargeable Li-ion Polymer Battery DC3.85V, 8000mAh			
AC Adapter:	Model: HJ-FC001K7-US Input: AC100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 3.0A or 9.0V, 2.0A or 12.0V, 1.5A			
Wireless Charger:	Input: DC 12.0V, 2.0A or 9.0V, 2.0A or 5.0V, 2A Output: 15W/ 10W/ 7.5W/ 5W			
Test Sample Condition:	The test samples were provided in good working order with no visible defects.			

4.3 Test Model and Environment

Test Mode:	
DFT-s-OFDM access mode:	Keep the EUT communication with simulated station in Pi/2-BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM modulation of DFT-s-OFDM access mode.
CP-OFDM access mode:	Keep the EUT communication with simulated station in Pi/2-BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM modulation of CP-OFDM access mode.
Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report.	
Operating Environment:	
Temperature:	Normal: 15°C ~ 35°C, Extreme: -30°C ~ +50°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.85 Vdc, Extreme: Low 3.5Vdc, High 4.40 Vdc

4.4 Description of Test Auxiliary Equipment

Test Equipment	Manufacturer	Model No.	Serial No.
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY60192444

4.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Conducted Emission for LISN (9kHz ~ 150kHz)	±3.11 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.62 dB
Radiated Emission (30MHz ~ 1GHz) (3m SAC)	±4.45 dB
Radiated Emission (1GHz ~ 18GHz) (3m SAC)	±5.34 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	±5.34 dB
<i>Note: 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.</i>	

4.6 Additions to, Deviations, or Exclusions from the Method

No

4.7 Laboratory Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC - Designation No.: CN1211 JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551. ● ISED – CAB identifier.: CN0021 The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L15527 JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf
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4.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.
 Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.
 Tel: +86-755-23118282, Fax: +86-755-23116366
 Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

4.9 Test Instruments List

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	01-19-2021	01-18-2024
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	02-17-2022	02-16-2023
Biconical Antenna	Schwarzbeck	VUBA9117	WXJ002-1	06-20-2021	06-19-2022
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	02-17-2022	02-16-2023
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-3	06-18-2021	06-17-2022
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXG001-7	02-17-2022	02-16-2023
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXG001-3	02-17-2022	02-16-2023
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXG001-9	02-17-2022	02-16-2023
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	02-17-2022	02-16-2023
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	10-27-2022	10-26-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	WXJ008-6	10-27-2021	10-26-2022
Coaxial Cable (30MHz ~ 1GHz)	JYT	JYT3M-1G-NN-8M	WXG001-4	02-17-2022	02-16-2023
Coaxial Cable (1GHz ~ 18GHz)	JYT	JYT3M-18G-NN-8M	WXG001-5	02-17-2022	02-16-2023
Coaxial Cable (18GHz ~ 40GHz)	JYT	JYT3M-40G-SS-8M	WXG001-7	02-17-2022	02-16-2023
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/C	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

Conducted Method:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
Spectrum Analyzer	Keysight	N9020B	WXJ004-2	10-27-2021	10-26-2022
Vector Signal Generator	Keysight	N5182B	WXJ006-5	10-27-2021	10-26-2022
Analog Signal Generator	Keysight	N5173B	WXJ006-3	10-27-2021	10-26-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	WXJ008-6	10-27-2021	10-26-2022
DC Power Supply	Keysight	E3642A	WXJ025-3	11-27-2020	11-26-2023
Temperature Humidity Chamber	HONG ZHI	CZ-A-80D	WXJ032-2	09-23-2020	09-22-2023
RF Control Box	MWRF-test	MW400-RFCB	WXG005	N/C	
Automatic Filter Box	MWRF-test	MW400-SFCB1	WXG005-1	N/C	
Automatic Filter Box	MWRF-test	MW400-SFCB2	WXG005-2	N/C	
Test Software	MWRF-test	MTS 8200 NR	Version: 2.0.0.0		

5. Measurement Setup and Procedure

5.1 Test Channel

According to ANSI C63.26-2015 chapter 5.1.2.1 Table 2 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

Band n5, SCS: 15 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
5 MHz			10 MHz		
Lowest	165300	826.5	Lowest	165800	829.0
Middle	167300	836.5	Middle	167300	836.5
Highest	169300	846.5	Highest	168800	844.0
15 MHz			20 MHz		
Lowest	166300	831.5	Lowest	166800	834.0
Middle	167300	836.5	Middle	167300	836.5
Highest	168300	841.5	Highest	167800	839.0
Band n5, SCS: 30 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	165800	829.0	Lowest	166300	831.5
Middle	167300	836.5	Middle	167300	836.5
Highest	168800	844.0	Highest	168300	841.5
20 MHz					
Lowest	166800	834.0			
Middle	167300	836.5			
Highest	167800	839.0			

Band n41(2496 MHz ~2690 MHz), SCS: 15 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	500202	2501.010	Lowest	500700	2503.500
Middle	518601	2593.005	Middle	518601	2593.005
Highest	537000	2685.000	Highest	536499	2682.495
20 MHz			30 MHz		
Lowest	501201	2506.005	Lowest	502200	2511.000
Middle	518601	2593.005	Middle	518601	2593.005
Highest	535998	2679.990	Highest	534999	2674.995
40 MHz			50 MHz		
Lowest	503202	2516.010	Lowest	504201	2521.005
Middle	518601	2593.005	Middle	518601	2593.005
Highest	534000	2670.000	Highest	532998	2664.990
Band n41(2496 MHz ~2690 MHz), SCS: 30 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	500202	2501.010	Lowest	500700	2503.500
Middle	518598	2592.990	Middle	518598	2592.990
Highest	537000	2685.000	Highest	536496	2682.480
20 MHz			30 MHz		
Lowest	501204	2506.020	Lowest	502200	2511.000
Middle	518598	2592.990	Middle	518598	2592.990
Highest	535998	2679.990	Highest	534996	2674.980
40 MHz			50 MHz		
Lowest	503202	2516.010	Lowest	504204	2521.020
Middle	518598	2592.990	Middle	518598	2592.990
Highest	534000	2670.000	Highest	532998	2664.990
60 MHz			80 MHz		
Lowest	505200	2526.000	Lowest	507204	2536.020
Middle	518598	2592.990	Middle	518598	2592.990
Highest	531996	2659.980	Highest	52998	2649.990
90 MHz			100 MHz		
Lowest	508200	2541.000	Lowest	509202	2546.010
Middle	518598	2592.990	Middle	518598	2592.990
Highest	528996	2644.980	Highest	528000	2640.000

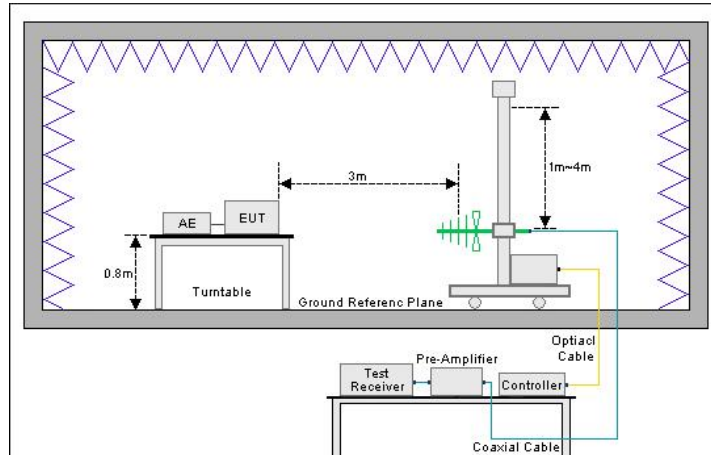
Band n77(3450-3550), SCS: 15 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	630334	3455.010	Lowest	630500	3457.500
Middle	633333	3499.995	Middle	633333	3499.995
Highest	636333	3544.995	Highest	636166	3542.490
20 MHz			25 MHz		
Lowest	630667	3460.005	Lowest	630834	3462.510
Middle	633333	3499.995	Middle	633333	3499.995
Highest	636000	3540.000	Highest	635833	3537.495
30 MHz			40 MHz		
Lowest	631000	3465.000	Lowest	631334	3470.010
Middle	633333	3499.995	Middle	633333	3499.995
Highest	635666	3534.990	Highest	635333	3529.995
50 MHz					
Lowest	631667	3475.005			
Middle	633333	3499.995			
Highest	635000	3525.000			
Band n77(3450-3550), SCS: 30 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	630334	3455.010	Lowest	630500	3457.500
Middle	633334	3500.010	Middle	633334	3500.010
Highest	636332	3544.980	Highest	636166	3542.490
20 MHz			25 MHz		
Lowest	630668	3460.020	Lowest	630834	3462.510
Middle	633334	3500.010	Middle	633334	3500.010
Highest	636000	3540.000	Highest	635832	3537.480
30 MHz			40 MHz		
Lowest	631000	3465.000	Lowest	631334	3470.010
Middle	633334	3500.010	Middle	633334	3500.010
Highest	635666	3534.990	Highest	635332	3529.980
50 MHz			60 MHz		
Lowest	631668	3475.020	Lowest	632000	3480.000
Middle	633334	3500.010	Middle	633334	3500.010
Highest	635000	3525.000	Highest	634666	3519.990
80 MHz			90 MHz		
Lowest	632668	3490.020	Lowest	633000	3495.000
Middle	633334	3500.010	Middle	633334	3500.010
Highest	634000	3510.000	Highest	633666	3504.990
100 MHz					
Lowest	633334	3500.010			
Middle	633334	3500.010			
Highest	633332	3499.980			

Band n77(3700-3980), SCS: 15 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	647000	3705.000	Lowest	647167	3707.505
Middle	656000	3840.000	Middle	656000	3840.000
Highest	665000	3975.000	Highest	664833	3972.495
20 MHz			25 MHz		
Lowest	647334	3710.010	Lowest	647500	3712.500
Middle	656000	3840.000	Middle	656000	3840.000
Highest	664666	3969.990	Highest	664500	3967.500
30 MHz			40 MHz		
Lowest	647667	3715.005	Lowest	648000	3720.000
Middle	656000	3840.000	Middle	656000	3840.000
Highest	664333	3964.995	Highest	664000	3960.000
50 MHz					
Lowest	648334	3725.010			
Middle	656000	3840.000			
Highest	663666	3954.990			
Band n77(3700-3980), SCS: 30 kHz					
Channels	ARFCN	Frequency (MHz)	Channels	ARFCN	Frequency (MHz)
10 MHz			15 MHz		
Lowest	647000	3705.000	Lowest	647168	3707.520
Middle	656000	3840.000	Middle	656000	3840.000
Highest	665000	3975.000	Highest	664832	3972.480
20 MHz			25 MHz		
Lowest	647334	3710.010	Lowest	647500	3712.500
Middle	656000	3840.000	Middle	656000	3840.000
Highest	664666	3969.990	Highest	664500	3967.500
30 MHz			40 MHz		
Lowest	647668	3715.020	Lowest	648000	3720.000
Middle	656000	3840.000	Middle	656000	3840.000
Highest	664332	3964.980	Highest	664000	3960.000
50 MHz			60 MHz		
Lowest	648334	3725.010	Lowest	648668	3730.020
Middle	656000	3840.000	Middle	656000	3840.000
Highest	663666	3954.990	Highest	663332	3949.980
80 MHz			90 MHz		
Lowest	649334	3740.010	Lowest	649668	3745.020
Middle	656000	3840.000	Middle	656000	3840.000
Highest	662666	3939.990	Highest	662332	3934.980
100 MHz					
Lowest	650000	3750.000			
Middle	656000	3840.000			
Highest	662000	3930.000			

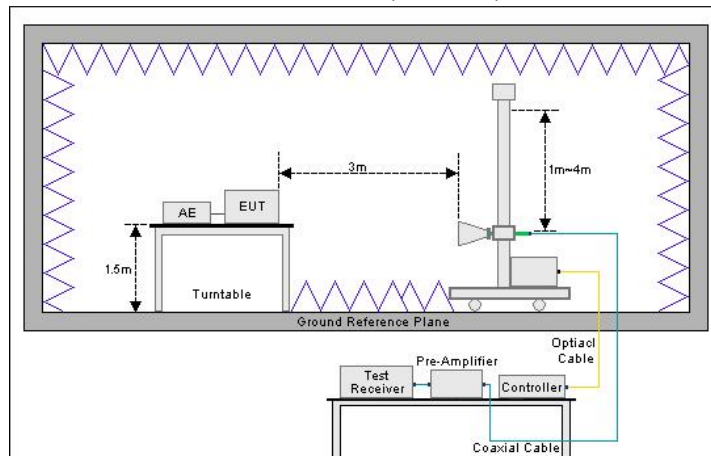
5.2 Test Setup

1) Radiated emission measurement:

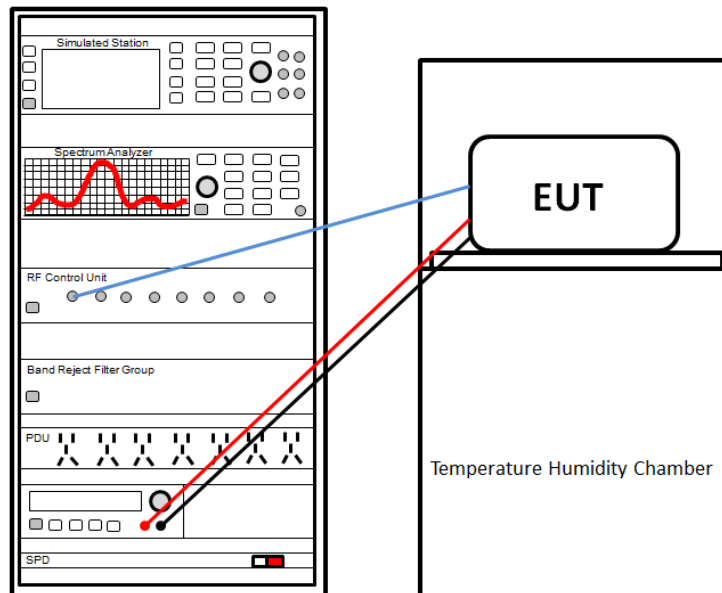
Below 1GHz (3m SAC)



Above 1GHz (3m SAC)



2) Conducted test method



5.3 Test Procedure

Test method	Test step
Radiated emission	<p>For below 1GHz:</p> <ol style="list-style-type: none"> The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. <p>For above 1GHz:</p> <ol style="list-style-type: none"> The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. EUT works in each mode of operation that needs to be tested , and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	<ol style="list-style-type: none"> The NR antenna port of EUT was connected to the test port of the test system through an RF cable. The EUT is keeping in continuous transmission mode and tested in all modulation modes. Open the test software, prepare a test plan, and control the system through the software. After the test is completed, the test report is exported through the test software.

6. Test Results

6.1 Summary

6.1.1 Clause and Data Summary

Test items	Standard clause	Test data	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	See SAR Report	Pass
RF Output Power	Part 2.1046 Part 22.913 (a)(5) Part 27.50 (h)(2) Part 27.50 (j)(3) Part 27.50 (k)(3)	Appendix – 5G NR	Pass
Peak-to-Average Power Ratio	Part 27.50 (j)(4) Part 27.50 (k)(4)	Appendix – 5G NR	Pass
26dB Emission Bandwidth 99% Occupied Bandwidth	Part 2.1049 Part 22.917 (b) Part 27.53 (l)(2) Part 27.53 (m)(6) Part 27.53 (n)(2)	Appendix – 5G NR	Pass
Out of Band Emission at Antenna Terminals	Part 2.1051 Part 22.917 (a) Part 27.53 (l)(2) Part 27.53 (m)(4) Part 27.53 (n)(2)	Appendix – 5G NR	Pass
Field Strength of Spurious Radiation	Part 2.1053 Part 22.917 (a) Part 27.53 (l)(2) Part 27.53 (m)(4) Part 27.53 (n)(2)	See Section 6.2	Pass
Frequency Stability vs. Temperature	Part 2.1055 (a)(1)(b) Part 22.355 Part 27.54	Appendix – 5G NR	Pass
Frequency Stability vs. Voltage	Part 2.1055 (d)(2) Part 22.355 Part 27.54	Appendix – 5G NR	Pass
Remark:			
1. Pass: The EUT complies with the essential requirements in the standard.			
2. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (Fundamental Frequency below 1GHz)/1.0dB (Fundamental Frequency above 1GHz) (provided by the customer).			
Test Method:	ANSI/TIA-603-E-2016 ANSI C63.26-2015		

6.1.2 Test Limit

Test items	Limit
RF output power	Band n41: 2W EIRP, Band n5: 7W ERP, Band n77: 1W EIRP
Peak-to-Average Power Ratio	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB
Modulation Characteristics	N/A
26dB Emission Bandwidth 99% Occupied Bandwidth	N/A
<p>Out of Band Emission at Antenna Terminals</p> <p>Field Strength of Spurious Radiation</p>	<p>Band n5 : The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.</p> <p>Band n41: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.</p> <p>Band n77: For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.</p>

<p>Out of Band Emission at Antenna Terminals</p> <p>Field Strength of Spurious Radiation</p>	<p>For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.</p>
<p>Frequency Stability vs. Temperature</p> <p>Frequency Stability vs. Voltage</p>	<p>The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.</p>

6.2 Field Strength of Spurious Radiation Measurement

Note:

1. The field strength of spurious radiation is tested by selecting the modulation and RB allocation with the maximum power in lowest and highest bandwidth.

Band n5 – SCS 15kHz						
5MHz(1@0) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1653.00	-50.32	-11.08	-61.40	-13.00	48.40	Vertical
2479.50	-49.98	-6.19	-56.17	-13.00	43.17	Vertical
3306.00	-49.64	-4.73	-54.37	-13.00	41.37	Vertical
1653.00	-50.53	-10.95	-61.48	-13.00	48.48	Horizontal
2479.50	-50.21	-6.51	-56.72	-13.00	43.72	Horizontal
3306.00	-49.35	-5.20	-54.55	-13.00	41.55	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-50.32	-11.13	-61.45	-13.00	48.45	Vertical
2509.50	-50.26	-6.20	-56.46	-13.00	43.46	Vertical
3346.00	-49.93	-5.03	-54.96	-13.00	41.96	Vertical
1673.00	-50.46	-11.05	-61.51	-13.00	48.51	Horizontal
2509.50	-50.19	-6.51	-56.70	-13.00	43.70	Horizontal
3346.00	-49.51	-5.23	-54.74	-13.00	41.74	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1693.00	-50.45	-11.12	-61.57	-13.00	48.57	Vertical
2539.50	-50.73	-6.03	-56.76	-13.00	43.76	Vertical
3386.00	-50.18	-5.01	-55.19	-13.00	42.19	Vertical
1693.00	-50.08	-11.03	-61.11	-13.00	48.11	Horizontal
2539.50	-50.20	-6.32	-56.52	-13.00	43.52	Horizontal
3386.00	-49.95	-5.17	-55.12	-13.00	42.12	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n5 – SCS 15kHz						
20MHz(1 @0) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1668.00	-49.91	-11.05	-60.96	-13.00	47.96	Vertical
2502.00	-50.13	-6.15	-56.28	-13.00	43.28	Vertical
3336.00	-49.26	-4.88	-54.14	-13.00	41.14	Vertical
1668.00	-50.92	-10.92	-61.84	-13.00	48.84	Horizontal
2502.00	-50.62	-6.47	-57.09	-13.00	44.09	Horizontal
3336.00	-49.77	-5.13	-54.90	-13.00	41.90	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-49.98	-11.13	-61.11	-13.00	48.11	Vertical
2509.50	-50.24	-6.20	-56.44	-13.00	43.44	Vertical
3346.00	-50.18	-5.03	-55.21	-13.00	42.21	Vertical
1673.00	-50.71	-11.05	-61.76	-13.00	48.76	Horizontal
2509.50	-50.24	-6.51	-56.75	-13.00	43.75	Horizontal
3346.00	-49.32	-5.23	-54.55	-13.00	41.55	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1678.00	-50.08	-11.26	-61.34	-13.00	48.34	Vertical
2517.00	-50.44	-6.20	-56.64	-13.00	43.64	Vertical
3356.00	-50.09	-5.15	-55.24	-13.00	42.24	Vertical
1678.00	-49.61	-11.18	-60.79	-13.00	47.79	Horizontal
2517.00	-50.02	-6.30	-56.32	-13.00	43.32	Horizontal
3356.00	-49.55	-5.29	-54.84	-13.00	41.84	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n5 – SCS 30kHz						
10MHz(1 @0) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1658.00	-50.41	-11.11	-61.52	-13.00	48.52	Vertical
2487.00	-49.46	-6.22	-55.68	-13.00	42.68	Vertical
3316.00	-49.69	-4.98	-54.67	-13.00	41.67	Vertical
1658.00	-50.04	-11.02	-61.06	-13.00	48.06	Horizontal
2487.00	-49.96	-6.54	-56.50	-13.00	43.50	Horizontal
3316.00	-49.43	-5.24	-54.67	-13.00	41.67	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-50.33	-11.13	-61.46	-13.00	48.46	Vertical
2509.50	-49.81	-6.20	-56.01	-13.00	43.01	Vertical
3346.00	-50.17	-5.03	-55.20	-13.00	42.20	Vertical
1673.00	-50.33	-11.05	-61.38	-13.00	48.38	Horizontal
2509.50	-50.41	-6.51	-56.92	-13.00	43.92	Horizontal
3346.00	-49.47	-5.23	-54.70	-13.00	41.70	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1688.00	-50.59	-11.14	-61.73	-13.00	48.73	Vertical
2532.00	-49.53	-6.11	-55.64	-13.00	42.64	Vertical
3376.00	-50.58	-5.07	-55.65	-13.00	42.65	Vertical
1688.00	-50.83	-11.07	-61.90	-13.00	48.90	Horizontal
2532.00	-50.09	-6.42	-56.51	-13.00	43.51	Horizontal
3376.00	-49.44	-5.21	-54.65	-13.00	41.65	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n5 – SCS 30kHz						
20MHz(1 @0) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1668.00	-49.98	-11.05	-61.03	-13.00	48.03	Vertical
2502.00	-49.74	-6.15	-55.89	-13.00	42.89	Vertical
3336.00	-49.39	-4.88	-54.27	-13.00	41.27	Vertical
1668.00	-49.71	-10.92	-60.63	-13.00	47.63	Horizontal
2502.00	-49.64	-6.47	-56.11	-13.00	43.11	Horizontal
3336.00	-49.05	-5.13	-54.18	-13.00	41.18	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1673.00	-49.97	-11.13	-61.10	-13.00	48.10	Vertical
2509.50	-49.51	-6.20	-55.71	-13.00	42.71	Vertical
3346.00	-49.77	-5.03	-54.80	-13.00	41.80	Vertical
1673.00	-50.42	-11.05	-61.47	-13.00	48.47	Horizontal
2509.50	-49.95	-6.51	-56.46	-13.00	43.46	Horizontal
3346.00	-49.17	-5.23	-54.40	-13.00	41.40	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
1678.00	-50.19	-11.26	-61.45	-13.00	48.45	Vertical
2517.00	-49.91	-6.20	-56.11	-13.00	43.11	Vertical
3356.00	-50.30	-5.15	-55.45	-13.00	42.45	Vertical
1678.00	-50.65	-11.18	-61.83	-13.00	48.83	Horizontal
2517.00	-50.51	-6.30	-56.81	-13.00	43.81	Horizontal
3356.00	-49.23	-5.29	-54.52	-13.00	41.52	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n41 – SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5002.02	-51.56	4.19	-47.37	-25.00	22.37	Vertical
7503.03	-51.55	11.13	-40.42	-25.00	15.42	Vertical
10004.04	-53.84	19.47	-34.37	-25.00	9.37	Vertical
5002.02	-50.38	3.23	-47.15	-25.00	22.15	Horizontal
7503.03	-52.56	11.15	-41.41	-25.00	16.41	Horizontal
10004.04	-52.39	17.68	-34.71	-25.00	9.71	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5186.01	-51.82	3.96	-47.86	-25.00	22.86	Vertical
7779.02	-51.96	11.22	-40.74	-25.00	15.74	Vertical
10372.02	-53.94	19.14	-34.80	-25.00	9.80	Vertical
5186.01	-50.17	3.47	-46.70	-25.00	21.70	Horizontal
7779.02	-52.33	10.81	-41.52	-25.00	16.52	Horizontal
10372.02	-52.22	17.86	-34.36	-25.00	9.36	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5370.00	-51.99	3.99	-48.00	-25.00	23.00	Vertical
8055.00	-52.01	10.84	-41.17	-25.00	16.17	Vertical
10740.00	-54.29	19.46	-34.83	-25.00	9.83	Vertical
5370.00	-50.28	3.55	-46.73	-25.00	21.73	Horizontal
8055.00	-52.51	10.56	-41.95	-25.00	16.95	Horizontal
10740.00	-52.43	18.11	-34.32	-25.00	9.32	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n41 – SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5042.01	-51.28	4.56	-46.72	-25.00	21.72	Vertical
7563.02	-51.29	13.29	-38.00	-25.00	13.00	Vertical
10084.02	-53.88	16.93	-36.95	-25.00	11.95	Vertical
5042.01	-50.53	4.56	-45.97	-25.00	20.97	Horizontal
7563.02	-52.19	13.29	-38.90	-25.00	13.90	Horizontal
10084.02	-52.77	16.93	-35.84	-25.00	10.84	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5186.01	-52.08	4.76	-47.32	-25.00	22.32	Vertical
7779.02	-52.14	13.48	-38.66	-25.00	13.66	Vertical
10372.02	-53.58	18.00	-35.58	-25.00	10.58	Vertical
5186.01	-50.51	4.76	-45.75	-25.00	20.75	Horizontal
7779.02	-52.09	13.48	-38.61	-25.00	13.61	Horizontal
10372.02	-52.38	18.00	-34.38	-25.00	9.38	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5329.98	-52.44	5.41	-47.03	-25.00	22.03	Vertical
7994.97	-52.27	13.33	-38.94	-25.00	13.94	Vertical
10659.96	-54.54	19.67	-34.87	-25.00	9.87	Vertical
5329.98	-50.62	5.41	-45.21	-25.00	20.21	Horizontal
7994.97	-52.89	13.33	-39.56	-25.00	14.56	Horizontal
10659.96	-52.59	19.67	-32.92	-25.00	7.92	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n41 – SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5002.02	-51.87	4.00	-47.87	-25.00	22.87	Vertical
7503.03	-52.33	13.14	-39.19	-25.00	14.19	Vertical
10004.04	-53.50	16.89	-36.61	-25.00	11.61	Vertical
5002.02	-50.42	4.56	-45.86	-25.00	20.86	Horizontal
7503.03	-52.00	13.14	-38.86	-25.00	13.86	Horizontal
10004.04	-52.30	16.89	-35.41	-25.00	10.41	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5185.98	-51.84	3.96	-47.88	-25.00	22.88	Vertical
7778.97	-51.73	11.22	-40.51	-25.00	15.51	Vertical
10371.96	-53.59	19.14	-34.45	-25.00	9.45	Vertical
5185.98	-50.37	3.47	-46.90	-25.00	21.90	Horizontal
7778.97	-53.03	10.81	-42.22	-25.00	17.22	Horizontal
10371.96	-52.21	17.86	-34.35	-25.00	9.35	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5370.00	-52.42	4.03	-48.39	-25.00	23.39	Vertical
8055.00	-52.11	10.95	-41.16	-25.00	16.16	Vertical
10740.00	-54.65	19.84	-34.81	-25.00	9.81	Vertical
5370.00	-50.78	3.98	-46.80	-25.00	21.80	Horizontal
8055.00	-52.60	10.79	-41.81	-25.00	16.81	Horizontal
10740.00	-52.42	18.44	-33.98	-25.00	8.98	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n41 – SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5092.02	-51.84	4.46	-47.38	-25.00	22.38	Vertical
7638.03	-52.62	11.26	-41.36	-25.00	16.36	Vertical
10184.04	-53.24	19.86	-33.38	-25.00	8.38	Vertical
5092.02	-50.86	3.03	-47.83	-25.00	22.83	Horizontal
7638.03	-51.85	10.66	-41.19	-25.00	16.19	Horizontal
10184.04	-51.83	17.85	-33.98	-25.00	8.98	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5185.98	-51.85	3.96	-47.89	-25.00	22.89	Vertical
7778.97	-52.16	11.22	-40.94	-25.00	15.94	Vertical
10371.96	-53.32	19.14	-34.18	-25.00	9.18	Vertical
5185.98	-50.34	3.47	-46.87	-25.00	21.87	Horizontal
7778.97	-52.59	10.81	-41.78	-25.00	16.78	Horizontal
10371.96	-52.27	17.86	-34.41	-25.00	9.41	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
5280.00	-52.04	4.04	-48.00	-25.00	23.00	Vertical
7920.00	-52.53	10.70	-41.83	-25.00	16.83	Vertical
10560.00	-54.44	19.24	-35.20	-25.00	10.20	Vertical
5280.00	-50.53	3.32	-47.21	-25.00	22.21	Horizontal
7920.00	-52.67	10.75	-41.92	-25.00	16.92	Horizontal
10560.00	-52.25	18.16	-34.09	-25.00	9.09	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3450 MHz – 3550 MHz) – SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
6910.02	-53.25	10.75	-42.50	-13.00	29.50	Vertical
10365.03	-54.45	17.40	-37.05	-13.00	24.05	Vertical
13820.04	-54.75	23.61	-31.14	-13.00	18.14	Vertical
6910.02	-53.38	10.75	-42.63	-13.00	29.63	Horizontal
10365.03	-53.52	17.40	-36.12	-13.00	23.12	Horizontal
13820.04	-54.00	23.61	-30.39	-13.00	17.39	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.00	-53.02	10.51	-42.51	-13.00	29.51	Vertical
10500.00	-54.38	18.37	-36.01	-13.00	23.01	Vertical
14000.00	-55.22	25.38	-29.84	-13.00	16.84	Vertical
7000.00	-53.15	10.51	-42.64	-13.00	29.64	Horizontal
10500.00	-53.87	18.37	-35.50	-13.00	22.50	Horizontal
14000.00	-54.22	25.38	-28.84	-13.00	15.84	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7090.00	-52.73	11.50	-41.23	-13.00	28.23	Vertical
10635.00	-54.86	18.87	-35.99	-13.00	22.99	Vertical
14180.00	-55.39	26.86	-28.53	-13.00	15.53	Vertical
7090.00	-53.56	11.50	-42.06	-13.00	29.06	Horizontal
10635.00	-53.49	18.87	-34.62	-13.00	21.62	Horizontal
14180.00	-54.71	26.86	-27.85	-13.00	14.85	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3450 MHz – 3550 MHz) – SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
6950.02	-53.70	10.50	-43.20	-13.00	30.20	Vertical
10425.03	-54.44	17.63	-36.81	-13.00	23.81	Vertical
13900.04	-54.72	24.60	-30.12	-13.00	17.12	Vertical
6950.02	-53.19	10.50	-42.69	-13.00	29.69	Horizontal
10425.03	-53.65	17.63	-36.02	-13.00	23.02	Horizontal
13900.04	-54.03	24.60	-29.43	-13.00	16.43	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.00	-52.89	10.49	-42.40	-13.00	29.40	Vertical
10500.00	-54.40	18.21	-36.19	-13.00	23.19	Vertical
14000.00	-55.09	25.38	-29.71	-13.00	16.71	Vertical
7000.00	-53.48	10.49	-42.99	-13.00	29.99	Horizontal
10500.00	-53.74	18.21	-35.53	-13.00	22.53	Horizontal
14000.00	-54.45	25.38	-29.07	-13.00	16.07	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7050.00	-52.32	11.08	-41.24	-13.00	28.24	Vertical
10575.00	-54.75	18.53	-36.22	-13.00	23.22	Vertical
14100.00	-54.93	26.24	-28.69	-13.00	15.69	Vertical
7050.00	-53.92	11.08	-42.84	-13.00	29.84	Horizontal
10575.00	-53.21	18.53	-34.68	-13.00	21.68	Horizontal
14100.00	-54.82	26.24	-28.58	-13.00	15.58	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3450 MHz – 3550 MHz) – SCS 30kHz 10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
6910.02	-52.89	10.75	-42.14	-13.00	29.14	Vertical
10365.03	-54.68	17.58	-37.10	-13.00	24.10	Vertical
13820.04	-55.76	23.61	-32.15	-13.00	19.15	Vertical
6910.02	-53.17	10.75	-42.42	-13.00	29.42	Horizontal
10365.03	-53.24	17.58	-35.66	-13.00	22.66	Horizontal
13820.04	-54.68	23.61	-31.07	-13.00	18.07	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.02	-53.27	10.49	-42.78	-13.00	29.78	Vertical
10500.03	-54.64	18.21	-36.43	-13.00	23.43	Vertical
14000.04	-55.66	25.38	-30.28	-13.00	17.28	Vertical
7000.02	-53.4	10.49	-42.91	-13.00	29.91	Horizontal
10500.03	-53.68	18.21	-35.47	-13.00	22.47	Horizontal
14000.04	-54.24	25.38	-28.86	-13.00	15.86	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7089.96	-52.40	11.50	-40.90	-13.00	27.90	Vertical
10634.94	-54.91	18.71	-36.20	-13.00	23.20	Vertical
14179.92	-55.34	26.86	-28.48	-13.00	15.48	Vertical
7089.96	-53.29	11.50	-41.79	-13.00	28.79	Horizontal
10634.94	-52.98	18.71	-34.27	-13.00	21.27	Horizontal
14179.92	-54.48	26.86	-27.62	-13.00	14.62	Horizontal
Remark: 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3450 MHz – 3550 MHz) – SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.02	-53.06	10.49	-42.57	-13.00	29.57	Vertical
10500.03	-54.69	18.21	-36.48	-13.00	23.48	Vertical
14000.04	-55.84	25.38	-30.46	-13.00	17.46	Vertical
7000.02	-52.97	10.49	-42.48	-13.00	29.48	Horizontal
10500.03	-53.62	18.21	-35.41	-13.00	22.41	Horizontal
14000.04	-54.54	25.38	-29.16	-13.00	16.16	Horizontal

Remark:
 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.

Band n77(3700 MHz – 3980 MHz) – SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7410.00	-52.89	12.64	-40.25	-13.00	27.25	Vertical
11115.00	-53.30	18.78	-34.52	-13.00	21.52	Vertical
14820.00	-56.12	26.68	-29.44	-13.00	16.44	Vertical
7410.00	-52.33	12.64	-39.69	-13.00	26.69	Horizontal
11115.00	-52.63	18.78	-33.85	-13.00	20.85	Horizontal
14820.00	-56.88	26.68	-30.20	-13.00	17.20	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7680.00	-52.96	12.84	-40.12	-13.00	27.12	Vertical
11520.00	-53.53	18.50	-35.03	-13.00	22.03	Vertical
15360.00	-56.10	24.94	-31.16	-13.00	18.16	Vertical
7680.00	-52.56	12.84	-39.72	-13.00	26.72	Horizontal
11520.00	-52.65	18.50	-34.15	-13.00	21.15	Horizontal
15360.00	-57.22	24.94	-32.28	-13.00	19.28	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7950.00	-52.81	16.92	-35.89	-13.00	22.89	Vertical
11925.00	-53.49	12.98	-40.51	-13.00	27.51	Vertical
15900.00	-56.58	22.31	-34.27	-13.00	21.27	Vertical
7950.00	-52.67	16.92	-35.75	-13.00	22.75	Horizontal
11925.00	-52.19	12.98	-39.21	-13.00	26.21	Horizontal
15900.00	-57.22	22.31	-34.91	-13.00	21.91	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3700 MHz – 3980 MHz) – SCS 15kHz 50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7450.02	-53.42	12.49	-40.93	-13.00	27.93	Vertical
11175.03	-53.86	18.85	-35.01	-13.00	22.01	Vertical
14900.04	-56.43	26.90	-29.53	-13.00	16.53	Vertical
7450.02	-52.90	12.49	-40.41	-13.00	27.41	Horizontal
11175.03	-52.85	18.85	-34.00	-13.00	21.00	Horizontal
14900.04	-57.62	26.90	-30.72	-13.00	17.72	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7680.00	-52.51	12.84	-39.67	-13.00	26.67	Vertical
11520.00	-53.12	18.50	-34.62	-13.00	21.62	Vertical
15360.00	-56.04	24.94	-31.10	-13.00	18.10	Vertical
7680.00	-52.81	12.84	-39.97	-13.00	26.97	Horizontal
11520.00	-52.65	18.50	-34.15	-13.00	21.15	Horizontal
15360.00	-57.51	24.94	-32.57	-13.00	19.57	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7909.98	-52.80	17.07	-35.73	-13.00	22.73	Vertical
11864.97	-53.09	17.97	-35.12	-13.00	22.12	Vertical
15819.96	-56.19	18.75	-37.44	-13.00	24.44	Vertical
7909.98	-52.11	17.07	-35.04	-13.00	22.04	Horizontal
11864.97	-52.28	17.97	-34.31	-13.00	21.31	Horizontal
15819.96	-57.26	18.75	-38.51	-13.00	25.51	Horizontal
Remark: 1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3700 MHz – 3980 MHz) – SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7410.00	-52.85	12.64	-40.21	-13.00	27.21	Vertical
11115.00	-53.85	18.78	-35.07	-13.00	22.07	Vertical
14820.00	-55.98	26.68	-29.30	-13.00	16.30	Vertical
7410.00	-52.49	12.64	-39.85	-13.00	26.85	Horizontal
11115.00	-53.03	18.78	-34.25	-13.00	21.25	Horizontal
14820.00	-57.21	26.68	-30.53	-13.00	17.53	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7680.00	-52.81	12.84	-39.97	-13.00	26.97	Vertical
11520.00	-53.74	18.50	-35.24	-13.00	22.24	Vertical
15360.00	-55.9	24.94	-30.96	-13.00	17.96	Vertical
7680.00	-52.16	12.84	-39.32	-13.00	26.32	Horizontal
11520.00	-53.08	18.50	-34.58	-13.00	21.58	Horizontal
15360.00	-57.07	24.94	-32.13	-13.00	19.13	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7950.00	-53.14	16.92	-36.22	-13.00	23.22	Vertical
11925.00	-53.99	12.98	-41.01	-13.00	28.01	Vertical
15900.00	-55.53	22.31	-33.22	-13.00	20.22	Vertical
7950.00	-52.74	16.92	-35.82	-13.00	22.82	Horizontal
11925.00	-52.91	12.98	-39.93	-13.00	26.93	Horizontal
15900.00	-56.94	22.31	-34.63	-13.00	21.63	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

Band n77(3700 MHz – 3980 MHz) – SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7500.00	-52.50	12.48	-40.02	-13.00	27.02	Vertical
11250.00	-53.84	19.20	-34.64	-13.00	21.64	Vertical
15000.00	-56.48	25.36	-31.12	-13.00	18.12	Vertical
7500.00	-52.73	12.48	-40.25	-13.00	27.25	Horizontal
11250.00	-53.20	19.20	-34.00	-13.00	21.00	Horizontal
15000.00	-57.05	25.36	-31.69	-13.00	18.69	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7680.00	-53.20	12.84	-40.36	-13.00	27.36	Vertical
11520.00	-53.92	18.50	-35.42	-13.00	22.42	Vertical
15360.00	-56.39	24.94	-31.45	-13.00	18.45	Vertical
7680.00	-52.36	12.84	-39.52	-13.00	26.52	Horizontal
11520.00	-53.45	18.50	-34.95	-13.00	21.95	Horizontal
15360.00	-57.18	24.94	-32.24	-13.00	19.24	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7860.00	-53.01	13.20	-39.81	-13.00	26.81	Vertical
11790.00	-54.12	18.40	-35.72	-13.00	22.72	Vertical
15720.00	-55.86	20.34	-35.52	-13.00	22.52	Vertical
7860.00	-52.39	13.20	-39.19	-13.00	26.19	Horizontal
11790.00	-52.93	18.40	-34.53	-13.00	21.53	Horizontal
15720.00	-57.11	20.34	-36.77	-13.00	23.77	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

DC_7A_n77A (3450 MHz – 3550 MHz) – SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
6910.02	-51.76	10.75	-41.01	-13.00	28.01	Vertical
10365.03	-54.13	17.40	-36.73	-13.00	23.73	Vertical
13820.04	-53.73	23.61	-30.12	-13.00	17.12	Vertical
6910.02	-52.67	10.75	-41.92	-13.00	28.92	Horizontal
10365.03	-53.16	17.40	-35.76	-13.00	22.76	Horizontal
13820.04	-55.60	23.61	-31.99	-13.00	18.99	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.00	-52.13	10.51	-41.62	-13.00	28.62	Vertical
10500.00	-53.78	18.37	-35.41	-13.00	22.41	Vertical
14000.00	-54.14	25.38	-28.76	-13.00	15.76	Vertical
7000.00	-52.70	10.51	-42.19	-13.00	29.19	Horizontal
10500.00	-53.60	18.37	-35.23	-13.00	22.23	Horizontal
14000.00	-55.10	25.38	-29.72	-13.00	16.72	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7090.00	-51.71	11.50	-40.21	-13.00	27.21	Vertical
10635.00	-53.93	18.87	-35.06	-13.00	22.06	Vertical
14180.00	-54.52	26.86	-27.66	-13.00	14.66	Vertical
7090.00	-52.86	11.50	-41.36	-13.00	28.36	Horizontal
10635.00	-53.76	18.87	-34.89	-13.00	21.89	Horizontal
14180.00	-54.66	26.86	-27.80	-13.00	14.80	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

DC_7A_n77A (3450 MHz – 3550 MHz) – SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
6950.02	-52.22	10.50	-41.72	-13.00	28.72	Vertical
10425.03	-53.55	17.63	-35.92	-13.00	22.92	Vertical
13900.04	-53.82	24.60	-29.22	-13.00	16.22	Vertical
6950.02	-52.37	10.50	-41.87	-13.00	28.87	Horizontal
10425.03	-54.09	17.63	-36.46	-13.00	23.46	Horizontal
13900.04	-55.46	24.60	-30.86	-13.00	17.86	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.00	-52.09	10.49	-41.60	-13.00	28.60	Vertical
10500.00	-53.44	18.21	-35.23	-13.00	22.23	Vertical
14000.00	-54.31	25.38	-28.93	-13.00	15.93	Vertical
7000.00	-52.48	10.49	-41.99	-13.00	28.99	Horizontal
10500.00	-53.55	18.21	-35.34	-13.00	22.34	Horizontal
14000.00	-54.97	25.38	-29.59	-13.00	16.59	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7050.00	-52.08	11.08	-41.00	-13.00	28.00	Vertical
10575.00	-53.48	18.53	-34.95	-13.00	21.95	Vertical
14100.00	-54.77	26.24	-28.53	-13.00	15.53	Vertical
7050.00	-52.74	11.08	-41.66	-13.00	28.66	Horizontal
10575.00	-53.71	18.53	-35.18	-13.00	22.18	Horizontal
14100.00	-54.62	26.24	-28.38	-13.00	15.38	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

DC_7A_n77A (3450 MHz – 3550 MHz) – SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
6910.02	-51.98	10.75	-41.23	-13.00	28.23	Vertical
10365.03	-53.99	17.58	-36.41	-13.00	23.41	Vertical
13820.04	-53.97	23.61	-30.36	-13.00	17.36	Vertical
6910.02	-52.70	10.75	-41.95	-13.00	28.95	Horizontal
10365.03	-53.12	17.58	-35.54	-13.00	22.54	Horizontal
13820.04	-55.49	23.61	-31.88	-13.00	18.88	Horizontal
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.02	-51.79	10.49	-41.30	-13.00	28.30	Vertical
10500.03	-54.28	18.21	-36.07	-13.00	23.07	Vertical
14000.04	-54.38	25.38	-29.00	-13.00	16.00	Vertical
7000.02	-53.14	10.49	-42.65	-13.00	29.65	Horizontal
10500.03	-53.4	18.21	-35.19	-13.00	22.19	Horizontal
14000.04	-55.31	25.38	-29.93	-13.00	16.93	Horizontal
Highest channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7089.96	-52.30	11.50	-40.80	-13.00	27.80	Vertical
10634.94	-53.98	18.71	-35.27	-13.00	22.27	Vertical
14179.92	-53.64	26.86	-26.78	-13.00	13.78	Vertical
7089.96	-52.41	11.50	-40.91	-13.00	27.91	Horizontal
10634.94	-52.87	18.71	-34.16	-13.00	21.16	Horizontal
14179.92	-55.87	26.86	-29.01	-13.00	16.01	Horizontal
Remark:						
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.						

DC_7A_n77A (3450 MHz – 3550 MHz) – SCS 30kHz 100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Middle channel						
Frequency (MHz)	Reading Level (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Polarization
7000.02	-51.58	10.49	-41.09	-13.00	28.09	Vertical
10500.03	-54.58	18.21	-36.37	-13.00	23.37	Vertical
14000.04	-54.19	25.38	-28.81	-13.00	15.81	Vertical
7000.02	-53.05	10.49	-42.56	-13.00	29.56	Horizontal
10500.03	-53.74	18.21	-35.53	-13.00	22.53	Horizontal
14000.04	-55.36	25.38	-29.98	-13.00	16.98	Horizontal

Remark:
1. The emission levels of below 1 GHz are lower than the limit 10dB, so not show in test report.

-----End of report-----