



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT1924-7
FCC ID : IHDT56XA2
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(N)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Dec. 29, 2017 and completely tested on Mar. 01, 2018. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI/TIA-603-E and the testing has shown the tested sample to be in compliance with the applicable technical standards. This report contains data that were produced under subcontract by Laboratory SPORTON INTERNATIONAL INC.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.

***No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335
China***



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG7D2903B	Rev. 01	Initial issue of report	Mar. 08, 2018



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power (Band 5)	ERP < 7 Watt	PASS	-
	§27.50(c)(10)	Effective Radiated Power (Band 71)	ERP < 3 Watt	PASS	-
	§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power (Band 2) (Band 38) (Band 41)	EIRP < 2Watt	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power (Band 4) (Band 66)	EIRP < 1Watt	PASS	-
3.5	§24.232(d)	Peak-to-Average Ratio	<13 dB	PASS	-
3.6	§2.1049	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Conducted Band Edge Measurement (Band 2) (Band 4) (Band 5) (Band 66) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§27.53(m)(4)	Conducted Band Edge Measurement (Band 38) (Band 41)	§27.53(m)(4)		
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Conducted Spurious Emission (Band 2) (Band 4) (Band 5) (Band 66) (Band 71)	< 43+10log ₁₀ (P[Watts])	PASS	-
	§2.1051 §27.53(m)(4)	Conducted Spurious Emission (Band 38) (Band 41)	< 55+10log ₁₀ (P[Watts])		
3.9	§2.1055 §22.355	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		



Report Section	FCC Rule	Description	Limit	Result	Remark
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(g) §27.53(h)	Radiated Spurious Emission (Band 2) (Band 4) (Band 5) (Band 66) (Band 71)	$< 43 + 10\log_{10}(P[\text{Watts}])$	PASS	Under limit 5.80 dB at 8064.000 MHz
	§2.1053 §27.53(m)(4)	Radiated Spurious Emission (Band 38) (Band 41)	$< 55 + 10\log_{10}(P[\text{Watts}])$		



1 General Description

1.1 Applicant

Motorola Mobility LLC

222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC

222 W, Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT1924-7
FCC ID	IHDT56XA2
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(16QAM uplink is not supported)/LTE WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE / Bluetooth v4.1 LE /Bluetooth v4.2 LE
IMEI Code	Conducted: 351883090027800 for LTE B2/B4/B5/B71 351883090027818 for LTE B38/B41/B66 Radiation: 351883090028816
HW Version	DVT 1B
SW Version	OPP27.66
EUT Stage	Identical Prototype



1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	LTE Band 2 : 1850.7 MHz ~ 1909.3 MHz LTE Band 4 : 1710.7 MHz ~ 1754.3 MHz LTE Band 5 : 824.7 MHz ~ 848.3 MHz LTE Band 7 : 2502.5 MHz ~ 2567.5 MHz LTE Band 12 : 699.7 MHz ~ 715.3 MHz LTE Band 13 : 779.5 MHz ~ 784.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 66 : 1710.7 MHz ~ 1779.3 MHz LTE Band 71: 665.5 MHz ~ 695.5MHz
Rx Frequency	LTE Band 2 : 1930.7 MHz ~ 1989.3 MHz LTE Band 4 : 2110.7 MHz ~ 2154.3 MHz LTE Band 5 : 869.7 MHz ~ 893.3 MHz LTE Band 7 : 2622.5MHz ~ 2687.5 MHz LTE Band 12 : 729.7 MHz ~ 745.3 MHz LTE Band 13 : 748.5 MHz ~ 753.5 MHz LTE Band 38 : 2572.5MHz ~ 2617.5MHz LTE Band 41 : 2498.5 MHz ~ 2687.5 MHz LTE Band 66 : 2110.7 MHz~ 2179.3 MHz LTE Band 71: 619.5 MHz ~ 649.5MHz
Bandwidth	LTE Band 2 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 4 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 5 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 7 : 5MHz/ 10MHz / 15MHz / 20MHz LTE Band 12 : 1.4MHz / 3MHz / 5MHz / 10MHz LTE Band 13 : 5MHz / 10MHz LTE Band 38 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 41 : 5MHz / 10MHz / 15MHz / 20MHz LTE Band 66 : 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz LTE Band 71 : 5MHz / 10MHz / 15MHz / 20MHz
Maximum Output Power to Antenna	LTE Band 2 : 23.38 dBm LTE Band 4 : 23.14 dBm LTE Band 5 : 23.05 dBm LTE Band 38 : 22.57 dBm LTE Band 41 : 22.53 dBm LTE Band 66 : 23.41 dBm LTE Band 71 : 22.55 dBm
Antenna Gain	LTE Band 2 : -0.30 dBi LTE Band 4 : -1.10 dBi LTE Band 5 : -2.70 dBi LTE Band 38 : 0.40 dBi LTE Band 41 : 0.40 dBi LTE Band 66 : -0.80 dBi LTE Band 71 : -4.00 dBi
Type of Modulation	QPSK / 16QAM

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1	Brand Name	Motorola (Salom)	Model Name	SPN5970A SC-22
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5 Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA		
AC Adapter 2	Brand Name	Motorola (Chenyang)	Model Name	SPN5993A SC-22
	Power Rating	I/P: 100-240 Vac, 500mA, O/P: 5 Vdc,3000mA or 9Vdc,1600mA or 12Vdc,1200mA		
Earphone	Brand Name	Motorola (NEW Leader)	Model Name	NLD-EM300V-01SF
	Signal Line	1.25 meter, non-shielded cable, without ferrite core		
Battery	Brand Name	Motorola (Amperex)	Model Name	HE50
	Power Rating	3.8Vdc,4850/5000mAh	Type	Li-ion
USB Cable (Black/White)	Brand Name	Motorola (SaiBao)	Model Name	SLQ-A081A
	Signal Line	1.02 meter, shielded cable, without ferrite core		

1.6 Modification of EUT

No modifications are made to the EUT during all test items.



1.7 Re-use of Measured Data

1.7.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT1924-7, FCC ID: IHDT56XA2) is electrically identical to the reference device (Model: XT1924-6, XT1924-8, FCC ID: IHDT56XA1) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 178919 D01.

1.7.2 Difference Section

For details concerning the similarity with respect to component placement, mechanical/electrical design etc., some difference of population/depopulation to enable support of different cellular bands, please refer to the Product Equality Declaration.

The re-used RF data includes the following bands provided in Appendix D (Sporton RF Report No. FG7D2903-01B for the reference device Model: XT1924-6, XT1924-8, FCC ID: IHDT56XA1):

1.7.3 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for radiated spurious emission, Conducted Band-edge and Conducted spurious emission, the test result were consistent with FCC ID: IHDT56XA1 and added new Band 71 to full test and LTE Band 2/4/5/38/41/66 to full re-test.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

1.7.4 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test	Report Title/Section
PCE (2G/3G)	IHDT56XA1	Part22H.24E.27L (FG7D2903-01A)	All sections applicable for GSM850/1900
PCE (LTE)	IHDT56XA1	Part22H.24E.27L.27M. 27F.27H (FG7D2903-01B)	All sections applicable for LTE Band 7/12/13

1.8 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

LTE Band 2		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1850.7 ~ 1909.3	1M10G7D	-	0.1879	1M10W7D	-	0.1648
3	1851.5 ~ 1908.5	2M73G7D	-	0.1897	2M75W7D	-	0.1663
5	1852.5 ~ 1907.5	4M51G7D	-	0.1982	4M49W7D	-	0.1603
10	1855.0 ~ 1905.0	9M05G7D	0.0022	0.2023	9M09W7D	-	0.1690
15	1857.5 ~ 1902.5	13M5G7D	-	0.2023	13M5W7D	-	0.1714
20	1860.0 ~ 1900.0	18M4G7D	-	0.2032	18M5W7D	-	0.1633
LTE Band 4		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1754.3	1M09G7D	-	0.1560	1M10W7D	-	0.1334
3	1711.5 ~ 1753.5	2M72G7D	-	0.1570	2M72W7D	-	0.1380
5	1712.5 ~ 1752.5	4M50G7D	-	0.1589	4M50W7D	-	0.1349
10	1715.0 ~ 1750.0	9M05G7D	0.0029	0.1585	9M03W7D	-	0.1387
15	1717.5 ~ 1747.5	13M5G7D	-	0.1552	13M5W7D	-	0.1297
20	1720.0 ~ 1745.0	18M6G7D	-	0.1600	18M3W7D	-	0.1285
LTE Band 5		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
1.4	824.7 ~ 848.3	1M10G7D	-	0.0611	1M10W7D	-	0.0525
3	825.5 ~ 847.5	2M73G7D	-	0.0624	2M75W7D	-	0.0536
5	826.5 ~ 846.5	4M53G7D	-	0.0625	4M50W7D	-	0.0528
10	829.0 ~ 844.0	9M07G7D	0.0060	0.0661	9M01W7D	-	0.0592



LTE Band 38		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2572.5 ~ 2617.5	4M49G7D	-	0.1954	4M51W7D	-	0.1656
10	2575.0 ~ 2615.0	9M07G7D	0.0027	0.1959	9M03W7D	-	0.1679
15	2577.5 ~ 2612.5	13M5G7D	-	0.1959	13M5W7D	-	0.1671
20	2580.0 ~ 2610.0	18M3G7D	-	0.1982	18M5W7D	-	0.1726
LTE Band 41		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
5	2498.5 ~ 2687.5	4M50G7D	-	0.1954	4M51W7D	-	0.1592
10	2501.0 ~ 2685.0	9M05G7D	0.0022	0.1932	9M03W7D	-	0.1607
15	2503.5 ~ 2682.5	13M5G7D	-	0.1941	13M4W7D	-	0.1578
20	2506.0 ~ 2680.0	18M5G7D	-	0.1963	18M4W7D	-	0.1552
LTE Band 66		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum EIRP(W)
1.4	1710.7 ~ 1779.3	1M10G7D	-	0.1535	1M11W7D	-	0.1285
3	1711.5 ~ 1778.5	2M73G7D	-	0.1552	2M73W7D	-	0.1282
5	1712.5 ~ 1777.5	4M50G7D	-	0.1618	4M51W7D	-	0.1349
10	1715.0 ~ 1775.0	9M03G7D	0.0034	0.1667	9M01W7D	-	0.1384
15	1717.5 ~ 1772.5	13M5G7D	-	0.1762	13M5W7D	-	0.1449
20	1720.0 ~ 1770.0	18M3G7D	-	0.1824	18M4W7D	-	0.1422
LTE Band 71		QPSK			16QAM		
BW (MHz)	Frequency Range (MHz)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)	Emission Designator (99%OBW)	Frequency Tolerance (ppm)	Maximum ERP(W)
5	665.5 ~ 695.5	4M50G7D	-	0.0426	4M53W7D	-	0.0380
10	668.0 ~ 693.0	9M09G7D	0.0109	0.0435	9M01W7D	-	0.0341
15	670.5 ~ 690.5	13M4G7D	-	0.0407	13M5W7D	-	0.0347
20	673.0 ~ 688.0	18M5G7D	-	0.0437	18M5W7D	-	0.0367

1.9 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

Test Site	Sporton International (Kunshan) Inc.	
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	Sporton Site No.	FCC Test Firm Registration No.
	TH01-KS	630927

Note: The test site complies with ANSI C63.4 2014 requirement.

SPORTON INTERNATIONAL INC. is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and under the FCC-recognized accredited testing laboratories by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No.58, Aly. 75, Ln. 564 Wenhua 3rd Rd. Guishan Dist. Taoyuan City Taiwan TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.	FCC designation No.	FCC Test Firm Registration No.
	03CH11-HY	TW0007	214511

Note:

1. The test site complies with ANSI C63.4 2014 requirement.
2. Test data subcontracted: radiated spurious emissions in section 4.4 of this report



1.10 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L), 27(M), 27(N)
- ♦ ANSI/TIA-603-E
- ♦ FCC KDB 971168 D01 Power Meas License Digital Systems v03
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 Power Meas License Digital Systems v03 with maximum output power.

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max. Output Power	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓	✓
	38	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	41	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	66	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	71	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak-to-Average Ratio	2						✓	✓	✓	✓		✓	✓	✓	✓
	4						✓	✓	✓	✓		✓	✓	✓	✓
	5				✓	-	-	✓	✓	✓		✓	✓	✓	✓
	38	-	-				✓	✓	✓	✓		✓	✓	✓	✓
	41	-	-				✓	✓	✓	✓		✓	✓	✓	✓
	66						✓	✓	✓	✓		✓	✓	✓	✓
	71	-	-				✓	✓	✓	✓		✓	✓	✓	✓

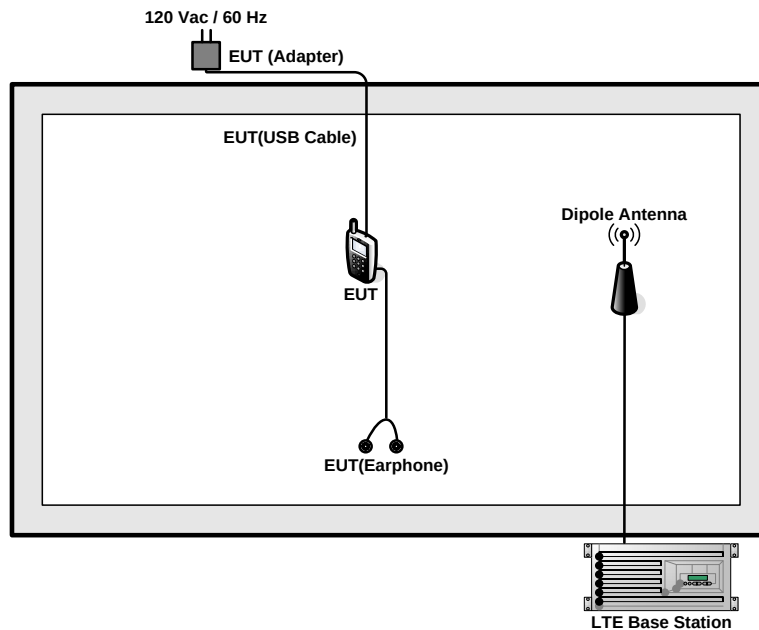


Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
26dB and 99% Bandwidth	2	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓			✓	✓	✓	✓
	38	-	-	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	41	-	-	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	66	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
	71	-	-	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓
Conducted Band Edge	2	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓		✓	✓		✓
	38	-	-	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	41	-	-	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	66	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
	71	-	-	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓



Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Conducted Spurious Emission	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓
	38	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	41	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	66	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	71	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Frequency Stability	2				✓			✓				✓		✓	
	4				✓			✓				✓		✓	
	5				✓	-	-	✓				✓		✓	
	38	-	-		✓			✓				✓		✓	
	41	-	-		✓			✓				✓		✓	
	66				✓			✓				✓		✓	
	71	-	-		✓			✓				✓		✓	
E.R.P./ E.I.R.P.	2	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	5	✓	✓	✓	✓	-	-	✓	✓	✓			✓	✓	✓
	38	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	41	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	66	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
	71	-	-	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Radiated Spurious Emission	2						✓	✓		✓			✓	✓	✓
	4						✓	✓		✓			✓	✓	✓
	5				✓	-	-	✓		✓			✓	✓	✓
	38	-	-				✓	✓		✓			✓	✓	✓
	41	-	-	✓	✓	✓	✓	✓		✓			✓	✓	✓
	66						✓	✓		✓			✓	✓	✓
	71	-	-		✓			✓		✓				✓	
Note	- The mark "✓" means that this configuration is chosen for testing - The mark "-" means that this bandwidth is not supported. - The device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test under different BW/RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	Power Supply	GW	GPS-3030D	N/A	N/A	Unshielded, 1.8 m
2.	LTE Base Station	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 5.10 dB.

Example :

$$\text{Offset(dB)} = \text{RF cable loss(dB)}.$$
$$= 5.10 \text{ (dB)}$$

2.5 Frequency List of Low/Middle/High Channels

LTE Band 2 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	18700	18900	19100
	Frequency	1860	1880	1900
15	Channel	18675	18900	19125
	Frequency	1857.5	1880	1902.5
10	Channel	18650	18900	19150
	Frequency	1855	1880	1905
5	Channel	18625	18900	19175
	Frequency	1852.5	1880	1907.5
3	Channel	18615	18900	19185
	Frequency	1851.5	1880	1908.5
1.4	Channel	18607	18900	19193
	Frequency	1850.7	1880	1909.3

LTE Band 4 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	20050	20175	20300
	Frequency	1720	1732.5	1745
15	Channel	20025	20175	20325
	Frequency	1717.5	1732.5	1747.5
10	Channel	20000	20175	20350
	Frequency	1715	1732.5	1750
5	Channel	19975	20175	20375
	Frequency	1712.5	1732.5	1752.5
3	Channel	19965	20175	20385
	Frequency	1711.5	1732.5	1753.5
1.4	Channel	19957	20175	20393
	Frequency	1710.7	1732.5	1754.3



LTE Band 5 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
10	Channel	20450	20525	20600
	Frequency	829	836.5	844
5	Channel	20425	20525	20625
	Frequency	826.5	836.5	846.5
3	Channel	20415	20525	20635
	Frequency	825.5	836.5	847.5
1.4	Channel	20407	20525	20643
	Frequency	824.7	836.5	848.3

LTE Band 38 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	37850	38000	38150
	Frequency	2580	2595	2610
15	Channel	37825	38000	38175
	Frequency	2577.5	2595	2612.5
10	Channel	37800	38000	38200
	Frequency	2575	2595	2615
5	Channel	37775	38000	38225
	Frequency	2572.5	2595	2617.5

LTE Band 41 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	39750	40620	41490
	Frequency	2506	2593	2680
15	Channel	39725	40620	41515
	Frequency	2503.5	2593	2682.5
10	Channel	39700	40620	41540
	Frequency	2501	2593	2685
5	Channel	39675	40620	41565
	Frequency	2498.5	2593	2687.5

LTE Band 66 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	132072	132322	132572
	Frequency	1720	1745	1770
15	Channel	132047	132322	132597
	Frequency	1717.5	1745	1772.5
10	Channel	132022	132322	132622
	Frequency	1715	1745	1775
5	Channel	131997	132322	132647
	Frequency	1712.5	1745	1777.5
3	Channel	131987	132322	132657
	Frequency	1711.5	1745	1778.5
1.4	Channel	131979	132322	132665
	Frequency	1710.7	1745	1779.3

LTE Band 71 Channel and Frequency List				
BW [MHz]	Channel/Frequency(MHz)	Lowest	Middle	Highest
20	Channel	133222	133297	133372
	Frequency	673.0	680.5	688.0
15	Channel	133197	133297	133397
	Frequency	670.5	680.5	690.5
10	Channel	133172	133297	133422
	Frequency	668.0	680.5	693.0
5	Channel	133147	133297	133447
	Frequency	665.5	680.5	695.5

3 Conducted Test Items

3.1 Measuring Instruments

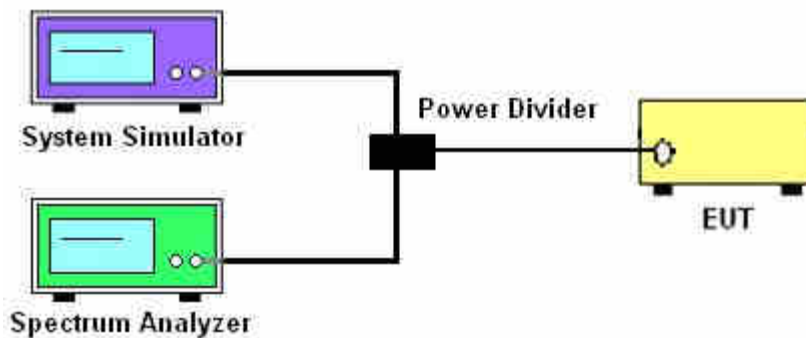
See list of measuring instruments of this test report.

3.2 Test Setup

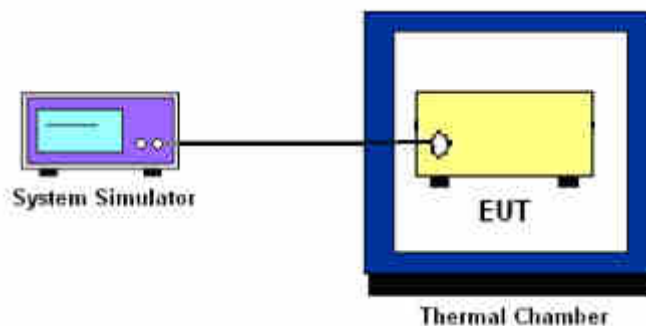
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth ,Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power Measurement and ERP/EIRP Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The ERP of mobile transmitters must not exceed 7 Watts for LTE Band 5.

The ERP of mobile transmitters must not exceed 3 Watts for LTE Band 71.

The EIRP of mobile transmitters must not exceed 2 Watts for LTE Band 2 and Band 38 and Band 41.

The EIRP of mobile transmitters must not exceed 1 Watts for LTE Band 4 and Band 66.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 5.7.1.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.
4. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1 %.
5. Record the deviation as Peak to Average Ratio.

3.6 Occupied Bandwidth

3.6.1 Description of Occupied Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 4.1 and 4.2.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
5. Set the detection mode to peak, and the trace mode to max hold.
6. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
(this is the reference value)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53 (g)

For operations in the 600MHz band and 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

27.53(m)(4)

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

3.7.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
5. Beyond the 1 MHz band from the band edge, RBW=1MHz was used.
6. Set spectrum analyzer with RMS detector.
7. Offset has included the duty factor for LTE Band 38/41. Duty factor $= 10 \log (1/x)$, where x is the measured duty cycle.
8. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
9. Checked that all the results comply with the emission limit line.

Example:

The limit line is derived from $43 + 10 \log (P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10 \log (P)] \text{ (dB)}$$

$$= [30 + 10 \log (P)] \text{ (dBm)} - [43 + 10 \log (P)] \text{ (dB)} = -13 \text{ dBm.}$$

10. For LTE Band 38, 41, the other 40 dB, and 55 dB have additionally applied same calculation above.

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 38,41:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Offset has included the duty factor for LTE Band 38/41. Duty factor = $10 \log (1/x)$, where x is the measured duty cycle.
9. Taking the record of maximum spurious emission.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
11. The limit line is derived from $43 + 10 \log (P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10 \log (P)]$ (dB)
 $= [30 + 10 \log (P)]$ (dBm) - $[43 + 10 \log (P)]$ (dB)
 $= -13$ dBm.
12. For Band 38, 41
The limit line is derived from $55 + 10 \log (P)$ dB below the transmitter power P(Watts)
 $= P(W) - [55 + 10 \log (P)]$ (dB)
 $= [30 + 10 \log (P)]$ (dBm) - $[55 + 10 \log (P)]$ (dB)
 $= -25$ dBm.

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 v03 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 v03 Section 9.0.
2. The EUT was placed in a temperature chamber at $20\pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

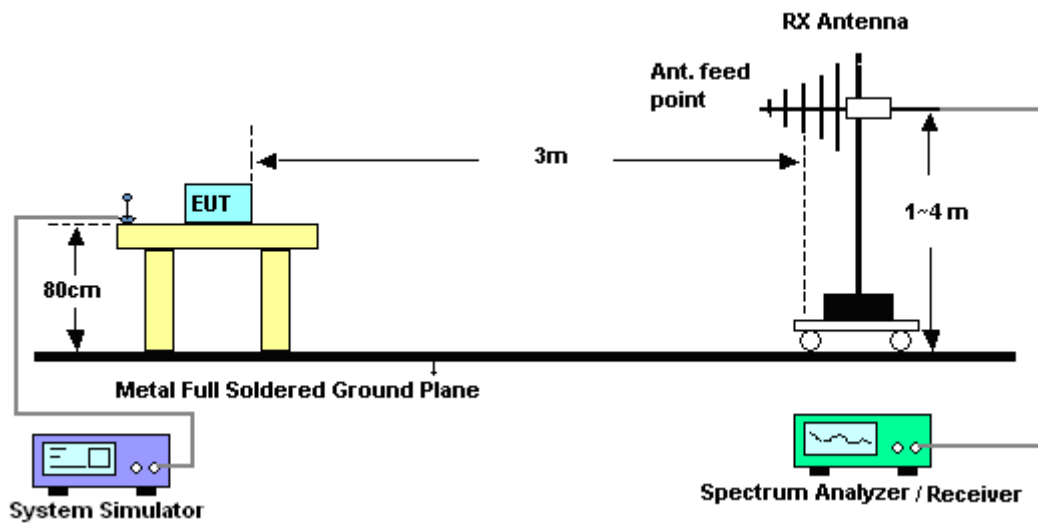
4 Radiated Test Items

4.1 Measuring Instruments

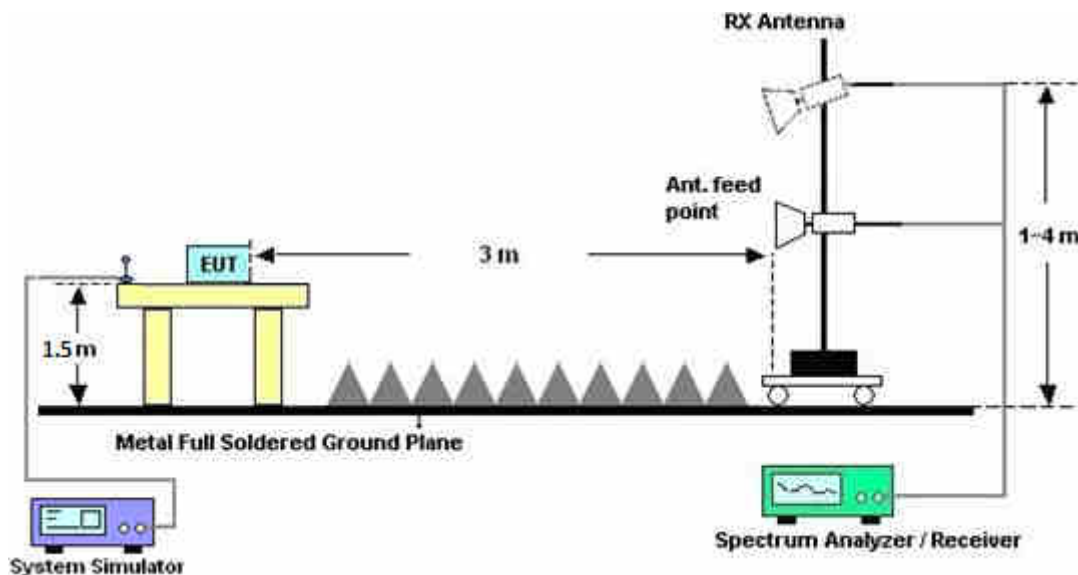
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Radiated Spurious Emission

4.4.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI/TIA-603-E. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 38, 41

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 5.8 and ANSI/TIA-603-E Section 2.2.12.
2. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between 1m to 4m to search the maximum spurious emission for both horizontal and vertical polarizations.
6. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
7. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
8. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
9. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

13. For Band 38, 41:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
 $ERP \text{ (dBm)} = EIRP - 2.15$



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 08, 2017	Jan. 12, 2018~ Jan. 31, 2018	Aug. 07, 2018	Conducted (TH01-KS)
Thermal Chamber	Hongzhan	LP-150U	HZ014011440	-40~+150°C 20%~95%RH	Apr. 18, 2017	Jan. 12, 2018~ Jan. 31, 2018	Apr. 17, 2018	Conducted (TH01-KS)
Radio communication analyzer	Anritsu	MT8820C	6201300652	2G/3G/LTE_ full band	Aug. 08, 2017	Jan. 12, 2018~ Jan. 31, 2018	Aug. 07, 2018	Conducted (TH01-KS)
Amplifier	MITEQ	TTA1840-35-H G	1871923	18GHz~40GHz,VS WR : 2.5:1 max	Jul. 18, 2017	Feb. 28, 2018~ Mar. 01, 2018	Jul. 17, 2018	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 10, 2017	Feb. 28, 2018~ Mar. 01, 2018	Nov. 09, 2018	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D&N-6-06	35414&AT-N06 02	30MHz~1GHz	Oct. 14, 2017	Feb. 28, 2018~ Mar. 01, 2018	Oct. 13, 2018	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1326	1GHz ~ 18GHz	Oct. 16, 2017	Feb. 28, 2018~ Mar. 01, 2018	Oct. 15, 2018	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 10, 2017	Feb. 28, 2018~ Mar. 01, 2018	Nov. 09, 2018	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHz	Oct. 19, 2017	Feb. 28, 2018~ Mar. 01, 2018	Oct. 18, 2018	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-108 0-1200-1500-6	SN2	1.2G High Pass	Sep. 18, 2017	Feb. 28, 2018~ Mar. 01, 2018	Sep. 17, 2018	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-270 0-3000-18000-	SN3	2.7G High Pass	Sep. 18, 2017	Feb. 28, 2018~ Mar. 01, 2018	Sep. 17, 2018	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	NCR	Feb. 28, 2018~ Mar. 01, 2018	NCR	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1~4m	NCR	Feb. 28, 2018~ Mar. 01, 2018	NCR	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	NCR	Feb. 28, 2018~ Mar. 01, 2018	NCR	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz- 40GHz	Apr. 27, 2017	Feb. 28, 2018~ Mar. 01, 2018	Apr. 26, 2018	Radiation (03CH11-HY)

NCR: No Calibration Required



6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.4 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	3.7 dB
--	--------

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2U_c(y)$)	4.0 dB
--	--------



Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.14	23.38	23.21
20	1	49		23.02	23.14	23.04
20	1	99		23.11	23.26	23.12
20	50	0		21.91	22.05	22.04
20	50	24		21.91	21.96	21.95
20	50	50		21.98	22.02	21.99
20	100	0		21.89	22.07	22.09
20	1	0	16-QAM	22.21	22.35	22.38
20	1	49		22.12	22.13	22.09
20	1	99		22.24	22.43	22.14
20	50	0		20.92	21.10	21.05
20	50	24		20.91	21.06	21.01
20	50	50		21.01	21.08	21.07
20	100	0		20.90	21.06	21.05
15	1	0	QPSK	23.14	23.35	23.18
15	1	37		23.02	23.12	22.91
15	1	74		23.31	23.36	23.35
15	36	0		21.88	22.18	22.03
15	36	20		21.91	22.09	21.95
15	36	39		22.03	22.16	21.93
15	75	0		21.94	22.07	22.01
15	1	0	16-QAM	22.37	22.51	22.54
15	1	37		22.46	22.25	22.32
15	1	74		22.53	22.64	22.39
15	36	0		20.92	21.17	21.01
15	36	20		20.94	21.11	20.96
15	36	39		21.01	21.02	20.93
15	75	0		20.96	21.06	21.11



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.10	23.20	23.36
10	1	25		22.90	23.00	22.98
10	1	49		23.18	23.23	23.18
10	25	0		21.97	22.00	22.00
10	25	12		21.95	22.01	21.98
10	25	25		21.99	21.98	22.04
10	50	0		21.91	22.00	21.96
10	1	0	16-QAM	22.31	22.42	22.47
10	1	25		22.12	22.23	22.08
10	1	49		22.40	22.58	22.44
10	25	0		20.99	21.08	21.05
10	25	12		20.90	21.06	20.96
10	25	25		21.01	21.18	21.08
10	50	0		20.97	21.18	21.03
5	1	0	QPSK	22.90	23.17	23.04
5	1	12		22.80	22.83	23.27
5	1	24		22.79	23.05	22.77
5	12	0		21.95	22.14	22.02
5	12	7		21.91	22.01	22.04
5	12	13		21.91	22.03	22.02
5	25	0		21.89	22.00	21.96
5	1	0	16-QAM	22.16	22.35	22.35
5	1	12		22.00	22.25	22.21
5	1	24		22.15	22.35	22.08
5	12	0		20.97	21.13	21.09
5	12	7		20.95	21.03	20.95
5	12	13		20.95	21.05	21.02
5	25	0		20.90	21.07	21.00



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.89	23.02	23.01
3	1	8		22.94	23.08	23.05
3	1	14		22.85	23.00	22.80
3	8	0		21.90	22.06	21.98
3	8	4		21.91	22.04	21.96
3	8	7		21.90	21.98	21.95
3	15	0		21.89	22.05	21.95
3	1	0	16-QAM	22.51	22.41	22.38
3	1	8		22.27	22.35	22.20
3	1	14		22.05	22.29	22.23
3	8	0		20.99	21.15	21.08
3	8	4		20.99	21.13	21.09
3	8	7		20.94	21.07	21.04
3	15	0		20.93	21.08	21.02
1.4	1	0	QPSK	22.77	22.99	22.87
1.4	1	3		22.76	23.04	22.93
1.4	1	5		22.75	22.93	22.84
1.4	3	0		22.81	22.92	22.84
1.4	3	1		22.86	22.97	22.94
1.4	3	3		22.85	22.93	22.83
1.4	6	0		21.86	22.00	21.93
1.4	1	0	16-QAM	22.20	22.47	22.38
1.4	1	3		22.11	22.35	22.26
1.4	1	5		22.14	22.17	22.07
1.4	3	0		21.91	22.07	22.01
1.4	3	1		21.92	22.05	22.00
1.4	3	3		21.85	21.95	21.91
1.4	6	0		20.96	21.02	20.99



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.03	23.14	22.99
20	1	49		22.96	23.04	22.95
20	1	99		22.88	22.96	22.77
20	50	0		21.84	21.94	21.77
20	50	24		21.77	21.86	21.76
20	50	50		21.75	21.81	21.63
20	100	0		21.76	21.87	21.74
20	1	0	16-QAM	21.97	22.08	22.10
20	1	49		21.98	22.19	22.11
20	1	99		22.02	22.15	22.00
20	50	0		20.84	20.94	20.82
20	50	24		20.77	20.92	20.76
20	50	50		20.74	20.86	20.67
20	100	0		20.77	20.87	20.74
15	1	0	QPSK	22.89	23.01	22.87
15	1	37		22.80	22.95	22.79
15	1	74		22.74	22.80	22.78
15	36	0		21.91	22.00	21.90
15	36	20		21.89	21.91	21.88
15	36	39		21.82	21.85	21.83
15	75	0		21.85	21.86	21.84
15	1	0	16-QAM	22.20	22.23	22.13
15	1	37		22.00	22.05	22.01
15	1	74		21.98	21.99	21.96
15	36	0		20.90	20.96	20.92
15	36	20		20.82	20.89	20.85
15	36	39		20.82	20.88	20.80
15	75	0		20.86	20.87	20.86



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	23.10	23.10	22.99
10	1	25		22.71	22.89	22.87
10	1	49		23.10	23.09	23.05
10	25	0		21.97	22.00	21.96
10	25	12		21.96	21.97	21.91
10	25	25		21.99	22.01	21.93
10	50	0		21.93	21.98	21.90
10	1	0	16-QAM	22.29	22.49	22.38
10	1	25		22.23	22.30	22.23
10	1	49		22.52	22.51	22.50
10	25	0		21.15	21.20	21.00
10	25	12		21.18	21.13	21.00
10	25	25		21.29	21.10	21.09
10	50	0		21.25	21.17	21.06
5	1	0	QPSK	23.05	23.10	23.11
5	1	12		22.90	22.87	22.91
5	1	24		22.99	22.91	22.94
5	12	0		22.22	22.21	22.13
5	12	7		22.07	22.03	22.04
5	12	13		22.05	22.10	22.08
5	25	0		22.01	22.09	22.00
5	1	0	16-QAM	22.39	22.38	22.40
5	1	12		22.28	22.26	22.21
5	1	24		22.36	22.31	22.33
5	12	0		21.21	21.18	21.12
5	12	7		21.09	21.01	21.00
5	12	13		21.11	21.03	21.01
5	25	0		21.09	21.02	21.05



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	23.03	23.06	22.96
3	1	8		23.00	23.02	22.99
3	1	14		22.93	22.98	22.85
3	8	0		22.02	22.03	21.97
3	8	4		21.97	22.03	21.98
3	8	7		21.98	22.01	21.89
3	15	0		21.97	22.01	21.93
3	1	0	16-QAM	22.38	22.45	22.35
3	1	8		22.25	22.31	22.20
3	1	14		22.41	22.50	22.35
3	8	0		21.08	21.13	21.01
3	8	4		21.10	21.14	21.02
3	8	7		21.09	21.15	21.03
3	15	0		21.03	21.08	21.08
1.4	1	0	QPSK	22.87	22.91	22.89
1.4	1	3		22.97	22.99	23.00
1.4	1	5		22.83	22.90	22.89
1.4	3	0		22.91	22.97	22.86
1.4	3	1		22.98	23.03	23.00
1.4	3	3		22.88	22.98	22.90
1.4	6	0		21.97	21.99	21.96
1.4	1	0	16-QAM	22.25	22.30	22.19
1.4	1	3		22.30	22.35	22.24
1.4	1	5		22.21	22.28	22.20
1.4	3	0		21.98	22.00	21.90
1.4	3	1		22.01	22.09	21.98
1.4	3	3		21.97	22.00	21.90
1.4	6	0		21.03	21.06	21.00



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.83	22.79	22.86
10	1	25		22.65	22.61	22.66
10	1	49		23.02	22.89	23.05
10	25	0		22.05	21.98	22.03
10	25	12		21.95	21.87	22.04
10	25	25		22.09	21.94	22.03
10	50	0		22.00	21.91	22.07
10	1	0	16-QAM	22.35	22.37	22.36
10	1	25		22.13	22.08	22.27
10	1	49		22.57	22.42	22.49
10	25	0		21.01	20.98	21.03
10	25	12		20.96	20.90	21.06
10	25	25		21.08	20.96	21.07
10	50	0		21.03	20.94	21.08
5	1	0	QPSK	22.80	22.78	22.81
5	1	12		22.70	22.76	22.69
5	1	24		22.69	22.65	22.70
5	12	0		21.77	21.71	21.76
5	12	7		21.77	21.80	21.82
5	12	13		21.78	21.79	21.65
5	25	0		21.74	21.70	21.85
5	1	0	16-QAM	22.01	21.90	22.08
5	1	12		21.95	21.90	22.00
5	1	24		21.96	22.07	22.08
5	12	0		20.75	20.65	20.60
5	12	7		20.79	20.71	20.65
5	12	13		20.80	20.85	20.90
5	25	0		20.76	20.71	20.61



LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.60	22.75	22.59
3	1	8		22.61	22.71	22.58
3	1	14		22.80	22.75	22.60
3	8	0		21.80	21.75	21.90
3	8	4		21.52	21.70	21.69
3	8	7		21.73	21.82	21.91
3	15	0		21.80	21.74	21.83
3	1	0	16-QAM	22.03	22.05	22.10
3	1	8		22.10	22.14	22.06
3	1	14		21.98	22.01	22.03
3	8	0		20.76	20.83	20.90
3	8	4		20.65	20.82	20.51
3	8	7		20.90	20.88	20.71
3	15	0		20.93	20.77	20.69
1.4	1	0	QPSK	22.51	22.60	22.60
1.4	1	3		22.60	22.65	22.71
1.4	1	5		22.70	22.68	22.70
1.4	3	0		22.63	22.62	22.60
1.4	3	1		22.55	22.65	22.61
1.4	3	3		22.53	22.61	22.58
1.4	6	0		21.60	21.65	21.70
1.4	1	0	16-QAM	21.98	22.00	22.03
1.4	1	3		21.96	21.99	22.00
1.4	1	5		21.99	22.05	22.03
1.4	3	0		21.63	21.69	21.71
1.4	3	1		21.70	21.71	21.73
1.4	3	3		21.63	21.66	21.78
1.4	6	0		20.63	20.74	20.80



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.51	22.55	22.53
20	1	49		22.47	22.30	22.27
20	1	99		22.57	22.56	22.50
20	50	0		21.72	21.66	21.74
20	50	24		21.83	21.74	21.78
20	50	50		21.71	21.70	21.84
20	100	0		21.70	21.77	21.76
20	1	0	16-QAM	21.81	21.86	21.85
20	1	49		21.84	21.78	21.97
20	1	99		21.92	21.76	21.95
20	50	0		20.75	20.61	20.88
20	50	24		20.87	20.69	20.85
20	50	50		20.86	20.82	20.87
20	100	0		20.86	20.72	20.90
15	1	0	QPSK	22.44	22.45	22.40
15	1	37		22.48	22.48	22.49
15	1	74		22.40	22.45	22.52
15	36	0		21.63	21.58	21.53
15	36	20		21.41	21.69	21.70
15	36	39		21.57	21.72	21.87
15	75	0		21.79	21.67	21.76
15	1	0	16-QAM	21.82	21.83	21.74
15	1	37		21.72	21.74	21.68
15	1	74		21.73	21.67	21.71
15	36	0		20.67	20.73	20.71
15	36	20		20.70	20.85	20.82
15	36	39		20.78	20.81	20.79
15	75	0		20.70	20.73	20.87



LTE Band 38 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.41	22.42	22.43
10	1	25		22.45	22.33	22.52
10	1	49		22.50	22.41	22.51
10	25	0		21.68	21.71	21.77
10	25	12		21.65	21.67	21.58
10	25	25		21.70	21.74	21.77
10	50	0		21.63	21.67	21.86
10	1	0	16-QAM	21.84	21.83	21.85
10	1	25		21.79	21.63	21.73
10	1	49		21.78	21.67	21.84
10	25	0		20.77	20.47	20.64
10	25	12		20.62	20.46	20.72
10	25	25		20.52	20.51	20.69
10	50	0		20.70	20.71	20.61
5	1	0	QPSK	22.44	22.45	22.51
5	1	12		22.45	22.48	22.49
5	1	24		22.46	22.46	22.46
5	12	0		21.77	21.77	21.74
5	12	7		21.62	21.74	21.53
5	12	13		21.55	21.72	21.74
5	25	0		21.59	21.66	21.61
5	1	0	16-QAM	21.69	21.61	21.60
5	1	12		21.70	21.71	21.76
5	1	24		21.79	21.66	21.73
5	12	0		20.69	20.52	20.66
5	12	7		20.72	20.70	20.71
5	12	13		20.64	20.76	20.75
5	25	0		20.65	20.77	20.78



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	22.23	22.33	22.26
20	1	49		22.18	22.30	22.19
20	1	99		22.33	22.53	22.42
20	50	0		21.40	21.53	21.51
20	50	24		21.46	21.56	21.55
20	50	50		21.38	21.50	21.49
20	100	0		21.40	21.55	21.46
20	1	0	16-QAM	21.38	21.51	21.43
20	1	49		21.35	21.50	21.48
20	1	99		21.34	21.48	21.50
20	50	0		20.46	20.54	20.51
20	50	24		20.40	20.58	20.47
20	50	50		20.42	20.40	20.41
20	100	0		20.45	20.42	20.43
15	1	0	QPSK	22.28	22.36	22.35
15	1	37		22.35	22.41	22.43
15	1	74		22.41	22.48	22.45
15	36	0		21.37	21.43	21.41
15	36	20		21.33	21.35	21.38
15	36	39		21.40	21.45	21.42
15	75	0		21.52	21.57	21.63
15	1	0	16-QAM	21.55	21.53	21.54
15	1	37		21.49	21.52	21.49
15	1	74		21.56	21.58	21.55
15	36	0		20.55	20.60	20.58
15	36	20		20.48	20.52	20.55
15	36	39		20.43	20.44	20.48
15	75	0		20.45	20.46	20.43



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.38	22.44	22.46
10	1	25		22.35	22.36	22.41
10	1	49		22.41	22.42	22.38
10	25	0		21.54	21.57	21.52
10	25	12		21.31	21.34	21.37
10	25	25		21.42	21.45	21.46
10	50	0		21.52	21.49	21.51
10	1	0	16-QAM	21.66	21.62	21.60
10	1	25		21.59	21.63	21.59
10	1	49		21.63	21.58	21.62
10	25	0		20.65	20.64	20.66
10	25	12		20.63	20.61	20.64
10	25	25		20.55	20.51	20.55
10	50	0		20.60	20.55	20.57
5	1	0	QPSK	22.51	22.46	22.50
5	1	12		22.50	22.48	22.46
5	1	24		22.43	22.32	22.33
5	12	0		21.41	21.35	21.34
5	12	7		21.38	21.41	21.44
5	12	13		21.49	21.45	21.51
5	25	0		21.44	21.40	21.42
5	1	0	16-QAM	21.62	21.57	21.55
5	1	12		21.59	21.62	21.59
5	1	24		21.57	21.59	21.60
5	12	0		20.52	20.48	20.45
5	12	7		20.43	20.39	20.42
5	12	13		20.54	20.49	20.54
5	25	0		20.66	20.63	20.64



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	23.11	23.01	22.96
20	1	49		23.04	23.02	22.96
20	1	99		23.41	23.35	23.06
20	50	0		21.88	21.84	21.82
20	50	24		21.85	21.82	21.80
20	50	50		21.83	21.81	21.76
20	100	0		21.87	21.81	21.79
20	1	0	16-QAM	22.28	22.21	22.19
20	1	49		22.16	22.11	22.06
20	1	99		22.33	22.28	22.25
20	50	0		20.92	20.87	20.84
20	50	24		20.91	20.88	20.83
20	50	50		20.90	20.86	20.82
20	100	0		20.94	20.84	20.82
15	1	0	QPSK	23.12	23.08	23.05
15	1	37		23.02	22.94	22.89
15	1	74		23.26	23.25	23.18
15	36	0		21.92	21.88	21.85
15	36	20		21.82	21.80	21.76
15	36	39		21.76	21.74	21.72
15	75	0		21.85	21.84	21.82
15	1	0	16-QAM	22.41	22.38	22.35
15	1	37		22.31	22.20	22.16
15	1	74		22.20	22.11	22.06
15	36	0		20.91	20.87	20.82
15	36	20		20.90	20.88	20.85
15	36	39		20.79	20.76	20.69
15	75	0		20.88	20.85	20.82



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	22.25	22.36	22.38
10	1	25		22.64	22.58	22.58
10	1	49		23.00	23.02	22.88
10	25	0		21.52	21.58	21.50
10	25	12		21.68	21.60	21.56
10	25	25		21.61	21.65	21.54
10	50	0		21.64	21.61	21.49
10	1	0	16-QAM	21.48	21.43	21.52
10	1	25		21.79	21.87	21.72
10	1	49		21.99	22.21	22.01
10	25	0		20.59	20.61	20.52
10	25	12		20.73	20.66	20.53
10	25	25		20.71	20.63	20.50
10	50	0		20.66	20.56	20.51
5	1	0	QPSK	22.89	22.81	22.78
5	1	12		22.77	22.72	22.68
5	1	24		22.71	22.65	22.62
5	12	0		21.71	21.65	21.63
5	12	7		21.63	21.58	21.55
5	12	13		21.66	21.62	21.59
5	25	0		21.60	21.57	21.56
5	1	0	16-QAM	22.10	22.05	22.03
5	1	12		21.92	21.88	21.85
5	1	24		21.94	21.88	21.83
5	12	0		20.77	20.71	20.69
5	12	7		20.72	20.67	20.64
5	12	13		20.73	20.69	20.65
5	25	0		20.55	20.53	20.51



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	22.71	22.64	22.62
3	1	8		22.62	22.55	22.54
3	1	14		22.63	22.57	22.55
3	8	0		21.66	21.58	21.57
3	8	4		21.58	21.55	21.53
3	8	7		21.63	21.58	21.56
3	15	0		21.55	21.51	21.51
3	1	0	16-QAM	21.85	21.80	21.78
3	1	8		21.88	21.82	21.82
3	1	14		21.76	21.73	21.70
3	8	0		20.65	20.60	20.59
3	8	4		20.66	20.57	20.54
3	8	7		20.64	20.62	20.58
3	15	0		20.58	20.55	20.52
1.4	1	0	QPSK	22.61	22.56	22.52
1.4	1	3		22.66	22.60	22.58
1.4	1	5		22.63	22.57	22.55
1.4	3	0		22.55	22.50	22.46
1.4	3	1		22.61	22.58	22.55
1.4	3	3		22.53	22.51	22.46
1.4	6	0		21.52	21.48	21.45
1.4	1	0	16-QAM	21.72	21.74	21.69
1.4	1	3		21.89	21.87	21.85
1.4	1	5		21.65	21.67	21.63
1.4	3	0		21.55	21.58	21.55
1.4	3	1		21.57	21.59	21.55
1.4	3	3		21.49	21.51	21.46
1.4	6	0		20.56	20.54	20.53



LTE Band 71 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	21.30	21.31	21.27
20	1	49		22.18	22.28	22.16
20	1	99		22.20	22.55	22.14
20	50	0		20.95	20.57	20.86
20	50	24		21.25	20.82	21.22
20	50	50		21.15	20.87	21.23
20	100	0		21.13	20.72	21.16
20	1	0	16-QAM	20.80	20.50	20.80
20	1	49		21.50	21.20	21.51
20	1	99		21.76	21.80	21.75
20	50	0		19.90	19.58	19.90
20	50	24		20.17	19.81	20.13
20	50	50		20.16	19.75	20.05
20	100	0		20.10	19.70	20.10
15	1	0	QPSK	22.00	22.05	22.10
15	1	37		22.15	22.20	22.02
15	1	74		22.13	22.25	22.23
15	36	0		21.10	21.13	21.10
15	36	20		21.13	21.20	21.28
15	36	39		21.20	21.27	21.24
15	75	0		20.92	20.95	20.90
15	1	0	16-QAM	21.40	21.44	21.50
15	1	37		21.43	21.52	21.46
15	1	74		21.42	21.55	21.50
15	36	0		20.16	20.16	20.12
15	36	20		20.28	20.22	20.16
15	36	39		20.20	20.26	20.20
15	75	0		20.23	20.23	20.15



LTE Band 71 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	21.55	21.25	21.45
10	1	25		22.25	21.95	22.36
10	1	49		22.30	22.53	22.23
10	25	0		21.15	20.85	21.25
10	25	12		21.45	21.05	21.43
10	25	25		21.60	21.15	21.42
10	50	0		21.42	21.03	21.50
10	1	0	16-QAM	20.50	20.13	20.56
10	1	25		21.35	20.96	21.35
10	1	49		21.45	21.44	21.48
10	25	0		20.18	19.82	20.26
10	25	12		20.40	20.02	20.40
10	25	25		20.51	20.15	20.46
10	50	0		20.45	20.09	20.40
5	1	0	QPSK	22.40	22.44	22.40
5	1	12		22.35	22.02	22.30
5	1	24		22.36	22.05	22.35
5	12	0		21.32	21.05	21.36
5	12	7		21.23	20.95	21.25
5	12	13		21.30	21.01	21.23
5	25	0		21.36	20.99	21.34
5	1	0	16-QAM	21.88	21.57	21.89
5	1	12		21.85	21.53	21.80
5	1	24		21.90	21.95	21.94
5	12	0		20.52	20.21	20.60
5	12	7		20.53	20.23	20.46
5	12	13		20.55	20.22	20.55
5	25	0		20.46	20.15	20.53

**ERP/EIRP**

LTE Band 2 ($G_T - L_C = -0.3$ dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
(MHz)									
Conducted Power (dBm)	22.76	23.04	22.93	22.94	23.08	23.05	22.80	22.83	23.27
Conducted Power (Watts)	0.1888	0.2014	0.1963	0.1968	0.2032	0.2018	0.1905	0.1919	0.2123
EIRP(dBm)	22.46	22.74	22.63	22.64	22.78	22.75	22.50	22.53	22.97
EIRP(Watts)	0.1762	0.1879	0.1832	0.1837	0.1897	0.1884	0.1778	0.1791	0.1982

LTE Band 2 ($G_T - L_C = -0.3$ dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
(MHz)									
Conducted Power (dBm)	23.10	23.20	23.36	23.31	23.36	23.35	23.14	23.38	23.21
Conducted Power (Watts)	0.2042	0.2089	0.2168	0.2143	0.2168	0.2163	0.2061	0.2178	0.2094
EIRP(dBm)	22.80	22.90	23.06	23.01	23.06	23.05	22.84	23.08	22.91
EIRP(Watts)	0.1905	0.1950	0.2023	0.2000	0.2023	0.2018	0.1923	0.2032	0.1954



LTE Band 2 ($G_T - L_C = -0.3$ dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	18607	18900	19193	18615	18900	19185	18625	18900	19175
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1850.7	1880	1909.3	1851.5	1880	1908.5	1852.5	1880	1907.5
(MHz)									
Conducted Power (dBm)	22.20	22.47	22.38	22.51	22.41	22.38	22.16	22.35	22.35
Conducted Power (Watts)	0.1660	0.1766	0.1730	0.1782	0.1742	0.1730	0.1644	0.1718	0.1718
EIRP(dBm)	21.90	22.17	22.08	22.21	22.11	22.08	21.86	22.05	22.05
EIRP(Watts)	0.1549	0.1648	0.1614	0.1663	0.1626	0.1614	0.1535	0.1603	0.1603

LTE Band 2 ($G_T - L_C = -0.3$ dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	18650	18900	19150	18675	18900	19125	18650	18900	19100
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1855	1880	1905	1857.5	1880	1902.5	1860	1880	1900
(MHz)									
Conducted Power (dBm)	22.40	22.58	22.44	22.53	22.64	22.39	22.24	22.43	22.14
Conducted Power (Watts)	0.1738	0.1811	0.1754	0.1791	0.1837	0.1734	0.1675	0.1750	0.1637
EIRP(dBm)	22.10	22.28	22.14	22.23	22.34	22.09	21.94	22.13	21.84
EIRP(Watts)	0.1622	0.1690	0.1637	0.1671	0.1714	0.1618	0.1563	0.1633	0.1528



LTE Band 4 ($G_T - L_C = -1.1$ dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	22.98	23.03	23.00	23.03	23.06	22.96	23.05	23.10	23.11
Conducted Power (Watts)	0.1986	0.2009	0.1995	0.2009	0.2023	0.1977	0.2018	0.2042	0.2046
EIRP(dBm)	21.88	21.93	21.90	21.93	21.96	21.86	21.95	22.00	22.01
EIRP(Watts)	0.1542	0.1560	0.1549	0.1560	0.1570	0.1535	0.1567	0.1585	0.1589

LTE Band 4 ($G_T - L_C = -1.1$ dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	23.10	23.10	22.99	22.89	23.01	22.87	23.03	23.14	22.99
Conducted Power (Watts)	0.2042	0.2042	0.1991	0.1945	0.2000	0.1936	0.2009	0.2061	0.1991
EIRP(dBm)	22.00	22.00	21.89	21.79	21.91	21.77	21.93	22.04	21.89
EIRP(Watts)	0.1585	0.1585	0.1545	0.1510	0.1552	0.1503	0.1560	0.1600	0.1545



LTE Band 4 ($G_T - L_C = -1.1$ dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	22.30	22.35	22.24	22.41	22.50	22.35	22.39	22.38	22.40
Conducted Power (Watts)	0.1698	0.1718	0.1675	0.1742	0.1778	0.1718	0.1734	0.1730	0.1738
EIRP(dBm)	21.20	21.25	21.14	21.31	21.40	21.25	21.29	21.28	21.30
EIRP(Watts)	0.1318	0.1334	0.1300	0.1352	0.1380	0.1334	0.1346	0.1343	0.1349

LTE Band 4 ($G_T - L_C = -1.1$ dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	22.52	22.51	22.50	22.20	22.23	22.13	21.98	22.19	22.11
Conducted Power (Watts)	0.1786	0.1782	0.1778	0.1660	0.1671	0.1633	0.1578	0.1656	0.1626
EIRP(dBm)	21.42	21.41	21.40	21.10	21.13	21.03	20.88	21.09	21.01
EIRP(Watts)	0.1387	0.1384	0.1380	0.1288	0.1297	0.1268	0.1225	0.1285	0.1262



LTE Band 5 ($G_T - L_C = -2.7$ dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	22.60	22.65	22.71	22.80	22.75	22.60	22.80	22.78	22.81
Conducted Power (Watts)	0.1820	0.1841	0.1866	0.1905	0.1884	0.1820	0.1905	0.1897	0.1910
ERP(dBm)	17.75	17.80	17.86	17.95	17.90	17.75	17.95	17.93	17.96
ERP(Watts)	0.0596	0.0603	0.0611	0.0624	0.0617	0.0596	0.0624	0.0621	0.0625

LTE Band 5 ($G_T - L_C = -2.7$ dB) QPSK			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	23.02	22.89	23.05
Conducted Power (Watts)	0.2004	0.1945	0.2018
ERP(dBm)	18.17	18.04	18.20
ERP(Watts)	0.0656	0.0637	0.0661



LTE Band 5 ($G_T - L_C = -2.7$ dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	20407	20525	20643	20415	20525	20635	20425	20525	20625
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	824.7	836.5	848.3	825.5	836.5	847.5	826.5	836.5	846.5
(MHz)									
Conducted Power (dBm)	21.99	22.05	22.03	22.10	22.14	22.06	22.01	21.90	22.08
Conducted Power (Watts)	0.1581	0.1603	0.1596	0.1622	0.1637	0.1607	0.1589	0.1549	0.1614
ERP(dBm)	17.14	17.20	17.18	17.25	17.29	17.21	17.16	17.05	17.23
ERP(Watts)	0.0518	0.0525	0.0522	0.0531	0.0536	0.0526	0.0520	0.0507	0.0528

LTE Band 5 ($G_T - L_C = -2.7$ dB) 16QAM			
Bandwidth	10M		
Channel	20450	20525	20600
	(Low)	(Mid)	(High)
Frequency	829	836.5	844
(MHz)			
Conducted Power (dBm)	22.57	22.42	22.49
Conducted Power (Watts)	0.1807	0.1746	0.1774
ERP(dBm)	17.72	17.57	17.64
ERP(Watts)	0.0592	0.0571	0.0581



LTE Band 38 ($G_T - L_C = 0.4$ dB) QPSK			
Bandwidth	5M		
Channel	37775	38000	38225
	(Low)	(Mid)	(High)
Frequency	2572.5	2595	2617.5
(MHz)			
Conducted Power (dBm)	22.44	22.45	22.51
Conducted Power (Watts)	0.1754	0.1758	0.1782
EIRP(dBm)	22.84	22.85	22.91
EIRP(Watts)	0.1923	0.1928	0.1954

LTE Band 38 ($G_T - L_C = 0.4$ dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	37800	38000	38200	37825	38000	38175	37850	38000	38150
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency	2575	2595	2615	2577.5	2595	2612.5	2580	2595	2610
(MHz)									
Conducted Power (dBm)	22.45	22.33	22.52	22.40	22.45	22.52	22.57	22.56	22.50
Conducted Power (Watts)	0.1758	0.1710	0.1786	0.1738	0.1758	0.1786	0.1807	0.1803	0.1778
EIRP(dBm)	22.85	22.73	22.92	22.80	22.85	22.92	22.97	22.96	22.90
EIRP(Watts)	0.1928	0.1875	0.1959	0.1905	0.1928	0.1959	0.1982	0.1977	0.1950



LTE Band 38 ($G_T - L_C = 0.4$ dB) 16QAM			
Bandwidth	5M		
Channel	37775	38000	38225
	(Low)	(Mid)	(High)
Frequency	2572.5	2595	2617.5
(MHz)			
Conducted Power (dBm)	21.79	21.66	21.73
Conducted Power (Watts)	0.1510	0.1466	0.1489
EIRP(dBm)	22.19	22.06	22.13
EIRP(Watts)	0.1656	0.1607	0.1633

LTE Band 38 ($G_T - L_C = 0.4$ dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	37800	38000	38200	37825	38000	38175	37850	38000	38150
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency	2575	2595	2615	2577.5	2595	2612.5	2580	2595	2610
(MHz)									
Conducted Power (dBm)	21.84	21.83	21.85	21.82	21.83	21.74	21.84	21.78	21.97
Conducted Power (Watts)	0.1528	0.1524	0.1531	0.1521	0.1524	0.1493	0.1528	0.1507	0.1574
EIRP(dBm)	22.24	22.23	22.25	22.22	22.23	22.14	22.24	22.18	22.37
EIRP(Watts)	0.1675	0.1671	0.1679	0.1667	0.1671	0.1637	0.1675	0.1652	0.1726

LTE Band 41 ($G_T - L_C = 0.4$ dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
(MHz)									
Conducted Power (dBm)	22.51	22.46	22.50	22.38	22.44	22.46	22.41	22.48	22.45
Conducted Power (Watts)	0.1782	0.1762	0.1778	0.1730	0.1754	0.1762	0.1742	0.1770	0.1758
EIRP(dBm)	22.91	22.86	22.90	22.78	22.84	22.86	22.81	22.88	22.85
EIRP(Watts)	0.1954	0.1932	0.1950	0.1897	0.1923	0.1932	0.1910	0.1941	0.1928

LTE Band 41 ($G_T - L_C = 0.4$ dB) QPSK			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency	2506	2593	2680
(MHz)			
Conducted Power (dBm)	22.33	22.53	22.42
Conducted Power (Watts)	0.1710	0.1791	0.1746
EIRP(dBm)	22.73	22.93	22.82
EIRP(Watts)	0.1875	0.1963	0.1914



LTE Band 41 ($G_T - L_C = 0.4$ dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	39675	40620	41565	39700	40620	41540	39725	40620	41515
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	2498.5	2593	2687.5	2501	2593	2685	2503.5	2593	2682.5
(MHz)									
Conducted Power (dBm)	21.62	21.57	21.55	21.66	21.62	21.60	21.56	21.58	21.55
Conducted Power (Watts)	0.1452	0.1435	0.1429	0.1466	0.1452	0.1445	0.1432	0.1439	0.1429
EIRP(dBm)	22.02	21.97	21.95	22.06	22.02	22.00	21.96	21.98	21.95
EIRP(Watts)	0.1592	0.1574	0.1567	0.1607	0.1592	0.1585	0.1570	0.1578	0.1567

LTE Band 41 ($G_T - L_C = 0.4$ dB) 16QAM			
Bandwidth	20M		
Channel	39750	40620	41490
	(Low)	(Mid)	(High)
Frequency	2506	2593	2680
(MHz)			
Conducted Power (dBm)	21.38	21.51	21.43
Conducted Power (Watts)	0.1374	0.1416	0.1390
EIRP(dBm)	21.78	21.91	21.83
EIRP(Watts)	0.1507	0.1552	0.1524



LTE Band 66 ($G_T - L_C = -0.8$ dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
(MHz)									
Conducted Power (dBm)	22.66	22.60	22.58	22.71	22.64	22.62	22.89	22.81	22.78
Conducted Power (Watts)	0.1845	0.1820	0.1811	0.1866	0.1837	0.1828	0.1945	0.1910	0.1897
EIRP(dBm)	21.86	21.80	21.78	21.91	21.84	21.82	22.09	22.01	21.98
EIRP(Watts)	0.1535	0.1514	0.1507	0.1552	0.1528	0.1521	0.1618	0.1589	0.1578

LTE Band 66 ($G_T - L_C = -0.8$ dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
(MHz)									
Conducted Power (dBm)	23.00	23.02	22.88	23.26	23.25	23.18	23.41	23.35	23.06
Conducted Power (Watts)	0.1995	0.2004	0.1941	0.2118	0.2113	0.2080	0.2193	0.2163	0.2023
EIRP(dBm)	22.20	22.22	22.08	22.46	22.45	22.38	22.61	22.55	22.26
EIRP(Watts)	0.1660	0.1667	0.1614	0.1762	0.1758	0.1730	0.1824	0.1799	0.1683



LTE Band 66 ($G_T - L_C = -0.8$ dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	131979	132322	132665	131987	132322	132657	131997	132322	132647
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1745	1779.3	1711.5	1745	1778.5	1712.5	1745	1777.5
(MHz)									
Conducted Power (dBm)	21.89	21.87	21.85	21.88	21.82	21.82	22.10	22.05	22.03
Conducted Power (Watts)	0.1545	0.1538	0.1531	0.1542	0.1521	0.1521	0.1622	0.1603	0.1596
EIRP(dBm)	21.09	21.07	21.05	21.08	21.02	21.02	21.30	21.25	21.23
EIRP(Watts)	0.1285	0.1279	0.1274	0.1282	0.1265	0.1265	0.1349	0.1334	0.1327

LTE Band 66 ($G_T - L_C = -0.8$ dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	132022	132322	132622	132047	132322	132597	132072	132322	132572
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(Mid)
Frequency	1715	1745	1775	1717.5	1745	1772.5	1720	1745	1770
(MHz)									
Conducted Power (dBm)	21.99	22.21	22.01	22.41	22.38	22.35	22.33	22.28	22.25
Conducted Power (Watts)	0.1581	0.1663	0.1589	0.1742	0.1730	0.1718	0.1710	0.1690	0.1679
EIRP(dBm)	21.19	21.41	21.21	21.61	21.58	21.55	21.53	21.48	21.45
EIRP(Watts)	0.1315	0.1384	0.1321	0.1449	0.1439	0.1429	0.1422	0.1406	0.1396



LTE Band 71 ($G_T - L_C = -4$ dB) QPSK									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
(MHz)									
Conducted Power (dBm)	22.40	22.44	22.40	22.30	22.53	22.23	22.13	22.25	22.23
Conducted Power (Watts)	0.1738	0.1754	0.1738	0.1698	0.1791	0.1671	0.1633	0.1679	0.1671
ERP(dBm)	16.25	16.29	16.25	16.15	16.38	16.08	15.98	16.10	16.08
ERP(Watts)	0.0422	0.0426	0.0422	0.0412	0.0435	0.0406	0.0396	0.0407	0.0406

LTE Band 71 ($G_T - L_C = -4$ dB) QPSK			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency	673	680.5	688
(MHz)			
Conducted Power (dBm)	22.20	22.55	22.14
Conducted Power (Watts)	0.1660	0.1799	0.1637
ERP(dBm)	16.05	16.40	15.99
ERP(Watts)	0.0403	0.0437	0.0397



LTE Band 71 ($G_T - L_C = -4$ dB) 16QAM									
Bandwidth	5M			10M			15M		
Channel	133147	133297	133447	133172	133297	133422	133197	133297	133397
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	665.5	680.5	695.5	668	680.5	693	670.5	680.5	690.5
(MHz)									
Conducted Power (dBm)	21.90	21.95	21.94	21.45	21.44	21.48	21.42	21.55	21.50
Conducted Power (Watts)	0.1549	0.1567	0.1563	0.1396	0.1393	0.1406	0.1387	0.1429	0.1413
ERP(dBm)	15.75	15.80	15.79	15.30	15.29	15.33	15.27	15.40	15.35
ERP(Watts)	0.0376	0.0380	0.0379	0.0339	0.0338	0.0341	0.0337	0.0347	0.0343

LTE Band 71 ($G_T - L_C = -4$ dB) 16QAM			
Bandwidth	20M		
Channel	133222	133297	133372
	(Low)	(Mid)	(High)
Frequency	673	680.5	688
(MHz)			
Conducted Power (dBm)	21.76	21.80	21.75
Conducted Power (Watts)	0.1500	0.1514	0.1496
ERP(dBm)	15.61	15.65	15.60
ERP(Watts)	0.0364	0.0367	0.0363

**Peak-to-Average Ratio**

Mode	LTE Band 2 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.23	5.19	4.61	6.14	PASS
Middle CH	4.67	5.13	5.65	6.14	
Highest CH	4.84	5.10	5.65	6.29	

Mode	LTE Band 4 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.38	5.01	4.99	6.06	PASS
Middle CH	4.72	5.10	5.25	6.17	
Highest CH	4.81	5.39	5.57	6.20	

Mode	LTE Band 5 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	3.68	4.81	4.55	5.77	PASS
Middle CH	4.23	4.75	5.16	5.74	
Highest CH	3.97	4.75	4.87	5.65	

Mode	LTE Band 38 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.67	5.39	5.57	6.49	PASS
Middle CH	5.10	5.33	5.74	6.32	
Highest CH	6.00	5.51	6.55	6.26	



Mode	LTE Band 41 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	5.65	5.25	6.46	6.06	PASS
Middle CH	5.65	5.77	6.23	6.23	
Highest CH	4.81	5.16	5.71	6.35	

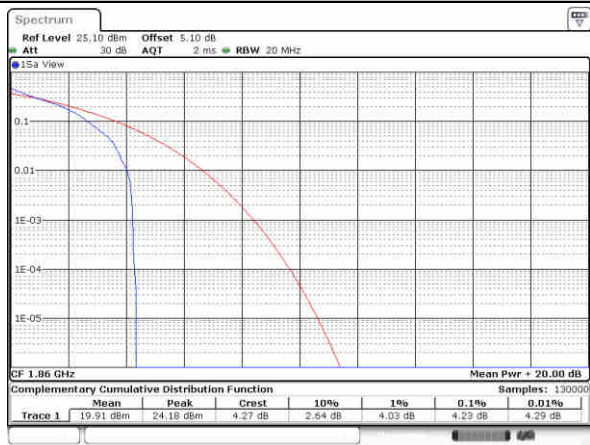
Mode	LTE Band 66 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.06	4.93	4.58	5.88	PASS
Middle CH	4.93	5.13	5.86	6.09	
Highest CH	4.84	5.19	5.65	6.17	

Mode	LTE Band 71 / 20MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.70	4.84	5.51	5.77	PASS
Middle CH	4.43	4.78	5.39	5.74	
Highest CH	4.72	4.87	5.54	5.83	

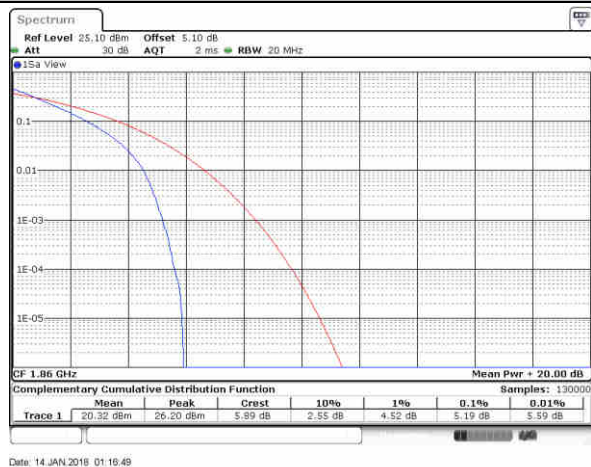


LTE Band 2 / 20MHz / QPSK

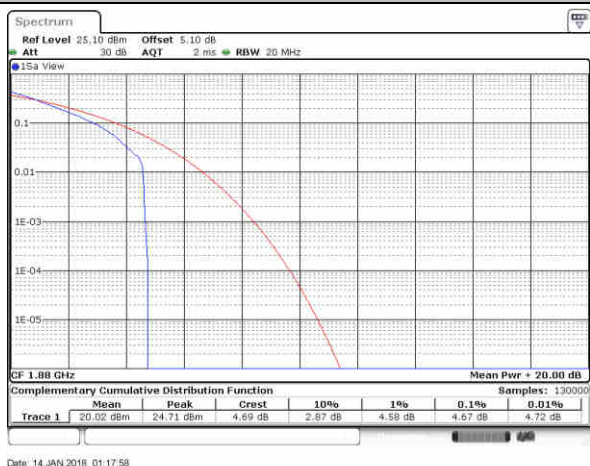
Lowest Channel / 1RB



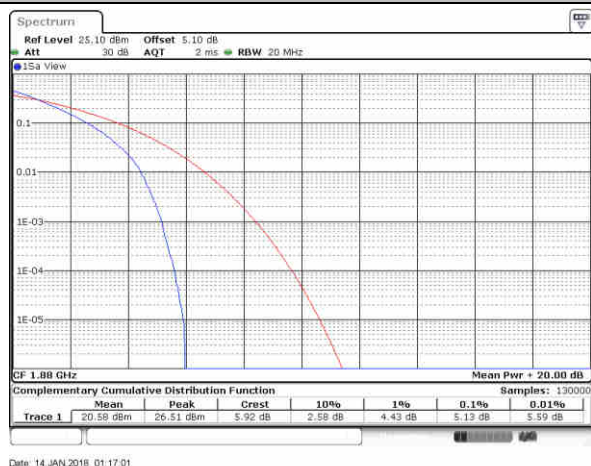
Lowest Channel / Full RB



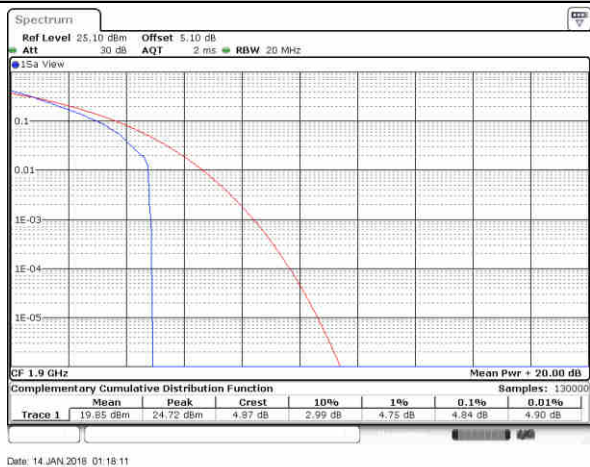
Middle Channel / 1RB



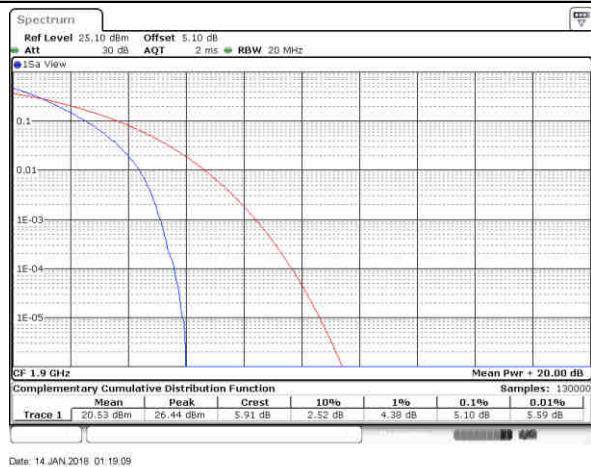
Middle Channel / Full RB



Highest Channel / 1RB



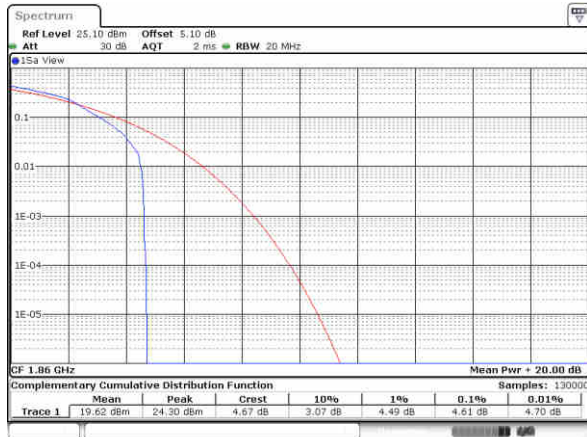
Highest Channel / Full RB





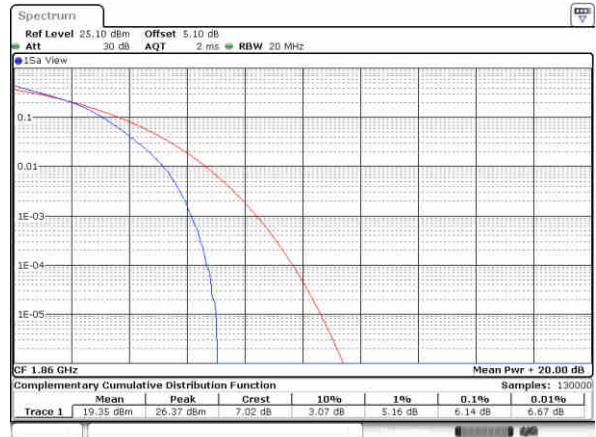
LTE Band 2 / 20MHz / 16QAM

Lowest Channel / 1RB



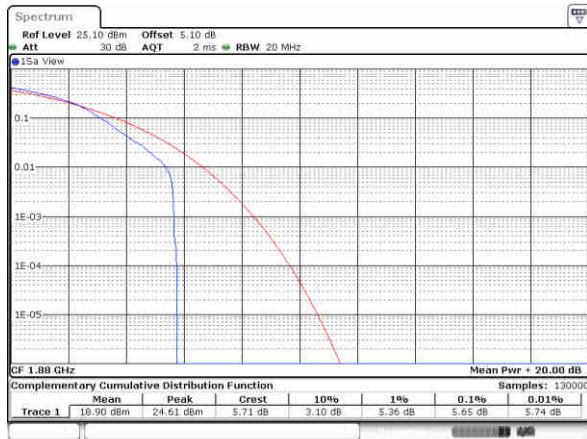
Date: 14 JAN 2016 01:16:02

Lowest Channel / Full RB



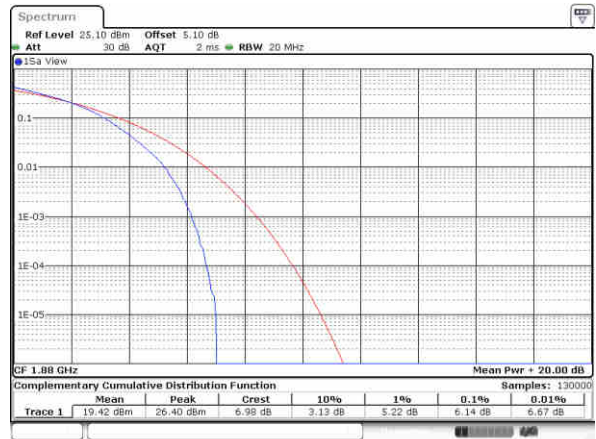
Date: 14 JAN 2016 01:16:39

Middle Channel / 1RB



Date: 14 JAN 2016 01:17:47

Middle Channel / Full RB



Date: 14 JAN 2016 01:17:11

Highest Channel / 1RB



Date: 14 JAN 2016 01:18:22

Highest Channel / Full RB

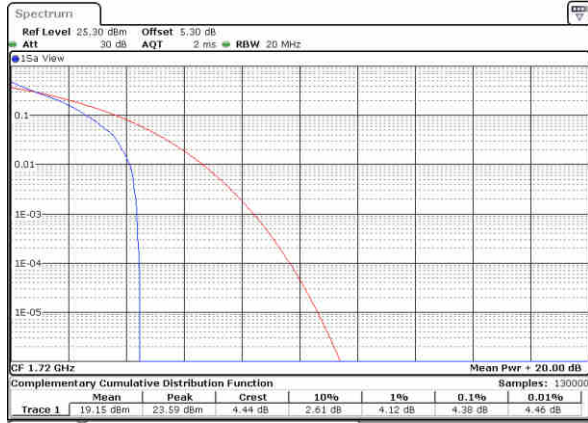


Date: 14 JAN 2016 01:18:59



LTE Band 4 / 20MHz / QPSK

Lowest Channel / 1RB



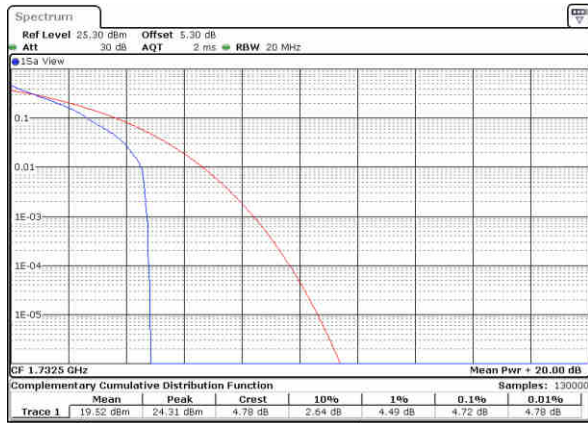
Date: 16 JAN 2018 13:40:17

Lowest Channel / Full RB



Date: 16 JAN 2018 13:40:30

Middle Channel / 1RB



Date: 16 JAN 2018 13:41:37

Middle Channel / Full RB



Date: 16 JAN 2018 13:41:00

Highest Channel / 1RB



Date: 16 JAN 2018 13:42:29

Highest Channel / Full RB

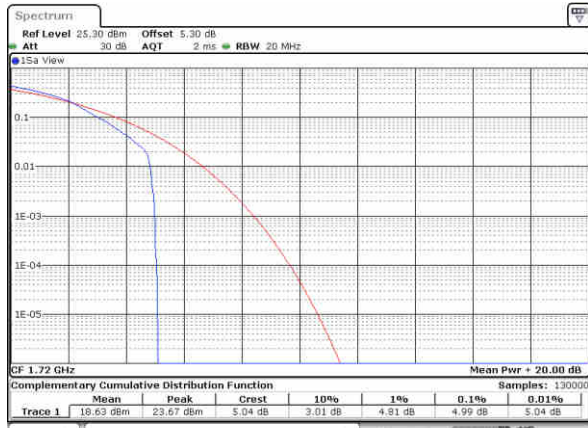


Date: 16 JAN 2018 13:42:41



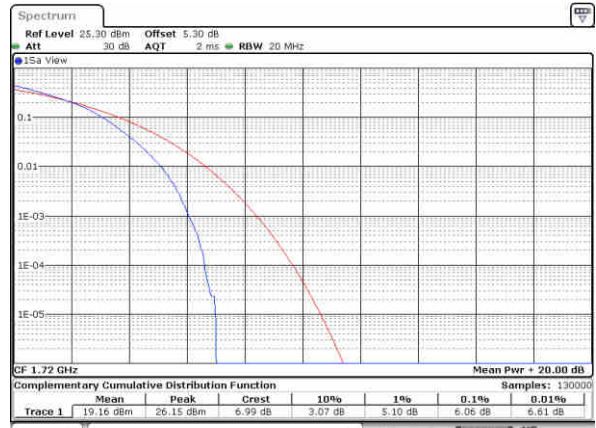
LTE Band 4 / 20MHz / 16QAM

Lowest Channel / 1RB



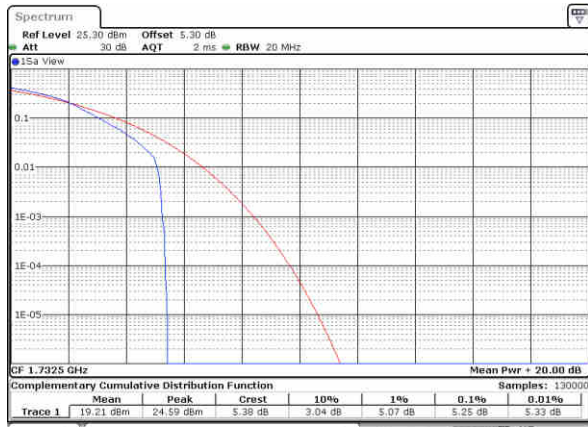
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Lowest Channel / Full RB



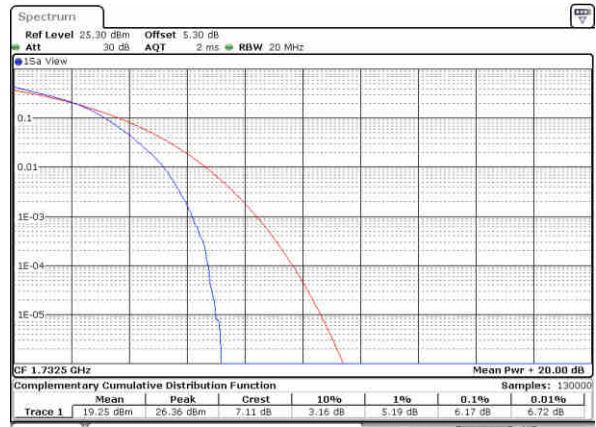
Date: 16 JAN 2018 13:39:28

Middle Channel / 1RB



Date: 16 JAN 2018 13:38:03

Middle Channel / Full RB



Date: 16 JAN 2018 13:39:18

Highest Channel / 1RB



Date: 16 JAN 2018 13:38:22

Highest Channel / Full RB

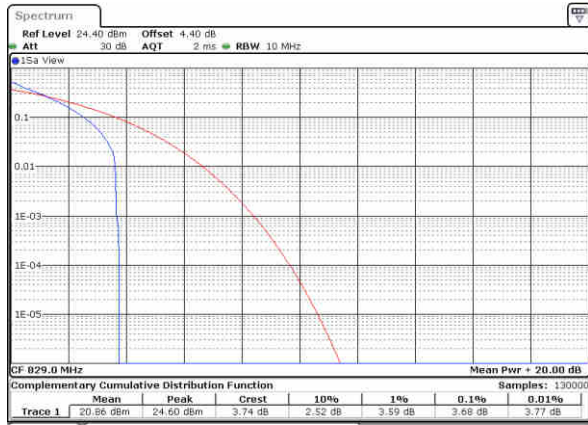


Date: 16 JAN 2018 13:38:31



LTE Band 5 / 10MHz / QPSK

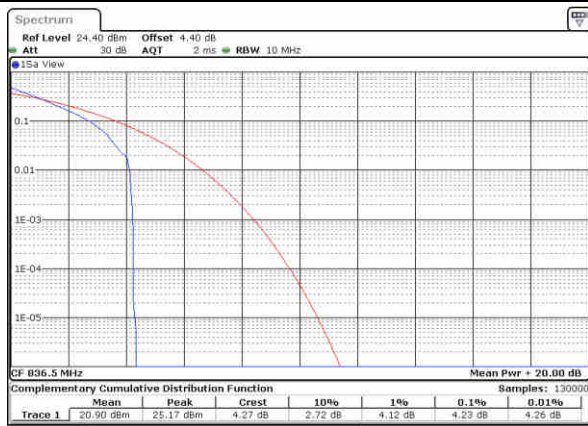
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



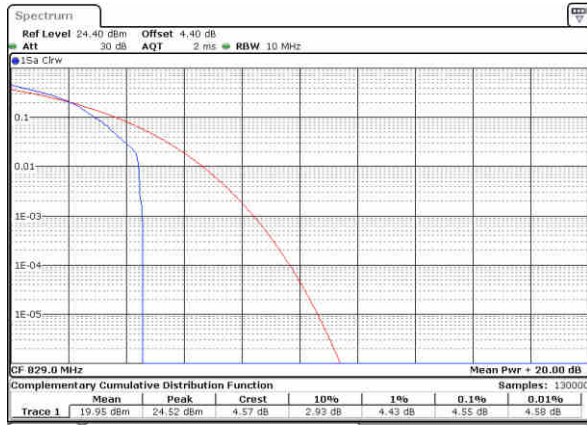
Highest Channel / Full RB





LTE Band 5 / 10MHz / 16QAM

Lowest Channel / 1RB



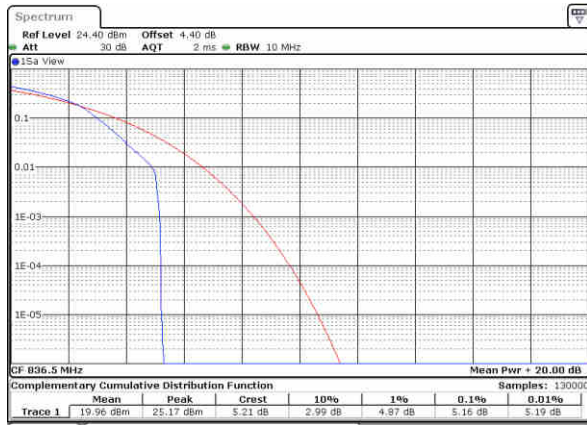
Date: 15 JAN 2018 12:32:44

Lowest Channel / Full RB



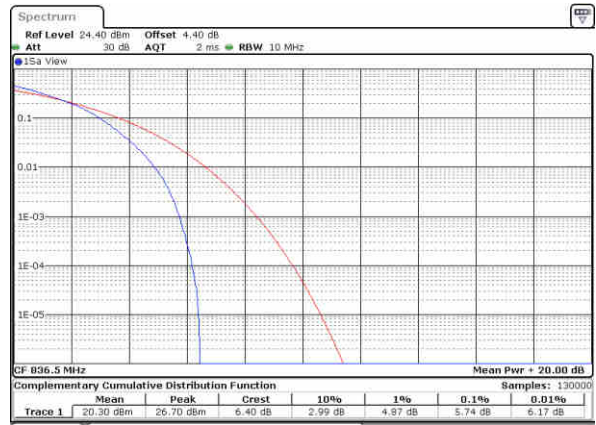
Date: 15 JAN 2018 12:33:05

Middle Channel / 1RB



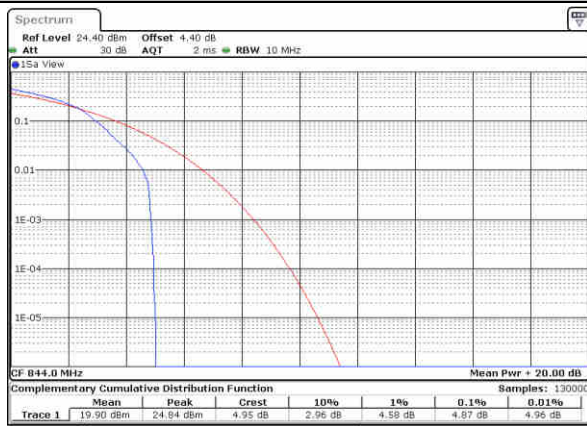
Date: 15 JAN 2018 12:33:15

Middle Channel / Full RB



Date: 15 JAN 2018 12:33:25

Highest Channel / 1RB



Date: 15 JAN 2018 12:33:34

Highest Channel / Full RB

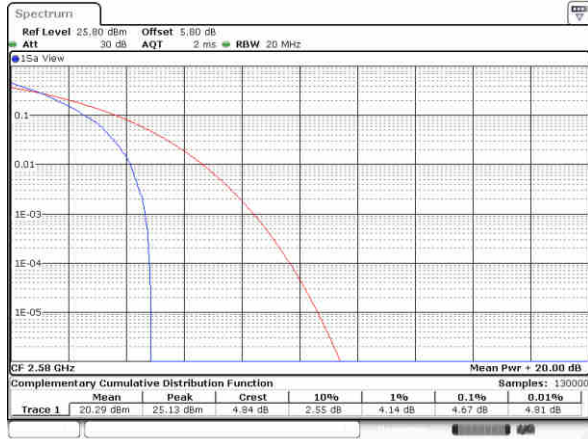


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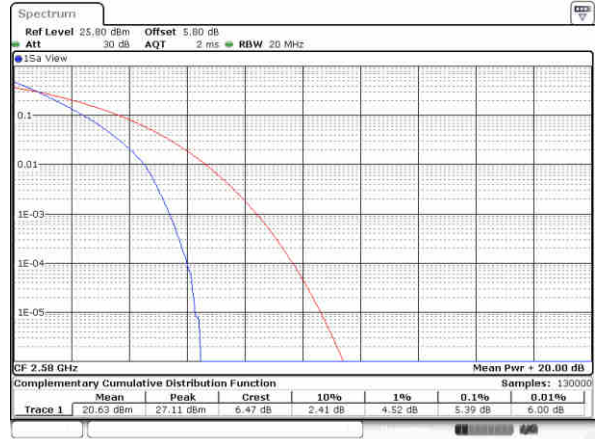


LTE Band 38 / 20MHz / QPSK

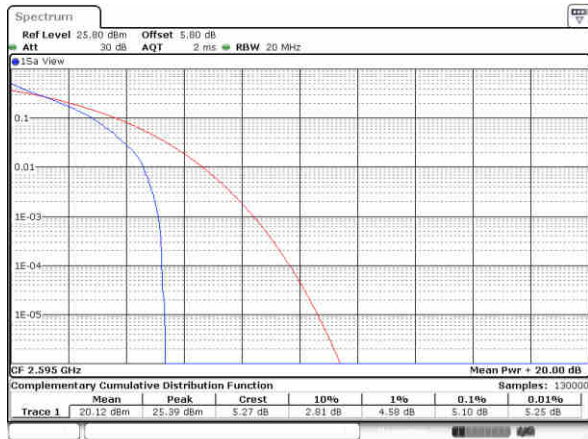
Lowest Channel / 1RB



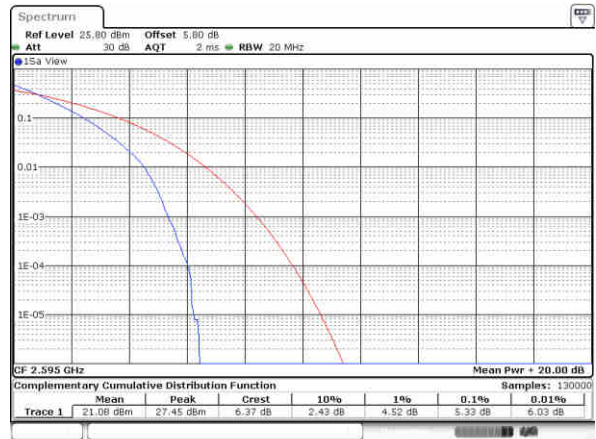
Lowest Channel / Full RB



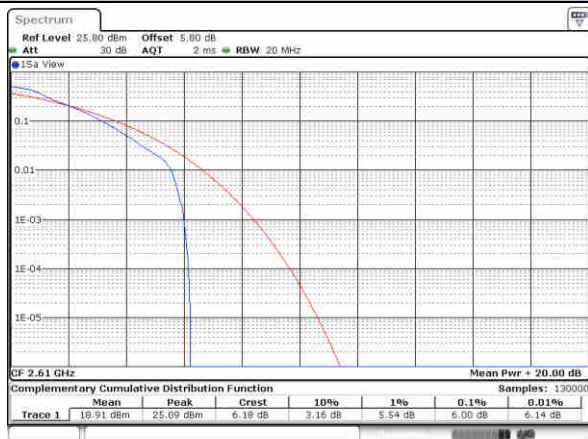
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



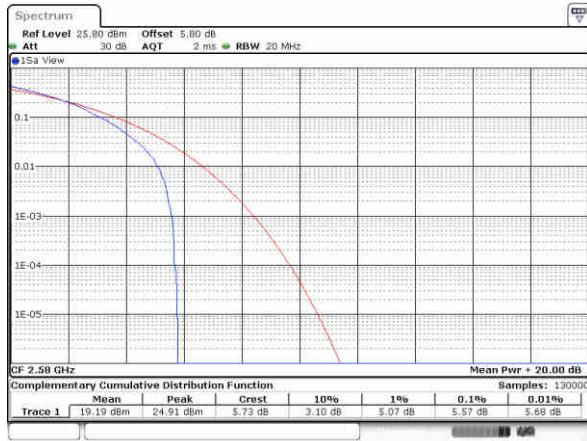
Highest Channel / Full RB



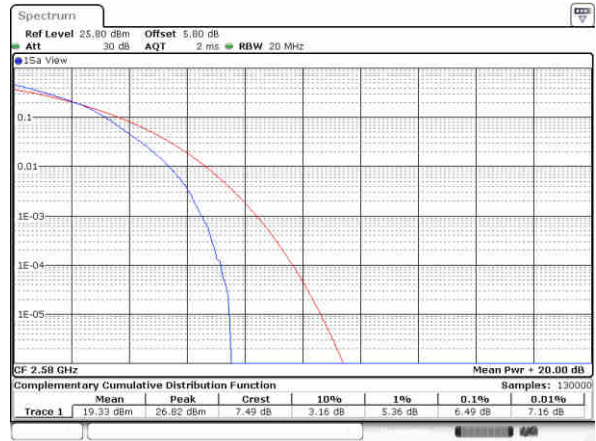


LTE Band 38 / 20MHz / 16QAM

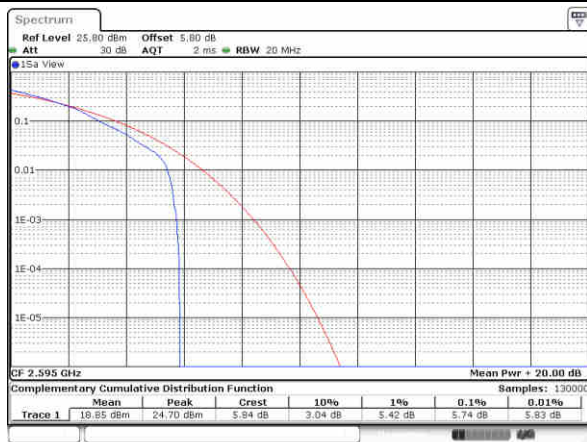
Lowest Channel / 1RB



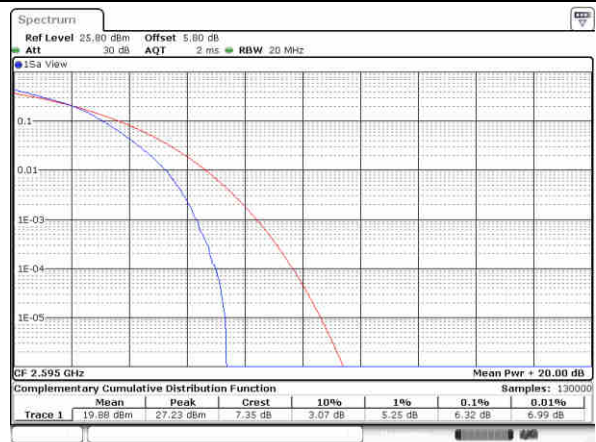
Lowest Channel / Full RB



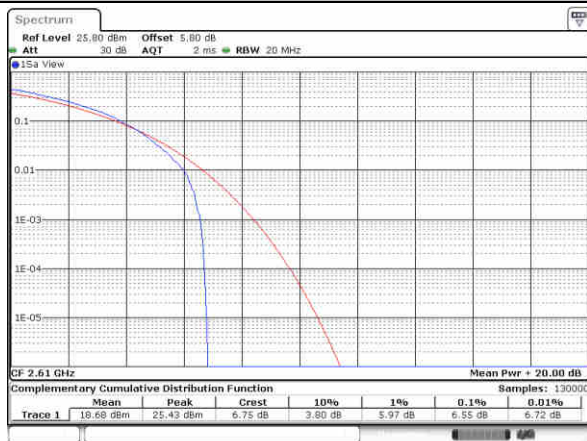
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



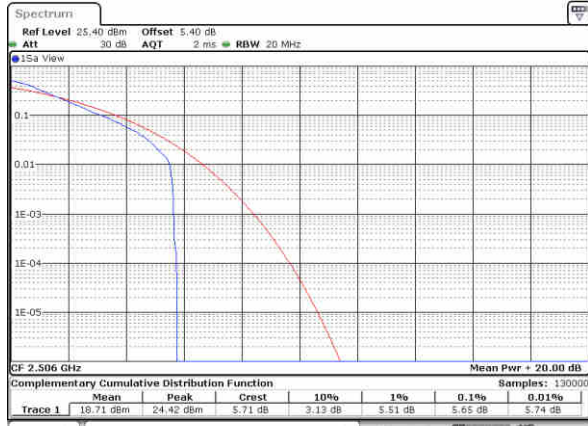
Highest Channel / Full RB



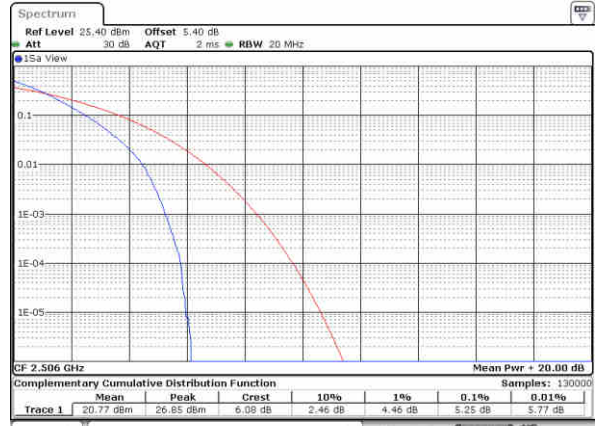


LTE Band 41 / 20MHz / QPSK

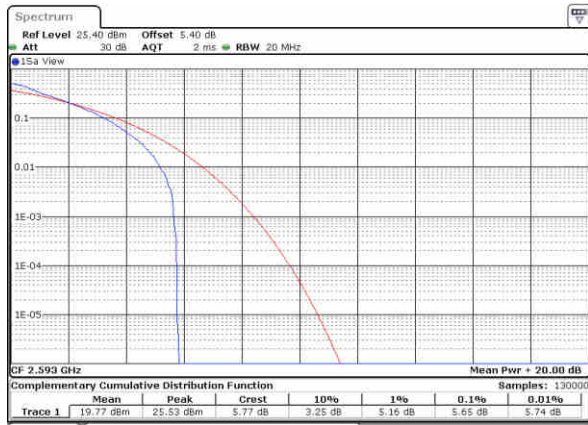
Lowest Channel / 1RB



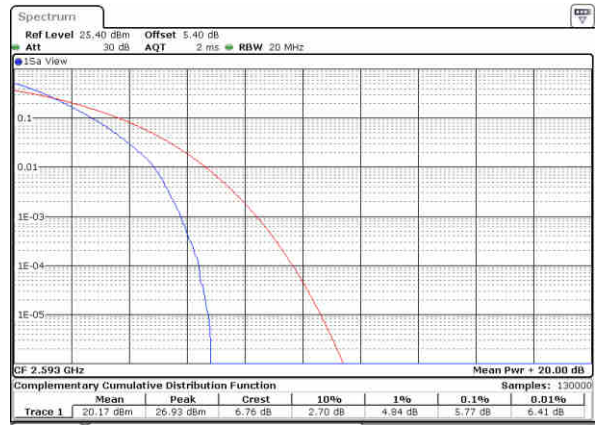
Lowest Channel / Full RB



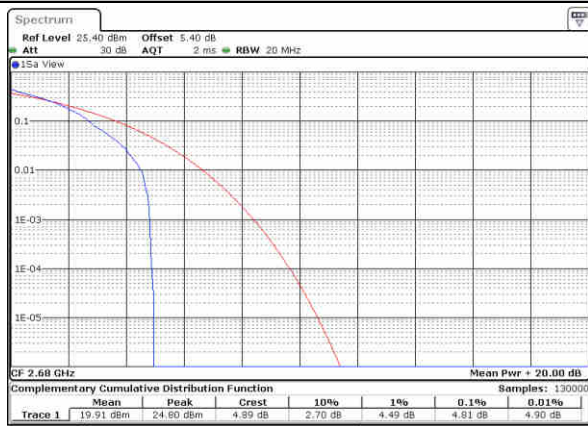
Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



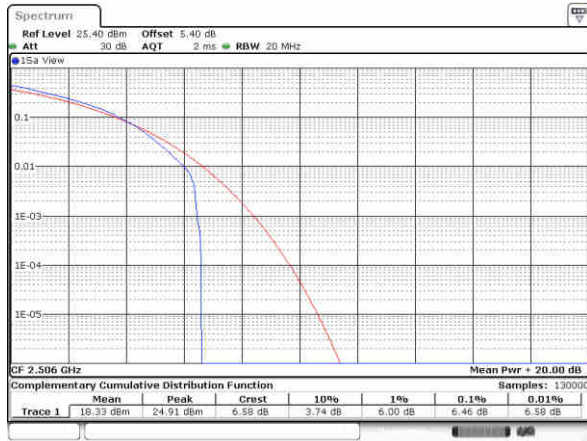
Highest Channel / Full RB



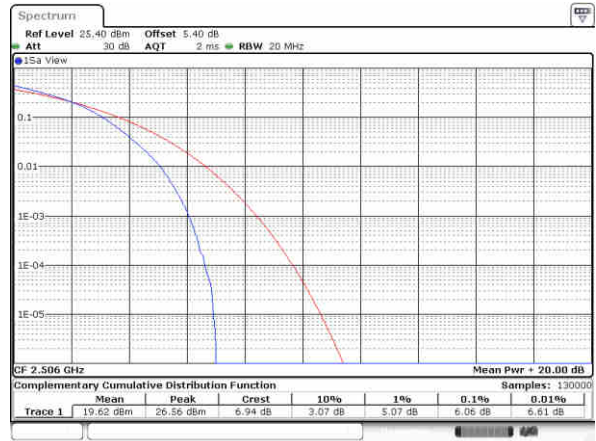


LTE Band 41 / 20MHz / 16QAM

Lowest Channel / 1RB



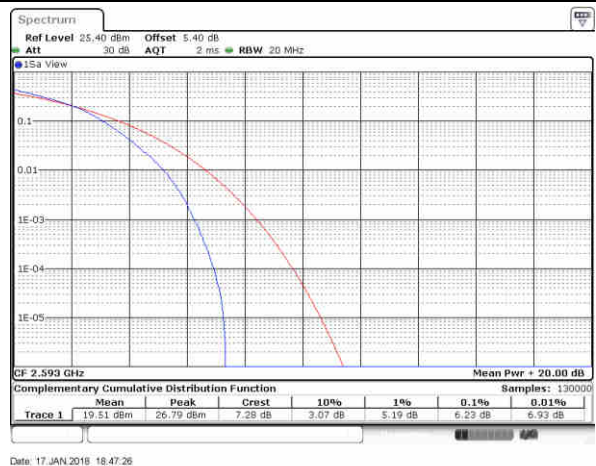
Lowest Channel / Full RB



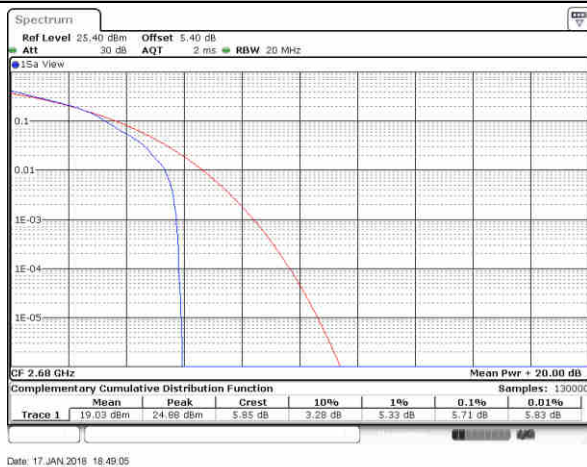
Middle Channel / 1RB



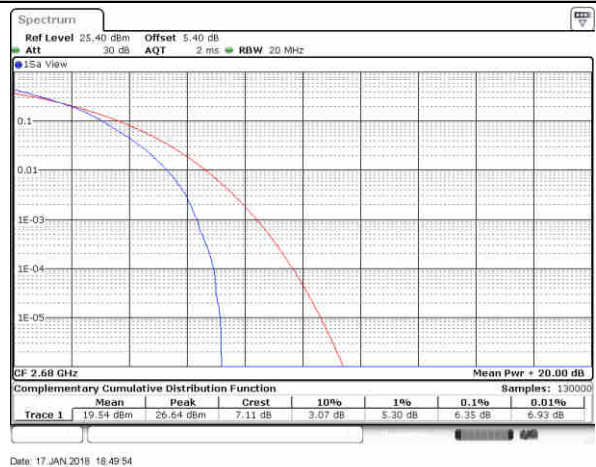
Middle Channel / Full RB



Highest Channel / 1RB



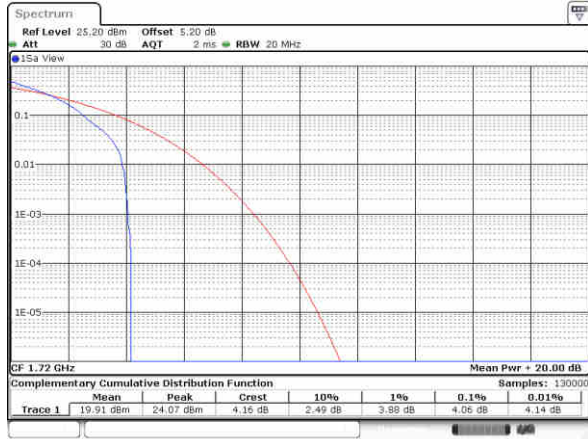
Highest Channel / Full RB



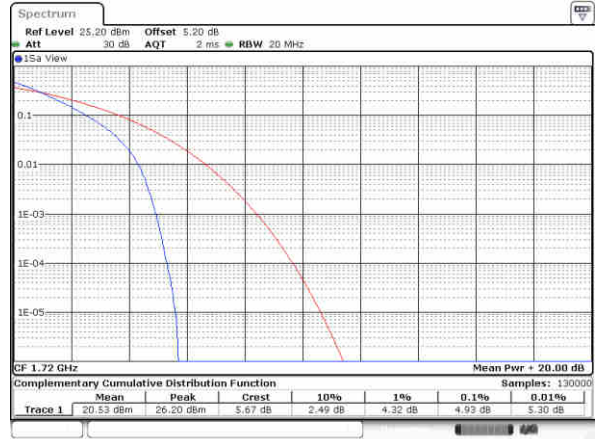


LTE Band 66 / 20MHz / QPSK

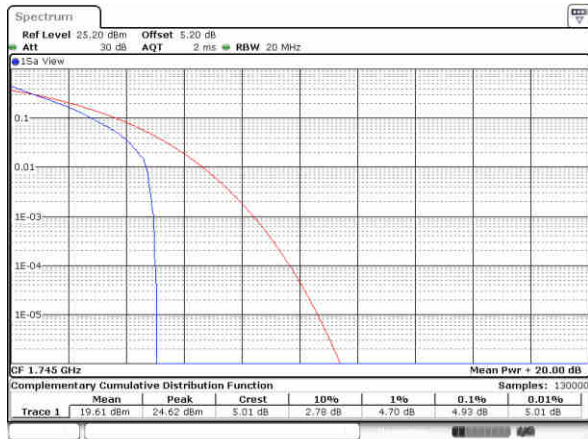
Lowest Channel / 1RB



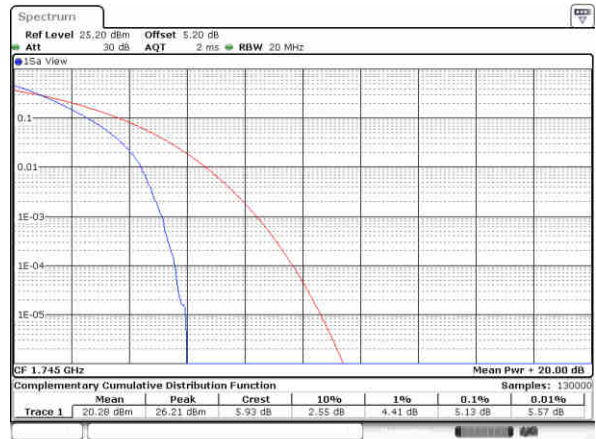
Lowest Channel / Full RB



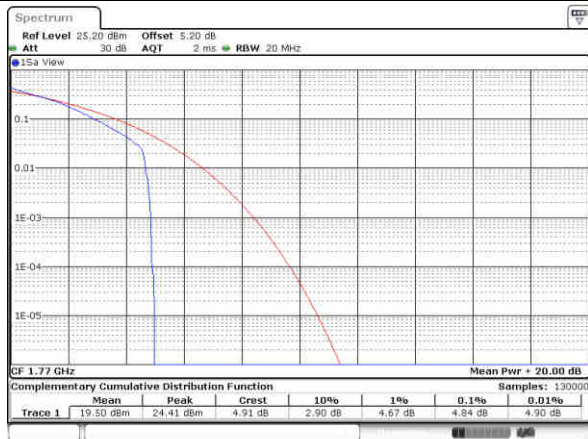
Middle Channel / 1RB



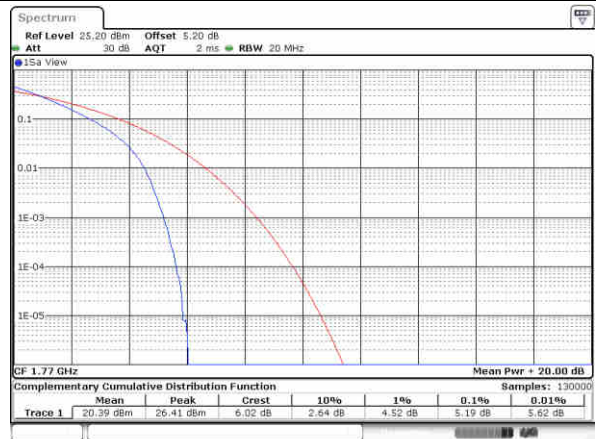
Middle Channel / Full RB



Highest Channel / 1RB



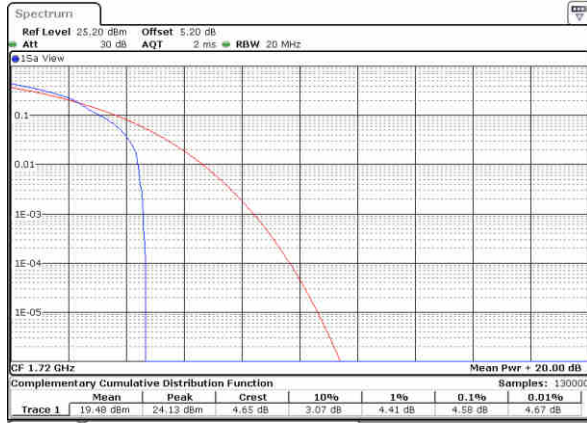
Highest Channel / Full RB





LTE Band 66 / 20MHz / 16QAM

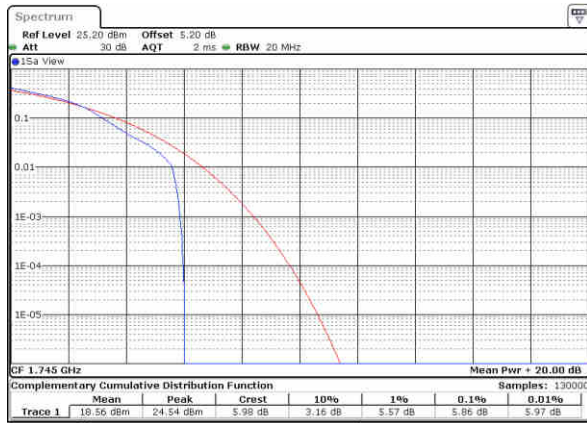
Lowest Channel / 1RB



Lowest Channel / Full RB



Middle Channel / 1RB



Middle Channel / Full RB



Highest Channel / 1RB



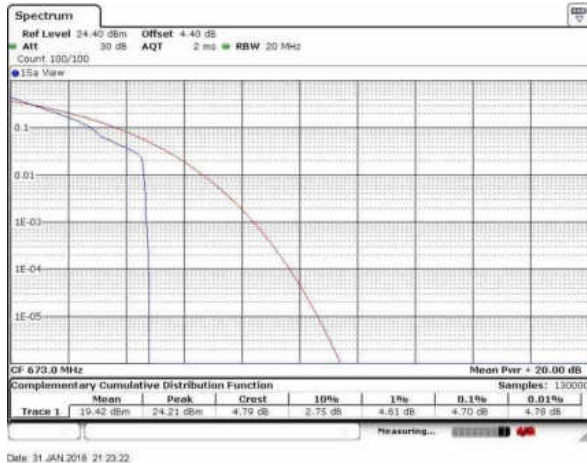
Highest Channel / Full RB





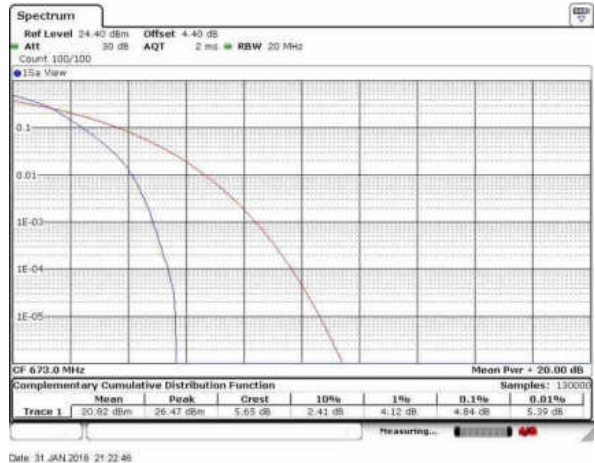
LTE Band 71 / 20MHz / QPSK

Lowest Channel / 1RB



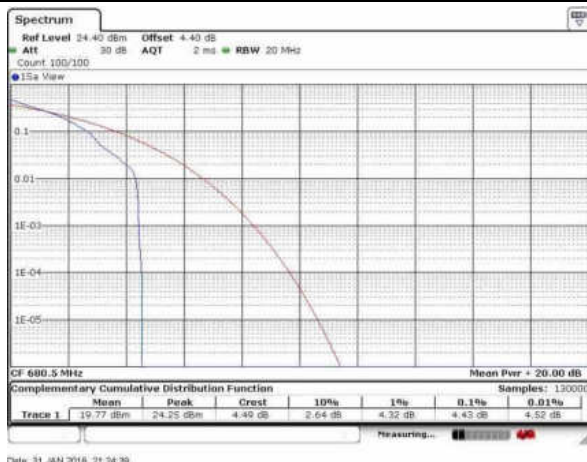
Date: 31 JAN 2016 21:23:22

Lowest Channel / Full RB



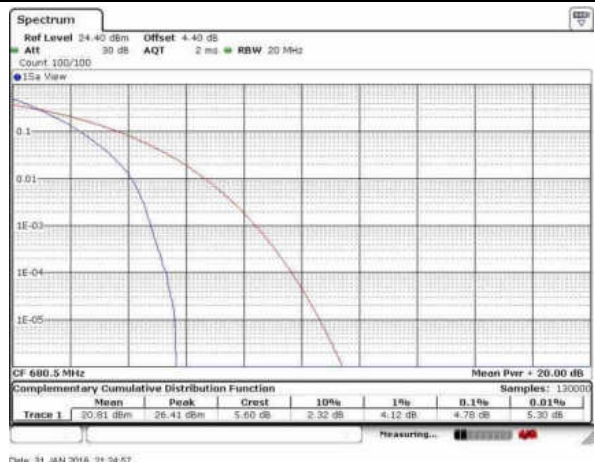
Date: 31 JAN 2016 21:22:48

Middle Channel / 1RB



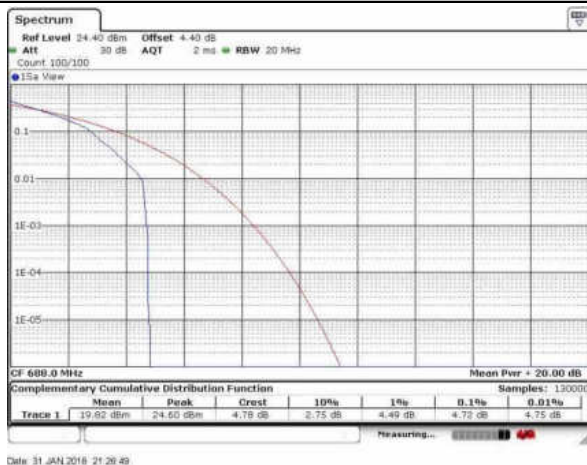
Date: 31 JAN 2016 21:24:39

Middle Channel / Full RB



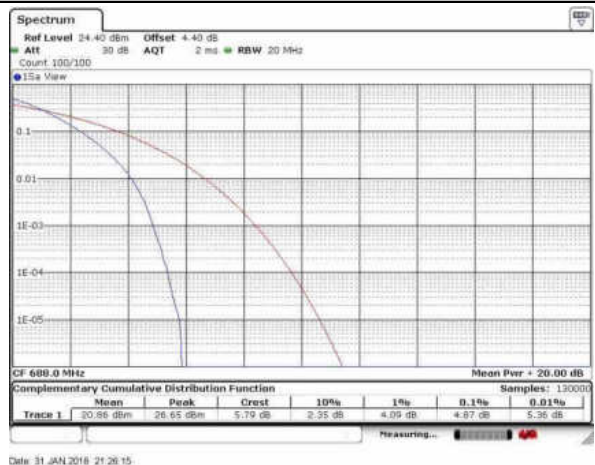
Date: 31 JAN 2016 21:24:57

Highest Channel / 1RB



Date: 31 JAN 2016 21:28:49

Highest Channel / Full RB

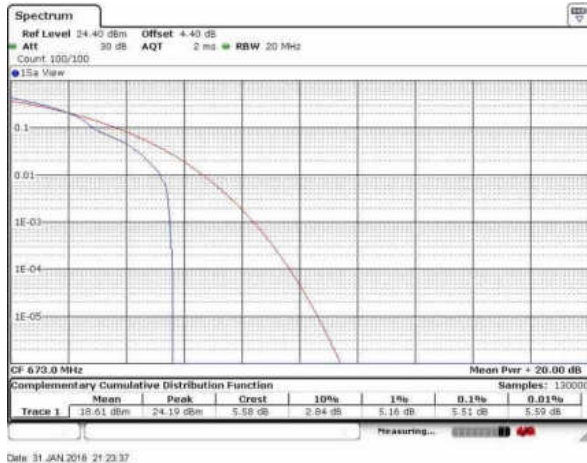


Date: 31 JAN 2016 21:28:15



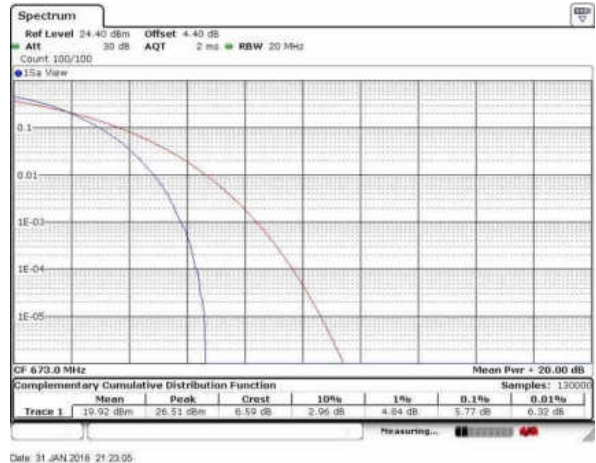
LTE Band 71 / 20MHz / 16QAM

Lowest Channel / 1RB



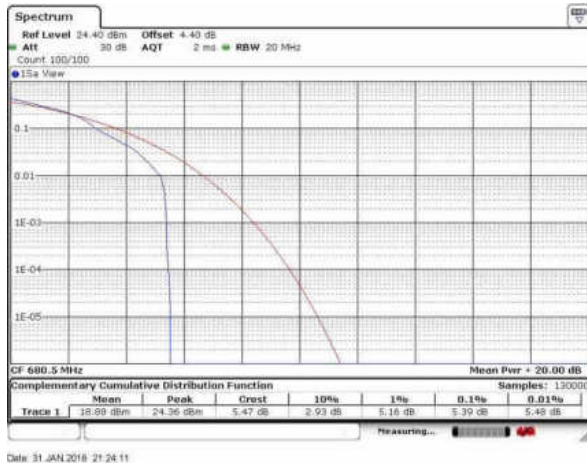
Date: 31 JAN 2016 21:23:37

Lowest Channel / Full RB



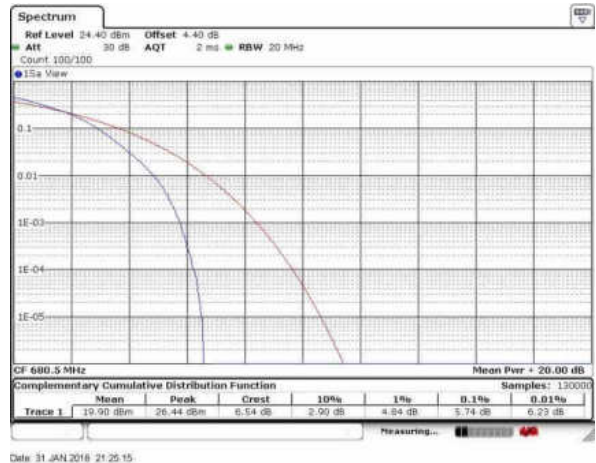
Date: 31 JAN 2016 21:23:05

Middle Channel / 1RB



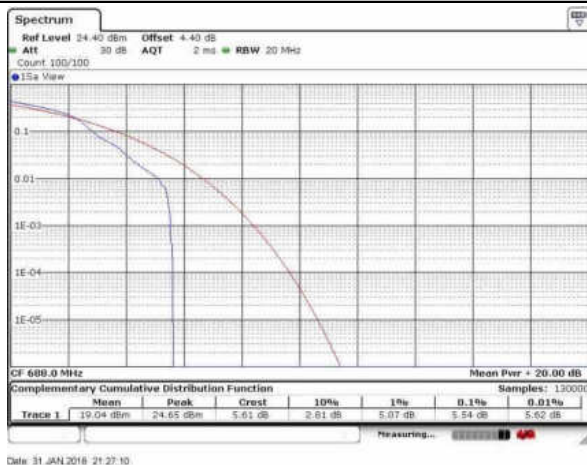
Date: 31 JAN 2016 21:24:11

Middle Channel / Full RB



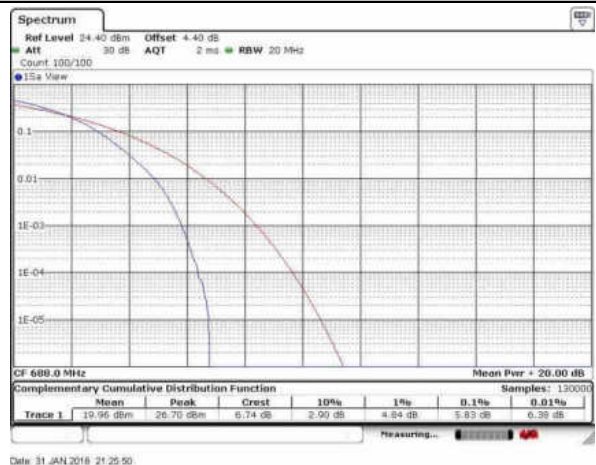
Date: 31 JAN 2016 21:25:15

Highest Channel / 1RB



Date: 31 JAN 2016 21:27:10

Highest Channel / Full RB



Date: 31 JAN 2016 21:25:50

**26dB Bandwidth**

Mode	LTE Band 2 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.276	1.270	2.991	3.039	5.005	5.035	9.99	9.79	14.386	14.236	20.18	20.22
Middle CH	1.270	1.248	2.985	3.015	5.005	4.835	9.91	9.89	14.446	14.476	20.10	20.14
Highest CH	1.284	1.262	3.021	3.069	4.885	4.885	9.67	9.87	14.326	14.446	20.14	20.18

Mode	LTE Band 4 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.273	1.284	3.033	3.015	4.905	4.875	9.99	9.87	14.296	14.655	20.18	20.14
Middle CH	1.276	1.284	3.021	3.045	4.875	4.935	9.73	9.77	14.535	14.505	20.06	20.10
Highest CH	1.273	1.284	2.985	3.003	4.975	4.865	9.61	9.79	14.476	14.266	20.10	20.14

Mode	LTE Band 5 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.259	1.290	3.009	3.009	4.935	4.935	9.85	9.91	-	-	-	-
Middle CH	1.273	1.273	3.027	2.979	4.855	4.855	9.67	9.97	-	-	-	-
Highest CH	1.270	1.292	3.039	3.033	4.955	4.885	9.97	9.69	-	-	-	-

Mode	LTE Band 38 : 26dB BW(MHz)											
BW	5MHz		10MHz		15MHz		20MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM				
Lowest CH	4.925	4.935	9.73	9.69	14.416	14.266	20.18	20.18				
Middle CH	4.875	4.945	9.91	9.85	14.505	14.116	20.26	20.14				
Highest CH	4.975	4.825	9.87	9.73	14.565	14.386	20.06	20.06				



Mode	LTE Band 41 : 26dB BW(MHz)											
BW	5MHz		10MHz		15MHz		20MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM				
Lowest CH	4.825	4.925	9.61	9.95	14.236	14.266	20.10	20.18				
Middle CH	4.995	4.895	9.81	9.85	14.476	14.296	20.14	20.06				
Highest CH	4.965	4.975	10.03	9.81	14.326	14.146	20.14	20.22				

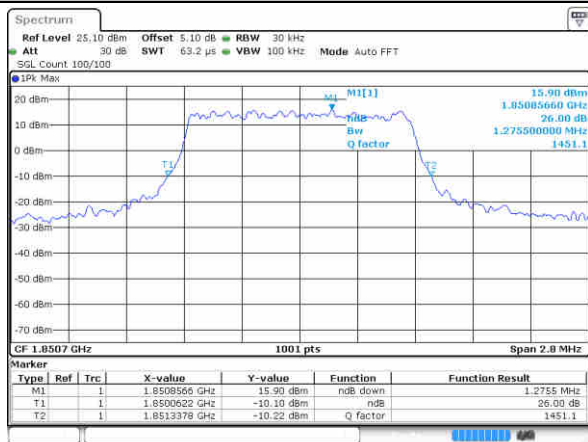
Mode	LTE Band 66 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.287	1.273	3.015	3.021	4.915	4.885	9.77	9.69	14.176	14.206	20.34	20.22
Middle CH	1.250	1.273	2.997	3.015	4.905	4.905	9.81	9.77	14.146	14.595	20.10	20.14
Highest CH	1.278	1.304	3.045	3.051	4.865	4.825	9.95	9.65	14.535	14.386	20.10	20.18

Mode	LTE Band 71 : 26dB BW(MHz)											
BW	5MHz		10MHz		15MHz		20MHz					
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM				
Lowest CH	4.985	5.015	9.71	9.97	14.206	14.326	20.18	20.10				
Middle CH	4.835	4.975	9.71	9.73	14.416	14.356	20.42	20.26				
Highest CH	4.935	4.945	9.85	9.89	14.416	14.296	20.539	20.22				

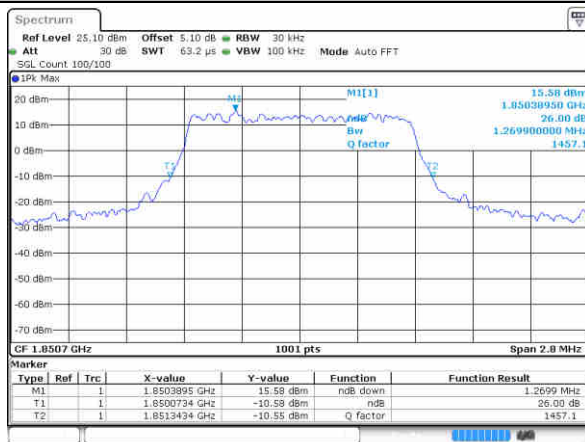


LTE Band 2

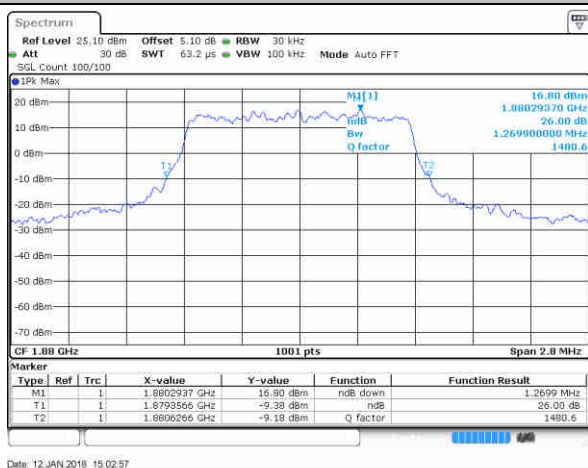
Lowest Channel / 1.4MHz / QPSK



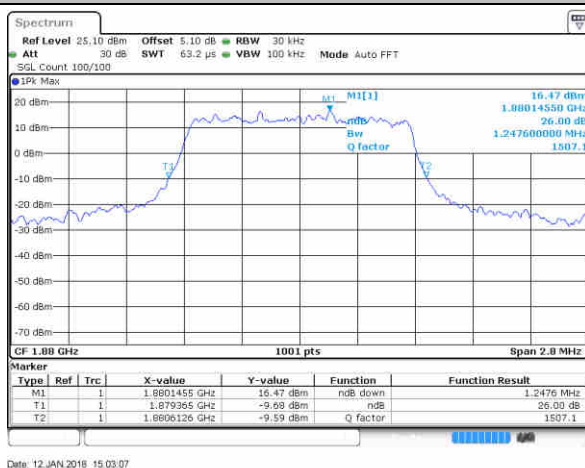
Lowest Channel / 1.4MHz / 16QAM



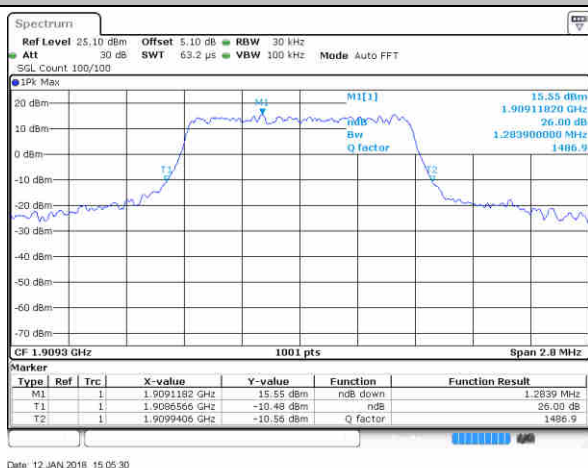
Middle Channel / 1.4MHz / QPSK



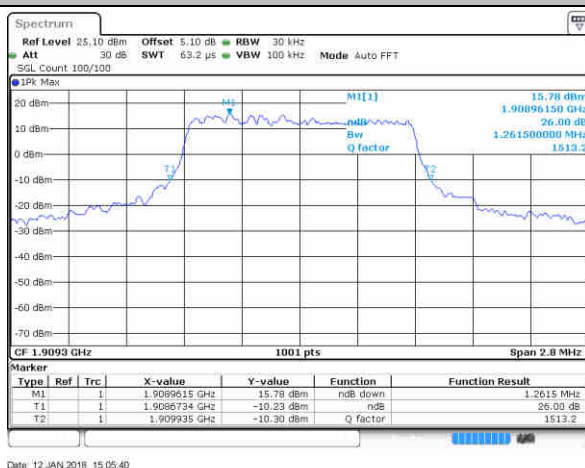
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK



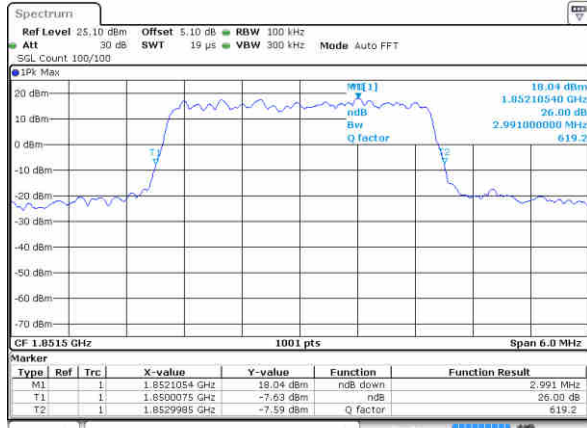
Highest Channel / 1.4MHz / 16QAM



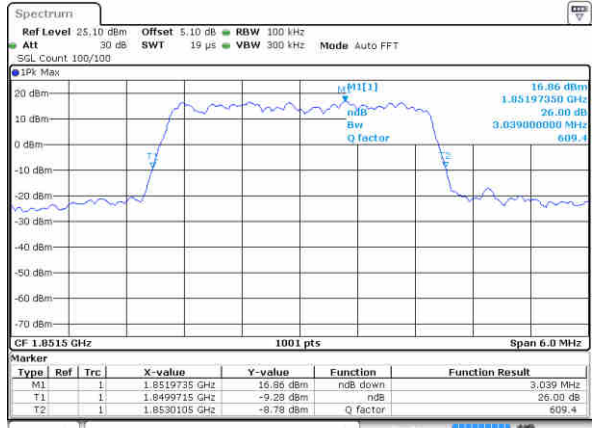


LTE Band 2

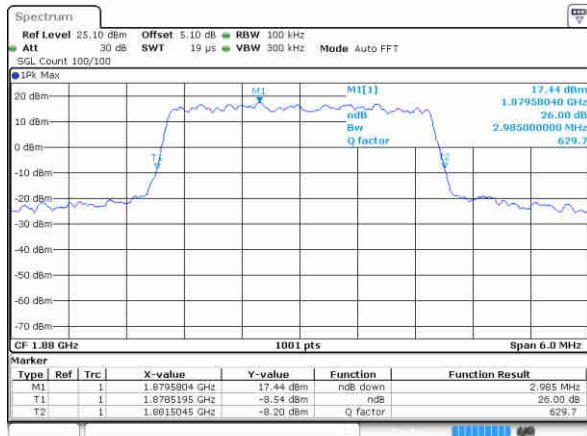
Lowest Channel / 3MHz / QPSK



Lowest Channel / 3MHz / 16QAM



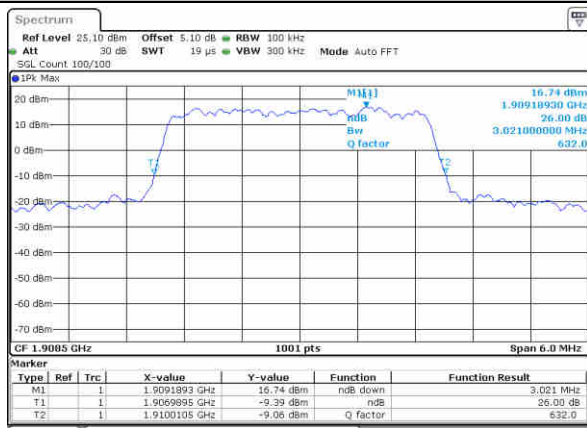
Middle Channel / 3MHz / QPSK



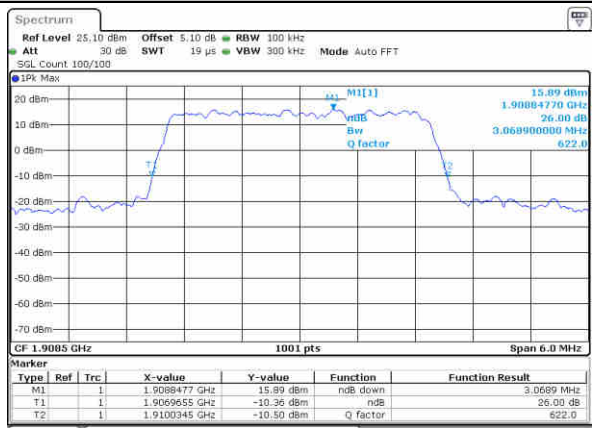
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK



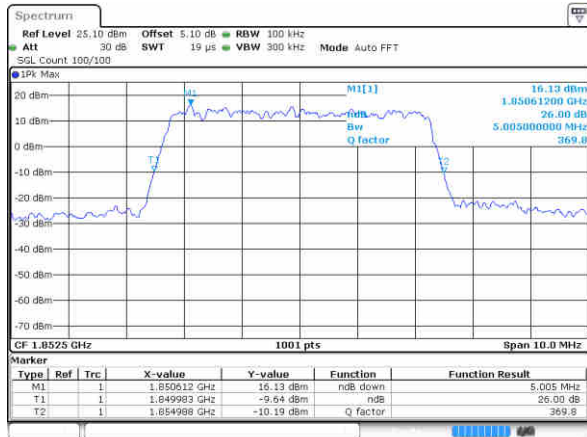
Highest Channel / 3MHz / 16QAM



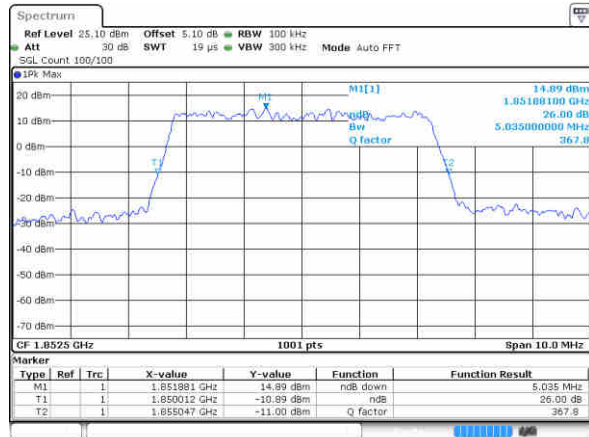


LTE Band 2

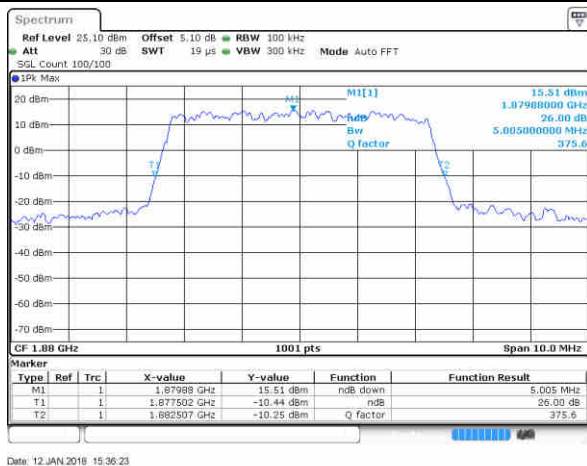
Lowest Channel / 5MHz / QPSK



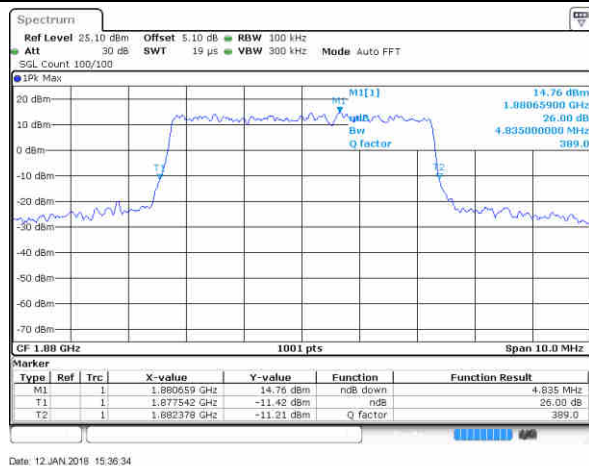
Lowest Channel / 5MHz / 16QAM



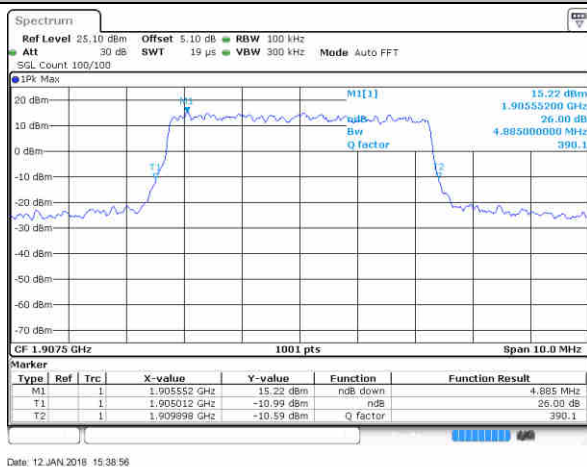
Middle Channel / 5MHz / QPSK



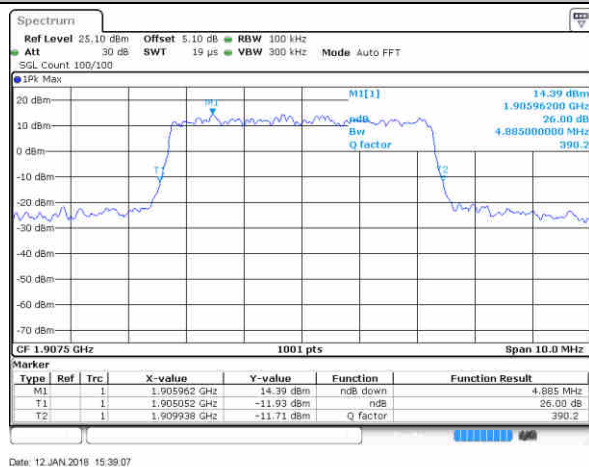
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



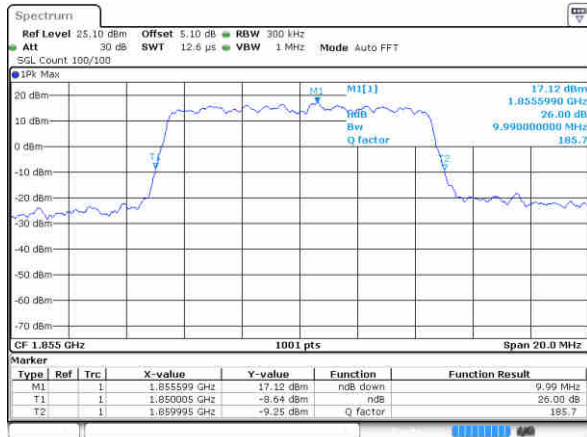
Highest Channel / 5MHz / 16QAM



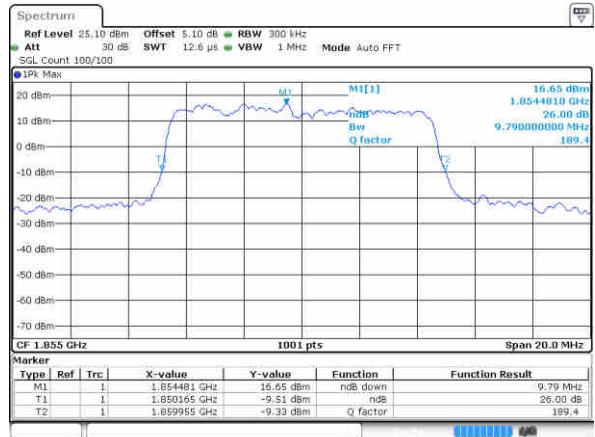


LTE Band 2

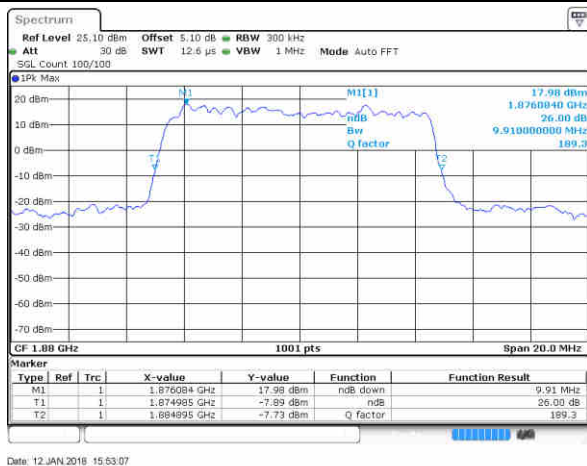
Lowest Channel / 10MHz / QPSK



Lowest Channel / 10MHz / 16QAM



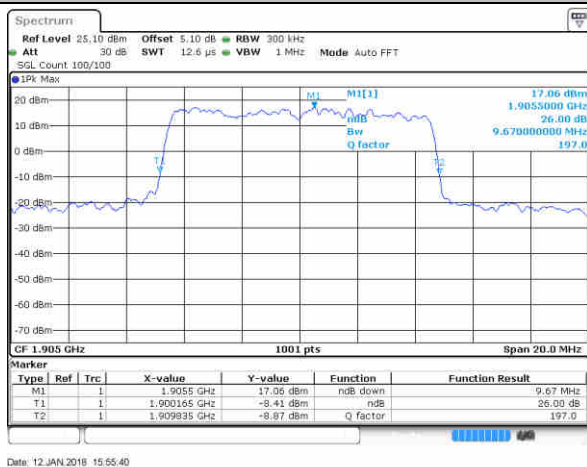
Middle Channel / 10MHz / QPSK



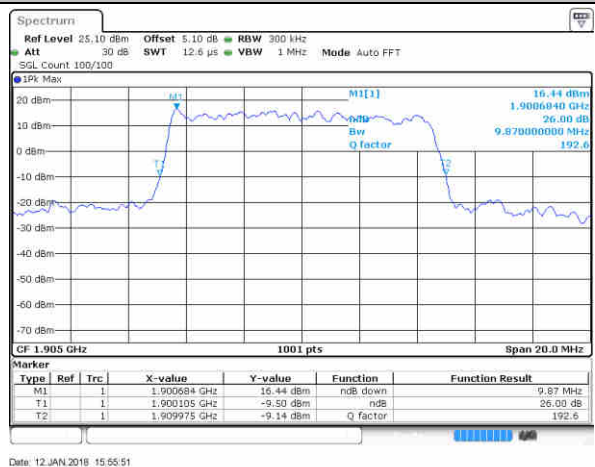
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



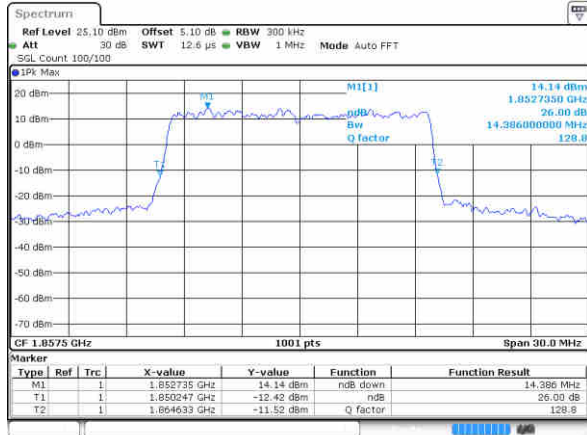
Highest Channel / 10MHz / 16QAM



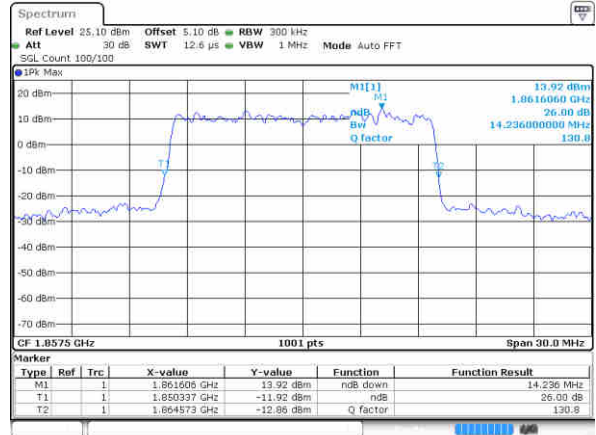


LTE Band 2

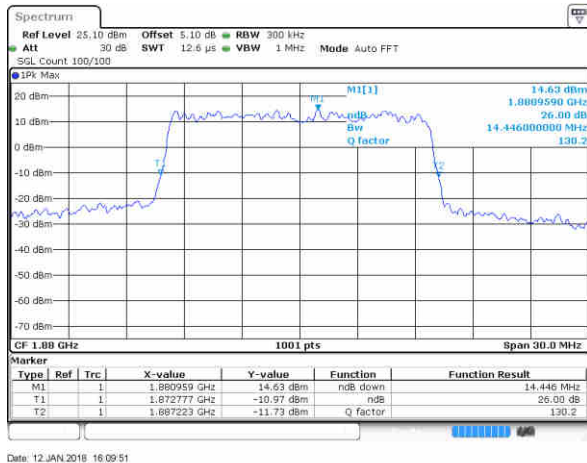
Lowest Channel / 15MHz / QPSK



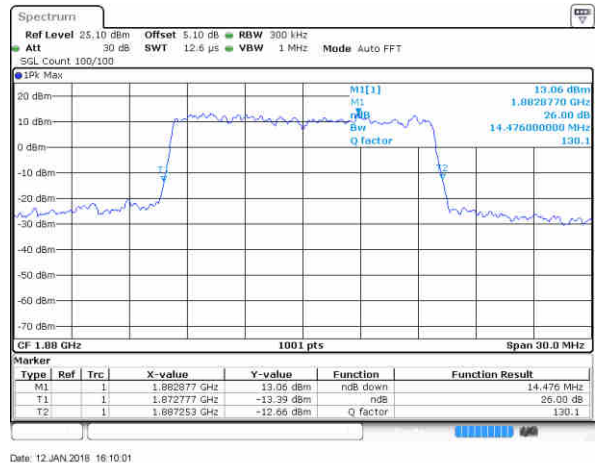
Lowest Channel / 15MHz / 16QAM



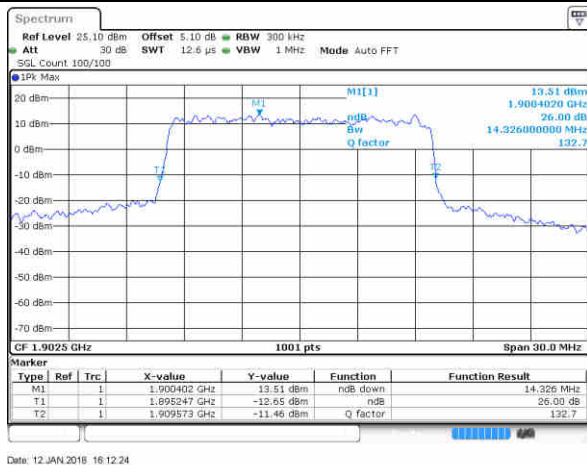
Middle Channel / 15MHz / QPSK



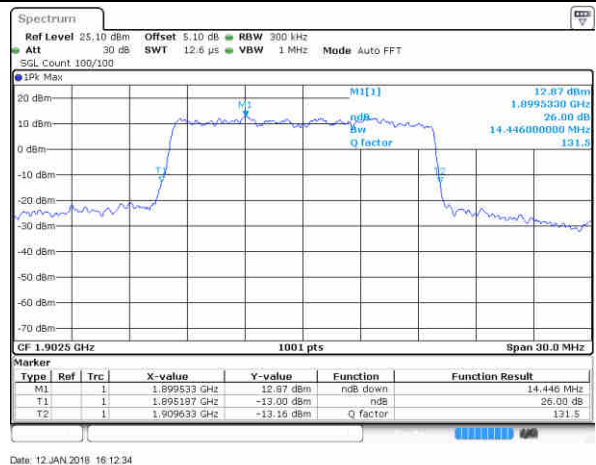
Middle Channel / 15MHz / 16QAM



Highest Channel / 15MHz / QPSK



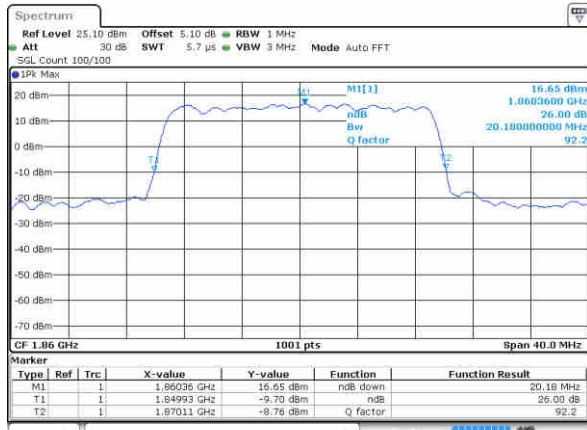
Highest Channel / 15MHz / 16QAM





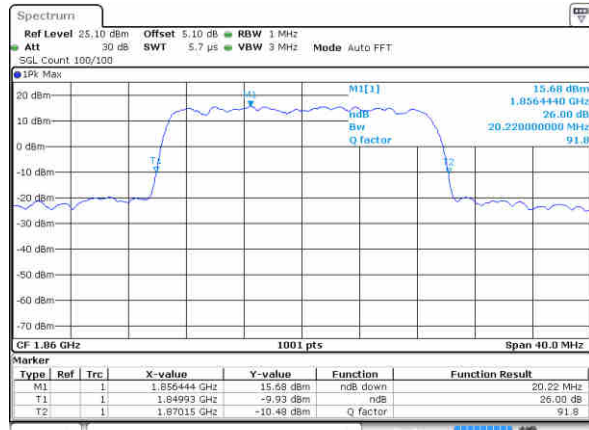
LTE Band 2

Lowest Channel / 20MHz / QPSK



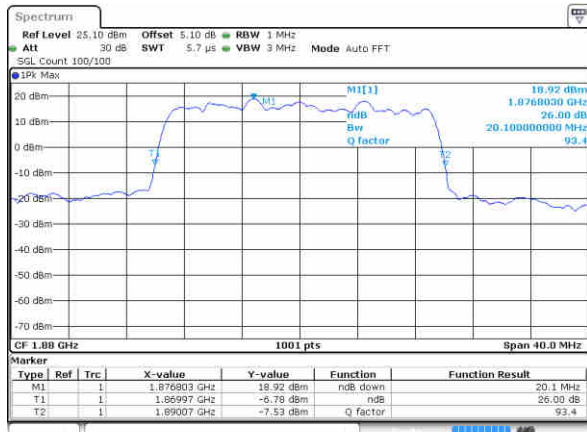
Date: 12 JAN 2018 16:19:29

Lowest Channel / 20MHz / 16QAM



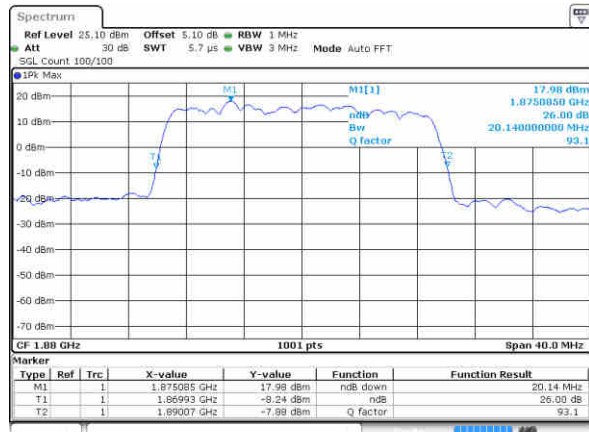
Date: 12 JAN 2018 16:19:39

Middle Channel / 20MHz / QPSK



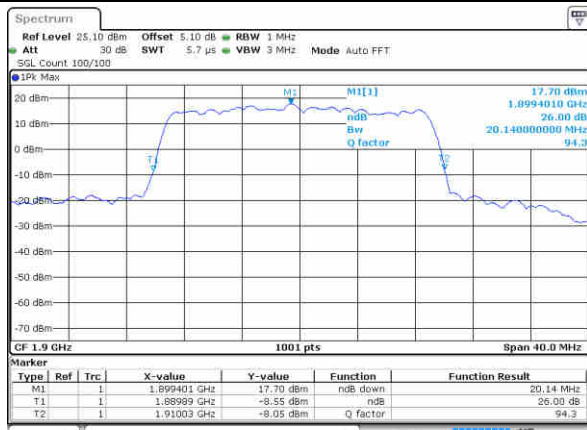
Date: 12 JAN 2018 16:26:34

Middle Channel / 20MHz / 16QAM



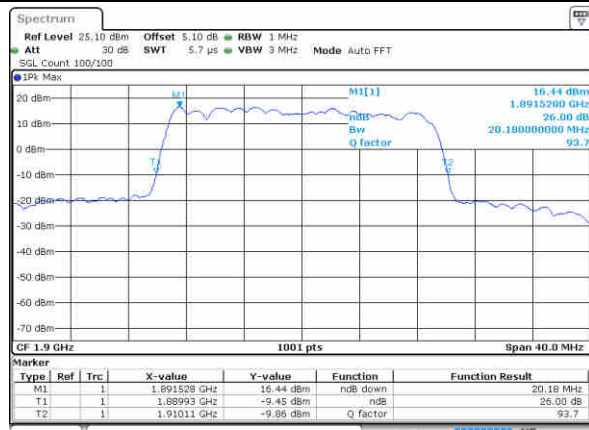
Date: 12 JAN 2018 16:26:44

Highest Channel / 20MHz / QPSK



Date: 12 JAN 2018 16:29:07

Highest Channel / 20MHz / 16QAM



Date: 12 JAN 2018 16:29:18