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Radio Test report – Radio 4480 B66 B70 B70A

Project number:

463928-1TRFWL-R1

Applicant:

Ericsson Canada Inc.

Product name:	Model (PMN):	Part number:
Radio 4480	Radio 4480 44B66 44B70 C	KRC 161 991/1
FCC ID:	**ISED Reg. Number:**	**HVIN:**
TA8AKRC161991-1	287AB-AS1619911	AS1619991

Requirements/Summary:

Standard	Environmental phenomenon	Compliance
FCC 47 CFR Part 27	Miscellaneous wireless communications services	Yes
RSS-139 Issue 3, July 16, 2015	Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710–1780 MHz and 2110–2180 MHz	Yes
RSS-170 Issue 3, July 9, 2015	Ancillary Terrestrial Component (ATC) Equipment Operating in the Mobile-Satellite Service (MSS) Bands AWS-4 (2000–2020 MHz and 2180–2200MHz) Limitation as per IC P9 Licensing Agreement https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11536.html	Yes

Date of issue: July 4, 2022

Moustapha Salah Toubeh, EMC/Wireless Specialist
Tested by

Signature

Andrey Adelberg, Senior Wireless/EMC Specialist
Reviewed by

Signature

Two test locations

Company name	Nemko Canada Inc.	
Address	303 River Road	349 Terry Fox
City	Ottawa	Ottawa
Province	Ontario	Ontario
Postal code	K1V 1H2	K2K 2V6
Country	Canada	Canada
Telephone	+1 613 737 9680	+1 613 963 8000
Facsimile	+1 613 737 9691	
Toll free	+1 800 563 6336	
Website	www.nemko.com	
Site number	FCC test site registration number: CA2040, IC: 2040A-4 (3 m semi anechoic chamber)	

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.
This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this reAnt Are within Nemko Canada's ISO/IEC 17025 accreditation.

Copyright notification

Table of contents

Section 1. Report summary

1.1 Applicant and manufacturer

Company name	Ericsson Canada Inc.
Address	349 Terry Fox Drive, Ottawa, ON, Canada, K2K 2V6

1.2 Test specifications

FCC 47 CFR Part 2	Frequency Allocations and Radio Treaty Maters; General Rules and Regulations
FCC 47 CFR Part 27	Miscellaneous wireless communications services
RSS-139 Issue 3, July 16, 2015	Advanced Wireless Services (AWS) equipment operating in the bands 1710–1780 MHz and 2110–2180 MHz
SRSP-510, Issue 5, February 2009	Technical Requirements for Personal Communications Services (PCS) in the Bands 1850–1915 MHz and 1930–1995 MHz
RSS-170 Issue 3, July 9, 2015*	Ancillary Terrestrial Component (ATC) Equipment Operating in the Mobile-Satellite Service (MSS) Bands
RSS-Gen, Issue 5, April 2018	General Requirements for Compliance of Radio Apparatus

*Equipment operating in the ancillary terrestrial component (ATC) of the frequency bands 2000–2020 MHz and 2180–2200 MHz is certified under RSS-170. Limitations specified under Industry Canada P9 Licensing Agreement applied as per https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11536.html

1.3 Test method

ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 662911 D01	Multiple Transmitter Output v02r01
KDB 662911 D02	MIMO with Cross-Polarized Antennas v01

1.4 Statement of compliance

In the configuration tested, the EUT was found compliant. Testing was completed against customer test plan. Results obtained indicate that the product under test complies in full with the requirements tested.

This test report (**463928-1TRFWL-R1**) applies to the *Radio 4480 44B66 44B70 C with* part number *KRC 161 991/1:* See "Summary of test results" for full details.

EUT Configuration(s) SRO/MRO:

B66*:*
LTE/NR: 5, 10, 15, 20 MHz, Max 6 Carriers
SRO: LTE, NR (L+NB-IoT)
MRO: L+NR (L+NB-IoT)
ESS is supported with LTE and/or LTE +NB-IoT (IB, GB)

B70/B70A*:*
LTE/NR: 5, 10, 15, 20 MHz (Max 5 Carriers)
SRO: LTE, NR, (L+NB-IoT)
MRO: L+NR, (L+NB-IoT)
ESS is supported with LTE and/or LTE +NB-IoT (IB, GB)

1.5 Test report revision history

Table 1.5-1: *Test report revision history*

Revision #	Date of issue	Details of changes made to test report
TRF	July 4, 2022	Original report issued

Section 2. Summary of test results

2.1 Testing location

Test location (s)	Ottawa

2.2 Testing period

Test start date	May 30, 2022	Test end date	June 3, 2022

2.3 Sample information

Receipt date	May 30, 2022	Nemko sample ID number	1

2.4 FCC Part 27 test results

Table 2.4-1: *FCC results summary*

Part	Test description	Verdict
§27.50(b)	Maximum output power at RF antenna connector	Pass
§27.53	Spurious emissions at RF antenna connector	Pass
§27.53	Radiated spurious emissions (conducted and radiated)	Pass
§2.1049	Occupied bandwidth	Pass

Notes: Only tests requested by the client have been performed

2.5 RSS-139/170 test results

Table 2.5-1: *ISED results summary*

Part	Test description	Verdict
RSS-139, 4.1	Transmitter output power and Equivalent Isotropic Radiated Power (e.i.r.p.)	Pass
RSS-139, 4.2	Spurious emissions at RF antenna connector	Pass
RSS-139, 4.2	Radiated spurious emissions (conducted and radiated)	Pass
RSS-170, 5.3	Transmitter output power and Equivalent Isotropic Radiated Power (e.i.r.p.)	Pass
RSS-170, 5.4	Spurious emissions at RF antenna connector	Pass
RSS-170, 5.4	Radiated spurious emissions (conducted and radiated)	Pass
RSS-Gen, 6.7	Occupied bandwidth	Pass
RSS-Gen, 7.4	Receiver conducted spurious emissions	Pass

Notes: Only tests requested by the client have been performed

ATC Base Station Equipment operating in bands 2000–2020 MHz and 2180–2200 MHz

The unwanted emissions of ATC base station equipment transmitting in the bands 2000–2020 MHz and 2180–2200 MHz shall comply with the following:	(1) The power of any unwanted emissions at frequencies outside the equipment's operating frequency block shall be attenuated below the transmitter power P (dBW), by 43 + 10 log p (watts), dB. (2) For equipment operating in the band 2180–2200 MHz, in addition to (1), the power of any emissions on all frequencies between 2200 MHz and 2290 MHz shall not exceed an e.i.r.p. of −100.6 dBW/4 kHz (−70.6 dBm/4 kHz).*

*** This requirement is for implementation and is enforced at the time of licensing. Therefore, results are not included in this report.**

Note: Requirement number 2 above is amended as detailed in the following ISED document: https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11536.html

Section 3. Equipment under test (EUT) details

3.1 EUT information

Product name	Radio 4480	
Model	Radio 4480 44B66 44B70 C	
Part number	KRC 161 991/1	
Revision	R1A	
Serial number	EA2A476830	
Antenna ports	4 TX/RX Ports	
Frequency B66	TX (DL): 2110 - 2200 MHz, BW: 90MHz RX (UL): 1710 - 1780 MHz, BW: 70MHz	
FDD	400 MHz	
Frequency B70	TX (DL): 1995 – 2020 MHz, BW: 25MHz RX (UL): 1695 – 1710 MHz, BW: 15MHz	
Frequency B70A	TX (DL): 2000 – 2020 MHz, BW: 20MHz RX (UL): 1695 – 1710 MHz, BW: 15MHz	
FDD	300 MHz	
Nominal O/P per Antenna Port / Band	SRO / MRO: Single / Multi Carrier: 40W (46.02 dBm)	
3GPP Band Category	B66: BC1, B70: BC1	
Accuracy (nominal)	±0.1 ppm	
Nominal voltage	-48 VDC @ 38A (max), (-36 to -58.5VDC)	
Power Consumption	1800 W	
RAT	LTE: SC, MC, MIMO, CA, ESS, (LTE + NB-IoT (IB, GB)) NR: SC, MC, MIMO, CA, ESS	
Modulation	LTE: QPSK, 16QAM, 64QAM, 256QAM NR: QPSK, 16QAM, 64QAM, 256QAM	
Channel bandwidth	LTE: 5MHz, 10MHz, 15MHz, 20MHz NR: 5MHz, 10MHz, 15MHz, 20MHz	
CPRI	10Gbps (Data 1-2)	
Channel raster	LTE/NR: 100kHz	
Regulatory requirements	Radio: FCC: CFR 47 Part 2, 27 IC: RSS-GEN, RSS-139, RSS-170 (P9) EMC: FCC Part 15, ICES-003 Safety: IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 60529, UL/CSA 62368-1, UL 50E / CAN/CSA	
Carrier Configuration:	B66 SRO: LTE, NR (L+NB-IoT) MRO: L+NR (L+NB-IoT)	B70 SRO: LTE, NR, (L+NB-IoT) MRO: L+NR, (L+NB-IoT)
Regulatory ID:	FCC: TA8AKRC161991-1 IC: 287AB-AS1619911 HVIN: AS1619911	
Emission Designator	LTE: 5M00W7D, 10M0W7D, 15M0W7D, 20M0W7D NR: 5M00W7D, 10M0W7D, 15M0W7D, 20M0W7D	
Operating temperature	−40 °C to +55 °C	
Radio Total Power (max.):	B66 + B70: 320W (55.05dBm), 80W/Port (max) Configurations /Port: B66 40W and B70 40W	
Supported Carrier Configurations /RAT:	B66: 5MHz (1-6), 10MHz (1-6) 15MHz (1-4), 20MHz (1-3) B70: 5MHz (1-5), 10MHz (1-2), 15MHz (1), 20MHz (1)	
Dimensions: (H x W x D)	553mm x 398mm x 151mm	
Weight:	32kg	

3.2 Product description and theory of operation

EUT description of the methods used to exercise the EUT and all relevant ports:

Description/theory of operation	Radio 4480 44B66 44B70 C is a multi-standard remote Dual Band radio forming part of the Ericsson RBS (Radio Base Station) equipment. Radio 4480 provides radio access for mobile and fixed devices and is designed for the outdoor environment. Radio 4480 operates over 2 bands (Band 66 and Band 70/70A) via 4 TX/RX ports connected directly into an integrated antenna. Radio unit installation is designed for pole, wall or rail mount options. A fiber optic interface provides the RRU/RBS control and digital interface between the Radio and the RBS. Radio 4480 product is convection cooled and shall be mounted vertically. Output RF Power is rated at 4 x 40 W. Altitude during operation: Below 4000 m Radio 4480 is a synthesized transceiver designed for use in the 3GPP (Third Generation Partnership Project) for LTE (Long Term Evolution) - E-UTRA Base Station, NR (New Radio). Radio 4480 B66 B70 C is a 4TX/4RX remote radio unit (RRU).

Ant Description

Port	Description
ANT 1–4	RF Output ports from 1 to 4
Alarm	Alarm
Data 1	Optical Interface Data 1
Data 2	Optical Interface Data 2
Data 3	Optical Interface Data 3
Data 4	Optical Interface Data 4
DC Input	−48 V_{DC}
MMI	Display - Radio Status
GND	Ground

Physical

Dimensions	398 mm × 553 mm × 151 mm (H × W × D)
Weight	32 kg
Operating Temperature	−40 to +55 °C
Mounting	Pole, Wall, Mast Mount
Cooling	Convection (forced air)

Software details: **CXP9017316%7-R90LA**

Radio Hardware Configuration

Product: Radio 4480 KRC 161 991/1	Revision R1B		QTY	Description
ROA 128 7007/19	R1C		1	PCB ASSY MOB
ROZ 104 7008/1	R4C		1	DC-DC Circuit
ROR 101 7007/01	R1D		2	Circuit Module PAM B66
ROR 1001 7007/70	R1C		2	Circuit Module PAM B70
KRF 901 700	R1A	Options: /L, /D	1	Filter RF (/L: FINGU, /D: ACE)
NTB 101 0700/3	R1C		1	Parts
NTB 101 1342/1	R1A		1	Parts

Product Identification Label

3.3 EUT test details

B66, B70 and B70A single carrier frequencies for LTE & NR are listed below.

LTE Single Carrier B66:

Bandwidth	Transmit / DL (MHz)					
(MHz)	B	*EARFCN*	M	*EARFCN*	T	*EARFCN*
5	2112.5	*66461*	2155.0	*66886*	2197.5	*67311*
10	2115.0	*66486*	2155.0	*66886*	2195.0	*67286*
15	2117.5	*66511*	2155.0	*66886*	2192.5	*67261*
20	2120.0	*66536*	2155.0	*66886*	2190.0	*67236*

BW	Receive / UL (MHz)					
(MHz)	B	*EARFCN*	M	*EARFCN*	T	*EARFCN*
5	1712.5	*131997*	1755.0	*132422*	n/a	n/a
10	1715.0	*132022*	1755.0	*132422*	n/a	n/a
15	1717.5	*132047*	1755.0	*132422*	n/a	n/a
20	1720.0	*132072*	1755.0	*132422*	n/a	n/a

NR Single Carrier B66:

Bandwidth	Transmit / DL (MHz)					
(MHz)	B	*NR-ARFCN*	M	*NR-ARFCN*	T	*NR-ARFCN*
5	2112.5	*422500*	2155.0	*431000*	2197.5	*439500*
10	2115.0	*423000*	2155.0	*431000*	2195.0	*439000*
15	2117.5	*423500*	2155.0	*431000*	2192.5	*438500*
20	2120.0	*424000*	2155.0	*431000*	2190.0	*438000*

BW	Receive / UL (MHz)					
(MHz)	B	*NR-ARFCN*	M	*NR-ARFCN*	T	*NR-ARFCN*
5	1712.5	*342500*	1755.0	*351000*	n/a	n/a
10	1715.0	*343000*	1755.0	*351000*	n/a	n/a
15	1717.5	*343500*	1755.0	*351000*	n/a	n/a
20	1720.0	*344000*	1755.0	*351000*	n/a	n/a

EUT test details, continued

LTE Single Carrier B70:

Bandwidth	Transmit / DL (MHz)					
(MHz)	B	*EARFCN*	M	*EARFCN*	T	*EARFCN*
5	**1997.5**	*68361*	**2007.5**	*68461*	**2017.5**	*68561*
10	**2000.0**	*68386*	**2007.5**	*68461*	**2015.0**	*68536*
15	**2002.5**	*68411*	**2007.5**	*68461*	**2012.5**	*68511*
20	**2005.0**	*68436*	**2007.5**	*68461*	**2010.0**	*68486*

BW	Receive / UL (MHz)					
(MHz)	B	*EARFCN*	M	*EARFCN*	T	*EARFCN*
5	**1697.5**	*132997*	**1707.5**	*133097*	**1707.5**	*133097*
10	**1700.0**	*133022*	**1707.5**	*133097*	**1705.0**	*133072*
15	**1702.5**	*133047*	**1707.5**	*133097*	**1702.5**	*133047*

NR Single Carrier B70:

Bandwidth	Transmit / DL (MHz)					
(MHz)	B	*NR-ARFCN*	M	*NR-ARFCN*	T	*NR-ARFCN*
5	**1997.5**	*386500*	**2007.5**	*388500*	**2017.5**	*390500*
10	**2000.0**	*387000*	**2007.5**	*388500*	**2015.0**	*390000*
15	**2002.5**	*387500*	**2007.5**	*388500*	**2012.5**	*389500*
20	**2005.0**	*68436*	**2007.5**	*68461*	**2010.0**	*68486*

Bandwidth	Receive / UL (MHz)					
(MHz)	B	*NR-ARFCN*	M	*NR-ARFCN*	T	*NR-ARFCN*
5	**1697.5**	*370500*	**1707.5**	*372500*	**1717.5**	*374500*
10	**1700.0**	*371000*	**1707.5**	*372500*	**1715.0**	*374000*
15	**1702.5**	*371500*	**1707.5**	*372500*	**1712.5**	*373500*

EUT test details, continued

LTE Single Carrier B70A:

Bandwidth	Transmit / DL (MHz)					
(MHz)	B	*EARFCN*	M	*EARFCN*	T	*EARFCN*
5	**2002.5**	*68411*	**2010.0**	*68486*	**2017.5**	*68561*
10	**2005.0**	*68436*	**2010.0**	*68486*	**2015.0**	*68536*
15	**2007.5**	*68461*	**2010.0**	*68486*	**2012.5**	*68511*
20	**2010.0**	*68486*	**2010.0**	*68486*	**2010.0**	*68486*

Bandwidth	Receive / UL (MHz)					
(MHz)	B	*EARFCN*	M	*EARFCN*	T	*EARFCN*
5	**1702.5**	*133047*	**1710.0**	*133122*	**1707.5**	*133097*
10	**1705.0**	*133072*	**1710.0**	*133122*	**1705.0**	*133072*
15	**N/A**	*N/A*	**N/A**	*N/A*	**N/A**	*N/A*
20	**N/A**	*N/A*	**N/A**	*N/A*	**N/A**	*N/A*

NR Single Carrier B70A:

Bandwidth	Transmit / DL (MHz)					
(MHz)	B	*NR-ARFCN*	M	*NR-ARFCN*	T	*NR-ARFCN*
5	**2002.5**	*386500*	**2010.0**	*388000*	**2017.5**	*389500*
10	**2005.0**	*387000*	**2010.0**	*388000*	**2015.0**	*389000*
15	**2007.5**	*387500*	**2010.0**	*388000*	**2012.5**	*388500*

Bandwidth	Receive / UL (MHz)					
(MHz)	B	*NR-ARFCN*	M	*NR-ARFCN*	T	*NR-ARFCN*
5	**1702.5**	*370500*	**1710.0**	*372000*	**1717.5**	*373500*
10	**1705.0**	*371000*	**1710.0**	*372000*	**1715.0**	*373000*
15	**1707.5**	*371500*	**1710.0**	*372000*	**1712.5**	*372500*

EUT test details, continued

The syntax used to describe detailed radio carrier configurations that were tested is as follows:

The General Carrier Configuration description syntax is:

$^{Band(Port)}$**#Carriers x Location**$_{Bandwith\_RAT(Modulation/IoT)}$

The detail RUx command strings used to configure the radio use the following syntax. From this syntax exaxct frequencies tested can be determined.

<Port>_<RAT><BW in MHz>0_D<uplink/downlink>_P<power in W>_<Modulation>

Detailed radio carrier configurations that were tested are presented in the following tables.

B66 LTE Configurations Tested:

Carrier Configuration	RUx String
$^{B66(A)}1xB_{5LTE}$	A_L50_2112.5M_Dd_P40W_MODtm1p1
$^{B66(B)}1xB_{5LTE}$	B_L50_2112.5M_Dd_P40W_MODtm1p1
$^{B66(C)}1xB_{5LTE}$	C_L50_2112.5M_Dd_P40W_MODtm1p1
$^{B66(D)}1xB_{5LTE}$	D_L50_2112.5M_Dd_P40W_MODtm1p1
$^{B66(D)}1xB_{5LTE(16QAM)}$	D_L50_2112.5M_Dd_P40W_MODtm3p2
$^{B66(D)}1xB_{5LTE(64QAM)}$	D_L50_2112.5M_Dd_P40W_MODtm3p1
$^{B66(D)}1xB_{5LTE(256QAM)}$	D_L50_2112.5M_Dd_P40W_MODtm3p1a
$^{B66(D)}1xM_{5LTE}$	D_L50_2155M_Dd_P40W_MODtm1p1
$^{B66(D)}1xT_{5LTE}$	D_L50_2197.5M_Dd_P40W_MODtm1p1
$^{B66(D)}1xB_{5LTE(IB-IoT1)}$	D_L50_2112.5M_Dd_P40W_MODtm1p1_MODiot1
$^{B66(D)}1xB_{5LTE(IB-IoT2)}$	D_L50_2112.5M_Dd_P40W_MODtm1p1_MODiot2
$^{B66(D)}1xM_{5LTE(IB-IoT1)}$	D_L50_2155M_Dd_P40W_MODtm1p1_MODiot1
$^{B66(D)}1xM_{5LTE(IB-IoT2)}$	D_L50_2155M_Dd_P40W_MODtm1p1_MODiot2
$^{B66(D)}1xT_{5LTE(IB-IoT1)}$	D_L50_2197.5M_Dd_P40W_MODtm1p1_MODiot1
$^{B66(D)}1xT_{5LTE(IB-IoT2)}$	D_L50_2197.5M_Dd_P40W_MODtm1p1_MODiot2
$^{B66(D)}1xB_{10LTE}$	D_L100_2115M_Dd_P40W_MODtm1p1
$^{B66(D)}1xM_{10LTE}$	D_L100_2155M_Dd_P40W_MODtm1p1
$^{B66(D)}1xT_{10LTE}$	D_L100_2195M_Dd_P40W_MODtm1p1
$^{B66(D)}1xB_{10LTE(GB-IoT)}$	D_L100GB1L1_2115M_Dd_P40W
$^{B66(D)}1xM_{10LTE(GB-IoT)}$	D_L100GB1L1_2155M_Dd_P40W
$^{B66(D)}1xT_{10LTE(GB-IoT)}$	D_L100GB1L1_2195M_Dd_P40W

EUT test details, continued

B66 LTE Configurations Tested, Continued :

Carrier Configuration	RUx String
$^{B66(D)}1xB_{15LTE}$	D_L150_2117.5M_Dd_P40W_MODtm1p1
$^{B66(D)}1xM_{15LTE}$	D_L150_2155M_Dd_P40W_MODtm1p1
$^{B66(D)}1xT_{15LTE}$	D_L150_2192.5M_Dd_P40W_MODtm1p1
$^{B66(D)}1xB_{15LTE(GB-IoT)}$	D_L150GB1L1_2117.5M_Dd_P40W
$^{B66(D)}1xM_{15LTE(GB-IoT)}$	D_L150GB1L1_2155M_Dd_P40W
$^{B66(D)}1xT_{15LTE(GB-IoT)}$	D_L150GB1L1_2192.5M_Dd_P40W
$^{B66(D)}1xB_{20LTE}$	D_L200_2120M_Dd_P40W_MODtm1p1
$^{B66(D)}1xM_{20LTE}$	D_L200_2155M_Dd_P40W_MODtm1p1
$^{B66(D)}1xT_{20LTE}$	D_L200_2190M_Dd_P40W_MODtm1p1
$^{B66(D)}1xB_{20LTE(GB-IoT)}$	D_L200GB1L1_2120M_Dd_P40W
$^{B66(D)}1xM_{20LTE(GB-IoT)}$	D_L200GB1L1_2155M_Dd_P40W
$^{B66(D)}1xT_{20LTE(GB-IoT)}$	D_L200GB1L1_2190M_Dd_P40W
$^{B66(D)}1xB_{5LTE(IB-IoT1)}$ + $^{B66(D)}1xT_{5LTE(IB-IoT2)}$	D_L50_2112.5M_Dd_P20W_MODiot1;D_L50_2197.5M_Dd_P20W_MODiot2_CPRI1.1
$^{B66(D)}1xB_{5LTE(IB-IoT2)}$ + $^{B66(D)}1xT_{5LTE(IB-IoT1)}$	D_L50_2112.5M_Dd_P20W_MODiot2;D_L50_2197.5M_Dd_P20W_MODiot1_CPRI1.1
$^{B66(D)}1xB_{10LTE(GB-IoT1L0)}$ + $^{B66(D)}1xT_{10LTE(GB-IoT0L1)}$	D_L100GB1L0_2115M_Dd_P20W;D_L100GB0L1_2195M_Dd_P20W_CPRI1.1
$^{B66(D)}1xB_{15LTE(GB-IoT1L0)}$ + $^{B66(D)}1xT_{15LTE(GB-IoT0L1)}$	D_L150GB1L0_2117.5M_Dd_P20W;D_L150GB0L1_2192.5M_Dd_P20W_CPRI1.1
$^{B66(D)}1xB_{20LTE(GB-IoT1L0)}$ + $^{B66(D)}1xT_{20LTE(GB-IoT0L1)}$	D_L200GB1L0_2120M_Dd_P20W;D_L200GB0L1_2190M_Dd_P20W_CPRI1.1
$^{B66(D)}1xB_{5LTE(IB-IoT1)}$ + $^{B66(D)}1xB,1xT_{5LTE}$ + $^{B66(D)}1xT_{5LTE(IB-IoT2)}$	D_L50_2112.5M_Dd_P10W_MODiot1;D_L50_2117.5M_Dd_P10W_MODtm1p1;D_L50_2192.5M_Dd_P10W_MODtm1p1;D_L50_2197.5M_Dd_P10W_MODiot2_CPRI1.1
$^{B66(D)}1xB_{10LTE(GB-IoT1L0)}$ + $^{B66(D)}1xB,1xT_{10LTE}$ + $^{B66(D)}1xT_{10LTE(GB-IoT0L1)}$	D_L100GB1L0_2115M_Dd_P10W;D_L100_2125M_Dd_P10W_MODtm1p1;D_L100_2185M_Dd_P10W_MODtm1p1;D_L100GB0L1_2195M_Dd_P10W_CPRI1.1
$^{B66(D)}1xB_{15LTE(GB-IoT1L0)}$ + $^{B66(D)}1xB,1xT_{15LTE}$ + $^{B66(D)}1xT_{15LTE(GB-IoT0L1)}$	D_L150GB1L0_2117.5M_Dd_P10W;D_L150_2132.5M_Dd_P10W_MODtm1p1;D_L150_2177.5M_Dd_P10W_MODtm1p1;D_L150GB0L1_2192.5M_Dd_P10W_CPRI1.1
$^{B66(D)}1xB_{20LTE(GB-IoT1L0)}$ + $^{B66(D)}1xB,1xT_{20LTE}$ + $^{B66(D)}1xT_{20LTE(GB-IoT0L1)}$	D_L200GB1L0_2120M_Dd_P10W;D_L200_2140M_Dd_P10W_MODtm1p1;D_L200_2170M_Dd_P10W_MODtm1p1;D_L200GB0L1_2190M_Dd_P10W_CPRI1.1

EUT test details, continued

B66 LTE Configurations Tested, Continued :

Carrier Configuration	RUx String
$^{B66(D)}$1xB$_{5LTE(IB-IoT1)}$ + $^{B66(D)}$2xB,2xT$_{5LTE}$ + $^{B66(D)}$1xT$_{5LTE(IB-IoT2)}$	D_L50_2112.5M_Dd_P6.67W_MODiot1;D_L50_2117.5M_Dd_P6.67W_MODtm1p1;D_L50_2122.5M_Dd_P6.67W_MODtm1p1;D_L50_2187.5M_Dd_P6.67W_MODtm1p1;D_L50_2192.5M_Dd_P6.67W_MODtm1p1;D_L50_2197.5M_Dd_P6.67W_MODiot2_CPRI1.1
$^{B66(D)}$1xB$_{10LTE(GB-IoT1L0)}$ + $^{B66(D)}$2xB,2xT$_{10LTE}$ + $^{B66(D)}$1xT$_{10LTE(GB-IoT0L1)}$	D_L100GB1L0_2115M_Dd_P6.67W;D_L100_2125M_Dd_P6.67W_MODtm1p1;D_L100_2135M_Dd_P6.67W_MODtm1p1;D_L100_2175M_Dd_P6.67W_MODtm1p1;D_L100_2185M_Dd_P6.67W_MODtm1p1;D_L100GB0L1_2195M_Dd_P6.67W_CPRI1.1
$^{B66(D)}$1xB$_{15LTE(GB-IoT1L0)}$ + $^{B66(D)}$2xB,2xT$_{15LTE}$ + $^{B66(D)}$1xT$_{15LTE(GB-IoT0L1)}$	D_L150GB1L0_2117.5M_Dd_P6.67W;D_L150_2132.5M_Dd_P6.67W_MODtm1p1;D_L150_2147.5M_Dd_P6.67W_MODtm1p1;D_L150_2162.5M_Dd_P6.67W_MODtm1p1;D_L150_2177.5M_Dd_P6.67W_MODtm1p1;D_L150GB0L1_2192.5M_Dd_P6.67W_CPRI1.1

B66 NR Configurations Tested:

Carrier Configuration	RUx String
$^{B66(D)}$1xB$_{5NR}$	D_NR50_2112.5M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xB$_{5NR(16QAM)}$	D_NR50_2112.5M_Dd_P40W_MODtm3p2-15k
$^{B66(D)}$1xB$_{5NR(64QAM)}$	D_NR50_2112.5M_Dd_P40W_MODtm3p1-15k
$^{B66(D)}$1xB$_{5NR(256QAM)}$	D_NR50_2112.5M_Dd_P40W_MODtm3p1a-15k
$^{B66(D)}$1xM$_{5NR}$	D_NR50_2155M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xT$_{5NR}$	D_NR50_2197.5M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xB$_{10NR}$	D_NR100_2115M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xM$_{10NR}$	D_NR100_2155M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xT$_{10NR}$	D_NR100_2195M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xB$_{15NR}$	D_NR150_2117.5M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xM$_{15NR}$	D_NR150_2155M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xT$_{15NR}$	D_NR150_2192.5M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xB$_{20NR}$	D_NR200_2120M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xM$_{20NR}$	D_NR200_2155M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xT$_{20NR}$	D_NR200_2190M_Dd_P40W_MODtm1p1-15k
$^{B66(D)}$1xB,1xT$_{5NR}$	D_NR50_2112.5M_Dd_P20W_MODtm1p1-15k;D_NR50_2197.5M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}$1xB,1xT$_{10NR}$	D_NR100_2115M_Dd_P20W_MODtm1p1-15k;D_NR100_2195M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}$1xB,1xT$_{15NR}$	D_NR150_2117.5M_Dd_P20W_MODtm1p1-15k;D_NR150_2192.5M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}$1xB,1xT$_{20NR}$	D_NR200_2120M_Dd_P20W_MODtm1p1-15k;D_NR200_2190M_Dd_P20W_MODtm1p1-15k

EUT test details, continued

B66 NR Configurations Tested, Continued :

Carrier Configuration	RUx String
$^{B66(D)}$1xB,1xM,1xT_{5NR}	D_NR50_2112.5M_Dd_P13.34W_MODtm1p1-15k;D_NR50_2155M_Dd_P13.33W_MODtm1p1-15k;D_NR50_2197.5M_Dd_P13.33W_MODtm1p1-15k
$^{B66(D)}$1xB,1xM,1xT_{10NR}	D_NR100_2115M_Dd_P13.34W_MODtm1p1-15k;D_NR100_2155M_Dd_P13.33W_MODtm1p1-15k;D_NR100_2195M_Dd_P13.33W_MODtm1p1-15k
$^{B66(D)}$1xB,1xM,1xT_{15NR}	D_NR150_2117.5M_Dd_P13.34W_MODtm1p1-15k;D_NR150_2155M_Dd_P13.33W_MODtm1p1-15k;D_NR150_2192.5M_Dd_P13.33W_MODtm1p1-15k
$^{B66(D)}$1xB,1xM,1xT_{20NR}	D_NR200_2120M_Dd_P13.34W_MODtm1p1-15k;D_NR200_2155M_Dd_P13.33W_MODtm1p1-15k;D_NR200_2190M_Dd_P13.33W_MODtm1p1-15k
$^{B66(D)}$2xB,2xT_{5NR}	D_NR50_2112.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2117.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2192.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2197.5M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}$2xB,2xT_{10NR}	D_NR100_2115M_Dd_P10W_MODtm1p1-15k;D_NR100_2125M_Dd_P10W_MODtm1p1-15k;D_NR100_2185M_Dd_P10W_MODtm1p1-15k;D_NR100_2195M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}$2xB,2xT_{15NR}	D_NR150_2117.5M_Dd_P10W_MODtm1p1-15k;D_NR150_2132.5M_Dd_P10W_MODtm1p1-15k;D_NR150_2177.5M_Dd_P10W_MODtm1p1-15k;D_NR150_2192.5M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}$2xB,2xT_{20NR}	D_NR200_2120M_Dd_P10W_MODtm1p1-15k;D_NR200_2140M_Dd_P10W_MODtm1p1-15k;D_NR200_2170M_Dd_P10W_MODtm1p1-15k;D_NR200_2190M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}$2xB,2xT_{20NR} + $^{B66(D)}$1xM_{10NR}	D_NR200_2120M_Dd_P8W_MODtm1p1-15k;D_NR200_2140M_Dd_P8W_MODtm1p1-15k;D_NR100_2155M_Dd_P8W_MODtm1p1-15k;D_NR200_2170M_Dd_P8W_MODtm1p1-15k;D_NR200_2190M_Dd_P8W_MODtm1p1-15k
$^{B66(D)}$3xB,3xT_{5NR}	D_NR50_2112.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2117.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2122.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2187.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2192.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2197.5M_Dd_P6.67W_MODtm1p1-15k
$^{B66(D)}$3xB,3xT_{10NR}	D_NR100_2115M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2125M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2135M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2175M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2185M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2195M_Dd_P6.67W_MODtm1p1-15k
$^{B66(D)}$3xB,3xT_{15NR}	D_NR150_2117.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2132.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2147.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2162.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2177.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2192.5M_Dd_P6.67W_MODtm1p1-15k

B70 LTE Configurations Tested:

Carrier Configuration	RUx String
$^{B70(D)}$1xB_{5LTE}	D_L50_1997.5M_Dd_P40W_MODtm1p1
$^{B70(D)}$1x$B_{5LTE(16QAM)}$	D_L50_1997.5M_Dd_P40W_MODtm3p2
$^{B70(D)}$1x$B_{5LTE(64QAM)}$	D_L50_1997.5M_Dd_P40W_MODtm3p1
$^{B70(D)}$1x$B_{5LTE(256QAM)}$	D_L50_1997.5M_Dd_P40W_MODtm3p1a
$^{B70(D)}$1xM_{5LTE}	D_L50_2007.5M_Dd_P40W_MODtm1p1
$^{B70(D)}$1xT_{5LTE}	D_L50_2017.5M_Dd_P40W_MODtm1p1

EUT test details, continued

B70 LTE Configurations Tested, Continued:

Carrier Configuration	RUx String
$^{B70(D)}1xB_{5LTE(IB\text{-}IoT1)}$	D_L50_1997.5M_Dd_P40W_MODiot1
$^{B70(D)}1xB_{5LTE(IB\text{-}IoT2)}$	D_L50_1997.5M_Dd_P40W_MODiot2
$^{B70(D)}1xM_{5LTE(IB\text{-}IoT1)}$	D_L50_2007.5M_Dd_P40W_MODiot1
$^{B70(D)}1xM_{5LTE(IB\text{-}IoT2)}$	D_L50_2007.5M_Dd_P40W_MODiot2
$^{B70(D)}1xT_{5LTE(IB\text{-}IoT1)}$	D_L50_2017.5M_Dd_P40W_MODiot1
$^{B70(D)}1xT_{5LTE(IB\text{-}IoT2)}$	D_L50_2017.5M_Dd_P40W_MODiot2
$^{B70(D)}1xB_{10LTE}$	D_L100_2000M_Dd_P40W_MODtm1p1
$^{B70(D)}1xM_{10LTE}$	D_L100_2007.5M_Dd_P40W_MODtm1p1
$^{B70(D)}1xT_{10LTE}$	D_L100_2015M_Dd_P40W_MODtm1p1
$^{B70(D)}1xB_{10LTE(GB\text{-}IoT)}$	D_L100GB1L1_2000M_Dd_P40W
$^{B70(D)}1xM_{10LTE(GB\text{-}IoT)}$	D_L100GB1L1_2007.5M_Dd_P40W
$^{B70(D)}1xT_{10LTE(GB\text{-}IoT)}$	D_L100GB1L1_2015M_Dd_P40W
$^{B70(D)}1xB_{15LTE}$	D_L150_2002.5M_Dd_P40W_MODtm1p1
$^{B70(D)}1xM_{15LTE}$	D_L150_2007.5M_Dd_P40W_MODtm1p1
$^{B70(D)}1xT_{15LTE}$	D_L150_2012.5M_Dd_P40W_MODtm1p1
$^{B70(D)}1xB_{15LTE(GB\text{-}IoT)}$	D_L150GB1L1_2002.5M_Dd_P40W
$^{B70(D)}1xM_{15LTE(GB\text{-}IoT)}$	D_L150GB1L1_2007.5M_Dd_P40W
$^{B70(D)}1xT_{15LTE(GB\text{-}IoT)}$	D_L150GB1L1_2012.5M_Dd_P40W
$^{B70(D)}1xB_{20LTE}$	D_L200_2005M_Dd_P40W_MODtm1p1
$^{B70(D)}1xM_{20LTE}$	D_L200_2007.5M_Dd_P40W_MODtm1p1
$^{B70(D)}1xT_{20LTE}$	D_L200_2010M_Dd_P40W_MODtm1p1
$^{B70(D)}1xB_{20LTE(GB\text{-}IoT)}$	D_L200GB1L1_2005M_Dd_P40W
$^{B70(D)}1xM_{20LTE(GB\text{-}IoT)}$	D_L200GB1L1_2007.5M_Dd_P40W
$^{B70(D)}1xT_{20LTE(GB\text{-}IoT)}$	D_L200GB1L1_2010M_Dd_P40W
$^{B70(D)}1xB_{5LTE(IB\text{-}IoT1)}$ + $^{B70(D)}1xT_{5LTE(IB\text{-}IoT2)}$	D_L50_1997.5M_Dd_P20W_MODiot1;D_L50_2017.5M_Dd_P20W_MODiot2_CPRI1.1
$^{B70(D)}1xB_{5LTE(IB\text{-}IoT2)}$ + $^{B70(D)}1xT_{5LTE(IB\text{-}IoT1)}$	D_L50_1997.5M_Dd_P20W_MODiot2;D_L50_2017.5M_Dd_P20W_MODiot1_CPRI1.1
$^{B70(D)}1xB_{10LTE(GB\text{-}IoT1L0)}$ + $^{B70(D)}1xT_{10LTE(GB\text{-}IoT0L1)}$	D_L100GB1L0_2000M_Dd_P20W;D_L100GB0L1_2015M_Dd_P20W_CPRI1.1

EUT test details, continued

B70 LTE Configurations Tested, Continued :

Carrier Configuration	RUx String
$^{B70(D)}$1xB$_{5LTE(IB\text{-}IoT1)}$ + $^{B70(D)}$1xB,1xT$_{5LTE}$ + $^{B70(D)}$1xT$_{5LTE(IB\text{-}IoT2)}$	D_L50_1997.5M_Dd_P10W_MODiot1;D_L50_2002.5M_Dd_P10W_MODtm1p1;D_L50_2012.5M_Dd_P10W_MODtm1p1;D_L50_2017.5M_Dd_P10W_MODiot2_CPRI1.1
$^{B70(D)}$5xM$_{5LTE}$	D_L50_1997.5M_Dd_P8W_MODiot1;D_L50_2002.5M_Dd_P8W_MODtm1p1;D_L50_2007.5M_Dd_P8W_MODtm1p1;D_L50_2012.5M_Dd_P8W_MODtm1p1;D_L50_2017.5M_Dd_P8W_MODiot2_CPRI1.1

B70 NR Configurations Tested:

Carrier Configuration	RUx String
$^{B70(D)}$1xB$_{5NR}$	D_NR50_1997.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xB$_{5NR(16QAM)}$	D_NR50_1997.5M_Dd_P40W_MODtm3p2-15k
$^{B70(D)}$1xB$_{5NR(64QAM)}$	D_NR50_1997.5M_Dd_P40W_MODtm3p1-15k
$^{B70(D)}$1xB$_{5NR(256QAM)}$	D_NR50_1997.5M_Dd_P40W_MODtm3p1a-15k
$^{B70(D)}$1xM$_{5NR}$	D_NR50_2007.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xT$_{5NR}$	D_NR50_2017.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xB$_{10NR}$	D_NR100_2000M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xM$_{10NR}$	D_NR100_2007.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xT$_{10NR}$	D_NR100_2015M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xB$_{15NR}$	D_NR150_2002.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xM$_{15NR}$	D_NR150_2007.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xT$_{15NR}$	D_NR150_2012.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xB$_{20NR}$	D_NR200_2005M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xM$_{20NR}$	D_NR200_2007.5M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xT$_{20NR}$	D_NR200_2010M_Dd_P40W_MODtm1p1-15k
$^{B70(D)}$1xB,1xT$_{5NR}$	D_NR50_1997.5M_Dd_P20W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P20W_MODtm1p1-15k
$^{B70(D)}$1xB,1xT$_{10NR}$	D_NR100_2000M_Dd_P20W_MODtm1p1-15k;D_NR100_2015M_Dd_P20W_MODtm1p1-15k
$^{B70(D)}$1xB,1xM,1xT$_{5NR}$	D_NR50_1997.5M_Dd_P13.34W_MODtm1p1-15k;D_NR50_2007.5M_Dd_P13.34W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P13.34W_MODtm1p1-15k
$^{B70(D)}$2xB,2xT$_{5NR}$	D_NR50_1997.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2002.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2012.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P10W_MODtm1p1-15k

EUT test details, continued

B70 NR Configurations Tested, Continued :

Carrier Configuration	RUx String
$^{B70(D)}5xM_{5NR}$	D_NR50_1997.5M_Dd_P8W_MODtm1p1-15k;D_NR50_2002.5M_Dd_P8W_MODtm1p1-15k;D_NR50_2007.5M_Dd_P8W_MODtm1p1-15k;D_NR50_2012.5M_Dd_P8W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P8W_MODtm1p1-15k

B70A LTE Configurations Tested:

Carrier Configuration	RUx String
$^{B70A(D)}1xB_{5LTE}$	D_L50_2002.5M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xB_{5LTE(16QAM)}$	D_L50_2002.5M_Dd_P40W_MODtm3p2
$^{B70A(D)}1xB_{5LTE(64QAM)}$	D_L50_2002.5M_Dd_P40W_MODtm3p1
$^{B70A(D)}1xB_{5LTE(256QAM)}$	D_L50_2002.5M_Dd_P40W_MODtm3p1a
$^{B70A(D)}1xM_{5LTE}$	D_L50_2010M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xB_{5LTE(IB-IoT1)}$	D_L50_2002.5M_Dd_P40W_MODiot1
$^{B70A(D)}1xB_{5LTE(IB-IoT2)}$	D_L50_2002.5M_Dd_P40W_MODiot2
$^{B70A(D)}1xM_{5LTE(IB-IoT1)}$	D_L50_2010M_Dd_P40W_MODiot1
$^{B70A(D)}1xM_{5LTE(IB-IoT2)}$	D_L50_2010M_Dd_P40W_MODiot2
$^{B70A(D)}1xB_{10LTE}$	D_L100_2005M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xM_{10LTE}$	D_L100_2010M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xB_{10LTE(GB-IoT)}$	D_L100GB1L1_2005M_Dd_P40W
$^{B70A(D)}1xM_{10LTE(GB-IoT)}$	D_L100GB1L1_2010M_Dd_P40W
$^{B70A(D)}1xB_{15LTE}$	D_L150_2007.5M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xM_{15LTE}$	D_L150_2010M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xB_{15LTE(GB-IoT)}$	D_L150GB1L1_2007.5M_Dd_P40W
$^{B70A(D)}1xM_{15LTE(GB-IoT)}$	D_L150GB1L1_2010M_Dd_P40W
$^{B70A(D)}1xM_{20LTE}$	D_L200_2010M_Dd_P40W_MODtm1p1
$^{B70A(D)}1xM_{20LTE(GB-IoT)}$	D_L200GB1L1_2010M_Dd_P40W
$^{B70A(D)}1xB_{5LTE(IB-IoT1)}$ + $^{B70A(D)}1xT_{5LTE(IB-IoT2)}$	D_L50_2002.5M_Dd_P20W_MODiot1;D_L50_2017.5M_Dd_P20W_MODiot2_CPRI1.1
$^{B70A(D)}1xB_{5LTE(IB-IoT2)}$ + $^{B70A(D)}1xT_{5LTE(IB-IoT1)}$	D_L50_2002.5M_Dd_P20W_MODiot2;D_L50_2017.5M_Dd_P20W_MODiot1_CPRI1.1
$^{B70A(D)}1xB_{10LTE(GB-IoT1L0)}$ + $^{B70A(D)}1xT_{10LTE(GB-IoT0L1)}$	D_L100GB1L0_2005M_Dd_P20W;D_L100GB0L1_2015M_Dd_P20W_CPRI1.1

EUT test details, continued

B70A NR Configurations Tested:

Carrier Configuration	RUx String
$^{B70A(D)}1xB_{5NR}$	D_NR50_2002.5M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xB_{5NR(16QAM)}$	D_NR50_2002.5M_Dd_P40W_MODtm3p2-15k
$^{B70A(D)}1xB_{5NR(64QAM)}$	D_NR50_2002.5M_Dd_P40W_MODtm3p1-15k
$^{B70A(D)}1xB_{5NR(256QAM)}$	D_NR50_2002.5M_Dd_P40W_MODtm3p1a-15k
$^{B70A(D)}1xM_{5NR}$	D_NR50_2010M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xB_{10NR}$	D_NR100_2005M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xM_{10NR}$	D_NR100_2010M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xB_{15NR}$	D_NR150_2007.5M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xM_{15NR}$	D_NR150_2010M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xM_{20NR}$	D_NR200_2010M_Dd_P40W_MODtm1p1-15k
$^{B70A(D)}1xB,1xT_{5NR}$	D_NR50_2002.5M_Dd_P20W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P20W_MODtm1p1-15k
$^{B70A(D)}1xB,1xT_{10NR}$	D_NR100_2005M_Dd_P20W_MODtm1p1-15k;D_NR100_2015M_Dd_P20W_MODtm1p1-15k
$^{B70A(D)}1xB,1xM,1xT_{5NR}$	D_NR50_2002.5M_Dd_P13.34W_MODtm1p1-15k;D_NR50_2010M_Dd_P13.34W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P13.34W_MODtm1p1-15k

B66 Multi-RAT Configurations Tested:

Carrier Configuration	RUx String
$^{B66(D)}1xB_{5LTE} + {}^{B66(D)}1xT_{5NR}$	D_L50_2112.5M_Dd_P20W_MODtm1p1;D_NR50_2197.5M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}1xB_{10LTE} + {}^{B66(D)}1xT_{10NR}$	D_L100_2115M_Dd_P20W_MODtm1p1;D_NR100_2195M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}1xB_{15LTE} + {}^{B66(D)}1xT_{15NR}$	D_L150_2117.5M_Dd_P20W_MODtm1p1;D_NR150_2192.5M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}1xB_{20LTE} + {}^{B66(D)}1xT_{20NR}$	D_L200_2120M_Dd_P20W_MODtm1p1;D_NR200_2190M_Dd_P20W_MODtm1p1-15k
$^{B66(D)}2xB_{5LTE} + {}^{B66(D)}2xT_{5NR}$	D_L50_2112.5M_Dd_P10W_MODtm1p1;D_L50_2117.5M_Dd_P10W_MODtm1p1;D_NR50_2192.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2197.5M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}2xB_{10LTE} + {}^{B66(D)}2xT_{10NR}$	D_L100_2115M_Dd_P10W_MODtm1p1;D_L100_2125M_Dd_P10W_MODtm1p1;D_NR100_2185M_Dd_P10W_MODtm1p1-15k;D_NR100_2195M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}2xB_{15LTE} + {}^{B66(D)}2xT_{15NR}$	D_L150_2117.5M_Dd_P10W_MODtm1p1;D_L150_2132.5M_Dd_P10W_MODtm1p1;D_NR150_2177.5M_Dd_P10W_MODtm1p1-15k;D_NR150_2192.5M_Dd_P10W_MODtm1p1-15k
$^{B66(D)}2xB_{20LTE} + {}^{B66(D)}2xT_{20NR}$	D_L200_2120M_Dd_P10W_MODtm1p1;D_L200_2140M_Dd_P10W_MODtm1p1;D_NR200_2170M_Dd_P10W_MODtm1p1-15k;D_NR200_2190M_Dd_P10W_MODtm1p1-15k

EUT test details, continued

B66 Multi-RAT Configurations Tested, Continued :

Carrier Configuration	RUx String
$^{B66(D)}3xB_{5LTE} + {}^{B66(D)}3xT_{5NR}$	D_L50_2112.5M_Dd_P6.67W_MODtm1p1;D_L50_2117.5M_Dd_P6.67W_MODtm1p1;D_L50_2122.5M_Dd_P6.67W_MODtm1p1;D_NR50_2187.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2192.5M_Dd_P6.67W_MODtm1p1-15k;D_NR50_2197.5M_Dd_P6.67W_MODtm1p1-15k
$^{B66(D)}3xB_{10LTE} + {}^{B66(D)}3xT_{10NR}$	D_L100_2115M_Dd_P6.67W_MODtm1p1;D_L100_2125M_Dd_P6.67W_MODtm1p1;D_L100_2135M_Dd_P6.67W_MODtm1p1;D_NR100_2175M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2185M_Dd_P6.67W_MODtm1p1-15k;D_NR100_2195M_Dd_P6.67W_MODtm1p1-15k
$^{B66(D)}3xB_{15LTE} + {}^{B66(D)}3xT_{15NR}$	D_L150_2117.5M_Dd_P6.67W_MODtm1p1;D_L150_2132.5M_Dd_P6.67W_MODtm1p1;D_L150_2147.5M_Dd_P6.67W_MODtm1p1;D_NR150_2162.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2177.5M_Dd_P6.67W_MODtm1p1-15k;D_NR150_2192.5M_Dd_P6.67W_MODtm1p1-15k

B70 Multi-RAT Configurations Tested:

Carrier Configuration	RUx String
$^{B70(D)}1xB_{5LTE} + {}^{B70(D)}1xT_{5NR}$	D_L50_1997.5M_Dd_P20W_MODtm1p1;D_NR50_2017.5M_Dd_P20W_MODtm1p1-15k
$^{B70(D)}1xB_{10LTE} + {}^{B70(D)}1xT_{10NR}$	D_L100_2000M_Dd_P20W_MODtm1p1;D_NR100_2015M_Dd_P20W_MODtm1p1-15k
$^{B70(D)}2xB_{5LTE} + {}^{B70(D)}2xT_{5NR}$	D_L50_1997.5M_Dd_P10W_MODtm1p1;D_L50_2002.5M_Dd_P10W_MODtm1p1;D_NR50_2012.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P10W_MODtm1p1-15k
$^{B70(D)}3xB_{5LTE} + {}^{B70(D)}2xT_{5NR}$	D_L50_1997.5M_Dd_P8W_MODtm1p1;D_L50_2002.5M_Dd_P8W_MODtm1p1;D_L50_2007.5M_Dd_P8W_MODtm1p1;D_NR50_2012.5M_Dd_P8W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P8W_MODtm1p1-15k

B70A Multi-RAT Configurations Tested:

Carrier Configuration	RUx String
$^{B70A(D)}1xB_{5LTE} + {}^{B70A(D)}1xT_{5NR}$	D_L50_2002.5M_Dd_P20W_MODtm1p1;D_NR50_2017.5M_Dd_P20W_MODtm1p1-15k
$^{B70A(D)}1xB_{10LTE} + {}^{B70A(D)}1xT_{10NR}$	D_L100_2005M_Dd_P20W_MODtm1p1;D_NR100_2015M_Dd_P20W_MODtm1p1-15k
$^{B70A(D)}2xB_{5LTE} + {}^{B70A(D)}2xT_{5NR}$	D_L50_2002.5M_Dd_P10W_MODtm1p1;D_L50_2007.5M_Dd_P10W_MODtm1p1;D_NR50_2012.5M_Dd_P10W_MODtm1p1-15k;D_NR50_2017.5M_Dd_P10W_MODtm1p1-15k

3.4 EUT setup diagram

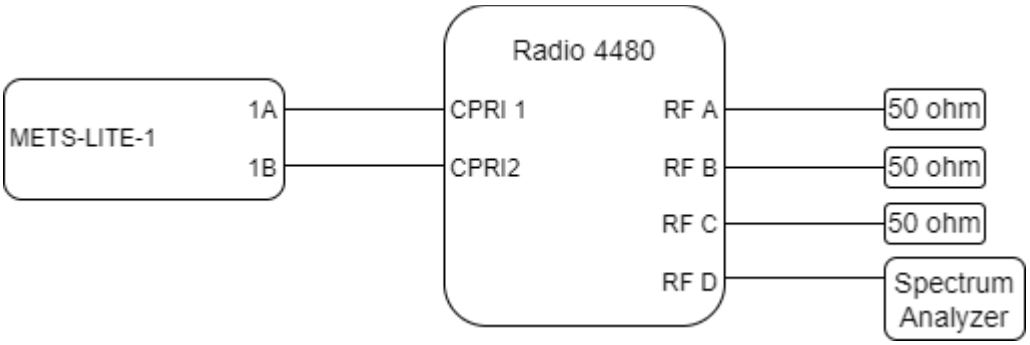

Figure 3.4-1: *Setup diagram – Radio Compliance*

3.5 Setup photographs

Figure 3.5-1: *Set up photo for Radio Compliance Testing*

3.6 Setup photographs, continued

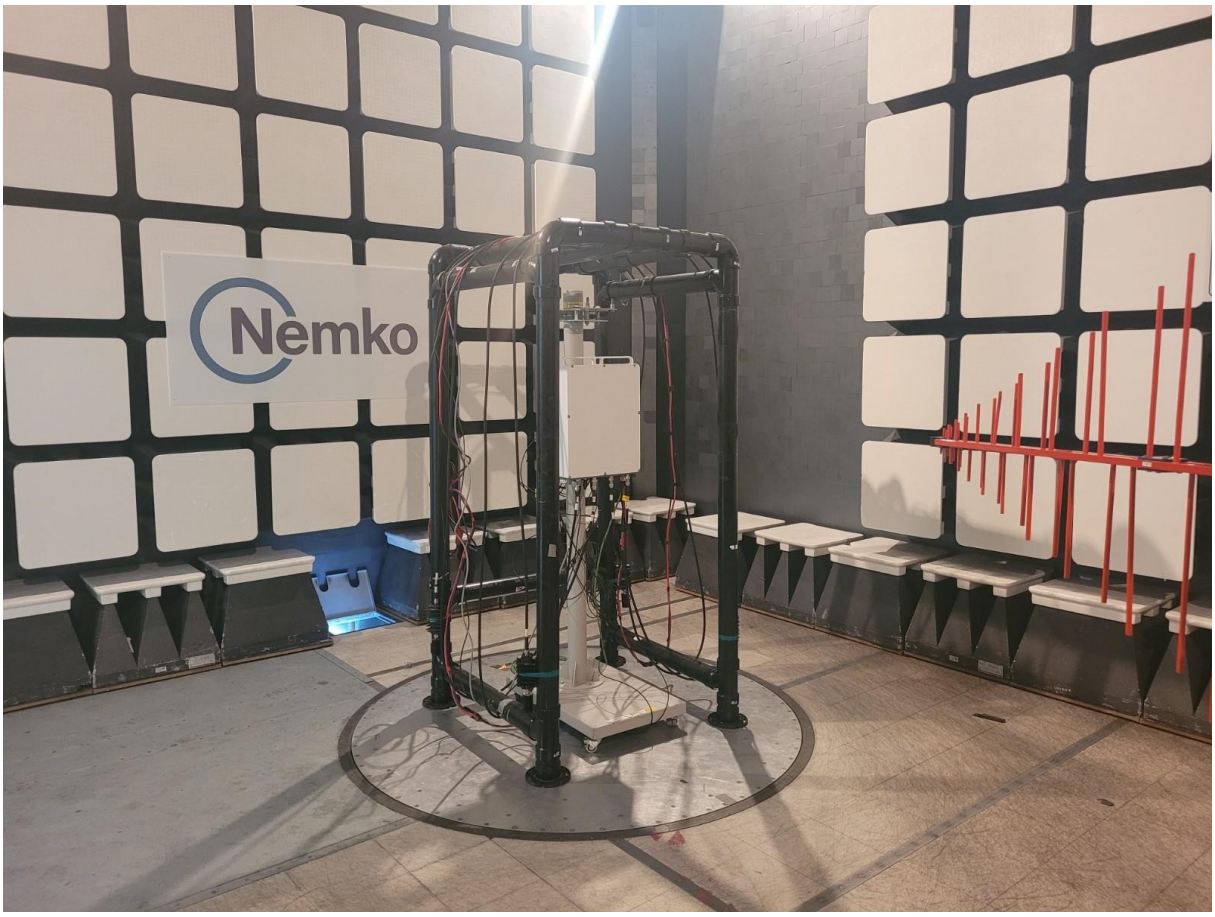

Figure 3.6-1: *EUT Set-up photo for Radiated Compliance Testing*

Section 4. Engineering considerations

4.1 Modifications incorporated in the EUT

There were no modifications performed to the EUT during this assessment.

4.2 Technical judgment

None

4.3 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 5. Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	860–1060 mbar

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages ±5 %, for which the equipment was designed.

Section 6. Measurement uncertainty

6.1 Uncertainty of measurement

Measurement uncertainty budgets for the tests are detailed below. Measurement uncertainty calculations assume a coverage factor of K = 2 with 95% certainty.

Test name	Measurement uncertainty, dB
All antenna port measurements	0.55
Conducted spurious emissions	1.13
Radiated spurious emissions	3.78

Section 7. Test equipment

7.1 Test equipment list

Table 7.1-1: *Equipment list*

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
3 m EMI test chamber	TDK	SAC-3	FA002047	1 year	20-Jan-23
Flush mount turntable	Sunol	FM2022	FA002082	—	NCR
Controller	Sunol	SC104V	FA002060	—	NCR
Antenna mast	Sunol	TLT2	FA002061	—	NCR
Receiver/spectrum analyzer	Rohde & Schwarz	ESU 26	FA002043	1 year	25-Nov-22
Horn (1–18 GHz)	ETS Lindgren	3117	FA002840	1 year	10-Feb-23
Preamp (1–18 GHz)	ETS Lindgren	124334	FA002873	1 year	22-Sep-22
50 Ω coax cable	C.C.A.	None	FA002556	1 year	03-May-23
Horn antenna (18–40 GHz)	EMCO	3116	FA001847	1 year	06-Jun-23
Pre-amplifier (18–26 GHz)	Narda	BBS-1826N612	FA001550	—	VOU
High pass filter (3-18 GHz)	Thilithic Inc.	6HC3000/18000-1.3-KK	FA002231	1 year	15-Jun-22
Signal and Spectrum Analyzer	Rhode&Schwarz	FSW50	FA003267	1 year	29-Nov-22
Testing Equipment*	Ericsson	CT11	T01G495060	—	NCR

Notes: NCR - no calibration required, VOU - verify on use.

* Testing equipment (CT11) is the test equipment that drives the radios traffic.

Section 8. Testing data

8.1 Maximum output power at RF antenna connector (Band 66)

8.1.1 Definitions and limits

FCC §27.50(d) Operation within the bands: 2110–2155 MHz and 2155–2180 MHz.

(1) The power of each fixed or base station transmitting in the 1995–2000 MHz, 2110–2155 MHz, 2155–2180 MHz or 2180–2200 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 3280 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 3280 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(2) The power of each fixed or base station transmitting in the 1995–2000 MHz, the 2110–2155 MHz 2155–2180 MHz band, or 2180–2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(3) A licensee operating a base or fixed station in the 2110–2155 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must coordinate such operations in advance with all Government and non-Government satellite entities in the 2025–2110 MHz band. A licensee operating a base or fixed station in the 2110–2180 MHz band utilizing power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with the following licensees authorized to operate within 120 kilometers (75 miles) of the base or fixed station operating in this band: All Broadband Radio Service (BRS) licensees authorized under this part in the 2155–2160 MHz band and all advanced wireless services (AWS) licensees authorized to operate on adjacent frequency blocks in the 2110–2180 MHz band.

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(6) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

8.1.1 Definitions and limits, continued

RSS-139, Section 4.1

The transmitter power shall be measured in terms of a root-mean-square (RMS) average value.

RSS-139, Section 6.5

Consult SRSP-513 for e.i.r.p. limits on fixed and base stations operating in the band 2110–2180 MHz.

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

RSS-170, Section 5.3.1

Consult SRSP-519 for e.i.r.p. limits on ATC base stations operating in the bands 2000–2020 MHz and 2180–2200 MHz.

SRSP-513, Section 5.1

5.1.1 Fixed and base stations

5.1.1.1 For fixed and base stations operating within the frequency range 2110–2180 MHz with a channel bandwidth equal to or less than 1 MHz, the maximum permissible equivalent isotropically radiated power (e.i.r.p.) is 1640 watts with an antenna height above average terrain (HAAT) up to 300 metres.

5.1.1.2 For fixed and base stations operating within the frequency range 2110–2180 MHz with a channel bandwidth greater than 1 MHz, the maximum permissible e.i.r.p. is 1640 watts/MHz e.i.r.p. (i.e. no more than 1640 watts e.i.r.p. in any 1 MHz band segment) with an antenna height above average terrain (HAAT) up to 300 metres.

5.1.1.3 Fixed and base stations located in geographic areas at a distance greater than 26 km from large or medium population centres, and transmitting within the frequency range 2110–2180 MHz, may increase their e.i.r.p. up to a maximum of 3280 watts/MHz (i.e. no more than 3280 watts e.i.r.p. in any 1 MHz band segment), with an antenna HAAT up to 300 metres.

Within 26 km of any large or medium population centre, fixed and base stations may operate at increased e.i.r.p. if more than 50% of the population within a particular sector's coverage is located outside these large and medium population centres.

Fixed and base stations with increased e.i.r.p. must not be used to provide coverage to large and medium population centres. However, some incidental coverage of these large and medium population centres by stations with increased e.i.r.p. is permitted.

This provision also applies for fixed and base stations with a channel bandwidth equal to or less than 1 MHz (i.e. the e.i.r.p. may be increased up to a maximum of 3280 watts).

5.1.1.4 Fixed and base station antenna heights above average terrain may exceed 300 metres with a reduction in e.i.r.p. The maximum permissible e.i.r.p. for installations with antenna HAAT in excess of 300 metres is given in the following table:

Table 8.1-1: *Reduction to Maximum Allowable E.I.R.P. for HAAT > 300 m*

HAAT (m)	Maximum EIRP, W/MHz
HAAT ≤ 300	1640 (or 3280[1])
300 < HAAT ≤ 500	1070
500 < HAAT ≤ 1000	490
1000 < HAAT ≤ 1500	270
1500 < HAAT ≤ 2000	160

Note: [1]for fixed and base stations with a channel bandwidth equal to or less than 1 MHz

8.1.1 Definitions and limits, continued

SRSP-519, Section 5.1

The equivalent isotropically radiated power (e.i.r.p.) of base stations shall not exceed 1640 W when transmitting with an emission bandwidth of 1 MHz or less, and 1640 W/MHz when transmitting with an emission bandwidth greater than 1 MHz.

Base stations located outside of large or medium population may increase their e.i.r.p. to a maximum of 3280 W when transmitting with an emission bandwidth of 1 MHz or less, and to 3280 W/MHz when transmitting with an emission bandwidth greater than 1 MHz.

A licensee operating a base station utilizing an e.i.r.p greater than 1640 W/MHz must coordinate in advance with all AWS–4 licensees authorized to operate on adjacent frequency blocks within the same band.

Base station antenna heights above average terrain may exceed 300 m with a corresponding reduction in e.i.r.p. in accordance with Table above

8.1.2 Test summary

Test date	May 30, 2022
Test engineer	Moustapha Salah Toubeh

8.1.3 Observations, settings, and special notes

Output power was measured with RMS power meter per ANSI C63.26 Paragraph 5.2.4.2 method. PSD was measured using method described in paragraph 5.2.4.4.

- Randomly selected sample plots provided for information and settings only
- This radio unit is tested without the antenna. Licensees are required to take into account installation and deployment criteria along with maximum power settings, antenna gain, and feeder loss for all carrier configurations to ensure compliance against EIRP limits as defined by the FCC/ISED regulations. (See section 8.1.1)
- Total MIMO PSD was calculated as follows: PSD from one antenna port + $10 \times \text{Log}_{10}$ (4)
- RBS (Radio Base Station) EIRP Limits are deployment dependent. To ensure compliance with legal limits detailed in section 8.1.1, RBS set up and carrier configurations are addressed during site commissioning.
- Report results are compiled for the maximum output rated power for worst case emission assessment. EIRP, based on possible beam configuration, indicate the maximum power / worst case beam configuration based on ideal antenna parameters. Customer carrier configuration and power will be limited to comply with legal limits of 3280 W/MHz and/or 1640 W/MHz during RBS site set up and commissioning. Non-compliant configurations will be restricted to lower carrier power to ensure compliance. Power settings and carrier configurations will be limited to lower power as warranted based on deployment scenarios as per FCC/ISED regulations as defined in section 8.1.1
- **To ensure compliance under worst case conditions with maximum output power based on a MIMO configuration, the maximum antenna gain for an RBS (Radio Base Station) system with Radio 4480 44B66 44B70 C is 18 dBi with 1 dB path loss.**

Spectrum analyzer settings for PSD:

Detector mode	RMS
Resolution bandwidth	1 MHz
Video bandwidth	>RBW
Measurement mode	Power over emission bandwidth
Trace mode	Averaging
Measurement time	Auto

8.1.4 Test data

Table 8.1-2: *EIRP calculation based on the* ***worst-case PSD measurement***

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	Cable loss, dB	Antenna gain, dBi	EIRP PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2155.0	41.04	47.06	-1.00	18.00	64.06	65.16	1.10

Table 8.1-3: *RF power density measurement results of a single-carrier operation for LTE on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2112.5	39.44	45.46	65.16	19.70
2155.0	39.64	45.66	65.16	19.50
2197.5	**40.00**	46.02	65.16	19.14

Table 8.1-4: *RF power density measurement results of a single-carrier operation for LTE with IB-IoT1 on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2112.5	40.09	46.11	65.16	19.05
2155.0	**41.04**	47.06	65.16	18.10
2197.5	40.63	46.65	65.16	18.51

Table 8.1-5: *RF power density measurement results of a single-carrier operation for LTE with IB-IoT2 on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2112.5	39.77	45.79	65.16	19.37
2155.0	39.80	45.82	65.16	19.34
2197.5	**40.01**	46.03	65.16	19.13

Table 8.1-6: *RF power density measurement results of a single-carrier operation for LTE on 10 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2115.0	36.30	42.32	62.15	19.83
2155.0	36.70	42.72	62.15	19.43
2195.0	**36.77**	42.79	62.15	19.36

Table 8.1-7: *RF power density measurement results of a single-carrier operation for LTE with GB-IoT on 10 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2115.0	36.23	42.25	62.15	19.90
2155.0	36.83	42.85	62.15	19.30
2195.0	**37.35**	43.37	62.15	18.78

Notes: [1] 1 GB-IoT at each edge of the channel.

Table 8.1-8: *RF power density measurement results of a single-carrier operation for LTE on 15 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2117.5	34.58	40.60	62.15	21.55
2155.0	34.96	40.98	62.15	21.17
2192.5	**35.27**	41.29	62.15	20.86

Test data, continued

Table 8.1-9: *RF power density measurement results of a single-carrier operation for LTE with GB-IoT on 15 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2117.5	35.04	41.06	62.15	21.09
2155.0	**35.21**	41.23	62.15	20.92
2192.5	35.14	41.16	62.15	20.99

Notes: [1] 1 GB-IoT at each edge of the channel.

Table 8.1-10: *RF power density measurement results of a single-carrier operation for LTE on 20 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2120.0	33.78	39.80	62.15	22.35
2155.0	**34.13**	40.15	62.15	22.00
2190.0	33.36	39.38	62.15	22.77

Table 8.1-11: *RF power density measurement results of a single-carrier operation for LTE with GB-IoT on 20 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2120.0	33.75	39.77	62.15	22.38
2155.0	**34.17**	40.19	62.15	21.96
2190.0	33.93	39.95	62.15	22.20

Notes: [1] 1 GB-IoT at each edge of the channel.

Table 8.1-12: *RF power density measurement results of a multi-carrier operation for LTE on 5 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers [1]	**37.18**	43.20	65.16	21.96
2 carriers [2]	37.17	40.36	65.16	24.80
4 carriers [1]	34.34	40.36	65.16	24.80
6 carriers [1]	32.50	38.52	65.16	26.64

Notes: [1] IB IoT1 at the bottom channel and IB IoT2 at the top channel.
[2] IB IoT2 at the bottom channel and IB IoT1 at the top channel.

Table 8.1-13: *RF power density measurement results of a multi-carrier operation for LTE on 10 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**33.71**	39.73	62.15	22.42
4 carriers	30.41	36.43	62.15	25.72
6 carriers	28.87	34.89	62.15	27.26

Notes: 1 GB IoT at the bottom channel and 1 GB IoT at the top channel.

Table 8.1-14: *RF power density measurement results of a multi-carrier operation for LTE on 15 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**31.47**	37.49	62.15	24.66
4 carriers	29.06	35.08	62.15	27.07
6 carriers	26.79	32.81	62.15	29.34

Notes: 1 GB IoT at the bottom channel and 1 GB IoT at the top channel.

Test data, continued

Table 8.1-15: *RF power density measurement results of a multi-carrier operation for LTE on 20 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**30.33**	36.35	62.15	25.80
4 carriers	28.09	34.11	62.15	28.04

Notes: 1 GB IoT at the bottom channel and 1 GB IoT at the top channel.

Table 8.1-16: *RF power density measurement results of a single-carrier operation for NR on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2112.5	**38.35**	44.37	65.16	20.79
2155.0	38.31	44.33	65.16	20.83
2197.5	38.30	44.32	65.16	20.84

Table 8.1-17: *RF power density measurement results of a single-carrier operation for NR on 10 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2115.0	35.22	41.24	62.15	20.91
2155.0	35.07	41.09	62.15	21.06
2195.0	**35.53**	41.55	62.15	20.60

Table 8.1-18: *RF power density measurement results of a single-carrier operation for NR on 15 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2117.5	**33.75**	39.77	62.15	22.38
2155.0	33.65	39.67	62.15	22.48
2192.5	33.22	39.24	62.15	22.91

Table 8.1-19: *RF power density measurement results of a single-carrier operation for NR on 20 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2120.0	31.85	37.87	62.15	24.28
2155.0	**32.73**	38.75	62.15	23.40
2190.0	32.51	38.53	62.15	23.62

Table 8.1-20: *RF power density measurement results of a multi-carrier operation for NR on 5 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**34.78**	43.20	65.16	21.96
3 carriers	33.73	40.36	65.16	24.80
4 carriers	32.40	40.36	65.16	24.80
6 carriers	30.96	38.52	65.16	26.64

Table 8.1-21: *RF power density measurement results of a multi-carrier operation for LTE on 10 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**31.91**	43.20	62.15	18.95
3 carriers	30.67	40.36	62.15	21.79
4 carriers	29.04	40.36	62.15	21.79
6 carriers	27.70	38.52	62.15	23.63

Test data, continued

Table 8.1-22: *RF power density measurement results of a multi-carrier operation for LTE on 15 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**30.07**	43.20	62.15	18.95
3 carriers	28.82	40.36	62.15	21.79
4 carriers	27.32	40.36	62.15	21.79
6 carriers	26.17	38.52	62.15	23.63

Table 8.1-23: *RF power density measurement results of a multi-carrier operation for LTE on 20 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**28.95**	43.20	62.15	18.95
3 carriers	27.72	40.36	62.15	21.79
4 carriers	25.91	40.36	62.15	21.79
5 carriers [1]	28.65	38.52	62.15	23.63

Notes: [1] For 5C NR, 4C were at 20 MHz channel and 1C at 10 MHz channel

Table 8.1-24: *RF power density measurement results of a multi-RAT operation*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 Carriers (LTE 5 MHz and NR 5 MHz)	**35.90**	41.92	62.15	20.23
2 Carriers (LTE 10 MHz and NR 10 MHz)	32.79	38.81	62.15	23.34
2 Carriers (LTE 15 MHz and NR 15 MHz)	31.38	37.40	62.15	24.75
2 Carriers (LTE 20 MHz and NR 20 MHz)	30.16	36.18	62.15	25.97
4 Carriers (2x LTE 5 MHz and 2x NR 5 MHz)	33.57	39.59	62.15	22.56
4 Carriers (2x LTE 10 MHz and 2x NR 10 MHz)	30.06	36.08	62.15	26.07
4 Carriers (2x LTE 15 MHz and 2x NR 15 MHz)	28.65	34.67	62.15	27.48
4 Carriers (2x LTE 20 MHz and 2x NR 20 MHz)	27.8	33.80	62.15	28.35
6 Carriers (3x LTE 5 MHz and 3x NR 5 MHz)	31.68	37.70	62.15	24.45
6 Carriers (3x LTE 10 MHz and 3x NR 10 MHz)	28.8	34.77	62.15	27.38
6 Carriers (3x LTE 15 MHz and 3x NR 15 MHz)	27.09	33.11	62.15	29.04

Note: “and”: non-contiguous channels; “x”: contiguous channels

Test data, continued

Table 8.1-25: *RF total channel power measurement results for LTE*

Remarks	5 MHz channel (40 W)	10 MHz channel (40 W)	15 MHz channel (40 W)	20 MHz channel (40 W)
Low channel, QPSK	45.75	45.77	45.81	45.85
Low channel, 16-QAM	45.72			
Low channel, 64-QAM	45.7			
Low channel, 256-QAM	45.65			
Mid channel, QPSK	46.17	46.17	46.1	46.08
Top channel, QPSK	45.84	45.92	45.91	45.97

Note: all results in the table are in dBm units

Table 8.1-26: *RF total channel power measurement results for LTE with IB or IoT*

Remarks	5 MHz channel (40 W) [1]	10 MHz channel (40 W) [2]	15 MHz channel (40 W) [2]	20 MHz channel (40 W) [2]
1 carrier with IB-IoT1/or IB-IoT2, Low channel, QPSK	45.74/45.74	NA	NA	NA
1 carrier with IB-IoT1/or IB-IoT2, Mid channel, QPSK	46.17/46.11	NA	NA	NA
1 carrier with IB-IoT1/or IB-IoT2, Top channel, QPSK	45.77/45.79	NA	NA	NA
1 carrier with GB-IoT, Low channel, QPSK	NA	45.62	45.7	45.75
1 carrier with GB-IoT, Mid channel, QPSK	NA	45.98	46.07	46.06
1 carrier with GB-IoT, Top channel, QPSK	NA	45.72	45.9	45.91
2 carriers with IB-IoT1 at the bottom channel and IB-IoT2 at the top channel, QPSK	45.41	NA	NA	NA
2 carriers with IB-IoT2 at the bottom channel and IB-IoT1 at the top channel, QPSK	45.45	NA	NA	NA
2 carriers with GB-IoT, QPSK	NA	45.06	45.13	45.17
4 carriers with IB-IoT1 and IB-IoT2, QPSK	45.7	NA	NA	NA
4 carriers with GB-IoT, QPSK	NA	45.63	45.76	45.83
6 carriers with IB-IoT1 and IB-IoT2, QPSK	45.79	NA	NA	NA
6 carriers with GB-IoT, QPSK	NA	45.76	45.85	NA

Notes: [1] For 1C, In-band IoT (IB-IoT1 or IB-IoT2) at the bottom of the channel. For 2C and above, IB-IoT1 at the bottom channel and IB-IoT2 at the top channel (or opposite)
[2] For 1C, 1 Guard-band IoT (GB-IoT) at each edge of the channel. For 2C and above, 1 GB-IoT at the bottom of the channel and 1 GB-IoT at the top of the channel
All results in the table are in dBm units

Table 8.1-27: *RF total channel power measurement results for NR*

Remarks	5 MHz channel (40 W)	10 MHz channel (40 W)	15 MHz channel (40 W)	20 MHz channel (40 W) [1]
1 carrier, Low channel, QPSK	44.54	44.57	44.63	44.6
1 carrier, Low channel, 16-QAM	44.44			
1 carrier, Low channel, 64-QAM	44.58			
1 carrier, Low channel, 256-QAM	44.47			
1 carrier, Mid channel, QPSK	44.95	44.96	44.94	44.98
1 carrier, Top channel, QPSK	44.61	44.73	44.67	44.73
2 carriers, QPSK	44.25	44.35	44.33	44.41
3 carriers, QPSK	44.65	44.77	44.78	44.81
4 carriers, QPSK	44.58	44.66	44.72	44.77
5 carriers, QPSK				44.83
6 carriers, QPSK	44.71	44.73	44.74	

Notes: [1] For 5C NR, 4C were at 20 MHz channel and 1C at 10 MHz channel
All results in the table are in dBm units

Test data, continued

Table 8.1-28: *RF total channel power measurement results for multi-RAT operation*

Remarks	5 MHz channel (20 W)	10 MHz channel (40 W)	15 MHz channel (60 W)	20 MHz channel (80 W)
1xLTE and 1×NR	45.32	45.45	45.48	45.53
2xLTE and 2×NR	45.79	45.81	45.83	45.91
3xLTE and 3×NR	45.8	45.88	45.94	NA

Notes: "and": non-contiguous channels; "x": contiguous channels
All results in the table are in dBm units

Test data, continued

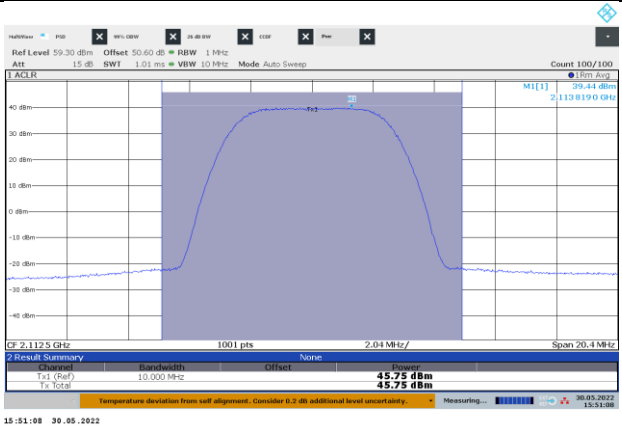

Figure 8.1-1: *PSD and Output channel power of LTE 5 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

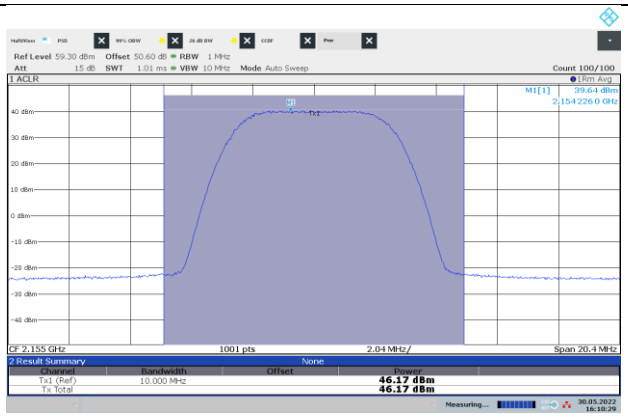

Figure 8.1-2: *PSD and Output channel power of LTE 5 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

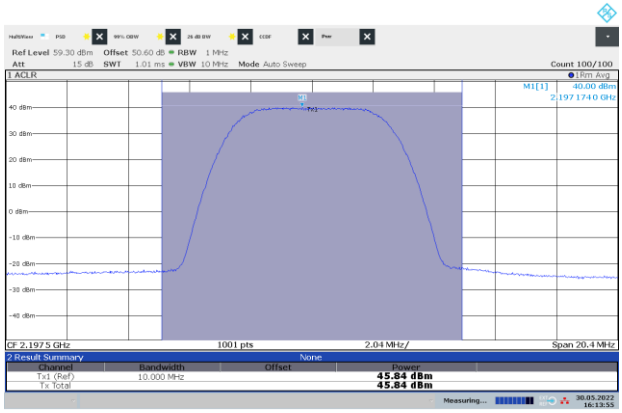

Figure 8.1-3: *PSD and Output channel power of LTE 5 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

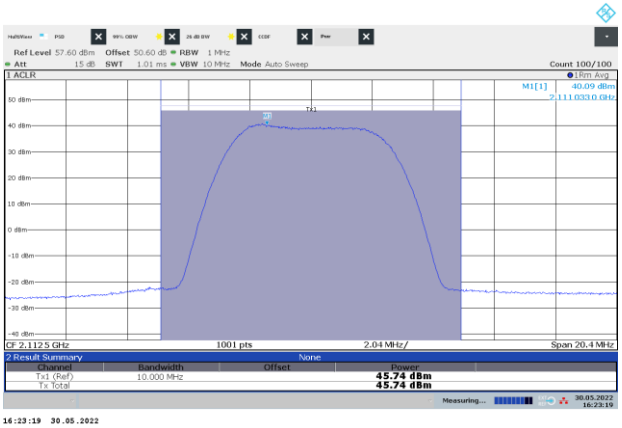

Figure 8.1-4: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1, single carrier operation, Low Channel, sample plot*

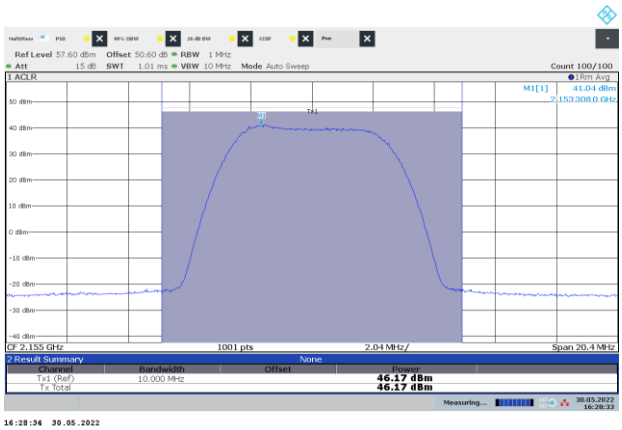

Figure 8.1-5: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1, single carrier operation, Mid Channel, sample plot*

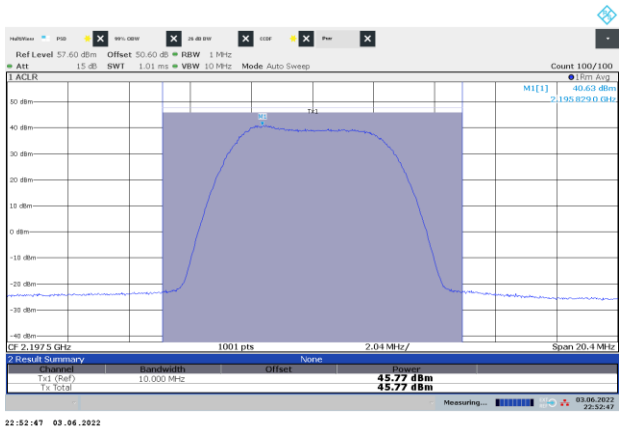

Figure 8.1-6: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1, single carrier operation, Top Channel, sample plot*

Test data, continued

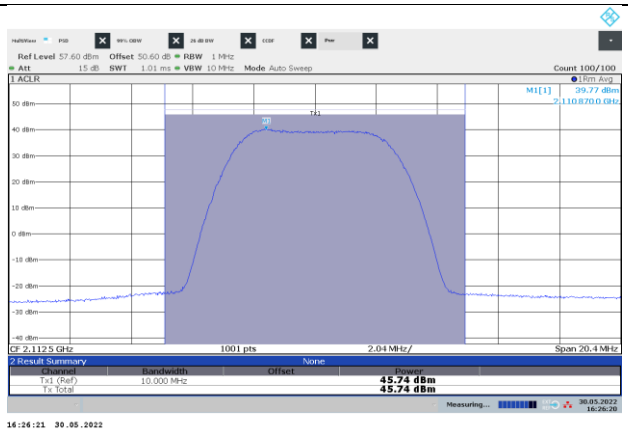

Figure 8.1-7: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2, single carrier operation, Low Channel, sample plot*

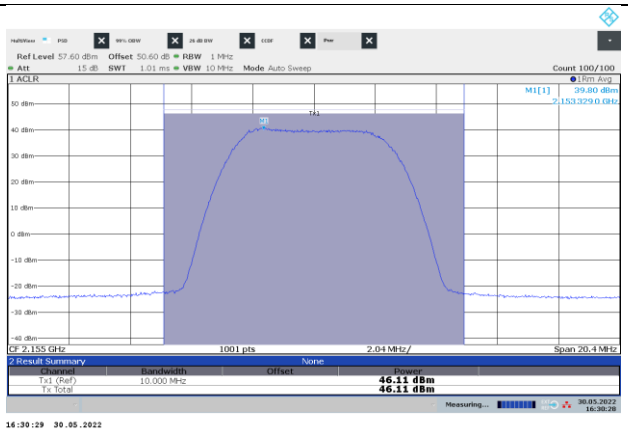

Figure 8.1-8: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2, single carrier operation, Mid Channel, sample plot*

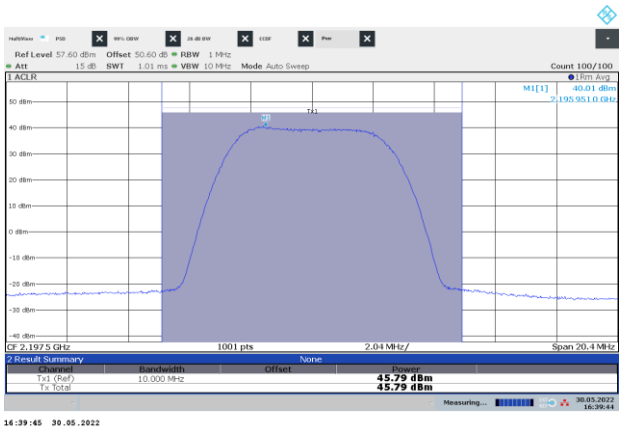

Figure 8.1-9: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2, single carrier operation, Top Channel, sample plot*

Test data, continued

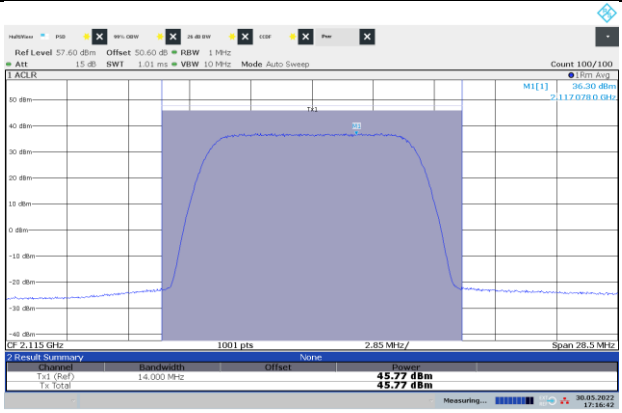

Figure 8.1-10: *PSD and Output channel power of LTE 10 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

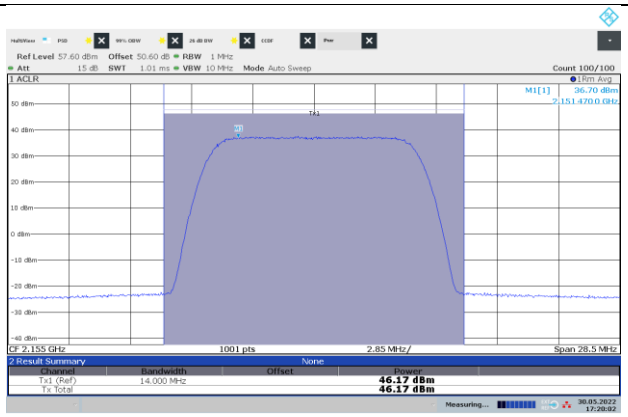

Figure 8.1-11: *PSD and Output channel power of LTE 10 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

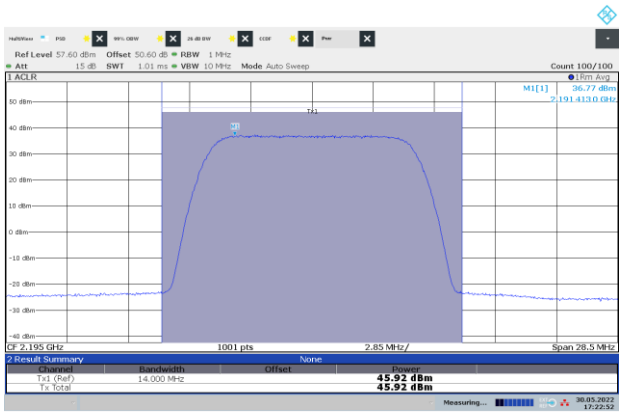

Figure 8.1-12: *PSD and Output channel power of LTE 10 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

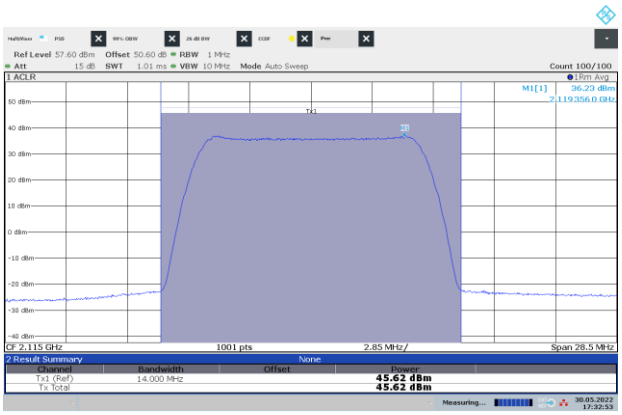

Figure 8.1-13: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, single carrier operation, Low Channel, sample plot*

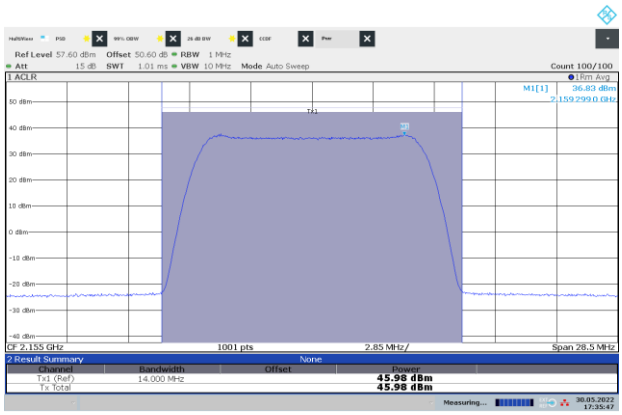

Figure 8.1-14: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, single carrier operation, Mid Channel, sample plot*

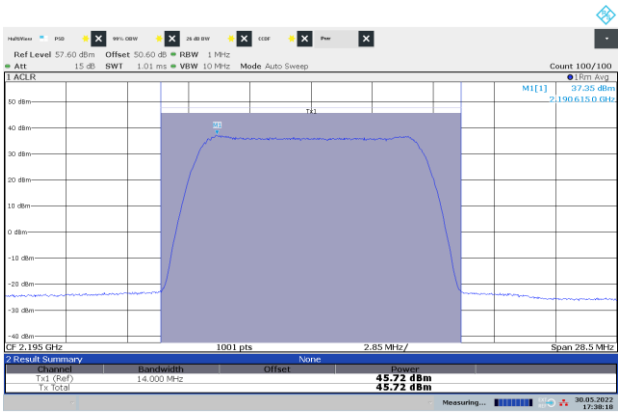

Figure 8.1-15: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, single carrier operation, Top Channel, sample plot*

Test data, continued

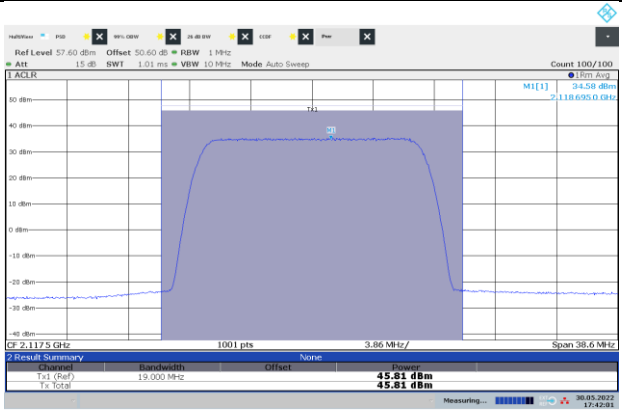

Figure 8.1-16: *PSD and Output channel power of LTE 15 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

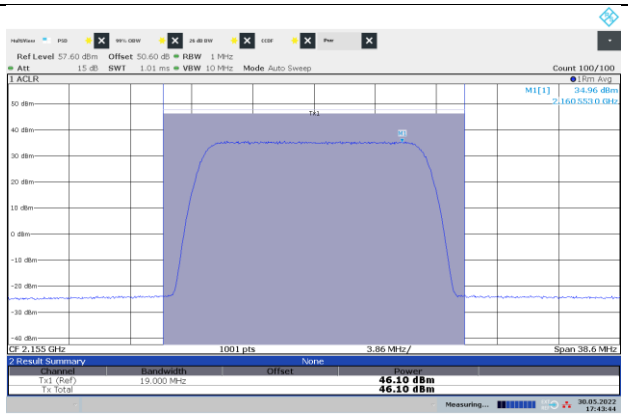

Figure 8.1-17: *PSD and Output channel power of LTE 15 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

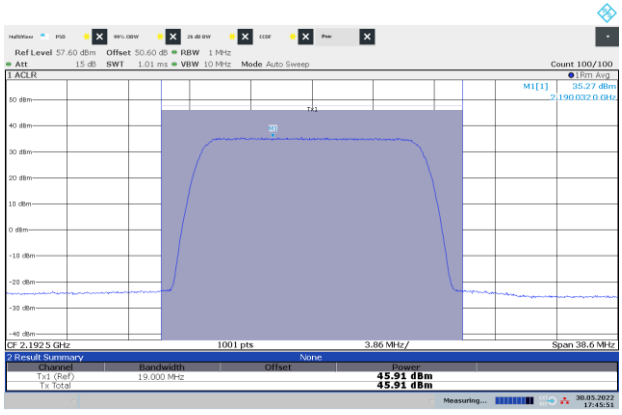

Figure 8.1-18: *PSD and Output channel power of LTE 15 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

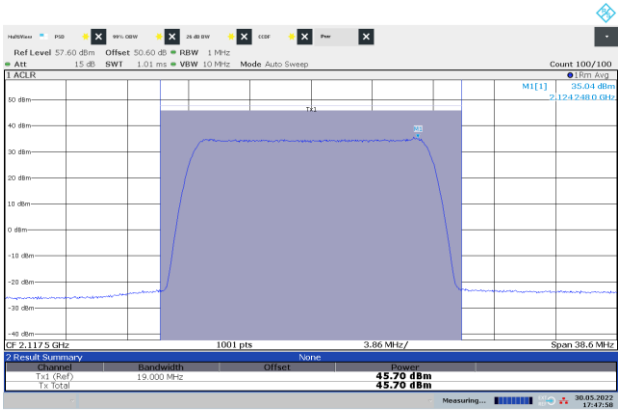

Figure 8.1-19: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, single carrier operation, Low Channel, sample plot*

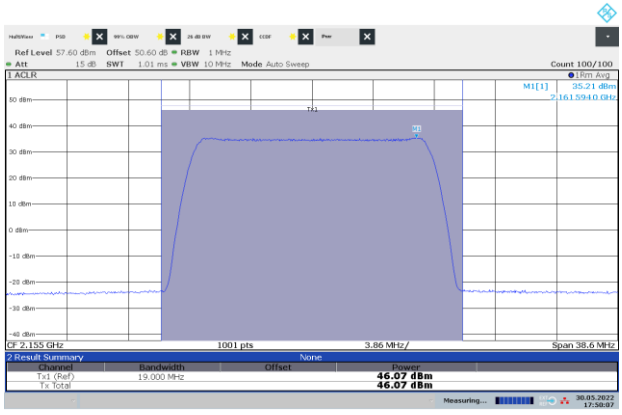

Figure 8.1-20: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, single carrier operation, Mid Channel, sample plot*

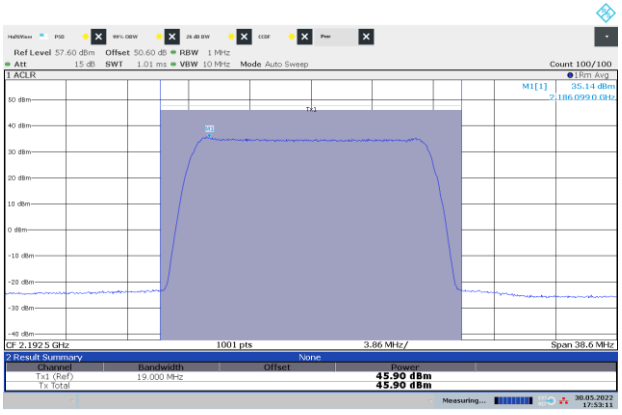

Figure 8.1-21: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, single carrier operation, Top Channel, sample plot*

Test data, continued

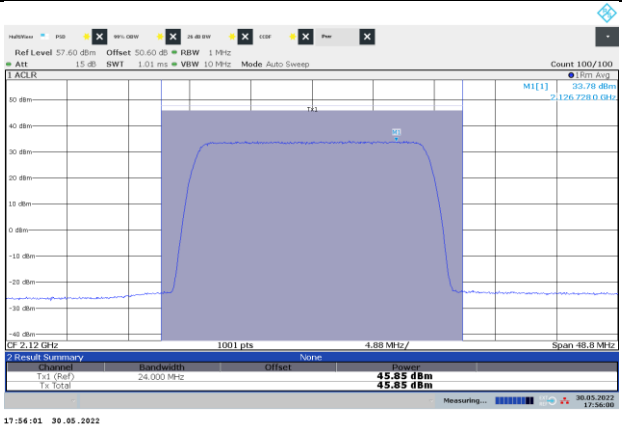

Figure 8.1-22: *PSD and Output channel power of LTE 20 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

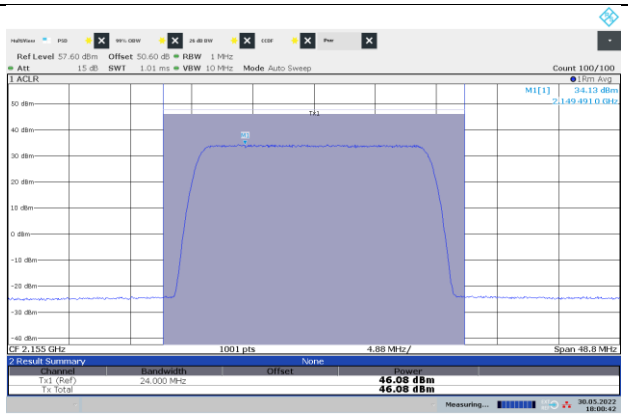

Figure 8.1-23: *PSD and Output channel power of LTE 20 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

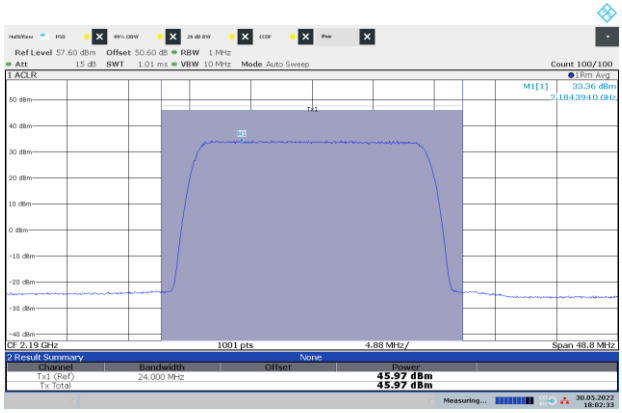

Figure 8.1-24: *PSD and Output channel power of LTE 20 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

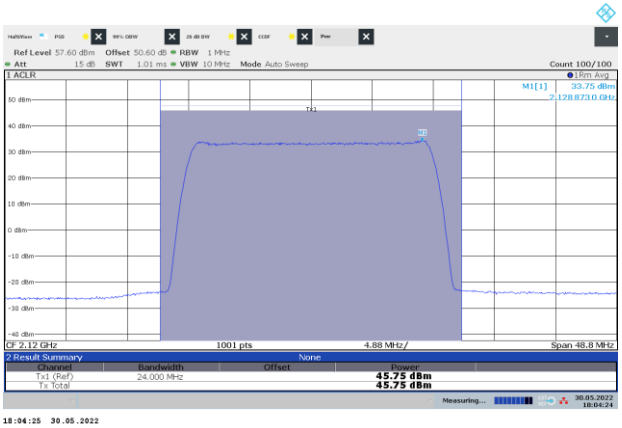

Figure 8.1-25: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, single carrier operation, Low Channel, sample plot*

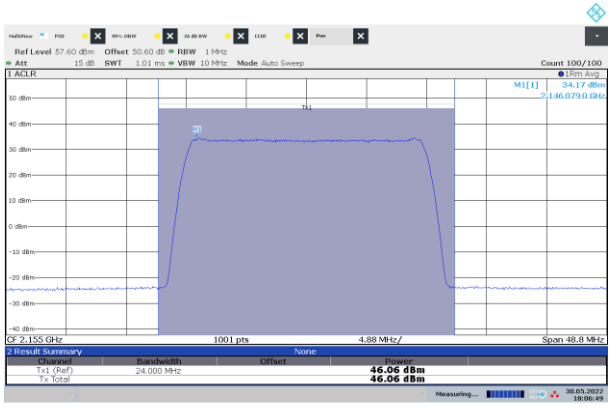

Figure 8.1-26: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, single carrier operation, Mid Channel, sample plot*

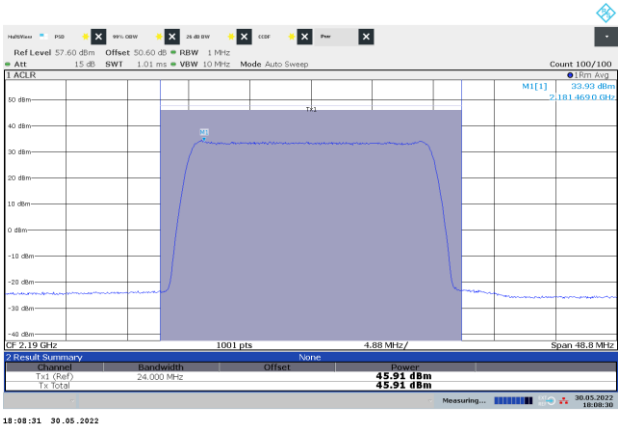

Figure 8.1-27: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, single carrier operation, Top Channel, sample plot*

Test data, continued

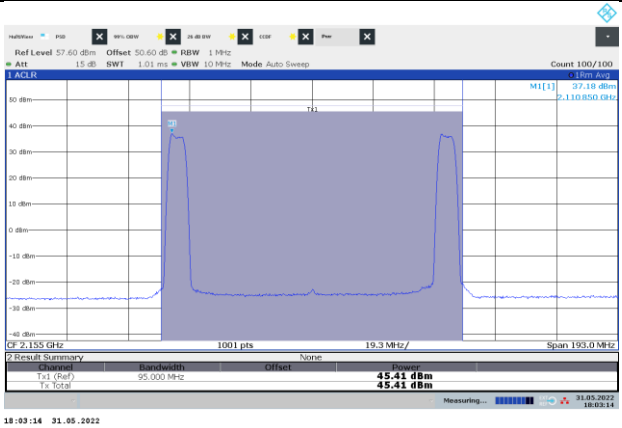

Figure 8.1-28: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1 and IB-IoT2, two carriers operation, sample plot*

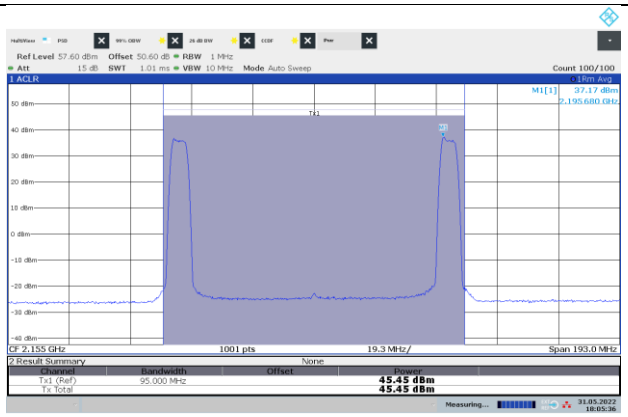

Figure 8.1-29: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2 and IB-IoT1, two carriers operation, sample plot*

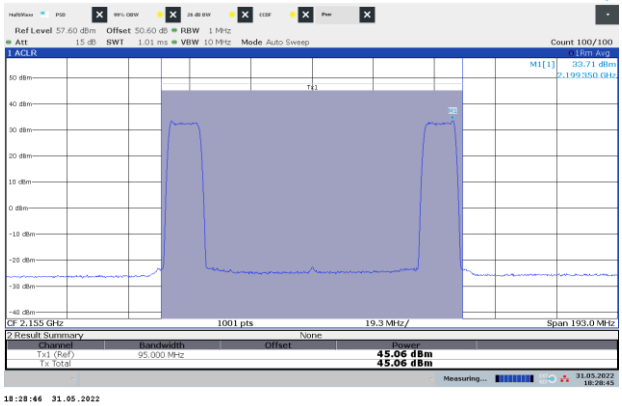

Figure 8.1-30: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, two carriers operation, sample plot*

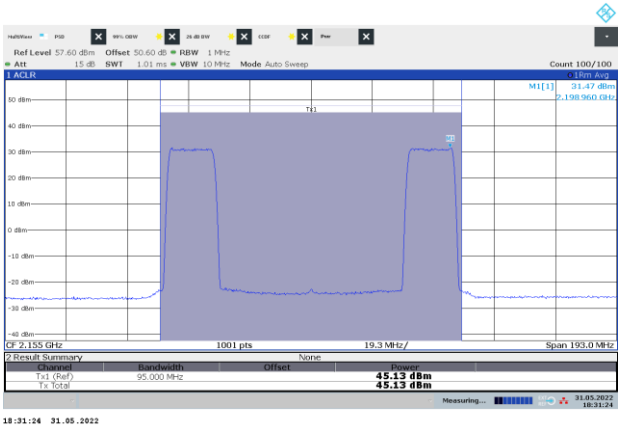

Figure 8.1-31: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, two carriers operation, sample plot*

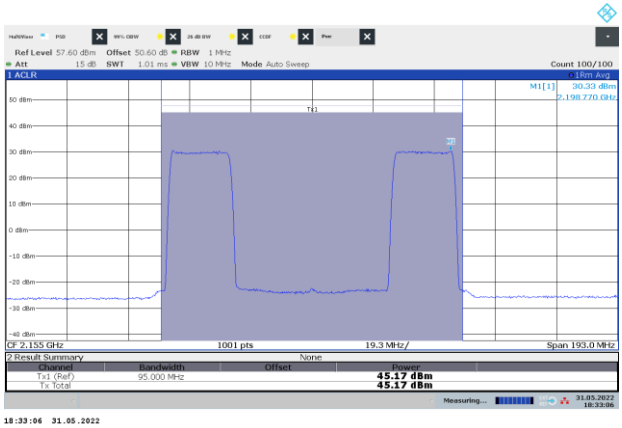

Figure 8.1-32: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, two carriers operation, sample plot*

Figure 8.1-33: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1 and IB-IoT2, four carriers operation, sample plot*

Test data, continued

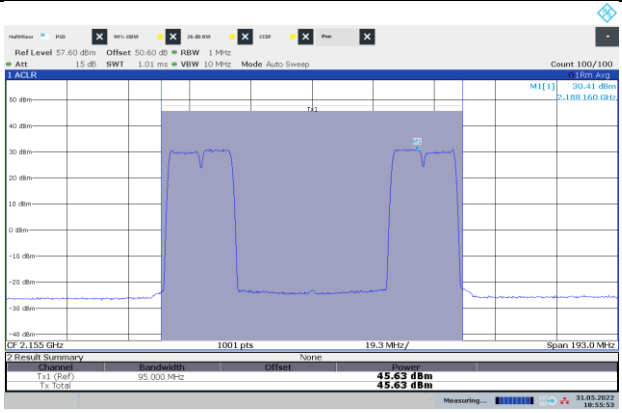

Figure 8.1-34: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, four carriers operation, sample plot*

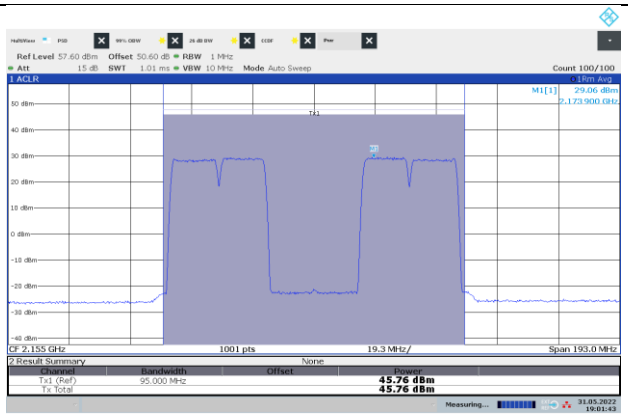

Figure 8.1-35: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, four carriers operation, sample plot*

Figure 8.1-36: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, four carriers operation, sample plot*

Figure 8.1-37: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1 and IB-IoT2, six carriers operation, sample plot*

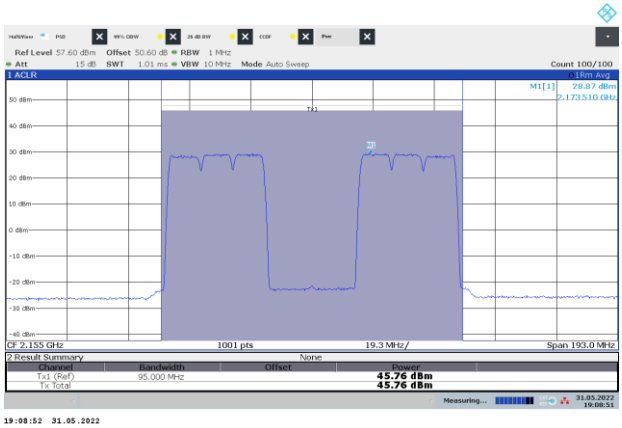

Figure 8.1-38: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, six carriers operation, sample plot*

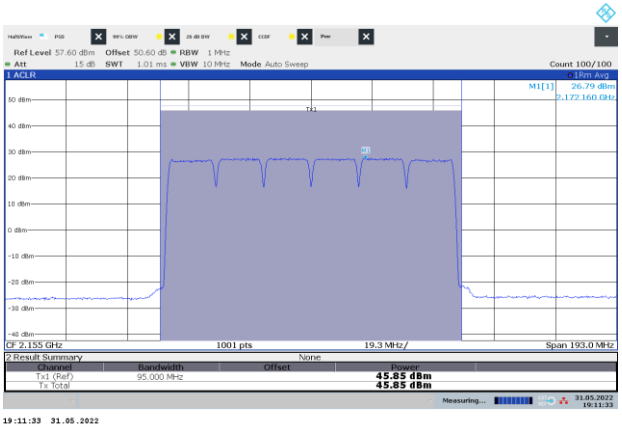

Figure 8.1-39: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, six carriers operation, sample plot*

Test data, continued

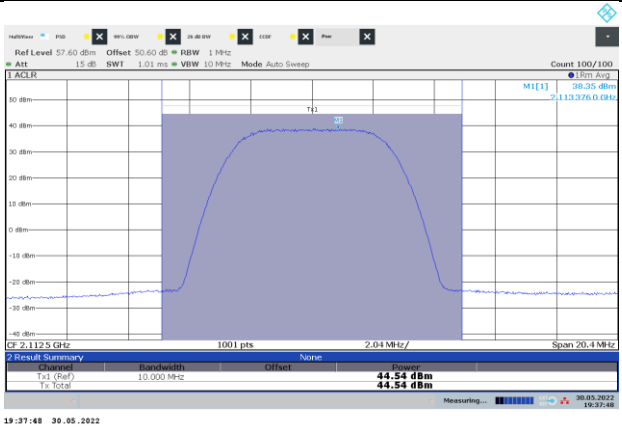

Figure 8.1-40: *PSD and Output channel power of NR 5 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

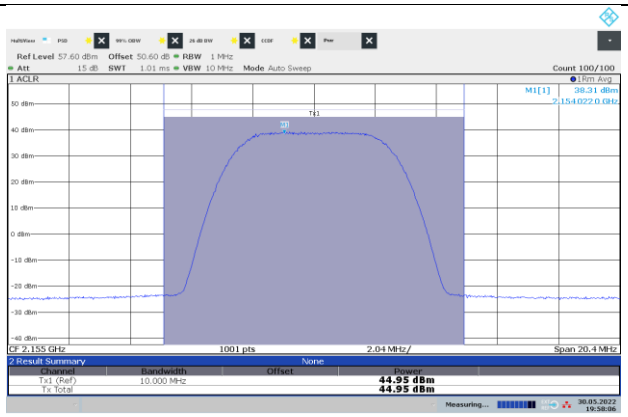

Figure 8.1-41: *PSD and Output channel power of NR 5 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

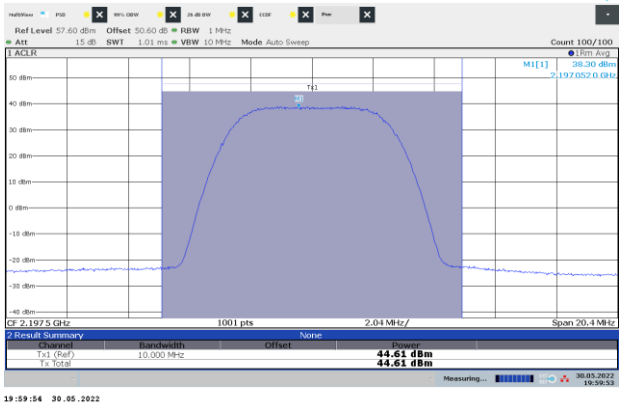

Figure 8.1-42: *PSD and Output channel power of NR 5 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

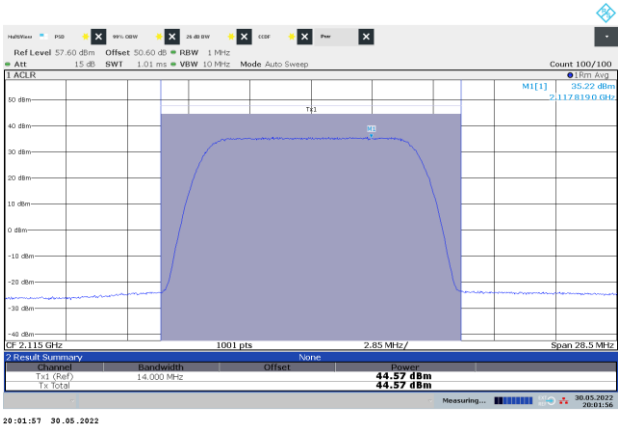

Figure 8.1-43: *PSD and Output channel power of NR 10 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

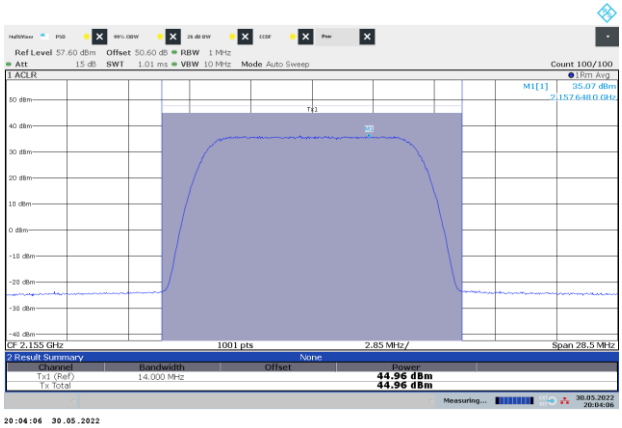

Figure 8.1-44: *PSD and Output channel power of NR 10 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

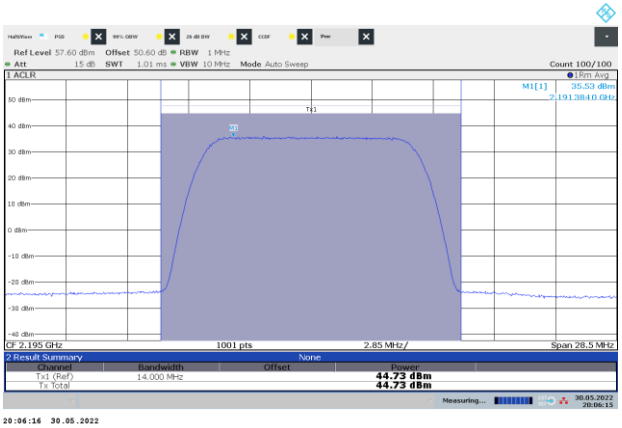

Figure 8.1-45: *PSD and Output channel power of NR 10 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

Test data, continued

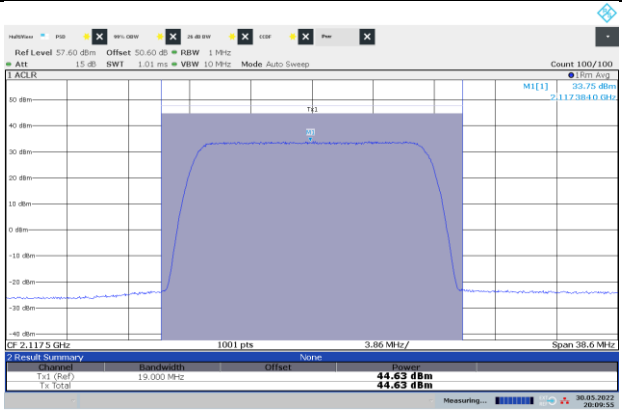

Figure 8.1-46: *PSD and Output channel power of NR 15 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

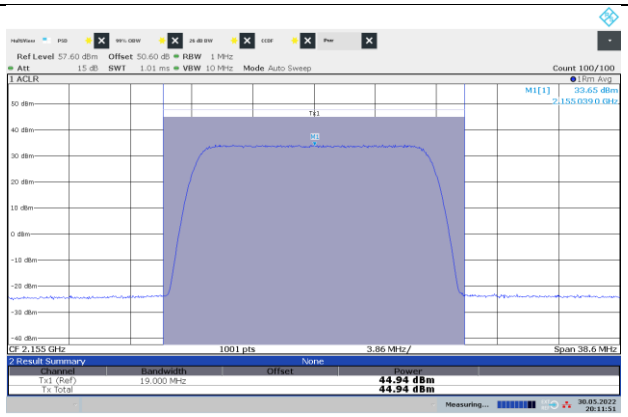

Figure 8.1-47: *PSD and Output channel power of NR 15 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

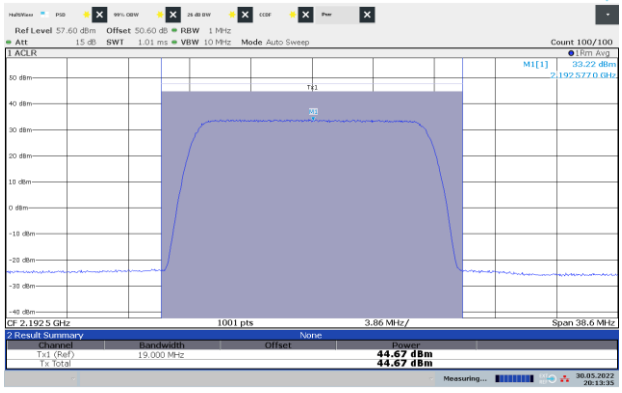

Figure 8.1-48: *PSD and Output channel power of NR 15 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

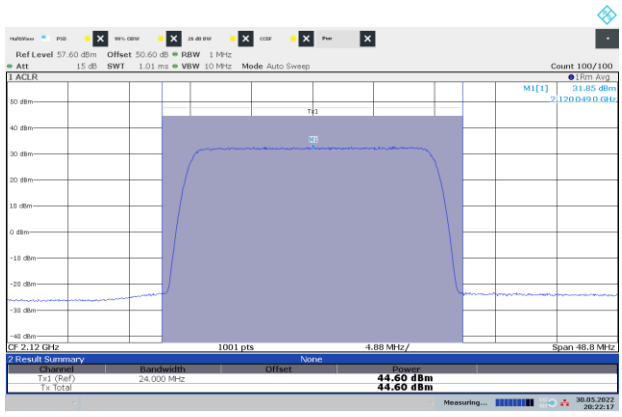

Figure 8.1-49: *PSD and Output channel power of NR 20 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

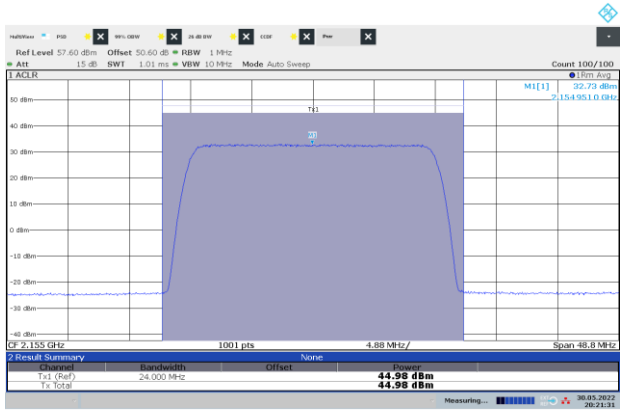

Figure 8.1-50: *PSD and Output channel power of NR 20 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

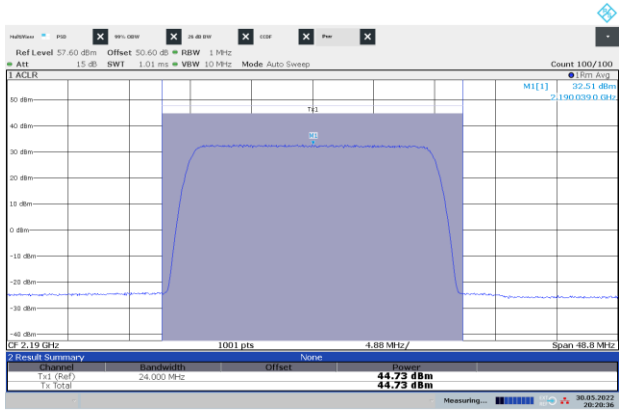

Figure 8.1-51: *PSD and Output channel power of NR 20 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

Test data, continued

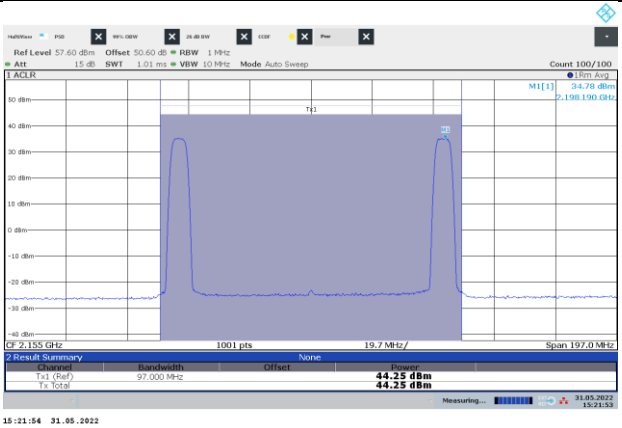

Figure 8.1-52: *PSD and Output channel power of NR 5 MHz channel bandwidth, two carriers operation, sample plot*

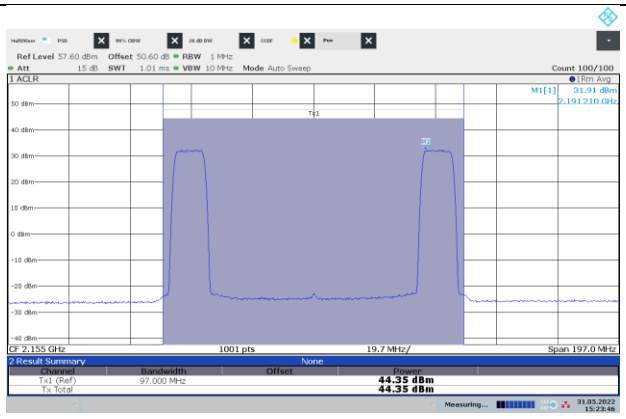

Figure 8.1-53: *PSD and Output channel power of NR 10 MHz channel bandwidth, two carriers operation, sample plot*

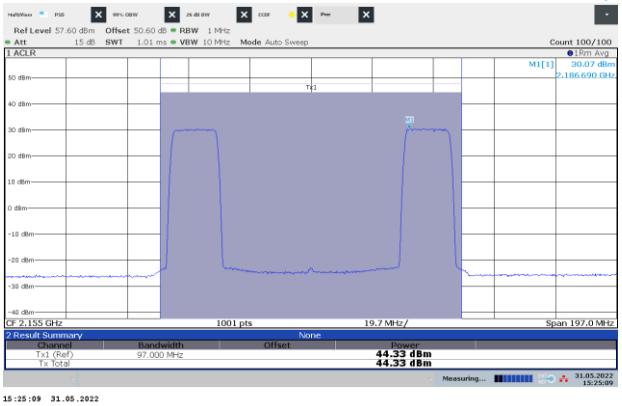

Figure 8.1-54: *PSD and Output channel power of NR 15 MHz channel bandwidth, two carriers operation, sample plot*

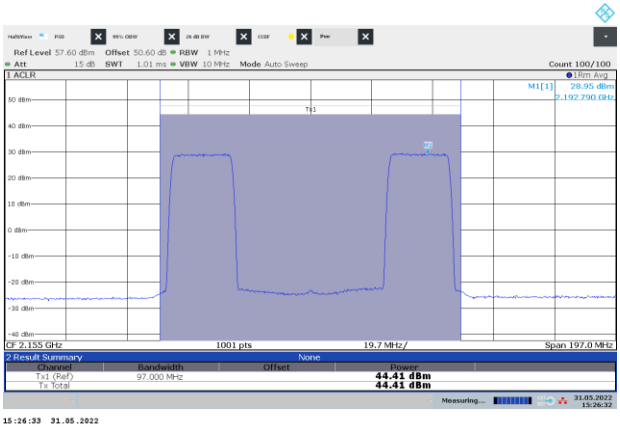

Figure 8.1-55: *PSD and Output channel power of NR 20 MHz channel bandwidth, two carriers operation, sample plot*

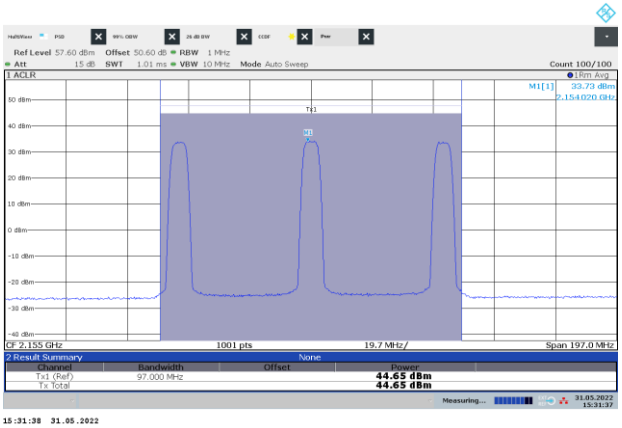

Figure 8.1-56: *PSD and Output channel power of NR 5 MHz channel bandwidth, three carriers operation, sample plot*

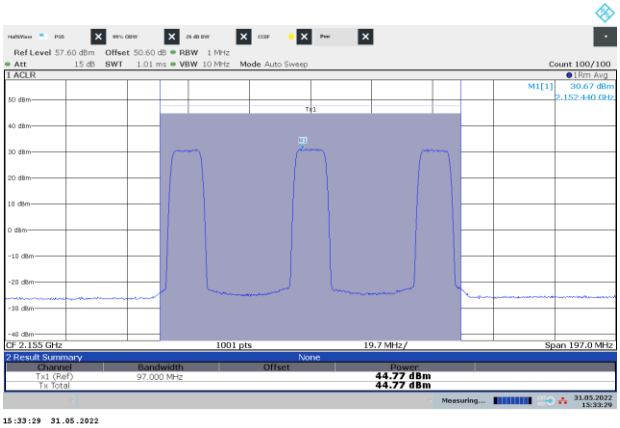

Figure 8.1-57: *PSD and Output channel power of NR 10 MHz channel bandwidth, three carriers operation, sample plot*

Test data, continued

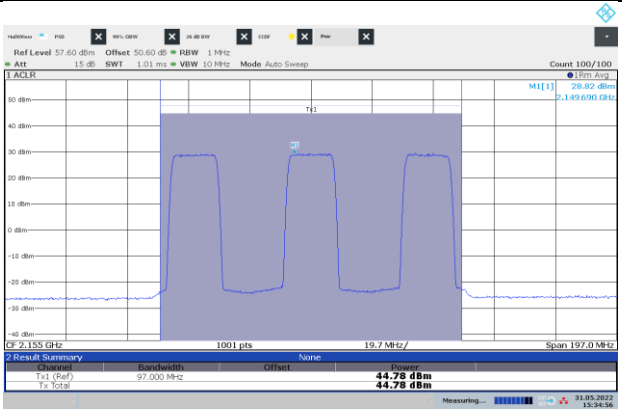

Figure 8.1-58: *PSD and Output channel power of NR 15 MHz channel bandwidth, three carriers operation, sample plot*

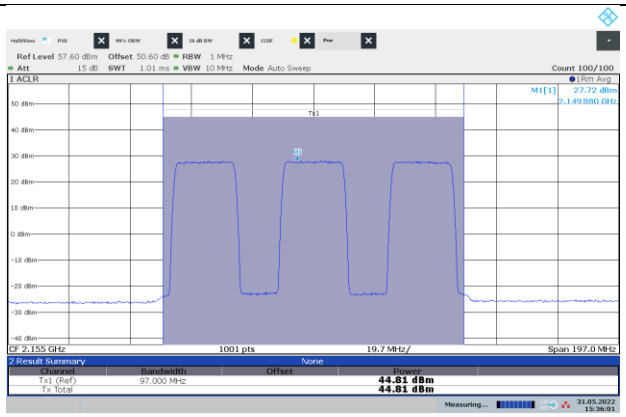

Figure 8.1-59: *PSD and Output channel power of NR 20 MHz channel bandwidth, three carriers operation, sample plot*

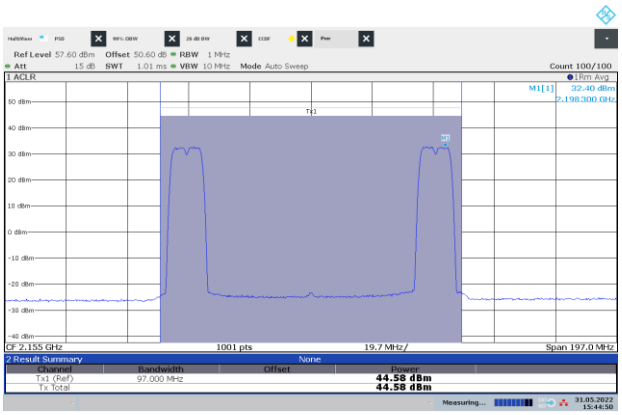

Figure 8.1-60: *PSD and Output channel power of NR 5 MHz channel bandwidth, four carriers operation, sample plot*

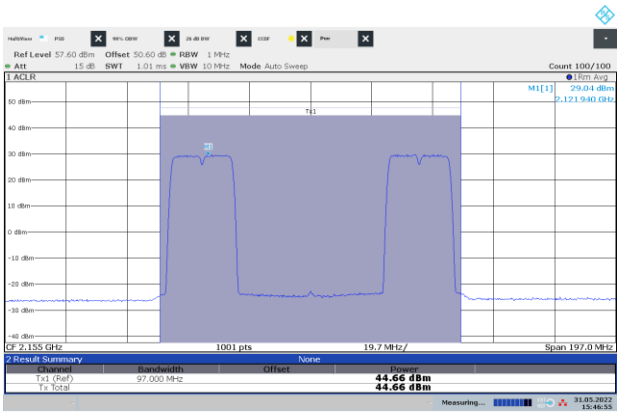

Figure 8.1-61: *PSD and Output channel power of NR 10 MHz channel bandwidth, four carriers operation, sample plot*

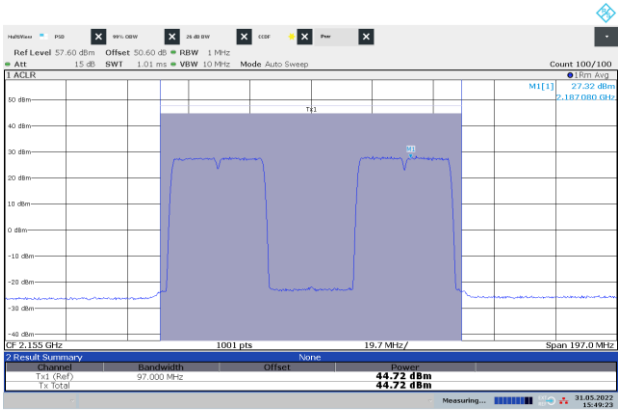

Figure 8.1-62: *PSD and Output channel power of NR 15 MHz channel bandwidth, four carriers operation, sample plot*

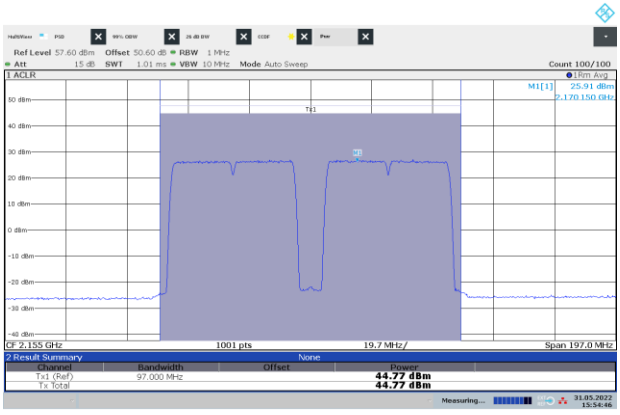

Figure 8.1-63: *PSD and Output channel power of NR 20 MHz channel bandwidth, four carriers operation, sample plot*

Test data, continued

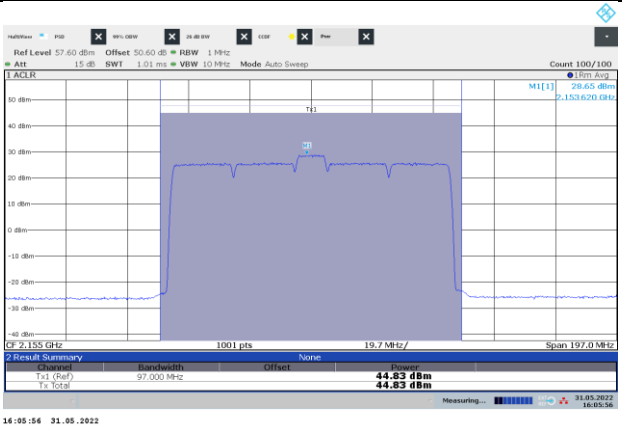

Figure 8.1-64: *PSD and Output channel power, five carriers operation 4x20MHz NR+ 1x10MHz NR, sample plot*

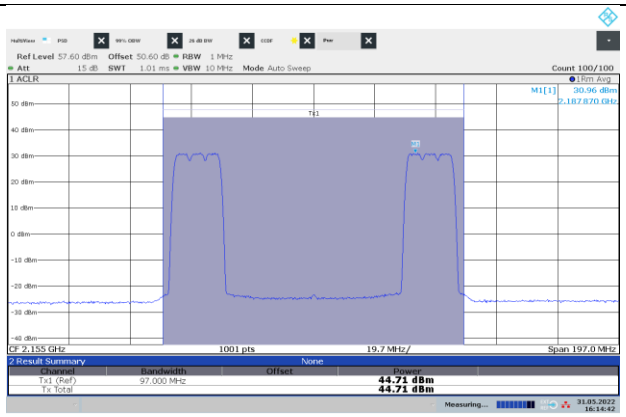

Figure 8.1-65: *PSD and Output channel power of NR 5 MHz channel bandwidth, six carriers operation, sample plot*

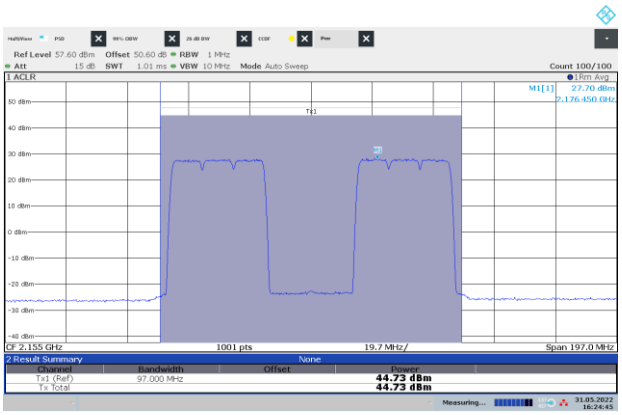

Figure 8.1-66: *PSD and Output channel power of NR 10 MHz channel bandwidth, six carriers operation, sample plot*

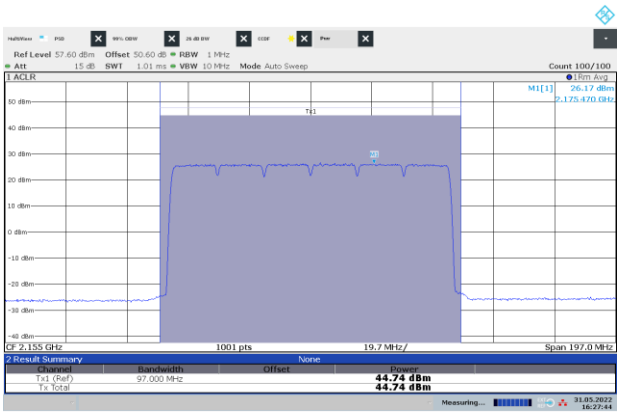

Figure 8.1-67: *PSD and Output channel power of NR 15 MHz channel bandwidth, six carriers operation, sample plot*

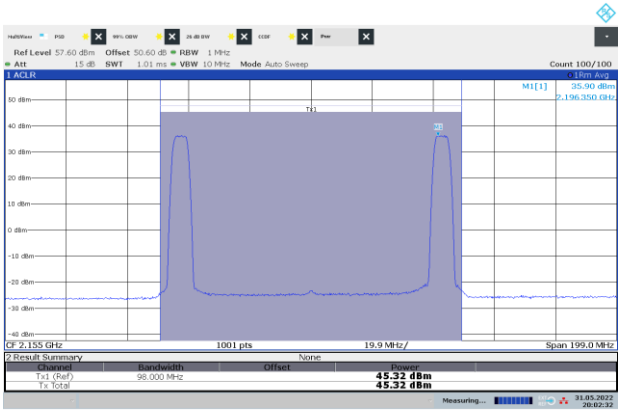

Figure 8.1-68: *PSD and Output channel power of Multi-RAT, two carriers operation 1x LTE 5 MHz + 1x NR 5 MHz, sample plot*

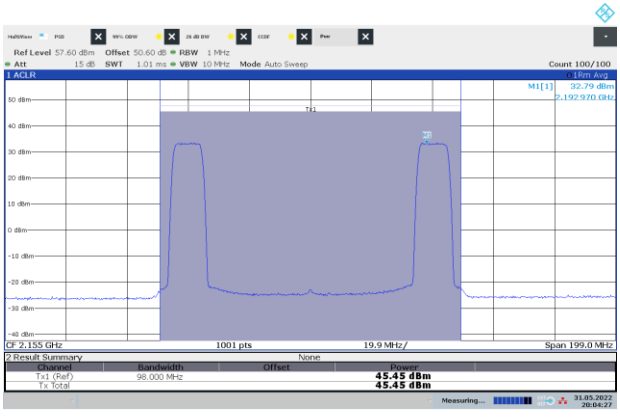

Figure 8.1-69: *PSD and Output channel power of Multi-RAT, two carriers operation 1x LTE 10 MHz + 1x NR 10 MHz, sample plot*

Test data, continued

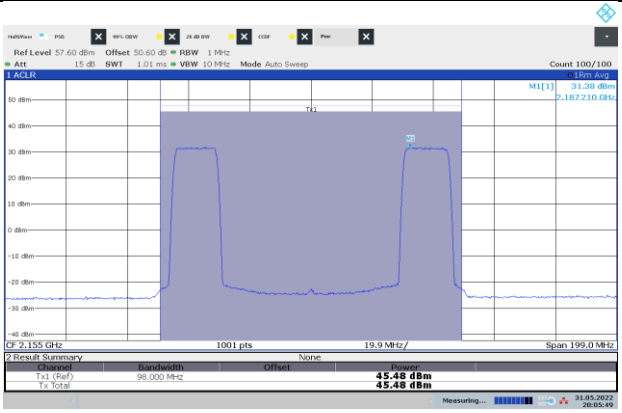

Figure 8.1-70: *PSD and Output channel power of Multi-RAT, two carriers operation 1x LTE 15 MHz + 1x NR 15 MHz, sample plot*

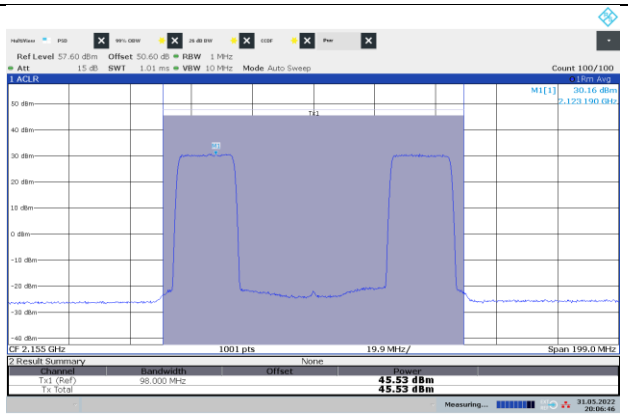

Figure 8.1-71: *PSD and Output channel power of Multi-RAT, two carriers operation 1x LTE 20 MHz + 1x NR 20 MHz, sample plot*

Figure 8.1-72: *PSD and Output channel power of Multi-RAT, four carriers operation 2x LTE 5 MHz + 2x NR 5 MHz, sample plot*

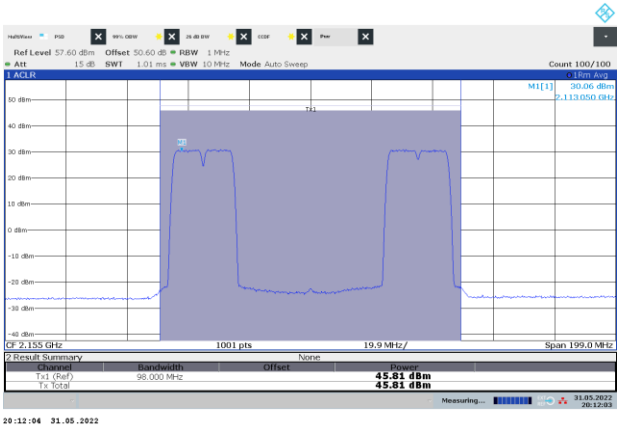

Figure 8.1-73: *PSD and Output channel power of Multi-RAT, four carriers operation 2x LTE 10 MHz + 2x NR 10 MHz, sample plot*

Figure 8.1-74: *PSD and Output channel power of Multi-RAT, four carriers operation 2x LTE 15 MHz + 2x NR 15 MHz, sample plot*

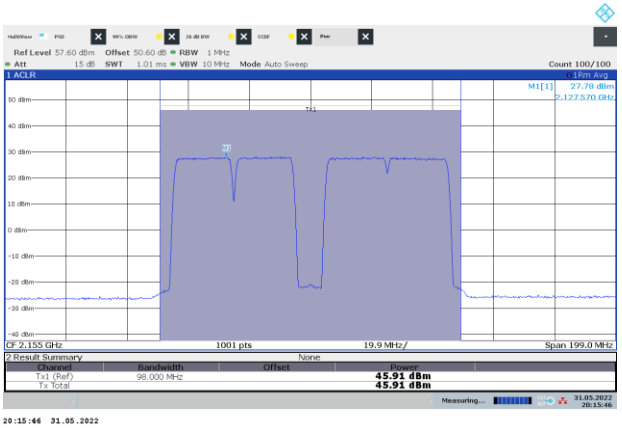

Figure 8.1-75: *PSD and Output channel power of Multi-RAT, four carriers operation 2x LTE 20 MHz + 2x NR 20 MHz, sample plot*

Test data, continued

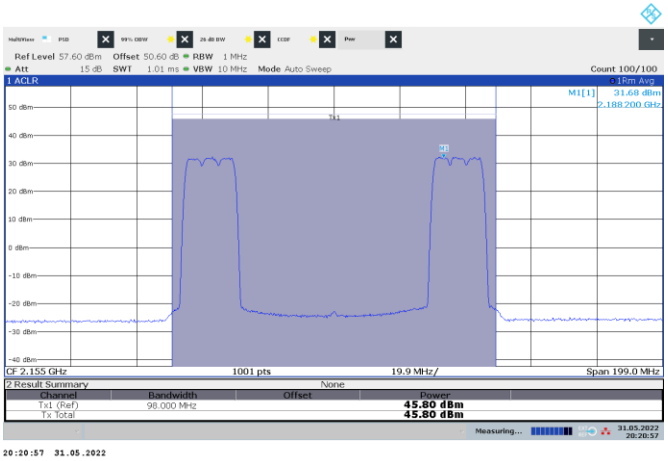

Figure 8.1-76: *PSD and Output channel power of Multi-RAT, six carriers operation 3x LTE 5 MHz + 3x NR 5 MHz, sample plot*

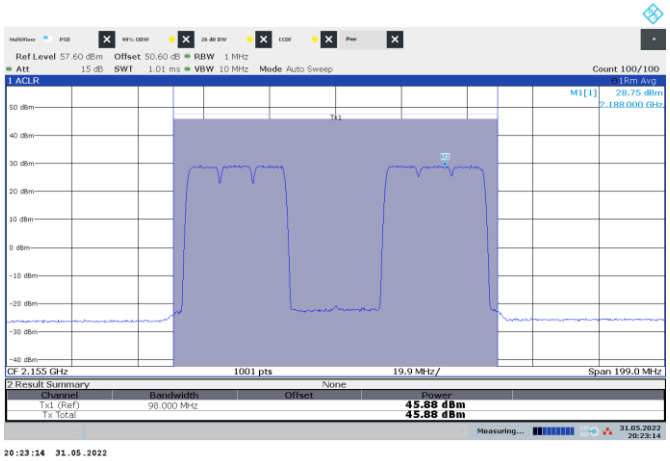

Figure 8.1-77: *PSD and Output channel power of Multi-RAT, six carriers operation 3x LTE 10 MHz + 3x NR 10 MHz, sample plot*

Figure 8.1-78: *PSD and Output channel power of Multi-RAT, six carriers operation 3x LTE 15 MHz + 3x NR 15 MHz, sample plot*

Test data, continued

Table 8.1-29: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for LTE 5 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
5 MHz, Low channel	2112.5	7.32	13.00	5.68
5 MHz, Mid channel	2155.0	7.32	13.00	5.68
5 MHz, Top channel	2197.5	7.32	13.00	5.68
5 MHz with IB-IoT1, Low channel	2112.5	7.32	13.00	5.68
5 MHz with IB-IoT1, Mid channel	2155.0	7.32	13.00	5.68
5 MHz with IB-IoT1, Top channel	2197.5	7.34	13.00	5.66
5 MHz with IB-IoT2, Low channel	2112.5	7.34	13.00	5.66
5 MHz with IB-IoT2, Mid channel	2155.0	7.32	13.00	5.68
5 MHz with IB-IoT, Top channel	2197.5	7.36	13.00	5.64

Table 8.1-30: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for LTE 10 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
10 MHz, Low channel	2115.0	7.34	13.00	5.66
10 MHz, Mid channel	2155.0	7.32	13.00	5.68
10 MHz, Top channel	2195.0	7.36	13.00	5.64
10 MHz with IoT, Low channel	2115.0	7.44	13.00	5.56
10 MHz with IoT, Mid channel	2155.0	7.44	13.00	5.56
10 MHz with IoT, Top channel	2195.0	7.48	13.00	5.52

Table 8.1-31: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for LTE 15 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
15 MHz, Low channel	2117.5	7.78	13.00	5.22
15 MHz, Mid channel	2155.0	7.76	13.00	5.24
15 MHz, Top channel	2192.5	7.76	13.00	5.24
15 MHz with IoT, Low channel	2117.5	7.88	13.00	5.12
15 MHz with IoT, Mid channel	2155.0	7.86	13.00	5.14
15 MHz with IoT, Top channel	2192.5	7.86	13.00	5.14

Table 8.1-32: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for LTE 20 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
20 MHz, Low channel	2120.0	8.10	13.00	4.90
20 MHz, Mid channel	2155.0	8.14	13.00	4.86
20 MHz, Top channel	2190.0	8.12	13.00	4.88
20 MHz with IoT, Low channel	2120.0	8.14	13.00	4.86
20 MHz with IoT, Mid channel	2155.0	8.12	13.00	4.88
20 MHz with IoT, Top channel	2190.0	8.10	13.00	4.90

Test data, continued

Table 8.1-33: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for NR 5 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
5 MHz, Low channel	2112.5	7.30	13.00	5.70
5 MHz, Mid channel	2155.0	7.30	13.00	5.70
5 MHz, Top channel	2197.5	7.32	13.00	5.68

Table 8.1-34: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for NR 10 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
10 MHz, Low channel	2115.0	7.34	13.00	5.66
10 MHz, Mid channel	2155.0	7.32	13.00	5.68
10 MHz, Top channel	2195.0	7.38	13.00	5.62

Table 8.1-35: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for NR 15 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
15 MHz, Low channel	2117.5	8.00	13.00	5.00
15 MHz, Mid channel	2155.0	7.96	13.00	5.04
15 MHz, Top channel	2192.5	7.80	13.00	5.20

Table 8.1-36: *Complementary Cumulative Distribution Function (CCDF) of the PAPR reduction measurement results for single carrier operation for NR 20 MHz*

Remarks	Frequency, MHz	0.1% CCDF, dB	PAPR reduction limit, dB	Margin, dB
20 MHz, Low channel	2120.0	8.10	13.00	4.90
20 MHz, Mid channel	2155.0	8.10	13.00	4.90
20 MHz, Top channel	2190.0	8.14	13.00	4.86

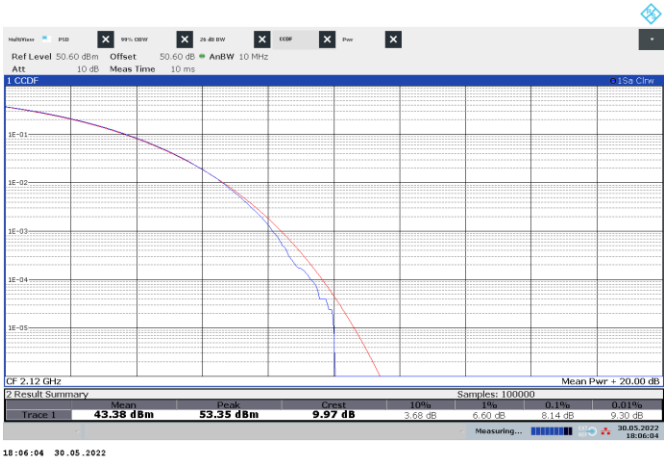

Figure 8.1-79: *CCDF sample plot, LTE*

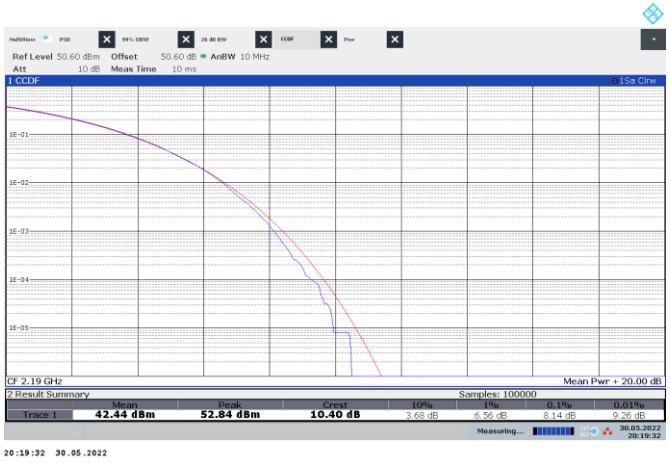

Figure 8.1-80: *CCDF sample plot, NR*

8.2 Transmitter output power (EIRP) and antenna height (Band 70)

8.2.1 Definitions and limits

FCC §27.50(d) Operation within the bands: 2110–2155 MHz and 2155–2180 MHz.

(1) The power of each fixed or base station transmitting in the 1995–2000 MHz, 2110–2155 MHz, 2155–2180 MHz or 2180–2200 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 3280 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 3280 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(2) The power of each fixed or base station transmitting in the 1995–2000 MHz, the 2110–2155 MHz 2155–2180 MHz band, or 2180–2200 MHz band and situated in any geographic location other than that described in paragraph (d)(1) of this section is limited to:

(i) An equivalent isotropically radiated power (EIRP) of 1640 watts when transmitting with an emission bandwidth of 1 MHz or less;

(ii) An EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

(3) A licensee operating a base or fixed station in the 2110–2155 MHz band utilizing a power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must coordinate such operations in advance with all Government and non-Government satellite entities in the 2025–2110 MHz band. A licensee operating a base or fixed station in the 2110–2180 MHz band utilizing power greater than 1640 watts EIRP and greater than 1640 watts/MHz EIRP must be coordinated in advance with the following licensees authorized to operate within 120 kilometers (75 miles) of the base or fixed station operating in this band: All Broadband Radio Service (BRS) licensees authorized under this part in the 2155–2160 MHz band and all advanced wireless services (AWS) licensees authorized to operate on adjacent frequency blocks in the 2110–2180 MHz band.

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(6) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

Table 8.2-1: *Reduction to Maximum Allowable E.I.R.P. for HAAT > 300 m*

HAAT (m)	Maximum EIRP, W/MHz
HAAT ≤ 300	1640 (or 3280[1])
300 < HAAT ≤ 500	1070
500 < HAAT ≤ 1000	490
1000 < HAAT ≤ 1500	270
1500 < HAAT ≤ 2000	160

Note: [1]for fixed and base stations with a channel bandwidth equal to or less than 1 MHz

8.2.2 Test summary

Test date	May 30, 2022
Test engineer	Moustapha Salah Toubeh

8.2.3 Observations, settings, and special notes

Output power was measured with RMS power meter per ANSI C63.26 Paragraph 5.2.4.2 method. PSD was measured using method described in paragraph 5.2.4.4.

- Randomly selected sample plots provided for information and settings only
- This radio unit is tested without the antenna. Licensees are required to take into account installation and deployment criteria along with maximum power settings, antenna gain, and feeder loss for all carrier configurations to ensure compliance against EIRP limits as defined by the FCC/ISED regulations. (See section 8.1.1)
- Total MIMO PSD was calculated as follows: PSD from one antenna port + 10 × Log_{10} (4)
- RBS (Radio Base Station) EIRP Limits are deployment dependent. To ensure compliance with legal limits detailed in section 8.1.1, RBS set up and carrier configurations are addressed during site commissioning.
- Report results are compiled for the maximum output rated power for worst case emission assessment. EIRP, based on possible beam configuration, indicate the maximum power / worst case beam configuration based on ideal antenna parameters. Customer carrier configuration and power will be limited to comply with legal limits of 3280 W/MHz and/or 1640 W/MHz during RBS site set up and commissioning. Non-compliant configurations will be restricted to lower carrier power to ensure compliance. Power settings and carrier configurations will be limited to lower power as warranted based on deployment scenarios as per FCC/ISED regulations as defined in section 8.1.1
- **To ensure compliance under worst case conditions with maximum output power based on a MIMO configuration, the maximum antenna gain for an RBS (Radio Base Station) system with Radio 4480 44B66 44B70 C is 18 dBi with 1 dB path loss.**

Spectrum analyzer settings for PSD:

Detector mode	RMS
Resolution bandwidth	1 MHz
Video bandwidth	>RBW
Measurement mode	Power over emission bandwidth
Trace mode	Averaging

8.2.1 Test data

Table 8.2-2: *EIRP calculation based on the* ***worst-case PSD measurement***

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	Cable loss, dB	Antenna gain, dBi	EIRP PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2007.5	40.93	46.95	-1.00	18.00	63.95	65.16	1.21

Table 8.2-3: *RF power density measurement results of a single-carrier operation for LTE on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
1997.5	**40.62**	46.64	65.16	18.52
2007.5	40.26	46.28	65.16	18.88
2017.5	39.76	45.78	65.16	19.38

Table 8.2-4: *RF power density measurement results of a single-carrier operation for LTE with IB-IoT1 on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
1997.5	40.20	46.22	65.16	18.94
2007.5	40.31	46.33	65.16	18.83
2017.5	**40.51**	46.53	65.16	18.63

Table 8.2-5: *RF power density measurement results of a single-carrier operation for LTE with IB-IoT2 on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
1997.5	40.13	46.15	65.16	19.01
2007.5	**40.93**	46.95	65.16	18.21
2017.5	40.84	46.86	65.16	18.30

Table 8.2-6: *RF power density measurement results of a single-carrier operation for LTE on 10 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2000.0	36.72	42.74	62.15	19.41
2007.5	**36.82**	42.84	62.15	19.31
2015.0	36.56	42.58	62.15	19.57

Table 8.2-7: *RF power density measurement results of a single-carrier operation for LTE with GB-IoT on 10 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2000.0	36.68	42.70	62.15	19.45
2007.5	36.92	42.94	62.15	19.21
2015.0	**37.08**	43.10	62.15	19.05

Notes: [1] 1 GB-IoT at each edge of the channel.

Table 8.2-8: *RF power density measurement results of a single-carrier operation for LTE on 15 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2002.0	34.59	40.61	62.15	21.54
2007.5	**35.07**	41.09	62.15	21.06
2012.5	34.87	40.89	62.15	21.26

Test data, continued

Table 8.2-9: *RF power density measurement results of a single-carrier operation for LTE with GB-IoT on 15 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2002.0	35.52	41.54	62.15	20.61
2007.5	**35.65**	41.67	62.15	20.48
2012.5	34.94	40.96	62.15	21.19

Notes: [1] 1 GB-IoT at each edge of the channel.

Table 8.2-10: *RF power density measurement results of a single-carrier operation for LTE on 20 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2005.0	33.83	39.85	62.15	22.30
2007.5	**34.01**	40.03	62.15	22.12
2010.0	33.85	39.87	62.15	22.28

Table 8.2-11: *RF power density measurement results of a single-carrier operation for LTE with GB-IoT on 20 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2005.0	33.77	39.79	62.15	22.36
2007.5	**34.19**	40.21	62.15	21.94
2010.0	34.02	40.04	62.15	22.11

Notes: [1] 1 GB-IoT at each edge of the channel.

Table 8.2-12: *RF power density measurement results of a multi-carrier operation for LTE on 5 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers [1]	**37.39**	43.20	65.16	21.96
2 carriers [2]	37.21	40.36	65.16	24.80
4 carriers [1]	33.87	40.36	65.16	24.80
5 carriers [1]	33.17	38.52	65.16	26.64

Notes: [1] IB IoT1 at the bottom channel and IB IoT2 at the top channel.
[2] IB IoT2 at the bottom channel and IB IoT1 at the top channel.

Table 8.2-13: *RF power density measurement results of a multi-carrier operation for LTE on 10 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**34.10**	40.12	62.15	22.03

Notes: 1 GB IoT at the bottom channel and 1 GB IoT at the top channel.

Test data, continued

Table 8.2-14: *RF power density measurement results of a single-carrier operation for NR on 5 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
1997.5	39.16	45.18	65.16	19.98
2007.5	39.25	45.27	65.16	19.89
2017.5	**39.57**	45.59	65.16	19.57

Table 8.2-15: *RF power density measurement results of a single-carrier operation for NR on 10 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2000.0	**36.46**	42.48	62.15	19.67
2007.5	36.20	42.22	62.15	19.93
2015.0	36.24	42.26	62.15	19.89

Table 8.2-16: *RF power density measurement results of a single-carrier operation for NR on 15 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2002.5	34.79	40.81	62.15	21.34
2007.5	**34.95**	40.97	62.15	21.18
2012.5	34.85	40.87	62.15	21.28

Table 8.2-17: *RF power density measurement results of a single-carrier operation for NR on 20 MHz channel*

Frequency, MHz	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2005.0	**33.53**	39.55	62.15	22.60
2007.5	**33.53**	39.55	62.15	22.60
2010.0	33.47	39.49	62.15	22.66

Table 8.2-18: *RF power density measurement results of a multi-carrier operation for NR on 5 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**36.52**	43.20	65.16	21.96
3 carriers	33.78	40.36	65.16	24.80
4 carriers	33.52	40.36	65.16	24.80
6 carriers	32.52	38.52	65.16	26.64

Table 8.2-19: *RF power density measurement results of a multi-carrier operation for LTE on 10 MHz channel*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 carriers	**33.31**	43.20	62.15	18.95

Test data, continued

Table 8.2-20: *RF power density measurement results of a multi-RAT operation*

Notes	RF power density, dBm/MHz	Total MIMO PSD, dBm/MHz	EIRP limit, dBm/MHz	Margin, dB
2 Carriers (LTE 5 MHz and NR 5 MHz)	**36.24**	42.26	62.15	19.89
2 Carriers (LTE 10 MHz and NR 10 MHz)	33.76	39.78	62.15	22.37
4 Carriers (2x LTE 5 MHz and 2x NR 5 MHz)	33.70	39.72	62.15	22.43
5 Carriers (3x LTE 5 MHz and 2x NR 5 MHz)	32.30	38.32	62.15	23.83

Note: “and”: non-contiguous channels; “x”: contiguous channels

Test data, continued

Table 8.2-21: *RF total channel power measurement results for LTE*

Remarks	5 MHz channel (40 W)	10 MHz channel (40 W)	15 MHz channel (40 W)	20 MHz channel (40 W)
Low channel, QPSK	46.34	46.00	45.95	45.96
Low channel, 16-QAM	46.19			
Low channel, 64-QAM	46.19			
Low channel, 256-QAM	46.13			
Mid channel, QPSK	45.24	46.04	45.99	45.99
Top channel, QPSK	46.02	45.91	45.89	45.95

Note: all results in the table are in dBm units

Table 8.2-22: *RF total channel power measurement results for LTE with IB or IoT*

Remarks	5 MHz channel (40 W) [1]	10 MHz channel (40 W) [2]	15 MHz channel (40 W) [2]	20 MHz channel (40 W) [2]
1 carrier with IB-IoT1/or IB-IoT2, Low channel, QPSK	46.01/45.97	NA	NA	NA
1 carrier with IB-IoT1/or IB-IoT2, Mid channel, QPSK	46.10/46.01	NA	NA	NA
1 carrier with IB-IoT1/or IB-IoT2, Top channel, QPSK	45.89/45.86	NA	NA	NA
1 carrier with GB-IoT, Low channel, QPSK	NA	45.85	45.88	45.93
1 carrier with GB-IoT, Mid channel, QPSK	NA	45.88	45.91	45.95
1 carrier with GB-IoT, Top channel, QPSK	NA	45.78	45.84	45.88
2 carriers with IB-IoT1 at the bottom channel and IB-IoT2 at the top channel, QPSK	45.64	NA	NA	NA
2 carriers with IB-IoT2 at the bottom channel and IB-IoT1 at the top channel, QPSK	45.62	NA	NA	NA
2 carriers with GB-IoT, QPSK	NA	45.64	NA	NA
4 carriers with IB-IoT1 and IB-IoT2, QPSK	45.72	NA	NA	NA
4 carriers with GB-IoT, QPSK	NA	45.63	45.76	45.83
5 carriers with IB-IoT1 and IB-IoT2, QPSK	45.87	NA	NA	NA

Notes: [1] For 1C, In-band IoT (IB-IoT1 or IB-IoT2) at the bottom of the channel. For 2C and above, IB-IoT1 at the bottom channel and IB-IoT2 at the top channel (or opposite)
[2] For 1C, 1 Guard-band IoT (GB-IoT) at each edge of the channel. For 2C and above, 1 GB-IoT at the bottom of the channel and 1 GB-IoT at the top of the channel
All results in the table are in dBm units

Table 8.2-23: *RF total channel power measurement results for NR*

Remarks	5 MHz channel (40 W)	10 MHz channel (40 W)	15 MHz channel (40 W)	20 MHz channel (40 W) [1]
1 carrier, Low channel, QPSK	45.85	45.97	45.98	45.98
1 carrier, Low channel, 16-QAM	45.87			
1 carrier, Low channel, 64-QAM	45.88			
1 carrier, Low channel, 256-QAM	45.92			
1 carrier, Mid channel, QPSK	46.02	45.99	46.01	45.97
1 carrier, Top channel, QPSK	45.84	45.9	45.97	45.94
2 carriers, QPSK	45.64	45.91	NA	NA
3 carriers, QPSK	45.63	NA	NA	NA
4 carriers, QPSK	45.77	NA	NA	NA
5 carriers, QPSK	45.89	NA	NA	NA

Notes: [1] For 5C NR, 4C were at 20 MHz channel and 1C at 10 MHz channel
All results in the table are in dBm units

Test data, continued

Table 8.2-24: *RF total channel power measurement results for multi-RAT operation*

Remarks	5 MHz channel (20 W)	10 MHz channel (40 W)	15 MHz channel (60 W)	20 MHz channel (80 W)
1xLTE and 1×NR	45.56	45.87	NA	NA
2xLTE and 2×NR	45.68	NA	NA	NA
3xLTE and 2×NR	45.82	NA	NA	NA

Notes: "and": non-contiguous channels; "x": contiguous channels
All results in the table are in dBm units

Test data, continued

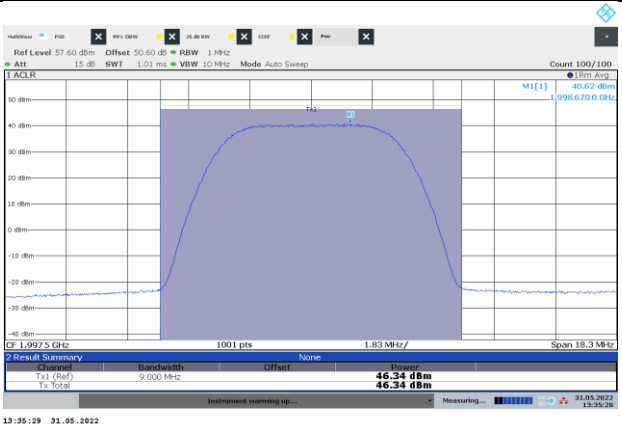

Figure 8.2-1: *PSD and Output channel power of LTE 5 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

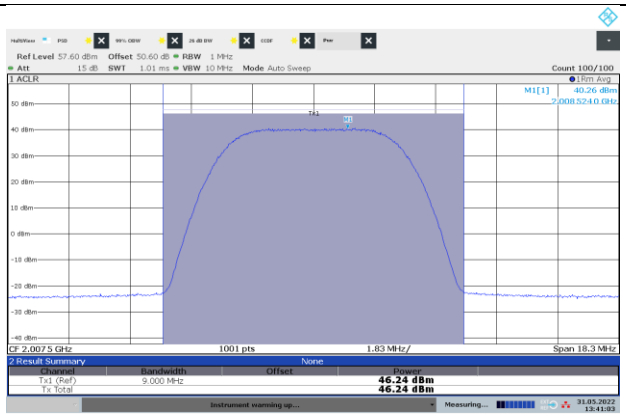

Figure 8.2-2: *PSD and Output channel power of LTE 5 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

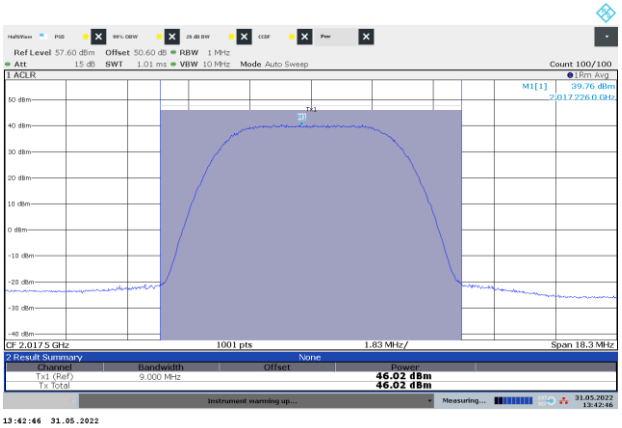

Figure 8.2-3: *PSD and Output channel power of LTE 5 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

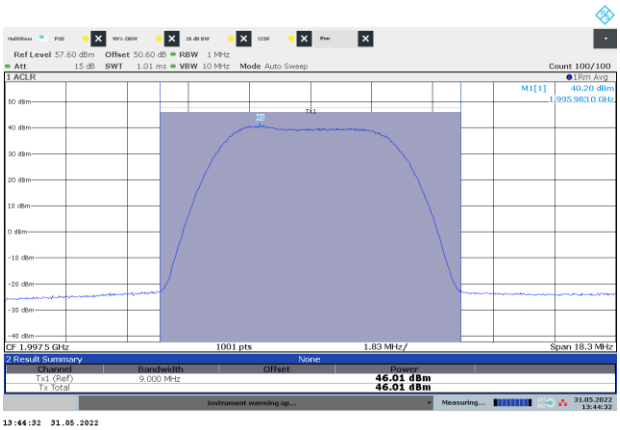

Figure 8.2-4: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1, single carrier operation, Low Channel, sample plot*

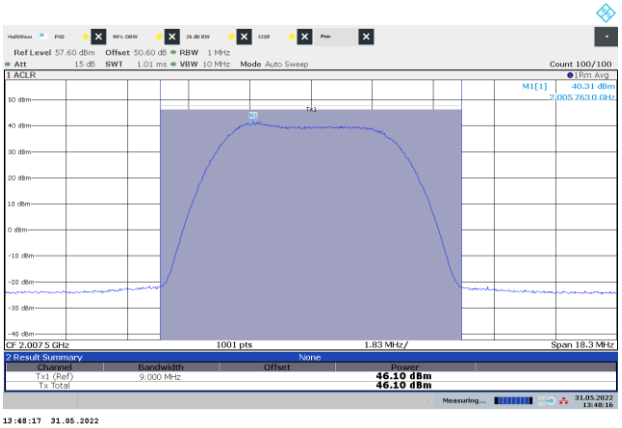

Figure 8.2-5: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1, single carrier operation, Mid Channel, sample plot*

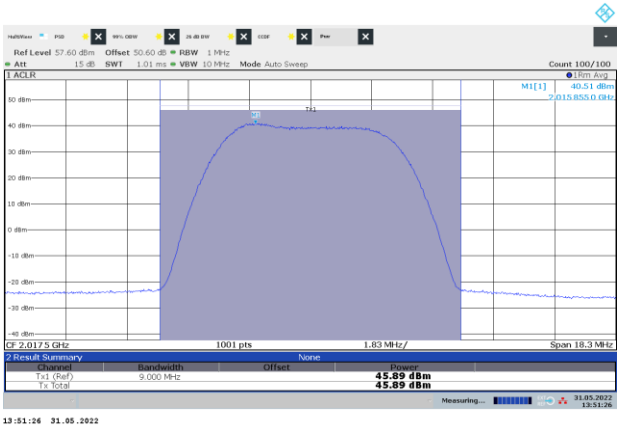

Figure 8.2-6: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1, single carrier operation, Top Channel, sample plot*

Test data, continued

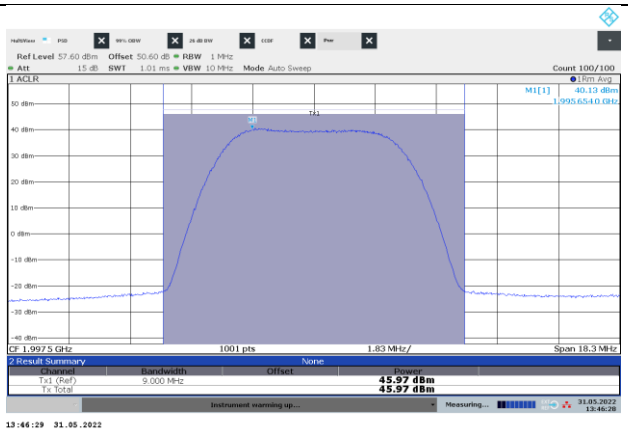

Figure 8.2-7: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2, single carrier operation, Low Channel, sample plot*

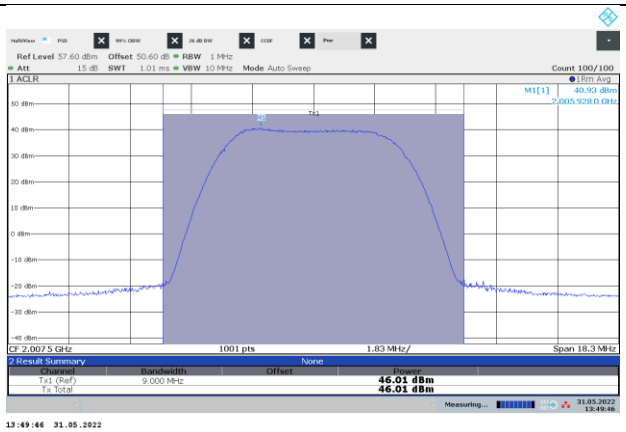

Figure 8.2-8: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2, single carrier operation, Mid Channel, sample plot*

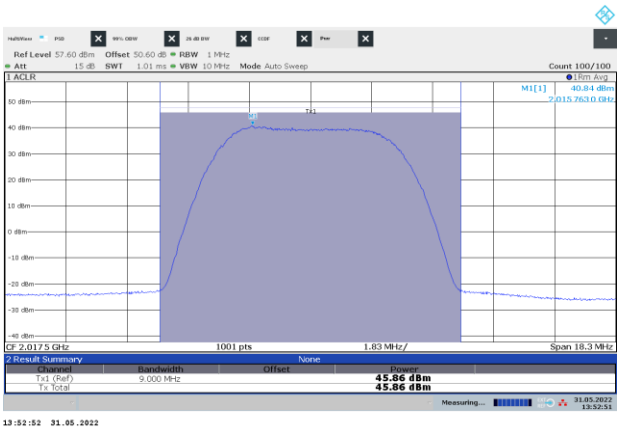

Figure 8.2-9: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2, single carrier operation, Top Channel, sample plot*

Test data, continued

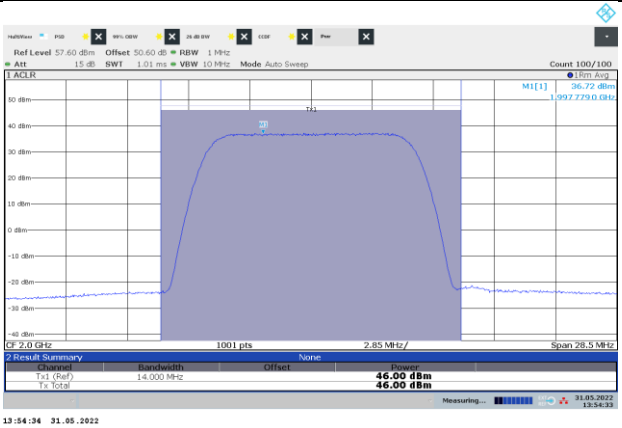

Figure 8.2-10: *PSD and Output channel power of LTE 10 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

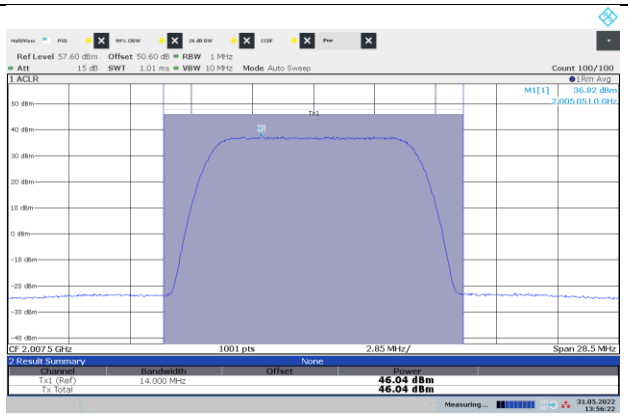

Figure 8.2-11: *PSD and Output channel power of LTE 10 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

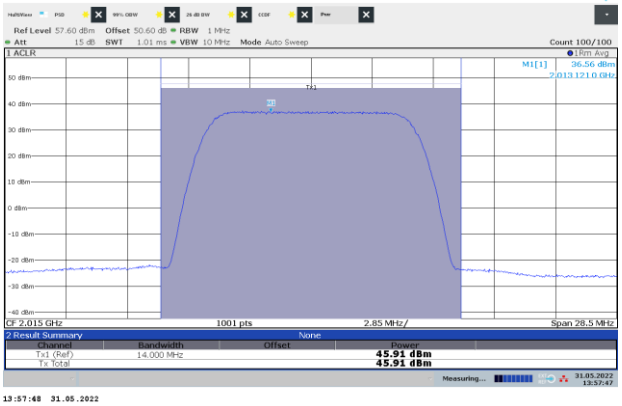

Figure 8.2-12: *PSD and Output channel power of LTE 10 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

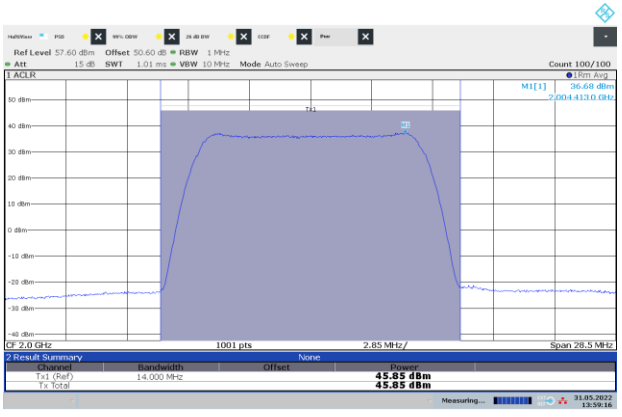

Figure 8.2-13: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, single carrier operation, Low Channel, sample plot*

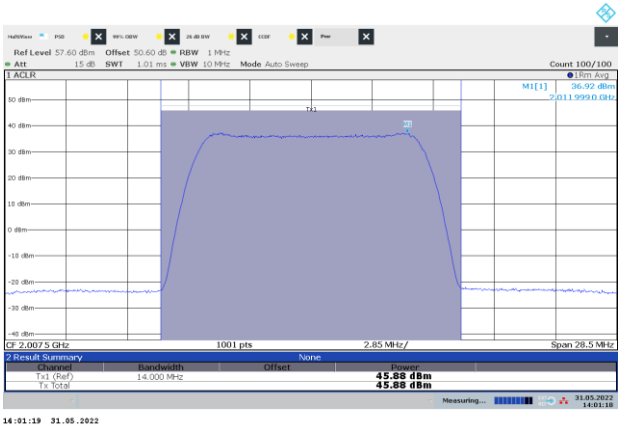

Figure 8.2-14: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, single carrier operation, Mid Channel, sample plot*

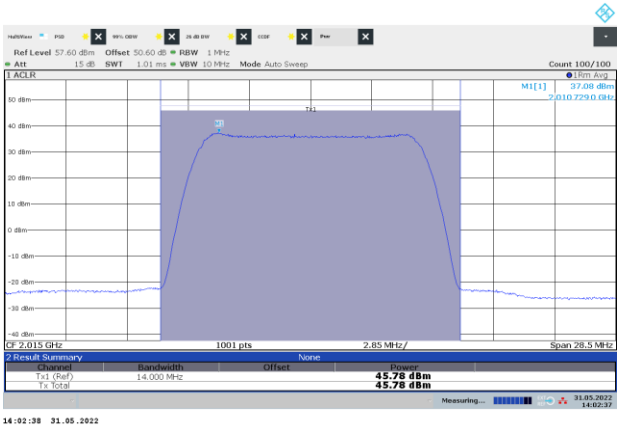

Figure 8.2-15: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, single carrier operation, Top Channel, sample plot*

Test data, continued

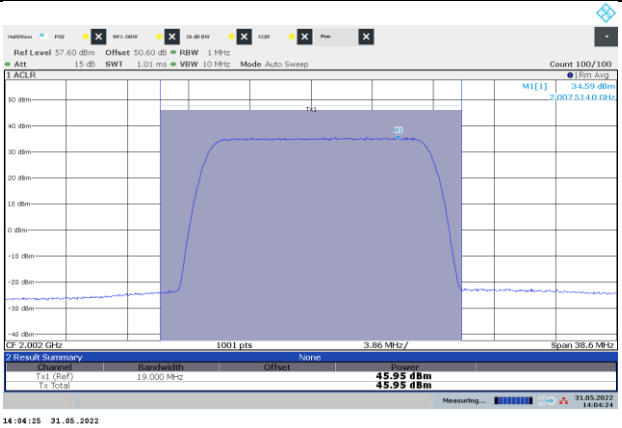

Figure 8.2-16: *PSD and Output channel power of LTE 15 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

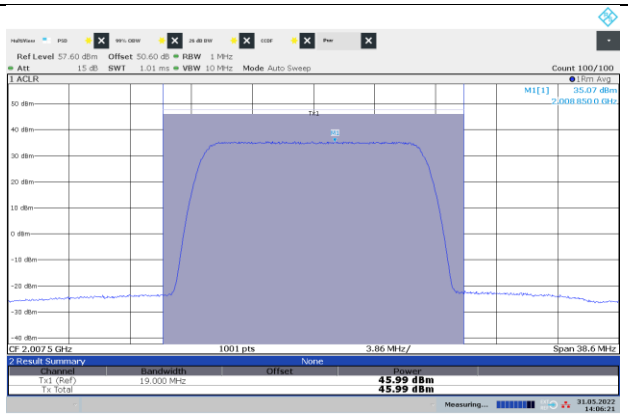

Figure 8.2-17: *PSD and Output channel power of LTE 15 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

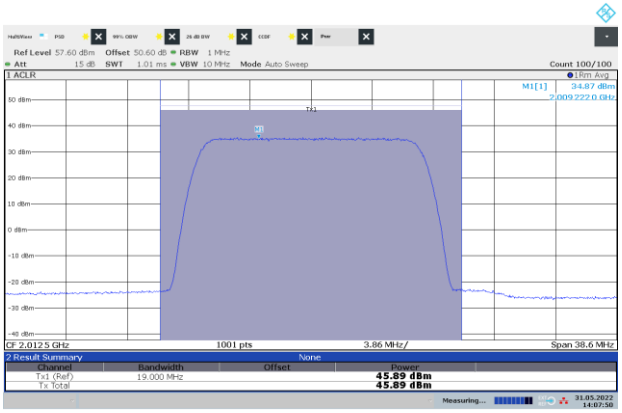

Figure 8.2-18: *PSD and Output channel power of LTE 15 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

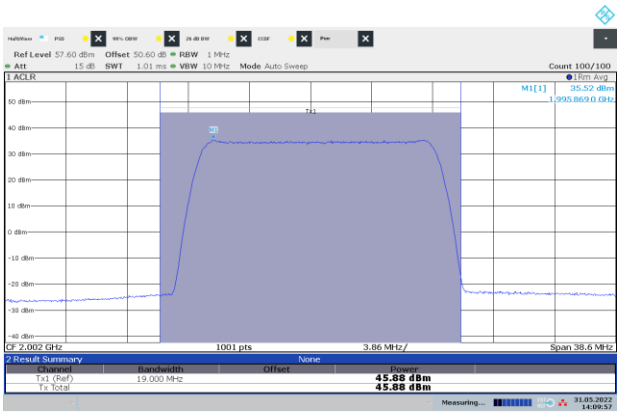

Figure 8.2-19: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, single carrier operation, Low Channel, sample plot*

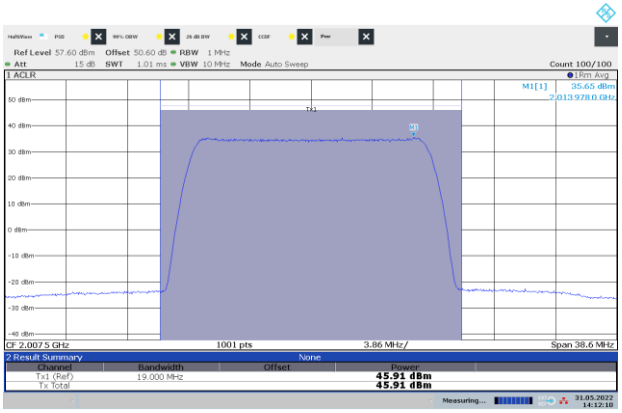

Figure 8.2-20: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, single carrier operation, Mid Channel, sample plot*

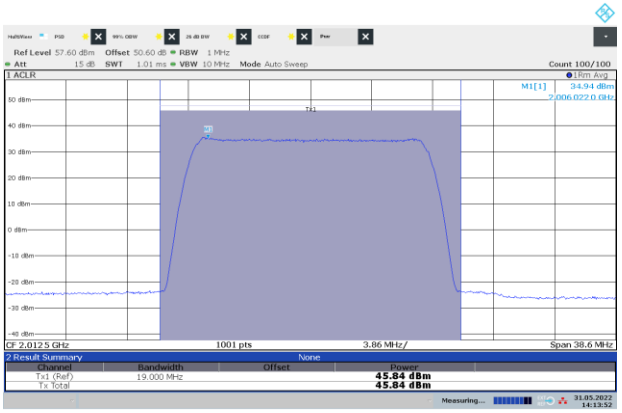

Figure 8.2-21: *PSD and Output channel power of LTE 15 MHz channel bandwidth with GB-IoT, single carrier operation, Top Channel, sample plot*

Test data, continued

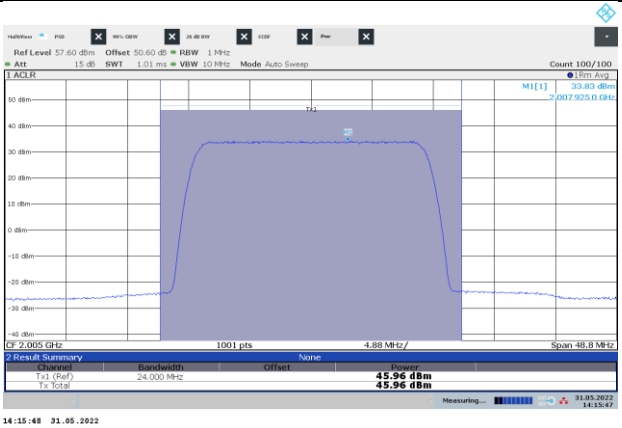

Figure 8.2-22: *PSD and Output channel power of LTE 20 MHz channel bandwidth, single carrier operation, Low Channel, sample plot*

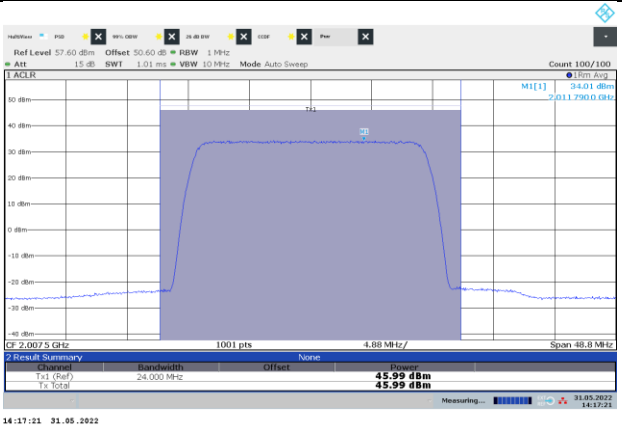

Figure 8.2-23: *PSD and Output channel power of LTE 20 MHz channel bandwidth, single carrier operation, Mid Channel, sample plot*

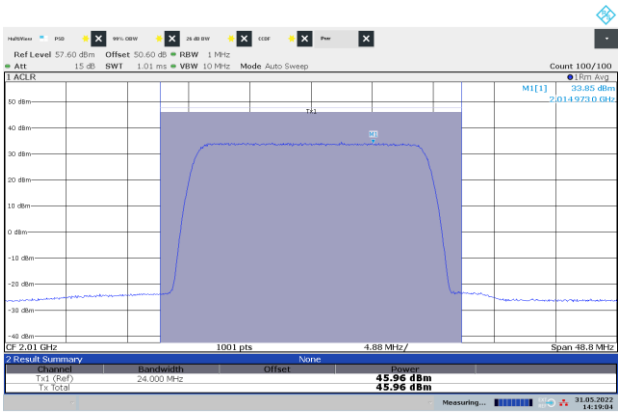

Figure 8.2-24: *PSD and Output channel power of LTE 20 MHz channel bandwidth, single carrier operation, Top Channel, sample plot*

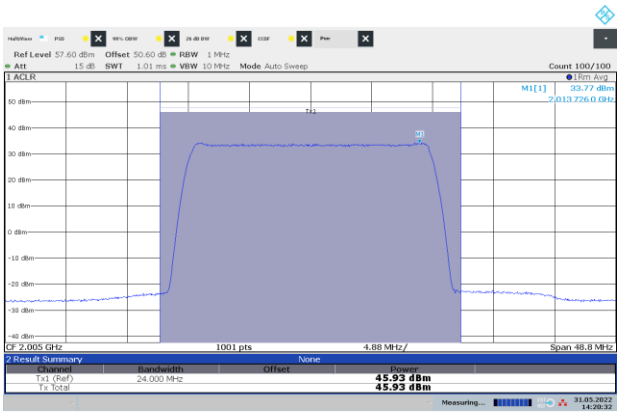

Figure 8.2-25: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, single carrier operation, Low Channel, sample plot*

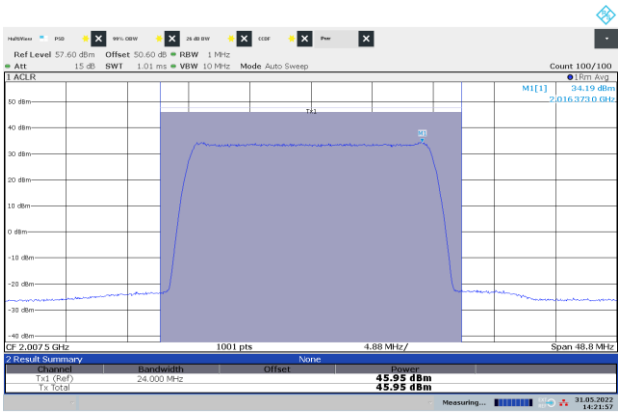

Figure 8.2-26: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, single carrier operation, Mid Channel, sample plot*

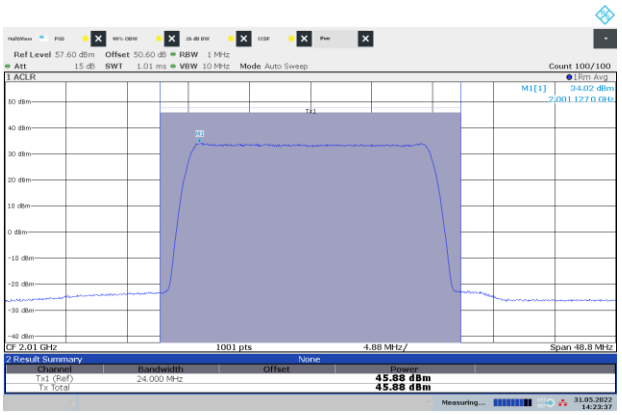

Figure 8.2-27: *PSD and Output channel power of LTE 20 MHz channel bandwidth with GB-IoT, single carrier operation, Top Channel, sample plot*

Test data, continued

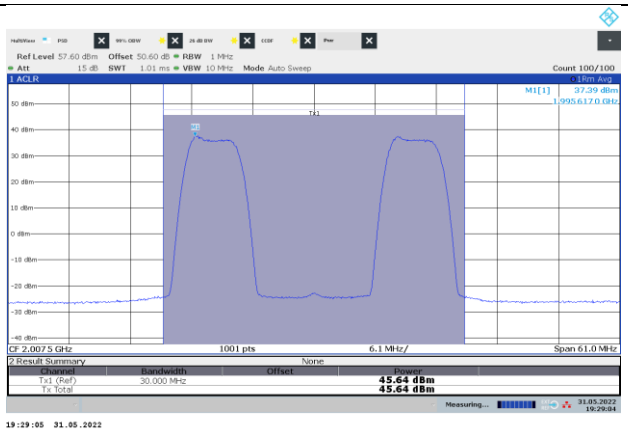

Figure 8.2-28: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1 and IB-IoT2, two carriers operation, sample plot*

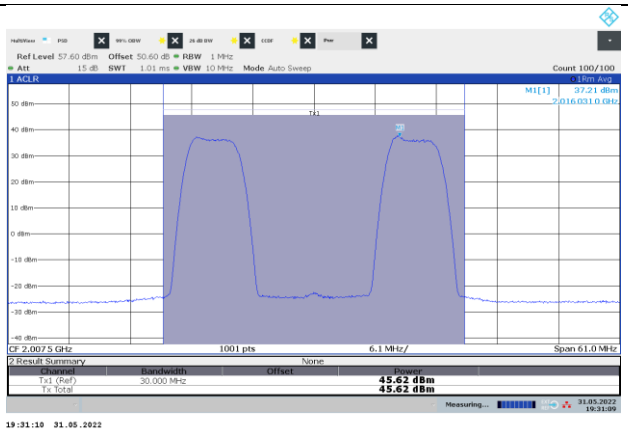

Figure 8.2-29: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT2 and IB-IoT1, two carriers operation, sample plot*

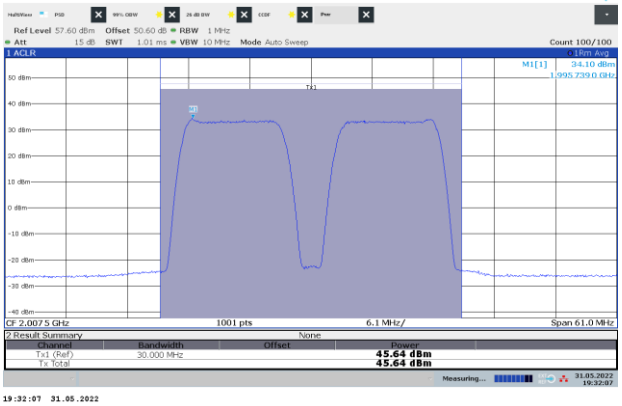

Figure 8.2-30: *PSD and Output channel power of LTE 10 MHz channel bandwidth with GB-IoT, two carriers operation, sample plot*

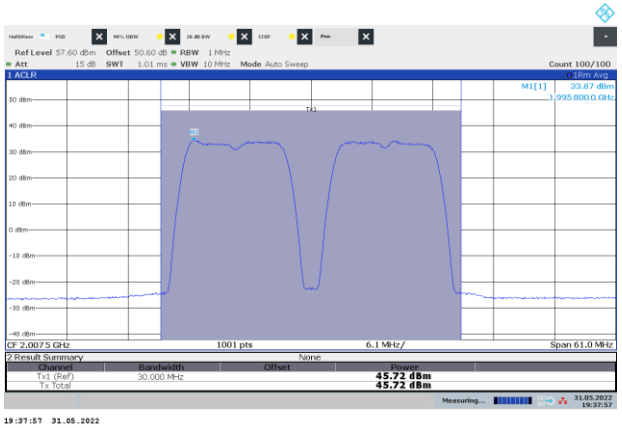

Figure 8.2-31: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1 and IB-IoT2, four carriers operation, sample plot*

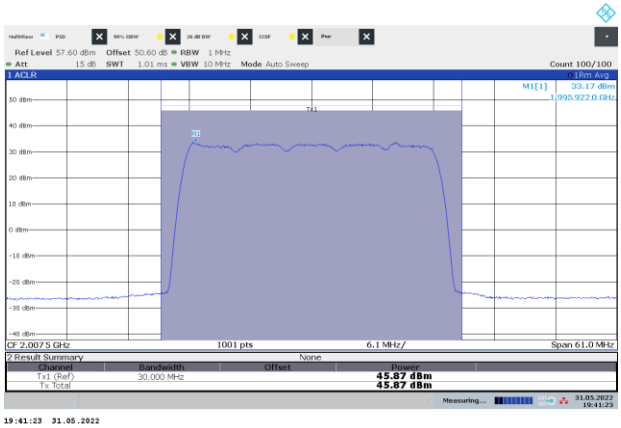

Figure 8.2-32: *PSD and Output channel power of LTE 5 MHz channel bandwidth with IB-IoT1 and IB-IoT2, five carriers operation, sample plot*