



Appendix B

E-UTRA Band CA_5B



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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE Band CA_5B

Band	Bandwidth	Channel	RB Cfg	Modulation	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
5-5	25RB+50RB	20428-20500	1RB#0-0RB#0	QPSK-QPSK	23.87	19.06	38.45	PASS
5-5	25RB+50RB	20428-20500	8RB#0-0RB#0	QPSK-QPSK	23.93	19.12	38.45	PASS
5-5	25RB+50RB	20478-20550	1RB#0-0RB#0	QPSK-QPSK	23.75	18.94	38.45	PASS
5-5	25RB+50RB	20478-20550	8RB#0-0RB#0	QPSK-QPSK	23.91	19.1	38.45	PASS
5-5	25RB+50RB	20528-20600	1RB#0-0RB#0	QPSK-QPSK	23.75	18.94	38.45	PASS
5-5	25RB+50RB	20528-20600	8RB#0-0RB#0	QPSK-QPSK	23.95	19.14	38.45	PASS
5-5	25RB+50RB	20500-20428	1RB#0-0RB#0	QPSK-QPSK	23.77	18.96	38.45	PASS
5-5	25RB+50RB	20500-20428	8RB#0-0RB#0	QPSK-QPSK	23.99	19.18	38.45	PASS
5-5	25RB+50RB	20550-20478	1RB#0-0RB#0	QPSK-QPSK	23.87	19.06	38.45	PASS
5-5	25RB+50RB	20550-20478	8RB#0-0RB#0	QPSK-QPSK	23.98	19.17	38.45	PASS
5-5	25RB+50RB	20600-20528	1RB#0-0RB#0	QPSK-QPSK	23.8	18.99	38.45	PASS
5-5	25RB+50RB	20600-20528	8RB#0-0RB#0	QPSK-QPSK	23.95	19.14	38.45	PASS
5-5	50RB+50RB	20450-20549	1RB#0-0RB#0	QPSK-QPSK	23.87	19.06	38.45	PASS
5-5	50RB+50RB	20450-20549	12RB#0-0RB#0	QPSK-QPSK	24.04	19.23	38.45	PASS
5-5	50RB+50RB	20476-20575	1RB#0-0RB#0	QPSK-QPSK	24	19.19	38.45	PASS
5-5	50RB+50RB	20476-20575	12RB#0-0RB#0	QPSK-QPSK	24.05	19.24	38.45	PASS
5-5	50RB+50RB	20501-20600	1RB#0-0RB#0	QPSK-QPSK	23.97	19.16	38.45	PASS
5-5	50RB+50RB	20501-20600	12RB#0-0RB#0	QPSK-QPSK	24.07	19.26	38.45	PASS
5-5	50RB+50RB	20549-20450	1RB#0-0RB#0	QPSK-QPSK	23.93	19.12	38.45	PASS
5-5	50RB+50RB	20549-20450	12RB#0-0RB#0	QPSK-QPSK	24.03	19.22	38.45	PASS
5-5	50RB+50RB	20575-20476	1RB#0-0RB#0	QPSK-QPSK	23.84	19.03	38.45	PASS
5-5	50RB+50RB	20575-20476	12RB#0-0RB#0	QPSK-QPSK	23.98	19.17	38.45	PASS
5-5	50RB+50RB	20600-20501	1RB#0-0RB#0	QPSK-QPSK	23.79	18.98	38.45	PASS
5-5	50RB+50RB	20600-20501	12RB#0-0RB#0	QPSK-QPSK	23.97	19.16	38.45	PASS
5-5	25RB+50RB	20428-20500	1RB#0-0RB#0	16QAM-16QAM	23.11	18.3	38.45	PASS
5-5	25RB+50RB	20428-20500	8RB#0-0RB#0	16QAM-16QAM	22.93	18.12	38.45	PASS
5-5	25RB+50RB	20478-20550	1RB#0-0RB#0	16QAM-16QAM	22.94	18.13	38.45	PASS
5-5	25RB+50RB	20478-20550	8RB#0-0RB#0	16QAM-16QAM	22.94	18.13	38.45	PASS
5-5	25RB+50RB	20528-20600	1RB#0-0RB#0	16QAM-16QAM	23	18.19	38.45	PASS
5-5	25RB+50RB	20528-20600	8RB#0-0RB#0	16QAM-16QAM	22.97	18.16	38.45	PASS
5-5	25RB+50RB	20500-20428	1RB#0-0RB#0	16QAM-16QAM	22.97	18.16	38.45	PASS
5-5	25RB+50RB	20500-20428	8RB#0-0RB#0	16QAM-16QAM	22.94	18.13	38.45	PASS
5-5	25RB+50RB	20550-20478	1RB#0-0RB#0	16QAM-16QAM	22.98	18.17	38.45	PASS
5-5	25RB+50RB	20550-20478	8RB#0-0RB#0	16QAM-16QAM	23	18.19	38.45	PASS
5-5	25RB+50RB	20600-20528	1RB#0-0RB#0	16QAM-16QAM	23.03	18.22	38.45	PASS
5-5	25RB+50RB	20600-20528	8RB#0-0RB#0	16QAM-16QAM	22.85	18.04	38.45	PASS
5-5	50RB+50RB	20450-20549	1RB#0-0RB#0	16QAM-16QAM	23.14	18.33	38.45	PASS
5-5	50RB+50RB	20450-20549	12RB#0-0RB#0	16QAM-16QAM	23.02	18.21	38.45	PASS
5-5	50RB+50RB	20476-20575	1RB#0-0RB#0	16QAM-16QAM	23.19	18.38	38.45	PASS
5-5	50RB+50RB	20476-20575	12RB#0-0RB#0	16QAM-16QAM	23.03	18.22	38.45	PASS
5-5	50RB+50RB	20501-20600	1RB#0-0RB#0	16QAM-16QAM	23.23	18.42	38.45	PASS
5-5	50RB+50RB	20501-20600	12RB#0-0RB#0	16QAM-16QAM	23.07	18.26	38.45	PASS
5-5	50RB+50RB	20549-20450	1RB#0-0RB#0	16QAM-16QAM	23.21	18.4	38.45	PASS

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5-5	50RB+50RB	20549-20450	12RB#0-0RB#0	16QAM-16QAM	23.01	18.2	38.45	PASS
5-5	50RB+50RB	20575-20476	1RB#0-0RB#0	16QAM-16QAM	23.15	18.34	38.45	PASS
5-5	50RB+50RB	20575-20476	12RB#0-0RB#0	16QAM-16QAM	22.98	18.17	38.45	PASS
5-5	50RB+50RB	20600-20501	1RB#0-0RB#0	16QAM-16QAM	23.08	18.27	38.45	PASS
5-5	50RB+50RB	20600-20501	12RB#0-0RB#0	16QAM-16QAM	22.92	18.11	38.45	PASS
5-5	25RB+50RB	20428-20500	1RB#0-0RB#0	64QAM-64QAM	22.08	17.27	38.45	PASS
5-5	25RB+50RB	20428-20500	8RB#0-0RB#0	64QAM-64QAM	21.94	17.13	38.45	PASS
5-5	25RB+50RB	20478-20550	1RB#0-0RB#0	64QAM-64QAM	22.01	17.2	38.45	PASS
5-5	25RB+50RB	20478-20550	8RB#0-0RB#0	64QAM-64QAM	21.91	17.1	38.45	PASS
5-5	25RB+50RB	20528-20600	1RB#0-0RB#0	64QAM-64QAM	21.87	17.06	38.45	PASS
5-5	25RB+50RB	20528-20600	8RB#0-0RB#0	64QAM-64QAM	21.91	17.1	38.45	PASS
5-5	25RB+50RB	20500-20428	1RB#0-0RB#0	64QAM-64QAM	21.99	17.18	38.45	PASS
5-5	25RB+50RB	20500-20428	8RB#0-0RB#0	64QAM-64QAM	21.84	17.03	38.45	PASS
5-5	25RB+50RB	20550-20478	1RB#0-0RB#0	64QAM-64QAM	21.86	17.05	38.45	PASS
5-5	25RB+50RB	20550-20478	8RB#0-0RB#0	64QAM-64QAM	21.78	16.97	38.45	PASS
5-5	25RB+50RB	20600-20528	1RB#0-0RB#0	64QAM-64QAM	22.05	17.24	38.45	PASS
5-5	25RB+50RB	20600-20528	8RB#0-0RB#0	64QAM-64QAM	21.82	17.01	38.45	PASS
5-5	50RB+50RB	20450-20549	1RB#0-0RB#0	64QAM-64QAM	22.11	17.3	38.45	PASS
5-5	50RB+50RB	20450-20549	12RB#0-0RB#0	64QAM-64QAM	22.09	17.28	38.45	PASS
5-5	50RB+50RB	20476-20575	1RB#0-0RB#0	64QAM-64QAM	22.04	17.23	38.45	PASS
5-5	50RB+50RB	20476-20575	12RB#0-0RB#0	64QAM-64QAM	22.03	17.22	38.45	PASS
5-5	50RB+50RB	20501-20600	1RB#0-0RB#0	64QAM-64QAM	22.05	17.24	38.45	PASS
5-5	50RB+50RB	20501-20600	12RB#0-0RB#0	64QAM-64QAM	22.05	17.24	38.45	PASS
5-5	50RB+50RB	20549-20450	1RB#0-0RB#0	64QAM-64QAM	22.17	17.36	38.45	PASS
5-5	50RB+50RB	20549-20450	12RB#0-0RB#0	64QAM-64QAM	22.04	17.23	38.45	PASS
5-5	50RB+50RB	20575-20476	1RB#0-0RB#0	64QAM-64QAM	22.02	17.21	38.45	PASS
5-5	50RB+50RB	20575-20476	12RB#0-0RB#0	64QAM-64QAM	21.93	17.12	38.45	PASS
5-5	50RB+50RB	20600-20501	1RB#0-0RB#0	64QAM-64QAM	22.05	17.24	38.45	PASS
5-5	50RB+50RB	20600-20501	12RB#0-0RB#0	64QAM-64QAM	21.97	17.16	38.45	PASS

Note:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level



2 Peak-to-Average Ratio

Part I - Test Results

Test Band	PCC RB	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
CA_5B	25RB+50RB	TM1	20428-20500	5.86	13	PASS
			20478-20550	5.88	13	PASS
			20528-20600	5.68	13	PASS
			20500-20428	5.88	13	PASS
			20550-20478	5.74	13	PASS
			20600-20528	5.68	13	PASS
		TM2	20428-20500	6.35	13	PASS
			20478-20550	6.35	13	PASS
			20528-20600	6.12	13	PASS
			20500-20428	6.35	13	PASS
			20550-20478	6.26	13	PASS
			20600-20528	6.09	13	PASS
		TM3	20428-20500	6.35	13	PASS
			20478-20550	6.61	13	PASS
			20528-20600	6.17	13	PASS
			20500-20428	6.35	13	PASS
			20550-20478	6.29	13	PASS
			20600-20528	6.06	13	PASS
	50RB+50RB	TM1	20450-20549	6.35	13	PASS
			20476-20575	6.23	13	PASS
			20501-20600	6.12	13	PASS
			20549-20450	6.20	13	PASS
			20575-20476	6.00	13	PASS
			20600-20501	5.88	13	PASS
TM2		20450-20549	6.67	13	PASS	
		20476-20575	6.75	13	PASS	
		20501-20600	6.58	13	PASS	
		20549-20450	6.55	13	PASS	
		20575-20476	6.35	13	PASS	
		20600-20501	6.49	13	PASS	
TM3		20450-20549	6.58	13	PASS	
		20476-20575	6.72	13	PASS	
		20501-20600	6.58	13	PASS	

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Test Band	PCC RB	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
			20549-20450	6.41	13	PASS
			20575-20476	6.58	13	PASS
			20600-20501	6.52	13	PASS

2.1 For LTE_CA_5B

2.1.1 Test Band = Bandwidth=25RB+50RB

2.1.1.1 Test Mode = LTE/TM1

2.1.1.1.1 Test Channel = 20428-20500

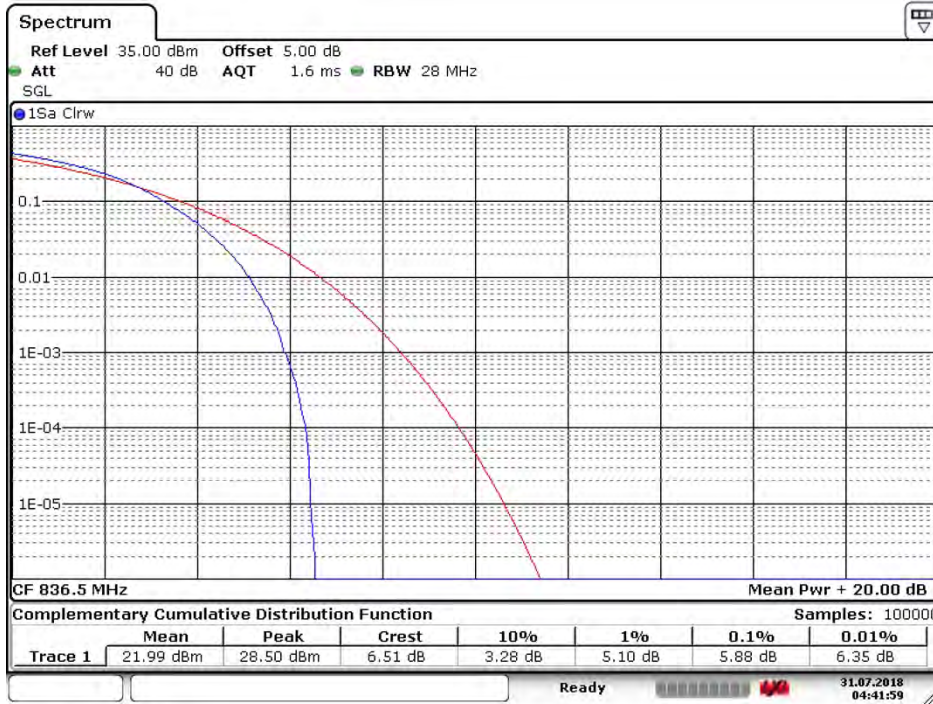


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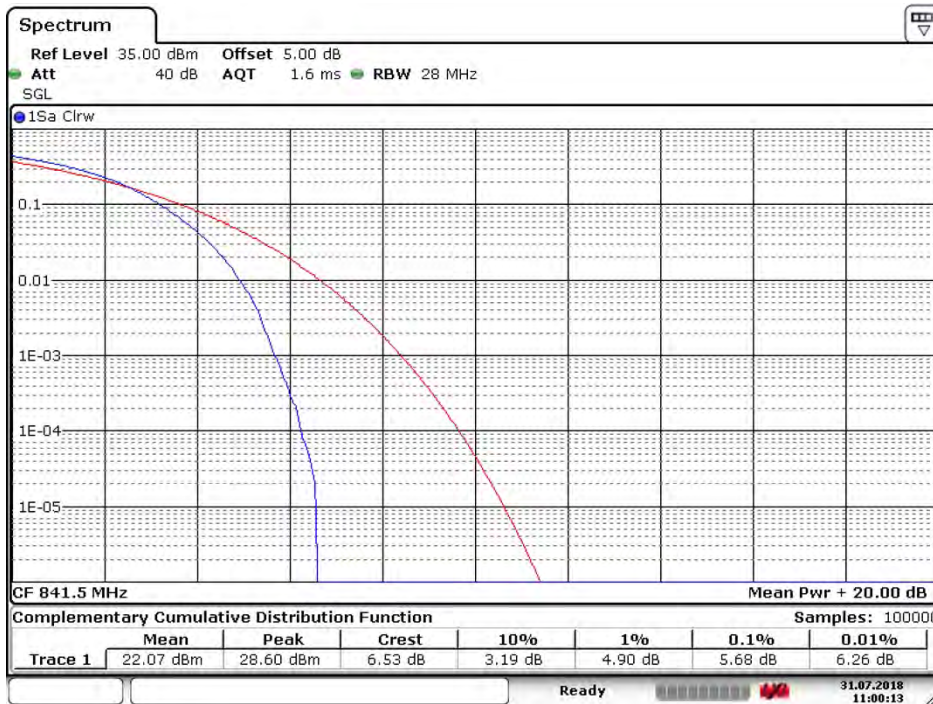


2.1.1.1.2 Test Channel = 20478-20550



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2.1.1.1.3 Test Channel = 20528-20600



Date: 31.JUL.2018 11:00:14

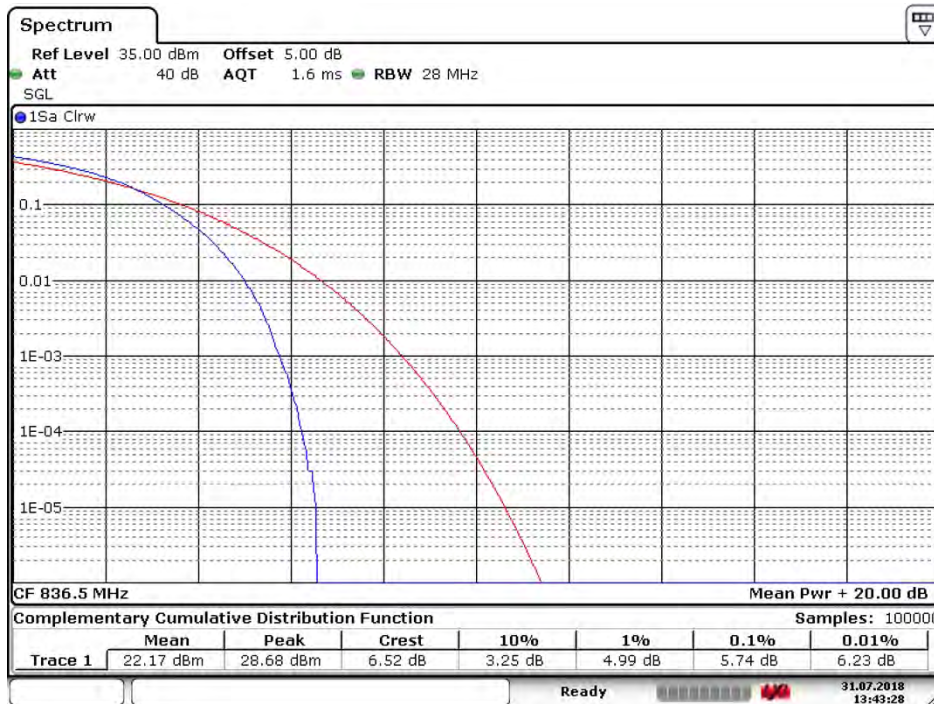


2.1.1.1.4 Test Channel = 20500-20428



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2.1.1.1.5 Test Channel = 20550-20478

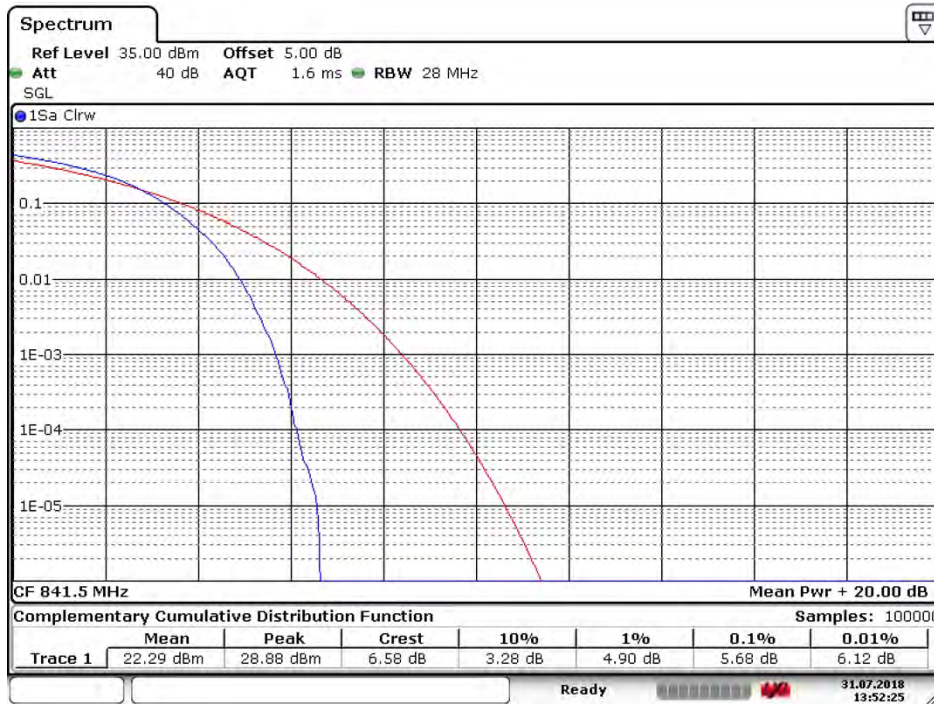


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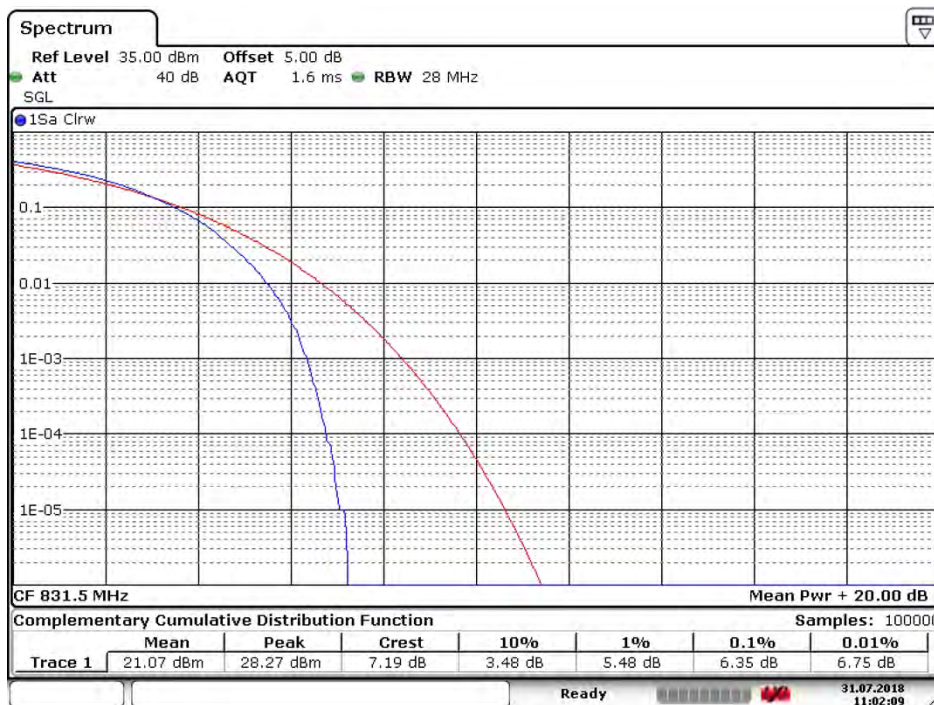
2.1.1.1.6 Test Channel = 20600-20528



Date: 31.JUL.2018 13:52:25

2.1.1.2 Test Mode = LTE/TM2

2.1.1.2.1 Test Channel = 20428-20500

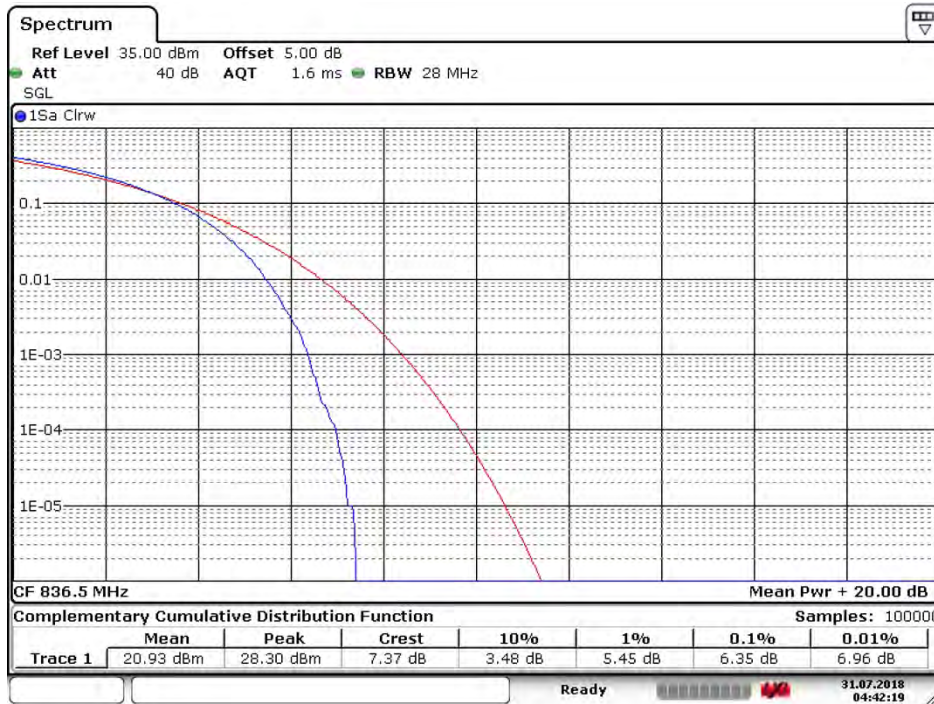


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2.1.1.2.2 Test Channel = 20478-20550



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2.1.1.2.3 Test Channel = 20528-20600

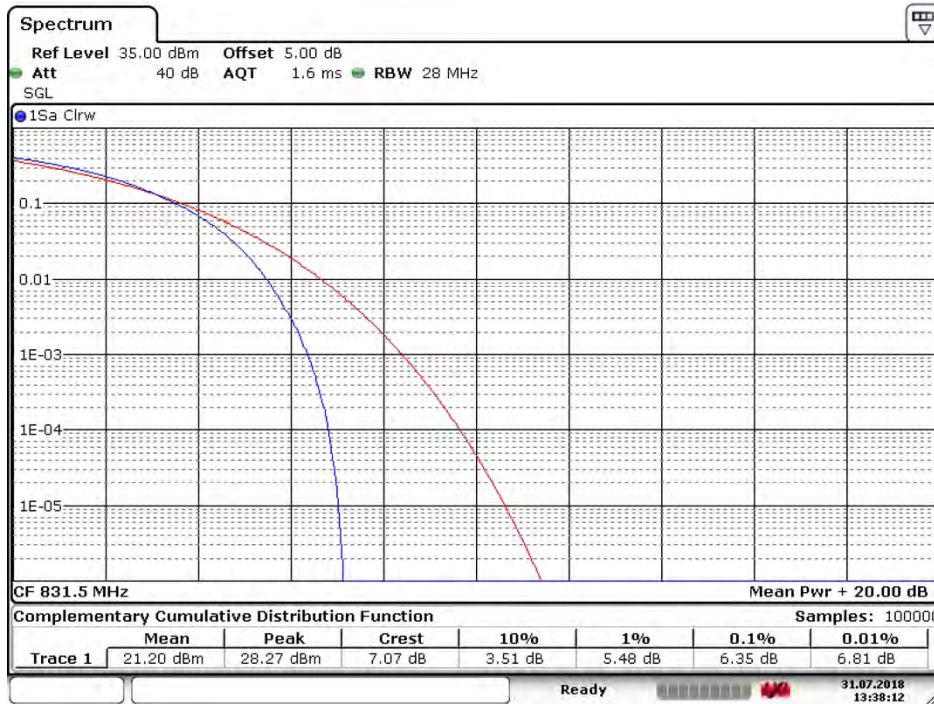


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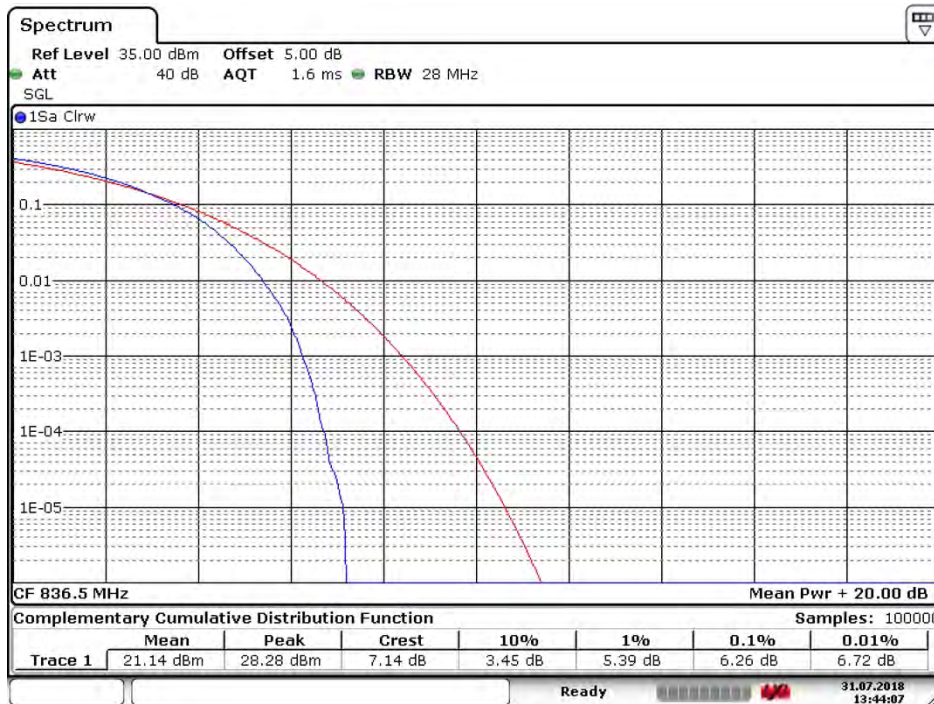


2.1.1.2.4 Test Channel = 20500-20428



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2.1.1.2.5 Test Channel = 20550-20478



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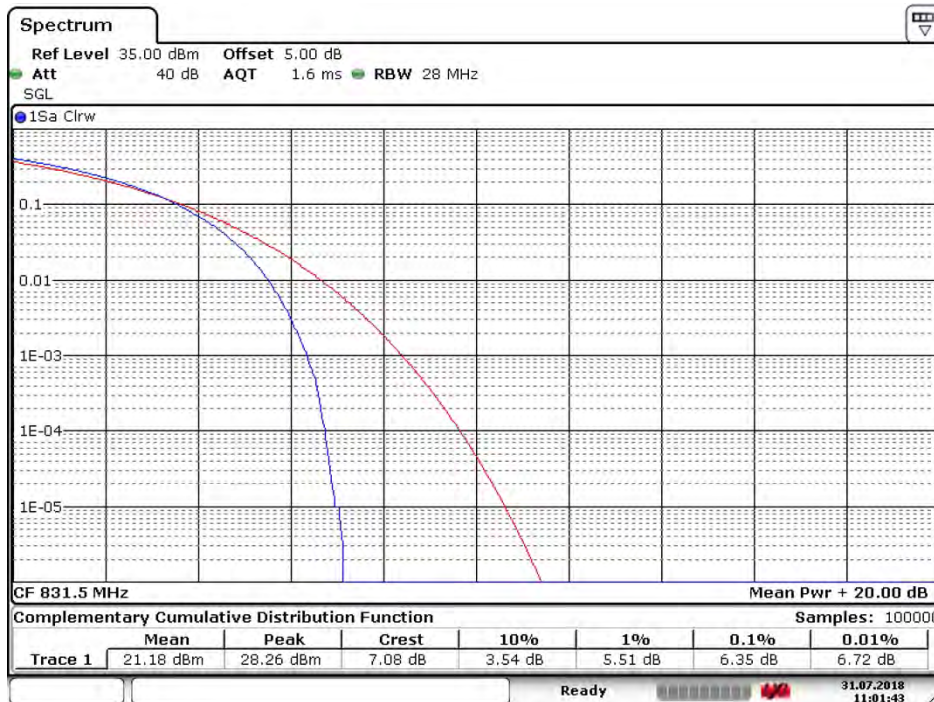
2.1.1.2.6 Test Channel = 20600-20528



Date: 31.JUL.2018 13:52:14

2.1.1.3 Test Mode = LTE/TM3

2.1.1.3.1 Test Channel = 20428-20500



Date: 31.JUL.2018 11:01:43

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2.1.1.3.2 Test Channel = 20478-20550



Date: 31.JUL.2018 04:42:37

2.1.1.3.3 Test Channel = 20528-20600



Date: 31.JUL.2018 11:01:00

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2.1.1.3.4 Test Channel = 20500-20428



Date: 31.JUL.2018 13:37:35

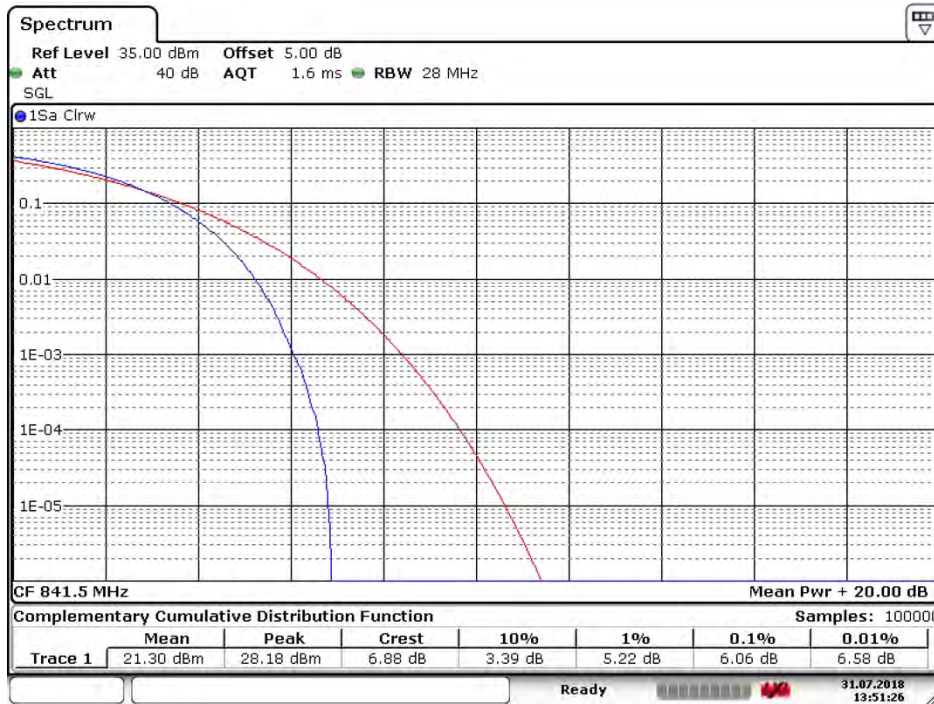
2.1.1.3.5 Test Channel = 20550-20478



Date: 31.JUL.2018 13:44:20

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2.1.1.3.6 Test Channel = 20600-20528



Date: 31.JUL.2018 13:51:27

2.1.2 Test Band = Bandwidth=50RB+50RB

2.1.2.1 Test Mode = LTE/TM1

2.1.2.1.1 Test Channel = 20450-20549

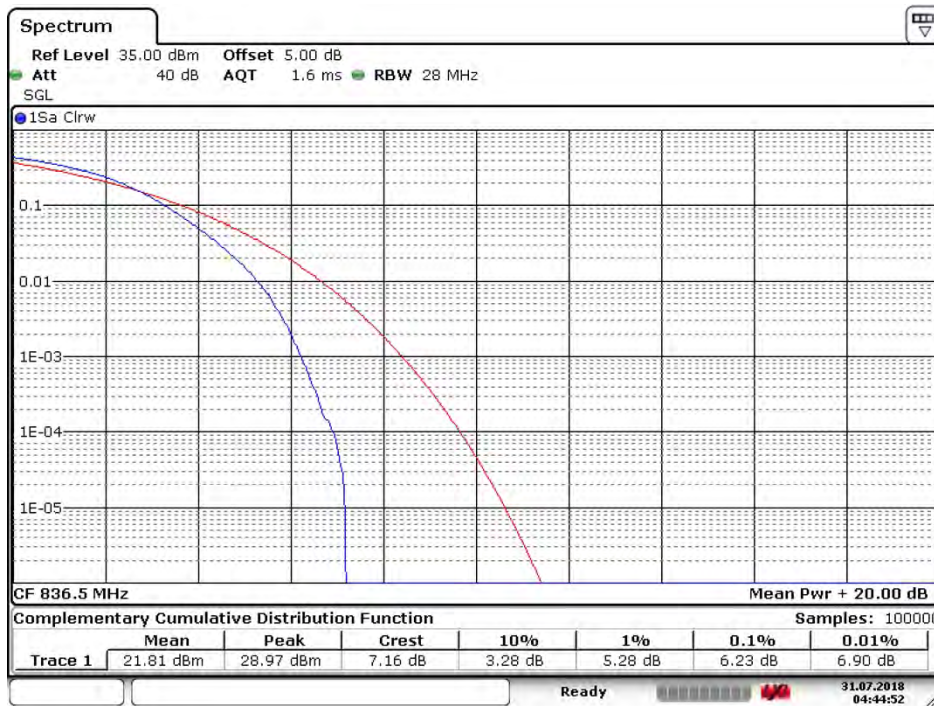


Date: 31.JUL.2018 11:04:41

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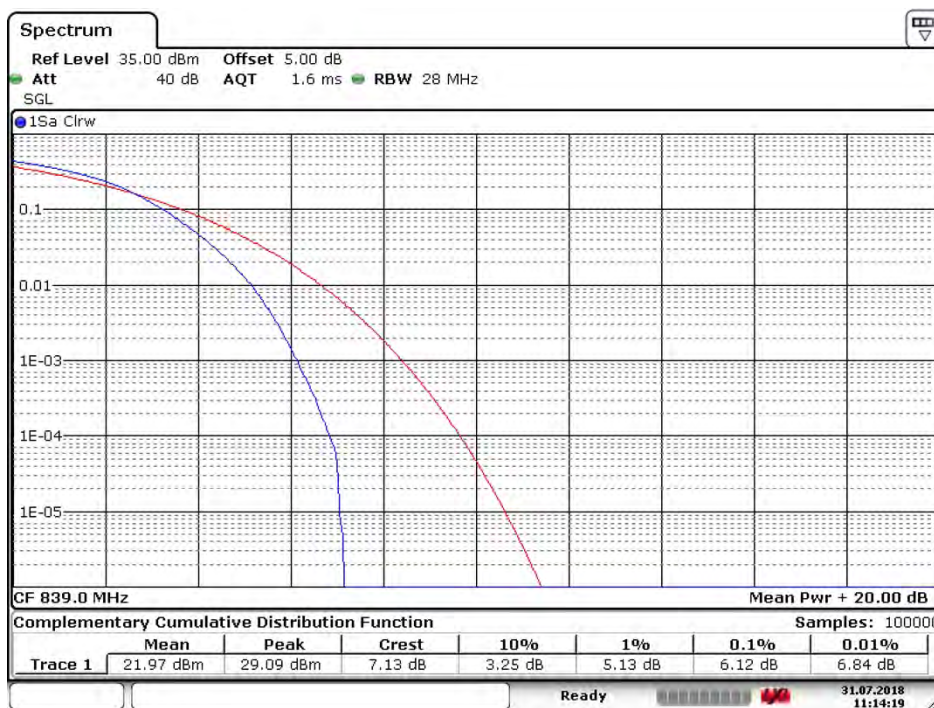


2.1.2.1.2 Test Channel = 20476-20575



Date: 31.JUL.2018 04:44:52

2.1.2.1.3 Test Channel = 20501-20600

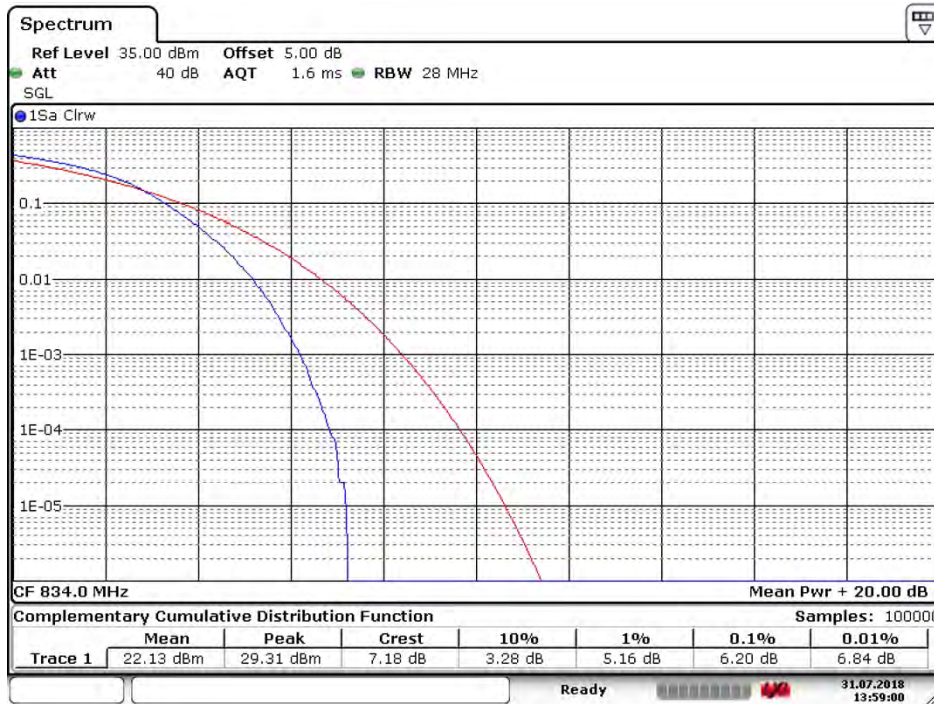


Date: 31.JUL.2018 11:14:19

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2.1.2.1.4 Test Channel = 20549-20450



Date: 31.JUL.2018 13:59:01

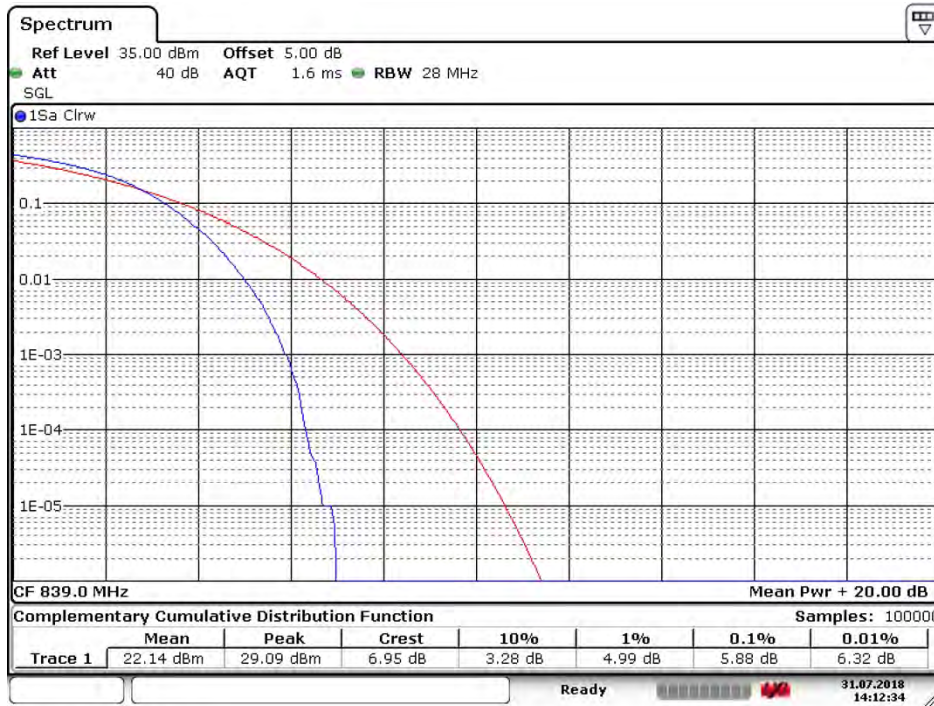
2.1.2.1.5 Test Channel = 20575-20476



Date: 31.JUL.2018 14:11:05



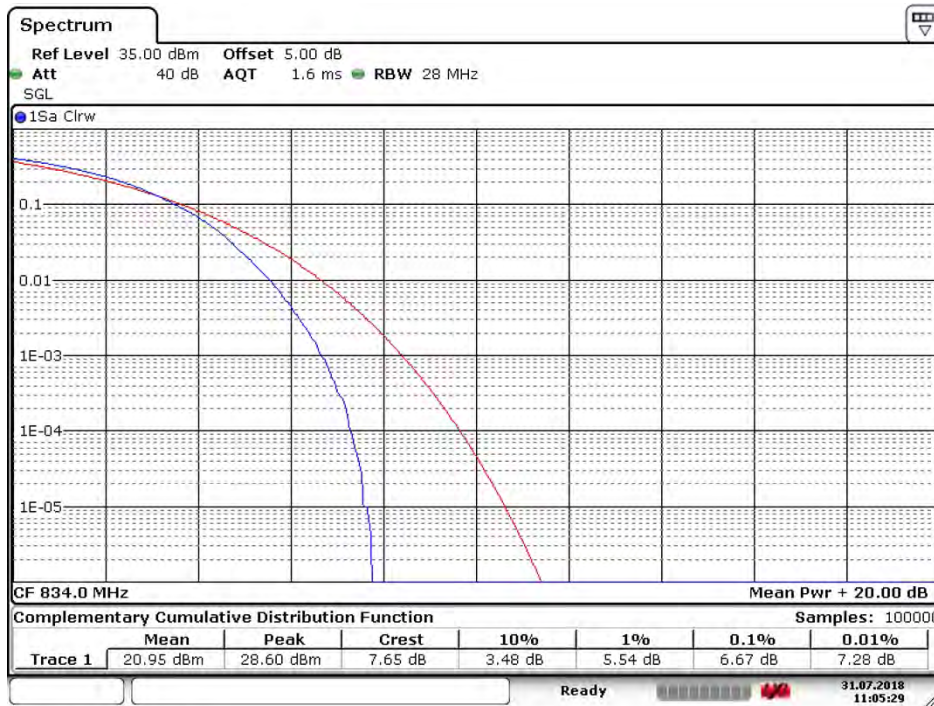
2.1.2.1.6 Test Channel = 20600-20501



Date: 31.JUL.2018 14:12:35

2.1.2.2 Test Mode = LTE/TM2

2.1.2.2.1 Test Channel = 20450-20549

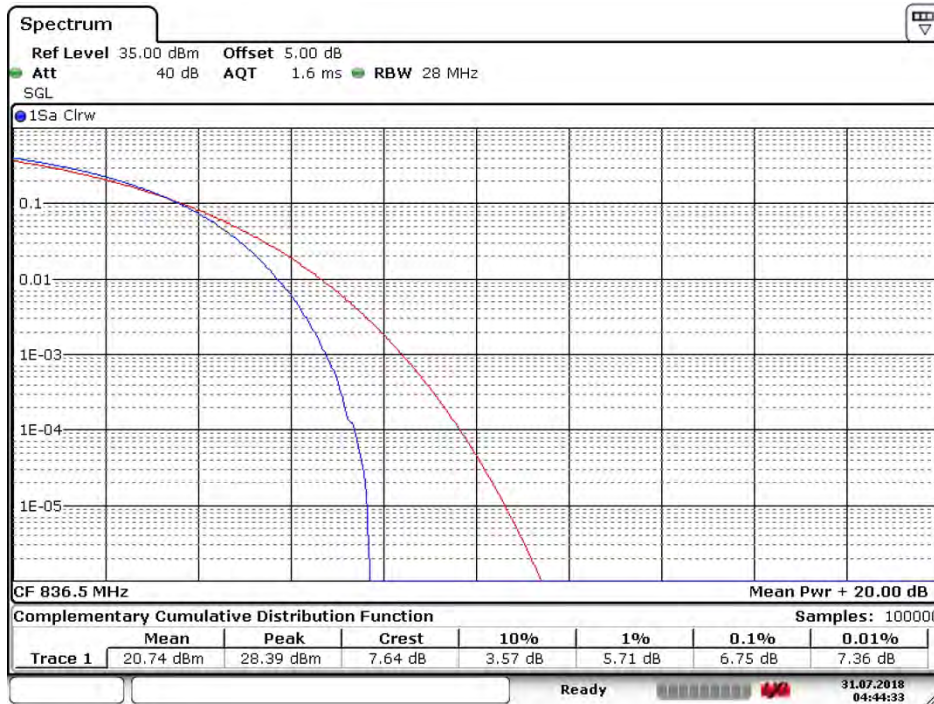


Date: 31.JUL.2018 11:05:30

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2.1.2.2.2 Test Channel = 20476-20575



Date: 31.JUL.2018 04:44:34

2.1.2.2.3 Test Channel = 20501-20600

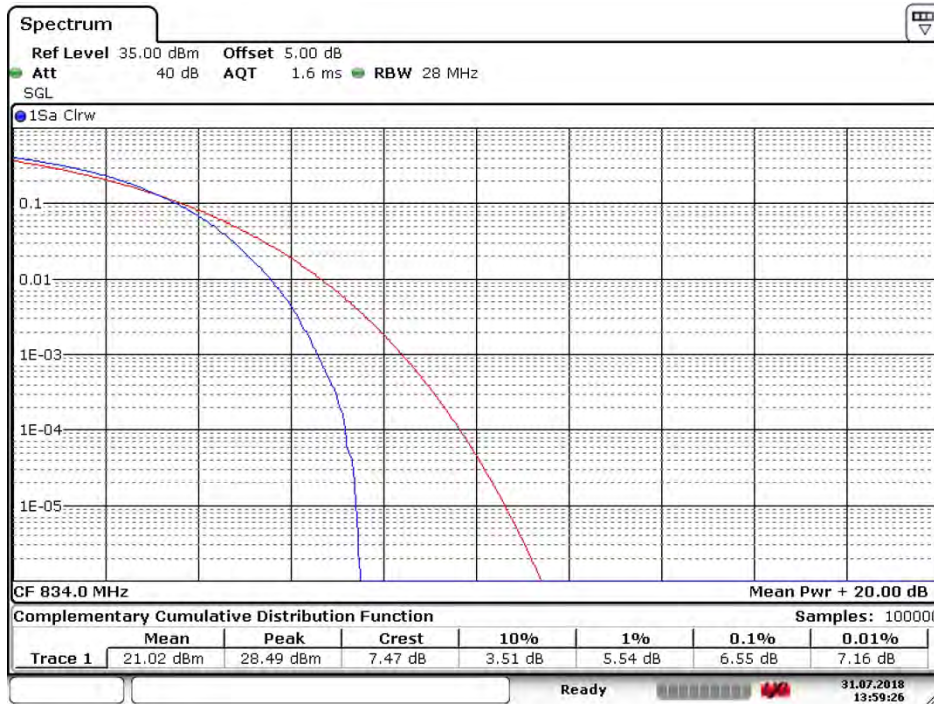


Date: 31.JUL.2018 11:14:03

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2.1.2.2.4 Test Channel = 20549-20450



Date: 31.JUL.2018 13:59:26

2.1.2.2.5 Test Channel = 20575-20476



Date: 31.JUL.2018 14:10:47

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2.1.2.2.6 Test Channel = 20600-20501



Date: 31.JUL.2018 14:12:51

2.1.2.3 Test Mode = LTE/TM3

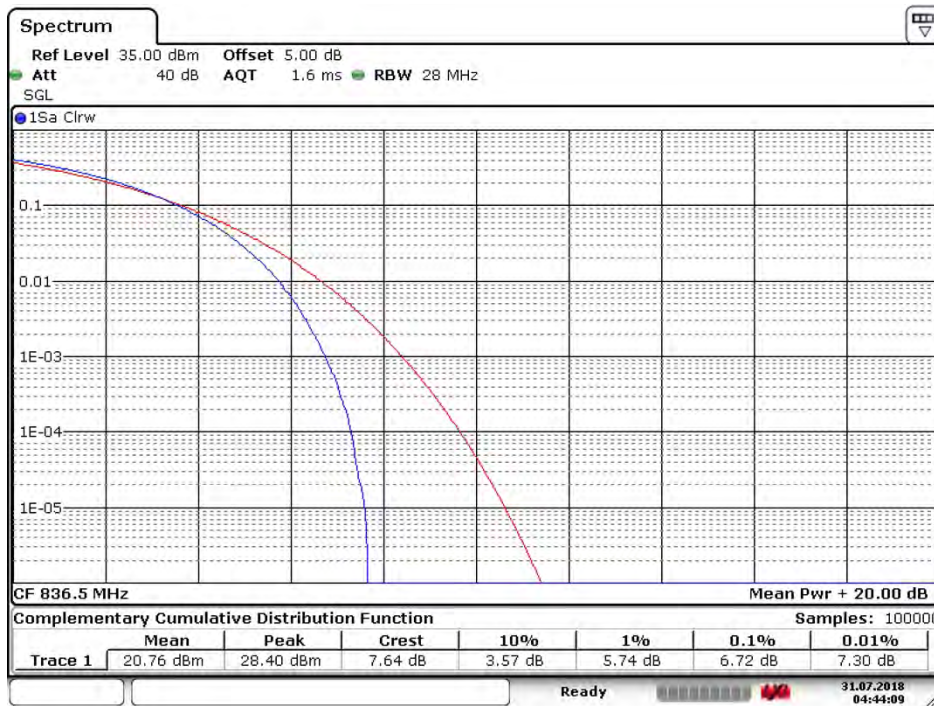
2.1.2.3.1 Test Channel = 20450-20549



Date: 31.JUL.2018 11:05:45

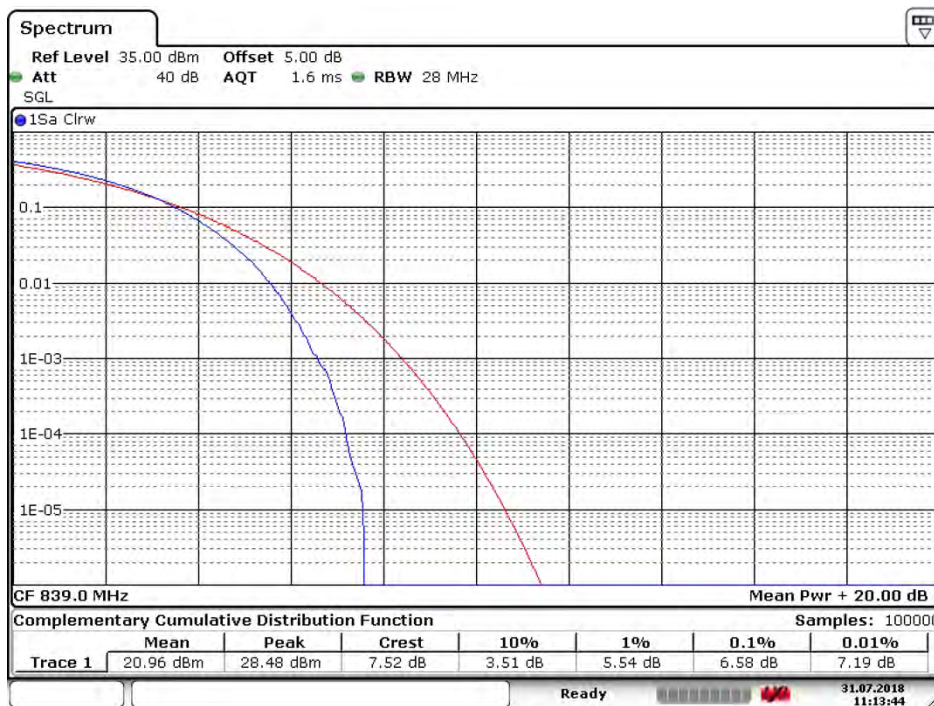


2.1.2.3.2 Test Channel = 20476-20575



Date: 31.JUL.2018 04:44:09

2.1.2.3.3 Test Channel = 20501-20600

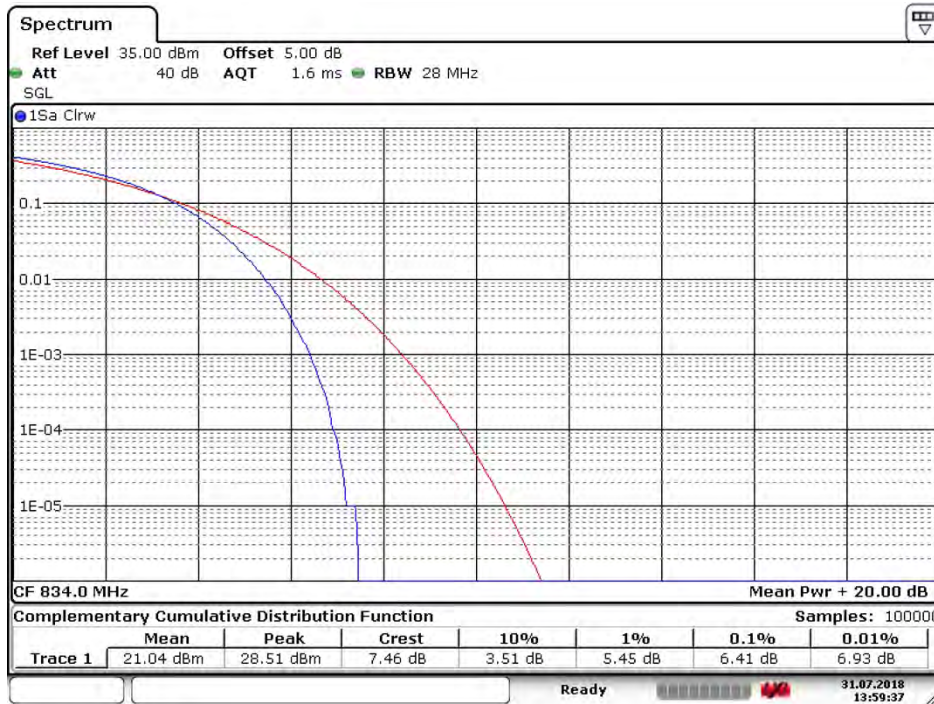


Date: 31.JUL.2018 11:13:44

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2.1.2.3.4 Test Channel = 20549-20450



Date: 31.JUL.2018 13:59:37

2.1.2.3.5 Test Channel = 20575-20476



Date: 31.JUL.2018 14:10:30

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2.1.2.3.6 Test Channel = 20600-20501



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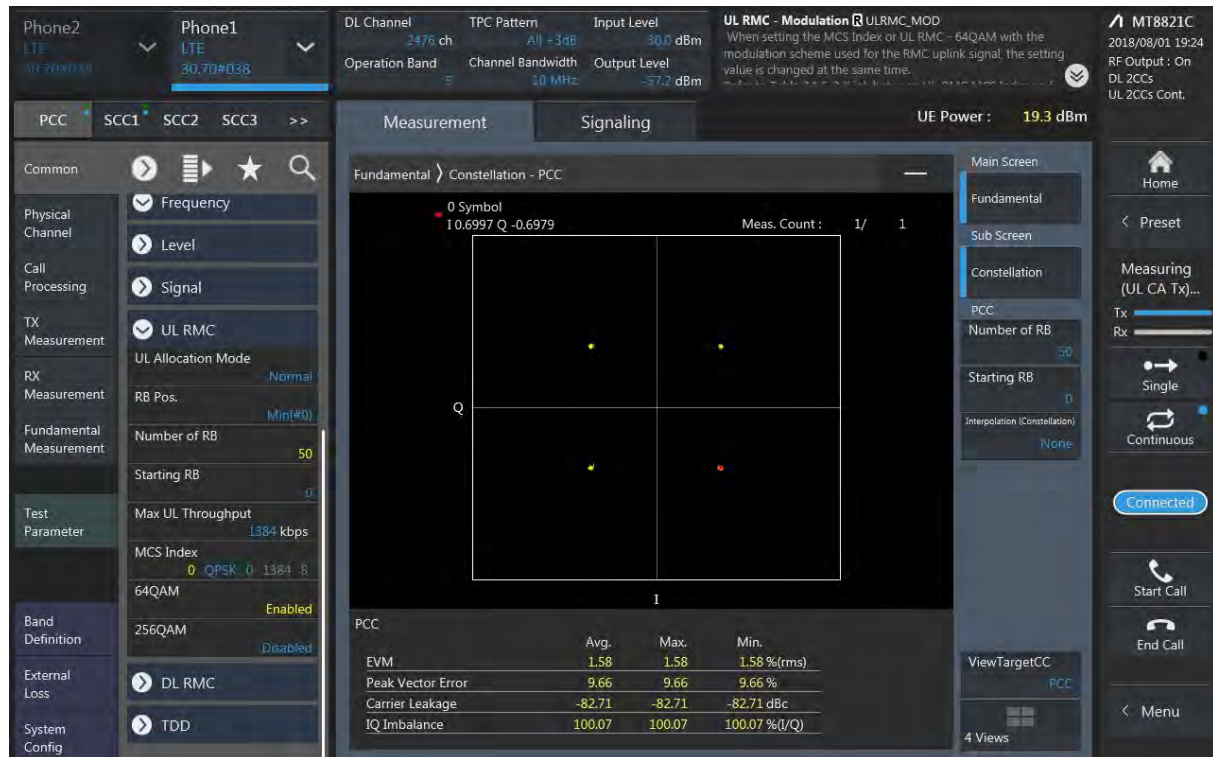
3 Modulation Characteristics

3.1 For LTE

3.1.1 Test Band = LTE Band CA_5B

3.1.1.1 Test Mode = LTE /TM1 50RB+50RB

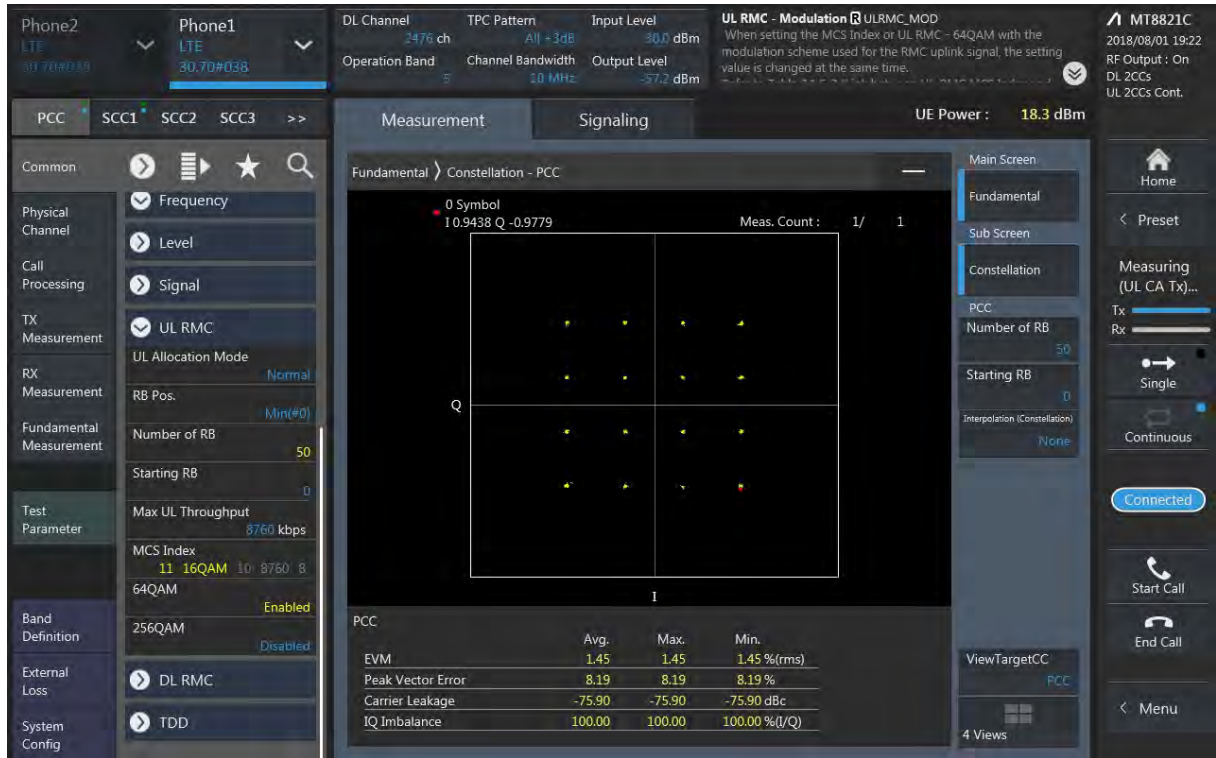
3.1.1.1.1 Test Channel = MCH





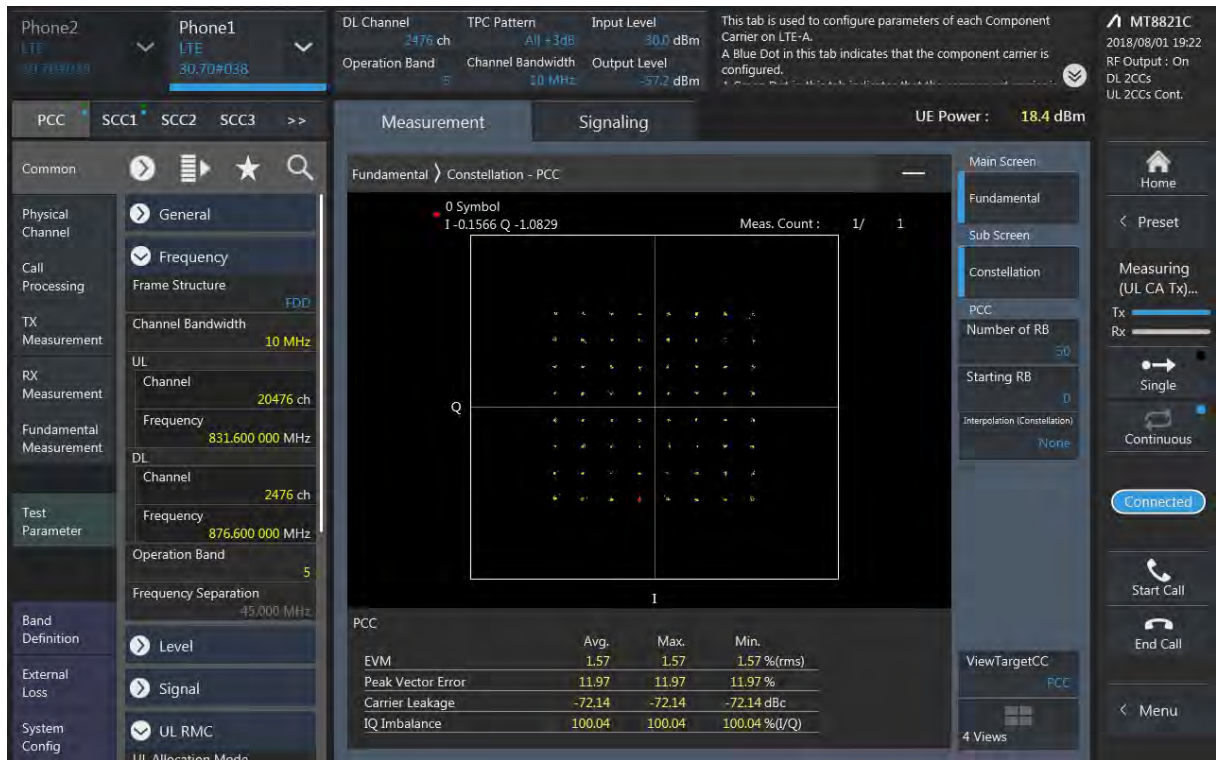
3.1.1.2 Test Mode = LTE /TM2 50RB+50RB

3.1.1.2.1 Test Channel = MCH





3.1.1.3 Test Mode = LTE /TM3 50RB+50RB
3.1.1.3.1 Test Channel = MCH





4 Bandwidth

Part I - Test Results

Test Band	PCC RB	Test Mode	Test Channel	OBW	EBW
CA_5B	25RB+50RB	TM1	20428-20500	13.94	14.81
			20478-20550	13.91	14.81
			20528-20600	13.88	14.76
			20500-20428	13.94	14.93
			20550-20478	13.91	14.93
			20600-20528	13.91	14.87
		TM2	20428-20500	13.94	14.78
			20478-20550	13.88	14.78
			20528-20600	13.91	14.78
			20500-20428	13.94	14.87
			20550-20478	13.91	14.87
			20600-20528	13.91	14.90
		TM3	20428-20500	13.94	14.78
			20478-20550	13.85	14.72
			20528-20600	13.91	14.75
			20500-20428	13.94	14.90
			20550-20478	13.91	14.84
			20600-20528	13.94	14.90
	50RB+50RB	TM1	20450-20549	18.82	19.94
			20476-20575	18.78	19.90
			20501-20600	18.78	19.94
			20549-20450	18.78	19.90
			20575-20476	18.78	19.86
			20600-20501	18.78	19.90
TM2		20450-20549	18.78	19.98	
		20476-20575	18.74	19.90	
		20501-20600	18.78	19.90	
		20549-20450	18.82	19.94	
		20575-20476	18.74	19.94	
		20600-20501	18.78	19.94	
TM3		20450-20549	18.89	19.94	
		20476-20575	18.74	19.86	
		20501-20600	18.78	19.94	
		20549-20450	18.82	19.90	



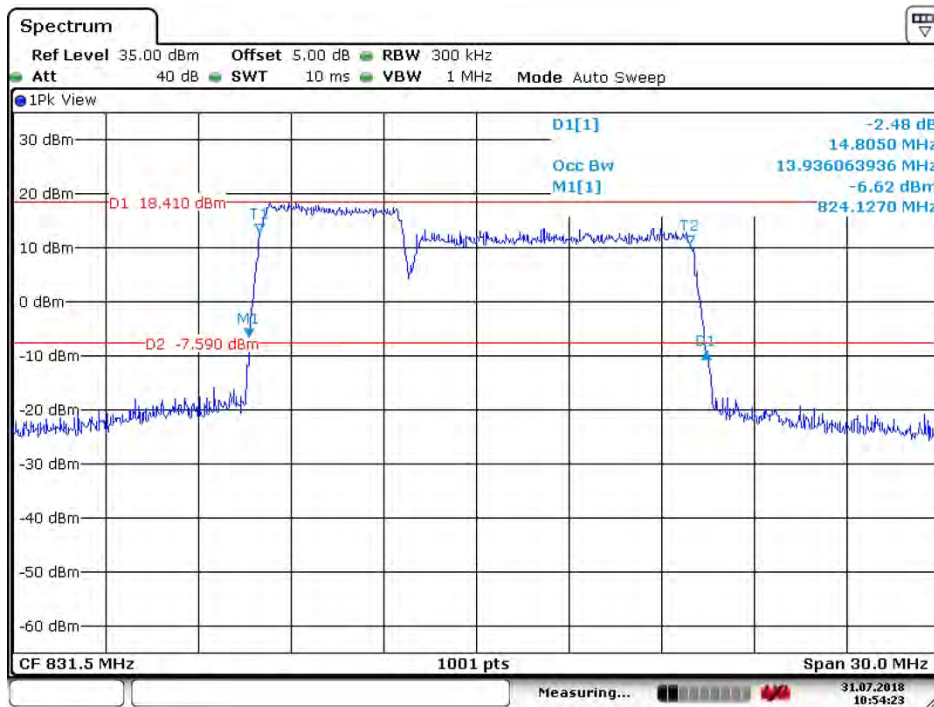
Test Band	PCC RB	Test Mode	Test Channel	OBW	EBW
			20575-20476	18.78	19.86
			20600-20501	18.78	19.90

4.1 For LTE_CA_5B

4.1.1 Test Band = Bandwidth=25RB+50RB

4.1.1.1 Test Mode = LTE/TM1

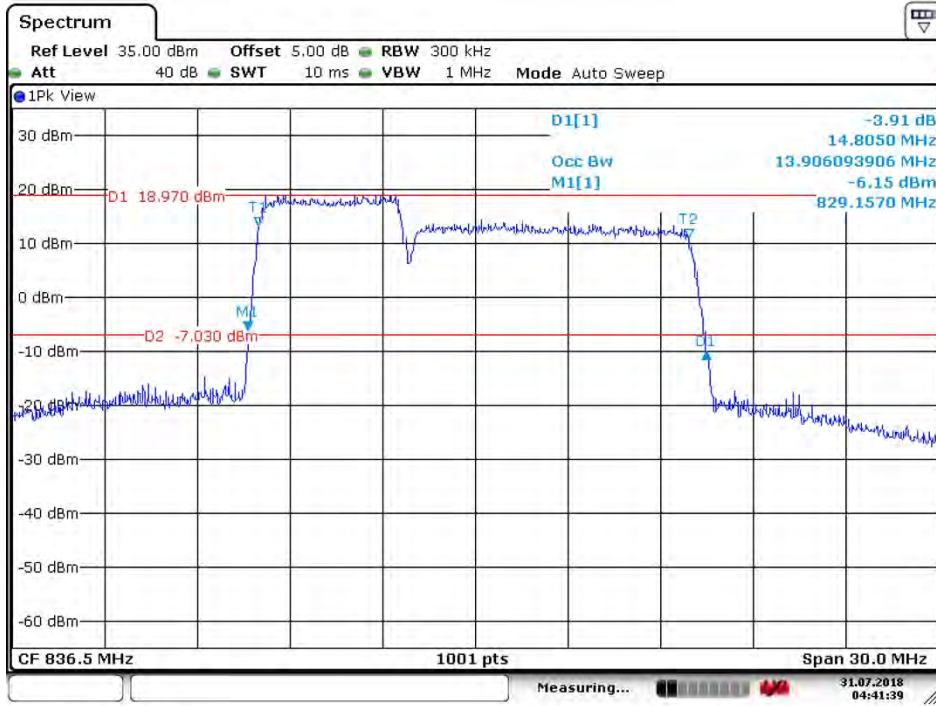
4.1.1.1.1 Test Channel = 20428-20500



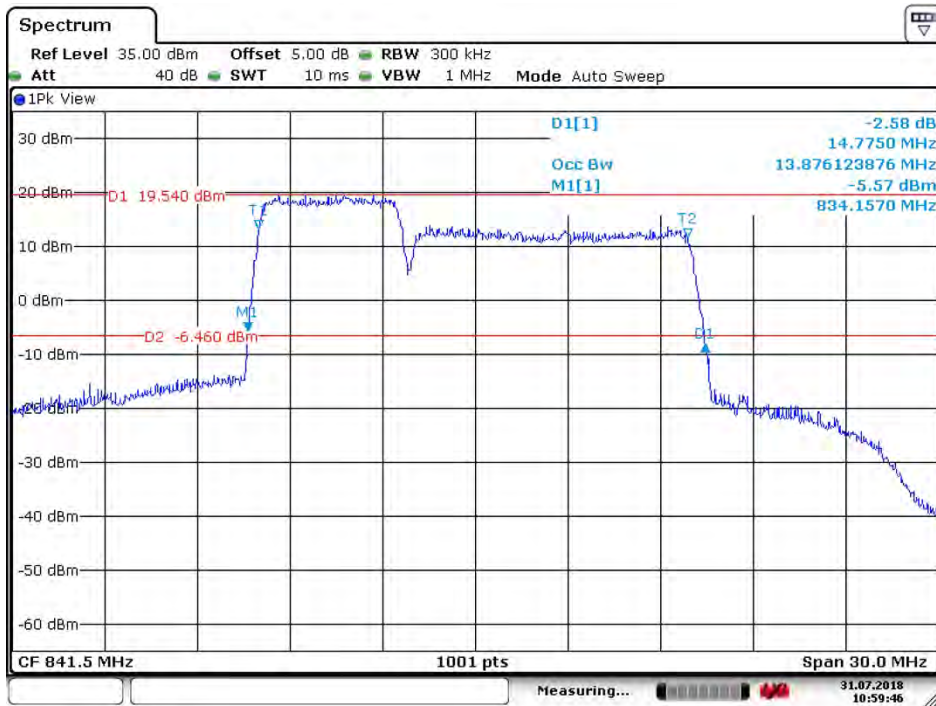
Date: 31.JUL.2018 10:54:24



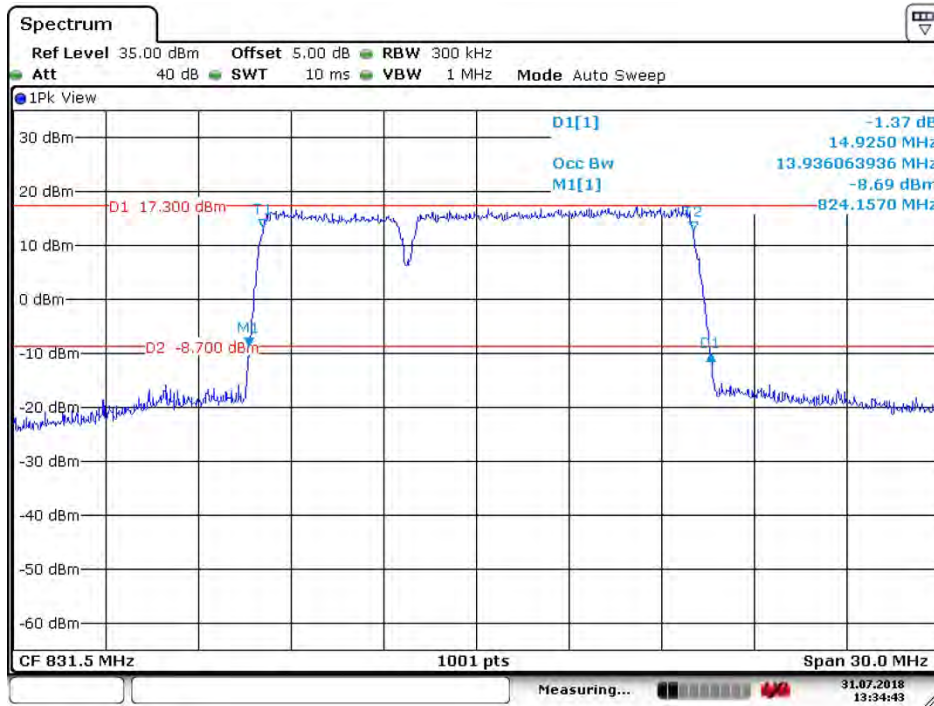
4.1.1.1.2 Test Channel = 20478-20550



4.1.1.1.3 Test Channel = 20528-20600

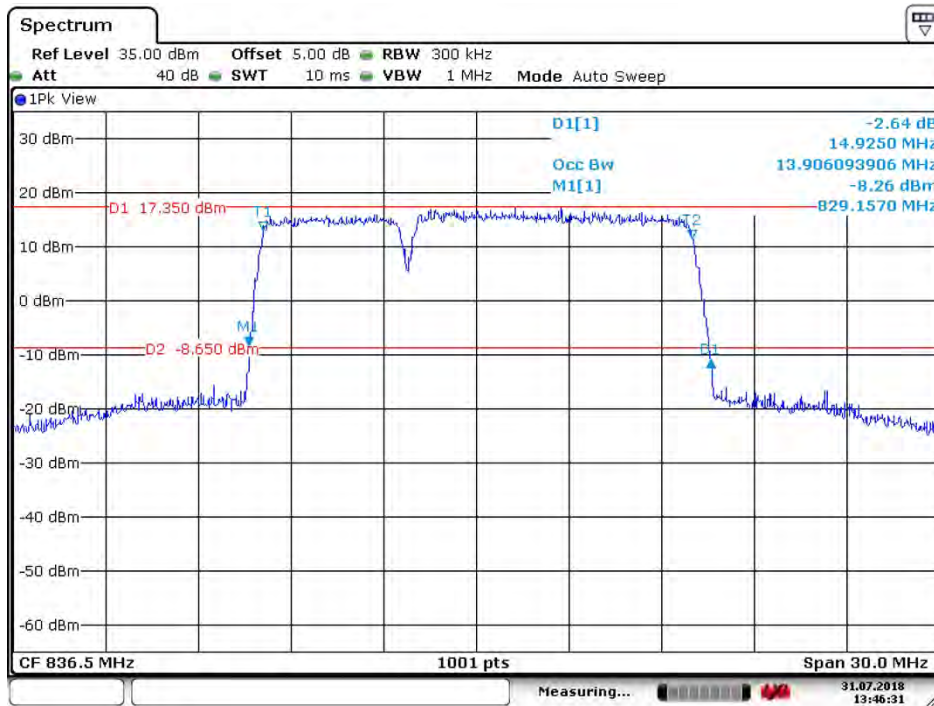


4.1.1.1.4 Test Channel = 20500-20428



Date: 31.JUL.2018 13:34:43

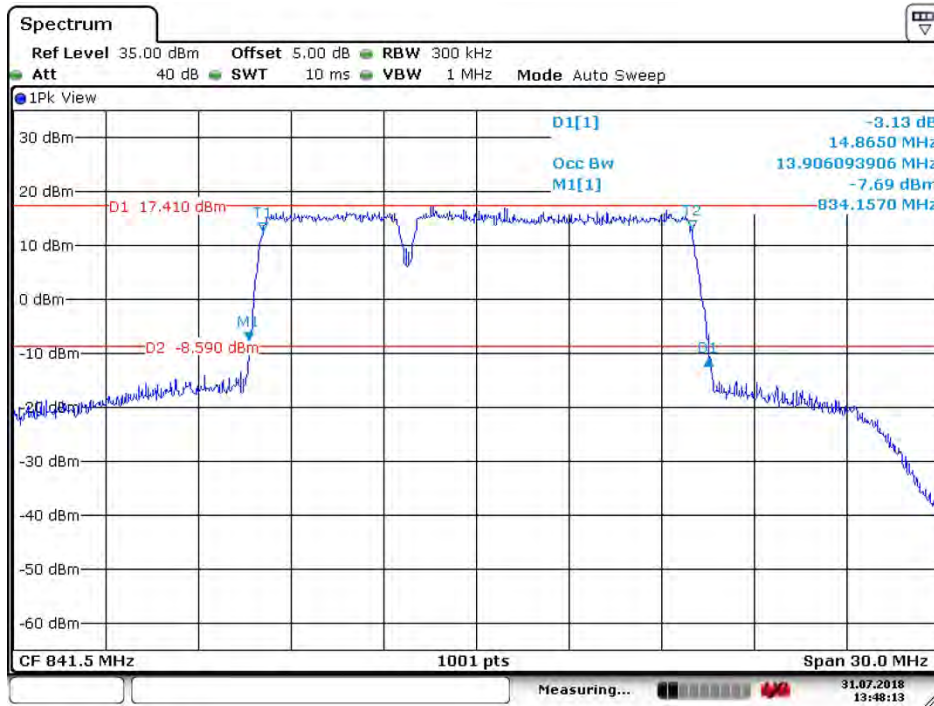
4.1.1.1.5 Test Channel = 20550-20478



Date: 31.JUL.2018 13:46:31



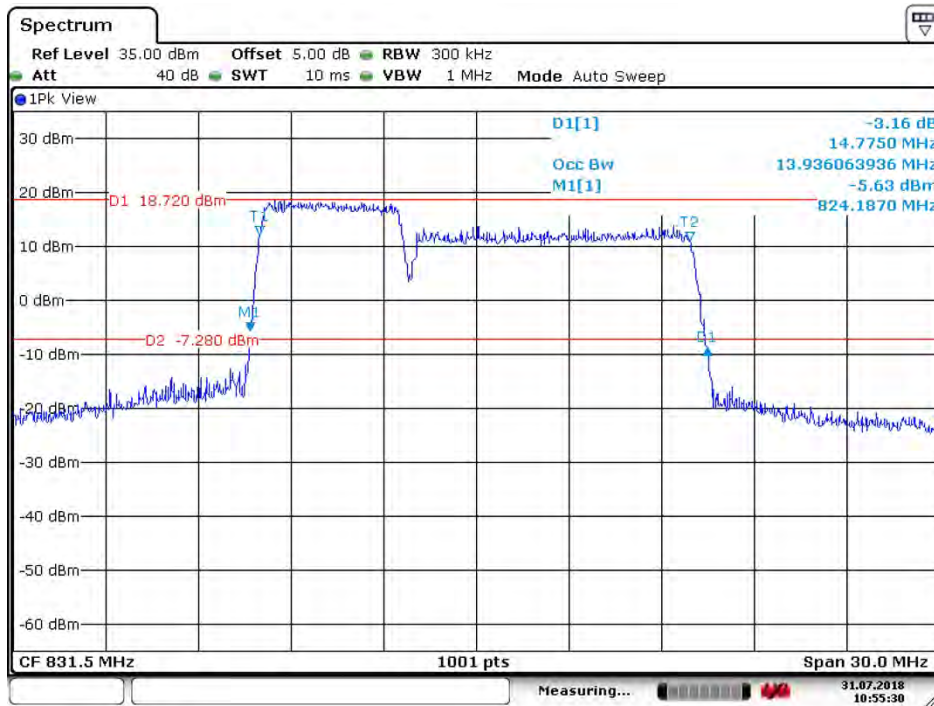
4.1.1.1.6 Test Channel = 20600-20528



Date: 31.JUL.2018 13:48:13

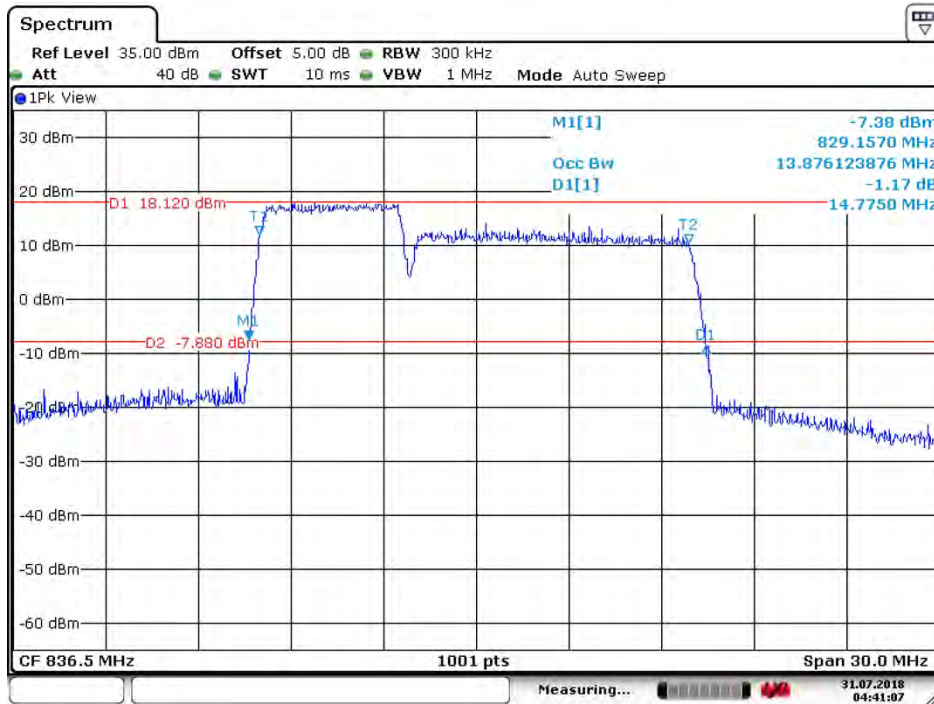
4.1.1.2 Test Mode = LTE/TM2

4.1.1.2.1 Test Channel = 20428-20500



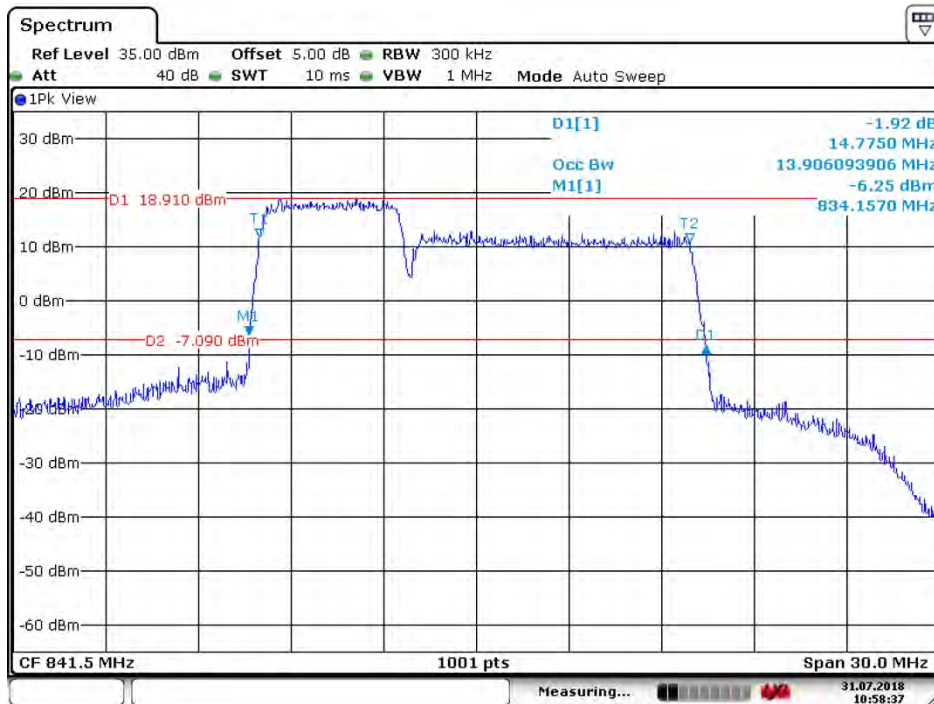
Date: 31.JUL.2018 10:55:31

4.1.1.2.2 Test Channel = 20478-20550



Date: 31.JUL.2018 04:41:08

4.1.1.2.3 Test Channel = 20528-20600

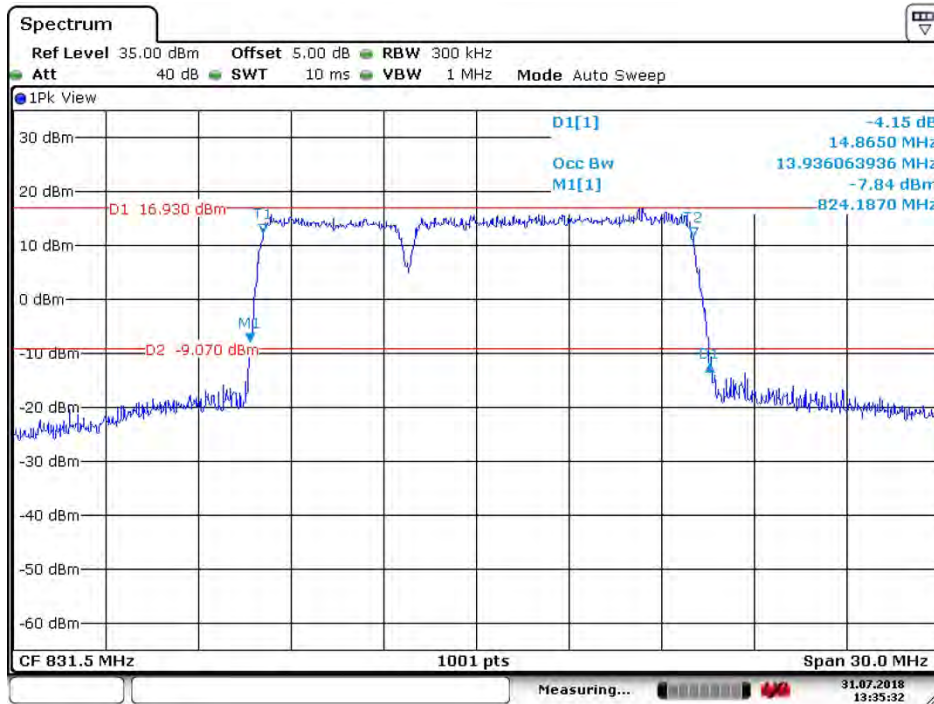


Date: 31.JUL.2018 10:58:37

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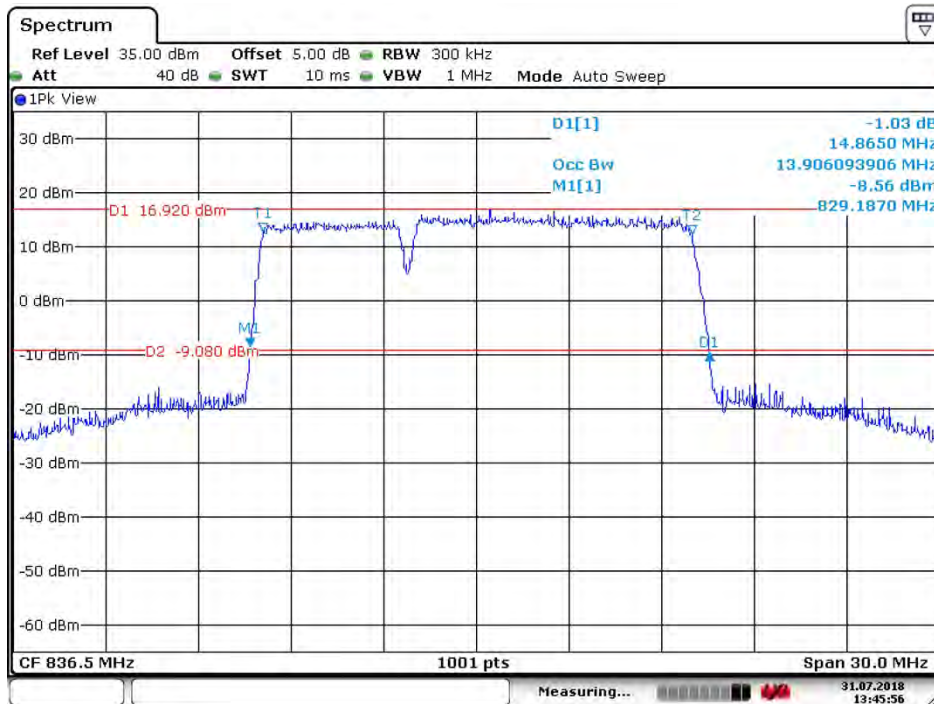


4.1.1.2.4 Test Channel = 20500-20428



Date: 31.JUL.2018 13:35:32

4.1.1.2.5 Test Channel = 20550-20478

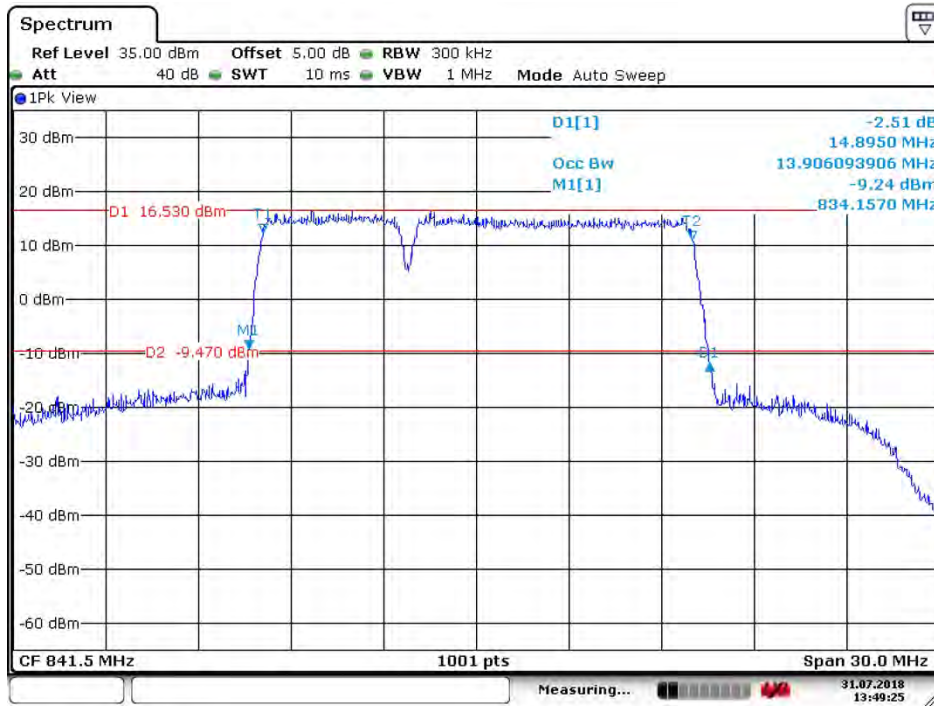


Date: 31.JUL.2018 13:45:56

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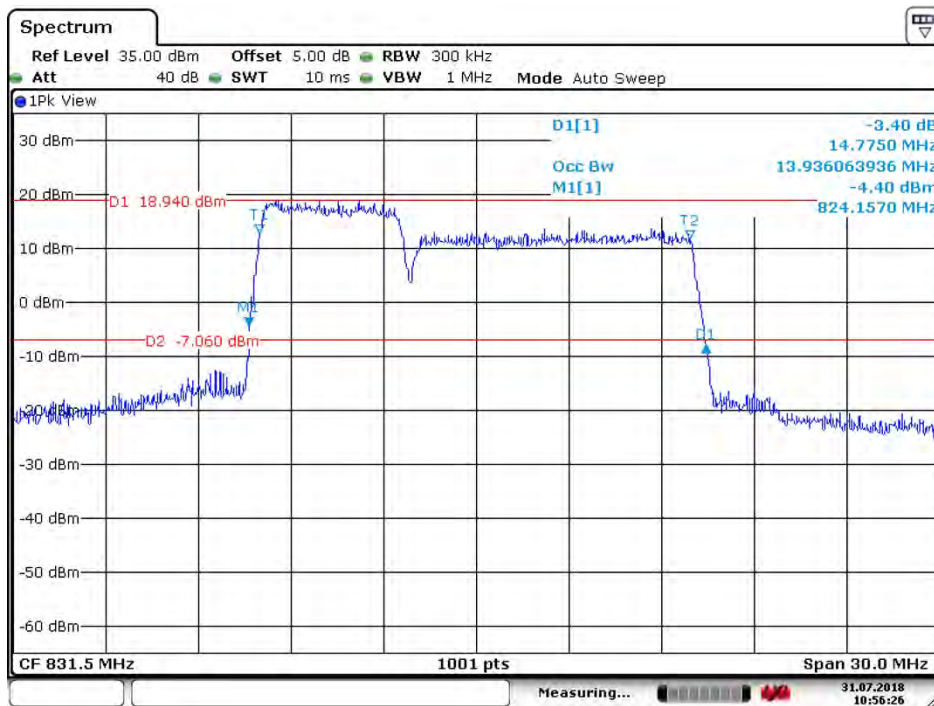
4.1.1.2.6 Test Channel = 20600-20528



Date: 31.JUL.2018 13:49:25

4.1.1.3 Test Mode = LTE/TM3

4.1.1.3.1 Test Channel = 20428-20500

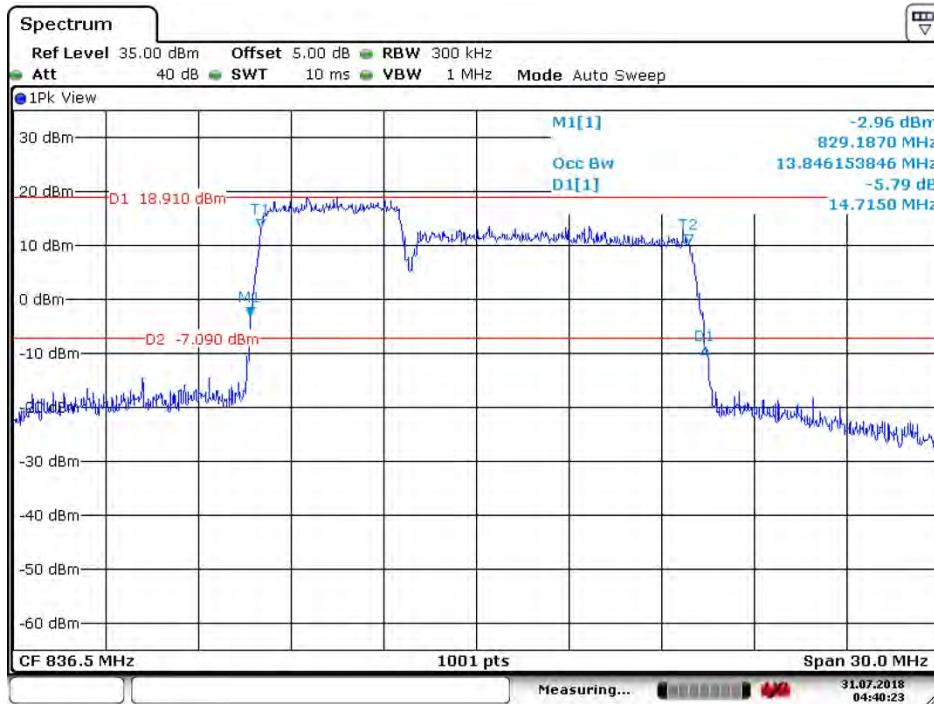


Date: 31.JUL.2018 10:56:27

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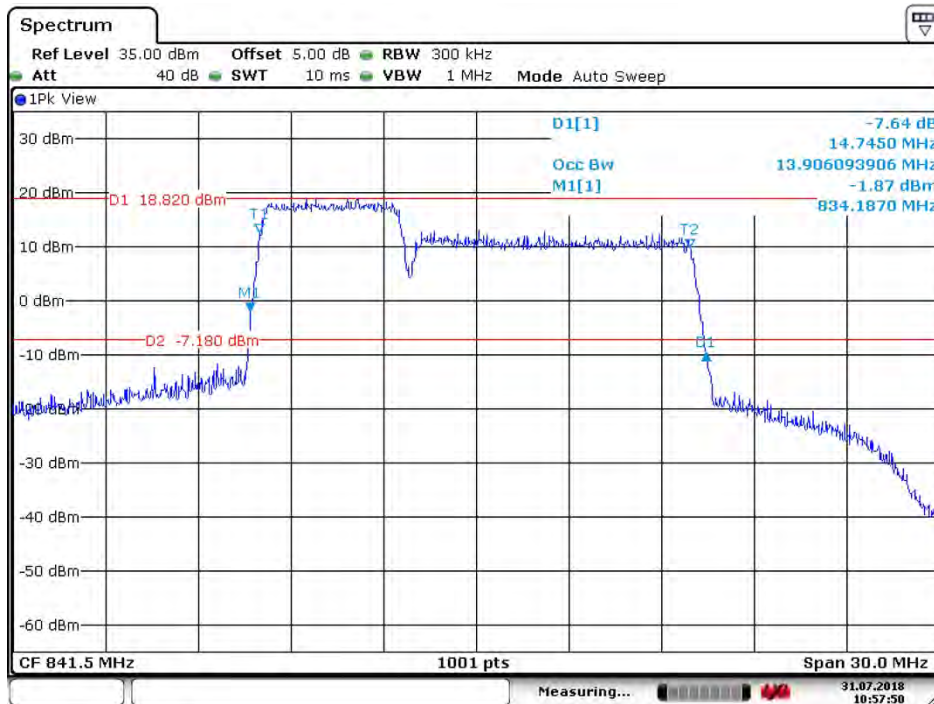


4.1.1.3.2 Test Channel = 20478-20550



Date: 31.JUL.2018 04:40:23

4.1.1.3.3 Test Channel = 20528-20600

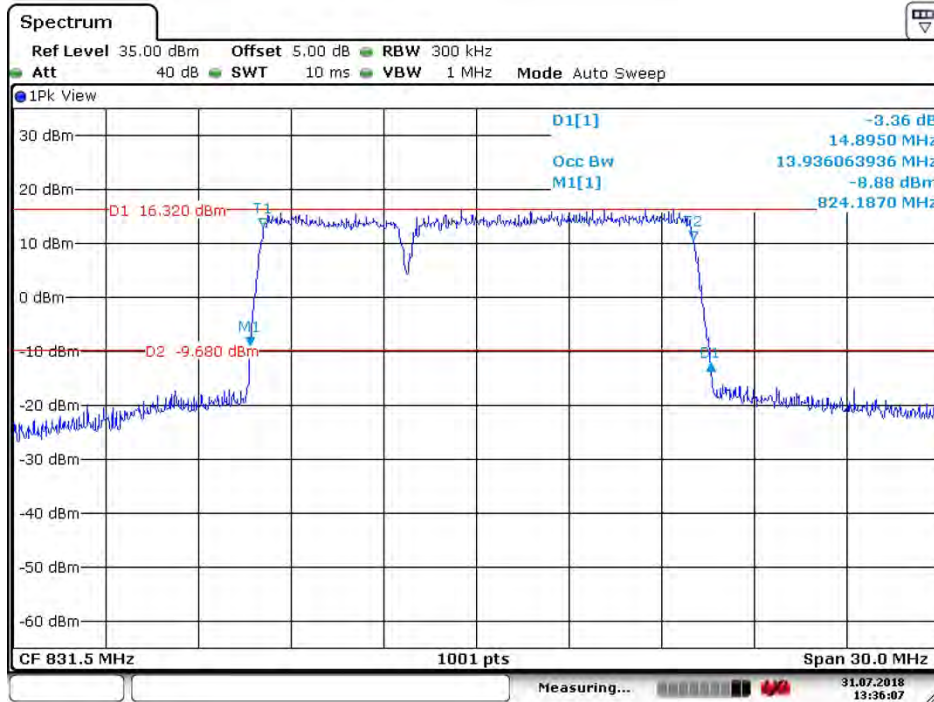


Date: 31.JUL.2018 10:57:51

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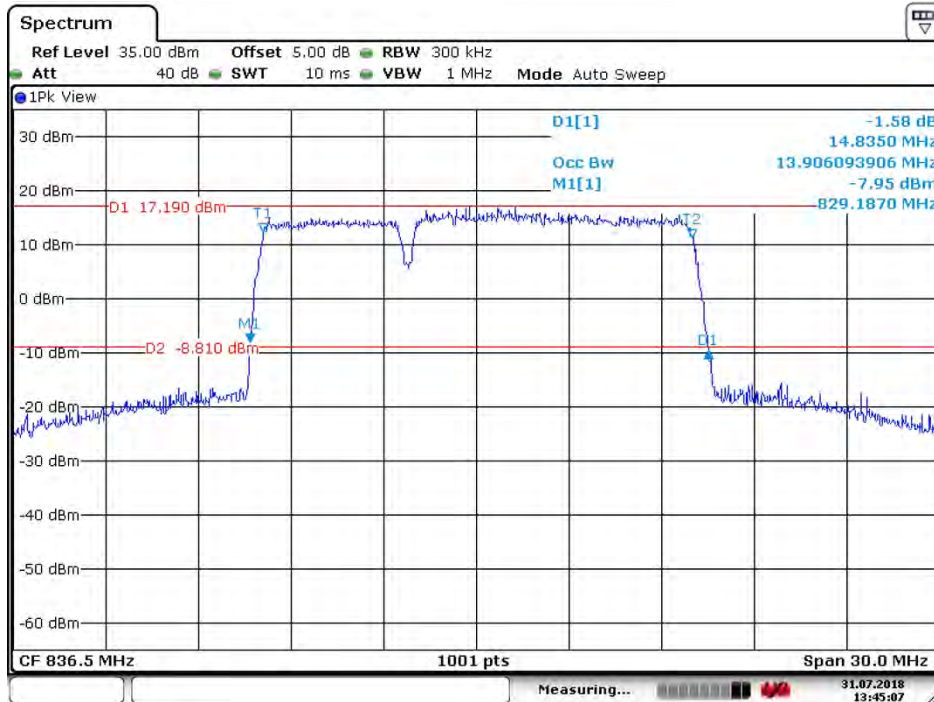


4.1.1.3.4 Test Channel = 20500-20428



Date: 31.JUL.2018 13:36:08

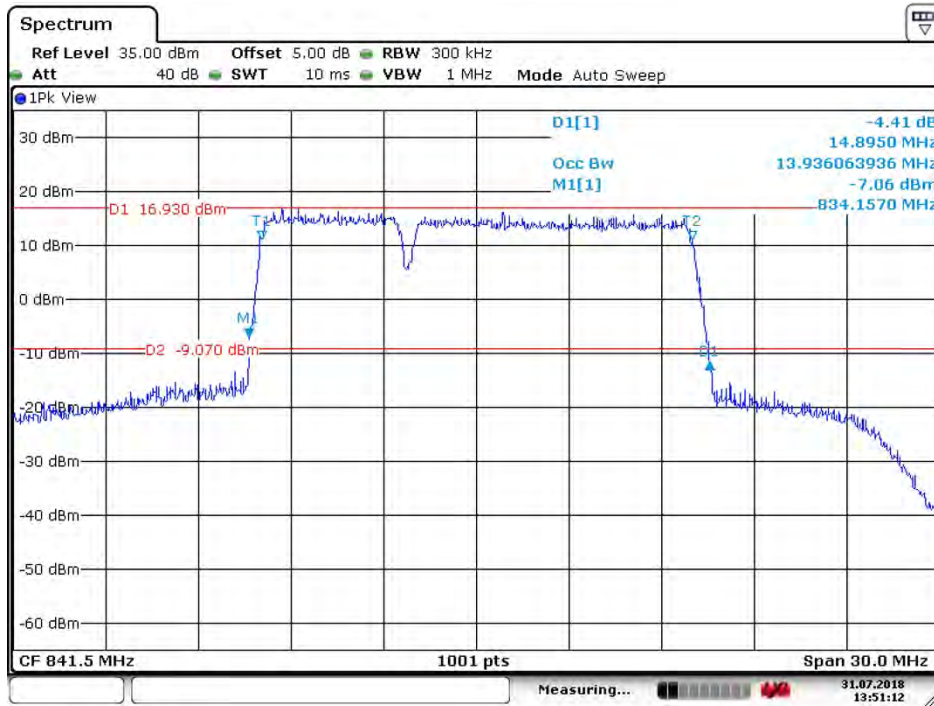
4.1.1.3.5 Test Channel = 20550-20478



Date: 31.JUL.2018 13:45:07

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4.1.1.3.6 Test Channel = 20600-20528

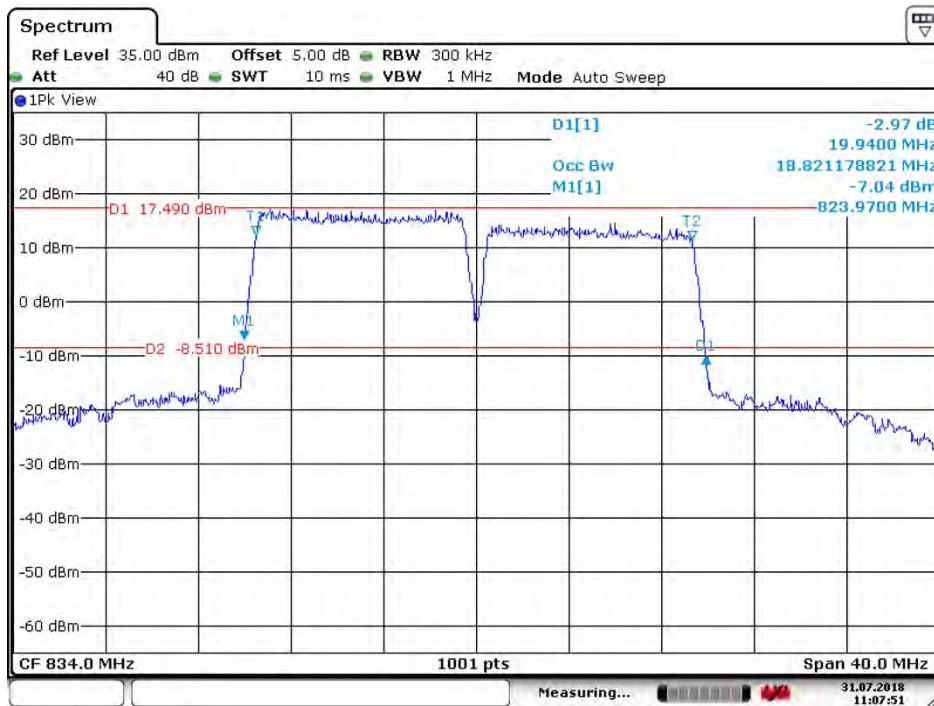


Date: 31.JUL.2018 13:51:12

4.1.2 Test Band = Bandwidth=50RB+50RB

4.1.2.1 Test Mode = LTE/TM1

4.1.2.1.1 Test Channel = 20450-20549

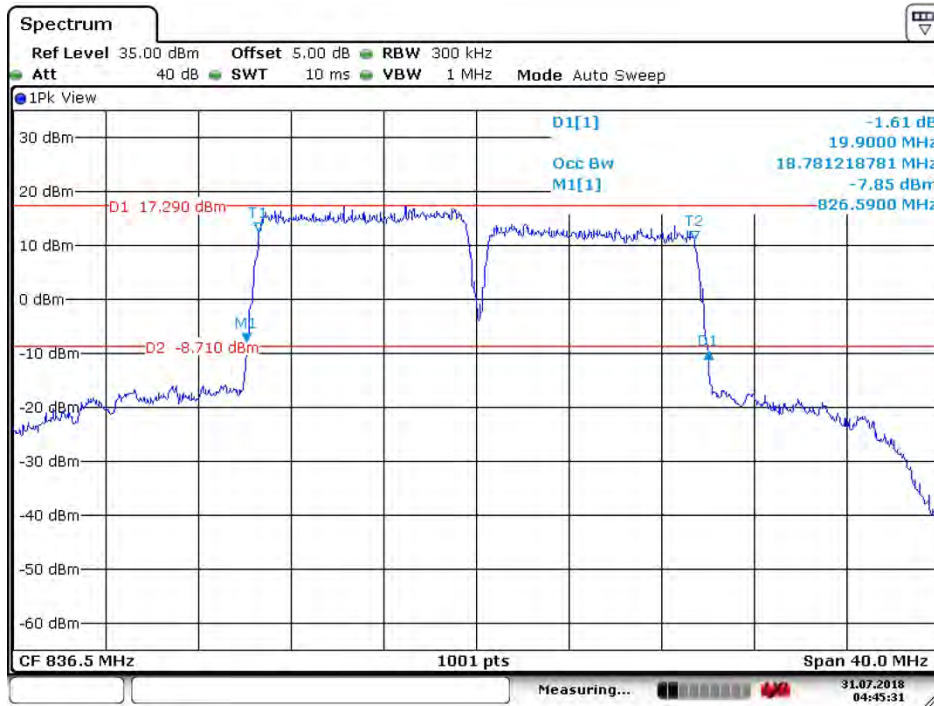


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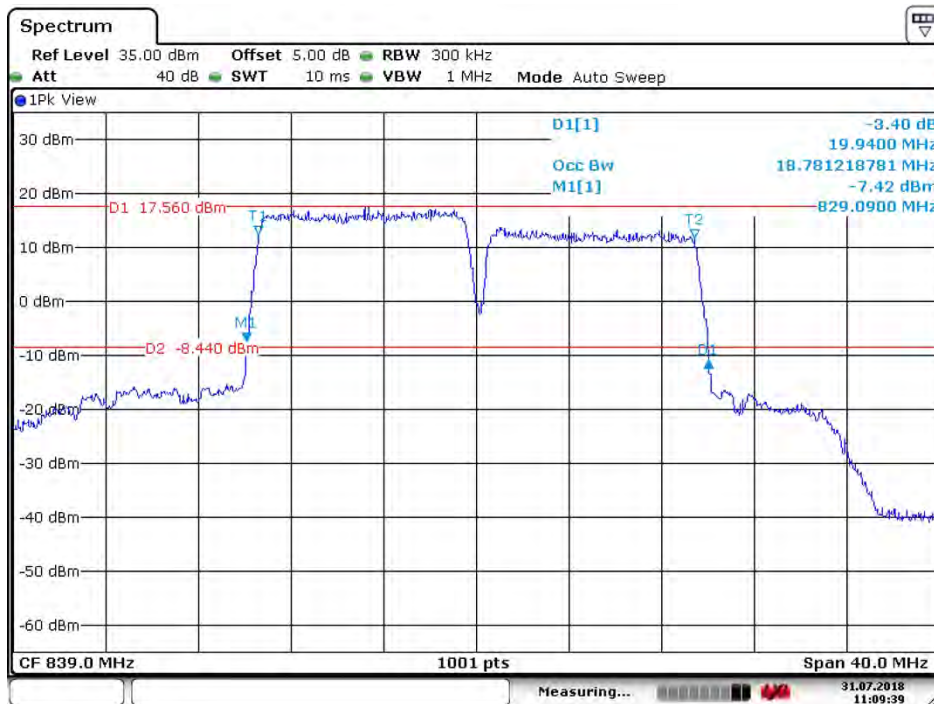


4.1.2.1.2 Test Channel = 20476-20575



Date: 31.JUL.2018 04:45:32

4.1.2.1.3 Test Channel = 20501-20600

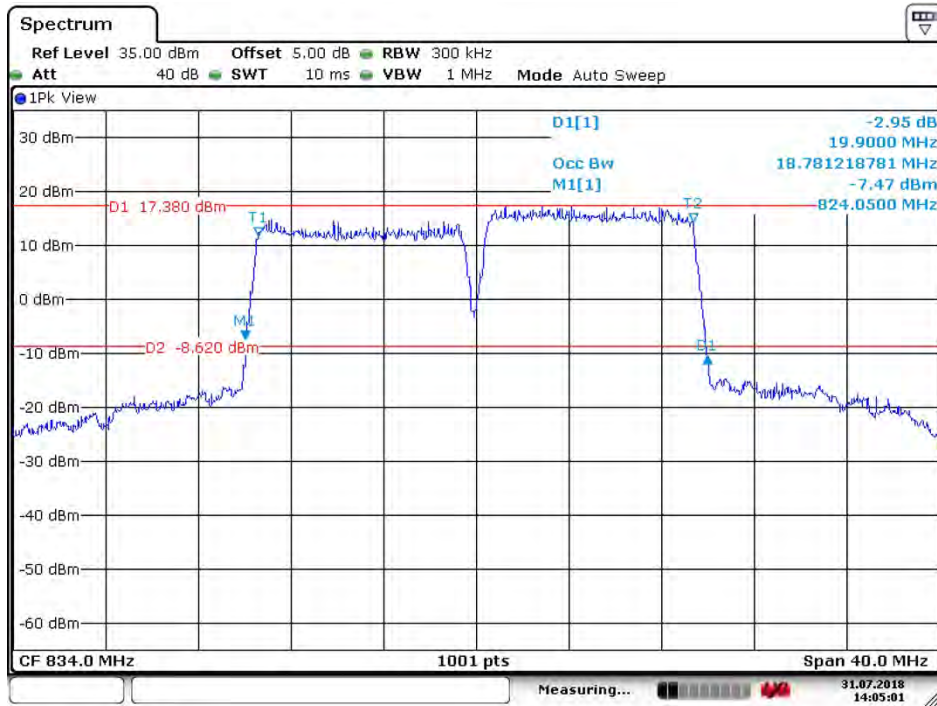


Date: 31.JUL.2018 11:09:39

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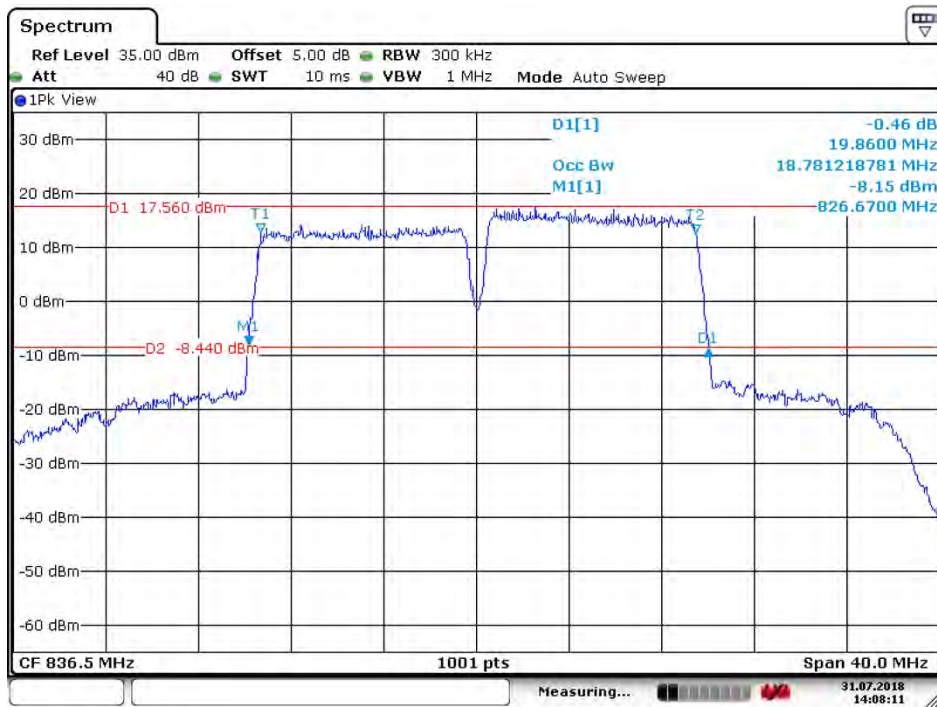


4.1.2.1.4 Test Channel = 20549-20450



Date: 31.JUL.2018 14:05:02

4.1.2.1.5 Test Channel = 20575-20476

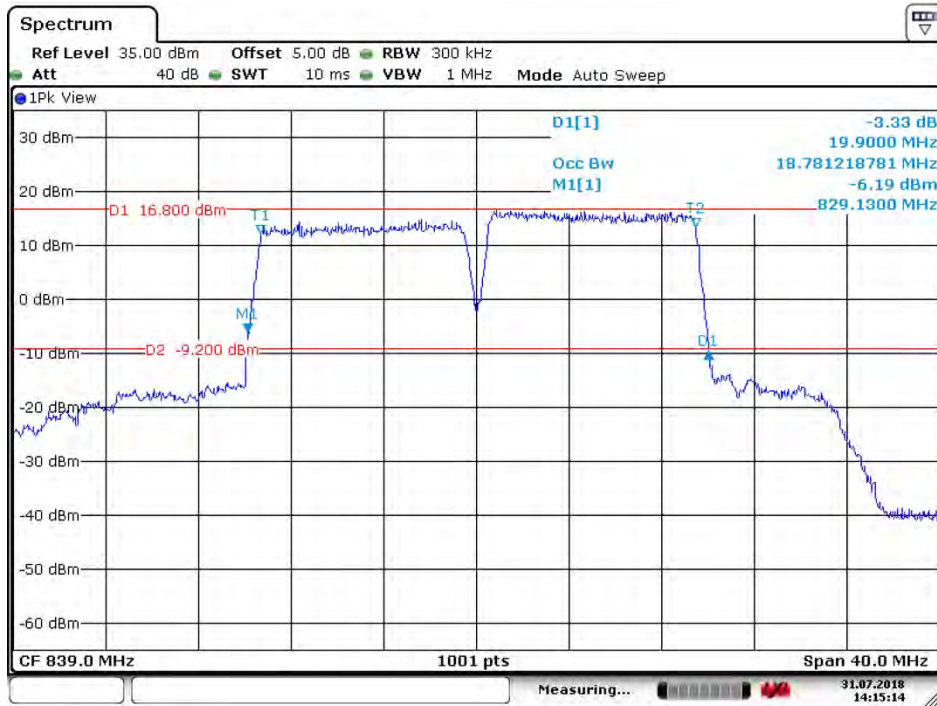


Date: 31.JUL.2018 14:08:11

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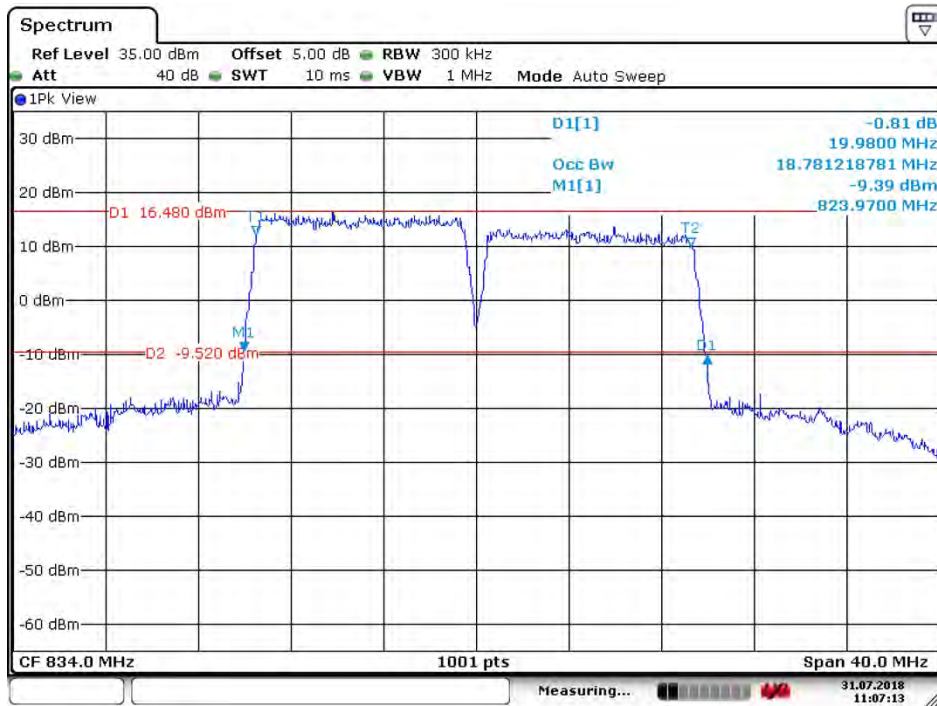
4.1.2.1.6 Test Channel = 20600-20501



Date: 31.JUL.2018 14:15:14

4.1.2.2 Test Mode = LTE/TM2

4.1.2.2.1 Test Channel = 20450-20549



Date: 31.JUL.2018 11:07:13

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