

Partial Test Report

22-1-0030601T043a-C01



Number of pages: 38 **Date of Report:** 2023-Mar-31

Testing company: cetecom advanced GmbH
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Applicant: Continental Automotive Technologies GmbH

Product: Telematic Control Unit
Model: BSRF_EA_RWO

FCC ID: KR5-BSRFEARWO

Testing has been carried out in accordance with:

FCC Regulations
Title 47 CFR, Chapter I, Subchapter A
 Part 15, Subpart C Intentional Radiators; § 15.209 Radiated emission limits; general requirements
Title 47 CFR, Chapter I, Subchapter B
 Part 22, Subpart H Cellular Radiotelephone Service
 Part 24, Subpart E Paging and Radiotelephone Service
 Part 27, Subpart C Miscellaneous Wireless Communications Services
Title 47 CFR, Chapter I, Subchapter D
 Part 90, Subpart I, General technical standards; Subpart S Private Land Mobile Radio Services

ISED-Regulations, Radio Standards Specification
RSS-Gen, Issue 5
 General Requirements for Compliance of Radio Apparatus
RSS-132, Issue 3
 Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
RSS-133, Issue 6, Amendment 1
 2 GHz Personal Communications Services
RSS-139, Issue 3
 Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz

Tested Technology: LTE

Test Results: **The EUT complies with the requirements in respect of selected parameters subject to the test.**
 The test results relate only to devices specified in this document
 The current version of Test Report "TR22-1-0030601T043a-C01" replaces the test report "TR22-1-0030601T043a" dated 2023-Feb-07. The replaced test report is herewith invalid.

Signatures:





Dipl.-Ing. Ninovic Perez
 Test Lab Manager
 Authorization of test report

M.Sc. Patrick Marzotko
 Test Manager
 Responsible of test report

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The listed attachments are separate documents.			

1 General information

1.1 Disclaimer and Notes

The test results of this test report relate exclusively to the test item specified in this test report as specified in chapter 2.7. cetecom advanced does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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Also we refer on special conditions which the applicant should fulfill according §2.927 to §2.948, special focus regarding modification of the equipment and availability of sample equipment for market surveillance tests.

1.2 Attestation

I declare that all measurements were performed by me or under my supervision and that all measurements have been performed and are correct to my best knowledge and belief to Industry Canada standards. All of the above requirements are met in accordance with enumerated standards.

1.3 Summary of Test Results

Test case in LTE2 band	Reference Clause FCC	Reference Clause ISED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	--	--	NP
Conducted RF output power	§2.1046(a)	RSS-133:4.1/6.4 + SRSP-510:5.1.2	13	--	PASSED
Radiated RF output power	§24.232(c), §2.1046(a)	RSS-133:6.4 + SRSP-510:5.1.2	--	--	NP
26dB Emission bandwidth	§24.238(b), §2.1049(h)	RSS-Gen, Issue 5:§6.6	--	--	NP
Occupied Channel Bandwidth 99%	§24.238(b), §2.1049(h)	RSS-Gen, Issue 5:§6.6	--	--	NP
Radiated Band Edge	§24.238(a)(b), §2.1053(a), §2.1057(a)	RSS-133, Issue 6: §6.5.1(i)(ii)	33	--	PASSED
Conducted RF Band Edge	§24.238(a)(b), §2.1051	RSS-133, Issue 6: §6.5.1(i)(ii)	--	--	NP
Peak to Average ratio (PAPR)	§2.1046(a)	RSS-133:4.1/6.4 + SRSP-510:5.1.2	--	--	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	28	--	PASSED
Spurious emissions at antenna terminals	§24.238(a)(b), §2.1051	RSS-133, Issue 6: §6.5.1(i)(ii)	--	--	NP
Radiated spurious emissions	§24.238(a)(b), §2.1053(a)	RSS-133, Issue 6: §6.5.1(i)(ii)	31	--	PASSED
Frequency stability, temperature variation	§24.235, §2.1055(a)(1)	RSS-133: 6.3	--	--	NP
Frequency stability, voltage variation	§24.235, §2.1055(a)(1)	RSS-133: 6.3	--	--	NP

Test case in LTE4 band	Reference Clause FCC	Reference Clause ISCED	Page	NP	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	--	--	NP
Conducted RF output power	§27.50(d)(4), §2.1046	RSS-139, Issue 3:§6.5	13	--	PASSED
Radiated RF output power	§27.50(d)(4), §2.1046(a)	RSS-139, Issue 3: 6.5 + SRSP-513	--	--	NP
26dB Emission bandwidth	§27.53(h)(3), §2.202(a)	RSS-Gen, Issue 5:§6.6	--	--	NP
Occupied Channel Bandwidth 99%	§27.53(h)(3), §2.202(a)	RSS-Gen, Issue 5:§6.6	--	--	NP
Radiated Band Edge	§27.53(h), §2.1053(a) §2.1057(a)	RSS-139, Issue 3: 6.6 (i)(ii)	33	--	PASSED
Conducted RF Band Edge	§27.53(h), §2.1051	RSS-139, Issue 3: §6.6 (i)(ii)	--	--	NP
Peak to Average ratio (PAPR)	§27.50(d)(4), §2.1046	RSS-139, Issue 3:§6.5	--	--	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	28	--	PASSED
Spurious emissions at antenna terminals	§27.53(h), §2.1051	RSS-139, Issue 3: §6.6 (i)(ii)	--	--	NP
Radiated spurious emissions	§27.53(h), §2.1053(a)	RSS-139, Issue 3: §6.6 (i)(ii)	31	--	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-139, Issue 3:§6.4	--	--	NP
Frequency stability, voltage variation	§27.54, §2.1055(a)(1)	RSS-139, Issue 3:§6.4	--	--	NP

Test case in LTE5 band	Reference Clause FCC	Reference Clause ISCED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	--	--	NP
Conducted RF output power	§22.913(a)(5), §2.1046	RSS-132:5.4 + SRSP 503:5.1.3	13	--	PASSED
Radiated RF output power	§22.913, §2.1046(a)	RSS-132: 5.4 + SRSP 503:5.1.3	--	--	NP
26dB Emission bandwidth	§22.917(b), §2.1049(h)	RSS-Gen, Issue 5:§6.6	--	--	NP
Occupied Channel Bandwidth 99%	§22.917(b), §2.1049(h)	RSS-Gen, Issue 5:§6.6	--	--	NP
Radiated Band Edge	§22.917(a)(b), §2.1053(a), §2.1057(a)	RSS-132, Issue 3: §5.5(i)(ii)	33	--	PASSED
Conducted RF Band Edge	§22.917(a)(b), §2.1051	RSS-132, Issue 3: §5.5(i)(ii)	--	--	NP
Peak to Average ratio (PAPR)	§22.913(a)(5), §2.1046	RSS-132:5.4 + SRSP 503:5.1.3	--	--	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	28	--	PASSED
Spurious emissions at antenna terminals	§22.917(a)(b), §2.1051	RSS-132, Issue 3: §5.5(i)(ii)	--	--	NP
Radiated spurious emissions	§22.917(a)(b), §2.1053(a)	RSS-132, Issue 3: §5.5(i)(ii)	31	--	PASSED
Frequency stability, temperature variation	§22.355, §2.1055(a)(1)	RSS-132: 5.3	--	--	NP
Frequency stability, voltage variation	§22.355, §2.1055(a)(1)	RSS-132: 5.3	--	--	NP

Test case in LTE7 band	Reference Clause FCC	Reference Clause ISSED	Page	Remark	Result
AC-Power Lines Conducted Emissions	§15.207(a)	RSS-Gen, Issue 5:§8.8	--	--	NP
Conducted RF output power	§27.50(h)(2), §2.1046	RSS-139, Issue 3:§6.5	13	--	PASSED
Radiated RF output power	§27.50(d)(4) §2.1046(a)	RSS-139, Issue 3: 6.5 + SRSP-513	--	--	NP
26dB Emission bandwidth	§27.53(h)(3) §2.202(a)	RSS-Gen, Issue 5: §6.6	--	--	NP
Occupied Channel Bandwidth 99%	§27.53(h)(3), §2.202(a)	RSS-Gen, Issue 5:§6.6	--	--	NP
Radiated Band Edge	§27.53(h), §2.1053(a) §2.1057(a)	RSS-139, Issue 3:§ 6.6 (i)(ii)	33	--	PASSED
Conducted RF Band Edge	§27.53(l), §2.1051	RSS-139, Issue 3: §6.6 (i)(ii)	--	--	NP
Peak to Average ratio (PAPR)	§27.50(h)(2), §2.1046	RSS-139, Issue 3:§6.5	--	--	NP
Radiated field strength emissions below 30 MHz	§15.205, §15.209	RSS-Gen: Issue 5: §8.9 Table 6	28	--	PASSED
Spurious emissions at antenna terminals	§27.53(h), §2.1051	RSS-139, Issue 3: §6.6 (i)(ii)	--	--	NP
Radiated spurious emissions	§27.53(l), §2.1053(a)	RSS-139, Issue 3: §6.6 (i)(ii)	31	--	PASSED
Frequency stability, temperature variation	§27.54, §2.1055(a)(1)	RSS-139, Issue 3:§6.4	--	--	NP
Frequency stability, voltage variation	§27.54, §2.1055(a)(1)	RSS-139, Issue 3:§6.4	--	--	NP

PASSED The EUT complies with the essential requirements in the standard.
 FAILED The EUT does not comply with the essential requirements in the standard.
 N/A Test case does not apply to the test object.
 NP The test was not performed by the cetecom advanced Laboratory.

Decision Rule: cetecom advanced GmbH follows [ILAC G8:2019 chapter 4.2.1 \(Simple Acceptance Rule\)](#).

Remarks:

- Please check the module report “W7L-P20210616-2RF04, W7L-P20210616-2RF05 and W7L-P20210616-2RF06” for not performed Measurements by the cetecom advanced laboratory.

1.4 Summary of Test Methods

Test case	Test method
AC-Power Lines Conducted Emissions	ANSI C63.4-2014, §7, ANSI C63.10-2013 §6.2
Conducted RF output power	ANSI C63.26:2015, §5.2, KDB 971168 D01 v03r01
Radiated RF output power	ANSI C63.26:2015, §5.2.7, KDB 971168 D01 v03r01
Occupied Channel Bandwidth 99%	ANSI C63.26:2015, §5.4.4, KDB 971168 D01 v03r01
26dB Emission bandwidth	ANSI C63.26:2015, §5.4.3, KDB 971168 D01 v03r01
Modulation characteristics	ANSI C63.26:2015, §5.3
Radiated Band Edge	ANSI C63.26:2015, §5.5, KDB 971168 D01 v03r01
Conducted RF Band Edge	ANSI C63.26:2015, §5.7, KDB 971168 D01 v03r01
Peak to Average ratio (PAPR)	ANSI C63.26:2015, §5.2.6
Result calculated with measured conducted RF-power value and stated/measured antenna gain for band of interest	
Radiated field strength emissions below 30 MHz	ANSI C63.4-2014 §5.3, §8.2.1, §8.3.1.1+§8.3.2.1
Spurious emissions at antenna terminals	ANSI C63.26:2015, §5.7, KDB 971168 D01 v03r01
Radiated spurious emissions	ANSI C63.26:2015, §5.5, KDB 971168 D01 v03r01, ANSI C63.26.1:2018

2 Administrative Data

2.1 Identification of the Testing Laboratory

Company name:	cetecom advanced GmbH
Address:	Im Teelbruch 116 45219 Essen - Kettwig Germany
Responsible for testing laboratory:	Dipl.-Ing. Ninovic Perez
Accreditation scope:	DAkkS Webpage: FCC ISED
IC Lab company No. / CAB ID:	3462D / DE0005
Test location:	Im Teelbruch 116; 45219 Essen

2.2 General limits for environmental conditions

Temperature:	22±2 °C
Relative. humidity:	45±15% rH

2.3 Test Laboratories sub-contracted

Company name:	--
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2.4 Organizational Items

Responsible test manager:	M.Sc. Patrick Marzotko
Receipt of EUT:	2022-Oct-14
Date(s) of test:	2022-Oct-31 to 2022-Dec-22
Version of template:	22.1101

2.5 Applicant's details

Applicant's name:	Continental Automotive Technologies GmbH
Address:	Siemensstraße 12 93055 Regensburg Bavaria Germany
Contact Person:	Kelvin Fongang
Contact Person's Email:	kelvin.fongang@continental-corporation.com

2.6 Manufacturer's details

Manufacturer's name:	Continental Automotive Technologies GmbH
Address:	Siemensstraße 12 93055 Regensburg Germany

2.7 Equipment under Test (EUT)

EUT No. *)	Sample No.	Product	Model	Type	SN	HW	SW
EUT 1	22-1-00306558_C01	Telematic Control Unit	BSRF_EA_RW0	-	22991129087081	C4.2	V19.06

*) EUT short description is used to simplify the identification of the EUT in this test report.

2.8 Untested Variant (VAR)

VAR No. *)	Sample No.	Product	Model	Type	SN	HW	SW
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*) The listed additional untested model variant(s) (VAR) is/are not object of evaluation of compliance. For further information please see Annex 5: Declaration of applicant of model differences.

If the table above does not show any other line than the headline, no untested variants are available.

2.9 Auxiliary Equipment (AE)

AE No. *)	Sample No.	Auxiliary Equipment	Model	SN	HW	SW
AE 1	22-1-00836561_C01	Backup Battery	N/A	N/A	N/A	N/A
AE 2	22-1-00836562_C01	E-call button Box	Shielded load box for E-call and A-Call	N/A	N/A	N/A
AE 3	22-1-00836566_C01	Microphone	KHM0090-010010 Peugeot Citroen 9832955480 00	N/A	N/A	N/A
AE 4	22-1-00836567_C01	Loudspeaker	ASK 900065001	N/A	N/A	N/A
AE 5	22-1-00836589_C01	RF shielded load box with load for AM/FM	N/A	N/A	N/A	N/A
AE 6	22-1-00836590_C01	RF shielded load box with load for FM/DAB	N/A	N/A	N/A	N/A
AE 7	22-1-008365130_C01	Orig. LTE1/LTE2/GNSS antenna	LTE1/LTE2/GNSS patch antennas	0014	N/A	N/A
AE 8	22-1-003065140_C01	HP Laptop	N/A	5CG8080WXB	N/A	N/A
AE 9	22-1-00306541_C01	Ethernet BRR media converter BSRF1	100BASE-T1 MediaConverter_BCM	220630 349	N/A	N/A

*) AE short description is used to simplify the identification of the auxiliary equipment in this test report. If the table above does not show any other line than the headline, no AE was used during testing nor was taken into account for evaluation

2.10 Connected cables (CAB)

CAB No. *)	Sample No.	Cable Type	Connectors / Details	Length
CAB 1	22-1-00836540_C01	EMC harness	EMC Harness 2m	2 m
CAB 2	22-1-008365109_C01	External antenna cable GNSS/LTE	FAKRA cables SMB/SMB between patch antenna and BSRF EA	--
CAB 3	22-1-008365110_C01	External antenna cable GNSS/LTE	FAKRA cables SMB/SMB between patch antenna and BSRF EA	--
CAB 4	22-1-008365151_C01	USB to Ethernet converter	USB/LAN	0.3 m

*) CAB short description is used to simplify the identification of the connected cables in this test report. If the table above does not show any other line than the headline, no cable was used during testing nor was taken into account for evaluation

2.11 Software (SW)

SW No. *)	Sample No.	SW Name	Description	SW Status
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*) SW short description is used to simplify the identification of the used software in this test report. If the table above does not show any other line than the headline, no SW was used during testing nor was taken into account for evaluation.

2.12 EUT set-ups

set-up no. *)	Combination of EUT and AE	Description
1	EUT 1 + AE 1 + AE 2 + AE 3 + AE 4 + AE 5 + AE 6 + AE 7 + AE 8 + AE 9 + CAB 1 + CAB 2 + CAB 3 + CAB 4	Used for Radiated measurements

*) EUT set-up no. is used to simplify the identification of the EUT set-up in this test report.

2.13 EUT operation modes

EUT operating mode no. *)	Operating modes	Additional information
1	TXRX (Signalling mode)	Full communication link Band LTE FDD 2 to base station. Details about operational mode on measurement diagram
2		Full communication link Band LTE FDD 4 to base station. Details about operational mode on measurement diagram
3		Full communication link Band LTE FDD 5 to base station. Details about operational mode on measurement diagram
4		Full communication link Band LTE FDD 7 to base station. Details about operational mode on measurement diagram

*) EUT operating mode no. is used to simplify the test report.

3 Equipment under test (EUT)

3.1 General Data of Main EUT as Declared by Applicant

Firmware	<input type="checkbox"/> for normal use	<input checked="" type="checkbox"/> Special version for test execution	
Power supply	<input type="checkbox"/> AC Mains	-	
	<input checked="" type="checkbox"/> DC Mains	12 V	
	<input type="checkbox"/> Battery	-	
Operational conditions	T _{nom} = +21 °C	T _{min} = n/a	T _{max} = n/a
EUT sample type	Pre-Production		
Weight	0.400 kg		
Size [LxWxH]	18.5 cm x 11.0 cm x 2.0 cm		
Interfaces/Ports	--		
For further details refer Applicants Declaration & following technical documents			

3.2 Detailed Technical data of Main EUT as Declared by Applicant

TX Frequency range [MHz] and Number of channels	<input checked="" type="checkbox"/> LTE 2	1850 - 1910 (UL), 1930 - 1990 (DL)	UARFCN range 18600 - 19199
	<input checked="" type="checkbox"/> LTE 4	1710 - 1755 (UL), 2110 - 2155 (DL)	UARFCN range 19950 - 20399
	<input checked="" type="checkbox"/> LTE 5	824 - 849 (UL), 869 - 894 (DL)	UARFCN range 20400 - 20649
	<input checked="" type="checkbox"/> LTE 7	2505 - 2565 (UL), 2625 - 2685 (DL)	UARFCN range 20775 - 21350
	<input type="checkbox"/> LTE 12	699 - 716 (UL), 2625 - 2685 (DL)	UARFCN range 23010 - 23179
	<input type="checkbox"/> LTE 13	782 - 782 (UL), 751 - 751 (DL)	UARFCN range 23205 - 23230
	<input type="checkbox"/> LTE 17	704 - 716 (UL), 734 - 746 (DL)	UARFCN range 23755 - 23800
	<input type="checkbox"/> LTE 25	1850 - 1915 (UL), 1930 - 1995 (DL)	UARFCN range 26040 - 26689
	<input type="checkbox"/> LTE 26	814 - 848.9 (UL), 859 - 893.9 (DL)	UARFCN range 26690 - 27039
	<input type="checkbox"/> LTE 28	708 - 743 (UL), 763 - 798 (DL)	UARFCN range 27225 - 27645
	<input type="checkbox"/> LTE 41	2501 - 2685 (UL), 2501 - 2685 (DL)	UARFCN range 39675 - 41490
	<input type="checkbox"/> LTE 66	1710 - 1780 (UL), 2110 - 2200 (DL)	UARFCN range 131972 - 132671
Antenna Type	<input type="checkbox"/> Integrated <input checked="" type="checkbox"/> External, no RF- connector <input type="checkbox"/> External, separate RF-connector		
Antenna gain	LTE band 2: +2.6 dBi		
	LTE band 4: +2.4 dBi		
	LTE band 5: +1.2 dBi		
	LTE band 7: +3.0 dBi		
FCC label attached	No		
Test firmware / software and storage location	EUT 1		
For further details refer Applicants Declaration & following technical documents			
Description of Reference Document (supplied by applicant)		Version	Total Pages
BSRF EA Homologation Test Setup Manual_V1.0		1.0	82

3.3 Worst case identification

LTE Band	Details
LTE B02	BW 20 MHz QPSK high channel 19100 MHz 1RB@0
LTE B04	BW 20 MHz QPSK high channel 20300 MHz 1RB@0
LTE B05	BW 10 MHz QPSK low channel 20450 MHz 1RB@0
LTE B07	BW 20 MHz QPSK low channel 20850 MHz 1RB@50

3.4 Modifications on Test sample

Additions/deviations or exclusions	
	--

4 Measurements

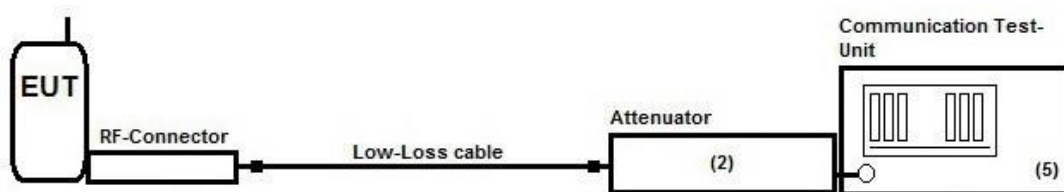
4.1 Conducted RF output power

4.1.1 Description of the general test setup and methodology, see below example:

Following modified test set-up apply for tests performed inside the climatic chamber (frequency stability) or conducted RF-carrier power-measurement. The EUT RF-Signal is directly connected over suitable RF-connector over low-loss cable and an attenuator (2) to the cellular radio communication test-unit. (5).

The measurements were performed with the integrated power measurement function of the communication test-unit. (5).

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:
(See Tables *Summary of Test Results* and *Summary of Test Methods* on page 5)

EUT settings

The EUT was instructed to send with maximum power (if adjustable) according applicants instructions.
The measurements were made at the low, middle and high carrier frequencies of each of the supported operating band within the designated range within the allowed channel bandwidths. Choosing three TX-carrier frequencies of the mobile phone, should be sufficient to demonstrate compliance

4.1.2 Measurement Location

Test site	120911 - Radio Laboratory 2
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4.1.3 Limit

Operation band	Frequency Range [MHz]	FCC Limit [W] ☒	ISED Limit [W] ☒
LTE2	1850 - 1910	2 EIRP (33 dBm)	2 EIRP (33 dBm)
LTE4	1710 - 1755	1 EIRP (30dBm)	1 EIRP (30dBm)
LTE5	824 - 849	7 ERP (38.5 dBm)	7 ERP (38.5 dBm)
LTE7	2502.5 - 2567.5	2 EIRP (33 dBm)	2 EIRP (33 dBm)

4.1.4 Result

Comparison of tested power and certified power values:

LTE Band Configuration					CETECOM tested power, Modulation: QPSK					Certified module power, Modulation: QPSK		
LTE Band	Bandwidth [MHz]	Channel	ARFCN-Frequency [MHz]	Antenna Gain [dBi]	RB	Start RB	RMS Power at Antenna Port [dBm]	E.I.R.P [dBm]	E.R.P [dBm]	RMS Power at Antenna Port [dBm]	E.I.R.P [dBm]	E.R.P [dBm]
2	20	18700	1860.00	2.70	1	0	21.51	24.21	26.36	23.15	25.85	28.00
2	20	18900	1880.00	2.70	1	0	21.44	24.14	26.29	23.13	25.83	27.98
2	20	19100	1900.00	2.70	1	0	21.72	24.42	26.57	23.02	25.72	27.87
4	20	20050	1720.00	2.40	1	0	21.36	23.76	25.91	23.61	26.01	28.16
4	20	20175	1732.50	2.40	1	0	21.62	24.02	26.17	23.45	25.85	28.00
4	20	20300	1745.00	2.40	1	0	21.91	24.31	26.46	23.49	25.89	28.04
5	10	20450	829.00	1.20	1	0	22.20	23.40	25.55	23.39	24.59	26.74
5	10	20525	836.50	1.20	1	0	21.97	23.17	25.32	23.10	24.30	26.45
5	10	20600	844.00	1.20	1	0	22.09	23.29	25.44	23.14	24.34	26.49
7	20	20850	2510.00	3.00	1	50	20.66	23.66	25.81	23.30	26.30	28.45
7	20	21100	2535.00	3.00	1	50	20.64	23.64	25.79	23.23	26.23	28.38
7	20	21350	2560.00	3.00	1	50	20.39	23.39	25.54	23.16	26.16	28.31

LTE FDD Band 2																
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict
BW 1.4 MHz	18607	1850.70	QPSK	1	0	23.07	2.70	25.77	0.37757	23.62	0.23014	2.00	33.01	2.00	33.01	Passed
				1	2	23.06	2.70	25.76	0.37670	23.61	0.22961	2.00	33.01	2.00	33.01	Passed
				1	5	23.02	2.70	25.72	0.37325	23.57	0.22751	2.00	33.01	2.00	33.01	Passed
				3	0	23.03	2.70	25.73	0.37411	23.58	0.22803	2.00	33.01	2.00	33.01	Passed
				3	1	23.12	2.70	25.82	0.38194	23.67	0.23281	2.00	33.01	2.00	33.01	Passed
				3	3	22.90	2.70	25.60	0.36308	23.45	0.22131	2.00	33.01	2.00	33.01	Passed
			16QAM	6	0	22.40	2.70	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed
				1	0	22.08	2.70	24.78	0.30061	22.63	0.18323	2.00	33.01	2.00	33.01	Passed
				1	2	22.09	2.70	24.79	0.30130	22.64	0.18365	2.00	33.01	2.00	33.01	Passed
				1	5	21.91	2.70	24.61	0.28907	22.46	0.17620	2.00	33.01	2.00	33.01	Passed
				3	0	22.10	2.70	24.80	0.30200	22.65	0.18408	2.00	33.01	2.00	33.01	Passed
				3	1	21.90	2.70	24.60	0.28840	22.45	0.17579	2.00	33.01	2.00	33.01	Passed
				3	3	21.91	2.70	24.61	0.28907	22.46	0.17620	2.00	33.01	2.00	33.01	Passed
				6	0	20.97	2.70	23.67	0.23281	21.52	0.14191	2.00	33.01	2.00	33.01	Passed
				1	0	23.09	2.70	25.79	0.37931	23.64	0.23121	2.00	33.01	2.00	33.01	Passed
	18900	1880.00	QPSK	1	2	23.05	2.70	25.75	0.37584	23.60	0.22909	2.00	33.01	2.00	33.01	Passed
				1	5	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed
				3	0	23.03	2.70	25.73	0.37411	23.58	0.22803	2.00	33.01	2.00	33.01	Passed
				3	1	23.10	2.70	25.80	0.38019	23.65	0.23174	2.00	33.01	2.00	33.01	Passed
				3	3	22.89	2.70	25.59	0.36224	23.44	0.22080	2.00	33.01	2.00	33.01	Passed
				6	0	21.97	2.70	24.67	0.29309	22.52	0.17865	2.00	33.01	2.00	33.01	Passed
			16QAM	1	0	22.09	2.70	24.79	0.30130	22.64	0.18365	2.00	33.01	2.00	33.01	Passed
				1	2	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed
				1	5	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed
				3	0	22.04	2.70	24.74	0.29785	22.59	0.18155	2.00	33.01	2.00	33.01	Passed
				3	1	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed
				3	3	21.88	2.70	24.58	0.28708	22.43	0.17498	2.00	33.01	2.00	33.01	Passed
				6	0	20.98	2.70	23.68	0.23335	21.53	0.14223	2.00	33.01	2.00	33.01	Passed
				1	0	22.97	2.70	25.67	0.36898	23.52	0.22491	2.00	33.01	2.00	33.01	Passed
				1	2	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed
	1	5	22.91	2.70	25.61	0.36392	23.46	0.22182	2.00	33.01	2.00	33.01	Passed			
	19193	1909.30	QPSK	3	0	23.06	2.70	25.76	0.37670	23.61	0.22961	2.00	33.01	2.00	33.01	Passed
				3	1	22.94	2.70	25.64	0.36644	23.49	0.22336	2.00	33.01	2.00	33.01	Passed
				3	3	22.89	2.70	25.59	0.36224	23.44	0.22080	2.00	33.01	2.00	33.01	Passed
				6	0	21.95	2.70	24.65	0.29174	22.50	0.17783	2.00	33.01	2.00	33.01	Passed
				1	0	21.99	2.70	24.69	0.29444	22.54	0.17947	2.00	33.01	2.00	33.01	Passed
				1	2	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed
			16QAM	1	5	21.92	2.70	24.62	0.28973	22.47	0.17660	2.00	33.01	2.00	33.01	Passed
				3	0	22.04	2.70	24.74	0.29785	22.59	0.18155	2.00	33.01	2.00	33.01	Passed
				3	1	21.90	2.70	24.60	0.28840	22.45	0.17579	2.00	33.01	2.00	33.01	Passed
				3	3	21.89	2.70	24.59	0.28774	22.44	0.17539	2.00	33.01	2.00	33.01	Passed
				6	0	20.85	2.70	23.55	0.22646	21.40	0.13804	2.00	33.01	2.00	33.01	Passed
				1	0	23.09	2.70	25.79	0.37931	23.64	0.23121	2.00	33.01	2.00	33.01	Passed
				1	7	23.02	2.70	25.72	0.37325	23.57	0.22751	2.00	33.01	2.00	33.01	Passed
				1	14	22.98	2.70	25.68	0.36983	23.53	0.22542	2.00	33.01	2.00	33.01	Passed
				8	0	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed
	8	3	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed			
	8	7	21.87	2.70	24.57	0.28642	22.42	0.17458	2.00	33.01	2.00	33.01	Passed			
	15	0	22.01	2.70	24.71	0.29580	22.56	0.18030	2.00	33.01	2.00	33.01	Passed			
	18615	1851.50	QPSK	1	0	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed
				1	7	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed
				1	14	21.94	2.70	24.64	0.29107	22.49	0.17742	2.00	33.01	2.00	33.01	Passed
				8	0	21.06	2.70	23.76	0.23768	21.61	0.14488	2.00	33.01	2.00	33.01	Passed
				8	3	20.95	2.70	23.65	0.23174	21.50	0.14125	2.00	33.01	2.00	33.01	Passed
				8	7	20.93	2.70	23.63	0.23067	21.48	0.14060	2.00	33.01	2.00	33.01	Passed
			16QAM	15	0	20.97	2.70	23.67	0.23281	21.52	0.14191	2.00	33.01	2.00	33.01	Passed
				1	0	23.11	2.70	25.81	0.38107	23.66	0.23227	2.00	33.01	2.00	33.01	Passed
				1	7	23.06	2.70	25.76	0.37670	23.61	0.22961	2.00	33.01	2.00	33.01	Passed
				1	14	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed
				8	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed
				8	3	22.10	2.70	24.80	0.30200	22.65	0.18408	2.00	33.01	2.00	33.01	Passed
				8	7	21.96	2.70	24.66	0.29242	22.51	0.17824	2.00	33.01	2.00	33.01	Passed
				15	0	21.98	2.70	24.68	0.29376	22.53	0.17906	2.00	33.01	2.00	33.01	Passed
				1	0	22.15	2.70	24.85	0.30549	22.70	0.18621	2.00	33.01	2.00	33.01	Passed
	1	7	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed			
	18900	1880.00	QPSK	1	14	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed
				8	0	21.05	2.70	23.75	0.23714	21.60	0.14454	2.00	33.01	2.00	33.01	Passed
				8	3	20.97	2.70	23.67	0.23281	21.52	0.14191	2.00	33.01	2.00	33.01	Passed
				8	7	20.86	2.70	23.56	0.22699	21.41	0.13836	2.00	33.01	2.00	33.01	Passed
				15	0	20.92	2.70	23.62	0.23014	21.47	0.14028	2.00	33.01	2.00	33.01	Passed
				1	0	22.96	2.70	25.66	0.36813	23.51	0.22439	2.00	33.01	2.00	33.01	Passed
			16QAM	1	7	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed
				1	14	22.91	2.70	25.61	0.36392	23.46	0.22182	2.00	33.01	2.00	33.01	Passed
				8	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed
				8	3	21.96	2.70	24.66	0.29242	22.51	0.17824	2.00	33.01	2.00	33.01	Passed
				8	7	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed
				15	0	21.89	2.70	24.59	0.28774	22.44	0.17539	2.00	33.01	2.00	33.01	Passed
				1	0	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed
				1	7	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed
				1	14	21.92	2.70	24.62	0.28973	22.47	0.17660	2.00	33.01	2.00	33.01	Passed
	19185	1908.50	QPSK	8	0	21.04	2.70	23.74	0.23659	21.59	0.14421	2.00	33.01	2.00	33.01	Passed
				8	3	20.93	2.70	23.63	0.23067	21.48	0.14060	2.00	33.01	2.00	33.01	Passed
				8	7	20.85	2.70	23.55	0.22646	21.40	0.13804	2.00	33.01	2.00	33.01	Passed
				15	0	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed

LTE FDD Band 2																
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict
BW 5 MHz	18625	1852.50	QPSK	1	0	23.10	2.70	25.80	0.38019	23.65	0.23174	2.00	33.01	2.00	33.01	Passed
				1	12	23.07	2.70	25.77	0.37757	23.62	0.23014	2.00	33.01	2.00	33.01	Passed
				1	24	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed
				12	0	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed
				12	6	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed
				12	13	21.91	2.70	24.61	0.28907	22.46	0.17620	2.00	33.01	2.00	33.01	Passed
				25	0	21.99	2.70	24.69	0.29444	22.54	0.17947	2.00	33.01	2.00	33.01	Passed
				1	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed
				1	12	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed
				1	24	21.94	2.70	24.64	0.29107	22.49	0.17742	2.00	33.01	2.00	33.01	Passed
				12	0	21.06	2.70	23.76	0.23768	21.61	0.14488	2.00	33.01	2.00	33.01	Passed
				12	6	20.92	2.70	23.62	0.23014	21.47	0.14028	2.00	33.01	2.00	33.01	Passed
			12	13	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed	
			25	0	20.97	2.70	23.67	0.23281	21.52	0.14191	2.00	33.01	2.00	33.01	Passed	
			16QAM	12	0	21.06	2.70	23.76	0.23768	21.61	0.14488	2.00	33.01	2.00	33.01	Passed
			12	6	20.92	2.70	23.62	0.23014	21.47	0.14028	2.00	33.01	2.00	33.01	Passed	
			12	13	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed	
			25	0	20.97	2.70	23.67	0.23281	21.52	0.14191	2.00	33.01	2.00	33.01	Passed	
			1	0	23.06	2.70	25.76	0.37670	23.61	0.22961	2.00	33.01	2.00	33.01	Passed	
			1	12	23.03	2.70	25.73	0.37411	23.58	0.22803	2.00	33.01	2.00	33.01	Passed	
			1	24	22.98	2.70	25.68	0.36983	23.53	0.22542	2.00	33.01	2.00	33.01	Passed	
			12	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed	
			12	6	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed	
			12	13	21.92	2.70	24.62	0.28973	22.47	0.17660	2.00	33.01	2.00	33.01	Passed	
	25	0	22.01	2.70	24.71	0.29580	22.56	0.18030	2.00	33.01	2.00	33.01	Passed			
	1	0	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed			
	1	12	22.09	2.70	24.79	0.30130	22.64	0.18365	2.00	33.01	2.00	33.01	Passed			
	1	24	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed			
	16QAM	12	0	21.03	2.70	23.73	0.23605	21.58	0.14388	2.00	33.01	2.00	33.01	Passed		
	12	6	21.01	2.70	23.71	0.23496	21.56	0.14322	2.00	33.01	2.00	33.01	Passed			
	12	13	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed			
	25	0	20.93	2.70	23.63	0.23067	21.48	0.14060	2.00	33.01	2.00	33.01	Passed			
	1	0	22.97	2.70	25.67	0.36898	23.52	0.22491	2.00	33.01	2.00	33.01	Passed			
	1	12	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed			
	1	24	22.95	2.70	25.65	0.36728	23.50	0.22387	2.00	33.01	2.00	33.01	Passed			
	12	0	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed			
	12	6	21.97	2.70	24.67	0.29309	22.52	0.17865	2.00	33.01	2.00	33.01	Passed			
	12	13	21.94	2.70	24.64	0.29107	22.49	0.17742	2.00	33.01	2.00	33.01	Passed			
	25	0	21.92	2.70	24.62	0.28973	22.47	0.17660	2.00	33.01	2.00	33.01	Passed			
	1	0	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed			
	1	12	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed			
	1	24	21.91	2.70	24.61	0.28907	22.46	0.17620	2.00	33.01	2.00	33.01	Passed			
	16QAM	12	0	21.01	2.70	23.71	0.23496	21.56	0.14322	2.00	33.01	2.00	33.01	Passed		
	12	6	20.89	2.70	23.59	0.22856	21.44	0.13932	2.00	33.01	2.00	33.01	Passed			
	12	13	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed			
	25	0	20.85	2.70	23.55	0.22646	21.40	0.13804	2.00	33.01	2.00	33.01	Passed			
	1	0	23.10	2.70	25.80	0.38019	23.65	0.23174	2.00	33.01	2.00	33.01	Passed			
	1	24	23.07	2.70	25.77	0.37757	23.62	0.23014	2.00	33.01	2.00	33.01	Passed			
1	49	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed				
25	0	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed				
25	12	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed				
25	25	21.91	2.70	24.61	0.28907	22.46	0.17620	2.00	33.01	2.00	33.01	Passed				
50	0	21.99	2.70	24.69	0.29444	22.54	0.17947	2.00	33.01	2.00	33.01	Passed				
1	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed				
1	24	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed				
1	49	21.94	2.70	24.64	0.29107	22.49	0.17742	2.00	33.01	2.00	33.01	Passed				
16QAM	25	0	21.06	2.70	23.76	0.23768	21.61	0.14488	2.00	33.01	2.00	33.01	Passed			
25	12	20.92	2.70	23.62	0.23014	21.47	0.14028	2.00	33.01	2.00	33.01	Passed				
25	25	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed				
50	0	20.97	2.70	23.67	0.23281	21.52	0.14191	2.00	33.01	2.00	33.01	Passed				
1	0	23.06	2.70	25.76	0.37670	23.61	0.22961	2.00	33.01	2.00	33.01	Passed				
1	24	23.03	2.70	25.73	0.37411	23.58	0.22803	2.00	33.01	2.00	33.01	Passed				
1	49	22.98	2.70	25.68	0.36983	23.53	0.22542	2.00	33.01	2.00	33.01	Passed				
25	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed				
25	12	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed				
25	25	21.92	2.70	24.62	0.28973	22.47	0.17660	2.00	33.01	2.00	33.01	Passed				
50	0	22.01	2.70	24.71	0.29580	22.56	0.18030	2.00	33.01	2.00	33.01	Passed				
1	0	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed				
1	24	22.09	2.70	24.79	0.30130	22.64	0.18365	2.00	33.01	2.00	33.01	Passed				
1	49	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed				
16QAM	25	0	21.03	2.70	23.73	0.23605	21.58	0.14388	2.00	33.01	2.00	33.01	Passed			
25	12	21.01	2.70	23.71	0.23496	21.56	0.14322	2.00	33.01	2.00	33.01	Passed				
25	25	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed				
50	0	20.93	2.70	23.63	0.23067	21.48	0.14060	2.00	33.01	2.00	33.01	Passed				
1	0	22.97	2.70	25.67	0.36898	23.52	0.22491	2.00	33.01	2.00	33.01	Passed				
1	24	22.99	2.70	25.69	0.37068	23.54	0.22594	2.00	33.01	2.00	33.01	Passed				
1	49	22.95	2.70	25.65	0.36728	23.50	0.22387	2.00	33.01	2.00	33.01	Passed				
25	0	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed				
25	12	21.97	2.70	24.67	0.29309	22.52	0.17865	2.00	33.01	2.00	33.01	Passed				
25	25	21.94	2.70	24.64	0.29107	22.49	0.17742	2.00	33.01	2.00	33.01	Passed				
50	0	21.92	2.70	24.62	0.28973	22.47	0.17660	2.00	33.01	2.00	33.01	Passed				
1	0	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed				
1	24	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed				
1	49	21.91	2.70	24.61	0.28907	22.46	0.17620	2.00	33.01	2.00	33.01	Passed				
16QAM	25	0	21.01	2.70	23.71	0.23496										

LTE FDD Band 2																
Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm), EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict	
BW 15 MHz	18675	1857.50	QPSK	1	0	23.14	2.70	25.84	0.38371	23.69	0.23388	2.00	33.01	2.00	33.01	Passed
				1	37	23.05	2.70	25.75	0.37584	23.60	0.22909	2.00	33.01	2.00	33.01	Passed
				1	74	23.02	2.70	25.72	0.37325	23.57	0.22751	2.00	33.01	2.00	33.01	Passed
				36	0	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed
				36	19	22.12	2.70	24.82	0.30339	22.67	0.18493	2.00	33.01	2.00	33.01	Passed
				36	39	21.87	2.70	24.57	0.28642	22.42	0.17458	2.00	33.01	2.00	33.01	Passed
		16QAM	75	0	22.04	2.70	24.74	0.29785	22.59	0.18155	2.00	33.01	2.00	33.01	Passed	
			1	0	22.10	2.70	24.80	0.30200	22.65	0.18408	2.00	33.01	2.00	33.01	Passed	
			1	37	22.07	2.70	24.77	0.29992	22.62	0.18281	2.00	33.01	2.00	33.01	Passed	
			1	74	21.90	2.70	24.60	0.28840	22.45	0.17579	2.00	33.01	2.00	33.01	Passed	
			36	0	21.12	2.70	23.82	0.24099	21.67	0.14689	2.00	33.01	2.00	33.01	Passed	
			36	19	20.90	2.70	23.60	0.22909	21.45	0.13964	2.00	33.01	2.00	33.01	Passed	
	18900	1880.00	QPSK	36	39	20.92	2.70	23.62	0.23014	21.47	0.14028	2.00	33.01	2.00	33.01	Passed
				75	0	21.02	2.70	23.72	0.23550	21.57	0.14355	2.00	33.01	2.00	33.01	Passed
				1	0	23.09	2.70	25.79	0.37931	23.64	0.23121	2.00	33.01	2.00	33.01	Passed
				1	37	23.08	2.70	25.78	0.37844	23.63	0.23067	2.00	33.01	2.00	33.01	Passed
				1	74	23.05	2.70	25.75	0.37584	23.60	0.22909	2.00	33.01	2.00	33.01	Passed
				36	0	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed
		16QAM	36	19	22.10	2.70	24.80	0.30200	22.65	0.18408	2.00	33.01	2.00	33.01	Passed	
			36	39	21.90	2.70	24.60	0.28840	22.45	0.17579	2.00	33.01	2.00	33.01	Passed	
			75	0	21.99	2.70	24.69	0.29444	22.54	0.17947	2.00	33.01	2.00	33.01	Passed	
			1	0	22.15	2.70	24.85	0.30549	22.70	0.18621	2.00	33.01	2.00	33.01	Passed	
			1	37	22.06	2.70	24.76	0.29923	22.61	0.18239	2.00	33.01	2.00	33.01	Passed	
			1	74	21.99	2.70	24.69	0.29444	22.54	0.17947	2.00	33.01	2.00	33.01	Passed	
	19125	1902.50	QPSK	36	0	21.01	2.70	23.71	0.23496	21.56	0.14322	2.00	33.01	2.00	33.01	Passed
				36	19	20.99	2.70	23.69	0.23388	21.54	0.14256	2.00	33.01	2.00	33.01	Passed
				36	39	20.87	2.70	23.57	0.22751	21.42	0.13868	2.00	33.01	2.00	33.01	Passed
				75	0	20.95	2.70	23.65	0.23174	21.50	0.14125	2.00	33.01	2.00	33.01	Passed
				1	0	22.94	2.70	25.64	0.36644	23.49	0.22336	2.00	33.01	2.00	33.01	Passed
				1	37	22.95	2.70	25.65	0.36728	23.50	0.22387	2.00	33.01	2.00	33.01	Passed
		16QAM	1	74	22.92	2.70	25.62	0.36475	23.47	0.22233	2.00	33.01	2.00	33.01	Passed	
			36	0	22.07	2.70	24.77	0.29992	22.62	0.18281	2.00	33.01	2.00	33.01	Passed	
			36	19	21.97	2.70	24.67	0.29309	22.52	0.17865	2.00	33.01	2.00	33.01	Passed	
			36	39	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed	
			75	0	21.94	2.70	24.64	0.29107	22.49	0.17742	2.00	33.01	2.00	33.01	Passed	
			1	0	21.98	2.70	24.68	0.29376	22.53	0.17906	2.00	33.01	2.00	33.01	Passed	
	18700	1860.00	QPSK	1	37	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed
				1	74	21.90	2.70	24.60	0.28840	22.45	0.17579	2.00	33.01	2.00	33.01	Passed
				36	0	21.08	2.70	23.78	0.23878	21.63	0.14555	2.00	33.01	2.00	33.01	Passed
				36	19	20.90	2.70	23.60	0.22909	21.45	0.13964	2.00	33.01	2.00	33.01	Passed
				36	39	20.88	2.70	23.58	0.22803	21.43	0.13900	2.00	33.01	2.00	33.01	Passed
				75	0	20.82	2.70	23.52	0.22491	21.37	0.13709	2.00	33.01	2.00	33.01	Passed
		16QAM	1	0	21.51	2.70	24.21	0.26363	22.06	0.16069	2.00	33.01	2.00	33.01	Passed	
			1	50	23.09	2.70	25.79	0.37931	23.64	0.23121	2.00	33.01	2.00	33.01	Passed	
			1	99	23.04	2.70	25.74	0.37497	23.59	0.22856	2.00	33.01	2.00	33.01	Passed	
			50	0	22.09	2.70	24.79	0.30130	22.64	0.18365	2.00	33.01	2.00	33.01	Passed	
			50	25	22.13	2.70	24.83	0.30409	22.68	0.18535	2.00	33.01	2.00	33.01	Passed	
			50	50	21.95	2.70	24.65	0.29174	22.50	0.17783	2.00	33.01	2.00	33.01	Passed	
18900	1800.00	QPSK	100	0	22.05	2.70	24.75	0.29854	22.60	0.18197	2.00	33.01	2.00	33.01	Passed	
			1	0	22.13	2.70	24.83	0.30409	22.68	0.18535	2.00	33.01	2.00	33.01	Passed	
			1	50	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed	
			1	99	21.96	2.70	24.66	0.29242	22.51	0.17824	2.00	33.01	2.00	33.01	Passed	
			50	0	21.14	2.70	23.84	0.24210	21.69	0.14757	2.00	33.01	2.00	33.01	Passed	
			50	25	20.98	2.70	23.68	0.23335	21.53	0.14223	2.00	33.01	2.00	33.01	Passed	
	16QAM	50	50	20.95	2.70	23.65	0.23174	21.50	0.14125	2.00	33.01	2.00	33.01	Passed		
		100	0	21.03	2.70	23.73	0.23605	21.58	0.14388	2.00	33.01	2.00	33.01	Passed		
		1	0	21.44	2.70	24.14	0.25942	21.99	0.15812	2.00	33.01	2.00	33.01	Passed		
		1	50	23.11	2.70	25.81	0.38107	23.66	0.23227	2.00	33.01	2.00	33.01	Passed		
		1	99	23.06	2.70	25.76	0.37670	23.61	0.22961	2.00	33.01	2.00	33.01	Passed		
		50	0	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed		
19100	1900.00	QPSK	50	25	22.12	2.70	24.82	0.30339	22.67	0.18493	2.00	33.01	2.00	33.01	Passed	
			50	50	21.97	2.70	24.67	0.29309	22.52	0.17865	2.00	33.01	2.00	33.01	Passed	
			100	0	22.03	2.70	24.73	0.29717	22.58	0.18113	2.00	33.01	2.00	33.01	Passed	
			1	0	22.16	2.70	24.86	0.30620	22.71	0.18664	2.00	33.01	2.00	33.01	Passed	
			1	50	22.11	2.70	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed	
			1	99	22.01	2.70	24.71	0.29580	22.56	0.18030	2.00	33.01	2.00	33.01	Passed	
	16QAM	50	0	21.09	2.70	23.79	0.23933	21.64	0.14588	2.00	33.01	2.00	33.01	Passed		
		50	25	21.03	2.70	23.73	0.23605	21.58	0.14388	2.00	33.01	2.00	33.01	Passed		
		50	50	20.93	2.70	23.63	0.23067	21.48	0.14060	2.00	33.01	2.00	33.01	Passed		
		100	0	21.00	2.70	23.70	0.23442	21.55	0.14289	2.00	33.01	2.00	33.01	Passed		
		1	0	21.72	2.70	24.42	0.27669	22.27	0.16866	2.00	33.01	2.00	33.01	Passed		
		1	50	23.01	2.70	25.71	0.37239	23.56	0.22699	2.00	33.01	2.00	33.01	Passed		
19100	1900.00	QPSK	1	99	22.96	2.70	25.66	0.36813	23.51	0.22439	2.00	33.01	2.00	33.01	Passed	
			50	0	22.08	2.70	24.78	0.30061	22.63	0.18323	2.00	33.01	2.00	33.01	Passed	
			50	25	22.02	2.70	24.72	0.29648	22.57	0.18072	2.00	33.01	2.00	33.01	Passed	
			50	50	21.95	2.70	24.65	0.29174	22.50	0.17783	2.00	33.01	2.00	33.01	Passed	
			100	0	21.97	2.70	24.67	0.29309	22.52	0.17865	2.00	33.01	2.00	33.01	Passed	
			1	0	22.04	2.70	24.74	0.29785	22.59	0.18155	2.00	33.01	2.00	33.01	Passed	
16QAM	1	50	22.07	2.70	24.77	0.29992	22.62	0.18281	2.00	33.01	2.00	33.01	Passed			
	1	99	21.93	2.70	24.63	0.29040	22.48	0.17701	2.00	33.01	2.00	33.01	Passed			
	50	0	21.09	2.70	23.79	0.23933	21.64	0.14588	2.00	33.01	2.00	33.01	Passed			
	50	25	20.95	2.70	23.65	0.23174	21.50	0.14125	2.00	33.01	2.00	33.01	Passed			
	50	50	20.90	2.70	23.60	0.22909	21.45	0.13964	2.00	33.01						

LTE FDD Band 4																
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	ERP in dBm	ERP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit; (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict
BW 1.4 MHz	19957	1710.70	QPSK	1	0	23.53	2.40	25.93	0.39174	23.78	0.23878	1.00	30.00	1.00	30.00	Passed
				1	2	23.43	2.40	25.83	0.38282	23.68	0.23335	1.00	30.00	1.00	30.00	Passed
				1	5	23.44	2.40	25.84	0.38371	23.69	0.23388	1.00	30.00	1.00	30.00	Passed
				3	0	23.37	2.40	25.77	0.37757	23.62	0.23014	1.00	30.00	1.00	30.00	Passed
				3	1	23.46	2.40	25.86	0.38548	23.71	0.23496	1.00	30.00	1.00	30.00	Passed
				3	3	23.26	2.40	25.66	0.36813	23.51	0.22439	1.00	30.00	1.00	30.00	Passed
			16QAM	6	0	22.40	2.40	24.80	0.30200	22.65	0.18408	1.00	30.00	1.00	30.00	Passed
				1	0	22.01	2.40	24.41	0.27606	22.26	0.16827	1.00	30.00	1.00	30.00	Passed
				1	2	22.09	2.40	24.49	0.28125	22.34	0.17144	1.00	30.00	1.00	30.00	Passed
				1	5	22.14	2.40	24.54	0.28445	22.39	0.17338	1.00	30.00	1.00	30.00	Passed
				3	0	22.30	2.40	24.70	0.29512	22.55	0.17989	1.00	30.00	1.00	30.00	Passed
				3	1	22.22	2.40	24.62	0.28973	22.47	0.17660	1.00	30.00	1.00	30.00	Passed
	20175	1732.50	QPSK	3	3	22.27	2.40	24.67	0.29309	22.52	0.17865	1.00	30.00	1.00	30.00	Passed
				6	0	21.30	2.40	23.70	0.23442	21.55	0.14289	1.00	30.00	1.00	30.00	Passed
				1	0	23.41	2.40	25.81	0.38107	23.66	0.23227	1.00	30.00	1.00	30.00	Passed
				1	2	23.28	2.40	25.68	0.36983	23.53	0.22542	1.00	30.00	1.00	30.00	Passed
				1	5	23.27	2.40	25.67	0.36898	23.52	0.22491	1.00	30.00	1.00	30.00	Passed
				3	0	23.23	2.40	25.63	0.36559	23.48	0.22284	1.00	30.00	1.00	30.00	Passed
		16QAM	3	1	23.31	2.40	25.71	0.37239	23.56	0.22699	1.00	30.00	1.00	30.00	Passed	
			3	3	23.11	2.40	25.51	0.35563	23.36	0.21677	1.00	30.00	1.00	30.00	Passed	
			6	0	22.19	2.40	24.59	0.28774	22.44	0.17539	1.00	30.00	1.00	30.00	Passed	
			1	0	21.88	2.40	24.28	0.26792	22.13	0.16331	1.00	30.00	1.00	30.00	Passed	
			1	2	21.89	2.40	24.29	0.26853	22.14	0.16368	1.00	30.00	1.00	30.00	Passed	
			1	5	22.02	2.40	24.42	0.27669	22.27	0.16866	1.00	30.00	1.00	30.00	Passed	
	20393	1754.30	QPSK	3	0	22.10	2.40	24.50	0.28184	22.35	0.17179	1.00	30.00	1.00	30.00	Passed
				3	1	22.20	2.40	24.60	0.28840	22.45	0.17579	1.00	30.00	1.00	30.00	Passed
				3	3	22.10	2.40	24.50	0.28184	22.35	0.17179	1.00	30.00	1.00	30.00	Passed
				6	0	21.17	2.40	23.57	0.22751	21.42	0.13868	1.00	30.00	1.00	30.00	Passed
				1	0	23.44	2.40	25.84	0.38371	23.69	0.23388	1.00	30.00	1.00	30.00	Passed
				1	2	23.37	2.40	25.77	0.37757	23.62	0.23014	1.00	30.00	1.00	30.00	Passed
		16QAM	1	5	23.34	2.40	25.74	0.37497	23.59	0.22856	1.00	30.00	1.00	30.00	Passed	
			3	0	23.41	2.40	25.81	0.38107	23.66	0.23227	1.00	30.00	1.00	30.00	Passed	
			3	1	23.30	2.40	25.70	0.37154	23.55	0.22646	1.00	30.00	1.00	30.00	Passed	
			3	3	23.26	2.40	25.66	0.36813	23.51	0.22439	1.00	30.00	1.00	30.00	Passed	
			6	0	22.32	2.40	24.72	0.29648	22.57	0.18072	1.00	30.00	1.00	30.00	Passed	
			1	0	21.93	2.40	24.33	0.27102	22.18	0.16520	1.00	30.00	1.00	30.00	Passed	
	19965	1711.50	QPSK	1	2	22.06	2.40	24.46	0.27925	22.31	0.17022	1.00	30.00	1.00	30.00	Passed
				1	5	22.16	2.40	24.56	0.28576	22.41	0.17418	1.00	30.00	1.00	30.00	Passed
				3	0	2.25	2.40	4.65	0.00292	2.50	0.00178	1.00	30.00	1.00	30.00	Passed
				3	1	22.23	2.40	24.63	0.29040	22.48	0.17701	1.00	30.00	1.00	30.00	Passed
				3	3	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed
				6	0	21.19	2.40	23.59	0.22856	21.44	0.13932	1.00	30.00	1.00	30.00	Passed
		16QAM	1	0	23.55	2.40	25.95	0.39355	23.80	0.23988	1.00	30.00	1.00	30.00	Passed	
			1	7	23.39	2.40	25.79	0.37931	23.64	0.23121	1.00	30.00	1.00	30.00	Passed	
			1	14	23.40	2.40	25.80	0.38019	23.65	0.23174	1.00	30.00	1.00	30.00	Passed	
			8	0	22.36	2.40	24.76	0.29923	22.61	0.18239	1.00	30.00	1.00	30.00	Passed	
			8	3	22.39	2.40	24.79	0.30130	22.64	0.18365	1.00	30.00	1.00	30.00	Passed	
			8	7	22.23	2.40	24.63	0.29040	22.48	0.17701	1.00	30.00	1.00	30.00	Passed	
20175	1732.50	QPSK	15	0	22.37	2.40	24.77	0.29992	22.62	0.18281	1.00	30.00	1.00	30.00	Passed	
			1	0	21.98	2.40	24.38	0.27416	22.23	0.16711	1.00	30.00	1.00	30.00	Passed	
			1	7	22.06	2.40	24.46	0.27925	22.31	0.17022	1.00	30.00	1.00	30.00	Passed	
			1	14	22.17	2.40	24.57	0.28642	22.42	0.17458	1.00	30.00	1.00	30.00	Passed	
			8	0	21.26	2.40	23.66	0.23227	21.51	0.14158	1.00	30.00	1.00	30.00	Passed	
			8	3	21.27	2.40	23.67	0.23281	21.52	0.14191	1.00	30.00	1.00	30.00	Passed	
	16QAM	8	7	21.29	2.40	23.69	0.23388	21.54	0.14256	1.00	30.00	1.00	30.00	Passed		
		15	0	21.30	2.40	23.70	0.23442	21.55	0.14289	1.00	30.00	1.00	30.00	Passed		
		1	0	23.43	2.40	25.83	0.38282	23.68	0.23335	1.00	30.00	1.00	30.00	Passed		
		1	7	23.29	2.40	25.69	0.37068	23.54	0.22594	1.00	30.00	1.00	30.00	Passed		
		1	14	23.27	2.40	25.67	0.36898	23.52	0.22491	1.00	30.00	1.00	30.00	Passed		
		8	0	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed		
20385	1753.50	QPSK	8	3	22.31	2.40	24.71	0.29580	22.56	0.18030	1.00	30.00	1.00	30.00	Passed	
			8	7	22.18	2.40	24.58	0.28708	22.43	0.17498	1.00	30.00	1.00	30.00	Passed	
			15	0	22.20	2.40	24.60	0.28840	22.45	0.17579	1.00	30.00	1.00	30.00	Passed	
			1	0	21.94	2.40	24.34	0.27164	22.19	0.16558	1.00	30.00	1.00	30.00	Passed	
			1	7	21.92	2.40	24.32	0.27040	22.17	0.16482	1.00	30.00	1.00	30.00	Passed	
			1	14	22.02	2.40	24.42	0.27669	22.27	0.16866	1.00	30.00	1.00	30.00	Passed	
	16QAM	8	0	21.11	2.40	23.51	0.22439	21.36	0.13677	1.00	30.00	1.00	30.00	Passed		
		8	3	21.15	2.40	23.55	0.22646	21.40	0.13804	1.00	30.00	1.00	30.00	Passed		
		8	7	21.08	2.40	23.48	0.22284	21.33	0.13583	1.00	30.00	1.00	30.00	Passed		
		15	0	21.11	2.40	23.51	0.22439	21.36	0.13677	1.00	30.00	1.00	30.00	Passed		
		1	0	23.43	2.40	25.83	0.38282	23.68	0.23335	1.00	30.00	1.00	30.00	Passed		
		1	7	23.37	2.40	25.77	0.37757	23.62	0.23014	1.00	30.00	1.00	30.00	Passed		
20385	1753.50	QPSK	1	14	23.34	2.40	25.74	0.37497	23.59	0.22856	1.00	30.00	1.00	30.00	Passed	
			8	0	22.41	2.40	24.81	0.30269	22.66	0.18450	1.00	30.00	1.00	30.00	Passed	
			8	3	22.32	2.40	24.72	0.29648	22.57	0.18072	1.00	30.00	1.00	30.00	Passed	
			8	7	22.30	2.40	24.70	0.29512	22.55	0.17989	1.00	30.00	1.00	30.00	Passed	
			15	0	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed	
			1	0	21.96	2.40	24.36	0.27290	22.21	0.16634	1.00	30.00	1.00	30.00	Passed	
	16QAM	1	7	22.04	2.40	24.44	0.27797	22.29	0.16943	1.00	30.00	1.00	30.00	Passed		
		1	14	22.16	2.40	24.56	0.28576	22.41	0.17418	1.00	30.00	1.00	30.00	Passed		
		8	0	21.25	2.40	23.65	0.23174	21.50	0.14125	1.00	30.00	1.00	30.00	Passed		
		8	3	21.26	2.40	23.66	0.23227	21.51	0.14158	1.00	30.00	1.00	30.00	Passed		
		8	7	21.22	2.40	23.62	0.23014	21.47	0.14028	1.00	30.00	1.00	30.00	Passed		
		15	0	21.22	2.40	23.62	0.2									

LTE FDD Band 4																	
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit; (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict	
BW 5 MHz	19975	1712.50	QPSK	1	0	23.56	2.40	25.96	0.39446	23.81	0.24044	1.00	30.00	1.00	30.00	Passed	
				1	12	23.44	2.40	25.84	0.38371	23.69	0.23388	1.00	30.00	1.00	30.00	Passed	
				1	24	23.41	2.40	25.81	0.38107	23.66	0.23227	1.00	30.00	1.00	30.00	Passed	
				12	0	22.39	2.40	24.79	0.30130	22.64	0.18365	1.00	30.00	1.00	30.00	Passed	
				12	6	22.39	2.40	24.79	0.30130	22.64	0.18365	1.00	30.00	1.00	30.00	Passed	
				12	13	22.27	2.40	24.67	0.29309	22.52	0.17865	1.00	30.00	1.00	30.00	Passed	
			12	25	22.35	2.40	24.75	0.29854	22.60	0.18197	1.00	30.00	1.00	30.00	Passed		
			16QAM	1	0	21.99	2.40	24.39	0.27479	22.24	0.16749	1.00	30.00	1.00	30.00	Passed	
				1	12	22.00	2.40	24.40	0.27542	22.25	0.16788	1.00	30.00	1.00	30.00	Passed	
				1	24	22.17	2.40	24.57	0.28642	22.42	0.17458	1.00	30.00	1.00	30.00	Passed	
				12	0	21.26	2.40	23.66	0.23227	21.51	0.14158	1.00	30.00	1.00	30.00	Passed	
				12	6	21.24	2.40	23.64	0.23121	21.49	0.14093	1.00	30.00	1.00	30.00	Passed	
	12	13		21.24	2.40	23.64	0.23121	21.49	0.14093	1.00	30.00	1.00	30.00	Passed			
	20175	1732.50	QPSK	1	0	23.38	2.40	25.78	0.37844	23.63	0.23067	1.00	30.00	1.00	30.00	Passed	
				1	12	23.26	2.40	25.66	0.36813	23.51	0.22439	1.00	30.00	1.00	30.00	Passed	
				1	24	23.26	2.40	25.66	0.36813	23.51	0.22439	1.00	30.00	1.00	30.00	Passed	
				12	0	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed	
				12	6	22.32	2.40	24.72	0.29648	22.57	0.18072	1.00	30.00	1.00	30.00	Passed	
				12	13	22.14	2.40	24.54	0.28445	22.39	0.17338	1.00	30.00	1.00	30.00	Passed	
			16QAM	1	0	22.23	2.40	24.63	0.29040	22.48	0.17701	1.00	30.00	1.00	30.00	Passed	
				1	0	21.90	2.40	24.30	0.26915	22.15	0.16406	1.00	30.00	1.00	30.00	Passed	
				1	12	21.95	2.40	24.35	0.27227	22.20	0.16596	1.00	30.00	1.00	30.00	Passed	
				1	24	22.02	2.40	24.42	0.27669	22.27	0.16866	1.00	30.00	1.00	30.00	Passed	
				12	0	21.90	2.40	24.30	0.26915	22.15	0.16406	1.00	30.00	1.00	30.00	Passed	
				12	6	21.19	2.40	23.59	0.22856	21.44	0.13932	1.00	30.00	1.00	30.00	Passed	
	20375	1752.50	QPSK	1	0	23.38	2.40	25.78	0.37844	23.63	0.23067	1.00	30.00	1.00	30.00	Passed	
				1	12	23.26	2.40	25.66	0.36813	23.51	0.22439	1.00	30.00	1.00	30.00	Passed	
				1	24	23.38	2.40	25.78	0.37844	23.63	0.23067	1.00	30.00	1.00	30.00	Passed	
				12	0	22.33	2.40	24.73	0.29717	22.58	0.18113	1.00	30.00	1.00	30.00	Passed	
				12	6	22.33	2.40	24.73	0.29717	22.58	0.18113	1.00	30.00	1.00	30.00	Passed	
				12	13	22.31	2.40	24.71	0.29580	22.56	0.18030	1.00	30.00	1.00	30.00	Passed	
			16QAM	1	0	22.29	2.40	24.69	0.29444	22.54	0.17947	1.00	30.00	1.00	30.00	Passed	
				1	0	21.96	2.40	24.36	0.27290	22.21	0.16634	1.00	30.00	1.00	30.00	Passed	
				1	12	22.03	2.40	24.43	0.27733	22.28	0.16904	1.00	30.00	1.00	30.00	Passed	
				1	24	22.15	2.40	24.55	0.28510	22.40	0.17378	1.00	30.00	1.00	30.00	Passed	
				12	0	21.22	2.40	23.62	0.23014	21.47	0.14028	1.00	30.00	1.00	30.00	Passed	
				12	6	21.22	2.40	23.62	0.23014	21.47	0.14028	1.00	30.00	1.00	30.00	Passed	
	BW 10 MHz	20000	1715.00	QPSK	1	0	23.53	2.40	25.93	0.39174	23.78	0.23878	1.00	30.00	1.00	30.00	Passed
					1	24	23.44	2.40	25.84	0.38371	23.69	0.23388	1.00	30.00	1.00	30.00	Passed
					1	49	23.38	2.40	25.78	0.37844	23.63	0.23067	1.00	30.00	1.00	30.00	Passed
					25	0	22.40	2.40	24.80	0.30200	22.65	0.18408	1.00	30.00	1.00	30.00	Passed
					25	12	22.45	2.40	24.85	0.30549	22.70	0.18621	1.00	30.00	1.00	30.00	Passed
					25	25	22.25	2.40	24.65	0.29174	22.50	0.17783	1.00	30.00	1.00	30.00	Passed
				16QAM	50	0	22.40	2.40	24.80	0.30200	22.65	0.18408	1.00	30.00	1.00	30.00	Passed
					1	0	21.99	2.40	24.39	0.27479	22.24	0.16749	1.00	30.00	1.00	30.00	Passed
					1	24	22.08	2.40	24.48	0.28054	22.33	0.17100	1.00	30.00	1.00	30.00	Passed
					1	49	22.17	2.40	24.57	0.28642	22.42	0.17458	1.00	30.00	1.00	30.00	Passed
					25	0	21.28	2.40	23.68	0.23335	21.53	0.14223	1.00	30.00	1.00	30.00	Passed
25					12	21.28	2.40	23.68	0.23335	21.53	0.14223	1.00	30.00	1.00	30.00	Passed	
20175		1732.50	QPSK	1	0	23.30	2.40	25.70	0.37154	23.55	0.22646	1.00	30.00	1.00	30.00	Passed	
				1	24	23.26	2.40	25.66	0.36813	23.51	0.22439	1.00	30.00	1.00	30.00	Passed	
				1	49	23.30	2.40	25.70	0.37154	23.55	0.22646	1.00	30.00	1.00	30.00	Passed	
				25	0	22.25	2.40	24.65	0.29174	22.50	0.17783	1.00	30.00	1.00	30.00	Passed	
				25	12	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed	
				25	25	22.11	2.40	24.51	0.28249	22.36	0.17219	1.00	30.00	1.00	30.00	Passed	
			16QAM	50	0	22.23	2.40	24.63	0.29040	22.48	0.17701	1.00	30.00	1.00	30.00	Passed	
				1	0	21.87	2.40	24.27	0.26730	22.12	0.16293	1.00	30.00	1.00	30.00	Passed	
				1	24	21.91	2.40	24.31	0.26977	22.16	0.16444	1.00	30.00	1.00	30.00	Passed	
				1	49	22.03	2.40	24.43	0.27733	22.28	0.16904	1.00	30.00	1.00	30.00	Passed	
				25	0	21.07	2.40	23.47	0.22233	21.32	0.13552	1.00	30.00	1.00	30.00	Passed	
				25	12	21.13	2.40	23.53	0.22542	21.38	0.13740	1.00	30.00	1.00	30.00	Passed	
20350		1750.00	QPSK	25	25	21.11	2.40	23.51	0.22439	21.36	0.13677	1.00	30.00	1.00	30.00	Passed	
				50	0	21.11	2.40	23.51	0.22439	21.36	0.13677	1.00	30.00	1.00	30.00	Passed	
				1	0	23.44	2.40	25.84	0.38371	23.69	0.23388	1.00	30.00	1.00	30.00	Passed	
				1	24	23.38	2.40	25.78	0.37844	23.63	0.23067	1.00	30.00	1.00	30.00	Passed	
				1	49	23.34	2.40	25.74	0.37497	23.59	0.22856	1.00	30.00	1.00	30.00	Passed	
				25	0	22.41	2.40	24.81	0.30269	22.66	0.18450	1.00	30.00	1.00	30.00	Passed	
			16QAM	25	12	22.33	2.40	24.73	0.29717	22.58	0.18113	1.00	30.00	1.00	30.00	Passed	
				25	25	22.30	2.40	24.70	0.29512	22.55	0.17989	1.00	30.00	1.00	30.00	Passed	
				50	0	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed	
				1	0	21.92	2.40	24.32	0.27040	22.17	0.16482	1.00	30.00	1.00	30.00	Passed	
				1	24	22.06	2.40	24.46	0.27925	22.31	0.17022	1.00	30.00	1.00	30.00	Passed	
				1	49	22.12	2.40	24.52	0.28314	22.37	0.17258	1.00	30.00	1.00	30.00	Passed	

LTE FDD Band 4																		
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm), EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict		
BW 15 MHz	20025	1717.50	QPSK	1	0	23.60	2.40	26.00	0.39811	23.85	0.24266	1.00	30.00	1.00	30.00	Passed		
				1	37	23.42	2.40	25.82	0.38194	23.67	0.23281	1.00	30.00	1.00	30.00	Passed		
				1	74	23.44	2.40	25.84	0.38371	23.69	0.23388	1.00	30.00	1.00	30.00	Passed		
				36	0	22.37	2.40	24.77	0.29992	22.62	0.18281	1.00	30.00	1.00	30.00	Passed		
				36	19	22.46	2.40	24.86	0.30620	22.71	0.18664	1.00	30.00	1.00	30.00	Passed		
				36	39	22.23	2.40	24.63	0.29040	22.48	0.17701	1.00	30.00	1.00	30.00	Passed		
				75	0	22.40	2.40	24.80	0.30200	22.65	0.18408	1.00	30.00	1.00	30.00	Passed		
				1	0	22.03	2.40	24.43	0.27733	22.28	0.16904	1.00	30.00	1.00	30.00	Passed		
				1	37	22.07	2.40	24.47	0.27990	22.32	0.17061	1.00	30.00	1.00	30.00	Passed		
				1	74	22.13	2.40	24.53	0.28379	22.38	0.17298	1.00	30.00	1.00	30.00	Passed		
			16QAM	36	0	21.32	2.40	23.72	0.23550	21.57	0.14355	1.00	30.00	1.00	30.00	Passed		
				36	19	21.22	2.40	23.62	0.23014	21.47	0.14028	1.00	30.00	1.00	30.00	Passed		
				36	39	21.28	2.40	23.68	0.23335	21.53	0.14223	1.00	30.00	1.00	30.00	Passed		
				75	0	21.35	2.40	23.75	0.23714	21.60	0.14454	1.00	30.00	1.00	30.00	Passed		
				1	0	23.41	2.40	25.81	0.38107	23.66	0.23227	1.00	30.00	1.00	30.00	Passed		
				1	37	23.31	2.40	25.71	0.37239	23.56	0.22699	1.00	30.00	1.00	30.00	Passed		
				1	74	23.33	2.40	25.73	0.37411	23.58	0.22803	1.00	30.00	1.00	30.00	Passed		
				36	0	22.26	2.40	24.66	0.29242	22.51	0.17824	1.00	30.00	1.00	30.00	Passed		
				36	19	22.31	2.40	24.71	0.29580	22.56	0.18030	1.00	30.00	1.00	30.00	Passed		
				36	39	22.12	2.40	24.52	0.28314	22.37	0.17258	1.00	30.00	1.00	30.00	Passed		
	16QAM	75	0	22.21	2.40	24.61	0.28907	22.46	0.17620	1.00	30.00	1.00	30.00	Passed				
		1	0	21.94	2.40	24.34	0.27164	22.19	0.16558	1.00	30.00	1.00	30.00	Passed				
		1	37	21.92	2.40	24.32	0.27040	22.17	0.16482	1.00	30.00	1.00	30.00	Passed				
		1	74	22.08	2.40	24.48	0.28054	22.33	0.17100	1.00	30.00	1.00	30.00	Passed				
		36	0	21.07	2.40	23.47	0.22233	21.32	0.13552	1.00	30.00	1.00	30.00	Passed				
		36	19	21.17	2.40	23.57	0.22751	21.42	0.13868	1.00	30.00	1.00	30.00	Passed				
		36	39	21.09	2.40	23.49	0.22336	21.34	0.13614	1.00	30.00	1.00	30.00	Passed				
		75	0	21.14	2.40	23.54	0.22594	21.39	0.13772	1.00	30.00	1.00	30.00	Passed				
		1	0	23.41	2.40	25.81	0.38107	23.66	0.23227	1.00	30.00	1.00	30.00	Passed				
		1	37	23.33	2.40	25.73	0.37411	23.58	0.22803	1.00	30.00	1.00	30.00	Passed				
	20325	1747.50	1732.50	QPSK	1	74	23.35	2.40	25.75	0.37584	23.60	0.22909	1.00	30.00	1.00	30.00	Passed	
					36	0	22.42	2.40	24.82	0.30339	22.67	0.18493	1.00	30.00	1.00	30.00	Passed	
					36	19	22.33	2.40	24.73	0.29717	22.58	0.18113	1.00	30.00	1.00	30.00	Passed	
					36	39	22.30	2.40	24.70	0.29512	22.55	0.17989	1.00	30.00	1.00	30.00	Passed	
					75	0	22.31	2.40	24.71	0.29580	22.56	0.18030	1.00	30.00	1.00	30.00	Passed	
				16QAM	1	0	21.92	2.40	24.32	0.27040	22.17	0.16482	1.00	30.00	1.00	30.00	Passed	
					1	37	22.06	2.40	24.46	0.27925	22.31	0.17022	1.00	30.00	1.00	30.00	Passed	
					1	74	22.14	2.40	24.54	0.28445	22.39	0.17338	1.00	30.00	1.00	30.00	Passed	
					36	0	21.29	2.40	23.69	0.23388	21.54	0.14256	1.00	30.00	1.00	30.00	Passed	
					36	19	21.23	2.40	23.63	0.23067	21.48	0.14060	1.00	30.00	1.00	30.00	Passed	
		20050	1720.00	1720.00	QPSK	1	50	23.46	2.40	25.86	0.38548	23.71	0.23496	1.00	30.00	1.00	30.00	Passed
						1	99	23.46	2.40	25.86	0.38548	23.71	0.23496	1.00	30.00	1.00	30.00	Passed
						50	0	22.43	2.40	24.83	0.30409	22.68	0.18535	1.00	30.00	1.00	30.00	Passed
						50	25	22.47	2.40	24.87	0.30690	22.72	0.18707	1.00	30.00	1.00	30.00	Passed
						50	50	22.31	2.40	24.71	0.29580	22.56	0.18030	1.00	30.00	1.00	30.00	Passed
					16QAM	100	0	22.41	2.40	24.81	0.30269	22.66	0.18450	1.00	30.00	1.00	30.00	Passed
						1	0	22.06	2.40	24.46	0.27925	22.31	0.17022	1.00	30.00	1.00	30.00	Passed
						1	50	22.11	2.40	24.51	0.28249	22.36	0.17219	1.00	30.00	1.00	30.00	Passed
						1	99	22.19	2.40	24.59	0.28774	22.44	0.17539	1.00	30.00	1.00	30.00	Passed
						50	0	21.34	2.40	23.74	0.23659	21.59	0.14421	1.00	30.00	1.00	30.00	Passed
	20175	1732.50	1732.50	QPSK	50	25	21.30	2.40	23.70	0.23442	21.55	0.14289	1.00	30.00	1.00	30.00	Passed	
					50	50	21.31	2.40	23.71	0.23496	21.56	0.14322	1.00	30.00	1.00	30.00	Passed	
					100	0	21.36	2.40	23.76	0.23768	21.61	0.14488	1.00	30.00	1.00	30.00	Passed	
					1	0	21.62	2.40	24.02	0.25235	21.87	0.15382	1.00	30.00	1.00	30.00	Passed	
					1	50	23.34	2.40	25.74	0.37497	23.59	0.22856	1.00	30.00	1.00	30.00	Passed	
				16QAM	1	99	23.34	2.40	25.74	0.37497	23.59	0.22856	1.00	30.00	1.00	30.00	Passed	
					50	0	22.31	2.40	24.71	0.29580	22.56	0.18030	1.00	30.00	1.00	30.00	Passed	
					50	25	22.33	2.40	24.73	0.29717	22.58	0.18113	1.00	30.00	1.00	30.00	Passed	
					50	50	22.19	2.40	24.59	0.28774	22.44	0.17539	1.00	30.00	1.00	30.00	Passed	
					100	0	22.25	2.40	24.65	0.29174	22.50	0.17783	1.00	30.00	1.00	30.00	Passed	
	20300	1745.00	1745.00	QPSK	1	0	21.95	2.40	24.35	0.27227	22.20	0.16596	1.00	30.00	1.00	30.00	Passed	
					1	50	21.97	2.40	24.37	0.27353	22.22	0.16672	1.00	30.00	1.00	30.00	Passed	
					1	99	22.10	2.40	24.50	0.28184	22.35	0.17179	1.00	30.00	1.00	30.00	Passed	
					50	0	21.15	2.40	23.55	0.22646	21.40	0.13804	1.00	30.00	1.00	30.00	Passed	
					50	25	21.21	2.40	23.61	0.22961	21.46	0.13996	1.00	30.00	1.00	30.00	Passed	
				16QAM	50	50	21.15	2.40	23.55	0.22646	21.40	0.13804	1.00	30.00	1.00	30.00	Passed	
					100	0	21.19	2.40	23.59	0.22856	21.44	0.13932	1.00	30.00	1.00	30.00	Passed	
					1	0	21.91	2.40	24.31	0.26977	22.16	0.16444	1.00	30.00	1.00	30.00	Passed	
					1	50	23.39	2.40	25.79	0.37931	23.64	0.23121	1.00	30.00	1.00	30.00	Passed	
					1	99	23.39	2.40	25.79	0.37931	23.64	0.23121	1.00	30.00	1.00	30.00	Passed	
	20200	1745.00	1745.00	QPSK	50	0	22.43	2.40	24.83	0.30409	22.68	0.18535	1.00	30.00	1.00	30.00	Passed	
					50	25	22.38	2.40	24.78	0.30061	22.63	0.18323	1.00	30.00	1.00	30.00	Passed	
					50	50	22.32	2.40	24.72	0.29648	22.57	0.18072	1.00	30.00	1.00	30.00	Passed	
					100	0	22.34	2.40	24.74	0.29785	22.59	0.18155	1.00	30.00	1.00	30.00	Passed	
					1	0	21.98	2.40	24.38	0.27416	22.23	0.16711	1.00	30.00	1.00	30.00	Passed	
				16QAM	1	50	22.08	2.40	24.48	0.28054	22.33	0.17100	1.00	30.00	1.00	30.00	Passed	
					1	99	22.17	2.40	24.57	0.28642	22.42	0.17458	1.00	30.00	1.00	30.00	Passed	
					50	0	21.30	2.40	23.70	0.23442	21.55	0.14289	1.00	30.00	1.00	30.00	Passed	
					50	25	21.28	2.40	23.68	0.23335	21.53	0.14223	1.00	30.00	1.00	30.00	Passed	
					50	50	21.27	2.40	23.67	0.23281	21.52	0.14191	1.00	30.00	1.00	30.00	Passed	
	100	0	21.24	2.40	23.64	0.23121	21.49	0.14093	1.00	30.00	1.00	30.00	Passed					

EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable
 ERP|dBm = EIRP|dBm - 2.15|dB
 Measured by CETECOM QPSK max value 16QAM max value
 Other values please refer to modular report W7L-P20210616-2RF06

LTE FDD Band 5															
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBd)	ERP in dBm	ERP in Watt	FCC Limit (W), ERP	FCC Limit (dBm), ERP	ISED Limit (W), ERP	ISED Limit (dBm), ERP	Verdict	
BW 1.4 MHz	20407	824.70	QPSK	1	0	23.31	-0.95	22.36	0.17219	7.00	38.45	7.00	38.45	Passed	
				1	2	23.22	-0.95	22.27	0.16866	7.00	38.45	7.00	38.45	Passed	
				1	5	23.12	-0.95	22.17	0.16482	7.00	38.45	7.00	38.45	Passed	
				3	0	23.23	-0.95	22.28	0.16904	7.00	38.45	7.00	38.45	Passed	
				3	1	23.13	-0.95	22.18	0.16520	7.00	38.45	7.00	38.45	Passed	
				3	3	23.11	-0.95	22.16	0.16444	7.00	38.45	7.00	38.45	Passed	
			16QAM	6	0	22.25	-0.95	21.30	0.13490	7.00	38.45	7.00	38.45	Passed	
				1	0	22.12	-0.95	21.17	0.13092	7.00	38.45	7.00	38.45	Passed	
				1	2	22.08	-0.95	21.13	0.12972	7.00	38.45	7.00	38.45	Passed	
				1	5	22.02	-0.95	21.07	0.12794	7.00	38.45	7.00	38.45	Passed	
				3	0	22.16	-0.95	21.21	0.13213	7.00	38.45	7.00	38.45	Passed	
				3	1	22.11	-0.95	21.16	0.13062	7.00	38.45	7.00	38.45	Passed	
	20525	836.50	QPSK	3	3	22.06	-0.95	21.11	0.12912	7.00	38.45	7.00	38.45	Passed	
				6	0	21.15	-0.95	20.20	0.10471	7.00	38.45	7.00	38.45	Passed	
				1	0	23.06	-0.95	22.11	0.16255	7.00	38.45	7.00	38.45	Passed	
				1	2	22.86	-0.95	21.91	0.15524	7.00	38.45	7.00	38.45	Passed	
				1	5	22.77	-0.95	21.82	0.15205	7.00	38.45	7.00	38.45	Passed	
				3	0	22.93	-0.95	21.98	0.15776	7.00	38.45	7.00	38.45	Passed	
			16QAM	3	1	22.92	-0.95	21.97	0.15740	7.00	38.45	7.00	38.45	Passed	
				3	3	22.80	-0.95	21.85	0.15311	7.00	38.45	7.00	38.45	Passed	
				6	0	21.97	-0.95	21.02	0.12647	7.00	38.45	7.00	38.45	Passed	
				1	0	21.85	-0.95	20.90	0.12303	7.00	38.45	7.00	38.45	Passed	
				1	2	21.81	-0.95	20.86	0.12190	7.00	38.45	7.00	38.45	Passed	
				1	5	21.66	-0.95	20.71	0.11776	7.00	38.45	7.00	38.45	Passed	
	20643	848.30	QPSK	3	0	21.90	-0.95	20.95	0.12445	7.00	38.45	7.00	38.45	Passed	
				3	1	21.95	-0.95	21.00	0.12589	7.00	38.45	7.00	38.45	Passed	
				3	3	21.80	-0.95	20.85	0.12162	7.00	38.45	7.00	38.45	Passed	
				6	0	20.91	-0.95	19.96	0.09908	7.00	38.45	7.00	38.45	Passed	
				1	0	23.09	-0.95	22.14	0.16368	7.00	38.45	7.00	38.45	Passed	
				1	2	22.98	-0.95	22.03	0.15959	7.00	38.45	7.00	38.45	Passed	
			16QAM	1	5	22.88	-0.95	21.93	0.15596	7.00	38.45	7.00	38.45	Passed	
				3	0	23.01	-0.95	22.06	0.16069	7.00	38.45	7.00	38.45	Passed	
				3	1	22.84	-0.95	21.89	0.15453	7.00	38.45	7.00	38.45	Passed	
				3	3	22.88	-0.95	21.93	0.15596	7.00	38.45	7.00	38.45	Passed	
				6	0	22.00	-0.95	21.05	0.12735	7.00	38.45	7.00	38.45	Passed	
				1	0	21.92	-0.95	20.97	0.12503	7.00	38.45	7.00	38.45	Passed	
	BW 3 MHz	20415	825.50	QPSK	1	2	21.86	-0.95	20.91	0.12331	7.00	38.45	7.00	38.45	Passed
					1	5	21.81	-0.95	20.86	0.12190	7.00	38.45	7.00	38.45	Passed
					3	0	21.90	-0.95	20.95	0.12445	7.00	38.45	7.00	38.45	Passed
					3	1	21.89	-0.95	20.94	0.12417	7.00	38.45	7.00	38.45	Passed
					3	3	21.89	-0.95	20.94	0.12417	7.00	38.45	7.00	38.45	Passed
					6	0	20.92	-0.95	19.97	0.09931	7.00	38.45	7.00	38.45	Passed
					1	0	23.33	-0.95	22.38	0.17298	7.00	38.45	7.00	38.45	Passed
				16QAM	1	7	23.18	-0.95	22.23	0.16711	7.00	38.45	7.00	38.45	Passed
					1	14	23.08	-0.95	22.13	0.16331	7.00	38.45	7.00	38.45	Passed
					8	0	22.22	-0.95	21.27	0.13397	7.00	38.45	7.00	38.45	Passed
					8	3	22.06	-0.95	21.11	0.12912	7.00	38.45	7.00	38.45	Passed
					8	7	22.08	-0.95	21.13	0.12972	7.00	38.45	7.00	38.45	Passed
15					0	22.22	-0.95	21.27	0.13397	7.00	38.45	7.00	38.45	Passed	
1					0	22.09	-0.95	21.14	0.13002	7.00	38.45	7.00	38.45	Passed	
1					7	22.05	-0.95	21.10	0.12882	7.00	38.45	7.00	38.45	Passed	
20525	836.50	QPSK	1	14	22.05	-0.95	21.10	0.12882	7.00	38.45	7.00	38.45	Passed		
			8	0	21.12	-0.95	20.17	0.10399	7.00	38.45	7.00	38.45	Passed		
			8	3	21.16	-0.95	20.21	0.10495	7.00	38.45	7.00	38.45	Passed		
			8	7	21.08	-0.95	20.13	0.10304	7.00	38.45	7.00	38.45	Passed		
			15	0	21.15	-0.95	20.20	0.10471	7.00	38.45	7.00	38.45	Passed		
			1	0	23.08	-0.95	22.13	0.16331	7.00	38.45	7.00	38.45	Passed		
			1	7	22.77	-0.95	21.92	0.15560	7.00	38.45	7.00	38.45	Passed		
		16QAM	1	14	22.77	-0.95	21.82	0.15205	7.00	38.45	7.00	38.45	Passed		
			8	0	21.96	-0.95	21.01	0.12618	7.00	38.45	7.00	38.45	Passed		
			8	3	21.92	-0.95	20.97	0.12503	7.00	38.45	7.00	38.45	Passed		
			8	7	21.87	-0.95	20.92	0.12359	7.00	38.45	7.00	38.45	Passed		
			15	0	21.98	-0.95	21.03	0.12677	7.00	38.45	7.00	38.45	Passed		
			1	0	21.91	-0.95	20.96	0.12474	7.00	38.45	7.00	38.45	Passed		
			1	7	21.84	-0.95	20.89	0.12274	7.00	38.45	7.00	38.45	Passed		
			1	14	21.66	-0.95	20.71	0.11776	7.00	38.45	7.00	38.45	Passed		
20635	847.50	QPSK	8	0	20.91	-0.95	19.96	0.09908	7.00	38.45	7.00	38.45	Passed		
			8	3	20.90	-0.95	19.95	0.09886	7.00	38.45	7.00	38.45	Passed		
			8	7	20.78	-0.95	19.83	0.09616	7.00	38.45	7.00	38.45	Passed		
			15	0	20.85	-0.95	19.90	0.09772	7.00	38.45	7.00	38.45	Passed		
			1	0	23.08	-0.95	22.13	0.16331	7.00	38.45	7.00	38.45	Passed		
			1	7	22.98	-0.95	22.03	0.15959	7.00	38.45	7.00	38.45	Passed		
			1	14	22.88	-0.95	21.93	0.15596	7.00	38.45	7.00	38.45	Passed		
		16QAM	8	0	22.04	-0.95	21.09	0.12856	7.00	38.45	7.00	38.45	Passed		
			8	3	21.86	-0.95	20.91	0.12331	7.00	38.45	7.00	38.45	Passed		
			8	7	21.92	-0.95	20.97	0.12503	7.00	38.45	7.00	38.45	Passed		
			15	0	21.94	-0.95	20.99	0.12560	7.00	38.45	7.00	38.45	Passed		
			1	0	21.95	-0.95	21.00	0.12589	7.00	38.45	7.00	38.45	Passed		
			1	7	21.84	-0.95	20.89	0.12274	7.00	38.45	7.00	38.45	Passed		
			1	14	21.81	-0.95	20.86	0.12190	7.00	38.45	7.00	38.45	Passed		
			8	0	20.90	-0.95	19.95	0.09886	7.00	38.45	7.00	38.45	Passed		
8	3	20.92	-0.95	19.97	0.09931	7.00	38.45	7.00	38.45	Passed					
8	7	20.85	-0.95	19.90	0.09772	7.00	38.45	7.00	38.45	Passed					
15	0	20.95	-0.95	20.00	0.10000	7.00	38.45	7.00	38.45	Passed					

LTE FDD Band 5																	
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBd)	ERP in dBm	ERP in Watt	FCC Limit (W), ERP	FCC Limit (dBm); ERP	ISED Limit (W), ERP	ISED Limit (dBm), ERP	Verdict			
BW 5 MHz	20425	826.50	QPSK	1	0	23.34	-0.95	22.39	0.17338	7.00	38.45	7.00	38.45	Passed			
				1	12	23.23	-0.95	22.28	0.16904	7.00	38.45	7.00	38.45	Passed			
				1	24	23.09	-0.95	22.14	0.16368	7.00	38.45	7.00	38.45	Passed			
				12	0	22.25	-0.95	21.30	0.13490	7.00	38.45	7.00	38.45	Passed			
				12	6	22.06	-0.95	21.11	0.12912	7.00	38.45	7.00	38.45	Passed			
				12	13	22.12	-0.95	21.17	0.13092	7.00	38.45	7.00	38.45	Passed			
			25	0	22.20	-0.95	21.25	0.13335	7.00	38.45	7.00	38.45	Passed				
			16QAM	1	0	22.10	-0.95	21.15	0.13032	7.00	38.45	7.00	38.45	Passed			
				1	12	22.02	-0.95	21.07	0.12794	7.00	38.45	7.00	38.45	Passed			
				1	24	22.05	-0.95	21.10	0.12882	7.00	38.45	7.00	38.45	Passed			
				12	0	21.12	-0.95	20.17	0.10399	7.00	38.45	7.00	38.45	Passed			
				12	6	21.13	-0.95	20.18	0.10423	7.00	38.45	7.00	38.45	Passed			
				12	13	21.03	-0.95	20.08	0.10186	7.00	38.45	7.00	38.45	Passed			
			25	0	21.15	-0.95	20.20	0.10471	7.00	38.45	7.00	38.45	Passed				
			20525	836.50	QPSK	1	0	23.03	-0.95	22.08	0.16144	7.00	38.45	7.00	38.45	Passed	
						1	12	22.84	-0.95	21.89	0.15453	7.00	38.45	7.00	38.45	Passed	
						1	24	22.76	-0.95	21.81	0.15171	7.00	38.45	7.00	38.45	Passed	
						12	0	21.96	-0.95	21.01	0.12618	7.00	38.45	7.00	38.45	Passed	
	12	6				21.93	-0.95	20.98	0.12531	7.00	38.45	7.00	38.45	Passed			
	12	13				21.83	-0.95	20.88	0.12246	7.00	38.45	7.00	38.45	Passed			
	25	0			22.01	-0.95	21.06	0.12764	7.00	38.45	7.00	38.45	Passed				
	16QAM	1			0	21.87	-0.95	20.92	0.12359	7.00	38.45	7.00	38.45	Passed			
		1			12	21.87	-0.95	20.92	0.12359	7.00	38.45	7.00	38.45	Passed			
		1			24	21.66	-0.95	20.71	0.11776	7.00	38.45	7.00	38.45	Passed			
		12			0	20.89	-0.95	19.94	0.09863	7.00	38.45	7.00	38.45	Passed			
		12			6	20.94	-0.95	19.99	0.09977	7.00	38.45	7.00	38.45	Passed			
		12			13	20.80	-0.95	19.85	0.09661	7.00	38.45	7.00	38.45	Passed			
	25	0			20.86	-0.95	19.91	0.09795	7.00	38.45	7.00	38.45	Passed				
	20625	846.50			QPSK	1	0	23.09	-0.95	22.14	0.16368	7.00	38.45	7.00	38.45	Passed	
						1	12	22.98	-0.95	22.03	0.15959	7.00	38.45	7.00	38.45	Passed	
						1	24	22.92	-0.95	21.97	0.15740	7.00	38.45	7.00	38.45	Passed	
						12	0	21.98	-0.95	21.03	0.12677	7.00	38.45	7.00	38.45	Passed	
			12	6		21.87	-0.95	20.92	0.12359	7.00	38.45	7.00	38.45	Passed			
			12	13		21.93	-0.95	20.98	0.12531	7.00	38.45	7.00	38.45	Passed			
			25	0	21.97	-0.95	21.02	0.12647	7.00	38.45	7.00	38.45	Passed				
			16QAM	1	0	21.95	-0.95	21.00	0.12589	7.00	38.45	7.00	38.45	Passed			
				1	12	21.83	-0.95	20.88	0.12246	7.00	38.45	7.00	38.45	Passed			
				1	24	21.80	-0.95	20.85	0.12162	7.00	38.45	7.00	38.45	Passed			
				12	0	20.87	-0.95	19.92	0.09817	7.00	38.45	7.00	38.45	Passed			
				12	6	20.88	-0.95	19.93	0.09840	7.00	38.45	7.00	38.45	Passed			
				12	13	20.88	-0.95	19.93	0.09840	7.00	38.45	7.00	38.45	Passed			
			25	0	20.92	-0.95	19.97	0.09931	7.00	38.45	7.00	38.45	Passed				
			BW 10 MHz	20450	829.00	QPSK	1	0	22.20	-0.95	21.25	0.13335	7.00	38.45	7.00	38.45	Passed
							1	24	23.25	-0.95	22.30	0.16982	7.00	38.45	7.00	38.45	Passed
							1	49	23.14	-0.95	22.19	0.16558	7.00	38.45	7.00	38.45	Passed
							25	0	22.29	-0.95	21.34	0.13614	7.00	38.45	7.00	38.45	Passed
	25	12					22.14	-0.95	21.19	0.13152	7.00	38.45	7.00	38.45	Passed		
	25	25					22.16	-0.95	21.21	0.13213	7.00	38.45	7.00	38.45	Passed		
50	0	22.26				-0.95	21.31	0.13521	7.00	38.45	7.00	38.45	Passed				
16QAM	1	0				22.17	-0.95	21.22	0.13243	7.00	38.45	7.00	38.45	Passed			
	1	24				22.10	-0.95	21.15	0.13032	7.00	38.45	7.00	38.45	Passed			
	1	49				22.07	-0.95	21.12	0.12942	7.00	38.45	7.00	38.45	Passed			
	25	0				21.20	-0.95	20.25	0.10593	7.00	38.45	7.00	38.45	Passed			
	25	12				21.19	-0.95	20.24	0.10568	7.00	38.45	7.00	38.45	Passed			
	25	25				21.10	-0.95	20.15	0.10351	7.00	38.45	7.00	38.45	Passed			
50	0	21.21				-0.95	20.26	0.10617	7.00	38.45	7.00	38.45	Passed				
20525	836.50	QPSK				1	0	21.97	-0.95	21.02	0.12647	7.00	38.45	7.00	38.45	Passed	
						1	24	22.92	-0.95	21.97	0.15740	7.00	38.45	7.00	38.45	Passed	
						1	49	22.84	-0.95	21.89	0.15453	7.00	38.45	7.00	38.45	Passed	
						25	0	22.01	-0.95	21.06	0.12764	7.00	38.45	7.00	38.45	Passed	
				25	12	21.94	-0.95	20.99	0.12560	7.00	38.45	7.00	38.45	Passed			
				25	25	21.88	-0.95	20.93	0.12388	7.00	38.45	7.00	38.45	Passed			
		50		0	22.03	-0.95	21.08	0.12823	7.00	38.45	7.00	38.45	Passed				
		16QAM		1	0	21.92	-0.95	20.97	0.12503	7.00	38.45	7.00	38.45	Passed			
				1	24	21.89	-0.95	20.94	0.12417	7.00	38.45	7.00	38.45	Passed			
				1	49	21.74	-0.95	20.79	0.11995	7.00	38.45	7.00	38.45	Passed			
				25	0	20.95	-0.95	20.00	0.10000	7.00	38.45	7.00	38.45	Passed			
				25	12	20.96	-0.95	20.01	0.10023	7.00	38.45	7.00	38.45	Passed			
				25	25	20.85	-0.95	19.90	0.09772	7.00	38.45	7.00	38.45	Passed			
		50		0	20.93	-0.95	19.98	0.09954	7.00	38.45	7.00	38.45	Passed				
		20600		844.00	QPSK	1	0	22.09	-0.95	21.14	0.13002	7.00	38.45	7.00	38.45	Passed	
						1	24	23.00	-0.95	22.05	0.16032	7.00	38.45	7.00	38.45	Passed	
						1	49	22.93	-0.95	21.98	0.15776	7.00	38.45	7.00	38.45	Passed	
						25	0	22.03	-0.95	21.08	0.12823	7.00	38.45	7.00	38.45	Passed	
25	12					21.92	-0.95	20.97	0.12503	7.00	38.45	7.00	38.45	Passed			
25	25					21.94	-0.95	20.99	0.12560	7.00	38.45	7.00	38.45	Passed			
50	0				22.02	-0.95	21.07	0.12794	7.00	38.45	7.00	38.45	Passed				
16QAM	1				0	21.97	-0.95	21.02	0.12647	7.00	38.45	7.00	38.45	Passed			
	1				24	21.88	-0.95	20.93	0.12388	7.00	38.45	7.00	38.45	Passed			
	1				49	21.82	-0.95	20.87	0.12218	7.00	38.45	7.00	38.45	Passed			
	25				0	20.95	-0.95	20.00	0.10000	7.00	38.45	7.00	38.45	Passed			
	25				12	20.94	-0.95	19.99	0.09977	7.00	38.45	7.00	38.45	Passed			
	25				25	20.90	-0.95	19.95	0.09886	7.00	38.45	7.00	38.45	Passed			
50	0				20.97	-0.95	20.02	0.10046	7.00	38.45	7.00	38.45	Passed				
EIRP= RMS Power at Antenna Port + Maximum declared Antenna Gain - Path loss to Antenna Connector - Path loss in Antenna Cable																	
ERP dBm = EIRP dBm - 2.15 dB																	
Measured by CETECOM					QPSK max value					16QAM max value							
Other values please refer to modular report W7L-P20210616-ZRF04																	

LTE FDD Band 7																	
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit; (dBm); EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict	
BW 5 MHz	20775	2502.50	QPSK	1	0	23.20	3.00	26.20	0.41687	24.05	0.25410	2.00	33.01	2.00	33.01	Passed	
				1	12	23.28	3.00	26.28	0.42462	24.13	0.25882	2.00	33.01	2.00	33.01	Passed	
				1	24	23.13	3.00	26.13	0.41020	23.98	0.25003	2.00	33.01	2.00	33.01	Passed	
				12	0	22.18	3.00	25.18	0.32961	23.03	0.20091	2.00	33.01	2.00	33.01	Passed	
				12	6	22.16	3.00	25.16	0.32810	23.01	0.19999	2.00	33.01	2.00	33.01	Passed	
				12	13	22.14	3.00	25.14	0.32659	22.99	0.19907	2.00	33.01	2.00	33.01	Passed	
			16QAM	25	0	22.14	3.00	25.14	0.32659	22.99	0.19907	2.00	33.01	2.00	33.01	Passed	
				1	0	21.95	3.00	24.95	0.31261	22.80	0.19055	2.00	33.01	2.00	33.01	Passed	
				1	12	21.99	3.00	24.99	0.31550	22.84	0.19231	2.00	33.01	2.00	33.01	Passed	
				1	24	22.00	3.00	25.00	0.31623	22.85	0.19275	2.00	33.01	2.00	33.01	Passed	
				12	0	21.09	3.00	24.09	0.25645	21.94	0.15631	2.00	33.01	2.00	33.01	Passed	
				12	6	21.05	3.00	24.05	0.25410	21.90	0.15488	2.00	33.01	2.00	33.01	Passed	
	21100	QPSK	2535.00	QPSK	1	0	23.07	3.00	26.07	0.40458	23.92	0.24660	2.00	33.01	2.00	33.01	Passed
					1	12	23.15	3.00	26.15	0.41210	24.00	0.25119	2.00	33.01	2.00	33.01	Passed
					1	24	23.03	3.00	26.03	0.40087	23.88	0.24434	2.00	33.01	2.00	33.01	Passed
					12	0	22.10	3.00	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed
					12	6	22.14	3.00	25.14	0.32659	22.99	0.19907	2.00	33.01	2.00	33.01	Passed
					12	13	22.06	3.00	25.06	0.32063	22.91	0.19543	2.00	33.01	2.00	33.01	Passed
		16QAM	25	0	22.07	3.00	25.07	0.32137	22.92	0.19588	2.00	33.01	2.00	33.01	Passed		
			1	0	21.91	3.00	24.91	0.30974	22.76	0.18880	2.00	33.01	2.00	33.01	Passed		
			1	12	21.96	3.00	24.96	0.31333	22.81	0.19099	2.00	33.01	2.00	33.01	Passed		
			1	24	21.90	3.00	24.90	0.30903	22.75	0.18836	2.00	33.01	2.00	33.01	Passed		
			12	0	20.97	3.00	23.97	0.24946	21.82	0.15205	2.00	33.01	2.00	33.01	Passed		
			12	6	21.05	3.00	24.05	0.25410	21.90	0.15488	2.00	33.01	2.00	33.01	Passed		
	21425	QPSK	2567.50	QPSK	1	0	23.15	3.00	26.15	0.41210	24.00	0.25119	2.00	33.01	2.00	33.01	Passed
					1	12	23.14	3.00	26.14	0.41115	23.99	0.25061	2.00	33.01	2.00	33.01	Passed
					1	24	23.03	3.00	26.03	0.40087	23.88	0.24434	2.00	33.01	2.00	33.01	Passed
					12	0	22.10	3.00	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed
					12	6	22.03	3.00	25.03	0.31842	22.88	0.19409	2.00	33.01	2.00	33.01	Passed
					12	13	22.11	3.00	25.11	0.32434	22.96	0.19770	2.00	33.01	2.00	33.01	Passed
		16QAM	25	0	22.01	3.00	25.01	0.31696	22.86	0.19320	2.00	33.01	2.00	33.01	Passed		
			1	0	21.85	3.00	24.85	0.30549	22.70	0.18621	2.00	33.01	2.00	33.01	Passed		
			1	12	21.92	3.00	24.92	0.31046	22.77	0.18923	2.00	33.01	2.00	33.01	Passed		
			1	24	21.91	3.00	24.91	0.30974	22.76	0.18880	2.00	33.01	2.00	33.01	Passed		
			12	0	20.98	3.00	23.98	0.25003	21.83	0.15241	2.00	33.01	2.00	33.01	Passed		
			12	6	20.96	3.00	23.96	0.24889	21.81	0.15171	2.00	33.01	2.00	33.01	Passed		
	BW 10 MHz	20800	2505.00	QPSK	1	0	23.17	3.00	26.17	0.41400	24.02	0.25235	2.00	33.01	2.00	33.01	Passed
					1	24	23.28	3.00	26.28	0.42462	24.13	0.25882	2.00	33.01	2.00	33.01	Passed
					1	49	23.10	3.00	26.10	0.40738	23.95	0.24831	2.00	33.01	2.00	33.01	Passed
					25	0	22.19	3.00	25.19	0.33037	23.04	0.20137	2.00	33.01	2.00	33.01	Passed
					25	12	22.22	3.00	25.22	0.33266	23.07	0.20277	2.00	33.01	2.00	33.01	Passed
					25	25	22.12	3.00	25.12	0.32509	22.97	0.19815	2.00	33.01	2.00	33.01	Passed
				16QAM	50	0	22.19	3.00	25.19	0.33037	23.04	0.20137	2.00	33.01	2.00	33.01	Passed
					1	0	21.95	3.00	24.95	0.31261	22.80	0.19055	2.00	33.01	2.00	33.01	Passed
					1	24	22.04	3.00	25.04	0.31915	22.89	0.19454	2.00	33.01	2.00	33.01	Passed
					1	49	22.00	3.00	25.00	0.31623	22.85	0.19275	2.00	33.01	2.00	33.01	Passed
					25	0	21.11	3.00	24.11	0.25763	21.96	0.15704	2.00	33.01	2.00	33.01	Passed
					25	12	21.09	3.00	24.09	0.25645	21.94	0.15631	2.00	33.01	2.00	33.01	Passed
21100		QPSK	2535.00	QPSK	25	25	21.07	3.00	24.07	0.25527	21.92	0.15560	2.00	33.01	2.00	33.01	Passed
					50	0	21.13	3.00	24.13	0.25882	21.98	0.15776	2.00	33.01	2.00	33.01	Passed
					1	0	23.10	3.00	26.10	0.40738	23.95	0.24831	2.00	33.01	2.00	33.01	Passed
					1	24	23.15	3.00	26.15	0.41210	24.00	0.25119	2.00	33.01	2.00	33.01	Passed
					1	49	23.07	3.00	26.07	0.40458	23.92	0.24660	2.00	33.01	2.00	33.01	Passed
					25	0	22.09	3.00	25.09	0.32285	22.94	0.19679	2.00	33.01	2.00	33.01	Passed
		16QAM	25	12	22.08	3.00	25.08	0.32211	22.93	0.19634	2.00	33.01	2.00	33.01	Passed		
			25	25	22.03	3.00	25.03	0.31842	22.88	0.19409	2.00	33.01	2.00	33.01	Passed		
			50	0	22.07	3.00	25.07	0.32137	22.92	0.19588	2.00	33.01	2.00	33.01	Passed		
			1	0	21.88	3.00	24.88	0.30761	22.73	0.18750	2.00	33.01	2.00	33.01	Passed		
			1	24	21.92	3.00	24.92	0.31046	22.77	0.18923	2.00	33.01	2.00	33.01	Passed		
			1	49	21.91	3.00	24.91	0.30974	22.76	0.18880	2.00	33.01	2.00	33.01	Passed		
21400		QPSK	2565.00	QPSK	25	0	20.95	3.00	23.95	0.24831	21.80	0.15136	2.00	33.01	2.00	33.01	Passed
					25	12	20.99	3.00	23.99	0.25061	21.84	0.15276	2.00	33.01	2.00	33.01	Passed
					25	25	21.00	3.00	24.00	0.25119	21.85	0.15311	2.00	33.01	2.00	33.01	Passed
					50	0	20.95	3.00	23.95	0.24831	21.80	0.15136	2.00	33.01	2.00	33.01	Passed
					1	0	23.01	3.00	26.01	0.39902	23.86	0.24322	2.00	33.01	2.00	33.01	Passed
					1	24	23.15	3.00	26.15	0.41210	24.00	0.25119	2.00	33.01	2.00	33.01	Passed
		16QAM	1	49	22.99	3.00	25.99	0.39719	23.84	0.24210	2.00	33.01	2.00	33.01	Passed		
			25	0	22.13	3.00	25.13	0.32584	22.98	0.19861	2.00	33.01	2.00	33.01	Passed		
			25	12	22.03	3.00	25.03	0.31842	22.88	0.19409	2.00	33.01	2.00	33.01	Passed		
			25	25	22.10	3.00	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed		
			50	0	21.98	3.00	24.98	0.31477	22.83	0.19187	2.00	33.01	2.00	33.01	Passed		
			1	0	21.81	3.00	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed		
(Additional rows for BW 10 MHz, 21400, QPSK and 16QAM modulation schemes, following the same pattern as above.)																	

LTE FDD Band 7																
	Channel Nr.	ARFCN-Frequency (MHz)	Modulation	RB	Start RB	RMS Power at Antenna Port (dBm)	Maximum declared Antenna Gain(dBi)	EIRP in dBm	EIRP in Watt	ERP in dBm	ERP in Watt	FCC Limit(W), EIRP	FCC Limit (dBm), EIRP	ISED Limit(W), EIRP	ISED Limit (dBm), EIRP	Verdict
BW 15 MHz	20825	2507.50	QPSK	1	0	23.24	3.00	26.24	0.42073	24.09	0.25645	2.00	33.01	2.00	33.01	Passed
				1	37	23.26	3.00	26.26	0.42267	24.11	0.25763	2.00	33.01	2.00	33.01	Passed
				1	74	23.16	3.00	26.16	0.41305	24.01	0.25177	2.00	33.01	2.00	33.01	Passed
				36	0	22.16	3.00	25.16	0.32810	23.01	0.19999	2.00	33.01	2.00	33.01	Passed
				36	19	22.23	3.00	25.23	0.33343	23.08	0.20324	2.00	33.01	2.00	33.01	Passed
				36	39	22.10	3.00	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed
				75	0	22.19	3.00	25.19	0.33037	23.04	0.20137	2.00	33.01	2.00	33.01	Passed
				1	0	21.99	3.00	24.99	0.31550	22.84	0.19231	2.00	33.01	2.00	33.01	Passed
				1	37	22.03	3.00	25.03	0.31842	22.88	0.19409	2.00	33.01	2.00	33.01	Passed
			16QAM	1	74	21.96	3.00	24.96	0.31333	22.81	0.19099	2.00	33.01	2.00	33.01	Passed
				36	0	21.15	3.00	24.15	0.26002	22.00	0.15849	2.00	33.01	2.00	33.01	Passed
				36	19	21.03	3.00	24.03	0.25293	21.88	0.15417	2.00	33.01	2.00	33.01	Passed
				36	39	21.12	3.00	24.12	0.25823	21.97	0.15740	2.00	33.01	2.00	33.01	Passed
				75	0	21.14	3.00	24.14	0.25942	21.99	0.15812	2.00	33.01	2.00	33.01	Passed
				1	0	23.10	3.00	26.10	0.40738	23.95	0.24831	2.00	33.01	2.00	33.01	Passed
				1	37	23.20	3.00	26.20	0.41687	24.05	0.25410	2.00	33.01	2.00	33.01	Passed
				1	74	23.10	3.00	26.10	0.40738	23.95	0.24831	2.00	33.01	2.00	33.01	Passed
				36	0	22.10	3.00	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed
	21100	2535.00	QPSK	36	19	22.13	3.00	25.13	0.32584	22.98	0.19861	2.00	33.01	2.00	33.01	Passed
				36	39	22.04	3.00	25.04	0.31915	22.89	0.19454	2.00	33.01	2.00	33.01	Passed
				75	0	22.05	3.00	25.05	0.31989	22.90	0.19498	2.00	33.01	2.00	33.01	Passed
				1	0	21.95	3.00	24.95	0.31261	22.80	0.19055	2.00	33.01	2.00	33.01	Passed
				1	37	21.93	3.00	24.93	0.31117	22.78	0.18967	2.00	33.01	2.00	33.01	Passed
				1	74	21.96	3.00	24.96	0.31333	22.81	0.19099	2.00	33.01	2.00	33.01	Passed
				36	0	20.95	3.00	23.95	0.24831	21.80	0.15136	2.00	33.01	2.00	33.01	Passed
				36	19	21.03	3.00	24.03	0.25293	21.88	0.15417	2.00	33.01	2.00	33.01	Passed
				36	39	20.98	3.00	23.98	0.25003	21.83	0.15241	2.00	33.01	2.00	33.01	Passed
			16QAM	75	0	20.98	3.00	23.98	0.25003	21.83	0.15241	2.00	33.01	2.00	33.01	Passed
				1	0	22.98	3.00	25.98	0.39628	23.83	0.24155	2.00	33.01	2.00	33.01	Passed
				1	37	23.10	3.00	26.10	0.40738	23.95	0.24831	2.00	33.01	2.00	33.01	Passed
				1	74	23.00	3.00	26.00	0.39811	23.85	0.24266	2.00	33.01	2.00	33.01	Passed
				36	0	22.14	3.00	25.14	0.32659	22.99	0.19907	2.00	33.01	2.00	33.01	Passed
				36	19	22.03	3.00	25.03	0.31842	22.88	0.19409	2.00	33.01	2.00	33.01	Passed
				36	39	22.10	3.00	25.10	0.32359	22.95	0.19724	2.00	33.01	2.00	33.01	Passed
				75	0	22.03	3.00	25.03	0.31842	22.88	0.19409	2.00	33.01	2.00	33.01	Passed
				1	0	21.81	3.00	24.81	0.30269	22.66	0.18450	2.00	33.01	2.00	33.01	Passed
	21375	2562.50	QPSK	1	37	21.95	3.00	24.95	0.31261	22.80	0.19055	2.00	33.01	2.00	33.01	Passed
				1	74	21.90	3.00	24.90	0.30903	22.75	0.18836	2.00	33.01	2.00	33.01	Passed
				36	0	21.05	3.00	24.05	0.25410	21.90	0.15488	2.00	33.01	2.00	33.01	Passed
				36	19	20.97	3.00	23.97	0.24946	21.82	0.15205	2.00	33.01	2.00	33.01	Passed
				36	39	21.02	3.00	24.02	0.25235	21.87	0.15382	2.00	33.01	2.00	33.01	Passed
				75	0	20.88	3.00	23.88	0.24434	21.73	0.14894	2.00	33.01	2.00	33.01	Passed
				1	0	23.25	3.00	26.25	0.42170	24.10	0.25704	2.00	33.01	2.00	33.01	Passed
				1	50	20.66	3.00	23.66	0.23227	21.51	0.14158	2.00	33.01	2.00	33.01	Passed
				1	99	23.18	3.00	26.18	0.41495	24.03	0.25293	2.00	33.01	2.00	33.01	Passed
			16QAM	50	0	22.22	3.00	25.22	0.33266	23.07	0.20277	2.00	33.01	2.00	33.01	Passed
				50	25	22.24	3.00	25.24	0.33420	23.09	0.20370	2.00	33.01	2.00	33.01	Passed
				50	50	22.18	3.00	25.18	0.32961	23.03	0.20091	2.00	33.01	2.00	33.01	Passed
100				0	22.20	3.00	25.20	0.33113	23.05	0.20184	2.00	33.01	2.00	33.01	Passed	
1				0	22.02	3.00	25.02	0.31769	22.87	0.19364	2.00	33.01	2.00	33.01	Passed	
1				50	22.07	3.00	25.07	0.32137	22.92	0.19588	2.00	33.01	2.00	33.01	Passed	
1				99	22.02	3.00	25.02	0.31769	22.87	0.19364	2.00	33.01	2.00	33.01	Passed	
50				0	21.17	3.00	24.17	0.26122	22.02	0.15922	2.00	33.01	2.00	33.01	Passed	
50				25	21.11	3.00	24.11	0.25763	21.96	0.15704	2.00	33.01	2.00	33.01	Passed	
20850	2510.00	QPSK	50	50	21.15	3.00	24.15	0.26002	22.00	0.15849	2.00	33.01	2.00	33.01	Passed	
			100	0	21.15	3.00	24.15	0.26002	22.00	0.15849	2.00	33.01	2.00	33.01	Passed	
			1	0	23.14	3.00	26.14	0.41115	23.99	0.25061	2.00	33.01	2.00	33.01	Passed	
			1	50	20.64	3.00	23.64	0.23121	21.49	0.14093	2.00	33.01	2.00	33.01	Passed	
			1	99	23.11	3.00	26.11	0.40832	23.96	0.24889	2.00	33.01	2.00	33.01	Passed	
			50	0	22.15	3.00	25.15	0.32734	23.00	0.19953	2.00	33.01	2.00	33.01	Passed	
			50	25	22.15	3.00	25.15	0.32734	23.00	0.19953	2.00	33.01	2.00	33.01	Passed	
			50	50	22.11	3.00	25.11	0.32434	22.96	0.19770	2.00	33.01	2.00	33.01	Passed	
			100	0	22.09	3.00	25.09	0.32285	22.94	0.19679	2.00	33.01	2.00	33.01	Passed	
		16QAM	1	0	21.40	3.00	24.40	0.27517	22.25	0.16773	2.00	33.01	2.00	33.01	Passed	
			1	50	21.98	3.00	24.98	0.31477	22.83	0.19187	2.00	33.01	2.00	33.01	Passed	
			1	99	21.98	3.00	24.98	0.31477	22.83	0.19187	2.00	33.01	2.00	33.01	Passed	
			50	0	21.03	3.00	24.03	0.25293	21.88	0.15417	2.00	33.01	2.00	33.01	Passed	
			50	25	21.07	3.00	24.07	0.25527	21.92	0.15560	2.00	33.01	2.00	33.01	Passed	
			50	50	21.04	3.00	24.04	0.25351	21.89	0.15453	2.00	33.01	2.00	33.01	Passed	
			100	0	21.03	3.00	24.03	0.25293	21.88	0.15417	2.00	33.01	2.00	33.01	Passed	
			1	0	23.06	3.00	26.06	0.40365	23.91	0.24604	2.00	33.01	2.00	33.01	Passed	
			1	50	20.39	3.00	23.39	0.21827	21.24	0.13305	2.00	33.01	2.00	33.01	Passed	
21350	2560.00	QPSK	1	99	23.04	3.00	26.04	0.40179	23.89	0.24491	2.00	33.01	2.00	33.01	Passed	
			50	0	22.15	3.00	25.15	0.32734	23.00	0.19953	2.00	33.01	2.00	33.01	Passed	
			50	25	22.08	3.00	25.08	0.32211	22.93	0.19634	2.00	33.01	2.00	33.01	Passed	
			50	50	22.12	3.00	25.12	0.32509	22.97	0.19815	2.00	33.01	2.00	33.01	Passed	
			100	0	22.06	3.00	25.06	0.32063	22.91	0.19543	2.00	33.01	2.00	33.01	Passed	
			1	0	21.87	3.00	24.87	0.30690	22.72	0.18707	2.00	33.01	2.00	33.01	Passed	
			1	50	21.97	3.00	24.97	0.31405	22.82	0.19143	2.00	33.01	2.00	33.01	Passed	
			1	99	21.93	3.00	24.93	0.31117	22.78	0.18967	2.00	33.01	2.00	33.01	Passed	
			50	0	21.06	3.00	24.06	0.25468	21.91	0.15524	2.00	33.01	2.00	33.01	Passed	
		16QAM	50	25	21.02	3.00	24.02	0.25235	21.87	0.15382	2.00	33.01	2.00	33.01	Passed	
			50	50	21.04	3.00	24.04	0.25351	21.89	0.15453	2.00	33.01	2.00	33.01	Passed	
			100	0	20.96	3.00	23.96	0.24889	21.81							

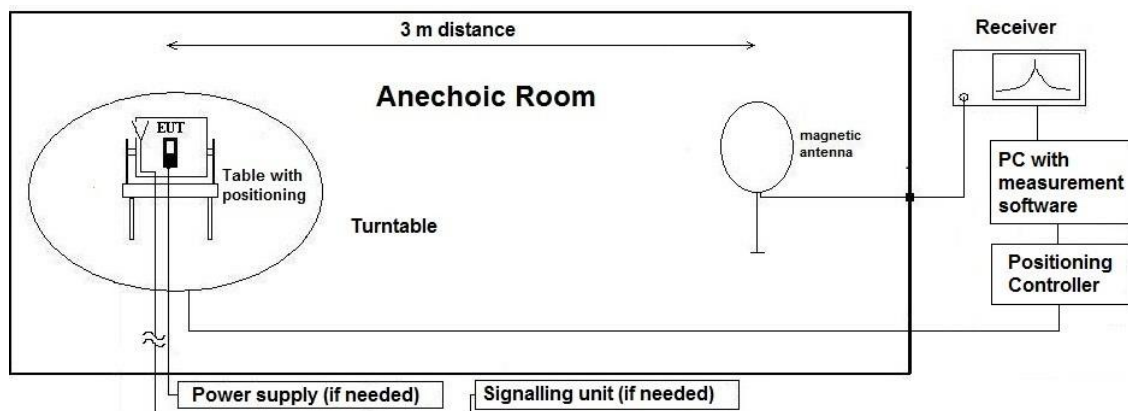
4.2 Radiated field strength emissions below 30 MHz

4.2.1 Description of the general test setup and methodology, see below example:

Evaluating the radiated field emissions are done first by an exploratory emission measurement and a final measurement for most critical frequencies determined.

The loop antenna was placed at 1 m height above ground plane and 3 m measurement distance from set-up for investigations. Because of reduced measurement distance, correction data were applied, as stated in chapter "General Limit - Radiated field strength emissions below 30 MHz". The tests are performed in the semi anechoic room recognized by the regulatory commission.

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:
(See *Tables Summary of Test Results* and *Summary of Test Methods* on page 5)

Exploratory, preliminary measurements

The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 0.8 m height which is placed on the turntable. By rotating the turntable (step 90°, range 0° to 360°) and the EUT itself either on 3-orthogonal axis (portable equipment) or 2-orthogonal axis (defined operational position of EUT), the emission spectrum was recorded.

The loop antenna was moved at least to 2-perpendicular axes (antenna vector in direction of EUT and parallel to EUT) in order to maximize the emissions. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a data reduction table for further investigations. If various operating modes are supported, further investigations are made to find the worst-case. Also the interconnection cables and equipment position were varied in order to maximize the emissions.

Final measurement on critical frequencies

Based on the exploratory measurements, the most critical frequencies are re-measured by main-taining the EUT's worst-case operation mode, cable position, etc.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself either over 3-orthogonal axis (not defined usage position) or 2-orthogonal axis (defined usage position).

On the determined worst-case position, a final measurement with necessary bandwidth and detector according standard has been carried out.

Formula:

$$E_C = E_R + AF + C_L + D_F - G_A$$

$$M = L_T - E_C$$

AF = Antenna factor

C_L = Cable loss

D_F = Distance correction factor (if used)

E_C = Electrical field – corrected value

E_R = Receiver reading

G_A = Gain of pre-amplifier (if used)

L_T = Limit

M = Margin

All units are dB-units, positive margin means value is below limit.

4.2.2 Sample calculation

Raw-Value [dBuV/m]	Antenna factor	Distance Correction [dB]	Cable Loss	Preamplifier	Resulting correction value [dB]	Final result [dBuV/m]	Remarks
19.83	18.9	-70.75	0.18	--	-51.67	-31.83	30 to 3 m correction used according ANSI C63.10-2013

Remark: This calculation is based on an example value at 458 kHz

4.2.3 Correction factors due to reduced meas. distance (f < 30 MHz):

The used correction factors when the measurement distance is reduced compared to regulatory measurement distance, are calculated according to Extrapolation formulas valid for EUT's with maximum dimension of 0.625xLambda. Formula 2+3+4 as presented in ANSI C63.10, Chapter 6.4.4 are used for the calculations of proper extrapolation factors

Frequency Range	f [kHz/MHz]	Lambda [m]	Far-Field Point [m]	Distance Limit accord. 15.209 [m]	1st Condition (dmeas < Dnear-field)	2nd Condition (Limit distance bigger dnear-field)	Distance Correction accord. Formula	
kHz	9	33333.33	5305.17	300	fulfilled	not fulfilled	-80.00	
	10	30000.00	4774.65		fulfilled	not fulfilled	-80.00	
	20	15000.00	2387.33		fulfilled	not fulfilled	-80.00	
	30	10000.00	1591.55		fulfilled	not fulfilled	-80.00	
	40	7500.00	1193.66		fulfilled	not fulfilled	-80.00	
	50	6000.00	954.93		fulfilled	not fulfilled	-80.00	
	60	5000.00	795.78		fulfilled	not fulfilled	-80.00	
	70	4285.71	682.09		fulfilled	not fulfilled	-80.00	
	80	3750.00	596.83		fulfilled	not fulfilled	-80.00	
	90	3333.33	530.52		fulfilled	not fulfilled	-80.00	
	100	3000.00	477.47		fulfilled	not fulfilled	-80.00	
	125	2400.00	381.97		fulfilled	not fulfilled	-80.00	
	200	1500.00	238.73		fulfilled	fulfilled	-78.02	
	300	1000.00	159.16		fulfilled	fulfilled	-74.49	
	400	750.00	119.37		fulfilled	fulfilled	-72.00	
	490	612.24	97.44		fulfilled	fulfilled	-70.23	
	500	600.00	95.49		30	fulfilled	not fulfilled	-40.00
	600	500.00	79.58			fulfilled	not fulfilled	-40.00
700	428.57	68.21	fulfilled	not fulfilled		-40.00		
800	375.00	59.68	fulfilled	not fulfilled		-40.00		
900	333.33	53.05	fulfilled	not fulfilled		-40.00		
1.00	300.00	47.75	fulfilled	not fulfilled		-40.00		
1.59	188.50	30.00	fulfilled	not fulfilled		-40.00		
2.00	150.00	23.87	fulfilled	fulfilled		-38.02		
3.00	100.00	15.92	fulfilled	fulfilled		-34.49		
4.00	75.00	11.94	fulfilled	fulfilled		-32.00		
5.00	60.00	9.55	fulfilled	fulfilled		-30.06		
6.00	50.00	7.96	fulfilled	fulfilled		-28.47		
7.00	42.86	6.82	fulfilled	fulfilled		-27.13		
8.00	37.50	5.97	fulfilled	fulfilled		-25.97		
9.00	33.33	5.31	fulfilled	fulfilled		-24.95		
10.00	30.00	4.77	fulfilled	fulfilled		-24.04		
10.60	28.30	4.50	fulfilled	fulfilled		-23.53		
11.00	27.27	4.34	fulfilled	fulfilled		-23.21		
12.00	25.00	3.98	fulfilled	fulfilled	-22.45			
13.56	22.12	3.52	fulfilled	fulfilled	-21.39			
15.00	20.00	3.18	fulfilled	fulfilled	-20.51			
15.92	18.85	3.00	fulfilled	fulfilled	-20.00			
17.00	17.65	2.81	not fulfilled	fulfilled	-20.00			
18.00	16.67	2.65	not fulfilled	fulfilled	-20.00			
20.00	15.00	2.39	not fulfilled	fulfilled	-20.00			
21.00	14.29	2.27	not fulfilled	fulfilled	-20.00			
23.00	13.04	2.08	not fulfilled	fulfilled	-20.00			
25.00	12.00	1.91	not fulfilled	fulfilled	-20.00			
27.00	11.11	1.77	not fulfilled	fulfilled	-20.00			
29.00	10.34	1.65	not fulfilled	fulfilled	-20.00			
30.00	10.00	1.59	not fulfilled	fulfilled	-20.00			

4.2.4 Measurement Location

Test site	120901 - SAC - Radiated Emission <1GHz
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4.2.5 Limit

Radiated emissions limits (3 meters)					
Frequency Range [MHz]	Limit [$\mu\text{V}/\text{m}$]	Limit [$\text{dB}\mu\text{V}/\text{m}$]	Distance [m]	Detector	RBW [kHz]
0.009 – 0.09	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	0.2
0.09 – 0.11	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Quasi peak	0.2
0.11 – 0.15	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	0.2
0.15 – 0.49	2400 / f [kHz]	67.6 – 20Log(f) (kHz)	300	Pk & Avg	9
0.49 – 1.705	24000 / f [kHz]	87.6 – 20Log(f) (kHz)	30	Quasi peak	9
1.705 - 30	30	29.5	30	Quasi peak	9

*Remark: In Canada same limits apply, just unit reference is different

4.2.6 Result

Diagram	Band	Mode	Maximum Level [$\text{dB}\mu\text{V}/\text{m}$] Frequency Range 0.009 – 30 MHz	Result
2.201	2	1	No peaks found	Passed
2.401	4	2	No peaks found	Passed
2.501a	5	3 (EUT laying)	No peaks found	Passed
2.501b	5	3 (EUT standing)	No peaks found	Passed
2.701	7	4	No peaks found	Passed

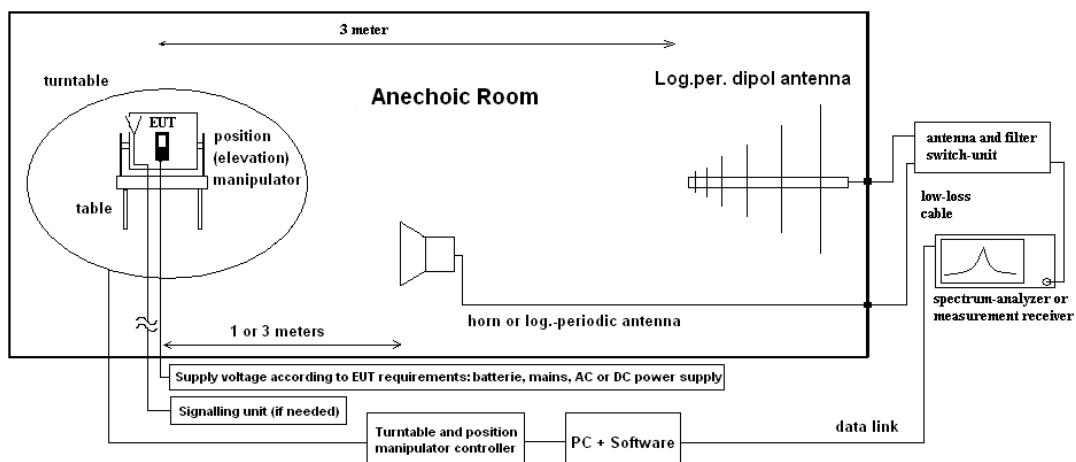
Remark: for more information and graphical plot see annex A1 TR22-1-0030601T043a_C01_A1

4.3 Radiated spurious emissions

4.3.1 Description of the general test setup and methodology, see below example:

Evaluating the emissions have to be done first by an exploratory emissions measurement and a final measurement for most critical frequencies. The tests are performed in a CISPR 16-1-4:2010 compliant fully anechoic room (FAR) recognized by the regulatory commission. The measurement distance was set to 3 meter for frequencies up to 18 GHz and 2 meter above 18 GHz. A logarithmic periodic antenna is used for the frequency range 30 MHz to 1 GHz. Horn antennas are used for frequency range 1 GHz to 40 GHz. The EUT is aligned within 3 dB beam width of the measurement antenna with three orthogonal axis measurements on the EUT.

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:
(See Tables *Summary of Test Results* and *Summary of Test Methods* on page 5)

Exploratory, preliminary measurements

The EUT and its associated accessories are placed on a non-conductive position manipulator (tipping device) of 1.50 m height which is placed on the turntable. By rotating the turntable (range 0° to 360°, step 45°) and the EUT itself on 3-orthogonal axis (the emission spectrum and it's characteristics was recorded with an EMI-receiver, broadband antenna and software.

The measurements are performed in horizontal and vertical polarization of the measurement antennas. The results are documented in a diagram. Critical frequencies (low margin to limit) are saved within a table for further investigations. If various operating modes are supported, further investigations are made to find the worst-case of them. Also the interconnection cables and equipment position were varied in order to maximize the emissions.

Final measurement on critical frequencies

Based on the exploratory measurements, the most critical frequencies are re-measured by main-taining the EUT's worst-case operation mode, cable position, etc.

First a frequency zoom around the critical frequency is done to locate the frequency more precisely. After this step, for all identified critical frequencies, the maximum peak was determined.

Following parameters were varied: the turntable angle continuously in the range 0 to 360 degree, the EUT itself over 3-orthogonal axis and the height for EUT with large dimensions.

On the determined worst-case position, a final measurement with necessary bandwidth and detector according standard has been carried out.

The readings on the spectrum analyzer are corrected with conversion value between field strength and E(I)RP, so the readings shown are equivalent to ERP/EIRP values. Critical measurements near the limit are re-measured with a substitution method accord. ANSI/TIA/EIA 603 C/D

Formula:

$$P_{EIRP} = P_{MEAS} + C_L + FSL - G_{PreA} - G_{ANT} \quad (1)$$

P_{MEAS} = measured power at instrument

M = Margin

L_T = Limit

FSL = Free Space loss = Function(frequency, measurement distance)

$$M = L_T - P_{EIRP}$$

C_L = cable loss

G_{PreA} = Gain of pre-amplifier (if used)

G_{ANT} = Gain of antenna in [dBi]

All units are dB-units, positive margin means value is below limit.

4.3.2 Measurement Location

Test site	120904 - FAC1 - Radiated Emissions
Test site	120907 - FAC2 - Radiated Emissions

4.3.3 Limit

Operation band	Frequency Range [MHz]	Limit [dBm]	Detector [MaxHold]	RBW / VBW [MHz]
LTE2	30 - 19100	-13	Peak	3 / 3
LTE4	30 - 17500	-13	Peak	3 / 3
LTE5	30 - 8500	-13	Peak	3 / 3
LTE7	30 - 25700	-13	Peak	3 / 3

4.3.4 Result

Diagram	Band	Mode	30 MHz to 15 GHz	15 GHz to 18 GHz	18 GHz to 19.5 GHz	Result
8.02a	2	1 (EUT standing)	No peaks found	--	--	Passed
8.02b	2	1 (EUT laying)	No peaks found	--	--	Passed
8.03a	2	1 (EUT laying, Ant hor)	--	No peaks found	--	Passed
8.03b	2	1 (EUT standing, Ant hor)	--	No peaks found	--	Passed
8.03c	2	1 (EUT laying, Ant ver)	--	No peaks found	--	Passed
8.03d	2	1 (EUT standing, Ant ver)	--	No peaks found	--	Passed
8.04a	2	1 (EUT laying, Ant hor/ver)	--	--	No peaks found	Passed
8.04b	2	1 (EUT standing, Ant hor/ver)	--	--	No peaks found	Passed

Diagram	Band	Mode	30 MHz to 15 GHz	15 GHz to 18 GHz	Result
8.05a	4	2 (EUT standing)	No peaks found	--	Passed
8.05b	4	2 (EUT laying)	No peaks found	--	Passed
8.06a	4	2 (EUT laying, Ant hor)	--	No peaks found	Passed
8.06b	4	2 (EUT standing, Ant hor)	--	No peaks found	Passed
8.06c	4	2 (EUT laying, Ant ver)	--	No peaks found	Passed
8.06d	4	2 (EUT standing, Ant ver)	--	No peaks found	Passed

Diagram	Band	Mode	30 MHz to 9 GHz	Result
8.07a	5	3 (EUT standing)	No peaks found	Passed
8.07b	5	3 (EUT laying)	No peaks found	Passed

Diagram	Band	Mode	30 MHz to 2.8 GHz	2.8 GHz to 15 GHz	15 GHz to 18 GHz	18 GHz to 27 GHz	Result
8.08a	7	4 (EUT standing)	No peaks found	--	--	--	Passed
8.08b	7	4 (EUT laying)	No peaks found	--	--	--	Passed
8.09a	7	4 (EUT laying)	--	No peaks found	--	--	Passed
8.09b	7	4 (EUT standing)	--	No peaks found	--	--	Passed
8.10a	7	4 (EUT laying, Ant hor)	--	--	No peaks found	--	Passed
8.10b	7	4 (EUT standing, Ant hor)	--	--	No peaks found	--	Passed
8.10c	7	4 (EUT laying, Ant ver)	--	--	No peaks found	--	Passed
8.10d	7	4 (EUT standing, Ant ver)	--	--	No peaks found	--	Passed
8.11a	7	4 (EUT laying, Ant hor/ver)	--	--	--	No peaks found	Passed
8.11b	7	4 (EUT standing, Ant hor/ver)	--	--	--	No peaks found	Passed

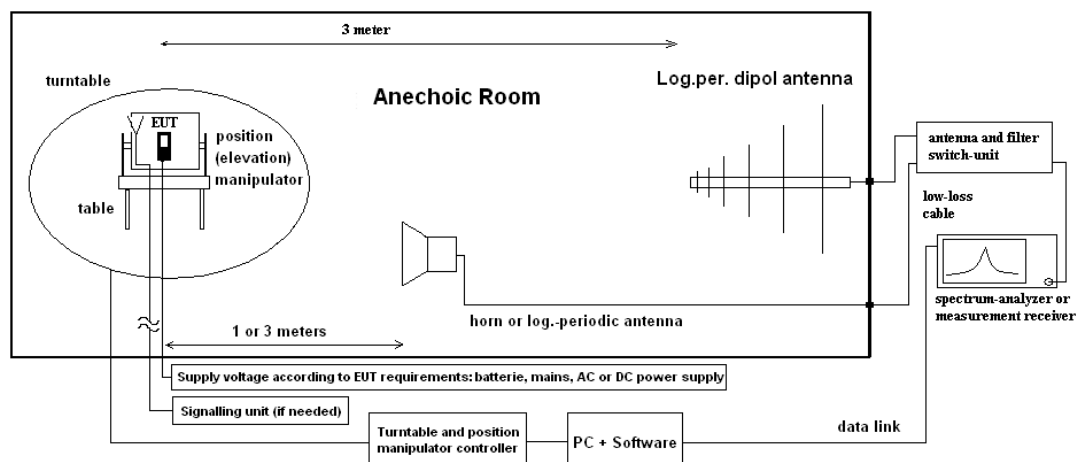
Remark: for more information and graphical plot see annex A1 [TR22-1-0030601T043a_C01_A1](#)

4.4 Radiated Band Edge

4.4.1 Description of the general test setup and methodology, see below example:

Evaluating the emissions have to be done first by an exploratory emissions measurement and a final measurement for most critical frequencies. The tests are performed in a CISPR 16-1-4:2010 compliant fully anechoic room (FAR) recognized by the regulatory commission. The measurement distance was set to 3 meter for frequencies up to 18 GHz and 2 meter above 18 GHz. A logarithmic periodic antenna is used for the frequency range 30 MHz to 1 GHz. Horn antennas are used for frequency range 1 GHz to 40 GHz. The EUT is aligned within 3 dB beam width of the measurement antenna with three orthogonal axis measurements on the EUT

Schematic:



Testing method:

The measurement is made according to relevant reference clauses:
(See Tables *Summary of Test Results* and *Summary of Test Methods* on page 5)

See chapter Radiated Spurious Emission for Test method.

4.4.2 Measurement Location

Test site	120904 - FAC1 - Radiated Emissions
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4.4.3 Limit

Operation band	Frequency Range [MHz]	Limit [dBm]	Detector [MaxHold]	RBW / VBW [MHz]
LTE2	Below 1850 and above 1910	-13	Peak	0.03 / 0.3
LTE4	Below 1710 and above 1755	-13	Peak	0.03 / 0.3
LTE5	Below 824 and above 849	-13	Peak	0.02 / 0.2
LTE7	2496 - 2499 2499 - 2500 2570 - 2571 2571 - 2575	-10 (RBW = 1 MHz, VBW = 3 MHz) -10 (RBW = 500 kHz, VBW = 2 MHz) -10 (RBW = 500 kHz, VBW = 2 MHz) -10 (RBW = 1 MHz, VBW = 3 MHz)	Peak	0.03 / 0.3

4.4.4 Result

Diagram	Band	Mode	Edge [Low / High]	Value [dBm]	Result
9.201	2	1	Low_1RB	-31.941	Passed
9.202	2	1	Low_full	-36.228	Passed
9.203	2	1	High_1RB	-32.079	Passed
9.204	2	1	High_full	-34.214	Passed

Diagram	Band	Mode	Edge [Low / High]	Value [dBm]	Result
9.401	4	2	Low_1RB	-29.34	Passed
9.402	4	2	Low_full	-29.34	Passed
9.403	4	2	High_1RB	-29.38	Passed
9.204	4	2	High_full	-29.49	Passed

Diagram	Band	Mode	Edge [Low / High]	Value [dBm]	Result
9.501	5	3	Low_1RB	-31.79	Passed
9.502	5	3	Low_full	-26.71	Passed
9.503	5	3	High_1RB	-30.18	Passed
9.504	5	3	High_full	-34.27	Passed

Diagram	Band	Mode	Edge [Low / High]	Value [dBm]	Result
9.701	7	4	Low_1RB	-32.54	Passed
9.702	7	4	Low_full	-32.58	Passed
9.703	7	4	High_1RB	-32.29	Passed
9.704	7	4	High_full	-32.02	Passed

Remark: for more information and graphical plot see annex A1 **TR22-1-0030601T043a_C01_A1**

4.5 Equipment lists

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
	120901 - SAC - Radiated Emission <1GHz			calchk	cal: 2015-Jul-21 chk: 2021-Jul-27	cal: 10Y chk: 12M	cal: 2025-Jul-21 chk: 2022-Jul-27
20442	Semi Anechoic Chamber	ETS-Lindgren GmbH / Taufkirchen	-	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20482	filter matrix Filter matrix SAR 1	CETECOM GmbH	-	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20574	Biconilog Hybrid Antenna BTA-L	Frankonia GmbH / Heideck	980026L	cal	cal: 2022-Jun-15	cal: 36M	cal: 2025-Jun-15
20620	Test Receiver ESU26	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100362	cal	cal: 2022-Jun-08	cal: 12M	cal: 2023-Jun-08
20885	Power Supply EA3632A	Agilent Technologies Deutschland GmbH	75305850	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
25038	Loop Antenna HFH2-Z2	Rohde & Schwarz Messgerätebau GmbH / Memmingen	879824/13	cal	cal: 2022-Jul-04	cal: 24M	cal: 2024-Jul-04
	120904 - FAC1 - Radiated Emissions			chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20020	Horn Antenna 3115 (Subst 1)	EMCO Elektronik GmbH	9107-3699	calchk	cal: 2021-Aug-17 chk: 2013-Apr-20	cal: 36M chk: 12M	cal: 2024-Aug-17
20066	Notch Filter WRCT 1900/2200-5/40-10EEK	Wainwright Instruments GmbH	5	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20121	Notch Filter WRCB 1879,5/1880,5EE	Wainwright Instruments GmbH	15	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20122	Notch Filter WRCB 1747/1748	Wainwright Instruments GmbH	12	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20254	High Pass Filter 5HC 2600/12750-1.5KK	Trilithic	23042	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20287	Pre-Amplifier 25MHz - 4GHz AMF-2D-100M4G-3S-10P	Miteq Inc.	379418	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20290	Notch Filter WRCA 901,9/903,1SS	Wainwright Instruments GmbH	3RR	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20291	High Pass Filter WHJ 2200-4EE	Wainwright Instruments GmbH	14	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20338	Pre-Amplifier 100MHz - 26GHz JS4-00102600-38-5P	Miteq Inc.	838697	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20341	Digital Multimeter Fluke 112	Fluke Deutschland GmbH / Glottertal	81650455	cal	cal: 2022-May-18	cal: 24M	cal: 2024-May-18
20439	Ultrabroadband-Antenna HL562	Rohde & Schwarz Messgerätebau GmbH	100248	calchk	cal: 2017-Mar-10	cal: 72M chk: 12M	cal: 2023-Mar-10
20448	Notch Filter WRCT 1850.0/2170.0-5/40-10SSK	Wainwright Instruments GmbH	5	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20449	Notch Filter WRCT 824.0/894.0-5/40-8SSK	Wainwright Instruments GmbH	1	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20484	Pre-Amplifier 2,5GHz - 18GHz AMF-5D-02501800-25-10P	Miteq Inc.	1244554	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20489	Test Receiver ESU40	Rohde & Schwarz Messgerätebau GmbH / Memmingen	100030	cal	cal: 2022-Jul-20	cal: 12M	cal: 2023-Jul-20
20512	Notch Filter WRCA 800/960-02/40-6EEK (GSM 850)	Wainwright Instruments GmbH	24	chk	chk: 2022-Jun-30	chk: 12M	chk: 2023-Jun-30
20549	Log. Per. Antenna HL025	Rohde & Schwarz Messgerätebau GmbH	1000060	calchk	cal: 2021-Aug-18	cal: 36M chk: 12M	cal: 2024-Aug-18
20558	Fully Anechoic Chamber 1	ETS-Lindgren GmbH / Taufkirchen	-	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20611	Power Supply E3632A	Agilent Technologies Deutschland GmbH	KR 75305854	cpu			
20670	Radio Communication Tester CMU200	Rohde & Schwarz Messgerätebau GmbH / Memmingen	106833	cal	cal: 2022-May-10	cal: 24M	cal: 2024-May-10
20690	Spectrum Analyzer FSU	Rohde & Schwarz Messgerätebau GmbH	100302/026	cal	cal: 2021-May-20	cal: 24M	cal: 2023-May-20
20720	Measurement Software EMC32 [FAC]	Rohde & Schwarz Messgerätebau GmbH	V10.xx	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20868	High Pass Filter AFH-07000	AtlanTecRF	16071300004	chk	chk: 2021-Jun-11	chk: 12M	chk: 2022-Jun-11
	120907 - FAC2 - Radiated Emissions			chk	chk: 2021-Aug-30	chk: 12M	chk: 2023-Kan-31
20005	AC - LISN 50 Ohm/50µH ESH2-Z5	Rohde & Schwarz Messgerätebau GmbH / Memmingen	861741/005	cal	cal: 2022-May-19	cal: 12M	cal: 2023-May-19
20133	Horn Antenna 3115 (Meas 1)	EMCO Elektronik GmbH	9012-3629	cal	cal: 2020-Apr-08	cal: 36M	cal: 2023-Apr-08
20302	Horn Antenna BBHA9170 (Meas 1)	Schwarzbeck Mess-Elektronik OHG / Schönau	155	cpu	chk: 2020-Apr-15	chk: 12M	
20303	Horn Antenna BBHA9170 (Subst 1)	Schwarzbeck Mess-Elektronik OHG	156	cpu		chk: 12M	
20354	DC - Power Supply 40A NGPE 40/40		448	cpu			
20412	Fully Anechoic Chamber 2	ETS-Lindgren GmbH / Taufkirchen	without	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20729	FS-Z140	Rohde & Schwarz Messgerätebau GmbH	101004	cal	cal: 2020-May-26	cal: 36M	cal: 2023-May-26
20730	FS-Z110	Rohde & Schwarz Messgerätebau GmbH	101468	cal	cal: 2020-Jun-19	cal: 36M	cal: 2023-Jun-19
20731	FS-Z75	Rohde & Schwarz Messgerätebau GmbH / Memmingen	101022	cal	cal: 2022-May-18	cal: 36M	cal: 2025-May-18
20732	Signal- and Spectrum Analyzer FSW67	Rohde & Schwarz Messgerätebau GmbH / Memmingen	104023	cal	cal: 2022-Jun-08	cal: 12M	cal: 2023-Jun-08
20733	Harmonic Mixer FS-Z220	RPG-Radiometer Physics GmbH	101009	cal	cal: 2021-May-27	cal: 36M	cal: 2024-May-27
20734	Harmonic Mixer FS-Z325	RPG-Radiometer Physics GmbH	101005	cal	cal: 2021-May-27	cal: 36M	cal: 2024-May-27
20765	Pickett-Potter Horn Antenna FH-PP 40-60	RPG-Radiometer Physics GmbH / Meckenheim	010001	cal	cal: 2020-Sep-15	cal: 36M	cal: 2023-Sep-15
20767	Pickett-Potter Horn Antenna FH-PP 140-220	RPG-Radiometer Physics GmbH / Meckenheim	010011	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20811	Horn Antenna ASY-SGH-124-SMA	Antenna Systems Solutions S.L	29F14182337	cal	cal: 2021-Oct-20	cal: 36M	cal: 2024-Oct-20
20812	Pickett-Potter Horn Antenna FH-PP-325	RPG-Radiometer Physics GmbH	10024	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20813	Pickett-Potter Horn Antenna FH-PP 075	RPG-Radiometer Physics GmbH / Meckenheim	10006	cal	cal: 2020-Sep-09	cal: 36M	cal: 2023-Sep-09
20814	Pickett-Potter Horn Antenna FH-PP 140	RPG-Radiometer Physics GmbH	10008	cnn	cal: -	cal: -	cal: -

ID	Description	Manufacturer	SerNo	CheckType	Last Check	Interval	Next Check
					chk: -	chk: -	chk: -
20815	Pickett-Potter Horn Antenna FH-PP 110	RPG-Radiometer Physics GmbH	10014	cal	cal: 2020-Sep-04	cal: 36M	cal: 2023-Sep-04
20816	SGH Antenna SGH-26-WR10	Anteral S.L.	1144	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20817	Waveguide Rectangular Horn Antenna SAR-2309-22-S2	ERAVAN	13254-01	cal	cal: 2020-Jul-29	cal: 36M	cal: 2023-Jul-29
20836	1-18 GHz Amplifier	Wright Technologies, Inc., Inc.	0001	chk		chk: 36M	
20877	IS42-08001800-16-8P Verstärker	Miteq Inc.	2079991 / 2079992	chk	chk: 2020-Feb-27	chk: 36M	chk: 2023-May-27
20907	Waveguide WR-15 attenuator STA-30-15-M2	SAGE Millimeter Inc.	13256-01	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20908	Waveguide WR 10 attenuator STA-30-10-M2	SAGE Millimeter Inc.	13256-01	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20909	Waveguide Horn Antenna PE9881-24	Pasternack Enterprises, Inc.	37/2016	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20910	Frequency Multiplier 936VF-10/385	MI-Wave, Millimeter Wave Products Inc.	142	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20911	Frequency Multiplier 938WF-10/387	MI-Wave, Millimeter Wave Products Inc.	141	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20912	Low noise Amplifier Module 0.5-4GHz	RF-Lambda Europe GmbH	19041200083	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
20913	Phase Amplitude Stable Cable Assembly DC-40GHz	RF-Lambda Europe GmbH	AC19040001	cnn	cal: - chk: -	cal: - chk: -	cal: - chk: -
25457	DRG Horn Antenna SAS-574	A.H. Systems, Inc. / Chatsworth	383	cal	cal: 2022-Mar-28	cal: 36M	cal: 2025-Mar-28
	120911 - Radio Laboratory 2						
20457	DC-Power supply, 0-5A EA-3013 S	EA Elektro-Automatik GmbH & Co. KG	9624680	cpu			
20594	Wideband Radio Communication Tester CMW500	Rohde & Schwarz Messgerätebau GmbH	163673	cal	cal: -2022-Jun-30	cal: 12M	cal: 2022-Jun-30

Tools used in 'P1M1'

4.5.1 Legend

Note / remarks	Interval of calibration & Verification
12M	12 months
24M	24 months
36M	36 months
10Y	10 Years

Abbreviation Check Type	Description
cnn	Calibration and verification not necessary
cal	Calibration
calchk	Calibration plus intermediate Verification
chk	Verification
cpu	Verification before usage

5 Results from external laboratory

None	-
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6 Opinions and interpretations

None	-
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7 List of abbreviations

None	-
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8 Measurement Uncertainty valid for conducted/radiated measurements

The reported uncertainties are calculated based on the standard uncertainty multiplied with the appropriate coverage factor **k**, such that a confidence level of approximately 95% is achieved. For uncertainty determination, each component used in the concrete measurement set-up was taken in account and its contribution to the overall uncertainty according its statistical distribution calculated.

Measurement type	Frequency range of measurement		Calculated Uncertainty based on confidence level of 95.54%	Remarks
	Start [MHz]	Stop [MHz]		
Magnetic field strength	0.009	30	4.86	Magnetic loop antenna, Pre-amp on
RF-Output power (eirp) Unwanted emissions (eirp) [dB]	30	100	4.57	without Pre-Amp
	30	100	4.91	with PreAmp
	100	1000	4.02	without Pre-Amp
	100	1000	4.26	with PreAmp
	1000	18000	4.36	without Pre-Amp
	1000	18000	5.23	with PreAmp
	18000	33000	4.92	Schwarzbeck BBHA9170 (#20302) Antenna set-up non-waveguide antenna)
	33000	50000	4.17	Set-up for Q-Band (WR-22), non-wave guide antenna
	40000	60000	4.69	Set-up U-Band (WR-19), non-waveguide antenna
	50000	75000	4.06	External Mixer set-up V-Band (WR-15)
	75000	110000	4.17	External Mixer set-up W-Band (WR-6)
	90000	140000	5.49	External Mixer set-up F-Band (WR-8)
	140000	225000	6.22	External Mixer set-up G-Band (WR-5)
	225000	325000	7.04	External Mixer set-up (WR-3)
325000	500000	8.84	External Mixer set-up (WR-2.2)	
Radiated Blocking [dB]	1000	18000	2.85	Typical set-up with microwave generator and antenna, value for 7GHz calculated
	18000	33000	4.66	Typical set-up with microwave generator and antenna
	33000	50000	3.48	WR-22 set-up
	50000	75000	3.73	WR-15 set-up
	75000	110000	4.26	WR-6 set-up
Frequency Error [kHz]	40000	77000	276.19	calculated for 77 GHz (FMCW) carrier
	6000	7000	33.92	calculated for 6.5GHz UWB Ch.5
TS 8997 conducted Parameters	30	6000	1.11	1. Power measurement with Fast-sampling-detector
	30	6000	1.20	2. Power measurement with Spectrum-Analyzer
	30	6000	1.20	3. Power Spectrum-Density measurement
	30	7500	1.20	4. Conducted Spurious emissions:
	0.009	30	2.56	5. Conducted Spurious emissions:
	2.4	2.48	1.95 ppm	6a. Bandwidth / 2-Marker Method for 2.4GHz ISM
	5.18	5.825	7.180 ppm	6b. Bandwidth / 2-Marker Method for 5GHz WLAN
	5.18	5.825	1.099 ppm	7 Frequency (Marker method) for 5GHz WLAN
	30	6000	0.11561µs	8 Medium-Utilization factor / Timing
	30	6000	1.85	9 Blocking-Level of companion device
30	6000	1.62	9 Blocking Generator level	
Conducted emissions	0.009	30	3.57	

9 Versions of test reports (change history)

Version	Applied changes	Date of release
--	Initial release	2023-Mar-31
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End Of Test Report