FCC TEST REPORT

Name of Sample:	**Mobile Cellular Phone**
Model of Sample:	**XT2527-1**
Applicant:	**Motorola Mobility LLC**
Issue Date:	**2025-04-15**

ADR TEST AND CERTIFICATION CENTER

Motorola Mobility LLC, a Lenovo Company

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Name of Client	Motorola Mobility LLC		
Address of Client	222 W, Merchandise Mart Plaza, Chicago IL 60654 USA		
Trademark	Motorola	**Type Name or ID**	FCC ID: IHDT56AV5
Applicant No.	RF190513	**Sample No.**	1#: NN0R250101 2#: NN0R250112
Delivering Date	2025-03-19	**Test Date**	2025-03-19 to 2025-04-24
Sample Illustration	None		
Standard	47 CFR Part 2; 47 CFR Part 22; 47 CFR Part 24; 47 CFR Part 27; 47 CFR Part 90;		
Conclusion	Pass		
Remarks	N/A		

Editor: Wangzhenyu **Reviewer:** Hexiaolin **Signatory:** HuangshengLin

Matters Needing Attention

a) The electronic report shall be valid after encryption.

b) The paper report shall be valid after being stamped with the official seal of the company.

c) The report is invalid without the signature of the Editor, Reviewer and Signatory.

d) The test report is invalid if there is any evidence of erasure and/or falsification.

e) If there is any dissidence for the test report, please file objection to the lab within 15 days from the date of receiving the test report.

f) The test report is only responsible for the tested model/sample. The sample(s) presented in this report are provided by client.

g) Context of the test report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of the lab.

Revision History

Report No.	Version	Description	Issued Date
TR-25ADRTCC7007	Rev.01	Initial issue of report	2025-04-15
TR-25ADRTCC7007	Rev.02	1, Updated the description on page7 2, Update DC_66A_n41A OBW data.	2025-04-24
TR-25ADRTCC7007	Rev.03	1, Updated the Emission Mask description and test procedure on page20	2025-04-25

Catalogue

1. Test Summary

1.1. 5G NR Band n2

Test Item	Rule No.	Requirements	Test Result	Verdict
Conducted Power	§2.1046	Report Only	Section 1 of Appendix B	Pass
Effective Isotropic Radiated Power	§24.232(c)	EIRP < 2W		
Peak-Average Ratio	§24.232(d)	<13 dB	Section 2 of Appendix B	Pass
Modulation Characteristics	§2.1047	Digital modulation	Section 3 of Appendix B	Pass
Occupied Bandwidth	§2.1049	No limit	Section 4 of Appendix B	Pass
26dB Emission Bandwidth		No limit		
Conducted Band Edges	§2.1051 §24.238(a)	< -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B	Pass
Conducted Spurious Emission	§2.1051 §24.238(a)	< -13 dBm/MHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges.	Section 6 of Appendix B	Pass
Frequency Stability	§24.235	< ±2.5 ppm	Section 7 of Appendix B	Pass

1.2. 5G NR Band n5/n26 (824-849)

Test Item	Rule No.	Requirements	Test Result	Verdict
Conducted Power	§2.1046	Report Only	Section 1 of Appendix B	Pass
Effective Radiated Power	§22.913(a)(5)	ERP < 7W		
Peak-Average Ratio	§22.913(d)	<13 dB	Section 2 of Appendix B	Pass
Modulation Characteristics	§2.1047	Digital modulation	Section 3 of Appendix B	Pass
Occupied Bandwidth	§2.1049	No limit	Section 4 of Appendix B	Pass
26dB Emission Bandwidth		No limit		
Conducted Band Edges	§2.1051 §22.917(a)	< -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B	Pass
Conducted Spurious Emission	§2.1051 §22.917(a)	< -13 dBm/100 kHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges	Section 6 of Appendix B	Pass
Frequency Stability	§2.1055 §22.355	< ±2.5ppm	Section 7 of Appendix B	Pass

1.3. 5G NR Band n26 (814-824)

Test Item	Rule No.	Requirements	Test Result	Verdict
Conducted Power	§2.1046 §90.635	Report Only	Section 1 of Appendix B	PASS
Peak-Average Ratio	---	<13 dB	Section 2 of Appendix B	PASS
Modulation Characteristics	§2.1047	Digital modulation	Section 3 of Appendix B	PASS
Occupied Bandwidth	§2.1049	No limit	Section 4 of Appendix B	PASS
26dB Emission Bandwidth		No limit		
Emission Mask	§2.1051 § 90.691	For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50+10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the	Section 5 of Appendix B	PASS

Test Item	Rule No.	Requirements	Test Result	Verdict
		center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.		
Conducted Spurious Emission	§2.1051 §90.691	< 43 + 10Log10(P[Watts]) for all out-of-band emissions	Section 6 of Appendix B	PASS
Frequency Stability	§90.213	< ±2.5ppm	Section 7 of Appendix B	PASS

1.4. 5G NR Band n7/n38/n41

Test Item	Rule No.	Requirements	Test Result	Verdict
Conducted Power	§2.1046	Report Only	Section 1 of Appendix B	Pass
Effective Isotropic Radiated Power	§27.50(h) (2)	EIRP < 2W		
Peak-Average Ratio	§27.50(a)	<13 dB	Section 2 of Appendix B	Pass
Modulation Characteristics	§2.1047	Digital modulation	Section 3 of Appendix B	Pass
Occupied Bandwidth	§2.1049	No limit	Section 4 of Appendix B	Pass
26dB Emission Bandwidth		No limit		
Conducted Band Edges	§2.1051 §27.53(m) (4)	For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5MHz.	Section 5 of Appendix B	Pass
Conducted Spurious Emission	§2.1051 §27.53(m) (4)	< -25 dBm/MHz for outside Band Edge Range	Section 6 of Appendix B	Pass
Frequency Stability	§27.54	Within authorized bands	Section 7 of Appendix B	Pass

1.5. 5G NR Band n66

Test Item	Rule No.	Requirements	Test Result	Verdict
Conducted Power	§2.1046	Report Only	Section 1 of Appendix B	Pass
Effective Isotropic Radiated Power	§27.50(d)	EIRP < 1W		
Peak-Average Ratio	---	<13 dB	Section 2 of Appendix B	Pass
Modulation Characteristics	§2.1047	Digital modulation	Section 3 of Appendix B	Pass
Occupied Bandwidth	§2.1049	No limit	Section 4 of Appendix B	Pass
26dB Emission Bandwidth		No limit		
Conducted Band Edges	§2.1051 §27.53(h)	< -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block.	Section 5 of Appendix B	Pass
Conducted Spurious Emission	§2.1051 §27.53(h)	< -13 dBm/MHz, from 9 kHz to 10th harmonics but outside authorized operating frequency ranges	Section 6 of Appendix B	Pass
Frequency Stability	§27.54	Within authorized bands	Section 7 of Appendix B	Pass

1.6. 5G NR Band n77 (3700-3980)/n78 (3700-3800)

Test Item	Rule No.	Requirements	Test Result	Verdict
Conducted Power	§2.1046	Report Only	Section 1 of Appendix B	Pass
Effective Isotropic Radiated Power	§27.50(j) (3)	EIRP < 1W		
Peak-Average Ratio	§27.50(j) (4)	<13 dB	Section 2 of Appendix B	Pass
Modulation Characteristics	§2.1047	Digital modulation	Section 3 of Appendix B	Pass
Occupied Bandwidth	§2.1049	No limit	Section 4 of Appendix B	Pass
26dB Emission Bandwidth		No limit		
Conducted Band Edges	§2.1051 §27.53(l) (2)	< -13 dBm/MHz	Section 5 of Appendix B	Pass
Conducted Spurious Emission	§2.1051 §27.53(l) (2)	< -13 dBm/MHz	Section 6 of Appendix B	Pass
Frequency Stability	§27.54	Within authorized bands	Section 7 of Appendix B	Pass

Remark:

1, Only 5G NR Bands conducted test performed and the data displayed in this report, the radiated spurious emission refer to the report (25ADRTCC5019).

2, The devices supports two PAs for 5G NR (Main PA and other PA), both PAs were evaluated, but only the worst band data displayed in this report, the SA mode for n2/n5/n7/n26/n38/n41/n66/n77/n78 and NSA mode (except the ENDC combinations mentioned below) for n2/n7/n38/n41/n66/n78 worked with the main PA, and DC_4A-n2A/DC_2A-n66A/ DC_5A-n66A worked with the other PA.

3, The maximum E(I)RP is calculated from max output power and max antenna gain, only the max E(I)RP data displayed in this report, n5/n26/n38/n41 for Antenna 4; n2/n7/n66 for Antenna 1; n77/n78 for antenna 5.

4, 5G NR Bands support SA mode for n2/n5/n7/n26/n38/n41/n66/n77/n78 and NSA mode for n2/n7/n38/n41/n66/n78.

5, The test has been assessed on SA and NSA mode, but only the worst mode performed the whole conducted test items by referring to the max conducted power.

6, The ENDC combination could be referred to the product specification.

2. Maximum Effective Radiated (Isotropic) Power and Emission Designator

2.1. NR System

2.1.1. NR Band n2 (1850-1910)

5G SA (n2A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
5MHz	1852.5-1907.5	0.115345	4M50G7D	0.093325	4M49W7D
10MHz	1855.0-1905.0	0.112460	9M27G7D	0.094842	9M29W7D
15MHz	1857.5-1902.5	0.113240	14M1G7D	0.093325	14M2W7D
20MHz	1860.0-1900.0	0.114025	18M9G7D	0.095060	18M9W7D
25MHz	1862.5-1897.5	0.113763	23M7G7D	0.095060	23M8W7D
30MHz	1865.0-1895.0	0.114815	28M6G7D	0.095719	28M7W7D
35MHz	1867.5-1892.5	0.114288	33M6G7D	0.095499	33M7W7D
40MHz	1870.0-1890.0	0.115345	38M6G7D	0.096161	38M7W7D

5G NR NSA (DC_4A_n2A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
5MHz	1852.5-1907.5	0.089125	4M48G7D	0.073451	4M49W7D
10MHz	1855.0-1905.0	0.088512	9M29G7D	0.075162	9M29W7D
15MHz	1857.5-1902.5	0.089125	14M1G7D	0.075336	14M2W7D
20MHz	1860.0-1900.0	0.089950	18M9G7D	0.074302	18M9W7D
25MHz	1862.5-1897.5	0.090573	23M7G7D	0.072111	23M8W7D
30MHz	1865.0-1895.0	0.086896	28M7G7D	0.070469	28M5W7D
35MHz	1867.5-1892.5	0.087902	33M6G7D	0.070469	33M6W7D
40MHz	1870.0-1890.0	0.087700	38M6G7D	0.074473	38M6W7D

2.1.2. NR Band n5 (824-849)

5G NR NSA (DC_2A_n5A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
5MHz	826.5-846.5	0.046238	4M50G7D	0.037239	4M48W7D
10MHz	829.0-844.0	0.045290	9M27G7D	0.037068	9M29W7D
15MHz	831.5-841.5	0.045709	14M1G7D	0.037325	14M1W7D
20MHz	834.0-839.0	0.045709	18M9G7D	0.037411	18M9W7D

2.1.3. NR Band n7 (2500-2570)

5G NR SA (n7A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum ERP (W)	Emission Designator (99% OBW)	Maximum ERP (W)	Emission Designator (99% OBW)
5MHz	2502.5-2567.5	0.132434	4M50G7D	0.111173	4M49W7D
10MHz	2505.0-2565.0	0.132130	9M27G7D	0.112720	9M29W7D
15MHz	2507.5-2562.5	0.131522	14M1G7D	0.112720	14M2W7D
20MHz	2510.0-2560.0	0.132130	18M9G7D	0.111173	18M9W7D
25MHz	2512.5-2557.5	0.131826	23M7G7D	0.108893	23M8W7D
30MHz	2515.0-2555.0	0.133660	28M6G7D	0.111686	28M5W7D
35MHz	2517.5-2552.5	0.131826	33M6G7D	0.112202	33M6W7D
40MHz	2520.0-2550.0	0.133045	38M6G7D	0.110917	38M5W7D
50MHz	2525.0-2545.0	0.130617	48M2G7D	0.113501	48M2W7D

2.1.4. NR Band n26 (814-824)

5G NR SA (n26A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum Conducted Power (W)	Emission Designator (99% OBW)	Maximum Conducted Power (W)	Emission Designator (99% OBW)
5MHz	816.5-821.5	0.213796	4M50G7D	0.171002	4M48W7D
10MHz	819.0	0.208449	9M27G7D	0.171002	9M29W7D
15MHz	821.5	0.208449	14M1G7D	0.172982	14M1W7D
20MHz	824.0	0.209894	18M9G7D	0.173380	18M9W7D

2.1.5. NR Band n26 (824-849)

5G NR SA (n26A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum ERP (W)	Emission Designator (99% OBW)	Maximum ERP (W)	Emission Designator (99% OBW)
5MHz	826.5-846.5	0.077090	4M50G7D	0.061094	4M48W7D
10MHz	829.0-844.0	0.075683	9M27G7D	0.062230	9M29W7D
15MHz	831.5-841.5	0.076384	14M1G7D	0.062373	14M1W7D
20MHz	834.0-839.0	0.076560	18M9G7D	0.063387	18M9W7D

2.1.6. NR Band n38 (2570-2620)

5G NR NSA (DC_66A_n38A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
10MHz	2575.0-2615.0	0.136773	8M57G7D	0.109901	8M59W7D
15MHz	2577.5-2612.5	0.137088	13M6G7D	0.108643	13M7W7D
20MHz	2580.0-2610.0	0.137404	18M2G7D	0.108393	18M2W7D
25MHz	2582.5-2607.5	0.136458	23M1G7D	0.108643	23M3W7D
30MHz	2585.0-2605.0	0.139316	27M8G7D	0.110154	27M9W7D
40MHz	2590.0-2600.0	0.137404	37M8G7D	0.107895	37M9W7D

2.1.7. NR Band n41 (2496-2690)

5G NR NSA (DC_66A_n41A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
10MHz	2501.01-2685.00	0.134896	8M57G7D	0.106414	8M59W7D
15MHz	2503.50-2682.48	0.134276	13M6G7D	0.105439	13M6W7D
20MHz	2506.02-2679.99	0.134896	18M2G7D	0.105682	18M2W7D
25MHz	2508.51-2677.50	0.133660	23M2G7D	0.105439	23M2W7D
30MHz	2511.00-2674.98	0.137721	27M8G7D	0.107152	27M8W7D
35MHz	2513.50-2672.50	0.137088	32M9G7D	0.107152	32M9W7D
40MHz	2516.01-2670.00	0.135519	37M8G7D	0.106170	37M8W7D
45MHz	2518.50-2667.48	0.134586	42M4G7D	0.106414	42M5W7D
50MHz	2521.02-2664.99	0.135519	47M5G7D	0.106660	47M6W7D
60MHz	2526.00-2659.98	0.133968	57M9G7D	0.105439	57M9W7D
70MHz	2531.01-2655.00	0.137404	67M6G7D	0.109648	67M4W7D
80MHz	2536.02-2649.99	0.137404	77M4G7D	0.110154	77M4W7D
90MHz	2541.00-2644.98	0.142233	87M4G7D	0.109648	87M4W7D
100MHz	2546.01-2640.00	0.139637	97M3G7D	0.109144	97M5W7D

2.1.8. NR Band n66 (1710-1780)

5G NR SA (n66A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
5MHz	1712.5-1777.5	0.101625	4M49G7D	0.081658	4M48W7D
10MHz	1715.0-1775.0	0.100231	9M27G7D	0.083753	9M29W7D
15MHz	1717.5-1772.5	0.101391	14M1G7D	0.084333	14M1W7D
20MHz	1720.0-1770.0	0.102094	18M9G7D	0.084333	18M9W7D
25MHz	1722.5-1767.5	0.100693	23M7G7D	0.082794	23M8W7D
30MHz	1725.0-1765.0	0.101625	28M6G7D	0.084918	28M5W7D
35MHz	1727.5-1762.5	0.101158	33M6G7D	0.082985	33M6W7D
40MHz	1730.0-1760.0	0.101158	38M6G7D	0.083176	38M6W7D
45MHz	1732.5-1757.5	0.101158	43M2G7D	0.083753	43M3W7D

5G NR NSA (DC_5A_n66A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
5MHz	1712.5-1777.5	0.100462	4M49G7D	0.079068	4M48W7D
10MHz	1715.0-1775.0	0.099083	9M27G7D	0.07925	9M29W7D
15MHz	1717.5-1772.5	0.099541	14M1G7D	0.079433	14M1W7D
20MHz	1720.0-1770.0	0.099770	18M9G7D	0.079068	18M9W7D
25MHz	1722.5-1767.5	0.097949	23M7G7D	0.079250	23M8W7D

30MHz	1725.0-1765.0	0.099083	28M6G7D	0.079983	28M5W7D
35MHz	1727.5-1762.5	0.097949	33M5G7D	0.079433	33M6W7D
40MHz	1730.0-1760.0	0.097499	38M6G7D	0.079068	38M5W7D
45MHz	1732.5-1757.5	0.097275	43M2G7D	0.078343	43M2W7D

2.1.9. NR Band n77 (3700-3980)

5G NR SA (n77A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
10MHz	3705.00-3975.00	0.169824	8M59G7D	0.135831	8M59W7D
15MHz	3707.52-3972.48	0.175792	13M6G7D	0.137088	13M6W7D
20MHz	3710.01-3969.99	0.173380	18M2G7D	0.134896	18M2W7D
25MHz	3712.50-3967.50	0.172187	23M2G7D	0.136773	23M2W7D
30MHz	3715.02-3964.98	0.176604	27M8G7D	0.140281	27M9W7D
40MHz	3720.00-3960.00	0.180717	37M9G7D	0.138676	37M8W7D
50MHz	3725.01-3954.99	0.179061	47M4G7D	0.139637	47M5W7D
60MHz	3730.02-3949.98	0.182810	57M9G7D	0.143549	57M9W7D
70MHz	3735.00-3945.00	0.187499	67M7G7D	0.145881	67M6W7D
80MHz	3740.01-3939.99	0.181552	77M5G7D	0.142233	77M5W7D
90MHz	3745.02-3934.98	0.181134	87M4G7D	0.144212	87M4W7D
100MHz	3750.00-3930.00	0.183654	97M5G7D	0.145546	97M5W7D

2.1.10. NR Band n78 (3700-3800)

5G NR SA (n78A)		Pi/2 BPSK / QPSK		16QAM/64QAM/256QAM	
Bandwidth	Frequency Range (MHz)	Maximum EIRP (W)	Emission Designator (99% OBW)	Maximum EIRP (W)	Emission Designator (99% OBW)
10MHz	3705.00-3795.00	0.133352	8M57G7D	0.104713	8M59W7D
15MHz	3707.52-3792.48	0.133045	13M6G7D	0.105439	13M6W7D
20MHz	3710.01-3789.99	0.132739	18M2G7D	0.104472	18M2W7D
25MHz	3712.50-3787.50	0.134896	23M1G7D	0.10617	23M2W7D
30MHz	3715.02-3784.98	0.134586	27M8G7D	0.107152	27M9W7D
40MHz	3720.00-3780.00	0.137088	37M7G7D	0.105925	37M8W7D
50MHz	3725.01-3774.99	0.135207	47M5G7D	0.105682	47M6W7D
60MHz	3730.02-3769.98	0.133352	57M9G7D	0.106660	58M0W7D
70MHz	3735.00-3765.00	0.137404	67M6G7D	0.108643	67M4W7D
80MHz	3740.01-3759.99	0.140605	77M4G7D	0.109648	77M5W7D
90MHz	3745.02-3754.98	0.140281	87M4G7D	0.108393	87M4W7D
100MHz	3750.00	0.140605	97M5G7D	0.108893	97M5W7D

3. General Information

3.1. General Description of EUT

EUT Description:	Mobile Cellular Phone
Brand Name:	Motorola
Model Name:	XT2527-1
FCC ID:	IHDT56AV5
IMEI Code:	1#: 358887330041771/358887330041789 (Conducted); 2#: 358887330041631/358887330041649 (Conducted);
Hardware Version:	DVT2
Software Version:	V2VN35.50
NR Modulation:	DFT-s-OFDM: ☒Pi/2BPSK; ☒ QPSK; ☒ 16QAM; ☒ 64QAM; ☒ 256QAM; CP-OFDM: ☒ QPSK; ☒ 16QAM; ☒ 64QAM; ☒ 256QAM;
Sample Type:	☒ Portable Device, ☐Module
Antenna Type:	☐External, ☒ Integrated
Antenna Gain:	n2 (1850-1910): -3.10dBi (Ant1); -3.90dBi (Ant4); n5 (824-849): -5.40dBi (Ant0); -4.30dBi (Ant4); n7 (2500-2570): -2.30dBi (Ant1); -2.10dBi (Ant4); n26 (814-849): -5.40dBi (Ant0); -4.30dBi (Ant4); n38 (2570-2620): -2.30dBi (Ant1); -2.10dBi (Ant4); n41 (2496-2690): -2.30dBi (Ant1); -2.10dBi (Ant4); n66 (1710-1780): -3.60dBi (Ant1); -3.30dBi (Ant4); n77 (3700-3980): -5.10dBi (Ant3); -1.20dBi (Ant5); -4.70dBi (Ant7); -2.20dBi (Ant9); n78 (3700-3800): -5.10dBi (Ant3); -2.40dBi (Ant5); -4.70dBi (Ant7); -2.20dBi (Ant9);

Remark

1, The information above was declared by manufacture. Please refer to the specifications or user manual for more detailed description.

3.2. Test Environment

Relative Humidity:	52.0% - 62.0%	
Atmospheric Pressure:	101.32 KPa	
Temperature:	NT (normal temperature)	25.0 °C – 27.5 °C
Voltage:	LV (Low voltage)	3.40V
	NV (Nominal voltage)	3.81V
	HV (High voltage)	4.50V

3.3. Specification of Accessories

Accessory	Brand Name	Model Name
AC Adapter 1 (US)	Motorola（Salcomp）	MC-331L
AC Adapter 2 (EU)	Motorola（Salcomp）	MC-332L
AC Adapter 3 (UK)	Motorola（Salcomp）	MC-333L
AC Adapter 4 (AU)	Motorola（Salcomp）	MC-335L
AC Adapter 5 (AR)	Motorola（Salcomp）	MC-336L
AC Adapter 6 (BR)	Motorola（Salcomp）	MC-337L
AC Adapter 7 (US)	Motorola（Chenyang）	MC-331L
AC Adapter 8 (EU)	Motorola（Chenyang）	MC-332L
AC Adapter 9 (UK)	Motorola（Chenyang）	MC-333L

AC Adapter 10 (AR)	Motorola（Chenyang）	MC-336L
AC Adapter 11 (BR)	Motorola（Chenyang）	MC-337L
Battery 1	NVT	RA52
Battery 2	SUNWODA	RA52
Wireless Earphones	Motorola	XT2443-1
USB Cable 1	Washin	HX-ZN-34
USB Cable 2	Juwei	JWUB1928-ZN01H

4. Test Configuration of Equipment Under Test

4.1. Test Mode for NR Configuration

Test Case	5G NR	SCS		Bandwidth	Modulation					Channel			RB	
		15KHz	30KHz		Pi/2BPSK	QPSK	16QAM	64QAM	256QAM	LCH	MCH	HCH	1	Full
Effective Isotropic Radiated Power	N2 (1850-1910)	●	○	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N5 (824-849)	●	○	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N7 (2500-2570)	●	○	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N26 (814-824)	●	○	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N26 (824-849)	●	○	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N38 (2570-2620)	○	●	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N41 (2496-2690)	○	●	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N66 (1710-1780)	●	○	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N77 (3700-3980)	○	●	All Supported BW	●	●	●	●	●	●	●	●	●	●
	N78 (3700-3800)	○	●	All Supported BW	●	●	●	●	●	●	●	●	●	●
Peak-Average Ratio	N2 (1850-1910)	●	○	Highest BW	●	●	○	○	○	●	●	●	○	●
	N5 (824-849)	●	○	Highest BW	●	●	○	○	○	●	●	●	○	●
	N7 (2500-2570)	●	○	Highest BW	●	●	○	○	○	●	●	●	○	●
	N26 (814-824)	●	○	Highest BW	●	●	○	○	○	●	●	●	○	●
	N26 (824-849)	●	○	Highest BW	●	●	○	○	○	●	●	●	○	●
	N38 (2570-2620)	○	●	Highest BW	●	●	○	○	○	●	●	●	○	●
	N41 (2496-2690)	○	●	Highest BW	●	●	○	○	○	●	●	●	○	●
	N66 (1710-1780)	●	○	Highest BW	●	●	○	○	○	●	●	●	○	●
	N77 (3700-3980)	○	●	Highest BW	●	●	○	○	○	●	●	●	○	●
	N78 (3700-3800)	○	●	Highest BW	●	●	○	○	○	●	●	●	○	●
Modulation Characteristics	N2 (1850-1910)	●	○	Highest BW	●	●	●	●	●	○	●	○	○	●
	N5 (824-849)	●	○	Highest BW	●	●	●	●	●	○	●	○	○	●
	N7 (2500-2570)	●	○	Highest BW	●	●	●	●	●	○	●	○	○	●
	N26 (814-824)	●	○	Highest BW	●	●	●	●	●	○	●	○	○	●
	N26 (824-849)	●	○	Highest BW	●	●	●	●	●	○	●	○	○	●
	N38 (2570-2620)	○	●	Highest BW	●	●	●	●	●	○	●	○	○	●
	N41 (2496-2690)	○	●	Highest BW	●	●	●	●	●	○	●	○	○	●
	N66 (1710-1780)	●	○	Highest BW	●	●	●	●	●	○	●	○	○	●
	N77 (3700-3980)	○	●	Highest BW	●	●	●	●	●	○	●	○	○	●
	N78 (3700-3800)	○	●	Highest BW	●	●	●	●	●	○	●	○	○	●

Occupied Bandwidth & 26dB Emission Bandwidth	N2 (1850-1910)	●	○	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N5 (824-849)	●	○	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N7 (2500-2570)	●	○	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N26 (814-824)	●	○	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N26 (824-849)	●	○	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N38 (2570-2620)	○	●	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N41 (2496-2690)	○	●	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N66 (1710-1780)	●	○	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N77 (3700-3980)	○	●	All Supported BW	●	●	●	●	●	○	●	○	○	●
	N78 (3700-3800)	○	●	All Supported BW	●	●	●	●	●	○	●	○	○	●
Conducted Band Edges	N2 (1850-1910)	●	○	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N5 (824-849)	●	○	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N7 (2500-2570)	●	○	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N26 (824-849)	●	○	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N38 (2570-2620)	○	●	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N41 (2496-2690)	○	●	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N66 (1710-1780)	●	○	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N77 (3700-3980)	○	●	All Supported BW	●	●	○	○	○	●	○	●	●	●
	N78 (3700-3800)	○	●	All Supported BW	●	●	○	○	○	●	○	●	●	●
Emission Mask	N26 (814-824)	●	○	All Supported BW	●	●	○	○	○	●	○	●	●	●
Conducted Spurious Emission	N2 (1850-1910)	●	○	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N5 (824-849)	●	○	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N7 (2500-2570)	●	○	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N26 (814-824)	●	○	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N26 (824-849)	●	○	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N38 (2570-2620)	○	●	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N41 (2496-2690)	○	●	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N66 (1710-1780)	●	○	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N77 (3700-3980)	○	●	All Supported BW	●	●	○	○	○	●	●	●	●	○
	N78 (3700-3800)	○	●	All Supported BW	●	●	○	○	○	●	●	●	●	○
Frequency Stability	N2 (1850-1910)	●	○	Highest BW	○	●	○	○	○	○	●	○	○	●
	N5 (824-849)	●	○	Highest BW	○	●	○	○	○	○	●	○	○	●
	N7 (2500-2570)	●	○	Highest BW	○	●	○	○	○	○	●	○	○	●
	N26 (814-824)	●	○	Highest BW	○	●	○	○	○	○	●	○	○	●
	N26 (824-849)	●	○	Highest BW	○	●	○	○	○	○	●	○	○	●
	N38 (2570-2620)	○	●	Highest BW	○	●	○	○	○	○	●	○	○	●
	N41 (2496-2690)	○	●	Highest BW	○	●	○	○	○	○	●	○	○	●
	N66 (1710-1780)	●	○	Highest BW	○	●	○	○	○	○	●	○	○	●
	N77 (3700-3980)	○	●	Highest BW	○	●	○	○	○	○	●	○	○	●
	N78 (3700-3800)	○	●	Highest BW	○	●	○	○	○	○	●	○	○	●

Remark:

1, the mark "●" means this configuration was chosen for testing, mark "○" means not selected, and the mark "✘" means not applicable.

2, All Supported BW means all supported bandwidth for selected SCS configuration.

4.2. Test Frequencies

4.2.1 5G NR System

4.2.1.1. NR Band n2 (1850-1910)

4.2.1.1.1. SCS=15KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
5MHz	370500	1852.5	376000	1880.0	381500	1907.5
10MHz	371000	1855.0	376000	1880.0	381000	1905.0
15MHZ	371500	1857.5	376000	1880.0	380500	1902.5
20MHz	372000	1860.0	376000	1880.0	380000	1900.0
25MHz	372500	1862.5	376000	1880.0	379500	1897.5
30MHz	373000	1865.0	376000	1880.0	379000	1895.0
35MHz	373500	1867.5	376000	1880.0	378500	1892.5
40MHz	374000	1870.0	376000	1880.0	378000	1890.0

4.2.1.2. NR Band n5 (824-849)

4.2.1.2.1. SCS=15KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
5MHz	165300	826.5	167300	836.5	169300	846.5
10MHz	165800	829.0	167300	836.5	168800	844.0
15MHZ	166300	831.5	167300	836.5	168300	841.5
20MHz	166800	834.0	167300	836.5	167800	839.0

4.2.1.3. NR Band n7 (2500-2570)

4.2.1.3.1. SCS=15KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
5MHz	500500	2502.5	507000	2535.0	513500	2567.5
10MHz	501000	2505.0	507000	2535.0	513000	2565.0
15MHZ	501500	2507.5	507000	2535.0	512500	2562.5
20MHz	502000	2510.0	507000	2535.0	512000	2560.0
25MHz	502500	2512.5	507000	2535.0	511500	2557.5
30MHz	503000	2515.0	507000	2535.0	511000	2555.0
35MHz	503500	2517.5	507000	2535.0	510500	2552.5
40MHz	504000	2520.0	507000	2535.0	510000	2550.0
50MHz	505000	2525.0	507000	2535.0	509000	2545.0

4.2.1.4. NR Band n26 (814-824)

4.2.1.4.1. SCS=15KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
5MHz	163300	816.5	163800	819.0	164300	821.5
10MHz	163800	819.0	163800	819.0	163800	819.0
15MHz	164300	821.5	164300	821.5	164300	821.5
20MHz	164800	824.0	164800	824.0	164800	824.0

4.2.1.5. NR Band n26 (824-849)

4.2.1.5.1. SCS=15KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
5MHz	165300	826.5	167300	836.5	169300	846.5
10MHz	165800	829.0	167300	836.5	168800	844.0
15MHZ	166300	831.5	167300	836.5	168300	841.5
20MHz	166800	834.0	167300	836.5	167800	839.0

4.2.1.6. NR Band n38 (2570-2620)

4.2.1.6.1. SCS=30KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
10MHz	515000	2575.0	519000	2595.0	525000	2625.0
15MHz	515500	2577.5	519000	2595.0	524500	2622.5
20MHz	516000	2580.0	519000	2595.0	522000	2610.0
25MHz	516500	2582.5	519000	2595.0	521500	2607.5
30MHz	517000	2585.0	519000	2595.0	521000	2605.0
40MHz	518000	2590.0	519000	2595.0	520000	2600.0

4.2.1.7. NR Band n41 (2496-2690)

4.2.1.7.1. SCS=30KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
10MHz	500202	2501.01	518598	2592.99	537000	2685.00
15MHz	500700	2503.50	518598	2592.99	536496	2682.48
20MHz	501204	2506.02	518598	2592.99	535998	2679.99
25MHz	501700	2508.50	518598	2592.99	535500	2677.50
30MHz	502200	2511.00	518598	2592.99	534996	2674.98
35MHz	502700	2513.50	518598	2592.99	534500	2672.50
40MHz	503202	2516.01	518598	2592.99	534000	2670.00
45MHz	503700	2518.50	518598	2592.99	533500	2667.50
50MHz	504204	2521.02	518598	2592.99	532998	2664.99
60MHz	505200	2526.00	518598	2592.99	531996	2659.98
70MHz	506202	2531.01	518598	2592.99	531000	2655.00
80MHz	507204	2536.02	518598	2592.99	529998	2649.99
90MHz	508200	2541.00	518598	2592.99	528996	2644.98
100MHz	509202	2546.01	518598	2592.99	528000	2640.00

4.2.1.8. NR Band n66 (1710-1780)

4.2.1.8.1. SCS=15KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
5MHz	342500	1712.5	349000	1745.0	355500	1777.5
10MHz	343000	1715.0	349000	1745.0	355000	1775.0
15MHz	343500	1717.5	349000	1745.0	354500	1772.5
20MHz	344000	1720.0	349000	1745.0	354000	1770.0
25MHz	344500	1722.5	349000	1745.0	353500	1767.5

30MHz	345000	1725.0	349000	1745.0	353000	1765.0
35MHz	345500	1727.5	349000	1745.0	352500	1762.5
40MHz	346000	1730.0	349000	1745.0	352000	1760.0
45MHz	346500	1732.5	349000	1745.0	351500	1757.5

4.2.1.9. NR Band N77 (3700-3980)

4.2.1.9.1. SCS=30KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
10MHz	741000	3705.00	656000	3840.00	665000	3975.00
15MHz	741504	3707.52	656000	3840.00	664832	3972.48
20MHz	647334	3710.01	656000	3840.00	664666	3969.99
25MHz	742500	3712.50	656000	3840.00	664500	3967.50
30MHz	647668	3715.02	656000	3840.00	664332	3964.98
40MHz	648000	3720.00	656000	3840.00	664000	3960.00
50MHz	648334	3725.01	656000	3840.00	663666	3954.99
60MHz	648668	3730.02	656000	3840.00	663332	3949.98
70MHz	649000	3735.00	656000	3840.00	663000	3945.00
80MHz	649334	3740.01	656000	3840.00	662666	3939.99
90MHz	649668	3745.02	656000	3840.00	662332	3934.98
100MHz	650000	3750.00	656000	3840.00	662000	3930.00

4.2.1.10. NR Band N78 (3700-3800)

4.2.1.10.1. SCS=30KHz

Bandwidth	LCH		MCH		HCH	
	Arfcn	Freq	Arfcn	Freq	Arfcn	Freq
10MHz	741000	3705.00	650000	3750.00	653000	3795.00
15MHz	741504	3707.52	650000	3750.00	652832	3792.48
20MHz	647334	3710.01	650000	3750.00	652666	3789.99
25MHz	742500	3712.50	650000	3750.00	652500	3787.50
30MHz	647668	3715.02	650000	3750.00	652332	3784.98
40MHz	648000	3720.00	650000	3750.00	652000	3780.00
50MHz	648334	3725.01	650000	3750.00	651666	3774.99
60MHz	648668	3730.02	650000	3750.00	651332	3769.98
70MHz	649000	3735.00	650000	3750.00	651000	3765.00
80MHz	649334	3740.01	650000	3750.00	650666	3759.99
90MHz	649668	3745.02	650000	3750.00	650332	3754.98
100MHz	650000	3750.00	650000	3750.00	650000	3750.00

5. Description of Tests

5.1. Conducted Output Power Measurement

5.1.1. Description of Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT, Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

5.1.2. Test Procedures

1， The testing follows ANSI C63.26 Section 5.2.

2， The transmitter output port was connected to the system simulator.

3， Set EUT at maximum power through the system simulator.

4， Select lowest, Middle, Highest channels for each band and each modulation.

5， Record the reading power from the system simulator.

5.2. Effective (Isotropic) Radiated Power

Measurement Procedure: ANSI C63.26

Calculate power in dBm by the following formula:

ERP (dBm) = Conducted Power (dBm) + antenna gain (dBd)

EIRP (dBm) = Conducted Power (dBm) + antenna gain (dBi)

EIRP=ERP+2.15dB

5.3. Peak-to-Average Ratio Measurement

5.3.1. Description of PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis, A CCDF curve depicts the probability of peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

5.3.2. Test Procedures

1， The testing follows ANSI C63.26 Section 5.2.3.4(CCDF)

2， Refer to instrument's analyser instruction manual for details on how to use the power statistics/CCDF function.

3， Centre Frequency = Carrier centre frequency.

4， Set resolution bandwidth ≥ signal's occupied bandwidth.

5， Set the number of counts to a value that stabilizes the measured CCDF curve.

6， Set the measurement interval as follows:

1) for continuous transmissions (>98% duty cycle), set to 1ms.

2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

7， Record the maximum PAR level associated with a probability of 0.1%.

5.3.3. Alternate procedure for PAR

Measurement Procedure: 5.2.6 of ANSI C63.26

Some regulatory requirements specify a PAR limit when the output power limits are specified in terms of average power. If it becomes necessary to provide measurement data to demonstrate compliance to a PAR

limit, then the appropriate procedure from those provided in 5.2.3 shall be utilized to determine the peak power (or peak

PSD) and the appropriate procedure from those provided in 5.2.4 shall be used to determine
the average power (or average PSD). The data from these measurements is then used in Equation (2) to determine the PAR of a narrowband CW-like signal. See 5.2.3.4 for guidance on determining the PAR of a broadband noise-like signal.
PAR (dB) = PPk (dBm or dBW) − PAvg (dBm or dBW)
where
PAR peak-to-average power ratio, in dB
PPk measured peak power or peak PSD level, in dBm or dBW
PAvg measured average power or average PSD level, in dBm or dBW

5.4. 99% Occupied Bandwidth & 26dB Emission Bandwidth

5.4.1. Description of 99% Occupied Bandwidth & 26dB Emission Bandwidth Measurement

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. The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel, middle channel and high channel). The span of the analyser shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

5.4.2. Test Procedures

1, The testing follows ANSI C63.26 Section 5.4
2, The signal analyzer's automatic measurement capability was used to perform the 99% occupied bandwidth and the 26dB emission bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
3, RBW ≥1% - 5% of the expected OBW.
4, VBW ≥3 * RBW
5, Detector=Peak
6, Trace Mode= Max Hold.
7, Sweep Time=Auto
8, The trace was allowed to stabilize.
9, If necessary, steps 2-7 were repeated after changing the RBW such that it would be within 1%-5% of the 99% occupied bandwidth observed in step 7.

5.5. Conducted Band Edge Measurement

5.5.1. Description of Conducted Band Edge Measurement

The transmitter output was connected to a calibrated coaxial cable, attenuator and spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at two frequencies (low channel and high channel).in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of 100kHz or 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emissions are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyser was set at thrice the resolution bandwidth. Detector Mode was set to peak or

peak hold power.

5.5.2. Test Procedures

1， The testing follows ANSI C63.26 Section 5.7

2， Start and stop frequency were set such that the band edge would be placed in the centre of the spectrum analyzer screen.

3， Span was set large enough to capture all out of band emissions near the band edge.

4， RBW ≥1% of the emission bandwidth (2% of the emission bandwidth for n7/n38/n41 except when 1MHz band is 2495-2496MHz ,other specified requirement for special range excepted);

5， VBW ≥3 * RBW

6， Detector=RMS

7， Trace Mode=Trace Average for continuous emissions, Max Hold for pulse emissions.

8， Sweep Points ≥2 x Span/RBW

9， Sweep Time = Auto

10， The trace was allowed to stabilize.

5.6. Emission Mask

5.6.1. Description of Emission Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90 .691.(a):

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116Log1o(f/6.1) decibels or 50 + 10 Log1o(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the centre of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log1(P)decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the centre of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

<Emission Mask B>

For transmitters that are equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier power (P) as follows:

(1) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: At least 25 dB.

(2) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: At least 35 dB.

(3) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB.

5.6.2. Test Procedures

1, The EUT was connected to spectrum analyzer and base station via power divider.

2, The emissions mask of low and high channels for the highest RF powers were measured.

3, The measured RBW and the VBW set 3 times of RBW are then set in spectrum analyzer, and the RBW correction factor 10log (1% of OBW/measured RBW)(dB) was compensated, if required.

5.7. Conducted Spurious Emission Measurement

5.7.1. Description of Conducted Spurious Emission Measurement

The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel). The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyser. The spectrum is scanned from 9KHz up to a frequency including its 10th harmonic or 40GHz, which is lower.

5.7.2. Test Procedures

1， The testing follows ANSI C63.26 Section 5.7

2， RBW ≥100KHz for emissions below 1GHz,1MHz for emissions above 1GHz. (Unless otherwise specified requirement for special range)

3， VBW ≥3 * RBW

4， Detector = RMS

5， Trace Mode = Average.

6， Sweep Points ≥2 * Span/RBW

7， Sweep Time = Auto

8， The trace was allowed to stabilize.

5.8. Frequency Stability Measurement

5.8.1. Description of Frequency Stability Measurement

The Frequency Stability should be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emissions stays within the authorized frequency block

5.8.2. Measurement Procedure for Temperature Variation

1， The testing follows ANSI C63.26 section 5.6.4.

2， The EUT was set up in the thermal chamber and connected with the system simulator.

3， 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.

4， With power off, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum change in frequency was recorded within one minute.

5.8.3. Measurement Procedure for Voltage Variation

1， The testing follows ANSI C63.26 section 5.6.5.

2， The EUT was placed in a thermal chamber at 20±5°C and connected with the system simulator.

3， The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.

4， For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

5， The variation in frequency was measured for the worst case.

6. List of Measuring Equipment

Equipment	Model	Manufacture	Device No.	Cal Date	Cal Due
Radio Communication Analyzer	MT8000A	Anritsu	6272427164	2024-11-15	2025-11-14
	MT8000A	Anritsu	6272478367	2024-07-03	2025-07-02
	MT8821C	Anritsu	6272374630	2024-11-15	2025-11-14
Spectrum Analyzer (50Hz-40GHz)	FSV	R&S	101046	2024-11-15	2025-11-14
Spectrum Analyzer (50Hz-40GHz)	FSV	R&S	101334	2024-11-15	2025-11-14
Power Supply	2036	Keithley	4058748	2024-11-15	2025-11-14
Temperature Chamber	C/64/40/3	Weiss	56246017780020	2025-03-24	2026-03-25
Power Divider	-	WOKEN	0120A04051801O	NCR	
Power Divider	-	WOKEN	0120A02051801M	NCR	

Remark:

1, For equipment listed above that has a calibration date or calibration due date that falls within the test date range, and the equipment was used after calibrate date and before calibrate due date.

2, “NCR” means no calibration required.

7. Measurement Uncertainty

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

7.1. Uncertainty of Conducted Measurement

Contribution	Expanded Uncertainty
Conducted Power	± 1.09 dB
Peak-to-Average Ratio	± 2.28 dB
Channel Bandwidth	± 0.15% MHz
Conducted Emission (f <1GHz)	± 2.23 dB
Conducted Emission (1GHz < f <18GHz)	± 2.24 dB
Conducted Emission (18GHz < f <40GHz)	± 2.11 dB
Frequency	± 0.02 KHz

8. Appendixes

Appendix B.1	NR Band n2A (1850-1910)
Appendix B.2	NR Band n5A (824-849)
Appendix B.3	NR Band n7A (2500-2750)
Appendix B.4	NR Band n26A (814-824)
Appendix B.5	NR Band n26A (824-849)
Appendix B.6	NR Band DC_66A_n38A (2570-2620)
Appendix B.7	NR Band DC_66A_n41A (2496-2690)
Appendix B.8	NR Band n66A (1710-1780)
Appendix B.9	NR Band n77A (3700-3980)
Appendix B.10	NR Band n78A (3700-3800)
Appendix B.11	NR Band DC_4A_n2A (1850-1910)
Appendix B.12	NR Band DC_5A_n66A (1710-1780)

The End