TEST REPORT

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1. Client

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
- Date of Receipt : 2022-10-17

2. Use of Report : Certification

3. Name of Product and Model : Mobile Phone
- Model Name : SM-A346M/DSN
- Manufacturer and Country of Origin : Samsung Electronics Co., Ltd. / VIETNAM

4. FCC ID : A3LSMA346M

5. Date of Test : 2022-12-06 ~ 2023-01-03

6. Location of Test : ■ Permanent Testing Lab ☐ On Site Testing
(Address: 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

7. Test Standards : IEEE 1528-2013, ANSI/IEEE C95.1, KDB Publication

8. Test Results : Refer to the test result in the test report

Affirmation	Tested by Name : Hankyul Jung (Signature)	Technical Manager Name : Jongwon Ma (Signature)

2023-01-12

Eurofins KCTL Co.,Ltd.

REPORT REVISION HISTORY

Date	Revision	Page No
2023-01-06	Originally issued	-
2023-01-12	Revised the title	88
	Conducted output power updated -LTE Band 2, LTE Band 66, 5G NR n66 information	overall

Note: The Report No. KR23-SPF0001 is superseded by the report No. KR23-SPF0001-A.

General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ **Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:**

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ **Statement not required by the standard or client used for type testing**

1. Identification when information is provided by the customer: Information marked " # " is provided by the customer. - Disclaimer: This information is provided by the customer and can affect the validity of results.

CONTENTS

1. General information 4
2. Device information 5
3. #LTE Information 19
4. #5G NR Information 21
5. Specific Absorption Rate 22
6. SAR Measurement Procedures 23
7. SAR Measurement Configurations 24
8. RF Exposure Limits 28
9. SAR General Measurement Procedures 29
10. RF Average Conducted Output Power 36
11. System Verification 119
12. SAR Test Results 124
13. Simultaneous Transmission 159
14. SAR Measurement Variability 180
15. Measurement Uncertainty 181
16. Test Equipment Information 182
17. Test System Verification Results 184
18. Test Results 212
Appendixes List 312
Appendix A. Calibration certificate 313
Appendix B. SAR Tissue Specification 455
Appendix C. LTE CA RF Conducted Power 456
Appendix D. #Antenna Location & Distance 466
Appendix E. EUT Photo 470
Appendix F. Test Setup Photo 473
Appendix G. Power Reduction Verification 481
End of test report 488

1. General information

Client	:	Samsung Electronics Co., Ltd.
Address	:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Manufacturer	:	Samsung Electronics Co., Ltd.
Address	:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
Factory	:	Samsung Electronics Vietnam Thai Nguyen Co., Ltd
Address	:	Yen Binh Industrial Park, Dong Tien Ward, Pho Yen Town, Thai Nguyen Province, Vietnam
Laboratory	:	Eurofins KCTL Co.,Ltd.
Address	:	65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
Accreditations	:	FCC Site Designation No: KR0040, FCC Site Registration No: 687132 VCCI Registration No. : R-3327, G-198, C-3706, T-1849 CAB Identifier: KR0040, ISED Number: 8035A KOLAS No.: KT231

1.1 Report Overview

This report details the results of testing carried out on the samples listed in section 2, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this test report is used in any configuration other than that detailed in the test report, the manufacturer must ensure the new configuration complies with all relevant standards and certification requirements. Any mention of Eurofins KCTL Co.,Ltd. Wireless lab or testing done by Eurofins KCTL Co.,Ltd. Wireless lab made in connection with the distribution or use of the tested product must be approved in writing by Eurofins KCTL Co.,Ltd. Wireless lab.

2. Device information

2.1 Basic description

Product Name		Mobile Phone		
Product Model Name		SM-A346M/DSN		
Derivative Model		SM-A346M/N		
Product Manufacturer		Samsung Electronics Co., Ltd.		
Product Serial Number	Radiation	R3CTA0ARBEJ, R3CT904N0ZF, R3CT904NARX		
		R3CTA0ARECT, 68559F4CEF337ECE, 67EAC23D90337ECE		
	Conduction	R3CT904N2GB, R3CT904N42Y, R3CT904MLNZ		
Device Overview		Band & Mode	Operating Modes	Tx Frequency (㎒)
		GSM/GPRS/EDGE 850	Voice/Data	824.2 ~ 848.8
		GSM/GPRS/EDGE 1900	Voice/Data	1 850.2 ~ 1 909.8
		WCDMA Band II	Voice/Data	1 852.4 ~ 1 907.6
		WCDMA Band IV	Voice/Data	1 712.4 ~ 1 752.6
		WCDMA Band V	Voice/Data	826.4 ~ 846.6
		LTE Band 2	Voice/Data	1 850.7 ~ 1 909.3
		LTE Band 4	Voice/Data	1 710.7 ~ 1 754.3
		LTE Band 5	Voice/Data	824.7 ~ 848.3
		LTE Band 12	Voice/Data	699.7 ~ 715.3
		LTE Band 13	Voice/Data	779.5 ~ 784.5
		LTE Band 17	Voice/Data	706.5 ~ 713.5
		LTE Band 26	Voice/Data	814.7 ~ 848.3
		LTE Band 41	Voice/Data	2 498.5 ~ 2 687.5
		LTE Band 66	Voice/Data	1 710.7 ~ 1 779.3
		5G NR n5	Voice/Data	826.5 ~ 846.5
		5G NR n66	Voice/Data	1 712.5 ~ 1 777.5
		2.4 ㎓ WLAN	Voice/Data	2 412.0 ~ 2 472.0
		U-NII-1	Voice/Data	5 180.0 ~ 5 240.0
		U-NII-2A	Voice/Data	5 260.0 ~ 5 320.0
		U-NII-2C	Voice/Data	5 500.0 ~ 5 720.0
		U-NII-3	Voice/Data	5 745.0 ~ 5 825.0
		Bluetooth	Data	2 402.0 ~ 2 480.0
		NFC	Data	13.56
TDWR Information		5.60 ㎓~ 5.65 ㎓ band (TDWR) is supported by the device.		

2.2 Summary of SAR Test Results

Band	Ant.	Equipment Class	Highest Reported			
			1g SAR (W/kg)			10g SAR (W/kg)
			Head	Body-Worn	Hotspot	Phablet
GSM/GPRS/EDGE 850		PCE	0.37	0.45	0.55	N/A
GSM/GPRS/EDGE 1900		PCE	< 0.10	0.69	**1.23**	2.54
WCDMA Band II		PCE	< 0.10	**0.76**	1.06	2.21
WCDMA Band IV		PCE	< 0.10	0.59	1.15	**2.89**
WCDMA Band V		PCE	0.25	0.28	0.49	N/A
LTE Band 2	Main1	PCE	< 0.10	0.33	0.62	1.70
	Sub2	PCE	0.66	0.30	0.46	N/A
LTE Band 4	Main1	PCE	N/A	N/A	N/A	N/A
	Sub2	PCE	0.67	0.15	0.41	N/A
LTE Band 5		PCE	0.28	0.32	0.66	N/A
LTE Band 12		PCE	0.14	0.21	0.22	N/A
LTE Band 13		PCE	0.14	0.23	0.22	N/A
LTE Band 17		PCE	N/A	N/A	N/A	N/A
LTE Band 26		PCE	0.21	0.24	0.39	N/A
LTE Band 41		PCE	0.13	0.18	0.24	N/A
LTE Band 66	Main1	PCE	< 0.10	0.60	0.66	1.78
	Sub2	PCE	**0.75**	0.26	0.40	N/A
5G NR n5		PCE	0.25	0.32	0.54	N/A
5G NR n66	Main1	PCE	< 0.10	0.46	0.73	2.21
	Sub2	PCE	0.64	0.32	0.38	N/A
2.4 ㎓ WLAN		DTS	0.27	0.21	0.35	N/A
U-NII-1		NII	N/A	N/A	N/A	N/A
U-NII-2A		NII	0.22	0.30	N/A	2.05
U-NII-2C		NII	0.41	0.39	N/A	2.35
U-NII-3		NII	0.33	0.25	0.62	N/A
Bluetooth		DSS	0.33	< 0.10	0.11	N/A
NFC		DXX	N/A	N/A	N/A	< 0.10
Simultaneous SAR per KDB 690783 D01v01r03			1.57	1.31	1.31	3.68

2.3 #Antenna information

Antenna Type		Main Ant : Metal Ant / Sub Ant : LDS Ant														
Band		GSM		WCDMA			LTE								NR	
		850	1900	II	IV	V	2	4	5	12	13	26	41	66	n5	n66
Peak gain (dBi)	Main 1	-5.5	-4.8	-4.8	-4.7	-5.5	-4.8	-4.7	-5.5	-5.9	-6.4	-6.5	-	-5.0	-5.5	-5.0
	Main 2	-	-	-	-	-	-	-	-	-	-	-	-4.8	-	-	-
	Sub 2	-	-	-	-	-	-2.1	-2.1	-	-	-	-	-	-2.1	-	-2.0

Antenna Type		Sub Ant : LDS Antenna			
Band		WLAN 2.4 ㎓ / Bluetooth	UNII-2A	UNII-2C	UNII-3
Peak gain (dBi)	Sub 4	-	-8.89	-8.70	-9.03
	Sub 5	-9.43	-9.78	-9.51	-9.43
	Sub 8	-9.03	-	-	-

2.4 Measurement date and environment

Shield room	Date	Environment	
		Temperature (°C)	Humidity (%)
8F - 1	2022-12-13	20.6 ~ 21.0	47.4
	2022-12-15	20.7 ~ 20.8	48.1
	2022-12-19	21.0 ~ 21.2	50.5
	2022-12-21	20.4 ~ 20.5	48.6
	2023-01-03	20.1 ~ 20.6	48.9
8F - 2	2022-12-06	21.8 ~ 22.0	41.0
	2022-12-07	21.0 ~ 21.0	41.5
	2022-12-08	21.5 ~ 22.2	40.9
	2022-12-09	21.0 ~ 21.4	42.0
	2022-12-12	21.1 ~ 21.8	42.1
	2022-12-13	21.2 ~ 22.1	42.3
	2022-12-15	21.4 ~ 21.5	41.2
	2022-12-17	21.5 ~ 22.0	41.0
	2022-12-28	21.4 ~ 21.8	40.9
	2023-01-02	22.1 ~ 22.3	42.0
	2023-01-03	21.8 ~ 21.8	41.6
8F - 3	2022-12-16	20.3 ~ 21.0	46.5
	2022-12-17	20.9 ~ 21.7	46.2
	2022-12-26	20.1 ~ 20.4	47.6
8F - 4	2022-12-17	20.8 ~ 21.0	49.3
	2022-12-19	20.5 ~ 20.7	50.0
	2022-12-20	20.6 ~ 20.9	48.1
	2022-12-21	20.6 ~ 21.1	50.8
	2022-12-22	21.0 ~ 21.2	47.9
	2022-12-24	20.8 ~ 21.1	48.3
	2022-12-27	21.3 ~ 21.6	49.6

2.5 Power Reduction for SAR

This device utilizes a power reduction mechanism for some wireless modes and bands for SAR compliance under portable hotspot conditions. All hotspot SAR evaluations for this device were performed at the maximum allowed output power when hotspot is enabled.

This device uses an independent fixed level power reduction mechanism for WLAN operations during VoWIFI held to ear scenarios. Per FCC Guidance, the held-to-ear exposure conditions were evaluated at reduced power according to the Head SAR positions described in IEEE 1528-2013. Detailed descriptions of the power reduction mechanism are included in the operational description.

2.6 #Maximum Tune-up power

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 447498 D04v01.

Band	Mode	Output Power(dBm)			
		Normal		Back-off (Grip Sensor, Hotspot, Ear-jack)	
		Target	Max. Allowed	Target	Max. Allowed
GSM 850	GSM Voice	33.80	**34.80**	Not Supported	
	GPRS 1 TX	33.80	**34.80**		
	GPRS 2 TX	32.80	**33.80**		
	GPRS 3 TX	29.80	**30.80**		
	GPRS 4 TX	28.50	**29.50**		
	EGPRS 1 TX	27.50	**28.50**		
	EGPRS 2 TX	26.50	**27.50**		
	EGPRS 3 TX	24.50	**25.50**		
	EGPRS 4 TX	23.50	**24.50**		
GSM 1900	GSM Voice	30.80	**31.80**	27.80	**28.80**
	GPRS 1 TX	30.80	**31.80**	27.80	**28.80**
	GPRS 2 TX	29.80	**30.80**	26.80	**27.80**
	GPRS 3 TX	26.80	**27.80**	23.80	**24.80**
	GPRS 4 TX	25.50	**26.50**	22.50	**23.50**
	EGPRS 1 TX	25.00	**26.00**	22.00	**23.00**
	EGPRS 2 TX	24.00	**25.00**	21.00	**22.00**
	EGPRS 3 TX	22.00	**23.00**	19.00	**20.00**
	EGPRS 4 TX	21.00	**22.00**	18.00	**19.00**

Band	Mode	Output Power(dBm)			
		Normal		Back-off (Grip Sensor, Hotspot, Ear-jack)	
		Target	Max. Allowed	Target	Max. Allowed
WCDMA Band II					
RMC		23.60	**24.60**	19.60	**20.60**
AMR		23.60	**24.60**	19.60	**20.60**
HSDPA	Subtest 1	22.60	**23.60**	18.60	**19.60**
	Subtest 2	22.60	**23.60**	18.60	**19.60**
	Subtest 3	22.10	**23.10**	18.60	**19.60**
	Subtest 4	22.10	**23.10**	18.60	**19.60**
HSUPA	Subtest 1	20.60	**21.60**	16.60	**17.60**
	Subtest 2	18.60	**19.60**	16.60	**17.60**
	Subtest 3	19.60	**20.60**	16.60	**17.60**
	Subtest 4	18.60	**19.60**	16.60	**17.60**
	Subtest 5	20.60	**21.60**	16.60	**17.60**
DC-HSDPA	Subtest 1	22.60	**23.60**	18.60	**19.60**
	Subtest 2	22.60	**23.60**	18.60	**19.60**
	Subtest 3	22.10	**23.10**	18.60	**19.60**
	Subtest 4	22.10	**23.10**	18.60	**19.60**
WCDMA Band IV					
RMC		23.60	**24.60**	20.60	**21.60**
AMR		23.60	**24.60**	20.60	**21.60**
HSDPA	Subtest 1	22.60	**23.60**	19.60	**20.60**
	Subtest 2	22.60	**23.60**	19.60	**20.60**
	Subtest 3	22.10	**23.10**	19.60	**20.60**
	Subtest 4	22.10	**23.10**	19.60	**20.60**
HSUPA	Subtest 1	20.60	**21.60**	17.60	**18.60**
	Subtest 2	18.60	**19.60**	17.60	**18.60**
	Subtest 3	19.60	**20.60**	17.60	**18.60**
	Subtest 4	18.60	**19.60**	17.60	**18.60**
	Subtest 5	20.60	**21.60**	17.60	**18.60**
DC-HSDPA	Subtest 1	22.60	**23.60**	19.60	**20.60**
	Subtest 2	22.60	**23.60**	19.60	**20.60**
	Subtest 3	22.10	**23.10**	19.60	**20.60**
	Subtest 4	22.10	**23.10**	19.60	**20.60**
WCDMA Band V					
RMC		24.50	**25.50**	**Not Supported**	
AMR		24.50	**25.50**		
HSDPA	Subtest 1	23.50	**24.50**		
	Subtest 2	23.50	**24.50**		
	Subtest 3	23.00	**24.00**		
	Subtest 4	23.00	**24.00**		
HSUPA	Subtest 1	21.50	**22.50**		
	Subtest 2	19.50	**20.50**		
	Subtest 3	20.50	**21.50**		
	Subtest 4	19.50	**20.50**		
	Subtest 5	21.50	**22.50**		
DC-HSDPA	Subtest 1	23.50	**24.50**		
	Subtest 2	23.50	**24.50**		
	Subtest 3	23.00	**24.00**		
	Subtest 4	23.00	**24.00**		

Band	Ant.	Output Power(dBm)									
		Normal		Back-off							
				Grip Sensor		Ear-jack		Hotspot		RCV	
		Target	Max. Allowed	Target	Max. Allowed	Target	Max. Allowed	Target	Max. Allowed	Target	Max. Allowed
LTE Band 2	Main1	23.30	**24.30**	20.30	**21.30**	20.30	**21.30**	18.30	**19.30**	**Not Supported**	
	Sub2	23.00	**24.00**	**Not Supported**		20.00	**21.00**	20.00	**21.00**	20.00	**21.00**
LTE Band 4	*Main1	24.00	**25.00**	21.00	**22.00**	21.00	**22.00**	19.00	**20.00**	**Not Supported**	
	Sub2	20.00	**21.00**	**Not Supported**							
LTE Band 5		24.80	**25.80**	**Not Supported**							
LTE Band 12		24.00	**25.00**	**Not Supported**							
LTE Band 13		24.00	**25.00**	**Not Supported**							
*LTE Band 17		24.00	**25.00**	**Not Supported**							
LTE Band 26		24.00	**25.00**	**Not Supported**							
LTE Band 41		23.00	**24.00**	20.00	**21.00**	20.00	**21.00**	20.00	**21.00**	**Not Supported**	
LTE Band 66	Main1	24.00	**25.00**	21.00	**22.00**	21.00	**22.00**	19.00	**20.00**	**Not Supported**	
	Sub2	23.00	**24.00**	**Not Supported**		20.00	**21.00**	20.00	**21.00**	20.00	**21.00**
5G NR_n5		24.80	**25.80**	**Not Supported**							
5G NR_n66	Main1	23.00	**24.00**	20.00	**21.00**	20.00	**21.00**	20.00	**21.00**	**Not Supported**	
	Sub2	22.70	**23.70**	**Not Supported**		19.70	**20.70**	19.70	**20.70**	19.70	**20.70**

Notes:

***LTE Band 4 Main 1 Ant. Measured Results**

SAR for LTE Band 4 (Frequency range: 1 710.7 ~ 1 754.3 ㎒) is covered by LTE Band 66 (Frequency range: 1 710.7 ~ 1 779.3 ㎒) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

***LTE Band 17 Measured Results**

SAR for LTE Band 17 (Frequency range: 706.5 ~ 713.5 ㎒) is covered by LTE Band 12 (Frequency range: 699.7 ~ 715.3 ㎒) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

Band/ Ant.	Mode	Channel	Output Power(dBm)			
			Normal		Back-off (RCV)	
			Target	Max. Allowed	Target	Max. Allowed
WLAN 2.4 GHz/ SISO	802.11b	1 – 10	18.00	**19.00**	10.00	**11.00**
		11	17.00	**18.00**	10.00	**11.00**
		12	5.00	**6.00**	5.00	**6.00**
		13	2.00	**3.00**	2.00	**3.00**
	802.11g	1 – 10	16.00	**17.00**	10.00	**11.00**
		11	14.00	**15.00**	10.00	**11.00**
		12	5.00	**6.00**	5.00	**6.00**
		13	1.00	**2.00**	1.00	**2.00**
	802.11n(HT20)	1 – 10	16.00	**17.00**	10.00	**11.00**
		11	14.00	**15.00**	10.00	**11.00**
		12	5.00	**6.00**	5.00	**6.00**
		13	1.00	**2.00**	1.00	**2.00**
WLAN 2.4 GHz/ MIMO	802.11b	1 – 10	21.00	**22.00**	13.00	**14.00**
		11	20.00	**21.00**	13.00	**14.00**
		12	8.00	**9.00**	8.00	**9.00**
		13	5.00	**6.00**	5.00	**6.00**
	802.11g	1 – 10	19.00	**20.00**	13.00	**14.00**
		11	17.00	**18.00**	13.00	**14.00**
		12	8.00	**9.00**	8.00	**9.00**
		13	4.00	**5.00**	4.00	**5.00**
	802.11n(HT20)	1 – 10	19.00	**20.00**	13.00	**14.00**
		11	17.00	**18.00**	13.00	**14.00**
		12	8.00	**9.00**	8.00	**9.00**
		13	4.00	**5.00**	4.00	**5.00**

Band/ Ant.	Mode	Channel	Output Power(dBm)			
			Normal		Back-off (RCV)	
			Target	Max. Allowed	Target	Max. Allowed
U-NII-1/ SISO	802.11a	All Channel	17.00	**18.00**	9.00	**10.00**
	802.11n(HT20)	All Channel	16.00	**17.00**	9.00	**10.00**
	802.11n(HT40)	Except 38	16.00	**17.00**	9.00	**10.00**
		38	13.00	**14.00**	9.00	**10.00**
	802.11ac(VHT20)	All Channel	15.00	**16.00**	9.00	**10.00**
	802.11ac(VHT40)	Except 38	14.00	**15.00**	9.00	**10.00**
		38	12.00	**13.00**	9.00	**10.00**
	802.11ac(VHT80)	All Channel	9.00	**10.00**	9.00	**10.00**
U-NII-1/ MIMO	802.11a	All Channel	20.00	**21.00**	12.00	**13.00**
	802.11n(HT20)	All Channel	19.00	**20.00**	12.00	**13.00**
	802.11n(HT40)	Except 38	19.00	**20.00**	12.00	**13.00**
		38	16.00	**17.00**	12.00	**13.00**
	802.11ac(VHT20)	All Channel	18.00	**19.00**	12.00	**13.00**
	802.11ac(VHT40)	Except 38	17.00	**18.00**	12.00	**13.00**
		38	15.00	**16.00**	12.00	**13.00**
	802.11ac(VHT80)	All Channel	12.00	**13.00**	12.00	**13.00**
U-NII-2A/ SISO	802.11a	All Channel	17.00	**18.00**	9.00	**10.00**
	802.11n(HT20)	All Channel	16.00	**17.00**	9.00	**10.00**
	802.11n(HT40)	Except 62	16.00	**17.00**	9.00	**10.00**
		62	14.00	**15.00**	9.00	**10.00**
	802.11ac(VHT20)	All Channel	15.00	**16.00**	9.00	**10.00**
	802.11ac(VHT40)	All Channel	14.00	**15.00**	9.00	**10.00**
	802.11ac(VHT80)	All Channel	12.00	**13.00**	9.00	**10.00**
U-NII-2A/ MIMO	802.11a	All Channel	20.00	**21.00**	12.00	**13.00**
	802.11n(HT20)	All Channel	19.00	**20.00**	12.00	**13.00**
	802.11n(HT40)	Except 62	19.00	**20.00**	12.00	**13.00**
		62	17.00	**18.00**	12.00	**13.00**
	802.11ac(VHT20)	All Channel	18.00	**19.00**	12.00	**13.00**
	802.11ac(VHT40)	All Channel	17.00	**18.00**	12.00	**13.00**
	802.11ac(VHT80)	All Channel	15.00	**16.00**	12.00	**13.00**

Band/ Ant.	Mode	Channel	Output Power(dBm)			
			Normal		Back-off (RCV)	
			Target	Max. Allowed	Target	Max. Allowed
U-NII-2C/ SISO	802.11a	All Channel	17.00	**18.00**	9.00	**10.00**
	802.11n(HT20)	All Channel	16.00	**17.00**	9.00	**10.00**
	802.11n(HT40)	Except 102	16.00	**17.00**	9.00	**10.00**
		102	14.00	**15.00**	9.00	**10.00**
	802.11ac(VHT20)	All Channel	15.00	**16.00**	9.00	**10.00**
	802.11ac(VHT40)	All Channel	14.00	**15.00**	9.00	**10.00**
	802.11ac(VHT80)	Except 106	13.00	**14.00**	9.00	**10.00**
		106	11.00	**12.00**	9.00	**10.00**
U-NII-2C/ MIMO	802.11a	All Channel	20.00	**21.00**	12.00	**13.00**
	802.11n(HT20)	All Channel	19.00	**20.00**	12.00	**13.00**
	802.11n(HT40)	Except 102	19.00	**20.00**	12.00	**13.00**
		102	17.00	**18.00**	12.00	**13.00**
	802.11ac(VHT20)	All Channel	18.00	**19.00**	12.00	**13.00**
	802.11ac(VHT40)	All Channel	17.00	**18.00**	12.00	**13.00**
	802.11ac(VHT80)	Except 106	16.00	**17.00**	12.00	**13.00**
		106	14.00	**15.00**	12.00	**13.00**
U-NII-3/ SISO	802.11a	All Channel	17.00	**18.00**	9.00	**10.00**
	802.11n(HT20)	All Channel	16.00	**17.00**	9.00	**10.00**
	802.11n(HT40)	All Channel	16.00	**17.00**	9.00	**10.00**
	802.11ac(VHT20)	All Channel	15.00	**16.00**	9.00	**10.00**
	802.11ac(VHT40)	All Channel	14.00	**15.00**	9.00	**10.00**
	802.11ac(VHT80)	All Channel	13.00	**14.00**	9.00	**10.00**
U-NII-3/ MIMO	802.11a	All Channel	20.00	**21.00**	12.00	**13.00**
	802.11n(HT20)	All Channel	19.00	**20.00**	12.00	**13.00**
	802.11n(HT40)	All Channel	19.00	**20.00**	12.00	**13.00**
	802.11ac(VHT20)	All Channel	18.00	**19.00**	12.00	**13.00**
	802.11ac(VHT40)	All Channel	17.00	**18.00**	12.00	**13.00**
	802.11ac(VHT80)	All Channel	16.00	**17.00**	12.00	**13.00**

Band	Mode	Channel	Output Power (dB m)	
			Target	Max. Allowed
Bluetooth	BDR(GFSK)	All Channel	12.00	**13.00**
	EDR (π/4DQPSK)	All Channel	10.00	**11.00**
	EDR(8DPSK)	All Channel	10.00	**11.00**
	LE(GFSK)	0	8.00	**9.00**
		19	8.50	**9.50**
		39	9.00	**10.00**

2.7 #DUT Antenna Locations

The overall dimensions of this device are > 9 x 5 ㎝. A diagram showing the location of the device antennas can be found in Appendix D. Since the diagonal dimension of this device is > 160 ㎜ and < 200 ㎜, it is considered a “Phablet”.

Mode	Ant.	Device Edge for SAR Testing (Rear View)					
		Front	Rear	Left Edge	Right Edge	Top	Bottom
GPRS 850		Yes	Yes	Yes	Yes	No	Yes
GPRS 1900		Yes	Yes	Yes	Yes	No	Yes
WCDMA Band II		Yes	Yes	Yes	Yes	No	Yes
WCDMA Band IV		Yes	Yes	Yes	Yes	No	Yes
WCDMA Band V		Yes	Yes	Yes	Yes	No	Yes
LTE Band 2	Main	Yes	Yes	Yes	Yes	No	Yes
	Sub	Yes	Yes	Yes	Yes	Yes	No
LTE Band 4	Main	No	No	No	No	No	No
	Sub	Yes	Yes	Yes	Yes	Yes	No
LTE Band 5		Yes	Yes	Yes	Yes	No	Yes
LTE Band 12		Yes	Yes	Yes	Yes	No	Yes
LTE Band 13		Yes	Yes	Yes	Yes	No	Yes
LTE Band 26		Yes	Yes	Yes	Yes	No	Yes
LTE Band 41		Yes	Yes	Yes	No	No	Yes
LTE Band 66	Main	Yes	Yes	Yes	Yes	No	Yes
	Sub	Yes	Yes	Yes	Yes	Yes	No
5N NR n5		Yes	Yes	Yes	Yes	No	Yes
5N NR n66	Main	Yes	Yes	Yes	Yes	No	Yes
	Sub	Yes	Yes	Yes	Yes	Yes	No
2.4 ㎓ WLAN		Yes	Yes	Yes	No	Yes	No
5 ㎓ WLAN		Yes	Yes	Yes	No	Yes	No
Bluetooth		Yes	Yes	Yes	No	Yes	No

Note: Particular DUT edges were not required to be evaluated for Hotspot SAR or Phablet SAR if the edges were greater than 2.5 cm from the transmitting antenna according to FCC KDB Publication 941225 D06v02r01 and FCC KDB Publication 648474 D04v01r03. The antenna document shows the distances between the transmit antennas and the edges of the device. When Hotspot mode is enabled, U-NII-1, U-NII-2A, U-NII-2C operations is disabled.

2.8 Near Field Communications (NFC) Antenna

This DUT has NFC operations. The NFC antenna is integrated into the device for the model. Therefore, all SAR test were performed with the device which already incorporates the NFC antenna.
A diagram showing the location of the NFC antenna can be found in Appendix D.

2.9 #Simultaneous Transmission Configurations

According to FCC KDB 447498 D04v01, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.
This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D04v01 4.3.2 procedures.

No	Scenario	RF Exposure Condition			
		Head	Body-Worn	Hotspot	Phablet
1	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 2.4 ㎓ Ant.1	Yes	Yes	Yes	Yes
2	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 2.4 ㎓ Ant.2	Yes	Yes	Yes	Yes
3	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 2.4 ㎓ MIMO	Yes	Yes	Yes	Yes
4	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 5 ㎓ Ant.1	Yes	Yes	Yes	Yes
5	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 5 ㎓ Ant.2	Yes	Yes	Yes	Yes
6	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 5 ㎓ MIMO	Yes	Yes	Yes	Yes
7	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + 2.4 ㎓ Bluetooth	Yes	Yes	Yes	Yes
8	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 2.4 ㎓ Ant.2 + 2.4 ㎓ Bluetooth	Yes	Yes	Yes	Yes
9	[GSM or WCDMA or LTE or 5G NR] or LTE UL CA or [EN-DC] LTE+NR + WLAN 5 ㎓ Ant.2 + 2.4 ㎓ Bluetooth	Yes	Yes	Yes	Yes
10	All scenario + NFC	No	No	No	Yes

LTE UL CA Configuration

No	UL CA		Antenna		RF Exposure Condition			
	PCC	SCC	PCC	SCC	Head	Body-Worn	Hotspot	Phablet
1	B2	B4	Main1	Sub2	Yes	Yes	Yes	Yes

EN-DC Configuration

No	EN-DC		Antenna		RF Exposure Condition			
	LTE	NR	LTE	5G NR	Head	Body-Worn	Hotspot	Phablet
1	B2	n5	Sub2	Main1	Yes	Yes	Yes	Yes
2	B66		Sub2		Yes	Yes	Yes	Yes
3	B2	n66	Main1	Sub2	Yes	Yes	Yes	Yes
4	B5		Main1		Yes	Yes	Yes	Yes
5	B12		Main1		Yes	Yes	Yes	Yes
6	B13		Main1		Yes	Yes	Yes	Yes
7	B66		Main1		Yes	Yes	Yes	Yes

Notes:

- It does not to transmit simultaneously the Bluetooth and 2.4 / 5 GHz WLAN Ant.1.
- It is to use the Bluetooth and 2.4 ㎓ WLAN same antenna path.
- This device supports Bluetooth Tethering.
- This device supports VoLTE.
- This device supports VoWIFI.
- WLAN Hotspot is supported for 2.4 ㎓ and UNII-3 of 5 ㎓ WLAN.
- 5 ㎓ Hotspot mode is only supported for the UNII-3, therefore U-NII-1, U-NII-2A, U-NII-2C were not evaluated for Hotspot mode conditions.
- NFC operation is handheld only, simultaneous operation is considered a phablet.

2.10 SAR Test Methods and Procedures

The tests documented in this report were performed in accordance with IEEE 1528-2013 and the following published KDB procedures:

- IEEE 1528-2013
- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D04 Interim General RF Exposure Guidance v01
- 616217 D04 SAR for laptop and tablets v01r02 (Proximity Sensor)
- 648474 D04 Handset SAR v01r03
- 865664 D01 SAR measurement 100 ㎒ to 6 ㎓ v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D01 3G SAR Procedures v03r01
- 941225 D05 SAR for LTE Devices v02r05
- 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
- 941225 D06 Hotspot Mode v02r01
- October 2014 TCB Workshop Notes (Other LTE Considerations)
- October 2016 TCB Workshop Notes (Bluetooth Duty Factor)
- April 2019 TCB Workshop Notes (Tissue Simulation Liquids)
- November 2018 TCB Workshop Notes (LTE UL/DL Carrier Aggregation SAR)
- April 2018 TCB Workshop Notes (LTE DL CA SAR Test Exclusion Update)
- October 2018 TCB Workshop Notes (LTE Inter-Band Uplink Carrier Aggregation)
- October 2020 TCB Workshop Notes (Intra-band and Inter-band NSA-EN-DC evaluation)

3. #LTE Information

LTE Information					
Form Factor	Portable Handset				
Frequency Range of each LTE transmission band	LTE Band 2 (1 850.7 ~ 1 909.3) ㎒ LTE Band 4 (1 710.7 ~ 1 754.3) ㎒ LTE Band 5 (824.7 ~ 848.3) ㎒ LTE Band 12 (699.7 ~ 715.3) ㎒ LTE Band 13 (779.5 ~ 784.5 ㎒) LTE Band 17 (706.5 ~ 713.5) ㎒ LTE Band 26 (814.7 ~ 848.3) ㎒ LTE Band 41 (2 498.5 ~ 2 687.5) ㎒ LTE Band 66 (1 710.7 ~ 1 779.3) ㎒				
Channel Bandwidths	LTE Band 2: 1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒ LTE Band 4: 1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒ LTE Band 5: 1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒ LTE Band 12: 1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒ LTE Band 13: 5 ㎒, 10 ㎒ LTE Band 17: 5 ㎒, 10 ㎒ LTE Band 26: 1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒ LTE Band 41: 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒ LTE Band 66: 1.4 ㎒, 3 ㎒, 5 ㎒, 10 ㎒, 15 ㎒, 20 ㎒				
Channel Numbers and Frequencies (㎒)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 2: 1.4 ㎒	1 850.7 (18 607)		1 880.0 (18 900)		1 909.3 (19 193)
LTE Band 2: 3 ㎒	1 851.5 (18 615)		1 880.0 (18 900)		1 908.5 (19 185)
LTE Band 2: 5 ㎒	1 852.5 (18 625)		1 880.0 (18 900)		1 907.5 (19 175)
LTE Band 2: 10 ㎒	1 855.0 (18 650)		1 880.0 (18 900)		1 905.0 (19 150)
LTE Band 2: 15 ㎒	1 857.5 (18 675)		1 880.0 (18 900)		1 902.5 (19 125)
LTE Band 2: 20 ㎒	1 860.0 (18 700)		1 880.0 (18 900)		1 900.0 (19 100)
LTE Band 4: 1.4 ㎒	1 710.7 (19 957)		1 732.5 (20 175)		1 754.3 (20 393)
LTE Band 4: 3 ㎒	1 711.5 (19 965)		1 732.5 (20 175)		1 753.5 (20 385)
LTE Band 4: 5 ㎒	1 712.5 (19 975)		1 732.5 (20 175)		1 752.5 (20 375)
LTE Band 4: 10 ㎒	1 715.0 (20 000)		1 732.5 (20 175)		1 750.0 (20 350)
LTE Band 4: 15 ㎒	1 717.5 (20 025)		1 732.5 (20 175)		1 747.5 (20 325)
LTE Band 4: 20 ㎒	1 720.0 (20 050)		1 732.5 (20 175)		1 745.0 (20 300)
LTE Band 5: 1.4 ㎒	824.7 (20 407)		836.5 (20 525)		848.3 (20 643)
LTE Band 5: 3 ㎒	825.5 (20 415)		836.5 (20 525)		847.5 (20 635)
LTE Band 5: 5 ㎒	826.5 (20 425)		836.5 (20 525)		846.5 (20 625)
LTE Band 5: 10 ㎒	829.0 (20 450)		836.5 (20 525)		844.0 (20 600)
LTE Band 12: 1.4 ㎒	699.7 (23 017)		707.5 (23 095)		715.3 (23 173)
LTE Band 12: 3 ㎒	700.5 (23 025)		707.5 (23 095)		714.5 (23 655)
LTE Band 12: 5 ㎒	701.5 (23 035)		707.5 (23 095)		713.5 (23 155)
LTE Band 12: 10 ㎒	704.0 (23 060)		707.5 (23 095)		711.0 (23 130)

Channel Numbers and Frequencies (MHz)	Low	Low-Mid	Mid	Mid-High	High
LTE Band 13: 5 MHz	779.5 (23 205)		782.0 (23 230)		784.5 (23 255)
LTE Band 13: 10 MHz	-		782.0 (23 230)		-
LTE Band 17: 5 MHz	706.5 (23 755)		710.0 (23 790)		713.5 (23 825)
LTE Band 17: 10 MHz	709.0 (23 780)		710.0 (23 790)		711.0 (23 800)
LTE Band 26: 1.4 MHz	814.7 (26 697)		831.5 (26 865)		848.3 (27 033)
LTE Band 26: 3 MHz	815.5 (26 705)		831.5 (26 865)		847.5 (27 025)
LTE Band 26: 5 MHz	816.5 (26 715)		831.5 (26 865)		846.5 (27 015)
LTE Band 26: 10 MHz	819.0 (26 740)		831.5 (26 865)		844.0 (26 990)
LTE Band 26: 15 MHz	821.5 (26 765)		831.5 (26 865)		841.5 (26 965)
LTE Band 41: 5 MHz	2 506.0 (39 750)	2 549.5 (40 185)	2 593.0 (40 620)	2 636.5 (41 055)	2 680.0 (41 490)
LTE Band 41: 10 MHz	2 506.0 (39 750)	2 549.5 (40 185)	2 593.0 (40 620)	2 636.5 (41 055)	2 680.0 (41 490)
LTE Band 41: 15 MHz	2 506.0 (39 750)	2 549.5 (40 185)	2 593.0 (40 620)	2 636.5 (41 055)	2 680.0 (41 490)
LTE Band 41: 20 MHz	2 506.0 (39 750)	2 549.5 (40 185)	2 593.0 (40 620)	2 636.5 (41 055)	2 680.0 (41 490)
LTE Band 66: 1.4 MHz	1 710.7 (131 979)		1 745.0 (132 322)		1 779.3 (132 665)
LTE Band 66: 3 MHz	1 711.5 (131 987)		1 745.0 (132 322)		1 778.5 (132 657)
LTE Band 66: 5 MHz	1 712.5 (131 997)		1 745.0 (132 322)		1 777.5 (132 647)
LTE Band 66: 10 MHz	1 715.0 (132 022)		1 745.0 (132 322)		1 775.0 (132 622)
LTE Band 66: 15 MHz	1 717.5 (132 047)		1 745.0 (132 322)		1 772.5 (132 597)
LTE Band 66: 20 MHz	1 720.0 (132 072)		1 745.0 (132 322)		1 770.0 (132 572)
UE Category	UL:13, DL:18				
Modulations Supported in UL	QPSK, 16QAM, 64QAM				
LTE MPR Permanently implemented per 3GPP TS 36.101 section 6.2.3 ~ 6.2.5?(manufacturer attestation to be provided)	YES				
A-MPR(Additional MPR) disabled for SAR Testing?	YES				
LTE Carrier Aggregation Possible Combinations	This device supports LTE UL/DL CA aggregation.				
LTE Additional Information	This device does not support full CA features on 3GPP Release 15. It supports carrier aggregation as shown in Appendix C. Uplink communications are done on the PCC. The following LTE Release 15 Features are not supported: Relay, HetNet, Enhanced MIMO, eICIC, WIFI Offloading, MDH, eMBMS, Cross-Carrier Scheduling, Enhanced SC-FDMA.				

4. #5G NR Information

5G NR Information				
Form Factor		Portable Handset		
Frequency Range of each 5G NR transmission band		5G NR n5: 824.0 ㎒~ 849.0 ㎒ 5G NR n66: 1710.0 ㎒~ 1780.0 ㎒		
Mode	Band	Duplex	SCS(KHz)	Bandwidths(BW)
NSA	n5	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
SA	n5	FDD	15	5, 10, 15, 20
	n66	FDD	15	5, 10, 15, 20, 25, 30, 40
Channel Numbers and Frequencies(㎒)		Low	Mid	High
Band	Bandwidths			
NR Band n5	5 ㎒	826.5 (165 300)	836.5 (167 300)	846.5 (169 300)
	10 ㎒	829.0 (165 800)	836.5 (167 300)	844.0 (168 800)
	15 ㎒	831.5 (166 300)	836.5 (167 300)	841.5 (168 300)
	20 ㎒	834.0 (166 800)	836.5 (167 300)	839.0 (167 800)
NR Band n66	5 ㎒	1 712.5 (342 500)	1 745.0 (349 000)	1 775.0 (355 000)
	10 ㎒	1 715.0 (343 000)	1 745.0 (349 000)	1 775.0 (355 000)
	15 ㎒	1 717.5 (343 500)	1 745.0 (349 000)	1 772.5 (354 500)
	20 ㎒	1 720.0 (344 000)	1 745.0 (349 000)	1 770.0 (354 000)
	25 ㎒	1 722.5 (344 500)	1 745.0 (349 000)	1 767.5 (353 500)
	30 ㎒	-	1 745.0 (349 000)	-
	40 ㎒	-	1 745.0 (349 000)	-
NR Band n5/n66 SCS		15 KHz		
3GPP Rel.		Rel.16		
5G NR UL/DL FR1		DFT-s-OFDM: π/2-BPSK(UL Only), QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM		
Non Standalone & Standalone are supported.		NR support to both SA and NSA(EN-DC)		
A-MPR(Additional MPR) disabled for SAR Testing?		YES		
EN-DC Carrier Aggregation Possible Combinations				
LTE Anchor Bands for NR Band n5		LTE Band 2/66(Sub 2 Ant.)		
LTE Anchor Bands for NR Band n66		LTE Band 2/5/12/13/66(Main 1 Ant.)		

5. Specific Absorption Rate

5.1 Introduction

The SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational / controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

5.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dv}\right)$$

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = C\left(\frac{\delta T}{\delta t}\right)$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength. However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

6. SAR Measurement Procedures

6.1 SAR Scan Procedures

Step 1: Power Reference Measurement
The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The Minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 1.4 mm. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties.
Step 2: Area Scan & Zoom Scan
The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot and Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing1 g and 10 g of simulated tissue. If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly. Area Scan & Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 mm ± 1 mm	½ $\delta \cdot \ln(2)$ mm 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$ mm	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details. * When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB Publication 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 3: Power drift measurement
The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

7. SAR Measurement Configurations

7.1 Ear Reference Point

Figure 1shows the front, back and side views of the SAM phantom. The “M” is the reference point for the center of the mouth, “LE” is the left ear reference point (ERP), and “RE” is the right ERP. The ERPs are 15 mm posterior to the entrance to the Ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 1. The plane Passing, through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck – Front) is perpendicular to the reference plane and passing through the LE (or RE) is called the Reference Pivoting Line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning.

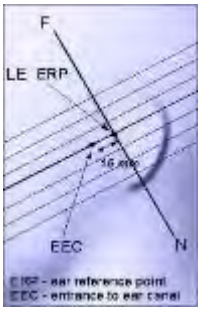


Figure 1
Close-Up Side view of ERP

7.2 Handset Reference Points

Two imaginary lines on the handset were established: the vertical centerline and the horizontal line. The test device was placed in a normal operating position with the acoustic output located along the “vertical centerline” on the front of the device aligned to the “ear reference point” (See Figure 3). The acoustic output was than located at the same level as the center of the ear reference point. The test device was positioned so that the “vertical centerline” was bisecting the front surface of the handset at its top and bottom edges, positioning the “ear reference point” on the outer surface of the both the left and right head phantoms on the ear reference point.

Figure 2
Front, back and side view of SAM Twin Phantom

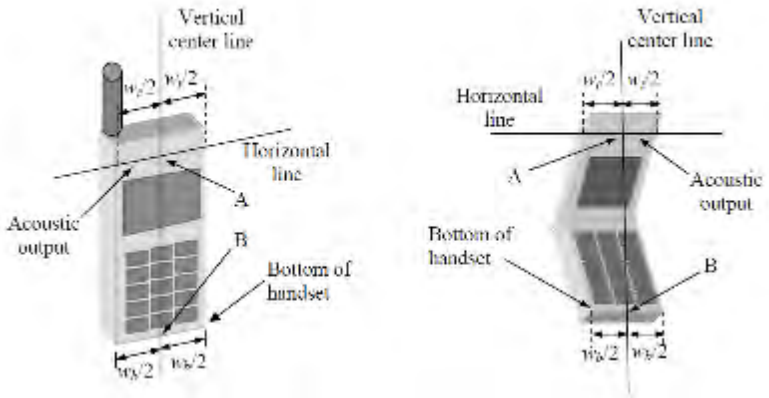


Figure 3
Handset Vertical Center & Horizontal Line Reference Points

7.3 Device Holder

The device holder is made out of low-loss POM material having the following dielectric parameters: relative permittivity ε = 3 and loss tangent δ = 0.02.

7.4 Positioning for Cheek/Touch

1. The test device was positioned with the device close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 4), such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom.

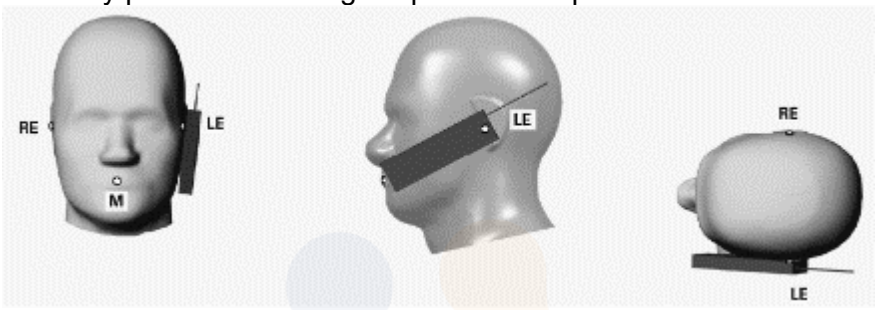


Figure 4: Front, Side and Top View of Cheek Position

2. The handset was translated towards the phantom along the line passing through RE & LE until the handset touches the pinna.
3. While maintaining the handset in this plane, the handset was rotated around the LE-RE line until the vertical centerline was in the reference plane.
4. The phone was then rotated around the vertical centerline until the phone (horizontal line) was symmetrical was respect to the line NF.
5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the device contact with the ear, the device was rotated about the NF line until any point on the handset made contact with a phantom point below the ear (cheek) (See Figure 5).

7.5 Positioning for Ear / 15˚ Tilt

With the test device aligned in the “Cheek Position”:

1. While maintaining the orientation of the phone, the phone was retracted parallel to the reference plane far enough to enable a rotation of the phone by 15 degrees.
2. The phone was then rotated around the horizontal line by 15 degrees.
3. While maintaining the orientation of the phone, the phone was moved parallel to the reference plane until any part of the handset touched the head. (In this position, point A was located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact was at any location other than the pinna, the angle of the phone would then be reduced. In this situation, the tilted position was obtained when any part of the phone was in contact of the ear as well as a second part of the phone was in contact with the head (see Figure 5).

Figure 5: Front, Side and Top View of Ear/ 15˚ Tilt

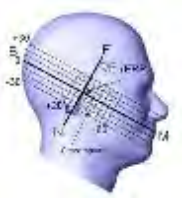


Figure 6: Side view w/ relevant markings

7.6 Body-Worn Accessory Configurations

Figure 7
Sample Body-Worn Diagram

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration (see Figure 7). Per FCC KDB Publication 648474 D04v01r03, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D04v01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.
Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.
Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

7.7 Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WIFI transmitter according to FCC KDB Publication 447498 D04v01 procedures. The "Portable Hotspot" feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

7.8 Proximity Sensor Considerations

This device uses a power reduction mechanism to reduce output powers in certain use conditions when the device is used close to the user's body.
When the device's antenna is within a certain distance of the user, the sensor activates and reduces the maximum allowed output power. However, the sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, additional evaluation is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level. FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional test positions.

7.9 Phablet Configurations

For smart phones with a display diagonal dimension > 150 ㎜ or an overall diagonal dimension > 160 ㎜ that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the phablets procedures outlined in KDB Publication 648474 D04v01r03 should be applied to evaluate SAR compliance. A device marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance. In addition to the normally required head and body-worn accessory SAR test procedures required for handsets, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna <=25 ㎜ from that surface or edge, in direct contact with the phantom, for 10g SAR. The UMPC mini-tablet 1g SAR at 5 ㎜ is not required. When hotspot mode applies, 10g SAR is required only for the surfaces and edges with hotspot mode 1g SAR > 1.2 W/kg.

8. RF Exposure Limits

UNCONTROLLED ENVIRONMENTS are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

CONTROLLED ENVIRONMENTS are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Partial Peak SAR [1] (Partial)	1.60 mW/g	8.00 mW/g
Partial Average SAR [2] (Whole Body)	0.08 mW/g	0.40 mW/g
Partial Peak SAR [3] (Hands/Feet/Ankle/Wrist)	4.00 mW/g	20.00 mW/g

1) The spatial Peak value of the SAR averaged over any 1g gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2) The spatial Average value of the SAR averaged over the whole body.
3) The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

9. SAR General Measurement Procedures

9.1 Measured and Reported SAR

Per FCC KDB Publication 447498 D04v01, When SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as reported SAR. Test highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

9.2 3G SAR Test Reduction Procedure

In FCC KDB Publication 941225 D01v03r01, certain transmission modes within a frequency band and wireless mode evaluated for SAR are defined as primary modes. The equivalent modes considered for SAR test reduction are denoted as secondary modes. When the maximum output power including tune-up tolerance specified for production units in a secondary mode is ≤ 0.25 dB higher than the primary mode or when the highest reported SAR of the primary mode, scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode, is ≤ 1.2 W/kg, SAR measurements are not required for the secondary mode. These criteria are referred to as the 3G SAR test reduction procedure. When the 3G SAR test reduction procedure is not satisfied, SAR measurements are additionally required for the secondary mode.

9.3 Procedures Used to Establish RF Signal for SAR

The following procedures are according to FCC KDB Publication 941225 D01v03r01 “3G SAR Measurement Procedures.”
The device is placed into a simulated call using a base station simulator in a RF shielded chamber. Establishing connections in this manner ensure a consistent means for testing SAR and are recommended for evaluating SAR [4]. Devices under test are evaluated prior to testing, with a fully charged battery and were configured to operate at maximum output power. In order to verify that the device is tested throughout the SAR test at maximum output power, the SAR measurement system measures a “point SAR” at an arbitrary reference point at the start and end of the 1 gram SAR evaluation, to assess for any power drifts during the evaluation. If the power drift deviates by more than 5%, the SAR test and drift measurements are repeated.

9.4 SAR Measurement Conditions for UMTS

9.4.1 Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in sec. 5.2 of 3GPP TS 34.121, using the appropriate RMC with TPC (transmit power control) set to all “1s” or applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HS-DPCCH etc) are tabulated in this test report. All configurations that are not supported by the DUT or cannot be measured due to technical or equipment limitations are identified.

9.4.2 Head SAR Measurement

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

9.4.3 Body SAR measurements

SAR for body exposure configurations is measured using the 12.2kbps RMC with the TPC bits all “1s”. the 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using and applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported SAR configuration in 12.2kbps RMC.

9.4.4 SAR Measurements with Rel. 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSDPA is measured using and FRC with H-SET 1 in Sub-test and a 12.2 kbps RMC without HSDPA. Handsets with both HSDPA and HSUPA are tested according to release 6 HSPA test procedures. 8.4.5 SAR Measurement with Rel.6 HSUPA The 3G SAR test Reduction Procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, Using H-Set 1 and QPSK for FRC and a 12.2kbps RMC configured in Test Loop Mode 1 and Power Control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA. When VOIP applies to head exposure, the 3G SAR test reduction procedure is applied with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body SAR measurements are applied to head exposure testing.

9.4.5 SAR Measurements with Rel. 6 HSUPA

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 and power control algorithm 2, according to the highest reported body SAR configuration in 12.2 kbps RMC without HSPA.

9.4.6 SAR Measurements with Rel. 8 DC-HSDPA

SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable

9.5 SAR Measurement Conditions for LTE

LTE modes are tested according to FCC KDB 941225 D05v02r05 publication. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluation SAR [4]. The R&S CMW500 or Anritsu MT8820C simulators are used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

9.5.1 Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

9.5.2 MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36. 101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

9.5.3 A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator

9.5.4 Required RB Size and RB offsets for SAR testing

According to FCC KDB 941225 D05v02r05

1. Per sec 4.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
   a. The required channel and offset combination with the highest maximum output power is required for SAR.
   b. When the reported SAR is ≤ 0.8 W/Kg, testing of the remaining RB offset configurations and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
   c. When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configurations for that channel
2. Per Sec 4.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Sec 4.2.1.
3. Per Sec. 4.2.3, QPSK SAR is not required for the 100% all0cation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is < 0.8 W/kg.
4. Per Sec. 4.2.4 and 4.3, SAR test for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sec. 4.2.1 through 4.2.3 is less than or equal to 1/2 dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is < 1.45 W/Kg.

9.5.5 LTE(TDD) Considerations

According to KDB 941225 D05v02r05, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

SAR was tested with the highest transmission duty factor (63.33 %) using Uplink-downlink configuration 0 and Special sub-frame configuration 6.

LTE TDD Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special sub frame configurations.

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$
5	$6592 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-
10	$13168 \cdot T_s$	$13152 \cdot T_s$	$12800 \cdot T_s$	-	-	-

Table 4.2-2: Uplink-downlink configurations

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Calculated Duty Cycle – Extended cyclic prefix in uplink x (Ts) x # of S + # of U
Example for calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = (5120 x [1/(15000 x 2048)] x 2 + 0.006)/0.01 = 63.33 %
Ts = 1/(15000 x 2048) seconds

9.6 SAR Testing with 802.11 Transmitters

The normal network operating configurations are not suitable for measuring the SAR of 802.11 a/b/g transmitters. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable.

9.6.1 General Device Setup

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. A periodic duty factor is required for current generation SAR systems to measure SAR. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 – 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR is scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

9.6.2 U-NII-1 and U-NII-2A

For devices that operate in both U-NII-1 and U-NII-2A bands, when the same maximum output power is specified for both bands, SAR measurement using OFDM SAR test procedures is not required for U-NII-1 unless the highest reported SAR for U-NII-2A is > 1.2 W/kg. When different maximum output powers is not required unless the highest reported SAR for the U-NII band with the higher maximum output power, adjusted by the ratio of lower to higher specified maximum output power for the two bands, is > 1.2 W/kg. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

9.6.3 U-NII-2C and U-NII-3

The frequency range covered by U-NII-2C and U-NII-3 is 380 ㎒ (5.47 – 5.85 ㎓), which requires a minimum of at least two SAR probe calibration frequency points to support SAR measurements. When Terminal Doppler Weather Radar (TDWR) restriction applies, the channels at 5.60 – 5.65 ㎓ in U-NII-2C band must be disabled with acceptable mechanisms and documented in the equipment certification. Unless band gap channels are permanently disabled, SAR must be considered for these channels. When band gap channels are disabled, each band is tested independently according to the normally required OFDM SAR measurement and probe calibration frequency point requirements.

9.6.4 Initial Test Position Procedure

For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode or UMPC mini-tablet, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated (peak) SAR is used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions is required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.

9.6.5 2.4 ㎓ SAR Test Requirement

SAR is measured for 2.4 ㎓ 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following.

1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
2) When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel; i.e., all channels require testing.

2.4 ㎓ 802.11g/n OFDM are additionally evaluated for SAR if highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 ㎓ band, the Initial Test Configuration Procedures should be followed.

9.6.6 OFDM Transmission Mode and SAR Test Channel Selection

For the 2.4 ㎓ and 5 ㎓ band, when the same maximum output power was specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration with the largest channel bandwidth, lowest order modulation and lowest data rate. When the maximum output power of a channel is the same for equivalent OFDM configurations; for example, 802.11a, 802.11n and 802.11ac or 802.11g and 802.11n with the same channel band width, modulation and data rate etc., the lower order 802.11 mode i.e., 802.11a, then 802.11n and 802.11ac or 802.11g then 802.11n, is used for SAR measurement. When maximum output power are the same for multiple test channels, either according to the default or additional power measurement requirements, SAR is measured using the channel closest to the middle of the frequency band or aggregated band. When there are multiple channels with the same maximum output power, SAR is measured using the higher number channel.

9.6.7 Initial Test Configuration Procedure

For OFDM, in both 2.4 and 5 ㎓ bands, an initial test configuration is determined for each frequency band and aggregated band, according to the transmission mode with the highest maximum output power specified for SAR measurements. When the same maximum output power is specified for multiple OFDM transmission mode configurations in a frequency band or aggregated band, SAR is measured using the configuration(s) with the largest channel bandwidth, lowest order modulation, and lowest data rate. If the average RF output powers of the highest identical transmission modes are within 0.25 ㏈ of each other, mid channel of the transmission mode with highest average RF output power is the initial test channel. Otherwise, the channel of the transmission mode with the highest average RF output conducted power will be the initial test configuration.

When the reported SAR is ≤ 0.8 W/kg, no additional measurements on other test channels are required. Otherwise, SAR is evaluated using the subsequent highest average RF output channel until the reported SAR result is ≤ 1.2 W/kg or all channels are measured. When there are multiple untested channels having the same subsequent highest average RF output power, the channel with higher frequency from the lowest 802.11 mode is considered for SAR measurements.

9.6.8 Subsequent Test Configuration Procedures

For OFDM configurations in each frequency band and aggregated band, SAR is evaluated for initial test configuration using the fixed test position or the initial test position procedure. When the highest reported SAR (for the initial test configuration), adjusted by the ratio of the specified maximum output power of the subsequent test configuration to initial test configuration, is ≤ 1.2 W/kg, no additional SAR tests for the subsequent test configurations are required. When 10g SAR measurement is considered, a factor of 2.5 is applied to the thresholds above.

10. RF Average Conducted Output Power

10.1 GSM Average Conducted Output Power

Maximum Burst-Average Output Power (dB m)										
Band	Channel	GSM	GPRS (GMSK)				EGPRS (8-PSK)			
		Voice	1Tx	2Tx	3Tx	4Tx	1Tx	2Tx	3Tx	4Tx
GSM 850	128	33.38	33.39	31.84	29.01	27.73	27.01	25.85	23.55	22.50
	190	**33.36**	33.37	**31.81**	28.99	27.72	26.94	25.74	23.54	22.58
	251	33.29	33.31	31.84	28.93	27.66	26.84	25.64	23.50	22.50
GSM 1900	512	30.57	30.58	28.92	26.18	24.85	25.80	24.63	22.25	20.81
	661	**30.63**	30.67	**29.04**	26.30	24.99	25.94	24.74	22.38	21.03
	810	30.53	30.55	28.96	26.25	24.91	25.94	24.72	22.42	21.06

Maximum Frame-Average Output Power (dB m)										
Band	Channel	GSM	GPRS (GMSK)				EGPRS (8-PSK)			
		Voice	1Tx	2Tx	3Tx	4Tx	1Tx	2Tx	3Tx	4Tx
GSM 850	128	24.35	24.36	25.82	24.75	24.72	17.98	19.83	19.29	19.49
	190	24.33	24.34	25.79	24.73	24.71	17.91	19.72	19.28	19.57
	251	24.26	24.28	25.82	24.67	24.65	17.81	19.62	19.24	19.49
GSM 1900	512	21.54	21.55	22.90	21.92	21.84	16.77	18.61	17.99	17.80
	661	21.60	21.64	23.02	22.04	21.98	16.91	18.72	18.12	18.02
	810	21.50	21.52	22.94	21.99	21.90	16.91	18.70	18.16	18.05
GSM 850	Frame Avg, Target	25.77	25.77	27.78	26.54	26.49	19.47	21.48	21.24	21.49
GSM 1900		22.77	22.77	24.78	23.54	23.49	16.97	18.98	18.74	18.99

10.2 GSM Reduced Average Conducted Output Power (Ear-jack, Grip Sensor, Hotspot)

Maximum Burst-Average Output Power (dB m)										
Band	Channel	GSM	GPRS (GMSK)				EGPRS (8-PSK)			
		Voice	1Tx	2Tx	3Tx	4Tx	1Tx	2Tx	3Tx	4Tx
GSM 1900	512	26.88	26.92	**25.85**	23.32	22.14	22.61	21.45	19.35	17.96
	661	27.13	27.16	**26.00**	23.58	22.38	22.96	21.96	19.72	18.35
	810	27.15	27.18	**26.03**	23.59	22.40	22.93	21.92	19.74	18.34

Maximum Frame-Average Output Power (dB m)										
Band	Channel	GSM	GPRS (GMSK)				EGPRS (8-PSK)			
		Voice	1Tx	2Tx	3Tx	4Tx	1Tx	2Tx	3Tx	4Tx
GSM 1900	512	17.85	17.89	19.83	19.06	19.13	13.58	15.43	15.09	14.95
	661	18.10	18.13	19.98	19.32	19.37	13.93	15.94	15.46	15.34
	810	18.12	18.15	20.01	19.33	19.39	13.90	15.90	15.48	15.33
GSM 1900	Frame Avg, Target	19.77	19.77	21.78	20.54	20.49	13.97	15.98	15.74	15.99

10.3 WCDMA Average Conducted Output Power

Band	Mode	Average Conducted Power (dBm)			MPR [dB]
		Channel			
		9 262	9 400	9 538	
		1 852.4 MHz	1 880.0 MHz	1 907.6 MHz	
WCDMA II	RMC	23.24	**23.36**	23.48	-
	AMR	23.15	23.30	23.36	-
	HSDPA-Subtest 1	22.27	22.38	22.51	0
	HSDPA-Subtest 2	21.33	21.61	21.56	0
	HSDPA-Subtest 3	20.62	20.84	20.95	0.5
	HSDPA-Subtest 4	20.61	20.71	20.79	0.5
	HSUPA-Subtest 1	20.15	20.77	20.86	0
	HSUPA-Subtest 2	19.14	19.28	19.33	2
	HSUPA-Subtest 3	20.15	20.27	20.38	1
	HSUPA-Subtest 4	19.50	19.48	19.47	2
	HSUPA-Subtest 5	21.10	21.22	21.33	0
	DC-HSDPA-Subtest 1	22.53	22.30	22.42	0
	DC-HSDPA-Subtest 2	22.17	22.29	22.40	0
	DC-HSDPA-Subtest 3	21.71	21.81	21.95	0.5
	DC-HSDPA-Subtest 4	21.71	21.79	21.92	0.5

Band	Mode	Average Conducted Power (dBm)			MPR [dB]
		Channel			
		1 312	1 412	1 513	
		1 712.4 MHz	1 732.4 MHz	1 752.6 MHz	
WCDMA IV	RMC	23.61	**23.42**	23.15	-
	AMR	23.55	23.34	23.11	-
	HSDPA-Subtest 1	22.61	22.40	22.23	0
	HSDPA-Subtest 2	22.00	21.46	21.45	0
	HSDPA-Subtest 3	21.11	20.66	20.92	0.5
	HSDPA-Subtest 4	20.95	20.72	20.56	0.5
	HSUPA-Subtest 1	21.03	20.81	20.61	0
	HSUPA-Subtest 2	19.48	19.30	19.09	2
	HSUPA-Subtest 3	20.53	20.32	20.12	1
	HSUPA-Subtest 4	19.53	19.33	19.13	2
	HSUPA-Subtest 5	21.50	21.29	21.09	0
	DC-HSDPA-Subtest 1	22.57	22.41	22.22	0
	DC-HSDPA-Subtest 2	22.58	22.41	22.22	0
	DC-HSDPA-Subtest 3	22.14	21.94	21.76	0.5
	DC-HSDPA-Subtest 4	22.10	21.89	21.71	0.5

Band	Mode	Average Conducted Power (dBm)			MPR [dB]
		Channel			
		4 132	4 183	4 233	
		826.4 ㎒	836.6 ㎒	846.6 ㎒	
WCDMA V	RMC	23.61	**23.59**	23.58	-
	AMR	23.58	23.50	23.50	-
	HSDPA-Subtest 1	22.58	22.56	22.55	0
	HSDPA-Subtest 2	22.05	22.05	22.02	0
	HSDPA-Subtest 3	21.51	21.61	21.67	0.5
	HSDPA-Subtest 4	21.76	21.51	21.51	0.5
	HSUPA-Subtest 1	21.07	21.03	21.02	0
	HSUPA-Subtest 2	20.47	20.42	20.42	2
	HSUPA-Subtest 3	20.59	20.53	20.53	1
	HSUPA-Subtest 4	20.46	20.43	20.44	2
	HSUPA-Subtest 5	21.54	21.51	21.51	0
	DC-HSDPA-Subtest 1	22.91	22.54	22.58	0
	DC-HSDPA-Subtest 2	22.61	22.55	22.57	0
	DC-HSDPA-Subtest 3	22.14	22.07	22.12	0.5
	DC-HSDPA-Subtest 4	22.08	22.04	22.07	0.5

10.4 WCDMA Reduced Average Conducted Output Power (Grip Sensor, Hotspot, Ear-jack)

Band	Mode	Average Conducted Power (dBm)			MPR [dB]
		Channel			
		9 262	9 400	9 538	
		1 852.4 ㎒	1 880.0 ㎒	1 907.6 ㎒	
WCDMA II	RMC	**19.38**	**19.56**	**19.69**	-
	AMR	19.35	19.50	19.62	-
	HSDPA-Subtest 1	18.27	18.45	18.53	0
	HSDPA-Subtest 2	17.61	17.77	17.87	0
	HSDPA-Subtest 3	17.24	17.41	17.48	0.0
	HSDPA-Subtest 4	17.12	17.30	17.40	0.0
	HSUPA-Subtest 1	16.76	16.92	17.01	0
	HSUPA-Subtest 2	16.23	16.38	16.48	0
	HSUPA-Subtest 3	16.27	16.41	16.47	0
	HSUPA-Subtest 4	15.77	15.92	16.00	0
	HSUPA-Subtest 5	17.23	17.40	17.46	0
	DC-HSDPA-Subtest 1	18.21	18.47	18.58	0
	DC-HSDPA-Subtest 2	18.29	18.48	18.60	0
	DC-HSDPA-Subtest 3	17.77	17.93	18.04	0.0
	DC-HSDPA-Subtest 4	17.77	17.93	18.03	0.0

Band	Mode	Average Conducted Power (dBm)			MPR [dB]
		Channel			
		1 312	1 412	1 513	
		1 712.4 ㎒	1 732.4 ㎒	1 752.6 ㎒	
WCDMA IV	RMC	**20.70**	**20.54**	**20.38**	-
	AMR	20.60	20.51	20.32	-
	HSDPA-Subtest 1	20.59	20.53	20.35	0
	HSDPA-Subtest 2	19.12	18.74	18.42	0
	HSDPA-Subtest 3	18.42	18.20	18.12	0.0
	HSDPA-Subtest 4	18.55	18.16	18.15	0.0
	HSUPA-Subtest 1	17.78	17.98	17.77	0
	HSUPA-Subtest 2	17.70	17.46	17.36	0
	HSUPA-Subtest 3	18.52	18.54	17.41	0
	HSUPA-Subtest 4	17.38	17.11	16.97	0
	HSUPA-Subtest 5	18.58	18.51	18.30	0
	DC-HSDPA-Subtest 1	19.36	19.64	19.46	0
	DC-HSDPA-Subtest 2	19.87	19.66	19.50	0
	DC-HSDPA-Subtest 3	19.36	19.13	18.96	0.0
	DC-HSDPA-Subtest 4	19.37	19.15	18.95	0.0

10.5 LTE Average Conducted Output Power

10.5.1 LTE Band 2

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 700	18 900	19 100	
				1 860.0 ㎒	1 880.0 ㎒	1 900.0 ㎒	
20 ㎒	QPSK	1	0	23.68	23.79	23.70	0
		1	49	23.73	**23.94**	23.76	0
		1	99	23.72	23.64	23.64	0
		50	0	22.62	22.80	22.78	1
		50	24	22.69	**22.88**	22.81	1
		50	50	22.70	22.79	22.73	1
		100	0	22.63	22.85	22.85	1
	16QAM	1	0	22.87	22.87	23.25	1
		1	49	23.00	22.91	23.17	1
		1	99	22.89	22.81	23.18	1
		50	0	21.56	21.79	21.68	2
		50	24	21.62	21.88	21.82	2
		50	50	21.70	21.85	21.81	2
		100	0	21.72	21.75	21.73	2
	64QAM	1	0	21.35	21.46	21.43	2
		1	49	21.36	21.68	21.54	2
		1	99	21.50	21.42	21.63	2
		50	0	20.46	20.75	20.76	3
		50	24	20.75	20.92	20.91	3
		50	50	20.61	20.84	20.78	3
		100	0	20.61	20.78	20.61	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 675	18 900	19 125	
				1 857.5 ㎒	1 880.0 ㎒	1 902.5 ㎒	
15 ㎒	QPSK	1	0	23.54	23.76	23.68	0
		1	36	23.66	23.58	23.66	0
		1	74	23.52	23.54	23.62	0
		36	0	22.54	22.78	22.70	1
		36	18	22.62	22.79	22.73	1
		36	37	22.51	22.71	22.73	1
		75	0	22.60	22.82	22.78	1
	16QAM	1	0	22.88	23.16	22.75	1
		1	36	22.99	23.20	22.87	1
		1	74	22.96	23.09	22.86	1
		36	0	21.50	21.62	21.69	2
		36	18	21.77	21.80	21.72	2
		36	37	21.51	21.77	21.71	2
		75	0	21.52	21.73	21.62	2
	64QAM	1	0	21.42	21.52	21.63	2
		1	36	21.45	21.59	21.48	2
		1	74	21.46	21.42	21.65	2
		36	0	20.53	20.65	20.64	3
		36	18	20.72	20.71	20.72	3
		36	37	20.60	20.58	20.69	3
		75	0	20.49	20.62	20.66	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 650	18 900	19 150	
				1 855.0 ㎒	1 880.0 ㎒	1 905.0 ㎒	
10 ㎒	QPSK	1	0	23.65	23.77	23.70	0
		1	25	23.60	23.81	23.81	0
		1	49	23.68	23.66	23.67	0
		25	0	22.63	22.73	22.89	1
		25	12	22.59	22.75	22.81	1
		25	25	22.61	22.75	22.70	1
		50	0	22.71	22.85	22.72	1
	16QAM	1	0	23.13	22.91	22.70	1
		1	25	23.17	22.92	22.89	1
		1	49	23.15	22.75	22.70	1
		25	0	21.71	21.75	21.96	2
		25	12	21.61	21.79	21.91	2
		25	25	21.57	21.76	21.71	2
		50	0	21.58	21.75	21.84	2
	64QAM	1	0	21.33	21.56	21.61	2
		1	25	21.46	21.55	21.55	2
		1	49	21.56	21.65	21.79	2
		25	0	20.66	20.71	20.72	3
		25	12	20.49	20.87	20.72	3
		25	25	20.62	20.71	20.67	3
		50	0	20.65	20.74	20.75	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 625	18 900	19 175	
				1 852.5 ㎒	1 880.0 ㎒	1 907.5 ㎒	
5 ㎒	QPSK	1	0	23.71	23.77	23.93	0
		1	12	23.69	23.74	23.90	0
		1	24	23.71	23.70	23.90	0
		12	0	22.60	22.79	22.89	1
		12	7	22.61	22.85	22.66	1
		12	13	22.54	22.78	22.78	1
		25	0	22.63	22.85	22.79	1
	16QAM	1	0	22.60	23.02	22.85	1
		1	12	22.66	22.98	22.76	1
		1	24	22.59	22.92	22.76	1
		12	0	21.63	21.77	21.76	2
		12	7	21.57	21.85	21.74	2
		12	13	21.67	21.83	21.78	2
		25	0	21.59	21.77	21.84	2
	64QAM	1	0	21.46	21.56	21.75	2
		1	12	21.55	21.65	21.75	2
		1	24	21.58	21.60	21.66	2
		12	0	20.59	20.73	20.80	3
		12	7	20.61	20.88	20.67	3
		12	13	20.66	20.87	20.59	3
		25	0	20.55	20.53	20.66	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 615	18 900	19 185	
				1 851.5 ㎒	1 880.0 ㎒	1 908.5 ㎒	
3 ㎒	QPSK	1	0	23.59	23.83	23.72	0
		1	8	23.51	23.60	23.79	0
		1	14	23.64	23.60	23.56	0
		8	0	22.55	22.81	22.83	1
		8	4	22.45	22.79	22.69	1
		8	7	22.60	22.80	22.65	1
		15	0	22.43	22.72	22.68	1
	16QAM	1	0	23.09	22.85	22.69	1
		1	8	22.97	22.82	22.65	1
		1	14	23.03	22.78	22.74	1
		8	0	21.70	21.70	21.72	2
		8	4	21.66	21.85	21.69	2
		8	7	21.63	21.79	21.86	2
		15	0	21.45	21.62	21.78	2
	64QAM	1	0	21.47	21.56	21.68	2
		1	8	21.50	21.60	21.64	2
		1	14	21.55	21.49	21.52	2
		8	0	20.56	20.62	20.79	3
		8	4	20.75	20.85	20.73	3
		8	7	20.84	20.90	20.74	3
		15	0	20.53	20.66	20.65	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 607	18 900	19 193	
				1 850.7 ㎒	1 880.0 ㎒	1 909.3 ㎒	
1.4 ㎒	QPSK	1	0	23.42	23.77	23.71	0
		1	3	23.40	23.81	23.66	0
		1	5	23.42	23.70	23.68	0
		3	0	23.50	23.67	23.67	0
		3	1	23.56	23.75	23.76	0
		3	3	23.53	23.68	23.69	0
		6	0	22.62	22.75	22.85	1
	16QAM	1	0	22.53	22.77	22.87	1
		1	3	22.65	22.77	22.89	1
		1	5	22.63	22.75	22.97	1
		3	0	22.69	22.94	22.65	1
		3	1	22.58	22.95	22.74	1
		3	3	22.69	22.83	22.77	1
		6	0	21.50	21.66	21.75	2
	64QAM	1	0	21.37	21.63	21.75	2
		1	3	21.49	21.57	21.75	2
		1	5	21.46	21.70	21.58	2
		3	0	21.47	21.54	21.62	2
		3	1	21.41	21.52	21.69	2
		3	3	21.41	21.64	21.69	2
		6	0	20.55	20.66	20.71	3

10.5.2 LTE Band 2(Sub2 Ant.)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 700	18 900	19 100	
				1 860.0 ㎒	1 880.0 ㎒	1 900.0 ㎒	
20 ㎒	QPSK	1	0	23.57	**23.78**	23.68	0
		1	49	23.17	23.47	23.28	0
		1	99	23.07	23.35	23.22	0
		50	0	22.54	22.79	22.72	1
		50	24	22.59	**22.88**	22.75	1
		50	50	22.54	22.77	22.65	1
		100	0	22.60	22.81	22.74	1
	16QAM	1	0	21.94	22.16	22.03	1
		1	49	22.15	22.35	22.19	1
		1	99	21.98	22.25	22.07	1
		50	0	21.48	21.77	21.64	2
		50	24	21.56	21.87	21.76	2
		50	50	21.62	21.84	21.78	2
		100	0	21.53	21.74	21.55	2
	64QAM	1	0	20.82	21.26	21.00	2
		1	49	21.23	21.31	21.05	2
		1	99	20.98	21.26	20.93	2
		50	0	20.41	20.71	20.66	3
		50	24	20.71	20.90	20.90	3
		50	50	20.61	20.81	20.64	3
		100	0	20.54	20.75	20.44	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 675	18 900	19 125	
				1 857.5 ㎒	1 880.0 ㎒	1 902.5 ㎒	
15 ㎒	QPSK	1	0	23.49	23.75	23.58	0
		1	36	23.23	23.40	23.34	0
		1	74	23.03	23.32	23.15	0
		36	0	22.47	22.74	22.63	1
		36	18	22.49	22.77	22.66	1
		36	37	22.40	22.70	22.51	1
		75	0	22.60	22.81	22.73	1
	16QAM	1	0	21.78	21.98	21.76	1
		1	36	22.06	22.30	22.00	1
		1	74	21.98	22.19	21.99	1
		36	0	21.27	21.52	21.25	2
		36	18	21.64	21.80	21.63	2
		36	37	21.40	21.61	21.39	2
		75	0	21.26	21.52	21.27	2
	64QAM	1	0	20.71	21.08	20.71	2
		1	36	21.10	21.22	20.91	2
		1	74	21.05	21.25	20.98	2
		36	0	20.36	20.62	20.30	3
		36	18	20.71	20.71	20.55	3
		36	37	20.30	20.55	20.29	3
		75	0	20.35	20.60	20.23	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 650	18 900	19 150	
				1 855.0 ㎒	1 880.0 ㎒	1 905.0 ㎒	
10 ㎒	QPSK	1	0	23.56	23.76	23.70	0
		1	25	23.17	23.35	23.23	0
		1	49	22.98	23.29	23.16	0
		25	0	22.44	22.73	22.55	1
		25	12	22.48	22.74	22.64	1
		25	25	22.52	22.71	22.60	1
		50	0	22.62	22.84	22.66	1
	16QAM	1	0	21.68	21.93	21.71	1
		1	25	21.91	22.18	21.99	1
		1	49	21.95	22.14	21.87	1
		25	0	21.53	21.72	21.53	2
		25	12	21.45	21.74	21.57	2
		25	25	21.51	21.68	21.47	2
		50	0	21.49	21.69	21.47	2
	64QAM	1	0	20.78	20.88	20.83	2
		1	25	20.96	21.22	20.96	2
		1	49	21.08	21.24	21.01	2
		25	0	20.66	20.62	20.53	3
		25	12	20.48	20.87	20.61	3
		25	25	20.61	20.57	20.61	3
		50	0	20.58	20.72	20.36	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 625	18 900	19 175	
				1 852.5 ㎒	1 880.0 ㎒	1 907.5 ㎒	
5 ㎒	QPSK	1	0	23.45	23.73	23.64	0
		1	12	23.14	23.41	23.28	0
		1	24	23.06	23.24	23.17	0
		12	0	22.51	22.70	22.54	1
		12	7	22.56	22.82	22.66	1
		12	13	22.53	22.71	22.58	1
		25	0	22.58	22.80	22.74	1
	16QAM	1	0	21.73	22.01	21.83	1
		1	12	21.88	22.11	21.86	1
		1	24	21.94	22.16	21.96	1
		12	0	21.48	21.70	21.52	2
		12	7	21.49	21.78	21.48	2
		12	13	21.61	21.78	21.59	2
		25	0	21.23	21.51	21.34	2
	64QAM	1	0	20.68	20.96	20.91	2
		1	12	20.89	21.18	20.78	2
		1	24	20.99	21.26	20.90	2
		12	0	20.51	20.70	20.48	3
		12	7	20.56	20.87	20.58	3
		12	13	20.61	20.82	20.53	3
		25	0	20.32	20.44	20.36	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 615	18 900	19 185	
				1 851.5 ㎒	1 880.0 ㎒	1 908.5 ㎒	
3 ㎒	QPSK	1	0	23.55	23.81	23.65	0
		1	8	23.24	23.48	23.38	0
		1	14	23.05	23.36	23.27	0
		8	0	22.54	22.80	22.72	1
		8	4	22.44	22.74	22.62	1
		8	7	22.58	22.79	22.63	1
		15	0	22.40	22.71	22.53	1
	16QAM	1	0	21.72	22.03	21.83	1
		1	8	21.95	22.16	21.96	1
		1	14	21.82	22.02	21.72	1
		8	0	21.40	21.62	21.33	2
		8	4	21.61	21.77	21.59	2
		8	7	21.63	21.79	21.51	2
		15	0	21.29	21.54	21.30	2
	64QAM	1	0	20.67	21.10	20.69	2
		1	8	20.95	21.08	20.97	2
		1	14	20.81	20.88	20.65	2
		8	0	20.50	20.47	20.38	3
		8	4	20.74	20.83	20.62	3
		8	7	20.78	20.90	20.66	3
		15	0	20.28	20.63	20.27	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 607	18 900	19 193	
				1 850.7 ㎒	1 880.0 ㎒	1 909.3 ㎒	
1.4 ㎒	QPSK	1	0	23.38	23.65	23.47	0
		1	3	23.11	23.32	23.27	0
		1	5	22.91	23.20	23.09	0
		3	0	22.46	22.65	22.56	0
		3	1	23.44	23.74	23.55	0
		3	3	22.31	22.61	22.56	0
		6	0	22.45	22.73	22.65	1
	16QAM	1	0	21.81	21.97	21.72	1
		1	3	21.87	22.13	21.97	1
		1	5	21.82	22.06	21.77	1
		3	0	21.43	21.66	21.42	1
		3	1	21.60	21.81	21.58	1
		3	3	21.38	21.69	21.42	1
		6	0	21.41	21.60	21.43	2
	64QAM	1	0	20.81	20.99	20.66	2
		1	3	20.97	21.04	21.02	2
		1	5	20.87	21.00	20.87	2
		3	0	20.44	20.58	20.52	2
		3	1	20.50	20.81	20.56	2
		3	3	20.40	20.71	20.43	2
		6	0	20.50	20.54	20.37	3

10.5.3 LTE Band 4(Sub2 Ant.)

Band width	Modulation	RB Size	RB offset	Maximum Average Power 20 175 1732.5 ㎒	MPR
20 ㎒	QPSK	1	0	19.06	0
		1	49	**19.17**	0
		1	99	19.02	0
		50	0	18.04	1
		50	24	**18.09**	1
		50	50	18.01	1
		100	0	18.05	1
	16QAM	1	0	18.15	1
		1	49	18.14	1
		1	99	18.11	1
		50	0	17.18	2
		50	24	17.18	2
		50	50	17.12	2
		100	0	17.14	2
	64QAM	1	0	17.08	2
		1	49	17.30	2
		1	99	17.37	2
		50	0	16.15	3
		50	24	16.17	3
		50	50	16.20	3
		100	0	16.14	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power 20 025 1717.5 ㎒	20 175 1732.5 ㎒	20 325 1747.5 ㎒	MPR
15 ㎒	QPSK	1	0	19.15	19.28	19.05	0
		1	36	19.28	19.13	19.08	0
		1	74	19.10	19.02	19.05	0
		36	0	18.34	18.22	18.05	1
		36	18	18.24	18.17	18.00	1
		36	37	18.15	18.14	18.05	1
		75	0	18.38	18.24	18.03	1
	16QAM	1	0	18.15	18.15	18.17	1
		1	36	18.26	18.25	18.11	1
		1	74	18.19	18.10	18.11	1
		36	0	17.37	17.21	17.02	2
		36	18	17.25	17.15	17.05	2
		36	37	17.27	17.19	17.11	2
		75	0	17.25	17.25	17.08	2
	64QAM	1	0	17.05	17.14	17.16	2
		1	36	17.26	17.33	17.36	2
		1	74	17.24	17.28	17.37	2
		36	0	16.18	16.14	16.18	3
		36	18	16.21	16.20	16.21	3
		36	37	16.15	16.24	16.18	3
		75	0	16.13	16.10	16.09	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 000	20 175	20 350	
				1715.0 MHz	1732.5 MHz	1750.0 MHz	
10 MHz	QPSK	1	0	19.19	19.14	19.13	0
		1	25	19.15	19.06	19.03	0
		1	49	19.20	19.00	19.09	0
		25	0	18.22	18.06	18.06	1
		25	12	18.24	18.09	18.09	1
		25	25	18.14	18.03	18.08	1
		50	0	18.16	18.20	18.04	1
	16QAM	1	0	18.24	18.21	18.19	1
		1	25	18.32	18.26	18.09	1
		1	49	18.25	18.24	18.08	1
		25	0	17.29	17.24	17.09	2
		25	12	17.18	17.20	17.01	2
		25	25	17.31	17.22	17.04	2
		50	0	17.20	17.10	17.08	2
	64QAM	1	0	17.04	17.05	17.18	2
		1	25	17.20	17.18	17.30	2
		1	49	17.24	17.23	17.30	2
		25	0	16.15	16.24	16.33	3
		25	12	16.09	16.18	16.28	3
		25	25	16.09	16.21	16.15	3
		50	0	16.07	16.24	16.24	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 975	20 175	20 375	
				1712.5 MHz	1732.5 MHz	1752.5 MHz	
5 MHz	QPSK	1	0	19.26	19.21	19.06	0
		1	12	19.20	19.12	19.16	0
		1	24	19.24	19.07	19.12	0
		12	0	18.26	18.21	18.11	1
		12	7	18.23	18.10	18.03	1
		12	13	18.15	18.00	18.05	1
		25	0	18.38	18.08	18.08	1
	16QAM	1	0	18.28	18.37	18.10	1
		1	12	18.12	18.29	18.06	1
		1	24	18.15	18.22	18.12	1
		12	0	17.27	17.09	17.03	2
		12	7	17.26	17.20	17.05	2
		12	13	17.23	17.13	17.10	2
		25	0	17.35	17.13	17.03	2
	64QAM	1	0	17.11	17.10	17.26	2
		1	12	17.13	17.27	17.30	2
		1	24	17.13	17.12	17.37	2
		12	0	16.06	16.21	16.29	3
		12	7	16.23	16.23	16.22	3
		12	13	16.19	16.21	16.26	3
		25	0	16.14	16.23	16.21	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 965	20 175	20 385	
				1711.5 ㎒	1732.5 ㎒	1753.5 ㎒	
3 ㎒	QPSK	1	0	19.13	19.12	19.05	0
		1	8	19.14	19.08	19.09	0
		1	14	19.14	19.02	19.07	0
		8	0	18.08	18.11	18.11	1
		8	4	18.16	18.05	18.02	1
		8	7	18.21	18.17	18.02	1
		15	0	18.14	18.16	18.04	1
	16QAM	1	0	18.29	18.32	18.06	1
		1	8	18.30	18.14	18.03	1
		1	14	18.32	18.18	18.02	1
		8	0	17.34	17.12	17.09	2
		8	4	17.44	17.03	17.03	2
		8	7	17.47	17.11	17.15	2
		15	0	17.20	17.18	17.05	2
	64QAM	1	0	17.17	17.17	17.13	2
		1	8	17.30	17.15	17.29	2
		1	14	17.16	17.25	17.29	2
		8	0	16.14	16.24	16.38	3
		8	4	16.22	16.31	16.16	3
		8	7	16.18	16.22	16.24	3
		15	0	16.18	16.26	16.27	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 957	20 175	20 393	
				1710.7 ㎒	1732.5 ㎒	1754.3 ㎒	
1.4 ㎒	QPSK	1	0	19.24	19.02	19.11	0
		1	3	19.13	19.05	19.13	0
		1	5	19.21	19.08	19.03	0
		3	0	19.20	19.06	19.12	0
		3	1	19.15	19.06	19.06	0
		3	3	19.26	19.15	19.14	0
		6	0	18.25	18.02	18.18	1
	16QAM	1	0	18.17	18.29	18.04	1
		1	3	18.08	18.18	18.04	1
		1	5	18.18	18.21	18.02	1
		3	0	18.20	18.11	18.01	1
		3	1	18.39	18.18	18.09	1
		3	3	18.35	18.11	18.00	1
		6	0	17.13	17.21	17.05	2
	64QAM	1	0	17.10	17.21	17.25	2
		1	3	17.14	17.33	17.13	2
		1	5	17.16	17.39	17.29	2
		3	0	17.21	17.07	17.21	2
		3	1	17.05	17.11	17.23	2
		3	3	17.27	17.20	17.21	2
		6	0	16.13	16.30	16.25	3

10.5.4 LTE Band 5

Band width	Modulation	RB Size	RB offset	Maximum Average Power 20 525 836.5 ㎒	MPR
10 ㎒	QPSK	1	0	23.90	0
		1	25	**23.94**	0
		1	49	23.83	0
		25	0	**22.95**	1
		25	12	22.85	1
		25	25	22.87	1
		50	0	22.94	1
	16QAM	1	0	22.99	1
		1	25	22.97	1
		1	49	22.86	1
		25	0	21.95	2
		25	12	21.89	2
		25	25	21.94	2
		50	0	21.89	2
	64QAM	1	0	22.76	2
		1	25	22.60	2
		1	49	22.45	2
		25	0	21.62	3
		25	12	21.47	3
		25	25	21.41	3
		50	0	21.48	3

10 ㎒ Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

Band width	Modulation	RB Size	RB offset	Maximum Average Power 20 425 826.5 ㎒	20 525 836.5 ㎒	20 625 846.5 ㎒	MPR
5 ㎒	QPSK	1	0	24.04	23.89	23.99	0
		1	12	24.04	23.89	23.92	0
		1	24	24.00	23.82	23.97	0
		12	0	22.87	22.84	22.93	1
		12	7	22.84	22.81	22.83	1
		12	13	22.80	22.80	22.82	1
		25	0	22.85	22.82	22.85	1
	16QAM	1	0	22.83	23.16	22.93	1
		1	12	22.80	23.17	22.90	1
		1	24	22.82	23.13	22.90	1
		12	0	21.81	21.86	21.82	2
		12	7	21.83	21.82	21.80	2
		12	13	21.80	21.81	21.80	2
		25	0	21.87	21.82	21.86	2
	64QAM	1	0	22.86	22.72	22.17	2
		1	12	22.87	22.69	22.22	2
		1	24	22.77	22.42	22.06	2
		12	0	21.72	21.54	21.08	3
		12	7	21.73	21.50	20.96	3
		12	13	21.59	21.40	20.86	3
		25	0	21.67	21.47	20.95	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 407	20 525	20 643	
				824.7 MHz	836.5 MHz	848.3 MHz	
3 MHz	QPSK	1	0	23.82	23.86	23.84	0
		1	8	23.80	23.84	23.80	0
		1	14	23.85	23.84	23.83	0
		8	0	22.84	22.80	22.81	1
		8	4	22.82	22.80	22.80	1
		8	7	22.83	22.81	22.81	1
		15	0	22.86	22.82	22.80	1
	16QAM	1	0	23.44	23.00	22.84	1
		1	8	23.37	22.90	22.80	1
		1	14	23.37	22.91	22.83	1
		8	0	22.01	21.81	21.88	2
		8	4	21.99	21.84	21.88	2
		8	7	22.00	21.81	21.81	2
		15	0	21.81	21.80	21.84	2
	64QAM	1	0	22.92	22.62	22.07	2
		1	8	22.77	22.57	22.18	2
		1	14	22.86	22.49	22.05	2
		8	0	21.76	21.46	21.00	3
		8	4	21.71	21.42	20.91	3
		8	7	21.66	21.43	20.89	3
		15	0	21.68	21.44	20.91	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 407	20 525	20 643	
				824.7 MHz	836.5 MHz	848.3 MHz	
1.4 MHz	QPSK	1	0	23.84	23.80	23.81	0
		1	3	23.83	23.81	23.88	0
		1	5	23.81	23.81	23.82	0
		3	0	23.88	23.86	23.86	0
		3	1	23.91	23.87	23.90	0
		3	3	23.89	23.80	23.86	0
		6	0	22.88	22.82	22.83	1
	16QAM	1	0	22.90	22.80	22.95	1
		1	3	22.88	22.81	22.98	1
		1	5	22.90	22.80	22.99	1
		3	0	22.96	22.97	22.91	1
		3	1	22.94	23.02	22.94	1
		3	3	22.95	22.95	22.88	1
		6	0	21.80	21.81	21.84	2
	64QAM	1	0	22.89	22.60	22.04	2
		1	3	22.79	22.61	22.09	2
		1	5	22.74	22.55	22.07	2
		3	0	22.85	22.55	22.02	2
		3	1	22.79	22.50	22.01	2
		3	3	22.81	22.48	22.02	2
		6	0	21.64	21.37	20.86	3

10.5.5 LTE Band 12

Band width	Modulation	RB Size	RB offset	Maximum Average Power 23 095 707.5 ㎒	MPR
10 ㎒	QPSK	1	0	23.33	0
		1	25	**23.52**	0
		1	49	23.29	0
		25	0	**22.41**	1
		25	12	22.30	1
		25	25	22.35	1
		50	0	22.35	1
	16QAM	1	0	22.93	1
		1	25	22.94	1
		1	49	22.89	1
		25	0	21.40	2
		25	12	21.30	2
		25	25	21.25	2
		50	0	21.30	2
	64QAM	1	0	21.81	2
		1	25	21.68	2
		1	49	21.54	2
		25	0	20.63	3
		25	12	20.52	3
		25	25	20.42	3
		50	0	20.48	3

10 ㎒ Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

Band width	Modulation	RB Size	RB offset	Maximum Average Power 23 035 701.5 ㎒	23 095 707.5 ㎒	23 155 713.5 ㎒	MPR
5 ㎒	QPSK	1	0	23.51	23.41	23.44	0
		1	12	23.49	23.36	23.34	0
		1	24	23.49	23.39	23.33	0
		12	0	22.32	22.36	22.20	1
		12	7	22.35	22.23	22.19	1
		12	13	22.36	22.24	22.08	1
		25	0	22.37	22.33	22.19	1
	16QAM	1	0	22.32	22.67	22.43	1
		1	12	22.30	22.64	22.34	1
		1	24	22.34	22.66	22.29	1
		12	0	21.29	21.37	21.15	2
		12	7	21.31	21.28	21.18	2
		12	13	21.31	21.28	21.03	2
		25	0	21.36	21.29	21.20	2
	64QAM	1	0	21.75	21.74	21.62	2
		1	12	21.70	21.76	21.51	2
		1	24	21.73	21.59	21.40	2
		12	0	20.55	20.60	20.37	3
		12	7	20.56	20.52	20.28	3
		12	13	20.54	20.44	20.11	3
		25	0	20.56	20.48	20.23	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				23 025	23 095	23 165	
				700.5 MHz	707.5 MHz	714.5 MHz	
3 MHz	QPSK	1	0	23.28	23.37	23.21	0
		1	8	23.32	23.33	23.17	0
		1	14	23.33	23.36	23.17	0
		8	0	22.33	22.28	22.22	1
		8	4	22.33	22.25	22.23	1
		8	7	22.34	22.24	22.15	1
		15	0	22.29	22.26	22.06	1
	16QAM	1	0	22.94	22.43	22.24	1
		1	8	22.90	22.40	22.22	1
		1	14	22.90	22.40	22.24	1
		8	0	21.50	21.27	21.27	2
		8	4	21.44	21.26	21.22	2
		8	7	21.50	21.21	21.16	2
		15	0	21.29	21.27	21.17	2
	64QAM	1	0	21.64	21.72	21.53	2
		1	8	21.65	21.71	21.51	2
		1	14	21.72	21.62	21.64	2
		8	0	20.58	20.57	20.56	3
		8	4	20.55	20.49	20.50	3
		8	7	20.56	20.45	20.47	3
		15	0	20.52	20.45	20.47	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				23 017	23 095	23 173	
				699.7 MHz	707.5 MHz	715.3 MHz	
1.4 MHz	QPSK	1	0	23.30	23.35	23.20	0
		1	3	23.32	23.32	23.21	0
		1	5	23.31	23.33	23.19	0
		3	0	23.33	23.29	23.18	0
		3	1	23.34	23.31	23.22	0
		3	3	23.35	23.29	23.17	0
		6	0	22.33	22.31	22.22	1
	16QAM	1	0	22.36	22.31	22.33	1
		1	3	22.37	22.33	22.37	1
		1	5	22.37	22.30	22.35	1
		3	0	22.42	22.48	22.20	1
		3	1	22.42	22.48	22.22	1
		3	3	22.40	22.47	22.20	1
		6	0	21.26	21.32	21.21	2
	64QAM	1	0	21.69	21.72	21.39	2
		1	3	21.66	21.67	21.33	2
		1	5	21.63	21.66	21.32	2
		3	0	21.62	21.63	21.36	2
		3	1	21.65	21.61	21.30	2
		3	3	21.67	21.57	21.30	2
		6	0	20.51	20.50	20.17	3

10.5.6 LTE Band 13

Band width	Modulation	RB Size	RB offset	Maximum Average Power 23 230 782.0 ㎒	MPR
10 ㎒	QPSK	1	0	23.44	0
		1	25	**23.47**	0
		1	49	23.42	0
		25	0	**22.55**	1
		25	12	22.45	1
		25	25	22.49	1
		50	0	22.50	1
	16QAM	1	0	23.02	1
		1	25	23.00	1
		1	49	22.94	1
		25	0	21.57	2
		25	12	21.51	2
		25	25	21.51	2
		50	0	21.46	2
	64QAM	1	0	21.45	2
		1	25	21.36	2
		1	49	21.09	2
		25	0	20.25	3
		25	12	20.12	3
		25	25	20.11	3
		50	0	20.21	3

10 ㎒ Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

Band width	Modulation	RB Size	RB offset	Maximum Average Power 23 230 782.0 ㎒	MPR
5 ㎒	QPSK	1	0	23.60	0
		1	12	23.58	0
		1	24	23.49	0
		12	0	22.54	1
		12	7	22.43	1
		12	13	22.40	1
		25	0	22.45	1
	16QAM	1	0	22.42	1
		1	12	22.42	1
		1	24	22.35	1
		12	0	21.51	2
		12	7	21.42	2
		12	13	21.37	2
		25	0	21.48	2
	64QAM	1	0	21.28	2
		1	12	21.39	2
		1	24	21.18	2
		12	0	20.22	3
		12	7	20.09	3
		12	13	20.07	3
		25	0	20.16	3

10.5.7 LTE Band 26

Band width	Modulation	RB Size	RB offset	Maximum Average Power 26 865 831.5 ㎒	MPR
15 ㎒	QPSK	1	0	23.39	0
		1	36	**23.50**	0
		1	74	23.32	0
		36	0	**22.43**	1
		36	18	22.38	1
		36	37	22.33	1
		75	0	22.40	1
	16QAM	1	0	22.48	1
		1	36	22.51	1
		1	74	22.34	1
		36	0	21.49	2
		36	18	21.39	2
		36	37	21.33	2
		75	0	21.40	2
	64QAM	1	0	21.45	2
		1	36	21.45	2
		1	74	21.02	2
		36	0	20.26	3
		36	18	20.19	3
		36	37	20.03	3
		75	0	20.12	3

15 ㎒ Bandwidths does not support at least three non-overlapping channels in certain channel bandwidths. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing per KDB 941225 D05 SAR for LTE Devices.

Band width	Modulation	RB Size	RB offset	Maximum Average Power 26 740 819.0 ㎒	26 865 831.5 ㎒	26 990 844.0 ㎒	MPR
10 ㎒	QPSK	1	0	23.44	23.42	23.27	0
		1	25	23.43	23.45	23.18	0
		1	49	23.37	23.41	23.14	0
		25	0	22.47	22.44	22.22	1
		25	12	22.39	22.42	22.23	1
		25	25	22.46	22.32	22.10	1
		50	0	22.49	22.44	22.20	1
	16QAM	1	0	23.03	22.51	22.29	1
		1	25	23.06	22.50	22.23	1
		1	49	22.96	22.44	22.17	1
		25	0	21.47	21.51	21.28	2
		25	12	21.45	21.43	21.25	2
		25	25	21.49	21.34	21.12	2
		50	0	21.44	21.41	21.19	2
	64QAM	1	0	21.30	21.34	21.57	2
		1	25	21.42	21.47	21.43	2
		1	49	21.29	21.20	21.28	2
		25	0	20.36	20.32	20.32	3
		25	12	20.30	20.22	20.27	3
		25	25	20.32	20.08	20.09	3
		50	0	20.34	20.21	20.23	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				26 715	26 865	27 015	
				816.5 MHz	831.5 MHz	846.5 MHz	
5 MHz	QPSK	1	0	23.64	23.41	23.27	0
		1	12	23.61	23.41	23.26	0
		1	24	23.51	23.40	23.29	0
		12	0	22.48	22.46	22.27	1
		12	7	22.41	22.34	22.19	1
		12	13	22.41	22.29	22.16	1
		25	0	22.45	22.35	22.20	1
	16QAM	1	0	22.43	22.68	22.27	1
		1	12	22.42	22.66	22.22	1
		1	24	22.39	22.68	22.25	1
		12	0	21.46	21.44	21.20	2
		12	7	21.37	21.35	21.11	2
		12	13	21.36	21.29	21.04	2
		25	0	21.45	21.31	21.22	2
	64QAM	1	0	21.51	21.39	21.39	2
		1	12	21.56	21.32	21.41	2
		1	24	21.49	21.29	21.25	2
		12	0	20.31	20.33	20.24	3
		12	7	20.28	20.18	20.16	3
		12	13	20.27	20.09	20.02	3
		25	0	20.29	20.15	20.12	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				26 705	26 865	27 025	
				815.5 MHz	831.5 MHz	847.5 MHz	
3 MHz	QPSK	1	0	23.43	23.38	23.19	0
		1	8	23.40	23.38	23.13	0
		1	14	23.47	23.36	23.13	0
		8	0	22.44	22.35	22.17	1
		8	4	22.43	22.30	22.15	1
		8	7	22.39	22.29	22.16	1
		15	0	22.41	22.31	22.15	1
	16QAM	1	0	23.01	22.49	22.20	1
		1	8	22.95	22.44	22.15	1
		1	14	22.96	22.43	22.20	1
		8	0	21.60	21.33	21.25	2
		8	4	21.58	21.30	21.21	2
		8	7	21.56	21.29	21.23	2
		15	0	21.41	21.32	21.20	2
	64QAM	1	0	21.50	21.29	21.24	2
		1	8	21.42	21.25	21.30	2
		1	14	21.37	21.15	21.25	2
		8	0	20.29	20.11	20.18	3
		8	4	20.26	20.02	20.09	3
		8	7	20.30	20.02	20.02	3
		15	0	20.19	20.03	20.06	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				26 697	26 865	27 033	
				814.7 ㎒	831.5 ㎒	848.3 ㎒	
1.4 ㎒	QPSK	1	0	23.41	23.39	23.22	0
		1	3	23.45	23.42	23.21	0
		1	5	23.40	23.38	23.24	0
		3	0	23.46	23.36	23.19	0
		3	1	23.48	23.37	23.20	0
		3	3	23.49	23.35	23.19	0
		6	0	22.47	22.36	22.16	1
	16QAM	1	0	22.47	22.36	22.29	1
		1	3	22.48	22.34	22.32	1
		1	5	22.45	22.36	22.29	1
		3	0	22.52	22.52	22.17	1
		3	1	22.49	22.55	22.17	1
		3	3	22.49	22.53	22.20	1
		6	0	21.36	21.35	21.19	2
	64QAM	1	0	21.41	21.30	21.26	2
		1	3	21.37	21.27	21.26	2
		1	5	21.36	21.12	21.21	2
		3	0	21.33	21.19	21.14	2
		3	1	21.36	21.21	21.17	2
		3	3	21.37	21.15	21.13	2
		6	0	20.20	20.05	20.03	3

10.5.8 LTE Band 41

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
20 MHz	QPSK	1	0	22.52	22.31	22.27	22.38	22.47	0
		1	49	22.56	22.39	22.37	22.52	**22.60**	0
		1	99	22.22	22.23	22.22	22.39	22.48	0
		50	0	21.33	21.43	21.31	21.49	21.62	1
		50	24	21.56	21.41	21.38	21.50	**21.63**	1
		50	50	21.59	21.31	21.34	21.49	21.54	1
		100	0	21.53	21.40	21.30	21.48	21.59	1
	16QAM	1	0	21.53	21.06	21.03	21.42	21.22	1
		1	49	21.58	21.12	21.05	21.51	21.34	1
		1	99	21.29	21.01	21.02	21.41	21.24	1
		50	0	20.35	20.35	20.35	20.46	20.57	2
		50	24	20.54	20.34	20.39	20.49	20.57	2
		50	50	20.53	20.30	20.36	20.46	20.51	2
		100	0	20.48	20.35	20.30	20.45	20.52	2
	64QAM	1	0	20.52	20.08	20.01	20.38	20.13	2
		1	49	20.50	20.16	20.05	20.59	20.27	2
		1	99	20.26	20.05	20.10	20.34	20.28	2
		50	0	19.31	19.38	19.27	19.40	19.58	3
		50	24	19.47	19.32	19.44	19.41	19.57	3
		50	50	19.45	19.35	19.36	19.44	19.42	3
		100	0	19.58	19.42	19.40	19.48	19.58	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
15 MHz	QPSK	1	0	22.57	22.38	22.22	22.45	22.52	0
		1	36	22.57	22.36	22.28	22.49	22.59	0
		1	74	22.38	22.29	22.16	22.42	22.52	0
		36	0	21.44	21.39	21.28	21.44	21.58	1
		36	18	21.50	21.35	21.30	21.44	21.57	1
		36	37	21.49	21.35	21.32	21.45	21.57	1
		75	0	21.55	21.40	21.34	21.49	21.59	1
	16QAM	1	0	21.75	21.33	21.10	21.61	21.46	1
		1	36	21.77	21.33	21.24	21.68	21.54	1
		1	74	21.63	21.22	21.05	21.60	21.46	1
		36	0	20.50	20.39	20.25	20.46	20.61	2
		36	18	20.51	20.36	20.30	20.46	20.56	2
		36	37	20.53	20.29	20.29	20.48	20.57	2
		75	0	20.50	20.34	20.26	20.45	20.54	2
	64QAM	1	0	20.83	20.28	20.01	20.63	20.44	2
		1	36	20.87	20.24	20.31	20.62	20.55	2
		1	74	20.71	20.26	20.08	20.69	20.56	2
		36	0	19.41	19.41	19.26	19.56	19.67	3
		36	18	19.60	19.32	19.30	19.55	19.53	3
		36	37	19.60	19.33	19.31	19.52	19.56	3
		75	0	19.53	19.43	19.36	19.44	19.48	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
10 MHz	QPSK	1	0	22.63	22.45	22.42	22.52	22.56	0
		1	25	22.62	22.43	22.37	22.53	22.62	0
		1	49	22.62	22.37	22.35	22.50	22.58	0
		25	0	21.50	21.40	21.35	21.51	21.61	1
		25	12	21.55	21.37	21.34	21.48	21.57	1
		25	25	21.57	21.36	21.34	21.49	21.46	1
		50	0	21.59	21.42	21.40	21.54	21.63	1
	16QAM	1	0	21.73	21.35	21.10	21.65	21.52	1
		1	25	21.76	21.31	21.09	21.70	21.55	1
		1	49	21.72	21.29	21.02	21.67	21.51	1
		25	0	20.50	20.34	20.34	20.51	20.57	2
		25	12	20.57	20.30	20.32	20.45	20.53	2
		25	25	20.55	20.28	20.36	20.46	20.54	2
		50	0	20.52	20.35	20.34	20.46	20.56	2
	64QAM	1	0	20.74	20.26	20.06	20.70	20.61	2
		1	25	20.64	20.33	20.15	20.70	20.57	2
		1	49	20.79	20.30	20.06	20.65	20.63	2
		25	0	19.58	19.22	19.47	19.52	19.51	3
		25	12	19.64	19.43	19.42	19.54	19.55	3
		25	25	19.50	19.32	19.43	19.52	19.47	3
		50	0	19.41	19.30	19.26	19.31	19.66	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
5 MHz	QPSK	1	0	22.56	22.48	22.40	22.50	22.70	0
		1	12	22.55	22.51	22.40	22.46	22.70	0
		1	24	22.56	22.45	22.34	22.46	22.68	0
		12	0	21.51	21.38	21.35	21.45	21.58	1
		12	7	21.54	21.39	21.31	21.45	21.58	1
		12	13	21.53	21.35	21.29	21.44	21.54	1
		25	0	21.54	21.42	21.32	21.49	21.55	1
	16QAM	1	0	21.66	21.74	21.42	21.56	21.92	1
		1	12	21.69	21.73	21.40	21.57	21.91	1
		1	24	21.66	21.69	21.37	21.55	21.90	1
		12	0	20.51	20.32	20.26	20.49	20.55	2
		12	7	20.53	20.28	20.23	20.44	20.49	2
		12	13	20.55	20.28	20.21	20.46	20.50	2
		25	0	20.50	20.40	20.28	20.42	20.62	2
	64QAM	1	0	20.62	20.66	20.47	20.49	20.82	2
		1	12	20.78	20.69	20.40	20.67	20.84	2
		1	24	20.71	20.63	20.42	20.46	20.88	2
		12	0	19.52	19.29	19.16	19.56	19.65	3
		12	7	19.62	19.27	19.27	19.45	19.54	3
		12	13	19.52	19.21	19.16	19.47	19.46	3
		25	0	19.41	19.44	19.32	19.42	19.54	3

10.5.9 LTE Band 66

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 072	132 322	132 572	
				1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	QPSK	1	0	23.85	23.77	23.45	0
		1	49	**23.95**	23.90	23.66	0
		1	99	23.72	23.56	23.41	0
		50	0	**23.06**	22.75	22.57	1
		50	24	22.98	22.73	22.59	1
		50	50	22.86	22.71	22.54	1
		100	0	22.89	22.70	22.56	1
	16QAM	1	0	23.24	22.87	23.14	1
		1	49	23.19	23.04	23.08	1
		1	99	22.92	22.70	22.85	1
		50	0	21.94	21.69	21.50	2
		50	24	21.84	21.68	21.43	2
		50	50	21.74	21.65	21.41	2
		100	0	21.85	21.67	21.34	2
	64QAM	1	0	21.68	21.89	21.90	2
		1	49	21.67	21.96	21.88	2
		1	99	21.75	21.87	21.90	2
		50	0	20.82	20.94	21.12	3
		50	24	20.84	20.99	21.07	3
		50	50	20.91	21.07	21.06	3
		100	0	20.91	20.87	21.13	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 047	132 322	132 597	
				1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	QPSK	1	0	23.80	23.66	23.49	0
		1	36	23.86	23.63	23.48	0
		1	74	23.67	23.46	23.46	0
		36	0	22.95	22.65	22.37	1
		36	18	22.93	22.63	22.50	1
		36	37	22.93	22.66	22.41	1
		75	0	22.82	22.66	22.38	1
	16QAM	1	0	23.35	22.84	22.86	1
		1	36	23.52	22.80	22.79	1
		1	74	23.31	22.71	22.79	1
		36	0	21.97	21.60	21.50	2
		36	18	21.86	21.62	21.43	2
		36	37	21.79	21.56	21.50	2
		75	0	21.85	21.67	21.55	2
	64QAM	1	0	21.66	21.79	21.75	2
		1	36	21.95	22.00	21.94	2
		1	74	21.87	21.99	21.92	2
		36	0	20.87	21.02	20.88	3
		36	18	20.84	20.98	21.09	3
		36	37	20.95	21.05	21.14	3
		75	0	20.78	20.91	21.04	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 022	132 322	132 622	
				1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	QPSK	1	0	23.80	23.65	23.41	0
		1	25	23.84	23.67	23.47	0
		1	49	23.77	23.64	23.45	0
		25	0	23.00	22.59	22.44	1
		25	12	22.88	22.73	22.46	1
		25	25	22.98	22.67	22.47	1
		50	0	22.88	22.71	22.46	1
	16QAM	1	0	23.48	22.81	22.56	1
		1	25	23.41	22.89	22.57	1
		1	49	23.37	22.70	22.46	1
		25	0	21.91	21.78	21.62	2
		25	12	21.90	21.74	21.42	2
		25	25	21.90	21.78	21.52	2
		50	0	21.92	21.64	21.51	2
	64QAM	1	0	21.60	21.92	21.84	2
		1	25	21.80	21.89	21.87	2
		1	49	21.74	21.99	21.84	2
		25	0	20.71	21.03	20.96	3
		25	12	20.85	21.12	21.02	3
		25	25	20.75	21.13	20.99	3
		50	0	20.78	21.05	20.96	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 997	132 322	132 647	
				1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	QPSK	1	0	23.95	23.71	23.48	0
		1	12	24.08	23.80	23.43	0
		1	24	24.08	23.79	23.50	0
		12	0	22.95	22.75	22.31	1
		12	7	22.96	22.59	22.33	1
		12	13	22.93	22.65	22.39	1
		25	0	22.89	22.64	22.38	1
	16QAM	1	0	22.92	23.00	22.65	1
		1	12	22.82	23.03	22.55	1
		1	24	22.77	22.89	22.59	1
		12	0	21.95	21.69	21.47	2
		12	7	21.91	21.73	21.35	2
		12	13	21.87	21.53	21.44	2
		25	0	21.98	21.54	21.43	2
	64QAM	1	0	21.68	21.95	21.97	2
		1	12	21.73	21.92	21.92	2
		1	24	21.79	21.88	21.87	2
		12	0	20.92	20.88	20.87	3
		12	7	20.90	21.03	20.93	3
		12	13	20.84	21.06	20.96	3
		25	0	20.71	21.02	20.98	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 987	132 322	132 657	
				1 711.5 MHz	1 745.0 MHz	1 778.5 MHz	
3 MHz	QPSK	1	0	23.89	23.65	23.37	0
		1	8	23.85	23.63	23.40	0
		1	14	23.88	23.55	23.31	0
		8	0	22.82	22.64	22.45	1
		8	4	22.91	22.58	22.42	1
		8	7	22.91	22.65	22.51	1
		15	0	22.89	22.63	22.40	1
	16QAM	1	0	23.52	22.74	22.53	1
		1	8	23.37	22.81	22.31	1
		1	14	23.41	22.81	22.63	1
		8	0	22.10	21.65	21.50	2
		8	4	21.97	21.65	21.49	2
		8	7	22.06	21.55	21.45	2
		15	0	21.95	21.54	21.45	2
	64QAM	1	0	21.64	22.00	21.84	2
		1	8	21.72	21.89	21.90	2
		1	14	21.66	22.05	21.87	2
		8	0	20.82	21.07	21.04	3
		8	4	20.70	21.07	21.04	3
		8	7	20.72	21.10	20.98	3
		15	0	20.83	21.01	20.88	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 979	132 322	132 665	
				1 710.7 MHz	1 745.0 MHz	1 779.3 MHz	
1.4 MHz	QPSK	1	0	24.04	24.21	23.84	0
		1	3	24.18	24.18	23.72	0
		1	5	24.20	24.10	23.70	0
		3	0	24.16	24.11	23.78	0
		3	1	24.13	24.02	23.95	0
		3	3	24.16	23.91	23.64	0
		6	0	23.21	22.93	22.61	1
	16QAM	1	0	23.39	23.07	23.01	1
		1	3	23.22	23.09	22.79	1
		1	5	23.26	23.15	22.64	1
		3	0	23.35	23.24	22.74	1
		3	1	23.25	23.14	22.80	1
		3	3	23.15	23.24	22.81	1
		6	0	22.20	22.06	21.80	2
	64QAM	1	0	22.05	22.35	22.20	2
		1	3	22.05	22.44	22.30	2
		1	5	21.99	22.37	22.39	2
		3	0	21.90	22.08	22.20	2
		3	1	21.79	22.19	22.30	2
		3	3	22.10	22.21	22.28	2
		6	0	21.07	21.34	21.35	3

10.5.10 LTE Band 66(Sub2 Ant.)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 072	132 322	132 572	
				1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	QPSK	1	0	23.57	23.58	23.28	0
		1	49	23.87	23.89	23.59	0
		1	99	23.45	23.47	23.15	0
		50	0	22.65	22.68	22.36	1
		50	24	22.64	22.67	22.35	1
		50	50	22.57	22.69	22.40	1
		100	0	22.56	22.63	22.38	1
	16QAM	1	0	22.72	22.73	22.34	1
		1	49	22.48	22.51	22.16	1
		1	99	22.54	22.61	22.29	1
		50	0	21.65	21.68	21.32	2
		50	24	21.49	21.58	21.26	2
		50	50	21.43	21.55	21.19	2
		100	0	21.64	21.64	21.31	2
	64QAM	1	0	21.62	21.88	21.36	2
		1	49	21.41	21.61	21.13	2
		1	99	21.41	21.67	21.26	2
		50	0	20.74	20.65	20.32	3
		50	24	20.64	20.68	20.26	3
		50	50	20.42	20.47	20.05	3
		100	0	20.73	20.59	20.37	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 047	132 322	132 597	
				1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	QPSK	1	0	23.50	23.47	23.16	0
		1	36	23.45	23.56	23.16	0
		1	74	23.31	23.38	23.02	0
		36	0	22.55	22.56	22.27	1
		36	18	22.44	22.56	22.27	1
		36	37	22.58	22.57	22.31	1
		75	0	22.51	22.61	22.34	1
	16QAM	1	0	22.67	22.68	22.68	1
		1	36	22.16	22.27	22.29	1
		1	74	22.33	22.42	22.37	1
		36	0	21.42	21.48	21.41	2
		36	18	21.45	21.43	21.38	2
		36	37	21.42	21.46	21.43	2
		75	0	21.40	21.52	21.53	2
	64QAM	1	0	21.64	21.75	21.73	2
		1	36	21.07	21.37	21.27	2
		1	74	21.30	21.52	21.46	2
		36	0	20.42	20.56	20.39	3
		36	18	20.37	20.44	20.32	3
		36	37	20.38	20.40	20.38	3
		75	0	20.38	20.50	20.44	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 022	132 322	132 622	
				1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	QPSK	1	0	23.43	23.49	23.10	0
		1	25	23.58	23.64	23.27	0
		1	49	23.16	23.27	23.01	0
		25	0	22.56	22.54	22.20	1
		25	12	22.63	22.60	22.32	1
		25	25	22.55	22.61	22.36	1
		50	0	22.70	22.70	22.37	1
	16QAM	1	0	22.53	22.60	22.52	1
		1	25	22.26	22.28	22.17	1
		1	49	22.39	22.43	22.46	1
		25	0	21.57	21.62	21.54	2
		25	12	21.36	21.36	21.34	2
		25	25	21.47	21.49	21.51	2
		50	0	21.36	21.48	21.41	2
	64QAM	1	0	21.50	21.65	21.65	2
		1	25	21.41	21.19	21.11	2
		1	49	21.40	21.48	21.53	2
		25	0	20.43	20.58	20.56	3
		25	12	20.41	20.25	20.31	3
		25	25	20.46	20.64	20.53	3
		50	0	20.28	20.47	20.45	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 997	132 322	132 647	
				1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	QPSK	1	0	23.29	23.38	23.00	0
		1	12	23.65	23.67	23.34	0
		1	24	23.18	23.30	22.90	0
		12	0	22.59	22.58	22.20	1
		12	7	22.54	22.58	22.19	1
		12	13	22.53	22.61	22.30	1
		25	0	22.55	22.63	22.27	1
	16QAM	1	0	22.47	22.59	22.56	1
		1	12	22.31	22.30	22.26	1
		1	24	22.44	22.54	22.55	1
		12	0	21.57	21.54	21.47	2
		12	7	21.32	21.42	21.31	2
		12	13	21.50	21.50	21.38	2
		25	0	21.38	21.41	21.33	2
	64QAM	1	0	21.56	21.50	21.54	2
		1	12	21.39	21.20	21.30	2
		1	24	21.36	21.64	21.63	2
		12	0	20.47	20.54	20.46	3
		12	7	20.28	20.51	20.27	3
		12	13	20.48	20.42	20.31	3
		25	0	20.28	20.35	20.42	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 987	132 322	132 657	
				1 711.5 MHz	1 745.0 MHz	1 778.5 MHz	
3 MHz	QPSK	1	0	23.29	23.41	23.14	0
		1	8	23.50	23.61	23.36	0
		1	14	23.28	23.29	22.97	0
		8	0	22.58	22.63	22.37	1
		8	4	22.50	22.51	22.26	1
		8	7	22.59	22.57	22.29	1
		15	0	22.55	22.62	22.33	1
	16QAM	1	0	22.45	22.49	22.46	1
		1	8	22.22	22.29	22.22	1
		1	14	22.51	22.56	22.57	1
		8	0	21.43	21.46	21.35	2
		8	4	21.45	21.45	21.44	2
		8	7	21.41	21.50	21.40	2
		15	0	21.36	21.41	21.39	2
	64QAM	1	0	21.38	21.49	21.47	2
		1	8	21.13	21.19	21.27	2
		1	14	21.52	21.71	21.50	2
		8	0	20.38	20.49	20.30	3
		8	4	20.54	20.54	20.54	3
		8	7	20.49	20.47	20.48	3
		15	0	20.22	20.33	20.45	3

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 979	132 322	132 665	
				1 710.7 MHz	1 745.0 MHz	1 779.3 MHz	
1.4 MHz	QPSK	1	0	23.47	23.52	23.26	0
		1	3	23.63	23.64	23.28	0
		1	5	23.17	23.29	22.91	0
		3	0	22.54	22.59	22.23	0
		3	1	22.52	22.54	22.29	0
		3	3	23.66	23.65	23.39	0
		6	0	22.48	22.56	22.17	1
	16QAM	1	0	22.68	22.67	22.63	1
		1	3	22.28	22.28	22.19	1
		1	5	22.49	22.51	22.48	1
		3	0	21.47	21.47	21.39	1
		3	1	21.53	21.52	21.44	1
		3	3	21.34	21.34	21.33	1
		6	0	21.48	21.47	21.50	2
	64QAM	1	0	21.70	21.76	21.71	2
		1	3	21.32	21.28	21.27	2
		1	5	21.53	21.41	21.52	2
		3	0	20.43	20.50	20.37	2
		3	1	20.59	20.45	20.43	2
		3	3	20.43	20.28	20.27	2
		6	0	20.40	20.43	20.50	3

10.6 LTE Reduced Average Conducted Output Power

10.6.1 LTE Band 2(Grip Sensor, Ear-jack)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 700	18 900	19 100	
				1 860.0 ㎒	1 880.0 ㎒	1 900.0 ㎒	
20 ㎒	QPSK	1	0	19.66	19.75	19.77	0
		1	49	19.78	19.95	19.91	0
		1	99	19.70	19.76	19.74	0
		50	0	19.68	19.87	19.88	0
		50	24	19.78	19.92	19.91	0
		50	50	19.77	19.83	19.84	0
		100	0	19.74	19.88	19.87	0
	16QAM	1	0	19.89	19.98	20.22	0
		1	49	20.02	20.14	20.28	0
		1	99	19.97	19.99	20.24	0
		50	0	19.69	19.87	19.89	0
		50	24	19.71	19.88	19.95	0
		50	50	19.78	19.81	19.89	0
		100	0	19.76	19.83	19.90	0
	64QAM	1	0	20.14	19.82	20.27	0
		1	49	19.82	20.19	20.36	0
		1	99	20.19	19.85	20.38	0
		50	0	19.90	20.07	19.79	0
		50	24	19.74	20.08	19.91	0
		50	50	19.79	20.09	19.83	0
		100	0	19.61	20.03	20.20	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 675	18 900	19 125	
				1 857.5 ㎒	1 880.0 ㎒	1 902.5 ㎒	
15 ㎒	QPSK	1	0	19.53	19.73	19.80	0
		1	36	19.59	19.88	19.88	0
		1	74	19.63	19.78	19.82	0
		36	0	19.69	19.82	19.90	0
		36	18	19.70	19.79	19.90	0
		36	37	19.76	19.76	19.82	0
		75	0	19.74	19.80	19.83	0
	16QAM	1	0	20.20	19.89	20.22	0
		1	36	20.22	19.98	20.28	0
		1	74	20.29	19.86	20.22	0
		36	0	19.71	19.83	19.88	0
		36	18	19.77	19.85	19.95	0
		36	37	19.78	19.86	19.89	0
		75	0	19.74	19.87	19.89	0
	64QAM	1	0	20.25	20.05	20.24	0
		1	36	20.14	20.25	20.39	0
		1	74	20.30	19.98	20.34	0
		36	0	19.57	20.05	20.04	0
		36	18	19.89	20.01	19.97	0
		36	37	19.51	19.99	19.82	0
		75	0	19.94	19.78	19.80	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 650	18 900	19 150	
				1 855.0 ㎒	1 880.0 ㎒	1 905.0 ㎒	
10 ㎒	QPSK	1	0	19.60	19.85	19.85	0
		1	25	19.58	19.88	19.93	0
		1	49	19.66	19.80	19.82	0
		25	0	19.73	19.79	19.98	0
		25	12	19.71	19.80	19.97	0
		25	25	19.72	19.82	19.86	0
		50	0	19.72	19.87	19.93	0
	16QAM	1	0	20.24	19.98	19.90	0
		1	25	20.27	20.00	19.98	0
		1	49	20.29	19.94	19.90	0
		25	0	19.81	19.94	20.01	0
		25	12	19.75	19.91	19.99	0
		25	25	19.78	19.91	19.95	0
		50	0	19.76	19.86	19.94	0
	64QAM	1	0	20.26	20.23	20.06	0
		1	25	20.18	19.73	19.96	0
		1	49	20.17	19.98	19.81	0
		25	0	19.77	19.70	19.87	0
		25	12	19.74	19.74	20.25	0
		25	25	19.72	19.69	20.05	0
		50	0	19.61	19.94	20.09	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 625	18 900	19 175	
				1 852.5 ㎒	1 880.0 ㎒	1 907.5 ㎒	
5 ㎒	QPSK	1	0	19.80	19.85	19.96	0
		1	12	19.82	19.90	19.96	0
		1	24	19.78	19.85	19.90	0
		12	0	19.69	19.85	19.99	0
		12	7	19.67	19.83	19.90	0
		12	13	19.70	19.76	19.84	0
		25	0	19.69	19.84	19.92	0
	16QAM	1	0	19.61	20.01	20.01	0
		1	12	19.69	20.14	19.98	0
		1	24	19.64	20.08	19.93	0
		12	0	19.69	19.87	19.99	0
		12	7	19.68	19.85	19.88	0
		12	13	19.70	19.84	19.83	0
		25	0	19.79	19.85	19.99	0
	64QAM	1	0	19.83	20.11	19.85	0
		1	12	19.40	20.24	19.69	0
		1	24	19.83	19.83	19.69	0
		12	0	19.81	19.71	20.09	0
		12	7	19.80	19.89	20.02	0
		12	13	19.40	20.07	19.54	0
		25	0	19.80	19.93	20.06	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 615	18 900	19 185	
				1 851.5 ㎒	1 880.0 ㎒	1 908.5 ㎒	
3 ㎒	QPSK	1	0	19.67	19.80	19.90	0
		1	8	19.64	19.82	19.91	0
		1	14	19.64	19.85	19.86	0
		8	0	19.71	19.84	19.88	0
		8	4	19.67	19.84	19.92	0
		8	7	19.69	19.80	19.87	0
		15	0	19.69	19.86	19.91	0
	16QAM	1	0	19.70	20.20	20.04	0
		1	8	19.69	20.23	20.04	0
		1	14	19.73	20.29	20.01	0
		8	0	19.76	20.01	19.91	0
		8	4	19.76	20.00	19.93	0
		8	7	19.72	20.00	19.89	0
		15	0	19.72	19.84	19.99	0
	64QAM	1	0	19.84	19.96	19.77	0
		1	8	19.78	20.22	20.10	0
		1	14	19.58	20.19	19.83	0
		8	0	19.95	20.23	19.94	0
		8	4	19.89	20.24	19.82	0
		8	7	19.88	20.25	19.93	0
		15	0	19.90	19.96	20.19	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 607	18 900	19 193	
				1 850.7 ㎒	1 880.0 ㎒	1 909.3 ㎒	
1.4 ㎒	QPSK	1	0	19.74	20.05	20.01	0
		1	3	19.79	20.03	19.99	0
		1	5	19.76	20.06	19.95	0
		3	0	19.84	19.97	20.01	0
		3	1	19.81	19.98	19.98	0
		3	3	19.86	19.97	19.95	0
		6	0	19.85	20.00	20.05	0
	16QAM	1	0	19.83	20.04	20.16	0
		1	3	19.91	20.04	20.18	0
		1	5	19.88	20.05	20.13	0
		3	0	19.90	20.14	20.05	0
		3	1	19.92	20.14	19.99	0
		3	3	19.92	20.16	20.01	0
		6	0	19.79	20.01	20.13	0
	64QAM	1	0	19.85	20.22	19.93	0
		1	3	20.06	20.13	20.16	0
		1	5	19.70	20.24	20.22	0
		3	0	19.99	20.22	20.10	0
		3	1	19.85	20.08	19.88	0
		3	3	19.85	20.26	19.73	0
		6	0	20.04	20.18	20.01	0

10.6.2 LTE Band 2(Hotspot)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 700	18 900	19 100	
				1 860.0 ㎒	1 880.0 ㎒	1 900.0 ㎒	
20 ㎒	QPSK	1	0	18.41	18.66	18.43	0
		1	49	18.71	**18.92**	18.65	0
		1	99	18.61	18.54	18.67	0
		50	0	18.53	18.79	18.60	0
		50	24	18.71	**18.90**	18.78	0
		50	50	18.48	18.65	18.50	0
		100	0	18.46	18.83	18.80	0
	16QAM	1	0	18.70	18.94	18.90	0
		1	49	18.92	19.09	19.06	0
		1	99	18.63	18.89	19.17	0
		50	0	18.42	18.84	18.87	0
		50	24	18.64	18.76	18.78	0
		50	50	18.54	18.44	18.69	0
		100	0	18.46	18.58	18.77	0
	64QAM	1	0	18.53	18.88	19.08	0
		1	49	18.41	18.53	19.01	0
		1	99	19.00	18.94	18.87	0
		50	0	18.58	18.57	18.65	0
		50	24	18.13	18.75	18.97	0
		50	50	18.53	18.32	18.83	0
		100	0	18.99	18.51	18.36	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 675	18 900	19 125	
				1 857.5 ㎒	1 880.0 ㎒	1 902.5 ㎒	
15 ㎒	QPSK	1	0	18.48	18.52	18.74	0
		1	36	18.20	18.68	18.57	0
		1	74	18.62	18.65	18.80	0
		36	0	18.30	18.63	18.67	0
		36	18	18.48	18.63	18.82	0
		36	37	18.43	18.60	18.68	0
		75	0	18.34	18.71	18.83	0
	16QAM	1	0	19.05	18.87	19.10	0
		1	36	19.02	18.84	19.07	0
		1	74	19.09	18.67	19.17	0
		36	0	18.69	18.53	18.77	0
		36	18	18.50	18.67	18.64	0
		36	37	18.45	18.84	18.57	0
		75	0	18.74	18.61	18.83	0
	64QAM	1	0	19.11	18.48	19.12	0
		1	36	19.10	19.00	19.03	0
		1	74	18.75	18.27	18.73	0
		36	0	18.38	18.48	18.86	0
		36	18	18.42	18.48	19.13	0
		36	37	18.51	18.66	18.46	0
		75	0	18.27	18.69	18.46	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 650	18 900	19 150	
				1 855.0 ㎒	1 880.0 ㎒	1 905.0 ㎒	
10 ㎒	QPSK	1	0	18.60	18.78	18.52	0
		1	25	18.56	18.52	18.70	0
		1	49	18.36	18.78	18.81	0
		25	0	18.48	18.41	18.91	0
		25	12	18.65	18.47	18.80	0
		25	25	18.65	18.77	18.61	0
		50	0	18.46	18.67	18.59	0
	16QAM	1	0	18.87	18.78	18.87	0
		1	25	18.92	18.98	18.66	0
		1	49	19.26	18.72	18.65	0
		25	0	18.41	18.69	18.89	0
		25	12	18.56	18.91	18.66	0
		25	25	18.69	18.63	18.86	0
		50	0	18.74	18.54	18.82	0
	64QAM	1	0	18.95	18.87	18.37	0
		1	25	18.87	18.70	18.69	0
		1	49	19.14	18.71	18.91	0
		25	0	18.46	18.64	18.38	0
		25	12	18.84	18.60	18.76	0
		25	25	18.87	19.09	18.70	0
		50	0	18.50	18.36	18.98	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 625	18 900	19 175	
				1 852.5 ㎒	1 880.0 ㎒	1 907.5 ㎒	
5 ㎒	QPSK	1	0	18.69	18.62	18.92	0
		1	12	18.65	18.79	18.94	0
		1	24	18.69	18.78	18.51	0
		12	0	18.55	18.56	18.80	0
		12	7	18.37	18.56	18.79	0
		12	13	18.48	18.68	18.84	0
		25	0	18.62	18.49	18.58	0
	16QAM	1	0	18.30	18.92	18.86	0
		1	12	18.35	18.94	18.92	0
		1	24	18.52	18.76	18.76	0
		12	0	18.34	18.52	18.84	0
		12	7	18.60	18.71	18.67	0
		12	13	18.33	18.54	18.71	0
		25	0	18.79	18.49	18.60	0
	64QAM	1	0	18.67	18.98	18.86	0
		1	12	18.86	18.63	18.56	0
		1	24	18.48	18.74	18.70	0
		12	0	18.64	18.73	18.78	0
		12	7	18.68	18.27	18.85	0
		12	13	18.25	19.05	18.97	0
		25	0	18.85	18.57	18.62	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 615	18 900	19 185	
				1 851.5 ㎒	1 880.0 ㎒	1 908.5 ㎒	
3 ㎒	QPSK	1	0	18.63	18.62	18.82	0
		1	8	18.30	18.58	18.62	0
		1	14	18.43	18.71	18.80	0
		8	0	18.66	18.81	18.74	0
		8	4	18.30	18.56	18.84	0
		8	7	18.42	18.55	18.65	0
		15	0	18.33	18.62	18.82	0
	16QAM	1	0	18.68	18.83	18.73	0
		1	8	18.48	19.14	18.80	0
		1	14	18.40	18.98	18.98	0
		8	0	18.40	18.90	18.83	0
		8	4	18.74	18.80	18.64	0
		8	7	18.68	18.61	18.66	0
		15	0	18.48	18.73	18.78	0
	64QAM	1	0	18.47	19.26	18.96	0
		1	8	18.81	18.93	18.95	0
		1	14	18.42	19.28	18.88	0
		8	0	18.47	18.87	18.67	0
		8	4	18.51	18.72	19.00	0
		8	7	18.52	18.91	18.39	0
		15	0	18.62	18.57	18.80	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 607	18 900	19 193	
				1 850.7 ㎒	1 880.0 ㎒	1 909.3 ㎒	
1.4 ㎒	QPSK	1	0	18.38	18.67	18.74	0
		1	3	18.63	18.78	18.65	0
		1	5	18.50	18.92	18.75	0
		3	0	18.58	18.63	18.61	0
		3	1	18.65	18.81	18.89	0
		3	3	18.73	18.79	18.57	0
		6	0	18.61	18.69	18.74	0
	16QAM	1	0	18.65	18.72	19.14	0
		1	3	18.63	18.85	18.98	0
		1	5	18.49	18.66	18.92	0
		3	0	18.80	19.01	19.02	0
		3	1	18.84	18.82	18.62	0
		3	3	18.71	19.12	18.86	0
		6	0	18.40	18.81	18.80	0
	64QAM	1	0	18.91	18.59	18.85	0
		1	3	18.75	18.43	19.06	0
		1	5	18.87	18.57	18.82	0
		3	0	18.85	19.07	18.64	0
		3	1	18.27	19.01	18.80	0
		3	3	18.47	18.90	18.53	0
		6	0	19.04	18.79	19.00	0

10.6.3 LTE Band 2(Sub2 Ant.) (Grip Sensor, Hotspot, Ear-jack)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 700	18 900	19 100	
				1 860.0 ㎒	1 880.0 ㎒	1 900.0 ㎒	
20 ㎒	QPSK	1	0	20.51	20.71	20.71	0
		1	49	20.64	**20.85**	20.84	0
		1	99	20.48	20.74	20.78	0
		50	0	20.62	20.75	20.77	0
		50	24	20.60	**20.84**	20.81	0
		50	50	20.67	20.81	20.79	0
		100	0	20.52	20.75	20.70	0
	16QAM	1	0	20.52	20.65	20.70	0
		1	49	20.58	20.80	20.77	0
		1	99	20.55	20.76	20.79	0
		50	0	20.58	20.73	20.72	0
		50	24	20.63	20.81	20.78	0
		50	50	20.68	20.84	20.85	0
		100	0	20.53	20.72	20.71	0
	64QAM	1	0	20.63	20.61	20.62	0
		1	49	20.68	20.76	20.70	0
		1	99	20.64	20.65	20.67	0
		50	0	20.60	20.67	20.62	0
		50	24	20.67	20.76	20.67	0
		50	50	20.75	20.76	20.82	0
		100	0	20.60	20.65	20.64	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 675	18 900	19 125	
				1 857.5 ㎒	1 880.0 ㎒	1 902.5 ㎒	
15 ㎒	QPSK	1	0	20.40	20.64	20.56	0
		1	36	20.55	20.76	20.73	0
		1	74	20.44	20.60	20.59	0
		36	0	20.39	20.58	20.52	0
		36	18	20.52	20.74	20.73	0
		36	37	20.38	20.65	20.70	0
		75	0	20.64	20.79	20.76	0
	16QAM	1	0	20.25	20.52	20.38	0
		1	36	20.49	20.68	20.52	0
		1	74	20.56	20.70	20.57	0
		36	0	20.32	20.59	20.37	0
		36	18	20.35	20.57	20.32	0
		36	37	20.44	20.72	20.50	0
		75	0	20.25	20.52	20.33	0
	64QAM	1	0	20.23	20.62	20.35	0
		1	36	20.49	20.75	20.55	0
		1	74	20.50	20.81	20.60	0
		36	0	20.36	20.66	20.38	0
		36	18	20.30	20.59	20.28	0
		36	37	20.44	20.80	20.49	0
		75	0	20.26	20.59	20.26	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 650	18 900	19 150	
				1 855.0 ㎒	1 880.0 ㎒	1 905.0 ㎒	
10 ㎒	QPSK	1	0	20.41	20.65	20.72	0
		1	25	20.66	20.81	20.83	0
		1	49	20.45	20.61	20.60	0
		25	0	20.43	20.63	20.62	0
		25	12	20.54	20.77	20.79	0
		25	25	20.54	20.68	20.75	0
		50	0	20.65	20.83	20.75	0
	16QAM	1	0	20.38	20.52	20.35	0
		1	25	20.57	20.73	20.50	0
		1	49	20.44	20.57	20.29	0
		25	0	20.35	20.56	20.35	0
		25	12	20.52	20.75	20.55	0
		25	25	20.58	20.74	20.58	0
		50	0	20.41	20.61	20.48	0
	64QAM	1	0	20.42	20.44	20.32	0
		1	25	20.65	20.63	20.49	0
		1	49	20.48	20.48	20.28	0
		25	0	20.39	20.50	20.35	0
		25	12	20.63	20.61	20.51	0
		25	25	20.69	20.65	20.61	0
		50	0	20.53	20.50	20.47	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 625	18 900	19 175	
				1 852.5 ㎒	1 880.0 ㎒	1 907.5 ㎒	
5 ㎒	QPSK	1	0	20.43	20.66	20.64	0
		1	12	20.54	20.76	20.83	0
		1	24	20.52	20.66	20.59	0
		12	0	20.33	20.58	20.64	0
		12	7	20.57	20.75	20.82	0
		12	13	20.42	20.61	20.59	0
		25	0	20.56	20.72	20.68	0
	16QAM	1	0	20.29	20.47	20.33	0
		1	12	20.50	20.65	20.43	0
		1	24	20.38	20.63	20.36	0
		12	0	20.42	20.58	20.33	0
		12	7	20.48	20.65	20.52	0
		12	13	20.47	20.62	20.45	0
		25	0	20.34	20.59	20.33	0
	64QAM	1	0	20.40	20.52	20.25	0
		1	12	20.55	20.72	20.33	0
		1	24	20.50	20.65	20.28	0
		12	0	20.52	20.62	20.20	0
		12	7	20.55	20.66	20.49	0
		12	13	20.54	20.71	20.37	0
		25	0	20.46	20.68	20.30	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 615	18 900	19 185	
				1 851.5 ㎒	1 880.0 ㎒	1 908.5 ㎒	
3 ㎒	QPSK	1	0	20.31	20.52	20.56	0
		1	8	20.57	20.81	20.87	0
		1	14	20.30	20.55	20.58	0
		8	0	20.28	20.56	20.55	0
		8	4	20.56	20.69	20.70	0
		8	7	20.49	20.63	20.62	0
		15	0	20.44	20.70	20.67	0
	16QAM	1	0	20.24	20.48	20.20	0
		1	8	20.60	20.73	20.51	0
		1	14	20.51	20.69	20.49	0
		8	0	20.29	20.55	20.38	0
		8	4	20.42	20.64	20.49	0
		8	7	20.47	20.71	20.46	0
		15	0	20.22	20.49	20.25	0
	64QAM	1	0	20.29	20.34	20.26	0
		1	8	20.67	20.65	20.56	0
		1	14	20.63	20.56	20.52	0
		8	0	20.42	20.48	20.35	0
		8	4	20.50	20.53	20.47	0
		8	7	20.62	20.65	20.44	0
		15	0	20.32	20.45	20.25	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				18 607	18 900	19 193	
				1 850.7 ㎒	1 880.0 ㎒	1 909.3 ㎒	
1.4 ㎒	QPSK	1	0	20.41	20.63	20.60	0
		1	3	20.58	20.73	20.72	0
		1	5	20.50	20.65	20.61	0
		3	0	20.47	20.66	20.72	0
		3	1	20.57	20.76	20.75	0
		3	3	20.52	20.73	20.72	0
		6	0	20.53	20.81	20.83	0
	16QAM	1	0	20.37	20.50	20.35	0
		1	3	20.50	20.73	20.50	0
		1	5	20.57	20.71	20.47	0
		3	0	20.29	20.49	20.32	0
		3	1	20.56	20.76	20.49	0
		3	3	20.37	20.64	20.40	0
		6	0	20.32	20.53	20.29	0
	64QAM	1	0	20.33	20.48	20.27	0
		1	3	20.44	20.77	20.49	0
		1	5	20.57	20.75	20.44	0
		3	0	20.23	20.47	20.26	0
		3	1	20.51	20.80	20.40	0
		3	3	20.31	20.64	20.38	0
		6	0	20.24	20.53	20.30	0

10.6.4 LTE Band 4(Grip Sensor, Ear-jack)

Band width	Modulation	RB Size	RB offset	Maximum Average Power	MPR
				20 175	
				1732.5 ㎒	
20 ㎒	QPSK	1	0	20.38	0
		1	49	20.55	0
		1	99	20.20	0
		50	0	20.56	0
		50	24	20.38	0
		50	50	20.38	0
		100	0	20.59	0
	16QAM	1	0	20.53	0
		1	49	20.54	0
		1	99	20.39	0
		50	0	20.39	0
		50	24	20.39	0
		50	50	20.34	0
		100	0	20.42	0
	64QAM	1	0	20.65	0
		1	49	20.61	0
		1	99	20.49	0
		50	0	20.43	0
		50	24	20.49	0
		50	50	20.48	0
		100	0	20.53	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 025	20 175	20 325	
				1717.5 ㎒	1732.5 ㎒	1747.5 ㎒	
15 ㎒	QPSK	1	0	20.31	20.43	20.24	0
		1	36	20.46	20.47	20.25	0
		1	74	20.31	20.25	20.06	0
		36	0	20.53	20.39	20.20	0
		36	18	20.52	20.35	20.19	0
		36	37	20.43	20.34	20.14	0
		75	0	20.48	20.35	20.22	0
	16QAM	1	0	20.58	20.57	20.59	0
		1	36	20.57	20.56	20.56	0
		1	74	20.47	20.35	20.54	0
		36	0	20.54	20.44	20.21	0
		36	18	20.57	20.37	20.21	0
		36	37	20.49	20.39	20.18	0
		75	0	20.50	20.40	20.25	0
	64QAM	1	0	20.51	20.49	20.51	0
		1	36	20.55	20.41	20.43	0
		1	74	20.44	20.20	20.46	0
		36	0	20.48	20.30	20.12	0
		36	18	20.49	20.22	20.12	0
		36	37	20.39	20.34	20.14	0
		75	0	20.42	20.35	20.12	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 000	20 175	20 350	
				1715.0 MHz	1732.5 MHz	1750.0 MHz	
10 MHz	QPSK	1	0	20.47	20.44	20.23	0
		1	25	20.53	20.42	20.21	0
		1	49	20.42	20.34	20.09	0
		25	0	20.55	20.39	20.26	0
		25	12	20.52	20.42	20.24	0
		25	25	20.52	20.36	20.17	0
		50	0	20.56	20.42	20.24	0
	16QAM	1	0	20.59	20.55	20.27	0
		1	25	20.50	20.53	20.27	0
		1	49	20.54	20.43	20.15	0
		25	0	20.63	20.50	20.29	0
		25	12	20.60	20.50	20.28	0
		25	25	20.53	20.49	20.24	0
		50	0	20.58	20.45	20.28	0
	64QAM	1	0	20.56	20.63	20.31	0
		1	25	20.47	20.60	20.30	0
		1	49	20.46	20.48	20.16	0
		25	0	20.56	20.57	20.27	0
		25	12	20.59	20.55	20.26	0
		25	25	20.44	20.53	20.18	0
		50	0	20.57	20.48	20.31	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 975	20 175	20 375	
				1712.5 MHz	1732.5 MHz	1752.5 MHz	
5 MHz	QPSK	1	0	20.17	20.45	20.32	0
		1	12	20.67	20.44	20.27	0
		1	24	20.63	20.35	20.25	0
		12	0	20.58	20.41	20.28	0
		12	7	20.54	20.36	20.17	0
		12	13	20.53	20.35	20.11	0
		25	0	20.54	20.35	20.21	0
	16QAM	1	0	20.42	20.54	20.33	0
		1	12	20.46	20.53	20.29	0
		1	24	20.44	20.46	20.26	0
		12	0	20.56	20.43	20.22	0
		12	7	20.55	20.43	20.14	0
		12	13	20.50	20.37	20.10	0
		25	0	20.60	20.32	20.28	0
	64QAM	1	0	20.52	20.43	20.30	0
		1	12	20.56	20.49	20.33	0
		1	24	20.54	20.38	20.27	0
		12	0	20.68	20.38	20.27	0
		12	7	20.63	20.34	20.14	0
		12	13	20.53	20.30	20.12	0
		25	0	20.69	20.25	20.31	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 965	20 175	20 385	
				1711.5 ㎒	1732.5 ㎒	1753.5 ㎒	
3 ㎒	QPSK	1	0	20.49	20.29	20.22	0
		1	8	20.41	20.34	20.16	0
		1	14	20.44	20.37	20.18	0
		8	0	20.46	20.34	20.14	0
		8	4	20.46	20.37	20.13	0
		8	7	20.51	20.32	20.13	0
		15	0	20.51	20.32	20.13	0
	16QAM	1	0	20.49	20.57	20.34	0
		1	8	20.48	20.54	20.30	0
		1	14	20.50	20.54	20.26	0
		8	0	20.56	20.55	20.20	0
		8	4	20.57	20.53	20.17	0
		8	7	20.58	20.54	20.14	0
		15	0	20.56	20.36	20.19	0
	64QAM	1	0	20.38	20.63	20.31	0
		1	8	20.37	20.58	20.30	0
		1	14	20.44	20.60	20.27	0
		8	0	20.44	20.59	20.15	0
		8	4	20.46	20.60	20.14	0
		8	7	20.56	20.58	20.14	0
		15	0	20.46	20.42	20.16	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 957	20 175	20 393	
				1710.7 ㎒	1732.5 ㎒	1754.3 ㎒	
1.4 ㎒	QPSK	1	0	20.55	20.65	20.36	0
		1	3	20.69	20.58	20.31	0
		1	5	20.68	20.64	20.36	0
		3	0	20.70	20.53	20.34	0
		3	1	20.72	20.51	20.32	0
		3	3	20.71	20.51	20.31	0
		6	0	20.57	20.55	20.37	0
	16QAM	1	0	20.54	20.57	20.48	0
		1	3	20.56	20.60	20.52	0
		1	5	20.55	20.52	20.47	0
		3	0	20.57	20.55	20.34	0
		3	1	20.51	20.53	20.36	0
		3	3	20.51	20.58	20.34	0
		6	0	20.61	20.57	20.41	0
	64QAM	1	0	20.47	20.68	20.39	0
		1	3	20.54	20.69	20.47	0
		1	5	20.50	20.64	20.39	0
		3	0	20.54	20.65	20.28	0
		3	1	20.50	20.60	20.25	0
		3	3	20.50	20.68	20.28	0
		6	0	20.61	20.66	20.36	0

10.6.5 LTE Band 4(Hotspot)

Band width	Modulation	RB Size	RB offset	Maximum Average Power	MPR
				20 175	
				1732.5 ㎒	
20 ㎒	QPSK	1	0	18.46	0
		1	49	18.83	0
		1	99	18.57	0
		50	0	18.70	0
		50	24	18.74	0
		50	50	18.42	0
		100	0	18.72	0
	16QAM	1	0	18.76	0
		1	49	18.82	0
		1	99	18.65	0
		50	0	18.78	0
		50	24	18.67	0
		50	50	18.43	0
		100	0	18.67	0
	64QAM	1	0	18.67	0
		1	49	18.72	0
		1	99	18.79	0
		50	0	18.55	0
		50	24	18.82	0
		50	50	18.50	0
		100	0	18.66	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 025	20 175	20 325	
				1717.5 ㎒	1732.5 ㎒	1747.5 ㎒	
15 ㎒	QPSK	1	0	18.65	18.44	18.54	0
		1	36	18.60	18.59	18.50	0
		1	74	18.49	18.36	18.14	0
		36	0	18.53	18.61	18.26	0
		36	18	18.69	18.60	18.55	0
		36	37	18.49	18.41	18.51	0
		75	0	18.51	18.37	18.46	0
	16QAM	1	0	18.84	18.74	18.78	0
		1	36	18.97	18.78	18.59	0
		1	74	18.80	18.63	18.71	0
		36	0	18.61	18.56	18.53	0
		36	18	18.69	18.76	18.36	0
		36	37	18.82	18.48	18.18	0
		75	0	18.54	18.72	18.44	0
	64QAM	1	0	18.85	18.75	18.78	0
		1	36	18.74	18.72	18.80	0
		1	74	18.55	18.47	18.51	0
		36	0	18.83	18.34	18.52	0
		36	18	18.69	18.28	18.29	0
		36	37	18.46	18.70	18.14	0
		75	0	18.52	18.68	18.45	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				20 000	20 175	20 350	
				1715.0 MHz	1732.5 MHz	1750.0 MHz	
10 MHz	QPSK	1	0	18.86	18.69	18.62	0
		1	25	18.55	18.44	18.45	0
		1	49	18.70	18.55	18.28	0
		25	0	18.58	18.69	18.66	0
		25	12	18.71	18.52	18.40	0
		25	25	18.72	18.41	18.46	0
		50	0	18.74	18.73	18.36	0
	16QAM	1	0	18.69	18.70	18.59	0
		1	25	18.54	18.62	18.62	0
		1	49	18.64	18.68	18.36	0
		25	0	19.03	18.83	18.68	0
		25	12	18.87	18.60	18.58	0
		25	25	18.56	18.49	18.61	0
		50	0	18.61	18.84	18.41	0
	64QAM	1	0	18.82	18.93	18.51	0
		1	25	18.69	18.98	18.38	0
		1	49	18.79	18.84	18.43	0
		25	0	18.63	18.91	18.65	0
		25	12	18.86	18.79	18.46	0
		25	25	18.52	18.73	18.25	0
		50	0	18.70	18.74	18.50	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 975	20 175	20 375	
				1712.5 MHz	1732.5 MHz	1752.5 MHz	
5 MHz	QPSK	1	0	18.39	18.61	18.63	0
		1	12	18.87	18.46	18.34	0
		1	24	18.99	18.61	18.40	0
		12	0	18.76	18.77	18.32	0
		12	7	18.82	18.57	18.33	0
		12	13	18.72	18.40	18.35	0
		25	0	18.94	18.40	18.45	0
	16QAM	1	0	18.62	18.70	18.68	0
		1	12	18.61	18.86	18.32	0
		1	24	18.84	18.46	18.30	0
		12	0	18.95	18.67	18.60	0
		12	7	18.67	18.58	18.28	0
		12	13	18.80	18.65	18.18	0
		25	0	18.88	18.49	18.65	0
	64QAM	1	0	18.73	18.65	18.33	0
		1	12	18.72	18.60	18.43	0
		1	24	18.86	18.49	18.57	0
		12	0	18.75	18.66	18.35	0
		12	7	18.83	18.48	18.54	0
		12	13	18.56	18.47	18.42	0
		25	0	18.79	18.39	18.41	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 965	20 175	20 385	
				1711.5 ㎒	1732.5 ㎒	1753.5 ㎒	
3 ㎒	QPSK	1	0	18.50	18.42	18.45	0
		1	8	18.59	18.57	18.36	0
		1	14	18.56	18.72	18.26	0
		8	0	18.82	18.74	18.42	0
		8	4	18.59	18.49	18.21	0
		8	7	18.85	18.62	18.35	0
		15	0	18.69	18.36	18.35	0
	16QAM	1	0	18.77	18.95	18.70	0
		1	8	18.51	18.67	18.69	0
		1	14	18.90	18.73	18.27	0
		8	0	18.82	18.69	18.27	0
		8	4	18.71	18.55	18.26	0
		8	7	18.94	18.91	18.53	0
		15	0	18.84	18.65	18.43	0
	64QAM	1	0	18.66	18.68	18.34	0
		1	8	18.76	18.81	18.32	0
		1	14	18.44	18.95	18.61	0
		8	0	18.55	18.85	18.33	0
		8	4	18.64	18.81	18.30	0
		8	7	18.64	18.60	18.34	0
		15	0	18.63	18.75	18.47	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				19 957	20 175	20 393	
				1710.7 ㎒	1732.5 ㎒	1754.3 ㎒	
1.4 ㎒	QPSK	1	0	18.77	19.01	18.63	0
		1	3	18.94	18.83	18.32	0
		1	5	18.69	18.75	18.62	0
		3	0	18.74	18.57	18.49	0
		3	1	18.79	18.53	18.47	0
		3	3	18.88	18.87	18.35	0
		6	0	18.77	18.80	18.66	0
	16QAM	1	0	18.64	18.66	18.59	0
		1	3	18.82	18.95	18.56	0
		1	5	18.87	18.66	18.76	0
		3	0	18.74	18.80	18.59	0
		3	1	18.69	18.78	18.74	0
		3	3	18.56	18.83	18.62	0
		6	0	18.71	18.60	18.74	0
	64QAM	1	0	18.83	19.05	18.73	0
		1	3	18.88	19.00	18.70	0
		1	5	18.89	18.92	18.53	0
		3	0	18.75	19.03	18.53	0
		3	1	18.57	18.62	18.25	0
		3	3	18.79	18.73	18.60	0
		6	0	18.66	18.95	18.42	0

10.6.6 LTE Band 41(Grip Sensor, Hotspot, Ear-jack)

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
20 MHz	QPSK	1	0	19.15	19.07	19.02	19.14	**19.17**	0
		1	49	19.16	19.13	19.06	19.04	19.13	0
		1	99	19.16	19.12	19.14	19.14	19.02	0
		50	0	19.03	18.97	18.87	19.03	**19.18**	0
		50	24	19.10	18.97	18.90	19.07	19.16	0
		50	50	19.11	18.89	18.89	19.04	19.12	0
		100	0	19.06	18.93	18.84	19.03	19.12	0
	16QAM	1	0	19.07	18.64	18.57	18.93	18.77	0
		1	49	19.10	18.71	18.57	19.02	18.93	0
		1	99	19.01	18.55	18.51	18.94	18.80	0
		50	0	18.93	18.94	18.92	18.83	18.92	0
		50	24	18.82	18.91	18.96	18.84	18.82	0
		50	50	18.82	18.89	18.92	18.91	18.95	0
		100	0	18.92	18.91	18.90	18.94	18.88	0
	64QAM	1	0	18.99	18.52	18.60	18.94	18.77	0
		1	49	19.04	18.65	18.57	19.02	18.94	0
		1	99	18.99	18.56	18.51	18.87	18.82	0
		50	0	18.88	18.83	18.94	18.84	18.92	0
		50	24	18.84	18.85	18.99	18.81	18.77	0
		50	50	18.76	18.82	18.98	18.84	18.96	0
		100	0	18.86	18.81	18.92	18.86	18.86	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
15 MHz	QPSK	1	0	19.14	19.16	19.04	19.02	19.09	0
		1	36	19.11	19.15	19.11	19.04	19.11	0
		1	74	19.02	19.10	19.18	19.05	19.03	0
		36	0	19.07	18.94	18.80	18.98	19.12	0
		36	18	19.08	18.89	18.86	19.02	19.11	0
		36	37	19.08	18.88	18.85	19.03	19.07	0
		75	0	19.08	18.90	18.87	19.05	19.12	0
	16QAM	1	0	19.27	18.88	18.64	19.13	19.02	0
		1	36	19.29	18.93	18.76	19.21	19.11	0
		1	74	19.19	18.82	18.58	19.16	19.00	0
		36	0	18.96	18.98	18.87	18.98	18.96	0
		36	18	18.96	18.91	18.85	18.97	18.93	0
		36	37	18.91	18.91	18.88	18.88	18.93	0
		75	0	18.90	18.91	18.87	18.91	18.93	0
	64QAM	1	0	19.34	19.02	18.71	19.23	19.02	0
		1	36	19.39	19.02	18.81	19.32	19.10	0
		1	74	19.24	18.95	18.65	19.25	18.97	0
		36	0	19.03	19.07	18.89	19.01	18.94	0
		36	18	19.06	19.02	18.89	19.02	18.91	0
		36	37	18.96	18.96	18.99	18.91	18.95	0
		75	0	18.94	19.03	18.93	18.94	18.94	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
10 MHz	QPSK	1	0	19.15	19.19	19.05	19.07	19.15	0
		1	25	19.15	19.17	19.04	19.08	19.17	0
		1	49	19.10	19.13	19.18	19.05	19.10	0
		25	0	19.06	18.95	18.90	19.01	19.18	0
		25	12	19.07	18.93	18.89	19.02	19.14	0
		25	25	19.12	18.91	18.89	19.04	19.14	0
		50	0	19.10	18.98	18.90	19.07	19.16	0
	16QAM	1	0	19.29	18.90	18.63	19.21	19.09	0
		1	25	19.27	18.89	18.65	19.24	19.07	0
		1	49	19.28	18.88	18.56	19.21	19.07	0
		25	0	18.88	18.94	18.92	18.88	18.93	0
		25	12	18.99	18.91	18.91	18.85	18.90	0
		25	25	18.94	18.89	18.90	18.87	18.88	0
		50	0	18.91	18.95	18.91	18.84	18.95	0
	64QAM	1	0	19.21	18.98	18.54	19.26	19.07	0
		1	25	19.19	19.04	18.60	19.27	18.98	0
		1	49	19.28	18.95	18.57	19.34	19.00	0
		25	0	18.88	19.09	18.82	18.97	18.89	0
		25	12	18.98	19.00	18.86	18.96	18.88	0
		25	25	18.86	19.02	18.83	19.00	18.81	0
		50	0	18.81	19.06	18.82	18.97	18.90	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power					MPR
				39 750	40 185	40 620	41 055	41 490	
				2 506.0 MHz	2 549.5 MHz	2 593.0 MHz	2 636.5 MHz	2 680.0 MHz	
5 MHz	QPSK	1	0	19.20	19.11	19.08	19.11	19.18	0
		1	12	19.21	19.11	19.07	19.14	19.16	0
		1	24	19.18	19.10	19.06	19.06	19.13	0
		12	0	19.07	18.95	18.85	19.04	19.17	0
		12	7	19.05	18.91	18.83	19.00	19.15	0
		12	13	19.05	18.91	18.80	18.97	19.11	0
		25	0	19.09	18.93	18.86	19.04	19.17	0
	16QAM	1	0	19.45	19.00	19.03	19.37	19.17	0
		1	12	19.46	19.01	19.03	19.38	19.18	0
		1	24	19.47	18.96	19.00	19.33	19.18	0
		12	0	18.85	18.89	18.93	18.99	18.92	0
		12	7	18.83	18.88	18.89	18.97	18.90	0
		12	13	18.84	18.85	18.90	18.94	18.88	0
		25	0	18.93	18.92	18.85	18.87	18.95	0
	64QAM	1	0	19.39	18.96	18.97	19.40	19.12	0
		1	12	19.41	19.02	18.91	19.42	19.17	0
		1	24	19.38	18.91	18.90	19.31	19.08	0
		12	0	18.80	18.92	18.80	19.05	18.84	0
		12	7	18.72	18.89	18.75	19.01	18.81	0
		12	13	18.77	18.88	18.82	18.95	18.81	0
		25	0	18.80	18.90	18.72	18.91	18.87	0

10.6.7 LTE Band 66(Grip Sensor, Ear-jack)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 072	132 322	132 572	
				1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	QPSK	1	0	20.45	20.29	20.08	0
		1	49	20.48	20.52	20.13	0
		1	99	20.48	20.26	20.01	0
		50	0	20.13	20.13	20.01	0
		50	24	20.10	20.14	20.05	0
		50	50	20.09	20.08	20.06	0
		100	0	20.09	20.10	20.05	0
	16QAM	1	0	20.75	20.49	20.66	0
		1	49	20.84	20.57	20.72	0
		1	99	20.58	20.33	20.42	0
		50	0	20.64	20.27	20.17	0
		50	24	20.55	20.34	20.16	0
		50	50	20.48	20.19	20.10	0
		100	0	20.55	20.22	20.14	0
	64QAM	1	0	20.71	20.38	20.80	0
		1	49	20.59	20.60	20.66	0
		1	99	20.57	20.19	20.33	0
		50	0	20.64	20.49	20.43	0
		50	24	20.58	20.16	20.03	0
		50	50	20.29	20.40	20.24	0
		100	0	20.42	20.14	20.13	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 047	132 322	132 597	
				1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	QPSK	1	0	20.40	20.33	20.19	0
		1	36	20.49	20.31	20.17	0
		1	74	20.50	20.33	20.09	0
		36	0	20.10	20.13	20.01	0
		36	18	20.10	20.11	20.04	0
		36	37	20.13	20.04	20.08	0
		75	0	20.09	20.11	20.01	0
	16QAM	1	0	20.97	20.41	20.59	0
		1	36	20.91	20.45	20.55	0
		1	74	21.00	20.30	20.39	0
		36	0	20.55	20.32	20.14	0
		36	18	20.56	20.30	20.10	0
		36	37	20.51	20.28	20.07	0
		75	0	20.56	20.31	20.10	0
	64QAM	1	0	20.59	20.71	20.36	0
		1	36	20.68	20.21	20.28	0
		1	74	20.64	20.49	20.61	0
		36	0	20.78	20.46	20.18	0
		36	18	20.66	20.00	20.04	0
		36	37	20.39	20.46	20.30	0
		75	0	20.40	20.52	20.03	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 022	132 322	132 622	
				1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	QPSK	1	0	20.46	20.33	20.09	0
		1	25	20.53	20.30	20.07	0
		1	49	20.45	20.29	20.10	0
		25	0	20.12	20.11	20.11	0
		25	12	20.13	20.11	20.10	0
		25	25	20.12	20.13	20.08	0
		50	0	20.14	20.14	20.09	0
	16QAM	1	0	20.94	20.44	20.13	0
		1	25	20.94	20.45	20.14	0
		1	49	20.93	20.42	20.03	0
		25	0	20.66	20.35	20.19	0
		25	12	20.65	20.42	20.18	0
		25	25	20.60	20.38	20.15	0
		50	0	20.56	20.32	20.15	0
	64QAM	1	0	20.72	20.51	20.16	0
		1	25	20.72	20.33	20.06	0
		1	49	20.87	20.18	20.07	0
		25	0	20.48	20.45	20.19	0
		25	12	20.89	20.71	20.46	0
		25	25	20.55	20.68	20.10	0
		50	0	20.64	20.43	20.41	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 997	132 322	132 647	
				1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	QPSK	1	0	20.64	20.33	20.21	0
		1	12	20.63	20.34	20.15	0
		1	24	20.66	20.29	20.09	0
		12	0	20.13	20.08	20.08	0
		12	7	20.12	20.12	20.08	0
		12	13	20.13	20.03	20.01	0
		25	0	20.11	20.11	20.06	0
	16QAM	1	0	20.42	20.61	20.21	0
		1	12	20.44	20.61	20.12	0
		1	24	20.46	20.58	20.11	0
		12	0	20.57	20.33	20.06	0
		12	7	20.56	20.30	20.01	0
		12	13	20.54	20.28	20.00	0
		25	0	20.55	20.27	20.10	0
	64QAM	1	0	20.30	20.46	20.32	0
		1	12	20.27	20.86	20.06	0
		1	24	20.61	20.84	20.30	0
		12	0	20.59	20.63	20.34	0
		12	7	20.41	20.09	20.12	0
		12	13	20.77	20.08	20.17	0
		25	0	20.25	20.26	20.05	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 987	132 322	132 657	
				1 711.5 MHz	1 745.0 MHz	1 778.5 MHz	
3 MHz	QPSK	1	0	20.36	20.27	20.15	0
		1	8	20.42	20.24	20.07	0
		1	14	20.44	20.26	20.07	0
		8	0	20.48	20.17	20.13	0
		8	4	20.47	20.20	20.09	0
		8	7	20.44	20.18	20.10	0
		15	0	20.48	20.19	20.13	0
	16QAM	1	0	20.94	20.39	20.18	0
		1	8	20.94	20.37	20.13	0
		1	14	20.93	20.38	20.10	0
		8	0	20.72	20.23	20.07	0
		8	4	20.68	20.22	20.07	0
		8	7	20.67	20.21	20.05	0
		15	0	20.46	20.26	20.00	0
	64QAM	1	0	20.89	20.43	20.10	0
		1	8	20.72	20.09	20.05	0
		1	14	20.79	20.17	20.38	0
		8	0	20.65	20.09	20.03	0
		8	4	20.65	20.03	20.08	0
		8	7	20.84	20.14	20.08	0
		15	0	20.42	20.25	20.03	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 979	132 322	132 665	
				1 710.7 MHz	1 745.0 MHz	1 779.3 MHz	
1.4 MHz	QPSK	1	0	20.36	20.35	20.17	0
		1	3	20.48	20.31	20.11	0
		1	5	20.47	20.33	20.13	0
		3	0	20.50	20.24	20.15	0
		3	1	20.50	20.23	20.16	0
		3	3	20.50	20.24	20.08	0
		6	0	20.52	20.28	20.16	0
	16QAM	1	0	20.50	20.29	20.13	0
		1	3	20.53	20.32	20.16	0
		1	5	20.54	20.27	20.12	0
		3	0	20.60	20.44	20.01	0
		3	1	20.59	20.46	20.14	0
		3	3	20.57	20.48	20.01	0
		6	0	20.39	20.29	20.06	0
	64QAM	1	0	20.25	20.35	20.00	0
		1	3	20.41	20.12	20.03	0
		1	5	20.59	20.36	20.15	0
		3	0	20.32	20.33	20.17	0
		3	1	20.61	20.18	20.32	0
		3	3	20.33	20.47	20.01	0
		6	0	20.37	20.15	20.10	0

10.6.8 LTE Band 66(Hotspot)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 072	132 322	132 572	
				1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	QPSK	1	0	18.78	18.75	18.38	0
		1	49	18.98	**19.02**	18.44	0
		1	99	18.96	18.72	18.36	0
		50	0	18.49	18.44	18.37	0
		50	24	18.45	**18.65**	18.39	0
		50	50	18.47	18.48	18.43	0
		100	0	18.51	18.55	18.54	0
	16QAM	1	0	19.23	18.80	19.06	0
		1	49	19.27	18.89	19.21	0
		1	99	18.90	18.79	18.74	0
		50	0	18.96	18.57	18.67	0
		50	24	19.00	18.80	18.58	0
		50	50	18.82	18.51	18.48	0
		100	0	18.95	18.65	18.59	0
	64QAM	1	0	19.11	18.74	19.18	0
		1	49	18.93	18.93	19.05	0
		1	99	18.99	18.68	18.63	0
		50	0	19.14	18.99	18.87	0
		50	24	19.05	18.52	18.38	0
		50	50	18.61	18.79	18.58	0
		100	0	18.91	18.45	18.62	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 047	132 322	132 597	
				1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	QPSK	1	0	18.70	18.81	18.59	0
		1	36	18.89	18.81	18.52	0
		1	74	18.89	18.81	18.46	0
		36	0	18.50	18.63	18.38	0
		36	18	18.55	18.49	18.36	0
		36	37	18.45	18.35	18.43	0
		75	0	18.49	18.53	18.50	0
	16QAM	1	0	19.28	18.82	19.06	0
		1	36	19.37	18.84	18.89	0
		1	74	19.33	18.61	18.73	0
		36	0	19.05	18.79	18.44	0
		36	18	18.97	18.78	18.56	0
		36	37	18.87	18.61	18.53	0
		75	0	18.94	18.63	18.53	0
	64QAM	1	0	19.10	19.04	18.79	0
		1	36	19.15	18.52	18.65	0
		1	74	19.19	18.82	19.10	0
		36	0	19.14	18.82	18.64	0
		36	18	19.09	18.48	18.44	0
		36	37	18.86	18.83	18.79	0
		75	0	18.76	18.96	18.42	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 022	132 322	132 622	
				1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	QPSK	1	0	18.87	18.80	18.45	0
		1	25	18.89	18.72	18.54	0
		1	49	18.81	18.69	18.48	0
		25	0	18.48	18.44	18.43	0
		25	12	18.44	18.57	18.51	0
		25	25	18.58	18.51	18.40	0
		50	0	18.53	18.44	18.53	0
	16QAM	1	0	19.28	18.77	18.44	0
		1	25	19.37	18.87	18.51	0
		1	49	19.30	18.89	18.40	0
		25	0	19.03	18.68	18.61	0
		25	12	19.03	18.83	18.58	0
		25	25	19.05	18.69	18.51	0
		50	0	18.97	18.71	18.60	0
	64QAM	1	0	18.69	18.81	18.75	0
		1	25	18.70	19.29	18.53	0
		1	49	19.10	19.27	18.73	0
		25	0	18.98	18.93	18.82	0
		25	12	18.72	18.45	18.58	0
		25	25	19.14	18.54	18.60	0
		50	0	18.60	18.59	18.53	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 997	132 322	132 647	
				1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	QPSK	1	0	18.97	18.68	18.56	0
		1	12	19.00	18.71	18.52	0
		1	24	19.11	18.62	18.51	0
		12	0	18.61	18.57	18.49	0
		12	7	18.44	18.62	18.46	0
		12	13	18.50	18.49	18.40	0
		25	0	18.55	18.53	18.49	0
	16QAM	1	0	18.77	19.02	18.56	0
		1	12	18.91	19.10	18.46	0
		1	24	18.80	19.07	18.44	0
		12	0	18.92	18.68	18.54	0
		12	7	19.06	18.61	18.48	0
		12	13	18.91	18.72	18.50	0
		25	0	18.97	18.73	18.50	0
	64QAM	1	0	19.32	18.92	18.47	0
		1	12	19.08	18.50	18.55	0
		1	24	19.26	18.62	18.80	0
		12	0	19.08	18.44	18.34	0
		12	7	19.06	18.47	18.54	0
		12	13	19.26	18.60	18.50	0
		25	0	18.87	18.68	18.37	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 987	132 322	132 657	
				1 711.5 ㎒	1 745.0 ㎒	1 778.5 ㎒	
3 ㎒	QPSK	1	0	18.85	18.63	18.55	0
		1	8	18.80	18.73	18.37	0
		1	14	18.90	18.74	18.38	0
		8	0	18.87	18.47	18.48	0
		8	4	18.78	18.67	18.54	0
		8	7	18.78	18.48	18.41	0
		15	0	18.81	18.58	18.55	0
	16QAM	1	0	19.32	18.82	18.64	0
		1	8	19.34	18.84	18.58	0
		1	14	19.29	18.69	18.50	0
		8	0	19.05	18.73	18.49	0
		8	4	19.05	18.53	18.54	0
		8	7	18.97	18.66	18.37	0
		15	0	18.84	18.69	18.39	0
	64QAM	1	0	19.37	18.82	18.53	0
		1	8	19.05	18.48	18.43	0
		1	14	19.26	18.67	18.77	0
		8	0	18.95	18.44	18.42	0
		8	4	18.96	18.51	18.47	0
		8	7	19.21	18.61	18.46	0
		15	0	18.78	18.74	18.44	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 979	132 322	132 665	
				1 710.7 ㎒	1 745.0 ㎒	1 779.3 ㎒	
1.4 ㎒	QPSK	1	0	18.86	18.70	18.56	0
		1	3	18.91	18.73	18.53	0
		1	5	18.90	18.76	18.61	0
		3	0	18.91	18.74	18.50	0
		3	1	18.91	18.54	18.49	0
		3	3	18.88	18.58	18.40	0
		6	0	19.00	18.74	18.57	0
	16QAM	1	0	18.94	18.63	18.50	0
		1	3	18.96	18.63	18.61	0
		1	5	18.91	18.66	18.54	0
		3	0	19.07	18.75	18.35	0
		3	1	18.94	18.82	18.55	0
		3	3	18.99	18.79	18.50	0
		6	0	18.87	18.59	18.40	0
	64QAM	1	0	18.58	18.68	18.32	0
		1	3	18.82	18.55	18.38	0
		1	5	19.03	18.70	18.59	0
		3	0	18.62	18.76	18.49	0
		3	1	19.11	18.63	18.76	0
		3	3	18.75	18.91	18.42	0
		6	0	18.78	18.63	18.59	0

10.6.9 LTE Band 66(Sub2 Ant.) (Hotspot, Ear-jack, RCV)

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 072	132 322	132 572	
				1 720.0 MHz	1 745.0 MHz	1 770.0 MHz	
20 MHz	QPSK	1	0	20.57	20.58	20.38	0
		1	49	20.76	**20.80**	20.56	0
		1	99	20.44	20.48	20.28	0
		50	0	20.54	20.65	20.39	0
		50	24	20.52	20.62	20.39	0
		50	50	20.77	**20.83**	20.56	0
		100	0	20.52	20.61	20.36	0
	16QAM	1	0	20.59	20.73	20.41	0
		1	49	20.64	20.68	20.48	0
		1	99	20.68	20.79	20.56	0
		50	0	20.66	20.66	20.43	0
		50	24	20.49	20.62	20.37	0
		50	50	20.42	20.54	20.29	0
		100	0	20.56	20.64	20.30	0
	64QAM	1	0	20.47	20.66	20.46	0
		1	49	20.55	20.59	20.59	0
		1	99	20.64	20.73	20.62	0
		50	0	20.60	20.61	20.52	0
		50	24	20.39	20.59	20.42	0
		50	50	20.35	20.52	20.41	0
		100	0	20.44	20.60	20.32	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 047	132 322	132 597	
				1 717.5 MHz	1 745.0 MHz	1 772.5 MHz	
15 MHz	QPSK	1	0	20.38	20.44	20.10	0
		1	36	20.50	20.52	20.19	0
		1	74	20.37	20.40	20.15	0
		36	0	20.47	20.58	20.31	0
		36	18	20.40	20.49	20.15	0
		36	37	20.54	20.68	20.36	0
		75	0	20.49	20.60	20.41	0
	16QAM	1	0	20.52	20.66	20.65	0
		1	36	20.46	20.47	20.39	0
		1	74	20.45	20.54	20.44	0
		36	0	20.38	20.47	20.39	0
		36	18	20.39	20.47	20.43	0
		36	37	20.26	20.38	20.25	0
		75	0	20.55	20.54	20.53	0
	64QAM	1	0	20.63	20.55	20.59	0
		1	36	20.60	20.44	20.40	0
		1	74	20.52	20.46	20.38	0
		36	0	20.53	20.39	20.32	0
		36	18	20.50	20.40	20.44	0
		36	37	20.34	20.35	20.27	0
		75	0	20.69	20.46	20.48	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				132 022	132 322	132 622	
				1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	QPSK	1	0	20.36	20.43	20.21	0
		1	25	20.65	20.65	20.41	0
		1	49	20.28	20.38	20.15	0
		25	0	20.60	20.59	20.31	0
		25	12	20.53	20.54	20.21	0
		25	25	20.67	20.68	20.41	0
		50	0	20.56	20.64	20.43	0
	16QAM	1	0	20.61	20.64	20.61	0
		1	25	20.48	20.48	20.44	0
		1	49	20.65	20.67	20.53	0
		25	0	20.42	20.46	20.44	0
		25	12	20.42	20.41	20.33	0
		25	25	20.40	20.49	20.42	0
		50	0	20.44	20.49	20.36	0
	64QAM	1	0	20.68	20.63	20.59	0
		1	25	20.57	20.49	20.37	0
		1	49	20.78	20.69	20.43	0
		25	0	20.56	20.55	20.40	0
		25	12	20.51	20.50	20.25	0
		25	25	20.47	20.57	20.40	0
		50	0	20.57	20.52	20.31	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 997	132 322	132 647	
				1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	QPSK	1	0	20.43	20.52	20.32	0
		1	12	20.60	20.63	20.43	0
		1	24	20.22	20.32	20.13	0
		12	0	20.59	20.67	20.45	0
		12	7	20.44	20.48	20.22	0
		12	13	20.65	20.70	20.40	0
		25	0	20.48	20.54	20.30	0
	16QAM	1	0	20.44	20.58	20.58	0
		1	12	20.38	20.51	20.37	0
		1	24	20.53	20.66	20.64	0
		12	0	20.55	20.56	20.44	0
		12	7	20.55	20.55	20.45	0
		12	13	20.33	20.42	20.37	0
		25	0	20.32	20.42	20.36	0
	64QAM	1	0	20.44	20.59	20.60	0
		1	12	20.28	20.57	20.35	0
		1	24	20.43	20.66	20.65	0
		12	0	20.53	20.57	20.37	0
		12	7	20.52	20.56	20.47	0
		12	13	20.29	20.44	20.30	0
		25	0	20.24	20.51	20.31	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 987	132 322	132 657	
				1 711.5 ㎒	1 745.0 ㎒	1 778.5 ㎒	
3 ㎒	QPSK	1	0	20.45	20.44	20.22	0
		1	8	20.56	20.56	20.32	0
		1	14	20.29	20.29	20.05	0
		8	0	20.77	20.83	20.63	0
		8	4	20.34	20.44	20.14	0
		8	7	20.63	20.72	20.47	0
		15	0	20.49	20.55	20.30	0
	16QAM	1	0	20.60	20.61	20.55	0
		1	8	20.39	20.49	20.38	0
		1	14	20.57	20.63	20.52	0
		8	0	20.42	20.56	20.42	0
		8	4	20.47	20.51	20.40	0
		8	7	20.25	20.34	20.28	0
		15	0	20.40	20.53	20.43	0
	64QAM	1	0	20.61	20.66	20.57	0
		1	8	20.42	20.47	20.47	0
		1	14	20.68	20.63	20.52	0
		8	0	20.46	20.62	20.45	0
		8	4	20.54	20.51	20.42	0
		8	7	20.30	20.36	20.31	0
		15	0	20.44	20.56	20.45	0

Band width	Modulation	RB Size	RB offset	Maximum Average Power			MPR
				131 979	132 322	132 665	
				1 710.7 ㎒	1 745.0 ㎒	1 779.3 ㎒	
1.4 ㎒	QPSK	1	0	20.37	20.49	20.19	0
		1	3	20.49	20.49	20.30	0
		1	5	20.35	20.37	20.07	0
		3	0	20.54	20.53	20.25	0
		3	1	20.50	20.57	20.33	0
		3	3	20.69	20.76	20.52	0
		6	0	20.51	20.56	20.37	0
	16QAM	1	0	20.52	20.59	20.57	0
		1	3	20.43	20.44	20.35	0
		1	5	20.57	20.60	20.55	0
		3	0	20.38	20.44	20.41	0
		3	1	20.51	20.56	20.42	0
		3	3	20.40	20.47	20.35	0
		6	0	20.35	20.49	20.37	0
	64QAM	1	0	20.37	20.53	20.61	0
		1	3	20.31	20.33	20.41	0
		1	5	20.43	20.49	20.58	0
		3	0	20.27	20.33	20.49	0
		3	1	20.39	20.52	20.51	0
		3	3	20.26	20.39	20.42	0
		6	0	20.23	20.42	20.42	0

10.7 5G NR Average Conducted Output Power

10.7.1 NR n5(SA)

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 167 300 836.5 ㎒	MPR
20 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.95	0
			1	53	24.11	0
			1	104	23.82	0
			50	0	23.86	0.5
			50	28	24.17	0
			50	56	23.61	0.5
			100	0	23.74	0.5
		QPSK	1	1	23.91	0
			1	53	**24.02**	0
			1	104	23.88	0
			50	0	23.33	1
			50	28	**24.20**	0
			50	56	23.16	1
			100	0	23.30	1
		16QAM	1	1	22.85	1
		64QAM	1	1	21.46	2.5
		256QAM	1	1	19.50	4.5
	CP-OFDM	QPSK	1	1	**22.37**	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 167 300 836.5 ㎒	MPR
15 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.90	0
			1	40	24.02	0
			1	77	23.85	0
			36	0	23.68	0.5
			36	22	24.10	0
			36	43	23.71	0.5
			75	0	23.65	0.5
		QPSK	1	1	24.01	0
			1	40	24.03	0
			1	77	23.90	0
			36	0	23.21	1
			36	22	24.14	0
			36	43	23.22	1
			75	0	23.19	1
		16QAM	1	1	22.97	1
		64QAM	1	1	21.55	2.5
		256QAM	1	1	19.48	4.5
	CP-OFDM	QPSK	1	1	23.35	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 167 300 836.5 ㎒	MPR
10 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.81	0
			1	26	23.87	0
			1	50	23.83	0
			25	0	23.54	0.5
			25	14	23.99	0
			25	27	23.59	0.5
			50	0	23.53	0.5
		QPSK	1	1	23.91	0
			1	26	23.93	0
			1	50	23.81	0
			25	0	23.09	1
			25	14	24.01	0
			25	27	23.09	1
			50	0	23.06	1
		16QAM	1	1	22.86	1
		64QAM	1	1	21.44	2.5
		256QAM	1	1	19.35	4.5
	CP-OFDM	QPSK	1	1	22.31	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 165300 826.5 ㎒	167300 836.5 ㎒	169300 846.5 ㎒	MPR
5 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	24.00	24.01	23.90	0
			1	13	24.05	24.06	23.94	0
			1	23	24.01	24.03	23.95	0
			12	0	23.61	23.68	23.62	0.5
			12	7	24.07	24.07	24.03	0
			12	13	23.58	23.65	23.62	0.5
			25	0	23.58	23.68	23.61	0.5
		QPSK	1	1	24.00	24.05	23.96	0
			1	13	23.94	24.02	23.96	0
			1	23	23.95	24.03	23.95	0
			12	0	23.15	23.17	23.04	1
			12	7	24.03	24.08	24.00	0
			12	13	23.14	23.15	23.00	1
			25	0	23.15	23.16	23.16	1
		16QAM	1	1	22.84	22.91	22.80	1
		64QAM	1	1	21.52	21.55	21.55	2.5
		256QAM	1	1	19.43	19.52	19.42	4.5
	CP-OFDM	QPSK	1	1	22.44	22.48	22.44	1.5

10.7.2 NR n5(NSA)

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 167 300 836.5 ㎒	MPR
20 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	24.06	0
			1	53	24.21	0
			1	104	23.97	0
			50	0	23.95	0.5
			50	28	24.26	0
			50	56	23.75	0.5
			100	0	23.84	0.5
		QPSK	1	1	24.08	0
			1	53	24.18	0
			1	104	23.97	0
			50	0	23.46	1
			50	28	24.30	0
			50	56	23.25	1
			100	0	23.41	1
		16QAM	1	1	23.22	1
		64QAM	1	1	21.51	2.5
		256QAM	1	1	20.01	4.5
	CP-OFDM	QPSK	1	1	22.76	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 167 300 836.5 ㎒	MPR
15 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	24.05	0
			1	40	24.19	0
			1	77	24.02	0
			36	0	23.81	0.5
			36	22	24.24	0
			36	43	23.82	0.5
			75	0	23.78	0.5
		QPSK	1	1	24.19	0
			1	40	24.17	0
			1	77	24.04	0
			36	0	23.36	1
			36	22	24.26	0
			36	43	23.32	1
			75	0	23.36	1
		16QAM	1	1	23.25	1
		64QAM	1	1	21.51	2.5
		256QAM	1	1	20.01	4.5
	CP-OFDM	QPSK	1	1	22.84	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 167 300 836.5 ㎒	MPR
10 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	24.08	0
			1	26	24.14	0
			1	50	24.17	0
			25	0	23.77	0.5
			25	14	24.14	0
			25	27	24.13	0.5
			50	0	23.79	0.5
		QPSK	1	1	24.18	0
			1	26	23.98	0
			1	50	23.85	0
			25	0	23.08	1
			25	14	24.06	0
			25	27	23.07	1
			50	0	23.02	1
		16QAM	1	1	23.24	1
		64QAM	1	1	21.52	2.5
		256QAM	1	1	20.00	4.5
	CP-OFDM	QPSK	1	1	22.67	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 165300 826.5 ㎒	167300 836.5 ㎒	169300 846.5 ㎒	MPR
5 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	24.07	24.15	24.07	0
			1	13	24.13	24.21	24.07	0
			1	23	24.14	24.21	24.06	0
			12	0	23.73	23.78	23.69	0.5
			12	7	24.21	24.22	24.09	0
			12	13	23.65	23.72	23.64	0.5
			25	0	23.68	23.73	23.63	0.5
		QPSK	1	1	24.16	24.18	24.06	0
			1	13	24.09	24.11	24.06	0
			1	23	24.06	24.14	24.09	0
			12	0	23.24	23.30	23.29	1
			12	7	24.17	24.23	24.18	0
			12	13	23.21	23.24	23.13	1
			25	0	23.25	23.27	23.18	1
		16QAM	1	1	23.29	23.32	23.18	1
		64QAM	1	1	21.53	21.56	21.51	2.5
		256QAM	1	1	19.98	20.03	19.97	4.5
	CP-OFDM	QPSK	1	1	22.84	22.86	22.81	1.5

10.7.3 NR n66(SA)

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
40 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.41	0
			1	108	23.07	0
			1	214	23.00	0
			108	0	22.84	0.5
			108	54	23.31	0
			108	108	22.77	0.5
			216	0	22.87	0.5
		QPSK	1	1	**23.49**	0
			1	108	23.18	0
			1	214	23.02	0
			108	0	22.55	1
			108	54	**23.37**	0
			108	108	22.39	1
			216	0	**22.28**	1
		16QAM	1	1	21.89	1
		64QAM	1	1	20.77	2.5
		256QAM	1	1	18.74	4.5
	CP-OFDM	QPSK	1	1	21.82	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
30 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.09	0
			1	80	23.14	0
			1	158	22.90	0
			80	0	22.85	0.5
			80	40	23.29	0
			80	80	22.85	0.5
			160	0	22.83	0.5
		QPSK	1	1	23.26	0
			1	80	23.21	0
			1	158	22.91	0
			80	0	22.27	1
			80	40	23.55	0
			80	80	22.30	1
			160	0	22.41	1
		16QAM	1	1	22.02	1
		64QAM	1	1	20.88	2.5
		256QAM	1	1	18.72	4.5
	CP-OFDM	QPSK	1	1	21.68	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344500	349000	353500	
					1722.5㎒	1745.0㎒	1767.5㎒	
25 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.31	23.23	23.16	0
			1	67	23.14	23.11	23.29	0
			1	131	23.25	22.84	22.92	0
			64	0	22.66	22.73	22.75	0.5
			64	35	23.38	23.25	23.24	0
			64	69	22.63	22.64	22.57	0.5
			128	0	22.78	22.73	22.64	0.5
		QPSK	1	1	23.20	23.25	23.23	0
			1	67	23.11	23.26	23.17	0
			1	131	22.85	23.07	22.93	0
			64	0	22.44	22.46	22.16	1
			64	35	23.45	23.48	23.44	0
			64	69	22.15	22.27	22.05	1
			128	0	22.24	22.22	22.25	1
		16QAM	1	1	21.67	21.88	21.98	1
		64QAM	1	1	20.78	20.83	20.77	2.5
		256QAM	1	1	18.81	18.84	18.56	4.5
	CP-OFDM	QPSK	1	1	21.55	21.81	21.66	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344000	349000	354000	
					1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.23	23.19	23.06	0
			1	53	23.13	23.16	23.03	0
			1	104	23.03	23.01	22.99	0
			50	0	22.65	22.75	22.75	0.5
			50	28	23.33	23.24	23.20	0
			50	56	22.64	22.76	22.57	0.5
			100	0	22.63	22.77	22.68	0.5
		QPSK	1	1	23.31	23.29	23.01	0
			1	53	23.15	23.27	23.06	0
			1	104	23.01	23.02	22.96	0
			50	0	22.27	22.35	22.29	1
			50	28	23.50	23.38	23.52	0
			50	56	22.11	22.20	22.10	1
			100	0	22.76	22.28	22.76	1
		16QAM	1	1	21.82	22.01	22.07	1
		64QAM	1	1	20.66	20.69	20.81	2.5
		256QAM	1	1	18.69	18.63	18.62	4.5
	CP-OFDM	QPSK	1	1	21.68	21.65	21.66	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343500	349000	354500	
					1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.13	23.03	22.98	0
			1	40	23.09	23.09	23.03	0
			1	77	22.97	23.03	23.05	0
			36	0	22.77	22.79	22.78	0.5
			36	22	23.26	23.25	23.15	0
			36	43	22.75	22.70	22.60	0.5
			75	0	22.75	22.82	22.61	0.5
		QPSK	1	1	23.18	23.15	23.11	0
			1	40	23.19	23.27	23.02	0
			1	77	23.09	23.13	22.91	0
			36	0	22.80	22.87	22.78	1
			36	22	23.33	23.28	23.31	0
			36	43	22.19	22.28	22.24	1
			75	0	22.33	22.38	22.31	1
		16QAM	1	1	21.85	22.00	21.93	1
		64QAM	1	1	20.66	20.80	20.77	2.5
		256QAM	1	1	18.63	18.78	18.72	4.5
	CP-OFDM	QPSK	1	1	21.54	21.60	21.59	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343000	349000	355000	
					1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.83	22.82	22.83	0
			1	26	22.89	22.85	23.00	0
			1	50	22.88	22.84	22.79	0
			25	0	22.61	22.65	22.59	0.5
			25	14	23.04	23.05	23.15	0
			25	27	22.69	22.58	22.58	0.5
			50	0	22.49	22.63	22.56	0.5
		QPSK	1	1	22.90	22.99	22.88	0
			1	26	23.12	23.17	22.99	0
			1	50	22.92	22.87	22.76	0
			25	0	22.05	22.14	22.10	1
			25	14	23.21	23.12	23.04	0
			25	27	22.16	22.07	22.09	1
			50	0	22.09	22.13	22.08	1
		16QAM	1	1	21.76	21.83	21.81	1
		64QAM	1	1	20.67	20.70	20.45	2.5
		256QAM	1	1	18.35	18.47	18.43	4.5
	CP-OFDM	QPSK	1	1	21.61	21.60	21.63	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					342500	349000	355500	
					1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	23.20	23.16	23.20	0
			1	13	23.15	23.01	23.08	0
			1	23	23.06	23.01	23.17	0
			12	0	22.83	22.89	22.86	0.5
			12	7	23.21	23.19	23.13	0
			12	13	22.63	22.70	22.65	0.5
			25	0	22.71	22.72	22.69	0.5
		QPSK	1	1	22.98	23.24	23.06	0
			1	13	23.19	23.10	23.20	0
			1	23	23.07	23.12	23.23	0
			12	0	22.28	22.23	22.22	1
			12	7	23.26	23.22	23.26	0
			12	13	22.06	22.28	22.15	1
			25	0	22.20	22.24	22.15	1
		16QAM	1	1	21.92	22.06	21.95	1
		64QAM	1	1	20.73	20.78	20.90	2.5
		256QAM	1	1	18.82	18.75	18.65	4.5
	CP-OFDM	QPSK	1	1	21.75	21.68	21.69	1.5

10.7.4 NR n66 Sub2 Ant.(NSA)

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
40 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.55	0
			1	108	22.60	0
			1	214	22.62	0
			108	0	22.84	0.5
			108	54	23.07	0
			108	108	22.56	0.5
			216	0	22.65	0.5
		QPSK	1	1	22.70	0
			1	108	**22.83**	0
			1	214	22.79	0
			108	0	22.42	1
			108	54	**23.31**	0
			108	108	22.12	1
			216	0	22.27	1
		16QAM	1	1	21.68	1
		64QAM	1	1	19.98	2.5
		256QAM	1	1	18.69	4.5
	CP-OFDM	QPSK	1	1	**21.80**	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
30 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.62	0
			1	80	22.50	0
			1	158	22.55	0
			80	0	22.79	0.5
			80	40	23.29	0
			80	80	22.71	0.5
			160	0	22.83	0.5
		QPSK	1	1	22.67	0
			1	80	22.72	0
			1	158	22.62	0
			80	0	22.23	1
			80	40	23.51	0
			80	80	22.24	1
			160	0	22.37	1
		16QAM	1	1	21.74	1
		64QAM	1	1	19.97	2.5
		256QAM	1	1	18.68	4.5
	CP-OFDM	QPSK	1	1	21.67	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344500	349000	353500	
					1722.5㎒	1745.0㎒	1767.5㎒	
25 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.52	22.53	22.31	0
			1	67	22.57	22.65	22.43	0
			1	131	22.59	22.46	22.51	0
			64	0	22.57	22.71	22.72	0.5
			64	35	23.32	23.25	23.22	0
			64	69	22.45	22.56	22.41	0.5
			128	0	22.75	22.71	22.57	0.5
		QPSK	1	1	22.39	22.60	22.55	0
			1	67	22.67	22.79	22.74	0
			1	131	22.69	22.68	22.50	0
			64	0	22.37	22.44	22.11	1
			64	35	23.36	23.47	23.32	0
			64	69	22.07	22.10	22.02	1
			128	0	22.21	22.21	22.21	1
		16QAM	1	1	21.50	21.88	21.61	1
		64QAM	1	1	20.07	20.08	20.02	2.5
		256QAM	1	1	18.57	18.51	18.51	4.5
	CP-OFDM	QPSK	1	1	21.55	21.77	21.40	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344000	349000	354000	
					1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.48	22.56	22.42	0
			1	53	22.53	22.54	22.41	0
			1	104	22.60	22.61	22.59	0
			50	0	22.65	22.75	22.75	0.5
			50	28	23.18	23.21	23.19	0
			50	56	22.57	22.67	22.53	0.5
			100	0	22.63	22.70	22.56	0.5
		QPSK	1	1	22.53	22.60	22.49	0
			1	53	22.64	22.72	22.67	0
			1	104	22.56	22.64	22.63	0
			50	0	22.26	22.32	22.25	1
			50	28	23.35	23.36	23.21	0
			50	56	22.10	22.16	22.08	1
			100	0	22.19	22.27	22.20	1
		16QAM	1	1	21.65	21.74	21.61	1
		64QAM	1	1	20.10	20.11	20.07	2.5
		256QAM	1	1	18.55	18.58	18.50	4.5
	CP-OFDM	QPSK	1	1	21.63	21.65	21.50	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343500	349000	354500	
					1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.49	22.55	22.41	0
			1	40	22.50	22.53	22.51	0
			1	77	22.55	22.59	22.59	0
			36	0	22.71	22.78	22.76	0.5
			36	22	23.16	23.22	23.13	0
			36	43	22.63	22.63	22.50	0.5
			75	0	22.70	22.73	22.61	0.5
		QPSK	1	1	22.67	22.67	22.63	0
			1	40	22.74	22.75	22.71	0
			1	77	22.67	22.67	22.62	0
			36	0	22.30	22.30	22.28	1
			36	22	23.24	23.24	23.19	0
			36	43	22.19	22.22	22.20	1
			75	0	22.25	22.30	22.22	1
		16QAM	1	1	21.79	21.79	21.79	1
		64QAM	1	1	20.06	20.07	19.95	2.5
		256QAM	1	1	18.42	18.51	18.41	4.5
	CP-OFDM	QPSK	1	1	21.16	21.24	21.16	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343000	349000	355000	
					1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.32	22.39	22.24	0
			1	26	22.40	22.40	22.38	0
			1	50	22.33	22.37	22.26	0
			25	0	22.47	22.56	22.53	0.5
			25	14	22.98	23.05	22.92	0
			25	27	22.42	22.51	22.50	0.5
			50	0	22.46	22.56	22.47	0.5
		QPSK	1	1	22.40	22.48	22.33	0
			1	26	22.52	22.55	22.49	0
			1	50	22.43	22.51	22.38	0
			25	0	22.03	22.11	22.04	1
			25	14	22.99	23.07	22.97	0
			25	27	21.95	22.00	22.00	1
			50	0	22.06	22.11	22.05	1
		16QAM	1	1	21.75	21.81	21.71	1
		64QAM	1	1	19.93	19.96	19.83	2.5
		256QAM	1	1	18.33	18.42	18.41	4.5
	CP-OFDM	QPSK	1	1	21.06	21.06	21.02	1.5

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					342500	349000	355500	
					1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	22.49	22.51	22.42	0
			1	13	22.51	22.55	22.52	0
			1	23	22.50	22.56	22.42	0
			12	0	22.68	22.68	22.55	0.5
			12	7	23.09	23.11	22.97	0
			12	13	22.63	22.64	22.61	0.5
			25	0	22.57	22.67	22.67	0.5
		QPSK	1	1	22.71	22.73	22.67	0
			1	13	22.69	22.74	22.62	0
			1	23	22.63	22.70	22.70	0
			12	0	22.13	22.17	22.13	1
			12	7	23.09	23.18	23.18	0
			12	13	22.04	22.13	21.99	1
			25	0	22.20	22.22	22.14	1
		16QAM	1	1	21.82	21.92	21.78	1
		64QAM	1	1	20.04	20.12	20.02	2.5
		256QAM	1	1	18.49	18.55	18.50	4.5
	CP-OFDM	QPSK	1	1	21.22	21.25	21.18	1.5

10.8 5G NR Reduced Average Conducted Output Power

10.8.1 NR n66(SA)

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
40 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.96	0
			1	108	20.00	0
			1	214	19.92	0
			108	0	19.78	0
			108	54	20.15	0
			108	108	20.10	0
			216	0	20.03	0
		QPSK	1	1	19.88	0
			1	108	**20.07**	0
			1	214	19.57	0
			108	0	**20.10**	0
			108	54	20.07	0
			108	108	20.08	0
			216	0	20.06	0
		16QAM	1	1	20.11	0
		64QAM	1	1	20.11	0
		256QAM	1	1	18.26	1.5
	CP-OFDM	QPSK	1	1	**20.06**	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
30 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.12	0
			1	80	20.07	0
			1	158	19.76	0
			80	0	20.01	0
			80	40	20.16	0
			80	80	20.10	0
			160	0	20.11	0
		QPSK	1	1	19.98	0
			1	80	20.01	0
			1	158	19.68	0
			80	0	20.03	0
			80	40	20.09	0
			80	80	20.00	0
			160	0	19.98	0
		16QAM	1	1	20.13	0
		64QAM	1	1	19.89	0
		256QAM	1	1	18.26	1.5
	CP-OFDM	QPSK	1	1	19.95	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344500	349000	353500	
					1722.5㎒	1745.0㎒	1767.5㎒	
25 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.91	19.89	19.89	0
			1	67	19.99	20.23	19.83	0
			1	131	19.89	19.89	19.81	0
			64	0	19.96	20.02	19.84	0
			64	35	20.09	19.93	20.17	0
			64	69	19.86	20.02	19.78	0
			128	0	19.96	19.94	19.72	0
		QPSK	1	1	19.85	19.96	19.87	0
			1	67	20.07	19.87	19.91	0
			1	131	19.80	19.87	19.85	0
			64	0	19.96	19.98	19.79	0
			64	35	20.01	19.99	20.13	0
			64	69	19.97	19.91	19.83	0
			128	0	20.02	19.95	19.93	0
		16QAM	1	1	20.04	19.95	20.07	0
		64QAM	1	1	20.01	20.11	19.81	0
		256QAM	1	1	18.18	18.37	18.18	1.5
	CP-OFDM	QPSK	1	1	19.98	19.99	20.02	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344000	349000	354000	
					1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.92	19.97	19.90	0
			1	53	20.06	20.08	19.95	0
			1	104	19.84	19.85	19.73	0
			50	0	19.86	19.93	19.86	0
			50	28	20.01	20.07	20.07	0
			50	56	19.91	19.96	19.91	0
			100	0	19.92	19.99	19.87	0
		QPSK	1	1	19.81	19.87	19.86	0
			1	53	19.95	20.01	19.88	0
			1	104	19.71	19.72	19.71	0
			50	0	19.94	19.98	19.91	0
			50	28	20.08	20.10	19.98	0
			50	56	19.99	20.05	19.90	0
			100	0	19.94	20.04	19.94	0
		16QAM	1	1	19.95	20.04	19.94	0
		64QAM	1	1	19.92	19.97	19.85	0
		256QAM	1	1	18.33	18.33	18.24	1.5
	CP-OFDM	QPSK	1	1	19.94	20.01	19.95	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343500	349000	354500	
					1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.98	19.99	19.91	0
			1	40	20.02	20.02	19.96	0
			1	77	19.81	19.91	19.81	0
			36	0	20.05	20.07	20.03	0
			36	22	20.01	20.06	19.99	0
			36	43	19.91	20.00	19.98	0
			75	0	20.07	20.10	20.01	0
		QPSK	1	1	19.88	19.94	19.91	0
			1	40	19.97	20.02	19.99	0
			1	77	19.84	19.88	19.84	0
			36	0	20.06	20.08	20.02	0
			36	22	19.97	20.06	20.00	0
			36	43	19.96	20.04	19.96	0
			75	0	20.04	20.08	20.05	0
		16QAM	1	1	20.35	20.37	20.31	0
		64QAM	1	1	20.14	20.15	20.04	0
		256QAM	1	1	18.40	18.41	18.37	1.5
	CP-OFDM	QPSK	1	1	20.03	20.05	20.02	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343000	349000	355000	
					1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.85	19.85	19.74	0
			1	26	19.88	19.90	19.85	0
			1	50	19.78	19.79	19.78	0
			25	0	19.89	19.91	19.78	0
			25	14	19.84	19.93	19.92	0
			25	27	19.85	19.92	19.82	0
			50	0	19.84	19.88	19.80	0
		QPSK	1	1	19.79	19.84	19.83	0
			1	26	19.89	19.95	19.92	0
			1	50	19.80	19.83	19.72	0
			25	0	19.91	19.94	19.92	0
			25	14	19.97	19.98	19.90	0
			25	27	19.84	19.92	19.87	0
			50	0	19.79	19.89	19.74	0
		16QAM	1	1	20.10	20.14	20.09	0
		64QAM	1	1	19.99	19.99	19.91	0
		256QAM	1	1	18.21	18.26	18.17	1.5
	CP-OFDM	QPSK	1	1	19.88	19.88	19.86	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					342500	349000	355500	
					1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.92	20.01	19.95	0
			1	13	19.99	20.04	19.99	0
			1	23	19.99	20.06	19.93	0
			12	0	20.11	20.12	20.09	0
			12	7	20.04	20.08	19.98	0
			12	13	19.96	20.06	19.97	0
			25	0	20.03	20.04	20.01	0
		QPSK	1	1	19.96	20.02	19.99	0
			1	13	19.96	20.04	20.01	0
			1	23	20.07	20.09	20.08	0
			12	0	20.08	20.14	20.01	0
			12	7	20.04	20.11	20.03	0
			12	13	20.07	20.09	19.97	0
			25	0	20.08	20.10	20.04	0
		16QAM	1	1	20.35	20.42	20.31	0
		64QAM	1	1	20.15	20.15	20.08	0
		256QAM	1	1	18.37	18.45	18.39	1.5
	CP-OFDM	QPSK	1	1	20.07	20.09	20.09	0

10.8.2 NR n66 Sub2 Ant.(NSA)

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
40 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.20	0
			1	108	20.12	0
			1	214	20.31	0
			108	0	20.38	0
			108	54	20.38	0
			108	108	20.17	0
			216	0	20.50	0
		QPSK	1	1	**20.45**	0
			1	108	20.43	0
			1	214	20.32	0
			108	0	**20.55**	0
			108	54	20.33	0
			108	108	20.31	0
			216	0	20.44	0
		16QAM	1	1	20.19	0
		64QAM	1	1	20.47	0
		256QAM	1	1	18.99	1.5
	CP-OFDM	QPSK	1	1	**20.36**	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power 349000 1 745.0 ㎒	MPR
30 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.05	0
			1	80	20.28	0
			1	158	20.12	0
			80	0	20.46	0
			80	40	20.34	0
			80	80	20.32	0
			160	0	20.44	0
		QPSK	1	1	20.45	0
			1	80	20.33	0
			1	158	20.26	0
			80	0	20.61	0
			80	40	20.35	0
			80	80	20.19	0
			160	0	20.39	0
		16QAM	1	1	20.06	0
		64QAM	1	1	20.69	0
		256QAM	1	1	18.77	1.5
	CP-OFDM	QPSK	1	1	20.16	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344500	349000	353500	
					1722.5㎒	1745.0㎒	1767.5㎒	
25 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.01	20.30	19.99	0
			1	67	20.06	20.38	20.24	0
			1	131	20.19	20.17	20.03	0
			64	0	20.41	20.36	20.16	0
			64	35	20.27	20.28	20.42	0
			64	69	20.13	20.40	20.45	0
			128	0	20.35	20.40	20.26	0
		QPSK	1	1	20.21	20.17	20.15	0
			1	67	20.52	20.33	20.24	0
			1	131	20.29	20.21	20.22	0
			64	0	20.39	20.52	20.38	0
			64	35	20.27	20.55	20.44	0
			64	69	20.18	20.32	20.18	0
			128	0	20.53	20.48	20.41	0
		16QAM	1	1	20.00	20.19	20.04	0
		64QAM	1	1	20.49	20.61	20.56	0
		256QAM	1	1	18.84	18.79	18.69	1.5
	CP-OFDM	QPSK	1	1	19.88	20.04	19.77	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					344000	349000	354000	
					1 720.0 ㎒	1 745.0 ㎒	1 770.0 ㎒	
20 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.09	20.19	20.13	0
			1	53	20.19	20.23	20.12	0
			1	104	20.20	20.21	20.06	0
			50	0	20.34	20.38	20.27	0
			50	28	20.30	20.33	20.30	0
			50	56	20.22	20.31	20.30	0
			100	0	20.33	20.41	20.37	0
		QPSK	1	1	20.21	20.31	20.21	0
			1	53	20.38	20.43	20.38	0
			1	104	20.21	20.28	20.14	0
			50	0	20.44	20.46	20.35	0
			50	28	20.33	20.41	20.32	0
			50	56	20.32	20.33	20.24	0
			100	0	20.41	20.42	20.30	0
		16QAM	1	1	20.10	20.18	20.16	0
		64QAM	1	1	20.53	20.62	20.58	0
		256QAM	1	1	18.83	18.85	18.78	1.5
	CP-OFDM	QPSK	1	1	19.85	19.93	19.79	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343500	349000	354500	
					1 717.5 ㎒	1 745.0 ㎒	1 772.5 ㎒	
15 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.13	20.18	20.07	0
			1	40	20.14	20.20	20.15	0
			1	77	20.16	20.23	20.16	0
			36	0	20.39	20.42	20.32	0
			36	22	20.24	20.33	20.24	0
			36	43	20.29	20.34	20.22	0
			75	0	20.35	20.38	20.23	0
		QPSK	1	1	20.32	20.39	20.34	0
			1	40	20.41	20.47	20.40	0
			1	77	20.27	20.32	20.24	0
			36	0	20.45	20.51	20.48	0
			36	22	20.31	20.39	20.37	0
			36	43	20.33	20.35	20.21	0
			75	0	20.46	20.50	20.38	0
		16QAM	1	1	20.08	20.14	20.10	0
		64QAM	1	1	20.53	20.63	20.55	0
		256QAM	1	1	18.80	18.86	18.82	1.5
	CP-OFDM	QPSK	1	1	19.79	19.88	19.73	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					343000	349000	355000	
					1 715.0 ㎒	1 745.0 ㎒	1 775.0 ㎒	
10 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	19.95	20.05	19.92	0
			1	26	20.06	20.07	19.94	0
			1	50	19.99	20.06	19.91	0
			25	0	20.13	20.21	20.16	0
			25	14	20.20	20.20	20.15	0
			25	27	20.12	20.17	20.17	0
			50	0	20.20	20.21	20.16	0
		QPSK	1	1	20.18	20.26	20.17	0
			1	26	20.20	20.29	20.18	0
			1	50	20.16	20.22	20.19	0
			25	0	20.27	20.27	20.12	0
			25	14	20.17	20.23	20.13	0
			25	27	20.06	20.12	19.98	0
			50	0	20.15	20.24	20.17	0
		16QAM	1	1	19.95	19.97	19.95	0
		64QAM	1	1	20.42	20.52	20.45	0
		256QAM	1	1	18.53	18.63	18.54	1.5
	CP-OFDM	QPSK	1	1	18.78	18.87	18.82	0

Band width	Modulation	Mode	RB Size	RB offset	Maximum Average Power			MPR
					342500	349000	355500	
					1 712.5 ㎒	1 745.0 ㎒	1 777.5 ㎒	
5 ㎒	DFT-s-OFDM	π/2 BPSK	1	1	20.22	20.23	20.14	0
			1	13	20.24	20.25	20.19	0
			1	23	20.19	20.26	20.25	0
			12	0	20.29	20.35	20.25	0
			12	7	20.25	20.29	20.17	0
			12	13	20.21	20.27	20.27	0
			25	0	20.35	20.36	20.33	0
		QPSK	1	1	20.43	20.45	20.36	0
			1	13	20.46	20.48	20.45	0
			1	23	20.38	20.47	20.37	0
			12	0	20.27	20.37	20.27	0
			12	7	20.27	20.29	20.22	0
			12	13	20.26	20.28	20.24	0
			25	0	20.27	20.37	20.37	0
		16QAM	1	1	20.13	20.15	20.06	0
		64QAM	1	1	20.62	20.68	20.55	0
		256QAM	1	1	18.81	18.88	18.78	1.5
	CP-OFDM	QPSK	1	1	19.87	19.93	19.90	0

10.9 WLAN Average Conducted Output Power

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission modes with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

Power Measurement Setup

10.9.1 WLAN Average Conducted Output Power-SISO

Band	Freq. [MHz]	Channel	Ant.1 (dBm)			Ant.2 (dBm)		
			802.11b	802.11g	802.11n	802.11b	802.11g	802.11n
WLAN 2.4 GHz	2 412.0	1	**18.12**	15.90	15.69	18.08	15.61	15.44
	2 437.0	6	17.84	15.62	16.40	**18.47**	16.08	16.83
	2 462.0	11	17.33	14.55	13.40	17.69	14.46	14.30
	2 467.0	12	5.83	4.42	4.31	5.41	4.37	4.34
	2 472.0	13	2.52	0.90	0.73	2.68	0.69	0.60
Band	**Freq. [MHz]**	**Channel**	**802.11a**	**802.11n**	**802.11ac**	**802.11a**	**802.11n**	**802.11ac**
NII (20 MHz)	5 180.0	36	16.90	15.83	14.66	16.22	15.21	14.23
	5 200.0	40	16.80	15.63	14.56	16.28	15.27	14.34
	5 220.0	44	17.05	16.07	15.13	16.69	16.02	15.14
	5 240.0	48	17.82	16.66	15.64	**17.60**	16.46	15.67
	5 260.0	52	16.91	15.78	14.72	16.63	15.61	14.90
	5 280.0	56	17.24	16.03	15.18	16.89	15.95	15.13
	5 300.0	60	17.20	16.15	15.26	17.24	16.19	15.21
	5 320.0	64	**17.39**	16.25	15.27	**17.27**	16.22	15.40
	5 500.0	100	**17.77**	16.62	15.60	**17.33**	16.31	15.53
	5 600.0	120	17.35	16.32	15.31	16.97	15.92	15.09
	5 620.0	124	17.31	16.28	15.32	17.08	16.07	15.10
	5 720.0	144	17.28	16.18	15.20	17.27	16.09	15.19
	5 745.0	149	16.63	15.61	14.58	**17.40**	16.10	15.13
	5 785.0	157	**16.74**	15.47	14.59	17.08	15.89	14.72
	5 825.0	165	16.53	15.65	14.64	16.39	15.29	14.39

Band	Freq. [MHz]	Channel	802.11n	802.11ac	802.11n	802.11ac
NII (40 MHz)	5 190.0	38	12.83	11.94	12.81	11.88
	5 230.0	46	16.55	14.44	16.61	14.49
	5 270.0	54	15.95	13.87	16.13	14.07
	5 310.0	62	14.16	14.18	14.12	14.44
	5 510.0	102	14.66	14.61	14.28	14.56
	5 590.0	118	16.44	14.39	16.14	14.27
	5 630.0	126	15.83	14.51	16.18	14.14
	5 710.0	142	16.25	14.49	16.18	14.24
	5 755.0	151	15.97	13.82	16.78	14.91
	5 795.0	159	16.03	13.90	16.41	14.49

Band	Freq. [MHz]	Channel	802.11ac	802.11ac
NII (80 MHz)	5 210.0	42	9.36	9.07
	5 290.0	58	12.03	11.99
	5 530.0	106	10.76	10.21
	5 610.0	122	13.23	13.23
	5 690.0	138	12.69	12.37
	5 775.0	155	12.96	13.64

10.9.2 WLAN Average Conducted Output Power-MIMO

Band	Freq. [㎒]	Channel	Mode		
			802.11b	802.11g	802.11n
WLAN 2.4 ㎓	2 412.0	1	20.96	18.68	18.62
	2 437.0	6	**20.99**	18.70	19.62
	2 462.0	11	19.81	17.16	16.57
	2 467.0	12	8.76	7.20	7.23
	2 472.0	13	5.63	3.95	3.96
Band	**Freq. [㎒]**	**Channel**	**Mode**		
			802.11a	**802.11n**	**802.11ac**
NII (20 ㎒)	5 180.0	36	19.16	18.13	18.02
	5 200.0	40	19.26	18.54	17.92
	5 220.0	44	19.75	19.13	18.64
	5 240.0	48	20.38	19.68	18.79
	5 260.0	52	19.44	18.81	18.24
	5 280.0	56	19.73	19.06	18.51
	5 300.0	60	**19.74**	19.25	18.72
	5 320.0	64	**19.92**	19.33	18.76
	5 500.0	100	**20.22**	19.63	18.81
	5 600.0	120	19.86	19.28	18.69
	5 620.0	124	19.72	19.22	18.65
	5 720.0	144	19.69	19.18	18.54
	5 745.0	149	**19.52**	18.93	18.34
	5 785.0	157	19.36	18.74	18.26
	5 825.0	165	19.26	18.61	18.06
Band	**Freq. [㎒]**	**Channel**	**Mode**		
			802.11n		**802.11ac**
NII (40 ㎒)	5 190.0	38	15.74		15.43
	5 230.0	46	19.02		17.42
	5 270.0	54	18.46		16.96
	5 310.0	62	17.82		17.24
	5 510.0	102	17.62		17.08
	5 590.0	118	18.77		17.16
	5 630.0	126	18.74		17.21
	5 710.0	142	18.76		17.24
	5 755.0	151	18.68		17.15
	5 795.0	159	18.80		17.27
Band	**Freq. [㎒]**	**Channel**	**Mode**		
			802.11ac		
NII (80 ㎒)	5 210.0	42	12.64		
	5 290.0	58	14.92		
	5 530.0	106	13.42		
	5 610.0	122	16.03		
	5 690.0	138	15.12		
	5 775.0	155	16.09		

10.10 WLAN Reduced Average Conducted Output Power

10.10.1 WLAN Reduced Average Conducted Output Power(RCV)-SISO

Band	Freq. [MHz]	Channel	Ant.1 (dBm)			Ant.2 (dBm)		
			802.11b	802.11g	802.11n	802.11b	802.11g	802.11n
WLAN 2.4 GHz	2 412.0	1	10.32	9.67	9.55	**10.72**	9.89	9.75
	2 437.0	6	10.12	9.49	9.32	10.46	10.15	9.99
	2 462.0	11	**10.64**	10.08	9.92	10.49	9.57	9.47
	2 467.0	12	5.83	4.42	4.31	5.41	4.37	4.34
	2 472.0	13	2.49	0.90	0.73	2.68	0.69	0.60
Band	**Freq. [MHz]**	**Channel**	**802.11a**	**802.11n**	**802.11ac**	**802.11a**	**802.11n**	**802.11ac**
NII (20 MHz)	5 180.0	36	8.55	8.61	8.58	8.32	8.21	8.19
	5 200.0	40	8.53	8.91	8.91	8.44	8.66	8.67
	5 220.0	44	8.65	9.16	9.20	8.92	9.02	9.03
	5 240.0	48	9.34	9.69	9.66	9.28	9.58	9.59
	5 260.0	52	8.11	8.47	8.47	8.33	8.62	8.61
	5 280.0	56	8.45	8.70	8.78	8.58	8.95	8.89
	5 300.0	60	8.52	8.87	8.83	8.62	9.05	9.03
	5 320.0	64	8.62	9.11	9.08	9.05	9.26	9.27
	5 500.0	100	9.65	9.31	9.26	9.93	9.67	9.61
	5 600.0	120	9.17	9.65	9.60	9.36	9.74	9.74
	5 620.0	124	9.22	9.52	9.52	9.28	9.69	9.63
	5 720.0	144	9.07	9.38	9.39	8.91	9.26	9.25
	5 745.0	149	8.72	8.87	8.84	9.12	9.23	9.24
	5 785.0	157	8.53	8.75	8.46	8.86	8.98	8.91
	5 825.0	165	8.49	8.73	8.75	8.50	8.38	8.67
Band	**Freq. [MHz]**	**Channel**	**802.11n**		**802.11ac**	**802.11n**		**802.11ac**
NII (40 MHz)	5 190.0	38	8.51		8.68	8.26		8.35
	5 230.0	46	9.49		9.62	9.54		9.50
	5 270.0	54	8.64		8.73	8.80		8.83
	5 310.0	62	9.19		9.16	9.33		9.35
	5 510.0	102	9.92		9.81	9.96		9.92
	5 590.0	118	9.81		9.91	9.80		9.83
	5 630.0	126	9.88		9.87	9.79		9.75
	5 710.0	142	9.77		9.70	9.49		9.59
	5 755.0	151	9.40		9.37	9.94		9.88
	5 795.0	159	9.33		9.29	9.52		9.55
Band	**Freq. [MHz]**	**Channel**	**802.11ac**			**802.11ac**		
NII (80 MHz)	5 210.0	42	9.36			9.07		
	5 290.0	58	**8.75**			**8.86**		
	5 530.0	106	9.88			**9.77**		
	5 610.0	122	9.73			9.63		
	5 690.0	138	**10.23**			9.48		
	5 775.0	155	**9.24**			**9.50**		

10.10.2 WLAN Reduced Average Conducted Output Power(RCV)-MIMO

Band	Freq. [㎒]	Channel	Mode		
			802.11b	802.11g	802.11n
WLAN 2.4 ㎓	2 412.0	1	13.26	13.66	13.57
	2 437.0	6	13.09	13.66	13.60
	2 462.0	11	**13.34**	13.62	13.61
	2 467.0	12	8.76	7.20	7.23
	2 472.0	13	5.63	3.95	3.96

Band	Freq. [㎒]	Channel	Mode		
			802.11a	802.11n	802.11ac
NII (20 ㎒)	5 180.0	36	11.35	11.60	11.56
	5 200.0	40	11.80	11.94	11.90
	5 220.0	44	11.81	12.43	12.29
	5 240.0	48	12.65	12.88	12.80
	5 260.0	52	11.54	11.75	11.72
	5 280.0	56	11.75	12.06	12.01
	5 300.0	60	11.74	12.25	12.13
	5 320.0	64	12.10	12.45	12.28
	5 500.0	100	12.62	12.88	12.78
	5 600.0	120	12.63	12.66	12.40
	5 620.0	124	12.41	12.94	12.86
	5 720.0	144	12.09	12.60	12.43
	5 745.0	149	12.28	12.42	12.17
	5 785.0	157	12.01	12.33	12.05
	5 825.0	165	11.77	11.96	11.76

Band	Freq. [㎒]	Channel	Mode	
			802.11n	802.11ac
NII (40 ㎒)	5 190.0	38	11.69	11.56
	5 230.0	46	12.71	12.63
	5 270.0	54	11.93	11.85
	5 310.0	62	12.42	12.35
	5 510.0	102	12.61	12.57
	5 590.0	118	12.54	12.45
	5 630.0	126	12.56	12.45
	5 710.0	142	12.73	12.70
	5 755.0	151	12.75	12.69
	5 795.0	159	12.57	12.44

Band	Freq. [㎒]	Channel	Mode
			802.11ac
NII (80 ㎒)	5 210.0	42	12.64
	5 290.0	58	**11.79**
	5 530.0	106	12.37
	5 610.0	122	12.19
	5 690.0	138	**12.84**
	5 775.0	155	**12.34**

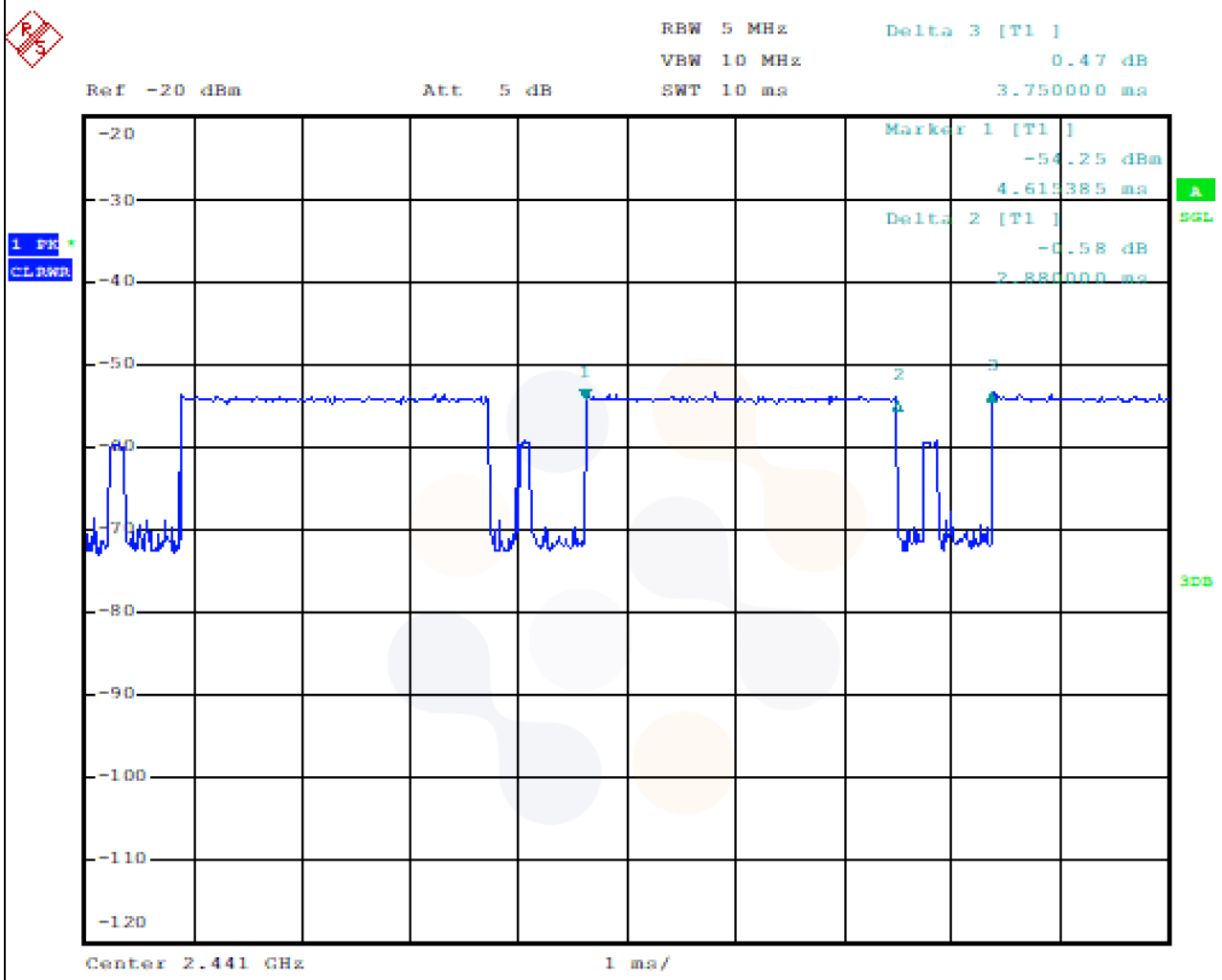
10.11 Bluetooth Average Conducted Output Power

Mode	Freq. [MHz]	Channel	Conducted Powers (dBm)
BDR_DH5 (1 Mbps)	2 402.0	0	12.36
	2 441.0	39	**12.84**
	2 480.0	78	12.82
EDR_3-DH5 (3 Mbps)	2 402.0	0	9.66
	2 441.0	39	10.16
	2 480.0	78	10.43
LE (1 Mbps 37)	2 402.0	0	7.56
	2 440.0	19	7.62
	2 480.0	39	9.48
LE (1 Mbps 255)	2 402.0	0	7.48
	2 440.0	19	7.52
	2 480.0	39	9.36
LE (2 Mbps 37)	2 402.0	0	7.63
	2 440.0	19	7.71
	2 480.0	39	9.55
LE (2 Mbps 255)	2 402.0	0	7.51
	2 440.0	19	7.57
	2 480.0	39	9.42

10.12 Wireless Band Duty Cycle

Wireless Bands		Frequency Bands		Mode	Duty Cycle (%)
GSM		850 1900		Voice, GPRS(GMSK), EGPRS(8PSK)	Voice: 12.5
					(E)GPRS 1Tx : 12.5
					(E)GPRS 2Tx : 25.0
					(E)GPRS 3Tx : 37.5
					(E)GPRS 4Tx : 50.0
WCDMA		Band II		RMC, AMR, HSDPA, HSUPA,DC-HSDPA	100
		Band IV			
		Band V			
LTE		FDD Band 2		QPSK, 16QAM, 64QAM	100
		FDD Band 4			
		FDD Band 5			
		FDD Band 12			
		FDD Band 13			
		FDD Band 26			
		FDD Band 66			
		TDD Band 41			63.33
WLAN	Head	2.4 ㎓	Sub 5	802.11b	98.2
			Sub 8		99.0
			MIMO		98.8
		NII		802.11ac(VHT80)	88.0
	Body-Worn	2.4 ㎓	Sub 5	802.11b	99.0
			Sub 8		
			MIMO		98.8
		U-NII-2A U-NII-2C	Sub 4	802.11a	93.4
			Sub 5		
			MIMO		93.5
		U-NII-3			97.5
	Hotspot	2.4 ㎓	Sub 5	802.11b	99.0
			Sub 8		
			MIMO		98.8
		U-NII-3	Sub 4	802.11a	93.4
			Sub 5		
			MIMO		97.5
	Phablet	NII	Sub 4	802.11a	93.4
			Sub 5		
			MIMO		93.5
Bluetooth					76.8

Wireless Bands	Frequency Bands		Mode		Duty Cycle
	Mode	Packet	On Time (ms)	On-Off Time (ms)	Duty Cycle (%)
Bluetooth	BDR(GFSK)	DH5	2.88	3.75	76.8



11. System Verification

11.1 Tissue Verification

The dielectric properties for this Tissue Simulant Liquids were measured by using the SPEAG Model DAK3.5 Dielectric Probe in conjunction with Agilent E5071B Network Analyzer (300 ㎑ – 8 500 ㎒). The Conductivity (σ) and Permittivity (ρ) are listed in Table 1.For the SAR measurement given in this report. The temperature variation of the Tissue Simulant Liquids was (22 ± 2) ℃.

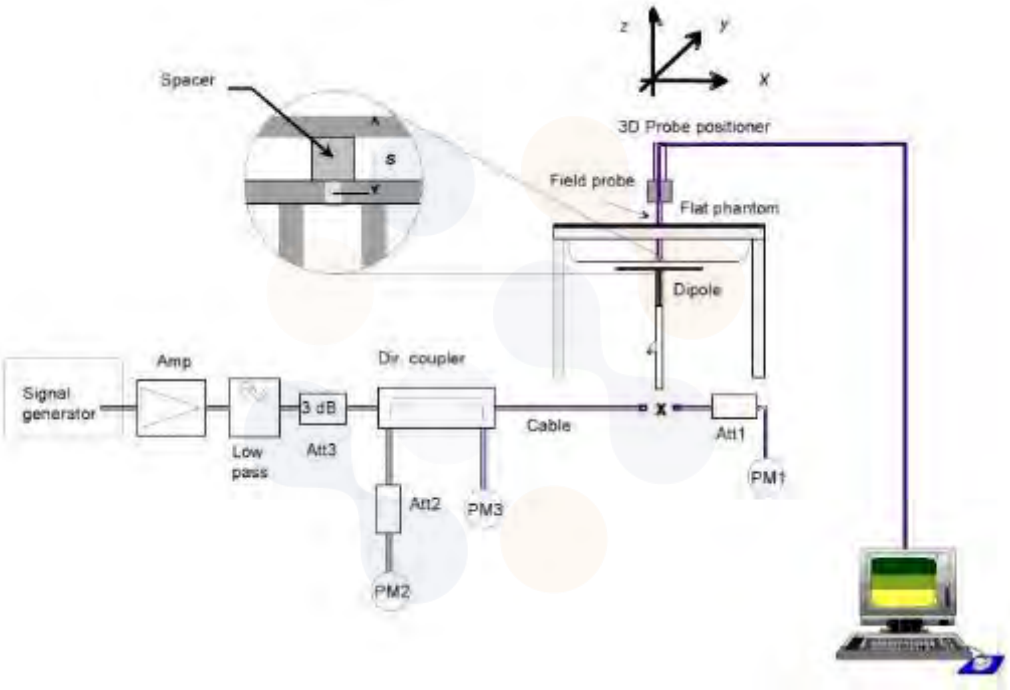
Freq. (㎒)	Limit/Measured		Permittivity (ρ)	Conductivity (σ)	Temp. (°C)
13.0	Recommended Limit		55.00 ± 5 % (52.25 ~ 57.75)	0.75 ± 5 % (0.71 ~ 0.79)	22 ± 2
	Measured	2022-12-27	55.00	0.76	20.81
750.0	Recommended Limit		41.90 ± 5 % (39.81 ~ 44.00)	0.89 ± 5 % (0.85 ~ 0.93)	22 ± 2
	Measured	2022-12-06	43.39	0.90	20.91
		2022-12-17	42.31	0.88	20.88
850.0	Recommended Limit		41.50 ± 5 % (39.43 ~ 43.58)	0.92 ± 5 % (0.87 ~ 0.97)	22 ± 2
	Measured	2022-12-07	40.83	0.91	20.97
		2022-12-12	41.83	0.92	20.90
		2022-12-13	41.56	0.93	20.81
		2022-12-14	41.59	0.93	20.88
		2022-12-16	41.32	0.89	20.89
1 750.0	Recommended Limit		40.07 ± 5 % (38.07 ~ 42.07)	1.37 ± 5 % (1.30 ~ 1.44)	22 ± 2
	Measured	2022-12-09	39.06	1.39	20.93
		2022-12-15	39.49	1.37	20.97
		2022-12-17	39.01	1.32	20.88
		2022-12-21	41.27	1.34	20.79
		2022-12-24	38.80	1.38	20.99
		2022-12-26	38.75	1.33	20.75
		2022-12-28	39.42	1.38	20.85
		2023-01-03	38.61	1.36	20.63
1 900.0	Recommended Limit		40.00 ± 5 % (38.00 ~ 42.00)	1.40 ± 5 % (1.33 ~ 1.47)	22 ± 2
	Measured	2022-12-08	38.52	1.44	20.88
		2022-12-19	39.91	1.41	20.91
		2022-12-20	40.16	1.41	20.87
		2022-12-22	38.76	1.40	20.85
		2022-12-28	38.49	1.45	20.85
		2022-01-02	38.49	1.46	20.95

Freq. (㎒)	Limit/Measured		Permittivity (ρ)	Conductivity (σ)	Temp. (°C)
2 450.0	Recommended Limit		39.20 ± 5 % (37.24 ~ 41.16)	1.80 ± 5 % (1.71 ~ 1.89)	22 ± 2
	Measured	2022-12-13	37.70	1.85	20.60
		2023-01-03	39.38	1.86	20.10
2 600.0	Recommended Limit		39.00 ± 5 % (37.05 ~ 40.95)	1.96 ± 5 % (1.86 ~ 2.06)	22 ± 2
	Measured	2022-12-17	37.76	1.94	20.94
5 250.0	Recommended Limit		35.90 ± 5 % (34.15 ~ 37.75)	4.71 ± 5 % (4.47 ~ 4.95)	22 ± 2
	Measured	2022-12-15	35.00	4.80	20.74
5 600.0	Recommended Limit		35.50 ± 5 % (33.73~37.28)	5.07 ± 5 % (4.82~5.32)	22 ± 2
	Measured	2022-12-21	34.81	5.16	20.74
5 800.0	Recommended Limit		35.30 ± 5 % (33.54~37.07)	5.27 ± 5 % (5.01~5.53)	22 ± 2
	Measured	2022-12-19	34.69	5.26	20.79

<Table 1. Measurement result Tissue electric parameters>

11.2 Test System Verification

The microwave circuit arrangement for system verification is sketched below picture.
The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within ± 10% from the t arget SAR values. The tests were conducted on the same days as the measurement of the EUT. The obtained results from the system accuracy verification are displayed in the Table 2. During the tests, the ambient temperature of the laboratory was in the range (22 ± 2) ℃, th e relative humidity was in the range(50 ± 20)% and the liquid depth Above the ear/grid refer ence points was above 15 ㎝ in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



Verification Kit	Probe S/N	Frequency (㎒)	Tissue Type	Limit/Measured (Normalized to 1 W)		
CLA13 SN: 1019	EX3DV4 SN: 3928	13.0	HSL	Recommended Limit 10g (Normalized)		0.356 ± 10 % (0.32~0.39)
				Measured	2022-12-27	0.38
D750V2 SN: 1183	EX3DV4 SN: 3865	750.0	HSL	Recommended Limit 1g (Normalized)		8.36 ± 10 % (7.52~9.20)
				Measured	2022-12-06	8.56
					2022-12-17	8.12
D850V2 SN: 1006	EX3DV4 SN: 3865	850.0	HSL	Recommended Limit 1g (Normalized)		10.10 ±10 % (9.09~11.11)
				Measured	2022-12-07	10.20
					2022-12-12	10.16
					2022-12-13	9.84
					2022-12-14	9.68
	EX3DV4 SN: 7540			Measured	2022-12-16	10.36
D1750V2 SN: 1072	EX3DV4 SN: 3865	1 750.0	HSL	Recommended Limit 1g (Normalized)		36.50 ± 10 % (32.85~40.15)
				Measured	2022-12-09	38.60
					2022-12-15	36.24
					2022-12-28	36.80
					2023-01-03	37.92
				Recommended Limit 10g (Normalized)		19.30 ± 10 % (17.37~21.23)
				Measured	2022-12-09	20.24
					2022-12-15	20.32
					2022-12-28	19.08
					2023-01-03	19.96
	EX3DV4 SN: 7540	1 750.0	HSL	Recommended Limit 1g (Normalized)		36.50 ± 10 % (32.85~40.15)
				Measured	2022-12-17	37.60
					2022-12-26	35.28
				Recommended Limit 10g (Normalized)		19.30 ± 10 % (17.37~21.23)
				Measured	2022-12-17	20.08
					2022-12-26	18.88
	EX3DV4 SN: 3928	1 750.0	HSL	Recommended Limit 1g (Normalized)		36.50 ± 10 % (32.85~40.15)
				Measured	2022-12-21	37.88
					2022-12-24	36.68
				Recommended Limit 10g (Normalized)		19.30 ± 10 % (17.37~21.23)
				Measured	2022-12-21	20.28
					2022-12-24	19.64

Verification Kit	Probe S/N	Frequency (㎒)	Tissue Type	Limit/Measured (Normalized to 1 W)		
D1900V2 SN: 5d160	EX3DV4 SN: 3865	1 900.0	HSL	Recommended Limit 1g (Normalized)		39.60 ± 10 % (35.64~43.56)
				Measured	2022-12-08	39.04
					2022-12-28	39.12
					2023-01-02	38.44
				Recommended Limit 10g (Normalized)		39.60 ± 10 % (35.64~43.56)
				Measured	2022-12-08	39.04
					2022-12-28	39.12
					2023-01-02	38.44
	EX3DV4 SN: 3928	1 900.0	HSL	Recommended Limit 1g (Normalized)		39.60 ± 10 % (35.64~43.56)
				Measured	2022-12-19	41.20
					2022-12-20	40.00
					2022-12-22	39.68
				Recommended Limit 10g (Normalized)		20.80 ± 10 % (18.72~22.88)
				Measured	2022-12-19	21.48
					2022-12-20	20.92
					2022-12-22	20.68
D2450V2 SN: 895	EX3DV4 SN: 3697	2 450.0	HSL	Recommended Limit 1g (Normalized)		52.40 ± 10 % (47.16 ~ 57.64)
				Measured	2022-12-13	50.90
					2023-01-03	52.00
D2600V2 SN: 1050	EX3DV4 SN: 3928	2 600.0	HSL	Recommended Limit 1g (Normalized)		56.70 ± 10 % (51.03 ~ 62.37)
				Measured	2022-12-17	54.70
D5GHzV2 SN: 1134	EX3DV4 SN: 3697	5 250.0	HSL	Recommended Limit 1g (Normalized)		81.40 ± 10 % (73.26~89.54)
				Measured	2022-12-15	82.70
				Recommended Limit 10g (Normalized)		23.20 ± 10 % (20.88~25.52)
				Measured	2022-12-15	23.70
		5 600.0	HSL	Recommended Limit 1g (Normalized)		84.50 ± 10 % (76.05~92.95)
				Measured	2022-12-21	87.30
				Recommended Limit 10g (Normalized)		23.90 ± 10 % (21.51~26.29)
				Measured	2022-12-21	25.20
		5 800.0	HSL	Recommended Limit 1g (Normalized)		82.60 ± 10 % (74.34~90.86)
				Measured	2022-12-19	84.40

<Table 2. System Verification Result>

12. SAR Test Results

12.1 Standalone Head SAR Test Results

GSM 850 Band									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
Voice	Right Cheek	0	836.6	33.36	34.80	1.393	0.185	**0.258**	
	Right Tilt	0	836.6	33.36	34.80	1.393	0.087	0.121	
	Left Cheek	0	836.6	33.36	34.80	1.393	0.126	0.176	
	Left Tilt	0	836.6	33.36	34.80	1.393	0.092	0.128	
GPRS 2Tx	Right Cheek	0	836.6	31.81	33.80	1.581	0.234	**0.370**	1
	Right Tilt	0	836.6	31.81	33.80	1.581	0.132	0.209	
	Left Cheek	0	836.6	31.81	33.80	1.581	0.186	0.294	
	Left Tilt	0	836.6	31.81	33.80	1.581	0.156	0.247	

GSM 1900 Band									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
Voice	Right Cheek	0	1 880.0	30.63	31.80	1.309	0.038	0.050	
	Right Tilt	0	1 880.0	30.63	31.80	1.309	0.028	0.037	
	Left Cheek	0	1 880.0	30.63	31.80	1.309	0.023	0.030	
	Left Tilt	0	1 880.0	30.63	31.80	1.309	0.024	0.031	
GPRS 2Tx	Right Cheek	0	1 880.0	29.04	30.80	1.500	0.058	**0.087**	2
	Right Tilt	0	1 880.0	29.04	30.80	1.500	0.037	0.056	
	Left Cheek	0	1 880.0	29.04	30.80	1.500	0.053	0.080	
	Left Tilt	0	1 880.0	29.04	30.80	1.500	0.034	0.051	

WCDMA Band II									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Right Cheek	0	1 880.0	23.36	24.60	1.330	0.066	**0.088**	3
	Right Tilt	0	1 880.0	23.36	24.60	1.330	0.041	0.055	
	Left Cheek	0	1 880.0	23.36	24.60	1.330	0.055	0.073	
	Left Tilt	0	1 880.0	23.36	24.60	1.330	0.032	0.043	

WCDMA Band IV									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Right Cheek	0	1 732.4	23.42	24.60	1.312	0.065	**0.085**	4
	Right Tilt	0	1 732.4	23.42	24.60	1.312	0.038	0.050	
	Left Cheek	0	1 732.4	23.42	24.60	1.312	0.047	0.062	
	Left Tilt	0	1 732.4	23.42	24.60	1.312	0.040	0.052	

WCDMA Band V									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Right Cheek	0	836.6	23.59	25.50	1.552	0.160	**0.248**	5
	Right Tilt	0	836.6	23.59	25.50	1.552	0.085	0.132	
	Left Cheek	0	836.6	23.59	25.50	1.552	0.124	0.192	
	Left Tilt	0	836.6	23.59	25.50	1.552	0.077	0.120	

LTE Band 2									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Right Cheek	0	1 880.0	23.94	24.30	1.086	0.065	**0.071**	6
QPSK 20M 50RB 0Offset	Right Cheek	0	1 880.0	22.88	23.30	1.102	0.054	0.060	
QPSK 20M 1RB 49Offset	Right Tilt	0	1 880.0	23.94	24.30	1.086	0.033	0.036	
QPSK 20M 50RB 0Offset	Right Tilt	0	1 880.0	22.88	23.30	1.102	0.024	0.026	
QPSK 20M 1RB 49Offset	Left Cheek	0	1 880.0	23.94	24.30	1.086	0.055	0.060	
QPSK 20M 50RB 0Offset	Left Cheek	0	1 880.0	22.88	23.30	1.102	0.040	0.044	
QPSK 20M 1RB 49Offset	Left Tilt	0	1 880.0	23.94	24.30	1.086	0.037	0.040	
QPSK 20M 50RB 0Offset	Left Tilt	0	1 880.0	22.88	23.30	1.102	0.030	0.033	

LTE Band 2 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Right Cheek	0	1 880.0	20.85	21.00	1.035	0.631	0.653	
QPSK 20M 50RB 24Offset	Right Cheek	0	1 880.0	20.84	21.00	1.038	0.634	0.658	
QPSK 20M 1RB 49Offset	Right Tilt	0	1 880.0	20.85	21.00	1.035	0.627	0.649	
QPSK 20M 50RB 24Offset	Right Tilt	0	1 880.0	20.84	21.00	1.038	0.635	**0.659**	7
QPSK 20M 1RB 49Offset	Left Cheek	0	1 880.0	20.85	21.00	1.035	0.343	0.355	
QPSK 20M 50RB 24Offset	Left Cheek	0	1 880.0	20.84	21.00	1.038	0.341	0.354	
QPSK 20M 1RB 49Offset	Left Tilt	0	1 880.0	20.85	21.00	1.035	0.402	0.416	
QPSK 20M 50RB 24Offset	Left Tilt	0	1 880.0	20.84	21.00	1.038	0.403	0.418	

LTE Band 4 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Right Cheek	0	1 732.5	19.17	21.00	1.524	0.419	0.639	
QPSK 20M 50RB 24Offset	Right Cheek	0	1 732.5	18.09	20.00	1.552	0.366	0.568	
QPSK 20M 1RB 49Offset	Right Tilt	0	1 732.5	19.17	21.00	1.524	0.441	**0.672**	8
QPSK 20M 50RB 24Offset	Right Tilt	0	1 732.5	18.09	20.00	1.552	0.399	0.619	
QPSK 20M 1RB 49Offset	Left Cheek	0	1 732.5	19.17	21.00	1.524	0.262	0.399	
QPSK 20M 50RB 24Offset	Left Cheek	0	1 732.5	18.09	20.00	1.552	0.232	0.360	
QPSK 20M 1RB 49Offset	Left Tilt	0	1 732.5	19.17	21.00	1.524	0.314	0.479	
QPSK 20M 50RB 24Offset	Left Tilt	0	1 732.5	18.09	20.00	1.552	0.282	0.438	

LTE Band 5									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Right Cheek	0	836.5	23.94	25.80	1.535	0.181	**0.278**	9
QPSK 10M 25RB 0Offset	Right Cheek	0	836.5	22.95	24.80	1.531	0.136	0.208	
QPSK 10M 1RB 25Offset	Right Tilt	0	836.5	23.94	25.80	1.535	0.083	0.127	
QPSK 10M 25RB 0Offset	Right Tilt	0	836.5	22.95	24.80	1.531	0.061	0.093	
QPSK 10M 1RB 25Offset	Left Cheek	0	836.5	23.94	25.80	1.535	0.152	0.233	
QPSK 10M 25RB 0Offset	Left Cheek	0	836.5	22.95	24.80	1.531	0.116	0.178	
QPSK 10M 1RB 25Offset	Left Tilt	0	836.5	23.94	25.80	1.535	0.090	0.138	
QPSK 10M 25RB 0Offset	Left Tilt	0	836.5	22.95	24.80	1.531	0.068	0.104	

LTE Band 12									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Right Cheek	0	707.5	23.52	25.00	1.406	0.100	**0.141**	10
QPSK 10M 25RB 25Offset	Right Cheek	0	707.5	22.41	24.00	1.442	0.078	0.112	
QPSK 10M 1RB 25Offset	Right Tilt	0	707.5	23.52	25.00	1.406	0.060	0.084	
QPSK 10M 25RB 25Offset	Right Tilt	0	707.5	22.41	24.00	1.442	0.044	0.063	
QPSK 10M 1RB 25Offset	Left Cheek	0	707.5	23.52	25.00	1.406	0.085	0.120	
QPSK 10M 25RB 25Offset	Left Cheek	0	707.5	22.41	24.00	1.442	0.066	0.095	
QPSK 10M 1RB 25Offset	Left Tilt	0	707.5	23.52	25.00	1.406	0.041	0.058	
QPSK 10M 25RB 25Offset	Left Tilt	0	707.5	22.41	24.00	1.442	0.035	0.050	

LTE Band 13									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Right Cheek	0	782.0	23.47	25.00	1.422	0.089	0.127	
QPSK 10M 25RB 12Offset	Right Cheek	0	782.0	22.55	24.00	1.396	0.074	0.103	
QPSK 10M 1RB 25Offset	Right Tilt	0	782.0	23.47	25.00	1.422	0.049	0.070	
QPSK 10M 25RB 12Offset	Right Tilt	0	782.0	22.55	24.00	1.396	0.034	0.047	
QPSK 10M 1RB 25Offset	Left Cheek	0	782.0	23.47	25.00	1.422	0.096	**0.137**	11
QPSK 10M 25RB 12Offset	Left Cheek	0	782.0	22.55	24.00	1.396	0.072	0.101	
QPSK 10M 1RB 25Offset	Left Tilt	0	782.0	23.47	25.00	1.422	0.058	0.082	
QPSK 10M 25RB 12Offset	Left Tilt	0	782.0	22.55	24.00	1.396	0.045	0.063	

LTE Band 26									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 15M 1RB 36Offset	Right Cheek	0	831.5	23.50	25.00	1.413	0.147	**0.208**	12
QPSK 15M 36RB 0Offset	Right Cheek	0	831.5	22.43	24.00	1.435	0.118	0.169	
QPSK 15M 1RB 36Offset	Right Tilt	0	831.5	23.50	25.00	1.413	0.076	0.107	
QPSK 15M 36RB 0Offset	Right Tilt	0	831.5	22.43	24.00	1.435	0.061	0.088	
QPSK 15M 1RB 36Offset	Left Cheek	0	831.5	23.50	25.00	1.413	0.067	0.095	
QPSK 15M 36RB 0Offset	Left Cheek	0	831.5	22.43	24.00	1.435	0.092	0.132	
QPSK 15M 1RB 36Offset	Left Tilt	0	831.5	23.50	25.00	1.413	0.068	0.096	
QPSK 15M 36RB 0Offset	Left Tilt	0	831.5	22.43	24.00	1.435	0.063	0.090	

LTE Band 41									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Right Cheek	0	2 680.0	22.60	24.00	1.380	0.069	0.095	
QPSK 20M 50RB 24Offset	Right Cheek	0	2 680.0	21.63	23.00	1.371	0.036	0.049	
QPSK 20M 1RB 49Offset	Right Tilt	0	2 680.0	22.60	24.00	1.380	0.082	0.113	
QPSK 20M 50RB 24Offset	Right Tilt	0	2 680.0	21.63	23.00	1.371	0.063	0.086	
QPSK 20M 1RB 49Offset	Left Cheek	0	2 680.0	22.60	24.00	1.380	0.095	**0.131**	13
QPSK 20M 50RB 24Offset	Left Cheek	0	2 680.0	21.63	23.00	1.371	0.074	0.101	
QPSK 20M 1RB 49Offset	Left Tilt	0	2 680.0	22.60	24.00	1.380	0.041	0.057	
QPSK 20M 50RB 24Offset	Left Tilt	0	2 680.0	21.63	23.00	1.371	0.031	0.043	

LTE Band 66									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Right Cheek	0	1 720.0	23.95	25.00	1.274	0.059	**0.076**	14
QPSK 20M 50RB 0Offset	Right Cheek	0	1 720.0	23.06	24.00	1.242	0.040	0.050	
QPSK 20M 1RB 49Offset	Right Tilt	0	1 720.0	23.95	25.00	1.274	0.045	0.057	
QPSK 20M 50RB 0Offset	Right Tilt	0	1 720.0	23.06	24.00	1.242	0.033	0.041	
QPSK 20M 1RB 49Offset	Left Cheek	0	1 720.0	23.95	25.00	1.274	0.049	0.062	
QPSK 20M 50RB 0Offset	Left Cheek	0	1 720.0	23.06	24.00	1.242	0.031	0.039	
QPSK 20M 1RB 49Offset	Left Tilt	0	1 720.0	23.95	25.00	1.274	0.030	0.038	
QPSK 20M 50RB 0Offset	Left Tilt	0	1 720.0	23.06	24.00	1.242	0.021	0.026	

LTE Band 66 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Right Cheek	0	1 745.0	20.80	21.00	1.047	0.613	0.642	
QPSK 20M 50RB 50Offset	Right Cheek	0	1 745.0	20.83	21.00	1.040	0.615	0.640	
QPSK 20M 1RB 49Offset	Right Tilt	0	1 745.0	20.80	21.00	1.047	0.716	0.750	
QPSK 20M 50RB 50Offset	Right Tilt	0	1 745.0	20.83	21.00	1.040	0.722	**0.751**	15
QPSK 20M 1RB 49Offset	Left Cheek	0	1 745.0	20.80	21.00	1.047	0.401	0.420	
QPSK 20M 50RB 50Offset	Left Cheek	0	1 745.0	20.83	21.00	1.040	0.396	0.412	
QPSK 20M 1RB 49Offset	Left Tilt	0	1 745.0	20.80	21.00	1.047	0.460	0.482	
QPSK 20M 50RB 50Offset	Left Tilt	0	1 745.0	20.83	21.00	1.040	0.470	0.489	

5G NR n5									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Right Cheek	0	836.5	24.02	25.80	1.507	0.160	0.241	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Right Cheek	0	836.5	24.20	25.80	1.445	0.175	**0.253**	16
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Right Tilt	0	836.5	24.02	25.80	1.507	0.080	0.121	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Right Tilt	0	836.5	24.20	25.80	1.445	0.084	0.121	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Left Cheek	0	836.5	24.02	25.80	1.507	0.138	0.208	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Left Cheek	0	836.5	24.20	25.80	1.445	0.149	0.215	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Left Tilt	0	836.5	24.02	25.80	1.507	0.082	0.124	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Left Tilt	0	836.5	24.20	25.80	1.445	0.083	0.120	
CP-OFDM_QPSK SCS 15 kHz_20MHz 1RB 1offset	Right Cheek	0	836.5	22.37	24.30	1.560	0.127	0.198	

5G NR n66									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right Cheek	0	1 745.0	23.49	24.00	1.125	0.051	0.057	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Right Cheek	0	1 745.0	23.37	24.00	1.156	0.065	**0.075**	17
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right Tilt	0	1 745.0	23.49	24.00	1.125	0.054	0.061	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Right Tilt	0	1 745.0	23.37	24.00	1.156	0.056	0.065	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Left Cheek	0	1 745.0	23.49	24.00	1.125	0.047	0.053	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Left Cheek	0	1 745.0	23.37	24.00	1.156	0.049	0.057	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Left Tilt	0	1 745.0	23.49	24.00	1.125	0.039	0.044	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Left Tilt	0	1 745.0	23.37	24.00	1.156	0.033	0.038	
CP-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right Cheek	0	1 745.0	22.28	22.50	1.052	0.039	0.041	

5G NR n66 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right Cheek	0	1 745.0	20.45	20.70	1.059	0.580	0.614	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Right Cheek	0	1 745.0	20.55	20.70	1.035	0.598	0.619	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right Tilt	0	1 745.0	20.45	20.70	1.059	0.608	**0.644**	18
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Right Tilt	0	1 745.0	20.55	20.70	1.035	0.620	0.642	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Left Cheek	0	1 745.0	20.45	20.70	1.059	0.357	0.378	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Left Cheek	0	1 745.0	20.55	20.70	1.035	0.364	0.377	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Left Tilt	0	1 745.0	20.45	20.70	1.059	0.399	0.423	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Left Tilt	0	1 745.0	20.55	20.70	1.035	0.398	0.412	
CP-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right Tilt	0	1 745.0	20.36	20.70	1.081	0.593	0.641	

2.4 GHz WLAN												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 1g SAR (W/kg)	Scaled 1g SAR (W/kg)	Plot No.
802.11b	Wi-fi 1 (Sub 5)	Right Cheek	0	2 462.0	10.64	11.00	1.086	1.018	0.288	0.196	**0.217**	19
		Right Tilt	0	2 462.0	10.64	11.00	1.086	1.018	0.155	-	-	
		Left Cheek	0	2 462.0	10.64	11.00	1.086	1.018	0.066	-	-	
		Left Tilt	0	2 462.0	10.64	11.00	1.086	1.018	0.025	-	-	
	Wi-fi 2 (Sub 8)	Right Cheek	0	2 412.0	10.72	11.00	1.067	1.010	0.027	-	-	
		Right Tilt	0	2 412.0	10.72	11.00	1.067	1.010	0.032	-	-	
		Left Cheek	0	2 412.0	10.72	11.00	1.067	1.010	0.035	0.020	**0.022**	20
		Left Tilt	0	2 412.0	10.72	11.00	1.067	1.010	0.033	-	-	
	MIMO	Right Cheek	0	2 462.0	13.34	14.00	1.164	1.012	0.260	0.227	**0.267**	21
		Right Tilt	0	2 462.0	13.34	14.00	1.164	1.012	0.154	-	-	
		Left Cheek	0	2 462.0	13.34	14.00	1.164	1.012	0.068	-	-	
		Left Tilt	0	2 462.0	13.34	14.00	1.164	1.012	0.041	-	-	

NII												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 1g SAR (W/kg)	Scaled 1g SAR (W/kg)	Plot No.
802.11ac (VHT80)	Wi-fi 1 (Sub 4)	Right Cheek	0	5 290.0	8.75	10.00	1.334	1.136	0.094	0.027	**0.041**	22
		Right Tilt	0	5 290.0	8.75	10.00	1.334	1.136	0.029	-	-	
		Left Cheek	0	5 290.0	8.75	10.00	1.334	1.136	0.040	-	-	
		Left Tilt	0	5 290.0	8.75	10.00	1.334	1.136	0.038	-	-	
	Wi-fi 2 (Sub 5)	Right Cheek	0	5 290.0	8.86	10.00	1.300	1.136	0.305	0.119	**0.176**	23
		Right Tilt	0	5 290.0	8.86	10.00	1.300	1.136	0.102	-	-	
		Left Cheek	0	5 290.0	8.86	10.00	1.300	1.136	0.089	-	-	
		Left Tilt	0	5 290.0	8.86	10.00	1.300	1.136	0.032	-	-	
	MIMO	Right Cheek	0	5 290.0	11.79	13.00	1.321	1.136	0.434	0.146	**0.219**	24
		Right Tilt	0	5 290.0	11.79	13.00	1.321	1.136	0.047	-	-	
		Left Cheek	0	5 290.0	11.79	13.00	1.321	1.136	0.090	-	-	
		Left Tilt	0	5 290.0	11.79	13.00	1.321	1.136	0.093	-	-	
802.11ac (VHT80)	Wi-fi 1 (Sub 4)	Right Cheek	0	5 690.0	10.23	10.00	0.948	1.136	0.153	0.050	**0.054**	25
		Right Tilt	0	5 690.0	10.23	10.00	0.948	1.136	0.037	-	-	
		Left Cheek	0	5 690.0	10.23	10.00	0.948	1.136	0.031	-	-	
		Left Tilt	0	5 690.0	10.23	10.00	0.948	1.136	0.024	-	-	
	Wi-fi 2 (Sub 5)	Right Cheek	0	5 530.0	9.77	10.00	1.054	1.136	0.675	0.255	**0.305**	26
		Right Tilt	0	5 530.0	9.77	10.00	1.054	1.136	0.068	-	-	
		Left Cheek	0	5 530.0	9.77	10.00	1.054	1.136	0.095	-	-	
		Left Tilt	0	5 530.0	9.77	10.00	1.054	1.136	0.025	-	-	
	MIMO	Right Cheek	0	5 690.0	12.84	13.00	1.038	1.136	0.894	0.348	**0.410**	27
		Right Tilt	0	5 690.0	12.84	13.00	1.038	1.136	0.146	0.039	0.046	
		Left Cheek	0	5 690.0	12.84	13.00	1.038	1.136	0.132	-	-	
		Left Tilt	0	5 690.0	12.84	13.00	1.038	1.136	0.064	-	-	
802.11ac (VHT80)	Wi-fi 1 (Sub 4)	Right Cheek	0	5 775.0	9.24	10.00	1.191	1.136	0.094	0.025	**0.034**	28
		Right Tilt	0	5 775.0	9.24	10.00	1.191	1.136	0.058	-	-	
		Left Cheek	0	5 775.0	9.24	10.00	1.191	1.136	0.028	-	-	
		Left Tilt	0	5 775.0	9.24	10.00	1.191	1.136	0.035	-	-	
	Wi-fi 2 (Sub 5)	Right Cheek	0	5 775.0	9.50	10.00	1.122	1.136	0.619	0.255	**0.325**	29
		Right Tilt	0	5 775.0	9.50	10.00	1.122	1.136	0.050	-	-	
		Left Cheek	0	5 775.0	9.50	10.00	1.122	1.136	0.069	-	-	
		Left Tilt	0	5 775.0	9.50	10.00	1.122	1.136	0.058	-	-	
	MIMO	Right Cheek	0	5 775.0	12.34	13.00	1.164	1.136	0.438	0.165	**0.218**	30
		Right Tilt	0	5 775.0	12.34	13.00	1.164	1.136	0.068	-	-	
		Left Cheek	0	5 775.0	12.34	13.00	1.164	1.136	0.082	-	-	
		Left Tilt	0	5 775.0	12.34	13.00	1.164	1.136	0.035	-	-	

Bluetooth										
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Duty Cycle Compensate Factor**	**Measured 1 g SAR (W/kg)**	**Scaled 1 g SAR (W/kg)**	**Plot No.**
BDR DH5	Right Cheek	0	2 441.0	12.84	13.00	1.038	1.016	0.316	**0.333**	31
	Right Tilt	0	2 441.0	12.84	13.00	1.038	1.016	0.100	0.105	
	Left Cheek	0	2 441.0	12.84	13.00	1.038	1.016	0.067	0.071	
	Left Tilt	0	2 441.0	12.84	13.00	1.038	1.016	0.024	0.025	

12.2 Standalone Body-Worn SAR Test Results

GSM 850 Band									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
Voice	Front	15	836.6	33.36	34.80	1.393	0.014	0.020	
	Rear	15	836.6	33.36	34.80	1.393	0.017	0.024	
GPRS 2Tx	Front	15	836.6	31.81	33.80	1.581	0.247	0.391	
	Rear	15	836.6	31.81	33.80	1.581	0.286	**0.452**	32

GSM 1900 Band									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
Voice	Front	15	1 880.0	30.63	31.80	1.309	0.207	0.271	
	Rear	15	1 880.0	30.63	31.80	1.309	0.288	0.377	
GPRS 2Tx	Front	15	1 880.0	29.04	30.80	1.500	0.332	0.498	
	Rear	15	1880.0	29.04	30.80	1.500	0.461	**0.692**	33

WCDMA Band II									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Front	15	1 880.0	23.36	24.60	1.330	0.345	0.459	
	Rear	15	1 880.0	23.36	24.60	1.330	0.573	**0.762**	34

WCDMA Band IV									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Front	15	1 732.4	23.42	24.60	1.312	0.281	0.369	
	Rear	15	1 732.4	23.42	24.60	1.312	0.450	**0.590**	35

WCDMA Band V									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Front	15	836.6	23.59	25.50	1.552	0.157	0.244	
	Rear	15	836.6	23.59	25.50	1.552	0.177	**0.275**	36

LTE Band 2									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	15	1 880.0	23.94	24.30	1.086	0.197	0.214	
QPSK 20M 50RB 24Offset	Front	15	1 880.0	22.88	23.30	1.102	0.290	0.320	
QPSK 20M 1RB 49Offset	Rear	15	1 880.0	23.94	24.30	1.086	0.304	**0.330**	37
QPSK 20M 50RB 24Offset	Rear	15	1 880.0	22.88	23.30	1.102	0.236	0.260	

LTE Band 2 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	15	1 880.0	23.78	24.00	1.052	0.115	0.121	
QPSK 20M 50RB 24Offset	Front	15	1 880.0	22.88	23.00	1.028	0.108	0.111	
QPSK 20M 1RB 49Offset	Rear	15	1 880.0	23.78	24.00	1.052	0.281	**0.296**	38
QPSK 20M 50RB 24Offset	Rear	15	1 880.0	22.88	23.00	1.028	0.259	0.266	

LTE Band 4 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	15	1 732.5	19.17	21.00	1.524	0.055	0.084	
QPSK 20M 50RB 24Offset	Front	15	1 732.5	18.09	20.00	1.552	0.043	0.067	
QPSK 20M 1RB 49Offset	Rear	15	1 732.5	19.17	21.00	1.524	0.096	**0.146**	39
QPSK 20M 50RB 24Offset	Rear	15	1 732.5	18.09	20.00	1.552	0.082	0.127	

LTE Band 5									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Front	15	836.5	23.94	25.80	1.535	0.187	0.287	
QPSK 10M 25RB 0Offset	Front	15	836.5	22.95	24.80	1.531	0.148	0.227	
QPSK 10M 1RB 25Offset	Rear	15	836.5	23.94	25.80	1.535	0.208	**0.319**	40
QPSK 10M 25RB 0Offset	Rear	15	836.5	22.95	24.80	1.531	0.163	0.250	

LTE Band 12									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Front	15	707.5	23.52	25.00	1.406	0.121	0.170	
QPSK 10M 25RB 25Offset	Front	15	707.5	22.41	24.00	1.442	0.095	0.137	
QPSK 10M 1RB 25Offset	Rear	15	707.5	23.52	25.00	1.406	0.147	**0.207**	41
QPSK 10M 25RB 25Offset	Rear	15	707.5	22.41	24.00	1.442	0.111	0.160	

LTE Band 13									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Front	15	782.0	23.47	25.00	1.422	0.113	0.161	
QPSK 10M 25RB 0Offset	Front	15	782.0	22.55	24.00	1.396	0.112	0.156	
QPSK 10M 1RB 25Offset	Rear	15	782.0	23.47	25.00	1.422	0.161	**0.229**	42
QPSK 10M 25RB 0Offset	Rear	15	782.0	22.55	24.00	1.396	0.130	0.181	

LTE Band 26									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 15M 1RB 36Offset	Front	15	831.5	23.50	25.00	1.413	0.141	0.199	
QPSK 15M 36RB 0Offset	Front	15	831.5	22.43	24.00	1.435	0.120	0.172	
QPSK 15M 1RB 36Offset	Rear	15	831.5	23.50	25.00	1.413	0.172	**0.243**	43
QPSK 15M 36RB 0Offset	Rear	15	831.5	22.43	24.00	1.435	0.136	0.195	

LTE Band 41									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	15	2 680.0	22.60	24.00	1.380	0.111	0.153	
QPSK 20M 50RB 24Offset	Front	15	2 680.0	21.63	23.00	1.371	0.087	0.119	
QPSK 20M 1RB 49Offset	Rear	15	2 680.0	22.60	24.00	1.380	0.127	**0.175**	44
QPSK 20M 50RB 24Offset	Rear	15	2 680.0	21.63	23.00	1.371	0.102	0.140	

LTE Band 66									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	15	1 720.0	23.95	25.00	1.274	0.297	0.378	
QPSK 20M 50RB 0Offset	Front	15	1 720.0	23.06	24.00	1.242	0.235	0.292	
QPSK 20M 1RB 49Offset	Rear	15	1 720.0	23.95	25.00	1.274	0.468	**0.596**	45
QPSK 20M 50RB 0Offset	Rear	15	1 720.0	23.06	24.00	1.242	0.370	0.460	

LTE Band 66 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	15	1 745.0	23.89	24.00	1.026	0.125	0.128	
QPSK 20M 50RB 0Offset	Front	15	1 745.0	22.69	23.00	1.074	0.102	0.110	
QPSK 20M 1RB 49Offset	Rear	15	1 745.0	23.89	24.00	1.026	0.254	**0.261**	46
QPSK 20M 50RB 0Offset	Rear	15	1 745.0	22.69	23.00	1.074	0.216	0.232	

5G NR n5									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Front	15	836.5	24.02	25.80	1.507	0.184	0.277	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Front	15	836.5	24.20	25.80	1.445	0.187	0.270	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Rear	15	836.5	24.02	25.80	1.507	0.211	**0.318**	47
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Rear	15	836.5	24.20	25.80	1.445	0.216	0.312	
CP-OFDM_QPSK SCS 15 kHz_20MHz 1RB 1offset	Rear	15	836.5	22.37	24.30	1.560	0.157	0.245	

5G NR n66									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Front	15	1 745.0	23.49	24.00	1.125	0.224	0.252	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Front	15	1 745.0	23.37	24.00	1.156	0.240	0.277	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Rear	15	1 745.0	23.49	24.00	1.125	0.298	0.335	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Rear	15	1 745.0	23.37	24.00	1.156	0.400	**0.462**	48
CP-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Rear	15	1 745.0	22.28	22.50	1.052	0.276	0.290	

5G NR n66 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Front	15	1 745.0	22.83	23.70	1.222	0.120	0.147	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Front	15	1 745.0	23.31	23.70	1.094	0.133	0.146	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Rear	15	1 745.0	22.83	23.70	1.222	0.256	0.313	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Rear	15	1 745.0	23.31	23.70	1.094	0.294	**0.322**	49
CP-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Rear	15	1 745.0	21.80	22.20	1.096	0.168	0.184	

2.4 ㎓ WLAN												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 1g SAR (W/kg)	Scaled 1g SAR (W/kg)	Plot No.
802.11b	Wi-fi 1 (Sub 5)	Front	15	2 412.0	18.12	19.00	1.225	1.010	0.210	-	-	
		Rear	15	2 412.0	18.12	19.00	1.225	1.012	0.267	0.168	**0.208**	50
	Wi-fi 2 (Sub 8)	Front	15	2 437.0	18.47	19.00	1.130	1.010	0.044	-	-	
		Rear	15	2 437.0	18.47	19.00	1.130	1.012	0.095	0.066	**0.075**	51
	MIMO	Front	15	2 437.0	20.99	22.00	1.262	1.012	0.188	-	-	
		Rear	15	2 437.0	20.99	22.00	1.262	1.012	0.221	0.155	**0.198**	52

NII												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 1g SAR (W/kg)	Scaled 1g SAR (W/kg)	Plot No.
802.11a	Wi-fi 1 (Sub 4)	Front	15	5 320.0	17.39	18.00	1.151	1.071	0.077	-	-	
		Rear	15	5 320.0	17.39	18.00	1.151	1.071	0.306	0.133	**0.164**	53
	Wi-fi 2 (Sub 5)	Front	15	5 320.0	17.27	18.00	1.183	1.071	0.111	-	-	
		Rear	15	5 320.0	17.27	18.00	1.183	1.071	0.191	0.083	**0.105**	54
	MIMO	Front	15	5 320.0	19.92	21.00	1.282	1.070	0.198	-	-	
		Rear	15	5 320.0	19.92	21.00	1.282	1.070	0.488	0.218	**0.299**	55
802.11a	Wi-fi 1 (Sub 4)	Front	15	5 500.0	17.77	18.00	1.054	1.071	0.175	-	-	
		Rear	15	5 500.0	17.77	18.00	1.054	1.071	0.536	0.240	**0.271**	56
	Wi-fi 2 (Sub 5)	Front	15	5 500.0	17.33	18.00	1.167	1.071	0.234	-	-	
		Rear	15	5 500.0	17.33	18.00	1.167	1.071	0.249	0.110	**0.137**	57
	MIMO	Front	15	5 500.0	20.22	21.00	1.197	1.070	0.367	-	-	
		Rear	15	5 500.0	20.22	21.00	1.197	1.070	0.698	0.308	**0.394**	58
802.11a	Wi-fi 1 (Sub 4)	Front	15	5 785.0	16.74	18.00	1.337	1.071	0.036	-	-	
		Rear	15	5 785.0	16.74	18.00	1.337	1.071	0.252	0.103	**0.147**	59
	Wi-fi 2 (Sub 5)	Front	15	5 745.0	17.40	18.00	1.148	1.071	0.205	-	-	
		Rear	15	5 745.0	17.40	18.00	1.148	1.071	0.220	0.092	**0.113**	60
	MIMO	Front	15	5 745.0	19.52	21.00	1.406	1.026	0.322	-	-	
		Rear	15	5 745.0	19.52	21.00	1.406	1.026	0.407	0.172	**0.248**	61

Bluetooth										
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
BDR DH5	Front	15	2 441.0	12.84	13.00	1.038	1.016	0.028	0.030	
	Rear	15	2 441.0	12.84	13.00	1.038	1.016	0.036	**0.038**	62

12.3 Standalone Hotspot SAR Test Results

GSM 850 Band									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
GPRS 2Tx	Front	10	836.6	31.81	33.80	1.581	0.271	0.428	
	Rear	10	836.6	31.81	33.80	1.581	0.345	**0.545**	63
	Left	10	836.6	31.81	33.80	1.581	0.126	0.199	
	Right	10	836.6	31.81	33.80	1.581	0.290	0.458	
	Bottom	10	836.6	31.81	33.80	1.581	0.176	0.278	

GSM 1900 Band									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
GPRS 2Tx	Front	10	1 880.0	26.00	27.80	1.514	0.261	0.395	
	Rear	10	1 880.0	26.00	27.80	1.514	0.413	0.625	
	Left	10	1 880.0	26.00	27.80	1.514	0.056	0.085	
	Right	10	1 880.0	26.00	27.80	1.514	0.044	0.067	
	Bottom	10	1 880.0	26.00	27.80	1.514	0.751	1.137	
	Bottom	10	1 850.2	25.85	27.80	1.567	0.621	0.973	
	Bottom	10	1 909.8	26.03	27.80	1.503	0.817	**1.228**	64
	Repeated SAR Test								
	Bottom	10	1 909.8	26.03	27.80	1.503	0.816	1.226	

WCDMA Band II									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Front	10	1 880.0	19.56	20.60	1.271	0.277	0.352	
	Rear	10	1 880.0	19.56	20.60	1.271	0.456	0.580	
	Left	10	1 880.0	19.56	20.60	1.271	0.060	0.076	
	Right	10	1 880.0	19.56	20.60	1.271	0.039	0.050	
	Bottom	10	1 880.0	19.56	20.60	1.271	0.833	1.059	
	Bottom	10	1 852.4	19.38	20.60	1.324	0.759	1.005	
	Bottom	10	1 907.6	19.69	20.60	1.233	0.860	**1.060**	65
	Repeated SAR Test								
	Bottom	10	1 907.6	19.69	20.60	1.233	0.857	1.057	

WCDMA Band IV									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Front	10	1 732.4	20.54	21.60	1.276	0.296	0.378	
	Rear	10	1 732.4	20.54	21.60	1.276	0.472	0.602	
	Left	10	1 732.4	20.54	21.60	1.276	0.054	0.069	
	Right	10	1 732.4	20.54	21.60	1.276	0.053	0.068	
	Bottom	10	1 732.4	20.54	21.60	1.276	0.731	0.933	
	Bottom	10	1 712.4	20.70	21.60	1.230	0.795	0.978	
	Bottom	10	1 752.6	20.38	21.60	1.324	0.870	**1.152**	66
	Repeated SAR Test								
	Bottom	10	1 752.6	20.38	21.60	1.324	0.869	1.151	

WCDMA Band V									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
RMC	Front	10	836.6	23.59	25.50	1.552	0.203	0.315	
	Rear	10	836.6	23.59	25.50	1.552	0.315	**0.489**	67
	Left	10	836.6	23.59	25.50	1.552	0.091	0.141	
	Right	10	836.6	23.59	25.50	1.552	0.162	0.251	
	Bottom	10	836.6	23.59	25.50	1.552	0.141	0.219	

LTE Band 2									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	10	1 880.0	18.92	19.30	1.091	0.183	0.200	
QPSK 20M 50RB 24Offset	Front	10	1 880.0	18.90	19.30	1.096	0.185	0.203	
QPSK 20M 1RB 49Offset	Rear	10	1 880.0	18.92	19.30	1.091	0.334	0.364	
QPSK 20M 50RB 24Offset	Rear	10	1 880.0	18.90	19.30	1.096	0.294	0.322	
QPSK 20M 1RB 49Offset	Left	10	1 880.0	18.92	19.30	1.091	0.046	0.050	
QPSK 20M 50RB 24Offset	Left	10	1 880.0	18.90	19.30	1.096	0.046	0.050	
QPSK 20M 1RB 49Offset	Right	10	1 880.0	18.92	19.30	1.091	0.043	0.047	
QPSK 20M 50RB 24Offset	Right	10	1 880.0	18.90	19.30	1.096	0.045	0.049	
QPSK 20M 1RB 49Offset	Bottom	10	1 880.0	18.92	19.30	1.091	0.572	**0.624**	68
QPSK 20M 50RB 24Offset	Bottom	10	1 880.0	18.90	19.30	1.096	0.496	0.544	

LTE Band 2 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	10	1 880.0	20.85	21.00	1.035	0.136	0.141	
QPSK 20M 50RB 24Offset	Front	10	1 880.0	20.84	21.00	1.038	0.138	0.143	
QPSK 20M 1RB 49Offset	Rear	10	1 880.0	20.85	21.00	1.035	0.369	0.382	
QPSK 20M 50RB 24Offset	Rear	10	1 880.0	20.84	21.00	1.038	0.363	0.377	
QPSK 20M 1RB 49Offset	Left	10	1 880.0	20.85	21.00	1.035	0.039	0.040	
QPSK 20M 50RB 24Offset	Left	10	1 880.0	20.84	21.00	1.038	0.040	0.042	
QPSK 20M 1RB 49Offset	Right	10	1 880.0	20.85	21.00	1.035	0.041	0.042	
QPSK 20M 50RB 24Offset	Right	10	1 880.0	20.84	21.00	1.038	0.042	0.044	
QPSK 20M 1RB 49Offset	Top	10	1 880.0	20.85	21.00	1.035	0.430	0.445	
QPSK 20M 50RB 24Offset	Top	10	1 880.0	20.84	21.00	1.038	0.441	**0.458**	69

LTE Band 4 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	10	1 732.5	19.17	21.00	1.524	0.123	0.187	
QPSK 20M 50RB 24Offset	Front	10	1 732.5	18.09	20.00	1.552	0.097	0.151	
QPSK 20M 1RB 49Offset	Rear	10	1 732.5	19.17	21.00	1.524	0.265	0.404	
QPSK 20M 50RB 24Offset	Rear	10	1 732.5	18.09	20.00	1.552	0.210	0.326	
QPSK 20M 1RB 49Offset	Left	10	1 732.5	19.17	21.00	1.524	0.046	0.070	
QPSK 20M 50RB 24Offset	Left	10	1 732.5	18.09	20.00	1.552	0.037	0.057	
QPSK 20M 1RB 49Offset	Right	10	1 732.5	19.17	21.00	1.524	0.028	0.043	
QPSK 20M 50RB 24Offset	Right	10	1 732.5	18.09	20.00	1.552	0.022	0.034	
QPSK 20M 1RB 49Offset	Top	10	1 732.5	19.17	21.00	1.524	0.267	**0.407**	70
QPSK 20M 50RB 24Offset	Top	10	1 732.5	18.09	20.00	1.552	0.216	0.335	

LTE Band 5									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Front	10	836.5	23.94	25.80	1.535	0.326	0.500	
QPSK 10M 25RB 0Offset	Front	10	836.5	22.95	24.80	1.531	0.253	0.387	
QPSK 10M 1RB 25Offset	Rear	10	836.5	23.94	25.80	1.535	0.430	**0.660**	71
QPSK 10M 25RB 0Offset	Rear	10	836.5	22.92	24.80	1.542	0.335	0.517	
QPSK 10M 1RB 25Offset	Left	10	836.5	23.94	25.80	1.535	0.125	0.192	
QPSK 10M 25RB 0Offset	Left	10	836.5	22.95	24.80	1.531	0.097	0.149	
QPSK 10M 1RB 25Offset	Right	10	836.5	23.94	25.80	1.535	0.213	0.327	
QPSK 10M 25RB 0Offset	Right	10	836.5	22.95	24.80	1.531	0.165	0.253	
QPSK 10M 1RB 25Offset	Bottom	10	836.5	23.94	25.80	1.535	0.155	0.238	
QPSK 10M 25RB 0Offset	Bottom	10	836.5	22.95	24.80	1.531	0.122	0.187	

LTE Band 12									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Front	10	707.5	23.52	25.00	1.406	0.120	0.169	
QPSK 10M 25RB 0Offset	Front	10	707.5	22.41	24.00	1.442	0.095	0.137	
QPSK 10M 1RB 25Offset	Rear	10	707.5	23.52	25.00	1.406	0.156	**0.219**	72
QPSK 10M 25RB 0Offset	Rear	10	707.5	22.41	24.00	1.442	0.131	0.189	
QPSK 10M 1RB 25Offset	Left	10	707.5	23.52	25.00	1.406	0.138	0.194	
QPSK 10M 25RB 0Offset	Left	10	707.5	22.41	24.00	1.442	0.097	0.140	
QPSK 10M 1RB 25Offset	Right	10	707.5	23.52	25.00	1.406	0.090	0.127	
QPSK 10M 25RB 0Offset	Right	10	707.5	22.41	24.00	1.442	0.065	0.094	
QPSK 10M 1RB 25Offset	Bottom	10	707.5	23.52	25.00	1.406	0.023	0.032	
QPSK 10M 25RB 0Offset	Bottom	10	707.5	22.41	24.00	1.442	0.019	0.027	

LTE Band 13									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 10M 1RB 25Offset	Front	10	782.0	23.47	25.00	1.422	0.127	0.181	
QPSK 10M 25RB 0Offset	Front	10	782.0	22.55	24.00	1.396	0.102	0.142	
QPSK 10M 1RB 25Offset	Rear	10	782.0	23.47	25.00	1.422	0.146	0.208	
QPSK 10M 25RB 0Offset	Rear	10	782.0	22.55	24.00	1.396	0.119	0.166	
QPSK 10M 1RB 25Offset	Left	10	782.0	23.47	25.00	1.422	0.126	0.179	
QPSK 10M 25RB 0Offset	Left	10	782.0	22.55	24.00	1.396	0.096	0.134	
QPSK 10M 1RB 25Offset	Right	10	782.0	23.47	25.00	1.422	0.155	**0.220**	73
QPSK 10M 25RB 0Offset	Right	10	782.0	22.55	24.00	1.396	0.113	0.158	
QPSK 10M 1RB 25Offset	Bottom	10	782.0	23.47	25.00	1.422	0.005	0.007	
QPSK 10M 25RB 0Offset	Bottom	10	782.0	22.55	24.00	1.396	0.020	0.028	

LTE Band 26									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 15M 1RB 36Offset	Front	10	831.5	23.60	25.00	1.380	0.223	0.308	
QPSK 15M 36RB 0Offset	Front	10	831.5	22.43	24.00	1.435	0.172	0.247	
QPSK 15M 1RB 36Offset	Rear	10	831.5	23.60	25.00	1.380	0.281	**0.388**	74
QPSK 15M 36RB 0Offset	Rear	10	831.5	22.43	24.00	1.435	0.230	0.330	
QPSK 15M 1RB 36Offset	Left	10	831.5	23.60	25.00	1.380	0.118	0.163	
QPSK 15M 36RB 0Offset	Left	10	831.5	22.43	24.00	1.435	0.095	0.136	
QPSK 15M 1RB 36Offset	Right	10	831.5	23.60	25.00	1.380	0.199	0.275	
QPSK 15M 36RB 0Offset	Right	10	831.5	22.43	24.00	1.435	0.152	0.218	
QPSK 15M 1RB 36Offset	Bottom	10	831.5	23.60	25.00	1.380	0.110	0.152	
QPSK 15M 36RB 0Offset	Bottom	10	831.5	22.43	24.00	1.435	0.079	0.113	

LTE Band 41									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 1 g SAR (W/kg)**	**Scaled 1 g SAR (W/kg)**	**Plot No.**
QPSK 20M 1RB 0Offset	Front	10	2 680.0	19.17	21.00	1.524	0.115	0.175	
QPSK 20M 50RB 0Offset	Front	10	2 680.0	19.18	21.00	1.521	0.117	0.178	
QPSK 20M 1RB 0Offset	Rear	10	2 680.0	19.17	21.00	1.524	0.154	**0.235**	75
QPSK 20M 50RB 0Offset	Rear	10	2 680.0	19.18	21.00	1.521	0.151	0.230	
QPSK 20M 1RB 0Offset	Left	10	2 680.0	19.17	21.00	1.524	0.043	0.066	
QPSK 20M 50RB 0Offset	Left	10	2 680.0	19.18	21.00	1.521	0.037	0.056	
QPSK 20M 1RB 0Offset	Bottom	10	2 680.0	19.17	21.00	1.524	0.136	0.207	
QPSK 20M 50RB 0Offset	Bottom	10	2 680.0	19.18	21.00	1.521	0.143	0.218	

LTE Band 66									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 1 g SAR (W/kg)**	**Scaled 1 g SAR (W/kg)**	**Plot No.**
QPSK 20M 1RB 49Offset	Front	10	1 745.0	19.02	20.00	1.253	0.207	0.259	
QPSK 20M 50RB 24Offset	Front	10	1 745.0	18.65	20.00	1.365	0.204	0.278	
QPSK 20M 1RB 49Offset	Rear	10	1 745.0	19.02	20.00	1.253	0.269	0.337	
QPSK 20M 50RB 24Offset	Rear	10	1 745.0	18.65	20.00	1.365	0.267	0.364	
QPSK 20M 1RB 49Offset	Left	10	1 745.0	19.02	20.00	1.253	0.066	0.083	
QPSK 20M 50RB 24Offset	Left	10	1 745.0	18.65	20.00	1.365	0.061	0.083	
QPSK 20M 1RB 49Offset	Right	10	1 745.0	19.02	20.00	1.253	0.031	0.039	
QPSK 20M 50RB 24Offset	Right	10	1 745.0	18.65	20.00	1.365	0.067	0.091	
QPSK 20M 1RB 49Offset	Bottom	10	1 745.0	19.02	20.00	1.253	0.479	0.600	
QPSK 20M 50RB 24Offset	Bottom	10	1 720.0	18.65	20.00	1.365	0.482	**0.658**	76

LTE Band 66 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
QPSK 20M 1RB 49Offset	Front	10	1 745.0	20.80	21.00	1.047	0.123	0.129	
QPSK 20M 50RB 50Offset	Front	10	1 745.0	20.83	21.00	1.040	0.123	0.128	
QPSK 20M 1RB 49Offset	Rear	10	1 745.0	20.80	21.00	1.047	0.308	0.322	
QPSK 20M 50RB 50Offset	Rear	10	1 745.0	20.83	21.00	1.040	0.299	0.311	
QPSK 20M 1RB 49Offset	Left	10	1 745.0	20.80	21.00	1.047	0.061	0.064	
QPSK 20M 50RB 50Offset	Left	10	1 745.0	20.83	21.00	1.040	0.060	0.062	
QPSK 20M 1RB 49Offset	Right	10	1 745.0	20.80	21.00	1.047	0.044	0.046	
QPSK 20M 50RB 50Offset	Right	10	1 745.0	20.83	21.00	1.040	0.046	0.048	
QPSK 20M 1RB 49Offset	Top	10	1 745.0	20.80	21.00	1.047	0.379	0.397	
QPSK 20M 50RB 50Offset	Top	10	1 745.0	20.83	21.00	1.040	0.382	**0.397**	77

5G NR n5									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Front	10	836.5	24.02	25.80	1.507	0.239	0.360	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Front	10	836.5	24.20	25.80	1.445	0.242	0.350	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Rear	10	836.5	24.02	25.80	1.507	0.359	**0.541**	78
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Rear	10	836.5	24.20	25.80	1.445	0.372	0.538	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Left	10	836.5	24.02	25.80	1.507	0.100	0.151	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Left	10	836.5	24.20	25.80	1.445	0.097	0.140	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Right	10	836.5	24.02	25.80	1.507	0.213	0.321	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Right	10	836.5	24.20	25.80	1.445	0.215	0.311	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Bottom	10	836.5	24.02	25.80	1.507	0.189	0.285	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 28offset	Bottom	10	836.5	24.20	25.80	1.445	0.193	0.279	
CP-OFDM_QPSK SCS 15kHz_20 MHz 1RB 1offset	Rear	10	836.5	22.37	24.30	1.560	0.229	0.357	

5G NR n66									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 1 g SAR (W/kg)**	**Scaled 1 g SAR (W/kg)**	**Plot No.**
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Front	10	1 745.0	20.07	21.00	1.239	0.237	0.294	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Front	10	1 745.0	20.10	21.00	1.230	0.258	0.317	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Rear	10	1 745.0	20.07	21.00	1.239	0.312	0.387	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Rear	10	1 745.0	20.10	21.00	1.230	0.347	0.427	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Left	10	1 745.0	20.07	21.00	1.239	0.054	0.067	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Left	10	1 745.0	20.10	21.00	1.230	0.062	0.076	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Right	10	1 745.0	20.07	21.00	1.239	0.047	0.058	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Right	10	1 745.0	20.10	21.00	1.230	0.054	0.066	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Bottom	10	1 745.0	20.07	21.00	1.239	0.518	0.642	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Bottom	10	1 745.0	20.10	21.00	1.230	0.596	**0.733**	79
CP-OFDM_QPSK SCS 15kHz_40 MHz 1RB 1offset	Bottom	10	1 745.0	20.06	21.00	1.242	0.526	0.653	

5G NR n66 Sub2 Ant.									
Mode	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Front	10	1 745.0	20.45	20.70	1.059	0.128	0.136	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 0offset	Front	10	1 745.0	20.55	20.70	1.035	0.133	0.138	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Rear	10	1 745.0	20.45	20.70	1.059	0.291	0.308	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 0offset	Rear	10	1 745.0	20.55	20.70	1.035	0.298	0.308	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Left	10	1 745.0	20.45	20.70	1.059	0.092	0.097	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 0offset	Left	10	1 745.0	20.55	20.70	1.035	0.081	0.084	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Right	10	1 745.0	20.45	20.70	1.059	0.046	0.049	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 0offset	Right	10	1 745.0	20.55	20.70	1.035	0.045	0.047	
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 1RB 53offset	Top	10	1 745.0	20.45	20.70	1.059	0.355	**0.376**	80
DFT-S-OFDM_QPSK SCS 15 kHz_20MHz 50RB 0offset	Top	10	1 745.0	20.55	20.70	1.035	0.356	0.368	
CP-OFDM_QPSK SCS 15kHz_20 MHz 1RB 1offset	Top	10	1 745.0	20.36	20.70	1.081	0.328	0.355	

2.4 GHz WLAN												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 1g SAR (W/kg)	Scaled 1g SAR (W/kg)	Plot No.
802.11b	Wi-fi 1 (Sub 5)	Front	10	2 412.0	18.12	19.00	1.225	1.010	0.389	-	-	
		Rear	10	2 412.0	18.12	19.00	1.225	1.010	0.500	0.263	**0.325**	81
		Left	10	2 412.0	18.12	19.00	1.225	1.010	0.446	-	-	
		Top	10	2 412.0	18.12	19.00	1.225	1.012	0.268	-	-	
	Wi-fi 2 (Sub 8)	Front	10	2 437.0	18.47	19.00	1.130	1.010	0.080	-	-	
		Rear	10	2 437.0	18.47	19.00	1.130	1.010	0.227	0.140	**0.160**	82
		Top	10	2 437.0	18.47	19.00	1.130	1.010	0.180	-	-	
	MIMO	Front	10	2 437.0	20.99	22.00	1.262	1.012	0.342	-	-	
		Rear	10	2 437.0	20.99	22.00	1.262	1.012	0.410	0.271	**0.346**	83
		Left	10	2 437.0	20.99	22.00	1.262	1.012	0.397	-	-	
		Top	10	2 437.0	20.99	22.00	1.262	1.012	0.126	-	-	

U-NII-3												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 1g SAR (W/kg)	Scaled 1g SAR (W/kg)	Plot No.
802.11a	Wi-fi 1 (Sub 4)	Front	10	5 785.0	16.74	18.00	1.337	1.071	0.093	-	-	
		Rear	10	5 785.0	16.74	18.00	1.337	1.071	0.469	0.209	0.299	
		Left	10	5 785.0	16.74	18.00	1.337	1.071	0.681	0.281	**0.402**	84
		Top	10	5 785.0	16.74	18.00	1.337	1.071	0.027	-	-	
	Wi-fi 2 (Sub 5)	Front	10	5 745.0	17.40	18.00	1.148	1.071	0.337	-	-	
		Rear	10	5 745.0	17.40	18.00	1.148	1.071	0.306	0.138	Note7) 0.170	
		Left	10	5 745.0	17.40	18.00	1.148	1.071	0.583	0.244	**0.300**	85
		Top	10	5 745.0	17.40	18.00	1.148	1.071	0.125	-	-	
	MIMO	Front	10	5 745.0	19.52	21.00	1.406	1.026	0.435	-	-	
		Rear	10	5 745.0	19.52	21.00	1.406	1.026	0.484	0.214	0.309	
		Left	10	5 745.0	19.52	21.00	1.406	1.026	0.973	0.428	**0.617**	86
		Top	10	5 745.0	19.52	21.00	1.406	1.026	0.141	-	-	

Bluetooth										
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Measured 1 g SAR (W/kg)	Scaled 1 g SAR (W/kg)	Plot No.
BDR DH5	Front	10	2 441.0	12.84	13.00	1.038	1.016	0.059	0.062	
	Rear	10	2 441.0	12.84	13.00	1.038	1.016	0.077	0.081	
	Left	10	2 441.0	12.84	13.00	1.038	1.016	0.102	**0.108**	87
	Top	10	2 441.0	12.84	13.00	1.038	1.016	0.012	0.013	

12.4 Standalone Phablet SAR Test Results

GSM 1900 Band									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 10 g SAR (W/kg)	Scaled 10 g SAR (W/kg)	Plot No.
GPRS 2Tx	Grip Sensor off								
	Front	7	1 880.0	29.04	30.80	1.500	0.433	0.650	
	Rear	10	1 880.0	29.04	30.80	1.500	0.494	0.741	
	Left	0	1 880.0	29.04	30.80	1.500	0.336	0.504	
	Right	0	1 880.0	29.04	30.80	1.500	0.135	0.203	
	Bottom	14	1 880.0	29.04	30.80	1.500	0.498	0.747	
	Grip Sensor on								
	Front	0	1 880.0	26.00	27.80	1.514	0.694	1.051	
	Rear	0	1 880.0	26.00	27.80	1.514	1.140	1.726	
	Bottom	0	1 880.0	26.00	27.80	1.514	1.640	2.483	
	Bottom	0	1 850.2	25.85	27.80	1.567	1.620	**2.539**	88
	Bottom	0	1 909.8	26.03	27.80	1.503	1.510	2.270	

WCDMA Band II									
Mode	EUT Position	Distance (mm)	Frequency (㎒)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Measured 10 g SAR (W/kg)	Scaled 10 g SAR (W/kg)	Plot No.
RMC	Grip Sensor off								
	Front	7	1 880.0	23.36	24.60	1.330	0.564	0.750	
	Rear	10	1 880.0	23.36	24.60	1.330	0.638	0.849	
	Left	0	1 880.0	23.36	24.60	1.330	0.438	0.583	
	Right	0	1 880.0	23.36	24.60	1.330	0.177	0.235	
	Bottom	14	1 880.0	23.36	24.60	1.330	0.623	0.829	
	Grip Sensor on								
	Front	0	1 880.0	19.56	20.60	1.271	0.767	0.975	
	Rear	0	1 880.0	19.56	20.60	1.271	1.200	1.525	
	Bottom	0	1 880.0	19.56	20.60	1.271	1.650	2.097	
	Bottom	0	1 852.4	19.38	20.60	1.324	1.670	**2.211**	89
	Bottom	0	1 907.6	19.69	20.60	1.233	1.610	1.985	

WCDMA Band IV									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 10 g SAR (W/kg)**	**Scaled 10 g SAR (W/kg)**	**Plot No.**
RMC	Grip Sensor off								
	Front	7	1 732.4	23.42	24.60	1.312	0.473	0.621	
	Rear	10	1 732.4	23.42	24.60	1.312	0.528	0.693	
	Left	0	1 732.4	23.42	24.60	1.312	0.266	0.349	
	Right	0	1 732.4	23.42	24.60	1.312	0.180	0.236	
	Bottom	14	1 732.4	23.42	24.60	1.312	0.472	0.619	
	Grip Sensor on								
	Front	0	1 732.4	20.54	21.60	1.276	0.819	1.045	
	Rear	0	1 732.4	20.54	21.60	1.276	1.480	1.888	
	Bottom	0	1 732.4	20.54	21.60	1.276	2.110	2.692	
	Bottom	0	1 712.4	20.70	21.60	1.230	1.780	2.189	
	Bottom	0	1 752.6	20.38	21.60	1.324	2.180	**2.886**	90
	Repeated SAR Test								
	Bottom	10	1 752.6	20.38	21.60	1.324	2.180	2.886	

LTE Band 2									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 10 g SAR (W/kg)**	**Scaled 10 g SAR (W/kg)**	**Plot No.**
Grip Sensor off									
QPSK 20M 1RB 49Offset	Front	7	1 880.0	23.94	24.30	1.086	0.493	0.535	
QPSK 20M 50RB 24Offset	Front	7	1 880.0	22.88	23.30	1.102	0.395	0.435	
QPSK 20M 1RB 49Offset	Rear	10	1 880.0	23.94	24.30	1.086	0.558	0.606	
QPSK 20M 50RB 24Offset	Rear	10	1 880.0	22.88	23.30	1.102	0.440	0.485	
QPSK 20M 1RB 49Offset	Left	0	1 880.0	23.94	24.30	1.086	0.318	0.345	
QPSK 20M 50RB 24Offset	Left	0	1 880.0	22.88	23.30	1.102	0.141	0.155	
QPSK 20M 1RB 49Offset	Right	0	1 880.0	23.94	24.30	1.086	0.314	0.341	
QPSK 20M 50RB 24Offset	Right	0	1 880.0	22.88	23.30	1.102	0.239	0.263	
QPSK 20M 1RB 49Offset	Bottom	14	1 880.0	23.94	24.30	1.086	0.540	0.586	
QPSK 20M 50RB 24Offset	Bottom	14	1 880.0	22.88	23.30	1.102	0.432	0.476	
Grip Sensor on									
QPSK 20M 1RB 49Offset	Front	0	1 880.0	19.95	21.30	1.365	0.516	0.704	
QPSK 20M 50RB 24Offset	Front	0	1 880.0	19.92	21.30	1.374	0.400	0.550	
QPSK 20M 1RB 49Offset	Rear	0	1 880.0	19.95	21.30	1.365	0.842	1.149	
QPSK 20M 50RB 24Offset	Rear	0	1 880.0	19.92	21.30	1.374	0.847	1.164	
QPSK 20M 1RB 49Offset	Bottom	0	1 880.0	19.95	21.30	1.365	1.180	1.611	
QPSK 20M 50RB 24Offset	Bottom	0	1 880.0	19.92	21.30	1.374	1.240	**1.704**	91

LTE Band 66									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (㎒)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 10 g SAR (W/kg)**	**Scaled 10 g SAR (W/kg)**	**Plot No.**
Grip Sensor off									
QPSK 20M 1RB 49Offset	Front	7	1 745.0	23.95	25.00	1.274	0.447	0.569	
QPSK 20M 50RB 0Offset	Front	7	1 745.0	23.06	24.00	1.242	0.355	0.441	
QPSK 20M 1RB 49Offset	Rear	10	1 745.0	23.95	25.00	1.274	0.481	0.613	
QPSK 20M 50RB 0Offset	Rear	10	1 745.0	23.06	24.00	1.242	0.386	0.479	
QPSK 20M 1RB 49Offset	Left	0	1 745.0	23.95	25.00	1.274	0.323	0.412	
QPSK 20M 50RB 0Offset	Left	0	1 745.0	23.06	24.00	1.242	0.242	0.301	
QPSK 20M 1RB 49Offset	Right	0	1 745.0	23.95	25.00	1.274	0.160	0.204	
QPSK 20M 50RB 0Offset	Right	0	1 745.0	23.06	24.00	1.242	0.119	0.148	
QPSK 20M 1RB 49Offset	Bottom	14	1 745.0	23.95	25.00	1.274	0.456	0.581	
QPSK 20M 50RB 0Offset	Bottom	14	1 745.0	23.06	24.00	1.242	0.363	0.451	
Grip Sensor on									
QPSK 20M 1RB 49Offset	Front	0	1 745.0	20.52	22.00	1.406	0.611	0.859	
QPSK 20M 50RB 24Offset	Front	0	1 745.0	20.14	22.00	1.535	0.622	0.955	
QPSK 20M 1RB 49Offset	Rear	0	1 745.0	20.52	22.00	1.406	0.757	1.064	
QPSK 20M 50RB 24Offset	Rear	0	1 745.0	20.14	22.00	1.535	0.753	1.156	
QPSK 20M 1RB 49Offset	Bottom	0	1 745.0	20.52	22.00	1.406	1.260	1.772	
QPSK 20M 50RB 24Offset	Bottom	0	1 745.0	20.14	22.00	1.535	1.160	**1.781**	92

5G NR n66									
Mode	**EUT Position**	**Distance (mm)**	**Frequency (MHz)**	**Measured Conducted Power (dBm)**	**Max. Tune-up Power (dBm)**	**Power Scaling Factor**	**Measured 10 g SAR (W/kg)**	**Scaled 10 g SAR (W/kg)**	**Plot No.**
Grip Sensor off									
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Front	7	1 745.0	23.49	24.00	1.125	0.339	0.381	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Front	7	1 745.0	23.37	24.00	1.156	0.410	0.474	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Rear	10	1 745.0	23.49	24.00	1.125	0.386	0.434	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Rear	10	1 745.0	23.37	24.00	1.156	0.464	0.536	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Left	0	1 745.0	23.49	24.00	1.125	0.187	0.210	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Left	0	1 745.0	23.37	24.00	1.156	0.251	0.290	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Right	0	1 745.0	23.49	24.00	1.125	0.088	0.099	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Right	0	1 745.0	23.37	24.00	1.156	0.103	0.119	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Bottom	14	1 745.0	23.49	24.00	1.125	0.316	0.356	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 54offset	Bottom	14	1 745.0	23.37	24.00	1.156	0.400	0.462	
Grip Sensor on									
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Front	0	1 745.0	20.07	21.00	1.239	0.664	0.823	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Front	0	1 745.0	20.10	21.00	1.230	0.671	0.825	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Rear	0	1 745.0	20.07	21.00	1.239	1.120	1.388	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Rear	0	1 745.0	20.10	21.00	1.230	1.140	1.402	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 1RB 108offset	Bottom	0	1 745.0	20.07	21.00	1.239	1.720	2.131	
DFT-S-OFDM_QPSK SCS 15 kHz_40MHz 108RB 0offset	Bottom	0	1 745.0	20.10	21.00	1.230	1.800	**2.214**	93
CP-OFDM_QPSK SCS 15 kHz_40MHz 1RB 1offset	Bottom	0	1 745.0	20.06	21.00	1.242	1.540	1.913	

NII												
Mode	Ant.	EUT Position	Distance (mm)	Frequency (MHz)	Measured Conducted Power (dBm)	Max. Tune-up Power (dBm)	Power Scaling Factor	Duty Cycle Compensate Factor	Area Scan Max SAR (W/kg)	Measured 10g SAR (W/kg)	Scaled 10g SAR (W/kg)	Plot No.
802.11a	Wi-fi 1 (Sub 4)	Front	0	5 320.0	17.39	18.00	1.151	1.071	2.076	-	-	
		Rear	0	5 320.0	17.39	18.00	1.151	1.071	6.254	1.150	**1.324**	94
		Left	0	5 320.0	17.39	18.00	1.151	1.071	7.732	0.928	1.068	
		Top	0	5 320.0	17.39	18.00	1.151	1.071	0.122	-	-	
	Wi-fi 2 (Sub 5)	Front	0	5 320.0	17.27	18.00	1.183	1.071	4.517	-	-	
		Rear	0	5 320.0	17.27	18.00	1.183	1.071	5.276	0.654	0.774	
		Left	0	5 320.0	17.27	18.00	1.183	1.071	13.504	1.150	**1.360**	95
		Top	0	5 240.0	17.60	18.00	1.096	1.070	0.486	-	-	
	MIMO	Front	0	5 320.0	19.92	21.00	1.282	1.070	4.348	-	-	
		Rear	0	5 320.0	19.92	21.00	1.282	1.070	13.170	1.310	1.679	
		Left	0	5 320.0	19.92	21.00	1.282	1.070	16.679	1.600	**2.051**	96
		Left	0	5 300.0	19.74	21.00	1.337	1.070	0.405	-	-	
		Top	0	5 320.0	19.92	21.00	1.282	1.070	2.076	-	-	
802.11a	Wi-fi 1 (Sub 4)	Front	0	5 500.0	17.77	18.00	1.054	1.071	1.790	-	-	
		Rear	0	5 500.0	17.77	18.00	1.054	1.071	8.641	0.993	1.047	
		Left	0	5 500.0	17.77	18.00	1.054	1.071	10.487	1.140	**1.202**	97
		Top	0	5 500.0	17.77	18.00	1.054	1.071	0.221	-	-	
	Wi-fi 2 (Sub 5)	Front	0	5 500.0	17.33	18.00	1.167	1.071	7.524	1.050	1.225	
		Rear	0	5 500.0	17.33	18.00	1.167	1.071	5.720	-	-	
		Left	0	5 500.0	17.33	18.00	1.167	1.071	14.778	1.370	**1.599**	98
		Top	0	5 500.0	17.33	18.00	1.167	1.071	0.524	-	-	
	MIMO	Front	0	5 500.0	20.22	21.00	1.197	1.070	6.359	-	-	
		Rear	0	5 500.0	20.22	21.00	1.197	1.070	10.768	1.480	1.772	
		Left	0	5 500.0	20.22	21.00	1.197	1.070	20.94	1.960	**2.346**	99
		Top	0	5 500.0	20.22	21.00	1.197	1.070	0.691	-	-	

12.5 Standalone NFC SAR Test Results

NFC							
Mode	EUT Position	Distance (mm)	Test setup		Frequency (㎒)	Measured 10 g SAR (W/kg)	Plot No.
			Type	Bitrate			
PBRS	Rear	0	A	106	13.6	0.023	
		0	B	106	13.6	0.023	
		0	F	106	13.6	0.000	
		0	B	212	13.6	**0.023**	100
		0	B	424	13.6	0.023	
	Front	0	B	212	13.6	0.000	
	Left	0	B	212	13.6	0.000	
	Right	0	B	212	13.6	0.000	
	Top	0	B	212	13.6	0.000	
	Bottom	0	B	212	13.6	0.000	

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, and FCC KDB Publication 447498 D04v01.
2. All modes of operation were investigated, and worst-case results are reported.
3. Battery is fully charged for all readings and the standard batteries are the only options.
4. Liquid tissue depth was at least 15 cm.
5. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
6. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D04v01.
7. Device was tested using a fixed spacing for body-worn accessory testing. A separation distance of 15 ㎜ was considered because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
8. Per FCC KDB Publication 648474 D04v01r03, body-worn SAR was evaluated without a headset connected to the device. Since the standalone reported body-worn SAR was ≤ 1.2 W/kg, no additional body-worn SAR evaluations using a headset cable were required.
9. This device utilizes power reduction for some wireless modes, as outlined in Section 2.3. The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous transmission scenarios.

GSM Notes:

1. Body-Worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2. This device supports GSM VOIP in the head and body-worn configurations; therefore GPRS was additionally evaluated for head and body-worn compliance.
3. Justification for reduced test configurations per KDB Publication 941225 D01v03r01 and October 2013 TCB Workshop Notes: The source-based frame-averaged output power was evaluated for all GPRS/EDGE slot configurations. The configuration with the highest target frame averaged output power was evaluated for hotspot SAR. When the maximum frame-averaged powers are equivalent across two or more slots (within 0.25 dB), the configuration with the most number of time slots was tested.
4. Per FCC KDB Publication 447498 D04v01, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s). Since the maximum output power variation across the required test channels is not > ½ dB, the middle channel was used for testing.

WCDMA Notes:

1. UMTS mode in was tested under RMC 12.2 kbps with HSPA Inactive per KDB Publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
2. Per FCC KDB Publication 447498 D04v01, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg for 1g evaluations then testing at the other channels is not required for such test configuration(s).

LTE Notes:

1. Justification Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.
2. When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
3. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
4. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
5. Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.
6. A-MPR was disabled for all SAR tests by setting NS=01 and MCC=001 on the base station simulator.
7. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).
8. TDD LTE was tested using UL-DL configuration 0 with 6 UL sub frames and 2S sub-frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
9. For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing; therefore, the requirement for H, M and L channels may not fully apply.
10. LTE Band 66 (Sub 2 Ant.) operationg only in NSA-EN-DC configuration.
11. LTE Band 2 (Sub 2 Ant.) operationg only in NSA-EN-DC configuration.
12. LTE Band 4 (Sub 2 Ant.) operationg only in LTE UL CA configuration.

5G NR Notes:

1. NR Bands support SA and NSA modes. NR Bands in EN-DC mode operates with the LTE Bands shown in the 5G NR Information acting as anchor bands. Per FCC guidance, SAR tests for NR Bands and LTE Anchors Bands were performed separately due to limitations in SAR probe calibration factors.
2. More detailed specifications of the NR bands are contained in the Operation description document.
3. For NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power were evaluated for SAR tests.
4. NR Band 66 (Sub 2 Ant.) operation only in NSA-EN-DC configuration.

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WLAN & Bluetooth Notes:

1. Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02 for 2.4㎓ WIFI operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4㎓ 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR.
2. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance.
3. When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n then ac) is selected.
4. When the specified maximum output power is the same for both UNII Band1 and UNII Band 2A, begins SAR measurement in UNII band 2A; and if the highest reported SAR for UNII band 2A is ≤ 1.2W/kg, SAR is not required for UNII band1 > 1.2W/kg, both bands should be tested independently for SAR.
5. When the maximum reported 1g averaged SAR is ≤0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg for 1g evaluations or all test channels were measured.
6. When the reported SAR is ≤ 0.4 W/kg, further SAR measurement within this exposure condition are not required Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR is ≤ 0.8 W/kg or all test positions are measured.
7. SAR tested for satisfy simultaneous transmission analysis.
8. The Bluetooth duty cycle factor is conservatively applied by rounding up the measured duty by 76.8% +1.0% = 78.0 % (78.0% / 76.8% = 1.016)

13. Simultaneous Transmission

The following procedures adopted from FCC KDB Publication 447498 D04v01 are applicable to devices with built in unlicensed transmitters such as 802.11 and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per FCC KDB Publication 447498 D04v01 4.3.2 and IEEE 1528-2013 Section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of the 1g or 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is within SAR limits. The different test positions in an exposure condition may be considered collectively to determine SAR test exclusion according to the sum of 1g or 10g SAR.

13.1 Simultaneous Transmission Analysis(Standalone)

Band / Position		Licensed							
		GSM/GPRS		WCDMA			LTE		
		850 Band	1900 Band	Ⅱ	Ⅳ	Ⅴ	2		4
		Main 1 Ant.	Main 1 Ant.	Main 1 Ant.	Main 1 Ant.	Main 1 Ant.	Main 1 Ant.	Sub 2 Ant.	Sub 2 Ant.
		[①]							
Head	Right Cheek	0.370	0.087	0.088	0.085	0.248	0.071	0.658	0.639
	Right Tilt	0.209	0.056	0.055	0.050	0.132	0.036	0.659	0.672
	Left Cheek	0.294	0.080	0.073	0.062	0.192	0.060	0.355	0.399
	Left Tilt	0.247	0.051	0.043	0.052	0.120	0.040	0.418	0.479
Body-worn	Front	0.391	0.498	0.459	0.369	0.244	0.320	0.121	0.084
	Rear	0.452	0.692	0.762	0.590	0.275	0.330	0.296	0.146
Hotspot	Front	0.428	0.395	0.352	0.378	0.315	0.203	0.143	0.187
	Rear	0.545	0.625	0.580	0.602	0.489	0.364	0.382	0.404
	Left	0.199	0.085	0.076	0.069	0.141	0.050	0.042	0.070
	Right	0.458	0.067	0.050	0.068	0.251	0.049	0.044	0.043
	Top	-	-	-	-	-	-	0.458	0.407
	Bottom	0.278	1.228	1.060	1.152	0.219	0.624	-	-
Phablet	Front	-	1.051	0.975	1.045	-	0.704	-	-
	Rear	-	1.726	1.525	1.888	-	1.164	-	-
	Left	-	0.504	0.583	0.349	-	0.345	-	-
	Right	-	0.203	0.235	0.236	-	0.341	-	-
	Top	-	-	-	-	-	-	-	-
	Bottom	-	2.539	2.211	2.886	-	1.704	-	-

Band / Position		Licensed									
		LTE							NR		
		5	12	13	26	41	66		n5	n66	n66
		Main 1 Ant.	Main 1 Ant.	Main 1 Ant.	Main 1 Ant.	Main 2 Ant.	Main 1 Ant.	Sub 2 Ant.	Main 1 Ant.	Main 1 Ant.	Sub 2 Ant.
		[①]									
Head	Right Cheek	0.278	0.141	0.127	0.208	0.095	0.076	0.642	0.253	0.075	0.619
	Right Tilt	0.127	0.084	0.070	0.107	0.113	0.057	0.751	0.121	0.065	0.644
	Left Cheek	0.233	0.120	0.137	0.132	0.131	0.062	0.420	0.215	0.057	0.378
	Left Tilt	0.138	0.058	0.082	0.096	0.057	0.038	0.489	0.124	0.044	0.423
Body-worn	Front	0.287	0.170	0.161	0.199	0.153	0.378	0.128	0.277	0.277	0.147
	Rear	0.319	0.207	0.229	0.243	0.175	0.596	0.261	0.318	0.462	0.322
Hotspot	Front	0.500	0.169	0.181	0.308	0.178	0.278	0.129	0.360	0.317	0.138
	Rear	0.660	0.219	0.208	0.388	0.235	0.364	0.322	0.541	0.427	0.308
	Left	0.192	0.194	0.179	0.163	0.066	0.083	0.064	0.151	0.076	0.097
	Right	0.327	0.127	0.220	0.275	-	0.091	0.048	0.321	0.066	0.049
	Top	-	-	-	-	-	-	0.397	-	-	0.376
	Bottom	0.238	0.032	0.028	0.152	0.218	0.658	-	0.285	0.733	-
Phablet	Front	-	-	-	-	-	0.955	-	-	0.825	-
	Rear	-	-	-	-	-	1.156	-	-	1.402	-
	Left	-	-	-	-	-	0.412	-	-	0.290	-
	Right	-	-	-	-	-	0.204	-	-	0.119	-
	Top	-	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-	-	1.781	-	-	2.214	-

Band / Position		WLAN						Bluetooth	NFC
		2.4 ㎓ WIFI1 Sub5 Ant.	2.4 ㎓ WIFI2 Sub8 Ant.	2.4 ㎓ MIMO	5 ㎓ WIFI1 Sub4 Ant.	5 ㎓ WIFI2 Sub5 Ant.	5 ㎓ MIMO		
		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	-	-	-	-	-	-	-	-
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	-	-	-	1.324	0.774	1.772	-	0.023
	Left	-	-	-	1.202	1.599	2.346	-	0.000
	Right	-	-	-	-	-	-	-	0.000
	Top	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	-	-	-	-	-	-	-	0.000

Summation										
GSM/GPRS 850 Band (Main 1 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.587	0.392	0.637	0.424	0.695	0.780	0.703	0.725	1.028
	Right Tilt	0.426	0.231	0.476	0.263	0.534	0.255	0.314	0.336	0.639
	Left Cheek	0.511	0.316	0.561	0.348	0.619	0.704	0.365	0.387	0.690
	Left Tilt	0.464	0.269	0.514	0.301	0.572	0.657	0.272	0.294	0.597
Body-worn	Front	0.599	0.466	0.589	0.662	0.528	0.785	0.421	0.496	0.558
	Rear	0.660	0.527	0.650	0.723	0.589	0.846	0.490	0.565	0.627
Hotspot	Front	0.753	0.588	0.774	0.830	0.728	1.045	0.490	0.650	0.790
	Rear	0.870	0.705	0.891	0.844	0.715	0.854	0.626	0.786	0.796
	Left	0.524	0.199	0.545	0.601	0.499	0.816	0.307	0.307	0.607
	Right	0.458	0.458	0.458	0.458	0.458	0.458	0.458	0.458	0.458
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.278	0.278	0.278	0.278	0.278	0.278	0.278	0.278	0.278
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
GSM/GPRS 1900 Band (Main 1 Ant.)										
Head	Right Cheek	0.304	0.109	0.354	0.141	0.412	0.497	0.420	0.442	0.745
	Right Tilt	0.273	0.078	0.323	0.110	0.381	0.102	0.161	0.183	0.486
	Left Cheek	0.297	0.102	0.347	0.134	0.405	0.490	0.151	0.173	0.476
	Left Tilt	0.268	0.073	0.318	0.105	0.376	0.461	0.076	0.098	0.401
Body-worn	Front	0.706	0.573	0.696	0.769	0.635	0.892	0.528	0.603	0.665
	Rear	0.900	0.767	0.890	0.963	0.829	1.086	0.730	0.805	0.867
Hotspot	Front	0.720	0.555	0.741	0.797	0.695	1.012	0.457	0.617	0.757
	Rear	0.950	0.785	0.971	0.924	0.795	0.934	0.706	0.866	0.876
	Left	0.410	0.085	0.431	0.487	0.385	0.702	0.193	0.193	0.493
	Right	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228	1.228
Phablet	Front	1.051	1.051	1.051	2.375	2.276	3.397	1.051	1.051	2.276
	Rear	1.749	1.749	1.749	3.073	2.523	3.521	1.749	1.749	2.523
	Left	0.504	0.504	0.504	1.706	2.103	2.850	0.504	0.504	2.103
	Right	0.203	0.203	0.203	0.203	0.203	0.203	0.203	0.203	0.203
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	2.539	2.539	2.539	2.539	2.539	2.539	2.539	2.539	2.539

Summation										
WCDMA B.2 (Main 1 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.305	0.110	0.355	0.142	0.413	0.498	0.421	0.443	0.746
	Right Tilt	0.272	0.077	0.322	0.109	0.380	0.101	0.160	0.182	0.485
	Left Cheek	0.290	0.095	0.340	0.127	0.398	0.483	0.144	0.166	0.469
	Left Tilt	0.260	0.065	0.310	0.097	0.368	0.453	0.068	0.090	0.393
Body-worn	Front	0.667	0.534	0.657	0.730	0.596	0.853	0.489	0.564	0.626
	Rear	0.970	0.837	0.960	1.033	0.899	1.156	0.800	0.875	0.937
Hotspot	Front	0.677	0.512	0.698	0.754	0.652	0.969	0.414	0.574	0.714
	Rear	0.905	0.740	0.926	0.879	0.750	0.889	0.661	0.821	0.831
	Left	0.401	0.076	0.422	0.478	0.376	0.693	0.184	0.184	0.484
	Right	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060
Phablet	Front	0.975	0.975	0.975	2.299	2.200	3.321	0.975	0.975	2.200
	Rear	1.548	1.548	1.548	2.872	2.322	3.320	1.548	1.548	2.322
	Left	0.583	0.583	0.583	1.785	2.182	2.929	0.583	0.583	2.182
	Right	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235	0.235
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	2.211	2.211	2.211	2.211	2.211	2.211	2.211	2.211	2.211
WCDMA B.4 (Main 1 Ant.)										
Head	Right Cheek	0.302	0.107	0.352	0.139	0.410	0.495	0.418	0.440	0.743
	Right Tilt	0.267	0.072	0.317	0.104	0.375	0.096	0.155	0.177	0.480
	Left Cheek	0.279	0.084	0.329	0.116	0.387	0.472	0.133	0.155	0.458
	Left Tilt	0.269	0.074	0.319	0.106	0.377	0.462	0.077	0.099	0.402
Body-worn	Front	0.577	0.444	0.567	0.640	0.506	0.763	0.399	0.474	0.536
	Rear	0.798	0.665	0.788	0.861	0.727	0.984	0.628	0.703	0.765
Hotspot	Front	0.703	0.538	0.724	0.780	0.678	0.995	0.440	0.600	0.740
	Rear	0.927	0.762	0.948	0.901	0.772	0.911	0.683	0.843	0.853
	Left	0.394	0.069	0.415	0.471	0.369	0.686	0.177	0.177	0.477
	Right	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	1.152	1.152	1.152	1.152	1.152	1.152	1.152	1.152	1.152
Phablet	Front	1.045	1.045	1.045	2.369	2.270	3.391	1.045	1.045	2.270
	Rear	1.911	1.911	1.911	3.235	2.685	**3.683**	1.911	1.911	2.685
	Left	0.349	0.349	0.349	1.551	1.948	2.695	0.349	0.349	1.948
	Right	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	2.886	2.886	2.886	2.886	2.886	2.886	2.886	2.886	2.886

Summation										
WCDMA B.5 (Main 1 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.465	0.270	0.515	0.302	0.573	0.658	0.581	0.603	0.906
	Right Tilt	0.349	0.154	0.399	0.186	0.457	0.178	0.237	0.259	0.562
	Left Cheek	0.409	0.214	0.459	0.246	0.517	0.602	0.263	0.285	0.588
	Left Tilt	0.337	0.142	0.387	0.174	0.445	0.530	0.145	0.167	0.470
Body-worn	Front	0.452	0.319	0.442	0.515	0.381	0.638	0.274	0.349	0.411
	Rear	0.483	0.350	0.473	0.546	0.412	0.669	0.313	0.388	0.450
Hotspot	Front	0.640	0.475	0.661	0.717	0.615	0.932	0.377	0.537	0.677
	Rear	0.814	0.649	0.835	0.788	0.659	0.798	0.570	0.730	0.740
	Left	0.466	0.141	0.487	0.543	0.441	0.758	0.249	0.249	0.549
	Right	0.251	0.251	0.251	0.251	0.251	0.251	0.251	0.251	0.251
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.219	0.219	0.219	0.219	0.219	0.219	0.219	0.219	0.219
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
LTE B.2 (Main 1 Ant.)										
Head	Right Cheek	0.288	0.093	0.338	0.125	0.396	0.481	0.404	0.426	0.729
	Right Tilt	0.253	0.058	0.303	0.090	0.361	0.082	0.141	0.163	0.466
	Left Cheek	0.277	0.082	0.327	0.114	0.385	0.470	0.131	0.153	0.456
	Left Tilt	0.257	0.062	0.307	0.094	0.365	0.450	0.065	0.087	0.390
Body-worn	Front	0.528	0.395	0.518	0.591	0.457	0.714	0.350	0.425	0.487
	Rear	0.538	0.405	0.528	0.601	0.467	0.724	0.368	0.443	0.505
Hotspot	Front	0.528	0.363	0.549	0.605	0.503	0.820	0.265	0.425	0.565
	Rear	0.689	0.524	0.710	0.663	0.534	0.673	0.445	0.605	0.615
	Left	0.375	0.050	0.396	0.452	0.350	0.667	0.158	0.158	0.458
	Right	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.624	0.624	0.624	0.624	0.624	0.624	0.624	0.624	0.624
Phablet	Front	0.704	0.704	0.704	2.028	1.929	3.050	0.704	0.704	1.929
	Rear	1.187	1.187	1.187	2.511	1.961	2.959	1.187	1.187	1.961
	Left	0.345	0.345	0.345	1.547	1.944	2.691	0.345	0.345	1.944
	Right	0.341	0.341	0.341	0.341	0.341	0.341	0.341	0.341	0.341
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	1.704	1.704	1.704	1.704	1.704	1.704	1.704	1.704	1.704

Summation										
LTE B.2 (Sub 2 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.875	0.680	0.925	0.712	0.983	1.068	0.991	1.013	1.316
	Right Tilt	0.876	0.681	0.926	0.713	0.984	0.705	0.764	0.786	1.089
	Left Cheek	0.572	0.377	0.622	0.409	0.680	0.765	0.426	0.448	0.751
	Left Tilt	0.635	0.440	0.685	0.472	0.743	0.828	0.443	0.465	0.768
Body-worn	Front	0.329	0.196	0.319	0.392	0.258	0.515	0.151	0.226	0.288
	Rear	0.504	0.371	0.494	0.567	0.433	0.690	0.334	0.409	0.471
Hotspot	Front	0.468	0.303	0.489	0.545	0.443	0.760	0.205	0.365	0.505
	Rear	0.707	0.542	0.728	0.681	0.552	0.691	0.463	0.623	0.633
	Left	0.367	0.042	0.388	0.444	0.342	0.659	0.150	0.150	0.450
	Right	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044
	Top	0.783	0.618	0.804	0.860	0.758	1.075	0.471	0.631	0.771
	Bottom	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
LTE B.4 (Sub 2 Ant.)										
Head	Right Cheek	0.856	0.661	0.906	0.693	0.964	1.049	0.972	0.994	1.297
	Right Tilt	0.889	0.694	0.939	0.726	0.997	0.718	0.777	0.799	1.102
	Left Cheek	0.616	0.421	0.666	0.453	0.724	0.809	0.470	0.492	0.795
	Left Tilt	0.696	0.501	0.746	0.533	0.804	0.889	0.504	0.526	0.829
Body-worn	Front	0.292	0.159	0.282	0.355	0.221	0.478	0.114	0.189	0.251
	Rear	0.354	0.221	0.344	0.417	0.283	0.540	0.184	0.259	0.321
Hotspot	Front	0.512	0.347	0.533	0.589	0.487	0.804	0.249	0.409	0.549
	Rear	0.729	0.564	0.750	0.703	0.574	0.713	0.485	0.645	0.655
	Left	0.395	0.070	0.416	0.472	0.370	0.687	0.178	0.178	0.478
	Right	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043	0.043
	Top	0.732	0.567	0.753	0.809	0.707	1.024	0.420	0.580	0.720
	Bottom	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-

Summation										
LTE B.5 (Main 1 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.495	0.300	0.545	0.332	0.603	0.688	0.611	0.633	0.936
	Right Tilt	0.344	0.149	0.394	0.181	0.452	0.173	0.232	0.254	0.557
	Left Cheek	0.450	0.255	0.500	0.287	0.558	0.643	0.304	0.326	0.629
	Left Tilt	0.355	0.160	0.405	0.192	0.463	0.548	0.163	0.185	0.488
Body-worn	Front	0.495	0.362	0.485	0.558	0.424	0.681	0.317	0.392	0.454
	Rear	0.527	0.394	0.517	0.590	0.456	0.713	0.357	0.432	0.494
Hotspot	Front	0.825	0.660	0.846	0.902	0.800	1.117	0.562	0.722	0.862
	Rear	0.985	0.820	1.006	0.959	0.830	0.969	0.741	0.901	0.911
	Left	0.517	0.192	0.538	0.594	0.492	0.809	0.300	0.300	0.600
	Right	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.238	0.238	0.238	0.238	0.238	0.238	0.238	0.238	0.238
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
LTE B.12 (Main 1 Ant.)										
Head	Right Cheek	0.358	0.163	0.408	0.195	0.466	0.551	0.474	0.496	0.799
	Right Tilt	0.301	0.106	0.351	0.138	0.409	0.130	0.189	0.211	0.514
	Left Cheek	0.337	0.142	0.387	0.174	0.445	0.530	0.191	0.213	0.516
	Left Tilt	0.275	0.080	0.325	0.112	0.383	0.468	0.083	0.105	0.408
Body-worn	Front	0.378	0.245	0.368	0.441	0.307	0.564	0.200	0.275	0.337
	Rear	0.415	0.282	0.405	0.478	0.344	0.601	0.245	0.320	0.382
Hotspot	Front	0.494	0.329	0.515	0.571	0.469	0.786	0.231	0.391	0.531
	Rear	0.544	0.379	0.565	0.518	0.389	0.528	0.300	0.460	0.470
	Left	0.519	0.194	0.540	0.596	0.494	0.811	0.302	0.302	0.602
	Right	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-

Summation										
LTE B.13 (Main 1 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.344	0.149	0.394	0.181	0.452	0.537	0.460	0.482	0.785
	Right Tilt	0.287	0.092	0.337	0.124	0.395	0.116	0.175	0.197	0.500
	Left Cheek	0.354	0.159	0.404	0.191	0.462	0.547	0.208	0.230	0.533
	Left Tilt	0.299	0.104	0.349	0.136	0.407	0.492	0.107	0.129	0.432
Body-worn	Front	0.369	0.236	0.359	0.432	0.298	0.555	0.191	0.266	0.328
	Rear	0.437	0.304	0.427	0.500	0.366	0.623	0.267	0.342	0.404
Hotspot	Front	0.506	0.341	0.527	0.583	0.481	0.798	0.243	0.403	0.543
	Rear	0.533	0.368	0.554	0.507	0.378	0.517	0.289	0.449	0.459
	Left	0.504	0.179	0.525	0.581	0.479	0.796	0.287	0.287	0.587
	Right	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220	0.220
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
LTE B.26 (Main 1 Ant.)										
Head	Right Cheek	0.425	0.230	0.475	0.262	0.533	0.618	0.541	0.563	0.866
	Right Tilt	0.324	0.129	0.374	0.161	0.432	0.153	0.212	0.234	0.537
	Left Cheek	0.349	0.154	0.399	0.186	0.457	0.542	0.203	0.225	0.528
	Left Tilt	0.313	0.118	0.363	0.150	0.421	0.506	0.121	0.143	0.446
Body-worn	Front	0.407	0.274	0.397	0.470	0.336	0.593	0.229	0.304	0.366
	Rear	0.451	0.318	0.441	0.514	0.380	0.637	0.281	0.356	0.418
Hotspot	Front	0.633	0.468	0.654	0.710	0.608	0.925	0.370	0.530	0.670
	Rear	0.713	0.548	0.734	0.687	0.558	0.697	0.469	0.629	0.639
	Left	0.488	0.163	0.509	0.565	0.463	0.780	0.271	0.271	0.571
	Right	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275	0.275
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.152	0.152	0.152	0.152	0.152	0.152	0.152	0.152	0.152
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-

Summation										
LTE B.41 (Main 2 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.312	0.117	0.362	0.149	0.420	0.505	0.428	0.450	0.753
	Right Tilt	0.330	0.135	0.380	0.167	0.438	0.159	0.218	0.240	0.543
	Left Cheek	0.348	0.153	0.398	0.185	0.456	0.541	0.202	0.224	0.527
	Left Tilt	0.274	0.079	0.324	0.111	0.382	0.467	0.082	0.104	0.407
Body-worn	Front	0.361	0.228	0.351	0.424	0.290	0.547	0.183	0.258	0.320
	Rear	0.383	0.250	0.373	0.446	0.312	0.569	0.213	0.288	0.350
Hotspot	Front	0.503	0.338	0.524	0.580	0.478	0.795	0.240	0.400	0.540
	Rear	0.560	0.395	0.581	0.534	0.405	0.544	0.316	0.476	0.486
	Left	0.391	0.066	0.412	0.468	0.366	0.683	0.174	0.174	0.474
	Right	-	-	-	-	-	-	-	-	-
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
LTE B.66 (Main 1 Ant.)										
Head	Right Cheek	0.293	0.098	0.343	0.130	0.401	0.486	0.409	0.431	0.734
	Right Tilt	0.274	0.079	0.324	0.111	0.382	0.103	0.162	0.184	0.487
	Left Cheek	0.279	0.084	0.329	0.116	0.387	0.472	0.133	0.155	0.458
	Left Tilt	0.255	0.060	0.305	0.092	0.363	0.448	0.063	0.085	0.388
Body-worn	Front	0.586	0.453	0.576	0.649	0.515	0.772	0.408	0.483	0.545
	Rear	0.804	0.671	0.794	0.867	0.733	0.990	0.634	0.709	0.771
Hotspot	Front	0.603	0.438	0.624	0.680	0.578	0.895	0.340	0.500	0.640
	Rear	0.689	0.524	0.710	0.663	0.534	0.673	0.445	0.605	0.615
	Left	0.408	0.083	0.429	0.485	0.383	0.700	0.191	0.191	0.491
	Right	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091	0.091
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.658	0.658	0.658	0.658	0.658	0.658	0.658	0.658	0.658
Phablet	Front	0.955	0.955	0.955	2.279	2.180	3.301	0.955	0.955	2.180
	Rear	1.179	1.179	1.179	2.503	1.953	2.951	1.179	1.179	1.953
	Left	0.412	0.412	0.412	1.614	2.011	2.758	0.412	0.412	2.011
	Right	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	1.781	1.781	1.781	1.781	1.781	1.781	1.781	1.781	1.781

Summation										
LTE B.66 (Sub 2 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	**[①+③+⑨]**	**[①+④+⑨]**	**[①+⑤+⑨]**	**[①+⑥+⑨]**	**[①+⑦+⑨]**	**[①+⑧+⑨]**	**[①+③+⑧+⑨]**	**[①+⑥+⑧+⑨]**
Head	Right Cheek	0.859	0.664	0.909	0.696	0.967	1.052	0.975	0.997	1.300
	Right Tilt	0.968	0.773	1.018	0.805	1.076	0.797	0.856	0.878	1.181
	Left Cheek	0.637	0.442	0.687	0.474	0.745	0.830	0.491	0.513	0.816
	Left Tilt	0.706	0.511	0.756	0.543	0.814	0.899	0.514	0.536	0.839
Body-worn	Front	0.336	0.203	0.326	0.399	0.265	0.522	0.158	0.233	0.295
	Rear	0.469	0.336	0.459	0.532	0.398	0.655	0.299	0.374	0.436
Hotspot	Front	0.454	0.289	0.475	0.531	0.429	0.746	0.191	0.351	0.491
	Rear	0.647	0.482	0.668	0.621	0.492	0.631	0.403	0.563	0.573
	Left	0.389	0.064	0.410	0.466	0.364	0.681	0.172	0.172	0.472
	Right	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048	0.048
	Top	0.722	0.557	0.743	0.799	0.697	1.014	0.410	0.570	0.710
	Bottom	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-
NR n5 (Main 1 Ant.)										
Head	Right Cheek	0.470	0.275	0.520	0.307	0.578	0.663	0.586	0.608	0.911
	Right Tilt	0.338	0.143	0.388	0.175	0.446	0.167	0.226	0.248	0.551
	Left Cheek	0.432	0.237	0.482	0.269	0.540	0.625	0.286	0.308	0.611
	Left Tilt	0.341	0.146	0.391	0.178	0.449	0.534	0.149	0.171	0.474
Body-worn	Front	0.485	0.352	0.475	0.548	0.414	0.671	0.307	0.382	0.444
	Rear	0.526	0.393	0.516	0.589	0.455	0.712	0.356	0.431	0.493
Hotspot	Front	0.685	0.520	0.706	0.762	0.660	0.977	0.422	0.582	0.722
	Rear	0.866	0.701	0.887	0.840	0.711	0.850	0.622	0.782	0.792
	Left	0.476	0.151	0.497	0.553	0.451	0.768	0.259	0.259	0.559
	Right	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-

Summation										
NR n66 (Main 1 Ant.)										
Band / Position		**1)**	**2)**	**3)**	**4)**	**5)**	**6)**	**7)**	**8)**	**9)**
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	0.292	0.097	0.342	0.129	0.400	0.485	0.408	0.430	0.733
	Right Tilt	0.282	0.087	0.332	0.119	0.390	0.111	0.170	0.192	0.495
	Left Cheek	0.274	0.079	0.324	0.111	0.382	0.467	0.128	0.150	0.453
	Left Tilt	0.261	0.066	0.311	0.098	0.369	0.454	0.069	0.091	0.394
Body-worn	Front	0.485	0.352	0.475	0.548	0.414	0.671	0.307	0.382	0.444
	Rear	0.670	0.537	0.660	0.733	0.599	0.856	0.500	0.575	0.637
Hotspot	Front	0.642	0.477	0.663	0.719	0.617	0.934	0.379	0.539	0.679
	Rear	0.752	0.587	0.773	0.726	0.597	0.736	0.508	0.668	0.678
	Left	0.401	0.076	0.422	0.478	0.376	0.693	0.184	0.184	0.484
	Right	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066
	Top	0.325	0.160	0.346	0.402	0.300	0.617	0.013	0.173	0.313
	Bottom	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733
Phablet	Front	0.825	0.825	0.825	2.149	2.050	3.171	0.825	0.825	2.050
	Rear	1.425	1.425	1.425	2.749	2.199	3.197	1.425	1.425	2.199
	Left	0.290	0.290	0.290	1.492	1.889	2.636	0.290	0.290	1.889
	Right	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119	0.119
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	2.214	2.214	2.214	2.214	2.214	2.214	2.214	2.214	2.214
NR n66 (Sub 2 Ant.)										
Head	Right Cheek	0.836	0.641	0.886	0.673	0.944	1.029	0.952	0.974	1.277
	Right Tilt	0.861	0.666	0.911	0.698	0.969	0.690	0.749	0.771	1.074
	Left Cheek	0.595	0.400	0.645	0.432	0.703	0.788	0.449	0.471	0.774
	Left Tilt	0.640	0.445	0.690	0.477	0.748	0.833	0.448	0.470	0.773
Body-worn	Front	0.355	0.222	0.345	0.418	0.284	0.541	0.177	0.252	0.314
	Rear	0.530	0.397	0.520	0.593	0.459	0.716	0.360	0.435	0.497
Hotspot	Front	0.463	0.298	0.484	0.540	0.438	0.755	0.200	0.360	0.500
	Rear	0.633	0.468	0.654	0.607	0.478	0.617	0.389	0.549	0.559
	Left	0.422	0.097	0.443	0.499	0.397	0.714	0.205	0.205	0.505
	Right	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049
	Top	0.701	0.536	0.722	0.778	0.676	0.993	0.389	0.549	0.689
	Bottom	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	-
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	-

Notes: Simultaneous transmission SAR test exclusion considerations

- Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Per KDB Publication 447498 D04v01.

- When the sum of SAR1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR1g 1.6 W/kg), the SPLSR procedures is not required. When the sum of SAR1g is greater than the SAR limit (SAR1g 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

- " - " = SAR test exclusion

13.2 Simultaneous Transmission Analysis(UL CA)

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B2	LTE B4	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Main1 Ant.	Sub2 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.071	0.639	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.036	0.672	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.060	0.399	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.040	0.479	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.320	0.084	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.330	0.146	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.203	0.187	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.364	0.404	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.050	0.070	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.049	0.043	-	-	-	-	-	-	-	-
	Top	-	0.407	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	0.624	-	-	-	-	-	-	-	-	-
Phablet	Front	0.704	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	1.164	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	0.345	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	0.341	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	1.704	-	-	-	-	-	-	-	-	0.000

Summation

LTE UL CA(2A-4A)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	0.927	0.732	0.977	0.764	1.035	1.120	1.043	1.065	1.368
	Right Tilt	0.925	0.730	0.975	0.762	1.033	0.754	0.813	0.835	1.138
	Left Cheek	0.676	0.481	0.726	0.513	0.784	0.869	0.530	0.552	0.855
	Left Tilt	0.736	0.541	0.786	0.573	0.844	0.929	0.544	0.566	0.869
Body-worn	Front	0.612	0.479	0.602	0.675	0.541	0.798	0.434	0.509	0.571
	Rear	0.684	0.551	0.674	0.747	0.613	0.870	0.514	0.589	0.651
Hotspot	Front	0.715	0.550	0.736	0.792	0.690	1.007	0.452	0.612	0.752
	Rear	1.093	0.928	1.114	1.067	0.938	1.077	0.849	1.009	1.019
	Left	0.445	0.120	0.466	0.522	0.420	0.737	0.228	0.228	0.528
	Right	0.092	0.092	0.092	0.092	0.092	0.092	0.092	0.092	0.092
	Top	0.732	0.567	0.753	0.809	0.707	1.024	0.420	0.580	0.720
	Bottom	0.624	0.624	0.624	0.624	0.624	0.624	0.624	0.624	0.624
Phablet	Front	0.704	0.704	0.704	2.028	1.929	3.050	0.704	0.704	1.929
	Rear	1.187	1.187	1.187	2.511	1.961	2.959	1.187	1.187	1.961
	Left	0.345	0.345	0.345	1.547	1.944	2.691	0.345	0.345	1.944
	Right	0.341	0.341	0.341	0.341	0.341	0.341	0.341	0.341	0.341
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	1.704	1.704	1.704	1.704	1.704	1.704	1.704	1.704	1.704

13.3 Simultaneous Transmission Analysis(EN-DC)

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B2	n5	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Sub2 Ant.	Main1 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.658	0.253	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.659	0.121	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.355	0.215	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.418	0.124	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.121	0.277	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.296	0.318	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.143	0.360	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.382	0.541	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.042	0.151	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.044	0.321	-	-	-	-	-	-	-	-
	Top	0.458	-	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	-	0.285	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	-	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	-	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	-	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	-	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.2+NR n5)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	1.128	0.933	1.178	0.965	1.236	1.321	1.244	1.266	**1.569**
	Right Tilt	0.997	0.802	1.047	0.834	1.105	0.826	0.885	0.907	1.210
	Left Cheek	0.787	0.592	0.837	0.624	0.895	0.980	0.641	0.663	0.966
	Left Tilt	0.759	0.564	0.809	0.596	0.867	0.952	0.567	0.589	0.892
Body-worn	Front	0.606	0.473	0.596	0.669	0.535	0.792	0.428	0.503	0.565
	Rear	0.822	0.689	0.812	0.885	0.751	1.008	0.652	0.727	0.789
Hotspot	Front	0.828	0.663	0.849	0.905	0.803	1.120	0.565	0.725	0.865
	Rear	1.248	1.083	1.269	1.222	1.093	1.232	1.004	1.164	1.174
	Left	0.518	0.193	0.539	0.595	0.493	0.810	0.301	0.301	0.601
	Right	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
	Top	0.783	0.618	0.804	0.860	0.758	1.075	0.471	0.631	0.771
	Bottom	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	0.000

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B66	n5	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Sub2 Ant.	Main1 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.642	0.253	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.751	0.121	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.420	0.215	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.489	0.124	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.128	0.277	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.261	0.318	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.129	0.360	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.322	0.541	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.064	0.151	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.048	0.321	-	-	-	-	-	-	-	-
	Top	0.397	-	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	-	0.285	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	-	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	-	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	-	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	-	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.66+NR n5)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	1.112	0.917	1.162	0.949	1.220	1.305	1.228	1.250	1.553
	Right Tilt	1.089	0.894	1.139	0.926	1.197	0.918	0.977	0.999	1.302
	Left Cheek	0.852	0.657	0.902	0.689	0.960	1.045	0.706	0.728	1.031
	Left Tilt	0.830	0.635	0.880	0.667	0.938	1.023	0.638	0.660	0.963
Body-worn	Front	0.613	0.480	0.603	0.676	0.542	0.799	0.435	0.510	0.572
	Rear	0.787	0.654	0.777	0.850	0.716	0.973	0.617	0.692	0.754
Hotspot	Front	0.814	0.649	0.835	0.891	0.789	1.106	0.551	0.711	0.851
	Rear	1.188	1.023	1.209	1.162	1.033	1.172	0.944	1.104	1.114
	Left	0.540	0.215	0.561	0.617	0.515	0.832	0.323	0.323	0.623
	Right	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369
	Top	0.722	0.557	0.743	0.799	0.697	1.014	0.410	0.570	0.710
	Bottom	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	0.000

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B2	n66	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Main1 Ant.	Sub2 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.071	0.619	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.036	0.644	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.060	0.378	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.040	0.423	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.320	0.147	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.330	0.322	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.203	0.138	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.364	0.308	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.050	0.097	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.049	0.049	-	-	-	-	-	-	-	-
	Top	-	0.376	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	0.624	-	-	-	-	-	-	-	-	-
Phablet	Front	0.704	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	1.164	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	0.345	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	0.341	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	1.704	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.2+NR n66)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	0.907	0.712	0.957	0.744	1.015	1.100	1.023	1.045	1.348
	Right Tilt	0.897	0.702	0.947	0.734	1.005	0.726	0.785	0.807	1.110
	Left Cheek	0.655	0.460	0.705	0.492	0.763	0.848	0.509	0.531	0.834
	Left Tilt	0.680	0.485	0.730	0.517	0.788	0.873	0.488	0.510	0.813
Body-worn	Front	0.675	0.542	0.665	0.738	0.604	0.861	0.497	0.572	0.634
	Rear	0.860	0.727	0.850	0.923	0.789	1.046	0.690	0.765	0.827
Hotspot	Front	0.666	0.501	0.687	0.743	0.641	0.958	0.403	0.563	0.703
	Rear	0.997	0.832	1.018	0.971	0.842	0.981	0.753	0.913	0.923
	Left	0.472	0.147	0.493	0.549	0.447	0.764	0.255	0.255	0.555
	Right	0.098	0.098	0.098	0.098	0.098	0.098	0.098	0.098	0.098
	Top	0.701	0.536	0.722	0.778	0.676	0.993	0.389	0.549	0.689
	Bottom	0.624	0.624	0.624	0.624	0.624	0.624	0.624	0.624	0.624
Phablet	Front	0.704	0.704	0.704	2.028	1.929	3.050	0.704	0.704	1.929
	Rear	1.187	1.187	1.187	2.511	1.961	2.959	1.187	1.187	1.961
	Left	0.345	0.345	0.345	1.547	1.944	2.691	0.345	0.345	1.944
	Right	0.341	0.341	0.341	0.341	0.341	0.341	0.341	0.341	0.341
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	1.704	1.704	1.704	1.704	1.704	1.704	1.704	1.704	1.704

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B5	n66	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Main1 Ant.	Sub2 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.278	0.619	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.127	0.644	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.233	0.378	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.138	0.423	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.287	0.147	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.319	0.322	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.500	0.138	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.660	0.308	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.192	0.097	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.327	0.049	-	-	-	-	-	-	-	-
	Top	-	0.376	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	0.238	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	-	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	-	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	-	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	-	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.5+NR n66)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	1.114	0.919	1.164	0.951	1.222	1.307	1.230	1.252	1.555
	Right Tilt	0.988	0.793	1.038	0.825	1.096	0.817	0.876	0.898	1.201
	Left Cheek	0.828	0.633	0.878	0.665	0.936	1.021	0.682	0.704	1.007
	Left Tilt	0.778	0.583	0.828	0.615	0.886	0.971	0.586	0.608	0.911
Body-worn	Front	0.642	0.509	0.632	0.705	0.571	0.828	0.464	0.539	0.601
	Rear	0.849	0.716	0.839	0.912	0.778	1.035	0.679	0.754	0.816
Hotspot	Front	0.963	0.798	0.984	1.040	0.938	1.255	0.700	0.860	1.000
	Rear	1.293	1.128	**1.314**	1.267	1.138	1.277	1.049	1.209	1.219
	Left	0.614	0.289	0.635	0.691	0.589	0.906	0.397	0.397	0.697
	Right	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376
	Top	0.701	0.536	0.722	0.778	0.676	0.993	0.389	0.549	0.689
	Bottom	0.238	0.238	0.238	0.238	0.238	0.238	0.238	0.238	0.238
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	0.000

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B12	n66	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Main1 Ant.	Sub2 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.141	0.619	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.084	0.644	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.120	0.378	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.058	0.423	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.170	0.147	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.207	0.322	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.169	0.138	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.219	0.308	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.194	0.097	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.127	0.049	-	-	-	-	-	-	-	-
	Top	-	0.376	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	0.032	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	-	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	-	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	-	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	-	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.12+NR n66)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	0.977	0.782	1.027	0.814	1.085	1.170	1.093	1.115	1.418
	Right Tilt	0.945	0.750	0.995	0.782	1.053	0.774	0.833	0.855	1.158
	Left Cheek	0.715	0.520	0.765	0.552	0.823	0.908	0.569	0.591	0.894
	Left Tilt	0.698	0.503	0.748	0.535	0.806	0.891	0.506	0.528	0.831
Body-worn	Front	0.525	0.392	0.515	0.588	0.454	0.711	0.347	0.422	0.484
	Rear	0.737	0.604	0.727	0.800	0.666	0.923	0.567	0.642	0.704
Hotspot	Front	0.632	0.467	0.653	0.709	0.607	0.924	0.369	0.529	0.669
	Rear	0.852	0.687	0.873	0.826	0.697	0.836	0.608	0.768	0.778
	Left	0.616	0.291	0.637	0.693	0.591	0.908	0.399	0.399	0.699
	Right	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176	0.176
	Top	0.701	0.536	0.722	0.778	0.676	0.993	0.389	0.549	0.689
	Bottom	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	0.000

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B13	n66	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Main1 Ant.	Sub2 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.127	0.619	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.070	0.644	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.137	0.378	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.082	0.423	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.161	0.147	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.229	0.322	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.181	0.138	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.208	0.308	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.179	0.097	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.220	0.049	-	-	-	-	-	-	-	-
	Top	-	0.376	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	0.028	-	-	-	-	-	-	-	-	-
Phablet	Front	-	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	-	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	-	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	-	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	-	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.13+NR n66)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	0.963	0.768	1.013	0.800	1.071	1.156	1.079	1.101	1.404
	Right Tilt	0.931	0.736	0.981	0.768	1.039	0.760	0.819	0.841	1.144
	Left Cheek	0.732	0.537	0.782	0.569	0.840	0.925	0.586	0.608	0.911
	Left Tilt	0.722	0.527	0.772	0.559	0.830	0.915	0.530	0.552	0.855
Body-worn	Front	0.516	0.383	0.506	0.579	0.445	0.702	0.338	0.413	0.475
	Rear	0.759	0.626	0.749	0.822	0.688	0.945	0.589	0.664	0.726
Hotspot	Front	0.644	0.479	0.665	0.721	0.619	0.936	0.381	0.541	0.681
	Rear	0.841	0.676	0.862	0.815	0.686	0.825	0.597	0.757	0.767
	Left	0.601	0.276	0.622	0.678	0.576	0.893	0.384	0.384	0.684
	Right	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269
	Top	0.701	0.536	0.722	0.778	0.676	0.993	0.389	0.549	0.689
	Bottom	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
Phablet	Front	-	-	-	1.324	1.225	2.346	-	-	1.225
	Rear	0.023	0.023	0.023	1.347	0.797	1.795	0.023	0.023	0.797
	Left	-	-	-	1.202	1.599	2.346	-	-	1.599
	Right	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	-	-	-	-	-	-	-	-	0.000

Band / Position		Licensed		WLAN						Bluetooth	NFC
		LTE B66	n66	2.4 ㎓ WIFI1	2.4 ㎓ WIFI2	2.4 ㎓ MIMO	5 ㎓ WIFI1	5 ㎓ WIFI2	5 ㎓ MIMO		
		Main1 Ant.	Sub2 Ant.	Sub5 Ant.	Sub8 Ant.		Sub4 Ant.	Sub5 Ant.			
		[①]		[②]	[③]	[④]	[⑤]	[⑥]	[⑦]	[⑧]	[⑨]
Head	Right Cheek	0.076	0.619	0.217	0.022	0.267	0.054	0.325	0.410	0.333	-
	Right Tilt	0.057	0.644	0.217	0.022	0.267	0.054	0.325	0.046	0.105	-
	Left Cheek	0.062	0.378	0.217	0.022	0.267	0.054	0.325	0.410	0.071	-
	Left Tilt	0.038	0.423	0.217	0.022	0.267	0.054	0.325	0.410	0.025	-
Body-worn	Front	0.378	0.147	0.208	0.075	0.198	0.271	0.137	0.394	0.030	-
	Rear	0.596	0.322	0.208	0.075	0.198	0.271	0.137	0.394	0.038	-
Hotspot	Front	0.278	0.138	0.325	0.160	0.346	0.402	0.300	0.617	0.062	-
	Rear	0.364	0.308	0.325	0.160	0.346	0.299	0.170	0.309	0.081	-
	Left	0.083	0.097	0.325	-	0.346	0.402	0.300	0.617	0.108	-
	Right	0.091	0.049	-	-	-	-	-	-	-	-
	Top	-	0.376	0.325	0.160	0.346	0.402	0.300	0.617	0.013	-
	Bottom	0.658	-	-	-	-	-	-	-	-	-
Phablet	Front	0.955	-	-	-	-	1.324	1.225	2.346	-	0.000
	Rear	1.156	-	-	-	-	1.324	0.774	1.772	-	0.023
	Left	0.412	-	-	-	-	1.202	1.599	2.346	-	0.000
	Right	0.204	-	-	-	-	-	-	-	-	0.000
	Top	-	-	-	-	-	1.324	1.599	2.346	-	0.000
	Bottom	1.781	-	-	-	-	-	-	-	-	0.000

Summation

EN-DC(LTE B.66+NR n66)

Band / Position		1)	2)	3)	4)	5)	6)	7)	8)	9)
		[①+②+⑨]	[①+③+⑨]	[①+④+⑨]	[①+⑤+⑨]	[①+⑥+⑨]	[①+⑦+⑨]	[①+⑧+⑨]	[①+③+⑧+⑨]	[①+⑥+⑧+⑨]
Head	Right Cheek	0.912	0.717	0.962	0.749	1.020	1.105	1.028	1.050	1.353
	Right Tilt	0.918	0.723	0.968	0.755	1.026	0.747	0.806	0.828	1.131
	Left Cheek	0.657	0.462	0.707	0.494	0.765	0.850	0.511	0.533	0.836
	Left Tilt	0.678	0.483	0.728	0.515	0.786	0.871	0.486	0.508	0.811
Body-worn	Front	0.733	0.600	0.723	0.796	0.662	0.919	0.555	0.630	0.692
	Rear	1.126	0.993	1.116	1.189	1.055	**1.312**	0.956	1.031	1.093
Hotspot	Front	0.741	0.576	0.762	0.818	0.716	1.033	0.478	0.638	0.778
	Rear	0.997	0.832	1.018	0.971	0.842	0.981	0.753	0.913	0.923
	Left	0.505	0.180	0.526	0.582	0.480	0.797	0.288	0.288	0.588
	Right	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140	0.140
	Top	0.701	0.536	0.722	0.778	0.676	0.993	0.389	0.549	0.689
	Bottom	0.658	0.658	0.658	0.658	0.658	0.658	0.658	0.658	0.658
Phablet	Front	0.955	0.955	0.955	2.279	2.180	3.301	0.955	0.955	2.180
	Rear	1.179	1.179	1.179	2.503	1.953	2.951	1.179	1.179	1.953
	Left	0.412	0.412	0.412	1.614	2.011	2.758	0.412	0.412	2.011
	Right	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204
	Top	-	-	-	1.324	1.599	2.346	-	-	1.599
	Bottom	1.781	1.781	1.781	1.781	1.781	1.781	1.781	1.781	1.781

14. SAR Measurement Variability

Per FCC KDB Publication 865664 D01v01r04, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

1) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.
2) **When the original highest measured SAR is ≥ 0.80 W/㎏, the measurement was repeated once.**
3) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

RF Exposure Conditions	Band	Mode	Frequency (㎒)	EUT Position	Separation Distance (㎜)	Measured 1 g SAR (W/kg)	Repeated 1g SAR (W/kg)	Ratio
Hotspot	GSM 1900	GPRS 2Tx	1 909.8	Bottom	10	0.817	0.816	1.00
	WCDMA Band II	RMC	1 907.6	Bottom	10	0.860	0.857	1.00
	WCDMA Band IV	RMC	1 752.6	Bottom	10	0.870	0.869	1.00

RF Exposure Conditions	Band	Mode	Frequency (㎒)	EUT Position	Separation Distance (㎜)	Measured 10 g SAR (W/kg)	Repeated 10g SAR (W/kg)	Ratio
Phablet	WCDMA Band IV	RMC	1 752.6	Bottom	10	2.180	2.180	1.00

15. Measurement Uncertainty

Per KDB 865664 D01 SAR measurement 100㎒ to 6㎓, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of *k* = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Standard 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

16. Test Equipment Information

Test Platform	SPEAG DASY5 System SPEAG DASY6 System			
Version	DASY52: 52.10.4.1535 / SEMCAD: 14.6.14 (7501) DASY6: 16.0.2.136			
Location	Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea			
Manufacture	SPEAG			
Hardware Reference				
Equipment	Model	Serial Number	Date of Calibration	Due date of next Calibration
Shield Room	-	8F - 1	-	-
Shield Room	-	8F - 2	-	-
Shield Room	-	8F - 3	-	-
Shield Room	-	8F - 4	-	-
DASY5 Robot	TX90XL speag	F12/5L7FA1/A/01	-	-
DASY6 Robot	TX90XL speag	F/18/0004968/A/001	-	-
DASY6 Robot	TX60 Lspeag	F/19/0007289/A/001	-	-
Phantom	Twin SAM Phantom	1728	-	-
Phantom	Twin SAM Phantom	1975	-	-
Phantom	Twin SAM Phantom	1984	-	-
Phantom	2mm Oval Phantom ELI5	2098	-	-
Mounting Device	Mounting Device	-	-	-
DAE	DAE4	666	2022-01-26	2023-01-26
DAE	DAE4	1342	2022-05-31	2023-05-31
DAE	DAE4	1567	2022-03-24	2023-03-24
DAE	DAE4	1587	2022-07-20	2023-07-20
Probe	EX3DV4	3697	2022-03-28	2023-03-28
Probe	EX3DV4	3865	2022-01-27	2023-01-27
Probe	EX3DV4	3928	2022-03-03	2023-03-03
Probe	EX3DV4	7540	2022-04-29	2023-04-29
ESG Vector Signal Generator	E4438C	MY42080486	2022-05-02	2023-05-02
ESG Vector Signal Generator	E4438C	MY42080845	2022-02-24	2023-02-24
Power Sensor	8481H	2703A11902	2022-05-02	2023-05-02
Power Sensor	8481H	3318A 19377	2022-05-02	2023-05-02
Power Sensor	8481H	3318A 19379	2022-05-02	2023-05-02
Power Sensor	8481H	3318A18090	2022-05-02	2023-05-02
Dual Power Meter	E4419B	GB43312301	2022-05-02	2023-05-02
Dual Power Meter	EPM-442A	GB37480680	2022-05-02	2023-05-02
Power Sensor	8481H	2703A11902	2022-05-02	2023-05-02
Power Sensor	8481H	3318A18090	2022-05-02	2023-05-02
Attenuator	8491B 3dB	17387	2022-05-02	2023-05-02
Attenuator	8491B-6dB	MY39270294	2022-05-02	2023-05-02
Attenuator	8491B 10dB	29425	2022-05-02	2023-05-02

Hardware Reference				
Equipment	Model	Serial Number	Date of Calibration	Due date of next Calibration
Attenuator	8491A	21552	2022-05-02	2023-05-02
Attenuator	8491A	35560	2022-05-02	2023-05-02
Attenuator	8491A	35934	2022-05-02	2023-05-02
Dual Directional Coupler	772D	2839A00719	2022-05-02	2023-05-02
Dual Directional Coupler	772D	2839A160504	2022-05-02	2023-05-02
Dual Directional Coupler	778D	16059	2022-05-02	2023-05-02
Dual Directional Coupler	ZMDC-30-1+	F708102210	2022-12-14	2023-12-14
Power Amplifier	GRF5039	1062	2022-05-02	2023-05-02
Power Amplifier	2055-BBS3Q7E9I	1005D/C0521	2022-02-24	2023-02-24
Power Amplifier	5190FE	1012	2022-05-02	2023-05-02
Power Amplifier	AMP2027	10010	2022-05-02	2023-05-02
Power Amplifier	TVA-R5-13A+	2202007	2022-12-14	2023-12-14
Low Pass Filter	VLF-3000+	31831	2022-05-02	2023-05-02
Low Pass Filter	VLF-1500+	31835	2022-05-02	2023-05-02
Low Pass Filter	LA-15N	36543	2022-05-02	2023-05-02
Low Pass Filter	LA-30N	40058	2022-05-02	2023-05-02
Low Pass Filter	LA-60N	40059	2022-05-02	2023-05-02
Confined Loop Antennas	CLA13	1019	2022-06-03	2024-06-03
Dipole Validation Kits	D750V3	1183	2022-09-21	2024-09-21
Dipole Validation Kits	D850V2	1006	2022-04-26	2024-04-26
Dipole Validation Kits	D1750V2	1072	2022-04-27	2024-04-27
Dipole Validation Kits	D1900V2	5d160	2022-04-29	2024-04-29
Dipole Validation Kits	D2450V2	895	2022-07-15	2024-07-15
Dipole Validation Kits	D2600V2	1050	2022-07-15	2024-07-15
Dipole Validation Kits	D5GHzV2	1134	2022-01-27	2024-01-27
Network Analyzer	E5071B	MY42403524	2022-02-15	2023-02-15
Dielectric Assessment Kit	DAK-3.5	1078	2022-05-30	2023-05-30
Dielectric Assessment Kit	DAK-12	1165	2022-06-13	2023-06-13
Humidity/Temp	MHB-382SD	73871	2022-05-04	2023-05-04
Humidity/Temp	MHB-382SD	25737	2022-05-04	2023-05-04
Humidity/Temp	MHB-382SD	46307	2022-03-17	2023-03-17
Humidity/Temp	MHB-382SD	46301	2022-02-25	2023-02-25
Spectrum Analyzer	FSP7	100289	2022-12-08	2023-12-08
Wideband Radio Communication Tester	CMW500	168683	2022-03-10	2023-03-10
Wideband Radio Communication Tester	CMW500	132120	2022-05-02	2023-05-02
Wideband Radio Communication Tester	CMW500	132423	2022-02-24	2022-02-24
Radio Communication Test Station	MT8000A	6261987922	2022-02-11	2023-02-11
Radio Communication Test Station	MT8821C	6201807233	2022-01-19	2023-01-19
Radio Communication Test Station	MT8821C	6262170371	2022-11-03	2023-11-03
Radio Communication Test Station	MT8821C	6262170372	2022-11-03	2023-11-03

17. Test System Verification Results

Eurofins KCTL Co.,Ltd.

Measurement Report for Device, FRONT, CLA13, UID 0 -, Channel 4 (13.0MHz)

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
CLA13, Speag	220.0 x 220.0 x 100.0	1019	Validation Dipole

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 0.00	CLA13	CW, 0--	13.0, 4	15.42	0.759	55.0

Hardware Setup

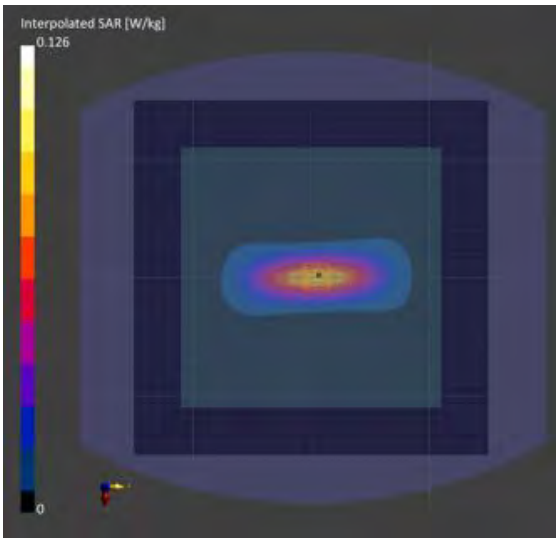
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2098	HBBL-4-250 , 2022-Dec-27	EX3DV4 - SN3928, 2022-03-03	DAE4 Sn1342, 2022-05-31

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	300.0 x 300.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	N/A	1.5
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2022-12-27	2022-12-27
psSAR1g [W/kg]	0.065	0.061
psSAR8g [W/kg]	0.054	0.040
psSAR10g [W/kg]	0.052	0.038
psAPD (1.0cm2, sq) [W/m2]		0.613
psAPD (4.0cm2, sq) [W/m2]		0.804
Power Drift [dB]		0.01
M2/M1 [%]		74.1
Dist 3dB Peak [mm]		> 15.0



Date: 2022-12-06

Test Laboratory: Eurofins KCTL Co.,Ltd.
File Name: 750 MHz Verification Input Power 250 mW 2022-12-06.da52:0

DUT: Dipole 750 MHz D750V3, Type: D750V3, Serial: D750V3 - SN:1183

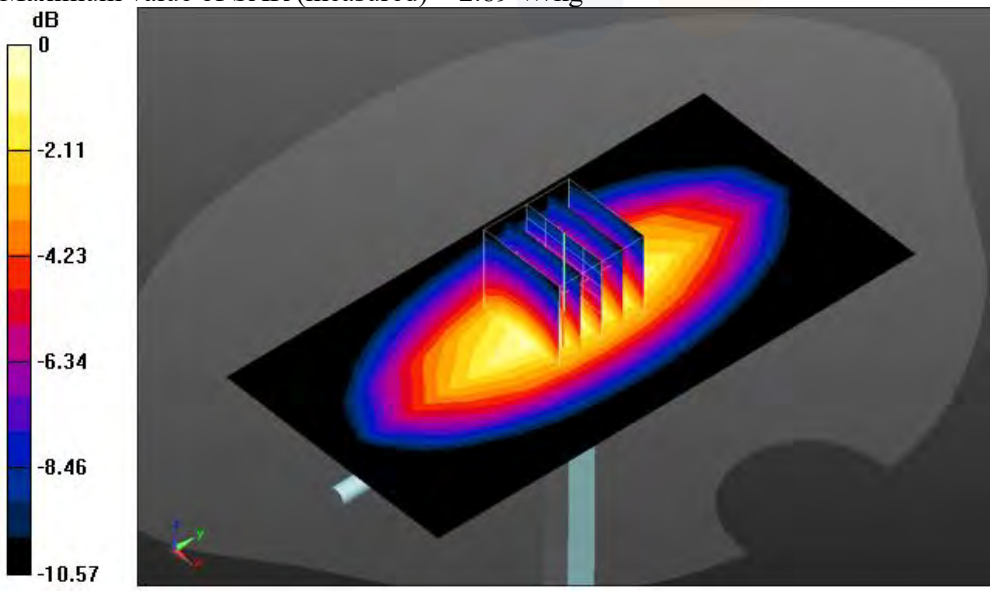
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.895 S/m; ε_r = 43.393; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3865;ConvF(10.24, 10.24, 10.24) @ 750 MHz; Calibrated: 2022-01-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2022-03-24
- Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1728
- Measurement SW: DASY52, Version 52.10 (4);

Configuration/750 MHz Verification Input Power 250 mW 2022-12-06/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.83 W/kg

Configuration/750 MHz Verification Input Power 250 mW 2022-12-06/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.51 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.29 W/kg
SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.41 W/kg
Maximum value of SAR (measured) = 2.89 W/kg



0 dB = 2.89 W/kg = 4.61 dBW/kg

Date: 2022-12-17

Test Laboratory: Eurofins KCTL Co.,Ltd.
File Name: 750 MHz Verification Input Power 250 mW 2022-12-17.da52:0

DUT: Dipole 750 MHz D750V3, Type: D750V3, Serial: D750V3 - SN:1183

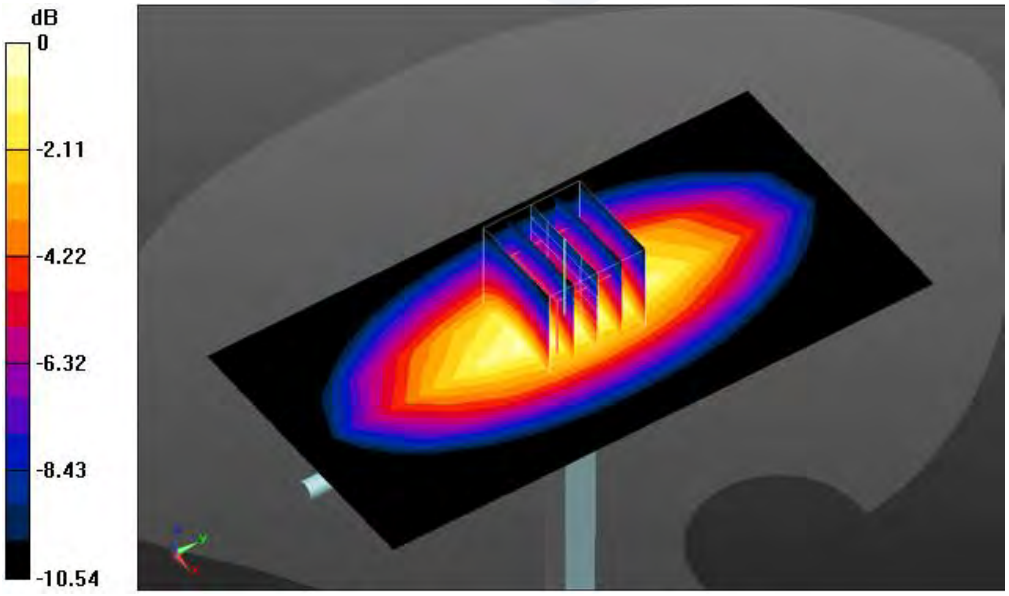
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.876 S/m; ε_r = 42.305; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3865;ConvF(10.24, 10.24, 10.24) @ 750 MHz; Calibrated: 2022-01-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2022-03-24
- Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1728
- Measurement SW: DASY52, Version 52.10 (4);

Configuration/750 MHz Verification Input Power 250 mW 2022-12-17/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.66 W/kg

Configuration/750 MHz Verification Input Power 250 mW 2022-12-17/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.65 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.12 W/kg
SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.34 W/kg
Maximum value of SAR (measured) = 2.74 W/kg



0 dB = 2.74 W/kg = 4.38 dBW/kg

Date: 2022-12-07

Test Laboratory: Eurofins KCTL Co.,Ltd.
File Name: 850 MHz Verification Input Power 250 mW 2022-12-07.da52:0

DUT: Dipole 850 MHz D850V2, Type: D850V2, Serial: D850V2 - SN:1006

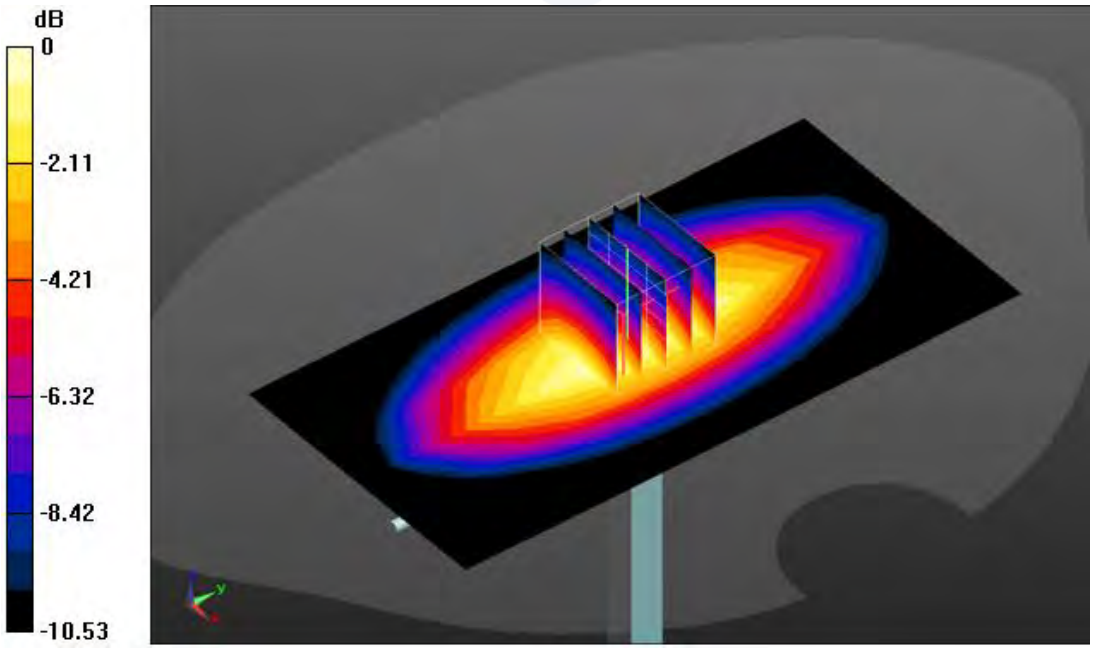
Communication System: UID 0, CW (0); Frequency: 850 MHz; Duty Cycle: 1:1
Medium parameters used: f = 850 MHz; σ = 0.908 S/m; ε_r = 40.825; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3865;ConvF(9.88, 9.88, 9.88) @ 850 MHz; Calibrated: 2022-01-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2022-03-24
- Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1728
- Measurement SW: DASY52, Version 52.10 (4);

Configuration/850 MHz Verification Input Power 250 mW 2022-12-07/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.38 W/kg

Configuration/850 MHz Verification Input Power 250 mW 2022-12-07/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 63.37 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.94 W/kg
SAR(1 g) = 2.55 W/kg; SAR(10 g) = 1.68 W/kg
Maximum value of SAR (measured) = 3.44 W/kg



0 dB = 3.44 W/kg = 5.37 dBW/kg

Date: 2022-12-12

Test Laboratory: Eurofins KCTL Co.,Ltd.
File Name: 850 MHz Verification Input Power 250 mW 2022-12-12.da52:0

DUT: Dipole 850 MHz D850V2, Type: D850V2, Serial: D850V2 - SN:1006

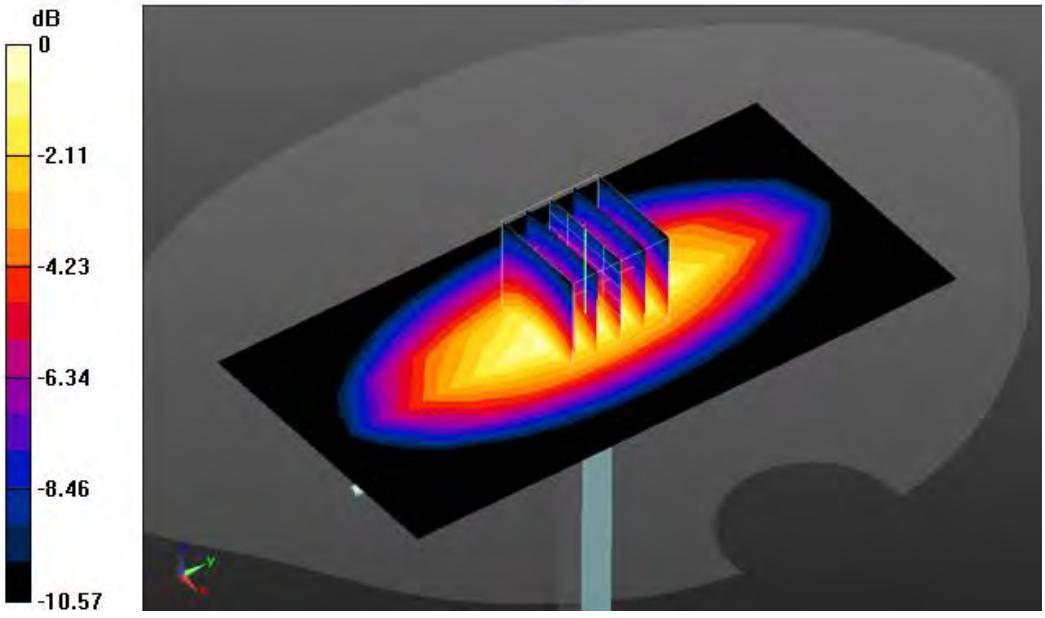
Communication System: UID 0, CW (0); Frequency: 850 MHz; Duty Cycle: 1:1
Medium parameters used: f = 850 MHz; σ = 0.924 S/m; ε_r = 41.828; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3865;ConvF(9.88, 9.88, 9.88) @ 850 MHz; Calibrated: 2022-01-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2022-03-24
- Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1728
- Measurement SW: DASY52, Version 52.10 (4);

Configuration/850 MHz Verification Input Power 250 mW 2022-12-12/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.30 W/kg

Configuration/850 MHz Verification Input Power 250 mW 2022-12-12/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 62.48 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 3.92 W/kg
SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.67 W/kg
Maximum value of SAR (measured) = 3.42 W/kg



0 dB = 3.42 W/kg = 5.34 dBW/kg

Date: 2022-12-13

Test Laboratory: Eurofins KCTL Co.,Ltd.
File Name: 850 MHz Verification Input Power 250 mW 2022-12-13.da52:0

DUT: Dipole 850 MHz D850V2, Type: D850V2, Serial: D850V2 - SN:1006

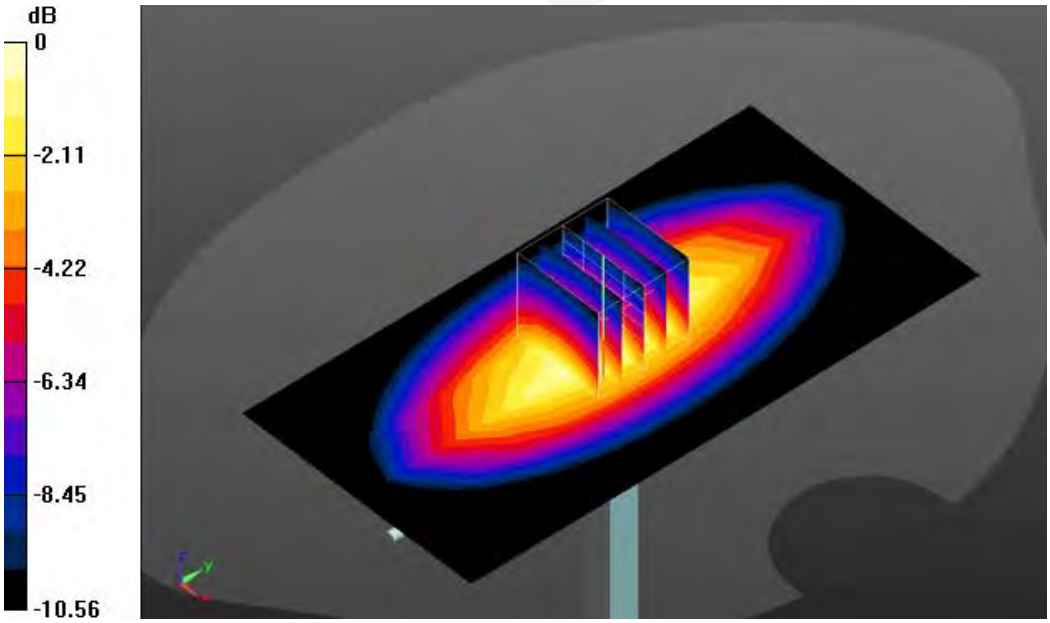
Communication System: UID 0, CW (0); Frequency: 850 MHz; Duty Cycle: 1:1
Medium parameters used: f = 850 MHz; σ = 0.931 S/m; ε_r = 41.562; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3865;ConvF(9.88, 9.88, 9.88) @ 850 MHz; Calibrated: 2022-01-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2022-03-24
- Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1728
- Measurement SW: DASY52, Version 52.10 (4);

Configuration/850 MHz Verification Input Power 250 mW 2022-12-13/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.25 W/kg

Configuration/850 MHz Verification Input Power 250 mW 2022-12-13/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.59 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.82 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.62 W/kg
Maximum value of SAR (measured) = 3.34 W/kg



0 dB = 3.34 W/kg = 5.24 dBW/kg

Date: 2022-12-14

Test Laboratory: Eurofins KCTL Co.,Ltd.
File Name: 850 MHz Verification Input Power 250 mW 2022-12-14.da52:0

DUT: Dipole 850 MHz D850V2, Type: D850V2, Serial: D850V2 - SN:1006

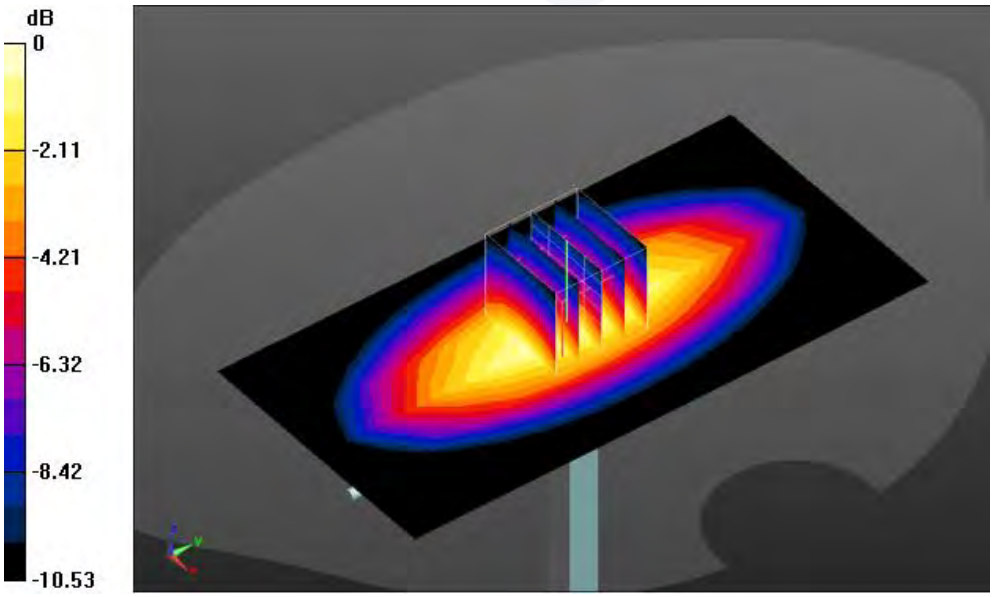
Communication System: UID 0, CW (0); Frequency: 850 MHz; Duty Cycle: 1:1
Medium parameters used: f = 850 MHz; σ = 0.932 S/m; ε_r = 41.587; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3865;ConvF(9.88, 9.88, 9.88) @ 850 MHz; Calibrated: 2022-01-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2022-03-24
- Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1728
- Measurement SW: DASY52, Version 52.10 (4);

Configuration/850 MHz Verification Input Power 250 mW 2022-12-14/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.18 W/kg

Configuration/850 MHz Verification Input Power 250 mW 2022-12-14/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.93 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.74 W/kg
SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.59 W/kg
Maximum value of SAR (measured) = 3.27 W/kg



0 dB = 3.27 W/kg = 5.15 dBW/kg