4.2.2. Wireless Router exposure conditions

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WIFI simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ⩾ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. For devices with form factors smaller than 9 cm x 5 cm, a test separation distance of 5 mm is required.

4.3. Extremity exposure conditions

Per FCC KDB 648474D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, the device is marketed as “Phablet”.
The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ⩽ 25 mm from that surface or edge, in direct contact with a flat phantom, for Product Specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, Product Specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

Due to the SAR result, the Main antenna frequency bands are not required to test with 0mm for the Product Specific 10 g SAR.

5. SAR System Verification Procedure

5.1. Tissue Simulate Liquid

5.1.1. Recipes for Tissue Simulate Liquid

The bellowing tables give the recipes for tissue simulating liquids to be used in different frequency bands：

Ingredients (% by weight)	Frequency (MHz)				
	450	700-900	1750-2000	2300-2500	2500-2700
Water	38.56	40.30	55.24	55.00	54.92
Salt (NaCl)	3.95	1.38	0.31	0.2	0.23
Sucrose	56.32	57.90	0	0	0
HEC	0.98	0.24	0	0	0
Bactericide	0.19	0.18	0	0	0
Tween	0	0	44.45	44.80	44.85
Salt: 99+% Pure Sodium Chloride Water: De-ionized, 16 MΩ+ resistivity Tween: Polyoxyethylene (20) sorbitan monolaurate			Sucrose: 98+% Pure Sucrose HEC: Hydroxyethyl Cellulose		
HSL5GHz is composed of the following ingredients： Water：50-65% Mineral oil：10-30% Emulsifiers：8-25% Sodium salt：0-1.5%					

Table 2： Recipe of Tissue Simulate Liquid

5.1.2. Measurement for Tissue Simulate Liquid

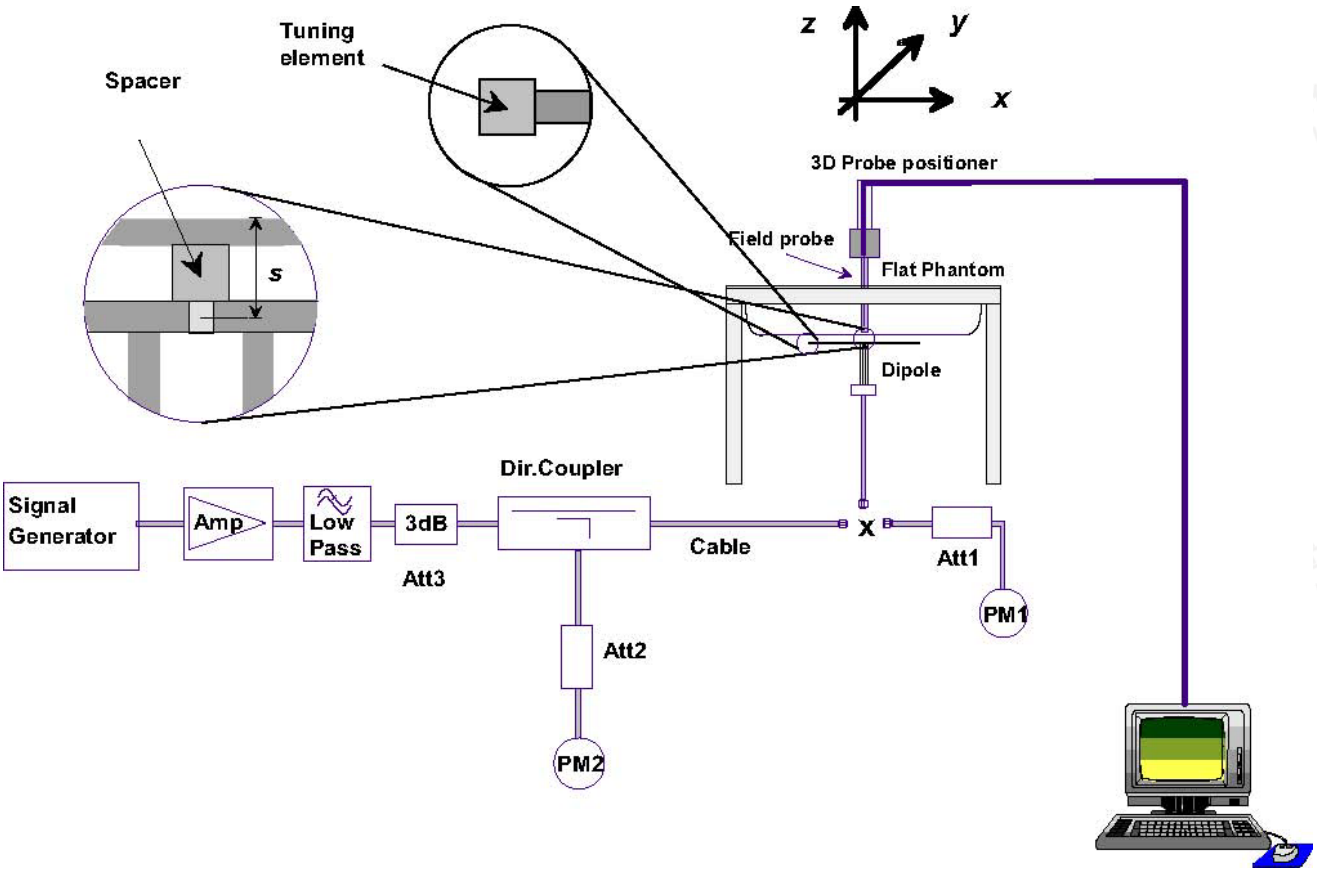
The dielectric properties for this Tissue Simulate Liquids were measured by using the DAKS. The Conductivity (σ) and Permittivity (ρ) are listed in bellow table. For the SAR measurement given in this report. The temperature variation of the Tissue Simulate Liquids was 22±2°C.

Tissue Type	Measured Frequency (MHz)	Target Tissue (±5%)		Measured Tissue		Liquid Temp. (℃)	Measured Date
		ε_r	σ(S/m)	ε_r	σ(S/m)		
835 Head	835	41.5 (39.43~43.58)	0.9 (0.86~0.95)	41.268	0.896	21.8	April 17, 2025
1750 Head	1750	40.1 (38.10~42.11)	1.37 (1.30~1.44)	40.352	1.379	21.7	April 18, 2025
1900 Head	1900	40 (38.00~42.00)	1.4 (1.33~1.47)	40.143	1.428	21.9	April 19, 2025
2600 Head	2600	39 (37.05~40.95)	1.96 (1.86~2.06)	38.731	1.927	21.9	April 19, 2025

Table 3： Measurement result of Tissue electric parameters

5.2. SAR System Check

The microwave circuit arrangement for system Check is sketched in F-1. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% from the target SAR values. The tests were conducted on the same days as the measurement of the EUT. The obtained results from the system accuracy verification are displayed in the following table (A power level of 100mW (below 3GHz) or 100mW (3-6GHz) was input to the dipole antenna). During the tests, the ambient temperature of the laboratory was in the range 22±2°C, the relative humidity was in the range 60% and the liquid depth above the ear reference points was above 15±0.5 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.



F-1. the microwave circuit arrangement used for SAR system check

5.2.1. Justification for Extended SAR Dipole Calibrations

1) Referring to KDB865664 D01 requirements for dipole calibration, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the following requirements. Each measured dipole is expected to evaluate with the following criteria at least on annual interval in Appendix C.

a) There is no physical damage on the dipole;
b) System check with specific dipole is within 10% of calibrated value;
c) Return-loss is within 20% of calibrated measurement;
d) Impedance is within 5Ω from the previous measurement.

2) Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.

D750V3 SN 119 Extend Dipole Calibrations

Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2023-06-15	-28.9		50.8		-3.54	
2024-06-14	-28.86	-0.14	50.4	-0.4	-3.51	0.03

D835V2 SN 4d124 Extend Dipole Calibrations

Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2023-10-24	-35.6		50.2		1.65	
2024-10-23	-35.56	-0.11	49.8	-0.4	1.64	0.01

D1750V2 SN 1035 Extend Dipole Calibrations

Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2023-06-12	-38.3		48.8		-0.06	
2024-06-11	-38.54	0.63	48.5	-0.3	-0.04	0.02

D1900V2 SN 5d055 Extend Dipole Calibrations

Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2023-10-20	-26.1		51.3		4.84	
2024-10-19	-26.0	-0.38	51.5	0.2	4.85	0.01

D2600V2 SN 1071 Extend Dipole Calibrations

Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2023-06-20	-23.7		48.6		-6.32	
2024-06-19	-23.68	-0.08	48.5	-0.1	-6.30	0.02

5.2.2. Summary System Check Result(s)

Validation Kit		Measured SAR 100mW	Measured SAR 100mW	Measured SAR (normalized to 1W)	Measured SAR (normalized to 1W)	Target SAR (normalized to 1W) (±10%)	Target SAR (normalized to 1W) (±10%)	Liquid Temp. (℃)	Measured Date
		1g (W/kg)	10g (W/kg)	1g (W/kg)	10g (W/kg)	1-g(W/kg)	10-g(W/kg)		
D835V2	Head	0.943	0.622	9.43	6.22	9.59 (8.63~10.55)	6.37 (5.73~7.01)	21.8	April 17, 2025
D1750V2	Head	3.54	1.86	35.40	18.60	35.9 (32.31~39.49)	18.9 (17.01~20.79)	21.7	April 18, 2025
D1900V2	Head	4.15	2.14	41.50	21.40	40.2 (36.18~44.22)	20.9 (18.81~22.99)	21.9	April 19, 2025
D2600V2	Head	5.57	2.52	55.70	25.20	56.80 (51.12~62.48)	25.5 (22.95~28.05)	21.9	April 19, 2025

Table 4： Please see the Appendix A

6. SAR measurement procedure

The measurement procedures are as follows:

6.1. Conducted power measurement

a. For WWAN power measurement, use base station simulator connection with RF cable, at maximum power in each supported wireless interface and frequency band.
b. Read the WWAN RF power level from the base station simulator.
c. For WLAN power measurement, use engineering software to configure EUT WLAN continuously Transmission, at maximum RF power in each supported wireless interface and frequency band.
d. Connect EUT RF port through RF cable to the power meter, and measure WLAN output power.

6.2. GSM Test Configuration

SAR tests for GSM 850 and GSM 1900, a communication link is set up with a System Simulator (SS) by air link. Using CMU200 the power level is set to “5” for GSM 850, set to “0” for GSM 1900. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslots is 4. the EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslots is 4.

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

6.3. UMTS Test Configuration

3G SAR Test Reduction Procedure
In the following procedures, the mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.3 This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as “otherwise” in the applicable procedures; SAR measurement is required for the secondary mode.

<u>Output power Verification</u>

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all “1’s” for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are requied in the SAR report. All configurations that are not supported by the handset or cannot be measured due to technical or equipment limitations must be clearly identified.

<u>Head SAR</u>

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode.

Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

1) Body-Worn Accessory SAR

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreaing code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the handset, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

2) Handsets with Release 5 HSDPA

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the "Release 5 HSDPA Data Devices" section of this document, for the highest reported SAR body-worn accessory exposure configuration in 12.2 kbps RMC. Handsets with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device.The number of HSDSCH/ HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set

Table 2: Subtests for UMTS Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (note 4)	15/15 (note 4)	64	12/15 (note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI}= 8 ⇔ $A_{hs} = \beta_{hs}/\beta_c$=30/15 ⇔ β_{hs}=30/15*β_c
Note2: CM=1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.
Note3: For subtest 2 the $\beta_c\beta_d$ ratio of 12/15 for the TFC during the measurement period(TF1,TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1,TF1) to β_c=11/15 and β_d=15/15.

HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the "Release 6 HSPA Data Devices" section of this document, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Devices' sections of this document

Table 3: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	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	94/75	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	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 ⇔ $A_{hs} = \beta_{hs}/\beta_c$ = 30/15 ⇔ β_{hs}= 30/15 *β_c.
Note 2: CM = 1 for βc/βd =12/15, β_{hs}/β_c =24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the βc/βd ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to βc = 10/15 and βd = 15/15.
Note 4: For subtest 5 the βc/βd ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to βc = 14/15 and βd = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.
Note 6: βed can not be set directly; it is set by Absolute Grant Value.

6.4. LTE Test Configuration

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.8 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.

QPSK with 50% RB allocation
The procedures required for 1 RB allocation in section 4.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.9

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 sections 4.2.1 and 4.2.2 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.

6.5. Power Reduction

The product without any power reduction.

6.6. Power Drift

To control the output power stability during the SAR test, SAR 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. This ensures that the power drift during one measurement is within ±0.2dB.

7. TEST CONDITIONS AND RESULTS

7.1. Conducted Power Results

According KDB 447498 D01 General RF Exposure Guidance v06 Section 4.1 2) states that "Unless it is specified differently in the published RF exposure KDB procedures, these requirements also apply to test reduction and test exclusion considerations. Time-averaged maximum conducted output power applies to SAR and, as required by § 2.1091(c), time-averaged ERP applies to MPE. When an antenna port is not available on the device to support conducted power measurement, such as FRS and certain Part 15 transmitters with built-in integral antennas, the maximum output power allowed for production units should be used to determine RF exposure test exclusion and compliance."

<GSM Conducted Power>

General Note:

1. Per KDB 447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. According to October 2013TCB Workshop, for GSM / GPRS / EGPRS, the number of time slots to test for SAR should correspond to the highest frame-average maximum output power configuration, considering the possibility of e.g. 3rd party VoIP operation for head and body-worn SAR testing, the EUT was set in GPRS (4Tx slot) for GSM850/GSM1900 band due to their highest frame-average power.
3. For hotspot mode SAR testing, GPRS should be evaluated, therefore the EUT was set in GPRS (4 Tx slots) for GSM850/GSM1900 band due to its highest frame-average power.

7.1.1. Conducted power measurement results for GSM850

GSM 850										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		128	190	251			128	190	251	
GSM(GMSK)	GSM	32.69	32.68	32.68	33.00	-9.19	23.50	23.49	23.49	23.81
GPRS(GMSK)	1 TX Slot	32.51	32.52	32.51	33.00	-9.19	23.32	23.33	23.32	23.81
	2 TX Slots	30.96	31.03	30.95	31.50	-6.18	24.78	24.85	24.77	25.32
	3 TX Slots	29.45	29.52	29.44	30.00	-4.42	25.03	25.10	25.02	**25.58**
	4 TX Slots	27.99	28.00	27.94	28.50	-3.17	24.82	24.83	24.77	25.33

7.1.2. Conducted power measurement results for PCS1900

GSM 1900										
Burst Output Power(dBm)					Tune up	Division Factors	Frame-Average Output Power(dBm)			Tune up
Channel		512	661	810			512	661	810	
GSM(GMSK)	GSM	29.66	29.71	29.62	30.00	-9.19	20.47	20.52	20.43	20.81
GPRS(GMSK)	1 TX Slot	29.54	29.57	29.48	30.00	-9.19	20.35	20.38	20.29	20.81
	2 TX Slots	27.94	27.99	27.94	28.00	-6.18	21.76	21.81	21.76	21.82
	3 TX Slots	26.48	26.48	26.44	27.00	-4.42	22.06	22.06	22.02	**22.58**
	4 TX Slots	24.95	24.98	24.96	25.00	-3.17	21.78	21.81	21.79	21.83

Note:

1)CMW500 measures GSM peak and average output power for active timeslots. For SAR the time based average power is relevant. The difference in between depends on the duty cycle of the TDMA signal:

No. of timeslots	1	2	3	4
Duty Cycle	1:8.3	1:4.15	1:2.77	1:2.075
Time based avg. power compared to slotted avg. power	-9.19	-6.18	-4.42	-3.17

2)The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:

3)Frame-averaged power = 10 x log (Burst-averaged power mW x Slot used / 8

When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used

When multiple slots can be used, SAR should be tested to account for the maximum source-based time-averaged output power.

<UMTS Conducted Power>

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station CMW500 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2Kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station R&S CMW500 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
   i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
   ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
   iii. Set Cell Power = -86 dBm
   iv. Set Channel Type = 12.2k + HSPA
   v. Set UE Target Power
   vi. Power Ctrl Mode= Alternating bits
   vii. Set and observe the E-TFCI
   viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI

d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 5) (Note 6)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c .

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.

Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 6: β_{ed} can not be set directly, it is set by Absolute Grant Value.

General Note

1. Per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If AMR 12.2kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2kbps can be excluded.
2. By design, AMR and HSDPA/HSUPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.
3. It is expected by the manufacturer that MPR for some HSDPA/HSUPA subtests may differ from the specification of 3GPP, according to the chipset implementation in this model. The implementation and expected deviation are detailed in tune-up procedure exhibit.

7.1.3. Conducted Power Measurement Results(WCDMA Band II)

Item	Band	WCDMA Band II result (dBm)			
		Channel/Frequency(MHz)			
	sub-test	9262/1852.4	9400/1880	9538/1907.6	Tune up
RMC	12.2kbps RMC	23.53	23.48	23.58	24.00
HSDPA	Sub –Test 1	22.89	22.84	22.97	23.00
	Sub –Test 2	22.87	22.76	22.70	23.00
	Sub –Test 3	22.83	22.76	22.88	23.00
	Sub –Test 4	22.89	22.84	22.88	23.00
HSUPA	Sub –Test 1	22.72	22.90	22.89	23.00
	Sub –Test 2	22.80	22.82	22.73	23.00
	Sub –Test 3	22.83	22.77	22.82	23.00
	Sub –Test 4	22.76	22.90	22.87	23.00
	Sub –Test 5	22.81	22.86	22.80	23.00

Note:
1) when the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
2)

7.1.4. Conducted Power Measurement Results(WCDMA Band V)

Item	Band	WCDMA Band V result (dBm)			
		Channel/Frequency(MHz)			
	sub-test	4132/826.4	4182/836.4	4233/846.6	Tune up
RMC	12.2kbps RMC	23.47	23.45	23.54	24.00
HSDPA	Sub –Test 1	22.79	22.70	22.77	23.00
	Sub –Test 2	22.80	22.83	22.75	23.00
	Sub –Test 3	22.77	22.72	22.82	23.00
	Sub –Test 4	22.80	22.80	22.72	23.00
HSUPA	Sub –Test 1	22.77	22.84	22.83	23.00
	Sub –Test 2	22.88	22.82	22.71	23.00
	Sub –Test 3	22.83	22.88	22.71	23.00
	Sub –Test 4	22.71	22.70	22.76	23.00
	Sub –Test 5	22.81	22.77	22.71	23.00

Note:
1) when the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

7.1.5. Conducted Power Measurement Results(LTE Band 2)

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Tune Up (dBm)
Band2	1.4MHz	QPSK	18607	1RB#0	23.56	24.00
Band2	1.4MHz	16QAM	18607	1RB#0	22.00	23.00
Band2	1.4MHz	QPSK	18607	1RB#2	23.60	24.00
Band2	1.4MHz	16QAM	18607	1RB#2	22.63	23.00
Band2	1.4MHz	QPSK	18607	1RB#5	23.69	24.00
Band2	1.4MHz	16QAM	18607	1RB#5	22.63	23.00
Band2	1.4MHz	QPSK	18607	3RB#0	23.61	24.00
Band2	1.4MHz	16QAM	18607	3RB#0	22.62	23.00
Band2	1.4MHz	QPSK	18607	3RB#1	23.55	24.00
Band2	1.4MHz	16QAM	18607	3RB#1	22.50	23.00
Band2	1.4MHz	QPSK	18607	3RB#3	23.57	24.00
Band2	1.4MHz	16QAM	18607	3RB#3	22.49	23.00
Band2	1.4MHz	QPSK	18607	6RB#0	22.66	23.00
Band2	1.4MHz	16QAM	18607	6RB#0	21.81	22.00
Band2	1.4MHz	QPSK	18900	1RB#0	23.45	24.00
Band2	1.4MHz	16QAM	18900	1RB#0	22.91	23.00
Band2	1.4MHz	QPSK	18900	1RB#2	23.24	24.00
Band2	1.4MHz	16QAM	18900	1RB#2	22.87	23.00
Band2	1.4MHz	QPSK	18900	1RB#5	23.45	24.00
Band2	1.4MHz	16QAM	18900	1RB#5	22.83	23.00
Band2	1.4MHz	QPSK	18900	3RB#0	23.41	24.00
Band2	1.4MHz	16QAM	18900	3RB#0	22.27	23.00
Band2	1.4MHz	QPSK	18900	3RB#1	23.39	24.00
Band2	1.4MHz	16QAM	18900	3RB#1	22.25	23.00
Band2	1.4MHz	QPSK	18900	3RB#3	23.41	24.00
Band2	1.4MHz	16QAM	18900	3RB#3	22.16	23.00
Band2	1.4MHz	QPSK	18900	6RB#0	22.39	23.00
Band2	1.4MHz	16QAM	18900	6RB#0	21.78	22.00
Band2	1.4MHz	QPSK	19193	1RB#0	23.42	24.00
Band2	1.4MHz	16QAM	19193	1RB#0	22.64	23.00
Band2	1.4MHz	QPSK	19193	1RB#2	23.43	24.00
Band2	1.4MHz	16QAM	19193	1RB#2	23.04	24.00
Band2	1.4MHz	QPSK	19193	1RB#5	23.50	24.00
Band2	1.4MHz	16QAM	19193	1RB#5	23.06	24.00
Band2	1.4MHz	QPSK	19193	3RB#0	23.57	24.00
Band2	1.4MHz	16QAM	19193	3RB#0	22.39	23.00
Band2	1.4MHz	QPSK	19193	3RB#1	23.55	24.00
Band2	1.4MHz	16QAM	19193	3RB#1	22.16	23.00
Band2	1.4MHz	QPSK	19193	3RB#3	23.55	24.00
Band2	1.4MHz	16QAM	19193	3RB#3	22.21	23.00
Band2	1.4MHz	QPSK	19193	6RB#0	22.52	23.00
Band2	1.4MHz	16QAM	19193	6RB#0	21.90	22.00
Band2	3MHz	QPSK	18615	1RB#0	20.39	21.00
Band2	3MHz	16QAM	18615	1RB#0	19.56	20.00
Band2	3MHz	QPSK	18615	1RB#8	20.35	21.00
Band2	3MHz	16QAM	18615	1RB#8	19.30	20.00
Band2	3MHz	QPSK	18615	1RB#14	20.33	21.00
Band2	3MHz	16QAM	18615	1RB#14	19.26	20.00
Band2	3MHz	QPSK	18615	8RB#0	19.47	20.00
Band2	3MHz	16QAM	18615	8RB#0	18.78	19.00
Band2	3MHz	QPSK	18615	8RB#4	19.47	20.00
Band2	3MHz	16QAM	18615	8RB#4	18.79	19.00
Band2	3MHz	QPSK	18615	8RB#7	19.53	20.00
Band2	3MHz	16QAM	18615	8RB#7	18.88	19.00
Band2	3MHz	QPSK	18615	15RB#0	19.55	20.00
Band2	3MHz	16QAM	18615	15RB#0	18.69	19.00
Band2	3MHz	QPSK	18900	1RB#0	20.84	21.00
Band2	3MHz	16QAM	18900	1RB#0	19.83	20.00
Band2	3MHz	QPSK	18900	1RB#8	20.91	21.00
Band2	3MHz	16QAM	18900	1RB#8	19.98	20.00
Band2	3MHz	QPSK	18900	1RB#14	20.90	21.00
Band2	3MHz	16QAM	18900	1RB#14	20.04	21.00

Band2	3MHz	QPSK	18900	8RB#0	20.04	21.00
Band2	3MHz	16QAM	18900	8RB#0	19.23	20.00
Band2	3MHz	QPSK	18900	8RB#4	20.04	21.00
Band2	3MHz	16QAM	18900	8RB#4	19.23	20.00
Band2	3MHz	QPSK	18900	8RB#7	20.02	21.00
Band2	3MHz	16QAM	18900	8RB#7	19.26	20.00
Band2	3MHz	QPSK	18900	15RB#0	19.97	20.00
Band2	3MHz	16QAM	18900	15RB#0	19.22	20.00
Band2	3MHz	QPSK	19185	1RB#0	21.77	22.00
Band2	3MHz	16QAM	19185	1RB#0	20.73	21.00
Band2	3MHz	QPSK	19185	1RB#8	21.90	22.00
Band2	3MHz	16QAM	19185	1RB#8	20.96	21.00
Band2	3MHz	QPSK	19185	1RB#14	21.86	22.00
Band2	3MHz	16QAM	19185	1RB#14	21.03	22.00
Band2	3MHz	QPSK	19185	8RB#0	20.99	21.00
Band2	3MHz	16QAM	19185	8RB#0	20.34	21.00
Band2	3MHz	QPSK	19185	8RB#4	21.00	22.00
Band2	3MHz	16QAM	19185	8RB#4	20.24	21.00
Band2	3MHz	QPSK	19185	8RB#7	21.06	22.00
Band2	3MHz	16QAM	19185	8RB#7	20.26	21.00
Band2	3MHz	QPSK	19185	15RB#0	20.96	21.00
Band2	3MHz	16QAM	19185	15RB#0	20.15	21.00
Band2	5MHz	QPSK	18625	1RB#0	22.56	23.00
Band2	5MHz	16QAM	18625	1RB#0	21.10	22.00
Band2	5MHz	QPSK	18625	1RB#12	22.58	23.00
Band2	5MHz	16QAM	18625	1RB#12	21.01	22.00
Band2	5MHz	QPSK	18625	1RB#24	22.64	23.00
Band2	5MHz	16QAM	18625	1RB#24	21.02	22.00
Band2	5MHz	QPSK	18625	12RB#0	21.59	22.00
Band2	5MHz	16QAM	18625	12RB#0	20.71	21.00
Band2	5MHz	QPSK	18625	12RB#6	21.59	22.00
Band2	5MHz	16QAM	18625	12RB#6	20.67	21.00
Band2	5MHz	QPSK	18625	12RB#13	21.65	22.00
Band2	5MHz	16QAM	18625	12RB#13	20.67	21.00
Band2	5MHz	QPSK	18625	25RB#0	21.63	22.00
Band2	5MHz	16QAM	18625	25RB#0	20.76	21.00
Band2	5MHz	QPSK	18900	1RB#0	22.51	23.00
Band2	5MHz	16QAM	18900	1RB#0	21.13	22.00
Band2	5MHz	QPSK	18900	1RB#12	22.51	23.00
Band2	5MHz	16QAM	18900	1RB#12	21.16	22.00
Band2	5MHz	QPSK	18900	1RB#24	22.54	23.00
Band2	5MHz	16QAM	18900	1RB#24	20.99	21.00
Band2	5MHz	QPSK	18900	12RB#0	21.60	22.00
Band2	5MHz	16QAM	18900	12RB#0	20.73	21.00
Band2	5MHz	QPSK	18900	12RB#6	21.61	22.00
Band2	5MHz	16QAM	18900	12RB#6	20.75	21.00
Band2	5MHz	QPSK	18900	12RB#13	21.71	22.00
Band2	5MHz	16QAM	18900	12RB#13	20.68	21.00
Band2	5MHz	QPSK	18900	25RB#0	21.68	22.00
Band2	5MHz	16QAM	18900	25RB#0	20.76	21.00
Band2	5MHz	QPSK	19175	1RB#0	22.67	23.00
Band2	5MHz	16QAM	19175	1RB#0	21.25	22.00
Band2	5MHz	QPSK	19175	1RB#12	22.69	23.00
Band2	5MHz	16QAM	19175	1RB#12	21.14	22.00
Band2	5MHz	QPSK	19175	1RB#24	22.76	23.00
Band2	5MHz	16QAM	19175	1RB#24	21.11	22.00
Band2	5MHz	QPSK	19175	12RB#0	21.69	22.00
Band2	5MHz	16QAM	19175	12RB#0	20.86	21.00
Band2	5MHz	QPSK	19175	12RB#6	21.69	22.00
Band2	5MHz	16QAM	19175	12RB#6	20.77	21.00
Band2	5MHz	QPSK	19175	12RB#13	21.80	22.00
Band2	5MHz	16QAM	19175	12RB#13	20.77	21.00
Band2	5MHz	QPSK	19175	25RB#0	21.71	22.00
Band2	5MHz	16QAM	19175	25RB#0	20.93	21.00
Band2	10MHz	QPSK	18650	1RB#0	22.47	23.00

Band2	10MHz	16QAM	18650	1RB#0	21.65	22.00
Band2	10MHz	QPSK	18650	1RB#24	22.47	23.00
Band2	10MHz	16QAM	18650	1RB#24	21.65	22.00
Band2	10MHz	QPSK	18650	1RB#49	22.52	23.00
Band2	10MHz	16QAM	18650	1RB#49	21.67	22.00
Band2	10MHz	QPSK	18650	25RB#0	21.61	22.00
Band2	10MHz	16QAM	18650	25RB#0	20.66	21.00
Band2	10MHz	QPSK	18650	25RB#12	21.51	22.00
Band2	10MHz	16QAM	18650	25RB#12	20.67	21.00
Band2	10MHz	QPSK	18650	25RB#25	21.57	22.00
Band2	10MHz	16QAM	18650	25RB#25	20.68	21.00
Band2	10MHz	QPSK	18650	50RB#0	21.70	22.00
Band2	10MHz	16QAM	18650	50RB#0	20.77	21.00
Band2	10MHz	QPSK	18900	1RB#0	22.50	23.00
Band2	10MHz	16QAM	18900	1RB#0	21.77	22.00
Band2	10MHz	QPSK	18900	1RB#24	22.43	23.00
Band2	10MHz	16QAM	18900	1RB#24	21.69	22.00
Band2	10MHz	QPSK	18900	1RB#49	22.43	23.00
Band2	10MHz	16QAM	18900	1RB#49	21.67	22.00
Band2	10MHz	QPSK	18900	25RB#0	21.65	22.00
Band2	10MHz	16QAM	18900	25RB#0	20.65	21.00
Band2	10MHz	QPSK	18900	25RB#12	21.65	22.00
Band2	10MHz	16QAM	18900	25RB#12	20.65	21.00
Band2	10MHz	QPSK	18900	25RB#25	21.53	22.00
Band2	10MHz	16QAM	18900	25RB#25	20.73	21.00
Band2	10MHz	QPSK	18900	50RB#0	21.70	22.00
Band2	10MHz	16QAM	18900	50RB#0	20.74	21.00
Band2	10MHz	QPSK	19150	1RB#0	22.55	23.00
Band2	10MHz	16QAM	19150	1RB#0	21.71	22.00
Band2	10MHz	QPSK	19150	1RB#24	22.58	23.00
Band2	10MHz	16QAM	19150	1RB#24	21.56	22.00
Band2	10MHz	QPSK	19150	1RB#49	22.62	23.00
Band2	10MHz	16QAM	19150	1RB#49	21.60	22.00
Band2	10MHz	QPSK	19150	25RB#0	21.74	22.00
Band2	10MHz	16QAM	19150	25RB#0	20.78	21.00
Band2	10MHz	QPSK	19150	25RB#12	21.73	22.00
Band2	10MHz	16QAM	19150	25RB#12	20.78	21.00
Band2	10MHz	QPSK	19150	25RB#25	21.83	22.00
Band2	10MHz	16QAM	19150	25RB#25	20.88	21.00
Band2	10MHz	QPSK	19150	50RB#0	21.79	22.00
Band2	10MHz	16QAM	19150	50RB#0	20.86	21.00
Band2	15MHz	QPSK	18675	1RB#0	22.49	23.00
Band2	15MHz	16QAM	18675	1RB#0	21.74	22.00
Band2	15MHz	QPSK	18675	1RB#38	22.51	23.00
Band2	15MHz	16QAM	18675	1RB#38	21.69	22.00
Band2	15MHz	QPSK	18675	1RB#74	22.52	23.00
Band2	15MHz	16QAM	18675	1RB#74	21.74	22.00
Band2	15MHz	QPSK	18675	38RB#0	21.80	22.00
Band2	15MHz	16QAM	18675	38RB#0	21.79	22.00
Band2	15MHz	QPSK	18675	38RB#18	21.79	22.00
Band2	15MHz	16QAM	18675	38RB#18	21.79	22.00
Band2	15MHz	QPSK	18675	38RB#37	21.79	22.00
Band2	15MHz	16QAM	18675	38RB#37	21.79	22.00
Band2	15MHz	QPSK	18675	75RB#0	21.79	22.00
Band2	15MHz	16QAM	18675	75RB#0	20.79	21.00
Band2	15MHz	QPSK	18900	1RB#0	22.53	23.00
Band2	15MHz	16QAM	18900	1RB#0	21.81	22.00
Band2	15MHz	QPSK	18900	1RB#38	22.48	23.00
Band2	15MHz	16QAM	18900	1RB#38	21.36	22.00
Band2	15MHz	QPSK	18900	1RB#74	22.52	23.00
Band2	15MHz	16QAM	18900	1RB#74	21.38	22.00
Band2	15MHz	QPSK	18900	38RB#0	21.71	22.00
Band2	15MHz	16QAM	18900	38RB#0	21.71	22.00
Band2	15MHz	QPSK	18900	38RB#18	21.71	22.00
Band2	15MHz	16QAM	18900	38RB#18	21.71	22.00

Band2	15MHz	QPSK	18900	38RB#37	21.71	22.00
Band2	15MHz	16QAM	18900	38RB#37	21.71	22.00
Band2	15MHz	QPSK	18900	75RB#0	21.71	22.00
Band2	15MHz	16QAM	18900	75RB#0	20.85	21.00
Band2	15MHz	QPSK	19125	1RB#0	22.51	23.00
Band2	15MHz	16QAM	19125	1RB#0	21.67	22.00
Band2	15MHz	QPSK	19125	1RB#38	22.60	23.00
Band2	15MHz	16QAM	19125	1RB#38	21.76	22.00
Band2	15MHz	QPSK	19125	1RB#74	22.64	23.00
Band2	15MHz	16QAM	19125	1RB#74	21.63	22.00
Band2	15MHz	QPSK	19125	38RB#0	21.62	22.00
Band2	15MHz	16QAM	19125	38RB#0	21.62	22.00
Band2	15MHz	QPSK	19125	38RB#18	21.62	22.00
Band2	15MHz	16QAM	19125	38RB#18	21.82	22.00
Band2	15MHz	QPSK	19125	38RB#37	21.82	22.00
Band2	15MHz	16QAM	19125	38RB#37	21.82	22.00
Band2	15MHz	QPSK	19125	75RB#0	21.82	22.00
Band2	15MHz	16QAM	19125	75RB#0	20.81	21.00
Band2	20MHz	QPSK	18700	1RB#0	20.68	21.00
Band2	20MHz	16QAM	18700	1RB#0	19.48	20.00
Band2	20MHz	QPSK	18700	1RB#49	20.65	21.00
Band2	20MHz	16QAM	18700	1RB#49	19.50	20.00
Band2	20MHz	QPSK	18700	1RB#99	20.74	21.00
Band2	20MHz	16QAM	18700	1RB#99	19.65	20.00
Band2	20MHz	QPSK	18700	50RB#0	19.49	20.00
Band2	20MHz	16QAM	18700	50RB#0	18.76	19.00
Band2	20MHz	QPSK	18700	50RB#25	19.50	20.00
Band2	20MHz	16QAM	18700	50RB#25	18.77	19.00
Band2	20MHz	QPSK	18700	50RB#50	19.55	20.00
Band2	20MHz	16QAM	18700	50RB#50	18.86	19.00
Band2	20MHz	QPSK	18700	100RB#0	19.70	20.00
Band2	20MHz	16QAM	18700	100RB#0	18.75	19.00
Band2	20MHz	QPSK	18900	1RB#0	20.76	21.00
Band2	20MHz	16QAM	18900	1RB#0	20.03	21.00
Band2	20MHz	QPSK	18900	1RB#49	21.02	22.00
Band2	20MHz	16QAM	18900	1RB#49	20.16	21.00
Band2	20MHz	QPSK	18900	1RB#99	21.21	22.00
Band2	20MHz	16QAM	18900	1RB#99	20.48	21.00
Band2	20MHz	QPSK	18900	50RB#0	19.94	20.00
Band2	20MHz	16QAM	18900	50RB#0	19.24	20.00
Band2	20MHz	QPSK	18900	50RB#25	20.06	21.00
Band2	20MHz	16QAM	18900	50RB#25	19.19	20.00
Band2	20MHz	QPSK	18900	50RB#50	20.26	21.00
Band2	20MHz	16QAM	18900	50RB#50	19.39	20.00
Band2	20MHz	QPSK	18900	100RB#0	20.05	21.00
Band2	20MHz	16QAM	18900	100RB#0	19.26	20.00
Band2	20MHz	QPSK	19100	1RB#0	22.58	23.00
Band2	20MHz	16QAM	19100	1RB#0	21.74	22.00
Band2	20MHz	QPSK	19100	1RB#49	22.65	23.00
Band2	20MHz	16QAM	19100	1RB#49	21.67	22.00
Band2	20MHz	QPSK	19100	1RB#99	22.57	23.00
Band2	20MHz	16QAM	19100	1RB#99	21.84	22.00
Band2	20MHz	QPSK	19100	50RB#0	21.67	22.00
Band2	20MHz	16QAM	19100	50RB#0	20.89	21.00
Band2	20MHz	QPSK	19100	50RB#25	21.68	22.00
Band2	20MHz	16QAM	19100	50RB#25	20.79	21.00
Band2	20MHz	QPSK	19100	50RB#50	21.68	22.00
Band2	20MHz	16QAM	19100	50RB#50	20.88	21.00
Band2	20MHz	QPSK	19100	100RB#0	21.73	22.00
Band2	20MHz	16QAM	19100	100RB#0	20.74	21.00

7.1.6. Conducted Power Measurement Results(LTE Band 4)

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Tune Up (dBm)
Band4	1.4MHz	QPSK	19957	1RB#0	20.72	21.00
Band4	1.4MHz	16QAM	19957	1RB#0	20.75	21.00
Band4	1.4MHz	QPSK	19957	1RB#2	20.70	21.00
Band4	1.4MHz	16QAM	19957	1RB#2	20.68	21.00
Band4	1.4MHz	QPSK	19957	1RB#5	20.67	21.00
Band4	1.4MHz	16QAM	19957	1RB#5	20.66	21.00
Band4	1.4MHz	QPSK	19957	3RB#0	20.66	21.00
Band4	1.4MHz	16QAM	19957	3RB#0	20.67	21.00
Band4	1.4MHz	QPSK	19957	3RB#1	20.82	21.00
Band4	1.4MHz	16QAM	19957	3RB#1	20.70	21.00
Band4	1.4MHz	QPSK	19957	3RB#3	20.70	21.00
Band4	1.4MHz	16QAM	19957	3RB#3	20.83	21.00
Band4	1.4MHz	QPSK	19957	6RB#0	20.68	21.00
Band4	1.4MHz	16QAM	19957	6RB#0	20.69	21.00
Band4	1.4MHz	QPSK	20175	1RB#0	21.33	22.00
Band4	1.4MHz	16QAM	20175	1RB#0	19.92	20.00
Band4	1.4MHz	QPSK	20175	1RB#2	21.17	22.00
Band4	1.4MHz	16QAM	20175	1RB#2	19.90	20.00
Band4	1.4MHz	QPSK	20175	1RB#5	21.29	22.00
Band4	1.4MHz	16QAM	20175	1RB#5	20.51	21.00
Band4	1.4MHz	QPSK	20175	3RB#0	21.31	22.00
Band4	1.4MHz	16QAM	20175	3RB#0	20.63	21.00
Band4	1.4MHz	QPSK	20175	3RB#1	21.31	22.00
Band4	1.4MHz	16QAM	20175	3RB#1	20.63	21.00
Band4	1.4MHz	QPSK	20175	3RB#3	21.28	22.00
Band4	1.4MHz	16QAM	20175	3RB#3	20.21	21.00
Band4	1.4MHz	QPSK	20175	6RB#0	20.39	21.00
Band4	1.4MHz	16QAM	20175	6RB#0	19.73	20.00
Band4	1.4MHz	QPSK	20393	1RB#0	21.76	22.00
Band4	1.4MHz	16QAM	20393	1RB#0	21.12	22.00
Band4	1.4MHz	QPSK	20393	1RB#2	21.89	22.00
Band4	1.4MHz	16QAM	20393	1RB#2	21.33	22.00
Band4	1.4MHz	QPSK	20393	1RB#5	21.79	22.00
Band4	1.4MHz	16QAM	20393	1RB#5	21.31	22.00
Band4	1.4MHz	QPSK	20393	3RB#0	22.04	23.00
Band4	1.4MHz	16QAM	20393	3RB#0	20.84	21.00
Band4	1.4MHz	QPSK	20393	3RB#1	21.91	22.00
Band4	1.4MHz	16QAM	20393	3RB#1	20.70	21.00
Band4	1.4MHz	QPSK	20393	3RB#3	21.97	22.00
Band4	1.4MHz	16QAM	20393	3RB#3	20.76	21.00
Band4	1.4MHz	QPSK	20393	6RB#0	21.06	22.00
Band4	1.4MHz	16QAM	20393	6RB#0	20.10	21.00
Band4	3MHz	QPSK	19965	1RB#0	21.97	22.00
Band4	3MHz	16QAM	19965	1RB#0	21.10	22.00
Band4	3MHz	QPSK	19965	1RB#8	21.96	22.00
Band4	3MHz	16QAM	19965	1RB#8	21.05	22.00
Band4	3MHz	QPSK	19965	1RB#14	21.92	22.00
Band4	3MHz	16QAM	19965	1RB#14	21.02	22.00
Band4	3MHz	QPSK	19965	8RB#0	21.20	22.00
Band4	3MHz	16QAM	19965	8RB#0	20.46	21.00
Band4	3MHz	QPSK	19965	8RB#4	21.21	22.00
Band4	3MHz	16QAM	19965	8RB#4	20.46	21.00
Band4	3MHz	QPSK	19965	8RB#7	21.21	22.00
Band4	3MHz	16QAM	19965	8RB#7	20.56	21.00
Band4	3MHz	QPSK	19965	15RB#0	21.11	22.00
Band4	3MHz	16QAM	19965	15RB#0	20.36	21.00
Band4	3MHz	QPSK	20175	1RB#0	22.15	23.00
Band4	3MHz	16QAM	20175	1RB#0	21.20	22.00
Band4	3MHz	QPSK	20175	1RB#8	22.15	23.00
Band4	3MHz	16QAM	20175	1RB#8	21.16	22.00
Band4	3MHz	QPSK	20175	1RB#14	22.29	23.00
Band4	3MHz	16QAM	20175	1RB#14	21.23	22.00

Band4	3MHz	QPSK	20175	8RB#0	21.27	22.00
Band4	3MHz	16QAM	20175	8RB#0	20.53	21.00
Band4	3MHz	QPSK	20175	8RB#4	21.26	22.00
Band4	3MHz	16QAM	20175	8RB#4	20.61	21.00
Band4	3MHz	QPSK	20175	8RB#7	21.24	22.00
Band4	3MHz	16QAM	20175	8RB#7	20.56	21.00
Band4	3MHz	QPSK	20175	15RB#0	21.25	22.00
Band4	3MHz	16QAM	20175	15RB#0	20.31	21.00
Band4	3MHz	QPSK	20385	1RB#0	22.31	23.00
Band4	3MHz	16QAM	20385	1RB#0	21.60	22.00
Band4	3MHz	QPSK	20385	1RB#8	22.31	23.00
Band4	3MHz	16QAM	20385	1RB#8	21.80	22.00
Band4	3MHz	QPSK	20385	1RB#14	22.34	23.00
Band4	3MHz	16QAM	20385	1RB#14	21.82	22.00
Band4	3MHz	QPSK	20385	8RB#0	21.49	22.00
Band4	3MHz	16QAM	20385	8RB#0	20.84	21.00
Band4	3MHz	QPSK	20385	8RB#4	21.50	22.00
Band4	3MHz	16QAM	20385	8RB#4	20.59	21.00
Band4	3MHz	QPSK	20385	8RB#7	21.52	22.00
Band4	3MHz	16QAM	20385	8RB#7	20.77	21.00
Band4	3MHz	QPSK	20385	15RB#0	21.48	22.00
Band4	3MHz	16QAM	20385	15RB#0	20.68	21.00
Band4	5MHz	QPSK	19975	1RB#0	22.00	23.00
Band4	5MHz	16QAM	19975	1RB#0	20.74	21.00
Band4	5MHz	QPSK	19975	1RB#12	21.99	22.00
Band4	5MHz	16QAM	19975	1RB#12	20.75	21.00
Band4	5MHz	QPSK	19975	1RB#24	21.95	22.00
Band4	5MHz	16QAM	19975	1RB#24	20.61	21.00
Band4	5MHz	QPSK	19975	12RB#0	21.18	22.00
Band4	5MHz	16QAM	19975	12RB#0	20.33	21.00
Band4	5MHz	QPSK	19975	12RB#6	21.18	22.00
Band4	5MHz	16QAM	19975	12RB#6	20.34	21.00
Band4	5MHz	QPSK	19975	12RB#13	21.15	22.00
Band4	5MHz	16QAM	19975	12RB#13	20.25	21.00
Band4	5MHz	QPSK	19975	25RB#0	21.14	22.00
Band4	5MHz	16QAM	19975	25RB#0	20.42	21.00
Band4	5MHz	QPSK	20175	1RB#0	21.93	22.00
Band4	5MHz	16QAM	20175	1RB#0	21.42	22.00
Band4	5MHz	QPSK	20175	1RB#12	22.01	23.00
Band4	5MHz	16QAM	20175	1RB#12	21.15	22.00
Band4	5MHz	QPSK	20175	1RB#24	22.20	23.00
Band4	5MHz	16QAM	20175	1RB#24	21.15	22.00
Band4	5MHz	QPSK	20175	12RB#0	21.31	22.00
Band4	5MHz	16QAM	20175	12RB#0	20.42	21.00
Band4	5MHz	QPSK	20175	12RB#6	21.20	22.00
Band4	5MHz	16QAM	20175	12RB#6	20.50	21.00
Band4	5MHz	QPSK	20175	12RB#13	21.18	22.00
Band4	5MHz	16QAM	20175	12RB#13	20.56	21.00
Band4	5MHz	QPSK	20175	25RB#0	21.24	22.00
Band4	5MHz	16QAM	20175	25RB#0	20.29	21.00
Band4	5MHz	QPSK	20375	1RB#0	22.37	23.00
Band4	5MHz	16QAM	20375	1RB#0	21.13	22.00
Band4	5MHz	QPSK	20375	1RB#12	22.38	23.00
Band4	5MHz	16QAM	20375	1RB#12	21.11	22.00
Band4	5MHz	QPSK	20375	1RB#24	22.37	23.00
Band4	5MHz	16QAM	20375	1RB#24	21.13	22.00
Band4	5MHz	QPSK	20375	12RB#0	21.53	22.00
Band4	5MHz	16QAM	20375	12RB#0	20.59	21.00
Band4	5MHz	QPSK	20375	12RB#6	21.55	22.00
Band4	5MHz	16QAM	20375	12RB#6	20.55	21.00
Band4	5MHz	QPSK	20375	12RB#13	21.62	22.00
Band4	5MHz	16QAM	20375	12RB#13	20.59	21.00
Band4	5MHz	QPSK	20375	25RB#0	21.43	22.00
Band4	5MHz	16QAM	20375	25RB#0	20.69	21.00
Band4	10MHz	QPSK	20000	1RB#0	21.88	22.00

Band4	10MHz	16QAM	20000	1RB#0	21.17	22.00
Band4	10MHz	QPSK	20000	1RB#24	21.81	22.00
Band4	10MHz	16QAM	20000	1RB#24	21.10	22.00
Band4	10MHz	QPSK	20000	1RB#49	21.78	22.00
Band4	10MHz	16QAM	20000	1RB#49	20.99	21.00
Band4	10MHz	QPSK	20000	25RB#0	21.19	22.00
Band4	10MHz	16QAM	20000	25RB#0	20.20	21.00
Band4	10MHz	QPSK	20000	25RB#12	21.12	22.00
Band4	10MHz	16QAM	20000	25RB#12	20.20	21.00
Band4	10MHz	QPSK	20000	25RB#25	21.01	22.00
Band4	10MHz	16QAM	20000	25RB#25	20.19	21.00
Band4	10MHz	QPSK	20000	50RB#0	21.07	22.00
Band4	10MHz	16QAM	20000	50RB#0	20.28	21.00
Band4	10MHz	QPSK	20175	1RB#0	21.95	22.00
Band4	10MHz	16QAM	20175	1RB#0	21.06	22.00
Band4	10MHz	QPSK	20175	1RB#24	22.05	23.00
Band4	10MHz	16QAM	20175	1RB#24	21.26	22.00
Band4	10MHz	QPSK	20175	1RB#49	22.14	23.00
Band4	10MHz	16QAM	20175	1RB#49	21.27	22.00
Band4	10MHz	QPSK	20175	25RB#0	21.15	22.00
Band4	10MHz	16QAM	20175	25RB#0	20.45	21.00
Band4	10MHz	QPSK	20175	25RB#12	21.25	22.00
Band4	10MHz	16QAM	20175	25RB#12	20.46	21.00
Band4	10MHz	QPSK	20175	25RB#25	21.27	22.00
Band4	10MHz	16QAM	20175	25RB#25	20.52	21.00
Band4	10MHz	QPSK	20175	50RB#0	21.22	22.00
Band4	10MHz	16QAM	20175	50RB#0	20.49	21.00
Band4	10MHz	QPSK	20350	1RB#0	22.15	23.00
Band4	10MHz	16QAM	20350	1RB#0	21.98	22.00
Band4	10MHz	QPSK	20350	1RB#24	22.18	23.00
Band4	10MHz	16QAM	20350	1RB#24	21.67	22.00
Band4	10MHz	QPSK	20350	1RB#49	22.35	23.00
Band4	10MHz	16QAM	20350	1RB#49	21.72	22.00
Band4	10MHz	QPSK	20350	25RB#0	21.45	22.00
Band4	10MHz	16QAM	20350	25RB#0	20.73	21.00
Band4	10MHz	QPSK	20350	25RB#12	21.46	22.00
Band4	10MHz	16QAM	20350	25RB#12	20.64	21.00
Band4	10MHz	QPSK	20350	25RB#25	21.47	22.00
Band4	10MHz	16QAM	20350	25RB#25	20.62	21.00
Band4	10MHz	QPSK	20350	50RB#0	21.47	22.00
Band4	10MHz	16QAM	20350	50RB#0	20.75	21.00
Band4	15MHz	QPSK	20025	1RB#0	21.89	22.00
Band4	15MHz	16QAM	20025	1RB#0	21.17	22.00
Band4	15MHz	QPSK	20025	1RB#38	21.80	22.00
Band4	15MHz	16QAM	20025	1RB#38	21.10	22.00
Band4	15MHz	QPSK	20025	1RB#74	21.75	22.00
Band4	15MHz	16QAM	20025	1RB#74	21.08	22.00
Band4	15MHz	QPSK	20025	38RB#0	21.13	22.00
Band4	15MHz	16QAM	20025	38RB#0	21.13	22.00
Band4	15MHz	QPSK	20025	38RB#18	21.13	22.00
Band4	15MHz	16QAM	20025	38RB#18	21.13	22.00
Band4	15MHz	QPSK	20025	38RB#37	21.12	22.00
Band4	15MHz	16QAM	20025	38RB#37	21.12	22.00
Band4	15MHz	QPSK	20025	75RB#0	21.12	22.00
Band4	15MHz	16QAM	20025	75RB#0	20.25	21.00
Band4	15MHz	QPSK	20175	1RB#0	21.49	22.00
Band4	15MHz	16QAM	20175	1RB#0	20.93	21.00
Band4	15MHz	QPSK	20175	1RB#38	21.59	22.00
Band4	15MHz	16QAM	20175	1RB#38	21.41	22.00
Band4	15MHz	QPSK	20175	1RB#74	22.34	23.00
Band4	15MHz	16QAM	20175	1RB#74	21.45	22.00
Band4	15MHz	QPSK	20175	38RB#0	21.20	22.00
Band4	15MHz	16QAM	20175	38RB#0	21.29	22.00
Band4	15MHz	QPSK	20175	38RB#18	21.29	22.00
Band4	15MHz	16QAM	20175	38RB#18	21.29	22.00

Band4	15MHz	QPSK	20175	38RB#37	21.28	22.00
Band4	15MHz	16QAM	20175	38RB#37	21.28	22.00
Band4	15MHz	QPSK	20175	75RB#0	21.28	22.00
Band4	15MHz	16QAM	20175	75RB#0	20.46	21.00
Band4	15MHz	QPSK	20325	1RB#0	22.03	23.00
Band4	15MHz	16QAM	20325	1RB#0	21.72	22.00
Band4	15MHz	QPSK	20325	1RB#38	22.15	23.00
Band4	15MHz	16QAM	20325	1RB#38	21.83	22.00
Band4	15MHz	QPSK	20325	1RB#74	22.28	23.00
Band4	15MHz	16QAM	20325	1RB#74	21.80	22.00
Band4	15MHz	QPSK	20325	38RB#0	21.44	22.00
Band4	15MHz	16QAM	20325	38RB#0	21.44	22.00
Band4	15MHz	QPSK	20325	38RB#18	21.45	22.00
Band4	15MHz	16QAM	20325	38RB#18	21.45	22.00
Band4	15MHz	QPSK	20325	38RB#37	21.45	22.00
Band4	15MHz	16QAM	20325	38RB#37	21.45	22.00
Band4	15MHz	QPSK	20325	75RB#0	21.46	22.00
Band4	15MHz	16QAM	20325	75RB#0	20.71	21.00
Band4	20MHz	QPSK	20050	1RB#0	21.88	22.00
Band4	20MHz	16QAM	20050	1RB#0	20.90	21.00
Band4	20MHz	QPSK	20050	1RB#49	21.80	22.00
Band4	20MHz	16QAM	20050	1RB#49	20.81	21.00
Band4	20MHz	QPSK	20050	1RB#99	21.83	22.00
Band4	20MHz	16QAM	20050	1RB#99	20.87	21.00
Band4	20MHz	QPSK	20050	50RB#0	21.12	22.00
Band4	20MHz	16QAM	20050	50RB#0	20.40	21.00
Band4	20MHz	QPSK	20050	50RB#25	21.14	22.00
Band4	20MHz	16QAM	20050	50RB#25	20.41	21.00
Band4	20MHz	QPSK	20050	50RB#50	21.02	22.00
Band4	20MHz	16QAM	20050	50RB#50	20.32	21.00
Band4	20MHz	QPSK	20050	100RB#0	21.13	22.00
Band4	20MHz	16QAM	20050	100RB#0	20.31	21.00
Band4	20MHz	QPSK	20175	1RB#0	21.97	22.00
Band4	20MHz	16QAM	20175	1RB#0	21.70	22.00
Band4	20MHz	QPSK	20175	1RB#49	22.05	23.00
Band4	20MHz	16QAM	20175	1RB#49	21.83	22.00
Band4	20MHz	QPSK	20175	1RB#99	22.30	23.00
Band4	20MHz	16QAM	20175	1RB#99	22.05	23.00
Band4	20MHz	QPSK	20175	50RB#0	21.17	22.00
Band4	20MHz	16QAM	20175	50RB#0	20.36	21.00
Band4	20MHz	QPSK	20175	50RB#25	21.23	22.00
Band4	20MHz	16QAM	20175	50RB#25	20.35	21.00
Band4	20MHz	QPSK	20175	50RB#50	21.35	22.00
Band4	20MHz	16QAM	20175	50RB#50	20.58	21.00
Band4	20MHz	QPSK	20175	100RB#0	21.23	22.00
Band4	20MHz	16QAM	20175	100RB#0	20.53	21.00
Band4	20MHz	QPSK	20300	1RB#0	22.23	23.00
Band4	20MHz	16QAM	20300	1RB#0	20.91	21.00
Band4	20MHz	QPSK	20300	1RB#49	22.37	23.00
Band4	20MHz	16QAM	20300	1RB#49	21.14	22.00
Band4	20MHz	QPSK	20300	1RB#99	22.50	23.00
Band4	20MHz	16QAM	20300	1RB#99	21.14	22.00
Band4	20MHz	QPSK	20300	50RB#0	21.38	22.00
Band4	20MHz	16QAM	20300	50RB#0	20.66	21.00
Band4	20MHz	QPSK	20300	50RB#25	21.37	22.00
Band4	20MHz	16QAM	20300	50RB#25	20.66	21.00
Band4	20MHz	QPSK	20300	50RB#50	21.53	22.00
Band4	20MHz	16QAM	20300	50RB#50	20.72	21.00
Band4	20MHz	QPSK	20300	100RB#0	21.48	22.00
Band4	20MHz	16QAM	20300	100RB#0	20.69	21.00

7.1.7. Conducted Power Measurement Results(LTE Band 5)

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Tune Up (dBm)
Band5	1.4MHz	QPSK	20407	1RB#0	23.57	24.00
Band5	1.4MHz	16QAM	20407	1RB#0	23.58	24.00
Band5	1.4MHz	QPSK	20407	1RB#2	23.55	24.00
Band5	1.4MHz	16QAM	20407	1RB#2	23.53	24.00
Band5	1.4MHz	QPSK	20407	1RB#5	23.51	24.00
Band5	1.4MHz	16QAM	20407	1RB#5	23.81	24.00
Band5	1.4MHz	QPSK	20407	3RB#0	23.74	24.00
Band5	1.4MHz	16QAM	20407	3RB#0	23.79	24.00
Band5	1.4MHz	QPSK	20407	3RB#1	23.79	24.00
Band5	1.4MHz	16QAM	20407	3RB#1	23.79	24.00
Band5	1.4MHz	QPSK	20407	3RB#3	23.63	24.00
Band5	1.4MHz	16QAM	20407	3RB#3	23.63	24.00
Band5	1.4MHz	QPSK	20407	6RB#0	23.63	24.00
Band5	1.4MHz	16QAM	20407	6RB#0	23.63	24.00
Band5	1.4MHz	QPSK	20525	1RB#0	23.48	24.00
Band5	1.4MHz	16QAM	20525	1RB#0	23.46	24.00
Band5	1.4MHz	QPSK	20525	1RB#2	23.49	24.00
Band5	1.4MHz	16QAM	20525	1RB#2	24.06	25.00
Band5	1.4MHz	QPSK	20525	1RB#5	23.52	24.00
Band5	1.4MHz	16QAM	20525	1RB#5	24.06	25.00
Band5	1.4MHz	QPSK	20525	3RB#0	23.73	24.00
Band5	1.4MHz	16QAM	20525	3RB#0	22.71	23.00
Band5	1.4MHz	QPSK	20525	3RB#1	23.75	24.00
Band5	1.4MHz	16QAM	20525	3RB#1	22.69	23.00
Band5	1.4MHz	QPSK	20525	3RB#3	23.66	24.00
Band5	1.4MHz	16QAM	20525	3RB#3	22.65	23.00
Band5	1.4MHz	QPSK	20525	6RB#0	22.71	23.00
Band5	1.4MHz	16QAM	20525	6RB#0	22.43	23.00
Band5	1.4MHz	QPSK	20643	1RB#0	23.21	24.00
Band5	1.4MHz	16QAM	20643	1RB#0	23.13	24.00
Band5	1.4MHz	QPSK	20643	1RB#2	23.09	24.00
Band5	1.4MHz	16QAM	20643	1RB#2	22.75	23.00
Band5	1.4MHz	QPSK	20643	1RB#5	22.19	23.00
Band5	1.4MHz	16QAM	20643	1RB#5	22.01	23.00
Band5	1.4MHz	QPSK	20643	3RB#0	23.29	24.00
Band5	1.4MHz	16QAM	20643	3RB#0	22.79	23.00
Band5	1.4MHz	QPSK	20643	3RB#1	23.27	24.00
Band5	1.4MHz	16QAM	20643	3RB#1	22.90	23.00
Band5	1.4MHz	QPSK	20643	3RB#3	22.53	23.00
Band5	1.4MHz	16QAM	20643	3RB#3	22.36	23.00
Band5	1.4MHz	QPSK	20643	6RB#0	22.71	23.00
Band5	1.4MHz	16QAM	20643	6RB#0	22.11	23.00
Band5	3MHz	QPSK	20415	1RB#0	23.36	24.00
Band5	3MHz	16QAM	20415	1RB#0	22.73	23.00
Band5	3MHz	QPSK	20415	1RB#8	23.10	24.00
Band5	3MHz	16QAM	20415	1RB#8	22.59	23.00
Band5	3MHz	QPSK	20415	1RB#14	23.13	24.00
Band5	3MHz	16QAM	20415	1RB#14	22.59	23.00
Band5	3MHz	QPSK	20415	8RB#0	22.64	23.00
Band5	3MHz	16QAM	20415	8RB#0	22.12	23.00
Band5	3MHz	QPSK	20415	8RB#4	22.54	23.00
Band5	3MHz	16QAM	20415	8RB#4	22.03	23.00
Band5	3MHz	QPSK	20415	8RB#7	22.41	23.00
Band5	3MHz	16QAM	20415	8RB#7	22.13	23.00
Band5	3MHz	QPSK	20415	15RB#0	22.43	23.00
Band5	3MHz	16QAM	20415	15RB#0	21.89	22.00
Band5	3MHz	QPSK	20525	1RB#0	23.30	24.00
Band5	3MHz	16QAM	20525	1RB#0	22.06	23.00
Band5	3MHz	QPSK	20525	1RB#8	23.50	24.00
Band5	3MHz	16QAM	20525	1RB#8	22.88	23.00
Band5	3MHz	QPSK	20525	1RB#14	23.56	24.00
Band5	3MHz	16QAM	20525	1RB#14	22.99	23.00

Band5	3MHz	QPSK	20525	8RB#0	22.53	23.00
Band5	3MHz	16QAM	20525	8RB#0	22.16	23.00
Band5	3MHz	QPSK	20525	8RB#4	22.53	23.00
Band5	3MHz	16QAM	20525	8RB#4	22.07	23.00
Band5	3MHz	QPSK	20525	8RB#7	22.43	23.00
Band5	3MHz	16QAM	20525	8RB#7	22.08	23.00
Band5	3MHz	QPSK	20525	15RB#0	22.46	23.00
Band5	3MHz	16QAM	20525	15RB#0	21.72	22.00
Band5	3MHz	QPSK	20635	1RB#0	23.19	24.00
Band5	3MHz	16QAM	20635	1RB#0	23.44	24.00
Band5	3MHz	QPSK	20635	1RB#8	23.11	24.00
Band5	3MHz	16QAM	20635	1RB#8	23.28	24.00
Band5	3MHz	QPSK	20635	1RB#14	22.04	23.00
Band5	3MHz	16QAM	20635	1RB#14	21.98	22.00
Band5	3MHz	QPSK	20635	8RB#0	22.74	23.00
Band5	3MHz	16QAM	20635	8RB#0	22.05	23.00
Band5	3MHz	QPSK	20635	8RB#4	22.61	23.00
Band5	3MHz	16QAM	20635	8RB#4	22.03	23.00
Band5	3MHz	QPSK	20635	8RB#7	22.37	23.00
Band5	3MHz	16QAM	20635	8RB#7	22.00	23.00
Band5	3MHz	QPSK	20635	15RB#0	22.30	23.00
Band5	3MHz	16QAM	20635	15RB#0	21.80	22.00
Band5	5MHz	QPSK	20425	1RB#0	23.47	24.00
Band5	5MHz	16QAM	20425	1RB#0	22.38	23.00
Band5	5MHz	QPSK	20425	1RB#12	23.60	24.00
Band5	5MHz	16QAM	20425	1RB#12	22.29	23.00
Band5	5MHz	QPSK	20425	1RB#24	23.62	24.00
Band5	5MHz	16QAM	20425	1RB#24	22.31	23.00
Band5	5MHz	QPSK	20425	12RB#0	22.62	23.00
Band5	5MHz	16QAM	20425	12RB#0	22.01	23.00
Band5	5MHz	QPSK	20425	12RB#6	22.59	23.00
Band5	5MHz	16QAM	20425	12RB#6	22.05	23.00
Band5	5MHz	QPSK	20425	12RB#13	22.51	23.00
Band5	5MHz	16QAM	20425	12RB#13	22.00	23.00
Band5	5MHz	QPSK	20425	25RB#0	22.34	23.00
Band5	5MHz	16QAM	20425	25RB#0	22.25	23.00
Band5	5MHz	QPSK	20525	1RB#0	23.23	24.00
Band5	5MHz	16QAM	20525	1RB#0	23.31	24.00
Band5	5MHz	QPSK	20525	1RB#12	23.64	24.00
Band5	5MHz	16QAM	20525	1RB#12	22.83	23.00
Band5	5MHz	QPSK	20525	1RB#24	23.68	24.00
Band5	5MHz	16QAM	20525	1RB#24	22.97	23.00
Band5	5MHz	QPSK	20525	12RB#0	22.65	23.00
Band5	5MHz	16QAM	20525	12RB#0	22.07	23.00
Band5	5MHz	QPSK	20525	12RB#6	22.51	23.00
Band5	5MHz	16QAM	20525	12RB#6	22.08	23.00
Band5	5MHz	QPSK	20525	12RB#13	22.64	23.00
Band5	5MHz	16QAM	20525	12RB#13	22.34	23.00
Band5	5MHz	QPSK	20525	25RB#0	22.61	23.00
Band5	5MHz	16QAM	20525	25RB#0	21.92	22.00
Band5	5MHz	QPSK	20625	1RB#0	24.02	25.00
Band5	5MHz	16QAM	20625	1RB#0	23.12	24.00
Band5	5MHz	QPSK	20625	1RB#12	23.90	24.00
Band5	5MHz	16QAM	20625	1RB#12	23.01	24.00
Band5	5MHz	QPSK	20625	1RB#24	22.49	23.00
Band5	5MHz	16QAM	20625	1RB#24	22.30	23.00
Band5	5MHz	QPSK	20625	12RB#0	22.79	23.00
Band5	5MHz	16QAM	20625	12RB#0	22.02	23.00
Band5	5MHz	QPSK	20625	12RB#6	22.59	23.00
Band5	5MHz	16QAM	20625	12RB#6	21.84	22.00
Band5	5MHz	QPSK	20625	12RB#13	22.64	23.00
Band5	5MHz	16QAM	20625	12RB#13	21.95	22.00
Band5	5MHz	QPSK	20625	25RB#0	22.72	23.00
Band5	5MHz	16QAM	20625	25RB#0	22.24	23.00
Band5	10MHz	QPSK	20450	1RB#0	23.40	24.00

Band5	10MHz	16QAM	20450	1RB#0	22.92	23.00
Band5	10MHz	QPSK	20450	1RB#24	23.38	24.00
Band5	10MHz	16QAM	20450	1RB#24	22.88	23.00
Band5	10MHz	QPSK	20450	1RB#49	23.31	24.00
Band5	10MHz	16QAM	20450	1RB#49	22.89	23.00
Band5	10MHz	QPSK	20450	25RB#0	22.61	23.00
Band5	10MHz	16QAM	20450	25RB#0	21.99	22.00
Band5	10MHz	QPSK	20450	25RB#12	22.55	23.00
Band5	10MHz	16QAM	20450	25RB#12	21.99	22.00
Band5	10MHz	QPSK	20450	25RB#25	22.54	23.00
Band5	10MHz	16QAM	20450	25RB#25	21.86	22.00
Band5	10MHz	QPSK	20450	50RB#0	22.59	23.00
Band5	10MHz	16QAM	20450	50RB#0	21.96	22.00
Band5	10MHz	QPSK	20525	1RB#0	23.39	24.00
Band5	10MHz	16QAM	20525	1RB#0	23.04	24.00
Band5	10MHz	QPSK	20525	1RB#24	23.46	24.00
Band5	10MHz	16QAM	20525	1RB#24	23.16	24.00
Band5	10MHz	QPSK	20525	1RB#49	23.53	24.00
Band5	10MHz	16QAM	20525	1RB#49	23.03	24.00
Band5	10MHz	QPSK	20525	25RB#0	22.58	23.00
Band5	10MHz	16QAM	20525	25RB#0	22.17	23.00
Band5	10MHz	QPSK	20525	25RB#12	22.55	23.00
Band5	10MHz	16QAM	20525	25RB#12	22.12	23.00
Band5	10MHz	QPSK	20525	25RB#25	22.61	23.00
Band5	10MHz	16QAM	20525	25RB#25	22.14	23.00
Band5	10MHz	QPSK	20525	50RB#0	22.61	23.00
Band5	10MHz	16QAM	20525	50RB#0	22.08	23.00
Band5	10MHz	QPSK	20600	1RB#0	23.45	24.00
Band5	10MHz	16QAM	20600	1RB#0	23.59	24.00
Band5	10MHz	QPSK	20600	1RB#24	23.46	24.00
Band5	10MHz	16QAM	20600	1RB#24	23.53	24.00
Band5	10MHz	QPSK	20600	1RB#49	22.96	23.00
Band5	10MHz	16QAM	20600	1RB#49	22.87	23.00
Band5	10MHz	QPSK	20600	25RB#0	22.61	23.00
Band5	10MHz	16QAM	20600	25RB#0	22.24	23.00
Band5	10MHz	QPSK	20600	25RB#12	22.60	23.00
Band5	10MHz	16QAM	20600	25RB#12	22.26	23.00
Band5	10MHz	QPSK	20600	25RB#25	22.73	23.00
Band5	10MHz	16QAM	20600	25RB#25	22.29	23.00
Band5	10MHz	QPSK	20600	50RB#0	22.37	23.00
Band5	10MHz	16QAM	20600	50RB#0	22.17	23.00