




FCC IC RF Test Report

Test Report Number	WAP-22021511-LC-FCC-IC-5GNR
FCC ID	KMH-14H317-NA1
IC	1422A-14H317NA1
Applicant	Ford Motor Company
Applicant Address	Building 5, 20300 Rotunda Dr., Dearborn, Michigan, United States 48124
Product Name	Vehicle Telematics Control Unit
Model Name	FNV3-B6-NA
Model Number	U5T-14H317-D
Date of Receipt	04/05/2022
Date of Test	05/17/2022 – 06/01/2022
Report Issue Date	06/03/2022
Test Standards	47CFR Part 22 47CFR Part 24 47CFR Part 27 RSS-130 Issue 2: Feb 2019 RSS-132 Issue 3: Jan 2013 RSS-133 Issue 6: Jan 2018 RSS-139 Issue 3: Jul 2015 RSS-192 Issue 4, May 2020 RSS-199 Issue 3: Dec 2016 RSS-Gen Issue 5: Feb 2021
Test Result	PASS
	<p>Issued by:</p> <p>Vista Compliance Laboratories 1261 Puerta Del Sol, San Clemente, CA 92673 USA www.vista-compliance.com</p>
 <hr style="width: 80%; margin: 0 auto;"/> <p>Devin Tai (Test Engineer)</p>	 <hr style="width: 80%; margin: 0 auto;"/> <p>David Zhang (Technical Manager)</p>
<p><small>This report is for the exclusive use of the applicant. 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. Note that the results contained in this report pertain only to the test samples identified herein, and the results relate only to the items tested and the results that were obtained in the period between the date of initial receipt of samples and the date of issue of the report. 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 and the results thereof based upon the information provided to us. The applicant has 60 days from date of issuance of this report to notify us of any material error or omission. 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. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by any government agencies. This report is not to be reproduced by any means except in full and in any case not without the written approval of Vista Laboratories.</small></p>	

REVISION HISTORY

Report Number	Version	Description	Issued Date
WAP-22021511-LC-FCC-IC-5GNR	01	Initial report	06/03/2022

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1 Test Summary

Test Item	FCC IC Rules	Test Method	Result
Effective (Isotropic) Radiated Power	§ 2.1046, § 22.913 § 24.232, § 27.50 RSS-130(4.6), RSS-132(5.4) RSS-133(6.4), RSS-139(6.5) RSS-192 (8.6), RSS-199 (4.4)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass
Peak to Average Ratio	§ 2.1046, § 22.913 § 24.232, § 27.50 RSS-130(4.6), RSS-132(5.4) RSS-133(6.4), RSS-139(6.6) RSS-192 (8.6), RSS-199 (4.4)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass
Occupied bandwidth	§2.1049 RSS-Gen (6.7)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass
Band Edge	§ 2.1051; § 22.917(a) § 24.238, § 27.53 RSS-130(4.7), RSS-132(5.5) RSS-133(6.5), RSS-139(6.6), RSS-192 (8.7), RSS-199 (4.5)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass
Conducted Spurious Emission	§ 2.1051; § 22.917(a) § 24.238, § 27.53 (h) RSS-130(4.7), RSS-132(5.5) RSS-133(6.5), RSS-139(6.6) RSS-192 (8.7), RSS-199 (4.5)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass
Field Strength of Radiated Spurious Emissions	§ 2.1051; § 22.917(a) § 24.238, § 27.53 (h) RSS-130(4.7), RSS-132(5.5) RSS-133(6.5), RSS-139(6.6) RSS-192 (8.7), RSS-199 (4.5)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass
Frequency Stability	§ 2.1055, § 22.355 § 24.235, § 27.54 RSS-130(4.5), RSS-132(5.3) RSS-133(6.3), RSS-139(6.4) RSS-192 (8.5), RSS-199 (4.3)	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01	Pass

2 General Information

2.1 Applicant

Applicant	Ford Motor Company
Applicant address	Building 5, 20300 Rotunda Dr., Dearborn, Michigan, United States 48124
Manufacturer	Ford Motor Company
Manufacturer Address	Building 5, 20300 Rotunda Dr., Dearborn, Michigan, United States 48124

2.2 Product information

Product Name	Vehicle Telematics Control Unit
Model Number	FNV3-B6-NA
Family Model Number	N/A
Serial Number	ANHGG22022104741, ANHGG22027104975 (Conducted), ANHGG22022104737, ANHGG21328102795 (Radiated)
Frequency Band	BT BDR/EDR: 2402-2480MHz BLE: 2402-2480MHz 802.11b/g/n-20MHz: 2412-2462MHz 802.11n-40MHz: 2422-2452MHz 802.11a/n-20MHz: 5500-5580MHz, 5660-5720, 5725-5825MHz 802.11n-40MHz: 5510-5550MHz, 5630-5710, 5755-5795MHz 802.11ac: 5530, 5690MHz, 5775MHz WCDMA Band 2: UL: 1850- 1910MHz; DL: 1930-1990MHz WCDMA Band 4: UL: 1710- 1755MHz. DL: 2110-2155MHz WCDMA Band 5: UL: 824- 849MHz; DL: 869-894MHz LTE Band 2: UL: 1850-1910MHz; DL: 1930-1990MHz LTE Band 4: UL:1710-1755MHz; DL: 2110-2155MHz LTE Band 5: UL:824-849MHz; DL: 869-894MHz LTE Band 7: UL:2500-2570MHz; DL: 2620-2690MHz LTE Band 12: UL:699-716MHz; DL: 729-746MHz LTE Band 13: UL:777-787MHz; DL:746-756MHz LTE Band 17: UL: 704-716MHz; DL: 734-746MHz LTE Band 29: DL: 717-728MHz (UE Receive Only) LTE Band 38: UL: 2570-2620MHz; DL: 2570-2620MHz LTE Band 66: UL:1710-1780MHz; DL: 2110-2200MHz LTE Band 71: UL: 663-698MHz; DL: 617-652MHz 5G NR n2: UL: 1850-1910MHz; DL: 1930-1990MHz 5G NR n5: UL:824-849MHz; DL: 869-894MHz 5G NR n7: UL:2500-2570MHz; DL: 2620-2690MHz 5G NR n41: UL:2496-2690MHz; DL: 2496-2690MHz 5G NR n66: UL:1710-1780MHz; DL: 2110-2200MHz 5G NR n71: UL:663-698MHz; DL: 617-652MHz 5G NR n77-L: UL:3450-3550MHz; DL: 3450-3550MHz 5G NR n77-H: UL:3700-3980MHz; DL: 3700-3980MHz 5G NR n78-L: UL:3450-3550MHz; DL: 3450-3550MHz 5G NR n78-H: UL: 3700-3800MHz; DL: 3700-3800MHz
Type of modulation	BT BDR/EDR: GFSK, $\pi/4$ DQPSK, 8DPSK

	BLE: GFSK 802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g: OFDM-CCK (BPSK, QPSK, 16QAM, 64QAM) 802.11a/n/ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) WCDMA: QPSK LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: Pi/2-BPSK, QPSK, 16QAM, 64QAM, 256QAM																														
Equipment Class/ Category	DSS, DTS, UNII, PCB																														
Maximum output power	See test result																														
Antenna Information	<p>2 x Internal BT/WLAN PCB trace antenna</p> <p>Peak Gain:</p> <ul style="list-style-type: none"> - 3.7 dBi @2.4GHz WiFi/Bluetooth, 6.4 dBi @5GHz WiFi <p>Cellular External antennas:</p> <p>Peak Gain: 6 dBi @ 617 - 960 MHz 8 dBi @ 1710-2200MHz 8.5 dBi @ 2300-2700MHz 9.5 dBi @ 3300-4200MHz 11.0 dBi @ 4400-5000MHz</p> <p><i>Antenna connector type: quad mini-Fakra connector</i></p> <p>Modem 6 TCU will support 4 vehicle cellular antenna ports. The antenna port mapping is at below table,</p> <table border="1" data-bbox="545 1120 1445 1299"> <thead> <tr> <th>Antenna</th> <th>LB</th> <th>MB</th> <th>HB</th> <th>N77/78/79</th> <th>N41</th> </tr> </thead> <tbody> <tr> <td>Antenna1</td> <td>DRX</td> <td>TX+PRX</td> <td>TX+PRX</td> <td>TX+PRX</td> <td>TX+PRX</td> </tr> <tr> <td>Antenna2</td> <td>TX+PRX</td> <td>DRX</td> <td>DRX</td> <td>DRX</td> <td>DRX</td> </tr> <tr> <td>Antenna3</td> <td>-</td> <td>MIMO</td> <td>MIMO</td> <td>MIMO</td> <td>MIMO</td> </tr> <tr> <td>Antenna4</td> <td>-</td> <td>MIMO</td> <td>MIMO</td> <td>MIMO</td> <td>MIMO</td> </tr> </tbody> </table> <p>Note:</p> <ol style="list-style-type: none"> 1. Antenna 1 and 3 go to the left-side rooftop external antenna (cellular antennas) and antenna 2 and 4 go to the right-side rooftop external antenna (cellular antennas). The cable length between left left-side and right-side rooftop external antenna are more than 20 cm. 2. Antenna 3 and 4 are for 4G-5G MIMO diversity only, no TX. 3. The antenna gain is declared by the manufacturer. Not all antennas support TX. The declared peak gain may have overestimated the TX gain of the single cellular antenna. For ERP/EIRP, radiated power will be measured in case when the calculated ERP/EIRP with declared antenna gain and measured conducted power is high. 4. 5G NR n77 overlaps the entire frequency range of 5G NR n78. Therefore, the test data provided I this report covers 5G NR n77 as well as 5G NR n78. 	Antenna	LB	MB	HB	N77/78/79	N41	Antenna1	DRX	TX+PRX	TX+PRX	TX+PRX	TX+PRX	Antenna2	TX+PRX	DRX	DRX	DRX	DRX	Antenna3	-	MIMO	MIMO	MIMO	MIMO	Antenna4	-	MIMO	MIMO	MIMO	MIMO
	Antenna	LB	MB	HB	N77/78/79	N41																									
Antenna1	DRX	TX+PRX	TX+PRX	TX+PRX	TX+PRX																										
Antenna2	TX+PRX	DRX	DRX	DRX	DRX																										
Antenna3	-	MIMO	MIMO	MIMO	MIMO																										
Antenna4	-	MIMO	MIMO	MIMO	MIMO																										
Clock Frequencies	N/A																														
Port/Connectors	CAN bus																														
Input Power	Vehicle Battery powered: 12VDC																														
Power Adapter Manu/Model	N/A																														
Power Adapter SN	N/A																														

Hardware version	N/A																																																																																																																																																																								
Software version	N/A																																																																																																																																																																								
Simultaneous Transmission	BT/BLE, WLAN and cellular radio can transmit simultaneously																																																																																																																																																																								
Additional Info	<p>3G Band: B2, B4, B5 4G Band: B2, B4, B5, B7, B12, B13, B17, B29, B38, B66, B71 5G SA Band: n78, n77, n71, n66, n41, n7, n5, n2 5G NSA Band: n77, n71, n66, n41, n5, n2 5G SCS spacing: 15 KHz (FDD), 30 KHz (TDD)</p> <p>MRDC Band Combination (NSA):</p> <table border="1"> <thead> <tr> <th colspan="4">MRDC Band Combinations</th> </tr> <tr> <th colspan="2">NR CA Config</th> <th colspan="2">LTE CA Config</th> </tr> <tr> <th>DL</th> <th>UL</th> <th>DL</th> <th>UL</th> </tr> </thead> <tbody> <tr><td>n71a</td><td>n71a</td><td>66a-66a</td><td>66a</td></tr> <tr><td>n71a</td><td>n71a</td><td>2a-66a</td><td>66a</td></tr> <tr><td>n71a</td><td>n71a</td><td>2a-66a</td><td>2a</td></tr> <tr><td>n66a</td><td>n66a</td><td>2a-12a-66a</td><td>12a</td></tr> <tr><td>n66a</td><td>n66a</td><td>2a-5a-66a</td><td>5a</td></tr> <tr><td>n66a</td><td>n66a</td><td>13a</td><td>13a</td></tr> <tr><td>n66a</td><td>n66a</td><td>2a-2a-12a</td><td>12a</td></tr> <tr><td>n66a</td><td>n66a</td><td>2a-2a-5a</td><td>5a</td></tr> <tr><td>n5a</td><td>n5a</td><td>5a-66a-66a</td><td>66a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-66a-66a</td><td>66a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-66a-66a</td><td>2a</td></tr> <tr><td>n5a</td><td>n5a</td><td>66a-66a</td><td>66a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-5a-66a</td><td>66a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-5a-66a</td><td>2a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-2a-66a</td><td>66a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-2a-66a</td><td>2a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-2a-5a</td><td>2a</td></tr> <tr><td>n5a</td><td>n5a</td><td>2a-2a</td><td>2a</td></tr> <tr><td>n2a</td><td>n2a</td><td>12a-66a-66a</td><td>12a</td></tr> <tr><td>n2a</td><td>n2a</td><td>5a-66a-66a</td><td>5a</td></tr> <tr><td>n2a</td><td>n2a</td><td>13a-66a</td><td>13a</td></tr> <tr><td>n2a</td><td>n2a</td><td>2a-12a-66a</td><td>12a</td></tr> <tr><td>n2a</td><td>n2a</td><td>2a-5a-66a</td><td>5a</td></tr> <tr><td>n77a</td><td>n77a</td><td>66a-66a</td><td>66a</td></tr> <tr><td>n77a</td><td>n77a</td><td>12a-66a</td><td>66a</td></tr> <tr><td>n77a</td><td>n77a</td><td>12a-66a</td><td>12a</td></tr> <tr><td>n77a</td><td>n77a</td><td>5a-66a</td><td>66a</td></tr> <tr><td>n77a</td><td>n77a</td><td>5a-66a</td><td>5a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-66a</td><td>66a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-66a</td><td>2a</td></tr> <tr><td>n77a</td><td>n77a</td><td>66a</td><td>66a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-29a</td><td>2a</td></tr> <tr><td>n77a</td><td>n77a</td><td>13a</td><td>13a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-12a</td><td>12a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-12a</td><td>2a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-5a</td><td>5a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-5a</td><td>2a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a-2a</td><td>2a</td></tr> <tr><td>n77a</td><td>n77a</td><td>2a</td><td>2a</td></tr> </tbody> </table>	MRDC Band Combinations				NR CA Config		LTE CA Config		DL	UL	DL	UL	n71a	n71a	66a-66a	66a	n71a	n71a	2a-66a	66a	n71a	n71a	2a-66a	2a	n66a	n66a	2a-12a-66a	12a	n66a	n66a	2a-5a-66a	5a	n66a	n66a	13a	13a	n66a	n66a	2a-2a-12a	12a	n66a	n66a	2a-2a-5a	5a	n5a	n5a	5a-66a-66a	66a	n5a	n5a	2a-66a-66a	66a	n5a	n5a	2a-66a-66a	2a	n5a	n5a	66a-66a	66a	n5a	n5a	2a-5a-66a	66a	n5a	n5a	2a-5a-66a	2a	n5a	n5a	2a-2a-66a	66a	n5a	n5a	2a-2a-66a	2a	n5a	n5a	2a-2a-5a	2a	n5a	n5a	2a-2a	2a	n2a	n2a	12a-66a-66a	12a	n2a	n2a	5a-66a-66a	5a	n2a	n2a	13a-66a	13a	n2a	n2a	2a-12a-66a	12a	n2a	n2a	2a-5a-66a	5a	n77a	n77a	66a-66a	66a	n77a	n77a	12a-66a	66a	n77a	n77a	12a-66a	12a	n77a	n77a	5a-66a	66a	n77a	n77a	5a-66a	5a	n77a	n77a	2a-66a	66a	n77a	n77a	2a-66a	2a	n77a	n77a	66a	66a	n77a	n77a	2a-29a	2a	n77a	n77a	13a	13a	n77a	n77a	2a-12a	12a	n77a	n77a	2a-12a	2a	n77a	n77a	2a-5a	5a	n77a	n77a	2a-5a	2a	n77a	n77a	2a-2a	2a	n77a	n77a	2a	2a
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2.3 Test standard and method

Test standard	47CFR Part 22 47CFR Part 24 47CFR Part 27 RSS-130 Issue 2: Feb 2019 RSS-132 Issue 3: Jan 2013 RSS-133 Issue 6: Jan 2018 RSS-139 Issue 3: Jul 2015 RSS-192 Issue 4, May 2020 RSS-199 Issue 3: Dec 2016 RSS-Gen Issue 5: Feb 2021
Test method	ANSI C63.26: 2015 KDB 971168 D01 Power Meas License Digital Systems v03r01 KDB 412172 D01 Determining ERP and EIRP v01r01

3 Test Site Information

Lab performing tests	Vista Laboratories, Inc.
Lab Address	1261 Puerta Del Sol, San Clemente, CA 92673 USA
Phone Number	+1 (949) 393-1123
Website	www.vista-compliance.com

Test Condition	Temperature	Humidity	Atmospheric Pressure
RF Testing	23.5°C	61.3%	1002 mbar
Radiated Emission Testing	23.5°C	61.3%	1002 mbar

4 Modification of EUT / Deviations from Standards

N/A

5 Test Configuration and Operation

5.1 EUT Test Configuration

EUT is powered by external DC power supply for testing purpose. EUT's RF antenna port is connected to spectrum analyzer through RF test cable for measurement. The test software is used to set EUT to different transmission mode in terms of radio mode (WLAN, BLE), test channel, data rate, etc. For Cellular radio, it's controlled by communication tester to change to different mode.

5.2 Supporting Equipment

Description	Manufacturer	Model #	Serial #
AC/DC Adapter	MEAN WELL	GST60A12-P1J	EB74Q81066

6 Uncertainty of Measurement

Test item	Measurement Uncertainty (dB)
RF Output Power (Conducted)	±1.2 dB
Power Spectral Density	±0.9 dB
Unwanted Emission (conducted)	±2.6 dB
Occupied Channel Bandwidth	±5 %
Radiated Emission (9KHz-30MHz)	±3.5 dB
Radiated Emission (30MHz-1GHz)	±4.6 dB
Radiated Emission (1-18GHz)	±4.9 dB
Radiated Emission (18-40GHz)	±3.5 dB

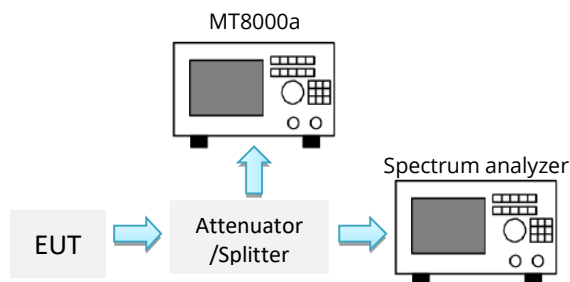
7 Test Results

7.1 RF Output Power

7.1.1 Requirement

- § 22.913(a) – ERP limit: 38.45 dBm
- RSS-132(5.4) – EIRP limit: 40.61 dBm
- § 24.232(c) / RSS-133(6.4) – EIRP limit: 33 dBm
- § 27.50(c)(9) / RSS-130(4.6.3) – ERP limit: 44.77 dBm
- § 27.50(c)(10) / RSS-130(4.6.2) – ERP limit: 34.77 dBm
- § 27.50(d) / RSS-139(6.5) – EIRP limit: 30 dBm
- § 27.50(d)– FCC EIRP limit: 30 dBm e.i.r.p
- RSS-192(8.6) – ISED EIRP limit: 28 dBm TRP/channel bandwidth)
- § 27.50(h) / RSS-199 (4.4) – 2 Watt (33 dBm) EIRP
- § 27.50(k) / 1-Watt (30 dBm) EIRP
- § 27.50(j) / 1-Watt (30 dBm) EIRP

7.1.2 Test setup



7.1.3 Test Procedure

For Conducted Power:

- The transmitter output port was connected to base station.
- Set EUT at maximum power through base station.
- Select lowest, middle, and highest channels for each band and different test mode.

For ERP/EIRP:

- According with 971168 D01 Power Meas License Digital Systems v03r01
- The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.
- The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

- The frequency ranges up to tenth harmonic of the fundamental frequency was investigated.
- Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.
- Spurious emissions in dB = $10 \log(\text{TX power in Watts}/0.001)$ – the absolute level
- Spurious attenuation limit in dB = $43 + 10 \log_{10}(\text{power out in Watts})$.

7.1.4 Test Result

5G n2 band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
370500	1852.5	5	1	0	23.15
			1	1	23.17
			12	6	23.62
			25	0	23.63
376500	1882.5	5	1	0	23.06
			1	1	23.07
			12	6	23.22
			25	0	23.26
381500	1907.5	5	1	0	23.12
			1	1	23.16
			12	6	23.18
			25	0	23.15
371000	1855	10	1	0	23.06
			1	1	23.15
			25	12	23.26
			50	0	23.27
376500	1882.5	10	1	0	23.06
			1	1	23.11
			25	12	23.25
			50	0	23.21
381000	1905	10	1	0	23.17
			1	1	23.21
			25	12	23.29
			50	0	23.14

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
371500	1857.5	15	1	0	23.24
			1	1	23.23
			36	18	23.17
			75	0	23.20
376500	1882.5	15	1	0	23.18
			1	1	23.28
			36	18	23.16
			75	0	23.19
380500	1902.5	15	1	0	23.20
			1	1	23.21
			36	18	23.16
			75	0	23.28
372000	1860	20	1	0	23.25
			1	1	23.34
			50	25	23.16
			100	0	23.15
376500	1882.5	20	1	0	23.19
			1	1	23.20
			50	25	23.21
			100	0	23.19
380000	1900	20	1	0	23.19
			1	1	23.28
			50	25	23.36
			100	0	23.16

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
370500	1852.5	5	1	0	23.08
			1	1	23.13
			12	6	23.17
			25	0	23.15
376500	1882.5	5	1	0	23.24
			1	1	23.29
			12	6	23.23
			25	0	23.15
382500	1912.5	5	1	0	23.06
			1	1	23.10
			12	6	23.22
			25	0	23.17
371000	1855	10	1	0	23.04
			1	1	23.09
			25	12	23.14
			50	0	23.23
376500	1882.5	10	1	0	23.16
			1	1	23.07
			25	12	23.35
			50	0	23.27
382000	1910	10	1	0	23.21
			1	1	23.22
			25	12	23.30
			50	0	23.15

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
371500	1857.5	15	1	0	23.24
			1	1	23.33
			36	18	23.17
			75	0	23.21
376500	1882.5	15	1	0	22.99
			1	1	23.08
			36	18	23.19
			75	0	23.16
381500	1907.5	15	1	0	23.15
			1	1	23.26
			36	18	23.16
			75	0	23.21
372000	1860	20	1	0	23.17
			1	1	23.17
			50	25	23.17
			100	0	23.25
376500	1882.5	20	1	0	23.25
			1	1	23.14
			50	25	23.22
			100	0	23.17
381000	1905	20	1	0	23.34
			1	1	23.22
			50	25	23.28
			100	0	23.23

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
370500	1852.5	5	1	0	22.11
			1	1	22.79
			12	6	23.09
			25	0	22.12
376500	1882.5	5	1	0	21.99
			1	1	23.21
			12	6	23.19
			25	0	22.18
382500	1912.5	5	1	0	22.02
			1	1	22.83
			12	6	23.10
			25	0	22.08
371000	1855	10	1	0	21.91
			1	1	23.46
			25	12	23.21
			50	0	22.15
376500	1882.5	10	1	0	22.26
			1	1	23.08
			25	12	23.22
			50	0	22.30
382000	1910	10	1	0	21.86
			1	1	23.21
			25	12	23.20
			50	0	22.16

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
371500	1857.5	15	1	0	22.38
			1	1	23.21
			36	18	23.27
			75	0	22.21
376500	1882.5	15	1	0	22.04
			1	1	23.52
			36	18	23.23
			75	0	22.23
381500	1907.5	15	1	0	22.15
			1	1	22.86
			36	18	23.18
			75	0	22.20
372000	1860	20	1	0	22.10
			1	1	23.61
			50	25	23.22
			100	0	22.23
376500	1882.5	20	1	0	22.17
			1	1	23.30
			50	25	23.12
			100	0	22.18
381000	1905	20	1	0	22.16
			1	1	23.25
			50	25	23.24
			100	0	22.16

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
370500	1852.5	5	1	0	21.92
			1	1	21.94
			12	6	21.64
			25	0	21.71
376500	1882.5	5	1	0	22.00
			1	1	22.01
			12	6	21.73
			25	0	21.69
382500	1912.5	5	1	0	21.46
			1	1	21.36
			12	6	21.31
			25	0	21.70
371000	1855	10	1	0	21.68
			1	1	21.71
			25	12	21.05
			50	0	21.60
376500	1882.5	10	1	0	21.55
			1	1	21.60
			25	12	21.73
			50	0	21.74
382000	1910	10	1	0	21.49
			1	1	21.50
			25	12	21.72
			50	0	21.62

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
371500	1857.5	15	1	0	21.69
			1	1	21.71
			36	18	21.75
			75	0	21.70
376500	1882.5	15	1	0	21.68
			1	1	21.63
			36	18	21.68
			75	0	21.67
381500	1907.5	15	1	0	21.82
			1	1	21.82
			36	18	21.73
			75	0	21.95
372000	1860	20	1	0	21.80
			1	1	21.81
			50	25	21.78
			100	0	21.79
376500	1882.5	20	1	0	21.43
			1	1	21.45
			50	25	21.67
			100	0	21.66
381000	1905	20	1	0	21.98
			1	1	21.97
			50	25	21.67
			100	0	21.75

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
370500	1852.5	5	1	0	19.13
			1	1	19.15
			12	6	19.60
			25	0	19.65
376500	1882.5	5	1	0	21.87
			1	1	21.87
			12	6	21.78
			25	0	21.72
382500	1912.5	5	1	0	19.18
			1	1	19.18
			12	6	19.54
			25	0	19.59
371000	1855	10	1	0	21.55
			1	1	21.59
			25	12	21.67
			50	0	21.66
376500	1882.5	10	1	0	19.17
			1	1	19.21
			25	12	19.62
			50	0	19.71
382000	1910	10	1	0	21.77
			1	1	21.70
			25	12	21.65
			50	0	21.70

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
371500	1857.5	15	1	0	19.38
			1	1	19.38
			36	18	19.73
			75	0	19.60
376500	1882.5	15	1	0	21.65
			1	1	21.62
			36	18	21.74
			75	0	21.77
381500	1907.5	15	1	0	19.31
			1	1	19.20
			36	18	19.58
			75	0	19.70
372000	1860	20	1	0	21.81
			1	1	21.71
			50	25	21.69
			100	0	21.79
376500	1882.5	20	1	0	19.19
			1	1	19.31
			50	25	19.65
			100	0	19.69
381000	1905	20	1	0	21.95
			1	1	21.84
			50	25	21.72
			100	0	21.75

5G n5 band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
165300	826.5	5	1	0	23.33
			1	1	23.39
			12	6	23.28
			25	0	23.27
167300	836.5	5	1	0	23.15
			1	1	23.19
			12	6	23.23
			25	0	23.21
169300	846.5	5	1	0	23.07
			1	1	23.20
			12	6	23.00
			25	0	23.10
165800	829	10	1	0	23.29
			1	1	23.22
			25	12	23.25
			50	0	23.24
167300	836.5	10	1	0	23.20
			1	1	23.22
			25	12	23.34
			50	0	23.30
168800	844	10	1	0	23.18
			1	1	23.08
			25	12	23.12
			50	0	23.12

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
166300	831.5	15	1	0	23.31
			1	1	23.33
			36	18	23.30
			75	0	23.23
167300	836.5	15	1	0	23.20
			1	1	23.30
			36	18	23.16
			75	0	23.26
168300	841.5	15	1	0	23.18
			1	1	23.17
			36	18	23.12
			75	0	23.20
166800	834	20	1	0	23.06
			1	1	23.07
			50	25	22.92
			100	0	22.89
167300	836.5	20	1	0	22.88
			1	1	22.81
			50	25	22.69
			100	0	22.90
167800	839	20	1	0	22.73
			1	1	22.72
			50	25	22.70
			100	0	22.63

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
165300	826.5	5	1	0	23.33
			1	1	23.30
			12	6	23.29
			25	0	23.27
167300	836.5	5	1	0	23.14
			1	1	23.19
			12	6	23.27
			25	0	23.18
169300	846.5	5	1	0	23.07
			1	1	23.10
			12	6	23.03
			25	0	22.98
165800	829	10	1	0	23.29
			1	1	23.21
			25	12	23.23
			50	0	23.25
167300	836.5	10	1	0	23.21
			1	1	23.22
			25	12	23.33
			50	0	23.30
168800	844	10	1	0	23.07
			1	1	23.18
			25	12	23.26
			50	0	23.16

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
166300	831.5	15	1	0	23.31
			1	1	23.33
			36	18	23.29
			75	0	23.23
167300	836.5	15	1	0	23.15
			1	1	23.16
			36	18	23.16
			75	0	23.26
168300	841.5	15	1	0	23.19
			1	1	23.19
			36	18	23.29
			75	0	23.16
166800	834	20	1	0	22.91
			1	1	22.93
			50	25	22.81
			100	0	22.96
167300	836.5	20	1	0	22.89
			1	1	22.82
			50	25	22.69
			100	0	22.88
167800	839	20	1	0	22.76
			1	1	22.75
			50	25	22.74
			100	0	22.82

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
165300	826.5	5	1	0	22.31
			1	1	23.01
			12	6	23.24
			25	0	22.28
167300	836.5	5	1	0	22.20
			1	1	22.83
			12	6	23.09
			25	0	22.21
169300	846.5	5	1	0	22.15
			1	1	22.71
			12	6	22.95
			25	0	22.03
165800	829	10	1	0	22.27
			1	1	22.92
			25	12	22.31
			50	0	22.28
167300	836.5	10	1	0	22.13
			1	1	22.76
			25	12	22.28
			50	0	22.28
168800	844	10	1	0	22.23
			1	1	22.05
			25	12	22.18
			50	0	22.15

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
166300	831.5	15	1	0	22.29
			1	1	22.98
			36	18	23.24
			75	0	22.22
167300	836.5	15	1	0	22.26
			1	1	22.92
			36	18	22.19
			75	0	22.16
168300	841.5	15	1	0	22.22
			1	1	22.83
			36	18	22.16
			75	0	22.19
166800	834	20	1	0	21.81
			1	1	22.93
			50	25	22.87
			100	0	21.91
167300	836.5	20	1	0	22.02
			1	1	22.99
			50	25	22.73
			100	0	21.79
167800	839	20	1	0	21.67
			1	1	22.78
			50	25	22.89
			100	0	21.65

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
165300	826.5	5	1	0	21.69
			1	1	21.71
			12	6	21.78
			25	0	21.78
167300	836.5	5	1	0	21.94
			1	1	21.43
			12	6	21.74
			25	0	21.71
169300	846.5	5	1	0	22.00
			1	1	21.98
			12	6	21.43
			25	0	21.51
165800	829	10	1	0	22.06
			1	1	22.09
			25	12	21.79
			50	0	21.81
167300	836.5	10	1	0	21.50
			1	1	21.51
			25	12	21.85
			50	0	21.81
168800	844	10	1	0	21.55
			1	1	21.45
			25	12	21.58
			50	0	21.66

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
166300	831.5	15	1	0	22.14
			1	1	22.15
			36	18	22.09
			75	0	21.71
167300	836.5	15	1	0	22.03
			1	1	22.04
			36	18	21.62
			75	0	21.76
168300	841.5	15	1	0	22.00
			1	1	21.99
			36	18	21.68
			75	0	21.72
166800	834	20	1	0	21.20
			1	1	21.23
			50	25	21.42
			100	0	21.39
167300	836.5	20	1	0	21.15
			1	1	21.16
			50	25	21.22
			100	0	21.24
167800	839	20	1	0	21.08
			1	1	21.13
			50	25	21.20
			100	0	21.16

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
165300	826.5	5	1	0	19.50
			1	1	19.42
			12	6	19.85
			25	0	19.80
167300	836.5	5	1	0	19.34
			1	1	19.35
			12	6	19.60
169300	846.5	5	25	0	19.60
			1	0	19.24
			1	1	19.24
165800	829	10	12	6	19.50
			25	0	19.53
			1	0	19.23
			1	1	19.28
167300	836.5	10	25	12	19.77
			50	0	19.71
			1	0	19.35
			1	1	19.22
168800	844	10	25	12	19.72
			50	0	19.83
			1	0	19.16
			1	1	19.16
			25	12	19.56
			50	0	19.59

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
166300	831.5	15	1	0	19.32
			1	1	19.34
			36	18	19.65
			75	0	19.72
167300	836.5	15	1	0	19.39
			1	1	19.29
			36	18	19.57
			75	0	19.70
168300	841.5	15	1	0	19.33
			1	1	19.39
			36	18	19.75
			75	0	19.68
166800	834	20	1	0	19.01
			1	1	19.05
			50	25	19.34
			100	0	19.41
167300	836.5	20	1	0	18.92
			1	1	18.94
			50	25	19.19
			100	0	19.26
167800	839	20	1	0	19.00
			1	1	19.00
			50	25	19.40
			100	0	19.30

5G n7 band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
500500	2502.5	5	1	0	22.93
			1	1	22.87
			12	6	22.97
			25	0	22.99
507000	2535	5	1	0	22.79
			1	1	22.82
			12	6	22.86
			25	0	22.94
513500	2567.5	5	1	0	22.74
			1	1	22.76
			12	6	22.77
			25	0	22.83
501000	2505	10	1	0	22.65
			1	1	22.62
			25	12	23.02
			50	0	23.07
507000	2535	10	1	0	23.38
			1	1	23.40
			25	12	23.56
			50	0	23.54
513000	2565	10	1	0	23.35
			1	1	23.36
			25	12	23.44
			50	0	23.37

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
501500	2507.5	15	1	0	23.64
			1	1	23.61
			36	18	23.71
			75	0	23.63
507000	2535	15	1	0	23.56
			1	1	23.55
			36	18	23.47
			75	0	23.58
512500	2562.5	15	1	0	23.38
			1	1	23.39
			36	18	23.36
			75	0	23.51
502000	2510	20	1	0	23.65
			1	1	23.75
			50	25	23.61
			100	0	23.64
507000	2535	20	1	0	23.42
			1	1	23.50
			50	25	23.37
			100	0	23.36
512000	2560	20	1	0	23.25
			1	1	23.23
			50	25	23.31
			100	0	23.37

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
500500	2502.5	5	1	0	22.98
			1	1	22.91
			12	6	22.99
			25	0	23.04
507000	2535	5	1	0	22.79
			1	1	22.80
			12	6	22.89
			25	0	22.87
513500	2567.5	5	1	0	22.76
			1	1	22.72
			12	6	22.84
			25	0	22.81
501000	2505	10	1	0	23.44
			1	1	23.44
			25	12	23.66
			50	0	23.54
507000	2535	10	1	0	23.49
			1	1	23.42
			25	12	23.47
			50	0	23.53
513000	2565	10	1	0	23.35
			1	1	23.34
			25	12	23.43
			50	0	23.42

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
501500	2507.5	15	1	0	23.54
			1	1	23.54
			36	18	23.69
			75	0	23.15
507000	2535	15	1	0	23.57
			1	1	23.66
			36	18	23.58
			75	0	23.58
512500	2562.5	15	1	0	23.35
			1	1	23.46
			36	18	23.38
			75	0	23.40
502000	2510	20	1	0	23.62
			1	1	23.63
			50	25	23.70
			100	0	23.63
507000	2535	20	1	0	23.43
			1	1	23.41
			50	25	23.35
			100	0	23.40
512000	2560	20	1	0	23.27
			1	1	23.26
			50	25	23.30
			100	0	23.38

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
500500	2502.5	5	1	0	22.14
			1	1	22.09
			12	6	21.96
			25	0	21.93
507000	2535	5	1	0	22.04
			1	1	22.81
			12	6	22.82
			25	0	21.97
513500	2567.5	5	1	0	21.30
			1	1	22.92
			12	6	22.73
			25	0	21.83
501000	2505	10	1	0	22.51
			1	1	23.63
			25	12	23.56
			50	0	22.50
507000	2535	10	1	0	22.45
			1	1	23.56
			25	12	23.50
			50	0	22.47
513000	2565	10	1	0	22.49
			1	1	23.21
			25	12	23.38
			50	0	22.46

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
501500	2507.5	15	1	0	22.50
			1	1	23.83
			36	18	23.69
			75	0	22.68
507000	2535	15	1	0	22.70
			1	1	23.55
			36	18	23.60
			75	0	22.58
512500	2562.5	15	1	0	22.28
			1	1	23.76
			36	18	23.33
			75	0	23.38
502000	2510	20	1	0	22.80
			1	1	23.60
			50	25	23.65
			100	0	22.66
507000	2535	20	1	0	22.35
			1	1	23.78
			50	25	23.39
			100	0	22.41
512000	2560	20	1	0	22.38
			1	1	23.61
			50	25	23.43
			100	0	22.52

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
500500	2502.5	5	1	0	21.37
			1	1	21.36
			12	6	21.38
			25	0	21.48
507000	2535	5	1	0	21.34
			1	1	21.30
			12	6	21.29
513500	2567.5	5	25	0	21.41
			1	0	21.04
			1	1	21.11
			12	6	21.34
501000	2505	10	25	0	21.33
			1	0	21.65
			1	1	21.65
			25	12	22.04
507000	2535	10	50	0	22.09
			1	0	22.12
			1	1	22.00
			25	12	21.92
513000	2565	10	50	0	22.02
			1	0	21.82
			1	1	21.71
			25	12	21.87
			50	0	21.86

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
501500	2507.5	15	1	0	22.06
			1	1	22.75
			36	18	22.16
			75	0	22.23
507000	2535	15	1	0	22.11
			1	1	21.99
			36	18	22.04
			75	0	21.96
512500	2562.5	15	1	0	21.94
			1	1	21.93
			36	18	21.95
			75	0	21.93
502000	2510	20	1	0	22.11
			1	1	22.11
			50	25	22.11
			100	0	22.13
507000	2535	20	1	0	21.94
			1	1	21.93
			50	25	21.93
			100	0	21.97
512000	2560	20	1	0	21.91
			1	1	21.77
			50	25	22.06
			100	0	22.04

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
500500	2502.5	5	1	0	19.06
			1	1	19.05
			12	6	19.47
			25	0	19.44
507000	2535	5	1	0	19.08
			1	1	18.97
			12	6	19.28
			25	0	19.32
513500	2567.5	5	1	0	18.69
			1	1	18.76
			12	6	19.25
			25	0	19.27
501000	2505	10	1	0	19.66
			1	1	19.63
			25	12	20.00
			50	0	20.07
507000	2535	10	1	0	20.15
			1	1	20.13
			25	12	20.04
			50	0	20.09
513000	2565	10	1	0	19.46
			1	1	19.47
			25	12	19.82
			50	0	19.87

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
501500	2507.5	15	1	0	20.11
			1	1	20.33
			36	18	20.06
			75	0	20.22
507000	2535	15	1	0	19.70
			1	1	19.69
			36	18	20.00
			75	0	19.99
512500	2562.5	15	1	0	19.96
			1	1	19.95
			36	18	19.85
			75	0	19.93
502000	2510	20	1	0	19.77
			1	1	19.77
			50	25	20.12
			100	0	20.12
507000	2535	20	1	0	19.94
			1	1	19.93
			50	25	19.95
			100	0	19.97
512000	2560	20	1	0	19.62
			1	1	19.52
			50	25	19.99
			100	0	19.96

5G n41 band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
501204	2506.02	20	1	0	22.62
			1	1	22.08
			25	12	22.56
			50	0	22.57
518598	2592.99	20	1	0	22.50
			1	1	22.32
			25	12	22.40
			50	0	22.59
535998	2679.99	20	1	0	22.35
			1	1	22.85
			25	12	22.66
			50	0	22.66
502200	2511	30	1	0	23.03
			1	1	22.48
			36	18	22.48
			75	0	22.54
518598	2592.99	30	1	0	22.82
			1	1	22.43
			36	18	22.31
			75	0	22.40
534996	2674.98	30	1	0	23.03
			1	1	22.26
			36	18	22.08
			75	0	22.40

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
503202	2516.01	40	1	0	22.79
			1	1	22.34
			50	25	23.02
			100	0	22.19
518598	2592.99	40	1	0	22.82
			1	1	22.37
			50	25	22.69
			100	0	22.50
534000	2670	40	1	0	22.91
			1	1	22.33
			50	25	22.65
			100	0	22.63
504204	2521.02	50	1	0	22.78
			1	1	22.30
			64	32	22.17
			128	0	22.14
518598	2592.99	50	1	0	22.56
			1	1	22.05
			64	32	22.10
			128	0	22.40
532998	2664.99	50	1	0	22.33
			1	1	22.17
			64	32	22.29
			128	0	22.28

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
505200	2526	60	1	0	22.38
			1	1	22.89
			81	40	23.04
			162	0	22.21
518598	2592.99	60	1	0	22.59
			1	1	22.08
			81	40	22.31
			162	0	22.27
531996	2659.98	60	1	0	22.27
			1	1	22.69
			81	40	22.34
			162	0	22.43
507204	2536.02	80	1	0	23.13
			1	1	23.03
			108	54	23.30
			216	0	22.35
518598	2592.99	80	1	0	22.17
			1	1	22.65
			108	54	22.30
			216	0	22.46
529998	2649.99	80	1	0	23.35
			1	1	22.87
			108	54	22.67
			216	0	22.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
509202	2546.01	100	1	0	22.93
			1	1	22.99
			135	67	23.02
			270	0	22.82
518598	2592.99	100	1	0	22.86
			1	1	22.66
			135	67	22.81
			270	0	22.56
528000	2640	100	1	0	23.17
			1	1	23.22
			135	67	23.39
			270	0	23.35

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
501204	2506.02	20	1	0	23.51
			1	1	23.02
			25	12	22.15
			50	0	22.43
518598	2592.99	20	1	0	22.80
			1	1	22.39
			25	12	22.36
535998	2679.99	20	50	0	22.34
			1	0	22.42
			1	1	22.78
502200	2511	30	25	12	22.69
			50	0	22.67
			1	0	23.02
518598	2592.99	30	1	1	22.46
			36	18	22.53
			75	0	22.50
			1	0	23.06
534996	2674.98	30	1	1	22.83
			36	18	22.77
			75	0	22.93
			1	0	23.03
			1	1	23.08
			36	18	23.18
			75	0	23.24
			1	0	23.03

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
503202	2516.01	40	1	0	22.81
			1	1	22.26
			50	25	22.99
			100	0	22.18
518598	2592.99	40	1	0	22.79
			1	1	22.28
			50	25	22.38
			100	0	22.56
534000	2670	40	1	0	22.89
			1	1	22.32
			50	25	22.66
			100	0	22.74
504204	2521.02	50	1	0	23.04
			1	1	23.21
			64	32	23.31
			128	0	23.15
518598	2592.99	50	1	0	23.00
			1	1	23.11
			64	32	23.08
			128	0	23.30
532998	2664.99	50	1	0	22.94
			1	1	23.04
			64	32	22.61
			128	0	22.83

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
505200	2526	60	1	0	23.31
			1	1	22.76
			81	40	23.06
			162	0	23.21
518598	2592.99	60	1	0	23.62
			1	1	23.10
			81	40	23.37
			162	0	23.35
531996	2659.98	60	1	0	23.19
			1	1	23.32
			81	40	23.36
			162	0	23.11
507204	2536.02	80	1	0	22.51
			1	1	22.94
			108	54	22.27
			216	0	22.35
518598	2592.99	80	1	0	23.10
			1	1	23.09
			108	54	23.40
			216	0	23.16
529998	2649.99	80	1	0	23.18
			1	1	23.80
			108	54	23.14
			216	0	23.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
509202	2546.01	100	1	0	23.50
			1	1	23.03
			135	67	23.63
			270	0	23.44
518598	2592.99	100	1	0	23.24
			1	1	23.17
			135	67	23.36
			270	0	23.48
528000	2640	100	1	0	23.73
			1	1	23.12
			135	67	23.19
			270	0	23.40

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
501204	2506.02	20	1	0	21.71
			1	1	22.22
			25	12	22.09
			50	0	22.56
518598	2592.99	20	1	0	22.05
			1	1	22.51
			25	12	22.33
			50	0	22.32
535998	2679.99	20	1	0	22.25
			1	1	22.80
			25	12	22.79
			50	0	22.69
502200	2511	30	1	0	22.10
			1	1	22.45
			36	18	22.43
			75	0	22.50
518598	2592.99	30	1	0	22.08
			1	1	22.50
			36	18	22.35
			75	0	22.36
534996	2674.98	30	1	0	21.58
			1	1	22.04
			36	18	22.00
			75	0	22.07

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
503202	2516.01	40	1	0	21.85
			1	1	22.63
			50	25	21.93
			100	0	22.25
518598	2592.99	40	1	0	21.91
			1	1	22.46
			50	25	22.65
			100	0	22.55
534000	2670	40	1	0	22.08
			1	1	22.40
			50	25	22.78
			100	0	22.69
504204	2521.02	50	1	0	21.84
			1	1	22.29
			64	32	22.20
			128	0	22.18
518598	2592.99	50	1	0	21.84
			1	1	22.18
			64	32	22.15
			128	0	22.26
532998	2664.99	50	1	0	21.57
			1	1	22.03
			64	32	22.06
			128	0	22.70

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
505200	2526	60	1	0	21.45
			1	1	22.00
			81	40	22.01
			162	0	22.19
518598	2592.99	60	1	0	21.96
			1	1	22.42
			81	40	22.35
			162	0	22.32
531996	2659.98	60	1	0	22.22
			1	1	22.59
			81	40	22.34
			162	0	22.15
507204	2536.02	80	1	0	21.58
			1	1	21.98
			108	54	22.32
			216	0	22.30
518598	2592.99	80	1	0	22.26
			1	1	22.51
			108	54	22.26
			216	0	22.29
529998	2649.99	80	1	0	21.37
			1	1	22.03
			108	54	22.62
			216	0	22.11

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
509202	2546.01	100	1	0	22.45
			1	1	22.23
			135	67	22.60
			270	0	22.26
518598	2592.99	100	1	0	22.61
			1	1	23.08
			135	67	22.55
			270	0	22.76
528000	2640	100	1	0	21.94
			1	1	22.39
			135	67	22.27
			270	0	22.56

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
501204	2506.02	20	1	0	21.41
			1	1	22.03
			25	12	22.16
			50	0	22.06
518598	2592.99	20	1	0	21.54
			1	1	22.03
			25	12	22.34
535998	2679.99	20	50	0	22.34
			1	0	22.24
			1	1	22.58
			25	12	22.74
502200	2511	30	50	0	22.82
			1	0	22.20
			1	1	22.74
			36	18	22.50
518598	2592.99	30	75	0	22.48
			1	0	21.98
			1	1	22.25
534996	2674.98	30	36	18	22.37
			75	0	22.35
			1	0	21.50
			1	1	21.99
			36	18	21.70
			75	0	21.74

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
503202	2516.01	40	1	0	21.13
			1	1	21.63
			50	25	22.00
			100	0	22.21
518598	2592.99	40	1	0	21.06
			1	1	22.17
			50	25	22.39
			100	0	22.61
534000	2670	40	1	0	21.56
			1	1	22.08
			50	25	22.29
			100	0	22.71
504204	2521.02	50	1	0	21.98
			1	1	22.53
			64	32	22.21
			128	0	22.15
518598	2592.99	50	1	0	21.73
			1	1	22.31
			64	32	22.13
			128	0	22.06
532998	2664.99	50	1	0	21.45
			1	1	21.95
			64	32	21.67
			128	0	21.73

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
505200	2526	60	1	0	21.50
			1	1	21.94
			81	40	22.09
			162	0	22.20
518598	2592.99	60	1	0	21.19
			1	1	22.03
			81	40	22.36
			162	0	22.35
531996	2659.98	60	1	0	22.33
			1	1	22.46
			81	40	22.34
			162	0	22.16
507204	2536.02	80	1	0	21.37
			1	1	21.74
			108	54	22.24
			216	0	22.25
518598	2592.99	80	1	0	21.92
			1	1	22.26
			108	54	22.36
			216	0	22.04
529998	2649.99	80	1	0	21.03
			1	1	22.03
			108	54	22.47
			216	0	22.51

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
509202	2546.01	100	1	0	21.41
			1	1	22.00
			135	67	22.55
			270	0	22.47
518598	2592.99	100	1	0	22.07
			1	1	22.59
			135	67	22.57
			270	0	22.50
528000	2640	100	1	0	21.73
			1	1	21.92
			135	67	22.51
			270	0	22.49

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
501204	2506.02	20	1	0	21.03
			1	1	21.06
			25	12	20.73
			50	0	20.82
518598	2592.99	20	1	0	20.33
			1	1	20.65
			25	12	20.77
			50	0	20.79
535998	2679.99	20	1	0	20.23
			1	1	20.24
			25	12	20.18
			50	0	20.23
502200	2511	30	1	0	20.72
			1	1	20.66
			36	18	20.92
			75	0	20.96
518598	2592.99	30	1	0	20.52
			1	1	20.23
			36	18	20.84
			75	0	20.83
534996	2674.98	30	1	0	20.17
			1	1	20.12
			36	18	20.16
			75	0	20.48

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	Output Power (dBm)
256QAM						
503202	2516.01	40	1	0	20.59	20.54
			1	1	20.67	20.62
			50	25	20.50	20.45
			100	0	20.68	20.63
518598	2592.99	40	1	0	20.71	20.66
			1	1	20.40	20.35
			50	25	20.08	20.03
			100	0	20.06	20.01
534000	2670	40	1	0	20.80	20.75
			1	1	20.77	20.72
			50	25	20.26	20.21
			100	0	20.19	20.14
504204	2521.02	50	1	0	20.73	20.68
			1	1	20.25	20.2
			64	32	20.24	20.19
			128	0	20.20	20.15
518598	2592.99	50	1	0	20.34	20.29
			1	1	20.33	20.28
			64	32	20.60	20.55
			128	0	20.58	20.53
532998	2664.99	50	1	0	19.83	19.78
			1	1	20.16	20.11
			64	32	20.15	20.1
			128	0	20.10	20.05

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	Output Power (dBm)
256QAM						
505200	2526	60	1	0	20.15	20.1
			1	1	20.19	20.14
			81	40	20.43	20.38
			162	0	20.66	20.61
518598	2592.99	60	1	0	20.51	20.46
			1	1	20.61	20.56
			81	40	20.81	20.76
531996	2659.98	60	162	0	20.83	20.78
			1	0	20.11	20.06
			1	1	20.06	20.01
			81	40	20.84	20.79
507204	2536.02	80	162	0	21.02	20.97
			1	0	20.23	20.18
			1	1	20.37	20.32
			108	54	20.73	20.68
518598	2592.99	80	216	0	20.65	20.6
			1	0	20.99	20.94
			1	1	21.03	20.98
			108	54	20.82	20.77
529998	2649.99	80	216	0	20.93	20.88
			1	0	20.08	20.03
			1	1	20.25	20.2
			108	54	21.02	20.97
529998	2649.99	80	216	0	20.95	20.9

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	Output Power (dBm)
256QAM						
509202	2546.01	100	1	0	20.55	20.5
			1	1	20.61	20.56
			135	67	20.16	20.11
			270	0	20.98	20.93
518598	2592.99	100	1	0	20.26	20.21
			1	1	20.17	20.12
			135	67	20.98	20.93
			270	0	20.26	20.21
528000	2640	100	1	0	20.28	20.23
			1	1	20.59	20.54
			135	67	20.37	20.32
			270	0	20.06	20.01

5G n66 band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)	Output Power (dBm)
PI/2 BPSK						
342500	1712.5	5	1	0	23.44	23.39
			1	1	23.39	23.34
			12	6	23.59	23.54
			25	0	23.53	23.48
349000	1745	5	1	0	23.49	23.44
			1	1	23.41	23.36
			12	6	23.48	23.43
			25	0	23.49	23.44
355500	1777.5	5	1	0	23.56	23.51
			1	1	23.58	23.53
			12	6	23.49	23.44
			25	0	23.37	23.32
343000	1715	10	1	0	23.51	23.46
			1	1	23.45	23.4
			25	12	23.85	23.8
			50	0	23.91	23.86
349000	1745	10	1	0	23.49	23.44
			1	1	23.33	23.28
			25	12	23.52	23.47
			50	0	23.51	23.46
355000	1775	10	1	0	23.27	23.22
			1	1	23.29	23.24
			25	12	23.36	23.31
			50	0	23.38	23.33

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
343500	1717.5	15	1	0	22.86
			1	1	22.74
			36	18	22.86
			75	0	22.79
349000	1745	15	1	0	22.73
			1	1	22.77
			36	18	22.75
			75	0	22.81
354500	1772.5	15	1	0	22.74
			1	1	22.66
			36	18	22.65
			75	0	22.67
344000	1720	20	1	0	22.94
			1	1	22.84
			50	25	22.72
			100	0	22.85
349000	1745	20	1	0	22.93
			1	1	22.84
			50	25	22.81
			100	0	22.96
354000	1770	20	1	0	22.83
			1	1	22.74
			50	25	22.90
			100	0	22.83

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
342500	1712.5	5	1	0	23.45
			1	1	23.40
			12	6	23.60
			25	0	23.53
349000	1745	5	1	0	23.40
			1	1	23.67
			12	6	23.57
355500	1777.5	5	25	0	23.53
			1	0	23.16
			1	1	23.35
			12	6	23.35
343000	1715	10	25	0	23.27
			1	0	23.39
			1	1	23.41
			25	12	23.44
349000	1745	10	50	0	23.41
			1	0	23.40
			1	1	23.56
			25	12	23.43
355000	1775	10	50	0	23.46
			1	0	23.34
			1	1	23.36
			25	12	23.40
			50	0	23.39

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
343500	1717.5	15	1	0	23.50
			1	1	23.47
			36	18	23.46
			75	0	23.49
349000	1745	15	1	0	23.44
			1	1	23.43
			36	18	23.37
			75	0	23.39
354500	1772.5	15	1	0	23.23
			1	1	23.31
			36	18	23.25
			75	0	23.32
344000	1720	20	1	0	23.64
			1	1	23.64
			50	25	23.48
			100	0	23.48
349000	1745	20	1	0	23.42
			1	1	23.36
			50	25	23.35
			100	0	23.45
354000	1770	20	1	0	23.36
			1	1	23.43
			50	25	23.45
			100	0	23.38

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
342500	1712.5	5	1	0	21.77
			1	1	22.54
			12	6	22.92
			25	0	21.92
349000	1745	5	1	0	21.95
			1	1	23.15
			12	6	22.97
			25	0	21.95
355500	1777.5	5	1	0	21.36
			1	1	22.51
			12	6	22.69
			25	0	21.79
343000	1715	10	1	0	21.62
			1	1	22.67
			25	12	22.81
			50	0	21.82
349000	1745	10	1	0	21.74
			1	1	22.72
			25	12	22.64
			50	0	22.50
355000	1775	10	1	0	22.28
			1	1	22.41
			25	12	22.68
			50	0	22.73

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
343500	1717.5	15	1	0	21.72
			1	1	22.73
			36	18	23.01
			75	0	22.06
349000	1745	15	1	0	21.96
			1	1	23.09
			36	18	22.73
			75	0	21.82
354500	1772.5	15	1	0	22.30
			1	1	22.57
			36	18	22.73
			75	0	22.73
344000	1720	20	1	0	21.82
			1	1	22.81
			50	25	22.91
			100	0	21.87
349000	1745	20	1	0	22.05
			1	1	23.14
			50	25	22.81
			100	0	21.80
354000	1770	20	1	0	22.75
			1	1	22.64
			50	25	22.80
			100	0	22.73

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
342500	1712.5	5	1	0	22.29
			1	1	23.42
			12	6	23.62
			25	0	22.53
349000	1745	5	1	0	22.29
			1	1	22.31
			12	6	22.06
355500	1777.5	5	25	0	21.97
			1	0	21.51
			1	1	21.55
			12	6	21.75
343000	1715	10	25	0	21.79
			1	0	22.19
			1	1	22.22
			25	12	21.89
349000	1745	10	50	0	21.94
			1	0	22.24
			1	1	22.17
			25	12	22.06
355000	1775	10	50	0	21.98
			1	0	21.73
			1	1	21.76
			25	12	21.79
			50	0	21.90

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
343500	1717.5	15	1	0	21.92
			1	1	21.83
			36	18	22.02
			75	0	21.99
349000	1745	15	1	0	21.88
			1	1	21.87
			36	18	21.87
			75	0	21.88
354500	1772.5	15	1	0	21.78
			1	1	21.76
			36	18	21.76
			75	0	21.80
344000	1720	20	1	0	21.84
			1	1	21.95
			50	25	21.97
			100	0	22.09
349000	1745	20	1	0	21.92
			1	1	21.81
			50	25	21.78
			100	0	21.81
354000	1770	20	1	0	21.77
			1	1	21.85
			50	25	21.82
			100	0	21.87

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
342500	1712.5	5	1	0	19.57
			1	1	19.59
			12	6	19.96
			25	0	19.90
349000	1745	5	1	0	20.20
			1	1	20.11
			12	6	20.07
			25	0	19.96
355500	1777.5	5	1	0	19.29
			1	1	19.34
			12	6	19.68
			25	0	19.72
343000	1715	10	1	0	19.49
			1	1	19.52
			25	12	19.84
			50	0	19.91
349000	1745	10	1	0	20.23
			1	1	19.66
			25	12	19.05
			50	0	19.15
355000	1775	10	1	0	19.39
			1	1	19.36
			25	12	19.73
			50	0	19.80

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
343500	1717.5	15	1	0	20.08
			1	1	20.09
			36	18	19.98
			75	0	20.04
349000	1745	15	1	0	19.49
			1	1	19.48
			36	18	19.76
			75	0	19.81
354500	1772.5	15	1	0	20.01
			1	1	19.98
			36	18	19.67
			75	0	19.79
344000	1720	20	1	0	19.66
			1	1	19.67
			50	25	19.96
			100	0	20.09
349000	1745	20	1	0	19.82
			1	1	19.82
			50	25	19.81
			100	0	19.89
354000	1770	20	1	0	19.41
			1	1	19.38
			50	25	19.76
			100	0	19.90

5G n71 band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
133100	665.5	5	1	0	23.01
			1	1	23.99
			12	6	23.96
			25	0	23.64
136100	680.5	5	1	0	23.67
			1	1	23.61
			12	6	23.65
			25	0	23.58
139100	695.5	5	1	0	23.56
			1	1	23.58
			12	6	23.40
			25	0	23.33
133600	668	10	1	0	23.99
			1	1	23.88
			25	12	23.95
			50	0	23.86
136100	680.5	10	1	0	23.68
			1	1	23.59
			25	12	23.74
			50	0	23.65
138600	693	10	1	0	22.74
			1	1	23.66
			25	12	23.49
			50	0	22.45

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
134100	670.5	15	1	0	23.83
			1	1	23.80
			36	18	23.58
			75	0	23.61
136100	680.5	15	1	0	23.64
			1	1	23.68
			36	18	23.60
			75	0	23.49
138100	690.5	15	1	0	23.56
			1	1	23.51
			36	18	23.46
			75	0	23.43
134600	673	20	1	0	23.98
			1	1	23.82
			50	25	23.58
			100	0	23.76
136100	680.5	20	1	0	23.68
			1	1	23.60
			50	25	23.56
			100	0	23.61
137600	688	20	1	0	23.54
			1	1	23.61
			50	25	23.60
			100	0	23.49

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
133100	665.5	5	1	0	22.91
			1	1	23.94
			12	6	23.87
			25	0	23.77
136100	680.5	5	1	0	23.66
			1	1	23.60
			12	6	23.65
			25	0	23.56
139100	695.5	5	1	0	23.40
			1	1	23.41
			12	6	23.44
			25	0	23.46
133600	668	10	1	0	23.87
			1	1	23.96
			25	12	23.85
			50	0	23.93
136100	680.5	10	1	0	23.70
			1	1	23.73
			25	12	23.60
			50	0	23.58
138600	693	10	1	0	22.68
			1	1	23.53
			25	12	23.49
			50	0	22.45

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
134100	670.5	15	1	0	23.81
			1	1	23.82
			36	18	23.68
			75	0	23.63
136100	680.5	15	1	0	23.61
			1	1	23.65
			36	18	23.55
			75	0	23.58
138100	690.5	15	1	0	23.54
			1	1	23.56
			36	18	23.45
			75	0	23.43
134600	673	20	1	0	23.81
			1	1	23.74
			50	25	23.65
			100	0	23.68
136100	680.5	20	1	0	23.67
			1	1	23.58
			50	25	23.55
			100	0	23.61
137600	688	20	1	0	23.57
			1	1	23.64
			50	25	23.51
			100	0	23.49

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
133100	665.5	5	1	0	21.73
			1	1	22.58
			12	6	22.09
			25	0	22.60
136100	680.5	5	1	0	22.83
			1	1	22.74
			12	6	22.38
			25	0	22.54
139100	695.5	5	1	0	22.40
			1	1	22.68
			12	6	22.56
			25	0	22.36
133600	668	10	1	0	22.20
			1	1	22.21
			25	12	22.08
			50	0	22.71
136100	680.5	10	1	0	22.64
			1	1	22.70
			25	12	22.51
			50	0	22.58
138600	693	10	1	0	22.70
			1	1	22.62
			25	12	22.54
			50	0	22.49

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
134100	670.5	15	1	0	22.81
			1	1	22.63
			36	18	22.41
			75	0	22.70
136100	680.5	15	1	0	22.81
			1	1	22.75
			36	18	22.55
			75	0	22.57
138100	690.5	15	1	0	22.57
			1	1	22.38
			36	18	22.45
			75	0	22.36
134600	673	20	1	0	22.77
			1	1	22.76
			50	25	22.56
			100	0	22.61
136100	680.5	20	1	0	22.51
			1	1	22.83
			50	25	22.55
			100	0	22.48
137600	688	20	1	0	22.78
			1	1	22.56
			50	25	22.44
			100	0	22.44

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
133100	665.5	5	1	0	20.92
			1	1	21.02
			12	6	21.63
			25	0	22.09
136100	680.5	5	1	0	22.00
			1	1	22.07
			12	6	21.98
139100	695.5	5	25	0	22.07
			1	0	21.71
			1	1	22.68
133600	668	10	12	6	22.06
			25	0	22.45
			1	0	22.33
			1	1	22.33
136100	680.5	10	25	12	22.61
			50	0	22.36
			1	0	22.43
138600	693	10	1	1	22.46
			25	12	22.06
			50	0	22.02
			1	0	21.94
136100	680.5	10	1	1	21.82
			25	12	22.01
			50	0	22.06

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
134100	670.5	15	1	0	22.22
			1	1	22.30
			36	18	21.93
			75	0	22.19
136100	680.5	15	1	0	21.98
			1	1	22.02
			36	18	22.09
			75	0	22.09
138100	690.5	15	1	0	21.80
			1	1	21.78
			36	18	21.88
			75	0	21.91
134600	673	20	1	0	22.24
			1	1	22.23
			50	25	22.08
			100	0	22.10
136100	680.5	20	1	0	22.43
			1	1	22.00
			50	25	22.06
			100	0	22.09
137600	688	20	1	0	21.91
			1	1	21.98
			50	25	21.99
			100	0	21.99

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
133100	665.5	5	1	0	19.16
			1	1	19.24
			12	6	20.02
			25	0	20.07
136100	680.5	5	1	0	19.81
			1	1	19.81
			12	6	20.02
			25	0	20.03
139100	695.5	5	1	0	20.14
			1	1	20.22
			12	6	19.87
			25	0	19.91
133600	668	10	1	0	19.85
			1	1	19.94
			25	12	19.99
			50	0	20.27
136100	680.5	10	1	0	20.35
			1	1	20.27
			25	12	20.06
			50	0	20.09
138600	693	10	1	0	19.65
			1	1	19.68
			25	12	20.00
			50	0	19.74

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
134100	670.5	15	1	0	19.92
			1	1	20.00
			36	18	20.20
			75	0	20.15
136100	680.5	15	1	0	19.70
			1	1	19.72
			36	18	19.91
			75	0	19.97
138100	690.5	15	1	0	19.67
			1	1	19.68
			36	18	19.84
			75	0	19.84
134600	673	20	1	0	20.08
			1	1	20.25
			50	25	20.18
			100	0	20.19
136100	680.5	20	1	0	20.35
			1	1	20.35
			50	25	20.03
			100	0	19.98
137600	688	20	1	0	19.62
			1	1	19.62
			50	25	19.95
			100	0	19.97

5G n77 Lower band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
630668	3460.02	20	1	0	22.62
			1	1	22.08
			25	12	22.56
			50	0	22.57
633334	3500.01	20	1	0	22.50
			1	1	22.32
			25	12	22.40
			50	0	22.59
636000	3540	20	1	0	22.35
			1	1	22.85
			25	12	22.66
			50	0	22.66
631000	3465	30	1	0	23.03
			1	1	22.48
			36	18	22.48
			75	0	22.54
633334	3500.01	30	1	0	22.82
			1	1	22.43
			36	18	22.31
			75	0	22.40
635666	3534.99	30	1	0	23.03
			1	1	22.26
			36	18	22.08
			75	0	22.40

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
631000	3470.01	40	1	0	22.79
			1	1	22.34
			50	25	23.02
			100	0	22.19
633334	3500.01	40	1	0	22.82
			1	1	22.37
			50	25	22.69
			100	0	22.50
635332	3529.98	40	1	0	22.91
			1	1	22.33
			50	25	22.65
			100	0	22.63
631668	3475.02	50	1	0	22.78
			1	1	22.30
			64	32	22.17
			128	0	22.14
633334	3500.01	50	1	0	22.56
			1	1	22.05
			64	32	22.10
			128	0	22.40
635000	3525	50	1	0	22.33
			1	1	22.17
			64	32	22.29
			128	0	22.28

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
632000	3480	60	1	0	22.38
			1	1	22.89
			81	40	23.04
			162	0	22.21
633334	3500.01	60	1	0	22.59
			1	1	22.08
			81	40	22.31
			162	0	22.27
634666	3519.99	60	1	0	22.27
			1	1	22.69
			81	40	22.34
			162	0	22.43
632668	3490.02	80	1	0	23.13
			1	1	23.03
			108	54	23.30
			216	0	22.35
633334	3500.01	80	1	0	22.17
			1	1	22.65
			108	54	22.30
			216	0	22.46
634000	3510	80	1	0	23.35
			1	1	22.87
			108	54	22.67
			216	0	22.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
633334	3500.01	100	1	0	22.93
			1	1	22.99
			135	67	23.02
			270	0	22.82

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
630668	3460.02	20	1	0	23.51
			1	1	23.02
			25	12	22.15
			50	0	22.43
633334	3500.01	20	1	0	22.80
			1	1	22.39
			25	12	22.36
			50	0	22.34
636000	3540	20	1	0	22.42
			1	1	22.78
			25	12	22.69
			50	0	22.67
631000	3465	30	1	0	23.02
			1	1	22.46
			36	18	22.53
			75	0	22.50
633334	3500.01	30	1	0	23.06
			1	1	22.83
			36	18	22.77
			75	0	22.93
635666	3534.99	30	1	0	23.03
			1	1	23.08
			36	18	23.18
			75	0	23.24

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
631000	3470.01	40	1	0	22.81
			1	1	22.26
			50	25	22.99
			100	0	22.18
633334	3500.01	40	1	0	22.79
			1	1	22.28
			50	25	22.38
			100	0	22.56
635332	3529.98	40	1	0	22.89
			1	1	22.32
			50	25	22.66
			100	0	22.74
631668	3475.02	50	1	0	23.04
			1	1	23.21
			64	32	23.31
			128	0	23.15
633334	3500.01	50	1	0	23.00
			1	1	23.11
			64	32	23.08
			128	0	23.30
635000	3525	50	1	0	22.94
			1	1	23.04
			64	32	22.61
			128	0	22.83

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
632000	3480	60	1	0	23.31
			1	1	22.76
			81	40	23.06
			162	0	23.21
633334	3500.01	60	1	0	23.62
			1	1	23.10
			81	40	23.37
			162	0	23.35
634666	3519.99	60	1	0	23.19
			1	1	23.32
			81	40	23.36
			162	0	23.11
632668	3490.02	80	1	0	22.51
			1	1	22.94
			108	54	22.27
			216	0	22.35
633334	3500.01	80	1	0	23.10
			1	1	23.09
			108	54	23.40
			216	0	23.16
634000	3510	80	1	0	23.18
			1	1	23.80
			108	54	23.14
			216	0	23.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
633334	3500.01	100	1	0	23.50
			1	1	23.03
			135	67	23.63
			270	0	23.44

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
630668	3460.02	20	1	0	21.71
			1	1	22.22
			25	12	22.09
			50	0	22.56
633334	3500.01	20	1	0	22.05
			1	1	22.51
			25	12	22.33
			50	0	22.32
636000	3540	20	1	0	22.25
			1	1	22.80
			25	12	22.79
			50	0	22.69
631000	3465	30	1	0	22.10
			1	1	22.45
			36	18	22.43
			75	0	22.50
633334	3500.01	30	1	0	22.08
			1	1	22.50
			36	18	22.35
			75	0	22.36
635666	3534.99	30	1	0	21.58
			1	1	22.04
			36	18	22.00
			75	0	22.07

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
631000	3470.01	40	1	0	21.85
			1	1	22.63
			50	25	21.93
			100	0	22.25
633334	3500.01	40	1	0	21.91
			1	1	22.46
			50	25	22.65
			100	0	22.55
635332	3529.98	40	1	0	22.08
			1	1	22.40
			50	25	22.78
			100	0	22.69
631668	3475.02	50	1	0	21.84
			1	1	22.29
			64	32	22.20
			128	0	22.18
633334	3500.01	50	1	0	21.84
			1	1	22.18
			64	32	22.15
			128	0	22.26
635000	3525	50	1	0	21.57
			1	1	22.03
			64	32	22.06
			128	0	22.70

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
632000	3480	60	1	0	21.45
			1	1	22.00
			81	40	22.01
			162	0	22.19
633334	3500.01	60	1	0	21.96
			1	1	22.42
			81	40	22.35
			162	0	22.32
634666	3519.99	60	1	0	22.22
			1	1	22.59
			81	40	22.34
			162	0	22.15
632668	3490.02	80	1	0	21.58
			1	1	21.98
			108	54	22.32
			216	0	22.30
633334	3500.01	80	1	0	22.26
			1	1	22.51
			108	54	22.26
			216	0	22.29
634000	3510	80	1	0	21.37
			1	1	22.03
			108	54	22.62
			216	0	22.11

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
633334	3500.01	100	1	0	22.45
			1	1	22.23
			135	67	22.60
			270	0	22.26

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
630668	3460.02	20	1	0	21.41
			1	1	22.03
			25	12	22.16
			50	0	22.06
633334	3500.01	20	1	0	21.54
			1	1	22.03
			25	12	22.34
			50	0	22.34
636000	3540	20	1	0	22.24
			1	1	22.58
			25	12	22.74
			50	0	22.82
631000	3465	30	1	0	22.20
			1	1	22.74
			36	18	22.50
			75	0	22.48
633334	3500.01	30	1	0	21.98
			1	1	22.25
			36	18	22.37
			75	0	22.35
635666	3534.99	30	1	0	21.50
			1	1	21.99
			36	18	21.70
			75	0	21.74

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
631000	3470.01	40	1	0	21.13
			1	1	21.63
			50	25	22.00
			100	0	22.21
633334	3500.01	40	1	0	21.06
			1	1	22.17
			50	25	22.39
			100	0	22.61
635332	3529.98	40	1	0	21.56
			1	1	22.08
			50	25	22.29
			100	0	22.71
631668	3475.02	50	1	0	21.98
			1	1	22.53
			64	32	22.21
			128	0	22.15
633334	3500.01	50	1	0	21.73
			1	1	22.31
			64	32	22.13
			128	0	22.06
635000	3525	50	1	0	21.45
			1	1	21.95
			64	32	21.67
			128	0	21.73

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
632000	3480	60	1	0	21.50
			1	1	21.94
			81	40	22.09
			162	0	22.20
633334	3500.01	60	1	0	21.19
			1	1	22.03
			81	40	22.36
			162	0	22.35
634666	3519.99	60	1	0	22.33
			1	1	22.46
			81	40	22.34
			162	0	22.16
632668	3490.02	80	1	0	21.37
			1	1	21.74
			108	54	22.24
			216	0	22.25
633334	3500.01	80	1	0	21.92
			1	1	22.26
			108	54	22.36
			216	0	22.04
634000	3510	80	1	0	21.03
			1	1	22.03
			108	54	22.47
			216	0	22.51

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
633334	3500.01	100	1	0	21.41
			1	1	22.00
			135	67	22.55
			270	0	22.47

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
630668	3460.02	20	1	0	21.03
			1	1	21.06
			25	12	20.73
			50	0	20.82
633334	3500.01	20	1	0	20.33
			1	1	20.65
			25	12	20.77
			50	0	20.79
636000	3540	20	1	0	20.23
			1	1	20.24
			25	12	20.18
			50	0	20.23
631000	3465	30	1	0	20.72
			1	1	20.66
			36	18	20.92
			75	0	20.96
633334	3500.01	30	1	0	20.52
			1	1	20.23
			36	18	20.84
			75	0	20.83
635666	3534.99	30	1	0	20.17
			1	1	20.12
			36	18	20.16
			75	0	20.48

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
631000	3470.01	40	1	0	20.59
			1	1	20.67
			50	25	20.50
			100	0	20.68
633334	3500.01	40	1	0	20.71
			1	1	20.40
			50	25	20.08
			100	0	20.06
635332	3529.98	40	1	0	20.80
			1	1	20.77
			50	25	20.26
			100	0	20.19
631668	3475.02	50	1	0	20.73
			1	1	20.25
			64	32	20.24
			128	0	20.20
633334	3500.01	50	1	0	20.34
			1	1	20.33
			64	32	20.60
			128	0	20.58
635000	3525	50	1	0	19.83
			1	1	20.16
			64	32	20.15
			128	0	20.10

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
632000	3480	60	1	0	20.15
			1	1	20.19
			81	40	20.43
			162	0	20.66
633334	3500.01	60	1	0	20.51
			1	1	20.61
			81	40	20.81
			162	0	20.83
634666	3519.99	60	1	0	20.11
			1	1	20.06
			81	40	20.84
			162	0	21.02
632668	3490.02	80	1	0	20.23
			1	1	20.37
			108	54	20.73
			216	0	20.65
633334	3500.01	80	1	0	20.99
			1	1	21.03
			108	54	20.82
			216	0	20.93
634000	3510	80	1	0	20.08
			1	1	20.25
			108	54	21.02
			216	0	20.95

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
633334	3500.01	100	1	0	20.55
			1	1	20.61
			135	67	20.16
			270	0	20.98

5G n77 Higher band – Conducted Output Power

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
647334	3460.02	20	1	0	22.62
			1	1	22.08
			25	12	22.56
			50	0	22.57
656000	3840	20	1	0	22.50
			1	1	22.32
			25	12	22.40
			50	0	22.59
664666	3969.99	20	1	0	22.35
			1	1	22.85
			25	12	22.66
			50	0	22.66
647668	3715.02	30	1	0	23.03
			1	1	22.48
			36	18	22.48
			75	0	22.54
656000	3840	30	1	0	22.82
			1	1	22.43
			36	18	22.31
			75	0	22.40
664332	3964.98	30	1	0	23.03
			1	1	22.26
			36	18	22.08
			75	0	22.40

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
648000	3720	40	1	0	22.79
			1	1	22.34
			50	25	23.02
			100	0	22.19
656000	3840	40	1	0	22.82
			1	1	22.37
			50	25	22.69
			100	0	22.50
664000	3960	40	1	0	22.91
			1	1	22.33
			50	25	22.65
			100	0	22.63
648668	3730.02	60	1	0	22.78
			1	1	22.30
			64	32	22.17
			128	0	22.14
656000	3840	60	1	0	22.56
			1	1	22.05
			64	32	22.10
			128	0	22.40
663332	3949.98	60	1	0	22.33
			1	1	22.17
			64	32	22.29
			128	0	22.28

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
PI/2 BPSK					
649334	3740.01	80	1	0	22.38
			1	1	22.89
			81	40	23.04
			162	0	22.21
656000	3840	80	1	0	22.59
			1	1	22.08
			81	40	22.31
662666	3939.99	80	162	0	22.27
			1	0	22.27
			1	1	22.69
650000	3750	100	81	40	22.34
			162	0	22.43
			1	0	23.13
656000	3840	100	1	1	23.03
			108	54	23.30
			216	0	22.35
			1	0	22.17
662000	3930	100	1	1	22.65
			108	54	22.30
			216	0	22.46
662000	3930	100	1	0	23.35
			1	1	22.87
			108	54	22.67
			216	0	22.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
647334	3710.01	20	1	0	23.51
			1	1	23.02
			25	12	22.15
			50	0	22.43
656000	3840	20	1	0	22.80
			1	1	22.39
			25	12	22.36
			50	0	22.34
664666	3969.99	20	1	0	22.42
			1	1	22.78
			25	12	22.69
			50	0	22.67
647668	3715.02	30	1	0	23.02
			1	1	22.46
			36	18	22.53
			75	0	22.50
656000	3840	30	1	0	23.06
			1	1	22.83
			36	18	22.77
			75	0	22.93
664332	3964.98	30	1	0	23.03
			1	1	23.08
			36	18	23.18
			75	0	23.24

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
648000	3720	40	1	0	22.81
			1	1	22.26
			50	25	22.99
			100	0	22.18
656000	3840	40	1	0	22.79
			1	1	22.28
			50	25	22.38
			100	0	22.56
664000	3960	40	1	0	22.89
			1	1	22.32
			50	25	22.66
			100	0	22.74
648668	3730.02	60	1	0	23.04
			1	1	23.21
			64	32	23.31
			128	0	23.15
656000	3840	60	1	0	23.00
			1	1	23.11
			64	32	23.08
			128	0	23.30
663332	3949.98	60	1	0	22.94
			1	1	23.04
			64	32	22.61
			128	0	22.83

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
QPSK					
649334	3740.01	80	1	0	23.31
			1	1	22.76
			81	40	23.06
			162	0	23.21
656000	3840	80	1	0	23.62
			1	1	23.10
			81	40	23.37
			162	0	23.35
662666	3939.99	80	1	0	23.19
			1	1	23.32
			81	40	23.36
			162	0	23.11
650000	3750	100	1	0	22.51
			1	1	22.94
			108	54	22.27
			216	0	22.35
656000	3840	100	1	0	23.10
			1	1	23.09
			108	54	23.40
			216	0	23.16
662000	3930	100	1	0	23.18
			1	1	23.80
			108	54	23.14
			216	0	23.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
647334	3710.01	20	1	0	21.71
			1	1	22.22
			25	12	22.09
			50	0	22.56
656000	3840	20	1	0	22.05
			1	1	22.51
			25	12	22.33
664666	3969.99	20	50	0	22.32
			1	0	22.25
			1	1	22.80
647668	3715.02	30	25	12	22.79
			50	0	22.69
			1	0	22.10
656000	3840	30	1	1	22.45
			36	18	22.43
			75	0	22.50
			1	0	22.08
664332	3964.98	30	1	1	22.50
			36	18	22.35
			75	0	22.36
			1	0	21.58
			1	1	22.04
			36	18	22.00
			75	0	22.07
			1	0	22.07

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
648000	3720	40	1	0	21.85
			1	1	22.63
			50	25	21.93
			100	0	22.25
656000	3840	40	1	0	21.91
			1	1	22.46
			50	25	22.65
			100	0	22.55
664000	3960	40	1	0	22.08
			1	1	22.40
			50	25	22.78
			100	0	22.69
648668	3730.02	60	1	0	21.84
			1	1	22.29
			64	32	22.20
			128	0	22.18
656000		60	1	0	21.84
			1	1	22.05
			64	32	22.10
			128	0	22.40
663332	3949.98	60	1	0	21.57
			1	1	22.17
			64	32	22.29
			128	0	22.28

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
16QAM					
649334	3740.01	80	1	0	21.45
			1	1	22.00
			81	40	22.01
			162	0	22.19
656000	3840	80	1	0	21.96
			1	1	22.42
			81	40	22.35
			162	0	22.32
662666	3939.99	80	1	0	22.22
			1	1	22.59
			81	40	22.34
			162	0	22.15
650000	3750	100	1	0	21.58
			1	1	21.98
			108	54	22.32
			216	0	22.30
656000	3840	100	1	0	22.26
			1	1	22.51
			108	54	22.26
			216	0	22.29
662000	3930	100	1	0	21.37
			1	1	22.03
			108	54	22.62
			216	0	22.11

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
647334	3710.01	20	1	0	21.41
			1	1	23.02
			25	12	22.15
			50	0	22.43
656000	3840	20	1	0	21.54
			1	1	22.39
			25	12	22.36
			50	0	22.34
664666	3969.99	20	1	0	22.24
			1	1	22.78
			25	12	22.69
			50	0	22.67
647668	3715.02	30	1	0	22.20
			1	1	22.46
			36	18	22.53
			75	0	22.50
656000	3840	30	1	0	21.98
			1	1	22.83
			36	18	22.77
			75	0	22.93
664332	3964.98	30	1	0	21.50
			1	1	23.08
			36	18	23.18
			75	0	23.24

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
648000	3720	40	1	0	21.13
			1	1	22.26
			50	25	22.99
			100	0	22.18
656000	3840	40	1	0	21.06
			1	1	22.28
			50	25	22.38
			100	0	22.56
664000	3960	40	1	0	21.56
			1	1	22.32
			50	25	22.66
			100	0	22.74
648668	3730.02	60	1	0	21.98
			1	1	23.21
			64	32	23.31
			128	0	23.15
656000	3840	60	1	0	21.73
			1	1	23.11
			64	32	23.08
			128	0	23.30
663332	3949.98	60	1	0	21.45
			1	1	23.04
			64	32	22.61
			128	0	22.83

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
64QAM					
649334	3740.01	80	1	0	21.50
			1	1	22.76
			81	40	23.06
			162	0	23.21
656000	3840	80	1	0	21.19
			1	1	23.10
			81	40	23.37
			162	0	23.35
662666	3939.99	80	1	0	22.33
			1	1	23.32
			81	40	23.36
			162	0	23.11
650000	3750	100	1	0	21.37
			1	1	22.94
			108	54	22.27
			216	0	22.35
656000	3840	100	1	0	21.92
			1	1	23.09
			108	54	23.40
			216	0	23.16
662000	3930	100	1	0	21.03
			1	1	23.80
			108	54	23.14
			216	0	23.61

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
647334	3710.01	20	1	0	21.03
			1	1	23.02
			25	12	22.15
			50	0	22.43
656000	3840	20	1	0	20.33
			1	1	22.39
			25	12	22.36
			50	0	22.34
664666	3969.99	20	1	0	20.23
			1	1	22.78
			25	12	22.69
			50	0	22.67
647668	3715.02	30	1	0	20.72
			1	1	22.46
			36	18	22.53
			75	0	22.50
656000	3840	30	1	0	20.52
			1	1	22.83
			36	18	22.77
			75	0	22.93
664332	3964.98	30	1	0	20.17
			1	1	23.08
			36	18	23.18
			75	0	23.24

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
648000	3720	40	1	0	20.59
			1	1	22.26
			50	25	22.99
			100	0	22.18
656000	3840	40	1	0	20.71
			1	1	22.28
			50	25	22.38
664000	3960	40	100	0	22.56
			1	0	20.80
			1	1	22.32
648668	3730.02	60	50	25	22.66
			100	0	22.74
			1	0	20.73
			1	1	23.21
656000	3840	60	64	32	23.31
			128	0	23.15
			1	0	20.34
663332	3949.98	60	1	1	23.11
			64	32	23.08
			128	0	23.30
			1	0	19.83
648668	3730.02	60	1	1	23.04
			64	32	22.61
			128	0	22.83

Channel No.	Frequency (MHz)	Channel Bandwidth (MHz)	RB Size	RB Offset	Output Power (dBm)
256QAM					
649334	3740.01	80	1	0	20.15
			1	1	22.76
			81	40	23.06
			162	0	23.21
656000	3840	80	1	0	20.51
			1	1	23.10
			81	40	23.37
			162	0	23.35
662666	3939.99	80	1	0	20.11
			1	1	23.32
			81	40	23.36
			162	0	23.11
650000	3750	100	1	0	20.23
			1	1	22.94
			108	54	22.27
			216	0	22.35
656000	3840	100	1	0	20.99
			1	1	23.09
			108	54	23.40
			216	0	23.16
662000	3930	100	1	0	20.08
			1	1	23.80
			108	54	23.14
			216	0	23.61

5G n2 band – Radiated Power

5G n2 band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
5MHz	-	370500/1852.5	376500/1882.5	381500/1907.5
	Pi/2 BPSK	31.83	31.46	31.38
	QPSK	31.37	31.49	31.42
	16QAM	31.29	31.41	31.30
	64QAM	30.14	30.21	29.90
	256QAM	27.85	30.07	27.80
10MHz	-	371000/1855	376500/1882.5	381000/1905
	Pi/2 BPSK	31.47	31.45	31.49
	QPSK	31.43	31.55	31.50
	16QAM	31.66	31.42	31.41
	64QAM	29.91	29.94	29.92
	256QAM	31.45	27.91	29.97
15MHz	-	371500/1857.5	376500/1882.5	380500/1902.5
	Pi/2 BPSK	31.44	31.48	31.48
	QPSK	31.53	31.39	31.46
	16QAM	31.47	31.72	31.38
	64QAM	29.95	29.88	30.15
	256QAM	27.93	29.97	27.90
20MHz	-	372000/1860	376500/1882.5	380000/1900
	Pi/2 BPSK	31.54	31.41	31.56
	QPSK	31.45	31.45	31.54
	16QAM	31.81	31.50	31.45
	64QAM	30.01	29.87	30.18
	256QAM	30.01	27.89	30.15
EIRP Limit (dBm)		33		
Result		Pass	Pass	Pass

5G n5 band – Radiated Power

5G n5 band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
5MHz	-	165300/826.5	167300/836.5	169300/846.5
	Pi/2 BPSK	29.87	29.71	29.68
	QPSK	29.81	29.75	29.58
	16QAM	29.72	29.57	29.43
	64QAM	28.26	28.42	28.48
	256QAM	26.33	26.09	26.02
10MHz	-	165800/829	167300/836.5	168800/844
	Pi/2 BPSK	29.77	29.82	29.66
	QPSK	29.77	29.81	29.74
	16QAM	29.40	29.24	28.71
	64QAM	28.57	28.33	28.14
	256QAM	29.82	26.31	26.08
15MHz	-	166300/831.5	167300/836.5	168300/841.5
	Pi/2 BPSK	29.81	29.78	29.68
	QPSK	29.81	29.74	29.77
	16QAM	29.72	29.40	29.31
	64QAM	28.63	28.52	28.48
	256QAM	26.20	26.18	26.23
20MHz	-	166800/834	167300/836.5	167800/839
	Pi/2 BPSK	29.55	29.38	29.21
	QPSK	29.44	29.37	29.30
	16QAM	29.41	29.47	29.37
	64QAM	27.90	27.72	27.68
	256QAM	25.90	25.75	25.89
ERP / EIRP Limit (dBm)		38.45 / 40.61		
Result		Pass	Pass	Pass

5G n7 band – Radiated Power

5G n7 band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
5MHz	-	500500/2502.5	507000/2535	513500/2567.5
	Pi/2 BPSK	31.99	31.94	31.83
	QPSK	32.04	31.89	31.84
	16QAM	31.14	31.82	31.92
	64QAM	30.48	30.41	30.34
	256QAM	28.48	19.83	19.78
10MHz	-	501000/2505	507000/2535	513000/2565
	Pi/2 BPSK	32.07	32.56	32.44
	QPSK	32.66	32.53	32.43
	16QAM	32.63	32.56	32.38
	64QAM	31.09	31.12	30.87
	256QAM	32.56	20.65	20.37
15MHz	-	501500/2507.5	507000/2535	512500/2562.5
	Pi/2 BPSK	32.71	32.58	32.51
	QPSK	32.69	32.66	32.46
	16QAM	32.83	32.60	32.76
	64QAM	31.75	31.11	30.95
	256QAM	29.33	29.00	28.96
20MHz	-	502000/2510	507000/2535	512000/2560
	Pi/2 BPSK	32.75	32.50	32.37
	QPSK	32.70	32.43	32.38
	16QAM	32.65	32.78	32.61
	64QAM	31.13	30.97	31.06
	256QAM	29.12	28.97	28.99
EIRP Limit (dBm)		33		
Result		Pass	Pass	Pass

5G n41 band – Radiated Power

5G n41 band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
20MHz	-	501204/2506.02	518598/2592.99	535998/2679.99
	Pi/2 BPSK	31.85	31.82	32.08
	QPSK	32.74	32.03	32.01
	16QAM	31.79	31.74	32.02
	64QAM	31.39	31.57	32.05
	256QAM	30.29	30.02	29.47
30MHz	-	502200/2511	518598/2592.99	534996/2674.98
	Pi/2 BPSK	32.26	32.05	32.26
	QPSK	32.25	32.29	32.47
	16QAM	31.73	31.73	31.30
	64QAM	31.97	31.60	31.22
	256QAM	30.19	30.07	29.71
40MHz	-	503202/2516.01	518598/2592.99	534000/2670
	Pi/2 BPSK	32.25	32.05	32.14
	QPSK	32.22	32.02	32.12
	16QAM	31.86	31.88	32.01
	64QAM	31.44	31.84	31.94
	256QAM	29.91	29.94	30.03
50MHz	-	504204/2521.02	518598/2592.99	532998/2664.99
	Pi/2 BPSK	32.01	31.79	31.56
	QPSK	32.54	32.53	32.27
	16QAM	31.52	31.49	31.93
	64QAM	31.76	31.54	31.18
	256QAM	29.96	29.83	29.39
60MHz	-	505200/2526	518598/2592.99	531996/2659.98
	Pi/2 BPSK	32.27	31.82	31.92
	QPSK	32.54	32.85	32.59
	16QAM	31.42	31.65	31.82
	64QAM	31.43	31.59	31.69
	256QAM	31.27	31.39	31.03
80MHz	-	504204/2521.02	518598/2592.99	529998/2649.99
	Pi/2 BPSK	32.53	31.88	32.58
	QPSK	32.17	32.63	31.72
	16QAM	31.55	31.74	31.85
	64QAM	31.48	31.59	31.74
	256QAM	29.89	30.06	30.25
100MHz	-	509202/2546.01	518598/2592.99	528000/2640
	Pi/2 BPSK	32.25	32.09	32.62
	QPSK	32.86	32.71	32.96
	16QAM	31.83	32.31	31.79
	64QAM	31.78	31.82	31.74
	256QAM	30.21	31.21	29.82
EIRP Limit (dBm)		33		
Result		Pass	Pass	Pass

5G n66 band – Radiated Power

5G n66 band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
5MHz	-	342500/1712.5	349000/1745	355500/1777.5
	Pi/2 BPSK	26.72	26.91	27.01
	QPSK	26.24	25.09	24.77
	16QAM	26.92	24.86	24.74
	64QAM	27.04	26.73	26.21
	256QAM	24.38	24.62	24.14
10MHz	-	343000/1715	349000/1745	355000/1775
	Pi/2 BPSK	26.99	27.18	27.28
	QPSK	26.50	25.34	25.02
	16QAM	27.19	25.11	24.99
	64QAM	27.31	27.00	26.47
	256QAM	24.62	24.87	24.38
15MHz	-	343500/1717.5	349000/1745	354500/1772.5
	Pi/2 BPSK	27.26	27.45	27.55
	QPSK	26.77	25.60	25.27
	16QAM	27.46	25.36	25.24
	64QAM	27.59	27.27	26.74
	256QAM	24.87	25.12	24.63
20MHz	-	344000/1720	349000/1745	354000/1770
	Pi/2 BPSK	27.53	27.73	27.83
	QPSK	27.04	25.85	25.52
	16QAM	27.74	25.62	25.49
	64QAM	27.86	27.54	27.01
	256QAM	25.12	25.37	24.87
EIRP Limit (dBm)		30		
Result		Pass	Pass	Pass

5G n71 band – Radiated Power

5G n71 band		ERP (dBm) / Frequency (MHz)		
BW	Modulation			
5MHz	-	133100/665.5	136100/680.5	139100/695.5
	Pi/2 BPSK	27.84	27.52	27.43
	QPSK	27.79	27.51	27.31
	16QAM	26.45	26.68	26.53
	64QAM	25.94	25.92	26.53
	256QAM	23.92	23.88	24.07
10MHz	-	133600/668	136100/680.5	138600/693
	Pi/2 BPSK	27.84	27.59	27.51
	QPSK	27.81	27.58	27.38
	16QAM	26.56	26.55	26.55
	64QAM	26.46	26.31	25.91
	256QAM	27.59	24.2	23.85
15MHz	-	134100/670.5	136100/680.5	138100/690.5
	Pi/2 BPSK	27.68	27.53	27.41
	QPSK	27.67	27.5	27.41
	16QAM	26.66	26.66	26.42
	64QAM	26.15	25.94	25.76
	256QAM	24.05	23.82	23.69
20MHz	-	134600/673	136100/680.5	137600/688
	Pi/2 BPSK	27.83	27.53	27.46
	QPSK	27.66	27.52	27.49
	16QAM	26.62	26.68	26.63
	64QAM	26.09	26.28	25.84
	256QAM	24.1	24.2	23.82
ERP Limit (dBm)		34.77		
Result		Pass	Pass	Pass

5G n77 Lower band – Radiated Power

5G n77 Lower band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
20MHz	-	630668/3460.02	633334/3500.01	636000/3540
	Pi/2 BPSK	27.13	27.11	27.36
	QPSK	27.79	27.31	27.29
	16QAM	27.08	27.03	27.31
	64QAM	26.69	26.86	27.33
	256QAM	25.63	25.37	24.84
30MHz	-	631000/3465	633334/3500.01	635666/3534.99
	Pi/2 BPSK	27.53	27.33	27.53
	QPSK	27.52	27.56	27.73
	16QAM	27.02	27.02	26.60
	64QAM	27.25	26.89	26.53
	256QAM	25.54	25.42	25.07
40MHz	-	631000/3470.01	633334/3500.01	635332/3529.98
	Pi/2 BPSK	27.52	27.33	27.41
	QPSK	27.49	27.30	27.39
	16QAM	27.14	27.16	27.29
	64QAM	26.74	27.12	27.22
	256QAM	25.27	25.30	25.38
50MHz	-	631668/3475.02	633334/3500.01	635000/3525
	Pi/2 BPSK	27.29	27.08	26.86
	QPSK	27.80	27.79	27.54
	16QAM	27.14	27.16	27.29
	64QAM	27.05	26.84	26.49
	256QAM	25.31	25.19	24.77
60MHz	-	632000/3480	633334/3500.01	634666/3519.99
	Pi/2 BPSK	27.54	27.11	27.20
	QPSK	27.80	27.66	27.85
	16QAM	26.72	26.94	27.11
	64QAM	26.78	26.88	27.03
	256QAM	25.25	25.41	25.59
80MHz	-	632668/3490.02	633334/3500.01	634000/3510
	Pi/2 BPSK	27.79	27.16	27.84
	QPSK	27.44	27.89	27.03
	16QAM	26.85	27.03	27.13
	64QAM	26.73	26.88	26.98
	256QAM	25.31	25.60	25.59
100MHz	-	-	518598/2592.99	-
	Pi/2 BPSK	-	27.52	-
	QPSK	-	26.45	-
	16QAM	-	27.12	-
	64QAM	-	27.07	-
	256QAM	-	25.56	-
FCC EIRP Limit (dBm)		30		
ISED EIRP Limit (dBm)		28		
Result		Pass	Pass	Pass

5G n77 Higher band – Radiated Power

5G n77 Higher band		EIRP (dBm) / Frequency (MHz)		
BW	Modulation			
20MHz	-	647334/3460.02	656000/3840	664666/3969.99
	Pi/2 BPSK	27.19	27.16	27.42
	QPSK	27.07	27.37	27.35
	16QAM	27.13	27.08	27.37
	64QAM	27.58	26.97	27.35
	256QAM	27.58	26.97	27.35
30MHz	-	647668/3715.02	656000/3840	664332/3964.98
	Pi/2 BPSK	27.59	27.39	27.59
	QPSK	27.58	27.62	27.80
	16QAM	27.07	27.07	26.65
	64QAM	27.10	27.50	27.80
	256QAM	27.10	27.50	27.80
40MHz	-	648000/3720	656000/3840	664000/3960
	Pi/2 BPSK	27.58	27.39	27.48
	QPSK	27.56	27.36	27.46
	16QAM	27.20	27.22	27.35
	64QAM	27.56	27.13	27.31
	256QAM	27.56	27.13	27.31
60MHz	-	648668/3730.02	656000/3840	663332/3949.98
	Pi/2 BPSK	27.35	27.13	26.91
	QPSK	27.87	27.86	27.60
	16QAM	26.87	26.84	27.27
	64QAM	27.87	27.86	27.60
	256QAM	27.87	27.86	27.60
80MHz	-	649334/3740.01	656000/3840	662666/3939.99
	Pi/2 BPSK	27.60	27.16	27.26
	QPSK	27.87	27.17	27.92
	16QAM	26.77	26.99	27.16
	64QAM	27.77	27.93	27.92
	256QAM	27.77	27.93	27.92
100MHz	-	650000/3750	656000/3840	662000/3930
	Pi/2 BPSK	27.86	27.22	27.31
	QPSK	27.51	27.96	27.35
	16QAM	26.90	27.08	27.19
	64QAM	27.51	27.96	27.35
	256QAM	27.51	27.96	27.35
EIRP Limit (dBm)		30		
Result		Pass	Pass	Pass

7.2 Peak to Average Ratio

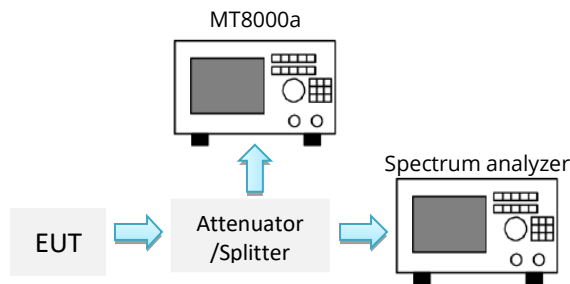
7.2.1 Requirement

§ 2.1046, § 22.913, § 24.232, § 27.50 (d)

RSS-132(5.4), RSS-133(6.4), RSS-139(6.5)

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

7.2.2 Test Setup



7.2.3 Test Procedure

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.7.1

- The signal analysers CCDF measurement profile is enabled
- Frequency carrier center frequency
- Measurement BW > Emission bandwidth of signal
- The signal analyzer was set to collect one million samples to generate the CCDF curve
- The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle) the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst trigger that is synced with an incoming pulse and the measurement interval set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power.
- Record the maximum PAPR level associated with a probability of 0. 1%.

7.2.4 Test Result

Band	Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	PAR (dB)	Limit (dB)	Result
n2 band	20	Pi/2 BPSK	376500	1882.5	4.19	13	Pass
		QPSK	376500	1882.5	4.48	13	Pass
		16QAM	376500	1882.5	5.66	13	Pass
		64QAM	376500	1882.5	6.08	13	Pass
		256QAM	376500	1882.5	6.66	13	Pass
n5 band	20	Pi/2 BPSK	167300	836.5	3.77	13	Pass
		QPSK	167300	836.5	4.52	13	Pass
		16QAM	167300	836.5	5.52	13	Pass
		64QAM	167300	836.5	5.94	13	Pass
		256QAM	167300	836.5	6.62	13	Pass
n7 band	20	Pi/2 BPSK	507000	2535	6.24	13	Pass
		QPSK	507000	2535	6.07	13	Pass
		16QAM	507000	2535	6.21	13	Pass
		64QAM	507000	2535	6.37	13	Pass
		256QAM	507000	2535	6.36	13	Pass
n41 band	20	Pi/2 BPSK	518598	2592.99	8.39	13	Pass
		QPSK	518598	2592.99	8.69	13	Pass
		16QAM	518598	2592.99	9.16	13	Pass
		64QAM	518598	2592.99	9.64	13	Pass
		256QAM	518598	2592.99	10.35	13	Pass
n66 band	20	Pi/2 BPSK	349000	1745	4.13	13	Pass
		QPSK	349000	1745	4.47	13	Pass
		16QAM	349000	1745	5.46	13	Pass
		64QAM	349000	1745	5.93	13	Pass
		256QAM	349000	1745	6.66	13	Pass
n71band	20	Pi/2 BPSK	136100	680.5	3.78	13	Pass
		QPSK	136100	680.5	4.47	13	Pass
		16QAM	136100	680.5	5.62	13	Pass
		64QAM	136100	680.5	6.04	13	Pass
		256QAM	136100	680.5	6.56	13	Pass
n77 Lower band	20	Pi/2 BPSK	633334	3500.01	7.53	13	Pass
		QPSK	633334	3500.01	8.32	13	Pass
		16QAM	633334	3500.01	9.75	13	Pass
		64QAM	633334	3500.01	9.73	13	Pass
		256QAM	633334	3500.01	10.62	13	Pass
n77 Higher band	20	Pi/2 BPSK	656000	3840	8.34	13	Pass
		QPSK	656000	3840	8.17	13	Pass
		16QAM	656000	3840	9.69	13	Pass
		64QAM	656000	3840	9.17	13	Pass
		256QAM	656000	3840	9.87	13	Pass

7.2.5 Test Plots

Please see appendix-A test plots.

7.3 Occupied Bandwidth

7.3.1 Requirement

§2.1049, RSS-Gen (6.7)

- 99% Occupied Bandwidth(kHz)

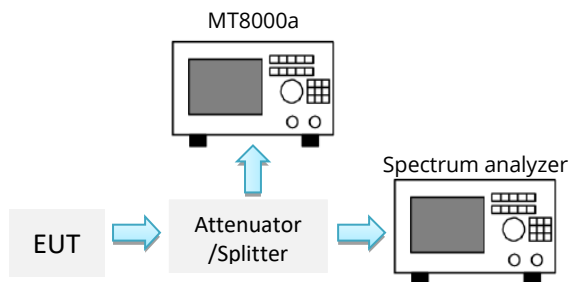
The occupied bandwidth that is the frequency bandwidth such that below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be Measured.

- 26 dB Bandwidth(kHz)

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

All modes of operation were investigated and the worst-case configuration results are reported in this section

7.3.2 Test Setup



7.3.3 Test Procedure

- The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- Set RBW = 1% to 5% of the actual occupied BW.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Span = large enough to capture all products of the modulation process
- Allow the trace to stabilize.
- Use automatic bandwidth measurement capability on instrument to obtain 99% and -26dB BW.

7.3.4 Test Result

5G n2 band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
376500	1882.5	5	4.476	4.954
376500	1882.5	10	9.282	10.010
376500	1882.5	15	14.129	14.960
376500	1882.5	20	18.941	21.450
QPSK	1882.5	5		
376500	1882.5	5	4.479	4.957
376500	1882.5	10	9.274	10.030
376500	1882.5	15	14.135	15.280
376500	1882.5	20	18.964	19.910
16QAM				
376500	1882.5	5	4.483	4.932
376500	1882.5	10	9.284	9.875
376500	1882.5	15	14.109	14.850
376500	1882.5	20	18.962	19.780
64QAM				
376500	1882.5	5	4.464	4.855
376500	1882.5	10	9.271	9.925
376500	1882.5	15	14.128	14.780
376500	1882.5	20	19.001	19.770
256QAM				
376500	1882.5	5	4.473	4.999
376500	1882.5	10	9.302	9.986
376500	1882.5	15	14.200	14.960
376500	1882.5	20	19.066	19.870

5G n5 band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
167300	836.5	5	4.476	4.909
167300	836.5	10	9.323	9.808
167300	836.5	15	14.200	14.850
167300	836.5	20	18.994	19.760
QPSK				
167300	836.5	5	4.487	4.989
167300	836.5	10	9.308	9.953
167300	836.5	15	14.185	14.840
167300	836.5	20	19.032	19.730
16QAM				
167300	836.5	5	4.484	4.941
167300	836.5	10	9.307	9.839
167300	836.5	15	14.148	14.840
167300	836.5	20	19.048	19.780
64QAM				
167300	836.5	5	4.477	4.952
167300	836.5	10	9.286	9.888
167300	836.5	15	14.184	14.820
167300	836.5	20	19.016	19.770
256QAM				
167300	836.5	5	4.472	4.920
167300	836.5	10	9.321	9.820
167300	836.5	15	14.192	14.820
167300	836.5	20	19.077	19.770

5G n7 band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
507000	2535	5	4.476	4.858
507000	2535	10	8.921	9.554
507000	2535	15	13.422	14.490
507000	2535	20	18.773	19.250
QPSK				
507000	2535	5	4.477	4.893
507000	2535	10	8.925	9.591
507000	2535	15	13.419	14.540
507000	2535	20	18.772	19.020
16QAM				
507000	2535	5	4.476	4.883
507000	2535	10	8.920	9.595
507000	2535	15	13.436	14.640
507000	2535	20	18.780	19.100
64QAM				
507000	2535	5	4.467	4.856
507000	2535	10	8.926	9.544
507000	2535	15	13.421	14.390
507000	2535	20	18.790	19.090
256QAM				
507000	2535	5	4.477	4.888
507000	2535	10	8.908	9.598
507000	2535	15	13.395	14.440
507000	2535	20	18.783	19.040

5G n41 band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
518598	2592.99	20	17.782	18.920
518598	2592.99	30	26.736	27.930
518598	2592.99	40	35.692	37.380
518598	2592.99	50	45.710	47.350
518598	2592.99	60	57.771	59.780
518598	2592.99	80	76.955	79.640
518598	2592.99	100	96.218	99.520
QPSK				
518598	2592.99	20	18.500	18.740
518598	2592.99	30	26.729	27.970
518598	2592.99	40	35.772	37.310
518598	2592.99	50	45.610	47.310
518598	2592.99	60	57.806	59.940
518598	2592.99	80	76.870	79.760
518598	2592.99	100	96.341	99.570
16QAM				
518598	2592.99	20	17.885	18.860
518598	2592.99	30	26.730	28.040
518598	2592.99	40	35.707	37.070
518598	2592.99	50	45.674	47.220
518598	2592.99	60	57.786	59.700
518598	2592.99	80	77.028	79.630
518598	2592.99	100	96.409	99.370
64QAM				
518598	2592.99	20	17.816	19.050
518598	2592.99	30	26.751	28.100
518598	2592.99	40	35.764	37.370
518598	2592.99	50	45.642	47.320
518598	2592.99	60	57.782	59.870
518598	2592.99	80	76.964	79.810
518598	2592.99	100	96.572	99.430
256QAM				
518598	2592.99	20	17.835	18.850
518598	2592.99	30	26.858	28.200
518598	2592.99	40	35.755	37.620
518598	2592.99	50	45.805	47.500
518598	2592.99	60	57.861	60.010
518598	2592.99	80	77.050	79.730
518598	2592.99	100	96.459	99.600

5G n66 band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
349000	1745	5	4.481	4.940
349000	1745	10	9.279	9.878
349000	1745	15	14.133	14.840
349000	1745	20	18.957	19.880
QPSK				
349000	1745	5	4.469	4.953
349000	1745	10	9.282	9.984
349000	1745	15	14.117	14.940
349000	1745	20	18.968	19.880
16QAM				
349000	1745	5	4.471	4.900
349000	1745	10	9.284	9.857
349000	1745	15	14.107	14.800
349000	1745	20	18.976	19.820
64QAM				
349000	1745	5	4.465	4.898
349000	1745	10	9.274	9.903
349000	1745	15	14.143	14.770
349000	1745	20	18.999	19.790
256QAM				
349000	1745	5	4.475	4.953
349000	1745	10	9.293	9.894
349000	1745	15	14.177	14.830
349000	1745	20	19.027	19.870

5G n71 band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
136100	680.5	5	4.481	4.882
136100	680.5	10	9.286	9.940
136100	680.5	15	14.192	14.910
136100	680.5	20	19.068	19.770
QPSK				
136100	680.5	5	4.482	4.983
136100	680.5	10	9.290	12.440
136100	680.5	15	14.189	14.880
136100	680.5	20	19.169	19.780
16QAM				
136100	680.5	5	4.470	4.946
136100	680.5	10	9.274	9.904
136100	680.5	15	14.167	14.890
136100	680.5	20	19.100	19.800
64QAM				
136100	680.5	5	4.474	5.239
136100	680.5	10	9.299	11.530
136100	680.5	15	14.194	16.760
136100	680.5	20	19.089	19.840
256QAM				
136100	680.5	5	4.460	4.871
136100	680.5	10	9.314	9.871
136100	680.5	15	14.208	14.830
136100	680.5	20	14.208	14.830

5G n77 Lower band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
633334	3500.01	20	17.835	18.410
633334	3500.01	30	27.053	27.900
633334	3500.01	40	36.049	36.910
633334	3500.01	50	46.136	47.280
633334	3500.01	60	58.370	59.610
633334	3500.01	80	77.769	79.460
633334	3500.01	100	97.065	99.740
QPSK				
633334	3500.01	20	18.008	18.530
633334	3500.01	30	26.967	27.680
633334	3500.01	40	35.988	37.290
633334	3500.01	50	46.201	47.490
633334	3500.01	60	58.392	59.670
633334	3500.01	80	77.788	79.420
633334	3500.01	100	97.108	99.190
16QAM				
633334	3500.01	20	17.972	18.470
633334	3500.01	30	27.023	27.870
633334	3500.01	40	35.971	36.940
633334	3500.01	50	46.244	47.180
633334	3500.01	60	58.511	59.720
633334	3500.01	80	77.733	79.410
633334	3500.01	100	96.251	99.600
64QAM				
633334	3500.01	20	18.012	18.510
633334	3500.01	30	26.997	27.950
633334	3500.01	40	36.098	36.980
633334	3500.01	50	46.134	47.040
633334	3500.01	60	57.900	59.420
633334	3500.01	80	77.408	79.050
633334	3500.01	100	97.393	99.260
256QAM				
633334	3500.01	20	18.039	18.810
633334	3500.01	30	27.093	27.780
633334	3500.01	40	36.075	37.080
633334	3500.01	50	45.905	46.810
633334	3500.01	60	58.402	59.700
633334	3500.01	80	77.626	79.320
633334	3500.01	100	96.298	99.680

5G n77 Higher band - Occupied Bandwidth

Channel	Frequency (MHz)	Bandwidth (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)
PI/2 BPSK				
656000	3840	20	17.987	18.570
656000	3840	30	27.056	27.770
656000	3840	40	36.003	36.880
656000	3840	60	58.003	59.280
656000	3840	80	77.981	79.470
656000	3840	100	97.460	99.100
QPSK				
656000	3840	20	17.882	18.520
656000	3840	30	27.051	27.740
656000	3840	40	35.979	36.840
656000	3840	60	58.474	59.670
656000	3840	80	77.973	79.490
656000	3840	100	97.199	99.250
16QAM				
656000	3840	20	18.017	18.500
656000	3840	30	27.029	27.590
656000	3840	40	36.075	36.840
656000	3840	60	58.171	59.330
656000	3840	80	77.742	79.350
656000	3840	100	97.498	99.340
64QAM				
656000	3840	20	18.019	18.510
656000	3840	30	26.805	27.640
656000	3840	40	36.031	36.880
656000	3840	60	58.381	58.650
656000	3840	80	77.697	78.990
656000	3840	100	97.483	99.510
256QAM				
656000	3840	20	17.898	18.500
656000	3840	30	27.028	27.720
656000	3840	40	36.102	36.820
656000	3840	60	58.474	59.590
656000	3840	80	77.593	78.990
656000	3840	100	97.338	99.060

7.3.5 Test Plots

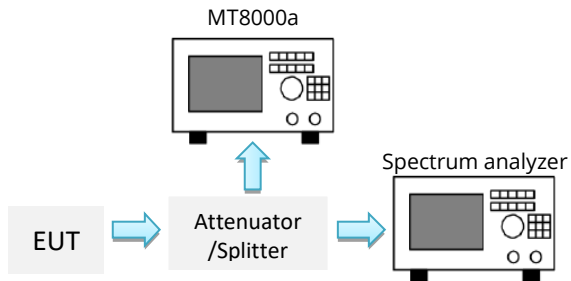
Please see appendix-B test plots.

7.4 Band Edge

7.4.1 Requirement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power(P)by a factor of at least $43+10 \log(P)$ dB.

7.4.2 Test Setup



7.4.3 Test Procedure

- The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- Set RBW as roughly $BW/100$.
- Detector = average
- Sweep = auto couple.
- Allow the trace to stabilize.
- Set Marker to edge frequency
- The Band Edges of low and high channels for the highest RF powers were measured

7.4.4 Test Result

Band	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Band Edge measured (dBm)	Limit (dBm)	Result
n2 band	QPSK	5	370500	1850	-18.988	-13	Pass
			381500	1910	-16.634	-13	Pass
		10	371000	1850	-14.245	-13	Pass
			381000	1910	-19.047	-13	Pass
		15	371500	1850	-15.259	-13	Pass
			380500	1910	-23.299	-13	Pass
20	372000	1850	-14.718	-13	Pass		
	380000	1910	-18.820	-13	Pass		
n5 band	QPSK	5	165300	824	-19.350	-13	Pass
			169300	849	-20.577	-13	Pass
		10	165800	824	-22.138	-13	Pass
			168800	849	-21.729	-13	Pass
		15	166300	824	-20.091	-13	Pass
			168300	849	-26.139	-13	Pass
20	166800	824	-21.259	-13	Pass		
	167800	849	-28.326	-13	Pass		
n7 band	QPSK	5	500500	2500	-15.815	-13	Pass
			513500	2570	-16.607	-13	Pass
		10	501000	2500	-18.730	-13	Pass
			513000	2570	-24.850	-13	Pass
		15	501500	2500	-15.895	-13	Pass
			512500	2570	-26.133	-13	Pass
20	502000	2500	-16.478	-13	Pass		
	512000	2570	-26.071	-13	Pass		
n41 band	QPSK	20	501204	2496	-20.973	-13	Pass
			535998	2690	-30.362	-13	Pass
		30	502200	2496	-22.871	-13	Pass
			534996	2690	-31.381	-13	Pass
		40	503202	2496	-19.142	-13	Pass
			534000	2690	-29.080	-13	Pass
		50	504204	2496	-16.587	-13	Pass
			532998	2690	-28.897	-13	Pass
		60	505200	2496	-16.440	-13	Pass
			531996	2690	-14.567	-13	Pass
80	507204	2496	-20.344	-13	Pass		
	529998	2690	-21.989	-13	Pass		
100	509202	2496	-16.157	-13	Pass		
	528000	2690	-22.249	-13	Pass		

Band	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Band Edge measured (dBm)	Limit (dBm)	Result
n66 band	QPSK	5	342500	1710	-14.139	-13	Pass
			355500	1780	-15.862	-13	Pass
		10	343000	1710	-18.034	-13	Pass
			355000	1780	-19.823	-13	Pass
		15	343500	1710	-13.929	-13	Pass
			354500	1780	-18.774	-13	Pass
20	344000	1710	-14.186	-13	Pass		
	354000	1780	-17.587	-13	Pass		
n71 band	QPSK	5	133100	663	-17.127	-13	Pass
			139100	698	-19.088	-13	Pass
		10	133600	663	-14.743	-13	Pass
			138600	698	-22.088	-13	Pass
		15	134100	663	-18.185	-13	Pass
			138100	698	-22.154	-13	Pass
20	134600	663	-17.876	-13	Pass		
	137600	698	-20.826	-13	Pass		
n77 lower band	QPSK	20	630668	3450	-17.218	-13	Pass
			636000	3550	-26.551	-13	Pass
		30	631000	3450	-21.087	-13	Pass
			635666	3550	-29.680	-13	Pass
		40	631000	3450	-23.889	-13	Pass
			635332	3550	-28.784	-13	Pass
		60	632000	3450	-15.030	-13	Pass
			634666	3550	-13.962	-13	Pass
80	632668	3450	-15.030	-13	Pass		
	634000	3550	-13.962	-13	Pass		
100	633334	3450	-15.640	-13	Pass		
	633334	3550	-24.049	-13	Pass		

Band	Modulation	Bandwidth (MHz)	Channel	Frequency (MHz)	Band Edge measured (dBm)	Limit (dBm)	Result
n77 higher band	QPSK	20	647334	3700	-22.360	-13	Pass
			664666	3980	-30.206	-13	Pass
		30	647668	3700	-24.132	-13	Pass
			664332	3980	-24.915	-13	Pass
		40	648000	3700	-20.540	-13	Pass
			664000	3980	-23.080	-13	Pass
		60	648668	3700	-26.729	-13	Pass
			663332	3980	-27.956	-13	Pass
		80	649334	3700	-21.595	-13	Pass
			662666	3980	-30.364	-13	Pass
		100	650000	3700	-15.548	-13	Pass
			662000	3980	-23.009	-13	Pass

7.4.5 Test Plots

Please see appendix-C test plots.

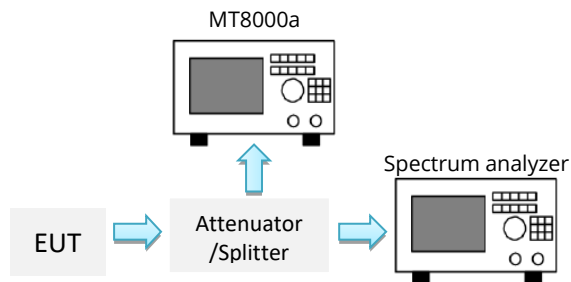
7.5 Conducted spurious emission

7.5.1 Requirement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power(P) by a factor of at least $43+10 \log(P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10 harmonics.

7.5.2 Test Setup



7.5.3 Test Procedure

- The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- Set RBW = 100KHz and VBW=300KHz for below 1GHz; set RBW=1MHz and VBW=3MHz for above 1GHz.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize.
- Use marker peak to search for spurious emission

7.5.4 Test Result

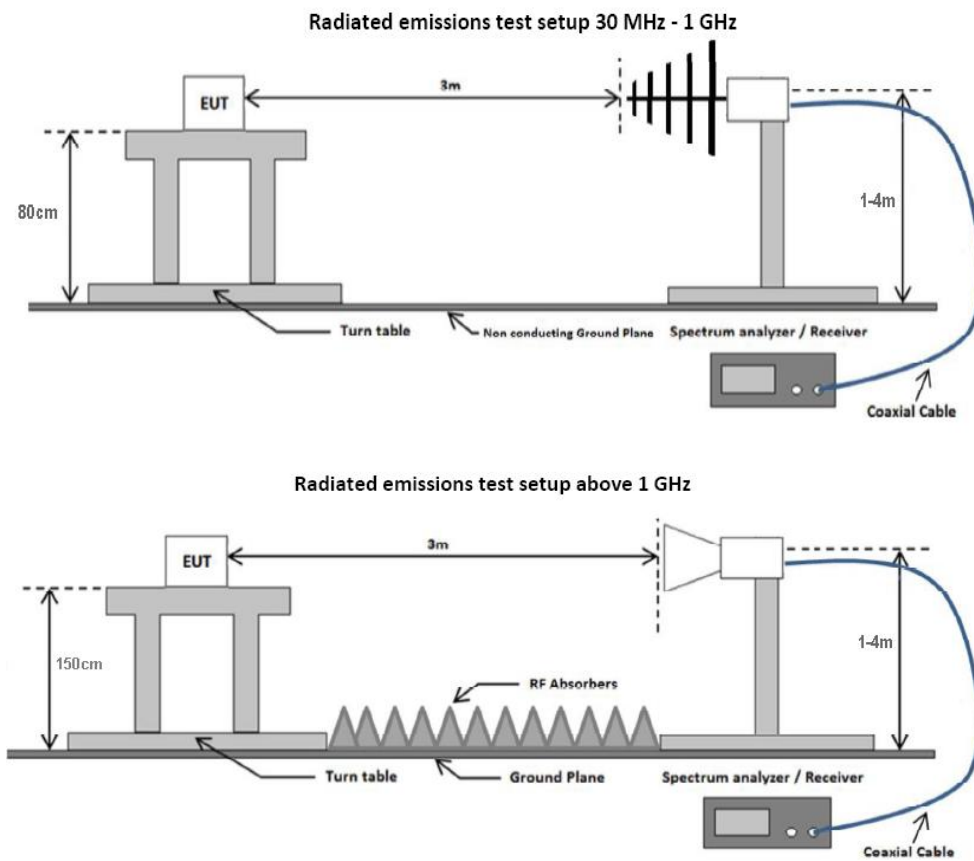
Please see appendix-D test plots.

7.6 Field Strength of Radiated Spurious Emissions

7.6.1 Requirement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power(P) by a factor of at least $43+10 \log(P)$ dB. The emission limit is equal to -13dBm.

7.6.2 Test Setup



7.6.3 Test Procedure

ANSI C63.26: 2015 section 5.5

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Boresight antenna mast was used during the scanning to point to EUT to maximize the emission. The process will be repeated in 3 EUT orientations.

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. The test was carried out at the selected frequency points obtained from the EUT characterization. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
 - a. Vertical or horizontal polarization (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
 - b. The EUT was then rotated to the direction that gave the maximum emission.
 - c. Finally, the antenna height was adjusted to the height that gave the maximum emission.
3. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 300 KHz for frequency below 150KHz.
4. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 10 kHz for frequency between 150KHz – 30MHz.
5. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-Peak detection at frequency between 30MHz - 1GHz.
6. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz with Peak detection for Peak and average measurement at frequency above 1GHz.
7. Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter.
8. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained.
9. Steps 2 - 8 were repeated for the next frequency point, until all selected frequency points were measured

7.6.4 Test Result

n2 band, 5MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3425.877	-71.64	19.22	-3.06	-55.49	RMS Max	V	248	161	-13	-42.49	Pass
2	5137.564	-69.6	21.23	-8.07	-56.44	RMS Max	V	298	267	-13	-43.44	Pass
3	6850.621	-71.18	23.19	-6.76	-54.76	RMS Max	H	253	336	-13	-41.76	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3490.277	-75.26	19.54	-1.12	-56.84	RMS Max	V	268	259	-13	-43.84	Pass
2	5235.293	-69.63	21.19	-8.66	-57.1	RMS Max	V	184	260	-13	-44.1	Pass
3	6980.601	-71.17	23.34	-6.35	-54.18	RMS Max	H	140	74	-13	-41.18	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3555.372	-77.35	19.42	0.58	-57.35	RMS Max	V	220	54	-13	-44.35	Pass
2	5332.271	-69.12	21.31	-8.97	-56.78	RMS Max	V	100	321	-13	-43.78	Pass
3	7110.543	-71.96	23.45	-5.88	-54.39	RMS Max	H	179	24	-13	-41.39	Pass

n5 band, 5MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3435.669	-72.9	19.27	-2.77	-56.4	RMS Max	V	212	142	-13	-43.4	Pass
2	5152.053	-70.03	21.21	-8.18	-57	RMS Max	V	227	115	-13	-44	Pass
3	6870.612	-71.81	23.26	-6.69	-55.24	RMS Max	H	257	73	-13	-42.24	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3465.726	-74.32	19.42	-1.86	-56.76	RMS Max	V	300	236	-13	-43.76	Pass
2	5197.177	-69.96	21.15	-8.43	-57.24	RMS Max	H	107	240	-13	-44.24	Pass
3	6930.603	-72.42	23.36	-6.48	-55.54	RMS Max	V	248	214	-13	-42.54	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3495.409	-75.48	19.57	-0.96	-56.88	RMS Max	H	223	194	-13	-43.88	Pass
2	5242.644	-69.77	21.2	-8.71	-57.28	RMS Max	V	180	18	-13	-44.28	Pass
3	6991.858	-71.46	23.34	-6.32	-54.45	RMS Max	V	238	303	-13	-41.45	Pass

Remarks:

1. Level (dBm) = Raw (dBm) + Cable loss(dB) + AF (dB).
2. AF (dB/m) = Antenna Factor (dB) - Pre-amplifier Gain (dB)
3. Margin = Level (dBm) - Limit value(dBm)

n7 band, 5MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3435.669	-72.9	19.27	-2.77	-56.4	RMS Max	V	212	142	-13	-43.4	Pass
2	5152.053	-70.03	21.21	-8.18	-57	RMS Max	V	227	115	-13	-44	Pass
3	6870.612	-71.81	23.26	-6.69	-55.24	RMS Max	H	257	73	-13	-42.24	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3465.726	-74.32	19.42	-1.86	-56.76	RMS Max	V	300	236	-13	-43.76	Pass
2	5197.177	-69.96	21.15	-8.43	-57.24	RMS Max	H	107	240	-13	-44.24	Pass
3	6930.603	-72.42	23.36	-6.48	-55.54	RMS Max	V	248	214	-13	-42.54	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3495.409	-75.48	19.57	-0.96	-56.88	RMS Max	H	223	194	-13	-43.88	Pass
2	5242.644	-69.77	21.2	-8.71	-57.28	RMS Max	V	180	18	-13	-44.28	Pass
3	6991.858	-71.46	23.34	-6.32	-54.45	RMS Max	V	238	303	-13	-41.45	Pass

n41 band, 20MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	5015.787	-70.1	20.96	-7.11	-56.26	RMS Max	V	284	58	-13	-43.26	Pass
2	7522.134	-72.13	23.74	-5.75	-54.14	RMS Max	H	120	13	-13	-41.14	Pass
3	10030.545	-74.63	24.08	-5.44	-55.99	RMS Max	V	216	171	-13	-42.99	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	5070.868	-70.5	21.17	-7.5	-56.83	RMS Max	H	171	88	-13	-43.83	Pass
2	7605.557	-72.73	24.07	-5.81	-54.47	RMS Max	H	143	275	-13	-41.47	Pass
3	10140.328	-74.43	24.08	-5.34	-55.69	RMS Max	V	283	52	-13	-42.69	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	5125.445	-70.24	21.25	-7.97	-56.97	RMS Max	V	181	228	-13	-43.97	Pass
2	7687.732	-72.57	24.17	-5.71	-54.11	RMS Max	V	230	25	-13	-41.11	Pass
3	10250.228	-74.79	24.08	-5.14	-55.85	RMS Max	H	256	255	-13	-42.85	Pass

Remarks:

1. Level (dBm) = Raw (dBm) + Cable loss(dB) + AF (dB).
2. AF (dB/m) = Antenna Factor (dB) - Preampifier Gain (dB)
3. Margin = Level (dBm) - Limit value(dBm)

n66 band, 5MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	5155.939	-70.11	21.21	-8.2	-57.11	RMS Max	V	210	173	-13	-44.11	Pass
2	7732.204	-72.18	24.2	-5.66	-53.64	RMS Max	V	286	351	-13	-40.64	Pass
3	10310.428	-74.48	24.08	-5.12	-55.52	RMS Max	V	170	284	-13	-42.52	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	5190.962	-70	21.16	-8.4	-57.24	RMS Max	V	220	206	-13	-44.24	Pass
2	7785.089	-72.53	24.24	-5.65	-53.94	RMS Max	V	107	292	-13	-40.94	Pass
3	10380.825	-76.35	24.08	-5.12	-57.39	RMS Max	H	185	205	-13	-44.39	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	5225.438	-69.22	21.18	-8.6	-56.64	RMS Max	V	138	278	-13	-43.64	Pass
2	7837.778	-73.4	24.24	-5.61	-54.77	RMS Max	V	117	349	-13	-41.77	Pass
3	10450.702	-75.15	24.08	-5.14	-56.21	RMS Max	H	150	161	-13	-43.21	Pass

n71 band, 5MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3435.789	-72.89	19.27	-2.76	-56.39	RMS Max	H	114	91	-13	-43.39	Pass
2	5152.531	-70.05	21.21	-8.18	-57.02	RMS Max	V	191	188	-13	-44.02	Pass
3	6870.578	-71.82	23.26	-6.69	-55.25	RMS Max	V	249	75	-13	-42.25	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3490.104	-75.26	19.54	-1.12	-56.84	RMS Max	V	165	230	-13	-43.84	Pass
2	5235.267	-69.63	21.19	-8.66	-57.1	RMS Max	V	243	144	-13	-44.1	Pass
3	6979.724	-71.31	23.34	-6.35	-54.32	RMS Max	H	120	315	-13	-41.32	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	3545.536	-76.82	19.45	0.34	-57.03	RMS Max	V	140	193	-13	-44.03	Pass
2	5317.186	-69.5	21.29	-8.92	-57.13	RMS Max	V	174	352	-13	-44.13	Pass
3	7090.768	-72.2	23.44	-5.94	-54.7	RMS Max	H	177	341	-13	-41.7	Pass

Remarks:

1. Level (dBm) = Raw (dBm) + Cable loss(dB) + AF (dB).
2. AF (dB/m) = Antenna Factor (dB) - Pre-amplifier Gain (dB)
3. Margin = Level (dBm) - Limit value(dBm)

n77 Lower band, 20MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	1341.103	-64.77	15.27	-6.48	-55.98	RMS Max	H	200	311	-13	-42.98	Pass
2	2011.425	-64.07	15.86	-4.64	-52.85	RMS Max	V	138	79	-13	-39.85	Pass
3	2682.224	-69.2	16.61	-3.49	-56.08	RMS Max	V	151	205	-13	-43.08	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	1361.305	-65.42	15.29	-6.6	-56.73	RMS Max	V	119	272	-13	-43.73	Pass
2	2041.744	-64.53	15.94	-4.7	-53.29	RMS Max	V	180	9	-13	-40.29	Pass
3	2722.65	-69.63	16.72	-3.31	-56.22	RMS Max	V	293	1	-13	-43.22	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	1381.14	-65.16	15.31	-6.63	-56.48	RMS Max	V	170	165	-13	-43.48	Pass
2	2071.123	-66.73	16.03	-4.68	-55.38	RMS Max	H	253	185	-13	-42.38	Pass
3	2762.645	-70.48	16.82	-3.04	-56.7	RMS Max	V	253	28	-13	-43.7	Pass

n77 Higher band, 20MHz Bandwidth, QPSK												
Low Channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	1403.22	-64.7	15.32	-6.69	-56.07	RMS Max	H	244	143	-13	-43.07	Pass
2	2104.248	-62.83	16.11	-4.61	-51.33	RMS Max	V	261	63	-13	-38.33	Pass
3	2806.56	-72.25	16.92	-2.75	-58.08	RMS Max	V	274	254	-13	-45.08	Pass
Mid channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	1415.042	-65.8	15.33	-6.79	-57.26	RMS Max	H	171	166	-13	-44.26	Pass
2	2122.481	-63.89	16.14	-4.5	-52.25	RMS Max	V	160	216	-13	-39.25	Pass
3	2830.326	-71.11	16.97	-2.68	-56.82	RMS Max	V	114	279	-13	-43.82	Pass
High channel												
No.	Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBm	Margin dB	Result
1	1427.058	-65.5	15.34	-6.9	-57.06	RMS Max	V	206	82	-13	-44.06	Pass
2	2140.058	-63.51	16.17	-4.38	-51.72	RMS Max	H	255	151	-13	-38.72	Pass
3	2854.385	-70.82	17.02	-2.6	-56.4	RMS Max	V	156	226	-13	-43.4	Pass

Remarks:

1. Level (dBm) = Raw (dBm) + Cable loss(dB) + AF (dB).
2. AF (dB/m) = Antenna Factor (dB) - Pre-amplifier Gain (dB)
3. Margin = Level (dBm) - Limit value(dBm)

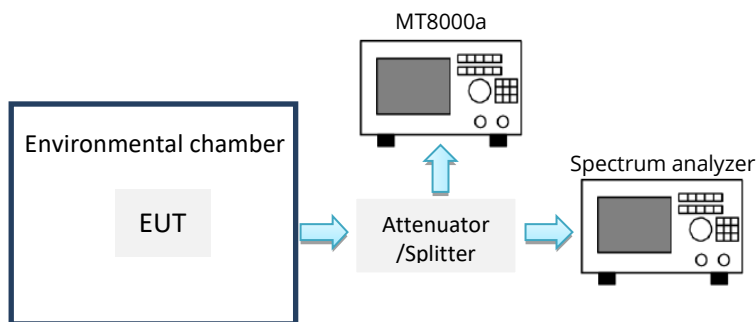
7.7 Frequency Stability

7.7.1 Requirement

§2.1055, §22.355 & §24.235, § 27.5(h); § 27.54
RSS-132(5.3), RSS-133(6.3), RSS-139(6.4)

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The carrier frequency shall not depart from the reference frequency in excess of $\pm 2.5\text{ppm}$ ($\pm 0.00025\%$) for mobile stations.

7.7.2 Test Setup



7.7.3 Test Procedure

- The testing follows ANSI C63.26 section 5.6.4.
- A communication link was established between EUT and base station.
- The EUT was set up in the thermal chamber and connected with the communication tester.
- With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- With power OFF, the temperature was raised in 10°C steps up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
- The frequency error was monitored and measured by base station under variation of ambient temperature and variation of primary supply voltage.

7.7.4 Test Result

5G NR n2 - 1882.5 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	24	0.019483	2.50	PASS
	-20	21	0.014574		
	-10	13	0.008683		
	0	25	0.009665		
	10	18	0.018992		
	20	20	0.011628		
	30	30	0.018010		
	40	30	0.020957		
	50	29	0.008683		
10.2	20	26	0.014574		
13.8	20	30	0.015556		

5G NR n5 - 836.5 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	38	0.011890	2.50	PASS
	-20	47	0.011890		
	-10	35	0.010824		
	0	50	0.009759		
	10	42	0.020946		
	20	33	0.012423		
	30	43	0.010824		
	40	40	0.022012		
	50	33	0.017218		
10.2	20	49	0.011356		
13.8	20	42	0.011890		

5G NR n7 – 2535 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	29	0.032312	2.50	PASS
	-20	21	0.023398		
	-10	25	0.027855		
	0	23	0.025627		
	10	30	0.033426		
	20	27	0.030084		
	30	17	0.018942		
	40	30	0.033426		
50	30	0.033426			
10.2	20	28	0.031198		
13.8	20	13	0.014485		

5G NR n41 – 2592.99 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	26	0.044229	2.50	PASS
	-20	24	0.022161		
	-10	13	0.016644		
	0	13	0.048643		
	10	27	0.028782		
	20	15	0.054160		
	30	29	0.028782		
	40	24	0.037609		
50	30	0.032092			
10.2	20	11	0.036505		
13.8	20	18	0.049747		

5G NR n66 – 1745 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	46	0.036219	2.50	PASS
	-20	35	0.028392		
	-10	35	0.049265		
	0	42	0.049265		
	10	41	0.023174		
	20	41	0.049265		
	30	46	0.019260		
	40	50	0.019260		
50	33	0.029696			
10.2	20	32	0.044047		
13.8	20	33	0.034915		

5G NR n71 – 680.5 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	46	0.018661	2.50	PASS
	-20	35	0.014749		
	-10	35	0.014749		
	0	42	0.017239		
	10	41	0.016883		
	20	41	0.016883		
	30	46	0.018661		
	40	50	0.020084		
	50	33	0.014038		
10.2	20	32	0.013682		
13.8	20	33	0.014038		

5G NR n77 Lower Band – 3500.01 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	46	0.014749	2.50	PASS
	-20	35	0.008347		
	-10	35	0.014393		
	0	42	0.008347		
	10	41	0.006568		
	20	41	0.014393		
	30	46	0.008347		
	40	50	0.010125		
	50	33	0.009414		
10.2	20	32	0.006924		
13.8	20	33	0.015816		

5G NR n77 Higher Band – 3840 MHz					
Voltage (Vdc)	Temperature (°C)	Frequency error (Hz)	Frequency error (ppm)	Limit (ppm)	Result
12.0	-30	46	0.014466	2.50	PASS
	-20	35	0.016582		
	-10	35	0.018168		
	0	42	0.020284		
	10	41	0.013407		
	20	41	0.015524		
	30	46	0.021341		
	40	50	0.020813		
	50	33	0.018697		
10.2	20	32	0.021341		
13.8	20	33	0.014466		

8 EUT and Test Setup Photos

See FCC exhibits

9 Test Instrument List

Equipment	Manufacturer	Model	Instrument Number	Cal. Date	Cal. Due
Semi-Anechoic Chamber	ETS-Lindgren	10M	VL001	10/18/2021	10/18/2022
Shielding Control Room	ETS-Lindgren	Series 81	VL006	N/A	N/A
Spectrum Analyzer	Keysight	N9020A	MY50110074	06/17/2021	06/17/2022
EMC Test Receiver	R&S	ESL6	100230	06/14/2021	06/14/2022
Bi-Log Antenna	ETS-Lindgren	3142E	217921	11/15/2021	11/15/2022
Horn Antenna (1-18GHz)	Electro-Metrics	EM-6961	6292	05/14/2022	05/14/2023
Horn Antenna (18-40GHz)	Com-Power	AH-840	101109	06/24/2021	06/24/2022
Preamplifier	RF Bay, Inc.	LPA-10-20	11180621	07/16/2021	07/16/2022
True RMS Multi-meter	UNI-T	UT181A	C173014829	05/05/2022	05/05/2023
Temp / Humidity / Pressure Meter	PCE Instruments	PCE-THB 40	R062028	05/05/2022	05/05/2023
RF Attenuator	Pasternack	PE7005-3	VL061	07/16/2021	07/16/2022
Preamplifier 100KHz - 40GHz	Aeroflex	33711-392- 77150-11	064	07/16/2021	07/16/2022
EM Center Control	ETS-Lindgren	7006-001	160136	N/A	N/A
Turn Table	ETS-Lindgren	2181-3.03	VL002	N/A	N/A
Boresight Antenna Tower	ETS-Lindgren	2171B	VL003	N/A	N/A
Loop Antenna (9k-30MHz)	Com-Power	AL-130	121012	05/16/2022	05/16/2023
RE test cable (below 6GHz)	Vista	RE-6GHz-01	RE-6GHz-01	07/16/2021	07/16/2022
RE test cable (1-18GHz)	PhaseTrack	II-240	RE-18GHz-01	07/16/2021	07/16/2022
RE test cable (>18GHz)	Sucoflex	104	344903/4	07/16/2021	07/16/2022
Pulse limiter	Com-Power	LIT-930A	531727	07/16/2021	07/16/2022
CE test cable #1	FIRST RF	FRF-C-1002- 001	CE-6GHz-01	07/16/2021	07/16/2022
CE test cable#2	FIRST RF	FRF-C-1002- 001	CE-6GHz-02	07/16/2021	07/16/2022
Vector Signal Generator	Keysight	N5182A	US47080548	06/17/2021	06/17/2022
USB RF Power Sensor	ETS-Lindgren	7002-006	SN 00151268	05/15/2022	05/15/2023
RF Power Amplifier (80- 1000MHz)	Ophir	5226FE	1013/1815	N/A	N/A
RF Power Amplifier (700- 6000MHz)	Ophir	5293FE	1063/1815	N/A	N/A
Horn Antenna (1-18GHz)	FT-RF	HA-07M18G- NF	180010HA	N/A	N/A
Wideband Communication	R&S	CMW500	147508	05/10/2022	05/10/2023
Radio Communication Tester	Anritsu	MT8000a	6262261939	02/23/2022	02/23/2023
Temperature/Humidity Chamber	Thermotron	SM-8-8200	40991	09/08/2021	09/08/2022

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