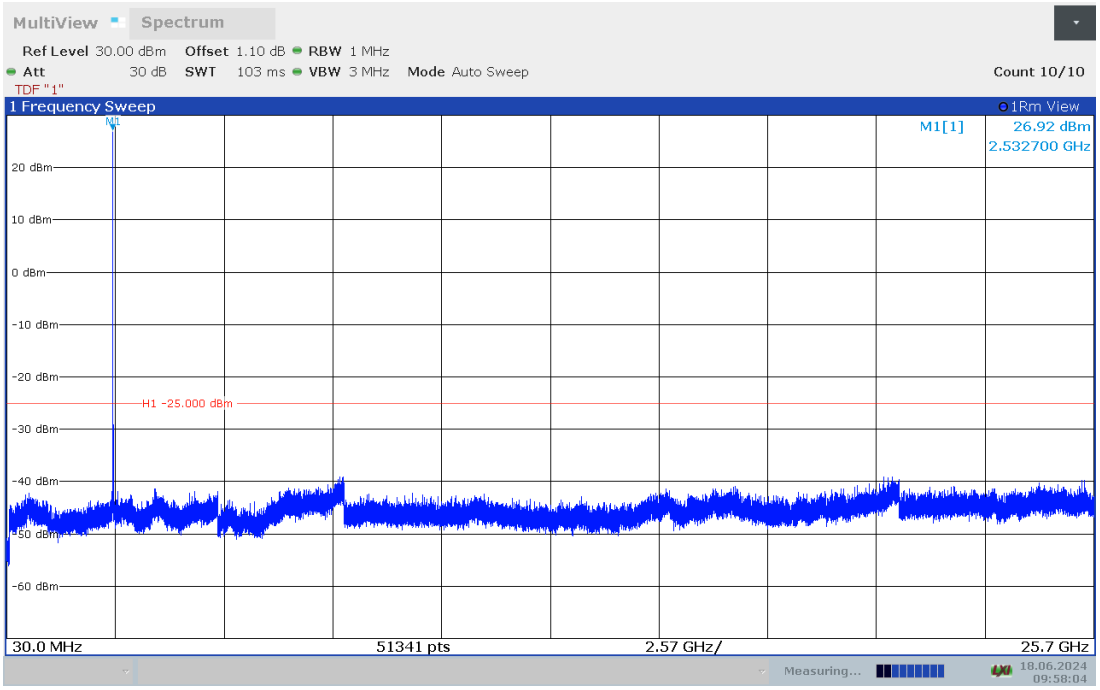
LTE band 7 20MHz QPSK: 30MHz – 25.7GHz

Spurious emission limit –25dBm.

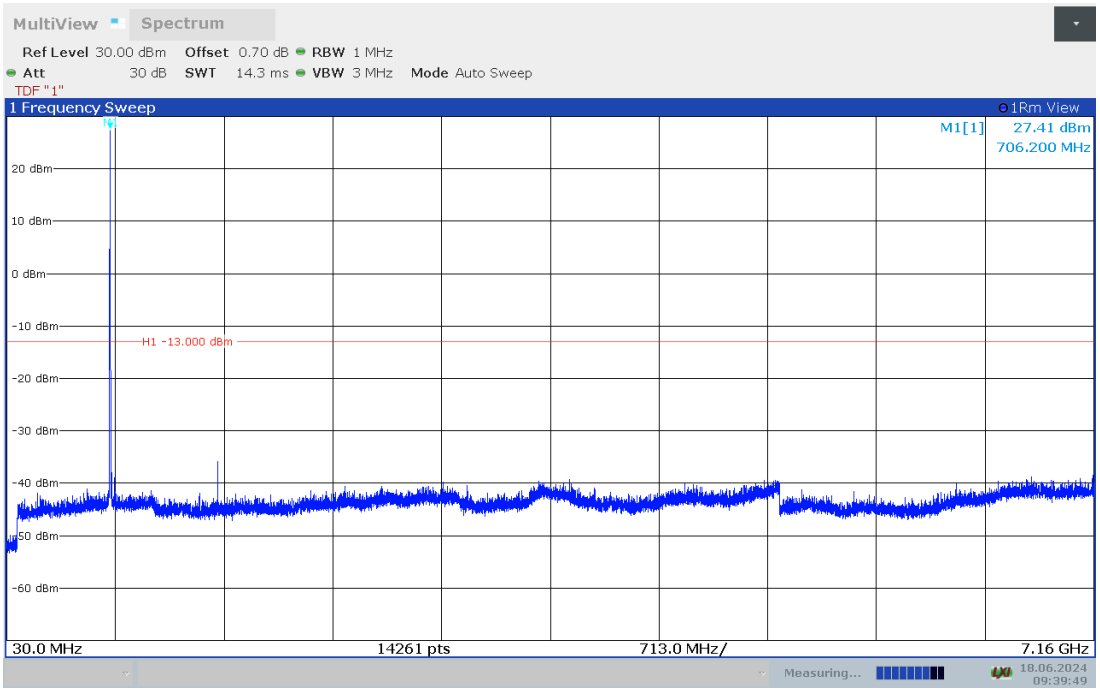
NOTE: peak above the limit line is the carrier frequency.



LTE band 12: 30MHz – 7.16GHz

Spurious emission limit –13dBm.

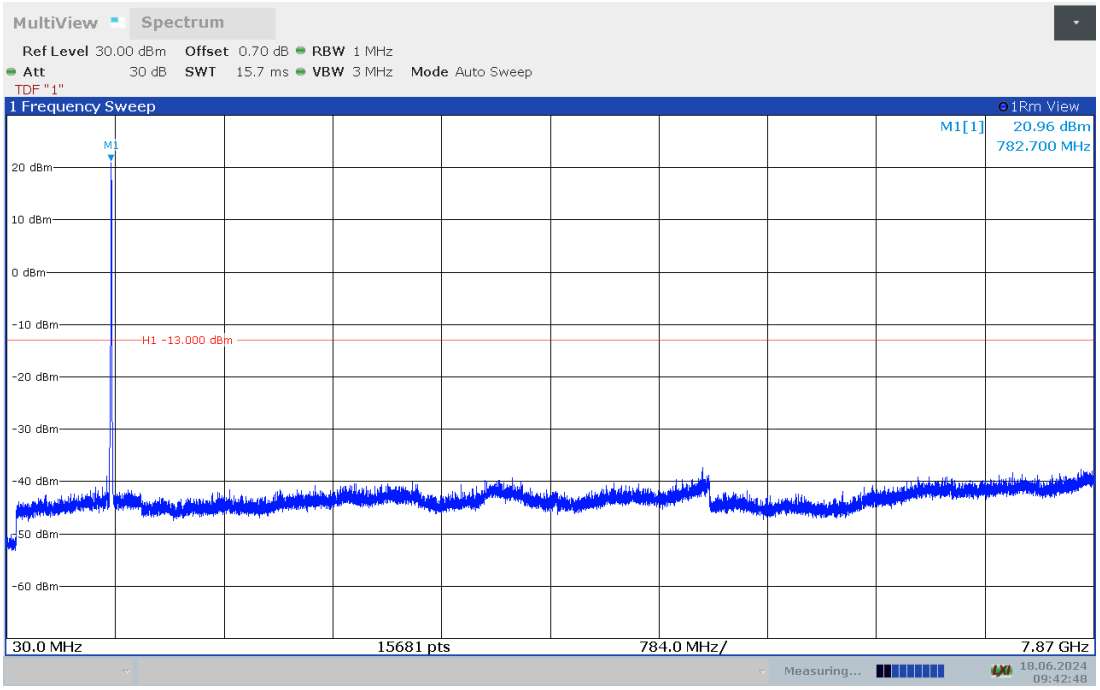
NOTE: peak above the limit line is the carrier frequency.



LTE band 13: 30MHz – 7.87GHz

Spurious emission limit –13dBm.

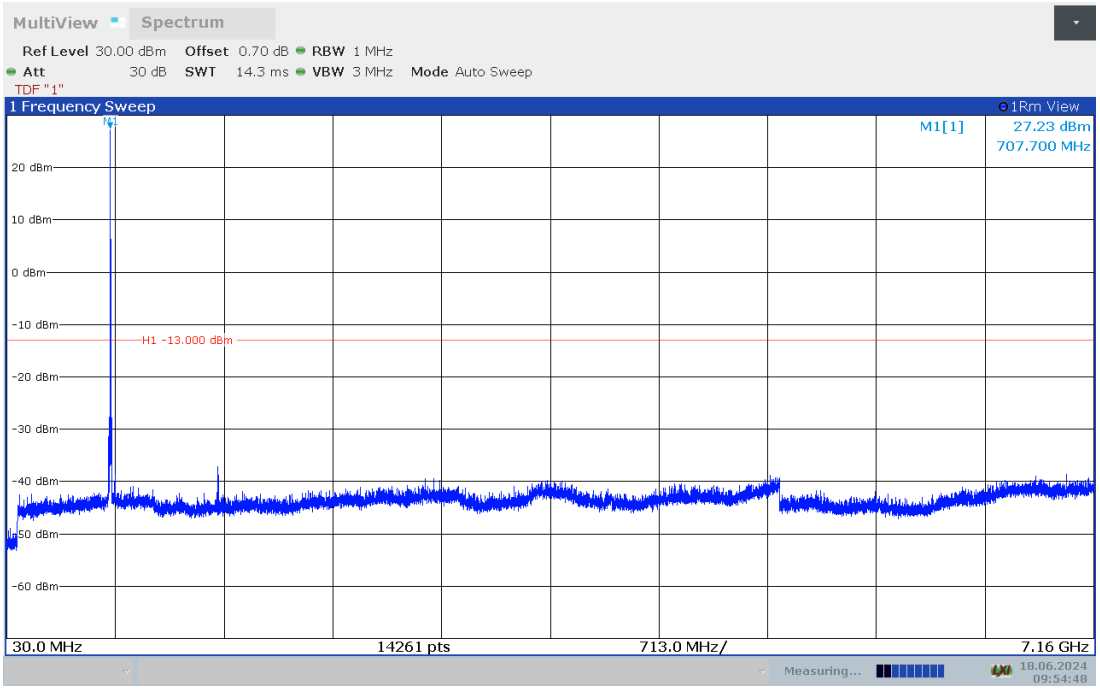
NOTE: peak above the limit line is the carrier frequency.



LTE band 17: 30MHz – 7.16GHz

Spurious emission limit –13dBm.

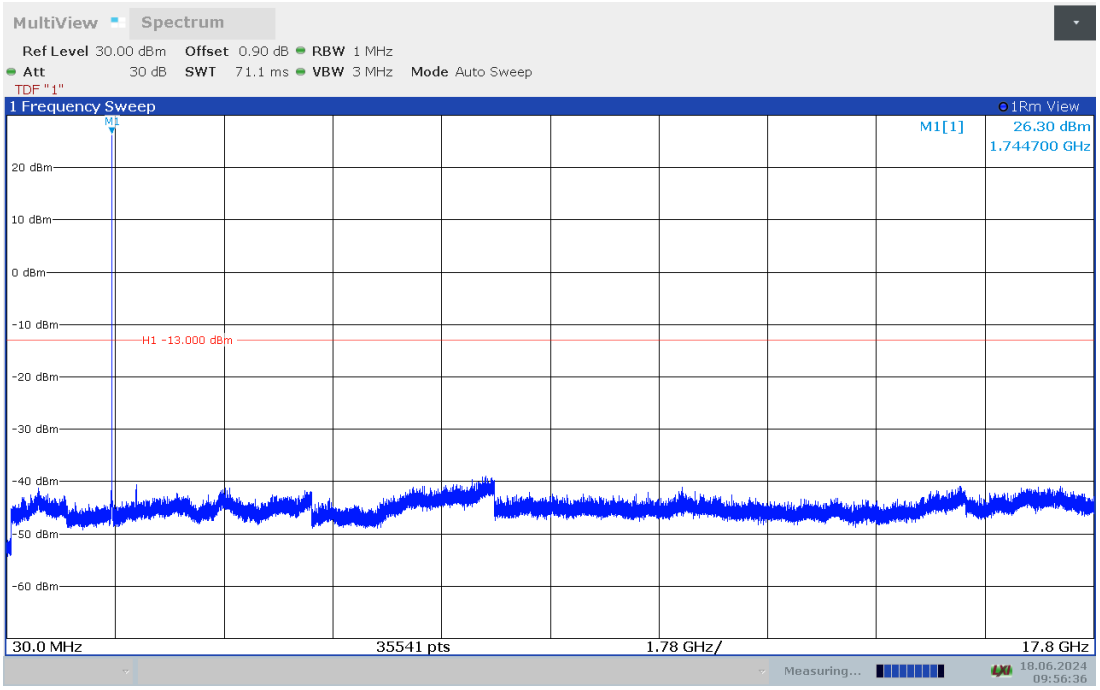
NOTE: peak above the limit line is the carrier frequency.



LTE Band 66: 30MHz – 17.8GHz

Spurious emission limit –13dBm.

NOTE: peak above the limit line is the carrier frequency.



A.8 PEAK-TO-AVERAGE POWER RATIO

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB

a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;

b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;

c) Set the number of counts to a value that stabilizes the measured CCDF curve;

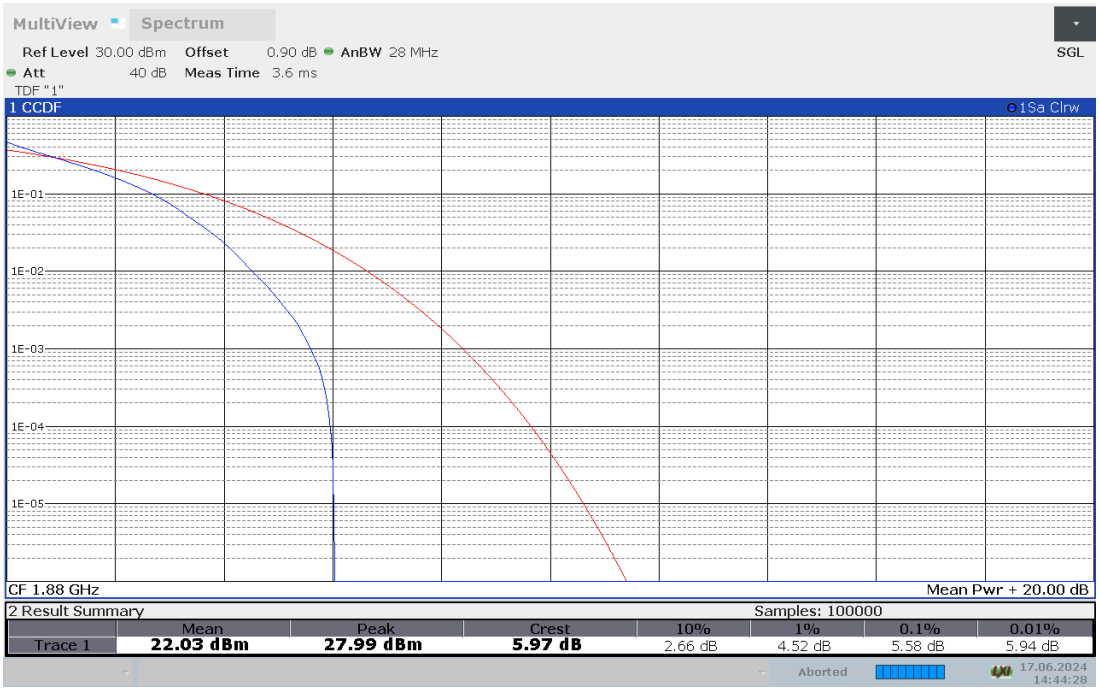
d) Record the maximum PAPR level associated with a probability of 0.1%.

Measurement results

LTE Band 2, BW1.4MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1880	100%,0	5.58	6.46

LTE band 2 , 1.4MHz Bandwidth,QPSK

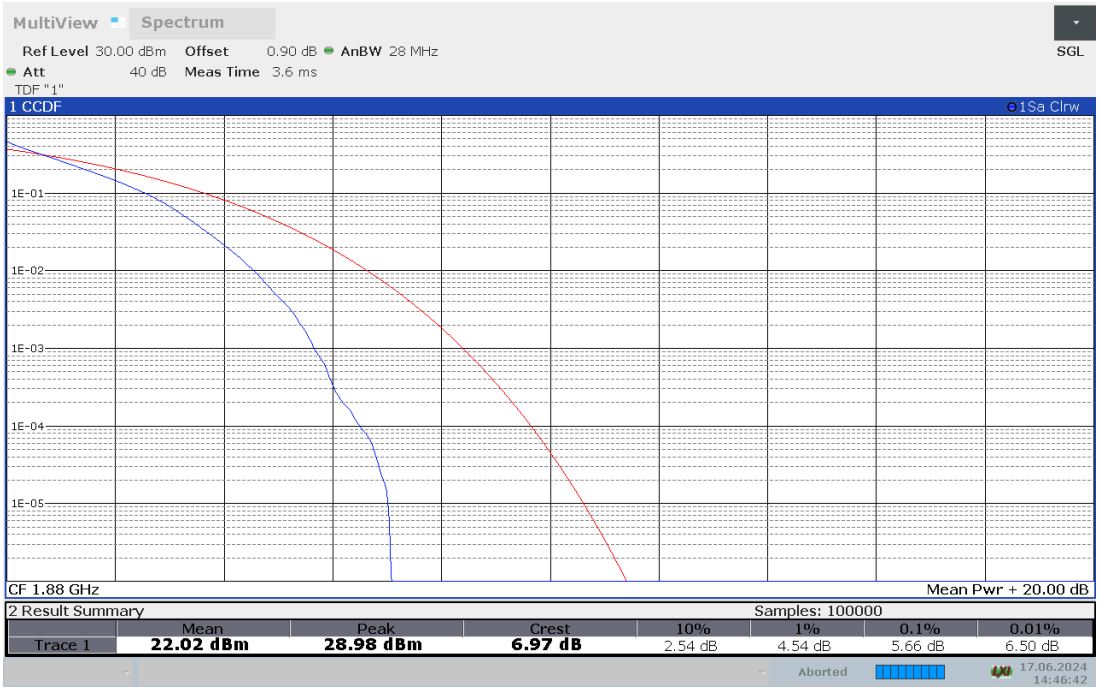


LTE band 2 , 1.4MHz Bandwidth,16QAM

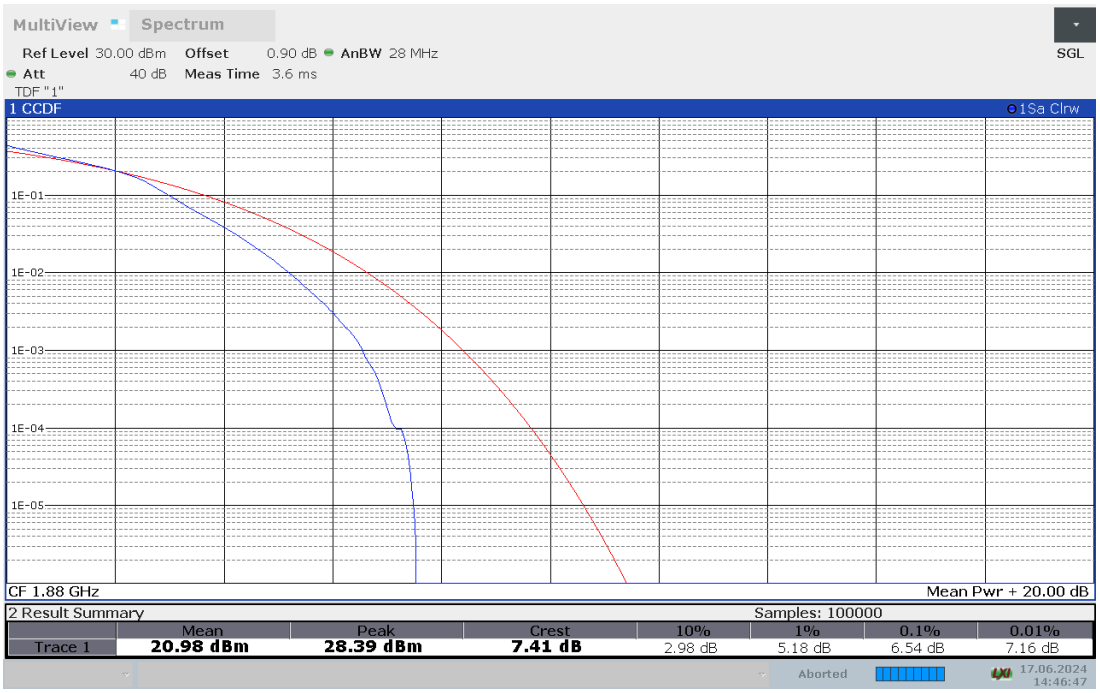
LTE Band 2, 3MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1880	100%,0	5.66	6.54

LTE band 2 , 3MHz Bandwidth,QPSK



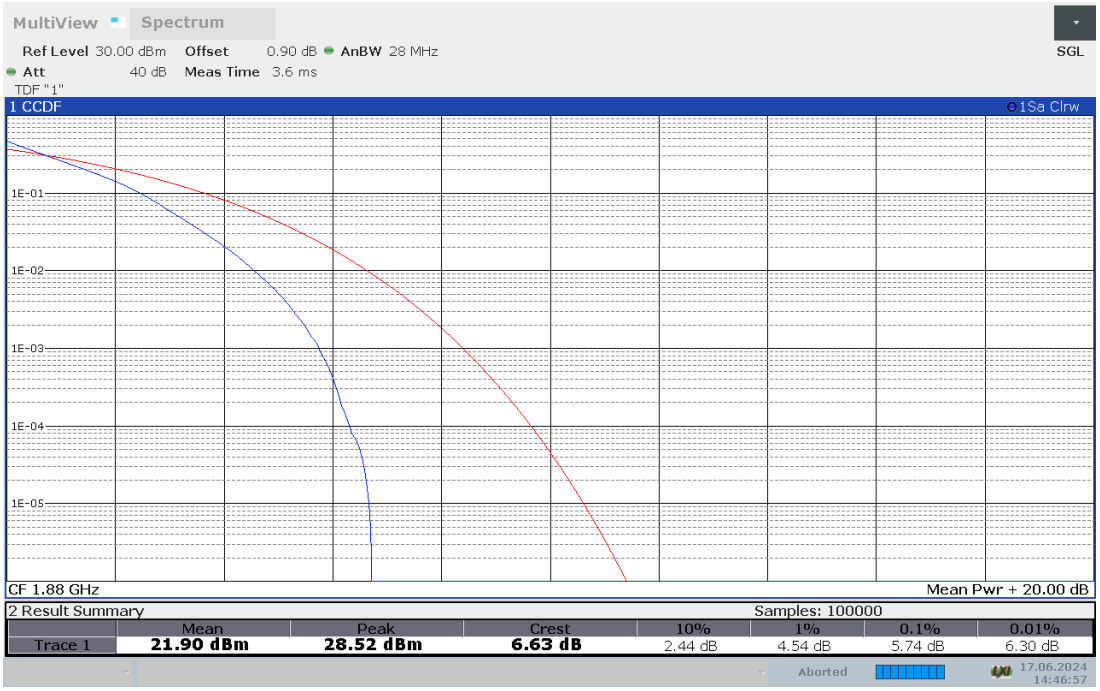
LTE band 2 , 3MHz Bandwidth,16QAM



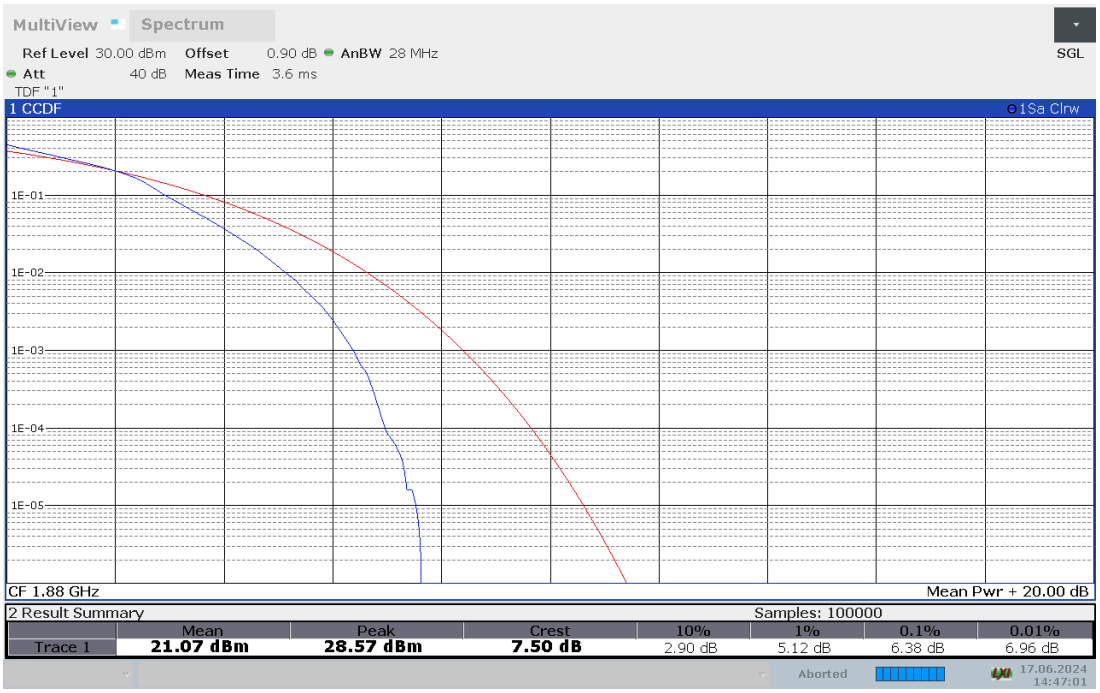
LTE Band 2, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1880	100%,0	5.74	6.38

LTE band 2 , 5MHz Bandwidth,QPSK



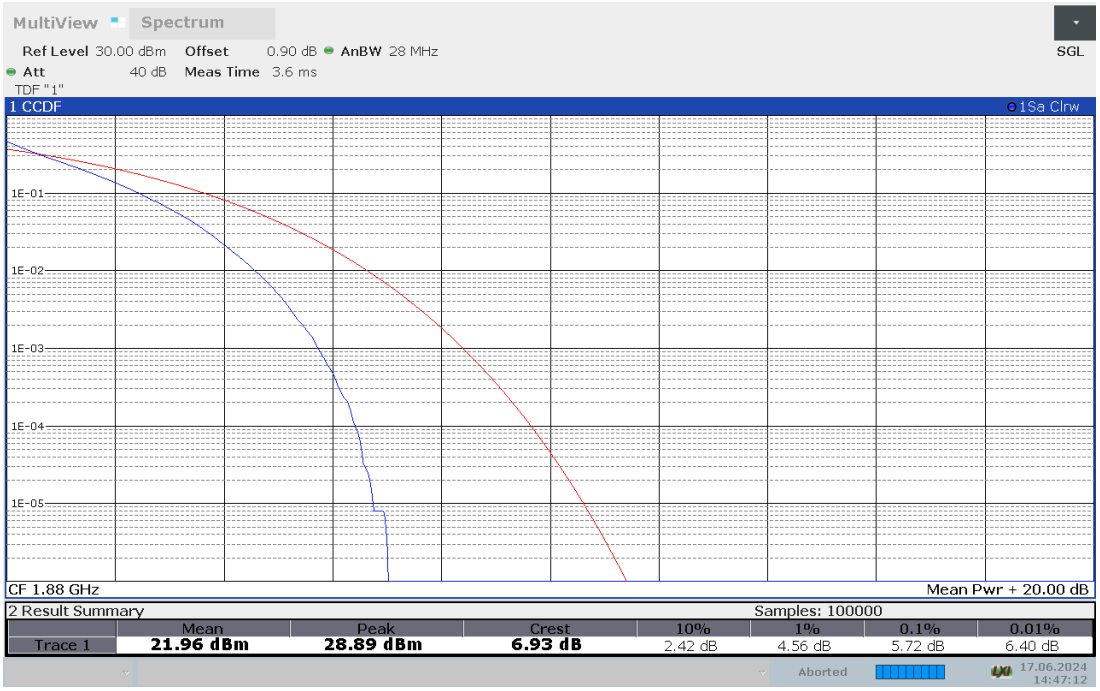
LTE band 2 , 5MHz Bandwidth,16QAM



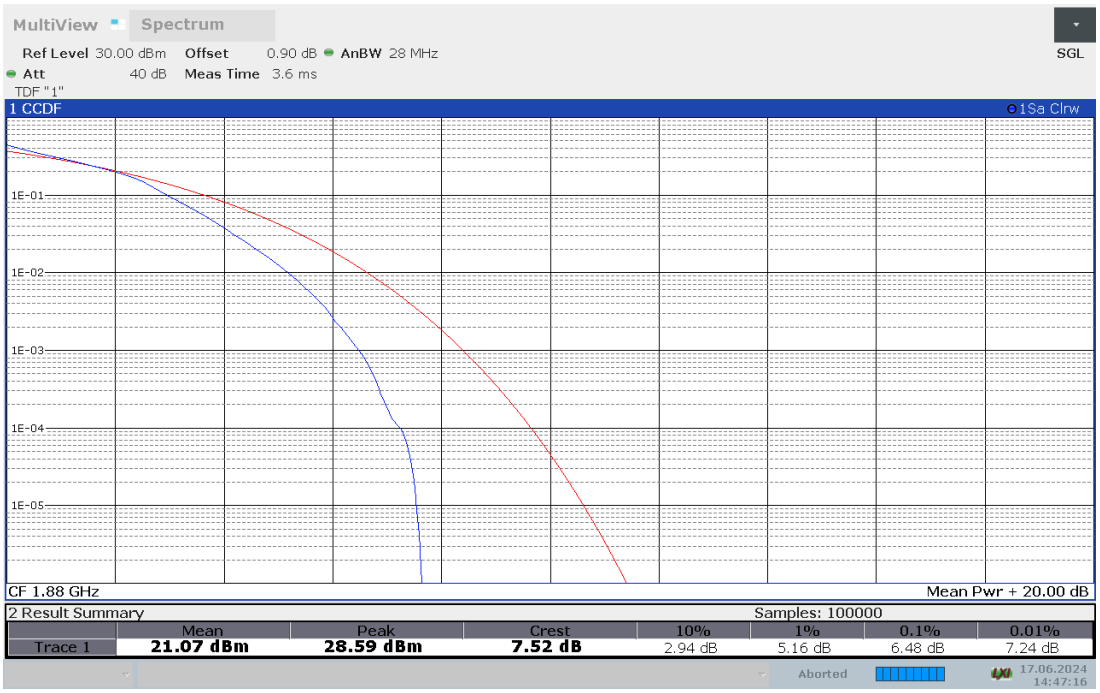
LTE Band 2, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1880	100%,0	5.72	6.48

LTE band 2 , 10MHz Bandwidth,QPSK



LTE band 2 , 10MHz Bandwidth,16QAM

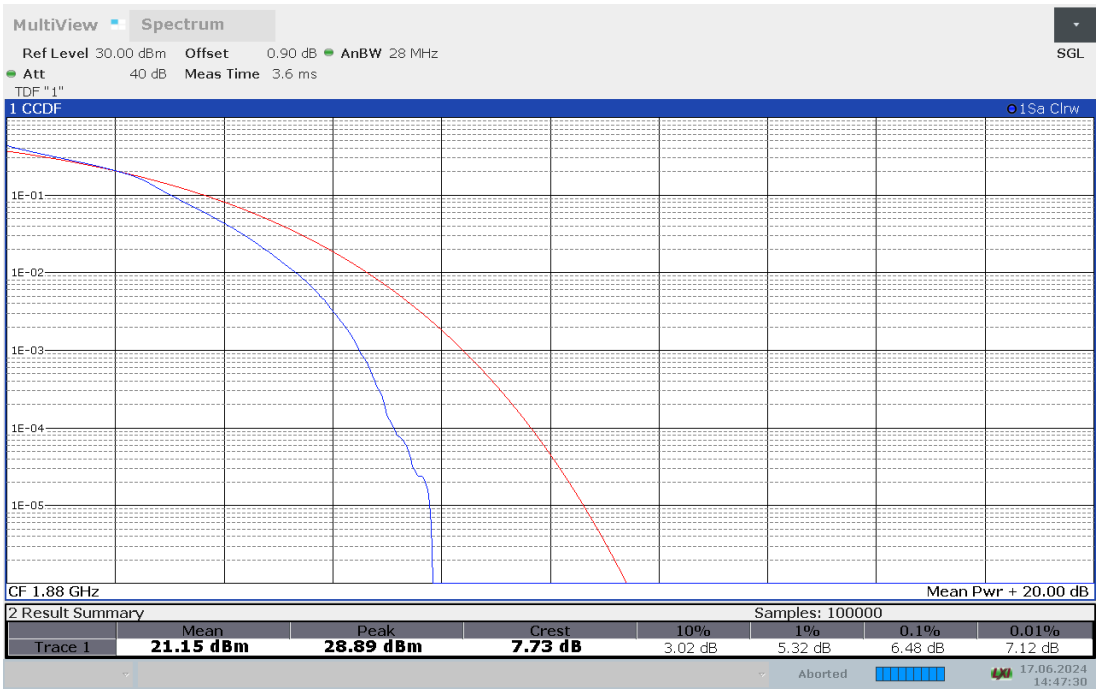


LTE Band 2, 15MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1880	100%,0	6.04	6.48

LTE band 2 , 15MHz Bandwidth,QPSK

LTE band 2 , 15MHz Bandwidth,16QAM

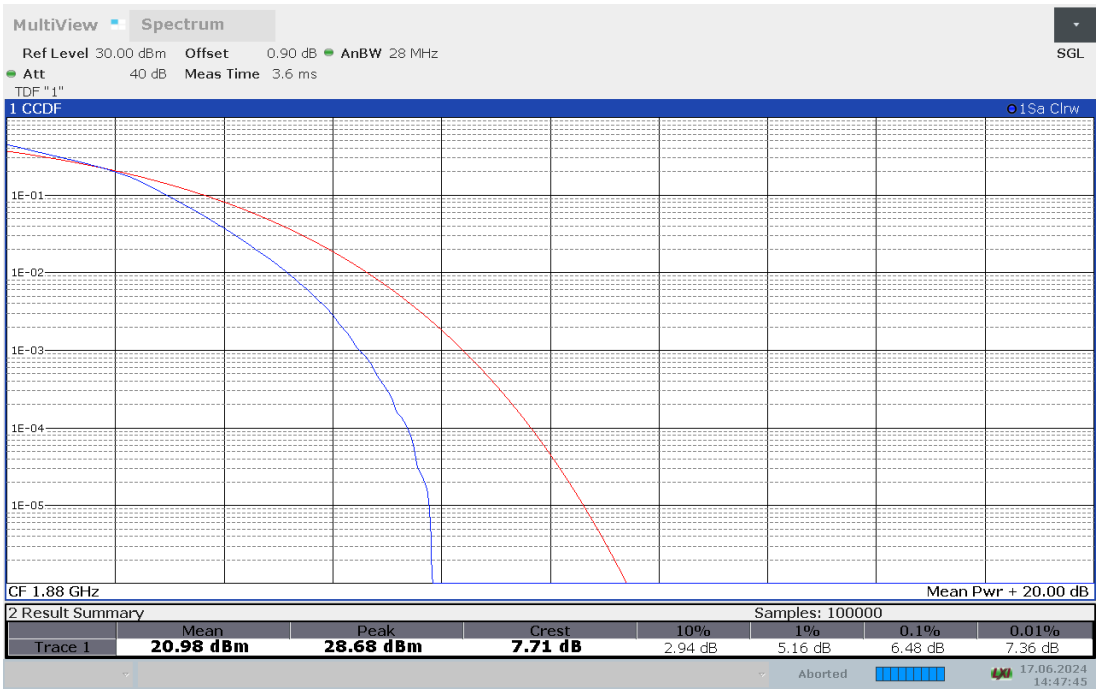


LTE Band 2, 20MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1880	100%,0	5.84	6.48

LTE band 2 , 20MHz Bandwidth,QPSK

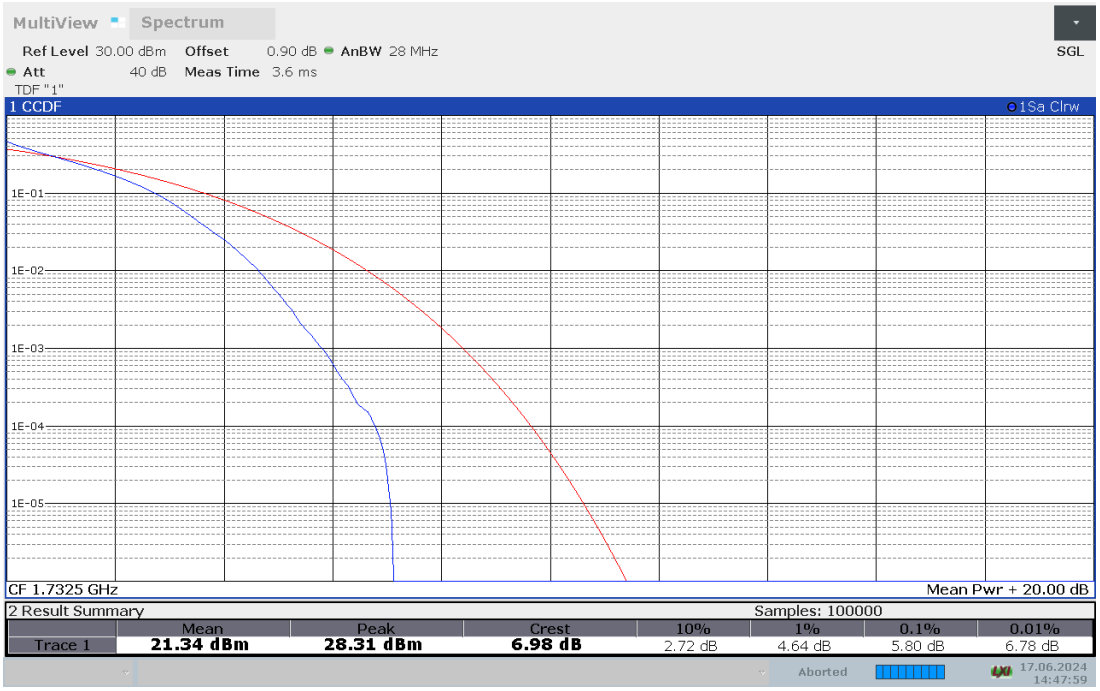
LTE band 2 , 20MHz Bandwidth,16QAM



LTE Band 4, BW1.4MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1732.5	100%,0	5.80	6.28

LTE band 4 , 1.4MHz Bandwidth,QPSK



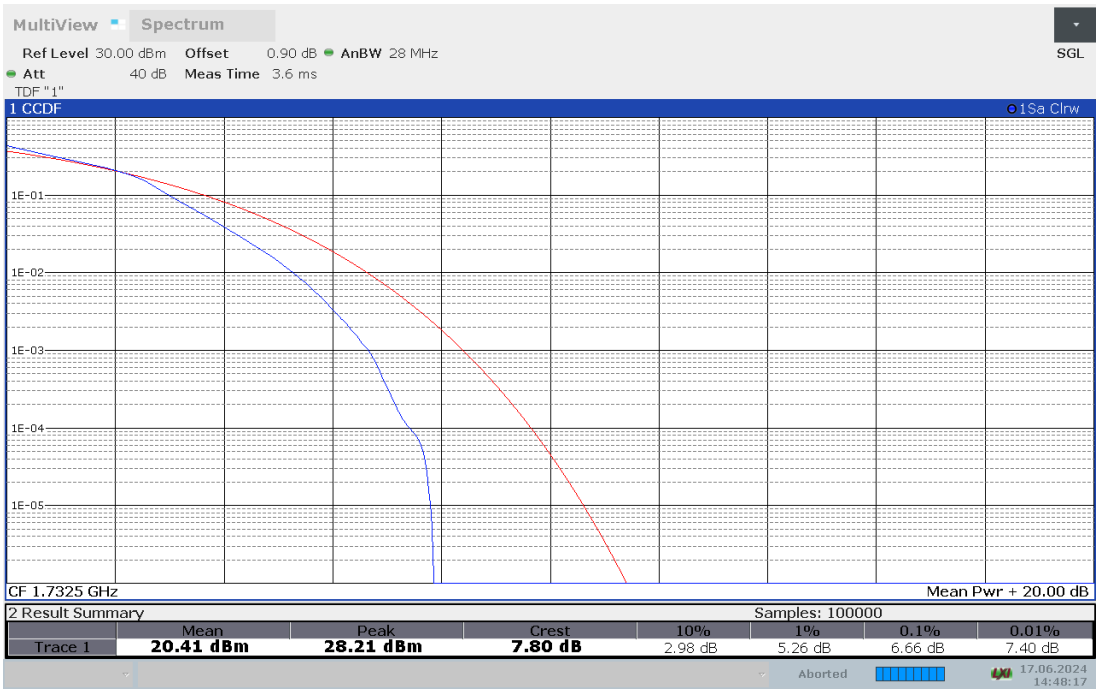
LTE band 4 , 1.4MHz Bandwidth,16QAM

LTE Band 4, 3MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1732.5	100%,0	5.58	6.66

LTE band 4 , 3MHz Bandwidth,QPSK

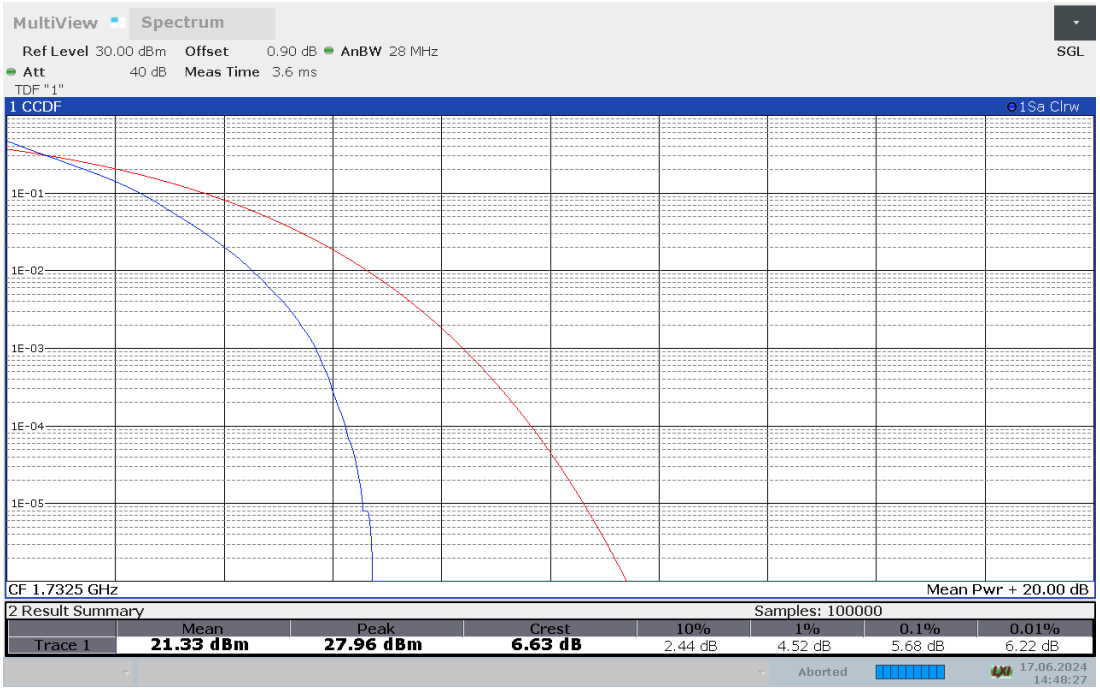
LTE band 4 , 3MHz Bandwidth,16QAM



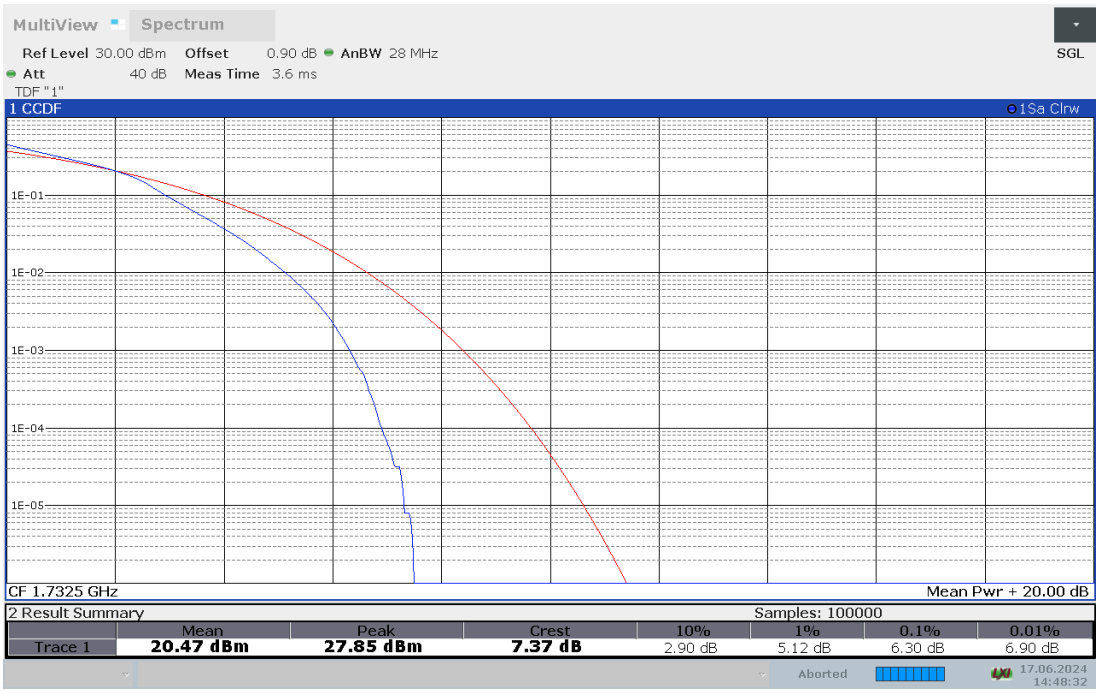
LTE Band 4, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1732.5	100%,0	5.68	6.30

LTE band 4 , 5MHz Bandwidth,QPSK



LTE band 4 , 5MHz Bandwidth,16QAM

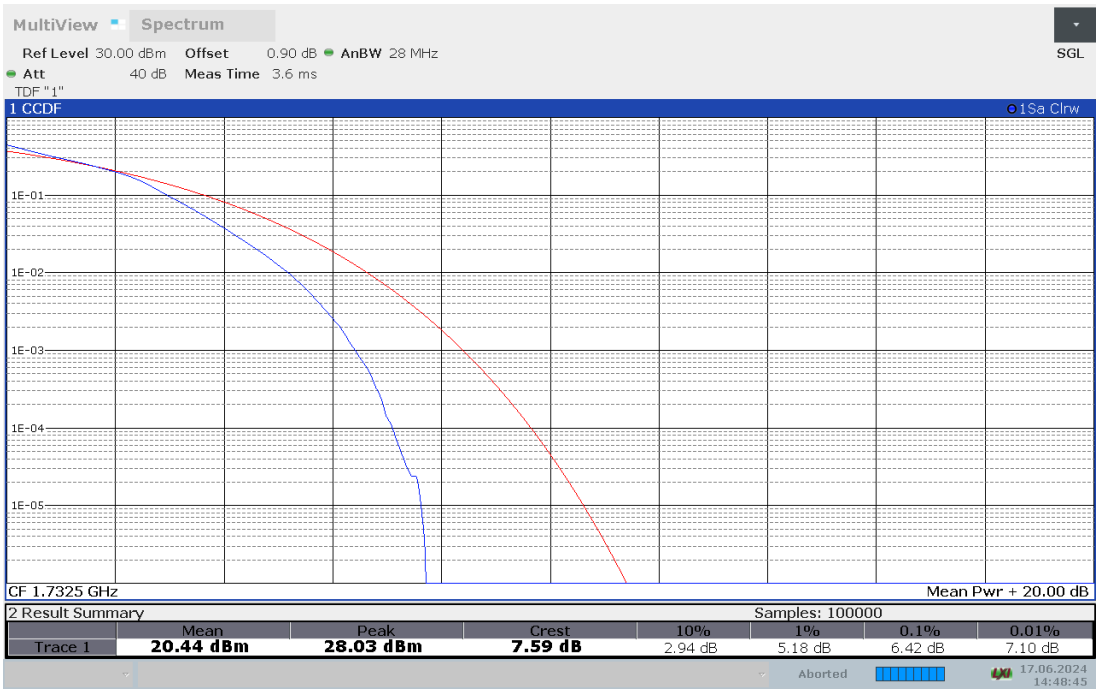


LTE Band 4, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1732.5	100%,0	5.70	6.42

LTE band 4 , 10MHz Bandwidth,QPSK

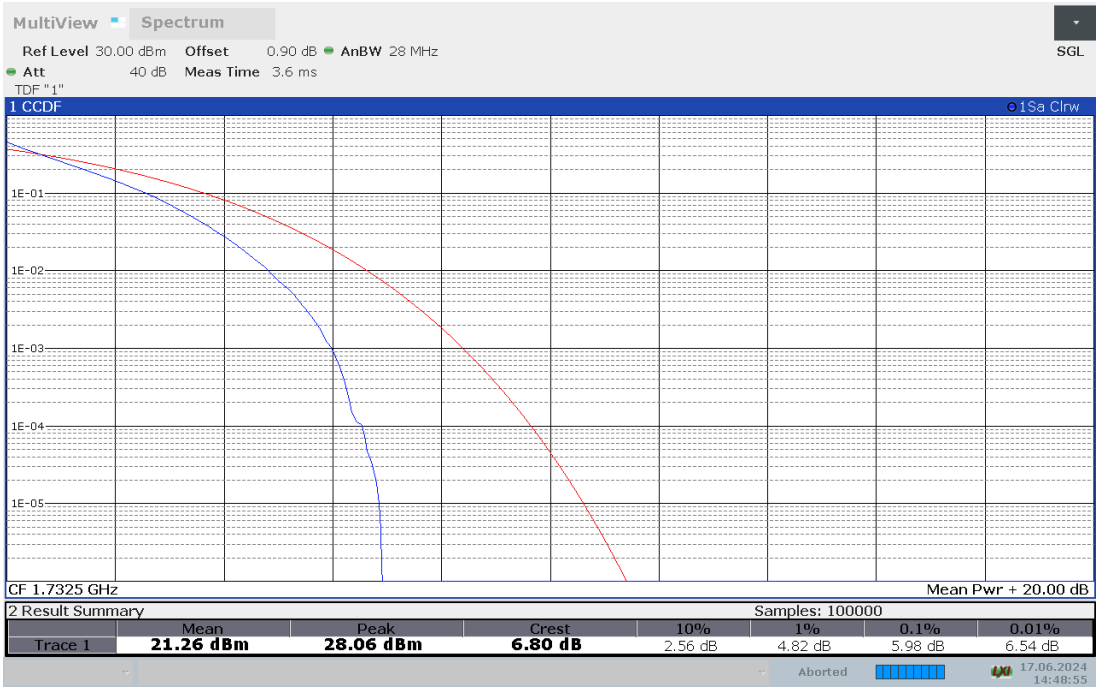
LTE band 4 , 10MHz Bandwidth,16QAM



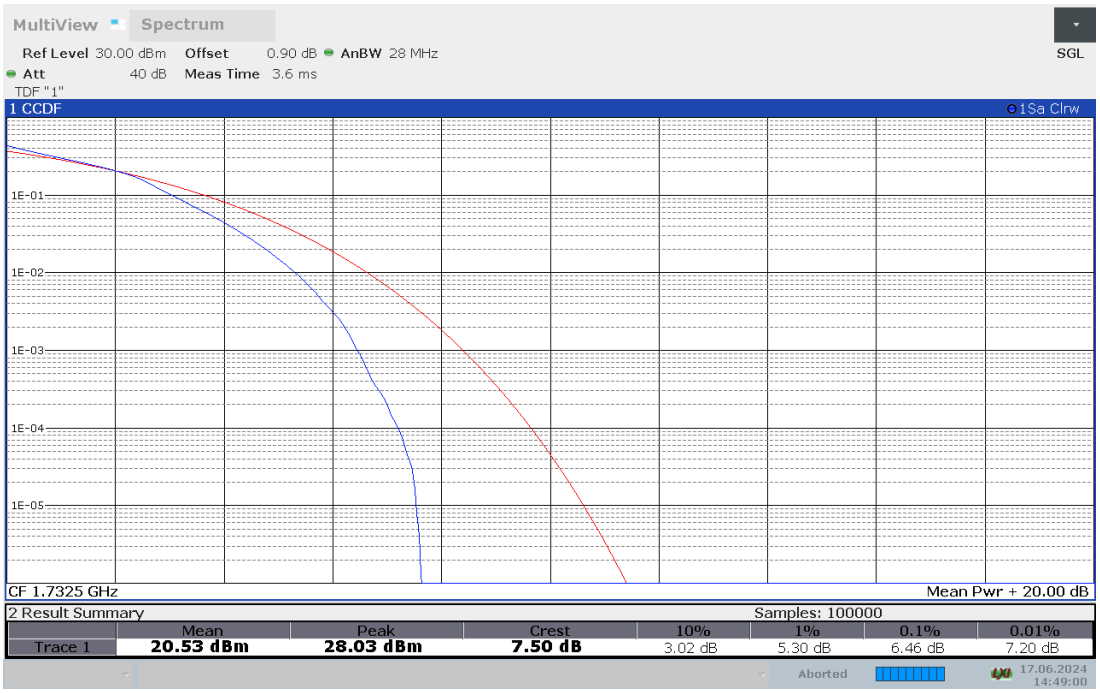
LTE Band 4, 15MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1732.5	100%,0	5.98	6.46

LTE band 4 , 15MHz Bandwidth,QPSK



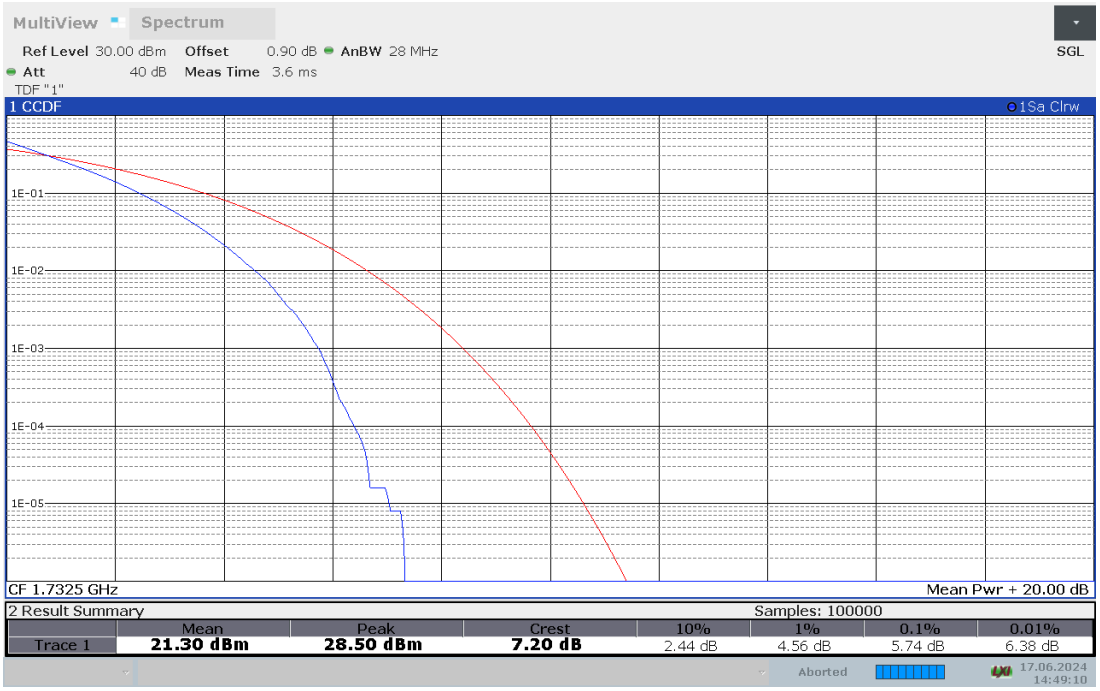
LTE band 4 , 15MHz Bandwidth,16QAM



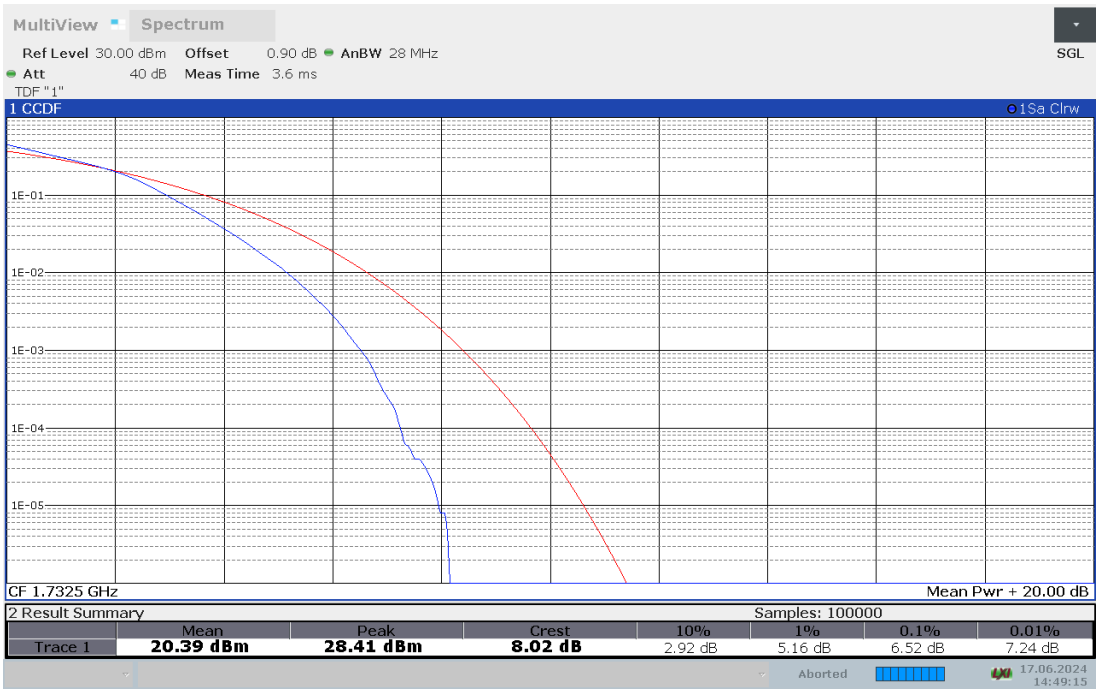
LTE Band 4, 20MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1732.5	100%,0	5.74	6.52

LTE band 4 , 20MHz Bandwidth,QPSK



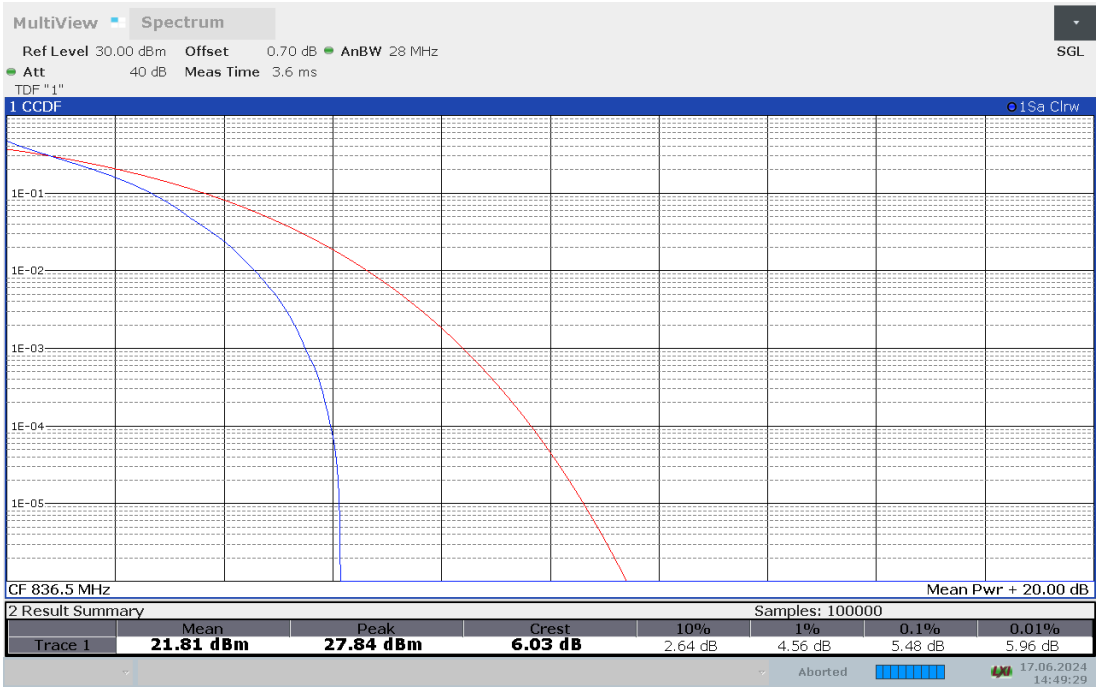
LTE band 4 , 20MHz Bandwidth,16QAM



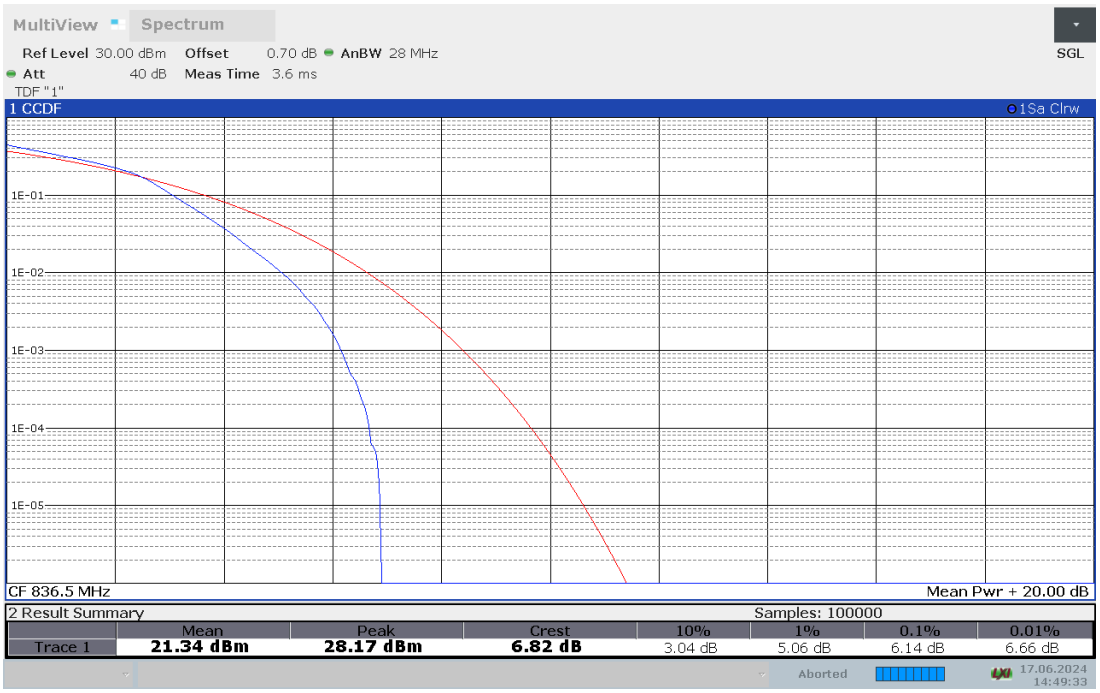
LTE Band 5, BW1.4MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
836.5	100%,0	5.48	6.14

LTE band 5 , 1.4MHz Bandwidth,QPSK



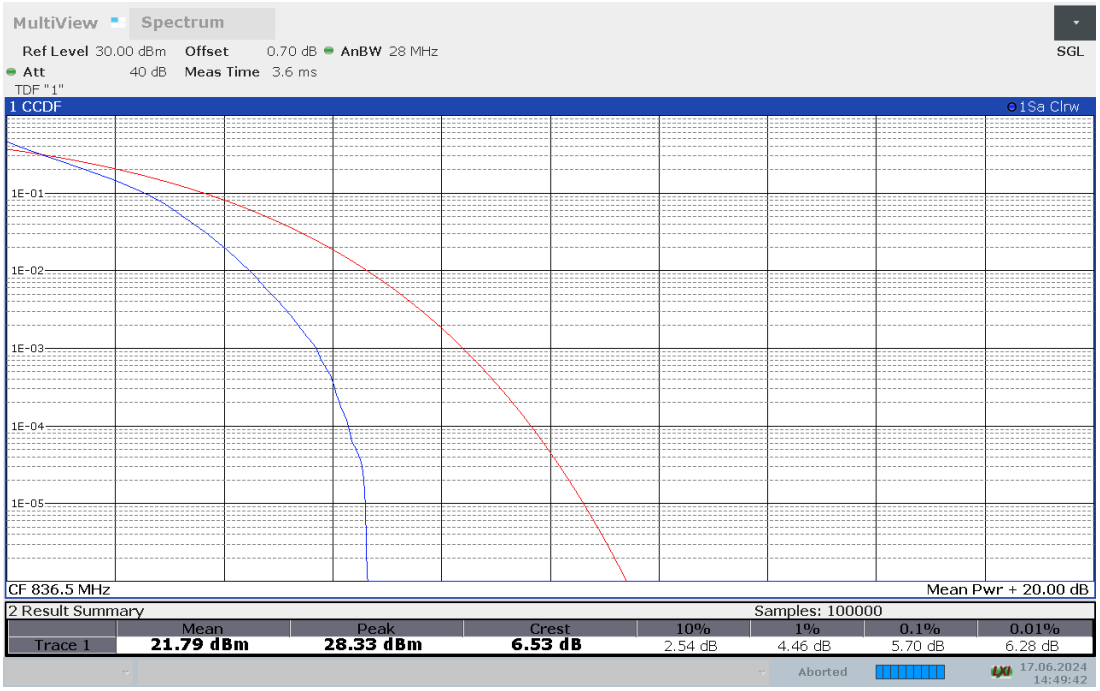
LTE band 5 , 1.4MHz Bandwidth,16QAM



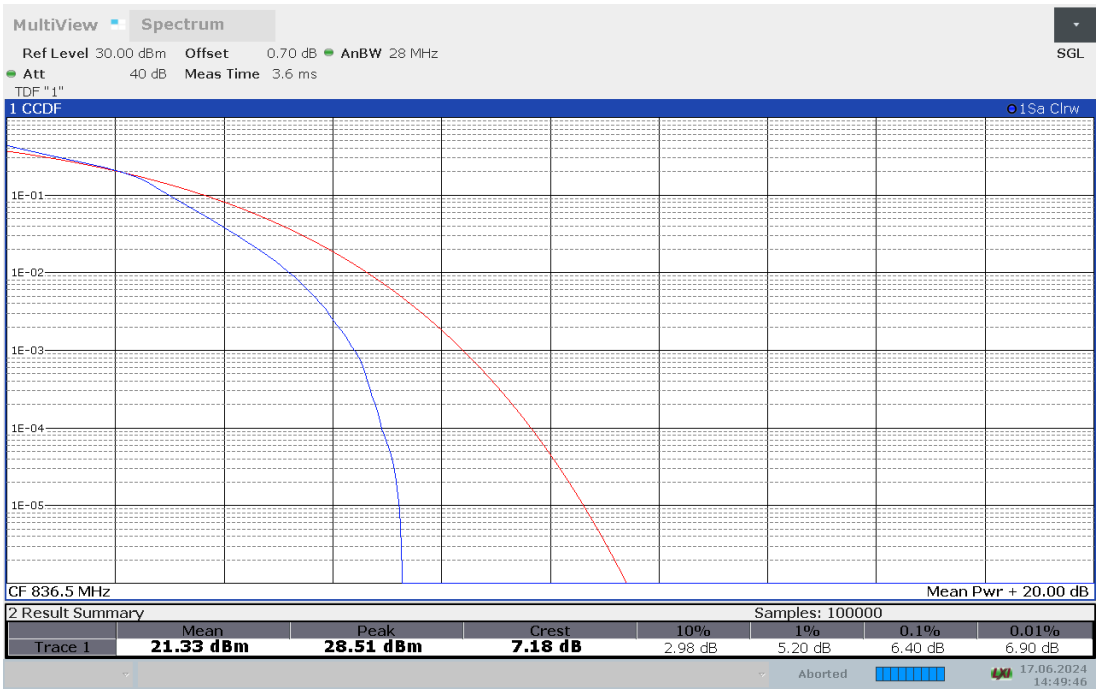
LTE Band 5, 3MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
836.5	100%,0	5.70	6.40

LTE band 5 , 3MHz Bandwidth,QPSK



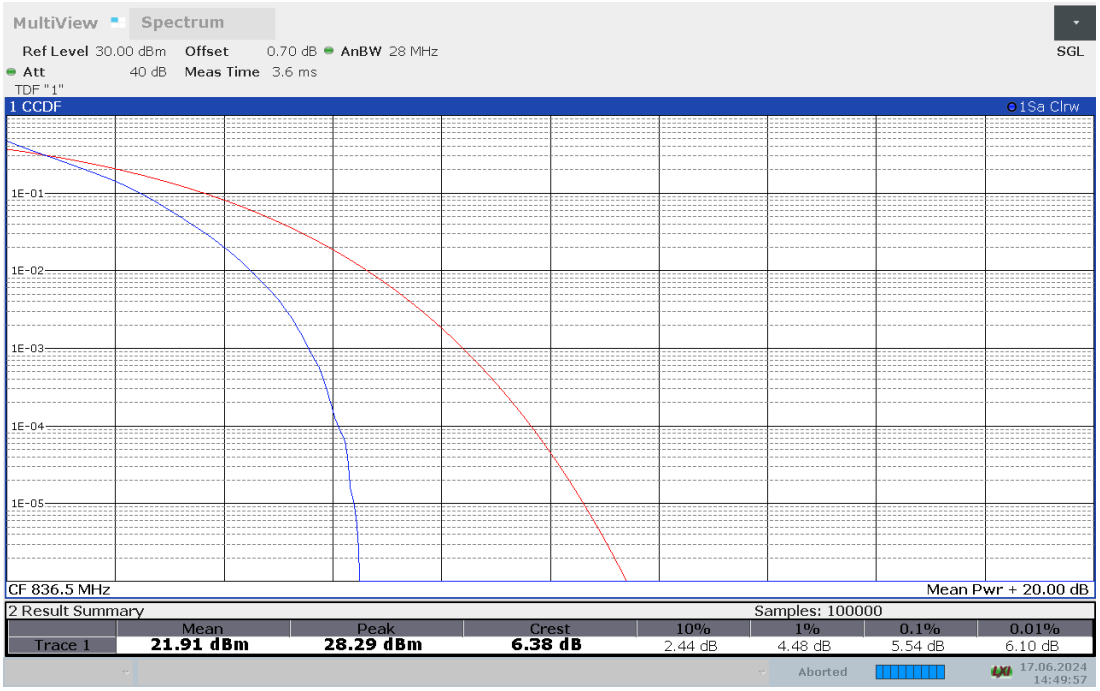
LTE band 5 , 3MHz Bandwidth,16QAM



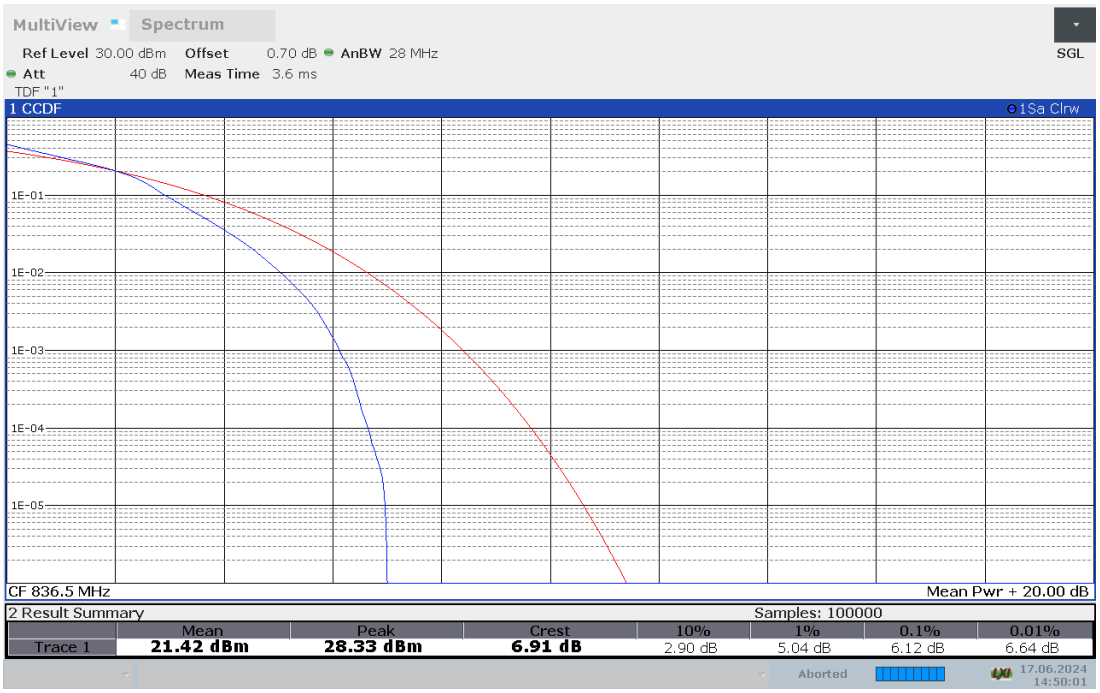
LTE Band 5, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
836.5	100%,0	5.54	6.12

LTE band 5 , 5MHz Bandwidth,QPSK



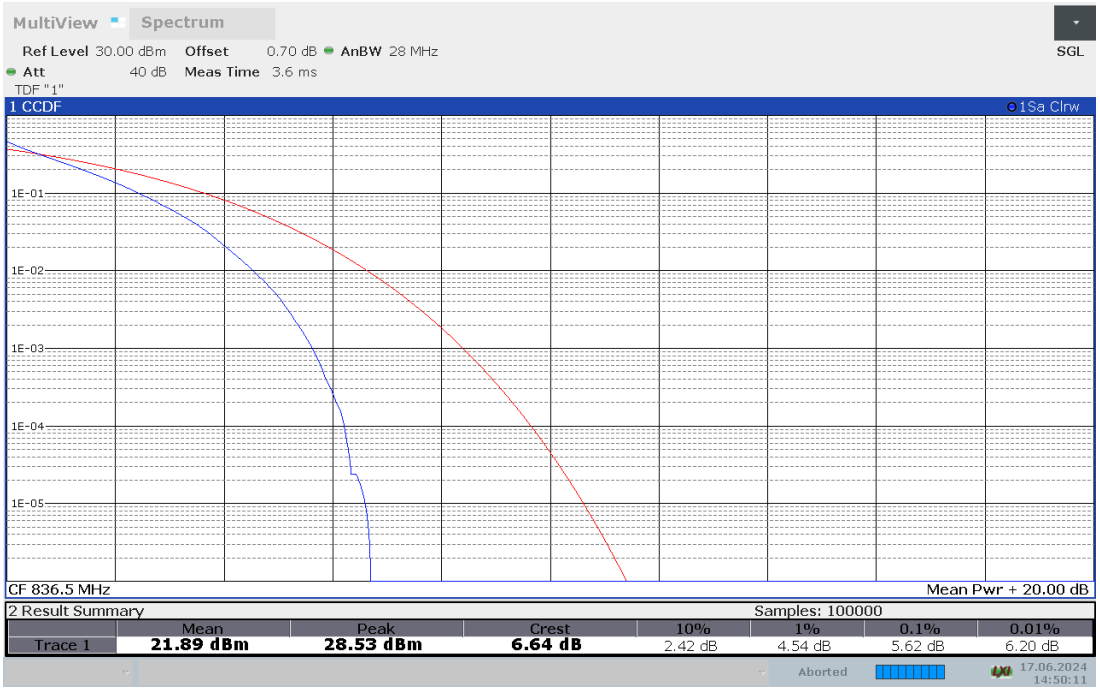
LTE band 5 , 5MHz Bandwidth,16QAM



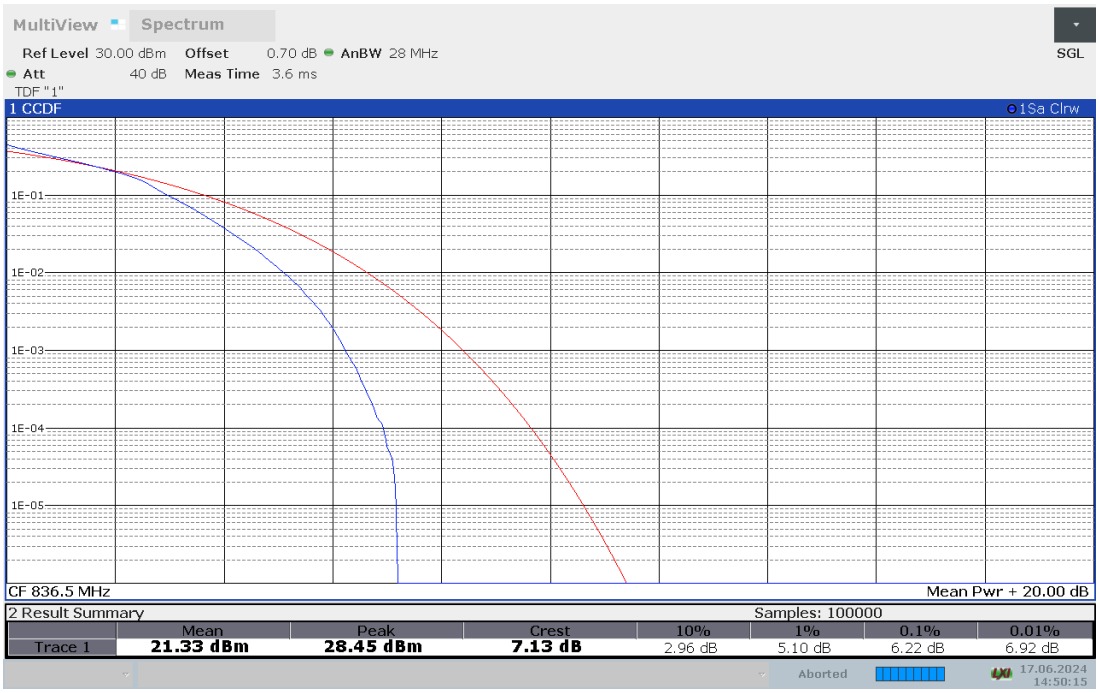
LTE Band 5, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
836.5	100%,0	5.62	6.22

LTE band 5 , 10MHz Bandwidth,QPSK



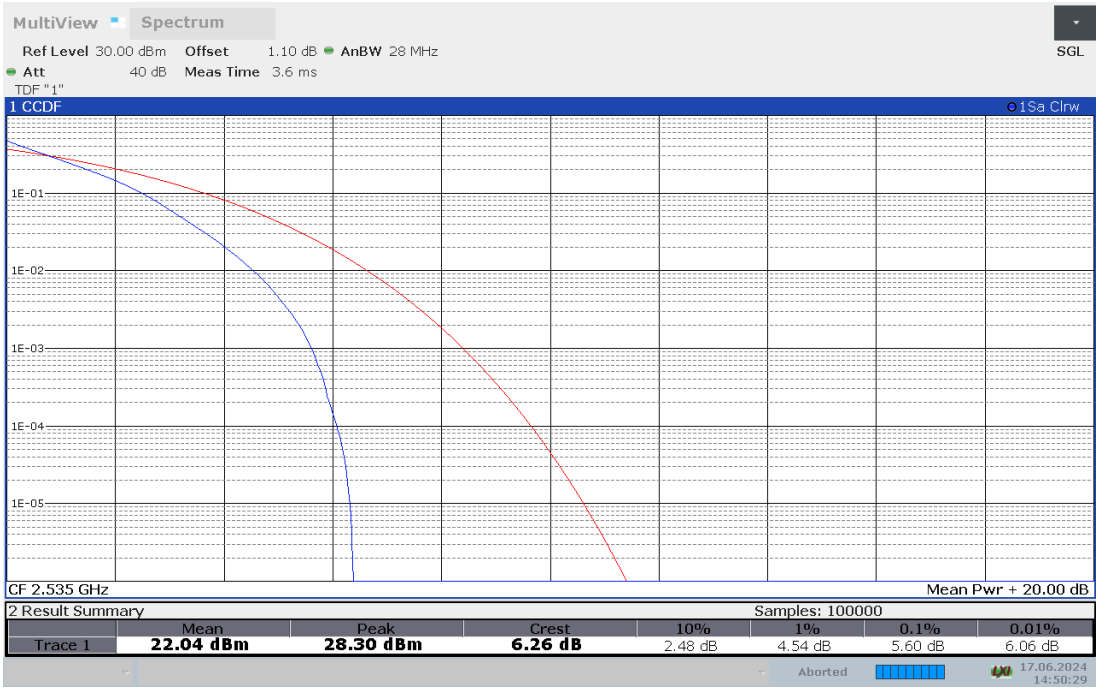
LTE band 5 , 10MHz Bandwidth,16QAM



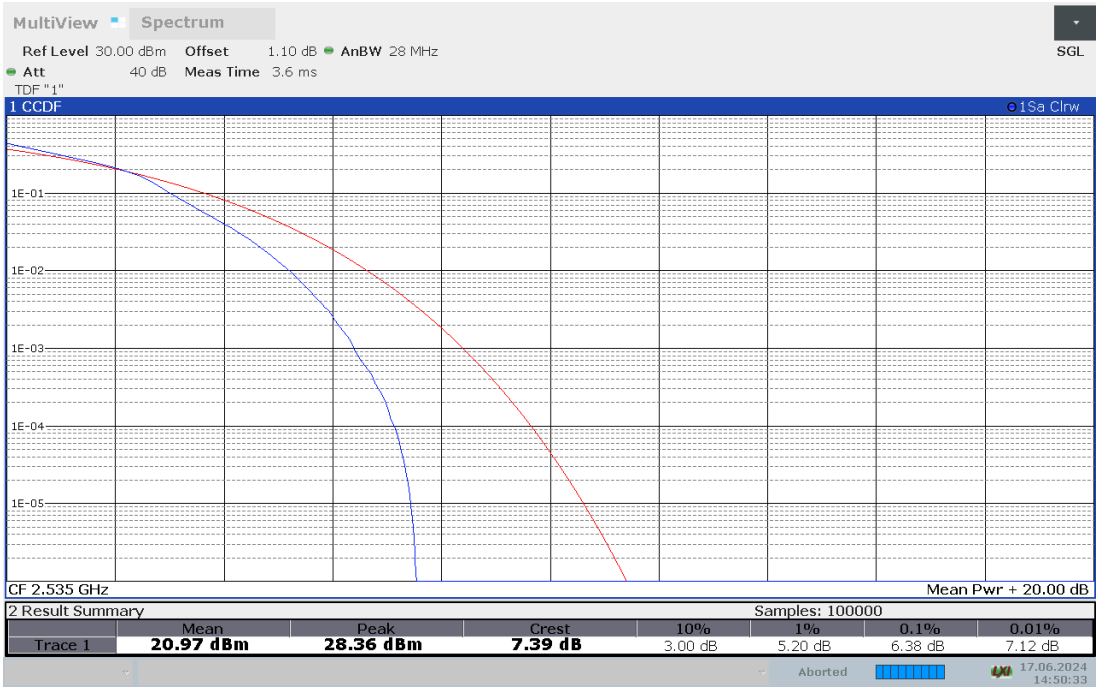
LTE Band 7, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
2535	100%,0	5.60	6.38

LTE band 7 , 5MHz Bandwidth,QPSK



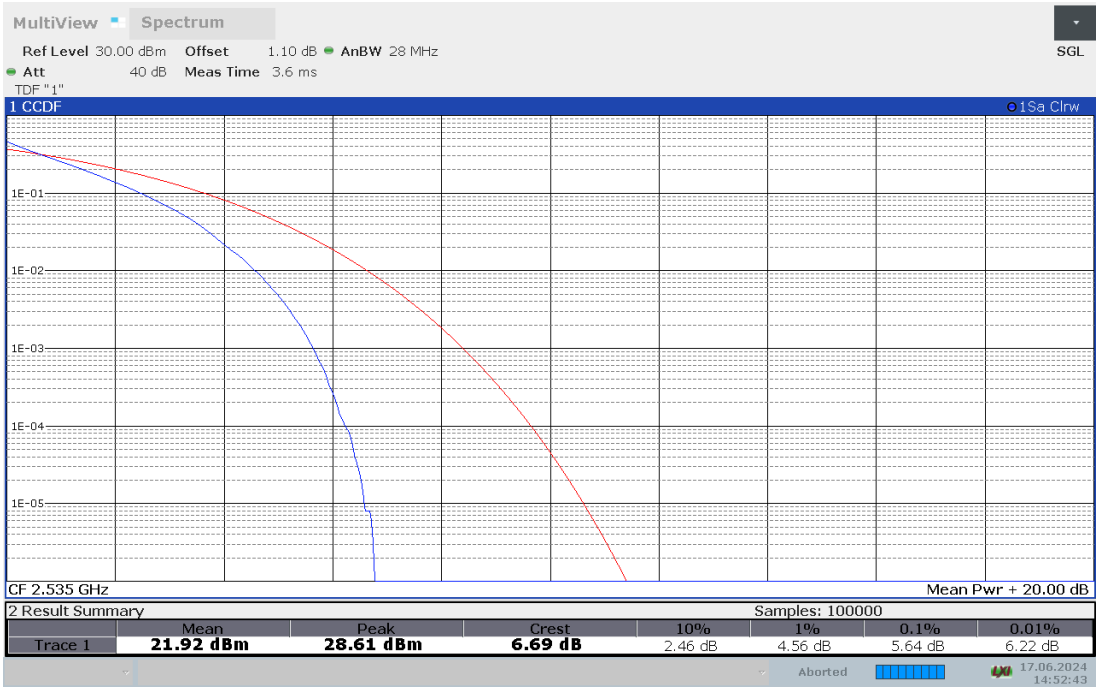
LTE band 7 , 5MHz Bandwidth,16QAM



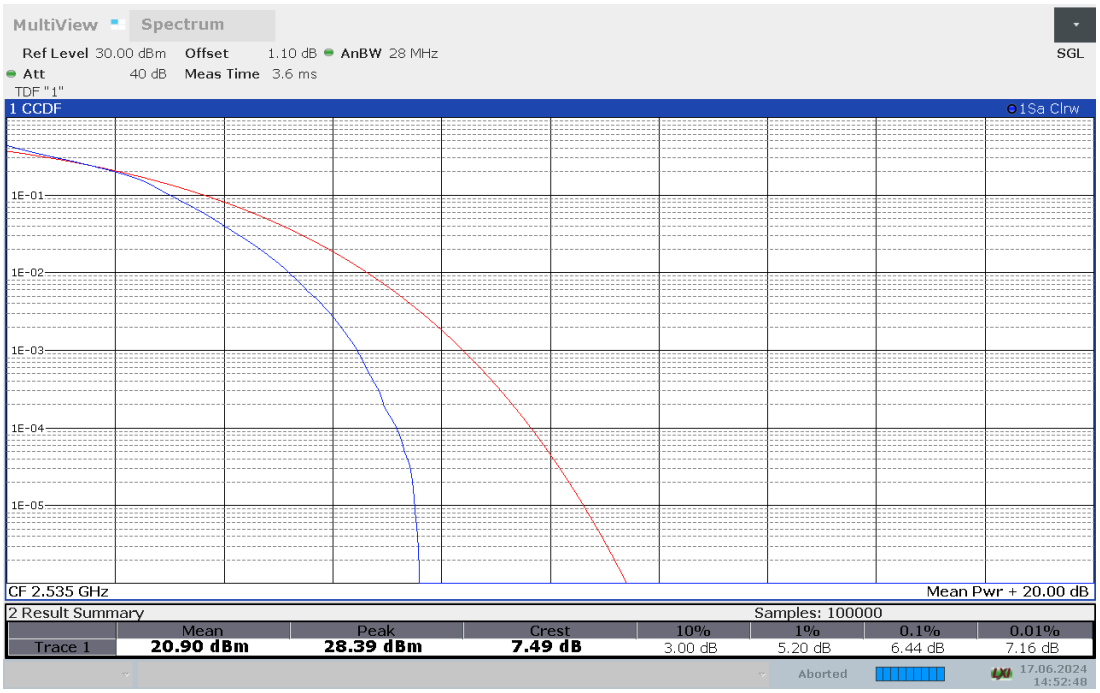
LTE Band 7, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
2535	100%,0	5.64	6.44

LTE band 7 , 10MHz Bandwidth,QPSK



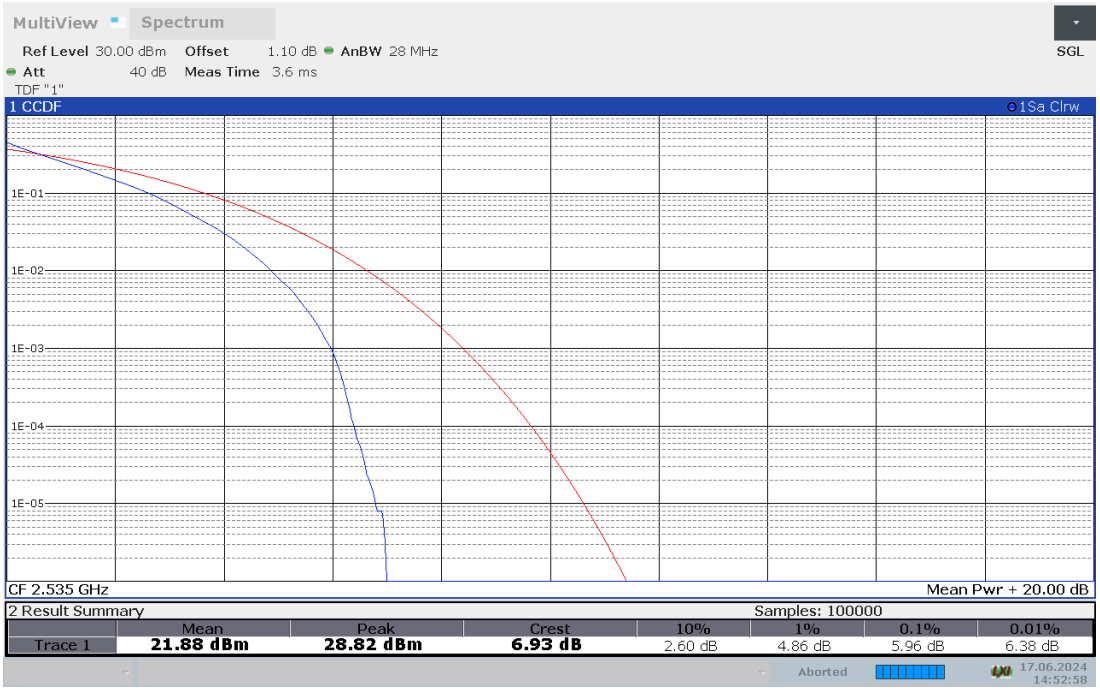
LTE band 7 , 10MHz Bandwidth,16QAM



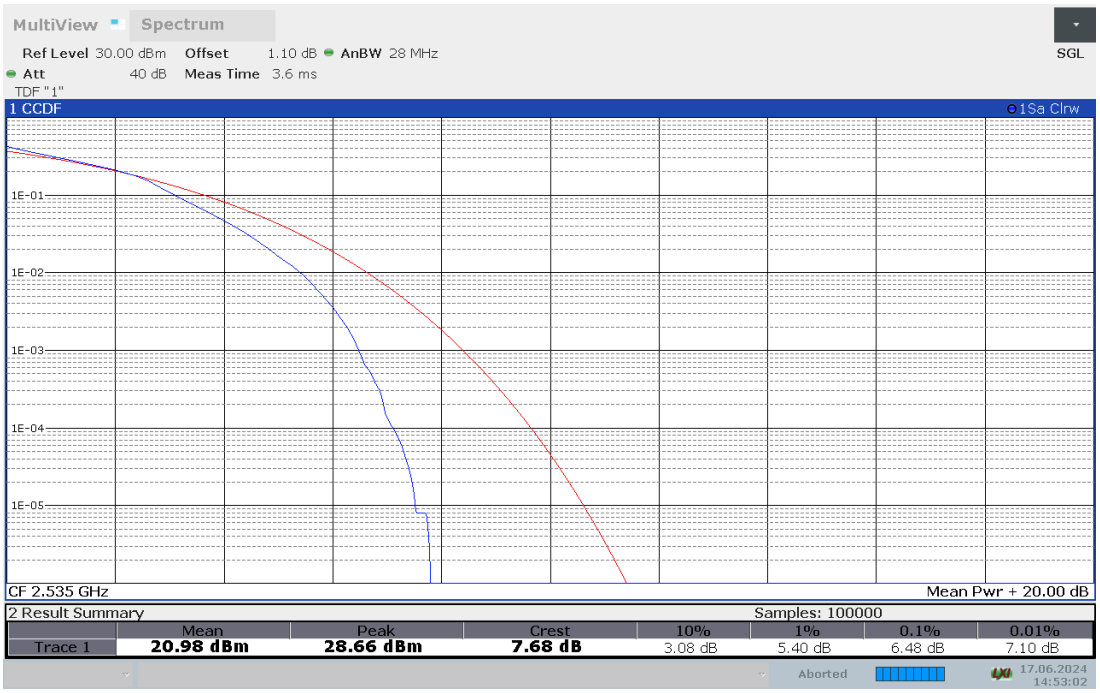
LTE Band 7, 15MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
2535	100%,0	5.96	6.48

LTE band 7 , 15MHz Bandwidth,QPSK



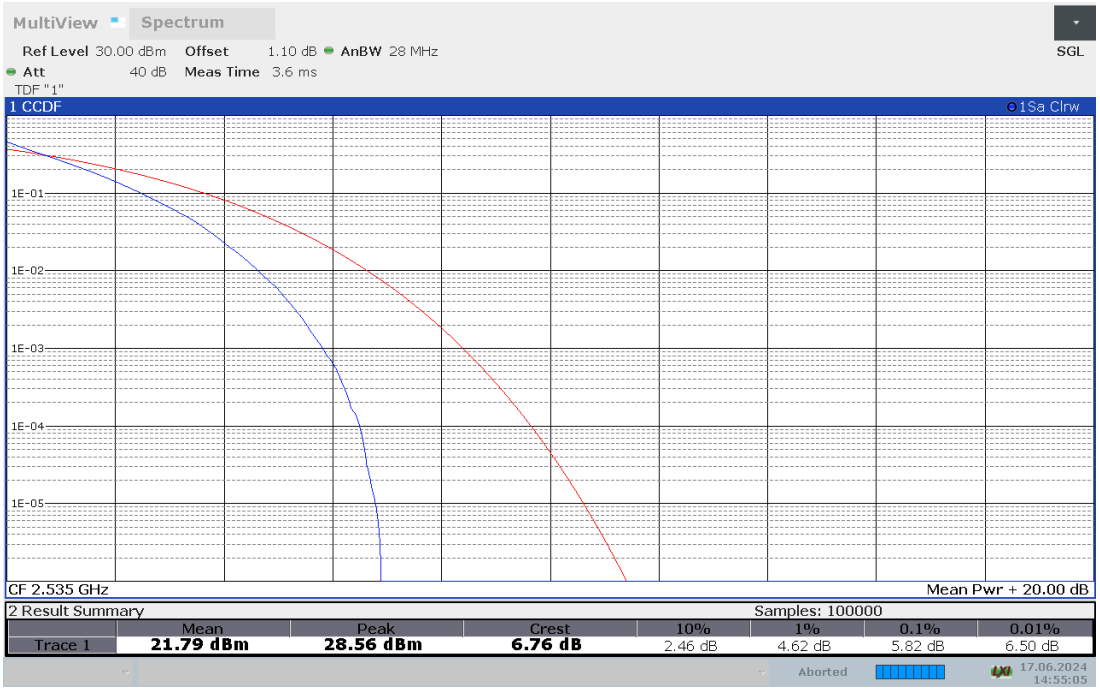
LTE band 7 , 15MHz Bandwidth,16QAM



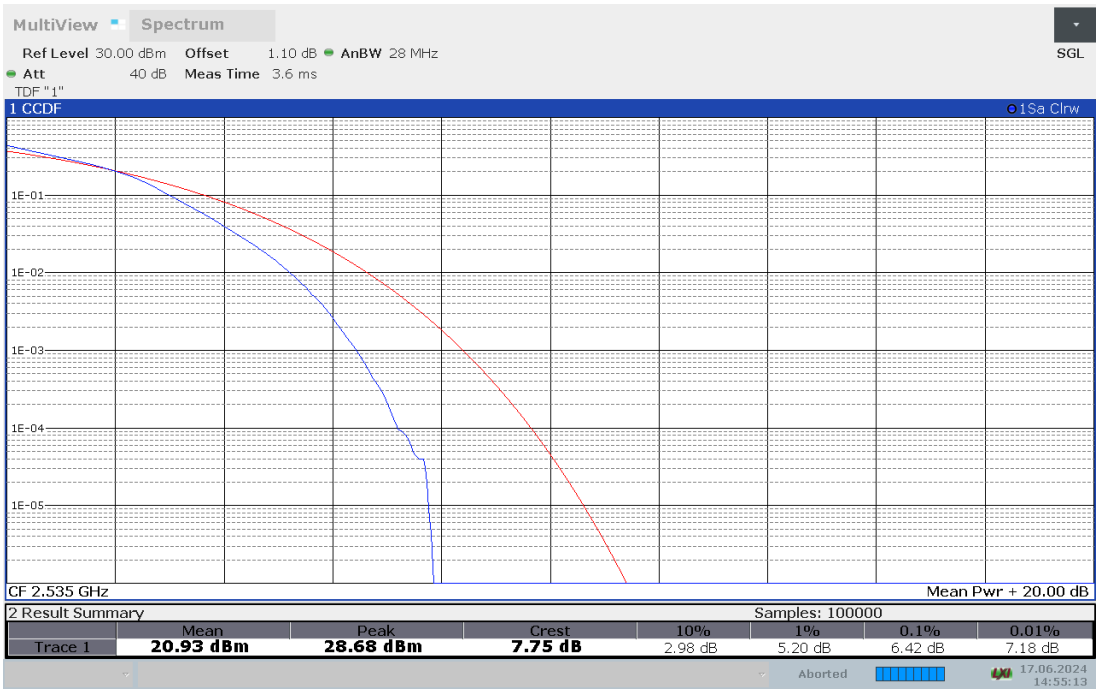
LTE Band 7, 20MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
2535	100%,0	5.82	6.42

LTE band 7 , 20MHz Bandwidth,QPSK



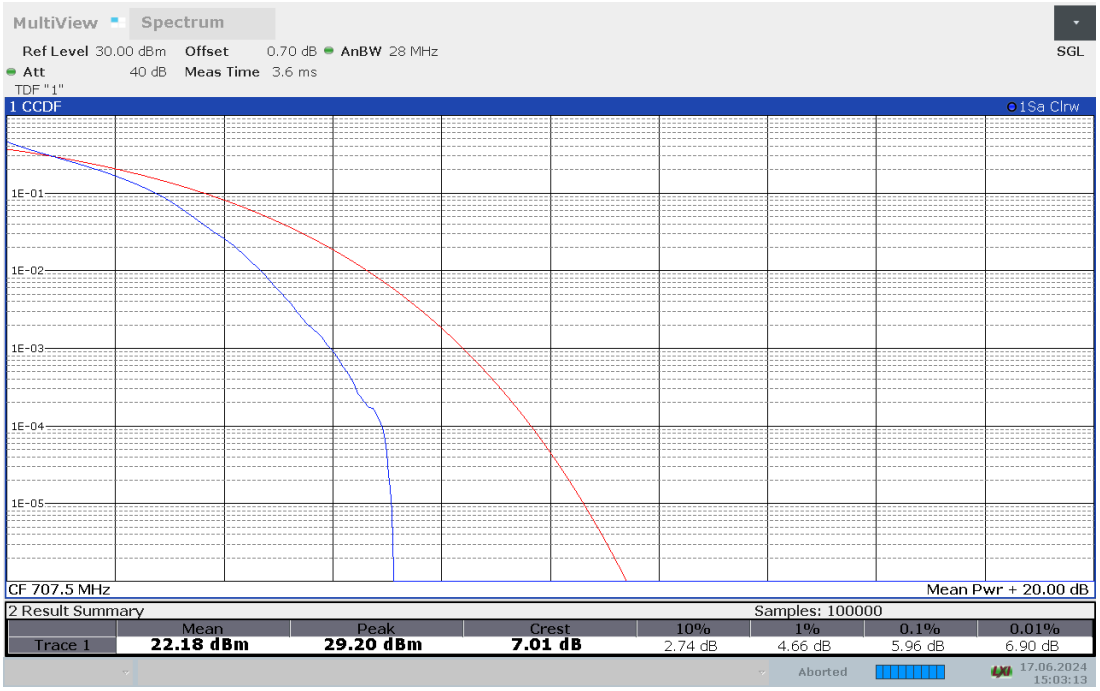
LTE band 7 , 20MHz Bandwidth,16QAM



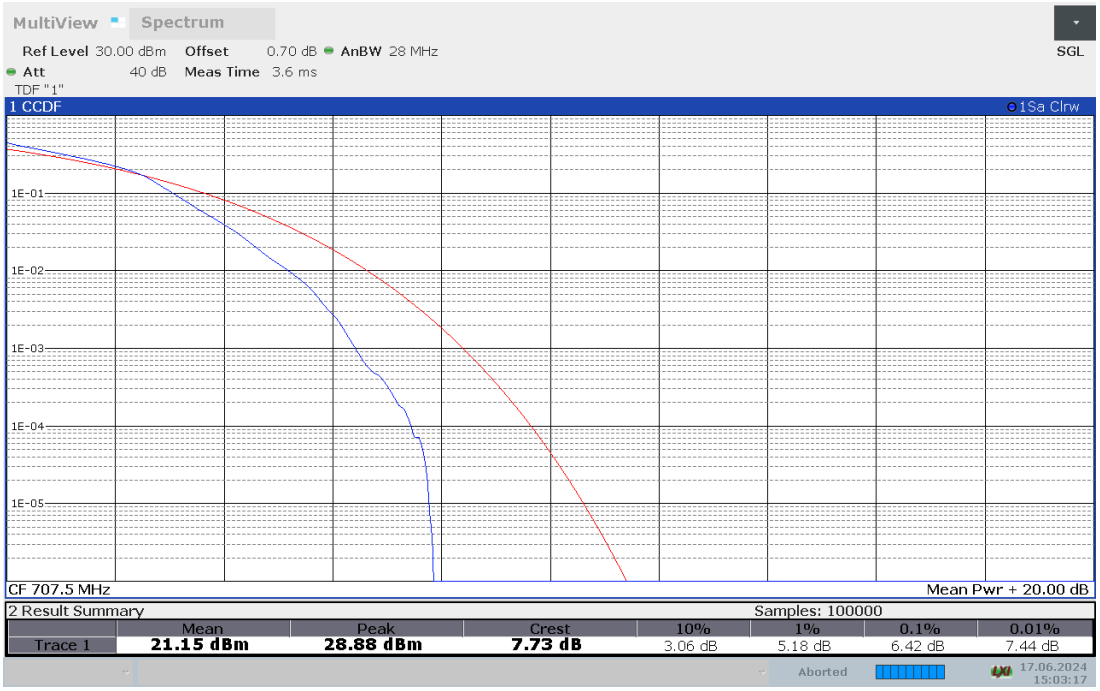
LTE Band 12, BW1.4MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
707.5	100%,0	5.96	6.42

LTE band 12 , 1.4MHz Bandwidth,QPSK



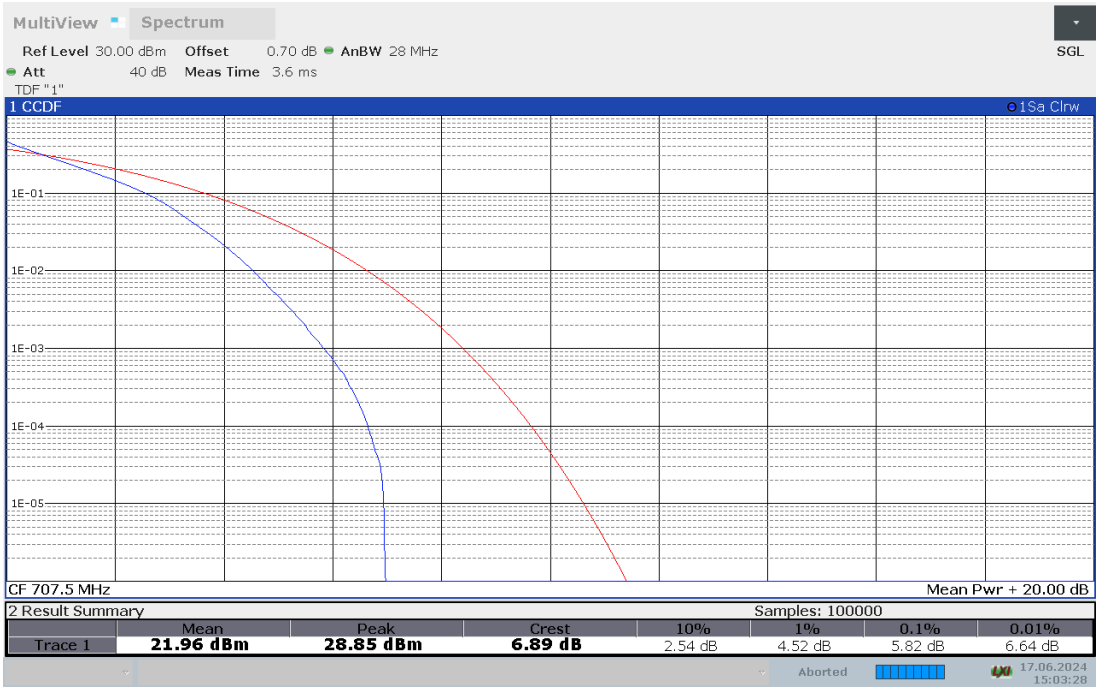
LTE band 12 , 1.4MHz Bandwidth,16QAM



LTE Band 12, 3MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
707.5	100%,0	5.82	6.44

LTE band 12 , 3MHz Bandwidth,QPSK

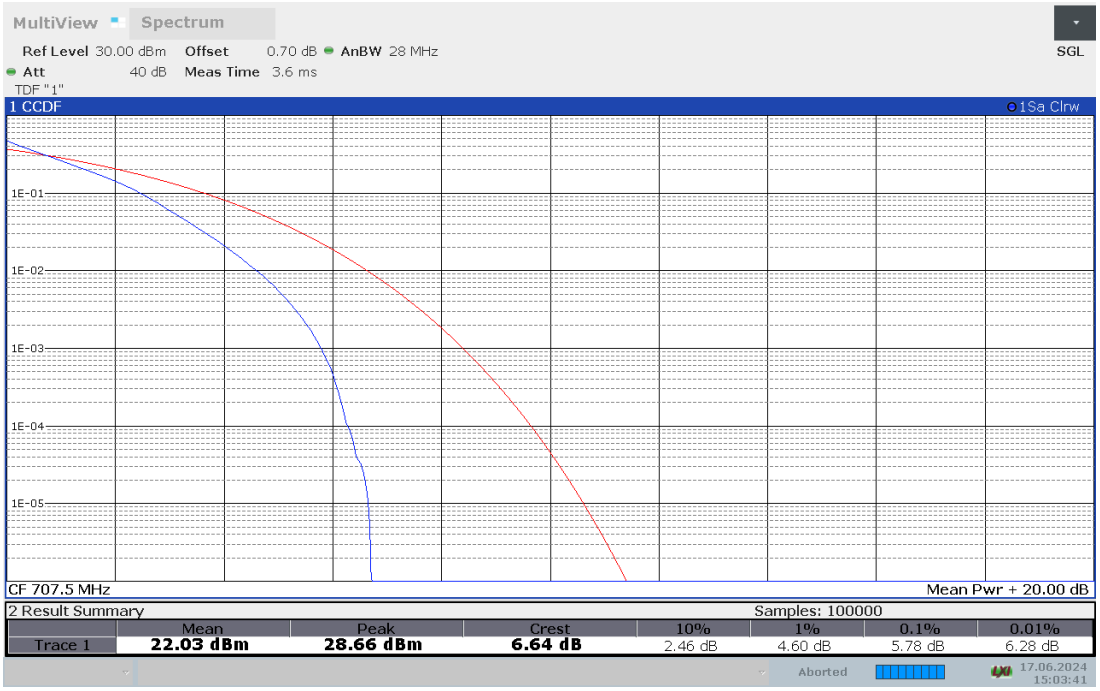


LTE band 12 , 3MHz Bandwidth,16QAM

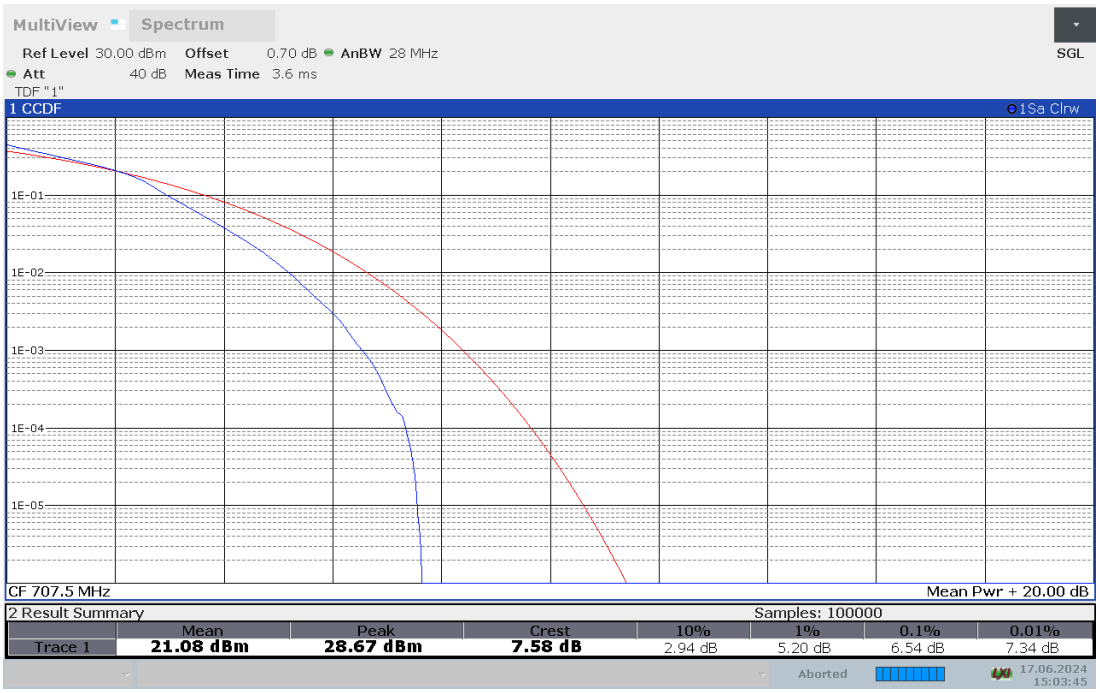
LTE Band 12, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
707.5	100%,0	5.78	6.54

LTE band 12 , 5MHz Bandwidth,QPSK



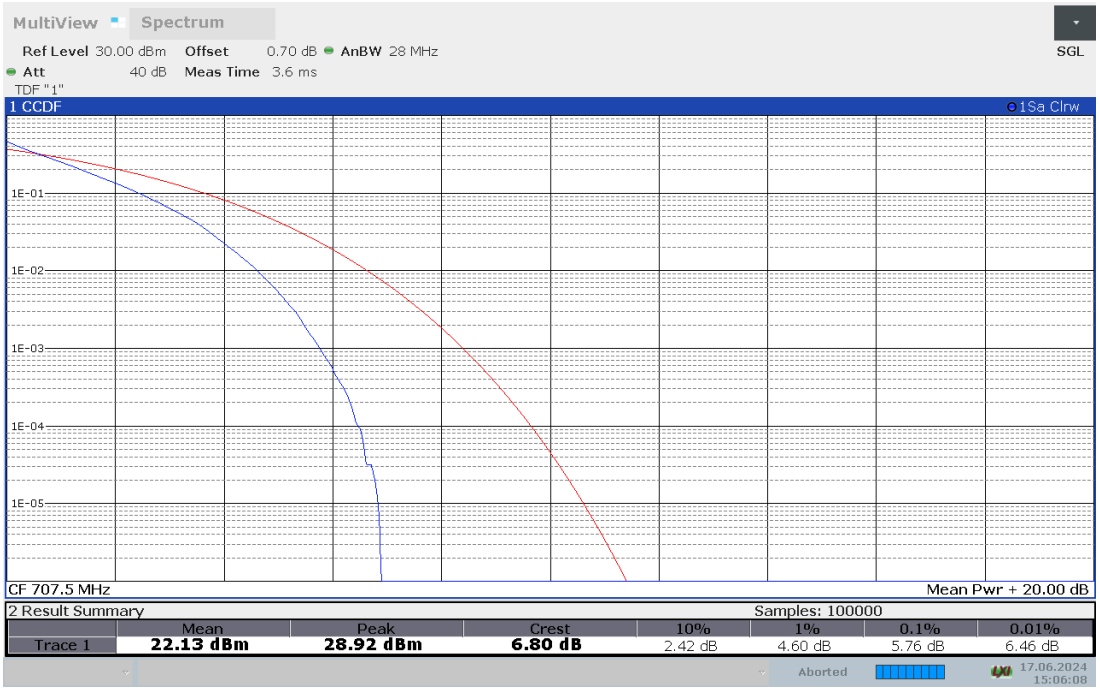
LTE band 12 , 5MHz Bandwidth,16QAM



LTE Band 12, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
707.5	100%,0	5.76	6.56

LTE band 12 , 10MHz Bandwidth,QPSK

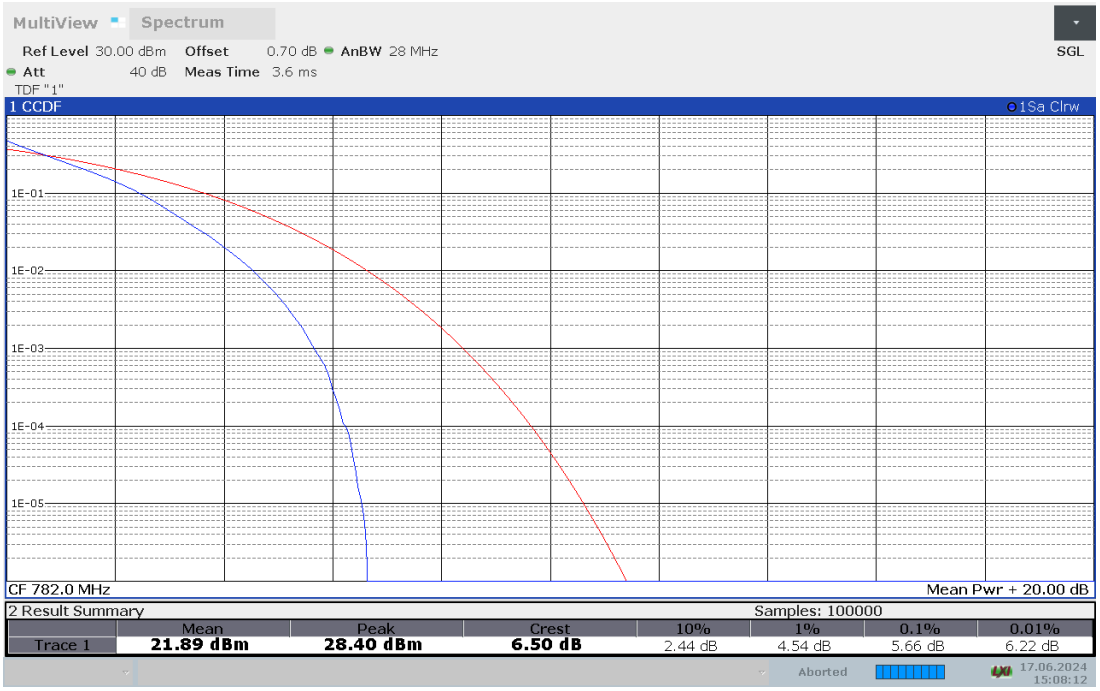


LTE band 12 , 10MHz Bandwidth,16QAM

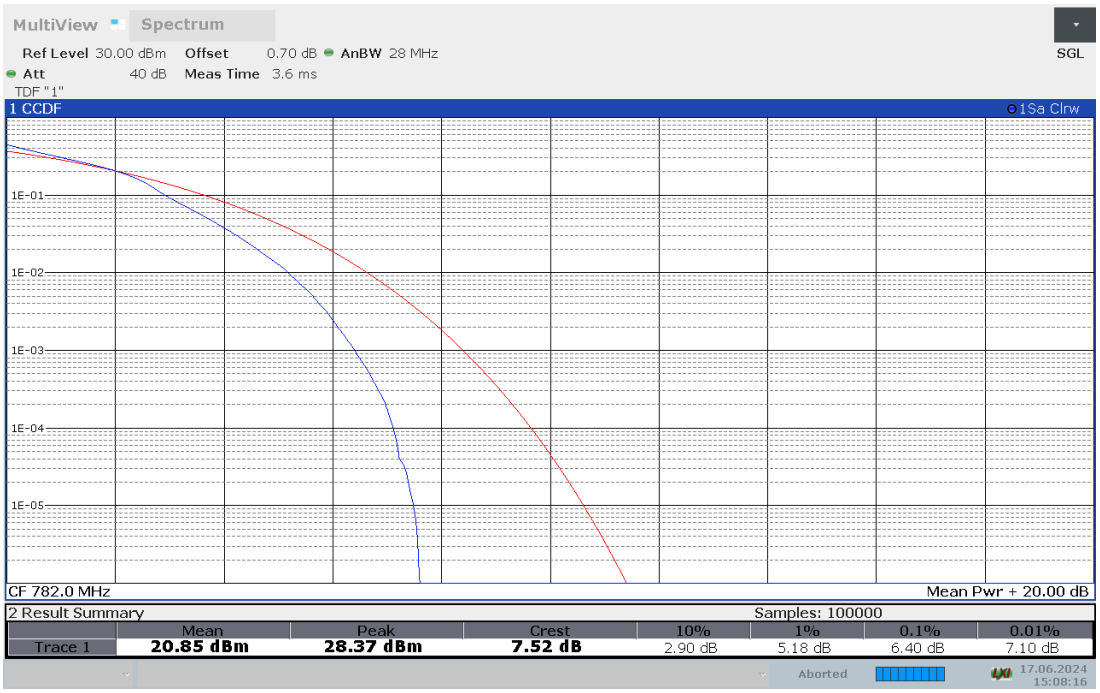
LTE Band 13, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
782	100%,0	5.66	6.40

LTE band 13 , 5MHz Bandwidth,QPSK



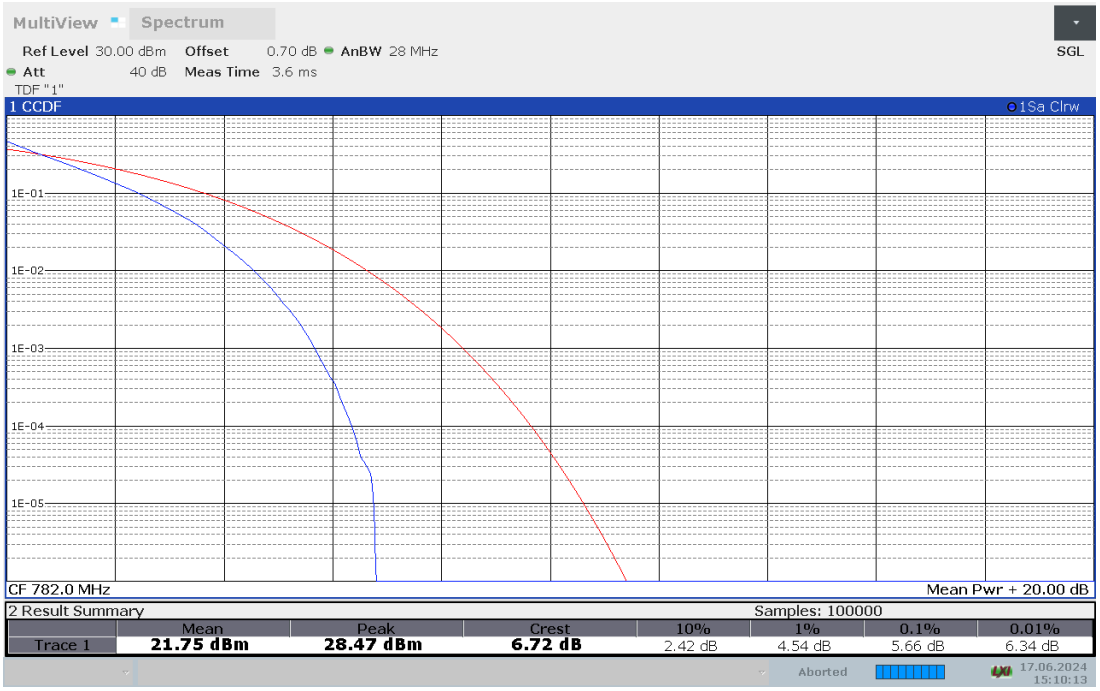
LTE band 13 , 5MHz Bandwidth,16QAM



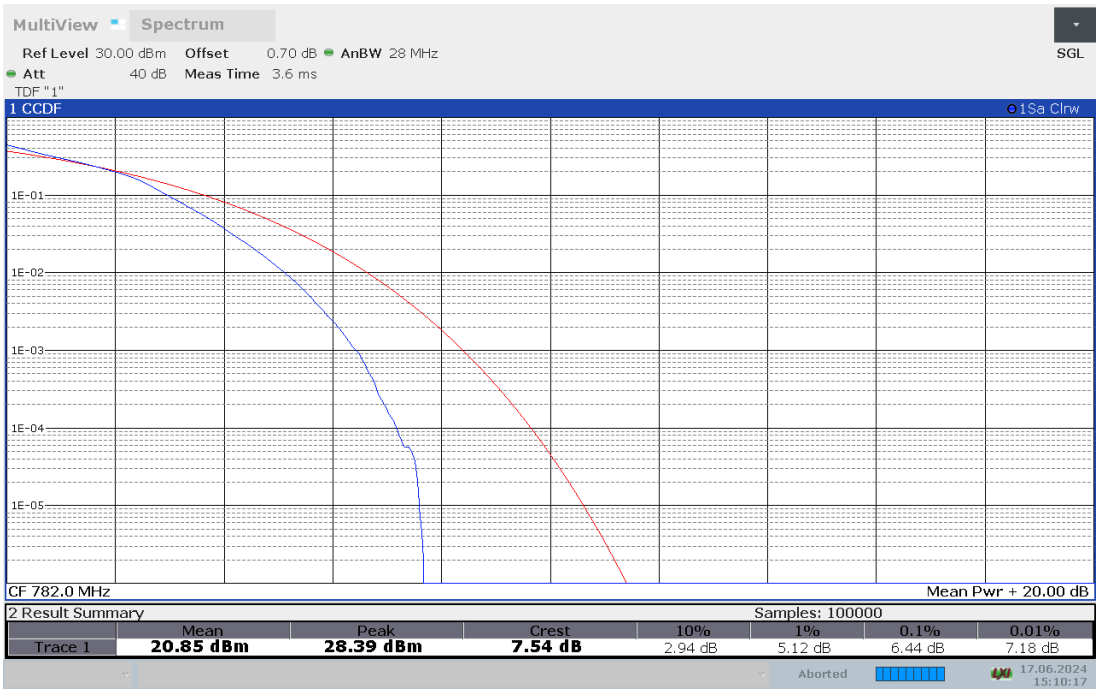
LTE Band 13, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
782	100%,0	5.66	6.44

LTE band 13 , 10MHz Bandwidth,QPSK



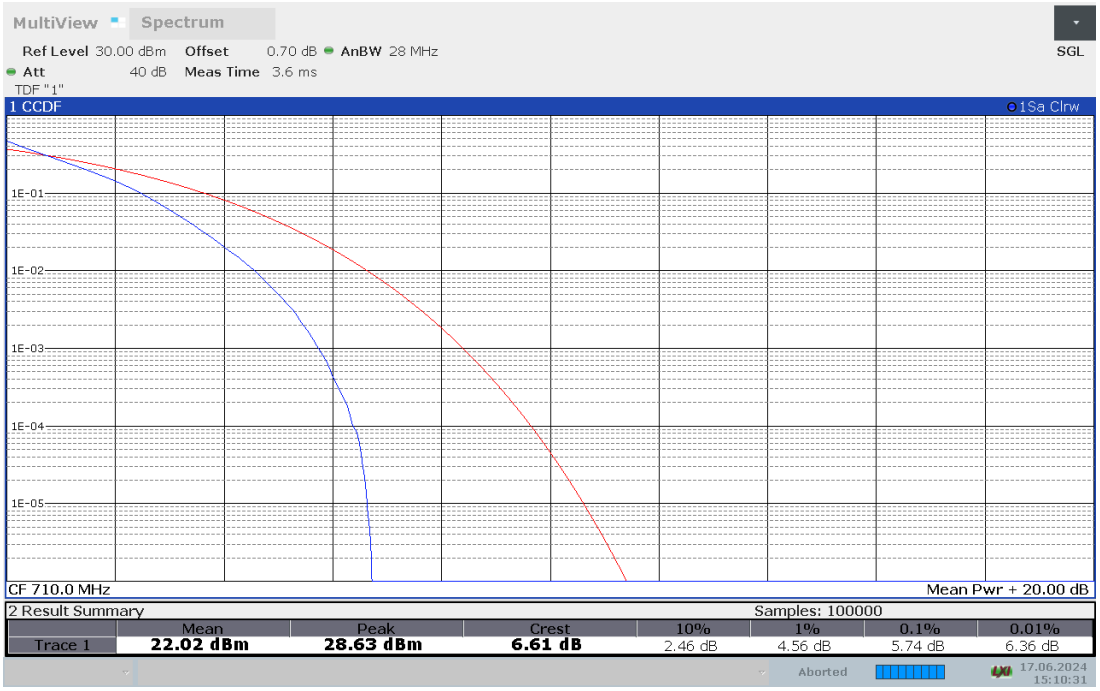
LTE band 13 , 10MHz Bandwidth,16QAM



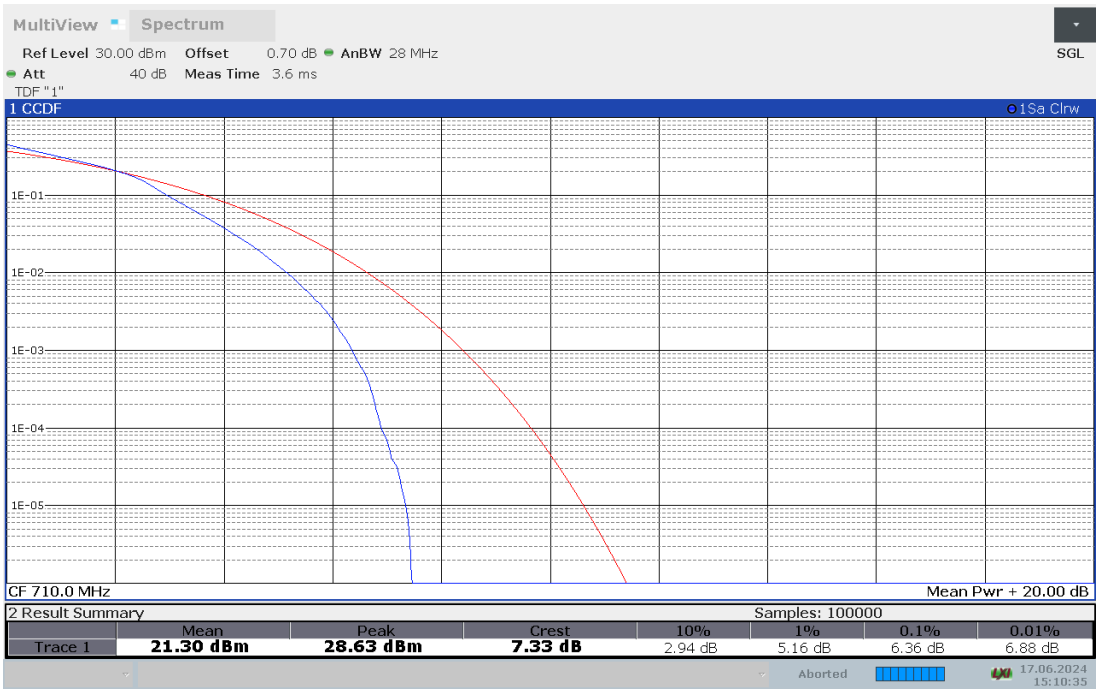
LTE Band 17, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
710	100%,0	5.74	6.36

LTE band 17 , 5MHz Bandwidth,QPSK



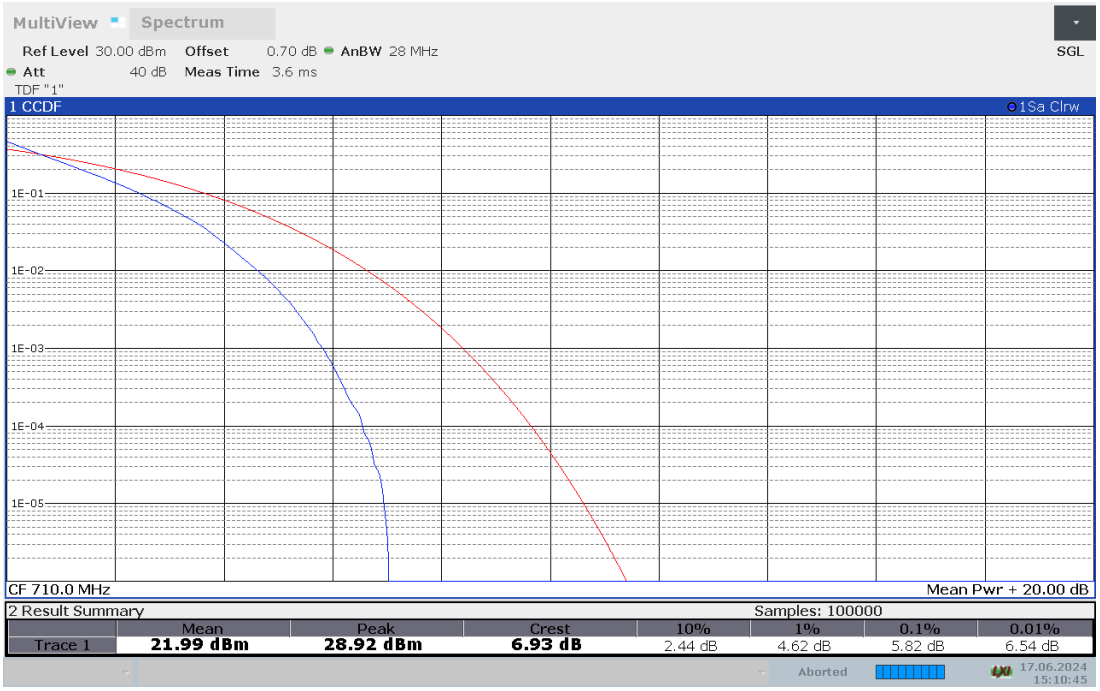
LTE band 17 , 5MHz Bandwidth,16QAM



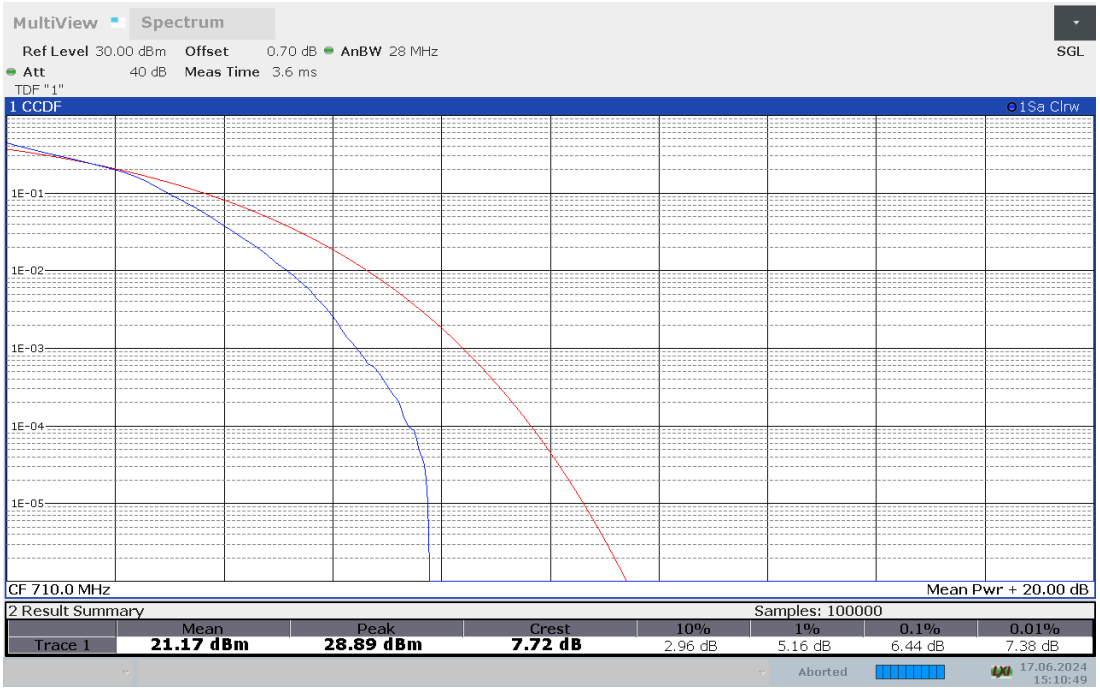
LTE Band 17, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
710	100%,0	5.82	6.44

LTE band 17 , 10MHz Bandwidth,QPSK



LTE band 17 , 10MHz Bandwidth,16QAM

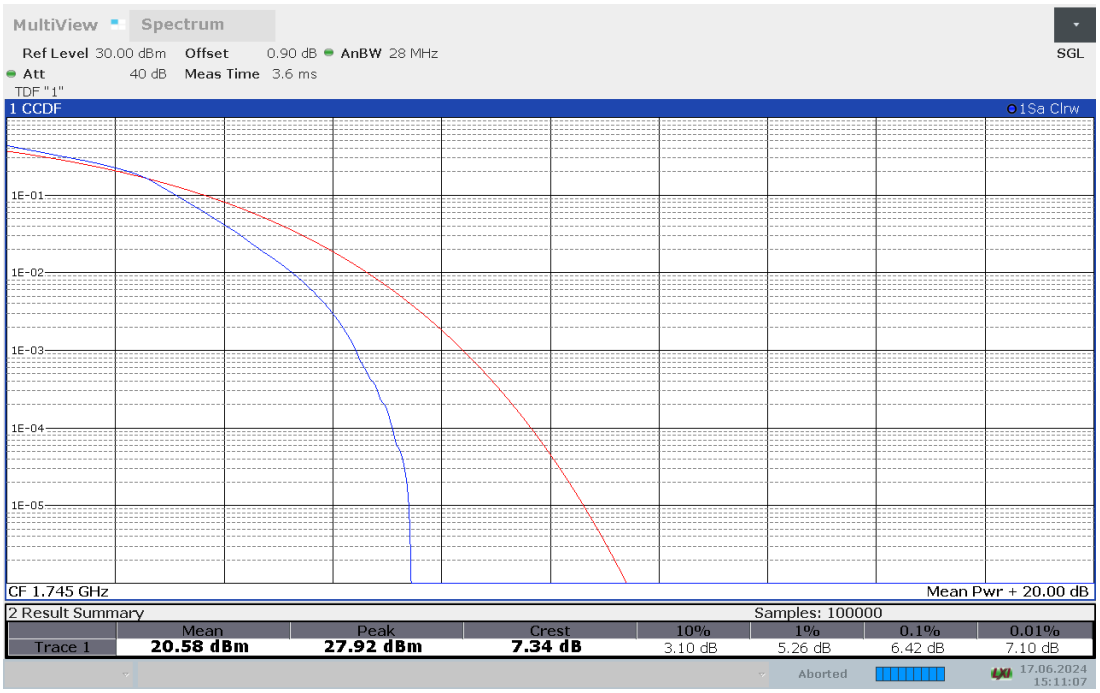


LTE Band 66, BW1.4MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1745	100%,0	5.66	6.42

LTE band 66 , 1.4MHz Bandwidth,QPSK

LTE band 66 , 1.4MHz Bandwidth,16QAM

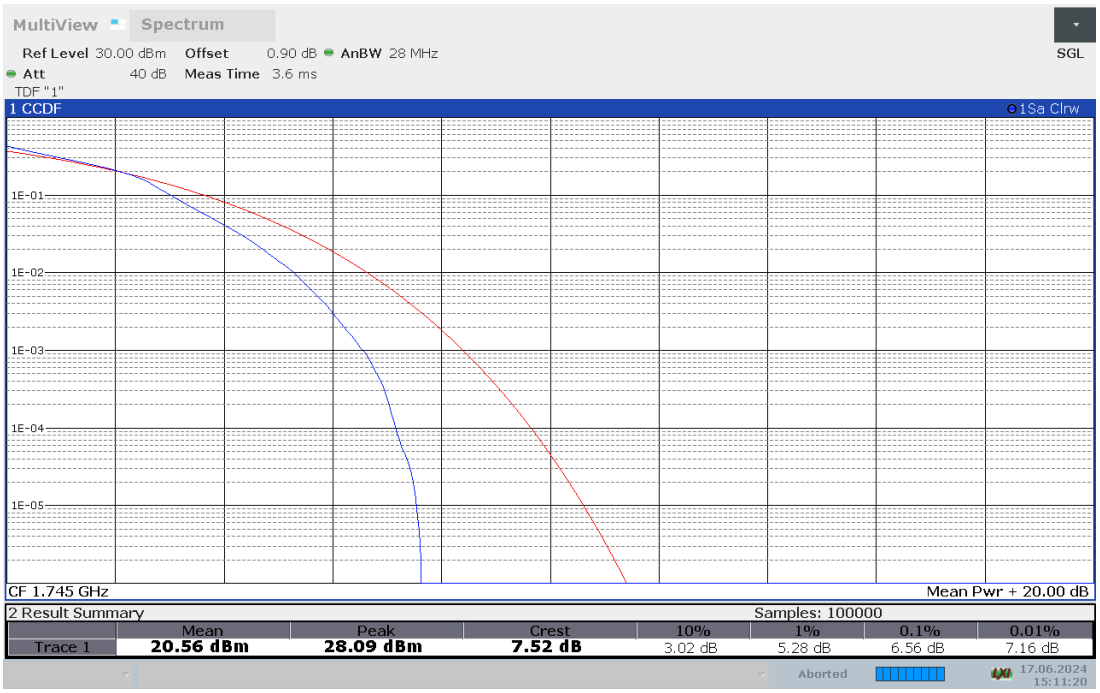


LTE Band 66, 3MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1745	100%,0	5.88	6.56

LTE band 66 , 3MHz Bandwidth,QPSK

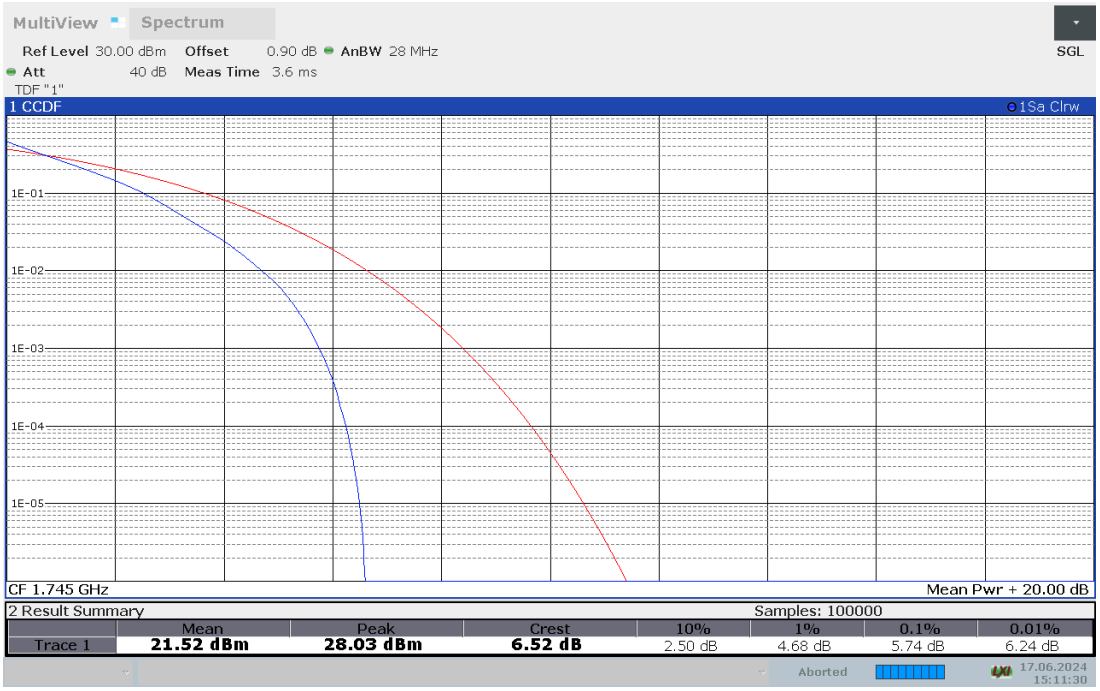
LTE band 66 , 3MHz Bandwidth,16QAM



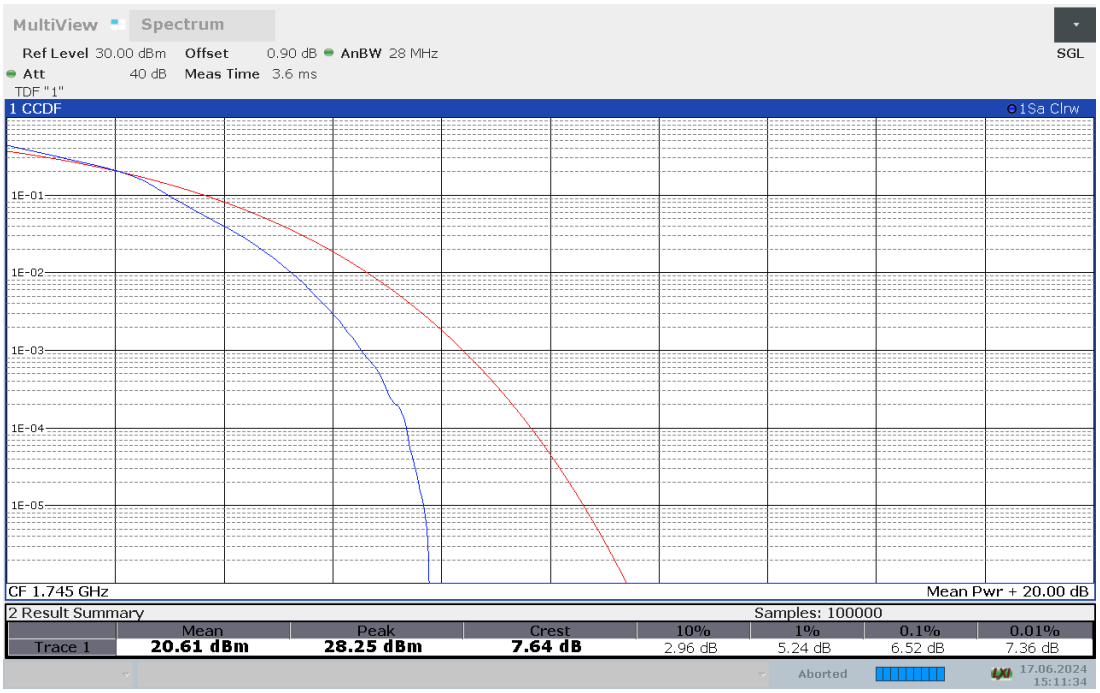
LTE Band 66, 5MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1745	100%,0	5.74	6.52

LTE band 66 , 5MHz Bandwidth,QPSK



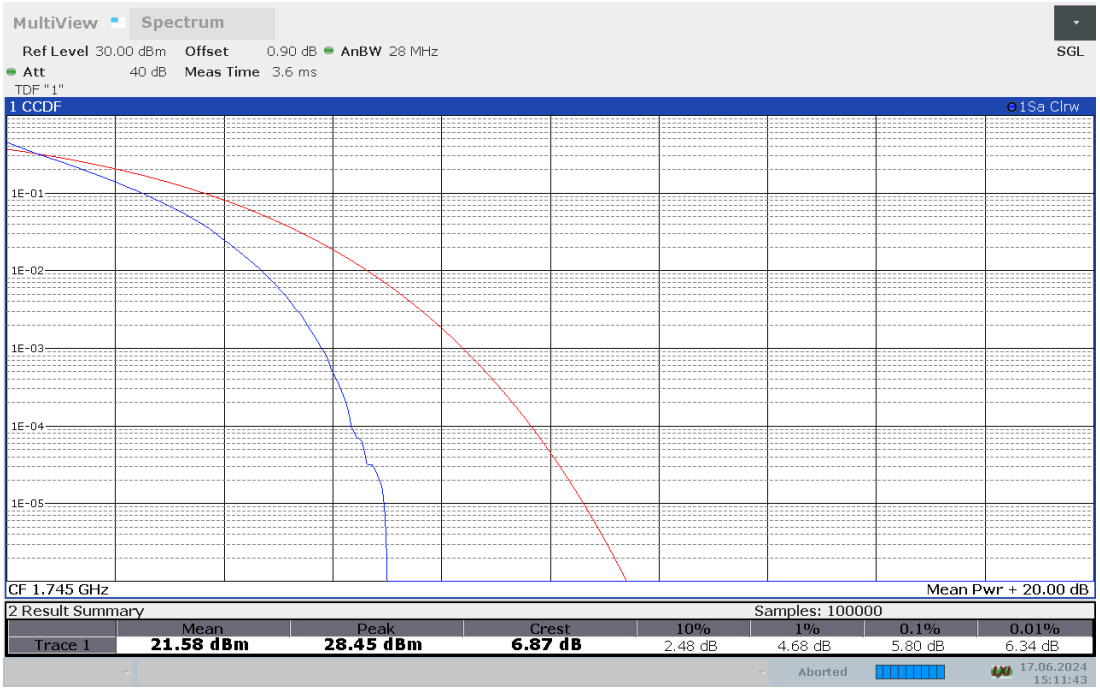
LTE band 66 , 5MHz Bandwidth,16QAM



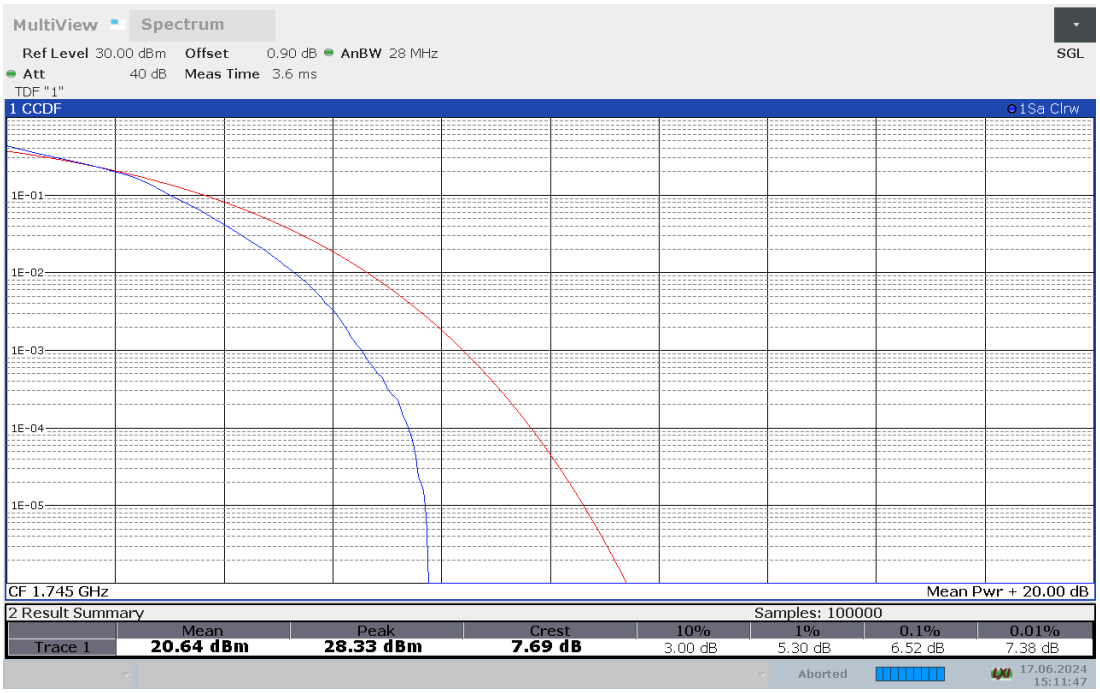
LTE Band 66, 10MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1745	100%,0	5.80	6.52

LTE band 66 , 10MHz Bandwidth,QPSK



LTE band 66 , 10MHz Bandwidth,16QAM

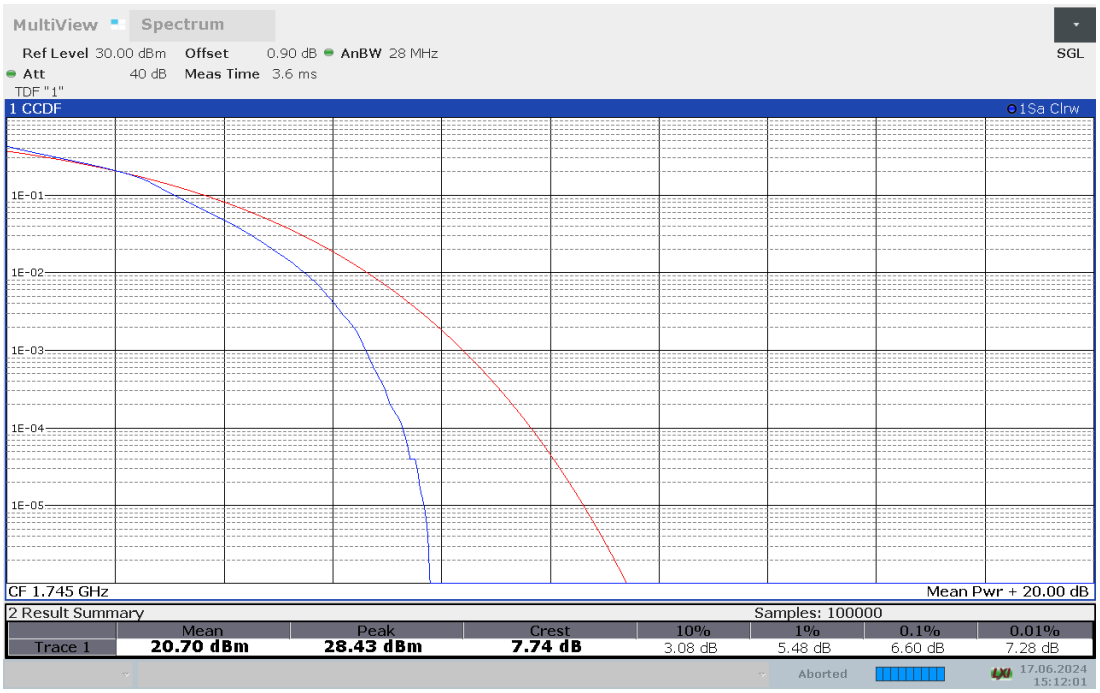


LTE Band 66, 15MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1745	100%,0	6.06	6.60

LTE band 66 , 15MHz Bandwidth,QPSK

LTE band 66 , 15MHz Bandwidth,16QAM

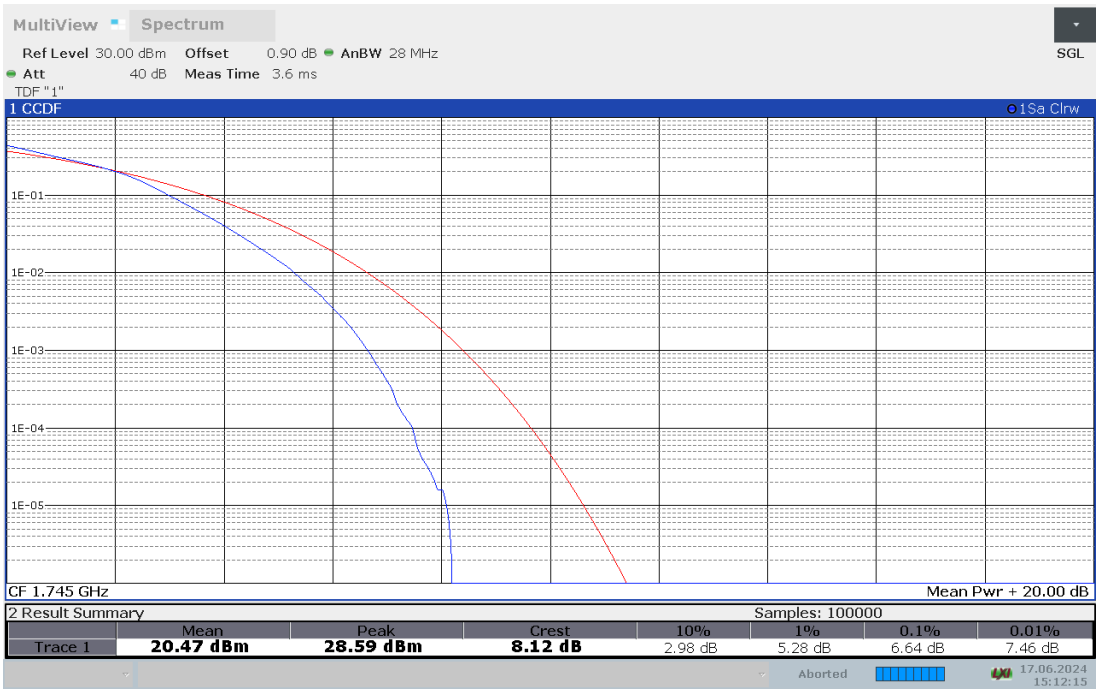


LTE Band 66, 20MHz

Frequency (MHz)	RB	PAPR (dB)	
		QPSK	16QAM
1745	100%,0	5.86	6.64

LTE band 66 , 20MHz Bandwidth,QPSK

LTE band 66 , 20MHz Bandwidth,16QAM



Note: Expanded measurement uncertainty is U = 0.48, k = 2

ANNEX B: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

SHENZHEN ACADEMY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

Shenzhen, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 14th day of November 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 4353.01
Valid to November 30, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

ANNEX C: Certificate of Brand Authorization

编号 No.：CTTL-001

TTL泰尔实验室

品牌授权书

Certificate of Brand Authorization

兹授权 **深圳信息通信研究院** 为“泰尔实验室”品牌实验室，可以使用“泰尔实验室”品牌开展检验检测相关业务，本授权书有效期至 **2024** 年 **10** 月 **31** 日。

This is to certify that **Shenzhen Academy of Information and Communications Technology** is authorized as the brand laboratory of “CTTL”, which may undertake inspection and testing related business using the “CTTL” brand. This certificate is valid for the period to **31 October 2024**.

“泰尔实验室”品牌是属于中国信息通信研究院所有的检验检测品牌，为了维护良好的品牌形象，不断提高品牌的价值，被授权机构必须严格遵照《“泰尔实验室”品牌管理手册》要求开展相关业务活动。

The brand “CTTL” is the inspection and testing brand owned by China Academy of Information and Communication Technology. In order to maintain a good brand image, and continuously improve the brand value, the authorized institutions must strictly comply with the requirements of *"CTTL" brand management manual* to carry out relevant business activities.

授权单位：中国信息通信研究院

China Academy of Information and Communication Technology（CAICT）

授权日期：2019 年 10 月 30 日

*****END OF REPORT*****