

## FCC Part 22/24 Compliance Test Report

<b>Test Report no.:</b>	FCC22&24_RM-1025_13.docx	<b>Date of Report:</b>	16-Jul-2014
<b>Number of pages:</b>	24	<b>Customer's Contact person:</b>	Wang Hai Juan (kellywan)
<b>Testing laboratory:</b>	TCC Microsoft Beijing Laboratory Beijing Economic and Technological Development Area No.5 Donghuan Zhonglu Beijing PRC China 100176 Tel. +86 10 8711 8888 Fax. +86 10 8711 4550	<b>Customer:</b>	Microsoft Beijing Economic and Technological Development Area No.5 Donghuan Zhonglu Beijing PRC China 100176 Tel. +86 10 8711 8888 Fax. +86 10 8711 4550
<b>FCC listing no.:</b>	975940		
<b>IC recognition no.:</b>	661AH-1		
<b>Tested devices/ accessories:</b>	<b>Phone RM-1025 / Battery BL-4UL / AC-Charger AC-18E / Headset WH-108 / Dummy battery SD-232R</b>		
<b>FCC ID:</b>	QTLRM-1025	<b>IC:</b>	
<b>Supplement reports:</b>	-		
<b>Testing has been carried out in accordance with:</b>	CFR 47, FCC rules Parts 22/24, TIA-603-C-2004 and IC standards, RSS-GEN (Issue 3, December 2010), RSS-130 (Issue 1, October 2013), RSS-132 (Issue 2, September 2005), RSS-133 (Issue 5, February 2009). Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		
<b>Documentation:</b>	The test report must always be reproduced in full; reproduction of an excerpt only is subject to written approval of the testing laboratory. The documentation of the testing performed on the tested devices is archived for 15 years at TCC Microsoft.		
<b>Test Results:</b>	<b>The EUT complies with the requirements in respect of all parameters subject to the test.</b> The test results relate only to devices specified in this document		
<b>Date and signature for the contents:</b>			

Gao Sherina, Engineer, EMC

## 1. Summary for FCC Part 22/24 Compliance Test Report

Date of receipt	17-Jun-2014
Testing completed	04-Jul-2014
The customer's contact person	Wang Hai Juan (kellywan)
Test Plan referred to	T:\Projects\RM-1025\TestPlan\RS_testplan_RM-1025.xlsm
Notes	-
Document name	FCC22&24_RM-1025_13.docx

### 1.1. EUT and Accessory Information

The EUT is a mobile phone with following features:

GSM/WCDMA/WLAN/Bluetooth

The EUT is tested with maximum rated TX power.

Devices under tests

Product	Type	SN	HW	MV	SW	DUT
Phone	RM-1025	004402478181732	0242	-	0.1421.100	54403
Battery	BL-4UL	4955404185020121466;0670721	-	-	-	54419
AC-Charger	AC-18E	4868673505140312365;0675695	-	-	-	54410
Headset	WH-108	3223m3R	-	-	-	54414
Dummy Battery	SD-232R	50024	-	-	-	54418
Phone	RM-1025	004402478182326	0242	-	0.1421.100	54400
Battery	BL-4UL	4955404185020121497;0670721	-	-	-	54408
AC-Charger	AC-18E	4868673505140311599;0675695	-	-	-	54409
Headset	WH-108	3223m3R	-	-	-	54413

### 1.2. Summary of Test Results

#### GSM 1900:

Section in CFR 47	Section in RSS-GEN or RSS-133	Name of the test	Result
§2.1046(a)	6.4	Conducted RF output power	NP
§24.232(b)	6.4	Radiated RF output power	NP
§2.1049(h)	4.6.1	99 % occupied bandwidth	PASSED
§24.238(a)	6.5	Band edge compliance	PASSED
§24.238(a), §2.1051	6.5	Spurious emissions at antenna terminals	NP
§24.238(a), §2.1053	6.5	Spurious radiated emissions	PASSED
§2.1055(a)	6.3	Frequency stability, temperature variation	PASSED
§2.1055(d)	6.3	Frequency stability, voltage variation	PASSED

#### GSM 850:

Section in CFR 47	Section in RSS-GEN or RSS-132	Name of the test	Result
§2.1046(a), 22.913(a)	4.4	Conducted RF output power	NP
§22.913(a)	4.4	Radiated RF output power	NP
§2.1049(h)	4.6.1	99 % occupied bandwidth	PASSED
§22.917(a)	4.5	Band edge compliance	PASSED
§22.917(a), §2.1051	4.5	Spurious emissions at antenna terminals	NP
§22.917(a), §2.1053	4.5	Spurious radiated emissions	PASSED
§2.1055(a)	4.3	Frequency stability, temperature variation	PASSED
§2.1055(d)	4.3	Frequency stability, voltage variation	PASSED

**WCDMA 1900:**

Section in CFR 47	Section in RSS-GEN or RSS-133	Name of the test	Result
§2.1046(a)	6.4	Conducted RF output power	NP
§24.232(b)	6.4	Radiated RF output power	NP
§2.1049(h)	4.6.1	99 % occupied bandwidth	PASSED
§24.238(a)	6.5	Band edge compliance	PASSED
§24.238(a), §2.1051	6.5	Spurious emissions at antenna terminals	NP
§24.238(a), §2.1053	6.5	Spurious radiated emissions	PASSED
§2.1055(a)	6.3	Frequency stability, temperature variation	NP
§2.1055(d)	6.3	Frequency stability, voltage variation	NP

**WCDMA 850:**

Section in CFR 47	Section in RSS-GEN or RSS-132	Name of the test	Result
§2.1046(a), 22.913(a)	4.4	Conducted RF output power	NP
§22.913(a)	4.4	Radiated RF output power	NP
§2.1049(h)	4.6.1	99 % occupied bandwidth	PASSED
§22.917(a)	4.5	Band edge compliance	PASSED
§22.917(a), §2.1051	4.5	Spurious emissions at antenna terminals	NP
§22.917(a), §2.1053	4.5	Spurious radiated emissions	PASSED
§2.1055(a)	4.3	Frequency stability, temperature variation	NP
§2.1055(d)	4.3	Frequency stability, voltage variation	NP

PASSED  
 FAILED  
 NP

The EUT complies with the essential requirements in the standard.  
 The EUT does not comply with the essential requirements in the standard.  
 The test was not performed by the TCC Microsoft Laboratory.

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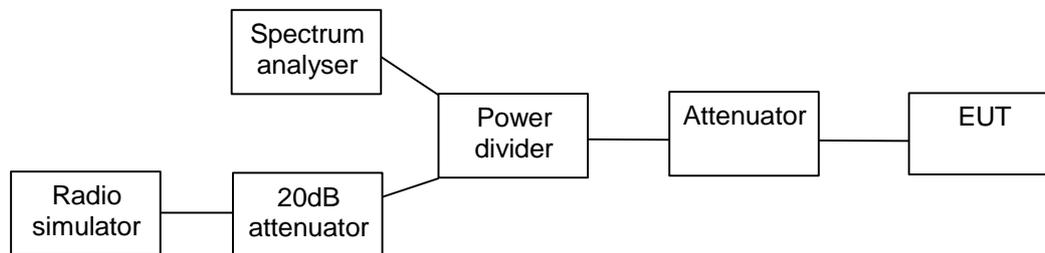
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**2. 99 % occupied bandwidth**  
(FCC §2.1049(h), RSS-133 4.6.1, RSS-132 4.6.1)

<b>EUT with DUT number</b>	RM-1025, DUT 54403
<b>Accessories with DUT numbers</b>	BL-4UL, DUT 54419 ; AC-18E, DUT 54410 ; WH-108, DUT 54414
<b>Operation Voltage [V] / [Hz]</b>	Nominal
<b>Results</b>	PASSED
<b>Remarks</b>	-
<b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b>	23/58/100.1
<b>Date of measurements</b>	25-Jun-2014
<b>Measured by</b>	Dou Rubo

**2.1. Test Setup**



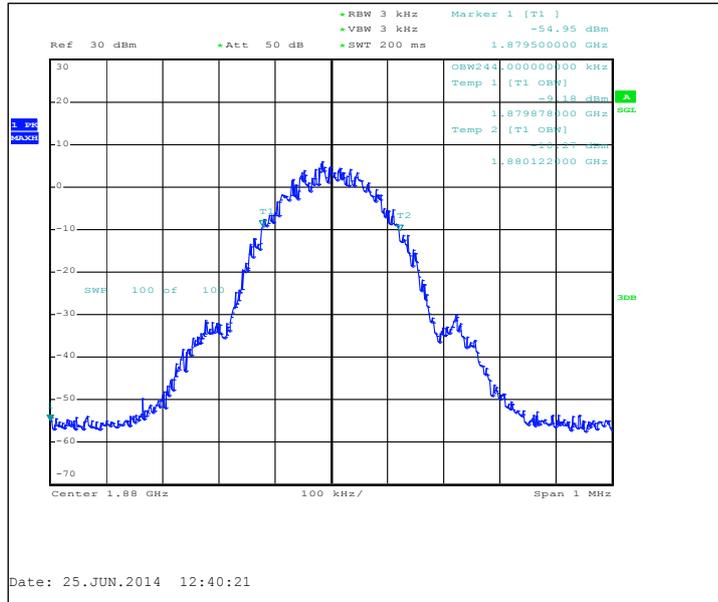
**2.2. Test method and limit**

The measurement is made according to applicable FCC rule parts and IC standards.

### 2.3. GSM 1900 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
GSM	244

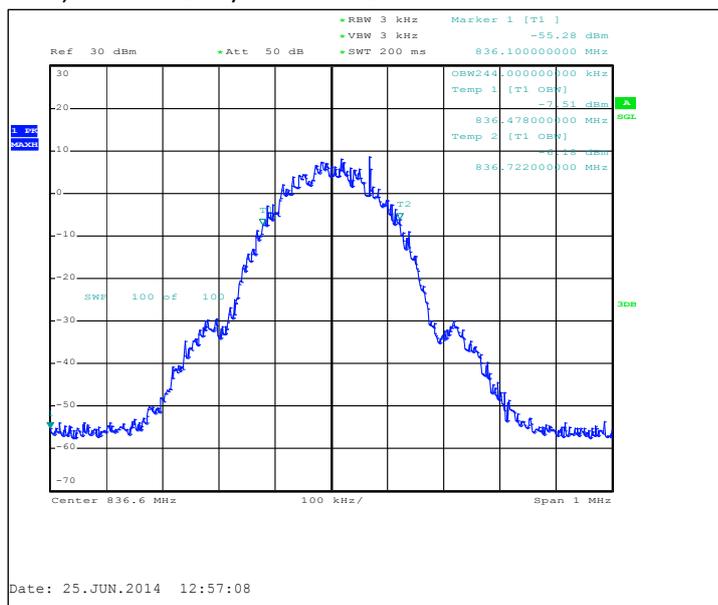
GSM, Channel 661 / 1880.0 MHz



### 2.4. GSM 850 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
GSM	244

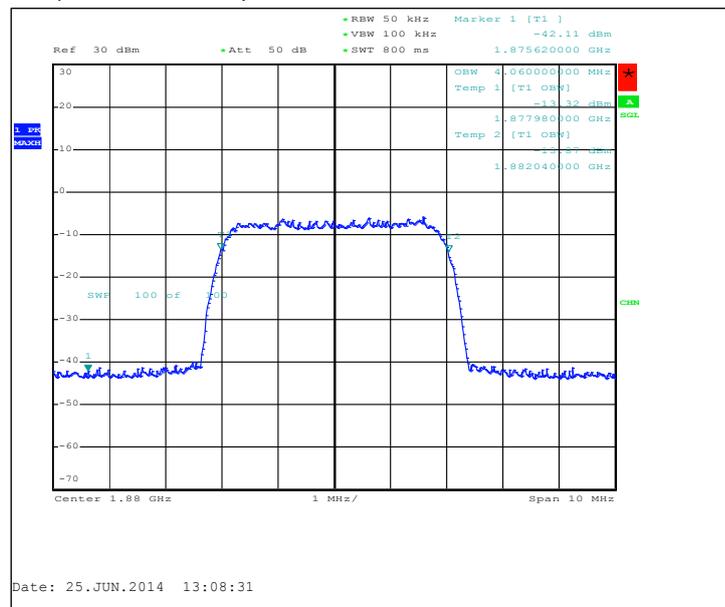
GSM, Channel 190 / 836.6 MHz



## 2.5. WCDMA 1900 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD	4060

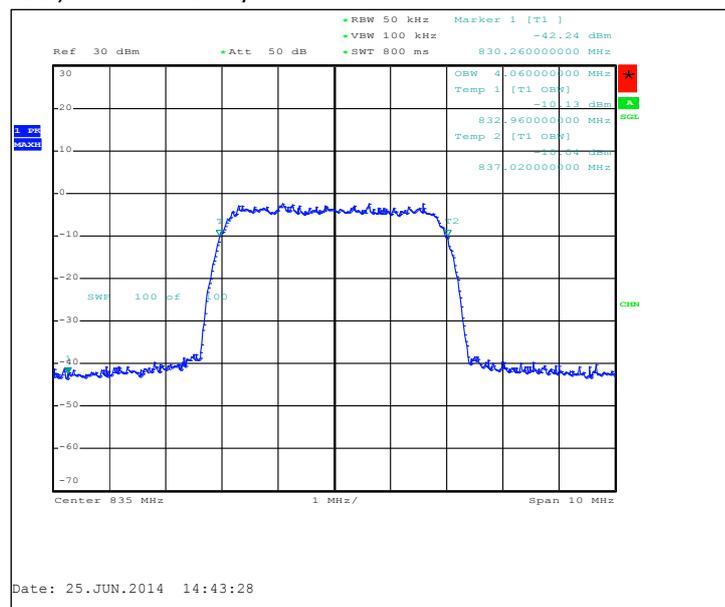
FDD, Channel 9400 / 1880.0 MHz



## 2.6. WCDMA 850 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD	4060

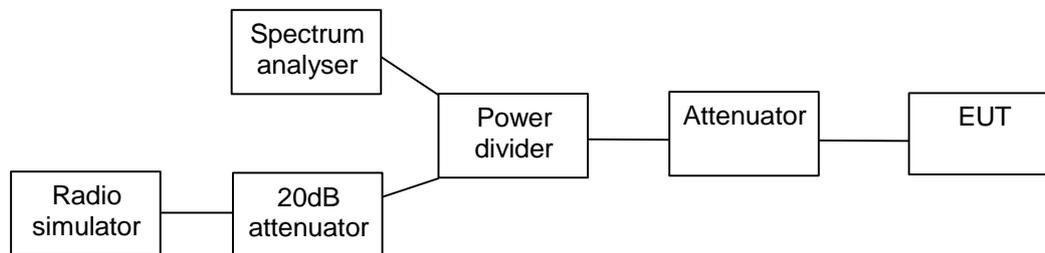
FDD, Channel 4175 / 835.0 MHz



### 3. Band edge compliance (FCC §24.238(a), §22.917(a), RSS-133 6.5, RSS-132 4.5)

<b>EUT with DUT number</b>	RM-1025, DUT 54403
<b>Accessories with DUT numbers</b>	BL-4UL, DUT 54419 ; AC-18E, DUT 54410 ; WH-108, DUT 54414
<b>Operation Voltage [V] / [Hz]</b>	Nominal
<b>Results</b>	PASSED
<b>Remarks</b>	-
<b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b>	23/58/100.1
<b>Date of measurements</b>	25-Jun-2014
<b>Measured by</b>	Dou Rubo

#### 3.1. Test Setup



#### 3.2. Test method and limit

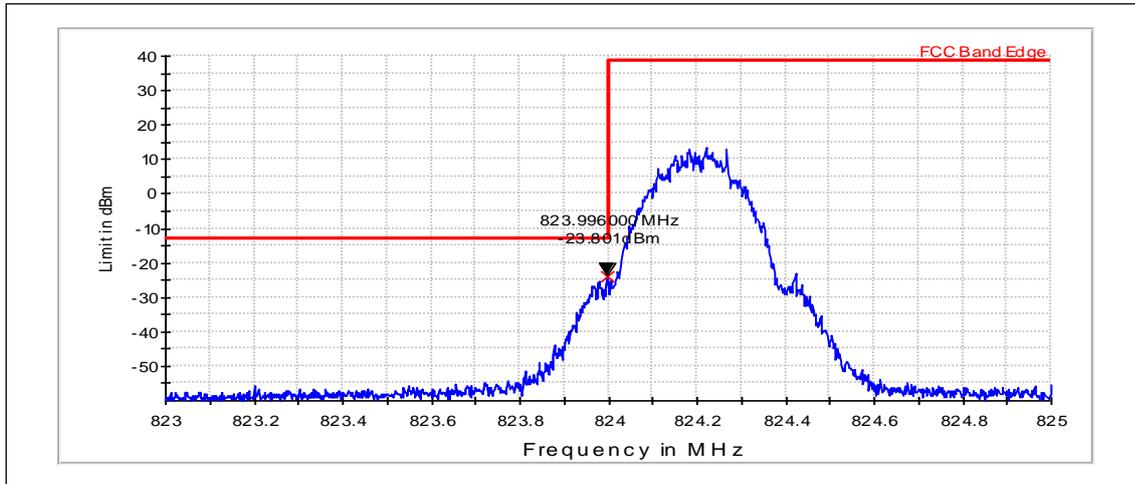
The measurement is made according to applicable FCC rule parts and IC standards.

Limits for band edge compliance measurements

Operation band	Frequency range [MHz]	Limit [dBm]
GSM 1900	Below 1850 and above 1910	-13
GSM 850	Below 824 and above 849	-13
WCDMA 1900	Below 1850 and above 1910	-13
WCDMA 850	Below 824 and above 849	-13

### 3.3. GSM 850 Test results

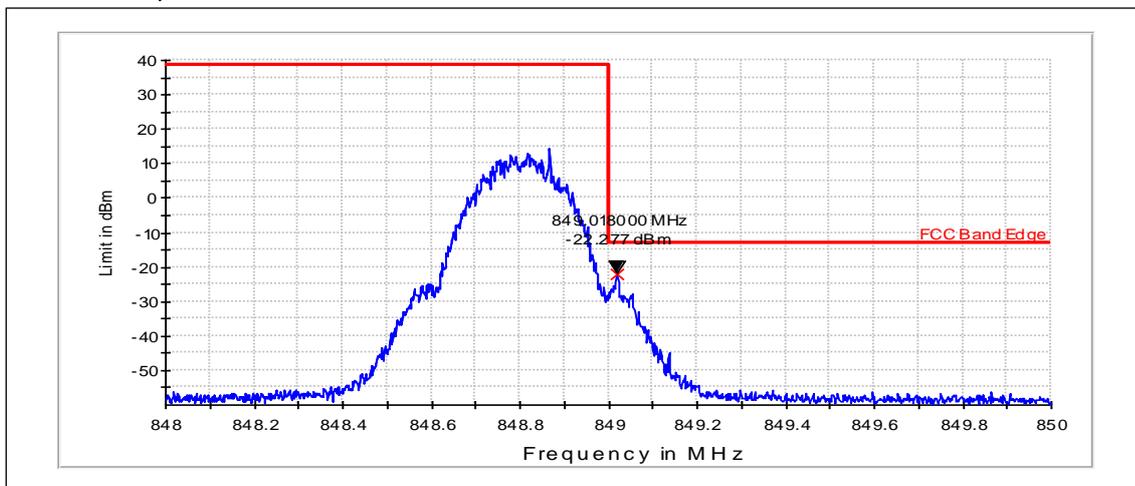
Channel 128 / 824.2 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
GSM	823.996	-23.80	PASSED

Channel 251 / 848.8 MHz

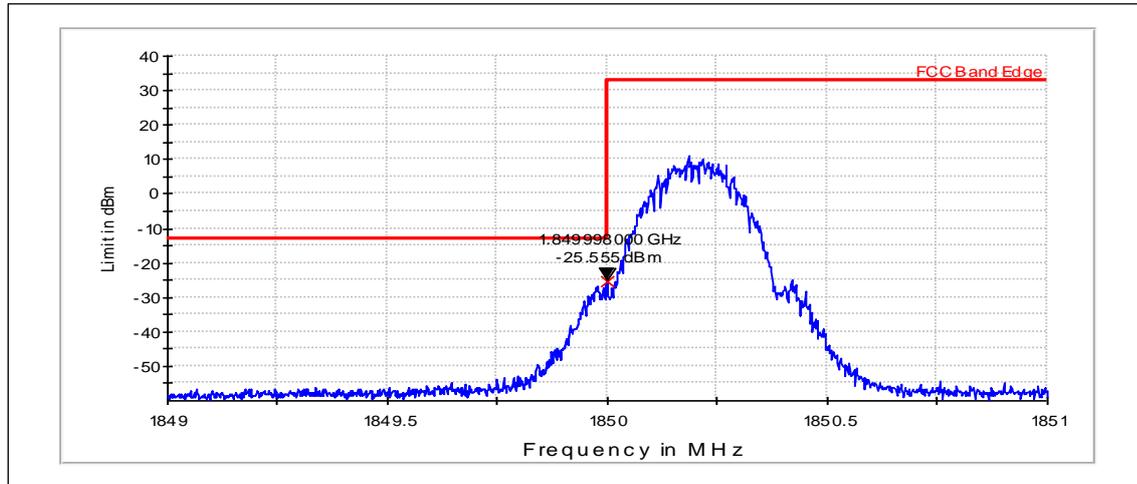


RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
GSM	849.018	-22.28	PASSED

### 3.4. GSM 1900 Test results

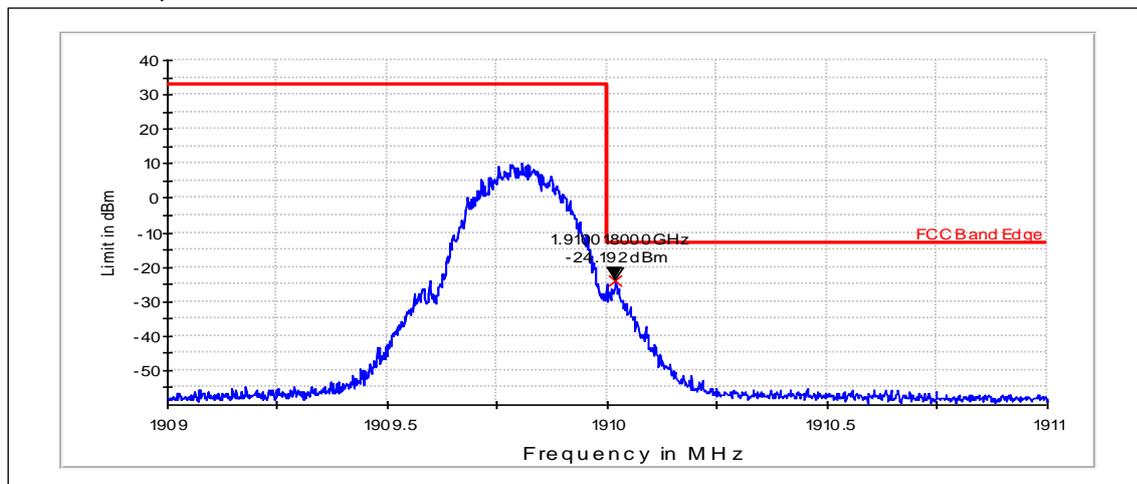
Channel 512 / 1850.2 MHz



RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
GSM	1849.998	-25.55	PASSED

Channel 810 / 1909.8 MHz

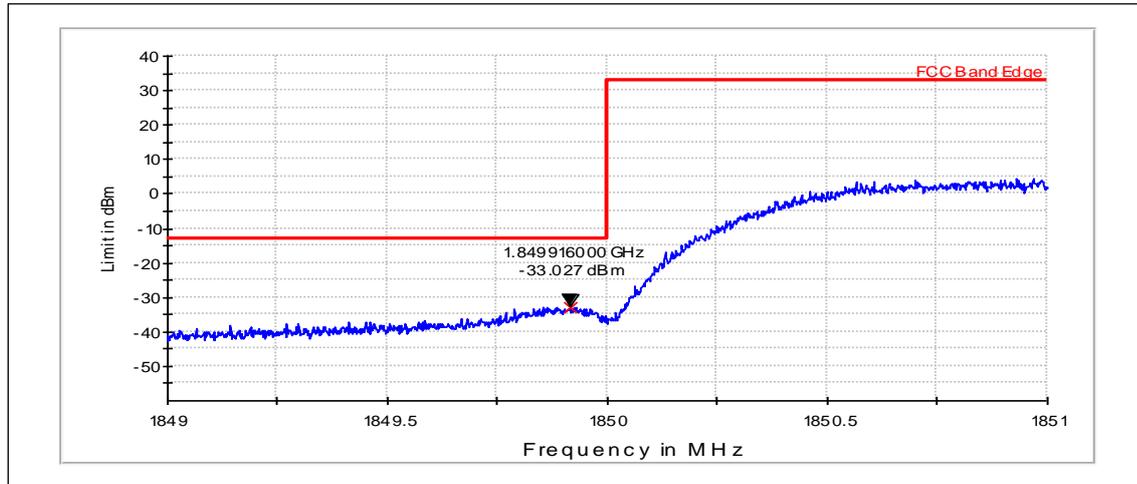


RMS (RBW: 3 kHz, VBW: 3 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
GSM	1910.018	-24.19	PASSED

### 3.5. WCDMA 1900 Test results

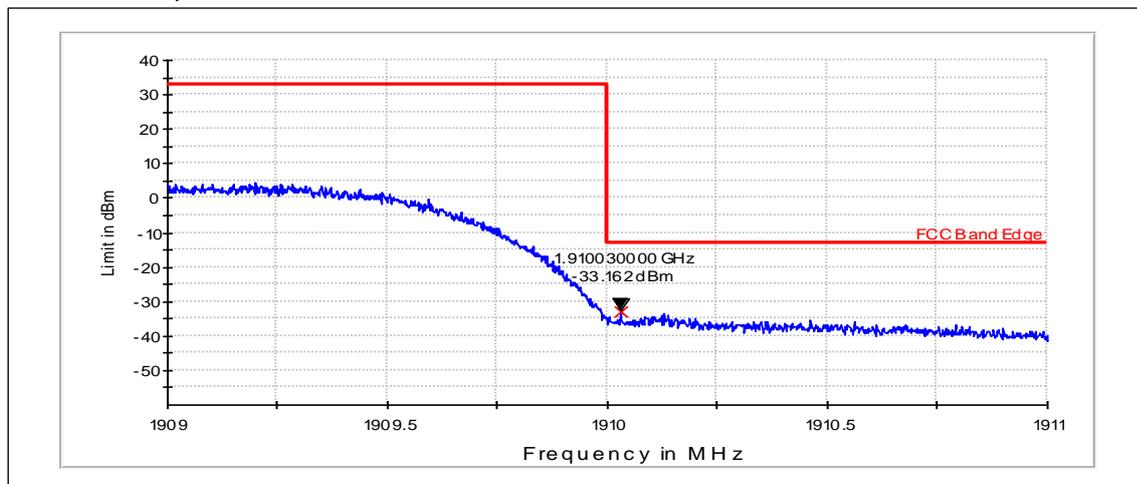
Channel 9262 / 1852.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	1849.916	-33.03	PASSED

Channel 9538 / 1907.6 MHz

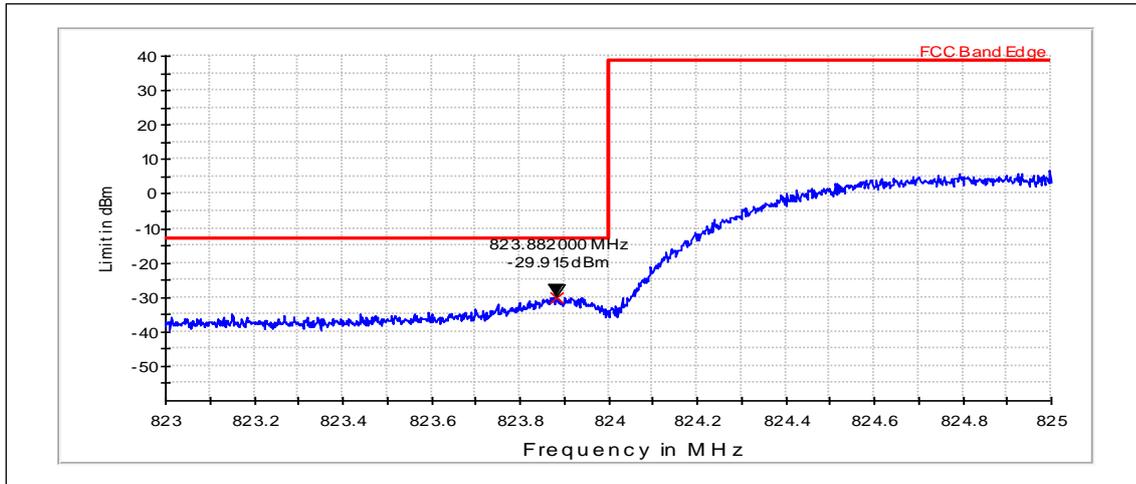


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	1910.030	-33.16	PASSED

### 3.6. WCDMA 850 Test results

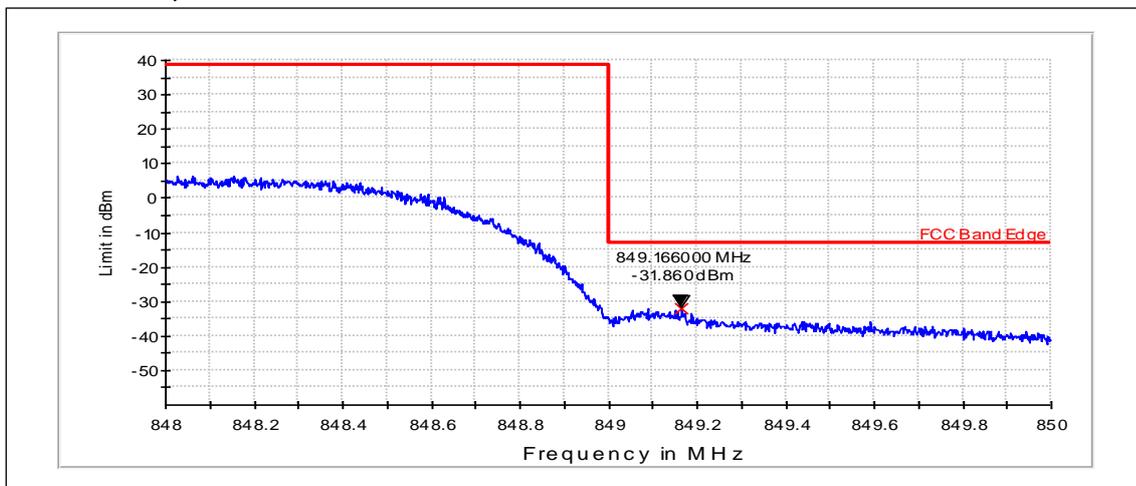
Channel 4132 / 826.4 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	823.882	-29.91	PASSED

Channel 4233 / 846.6 MHz



RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

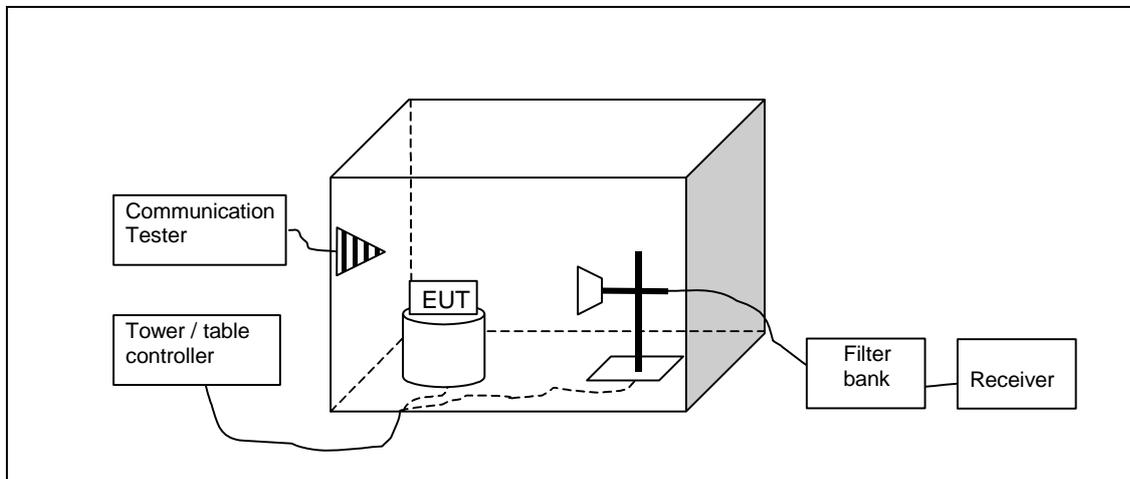
Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	849.166	-31.86	PASSED

## 4. Spurious radiated emissions

(FCC §22.917(a), §22.917(a), §2.1053, §24.238(a), §2.1053, §2.1053, RSS-132 4.5, RSS-133 6.5)

EUT with DUT number	RM-1025, DUT 54400
Accessories with DUT numbers	BL-4UL, DUT 54408 ; AC-18E, DUT 54409 ; WH-108, DUT 54413
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22/57/100.2
Date of measurements	23-Jun-2014
Measured by	Gao Sherina

### 4.1.1 Test setup



### 4.2. Test method and limit

The measurement is made according to TIA-603-C-2004 as follows:

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with absorbers on floor and measuring antenna at fixed height using 2-axis EUT position system.

The Final Measurement is performed in the Semi-Anechoic Chamber with conducting metal floor, if the Preliminary Measurement results are closer than 20 dB to the permissible value.

The EUT is placed at nonconductive plate at the turntable center.

For each suspected frequency, the turntable is rotated 360 degrees and antenna is scanned from 1 to 4 m. This is repeated for both horizontal and vertical receive antenna polarizations.

The emissions less than 20 dB below the permissible value are reported.

The substitution method is used. Substitution values at each frequencies are measured beforehand and saved to the test software. The substitution corrections are obtained as described below:

$$ASUBST = PSUBST TX - PSUBST RX - LSUBST CABLES + GSUBST TX ANT$$

Where ASUBST is the final substitution correction including receive antenna gain. PSUBST TX is

signal generator level, PSUBST RX is receiver level, LSUBST CABLES is cable losses including both TX and RX cables and GSUBST TX ANT is substitution antenna gain.

The measurement results are obtained as described below:

$$P[\text{dBm}] = \text{PMEAS} + \text{ATOT}$$

Where PMEAS is receiver reading in dBm and ATOT is total correction factor including cable loss and substitution correction (ATOT = LCABLES - GPREAMP + ASUBST).

Limits for spurious radiated emissions measurements

Operation band	Frequency range [MHz]	Limit [dBm]
GSM 850	30 - 8500	-13
GSM 1900	30 - 19100	-13
WCDMA 1900	30 - 19100	-13
WCDMA 850	30 - 8500	-13

### 4.3. GSM 850 test results

Peak detector

Frequency [MHz]	P [dBm]	P [μW]	P <sub>MEAS</sub> [dBm]	A <sub>TOT</sub> [dB]	Polarisation	Results
849.389	-68.68	0.00014	-65.08	-3.6	VERTICAL	PASSED
1673.066	-45.11	0.03083	-49.11	4	VERTICAL	PASSED
2509.94	-42.1	0.06166	-52.8	10.7	VERTICAL	PASSED
2510.02	-38.74	0.13366	-49.44	10.7	VERTICAL	PASSED
3346.132	-41.01	0.07925	-48.61	7.6	VERTICAL	PASSED
3346.693	-41	0.07943	-48.6	7.6	VERTICAL	PASSED

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

### 4.4. GSM 1900 test results

Peak detector

Frequency [MHz]	P [dBm]	P [μW]	P <sub>MEAS</sub> [dBm]	A <sub>TOT</sub> [dB]	Polarisation	Results
9265.651	-41.42	0.07211	-66.12	24.7	VERTICAL	PASSED
9291.904	-42.32	0.05861	-66.92	24.6	HORIZONTAL	PASSED
9669.579	-41.17	0.07638	-66.67	25.5	VERTICAL	PASSED
9865.21	-41.34	0.07345	-67.04	25.7	HORIZONTAL	PASSED
9917.756	-40.39	0.09141	-66.29	25.9	VERTICAL	PASSED
9995.582	-41.31	0.07396	-67.11	25.8	HORIZONTAL	PASSED

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

### 4.5. WCDMA 1900 test results

FDD mode, Peak detector

Frequency [MHz]	P [dBm]	P [μW]	P <sub>MEAS</sub> [dBm]	A <sub>TOT</sub> [dB]	Polarisation	Results
3758.617	-41.96	0.06368	-52.66	10.7	HORIZONTAL	PASSED
5645.872	-47.44	0.01803	-61.84	14.4	HORIZONTAL	PASSED
7512.405	-43.59	0.04375	-65.79	22.2	VERTICAL	PASSED
9401.503	-41.12	0.07727	-65.62	24.5	HORIZONTAL	PASSED
9463.186	-40.86	0.08204	-65.36	24.5	HORIZONTAL	PASSED
9644.83	-41.52	0.07047	-67.12	25.6	VERTICAL	PASSED
9817.295	-40.16	0.09638	-65.96	25.8	VERTICAL	PASSED
9852.725	-40.3	0.09333	-66.3	26	VERTICAL	PASSED
9978.737	-41.05	0.07852	-66.85	25.8	HORIZONTAL	PASSED
11284.309	-39.66	0.10814	-67.26	27.6	HORIZONTAL	PASSED
13158.136	-50.95	0.00804	-72.65	21.7	VERTICAL	PASSED
15044.509	-48.24	0.015	-72.24	24	VERTICAL	PASSED
16924.99	-49.04	0.01247	-72.34	23.3	HORIZONTAL	PASSED

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

#### 4.6. WCDMA 850 test results

FDD mode, Peak detector

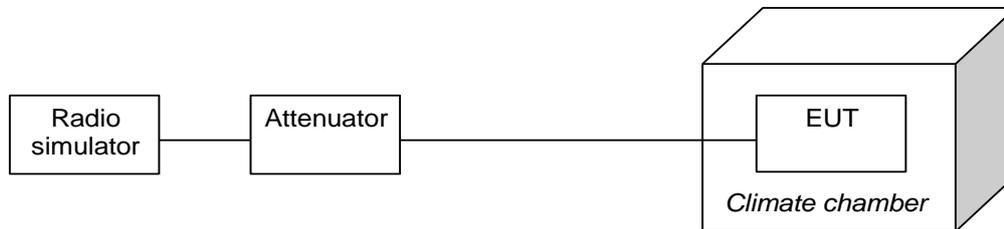
Frequency [MHz]	P [dBm]	P [μW]	P <sub>MEAS</sub> [dBm]	A <sub>TOT</sub> [dB]	Polarisation	Results
848.563	-44.21	0.03793	-78.41	34.2	HORIZONTAL	PASSED
852.771	-45.3	0.02951	-79.3	34	HORIZONTAL	PASSED
878.587	-37.74	0.16827	-72.74	35	VERTICAL	PASSED
946.538	-41.37	0.07295	-78.87	37.5	HORIZONTAL	PASSED
947.285	-40.79	0.08337	-78.19	37.4	HORIZONTAL	PASSED
982.4	-41.97	0.06353	-77.47	35.5	VERTICAL	PASSED
1661.082	-56.17	0.00242	-60.07	3.9	HORIZONTAL	PASSED
2501.453	-50.99	0.00796	-61.09	10.1	HORIZONTAL	PASSED
3345.912	-55.4	0.00288	-63	7.6	VERTICAL	PASSED
4167.365	-54.56	0.0035	-64.56	10	VERTICAL	PASSED
5004.369	-50.53	0.00885	-61.63	11.1	HORIZONTAL	PASSED
5849.509	-48.69	0.01352	-61.59	12.9	VERTICAL	PASSED
6685.912	-43.67	0.04295	-60.77	17.1	VERTICAL	PASSED
7524.92	-45.56	0.0278	-65.86	20.3	HORIZONTAL	PASSED
8350.862	-46.81	0.02084	-66.91	20.1	VERTICAL	PASSED

\*Substitution method could not be utilized as no emissions above noise floor were found during measurements.

## 5. Frequency stability, temperature variation (FCC §2.1055(a), RSS-132 4.3, RSS-133 6.3)

<b>EUT with DUT number</b>	RM-1025, DUT 54403
<b>Accessories with DUT numbers</b>	BL-4UL, DUT 54419 ; AC-18E, DUT 54410 ; WH-108, DUT 54414
<b>Operation Voltage [V] / [Hz]</b>	Nominal
<b>Results</b>	PASSED
<b>Remarks</b>	-
<b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b>	23/58/100.1
<b>Date of measurements</b>	25-Jun-2014
<b>Measured by</b>	Dou Rubo

### 5.1. Test Setup



### 5.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards as follows:

The climate chamber temperature is set to the maximum value and the temperature is allowed to stabilize. The EUT is placed in the chamber.

The EUT is set in idle mode for 15 minutes.

The EUT is set to transmit.

The transmit frequency error was measured immediately.

The steps c - e were repeated for each temperature. Limits for frequency stability, temperature variation measurements

Frequency deviation [ppm]
+/- 2.5

### 5.3. GSM 850 Test results

GSM, Channel 190 / 836.6 MHz

Temperature [°C]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	836.60	14.72000	0.0176	PASSED
40	836.60	14.72000	0.0176	PASSED
30	836.60	17.76000	0.0212	PASSED
20	836.60	3.94000	0.0047	PASSED
10	836.60	9.94000	0.0119	PASSED
0	836.60	-3.42000	-0.0041	PASSED
-10	836.60	4.58000	0.0055	PASSED
-20	836.60	6.52000	0.0078	PASSED
-22	836.60	9.36000	0.0112	PASSED
-24	836.60	-0.90000	-0.0011	PASSED

\*The EUT stopped working below -24°C.

### 5.4. GSM 1900 Test results

GSM, Channel 661 / 1880.0 MHz

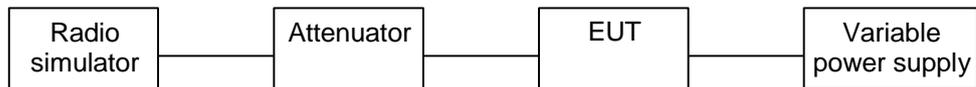
Temperature [°C]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	1880.00	-0.39000	-0.0002	PASSED
40	1880.00	6.78000	0.0036	PASSED
30	1880.00	19.11000	0.0102	PASSED
20	1880.00	-2.07000	-0.0011	PASSED
10	1880.00	1.42000	0.0008	PASSED
0	1880.00	-12.20000	-0.0065	PASSED
-10	1880.00	4.78000	0.0025	PASSED
-20	1880.00	15.30000	0.0081	PASSED
-22	1880.00	10.07000	0.0054	PASSED

\*The EUT stopped working below -22°C.

## 6. Frequency stability, voltage variation (FCC §2.1055(d), RSS-132 4.3, RSS-133 6.3)

<b>EUT with DUT number</b>	RM-1025, DUT 54403
<b>Accessories with DUT numbers</b>	SD-232R, DUT 54418
<b>Operation Voltage [V] / [Hz]</b>	Nominal
<b>Results</b>	PASSED
<b>Remarks</b>	-
<b>Temp [°C] / Humidity [%RH] / Air Pressure [kPa]</b>	23/63/100.3
<b>Date of measurements</b>	26-Jun-2014
<b>Measured by</b>	Dou Rubo

### 6.1. Test Setup



### 6.2. Test method and limit

The measurement is made according to applicable FCC rule parts and IC standards as follows:

The EUT battery was replaced with an adjustable power supply. The frequency stability was measured at nominal voltage and at the battery cut-off point.

Limits for frequency stability, voltage variation measurements

Frequency deviation [ppm]
+/- 2.5

### 6.3. GSM 850 Test results

GSM, Channel 190 / 836.6 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.3	836.60	3.03000	0.0036	PASSED
Battery cut-off point / 3.2	836.60	10.33000	0.0123	PASSED
Nominal / 3.9	836.60	12.85000	0.0154	PASSED

### 6.4. GSM 1900 Test results

GSM, Channel 661 / 1880.0 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.3	1880.00	7.23000	0.0038	PASSED
Battery cut-off point / 3.2	1880.00	11.69000	0.0062	PASSED
Nominal / 3.9	1880.00	7.36000	0.0039	PASSED

## 7. Test Equipment

### 7.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	15C, 15B
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	15C, 15B
-	RF Emission Software	EMC32 Test Software	R&S	22/24/27, 15C, 15B
BJPCHW0020	DC Power supply	Hp6632B	HP	22/24/27, 15C
BJPCPT0040	Receiver	ESCS30	R&S	15C, 15B
BJPCPT0069	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
BJPCTC0323	Signal Generator	SMR 27	R&S	22/24/27, 15C, 15B
BJPCPT0073	Signal Generator	SMR 20	R&S	22/24/27, 15C, 15B
BJPCPT0191	Pulse Limiter	ESH3-Z2	R&S	15C, 15B
BJPCPT0208	UPS	PULSAR RX10	Merlin gerin	15C, 15B
BJPCTC0001	DIGITAL CAMERA	PC1015	CANON	15C, 15R
BJPCTC0017	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
BJPCTC0062	AC Power source	6812B	Hp	15C, 15B
BJPCTC0067	Bluetooth Tester	CBT	R&S	22/24/27, 15C
BJPCTC0082	Humidity and Temperature Sensor	175-H2	Testo	15B, 15C
BJPCTC0088	Absolut pressure meter	testo 511	Testo	22/24/27, 15B, 15C
BJPCTC0089	Tempreture Test chamber	VT4002	Votsch industrietechnik	22/24/27, 15C
BJPCTC0090	FSP spectrum analyzer	FSP30	R&S	22/24/27, 15C
BJPCTC0094	GPIB-RS232 convertor	GPIB-RS232	NI	22/24/27, 15C
BJPCTC0112	Power Splitter	11667B	Agilent	22/24/27, 15C
BJPCTC0115	Communication Tester	CMU200	R&S	22/24/27, 15B, 15C
BJPCTC0127	AC Power source	SOYI-500VA	SOYI	15B 15C
BJPCTC0128	Communication antenna	JTXTLB-10180	A-INFOMW	22/24/27 15B 15C
BJPCTC0129	Communication antenna	JTXTLB-10180	A-INFOMW	22/24/27 15B 15C
BJPCTC0131	Communication tester	CMW500	R&S	22/24/27 15B 15C
BJPCTC0136	Communication antenna	JTXTLB-880-NF	A-INFOMW	15B 15C
BJPCTC0306	Power Splitter	11667B	Agilent	22/24/27, 15C
BJPCTC0305	GPIB converter	GPIB-RS232	NI	22/24/27, 15C
BJPCTC0304	Spectrum Analyser	FSV30	R&S	22/24/27, 15C
BJPCTC0309	GPIB-RS232 convertor	RS232	NI	22/24/27, 15C
BJPCTC0307	Dual channel battery/charger simulator	2306	KEITHLEY	22/24/27, 15C
BJPCTC0308	Dual channel battery/charger simulator	2306	KEITHLEY	22/24/27, 15C
BJPCTC0352	Signal Generator 20GHz	MG3692B	Anritsu	22/24/27, 15C
BJBDATC0169	Tempreture Test chamber	VT4002	Votsch	22/24/27, 15C
BJPCTC0334	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
BJPCTC0342	Communication Tester	CMU200	R&S	15B, 15C
BJPCTC0343	Power Splitter	1167A	Agilent	EN300328
BJPCTC0344	Power Splitter	1167A	Agilent	EN300328
BJPCTC0345	Power Splitter	1167A	Agilent	EN300328
BJPCTC0346	Attenuator	8496A	Agilent	EN300328
BJPCTC0347	Directional Coupler	4226-20	Narda	EN300328
BJPCTC0348	Signal generator	E4438C	Agilent	EN300328
BJPCTC0336	Signal Generator	SMP22	R&S	22/24/27, 15C

### 7.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	15C, 15B
-	BT / WLAN Antenna	SPA 2400/75/9/0/V	Huber-Suhner	15C, 15B
-	RF Emission Software	EMC32 Test Software	R&S	22/24/27, 15C, 15B
BJPCPT0072	Receiver	ESI B26	R&S	22/24/27, 15C, 15B

Eq. No	Equipment	Type	Manufacturer	Used in
BJPCPT0150	High Pass Filter	WHKS1200-10SS	Wainwright	22/24/27, 15C, 15B
BJPCPT0151	Band Reject Filter	WRCD1880/2000-0.2/40-5SSK	Wainwright	24, 15B
BJPCPT0154	Band Reject Filter	WRCT2402/2480-2400/2483.5-30-20SS	Wainwright	15C, 15B
BJPCPT0166	Antenna	VUBA 9117	Swarzbeck	22/24/27
BJPCPT0208	UPS	PULSAR RX10	Merlin gerin	15C.15B
BJPCTC0001	DIGITAL CAMERA	PC1015	CANON	15C.15R
BJPCTC0007	Antenna	HL562	R&S	22/24/27, 15C, 15B
BJPCTC0029	Antenna	HF906	R&S	22/24/27, 15C, 15B
BJPCTC0034	Band Reject Filter	WRCT 800/880-0.2/40-5SSK	Wainwright	22, 15B
BJPCTC0049	Preamplifier	Blma 0118-1A-Bt	Bonn	22/24/27, 15C, 15B
BJPCTC0055	Communication Tester	CMU200	R&S	22/24/27,15C,15B
BJPCTC0058	Bluetooth Tester	CBT	R&S	15C, 15B
BJPCTC0062	AC Power source	6812B	Hp	15C.15B
BJPCTC0064	Band Reject Filter	WRCG1877/1883-1870/1890-40/6SS	Wainwright	24, 15B
BJPCTC0071	Multi-Device Controller	2090	EMCO	22/24/27, 15C, 15B
BJPCTC0072	Anechoic Chamber	3 m Semi / Full Anechoic Chamber	ETS	22/24/27, 15C, 15B
BJPCTC0073	MAST	Model-TR/POL	ETS	22/24/27, 15C, 15B
BJPCTC0074	MAST	Model 2070-2	ETS	22/24/27, 15C, 15B
BJPCTC0075	Turntable	Model 2188	ETS-EMCO	22/24/27, 15C, 15B
BJPCTC0081	Humidity and Temperature Sensor	175-H2	Testo	15B, 15C
BJPCTC0088	Absolut pressure meter	testo 511	Testo	22/24/27, 15B,15C
BJPCTC0113	Receiver	ESI B26	R&S	22/24/27, 15B, 15C
BJPCTC0115	Communication Tester	CMU200	R&S	22/24/27, 15B, 15C
BJPCTC0124	Attenuator	SA18N200W-40	Fairview Microwave	-
BJPCTC0125	Loop Antenna	HFH2-Z2	R&S	15C
BJPCTC0126	Tripod	FHU-Z	R&S	15C
BJPCTC0128	Communication antenna	JXTXLB-10180	A-INFOMW	22/24/27 15B 15C
BJPCTC0129	Communication antenna	JXTXLB-10180	A-INFOMW	22/24/27 15B 15C
BJPCTC0131	Communication tester	CMW500	R&S	22/24/27 15B 15C
BJPCTC0133	Open Swith and contril unit	OSP 150	R&S	15B,15C
BJPCTC0134	Open Swith and contril unit	OSP 150	R&S	15B,15C
BJPCTC0135	Open Swith and contril unit	OSP 130	R&S	15B,15C
BJPCTC0136	Communication antenna	JXTXLB-880-NF	A-INFOMW	15B 15C
BJPCTC0171	Broad-band Horn Antenna	BBHA9120 D	SCHWARZBECK MESS - ELEKTRONIK	22/24/27, 15C, 15B
BJPCTC0310	Horn Antenna	QSH20SMA	Q-par	22/24/27, 15C, 15B
BJPCTC0311	Horn Antenna	QSH18SMA	Q-par	22/24/27, 15C, 15B
BJPCTC0312	Relay Switch Unit	-	-	22/24/27, 15C, 15B
BJPCTC0313	High Pass Filter	WHKX1.0/15G-12SS	Wainwright	22/24/27, 15C, 15B
BJPCTC0314	High Pass Filter	WHKX8.0/18G-88SS	Wainwright	22/24/27, 15C, 15B
BJPCTC0315	High Pass Filter	WHKX3.0/18G-12SS	Wainwright	22/24/27, 15C, 15B
BJPCTC0316	Preamplifier	AMT-5F-18002550-25-108	-	22/24/27, 15C, 15B
BJPCTC0317	Preamplifier	AMF-6D-02001800-29-20P	-	22/24/27, 15C, 15B
BJPCTC0350	Preamplifier	AMF-4D-01000800-30-29P	Miteq	22/24/27, 15C, 15B
BJPCTC0324	Preamplifier	AFS4-00100300-20-23P-6	Miteq	22/24/27, 15C, 15B
BJPCTC0329	Relay Switch Unit	-	-	22/24/27, 15C, 15B
BJPCTC0334	Communication Tester	CMU200	R&S	22/24/27, 15C, 15B
BJPCTC0342	Communication Tester	CMU200	R&S	15B, 15C

Eq. No	Equipment	Type	Manufacturer	Used in
BJPCTC0349	Preamplifier	AMF-4D-01000800-30-79P	Miteg	22/24/27, 15C, 15B
BJPCTC0350	Preamplifier	AMF-4D-01000800-30-29P	Miteg	22/24/27, 15C, 15B
BJPCTC0351	Preamplifier	AFS4-00101800	-	22/24/27, 15C, 15B