

FCC Part 22/24/27 Compliance Test Report

Test Report no.:	FCC_Cellular_RM-1104_14.docx	Date of Report:	04-Nov-2015
Number of pages:	25	Customer's Contact person:	Jari Rontu
Testing laboratory:	TCC Microsoft Tampere Laboratory P.O.Box 403 Visiokatu 3 FIN-33101 TAMPERE, FINLAND Tel. +358 71 800 8000 Fax. +358 71 804 6880	Customer:	Microsoft P.O.Box(86) Joensuukatu 7E FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 71 80 44122
FCC listing no.:	94436		
IC recognition no.:	661AK-1		
Tested devices/ accessories:	Phone RM-1104 / Battery BV-T5E		
FCC ID:	PYASTT	IC:	661X-STT
Supplement reports:	-		
Testing has been carried out in accordance with:	CFR 47, FCC rules Parts 22/24/27, TIA-603-D-2010 and IC standards, RSS-GEN (Issue 4, November 2014), RSS-132 (Issue 3, January 2013), RSS-133 (Issue 6, January 2013), RSS-139 (Issue 2, February 2009), RSS-199 (Issue 2, October 2014), RSS-130 (Issue 1, October 2013). Deviations, modifications or clarifications (if any) to above mentioned documents are written in each section under "Test method and limit".		
Documentation:	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.		
Test Results:	The EUT complies with the requirements in respect of all parameters subject to the test. The test results relate only to devices specified in this document		
Date and signature for the contents:			

Timo Raiskio, System Manager, EMC

1. Summary for FCC Part 22/24/27 Compliance Test Report

Date of receipt	01-Jul-2015
Testing completed	04-Nov-2015
The customer's contact person	Jari Rontu
Test Plan referred to	T:\Projects\RM-1104\TestPlan\RS_TestPlan_RM-1104_EMCC_FCC_new.xlsm
Notes	-
Document name	T:\Projects\RM-1104\EMCC\FCC_Cellular_RM-1104_14.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-1104	004402742178365	2012	-	01065.00000.15264.47000	400026
Battery	BV-T5E	4955405211010400583;0670775	LG v4.0	-	-	400027

1.2. Summary of Test Results

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	-
§22.913(a)	4.4	Radiated RF output power	PASSED
N/A	5.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§22.917(a)	4.5	Band edge compliance	-
§22.917(a), §2.1051	4.5	Spurious emissions at antenna terminals	-
§22.917(a), §2.1053	4.5	Spurious radiated emissions	-
§2.1055(a)	4.3	Frequency stability, temperature variation	-
§2.1055(d)	4.3	Frequency stability, voltage variation	-

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	-
§24.232(b)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§24.238(a)	6.5	Band edge compliance	-
§24.238(a), §2.1051	6.5	Spurious emissions at antenna terminals	-
§24.238(a), §2.1053	6.5	Spurious radiated emissions	-
§2.1055(a)	6.3	Frequency stability, temperature variation	-
§2.1055(d)	6.3	Frequency stability, voltage variation	-

WCDMA2:

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	-
§24.232(b)	6.4	Radiated RF output power	PASSED

N/A	6.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§24.238(a)	6.5	Band edge compliance	-
§24.238(a), §2.1051	6.5	Spurious emissions at antenna terminals	-
§24.238(a), §2.1053	6.5	Spurious radiated emissions	-
§2.1055(a)	6.3	Frequency stability, temperature variation	-
§2.1055(d)	6.3	Frequency stability, voltage variation	-

WCDMA4:

Section in CFR 47	Section in RSS-GEN or RSS-139	Name of the test	Result
§2.1046(a)	6.4	Conducted RF output power	-
§27.50(d)(2)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§27.53(g)	6.5	Band edge compliance	-
§27.53(g), §2.1051	6.5	Spurious emissions at antenna terminals	-
§24.238(a), §2.1053	6.5	Spurious radiated emissions	-
§2.1055(a)	6.3	Frequency stability, temperature variation	-
§2.1055(d)	6.3	Frequency stability, voltage variation	-

LTE2:

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	-
§24.232(b)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§24.238(a)	6.5	Band edge compliance	-
§24.238(a), §2.1051	6.5	Spurious emissions at antenna terminals	-
§24.238(a), §2.1053	6.5	Spurious radiated emissions	-
§2.1055(a)	6.3	Frequency stability, temperature variation	-
§2.1055(d)	6.3	Frequency stability, voltage variation	-

LTE4:

Section in CFR 47	Section in RSS-GEN or RSS-139	Name of the test	Result
§2.1046(a)	6.4	Conducted RF output power	-
§27.50(d)(4)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§27.53(h)	6.5	Band edge compliance	-
§27.53(h), §2.1051	6.5	Spurious emissions at antenna terminals	-
§27.53(h), §2.1053	6.5	Spurious radiated emissions	-
§2.1055(a)	6.3	Frequency stability, temperature variation	-
§2.1055(d)	6.3	Frequency stability, voltage variation	-

LTE5:

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	-
§22.913(a)	4.4	Radiated RF output power	PASSED
N/A	5.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-

§22.917(a)	4.5	Band edge compliance	-
§22.917(a), §2.1051	4.5	Spurious emissions at antenna terminals	-
§22.917(a), §2.1053	4.5	Spurious radiated emissions	-
§2.1055(a)	4.3	Frequency stability, temperature variation	-
§2.1055(d)	4.3	Frequency stability, voltage variation	-

LTE7:

Section in CFR 47	Section in RSS-GEN or RSS-199	Name of the test	Result
§2.1046(a)	4.4	Conducted RF output power	-
§27.50(h)(2)	4.4	Radiated RF output power	PASSED
N/A	N/A	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§27.53(l)	4.5(b)	Band edge compliance	-
§2.1051	4.5(b)	Spurious emissions at antenna terminals	-
§27.53(l), §2.1053	4.5(b)	Spurious radiated emissions	-
§27.54	4.3	Frequency stability, temperature variation	-
§27.54	4.3	Frequency stability, voltage variation	-

LTE12:

Section in CFR 47	Section in RSS-GEN or RSS-130	Name of the test	Result
§2.1046(a)	4.4	Conducted RF output power	-
§27.50(c)10	4.4	Radiated RF output power	PASSED
N/A	N/A	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§27.53(f)	4.6	Band edge compliance	-
§27.53(f)	4.6	Spurious emissions at antenna terminals	-
§27.53(f)	4.6	Spurious radiated emissions	-
§27.54	4.3	Frequency stability, temperature variation	-
§27.54	4.3	Frequency stability, voltage variation	-

LTE17:

Section in CFR 47	Section in RSS-GEN or RSS-130	Name of the test	Result
§2.1046(a)	4.4	Conducted RF output power	-
§27.50(c)(10)	4.4	Radiated RF output power	PASSED
N/A	N/A	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§27.53(g)	4.6	Band edge compliance	-
§27.53(g), §2.1051	4.6	Spurious emissions at antenna terminals	-
§27.53(g), §2.1051	4.6	Spurious radiated emissions	-
§2.1055(a)	4.3 (a)	Frequency stability, temperature variation	-
§2.1055(d)	4.3 (a)	Frequency stability, voltage variation	-

WCDMA5:

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	-
§22.913(a)	4.4	Radiated RF output power	PASSED
N/A	5.4	Peak to average power ratio	-
§2.1049(h)	6.6	99 % occupied bandwidth	-
§22.917(a)	4.5	Band edge compliance	-
§22.917(a), §2.1051	4.5	Spurious emissions at antenna terminals	-

§22.917(a), §2.1053	4.5	Spurious radiated emissions	-
§2.1055(a)	4.3	Frequency stability, temperature variation	-
§2.1055(d)	4.3	Frequency stability, voltage variation	-

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.

CONTENTS

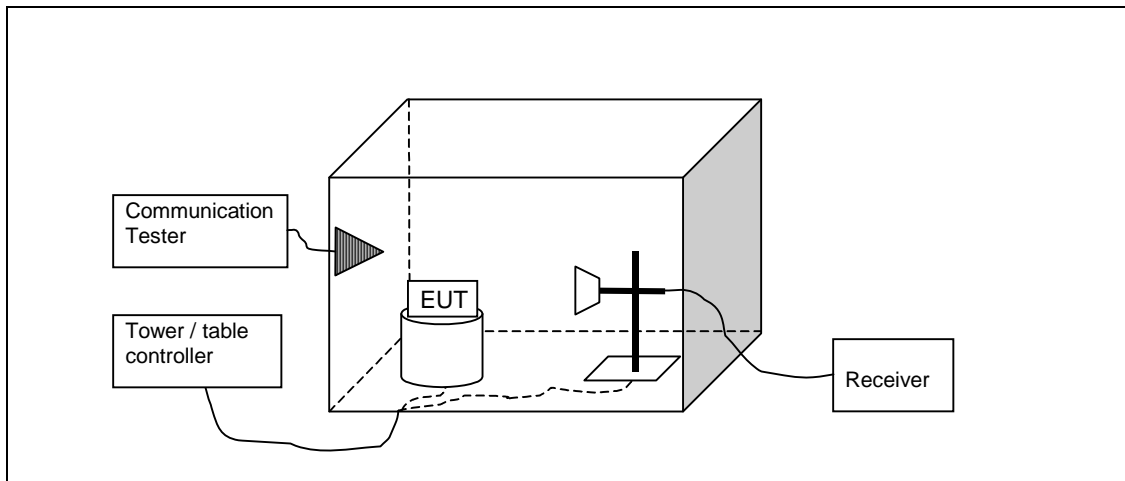
1. Summary for FCC Part 22/24/27 Compliance Test Report	2
1.1. EUT and Accessory Information	2
1.2. Summary of Test Results	2
2. Radiated RF output power, Antenna 1 (FCC §22.913(a), §27.50(c)(10), §27.50(c)10, §27.50(h)(2), §27.50(d)(4), §27.50(d)(2), §24.232(b), RSS-132 4.4, RSS-133 6.4, RSS-139 6.4, RSS-199 4.4, RSS-130 4.4)	8
2.2. Test method and limit	8
2.3. GSM 850 test results	10
2.4. GSM 850 E-GPRS (MSC9) test results.....	10
2.5. GSM 1900 test results	10
2.6. GSM 1900 E-GPRS (MSC9) test results.....	10
2.7. WCDMA2 test results	11
2.8. WCDMA4 test results	11
2.9. WCDMA5 test results	11
2.10. LTE2 test results.....	11
2.11. LTE4 test results.....	12
2.12. LTE5 test results.....	13
2.13. LTE7 test results.....	13
2.14. LTE12 test results.....	15
2.15. LTE17 test results.....	15
3. Radiated RF output power, Antenna 2 (FCC §22.913(a), §27.50(c)(10), §27.50(c)10, §27.50(h)(2), §27.50(d)(4), §27.50(d)(2), §24.232(b), RSS-132 4.4, RSS-133 6.4, RSS-139 6.4, RSS-199 4.4, RSS-130 4.4)	16
3.2. Test method and limit	16
3.3. GSM 850 test results	18
3.4. GSM 850 E-GPRS (MSC9) test results.....	18
3.5. GSM 1900 test results	18
3.6. GSM 1900 E-GPRS (MSC9) test results.....	18
3.7. WCDMA2 test results	19
3.8. WCDMA4 test results	19
3.9. WCDMA5 test results	19
3.10. LTE2 test results.....	19
3.11. LTE4 test results.....	20
3.12. LTE5 test results.....	21
3.13. LTE7 test results.....	21
3.14. LTE12 test results.....	23
3.15. LTE17 test results.....	23

4. Test Equipment	24
4.1. Conducted measurements	24
4.2. Radiated measurements	24

2. Radiated RF output power, Antenna 1
(FCC §22.913(a), §27.50(c)(10), §27.50(c)10, §27.50(h)(2), §27.50(d)(4), §27.50(d)(2), §24.232(b), RSS-132 4.4, RSS-133 6.4, RSS-139 6.4, RSS-199 4.4, RSS-130 4.4)

EUT with DUT number	RM-1104, DUT 400026
Accessories with DUT numbers	BV-T5E, DUT 400027
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 45 / 101.6
Date of measurements	04-Nov-2015
Measured by	Timo Raiskio

2.1.1 Test setup



2.2. Test method and limit

The measurement is made according to TIA-603-D-2010 as follows:

The measurement is performed in the Anechoic Chamber with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system. The turntable is rotated 360 degrees and this is repeated for both horizontal and vertical receive antenna polarizations.

The EUT is placed on a nonconductive plate at 170 cm height.

The substitution method is used. The measurement results are obtained as described below:

$$P[dBm] = P_{SUBST\ TX} + P_{MEAS} - P_{SUBST\ RX} - L_{SUBST\ CABLES} + G_{SUBST\ TX\ ANT}$$

Where $P_{SUBST\ TX}$ is signal generator level. P_{MEAS} is measured power level from the EUT. $P_{SUBST\ RX}$ is measured power level in substitute measurement. $L_{SUBST\ CABLE}$ is the loss of the cable between the signal generator and the substitution antenna and $G_{SUBST\ TX\ ANT}$ is substitution antenna gain.

Limits for radiated RF output power measurements

Frequency range [MHz]	Limit [W]	Limit [dBm]
824 - 849	7 ERP	38.5
1850 - 1910	2 EIRP	33
1710 - 1755	1 EIRP	30

2502.5 - 2567.5	2 EIRP	33
699 - 712	2 ERP	33
704 - 716	3 ERP	34.8

2.3. GSM 850 test results

RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
128 / 824.2	26.17	0.414	-5.85	32.02	HORIZONTAL	PASSED
190 / 836.6	27.06	0.508	-4.69	31.75	HORIZONTAL	PASSED
251 / 848.8	26.32	0.428	-4.8	31.12	HORIZONTAL	PASSED

2.4. GSM 850 E-GPRS (MSC9) test results

RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
128 / 824.2	22.29	0.17	-9.73	32.02	HORIZONTAL	PASSED
190 / 836.6	23.66	0.232	-8.09	31.75	HORIZONTAL	PASSED
251 / 848.8	22.98	0.198	-8.14	31.12	HORIZONTAL	PASSED

2.5. GSM 1900 test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
512 / 1850.2	25.92	0.391	-16.96	42.88	HORIZONTAL	PASSED
661 / 1880	25.51	0.356	-17.3	42.81	HORIZONTAL	PASSED
810 / 1909.8	25.95	0.394	-17.17	43.12	HORIZONTAL	PASSED

2.6. GSM 1900 E-GPRS (MSC9) test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
512 / 1850.2	26.09	0.407	-16.79	42.88	HORIZONTAL	PASSED
661 / 1880	25.24	0.335	-17.57	42.81	HORIZONTAL	PASSED
810 / 1909.8	25.71	0.372	-17.41	43.12	HORIZONTAL	PASSED

2.7. WCDMA2 test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
9262 / 1852.4	24.16	0.261	-18.7	42.86	HORIZONTAL	PASSED
9400 / 1880	23.3	0.214	-19.51	42.81	HORIZONTAL	PASSED
9538 / 1907.6	22.48	0.177	-20.48	42.96	HORIZONTAL	PASSED

2.8. WCDMA4 test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
1312 / 1712.4	23.62	0.23	-18.22	41.84	HORIZONTAL	PASSED
1412 / 1732.4	23.81	0.241	-18.27	42.08	HORIZONTAL	PASSED
1513 / 1752.6	23.5	0.224	-18.8	42.3	HORIZONTAL	PASSED

2.9. WCDMA5 test results

RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
4132 / 826.4	18.38	0.069	-13.65	32.03	HORIZONTAL	PASSED
4175 / 835	18.95	0.079	-13	31.95	HORIZONTAL	PASSED
4233 / 846.6	18.93	0.078	-12.24	31.17	HORIZONTAL	PASSED

2.10. LTE2 test results

FDD, CBW 3MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1851.5	24.43	0.277	-18.44	42.87	HORIZONTAL	PASSED
18900 / 1880	23.8	0.24	-19.01	42.81	HORIZONTAL	PASSED
18900 / 1908.5	22.8	0.19	-20.2	43	HORIZONTAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1860	25.01	0.317	-17.93	42.94	HORIZONTAL	PASSED
18900 / 1880	23.8	0.24	-19.01	42.81	HORIZONTAL	PASSED
18900 / 1900	23.91	0.246	-19.17	43.08	HORIZONTAL	PASSED

FDD, CBW 1.4MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1850.7	24.53	0.284	-18.35	42.88	HORIZONTAL	PASSED
18900 / 1880	23.73	0.236	-19.08	42.81	HORIZONTAL	PASSED
18900 / 1909.3	22.72	0.187	-20.35	43.07	HORIZONTAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1860	25.25	0.335	-17.69	42.94	HORIZONTAL	PASSED
18900 / 1880	23.46	0.222	-19.35	42.81	HORIZONTAL	PASSED
18900 / 1900	23.79	0.239	-19.29	43.08	HORIZONTAL	PASSED

2.11. LTE4 test results

FDD, CBW 3MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1711.5	23.4	0.219	-18.44	41.84	HORIZONTAL	PASSED
20175 / 1732.5	23.88	0.244	-18.2	42.08	HORIZONTAL	PASSED
20175 / 1753.5	23.3	0.214	-18.97	42.27	HORIZONTAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1720	24.31	0.27	-17.56	41.87	HORIZONTAL	PASSED
20175 / 1732.5	24.06	0.255	-18.02	42.08	HORIZONTAL	PASSED
20175 / 1745	24.04	0.253	-18.09	42.13	HORIZONTAL	PASSED

FDD, CBW 5MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
19975 / 1712.5	24.19	0.262	-17.65	41.84	HORIZONTAL	PASSED
20175 / 1732.5	23.75	0.237	-18.33	42.08	HORIZONTAL	PASSED
20375 / 1752.5	23.92	0.246	-18.37	42.29	HORIZONTAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1720	24.03	0.253	-17.84	41.87	HORIZONTAL	PASSED
20175 / 1732.5	23.43	0.22	-18.65	42.08	HORIZONTAL	PASSED
20175 / 1745	24.08	0.256	-18.05	42.13	HORIZONTAL	PASSED

2.12. LTE5 test results

FDD, CBW 3MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 825.5	18.73	0.075	-13.28	32.01	HORIZONTAL	PASSED
20525 / 836.5	19.1	0.081	-12.67	31.77	HORIZONTAL	PASSED
20525 / 847.5	19.55	0.09	-11.6	31.15	HORIZONTAL	PASSED

FDD, CBW 10MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 829	19.16	0.082	-12.9	32.06	HORIZONTAL	PASSED
20525 / 836.5	19.48	0.089	-12.29	31.77	HORIZONTAL	PASSED
20525 / 844	19.74	0.094	-11.63	31.37	HORIZONTAL	PASSED

FDD, CBW 5MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
20425 / 826.5	18.92	0.078	-13.11	32.03	HORIZONTAL	PASSED
20525 / 836.5	18.88	0.077	-12.89	31.77	HORIZONTAL	PASSED
20625 / 846.5	19.41	0.087	-11.77	31.18	HORIZONTAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 829	19.27	0.084	-12.79	32.06	HORIZONTAL	PASSED
20525 / 836.5	19.53	0.09	-12.24	31.77	HORIZONTAL	PASSED
20525 / 844	19.21	0.083	-12.16	31.37	HORIZONTAL	PASSED

2.13. LTE7 test results

FDD, CBW 15MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2507.5	27.52	0.565	-19.72	47.24	HORIZONTAL	PASSED
21100 / 2535	27.09	0.511	-20.31	47.4	VERTICAL	PASSED
21100 / 2562.5	26.14	0.411	-21.55	47.69	VERTICAL	PASSED

FDD, CBW 15MHz, QPSK, 1RB mid, Peak detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2507.5	30.62	1.152	-16.62	47.24	HORIZONTAL	PASSED
21100 / 2535	30.49	1.12	-16.91	47.4	VERTICAL	PASSED
21100 / 2562.5	28.88	0.773	-18.81	47.69	VERTICAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2510	27	0.502	-20.35	47.35	VERTICAL	PASSED
21100 / 2535	26.55	0.452	-20.85	47.4	VERTICAL	PASSED
21100 / 2560	26.32	0.428	-21.41	47.73	VERTICAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, Peak detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2510	29.88	0.972	-17.36	47.24	HORIZONTAL	PASSED
21100 / 2535	30.29	1.07	-17.11	47.4	VERTICAL	PASSED
21100 / 2560	29.45	0.882	-18.28	47.73	VERTICAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2505	27.66	0.584	-19.74	47.4	VERTICAL	PASSED
21100 / 2535	27.32	0.539	-20.08	47.4	VERTICAL	PASSED
21100 / 2565	26.66	0.463	-21	47.66	VERTICAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, Peak detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2505	30.84	1.213	-16.34	47.18	HORIZONTAL	PASSED
21100 / 2535	30.29	1.07	-17.11	47.4	VERTICAL	PASSED
21100 / 2565	28.91	0.778	-18.75	47.66	VERTICAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2510	27.19	0.524	-20.05	47.24	HORIZONTAL	PASSED
21100 / 2535	26.66	0.463	-20.74	47.4	VERTICAL	PASSED
21100 / 2560	26.13	0.41	-21.6	47.73	VERTICAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, Peak detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2510	30.13	1.031	-17.11	47.24	HORIZONTAL	PASSED
21100 / 2535	30.42	1.102	-16.98	47.4	VERTICAL	PASSED
21100 / 2560	29.45	0.882	-18.28	47.73	VERTICAL	PASSED

2.14. LTE12 test results

FDD, CBW 10MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 704	19.12	0.082	-10.75	29.87	HORIZONTAL	PASSED
23095 / 707.5	20.18	0.104	-9.85	30.03	HORIZONTAL	PASSED
23095 / 711	20.04	0.101	-10.14	30.18	HORIZONTAL	PASSED

FDD, CBW 3MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 700.5	17.9	0.062	-11.9	29.8	HORIZONTAL	PASSED
23095 / 707.5	19.07	0.081	-10.96	30.03	HORIZONTAL	PASSED
23095 / 714.5	19.42	0.088	-11	30.42	HORIZONTAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 704	19.07	0.081	-10.8	29.87	HORIZONTAL	PASSED
23095 / 707.5	20.14	0.103	-9.89	30.03	HORIZONTAL	PASSED
23095 / 711	19.93	0.098	-10.25	30.18	HORIZONTAL	PASSED

2.15. LTE17 test results

FDD, CBW 10MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
23780 / 709	19.75	0.094	-10.33	30.08	HORIZONTAL	PASSED
23790 / 710	19.74	0.094	-10.37	30.11	HORIZONTAL	PASSED
23800 / 711	20.02	0.1	-10.16	30.18	HORIZONTAL	PASSED

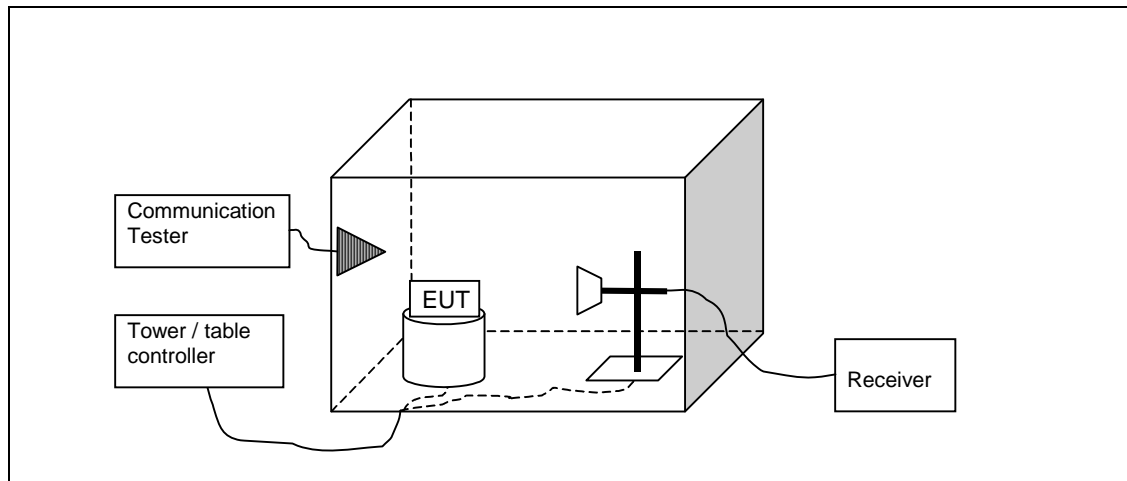
FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
23780 / 709	19.53	0.09	-10.55	30.08	HORIZONTAL	PASSED
23790 / 710	20.08	0.102	-10.03	30.11	HORIZONTAL	PASSED
23800 / 711	19.52	0.09	-10.66	30.18	HORIZONTAL	PASSED

3. Radiated RF output power, Antenna 2
(FCC §22.913(a), §27.50(c)(10), §27.50(c)10, §27.50(h)(2), §27.50(d)(4), §27.50(d)(2), §24.232(b), RSS-132 4.4, RSS-133 6.4, RSS-139 6.4, RSS-199 4.4, RSS-130 4.4)

EUT with DUT number	RM-1104, DUT 400026
Accessories with DUT numbers	BV-T5E, DUT 400027
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	21 / 45 / 101.6
Date of measurements	04-Nov-2015
Measured by	Timo Raiskio

3.1.1 Test setup



3.2. Test method and limit

The measurement is made according to TIA-603-D-2010 as follows:

The measurement is performed in the Anechoic Chamber with absorbers on the floor and measuring antenna at fixed height using 2-axis EUT position system. The turntable is rotated 360 degrees and this is repeated for both horizontal and vertical receive antenna polarizations.

The EUT is placed on a nonconductive plate at 170 cm height.

The substitution method is used. The measurement results are obtained as described below:

$$P[dBm] = P_{SUBST\ TX} + P_{MEAS} - P_{SUBST\ RX} - L_{SUBST\ CABLES} + G_{SUBST\ TX\ ANT}$$

Where $P_{SUBST\ TX}$ is signal generator level. P_{MEAS} is measured power level from the EUT. $P_{SUBST\ RX}$ is measured power level in substitute measurement. $L_{SUBST\ CABLE}$ is the loss of the cable between the signal generator and the substitution antenna and $G_{SUBST\ TX\ ANT}$ is substitution antenna gain.

Limits for radiated RF output power measurements

Frequency range [MHz]	Limit [W]	Limit [dBm]
824 - 849	7 ERP	38.5
1850 - 1910	2 EIRP	33
1710 - 1755	1 EIRP	30

2502.5 - 2567.5	2 EIRP	33
699 - 712	2 ERP	33
704 - 716	3 ERP	34.8

3.3. GSM 850 test results

RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
128 / 824.2	24.93	0.311	-7.09	32.02	HORIZONTAL	PASSED
190 / 836.6	25.33	0.341	-6.42	31.75	HORIZONTAL	PASSED
251 / 848.8	26.6	0.457	-4.52	31.12	HORIZONTAL	PASSED

3.4. GSM 850 E-GPRS (MSC9) test results

RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
128 / 824.2	21.22	0.132	-10.8	32.02	HORIZONTAL	PASSED
190 / 836.6	21.86	0.153	-9.89	31.75	HORIZONTAL	PASSED
251 / 848.8	23.42	0.22	-7.7	31.12	HORIZONTAL	PASSED

3.5. GSM 1900 test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
512 / 1850.2	25.08	0.322	-17.8	42.88	HORIZONTAL	PASSED
661 / 1880	25.19	0.33	-17.62	42.81	HORIZONTAL	PASSED
810 / 1909.8	26.35	0.432	-16.77	43.12	HORIZONTAL	PASSED

3.6. GSM 1900 E-GPRS (MSC9) test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
512 / 1850.2	24.28	0.268	-18.6	42.88	HORIZONTAL	PASSED
661 / 1880	25.08	0.322	-17.73	42.81	HORIZONTAL	PASSED
810 / 1909.8	26.45	0.442	-16.67	43.12	HORIZONTAL	PASSED

3.7. WCDMA2 test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
9262 / 1852.4	23.32	0.215	-19.54	42.86	HORIZONTAL	PASSED
9400 / 1880	23.06	0.202	-19.75	42.81	HORIZONTAL	PASSED
9538 / 1907.6	22.91	0.195	-20.05	42.96	HORIZONTAL	PASSED

3.8. WCDMA4 test results

RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
1312 / 1712.4	22.05	0.16	-19.79	41.84	HORIZONTAL	PASSED
1412 / 1732.4	22.58	0.181	-19.5	42.08	HORIZONTAL	PASSED
1513 / 1752.6	22.72	0.187	-19.58	42.3	HORIZONTAL	PASSED

3.9. WCDMA5 test results

RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
4132 / 826.4	17.55	0.057	-14.48	32.03	HORIZONTAL	PASSED
4175 / 835	18.7	0.074	-13.25	31.95	HORIZONTAL	PASSED
4233 / 846.6	19.05	0.08	-12.12	31.17	HORIZONTAL	PASSED

3.10. LTE2 test results

FDD, CBW 3MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1851.5	23.86	0.243	-19.01	42.87	HORIZONTAL	PASSED
18900 / 1880	23.45	0.221	-19.36	42.81	HORIZONTAL	PASSED
18900 / 1908.5	23.29	0.213	-19.71	43	HORIZONTAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1860	23.98	0.25	-18.96	42.94	HORIZONTAL	PASSED
18900 / 1880	23.67	0.233	-19.14	42.81	HORIZONTAL	PASSED
18900 / 1900	24	0.251	-19.08	43.08	HORIZONTAL	PASSED

FDD, CBW 1.4MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1850.7	24.09	0.257	-18.79	42.88	HORIZONTAL	PASSED
18900 / 1880	23.58	0.228	-19.23	42.81	HORIZONTAL	PASSED
18900 / 1909.3	23.93	0.247	-19.14	43.07	HORIZONTAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1860	23.57	0.227	-19.37	42.94	HORIZONTAL	PASSED
18900 / 1880	23.44	0.221	-19.37	42.81	HORIZONTAL	PASSED
18900 / 1900	23.61	0.23	-19.47	43.08	HORIZONTAL	PASSED

3.11. LTE4 test results

FDD, CBW 3MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1711.5	22.58	0.181	-19.26	41.84	HORIZONTAL	PASSED
20175 / 1732.5	23.05	0.202	-19.03	42.08	HORIZONTAL	PASSED
20175 / 1753.5	23.36	0.217	-18.91	42.27	HORIZONTAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1720	22.75	0.188	-19.12	41.87	HORIZONTAL	PASSED
20175 / 1732.5	22.77	0.189	-19.31	42.08	HORIZONTAL	PASSED
20175 / 1745	22.48	0.177	-19.65	42.13	HORIZONTAL	PASSED

FDD, CBW 5MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
19975 / 1712.5	22.53	0.179	-19.31	41.84	HORIZONTAL	PASSED
20175 / 1732.5	23.03	0.201	-19.05	42.08	HORIZONTAL	PASSED
20375 / 1752.5	23.01	0.2	-19.28	42.29	HORIZONTAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, RMS detector

Channel / fc [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 1720	22.98	0.198	-18.89	41.87	HORIZONTAL	PASSED
20175 / 1732.5	22.45	0.176	-19.63	42.08	HORIZONTAL	PASSED
20175 / 1745	22.51	0.178	-19.62	42.13	HORIZONTAL	PASSED

3.12. LTE5 test results

FDD, CBW 3MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 825.5	17.89	0.062	-14.12	32.01	HORIZONTAL	PASSED
20525 / 836.5	19.38	0.087	-12.39	31.77	HORIZONTAL	PASSED
20525 / 847.5	19.61	0.091	-11.54	31.15	HORIZONTAL	PASSED

FDD, CBW 10MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 829	18.39	0.069	-13.67	32.06	HORIZONTAL	PASSED
20525 / 836.5	19.37	0.087	-12.4	31.77	HORIZONTAL	PASSED
20525 / 844	19.74	0.094	-11.63	31.37	HORIZONTAL	PASSED

FDD, CBW 5MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
20425 / 826.5	17.67	0.059	-14.36	32.03	HORIZONTAL	PASSED
20525 / 836.5	18.99	0.079	-12.78	31.77	HORIZONTAL	PASSED
20625 / 846.5	19.84	0.096	-11.34	31.18	HORIZONTAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 829	18.28	0.067	-13.78	32.06	HORIZONTAL	PASSED
20525 / 836.5	19.23	0.084	-12.54	31.77	HORIZONTAL	PASSED
20525 / 844	19.73	0.094	-11.64	31.37	HORIZONTAL	PASSED

3.13. LTE7 test results

FDD, CBW 15MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2507.5	27.11	0.514	-20.13	47.24	HORIZONTAL	PASSED
21100 / 2535	26.79	0.478	-20.47	47.26	HORIZONTAL	PASSED
21100 / 2562.5	26.23	0.419	-21.46	47.69	VERTICAL	PASSED

FDD, CBW 15MHz, QPSK, 1RB mid, Peak detector

Channel / f _c [MHz]	EIRP [dBm]	EIRP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 2507.5	30.16	1.038	-17.23	47.39	VERTICAL	PASSED
21100 / 2535	30.29	1.07	-17.11	47.4	VERTICAL	PASSED
21100 / 2562.5	29.47	0.886	-18.08	47.55	HORIZONTAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, RMS detector

Channel / f_c [MHz]	EIRP [dBm]	EIRP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 2510	27.16	0.52	-20.19	47.35	VERTICAL	PASSED
21100 / 2535	27	0.501	-20.4	47.4	VERTICAL	PASSED
21100 / 2560	26.28	0.425	-21.45	47.73	VERTICAL	PASSED

FDD, CBW 20MHz, QPSK, 1RB mid, Peak detector

Channel / f_c [MHz]	EIRP [dBm]	EIRP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 2510	29.99	0.997	-17.36	47.35	VERTICAL	PASSED
21100 / 2535	30.36	1.086	-17.04	47.4	VERTICAL	PASSED
21100 / 2560	29.52	0.896	-18.21	47.73	VERTICAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / f_c [MHz]	EIRP [dBm]	EIRP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 2505	27.4	0.549	-19.78	47.18	HORIZONTAL	PASSED
21100 / 2535	27.56	0.57	-19.84	47.4	VERTICAL	PASSED
21100 / 2565	26.34	0.431	-21.32	47.66	VERTICAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, Peak detector

Channel / f_c [MHz]	EIRP [dBm]	EIRP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 2505	30.5	1.122	-16.9	47.4	VERTICAL	PASSED
21100 / 2535	30.42	1.102	-16.98	47.4	VERTICAL	PASSED
21100 / 2565	29.72	0.936	-17.94	47.66	VERTICAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, RMS detector

Channel / f_c [MHz]	EIRP [dBm]	EIRP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 2510	27.27	0.533	-19.97	47.24	HORIZONTAL	PASSED
21100 / 2535	26.58	0.455	-20.82	47.4	VERTICAL	PASSED
21100 / 2560	26.24	0.421	-21.49	47.73	VERTICAL	PASSED

FDD, CBW 20MHz, 16QAM, 1RB mid, Peak detector

Channel / f_c [MHz]	EIRP [dBm]	EIRP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 2510	30.05	1.012	-17.3	47.35	VERTICAL	PASSED
21100 / 2535	30.36	1.086	-17.04	47.4	VERTICAL	PASSED
21100 / 2560	29.45	0.882	-18.28	47.73	VERTICAL	PASSED

3.14. LTE12 test results

FDD, CBW 10MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 704	17.64	0.058	-12.23	29.87	HORIZONTAL	PASSED
23095 / 707.5	16.69	0.047	-13.34	30.03	HORIZONTAL	PASSED
23095 / 711	16.98	0.05	-13.2	30.18	HORIZONTAL	PASSED

FDD, CBW 3MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 700.5	17.24	0.053	-12.56	29.8	HORIZONTAL	PASSED
23095 / 707.5	17.09	0.051	-12.94	30.03	HORIZONTAL	PASSED
23095 / 714.5	16.67	0.046	-13.75	30.42	HORIZONTAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
0 / 704	18	0.063	-11.87	29.87	HORIZONTAL	PASSED
23095 / 707.5	17.06	0.051	-12.97	30.03	HORIZONTAL	PASSED
23095 / 711	16.59	0.046	-13.59	30.18	HORIZONTAL	PASSED

3.15. LTE17 test results

FDD, CBW 10MHz, QPSK, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
23780 / 709	16.97	0.05	-13.11	30.08	HORIZONTAL	PASSED
23790 / 710	17.33	0.054	-12.78	30.11	HORIZONTAL	PASSED
23800 / 711	17.02	0.05	-13.16	30.18	HORIZONTAL	PASSED

FDD, CBW 10MHz, 16QAM, 1RB mid, RMS detector

Channel / f _c [MHz]	ERP [dBm]	ERP [W]	P _{MEAS} [dBm]	A _{TOT} [dB]	Polarisation	Results
23780 / 709	17.03	0.05	-13.05	30.08	HORIZONTAL	PASSED
23790 / 710	17.3	0.054	-12.81	30.11	HORIZONTAL	PASSED
23800 / 711	16.66	0.046	-13.52	30.18	HORIZONTAL	PASSED

4. Test Equipment

4.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM350089	Power supply	6632A	Agilent	22/24/27, 15C, 15E
TM350090	Power supply	6632A	Agilent	22/24/27, 15C, 15E
TM30600	Impulse limiter	ESH3-Z2	R&S	15C, 15B
TM490017	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM490018	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM150128	Spectrum Analyzer	FSU26	R&S	22/24/27, 15C, 15E
TM23007	Oscilloscope	TDS684B	Tektronix	15E
TM22806	Battery	BAT 20/E	Fiskars	15C, 15B
TM22805	UPS	PS 20/1.2	Fiskars	15C, 15B
-	Temperature and humidity logger	175-H2	Testo	15C, 15B
-	Temperature and humidity logger	175-H2	Testo	22/24/27, 15C
-	Air pressure and temperature logger	635-2	Testo	22/24/27, 15C, 15B
-	Air pressure sensor	0638-1835	Testo	22/24/27, 15C, 15B
-	Temperature test chamber	VT 4002	Vötsch	22/24/27
2001	Bluetooth tester	CBT	R&S	15C, 15B
2009	LISN 50 µH	ENV216	R&S	15C, 15B
2010	LISN 50 µH	ENV216	R&S	15C, 15B
2012	Power splitter	11667B	Agilent	22/24/27, 15C
2013	Attenuator	8493C	Agilent	22/24/27, 15C
2014	Attenuator	8493C	Agilent	22/24/27, 15C
2019	Power splitter	ZN2PD-9G-S+	Mini-Circuits	15E
2020	Power splitter	ZN2PD-9G-S+	Mini-Circuits	15E
TM210166	Communication Tester	CMW500	R&S	22/24/27
TM210205	Communication Tester	CMU200	R&S	22/24/27
2023	Spectrum Analyzer	ESMI-RF	R&S	15B/15C
2024	Analyzer display unit	ESAI-D	R&S	15B/15C
TM110070	Signal Generator	SMF 100A	R&S	22/24/27, 15C, 15E, 15B
TM220065	Bluetooth tester	CBT	R&S	15C, 15B
TM210246	Communication Tester	CMU200	R&S	22/24/27, 15B
TM150131	Spectrum Analyzer	FSP30	R&S	22/24/27, 15C, 15E
TM210049	Communication Tester	CMU200	R&S	22/24/27

4.2. Radiated measurements

Eq. No	Equipment	Type	Manufacturer	Used in
-	Antenna	BBHA 9120 D	Schwarzbeck	22/24/27, 15C
TM38845	Receiver	ESIB 26	R&S	22/24/27, 15C, 15E, 15B
-	Antenna	HL562	R&S	22/24/27, 15C, 15E, 15B
-	Turntable	2188	EMCO	22/24/27, 15C, 15E, 15B
-	Turntable controller	2090	EMCO	22/24/27, 15C, 15E, 15B
-	RF system panel	OSP130	R&S	22/24/27, 15C, 15E, 15B
-	Mini mast	2075-2	ETS Lindgren	22/24/27, 15C, 15B
TM38843	Mini mast	2075	Emco	22/24/27, 15C, 15B
TM38842	Antenna mast controller	2090	Emco	22/24/27, 15C, 15B
TM30643	LISN 50 µH	LISN-5-20-2	FCC	22/24/27, 15C, 15B
TM30644	LISN 50 µH	LISN-5-20-2	FCC	22/24/27, 15C, 15B

Eq. No	Equipment	Type	Manufacturer	Used in
-	Temperature and humidity logger	175-H2	Testo	22/24/27, 15C, 15B
-	Air pressure and temperature logger	635-2	Testo	22/24/27, 15C, 15B
-	Air pressure sensor	0638-1835	Testo	22/24/27, 15C, 15B
TM37523	Preamplifier	AMF-4D-10M-3G-25-20P	Miteq	22/24/27, 15C, 15B
TM37498	Preamplifier	AMF-5D-020180-26-10P	Miteq	22/24/27, 15C, 15B
TM30599	Semi anechoic chamber	UNKNOWN	TDK	22/24/27, 15C, 15B
TM22638	Power supply	OL63743-901	-	22/24/27, 15C, 15E, 15B
TM38066	High pass filter	WHKX3.0/18G-12SS	Wainwright	22/24/27, 15C, 15E, 15B
2028	High pass filter	WHKX 1.0/15G-12SS	Wainwright	22/24/27, 15C, 15E, 15B
TM37545	Tunable notch filter	800.0/960.0-0.2/40-8SSK	Wainwright	22
TM26512	Tunable notch filter	WRCD1850/1910-0.2/40-10SSK	Wainwright	24
-	Band reject filter	WRCG1877/1883-1870/1890-40/6EE	Wainwright	24
-	Band reject filter	WRCG1729.4/1735.4-1722.4/1742.4-40/6SS	Wainwright	27
TM23892	Controller	G-1000SDX	Yaesu	22/24/27, 15C, 15E
2001	Bluetooth tester	CBT	R&S	15C, 15B
TM210203	Communication Tester	CMU200	R&S	22/24/27, 15B
6023	Antenna	VUBA 9117	Schwarzbeck	22/24/27
TM210166	Communication Tester	CMW500	R&S	22/24/27
2025	Antenna	HFH2-Z2	R&S	15C
TM110070	Signal Generator	SMF 100A	R&S	22/24/27, 15C, 15E, 15B
2052	Antenna	BBHA 9120 D	Schwarzbeck	22/24/27, 15C, 15B, 15E
-	Antenna	QSH18S20	Q-Par	22/24/27, 15C, 15B, 15E
-	Antenna	QSH20S20	Q-Par	22/24/27, 15C, 15B, 15E
-	Antenna	QSH20S20	Q-Par	22/24/27, 15C, 15B, 15E
TM220065	Bluetooth tester	CBT	R&S	15C, 15B

END OF REPORT