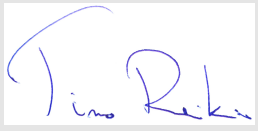
FCC Part 22/24/27 Compliance Test Report

Test Report no.:	FCC_Cellular_RM-1085_03_ant1	**Date of Report:**	18-Sep-2015
Number of pages:	133	**Customer's Contact person:**	Tia Melava
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) Joensuunkatu 7E FIN-24101 SALO, FINLAND Tel. +358 (0) 7180 08000 Fax. +358 71 80 44122
FCC listing no.: **IC recognition no.:**	94436 661AK-1		
Tested devices/ accessories:	**Phone RM-1085 / Battery BV-T4D / Charger AC-100E / Headset WH-308**		
FCC ID:	PYARM-1085	**IC:**	661X-RM1085
Supplement reports:	-		
Testing has been carried out in accordance with:	**CFR 47, FCC rules Parts 22/24/27, TIA-603-C-2004 and IC standards, RSS-GEN (Issue 4, November 2014), RSS-133 (Issue 6, January 2013), RSS-139 (Issue 2, February 2009), RSS-132 (Issue 3, January 2013), 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:	 Digitally signed by Timo Raiskio DN: cn=Timo Raiskio, o, ou, email=timo.raiskio@microsoft.com, c=FI Date: 2015.09.18 08:12:13 +03'00'		

Timo Raiskio, System Manager, EMC

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

Date of receipt	17-Jun-2015
Testing completed	29-Jun-2015
The customer's contact person	Tia Melava
Test Plan referred to	T:\Projects\RM-1085\TestPlan\RS_TestPlan_RM-1085.xlsm
Notes	LTE conducted output power results can be found in chapter 12. Appendix.
Document name	T:\Projects\RM-1085\EMC\FCC_Cellular_RM-1085_03_ant1.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-1085	004402742308392	2110	-	1063.00001.15244.09000	400011
Battery	BV-T4D	-	LGC V3.0	-	-	400012
Charger	AC-100E	4090495125580301759067575 8	0.3	-	-	400013
Headset	WH-308	-	-	-	-	400014
Phone	RM-1085	004402742308376;059W5J6	2110	-	01065.00000.15264.47000	400024
Battery	BV-T4D	4955405174010300359;0670771	LG v3.0	-	-	400025
Phone	RM-1085	004402742178365	2110	-	01065.00000.15264.47000	400026

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	NP
§22.913(a)	4.4	Radiated RF output power	PASSED
N/A	5.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	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

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	PASSED
N/A	6.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	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

WCDMA2:

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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	PASSED
N/A	6.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	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

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	NP
§27.50(d)(2)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	99 % occupied bandwidth	PASSED
§27.53(g)	6.5	Band edge compliance	PASSED
§27.53(g), §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

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	NP
§22.913(a)	4.4	Radiated RF output power	PASSED
N/A	5.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	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

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	NP
§24.232(b)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	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

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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	NP
§27.50(d)(4)	6.4	Radiated RF output power	PASSED
N/A	6.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	99 % occupied bandwidth	PASSED
§27.53(h)	6.5	Band edge compliance	PASSED
§27.53(h), §2.1051	6.5	Spurious emissions at antenna terminals	NP
§27.53(h), §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

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	NP
§22.913(a)	4.4	Radiated RF output power	PASSED
N/A	5.4	Peak to average power ratio	PASSED
§2.1049(h)	6.6	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

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	NP
§27.50(h)(2)	4.4	Radiated RF output power	PASSED
N/A	N/A	Peak to average power ratio	NP
§2.1049(h)	6.6	99 % occupied bandwidth	PASSED
§27.53(l)	4.5(b)	Band edge compliance	PASSED
§2.1051	4.5(b)	Spurious emissions at antenna terminals	NP
§27.53(l), §2.1053	4.5(b)	Spurious radiated emissions	PASSED
§27.54	4.3	Frequency stability, temperature variation	PASSED
§27.54	4.3	Frequency stability, voltage variation	PASSED

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	NP
§27.50(c)10	4.4	Radiated RF output power	PASSED
N/A	N/A	Peak to average power ratio	PASSED
§2.1049(h)	6.6	99 % occupied bandwidth	PASSED
§27.53(f)	4.6	Band edge compliance	PASSED
§27.53(f)	4.6	Spurious emissions at antenna terminals	NP
§27.53(f)	4.6	Spurious radiated emissions	PASSED
§27.54	4.3	Frequency stability, temperature variation	PASSED
§27.54	4.3	Frequency stability, voltage variation	PASSED

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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	NP
§27.50(c)(10)	4.4	Radiated RF output power	PASSED
N/A	N/A	Peak to average power ratio	PASSED
§2.1049(h)	6.6	99 % occupied bandwidth	PASSED
§27.53(g)	4.6	Band edge compliance	PASSED
§27.53(g), §2.1051	4.6	Spurious emissions at antenna terminals	NP
§27.53(g), §2.1051	4.6	Spurious radiated emissions	PASSED
§2.1055(a)	4.3 (a)	Frequency stability, temperature variation	PASSED
§2.1055(d)	4.3 (a)	Frequency stability, voltage variation	PASSED

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

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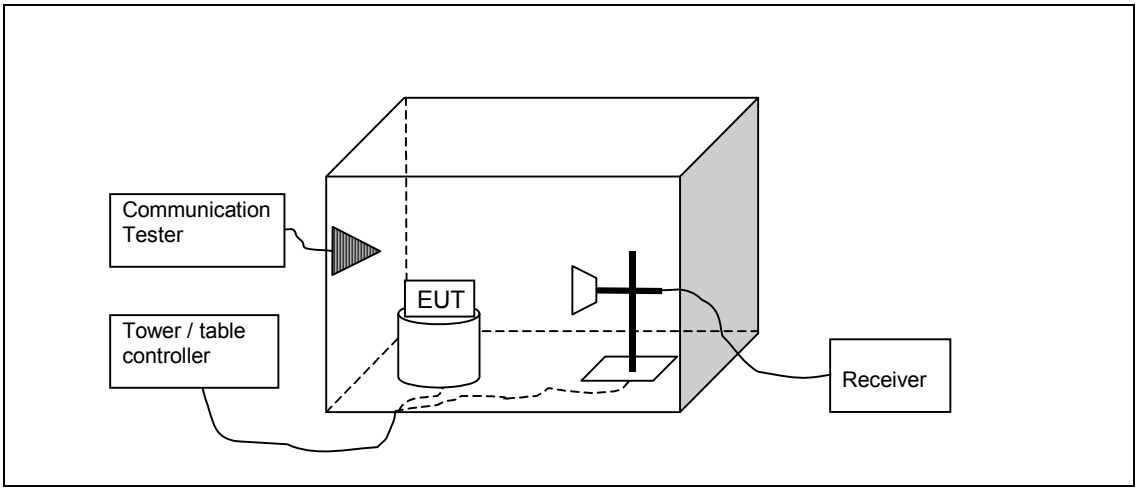
2. Radiated RF output power, Antenna 1

(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-1085, DUT 400024
Accessories with DUT numbers	BV-T4D, DUT 400025
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	LTE conducted output power results can be found in chapter 12. Appendix.
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	20 / 40 / 101.2
Date of measurements	16-Sep-2015
Measured by	Timo Raiskio

2.1.1 Test setup



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2.2. Test method and limit

The measurement is made according to TIA-603-C-2004 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

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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	27.78	0.599	-4.55	32.33	VERTICAL	PASSED
190 / 836.6	27.38	0.547	-4.25	31.63	HORIZONTAL	PASSED
251 / 848.8	25.61	0.364	-5.2	30.81	VERTICAL	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	23.79	0.239	-8.54	32.33	VERTICAL	PASSED
190 / 836.6	22.4	0.174	-9.23	31.63	HORIZONTAL	PASSED
251 / 848.8	24.58	0.287	-6.23	30.81	VERTICAL	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	30.44	1.106	-12.33	42.77	HORIZONTAL	PASSED
661 / 1880	30.34	1.081	-12.42	42.76	HORIZONTAL	PASSED
810 / 1909.8	29.83	0.961	-13.08	42.91	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	26.83	0.482	-15.94	42.77	HORIZONTAL	PASSED
661 / 1880	25.93	0.391	-16.83	42.76	HORIZONTAL	PASSED
810 / 1909.8	24.07	0.255	-18.84	42.91	HORIZONTAL	PASSED

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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	24.33	0.271	-18.46	42.79	HORIZONTAL	PASSED
9400 / 1880	23.31	0.214	-19.45	42.76	HORIZONTAL	PASSED
9538 / 1907.6	22.47	0.177	-20.38	42.85	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	24.01	0.252	-17.79	41.8	HORIZONTAL	PASSED
1412 / 1732.4	24.78	0.301	-17.11	41.89	HORIZONTAL	PASSED
1513 / 1752.6	24.81	0.302	-17.08	41.89	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	18.83	0.076	-13.65	32.48	VERTICAL	PASSED
4175 / 835	17.71	0.059	-14.22	31.93	VERTICAL	PASSED
4233 / 846.6	17.37	0.055	-13.42	30.79	VERTICAL	PASSED

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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	23.98	0.25	-18.79	42.77	HORIZONTAL	PASSED
18900 / 1880	23.06	0.202	-19.7	42.76	HORIZONTAL	PASSED
18900 / 1908.5	22.88	0.194	-20	42.88	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	23.94	0.248	-18.86	42.8	HORIZONTAL	PASSED
18900 / 1880	23.57	0.227	-19.19	42.76	HORIZONTAL	PASSED
18900 / 1900	22.54	0.179	-20.29	42.83	HORIZONTAL	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 / 1855	23.99	0.251	-18.89	42.88	HORIZONTAL	PASSED
18900 / 1880	23.5	0.224	-19.26	42.76	HORIZONTAL	PASSED
18900 / 1905	22.88	0.194	-19.96	42.84	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	23.98	0.25	-18.82	42.8	HORIZONTAL	PASSED
18900 / 1880	23.07	0.203	-19.69	42.76	HORIZONTAL	PASSED
18900 / 1900	22.52	0.178	-20.31	42.83	HORIZONTAL	PASSED

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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	24.32	0.27	-17.47	41.79	HORIZONTAL	PASSED
20175 / 1732.5	25.03	0.318	-16.86	41.89	HORIZONTAL	PASSED
20175 / 1753.5	25.01	0.317	-16.87	41.88	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	24.86	0.306	-17.03	41.89	HORIZONTAL	PASSED
20175 / 1732.5	25.03	0.318	-16.86	41.89	HORIZONTAL	PASSED
20175 / 1745	25.17	0.329	-16.73	41.9	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	24.1	0.257	-17.7	41.8	HORIZONTAL	PASSED
20175 / 1732.5	24.92	0.311	-16.97	41.89	HORIZONTAL	PASSED
20375 / 1752.5	25.15	0.327	-16.74	41.89	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	24.56	0.286	-17.33	41.89	HORIZONTAL	PASSED
20175 / 1732.5	24.93	0.311	-16.96	41.89	HORIZONTAL	PASSED
20175 / 1745	24.99	0.315	-16.91	41.9	HORIZONTAL	PASSED

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2.12. 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	18.9	0.078	-13.46	32.36	VERTICAL	PASSED
20525 / 836.5	18.62	0.073	-13.02	31.64	VERTICAL	PASSED
20525 / 847.5	17.86	0.061	-12.49	30.35	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	19.19	0.083	-13.03	32.22	VERTICAL	PASSED
20525 / 836.5	18.7	0.074	-12.94	31.64	HORIZONTAL	PASSED
20525 / 844	17.67	0.058	-13.33	31	VERTICAL	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	19.54	0.09	-12.93	32.47	VERTICAL	PASSED
20525 / 836.5	18.94	0.078	-12.7	31.64	HORIZONTAL	PASSED
20625 / 846.5	17.41	0.055	-12.87	30.28	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	19.02	0.08	-13.2	32.22	VERTICAL	PASSED
20525 / 836.5	18.74	0.075	-12.9	31.64	HORIZONTAL	PASSED
20525 / 844	17.72	0.059	-13.28	31	VERTICAL	PASSED

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2.13. 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	26.01	0.399	-20.64	46.65	HORIZONTAL	PASSED
21100 / 2535	25.42	0.349	-21.53	46.95	HORIZONTAL	PASSED
21100 / 2562.5	24.27	0.267	-22.68	46.95	HORIZONTAL	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	29.45	0.881	-17.2	46.65	HORIZONTAL	PASSED
21100 / 2535	28.36	0.685	-18.59	46.95	HORIZONTAL	PASSED
21100 / 2562.5	26.83	0.482	-20.12	46.95	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	25.87	0.387	-20.87	46.74	HORIZONTAL	PASSED
21100 / 2535	25.71	0.372	-21.24	46.95	HORIZONTAL	PASSED
21100 / 2560	24.87	0.307	-22.15	47.02	HORIZONTAL	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	29.69	0.93	-17.05	46.74	HORIZONTAL	PASSED
21100 / 2535	28.36	0.685	-18.59	46.95	HORIZONTAL	PASSED
21100 / 2560	27.03	0.504	-19.99	47.02	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 / 2510	26.05	0.403	-20.69	46.74	HORIZONTAL	PASSED
21100 / 2535	25.28	0.338	-21.67	46.95	HORIZONTAL	PASSED
21100 / 2560	24.98	0.315	-22.04	47.02	HORIZONTAL	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	29.61	0.915	-17.13	46.74	HORIZONTAL	PASSED
21100 / 2535	28.43	0.696	-18.52	46.95	HORIZONTAL	PASSED
21100 / 2560	27.22	0.527	-19.8	47.02	HORIZONTAL	PASSED

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2.14. LTE12 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 / 700.5	17.14	0.052	-13.32	30.46	VERTICAL	PASSED
23095 / 707.5	17.81	0.06	-12.34	30.15	HORIZONTAL	PASSED
23095 / 714.5	17.75	0.06	-12.75	30.5	VERTICAL	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 / 704	17.98	0.063	-11.95	29.93	HORIZONTAL	PASSED
23095 / 707.5	18	0.063	-12.68	30.68	VERTICAL	PASSED
23095 / 711	18.29	0.067	-12.34	30.63	VERTICAL	PASSED

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

Channel / f_C [MHz]	ERP [dBm]	ERP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
0 / 699.7	17.04	0.051	-13.4	30.44	VERTICAL	PASSED
23095 / 707.5	18.57	0.072	-12.11	30.68	VERTICAL	PASSED
23095 / 715.3	17.68	0.059	-12.81	30.49	VERTICAL	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	17.53	0.057	-12.4	29.93	HORIZONTAL	PASSED
23095 / 707.5	18.37	0.069	-12.31	30.68	VERTICAL	PASSED
23095 / 711	18.26	0.067	-12.37	30.63	VERTICAL	PASSED

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2.15. LTE17 test results

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

Channel / f_C [MHz]	ERP [dBm]	ERP [W]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
23755 / 706.5	17.56	0.057	-13.15	30.71	VERTICAL	PASSED
23790 / 710	17.52	0.057	-13.15	30.67	VERTICAL	PASSED
23825 / 713.5	17.23	0.053	-13.31	30.54	VERTICAL	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
23780 / 709	17.99	0.063	-12.24	30.23	HORIZONTAL	PASSED
23790 / 710	18.11	0.065	-12.18	30.29	HORIZONTAL	PASSED
23800 / 711	18.12	0.065	-12.51	30.63	VERTICAL	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	17.89	0.062	-12.34	30.23	HORIZONTAL	PASSED
23790 / 710	17.91	0.062	-12.38	30.29	HORIZONTAL	PASSED
23800 / 711	18.02	0.063	-12.28	30.3	HORIZONTAL	PASSED

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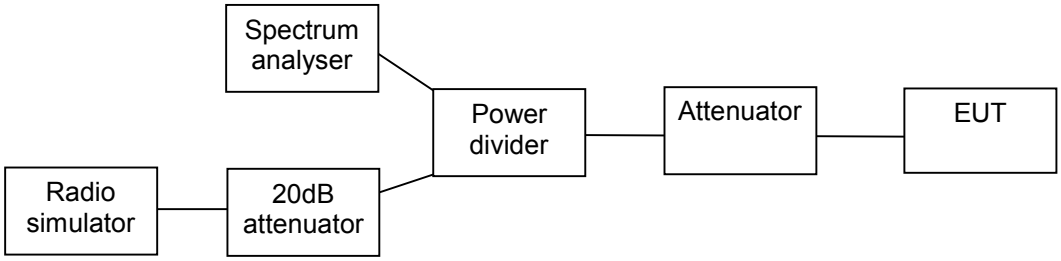
3. Peak to average power ratio, Antenna 1

(FCC N/A, RSS-133 6.4, RSS-139 6.4, RSS-132 5.4, RSS-130 N/A)

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	BV-T4D DUT400012, AC-100E DUT400013, WH-308 DUT400014
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	222 / 50 / 103.4
Date of measurements	29-Jun-2015
Measured by	Timo Raiskio

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 Peak to average power ratio measurements

Peak to average power ratio [dB]
≤ 13

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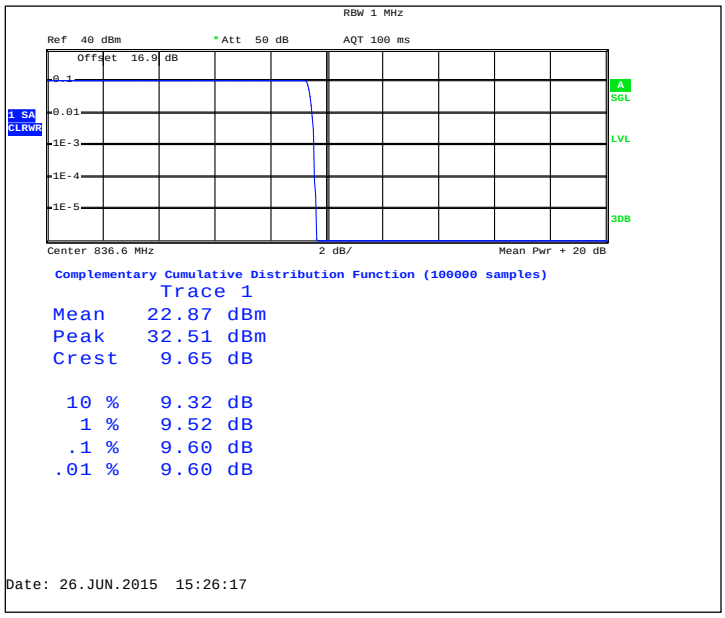
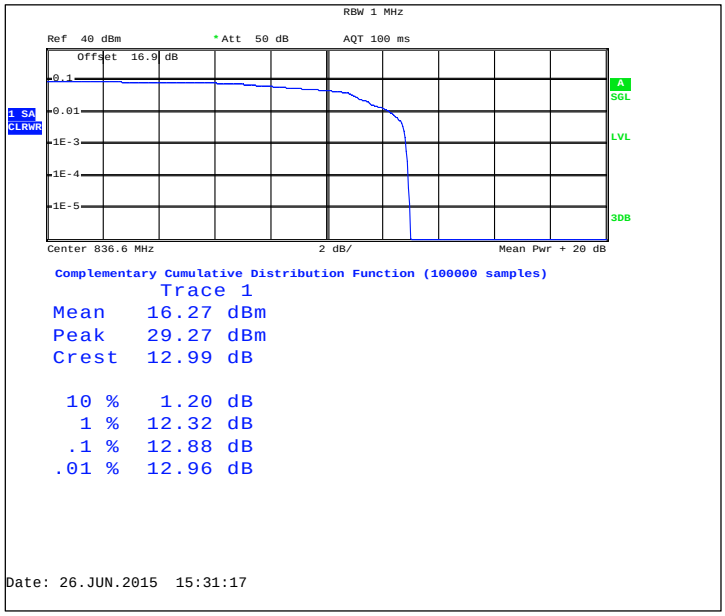
3.3. GSM 850 Test results

Operation mode (TX on)	Channel / f_C [MHz]	Peak to average power ratio [dB]	Result
GSM	190 / 836.6	9.65	PASSED
EGPRS	190 / 836.6	12.99	PASSED

GSM



EGPRS



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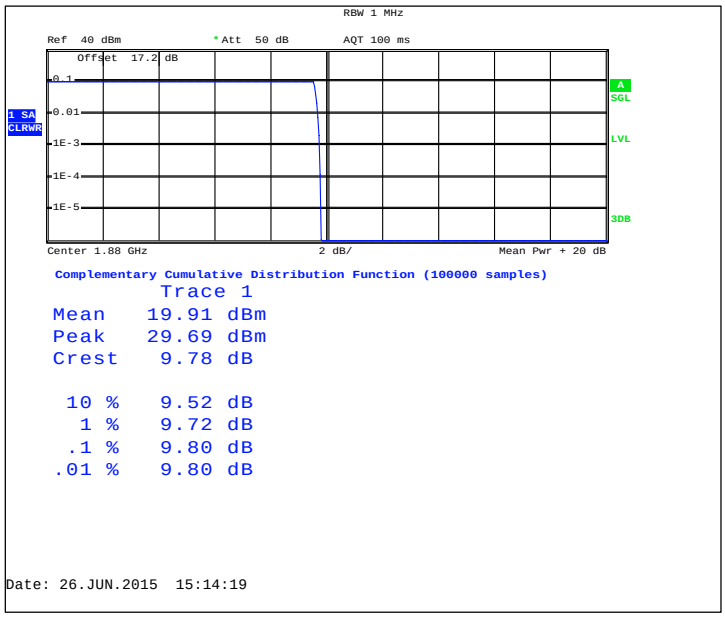
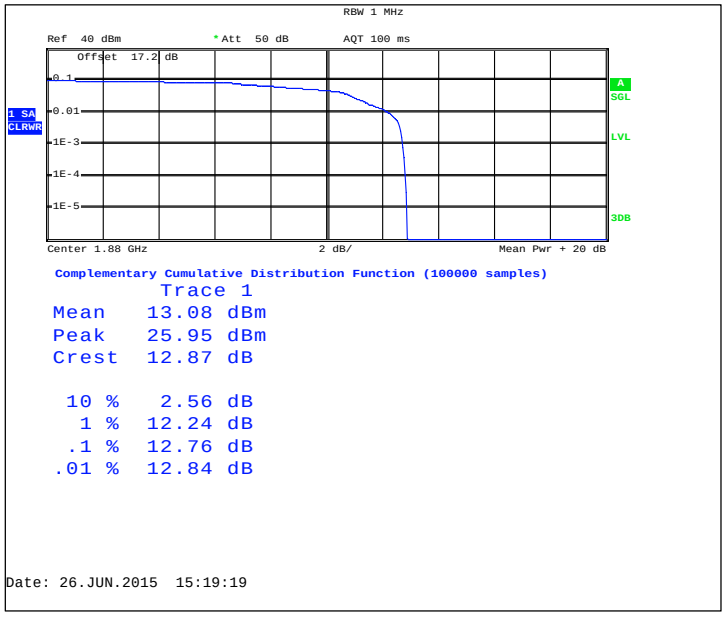
3.4. GSM 1900 Test results

Operation mode (TX on)	Channel / f_C [MHz]	Peak to average power ratio [dB]	Result
GSM	661 / 1880.0	9.78	PASSED
EGPRS	661 / 1880.0	12.87	PASSED

GSM



EGPRS



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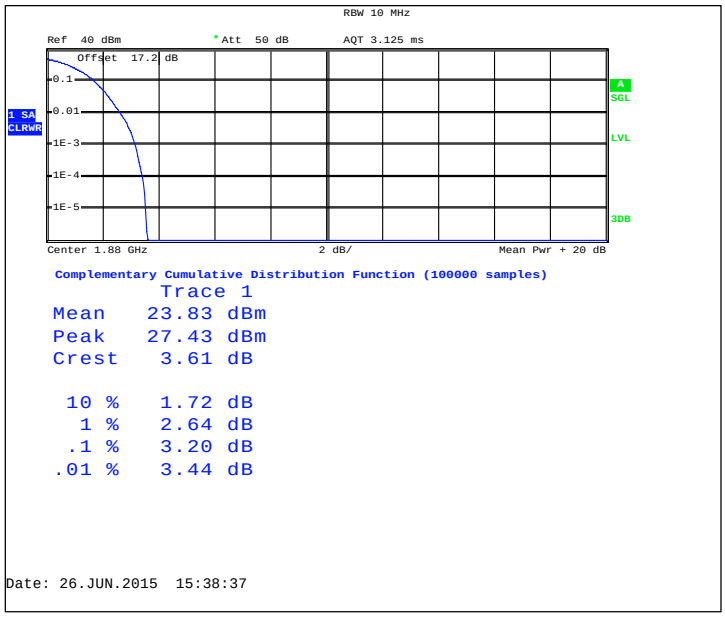
3.5. WCDMA2 Test results

Operation mode (TX on)	Channel / f_C [MHz]	Peak to average power ratio [dB]	Result
FDD	9400 / 1880.0	3.61	PASSED

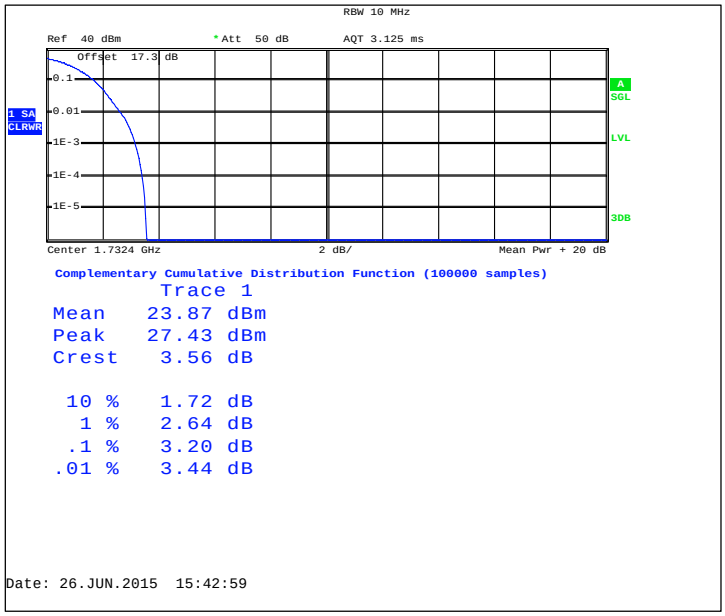
FDD



3.6. WCDMA4 Test results

Operation mode (TX on)	Channel / f_C [MHz]	Peak to average power ratio [dB]	Result
FDD	1412 / 1732.4	3.56	PASSED

FDD



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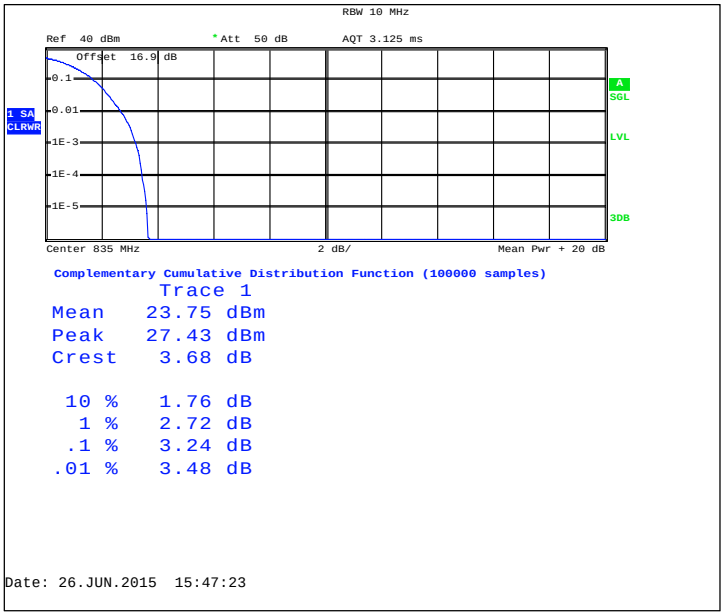
3.7. WCDMA5 Test results

Operation mode (TX on)	Channel / f_C [MHz]	Peak to average power ratio [dB]	Result
FDD	4175 / 835.0	3.68	PASSED

FDD



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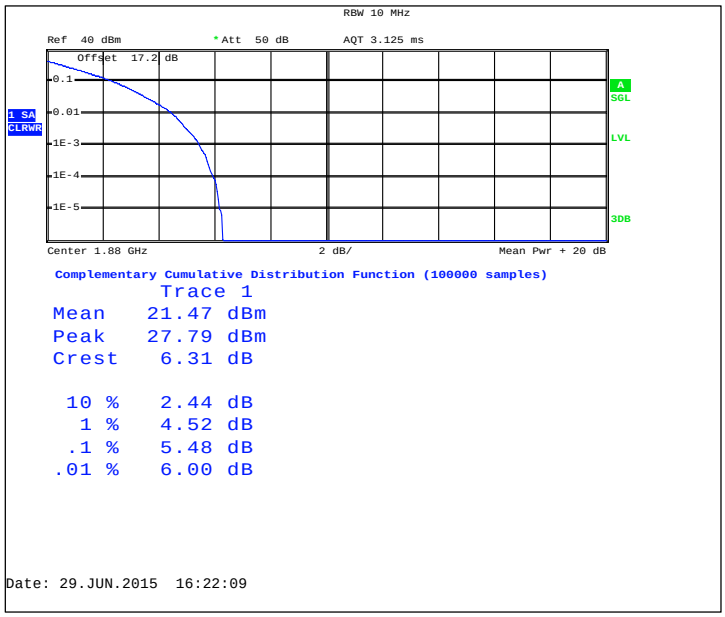
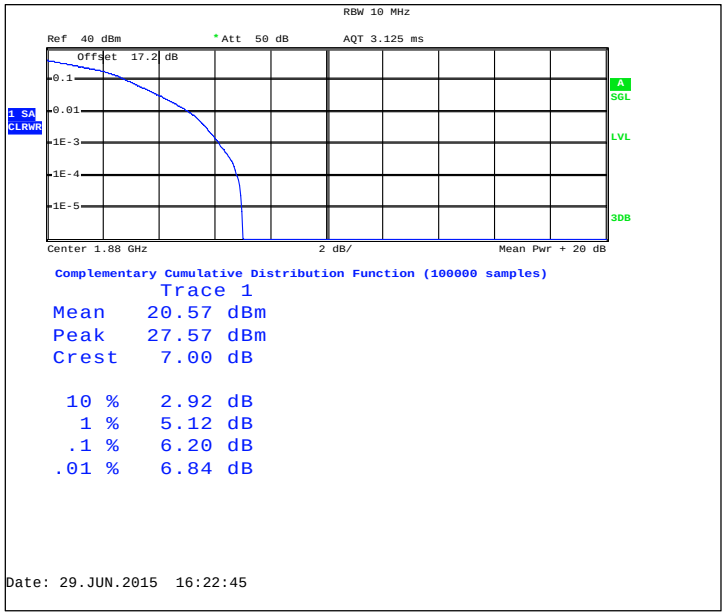
3.8. LTE2 Test results

Operation mode (TX on)	Channel / f_C [MHz]	Peak to average power ratio [dB]	Result
FDD, CBW 5MHz, QPSK, 25 RB	18900 / 1880.0	6.31	PASSED
FDD, CBW 5MHz, 16QAM, 25 RB	18900 / 1880.0	7.00	PASSED

FDD, CBW 5MHz, QPSK, 25 RB



FDD, CBW 5MHz, 16QAM, 25 RB



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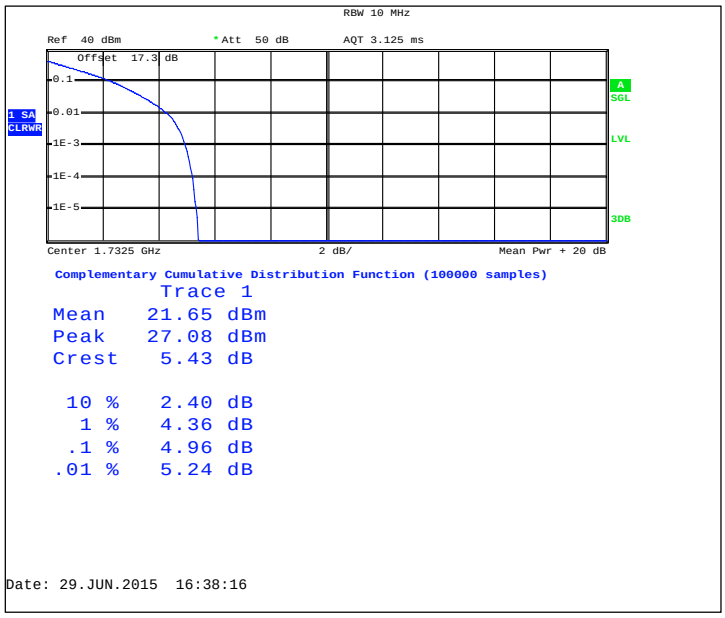
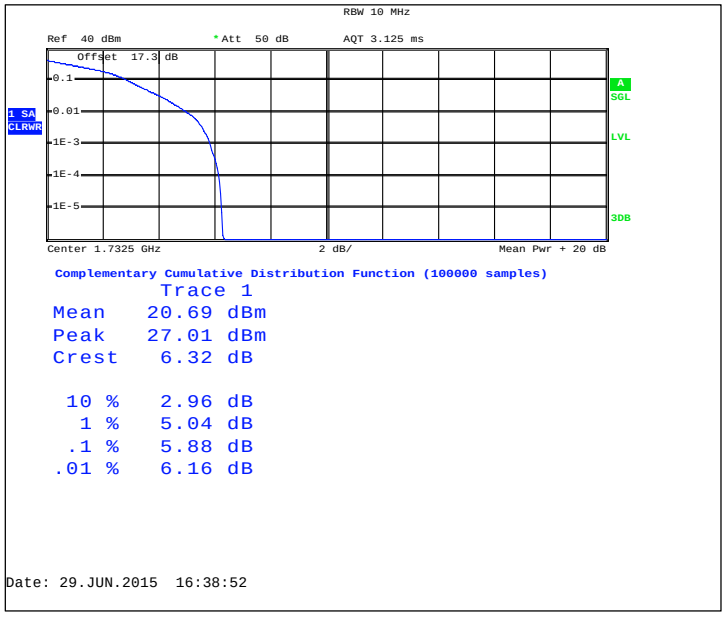
3.9. LTE4 Test results

Operation mode (TX on)	Channel / fc [MHz]	Peak to average power ratio [dB]	Result
FDD, CBW 5MHz, QPSK, 25 RB	20175 / 1732.5	5.43	PASSED
FDD, CBW 5MHz, 16QAM, 25 RB	20175 / 1732.5	6.32	PASSED

FDD, CBW 5MHz, QPSK, 25 RB



FDD, CBW 5MHz, 16QAM, 25 RB



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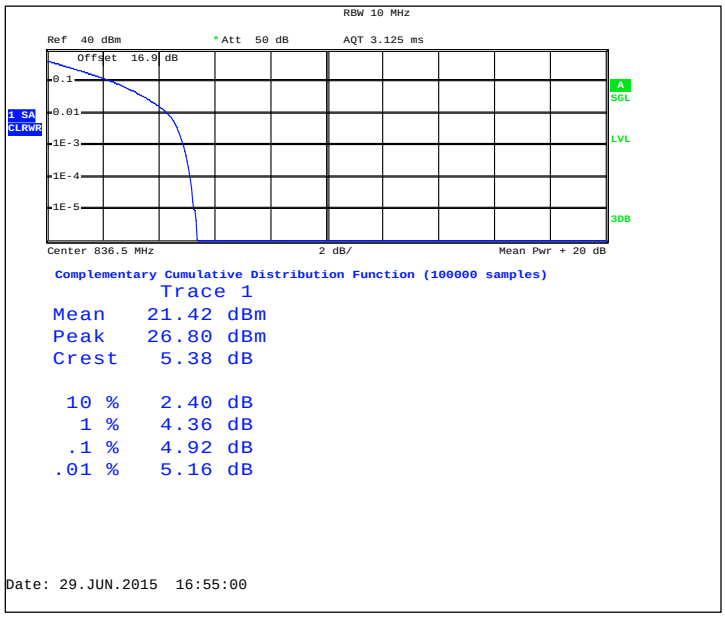
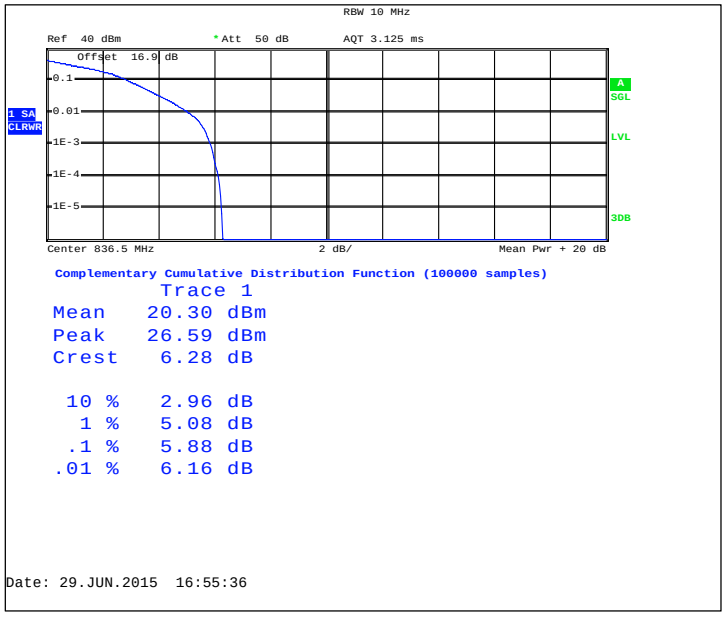
3.10. LTE5 Test results

Operation mode (TX on)	Channel / fc [MHz]	Peak to average power ratio [dB]	Result
FDD, CBW 5MHz, QPSK, 25 RB	20525 / 836.5	5.38	PASSED
FDD, CBW 5MHz, 16QAM, 25 RB	20525 / 836.5	6.28	PASSED

FDD, CBW 5MHz, QPSK, 25 RB



FDD, CBW 5MHz, 16QAM, 25 RB



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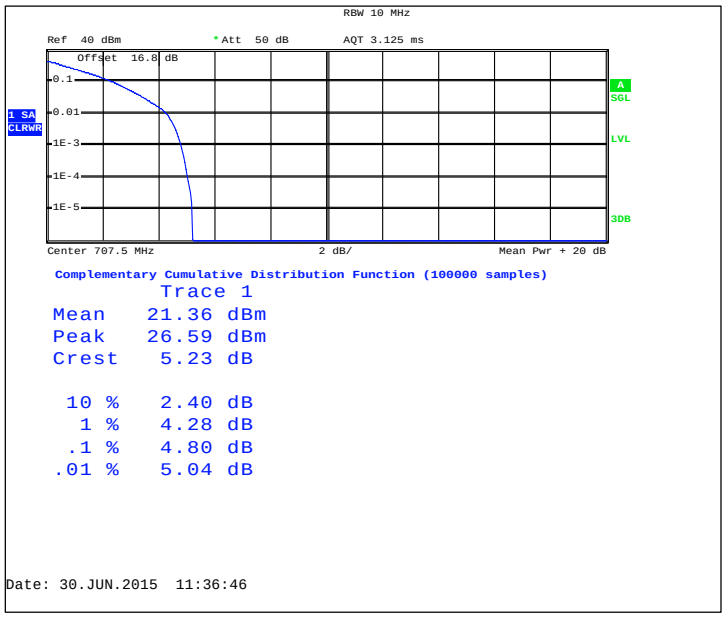
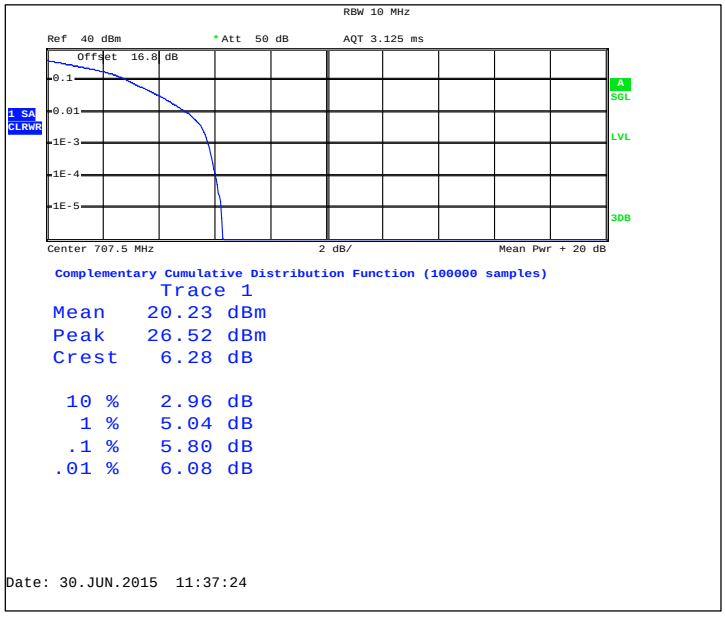
3.11. LTE12 Test results

Operation mode (TX on)	Channel / fc [MHz]	Peak to average power ratio [dB]	Result
FDD, CBW 5MHz, QPSK, 25 RB	23095 / 707.5	5.23	PASSED
FDD, CBW 5MHz, 16QAM, 25 RB	23095 / 707.5	6.28	PASSED

FDD, CBW 5MHz, QPSK, 25 RB



FDD, CBW 5MHz, 16QAM, 25 RB



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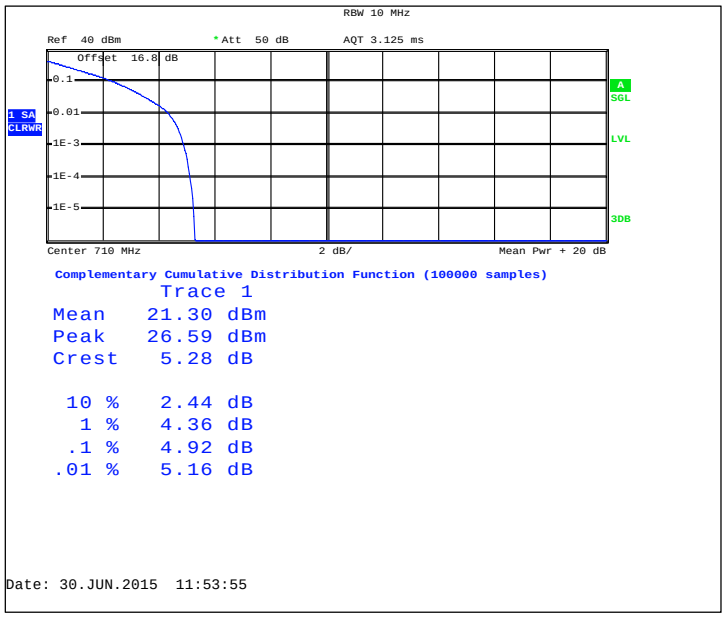
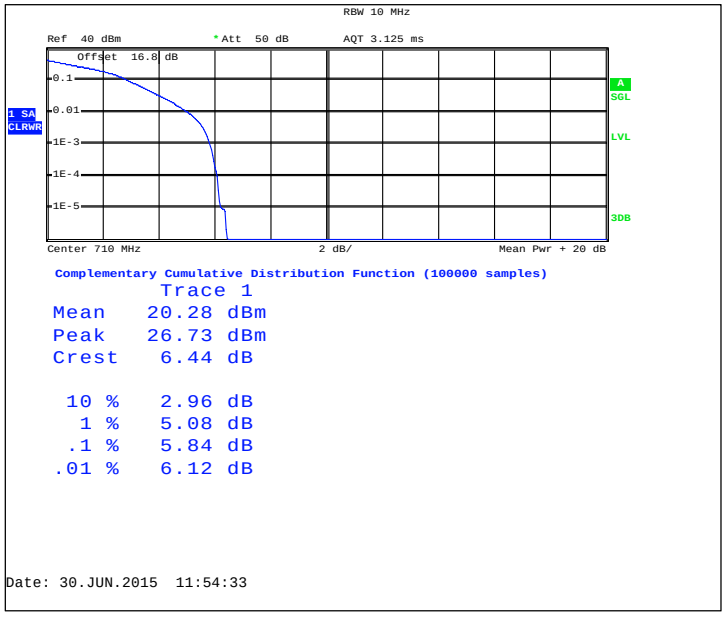
3.12. LTE17 Test results

Operation mode (TX on)	Channel / fc [MHz]	Peak to average power ratio [dB]	Result
FDD, CBW 5MHz, QPSK, 25 RB	23790 / 710.0	5.28	PASSED
FDD, CBW 5MHz, 16QAM, 25 RB	23790 / 710.0	6.44	PASSED

FDD, CBW 5MHz, QPSK, 25 RB



FDD, CBW 5MHz, 16QAM, 25 RB



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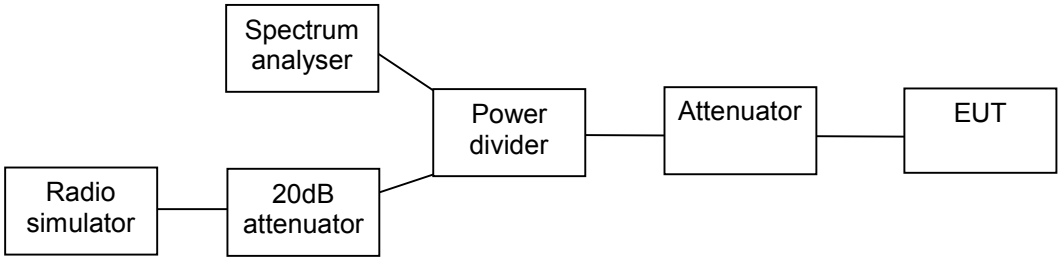
4. 99 % occupied bandwidth, Antenna 1

(FCC §2.1049(h), RSS-133 6.6, RSS-132 6.6, RSS-139 6.6)

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	BV-T4D DUT400012, AC-100E DUT400013, WH-308 DUT400014
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	20 / 50 / 100.4
Date of measurements	26-Jun-2015
Measured by	Timo Raiskio

4.1. Test Setup



4.2. Test method and limit

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

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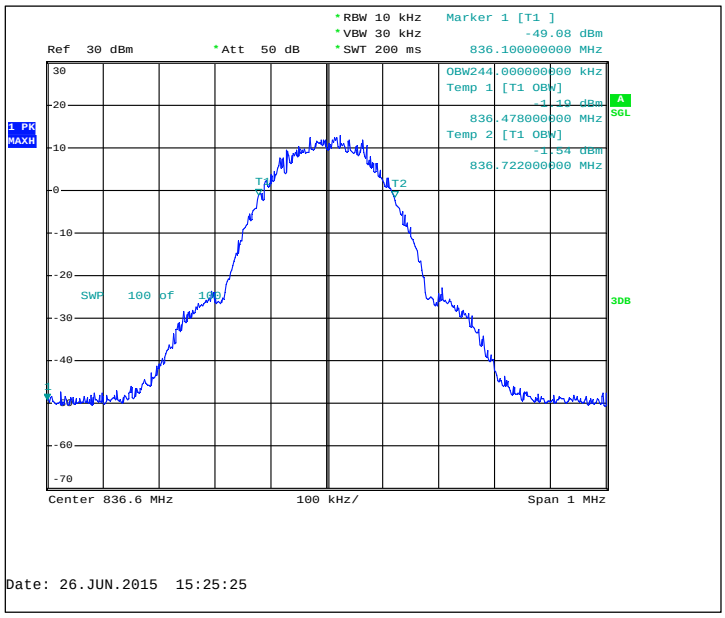
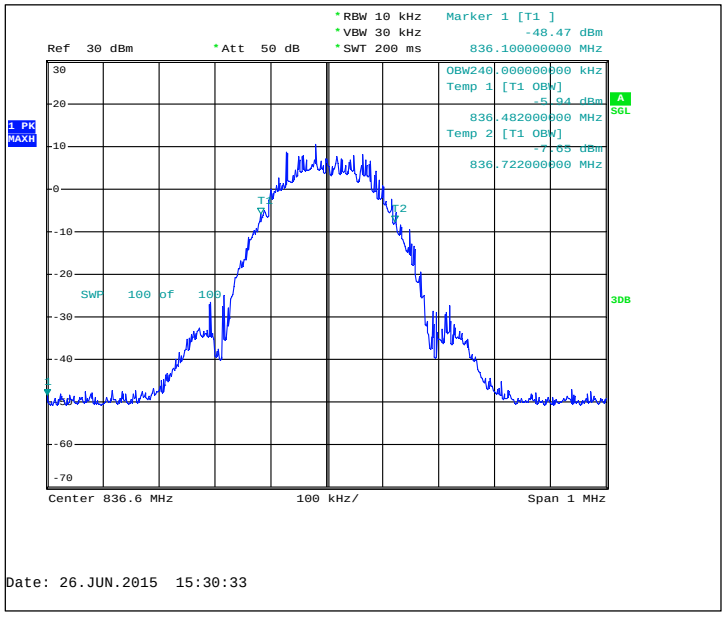
4.3. GSM 850 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
GSM	244
EGPRS	240

GSM, Channel 190 / 836.6 MHz



EGPRS, Channel 190 / 836.6 MHz



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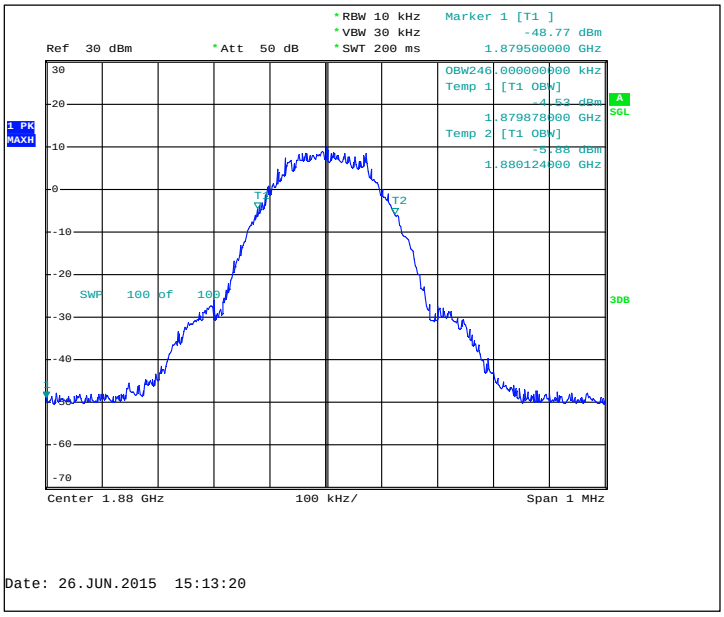
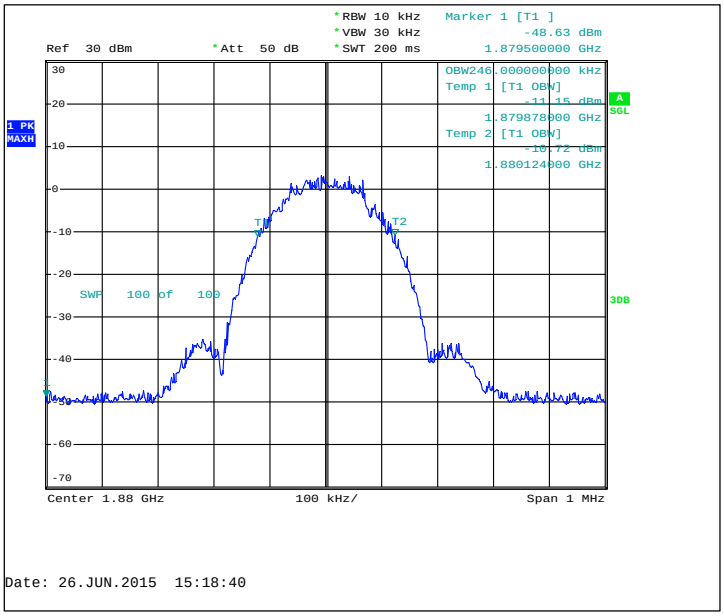
4.4. GSM 1900 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
GSM	246
EGPRS	246

GSM, Channel 661 / 1880.0 MHz



EGPRS, Channel 661 / 1880.0 MHz



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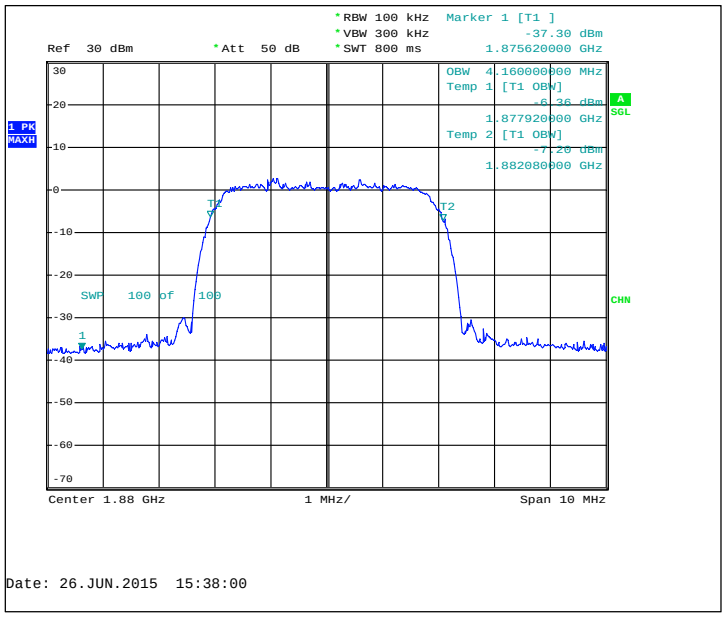
4.5. WCDMA2 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD	4160

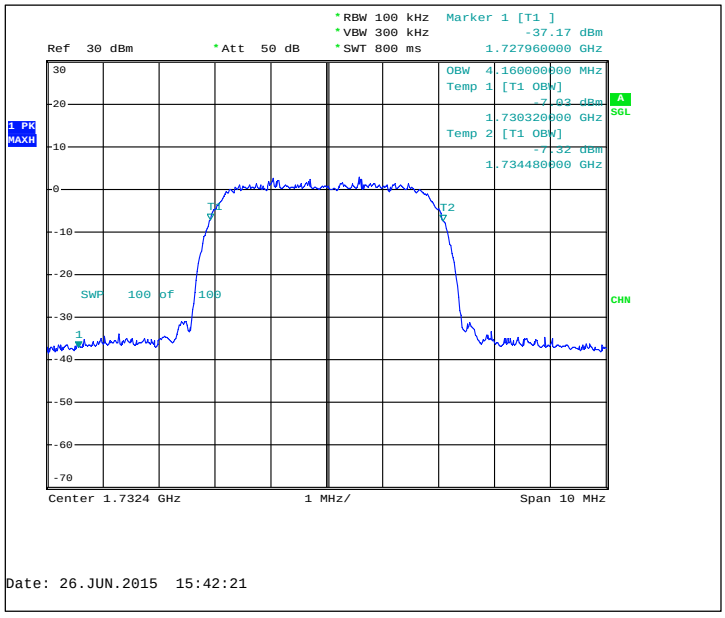
FDD, Channel 9400 / 1880.0 MHz



4.6. WCDMA4 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD	4160

FDD, Channel 1412 / 1732.4 MHz



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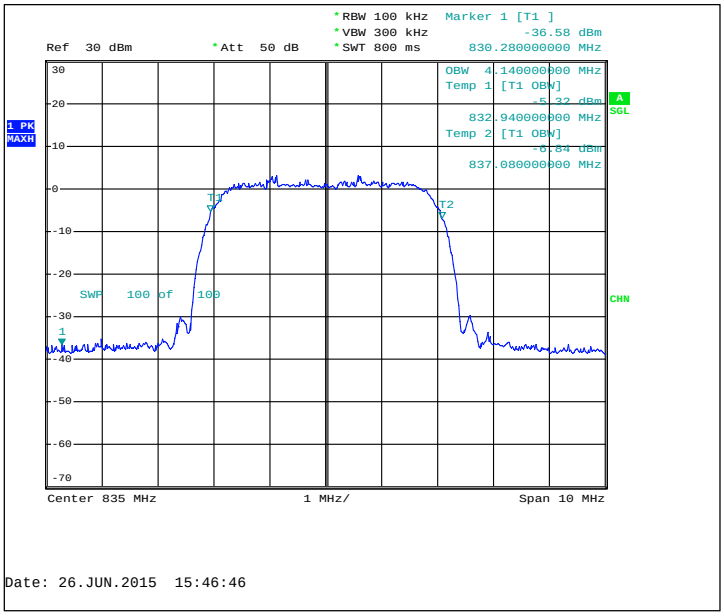
4.7. WCDMA5 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD	4140

FDD, Channel 4175 / 835.0 MHz



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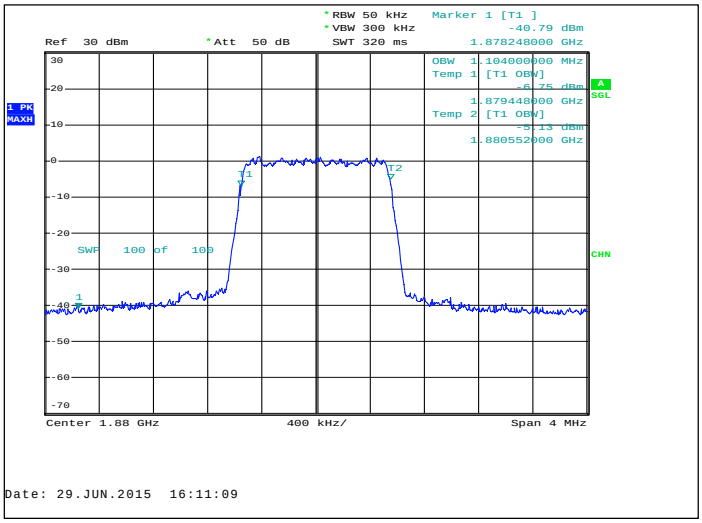
4.8. LTE2 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD, CBW 1.4MHz, QPSK, 6 RB	1104
FDD, CBW 3MHz, QPSK, 15 RB	2696
FDD, CBW 5MHz, QPSK, 25 RB	4494
FDD, CBW 10MHz, QPSK, 50 RB	8970
FDD, CBW 15MHz, QPSK, 75 RB	13440
FDD, CBW 20MHz, QPSK, 100 RB	17950
FDD, CBW 1.4MHz, 16QAM, 6 RB	1104
FDD, CBW 3MHz, 16QAM, 15 RB	2688
FDD, CBW 5MHz, 16QAM, 25 RB	4494
FDD, CBW 10MHz, 16QAM, 50 RB	8970
FDD, CBW 15MHz, 16QAM, 75 RB	13440
FDD, CBW 20MHz, 16QAM, 100 RB	17950

FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 18900 / 1880.0 MHz



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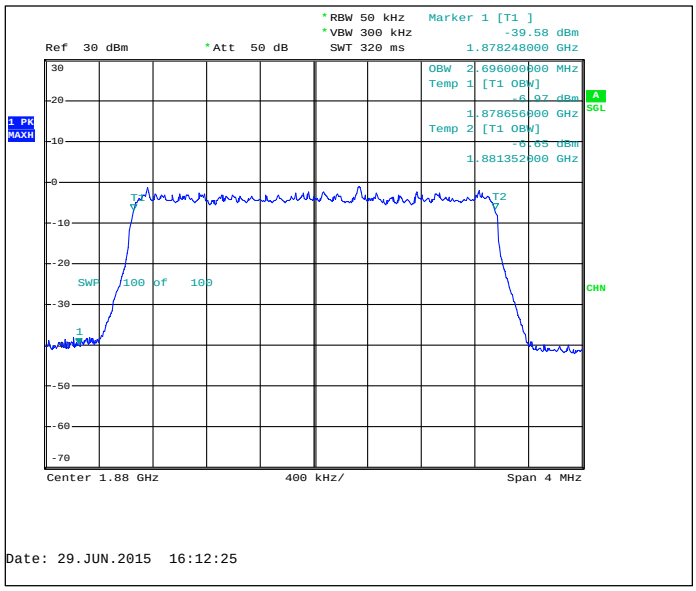
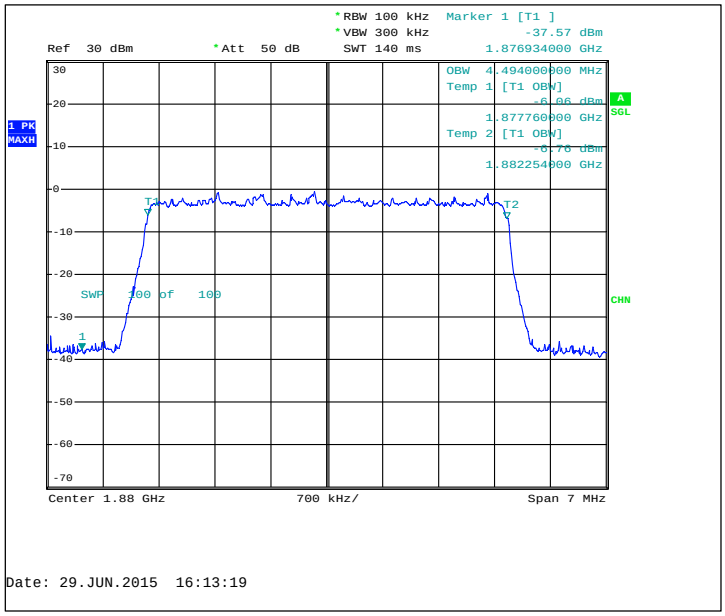
FDD, CBW 3MHz, QPSK, 15 RB, Channel 18900 / 1880.0 MHz



FDD, CBW 5MHz, QPSK, 25 RB, Channel 18900 / 1880.0 MHz



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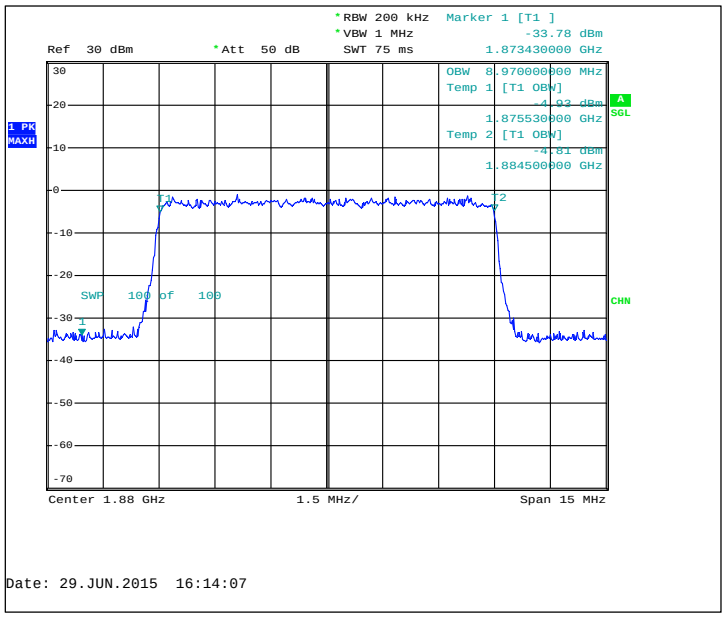
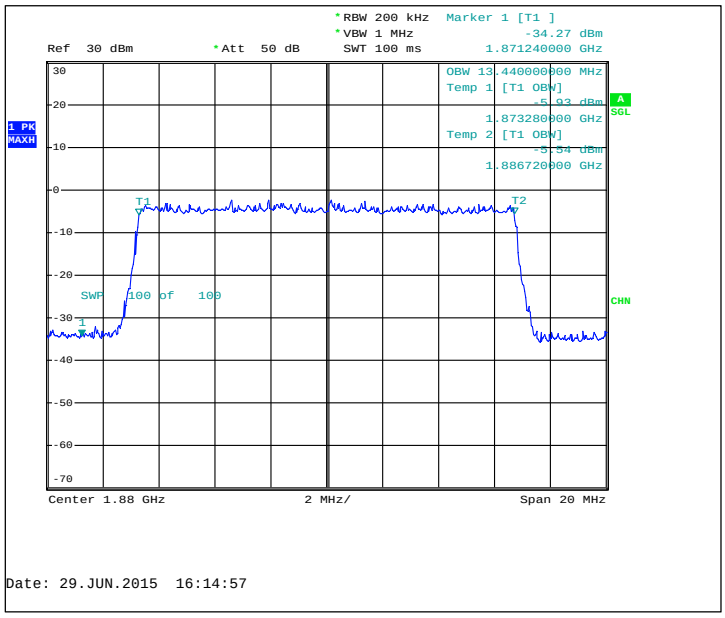
FDD, CBW 10MHz, QPSK, 50 RB, Channel 18900 / 1880.0 MHz



FDD, CBW 15MHz, QPSK, 75 RB, Channel 18900 / 1880.0 MHz



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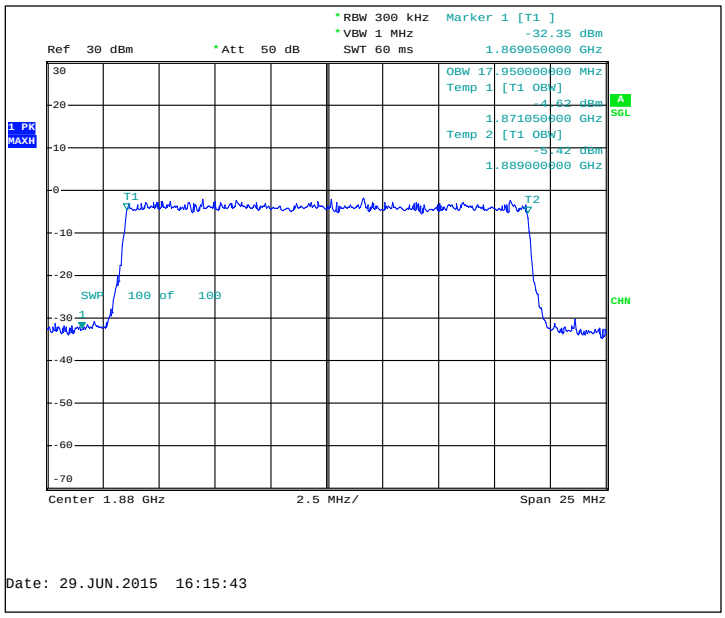
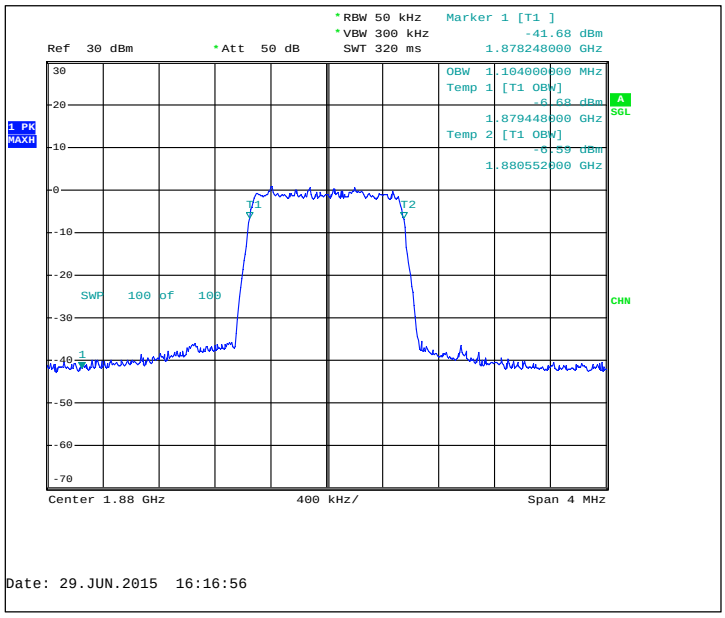
FDD, CBW 20MHz, QPSK, 100 RB, Channel 18900 / 1880.0 MHz



FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 18900 / 1880.0 MHz



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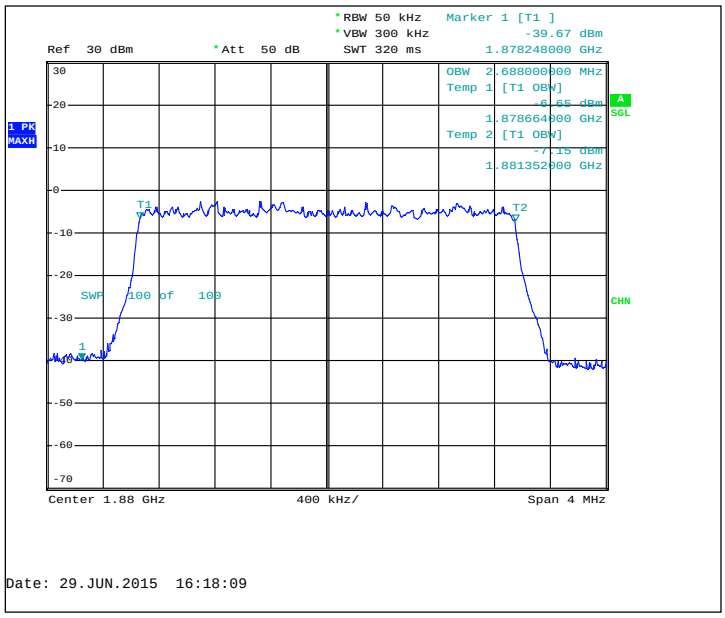
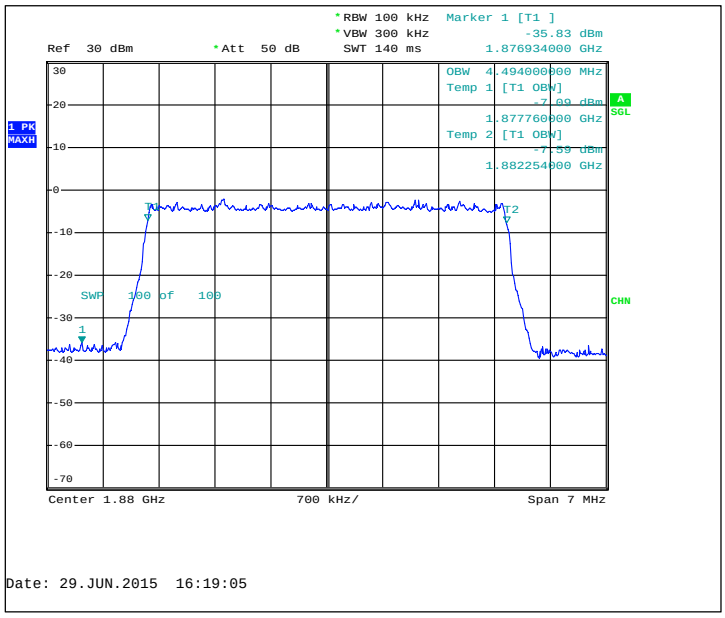
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 18900 / 1880.0 MHz



FDD, CBW 5MHz, 16QAM, 25 RB, Channel 18900 / 1880.0 MHz



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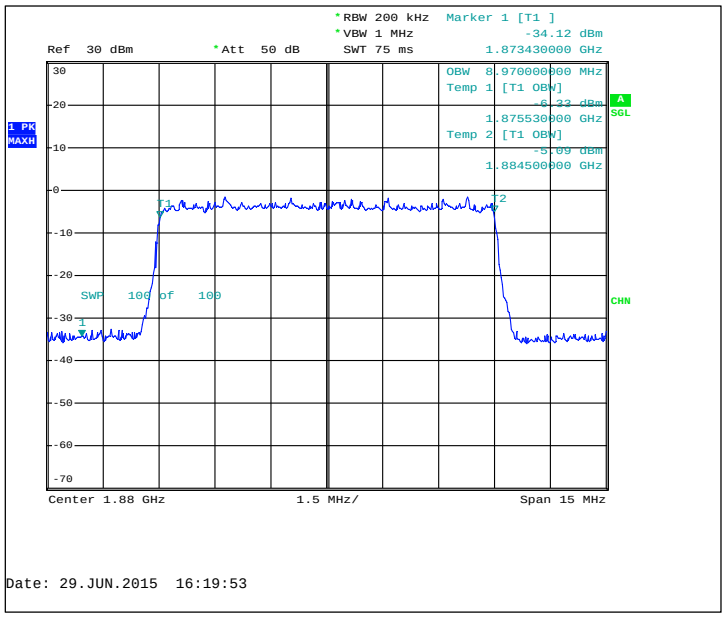
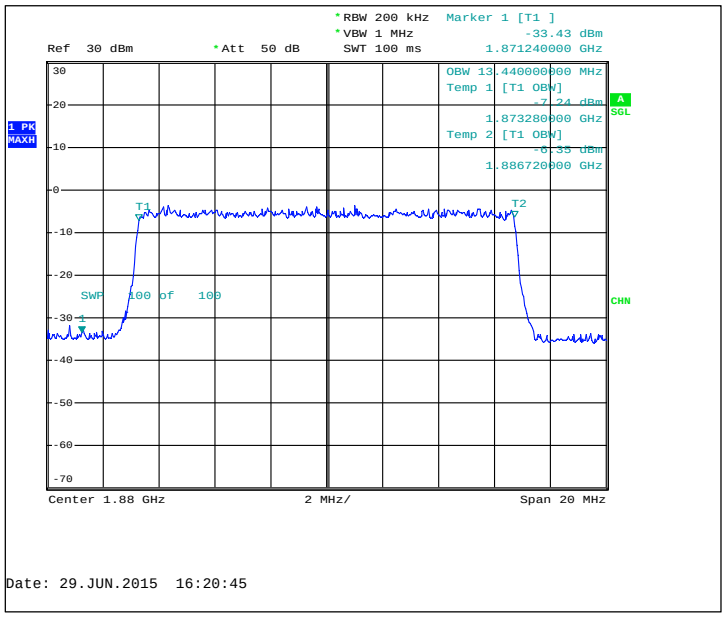
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 18900 / 1880.0 MHz



FDD, CBW 15MHz, 16QAM, 75 RB, Channel 18900 / 1880.0 MHz



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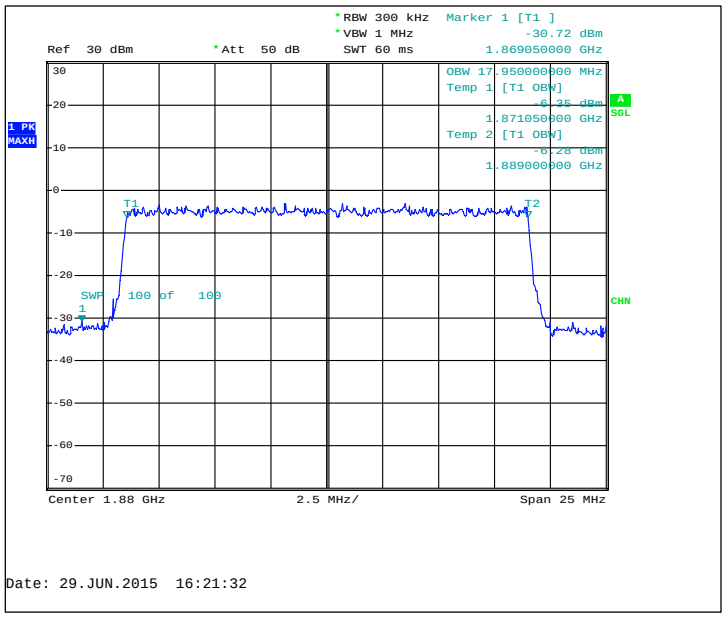
FDD, CBW 20MHz, 16QAM, 100 RB, Channel 18900 / 1880.0 MHz



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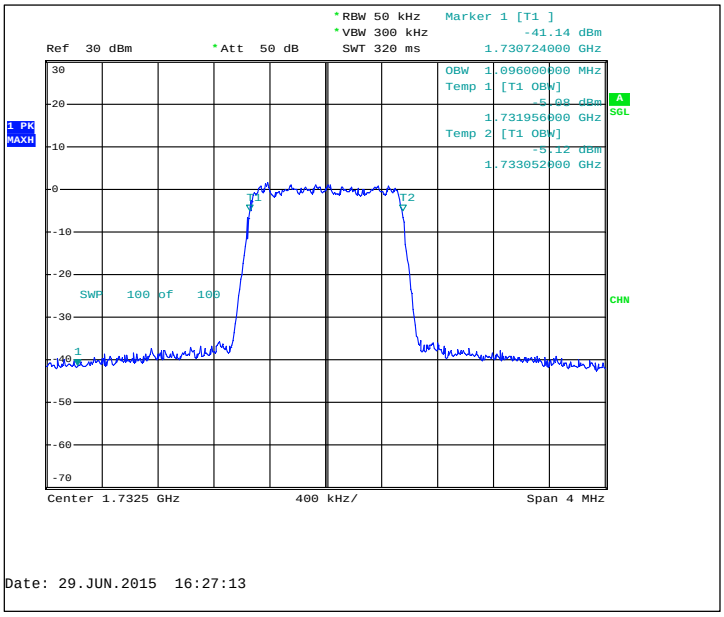
4.9. LTE4 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD, CBW 1.4MHz, QPSK, 6 RB	1096
FDD, CBW 3MHz, QPSK, 15 RB	2696
FDD, CBW 5MHz, QPSK, 25 RB	4494
FDD, CBW 10MHz, QPSK, 50 RB	8970
FDD, CBW 15MHz, QPSK, 75 RB	13480
FDD, CBW 20MHz, QPSK, 100 RB	17900
FDD, CBW 1.4MHz, 16QAM, 6 RB	1104
FDD, CBW 3MHz, 16QAM, 15 RB	2688
FDD, CBW 5MHz, 16QAM, 25 RB	4480
FDD, CBW 10MHz, 16QAM, 50 RB	8970
FDD, CBW 15MHz, 16QAM, 75 RB	13400
FDD, CBW 20MHz, 16QAM, 100 RB	17950

FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 20175 / 1732.5 MHz



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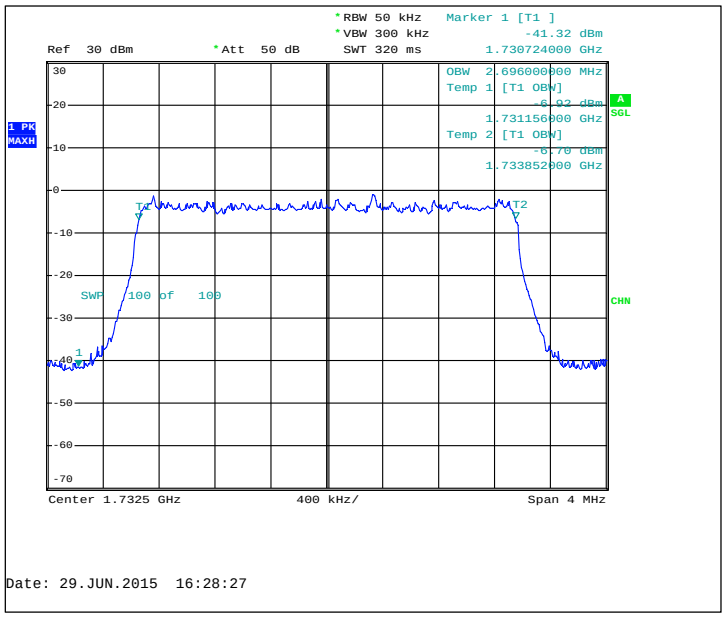
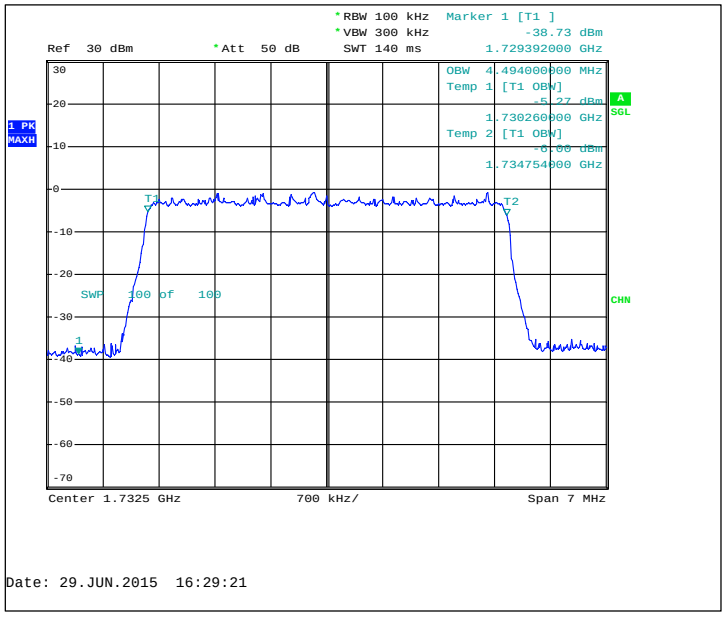
FDD, CBW 3MHz, QPSK, 15 RB, Channel 20175 / 1732.5 MHz



FDD, CBW 5MHz, QPSK, 25 RB, Channel 20175 / 1732.5 MHz



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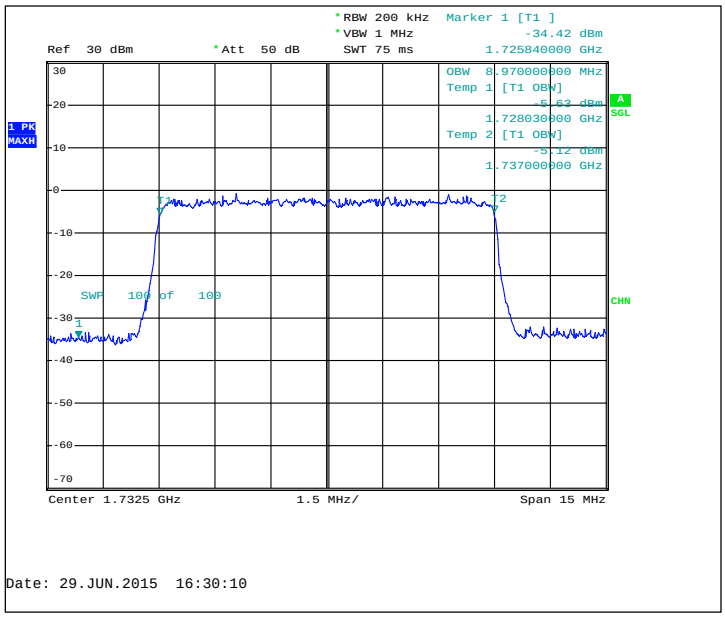
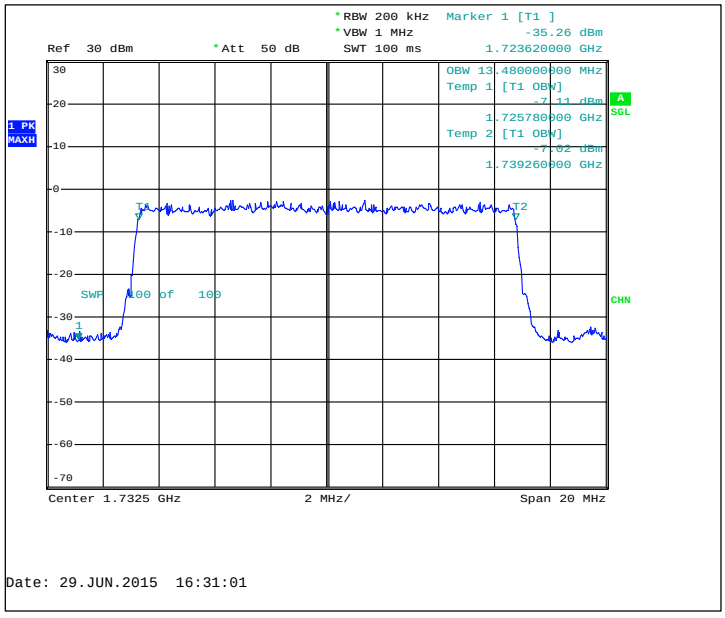
FDD, CBW 10MHz, QPSK, 50 RB, Channel 20175 / 1732.5 MHz



FDD, CBW 15MHz, QPSK, 75 RB, Channel 20175 / 1732.5 MHz



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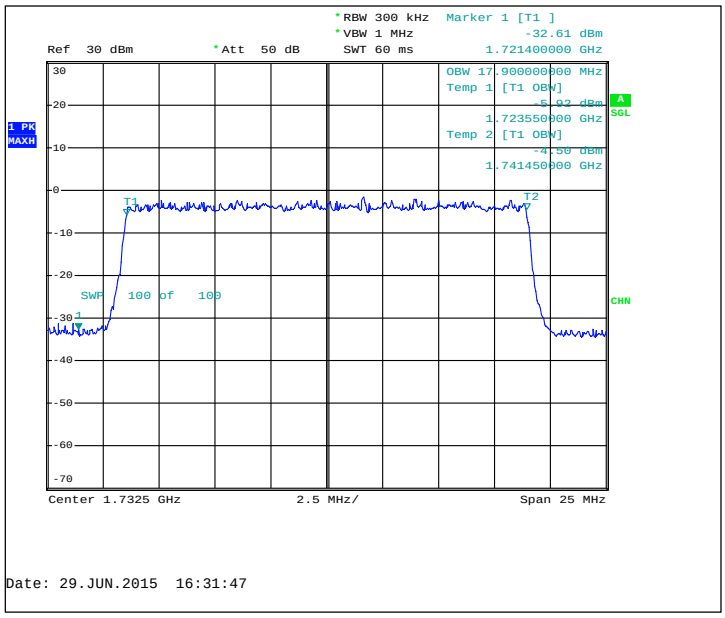
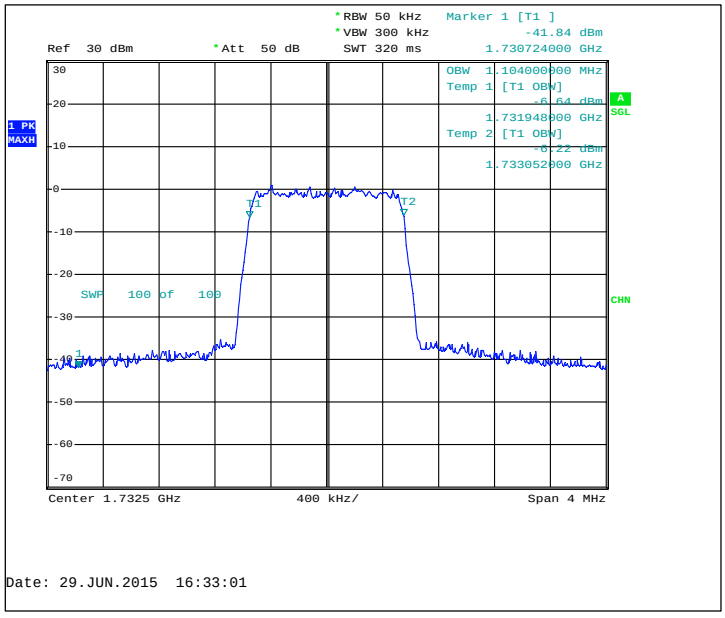
FDD, CBW 20MHz, QPSK, 100 RB, Channel 20175 / 1732.5 MHz



FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 20175 / 1732.5 MHz



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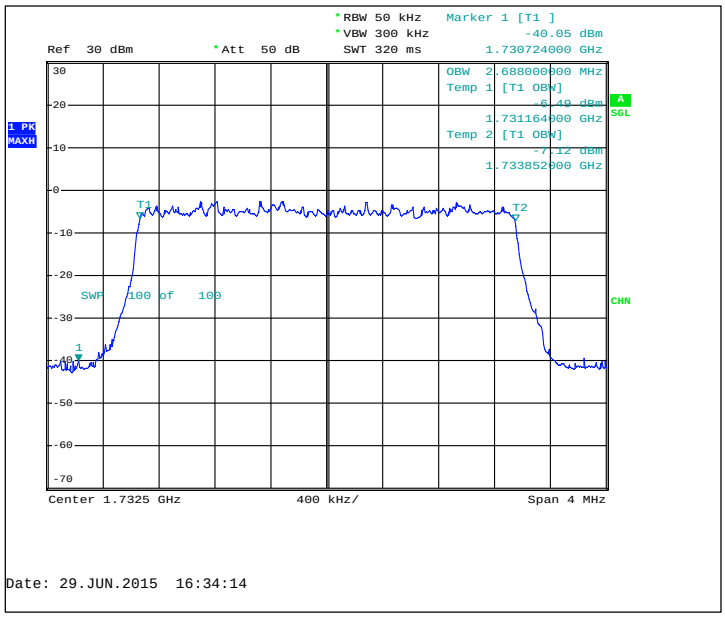
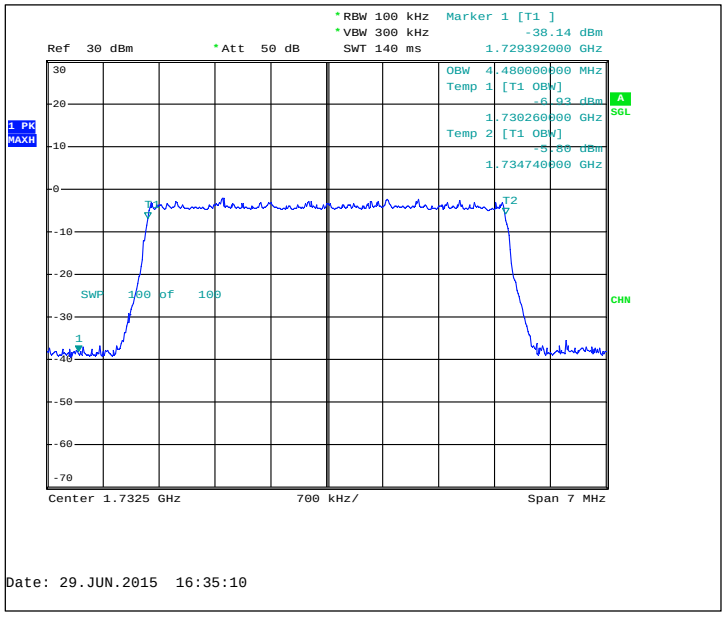
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 20175 / 1732.5 MHz



FDD, CBW 5MHz, 16QAM, 25 RB, Channel 20175 / 1732.5 MHz



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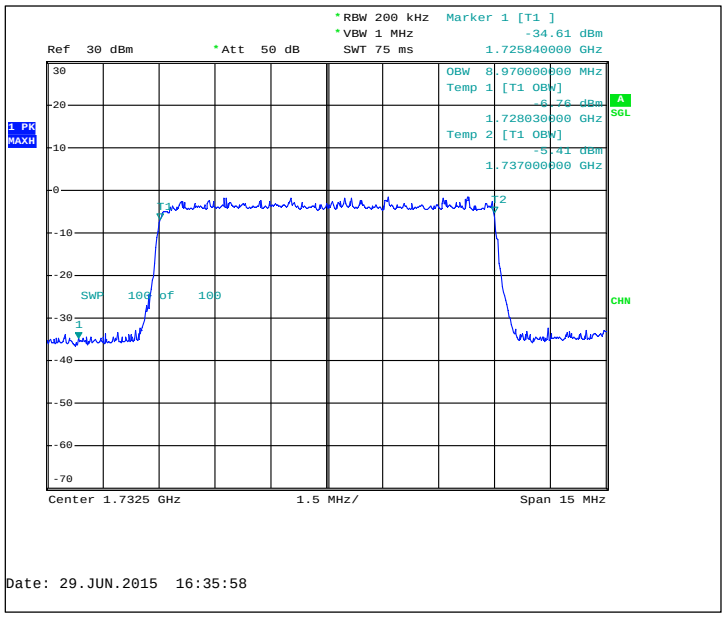
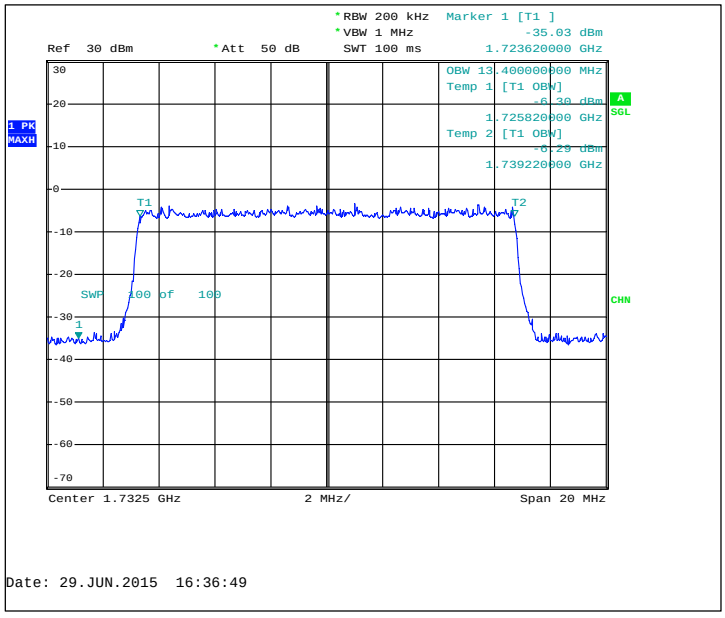
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 20175 / 1732.5 MHz



FDD, CBW 15MHz, 16QAM, 75 RB, Channel 20175 / 1732.5 MHz



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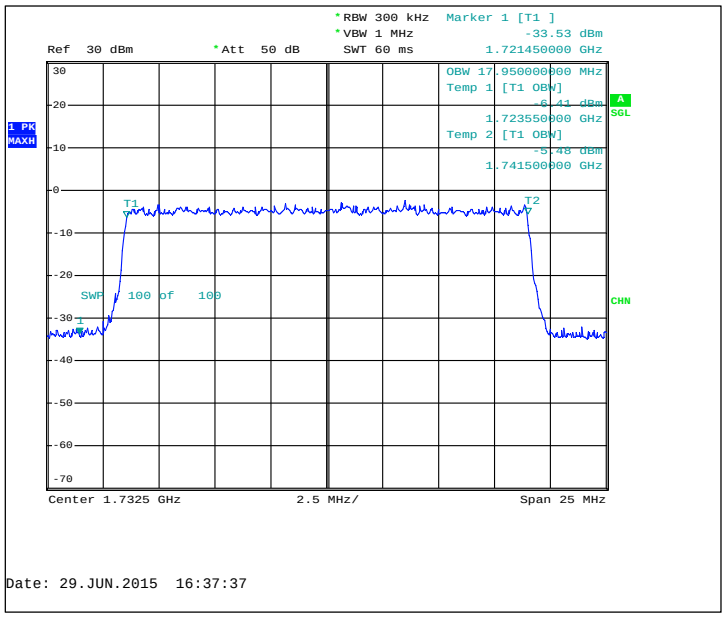
FDD, CBW 20MHz, 16QAM, 100 RB, Channel 20175 / 1732.5 MHz



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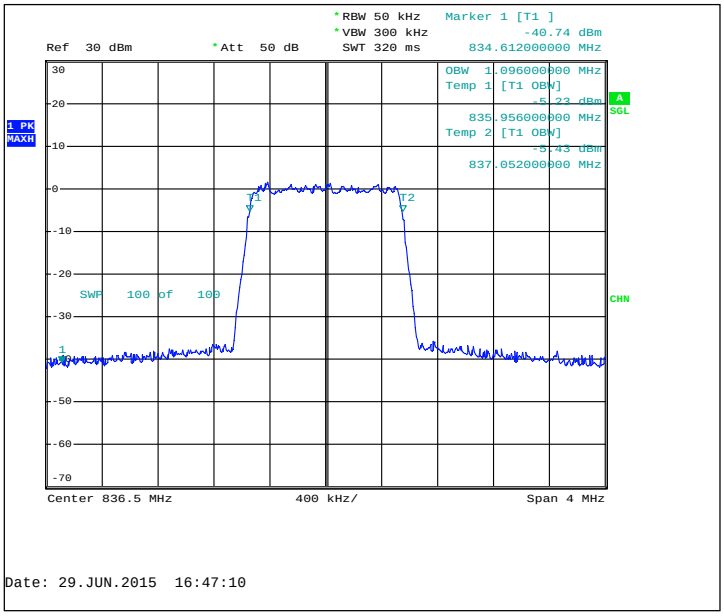
4.10. LTE5 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD, CBW 1.4MHz, QPSK, 6 RB	1096
FDD, CBW 3MHz, QPSK, 15 RB	2696
FDD, CBW 5MHz, QPSK, 25 RB	4494
FDD, CBW 10MHz, QPSK, 50 RB	8970
FDD, CBW 1.4MHz, 16QAM, 6 RB	1104
FDD, CBW 3MHz, 16QAM, 15 RB	2688
FDD, CBW 5MHz, 16QAM, 25 RB	4494
FDD, CBW 10MHz, 16QAM, 50 RB	8970

FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 20525 / 836.5 MHz



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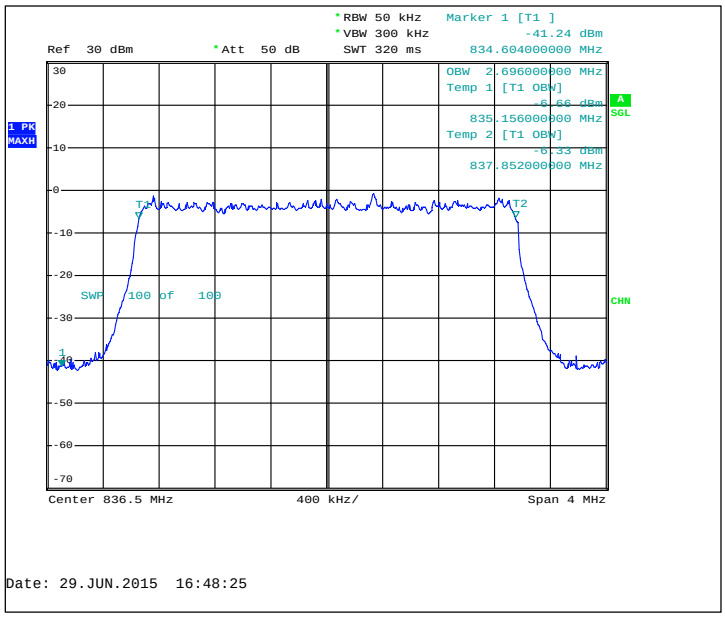
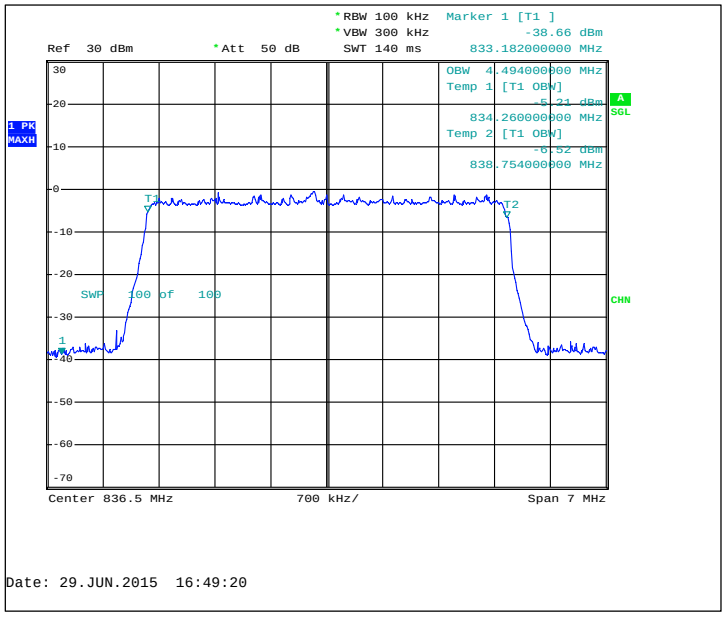
FDD, CBW 3MHz, QPSC, 15 RB, Channel 20525 / 836.5 MHz



FDD, CBW 5MHz, QPSK, 25 RB, Channel 20525 / 836.5 MHz



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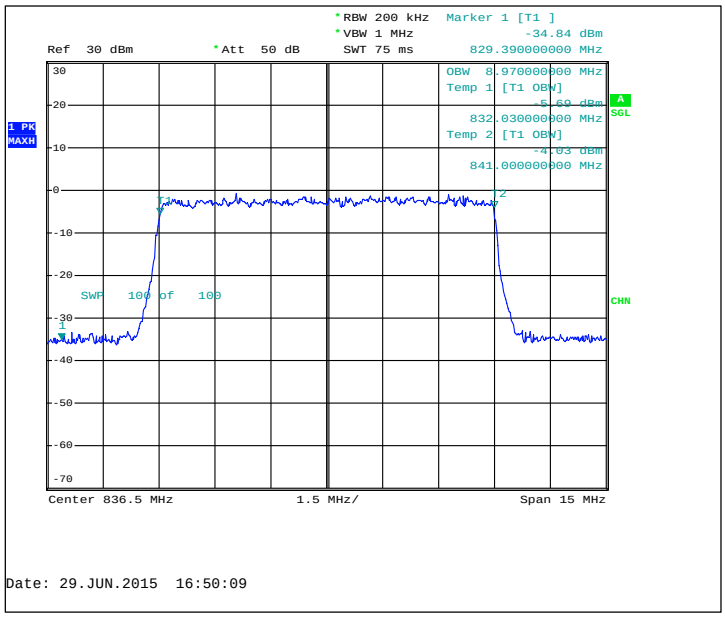
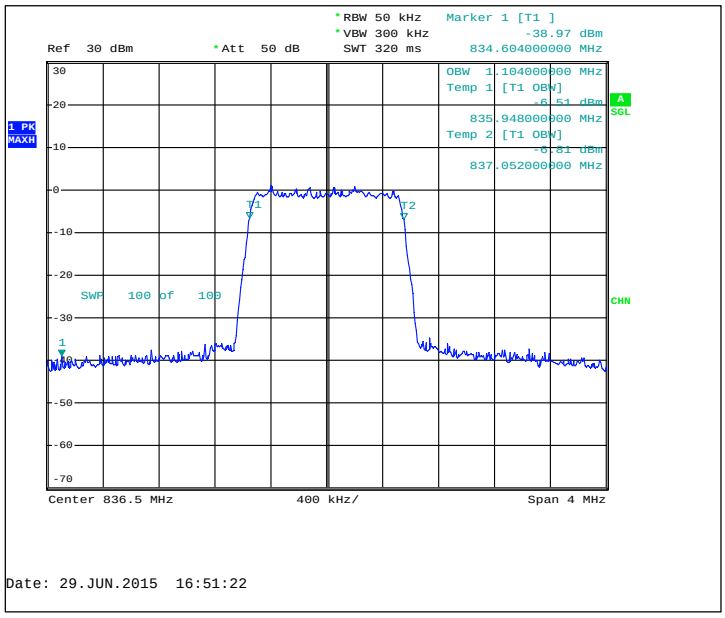
FDD, CBW 10MHz, QPSK, 50 RB, Channel 20525 / 836.5 MHz



FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 20525 / 836.5 MHz



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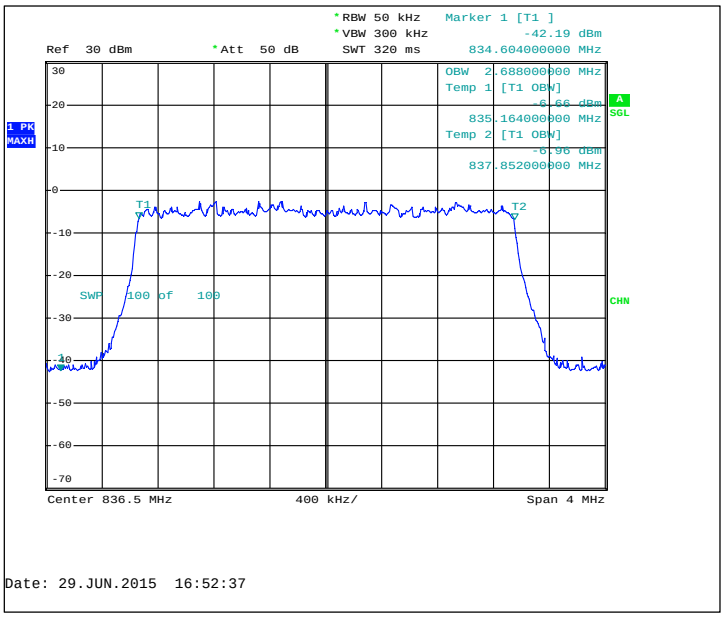
FDD, CBW 3MHz, 16QAM, 15 RB, Channel 20525 / 836.5 MHz



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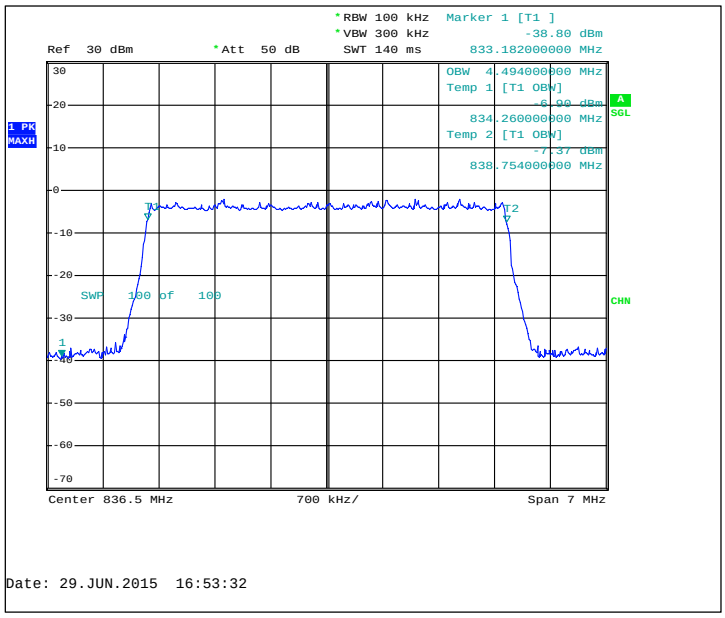
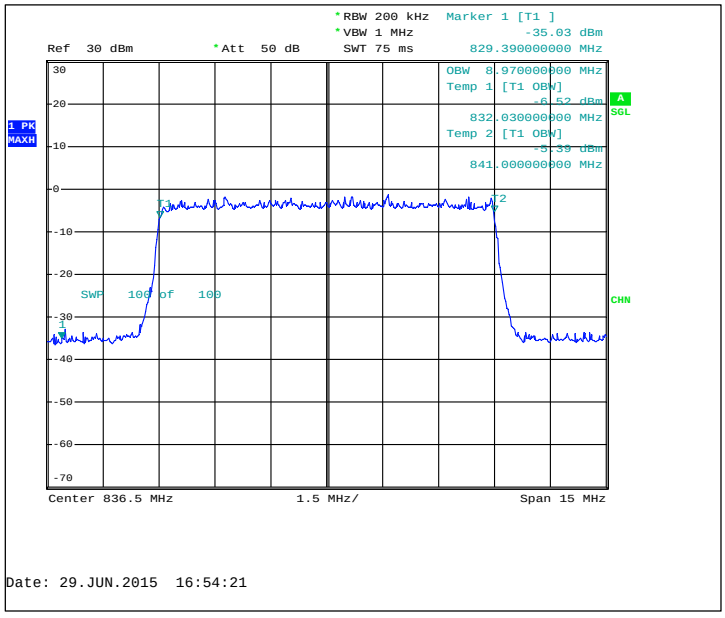
FDD, CBW 5MHz, 16QAM, 25 RB, Channel 20525 / 836.5 MHz



FDD, CBW 10MHz, 16QAM, 50 RB, Channel 20525 / 836.5 MHz



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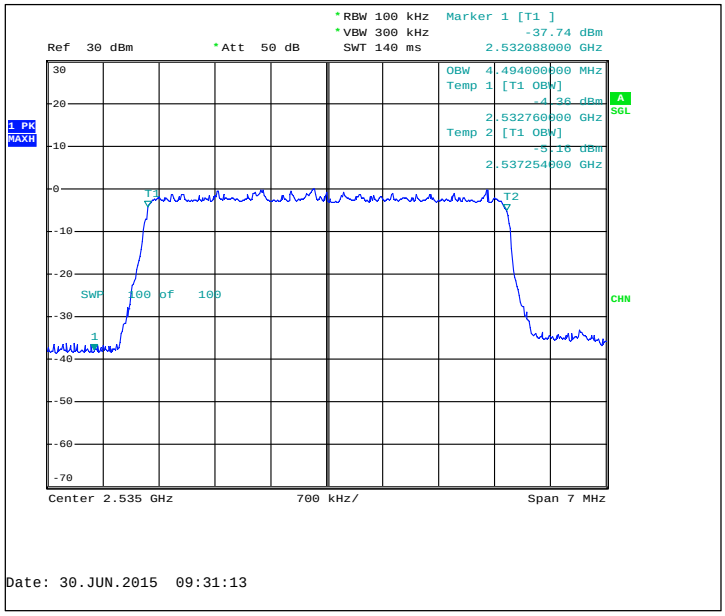
4.11. LTE7 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD, CBW 5MHz, QPSK, 25 RB	4494
FDD, CBW 10MHz, QPSK, 50 RB	8970
FDD, CBW 15MHz, QPSK, 75 RB	13440
FDD, CBW 20MHz, QPSK, 100 RB	17900
FDD, CBW 5MHz, 16QAM, 25 RB	4480
FDD, CBW 10MHz, 16QAM, 50 RB	8970
FDD, CBW 15MHz, 16QAM, 75 RB	13400
FDD, CBW 20MHz, 16QAM, 100 RB	17950

FDD, CBW 5MHz, QPSK, 25 RB, Channel 21100 / 2535.0 MHz



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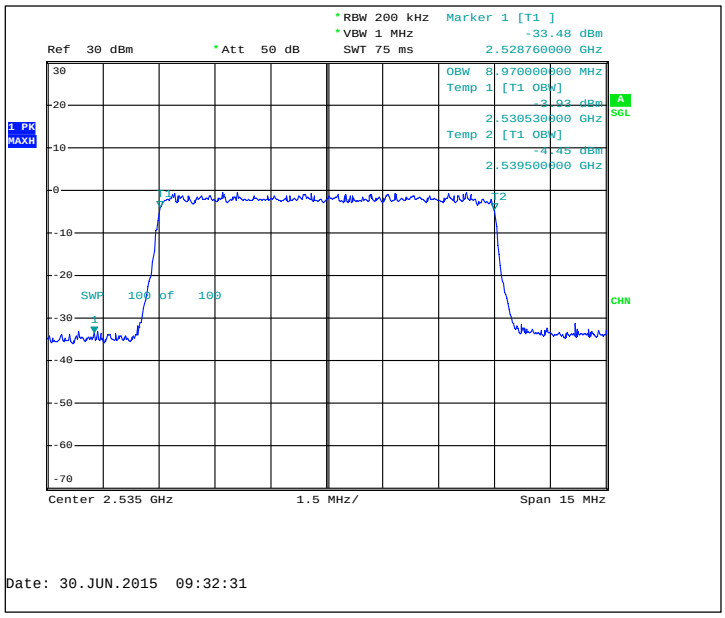
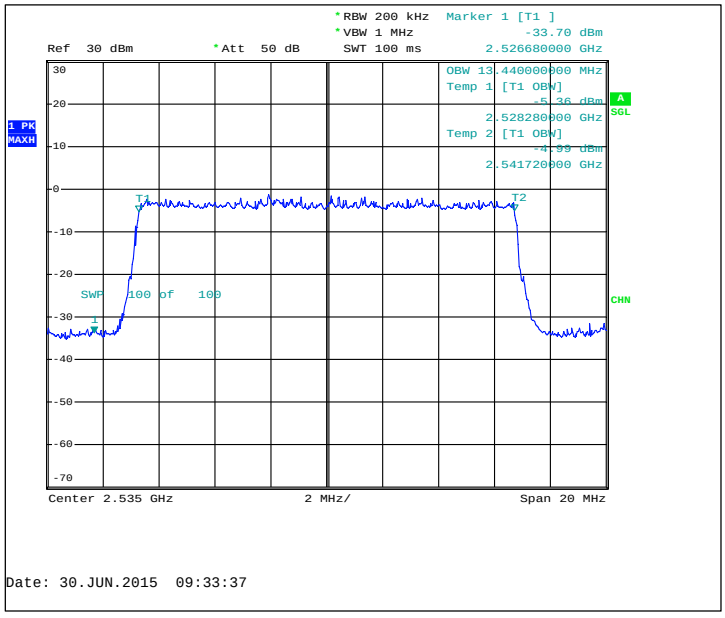
FDD, CBW 10MHz, QPSK, 50 RB, Channel 21100 / 2535.0 MHz



FDD, CBW 15MHz, QPSK, 75 RB, Channel 21100 / 2535.0 MHz



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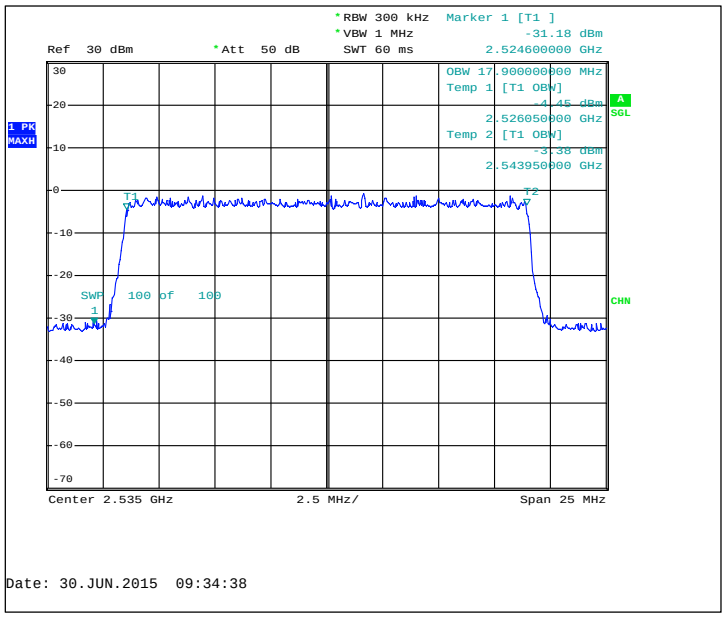
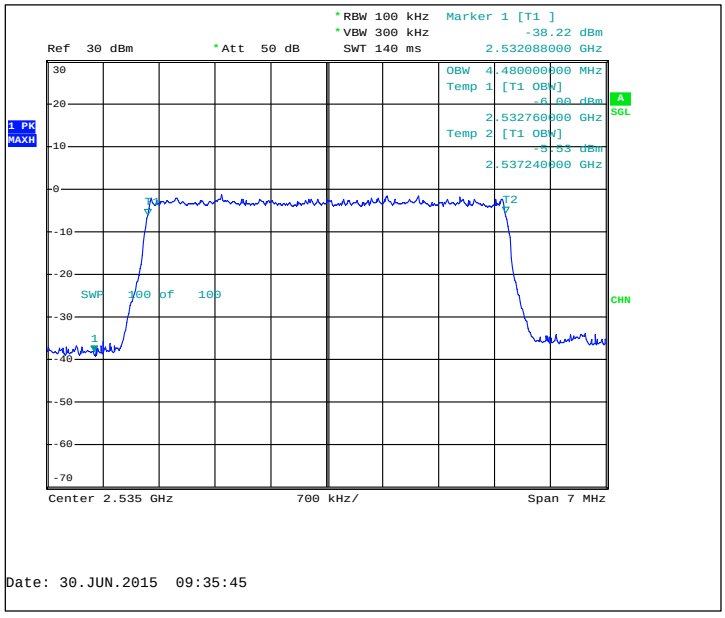
FDD, CBW 20MHz, QPSK, 100 RB, Channel 21100 / 2535.0 MHz



FDD, CBW 5MHz, 16QAM, 25 RB, Channel 21100 / 2535.0 MHz



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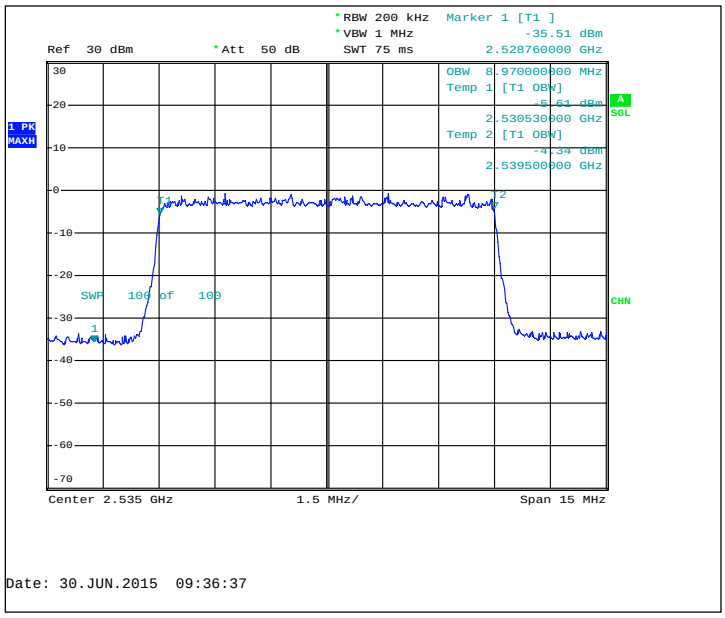
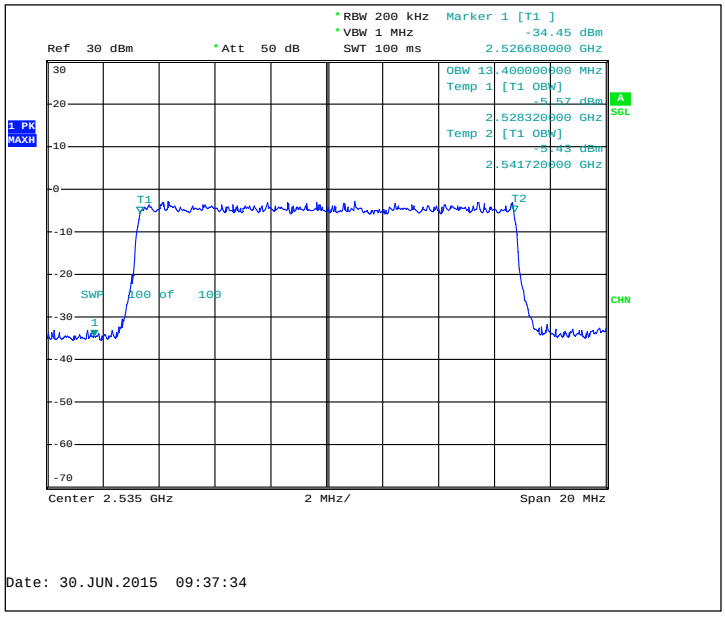
FDD, CBW 10MHz, 16QAM, 50 RB, Channel 21100 / 2535.0 MHz



FDD, CBW 15MHz, 16QAM, 75 RB, Channel 21100 / 2535.0 MHz



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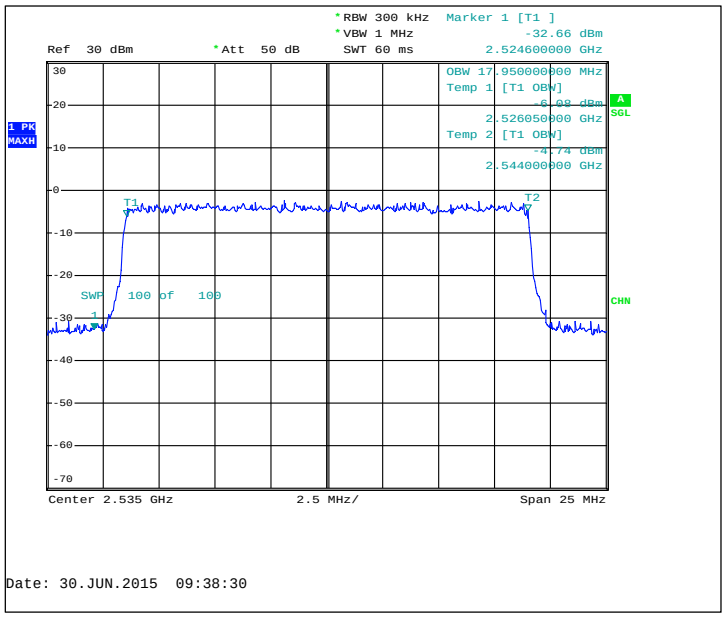
FDD, CBW 20MHz, 16QAM, 100 RB, Channel 21100 / 2535.0 MHz



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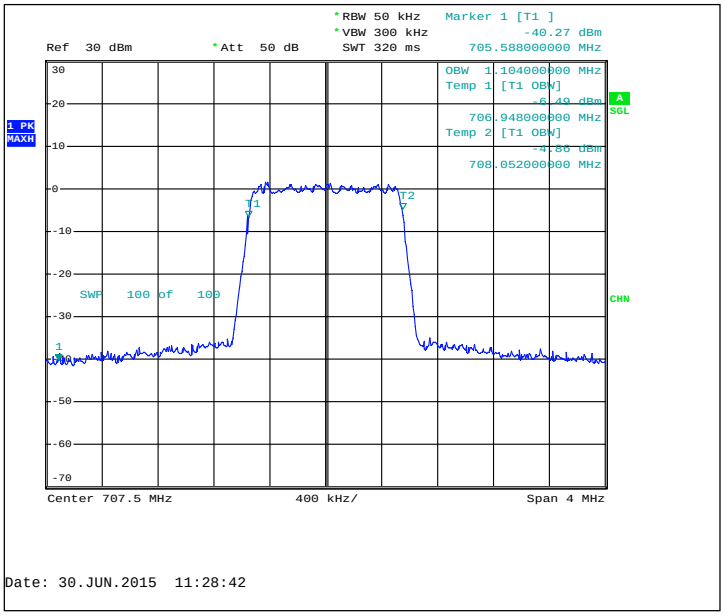
4.12. LTE12 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD, CBW 1.4MHz, QPSK, 6 RB	1104
FDD, CBW 3MHz, QPSK, 15 RB	2696
FDD, CBW 5MHz, QPSK, 25 RB	4494
FDD, CBW 10MHz, QPSK, 50 RB	8970
FDD, CBW 1.4MHz, 16QAM, 6 RB	1104
FDD, CBW 3MHz, 16QAM, 15 RB	2688
FDD, CBW 5MHz, 16QAM, 25 RB	4494
FDD, CBW 10MHz, 16QAM, 50 RB	8970

FDD, CBW 1.4MHz, QPSK, 6 RB, Channel 23095 / 707.5 MHz



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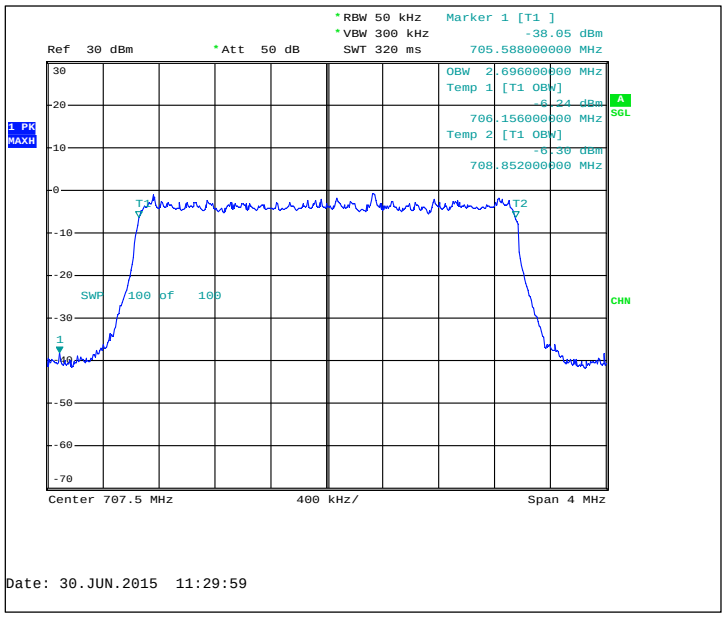
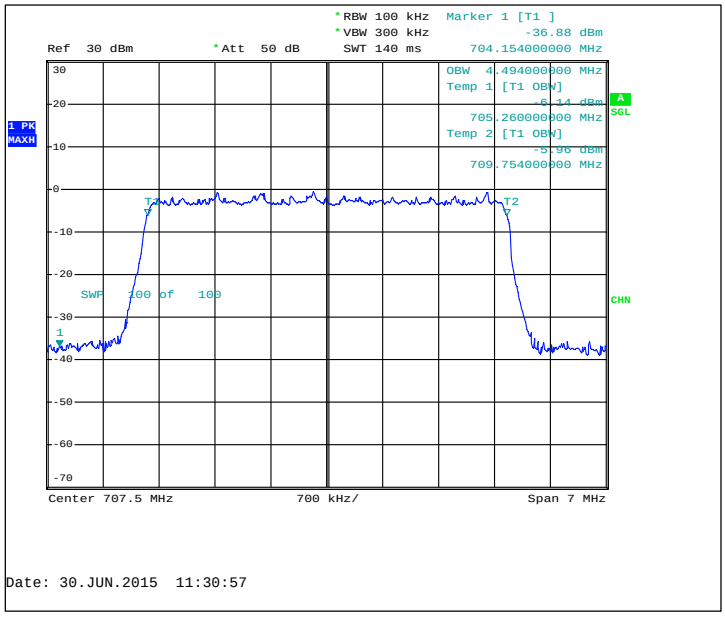
FDD, CBW 3MHz, QPSK, 15 RB, Channel 23095 / 707.5 MHz



FDD, CBW 5MHz, QPSK, 25 RB, Channel 23095 / 707.5 MHz



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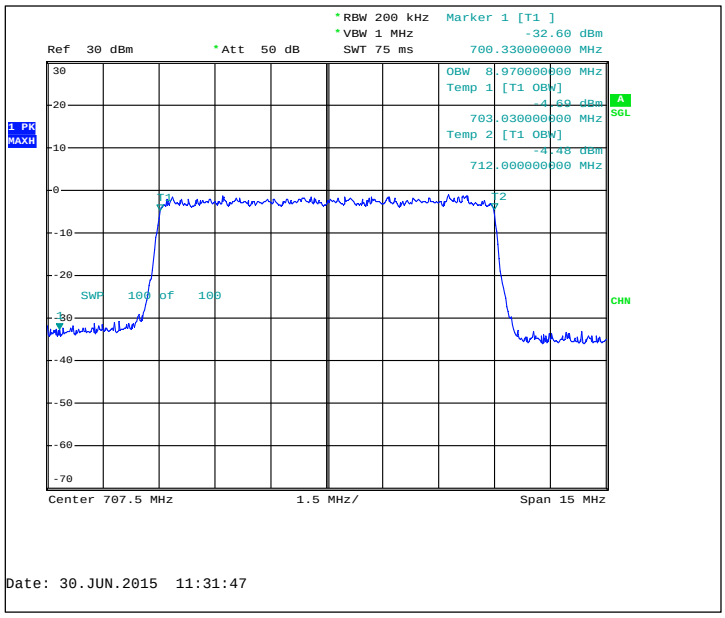
FDD, CBW 10MHz, QPSK, 50 RB, Channel 23095 / 707.5 MHz



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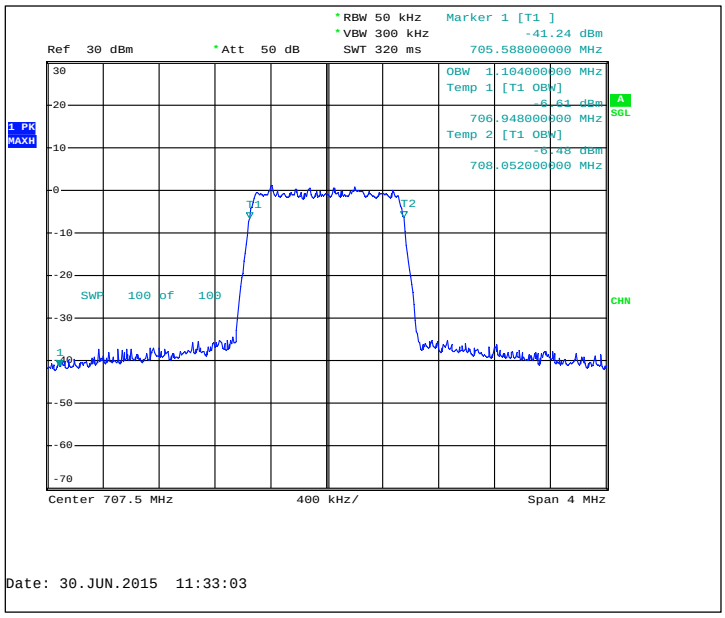
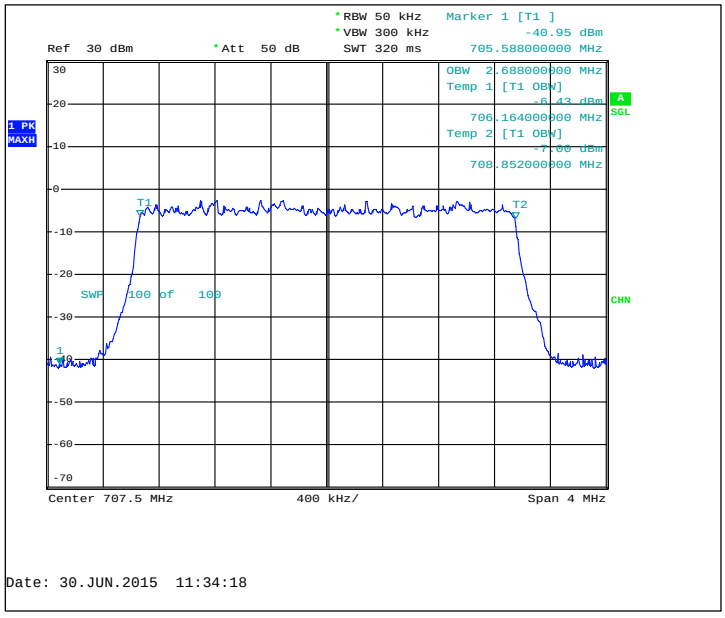
FDD, CBW 1.4MHz, 16QAM, 6 RB, Channel 23095 / 707.5 MHz



FDD, CBW 3MHz, 16QAM, 15 RB, Channel 23095 / 707.5 MHz



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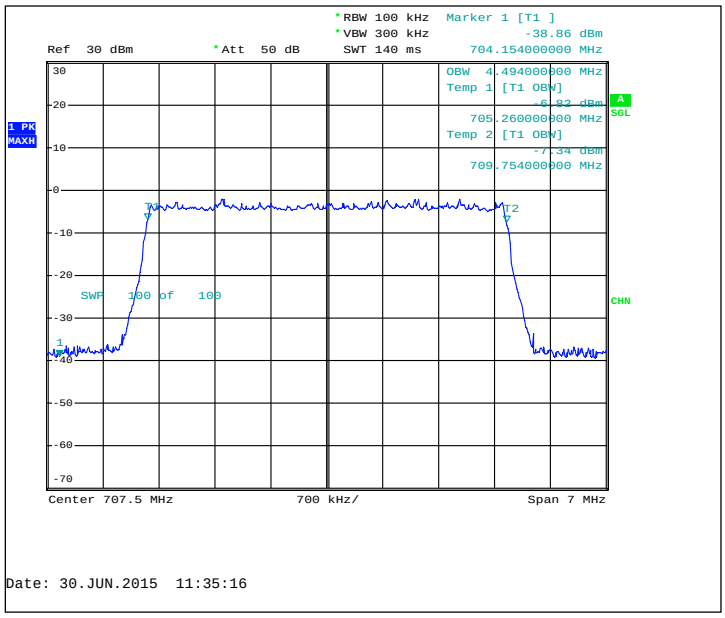
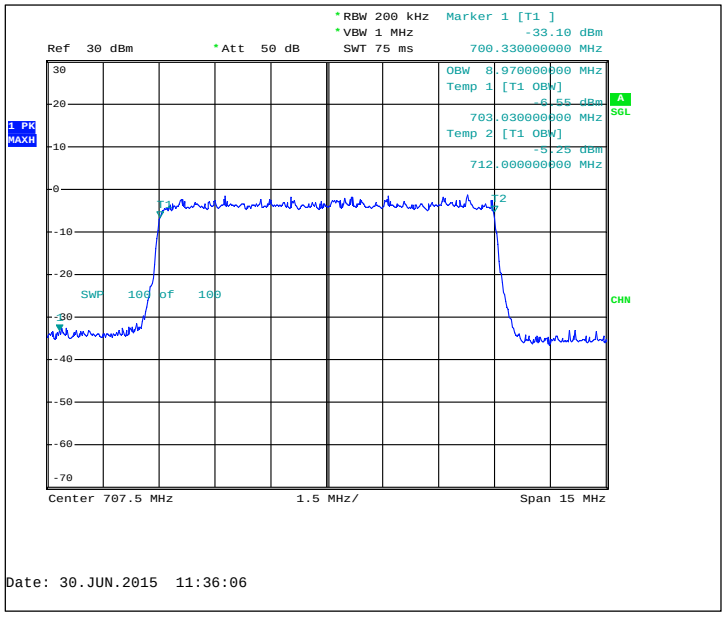
FDD, CBW 5MHz, 16QAM, 25 RB, Channel 23095 / 707.5 MHz



FDD, CBW 10MHz, 16QAM, 50 RB, Channel 23095 / 707.5 MHz



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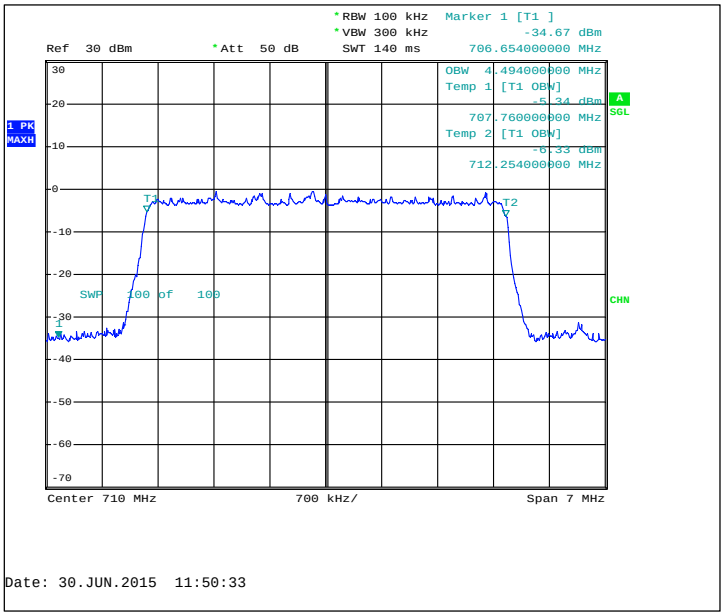
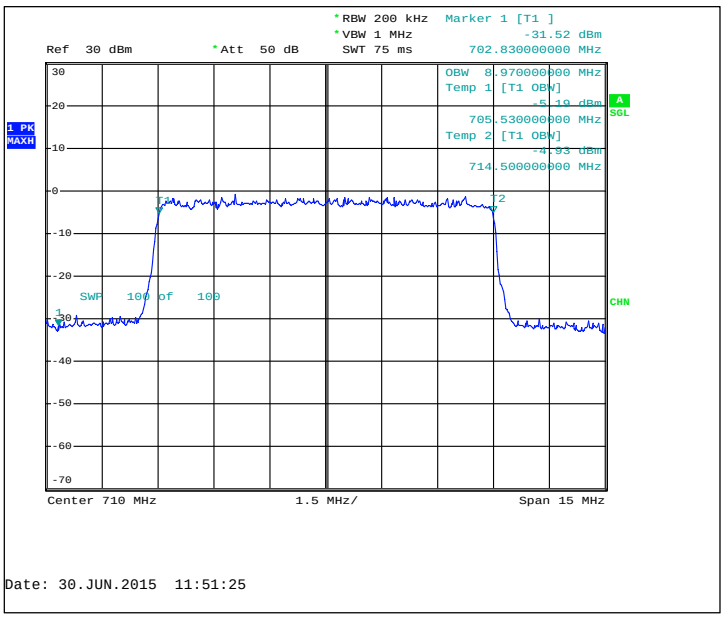
4.13. LTE17 Test results

Operation mode (TX on)	99% Occupied bandwidth [kHz]
FDD, CBW 5MHz, QPSK, 25 RB	4494
FDD, CBW 10MHz, QPSK, 50 RB	8970
FDD, CBW 5MHz, 16QAM, 25 RB	4494
FDD, CBW 10MHz, 16QAM, 50 RB	8970

FDD, CBW 5MHz, QPSK, 25 RB, Channel 23790 / 710.0 MHz



FDD, CBW 10MHz, QPSK, 50 RB, Channel 23790 / 710.0 MHz



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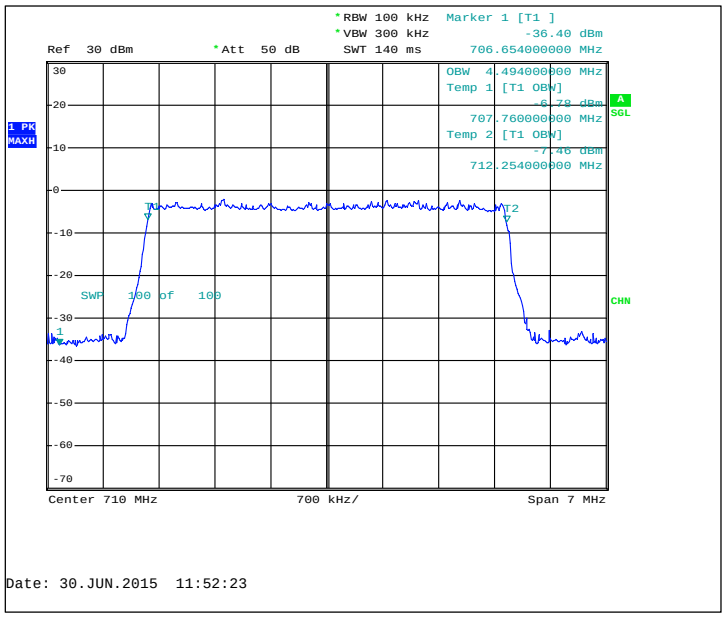
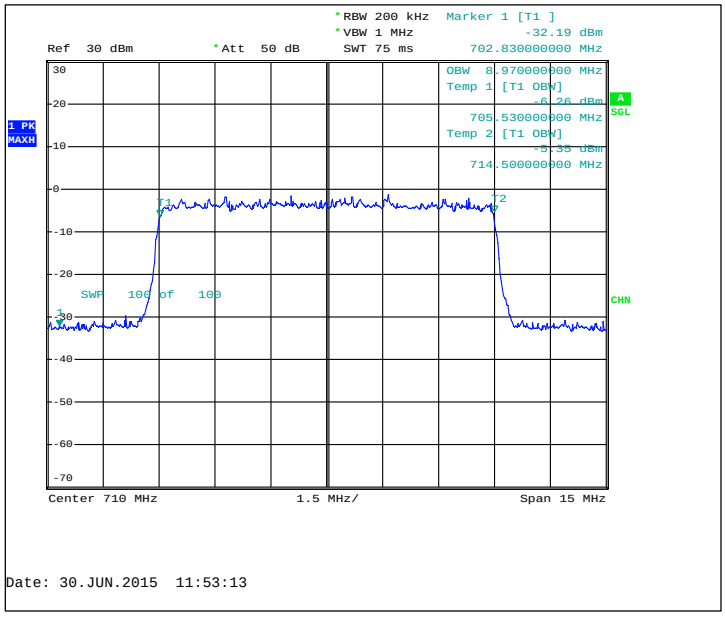
FDD, CBW 5MHz, 16QAM, 25 RB, Channel 23790 / 710.0 MHz



FDD, CBW 10MHz, 16QAM, 50 RB, Channel 23790 / 710.0 MHz



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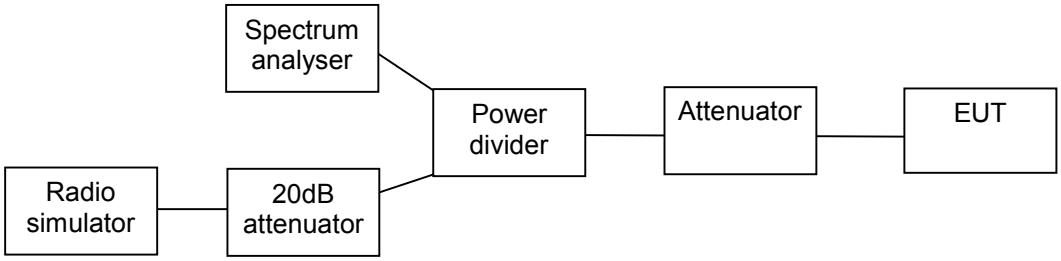
5. Band edge compliance, Antenna 1

(FCC §24.238(a), §27.53(g), §22.917(a), RSS-133 6.5, RSS-132 4.5, RSS-139 6.5)

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	BV-T4D DUT400012, AC-100E DUT400013, WH-308 DUT400014
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	20 / 50 / 100.4
Date of measurements	26-Jun-2015
Measured by	Timo Raiskio

5.1. Test Setup



5.2. 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
WCDMA2	Below 1850 and above 1910	-13
WCDMA4	Below 1710 and above 1755	-13
WCDMA5	Below 824 and above 849	-13

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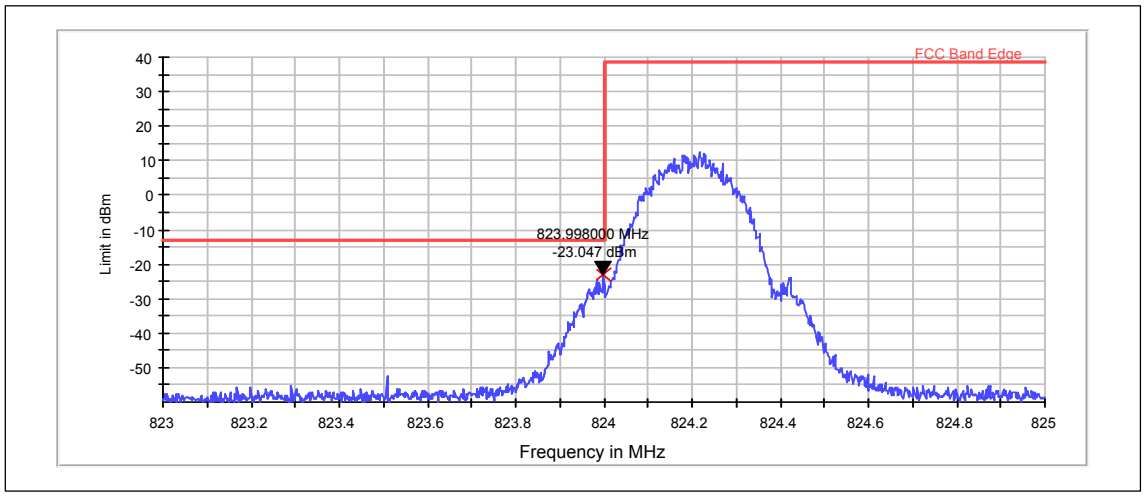
5.3. GSM 850 Test results

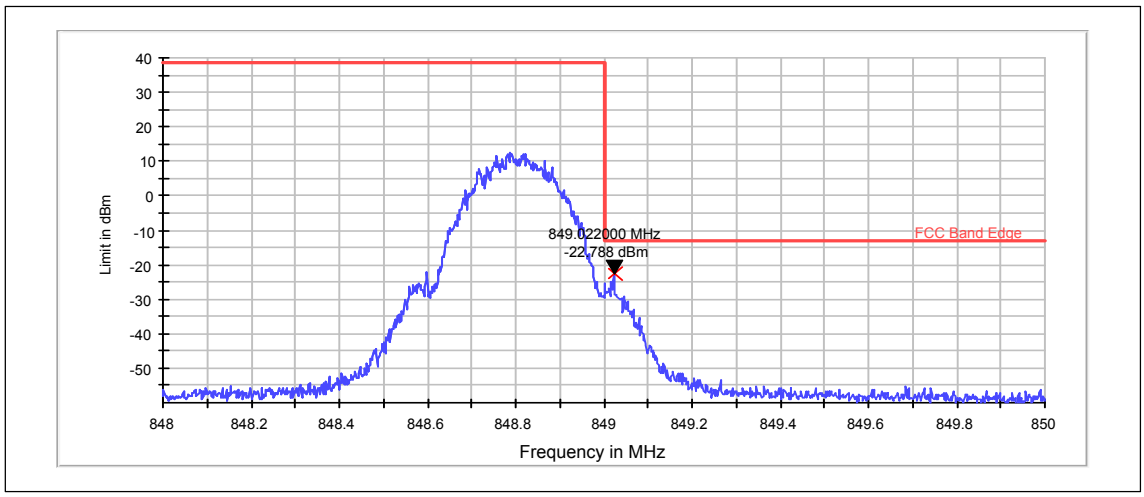
Channel 128 / 824.2 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
GSM	823.998	-23.05	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	849.022	-22.79	PASSED

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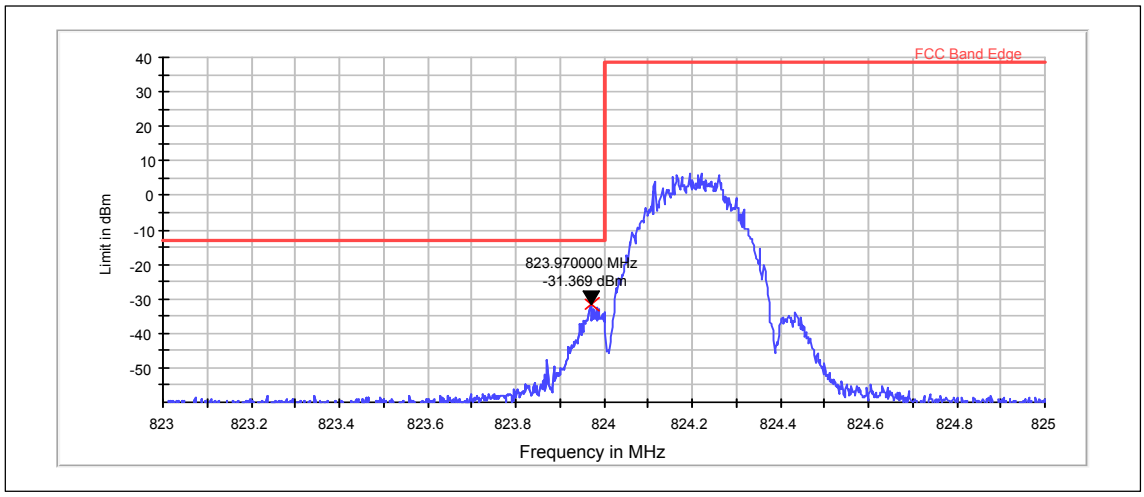
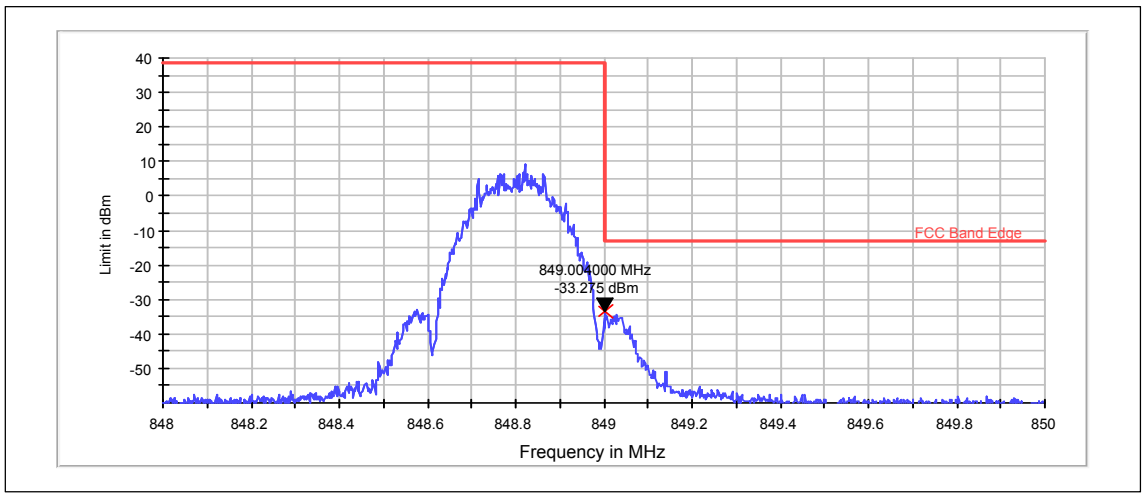
Channel 128 / 824.2 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
EGPRS	823.970	-31.37	PASSED

Channel 251 / 848.8 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
EGPRS	849.004	-33.27	PASSED

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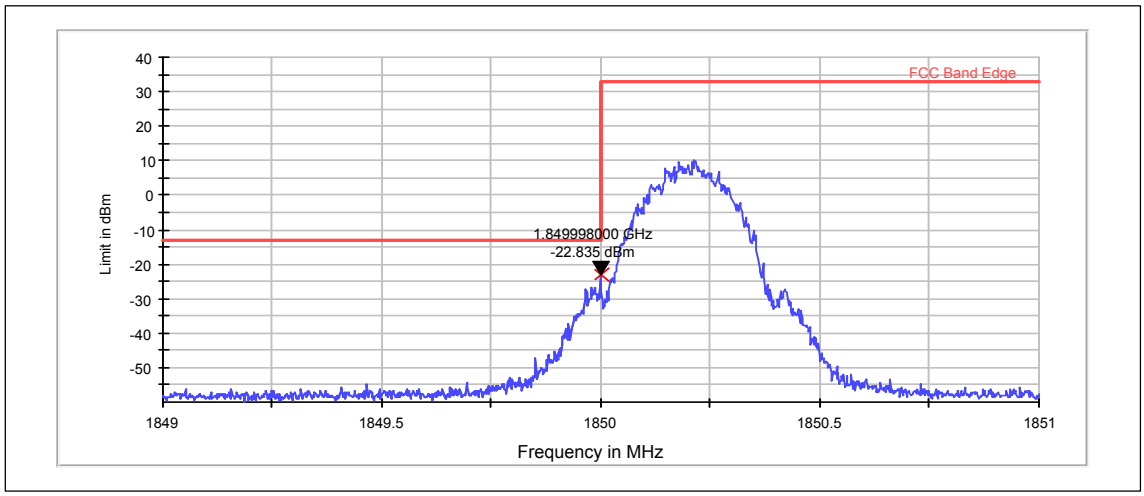
5.4. GSM 1900 Test results

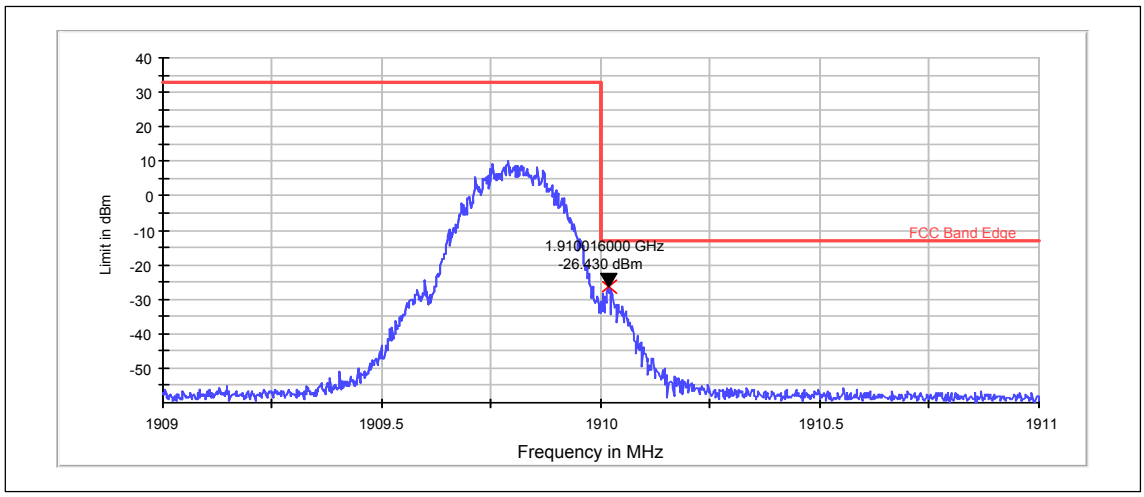
Channel 512 / 1850.2 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
GSM	1849.998	-22.84	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	1910.016	-26.43	PASSED

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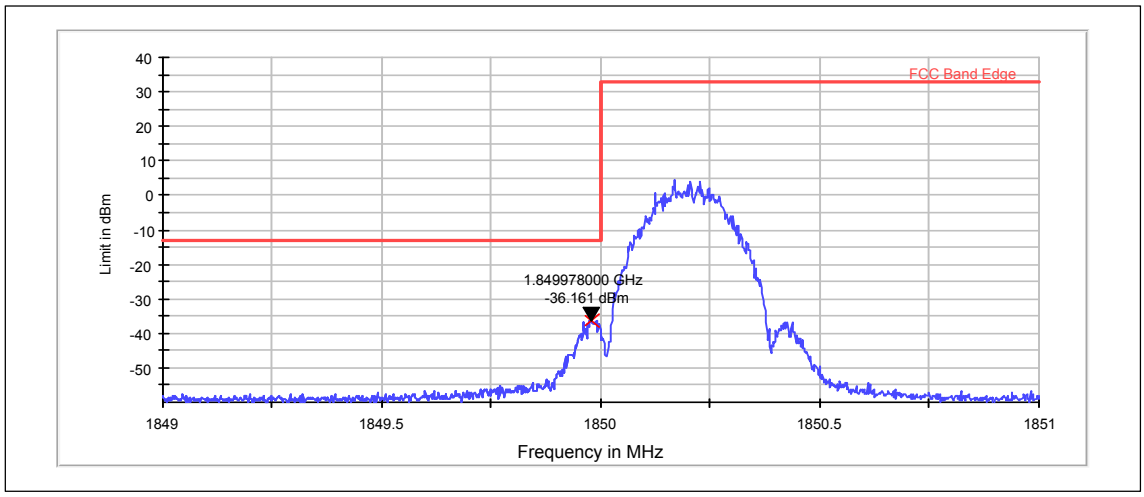
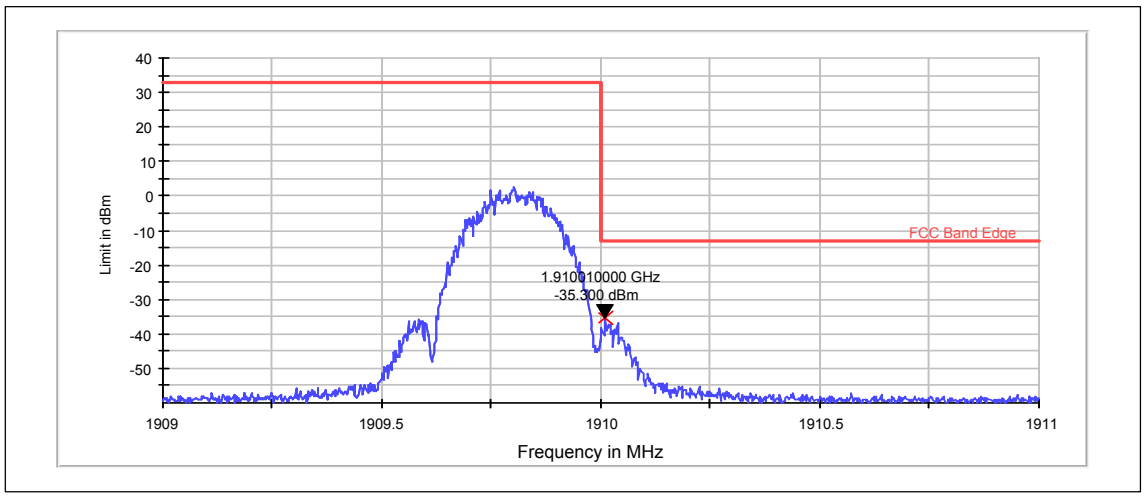
Channel 512 / 1850.2 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
EGPRS	1849.978	-36.16	PASSED

Channel 810 / 1909.8 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
EGPRS	1910.010	-35.30	PASSED

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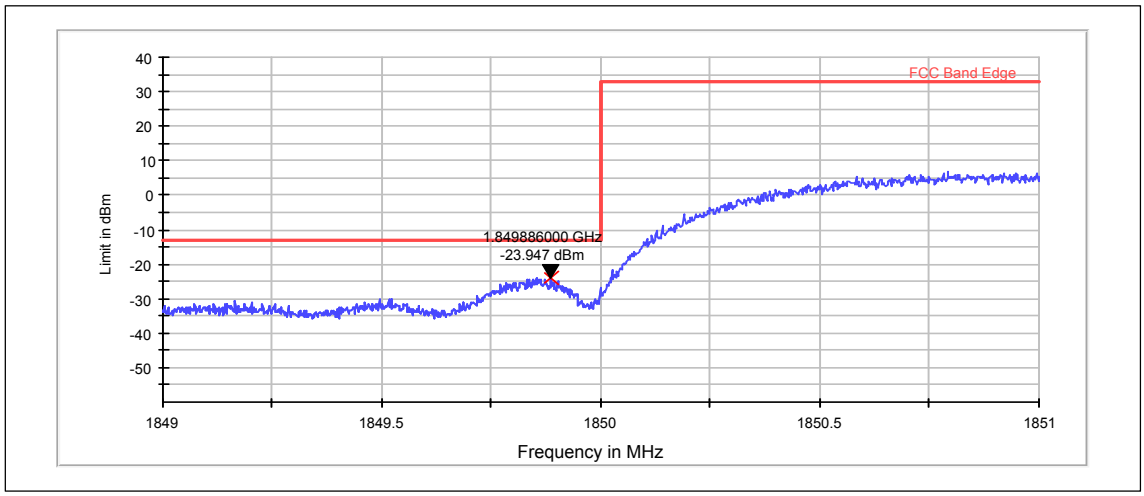
5.5. WCDMA2 Test results

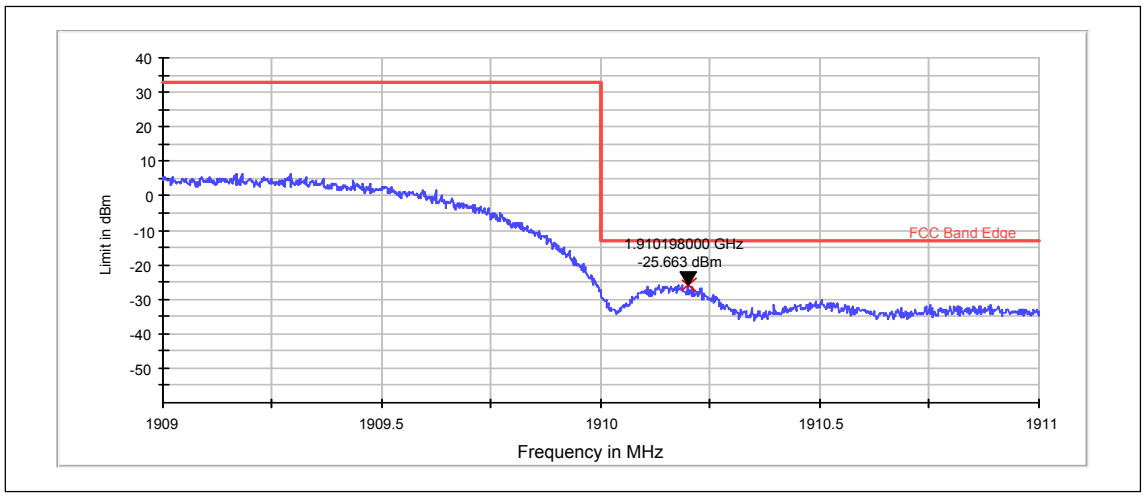
Channel 9262 / 1852.4 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	1849.886	-23.95	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	1910.198	-25.66	PASSED

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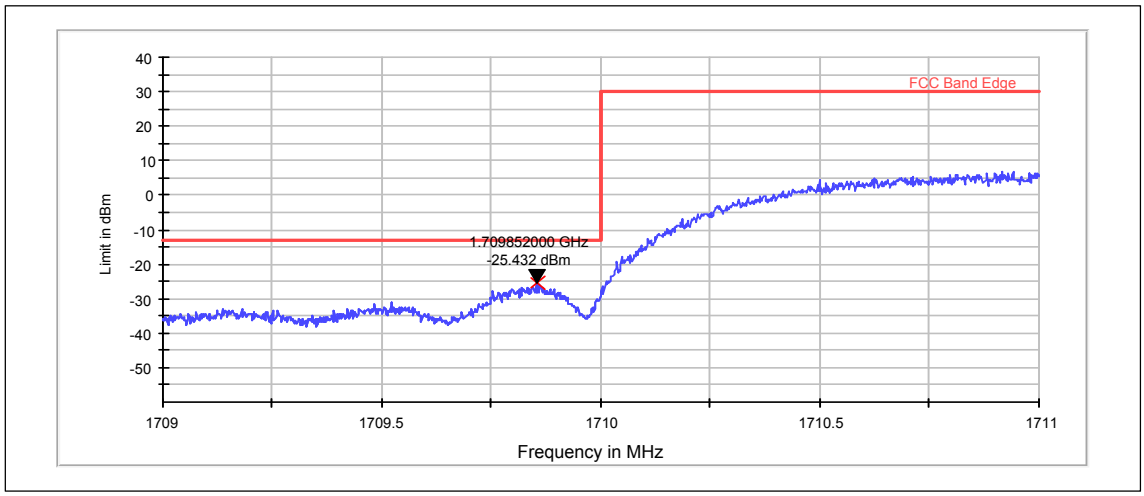
5.6. WCDMA4 Test results

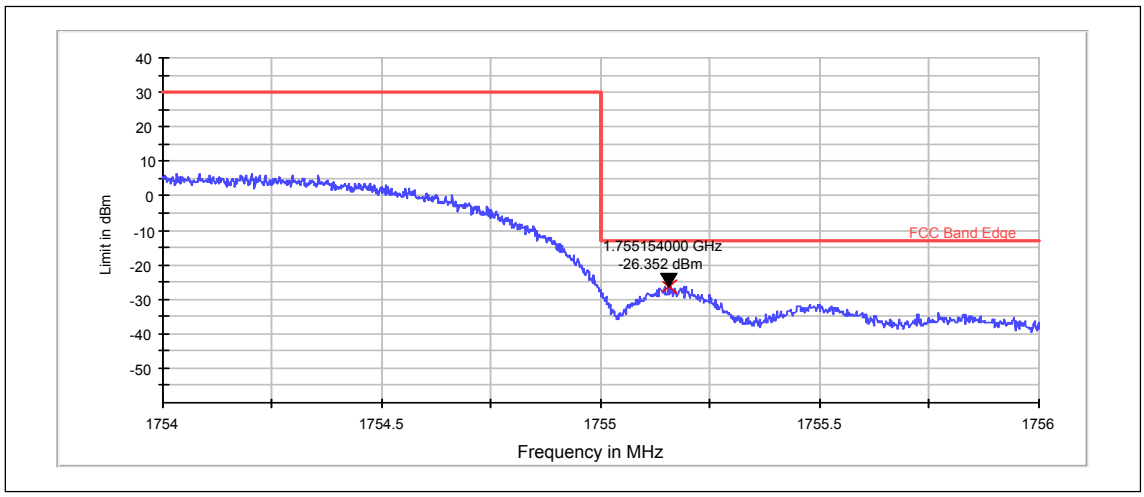
Channel 1312 / 1712.4 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	1709.852	-25.43	PASSED

Channel 1513 / 1752.6 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	1755.154	-26.35	PASSED

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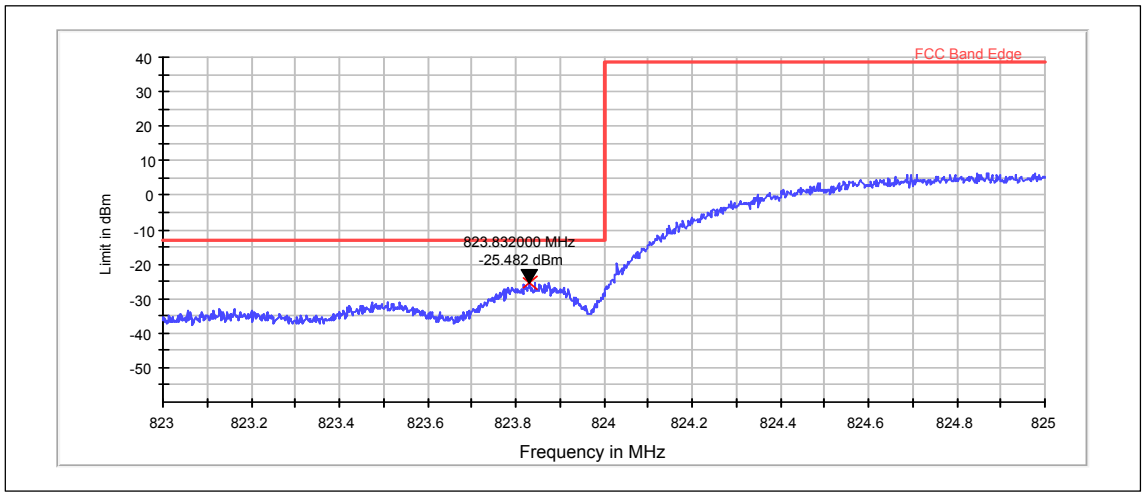
5.7. WCDMA5 Test results

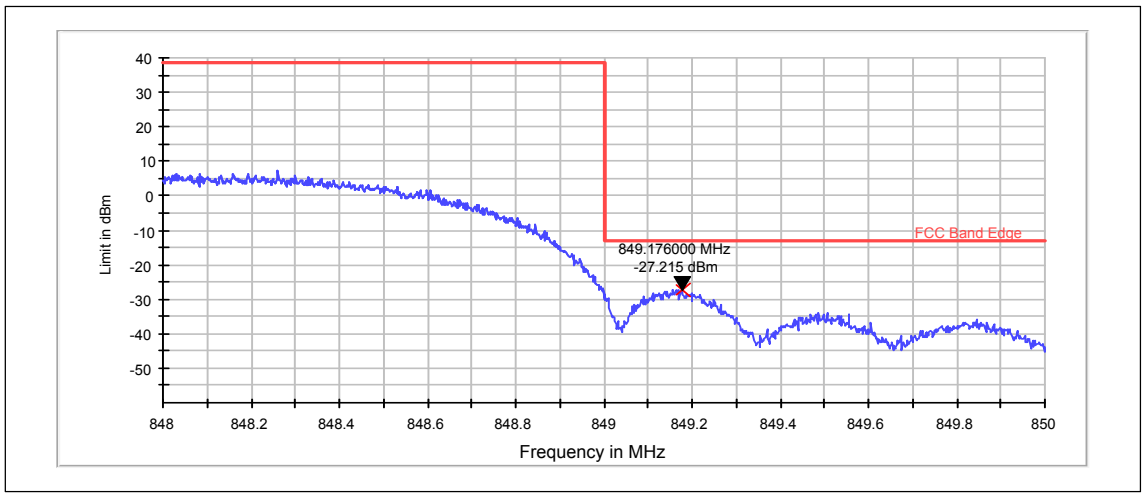
Channel 4132 / 826.4 MHz



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

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD	823.832	-25.48	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	849.176	-27.22	PASSED

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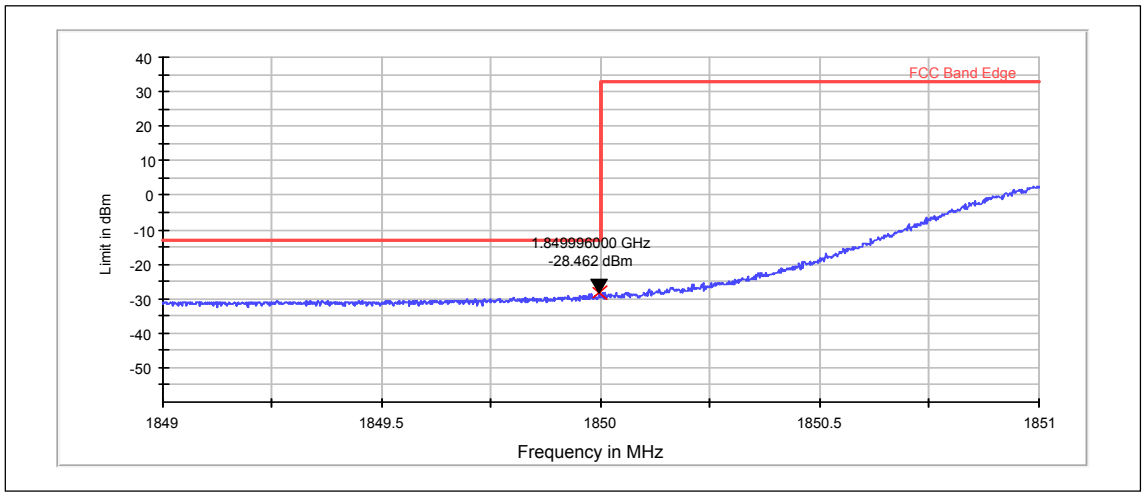
5.8. LTE2 Test results

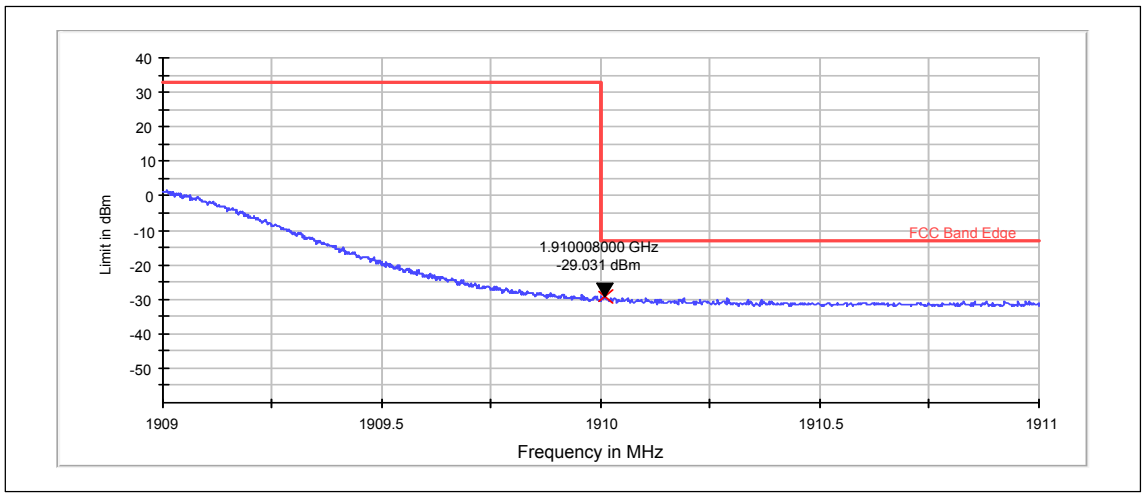
Channel 18700 / 1860 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, QPSK, 100 RB	1849.996	-28.46	PASSED

Channel 19100 / 1900 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, QPSK, 100 RB	1910.008	-29.03	PASSED

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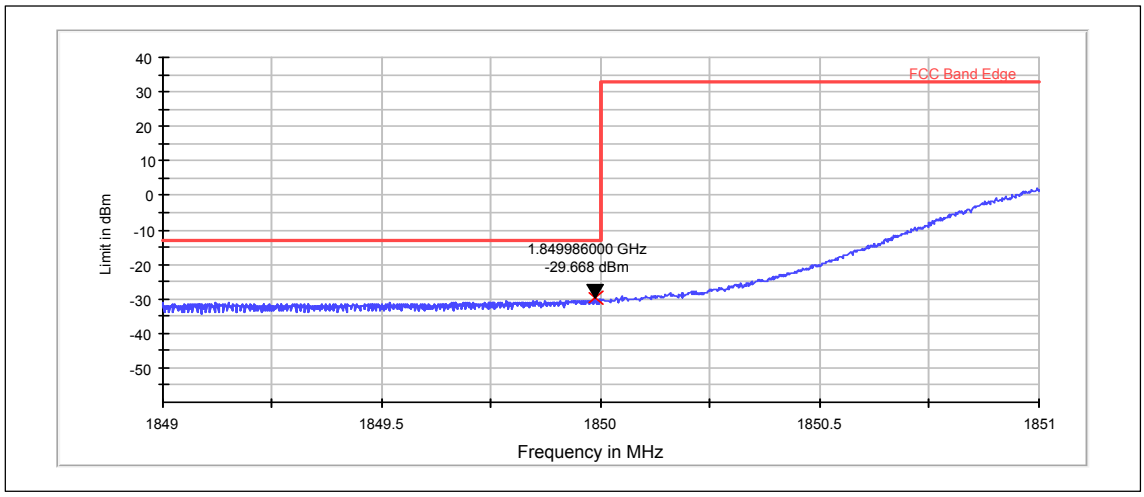
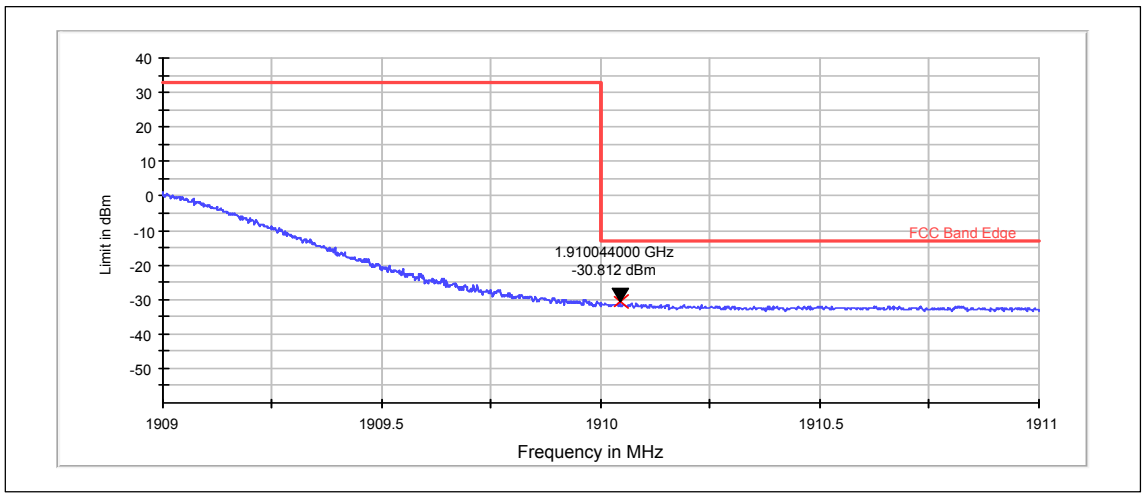
Channel 18700 / 1860 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, 16QAM, 100 RB	1849.986	-29.67	PASSED

Channel 19100 / 1900 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, 16QAM, 100 RB	1910.044	-30.81	PASSED

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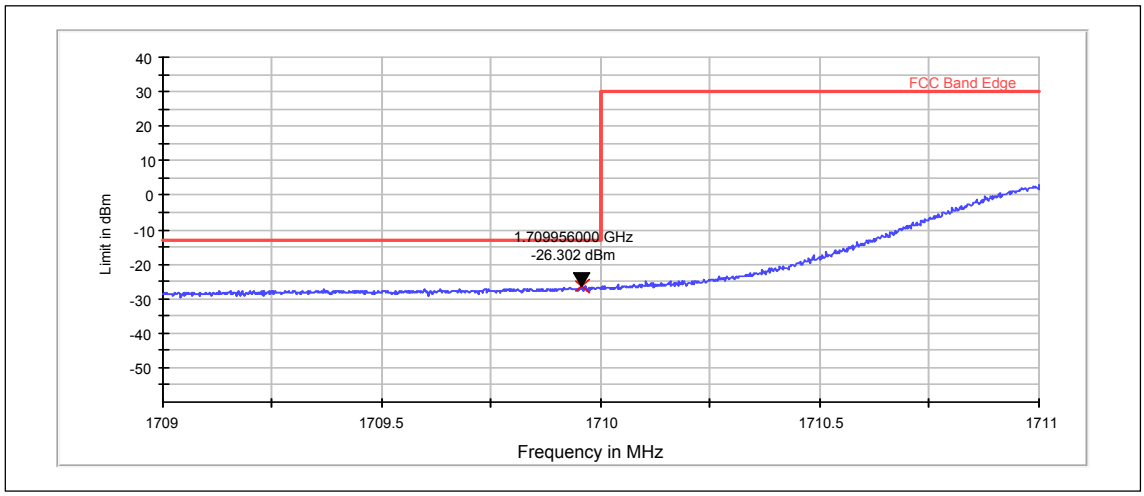
5.9. LTE4 Test results

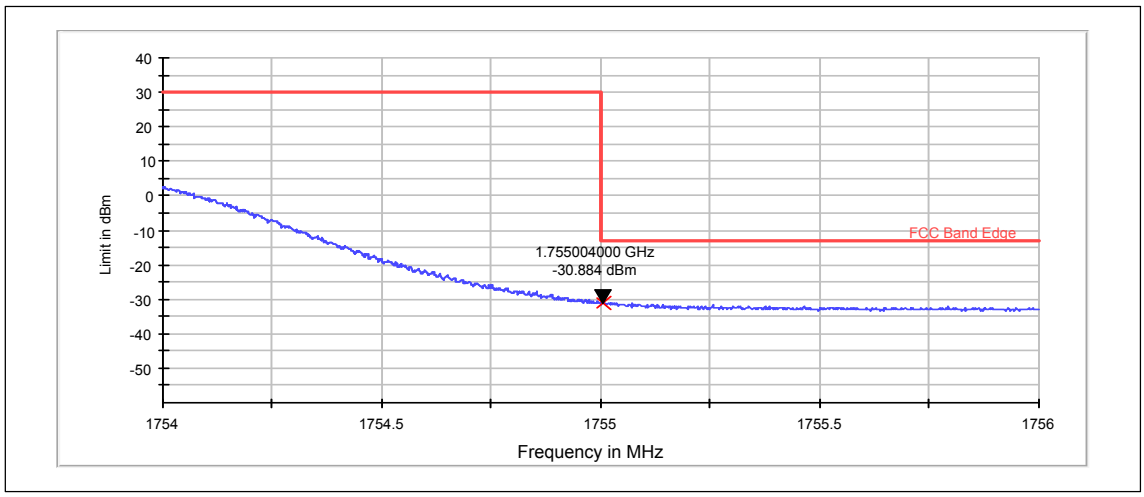
Channel 20050 / 1720 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, QPSK, 100 RB	1709.956	-26.30	PASSED

Channel 20300 / 1745 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, QPSK, 100 RB	1755.004	-30.88	PASSED

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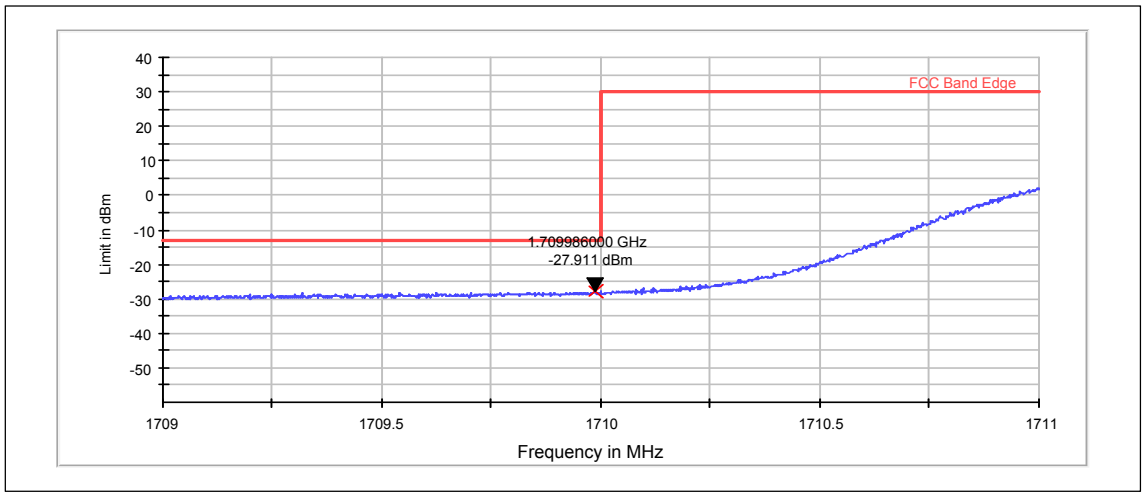
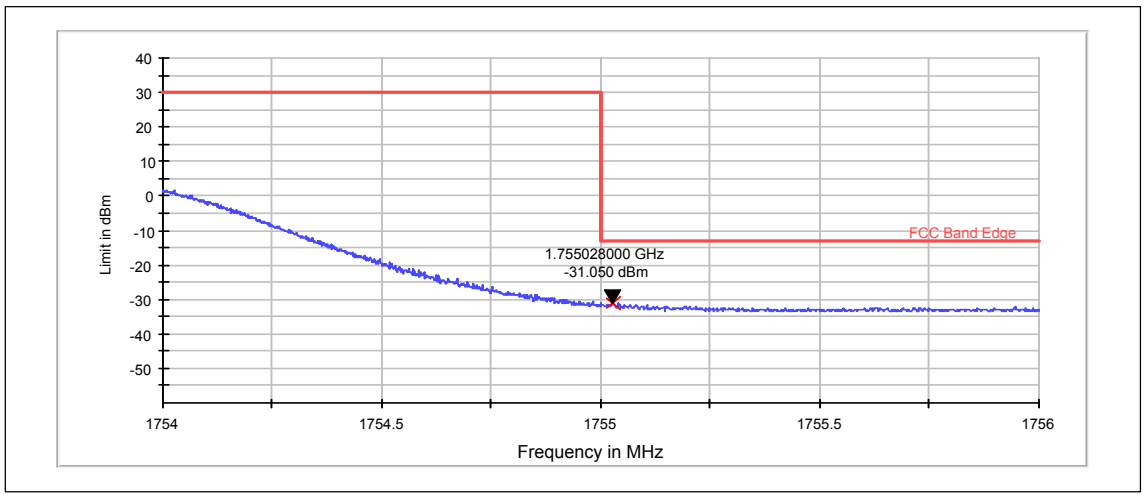
Channel 20050 / 1720 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, 16QAM, 100 RB	1709.986	-27.91	PASSED

Channel 20300 / 1745 MHz



RMS (RBW: 200 kHz, VBW: 1 MHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, 16QAM, 100 RB	1755.028	-31.05	PASSED

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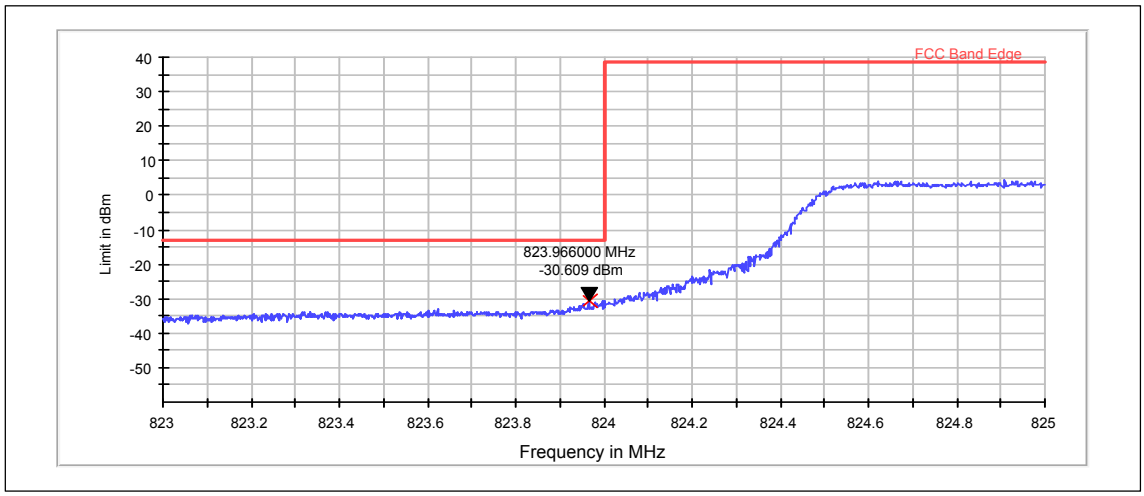
5.10. LTE5 Test results

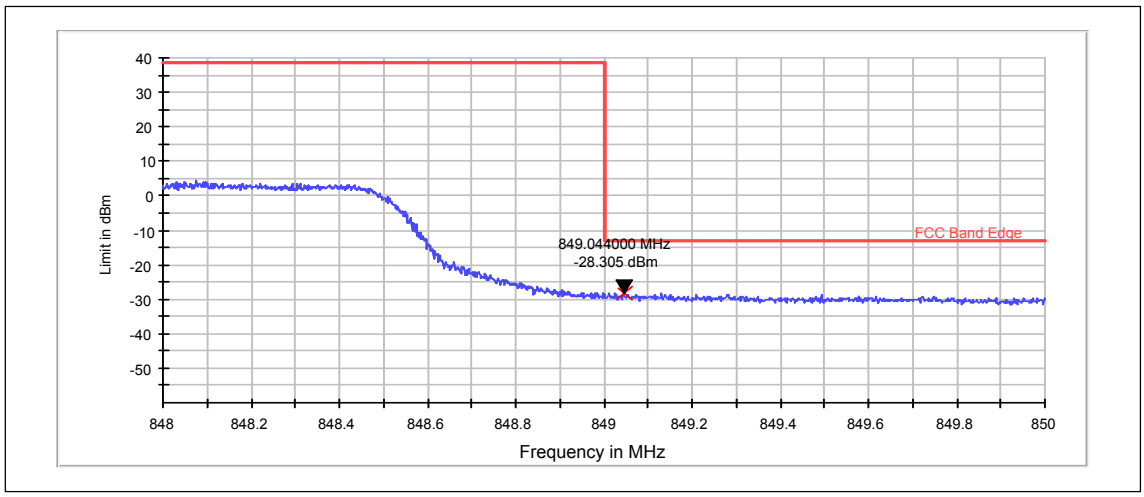
Channel 20450 / 829 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, QPSK, 50 RB	823.966	-30.61	PASSED

Channel 20600 / 844 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, QPSK, 50 RB	849.044	-28.30	PASSED

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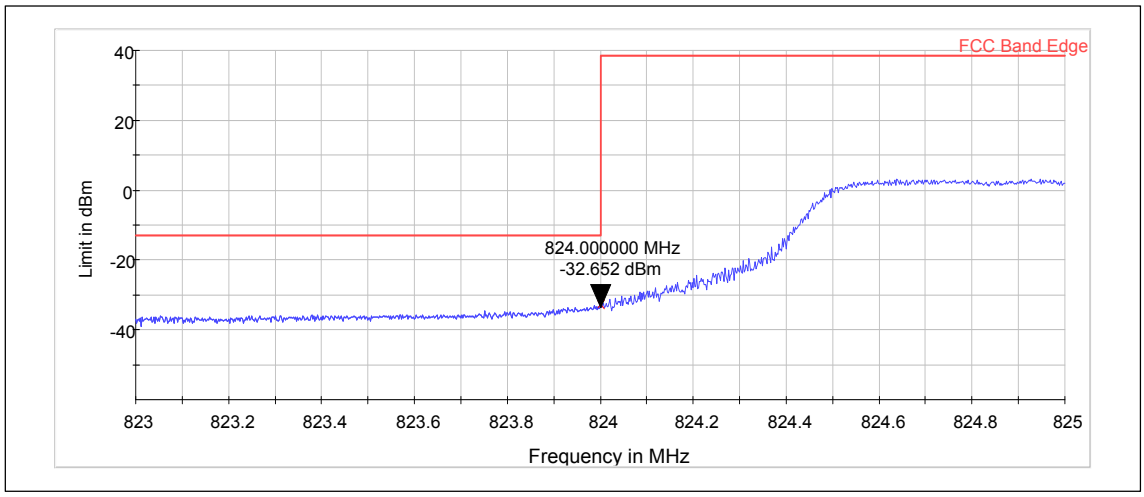
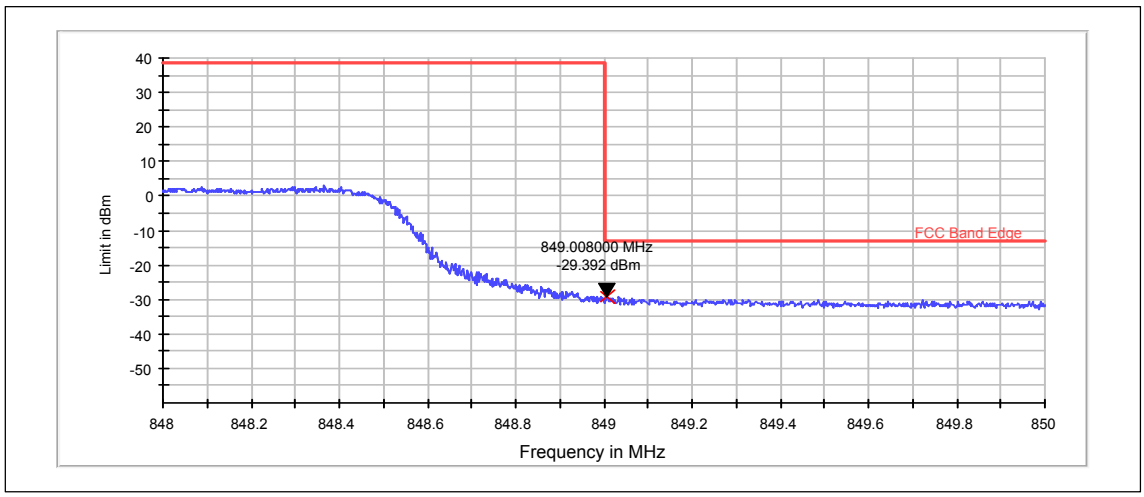
Channel 20450 / 829 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, 16QAM, 50 RB	824.000	-32.65	PASSED

Channel 20600 / 844 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz, Max hold)

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, 16QAM, 50 RB	849.008	-29.39	PASSED

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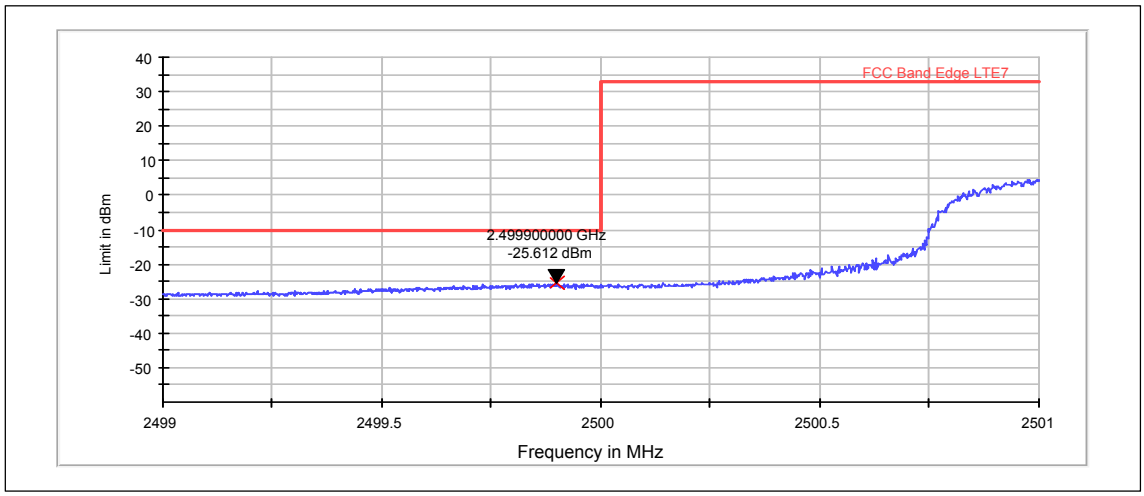
5.11. LTE7 Test results

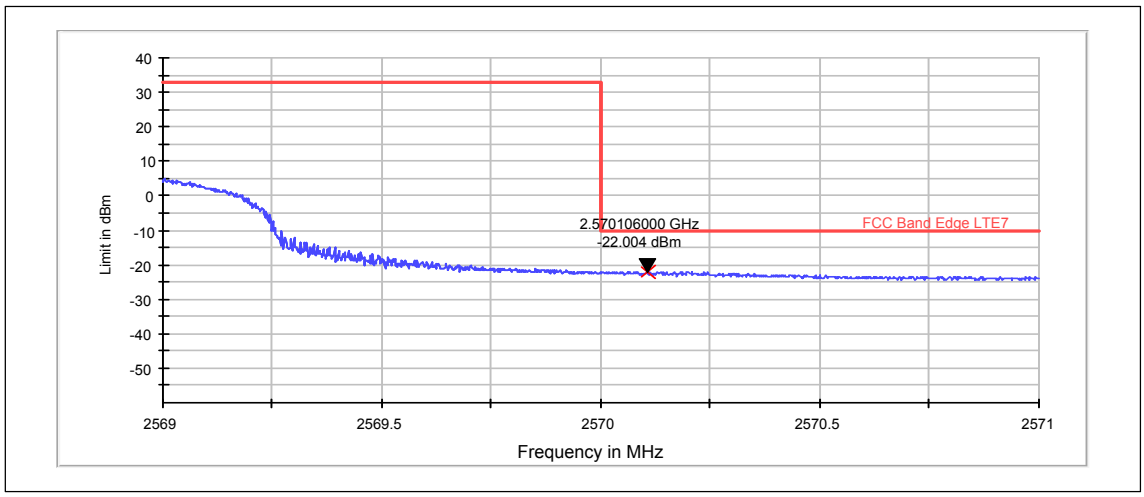
Channel 20850 / 2510 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, QPSK, 100 RB	2499.900	-25.61	PASSED

Channel 21350 / 2560 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, QPSK, 100 RB	2570.106	-22.00	PASSED

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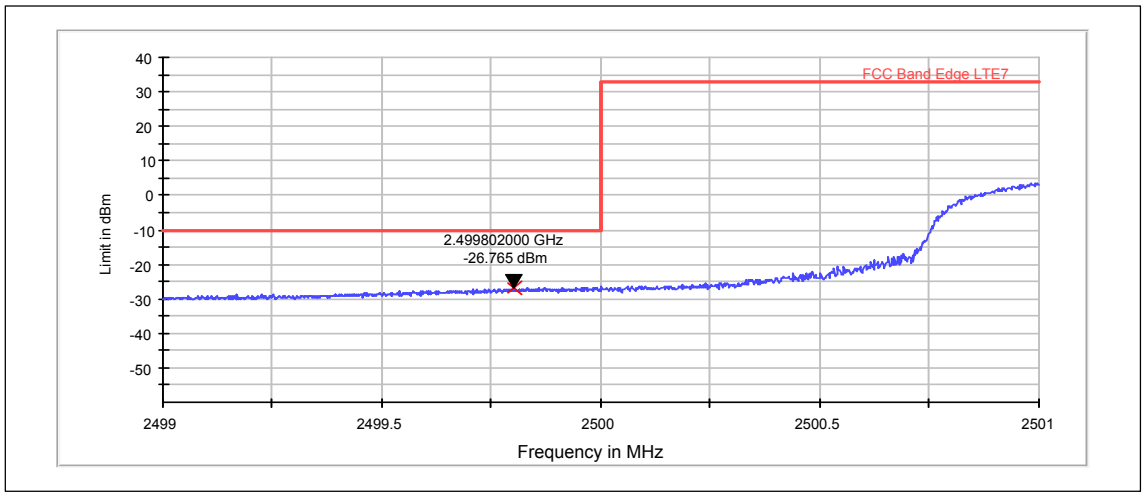
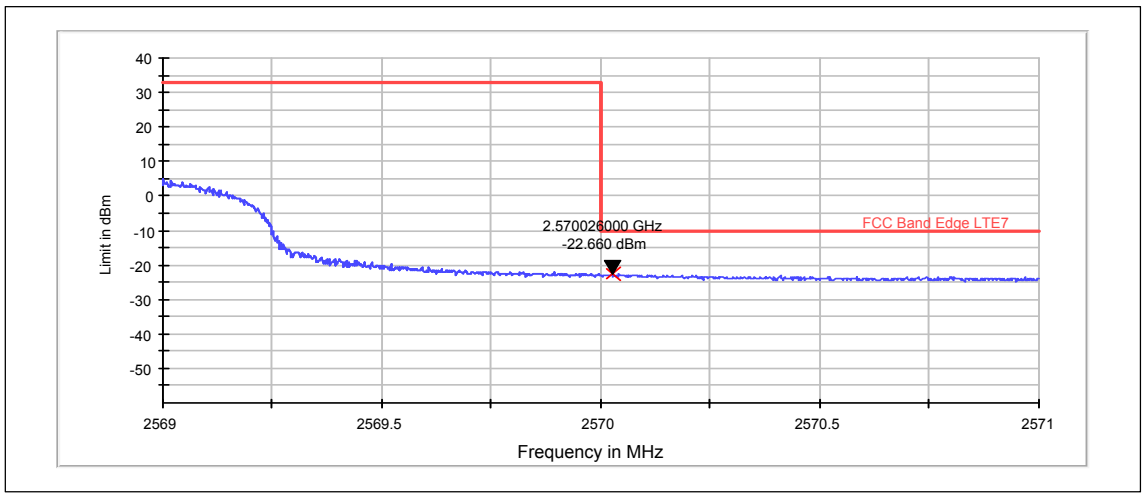
Channel 20850 / 2510 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, 16QAM, 100 RB	2499.802	-26.76	PASSED

Channel 21350 / 2560 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 20MHz, 16QAM, 100 RB	2570.026	-22.66	PASSED

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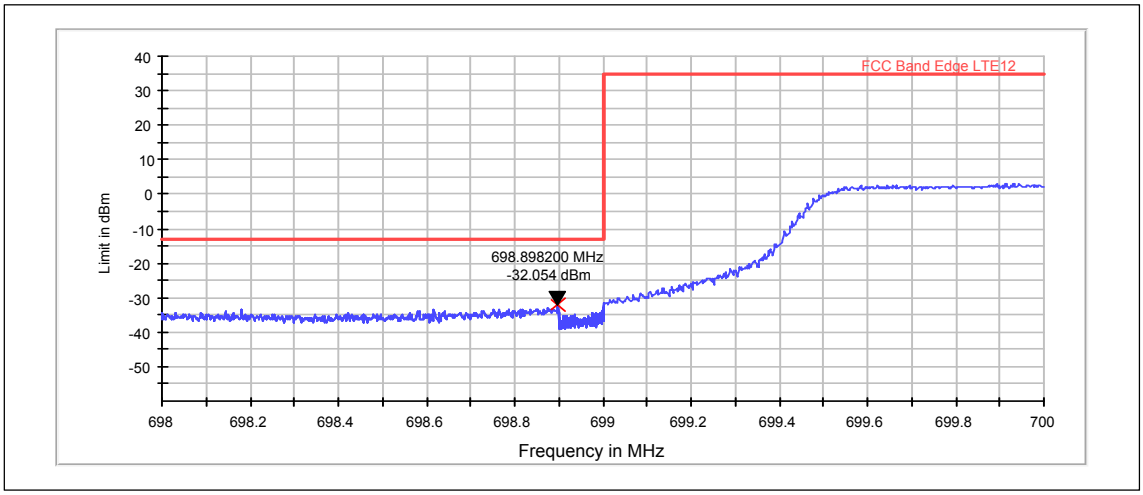
5.12. LTE12 Test results

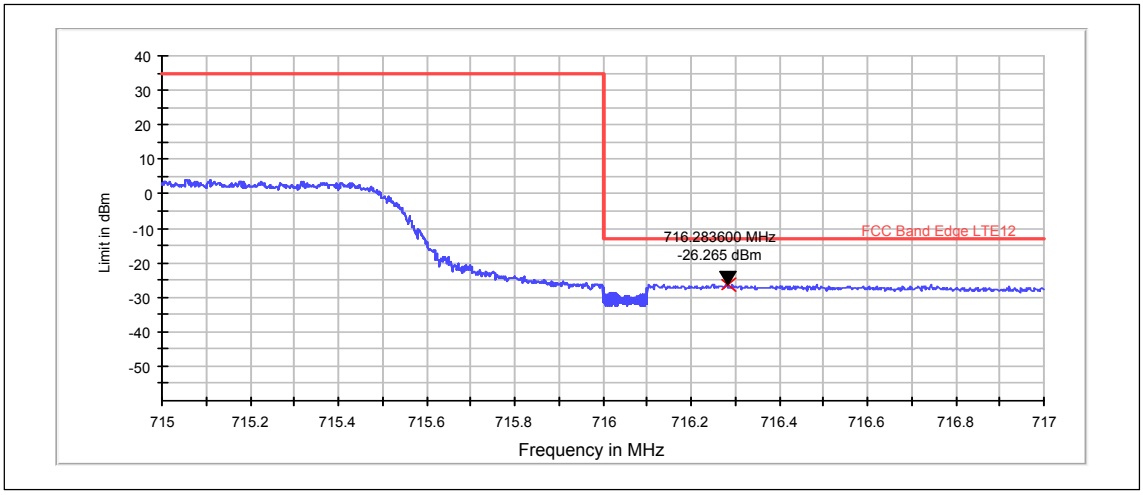
Channel 23060 / 704 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, QPSK, 50 RB	698.898	-32.05	PASSED

Channel 23130 / 711 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, QPSK, 50 RB	716.284	-26.27	PASSED

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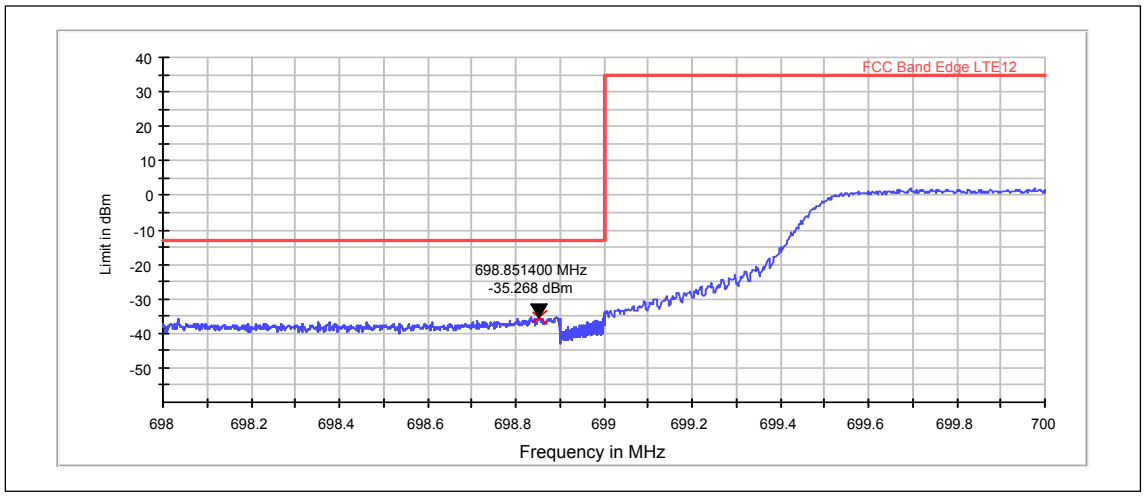
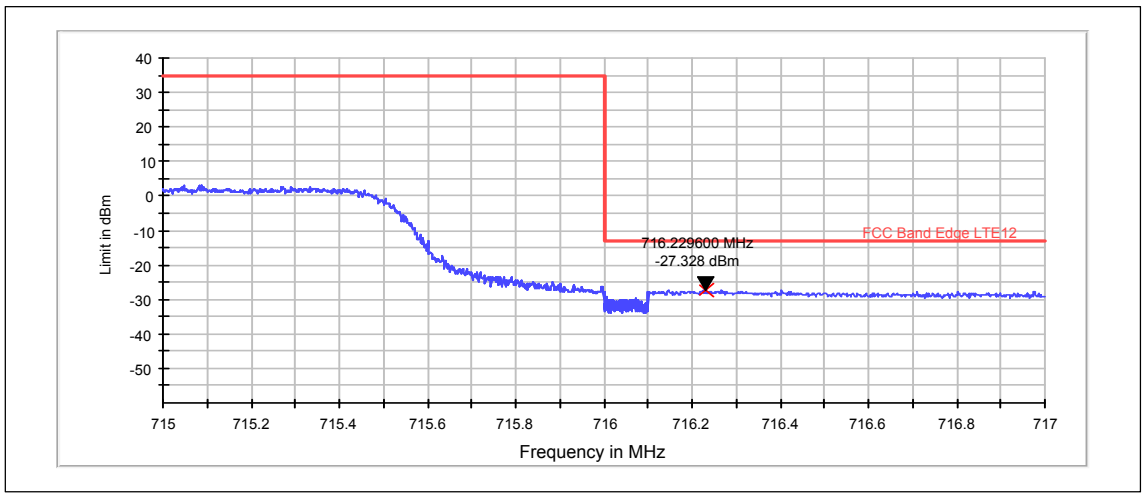
Channel 23060 / 704 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, 16QAM, 50 RB	698.851	-35.27	PASSED

Channel 23130 / 711 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, 16QAM, 50 RB	716.230	-27.33	PASSED

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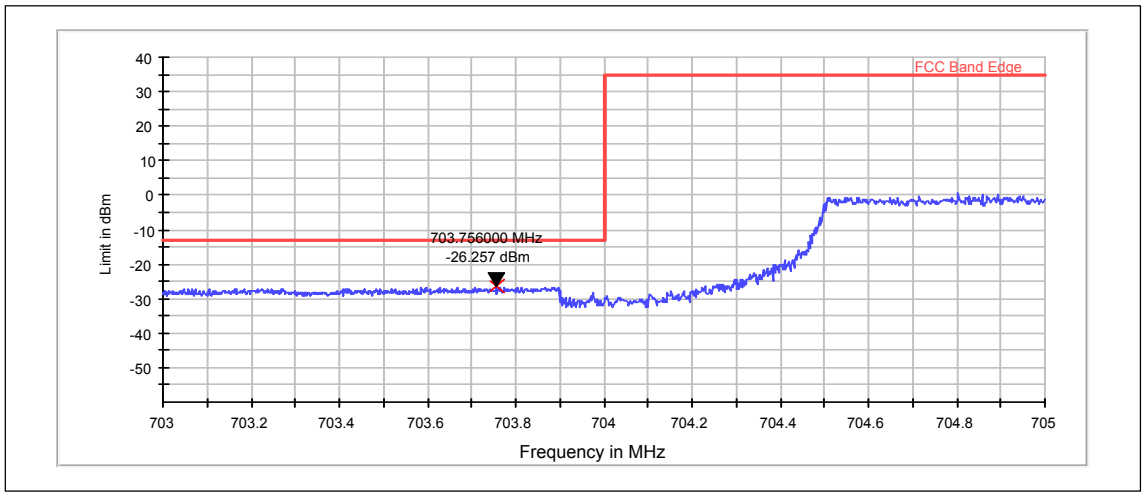
5.13. LTE17 Test results

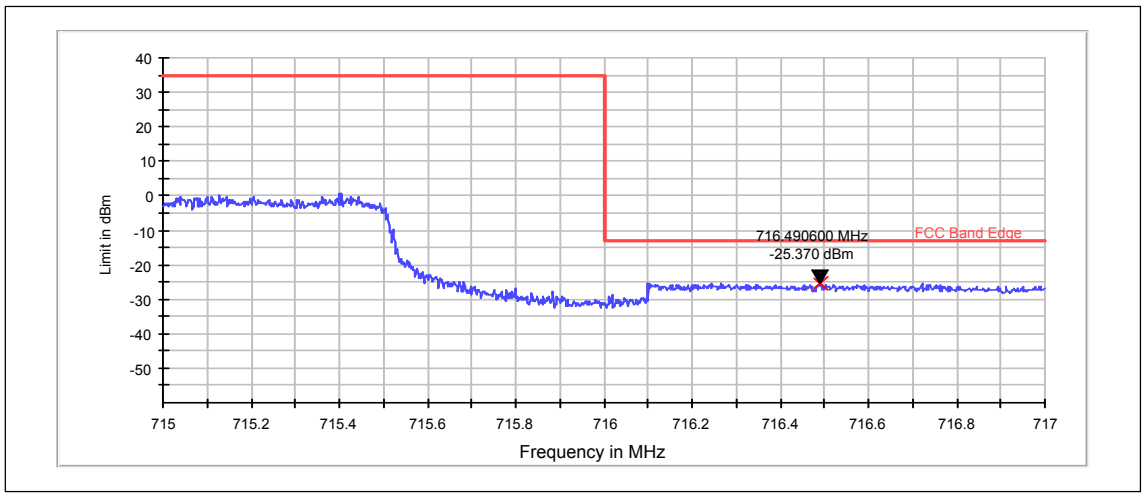
Channel 23780 / 709 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, QPSK, 50 RB	703.756	-26.26	PASSED

Channel 23800 / 711 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, QPSK, 50 RB	716.491	-25.37	PASSED

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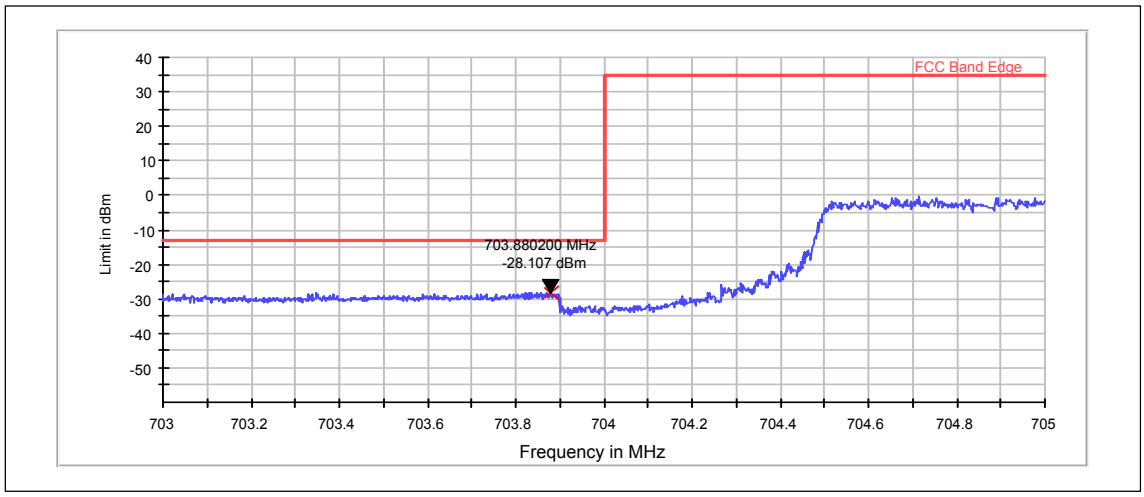
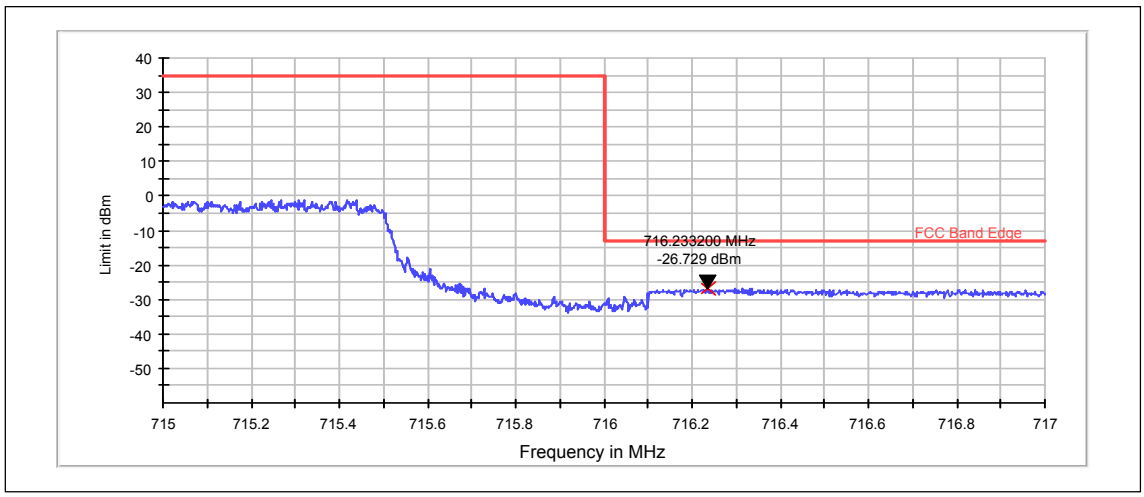
Channel 23780 / 709 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, 16QAM, 50 RB	703.880	-28.11	PASSED

Channel 23800 / 711 MHz



RMS detector, Max hold

Operation mode (TX on)	Frequency [MHz]	Level [dBm]	Result
FDD, CBW 10MHz, 16QAM, 50 RB	716.233	-26.73	PASSED

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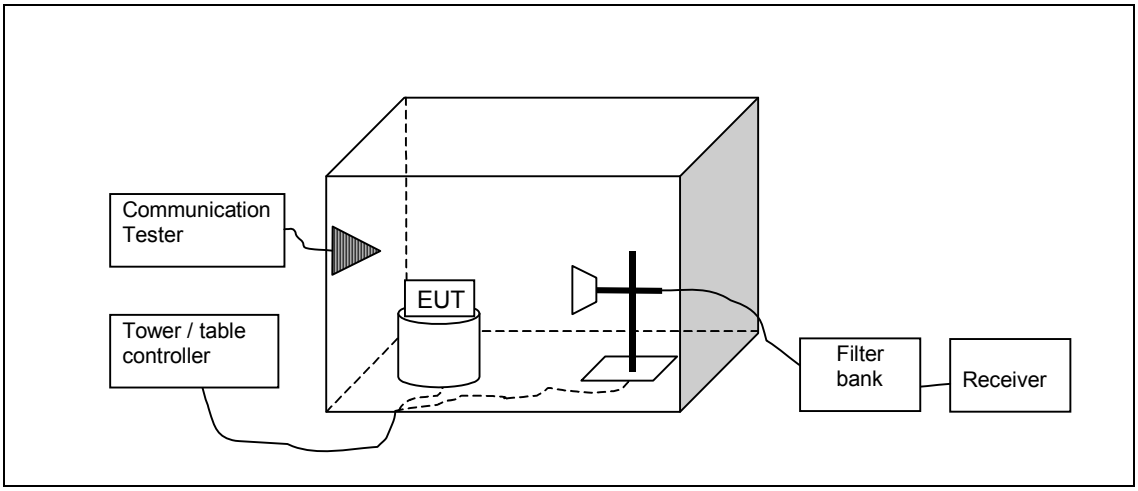
6. Spurious radiated emissions, Antenna 1

(FCC §24.238(a), §24.238(a), §2.1053, §27.53(g), §2.1051, §27.53(f), §27.53(l), §2.1053, §22.917(a), §2.1053, §27.53(h), §2.1053, §2.1053, RSS-133 6.5, RSS-139 6.5, RSS-132 4.5, RSS-199 4.5(b), RSS-130 4.6)

EUT with DUT number	RM-1085, DUT 400011
Accessories with DUT numbers	BVT4D, DUT 400012 ; AC-100E, DUT 400013 ; WH-308, DUT 400014
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 40 / 100.2
Date of measurements	27-Jun-2015
Measured by	Timo Raiskio

6.1.1 Test setup



6.2. 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 the 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 measurement is made up to 10th harmonic of the EUT highest TX channel.
The substitution method is used.

The measurement results are obtained as described below:

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

Where $P_{SUBST\ TX}$ is signal generator level, which produces the same receiver reading P_{MEAS} in dBm as EUT. $G_{SUBST\ TX\ ANT}$ is substitution antenna gain and $L_{SUBST\ CABLE}$ is the loss of the cable between the signal generator and the substitution antenna.

Limits for spurious radiated emissions measurements

Operation band	Frequency range [MHz]	Limit [dBm]
LTE2	30 - 19100	-13
LTE4	30 - 17500	-13
LTE5	30 - 8500	-13
LTE7	30 - 25700	-13
LTE12	30 - 7200	-13
LTE17	30 - 7200	-13 (RBW = 100 kHz, ERP)
GSM 850	30 - 8500	-13
GSM 1900	30 - 19100	-13
WCDMA2	30 - 19100	-13
WCDMA4	30 - 17500	-13
WCDMA5	30 - 8500	-13

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6.3. GSM 850 test results

Channel 190 / 836.6 MHz

Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1673.507	-53.73	0.00424	-47.13	-6.6	VERTICAL	PASSED
1719.078	-58.7	0.00135	-52.1	-6.6	VERTICAL	PASSED
2497.154	-55.1	0.00309	-55.1	0	HORIZONTAL	PASSED
2532.224	-55.09	0.0031	-55.79	0.7	VERTICAL	PASSED
3358.557	-59.24	0.00119	-59.94	0.7	HORIZONTAL	PASSED
3374.629	-59.95	0.00101	-60.75	0.8	HORIZONTAL	PASSED

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

Channel 190 / 836.6 MHz

Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1682.158	-59.72	0.00107	-53.12	-6.6	VERTICAL	PASSED
2517.756	-55.13	0.00307	-55.73	0.6	HORIZONTAL	PASSED

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6.5. GSM 1900 test results

Channel 661 / 1880.0 MHz

Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
5640.08	-46.63	0.02173	-54.43	7.8	VERTICAL	PASSED
7495.07	-50.13	0.00971	-64.33	14.2	VERTICAL	PASSED
8112.425	-47.07	0.01963	-62.77	15.7	HORIZONTAL	PASSED
9272.064	-44.47	0.03573	-64.27	19.8	VERTICAL	PASSED
9347.174	-45.26	0.02979	-63.96	18.7	VERTICAL	PASSED
9914.83	-45.93	0.02553	-63.83	17.9	HORIZONTAL	PASSED

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

Channel 661 / 1880.0 MHz

Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
3760.06	-50.27	0.0094	-54.77	4.5	HORIZONTAL	PASSED
5640.06	-47.85	0.01641	-55.65	7.8	VERTICAL	PASSED

6.7. WCDMA2 test results

Channel 9400 / 1880.0 MHz

FDD mode, Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1832.864	-56.15	0.00243	-52.85	-3.3	HORIZONTAL	PASSED
3757.455	-55.19	0.00303	-59.69	4.5	VERTICAL	PASSED
5633.607	-52.19	0.00604	-60.09	7.9	VERTICAL	PASSED
5644.79	-51.7	0.00676	-59.8	8.1	HORIZONTAL	PASSED
7498.737	-48.99	0.01262	-63.19	14.2	VERTICAL	PASSED
7516.733	-48.62	0.01374	-62.62	14	HORIZONTAL	PASSED
9318.417	-43.67	0.04295	-62.87	19.2	VERTICAL	PASSED
9387.234	-44.21	0.03793	-62.61	18.4	VERTICAL	PASSED
9406.353	-44.42	0.03614	-62.82	18.4	VERTICAL	PASSED
9939.94	-43.21	0.04775	-61.21	18	VERTICAL	PASSED
11289.599	-43.56	0.04406	-62.36	18.8	HORIZONTAL	PASSED
13156.212	-52.57	0.00553	-64.17	11.6	HORIZONTAL	PASSED
15041.263	-51.7	0.00676	-65.9	14.2	HORIZONTAL	PASSED
16914.89	-50.95	0.00804	-67.15	16.2	HORIZONTAL	PASSED

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6.8. WCDMA4 test results

Channel 1412 / 1732.4 MHz

FDD mode, Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1755.14	-47.46	0.01795	-43.06	-4.4	HORIZONTAL	PASSED
3468.347	-56.12	0.00244	-60.12	4	HORIZONTAL	PASSED
5193.493	-51.82	0.00658	-59.62	7.8	HORIZONTAL	PASSED
6927.536	-47.57	0.0175	-58.67	11.1	VERTICAL	PASSED
8661.058	-46.5	0.02239	-63.2	16.7	VERTICAL	PASSED
9220.822	-44.67	0.03412	-63.77	19.1	VERTICAL	PASSED
9358.136	-44.81	0.03304	-63.41	18.6	VERTICAL	PASSED
9365.671	-44.55	0.03508	-62.95	18.4	VERTICAL	PASSED
9857.054	-44.49	0.03556	-62.99	18.5	VERTICAL	PASSED
9906.232	-44.72	0.03373	-62.72	18	HORIZONTAL	PASSED
10391.695	-45.67	0.0271	-63.67	18	HORIZONTAL	PASSED
12128.984	-45.22	0.03006	-63.82	18.6	VERTICAL	PASSED
13861.945	-51.54	0.00701	-63.54	12	HORIZONTAL	PASSED
15589.376	-50.37	0.00918	-65.97	15.6	VERTICAL	PASSED
17319.571	-49.85	0.01035	-67.05	17.2	HORIZONTAL	PASSED

6.9. WCDMA5 test results

Channel 4175 / 835.0 MHz

FDD mode, Peak detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
821.478	-48.47	0.01422	-80.77	32.3	VERTICAL	PASSED
847.737	-49	0.01259	-79.8	30.8	VERTICAL	PASSED
848.221	-48.16	0.01528	-78.96	30.8	VERTICAL	PASSED
1007.495	-62.84	0.00052	-52.54	-10.3	VERTICAL	PASSED
1672.906	-59.39	0.00115	-52.79	-6.6	VERTICAL	PASSED
2508.196	-53.53	0.00444	-53.73	0.2	VERTICAL	PASSED
2514.719	-54.3	0.00372	-54.9	0.6	HORIZONTAL	PASSED
3340.822	-58.4	0.00145	-59.2	0.8	VERTICAL	PASSED
3344.83	-59.07	0.00124	-59.67	0.6	VERTICAL	PASSED
4165.561	-57.26	0.00188	-60.66	3.4	VERTICAL	PASSED
5016.874	-54.7	0.00339	-60.6	5.9	HORIZONTAL	PASSED
5846.703	-53.86	0.00411	-59.86	6	VERTICAL	PASSED
6676.934	-50.95	0.00804	-59.05	8.1	HORIZONTAL	PASSED
7514.78	-50.88	0.00817	-62.78	11.9	HORIZONTAL	PASSED
8340.842	-49.69	0.01074	-62.99	13.3	HORIZONTAL	PASSED

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6.10. LTE2 test results

Channel 18900 / 1880.0 MHz
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
3760.261	-65.8	0.00026	-70.3	4.5	HORIZONTAL	PASSED
5640.581	-50.85	0.00822	-59.05	8.2	HORIZONTAL	PASSED
7515.892	-59.57	0.0011	-73.67	14.1	HORIZONTAL	PASSED

Channel 18900 / 1880.0 MHz
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
3761.703	-66.47	0.00023	-70.97	4.5	HORIZONTAL	PASSED
5640.701	-60.57	0.00088	-68.77	8.2	HORIZONTAL	PASSED
7522.625	-60.09	0.00098	-73.89	13.8	HORIZONTAL	PASSED

6.11. LTE4 test results

Channel 20175 / 1732.5 MHz
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
3465.421	-65.42	0.00029	-69.12	3.7	VERTICAL	PASSED
5198.001	-56.26	0.00237	-63.76	7.5	VERTICAL	PASSED
6925.01	-58.69	0.00135	-69.89	11.2	VERTICAL	PASSED
8667.771	-57.36	0.00184	-74.26	16.9	VERTICAL	PASSED
10387.485	-56.23	0.00238	-74.23	18	VERTICAL	PASSED

Channel 20175 / 1732.5 MHz
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
3465.341	-65.06	0.00031	-68.76	3.7	VERTICAL	PASSED
5197.921	-62.18	0.00061	-69.68	7.5	VERTICAL	PASSED
6925.01	-58.49	0.00142	-69.69	11.2	VERTICAL	PASSED
8672.42	-57.21	0.0019	-74.31	17.1	VERTICAL	PASSED
10390.21	-56.28	0.00236	-74.28	18	HORIZONTAL	PASSED

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6.12. LTE5 test results

Channel 20525 / 836.5 MHz
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
857.918	-61.85	0.00065	-93.05	31.2	HORIZONTAL	PASSED
1664.082	-78.34	1E-05	-71.44	-6.9	HORIZONTAL	PASSED
2516.694	-73.7	4E-05	-74.3	0.6	HORIZONTAL	PASSED
3352.433	-77.88	2E-05	-78.48	0.6	HORIZONTAL	PASSED

Channel 20525 / 836.5 MHz
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
858.499	-61.78	0.00066	-92.98	31.2	HORIZONTAL	PASSED
1665.244	-77.83	2E-05	-70.93	-6.9	HORIZONTAL	PASSED
2513.728	-73.08	5E-05	-73.58	0.5	HORIZONTAL	PASSED
3342.212	-78.5	1E-05	-79	0.5	HORIZONTAL	PASSED

6.13. LTE7 test results

Channel 21100 / 2535.0 MHz
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
2551.789	-56.25	0.00237	-57.55	1.3	HORIZONTAL	PASSED
5074.309	-62.67	0.00054	-71.17	8.5	HORIZONTAL	PASSED
7605.701	-57.44	0.0018	-71.44	14	HORIZONTAL	PASSED
10139.218	-56.79	0.00209	-73.29	16.5	HORIZONTAL	PASSED

Channel 21100 / 2535.0 MHz
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
2552.229	-57.85	0.00164	-59.15	1.3	HORIZONTAL	PASSED
5073.667	-62.91	0.00051	-71.41	8.5	HORIZONTAL	PASSED
7605.421	-58.19	0.00152	-72.19	14	HORIZONTAL	PASSED
10140.782	-56.22	0.00239	-72.72	16.5	HORIZONTAL	PASSED

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6.14. LTE12 test results

Channel 23095 / 707.5 MHz
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1424.118	-79.59	1E-05	-70.99	-8.6	VERTICAL	PASSED
2123.001	-73.3	5E-05	-69.9	-3.4	HORIZONTAL	PASSED
2839.238	-71.42	7E-05	-74.22	2.8	VERTICAL	PASSED

Channel 23095 / 707.5 MHz
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1424.84	-79.9	1E-05	-71.4	-8.5	HORIZONTAL	PASSED
2123.081	-74.94	3E-05	-71.64	-3.3	VERTICAL	PASSED
2839.8	-71.08	8E-05	-73.98	2.9	VERTICAL	PASSED

6.15. LTE17 test results

Channel 23790 / 710 MHz
FDD, CBW 5MHz, QPSK, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1429.92	-79.67	1E-05	-71.47	-8.2	HORIZONTAL	PASSED
2130.661	-73.95	4E-05	-70.95	-3	VERTICAL	PASSED
2845.351	-71.64	7E-05	-74.64	3	VERTICAL	PASSED

Channel 23790 / 710 MHz
FDD, CBW 5MHz, 16QAM, 1 RB, RMS detector

Frequency [MHz]	P [dBm]	P [µW]	P_{MEAS} [dBm]	A_{TOT} [dB]	Polarisation	Results
1429.84	-79.92	1E-05	-71.72	-8.2	HORIZONTAL	PASSED
2130.541	-73.51	4E-05	-70.51	-3	VERTICAL	PASSED
2847.114	-71.37	7E-05	-74.27	2.9	VERTICAL	PASSED

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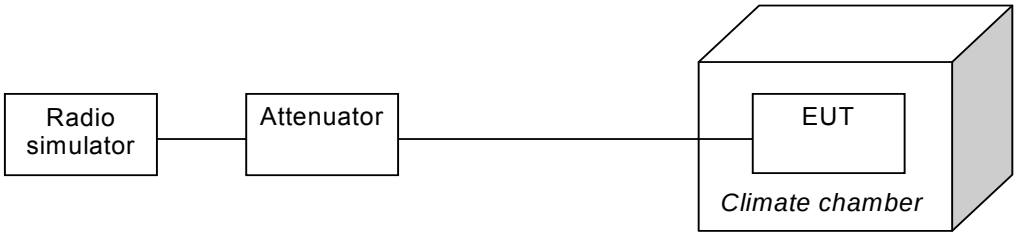
7. Frequency stability, temperature variation, Antenna 1

(FCC §2.1055(a), RSS-133 6.3, RSS-132 4.3, RSS-139 6.3)

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	BV-T4D DUT400012, AC-100E DUT400013, WH-308 DUT400014
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	20 / 50 / 100.4
Date of measurements	26-Jun-2015
Measured by	Timo Raiskio

7.1. Test Setup



7.2. 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

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7.3. GSM 1900 Test results

GSM, Channel 661 / 1880.0 MHz

Temperature [ºC]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	1880.00	26.09000	0.0139	PASSED
40	1880.00	21.70000	0.0115	PASSED
30	1880.00	14.27000	0.0076	PASSED
20	1880.00	10.40000	0.0055	PASSED
10	1880.00	13.82000	0.0074	PASSED
0	1880.00	28.54000	0.0152	PASSED
-10	1880.00	23.12000	0.0123	PASSED
-20	1880.00	31.19000	0.0166	PASSED
-30	1880.00	21.70000	0.0115	PASSED

7.4. GSM 850 Test results

GSM, Channel 190 / 836.6 MHz

Temperature [ºC]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	836.60	3.49000	0.0042	PASSED
40	836.60	-8.14000	-0.0097	PASSED
30	836.60	-5.94000	-0.0071	PASSED
20	836.60	1.74000	0.0021	PASSED
10	836.60	0.71000	0.0008	PASSED
0	836.60	1.74000	0.0021	PASSED
-10	836.60	3.49000	0.0042	PASSED
-20	836.60	2.07000	0.0025	PASSED
-30	836.60	-2.78000	-0.0033	PASSED

7.5. WCDMA4 Test results

FDD, Channel 1412 / 1732.4 MHz

Temperature [ºC]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	1732.40	-2.39563	-0.0014	PASSED
40	1732.40	-1.35803	-0.0008	PASSED
30	1732.40	-15.88440	-0.0092	PASSED
20	1732.40	-0.73242	-0.0004	PASSED
10	1732.40	-2.36511	-0.0014	PASSED
0	1732.40	-4.04358	-0.0023	PASSED
-10	1732.40	-1.37329	-0.0008	PASSED
-20	1732.40	-2.70081	-0.0016	PASSED
-30	1732.40	-1.93787	-0.0011	PASSED

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7.6. LTE7 Test results

FDD, CBW 20MHz, QPSK, 100 RB, Channel 21100 / 2535.0 MHz

Temperature [ºC]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	2535.00	-2.27451	-0.0009	PASSED
40	2535.00	-1.48773	-0.0006	PASSED
30	2535.00	-3.19004	-0.0013	PASSED
20	2535.00	-2.48909	-0.001	PASSED
10	2535.00	-2.23160	-0.0009	PASSED
0	2535.00	-2.98977	-0.0012	PASSED
-10	2535.00	-1.95980	-0.0008	PASSED
-20	2535.00	-3.94821	-0.0016	PASSED
-30	2535.00	-4.92096	-0.0019	PASSED

7.7. LTE12 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23095 / 707.5 MHz

Temperature [ºC]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	707.50	-0.70095	-0.001	PASSED
40	707.50	-0.07153	-0.0001	PASSED
30	707.50	-0.20027	-0.0003	PASSED
20	707.50	0.38624	0.0006	PASSED
10	707.50	0.35763	0.0005	PASSED
0	707.50	0.92983	0.0013	PASSED
-10	707.50	1.04427	0.0015	PASSED
-20	707.50	-0.54359	-0.0008	PASSED
-30	707.50	-1.65939	-0.0023	PASSED

7.8. LTE17 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23790 / 710.0 MHz

Temperature [ºC]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
50	710.00	-0.57220	-0.0008	PASSED
40	710.00	-0.58651	-0.0008	PASSED
30	710.00	0.44346	0.0006	PASSED
20	710.00	-0.27180	-0.0004	PASSED
10	710.00	-0.31471	-0.0004	PASSED
0	710.00	0.92983	0.0013	PASSED
-10	710.00	0.62943	0.0009	PASSED
-20	710.00	-0.11444	-0.0002	PASSED
-30	710.00	1.24455	0.0017	PASSED

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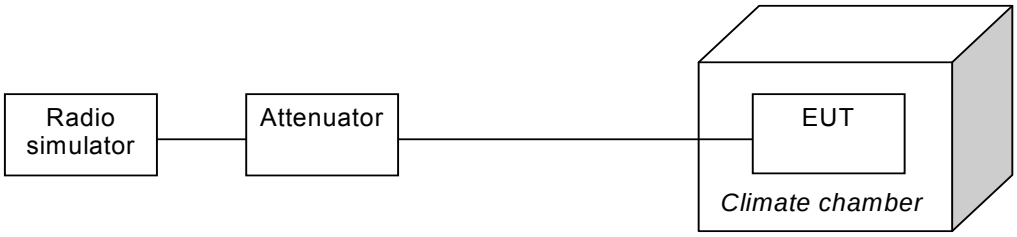
8. Frequency stability, temperature variation, (Band edge method), Antenna1

(RSS-139 6.3, RSS-199 4.3, RSS-130 4.3, RSS-130 4.3 (a))

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	BV-T4D DUT400012, AC-100E DUT400013, WH-308 DUT400014
Operation Voltage [V] / [Hz]	Nominal
Results	PASSED
Remarks	-
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	-30 / 20 / 50
Date of measurements	14-Jul-2015
Measured by	Timo Raiskio

8.1. Test Setup



8.2. 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.
The results were then calculated as per section 4.3 of RSS-130.

Limits for frequency stability, temperature variation measurements

Limit
The results must be within the operating band.

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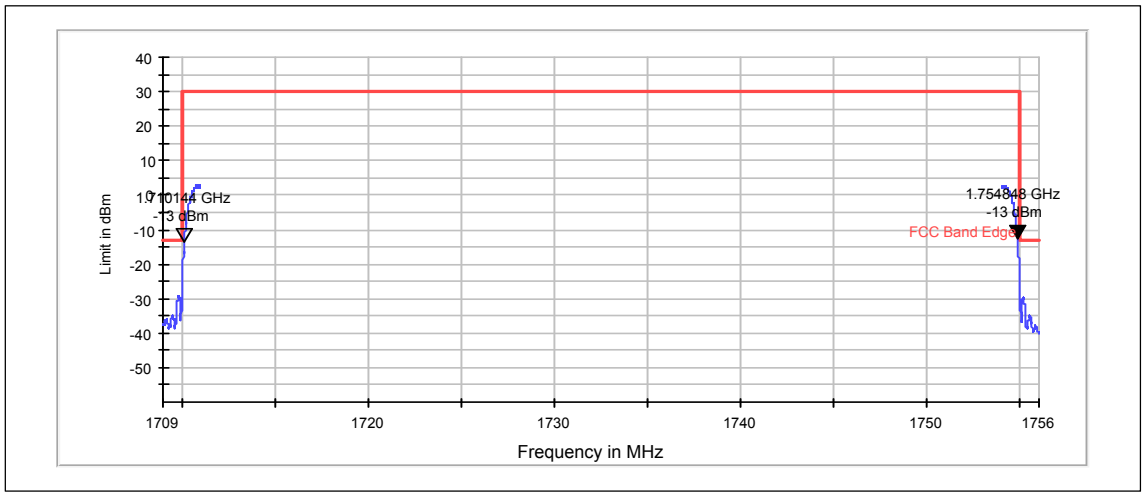
8.3. WCDMA4 Test results

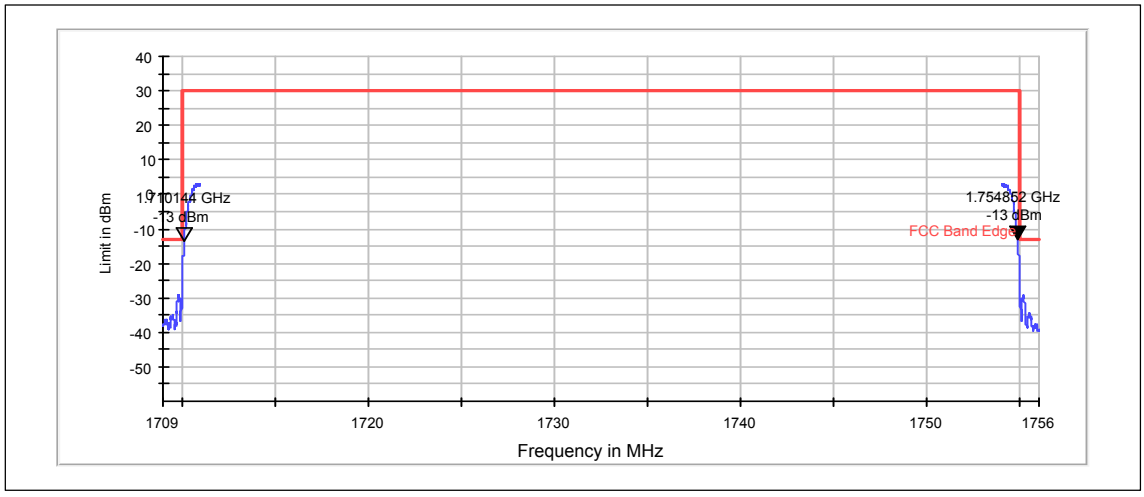
Channel 1412 / 1732.4 MHz



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

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
50	17.54761	1710.144000	1710.143982	1754.848000	1754.848017	PASSED

Channel 1412 / 1732.4 MHz



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

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
20	-1.78528	1710.144000	1710.143998	1754.852000	1754.852001	PASSED

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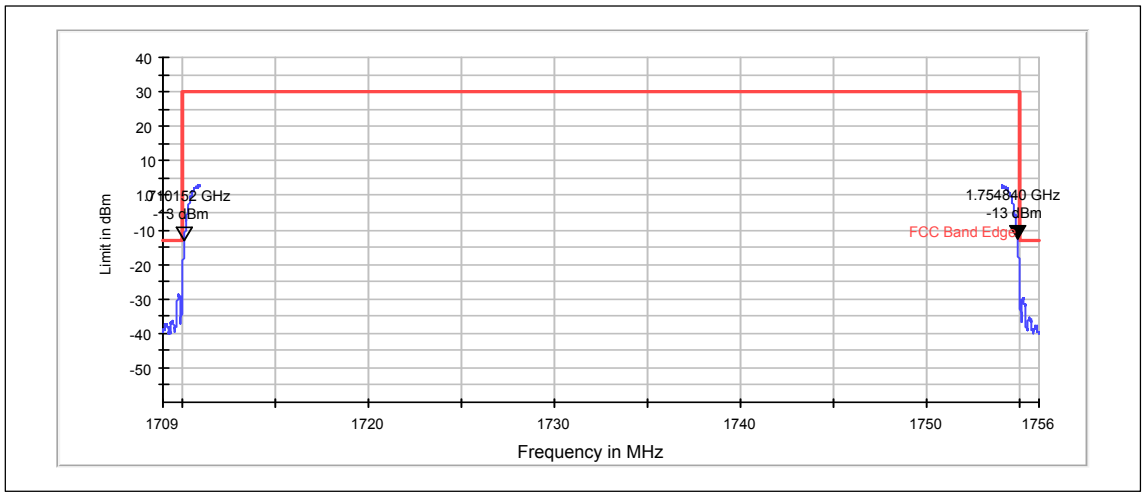
Channel 1412 / 1732.4 MHz

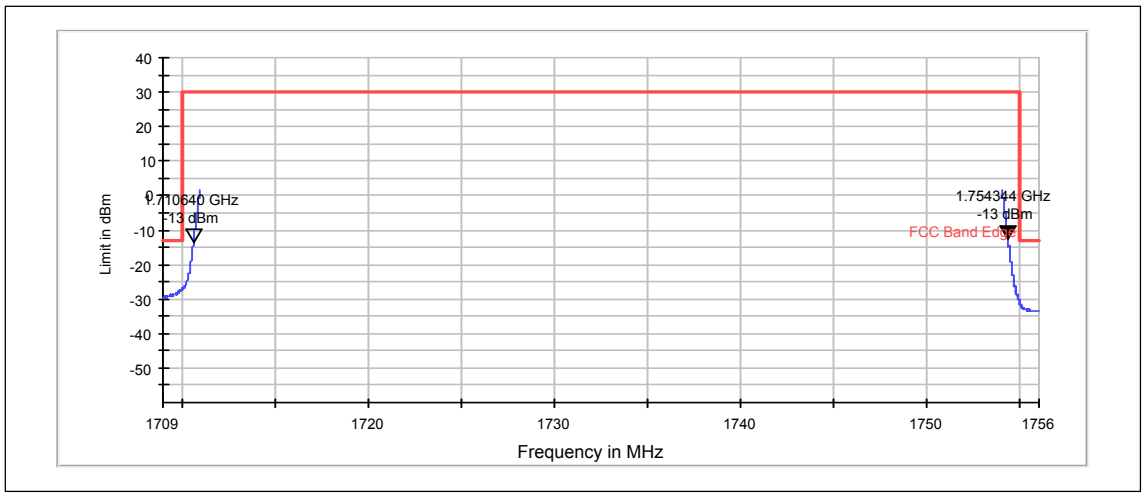


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
-30	3.98254	1710.152000	1710.151996	1754.840000	1754.840003	PASSED

8.4. LTE4 Test results

Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
50	3.70503	1710.640000	1710.639996	1754.344000	1754.344003	PASSED

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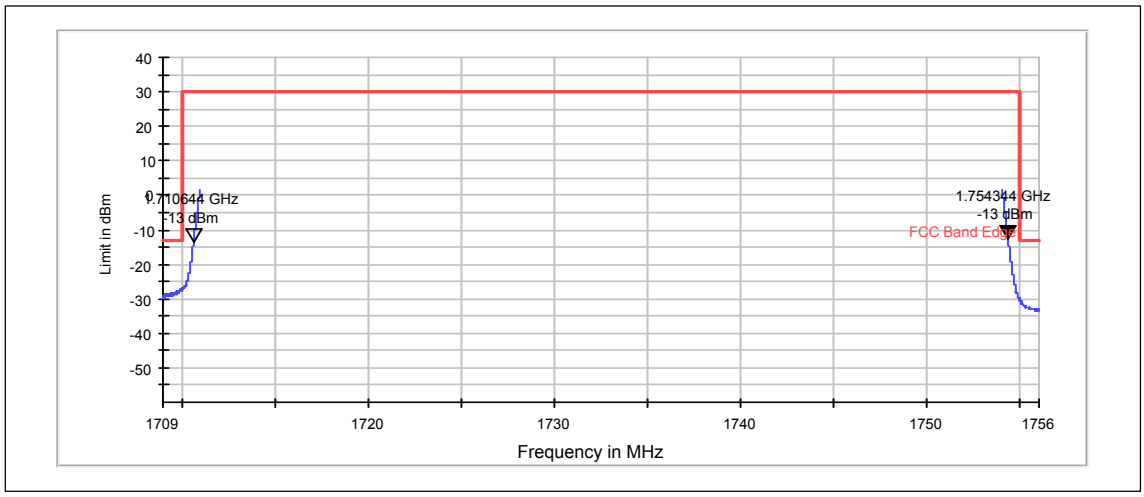
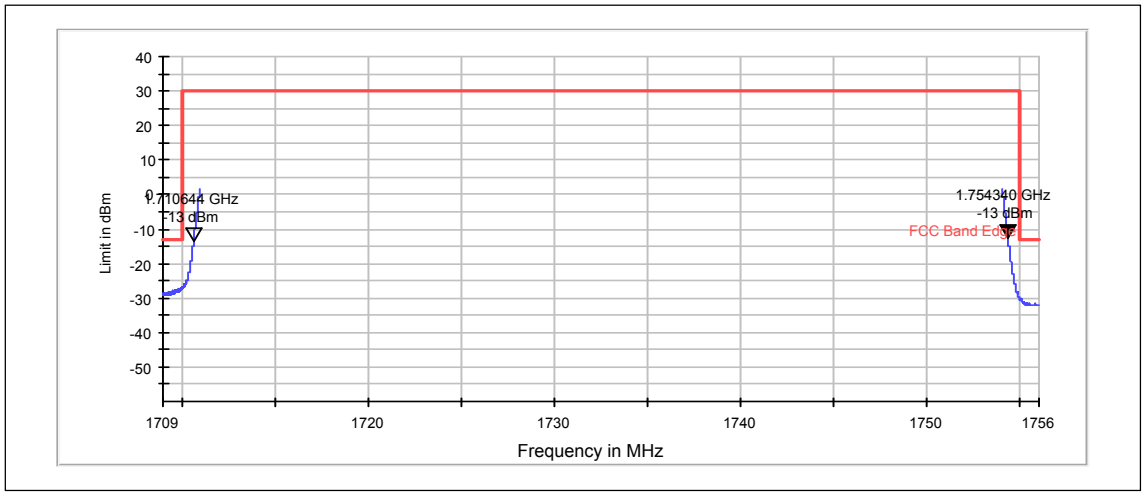
Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
20	2.24590	1710.644000	1710.643997	1754.344000	1754.344002	PASSED

Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
-30	1.51634	1710.644000	1710.643998	1754.340000	1754.340001	PASSED

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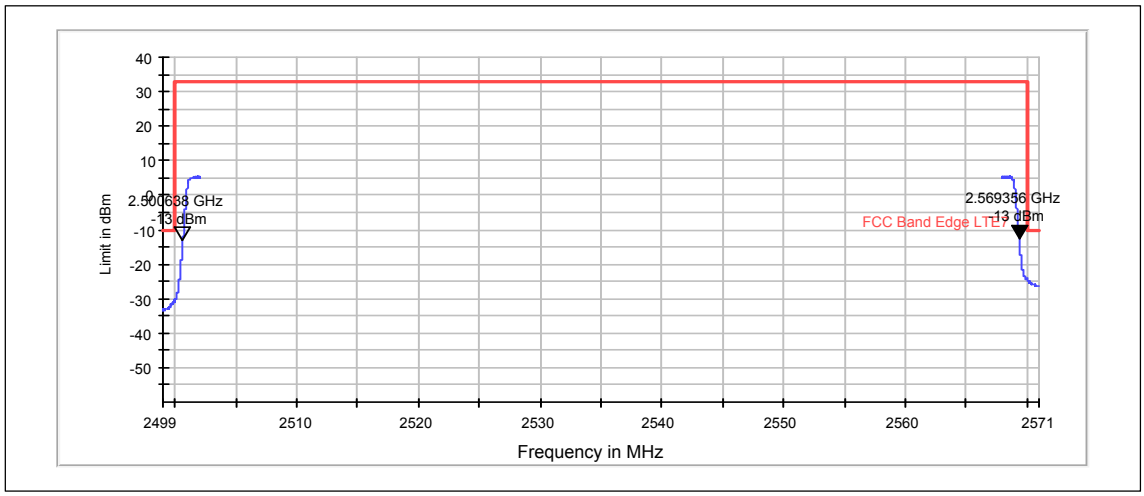
8.5. LTE7 Test results

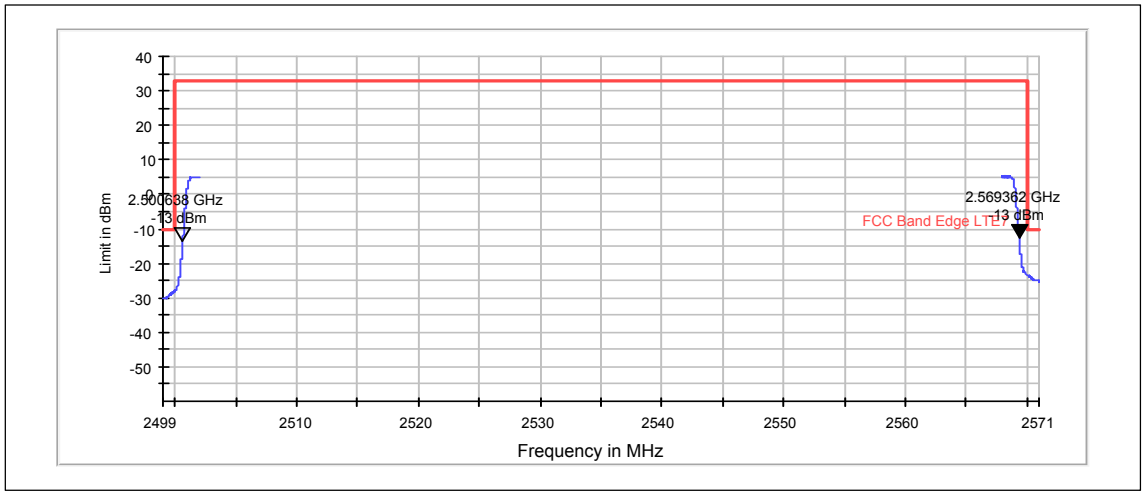
Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
50	1.53065	2500.638000	2500.637998	2569.356000	2569.356001	PASSED

Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
20	1.85967	2500.638000	2500.637998	2569.362000	2569.362001	PASSED

Channel 21100 / 2535.0 MHz

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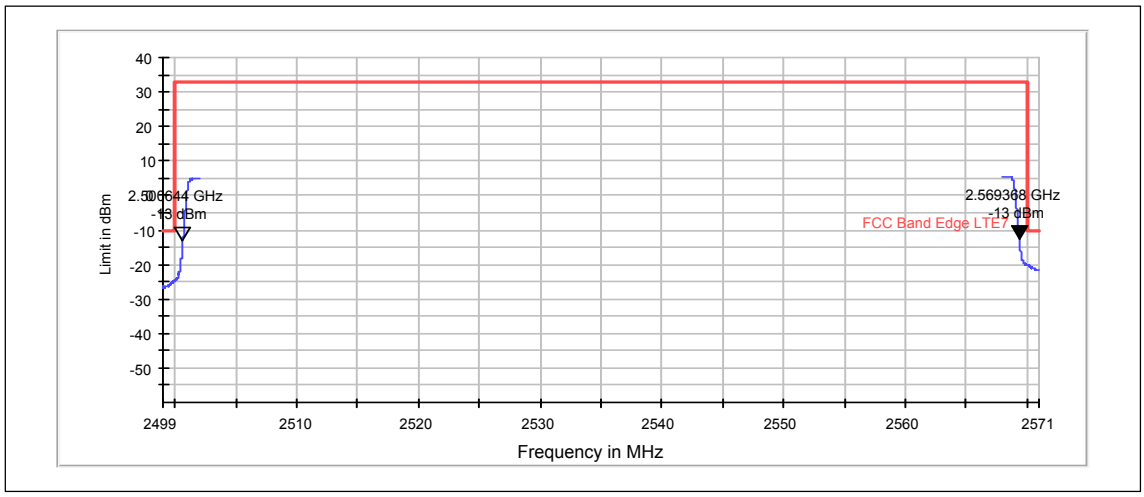
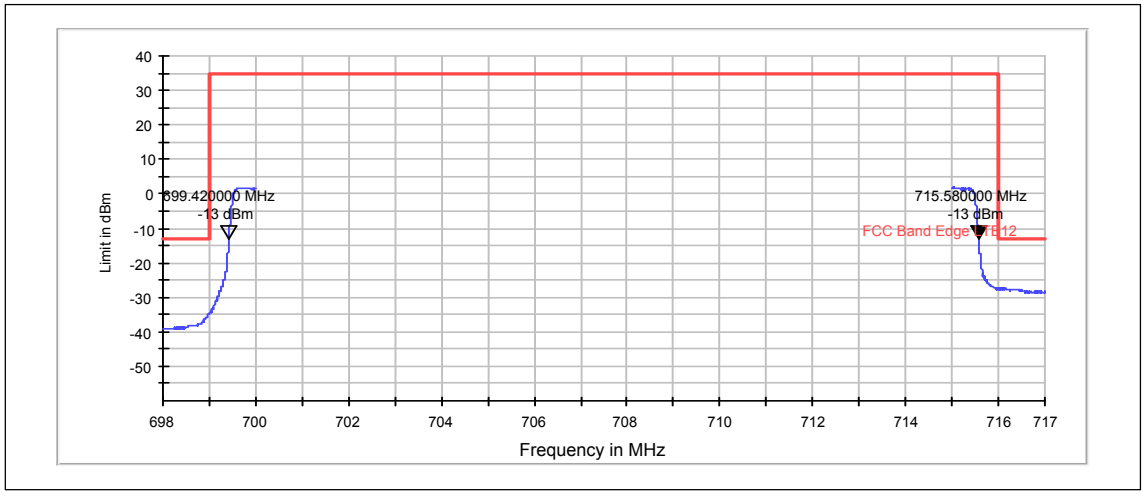


RMS (RBW: 500 kHz, VBW: 2 MHz)

Temperature [°C]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
-30	2.30312	2500.644000	2500.643997	2569.368000	2569.368002	PASSED

8.6. LTE12 Test results

Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Temperature [°C]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
50	-0.88692	699.420000	699.419999	715.580000	715.580000	PASSED

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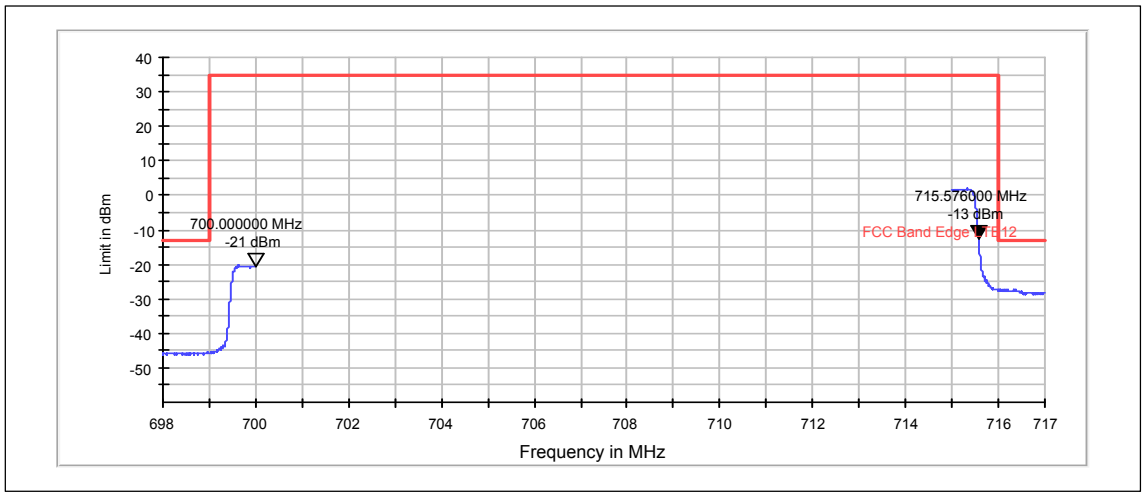
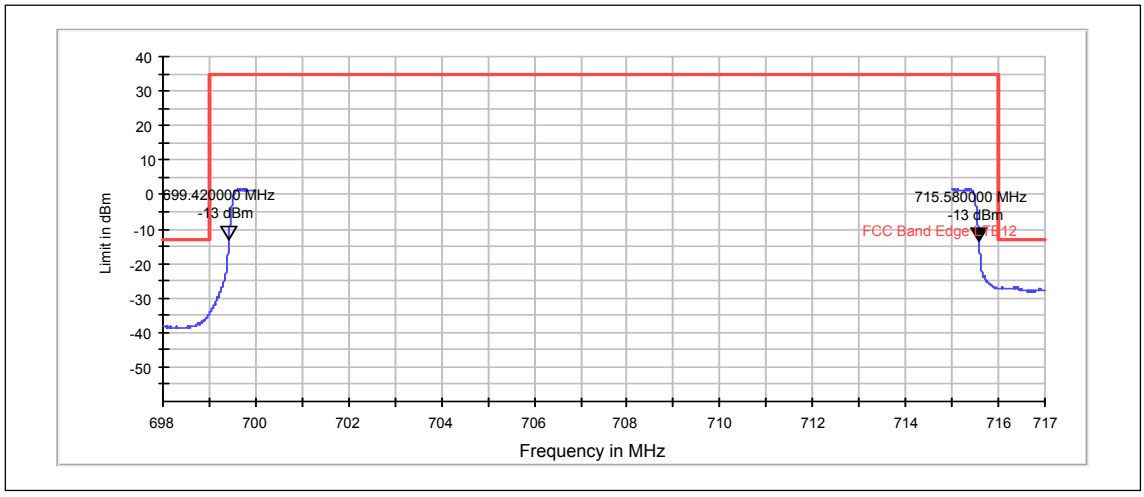
Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
20	-1.00000	700.000000	699.999999	715.576000	715.576001	PASSED

Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
-30	0.78678	699.420000	699.419999	715.580000	715.580000	PASSED

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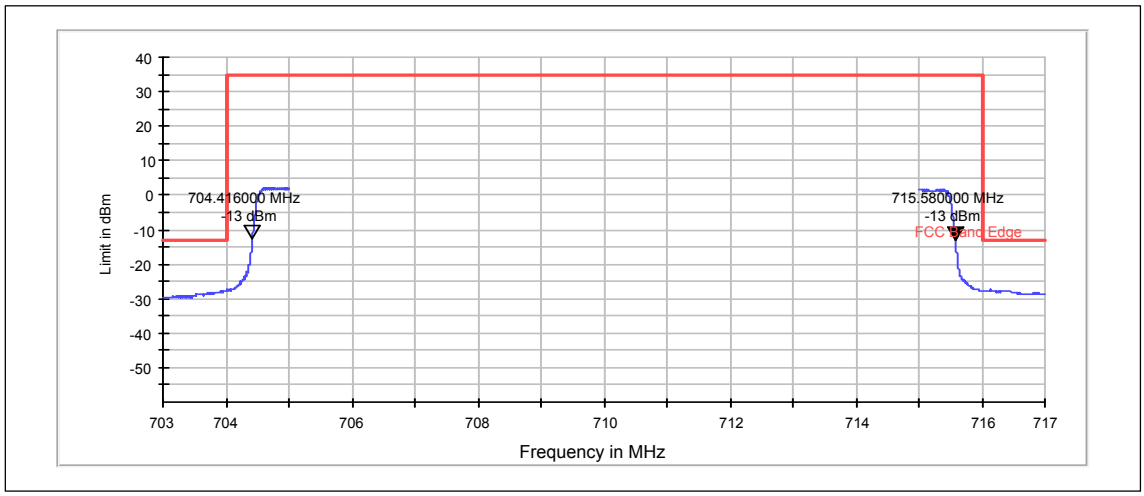
8.7. LTE17 Test results

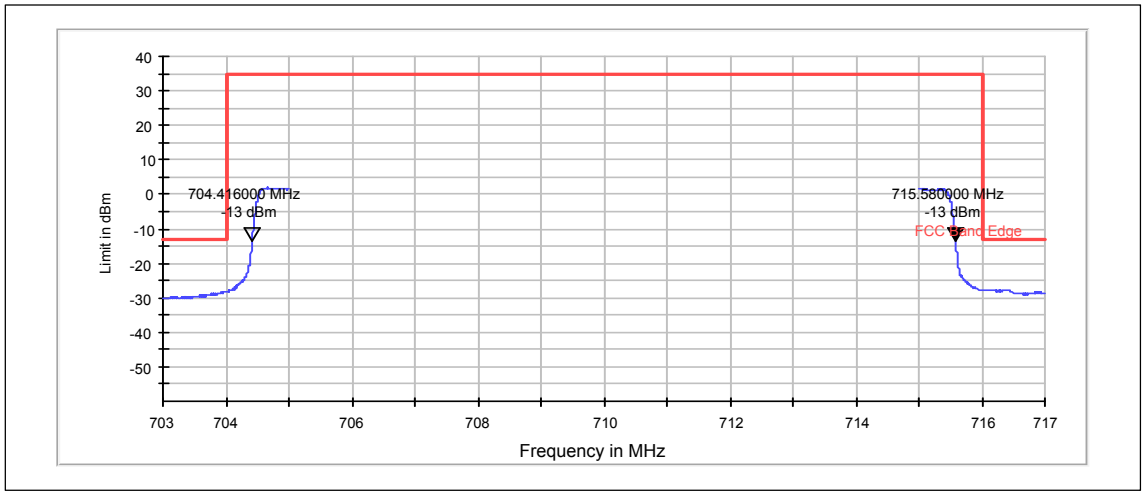
Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
50	-0.80109	704.416000	704.415999	715.580000	715.580000	PASSED

Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
20	-0.54359	704.416000	704.415999	715.580000	715.580000	PASSED

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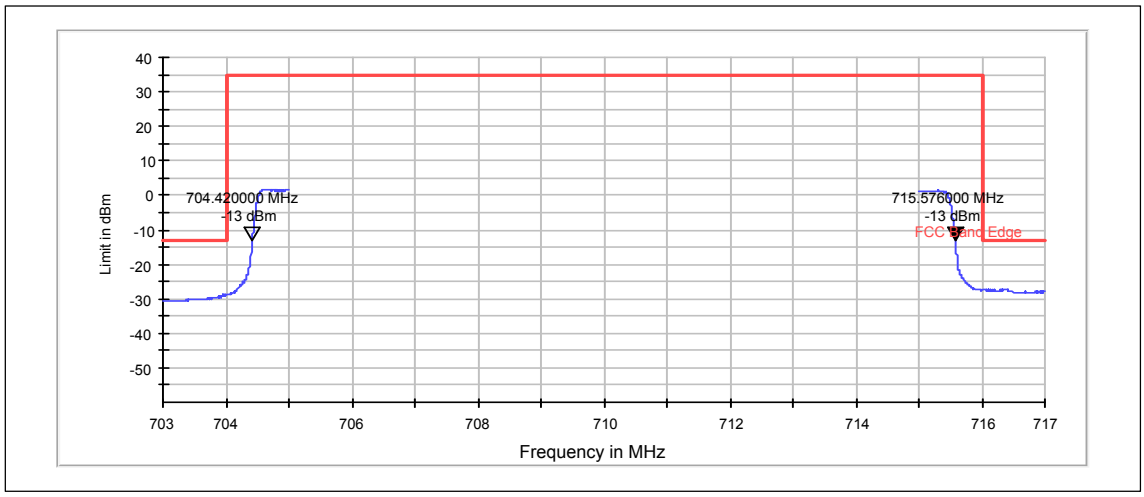
Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Temperature [ºC]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
-30	-0.40054	704.420000	704.419999	715.576000	715.576000	PASSED

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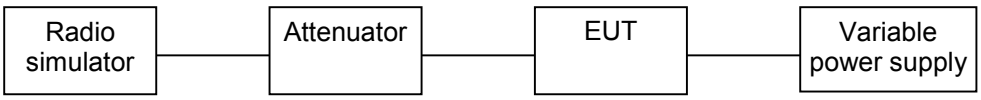
9. Frequency stability, voltage variation, Antenna 1

(FCC §2.1055(d), §27.54, RSS-133 6.3, RSS-132 4.3, RSS-139 6.3, RSS-199 4.3, RSS-130 4.3, RSS-130 4.3 (a))

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	SD-241R, DUT 400019
Operation Voltage [V] / [Hz]	3.3 / 3.9 / 4.4
Results	PASSED
Remarks	-
Temp [°C] / Humidity [%RH] / Air Pressure [kPa]	22 / 50 / 103.4
Date of measurements	29-Jun-2015
Measured by	Timo Raiskio

9.1. Test Setup



9.2. 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

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9.3. GSM 850 Test results

GSM,

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	836.60	0.32000	0.0004	PASSED
Battery cut-off point / 3.3	836.60	-1.36000	-0.0016	PASSED
Nominal / 3.9	836.60	-1.49000	-0.0018	PASSED

9.4. GSM 1900 Test results

GSM,

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	1880.00	2.91000	0.0015	PASSED
Battery cut-off point / 3.3	1880.00	12.59000	0.0067	PASSED
Nominal / 3.9	1880.00	12.85000	0.0068	PASSED

9.5. WCDMA4 Test results

FDD,

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	1732.40	-1.93787	-0.0011	PASSED
Battery cut-off point / 3.3	1732.40	-2.07520	-0.0012	PASSED
Nominal / 3.9	1732.40	-1.14441	-0.0007	PASSED

9.6. LTE4 Test results

FDD, CBW 20MHz, QPSK, 100 RB, Channel 20175 / 1732.5 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	1732.50	2.16007	0.0012	PASSED
Battery cut-off point / 3.3	1732.50	2.96116	0.0017	PASSED
Nominal / 3.9	1732.50	-0.44346	-0.0003	PASSED

9.7. LTE5 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 20525 / 836.5 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	836.50	-0.60081	-0.0007	PASSED
Battery cut-off point / 3.3	836.50	0.10014	0.0001	PASSED
Nominal / 3.9	836.50	-0.70095	-0.0008	PASSED

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9.8. LTE7 Test results

FDD, CBW 20MHz, QPSK, 100 RB, Channel 21100 / 2535.0 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	2535.00	-5.43594	-0.0021	PASSED
Battery cut-off point / 3.3	2535.00	-5.82218	-0.0023	PASSED
Nominal / 3.9	2535.00	-2.53201	-0.001	PASSED

9.9. LTE12 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23095 / 707.5 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	707.50	-0.27180	-0.0004	PASSED
Battery cut-off point / 3.3	707.50	-1.31607	-0.0019	PASSED
Nominal / 3.9	707.50	-0.82970	-0.0012	PASSED

9.10. LTE17 Test results

FDD, CBW 10MHz, QPSK, 50 RB, Channel 23790 / 710.0 MHz

Voltage level [V]	Frequency [MHz]	Deviation [Hz]	Deviation [ppm]	Result
Max / 4.4	710.00	-0.40054	-0.0006	PASSED
Battery cut-off point / 3.3	710.00	-0.95844	-0.0014	PASSED
Nominal / 3.9	710.00	-1.05858	-0.0015	PASSED

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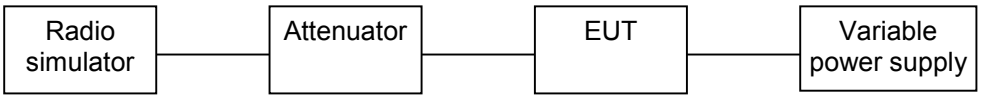
10. Frequency stability, voltage variation, (Band edge method), Antenna1

(RSS-199 4.3, RSS-130 4.3, RSS-130 4.3 (a), RSS-139 6.3)

EUT with DUT number	RM-1085, DUT 400015
Accessories with DUT numbers	SD-241R, DUT 400019
Operation Voltage [V] / [Hz]	3.3 / 3.9 / 4.4
Results	PASSED
Remarks	-
Temp [ºC] / Humidity [%RH] / Air Pressure [kPa]	22 / 50 / 103.4
Date of measurements	30-Jun-2015
Measured by	Timo Raiskio

10.1. Test Setup



10.2. 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.
The results were then calculated as per section 4.3 of RSS-130.

Limits for frequency stability, voltage variation measurements

Limit
The results must be within the operating band.

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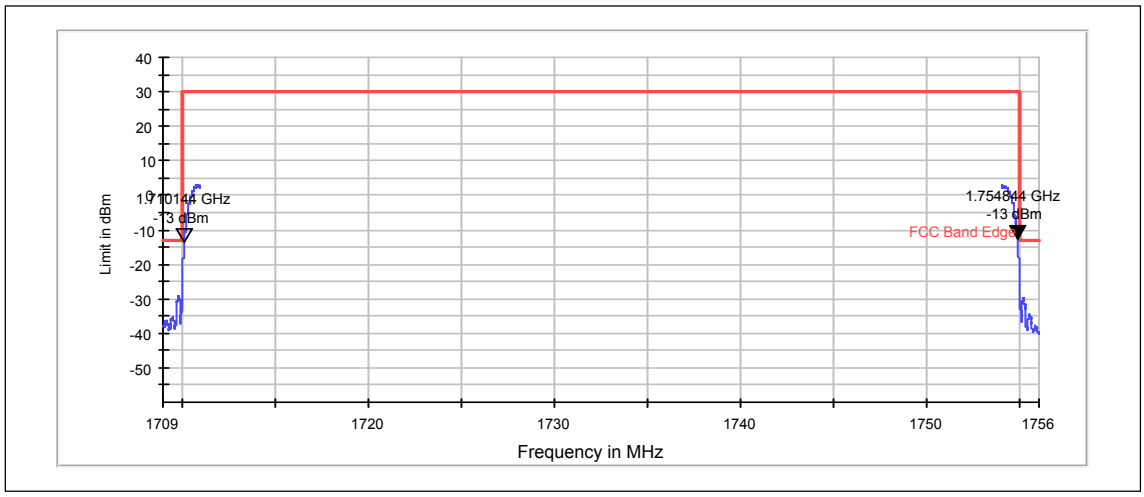
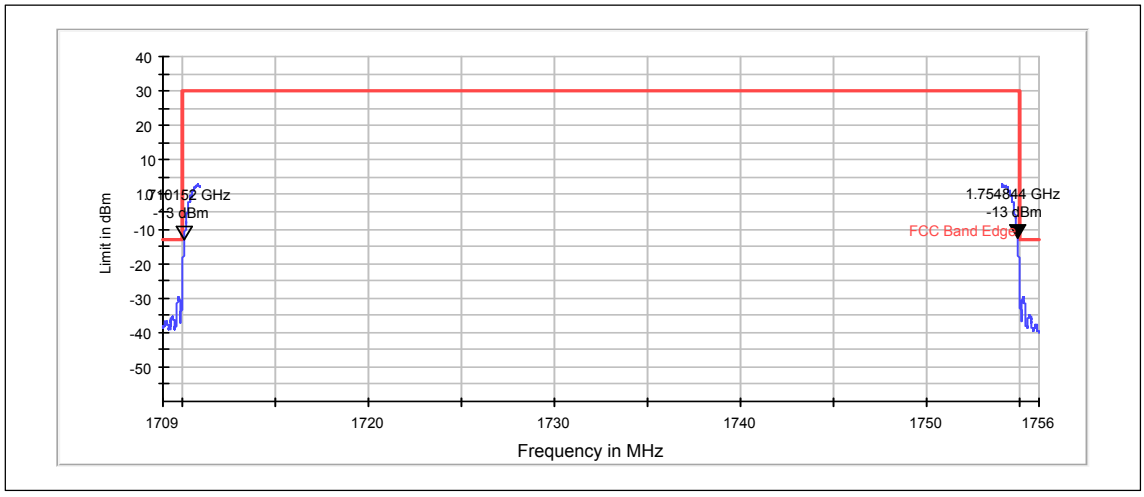
10.3. WCDMA4 Test results



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

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Max / 4.4	10.80322	1710.144000	1710.143989	1754.844000	1754.844010	PASSED



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

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Battery cut-off point / 3.3	-3.15857	1710.152000	1710.151996	1754.844000	1754.844003	PASSED

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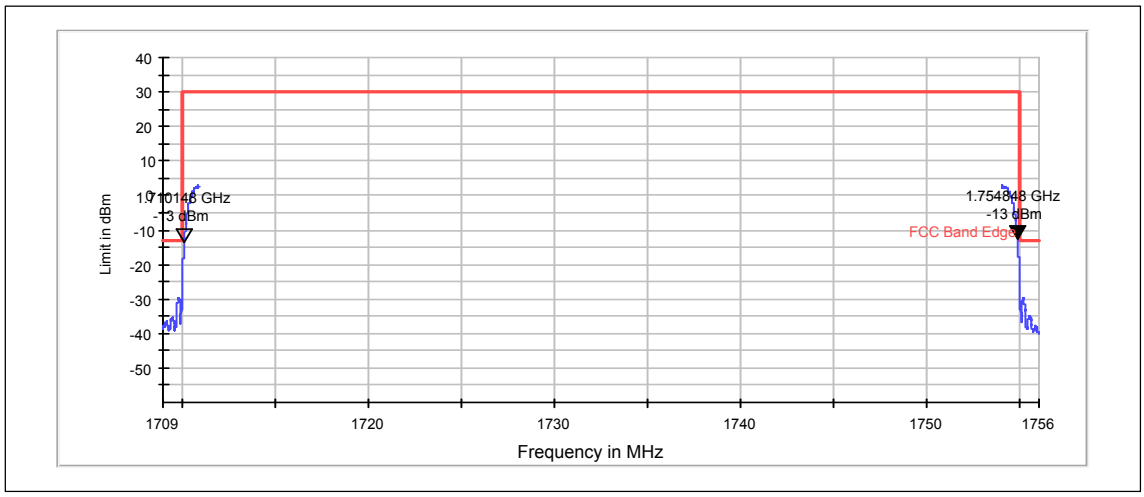
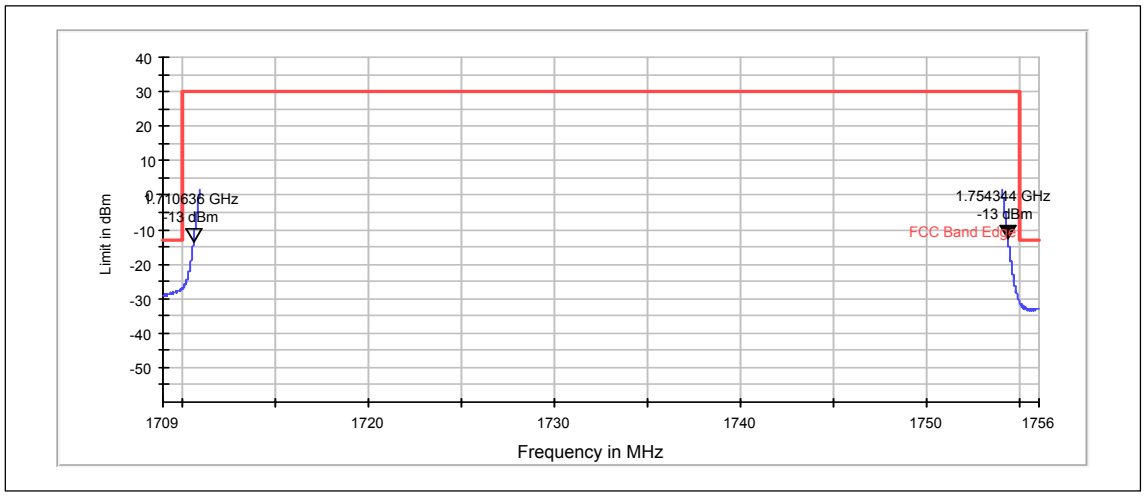


RMS (RBW: 50 kHz, VBW: 50 kHz, Max hold)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Nominal / 3.9	-4.95911	1710.148000	1710.147995	1754.848000	1754.848004	PASSED

10.4. LTE4 Test results

Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Max / 4.4	1.07288	1710.636000	1710.635998	1754.344000	1754.344001	PASSED

Channel 20175 / 1732.5 MHz

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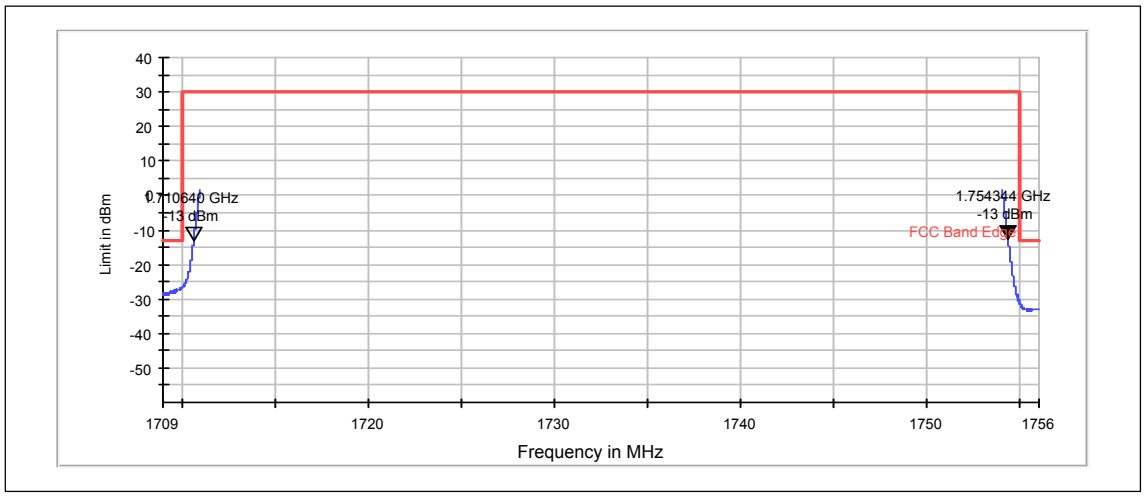
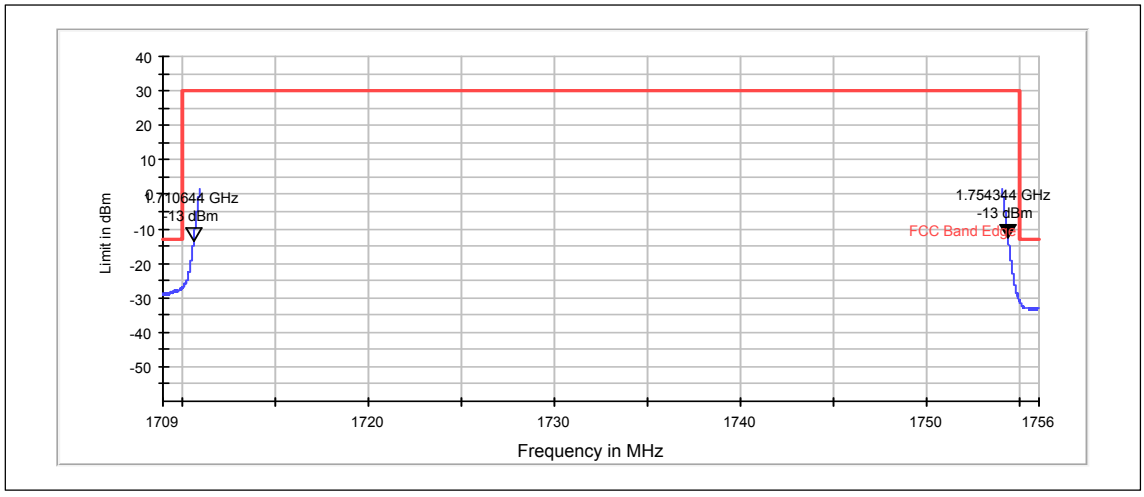


RMS (RBW: 500 kHz, VBW: 2 MHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Battery cut-off point / 3.3	-0.60081	1710.640000	1710.639999	1754.344000	1754.344000	PASSED

Channel 20175 / 1732.5 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Nominal / 3.9	2.70367	1710.644000	1710.643997	1754.344000	1754.344002	PASSED

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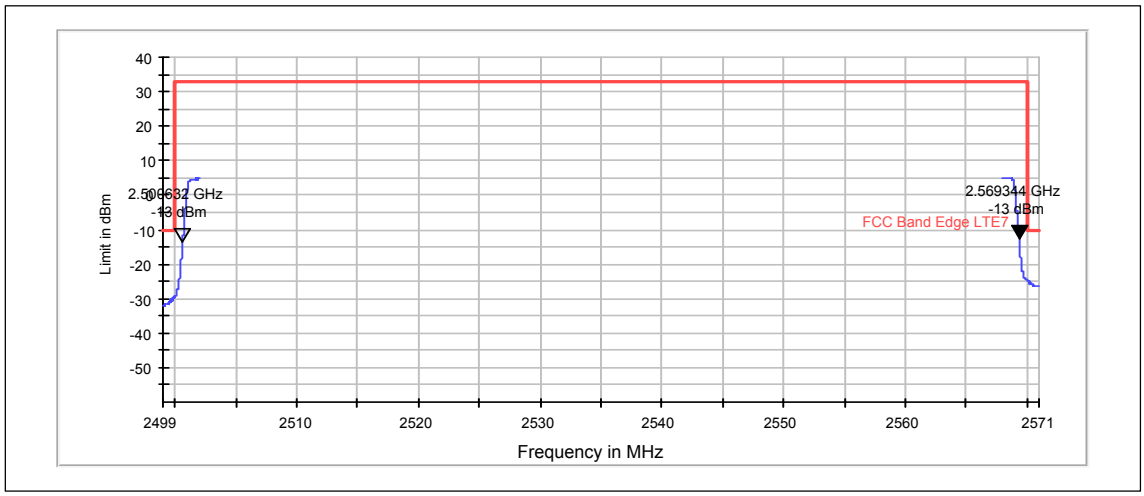
10.5. LTE7 Test results

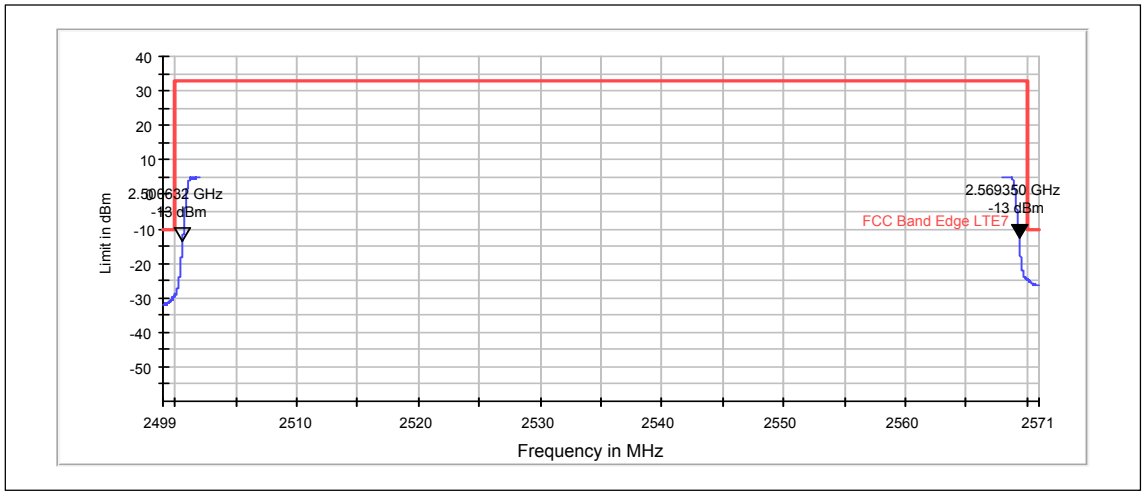
Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Max / 4.4	1.25885	2500.632000	2500.631998	2569.344000	2569.344001	PASSED

Channel 21100 / 2535.0 MHz



RMS (RBW: 500 kHz, VBW: 2 MHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Battery cut-off point / 3.3	0.64373	2500.632000	2500.631999	2569.350000	2569.350000	PASSED

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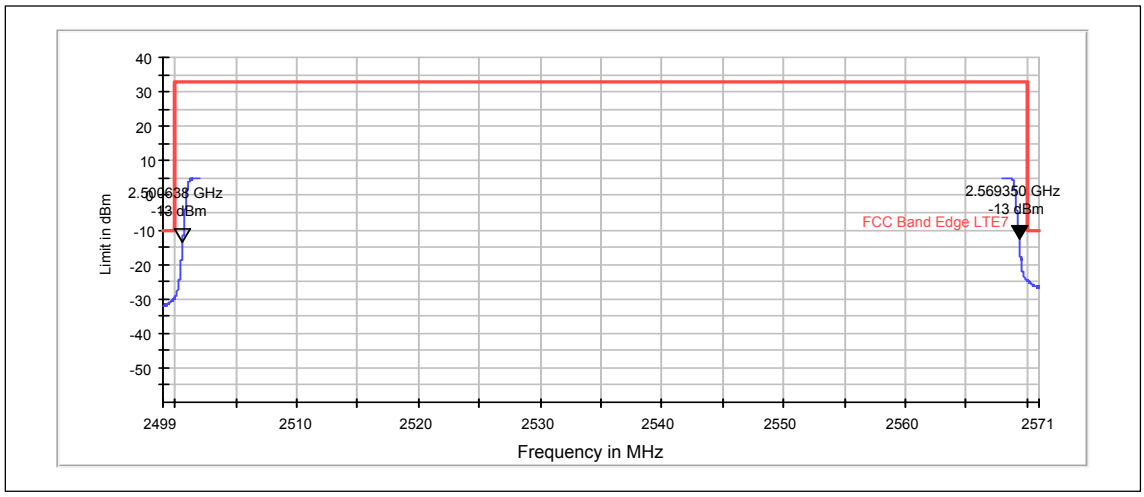
Channel 21100 / 2535.0 MHz

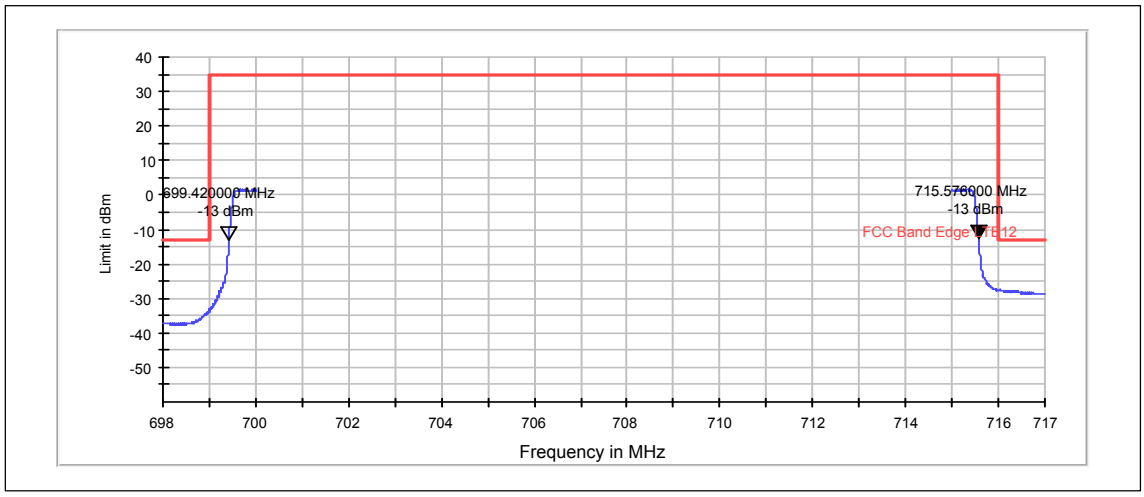


RMS (RBW: 500 kHz, VBW: 2 MHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Nominal / 3.9	2.47479	2500.638000	2500.637997	2569.350000	2569.350002	PASSED

10.6. LTE12 Test results

Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Max / 4.4	-0.81539	699.420000	699.419999	715.576000	715.576000	PASSED

Channel 23095 / 707.5 MHz

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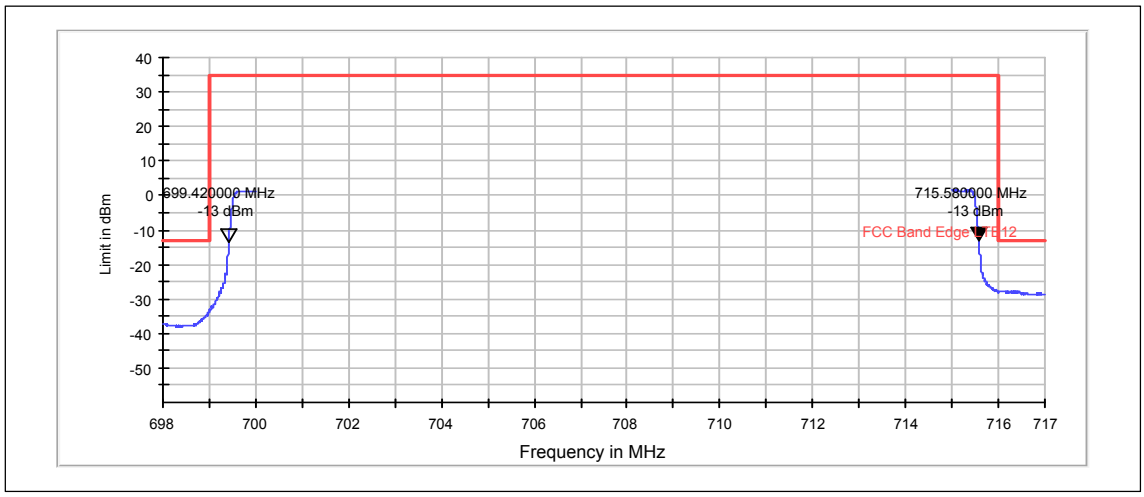
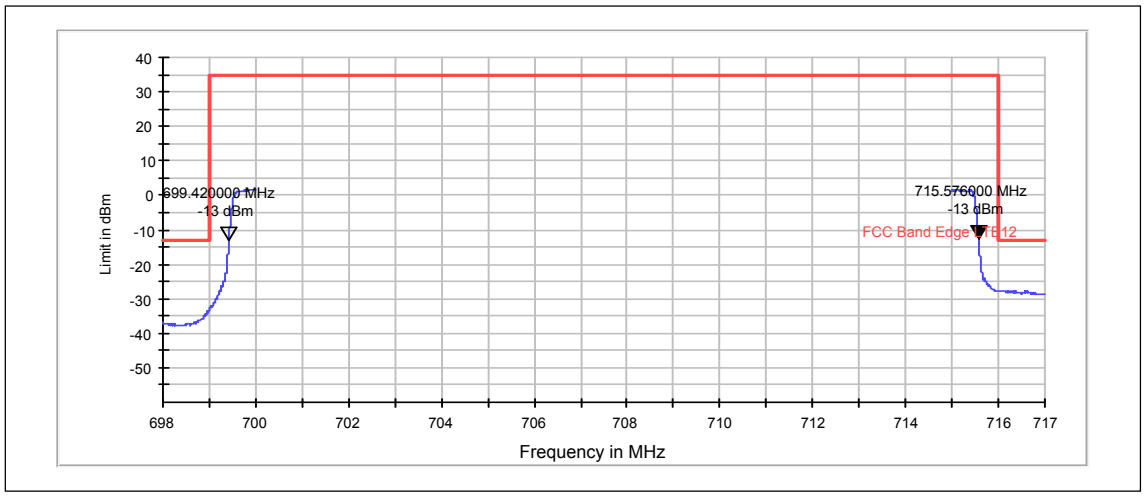


RMS (RBW: 100 kHz, VBW: 300 kHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Battery cut-off point / 3.3	-0.54359	699.420000	699.419999	715.580000	715.580000	PASSED

Channel 23095 / 707.5 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Nominal / 3.9	-3.07560	699.420000	699.419996	715.576000	715.576003	PASSED

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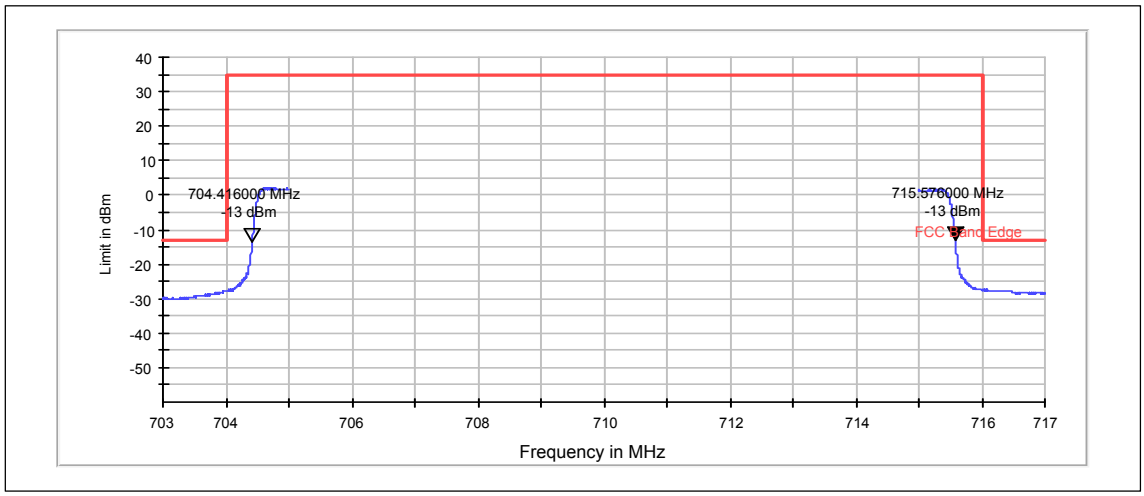
10.7. LTE17 Test results

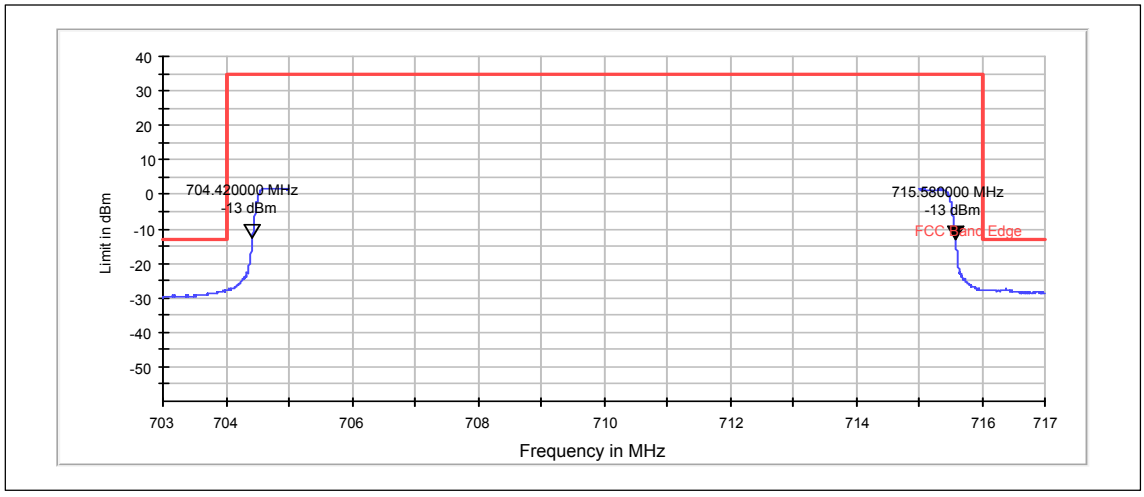
Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Max / 4.4	-0.91553	704.416000	704.415999	715.576000	715.576000	PASSED

Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Battery cut-off point / 3.3	-0.94414	704.420000	704.419999	715.580000	715.580000	PASSED

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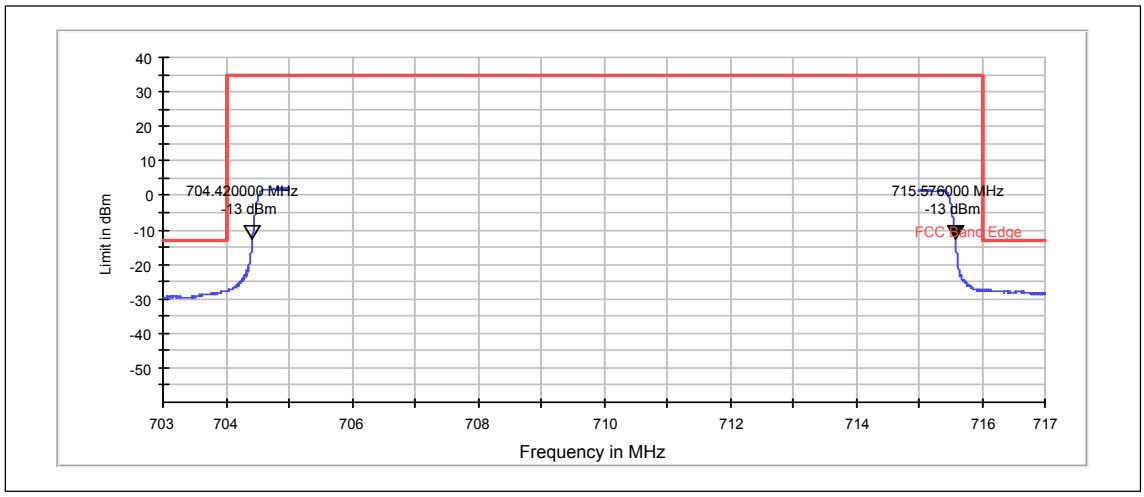
Channel 23790 / 710.0 MHz



RMS (RBW: 100 kHz, VBW: 300 kHz)

Voltage level [V]	Deviation [Hz]	Low marker [MHz]	Marker – Dev [MHz]	High marker [MHz]	Marker + Dev [MHz]	Result
Nominal / 3.9	-1.02997	704.420000	704.419998	715.576000	715.576001	PASSED

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11. Test Equipment

11.1. Conducted measurements

Eq. No	Equipment	Type	Manufacturer	Used in
TM38112	Power supply	6632A	Agilent	22/24/27, 15C, 15E
TM38114	Power supply	6632A	Agilent	22/24/27, 15C, 15E
TM210233	Communication Tester	CMU200	R&S	22/24/27
TM30600	Impulse limiter	ESH3-Z2	R&S	15C, 15B
TM26490	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM26491	LISN 50 µH	ESH3-Z5	R&S	15C, 15B
TM37610	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
2021	Communication Tester	CMW500	R&S	22/24/27
2022	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
2026	Signal Generator	SMF 100A	R&S	22/24/27, 15C, 15E, 15B
-	Bluetooth tester	CBT	R&S	15C, 15B
-	Communication Tester	CMU200	R&S	22/24/27, 15B

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11.2. 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
-	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
2002	Communication Tester	CMU200	R&S	22/24/27, 15B
6023	Antenna	VUBA 9117	Schwarzbeck	22/24/27
2021	Communication Tester	CMW500	R&S	22/24/27
2025	Antenna	HFH2-Z2	R&S	15C
2026	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
-	Bluetooth tester	CBT	R&S	15C, 15B

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12. Appendix

12.1. Conducted LTE RF output power values measured by the customer

12.1.1 Tolerance

Tolerance [dB]	
Low	-0.5
High	0.4

12.1.2 LTE 2

SN:004402742308376						Nominal		
Band / BW	**Modulation**	**RB Allocation**	**RB Offset**	**Tuning target (dBm)**	**Upper limit (dBm)**	**Ch18607 / 1850.7 MHz**	**Ch18900 / 1880 MHz**	**Ch19193 / 1909.3 MHz**
LTE2 1.4 MHz	QPSK	1	0	**22.5**	**22.9**	22.3	22.2	22.3
		1	2	**22.5**	**22.9**	**22.3**	**22.1**	**22.3**
		1	5	**22.5**	**22.9**	22.2	22.1	22.2
		3	0	**22.5**	**22.9**	22.2	22.0	22.2
		3	2	**22.5**	**22.9**	22.3	22.1	22.3
		3	3	**22.5**	**22.9**	22.2	22.0	22.2
		6	0	**21.5**	**21.9**	21.1	21.0	21.2
	16QAM	1	0	**21.5**	**21.9**	21.8	21.4	21.5
		1	2	**21.5**	**21.9**	**21.8**	**21.6**	**21.5**
		1	5	**21.5**	**21.9**	21.8	21.4	21.5
		3	0	**21.5**	**21.9**	21.3	21.0	21.2
		3	2	**21.5**	**21.9**	21.3	21.0	21.3
		3	3	**21.5**	**21.9**	21.2	21.0	21.2
		6	0	**20.5**	**20.9**	20.4	20.1	20.2

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch18615 / 1851.5 MHz	Ch18900 / 1880 MHz	Ch19185 / 1908.5 MHz
LTE2 3 MHz	QPSK	1	0	22.5	22.9	22.3	22.2	22.2
		1	7	22.5	22.9	**22.6**	**22.5**	**22.5**
		1	14	22.5	22.9	22.3	22.1	22.2
		8	0	21.5	21.9	21.2	21.2	21.2
		8	3	21.5	21.9	21.2	21.1	21.2
		8	7	21.5	21.9	21.2	21.1	21.2
		15	0	21.5	21.9	21.2	21.1	21.2
	16QAM	1	0	21.5	21.9	21.6	21.7	21.6
		1	7	22.0	22.4	**21.7**	**21.7**	**21.8**
		1	14	21.5	21.9	21.5	21.5	21.4
		8	0	20.5	20.9	20.2	20.2	20.3
		8	3	20.5	20.9	20.2	20.2	20.3
		8	7	20.5	20.9	20.2	20.2	20.2
		15	0	20.5	20.9	20.3	20.0	20.1

SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch18625 / 1852.5 MHz	Ch18900 / 1880 MHz	Ch19175 / 1907.5 MHz
LTE2 5 MHz	QPSK	1	0	22.5	22.9	22.2	22.1	22.4
		1	12	22.5	22.9	**22.3**	**22.5**	**22.2**
		1	24	22.5	22.9	22.1	22.5	22.3
		12	0	21.5	21.9	21.2	21.1	21.1
		12	6	21.5	21.9	21.2	21.1	21.2
		12	13	21.5	21.9	21.0	21.0	21.1
		25	0	21.5	21.9	21.3	21.0	21.1
	16QAM	1	0	21.5	21.9	21.3	21.2	21.4
		1	12	21.5	21.9	**21.4**	**21.1**	**21.3**
		1	24	21.5	21.9	21.1	21.1	21.3
		12	0	20.5	20.9	20.2	20.1	20.2
		12	6	20.5	20.9	20.2	20.1	20.1
		12	13	20.5	20.9	20.1	20.0	20.1
		25	0	20.5	20.9	20.3	20.0	20.2

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch18650 / 1855 MHz	Ch18900 / 1880 MHz	Ch19150 / 1905 MHz
LTE2 10 MHz	QPSK	1	0	22.5	22.9	22.6	22.4	22.4
		1	24	22.5	22.9	**22.2**	**22.1**	**22.2**
		1	49	22.5	22.9	22.3	22.0	22.2
		25	0	21.5	21.9	21.4	21.2	21.2
		25	12	21.5	21.9	21.3	21.1	21.2
		25	25	21.5	21.9	21.2	21.0	21.0
		50	0	21.5	21.9	21.2	21.1	21.2
	16QAM	1	0	22.0	22.4	22.1	22.0	22.0
		1	24	21.5	21.9	**21.5**	**21.6**	**21.8**
		1	49	21.5	21.9	21.9	21.6	21.5
		25	0	20.5	20.9	20.3	20.3	20.3
		25	12	20.5	20.9	20.2	20.1	20.3
		25	25	20.5	20.9	20.1	20.0	20.1
		50	0	20.5	20.9	20.2	20.1	20.3

SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch18675 / 1857.5 MHz	Ch18900 / 1880 MHz	Ch19125 / 1902.5 MHz
LTE2 15 MHz	QPSK	1	0	22.5	22.9	22.8	22.6	22.7
		1	36	22.5	22.9	**22.3**	**22.3**	**22.2**
		1	74	22.5	22.9	22.2	22.1	22.2
		36	0	21.5	21.9	21.4	21.3	21.3
		36	18	21.5	21.9	21.2	21.2	21.2
		36	38	21.5	21.9	21.2	21.1	21.2
		75	0	21.5	21.9	21.2	21.2	21.2
	16QAM	1	0	22.0	22.4	21.9	21.9	21.9
		1	36	21.5	21.9	**21.4**	**21.4**	**21.5**
		1	74	21.5	21.9	21.4	21.3	21.5
		36	0	20.5	20.9	20.4	20.2	20.3
		36	18	20.5	20.9	20.2	20.1	20.2
		36	38	20.5	20.9	20.1	20.1	20.2
		75	0	20.5	20.9	20.3	20.2	20.2

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch18700 / 1860 MHz	Ch18900 / 1880 MHz	Ch19100 / 1900 MHz
LTE2 20 MHz	QPSK	1	0	23.0	23.4	22.9	22.7	22.8
		1	49	22.5	22.9	22.1	22.1	22.1
		1	99	22.5	22.9	22.1	22.1	22.2
		50	0	21.5	21.9	21.6	21.4	21.6
		50	24	21.5	21.9	21.2	21.1	21.1
		50	50	21.5	21.9	21.2	21.0	21.1
		100	0	21.5	21.9	21.3	21.2	21.3
	16QAM	1	0	22.0	22.4	22.1	21.8	21.8
		1	49	21.5	21.9	21.5	21.3	21.0
		1	99	21.5	21.9	21.3	21.1	21.1
		50	0	20.5	20.9	20.6	20.4	20.5
		50	24	20.5	20.9	20.2	20.2	20.1
		50	50	20.5	20.9	20.2	20.0	20.1
		100	0	20.5	20.9	20.3	20.2	20.3

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12.1.3 LTE 4

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Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch19957 / 1710.7 MHz	Ch20175 / 1732.5 MHz	Ch20393 / 1754.3 MHz
LTE4 1.4 MHz	QPSK	1	0	22.5	22.9	22.7	22.7	22.7
		1	2	22.5	22.9	**22.7**	**22.6**	**22.7**
		1	5	22.5	22.9	22.6	22.6	22.6
		3	0	22.5	22.9	22.5	22.6	22.6
		3	2	22.5	22.9	22.6	22.6	22.7
		3	3	22.5	22.9	22.5	22.6	22.5
		6	0	21.5	21.9	21.6	21.5	21.5
	16QAM	1	0	21.5	21.9	21.8	21.9	21.9
		1	2	21.5	21.9	**21.8**	**21.9**	**21.8**
		1	5	21.5	21.9	21.7	21.8	21.9
		3	0	21.5	21.9	21.6	21.7	21.6
		3	2	21.5	21.9	21.6	21.8	21.7
		3	3	21.5	21.9	21.6	21.6	21.6
		6	0	20.5	20.9	20.6	20.6	20.8

SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch19965 / 1711.5 MHz	Ch20175 / 1732.5 MHz	Ch20385 / 1753.5 MHz
LTE4 3 MHz	QPSK	1	0	22.5	22.9	22.7	22.6	22.6
		1	7	22.5	22.9	**22.9**	**22.8**	**22.9**
		1	14	22.5	22.9	22.6	22.5	22.6
		8	0	21.5	21.9	21.6	21.5	21.7
		8	3	21.5	21.9	21.6	21.6	21.6
		8	7	21.5	21.9	21.6	21.5	21.5
		15	0	21.5	21.9	21.6	21.5	21.6
	16QAM	1	0	21.5	21.9	21.8	21.9	21.9
		1	7	22.0	22.4	**22.0**	**22.0**	**22.1**
		1	14	21.5	21.9	21.7	21.9	21.8
		8	0	20.5	20.9	20.6	20.6	20.6
		8	3	20.5	20.9	20.7	20.6	20.6
		8	7	20.5	20.9	20.6	20.5	20.5
		15	0	20.5	20.9	20.7	20.5	20.6

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SN:004402742308376						Nominal		
Band / BW	**Modulation**	**RB Allocation**	**RB Offset**	**Tuning target (dBm)**	**Upper limit (dBm)**	**Ch19975 / 1712.5 MHz**	**Ch20175 / 1732.5 MHz**	**Ch20375 / 1752.5 MHz**
LTE4 5 MHz	QPSK	1	0	**22.5**	**22.9**	22.7	22.7	22.7
		1	12	**22.5**	**22.9**	**22.7**	**22.6**	**22.5**
		1	24	**22.5**	**22.9**	22.5	22.6	22.5
		12	0	**21.5**	**21.9**	21.6	21.6	21.6
		12	6	**21.5**	**21.9**	21.6	21.6	21.6
		12	13	**21.5**	**21.9**	21.5	21.5	21.5
		25	0	**21.5**	**21.9**	21.6	21.6	21.6
	16QAM	1	0	**22.0**	**22.4**	22.3	22.0	21.7
		1	12	**22.0**	**22.4**	**22.2**	**21.8**	**21.8**
		1	24	**22.0**	**22.4**	22.1	21.7	21.5
		12	0	**20.5**	**20.9**	20.6	20.7	20.7
		12	6	**20.5**	**20.9**	20.6	20.7	20.7
		12	13	**20.5**	**20.9**	20.5	20.6	20.6
		25	0	**20.5**	**20.9**	20.6	20.6	20.6

SN:004402742308376						Nominal		
Band / BW	**Modulation**	**RB Allocation**	**RB Offset**	**Tuning target (dBm)**	**Upper limit (dBm)**	**Ch20000 / 1715 MHz**	**Ch20175 / 1732.5 MHz**	**Ch20350 / 1750 MHz**
LTE4 10 MHz	QPSK	1	0	**22.5**	**22.9**	22.8	22.9	22.9
		1	24	**22.5**	**22.9**	**22.6**	**22.6**	**22.6**
		1	49	**22.5**	**22.9**	22.5	22.5	22.5
		25	0	**21.5**	**21.9**	21.7	21.6	21.7
		25	12	**21.5**	**21.9**	21.6	21.5	21.5
		25	25	**21.5**	**21.9**	21.6	21.5	21.5
		50	0	**21.5**	**21.9**	21.6	21.5	21.6
	16QAM	1	0	**21.5**	**21.9**	21.7	21.9	21.9
		1	24	**21.5**	**21.9**	**21.6**	**21.8**	**21.9**
		1	49	**21.5**	**21.9**	21.6	21.7	21.9
		25	0	**20.5**	**20.9**	20.6	20.7	20.6
		25	12	**20.5**	**20.9**	20.5	20.5	20.5
		25	25	**20.5**	**20.9**	20.5	20.5	20.5
		50	0	**20.5**	**20.9**	20.6	20.5	20.5

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SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20025 / 1717.5 MHz	Ch20175 / 1732.5 MHz	Ch20325 / 1747.5 MHz
LTE4 15 MHz	QPSK	1	0	23.0	23.4	23.1	23.3	23.2
		1	36	22.0	22.4	**22.1**	**22.4**	**22.4**
		1	74	22.0	22.4	22.2	22.3	22.4
		36	0	21.5	21.9	21.7	21.7	21.9
		36	18	21.5	21.9	21.7	21.5	21.7
		36	38	21.5	21.9	21.7	21.5	21.6
		75	0	21.5	21.9	21.6	21.5	21.8
	16QAM	1	0	22.0	22.4	22.4	22.3	22.4
		1	36	22.0	22.4	**22.1**	**21.6**	**21.9**
		1	74	22.0	22.4	22.1	21.6	21.9
		36	0	20.5	20.9	20.7	20.7	20.9
		36	18	20.5	20.9	20.7	20.6	20.7
		36	38	20.5	20.9	20.7	20.5	20.6
		75	0	20.5	20.9	20.7	20.6	20.9

SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20050 / 1720 MHz	Ch20175 / 1732.5 MHz	Ch20300 / 1745 MHz
LTE4 20 MHz	QPSK	1	0	23.0	23.4	23.3	23.4	23.3
		1	49	22.5	22.9	**22.6**	**22.5**	**22.6**
		1	99	22.5	22.9	22.7	22.5	22.6
		50	0	21.5	21.9	21.9	21.9	21.9
		50	24	21.5	21.9	21.7	21.5	21.6
		50	50	21.5	21.9	21.6	21.5	21.6
		100	0	21.5	21.9	21.8	21.6	21.7
	16QAM	1	0	22.5	22.9	22.4	22.4	22.2
		1	49	21.5	21.9	**21.9**	**21.9**	**21.8**
		1	99	21.5	21.9	21.9	21.9	21.8
		50	0	20.5	20.9	20.9	20.9	20.9
		50	24	20.5	20.9	20.8	20.5	20.6
		50	50	20.5	20.9	20.6	20.5	20.6
		100	0	20.5	20.9	20.8	20.6	20.7

12.1.4 LTE 5

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SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20407 / 824.7 MHz	Ch20525 / 836.5 MHz	Ch20643 / 848.3 MHz
LTE5 1.4 MHz	QPSK	1	0	23.0	23.4	22.9	23.1	23.2
		1	2	23.0	23.4	**22.9**	**23.2**	**23.2**
		1	5	23.0	23.4	22.9	23.0	23.0
		3	0	23.0	23.4	22.7	23.0	22.9
		3	2	23.0	23.4	22.8	23.1	23.0
		3	3	23.0	23.4	22.7	23.0	22.9
		6	0	22.0	22.4	21.7	21.9	21.9
	16QAM	1	0	22.0	22.4	22.2	22.4	22.4
		1	2	22.0	22.4	**22.0**	**22.4**	**22.4**
		1	5	22.0	22.4	22.1	22.3	22.4
		3	0	22.0	22.4	21.8	22.2	22.0
		3	2	22.0	22.4	21.7	22.2	21.9
		3	3	22.0	22.4	21.7	22.1	21.9
		6	0	21.0	21.4	20.7	21.0	20.9

SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20415 / 825.5 MHz	Ch20525 / 836.5 MHz	Ch20635 / 847.5 MHz
LTE5 3 MHz	QPSK	1	0	23.0	23.4	22.7	23.0	23.0
		1	7	23.0	23.4	**23.0**	**23.3**	**23.2**
		1	14	23.0	23.4	22.6	23.0	22.9
		8	0	22.0	22.4	21.7	22.0	21.9
		8	3	22.0	22.4	21.7	22.0	21.9
		8	7	22.0	22.4	21.6	21.9	21.9
		15	0	22.0	22.4	21.7	22.0	21.9
	16QAM	1	0	22.0	22.4	21.8	22.0	22.1
		1	7	22.0	22.4	**22.1**	**22.2**	**22.1**
		1	14	22.0	22.4	21.9	21.9	21.9
		8	0	21.0	21.4	20.8	21.1	21.0
		8	3	21.0	21.4	20.8	21.1	21.0
		8	7	21.0	21.4	20.7	21.0	21.0
		15	0	21.0	21.4	20.7	21.0	20.9

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SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20425 / 826.5 MHz	Ch20525 / 836.5 MHz	Ch20625 / 846.5 MHz
LTE5 5 MHz	QPSK	1	0	23.0	23.4	22.8	23.0	23.0
		1	12	23.0	23.4	**22.7**	**22.9**	**23.0**
		1	24	23.0	23.4	22.8	23.0	23.0
		12	0	22.0	22.4	21.6	21.9	22.0
		12	6	22.0	22.4	21.7	22.0	22.0
		12	13	22.0	22.4	21.6	21.9	21.8
		25	0	22.0	22.4	21.6	22.0	22.0
	16QAM	1	0	22.0	22.4	22.0	22.3	22.4
		1	12	22.0	22.4	**21.8**	**22.2**	**22.4**
		1	24	22.0	22.4	21.9	22.4	22.3
		12	0	21.0	21.4	20.6	20.9	21.0
		12	6	21.0	21.4	20.6	20.9	21.0
		12	13	21.0	21.4	20.6	21.0	20.9
		25	0	21.0	21.4	20.6	20.9	20.9

SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20450 / 829 MHz	Ch20525 / 836.5 MHz	Ch20600 / 844 MHz
LTE5 10 MHz	QPSK	1	0	23.0	23.4	22.7	23.0	23.2
		1	24	23.0	23.4	**22.8**	**23.0**	**23.1**
		1	49	23.0	23.4	22.7	22.9	22.9
		25	0	22.0	22.4	21.7	21.9	21.9
		25	12	22.0	22.4	21.7	22.0	22.0
		25	25	22.0	22.4	21.7	21.8	21.8
		50	0	22.0	22.4	21.7	21.9	22.0
	16QAM	1	0	22.0	22.4	22.1	22.3	22.4
		1	24	22.0	22.4	**22.3**	**22.3**	**22.3**
		1	49	22.0	22.4	22.1	22.2	22.1
		25	0	21.0	21.4	20.7	20.9	20.9
		25	12	21.0	21.4	20.7	21.0	20.9
		25	25	21.0	21.4	20.8	20.9	20.8
		50	0	21.0	21.4	20.7	20.9	21.0

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20775 / 2502.5 MHz	Ch21100 / 2535 MHz	Ch21425 / 2567.5 MHz
LTE7 5 MHz	QPSK	1	0	24.0	24.4	23.9	23.8	23.8
		1	12	24.0	24.4	**23.7**	**24.0**	**23.9**
		1	24	24.0	24.4	23.7	24.0	23.8
		12	0	23.0	23.4	22.7	22.9	22.8
		12	6	23.0	23.4	22.7	23.0	22.9
		12	13	22.5	22.9	22.6	22.9	22.7
		25	0	23.0	23.4	22.7	22.8	22.8
	16QAM	1	0	23.0	23.4	23.3	23.4	23.1
		1	12	23.0	23.4	**23.4**	**23.4**	**23.2**
		1	24	23.0	23.4	23.1	23.2	23.1
		12	0	22.0	22.4	21.8	22.0	21.9
		12	6	22.0	22.4	21.7	22.1	21.9
		12	13	22.0	22.4	21.7	22.0	21.8
		25	0	22.0	22.4	21.6	22.0	21.9

SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20800 / 2505 MHz	Ch21100 / 2535 MHz	Ch21400 / 2565 MHz
LTE7 10 MHz	QPSK	1	0	24.0	24.4	23.9	24.1	23.9
		1	24	24.0	24.4	**23.9**	**24.1**	**23.9**
		1	49	24.0	24.4	23.5	24.0	23.7
		25	0	23.0	23.4	22.8	23.0	22.8
		25	12	23.0	23.4	22.8	23.0	22.8
		25	25	23.0	23.4	22.7	23.0	22.7
		50	0	23.0	23.4	22.7	22.9	22.8
	16QAM	1	0	23.0	23.4	23.2	23.4	23.4
		1	24	23.0	23.4	**23.3**	**23.4**	**23.4**
		1	49	23.0	23.4	22.8	23.2	23.1
		25	0	22.0	22.4	21.8	21.9	21.8
		25	12	22.0	22.4	21.8	22.0	21.8
		25	25	21.5	21.9	21.7	21.8	21.7
		50	0	21.5	21.9	21.8	21.9	21.8

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20825 / 2507.5 MHz	Ch21100 / 2535 MHz	Ch21375 / 2562.5 MHz
LTE7 15 MHz	QPSK	1	0	24.0	24.4	23.8	24.1	23.9
		1	36	24.0	24.4	23.8	24.2	24.1
		1	74	23.5	23.9	23.5	23.8	23.6
		36	0	23.0	23.4	22.7	23.1	23.0
		36	18	23.0	23.4	22.8	23.1	23.0
		36	38	23.0	23.4	22.5	23.1	22.9
		75	0	23.0	23.4	22.7	23.0	22.9
	16QAM	1	0	23.0	23.4	22.8	23.0	23.0
		1	36	23.0	23.4	23.0	23.1	23.1
		1	74	22.5	22.9	22.5	22.7	22.7
		36	0	22.0	22.4	21.7	22.1	22.0
		36	18	22.0	22.4	21.8	22.1	22.0
		36	38	22.0	22.4	21.6	22.0	21.9
		75	0	22.0	22.4	21.7	21.9	21.9

SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch20850 / 2510 MHz	Ch21100 / 2535 MHz	Ch21350 / 2560 MHz
LTE7 20 MHz	QPSK	1	0	24.0	24.4	23.6	23.9	23.9
		1	49	24.0	24.4	23.7	24.0	24.0
		1	99	23.0	23.4	23.2	23.4	23.4
		50	0	23.0	23.4	22.7	23.1	23.0
		50	24	23.0	23.4	22.7	23.1	23.0
		50	50	22.5	22.9	22.5	22.9	22.8
		100	0	22.5	22.9	22.6	22.9	22.9
	16QAM	1	0	23.0	23.4	22.7	23.4	23.4
		1	49	23.0	23.4	22.9	23.3	23.4
		1	99	23.0	23.4	22.5	23.1	23.0
		50	0	22.0	22.4	21.7	22.0	22.0
		50	24	22.0	22.4	21.7	22.1	22.1
		50	50	21.5	21.9	21.5	21.9	21.9
		100	0	21.5	21.9	21.6	21.9	21.9

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch23017 / 699.7 MHz	Ch23095 / 707.5 MHz	Ch23173 / 715.3 MHz
LTE12 1.4 MHz	QPSK	1	0	23.0	23.4	22.5	22.6	22.7
		1	2	23.0	23.4	**22.5**	**22.5**	**22.7**
		1	5	22.5	22.9	22.2	22.4	22.6
		3	0	23.0	23.4	22.5	22.6	22.6
		3	2	23.0	23.4	22.5	22.5	22.7
		3	3	23.0	23.4	22.6	22.5	22.7
		6	0	21.5	21.9	21.2	21.4	21.6
	16QAM	1	0	22.0	22.4	21.5	22.1	22.3
		1	2	22.0	22.4	**21.6**	**22.1**	**22.3**
		1	5	22.0	22.4	21.6	22.0	22.1
		3	0	22.0	22.4	21.5	21.5	21.6
		3	2	22.0	22.4	21.5	21.6	21.7
		3	3	22.0	22.4	21.5	21.6	21.6
		6	0	21.0	21.4	20.5	20.6	20.6

SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch23025 / 700.5 MHz	Ch23095 / 707.5 MHz	Ch23165 / 714.5 MHz
LTE12 3 MHz	QPSK	1	0	23.0	23.4	22.5	22.5	22.6
		1	7	23.0	23.4	**22.6**	**22.7**	**23.1**
		1	14	22.5	22.9	22.3	22.4	22.7
		8	0	22.0	22.4	21.5	21.5	21.7
		8	3	22.0	22.4	21.6	21.5	21.7
		8	7	22.0	22.4	21.5	21.5	21.7
		15	0	22.0	22.4	21.6	21.5	21.7
	16QAM	1	0	22.0	22.4	21.5	21.8	22.0
		1	7	22.0	22.4	**21.7**	**21.9**	**22.2**
		1	14	22.0	22.4	21.6	21.7	21.9
		8	0	20.5	20.9	20.4	20.4	20.6
		8	3	20.5	20.9	20.3	20.4	20.7
		8	7	20.5	20.9	20.4	20.4	20.7
		15	0	20.5	20.9	20.3	20.5	20.6

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SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch23035 / 701.5 MHz	Ch23095 / 707.5 MHz	Ch23155 / 713.5 MHz
LTE12 5 MHz	QPSK	1	0	22.5	22.9	22.2	22.5	22.6
		1	12	22.5	22.9	**22.3**	**22.5**	**22.7**
		1	24	22.5	22.9	22.3	22.5	22.6
		12	0	21.5	21.9	21.2	21.4	21.5
		12	6	21.5	21.9	21.3	21.5	21.6
		12	13	21.5	21.9	21.2	21.4	21.6
		25	0	21.5	21.9	21.3	21.5	21.7
	16QAM	1	0	22.0	22.4	21.9	21.8	21.6
		1	12	22.0	22.4	**21.8**	**21.7**	**21.7**
		1	24	22.0	22.4	21.7	21.7	21.6
		12	0	20.5	20.9	20.3	20.5	20.6
		12	6	20.5	20.9	20.3	20.5	20.6
		12	13	20.5	20.9	20.2	20.4	20.7
		25	0	20.5	20.9	20.3	20.5	20.6

SN: 004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch23060 / 704 MHz	Ch23095 / 707.5 MHz	Ch23130 / 711 MHz
LTE12 10 MHz	QPSK	1	0	22.5	22.9	22.5	22.4	22.5
		1	24	22.5	22.9	**22.4**	**22.5**	**22.5**
		1	49	22.5	22.9	22.5	22.5	22.6
		25	0	21.5	21.9	21.4	21.5	21.4
		25	12	21.5	21.9	21.4	21.5	21.5
		25	25	21.5	21.9	21.3	21.4	21.4
		50	0	21.5	21.9	21.3	21.4	21.4
	16QAM	1	0	22.0	22.4	21.5	21.6	22.0
		1	24	22.0	22.4	**21.5**	**21.6**	**21.9**
		1	49	22.0	22.4	21.5	21.7	22.2
		25	0	20.5	20.9	20.3	20.4	20.4
		25	12	20.5	20.9	20.3	20.4	20.4
		25	25	20.5	20.9	20.3	20.3	20.4
		50	0	20.5	20.9	20.3	20.4	20.4

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SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch23755 / 706.5 MHz	Ch23790 / 710 MHz	Ch23825 / 713.5 MHz
LTE17 5 MHz	QPSK	1	0	22.5	22.9	22.8	22.8	22.9
		1	12	22.5	22.9	**22.6**	**22.8**	**22.9**
		1	24	22.5	22.9	22.8	22.9	22.9
		12	0	21.5	21.9	21.8	21.9	21.9
		12	6	21.5	21.9	21.8	21.9	21.9
		12	13	21.5	21.9	21.7	21.9	21.9
		25	0	21.5	21.9	21.7	21.9	21.9
	16QAM	1	0	22.0	22.4	22.3	22.1	21.9
		1	12	22.0	22.4	**22.4**	**22.2**	**22.3**
		1	24	22.0	22.4	22.3	22.1	22.1
		12	0	20.5	20.9	20.7	20.9	20.9
		12	6	20.5	20.9	20.8	20.9	20.9
		12	13	20.5	20.9	20.7	20.9	20.9
		25	0	20.5	20.9	20.7	20.8	20.9

SN:004402742308376						Nominal		
Band / BW	Modulation	RB Allocation	RB Offset	Tuning target (dBm)	Upper limit (dBm)	Ch23780 / 709 MHz	Ch23790 / 710 MHz	Ch23800 / 711 MHz
LTE17 10 MHz		1	0	23.0	23.4	22.9	22.9	23.0
		1	24	23.0	23.4	**22.9**	**22.9**	**22.9**
		1	49	23.0	23.4	23.0	23.0	23.0
	QPSK	25	0	21.5	21.9	21.8	21.8	21.9
		25	12	21.5	21.9	21.9	21.9	21.9
		25	25	21.5	21.9	21.9	21.8	21.9
		50	0	21.5	21.9	21.9	21.9	21.8
		1	0	22.0	22.4	21.9	22.2	22.2
		1	24	22.0	22.4	**22.1**	**22.1**	**22.1**
		1	49	22.0	22.4	22.2	22.2	22.4
	16QAM	25	0	20.5	20.9	20.8	20.8	20.8
		25	12	20.5	20.9	20.8	20.9	20.8
		25	25	20.5	20.9	20.9	20.8	20.8
		50	0	20.5	20.9	20.9	20.9	20.8

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