SAR TEST REPORT

No. I15Z43176-SEM01

For

Huawei Technologies Co.,Ltd

Smart Phone

Model name: EVA-L19

With

Hardware Version: HL1UEVAM

Software Version: A168-L09C900B072

FCC ID: QISEVA-L19

Issued Date: 2016-03-19

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TESTING
CNAS L0570

Note:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I15Z43176-SEM01	Rev.0	2016-03-19	Initial creation of test report

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1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

1.2 Testing Environment

Temperature:	18°C~25 °C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

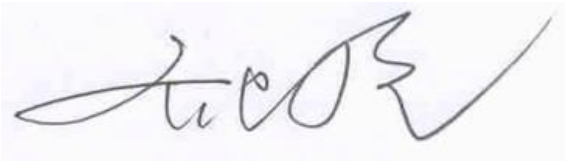
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	February 19, 2016
Testing End Date:	February 24, 2016

1.4 Signature

Lin Xiaojun

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)

Xiao Li

Deputy Director of the laboratory

(Approved this test report)

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2 Statement of Compliance

The device supports the dynamic antenna switching function to optimize transmission efficiency for wide range frequency operations. The detail information is presented in Annex J.
The device supports the dynamic antenna tuning function to optimize transmission efficiency for 1710MHz~2700MHz frequency operations. The detail information is presented in Annex K.
The device supports the power reduction. The detail information is presented in Annex L.
The device supports downlink Release 10 LTE Carrier Aggregation (CA) only. The detail information is presented in Annex M.

The maximum results of SAR found during testing for Huawei Technologies Co.,Ltd Smart Phone EVA-L19 are as follows:

Table 2.1: Highest Reported SAR for Head (1g)

Exposure Configuration	Configuration	Technology Band	Highest Reported SAR 1g (W/Kg)	Equipment Class
Head (Separation Distance 0mm)	Main antenna Main Modem	GSM 850	0.46	PCE
		PCS 1900	0.37	
		UMTS FDD 5	0.30	
		UMTS FDD 4	0.66	
		UMTS FDD 2	0.46	
		LTE Band 4	0.64	
		LTE Band 7	0.48	
		LTE Band 38	0.20	
		LTE Band 41	0.31	
	Second antenna Second Modem	GSM 850	1.46	PCE
		PCS 1900	1.43	
	Second antenna Main Modem	GSM 850	1.17	PCE
		PCS 1900	1.16	
		UMTS FDD 5	1.29	
		UMTS FDD 4	1.27	
		UMTS FDD 2	1.14	
		LTE Band 4	1.20	
		LTE Band 7	1.24	
		LTE Band 38	0.75	
		LTE Band 41	0.82	
	Main antenna Second Modem	GSM 850	0.07	PCE
		PCS 1900	0.08	
	WLAN antenna	WLAN 2.4 GHz	1.39	DTS
		WLAN 5 GHz	1.37	UNII

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Table 2.2: Highest Reported SAR for Hotspot (1g)

Exposure Configuration	Configuration	Technology Band	Highest Reported SAR 1g (W/Kg)	Equipment Class
Hotspot (Separation Distance 10mm)	Main antenna Main Modem	GSM 850	0.49	PCE
		PCS 1900	0.78	
		UMTS FDD 5	0.37	
		UMTS FDD 4	0.59	
		UMTS FDD 2	0.62	
		LTE Band 4	0.44	
		LTE Band 7	0.27	
		LTE Band 38	0.17	
		LTE Band 41	0.14	
	Second antenna Second Modem	GSM 850	1.12	PCE
		PCS 1900	0.37	
	Second antenna Main Modem	GSM 850	0.85	PCE
		PCS 1900	0.32	
		UMTS FDD 5	0.42	
		UMTS FDD 4	0.42	
		UMTS FDD 2	0.19	
		LTE Band 4	0.30	
		LTE Band 7	0.24	
		LTE Band 38	0.13	
		LTE Band 41	0.17	
	Main antenna Second Modem	GSM 850	0.13	PCE
		PCS 1900	0.29	
	WLAN antenna	WLAN 2.4 GHz	0.29	DTS
		WLAN 5 GHz	0.20	UNII

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Table 2.3: Highest Reported SAR for Body worn (1g)

Exposure Configuration	Configuration	Technology Band	Highest Reported SAR 1g (W/Kg)	Equipment Class
Body-worn (Separation Distance 15mm)	Main antenna Main Modem	GSM 850	0.35	PCE
		PCS 1900	0.27	
		UMTS FDD 5	0.23	
		UMTS FDD 4	0.32	
		UMTS FDD 2	0.49	
		LTE Band 4	0.37	
		LTE Band 7	0.20	
		LTE Band 38	0.10	
		LTE Band 41	0.10	
	Second antenna Second Modem	GSM 850	0.44	PCE
		PCS 1900	0.15	
	Second antenna Main Modem	GSM 850	0.43	PCE
		PCS 1900	0.15	
		UMTS FDD 5	0.14	
		UMTS FDD 4	0.18	
		UMTS FDD 2	0.14	
		LTE Band 4	0.09	
		LTE Band 7	0.10	
		LTE Band 38	0.05	
		LTE Band 41	0.07	
	Main antenna Second Modem	GSM 850	0.08	PCE
		PCS 1900	0.09	
	WLAN antenna	WLAN 2.4 GHz	0.13	DTS
		WLAN 5 GHz	0.12	UNII

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 10 mm or 15mm between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

The measurement together with the test system set-up is described in annex C of this test report. A detailed description of the equipment under test can be found in chapter 4 of this test report.

The highest reported SAR value is obtained at the case of **(Table 2.1&2.2&2.3),** and the values are**: 1.46 W/kg (1g).**

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Table 2.4: The sum of reported SAR values for three antennas with WLAN-2.4G

	Position	Band	Second ant. Main Modem	Band	Main ant. Second Modem	WLAN	Sum
Head	Left hand, Tilt15°	GSM850	0.79	GSM850	0.05	0.46	**1.30**
	Right hand, Touch cheek	WCDMA850	1.29	GSM850	0.07	0.12	**1.48**
Body	Rear 10mm	GSM850	0.85	GSM1900	0.29	0.12	**1.26**
	Rear 15mm	GSM850	0.43	GSM1900	0.09	0.06	**0.58**

	Position	Band	Main ant. Main Modem	Band	Second ant. Second Modem	WLAN	Sum
Head	Left hand, Tilt15°	LTE B4 1RB	0.19	GSM850	0.42	0.46	**1.07**
	Right hand, Touch cheek	W1700	0.66	GSM1900	0.70	0.12	**1.48**
Body	Rear 10mm	GSM1900	0.78	GSM1900	0.22	0.12	**1.12**
	Rear 15mm	W1900	0.49	GSM850 GSM1900	0.09	0.06	**0.64**

Table 2.5: The sum of reported SAR values for two antennas with WLAN-2.4G

	Position	Band	Second ant. Main Modem	WLAN	Sum
Head	Left hand, Touch cheek	GSM850	0.74	0.68	**1.42**
	Left hand, Tilt15°	GSM850	0.79	0.65	**1.44**
	Right hand, Touch cheek	WCDMA850	1.29	0.20	**1.49**
Body	Rear 10mm	GSM850	0.85	0.11	**0.96**
	Rear 15mm	GSM850	0.43	0.05	**0.48**

	Position	Band	Main ant. Main Modem	WLAN	Sum
Head	Left hand, Touch cheek	LTE B7 1RB	0.48	0.68	**1.16**
	Left hand, Tilt15°	LTE B4 1RB	0.19	0.65	**0.84**
	Right hand, Touch cheek	W1700	0.66	0.20	**0.86**
Body	Rear 10mm	GSM1900	0.78	0.11	**0.89**
	Rear 15mm	W1900	0.49	0.05	**0.54**

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Table 2.6: The sum of reported SAR values for three antennas with WLAN-5G

	Position	Band	Second ant. Main Modem	Band	Main ant. Second Modem	WLAN	Sum
Head	Left hand, Touch cheek	GSM850	0.74	GSM1900	0.08	0.54	**1.36**
	Left hand, Tilt15°	GSM850	0.79	GSM850	0.05	0.39	**1.23**
	Right hand, Touch cheek	WCDMA850	1.29	GSM850	0.07	0.23	**1.59**
Body	Rear 10mm	GSM850	0.85	GSM1900	0.29	0.06	**1.20**
	Rear 15mm	GSM850	0.43	GSM1900	0.09	0.06	**0.58**

	Position	Band	Main ant. Main Modem	Band	Second ant. Second Modem	WLAN	Sum
Head	Left hand, Touch cheek	LTE B7 1RB	0.48	GSM850	0.46	0.54	**1.48**
	Left hand, Tilt15°	LTE B4 1RB	0.19	GSM850	0.42	0.39	**1.00**
	Right hand, Touch cheek	W1700	0.66	GSM1900	0.70	0.23	**1.59**
Body	Rear 10mm	GSM1900	0.78	GSM1900	0.22	0.06	**1.06**
	Rear 15mm	W1900	0.49	GSM850 GSM1900	0.09	0.06	**0.64**

Table 2.7: The sum of reported SAR values for two antennas with WLAN-5G

	Position	Band	Second ant. Main Modem	WLAN	Sum
Head	Left hand, Touch cheek	GSM850	0.74	0.75	**1.49**
	Left hand, Tilt15°	GSM850	0.79	0.44	**1.23**
	Right hand, Touch cheek	WCDMA850	1.29	0.23	**1.52**
Body	Rear 10mm	GSM850	0.85	0.06	**0.91**
	Rear 15mm	GSM850	0.43	0.05	**0.48**

	Position	Band	Main ant. Main Modem	WLAN	Sum
Head	Left hand, Touch cheek	LTE B7 1RB	0.48	0.75	**1.23**
	Left hand, Tilt15°	LTE B4 1RB	0.19	0.44	**0.63**
	Right hand, Touch cheek	W1700	0.66	0.23	**0.89**
Body	Rear 10mm	GSM1900	0.78	0.06	**0.84**
	Rear 15mm	W1900	0.49	0.05	**0.54**

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Table 2.8: The sum of reported SAR values for three antennas with BT

	Position	Band	Second ant. Main Modem	Band	Main ant. Second Modem	BT	Sum
Body	Rear 15mm	GSM850	0.43	GSM1900	0.09	0.17	**0.69**

	Position	Band	Main ant. Main Modem	Band	Second ant. Second Modem	BT	Sum
Body	Rear 15mm	W1900	0.49	GSM850 GSM1900	0.09	0.17	**0.75**

Table 2.9: The sum of reported SAR values for two antennas withBT

	Position	Band	Second ant. Main Modem	BT	Sum
Body	Rear 15mm	GSM850	0.43	0.17	**0.60**

	Position	Band	Main ant. Main Modem	BT	Sum
Body	Rear 15mm	W1900	0.49	0.17	**0.66**

According to the above tables, the highest sum of reported SAR values is **1.59 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

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3 Client Information

3.1 Applicant Information

Company Name:	Huawei Technologies Co.,Ltd
Address /Post:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China
City:	Shenzhen
Country:	China
Contact Person:	zhangheng
Email:	ivy.zhangheng@huawei.com
Telephone:	18121057839/021-61752571

3.2 Manufacturer Information

Company Name:	Huawei Technologies Co.,Ltd
Address /Post:	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China
City:	Shenzhen
Country:	China
Contact Person:	/
Email:	/
Telephone:	/

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4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Smart Phone
Model name:	EVA-L19
Operating mode(s):	GSM 850/1900, WCDMA 850/1700/1900 BT, Wi-Fi, LTE Band 4/7/38/40/41
Tested Tx Frequency:	825 – 848.8 MHz (GSM 850)
	1850.2 – 1910 MHz (GSM 1900)
	826.4–846.6 MHz (WCDMA850 Band V)
	1712.4 – 1752.6 MHz (WCDMA 1700 Band IV)
	1852.4–1907.6 MHz (WCDMA1900 Band II)
	1720 – 1745 MHz (LTE Band 4)
	2510-2560 MHz (LTE Band 7)
	2570 – 2620 MHz (LTE Band 38)
	2555-2655 MHz(LTE Band 41)
	2400 – 2480 MHz (Bluetooth)
	2402 – 2472 MHz (Wi-Fi 2.4G)
	5150 – 5350 MHz / 5470 – 5850 MHz (Wi-Fi 5G)
Tested Rx Frequency:	869.2 – 891.8 MHz (GSM 850)
	1930.2 – 1989.8 MHz (GSM 1900)
	871.4 – 891.6 MHz (WCDMA850 Band V)
	2112.4 – 2152.6 MHz (WCDMA 1700 Band IV)
	1932.4 –1987.6 MHz (WCDMA1900 Band II)
	2120 – 2145 MHz (LTE Band 4)
	2630 – 2680(LTE Band 7)
	2570 – 2620 MHz (LTE Band 38)
	2555-2655 MHz(LTE Band 41)
	2400 – 2480 MHz (Bluetooth)
	2402 – 2472 MHz (Wi-Fi 2.4G)
	5150 – 5350 MHz / 5470 – 5850 MHz (Wi-Fi 5G)
GPRS/EGPRS Multislot Class:	12
GPRS capability Class:	B
WCDMA Category	HSDPA:24
	HSUPA:6
	HSPA+:14
	DC-HSDPA:24
Release Version	GSM: R6
	GPRS: R6
	UMTS: Rel 8
Antenna type:	Integrated antenna
Hotspot mode:	Support simultaneous transmission of hotspot and voice(or data)

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4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW	SW Version
EUT1	869542020008224 869542020015724	HL1UEVAM	A168-L09C900B072
EUT2	869542020008307 869542020015807	HL1UEVAM	A168-L09C900B072
EUT3	869542020007572 869542020015070	HL1UEVAM	A168-L09C900B072
EUT4	869542020007648 869542020015146	HL1UEVAM	A168-L09C900B072
EUT5	004401725302398 004401725303396	HL1UEVAM	A168-L09C900B072
EUT6	004401725302851 004401725303859	HL1UEVAM	A168-L09C900B072
EUT7	869542020000692	HL1UEVAM	A168-L09C900B072
EUT8	869157020018782	HL1UEVAM	A168-L09C900B072
EUT9	869542020008810 869542020016318	HL1UEVAM	A168-L09C900B072
EUT10	004401725303206 004401725302208	HL1UEVAM	A168-L09C900B072

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test SAR with the EUT1~6 and conducted power with the EUT7~10.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacturer
AE1	Battery	HB366481ECW Sunwoda Electronic Co.,Ltd. (ATL)	Huawei Technologies Co., Ltd.
AE2	Battery	HB366481ECW (sony) Huizhou Desay Battery Co., Ltd.	Huawei Technologies Co., Ltd.
AE3	Battery	HB366481ECW (ATL) 650 SCUD (Fujian) Electronics Co.,Lted	Huawei Technologies Co., Ltd.
AE4	Headset	MEMD1632B580C00	JIANGXI LIANCHUANG HONGSHENG ELECTRONIC CO., LTD
AE5	Headset	1311-3291-3.5mm-229	BOLUO COUNTY QUANCHENG ELECTRONIC CO., LTD

*AE ID: is used to identify the test sample in the lab internally.

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5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

ANSI C95.1–1992: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2 Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05: SAR Evaluation Considerations for LTE Devices

KDB941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02: REL. 10 LTE SAR TEST GUIDANCE AND KDB INQUIRIES

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

KDB865664 D01SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

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6 Specific Absorption Rate (SAR)

6.1 Introduction

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.

6.2 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 tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

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7 Tissue Simulating Liquids

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

Frequency(MHz)	Liquid Type	Conductivity(σ)	± 5% Range	Permittivity(ε)	± 5% Range
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
835	Body	0.97	0.92～1.02	55.2	52.4～58.0
1750	Head	1.37	1.30～1.44	40.08	38.1～42.1
1750	Body	1.49	1.42～1.56	53.4	50.7～56.1
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
1900	Body	1.52	1.44～1.60	53.3	50.6～56.0
2450	Head	1.80	1.71～1.89	39.2	37.2～41.2
2450	Body	1.95	1.85～2.05	52.7	50.1～55.3
2600	Head	1.96	1.86～2.06	39.01	37.06～40.96
2600	Body	2.16	2.05～2.27	52.5	49.9～55.1
5200	Head	4.66	4.43～4.89	35.99	34.19～37.79
5200	Body	5.30	5.04～5.56	49.0	46.6～51.4
5300	Head	4.76	4.52～5.00	35.87	34.08～37.66
5300	Body	5.42	5.15～5.69	48.9	46.46～51.34
5600	Head	5.07	4.82～5.32	35.53	33.75～37.31
5600	Body	5.77	5.48～6.06	48.5	46.08～50.92
5800	Head	5.27	5.01～5.53	35.3	33.5～37.1
5800	Body	6.00	5.70～6.30	48.2	45.8～50.6

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7.2 Dielectric Performance

Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2016-02-19	Head	835 MHz	41.12	-0.92	0.921	2.33
	Body	835 MHz	56.23	1.87	0.972	0.21
2016-02-20	Head	1750 MHz	39.53	-1.37	1.361	-2.85
	Body	1750 MHz	52.7	-1.31	1.472	-1.21
2016-02-21	Head	1900 MHz	39.78	-0.55	1.427	1.93
	Body	1900 MHz	54.05	1.41	1.55	1.97
2016-02-22	Head	2450 MHz	38.01	-3.04	1.822	1.22
	Body	2450 MHz	51.63	-2.03	1.974	1.23
2016-02-23	Head	2600 MHz	38.92	-0.23	1.957	-1.17
	Body	2600 MHz	51.25	-2.38	2.17	-0.46
2016-02-24	Head	5200 MHz	36.73	2.06	4.648	-0.26
	Body	5200 MHz	50.57	3.20	5.148	-2.87
	Head	5300 MHz	36.68	2.26	4.762	0.04
	Body	5300 MHz	50.27	2.80	5.315	-1.94
	Head	5600 MHz	35.98	1.27	5.117	0.93
	Body	5600 MHz	49.57	2.21	5.731	-0.68
	Head	5800 MHz	35.67	1.05	5.33	1.14
	Body	5800 MHz	49.12	1.91	6.121	2.02

Note: The liquid temperature is 22.0 °C

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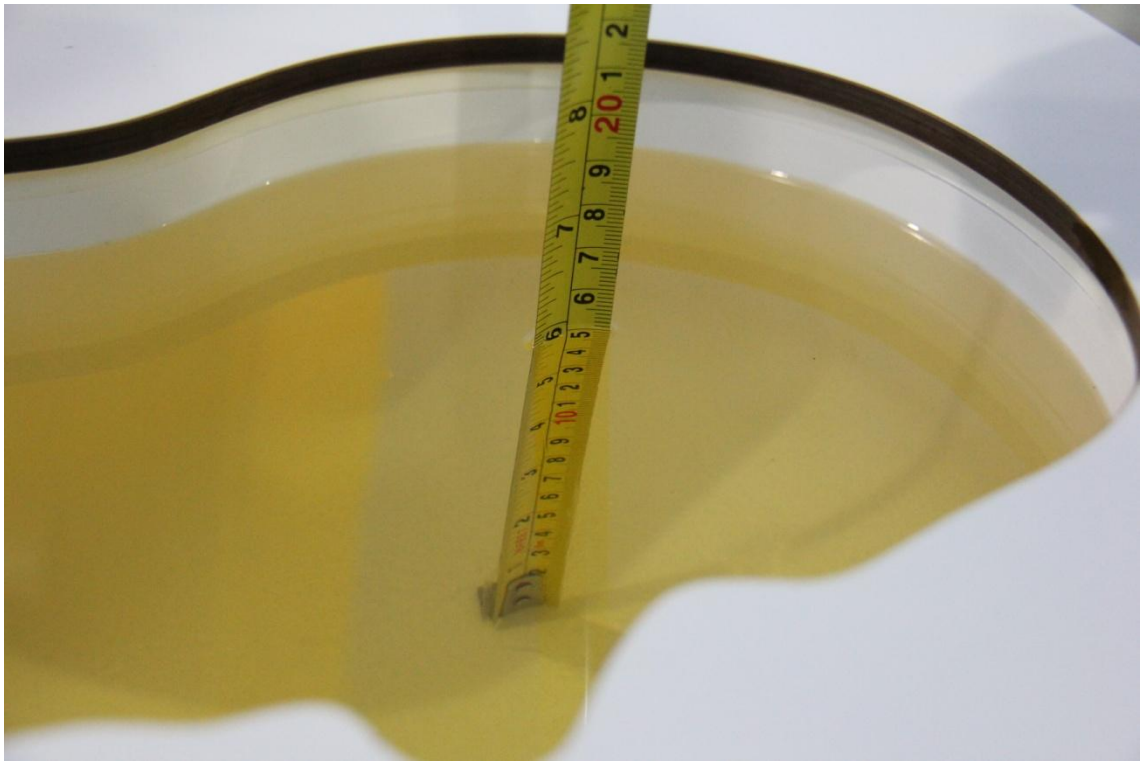
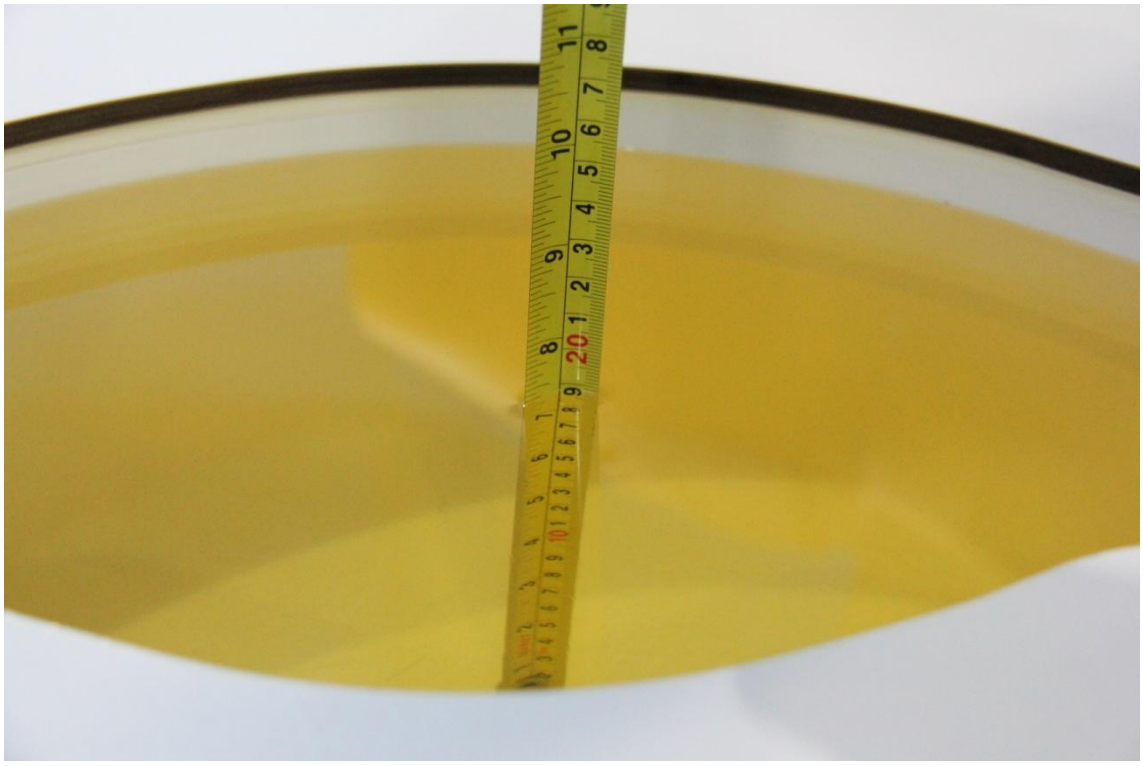


Picture 7-1: Liquid depth in the Head Phantom (835 MHz)



Picture 7-2: Liquid depth in the Flat Phantom (835 MHz)

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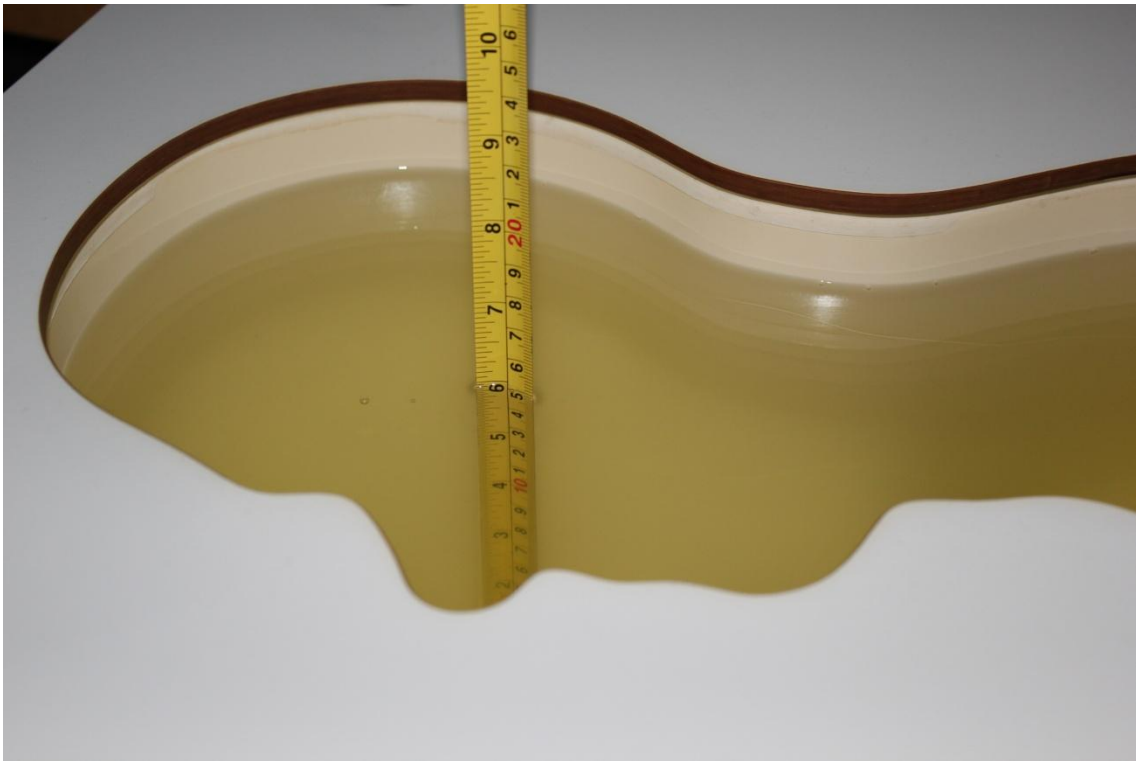
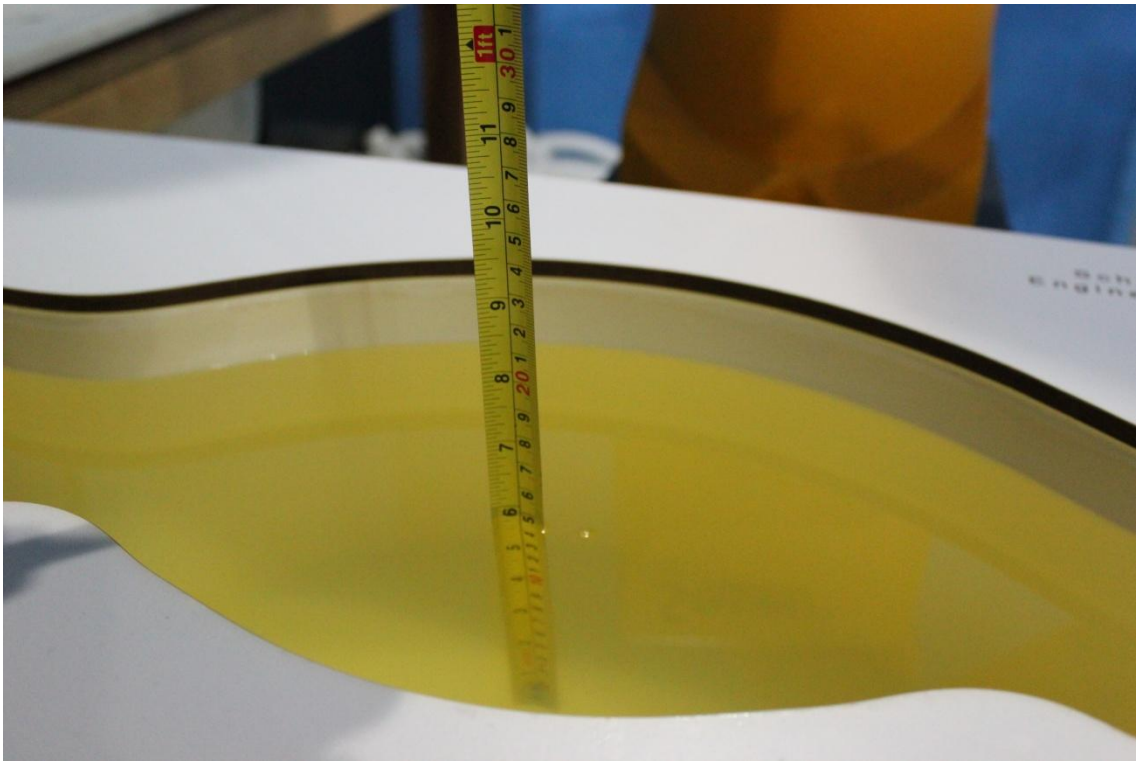


Picture 7-3: Liquid depth in the Head Phantom (1750 MHz)



Picture 7-4 Liquid depth in the Flat Phantom (1750MHz)

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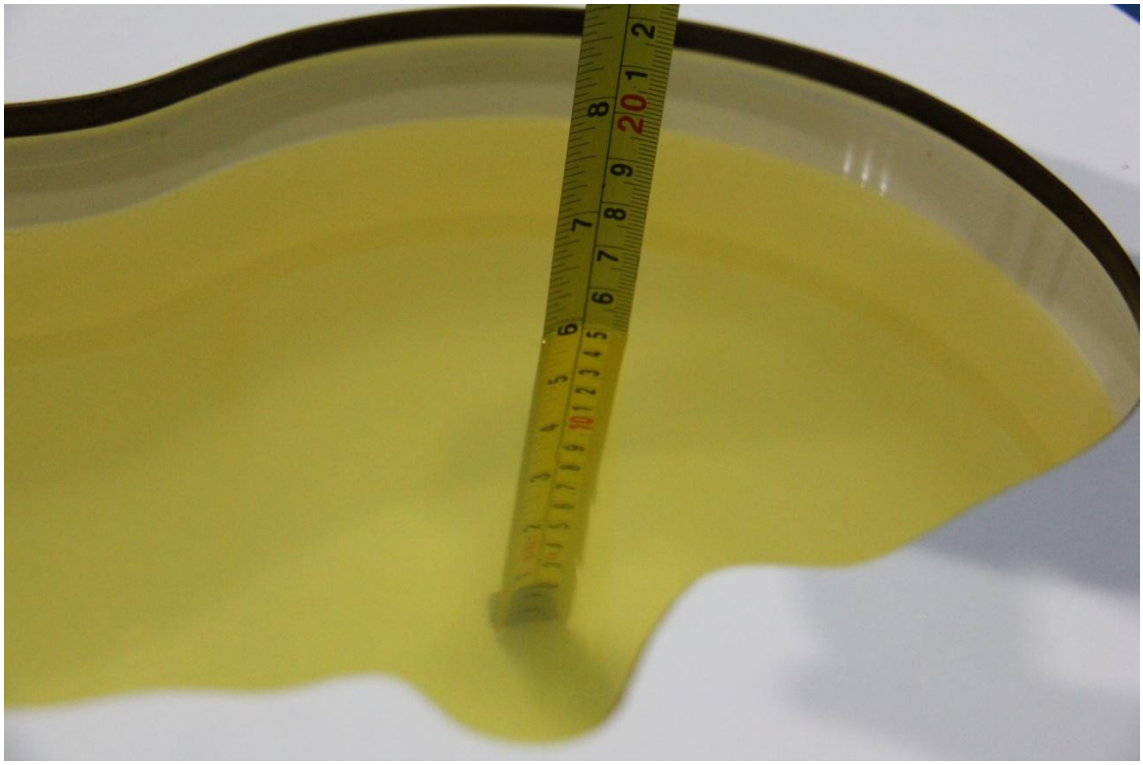
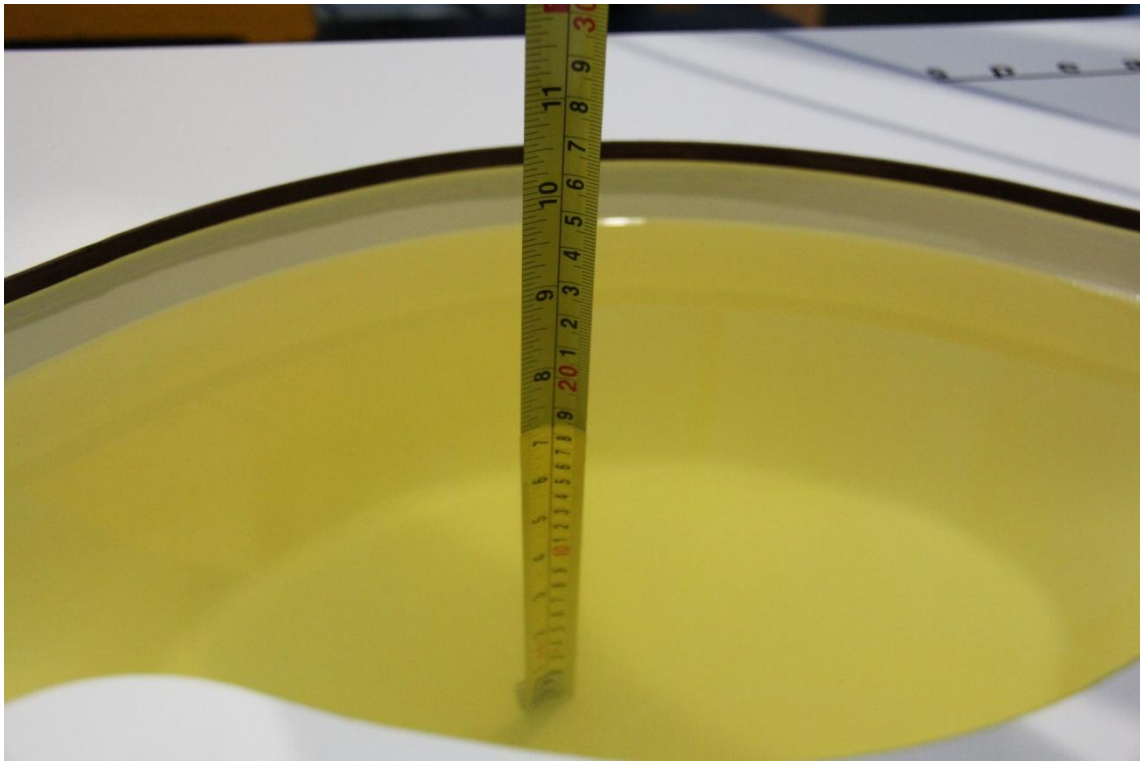


Picture 7-5: Liquid depth in the Head Phantom (1900 MHz)



Picture 7-6 Liquid depth in the Flat Phantom (1900MHz)

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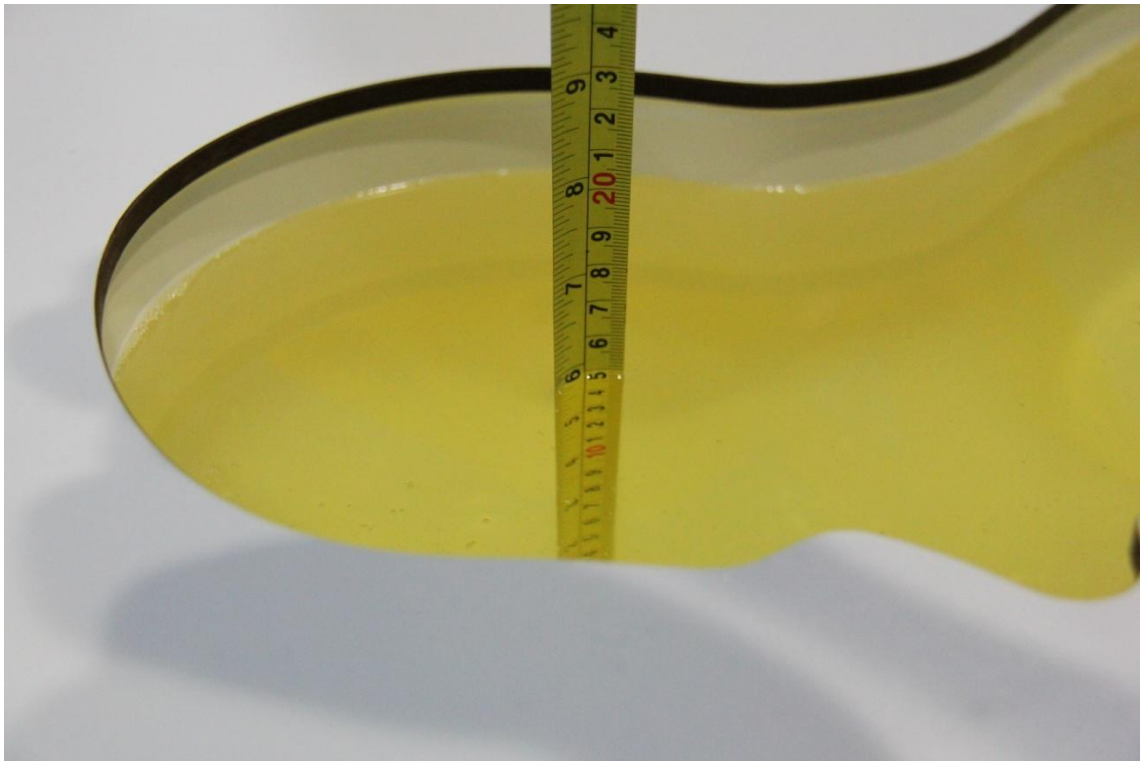
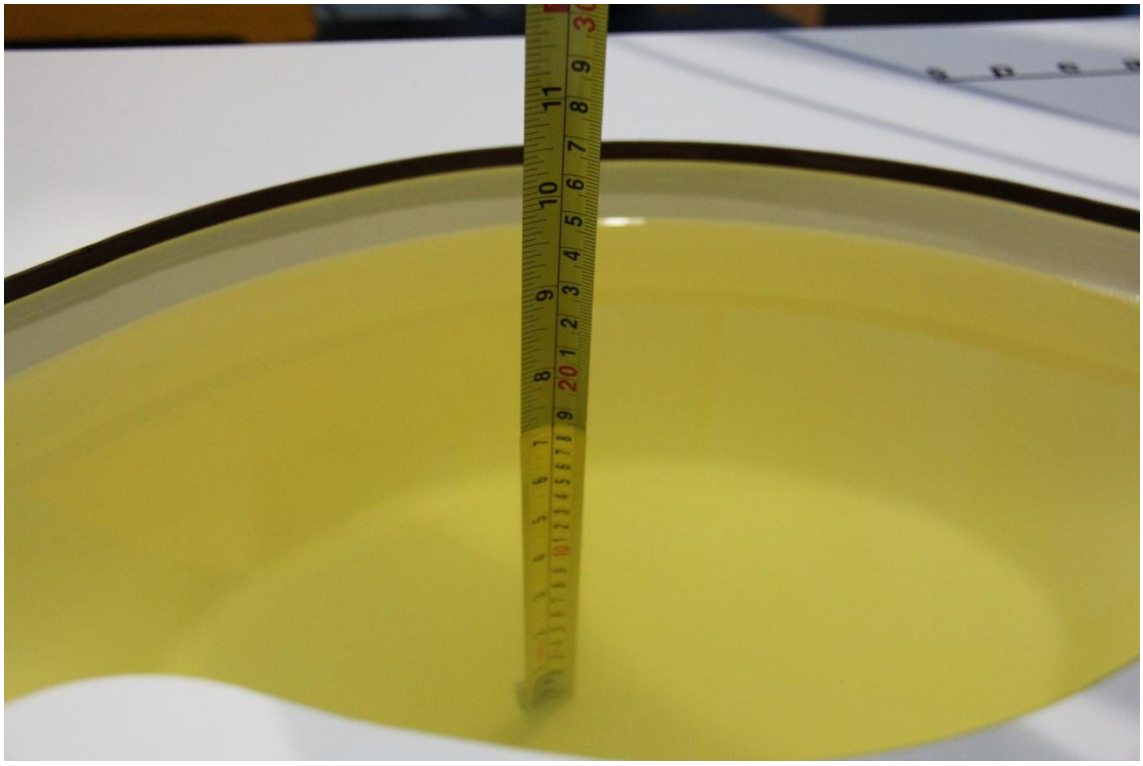


Picture 7-7 Liquid depth in the Head Phantom (2450MHz)



Picture 7-8 Liquid depth in the Flat Phantom (2450MHz)

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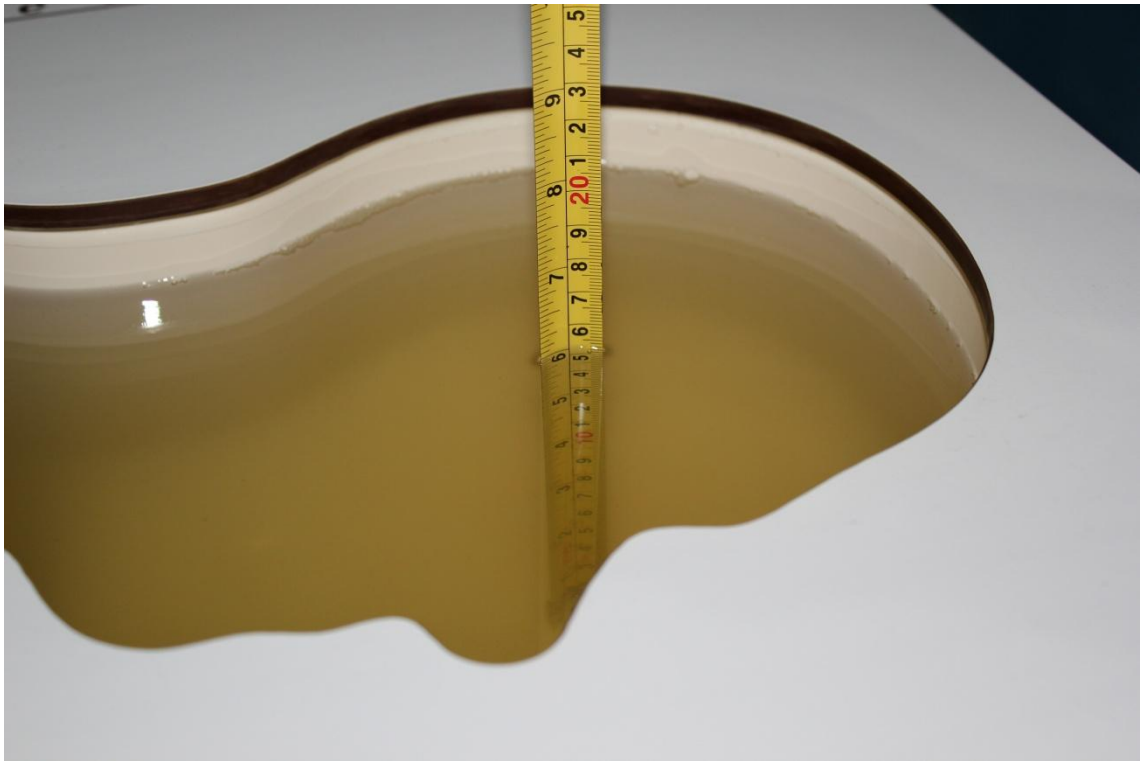
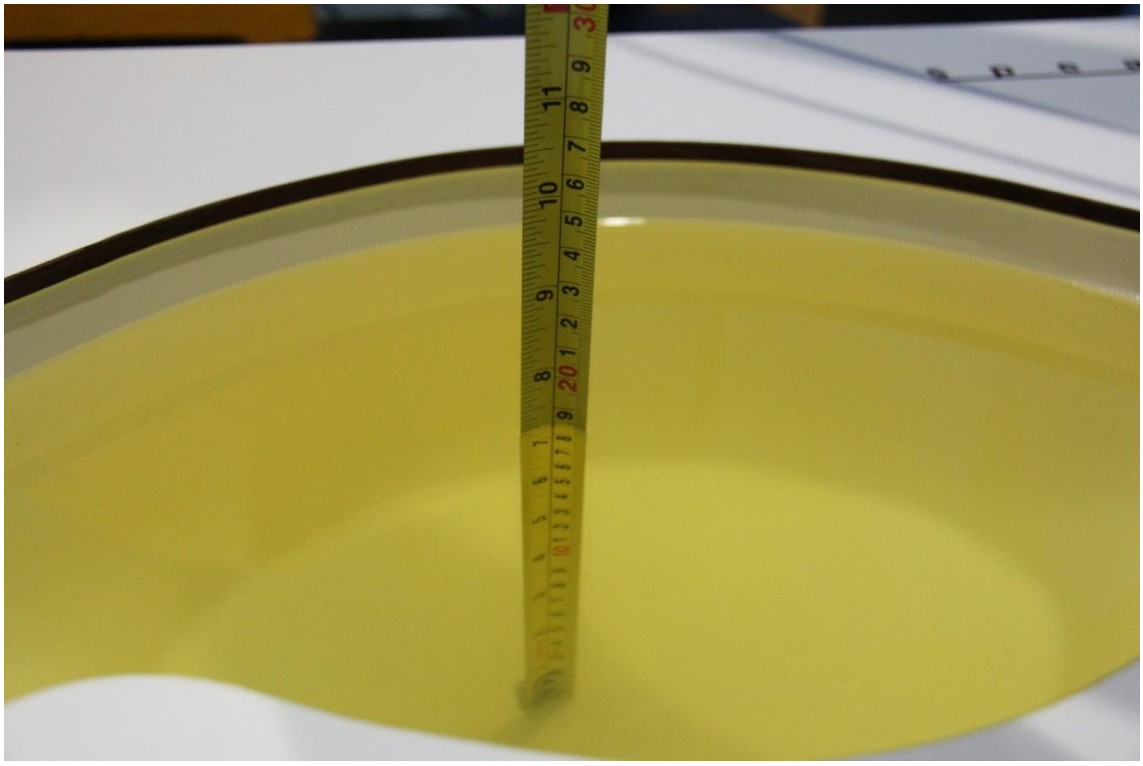


Picture 7-9 Liquid depth in the Head Phantom (2600 MHz Head)



Picture 7-10 Liquid depth in the Flat Phantom (2600MHz)

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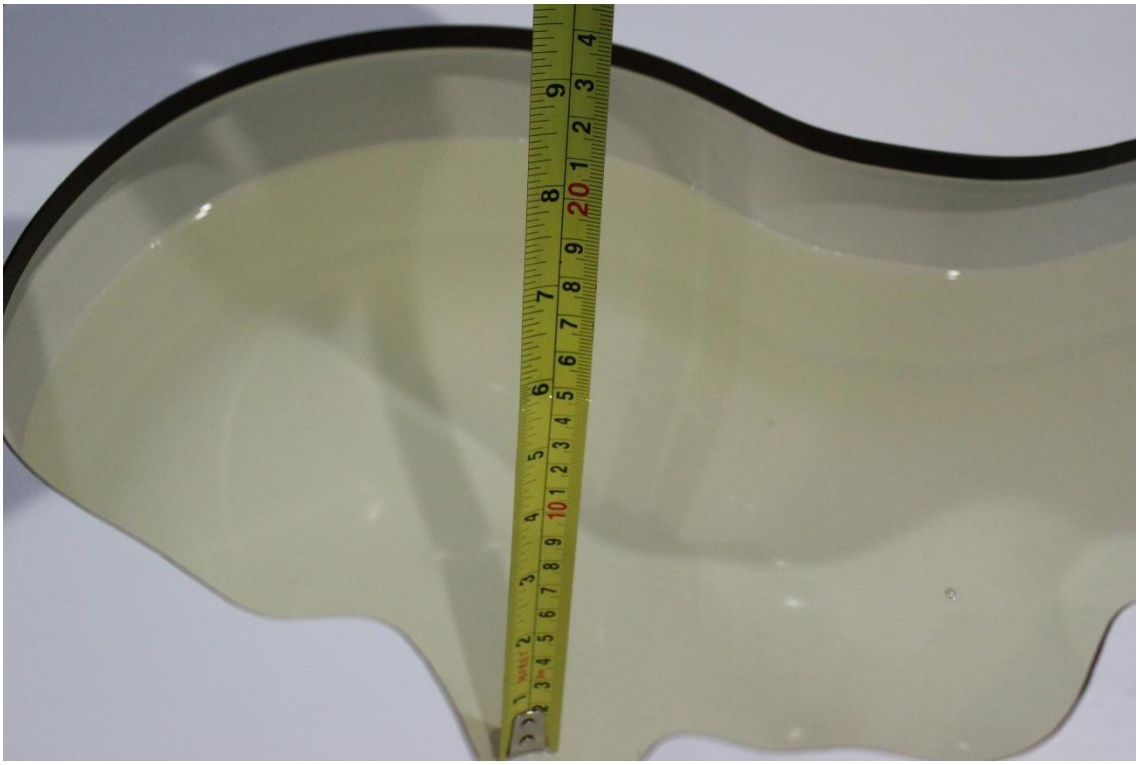
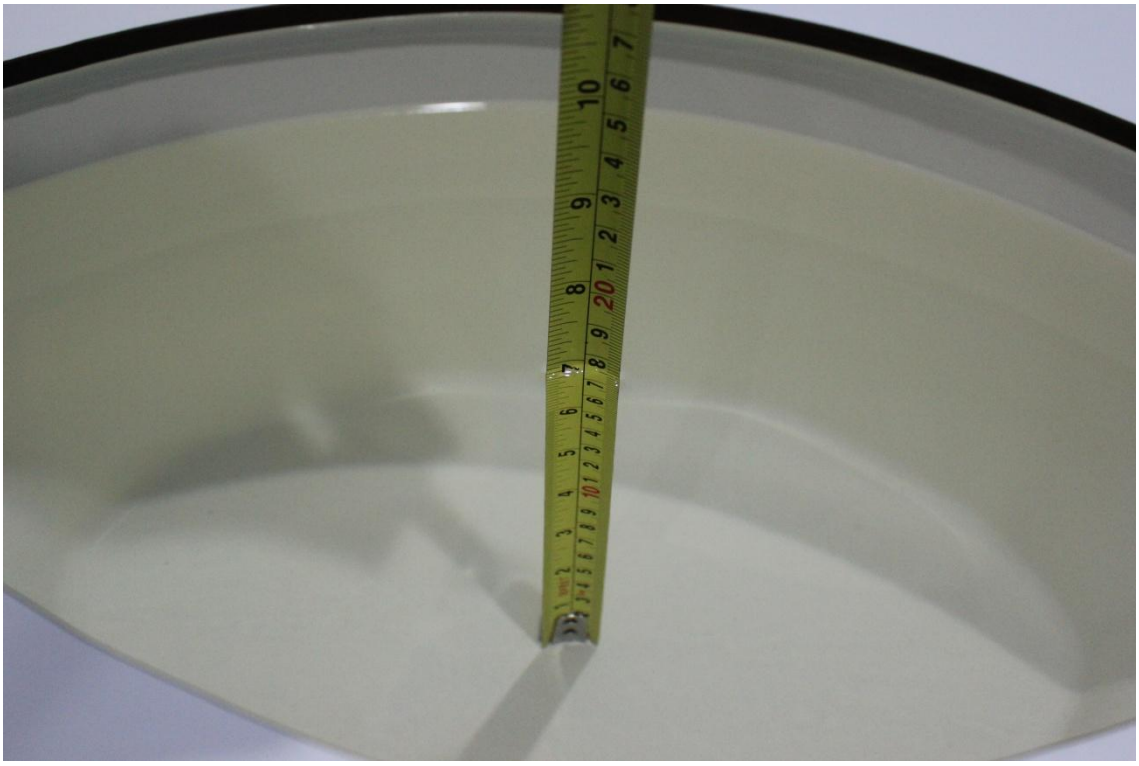


Picture 7-11 Liquid depth in the Head Phantom (5GHz)



Picture 7-12 Liquid depth in the Flat Phantom (5GHz)

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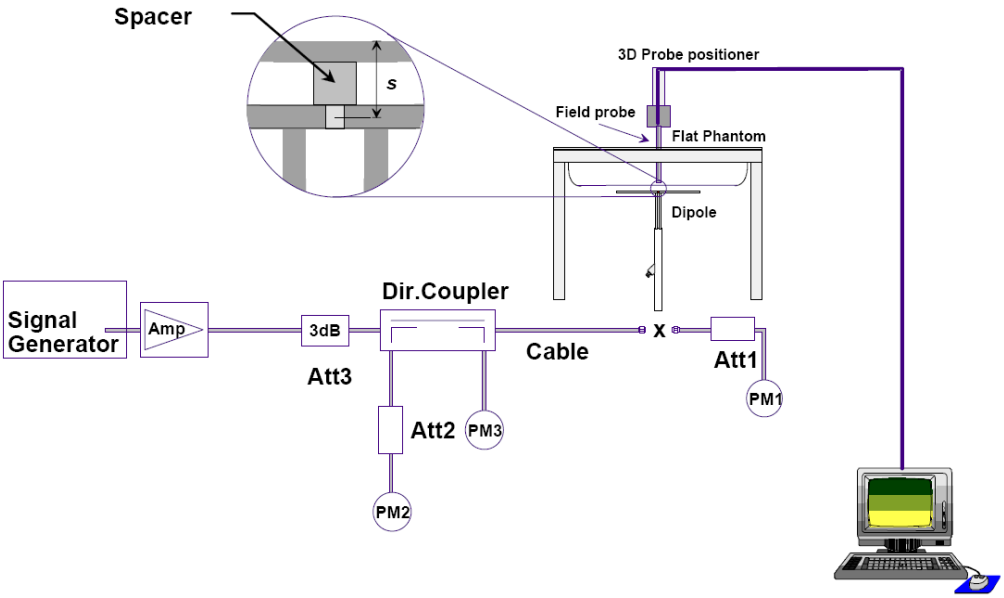
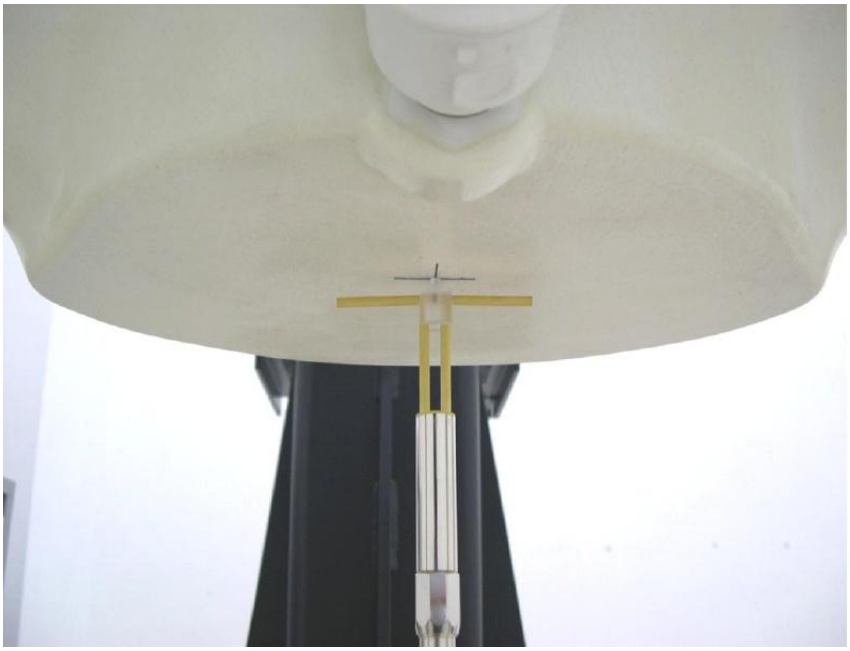
8 System verification

8.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 8.1 System Setup for System Evaluation



Picture 8.2 Photo of Dipole Setup

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8.2 System Verification

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device.
The system verification results are required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. The details are presented in annex B.

Table 8.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2015-02-19	835 MHz	5.86	9.01	5.92	9.20	1.02%	2.11%
2015-02-20	1750 MHz	19.9	36.9	19.36	36.60	-2.71%	-0.81%
2015-02-21	1900 MHz	21.5	40.7	21.52	41.60	0.09%	2.21%
2015-02-22	2450 MHz	24.5	52.5	24.16	52.80	-1.39%	0.57%
2015-02-23	2600 MHz	26	57.1	26.76	57.60	2.92%	0.88%
2015-02-24	5200 MHz	23.1	80.7	22.80	80.40	-1.30%	-0.37%
	5300 MHz	23.4	81.6	23.80	80.40	1.71%	-1.47%
	5600 MHz	23.5	82.6	24.10	81.90	2.55%	-0.85%
	5800 MHz	22.5	79	21.90	80.30	-2.67%	1.65%

Table 8.2: System Verification of Body

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2015-02-19	835 MHz	6.12	9.29	6.16	9.52	0.65%	2.48%
2015-02-20	1750 MHz	20.3	37.4	19.96	36.56	-1.67%	-2.25%
2015-02-21	1900 MHz	21.7	40.4	21.20	40.80	-2.30%	0.99%
2015-02-22	2450 MHz	24.4	52.1	23.76	50.80	-2.62%	-2.50%
2015-02-23	2600 MHz	25.4	56.4	26.08	57.60	2.68%	2.13%
2015-02-24	5200 MHz	21.7	77.5	21.60	75.30	-0.46%	-2.84%
	5300 MHz	21.5	76.8	21.70	74.70	0.93%	-2.73%
	5600 MHz	22.8	82.2	22.50	81.40	-1.32%	-0.97%
	5800 MHz	21.8	78.5	22.20	77.90	1.83%	-0.76%

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9 Measurement Procedures

9.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in picture 9.1.

Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex D),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., N_c > 3), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.

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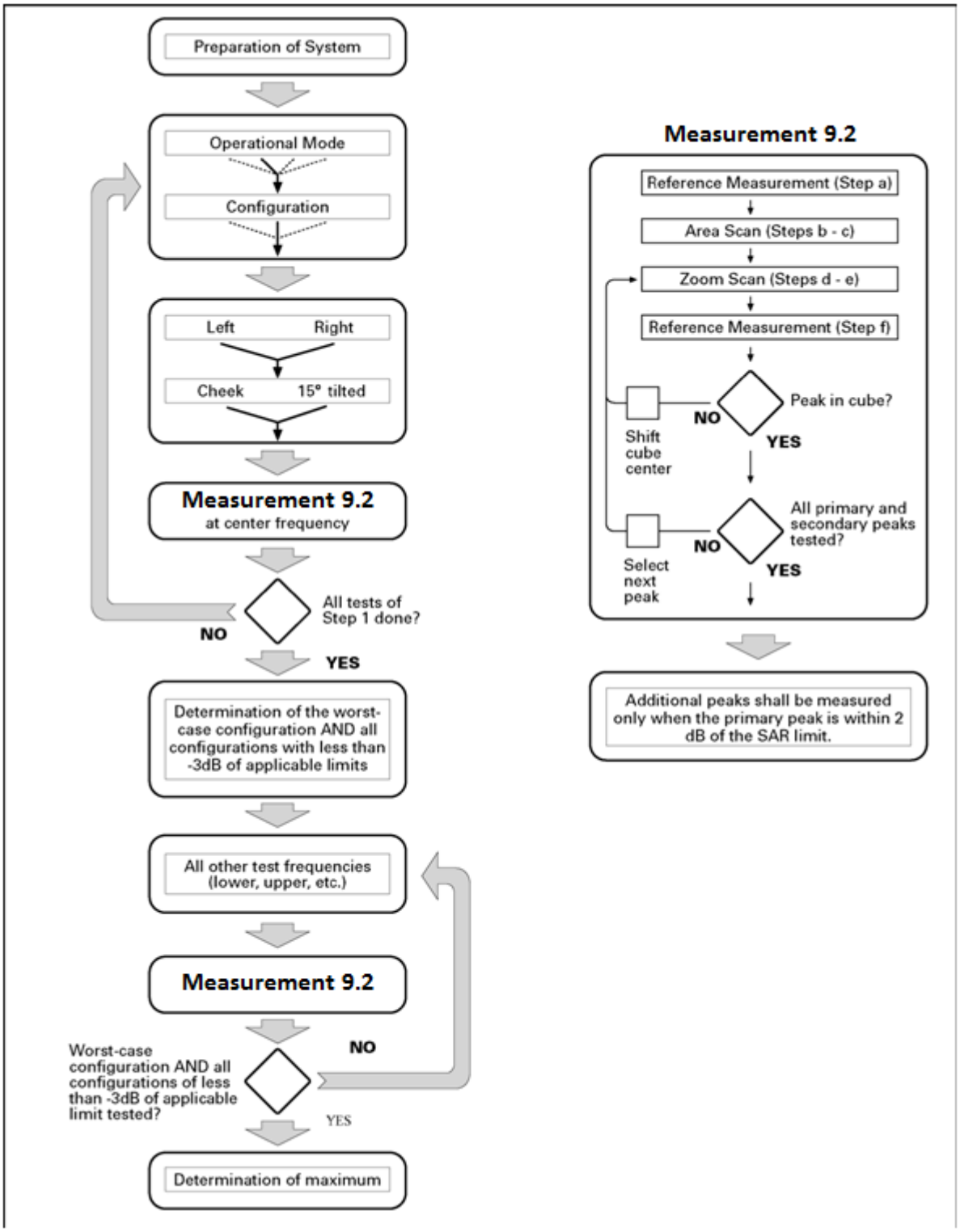

Picture 9.1 Block diagram of the tests to be performed

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9.2 General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2003. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 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	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
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 draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the ***reported*** SAR from the area scan based *1-g SAR estimation* procedures of KDB 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.

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9.3 WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & $DPDCH_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSPA Data Devices

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	3.0	2.0	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.0	0.0	21	81

For Release 8

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.

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9.4 SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Rohde & Rchwarz CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the CMW 500.

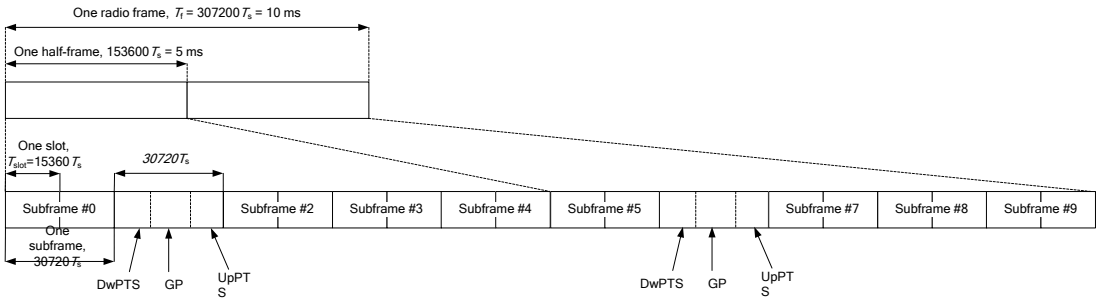
It is performed for conducted power and SAR based on the KDB941225 D05.

SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

1) QPSK with 1 RB allocation
   Start with the largest channel bandwidth and measure SAR for QPSK with 1 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. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.
2) QPSK with 50% RB allocation
   The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.
3) QPSK with 100% RB allocation
   For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

According to KDB 941225 D05, 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.

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



Picture 9.2 Frame structure type 2

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Table 9.4-1: 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	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
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	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Table 9.4-2: 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

According to Picture 9.2, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table 9.4-2:

Duty cycle =(30720Ts*Ups+Uplink Component*Specials)/(307200Ts)

About the uplink component of Special subframes, we can figure out by Table 9.4-1:

Uplink Component=UpPTS

In conclusion, for the **TDD LTE Band 38&Band 41**, Duty Cycle can be calculated with formula as below .all these sets are ok when we test, or we can set as below.

Duty cycle =[(30720Ts*Ups)+ UpPTS *Specials]/(307200Ts)

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And we can get different Duty cycles under different configurations:

Uplink-downlink configuration	Subframe number			Configuration of special subframe							
				Normal cyclic prefix in downlink				Extended cyclic prefix in downlink			
				Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
	D	S	U	configuration 0~4	configuration 5~9	configuration 0~4	configuration 5~9	configuration 0~3	configuration 4~7	configuration 0~3	configuration 4~7
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

SAR test Plan: For TDD LTE, SAR should be tested with the highest transmission duty factor **(63.33%)** using Uplink-downlink configuration **0** and Special subframe configuration **7** for Frame structure **type 2.**

9.5 Bluetooth & Wi-Fi Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. 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 that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a 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. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

9.6 Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in section 14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

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10 Area Scan Based 1-g SAR

10.1 Requirement of KDB

According to the KDB447498 D01 v05, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-g SAR is ≤ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR (See Annex B). When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

10.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz) and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55 wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm are 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASY software.

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11 Conducted Output Power

11.1 GSM Measurement result

During the process of testing, the EUT was controlled via Agilent Digital Radio Communication tester (E5515C) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

There are two situations in this project. One is Main antenna + Modem1 or Second antenna + Modem2, called through. Another is Second antenna + Modem1 or Main antenna + Modem2, called swap.

There are six states of power for throngh and six states of power for swap:

State1-1: Full Power for through

State1-2: Simultaneous transmission of Main antenna + Second antenna for through

State1-3: Simultaneous transmission of Main antenna + WLAN or Second antenna + WLAN for through

State1-4: Simultaneous transmission of three antennas with hotspot off for through

State1-5: Hotspot on for through

State1-6: Simultaneous transmission of three antennas with hotspot on for through

State2-1: Full Power for swap

State2-2: Simultaneous transmission of Main antenna + Second antenna for swap

State2-3: Simultaneous transmission of Main antenna + WLAN or Second antenna + WLAN for swap

State2-4: Simultaneous transmission of three antennas with hotspot off for swap

State2-5: Hotspot on for swap

State2-6: Simultaneous transmission of three antennas with hotspot on for swap

All states of power is as below:

Table 11.1: The conducted power measurement results for GSM850/1900

Main antenna + Main Modem				
State1-1/2/3/4/5				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	32.96	32.96	32.82	**33.5**
State1-6				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	31.27	31.02	30.80	**31.5**
State1-1/2/3/5				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	30.08	30.29	30.49	**31**

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State1-4				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	29.10	29.33	29.47	**29.5**
State1-6				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	28.37	28.43	28.48	**28.5**
Second antenna + Second Modem				
State1-1				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	32.46	32.51	32.48	**33.5**
State1-2/4/6				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	28.45	28.38	28.21	**28.5**
State1-1				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	29.58	29.71	29.69	**31**
State1-2/4/6				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	27.00	26.97	26.91	**27**
Second antenna + Main Modem				
State2-1/5				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	33.09	33.04	32.93	**33.2**
State2-2				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	29.70	29.68	29.54	**29.7**

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State2-3/4				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	28.69	28.65	28.46	**28.7**
State2-6				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	29.16	29.11	28.89	**29.2**
State2-1				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	30.51	30.69	30.83	**31**
State2-2/6				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	27.98	28.32	28.40	**28.5**
State2-3/4				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	25.71	25.86	25.96	**26**
State2-5				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	28.89	29.09	29.37	**29.5**
Main antenna + Second Modem				
State2-1/4/6				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	32.93	32.87	32.77	**33.5**
State2-2				
GSM 850MHz	Conducted Power (dBm)			
	Channel 251(848.8MHz)	Channel 190(836.6MHz)	Channel 128(824.2MHz)	Tune up
	30.42	30.46	30.41	**31**
State2-1				
GSM	Conducted Power (dBm)			

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1900MHz	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	30.38	30.33	30.32	**31**
State2-2/4				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	28.10	28.05	28.02	**28.5**
State2-6				
GSM 1900MHz	Conducted Power (dBm)			
	Channel 810(1909.8MHz)	Channel 661(1880MHz)	Channel 512(1850.2MHz)	Tune up
	27.54	27.39	27.35	**28**

Table 11.2: The conducted power measurement results for GPRS and EGPRS

Main antenna + Main Modem								
State1-1/2/3/4/5								
GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	33.00	33.00	32.94	**33.5**	-9.03dB	23.97	23.97	23.91
2 Txslots	31.21	31.19	30.98	**31.5**	-6.02dB	**25.19**	**25.17**	**24.96**
3Txslots	28.98	29.01	28.92	**29.5**	-4.26dB	24.72	24.75	24.66
4 Txslots	27.98	28.07	27.96	**28.5**	-3.01dB	24.97	25.06	24.95
GSM 850 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	32.98	32.97	32.91	**33.5**	-9.03dB	23.95	23.94	23.88
2 Txslots	31.19	31.17	30.98	**31.5**	-6.02dB	**25.17**	**25.15**	**24.96**
3Txslots	29.04	28.98	28.89	**29.5**	-4.26dB	24.78	24.72	24.63
4 Txslots	27.95	28.03	27.95	**28.5**	-3.01dB	24.94	25.02	24.94
GSM 850 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	26.53	26.52	26.39	**27**	-9.03dB	17.50	17.49	17.36
2 Txslots	24.95	25.00	24.95	**25**	-6.02dB	18.93	18.98	18.93
3Txslots	23.53	23.39	23.30	**24**	-4.26dB	**19.27**	**19.13**	**19.04**
4 Txslots	21.71	21.74	21.65	**22**	-3.01dB	18.70	18.73	18.64
State1-6								
GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	31.27	31.02	30.80	**31.5**	-9.03dB	22.24	21.99	21.77
2 Txslots	28.98	28.72	28.55	**29.5**	-6.02dB	**22.96**	**22.70**	**22.53**
3Txslots	27.03	26.82	26.71	**27.5**	-4.26dB	22.77	22.56	22.45
4 Txslots	25.71	25.40	25.24	**26.5**	-3.01dB	22.70	22.39	22.23

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GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	31.27	31.01	30.80	**31.5**	-9.03dB	22.24	21.98	21.77
2 Txslots	28.96	28.70	28.55	**29.5**	-6.02dB	**22.94**	**22.68**	**22.53**
3Txslots	27.02	26.81	26.70	**27.5**	-4.26dB	22.76	22.55	22.44
4 Txslots	25.70	25.38	25.23	**26.5**	-3.01dB	22.69	22.37	22.22
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	24.55	24.40	24.30	**25**	-9.03dB	15.52	15.37	15.27
2 Txslots	22.66	22.44	22.32	**23**	-6.02dB	16.64	16.42	16.30
3Txslots	21.05	20.81	20.68	**22**	-4.26dB	**16.79**	**16.55**	**16.42**
4 Txslots	19.41	19.33	19.26	**20**	-3.01dB	16.40	16.32	16.25
State1-1/2/3/5								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	30.08	30.30	30.50	**31**	-9.03	21.05	21.27	21.47
2 Txslots	28.15	28.40	28.71	**29**	-6.02	22.13	22.38	22.69
3Txslots	26.38	26.68	27.00	**27**	-4.26	22.12	22.42	22.74
4 Txslots	25.52	25.68	26.00	**26**	-3.01	**22.51**	**22.67**	**22.99**
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	30.06	30.28	30.46	**31**	-9.03	21.03	21.25	21.43
2 Txslots	28.13	28.38	28.49	**29**	-6.02	22.11	22.36	22.47
3Txslots	26.45	26.66	27.00	**27**	-4.26	22.19	22.40	22.74
4 Txslots	25.51	25.66	26.00	**26**	-3.01	**22.50**	**22.65**	**22.99**
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	26.22	26.45	26.49	**27**	-9.03dB	17.19	17.42	17.46
2 Txslots	24.73	24.94	25.25	**25.5**	-6.02dB	18.71	18.92	19.23
3Txslots	23.19	23.49	23.76	**24**	-4.26dB	**18.93**	**19.23**	**19.50**
4 Txslots	21.51	21.81	21.96	**22**	-3.01dB	18.50	18.80	18.95
State1-4								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	29.10	29.33	29.47	**29.5**	-9.03	20.07	20.30	20.44
2 Txslots	27.13	27.41	27.49	**27.5**	-6.02	**21.11**	**21.39**	**21.47**
3Txslots	25.18	25.20	25.42	**25.5**	-4.26	20.92	20.94	21.16
4 Txslots	23.86	24.06	24.29	**24.5**	-3.01	20.85	21.05	21.28
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	29.10	29.33	29.47	**29.5**	-9.03	20.07	20.30	20.44
2 Txslots	27.13	27.40	27.49	**27.5**	-6.02	**21.11**	**21.38**	**21.47**
3Txslots	25.18	25.20	25.41	**25.5**	-4.26	20.92	20.94	21.15

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4 Txslots	23.85	24.05	24.29	**24.5**	-3.01	20.84	21.04	21.28
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	25.21	25.39	25.49	**25.5**	-9.03dB	16.18	16.36	16.46
2 Txslots	23.16	23.41	23.50	**24**	-6.02dB	17.14	17.39	17.48
3Txslots	21.51	21.76	21.97	**22.5**	-4.26dB	**17.25**	**17.50**	**17.71**
4 Txslots	19.78	20.02	20.31	**20.5**	-3.01dB	16.77	17.01	17.30
State1-6								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	28.37	28.43	28.48	**28.5**	-9.03	19.34	19.40	19.45
2 Txslots	26.37	26.42	26.47	**26.5**	-6.02	**20.35**	**20.40**	**20.45**
3Txslots	24.11	24.27	24.49	**24.5**	-4.26	19.85	20.01	20.23
4 Txslots	22.99	23.28	23.48	**23.5**	-3.01	19.98	20.27	20.47
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	28.37	28.43	28.47	**28.5**	-9.03	19.34	19.40	19.44
2 Txslots	26.37	26.41	26.47	**26.5**	-6.02	**20.35**	**20.39**	**20.45**
3Txslots	24.11	24.27	24.49	**24.5**	-4.26	19.85	20.01	20.23
4 Txslots	22.98	23.27	23.47	**23.5**	-3.01	19.97	20.26	20.46
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	24.29	24.47	24.42	**24.5**	-9.03dB	15.26	15.44	15.39
2 Txslots	22.20	22.49	22.72	**23**	-6.02dB	16.18	16.47	16.70
3Txslots	20.57	20.84	21.05	**21.5**	-4.26dB	**16.31**	**16.58**	**16.79**
4 Txslots	18.88	19.14	19.29	**19.5**	-3.01dB	15.87	16.13	16.28
Second antenna –Second modem								
State1-1								
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	32.46	32.51	32.48	**33.5**	-9.03dB	23.43	23.48	23.45
2 Txslots	30.57	30.60	30.51	**31.5**	-6.02dB	**24.55**	**24.58**	**24.49**
3Txslots	28.22	28.21	28.08	**29.5**	-4.26dB	23.96	23.95	23.82
4 Txslots	26.15	26.14	26.00	**27.5**	-3.01dB	23.14	23.13	22.99
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	32.46	32.51	32.48	**33.5**	-9.03dB	23.43	23.48	23.45
2 Txslots	30.57	30.60	30.50	**31.5**	-6.02dB	**24.55**	**24.58**	**24.48**
3Txslots	28.22	28.21	28.08	**29.5**	-4.26dB	23.96	23.95	23.82
4 Txslots	26.14	26.13	25.99	**27.5**	-3.01dB	23.13	23.12	22.98
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	26.54	26.55	26.46	**27**	-9.03dB	17.51	17.52	17.43

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2 Txslots	24.49	24.50	24.45	**25**	-6.02dB	**18.47**	**18.48**	**18.43**
3Txslots	22.11	22.08	21.94	**23**	-4.26dB	17.85	17.82	17.68
4 Txslots	19.79	19.80	19.74	**21**	-3.01dB	16.78	16.79	16.73
State1-2/4/6								
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	28.45	28.38	28.21	**28.5**	-9.03dB	19.42	19.35	19.18
2 Txslots	26.39	26.34	26.15	**26.5**	-6.02dB	**20.37**	**20.32**	**20.13**
3Txslots	24.47	24.44	24.27	**25**	-4.26dB	20.21	20.18	20.01
4 Txslots	23.02	22.94	22.76	**23**	-3.01dB	20.01	19.93	19.75
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	28.45	28.38	28.21	**28.5**	-9.03dB	19.42	19.35	19.18
2 Txslots	26.39	26.33	26.15	**26.5**	-6.02dB	**20.37**	**20.31**	**20.13**
3Txslots	24.46	24.43	24.26	**25**	-4.26dB	20.20	20.17	20.00
4 Txslots	23.02	22.94	22.76	**23**	-3.01dB	20.01	19.93	19.75
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	22.40	22.38	22.32	**22.5**	-9.03dB	13.37	13.35	13.29
2 Txslots	20.95	20.95	20.88	**21**	-6.02dB	**14.93**	**14.93**	**14.86**
3Txslots	18.18	18.17	18.08	**18.5**	-4.26dB	13.92	13.91	13.82
4 Txslots	16.90	16.87	16.79	**17**	-3.01dB	13.89	13.86	13.78
State1-1								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	29.55	29.67	29.64	**31**	-9.03	20.52	20.64	20.61
2 Txslots	27.22	27.22	27.19	**28**	-6.02	**21.20**	**21.20**	**21.17**
3Txslots	25.05	25.07	25.08	**26**	-4.26	20.79	20.81	20.82
4 Txslots	22.76	22.82	22.85	**24**	-3.01	19.75	19.81	19.84
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	29.55	29.67	29.64	**31**	-9.03	20.52	20.64	20.61
2 Txslots	27.22	27.22	27.19	**28**	-6.02	**21.20**	**21.20**	**21.17**
3Txslots	25.05	25.06	25.07	**26**	-4.26	20.79	20.80	20.81
4 Txslots	22.76	22.81	22.84	**24**	-3.01	19.75	19.80	19.83
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	25.24	25.21	25.32	**26.5**	-9.03dB	16.21	16.18	16.29
2 Txslots	22.95	22.94	22.95	**24**	-6.02dB	**16.93**	**16.92**	**16.93**
3Txslots	20.26	20.29	20.36	**22**	-4.26dB	16.00	16.03	16.10
4 Txslots	17.85	17.89	17.99	**19.5**	-3.01dB	14.84	14.88	14.98

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State1-2/4/6								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	27.00	26.97	26.91	**27**	-9.03dB	17.97	17.94	17.88
2 Txslots	24.93	24.92	24.92	**25**	-6.02dB	**18.91**	**18.90**	**18.90**
3Txslots	22.49	22.49	22.50	**22.5**	-4.26dB	18.23	18.23	18.24
4 Txslots	21.31	21.33	21.36	**21.5**	-3.01dB	18.30	18.32	18.35
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	27.00	26.97	26.91	**27**	-9.03	17.97	17.94	17.88
2 Txslots	24.92	24.92	24.92	**25**	-6.02	**18.90**	**18.90**	**18.90**
3Txslots	22.48	22.49	22.50	**22.5**	-4.26	18.22	18.23	18.24
4 Txslots	21.31	21.32	21.36	**21.5**	-3.01	18.30	18.31	18.35
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	22.92	22.85	22.93	**23**	-9.03	13.89	13.82	13.90
2 Txslots	20.44	20.18	20.40	**20.5**	-6.02	**14.42**	**14.16**	**14.38**
3Txslots	17.97	17.88	17.94	**18**	-4.26	13.71	13.62	13.68
4 Txslots	16.35	16.23	16.48	**16.5**	-3.01	13.34	13.22	13.47
Second antenna – Main modem								
State2-1/5								
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	33.12	33.04	32.94	**33.5**	-9.03dB	24.09	24.01	23.91
2 Txslots	30.78	30.68	30.48	**31.5**	-6.02dB	**24.76**	**24.66**	**24.46**
3Txslots	28.50	28.50	28.46	**29.5**	-4.26dB	24.24	24.24	24.20
4 Txslots	27.49	27.47	27.45	**28.5**	-3.01dB	24.48	24.46	24.44
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	33.12	33.04	32.94	**33.5**	-9.03dB	24.09	24.01	23.91
2 Txslots	30.78	30.68	30.48	**31.5**	-6.02dB	**24.76**	**24.66**	**24.46**
3Txslots	28.49	28.49	28.45	**29.5**	-4.26dB	24.23	24.23	24.19
4 Txslots	27.49	27.47	27.45	**28.5**	-3.01dB	24.48	24.46	24.44
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	26.43	26.38	26.30	**27**	-9.03dB	17.40	17.35	17.27
2 Txslots	24.76	24.76	24.68	**25**	-6.02dB	**18.74**	**18.74**	**18.66**
3Txslots	22.88	22.81	22.77	**24**	-4.26dB	18.62	18.55	18.51
4 Txslots	20.98	20.92	20.95	**22**	-3.01dB	17.97	17.91	17.94
State2-2								
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	29.73	29.68	29.54	**30**	-9.03dB	20.70	20.65	20.51

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2 Txslots	27.53	27.49	27.40	**28**	-6.02dB	**21.51**	**21.47**	**21.38**
3Txslots	25.07	25.07	24.99	**26**	-4.26dB	20.81	20.81	20.73
4 Txslots	24.03	24.06	23.95	**25**	-3.01dB	21.02	21.05	20.94
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	29.73	29.68	29.54	**30**	-9.03dB	20.70	20.65	20.51
2 Txslots	27.53	27.49	27.40	**28**	-6.02dB	**21.51**	**21.47**	**21.38**
3Txslots	25.06	25.06	24.99	**26**	-4.26dB	20.80	20.80	20.73
4 Txslots	24.03	24.05	23.94	**25**	-3.01dB	21.02	21.04	20.93
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	23.35	23.31	23.05	**23.5**	-9.03dB	14.32	14.28	14.02
2 Txslots	21.38	21.32	21.23	**21.5**	-6.02dB	15.36	15.30	15.21
3Txslots	19.66	19.57	19.51	**20.5**	-4.26dB	**15.40**	**15.31**	**15.25**
4 Txslots	18.08	17.98	17.87	**18.5**	-3.01dB	15.07	14.97	14.86
State2-3/4								
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	28.93	28.68	28.46	**29**	-9.03dB	19.90	19.65	19.43
2 Txslots	26.76	26.54	26.36	**27**	-6.02dB	**20.74**	**20.52**	**20.34**
3Txslots	24.37	24.16	24.00	**25**	-4.26dB	20.11	19.90	19.74
4 Txslots	23.37	23.15	23.05	**24**	-3.01dB	20.36	20.14	20.04
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	28.93	28.68	28.46	**29**	-9.03dB	19.90	19.65	19.43
2 Txslots	26.76	26.53	26.36	**27**	-6.02dB	**20.74**	**20.51**	**20.34**
3Txslots	24.36	24.15	23.99	**25**	-4.26dB	20.10	19.89	19.73
4 Txslots	23.37	23.15	23.05	**24**	-3.01dB	20.36	20.14	20.04
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	22.46	22.30	22.20	**22.5**	-9.03dB	13.43	13.27	13.17
2 Txslots	20.47	20.34	20.40	**20.5**	-6.02dB	14.45	14.32	14.38
3Txslots	19.44	19.24	19.15	**19.5**	-4.26dB	**15.18**	**14.98**	**14.89**
4 Txslots	17.43	17.31	17.27	**17.5**	-3.01dB	14.42	14.30	14.26
State2-6								
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	29.36	29.11	28.89	**29.5**	-9.03dB	20.33	20.08	19.86
2 Txslots	27.22	26.95	26.78	**27.5**	-6.02dB	**21.20**	**20.93**	**20.76**
3Txslots	24.95	24.72	24.56	**25.5**	-4.26dB	20.69	20.46	20.30
4 Txslots	23.87	23.70	23.56	**24.5**	-3.01dB	20.86	20.69	20.55
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**

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1 Txslot	29.36	29.11	28.89	**29.5**	-9.03dB	20.33	20.08	19.86
2 Txslots	27.21	26.95	26.77	**27.5**	-6.02dB	**21.19**	**20.93**	**20.75**
3Txslots	24.95	24.72	24.56	**25.5**	-4.26dB	20.69	20.46	20.30
4 Txslots	23.86	23.69	23.55	**24.5**	-3.01dB	20.85	20.68	20.54
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**251**	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	22.36	22.21	22.10	**23**	-9.03dB	13.33	13.18	13.07
2 Txslots	20.76	20.63	20.53	**21**	-6.02dB	14.74	14.61	14.51
3Txslots	19.24	19.13	18.92	**20**	-4.26dB	**14.98**	**14.87**	**14.66**
4 Txslots	17.67	17.56	17.40	**18**	-3.01dB	14.66	14.55	14.39
State2-1								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	30.44	30.62	30.77	**31**	-9.03	21.41	21.59	21.74
2 Txslots	28.10	28.30	28.50	**29**	-6.02	22.08	22.28	22.48
3Txslots	26.40	26.59	26.88	**27**	-4.26	22.14	22.33	22.62
4 Txslots	25.38	25.47	25.76	**26**	-3.01	**22.37**	**22.46**	**22.75**
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	30.44	30.62	30.77	**31**	-9.03	21.41	21.59	21.74
2 Txslots	28.10	28.29	28.50	**29**	-6.02	22.08	22.27	22.48
3Txslots	26.40	26.59	26.88	**27**	-4.26	22.14	22.33	22.62
4 Txslots	25.37	25.47	25.76	**26**	-3.01	**22.36**	**22.46**	**22.75**
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	26.31	26.47	26.71	**27**	-9.03dB	17.28	17.44	17.68
2 Txslots	24.55	24.75	24.97	**25.5**	-6.02dB	18.53	18.73	18.95
3Txslots	23.07	23.28	23.51	**24**	-4.26dB	**18.81**	**19.02**	**19.25**
4 Txslots	21.14	21.37	21.56	**22**	-3.01dB	18.13	18.36	18.55
State2-2/6								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	27.96	28.33	28.42	**28.5**	-9.03	18.93	19.30	19.39
2 Txslots	25.90	26.31	26.32	**26.5**	-6.02	**19.88**	**20.29**	**20.30**
3Txslots	23.71	24.21	24.41	**24.5**	-4.26	19.45	19.95	20.15
4 Txslots	22.62	23.08	23.26	**23.5**	-3.01	19.61	20.07	20.25
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	27.96	28.33	28.42	**28.5**	-9.03	18.93	19.30	19.39
2 Txslots	25.90	26.31	26.32	**26.5**	-6.02	**19.88**	**20.29**	**20.30**
3Txslots	23.71	24.20	24.40	**24.5**	-4.26	19.45	19.94	20.14
4 Txslots	22.62	23.08	23.26	**23.5**	-3.01	19.61	20.07	20.25

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GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	23.70	24.18	24.20	**24.5**	-9.03dB	14.67	15.15	15.17
2 Txslots	21.84	22.32	22.46	**23**	-6.02dB	15.82	16.30	16.44
3Txslots	20.19	20.60	20.78	**21.5**	-4.26dB	**15.93**	**16.34**	**16.52**
4 Txslots	18.41	18.78	18.87	**19.5**	-3.01dB	15.40	15.77	15.86
State2-5								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	28.92	29.13	29.41	**29.5**	-9.03	19.89	20.10	20.38
2 Txslots	27.00	27.18	27.48	**27.5**	-6.02	**20.98**	**21.16**	**21.46**
3Txslots	25.11	25.29	25.50	**25.5**	-4.26	20.85	21.03	21.24
4 Txslots	23.77	23.96	24.26	**24.5**	-3.01	20.76	20.95	21.25
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	28.92	29.13	29.41	**29.5**	-9.03	19.89	20.10	20.38
2 Txslots	26.98	27.18	27.48	**27.5**	-6.02	**20.96**	**21.16**	**21.46**
3Txslots	25.08	25.29	25.50	**25.5**	-4.26	20.82	21.03	21.24
4 Txslots	23.77	23.95	24.24	**24.5**	-3.01	20.76	20.94	21.23
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	25.00	25.21	25.42	**25.5**	-9.03dB	15.97	16.18	16.39
2 Txslots	23.32	23.46	23.50	**24.0**	-6.02dB	**17.30**	**17.44**	**17.48**
3Txslots	21.44	21.68	21.92	**22.5**	-4.26dB	17.18	17.42	17.66
4 Txslots	19.70	19.92	20.13	**20.5**	-3.01dB	16.69	16.91	17.12
State2-3/4								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	25.71	25.86	25.96	**26**	-9.03	16.68	16.83	16.93
2 Txslots	23.43	23.71	23.88	**24**	-6.02	**17.41**	**17.69**	**17.86**
3Txslots	21.32	21.73	21.89	**22**	-4.26	17.06	17.47	17.63
4 Txslots	20.25	20.60	20.76	**21**	-3.01	17.24	17.59	17.75
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	25.70	25.86	25.96	**26**	-9.03	16.67	16.83	16.93
2 Txslots	23.43	23.70	23.88	**24**	-6.02	**17.41**	**17.68**	**17.86**
3Txslots	21.32	21.72	21.89	**22**	-4.26	17.06	17.46	17.63
4 Txslots	20.25	20.59	20.75	**21**	-3.01	17.24	17.58	17.74
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	21.54	21.76	21.96	**22**	-9.03dB	12.51	12.73	12.93
2 Txslots	19.87	20.25	20.45	**20.5**	-6.02dB	13.85	14.23	14.43
3Txslots	18.30	18.57	18.74	**19**	-4.26dB	**14.04**	**14.31**	**14.48**

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4 Txslots	16.68	16.93	16.97	17	-3.01dB	13.67	13.92	13.96
Main antenna –Second modem								
State2-1/4/6								
GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	32.93	32.87	32.77	33.5	-9.03dB	23.90	23.84	23.74
2 Txslots	30.12	29.97	29.84	31.5	-6.02dB	24.10	23.95	23.82
3Txslots	28.63	28.56	28.39	29.5	-4.26dB	24.37	24.30	24.13
4 Txslots	27.39	27.33	27.17	27.5	-3.01dB	**24.38**	**24.32**	**24.16**
GSM 850 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	32.92	32.86	32.76	33.5	-9.03dB	23.89	23.83	23.73
2 Txslots	30.10	29.97	29.83	31.5	-6.02dB	24.08	23.95	23.81
3Txslots	28.62	28.56	28.39	29.5	-4.26dB	24.36	24.30	24.13
4 Txslots	27.38	27.32	27.16	27.5	-3.01dB	**24.37**	**24.31**	**24.15**
GSM 850 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	26.98	26.96	26.95	27	-9.03dB	17.95	17.93	17.92
2 Txslots	24.74	24.73	24.72	25	-6.02dB	**18.72**	**18.71**	**18.70**
3Txslots	22.46	22.44	22.26	23	-4.26dB	18.20	18.18	18.00
4 Txslots	21.05	21.02	20.91	22	-3.01dB	18.04	18.01	17.90
State2-2								
GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	30.42	30.46	30.41	31	-9.03dB	21.39	21.43	21.38
2 Txslots	28.17	28.15	28.06	29	-6.02dB	**22.15**	**22.13**	**22.04**
3Txslots	26.10	26.06	25.98	27	-4.26dB	21.84	21.80	21.72
4 Txslots	24.15	24.13	24.02	25	-3.01dB	21.14	21.12	21.01
GSM 850 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	30.42	30.46	30.41	31	-9.03dB	21.39	21.43	21.38
2 Txslots	28.17	28.15	28.05	29	-6.02dB	**22.15**	**22.13**	**22.03**
3Txslots	26.10	26.06	25.97	27	-4.26dB	21.84	21.80	21.71
4 Txslots	24.15	24.12	24.01	25	-3.01dB	21.14	21.11	21.00
GSM 850 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	**190**	**128**	Tune up		**251**	**190**	**128**
1 Txslot	24.41	24.42	24.35	24.5	-9.03dB	15.38	15.39	15.32
2 Txslots	22.01	21.95	21.92	22.5	-6.02dB	**15.99**	**15.93**	**15.90**
3Txslots	19.92	19.86	19.80	20.5	-4.26dB	15.66	15.60	15.54
4 Txslots	17.84	17.80	17.70	19.5	-3.01dB	14.83	14.79	14.69

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State2-1								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	30.38	30.33	30.32	**31**	-9.03	21.35	21.30	21.29
2 Txslots	28.16	28.11	28.12	**29**	-6.02	**22.14**	**22.09**	**22.10**
3Txslots	25.78	25.76	26.02	**27**	-4.26	21.52	21.50	21.76
4 Txslots	24.65	24.67	24.86	**26**	-3.01	21.64	21.66	21.85
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	30.38	30.33	30.32	**31**	-9.03	21.35	21.30	21.29
2 Txslots	28.15	28.11	28.12	**29**	-6.02	**22.13**	**22.09**	**22.10**
3Txslots	25.78	25.75	26.02	**27**	-4.26	21.52	21.49	21.76
4 Txslots	24.65	24.66	24.85	**26**	-3.01	21.64	21.65	21.84
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	26.18	26.11	26.24	**27**	-9.03dB	17.15	17.08	17.21
2 Txslots	23.78	23.69	23.83	**25**	-6.02dB	**17.76**	**17.67**	**17.81**
3Txslots	21.41	21.42	21.56	**23**	-4.26dB	17.15	17.16	17.30
4 Txslots	19.73	19.65	19.75	**21**	-3.01dB	16.72	16.64	16.74
State2-2/4								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	28.10	28.05	28.02	**28.5**	-9.03	19.07	19.02	18.99
2 Txslots	25.91	25.83	25.86	**26.5**	-6.02	**19.89**	**19.81**	**19.84**
3Txslots	23.55	23.58	23.62	**24.5**	-4.26	19.29	19.32	19.36
4 Txslots	22.30	22.35	22.41	**23.5**	-3.01	19.29	19.34	19.40
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	28.10	28.05	28.02	**28.5**	-9.03	19.07	19.02	18.99
2 Txslots	25.90	25.83	25.85	**26.5**	-6.02	**19.88**	**19.81**	**19.83**
3Txslots	23.55	23.57	23.62	**24.5**	-4.26	19.29	19.31	19.36
4 Txslots	22.30	22.34	22.40	**23.5**	-3.01	19.29	19.33	19.39
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	23.88	23.81	23.95	**24.5**	-9.03dB	14.85	14.78	14.92
2 Txslots	21.52	21.43	21.36	**22.5**	-6.02dB	**15.50**	**15.41**	**15.34**
3Txslots	18.81	18.89	18.94	**20.5**	-4.26dB	14.55	14.63	14.68
4 Txslots	17.40	17.42	17.55	**18.5**	-3.01dB	14.39	14.41	14.54
State2-6								
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	27.54	27.39	27.35	**28**	-9.03	18.51	18.36	18.32
2 Txslots	25.32	25.25	25.30	**26**	-6.02	**19.30**	**19.23**	**19.28**

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3Txslots	23.07	22.94	23.01	24	-4.26	18.81	18.68	18.75
4 Txslots	21.82	21.73	21.69	23	-3.01	18.81	18.72	18.68
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	27.54	27.39	27.35	28	-9.03	18.51	18.36	18.32
2 Txslots	25.32	25.25	25.29	26	-6.02	**19.30**	**19.23**	**19.27**
3Txslots	23.07	22.94	23.01	24	-4.26	18.81	18.68	18.75
4 Txslots	21.81	21.72	21.68	23	-3.01	18.80	18.71	18.67
GSM 1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	**810**	**661**	**512**	Tune up		**810**	**661**	**512**
1 Txslot	23.45	23.30	23.38	24	-9.03dB	14.42	14.27	14.35
2 Txslots	20.97	20.80	20.90	22	-6.02dB	**14.95**	**14.78**	**14.88**
3Txslots	18.62	18.49	18.59	20	-4.26dB	14.36	14.23	14.33
4 Txslots	17.27	17.17	17.28	18	-3.01dB	14.26	14.16	14.27

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

11.2 WCDMA Measurement result

Table 11.3: The conducted Power for WCDMA

Main antenna –Main modem					
State1-1/2/3/4/5/6					
Item	**band**	**FDDV result**			
	ARFCN	**4233 (846.6MHz)**	**4182 (836.4MHz)**	**4132 (826.4MHz)**	**Tune up**
WCDMA	****	23.80	23.72	23.83	**24.5**
HSDPA	**1**	22.81	22.74	22.72	**24**
	2	22.38	22.26	22.23	**23.5**
	3	22.39	22.26	22.25	**23**
	4	22.38	22.27	22.26	**23**
HSUPA	**1**	20.49	20.15	20.14	**22**
	2	19.36	20.00	19.98	**21**
	3	19.97	19.72	19.71	**21**
	4	21.43	21.47	21.39	**21.5**
	5	22.02	22.09	22.11	**22.5**
DC-HSDPA	**1**	22.37	22.41	22.25	**24**
	2	22.43	22.37	22.29	**23.5**
	3	22.38	22.45	22.31	**23**
	4	22.35	22.38	22.32	**23**

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State1-1/2/3					
Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	23.56	23.49	23.51	24
HSDPA	1	22.49	22.54	22.47	23.5
	2	22.05	22.04	21.98	23.5
	3	22.06	22.07	21.99	22.5
	4	22.05	22.07	22.01	22.5
HSUPA	1	19.99	20.05	19.97	21.5
	2	19.64	19.45	19.58	21
	3	19.21	19.01	19.16	21
	4	21.17	21.00	21.12	21.5
	5	21.76	21.72	21.82	22
DC-HSDPA	1	22.08	22.10	22.13	23.5
	2	22.05	22.08	22.09	23
	3	22.11	22.11	22.15	22.5
	4	22.12	22.14	22.18	22.5

State1-4					
Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	21.67	21.64	21.62	22
HSDPA	1	20.38	20.27	20.39	21.5
	2	19.86	19.80	19.94	21.5
	3	19.89	19.80	19.89	20.5
	4	19.87	19.83	19.92	20.5
HSUPA	1	18.20	17.80	18.29	19.5
	2	17.57	17.45	17.43	19
	3	17.17	17.16	17.93	19
	4	19.22	19.00	19.18	19.5
	5	19.72	19.67	19.79	20
DC-HSDPA	1	20.17	20.08	20.17	21.5
	2	20.10	20.04	20.15	21
	3	20.12	20.02	20.18	20.5
	4	20.11	20.02	20.20	20.5

State1-5					
Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	23.25	22.99	23.01	23.5
HSDPA	1	22.04	22.02	21.97	23
	2	21.57	21.54	21.49	23
	3	21.57	21.57	21.5	22
	4	21.55	21.57	21.51	22

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HSUPA	1	19.48	19.31	19.66	21
	2	19.2	18.98	19.04	20.5
	3	18.77	18.55	18.74	20.5
	4	20.65	20.64	20.60	21
	5	21.28	21.23	21.33	21.5
DC-HSDPA	1	21.67	21.74	21.70	23
	2	21.73	21.68	21.68	22.5
	3	21.75	21.75	21.65	22
	4	21.69	21.66	21.66	22
State1-6					
Item	**band**	**FDDIV result**			
	ARFCN	**1513 (1752.6MHz)**	**1412 (1732.4MHz)**	**1312 (1712.4MHz)**	**Tune up**
WCDMA	\	20.66	20.60	20.64	21
HSDPA	1	19.34	19.27	19.37	20.5
	2	18.87	18.80	18.84	20.5
	3	18.86	18.82	18.87	19.5
	4	18.89	18.85	18.87	19.5
HSUPA	1	17.20	16.81	17.36	18.5
	2	16.60	16.43	16.54	18
	3	16.22	16.14	16.15	18
	4	18.13	17.98	18.20	18.5
	5	18.76	18.68	18.82	19
DC-HSDPA	1	19.09	19.04	19.16	20.5
	2	19.11	19.04	19.17	20
	3	19.10	19.05	19.19	19.5
	4	19.12	19.05	19.19	19.5
State1-1/2					
Item	**band**	**FDDII result**			
	ARFCN	**9538 (1907.6MHz)**	**9400 (1880MHz)**	**9262 (1852.4MHz)**	**Tune up**
WCDMA	\	23.52	23.49	23.35	24
HSDPA	1	22.69	22.55	22.46	24
	2	22.20	22.07	22.00	23.5
	3	22.21	22.08	22.03	22.5
	4	22.23	22.06	22.02	22.5
HSUPA	1	19.86	19.89	19.77	21
	2	19.76	19.60	19.73	21
	3	19.32	19.28	19.26	21
	4	21.05	21.07	21.06	21.5
	5	21.66	21.71	21.62	21.8
DC-HSDPA	1	22.23	22.20	22.15	24
	2	22.18	22.16	22.08	23
	3	22.21	22.21	22.13	22.5
	4	22.25	22.19	22.10	22.5

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State1-3/5					
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	21.10	21.01	20.88	21.5
HSDPA	1	20.25	20.08	20.04	21.5
	2	19.78	19.59	19.55	21
	3	19.77	19.6	19.54	20
	4	19.75	19.6	19.56	20
HSUPA	1	17.39	17.39	17.42	18.5
	2	17.31	17.10	17.25	18.5
	3	16.85	16.59	16.75	18.5
	4	18.81	18.56	18.73	19
	5	19.24	19.21	19.17	19.3
DC-HSDPA	1	19.71	19.59	19.61	21.5
	2	19.61	19.57	19.53	20.5
	3	19.69	19.66	19.65	20
	4	19.63	19.58	19.57	20

State1-4					
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	20.31	20.12	19.97	20.5
HSDPA	1	18.87	18.85	18.73	20.5
	2	18.37	18.31	18.20	20
	3	18.37	18.38	18.22	19
	4	18.38	18.33	18.21	19
HSUPA	1	16.43	16.80	16.87	17.5
	2	16.13	15.95	15.94	17.5
	3	15.64	15.66	15.50	17.5
	4	17.51	17.61	17.49	18
	5	18.17	18.17	18.15	18.3
DC-HSDPA	1	18.68	18.60	18.50	20.5
	2	18.66	18.65	18.52	19.5
	3	18.66	18.62	18.52	19
	4	18.67	18.63	18.53	19

State1-6					
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	19.33	19.15	18.95	19.5
HSDPA	1	17.80	17.79	17.77	19.5
	2	17.31	17.33	17.27	19
	3	17.31	17.36	17.29	18
	4	17.32	17.33	17.27	18
HSUPA	1	16.26	16.49	16.22	16.5

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	2	15.97	15.87	15.94	16.5
	3	15.72	16.49	15.69	16.5
	4	16.60	16.64	16.68	17
	5	17.23	17.21	17.22	17.3
DC-HSDPA	1	17.71	17.66	17.68	19.5
	2	17.70	17.66	17.62	18.5
	3	17.60	17.67	17.62	18
	4	17.70	17.65	17.62	18
Second antenna – Main modem					
State2-1					
Item	**band**	**FDDV result**			
	ARFCN	**4233 (846.6MHz)**	**4182 (836.4MHz)**	**4132 (826.4MHz)**	**Tune up**
WCDMA	\	23.85	23.73	23.79	24.5
HSDPA	1	22.83	22.75	22.73	24
	2	22.40	22.25	22.25	23.5
	3	22.40	22.26	22.26	23
	4	22.40	22.27	22.27	23
HSUPA	1	20.29	20.49	20.27	22
	2	20.20	20.07	19.89	21
	3	19.77	19.79	19.61	21
	4	21.48	21.45	21.50	21.5
	5	22.07	22.14	22.13	22.5
DC-HSDPA	1	22.31	22.32	22.36	24
	2	22.27	22.31	22.32	23.5
	3	22.29	22.29	22.24	23
	4	22.32	22.33	22.34	23
State2-2					
Item	**band**	**FDDV result**			
	ARFCN	**4233 (846.6MHz)**	**4182 (836.4MHz)**	**4132 (826.4MHz)**	**Tune up**
WCDMA	\	22.84	22.78	22.72	23.5
HSDPA	1	21.66	21.74	21.74	23
	2	21.16	21.22	21.23	22.5
	3	21.09	21.22	21.27	22
	4	21.08	21.23	21.28	22
HSUPA	1	19.15	19.24	19.23	21
	2	18.85	18.89	18.86	20
	3	18.54	18.56	18.53	20
	4	20.38	20.49	20.46	20.5
	5	21.00	21.09	21.10	21.5
DC-HSDPA	1	21.35	21.32	21.38	23
	2	21.32	21.37	21.35	22.5
	3	21.32	21.36	21.35	22
	4	21.33	21.33	21.36	22

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State2-3/4					
Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4182 (836.4MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	19.89	19.81	19.80	20
HSDPA	1	19.05	19.00	18.96	19.5
	2	18.53	18.52	18.49	19
	3	18.45	18.41	18.41	18.5
	4	18.46	18.42	18.41	18.5
HSUPA	1	16.52	16.42	16.31	17.5
	2	16.24	16.06	15.89	16.5
	3	15.82	15.68	16.44	16.5
	4	16.91	16.97	16.84	17
	5	17.85	17.94	17.90	18
DC-HSDPA	1	18.45	18.42	18.45	19.5
	2	18.42	18.44	18.44	19
	3	18,43	18.42	18.42	18.5
	4	18.41	18.42	18.43	18.5

State2-5					
Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4182 (836.4MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	23.20	23.23	23.26	24.0
HSDPA	1	21.88	21.78	21.78	23.5
	2	21.43	21.29	21.29	23.0
	3	21.42	21.29	21.28	22.5
	4	21.42	21.29	21.29	22.5
HSUPA	1	19.77	19.89	19.85	21.5
	2	19.78	19.61	19.51	20.5
	3	19.34	19.27	19.21	20.5
	4	20.88	21.00	20.86	21.0
	5	21.53	21.62	21.61	22.0
DC-HSDPA	1	21.82	21.83	21.82	23.5
	2	21.87	21.79	21.81	23.0
	3	21.88	21.84	21.83	22.5
	4	21.84	21.82	21.85	22.5

State2-6					
Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4182 (836.4MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	21.89	21.73	21.77	23
HSDPA	1	20.64	20.69	20.69	22.5
	2	20.13	20.20	20.22	22
	3	20.18	20.24	20.24	21.5
	4	20.14	20.25	20.26	21.5

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HSUPA	1	18.52	18.74	18.64	20.5
	2	17.91	18.06	17.83	19.5
	3	17.55	17.70	17.57	19.5
	4	19.36	19.54	19.44	20
	5	20.01	20.09	20.06	21
DC-HSDPA	1	20.51	20.58	20.57	22.5
	2	20.43	20.47	20.46	22
	3	20.42	20.45	20.48	21.5
	4	20.45	20.49	20.47	21.5
State2-1					
Item	**band**	**FDDIV result**			
	ARFCN	**1513 (1752.6MHz)**	**1412 (1732.4MHz)**	**1312 (1712.4MHz)**	**Tune up**
WCDMA	\	23.47	23.43	23.48	23.5
HSDPA	1	22.51	22.54	22.50	23.5
	2	22.06	22.05	21.99	23.5
	3	22.05	22.07	22.01	22.5
	4	22.05	22.08	22.02	22.5
HSUPA	1	20.10	20.16	19.96	21.5
	2	19.79	19.44	19.58	21
	3	19.31	20.04	19.14	21
	4	21.16	21.00	21.22	21.5
	5	21.81	21.74	21.87	22
DC-HSDPA	1	22.14	22.08	22.25	23.5
	2	22.09	22.03	22.21	23
	3	22.11	22.05	22.23	22.5
	4	22.13	22.07	22.25	22.5
State2-2/5/6					
Item	**band**	**FDDIV result**			
	ARFCN	**1513 (1752.6MHz)**	**1412 (1732.4MHz)**	**1312 (1712.4MHz)**	**Tune up**
WCDMA	\	21.54	21.48	21.57	22
HSDPA	1	20.58	20.6	20.55	21.5
	2	20.09	20.13	20.06	21.5
	3	20.09	20.13	20.06	20.5
	4	20.10	20.11	20.06	20.5
HSUPA	1	17.98	18.12	18.45	19.5
	2	17.99	17.48	17.48	19.0
	3	17.55	17.97	17.07	19.0
	4	19.23	19.03	19.14	19.5
	5	19.81	19.71	19.86	20.0
DC-HSDPA	1	20.12	20.08	20.18	21.5
	2	20.14	20.03	20.22	21
	3	20.17	20.05	20.21	20.5
	4	20.11	20.08	20.25	20.5

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State2-3/4					
Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	16.48	16.45	16.49	16.5
HSDPA	1	16.45	16.41	16.45	16.5
	2	16.24	16.20	16.21	16.5
	3	16.26	16.20	16.21	16.3
	4	16.25	16.22	16.23	16.3
HSUPA	1	13.29	13.33	13.26	14.5
	2	12.91	13.32	12.88	14
	3	12.42	13.05	12.38	14
	4	14.45	14.42	14.23	14.5
	5	14.89	14.77	14.79	15
DC-HSDPA	1	15.19	15.06	15.20	16.5
	2	15.18	15.05	15.15	16
	3	15.14	15.09	15.17	15.5
	4	15.16	15.11	15.12	15.5

State2-1					
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	23.56	23.52	23.35	24
HSDPA	1	22.72	22.54	22.50	24
	2	22.22	22.09	22.03	23.5
	3	22.25	22.07	22.03	22.5
	4	22.25	22.07	22.01	22.5
HSUPA	1	20.02	19.85	19.79	21
	2	19.72	19.58	19.75	21
	3	19.27	19.31	19.28	21
	4	21.21	21.26	20.99	21.5
	5	21.72	21.70	21.66	21.8
DC-HSDPA	1	22.15	22.14	22.11	24
	2	22.16	22.13	22.09	23
	3	22.13	22.15	22.07	22.5
	4	22.15	22.11	22.12	22.5

State2-2/5/6					
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	19.58	19.55	19.39	20
HSDPA	1	18.79	18.63	18.59	20
	2	18.31	18.15	18.1	19.5
	3	18.32	18.15	18.12	18.5
	4	18.31	18.16	18.11	18.5

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HSUPA	1	15.97	16.88	16.98	17
	2	16.54	16.59	17.00	17
	3	16.29	16.32	16.96	17
	4	17.39	17.14	17.24	17.5
	5	17.73	17.79	17.63	17.8
DC-HSDPA	1	18.15	18.07	18.05	20
	2	18.14	18.09	18.04	19
	3	18.15	18.07	18.04	18.5
	4	18.17	18.11	18.01	18.5
State2-3/4					
Item	**band**	**FDDII result**			
	ARFCN	**9538 (1907.6MHz)**	**9400 (1880MHz)**	**9262 (1852.4MHz)**	**Tune up**
WCDMA	\	15.38	15.68	15.78	17
HSDPA	1	16.68	16.62	16.61	17
	2	16.24	16.12	16.11	16.5
	3	16.24	16.15	16.14	16.3
	4	16.22	16.14	16.13	16.3
HSUPA	1	13.64	13.75	13.77	14
	2	12.78	12.89	13.51	14
	3	13.22	13.33	13.21	14
	4	13.16	13.54	13.63	15
	5	15.13	14.97	14.93	15.3
DC-HSDPA	1	15.53	15.87	15.96	17
	2	15.44	15.87	15.94	16
	3	15.44	15.86	15.94	16
	4	15.42	15.85	15.96	16

11.3 LTE Measurement result

Table 11.4: The conducted Power for LTE

Main antenna –Main modem						
State1-1/3						
Band 4						
Bandwidth (MHz)	RB allocation	Frequency (MHz)	QPSK		16QAM	
	RB offset (Start RB)		Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
1.4 MHz	1RB High (5)	1754.3	23.58	24.0	22.88	24.0
		1732.5	23.45	24.0	22.92	24.0
		1710.7	23.33	24.0	22.57	24.0
	1RB Middle (3)	1754.3	23.72	24.0	22.93	24.0
		1732.5	23.78	24.0	22.98	24.0
		1710.7	23.38	24.0	22.81	24.0

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	1RB Low (0)	1754.3	23.67	24.0	22.93	24.0
		1732.5	23.80	24.0	22.93	24.0
		1710.7	23.34	24.0	22.69	24.0
	3RB High (3)	1754.3	23.64	24.0	22.81	24.0
		1732.5	23.78	24.0	23.34	24.0
		1710.7	23.40	24.0	22.64	24.0
	3RB Middle (1)	1754.3	23.67	24.0	22.80	24.0
		1732.5	23.78	24.0	23.28	24.0
		1710.7	23.43	24.0	22.62	24.0
	3RB Low (0)	1754.3	23.66	24.0	22.84	24.0
		1732.5	23.76	24.0	22.99	24.0
		1710.7	23.41	24.0	22.62	24.0
	6RB (0)	1754.3	22.74	24.0	21.75	23.5
		1732.5	23.23	24.0	22.30	23.5
		1710.7	22.56	24.0	21.54	23.5
3 MHz	1RB High (14)	1753.5	23.43	24.0	22.66	24.0
		1732.5	23.79	24.0	22.78	24.0
		1711.5	23.19	24.0	22.17	24.0
	1RB Middle (7)	1753.5	23.64	24.0	22.89	24.0
		1732.5	23.75	24.0	22.99	24.0
		1711.5	23.45	24.0	22.45	24.0
	1RB Low (0)	1753.5	23.46	24.0	22.67	24.0
		1732.5	23.80	24.0	22.89	24.0
		1711.5	23.24	24.0	22.22	24.0
	8RB High (7)	1753.5	22.65	24.0	21.71	23.5
		1732.5	22.98	24.0	22.21	23.5
		1711.5	22.44	24.0	21.53	23.5
	8RB Middle (4)	1753.5	22.79	24.0	21.80	23.5
		1732.5	23.29	24.0	22.29	23.5
		1711.5	22.52	24.0	21.61	23.5
	8RB Low (0)	1753.5	22.73	24.0	21.74	23.5
		1732.5	23.31	24.0	22.32	23.5
		1711.5	22.50	24.0	21.62	23.5
	15RB (0)	1753.5	22.70	24.0	21.70	23.5
		1732.5	23.24	24.0	22.20	23.5
		1711.5	22.47	24.0	21.54	23.5
5 MHz	1RB High (24)	1752.5	23.26	24.0	22.51	24.0
		1732.5	23.75	24.0	22.84	24.0
		1712.5	23.04	24.0	22.05	24.0
	1RB Middle (12)	1752.5	23.59	24.0	22.92	24.0
		1732.5	23.67	24.0	22.88	24.0
		1712.5	23.48	24.0	22.46	24.0

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	1RB Low (0)	1752.5	23.33	24.0	22.60	24.0
		1732.5	23.99	24.0	22.95	24.0
		1712.5	23.22	24.0	22.21	24.0
	12RB High (13)	1752.5	22.62	24.0	21.72	23.5
		1732.5	23.19	24.0	22.23	23.5
		1712.5	22.41	24.0	21.58	23.5
	12RB Middle (6)	1752.5	22.76	24.0	21.83	23.5
		1732.5	23.34	24.0	22.33	23.5
		1712.5	22.57	24.0	21.72	23.5
	12RB Low (0)	1752.5	22.63	24.0	21.76	23.5
		1732.5	23.29	24.0	22.35	23.5
		1712.5	22.52	24.0	21.69	23.5
	25RB (0)	1752.5	22.68	24.0	21.68	23.5
		1732.5	23.23	24.0	22.18	23.5
		1712.5	22.45	24.0	21.50	23.5
10 MHz	1RB High (49)	1750	23.29	24.0	22.26	24.0
		1732.5	23.74	24.0	22.95	24.0
		1715	23.35	24.0	22.45	24.0
	1RB Middle (24)	1750	23.65	24.0	22.57	24.0
		1732.5	23.78	24.0	22.68	24.0
		1715	23.58	24.0	22.66	24.0
	1RB Low (0)	1750	23.55	24.0	22.53	24.0
		1732.5	23.74	24.0	22.97	24.0
		1715	23.22	24.0	22.37	24.0
	25RB High (25)	1750	22.54	24.0	21.55	23.5
		1732.5	22.98	24.0	21.95	23.5
		1715	22.44	24.0	21.52	23.5
	25RB Middle (12)	1750	22.69	24.0	21.77	23.5
		1732.5	23.30	24.0	22.26	23.5
		1715	22.55	24.0	21.55	23.5
	25RB Low (0)	1750	22.68	24.0	21.75	23.5
		1732.5	23.20	24.0	21.97	23.5
		1715	22.46	24.0	21.53	23.5
	50RB (0)	1750	22.71	24.0	21.71	23.5
		1732.5	23.22	24.0	21.96	23.5
		1715	22.45	24.0	21.52	23.5
15 MHz	1RB High (74)	1747.5	23.40	24.0	22.50	24.0
		1732.5	23.75	24.0	22.85	24.0
		1717.5	23.70	24.0	22.90	24.0
	1RB Middle (37)	1747.5	23.73	24.0	22.81	24.0
		1732.5	23.75	24.0	23.00	24.0
		1717.5	23.57	24.0	22.93	24.0

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	1RB Low (0)	1747.5	23.74	24.0	22.98	24.0
		1732.5	23.80	24.0	22.78	24.0
		1717.5	23.25	24.0	22.45	24.0
	36RB High (38)	1747.5	22.59	24.0	21.61	23.5
		1732.5	23.16	24.0	21.97	23.5
		1717.5	22.84	24.0	21.95	23.5
	36RB Middle (19)	1747.5	22.79	24.0	21.83	23.5
		1732.5	23.27	24.0	22.27	23.5
		1717.5	22.67	24.0	21.70	23.5
	36RB Low (0)	1747.5	22.97	24.0	21.97	23.5
		1732.5	22.91	24.0	21.92	23.5
		1717.5	22.56	24.0	21.60	23.5
	75RB (0)	1747.5	22.83	24.0	21.77	23.5
		1732.5	22.99	24.0	21.97	23.5
		1717.5	22.63	24.0	21.70	23.5
20 MHz	1RB High (99)	1745	23.26	24.0	22.66	24.0
		1732.5	23.71	24.0	22.78	24.0
		1720	23.78	24.0	22.70	24.0
	1RB Middle (50)	1745	23.72	24.0	22.93	24.0
		1732.5	23.78	24.0	23.39	24.0
		1720	23.76	24.0	22.67	24.0
	1RB Low (0)	1745	23.77	24.0	23.20	24.0
		1732.5	23.61	24.0	22.69	24.0
		1720	23.19	24.0	22.15	24.0
	50RB High (50)	1745	22.75	24.0	21.70	23.5
		1732.5	22.98	24.0	21.95	23.5
		1720	22.93	24.0	21.93	23.5
	50RB Middle (25)	1745	22.89	24.0	21.95	23.5
		1732.5	23.26	24.0	22.25	23.5
		1720	22.75	24.0	21.78	23.5
	50RB Low (0)	1745	22.96	24.0	21.96	23.5
		1732.5	22.95	24.0	21.95	23.5
		1720	22.56	24.0	21.58	23.5
	100RB (0)	1745	22.81	24.0	21.79	23.5
		1732.5	22.94	24.0	21.95	23.5
		1720	22.70	24.0	21.73	23.5

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State1-2						
Band 4						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
1.4 MHz	1RB High (5)	1754.3	21.66	22.0	21.65	22.0
		1732.5	21.72	22.0	21.81	22.0
		1710.7	21.40	22.0	21.41	22.0
	1RB Middle (3)	1754.3	21.80	22.0	21.84	22.0
		1732.5	21.83	22.0	21.74	22.0
		1710.7	21.51	22.0	21.49	22.0
	1RB Low (0)	1754.3	21.74	22.0	21.76	22.0
		1732.5	21.81	22.0	21.71	22.0
		1710.7	21.45	22.0	21.42	22.0
	3RB High (3)	1754.3	21.71	22.0	21.71	22.0
		1732.5	21.74	22.0	21.77	22.0
		1710.7	21.40	22.0	21.48	22.0
	3RB Middle (1)	1754.3	21.77	22.0	21.75	22.0
		1732.5	21.79	22.0	21.81	22.0
		1710.7	21.44	22.0	21.49	22.0
	3RB Low (0)	1754.3	21.78	22.0	21.84	22.0
		1732.5	21.77	22.0	21.83	22.0
		1710.7	21.40	22.0	21.47	22.0
	6RB (0)	1754.3	21.66	22.0	20.74	21.5
		1732.5	21.74	22.0	20.76	21.5
		1710.7	21.38	22.0	20.44	21.5
3 MHz	1RB High (14)	1753.5	21.51	22.0	21.52	22.0
		1732.5	21.53	22.0	21.46	22.0
		1711.5	21.32	22.0	21.54	22.0
	1RB Middle (7)	1753.5	21.79	22.0	21.68	22.0
		1732.5	21.79	22.0	21.77	22.0
		1711.5	21.54	22.0	21.73	22.0
	1RB Low (0)	1753.5	21.55	22.0	21.51	22.0
		1732.5	21.68	22.0	21.62	22.0
		1711.5	21.32	22.0	21.38	22.0
	8RB High (7)	1753.5	21.60	22.0	20.66	21.5
		1732.5	21.65	22.0	20.72	21.5
		1711.5	21.42	22.0	20.38	21.5
	8RB Middle (4)	1753.5	21.70	22.0	20.74	21.5
		1732.5	21.78	22.0	20.84	21.5
		1711.5	21.48	22.0	20.43	21.5
	8RB Low (0)	1753.5	21.65	22.0	20.71	21.5
		1732.5	21.75	22.0	20.86	21.5

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		1711.5	21.44	22.0	20.40	21.5
	15RB (0)	1753.5	21.61	22.0	20.71	21.5
		1732.5	21.74	22.0	20.78	21.5
		1711.5	21.43	22.0	20.43	21.5
5 MHz	1RB High (24)	1752.5	21.38	22.0	21.36	22.0
		1732.5	21.36	22.0	21.44	22.0
		1712.5	21.24	22.0	21.29	22.0
	1RB Middle (12)	1752.5	21.77	22.0	21.85	22.0
		1732.5	21.86	22.0	21.92	22.0
		1712.5	21.60	22.0	21.56	22.0
	1RB Low (0)	1752.5	21.48	22.0	21.53	22.0
		1732.5	21.62	22.0	21.63	22.0
		1712.5	21.23	22.0	21.27	22.0
	12RB High (13)	1752.5	21.62	22.0	20.75	21.5
		1732.5	21.66	22.0	20.79	21.5
		1712.5	21.53	22.0	20.44	21.5
	12RB Middle (6)	1752.5	21.75	22.0	20.82	21.5
		1732.5	21.83	22.0	20.97	21.5
		1712.5	21.59	22.0	20.55	21.5
	12RB Low (0)	1752.5	21.67	22.0	20.74	21.5
		1732.5	21.76	22.0	20.92	21.5
		1712.5	21.49	22.0	20.51	21.5
	25RB (0)	1752.5	21.67	22.0	20.76	21.5
		1732.5	21.70	22.0	20.74	21.5
		1712.5	21.51	22.0	20.51	21.5
10 MHz	1RB High (49)	1750	21.32	22.0	21.26	22.0
		1732.5	21.30	22.0	21.29	22.0
		1715	21.55	22.0	21.54	22.0
	1RB Middle (24)	1750	21.77	22.0	21.69	22.0
		1732.5	21.92	22.0	21.86	22.0
		1715	21.82	22.0	21.81	22.0
	1RB Low (0)	1750	21.34	22.0	21.28	22.0
		1732.5	21.56	22.0	21.58	22.0
		1715	21.23	22.0	21.24	22.0
	25RB High (25)	1750	21.53	22.0	20.48	21.5
		1732.5	21.58	22.0	20.64	21.5
		1715	21.62	22.0	20.71	21.5
	25RB Middle (12)	1750	21.69	22.0	20.60	21.5
		1732.5	21.75	22.0	20.78	21.5
		1715	21.74	22.0	20.76	21.5
	25RB Low (0)	1750	21.59	22.0	20.53	21.5
		1732.5	21.66	22.0	20.73	21.5

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		1715	21.57	22.0	20.54	21.5
	50RB (0)	1750	21.64	22.0	20.64	21.5
		1732.5	21.68	22.0	20.68	21.5
		1715	21.54	22.0	20.54	21.5
15 MHz	1RB High (74)	1747.5	21.41	22.0	21.46	22.0
		1732.5	21.27	22.0	21.14	22.0
		1717.5	21.66	22.0	21.62	22.0
	1RB Middle (37)	1747.5	21.68	22.0	21.74	22.0
		1732.5	21.87	22.0	21.80	22.0
		1717.5	21.92	22.0	21.89	22.0
	1RB Low (0)	1747.5	21.32	22.0	21.37	22.0
		1732.5	21.67	22.0	21.66	22.0
		1717.5	21.27	22.0	21.25	22.0
	36RB High (38)	1747.5	21.56	22.0	20.54	21.5
		1732.5	21.50	22.0	20.54	21.5
		1717.5	21.95	22.0	20.96	21.5
	36RB Middle (19)	1747.5	21.66	22.0	20.64	21.5
		1732.5	21.78	22.0	20.77	21.5
		1717.5	21.83	22.0	20.88	21.5
	36RB Low (0)	1747.5	21.57	22.0	20.57	21.5
		1732.5	21.75	22.0	20.78	21.5
		1717.5	21.63	22.0	20.63	21.5
	75RB (0)	1747.5	21.61	22.0	20.59	21.5
		1732.5	21.75	22.0	20.73	21.5
		1717.5	21.71	22.0	20.76	21.5
20 MHz	1RB High (99)	1745	21.25	22.0	21.48	22.0
		1732.5	21.12	22.0	21.31	22.0
		1720	21.33	22.0	21.40	22.0
	1RB Middle (50)	1745	21.64	22.0	21.86	22.0
		1732.5	21.82	22.0	22.05	22.0
		1720	21.94	22.0	22.02	22.0
	1RB Low (0)	1745	21.25	22.0	21.46	22.0
		1732.5	21.63	22.0	21.69	22.0
		1720	21.14	22.0	21.29	22.0
	50RB High (50)	1745	21.58	22.0	20.56	21.5
		1732.5	21.40	22.0	20.40	21.5
		1720	21.77	22.0	20.79	21.5
	50RB Middle (25)	1745	21.57	22.0	20.54	21.5
		1732.5	21.74	22.0	20.78	21.5
		1720	21.82	22.0	20.90	21.5

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	50RB Low (0)	1745	21.37	22.0	20.36	21.5
		1732.5	21.75	22.0	20.79	21.5
		1720	21.64	22.0	20.63	21.5
	100RB (0)	1745	21.48	22.0	20.46	21.5
		1732.5	21.63	22.0	20.66	21.5
		1720	21.68	22.0	20.73	21.5
State1-4						
Band 4						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
1.4 MHz	1RB High (5)	1754.3	20.81	21.5	19.84	21.5
		1732.5	20.84	21.5	19.82	21.5
		1710.7	20.47	21.5	19.57	21.5
	1RB Middle (3)	1754.3	20.92	21.5	20.05	21.5
		1732.5	21.01	21.5	19.92	21.5
		1710.7	20.58	21.5	19.71	21.5
	1RB Low (0)	1754.3	20.90	21.5	20.15	21.5
		1732.5	20.86	21.5	19.83	21.5
		1710.7	20.47	21.5	19.53	21.5
	3RB High (3)	1754.3	20.86	21.5	20.00	21.5
		1732.5	20.89	21.5	20.08	21.5
		1710.7	20.55	21.5	19.88	21.5
	3RB Middle (1)	1754.3	20.91	21.5	20.10	21.5
		1732.5	20.97	21.5	20.09	21.5
		1710.7	20.60	21.5	19.80	21.5
	3RB Low (0)	1754.3	20.97	21.5	20.00	21.5
		1732.5	20.94	21.5	20.05	21.5
		1710.7	20.54	21.5	19.77	21.5
	6RB (0)	1754.3	19.87	21.5	19.29	21.0
		1732.5	19.98	21.5	19.12	21.0
		1710.7	19.61	21.5	19.08	21.0
3 MHz	1RB High (14)	1753.5	20.70	21.5	19.68	21.5
		1732.5	20.65	21.5	19.91	21.5
		1711.5	20.38	21.5	19.55	21.5
	1RB Middle (7)	1753.5	20.95	21.5	19.94	21.5
		1732.5	20.94	21.5	19.93	21.5
		1711.5	20.63	21.5	19.69	21.5
	1RB Low (0)	1753.5	20.71	21.5	19.71	21.5
		1732.5	20.83	21.5	20.08	21.5
		1711.5	20.41	21.5	19.58	21.5
	8RB	1753.5	19.84	21.5	19.24	21.0

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	High (7)	1732.5	19.83	21.5	19.26	21.0
		1711.5	19.63	21.5	19.31	21.0
	8RB Middle (4)	1753.5	19.93	21.5	19.33	21.0
		1732.5	19.96	21.5	19.38	21.0
		1711.5	19.70	21.5	19.07	21.0
	8RB Low (0)	1753.5	19.88	21.5	19.30	21.0
		1732.5	20.00	21.5	19.33	21.0
		1711.5	19.64	21.5	19.01	21.0
	15RB (0)	1753.5	19.83	21.5	19.22	21.0
		1732.5	19.90	21.5	19.31	21.0
		1711.5	19.64	21.5	19.00	21.0
5 MHz	1RB High (24)	1752.5	20.45	21.5	19.67	21.5
		1732.5	20.50	21.5	19.58	21.5
		1712.5	20.38	21.5	19.57	21.5
	1RB Middle (12)	1752.5	20.83	21.5	20.04	21.5
		1732.5	21.04	21.5	20.10	21.5
		1712.5	20.71	21.5	19.74	21.5
	1RB Low (0)	1752.5	20.54	21.5	19.78	21.5
		1732.5	20.81	21.5	19.89	21.5
		1712.5	20.36	21.5	19.58	21.5
	12RB High (13)	1752.5	19.81	21.5	19.22	21.0
		1732.5	19.85	21.5	19.31	21.0
		1712.5	19.62	21.5	19.03	21.0
	12RB Middle (6)	1752.5	19.89	21.5	19.34	21.0
		1732.5	20.05	21.5	19.40	21.0
		1712.5	19.76	21.5	19.16	21.0
	12RB Low (0)	1752.5	19.82	21.5	19.21	21.0
		1732.5	19.98	21.5	19.32	21.0
		1712.5	19.64	21.5	19.17	21.0
	25RB (0)	1752.5	19.81	21.5	19.24	21.0
		1732.5	19.91	21.5	19.31	21.0
		1712.5	19.66	21.5	19.02	21.0
10 MHz	1RB High (49)	1750	20.50	21.5	19.59	21.5
		1732.5	20.44	21.5	19.51	21.5
		1715	20.78	21.5	20.01	21.5
	1RB Middle (24)	1750	20.84	21.5	20.00	21.5
		1732.5	21.01	21.5	19.96	21.5
		1715	20.92	21.5	20.26	21.5
	1RB Low (0)	1750	20.44	21.5	19.55	21.5
		1732.5	20.75	21.5	19.69	21.5
		1715	20.34	21.5	19.60	21.5
	25RB	1750	19.65	21.5	19.06	21.0

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	High (25)	1732.5	19.75	21.5	19.12	21.0
		1715	19.82	21.5	19.23	21.0
	25RB Middle (12)	1750	19.84	21.5	19.18	21.0
		1732.5	19.94	21.5	19.38	21.0
		1715	19.86	21.5	19.27	21.0
	25RB Low (0)	1750	19.75	21.5	19.13	21.0
		1732.5	19.87	21.5	19.37	21.0
		1715	19.71	21.5	19.02	21.0
	50RB (0)	1750	19.76	21.5	19.16	21.0
		1732.5	19.87	21.5	19.28	21.0
		1715	19.73	21.5	19.03	21.0
15 MHz	1RB High (74)	1747.5	20.65	21.5	19.63	21.5
		1732.5	20.48	21.5	19.50	21.5
		1717.5	20.83	21.5	19.97	21.5
	1RB Middle (37)	1747.5	20.75	21.5	19.82	21.5
		1732.5	21.03	21.5	19.98	21.5
		1717.5	21.03	21.5	20.18	21.5
	1RB Low (0)	1747.5	20.49	21.5	19.57	21.5
		1732.5	20.87	21.5	19.80	21.5
		1717.5	20.37	21.5	19.54	21.5
	36RB High (38)	1747.5	19.73	21.5	19.07	21.0
		1732.5	19.76	21.5	19.04	21.0
		1717.5	20.12	21.5	19.35	21.0
	36RB Middle (19)	1747.5	19.83	21.5	19.23	21.0
		1732.5	19.96	21.5	19.32	21.0
		1717.5	20.02	21.5	19.35	21.0
	36RB Low (0)	1747.5	19.74	21.5	19.09	21.0
		1732.5	19.95	21.5	19.39	21.0
		1717.5	19.83	21.5	19.18	21.0
	75RB (0)	1747.5	19.82	21.5	19.13	21.0
		1732.5	19.91	21.5	19.30	21.0
		1717.5	19.93	21.5	19.33	21.0
20 MHz	1RB High (99)	1745	20.57	21.5	19.81	21.5
		1732.5	20.36	21.5	19.65	21.5
		1720	20.70	21.5	19.80	21.5
	1RB Middle (50)	1745	20.72	21.5	20.04	21.5
		1732.5	20.96	21.5	20.25	21.5
		1720	21.16	21.5	20.39	21.5
	1RB Low (0)	1745	20.61	21.5	19.78	21.5
		1732.5	20.82	21.5	20.14	21.5
		1720	20.39	21.5	19.56	21.5

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	50RB High (50)	1745	19.76	21.5	19.16	21.0
		1732.5	19.62	21.5	19.05	21.0
		1720	20.00	21.5	19.32	21.0
	50RB Middle (25)	1745	19.75	21.5	19.17	21.0
		1732.5	19.97	21.5	19.36	21.0
		1720	20.09	21.5	19.44	21.0
	50RB Low (0)	1745	19.57	21.5	19.05	21.0
		1732.5	19.97	21.5	19.32	21.0
		1720	19.84	21.5	19.24	21.0
	100RB (0)	1745	19.67	21.5	19.07	21.0
		1732.5	19.82	21.5	19.21	21.0
		1720	19.97	21.5	19.30	21.0
State1-5						
Band 4						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
1.4 MHz	1RB High (5)	1754.3	22.68	23.5	21.91	23.0
		1732.5	23.19	23.5	21.99	23.0
		1710.7	22.43	23.5	21.66	23.0
	1RB Middle (3)	1754.3	22.77	23.5	21.98	23.0
		1732.5	23.26	23.5	22.38	23.0
		1710.7	22.48	23.5	21.74	23.0
	1RB Low (0)	1754.3	22.80	23.5	21.95	23.0
		1732.5	23.16	23.5	21.98	23.0
		1710.7	22.41	23.5	21.54	23.0
	3RB High (3)	1754.3	22.73	23.5	21.98	23.0
		1732.5	23.22	23.5	22.32	23.0
		1710.7	22.38	23.5	21.60	23.0
	3RB Middle (1)	1754.3	22.77	23.5	21.97	23.0
		1732.5	23.25	23.5	22.40	23.0
		1710.7	22.45	23.5	21.61	23.0
	3RB Low (0)	1754.3	22.76	23.5	21.97	23.0
		1732.5	23.22	23.5	22.30	23.0
		1710.7	22.41	23.5	21.57	23.0
	6RB (0)	1754.3	21.87	23.0	21.76	22.5
		1732.5	22.25	23.0	22.18	22.5
		1710.7	21.53	23.0	21.48	22.5
3 MHz	1RB High (14)	1753.5	22.59	23.5	21.79	23.0
		1732.5	23.01	23.5	22.19	23.0
		1711.5	22.30	23.5	21.67	23.0

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	1RB Middle (7)	1753.5	22.76	23.5	22.00	23.0
		1732.5	23.28	23.5	22.55	23.0
		1711.5	22.59	23.5	21.88	23.0
	1RB Low (0)	1753.5	22.58	23.5	21.81	23.0
		1732.5	23.11	23.5	22.21	23.0
		1711.5	22.38	23.5	21.72	23.0
	8RB High (7)	1753.5	21.79	23.0	21.70	22.5
		1732.5	21.93	23.0	22.12	22.5
		1711.5	21.54	23.0	21.47	22.5
	8RB Middle (4)	1753.5	21.86	23.0	21.76	22.5
		1732.5	22.31	23.0	22.28	22.5
		1711.5	21.61	23.0	21.56	22.5
	8RB Low (0)	1753.5	21.79	23.0	21.71	22.5
		1732.5	22.33	23.0	22.29	22.5
		1711.5	21.58	23.0	21.53	22.5
	15RB (0)	1753.5	21.76	23.0	21.69	22.5
		1732.5	22.26	23.0	22.17	22.5
		1711.5	21.56	23.0	21.49	22.5
5 MHz	1RB High (24)	1752.5	22.38	23.5	21.52	23.0
		1732.5	22.80	23.5	21.84	23.0
		1712.5	22.13	23.5	21.06	23.0
	1RB Middle (12)	1752.5	22.79	23.5	21.84	23.0
		1732.5	23.25	23.5	22.31	23.0
		1712.5	22.58	23.5	21.54	23.0
	1RB Low (0)	1752.5	22.45	23.5	21.58	23.0
		1732.5	23.02	23.5	21.99	23.0
		1712.5	22.29	23.5	21.26	23.0
	12RB High (13)	1752.5	21.77	23.0	21.74	22.5
		1732.5	22.21	23.0	22.17	22.5
		1712.5	21.55	23.0	21.50	22.5
	12RB Middle (6)	1752.5	21.89	23.0	21.88	22.5
		1732.5	22.33	23.0	22.33	22.5
		1712.5	21.70	23.0	21.64	22.5
	12RB Low (0)	1752.5	21.81	23.0	21.79	22.5
		1732.5	22.29	23.0	22.28	22.5
		1712.5	21.64	23.0	21.56	22.5
	25RB (0)	1752.5	21.82	23.0	21.73	22.5
		1732.5	22.20	23.0	22.09	22.5
		1712.5	21.56	23.0	21.49	22.5
10 MHz	1RB High (49)	1750	22.41	23.5	21.65	23.0
		1732.5	22.75	23.5	21.97	23.0
		1715	22.49	23.5	21.78	23.0

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	1RB Middle (24)	1750	22.72	23.5	22.00	23.0
		1732.5	23.36	23.5	22.54	23.0
		1715	22.66	23.5	21.95	23.0
	1RB Low (0)	1750	22.56	23.5	21.87	23.0
		1732.5	22.80	23.5	21.97	23.0
		1715	22.25	23.5	21.57	23.0
	25RB High (25)	1750	21.61	23.0	21.55	22.5
		1732.5	21.95	23.0	22.10	22.5
		1715	21.53	23.0	21.46	22.5
	25RB Middle (12)	1750	21.81	23.0	21.74	22.5
		1732.5	22.29	23.0	22.25	22.5
		1715	21.69	23.0	21.59	22.5
	25RB Low (0)	1750	21.77	23.0	21.71	22.5
		1732.5	22.22	23.0	22.18	22.5
		1715	21.56	23.0	21.48	22.5
	50RB (0)	1750	21.76	23.0	21.66	22.5
		1732.5	21.97	23.0	22.10	22.5
		1715	21.57	23.0	21.47	22.5
15 MHz	1RB High (74)	1747.5	22.54	23.5	21.65	23.0
		1732.5	22.80	23.5	21.94	23.0
		1717.5	22.80	23.5	22.00	23.0
	1RB Middle (37)	1747.5	22.72	23.5	21.88	23.0
		1732.5	23.33	23.5	22.40	23.0
		1717.5	22.70	23.5	21.94	23.0
	1RB Low (0)	1747.5	22.80	23.5	21.96	23.0
		1732.5	22.79	23.5	21.85	23.0
		1717.5	22.29	23.5	21.52	23.0
	36RB High (38)	1747.5	21.72	23.0	21.64	22.5
		1732.5	21.96	23.0	22.10	22.5
		1717.5	21.94	23.0	21.88	22.5
	36RB Middle (19)	1747.5	21.85	23.0	21.80	22.5
		1732.5	22.30	23.0	22.23	22.5
		1717.5	21.73	23.0	21.65	22.5
	36RB Low (0)	1747.5	21.99	23.0	21.93	22.5
		1732.5	21.98	23.0	22.10	22.5
		1717.5	21.66	23.0	21.56	22.5
	75RB (0)	1747.5	21.89	23.0	21.80	22.5
		1732.5	22.23	23.0	22.15	22.5
		1717.5	21.75	23.0	21.65	22.5
20 MHz	1RB High (99)	1745	22.50	23.5	21.50	23.0
		1732.5	22.77	23.5	21.80	23.0
		1720	22.80	23.5	21.90	23.0

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	1RB Middle (50)	1745	22.74	23.5	21.92	23.0
		1732.5	23.31	23.5	22.39	23.0
		1720	22.74	23.5	21.87	23.0
	1RB Low (0)	1745	22.79	23.5	21.99	23.0
		1732.5	22.75	23.5	21.90	23.0
		1720	22.28	23.5	21.23	23.0
	50RB High (50)	1745	21.99	23.0	21.73	22.5
		1732.5	22.15	23.0	21.95	22.5
		1720	22.20	23.0	21.90	22.5
	50RB Middle (25)	1745	22.20	23.0	21.89	22.5
		1732.5	22.48	23.0	22.17	22.5
		1720	22.09	23.0	21.78	22.5
	50RB Low (0)	1745	22.20	23.0	21.92	22.5
		1732.5	22.13	23.0	22.02	22.5
		1720	21.84	23.0	21.54	22.5
	100RB (0)	1745	21.87	23.0	21.72	22.5
		1732.5	21.96	23.0	21.98	22.5
		1720	21.84	23.0	21.73	22.5

State1-6

Band 4

Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
1.4 MHz	1RB High (5)	1754.3	19.86	20.5	18.88	20.5
		1732.5	19.93	20.5	19.14	20.5
		1710.7	19.58	20.5	18.78	20.5
	1RB Middle (3)	1754.3	19.97	20.5	19.02	20.5
		1732.5	20.10	20.5	19.01	20.5
		1710.7	19.72	20.5	18.85	20.5
	1RB Low (0)	1754.3	19.92	20.5	19.02	20.5
		1732.5	19.95	20.5	19.06	20.5
		1710.7	19.57	20.5	18.83	20.5
	3RB High (3)	1754.3	19.94	20.5	19.08	20.5
		1732.5	19.95	20.5	19.18	20.5
		1710.7	19.61	20.5	18.70	20.5
	3RB Middle (1)	1754.3	20.00	20.5	19.25	20.5
		1732.5	20.00	20.5	19.23	20.5
		1710.7	19.66	20.5	18.73	20.5
	3RB Low (0)	1754.3	20.00	20.5	19.25	20.5
		1732.5	19.97	20.5	19.20	20.5
		1710.7	19.63	20.5	18.70	20.5

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	6RB (0)	1754.3	19.01	20.5	18.05	20.0
		1732.5	19.02	20.5	18.07	20.0
		1710.7	18.66	20.5	18.07	20.0
3 MHz	1RB High (14)	1753.5	19.71	20.5	18.65	20.5
		1732.5	19.69	20.5	18.86	20.5
		1711.5	19.52	20.5	18.75	20.5
	1RB Middle (7)	1753.5	20.00	20.5	18.98	20.5
		1732.5	19.99	20.5	19.12	20.5
		1711.5	19.75	20.5	19.00	20.5
	1RB Low (0)	1753.5	19.76	20.5	18.69	20.5
		1732.5	19.91	20.5	18.90	20.5
		1711.5	19.47	20.5	18.72	20.5
	8RB High (7)	1753.5	18.95	20.5	18.40	20.0
		1732.5	18.93	20.5	18.34	20.0
		1711.5	18.68	20.5	18.10	20.0
	8RB Middle (4)	1753.5	19.06	20.5	18.38	20.0
		1732.5	19.05	20.5	18.39	20.0
		1711.5	18.74	20.5	18.17	20.0
	8RB Low (0)	1753.5	19.00	20.5	18.31	20.0
		1732.5	19.11	20.5	18.43	20.0
		1711.5	18.69	20.5	18.20	20.0
	15RB (0)	1753.5	18.94	20.5	18.36	20.0
		1732.5	19.01	20.5	18.31	20.0
		1711.5	18.68	20.5	18.07	20.0
5 MHz	1RB High (24)	1752.5	19.54	20.5	18.70	20.5
		1732.5	19.48	20.5	18.69	20.5
		1712.5	19.47	20.5	18.56	20.5
	1RB Middle (12)	1752.5	19.92	20.5	19.11	20.5
		1732.5	20.03	20.5	19.22	20.5
		1712.5	19.86	20.5	18.91	20.5
	1RB Low (0)	1752.5	19.64	20.5	18.81	20.5
		1732.5	19.78	20.5	19.03	20.5
		1712.5	19.46	20.5	18.53	20.5
	12RB High (13)	1752.5	18.91	20.5	18.36	20.0
		1732.5	18.93	20.5	18.33	20.0
		1712.5	18.71	20.5	18.10	20.0
	12RB Middle (6)	1752.5	19.05	20.5	18.39	20.0
		1732.5	19.12	20.5	18.43	20.0
		1712.5	18.85	20.5	18.23	20.0
	12RB Low (0)	1752.5	18.91	20.5	18.31	20.0
		1732.5	19.11	20.5	18.46	20.0
		1712.5	18.74	20.5	18.25	20.0

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	25RB (0)	1752.5	18.98	20.5	18.34	20.0
		1732.5	18.98	20.5	18.31	20.0
		1712.5	18.70	20.5	18.17	20.0
10 MHz	1RB High (49)	1750	19.62	20.5	18.71	20.5
		1732.5	19.56	20.5	18.59	20.5
		1715	19.79	20.5	19.05	20.5
	1RB Middle (24)	1750	20.00	20.5	19.15	20.5
		1732.5	20.14	20.5	19.25	20.5
		1715	20.02	20.5	19.24	20.5
	1RB Low (0)	1750	19.55	20.5	18.67	20.5
		1732.5	19.88	20.5	19.04	20.5
		1715	19.36	20.5	18.55	20.5
	25RB High (25)	1750	18.76	20.5	18.29	20.0
		1732.5	18.87	20.5	18.24	20.0
		1715	18.90	20.5	18.31	20.0
	25RB Middle (12)	1750	18.89	20.5	18.40	20.0
		1732.5	19.05	20.5	18.43	20.0
		1715	18.95	20.5	18.43	20.0
	25RB Low (0)	1750	18.84	20.5	18.21	20.0
		1732.5	19.05	20.5	18.35	20.0
		1715	18.72	20.5	18.15	20.0
	50RB (0)	1750	18.87	20.5	18.28	20.0
		1732.5	18.99	20.5	18.38	20.0
		1715	18.74	20.5	18.20	20.0
15 MHz	1RB High (74)	1747.5	19.74	20.5	18.78	20.5
		1732.5	19.59	20.5	18.52	20.5
		1717.5	19.91	20.5	19.11	20.5
	1RB Middle (37)	1747.5	19.89	20.5	19.08	20.5
		1732.5	20.12	20.5	19.17	20.5
		1717.5	20.15	20.5	19.37	20.5
	1RB Low (0)	1747.5	19.58	20.5	18.71	20.5
		1732.5	19.99	20.5	19.09	20.5
		1717.5	19.48	20.5	18.69	20.5
	36RB High (38)	1747.5	18.77	20.5	18.24	20.0
		1732.5	18.76	20.5	18.25	20.0
		1717.5	18.79	20.5	18.39	20.0
	36RB Middle (19)	1747.5	18.92	20.5	18.31	20.0
		1732.5	19.11	20.5	18.35	20.0
		1717.5	19.15	20.5	18.38	20.0
	36RB Low (0)	1747.5	18.84	20.5	18.25	20.0
		1732.5	19.13	20.5	18.40	20.0
		1717.5	18.86	20.5	18.35	20.0

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	75RB (0)	1747.5	18.86	20.5	18.34	20.0
		1732.5	19.04	20.5	18.36	20.0
		1717.5	19.04	20.5	18.41	20.0
20 MHz	1RB High (99)	1745	19.65	20.5	18.94	20.5
		1732.5	19.47	20.5	18.66	20.5
		1720	19.77	20.5	19.08	20.5
	1RB Middle (50)	1745	19.85	20.5	19.13	20.5
		1732.5	20.07	20.5	19.37	20.5
		1720	20.22	20.5	19.52	20.5
	1RB Low (0)	1745	19.68	20.5	18.83	20.5
		1732.5	19.93	20.5	19.18	20.5
		1720	19.43	20.5	18.67	20.5
	50RB High (50)	1745	18.86	20.5	18.30	20.0
		1732.5	18.67	20.5	18.06	20.0
		1720	19.08	20.5	18.35	20.0
	50RB Middle (25)	1745	18.80	20.5	18.21	20.0
		1732.5	19.03	20.5	18.39	20.0
		1720	19.09	20.5	18.47	20.0
	50RB Low (0)	1745	18.62	20.5	18.09	20.0
		1732.5	19.10	20.5	18.34	20.0
		1720	18.88	20.5	18.36	20.0
	100RB (0)	1745	18.73	20.5	18.18	20.0
		1732.5	18.90	20.5	18.31	20.0
		1720	18.97	20.5	18.43	20.0

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Band 7

Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
5 MHz	1RB High (24)	2567.5	23.70	**24.5**	22.62	**23.5**
		2535	23.65	**24.5**	22.68	**23.5**
		2502.5	23.50	**24.5**	22.61	**23.5**
	1RB Middle (12)	2567.5	23.89	**24.5**	23.00	**23.5**
		2535	23.85	**24.5**	23.00	**23.5**
		2502.5	23.76	**24.5**	22.99	**23.5**
	1RB Low (0)	2567.5	23.71	**24.5**	22.73	**23.5**
		2535	23.81	**24.5**	22.98	**23.5**
		2502.5	23.65	**24.5**	22.73	**23.5**
	12RB High (13)	2567.5	22.97	**23.5**	21.98	**22.5**
		2535	22.94	**23.5**	21.95	**22.5**
		2502.5	22.78	**23.5**	21.89	**22.5**

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	12RB Middle (6)	2567.5	22.97	23.5	21.97	22.5
		2535	22.95	23.5	21.95	22.5
		2502.5	22.90	23.5	22.00	22.5
	12RB Low (0)	2567.5	22.95	23.5	21.98	22.5
		2535	22.96	23.5	21.97	22.5
		2502.5	22.85	23.5	21.91	22.5
	25RB (0)	2567.5	22.91	23.5	21.96	22.5
		2535	22.99	23.5	22.00	22.5
		2502.5	22.79	23.5	21.79	22.5
10 MHz	1RB High (49)	2565	23.78	24.5	22.82	23.5
		2535	23.60	24.5	22.67	23.5
		2505	23.56	24.5	22.61	23.5
	1RB Middle (24)	2565	23.88	24.5	23.00	23.5
		2535	23.87	24.5	22.96	23.5
		2505	23.86	24.5	22.95	23.5
	1RB Low (0)	2565	23.67	24.5	22.70	23.5
		2535	23.74	24.5	22.78	23.5
		2505	23.63	24.5	22.71	23.5
	25RB High (25)	2565	23.00	23.5	21.99	22.5
		2535	22.89	23.5	21.92	22.5
		2505	22.82	23.5	21.81	22.5
	25RB Middle (12)	2565	22.97	23.5	21.97	22.5
		2535	22.98	23.5	22.00	22.5
		2505	22.94	23.5	21.96	22.5
	25RB Low (0)	2565	22.87	23.5	21.92	22.5
		2535	22.99	23.5	21.99	22.5
		2505	22.85	23.5	21.87	22.5
	50RB (0)	2565	22.99	23.5	22.00	22.5
		2535	22.96	23.5	21.97	22.5
		2505	22.86	23.5	21.86	22.5
15 MHz	1RB High (75)	2562.5	23.34	24.5	22.22	23.5
		2535	23.17	24.5	22.19	23.5
		2507.5	23.07	24.5	22.08	23.5
	1RB Middle (38)	2562.5	23.73	24.5	22.69	23.5
		2535	23.69	24.5	22.76	23.5
		2507.5	23.54	24.5	22.63	23.5
	1RB Low (0)	2562.5	23.11	24.5	22.06	23.5
		2535	23.17	24.5	22.25	23.5
		2507.5	23.02	24.5	22.13	23.5
	36RB	2562.5	22.48	23.5	21.51	22.5

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	High (38)	2535	22.53	23.5	21.52	22.5
		2507.5	22.36	23.5	21.38	22.5
	36RB Middle (19)	2562.5	22.49	23.5	21.54	22.5
		2535	22.74	23.5	21.72	22.5
		2507.5	22.51	23.5	21.50	22.5
	36RB Low (0)	2562.5	22.29	23.5	21.35	22.5
		2535	22.58	23.5	21.58	22.5
		2507.5	22.41	23.5	21.41	22.5
	75RB (0)	2562.5	22.36	23.5	21.39	22.5
		2535	22.50	23.5	21.48	22.5
		2507.5	22.36	23.5	21.34	22.5
20 MHz	1RB High (99)	2560	23.56	24.5	22.58	23.5
		2535	23.34	24.5	22.66	23.5
		2510	23.24	24.5	22.42	23.5
	1RB Middle (50)	2560	23.67	24.5	22.51	23.5
		2535	23.68	24.5	22.95	23.5
		2510	23.53	24.5	22.68	23.5
	1RB Low (0)	2560	23.29	24.5	22.32	23.5
		2535	23.30	24.5	22.59	23.5
		2510	23.33	24.5	22.43	23.5
	50RB High (50)	2560	22.47	23.5	21.51	22.5
		2535	22.51	23.5	21.50	22.5
		2510	22.33	23.5	21.36	22.5
	50RB Middle (25)	2560	22.41	23.5	21.45	22.5
		2535	22.64	23.5	21.62	22.5
		2510	22.43	23.5	21.44	22.5
	50RB Low (0)	2560	22.33	23.5	21.38	22.5
		2535	22.53	23.5	21.51	22.5
		2510	22.40	23.5	21.41	22.5
	100RB (0)	2560	22.39	23.5	21.43	22.5
		2535	22.52	23.5	21.50	22.5
		2510	22.36	23.5	21.35	22.5

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Band 7

Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
5 MHz	1RB High (24)	2567.5	21.68	22.5	20.69	21.5
		2535	21.61	22.5	20.62	21.5
		2502.5	21.44	22.5	20.26	21.5
	1RB Middle (12)	2567.5	21.98	22.5	20.95	21.5
		2535	21.93	22.5	20.88	21.5
		2502.5	21.81	22.5	20.66	21.5

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	1RB Low (0)	2567.5	21.89	22.5	20.89	21.5
		2535	21.94	22.5	20.87	21.5
		2502.5	21.60	22.5	20.42	21.5
	12RB High (13)	2567.5	21.00	21.5	19.93	20.5
		2535	20.91	21.5	19.87	20.5
		2502.5	20.70	21.5	19.77	20.5
	12RB Middle (6)	2567.5	20.93	21.5	19.95	20.5
		2535	20.99	21.5	19.99	20.5
		2502.5	20.84	21.5	19.90	20.5
	12RB Low (0)	2567.5	20.98	21.5	19.99	20.5
		2535	20.92	21.5	19.89	20.5
		2502.5	20.82	21.5	19.78	20.5
	25RB (0)	2567.5	20.94	21.5	20.00	20.5
		2535	20.90	21.5	19.94	20.5
		2502.5	20.73	21.5	19.70	20.5
10 MHz	1RB High (49)	2565	21.87	22.5	20.84	21.5
		2535	21.70	22.5	20.63	21.5
		2505	21.43	22.5	20.59	21.5
	1RB Middle (24)	2565	22.18	22.5	21.19	21.5
		2535	22.18	22.5	20.97	21.5
		2505	21.97	22.5	20.94	21.5
	1RB Low (0)	2565	21.89	22.5	20.94	21.5
		2535	21.92	22.5	20.79	21.5
		2505	21.64	22.5	20.68	21.5
	25RB High (25)	2565	20.98	21.5	19.99	20.5
		2535	20.92	21.5	19.93	20.5
		2505	20.74	21.5	19.71	20.5
	25RB Middle (12)	2565	20.98	21.5	19.99	20.5
		2535	20.94	21.5	19.96	20.5
		2505	20.86	21.5	19.82	20.5
	25RB Low (0)	2565	20.92	21.5	19.97	20.5
		2535	20.98	21.5	19.93	20.5
		2505	20.80	21.5	19.77	20.5
	50RB (0)	2565	20.94	21.5	19.97	20.5
		2535	20.93	21.5	19.93	20.5
		2505	20.80	21.5	19.75	20.5
15 MHz	1RB High (75)	2562.5	21.69	22.5	20.74	21.5
		2535	21.51	22.5	20.51	21.5
		2507.5	21.36	22.5	20.49	21.5
	1RB Middle (38)	2562.5	21.98	22.5	20.97	21.5
		2535	21.92	22.5	20.96	21.5
		2507.5	21.87	22.5	20.94	21.5

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	1RB Low (0)	2562.5	21.44	22.5	20.53	21.5
		2535	21.66	22.5	20.60	21.5
		2507.5	21.45	22.5	20.62	21.5
	36RB High (38)	2562.5	20.87	21.5	19.85	20.5
		2535	20.86	21.5	19.86	20.5
		2507.5	20.68	21.5	19.64	20.5
	36RB Middle (19)	2562.5	20.94	21.5	20.00	20.5
		2535	20.94	21.5	19.99	20.5
		2507.5	20.80	21.5	19.76	20.5
	36RB Low (0)	2562.5	20.86	21.5	19.81	20.5
		2535	20.90	21.5	19.89	20.5
		2507.5	20.74	21.5	19.69	20.5
	75RB (0)	2562.5	20.92	21.5	19.85	20.5
		2535	20.94	21.5	19.92	20.5
		2507.5	20.70	21.5	19.69	20.5
20 MHz	1RB High (99)	2560	21.88	22.5	20.93	21.5
		2535	21.69	22.5	20.77	21.5
		2510	21.61	22.5	20.76	21.5
	1RB Middle (50)	2560	21.96	22.5	21.21	21.5
		2535	21.90	22.5	21.30	21.5
		2510	21.83	22.5	20.91	21.5
	1RB Low (0)	2560	21.62	22.5	20.69	21.5
		2535	21.80	22.5	20.76	21.5
		2510	21.67	22.5	20.86	21.5
	50RB High (50)	2560	20.98	21.5	19.90	20.5
		2535	20.87	21.5	19.87	20.5
		2510	20.76	21.5	19.77	20.5
	50RB Middle (25)	2560	20.97	21.5	19.96	20.5
		2535	21.00	21.5	19.91	20.5
		2510	20.77	21.5	19.75	20.5
	50RB Low (0)	2560	20.90	21.5	19.83	20.5
		2535	20.99	21.5	19.92	20.5
		2510	20.71	21.5	19.68	20.5
	100RB (0)	2560	20.98	21.5	19.93	20.5
		2535	20.99	21.5	19.96	20.5
		2510	20.76	21.5	19.72	20.5

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Band 38

Bandwidth (MHz)	RB allocation	Frequency (MHz)	QPSK		16QAM	
	RB offset (Start RB)		Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
5 MHz	1RB High (24)	2617.5	24.28	25.0	23.26	24.28
		2595	24.19	25.0	23.42	24.19

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		2572.5	23.97	25.0	22.68	23.97
	1RB Middle (12)	2617.5	24.74	25.0	23.70	24.74
		2595	24.65	25.0	23.87	24.65
		2572.5	24.33	25.0	23.07	24.33
	1RB Low (0)	2617.5	24.37	25.0	23.46	24.37
		2595	24.38	25.0	23.63	24.38
		2572.5	24.02	25.0	22.76	24.02
	12RB High (13)	2617.5	23.40	24.0	22.46	23.40
		2595	23.58	24.0	22.47	23.58
		2572.5	23.10	24.0	22.05	23.10
	12RB Middle (6)	2617.5	23.49	24.0	22.54	23.49
		2595	23.71	24.0	22.53	23.71
		2572.5	23.31	24.0	22.19	23.31
	12RB Low (0)	2617.5	23.43	24.0	22.49	23.43
		2595	23.51	24.0	22.40	23.51
		2572.5	23.21	24.0	22.10	23.21
	25RB (0)	2617.5	23.41	24.0	22.38	23.41
		2595	23.61	24.0	22.42	23.61
		2572.5	23.07	24.0	21.87	23.07
10 MHz	1RB High (49)	2615	24.20	25.0	23.29	24.20
		2595	24.17	25.0	23.33	24.17
		2575	24.05	25.0	23.24	24.05
	1RB Middle (24)	2615	24.45	25.0	23.63	24.45
		2595	24.63	25.0	23.79	24.63
		2575	24.42	25.0	23.60	24.42
	1RB Low (0)	2615	24.31	25.0	23.40	24.31
		2595	24.26	25.0	23.32	24.26
		2575	23.93	25.0	23.20	23.93
	25RB High (25)	2615	23.38	24.0	22.29	23.38
		2595	23.45	24.0	22.30	23.45
		2575	23.13	24.0	21.98	23.13
	25RB Middle (12)	2615	23.47	24.0	22.29	23.47
		2595	23.67	24.0	22.44	23.67
		2575	23.24	24.0	22.09	23.24
	25RB Low (0)	2615	23.52	24.0	22.34	23.52
		2595	23.43	24.0	22.21	23.43
		2575	23.10	24.0	21.95	23.10
	50RB (0)	2615	23.60	24.0	22.63	23.60
		2595	23.48	24.0	22.26	23.48
		2575	23.14	24.0	21.99	23.14

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15 MHz	1RB High (75)	2612.5	24.07	25.0	23.17	24.07
		2595	23.93	25.0	23.11	23.93
		2577.5	24.01	25.0	22.82	24.01
	1RB Middle (38)	2612.5	24.61	25.0	23.78	24.61
		2595	24.59	25.0	23.76	24.59
		2577.5	24.41	25.0	23.22	24.41
	1RB Low (0)	2612.5	24.03	25.0	23.21	24.03
		2595	24.01	25.0	23.08	24.01
		2577.5	23.75	25.0	22.55	23.75
	36RB High (38)	2612.5	23.33	24.0	22.22	23.33
		2595	23.48	24.0	22.32	23.48
		2577.5	23.10	24.0	21.87	23.10
	36RB Middle (19)	2612.5	23.44	24.0	22.41	23.44
		2595	23.66	24.0	22.51	23.66
		2577.5	23.19	24.0	21.99	23.19
	36RB Low (0)	2612.5	23.21	24.0	22.09	23.21
		2595	23.33	24.0	22.18	23.33
		2577.5	23.03	24.0	21.84	23.03
	75RB (0)	2612.5	23.35	24.0	22.22	23.35
		2595	23.40	24.0	22.18	23.40
		2577.5	23.07	24.0	21.92	23.07
20 MHz	1RB High (99)	2610	24.27	25.0	23.40	24.27
		2595	24.24	25.0	23.15	24.24
		2580	24.26	25.0	23.15	24.26
	1RB Middle (50)	2610	24.73	25.0	23.86	24.73
		2595	24.70	25.0	23.59	24.70
		2580	24.51	25.0	23.38	24.51
	1RB Low (0)	2610	24.37	25.0	23.60	24.37
		2595	24.24	25.0	23.10	24.24
		2580	24.04	25.0	22.99	24.04
	50RB High (50)	2610	23.66	24.0	22.61	23.66
		2595	23.47	24.0	22.41	23.47
		2580	23.37	24.0	22.12	23.37
	50RB Middle (25)	2610	23.32	24.0	22.17	23.32
		2595	23.62	24.0	22.47	23.62
		2580	23.32	24.0	22.13	23.32
	50RB Low (0)	2610	23.48	24.0	22.30	23.48
		2595	23.50	24.0	22.30	23.50
		2580	23.31	24.0	22.05	23.31
	100RB (0)	2610	23.48	24.0	22.44	23.48
		2595	23.52	24.0	22.36	23.52
		2580	23.33	24.0	22.13	23.33

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State1-4/5/6						
Band 38						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
5 MHz	1RB High (24)	2617.5	22.66	24.0	22.45	23.0
		2595	22.82	24.0	23.00	23.0
		2572.5	22.33	24.0	22.26	23.0
	1RB Middle (12)	2617.5	22.98	24.0	22.88	23.0
		2595	23.24	24.0	23.00	23.0
		2572.5	22.72	24.0	22.65	23.0
	1RB Low (0)	2617.5	22.82	24.0	22.63	23.0
		2595	22.88	24.0	22.92	23.0
		2572.5	22.43	24.0	22.37	23.0
	12RB High (13)	2617.5	22.83	23.0	21.86	22.0
		2595	23.00	23.0	21.93	22.0
		2572.5	22.51	23.0	21.47	22.0
	12RB Middle (6)	2617.5	22.97	23.0	22.00	22.0
		2595	23.00	23.0	21.98	22.0
		2572.5	22.65	23.0	21.61	22.0
	12RB Low (0)	2617.5	22.89	23.0	21.97	22.0
		2595	22.92	23.0	21.85	22.0
		2572.5	22.57	23.0	21.53	22.0
	25RB (0)	2617.5	22.89	23.0	21.84	22.0
		2595	22.94	23.0	21.88	22.0
		2572.5	22.47	23.0	21.23	22.0
10 MHz	1RB High (49)	2615	22.68	24.0	22.90	23.0
		2595	22.65	24.0	22.56	23.0
		2575	22.36	24.0	22.58	23.0
	1RB Middle (24)	2615	22.98	24.0	23.00	23.0
		2595	23.00	24.0	22.95	23.0
		2575	22.75	24.0	22.95	23.0
	1RB Low (0)	2615	22.86	24.0	22.99	23.0
		2595	22.60	24.0	22.51	23.0
		2575	22.36	24.0	22.57	23.0
	25RB High (25)	2615	22.80	23.0	21.77	22.0
		2595	22.99	23.0	21.81	22.0
		2575	22.55	23.0	21.39	22.0
	25RB Middle (12)	2615	22.87	23.0	21.78	22.0
		2595	23.00	23.0	21.95	22.0
		2575	22.67	23.0	21.51	22.0
	25RB	2615	22.94	23.0	21.82	22.0

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	Low (0)	2595	22.88	23.0	21.71	22.0
		2575	22.54	23.0	21.38	22.0
	50RB (0)	2615	23.00	23.0	21.99	22.0
		2595	22.92	23.0	21.79	22.0
		2575	22.57	23.0	21.45	22.0
15 MHz	1RB High (75)	2612.5	22.40	24.0	22.16	23.0
		2595	22.45	24.0	22.37	23.0
		2577.5	22.26	24.0	22.37	23.0
	1RB Middle (38)	2612.5	22.99	24.0	22.74	23.0
		2595	23.00	24.0	23.00	23.0
		2577.5	22.69	24.0	22.80	23.0
	1RB Low (0)	2612.5	22.42	24.0	22.18	23.0
		2595	22.37	24.0	22.30	23.0
		2577.5	22.12	24.0	22.23	23.0
	36RB High (38)	2612.5	22.75	23.0	21.59	22.0
		2595	22.86	23.0	21.74	22.0
		2577.5	22.56	23.0	21.43	22.0
	36RB Middle (19)	2612.5	22.85	23.0	21.75	22.0
		2595	23.00	23.0	21.88	22.0
		2577.5	22.64	23.0	21.50	22.0
	36RB Low (0)	2612.5	22.66	23.0	21.47	22.0
		2595	22.75	23.0	21.63	22.0
		2577.5	22.48	23.0	21.34	22.0
	75RB (0)	2612.5	22.75	23.0	21.62	22.0
		2595	22.81	23.0	21.67	22.0
		2577.5	22.53	23.0	21.39	22.0
20 MHz	1RB High (99)	2610	22.72	24.0	22.38	23.0
		2595	22.76	24.0	22.40	23.0
		2580	22.71	24.0	22.33	23.0
	1RB Middle (50)	2610	23.20	24.0	22.86	23.0
		2595	23.24	24.0	22.87	23.0
		2580	22.96	24.0	22.58	23.0
	1RB Low (0)	2610	22.85	24.0	22.49	23.0
		2595	22.76	24.0	22.39	23.0
		2580	22.57	24.0	22.18	23.0
	50RB High (50)	2610	22.93	23.0	21.93	22.0
		2595	22.95	23.0	21.81	22.0
		2580	22.73	23.0	21.63	22.0
	50RB Middle (25)	2610	22.77	23.0	21.58	22.0
		2595	23.00	23.0	21.88	22.0
		2580	22.73	23.0	21.64	22.0

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	50RB Low (0)	2610	22.92	23.0	21.73	22.0
		2595	22.86	23.0	21.73	22.0
		2580	22.65	23.0	21.55	22.0
	100RB (0)	2610	22.98	23.0	21.79	22.0
		2595	22.93	23.0	21.73	22.0
		2580	22.68	23.0	21.54	22.0
State1-1/2/3/4						
Band 41						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
5 MHz	1RB High (24)	2652.5	22.86	24	21.84	23
		2605	22.48	24	21.57	23
		2557.5	22.29	24	21.39	23
	1RB Middle (12)	2652.5	23.24	24	22.23	23
		2605	22.94	24	22.03	23
		2557.5	22.63	24	21.74	23
	1RB Low (0)	2652.5	23.07	24	22.06	23
		2605	22.81	24	21.92	23
		2557.5	22.45	24	21.56	23
	12RB High (13)	2652.5	23.05	23.5	21.97	22.5
		2605	22.79	23.5	21.62	22.5
		2557.5	22.50	23.5	21.42	22.5
	12RB Middle (6)	2652.5	23.23	23.5	22.17	22.5
		2605	22.98	23.5	21.83	22.5
		2557.5	22.65	23.5	21.57	22.5
	12RB Low (0)	2652.5	23.22	23.5	22.14	22.5
		2605	22.99	23.5	21.84	22.5
		2557.5	22.61	23.5	21.54	22.5
	25RB (0)	2652.5	23.13	23.5	22.04	22.5
		2605	22.84	23.5	21.74	22.5
		2557.5	22.53	23.5	21.45	22.5
10 MHz	1RB High (49)	2650	22.93	24	21.96	23
		2605	22.58	24	21.60	23
		2560	22.30	24	21.59	23
	1RB Middle (24)	2650	23.28	24	22.31	23
		2605	23.06	24	22.07	23
		2560	22.66	24	21.96	23
	1RB Low (0)	2650	22.98	24	22.01	23
		2605	22.86	24	21.88	23
		2560	22.36	24	21.66	23

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	25RB High (25)	2650	23.07	23.5	22.03	22.5
		2605	22.79	23.5	21.68	22.5
		2560	22.56	23.5	21.46	22.5
	25RB Middle (12)	2650	23.19	23.5	22.15	22.5
		2605	22.95	23.5	21.85	22.5
		2560	22.67	23.5	21.56	22.5
	25RB Low (0)	2650	23.10	23.5	22.06	22.5
		2605	22.97	23.5	21.87	22.5
		2560	22.62	23.5	21.51	22.5
	50RB (0)	2650	23.10	23.5	21.96	22.5
		2605	22.86	23.5	21.73	22.5
		2560	22.56	23.5	21.43	22.5
15 MHz	1RB High (75)	2647.5	22.70	24	21.70	23
		2605	22.42	24	21.46	23
		2562.5	22.20	24	21.37	23
	1RB Middle (38)	2647.5	23.15	24	22.14	23
		2605	23.00	24	22.06	23
		2562.5	22.68	24	21.85	23
	1RB Low (0)	2647.5	22.71	24	21.62	23
		2605	22.60	24	21.65	23
		2562.5	22.24	24	21.41	23
	36RB High (38)	2647.5	23.05	23.5	21.90	22.5
		2605	22.70	23.5	21.61	22.5
		2562.5	22.51	23.5	21.44	22.5
	36RB Middle (19)	2647.5	23.14	23.5	22.00	22.5
		2605	22.90	23.5	21.82	22.5
		2562.5	22.66	23.5	21.59	22.5
	36RB Low (0)	2647.5	23.03	23.5	21.89	22.5
		2605	22.85	23.5	21.78	22.5
		2562.5	22.51	23.5	21.43	22.5
	75RB (0)	2647.5	23.07	23.5	21.94	22.5
		2605	22.90	23.5	21.71	22.5
		2562.5	22.56	23.5	21.47	22.5
20 MHz	1RB High (99)	2645	22.92	24	21.83	23
		2605	22.68	24	21.82	23
		2565	22.55	24	21.78	23
	1RB Middle (50)	2645	23.20	24	22.12	23
		2605	23.08	24	22.21	23
		2565	22.83	24	21.98	23
	1RB Low (0)	2645	22.91	24	21.77	23
		2605	22.81	24	22.02	23
		2565	22.46	24	21.71	23

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	50RB High (50)	2645	23.00	23.5	21.91	22.5
		2605	22.83	23.5	21.62	22.5
		2565	22.65	23.5	21.58	22.5
	50RB Middle (25)	2645	23.17	23.5	21.98	22.5
		2605	23.01	23.5	21.80	22.5
		2565	22.68	23.5	21.63	22.5
	50RB Low (0)	2645	23.14	23.5	21.90	22.5
		2605	23.06	23.5	21.85	22.5
		2565	22.66	23.5	21.62	22.5
	100RB (0)	2645	23.11	23.5	21.92	22.5
		2605	22.97	23.5	21.75	22.5
		2565	22.60	23.5	21.58	22.5
State1-5/6						
Band 41						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
5 MHz	1RB High (24)	2652.5	21.84	23	21.99	22.5
		2605	21.52	23	21.64	22.5
		2557.5	21.29	23	21.48	22.5
	1RB Middle (12)	2652.5	22.23	23	22.37	22.5
		2605	22.00	23	22.10	22.5
		2557.5	21.67	23	21.84	22.5
	1RB Low (0)	2652.5	22.04	23	22.20	22.5
		2605	21.89	23	21.98	22.5
		2557.5	21.48	23	21.66	22.5
	12RB High (13)	2652.5	22.05	22.5	22.03	22.2
		2605	21.76	22.5	21.76	22.2
		2557.5	21.52	22.5	21.46	22.2
	12RB Middle (6)	2652.5	22.22	22.5	22.20	22.2
		2605	21.98	22.5	21.96	22.2
		2557.5	21.68	22.5	21.62	22.2
	12RB Low (0)	2652.5	22.20	22.5	22.19	22.2
		2605	21.97	22.5	21.96	22.2
		2557.5	21.64	22.5	21.58	22.2
	25RB (0)	2652.5	22.10	22.5	22.01	22.2
		2605	21.85	22.5	21.76	22.2
		2557.5	21.55	22.5	21.47	22.2
10 MHz	1RB High (49)	2650	21.87	23	21.68	22.5
		2605	21.54	23	21.56	22.5
		2560	21.29	23	21.36	22.5

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	1RB Middle (24)	2650	22.23	23	22.04	22.5
		2605	22.04	23	22.05	22.5
		2560	21.68	23	21.73	22.5
	1RB Low (0)	2650	21.92	23	21.72	22.5
		2605	21.82	23	21.83	22.5
		2560	21.36	23	21.43	22.5
	25RB High (25)	2650	22.01	22.5	21.96	22.2
		2605	21.74	22.5	21.58	22.2
		2560	21.54	22.5	21.40	22.2
	25RB Middle (12)	2650	22.14	22.5	22.08	22.2
		2605	21.92	22.5	21.75	22.2
		2560	21.66	22.5	21.51	22.2
	25RB Low (0)	2650	22.05	22.5	22.00	22.2
		2605	21.93	22.5	21.76	22.2
		2560	21.62	22.5	21.47	22.2
	50RB (0)	2650	22.05	22.5	21.94	22.2
		2605	21.80	22.5	21.68	22.2
		2560	21.57	22.5	21.42	22.2
15 MHz	1RB High (75)	2647.5	21.69	23	21.71	22.5
		2605	21.43	23	21.39	22.5
		2562.5	21.18	23	21.38	22.5
	1RB Middle (38)	2647.5	22.15	23	22.17	22.5
		2605	22.05	23	21.99	22.5
		2562.5	21.70	23	21.87	22.5
	1RB Low (0)	2647.5	21.62	23	21.64	22.5
		2605	21.61	23	21.57	22.5
		2562.5	21.22	23	21.42	22.5
	36RB High (38)	2647.5	21.97	22.5	21.90	22.2
		2605	21.70	22.5	21.57	22.2
		2562.5	21.56	22.5	21.45	22.2
	36RB Middle (19)	2647.5	22.08	22.5	22.00	22.2
		2605	21.91	22.5	21.79	22.2
		2562.5	21.72	22.5	21.60	22.2
	36RB Low (0)	2647.5	21.96	22.5	21.89	22.2
		2605	21.85	22.5	21.73	22.2
		2562.5	21.55	22.5	21.44	22.2
	75RB (0)	2647.5	22.00	22.5	21.95	22.2
		2605	21.78	22.5	21.70	22.2
		2562.5	21.57	22.5	21.40	22.2
20 MHz	1RB High (99)	2645	21.81	23	21.89	22.5
		2605	21.76	23	21.93	22.5
		2565	21.48	23	21.80	22.5

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	1RB Middle (50)	2645	22.18	23	22.23	22.5
		2605	22.16	23	22.33	22.5
		2565	21.75	23	22.03	22.5
	1RB Low (0)	2645	21.77	23	21.84	22.5
		2605	21.91	23	22.09	22.5
		2565	21.43	23	21.72	22.5
	50RB High (50)	2645	21.99	22.5	21.94	22.2
		2605	21.71	22.5	21.59	22.2
		2565	21.69	22.5	21.56	22.2
	50RB Middle (25)	2645	22.08	22.5	22.03	22.2
		2605	21.94	22.5	21.80	22.2
		2565	21.76	22.5	21.62	22.2
	50RB Low (0)	2645	22.04	22.5	21.99	22.2
		2605	21.98	22.5	21.82	22.2
		2565	21.73	22.5	21.59	22.2
	100RB (0)	2645	22.01	22.5	21.93	22.2
		2605	21.95	22.5	21.86	22.2
		2565	21.71	22.5	21.56	22.2
Second antenna –Main modem						
State2-1						
Band 4						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK		16QAM	
			Actual output power (dBm)	Tune up	Actual output power (dBm)	Tune up
1.4 MHz	1RB High (5)	1754.3	23.62	24.5	22.69	24.0
		1732.5	24.10	24.5	23.18	24.0
		1710.7	23.37	24.5	22.64	24.0
	1RB Middle (3)	1754.3	23.73	24.5	22.73	24.0
		1732.5	24.17	24.5	22.92	24.0
		1710.7	23.49	24.5	22.80	24.0
	1RB Low (0)	1754.3	23.71	24.5	22.60	24.0
		1732.5	24.12	24.5	22.97	24.0
		1710.7	23.38	24.5	22.40	24.0
	3RB High (3)	1754.3	23.66	24.5	22.75	24.0
		1732.5	24.09	24.5	23.23	24.0
		1710.7	23.40	24.5	22.53	24.0
	3RB Middle (1)	1754.3	23.72	24.5	22.96	24.0
		1732.5	24.15	24.5	23.33	24.0
		1710.7	23.46	24.5	22.57	24.0
	3RB Low (0)	1754.3	23.69	24.5	22.72	24.0
		1732.5	24.09	24.5	23.24	24.0
		1710.7	23.40	24.5	22.46	24.0

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	6RB (0)	1754.3	22.76	24.0	21.79	23.0
		1732.5	23.21	24.0	21.92	23.0
		1710.7	22.51	24.0	21.51	23.0
3 MHz	1RB High (14)	1753.5	23.59	24.5	22.53	24.0
		1732.5	23.80	24.5	23.00	24.0
		1711.5	23.23	24.5	22.35	24.0
	1RB Middle (7)	1753.5	23.80	24.5	22.95	24.0
		1732.5	24.13	24.5	23.37	24.0
		1711.5	23.47	24.5	22.62	24.0
	1RB Low (0)	1753.5	23.58	24.5	22.58	24.0
		1732.5	23.99	24.5	23.20	24.0
		1711.5	23.27	24.5	22.43	24.0
	8RB High (7)	1753.5	22.74	24.0	21.82	23.0
		1732.5	22.98	24.0	21.95	23.0
		1711.5	22.46	24.0	21.50	23.0
	8RB Middle (4)	1753.5	22.81	24.0	21.90	23.0
		1732.5	23.22	24.0	22.26	23.0
		1711.5	22.53	24.0	21.60	23.0
	8RB Low (0)	1753.5	22.76	24.0	21.85	23.0
		1732.5	23.24	24.0	22.30	23.0
		1711.5	22.51	24.0	21.54	23.0
	15RB (0)	1753.5	22.73	24.0	21.76	23.0
		1732.5	23.17	24.0	21.96	23.0
		1711.5	22.49	24.0	21.53	23.0
5 MHz	1RB High (24)	1752.5	23.35	24.5	22.49	24.0
		1732.5	23.69	24.5	22.82	24.0
		1712.5	23.10	24.5	22.16	24.0
	1RB Middle (12)	1752.5	23.67	24.5	22.87	24.0
		1732.5	24.14	24.5	23.24	24.0
		1712.5	23.50	24.5	22.53	24.0
	1RB Low (0)	1752.5	23.38	24.5	22.53	24.0
		1732.5	23.78	24.5	22.90	24.0
		1712.5	23.22	24.5	22.27	24.0
	12RB High (13)	1752.5	22.66	24.0	21.82	23.0
		1732.5	22.91	24.0	22.21	23.0
		1712.5	22.46	24.0	21.51	23.0
	12RB Middle (6)	1752.5	22.85	24.0	21.92	23.0
		1732.5	23.29	24.0	22.33	23.0
		1712.5	22.60	24.0	21.67	23.0
	12RB Low (0)	1752.5	22.70	24.0	21.81	23.0
		1732.5	23.25	24.0	22.31	23.0
		1712.5	22.54	24.0	21.57	23.0

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