



FCC ID: P4Q-N635A  
Report No.: T191105W01-RP10

IC: 2420C-N635A

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Rev.: 00

**FCC 47 CFR PART 27 SUBPART L  
&  
INDUSTRY CANADA RSS-130 & RSS-139**

**TEST REPORT**

**For**

**Chiron pro**

**Model No.: N635**

**Trade Name: Mitac, Mio, Navman, Magellan**

*Issued to*

<b>FCC:</b>	<b>Mitac Digital Technology Corporation No.200, Wen Hwa 2nd Rd.,Kuei Shan Dist. Taoyuan, 33383 Taiwan</b>
<b>IC:</b>	<b>MiTAC Digital Technology Corporation No.200, Wenhua 2nd Rd., Guishan Dist. Taoyuan City 333 Taiwan</b>

*Issued by*

**Compliance Certification Services Inc.  
Wugu Laboratory  
No.11, Wugong 6th Rd., Wugu Dist.,  
New Taipei City 24891, Taiwan. (R.O.C.)  
Issued Date: January 17, 2020**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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### Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	January 17, 2020	Initial Issue	ALL	Allison Chen

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## 1. TEST RESULT CERTIFICATION

**FCC Applicant:** Mitac Digital Technology Corporation  
No.200, Wen Hwa 2nd Rd.,Kuei Shan Dist. Taoyuan, 33383  
Taiwan

**IC Applicant:** MiTAC Digital Technology Corporation  
No.200, Wenhua 2nd Rd., Guishan Dist. Taoyuan City 333  
Taiwan

**Manufacturer:** MITAC COMPUTER (KUNSHAN) CO., LTD.  
No. 269, 2nd Avenue, District A, Comprehensive Free Trade  
Zone, Kunshan, Jiangsu, P.R. China

**Equipment Under Test:** Chiron pro

**Trade Name:** Mitac, Mio, Navman, Magellan

**Model No.:** N635

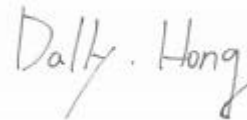
**Date of Test:** December 6 ~ 19, 2019

APPLICABLE STANDARDS	
Standard	TEST RESULT
FCC Part 27, Subpart C, L, FCC Part 2 & RSS-130 Issue 2 February 2019 & RSS-139 Issue 3 July 2015	No non-compliance noted
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Tested by:


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Kevin Tsai  
Deputy Manager  
Compliance Certification Services Inc.

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Dally Hong  
Engineer  
Compliance Certification Services Inc.

## 2. EUT DESCRIPTION

<b>Product</b>	Chiron pro	
<b>Model No.</b>	N635	
<b>Model Discrepancy</b>	Difference of the those trade names (list on this report) are just for marketing purpose only.	
<b>Trade</b>	Mitac, Mio, Navman, Magellan	
<b>Received Date</b>	November 5, 2019	
<b>Power Supply</b>	1. Power from Rechargeable Li-ion Polymer Battery. Rating: 3.7VDC, 4000mAh, 14.8Wh 2. Power from Adapter. I/P: 100-240VAC, 50/60Hz, 0.5A O/P: 5.0VDC, 2A	
<b>Modulation Technology</b>	LTE Band 13	QPSK, 16QAM
	LTE Band 7	QPSK, 16QAM
	LTE Band 4	QPSK, 16QAM
<b>Frequency Range</b>	LTE Band 13 Channel Bandwidth: 5MHz	779.5MHz ~ 784.5MHz
	LTE Band 13 Channel Bandwidth: 10MHz	782MHz
	LTE Band 7 Channel Bandwidth: 5MHz	2502.5MHz ~2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505.0MHz ~2565.0MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510.0MHz ~2560.0MHz
	LTE Band 4 Channel Bandwidth: 1.4MHz	1710.7MHz ~1754.2MHz
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.4MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715.0MHz ~1750.0MHz
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5MHz
	LTE Band 4 Channel Bandwidth: 20MHz	1720MHz ~1745MHz

<b>Transmit Power (ERP &amp; EIRP Power)</b>	LTE Band 4 Channel Bandwidth: 1.4MHz	QPSK: 25.09 dBm 16QAM: 24.28 dBm
	LTE Band 4 Channel Bandwidth: 3MHz	QPSK: 25.21 dBm 16QAM: 24.48 dBm
	LTE Band 4 Channel Bandwidth: 5MHz	QPSK: 25.25 dBm 16QAM: 24.54 dBm
	LTE Band 4 Channel Bandwidth: 10MHz	QPSK: 25.31 dBm 16QAM: 24.48 dBm
	LTE Band 4 Channel Bandwidth: 15MHz	QPSK: 25.28 dBm 16QAM: 24.58 dBm
	LTE Band 4 Channel Bandwidth: 20MHz	QPSK: 25.50 dBm 16QAM: 24.72 dBm
	LTE Band 7 Channel Bandwidth: 5MHz	QPSK 22.60 dBm 16QAM 21.97 dBm
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK 22.74 dBm 16QAM 22.08 dBm
	LTE Band 7 Channel Bandwidth: 15MHz	QPSK 22.81 dBm 16QAM 22.08 dBm
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK 23.09 dBm 16QAM 22.09 dBm
	LTE Band 13 Channel Bandwidth: 5MHz	QPSK: 20.08 dBm 16QAM: 19.37 dBm
	LTE Band 13 Channel Bandwidth: 10MHz	QPSK: 20.26 dBm 16QAM: 19.84 dBm
	<b>Antenna Specification</b>	Antenna type: Integral Band 4: 3.19 dBi Band 7: 1.75 dBi Band 13: -0.34 dBi

**Note:** 1. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3. TEST METHODOLOGY

#### 3.1 DESCRIPTION OF TEST TYPE

The EUT (model: N635) had been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

##### LTE Band 13: 777 MHz ~ 787 MHz

Three channels had been tested for each channel bandwidth.

Channel	5MHz		10MHz	
	Channel	Frequency(MHz)	Channel	Frequency(MHz)
Low CH	23205	779.5	-	-
Middle CH	23230	752.0	23230	782.0
High CH	23255	784.5	-	-

##### LTE Band 7: 2500 MHz ~ 2570 MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	5MHz		10MHz		15MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low channel (L)	20775	2502.5	20800	2505.0	20825	2507.5	20850	2510.0
Middle channel (M)	21100	2535.0	21100	2535.0	21100	2535.0	21100	2535.0
High channel (H)	21425	2567.5	21400	2565.0	21375	2562.5	21350	2560.0

##### LTE Band 4: 1710MHz ~ 1755MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	1.4MHz		3MHz		5MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	19957	1710.7	19965	1711.5	19975	1712.5
Middle CH	20175	1732.5	20175	1732.5	20175	1732.5
High CH	20393	1754.3	20384	1753.4	20375	1752.5
Channel Bandwidth	10MHz		15MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20000	1715.0	20025	1717.5	20050	1720.00
Middle CH	20175	1732.5	20175	1732.5	20175	1732.50
High CH	20350	1750.0	20325	1747.5	20300	1745.00



### 3.2 THE WORST MODE OF MEASUREMENT

#### 3.2.1 The worst mode of measurement

Radiated Emission Measurement	
Test Condition	Band edge, Emission for Unwanted and Fundamental
Power supply Mode	Mode1: EUT Power by Battery (DC 3V) Mode2: EUT Power by Adapter + Type C USB Mode3: EUT Power by Type C USB+ CarCharge (DC12V) Mode4: EUT Power by Cradle(N564)+Micro USB+Adapter Mode5: EUT Power by Cradle(N564)+Micro USB+ CarCharge (DC12V) Mode6: EUT Power by Cradle(N564) + Cable(DC 12V) Mode7: EUT Power by Cradle(N564_TN)+Micro USB+Adapter Mode8: EUT Power by Cradle(N564_TN)+Micro USB+ CarCharge (DC12V) Mode9: EUT Power by Cradle(N564_TN) + Cable(DC 12V) Mode10: EUT Power by Cradle(N635_V)+Micro USB+Adapter Mode11: EUT Power by Cradle(N635_V)+Micro USB+ CarCharge (DC12V) Mode12: EUT Power by Cradle(N635_V) + Cable(DC 12V) Mode13: EUT Power by Cradle(N635_VL)+Micro USB+Adapter Mode14: EUT Power by Cradle(N635_VL)+Micro USB+ CarCharge (DC12V) Mode15: EUT Power by Cradle(N635_VL) + Cable(DC 12V) Mode16: EUT Power by Cradle(N635_VHG) + Cable(DC 12V)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input checked="" type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode1: EUT Power by Battery (DC 3V) Mode2: EUT Power by Adapter + Type C USB Mode3: EUT Power by Type C USB+ CarCharge (DC12V) Mode4: EUT Power by Cradle(N564)+Micro USB+Adapter Mode5: EUT Power by Cradle(N564)+Micro USB+ CarCharge (DC12V) Mode6: EUT Power by Cradle(N564) + Cable(DC 12V) Mode7: EUT Power by Cradle(N564_TN)+Micro USB+Adapter Mode8: EUT Power by Cradle(N564_TN)+Micro USB+ CarCharge (DC12V) Mode9: EUT Power by Cradle(N564_TN) + Cable(DC 12V) Mode10: EUT Power by Cradle(N635_V)+Micro USB+Adapter Mode11: EUT Power by Cradle(N635_V)+Micro USB+ CarCharge (DC12V) Mode12: EUT Power by Cradle(N635_V) + Cable(DC 12V) Mode13: EUT Power by Cradle(N635_VL)+Micro USB+Adapter Mode14: EUT Power by Cradle(N635_VL)+Micro USB+ CarCharge (DC12V) Mode15: EUT Power by Cradle(N635_VL) + Cable(DC 12V) Mode16: EUT Power by Cradle(N635_VHG) + Cable(DC 12V)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

**Remark:**

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X, Y, Z and two polarity, for radiated measurement. The worst case(Z-Plane) were recorded in this report

## 4. TEST SUMMARY

FCC Standard Section	IC Standard Section	Report Section	Test Item	Result
-	-	2	Antenna Requirement	Pass
27.50(d), 27.50(b), 27.50(h)	RSS-130, section 4.4 RSS-139, section 6.5	8.1	ERP and EIRP Measurement	Pass
2.1055, 27.54	RSS-130 section 4.3 RSS-139 section 6.4	8.2	Frequency Stability v.s. temperature measurement	N/A
2.1049	RSS-GEN 6.7	8.3	Occupied Bandwidth Measurement	N/A
27.50(d)	RSS-130 section 4.4 RSS-133, section 6.4	8.4	Peak to Average Ratio	N/A
27.53(c), 27.53(g), 27.53(h)	RSS-130 section 4.6 RSS-139 section 6.5	8.5	Conducted Band Edge	N/A
27.53(c), 27.53(g), 27.53(h)	RSS-130 section 4.6 RSS-139 section 6.5	8.6	Conducted Spurious Emission	N/A
27.53(c), 27.53(g), 27.53(h)	RSS-130 section 4.6 RSS-139 section 6.5	8.7	Spurious Radiation Measurement	Pass

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## 5. INSTRUMENT CALIBRATION

### 5.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

### 5.2 MEASUREMENT EQUIPMENT USED

#### Equipment Used for Emissions Measurement

*Remark: Each piece of equipment is scheduled for calibration once a year.*

RF Conducted Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
Coaxial Cable	Woken	WC12	CC003	06/28/2019	06/27/2020
Power Divider	Solvang Technology	STI08-0015	008	08/06/2019	08/05/2020
Signal Analyzer	R&S	FSV 40	101073	09/25/2019	09/24/2020
Wideband Radio Communication Tester	R&S	CMW 500	116875	07/29/2019	07/28/2020
Software	N/A				

3M 966 Chamber Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/26/2019	02/25/2020
Bilog Antenna	Sunol Sciences	JB3	A030105	07/26/2019	07/25/2020
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/26/2019	02/25/2020
Coaxial Cable	EMCI	EMC105	190914+25111	09/20/2019	09/19/2020
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/30/2019	01/29/2020
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	10/04/2019	10/03/2020
Loop Ant	COM-POWER	AL-130	121051	03/22/2019	03/21/2020
Pre-Amplifier	EMEC	EM330	060609	02/26/2019	02/25/2020
Pre-Amplifier	HP	8449B	3008A00965	02/26/2019	02/25/2020
Wideband Radio Communication Tester	R&S	CMW 500	116875	07/29/2019	07/28/2020
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	05/29/2019	05/28/2020
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180413				

### 5.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87

**Remark:** This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

## 6. FACILITIES AND ACCREDITATIONS

### 6.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

- No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.  
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029
- No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)  
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045
- No.81-1, Lane 210, Bade 2nd Rd., Luchu Hsiang, Taoyuan Hsien 338, Taiwan  
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10: 2013 and CISPR Publication 22.

### 6.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

## 7. SETUP OF EQUIPMENT UNDER TEST

### 7.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

### 7.2 SUPPORT EQUIPMENT

No	Equipment	Brand	Model	Series No.	FCC ID
	N/A				

**Remark:**

1. *All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
2. *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

## 8. TEST PROCEDURE AND RESULT

### 8.1 ERP & EIRP MEASUREMENT

#### LIMIT

According to FCC §2.1046

**FCC 27.50 (d) (4):** Fixed, mobile, and portable (handheld) stations operating in the 1710-1755MHz band and mobile and portable stations operating in the 1695-1710MHz and 1755-1780MHz bands are limited to 1 watt EIRP.

**FCC 27.50 (b) (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 (h):** 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.

RSS-130 § 4.4,

The e.i.r.p. shall not exceed 50 watts for mobile equipment or for outdoor fixed subscriber equipment, nor shall it exceed 5 watts for portable equipment or for indoor fixed subscriber equipment.

RSS-139 § 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.

## TEST PROCEDURES

### CONDUCTED POWER MEASUREMENT:

1. The transmitter output power was connected to the call box.
2. Set EUT at maximum output power via call box.
3. Set Call box at lowest, middle and highest channels for each band and modulation.

## TEST RESULTS

*No non-compliance noted.*

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## TEST RESULTS

### LTE Band 4

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
1.4	QPSK	1 RB	0	1710.7	19957	21.79	24.98
				1732.5	20175	21.62	24.81
				1754.3	20393	21.90	25.09
			2	1710.7	19957	21.66	24.85
				1732.5	20175	21.66	24.85
				1754.3	20393	21.68	24.87
			5	1710.7	19957	21.44	24.63
				1732.5	20175	21.77	24.96
				1754.3	20393	21.60	24.79
		3 RB	0	1710.7	19957	20.50	23.69
				1732.5	20175	20.68	23.87
				1754.3	20393	20.56	23.75
			2	1710.7	19957	20.46	23.65
				1732.5	20175	20.53	23.72
				1754.3	20393	20.54	23.73
			3	1710.7	19957	20.68	23.87
				1732.5	20175	20.53	23.72
				1754.3	20393	20.61	23.80
6RB	1710.7	19957	20.67	23.86			
	1732.5	20175	20.95	24.14			
	1754.3	20393	20.75	23.94			
1.4	16-QAM	1 RB	0	1710.7	19957	20.94	24.13
				1732.5	20175	20.74	23.93
				1754.3	20393	21.09	24.28
			2	1710.7	19957	20.85	24.04
				1732.5	20175	20.61	23.80
				1754.3	20393	20.71	23.90
			5	1710.7	19957	20.76	23.95
				1732.5	20175	20.92	24.11
				1754.3	20393	21.05	24.24
		3 RB	0	1710.7	19957	20.08	23.27
				1732.5	20175	20.07	23.26
				1754.3	20393	20.29	23.48
			2	1710.7	19957	20.04	23.23
				1732.5	20175	20.32	23.51
				1754.3	20393	20.02	23.21
			3	1710.7	19957	20.38	23.57
				1732.5	20175	20.16	23.35
				1754.3	20393	20.11	23.30
6RB	1710.7	19957	20.13	23.32			
	1732.5	20175	20.13	23.32			
	1754.3	20393	20.23	23.42			



1.4	64-QAM	1 RB	0	1710.7	19957	20.13	23.32
				1732.5	20175	20.31	23.50
				1754.3	20393	20.22	23.41
			2	1710.7	19957	20.21	23.40
				1732.5	20175	20.06	23.25
				1754.3	20393	20.51	23.70
			5	1710.7	19957	20.23	23.42
				1732.5	20175	20.27	23.46
				1754.3	20393	20.22	23.41
		3 RB	0	1710.7	19957	19.17	22.36
				1732.5	20175	19.20	22.39
				1754.3	20393	19.32	22.51
			2	1710.7	19957	19.09	22.28
				1732.5	20175	19.16	22.35
				1754.3	20393	19.24	22.43
			3	1710.7	19957	19.22	22.41
				1732.5	20175	19.06	22.25
				1754.3	20393	19.33	22.52
		6RB	1710.7	19957	19.24	22.43	
			1732.5	20175	19.30	22.49	
			1754.3	20393	19.25	22.44	

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	#VALUE!	EIRP (dBm)
3	QPSK	1 RB	0	1711.5	19965	21.83	25.02
				1732.5	20175	21.71	24.90
				1753.5	20385	22.02	25.21
			7	1711.5	19965	21.78	24.97
				1732.5	20175	21.71	24.90
				1753.5	20385	21.81	25.00
			14	1711.5	19965	21.58	24.77
				1732.5	20175	21.97	25.16
				1753.5	20385	21.66	24.85
		8 RB	0	1711.5	19965	20.61	23.80
				1732.5	20175	20.81	24.00
				1753.5	20385	20.78	23.97
			4	1711.5	19965	20.66	23.85
				1732.5	20175	20.66	23.85
				1753.5	20385	20.71	23.90
			7	1711.5	19965	20.74	23.93
				1732.5	20175	20.58	23.77
				1753.5	20385	20.76	23.95
		15RB	1711.5	19965	20.77	23.96	
			1732.5	20175	20.99	24.18	
			1753.5	20385	20.85	24.04	
3	16-QAM	1 RB	0	1711.5	19965	21.03	24.22
				1732.5	20175	20.95	24.14
				1753.5	20385	21.29	24.48
			7	1711.5	19965	20.89	24.08
				1732.5	20175	20.80	23.99
				1753.5	20385	20.81	24.00
			14	1711.5	19965	20.81	24.00
				1732.5	20175	21.10	24.29
				1753.5	20385	21.20	24.39
		8 RB	0	1711.5	19965	19.78	22.97
				1732.5	20175	19.74	22.93
				1753.5	20385	19.97	23.16
			4	1711.5	19965	19.72	22.91
				1732.5	20175	20.01	23.20
				1753.5	20385	19.57	22.76
			7	1711.5	19965	19.91	23.10
				1732.5	20175	19.82	23.01
				1753.5	20385	19.77	22.96
		15RB	1711.5	19965	19.73	22.92	
			1732.5	20175	19.76	22.95	
			1753.5	20385	19.83	23.02	

3	64-QAM	1 RB	0	1711.5	19965	20.32	23.51
				1732.5	20175	20.43	23.62
				1753.5	20385	20.29	23.48
			7	1711.5	19965	20.38	23.57
				1732.5	20175	20.25	23.44
				1753.5	20385	20.61	23.80
			14	1711.5	19965	20.32	23.51
				1732.5	20175	20.36	23.55
				1753.5	20385	20.33	23.52
		8 RB	0	1711.5	19965	19.23	22.42
				1732.5	20175	19.32	22.51
				1753.5	20385	19.36	22.55
			4	1711.5	19965	19.29	22.48
				1732.5	20175	19.24	22.43
				1753.5	20385	19.29	22.48
			7	1711.5	19965	19.13	22.32
				1732.5	20175	19.25	22.44
				1753.5	20385	19.36	22.55
		15RB	1711.5	19965	19.27	22.46	
			1732.5	20175	19.34	22.53	
			1753.5	20385	19.43	22.62	

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
5	QPSK	1 RB	0	1712.5	19975	21.88	25.07
				1732.5	20175	21.89	25.08
				1752.5	20375	22.06	25.25
			12	1712.5	19975	21.82	25.01
				1732.5	20175	21.85	25.04
				1752.5	20375	21.85	25.04
			24	1712.5	19975	21.69	24.88
				1732.5	20175	22.05	25.24
				1752.5	20375	21.81	25.00
		12 RB	0	1712.5	19975	20.82	24.01
				1732.5	20175	20.88	24.07
				1752.5	20375	20.96	24.15
			6	1712.5	19975	20.81	24.00
				1732.5	20175	20.81	24.00
				1752.5	20375	20.82	24.01
			13	1712.5	19975	20.82	24.01
				1732.5	20175	20.77	23.96
				1752.5	20375	20.90	24.09
		25RB	1712.5	19975	20.95	24.14	
			1732.5	20175	21.07	24.26	
			1752.5	20375	21.01	24.20	
5	16-QAM	1 RB	0	1712.5	19975	21.13	24.32
				1732.5	20175	21.07	24.26
				1752.5	20375	21.35	24.54
			12	1712.5	19975	20.98	24.17
				1732.5	20175	20.98	24.17
				1752.5	20375	20.92	24.11
			24	1712.5	19975	21.01	24.20
				1732.5	20175	21.27	24.46
				1752.5	20375	21.31	24.50
		12 RB	0	1712.5	19975	19.83	23.02
				1732.5	20175	19.88	23.07
				1752.5	20375	20.07	23.26
			6	1712.5	19975	19.86	23.05
				1732.5	20175	20.04	23.23
				1752.5	20375	19.72	22.91
			13	1712.5	19975	20.06	23.25
				1732.5	20175	19.99	23.18
				1752.5	20375	19.90	23.09
		25RB	1712.5	19975	19.82	23.01	
			1732.5	20175	19.82	23.01	
			1752.5	20375	20.02	23.21	

5	64-QAM	1 RB	0	1712.5	19975	20.45	23.64
				1732.5	20175	20.64	23.83
				1752.5	20375	20.51	23.70
			12	1712.5	19975	20.53	23.72
				1732.5	20175	20.46	23.65
				1752.5	20375	20.65	23.84
			24	1712.5	19975	20.38	23.57
				1732.5	20175	20.58	23.77
				1752.5	20375	20.51	23.70
		12 RB	0	1712.5	19975	19.41	22.60
				1732.5	20175	19.53	22.72
				1752.5	20375	19.39	22.58
			6	1712.5	19975	19.39	22.58
				1732.5	20175	19.35	22.54
				1752.5	20375	19.33	22.52
			13	1712.5	19975	19.24	22.43
				1732.5	20175	19.47	22.66
				1752.5	20375	19.40	22.59
		25RB	1712.5	19975	19.43	22.62	
			1732.5	20175	19.51	22.70	
			1752.5	20375	19.49	22.68	

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)	
10	QPSK	1 RB	0	1715	20000	22.04	25.23	
				1732.5	20175	22.00	25.19	
				1750	20350	22.09	25.28	
			25	1715	20000	21.64	24.83	
					20175	21.87	25.06	
					20350	21.68	24.87	
				49	1715	20000	21.92	25.11
					1732.5	20175	22.12	25.31
					1750	20350	21.94	25.13
		25 RB	0	1715	20000	20.92	24.11	
				1732.5	20175	21.05	24.24	
				1750	20350	21.06	24.25	
			12	1715	20000	20.72	23.91	
					20175	20.87	24.06	
					20350	20.99	24.18	
				25	1715	20000	20.91	24.10
					1732.5	20175	20.97	24.16
					1750	20350	21.03	24.22
		50RB	1715	20000	20.94	24.13		
			1732.5	20175	20.99	24.18		
			1750	20350	21.07	24.26		
10	16-QAM	1 RB	0	1715	20000	21.06	24.25	
				1732.5	20175	21.22	24.41	
				1750	20350	21.29	24.48	
			25	1715	20000	21.13	24.32	
					20175	21.04	24.23	
					20350	21.28	24.47	
				49	1715	20000	21.20	24.39
					1732.5	20175	21.27	24.46
					1750	20350	21.20	24.39
		25 RB	0	1715	20000	19.83	23.02	
				1732.5	20175	20.20	23.39	
				1750	20350	19.98	23.17	
			12	1715	20000	19.80	22.99	
					20175	19.98	23.17	
					20350	19.90	23.09	
				25	1715	20000	19.91	23.10
					1732.5	20175	20.09	23.28
					1750	20350	19.99	23.18
		50RB	1715	20000	19.79	22.98		
			1732.5	20175	20.14	23.33		
			1750	20350	20.06	23.25		

10	64-QAM	1 RB	0	1715	20000	20.68	23.87
				1732.5	20175	20.71	23.90
				1750	20350	20.80	23.99
			25	1715	20000	20.36	23.55
				1732.5	20175	20.52	23.71
				1750	20350	20.46	23.65
			49	1715	20000	20.63	23.82
				1732.5	20175	20.59	23.78
				1750	20350	20.85	24.04
		25 RB	0	1715	20000	19.48	22.67
				1732.5	20175	19.58	22.77
				1750	20350	19.50	22.69
			12	1715	20000	19.52	22.71
				1732.5	20175	19.32	22.51
				1750	20350	19.40	22.59
			25	1715	20000	19.42	22.61
				1732.5	20175	19.35	22.54
				1750	20350	19.53	22.72
		50RB	1715	20000	19.49	22.68	
			1732.5	20175	19.36	22.55	
			1750	20350	19.64	22.83	

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
15	QPSK	1 RB	0	1717.5	20025	22.02	25.21
				1732.5	20175	22.04	25.23
				1747.5	20325	22.09	25.28
			36	1717.5	20025	21.88	25.07
				1732.5	20175	21.88	25.07
				1747.5	20325	21.92	25.11
			74	1717.5	20025	21.89	25.08
				1732.5	20175	22.08	25.27
				1747.5	20325	21.98	25.17
		36 RB	0	1717.5	20025	20.90	24.09
				1732.5	20175	21.00	24.19
				1747.5	20325	21.16	24.35
			18	1717.5	20025	20.94	24.13
				1732.5	20175	21.00	24.19
				1747.5	20325	20.91	24.10
			37	1717.5	20025	20.94	24.13
				1732.5	20175	20.91	24.10
				1747.5	20325	20.96	24.15
		75RB	1717.5	20025	21.09	24.28	
			1732.5	20175	21.11	24.30	
			1747.5	20325	21.23	24.42	
15	16-QAM	1 RB	0	1717.5	20025	21.20	24.39
				1732.5	20175	21.27	24.46
				1747.5	20325	21.38	24.57
			36	1717.5	20025	21.09	24.28
				1732.5	20175	21.07	24.26
				1747.5	20325	21.10	24.29
			74	1717.5	20025	21.18	24.37
				1732.5	20175	21.39	24.58
				1747.5	20325	21.37	24.56
		36 RB	0	1717.5	20025	19.90	23.09
				1732.5	20175	20.09	23.28
				1747.5	20325	20.23	23.42
			18	1717.5	20025	19.98	23.17
				1732.5	20175	20.12	23.31
				1747.5	20325	19.91	23.10
			37	1717.5	20025	20.10	23.29
				1732.5	20175	20.11	23.30
				1747.5	20325	20.04	23.23
		75RB	1717.5	20025	19.96	23.15	
			1732.5	20175	19.96	23.15	
			1747.5	20325	20.11	23.30	



15	64-QAM	1 RB	0	1717.5	20025	20.53	23.72
				1732.5	20175	20.79	23.98
				1747.5	20325	20.69	23.88
			36	1717.5	20025	20.59	23.78
				1732.5	20175	20.55	23.74
				1747.5	20325	20.69	23.88
			74	1717.5	20025	20.56	23.75
				1732.5	20175	20.80	23.99
				1747.5	20325	20.66	23.85
		36 RB	0	1717.5	20025	19.59	22.78
				1732.5	20175	19.64	22.83
				1747.5	20325	19.58	22.77
			18	1717.5	20025	19.42	22.61
				1732.5	20175	19.47	22.66
				1747.5	20325	19.53	22.72
			37	1717.5	20025	19.43	22.62
				1732.5	20175	19.50	22.69
				1747.5	20325	19.51	22.70
		75RB	1717.5	20025	19.61	22.80	
			1732.5	20175	19.63	22.82	
			1747.5	20325	19.63	22.82	

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)		
20	QPSK	1 RB	0	1720	20050	22.15	25.34		
				1732.5	20175	<b>22.31</b>	25.50		
				1745	20300	22.23	25.42		
			50	50	1720	20050	21.94	25.13	
					1732.5	20175	21.96	25.15	
					1745	20300	22.02	25.21	
			99	99	1720	20050	22.11	25.30	
					1732.5	20175	22.2	25.39	
					1745	20300	22.18	25.37	
		50 RB	0	0	1720	20050	21.09	24.28	
					1732.5	20175	<b>21.24</b>	24.43	
					1745	20300	21.17	24.36	
			25	25	1720	20050	20.99	24.18	
					1732.5	20175	21.07	24.26	
					1745	20300	21.05	24.24	
			50	50	1720	20050	21.03	24.22	
					1732.5	20175	21.1	24.29	
					1745	20300	21.15	24.34	
		100RB	100RB	1720	20050	21.14	24.33		
				1732.5	20175	<b>21.33</b>	24.52		
				1745	20300	21.29	24.48		
		20	16-QAM	1 RB	0	1720	20050	21.35	24.54
						1732.5	20175	21.42	24.61
						1745	20300	21.53	24.72
50	50				1720	20050	21.25	24.44	
					1732.5	20175	21.25	24.44	
					1745	20300	21.32	24.51	
99	99				1720	20050	21.32	24.51	
					1732.5	20175	21.42	24.61	
					1745	20300	21.41	24.60	
50 RB	0			0	1720	20050	20.09	23.28	
					1732.5	20175	20.21	23.40	
					1745	20300	20.36	23.55	
	25			25	1720	20050	20.08	23.27	
					1732.5	20175	20.37	23.56	
					1745	20300	20.11	23.30	
	50			50	1720	20050	20.43	23.62	
					1732.5	20175	20.18	23.37	
					1745	20300	20.2	23.39	
100RB	100RB			1720	20050	20.15	23.34		
				1732.5	20175	20.17	23.36		
				1745	20300	20.25	23.44		

20	64-QAM	1 RB	0	1720	20050	20.75	23.94
				1732.5	20175	20.84	24.03
				1745	20300	20.9	24.09
			50	1720	20050	20.67	23.86
				1732.5	20175	20.67	23.86
				1745	20300	20.72	23.91
			99	1720	20050	20.78	23.97
				1732.5	20175	20.87	24.06
				1745	20300	20.88	24.07
		50 RB	0	1720	20050	19.63	22.82
				1732.5	20175	19.68	22.87
				1745	20300	19.75	22.94
			25	1720	20050	19.55	22.74
				1732.5	20175	19.65	22.84
				1745	20300	19.6	22.79
			50	1720	20050	19.61	22.80
				1732.5	20175	19.62	22.81
				1745	20300	19.69	22.88
			100RB	1720	20050	19.66	22.85
				1732.5	20175	19.67	22.86
				1745	20300	19.76	22.95

### LTE Band 7

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
5	QPSK	1 RB	0	2502.5	20775	23.00	22.60
				2535	21100	22.95	22.55
				2567.5	21425	22.89	22.49
			12	2502.5	20775	22.78	22.38
				2535	21100	22.59	22.19
				2567.5	21425	22.58	22.18
			24	2502.5	20775	22.75	22.35
				2535	21100	22.61	22.21
				2567.5	21425	22.88	22.48
		12 RB	0	2502.5	20775	22.15	21.75
				2535	21100	21.74	21.34
				2567.5	21425	21.65	21.25
			6	2502.5	20775	22.03	21.63
				2535	21100	21.30	20.90
				2567.5	21425	21.66	21.26
			13	2502.5	20775	22.12	21.72
				2535	21100	21.43	21.03
				2567.5	21425	21.58	21.18
		25RB	2502.5	20775	22.24	21.84	
			2535	21100	21.76	21.36	
			2567.5	21425	21.82	21.42	
5	16-QAM	1 RB	0	2502.5	20775	22.37	21.97
				2535	21100	22.13	21.73
				2567.5	21425	22.06	21.66
			12	2502.5	20775	22.13	21.73
				2535	21100	21.67	21.27
				2567.5	21425	21.80	21.40
			24	2502.5	20775	22.16	21.76
				2535	21100	21.84	21.44
				2567.5	21425	22.14	21.74
		12 RB	0	2502.5	20775	21.16	20.76
				2535	21100	20.74	20.34
				2567.5	21425	20.76	20.36
			6	2502.5	20775	21.00	20.60
				2535	21100	20.59	20.19
				2567.5	21425	20.70	20.30
			13	2502.5	20775	21.07	20.67
				2535	21100	20.58	20.18
				2567.5	21425	20.88	20.48
		25RB	2502.5	20775	21.33	20.93	
			2535	21100	20.70	20.30	
			2567.5	21425	20.77	20.37	

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5	64-QAM	1 RB	0	2502.5	20775	21.25	20.85
				2535	21100	21.09	20.69
				2567.5	21425	21.09	20.69
			12	2502.5	20775	21.17	20.77
				2535	21100	20.80	20.40
				2567.5	21425	20.98	20.58
			24	2502.5	20775	21.38	20.98
				2535	21100	21.28	20.88
				2567.5	21425	21.11	20.71
		12 RB	0	2502.5	20775	20.27	19.87
				2535	21100	20.04	19.64
				2567.5	21425	20.06	19.66
			6	2502.5	20775	20.19	19.79
				2535	21100	19.90	19.50
				2567.5	21425	19.89	19.49
			13	2502.5	20775	20.26	19.86
				2535	21100	19.83	19.43
				2567.5	21425	19.96	19.56
			25RB	2502.5	20775	20.25	19.85
				2535	21100	19.65	19.25
				2567.5	21425	20.00	19.60

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
10	QPSK	1 RB	0	2505	20800	23.14	22.74
				2535	21100	23.05	22.65
				2565	21400	22.94	22.54
			25	2505	20800	22.89	22.49
				2535	21100	22.72	22.32
				2565	21400	22.67	22.27
			49	2505	20800	22.92	22.52
				2535	21100	22.70	22.30
				2565	21400	22.95	22.55
		25 RB	0	2505	20800	22.24	21.84
				2535	21100	21.79	21.39
				2565	21400	21.87	21.47
			12	2505	20800	22.14	21.74
				2535	21100	21.54	21.14
				2565	21400	21.88	21.48
			25	2505	20800	22.19	21.79
				2535	21100	21.63	21.23
				2565	21400	21.73	21.33
		50RB	2505	20800	22.36	21.96	
			2535	21100	21.86	21.46	
			2565	21400	21.99	21.59	
10	16-QAM	1 RB	0	2505	20800	22.48	22.08
				2535	21100	22.20	21.80
				2565	21400	22.18	21.78
			25	2505	20800	22.34	21.94
				2535	21100	21.77	21.37
				2565	21400	22.04	21.64
			49	2505	20800	22.34	21.94
				2535	21100	21.94	21.54
				2565	21400	22.23	21.83
		25 RB	0	2505	20800	21.40	21.00
				2535	21100	20.82	20.42
				2565	21400	20.95	20.55
			12	2505	20800	21.13	20.73
				2535	21100	20.74	20.34
				2565	21400	20.85	20.45
			25	2505	20800	21.16	20.76
				2535	21100	20.67	20.27
				2565	21400	20.94	20.54
		50RB	2505	20800	21.43	21.03	
			2535	21100	20.79	20.39	
			2565	21400	20.93	20.53	

10	64-QAM	1 RB	0	2505	20800	21.34	20.94
				2535	21100	21.33	20.93
				2565	21400	21.33	20.93
			25	2505	20800	21.32	20.92
				2535	21100	21.01	20.61
				2565	21400	21.13	20.73
			49	2505	20800	21.50	21.10
				2535	21100	21.42	21.02
				2565	21400	21.22	20.82
		25 RB	0	2505	20800	20.46	20.06
				2535	21100	20.14	19.74
				2565	21400	20.13	19.73
			12	2505	20800	20.25	19.85
				2535	21100	20.03	19.63
				2565	21400	20.00	19.60
			25	2505	20800	20.38	19.98
				2535	21100	20.03	19.63
				2565	21400	20.08	19.68
			50RB	2505	20800	20.19	19.79
				2535	21100	19.87	19.47
				2565	21400	20.15	19.75

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
15	QPSK	1 RB	0	2507.5	20825	23.21	22.81
				2535	21100	23.12	22.72
				2562.5	21375	23.12	22.72
			36	2507.5	20825	23.13	22.73
				2535	21100	22.86	22.46
				2562.5	21375	22.81	22.41
			74	2507.5	20825	23.10	22.70
				2535	21100	22.92	22.52
				2562.5	21375	23.17	22.77
		36 RB	0	2507.5	20825	22.33	21.93
				2535	21100	21.95	21.55
				2562.5	21375	22.09	21.69
			18	2507.5	20825	22.34	21.94
				2535	21100	21.78	21.38
				2562.5	21375	21.97	21.57
			37	2507.5	20825	22.31	21.91
				2535	21100	21.80	21.40
				2562.5	21375	21.97	21.57
		75RB	2507.5	20825	22.48	22.08	
			2535	21100	22.06	21.66	
			2562.5	21375	22.07	21.67	
15	16-QAM	1 RB	0	2507.5	20825	22.07	21.67
				2535	21100	22.28	21.88
				2562.5	21375	22.34	21.94
			36	2507.5	20825	22.43	22.03
				2535	21100	22.01	21.61
				2562.5	21375	22.12	21.72
			74	2507.5	20825	22.48	22.08
				2535	21100	22.11	21.71
				2562.5	21375	22.41	22.01
		36 RB	0	2507.5	20825	21.47	21.07
				2535	21100	20.98	20.58
				2562.5	21375	21.07	20.67
			18	2507.5	20825	21.32	20.92
				2535	21100	20.90	20.50
				2562.5	21375	20.91	20.51
			37	2507.5	20825	21.32	20.92
				2535	21100	20.90	20.50
				2562.5	21375	21.08	20.68
		75RB	2507.5	20825	21.50	21.10	
			2535	21100	20.93	20.53	
			2562.5	21375	21.07	20.67	



15	64-QAM	1 RB	0	2507.5	20825	21.28	20.88
				2535	21100	21.44	21.04
				2562.5	21375	21.46	21.06
			36	2507.5	20825	21.25	20.85
				2535	21100	21.17	20.77
				2562.5	21375	21.31	20.91
			74	2507.5	20825	21.44	21.04
				2535	21100	21.44	21.04
				2562.5	21375	21.42	21.02
		36 RB	0	2507.5	20825	20.39	19.99
				2535	21100	20.33	19.93
				2562.5	21375	20.21	19.81
			18	2507.5	20825	20.46	20.06
				2535	21100	20.10	19.70
				2562.5	21375	20.22	19.82
			37	2507.5	20825	20.21	19.81
				2535	21100	20.17	19.77
				2562.5	21375	20.20	19.80
		75RB	2507.5	20825	20.46	20.06	
			2535	21100	20.09	19.69	
			2562.5	21375	20.26	19.86	

BW(MHz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	EIRP (dBm)
20	QPSK	1 RB	0	2510	20850	<b>23.49</b>	23.09
				2535	21100	23.44	23.04
				2560	21350	23.47	23.07
			50	2510	20850	23.21	22.81
				2535	21100	22.99	22.59
				2560	21350	23.01	22.61
			99	2510	20850	23.34	22.94
				2535	21100	23.12	22.72
				2560	21350	23.23	22.83
		50 RB	0	2510	20850	<b>22.46</b>	22.06
				2535	21100	22.42	22.02
				2560	21350	22.37	21.97
			25	2510	20850	22.43	22.03
				2535	21100	22.01	21.61
				2560	21350	22.08	21.68
			50	2510	20850	22.38	21.98
				2535	21100	22.01	21.61
				2560	21350	22.13	21.73
		100RB	2510	20850	<b>22.49</b>	22.09	
			2535	21100	22.14	21.74	
			2560	21350	22.24	21.84	
20	16-QAM	1 RB	0	2510	20850	22.49	22.09
				2535	21100	22.37	21.97
				2560	21350	22.48	22.08
			50	2510	20850	22.48	22.08
				2535	21100	22.07	21.67
				2560	21350	22.24	21.84
			99	2510	20850	22.5	22.10
				2535	21100	22.29	21.89
				2560	21350	22.47	22.07
		50 RB	0	2510	20850	21.5	21.10
				2535	21100	21.1	20.70
				2560	21350	21.24	20.84
			25	2510	20850	21.38	20.98
				2535	21100	21.08	20.68
				2560	21350	21.12	20.72
			50	2510	20850	21.42	21.02
				2535	21100	21.08	20.68
				2560	21350	21.18	20.78
		100RB	2510	20850	21.5	21.10	
			2535	21100	21.11	20.71	
			2560	21350	21.25	20.85	

20	64-QAM	1 RB	0	2510	20850	21.37	20.97
				2535	21100	21.44	21.04
				2560	21350	21.5	21.10
			50	2510	20850	21.36	20.96
				2535	21100	21.28	20.88
				2560	21350	21.36	20.96
			99	2510	20850	21.44	21.04
				2535	21100	21.49	21.09
				2560	21350	21.42	21.02
		50 RB	0	2510	20850	20.39	19.99
				2535	21100	20.38	19.98
				2560	21350	20.45	20.05
			25	2510	20850	20.47	20.07
				2535	21100	20.3	19.90
				2560	21350	20.3	19.90
			50	2510	20850	20.21	19.81
				2535	21100	20.22	19.82
				2560	21350	20.37	19.97
			100RB	2510	20850	20.47	20.07
				2535	21100	20.32	19.92
				2560	21350	20.47	20.07

**LTE Band 13**

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	ERP (dBm)
5	QPSK	1 RB	0	779.5	23205	22.57	20.08
				782	23230	22.31	19.82
				784.5	23255	22.55	20.06
			12	779.5	23205	21.58	19.09
				782	23230	21.31	18.82
				784.5	23255	21.38	18.89
			24	779.5	23205	21.52	19.03
				782	23230	21.86	19.37
				784.5	23255	21.51	19.02
		12 RB	0	779.5	23205	21.79	19.30
				782	23230	20.34	17.85
				784.5	23255	20.34	17.85
			6	779.5	23205	20.43	17.94
				782	23230	20.50	18.01
				784.5	23255	20.73	18.24
			13	779.5	23205	20.53	18.04
				782	23230	20.65	18.16
				784.5	23255	20.43	17.94
		25RB	779.5	23205	20.35	17.86	
			782	23230	20.41	17.92	
			784.5	23255	20.33	17.84	
5	16-QAM	1 RB	0	779.5	23205	21.86	19.37
				782	23230	21.52	19.03
				784.5	23255	21.81	19.32
			12	779.5	23205	20.97	18.48
				782	23230	20.57	18.08
				784.5	23255	20.70	18.21
			24	779.5	23205	20.83	18.34
				782	23230	21.25	18.76
				784.5	23255	20.84	18.35
		12 RB	0	779.5	23205	21.00	18.51
				782	23230	19.59	17.10
				784.5	23255	19.65	17.16
			6	779.5	23205	19.73	17.24
				782	23230	19.83	17.34
				784.5	23255	20.10	17.61
			13	779.5	23205	19.93	17.44
				782	23230	19.87	17.38
				784.5	23255	19.73	17.24
		25RB	779.5	23205	19.75	17.26	
			782	23230	19.74	17.25	
			784.5	23255	19.71	17.22	

5	64-QAM	1 RB	0	779.5	23205	20.12	17.63
				782	23230	20.87	18.38
				784.5	23255	20.42	17.93
			12	779.5	23205	20.27	17.78
				782	23230	19.83	17.34
				784.5	23255	19.92	17.43
			24	779.5	23205	20.20	17.71
				782	23230	20.65	18.16
				784.5	23255	20.19	17.70
		12 RB	0	779.5	23205	19.45	16.96
				782	23230	18.97	16.48
				784.5	23255	18.98	16.49
			6	779.5	23205	18.98	16.49
				782	23230	19.15	16.66
				784.5	23255	19.42	16.93
			13	779.5	23205	19.29	16.80
				782	23230	19.20	16.71
				784.5	23255	18.94	16.45
		25RB	779.5	23205	19.13	16.64	
			782	23230	19.02	16.53	
			784.5	23255	19.00	16.51	

BW(Mhz)	Modulation	RB Size	RB Offset	Frequency (MHz)	Channel	Conducted power (dBm)	ERP (dBm)	
10	QPSK	1 RB	0	782	23230	<b>22.75</b>	20.26	
			25	782	23230	22.38	19.89	
			49	782	23230	22.61	20.12	
		25 RB	0	782	23230	<b>21.64</b>	19.15	
			12	782	23230	21.52	19.03	
			25	782	23230	21.57	19.08	
		50RB			782	23230	<b>21.59</b>	19.10
		16-QAM	1 RB	0	782	23230	21.97	19.48
				25	782	23230	21.59	19.10
	49			782	23230	21.92	19.43	
	25 RB		0	782	23230	20.52	18.03	
			12	782	23230	20.52	18.03	
			25	782	23230	20.59	18.10	
	50RB			782	23230	20.59	18.10	
	64-QAM		1 RB	0	782	23230	20.93	18.44
				25	782	23230	20.58	18.09
		49		782	23230	20.84	18.35	
		25 RB	0	782	23230	19.61	17.12	
			12	782	23230	19.48	16.99	
			25	782	23230	19.59	17.10	
		50RB			782	23230	19.55	17.06

## 8.2 FREQUENCY STABILITY MEASUREMENT

### LIMIT

According to the FCC part 27.54 shall be tested the frequency stability. The rule is defined that "The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### According to RSS -133 section 6.3.

The carrier frequency shall not depart from the reference frequency, in excess of  $\pm 2.5$  ppm for mobile stations and  $\pm 1.0$  ppm for base stations.

In lieu of meeting the above stability values, the test report may show that the frequency stability is sufficient to ensure that the emission bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

#### According to RSS -139 section 6.4.

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

### TEST PROCEDURE

Use Anritsu 8820 with frequency Error measurement capability.

Temp = -35 to +65°C

Voltage= 85% to 115% of the nominal value for AC powered equipment.

**NOTE:** *The frequency error was recorded frequency error from the communication simulator.*

Report No.: T191105W01-RP10

## TEST RESULTS

### FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT: LTE Band 13

Reference Frequency: LTE Band 13 Max Bandwidth QPSK, 782MHz				
Limit: $\pm 2.5$ ppm = 1955 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature (°C)	(Hz)	(ppm)	(ppm)
120	65	0.03	0.000038	+/- 2.5
120	50	0.02	0.000026	
120	40	0.01	0.000013	
120	30	0.00	0.000000	
120	20	0.01	0.000013	
120	10	0.02	0.000026	
120	0	-0.01	-0.000013	
120	-10	0.01	0.000013	
120	-20	0.00	0.000000	
120	-35	0.00	0.000000	

Reference Frequency: LTE Band 13 Max Bandwidth 16QAM, 782MHz				
Limit: $\pm 2.5$ ppm = 1955 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature (°C)	(Hz)	(ppm)	(ppm)
120	65	0.04	0.000051	+/- 2.5
120	50	0.01	0.000013	
120	40	0.01	0.000013	
120	30	0.02	0.000026	
120	20	0.01	0.000013	
120	10	0.03	0.000038	
120	0	0.02	0.000026	
120	-10	0.01	0.000013	
120	-20	0.00	0.000000	
120	-35	-0.01	-0.000013	

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**LTE Band 7**

Reference Frequency: LTE Band 7 Max Bandwidth QPSK, 2535MHz				
Limit: $\pm 2.5$ ppm = 6337.5 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature (°C)	(Hz)	(ppm)	(ppm)
120	65	-0.01	-0.000004	+/- 2.5
120	50	0.01	0.000004	
120	40	0.02	0.000008	
120	30	0.00	0.000000	
120	20	0.01	0.000004	
120	10	0.01	0.000004	
120	0	-0.01	-0.000004	
120	-10	0.00	0.000000	
120	-20	0.00	0.000000	
120	-35	0.01	0.000004	

Reference Frequency: LTE Band 7 Max Bandwidth 16QAM, 2535MHz				
Limit: $\pm 2.5$ ppm = 6337.5Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature (°C)	(Hz)	(ppm)	(ppm)
120	65	0.02	0.000008	+/- 2.5
120	50	0.01	0.000004	
120	40	-0.01	-0.000004	
120	30	0.00	0.000000	
120	20	0.01	0.000004	
120	10	0.02	0.000008	
120	0	0.00	0.000000	
120	-10	0.01	0.000004	
120	-20	-0.01	-0.000004	
120	-35	0.00	0.000000	



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**LTE Band 4**

Reference Frequency: LTE Band 4 Max Bandwidth QPSK, 1732.5 MHz				
Limit: $\pm 2.5$ ppm = 4331.25 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature ( $^{\circ}$ C)	(Hz)	(ppm)	(ppm)
120	65	-0.01	-0.000006	+/- 2.5
120	50	0.01	0.000006	
120	40	0.01	0.000006	
120	30	0.00	0.000000	
120	20	0.00	0.000000	
120	10	0.01	0.000006	
120	0	-0.01	-0.000006	
120	-10	-0.01	-0.000006	
120	-20	-0.02	-0.000012	
120	-35	0.00	0.000000	

Reference Frequency: LTE Band 4 Max Bandwidth 16QAM, 1732.5 MHz				
Limit: $\pm 2.5$ ppm = 4331.25 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature ( $^{\circ}$ C)	(Hz)	(ppm)	(ppm)
120	65	-0.01	-0.000006	+/- 2.5
120	50	-0.01	-0.000006	
120	40	0.01	0.000006	
120	30	0.00	0.000000	
120	20	0.01	0.000006	
120	10	-0.01	-0.000006	
120	0	0.01	0.000006	
120	-10	-0.02	-0.000012	
120	-20	0.01	0.000006	
120	-35	0.00	0.000000	

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**FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT:  
LTE Band 13**

Reference Frequency: LTE Band 13 Max Bandwidth QPSK, 782MHz				
Limit: $\pm 2.5$ ppm = 1955 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature (°C)	(Hz)	(ppm)	(ppm)
102	20	-0.01	-0.000013	+/- 2.5
120	20	0.00	0.000000	
138	20	0.01	0.000018	

Reference Frequency: LTE Band 13 Max Bandwidth 16QAM, 782MHz				
Limit: $\pm 2.5$ ppm = 1955 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature (°C)	(Hz)	(ppm)	(ppm)
102	20	0.00	0.000000	+/- 2.5
120	20	0.01	0.000013	
138	20	0.01	0.000013	

Report No.: T191105W01-RP10

**LTE Band 7**

Reference Frequency: LTE Band 7 Max Bandwidth QPSK, 2535MHz				
Limit: $\pm 2.5$ ppm = 6337.5 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature ( $^{\circ}$ C)	(Hz)	(ppm)	(ppm)
102	20	0.03	0.000042	+/- 2.5
120	20	0.01	0.000000	
138	20	0.02	0.000028	

Reference Frequency: LTE Band 7 Max Bandwidth 16QAM, 2535MHz				
Limit: $\pm 2.5$ ppm = 6337.5 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature ( $^{\circ}$ C)	(Hz)	(ppm)	(ppm)
102	20	-0.01	0.000028	+/- 2.5
120	20	0.00	0.000000	
138	20	0.00	0.000014	

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### LTE Band 4

Reference Frequency: LTE Band 4 Max Bandwidth QPSK, 1732.5 MHz				
Limit: $\pm 2.5$ ppm = 4331.25 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature ( $^{\circ}$ C)	(Hz)	(ppm)	(ppm)
102	20	0.00	0.000000	+/- 2.5
120	20	-0.01	-0.000006	
138	20	0.00	0.000000	

Reference Frequency: LTE Band 4 Max Bandwidth 16QAM, 1732.5 MHz				
Limit: $\pm 2.5$ ppm = 4331.25 Hz				
Power Supply	Environment	Frequency Error	Frequency Error	Limit (ppm)
Vdc	Temperature ( $^{\circ}$ C)	(Hz)	(ppm)	(ppm)
102	20	-0.01	-0.000006	+/- 2.5
120	20	0.00	0.000000	
138	20	-0.01	-0.000006	

### 8.3 OCCUPIED BANDWIDTH MEASUREMENT

#### LIMITS

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 power of a given emission.

#### TEST PROCEDURES

KDB 971168 D01 Power Meas License Digital Systems – Section 4.2

1. The occupied bandwidth was measured with the spectrum analyzer at the lowest, middle and highest channels in each band and different modulation. The 99% and -26dB bandwidth was measured and recorded.
2. RBW = 1-5% of the expected OBW
3. VBW  $\geq$  3 x RBW
4. Detector = Peak
5. Trace mode = max. hold

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## TEST RESULTS

### LTE Band 13

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	OBW(99%)(MHz)	26 dB Bandwidth(MHz)
13	5	Middle	752.0	QPSK	4.4717	4.935
		Middle	752.0	16QAM	4.4717	4.848
	10	Middle	752.0	QPSK	8.9435	9.783
		Middle	752.0	16QAM	8.9435	9.609

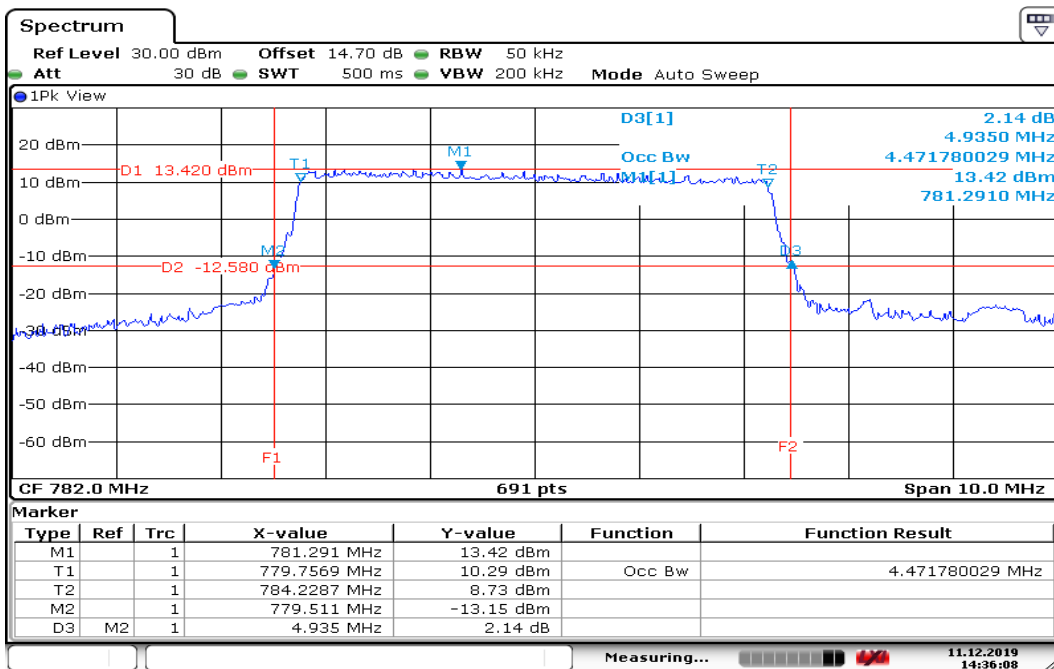
### LTE Band 7

Band	BW (MHz)	Channel	Frequency (MHz)	Mode	OBW(99%)(MHz)	26 dB Bandwidth(MHz)
7	5	Middle	2535.0	QPSK	4.4862	4.935
		Middle	2535.0	16QAM	4.4717	4.863
	10	Middle	2535.0	QPSK	8.9435	9.725
		Middle	2535.0	16QAM	8.9435	9.667
	15	Middle	2535.0	QPSK	13.4587	14.701
		Middle	2535.0	16QAM	13.4153	14.57
	20	Middle	2535.0	QPSK	18.0028	19.665
		Middle	2535.0	16QAM	18.0028	19.838

### LTE Band 4

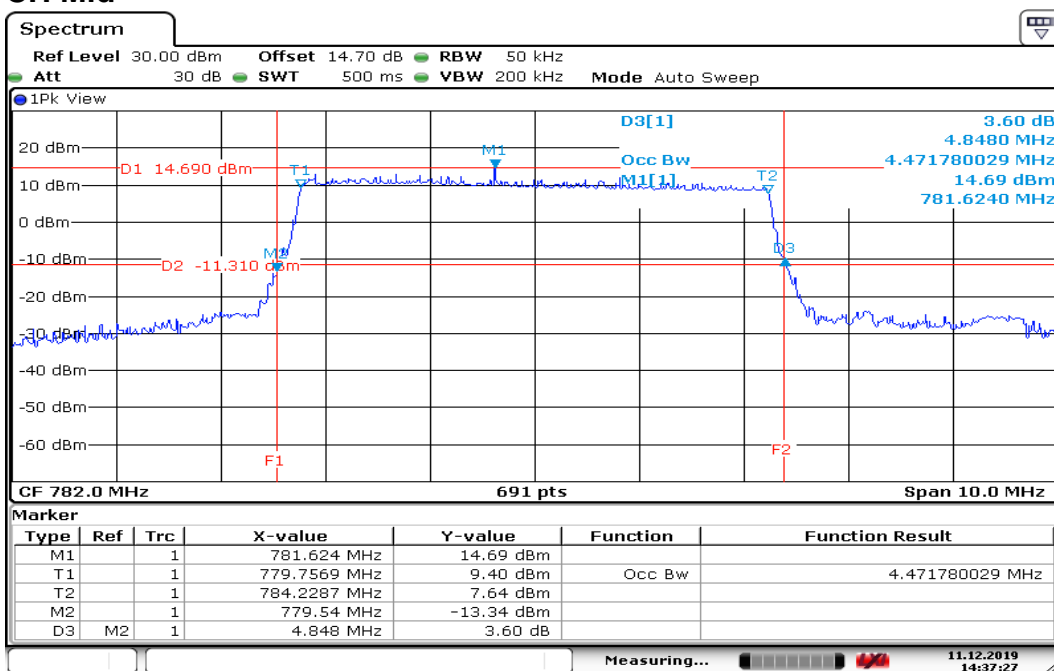
Band	BW (MHz)	Channel	Frequency (MHz)	Mode	OBW(99%)(MHz)	26 dB Bandwidth(MHz)
4	1.4	Middle	1732.5	QPSK	1.1027	1.3415
		Middle	1732.5	16QAM	1.1070	1.3893
	3	Middle	1732.5	QPSK	2.6917	2.974
		Middle	1732.5	16QAM	2.6917	2.9957
	5	Middle	1732.5	QPSK	4.4862	4.957
		Middle	1732.5	16QAM	4.4717	4.894
	10	Middle	1732.5	QPSK	8.9435	9.761
		Middle	1732.5	16QAM	8.9146	9.671
	15	Middle	1732.5	QPSK	13.4153	14.624
		Middle	1732.5	16QAM	13.4587	14.576
	20	Middle	1732.5	QPSK	18.0607	19.776
		Middle	1732.5	16QAM	18.0028	19.671

## LTE Band 13 CHANNEL BANDWIDTH: 5MHz / QPSK CH Mid



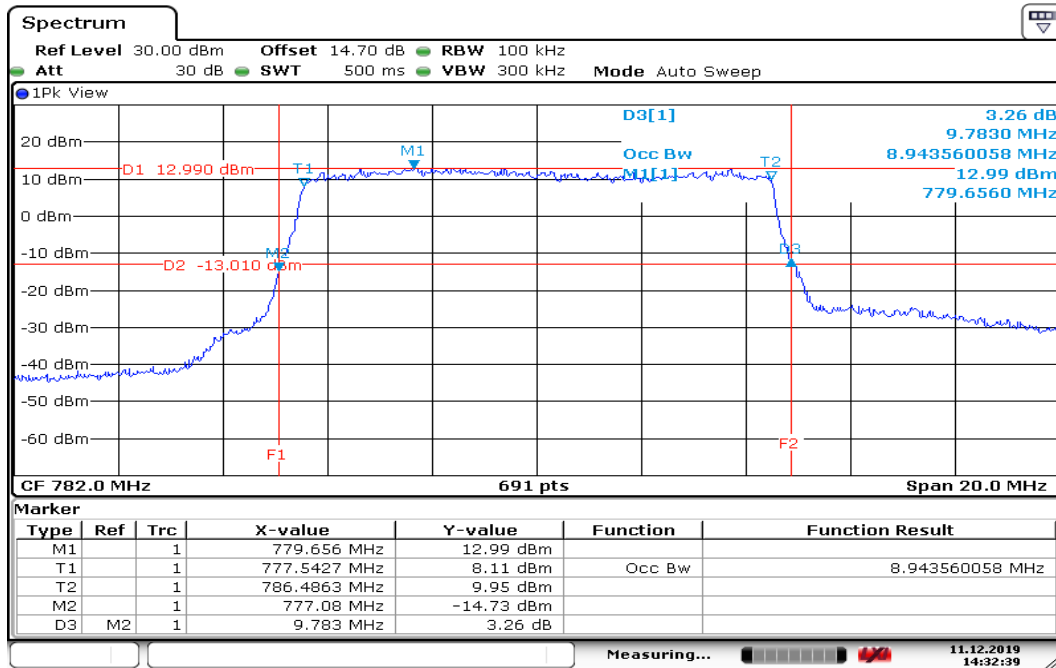
Date: 11.DEC.2019 14:36:09

## CHANNEL BANDWIDTH: 5MHz / 16QAM CH Mid



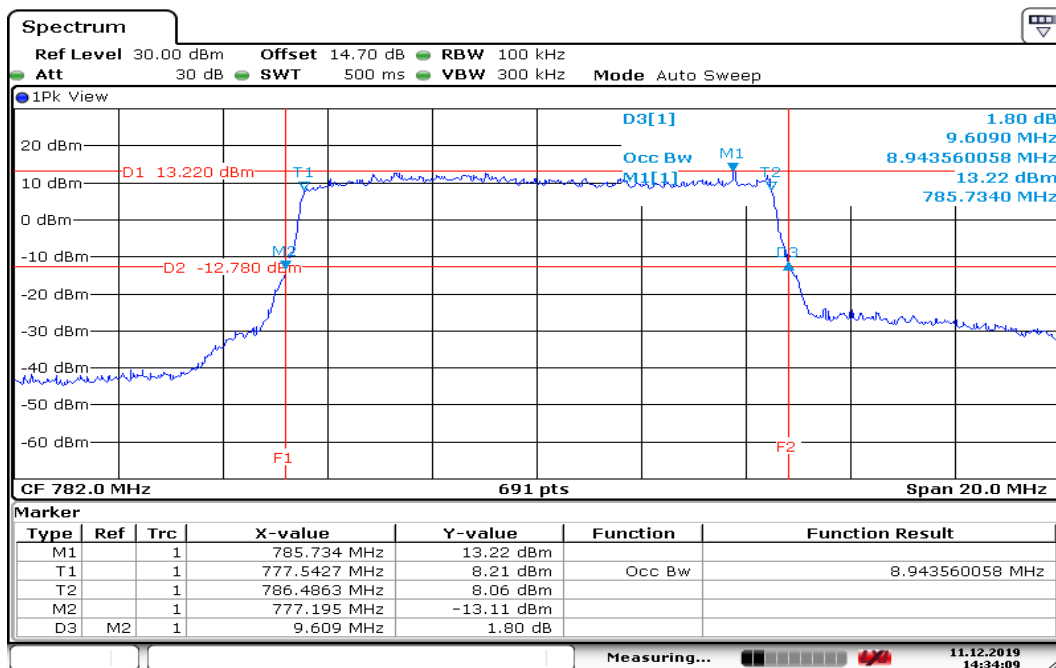
Date: 11.DEC.2019 14:37:27

## CHANNEL BANDWIDTH: 10MHz / QPSK CH Mid



Date: 11.DEC.2019 14:32:39

## CHANNEL BANDWIDTH: 10MHz / 16QAM CH Mid

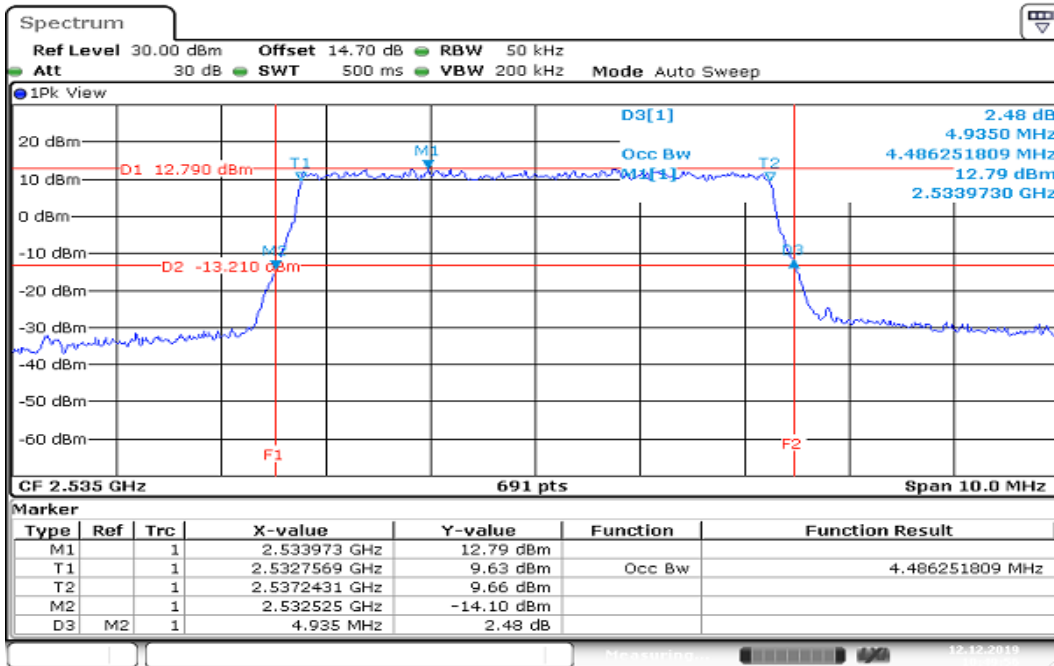


Date: 11.DEC.2019 14:34:09



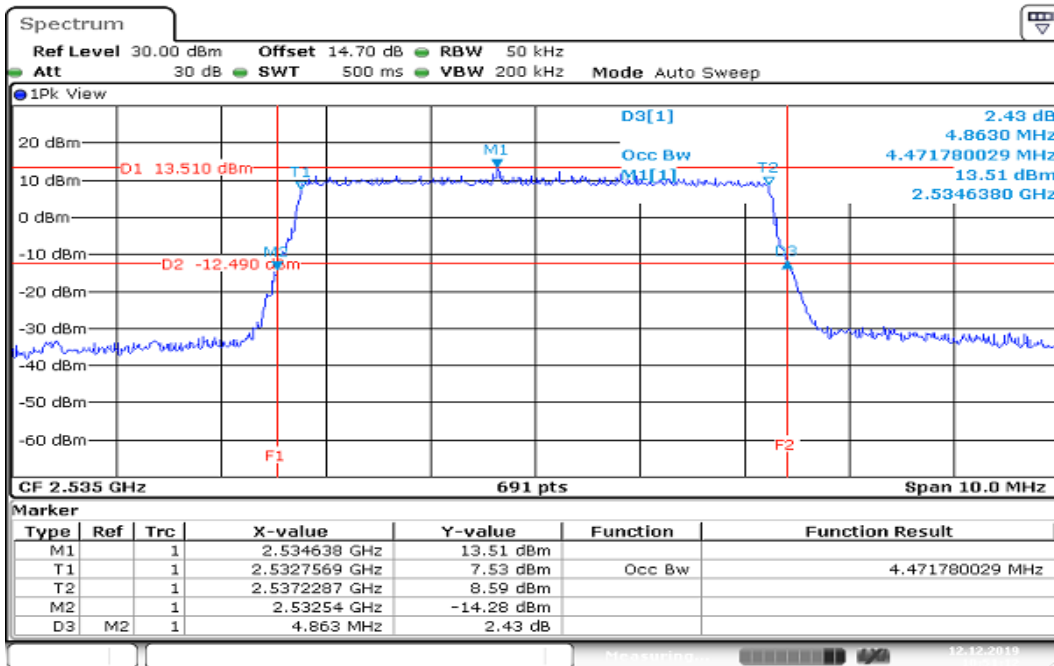
Report No.: T191105W01-RP10

## LTE Band 7 CHANNEL BANDWIDTH: 5MHz / QPSK CH Mid



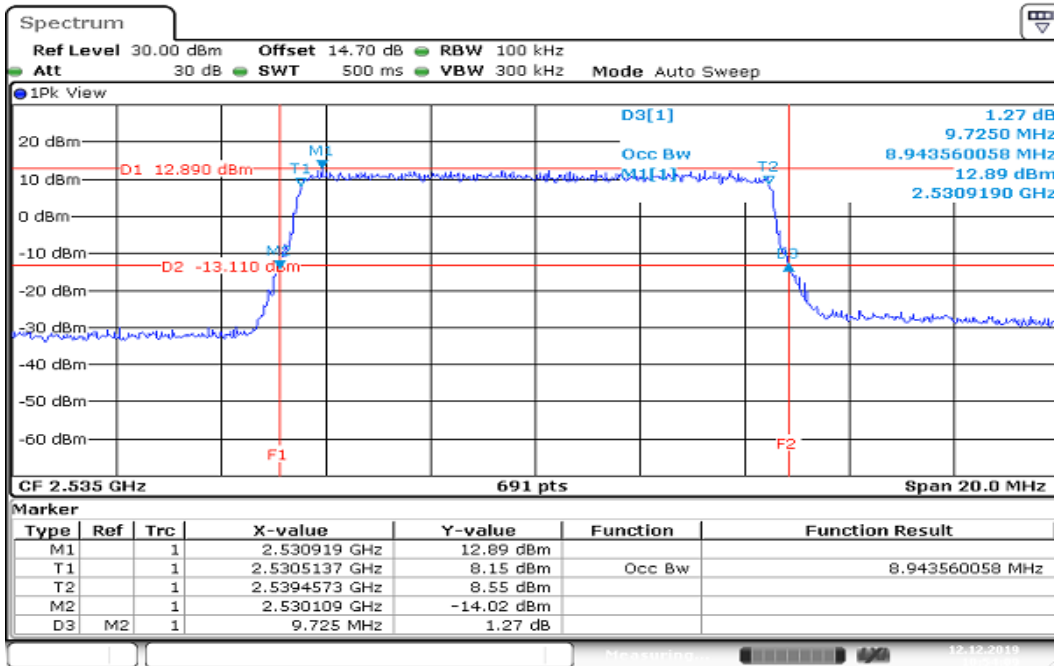
Date: 12.DEC.2019 10:49:56

## CHANNEL BANDWIDTH: 5MHz / 16QAM CH Mid



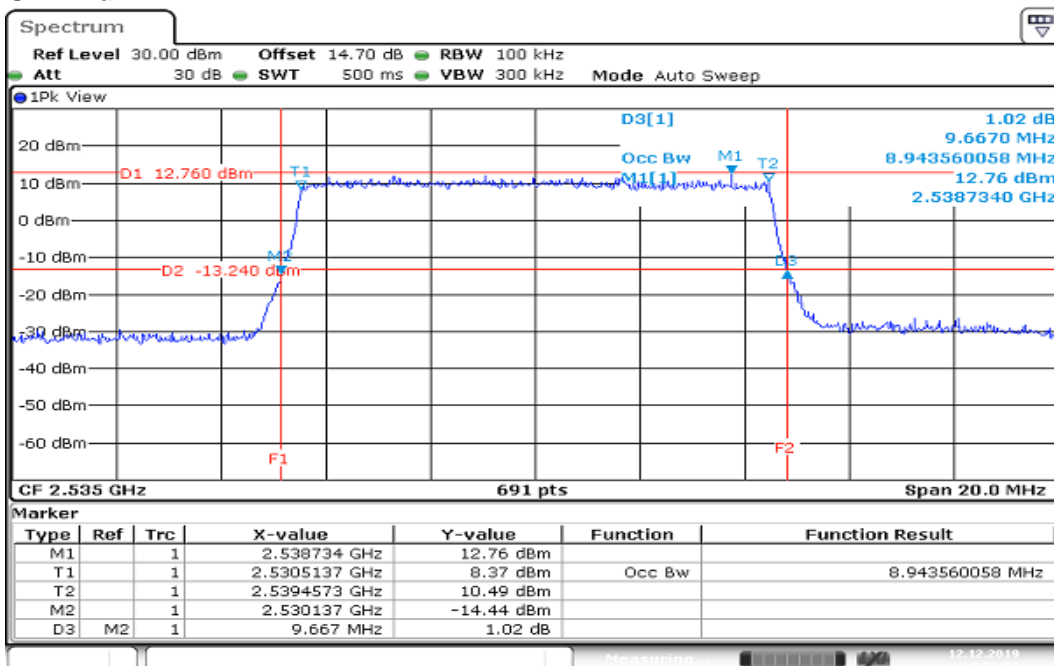
Date: 12.DEC.2019 10:51:13

## CHANNEL BANDWIDTH: 10MHz / QPSK CH Mid



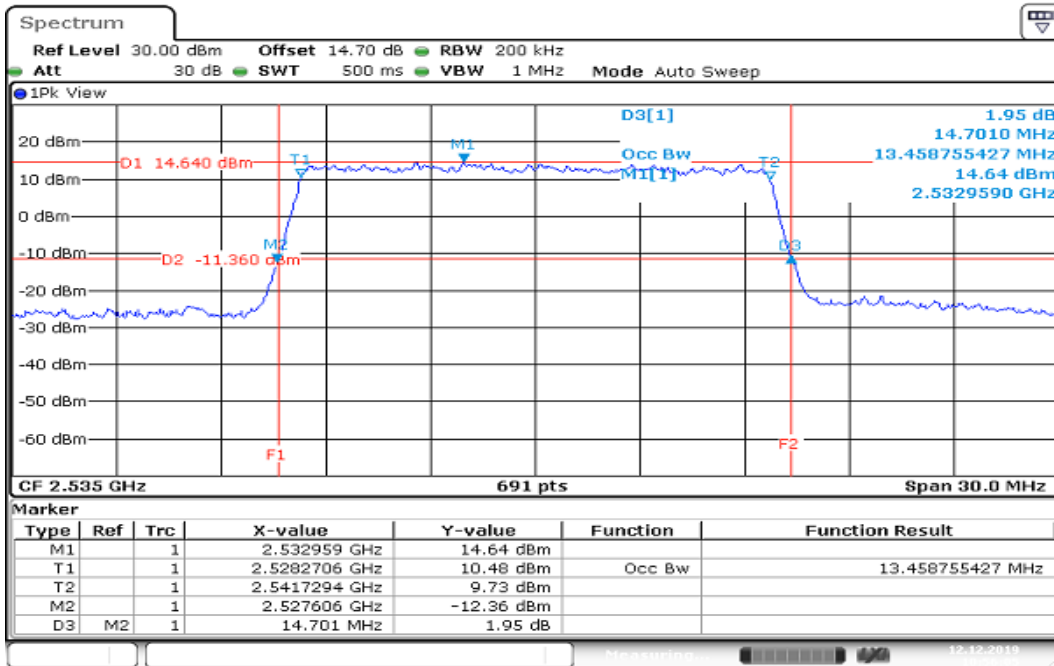
Date: 12.DEC.2019 10:54:09

## CHANNEL BANDWIDTH: 10MHz / 16QAM CH Mid



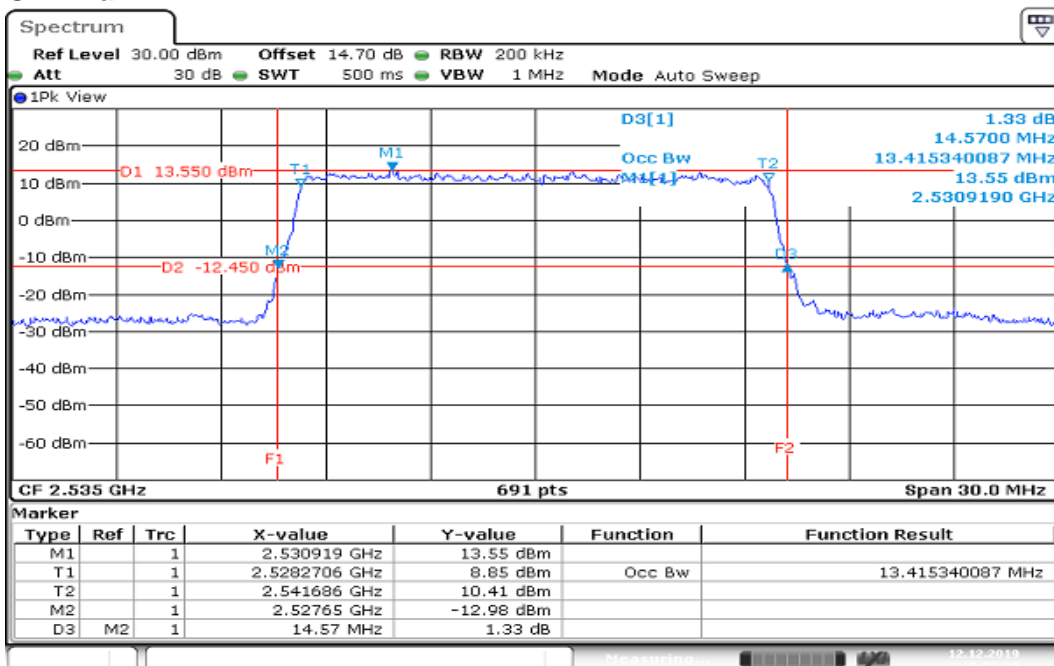
Date: 12.DEC.2019 10:53:00

## CHANNEL BANDWIDTH: 15MHz / QPSK CH Mid



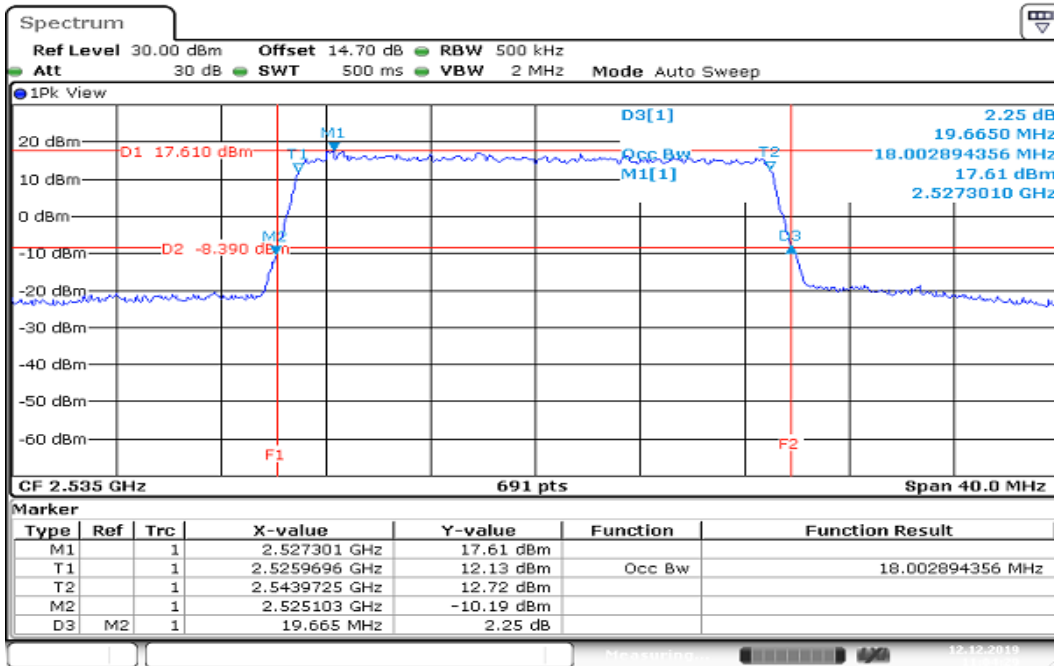
Date: 12.DEC.2019 10:56:05

## CHANNEL BANDWIDTH: 15MHz / 16QAM CH Mid



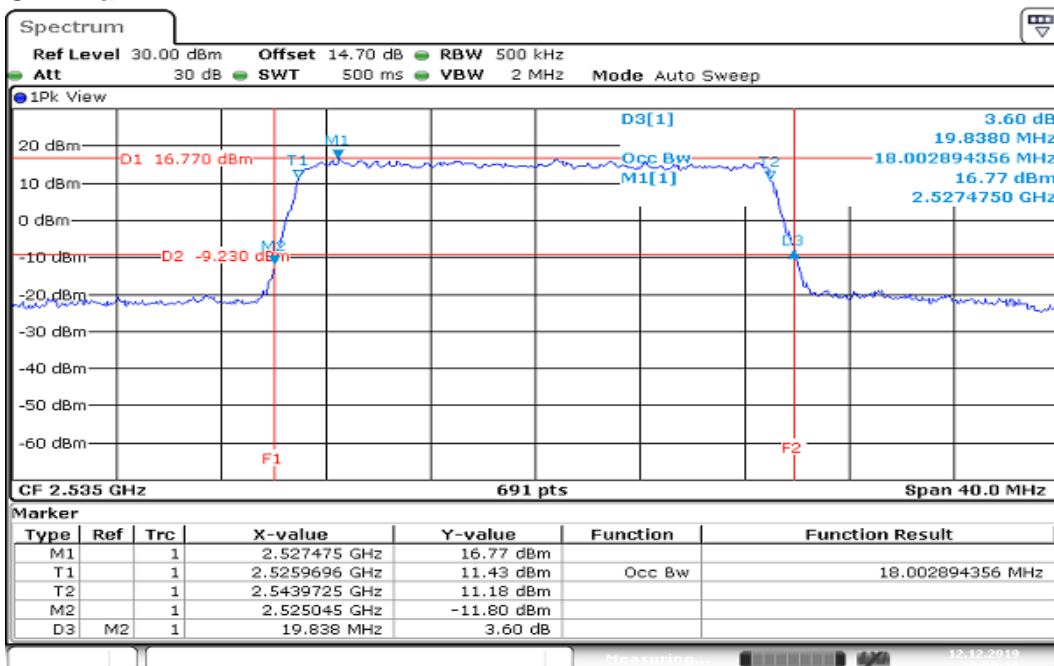
Date: 12.DEC.2019 10:57:29

## CHANNEL BANDWIDTH: 20MHz / QPSK CH Mid



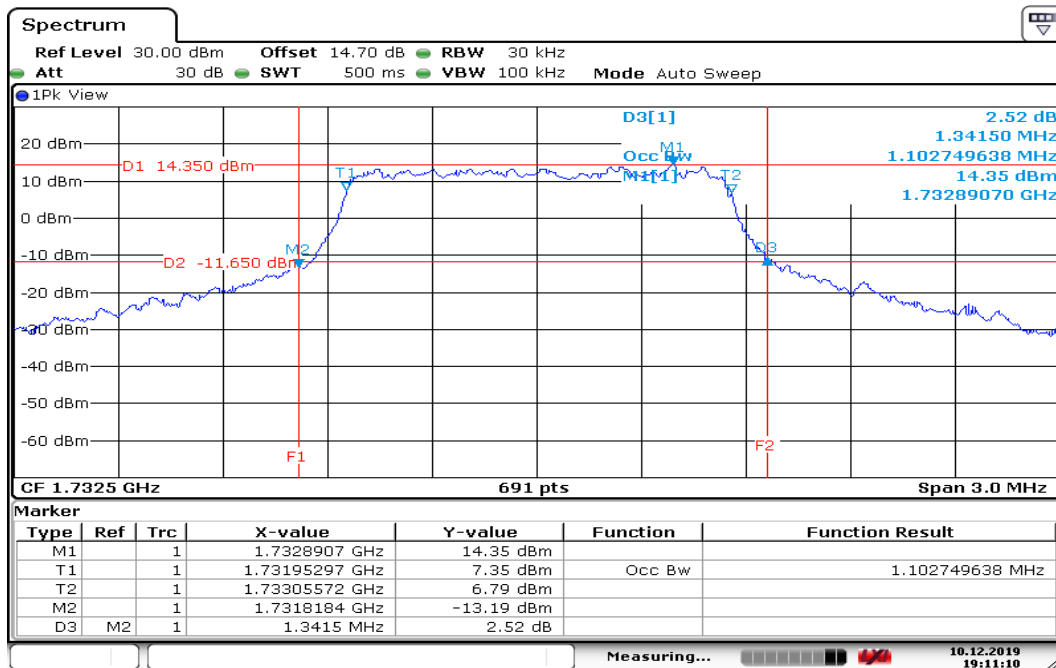
Date: 12.DEC.2019 11:04:29

## CHANNEL BANDWIDTH: 20MHz / 16QAM CH Mid



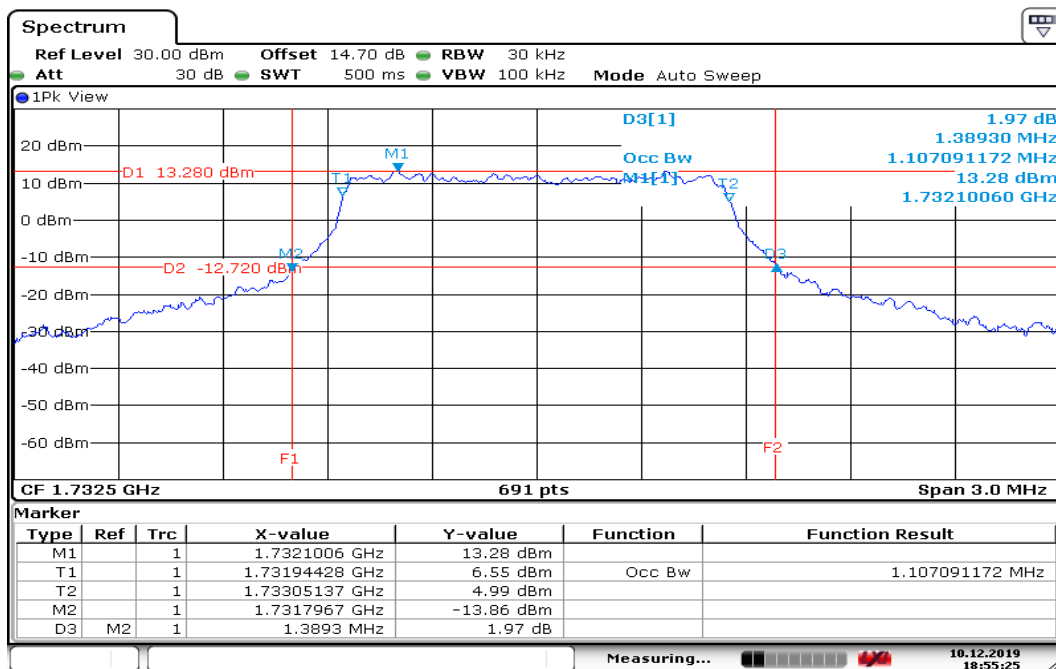
Date: 12.DEC.2019 10:59:37

## LTE Band 4 CHANNEL BANDWIDTH: 1.4MHz / QPSK CH Mid



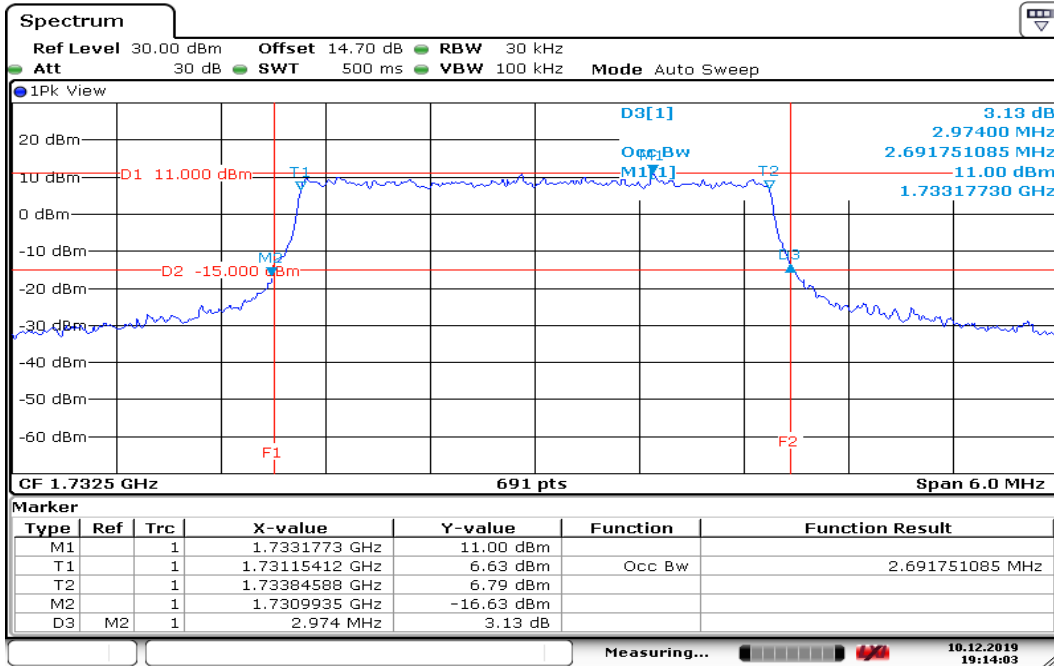
Date: 10.DEC.2019 19:11:10

## CHANNEL BANDWIDTH: 1.4MHz / 16QAM CH Mid



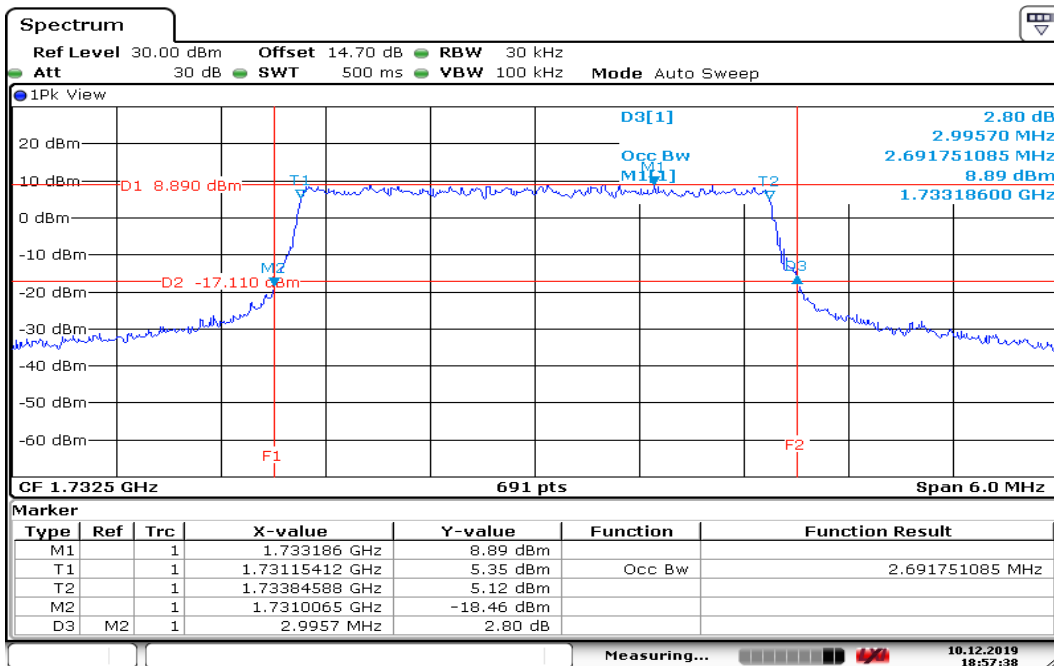
Date: 10.DEC.2019 18:55:25

## CHANNEL BANDWIDTH: 3MHz / QPSK CH Mid



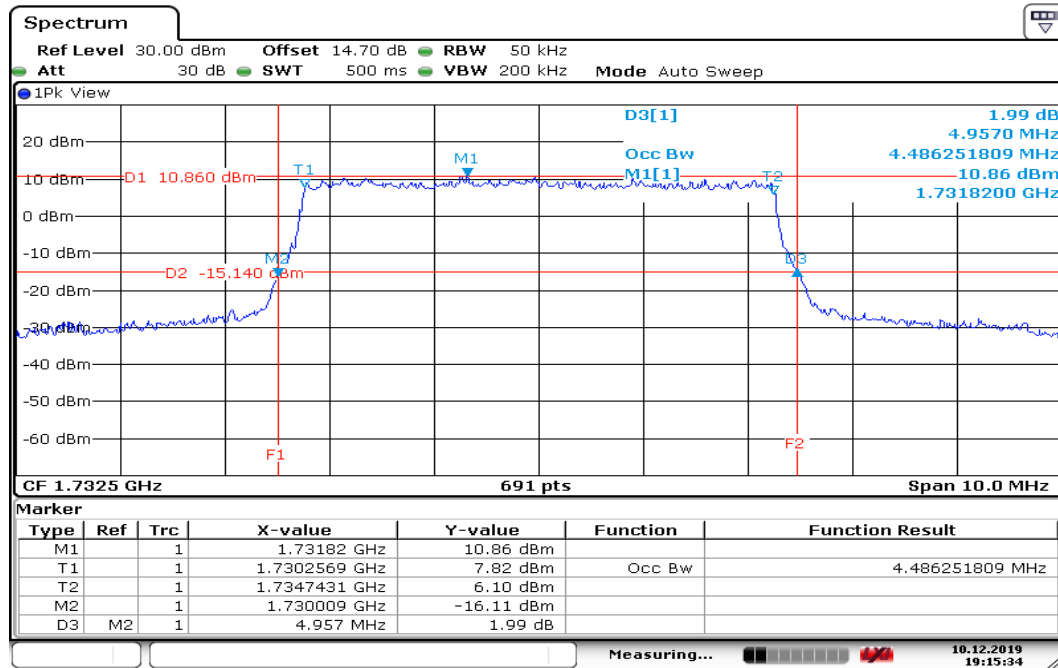
Date: 10.DEC.2019 19:14:03

## CHANNEL BANDWIDTH: 3MHz / 16QAM CH Mid



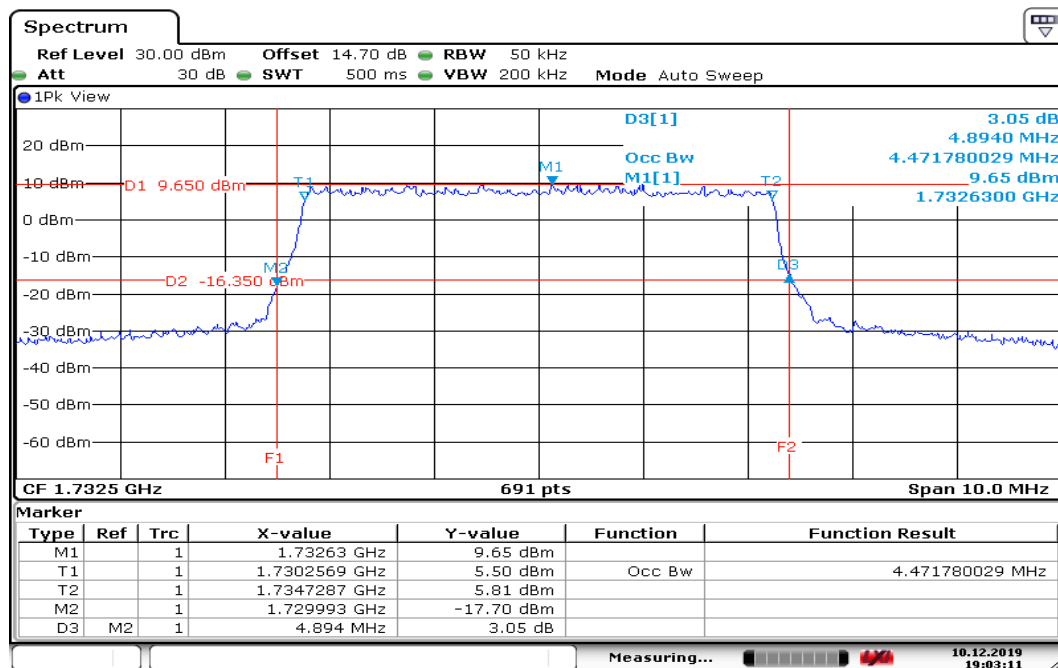
Date: 10.DEC.2019 18:57:38

## CHANNEL BANDWIDTH: 5MHz / QPSK CH Mid



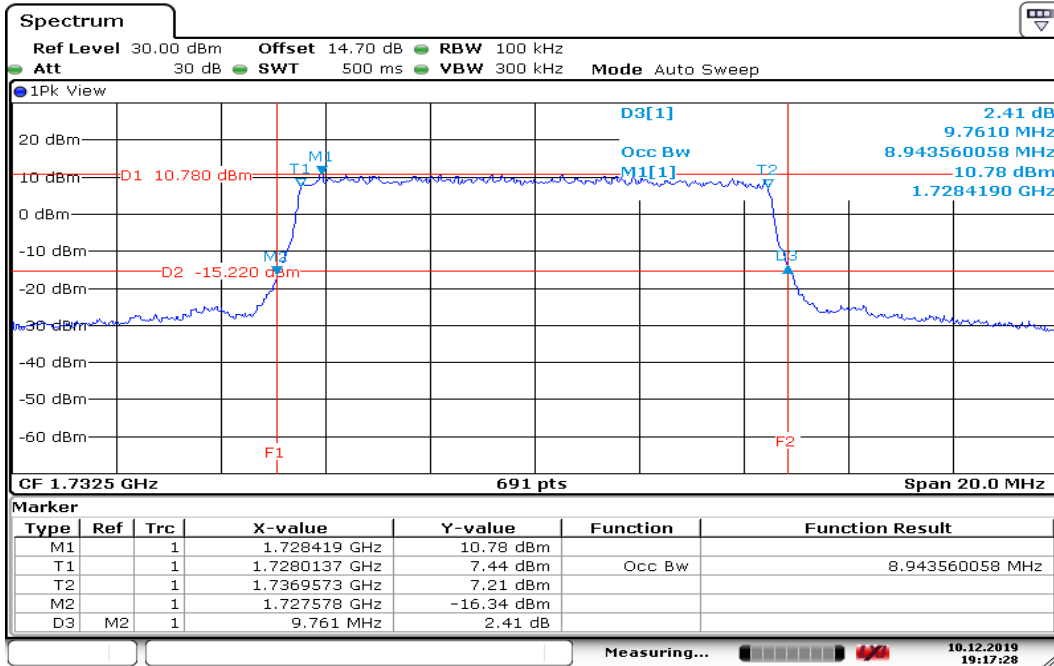
Date: 10.DEC.2019 19:15:35

## CHANNEL BANDWIDTH: 5MHz / 16QAM CH Mid



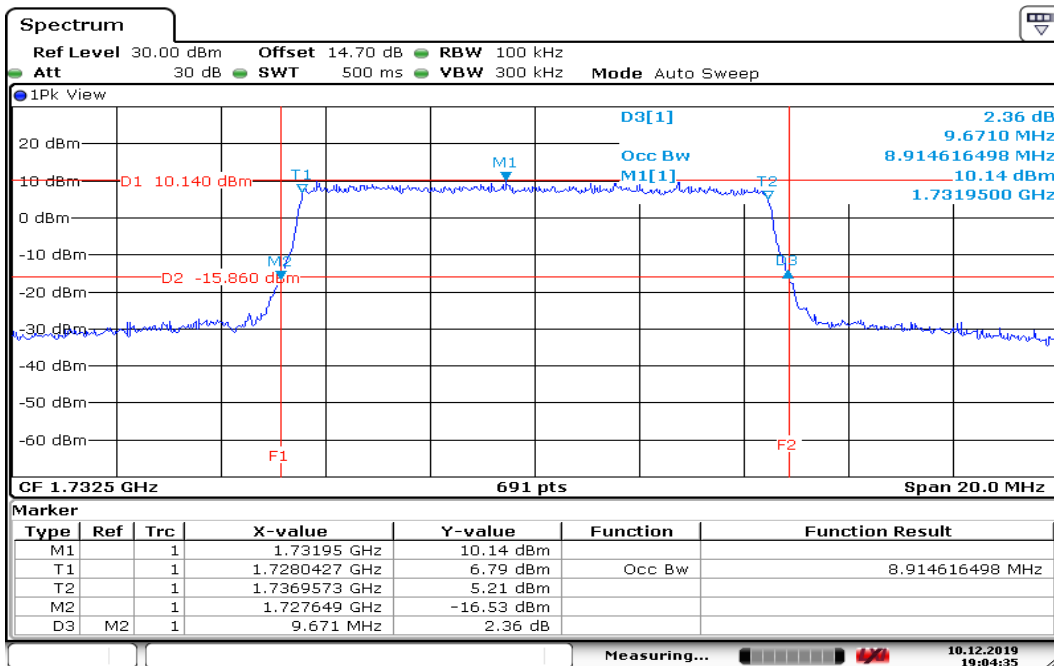
Date: 10.DEC.2019 19:03:11

## CHANNEL BANDWIDTH: 10MHz / QPSK CH Mid



Date: 10.DEC.2019 19:17:29

## CHANNEL BANDWIDTH: 10MHz / 16QAM CH Mid

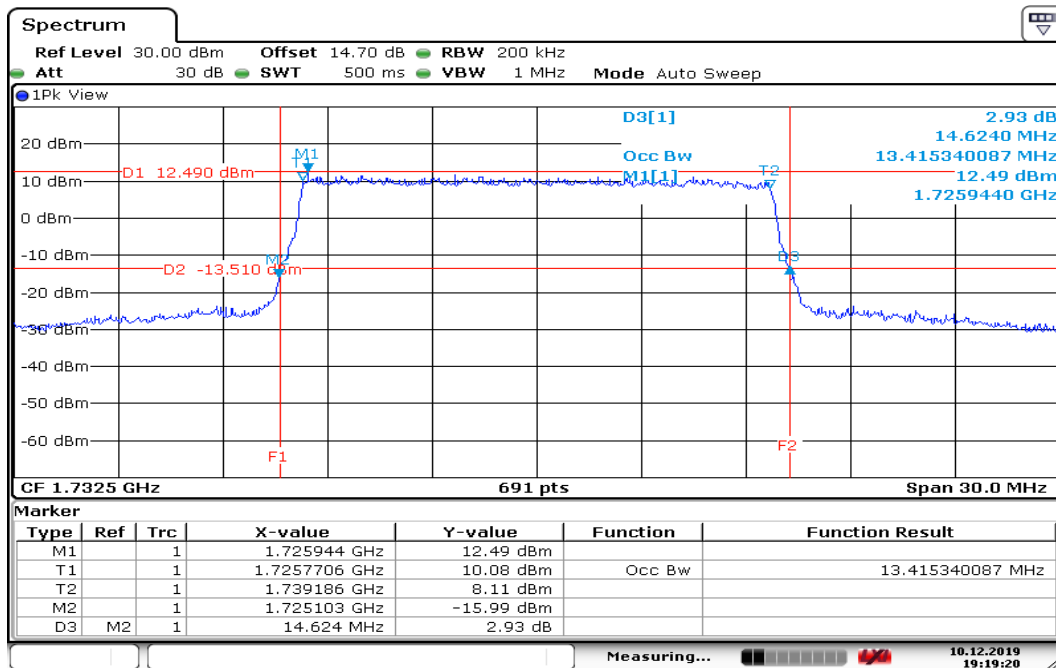


Date: 10.DEC.2019 19:04:35



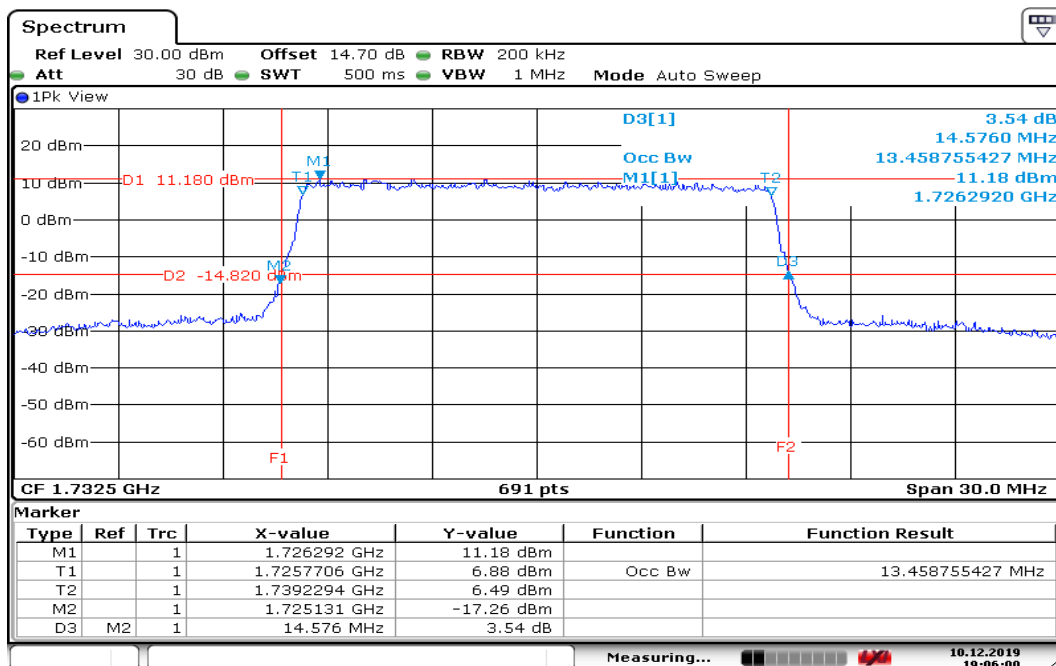
Report No.: T191105W01-RP10

## CHANNEL BANDWIDTH: 15MHz / QPSK CH Mid



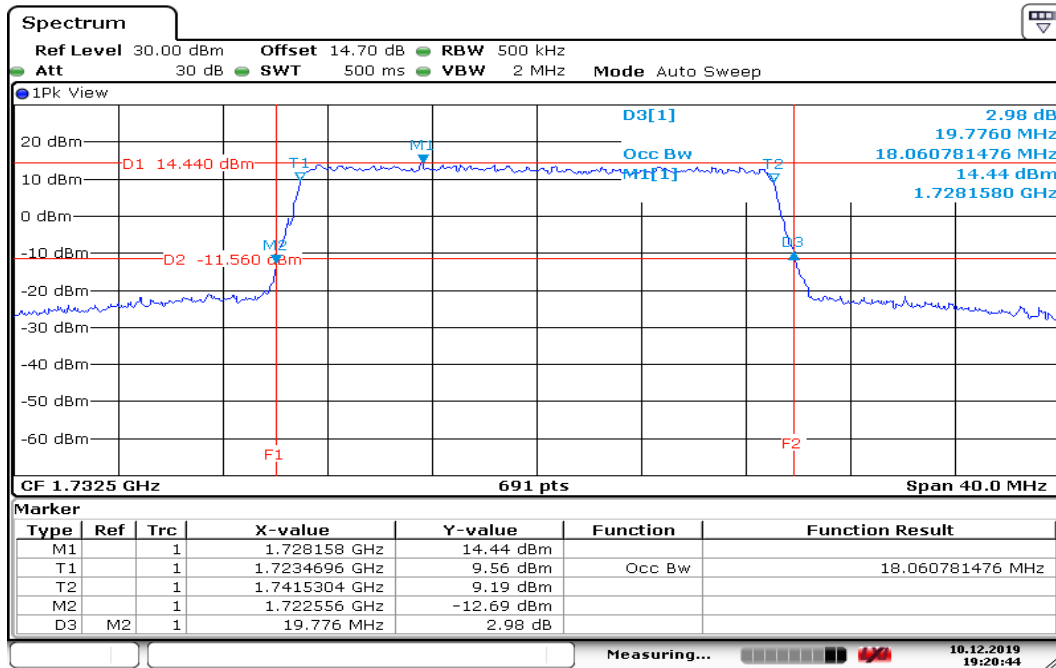
Date: 10.DEC.2019 19:19:20

## CHANNEL BANDWIDTH: 15MHz / 16QAM CH Mid



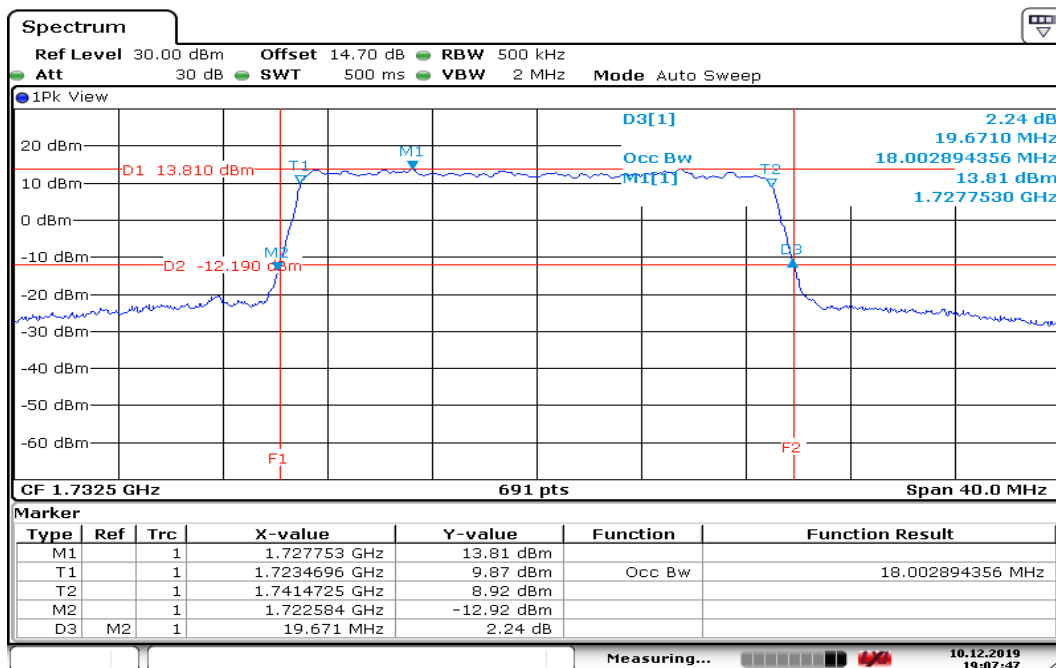
Date: 10.DEC.2019 19:06:00

## CHANNEL BANDWIDTH: 20MHz / QPSK CH Mid



Date: 10.DEC.2019 19:20:44

## CHANNEL BANDWIDTH: 20MHz / 16QAM CH Mid



Date: 10.DEC.2019 19:07:47

## 8.4 PEAK TO AVERAGE POWER RATIO

### LIMIT

In measuring transmissions in this band using an average power technique, peak-to-average power ratio (PAPR) of the transmission may not exceed 13 dB.

### TEST PROCEDURES

1. According to KDB 971168D01.
2. The EUT was connect to spectrum analyzer and call box.
3. Set the CCDF function in spectrum analyzer.
4. The highest RF output power were measured and recorded the maximum PAPR level associated with a probability of 0.1%.
5. Record the Peak to Average Power Ratio.

Report No.: T191105W01-RP10

## TEST RESULTS

### LTE Band 13

#### CHANNEL BANDWIDTH: 5MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	3.19

#### CHANNEL BANDWIDTH: 10MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	3.54

#### CHANNEL BANDWIDTH: 5MHz / QPSK / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	5.13

#### CHANNEL BANDWIDTH: 10MHz / QPSK / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	4.90

#### CHANNEL BANDWIDTH: 5MHz / 16QAM / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	4.17

#### CHANNEL BANDWIDTH: 10MHz / 16QAM / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	4.12

#### CHANNEL BANDWIDTH: 5MHz / 16QAM / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	5.54

#### CHANNEL BANDWIDTH: 10MHz / 16QAM / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
23230	782.00	5.77

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.

## LTE Band 7

### CHANNEL BANDWIDTH: 5MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	3.59

### CHANNEL BANDWIDTH: 10MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	3.45

### CHANNEL BANDWIDTH: 15MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	3.42

### CHANNEL BANDWIDTH: 20MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	3.33

### CHANNEL BANDWIDTH: 5MHz / QPSK / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.81

### CHANNEL BANDWIDTH: 10MHz / QPSK / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.75

### CHANNEL BANDWIDTH: 15MHz / QPSK / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.96

### CHANNEL BANDWIDTH: 20MHz / QPSK / 100%RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.72

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.

Report No.: T191105W01-RP10

**CHANNEL BANDWIDTH: 5MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.23

**CHANNEL BANDWIDTH: 10MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.26

**CHANNEL BANDWIDTH: 15MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.32

**CHANNEL BANDWIDTH: 20MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	4.06

**CHANNEL BANDWIDTH: 5MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	5.59

**CHANNEL BANDWIDTH: 10MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	5.68

**CHANNEL BANDWIDTH: 15MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	5.77

**CHANNEL BANDWIDTH: 20MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
21100	2535.00	5.57

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.

Report No.: T191105W01-RP10

### LTE Band 4

#### CHANNEL BANDWIDTH: 1.4MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.55

#### CHANNEL BANDWIDTH: 3MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.78

#### CHANNEL BANDWIDTH: 5MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.43

#### CHANNEL BANDWIDTH: 10MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.14

#### CHANNEL BANDWIDTH: 15MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.17

#### CHANNEL BANDWIDTH: 20MHz / QPSK / 1RB

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.17

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.

**CHANNEL BANDWIDTH: 1.4MHz / QPSK / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.04

**CHANNEL BANDWIDTH: 3MHz / QPSK / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.78

**CHANNEL BANDWIDTH: 5MHz / QPSK / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.72

**CHANNEL BANDWIDTH: 10MHz / QPSK / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.70

**CHANNEL BANDWIDTH: 15MHz / QPSK / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.90

**CHANNEL BANDWIDTH: 20MHz / QPSK / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.72

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.



**CHANNEL BANDWIDTH: 1.4MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.39

**CHANNEL BANDWIDTH: 3MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.28

**CHANNEL BANDWIDTH: 5MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.22

**CHANNEL BANDWIDTH: 10MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.78

**CHANNEL BANDWIDTH: 15MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	4.78

**CHANNEL BANDWIDTH: 20MHz / 16QAM / 1RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.04

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.

**CHANNEL BANDWIDTH: 1.4MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.80

**CHANNEL BANDWIDTH: 3MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.68

**CHANNEL BANDWIDTH: 5MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.68

**CHANNEL BANDWIDTH: 10MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.65

**CHANNEL BANDWIDTH: 15MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.74

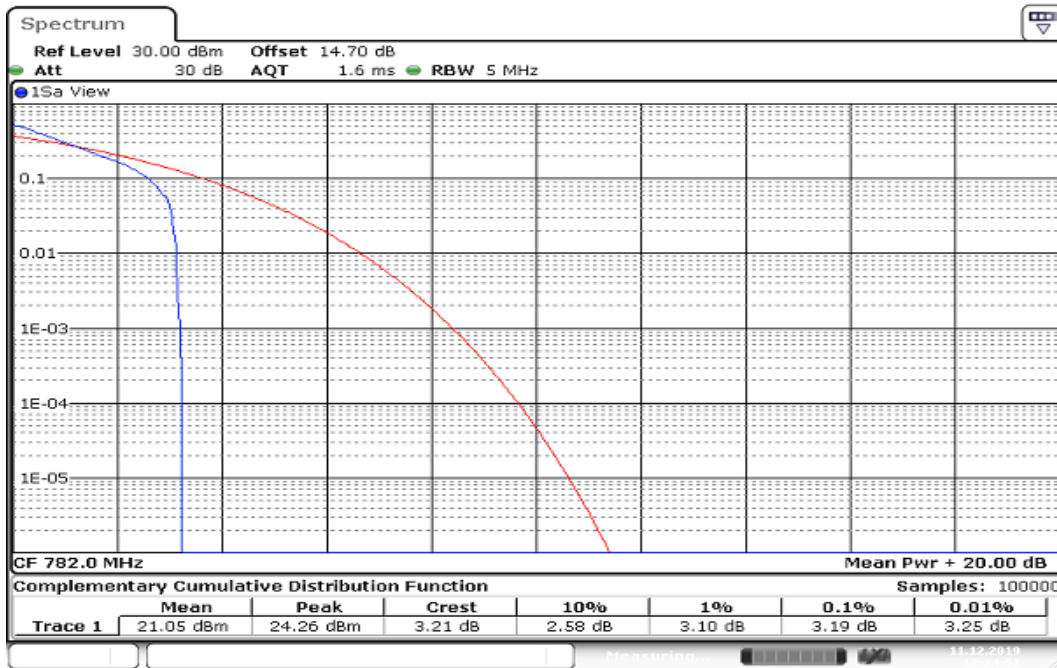
**CHANNEL BANDWIDTH: 20MHz / 16QAM / 100%RB**

Channel	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)
20175	1732.50	5.65

**Note:** We selected worst case to performed test in middle channel, the results can be meet other channel.

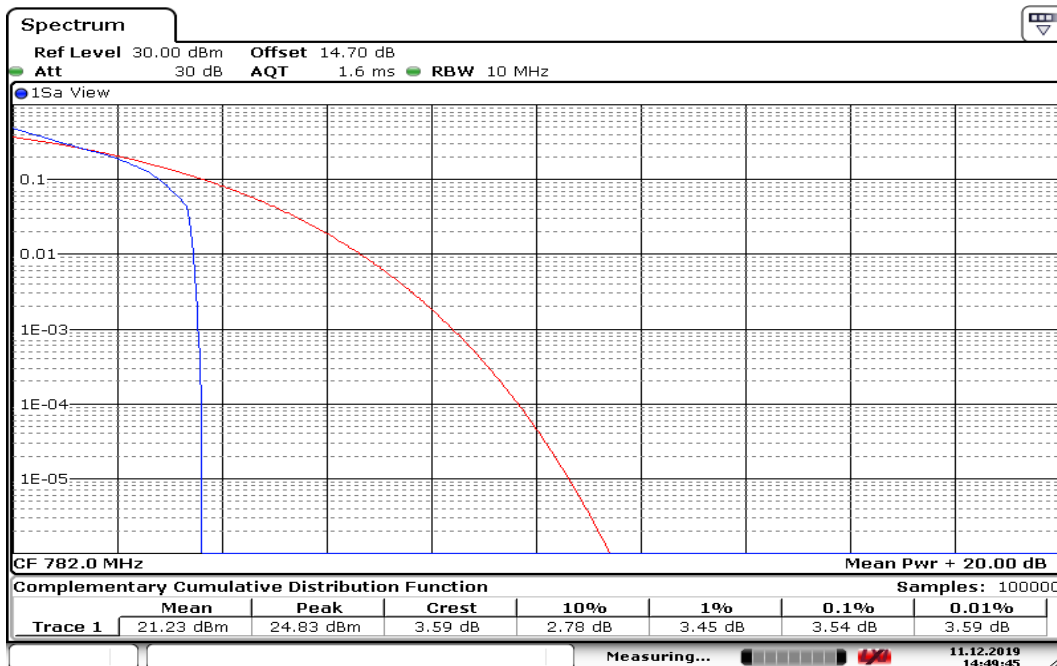
### LTE Band 13

#### CHANNEL BANDWIDTH: 5MHz / QPSK/ 1RB



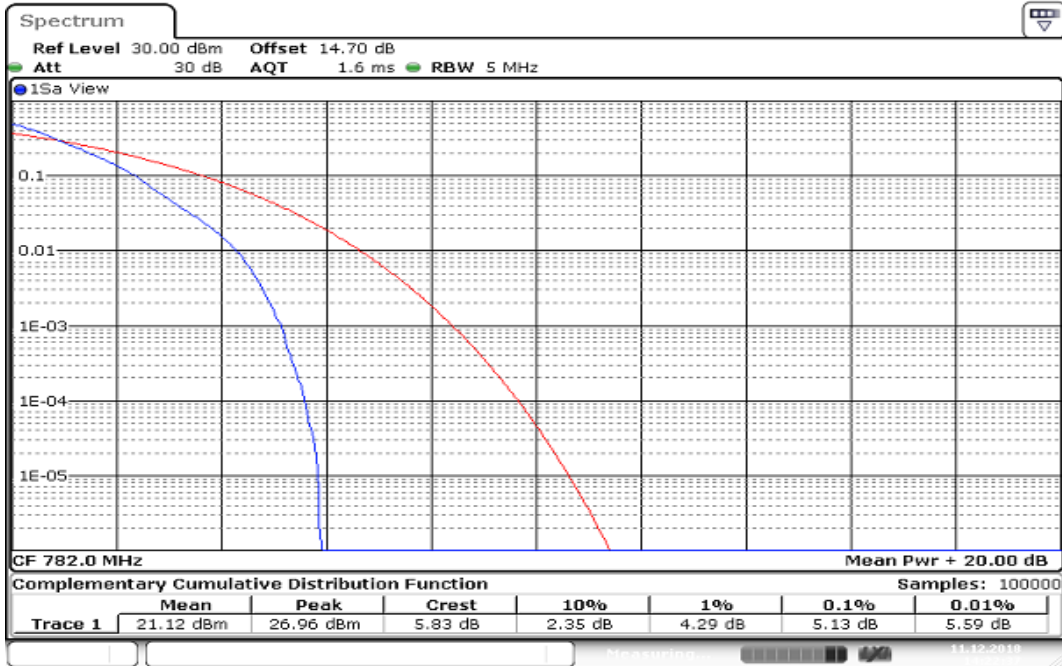
Date: 11.DEC.2019 17:24:51

#### CHANNEL BANDWIDTH: 10MHz / QPSK/ 1RB



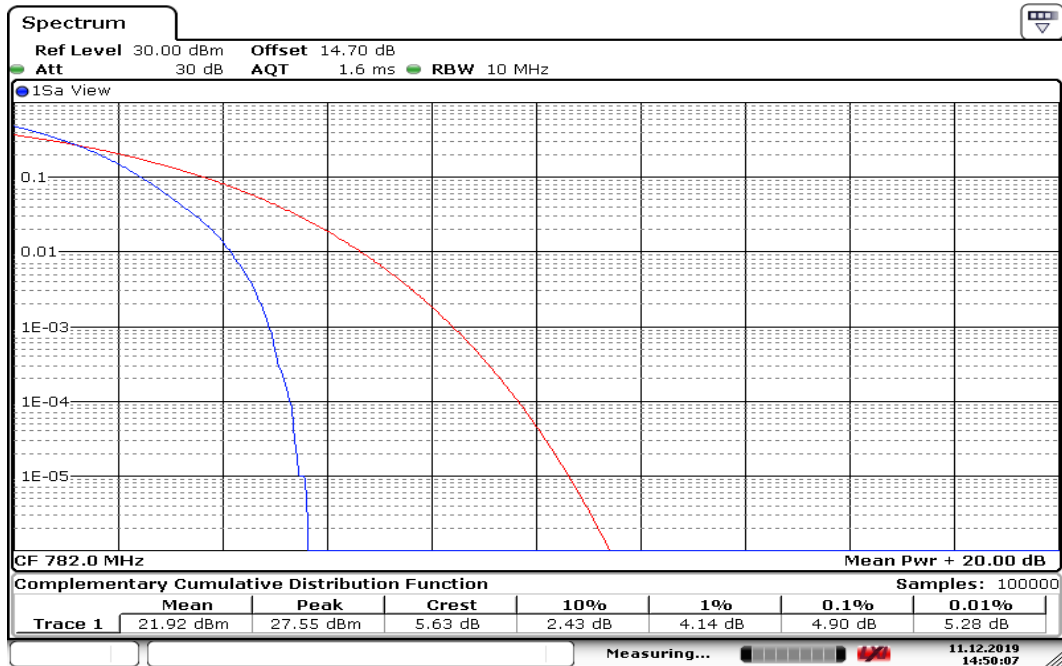
Date: 11.DEC.2019 14:49:45

### CHANNEL BANDWIDTH: 5MHz / QPSK/ 100%RB



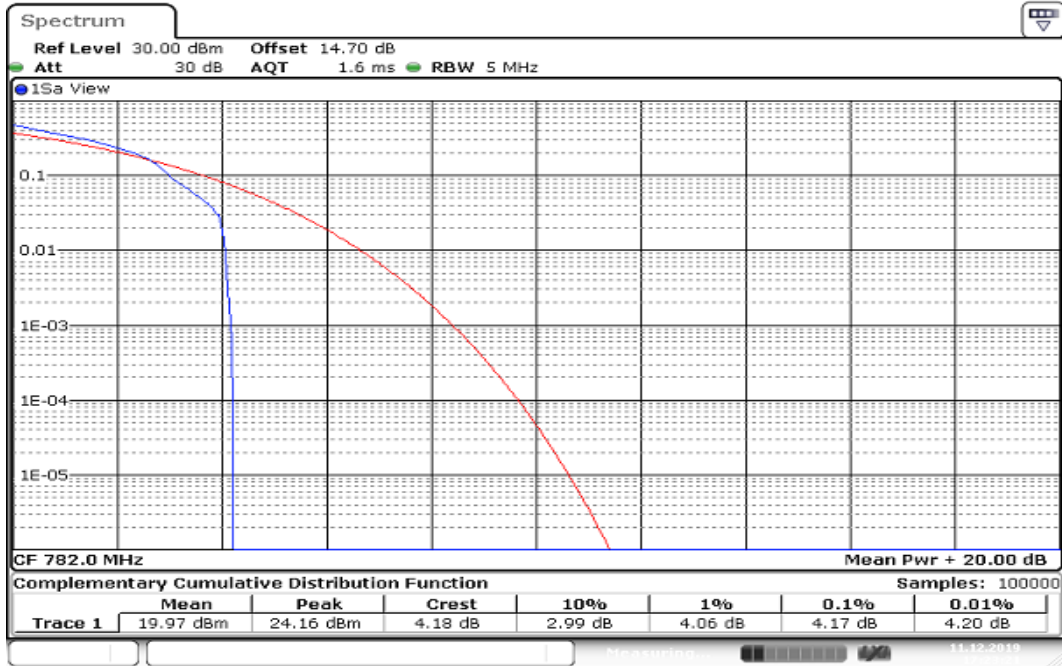
Date: 11 DEC 2018 14:22:37

### CHANNEL BANDWIDTH: 10MHz / QPSK/ 100%RB



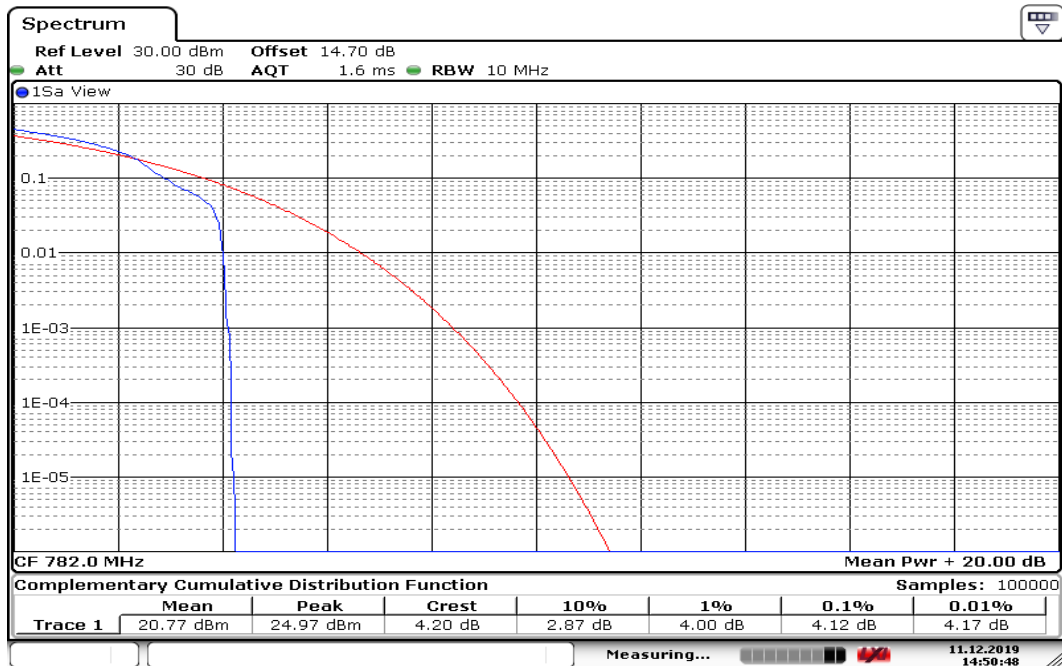
Date: 11 DEC 2019 14:50:07

### CHANNEL BANDWIDTH: 5MHz / 16QAM / 1RB



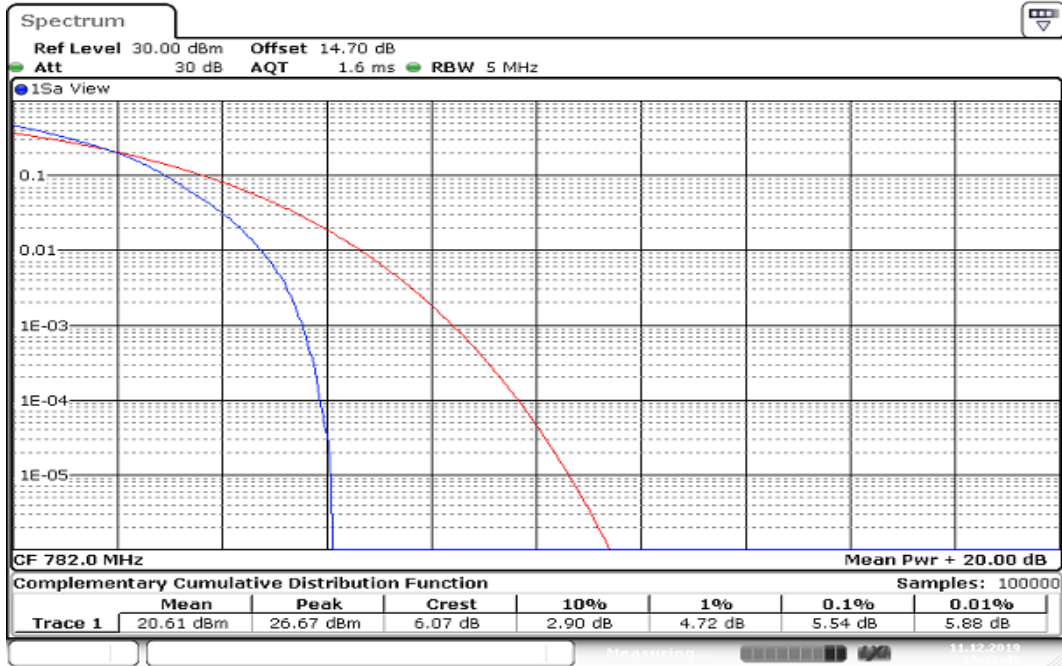
Date: 11.DEC.2019 17:23:21

### CHANNEL BANDWIDTH: 10MHz / 16QAM / 1RB



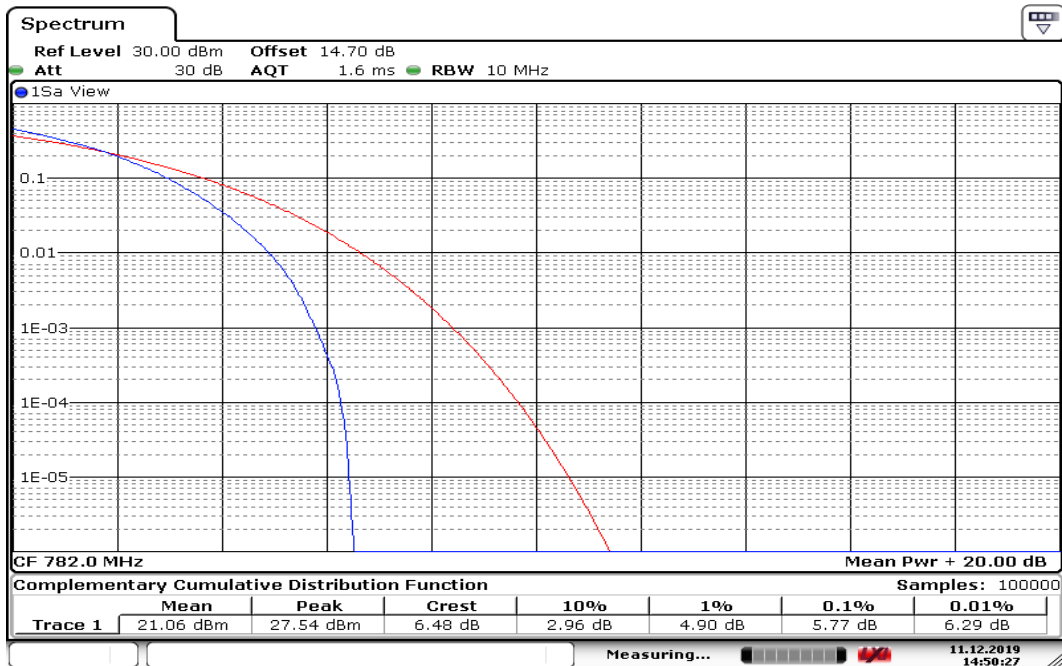
Date: 11.DEC.2019 14:50:49

### CHANNEL BANDWIDTH: 5MHz / 16QAM / 100%RB



Date: 11.DEC.2019 17:22:43

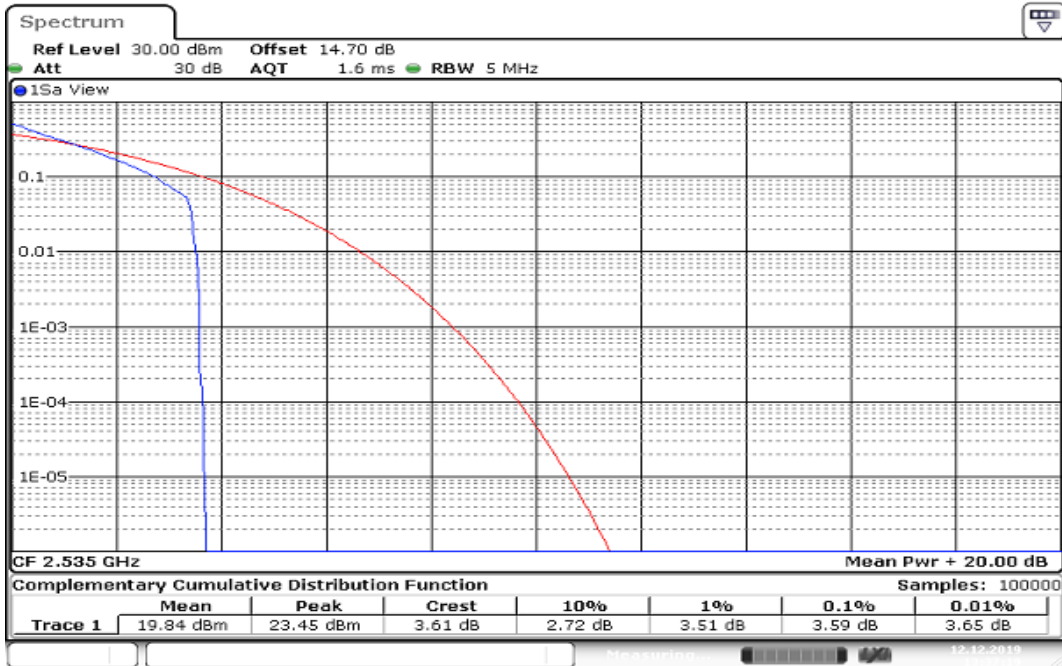
### CHANNEL BANDWIDTH: 10MHz / 16QAM / 100%RB



Date: 11.DEC.2019 14:50:27

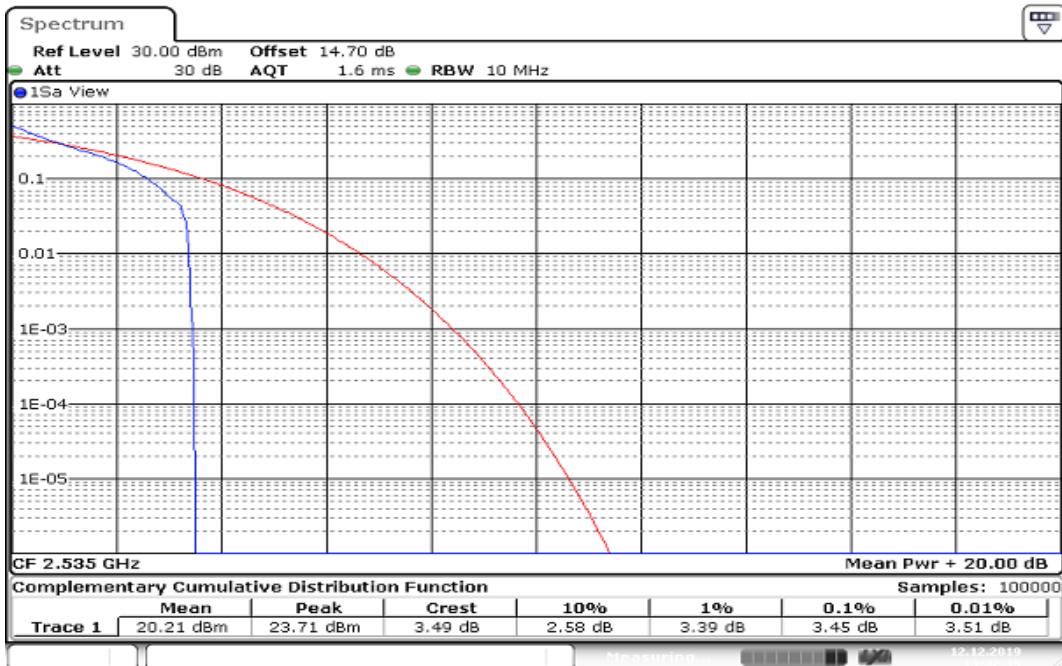
## LTE Band 7

### CHANNEL BANDWIDTH: 5MHz / QPSK/1RB



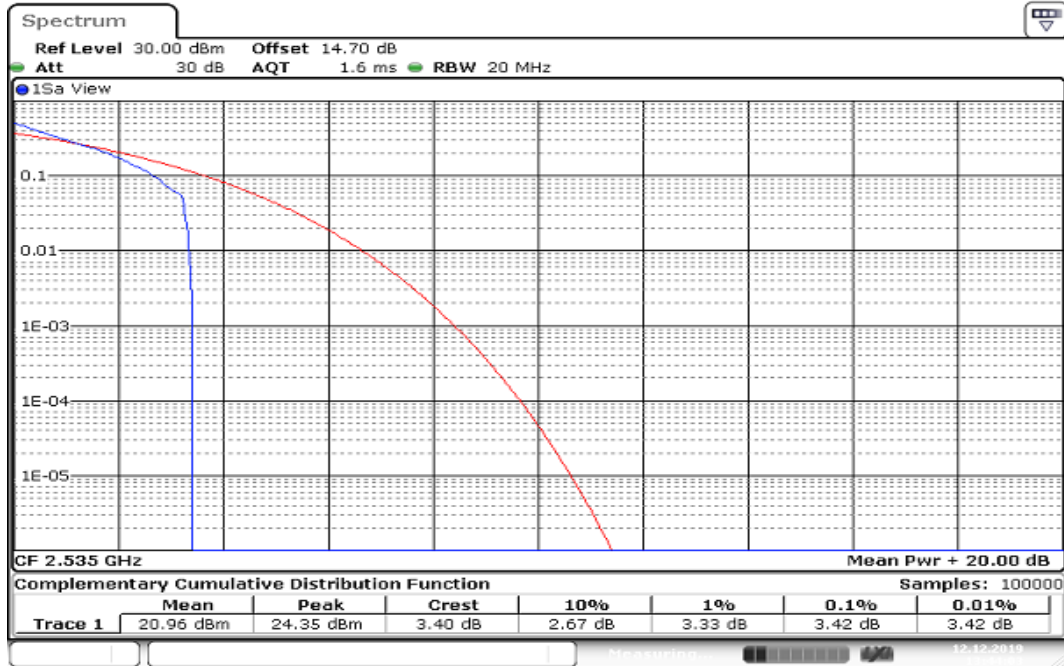
Date: 12.DEC.2019 13:37:19

### CHANNEL BANDWIDTH: 10MHz / QPSK /1RB



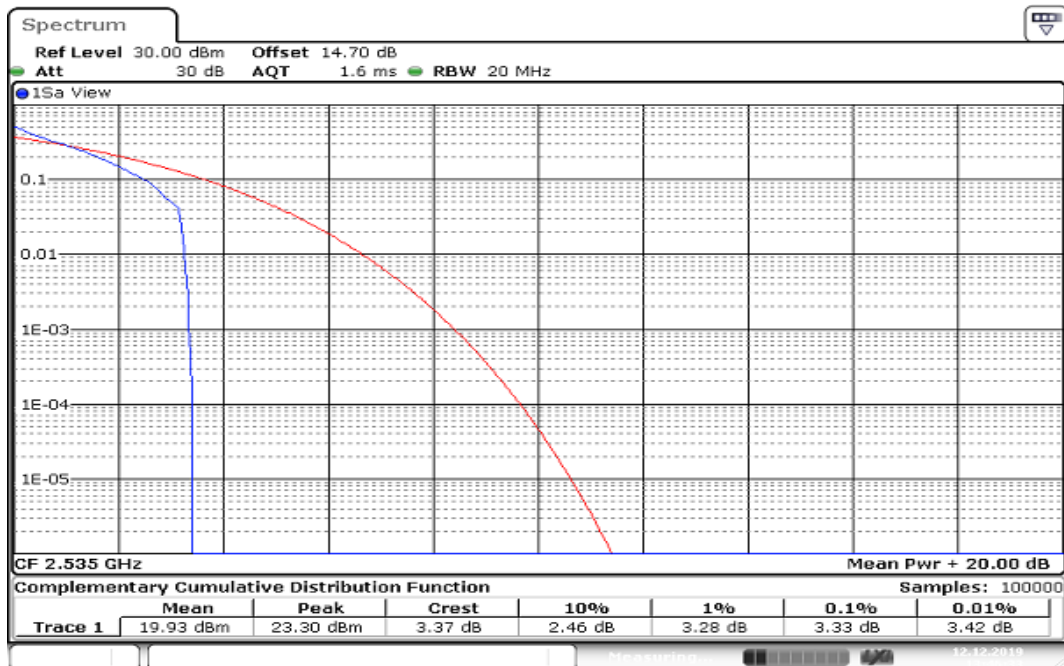
Date: 12.DEC.2019 13:42:16

### CHANNEL BANDWIDTH: 15MHz / QPSK/1RB



Date: 12.DEC.2019 13:44:04

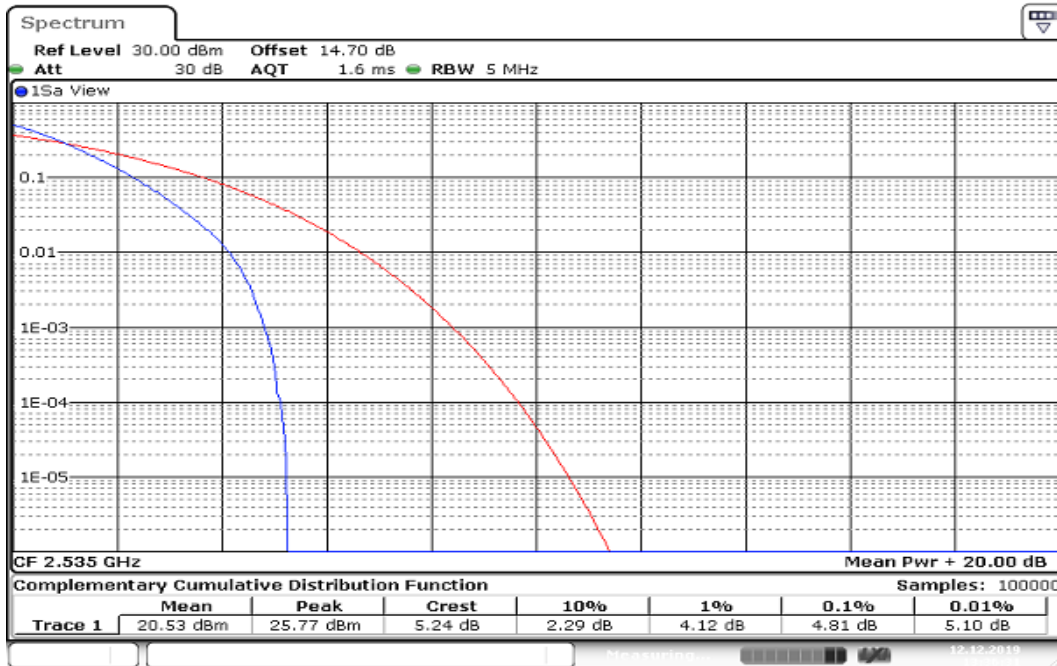
### CHANNEL BANDWIDTH: 20MHz / QPSK /1RB



Date: 12.DEC.2019 13:46:33

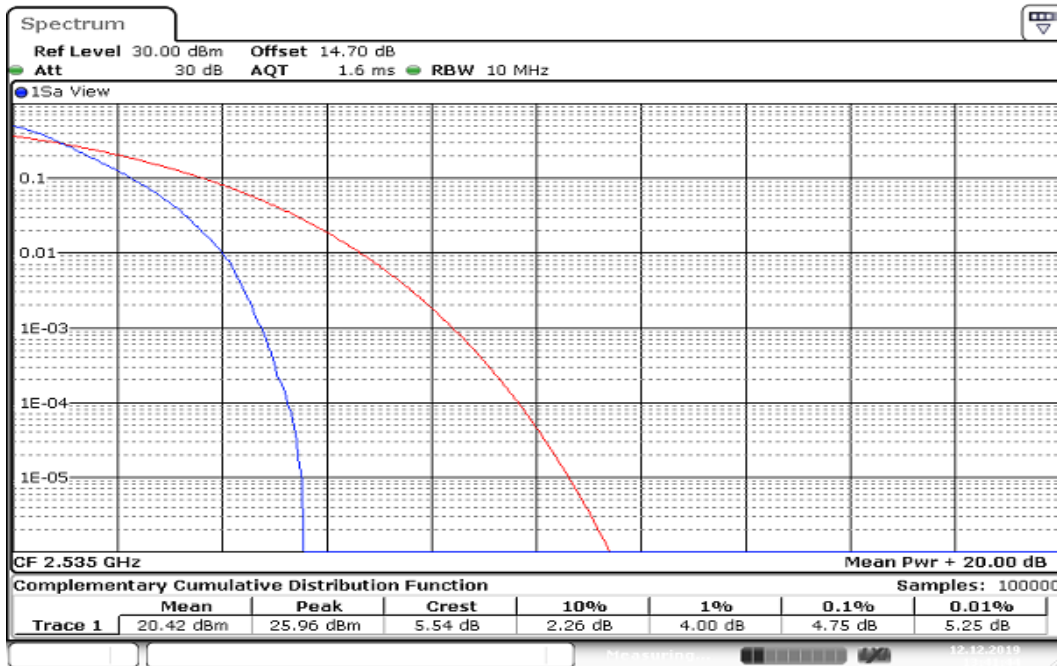


### CHANNEL BANDWIDTH: 5MHz / QPSK/100%RB



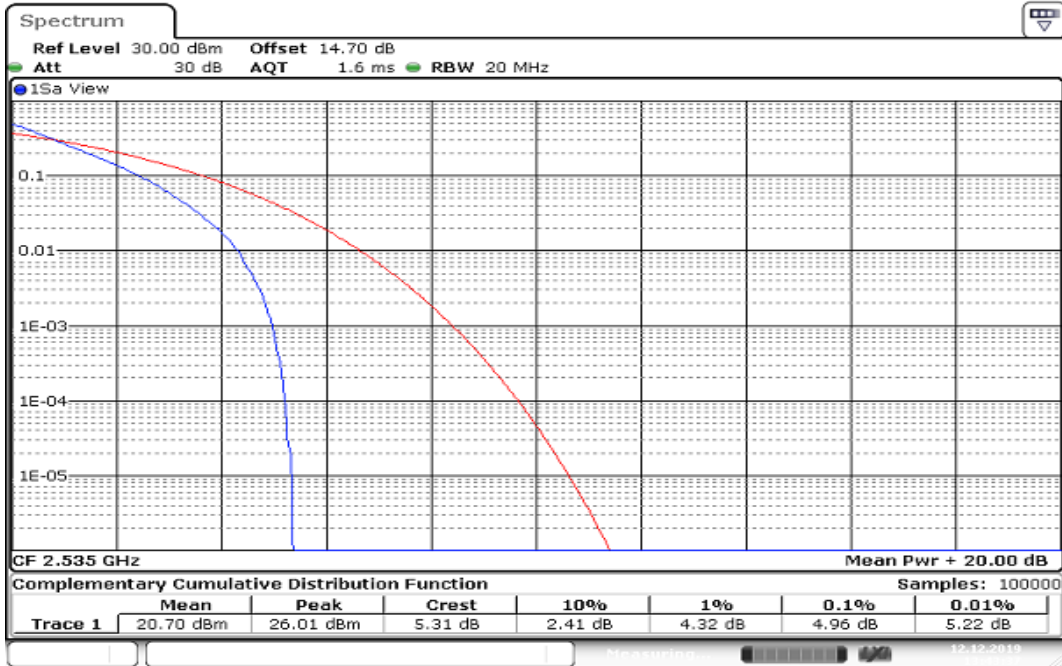
Date: 12.DEC.2019 13:36:32

### CHANNEL BANDWIDTH: 10MHz / QPSK /100%RB



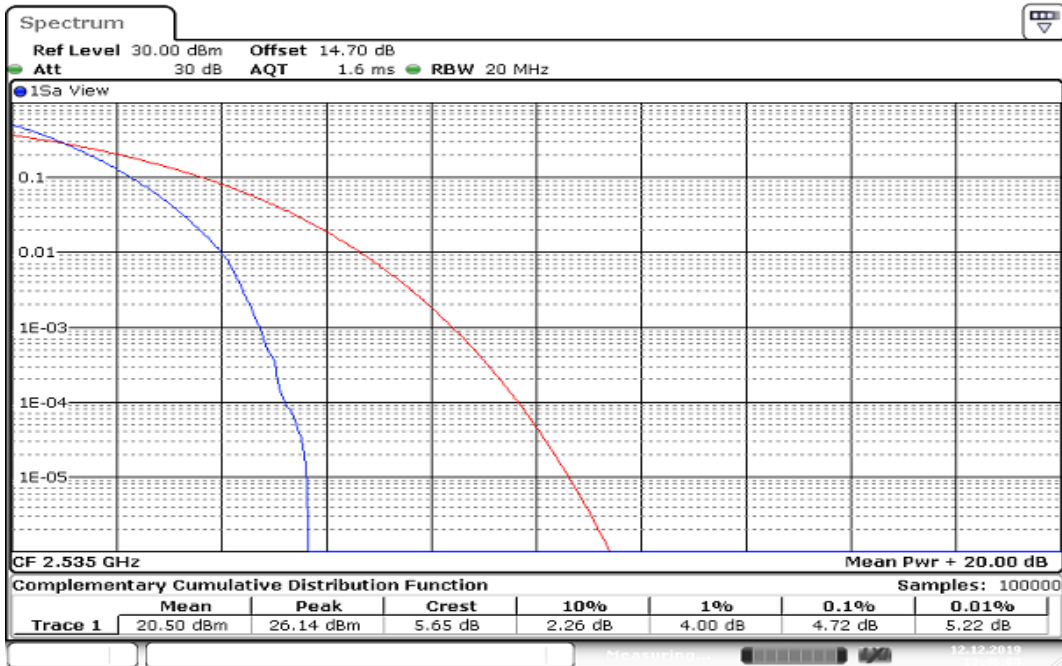
Date: 12.DEC.2019 13:41:44

### CHANNEL BANDWIDTH: 15MHz / QPSK/100%RB



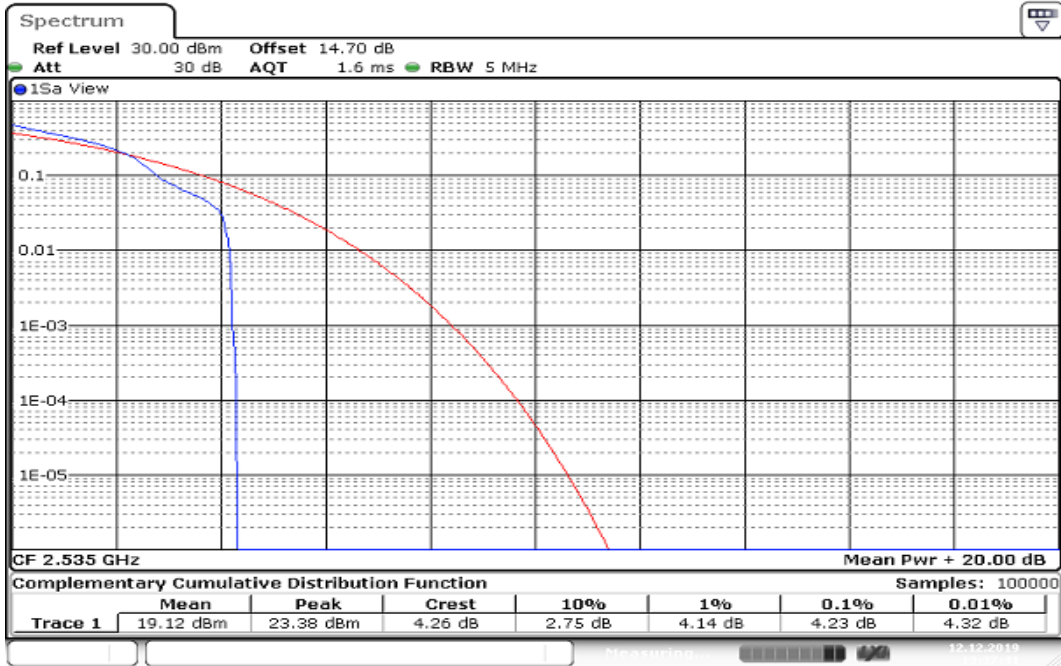
Date: 12.DEC.2019 13:43:37

### CHANNEL BANDWIDTH: 20MHz / QPSK /100%RB



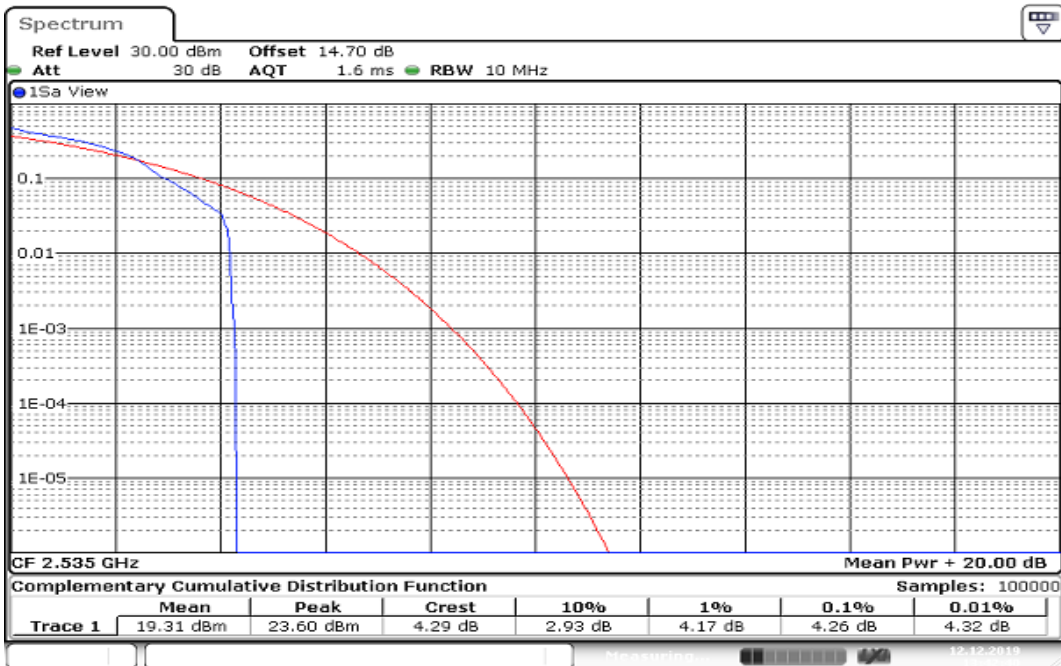
Date: 12.DEC.2019 13:46:01

### CHANNEL BANDWIDTH: 5MHz / 16QAM /1RB



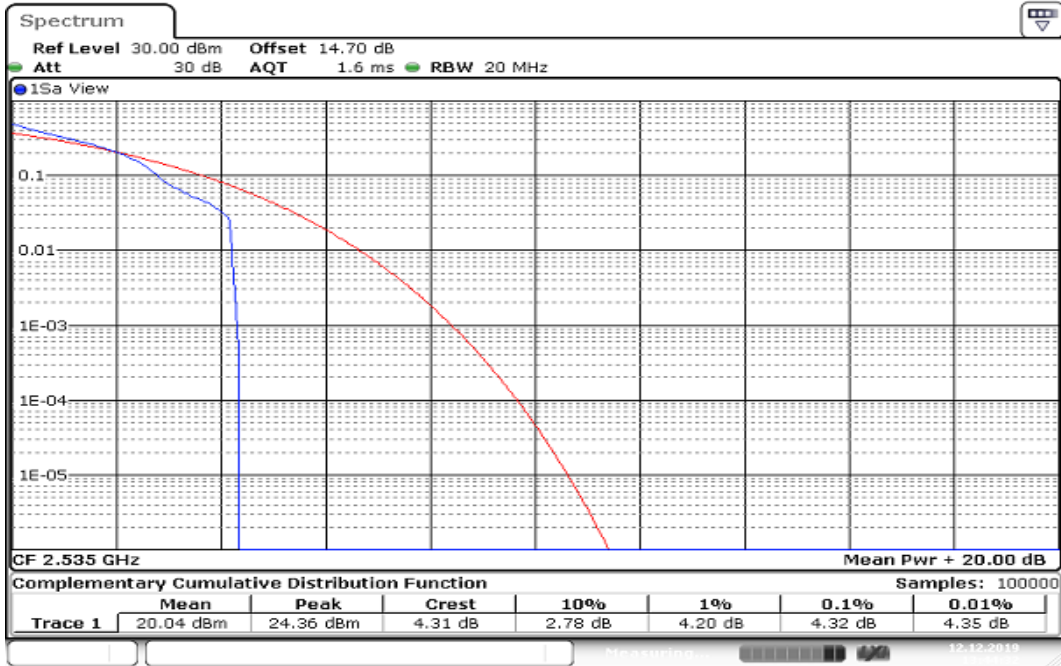
Date: 12.DEC.2019 13:37:41

### CHANNEL BANDWIDTH: 10MHz / 16QAM /1RB



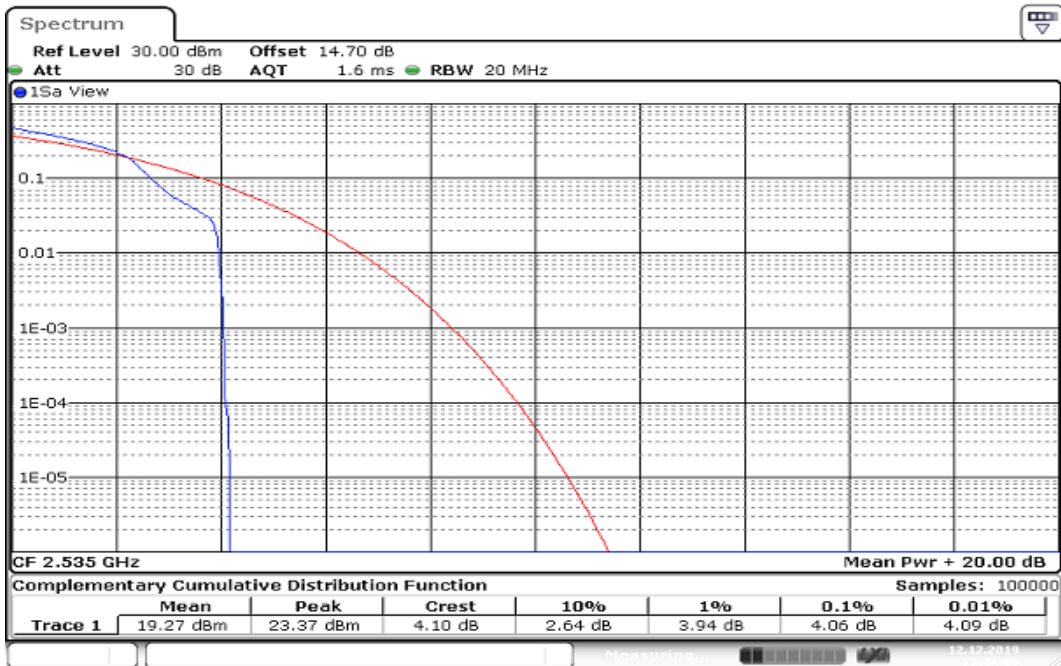
Date: 12.DEC.2019 13:42:41

### CHANNEL BANDWIDTH: 15MHz / 16QAM /1RB



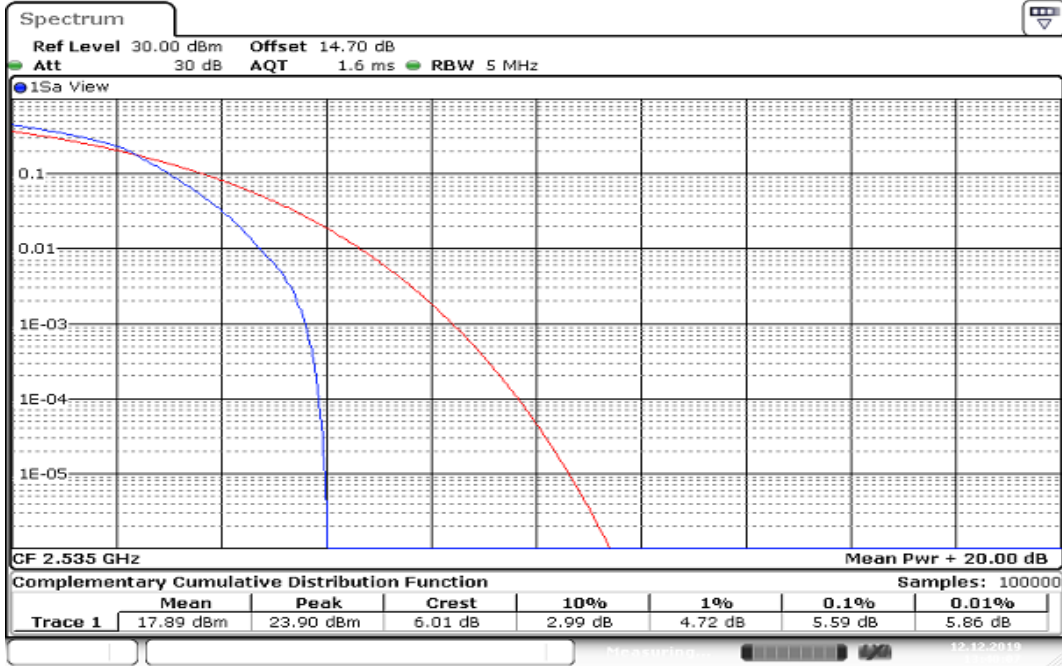
Date: 12.DEC.2019 13:44:32

### CHANNEL BANDWIDTH: 20MHz / 16QAM /1RB



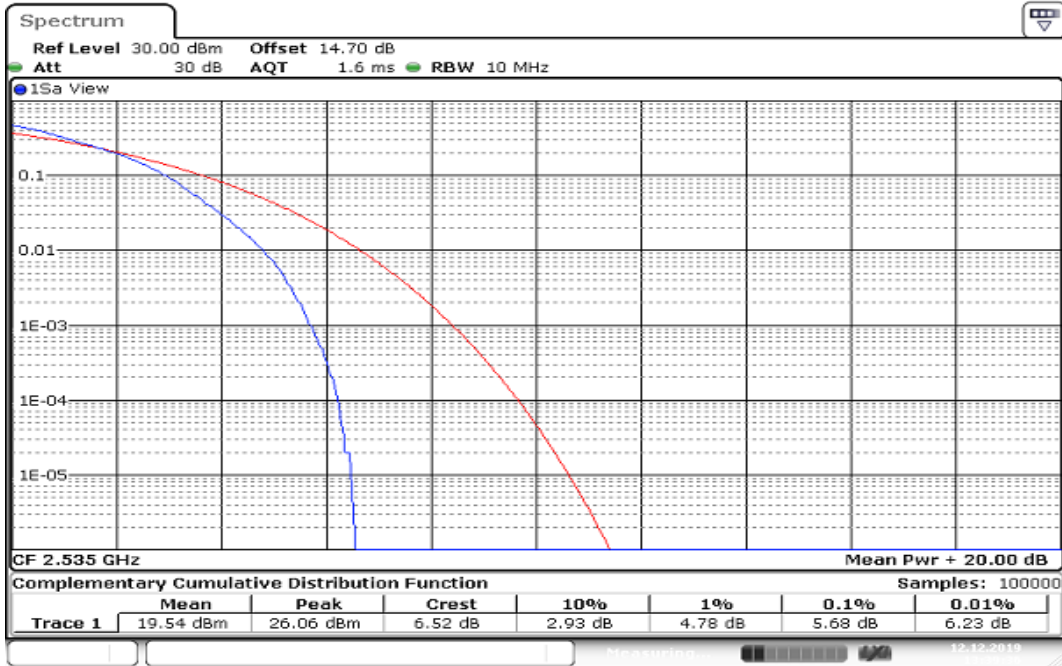
Date: 12.DEC.2019 13:47:03

### CHANNEL BANDWIDTH: 5MHz / 16QAM /100%RB



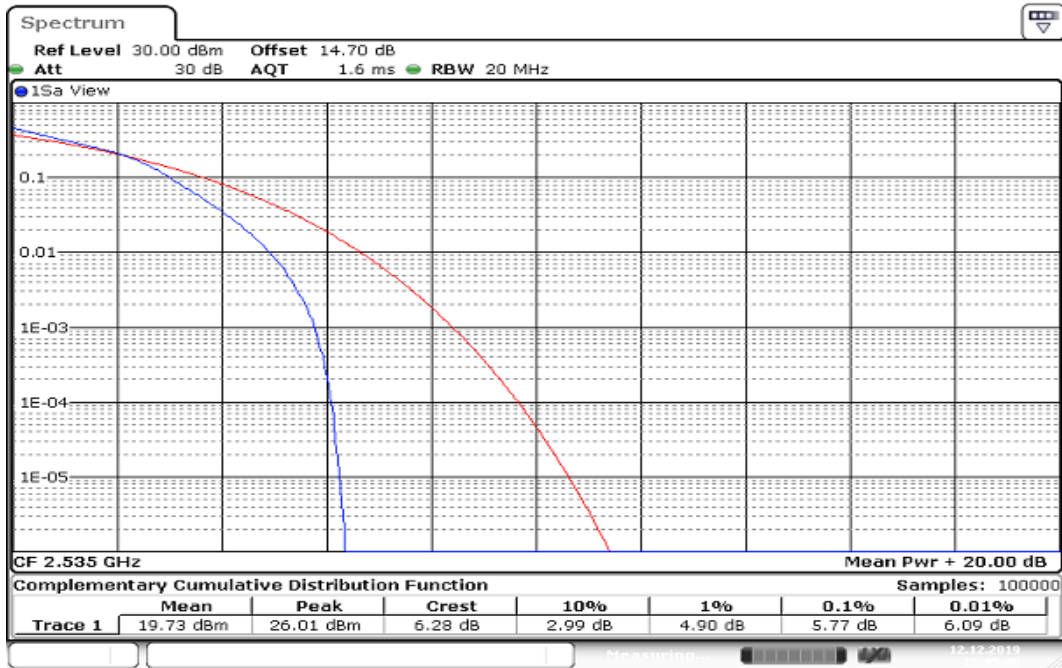
Date: 12.DEC.2019 13:40:07

### CHANNEL BANDWIDTH: 10MHz / 16QAM /100%RB



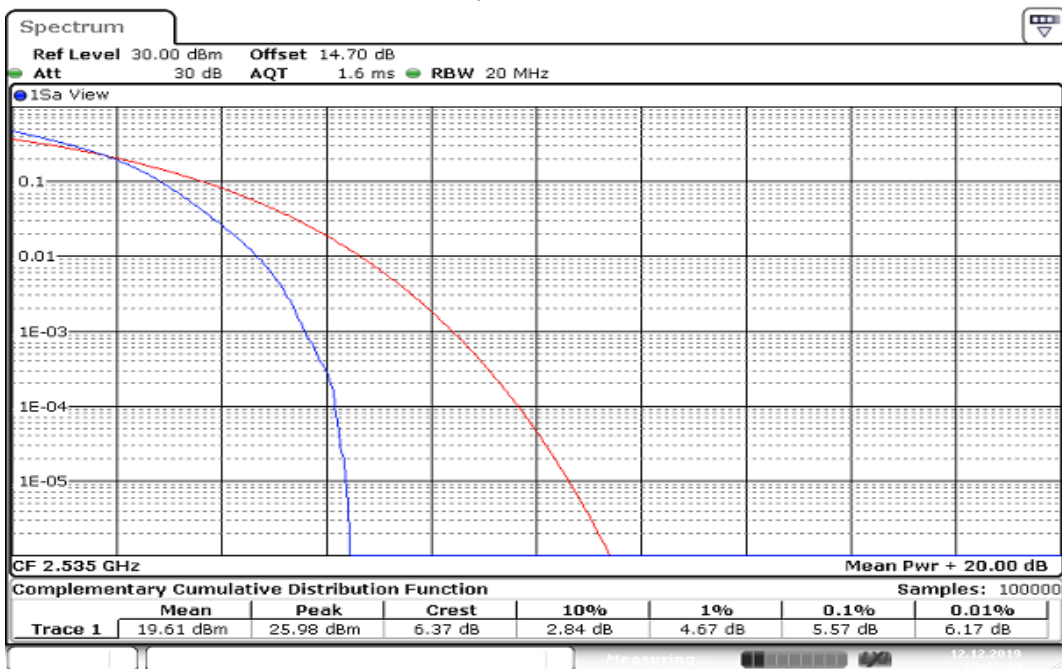
Date: 12.DEC.2019 13:39:37

### CHANNEL BANDWIDTH: 15MHz / 16QAM /100%RB



Date: 12.DEC.2019 13:45:00

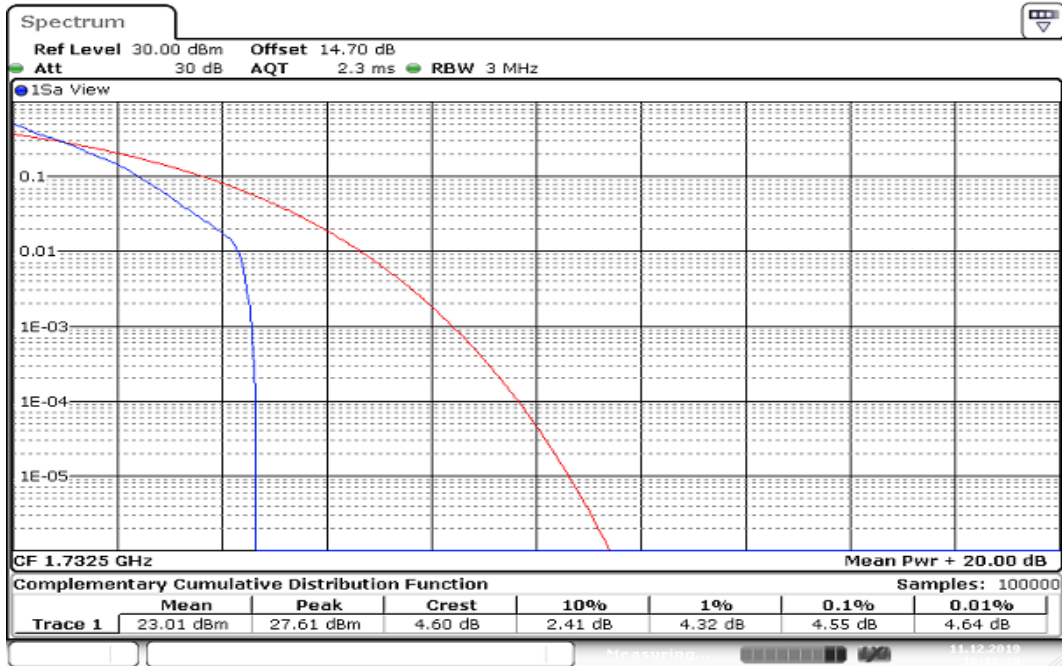
### CHANNEL BANDWIDTH: 20MHz / 16QAM /100%RB



Date: 12.DEC.2019 13:47:30

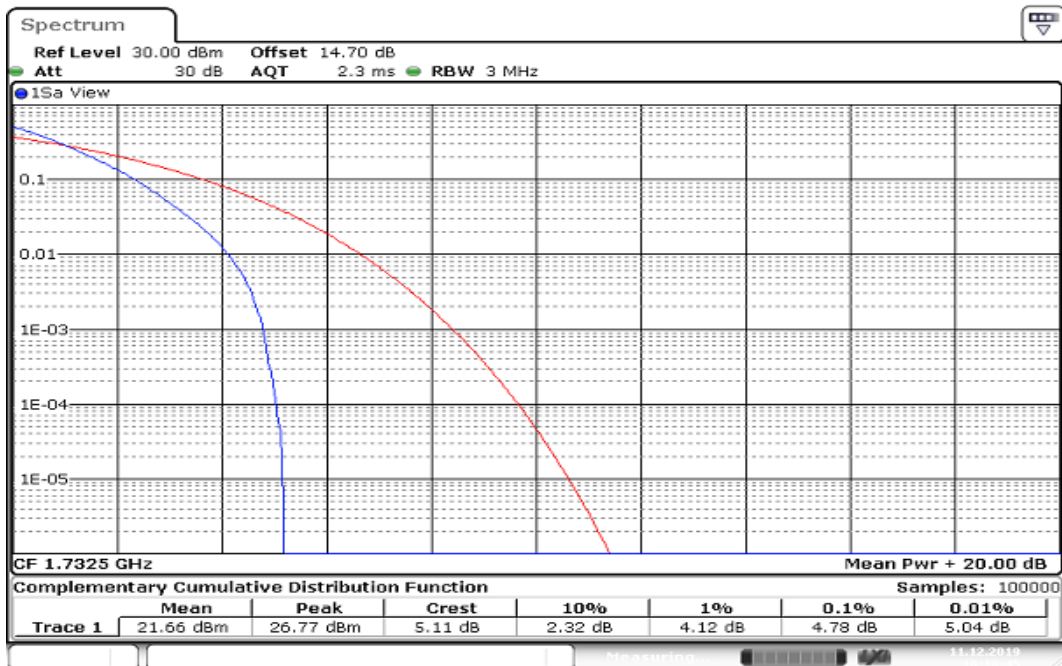
## LTE Band 4

### CHANNEL BANDWIDTH: 1.4MHz / QPSK/1RB



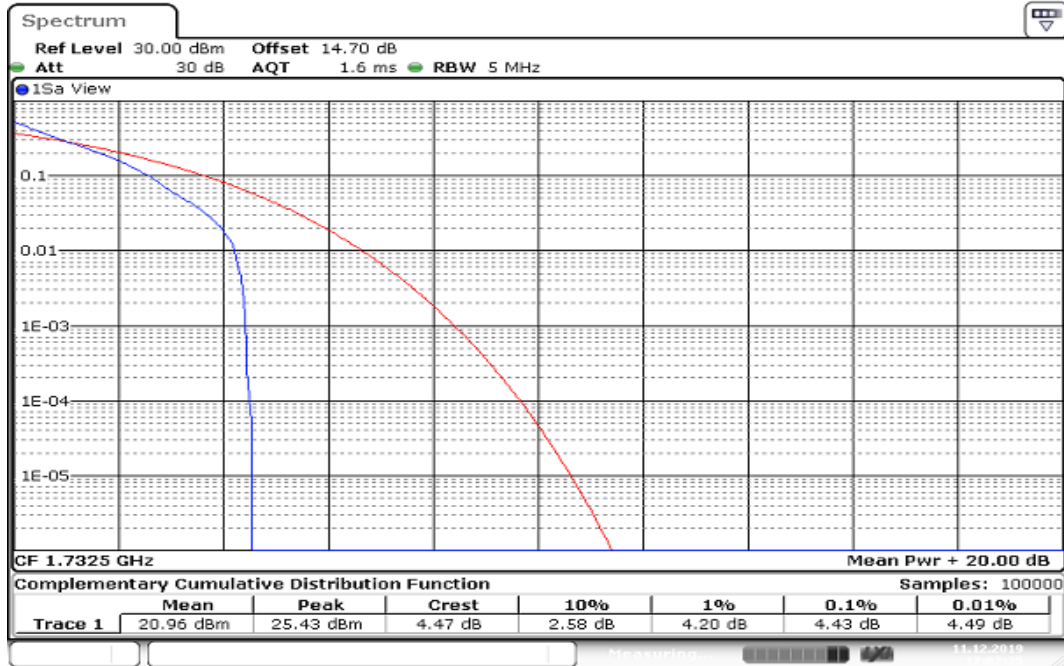
Date: 11.DEC.2019 10:18:11

### CHANNEL BANDWIDTH: 3MHz / QPSK /1RB



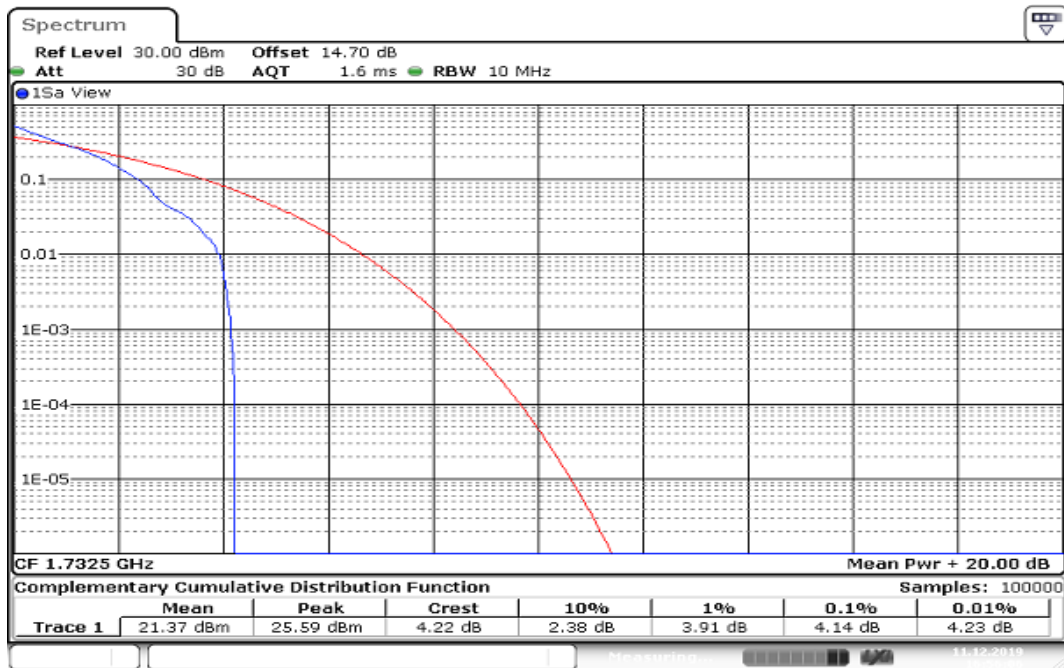
Date: 11.DEC.2019 10:18:45

### CHANNEL BANDWIDTH: 5MHz / QPSK/1RB



Date: 11.DEC.2019 17:02:26

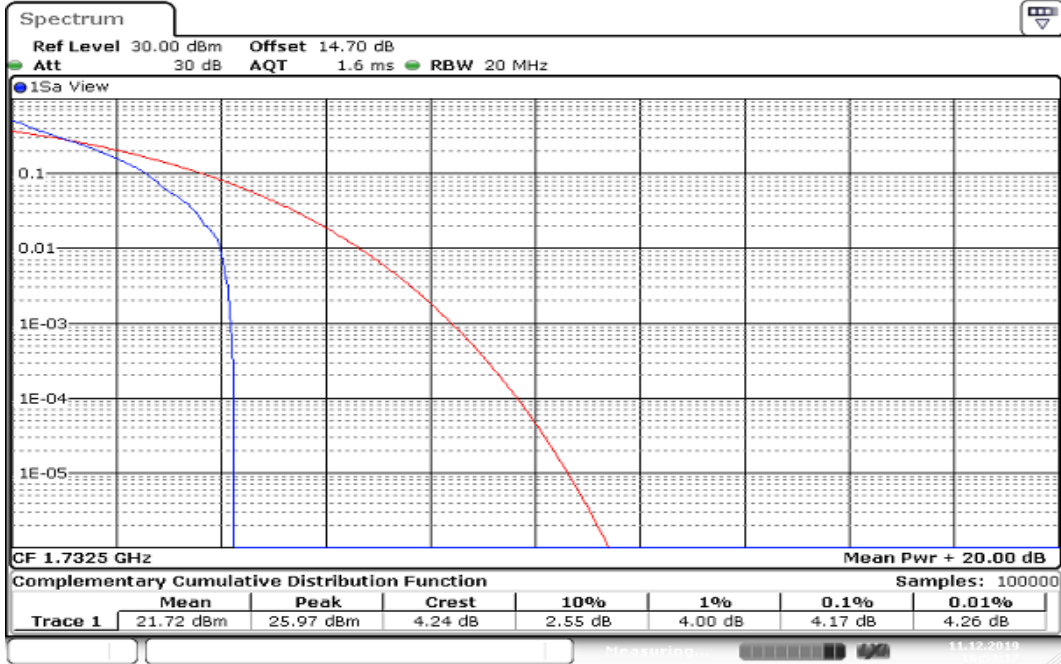
### CHANNEL BANDWIDTH: 10MHz / QPSK /1RB



Date: 11.DEC.2019 16:56:06

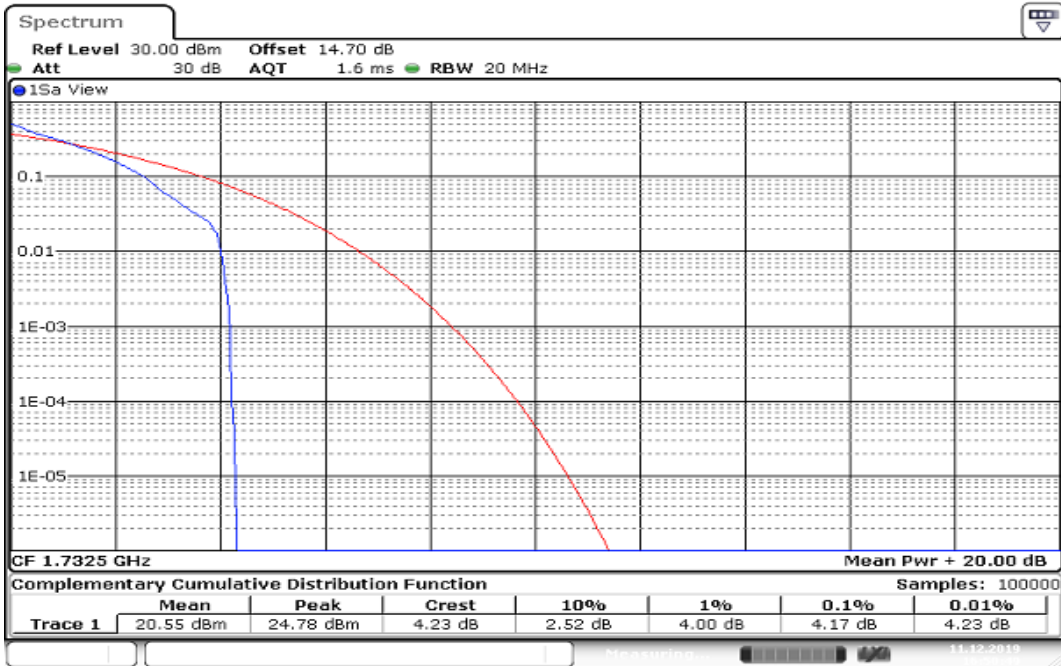


### CHANNEL BANDWIDTH: 15MHz / QPSK/1RB



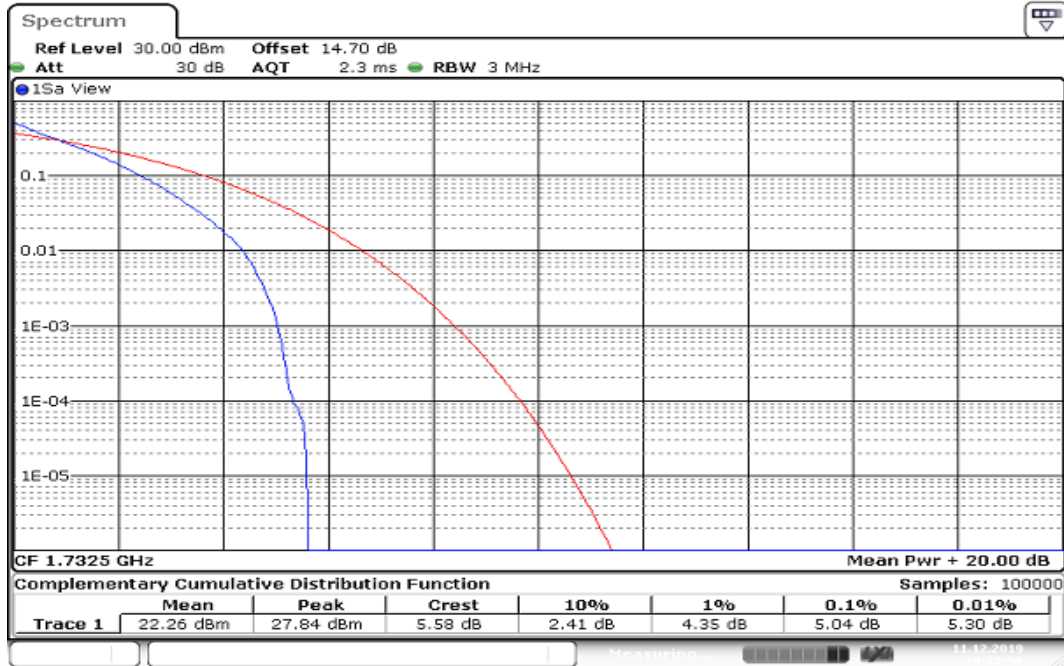
Date: 11.DEC.2019 16:53:17

### CHANNEL BANDWIDTH: 20MHz / QPSK /1RB



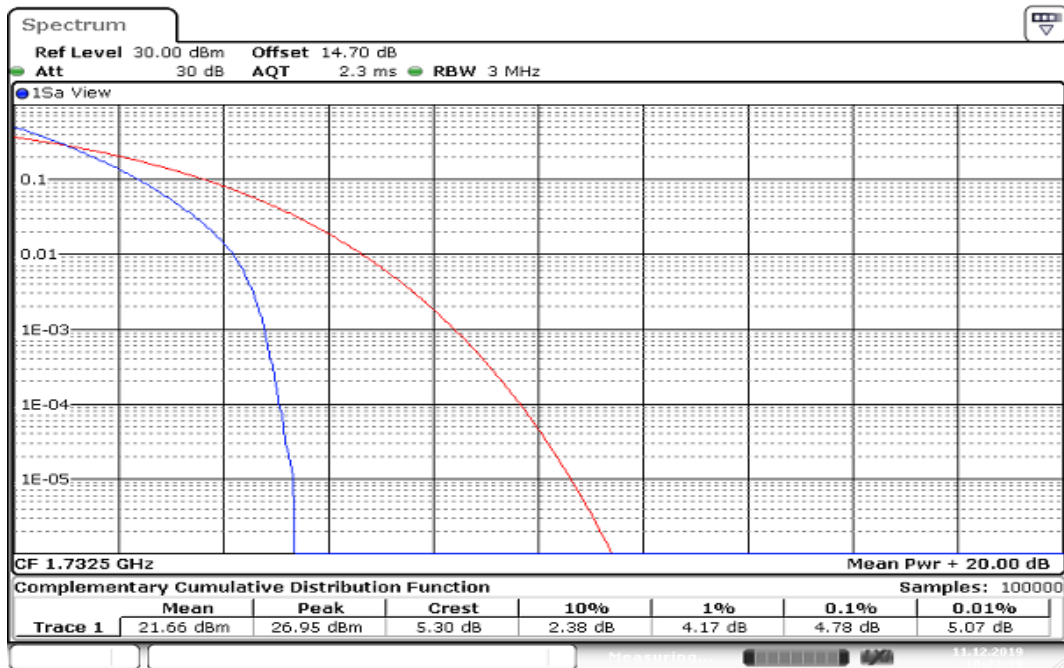
Date: 11.DEC.2019 16:50:49

### CHANNEL BANDWIDTH: 1.4MHz / QPSK/100%RB



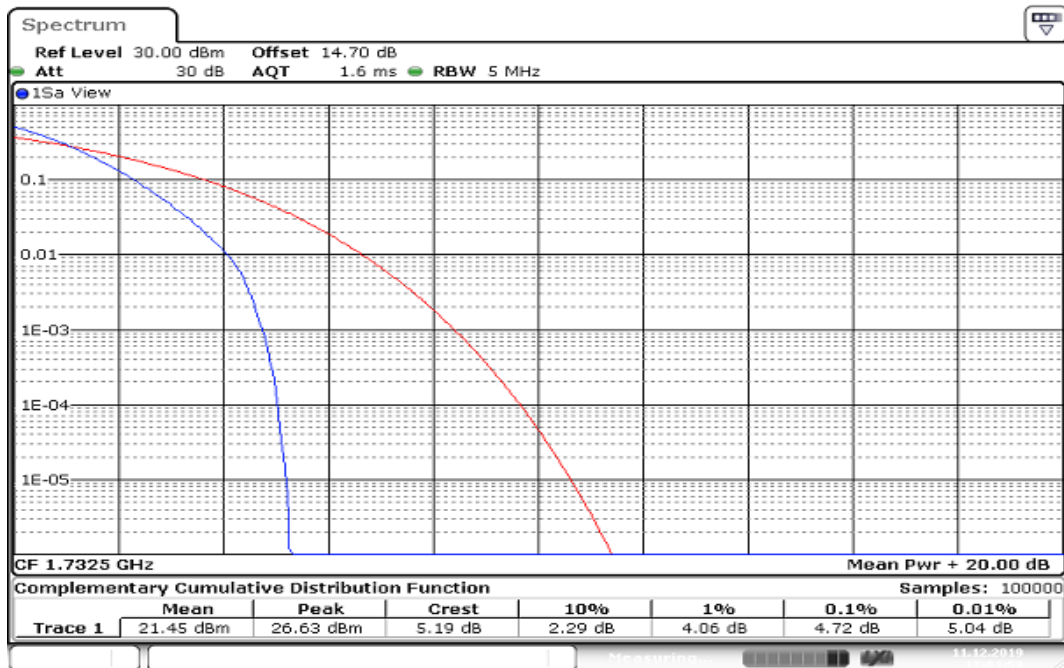
Date: 11.DEC.2019 10:22:57

### CHANNEL BANDWIDTH: 3MHz / QPSK /100%RB



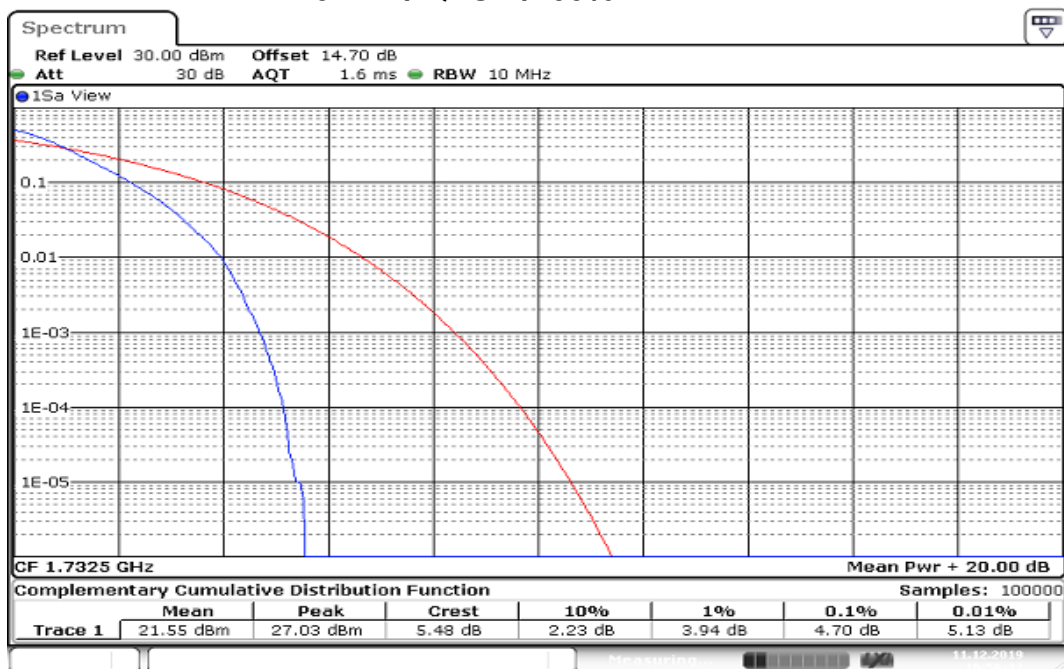
Date: 11.DEC.2019 10:22:39

### CHANNEL BANDWIDTH: 5MHz / QPSK/100%RB



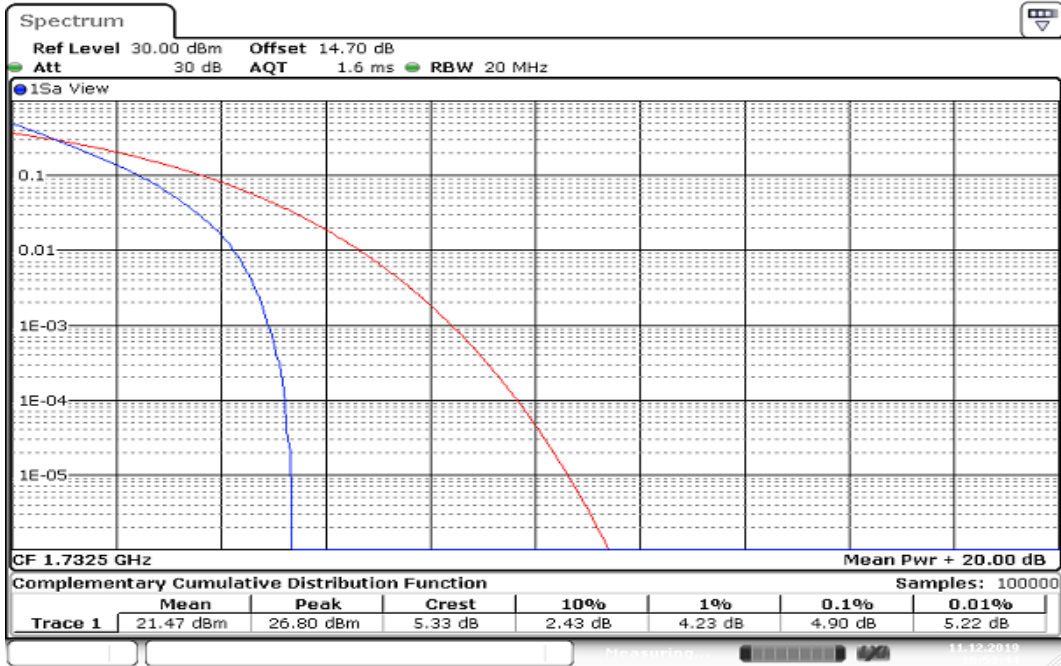
Date: 11.DEC.2019 17:01:59

### CHANNEL BANDWIDTH: 10MHz / QPSK /100%RB



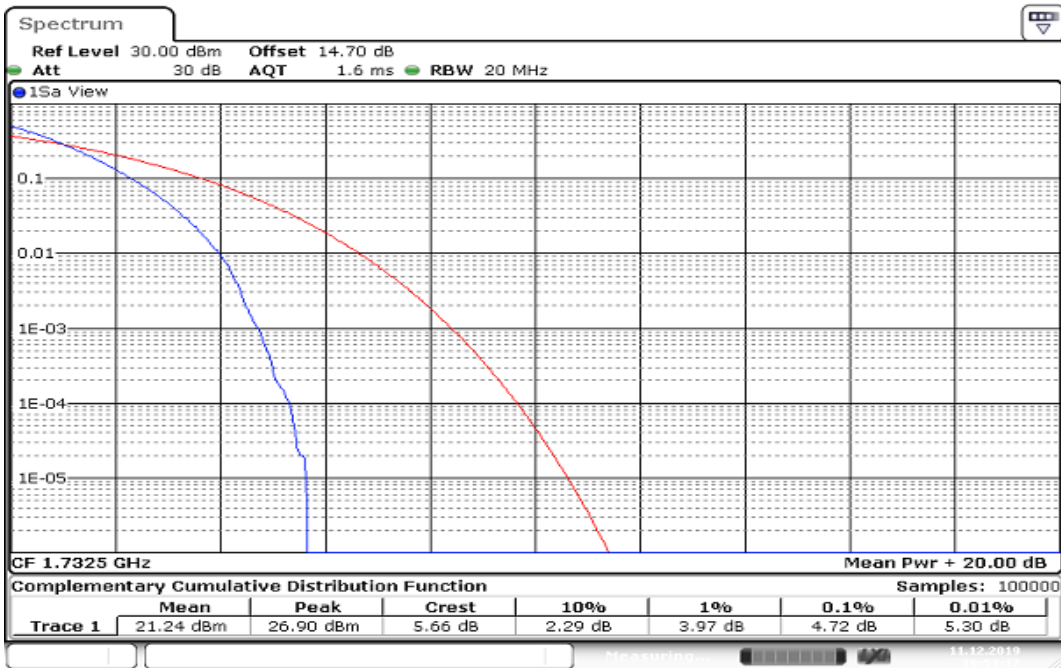
Date: 11.DEC.2019 16:56:32

### CHANNEL BANDWIDTH: 15MHz / QPSK/100%RB



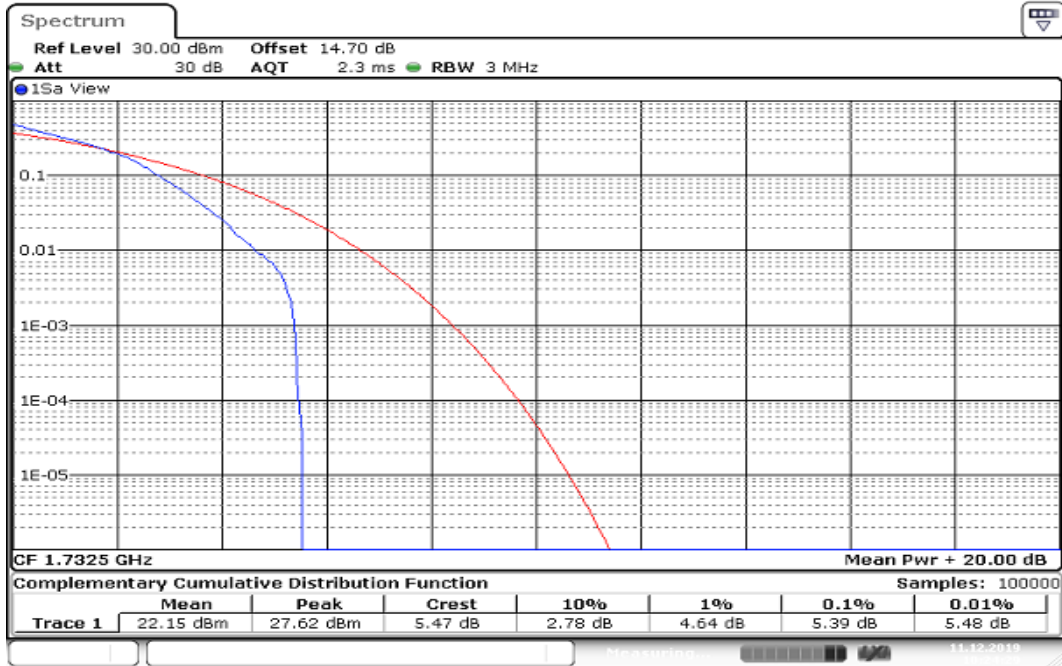
Date: 11.DEC.2019 16:53:44

### CHANNEL BANDWIDTH: 20MHz / QPSK /100%RB



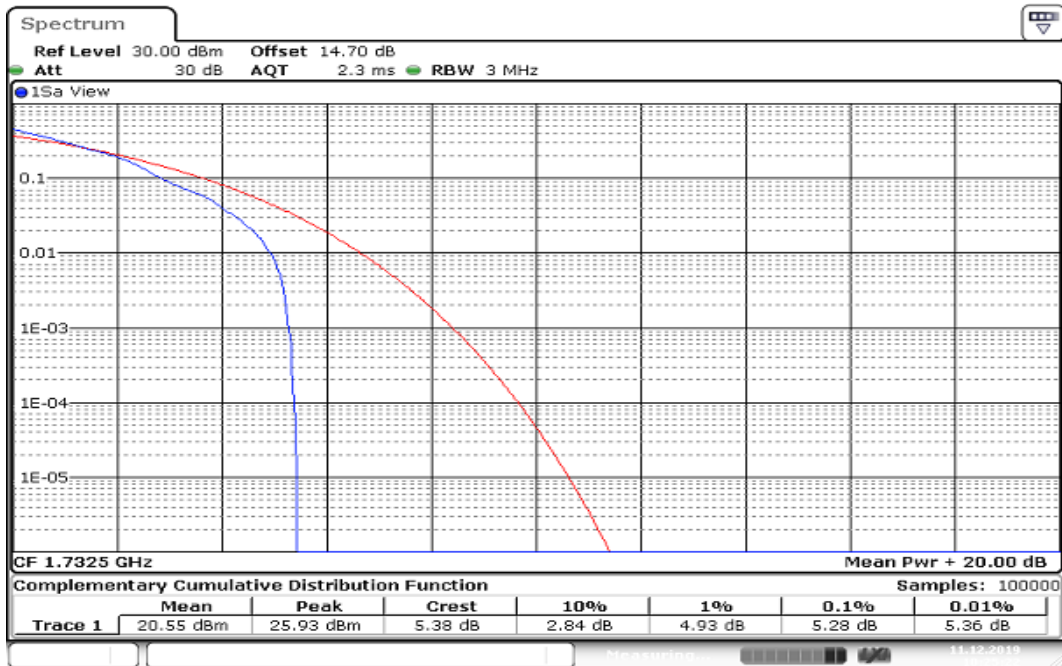
Date: 11.DEC.2019 16:51:17

### CHANNEL BANDWIDTH: 1.4MHz / 16QAM / 1RB



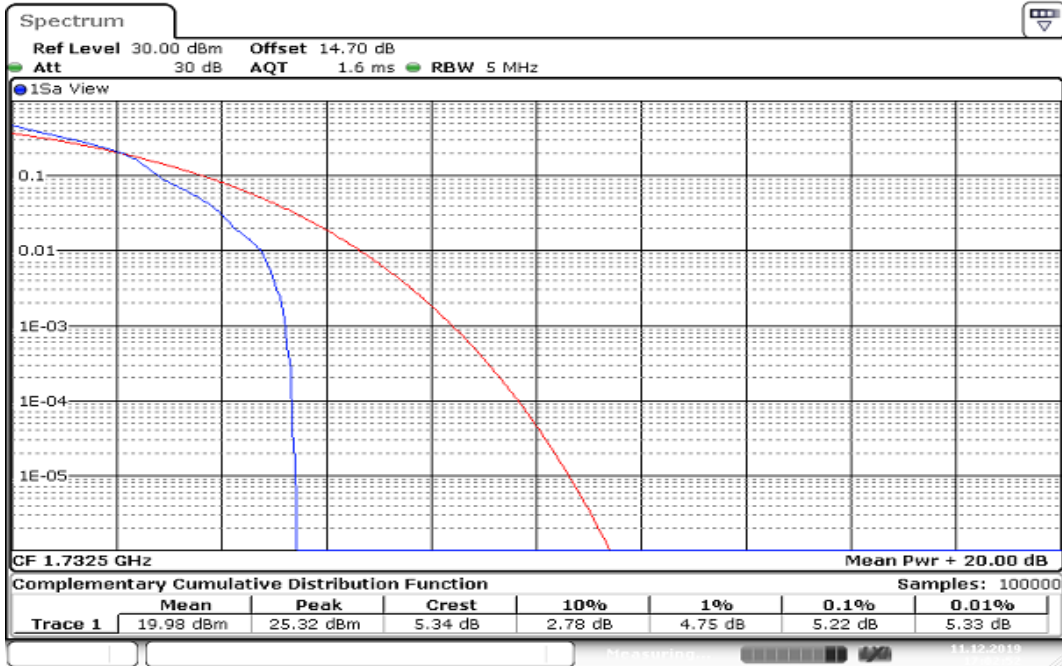
Date: 11.DEC.2019 10:24:30

### CHANNEL BANDWIDTH: 3MHz / 16QAM / 1RB



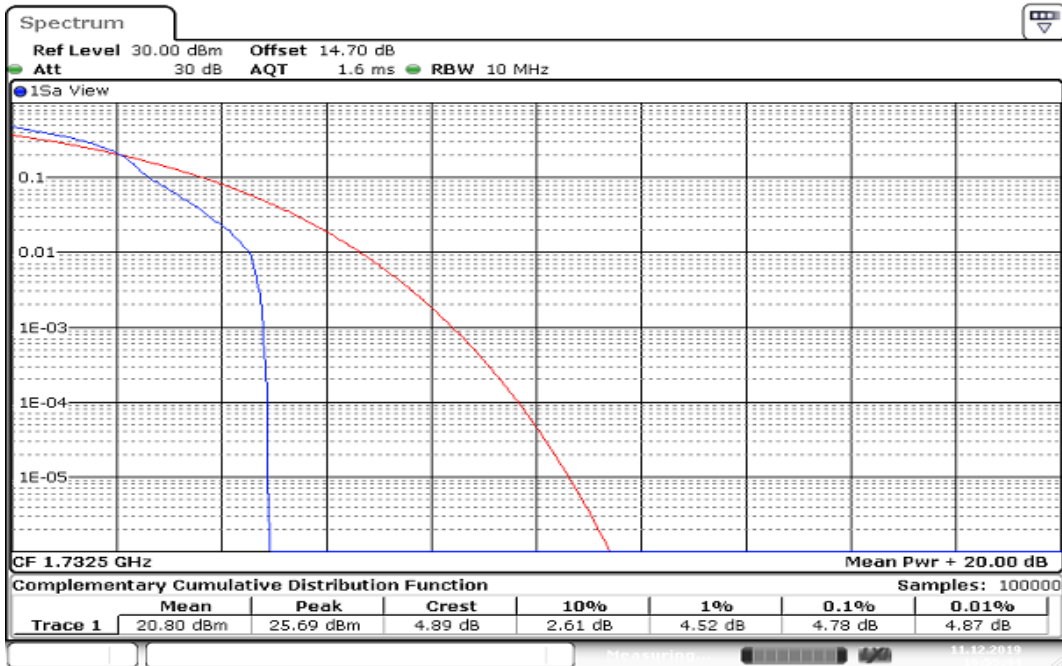
Date: 11.DEC.2019 10:25:23

### CHANNEL BANDWIDTH: 5MHz / 16QAM /1RB



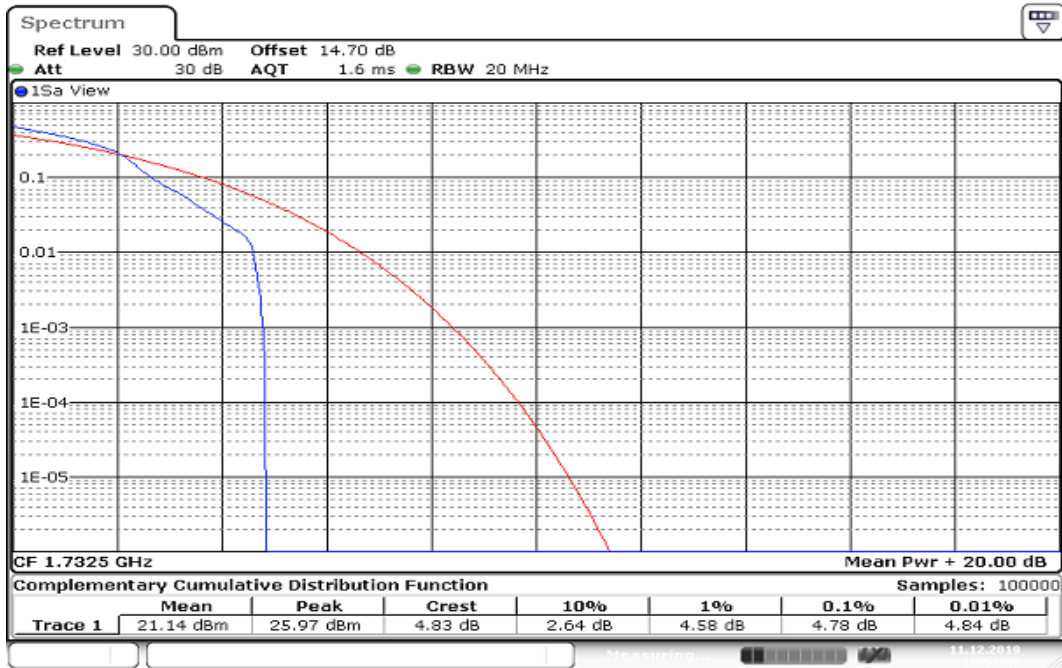
Date: 11.DEC.2019 17:02:52

### CHANNEL BANDWIDTH: 10MHz / 16QAM /1RB



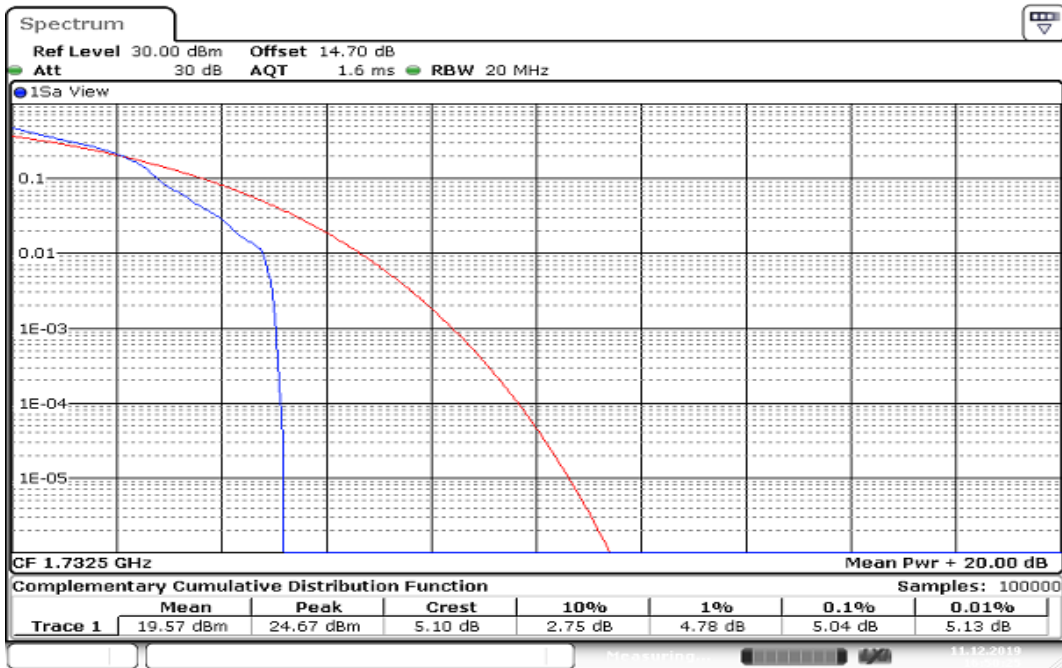
Date: 11.DEC.2019 16:55:44

### CHANNEL BANDWIDTH: 15MHz / 16QAM / 1RB



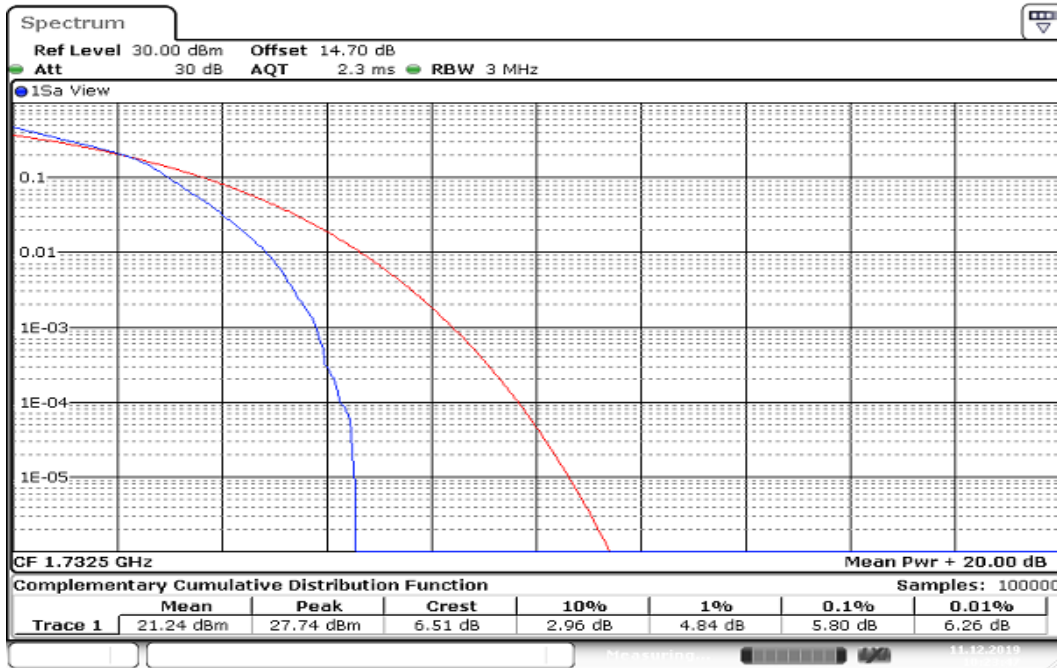
Date: 11.DEC.2019 16:52:49

### CHANNEL BANDWIDTH: 20MHz / 16QAM / 1RB



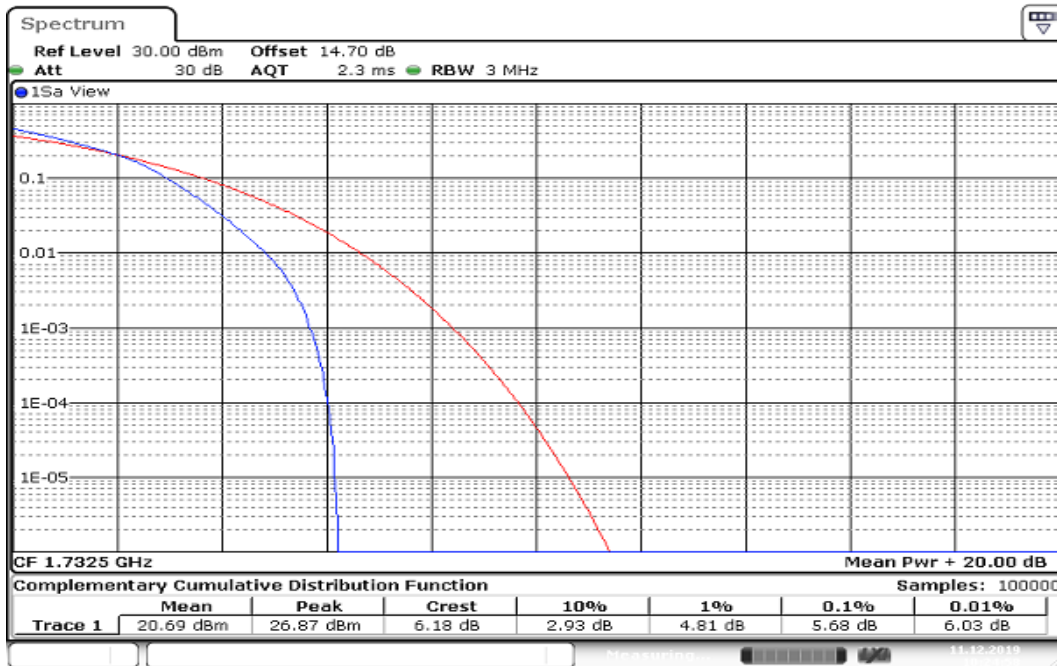
Date: 11.DEC.2019 16:50:25

### CHANNEL BANDWIDTH: 1.4MHz / 16QAM / 100%RB



Date: 11.DEC.2019 10:23:47

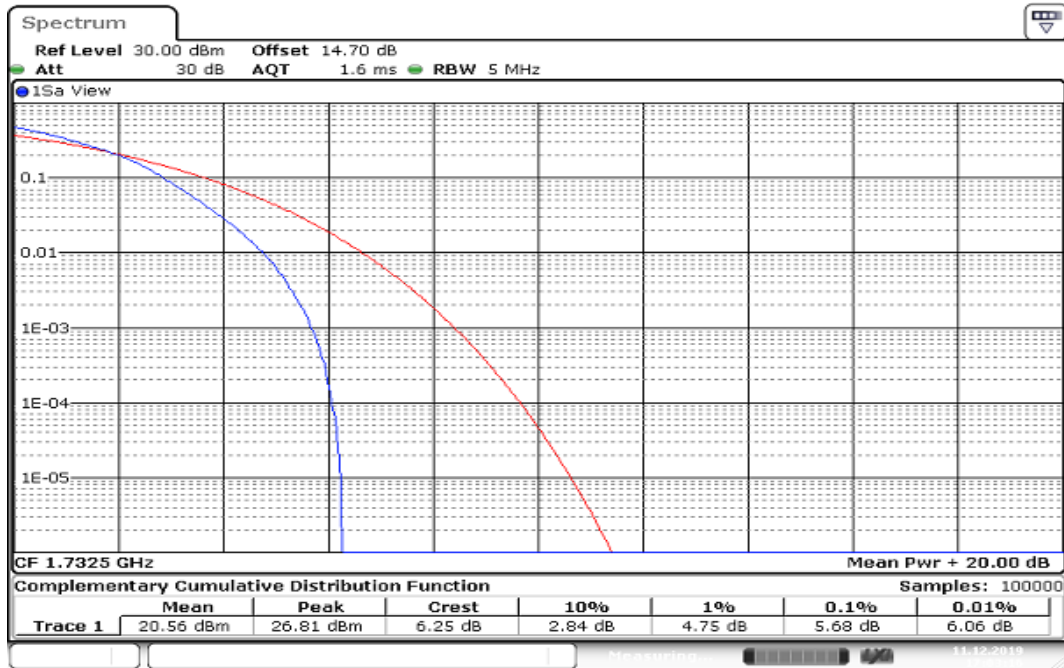
### CHANNEL BANDWIDTH: 3MHz / 16QAM / 100%RB



Date: 11.DEC.2019 10:24:59

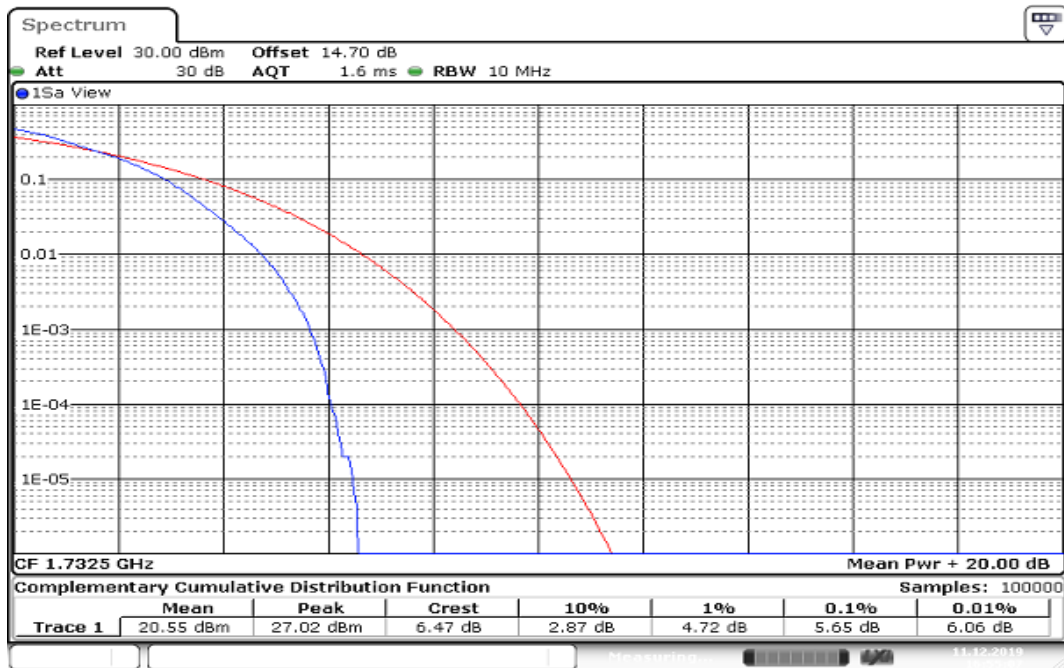


### CHANNEL BANDWIDTH: 5MHz / 16QAM / 100%RB



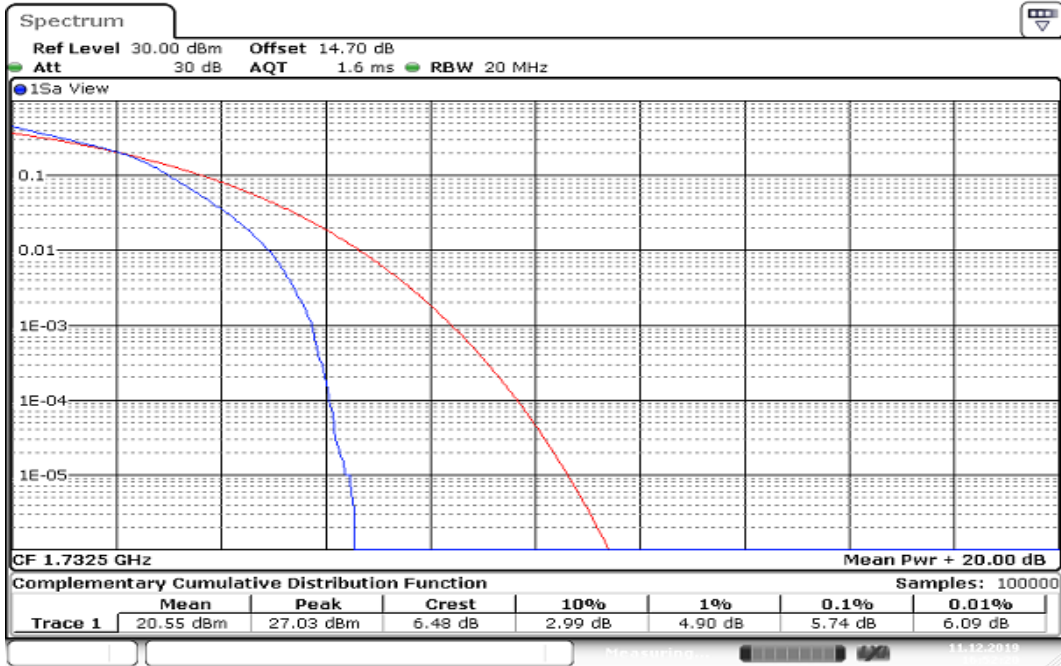
Date: 11.DEC.2019 17:03:16

### CHANNEL BANDWIDTH: 10MHz / 16QAM / 100%RB



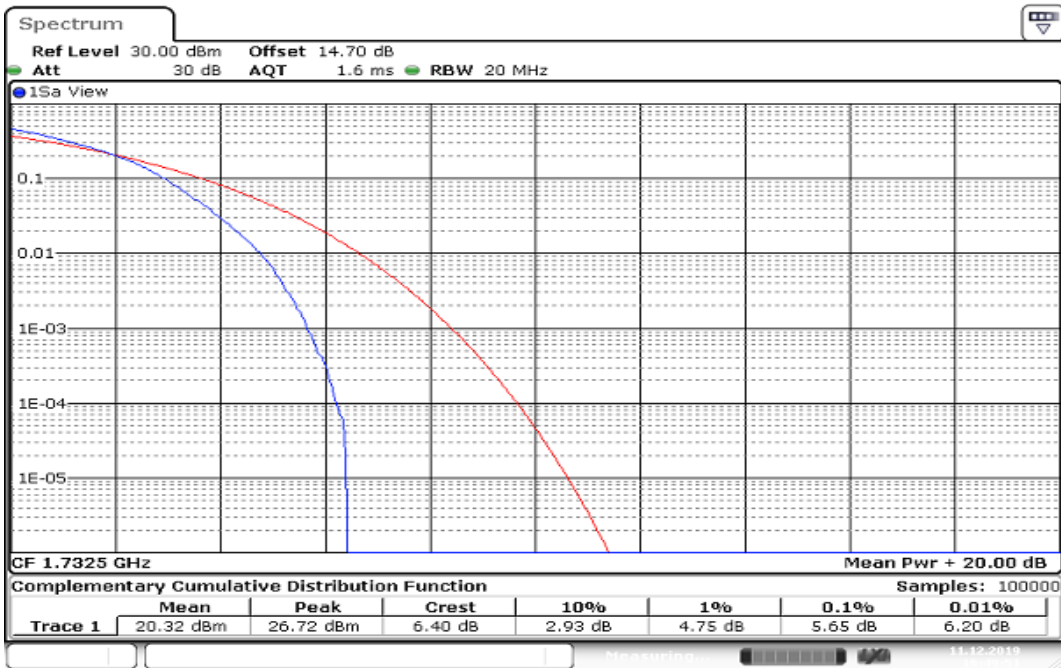
Date: 11.DEC.2019 16:55:07

### CHANNEL BANDWIDTH: 15MHz / 16QAM / 100%RB



Date: 11.DEC.2019 16:52:20

### CHANNEL BANDWIDTH: 20MHz / 16QAM / 100%RB



Date: 11.DEC.2019 16:49:52