

# FCC RF TEST REPORT

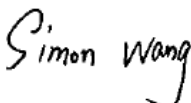

Applicant:	i.safe MOBILE GmbH
Address:	i_Park Tauberfranken 10 97922 Lauda-Koenigshofen Germany

Manufacturer or Supplier:	i.safe MOBILE GmbH
Address:	i_Park Tauberfranken 10 97922 Lauda-Koenigshofen Germany
Product:	Smartphone
Brand Name:	i.safe MOBILE
Model Name:	M540A01
Marketing Name:	IS540.1,IS540.M1,IS540.2,IS540.RG
FCC ID:	2AACZ-M540A01
Date of tests:	Nov. 24, 2022 ~ Feb. 07, 2023

The tests have been carried out according to the requirements of the following standard:

- FCC PART 22, Subpart H  FCC PART 24, Subpart E  FCC Part 27, Subpart C, M   
**ANSI/TIA/EIA-603-D**  
 FCC Part 2  ANSI/TIA/EIA-603-E  ANSI C63.26-2015

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Feb. 07, 2023	Date: Feb. 07, 2023

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



# TABLE OF CONTENTS

<b>RELEASE CONTROL RECORD .....</b>	<b>4</b>
<b>1 SUMMARY OF TEST RESULTS .....</b>	<b>5</b>
1.1 MEASUREMENT UNCERTAINTY .....	7
1.2 TEST SITE AND INSTRUMENTS .....	8
<b>2 GENERAL INFORMATION .....</b>	<b>10</b>
2.1 GENERAL DESCRIPTION OF EUT .....	10
2.2 CONFIGURATION OF SYSTEM UNDER TEST .....	27
2.3 DESCRIPTION OF SUPPORT UNITS .....	28
2.4 TEST ITEM AND TEST CONFIGURATION .....	28
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS .....	48
<b>3 TEST TYPES AND RESULTS .....</b>	<b>49</b>
3.1 OUTPUT POWER MEASUREMENT .....	49
3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT .....	49
3.1.2 TEST PROCEDURES .....	50
3.1.3 TEST SETUP .....	51
3.1.4 TEST RESULTS .....	52
3.2 FREQUENCY STABILITY MEASUREMENT .....	197
3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT .....	197
3.2.2 TEST PROCEDURE .....	197
3.2.3 TEST SETUP .....	197
3.2.4 TEST RESULTS .....	198
3.3 OCCUPIED BANDWIDTH MEASUREMENT .....	199
3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT .....	199
3.3.2 TEST SETUP .....	199
3.3.3 TEST PROCEDURES .....	199
3.3.4 TEST RESULTS .....	200
3.4 BAND EDGE MEASUREMENT .....	201
3.4.1 LIMITS OF BAND EDGE MEASUREMENT .....	201
3.4.2 TEST SETUP .....	202
3.4.3 TEST PROCEDURES .....	203
3.4.4 TEST RESULTS .....	204
3.5 CONDUCTED SPURIOUS EMISSIONS .....	205
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT .....	205
3.5.2 TEST PROCEDURE .....	205
3.5.3 TEST SETUP .....	205
3.5.4 TEST RESULTS .....	206
3.6 RADIATED EMISSION MEASUREMENT .....	207
3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT .....	207
3.6.2 TEST PROCEDURES .....	207
3.6.3 DEVIATION FROM TEST STANDARD .....	207
3.6.4 TEST SETUP .....	208
3.6.5 TEST RESULTS .....	210
3.7 PEAK TO AVERAGE RATIO .....	530
3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT .....	530
3.7.2 TEST SETUP .....	530
3.7.3 TEST PROCEDURES .....	530
3.7.4 TEST RESULTS .....	531



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

<b>4 INFORMATION ON THE TESTING LABORATORIES .....</b>	<b>532</b>
<b>5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB. 533</b>	
<b>6 APPENDIX .....</b>	<b>534</b>



Test Report No.: W7L-P22110036RF12

## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P22110036RF12	Original release	Feb. 07, 2023

# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 22/24/27 & PART 2			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	TEST LAB*
§2.1046	Conducted Output Power	Compliance	A
§24.232(c) §27.50(h)(2) §27.50(d)(4) §27.50(a)(3) §27.50(j)(3) §27.50(k)(3)	Equivalent Isotropically Radiated Power (5G NR n2, n7,n25,n30,n38,n41,n66,n77,n78)	Compliance	A
§22.913 (a) §27.50(b)(10) §27.50(c)(10)	Equivalent Radiated Power (5G NR n5,n12,n71)	Compliance	A
§2.1055 §22.355 §24.235 §27.54	Frequency Stability	Compliance	A
§2.1049	Occupied Bandwidth	Compliance	A
§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(l)(2) §27.53(m)(4)(6) §27.53(a)(4) §27.53(n)(2)	Band Edge Measurements	Compliance	A
§2.1051 §22.917(a) §24.238(a)	Conducted Spurious Emissions	Compliance	A



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

§27.53(g) §27.53(h) §27.53(l)(2) §27.53(m)(4)(6) §27.53(a)(4) §27.53(n)(2)			
§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h) §27.53(l)(2) §27.53(m)(4)(6) §27.53(a)(4) §27.53(n)(2)	Radiated Spurious Emissions	Compliance	A/B
§27.50(j)(4)	Peak-to-Average Ratio	Compliance	A

**\*Test Lab Information Reference**

**Lab A:**

BV 7Layers Communications Technology (Shenzhen) Co., Ltd

**Lab Address:**

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

**Accredited Test Lab Cert 3939.01**

**FCC Site Registration No. : 525120; Designation No. : CN1171;**

**Lab B:**

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

**Lab Address:**

Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province

**Accredited Test Lab Cert 6613.01**

**The FCC Site Registration No. is 434559; The Designation No. is CN1325.**

## 1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
Frequency Stability	$\pm 76.97\text{Hz}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions & Radiated Power (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions & Radiated Power (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Band Edge Measurements	$\pm 4.70\text{dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

## 1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Feb. 18,22	Feb. 17,23
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.15,22	May.14,23
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.04,22	Sep.03,23
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Mar. 06,22	Mar. 05,23
Horn Antenna	ETS-LINDGRE N	3117	00168692	Mar. 06,22	Mar. 05,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K- SG/QMS-00361	15433	Aug. 24, 22	Aug. 23, 23
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 15,22	Feb. 14,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 21,22	Feb.20,23
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn- CT0001143-121 6	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	May. 07,22	May. 06,23
Power Meter	Anritsu	ML2495A	1506002	Feb. 22,22	Feb. 21,23
Power Sensor	Anritsu	MA2411B	1339352	May. 07,22	May. 06,23
Temperature Chamber	ESPEC	SH-242	93000855	May. 12,22	May. 11,23
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 18,22	Feb. 17,23
Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.12,22	May.11,23
Radio Communication Analyzer	Starpoint	SP9500-CTS	20460	Oct. 13,22	Oct. 12,23

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
  2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
  3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
  4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.





BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.30,22	Aug.29,24
Pre-Amplifier	R&S	SCU08F1	101028	Sep.16,22	Sep.15,24
Vector Signal Generator	R&S	SMBV100B	102176	Feb.16,22	Feb.15,24
Signal Generator	R&S	SMB100A	182185	Feb.16,22	Feb.15,24
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.25,22	Nov.24,25
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Nov.25,22	Nov.24,25
EMI TEST Receiver	R&S	ESR26	101734	Feb.25,22	Feb.24,24
EMI TEST Receiver	R&S	ESW44	101973	Feb.25,22	Feb.24,24
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Feb.28,22	Feb.27,24
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.22,22	Aug.21,24
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Feb.23,22	Feb.22,24
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Aug.22,22	Aug.21,24
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Feb.23,22	Feb.22,24
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.27,22	Jun.26,24
Test Software	EMC32	EMC32	N/A	N/A	N/A
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	Oct.01,22	Sep.30,24
DC Source	HYELEC	HY3010B	551016	Aug.31,22	Aug.30,24
Hygrothermograph	DELI	20210528	SZ014	Sep.06,22	Sep.05,24
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Oct.31,22	Apr.29,23
CABLE	R&S	W12.14	N/A	Oct.31,22	Apr.29,23
CABLE	R&S	J12J103539-00-1	SEP-03-20-069	Oct.31,22	Apr.29,23
CABLE	R&S	J12J103539-00-1	SEP-03-20-070	Oct.31,22	Apr.29,23
Temperature Chamber	votsch	VT4002	58566078100050	May.31,22	May.30,24

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
  2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
  3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
  - 4 . The FCC Site Registration No. is 434559; The Designation No. is CN1325.

## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	Smartphone	
<b>BRAND NAME</b>	i.safe MOBILE	
<b>MODEL NAME</b>	M540A01	
<b>MARKETING NAME</b>	IS540.1,IS540.M1,IS540.2,IS540.RG	
<b>NOMINAL VOLTAGE</b>	5.0Vdc(adapter or host equipment) 3.7Vdc (Li-ion, battery)	
<b>MODULATION TECHNOLOGY</b>	<b>5G NR</b>	DFT-s-OFMA(Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM); CP-OFMA(QPSK, 16QAM, 64QAM, 256QAM);
<b>LTE ANCHOR BAND FOR NR BAND</b>	<b>NR Band n2</b>	LTE Band 5/7/12/13/14/66/71
	<b>NR Band n5</b>	LTE Band 2/7/48/66
	<b>NR Band n7</b>	LTE Band 2/5/12/13/66/71
	<b>NR Band n12</b>	LTE Band 2/7/66
	<b>NR Band n25</b>	LTE Band 12/48/66
	<b>NR Band n30</b>	Only SA Mode
	<b>NR Band n38</b>	LTE Band 2/4/5/12/66/71
	<b>NR Band n41</b>	LTE Band 2/4/5/12/25/66/71
	<b>NR Band n66</b>	LTE Band 2/5/7/12/13/14/48/71
	<b>NR Band n71</b>	LTE Band 2/7/66
	<b>NR Band n77(Part27Q)</b>	LTE Band 2/5/7/12/13/14/41/66
	<b>NR Band n77(Part27O)</b>	LTE Band 2/5/7/12/13/14/41/66
	<b>NR Band n78(Part27Q)</b>	LTE Band 2/4/5/12/13/26/38/41/66/71
<b>FREQUENCY RANGE</b>	<b>NR Band n2</b>	1852.5MHz ~ 1907.5MHz
	<b>NR Band n5</b>	826.5MHz ~ 846.5MHz
	<b>NR Band n7</b>	2502.5MHz ~ 2567.5MHz
	<b>NR Band n12</b>	701.5MHz ~ 713.5MHz
	<b>NR Band n25</b>	1852.5MHz ~ 1912.5MHz
	<b>NR Band n30</b>	2307.5MHz ~ 2312.5MHz
	<b>NR Band n38</b>	2582.52MHz ~ 2607.48MHz

<b>FREQUENCY RANGE</b>	<b>NR Band n41</b>	2506.02MHz ~ 2679.99MHz
	<b>NR Band n66</b>	1712.5MHz ~ 1777.5MHz
	<b>NR Band n71</b>	665.5MHz ~ 695.5MHz
	<b>NR Band n77(Part27Q)</b>	3460.02MHz ~ 3540MHz
	<b>NR Band n77(Part27O)</b>	3710.01MHz ~ 3969.99MHz
	<b>NR Band n78(Part27Q)</b>	3460.02MHz ~ 3540MHz
<b>EMISSION DESIGNATOR</b>	<b>NR Band n5 Channel Bandwidth: 5MHz</b>	QPSK: 4M48G7D 16QAM: 4M49W7D 64QAM: 4M50W7D 256QAM: 4M48W7D Pi/2BPSK: 4M50G9W
	<b>NR Band n5 Channel Bandwidth: 10MHz</b>	QPSK: 8M98G7D 16QAM: 8M97W7D 64QAM: 8M98W7D 256QAM: 8M96W7D Pi/2BPSK: 8M96G9W
	<b>NR Band n5 Channel Bandwidth: 15MHz</b>	QPSK: 13M4G7D 16QAM: 13M5W7D 64QAM: 13M4W7D 256QAM: 13M4W7D Pi/2BPSK: 13M5G9W
	<b>NR Band n5 Channel Bandwidth: 20MHz</b>	QPSK: 17M9G7D 16QAM: 17M9W7D 64QAM: 17M9W7D 256QAM: 17M9W7D Pi/2BPSK: 17M9G9W
	<b>NR Band n7 Channel Bandwidth: 5MHz</b>	QPSK: 4M51G7D 16QAM: 4M49W7D 64QAM: 4M49W7D 256QAM: 4M49W7D Pi/2BPSK: 4M49G9W
	<b>NR Band n7 Channel Bandwidth: 10MHz</b>	QPSK: 8M97G7D 16QAM: 8M98W7D 64QAM: 8M99W7D 256QAM: 8M98W7D Pi/2BPSK: 8M97G9W



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

<b>EMISSION DESIGNATOR</b>	<b>NR Band n7 Channel Bandwidth: 15MHz</b>	QPSK: 13M5G7D 16QAM: 13M5W7D 64QAM: 13M4W7D 256QAM: 13M5W7D Pi/2BPSK: 13M5G9W
	<b>NR Band n7 Channel Bandwidth: 20MHz</b>	QPSK: 17M9G7D 16QAM: 17M9W7D 64QAM: 17M9W7D 256QAM: 17M9W7D Pi/2BPSK: 17M9G9W
	<b>NR Band n12 Channel Bandwidth: 5MHz</b>	QPSK: 4M53G7D 16QAM: 4M49W7D 64QAM: 4M52W7D 256QAM: 4M50W7D Pi/2BPSK: 4M50G9W
	<b>NR Band n12 Channel Bandwidth: 10MHz</b>	QPSK: 8M92G7D 16QAM: 8M94W7D 64QAM: 8M95W7D 256QAM: 8M92W7D Pi/2BPSK: 8M93G9W
	<b>NR Band n12 Channel Bandwidth: 15MHz</b>	QPSK: 13M4G7D 16QAM: 13M4W7D 64QAM: 13M4W7D 256QAM: 13M4W7D Pi/2BPSK: 13M4G9W
	<b>NR Band n25 Channel Bandwidth: 5MHz</b>	QPSK: 4M52G7D 16QAM: 4M50W7D 64QAM: 4M49W7D 256QAM: 4M51W7D Pi/2BPSK: 4M49G9W
	<b>NR Band n25 Channel Bandwidth: 10MHz</b>	QPSK: 8M98G7D 16QAM: 9M00W7D 64QAM: 8M99W7D 256QAM: 8M97W7D Pi/2BPSK: 8M98G9W
	<b>NR Band n25 Channel Bandwidth: 15MHz</b>	QPSK: 13M5G7D 16QAM: 13M5W7D 64QAM: 13M5W7D 256QAM: 13M5W7D Pi/2BPSK: 13M5G9W



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

<b>EMISSION DESIGNATOR</b>	<b>NR Band n25 Channel Bandwidth: 20MHz</b>	QPSK: 17M9G7D 16QAM: 17M9W7D 64QAM: 17M9W7D 256QAM: 17M9W7D Pi/2BPSK: 17M9G9W
	<b>NR Band n25 Channel Bandwidth: 25MHz</b>	QPSK: 22M8G7D 16QAM: 22M8W7D 64QAM: 22M8W7D 256QAM: 22M8W7D Pi/2BPSK: 22M8G9W
	<b>NR Band n25 Channel Bandwidth: 30MHz</b>	QPSK: 28M5G7D 16QAM: 28M5W7D 64QAM: 28M5W7D 256QAM: 28M5W7D Pi/2BPSK: 28M5G9W
	<b>NR Band n25 Channel Bandwidth: 40MHz</b>	QPSK: 38M5G7D 16QAM: 38M5W7D 64QAM: 38M5W7D 256QAM: 38M5W7D Pi/2BPSK: 38M5G9W
	<b>NR Band n30 Channel Bandwidth: 5MHz</b>	QPSK: 4M49G7D 16QAM: 4M51W7D 64QAM: 4M50W7D 256QAM: 4M50W7D Pi/2BPSK: 4M51G9W
	<b>NR Band n30 Channel Bandwidth: 10MHz</b>	QPSK: 8M99G7D 16QAM: 8M99W7D 64QAM: 8M99W7D 256QAM: 8M97W7D Pi/2BPSK: 8M98G9W
	<b>NR Band n41 Channel Bandwidth: 20MHz</b>	QPSK: 18M0G7D 16QAM: 18M0W7D 64QAM: 18M0W7D 256QAM: 17M9W7D Pi/2BPSK: 18M0G9W
	<b>NR Band n41 Channel Bandwidth: 30MHz</b>	QPSK: 26M8G7D 16QAM: 26M8W7D 64QAM: 26M8W7D 256QAM: 26M8W7D Pi/2BPSK: 26M8G9W



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

<b>EMISSION DESIGNATOR</b>	<b>NR Band n41 Channel Bandwidth: 40MHz</b>	QPSK: 35M7G7D 16QAM: 35M7W7D 64QAM: 35M7W7D 256QAM: 35M7W7D Pi/2BPSK: 35M7G9W
	<b>NR Band n41 Channel Bandwidth 50MHz</b>	QPSK: 45M8G7D 16QAM: 45M8W7D 64QAM: 45M8W7D 256QAM: 45M8W7D Pi/2BPSK: 45M8G9W
	<b>NR Band n41 Channel Bandwidth 60MHz</b>	QPSK: 57M9G7D 16QAM: 57M9W7D 64QAM: 57M9W7D 256QAM: 57M9W7D Pi/2BPSK: 57M9G9W
	<b>NR Band n41 Channel Bandwidth 80MHz</b>	QPSK: 77M3G7D 16QAM: 77M2W7D 64QAM: 77M2W7D 256QAM: 77M3W7D Pi/2BPSK: 77M3G9W
	<b>NR Band n41 Channel Bandwidth 90MHz</b>	QPSK: 85M8G7D 16QAM: 85M8W7D 64QAM: 85M8W7D 256QAM: 85M8W7D Pi/2BPSK: 85M8G9W
	<b>NR Band n41 Channel Bandwidth 100MHz</b>	QPSK: 96M6G7D 16QAM: 96M6W7D 64QAM: 96M6W7D 256QAM: 96M4W7D Pi/2BPSK: 96M6G9W
	<b>NR Band n66 Channel Bandwidth: 5MHz</b>	QPSK: 4M49G7D 16QAM: 4M50W7D 64QAM: 4M50W7D 256QAM: 4M50W7D Pi/2BPSK: 4M50G9W
	<b>NR Band n66 Channel Bandwidth: 10MHz</b>	QPSK: 8M97G7D 16QAM: 8M99W7D 64QAM: 8M99W7D 256QAM: 8M98W7D Pi/2BPSK: 8M95G9W



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

<b>EMISSION DESIGNATOR</b>	<b>NR Band n66 Channel Bandwidth: 15MHz</b>	QPSK: 13M5G7D 16QAM: 13M5W7D 64QAM: 13M5W7D 256QAM: 13M4W7D Pi/2BPSK: 13M5G9W
	<b>NR Band n66 Channel Bandwidth: 20MHz</b>	QPSK: 17M9G7D 16QAM: 17M9W7D 64QAM: 17M9W7D 256QAM: 17M9W7D Pi/2BPSK: 17M9G9W
	<b>NR Band n66 Channel Bandwidth: 30MHz</b>	QPSK: 28M5G7D 16QAM: 28M6W7D 64QAM: 28M6W7D 256QAM: 28M5W7D Pi/2BPSK: 28M5G9W
	<b>NR Band n66 Channel Bandwidth: 40MHz</b>	QPSK: 38M5G7D 16QAM: 38M5W7D 64QAM: 38M5W7D 256QAM: 38M6W7D Pi/2BPSK: 38M5G9W
	<b>NR Band n71 Channel Bandwidth: 5MHz</b>	QPSK: 4M50G7D 16QAM: 4M51W7D 64QAM: 4M51W7D 256QAM: 4M49W7D Pi/2BPSK: 4M51G9W
	<b>NR Band n71 Channel Bandwidth: 10MHz</b>	QPSK: 8M98G7D 16QAM: 8M99W7D 64QAM: 9M01W7D 256QAM: 8M96W7D Pi/2BPSK: 8M97G9W
	<b>NR Band n71 Channel Bandwidth: 15MHz</b>	QPSK: 13M5G7D 16QAM: 13M5W7D 64QAM: 13M5W7D 256QAM: 13M5W7D Pi/2BPSK: 13M5G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 20MHz</b>	QPSK: 17M9G7D 16QAM: 17M9W7D 64QAM: 17M9W7D 256QAM: 17M9W7D Pi/2BPSK: 17M9G9W





BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

<b>EMISSION DESIGNATOR</b>	<b>NR Band 78(Part27Q) Channel Bandwidth: 30MHz</b>	QPSK: 26M8G7D 16QAM: 26M8W7D 64QAM: 26M7W7D 256QAM: 26M8W7D Pi/2BPSK: 26M8G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 40MHz</b>	QPSK: 35M7G7D 16QAM: 35M7W7D 64QAM: 35M7W7D 256QAM: 35M7W7D Pi/2BPSK: 35M7G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 50MHz</b>	QPSK: 45M8G7D 16QAM: 45M8W7D 64QAM: 45M9W7D 256QAM: 45M9W7D Pi/2BPSK: 45M8G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 60MHz</b>	QPSK: 57M9G7D 16QAM: 58M0W7D 64QAM: 58M0W7D 256QAM: 58M0W7D Pi/2BPSK: 58M0G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 80MHz</b>	QPSK: 77M1G7D 16QAM: 77M1W7D 64QAM: 77M2W7D 256QAM: 77M2W7D Pi/2BPSK: 77M1G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 90MHz</b>	QPSK: 85M5G7D 16QAM: 85M6W7D 64QAM: 85M6W7D 256QAM: 85M7W7D Pi/2BPSK: 85M7G9W
	<b>NR Band 78(Part27Q) Channel Bandwidth: 100MHz</b>	QPSK: 96M3G7D 16QAM: 96M5W7D 64QAM: 96M3W7D 256QAM: 96M3W7D Pi/2BPSK: 96M3G9W



<b>EMISSION DESIGNATOR</b>	<b>NR Band 77(Part27O) Channel Bandwidth: 20MHz</b>	QPSK: 17M8G7D 16QAM: 17M8W7D 64QAM: 17M9W7D 256QAM: 17M9W7D Pi/2BPSK: 17M8G9W
	<b>NR Band 77(Part27O) Channel Bandwidth: 30MHz</b>	QPSK: 26M8G7D 16QAM: 26M7W7D 64QAM: 26M7W7D 256QAM: 26M8W7D Pi/2BPSK: 26M8G9W
	<b>NR Band 77(Part27O) Channel Bandwidth: 40MHz</b>	QPSK: 35M7G7D 16QAM: 35M7W7D 64QAM: 35M7W7D 256QAM: 35M7W7D Pi/2BPSK: 35M7G9W
	<b>NR Band 77(Part27O) Channel Bandwidth: 50MHz</b>	QPSK: 45M7G7D 16QAM: 45M7W7D 64QAM: 45M6W7D 256QAM: 45M7W7D Pi/2BPSK: 45M6G9W
	<b>NR Band 77(Part27O) Channel Bandwidth: 60MHz</b>	QPSK: 57M9G7D 16QAM: 57M9W7D 64QAM: 58M0W7D 256QAM: 57M9W7D Pi/2BPSK: 57M9G9W
	<b>NR Band 77(Part27O) Channel Bandwidth: 80MHz</b>	QPSK: 77M1G7D 16QAM: 77M1W7D 64QAM: 77M0W7D 256QAM: 77M0W7D Pi/2BPSK: 77M0G9W
	<b>NR Band 77(Part27O) Channel Bandwidth: 100MHz</b>	QPSK: 96M3G7D 16QAM: 96M3W7D 64QAM: 96M3W7D 256QAM: 96M2W7D Pi/2BPSK: 96M3G9W

<b>5G SA MAX. EIRP POWER</b>	NR Band n2 Channel Bandwidth: 5MHz	184.08mW
	NR Band n2 Channel Bandwidth: 10MHz	184.5mW
	NR Band n2 Channel Bandwidth: 15MHz	185.35mW
	NR Band n2 Channel Bandwidth: 20MHz	189.23mW
	NR Band n5 Channel Bandwidth: 5MHz	57.81mW
	NR Band n5 Channel Bandwidth: 10MHz	57.28mW
	NR Band n5 Channel Bandwidth: 15MHz	57.68mW
	NR Band n5 Channel Bandwidth: 20MHz	59.43mW
	NR Band n7 Channel Bandwidth: 5MHz	142.89mW
	NR Band n7 Channel Bandwidth: 10MHz	140.93mW
	NR Band n7 Channel Bandwidth: 15MHz	141.91mW
	NR Band n7 Channel Bandwidth: 20MHz	146.22mW



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

<b>5G SA MAX. EIRP POWER</b>	<b>NR Band n12</b> <b>Channel Bandwidth:</b> <b>5MHz</b>	102.09mW
	<b>NR Band n12</b> <b>Channel Bandwidth:</b> <b>10MHz</b>	101.86mW
	<b>NR Band n12</b> <b>Channel Bandwidth:</b> <b>15MHz</b>	104.71mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>5MHz</b>	187.07mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>10MHz</b>	190.55mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>15MHz</b>	188.36mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>20MHz</b>	190.99mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>25MHz</b>	190.11mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>30MHz</b>	194.09mW
	<b>NR Band n25</b> <b>Channel Bandwidth:</b> <b>40MHz</b>	195.43mW
	<b>NR Band n30</b> <b>Channel Bandwidth:</b> <b>5MHz</b>	113.5mW
	<b>NR Band n30</b> <b>Channel Bandwidth:</b> <b>10MHz</b>	114.82mW
	<b>NR Band n38</b> <b>Channel Bandwidth:</b> <b>20MHz</b>	142.89mW

<b>5G SA MAX. EIRP POWER</b>	<b>NR Band n38</b> <b>Channel Bandwidth:</b> <b>30MHz</b>	143.55mW
	<b>NR Band n38</b> <b>Channel Bandwidth:</b> <b>40MHz</b>	144.21mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>20MHz</b>	141.91mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>30MHz</b>	144.88mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>40MHz</b>	141.91mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>50MHz</b>	144.21mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>60MHz</b>	139.64mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>80MHz</b>	142.23mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>90MHz</b>	142.89mW
	<b>NR Band n41</b> <b>Channel Bandwidth:</b> <b>100MHz</b>	144.54mW
	<b>NR Band n66</b> <b>Channel Bandwidth:</b> <b>5MHz</b>	240.44mW
	<b>NR Band n66</b> <b>Channel Bandwidth:</b> <b>10MHz</b>	236.05mW



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

<b>5G SA MAX. EIRP POWER</b>	<b>NR Band n66 Channel Bandwidth: 15MHz</b>	238.23mW
	<b>NR Band n66 Channel Bandwidth: 20MHz</b>	239.88mW
	<b>NR Band n66 Channel Bandwidth: 30MHz</b>	240.99mW
	<b>NR Band n66 Channel Bandwidth: 40MHz</b>	243.78mW
	<b>NR Band n71 Channel Bandwidth: 5MHz</b>	39.45mW
	<b>NR Band n71 Channel Bandwidth: 10MHz</b>	40.09mW
	<b>NR Band n71 Channel Bandwidth: 15MHz</b>	40.64mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 20MHz</b>	149.62mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 30MHz</b>	149.62mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 40MHz</b>	151.36mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 50MHz</b>	153.11mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 60MHz</b>	151.36mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 80MHz</b>	153.11mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 100MHz</b>	153.46mW



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

<b>5G SA MAX. EIRP POWER</b>	<b>NR Band 77(Part27O) Channel Bandwidth: 20MHz</b>	157.76mW
	<b>NR Band 77(Part27O) Channel Bandwidth: 30MHz</b>	156.68mW
	<b>NR Band 77(Part27O) Channel Bandwidth: 40MHz</b>	158.49mW
	<b>NR Band 77(Part27O) Channel Bandwidth: 50MHz</b>	154.53mW
	<b>NR Band 77(Part27O) Channel Bandwidth: 60MHz</b>	155.6mW
	<b>NR Band 77(Part27O) Channel Bandwidth: 80MHz</b>	157.76mW
	<b>NR Band 77(Part27O) Channel Bandwidth: 100MHz</b>	160.32mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 20MHz</b>	152.41mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 30MHz</b>	152.05mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 40MHz</b>	152.82mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 50MHz</b>	153.11mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 60MHz</b>	157.04mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 80MHz</b>	154.53mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 90MHz</b>	156.68mW
	<b>NR Band 78(Part27Q) Channel Bandwidth: 100MHz</b>	157.4mW

<b>5G SRS MAX. EIRP POWER</b>	<b>NR Band n41 Channel Bandwidth: 20MHz</b>	155.6mW
	<b>NR Band n41 Channel Bandwidth: 30MHz</b>	157.76mW
	<b>NR Band n41 Channel Bandwidth: 40MHz</b>	154.17mW
	<b>NR Band n41 Channel Bandwidth: 50MHz</b>	155.96mW
	<b>NR Band n41 Channel Bandwidth: 60MHz</b>	152.76mW
	<b>NR Band n41 Channel Bandwidth: 80MHz</b>	154.88mW
	<b>NR Band n41 Channel Bandwidth: 90MHz</b>	155.24mW
	<b>NR Band n41 Channel Bandwidth: 100MHz</b>	157.76mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 20MHz</b>	171.79mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 30MHz</b>	173.78mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 40MHz</b>	174.98mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 50MHz</b>	175.39mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 60MHz</b>	173.78mW
	<b>NR Band 77(Part27Q) Channel Bandwidth: 80MHz</b>	176.6mW

<b>5G SRS MAX. EIRP POWER</b>	NR Band 77(Part27Q) Channel Bandwidth: 100MHz	175.39mW
	NR Band 77(Part27O) Channel Bandwidth: 20MHz	179.06mW
	NR Band 77(Part27O) Channel Bandwidth: 30MHz	179.47mW
	NR Band 77(Part27O) Channel Bandwidth: 40MHz	175.79mW
	NR Band 77(Part27O) Channel Bandwidth: 50MHz	177.42mW
	NR Band 77(Part27O) Channel Bandwidth: 60MHz	179.06mW
	NR Band 77(Part27O) Channel Bandwidth: 80MHz	180.72mW
	NR Band 77(Part27O) Channel Bandwidth: 100MHz	183.23mW
	NR Band 78(Part27Q) Channel Bandwidth: 20MHz	177.42mW
	NR Band 78(Part27Q) Channel Bandwidth: 30MHz	178.78mW
	NR Band 78(Part27Q) Channel Bandwidth: 40MHz	175.79mW
	NR Band 78(Part27Q) Channel Bandwidth: 50MHz	176.2mW
	NR Band 78(Part27Q) Channel Bandwidth: 60MHz	178.65mW
	NR Band 78(Part27Q) Channel Bandwidth: 80MHz	175.79mW
	NR Band 78(Part27Q) Channel Bandwidth: 90MHz	179.06mW
	NR Band 78(Part27Q) Channel Bandwidth: 100MHz	179.47mW





**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

<b>ANTENNA TYPE</b>	5G SA ANT 1 PIFA Antenna with -0.5 dBi gain for NR Band n2 PIFA Antenna with -3 dBi gain for NR Band n5 PIFA Antenna with -1.5 dBi gain for NR Band n7 PIFA Antenna with -2.5 dBi gain for NR Band n12 PIFA Antenna with -0.5 dBi gain for NR Band n25 PIFA Antenna with -2.8 dBi gain for NR Band n30 PIFA Antenna with -1.5 dBi gain for NR Band n38 PIFA Antenna with -1.5 dBi gain for NR Band n41 PIFA Antenna with 0.4 dBi gain for NR Band n66 PIFA Antenna with -7 dBi gain for NR Band n71 PIFA Antenna with -1.3 dBi gain for NR Band n77 PIFA Antenna with -1.3 dBi gain for NR Band n78 5G SRS ANT 2 PIFA Antenna with -1.5 dBi gain for NR Band n41 ANT 3 PIFA Antenna with -3 dBi gain for NR Band n41 ANT 4 PIFA Antenna with -0.7 dBi gain for NR Band n77(Part27Q) PIFA Antenna with -0.7 dBi gain for NR Band n77(Part27O) PIFA Antenna with -0.7 dBi gain for NR Band n78(Part27Q) ANT 5 PIFA Antenna with -1.1 dBi gain for NR Band n41 PIFA Antenna with -3.1 dBi gain for NR Band n77(Part27Q) PIFA Antenna with -3.1 dBi gain for NR Band n77(Part27O) PIFA Antenna with -3.1 dBi gain for NR Band n78(Part27Q) ANT 6 PIFA Antenna with -1.1 dBi gain for NR Band n77(Part27Q) PIFA Antenna with -1.1 dBi gain for NR Band n77(Part27O) PIFA Antenna with -1.1 dBi gain for NR Band n78(Part27Q)
<b>HW VERSION</b>	V02
<b>SW VERSION</b>	IS540_ROW_00.00_1_20221017
<b>I/O PORTS</b>	Refer to user's manual
<b>CABLE SUPPLIED</b>	N/A
<b>EXTREME TEMPERATURE</b>	-10-50 °C
<b>EXTREME VOLTAGE</b>	3.6V - 4.2V



Test Report No.: W7L-P22110036RF12

**NOTE:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and four receiver.

MODULATION MODE	TX FUNCTION
5G NR	1TX/4RX

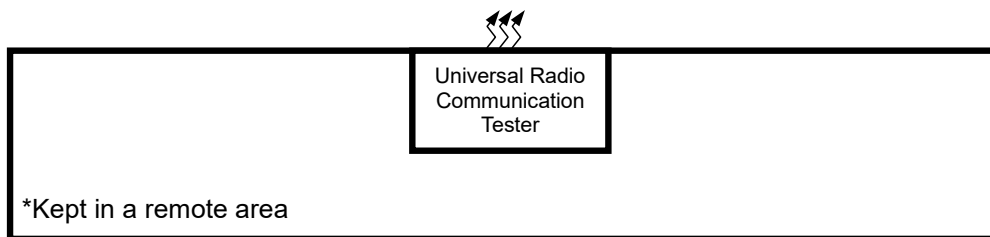
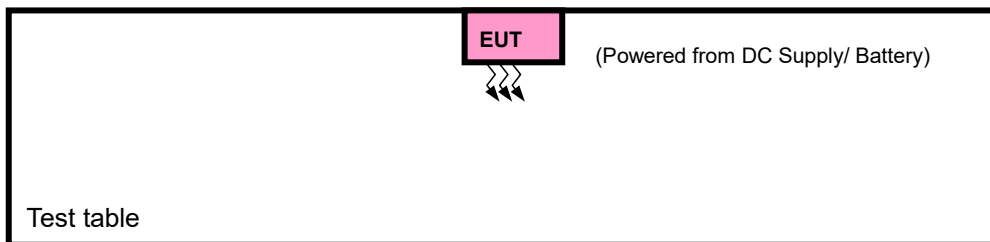
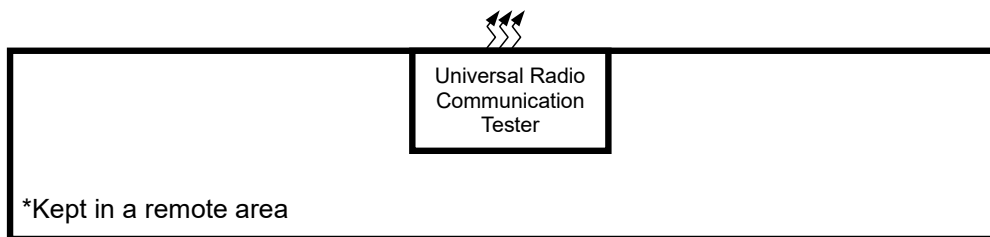
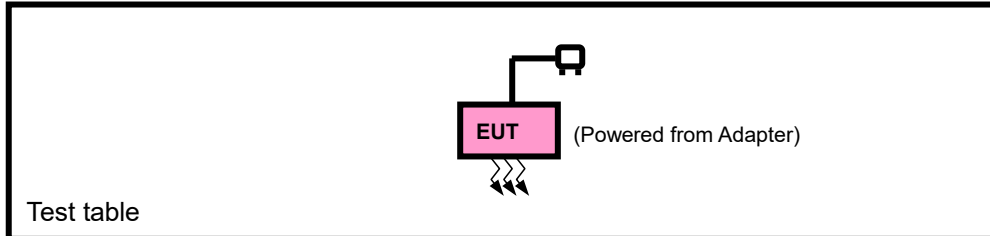
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. Max ERP/EIRP is according to Max conducted power calculate for SA.
5. This device supports SRS (sounding reference signal) 1, 2, 3,4 mode for NR TDD bands. For each SRS 1, 2 and 3, 4, Conducted power and radiated measurement were performed through FTM mode provide by the customer.

**List of Accessory:**

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
Battery	N/A	FPR Connectivity Technology Inc.	MBP540A01	Capacity : 3.7Vdc, 4400mAh
AC Adapter	N/A	SHENZHEN SHI YINGYUAN POWER SUPPLY TECHNOLOGY CO., LTD.	ICP12-050-2000B	I/P: 100-240Vac, 0.3A, O/P: 5.0Vdc, 2A
USB Cable 1	N/A	Winpower Technology Co., LTD	PROTECTOR 2.0	Signal Line, 1.0meter
USB Cable 2	N/A	Winpower Technology Co., LTD	USB2.0	Signal Line, 1.0meter

## 2.2 CONFIGURATION OF SYSTEM UNDER TEST

### FOR RADIATION EMISSION TEST





### 2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	LONG WEI	PS-6403D	010934269	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.8m

### 2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter + USB Cable with 5G NR link
B	EUT + DC Supply with 5G NR link

**5G NR n2 MODE (SA\_n2/ DC\_5A\_n2/ DC\_7A\_n2/ DC\_12A\_n2/ DC\_13A\_n2/ DC\_14A\_n2/  
DC\_66A\_n2/ DC\_71A\_n2)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	370500 to 381500	370500 to 381500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		371000 to 381000	371000 to 381000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		371500 to 380500	371500 to 380500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		372000 to 513500	372000 to 513500	Low, Middle, High	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset

**Note:** 1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The EIRP calculate presented in the report from worst SA n2.

3. SA n2 are covered by SA n25, Because it is a subset of SA n25 with the same output power and supported bandwidths, So the conducted test data please refer to SA n25.

**5G NR n5 MODE (SA\_n5/ DC\_2A\_n5/ DC\_7A\_n5/ DC\_48A\_n5/ DC\_66A\_n5)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	ERP	165300 to 169300	165300 to 169300	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		165800 to 168800	165800 to 168800	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		166300 to 168300	166300 to 168300	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		166800 to 167800	166800 to 167800	Low, Middle, High	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	166800 to 167800	166800 to 167800	Middle	20MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	166800 to 167800	166800 to 167800	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset Outer_ Full
A	OCCUPIED BANDWIDTH	165300 to 169300	165300 to 169300	Middle	5MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		165800 to 168800	165800 to 168800	Middle	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		166300 to 168300	166300 to 168300	Middle	15MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		166800 to 167800	166800 to 167800	Middle	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	165300 to 169300	165300 to 169300	Low	5MHz	QPSK	1RB/ 0RB Offset



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

				High	5MHz	QPSK	Outer_Full 1RB/ 24RB Offset Outer_Full		
				Low	10MHz	QPSK	1RB/ 0RB Offset Outer_Full		
		165800 to 168800	165800 to 168800	High	10MHz	QPSK	1RB/ 51RB Offset Outer_Full		
				Low	20MHz	QPSK	1RB/ 0RB Offset Outer_Full		
		166800 to 167800	166800 to 167800	High	20MHz	QPSK	1RB/ 105RB Offset Outer_Full		
				Low	20MHz	QPSK	1RB/ 0RB Offset Outer_Full		
		A	CONDUCTED EMISSION	165300 to 169300	165300 to 169300	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
				165800 to 168800	165800 to 168800	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
166800 to 167800	166800 to 167800			Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset		
A	RADIATED EMISSION	165300 to 169300	165300 to 169300	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset		
		165800 to 168800	165800 to 168800	Middle,	10MHz	QPSK	1RB/ 0RB Offset		
		166300 to 168300	166300 to 168300	Middle,	15MHz	QPSK	1RB/ 0RB Offset		
		166800 to 167800	166800 to 167800	Middle,	20MHz	QPSK	1RB/ 0RB Offset		

**Note:** 1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n5.



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**5G NR n7 MODE (SA\_n7/ DC\_2A\_n7/ DC\_5A\_n7/ DC\_12A\_n7/ DC\_13A\_n7/ DC\_66A\_n7/  
DC\_71A\_n7)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)		
A	ERP	500500 to 513500	500500 to 513500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset		
		51000 to 513000	51000 to 513000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset		
		501500 to 512500	501500 to 512500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset		
		502000 to 512000	502000 to 512000	Low, Middle, High	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset		
B	FREQUENCY STABILITY	502000 to 512000	502000 to 512000	Middle	20MHz	QPSK	Outer_ Full		
A	PEAK TO AVERAGE RATIO	502000 to 512000	502000 to 512000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset Outer_ Full		
A	OCCUPIED BANDWIDTH	500500 to 513500	500500 to 513500	Middle	5MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full		
		51000 to 513000	51000 to 513000	Middle	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full		
		501500 to 512500	501500 to 512500	Middle	15MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full		
		502000 to 512000	502000 to 512000	Middle	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full		
A	BAND EDGE	500500 to 513500	500500 to 513500	Low	5MHz	QPSK	1RB/ 0RB Offset Outer_ Full		
				High	5MHz	QPSK	1RB/ 24RB Offset Outer_ Full		
		51000 to 513000	51000 to 513000	Low	10MHz	QPSK	1RB/ 0RB Offset Outer_ Full		
				High	10MHz	QPSK	1RB/ 51RB Offset Outer_ Full		
		502000 to 512000	502000 to 512000	Low	20MHz	QPSK	1RB/ 0RB Offset Outer_ Full		
				High	20MHz	QPSK	1RB/ 105RB Offset Outer_ Full		
		A	CONDUCTED EMISSION	500500 to 513500	500500 to 513500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
				51000 to 513000	51000 to 513000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

		502000 to 512000	502000 to 512000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	500500 to 513500	500500 to 513500	Middle	5MHz	QPSK	1RB/ 0RB Offset
		51000 to 513000	51000 to 513000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		501500 to 512500	501500 to 512500	Middle	15MHz	QPSK	1RB/ 0RB Offset
		502000 to 512000	502000 to 512000	Middle	20MHz	QPSK	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n7.

**5G NR n12 MODE (SA\_n12/ DC\_2A\_n12/ DC\_7A\_n12/ DC\_66A\_n12)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	ERP	140300 to 142700	140300 to 142700	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		140800 to 142200	140800 to 142200	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		141300 to 141700	141300 to 141700	Low, Middle, High	15MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	141300 to 141700	141300 to 141700	Middle	15MHz	QPSK	Outer_Full
A	PEAK TO AVERAGE RATIO	141300 to 141700	141300 to 141700	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset Outer_Full
A	OCCUPIED BANDWIDTH	140300 to 142700	140300 to 142700	Middle	5MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_Full
		140800 to 142200	140800 to 142200	Middle	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_Full
		141300 to 141700	141300 to 141700	Middle	15MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_Full
A	BAND EDGE	140300 to 142700	140300 to 142700	Low	5MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset Outer_Full
				High	5MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 24RB Offset Outer_Full
		140800 to 142200	140800 to 142200	Low	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset Outer_Full
				High	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 51RB Offset Outer_Full
		141300 to 141700	141300 to 141700	Low	15MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset





**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

							Outer_Full
				High	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 78RB Offset
							Outer_Full
A	CONDUCTED EMISSION	140300 to 142700	140300 to 142700	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		140800 to 142200	140800 to 142200	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		141300 to 141700	141300 to 141700	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	140300 to 142700	140300 to 142700	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		140800 to 142200	140800 to 142200	Middle	10MHz	QPSK	1RB/ 0RB Offset
		141300 to 141700	141300 to 141700	Middle	15MHz	QPSK	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n12.

**5G NR n25 MODE (SA\_n25/ DC\_12A\_n25/ DC\_48A\_n25/ DC\_66A\_n25)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	370500 to 382500	370500 to 382500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		371000 to 382000	371000 to 382000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		371500 to 381500	371500 to 381500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		372000 to 381000	372000 to 381000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		372500 to 380500	372500 to 380500	Low, Middle, High	25MHz	QPSK	1RB/ 0RB Offset
		373000 to 380000	373000 to 380000	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		374000 to 379000	374000 to 379000	Low, Middle, High	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	374000 to 379000	374000 to 379000	Middle	40MHz	QPSK	Outer_Full
A	PEAK TO AVERAGE RATIO	374000 to 379000	374000 to 379000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset Outer_Full
A	OCCUPIED BANDWIDTH	370500 to 382500	370500 to 382500	Middle	5MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full
		371000 to 382000	371000 to 382000	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full
		371500 to 381500	371500 to 381500	Middle	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

		372000 to 381000	372000 to 381000	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full		
		372500 to 380500	372500 to 380500	Low, Middle, High	25MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full		
		373000 to 380000	373000 to 380000	Low, Middle, High	30MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full		
		374000 to 379000	374000 to 379000	Low, Middle, High	40MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_Full		
A	BAND EDGE	370500 to 382500	370500 to 382500	Low	5MHz	QPSK	1RB/ 0RB Offset Outer_Full		
				High	5MHz	QPSK	1RB/ 24 RB Offset Outer_Full		
		372000 to 381000	372000 to 381000	Low	20MHz	QPSK	1RB/ 0RB Offset Outer_Full		
				High	20MHz	QPSK	1RB/ 105 RB Offset Outer_Full		
		374000 to 379000	374000 to 379000	Low	40MHz	QPSK	1RB/ 0RB Offset Outer_Full		
				High	40MHz	QPSK	1RB/ 215 RB Offset Outer_Full		
		A	CONDUCTED EMISSION	370500 to 382500	370500 to 382500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
				372000 to 381000	372000 to 381000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
374000 to 379000	374000 to 379000			Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset		
A	RADIATED EMISSION	370500 to 382500	370500 to 382500	Middle	5MHz	QPSK	1RB/ 0RB Offset		
		371000 to 382000	371000 to 382000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset		
		371500 to 381500	371500 to 381500	Middle	15MHz	QPSK	1RB/ 0RB Offset		
		372000 to 381000	372000 to 381000	Middle	20MHz	QPSK	1RB/ 0RB Offset		
		372500 to 380500	372500 to 380500	Middle	25MHz	QPSK	1RB/ 0RB Offset		
		373000 to 380000	373000 to 380000	Middle	30MHz	QPSK	1RB/ 0RB Offset		
		374000 to 379000	374000 to 379000	Middle	40MHz	QPSK	1RB/ 0RB Offset		

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n25



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**5G NR n30 MODE (SA\_n30)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	ERP	461500 to 462500	461500 to 462500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		462000	462000	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
B	FREQUENCY STABILITY	462000	462000	Middle	10MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	462000	462000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
A	OCCUPIED BANDWIDTH	461500 to 462500	461500 to 462500	Middle	5MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		462000	462000	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	461500 to 462500	461500 to 462500	Low	5MHz	QPSK	1RB/ 0RB Offset
				High	5MHz	QPSK	1RB/ 24RB Offset
				Middle	10MHz	QPSK	Outer_ Full
		462000	462000	Middle	10MHz	QPSK	1RB/ 0RB Offset
				Middle	10MHz	QPSK	1RB/ 78RB Offset
				Middle	10MHz	QPSK	Outer_ Full
A	CONDUCTED EMISSION	461500 to 462500	461500 to 462500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		462000	462000	Middle	10MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	461500 to 462500	461500 to 462500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		462000	462000	Middle	10MHz	QPSK	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n30.



**5G NR n38 MODE (SA\_n38/ DC\_2A\_n38/ DC\_4A\_n38/ DC\_5A\_n38/ DC\_12A\_n38/ DC\_66A\_n38/ DC\_71A\_n38)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	ERP	516504 to 521496	516504 to 521496	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		517002 to 520998	517002 to 520998	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		518004 to 519996	518004 to 519996	Low, Middle, High	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The EIRP calculate presented in the report from worst SA n38.

3. SA n38 are covered by SA n41, Because it is a subset of SA n41 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to SA n41.

**5G NR n41 MODE (SA\_n41/ DC\_2A\_n41/ DC\_4A\_n41/ DC\_5A\_n41/ DC\_12A\_n41/ DC\_25A\_n41/ DC\_66A\_n41/ DC\_71A\_n41)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	501204 to 535998	501204 to 535998	Low, Middle, High	20MHz	QPSK,	1RB/ 0RB Offset
		502200 to 534996	502200 to 534996	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		503202 to 534000	503202 to 534000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		504200 to 532998	504200 to 532998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		505200 to 531996	505200 to 531996	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		507204 to 529998	507204 to 529998	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		508200 to 528996	508200 to 528996	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		509202 to 528000	509202 to 528000	Low, Middle, High	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	509202 to 528000	509202 to 528000	Middle	100MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	509202 to 528000	509202 to 528000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset Outer_ Full
A	OCCUPIED BANDWIDTH	501204 to 535998	501204 to 535998	Middle	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		502200 to 534996	502200 to 534996	Middle	30MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		503202 to 534000	503202 to 534000	Middle	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		504200 to 532998	504200 to 532998	Middle	50MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

		505200 to 531996	505200 to 531996	Middle	60MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		507204 to 529998	507204 to 529998	Middle	80MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		508200 to 528996	508200 to 528996	Middle	90MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		509202 to 528000	509202 to 528000	Middle	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	501204 to 535998	501204 to 535998	Low	20MHz	QPSK	1RB/ 0RB Offset
				Outer_ Full			
				High	20MHz	QPSK	1RB/ 50RB Offset
		Outer_ Full					
		505200 to 531996	505200 to 531996	Low	60MHz	QPSK	1RB/ 0RB Offset
				Outer_ Full			
				High	60MHz	QPSK	1RB/ 161RB Offset
		Outer_ Full					
		509202 to 528000	509202 to 528000	Low	100MHz	QPSK	1RB/ 0RB Offset
				Outer_ Full			
				High	100MHz	QPSK	1RB/ 272RB Offset
		Outer_ Full					
A	CONDUCTED EMISSION	501204 to 535998	501204 to 535998	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		505200 to 531996	505200 to 531996	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		509202 to 528000	509202 to 528000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	501204 to 535998	501204 to 535998	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		502200 to 534996	502200 to 534996	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		503202 to 534000	503202 to 534000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		504200 to 532998	504200 to 532998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		505200 to 531996	505200 to 531996	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		507204 to 529998	507204 to 529998	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		508200 to 528996	508200 to 528996	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		509202 to 528000	509202 to 528000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset

**Note: 1.**This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n41.



5G NR n41 SRS MODE 1,2,3,4

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	501204 to 535998	501204 to 535998	Low, Middle, High	20MHz	QPSK,	1RB/ 0RB Offset
		502200 to 534996	502200 to 534996	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		503202 to 534000	503202 to 534000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		504200 to 532998	504200 to 532998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		505200 to 531996	505200 to 531996	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		507204 to 529998	507204 to 529998	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		508200 to 528996	508200 to 528996	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		509202 to 528000	509202 to 528000	Low, Middle, High	100MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	RADIATED EMISSION	501204 to 535998	501204 to 535998	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		502200 to 534996	502200 to 534996	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		503202 to 534000	503202 to 534000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		504200 to 532998	504200 to 532998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		505200 to 531996	505200 to 531996	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		507204 to 529998	507204 to 529998	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		508200 to 528996	508200 to 528996	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		509202 to 528000	509202 to 528000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset

**Note: 1.** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The other conducted test data Please refer to SA 41 normal mode, Because it is a functionality of SA n41 with the same output power and supported bandwidths

5G NR n66 MODE (SA\_n66/ DC\_2A\_n66/ DC\_5A\_n66/ DC\_7A\_n66/ DC\_12A\_n66/ DC\_13A\_n66/ DC\_14A\_n66/ DC\_48A\_n66/ DC\_71A\_n66)

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	342500 to 355500	342500 to 355500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		343000 to 355000	343000 to 355000	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		343500 to 354500	343500 to 354500	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
		344000 to 354000	344000 to 354000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

		345000 to 353000	345000 to 353000	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		346000 to 352000	346000 to 352000	Low, Middle, High	40MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	346000 to 352000	346000 to 352000	Middle	40MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	346000 to 352000	346000 to 352000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
							Outer_ Full
A	OCCUPIED BANDWIDTH	342500 to 355500	342500 to 355500	Middle	5MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		343000 to 355000	343000 to 355000	Middle	10MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		343500 to 354500	343500 to 354500	Middle	15MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		344000 to 354000	344000 to 354000	Middle	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		345000 to 353000	345000 to 353000	Middle	30MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		346000 to 352000	346000 to 352000	Middle	40MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	502008 to 535998	502008 to 535998	Low	5MHz	QPSK	1RB/ 0RB Offset
				High	5MHz	QPSK	1RB/ 24RB Offset
		505008 to 532998	505008 to 532998	Low	20MHz	QPSK	1RB/ 0RB Offset
				High	20MHz	QPSK	1RB/ 105RB Offset
		508002 to 529998	508002 to 529998	Low	40MHz	QPSK	1RB/ 0RB Offset
				High	40MHz	QPSK	1RB/ 215RB Offset
						Outer_ Full	
A	CONDUCTED EMISSION	342500 to 355500	342500 to 355500	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		344000 to 354000	344000 to 354000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		346000 to 352000	346000 to 352000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	342500 to 355500	342500 to 355500	Middle	5MHz	QPSK	1RB/ 0RB Offset
		343000 to 355000	343000 to 355000	Middle	10MHz	QPSK	1RB/ 0RB Offset
		343500 to 354500	343500 to 354500	Middle	15MHz	QPSK	1RB/ 0RB Offset
		344000 to 354000	344000 to 354000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		345000 to 353000	345000 to 353000	Middle	30MHz	QPSK	1RB/ 0RB Offset





**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

		346000 to 352000	346000 to 352000	Middle	40MHz	QPSK	1RB/ 0RB Offset
--	--	------------------	------------------	--------	-------	------	-----------------

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n66.

**5G NR n71 MODE (SA\_n71)**

EUT CONFIGURE MODE	TESWT ITEM	AVAILAB LE CP-OFDM CHANNE L	AVAILABL E DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	ERP	133100 to 139100	133100 to 139100	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		133600 to 138600	133600 to 138600	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		134100 to 138100	134100 to 138100	Low, Middle, High	15MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	134100 to 138100	134100 to 138100	Middle	15MHz	QPSK	Outer_Full
A	PEAK TO AVERAGE RATIO	134100 to 138100	134100 to 138100	Low, Middle, High	15MHz	QPSK	Outer_Full
A	OCCUPIED BANDWIDTH	133100 to 139100	133100 to 139100	Middle	5MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full
		133600 to 138600	133600 to 138600	Middle	10MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_Full
		134100 to 138100	134100 to 138100	Middle	15MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_Full
A	BAND EDGE	133100 to 139100	133100 to 139100	Low	5MHz	QPSK	1RB/ 0RB Offset 1RB/ 24RB Offset Outer_Full
				High	5MHz	QPSK	1RB/ 0RB Offset 1RB/ 24RB Offset Outer_Full
				Low	10MHz	QPSK	1RB/ 0RB Offset 1RB/ 51RB Offset Outer_Full
				High	10MHz	QPSK	1RB/ 0RB Offset 1RB/ 51RB Offset Outer_Full
				Low	15MHz	QPSK	1RB/ 0RB Offset 1RB/ 78RB Offset Outer_Full
				High	15MHz	QPSK	1RB/ 0RB Offset 1RB/ 78RB Offset Outer_Full
		133600 to 138600	133600 to 138600	Low	5MHz	QPSK	1RB/ 0RB Offset 1RB/ 24RB Offset Outer_Full
				High	5MHz	QPSK	1RB/ 0RB Offset 1RB/ 24RB Offset Outer_Full
				Low	10MHz	QPSK	1RB/ 0RB Offset 1RB/ 51RB Offset Outer_Full
				High	10MHz	QPSK	1RB/ 0RB Offset 1RB/ 51RB Offset Outer_Full
				Low	15MHz	QPSK	1RB/ 0RB Offset 1RB/ 78RB Offset Outer_Full
				High	15MHz	QPSK	1RB/ 0RB Offset 1RB/ 78RB Offset Outer_Full
134100 to 138100	134100 to 138100	Low	5MHz	QPSK	1RB/ 0RB Offset 1RB/ 24RB Offset Outer_Full		
		High	5MHz	QPSK	1RB/ 0RB Offset 1RB/ 24RB Offset Outer_Full		
		Low	10MHz	QPSK	1RB/ 0RB Offset 1RB/ 51RB Offset Outer_Full		
		High	10MHz	QPSK	1RB/ 0RB Offset 1RB/ 51RB Offset Outer_Full		
		Low	15MHz	QPSK	1RB/ 0RB Offset 1RB/ 78RB Offset Outer_Full		
		High	15MHz	QPSK	1RB/ 0RB Offset 1RB/ 78RB Offset Outer_Full		





**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

A	CONDUCTED EMISSION	133100 to 139100	133100 to 139100	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		133600 to 138600	133600 to 138600	Low, Middle, High	10MHz	QPSK	1RB/ 0RB Offset
		134100 to 138100	134100 to 138100	Low, Middle, High	15MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	133100 to 139100	133100 to 139100	Low, Middle, High	5MHz	QPSK	1RB/ 0RB Offset
		133600 to 138600	133600 to 138600	Middle	10MHz	QPSK	1RB/ 0RB Offset
		134100 to 138100	134100 to 138100	Middle	15MHz	QPSK	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n71.

**5G NR n77(Part27Q) MODE (SA\_n77/ DC\_2A\_n77/ DC\_5A\_n77/ DC\_7A\_n77/ DC\_12A\_n77/ DC\_13A\_n77/ DC\_14A\_n77/ DC\_41A\_n77/ DC\_66A\_n77) AND SRS MODE 1,2,3,4**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		631002 to 635664	631002 to 635664	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 634998	631668 to 634998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle	100MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The EIRP calculate presented in the report from worst SA n77(Part27Q).

3.SA n77(Part27Q) are covered by SA n78(Part27Q), Because it is a subset of SA n78(Part27Q) with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to SA n78(Part27Q).



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**5G NR n77(Part270) MODE (SA\_n77/ DC\_2A\_n77/ DC\_5A\_n77/ DC\_7A\_n77/ DC\_12A\_n77/  
DC\_13A\_n77/ DC\_14A\_n77/ DC\_41A\_n77/ DC\_66A\_n77)**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		647670 to 664332	647670 to 664332	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		648000 to 664000	648000 to 664000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		648336 to 663666	648336 to 663666	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		649334 to 662666	649334 to 662666	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENCY STABILITY	650000 to 662000	650000 to 662000	Middle	100MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	650000 to 662000	650000 to 662000	Low, Middle, High	20MHz	QPSK	Outer_ Full
A	OCCUPIED BANDWIDTH	647334 to 664666	647334 to 664666	Middle	20MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		647670 to 664332	647670 to 664332	Middle	30MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		648000 to 664000	648000 to 664000	Middle	40MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		648336 to 663666	648336 to 663666	Middle	50MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		648668 to 663332	648668 to 663332	Middle	60MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		649334 to 662666	649334 to 662666	Middle	80MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	Pi/2BPSK, QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND EDGE	647334 to 664666	647334 to 664666	Low	20MHz	QPSK	1RB/ 0RB Offset
				High	20MHz	QPSK	Outer_ Full
				High	20MHz	QPSK	1RB/ 50RB Offset
		648668 to 663332	648668 to 663332	Low	60MHz	QPSK	Outer_ Full
				High	60MHz	QPSK	1RB/ 161RB Offset
				High	60MHz	QPSK	Outer_ Full
		650000 to 662000	650000 to 662000	Low	100MHz	QPSK	1RB/ 0RB Offset
				High	100MHz	QPSK	Outer_ Full
				High	100MHz	QPSK	1RB/ 272RB Offset
High	100MHz	QPSK	Outer_ Full				



**Test Report No.: W7L-P22110036RF12**

A	CONDUCTED EMISSION	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		647670 to 664332	647670 to 664332	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		648000 to 664000	648000 to 664000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		648336 to 663666	648336 to 663666	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		649334 to 662666	649334 to 662666	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset

**Note:** 1.This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n77(Part 270).

**5G NR n77(Part270) SRS MODE 1,2,3,4**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CP-OFDM CHANNEL	AVAILABLE DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		647670 to 664332	647670 to 664332	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		648000 to 664000	648000 to 664000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		648336 to 663666	648336 to 663666	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		649334 to 662666	649334 to 662666	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	RADIATED EMISSION	647334 to 664666	647334 to 664666	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		647670 to 664332	647670 to 664332	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		648000 to 664000	648000 to 664000	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		648336 to 663666	648336 to 663666	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		648668 to 663332	648668 to 663332	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

		649334 to 662666	649334 to 662666	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		650000 to 662000	650000 to 662000	Low, Middle, High	100MHz	QPSK	1RB/ 0RB Offset

**Note:** 1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The other conducted test data Please refer to SA 77(Part27O) normal mode, Because it is a functionality of SA n77(Part27O) with the same output power and supported bandwidths

**5G NR Band n78(Part27Q) (SA\_n78/ DC\_1A\_n78/ DC\_2A\_n78/ DC\_4A\_n78/ DC\_5A\_n78/ DC\_12A\_n78/ DC\_13A\_n78/ DC\_26A\_n78/ DC\_38A\_n78/ DC\_41A\_n78/ DC\_66A\_n78/ DC\_71A\_n78)**

EUT CONFIGUR E MODE	TEST ITEM	AVAILAB LE CP-OFDM CHANNE L	AVAILABL E DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		631002 to 635664	631002 to 635664	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 634998	631668 to 634998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		633000 to 633666	633000 to 633666	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle,	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	FREQUENC Y STABILITY	633334	633334	Middle	100MHz	QPSK	Outer_ Full
A	PEAK TO AVERAGE RATIO	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	Outer_ Full
A	OCCUPIED BANDWIDT H	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		631002 to 635664	631002 to 635664	Low, Middle, High	30MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		631334 to 635332	631334 to 635332	Low, Middle, High	40MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		631668 to 634998	631668 to 634998	Low, Middle, High	50MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		632668 to 634000	632668 to 634000	Low, Middle, High	80MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		633000 to 633666	633000 to 633666	Low, Middle, High	90MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	Outer_ Full
		633334	633334	Middle	100MHz	Pi/2BPSK,QPSK, 16QAM, 64QAM, 256QAM	Outer_ Full
A	BAND	630668 to 636000	630668 to 636000	Low	20MHz	QPSK	1RB/ 0RB Offset



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

	EDGE			High	20MHz	QPSK	Outer_Full 1RB/ 50RB Offset
				Low	60MHz	QPSK	Outer_Full 1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	High	60MHz	QPSK	Outer_Full 1RB/ 161RB Offset
				Middle	100MHz	QPSK	Outer_Full 1RB/ 272RB Offset
		633334	633334	Middle	100MHz	QPSK	Outer_Full
				Middle	100MHz	QPSK	Outer_Full
A	CONDUCTED EMISSION	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle	100MHz	QPSK	1RB/ 0RB Offset
A	RADIATED EMISSION	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		631002 to 635664	631002 to 635664	Middle	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Middle	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 634998	631668 to 634998	Middle	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Middle	60MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Middle	80MHz	QPSK	1RB/ 0RB Offset
		633000 to 633666	633000 to 633666	Middle	90MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle	100MHz	QPSK	1RB/ 0RB Offset

**Note: 1.** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The test data presented in the report from worst SA\_n78(Part27Q).



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**5G NR Band n78(Part27Q) SRS MODE 1,2,3,4**

EUT CONFIGUR E MODE	TEST ITEM	AVAILAB LE CP-OFDM CHANNE L	AVAILABL E DFT-S-OFDM CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(DFT-S-OFDM) (INCLUDE CP-OFDM)
A	EIRP	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		631002 to 635664	631002 to 635664	Low, Middle, High	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Low, Middle, High	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 634998	631668 to 634998	Low, Middle, High	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Low, Middle, High	60MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Low, Middle, High	80MHz	QPSK	1RB/ 0RB Offset
		633000 to 633666	633000 to 633666	Low, Middle, High	90MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle,	100MHz	Pi/2BPSK,QPSK,16QAM, 64QAM, 256QAM	1RB/ 0RB Offset
A	RADIATED EMISSION	630668 to 636000	630668 to 636000	Low, Middle, High	20MHz	QPSK	1RB/ 0RB Offset
		631002 to 635664	631002 to 635664	Middle	30MHz	QPSK	1RB/ 0RB Offset
		631334 to 635332	631334 to 635332	Middle	40MHz	QPSK	1RB/ 0RB Offset
		631668 to 634998	631668 to 634998	Middle	50MHz	QPSK	1RB/ 0RB Offset
		632000 to 634666	632000 to 634666	Middle	60MHz	QPSK	1RB/ 0RB Offset
		632668 to 634000	632668 to 634000	Middle	80MHz	QPSK	1RB/ 0RB Offset
		633000 to 633666	633000 to 633666	Middle	90MHz	QPSK	1RB/ 0RB Offset
		633334	633334	Middle	100MHz	QPSK	1RB/ 0RB Offset

**Note: 1.** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

2. The other conducted test data Please refer to SA 78(Part27Q) normal mode, Because it is a functionality of SA n78(Part27Q) with the same output power and supported bandwidths



Test Report No.: W7L-P22110036RF12

**TEST CONDITION:**

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP	23deg. C, 70%RH	DC 5V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.6V/3.7V/4.2V By DC Supply	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC5V By Adapter	James Fu
BAND EDGE	23deg. C, 70%RH	DC 5V By Adapter	James Fu
CONDUCTED EMISSION	23deg. C, 70%RH	DC5V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC5V By Adapter	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC5V By Adapter	James Fu



Test Report No.: W7L-P22110036RF12

## 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 22/24/27**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**ANSI/TIA/EIA-603-D**

**ANSI/TIA/EIA-603-E**

**ANSI C63.26-2015**

**NOTE:** All test items have been performed and recorded as per the above standards.





### 3 TEST TYPES AND RESULTS

#### 3.1 OUTPUT POWER MEASUREMENT

##### 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile / Portable station are limited to 7 watts e.r.p. (n5)

Mobile and portable stations are limited to 2 watts EIRP. (n2/n25)

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.(n7/n38/n41)”

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP(n66)

According to the specific rule Part 27.50(b)(10) and 27.50(c)(10) Fixed, mobile, and Portable stations (hand-held devices) transmitting in the 698-746 MHz, 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP(n12/n71)

According to the specific rule Part 27.50(j)(4) and Part 27.50(k)(3) ,Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.(n77/n78)

For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.(n30)

### 3.1.2 TEST PROCEDURES

#### EIRP / ERP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively  
(expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

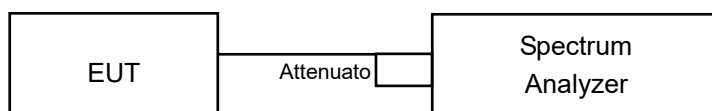
$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$L_{\text{C}}$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

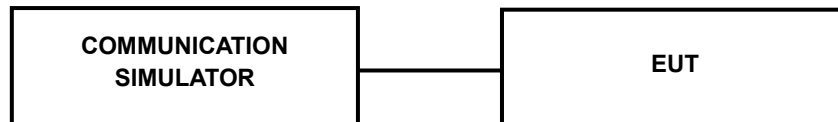
#### CONDUCTED POWER MEASUREMENT:

- The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



### 3.1.3 TEST SETUP

#### CONDUCTED POWER MEASUREMENT:



1. Connect the DUT transmitter output to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
2. Tune the analyzer to the nominal center frequency of the emission bandwidth (EBW).
3. Set the span to twice the nominal EBW (span = 2 x EBW).
4. Set the resolution bandwidth (RBW) to approximately 1% of EBW.
5. Set the video bandwidth (VBW) to  $\geq 3 \times$  RBW
6. Select the average power (RMS) display detector.
7. Set the number of measurement points to  $\geq 1001$ .
8. Use auto-coupled sweep time.
9. Perform measurement over an interval of time when the transmission is continuous and at its maximum power level.
10. Utilize trace averaging over 100 traces in the power averaging mode.
11. Use the Band/Channel Power function to determine the integrated power over the full EBW.
12. Record the band power level.
13. Adjust the recorded level by applying appropriate correction factors for the measurement set-up.
14. Determine the EIRP by adding the effective antenna gain to the adjusted power level.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 3.1.4 TEST RESULTS

#### AVERAGE CONDUCTED OUTPUT POWER (dBm)

#### 5G SA N2

BW	MCS Index	RB Size	RB Offset	Low CH 370500	Mid CH 376000	High CH 381500
				Frequency 1852.5MHz	Frequency 1880MHz	Frequency 1907.5MHz
5M	CP-OFDM QPSK	1	1	21.53	21.55	21.46

BW	MCS Index	RB Size	RB Offset	Low CH 371000	Mid CH 376000	High CH 381000
				Frequency 1855MHz	Frequency 1880MHz	Frequency 1905MHz
10M	CP-OFDM QPSK	1	1	21.56	21.58	21.47

BW	MCS Index	RB Size	RB Offset	Low CH 371500	Mid CH 376000	High CH 380500
				Frequency 1857.5MHz	Frequency 1880MHz	Frequency 1902.5MHz
15M	CP-OFDM QPSK	1	1	21.55	21.59	21.45

BW	MCS Index	RB Size	RB Offset	Low CH 372000	Mid CH 376000	High CH 380000
				Frequency 1860MHz	Frequency 1880MHz	Frequency 1900MHz
20M	CP-OFDM QPSK	1	1	21.58	21.61	21.48



Test Report No.: W7L-P22110036RF12

BW	MCS Index	RB Size	RB Offset	Low CH 370500	Mid CH 376000	High CH 381500
				Frequency 1852.5MHz	Frequency 1880MHz	Frequency 1907.5MHz
5M	DFT-s-OFDM QPSK	1	1	23.09	23.15	23.08

BW	MCS Index	RB Size	RB Offset	Low CH 371000	Mid CH 376000	High CH 381000
				Frequency 1855MHz	Frequency 1880MHz	Frequency 1905MHz
10M	DFT-s-OFDM QPSK	1	1	23.11	23.16	23.12

BW	MCS Index	RB Size	RB Offset	Low CH 371500	Mid CH 376000	High CH 380500
				Frequency 1857.5MHz	Frequency 1880MHz	Frequency 1902.5MHz
15M	DFT-s-OFDM QPSK	1	1	23.15	23.18	23.14

BW	MCS Index	RB Size	RB Offset	Low CH 372000	Mid CH 376000	High CH 380000
				Frequency 1860MHz	Frequency 1880MHz	Frequency 1900MHz
20M	DFT-s-OFDM Pi/2 BPSK	1	1	23.12	23.16	23.09
		1	53	23.11	23.09	23.06
		1	104	23.09	23.06	23.00
		50	0	22.67	22.72	22.68
		50	28	23.16	23.13	23.07
		50	56	22.62	22.66	22.58
		100	0	22.66	22.76	22.62
	DFT-s-OFDM QPSK	1	1	23.26	23.27	23.21
		1	53	23.17	23.24	23.13
		1	104	23.11	23.20	23.11
		50	0	22.18	22.24	22.11
		50	28	23.16	23.21	23.20
		50	56	22.15	22.22	22.13
		100	0	22.15	22.24	22.13
	DFT-s-OFDM 16QAM	1	1	22.43	22.44	22.42
	DFT-s-OFDM 64QAM	1	1	20.78	20.88	20.74
	DFT-s-OFDM 256QAM	1	1	18.60	18.60	18.54

**N5**

BW	MCS Index	RB Size	RB Offset	Low CH 165300	Mid CH 167300	High CH 169300
				Frequency 826.5MHz	Frequency 836.5MHz	Frequency 846.5MHz
5M	CP-OFDM QPSK	1	1	21.24	21.27	21.17

BW	MCS Index	RB Size	RB Offset	Low CH 165800	Mid CH 167300	High CH 168800
				Frequency 829MHz	Frequency 836.5MHz	Frequency 844MHz
10M	CP-OFDM QPSK	1	1	21.20	21.24	21.13

BW	MCS Index	RB Size	RB Offset	Low CH 166300	Mid CH 167300	High CH 168300
				Frequency 831.5MHz	Frequency 836.5MHz	Frequency 841.5MHz
15M	CP-OFDM QPSK	1	1	21.22	21.26	21.18

BW	MCS Index	RB Size	RB Offset	Low CH 166800	Mid CH 167300	High CH 167800
				Frequency 834MHz	Frequency 836.5MHz	Frequency 839MHz
20M	CP-OFDM QPSK	1	1	21.26	21.29	21.20



Test Report No.: W7L-P22110036RF12

BW	MCS Index	RB Size	RB Offset	Low CH 165300	Mid CH 167300	High CH 169300
				Frequency 826.5MHz	Frequency 836.5MHz	Frequency 846.5MHz
5M	DFT-s-OFDM QPSK	1	1	22.75	22.77	22.73

BW	MCS Index	RB Size	RB Offset	Low CH 165800	Mid CH 167300	High CH 168800
				Frequency 829MHz	Frequency 836.5MHz	Frequency 844MHz
10M	DFT-s-OFDM QPSK	1	1	22.68	22.73	22.70

BW	MCS Index	RB Size	RB Offset	Low CH 166300	Mid CH 167300	High CH 168300
				Frequency 831.5MHz	Frequency 836.5MHz	Frequency 841.5MHz
15M	DFT-s-OFDM QPSK	1	1	22.72	22.76	22.73



BW	MCS Index	RB Size	RB Offset	Low CH 166800	Mid CH 167300	High CH 167800
				Frequency 834MHz	Frequency 836.5MHz	Frequency 839MHz
20M	DFT-s-OFDM Pi/2 BPSK	1	1	22.79	22.83	22.71
		1	53	22.85	22.83	22.75
		1	104	22.78	22.75	22.64
		50	0	22.31	22.36	22.27
		50	28	22.81	22.78	22.67
		50	56	22.22	22.26	22.13
		100	0	22.28	22.38	22.19
	DFT-s-OFDM QPSK	1	1	22.84	22.89	22.78
		1	53	22.80	22.87	22.71
		1	104	22.68	22.77	22.63
		50	0	21.84	21.90	21.72
		50	28	22.76	22.81	22.75
		50	56	21.69	21.76	21.62
		100	0	21.76	21.85	21.69
	DFT-s-OFDM 16QAM	1	1	21.76	21.77	21.70
	DFT-s-OFDM 64QAM	1	1	20.44	20.54	20.35
	DFT-s-OFDM 256QAM	1	1	18.07	18.07	17.96

**N7**

BW	MCS Index	RB Size	RB Offset	Low CH 500500	Mid CH 507000	High CH 513500
				Frequency 2502.5MHz	Frequency 2535MHz	Frequency 2567.5MHz
5M	CP-OFDM QPSK	1	1	21.56	21.65	21.37

BW	MCS Index	RB Size	RB Offset	Low CH 501000	Mid CH 507000	High CH 513000
				Frequency 2505MHz	Frequency 2535MHz	Frequency 2565MHz
10M	CP-OFDM QPSK	1	1	21.54	21.60	21.32

BW	MCS Index	RB Size	RB Offset	Low CH 501500	Mid CH 507000	High CH 512500
				Frequency 2507.5MHz	Frequency 2535MHz	Frequency 2562.5MHz
15M	CP-OFDM QPSK	1	1	21.53	21.62	21.35

BW	MCS Index	RB Size	RB Offset	Low CH 502000	Mid CH 507000	High CH 512000
				Frequency 2510MHz	Frequency 2535MHz	Frequency 2560MHz
20M	CP-OFDM QPSK	1	1	21.56	21.67	21.38



Test Report No.: W7L-P22110036RF12

BW	MCS Index	RB Size	RB Offset	Low CH 500500	Mid CH 507000	High CH 513500
				Frequency 2502.5MHz	Frequency 2535MHz	Frequency 2567.5MHz
5M	DFT-s-OFDM QPSK	1	1	23.00	23.05	22.98

BW	MCS Index	RB Size	RB Offset	Low CH 501000	Mid CH 507000	High CH 513000
				Frequency 2505MHz	Frequency 2535MHz	Frequency 2565MHz
10M	DFT-s-OFDM QPSK	1	1	22.95	22.99	22.95

BW	MCS Index	RB Size	RB Offset	Low CH 501500	Mid CH 507000	High CH 512500
				Frequency 2507.5MHz	Frequency 2535MHz	Frequency 2562.5MHz
15M	DFT-s-OFDM QPSK	1	1	23.00	23.02	22.88

BW	MCS Index	RB Size	RB Offset	Low CH 502000	Mid CH 507000	High CH 512000
				Frequency 2510MHz	Frequency 2535MHz	Frequency 2560MHz
20M	DFT-s-OFDM Pi/2 BPSK	1	1	23.04	23.06	22.89
		1	53	22.99	22.94	22.78
		1	104	22.95	22.98	22.84
		50	0	22.57	22.52	22.36
		50	28	22.99	23.01	22.83
		50	56	22.41	22.49	22.25
		100	0	22.57	22.55	22.39
	DFT-s-OFDM QPSK	1	1	23.10	23.15	22.94
		1	53	22.95	23.02	22.83
		1	104	22.93	22.97	22.74
		50	0	22.07	22.10	21.99
		50	28	23.04	23.09	22.90
		50	56	21.96	22.03	21.82
		100	0	22.06	22.05	21.93
	DFT-s-OFDM 16QAM	1	1	22.05	22.13	21.89
	DFT-s-OFDM 64QAM	1	1	20.78	20.76	20.60
	DFT-s-OFDM 256QAM	1	1	18.29	18.37	18.13

**N12**

BW	MCS Index	RB Size	RB Offset	Low CH 140300	Mid CH 141500	High CH 142700
				Frequency 701.5MHz	Frequency 707.5MHz	Frequency 713.5MHz
5M	CP-OFDM QPSK	1	1	20.93	21.01	20.97

BW	MCS Index	RB Size	RB Offset	Low CH 140800	Mid CH 141500	High CH 142200
				Frequency 704MHz	Frequency 707.5MHz	Frequency 711MHz
10M	CP-OFDM QPSK	1	1	20.90	20.98	20.95

BW	MCS Index	RB Size	RB Offset	Low CH 141300	Mid CH 141500	High CH 141700
				Frequency 706.5MHz	Frequency 707.5MHz	Frequency 708.5MHz
15M	CP-OFDM QPSK	1	1	20.94	21.03	20.99

BW	MCS Index	RB Size	RB Offset	Low CH 140300	Mid CH 141500	High CH 142700
				Frequency 701.5MHz	Frequency 707.5MHz	Frequency 713.5MHz
5M	DFT-s-OFDM QPSK	1	1	22.55	22.59	22.56

BW	MCS Index	RB Size	RB Offset	Low CH 140800	Mid CH 141500	High CH 142200
				Frequency 704MHz	Frequency 707.5MHz	Frequency 711MHz
10M	DFT-s-OFDM QPSK	1	1	22.51	22.58	22.55

BW	MCS Index	RB Size	RB Offset	Low CH 141300	Mid CH 141500	High CH 141700
				Frequency 706.5MHz	Frequency 707.5MHz	Frequency 708.5MHz
15M	DFT-s-OFDM Pi/2 BPSK	1	1	22.63	22.67	22.60
		1	39	22.63	22.64	22.56
		1	77	22.58	22.55	22.54
		36	0	22.11	22.07	22.03
		36	19	22.58	22.62	22.60
		36	39	21.98	21.94	21.90
		75	0	22.16	22.19	22.13
	DFT-s-OFDM QPSK	1	1	22.61	22.70	22.58
		1	39	22.65	22.64	22.60
		1	77	22.50	22.56	22.47
		36	0	21.52	21.60	21.53
		36	19	22.61	22.66	22.55
		36	39	21.52	21.56	21.57
		75	0	21.71	21.77	21.70
	DFT-s-OFDM 16QAM	1	1	21.48	21.56	21.47
	DFT-s-OFDM 64QAM	1	1	20.23	20.23	20.23
	DFT-s-OFDM 256QAM	1	1	17.72	17.81	17.69



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**N25**

BW	MCS Index	RB Size	RB Offset	Low CH 370500	Mid CH 376500	High CH 382500
				Frequency 1852.5MHz	Frequency 1882.5MHz	Frequency 1912.5MHz
5M	CP-OFDM QPSK	1	1	21.53	21.63	21.60

BW	MCS Index	RB Size	RB Offset	Low CH 371000	Mid CH 376500	High CH 382000
				Frequency 1855MHz	Frequency 1882.5MHz	Frequency 1910MHz
10M	CP-OFDM QPSK	1	1	21.59	21.76	21.66

BW	MCS Index	RB Size	RB Offset	Low CH 371500	Mid CH 376500	High CH 381500
				Frequency 1857.5MHz	Frequency 1882.5MHz	Frequency 1907.5MHz
15M	CP-OFDM QPSK	1	1	21.72	21.66	21.71

BW	MCS Index	RB Size	RB Offset	Low CH 372000	Mid CH 376500	High CH 381000
				Frequency 1860MHz	Frequency 1882.5MHz	Frequency 1905MHz
20M	CP-OFDM QPSK	1	1	21.75	21.79	21.76

BW	MCS Index	RB Size	RB Offset	Low CH 372500	Mid CH 376500	High CH 380500
				Frequency 1862.5MHz	Frequency 1882.5MHz	Frequency 1902.5MHz
25M	CP-OFDM QPSK	1	1	21.77	21.81	21.85

BW	MCS Index	RB Size	RB Offset	Low CH 373000	Mid CH 376500	High CH 380000
				Frequency 1865MHz	Frequency 1882.5MHz	Frequency 1900MHz
30M	CP-OFDM QPSK	1	1	21.83	21.85	21.90

BW	MCS Index	RB Size	RB Offset	Low CH 374000	Mid CH 376500	High CH 379000
				Frequency 1870MHz	Frequency 1882.5MHz	Frequency 1895MHz
40M	CP-OFDM QPSK	1	1	21.82	21.88	21.92

BW	MCS Index	RB Size	RB Offset	Low CH 370500	Mid CH 376500	High CH 382500
				Frequency 1852.5MHz	Frequency 1882.5MHz	Frequency 1912.5MHz
5M	DFT-s-OFDM QPSK	1	1	23.21	23.22	23.18

BW	MCS Index	RB Size	RB Offset	Low CH 371000	Mid CH 376500	High CH 382000
				Frequency 1855MHz	Frequency 1882.5MHz	Frequency 1910MHz
10M	DFT-s-OFDM QPSK	1	1	23.27	23.30	23.30

BW	MCS Index	RB Size	RB Offset	Low CH 371500	Mid CH 376500	High CH 381500
				Frequency 1857.5MHz	Frequency 1882.5MHz	Frequency 1907.5MHz
15M	DFT-s-OFDM QPSK	1	1	23.09	23.18	23.25

BW	MCS Index	RB Size	RB Offset	Low CH 372000	Mid CH 376500	High CH 381000
				Frequency 1860MHz	Frequency 1882.5MHz	Frequency 1905MHz
20M	DFT-s-OFDM QPSK	1	1	23.22	23.25	23.31

BW	MCS Index	RB Size	RB Offset	Low CH 372500	Mid CH 376500	High CH 380500
				Frequency 1862.5MHz	Frequency 1882.5MHz	Frequency 1902.5MHz
25M	DFT-s-OFDM QPSK	1	1	23.25	23.29	23.11

BW	MCS Index	RB Size	RB Offset	Low CH 373000	Mid CH 376500	High CH 380000
				Frequency 1865MHz	Frequency 1882.5MHz	Frequency 1900MHz
30M	DFT-s-OFDM QPSK	1	1	23.34	23.38	23.31



BW	MCS Index	RB Size	RB Offset	Low CH 374000	Mid CH 376500	High CH 379000
				Frequency 1870MHz	Frequency 1882.5MHz	Frequency 1895MHz
40M	DFT-s-OFDM Pi/2 BPSK	1	1	23.25	23.28	23.23
		1	108	23.34	23.38	23.28
		1	214	23.36	23.33	23.23
		108	0	22.79	22.78	22.87
		108	54	23.31	23.22	23.26
		108	108	22.81	22.86	22.87
		216	0	22.85	22.78	22.86
	DFT-s-OFDM QPSK	1	1	23.39	23.41	23.36
		1	108	23.28	23.32	23.35
		1	214	23.38	23.38	23.33
		108	0	22.32	22.34	22.41
		108	54	23.37	23.26	23.33
		108	108	22.34	22.39	22.38
		216	0	22.39	22.33	22.37
	DFT-s-OFDM 16QAM	1	1	22.17	22.19	22.25
	DFT-s-OFDM 64QAM	1	1	20.90	21.00	20.97
	DFT-s-OFDM 256QAM	1	1	19.02	19.06	19.06



**BUREAU  
VERITAS**

**Test Report No.: W7L-P22110036RF12**

**N30**

BW	MCS Index	RB Size	RB Offset	Low CH 461500	Mid CH 462000	High CH 462500
				Frequency 2307.5MHz	Frequency 2310MHz	Frequency 2312.5MHz
5M	CP-OFDM QPSK	1	1	21.92	21.95	21.97

BW	MCS Index	RB Size	RB Offset	/	Mid CH 462000	/
				/	Frequency 2310MHz	/
10M	CP-OFDM QPSK	1	1	/	21.99	/

BW	MCS Index	RB Size	RB Offset	Low CH 461500	Mid CH 462000	High CH 462500
				Frequency 2307.5MHz	Frequency 2310MHz	Frequency 2312.5MHz
5M	DFT-s-OFDM QPSK	1	1	23.25	23.27	23.35

BW	MCS Index	RB Size	RB Offset	/	Mid CH 462000	/
				/	Frequency 2310MHz	/
10M	DFT-s-OFDM Pi/2 BPSK	1	1	/	23.37	/
		1	26	/	23.35	/
		1	50	/	23.31	/
		25	0	/	22.81	/
		25	14	/	23.35	/
		25	27	/	22.86	/
		50	0	/	22.89	/
	DFT-s-OFDM QPSK	1	1	/	23.40	/
		1	26	/	23.38	/
		1	50	/	23.36	/
		25	0	/	22.33	/
		25	14	/	23.36	/
		25	27	/	22.40	/
		50	0	/	22.43	/
	DFT-s-OFDM 16QAM	1	1	/	22.33	/
	DFT-s-OFDM 64QAM	1	1	/	21.03	/
	DFT-s-OFDM 256QAM	1	1	/	18.58	/



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**N38**

BW	MCS Index	RB Size	RB Offset	Low CH 516504	Mid CH 519000	High CH 521496
				Frequency 2582.52MHz	Frequency 2595MHz	Frequency 2607.48MHz
20M	CP-OFDM QPSK	1	1	21.43	21.32	21.37

BW	MCS Index	RB Size	RB Offset	Low CH 517002	Mid CH 519000	High CH 520998
				Frequency 2585.01MHz	Frequency 2595MHz	Frequency 2604.99MHz
30M	CP-OFDM QPSK	1	1	21.52	21.40	21.43

BW	MCS Index	RB Size	RB Offset	Low CH 518004	Mid CH 519000	High CH 519996
				Frequency 2590.02MHz	Frequency 2595MHz	Frequency 2599.98MHz
40M	CP-OFDM QPSK	1	1	21.58	21.41	21.46



Test Report No.: W7L-P22110036RF12

BW	MCS Index	RB Size	RB Offset	Low CH 516504	Mid CH 519000	High CH 521496
				Frequency 2582.52MHz	Frequency 2595MHz	Frequency 2607.48MHz
20M	DFT-s-OFDM QPSK	1	1	23.00	23.05	22.97

BW	MCS Index	RB Size	RB Offset	Low CH 517002	Mid CH 519000	High CH 520998
				Frequency 2585.01MHz	Frequency 2595MHz	Frequency 2604.99MHz
30M	DFT-s-OFDM QPSK	1	1	23.03	23.07	23.02

BW	MCS Index	RB Size	RB Offset	Low CH 518004	Mid CH 519000	High CH 519996
				Frequency 2590.02MHz	Frequency 2595MHz	Frequency 2599.98MHz
40M	DFT-s-OFDM Pi/2 BPSK	1	1	22.99	22.92	22.90
		1	53	22.90	22.79	22.77
		1	104	22.91	22.84	22.78
		50	0	22.46	22.43	22.40
		50	28	22.93	22.80	22.82
		50	56	22.33	22.34	22.34
		100	0	22.48	22.32	22.31
	DFT-s-OFDM QPSK	1	1	23.09	23.05	23.03
		1	53	22.99	22.88	22.86
		1	104	22.97	22.90	22.87
		50	0	21.97	21.96	21.95
		50	28	22.93	22.83	22.80
		50	56	21.86	21.83	21.81
		100	0	21.95	21.84	21.81
	DFT-s-OFDM 16QAM	1	1	22.03	21.90	21.91
	DFT-s-OFDM 64QAM	1	1	20.80	20.60	20.63
DFT-s-OFDM 256QAM	1	1	18.73	18.62	18.66	



**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF12

**N41**

BW	MCS Index	RB Size	RB Offset	Low CH 501204	Mid CH 518598	High CH 535998
				Frequency 2506.02MHz	Frequency 2592.99MHz	Frequency 2679.99MHz
20M	CP-OFDM QPSK	1	1	21.39	21.61	21.57

BW	MCS Index	RB Size	RB Offset	Low CH 502200	Mid CH 518598	High CH 534996
				Frequency 2511MHz	Frequency 2592.99MHz	Frequency 2674.98MHz
30M	CP-OFDM QPSK	1	1	21.42	21.56	21.51

BW	MCS Index	RB Size	RB Offset	Low CH 503202	Mid CH 518598	High CH 534000
				Frequency 2516.01MHz	Frequency 2592.99MHz	Frequency 2670MHz
40M	CP-OFDM QPSK	1	1	21.47	21.58	21.53

BW	MCS Index	RB Size	RB Offset	Low CH 504204	Mid CH 518598	High CH 532998
				Frequency 2521.02MHz	Frequency 2592.99MHz	Frequency 2664.99MHz
50M	CP-OFDM QPSK	1	1	21.44	21.49	21.48



Test Report No.: W7L-P22110036RF12

BW	MCS Index	RB Size	RB Offset	Low CH 505200	Mid CH 518598	High CH 531996
				Frequency 2526MHz	Frequency 2592.99MHz	Frequency 2659.98MHz
60M	CP-OFDM QPSK	1	1	21.39	21.53	21.55

BW	MCS Index	RB Size	RB Offset	Low CH 507204	Mid CH 518598	High CH 529998
				Frequency 2536.02MHz	Frequency 2592.99MHz	Frequency 2649.99MHz
80M	CP-OFDM QPSK	1	1	21.43	21.57	21.56

BW	MCS Index	RB Size	RB Offset	Low CH 508200	Mid CH 518598	High CH 528996
				Frequency 2541MHz	Frequency 2592.99MHz	Frequency 2644.98MHz
90M	CP-OFDM QPSK	1	1	21.48	21.56	21.51

BW	MCS Index	RB Size	RB Offset	Low CH 509202	Mid CH 518598	High CH 528000
				Frequency 2546.01MHz	Frequency 2592.99MHz	Frequency 2640MHz
100M	CP-OFDM QPSK	1	1	21.51	21.55	21.46

BW	MCS Index	RB Size	RB Offset	Low CH 501204	Mid CH 518598	High CH 535998
				Frequency 2506.02MHz	Frequency 2592.99MHz	Frequency 2679.99MHz
20M	DFT-s-OFDM QPSK	1	1	22.94	23.02	22.98

BW	MCS Index	RB Size	RB Offset	Low CH 502200	Mid CH 518598	High CH 534996
				Frequency 2511MHz	Frequency 2592.99MHz	Frequency 2674.98MHz
30M	DFT-s-OFDM QPSK	1	1	23.00	23.11	23.07

BW	MCS Index	RB Size	RB Offset	Low CH 503202	Mid CH 518598	High CH 534000
				Frequency 2516.01MHz	Frequency 2592.99MHz	Frequency 2670MHz
40M	DFT-s-OFDM QPSK	1	1	22.94	23.02	22.97

BW	MCS Index	RB Size	RB Offset	Low CH 504204	Mid CH 518598	High CH 532998
				Frequency 2521.02MHz	Frequency 2592.99MHz	Frequency 2664.99MHz
50M	DFT-s-OFDM QPSK	1	1	23.02	23.09	23.01

BW	MCS Index	RB Size	RB Offset	Low CH 505200	Mid CH 518598	High CH 531996
				Frequency 2526MHz	Frequency 2592.99MHz	Frequency 2659.98MHz
60M	DFT-s-OFDM QPSK	1	1	22.91	22.95	22.93

BW	MCS Index	RB Size	RB Offset	Low CH 507204	Mid CH 518598	High CH 529998
				Frequency 2536.02MHz	Frequency 2592.99MHz	Frequency 2649.99MHz
80M	DFT-s-OFDM QPSK	1	1	22.98	23.03	22.97

BW	MCS Index	RB Size	RB Offset	Low CH 508200	Mid CH 518598	High CH 528996
				Frequency 2541MHz	Frequency 2592.99MHz	Frequency 2644.98MHz
90M	DFT-s-OFDM QPSK	1	1	23.01	23.05	23.01



BW	MCS Index	RB Size	RB Offset	Low CH 509202	Mid CH 518598	High CH 528000
				Frequency 2546.01MHz	Frequency 2592.99MHz	Frequency 2640MHz
100M	DFT-s-OFDM Pi/2 BPSK	1	1	23.06	22.99	22.92
		1	137	22.84	22.74	22.66
		1	271	22.76	22.62	22.61
		135	0	22.46	22.31	22.27
		135	69	22.87	22.80	22.78
		135	138	22.34	22.19	22.15
		270	0	22.37	22.29	22.23
	DFT-s-OFDM QPSK	1	1	23.10	23.08	22.96
		1	137	22.99	22.87	22.83
		1	271	22.76	22.71	22.62
		135	0	21.92	21.89	21.82
		135	69	22.91	22.85	22.74
		135	138	21.74	21.67	21.68
		270	0	21.86	21.81	21.74
	DFT-s-OFDM 16QAM	1	1	21.96	21.93	21.84
	DFT-s-OFDM 64QAM	1	1	20.69	20.58	20.58
	DFT-s-OFDM 256QAM	1	1	18.70	18.68	18.56



BUREAU  
VERITAS

Test Report No.: W7L-P22110036RF12

N66

BW	MCS Index	RB Size	RB Offset	Low CH 342500	Mid CH 349000	High CH 355500
				Frequency 1712.5MHz	Frequency 1745MHz	Frequency 1777.5MHz
5M	CP-OFDM QPSK	1	1	22.08	22.00	21.89

BW	MCS Index	RB Size	RB Offset	Low CH 343000	Mid CH 349000	High CH 355000
				Frequency 1715MHz	Frequency 1745MHz	Frequency 1775MHz
10M	CP-OFDM QPSK	1	1	21.88	21.99	21.83

BW	MCS Index	RB Size	RB Offset	Low CH 343500	Mid CH 349000	High CH 354500
				Frequency 1717.5MHz	Frequency 1745MHz	Frequency 1772.5MHz
15M	CP-OFDM QPSK	1	1	21.92	21.94	21.94

BW	MCS Index	RB Size	RB Offset	Low CH 344000	Mid CH 349000	High CH 354000
				Frequency 1720MHz	Frequency 1745MHz	Frequency 1770MHz
20M	CP-OFDM QPSK	1	1	21.98	21.92	21.92

BW	MCS Index	RB Size	RB Offset	Low CH 345000	Mid CH 349000	High CH 353000
				Frequency 1725MHz	Frequency 1745MHz	Frequency 1765MHz
30M	CP-OFDM QPSK	1	1	22.00	21.86	21.97

BW	MCS Index	RB Size	RB Offset	Low CH 346000	Mid CH 349000	High CH 352000
				Frequency 1730MHz	Frequency 1745MHz	Frequency 1760MHz
40M	CP-OFDM QPSK	1	1	22.04	21.94	21.93

BW	MCS Index	RB Size	RB Offset	Low CH 342500	Mid CH 349000	High CH 355500
				Frequency 1712.5MHz	Frequency 1745MHz	Frequency 1777.5MHz
5M	DFT-s-OFDM QPSK	1	1	23.41	23.31	23.33

BW	MCS Index	RB Size	RB Offset	Low CH 343000	Mid CH 349000	High CH 355000
				Frequency 1715MHz	Frequency 1745MHz	Frequency 1775MHz
10M	DFT-s-OFDM QPSK	1	1	23.33	23.28	23.27

BW	MCS Index	RB Size	RB Offset	Low CH 343500	Mid CH 349000	High CH 354500
				Frequency 1717.5MHz	Frequency 1745MHz	Frequency 1772.5MHz
15M	DFT-s-OFDM QPSK	1	1	23.37	23.32	23.29

BW	MCS Index	RB Size	RB Offset	Low CH 344000	Mid CH 349000	High CH 354000
				Frequency 1720MHz	Frequency 1745MHz	Frequency 1770MHz
20M	DFT-s-OFDM QPSK	1	1	23.40	23.37	23.46

BW	MCS Index	RB Size	RB Offset	Low CH 345000	Mid CH 349000	High CH 353000
				Frequency 1725MHz	Frequency 1745MHz	Frequency 1765MHz
30M	DFT-s-OFDM QPSK	1	1	23.42	23.37	23.42

BW	MCS Index	RB Size	RB Offset	Low CH 346000	Mid CH 349000	High CH 352000
				Frequency 1730MHz	Frequency 1745MHz	Frequency 1760MHz
40M	DFT-s-OFDM Pi/2 BPSK	1	1	23.36	23.25	23.30
		1	108	23.34	23.26	23.35
		1	214	23.42	23.35	23.32
		108	0	22.77	22.70	22.75
		108	54	23.41	23.32	23.39
		108	108	22.96	22.85	22.90
		216	0	22.90	22.82	22.91
	DFT-s-OFDM QPSK	1	1	23.47	23.35	23.45
		1	108	23.43	23.41	23.43
		1	214	23.37	23.35	23.45
		108	0	22.30	22.28	22.30
		108	54	23.44	23.35	23.42
		108	108	22.49	22.38	22.43
		216	0	22.45	22.37	22.46
	DFT-s-OFDM 16QAM	1	1	22.35	22.28	22.25
	DFT-s-OFDM 64QAM	1	1	21.04	20.95	21.00
	DFT-s-OFDM 256QAM	1	1	19.09	18.98	19.05