



Appendix B

E-UTRA Band CA_38C

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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE Band CA_38C

BAND	Test Mode PCC/SCC	Channel PCC/SCC	RB Configuration		Modulation PCC&SCC	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
			PCC	SCC					
CA_38C	75RB+75RB	37825-37975	1RB@0	0RB@0	QPSK	22.26	24.22	33.00	Pass
CA_38C	75RB+75RB	37825-37975	16RB@0	0RB@0	QPSK	22.03	23.99	33.00	Pass
CA_38C	75RB+75RB	37925-38075	1RB@0	0RB@0	QPSK	22.25	24.21	33.00	Pass
CA_38C	75RB+75RB	37925-38075	16RB@0	0RB@0	QPSK	22.17	24.13	33.00	Pass
CA_38C	75RB+75RB	38025-38175	1RB@0	0RB@0	QPSK	22.22	24.18	33.00	Pass
CA_38C	75RB+75RB	38025-38175	16RB@0	0RB@0	QPSK	22.04	24.00	33.00	Pass
CA_38C	75RB+75RB	37975-37825	1RB@0	0RB@0	QPSK	21.62	23.58	33.00	Pass
CA_38C	75RB+75RB	37975-37825	16RB@0	0RB@0	QPSK	21.72	23.68	33.00	Pass
CA_38C	75RB+75RB	38075-37925	1RB@0	0RB@0	QPSK	21.59	23.55	33.00	Pass
CA_38C	75RB+75RB	38075-37925	16RB@0	0RB@0	QPSK	21.66	23.62	33.00	Pass
CA_38C	75RB+75RB	38175-38025	1RB@0	0RB@0	QPSK	21.50	23.46	33.00	Pass
CA_38C	75RB+75RB	38175-38025	16RB@0	0RB@0	QPSK	21.63	23.59	33.00	Pass
CA_38C	100RB+100RB	37850-38048	1RB@0	0RB@0	QPSK	21.98	23.94	33.00	Pass
CA_38C	100RB+100RB	37850-38048	18RB@0	0RB@0	QPSK	21.94	23.90	33.00	Pass
CA_38C	100RB+100RB	37901-38099	1RB@0	0RB@0	QPSK	22.03	23.99	33.00	Pass
CA_38C	100RB+100RB	37901-38099	18RB@0	0RB@0	QPSK	21.93	23.89	33.00	Pass
CA_38C	100RB+100RB	37952-38150	1RB@0	0RB@0	QPSK	22.02	23.98	33.00	Pass
CA_38C	100RB+100RB	37952-38150	18RB@0	0RB@0	QPSK	21.84	23.80	33.00	Pass
CA_38C	100RB+100RB	38048-37850	1RB@0	0RB@0	QPSK	21.52	23.48	33.00	Pass
CA_38C	100RB+100RB	38048-37850	18RB@0	0RB@0	QPSK	21.69	23.65	33.00	Pass
CA_38C	100RB+100RB	38099-37901	1RB@0	0RB@0	QPSK	21.56	23.52	33.00	Pass
CA_38C	100RB+100RB	38099-37901	18RB@0	0RB@0	QPSK	21.66	23.62	33.00	Pass
CA_38C	100RB+100RB	38150-37952	1RB@0	0RB@0	QPSK	21.57	23.53	33.00	Pass
CA_38C	100RB+100RB	38150-37952	18RB@0	0RB@0	QPSK	21.64	23.60	33.00	Pass
CA_38C	75RB+75RB	37825-37975	1RB@0	0RB@0	16QAM	21.02	22.98	33.00	Pass
CA_38C	75RB+75RB	37825-37975	16RB@0	0RB@0	16QAM	20.83	22.79	33.00	Pass
CA_38C	75RB+75RB	37925-38075	1RB@0	0RB@0	16QAM	21.11	23.07	33.00	Pass
CA_38C	75RB+75RB	37925-38075	16RB@0	0RB@0	16QAM	21.14	23.10	33.00	Pass
CA_38C	75RB+75RB	38025-38175	1RB@0	0RB@0	16QAM	21.38	23.34	33.00	Pass
CA_38C	75RB+75RB	38025-38175	16RB@0	0RB@0	16QAM	20.90	22.86	33.00	Pass
CA_38C	75RB+75RB	37975-37825	1RB@0	0RB@0	16QAM	20.56	22.52	33.00	Pass
CA_38C	75RB+75RB	37975-37825	16RB@0	0RB@0	16QAM	20.70	22.66	33.00	Pass
CA_38C	75RB+75RB	38075-37925	1RB@0	0RB@0	16QAM	20.57	22.53	33.00	Pass
CA_38C	75RB+75RB	38075-37925	16RB@0	0RB@0	16QAM	20.81	22.77	33.00	Pass
CA_38C	75RB+75RB	38175-38025	1RB@0	0RB@0	16QAM	20.66	22.62	33.00	Pass
CA_38C	75RB+75RB	38175-38025	16RB@0	0RB@0	16QAM	20.44	22.40	33.00	Pass
CA_38C	100RB+100RB	37850-38048	1RB@0	0RB@0	16QAM	21.05	23.01	33.00	Pass
CA_38C	100RB+100RB	37850-38048	18RB@0	0RB@0	16QAM	20.86	22.82	33.00	Pass
CA_38C	100RB+100RB	37901-38099	1RB@0	0RB@0	16QAM	21.21	23.17	33.00	Pass
CA_38C	100RB+100RB	37901-38099	18RB@0	0RB@0	16QAM	20.92	22.88	33.00	Pass
CA_38C	100RB+100RB	37952-38150	1RB@0	0RB@0	16QAM	21.12	23.08	33.00	Pass

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CA_38C	100RB+100RB	37952-38150	18RB@0	0RB@0	16QAM	20.84	22.80	33.00	Pass
CA_38C	100RB+100RB	38048-37850	1RB@0	0RB@0	16QAM	20.60	22.56	33.00	Pass
CA_38C	100RB+100RB	38048-37850	18RB@0	0RB@0	16QAM	20.83	22.79	33.00	Pass
CA_38C	100RB+100RB	38099-37901	1RB@0	0RB@0	16QAM	20.51	22.47	33.00	Pass
CA_38C	100RB+100RB	38099-37901	18RB@0	0RB@0	16QAM	20.44	22.40	33.00	Pass
CA_38C	100RB+100RB	38150-37952	1RB@0	0RB@0	16QAM	20.53	22.49	33.00	Pass
CA_38C	100RB+100RB	38150-37952	18RB@0	0RB@0	16QAM	20.73	22.69	33.00	Pass
CA_38C	75RB+75RB	37825-37975	1RB@0	0RB@0	64QAM	19.87	21.83	33.00	Pass
CA_38C	75RB+75RB	37825-37975	16RB@0	0RB@0	64QAM	19.88	21.84	33.00	Pass
CA_38C	75RB+75RB	37925-38075	1RB@0	0RB@0	64QAM	20.28	22.24	33.00	Pass
CA_38C	75RB+75RB	37925-38075	16RB@0	0RB@0	64QAM	19.89	21.85	33.00	Pass
CA_38C	75RB+75RB	38025-38175	1RB@0	0RB@0	64QAM	20.49	22.45	33.00	Pass
CA_38C	75RB+75RB	38025-38175	16RB@0	0RB@0	64QAM	19.96	21.92	33.00	Pass
CA_38C	75RB+75RB	37975-37825	1RB@0	0RB@0	64QAM	19.47	21.43	33.00	Pass
CA_38C	75RB+75RB	37975-37825	16RB@0	0RB@0	64QAM	19.76	21.72	33.00	Pass
CA_38C	75RB+75RB	38075-37925	1RB@0	0RB@0	64QAM	19.44	21.40	33.00	Pass
CA_38C	75RB+75RB	38075-37925	16RB@0	0RB@0	64QAM	19.82	21.78	33.00	Pass
CA_38C	75RB+75RB	38175-38025	1RB@0	0RB@0	64QAM	19.65	21.61	33.00	Pass
CA_38C	75RB+75RB	38175-38025	16RB@0	0RB@0	64QAM	19.30	21.26	33.00	Pass
CA_38C	100RB+100RB	37850-38048	1RB@0	0RB@0	64QAM	19.99	21.95	33.00	Pass
CA_38C	100RB+100RB	37850-38048	18RB@0	0RB@0	64QAM	19.77	21.73	33.00	Pass
CA_38C	100RB+100RB	37901-38099	1RB@0	0RB@0	64QAM	20.29	22.25	33.00	Pass
CA_38C	100RB+100RB	37901-38099	18RB@0	0RB@0	64QAM	20.01	21.97	33.00	Pass
CA_38C	100RB+100RB	37952-38150	1RB@0	0RB@0	64QAM	19.87	21.83	33.00	Pass
CA_38C	100RB+100RB	37952-38150	18RB@0	0RB@0	64QAM	19.62	21.58	33.00	Pass
CA_38C	100RB+100RB	38048-37850	1RB@0	0RB@0	64QAM	19.46	21.42	33.00	Pass
CA_38C	100RB+100RB	38048-37850	18RB@0	0RB@0	64QAM	19.66	21.62	33.00	Pass
CA_38C	100RB+100RB	38099-37901	1RB@0	0RB@0	64QAM	19.40	21.36	33.00	Pass
CA_38C	100RB+100RB	38099-37901	18RB@0	0RB@0	64QAM	19.46	21.42	33.00	Pass
CA_38C	100RB+100RB	38150-37952	1RB@0	0RB@0	64QAM	19.49	21.45	33.00	Pass
CA_38C	100RB+100RB	38150-37952	18RB@0	0RB@0	64QAM	19.61	21.57	33.00	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

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2 Peak-to-Average Ratio

Part I - Test Results

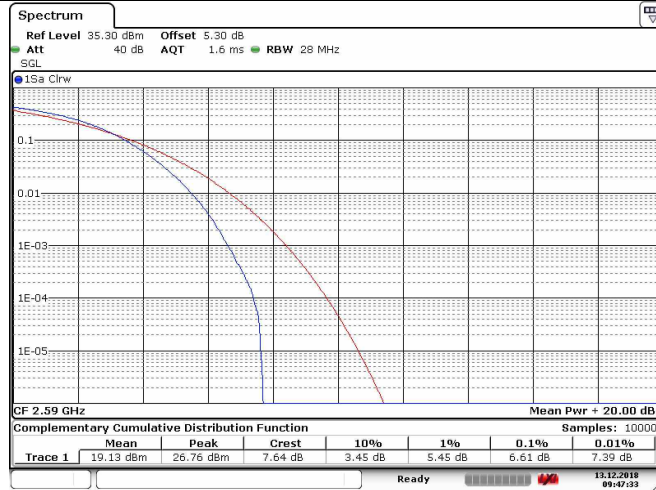
Test Band	Modulation	Test Mode	Test Channel	PCC RB Config	SCC RB Config	Measured [dB]	Limit [dB]	Verdict
CA_38C	QPSK	100RB+100RB	37850+38048	100RB@0	100RB@0	6.61	13	PASS
CA_38C	QPSK	100RB+100RB	37901+38099	100RB@0	100RB@0	6.75	13	PASS
CA_38C	QPSK	100RB+100RB	37952+38150	100RB@0	100RB@0	7.16	13	PASS
CA_38C	QPSK	100RB+100RB	38048+37850	100RB@0	100RB@0	6.75	13	PASS
CA_38C	QPSK	100RB+100RB	38099+37901	100RB@0	100RB@0	7.07	13	PASS
CA_38C	QPSK	100RB+100RB	38150+37952	100RB@0	100RB@0	7.68	13	PASS
CA_38C	16QAM	100RB+100RB	37850+38048	100RB@0	100RB@0	7.10	13	PASS
CA_38C	16QAM	100RB+100RB	37901+38099	100RB@0	100RB@0	7.74	13	PASS
CA_38C	16QAM	100RB+100RB	37952+38150	100RB@0	100RB@0	7.10	13	PASS
CA_38C	16QAM	100RB+100RB	38048+37850	100RB@0	100RB@0	7.19	13	PASS
CA_38C	16QAM	100RB+100RB	38099+37901	100RB@0	100RB@0	7.22	13	PASS
CA_38C	16QAM	100RB+100RB	38150+37952	100RB@0	100RB@0	7.33	13	PASS
CA_38C	64QAM	100RB+100RB	37850+38048	100RB@0	100RB@0	7.13	13	PASS
CA_38C	64QAM	100RB+100RB	37901+38099	100RB@0	100RB@0	7.48	13	PASS
CA_38C	64QAM	100RB+100RB	37952+38150	100RB@0	100RB@0	7.16	13	PASS
CA_38C	64QAM	100RB+100RB	38048+37850	100RB@0	100RB@0	7.10	13	PASS
CA_38C	64QAM	100RB+100RB	38099+37901	100RB@0	100RB@0	7.19	13	PASS
CA_38C	64QAM	100RB+100RB	38150+37952	100RB@0	100RB@0	7.13	13	PASS

Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE Band CA_38C

CA_38C_QPSK_100RB+100RB_37850+38048_PCC:100RB@0_SCC:100RB@0



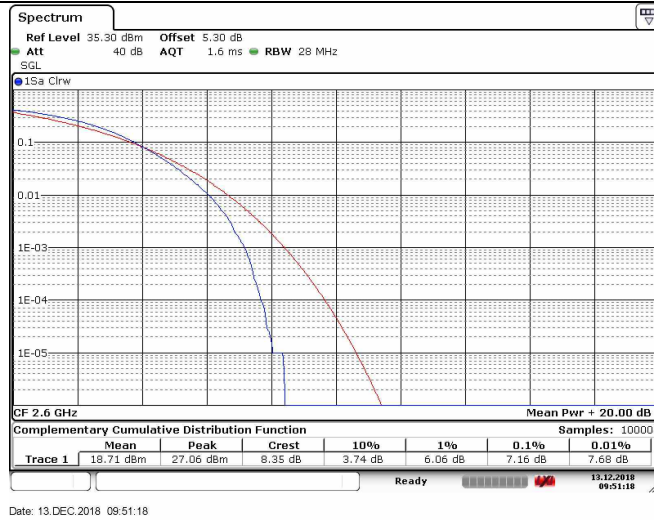
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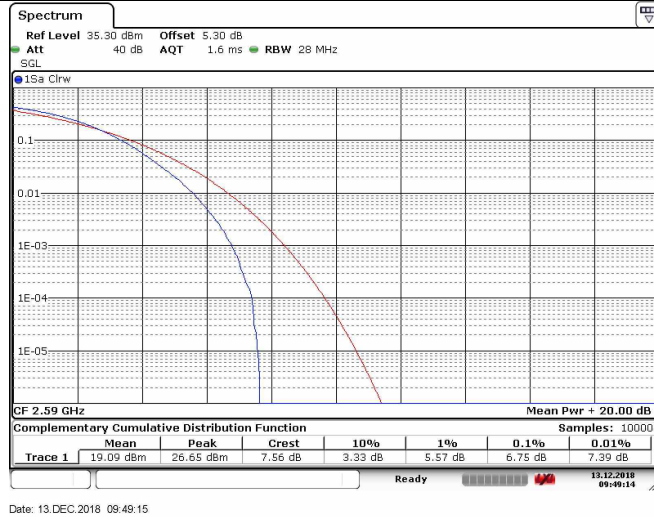
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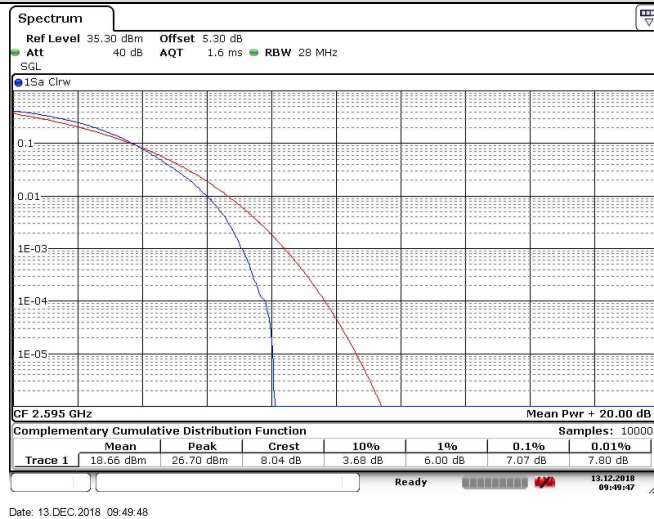
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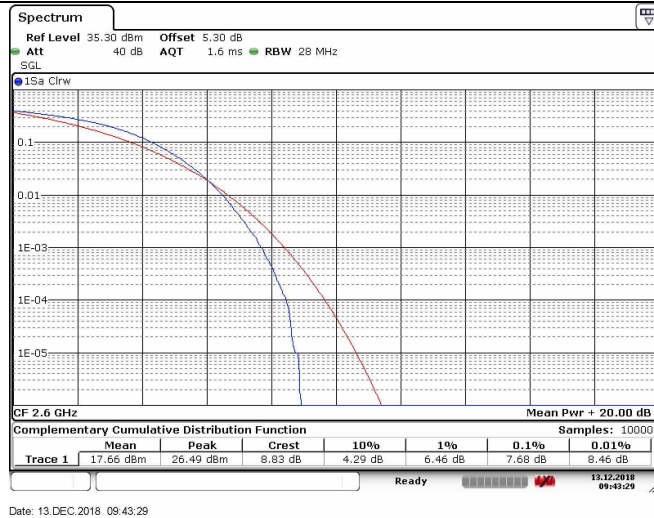
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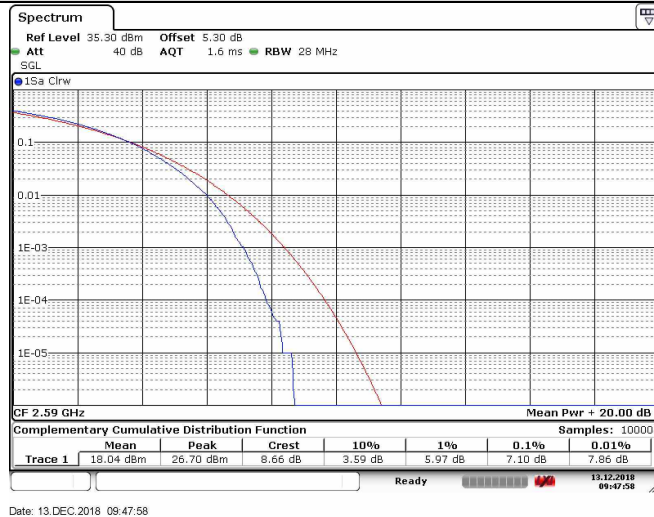
CA_38C_QPSK_100RB+100RB_38150+37952_PCC:100RB@0_SCC:100RB@0

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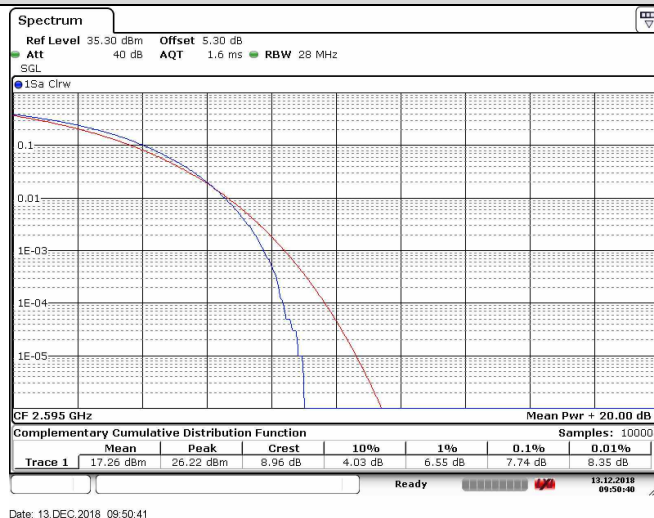
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CA_38C_16QAM_100RB+100RB_37850+38048_PCC:100RB@0_SCC:100RB@0



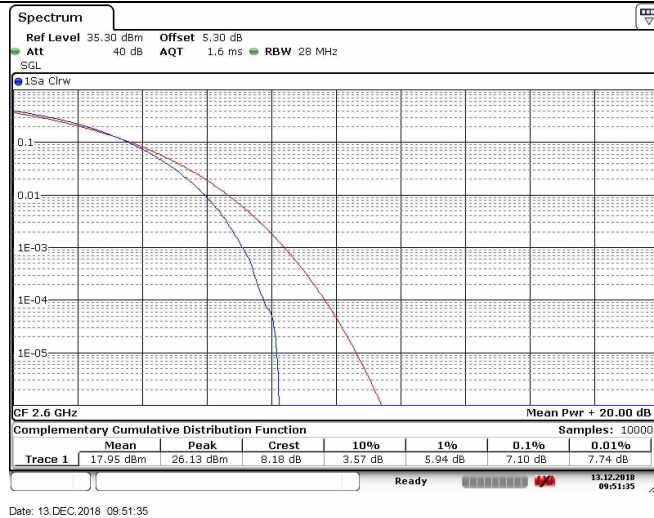
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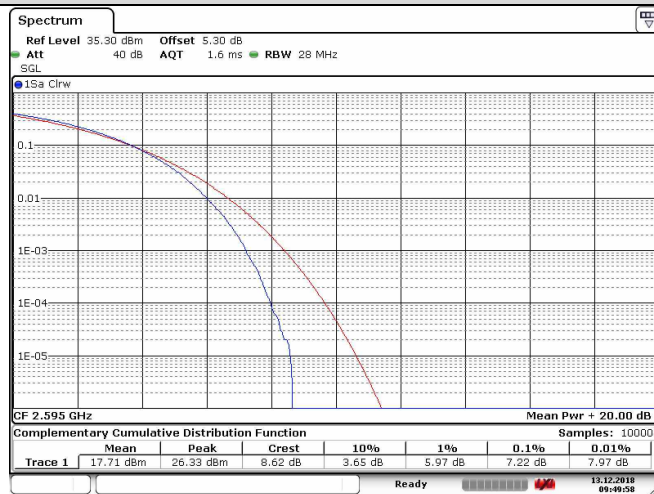
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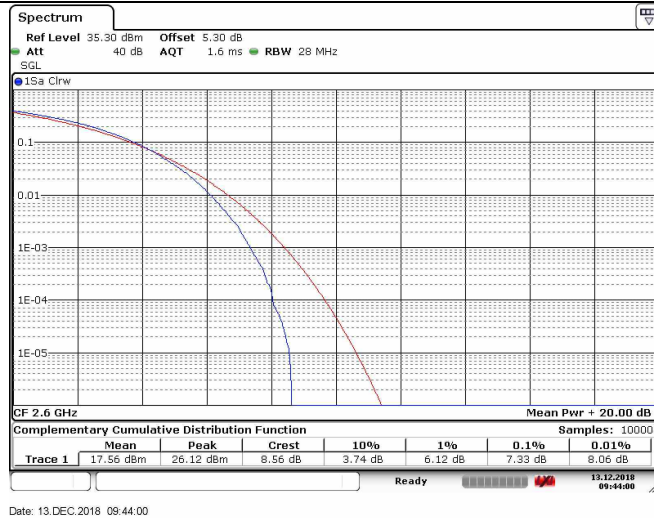
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CA_38C_16QAM_100RB+100RB_38099+37901_PCC:100RB@0_SCC:100RB@0



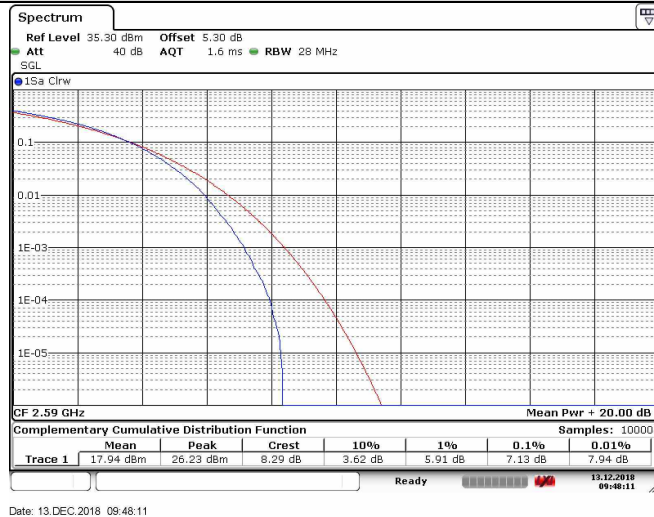
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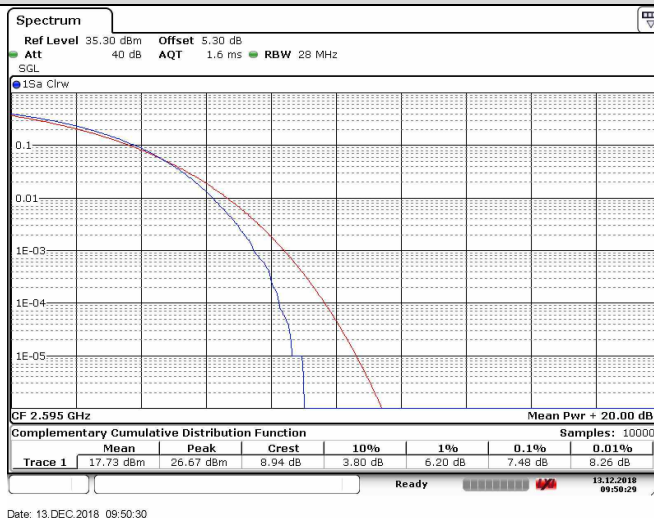
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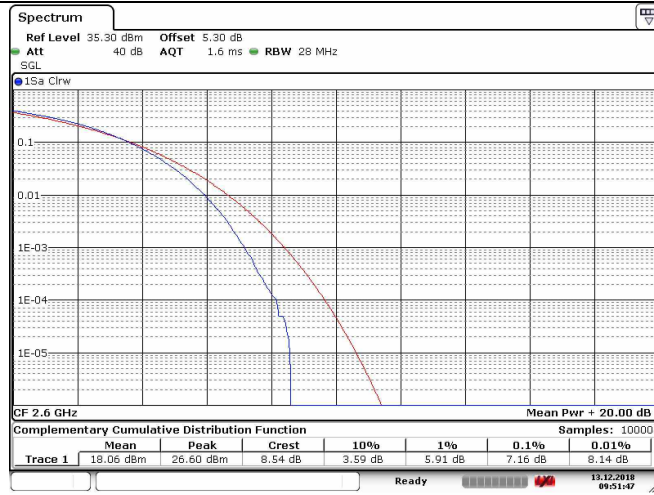
CA_38C_64QAM_100RB+100RB_37901+38099_PCC:100RB@0_SCC:100RB@0



Date: 13.DEC.2018 09:50:30

CA_38C_64QAM_100RB+100RB_37952+38150_PCC:100RB@0_SCC:100RB@0

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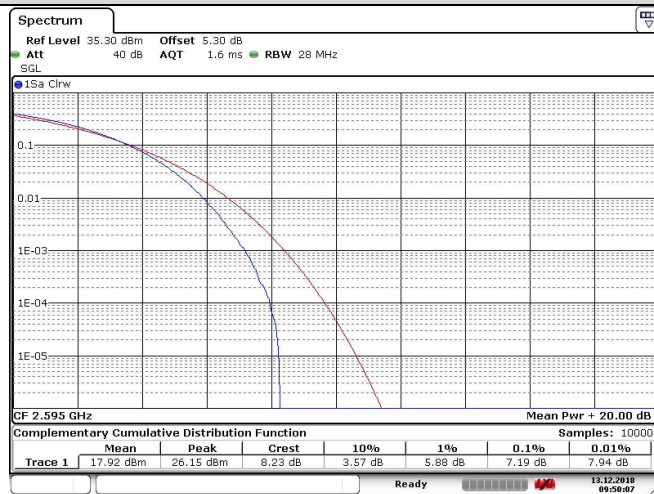
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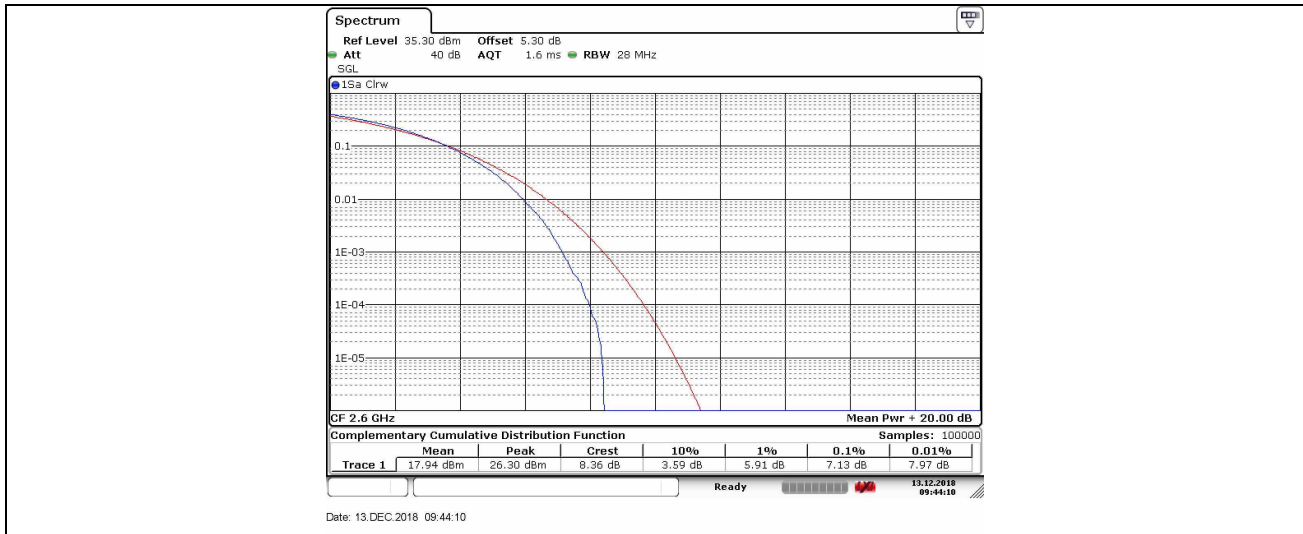
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Date: 13.DEC.2018 09:50:07

CA_38C_64QAM_100RB+100RB_38150+37952_PCC:100RB@0_SCC:100RB@0

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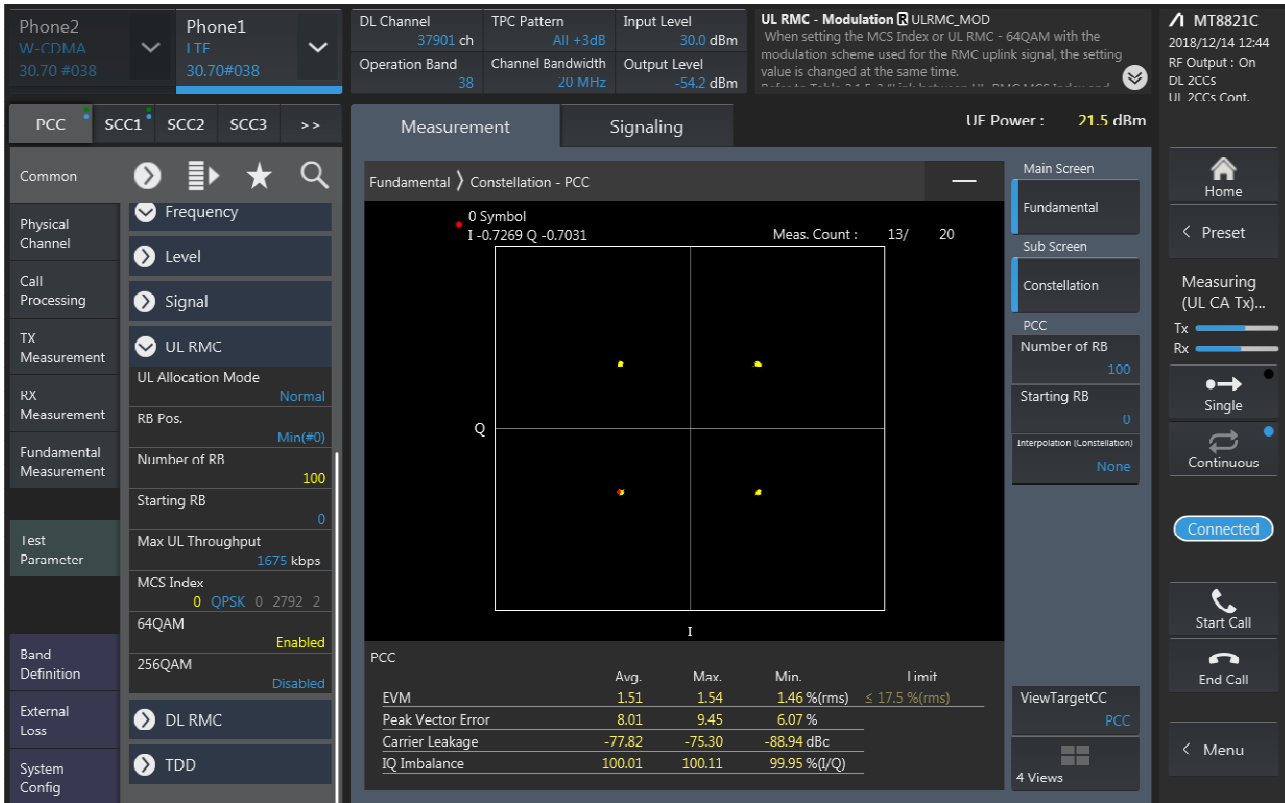
3 Modulation Characteristics

3.1 For LTE

3.1.1 Test Band = LTE Band CA_38C

3.1.1.1 Test Mode = LTE /QPSK 100RB+100RB

3.1.1.1.1 Test Channel = 37901+38099



3.1.1.2 Test Mode = LTE /16QAM 100RB+100RB

3.1.1.2.1 Test Channel =37901+38099

DL Channel: 37901 ch
TPC Pattern: All +3dB
Input Level: 30.0 dBm
UL RMC - Modulation: UL RMC_MOD
When setting the MCS Index or UL RMC - 64QAM with the modulation scheme used for the RMC uplink signal, the setting value is changed at the same time.

Operation Band: 38
Channel Bandwidth: 20 MHz
Output Level: -54.2 dBm

UL Power: 21.5 dBm

Constellation - PCC
 0 Symbol
 I 0.3113 Q 0.9496
 Meas. Count : 14/ 20

PCC	Avg.	Max.	Min.	Limit
FVM	1.89	1.95	1.85 %(rms)	< 12.5 %(rms)
Peak Vector Error	11.99	18.65	9.06 %	
Carrier Leakage	-76.95	-72.61	-90.99 dBc	
IQ Imbalance	100.01	100.19	99.85 %(I/Q)	

3.1.1.3 Test Mode = LTE /64QAM 100RB+100RB

3.1.1.3.1 Test Channel = 37901+38099

