

4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807 Tel. +82 31 428 5700 / Fax. +82 31 427 2370 http://www.sgsgroup.kr

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TEST REPORT

FCC Part 2 Subpart J, Part 22 Subpart C/H, Part 24 Subpart E, Part 27 Subpart C, Part 90 Subpart R/S IC RSS-130 Issue 2, RSS-132 Issue 4, RSS-133 Issue 6, RSS-139 Issue 4, RSS-140 Issue 1, RSS-192 Issue 5, RSS-198 Issue 1, RSS-199 Issue 4 and RSS-Gen Issue 5

> FCC ID: BEJTFGMEIBBCD1 IC Certification: 2703H-TFGMEIBBCD1

Equipment Under Test : Telematics

Model Name

: TFGMEIBBCD1

Variant Model Name(s): Refer to the page 4

Applicant

FCC: LG Electronics USA IC: LG ELECTRONICS INC.

Manufacturer

: LG Electronics Inc.

Date of Receipt

: 2024.02.14

Date of Test(s)

: 2024.02.19 ~ 2024.03.05

Date of Issue

: 2024.03.06

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

- 1) The results of this test report are effective only to the items tested.
- 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
- 3) This test report cannot be reproduced, except in full, without prior written permission of the Company.
- 4) The data marked * in this report was provided by the customer and may affect the validity of the test results. We are responsible for all the information of this test report except for the data(*) provided by the customer.

Tested by:

Dave Kim

Technical Manager:

Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory



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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on

request and accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx.

Phone No. : +82 31 688 0901 Fax No. : +82 31 688 0921

1.2. Details of Applicant

FCC Applicant : LG Electronics USA

FCC Address : 111 Sylvan Avenue, North Building, Englewood Cliffs, New Jersey, United States, 07632

IC Applicant : LG ELECTRONICS INC.

IC Address : 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, Korea (Republic of), 451-713

Contact Person : Kim, David Phone No. : +1 201 470 2696

1.3. Details of Manufacturer

Company : LG Electronics Inc.

Address : 10, Magokjungang 10-ro, Gangseo-gu, Seoul, Korea, 07796



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1.4. Description of EUT

Kind of Product		Telematics		
Model Name		TFGMEIBBCD1		
Variant Model Names		TFGMEIBBCD2, TFGMEIBBCD3		
Serial Number		Radiated: 351015130065751		
Power Supply		DC 13.5 V		
Rated Power		WCDMA II, V: 24 dB m WCDMA IV: 23.5 dB m LTE Band 2, 7, 13, 14: 24 dB m LTE Band 5, 12: 24.2 dB m LTE Band 4, 66: 23.5 dB m NR Band 2, 5, 7, 12, 13, 14, 25, 26, 71: NR Band 41: 25 dB m NR Band 66: 23.5 dB m NR Band 77, 78: 25 dB m	24 dB m	
Port 1 Frequency Range		WCDMA II: 1 850 Mlz ~ 1 910 Mlz WCDMA IV: 1 710 Mlz ~ 1 755 Mlz WCDMA V: 824 Mlz ~ 849 Mlz LTE Band 2: 1 850 Mlz ~ 1 910 Mlz LTE Band 4: 1 710 Mlz ~ 1 755 Mlz LTE Band 5: 824 Mlz ~ 849 Mlz LTE Band 7: 2 500 Mlz ~ 2 570 Mlz LTE Band 12: 699 Mlz ~ 716 Mlz LTE Band 13: 777 Mlz ~ 787 Mlz LTE Band 14: 788 Mlz ~ 798 Mlz LTE Band 66: 1 710 Mlz ~ 1 780 Mlz NR Band 2: 1 850 Mlz ~ 1 910 Mlz NR Band 5: 824 Mlz ~ 849 Mlz NR Band 7: 2 500 Mlz ~ 2 570 Mlz NR Band 7: 2 500 Mlz ~ 2 570 Mlz NR Band 12: 699 Mlz ~ 716 Mlz NR Band 12: 699 Mlz ~ 716 Mlz NR Band 13: 777 Mlz ~ 787 Mlz	NR Band 14: 788 MHz ~ 798 MHz NR Band 25: 1 850 MHz ~ 1 915 MHz NR Band 26(FCC Only): 814 MHz ~ 824 MHz NR Band 26: 824 MHz ~ 849 MHz NR Band 41(FCC): 2 496 MHz ~ 2 690 MHz NR Band 41(IC): 2 500 MHz ~ 2 690 MHz NR Band 66: 1 710 MHz ~ 1 780 MHz NR Band 71: 663 MHz ~ 698 MHz NR Band 77(FCC): 3 450 MHz ~ 3 550 MHz NR Band 77(FCC): 3 450 MHz ~ 3 980 MHz NR Band 78(FCC): 3 700 MHz ~ 3 800 MHz NR Band 77(IC): 3 450 MHz ~ 3 900 MHz NR Band 77(IC): 3 900 MHz ~ 3 980 MHz NR Band 77(IC): 3 450 MHz ~ 3 980 MHz NR Band 77(IC): 3 450 MHz ~ 3 980 MHz NR Band 77(IC): 3 450 MHz ~ 3 980 MHz NR Band 77(IC): 3 450 MHz ~ 3 980 MHz	
Port 2		NR Band 41(FCC): 2 496 Mb ~ 2 690 Mb NR Band 41(IC): 2 500 Mb ~ 2 690 Mb NR Band 77(FCC): 3 450 Mb ~ 3 550 M NR Band 77(FCC): 3 700 Mb ~ 3 980 M NR Band 78(FCC): 3 450 Mb ~ 3 550 M NR Band 78(FCC): 3 700 Mb ~ 3 800 M NR Band 77(IC): 3 450 Mb ~ 3 900 Mb NR Band 77(IC): 3 450 Mb ~ 3 980 Mb NR Band 77(IC): 3 450 Mb ~ 3 980 Mb NR Band 78(IC): 3 450 Mb ~ 3 800 Mb	Hz Hz Hz	
Modulation Technique		BPSK, QPSK, 16QAM, 64QAM		
Antenna Type		Internal: Planar Inverted F Antenna External: Metal Antenna		
Antenna Gain [*]		Refer to the clause 1.11		
H/W Version		REV.D		
S/W Version		SW170		
FVIN		SW170		
		·		



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1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	R&S	SMA100B	106887	Oct. 06, 2023	Annual	Oct. 06, 2024
Spectrum Analyzer	Agilent	N9020A	MY53421758	Sep. 01, 2023	Annual	Sep. 01, 2024
Spectrum Analyzer	Agilent	N9030A	US51350132	Nov. 27, 2023	Annual	Nov. 27, 2024
Spectrum Analyzer	R&S	FSV30	100955	Feb. 28, 2023	Annual	Feb. 28, 2024
Communication test station	Anritsu	MT8000A	6261949671	Oct. 06, 2023	Annual	Oct. 06, 2024
Communication Analyzer	Anritsu	MT8821C	6262192291	Oct. 11, 2023	Annual	Oct. 11, 2024
Low Pass Filter	Mini-Circuits	NLP-1200+	V 8979400903-2	Feb. 07, 2024	Annual	Feb. 07, 2025
High Pass Filter	Wainwright Instrument GmbH	WHKX10-900-1000- 18000-40SS	7	Feb. 27, 2024	Annual	Feb. 27, 2025
High Pass Filter	Wainwright Instrument GmbH	WHKX3.0/18G-6SS	21	Jun. 01, 2023	Annual	Jun. 01, 2024
DC Power Supply	Agilent	U8002A	MY49030063	Jan. 17, 2024	Annual	Jan. 17, 2025
Preamplifier	H.P.	8447F	2944A03909	Aug. 04, 2023	Annual	Aug. 04, 2024
Preamplifier	R&S	SCU18F	101058	Dec. 07, 2023	Annual	Dec. 07, 2024
Test Receiver	R&S	ESU 26	100109	Jan. 16, 2024	Annual	Jan. 16, 2025
Loop Antenna	Schwarzbeck Mess- Elektronik	FMZB 1519	1519-039	Aug. 21, 2023	Biennial	Aug. 21, 2025
Bilog Antenna	Schwarzbeck Mess- Elektronik	VULB9163	9163-437	May 31, 2023	Biennial	May 31, 2025
Horn Antenna	R&S	HF906	100326	Feb. 19, 2024	Annual	Feb. 19, 2025
Antenna Master	Innco systems GmbH	MA4640-XP-ET	MA4640/536/383 30516/L	N.C.R.	N/A	N.C.R.
Turn Table	Innco systems GmbH	DS 1200S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000- 4P	CO3000/963/383 30516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	RFONE	MWX221-NMSNMS (4 m)	J1023142	Oct. 04, 2023	Semi- Annual	Apr. 04, 2024
Coaxial Cable	Qualwave Inc.	QA500-18-NN-10 (10 m)	22200114	Oct. 04, 2023	Semi- Annual	Apr. 04, 2024

Note;

- For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.



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1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 2, 22, 24, 27 and 90 / IC RSS-Gen Issue 5, RSS-130 Issue 2, RSS-132 Issue 4, RSS-133 Issue 6,						
RSS-139 Issue 4, RSS-140 Issue 1, RSS-192 Issue 5, RSS-198 Issue 1 and RSS-199 Issue 4						
Section(s) in FCC	Section(s) in IC	Test Item	Result			
§2.1046	RSS-130 Issue 2 4.6					
§22.913(a)(5)	RSS-132 Issue 4 5.4 RSS-133 Issue 6 6.4					
§24.232(c)	RSS-139 Issue 4 5.5					
§27.50(b)(9), §27.50(c)(9)(10)	RSS-140 Issue 1 4.3	E.R.P. / E.I.R.P. & Radiated Output Power	Complied ²⁾³⁾			
§27.50(d)(4), §27.50(h)(2)	RSS-192 Issue 5 5.5					
§27.50(j)(3), §27.50(k)(3)	RSS-198 Issue 1 5.5					
§90.542(a)(6), §90.635(b)	RSS-199 Issue 4 5.5					
§22.917(a)						
§24.238(a)	RSS-130 Issue 2 4.7					
§27.53(c)(2), §27.53(f)	RSS-132 Issue 4 5.5					
§27.53(c)(2), §27.53(t)	RSS-133 Issue 6 6.5					
- 13/1- 17/1	RSS-139 Issue 4 5.6	Radiated Spurious Emissions	Complied ²⁾			
§27.53(l)(2), §27.53(n)(2)	RSS-140 Issue 1 4.4	·	·			
§27.53(m)(4)	RSS-192 Issue 5 5.6 RSS-198 Issue 1 5.6					
§90.543(e), §90.543(f)	RSS-199 Issue 4 5.6					
§90.691(a)						
§2.1046	RSS-Gen Issue 5 6.12	Conducted Output Power	N/A ¹⁾			
§2.1049	RSS-Gen Issue 5 6.7	Occupied Bandwidth	N/A ¹⁾			
	RSS-130 Issue 2 4.6					
§22.913(d)	RSS-132 Issue 4 5.4					
§24.232(d)	RSS-133 Issue 6 6.4					
§27.50(d)(5)	RSS-139 Issue 4 5.6 RSS-140 Issue 1 4.3	Peak-Average Ratio	N/A ¹⁾			
§27.50(j)(4)	RSS-140 Issue 1 4.3 RSS-192 Issue 5 5.5	-				
§27.50(k)(4)	RSS-198 Issue 1 5.5					
3 ()()	RSS-199 Issue 4 5.5					
	RSS-130 Issue 2 4.7					
§22.917(a)	RSS-132 Issue 4 5.5					
§24.238(a)	RSS-133 Issue 6 6.5					
§27.53(c)(2), §27.53(g)	RSS-139 Issue 4 5.6	Churique Emission et Antonne Terminal	N/A ¹⁾			
§27.53(I)(2), §27.53(n)(2)	RSS-140 Issue 1 4.4	Spurious Emission at Antenna Terminal	IN/A			
§27.53(h)(1), §27.53(m)(4)	RSS-192 Issue 5 5.6					
§90.543(e), §90.691(a)	RSS-198 Issue 1 5.6					
	RSS-199 Issue 4 5.6					
§22.917(a)	RSS-130 Issue 2 4.7					
§24.238(a)	RSS-132 Issue 4 5.5					
§27.53(c)(2), §27.53(g)	RSS-133 Issue 6 6.5 RSS-139 Issue 4 5.6					
§27.53(l)(2), §27.53(n)(2)	RSS-139 Issue 4 5.6 RSS-140 Issue 1 4.4	Band Edge and Emission Mask	N/A ¹⁾			
	RSS-140 Issue 1 4.4 RSS-192 Issue 5 5.6					
§27.53(h)(1), §27.53(m)(4)	RSS-198 Issue 1 5.6					
§90.543(e), §90.691(a)	RSS-199 Issue 4 5.6					
	RSS-Gen Issue 5 6.11					
00.12==	RSS-130 Issue 2 4.5					
§2.1055	RSS-132 Issue 4 5.3					
§22.355	RSS-133 Issue 6 6.3					
§24.235	RSS-139 Issue 4 5.4	Frequency Stability	N/A ¹⁾			
§27.54	RSS-140 Issue 1 4.2					
§90.213(a)	RSS-192 Issue 5 5.4					
• • •	RSS-198 Issue 1 5.4					
	RSS-199 Issue 4 5.4					

Note;

- 1) The test items were used the results from original test report.
- 2) This product is a C2PC case due to the addition of antennas. So only radiation test was performed and the rules for E.R.P. / E.I.R.P. and spurious radiated emission were satisfied.
- 3) The E.R.P. / E.I.R.P. was calculated or measured with the worst antenna which has the worst gain between two additional antennas.



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1.7. Sample Calculation for Offset

Where relevant, the following sample calculation is provided:

1.7.1. Radiation Test

- E.I.R.P. (dB m) = Measured level (dB/N) + Antenna factor (dB/m) + Cable loss (dB) + 20 Log D - 104.8; where D is the measurement distance in meters.

- E.R.P. (dB m) = E.I.R.P. (dB m) - 2.15 (dB)

1.8. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter		Uncertainty
Dedicted Engineers O. III. 45 20 MI		3.60 dB
Radiated Emission, 9 kllz to 30 Mlz	V	3.60 dB
Radiated Emission, below 1 ଔz		4.60 dB
		4.90 dB
Radiated Emission, above 1 @b		3.90 dB
		3.80 dB

All measurement uncertainty values are shown with a coverage factor of k=2 to indicate a 95 % level of confidence.

1.9. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL004879	2024.03.06	Initial

1.10. Manufacturer Declaration

The EUT supports two ports and LTE, WCDMA and 5G NR FDD bands support only port 1. The 5G NR TDD (n41, n77, n78) band supports both port 1 and port 2.

Port 1 supports only 5G NR TDD bands with MIMO mode and MIMO mode supports only CP-ODFM Modulation.



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1.11. Antenna Information

SISO

5150		Ar	ntenna Peak Gain (dl	3 i)
Band	Operating	External		
Dana	Frequency (贻)	Original [84933920]	Additional [85015365]	Additional [85015378]
NR 7 LTE 7	2 500 ~ 2 570	5.99	<u>1.10</u>	-1.14
NR 12 LTE 12	699 ~ 716	-1.05	-0.38	0.24
NR 13 LTE 13	777 ~ 787	-0.53	0	<u>0.36</u>
NR 14 LTE 14	788 ~ 798	-0.53	0.73	<u>1.05</u>
NR 25/2 LTE 2 WCDMA II	1 850 ~ 1 915	5.12	0.08	<u>1.27</u>
NR 26	814 ~ 824	0.37	0.73	<u>1.05</u>
WCDMA V NR 26/5 LTE 5	824 ~ 849	0.37	0.37	0.62
NR 66 LTE 66/4	1 710 ~ 1 780	5.54	<u>-0.90</u>	-1.53
WCDMA IV	1 710 ~ 1 755	5.19	<u>-0.90</u>	-1.53
NR 71	663 ~ 698	0.37	-0.47	<u>0.09</u>
5G NR Band 41 FCC	2 496 ~ 2 690	0.09	<u>2.21</u>	1.75
5G NR Band 41 IC	2 500 ~ 2 690	0.09	<u>2.21</u>	1.75
NR 77/78 Low Band_FCC	3 450 ~ 3 550	3.24	2.94	2.88
NR 77/78 High Band_FCC	3 700 ~ 3 980	3.24	3.31	3.89
NR 77/78 Low Band_IC	3 450 ~ 3 900	3.24	2.94	2.88
NR 77/78 High Band_IC	3 900 ~ 3 980	3.24	3.31	3.89

Note;

Antenna gains were compared between additional antennas and mark the worst gain of each band.



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MIMO

Operating Frequency (썐)			Antenna Peak Gain (dBi)		
		Antenna type	Original [84933920]	Ant. Gain Additional [85015365]	Additional [85015378]
		Port 1	5.99	3.15	2.41
NR 41 FCC	2 496 ~ 2 690	Port 2	0.09	2.21	1.75
		Port 1 + port 2 ¹⁾	6.54	<u>5.70</u>	5.10
		Port 1	5.99	3.15	2.41
NR 41 IC	2 500 ~ 2 690	Port 2	0.09	2.21	1.75
		Port 1 + port 2 ¹⁾	6.54	<u>5.70</u>	5.10
NR 77/78		Port 1	6.29	0.24	0.43
Low Band		Port 2	3.24	2.94	2.88
FCC		Port 1 + port 2 ¹⁾	7.91	4.70	<u>4.75</u>
NR 77/78		Port 1	6.29	2.04	2.21
High Band	3 700 ~ 3 980	Port 2	3.24	3.31	3.89
FCC		Port 1 + port 2 ¹⁾	7.91	5.71	<u>6.10</u>
NR 77/78		Port 1	6.29	0.24	0.43
Low Band	3 450 ~ 3 900	Port 2	3.24	2.94	2.88
IC	IC	Port 1 + port 2 ¹⁾	7.91	4.70	<u>4.75</u>
NR 77		Port 1	6.29	2.04	2.21
High Band	3 900 ~ 3 980	Port 2	3.24	3.31	3.89
IC		Port 1 + port 2 ¹⁾	7.91	5.71	<u>6.10</u>

Remark;

- Port 1 means secondary cell and Port 2 means primary cell.
- 5) According to KDB 662911 D01 Multiple Transmitter Output v02r01 F)2)d)(i), Port 1 + Port 2 Antenna Gain = $10 * log[(10^{G_1/20} + 10^{G_2/20})^2 / N_{ANT}]$

Where,

 G_1 = antenna gain of port 1,

 G_2 = antenna gain of port 2,

 N_{ANT} = the number of antennas

2) Antenna gains were compared between additional antennas and mark the worst gain of each band.



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1.12. E.R.P. / E.I.R.P. and Radiated Emissions Test Case

The E.R.P. / E.I.R.P. was calculated or measured with the worst antenna which has the worst gain between two additional antennas.

Radiated spurious emissions were tested with worst antenna (85015378) in the band with the lowest margin of previously data and selected respectively above 1 $\, \text{GHz} \,$ and below 1 $\, \text{GHz} \,$.

Fundamental Frequency Range	Worst Case
Below 1 GHz	NR Band 13 (10 № – QPSK)
Above 1 GHz	NR Band 66 (5 № – QPSK)

1.13. Information of Variant Model

Model Name		Description
Basic Model	TFGMEIBBCD1	- Dual GNSS
	TFGMEIBBCD2	- Same to RF module with basic model except following function - Single GNSS and Ultra-super cruise service doesn't supported
Variant Models TFGMEIBBCD3		- Same to RF module with basic model except following function - Single GNSS and Ultra-super cruise service doesn't supported - Euicc part is different with TFGMEIBBCD2

Note;

The all test items performed with basic model.



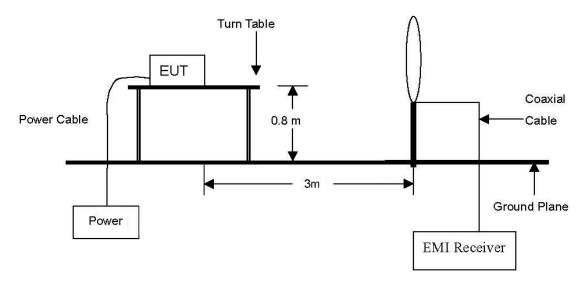
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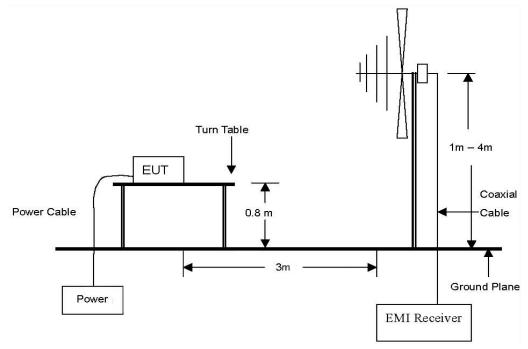
2. E.R.P. / E.I.R.P. & Radiated output power and Radiated Spurious Emissions

2.1. Test Setup

The diagram below shows the test setup that is utilized to make the measurements for emission from 9 $\,\mathrm{klz}$ to 30 $\,\mathrm{Mz}$.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 $\,\mathrm{Mb}$ to 1 $\,\mathrm{GL}$.

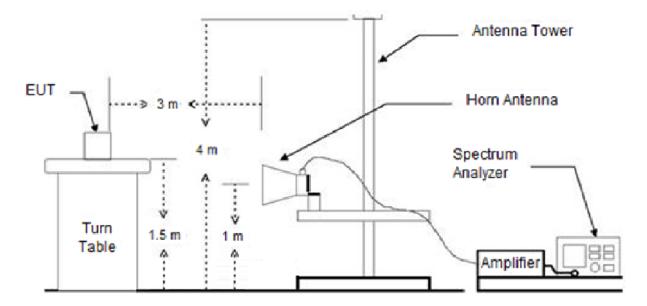




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The diagram below shows the test setup that is utilized to make the measurements for emission from 1 \times to 40 \times .





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2.2. Limit

2.2.1. Limit of E.R.P. / E.I.R.P.

FCC

- §22.913(a)(5), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.
- §24.232I, mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.
- $\S27.50(b)(9)$, control stations and mobile stations transmitting in the 746-757 Mb, 776-788 Mb, and 805–806 Mb bands and fixed stations transmitting in the 787-788 Mb and 805-806 Mb bands are limited to 30 watts ERP.
- §27.50I(9), control and mobile stations in the 698-746 Mb band are limited to 30 watts ERP.
- §27.50I(10), portable stations (hand-held devices) in the 600 Mb uplink band and the 698-746 Mb band, and fixed and mobile stations in the 600 Mb uplink band are limited to 3 watts ERP.
- §27.50(d)(4), fixed, mobile, and portable (hand-held) stations operating in the 1 710-1 755 Mb band and mobile and portable stations operating in the 1 695-1 710 Mb and 1 755-1 780 Mb bands are limited to 1 watt EIRP.
- §27.50(h)(2), Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
- §27.50(j)(3), Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.
- §27.50(k)(3), Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.
- $\S90.542(a)(6)$, Control stations and mobile stations transmitting in the 758-768 Mb band and the 788-798 Mb band are limited to 30 watts ERP.
- §90.635(b), the maximum output power of the transmitter for mobile stations is 100 watts (20 dBW).



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- RSS-130 Issue 2

4.6.3, the e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

- RSS-132 Issue 4

5.4, the transmitter output power shall be measured in terms of average power. The equivalent radiated power (e.r.p.) shall not exceed 7 watts for mobile equipment and 3 watts for portable equipment. The effective isotropic radiated power (e.i.r.p.) shall not exceed the limits specified in SRSP-503 for base station equipment.

- RSS-133 Issue 6

6.4, the equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510. Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p. The equipment shall employ means to limit the power to the minimum necessary for successful communication.

- RSS-139 Issue 4

5.5, The maximum output power of the equipment shall comply with the limits specified below. In the tables, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Table 3: Maximum power of equipment in the band 1 710-1 780 ₩b

Equipment type	Maximum power
Fixed station and base station	30 dB m e.i.r.p./ channel bandwidth
Subscriber equipment	30 dB m e.i.r.p./ channel bandwidth

- RSS-140 Issue 1

4.3, The equivalent radiated power (e.r.p.) for control and mobile equipment shall not exceed 30 W. The e.r.p. for portable equipment including handheld devices shall not exceed 3 W.

- RSS-192 Issue 5

5.5, the maximum output power of the equipment measured in terms of average values shall comply with the limits specified in table 1.

Table 1: Maximum power of equipment

Equipment type	Maximum Power
Non-AAS: base station (outdoor), fixed P-P station,	68 dBm e.i.r.p./5 MHz
P-MP hub station	·
AAS: base station (outdoor), P-MP hub station	47 dBm TRP/5 Mb
Indoor base station	39 dBm TRP/channel bandwidth
Fixed subscriber equipment	39 dBm e.i.r.p./channel bandwidth
Subscriber equipment other than fixed subscriber equipment	30 dBm e.i.r.p./channel bandwidth



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- RSS-198 Issue 1

5.5, the maximum power spectral density per antenna (considering all radiation patterns) of the equipment, measured in terms of average values, shall comply with the limits specified in table 1.

Table 1: Maximum power spectral density of equipment

Equipment type	Maximum power spectral density (per antenna)
Outdoor base station, fixed service equipment	37 dBm/Mbz e.i.r.p.
Indoor base station	20 dBm/Mz e.i.r.p.
Fixed subscriber equipment	20 dBm/Mz e.i.r.p.
Subscriber equipment other than fixed subscriber equipment	30 dBm /channel bandwidth e.i.r.p.

- RSS-199 Issue 4

5.5, the maximum output power of the equipment shall comply with the limits specified in table 3. In this table, maximum power refers to the equivalent isotropically radiated power (e.i.r.p.) or total radiated power (TRP), measured in terms of average values.

Subscriber equipment other than fixed subscriber equipment shall not exceed an e.i.r.p of 2W per channel bandwidth.

Fixed subscriber equipment shall not exceed the following:

5. conducted power of 2W per channel bandwidth for all ports II. e.i.r.p of 40 W per channel bandwidth

The maximum power limits for fixed station and base station are provided in Table 3. The limits in this RSS are specified for the purpose of certification and may not apply to all deployment scenarios. Consult SRSP-517 for more deployment details in the band 2 500-2 690 Mb.

Table 3: Maximum power of fixed station and base station in the band 2 500-2 690 №

Equipment type	Maximum power
Non-AAS fixed station and base station	e.i.r.p of 1 640 W / 账
AAS fixed station and base station	TRP of 43 dB m / Mbz



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2.2.2. Limit of Radiated Spurious Emissions

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- §22.917(a), 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 + 10log(P) dB.
- §24.238(a), 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.
- §27.53I(2), on any frequency outside the 776-788 Mb band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB.
- $\S27.53(f)$, For operations in the 746-758 Mb, 775-788 Mb, and 805-806 Mb bands, emissions in the band 1 559-1 610 Mb shall be limited to -70 dB W/Mb equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dB W EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.
- $\S27.53(g)$, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB.
- $\S27.53(h)(1)$, for operations in the 1 695-1 710 Mb, 1 710-1 755 Mb, 1 755-1 780 Mb, 1 915-1 920 Mb, 1 995-2 000 Mb, 2 000-2 020 Mb, 2 110-2 155 Mb, 2 155-2 180 Mb, and 2 180-2 200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log₁₀ (P) dB.
- §27.53(I)(2), for mobile operations in the 3 700-3 980 Mb band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm /Mb. Compliance with this paragraph (I)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 klb. In the bands between 1 and 5 Mb removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 klb. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
- §27.53(n)(2), for mobile operations in the 3 450-3 550 Mb band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm /Mb.. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kb. In the bands between 1 and 5 Mb removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kb. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.



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- $\S27.53(m)(4)$, for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log_{10}(P) \, \mathrm{dB}$ on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log_{10}(P) \, \mathrm{dB}$ on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log_{10}(P) \, \mathrm{dB}$ 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 $43 + 10 \log_{10}(P) \, \mathrm{dB}$ on all frequencies between 2 490.5 Mb and 2 496 Mb and $55 + 10 \log_{10}(P) \, \mathrm{dB}$ at or below 2 490.5 Mb. Mobile Satellite Service licensees operating on frequencies below 2 495 Mb may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.
- §90.543I, For operations in the 758-768 Mb and the 788-798 Mb bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
 - (5) On all frequencies between 769-775 Mb and 799-805 Mb, by a factor not less than 76 + 10 log (P) dB in a 6.25 kb band segment, for base and fixed stations.
- (2) On all frequencies between 769-775 $\,\text{Mz}$ and 799-805 $\,\text{Mz}$, by a factor not less than 65 + 10 log (P) $\,\text{dB}$ in a 6.25 $\,\text{kHz}$ band segment, for mobile and portable stations.
- (3) On any frequency between 775-788 Mb, above 805 Mb, and below 758 Mb, by at least 43 + 10 log (P) dB.
- (4) Compliance with the provisions of paragraphs I(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.
- (5) Compliance with the provisions of paragraph I(3) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 klb or greater. However, in the 100 klb bands immediately outside and adjacent to the frequency block, a resolution bandwidth of 30 klb may be employed.
- §90.543(f), For operations in the 758-775 Mz and 788-805 Mz bands, all emissions including harmonics in the band 1 559-1 610 Mz shall be limited to -70 dB W/Mz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dB W EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.
- §90.691(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:
 - (5) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 klb, 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 + 10 Log₁₀ (P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 klb.
- (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 klb, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 Log₁₀ (P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 klb.



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- 4.7.1, the unwanted emissions in any 100 $\,\mathrm{kllz}\,$ bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P ($\,\mathrm{dB}\,$ W), by at least 43 + 10 $\,\mathrm{log_{10}}\,$ p (watts), $\,\mathrm{dB}\,$. However, in the 100 $\,\mathrm{kllz}\,$ band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 $\,\mathrm{kllz}\,$ may be employed.
- 4.7.2, In addition to the limit outlined in section 4.7.1 above, equipment operating in the frequency bands 746-756 Mb and 777-787 Mb shall also comply with the following restrictions:
 - 5) The power of any unwanted emissions in any 6.25 klb bandwidth for all frequencies between 763-775 Mb and 793-806 Mb shall be attenuated below the transmitter power, P (dB W), by at least:
 - (5) 76 + 10 log10 p (watts), dB, for base and fixed equipment, and
- (ii) 65 + 10 log10 p (watts), dB, for mobile and portable equipment.
- b) The e.i.r.p. in the band 1 559-1 610 New shall not exceed -70 dB W/New for wideband signal and -80 dB W for discrete emission with bandwidth less than 700 Hz.
- RSS-132 Issue 4
- 5.5, Equipment shall meet the unwanted emission limits specified below.
- (i) In the first 1.0 Mb band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1 % of the occupied bandwidth shall be attenuated below the transmitter output power P (dB W) by at least 43 + 10 log(p) dB.
- (ii) After the first 1.0 $\,\mathrm{Mb}$ immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 $\,\mathrm{klb}$ bandwidth shall be attenuated below the transmitter output power P ($\,\mathrm{dB}$ W) by at least 43 + 10 log(p) $\,\mathrm{dB}$. If the measurement is performed using 1 % of the occupied bandwidth, power integration over 100 $\,\mathrm{klb}$ is required.
- RSS-133 Issue 6
- 6.5, Equipment shall comply with the limits in (i) and (ii) below.
 - (5) In the 1.0 Mb bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1 % of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dB W) by at least 43 + 10 log₁₀ p(watts).
- (ii) After the first 1.0 Mb, the emission power in any 1 Mb bandwidth shall be attenuated (in dB) below the transmitter output power P (dB W) by at least 43 + 10 \log_{10} p(watts). If the measurement is performed using 1 % of the emission bandwidth, power integration over 1.0 Mb is required.



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- RSS-139 Issue 4

5.6, Unwanted emissions shall be measured in terms of average values.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors) of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in table 6.

Table 6: Unwanted emission limits

Offset from the edge of the frequency block or frequency	Unwanted emission
block group	lmit
≤1 M½	-13 dB m/(1% of OB)*
>1 Mb	-13 dB m

^{*} OB is the occupied bandwidth

- RSS-140 Issue 1
- 4.4, The power of any unwanted emission outside the bands 758-768 № and 788-798 № shall be attenuated below the transmitter output power P in dB W as follows, where p is the transmitter output power in watts:
- a) For any frequency between 769-775 Mb and 799-806 Mb:
- i) 76 + 10 log (p), dB in a 6.25 klb band for fixed and base station equipment
- ii) 65 + 10 log (p), dB in a 6.25 kHz band for mobile and portable/hand-held equipment
- b) For any frequency between 775-788 Mb, above 806 Mb, and below 758 Mb: 43 + 10 log (p), dB in a bandwidth of 100 kb or greater. However, in the 100 kb bands immediately outside and adjacent to the frequency bands 758-768 Mb and 788-798 Mb, a resolution bandwidth of 30 kb may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the band 1 559-1 610 $\,\mathrm{Mz}$, shall not exceed $-70\,\mathrm{dB}$ W / $\,\mathrm{Mz}$ for wideband emissions, and $-80\,\mathrm{dB}$ W / $\,\mathrm{kz}$ for discrete emissions of less than 700 $\,\mathrm{Hz}$ bandwidth.



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- RSS-192 Issue 5

5.6, unwanted emissions shall be measured in terms of average values when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range. If the transmitter is designed for multi-carrier operation, the tests shall be carried out using both the maximum and minimum number of carriers intended for the equipment.

- 5.6.3, subscriber equipment shall have the TRP or conducted power (per antenna), where applicable, of unwanted emission not exceeding the following:
 - a. the limits in table 6
- b. a limit of -30 dBm/Mb in the frequency range greater than (B+5) Mb from the edge of the frequency band

Table 6: Unwanted emission limits for subscriber equipment

Frequency block	Offset freq	Offset frequency from the edge of the frequency block group (Mb)									
group (B)	0-1	0-1 1-5		>B							
10 Mz, 20 Mz, 30 Mz and 40 Mz	-13 dBm/1% of B	-10 dB m/ Mb	-13 dB m /Mb	-25 dBm/Mlz							
> 40 MHz	-13 dBm/400 kHz	-10 dB m /₩b	-13 dBm/Mbz	-25 dB m /Mb⁄z							

- RSS-198 Issue 1

5.6, unwanted emissions shall be measured in term of average value when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

5.6.1, the unwanted emission outside the frequency block group shall not exceed the TRP or total conducted power (sum of conducted power across all antenna connectors) limits as specified in table 2.

Table 2: Unwanted emission limits for all equipment

Offset frequency from the edge of the frequency block group (Mb)	Unwanted emission limits for all equipment
≤1	-13 dBm/1% OB*
>1	-13 dBm/Mb

^{*}OB is the occupied bandwidth

5.6.2, for frequencies between 4 200 $\,\text{Mb}$ and 4 400 $\,\text{Mb}$, the unwanted emission of outdoor base station, indoor base station and fixed service equipment shall not exceed a TRP or total conducted power (sum of conducted power across all antenna connectors) limit of -30 $\,\text{dB}$ m/ $\,\text{Mb}$.



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- RSS-199 Issue 4

5.6, unwanted emissions shall be measured in terms of average values when the transmitter is operating at the manufacturer's rated power and modulated as specified in RSS-Gen.

Equipment shall meet the unwanted emission limits, specified below, outside each frequency block group. For each channel bandwidth supported by the equipment under test, the unwanted emissions shall be measured and reported for two channel frequencies: one located as close as possible to the low end and one located as close as possible to the high end of the equipment's operating frequency range.

For the unwanted emission limits, in the 1 Mb band immediately outside and adjacent to the frequency block group, the power shall be measured with a resolution bandwidth of at least 1% of the occupied bandwidth for fixed stations, base stations, and fixed subscriber equipment, and 2 % for subscriber equipment other than fixed subscriber equipment. Beyond this 1 Mb band, a resolution bandwidth of 1 Mb shall be used. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full required measurement bandwidth of 1 Mb, or 1 % or 2 % of the occupied bandwidth, as applicable.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors), where applicable, of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in the tables below.

Table 4: Unwanted emission limits for fixed station, base station and fixed subscriber equipment

Offset from the edge of the frequency block or frequency block group (酏)	Unwanted emission limit
≤1	-13 dB m/(1% of OB*)
>1	-13 dB m/Mb

^{*} OB is the occupied bandwidth

Table 5: Unwanted emission limits for subscriber equipment other than fixed subscriber equipment

Offset from the edge of the frequency block or frequency block group (酏)	Unwanted emission limit
0-1	-10 dB m/(2% of OB*)
1-5	-10 dB m/Mb
5-X**	-13 dB m/Mbz
≥X	-25 dB m /Mbz

^{*} OB is the occupied bandwidth

In addition to complying with the limits in table 5, subscriber equipment other than fixed subscriber equipment shall not exceed -13 dB m/M $\rlap{\mbox{\tiny ME}}$ on all frequencies between 2 490.5 Mb and 2 496 Mb,and -25 dB m/M $\rlap{\mbox{\tiny ME}}$ at or below

2 490.5 Mz.

2 496 Mb, and 55 + 10 log10 p at or below 2 490.5 Mb.

In (a) and (b), p is the transmitter power measured in watts and X is 6 \(\text{Mtz} \) or the equipment occupied bandwidth, whichever is greater.

^{**} X is 6 Mb or the equipment occupied bandwidth, whichever is greater



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2.3. Test Procedure

2.3.1. E.R.P. / E.I.R.P. from conducted RF output power

According to subclause 5.2.5.5 of ANSI C63.26-2015 E.R.P. and E.I.R.P. are defined as the product of the power supplied to the antenna and its gain.

The relevant equation for determining the E.R.P. or E.I.R.P. from the conducted RF output power measured using the guidance provided above is:

E.R.P. or E.I.R.P. = $P_{Meas} + G_{T}$

where:

E.R.P. or E.I.R.P. = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

 P_{Meas} = measured transmitter output power or PSD, in dBm or dBW; G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

2.3.2. Radiated Output Power & Radiated Spurious Emissions

The test based on ANSI/TIA 603E: 2016 and ANSI C63.26-2015 and KDB 971168 D01 Power Meas License Digital Systems v03r01.

- 1. On a test site, the EUT shall be placed at 0.8 m or 1.5 m height on a turn table, and in the position close to normal use as declared by the applicant.
- 2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
- 3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
- 4. The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration band set to the emissions occupied bandwidth, RBW = 1-5 % of the OBW (not to exceed 1 №), VBW ≥ 3 x RBW, Detector = power averaging (rms), sweep time = auto, trace average at least 100 traces in power averaging (rms) mode, per the guidelines of KDB 971168 D01 Power Meas License Digital Systems v03r01.
- 5. Radiated spurious emissions measurement method was set as follows:

 RBW = 100 kl½ for emissions below 1 Gl½ and 1 Ml½ for emissions above 1 Gl½, VBW ≥ 3 x RBW,

 Detector = RMS, trace mode = max hold, per the guidelines of KDB 971168 D01 Power Meas License Digital Systems v03r01.
- 6. The transmitter shall be switched on, the measuring receiver shall be tuned to the frequency of the transmitter under test.
- 7. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
- 8. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- 9. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
- 10. The maximum signal level detected by the measuring receiver shall be noted.
- 11. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- 12. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
- 13. The measurement shall be repeated with the test antenna orientated for horizontal polarization.



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2.4. Test Results

Ambient temperature : $(23 \pm 1) ^{\circ}$ C Relative humidity : 47 % R.H.

2.4.1. E.R.P. / E.I.R.P. from conducted RF output power measurements

- Additional Antenna

WCDMA

Band	Frequency (Mb)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Worst Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Limit
WCDMA II	1 850 ~ 1 910	23.47	0.222	1.27	24.74	0.298			2 W E.I.R.P.
WCDMA IV	1 710 ~ 1 755	23.87	0.244	-0.90	22.97	0.198			1 W E.I.R.P.
WCDMA V	824 ~ 849	24.05	0.254	0.62	24.67	0.293	22.52	0.179	7 W E.R.P.

ITF

Band	Frequency (Mb)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Worst Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Limit
2	1 850 ~ 1 910	23.35	0.216	1.27	24.62	0.290			2 W E.I.R.P.
5	824 ~ 849	24.91	0.310	0.62	25.53	0.357	23.38	0.218	7 W E.R.P.
7	2 500 ~ 2 570	24.33	0.271	1.10	25.43	0.349			2 W E.I.R.P.
12	699 ~ 716	25.09	0.323	0.24	25.33	0.341	23.18	0.208	30 W E.R.P.
13	777 ~ 787	24.75	0.299	0.36	25.11	0.324	22.96	0.198	30 W E.R.P.
14	788 ~ 798	24.99	0.316	1.05	26.04	0.402	23.89	0.245	30 W E.R.P.
66/4	1 710 ~ 1 780	23.32	0.215	-0.90	22.42	0.175			1 W E.I.R.P.



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5G NR_SISO

Band	Frequency (Mb)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Worst Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Output Power Limit
n7	2 500 ~ 2 570	24.05	0.254	1.10	25.15	0.327			2 W E.I.R.P.
n12	699 ~ 716	24.79	0.301	0.24	25.03	0.318	22.88	0.194	30 W E.R.P.
n13	777 ~ 787	24.78	0.301	0.36	25.14	0.327	22.99	0.199	30 W E.R.P.
n14	788 ~ 798	24.90	0.309	1.05	25.95	0.394	23.80	0.240	30 W E.R.P.
n25/2	1 850 ~ 1 915	23.67	0.233	1.27	24.94	0.312			2 W E.I.R.P.
n26/5 Part 22	824 ~ 849	24.55	0.285	0.62	25.17	0.329	23.02	0.200	7 W E.R.P.
n26 Part 90	814 ~ 824	24.47	0.280	1.05	25.52	0.356	23.37	0.217	100 W
n66	1 710 ~ 1 780	22.95	0.197	-0.90	22.05	0.160			1 W E.I.R.P.
n71	663 ~ 698	24.51	0.282	0.09	24.60	0.288	22.45	0.176	3 W E.R.P.
n41 FCC	2 496 ~ 2 690	25.99	0.397	2.21	28.20	0.661			2 W E.I.R.P.
IC	2 500 ~ 2 690	25.99	0.397	2.21	28.20	0.661			2 W E.I.R.P.
FCC	3 450 ~ 3 550	25.37	0.344	2.94	28.31	0.678			1 W E.I.R.P.
FCC	3 700 ~ 3 980	24.80	0.302	3.89	28.69	0.740			1 W E.I.R.P.
IC	3 450 ~ 3 900	25.43	0.349	2.94	28.37	0.687			30 dB m / E.I.R.P.
n77 High band IC	3 900 ~ 3 980	24.47	0.280	3.89	28.36	0.685			30 dB m / E.I.R.P.

5G NR MIMO

Band	Frequency (Mtz)	Maximum Conducted Power (dB m)	Maximum Conducted Power (W)	Worst Antenna Gain (dB i)	Maximum E.I.R.P. (dB m)	Maximum E.I.R.P. (W)	Maximum E.R.P. (dB m)	Maximum E.R.P. (W)	Output Power Limit
n41 FCC	2 496 ~ 2 690	25.99	0.397	5.70	31.69	1.476			2 W E.I.R.P.
n41 IC	2 500 ~ 2 690	25.99	0.397	5.70	31.69	1.476			2 W E.I.R.P.

Remark;

- 1. E.I.R.P. (dB m) = Maximum Conducted Power (dB m) + Antenna Gain (dB i)
- 2. E.R.P. ($dB \, m$) = E.I.R.P. ($dB \, m$) 2.15 (dB); where E.R.P. and E.I.R.P. are expressed in consistent units.



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2.4.2. Radiated Output Power

5G NR_MIMO

NR 77/78 Low Band_FCC (3 450 ~ 3 550 Mb)

BW	770 LOW Barra	Frequency	Measured	Ant.	AF	CL	E	CF	E.I.I	R.P.
(MHz)	Modulation	(MHz)	Level (dBμV)	Pol.	(dB/ m)	(dB)	(dBμV/ m)	(dB)	(dB m)	(W)
		3 460.02	82.26	Н	31.02	8.13	121.41	-95.26	26.15	0.412
		3 460.02	80.94	V	31.02	8.13	120.09	-95.26	24.83	0.304
20	CP-OFDM	3 500.01	83.40	Н	31.10	7.93	122.43	-95.26	27.17	0.521
20	QPSK	3 500.01	75.23	V	31.10	7.93	114.26	-95.26	19.00	0.079
		3 540.00	81.66	Н	31.18	7.89	120.73	-95.26	25.47	0.353
		3 540.00	78.51	V	31.18	7.89	117.58	-95.26	22.32	0.171
		3 465.00	82.18	Н	31.03	8.09	121.30	-95.26	26.04	0.402
		3 465.00	76.78	V	31.03	8.09	115.90	-95.26	20.64	0.116
30	CP-OFDM	3 500.01	82.19	Н	31.10	7.93	121.22	-95.26	25.96	0.395
30	QPSK	3 500.01	76.90	V	31.10	7.93	115.93	-95.26	20.67	0.117
		3 534.99	82.80	Н	31.17	7.90	121.87	-95.26	26.61	0.458
		3 534.99	78.54	V	31.18	7.89	117.61	-95.26	22.35	0.172
		3 470.01	81.70	Н	31.04	8.06	120.80	-95.26	25.54	0.358
		3 470.01	75.95	V	31.04	8.06	115.05	-95.26	19.79	0.095
40	CP-OFDM	3 500.01	81.94	Н	31.10	7.93	120.97	-95.26	25.71	0.373
40	QPSK	3 500.01	77.31	V	31.10	7.93	116.34	-95.26	21.08	0.128
		3 529.98	83.05	Н	31.16	7.91	122.12	-95.26	26.86	0.486
		3 529.98	77.69	V	31.16	7.91	116.76	-95.26	21.50	0.141
		3 475.02	82.01	Н	31.05	8.03	121.09	-95.26	25.83	0.383
		3 475.02	75.31	V	31.05	8.03	114.39	-95.26	19.13	0.082
E0.	CP-OFDM	3 500.01	81.25	Н	31.10	7.93	120.28	-95.26	25.02	0.318
50	QPSK	3 500.01	76.78	V	31.10	7.93	115.81	-95.26	20.55	0.114
		3 525.00	81.06	Н	31.15	7.92	120.13	-95.26	24.87	0.307
		3 525.00	78.13	V	31.15	7.92	117.20	-95.26	21.94	0.156



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BW		Frequency	Measured	Ant.	AF	CL	Е	CF	E.I.I	R.P.
(MHz)	Modulation	(MHz)	Level (dBμV)	Pol.	(dB/ m)	(dB)	(dB <i>µ</i> V/ m)	(dB)	(dB m)	(W)
		3 480.00	82.65	Н	31.06	8.01	121.72	-95.26	26.46	0.443
		3 480.00	77.54	V	31.06	8.01	116.61	-95.26	21.35	0.137
60	CP-OFDM	3 500.01	81.84	Н	31.10	7.93	120.87	-95.26	25.61	0.364
00	QPSK	3 500.01	74.77	V	31.10	7.93	113.80	-95.26	18.54	0.071
		3 519.99	81.27	Н	31.14	7.93	120.34	-95.26	25.08	0.322
		3 519.99	77.88	V	31.14	7.93	116.95	-95.26	21.69	0.148
		3 485.01	80.89	Н	31.07	7.99	119.95	-95.26	24.69	0.295
		3 485.01	77.47	V	31.07	7.99	116.53	-95.26	21.27	0.134
70	CP-OFDM	3 500.01	80.93	Н	31.10	7.93	119.96	-95.26	24.70	0.295
70	QPSK	3 500.01	76.76	V	31.10	7.93	115.79	-95.26	20.53	0.113
		3 514.98	81.85	Н	31.13	7.93	120.91	-95.26	25.65	0.367
		3 514.98	76.51	V	31.13	7.93	115.57	-95.26	20.31	0.107
		3 490.02	81.64	Н	31.08	7.97	120.69	-95.26	25.43	0.349
		3 490.02	76.97	V	31.08	7.97	116.02	-95.26	20.76	0.119
80	CP-OFDM	3 500.01	80.94	Н	31.10	7.93	119.97	-95.26	24.71	0.296
80	QPSK	3 500.01	75.86	V	31.10	7.93	114.89	-95.26	19.63	0.092
		3 510.00	83.26	Н	31.12	7.93	3.01 121.72 -95.26 26.46 0.2 3.01 116.61 -95.26 21.35 0.3 7.93 120.87 -95.26 25.61 0.3 7.93 113.80 -95.26 25.08 0.3 7.93 120.34 -95.26 25.08 0.3 7.93 116.95 -95.26 21.69 0.3 7.99 116.53 -95.26 24.69 0.2 7.93 119.96 -95.26 24.70 0.2 7.93 120.91 -95.26 24.70 0.2 7.93 120.91 -95.26 25.65 0.3 7.93 120.91 -95.26 25.43 0.3 7.93 116.02 -95.26 25.43 0.3 7.93 119.97 -95.26 24.71 0.2 7.93 114.89 -95.26 24.71 0.2 7.93 122.31 -95.26 27.05 0.5 7.93 120.34	0.507		
		3 510.00	74.33	V	31.12	7.93		0.065		
		3 495.00	81.30	Н	31.09	7.95	120.34	-95.26	25.08	0.322
		3 495.00	76.42	V	31.09	7.95	115.46	-95.26	20.20	0.105
00	CP-OFDM	3 500.01	80.56	Н	31.10	7.93	119.59	-95.26	24.33	0.271
90	QPSK	3 500.01	76.54	V	31.10	7.93	115.57	-95.26	20.31	0.107
		3 504.99	80.53	Н	31.11	7.93	119.57	-95.26	24.31	0.270
		3 504.99	75.67	V	31.11	7.93	114.71	-95.26	19.45	0.088
400	CP-OFDM	3 500.01	81.71	Н	31.10	7.93	120.74	-95.26	25.48	0.353
100	QPSK	3 500.01	77.33	V	31.10	7.93	116.36	-95.26	21.10	0.129



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NR 77/78 High Band_FCC (3 700 ~ 3 980 账)

BW	776 High Band	Frequency	Measured	Ant.	AF	CL	E	CF	E.I.I	R.P.
(MHz)	Modulation	(MHz)	Level (dBμV)	Pol.	(dB/ m)	(dB)	(dB <i>µ</i> V/ m)	(dB)	(dB m)	(W)
		3 710.01	81.18	Н	32.14	9.55	122.87	-95.26	27.61	0.577
20		3 710.01	75.62	V	32.14	9.55	117.31	-95.26	22.05	0.160
	CP-OFDM	3 840.00	80.32	Н	32.30	9.38	122.00	-95.26	26.74	0.472
20	QPSK	3 840.00	77.40	V	32.30	9.38	119.08	-95.26	23.82	0.241
		3 969.99	80.17	Н	32.26	8.23	120.66	-95.26	25.40	0.347
		3 969.99	74.03	V	32.26	8.23	114.52	-95.26	19.26	0.084
		3 715.02	80.54	Н	32.16	9.40	122.10	-95.26	26.84	0.483
		3 715.02	76.00	V	32.16	9.40	117.56	-95.26	22.30	0.170
30	CP-OFDM	3 840.00	80.00	Н	32.30	9.38	121.68	-95.26	26.42	0.439
30	QPSK	3 840.00	73.72	V	32.30	9.38	115.40	-95.26	20.14	0.103
		3 964.98	80.60	Н	32.27	8.29	121.16	-95.26	25.90	0.389
		3 964.98	75.62	V	32.27	8.29	116.18	-95.26	20.92	0.124
	CP-OFDM QPSK	3 720.00	81.01	Н	32.18	9.25	122.44	-95.26	27.18	0.523
		3 720.00	76.98	V	32.18	9.25	118.41	-95.26	23.15	0.207
40		3 840.00	80.16	Н	32.30	9.38	121.84	-95.26	26.58	0.455
40		3 840.00	73.27	V	32.30	9.38	114.95	-95.26	19.69	0.093
		3 960.00	80.06	Н	32.28	8.35	120.69	-95.26	25.43	0.349
		3 960.00	72.90	V	32.28	8.35	113.53	-95.26	18.27	0.067
		3 725.01	80.99	Н	32.20	9.10	122.29	-95.26	27.03	0.505
		3 725.01	75.41	V	32.20	9.10	116.71	-95.26	21.45	0.140
50	CP-OFDM	3 840.00	78.39	Н	32.30	9.38	120.07	-95.26	24.81	0.303
50	QPSK	3 840.00	73.37	V	32.30	9.38	115.05	-95.26	19.79	0.095
		3 954.99	79.05	Н	32.29	8.42	119.76	-95.26	24.50	0.282
		3 954.99	76.68	V	32.29	8.42	117.39	-95.26	22.13	0.163
		3 730.02	80.84	Н	32.22	9.11	122.17	-95.26	26.91	0.491
		3 730.02	74.81	V	32.22	9.11	116.14	-95.26	20.88	0.123
60	CP-OFDM	3 840.00	80.85	Н	32.30	9.38	122.53	-95.26	27.27	0.534
60	QPSK	3 840.00	72.63	V	32.30	9.38	114.31	-95.26	19.05	0.080
		3 949.98	79.46	Н	32.30	8.48	120.24	-95.26	24.98	0.315
		3 949.98	75.47	V	32.30	8.48	116.25	-95.26	20.99	0.126



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BW		Frequency	Measured	Ant.	AF	CL	Е	CF	E.I.I	R.P.
(MHz)	Modulation	(MHz)	Level (dBµV)	Pol.	(dB/m)	(dB)	(dBµV/ m)	(dB)	(dB m)	(W)
		3 735.00	80.45	Н	32.24	9.11	121.80	-95.26	26.54	0.451
		3 735.00	74.45	V	32.24	9.11	115.80	-95.26	20.54	0.113
70	CP-OFDM	3 840.00	79.98	Н	32.30	9.38	121.66	-95.26	26.40	0.437
	QPSK	3 840.00	73.77	V	32.30	9.38	115.45	-95.26	20.19	0.105
		3 945.00	79.97	Н	32.30	8.78	121.05	-95.26	25.79	0.380
		3 945.00	73.50	V	32.30	8.78	114.58	-95.26	19.32	0.086
		3 740.01	80.26	Н	32.26	9.11	121.63	-95.26	26.37	0.434
		3 740.01	76.49	V	32.26	9.11	117.86	-95.26	22.60	0.182
80	CP-OFDM	3 840.00	80.80	Н	32.30	9.38	122.48	-95.26	27.22	0.528
80	QPSK	3 840.00	74.43	V	32.30	9.38	116.11	-95.26	20.85	0.122
		3 939.99	79.45	Н	32.30	9.08	120.83	-95.26	25.57	0.361
		3 939.99	73.82	V	32.30	9.08	115.20	-95.26	19.94	0.099
		3 745.02	80.40	Н	32.28	9.11	121.79	-95.26	26.53	0.450
		3 745.02	76.06	V	32.28	9.11	117.45	-95.26	22.19	0.166
90	CP-OFDM	3 840.00	79.29	Н	32.30	9.38	120.97	-95.26	25.71	0.373
90	QPSK	3 840.00	76.26	V	32.30	9.38	117.94	-95.26	22.68	0.185
		3 934.98	80.47	Н	32.30	9.38	122.15	-95.26	26.89	0.489
		3 934.98	74.54	V	32.30	9.38	116.22	-95.26	20.96	0.125
		3 750.00	80.99	Н	32.30	9.11	122.40	-95.26	27.14	0.518
		3 750.00	76.22	V	32.30	9.11	117.63	-95.26	22.37	0.173
100	CP-OFDM	3 840.00	78.39	Н	32.30	9.38	120.07	-95.26	24.81	0.303
100	QPSK	3 840.00	74.95	V	32.30	9.38	116.63	-95.26	21.37	0.137
		3 930.00	79.96	Н	32.30	9.68	121.94	-95.26	26.68	0.466
	_	3 930.00	76.34	V	32.30	9.68	118.32	-95.26	23.06	0.202



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NR 77/78 Low Band_IC (3 450 ~ 3 900 脏)

BW		Frequency	Measured	Ant.	AF	CL	E	CF	E.I.R.P.	Limit
(MHz)	Modulation	(MHz)	Level (dΒμV)	Pol.	(dB/ m)	(dB)	(dB <i>µ</i> V/ m)	(dB)	(dB m/c	hannel width)
		3 460.02	82.26	Н	31.02	8.13	121.41	-95.26	26.15	
		3 460.02	80.94	V	31.02	8.13	120.09	-95.26	24.83	
20	CP-OFDM	3 675	81.58	Η	31.95	9.14	122.67	-95.26	27.41	
20	QPSK	3 675	75.21	>	31.95	9.14	116.30	-95.26	21.04	
		3 889.98	80.53	Ι	32.30	9.99	122.82	-95.26	27.56	
		3 889.98	78.01	V	32.30	9.99	120.30	-95.26	25.04	
		3 465	82.18	Н	31.03	8.09	121.30	-95.26	26.04	
		3 465	76.78	V	31.03	8.09	115.90	-95.26	20.64	
20	CP-OFDM	3 675	81.25	Н	31.95	9.14	122.34	-95.26	27.08	
30	QPSK	3 675	77.62	V	31.95	9.14	118.71	-95.26	23.45	
		3 885	80.16	Н	32.30	9.89	122.35	-95.26	27.09	
		3 885	76.97	V	32.30	9.89	119.16	-95.26	23.90	
	CP-OFDM QPSK	3 470.01	81.70	Н	31.04	8.06	120.80	-95.26	25.54	
		3 470.01	75.95	V	31.04	8.06	115.05	-95.26	19.79	
40		3 675	81.25	Н	31.95	9.14	122.34	-95.26	27.08	20
40		3 675	78.76	V	31.95	9.14	119.85	-95.26	24.59	30
		3 879.99	80.49	Н	32.30	9.79	122.58	-95.26	27.32	
		3 879.99	75.87	V	32.30	9.79	117.96	-95.26	22.70	
		3 475.02	82.01	Н	31.05	8.03	121.09	-95.26	25.83	
		3 475.02	75.31	V	31.05	8.03	114.39	-95.26	19.13	
50	CP-OFDM	3 675	80.82	Н	31.95	9.14	121.91	-95.26	26.65	
50	QPSK	3 675	75.52	V	31.95	9.14	116.61	-95.26	21.35	
		3 874.98	80.50	Н	32.30	9.68	122.48	-95.26	27.22	
		3 874.98	74.13	V	32.30	9.68	116.11	-95.26	20.85	
		3 480	82.65	Н	31.06	8.01	121.72	-95.26	26.46	
		3 480	77.54	V	31.06	8.01	116.61	-95.26	21.35	
60	CP-OFDM	3 675	80.60	Н	31.95	9.14	121.69	-95.26	26.43	
00	QPSK	3 675	77.59	V	31.95	9.14	118.68	-95.26	23.42	
		3 870	80.00	Н	32.30	9.48	121.78	-95.26	26.52	
		0010								



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BW		Frequency	Measured	Ant.	AF	CL	Е	CF	E.I.R.P.	Limit
(MHz)	Modulation	(M社z)	Level (dBµV)	Pol.	(dB/m)	(dB)	(dB <i>μ</i> V/ m)	(dB)	(dB m/c bandy	
		3 485.01	80.89	Н	31.07	7.99	119.95	-95.26	24.69	
		3 485.01	77.47	V	31.07	7.99	116.53	-95.26	21.27	
70	CP-OFDM	3 675	80.91	Н	31.95	9.14	122.00	-95.26	26.74	
70	QPSK	3 675	75.18	V	31.95	9.14	116.27	-95.26	21.01	
		3 864.99	80.04	Н	32.30	9.28	121.62	-95.26	26.36	
		3 864.99	74.02	V	32.30	9.28	115.60	-95.26	20.34	
		3 490.02	81.64	Н	31.08	7.97	120.69	-95.26	25.43	
		3 490.02	76.97	V	31.08	7.97	116.02	-95.26	20.76	
00	CP-OFDM	3 675	81.43	Н	31.95	9.14	122.52	-95.26	27.26	
80	QPSK	3 675	77.10	V	31.95	9.14	118.19	-95.26	22.93	
		3 859.98	80.77	Н	32.30	9.08	122.15	-95.26	26.89	
		3 859.98	74.76	V	32.30	9.08	116.14	-95.26	20.88	30
		3 495	81.30	Н	31.09	7.95	120.34	-95.26	25.08	30
		3 495	76.42	V	31.09	7.95	115.46	-95.26	20.20	
00	CP-OFDM	3 675	80.89	Н	31.95	9.14	121.98	-95.26	26.72	
90	QPSK	3 675	75.55	V	31.95	9.14	116.64	-95.26	21.38	
		3 855	77.27	Н	32.30	8.88	118.45	-95.26	23.19	
		3 855	73.54	V	32.30	8.88	114.72	-95.26	19.46	
		3 500.01	80.42	Н	31.10	7.93	119.45	-95.26	24.19	
		3 500.01	76.91	V	31.10	7.93	115.94	-95.26	20.68	
100	CP-OFDM	3 675	80.48	Н	31.95	9.14	121.57	-95.26	26.31	
100	QPSK	3 675	79.37	V	31.95	9.14	120.46	-95.26	25.20	
		3 849.99	79.02	Н	32.30	8.68	120.00	-95.26	24.74	
		3 849.99	75.80	V	32.30	8.68	116.78	-95.26	21.52	



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NR 77 High Band_IC (3 900 ~ 3 980) 版)

BW	High Band_IC	Frequency	Measured	Ant.	AF	CL	E	CF	E.I.R.P.	Limit
(MHz)	Modulation	(MEz)	Level (dΒμV)	Pol.	(dB/ m)	(dB)	(dB <i>µ</i> V / m)	(dB)	(dB m/c bandy	hannel width)
		3 910.02	80.39	Н	32.30	10.11	122.80	-95.26	27.54	
		3 910.02	76.70	V	32.30	10.11	119.11	-95.26	23.85	
20	CP-OFDM	3 939.99	79.41	Н	32.30	9.08	120.79	-95.26	25.53	
20	QPSK	3 939.99	75.31	V	32.30	9.08	116.69	-95.26	21.43	
		3 969.99	80.17	Н	32.26	8.23	120.66	-95.26	25.40	
		3 969.99	74.03	V	32.26	8.23	114.52	-95.26	19.26	
		3 915	80.56	Н	32.30	10.07	122.93	-95.26	27.67	
		3 915	76.94	V	32.30	10.07	119.31	-95.26	24.05	
20	CP-OFDM	3 939.99	79.24	Н	32.30	9.08	120.62	-95.26	25.36	
30	QPSK	3 939.99	76.69	V	32.30	9.08	118.07	-95.26	22.81	
		3 964.98	80.60	Н	32.27	8.29	121.16	-95.26	25.90	
		3 964.98	75.62	V	32.27	8.29	116.18	-95.26	20.92	
	CP-OFDM QPSK	3 920.01	80.37	Н	32.30	10.02	122.69	-95.26	27.43	
		3 920.01	74.14	V	32.30	10.02	116.46	-95.26	21.20	
40		3 939.99	80.51	Н	32.30	9.08	121.89	-95.26	26.63	30
40		3 939.99	75.11	V	32.30	9.08	116.49	-95.26	21.23	
		3 960	80.06	Н	32.28	8.35	120.69	-95.26	25.43	
		3 960	72.90	V	32.28	8.35	113.53	-95.26	18.27	
		3 925.02	79.71	Н	32.30	9.98	121.99	-95.26	26.73	
		3 925.02	74.52	V	32.30	9.98	116.80	-95.26	21.54	
50	CP-OFDM	3 939.99	79.44	Н	32.30	9.08	120.82	-95.26	25.56	
50	QPSK	3 939.99	74.01	V	32.30	9.08	115.39	-95.26	20.13	
		3 954.99	79.05	Н	32.29	8.42	119.76	-95.26	24.50	
		3 954.99	76.68	V	32.29	8.42	117.39	-95.26	22.13	
		3 930	79.79	Н	32.30	9.68	121.77	-95.26	26.51	
		3 930	73.69	V	32.30	9.68	115.67	-95.26	20.41	
60	CP-OFDM	3 939.99	78.36	Н	32.30	9.08	119.74	-95.26	24.48	
60	QPSK	3 939.99	73.81	V	32.30	9.08	115.19	-95.26	19.93	
		3 949.98	79.46	Н	32.30	8.48	120.24	-95.26	24.98	
		3 949.98	75.47	V	32.30	8.48	116.25	-95.26	20.99	



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BW		Frequency	Measured	Ant.	AF	CL	Е	CF	E.I.R.P.	Limit
(MHz)	Modulation	(MHz)	Level (dB <i>µ</i> V)	Pol.	(dB/m)	(dB)	(dB <i>µ</i> V/ m)	(dB)	(dB m/channel bandwidth)	
		3 935.01	80.86	Н	32.30	9.38	122.54	-95.26	27.28	
	CP-OFDM QPSK	3 935.01	74.56	V	32.30	9.38	116.24	-95.26	20.98	
70		3 939.99	80.16	Н	32.30	9.08	121.54	-95.26	26.28	
70		3 939.99	73.83	V	32.30	9.08	115.21	-95.26	19.95	30
		3 945	79.97	Н	32.30	8.78	121.05	-95.26	25.79	30
		3 945	73.50	V	32.30	8.78	114.58	-95.26	19.32	
90	CP-OFDM	3 939.99	79.91	Н	32.30	9.08	121.29	-95.26	26.03	
80	QPSK	3 939.99	76.10	V	32.30	9.08	117.48	-95.26	22.22	

Remark;

- 1. AF = Antenna Factor, CL = Cable Loss, CF = Conversion Factor.
- 2. E ($dB\mu V/m$) = Measured Level ($dB\mu V$) + Antenna Factor (dB/m) + Cable Loss (dB).
- 3. E.I.R.P. (dB m) = E (dB μ V/m) + CF (dB).
- 4. CF (dB) = 20 log D 104.8; where D is the measurement distance in meters, According to KDB 971168 D01 v03r01 5.8.4.



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2.5. Radiated Spurious Emissions

NR Band 13 (10 版 - DFTS-OFDM QPSK)

Frequency (船)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB <i>µ</i> V/m)	CF (dB)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Middle Channel (782 吨)									
1 502.50	51.35	Н	25.20	-35.31	41.24	-97.41	-56.17	-13	43.17
1 500.55	51.55	V	25.20	-35.19	41.56	-97.41	-55.85	-13	42.85
3 888.08	44.56	Н	32.30	-30.12	46.74	-97.41	-50.67	-13	37.67
3 888.17	56.64	V	32.30	-30.12	58.82	-97.41	<u>-38.59</u>	-13	25.59
Above 3 900.00	Not detected	_	_	_	_	I	ı	_	-

NR band 66 (5 № - DFTS-OFDM QPSK)

Frequency (Mb)	Measured Level (dBμV)	Ant. Pol.	AF (dB/m)	AMP+CL (dB)	E (dB <i>µ</i> V/m)	CF (dB)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)		
Low Channel (1 712.5 順)											
Below 1 000.00	Not detected	_	-	-	_	-	-	-	-		
Above 1 000.00	Not detected	ı	_	ı	_	ı	ı	ı	ı		
Middle Chann	Middle Channel (1 745 №)										
Below 1 000.00	Not detected	_	_	-	_	-	-	-	-		
Above 1 000.00	Not detected	I	_	ı	_	I	I	I	I		
High Channel	(1777.5 账))									
Below 1 000.00	Not detected	_	-	-	_	-	-	-	-		
Above 1 000.00	Not detected	-	_	_	_	_	_	_	_		

Remark;

- 1. AF = Antenna Factor, CL = Cable Loss, CF = Conversion Factor.
- 2. E ($dB\mu N/m$) = Measured Level ($dB\mu N$) + Antenna Factor (dB/m) + Cable Loss (dB) + AMP (dB).
- 3. E.I.R.P. (dB m) = E (dB μ V/m) + CF (dB).
- 4. E.R.P. (dB m) = E (dB μ V/m) + CF (dB) 2.15 (dB); where E.R.P. and E.I.R.P. are expressed in consistent units.
- 5. CF (dB) = 20 log D 104.8; where D is the measurement distance in meters, According to ANSI C63.26-2015 5.2.7
- 6. The frequency spectrum is examined from 9 klb to the 10th harmonic of the fundamental frequency of the transmitter. No other spurious and harmonic emissions were reported greater than listed emissions above table.

- End of the Test Report -