DEKRA Testing and Certification, S.A.U.
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C.I.F. A29 507 456

DEKRA

ilac-MRA ENAC ENSAYOS Nº 51/LE147

Test report No:
NIE: 57478RRF.004A1

Test report

REFERENCE STANDARD:
USA FCC Part 27
CANADA RSS-130, RSS-139, RSS-199

(*) Identification of item tested	Secure Smartphone
(*) Trademark	Bittium
(*) Model and /or type reference	Tough Mobile 2
Other identification of the product	HW Version: 0302 SW Version: 40.1 FCC ID: V27SD-61 IC: 3282B-SD61
(*) Features	LTE • 3GPP Rel12 • FDD/TDD Cat13/5, • DL 400Mbit/s, • UL 75 Mbit/s UMTS/HSPA • 3GPP rel8, HSPA+, • DL 42 Mbit/s, • UL 5.76 Mbit/s GSM/GPRS/EDGE Complementary Radios • Wi-Fi 802.11 a/b/g/n/ac (2.4 and 5 GHz), 2 x 2 MIMO • BT 5.0 • NFC
Applicant	BITTIUM WIRELESS OY Ritaharjuntie 1, 90590 Oulu, Finland
Test method requested, standard	USA FCC Part 27 (10-1-18 Edition). CANADA RSS-130 Issue 1, Oct. 2013. CANADA RSS-139 Issue 3, Jul. 2015. CANADA RSS-199 Issue 3, Dec. 2016. ANSI C63.26-2015. ANSI/TIA-603-E: 2016. KDB 971168 D01 Power Meas License Digital Systems v03r01, April. 2018.

Summary	IN COMPLIANCE
Approved by (name / position & signature)	José Carlos Luque RF Lab. Supervisor 74841983Y JOSE CARLOS LUQUE (C:A29507456) Firmado digitalmente por 74841983Y JOSE CARLOS LUQUE (C:A29507456) Fecha: 2019.10.22 15:36:24 +02'00'
Date of issue	2019-10-22
Report template No	FDT08_22 (*) "Data provided by the client"

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Uncertainty

Uncertainty (factor k=2) was calculated according to the DEKRA Testing and Certification S.A.U. internal document PODT000.

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").

2. The sample of Tough Mobile 2 consists of a Secure Smartphone targeted for professional use where High Security is required.

DEKRA Testing and Certification S.A.U. declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples undergoing test have been selected by: The client.

- Sample S/01 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
57478C/032	Secure Smartphone	Tough Mobile 2	---	2018-11-26
57478C/033	USB cable	---	---	2018-11-26
57478C/034	AC/DC power adapter	---	---	2018-11-26
57478C/039	Headphones	---	---	2018-11-26

Sample S/01 has undergone the following test(s): All radiated tests indicated in Appendix A.

- Sample S/02 is composed of the following elements:

Control Nº	Description	Model	Serial Nº	Date of reception
57478C/016	Secure Smartphone	Tough Mobile 2	---	2018-10-25

Sample S/02 has undergone the following test(s): All conducted tests indicated in Appendix A.

Test sample description

Ports…… :	Port name and description		Cable				
			Specified length [m]	Attached during test	Shielded		
	Not provided.			☐	☐		
	-			☐	☐		
	-			☐	☐		
	-			☐	☐		
Supplementary information to the ports…… :	N/A						
Rated power supply .....:	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 3.6 – 4.35 Vdc.					
	☐	DC:					
Rated Power .....:	Not provided						
Clock frequencies.....:	Not provided						
Other parameters .....:	FCC ID: V27SD-61 IC: 3282B-SD61						
Software version .....:	40.1						
Hardware version .....:	0302						
Dimensions in cm (L x W x D).....:	Not provided						
Mounting position .....:	☐	Table top equipment					
	☐	Wall/Ceiling mounted equipment					
	☐	Floor standing equipment					
	☒	Hand-held equipment					
	☐	Other:					
Modules/parts.....:	Module/parts of test item			Type	Manufacturer		
	-						
Accessories (not part of the test item) .....:	Description		Type		Manufacturer		
	-						
	-						
	-						
Documents as provided by the applicant.....:	Description		File name		Issue date		
	-						

Identification of the client

BITTIUM WIRELESS OY
Ritaharjuntie 1, 90590 Oulu, Finland

Testing period and place

Test Location	DEKRA Testing and Certification S.A.U.
Date (start)	2018-10-26
Date (finish)	2019-04-30

Document history

Report number	Date	Description
57478RRF.004	2019-09-26	First release
57478RRF.004A1	2019-10-22	Second release. RF Output Power measurements were added on the modulation 16 QAM. The Maximum effective radiated power E.R.P. (dBm) measurements were added on the LTE Band 12 and 13.

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 75 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 ºC Max. = 35 ºC
Relative humidity	Min. = 20 % Max. = 35 %
Air pressure	Min. = 860 mbar Max. = 1060 mbar

Remarks and comments

The tests have been performed by the technical personnel: Jaime Amador, Carlos Alberto Contreras, Juan Carlos Fuentes, Jaime Barranquero, Ignacio Cabra, Carolina Postigo, Nicolás Salguero, José Gabriel Pendón, José Manuel Jiménez, Francisco José Alcaide.

Used instrumentation:

Conducted Measurements

		Last Calibration	Due Calibration
1.	Chamber HERAEUS VMT 04/35	2018/06	2020/06
2.	Wideband Radio Communication Tester ROHDE AND SCHWARZ CMW500	2018/05	2019/05
3.	Wideband Radio Communication Tester ROHDE AND SCHWARZ CMW500	2019/02	2020/02
4.	Wideband Radio Communication Tester ROHDE AND SCHWARZ CMW500	2018/04	2019/04
5.	Spectrum Analyzer PSA 3Hz-26.5 GHz AGILENT TECHNOLOGIES E4440A	2017/10	2019/10
6.	Spectrum Analyzer ROHDE AND SCHWARZ FSW50	2018/02	2020/02
7.	Signal Analyzer 20 Hz to 8 GHz ROHDE AND SCHWARZ FSQ8	2018/08	2020/08
8.	Signal and Spectrum Analyzer ROHDE AND SCHWARZ FSV40	2017/07	2019/07
9.	DC Power Supply 40V/40A Rohde & Schwarz NGPE40	2018/02	2021/02

Radiated Measurements

		Last Calibration	Due Calibration
1.	Semianechoic Absorber Lined Chamber ETS FACT3 200STP	N.A.	N.A.
2.	EMI Test Receiver ROHDE AND SCHWARZ ESR7	2018/10	2020/10
3.	BiconicalLog antenna ETS LINDGREN 3142E	2017/09	2020/09
4.	RF Pre-amplifier 40 dB, 10 MHz-6 GHz BONN ELEKTRONIK BLNA 0160-01N	2019/02	2020/08
5.	Signal and Spectrum Analyzer ROHDE AND SCHWARZ FSV40	2018/02	2020/02
6.	Broadband Horn antenna 1-18 GHz SCHWARZBECK BBHA 9120 D	2018/01	2021/01
7.	RF Pre-amplifier 30 dB, 18 GHz-40 GHz BONN ELEKTRONIK BLMA 1840-1M	2019/02	2021/02
8.	Broadband Horn antenna 18-40 GHz SCHWARZBECK BBHA 9170	2018/07	2021/07
9.	RF Pre-amplifier, 30 dB ,1-18 GHz BONN ELEKTRONIK BLMA 0118-3A	2019/04	2020/04
10.	Wideband Radio Communication Tester ROHDE AND SCHWARZ CMW500	2019/05	2020/05

Testing verdicts

Not applicable:	N/A
Pass:	P
Fail:	F
Not measured:	N/M

Summary

FCC PART 27/IC RSS-130 / RSS-139, RSS-199 PARAGRAPH		
Requirement – Test case	**Verdict**	**Remark**
Clause 27.50 / RSS-139 Clause 6.5. / RSS-130 Clause 4.4. / RSS-199 Clause 4.4: RF output power	P	
Clause 2.1047 / RSS-139 Clause 6.2. / RSS-130 Clause 4.1 / /RSS-199 Clause 4.1: Modulation characteristics	P	
Clause 27.54 / RSS-139 Clause 6.4. / RSS-130 Clause 4.3. / RSS-199 Clause 4.3: Frequency stability	P	
Clause 2.1049: Occupied Bandwidth	P	
Clause 27.53 / RSS-139 Clause 6.6. / RSS-130 Clause 4.6. / RSS-199 Clause 4.5: Spurious emissions at antenna terminals	P	
Clause 27.53 / RSS-139 Clause 6.6. / RSS-130 Clause 4.6. / RSS-199 Clause 4.5: Radiated emissions	P	
Supplementary information and remarks: None.		

Appendix A: Test results for FCC PART 27 / RSS-130, RSS-139, RSS-199

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TEST CONDITIONS

POWER SUPPLY (V):

Vn: 3.8 Vdc
Vmin: 3.6 Vdc (*)
Vmax: 4.2 Vdc (*)

Type of Power Supply: Rechargeable battery.

The subscripts ‘n’, ‘min’ and ‘max’ indicate temperature test conditions (normal, minimum and maximum respectively).

(*): Declared by applicant.

ANTENNA GAIN:

LOW Bands		ANTENNA TYPE
LTE Band 12	-2.8 dBi	Monopole
LTE Band 13	-4.4 dBi	Monopole

MIDDLE Bands		ANTENNA TYPE
3G WCDMA Band IV	0 dBi	Monopole with parasitic resonator
LTE Band 66	0.2 dBi	Monopole with parasitic resonator

HIGH Bands		ANTENNA TYPE
LTE Band 7	2.9 dBi	Loop
LTE Band 30	0.5 dBi	Loop
LTE Band 38	2.1 dBi	Loop

TEST FREQUENCIES:

WCDMA and HSUPA MODULATION:

Lowest Channel (1312): 1712.4 MHz
Middle Channel (1762): 1732.5 MHz
Highest Channel (1513): 1752.6 MHz

LTE Band 4. QPSK AND 16QAM MODULATION:

	Channel (Frequency. MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Lowest	19957 (1710.7)	19965 (1711.5)	19975 (1712.5)	20000 (1715.0)	20025 (1717.5)	20050 (1720.0)
Middle	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)	20175 (1732.5)
Highest	20393 (1754.3)	20385 (1753.5)	20375 (1752.5)	20350 (1750.0)	20325 (1747.5)	20300 (1745.0)

NOTE: This band is completely included in LTE Band 66, so the channels of Band 66 were tested to give conformity to the assigned block.

LTE Band 7. QPSK AND 16QAM MODULATION:

	Channel (Frequency. MHz)			
	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Lowest	20775 (2502.5)	20800 (2505.0)	20825 (2507.5)	20850 (2510.0)
Middle	21100 (2535.0)	21100 (2535.0)	21100 (2535.0)	21100 (2535.0)
Highest	21425 (2567.5)	21400 (2565.0)	21375 (2562.5)	21350 (2560.0)

LTE Band 12. QPSK AND 16QAM MODULATION:

	Channel (Frequency. MHz)			
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz
Lowest	23017 (699.7)	23025 (700.5)	23035 (701.5)	23060 (704.0)
Middle	23095 (707.5)	23095 (707.5)	23095 (707.5)	23095 (707.5)
Highest	23173 (715.3)	23165 (714.5)	23155 (713.5)	23130 (711.0)

LTE Band 13. QPSK AND 16QAM MODULATION:

	Channel (Frequency, MHz)	
	BW = 5 MHz	BW = 10 MHz
Lowest	23205 (779.5)	N/A
Middle	23230 (782.0)	23230 (782.0)
Highest	23255 (784.5)	N/A

LTE Band 17. QPSK AND 16QAM MODULATION:

	Channel (Frequency, MHz)	
	BW = 5 MHz	BW = 10 MHz
Lowest	23755 (706.5)	23780 (709)
Middle	23790 (710)	23790 (710)
Highest	23825 (713.5)	23800 (711)

NOTE: This band is completely included in LTE Band 12, so the channels of Band 12 were tested to give conformity to the assigned block.

LTE Band 30. QPSK AND 16QAM MODULATION:

	Channel (Frequency, MHz)	
	BW = 5 MHz	BW = 10 MHz
Lowest	27685 (2307.5)	---
Middle	27710 (2310)	27710 (2310)
Highest	27735 (2312.5)	----

LTE Band 38. QPSK AND 16QAM MODULATION:

	Channel (Frequency. MHz)			
	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Lowest	37775 (2572.5)	37800 (2575.0)	37825 (2577.5)	37850 (2580.0)
Middle	38000 (2595.0)	38000 (2595.0)	38000 (2595.0)	38000 (2595.0)
Highest	38225 (2617.5)	38200 (2615.0)	38175 (2612.5)	38150 (2610.0)

LTE Band 66. QPSK AND 16QAM MODULATION:

	Channel (Frequency. MHz)					
	BW = 1.4 MHz	BW = 3 MHz	BW = 5 MHz	BW = 10 MHz	BW = 15 MHz	BW = 20 MHz
Lowest	131979 (1710.7)	131987 (1711.5)	131997 (1712.5)	132022 (1715.0)	132047 (1717.5)	132072 (1720.0)
Middle	132322 (1745.0)	132322 (1745.0)	132322 (1745.0)	132322 (1745.0)	132322 (1745.0)	132322 (1745.0)
Highest	132665 (1779.3)	132657 (1778.5)	132647 (1777.5)	132622 (1775.0)	132597 (1772.5)	132572 (1770.0)

RF Output Power

SPECIFICATION:

FCC §27.50 (d) (4) & (5):

(4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(5) Equipment employed must be authorized in accordance with the provisions of §24.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (d)(6) of this section. 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

FCC §27.50 (h) (2):

(2) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power

FCC §27.50 (c) (10):

(10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

FCC §27.50 (b) (10):

(10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

FCC §27.50 (a) (3).

(3) Mobile and portable stations.

(i) For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

(ii) Mobile and portable stations are not permitted to transmit in the 2315-2320 MHz and 2345-2350 MHz bands.

(iii) Automatic transmit power control. Mobile and portable stations transmitting in the 2305-2315 MHz band or in the 2350-2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications.

RSS-139 Clause 6.5:

The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters shall not exceed one watt. The e.i.r.p. for fixed and base stations in the band 1710-1780 MHz shall not exceed one watt.

Consult SRSP-513 for e.i.r.p. limits on fixed and base stations operating in the band 2110-2180 MHz.

In addition, the peak to average power ratio (PAPR) of the equipment shall not exceed 13 dB for more than 0.1% of the time, using a signal that corresponds to the highest PAPR during periods of continuous transmission.

RSS-199 Clause 4.4:

The transmitter output power shall be measured in terms of average value.

For base station equipment, refer to SRSP-517 for the maximum permissible e.i.r.p.

For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 W. For fixed subscriber equipment, the transmitter output power shall not exceed 2 W and the e.i.r.p. shall be limited to 40 W.

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

For equipment with multiple antennas, the transmitter output power and e.i.r.p shall be measured according to ANSI C63.26-2015.

RSS-130 Clause 4.6:

4.6.1 General
The transmitter output power shall be measured in terms of average power. In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

4.6.2 Frequency bands 617-652 MHz and 663-698 MHz
The e.r.p. shall not exceed 3 watts for mobile equipment, fixed subscriber equipment and portable equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the equivalent isotropically radiated power (e.i.r.p.) limits.

4.6.3 Frequency bands 698-756 MHz and 777-787 MHz
The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

For base and fixed equipment other than fixed subscriber equipment, refer to SRSP-518 for the e.i.r.p. limits.

METHOD:

The conducted RF output power measurements were made at the RF output terminals of the EUT using the power meter of the Universal Radio Communication tester R&S CMW500, selecting maximum transmission power of the EUT and different modes of modulation.

The maximum equivalent isotropically radiated power (e.i.r.p.) is calculated by adding the declared maximum antenna gain (dBi).

The maximum effective radiated power e.r.p. is calculated from the maximum equivalent isotropically radiated power (e.i.r.p.) by subtracting 2.15 dB:

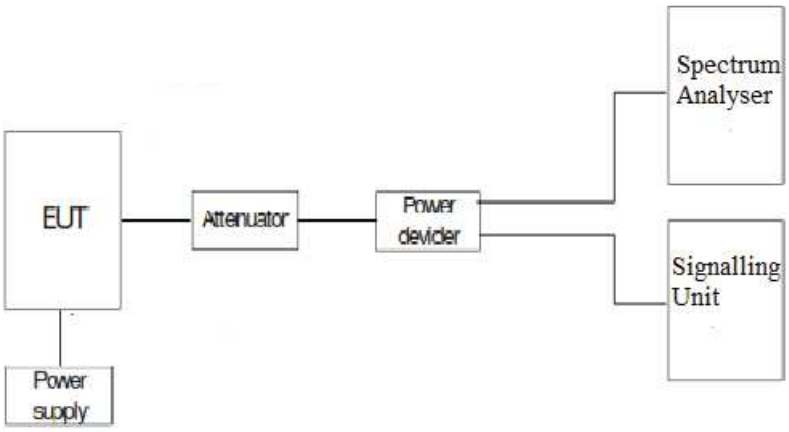
E.R.P. = E.I.R.P. – 2.15 dB

The peak-to-average power ratio (PAPR) is measured using an attenuator, power splitter and spectrum analyser with a Complementary Cumulative Distribution Function implemented.
The EUT was controlled via the Universal Radio Communication tester R&S CMW500 selecting maximum transmission power of the EUT and different modes of modulation.

TEST SETUP:

1. CONDUCTED AVERAGE POWER (except LTE band 30):

2. PEAK-TO-AVERAGE POWER RATIO (PAPR) and Conducted Average power (LTE band 30):



RESULTS:

1. AVERAGE POWER:

3G Band IV:

WCDMA MODULATION:

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0	0	0
Measured maximum average power (dBm) at antenna port	24.66	25.30	25.45
Maximum effective isotropically radiated average power E.I.R.P. (dBm)	24.66	25.30	25.45
Peak-to-average ratio (PAR) (dB)	3.13	3.00	3.16
Measurement uncertainty (dB)	<±0.66		

HSUPA MODULATION:

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0	0	0
Measured maximum average power (dBm) at antenna port	22.02	22.73	22.78
Maximum effective isotropically radiated average power E.I.R.P. (dBm)	22.02	22.73	22.78
Peak-to-average ratio (PAR) (dB)	3.48	4.17	3.33
Measurement uncertainty (dB)	<±0.66		

LTE Band 7:

LTE Band 7. QPSK MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	23.49	23.62	23.34
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	26.39	26.52	26.24
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 24.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 25, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 7. 16QAM MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	22.89	23.27	22.6
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.79	26.17	25.5
PAPR (dB)	6.11	6.19	5.88
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 24.
Worst case PAPR: Modulation 16QAM. RB Size: 25. RB Offset: 0.

LTE Band 7. QPSK MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	22.85	23.48	23.33
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.75	26.38	26.23
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 49.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 7. 16QAM MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	22.97	23.15	22.62
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.87	26.05	25.52
PAPR (dB)	6.04	6.14	6.06
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 49.
Worst case PAPR: Modulation 16QAM. RB Size: 50. RB Offset: 0.

LTE Band 7. QPSK MODULATION. Bandwidth = 15 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	23.04	23.64	23.34
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.94	26.54	26.24
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 74.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 75, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 7. 16QAM MODULATION. Bandwidth = 15 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	23	23.55	22.7
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.9	26.45	25.6
PAPR (dB)	6.01	6.19	6.06
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 74.
Worst case PAPR: Modulation 16QAM. RB Size: 75. RB Offset: 0.

LTE Band 7. QPSK MODULATION. Bandwidth = 20 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	22.88	23.12	23.03
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.78	26.02	22.93
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 0.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 100, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 7. 16QAM MODULATION. Bandwidth = 20 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.9	2.9	2.9
Measured maximum average power (dBm) at antenna port	22.74	23.08	22.78
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.64	25.98	25.68
PAPR (dB)	6.01	6.03	5.91
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 0.
Worst case PAPR: Modulation 16QAM. RB Size: 100. RB Offset: 0.

LTE Band 12:

LTE Band 12. QPSK MODULATION. Bandwidth = 1.4 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	24.08	24.35	24.10
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	21.28	21.55	21.30
Maximum effective radiated power E.R.P. (dBm)	19.13	19.40	19.15
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 2.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 6, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 12. 16QAM MODULATION. Bandwidth = 1.4 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	23.66	24.06	23.47
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	20.86	21.26	20.67
Maximum effective radiated power E.R.P. (dBm)	18.71	19.11	18.52
PAPR (dB)	6.11	5.67	5.54
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 2.
Worst case PAPR: Modulation 16QAM. RB Size: 6. RB Offset: 0.

LTE Band 12. QPSK MODULATION. Bandwidth = 3 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	24.25	24.40	24.22
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	21.45	21.60	21.42
Maximum effective radiated power E.R.P. (dBm)	19.30	19.45	19.27
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 7.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 15, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 12. 16QAM MODULATION. Bandwidth = 3 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	23.62	24.20	23.73
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	20.82	21.40	20.93
Maximum effective radiated power E.R.P. (dBm)	18.67	19.25	18.78
PAPR (dB)	6.07	6.03	5.93
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 7.
Worst case PAPR: Modulation 16QAM. RB Size: 15. RB Offset: 0.

LTE Band 12. QPSK MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	24.23	24.33	24.13
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	21.43	21.53	21.33
Maximum effective radiated power E.R.P. (dBm)	19.28	19.38	19.18
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 24.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 25, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 12. 16QAM MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	23.74	24.22	23.18
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	20.94	21.42	20.38
Maximum effective radiated power E.R.P. (dBm)	18.79	19.27	18.23
PAPR (dB)	6.04	5.87	6.03
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 24.
Worst case PAPR: Modulation 16QAM. RB Size: 25. RB Offset: 0.

LTE Band 12. QPSK MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	24.27	24.31	24.15
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	21.47	21.51	21.35
Maximum effective radiated power E.R.P. (dBm)	19.32	19.36	19.20
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 49.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 12. 16QAM MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-2.8	-2.8	-2.8
Measured maximum average power (dBm) at antenna port	23.62	24.10	23.45
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	20.82	21.10	20.65
Maximum effective radiated power E.R.P. (dBm)	18.67	18.95	18.50
PAPR (dB)	5.98	5.96	5.93
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 24.
Worst case PAPR: Modulation 16QAM. RB Size: 50. RB Offset: 0.

LTE Band 13:
LTE Band 13. QPSK MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-4.4	-4.4	-4.4
Measured maximum average power (dBm) at antenna port	22.33	23.77	23.83
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	17.93	19.37	19.43
Maximum effective radiated power E.R.P. (dBm)	15.78	17.22	17.28
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 0.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 25, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 13. 16QAM MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	-4.4	-4.4	-4.4
Measured maximum average power (dBm) at antenna port	21.23	23.53	23.53
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	16.83	19.13	19.13
Maximum effective radiated power E.R.P. (dBm)	14.68	16.98	16.98
PAPR (dB)	5.80	5.90	5.90
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 0.
Worst case PAPR: Modulation 16QAM. RB Size: 25. RB Offset: 0.

LTE Band 13. QPSK MODULATION. Bandwidth = 10 MHz.

Channel	Middle
Maximum declared antenna gain (dBi)	-4.4
Measured maximum average power (dBm) at antenna port	23.88
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	19.48
Maximum effective radiated power E.R.P. (dBm)	17.33
PAPR (dB)	(*)
Measurement uncertainty (dB)	<±0.66

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 49.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 13. 16QAM MODULATION. Bandwidth = 10 MHz.

Channel	Middle
Maximum declared antenna gain (dBi)	-4.4
Measured maximum average power (dBm) at antenna port	23.59
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	19.19
Maximum effective radiated power E.R.P. (dBm)	17.04
PAPR (dB)	5.80
Measurement uncertainty (dB)	<±0.66

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 49.
Worst case PAPR: Modulation 16QAM. RB Size: 50. RB Offset: 0.

LTE Band 30:

LTE Band 30. QPSK MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.5	0.5	0.5
Measured maximum average power (dBm) at antenna port	23.22	23.19	23.11
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	23.72	23.59	23.61
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 0.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 25, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

LTE Band 30. 16QAM MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.5	0.5	0.5
Measured maximum average power (dBm) at antenna port	22.42	22.18	22.52
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	22.92	22.68	23.02
PAPR (dB)	6.28	6.20	6.31
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 0.
Worst case PAPR: Modulation 16QAM. RB Size: 25. RB Offset: 0.

LTE Band 30. QPSK MODULATION. Bandwidth = 10 MHz.

Channel	Middle
Maximum declared antenna gain (dBi)	0.5
Measured maximum average power (dBm) at antenna port	23.07
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	23.57
PAPR (dB)	(*)
Measurement uncertainty (dB)	<±0.66

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 24.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration

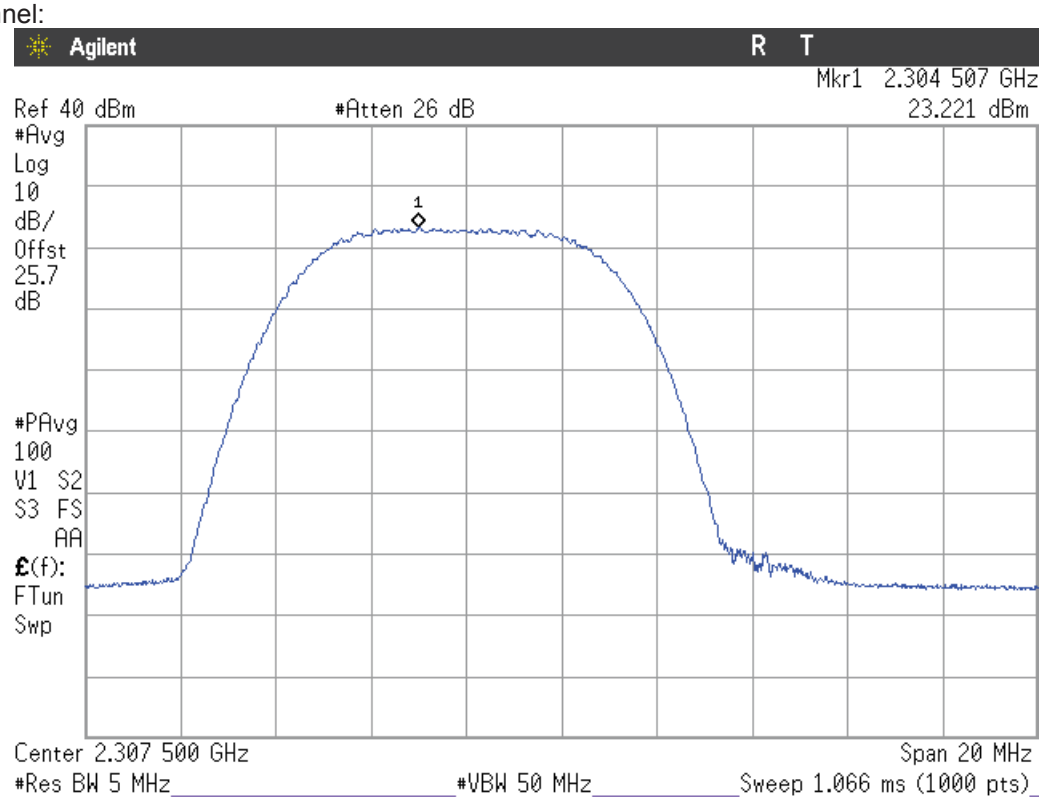
LTE Band 30. 16QAM MODULATION. Bandwidth = 10 MHz.

Channel	Middle
Maximum declared antenna gain (dBi)	0.5
Measured maximum average power (dBm) at antenna port	22.20
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	22.70
PAPR (dB)	6.15
Measurement uncertainty (dB)	<±0.66

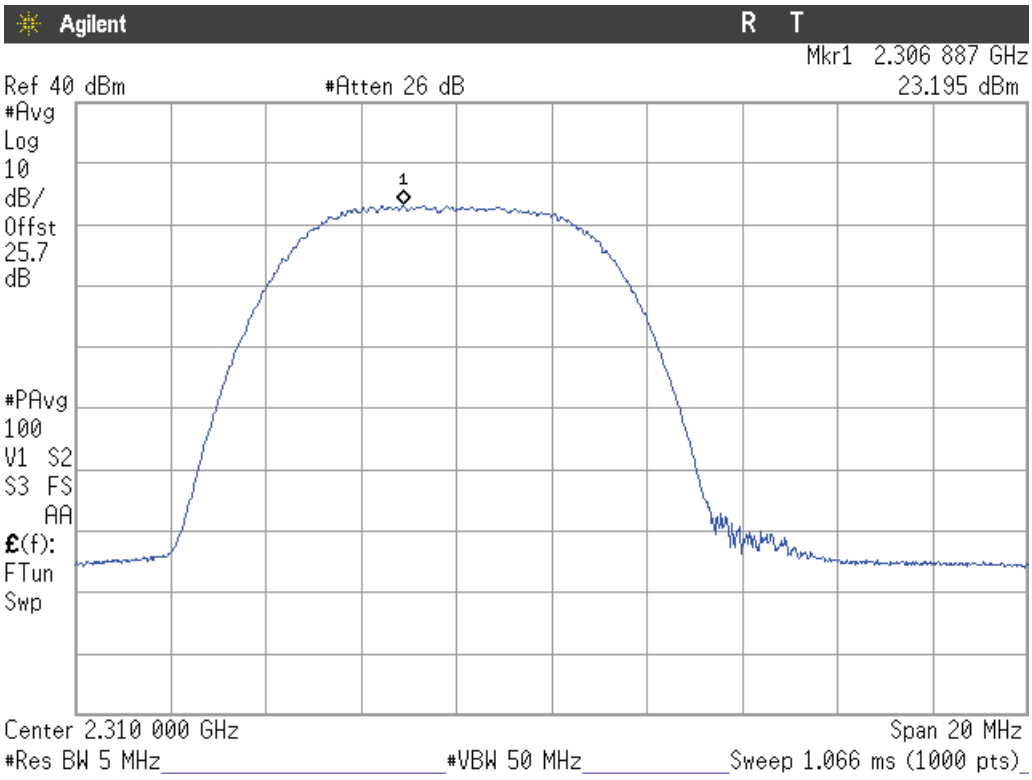
Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 24.
Worst case PAPR: Modulation 16QAM. RB Size: 50. RB Offset: 0.

LTE Band 30: Bandwidth = 5 MHz. Modulation QPSK. RB Size: 1. RB Offset: 0.

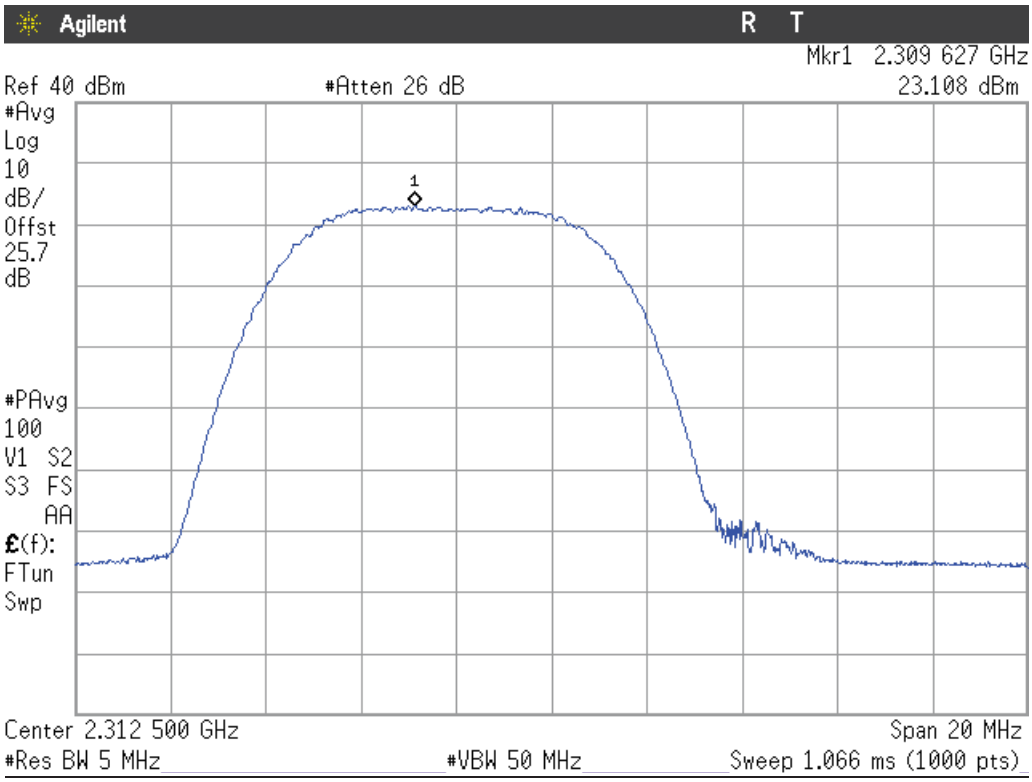
Lowest Channel:



Middle Channel:

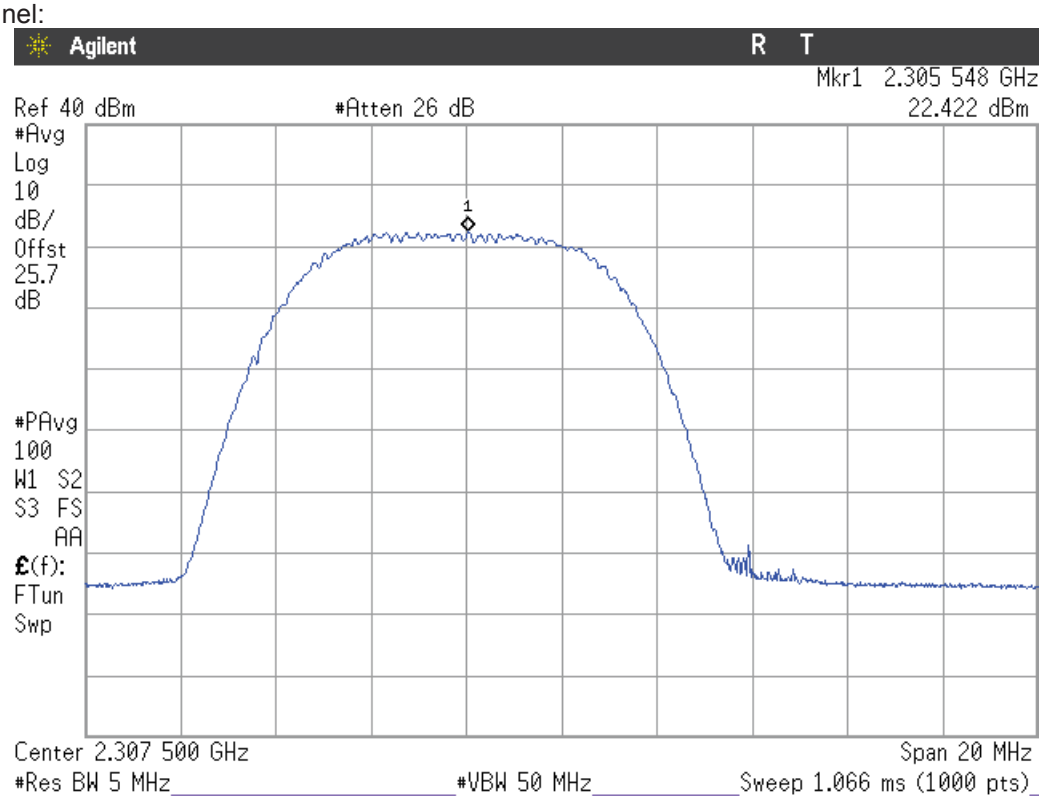


Highest Channel:

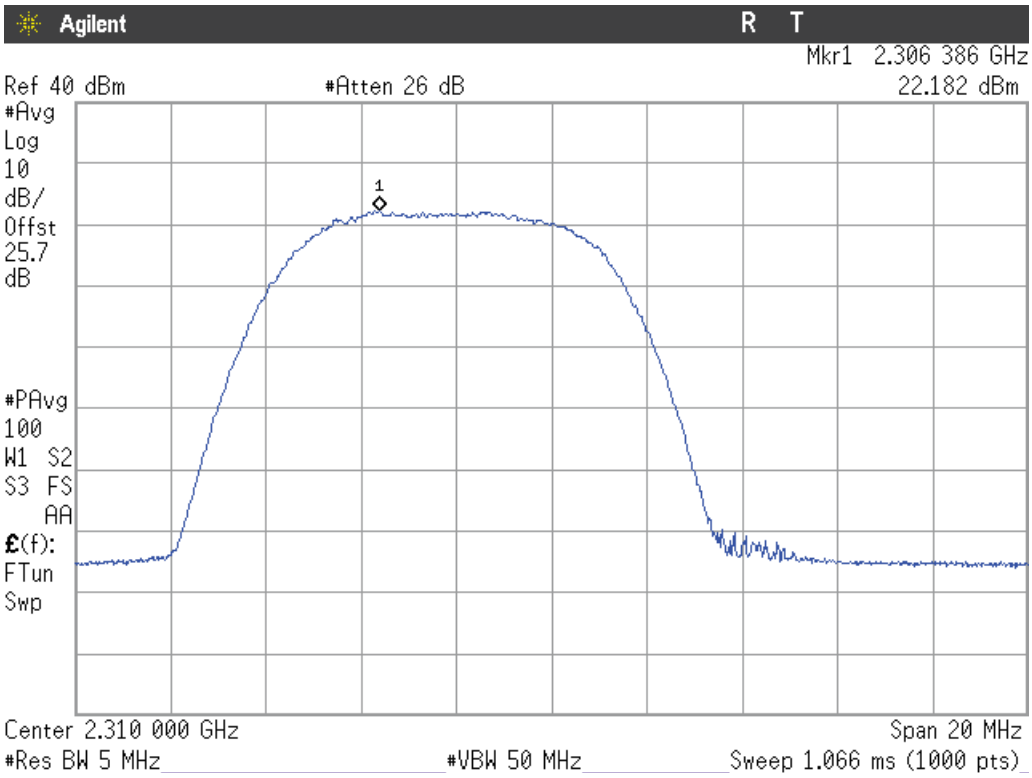


LTE Band 30: Bandwidth = 5 MHz. Modulation 16QAM. RB Size: 1. RB Offset: 0.

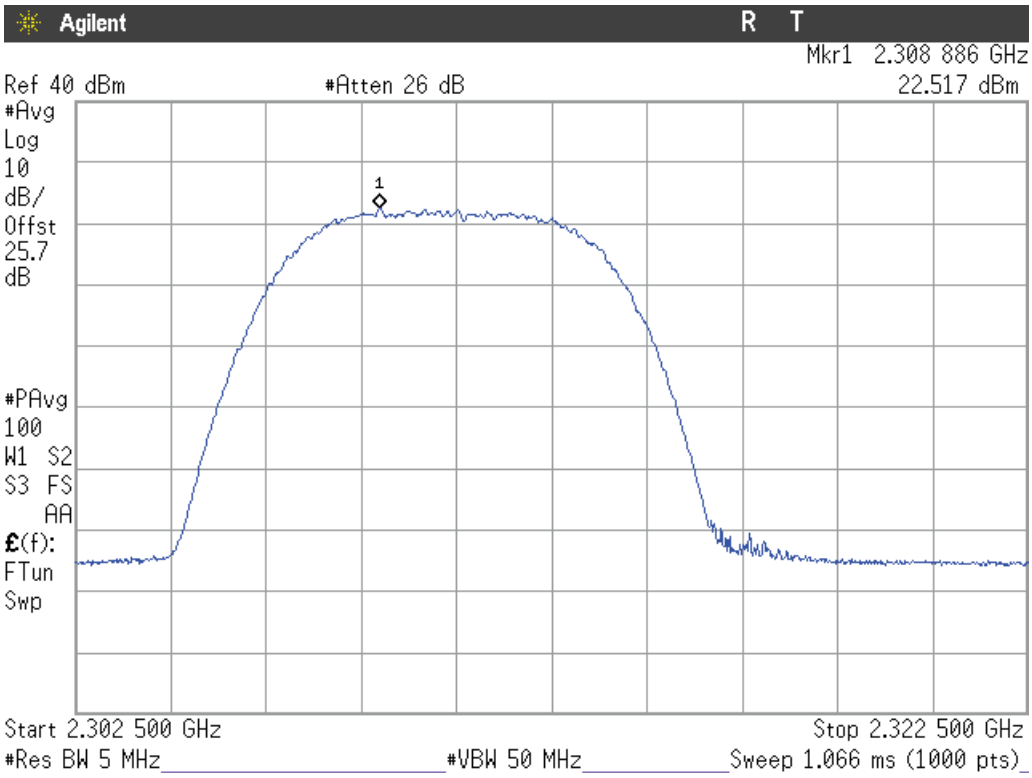
Lowest Channel:



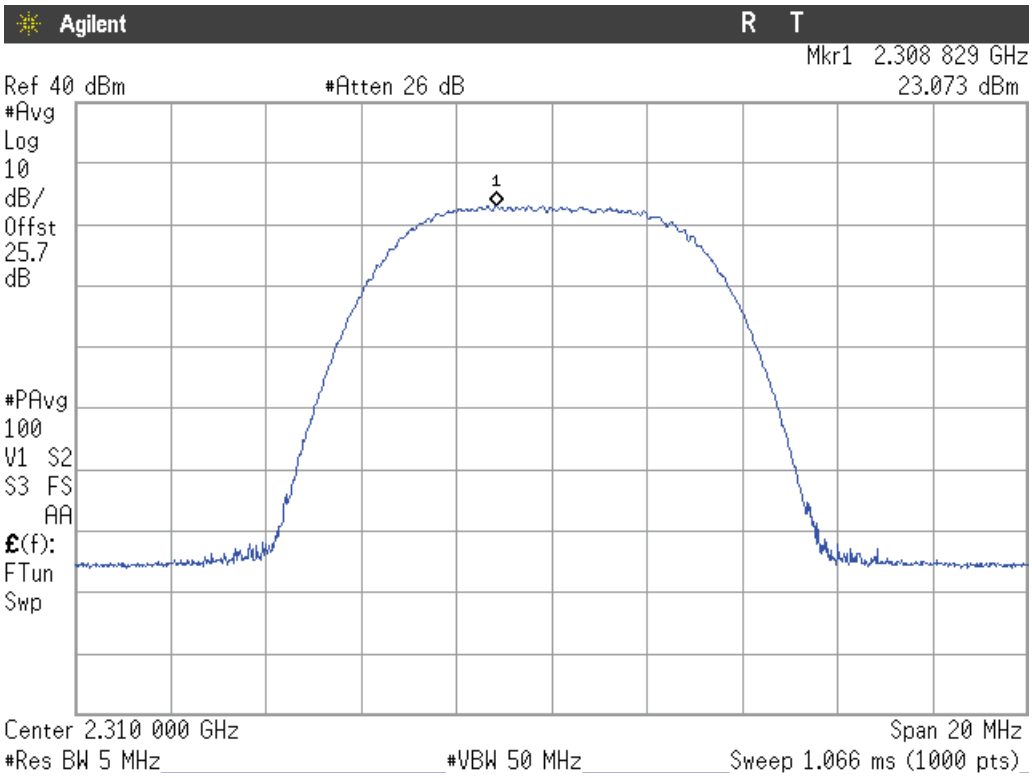
Middle Channel:



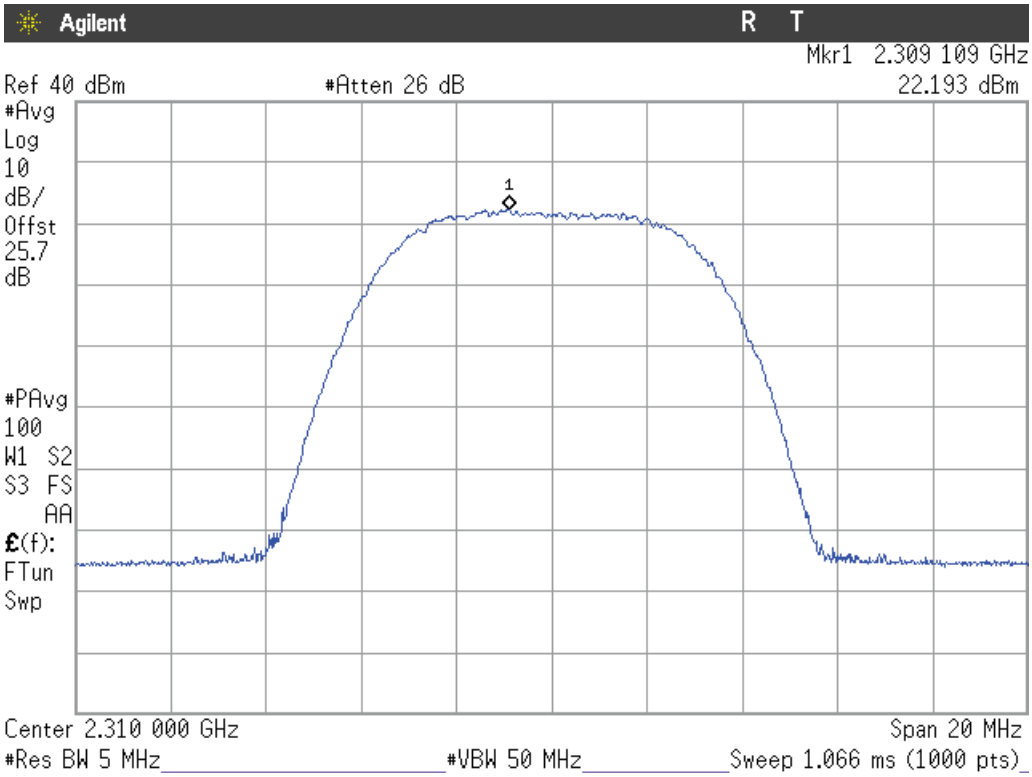
Highest Channel:



LTE Band 30: Bandwidth = 10 MHz. Modulation QPSK. RB Size: 1. RB Offset: 24.



LTE Band 30: Bandwidth = 10 MHz. Modulation 16QAM. RB Size: 1. RB Offset: 24.



LTE Band 38:

LTE Band 38. QPSK MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	24.23	24.05	24.22
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	26.33	26.15	26.32
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 12.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 25, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 38. 16QAM MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.52	24.08	23.35
Maximum equivalent isotropic ally radiated power (E.I.R.P.) (dBm)	25.62	26.18	25.45
PAPR (dB)	8.75	8.89	10.64
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 12.
Worst case PAPR: Modulation 16QAM. RB Size: 25. RB Offset: 0.

LTE Band 38. QPSK MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.91	24.04	23.67
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	26.01	26.14	25.77
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 24.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 38. 16QAM MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.61	24.03	23.81
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.71	26.13	25.91
PAPR (dB)	10.32	10.54	10.16
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 0.
Worst case PAPR: Modulation 16QAM. RB Size: 50. RB Offset: 0.

LTE Band 38. QPSK MODULATION. Bandwidth = 15 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.91	23.99	23.62
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	26.01	26.09	25.72
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 37.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 38. 16QAM MODULATION. Bandwidth = 15 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.88	23.96	23.61
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.98	26.06	25.71
PAPR (dB)	12.76	12.4	12.18
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 37.
Worst case PAPR: Modulation 16QAM. RB Size: 75. RB Offset: 0.

LTE Band 38. QPSK MODULATION. Bandwidth = 20 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.86	24.01	23.57
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.96	26.11	25.67
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 49.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 100, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 38. 16QAM MODULATION. Bandwidth = 20 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	2.1	2.1	2.1
Measured maximum average power (dBm) at antenna port	23.56	23.77	23.22
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	25.66	25.87	25.32
PAPR (dB)	12.18	11.67	12.44
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 49.
Worst case PAPR: Modulation 16QAM. RB Size: 100. RB Offset: 0.

LTE Band 66:

LTE Band 66. QPSK MODULATION. Bandwidth = 1.4 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	24.08	24	23.87
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.28	24.20	24.07
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 2.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 6, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 66. 16QAM MODULATION. Bandwidth = 1.4 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	22.88	23.62	23.14
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	23.08	23.82	23.34
PAPR (dB)	5.82	5.72	5.75
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 2.
Worst case PAPR: Modulation 16QAM. RB Size: 6. RB Offset: 0.

LTE Band 66. QPSK MODULATION. Bandwidth = 3 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	24.19	23.98	23.96
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.39	24.18	24.16
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 7.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 15, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 66. 16QAM MODULATION. Bandwidth = 3 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	22.72	23.5	23.14
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	22.92	23.7	23.34
PAPR (dB)	5.93	6.07	5.93
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 7.
Worst case PAPR: Modulation 16QAM. RB Size: 15. RB Offset: 0.

LTE Band 66. QPSK MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	24.11	23.88	23.97
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.31	24.08	24.17
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 0.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 25, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 66. 16QAM MODULATION. Bandwidth = 5 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	23.01	23.74	22.9
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	23.21	23.94	23.10
PAPR (dB)	5.90	5.99	5.87
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 0.
Worst case PAPR: Modulation 16QAM. RB Size: 25. RB Offset: 0.

LTE Band 66. QPSK MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	24.10	23.99	23.86
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.30	24.19	24.06
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 0.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 66. 16QAM MODULATION. Bandwidth = 10 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	23.27	23.45	23.22
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	23.47	23.65	23.42
PAPR (dB)	5.88	5.98	5.96
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 24.
Worst case PAPR: Modulation 16QAM. RB Size: 50. RB Offset: 0.

LTE Band 66. QPSK MODULATION. Bandwidth = 15 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	23.58	23.87	24.01
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	23.78	24.07	24.21
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 74.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 75, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 66. 16QAM MODULATION. Bandwidth = 15 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	23.92	23.51	23.45
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.12	23.71	23.65
PAPR (dB)	5.80	5.98	5.96
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 74.
Worst case PAPR: Modulation 16QAM. RB Size: 75. RB Offset: 0.

LTE Band 66. QPSK MODULATION. Bandwidth = 20 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	24.02	24.05	23.93
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.22	24.25	24.13
PAPR (dB)	(*)	(*)	(*)
Measurement uncertainty (dB)	<±0.66		

Worst case AVERAGE POWER: Modulation QPSK. RB Size: 1. RB Offset: 99.
(*): Preliminary measurements determined that the modulation 16QAM, RB Size: 50, RB Offset: 0 as the worst case. The results in the next tables shows the results for this configuration.

LTE Band 66. 16QAM MODULATION. Bandwidth = 20 MHz.

Channel	Lowest	Middle	Highest
Maximum declared antenna gain (dBi)	0.2	0.2	0.2
Measured maximum average power (dBm) at antenna port	24.04	24.16	23.92
Maximum equivalent isotropically radiated power (E.I.R.P.) (dBm)	24.24	24.36	23.12
PAPR (dB)	5.90	5.88	5.98
Measurement uncertainty (dB)	<±0.66		

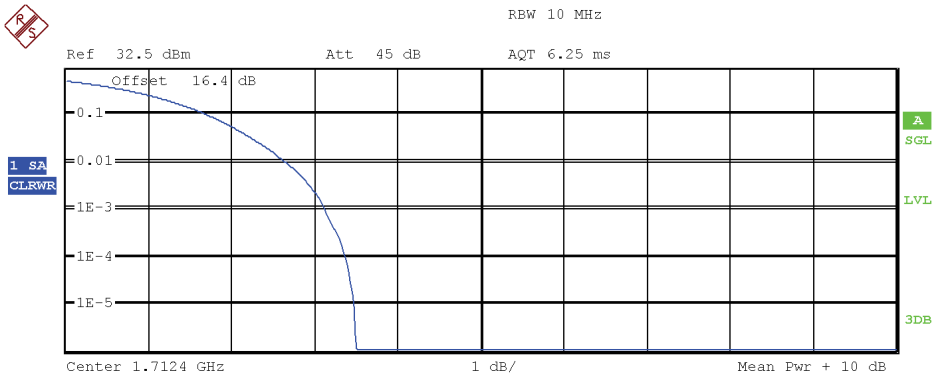
Worst case AVERAGE POWER: Modulation 16QAM. RB Size: 1. RB Offset: 99.
Worst case PAPR: Modulation 16QAM. RB Size: 100. RB Offset: 0.

Verdict: PASS

2. PEAK-TO-AVERAGE POWER RATIO (PAPR):

3G Band IV. WCDMA MODULATION.

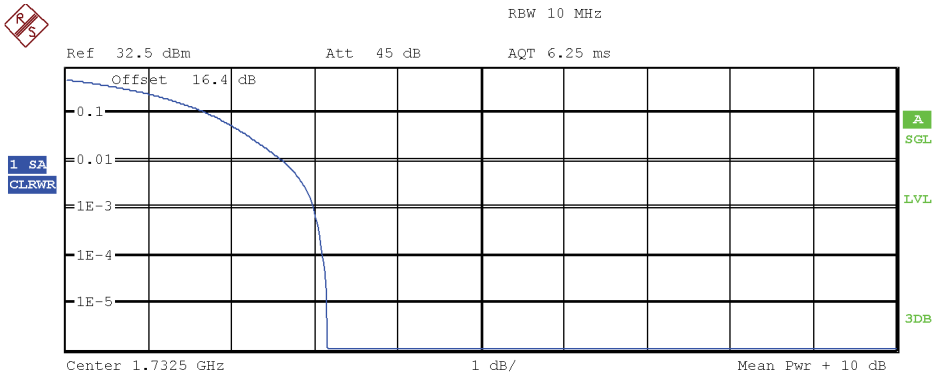
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	24.02 dBm
Peak	27.52 dBm
Crest	3.49 dB
10 %	1.71 dB
1 %	2.64 dB
.1 %	3.13 dB
.01 %	3.37 dB

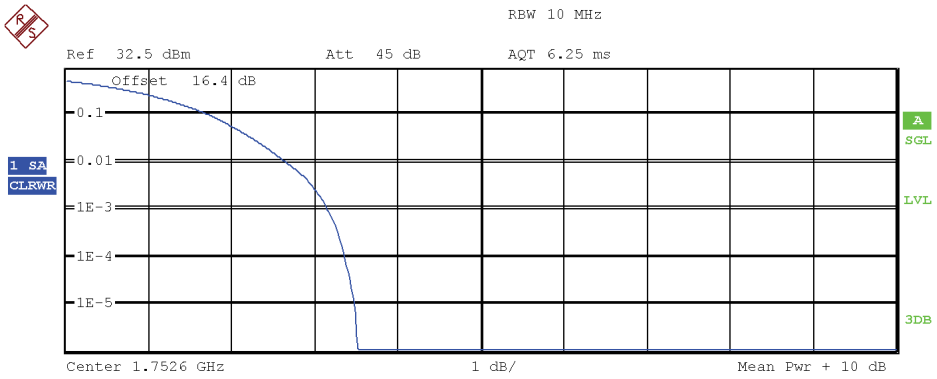
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	24.51 dBm
Peak	27.65 dBm
Crest	3.15 dB
10 %	1.73 dB
1 %	2.61 dB
.1 %	3.00 dB
.01 %	3.09 dB

Highest Channel:

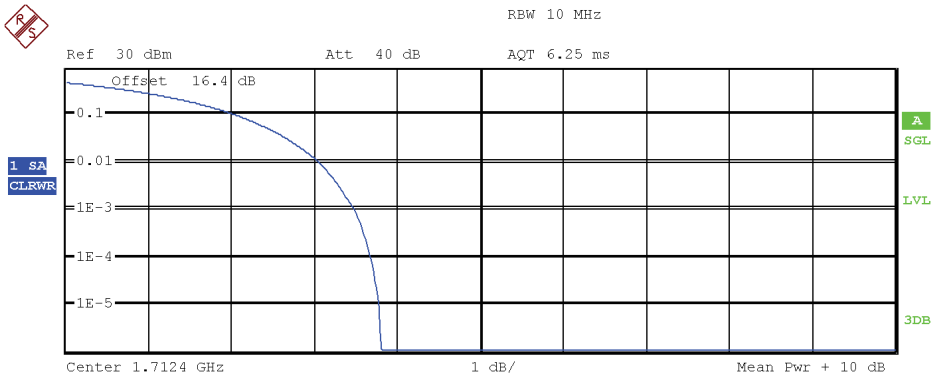


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	24.05 dBm
Peak	27.56 dBm
Crest	3.51 dB
10 %	1.73 dB
1 %	2.64 dB
.1 %	3.16 dB
.01 %	3.37 dB

3G Band IV. HSUPA MODULATION.

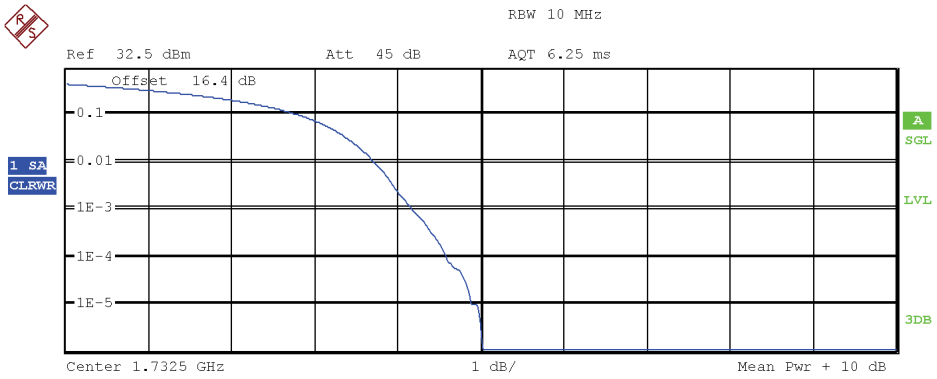
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.82 dBm
Peak	26.62 dBm
Crest	3.80 dB
10 %	2.07 dB
1 %	3.06 dB
.1 %	3.48 dB
.01 %	3.69 dB

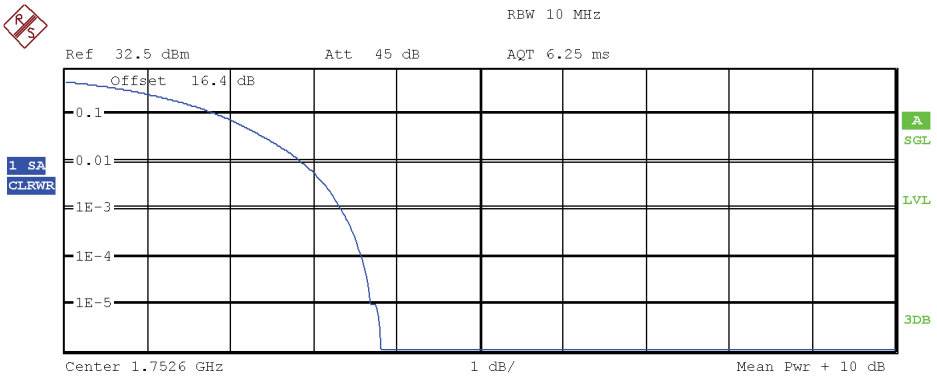
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.35 dBm
Peak	27.37 dBm
Crest	5.02 dB
10 %	2.82 dB
1 %	3.72 dB
.1 %	4.17 dB
.01 %	4.58 dB

Highest Channel:

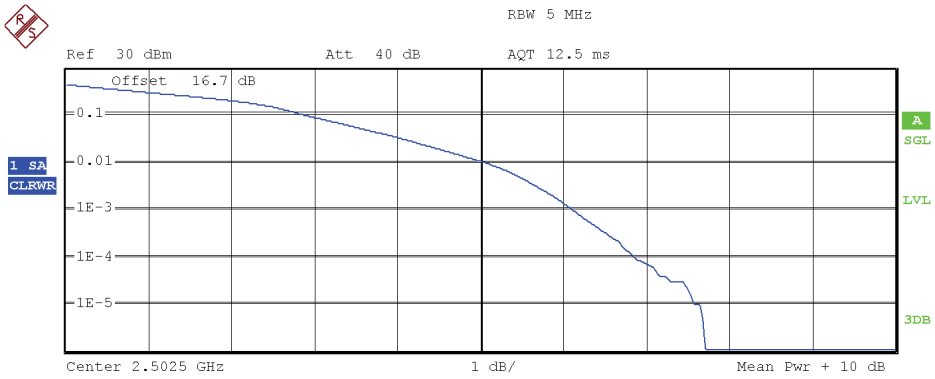


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.76 dBm
Peak	26.57 dBm
Crest	3.82 dB
10 %	1.86 dB
1 %	2.85 dB
.1 %	3.33 dB
.01 %	3.57 dB

LTE Band 7. Bandwidth = 5 MHz. Modulation 16 QAM. RB Size: 25. RB Offset: 0.

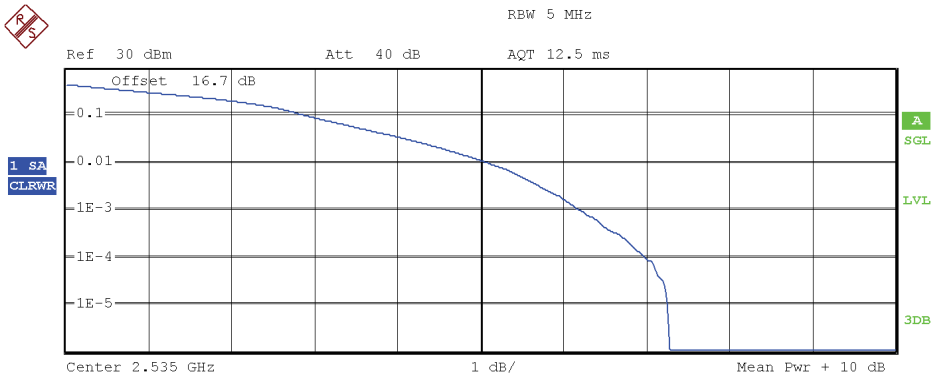
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.65 dBm
Peak	28.36 dBm
Crest	7.71 dB
10 %	2.90 dB
1 %	5.05 dB
.1 %	6.11 dB
.01 %	6.84 dB

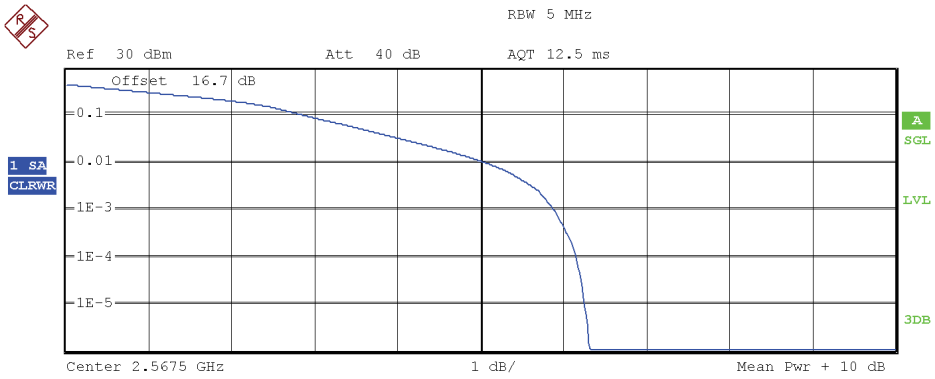
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.81 dBm
Peak	28.08 dBm
Crest	7.27 dB
10 %	2.88 dB
1 %	5.08 dB
.1 %	6.19 dB
.01 %	6.97 dB

Highest Channel:

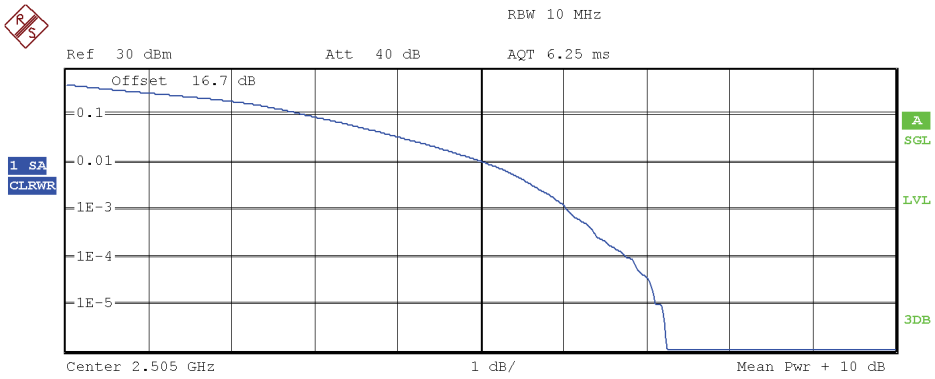


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.57 dBm
Peak	26.88 dBm
Crest	6.31 dB
10 %	2.87 dB
1 %	5.06 dB
.1 %	5.88 dB
.01 %	6.15 dB

LTE Band 7. Bandwidth = 10 MHz. Modulation 16 QAM. RB Size: 50. RB Offset: 0.

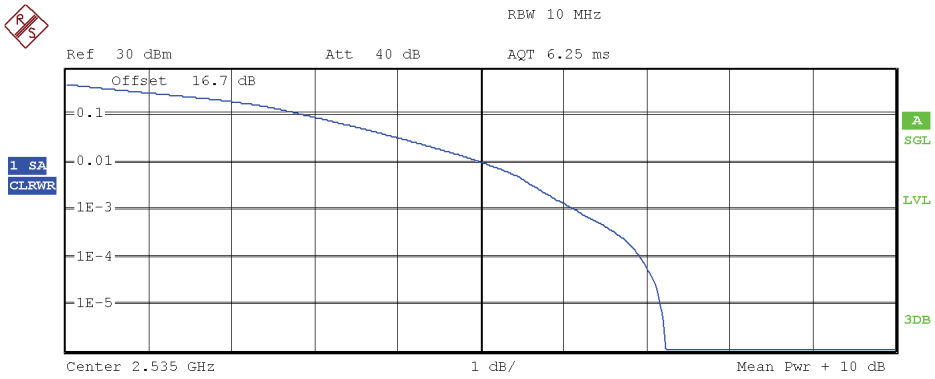
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	20.78 dBm
Peak	28.03 dBm
Crest	7.25 dB
10 %	2.92 dB
1 %	5.05 dB
.1 %	6.04 dB
.01 %	6.76 dB

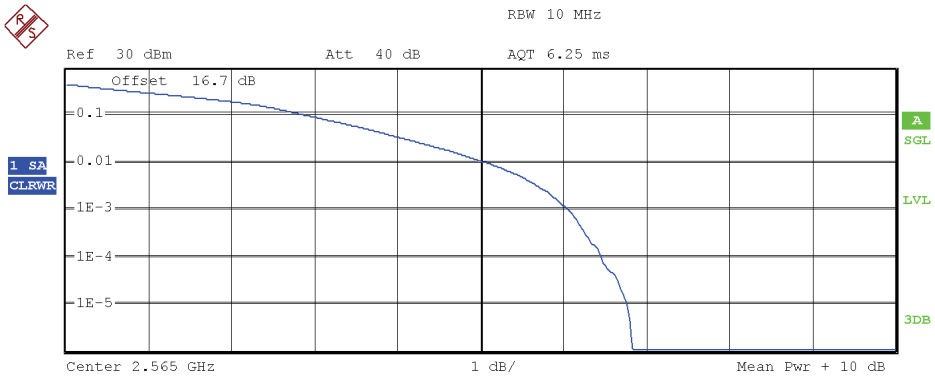
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	20.93 dBm
Peak	28.17 dBm
Crest	7.23 dB
10 %	2.90 dB
1 %	5.02 dB
.1 %	6.14 dB
.01 %	6.92 dB

Highest Channel:

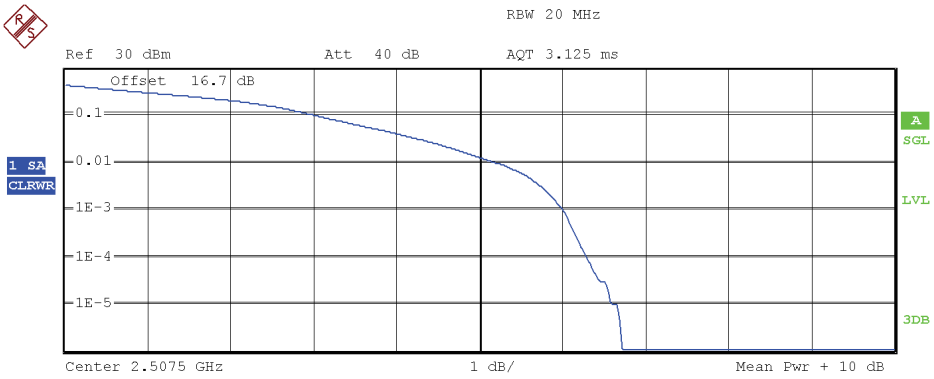


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	20.70 dBm
Peak	27.53 dBm
Crest	6.83 dB
10 %	2.90 dB
1 %	5.06 dB
.1 %	6.06 dB
.01 %	6.46 dB

LTE Band 7. Bandwidth = 15 MHz. Modulation 16 QAM. RB Size: 75. RB Offset: 0.

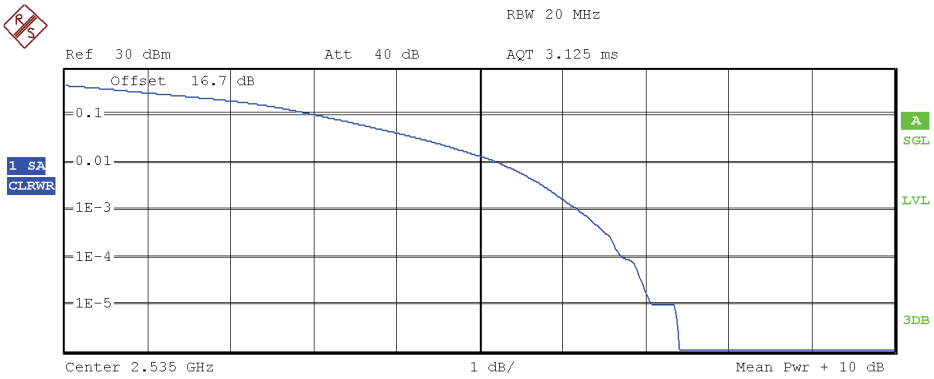
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.21 dBm
Peak	27.93 dBm
Crest	6.72 dB
10 %	3.01 dB
1 %	5.19 dB
.1 %	6.01 dB
.01 %	6.30 dB

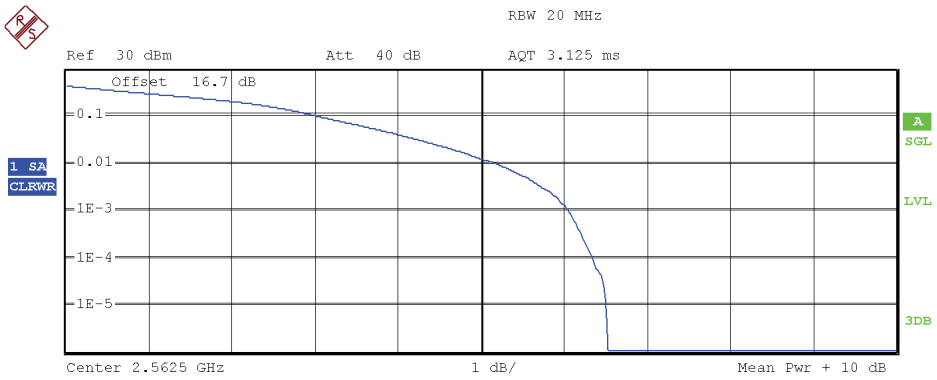
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.29 dBm
Peak	28.70 dBm
Crest	7.41 dB
10 %	3.06 dB
1 %	5.22 dB
.1 %	6.19 dB
.01 %	6.71 dB

Highest Channel:

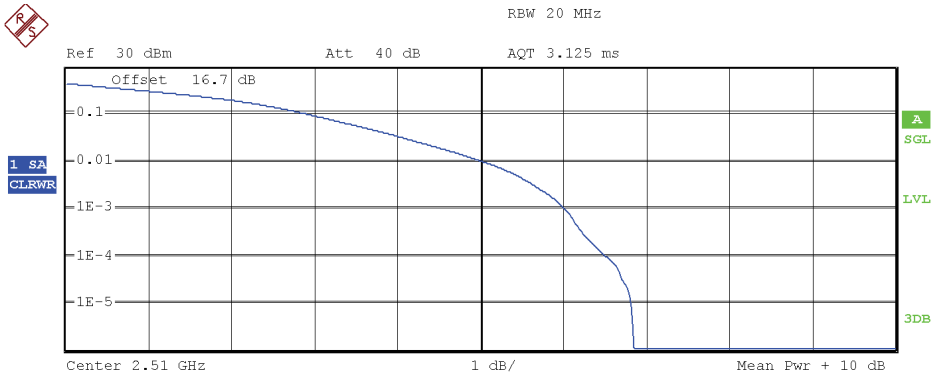


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.05 dBm
Peak	27.57 dBm
Crest	6.52 dB
10 %	3.04 dB
1 %	5.18 dB
.1 %	6.06 dB
.01 %	6.35 dB

LTE Band 7. Bandwidth = 20 MHz. Modulation 16 QAM. RB Size: 100. RB Offset: 0.

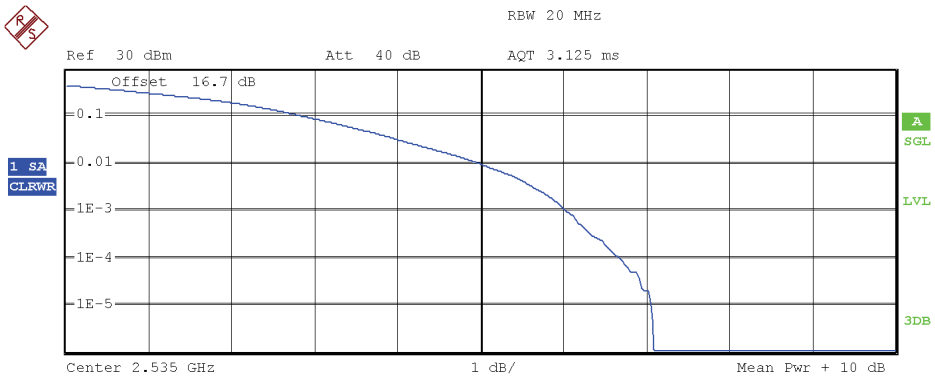
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.31 dBm
Peak	28.15 dBm
Crest	6.84 dB
10 %	2.92 dB
1 %	5.03 dB
.1 %	6.01 dB
.01 %	6.51 dB

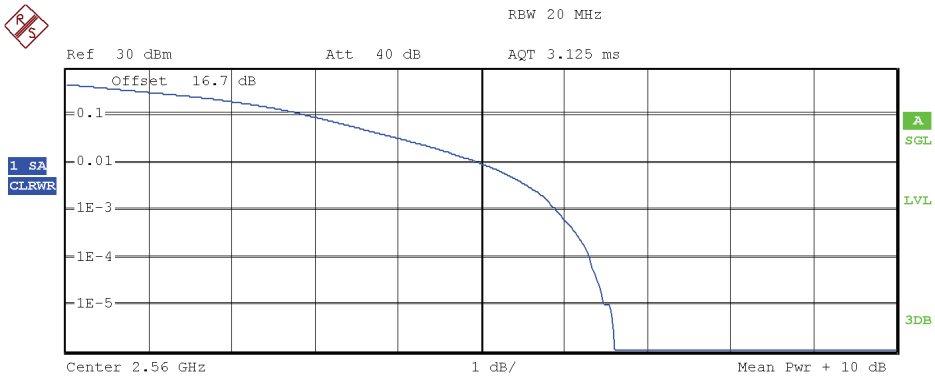
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.33 dBm
Peak	28.42 dBm
Crest	7.09 dB
10 %	2.87 dB
1 %	4.98 dB
.1 %	6.03 dB
.01 %	6.68 dB

Highest Channel:

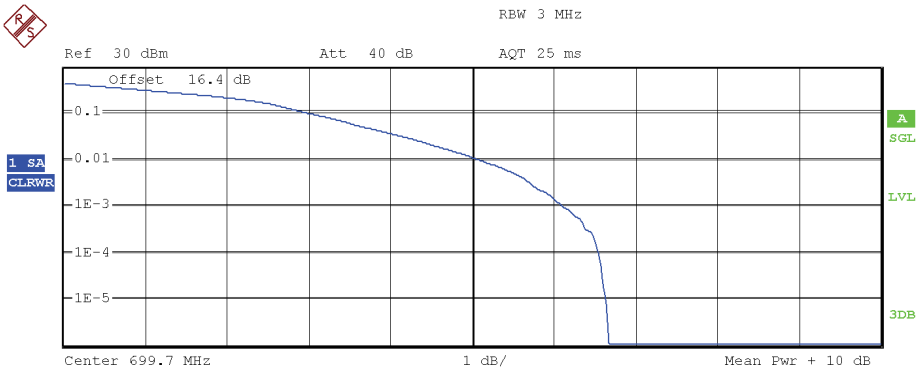


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	21.03 dBm
Peak	27.64 dBm
Crest	6.61 dB
10 %	2.92 dB
1 %	4.97 dB
.1 %	5.91 dB
.01 %	6.31 dB

LTE Band 12. Bandwidth = 1.4 MHz. Modulation 16 QAM. RB Size: 6. RB Offset: 0.

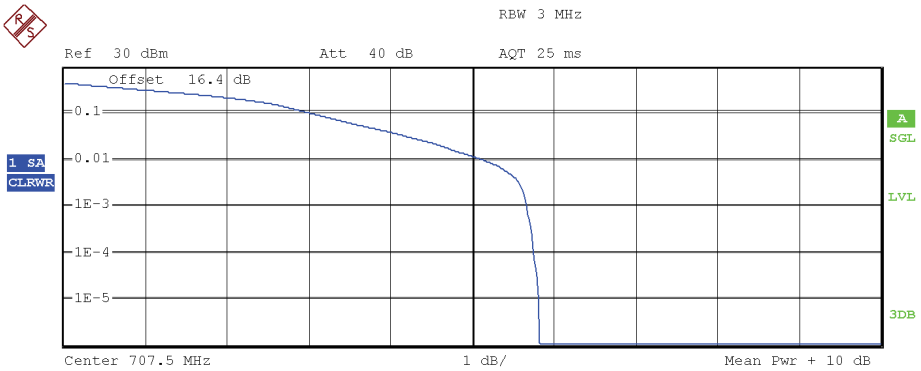
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.84 dBm
Peak	29.50 dBm
Crest	6.67 dB
10 %	3.01 dB
1 %	5.08 dB
.1 %	6.11 dB
.01 %	6.55 dB

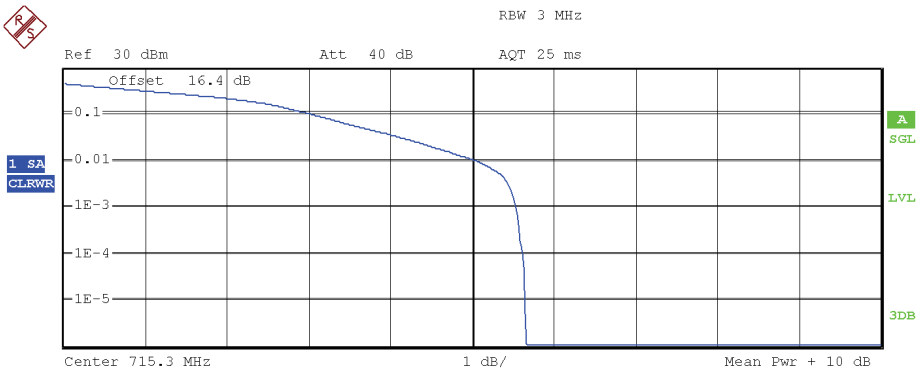
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	23.05 dBm
Peak	28.87 dBm
Crest	5.82 dB
10 %	3.04 dB
1 %	5.13 dB
.1 %	5.67 dB
.01 %	5.75 dB

Highest Channel:

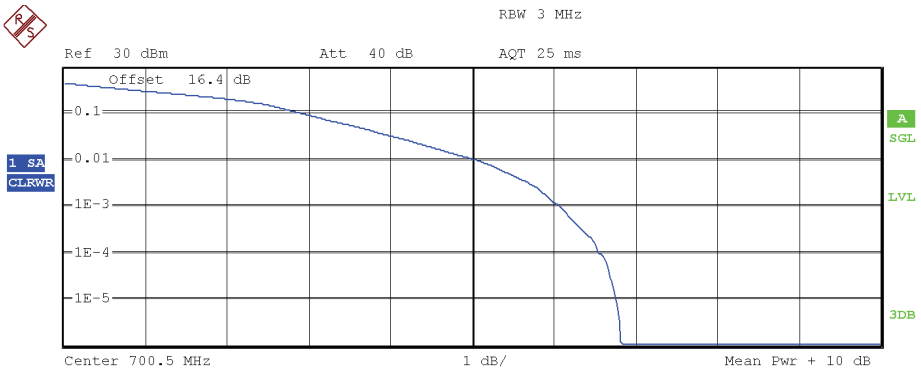


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.79 dBm
Peak	28.44 dBm
Crest	5.65 dB
10 %	3.04 dB
1 %	5.05 dB
.1 %	5.54 dB
.01 %	5.63 dB

LTE Band 12. Bandwidth = 3 MHz. Modulation 16 QAM. RB Size: 15. RB Offset: 0.

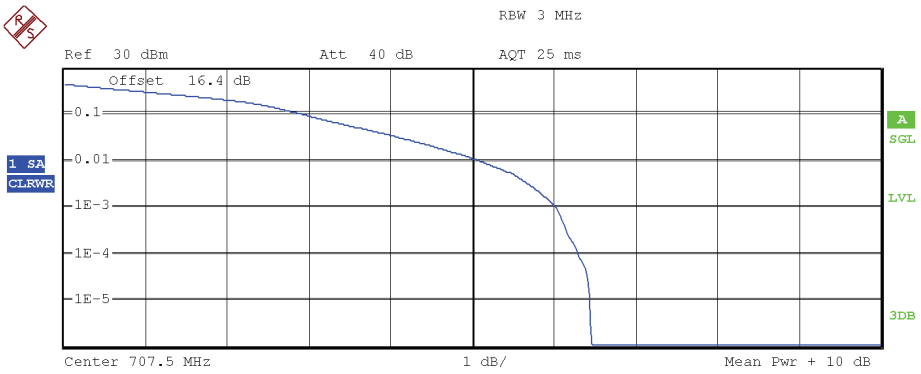
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.89 dBm
Peak	29.71 dBm
Crest	6.82 dB
10 %	2.93 dB
1 %	5.05 dB
.1 %	6.07 dB
.01 %	6.55 dB

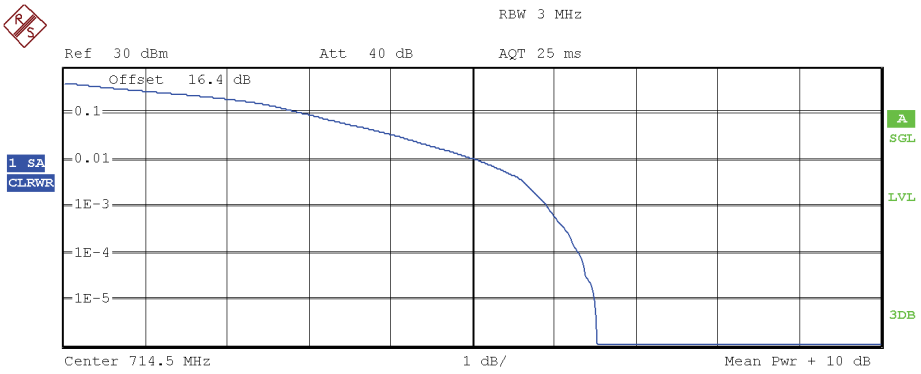
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.98 dBm
Peak	29.43 dBm
Crest	6.45 dB
10 %	2.95 dB
1 %	5.10 dB
.1 %	6.03 dB
.01 %	6.30 dB

Highest Channel:

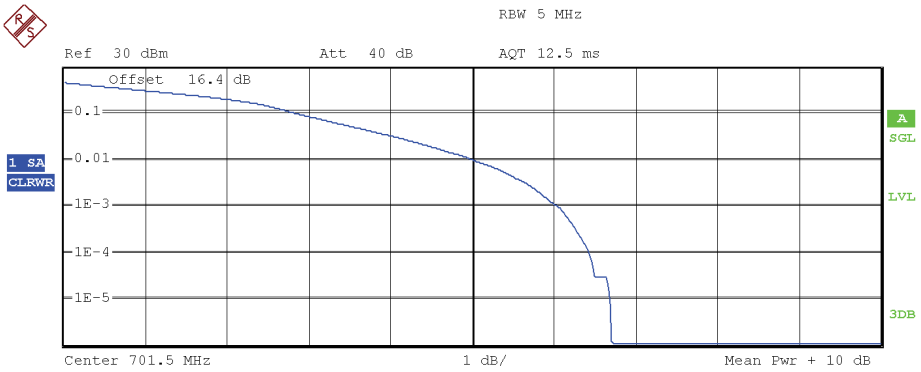


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.83 dBm
Peak	29.36 dBm
Crest	6.53 dB
10 %	2.95 dB
1 %	5.06 dB
.1 %	5.93 dB
.01 %	6.31 dB

LTE Band 12. Bandwidth = 5 MHz. Modulation 16 QAM. RB Size: 25. RB Offset: 0.

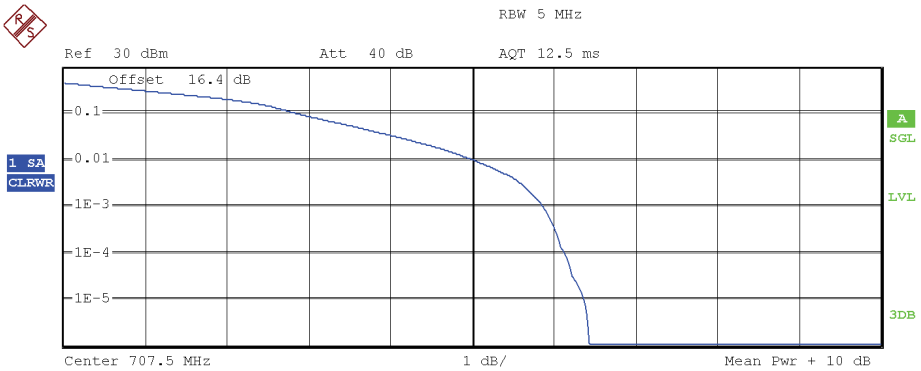
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	22.94 dBm
Peak	29.64 dBm
Crest	6.71 dB
10 %	2.85 dB
1 %	5.00 dB
.1 %	6.04 dB
.01 %	6.44 dB

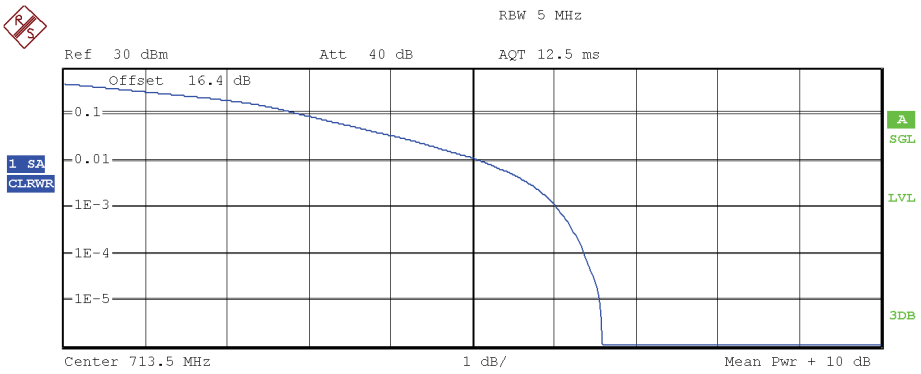
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	23.00 dBm
Peak	29.43 dBm
Crest	6.43 dB
10 %	2.87 dB
1 %	5.02 dB
.1 %	5.87 dB
.01 %	6.14 dB

Highest Channel:

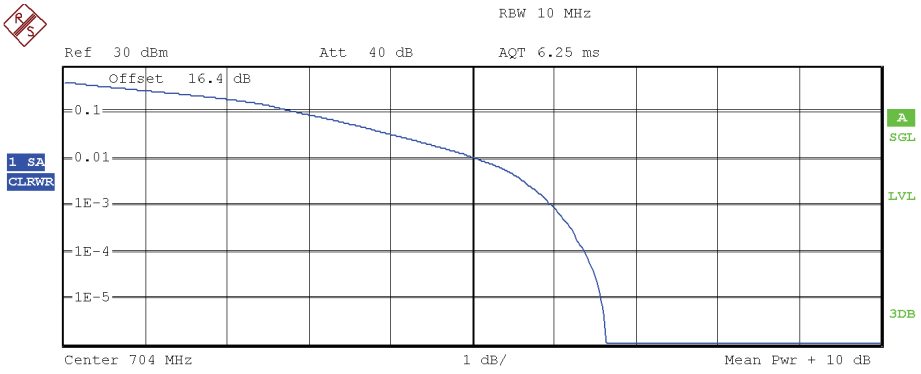


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	22.91 dBm
Peak	29.50 dBm
Crest	6.59 dB
10 %	2.92 dB
1 %	5.10 dB
.1 %	6.03 dB
.01 %	6.38 dB

LTE Band 12. Bandwidth = 10 MHz. Modulation 16 QAM. RB Size: 50. RB Offset: 0.

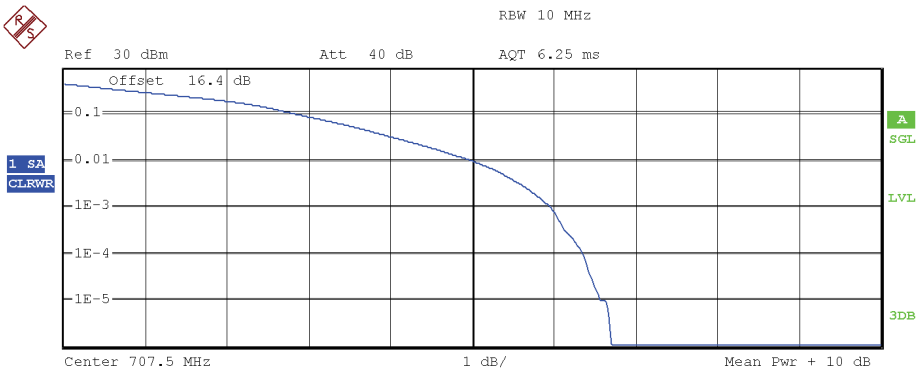
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	23.18 dBm
Peak	29.82 dBm
Crest	6.64 dB
10 %	2.88 dB
1 %	5.06 dB
.1 %	5.98 dB
.01 %	6.38 dB

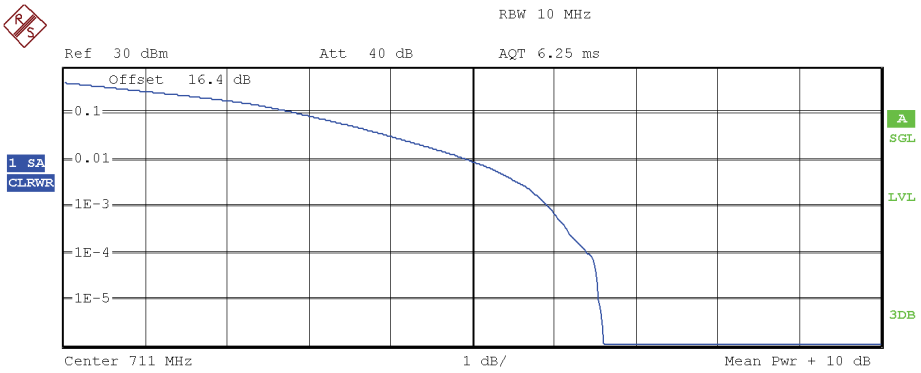
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	23.19 dBm
Peak	29.90 dBm
Crest	6.70 dB
10 %	2.87 dB
1 %	5.00 dB
.1 %	5.96 dB
.01 %	6.36 dB

Highest Channel:

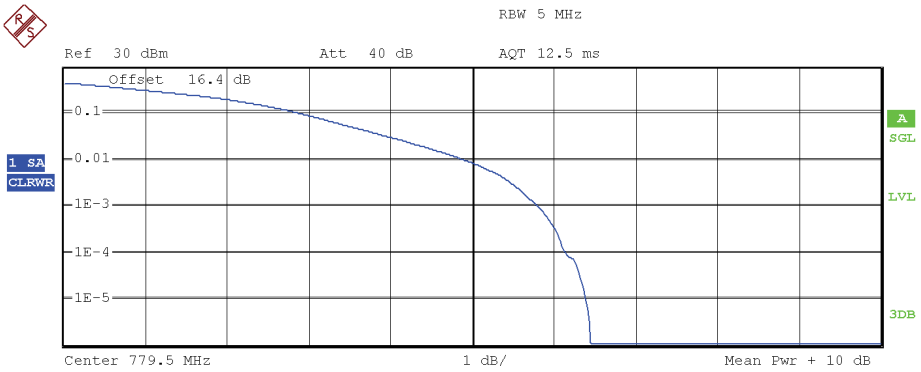


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	23.14 dBm
Peak	29.75 dBm
Crest	6.61 dB
10 %	2.88 dB
1 %	4.95 dB
.1 %	5.93 dB
.01 %	6.41 dB

LTE Band 13. Bandwidth = 5 MHz. Modulation 16 QAM. RB Size: 25. RB Offset: 0.

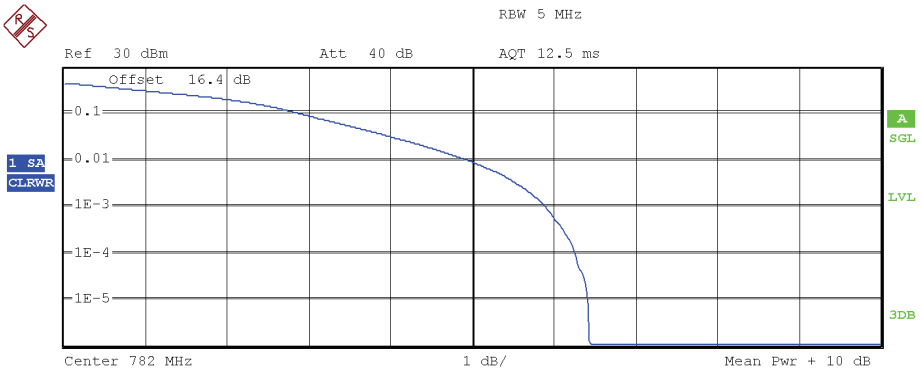
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.91 dBm
Peak	28.37 dBm
Crest	6.46 dB
10 %	2.90 dB
1 %	4.90 dB
.1 %	5.80 dB
.01 %	6.15 dB

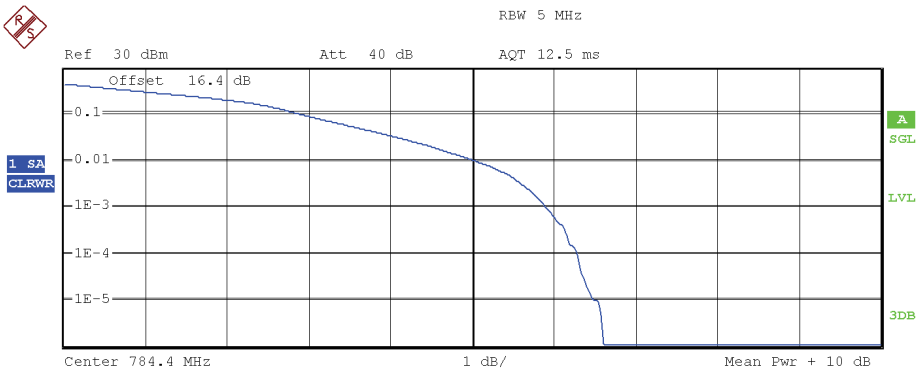
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.79 dBm
Peak	28.23 dBm
Crest	6.43 dB
10 %	2.90 dB
1 %	4.95 dB
.1 %	5.90 dB
.01 %	6.27 dB

Highest Channel:

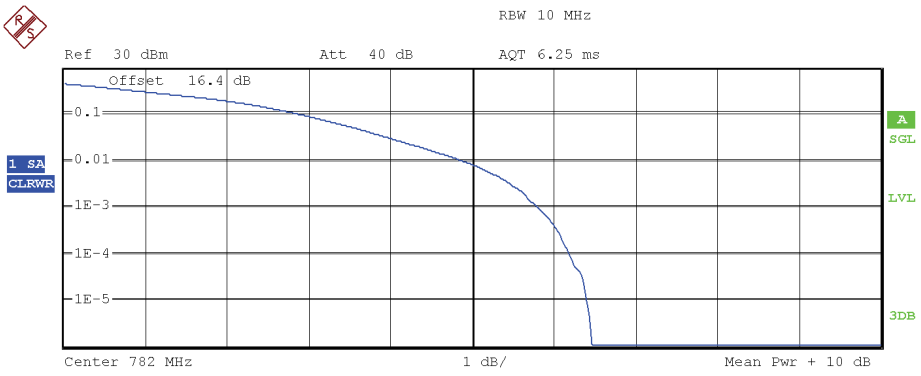


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	21.90 dBm
Peak	28.51 dBm
Crest	6.61 dB
10 %	2.90 dB
1 %	5.03 dB
.1 %	5.90 dB
.01 %	6.28 dB

LTE Band 13. Bandwidth = 10 MHz. Modulation 16 QAM. RB Size: 50. RB Offset: 0.

Middle Channel:

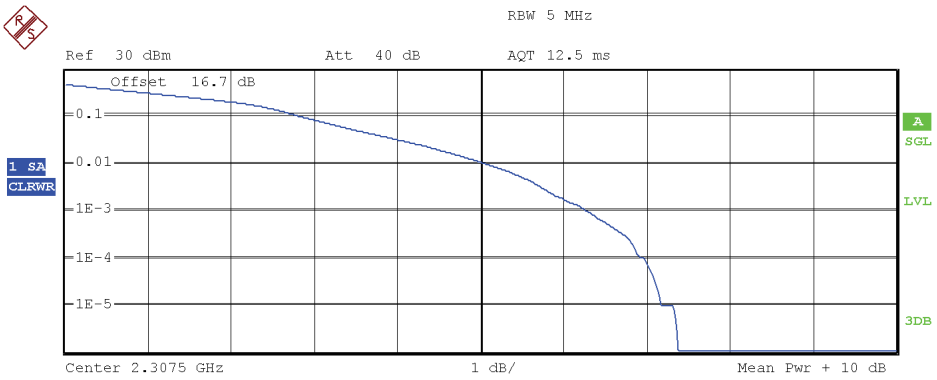


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.23 dBm
Peak	28.69 dBm
Crest	6.46 dB
10 %	2.90 dB
1 %	4.89 dB
.1 %	5.80 dB
.01 %	6.19 dB

LTE Band 30. Bandwidth = 5 MHz. Modulation 16 QAM. RB Size: 25. RB Offset: 0.

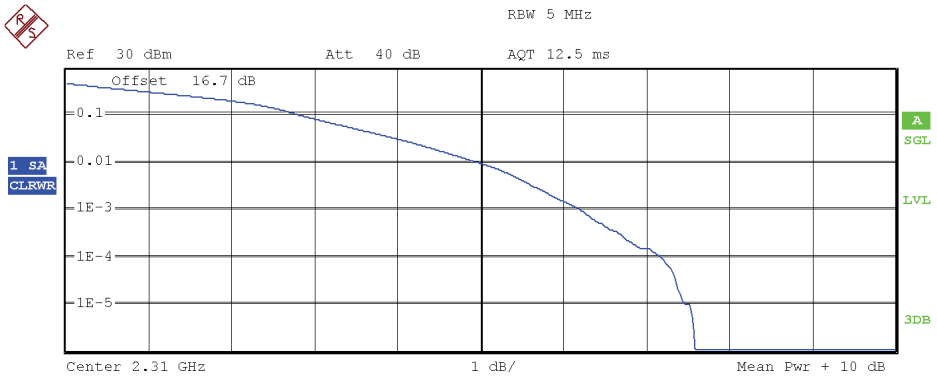
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.63 dBm
Peak	28.01 dBm
Crest	7.38 dB
10 %	2.84 dB
1 %	5.06 dB
.1 %	6.28 dB
.01 %	6.97 dB

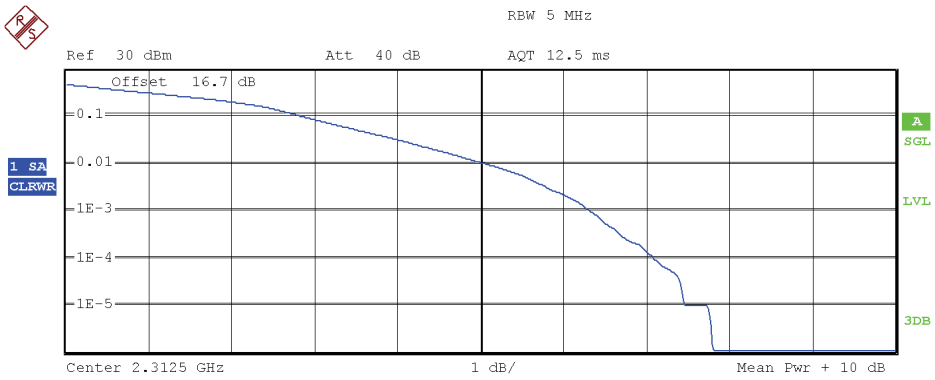
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.63 dBm
Peak	28.22 dBm
Crest	7.59 dB
10 %	2.84 dB
1 %	4.97 dB
.1 %	6.20 dB
.01 %	7.18 dB

Highest Channel:

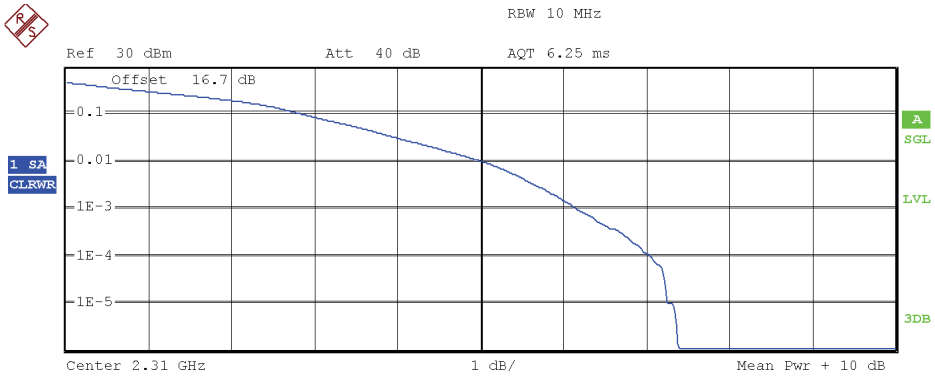


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	20.63 dBm
Peak	28.43 dBm
Crest	7.80 dB
10 %	2.85 dB
1 %	5.05 dB
.1 %	6.31 dB
.01 %	7.08 dB

LTE Band 30. Bandwidth = 10 MHz. Modulation 16 QAM. RB Size: 50. RB Offset: 0.

Middle Channel:

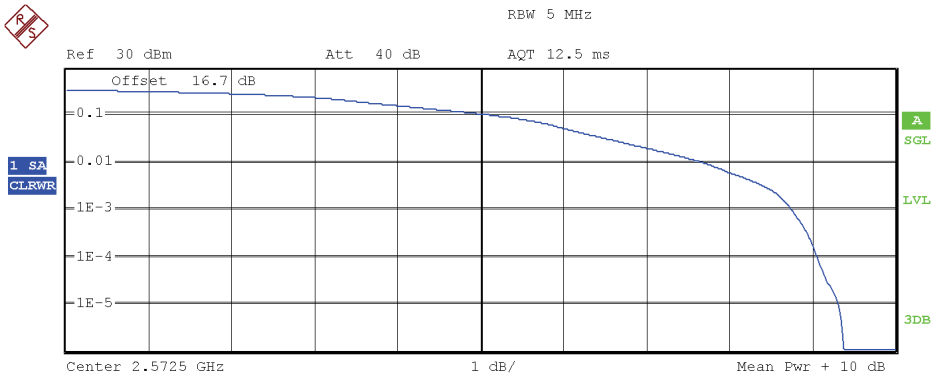


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	20.78 dBm
Peak	28.17 dBm
Crest	7.39 dB
10 %	2.85 dB
1 %	5.03 dB
.1 %	6.15 dB
.01 %	7.04 dB

LTE Band 38. Bandwidth = 5 MHz. Modulation 16 QAM. RB Size: 25. RB Offset: 0.

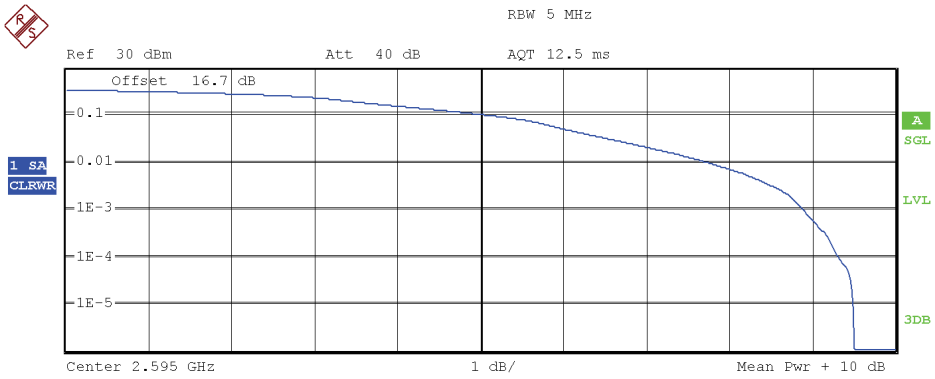
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	18.70 dBm
Peak	28.08 dBm
Crest	9.38 dB
10 %	5.16 dB
1 %	7.68 dB
.1 %	8.75 dB
.01 %	9.07 dB

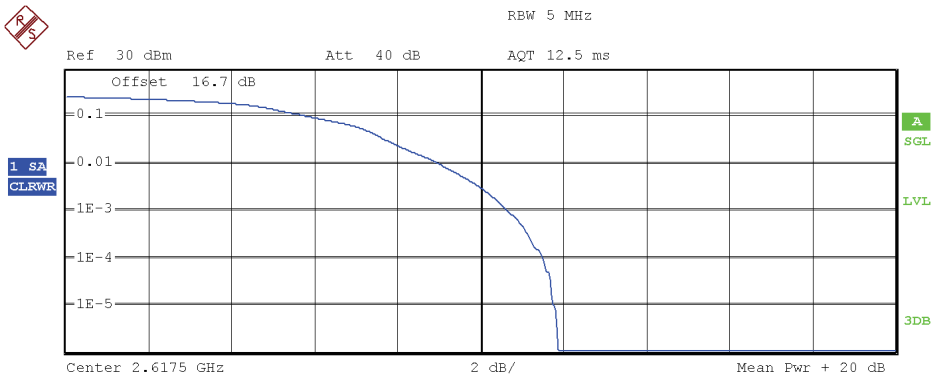
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	19.07 dBm
Peak	28.57 dBm
Crest	9.50 dB
10 %	5.11 dB
1 %	7.74 dB
.1 %	8.89 dB
.01 %	9.33 dB

Highest Channel:

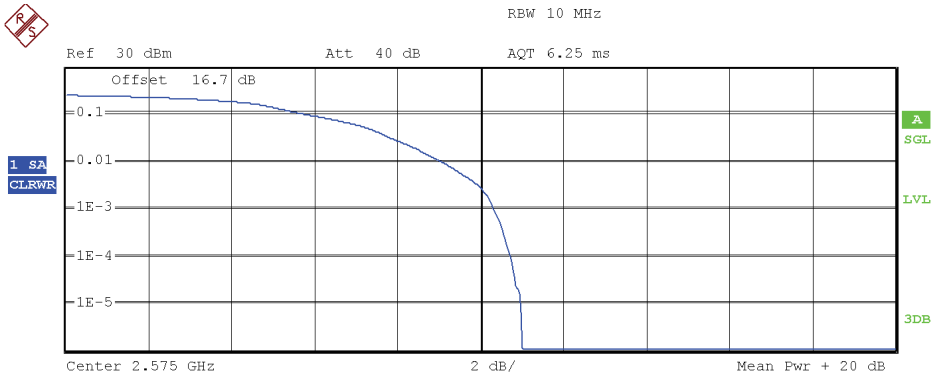


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	17.21 dBm
Peak	29.07 dBm
Crest	11.86 dB
10 %	5.83 dB
1 %	8.97 dB
.1 %	10.64 dB
.01 %	11.51 dB

LTE Band 38. Bandwidth = 10 MHz. Modulation 16 QAM. RB Size: 50. RB Offset: 0.

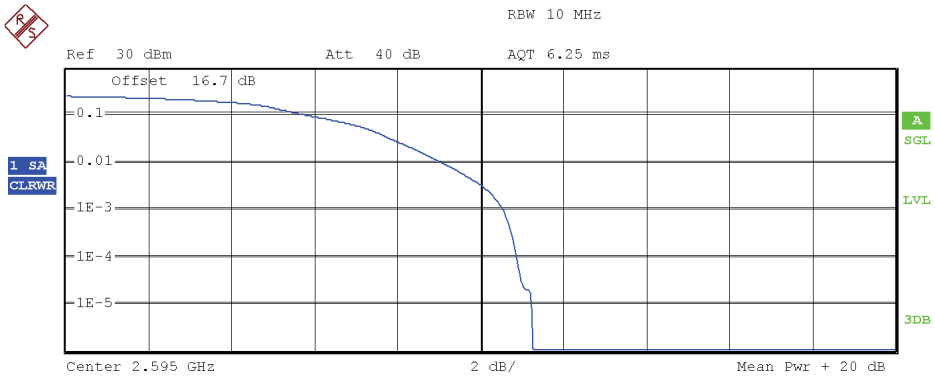
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	17.39 dBm
Peak	28.39 dBm
Crest	11.00 dB
10 %	5.80 dB
1 %	9.07 dB
.1 %	10.32 dB
.01 %	10.74 dB

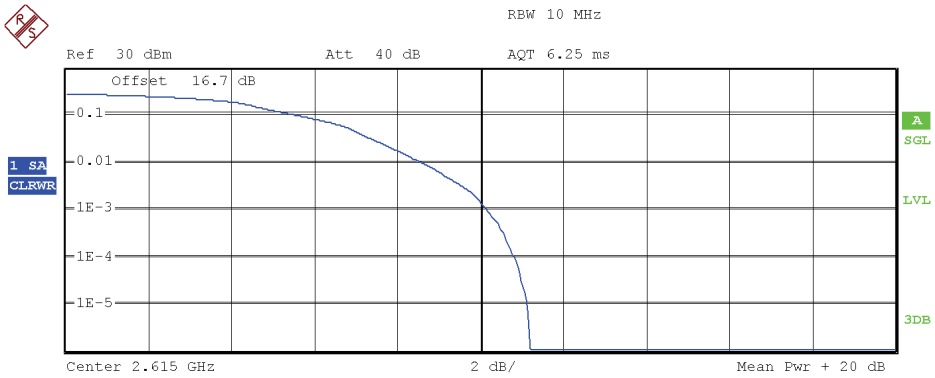
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	17.56 dBm
Peak	28.82 dBm
Crest	11.26 dB
10 %	5.83 dB
1 %	9.04 dB
.1 %	10.54 dB
.01 %	10.90 dB

Highest Channel:

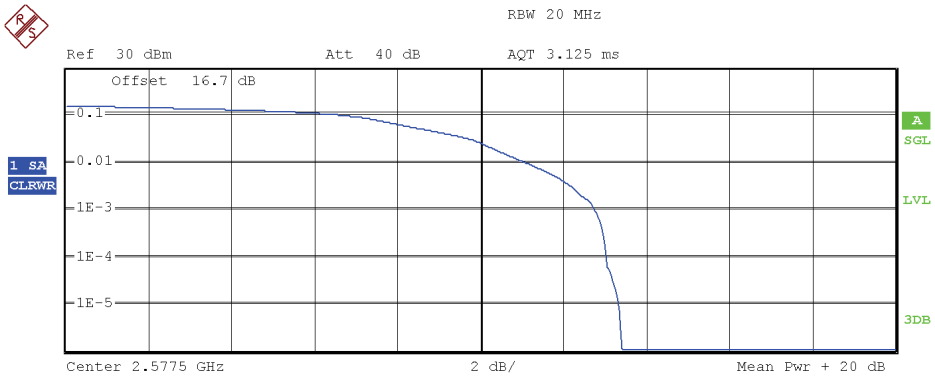


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	17.81 dBm
Peak	29.00 dBm
Crest	11.19 dB
10 %	5.58 dB
1 %	8.56 dB
.1 %	10.16 dB
.01 %	10.83 dB

LTE Band 38. Bandwidth = 15 MHz. Modulation 16 QAM. RB Size: 75. RB Offset: 0.

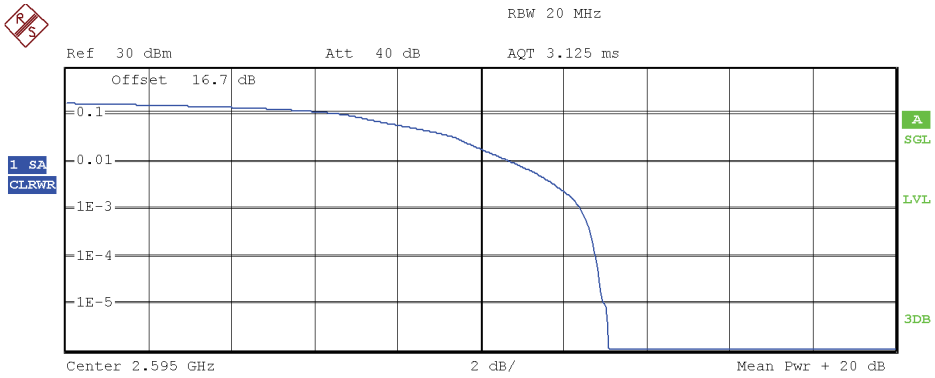
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	14.76 dBm
Peak	28.15 dBm
Crest	13.39 dB
10 %	6.70 dB
1 %	11.09 dB
.1 %	12.76 dB
.01 %	13.04 dB

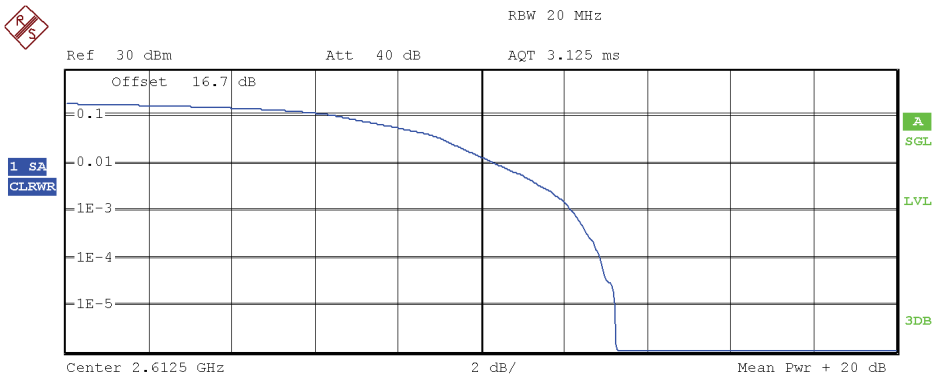
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	15.50 dBm
Peak	28.58 dBm
Crest	13.08 dB
10 %	6.70 dB
1 %	10.74 dB
.1 %	12.40 dB
.01 %	12.79 dB

Highest Channel:

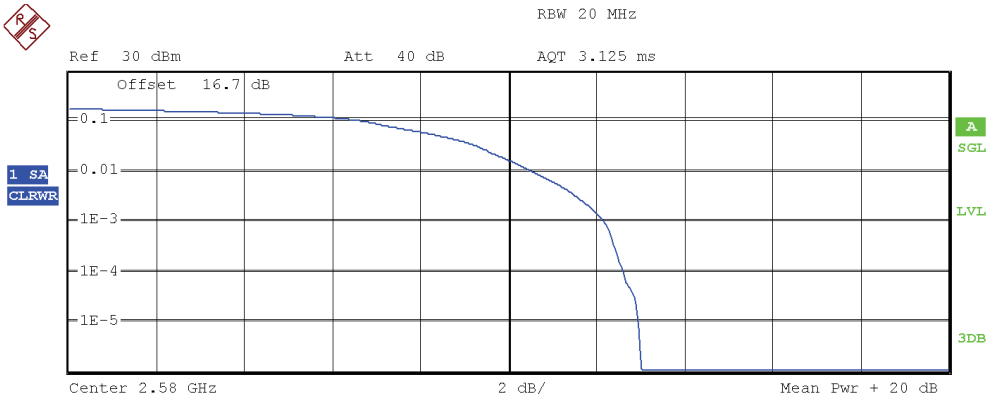


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	15.71 dBm
Peak	28.96 dBm
Crest	13.25 dB
10 %	6.57 dB
1 %	10.35 dB
.1 %	12.18 dB
.01 %	12.88 dB

LTE Band 38. Bandwidth = 20 MHz. Modulation 16 QAM. RB Size: 100. RB Offset: 0.

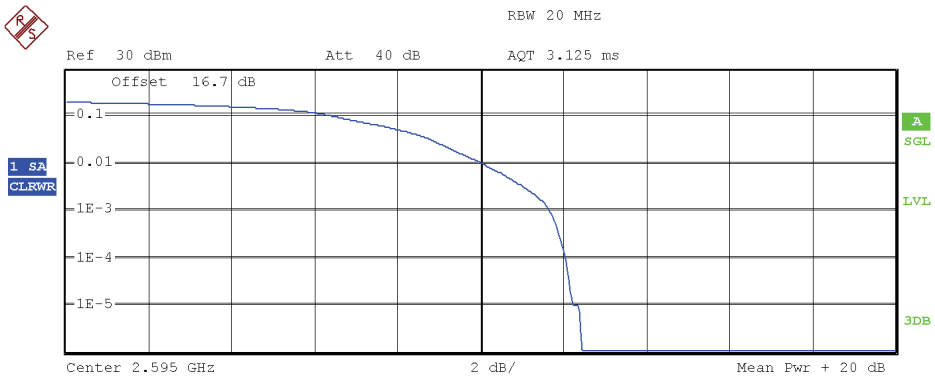
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	15.36 dBm
Peak	28.37 dBm
Crest	13.01 dB
10 %	6.73 dB
1 %	10.54 dB
.1 %	12.18 dB
.01 %	12.63 dB

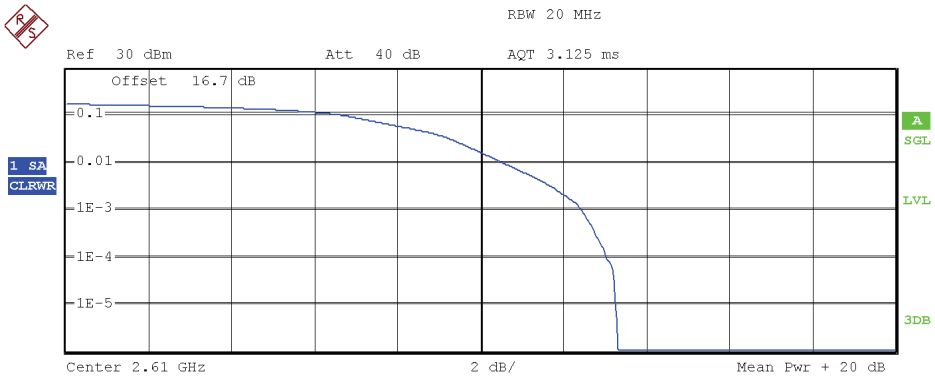
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	16.22 dBm
Peak	28.65 dBm
Crest	12.43 dB
10 %	6.47 dB
1 %	10.03 dB
.1 %	11.67 dB
.01 %	12.05 dB

Highest Channel:

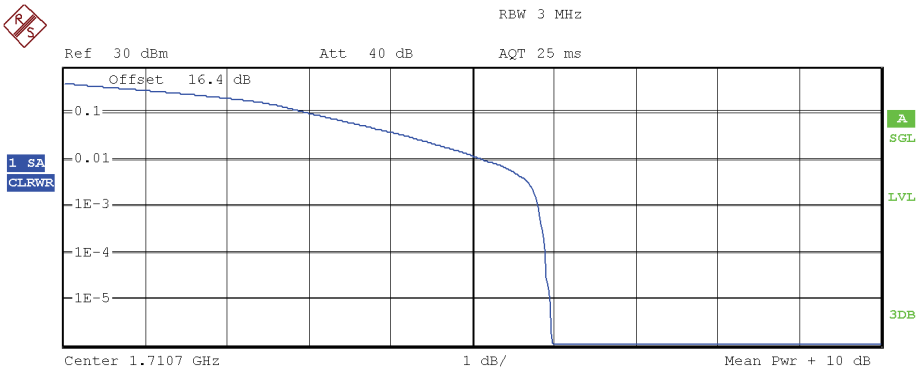


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	15.43 dBm
Peak	28.74 dBm
Crest	13.32 dB
10 %	6.73 dB
1 %	10.54 dB
.1 %	12.44 dB
.01 %	13.04 dB

LTE Band 66. Bandwidth = 1.4 MHz. Modulation 16 QAM. RB Size: 6. RB Offset: 0.

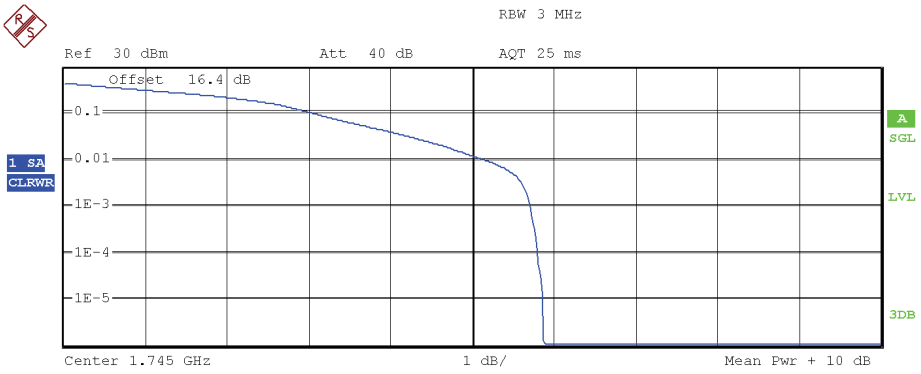
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.46 dBm
Peak	28.43 dBm
Crest	5.97 dB
10 %	3.01 dB
1 %	5.14 dB
.1 %	5.82 dB
.01 %	5.90 dB

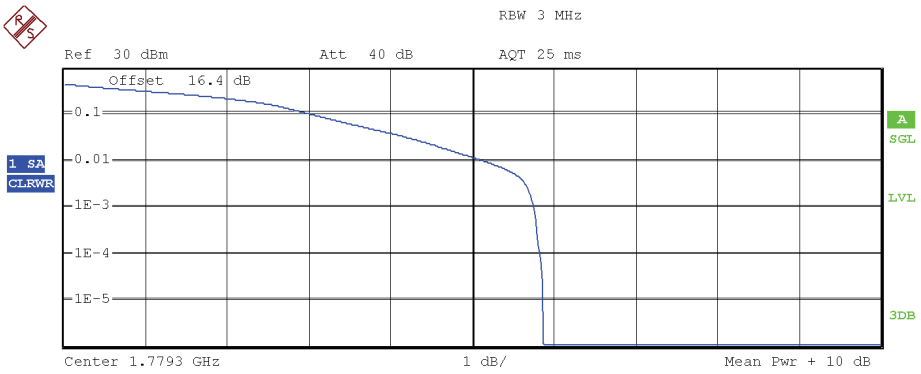
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.49 dBm
Peak	28.36 dBm
Crest	5.87 dB
10 %	3.06 dB
1 %	5.14 dB
.1 %	5.72 dB
.01 %	5.80 dB

Highest Channel:

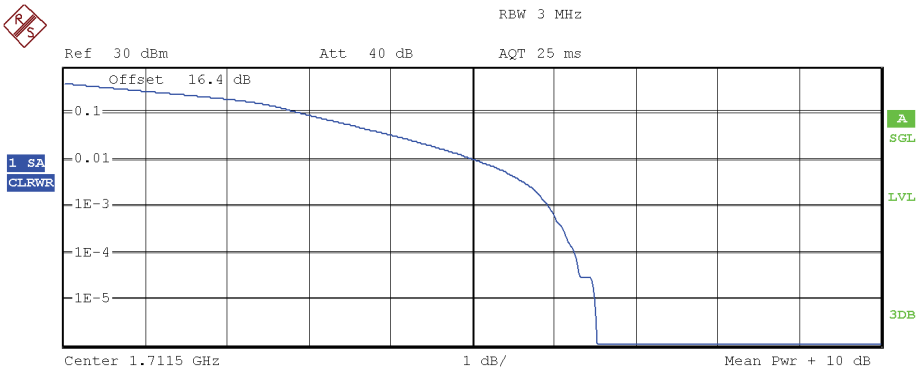


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.42 dBm
Peak	28.29 dBm
Crest	5.87 dB
10 %	3.04 dB
1 %	5.14 dB
.1 %	5.75 dB
.01 %	5.83 dB

LTE Band 66. Bandwidth = 3 MHz. Modulation 16 QAM. RB Size: 15. RB Offset: 0.

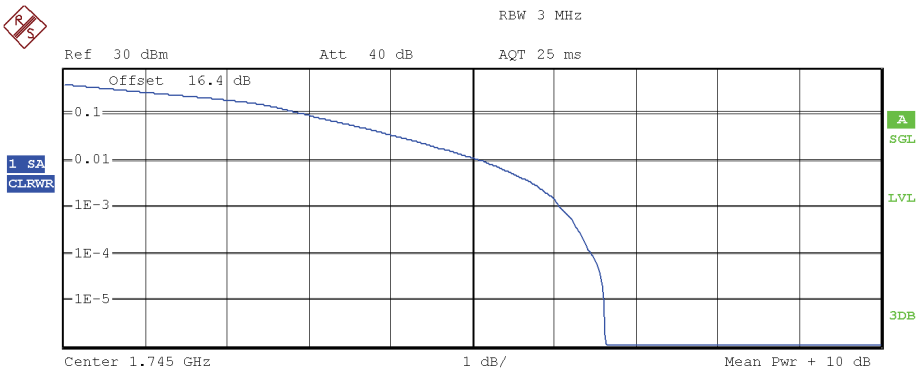
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.48 dBm
Peak	29.00 dBm
Crest	6.52 dB
10 %	2.93 dB
1 %	5.05 dB
.1 %	5.93 dB
.01 %	6.27 dB

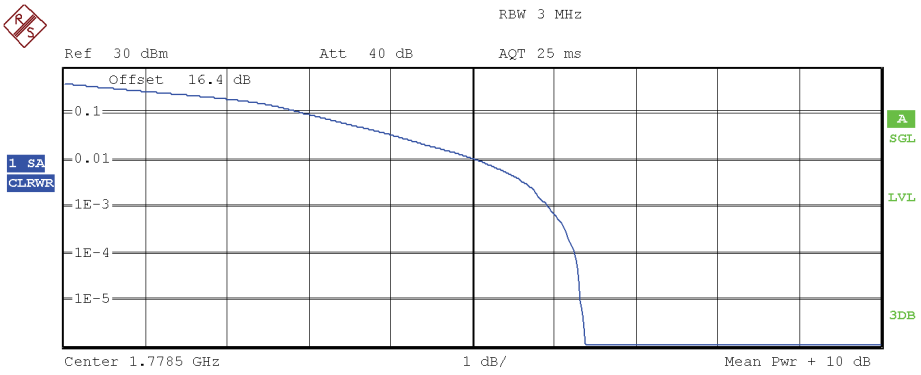
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.44 dBm
Peak	29.07 dBm
Crest	6.63 dB
10 %	2.96 dB
1 %	5.13 dB
.1 %	6.07 dB
.01 %	6.46 dB

Highest Channel:

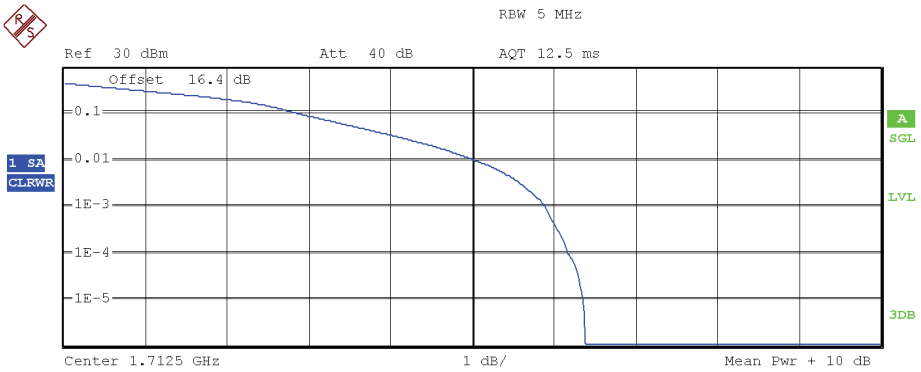


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 3.5MHz

	Trace 1
Mean	22.47 dBm
Peak	28.86 dBm
Crest	6.38 dB
10 %	2.96 dB
1 %	5.08 dB
.1 %	5.93 dB
.01 %	6.27 dB

LTE Band 66. Bandwidth = 5 MHz. Modulation 16 QAM. RB Size: 25. RB Offset: 0.

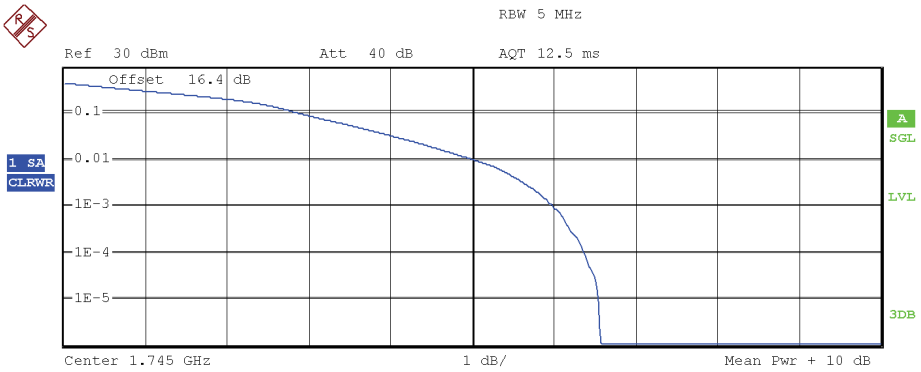
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	22.47 dBm
Peak	28.86 dBm
Crest	6.39 dB
10 %	2.87 dB
1 %	5.03 dB
.1 %	5.90 dB
.01 %	6.19 dB

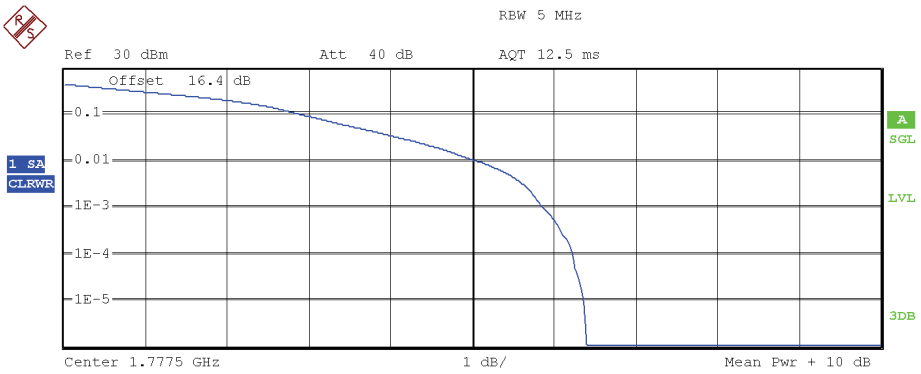
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	22.43 dBm
Peak	29.00 dBm
Crest	6.57 dB
10 %	2.90 dB
1 %	5.02 dB
.1 %	5.99 dB
.01 %	6.38 dB

Highest Channel:

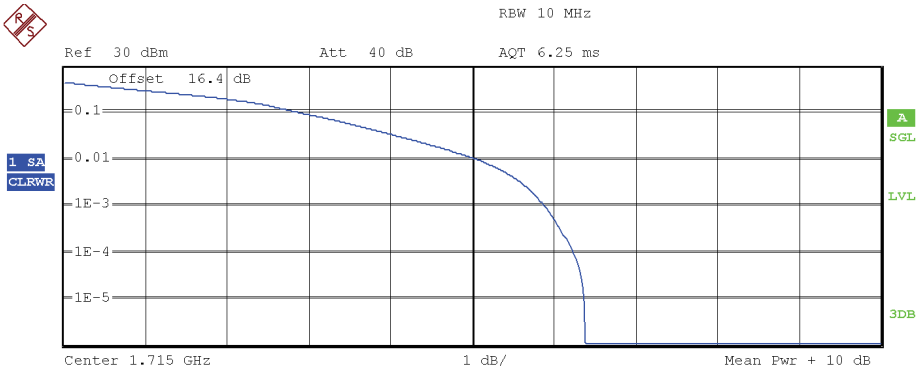


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 7.1MHz

	Trace 1
Mean	22.39 dBm
Peak	28.79 dBm
Crest	6.39 dB
10 %	2.92 dB
1 %	5.06 dB
.1 %	5.87 dB
.01 %	6.23 dB

LTE Band 66. Bandwidth = 10 MHz. Modulation 16 QAM. RB Size: 50. RB Offset: 0.

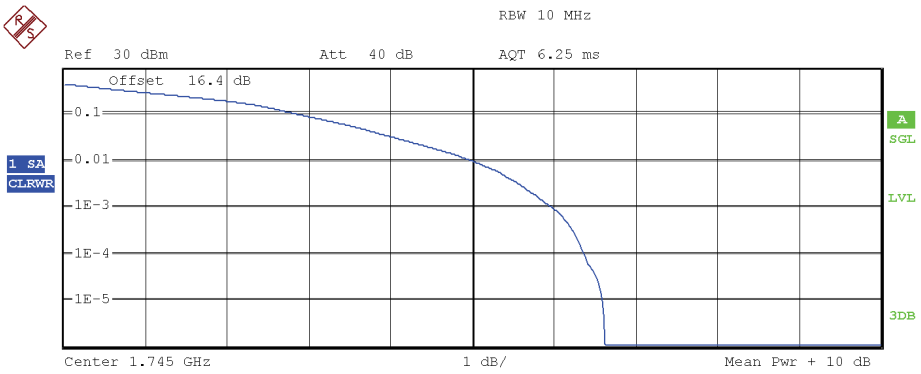
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.72 dBm
Peak	29.10 dBm
Crest	6.38 dB
10 %	2.88 dB
1 %	5.05 dB
.1 %	5.88 dB
.01 %	6.25 dB

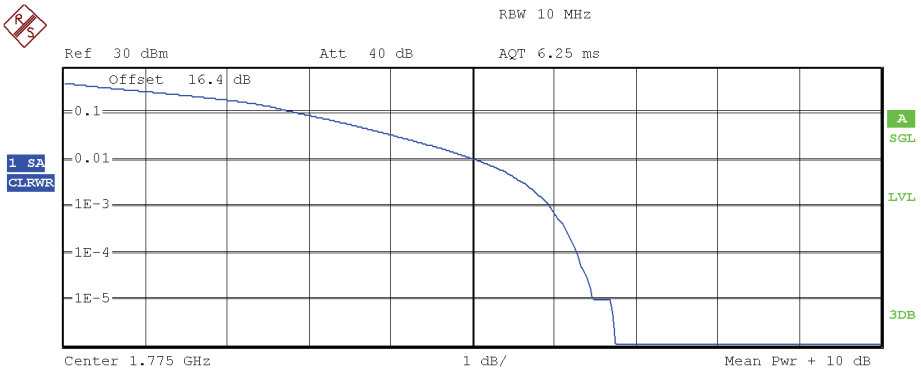
Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.75 dBm
Peak	29.38 dBm
Crest	6.62 dB
10 %	2.88 dB
1 %	5.00 dB
.1 %	5.98 dB
.01 %	6.38 dB

Highest Channel:

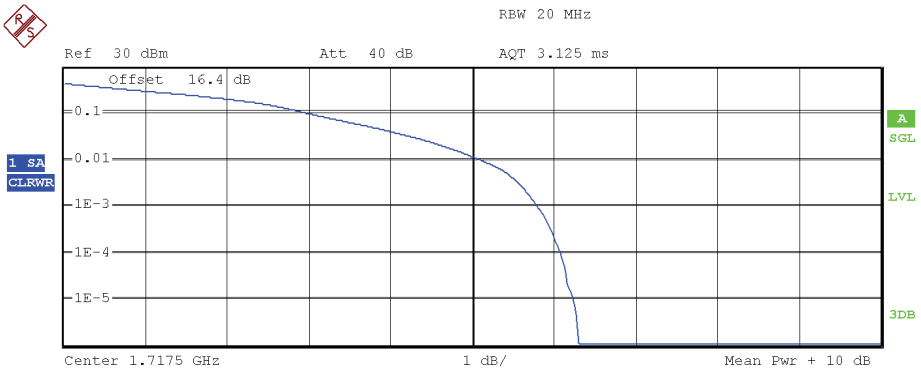


Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

	Trace 1
Mean	22.75 dBm
Peak	29.51 dBm
Crest	6.75 dB
10 %	2.90 dB
1 %	5.05 dB
.1 %	5.96 dB
.01 %	6.28 dB

LTE Band 66. Bandwidth = 15 MHz. Modulation 16 QAM. RB Size: 75. RB Offset: 0.

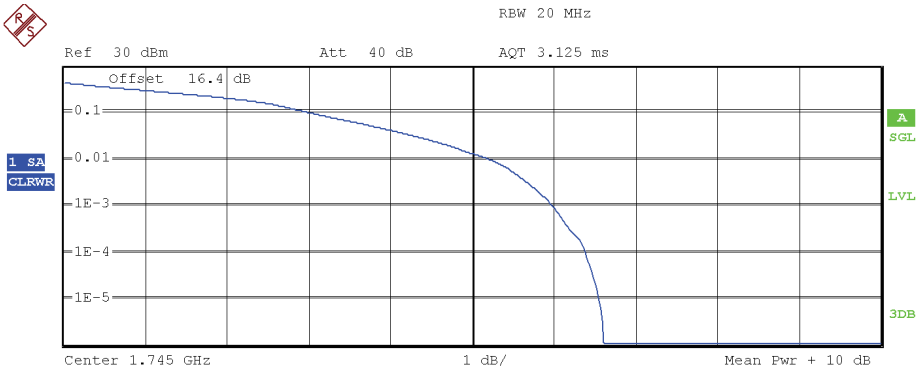
Lowest Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	22.77 dBm
Peak	29.07 dBm
Crest	6.30 dB
10 %	3.00 dB
1 %	5.10 dB
.1 %	5.80 dB
.01 %	6.09 dB

Middle Channel:



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 23.7MHz

	Trace 1
Mean	22.73 dBm
Peak	29.35 dBm
Crest	6.62 dB
10 %	3.01 dB
1 %	5.21 dB
.1 %	5.98 dB
.01 %	6.39 dB