



Appendix B

E-UTRA Band CA_7C

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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE Band CA_7C

BAND	Test Mode PCC/SCC	Channel PCC/SCC	RB Configuration		Modulation PCC&SCC	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
			PCC	SCC					
CA_7C	75RB+75RB	20825-20975	1RB@0	0RB@0	QPSK	22.09	23.67	33.00	Pass
CA_7C	75RB+75RB	20825-20975	16RB@0	0RB@0	QPSK	21.95	23.53	33.00	Pass
CA_7C	75RB+75RB	21025-21175	1RB@0	0RB@0	QPSK	22.38	23.96	33.00	Pass
CA_7C	75RB+75RB	21025-21175	16RB@0	0RB@0	QPSK	22.17	23.75	33.00	Pass
CA_7C	75RB+75RB	21225-21375	1RB@0	0RB@0	QPSK	22.24	23.82	33.00	Pass
CA_7C	75RB+75RB	21225-21375	16RB@0	0RB@0	QPSK	21.85	23.43	33.00	Pass
CA_7C	75RB+75RB	20975-20825	1RB@0	0RB@0	QPSK	21.73	23.31	33.00	Pass
CA_7C	75RB+75RB	20975-20825	16RB@0	0RB@0	QPSK	21.80	23.38	33.00	Pass
CA_7C	75RB+75RB	21175-21025	1RB@0	0RB@0	QPSK	21.29	22.87	33.00	Pass
CA_7C	75RB+75RB	21175-21025	16RB@0	0RB@0	QPSK	21.45	23.03	33.00	Pass
CA_7C	75RB+75RB	21375-21225	1RB@0	0RB@0	QPSK	21.15	22.73	33.00	Pass
CA_7C	75RB+75RB	21375-21225	16RB@0	0RB@0	QPSK	21.20	22.78	33.00	Pass
CA_7C	100RB+100RB	20850-21048	1RB@0	0RB@0	QPSK	21.70	23.28	33.00	Pass
CA_7C	100RB+100RB	20850-21048	18RB@0	0RB@0	QPSK	21.57	23.15	33.00	Pass
CA_7C	100RB+100RB	21001-21199	1RB@0	0RB@0	QPSK	22.09	23.67	33.00	Pass
CA_7C	100RB+100RB	21001-21199	18RB@0	0RB@0	QPSK	21.83	23.41	33.00	Pass
CA_7C	100RB+100RB	21152-21350	1RB@0	0RB@0	QPSK	21.61	23.19	33.00	Pass
CA_7C	100RB+100RB	21152-21350	18RB@0	0RB@0	QPSK	21.53	23.11	33.00	Pass
CA_7C	100RB+100RB	21048-20850	1RB@0	0RB@0	QPSK	21.72	23.30	33.00	Pass
CA_7C	100RB+100RB	21048-20850	18RB@0	0RB@0	QPSK	21.72	23.30	33.00	Pass
CA_7C	100RB+100RB	21199-21001	1RB@0	0RB@0	QPSK	21.35	22.93	33.00	Pass
CA_7C	100RB+100RB	21199-21001	18RB@0	0RB@0	QPSK	21.43	23.01	33.00	Pass
CA_7C	100RB+100RB	21350-21152	1RB@0	0RB@0	QPSK	21.24	22.82	33.00	Pass
CA_7C	100RB+100RB	21350-21152	18RB@0	0RB@0	QPSK	21.34	22.92	33.00	Pass
CA_7C	75RB+75RB	20825-20975	1RB@0	0RB@0	16QAM	21.41	22.99	33.00	Pass
CA_7C	75RB+75RB	20825-20975	16RB@0	0RB@0	16QAM	21.28	22.86	33.00	Pass
CA_7C	75RB+75RB	21025-21175	1RB@0	0RB@0	16QAM	21.77	23.35	33.00	Pass
CA_7C	75RB+75RB	21025-21175	16RB@0	0RB@0	16QAM	21.61	23.19	33.00	Pass
CA_7C	75RB+75RB	21225-21375	1RB@0	0RB@0	16QAM	21.63	23.21	33.00	Pass
CA_7C	75RB+75RB	21225-21375	16RB@0	0RB@0	16QAM	21.20	22.78	33.00	Pass
CA_7C	75RB+75RB	20975-20825	1RB@0	0RB@0	16QAM	21.14	22.72	33.00	Pass
CA_7C	75RB+75RB	20975-20825	16RB@0	0RB@0	16QAM	21.15	22.73	33.00	Pass
CA_7C	75RB+75RB	21175-21025	1RB@0	0RB@0	16QAM	20.75	22.33	33.00	Pass
CA_7C	75RB+75RB	21175-21025	16RB@0	0RB@0	16QAM	20.77	22.35	33.00	Pass
CA_7C	75RB+75RB	21375-21225	1RB@0	0RB@0	16QAM	20.53	22.11	33.00	Pass
CA_7C	75RB+75RB	21375-21225	16RB@0	0RB@0	16QAM	20.68	22.26	33.00	Pass
CA_7C	100RB+100RB	20850-21048	1RB@0	0RB@0	16QAM	21.11	22.69	33.00	Pass
CA_7C	100RB+100RB	20850-21048	18RB@0	0RB@0	16QAM	20.97	22.55	33.00	Pass
CA_7C	100RB+100RB	21001-21199	1RB@0	0RB@0	16QAM	21.50	23.08	33.00	Pass
CA_7C	100RB+100RB	21001-21199	18RB@0	0RB@0	16QAM	21.28	22.86	33.00	Pass
CA_7C	100RB+100RB	21152-21350	1RB@0	0RB@0	16QAM	21.11	22.69	33.00	Pass



CA_7C	100RB+100RB	21152-21350	18RB@0	0RB@0	16QAM	21.00	22.58	33.00	Pass
CA_7C	100RB+100RB	21048-20850	1RB@0	0RB@0	16QAM	21.22	22.80	33.00	Pass
CA_7C	100RB+100RB	21048-20850	18RB@0	0RB@0	16QAM	21.03	22.61	33.00	Pass
CA_7C	100RB+100RB	21199-21001	1RB@0	0RB@0	16QAM	20.75	22.33	33.00	Pass
CA_7C	100RB+100RB	21199-21001	18RB@0	0RB@0	16QAM	20.92	22.50	33.00	Pass
CA_7C	100RB+100RB	21350-21152	1RB@0	0RB@0	16QAM	20.62	22.20	33.00	Pass
CA_7C	100RB+100RB	21350-21152	18RB@0	0RB@0	16QAM	20.74	22.32	33.00	Pass
CA_7C	75RB+75RB	20825-20975	1RB@0	0RB@0	64QAM	20.88	22.46	33.00	Pass
CA_7C	75RB+75RB	20825-20975	16RB@0	0RB@0	64QAM	20.59	22.17	33.00	Pass
CA_7C	75RB+75RB	21025-21175	1RB@0	0RB@0	64QAM	21.22	22.80	33.00	Pass
CA_7C	75RB+75RB	21025-21175	16RB@0	0RB@0	64QAM	20.91	22.49	33.00	Pass
CA_7C	75RB+75RB	21225-21375	1RB@0	0RB@0	64QAM	20.97	22.55	33.00	Pass
CA_7C	75RB+75RB	21225-21375	16RB@0	0RB@0	64QAM	20.64	22.22	33.00	Pass
CA_7C	75RB+75RB	20975-20825	1RB@0	0RB@0	64QAM	20.45	22.03	33.00	Pass
CA_7C	75RB+75RB	20975-20825	16RB@0	0RB@0	64QAM	20.55	22.13	33.00	Pass
CA_7C	75RB+75RB	21175-21025	1RB@0	0RB@0	64QAM	20.17	21.75	33.00	Pass
CA_7C	75RB+75RB	21175-21025	16RB@0	0RB@0	64QAM	20.17	21.75	33.00	Pass
CA_7C	75RB+75RB	21375-21225	1RB@0	0RB@0	64QAM	19.93	21.51	33.00	Pass
CA_7C	75RB+75RB	21375-21225	16RB@0	0RB@0	64QAM	20.07	21.65	33.00	Pass
CA_7C	100RB+100RB	20850-21048	1RB@0	0RB@0	64QAM	20.43	22.01	33.00	Pass
CA_7C	100RB+100RB	20850-21048	18RB@0	0RB@0	64QAM	20.40	21.98	33.00	Pass
CA_7C	100RB+100RB	21001-21199	1RB@0	0RB@0	64QAM	20.84	22.42	33.00	Pass
CA_7C	100RB+100RB	21001-21199	18RB@0	0RB@0	64QAM	20.64	22.22	33.00	Pass
CA_7C	100RB+100RB	21152-21350	1RB@0	0RB@0	64QAM	20.41	21.99	33.00	Pass
CA_7C	100RB+100RB	21152-21350	18RB@0	0RB@0	64QAM	20.46	22.04	33.00	Pass
CA_7C	100RB+100RB	21048-20850	1RB@0	0RB@0	64QAM	20.54	22.12	33.00	Pass
CA_7C	100RB+100RB	21048-20850	18RB@0	0RB@0	64QAM	20.47	22.05	33.00	Pass
CA_7C	100RB+100RB	21199-21001	1RB@0	0RB@0	64QAM	20.16	21.74	33.00	Pass
CA_7C	100RB+100RB	21199-21001	18RB@0	0RB@0	64QAM	20.23	21.81	33.00	Pass
CA_7C	100RB+100RB	21350-21152	1RB@0	0RB@0	64QAM	20.10	21.68	33.00	Pass
CA_7C	100RB+100RB	21350-21152	18RB@0	0RB@0	64QAM	20.22	21.80	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,

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

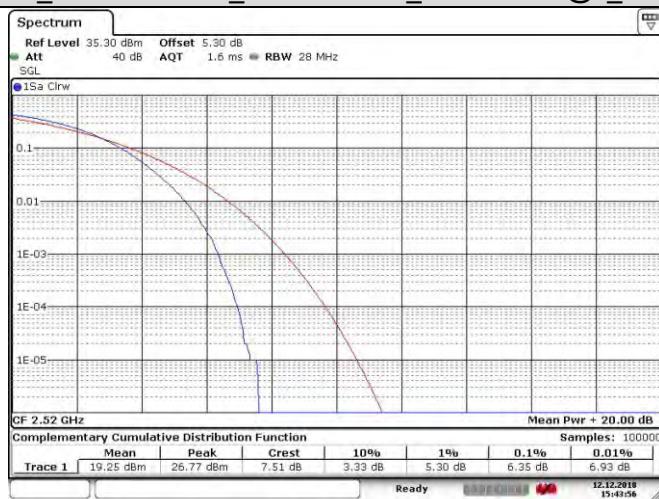
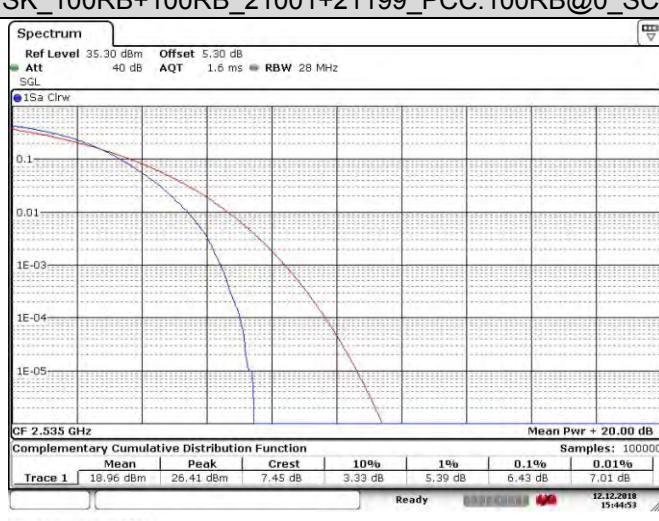
b: SGP=Signal Generator Level

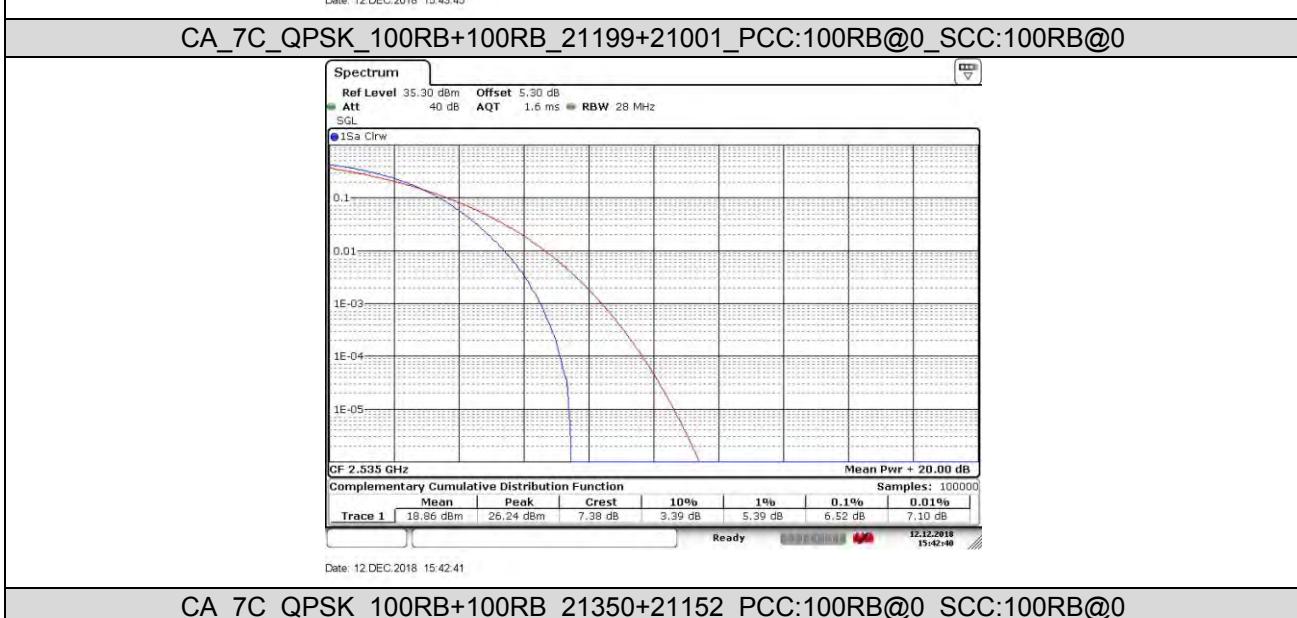
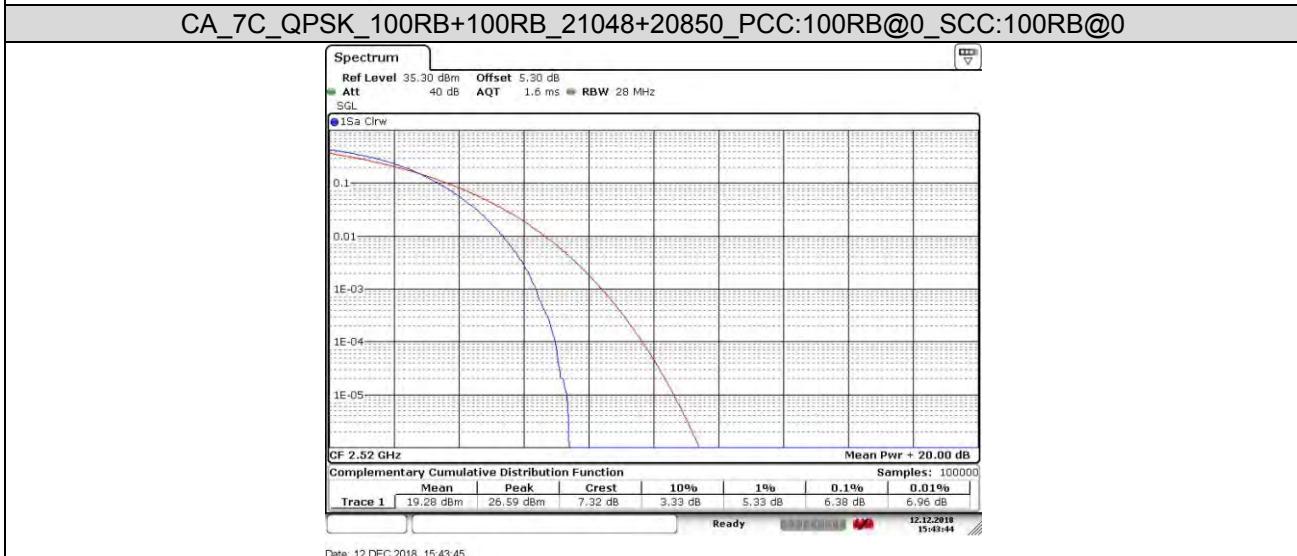
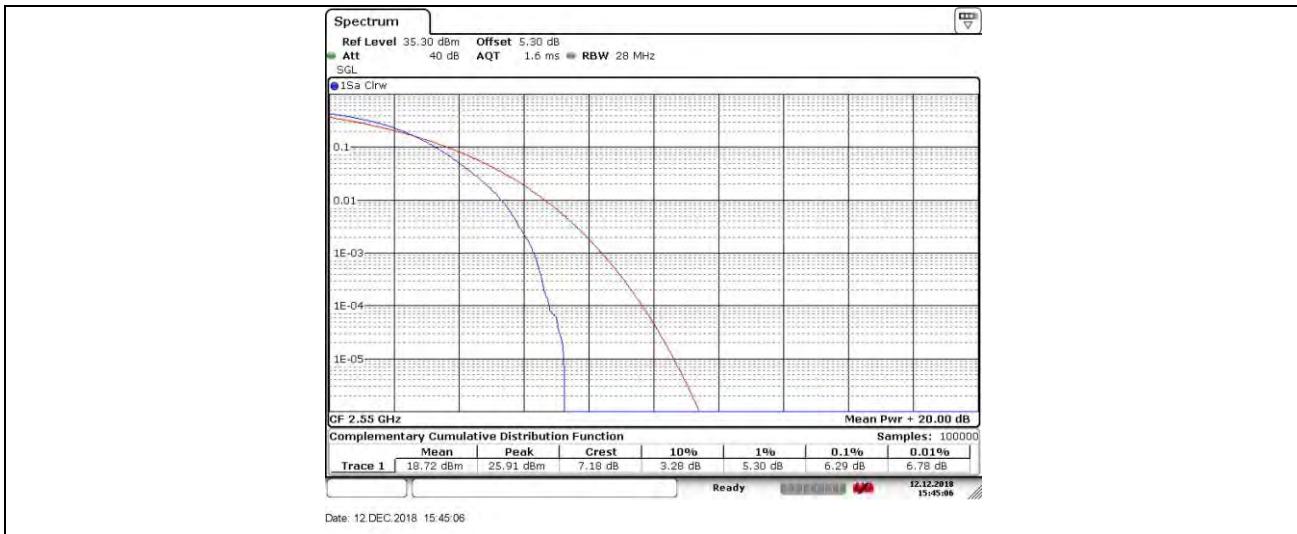


2 Peak-to-Average Ratio

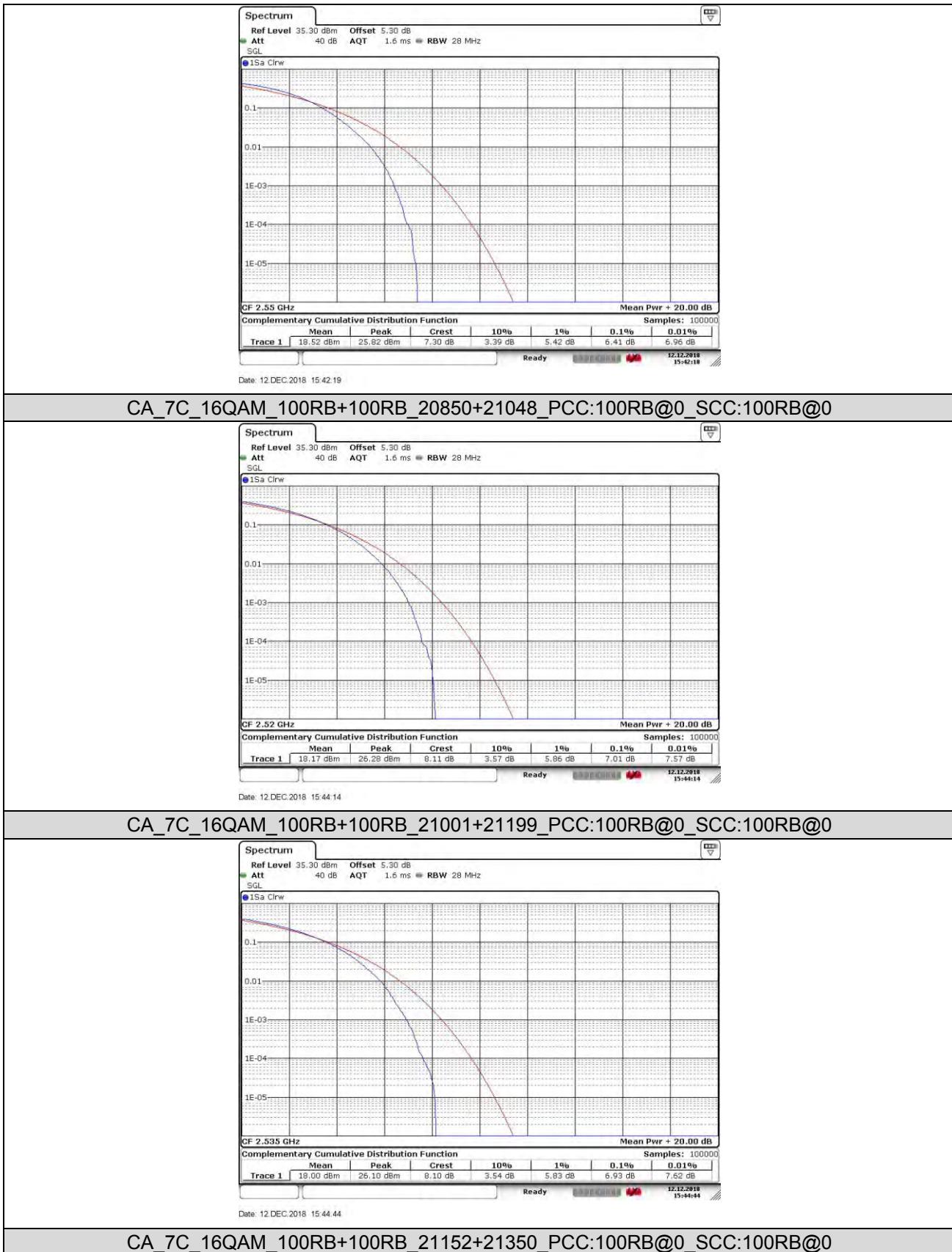
Part I - Test Results

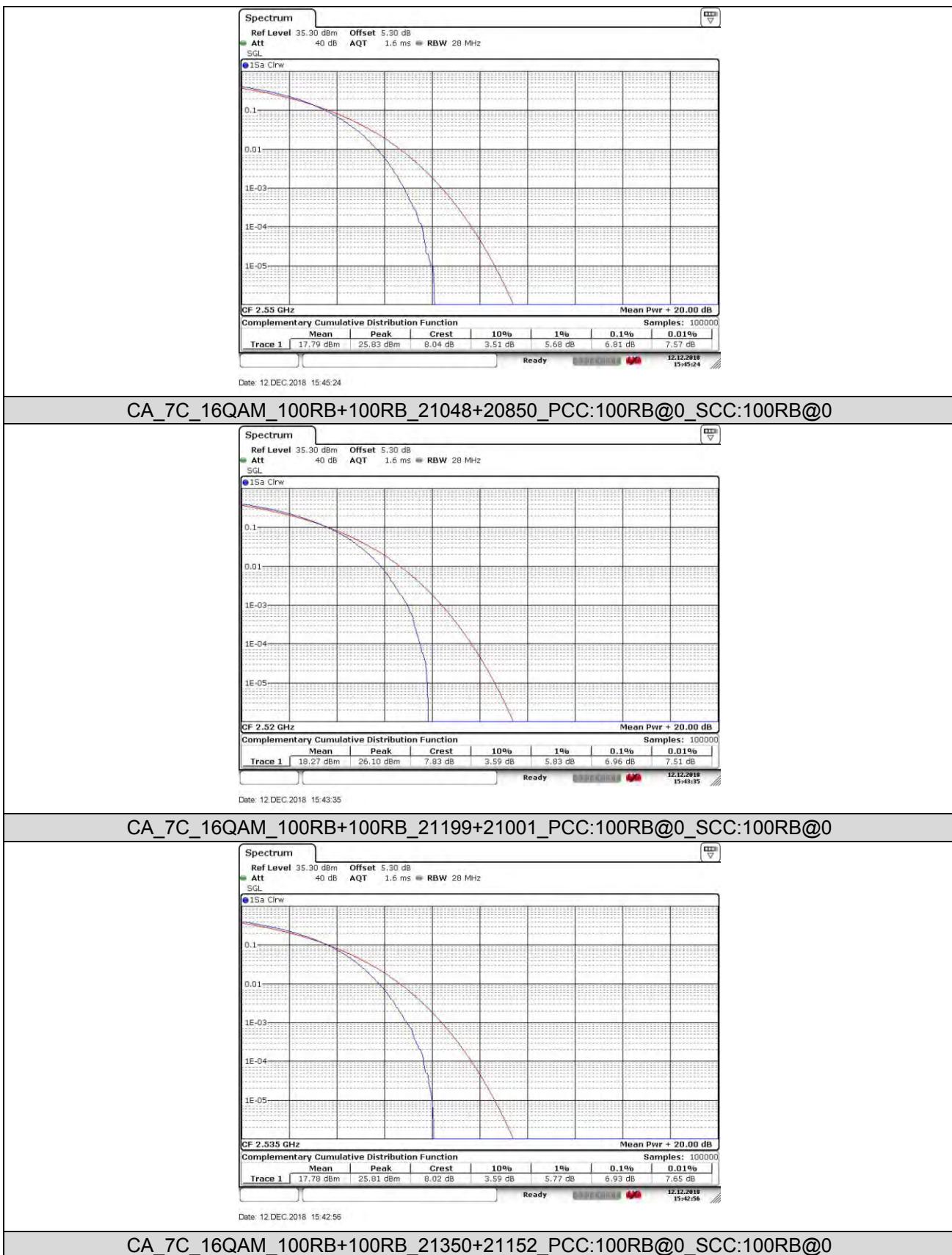
Test Band	Modulation	Test Mode	Test Channel	PCC RB Config	SCC RB Config	Measured [dB]	Limit [dB]	Verdict
CA_7C	QPSK	100RB+100RB	20850+21048	100RB@0	100RB@0	6.35	13	PASS
CA_7C	QPSK	100RB+100RB	21001+21199	100RB@0	100RB@0	6.43	13	PASS
CA_7C	QPSK	100RB+100RB	21152+21350	100RB@0	100RB@0	6.29	13	PASS
CA_7C	QPSK	100RB+100RB	21048+20850	100RB@0	100RB@0	6.38	13	PASS
CA_7C	QPSK	100RB+100RB	21199+21001	100RB@0	100RB@0	6.52	13	PASS
CA_7C	QPSK	100RB+100RB	21350+21152	100RB@0	100RB@0	6.41	13	PASS
CA_7C	16QAM	100RB+100RB	20850+21048	100RB@0	100RB@0	7.01	13	PASS
CA_7C	16QAM	100RB+100RB	21001+21199	100RB@0	100RB@0	6.93	13	PASS
CA_7C	16QAM	100RB+100RB	21152+21350	100RB@0	100RB@0	6.81	13	PASS
CA_7C	16QAM	100RB+100RB	21048+20850	100RB@0	100RB@0	9.96	13	PASS
CA_7C	16QAM	100RB+100RB	21199+21001	100RB@0	100RB@0	6.93	13	PASS
CA_7C	16QAM	100RB+100RB	21350+21152	100RB@0	100RB@0	6.84	13	PASS
CA_7C	64QAM	100RB+100RB	20850+21048	100RB@0	100RB@0	6.93	13	PASS
CA_7C	64QAM	100RB+100RB	21001+21199	100RB@0	100RB@0	6.99	13	PASS
CA_7C	64QAM	100RB+100RB	21152+21350	100RB@0	100RB@0	6.96	13	PASS
CA_7C	64QAM	100RB+100RB	21048+20850	100RB@0	100RB@0	6.90	13	PASS
CA_7C	64QAM	100RB+100RB	21199+21001	100RB@0	100RB@0	6.99	13	PASS
CA_7C	64QAM	100RB+100RB	21350+21152	100RB@0	100RB@0	7.01	13	PASS

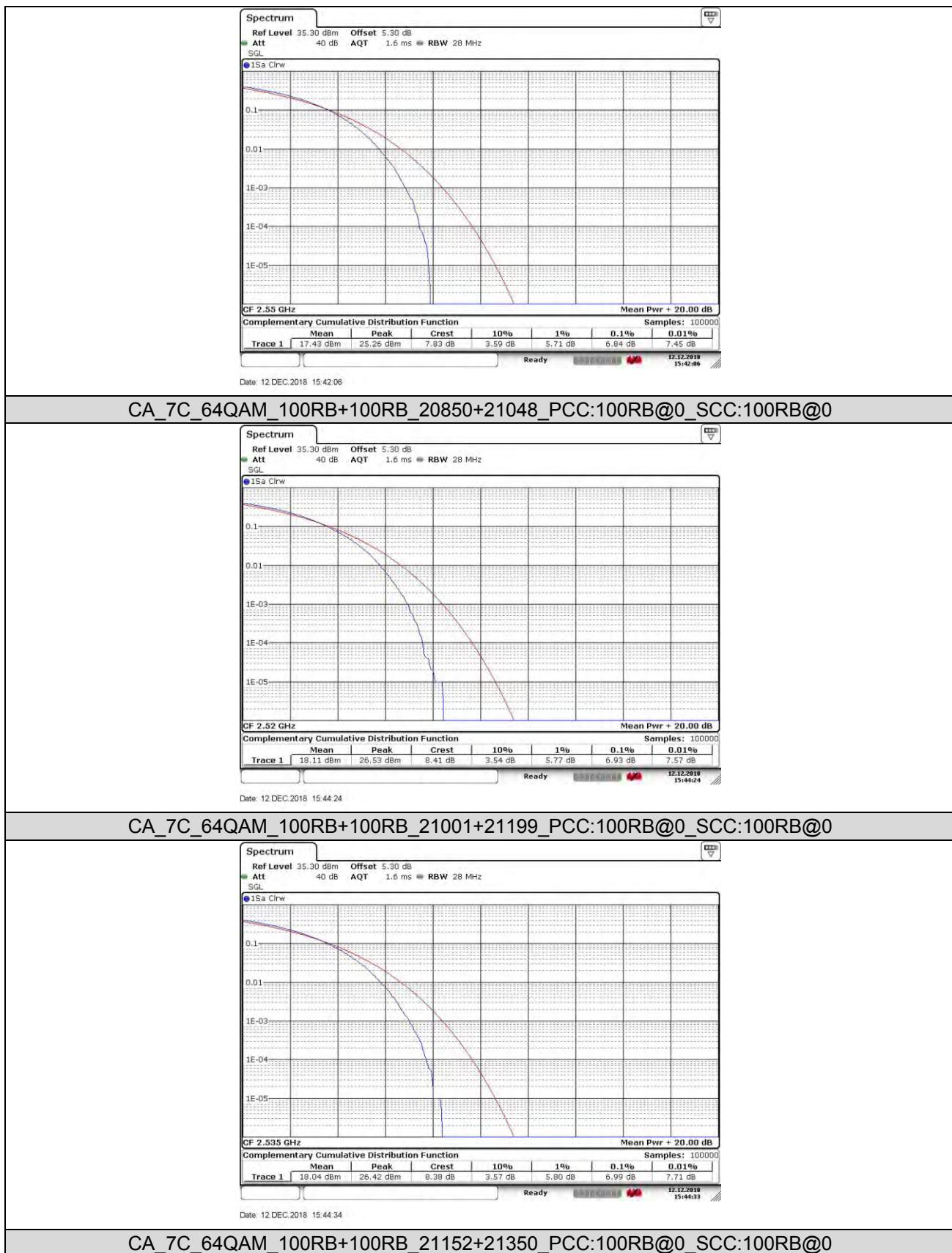
Part II - Test Plots**2.1 For LTE****2.1.1 Test Band = LTE Band CA_7C****CA_7C_QPSK_100RB+100RB_20850+21048_PCC:100RB@0_SCC:100RB@0****CA_7C_QPSK_100RB+100RB_21001+21199_PCC:100RB@0_SCC:100RB@0****CA_7C_QPSK_100RB+100RB_21152+21350_PCC:100RB@0_SCC:100RB@0**

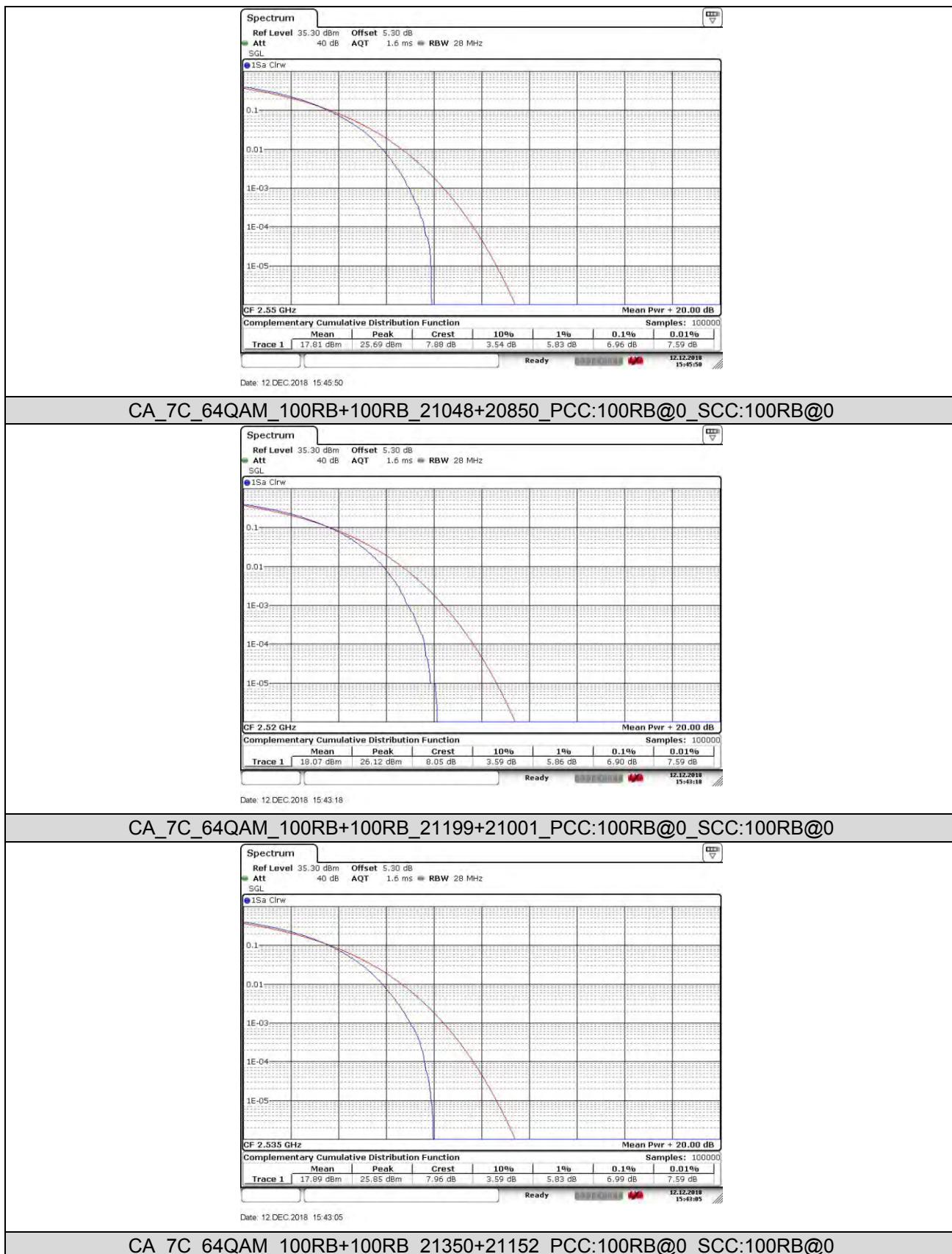


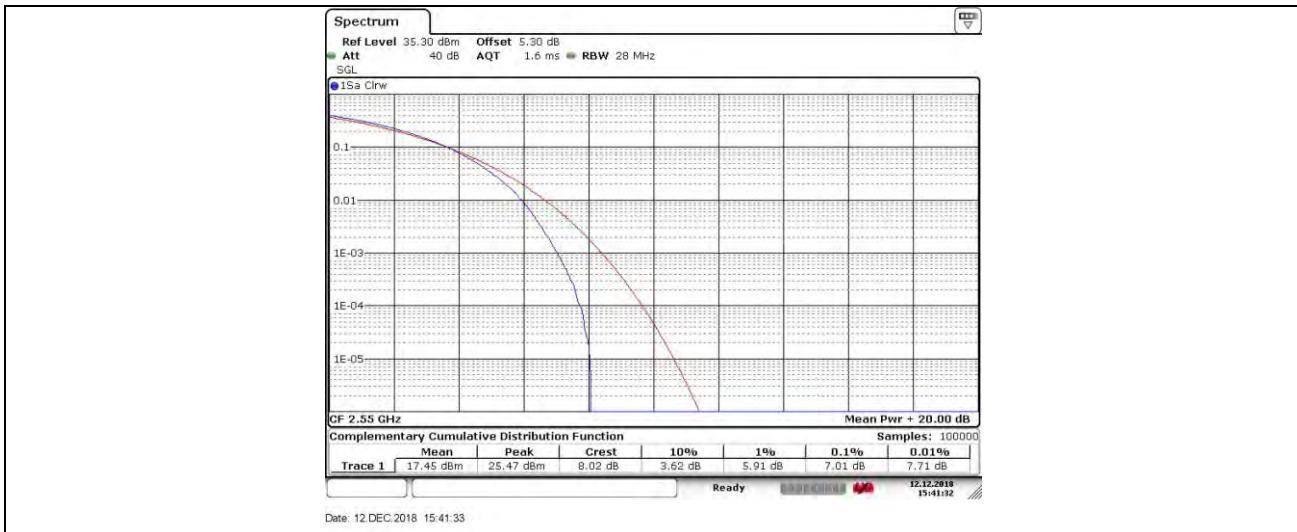
CA_7C_QPSK_100RB+100RB_21350+21152_PCC:100RB@0_SCC:100RB@0











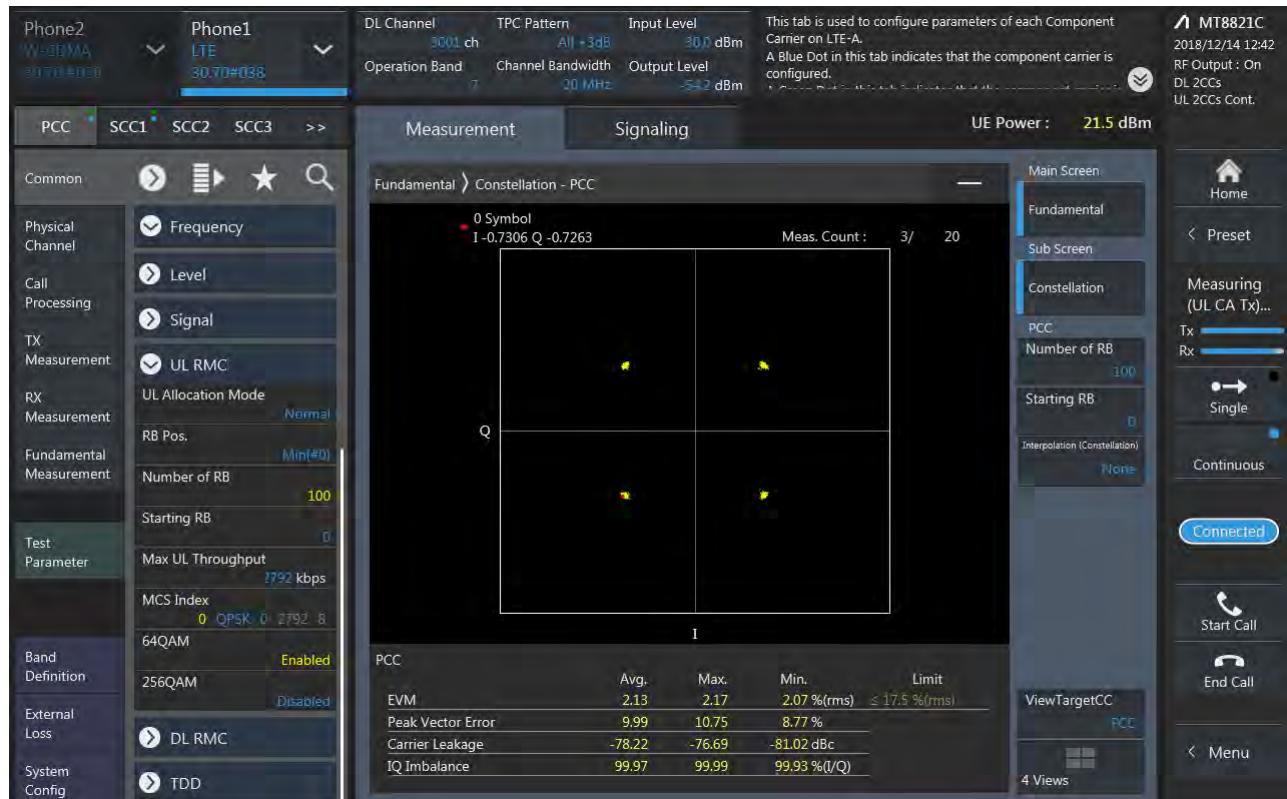
3 Modulation Characteristics

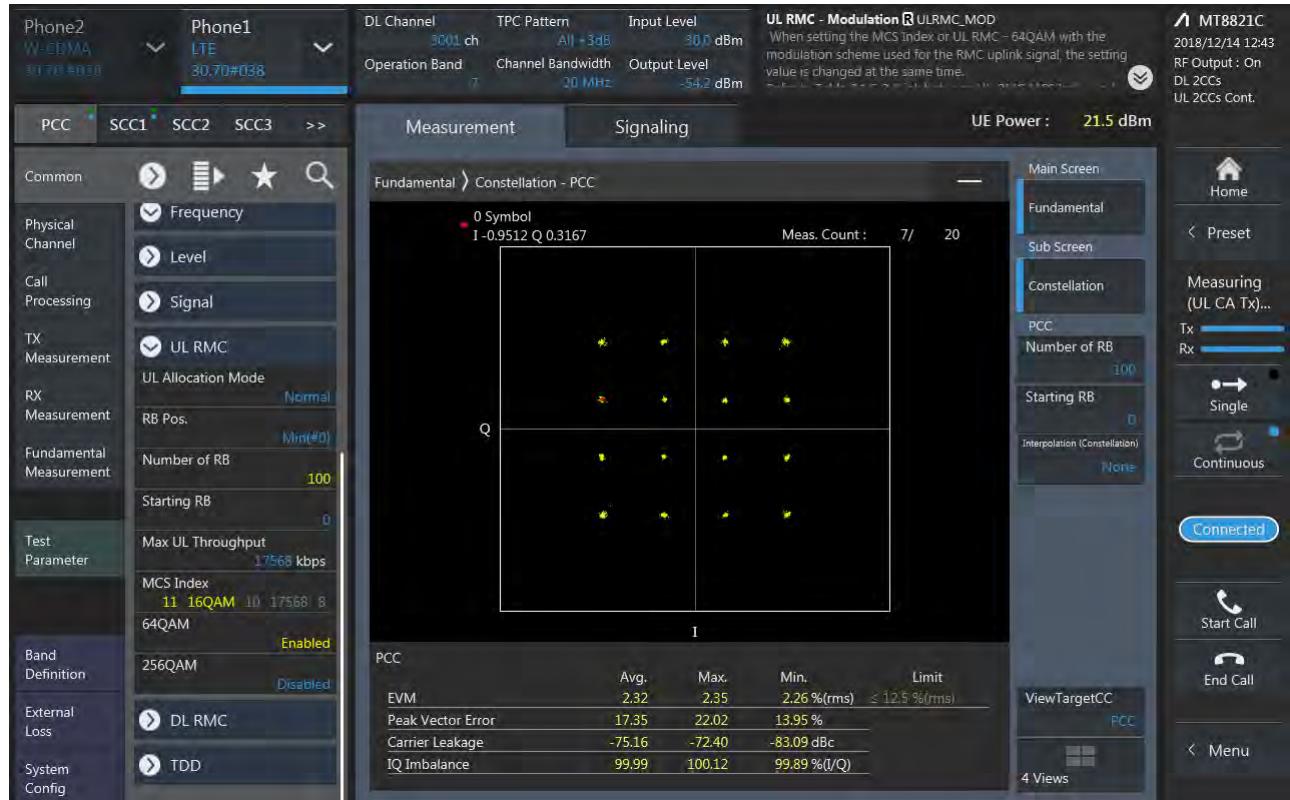
3.1 For LTE

3.1.1 Test Band = LTE Band CA_7C

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

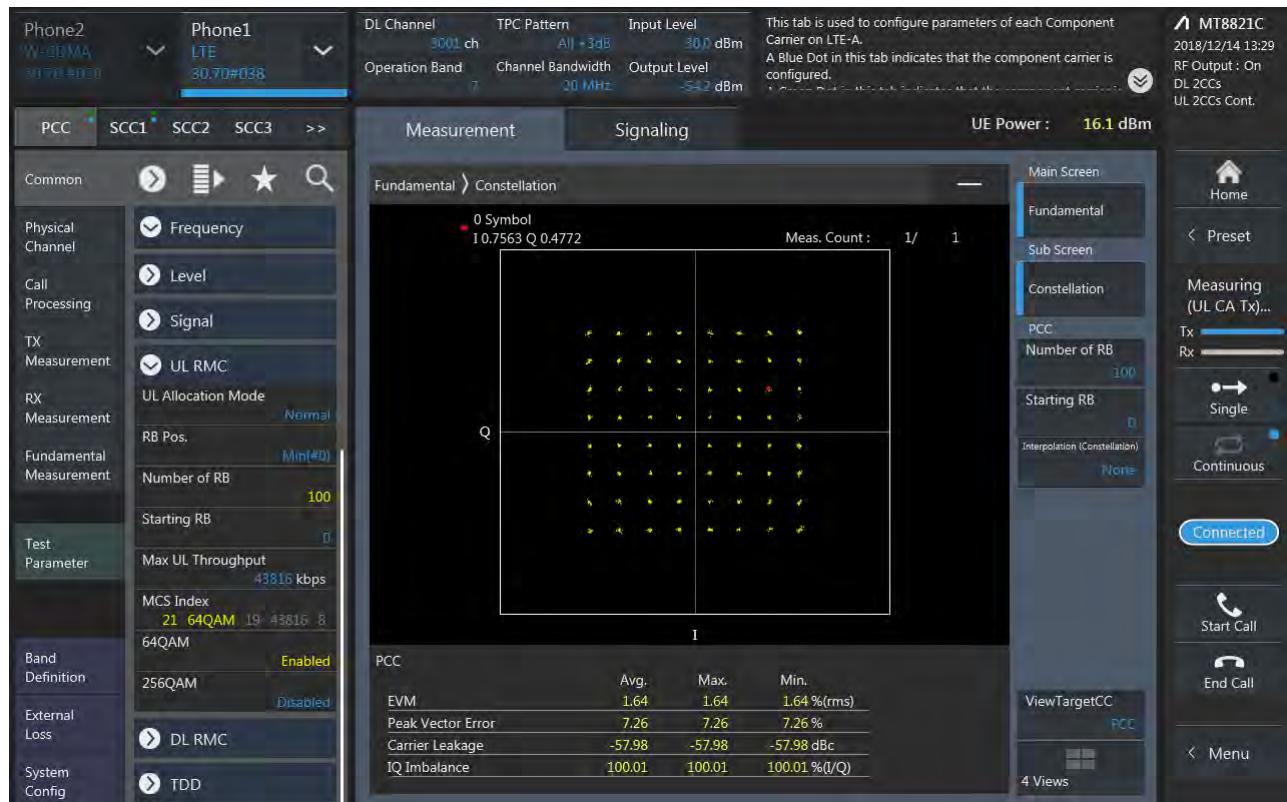
3.1.1.1.1 Test Channel = 21001+21199



3.1.1.2 Test Mode = LTE /16QAM 100RB+100RB**3.1.1.2.1 Test Channel =21001+21199**

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

3.1.1.3.1 Test Channel = 21001+21199





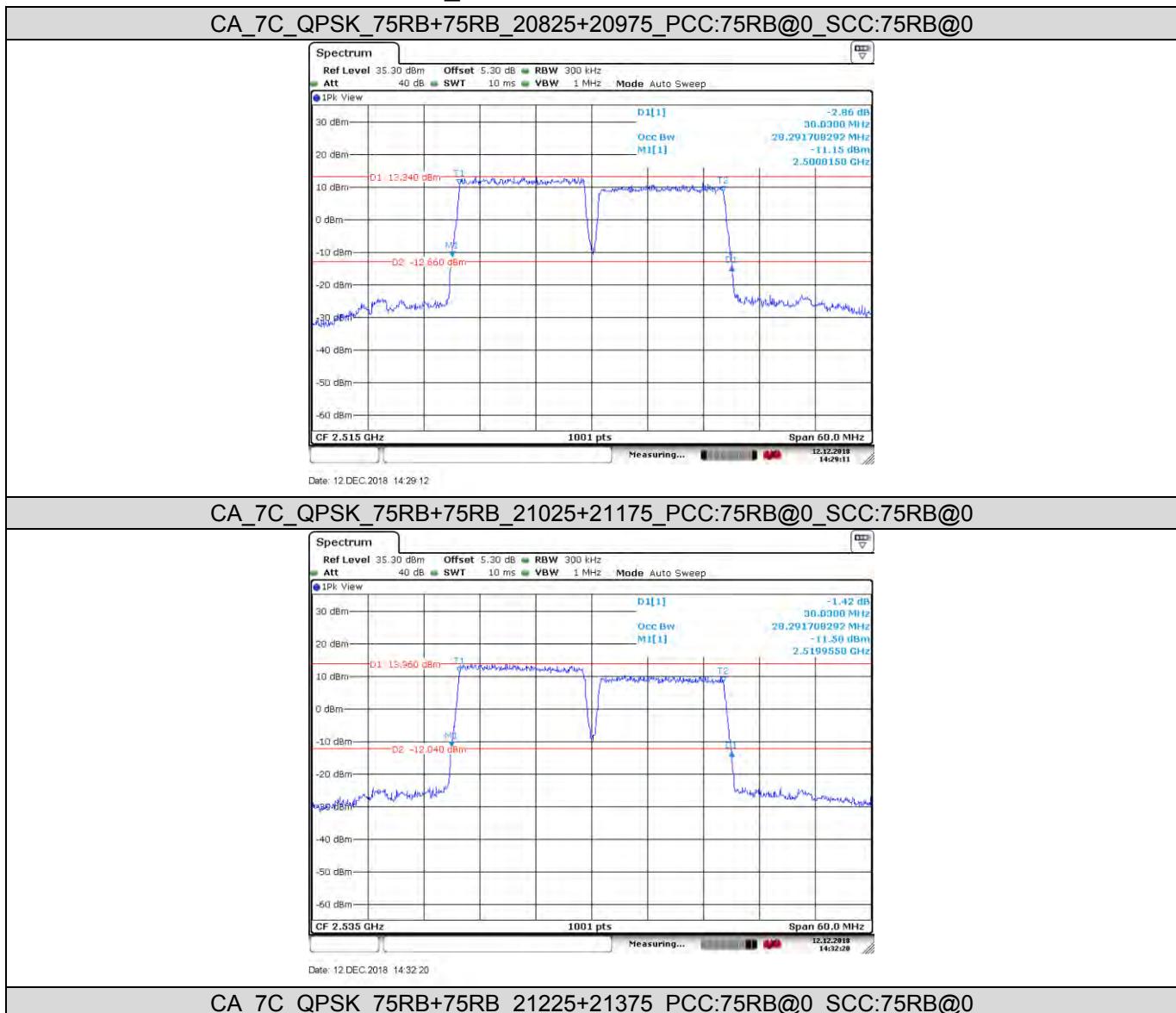
4 Bandwidth

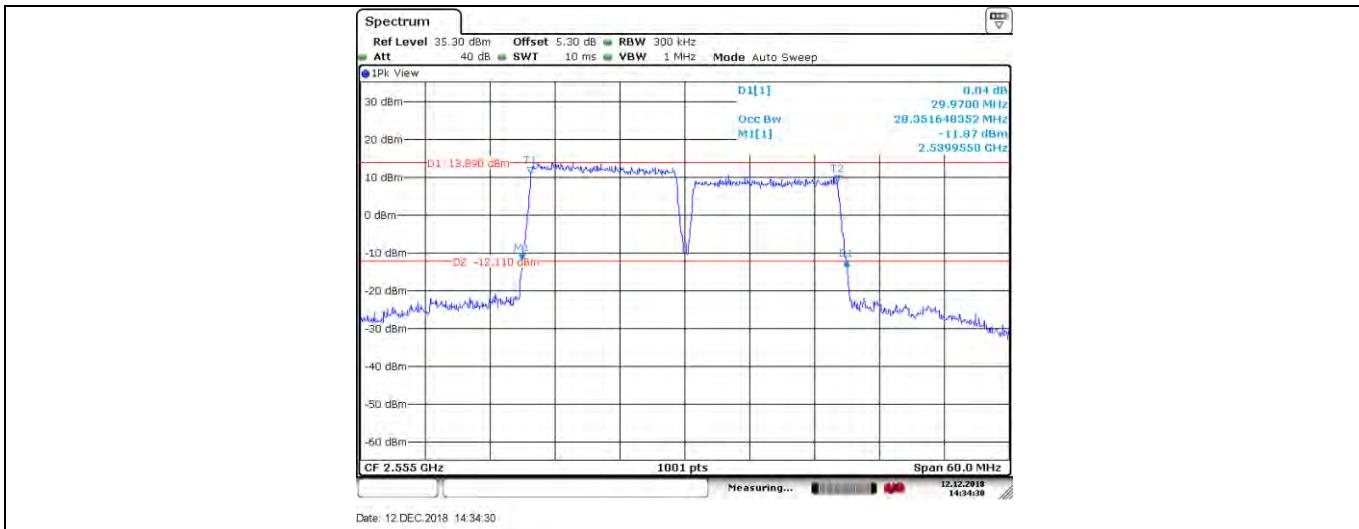
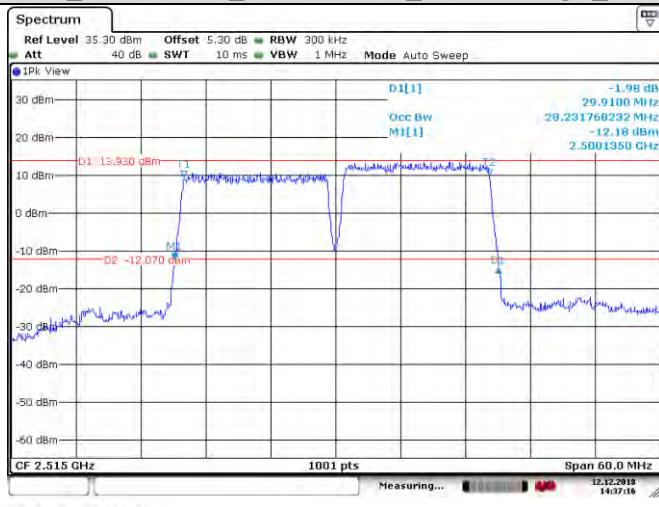
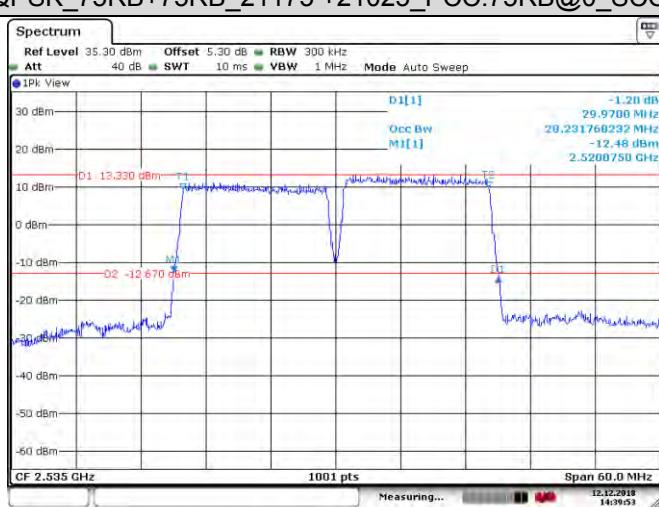
Test Band	Modulation PCC&SCC	Test Mode PCC/SCC	Test Channel PCC/SCC	PCC RB	SCC RB	OBW [MHz]	EBW [MHz]	Verdict
CA_7C	QPSK	75RB+75RB	20825+20975	75RB@0	75RB@0	28.29	30.03	PASS
CA_7C	QPSK	75RB+75RB	21025+21175	75RB@0	75RB@0	28.29	30.03	PASS
CA_7C	QPSK	75RB+75RB	21225+21375	75RB@0	75RB@0	28.35	29.97	PASS
CA_7C	QPSK	75RB+75RB	20975+20825	75RB@0	75RB@0	28.23	29.91	PASS
CA_7C	QPSK	75RB+75RB	21175 +21025	75RB@0	75RB@0	28.23	29.97	PASS
CA_7C	QPSK	75RB+75RB	21375 +21225	75RB@0	75RB@0	28.35	30.03	PASS
CA_7C	16QAM	75RB+75RB	20825+20975	75RB@0	75RB@0	28.29	30.03	PASS
CA_7C	16QAM	75RB+75RB	21025+21175	75RB@0	75RB@0	28.23	30.03	PASS
CA_7C	16QAM	75RB+75RB	21225+21375	75RB@0	75RB@0	28.35	29.79	PASS
CA_7C	16QAM	75RB+75RB	20975+20825	75RB@0	75RB@0	28.29	29.85	PASS
CA_7C	16QAM	75RB+75RB	21175 +21025	75RB@0	75RB@0	28.29	29.91	PASS
CA_7C	16QAM	75RB+75RB	21375 +21225	75RB@0	75RB@0	28.29	29.97	PASS
CA_7C	64QAM	75RB+75RB	20825+20975	75RB@0	75RB@0	28.29	30.09	PASS
CA_7C	64QAM	75RB+75RB	21025+21175	75RB@0	75RB@0	28.23	29.97	PASS
CA_7C	64QAM	75RB+75RB	21225+21375	75RB@0	75RB@0	28.23	29.91	PASS
CA_7C	64QAM	75RB+75RB	20975+20825	75RB@0	75RB@0	28.29	29.73	PASS
CA_7C	64QAM	75RB+75RB	21175 +21025	75RB@0	75RB@0	28.35	29.97	PASS
CA_7C	64QAM	75RB+75RB	21375 +21225	75RB@0	75RB@0	28.35	29.97	PASS
CA_7C	QPSK	100RB+100RB	20850+21048	100RB@0	100RB@0	37.52	39.68	PASS
CA_7C	QPSK	100RB+100RB	21001+21199	100RB@0	100RB@0	37.52	39.74	PASS
CA_7C	QPSK	100RB+100RB	21152+21350	100RB@0	100RB@0	37.46	39.56	PASS
CA_7C	QPSK	100RB+100RB	21048+20850	100RB@0	100RB@0	37.56	39.80	PASS
CA_7C	QPSK	100RB+100RB	21199+21001	100RB@0	100RB@0	37.58	39.80	PASS
CA_7C	QPSK	100RB+100RB	21350+21152	100RB@0	100RB@0	37.64	39.86	PASS
CA_7C	16QAM	100RB+100RB	20850+21048	100RB@0	100RB@0	37.52	39.74	PASS
CA_7C	16QAM	100RB+100RB	21001+21199	100RB@0	100RB@0	37.52	39.62	PASS
CA_7C	16QAM	100RB+100RB	21152+21350	100RB@0	100RB@0	37.52	39.68	PASS
CA_7C	16QAM	100RB+100RB	21048+20850	100RB@0	100RB@0	37.52	39.56	PASS
CA_7C	16QAM	100RB+100RB	21199+21001	100RB@0	100RB@0	37.52	39.68	PASS
CA_7C	16QAM	100RB+100RB	21350+21152	100RB@0	100RB@0	37.58	39.68	PASS
CA_7C	64QAM	100RB+100RB	20850+21048	100RB@0	100RB@0	37.52	39.68	PASS
CA_7C	64QAM	100RB+100RB	21001+21199	100RB@0	100RB@0	37.46	39.62	PASS
CA_7C	64QAM	100RB+100RB	21152+21350	100RB@0	100RB@0	37.52	39.74	PASS
CA_7C	64QAM	100RB+100RB	21048+20850	100RB@0	100RB@0	37.52	39.68	PASS
CA_7C	64QAM	100RB+100RB	21199+21001	100RB@0	100RB@0	37.58	39.62	PASS

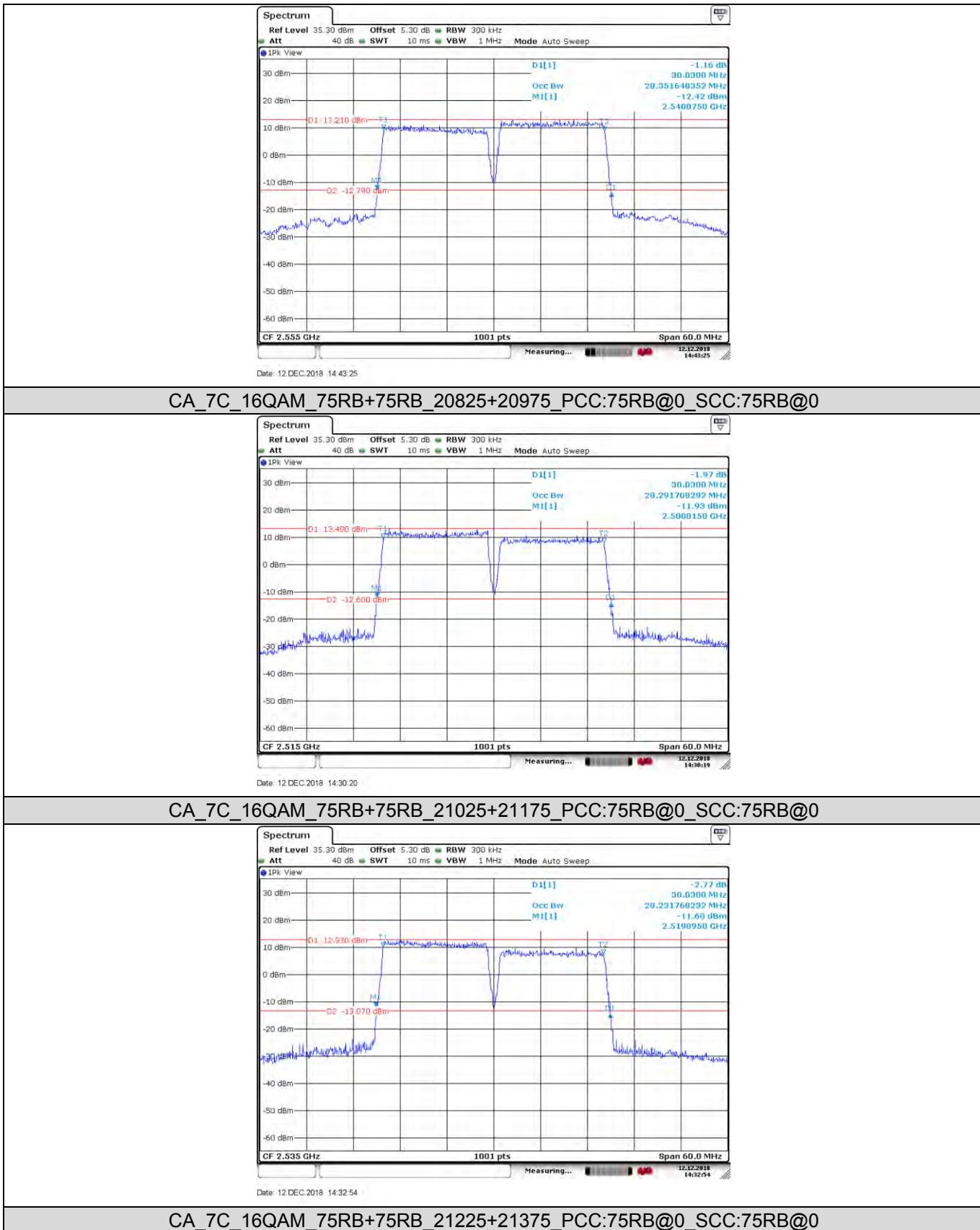
Test Band	Modulation PCC&SCC	Test Mode PCC/SCC	Test Channel PCC/SCC	PCC RB	SCC RB	OBW [MHz]	EBW [MHz]	Verdict
CA_7C	64QAM	100RB+100RB	21350+21152	100RB@0	100RB@0	37.52	39.92	PASS

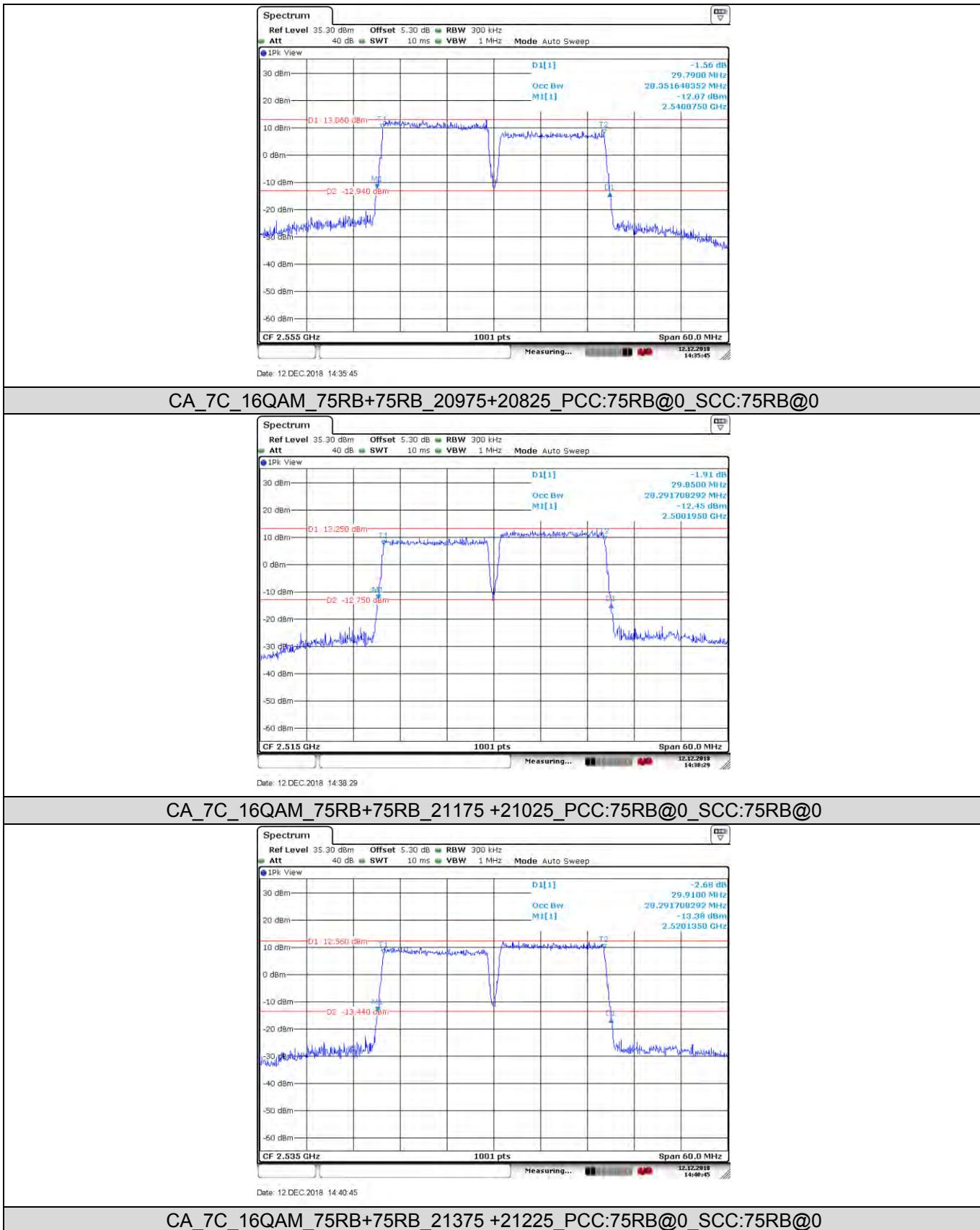
4.1 For LTE

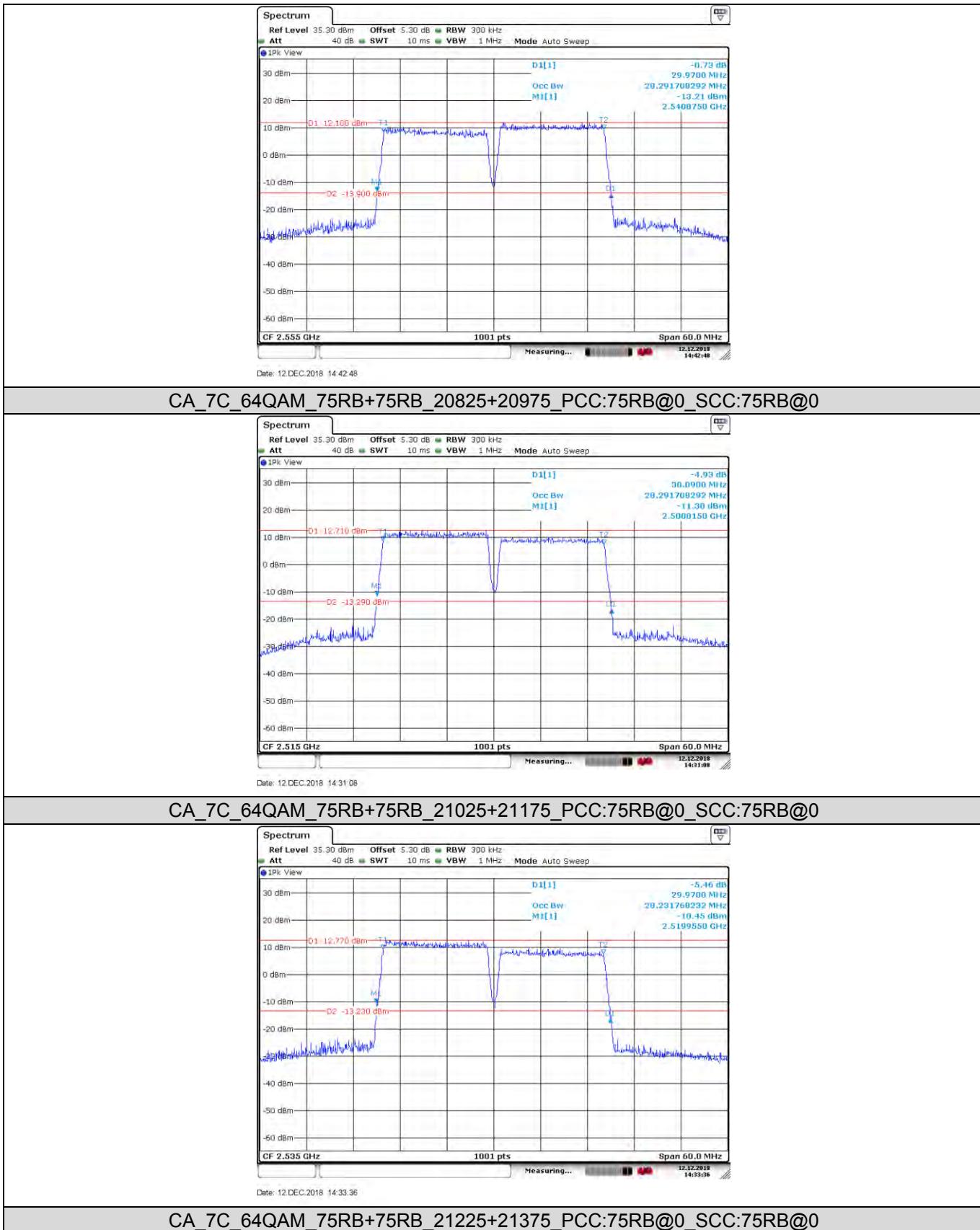
4.1.1 Test Band = LTE Band CA_7C

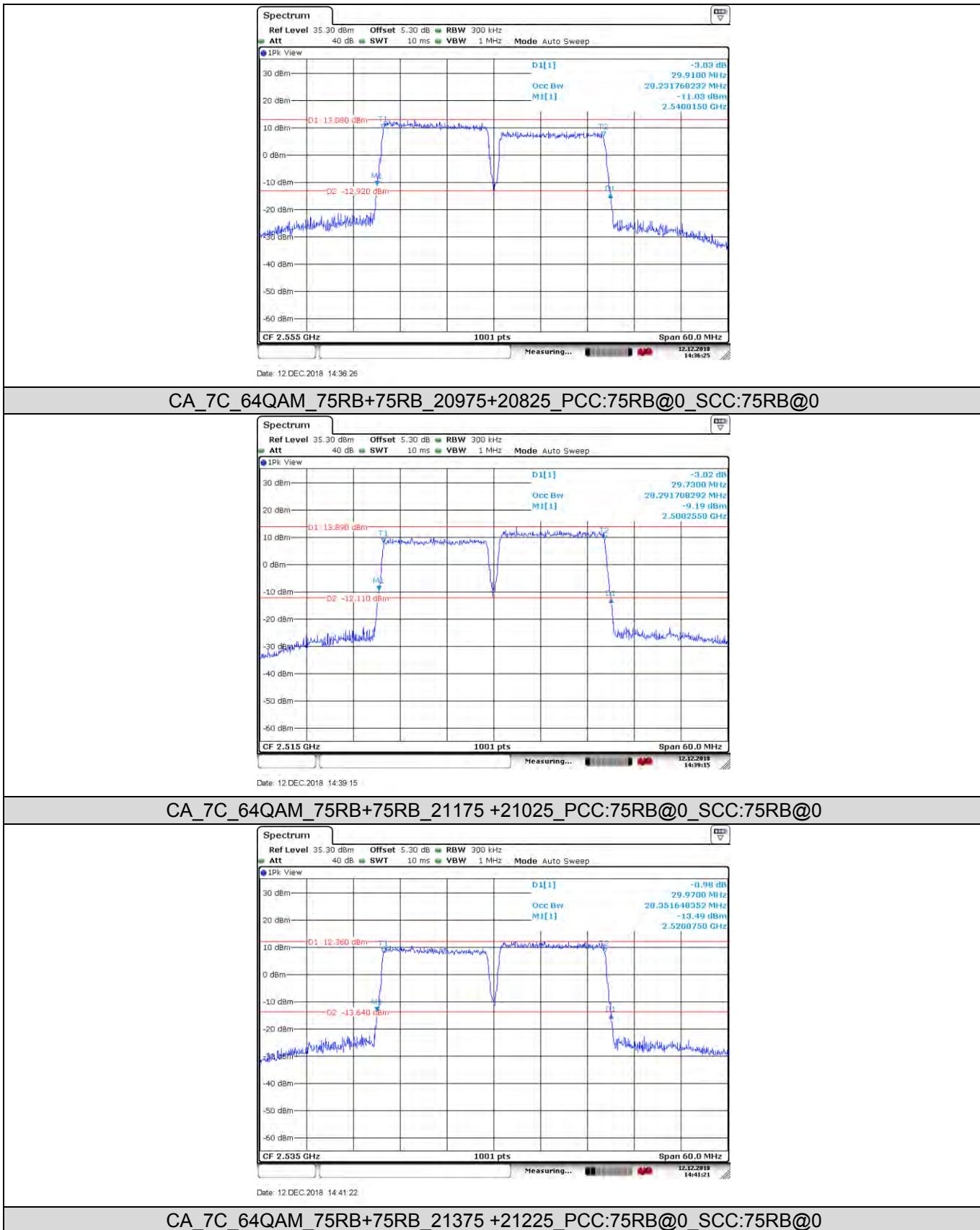


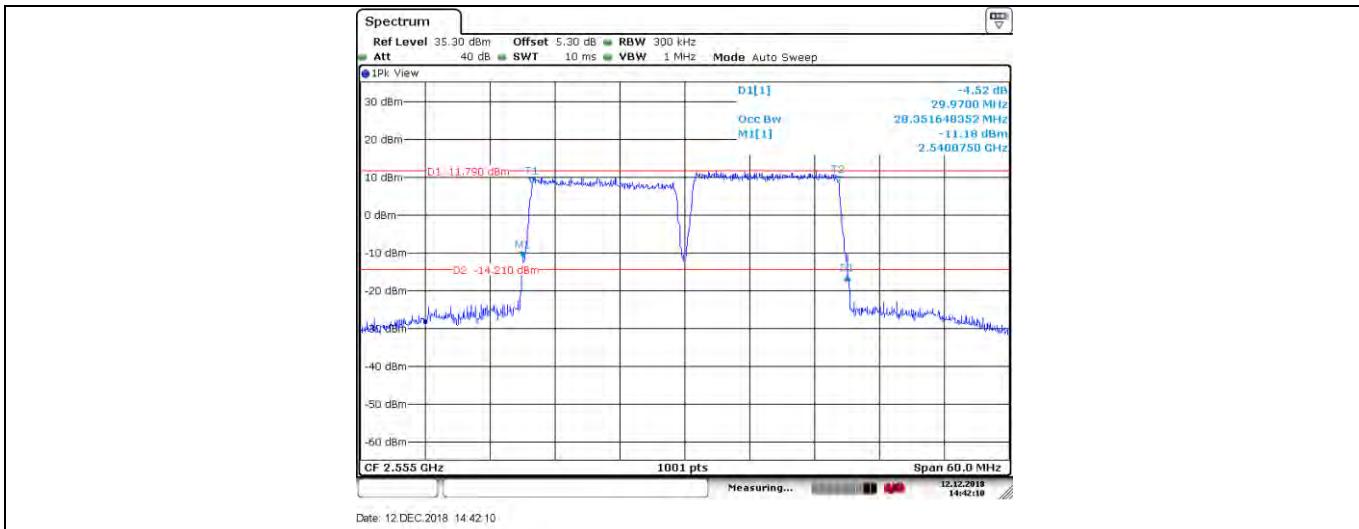
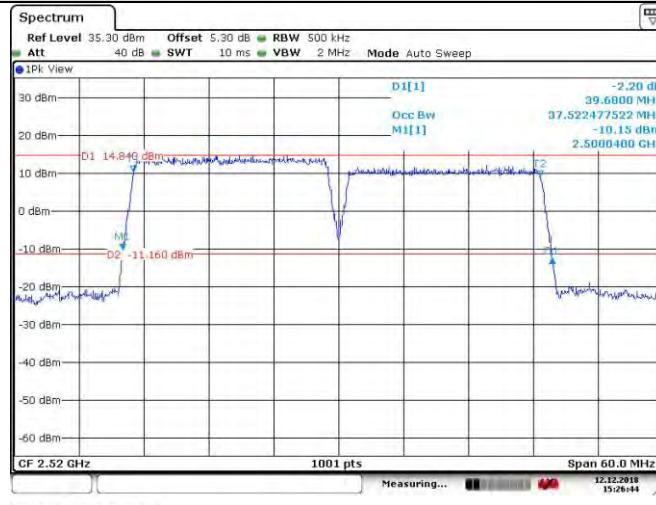
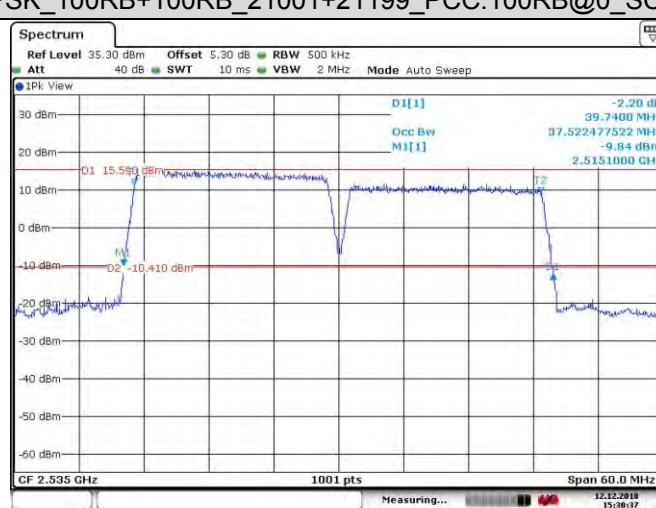
**CA_7C_QPSK_75RB+75RB_20975+20825_PCC:75RB@0_SCC:75RB@0****CA_7C_QPSK_75RB+75RB_21175 +21025_PCC:75RB@0_SCC:75RB@0****CA_7C_QPSK_75RB+75RB_21375 +21225_PCC:75RB@0_SCC:75RB@0**

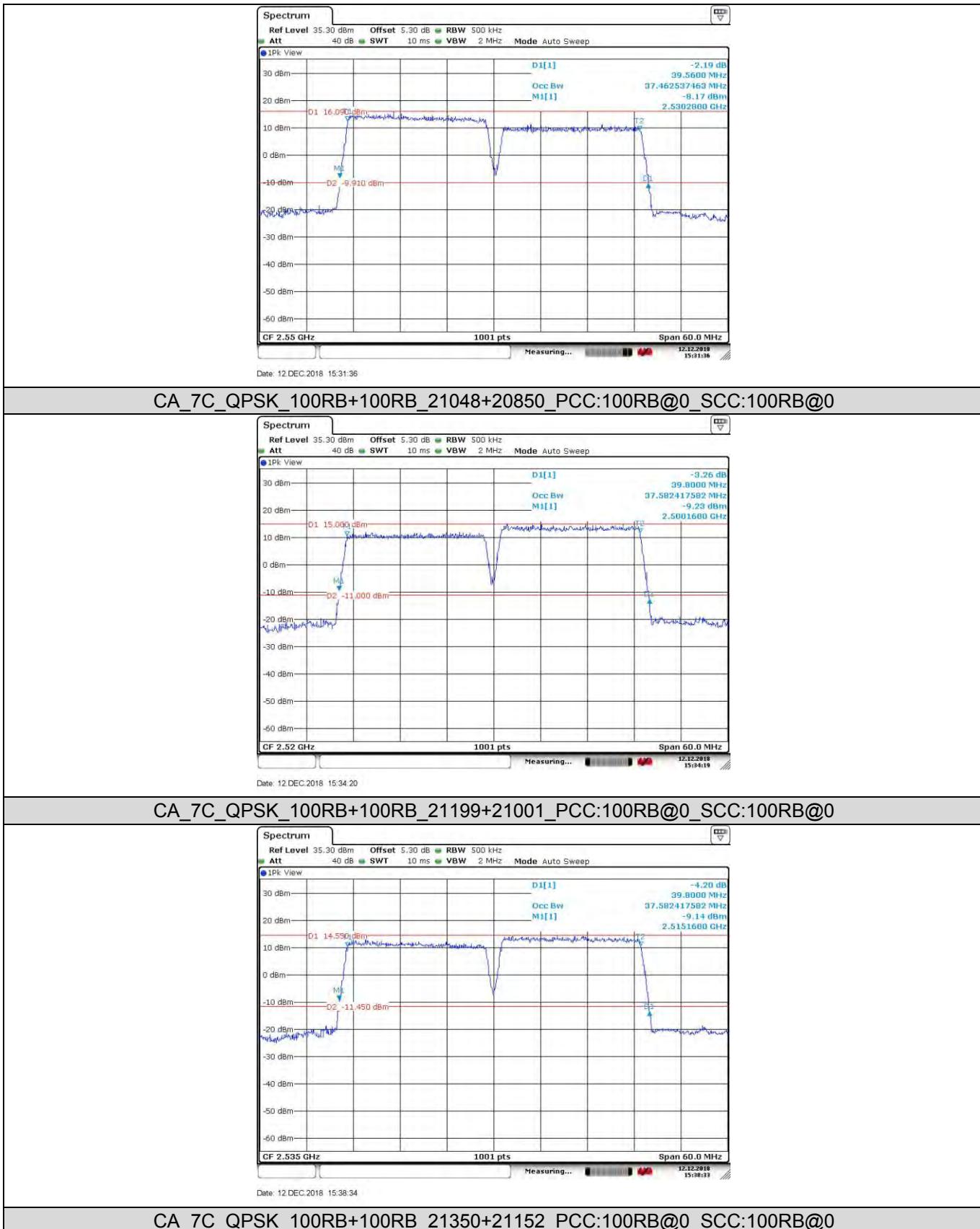


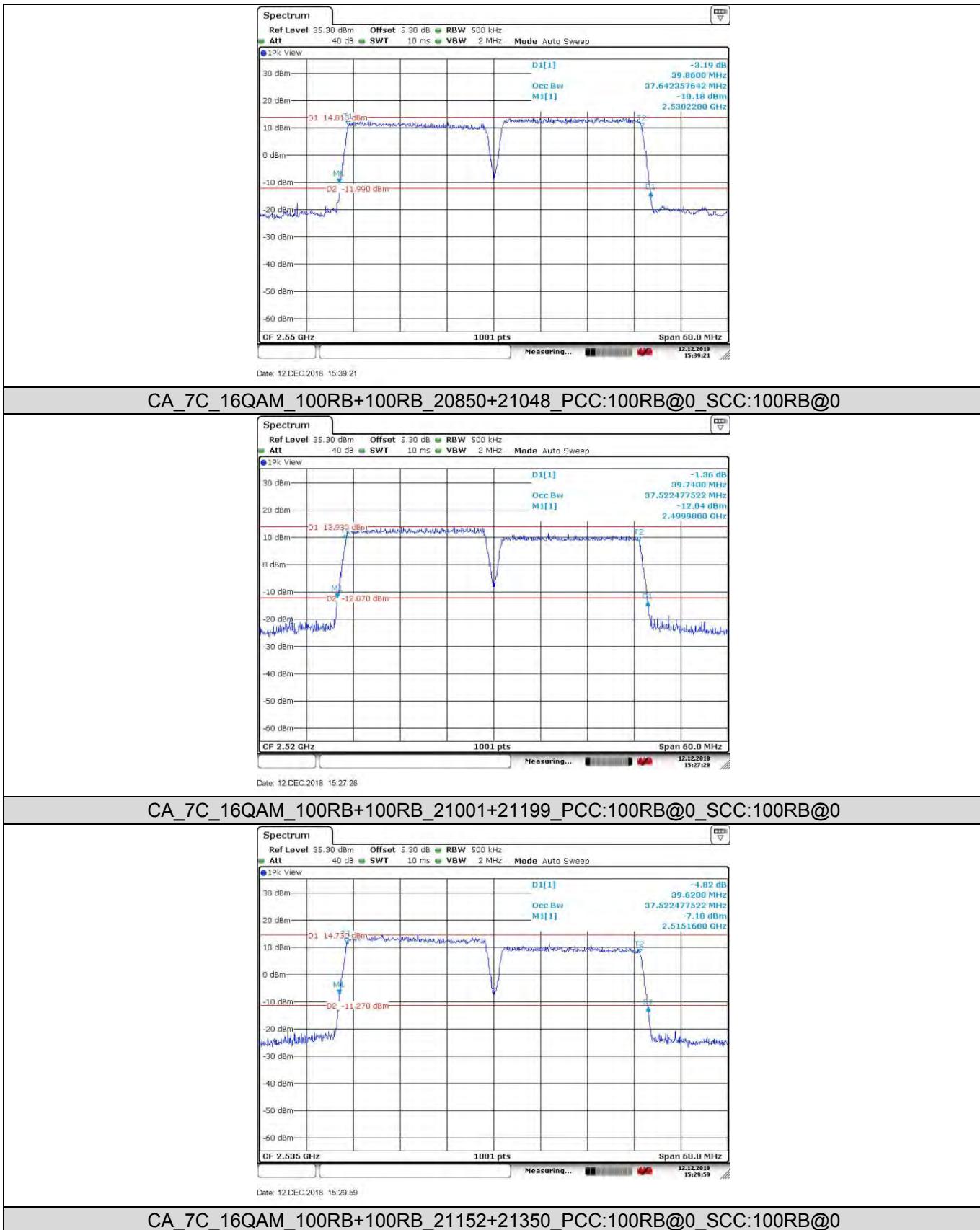


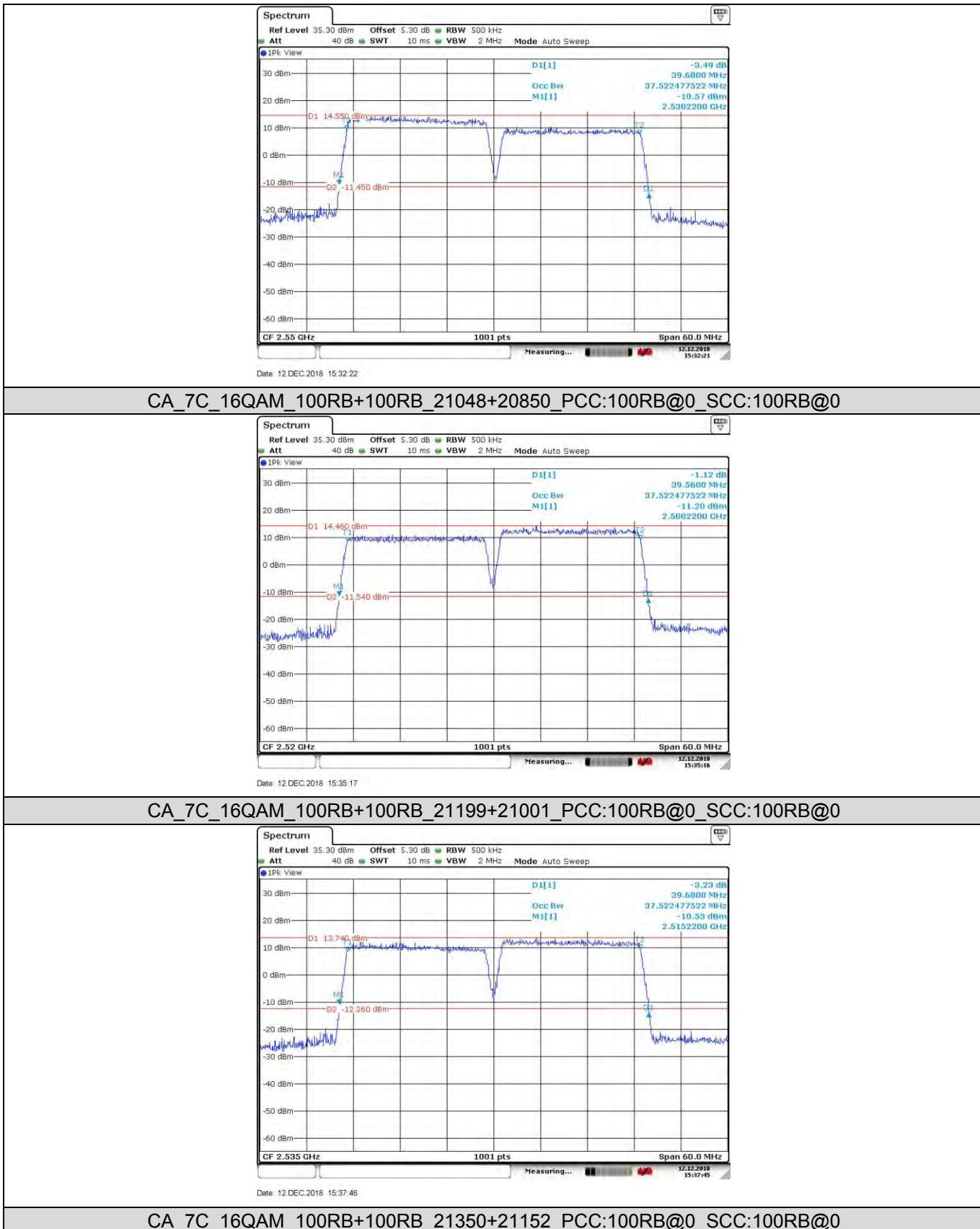


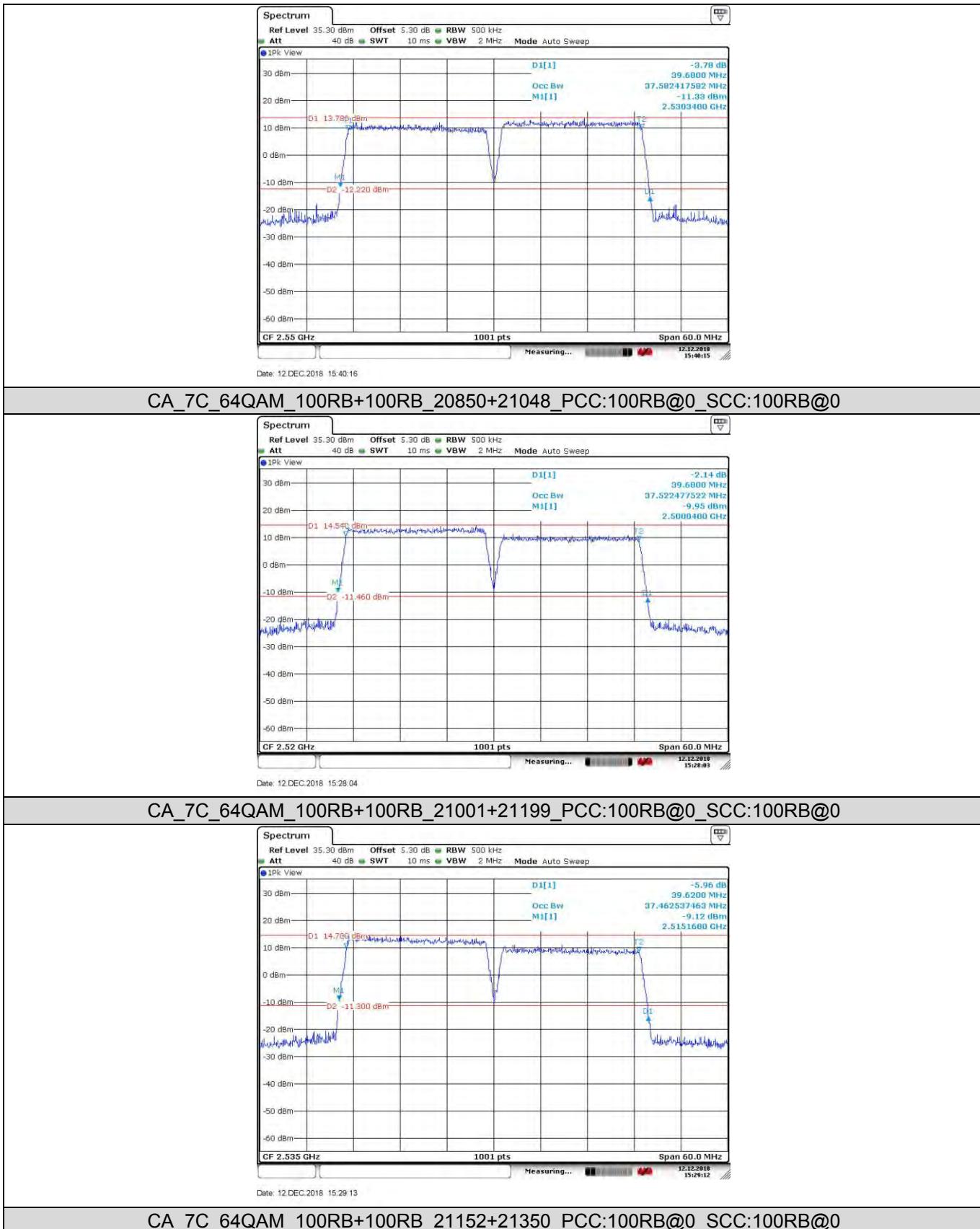


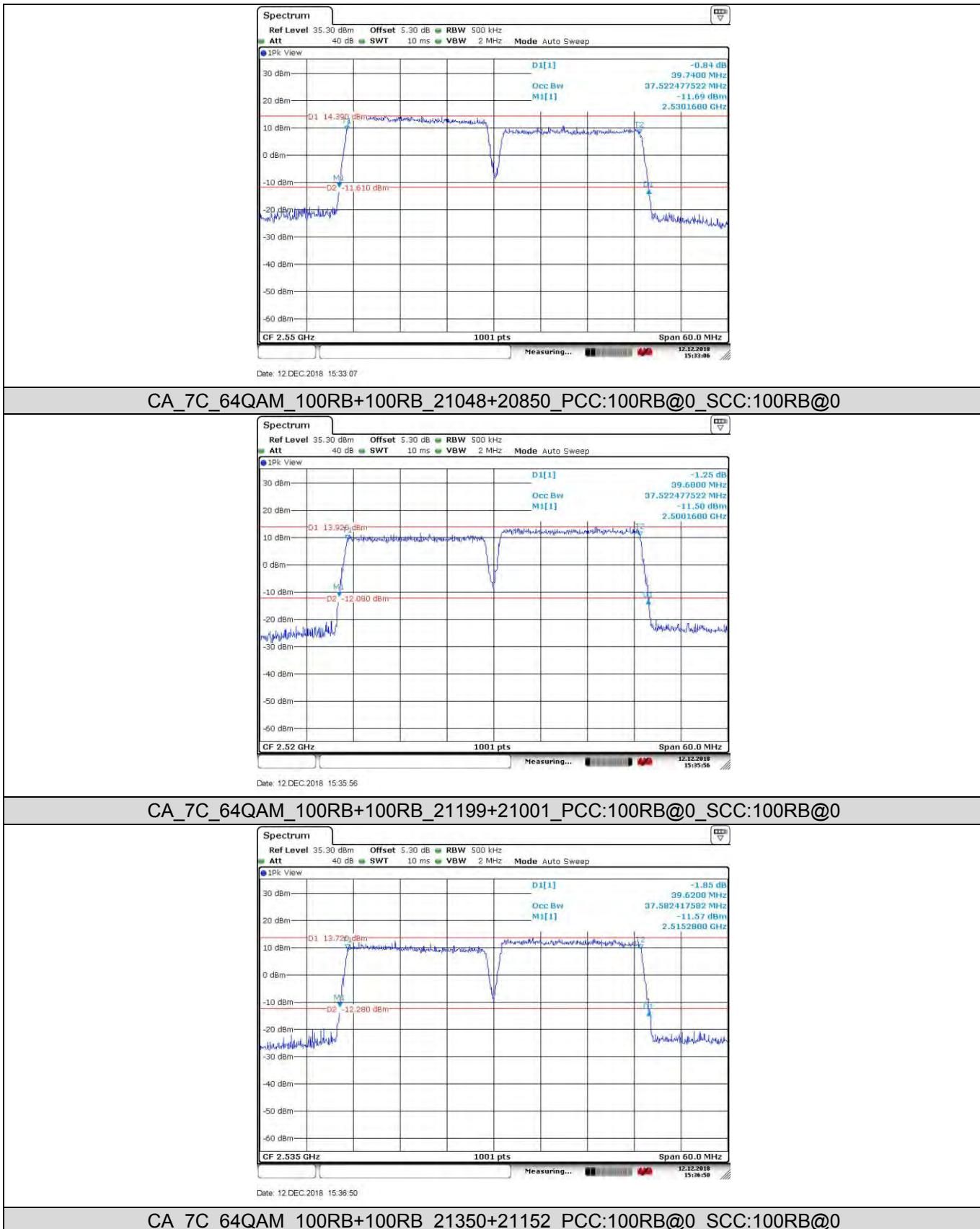
**CA_7C_QPSK_100RB+100RB_20850+21048_PCC:100RB@0_SCC:100RB@0****CA_7C_QPSK_100RB+100RB_21001+21199_PCC:100RB@0_SCC:100RB@0****CA_7C_QPSK_100RB+100RB_21152+21350_PCC:100RB@0_SCC:100RB@0**

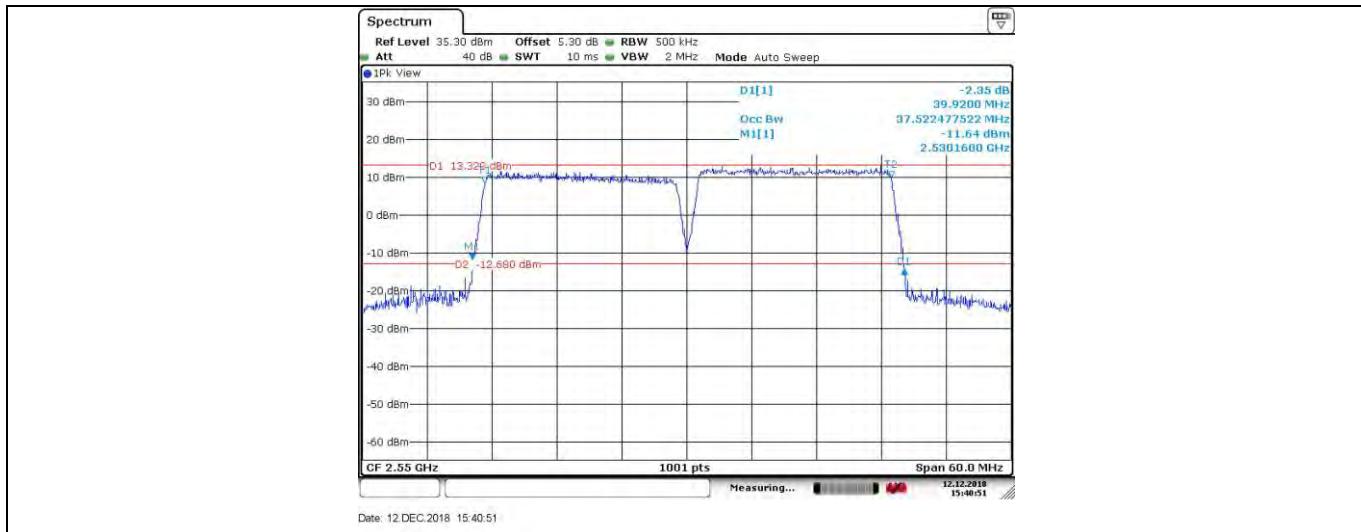








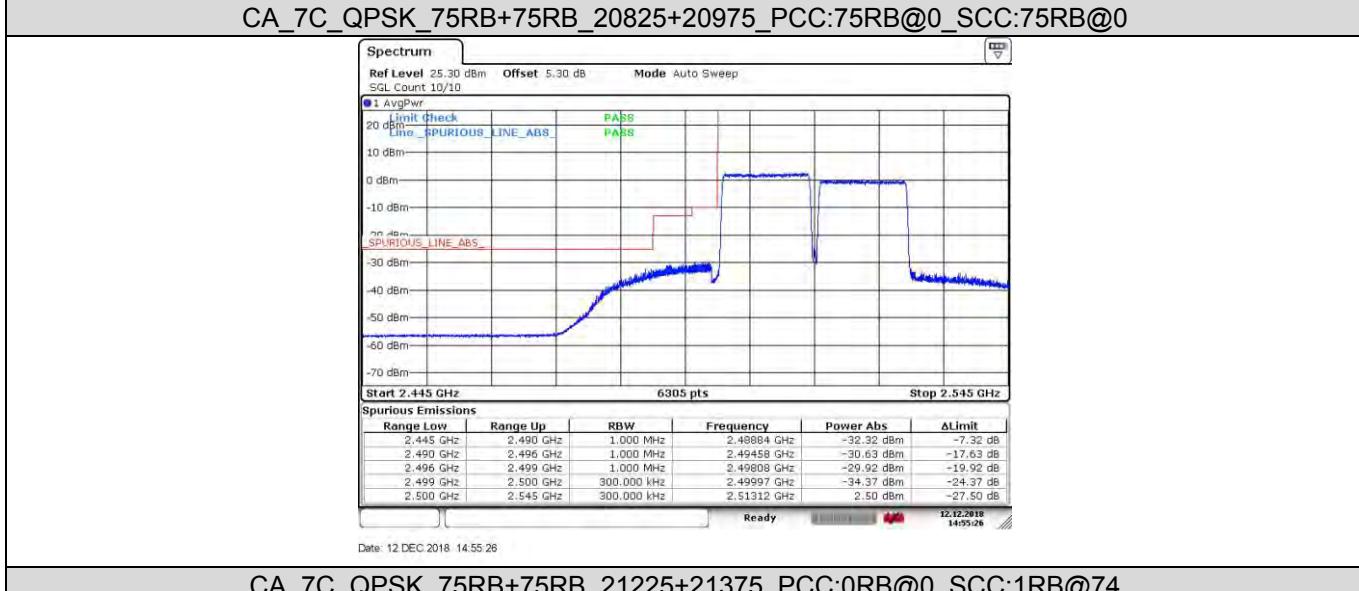
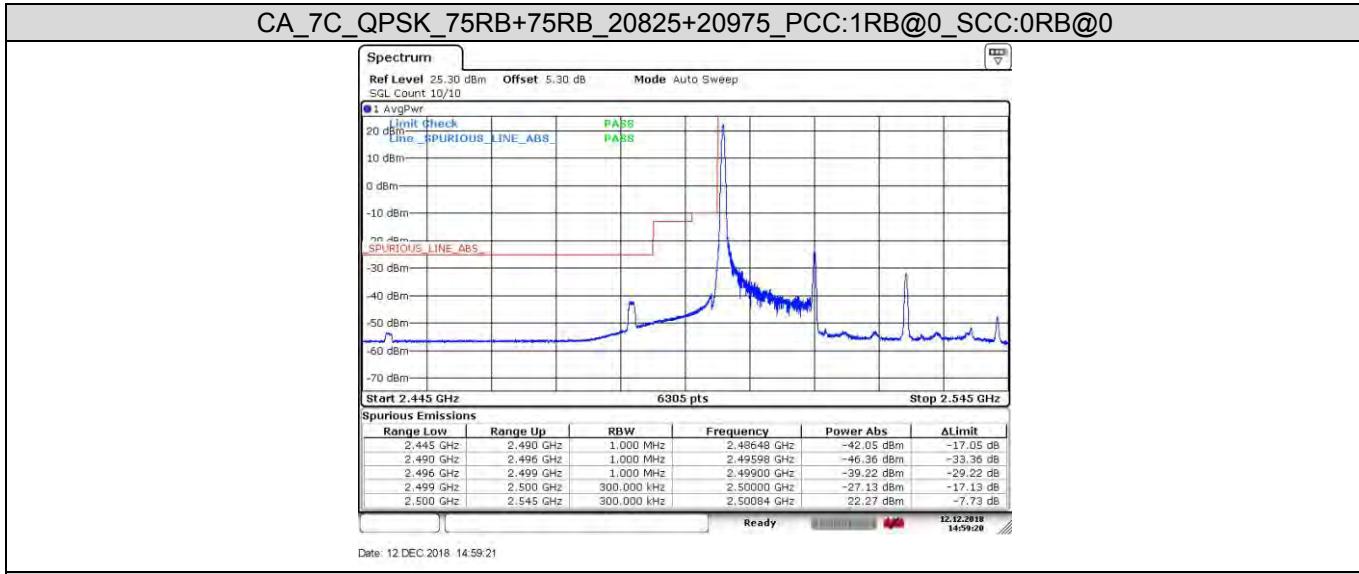




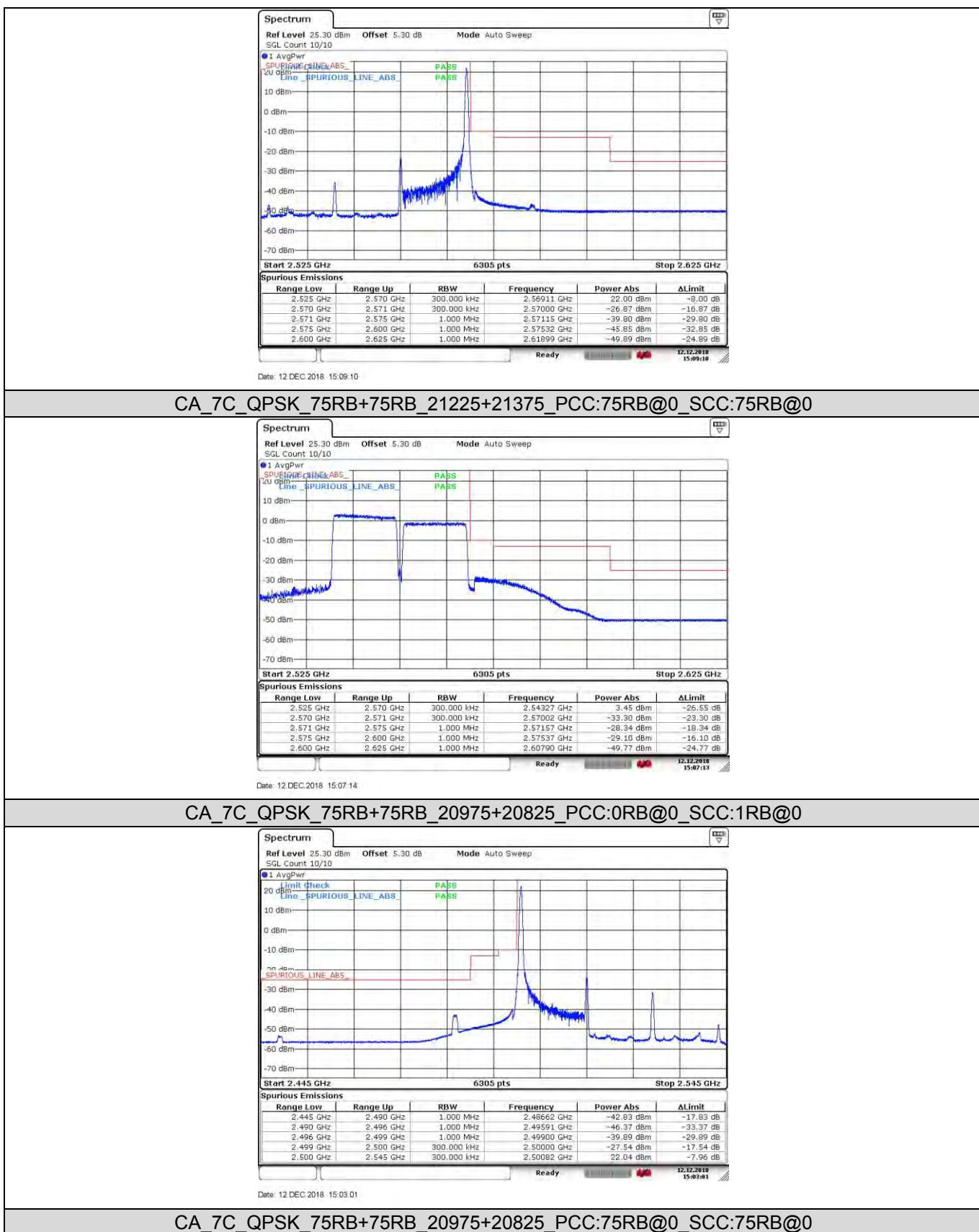
5 Band Edges Compliance

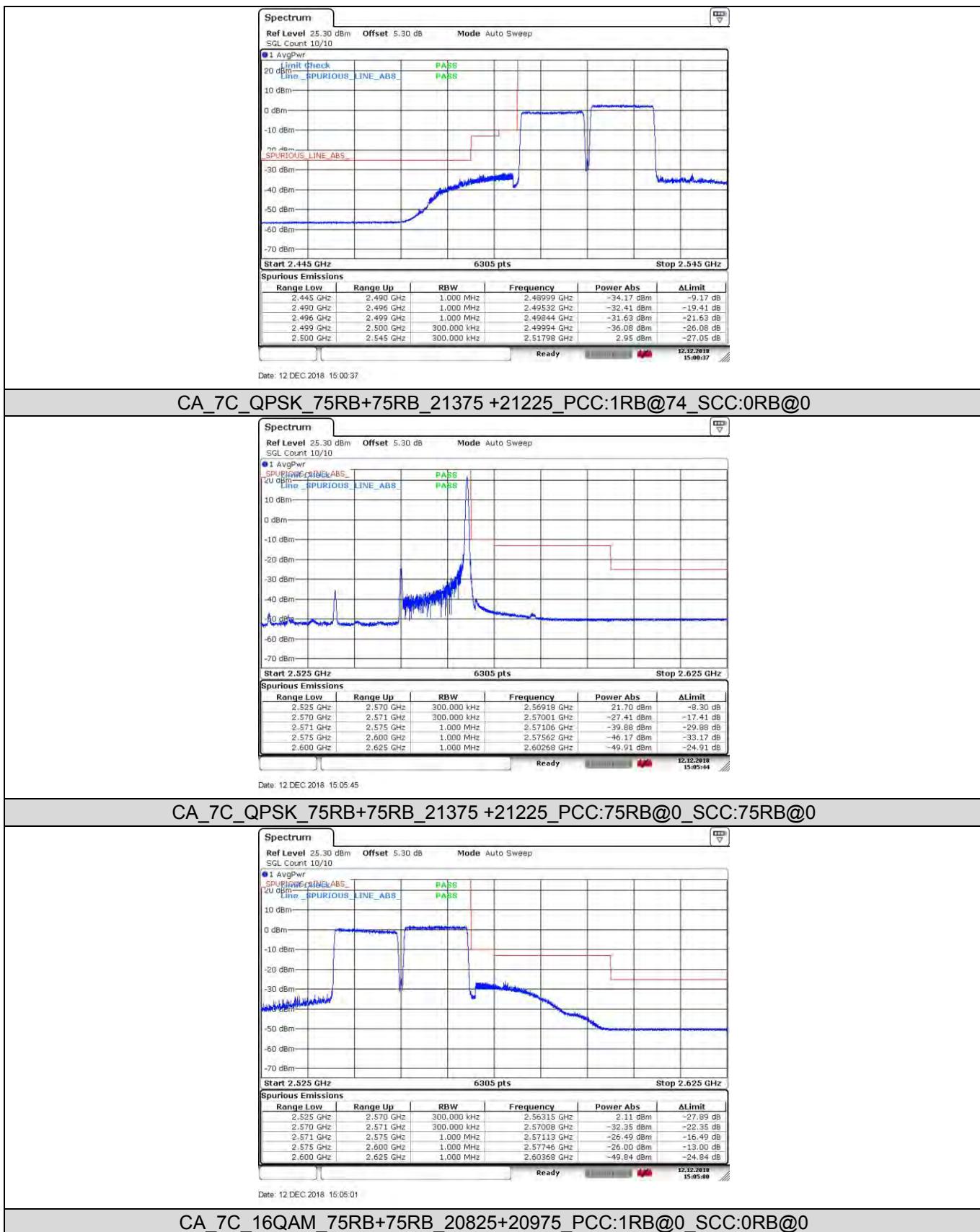
5.1 For LTE

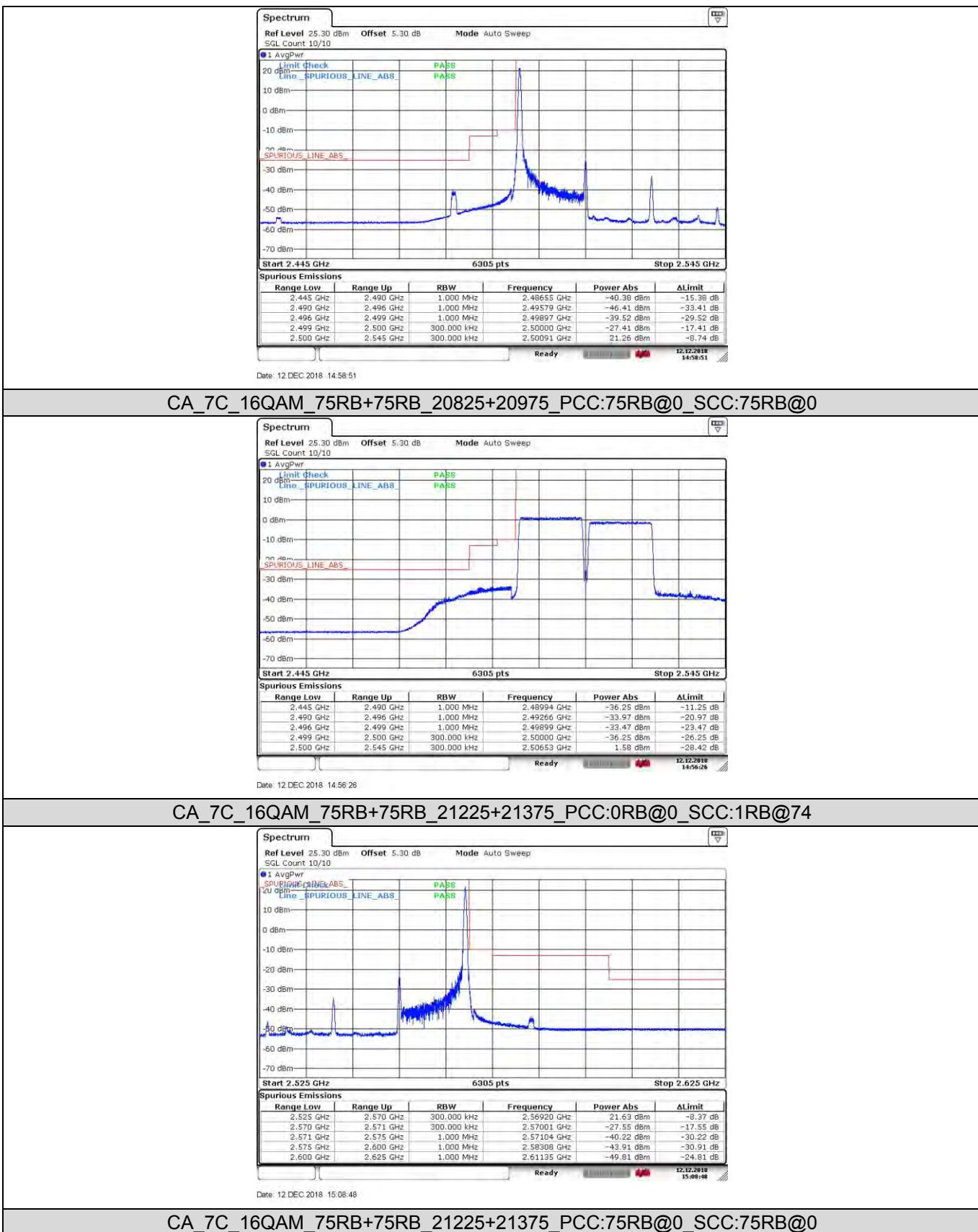
5.1.1 Test Band = LTE Band CA_7C

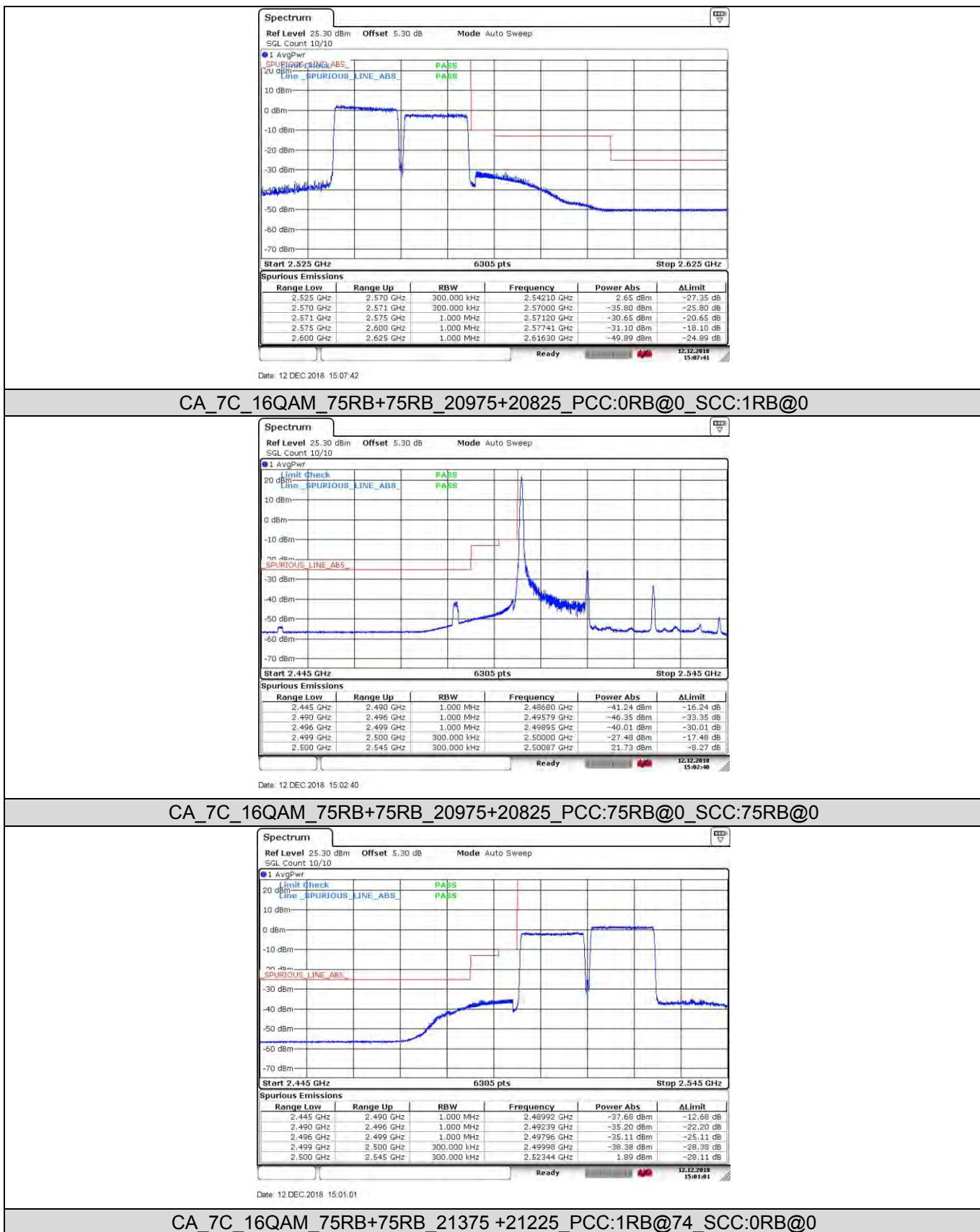


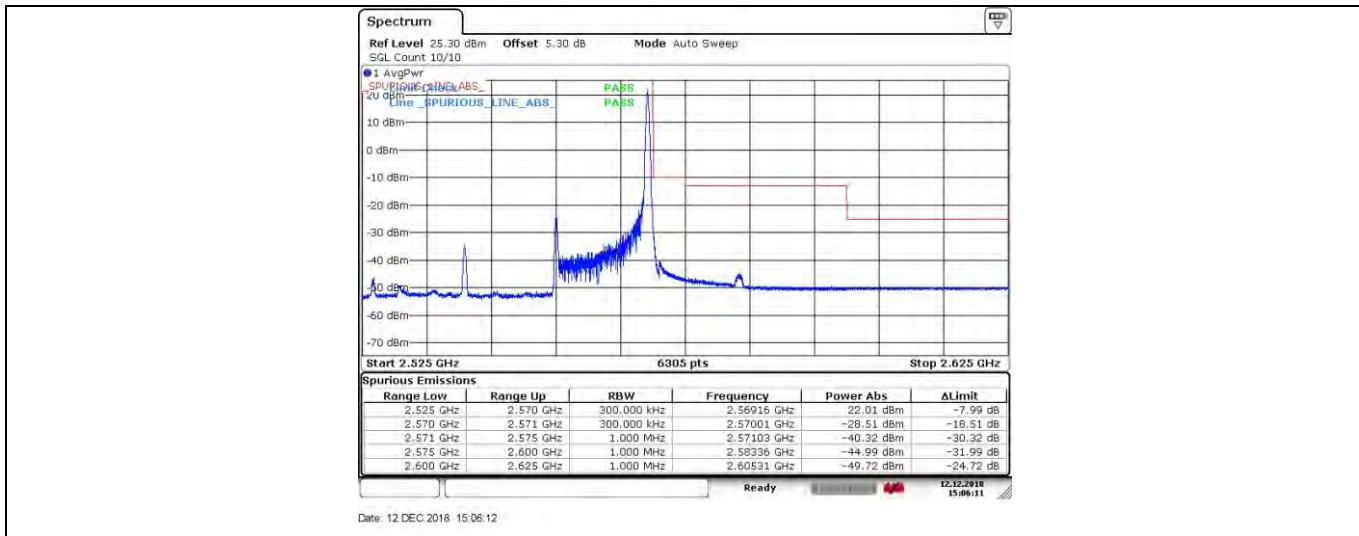
CA_7C_QPSK_75RB+75RB_21225+21375_PCC:0RB@0_SCC:1RB@74







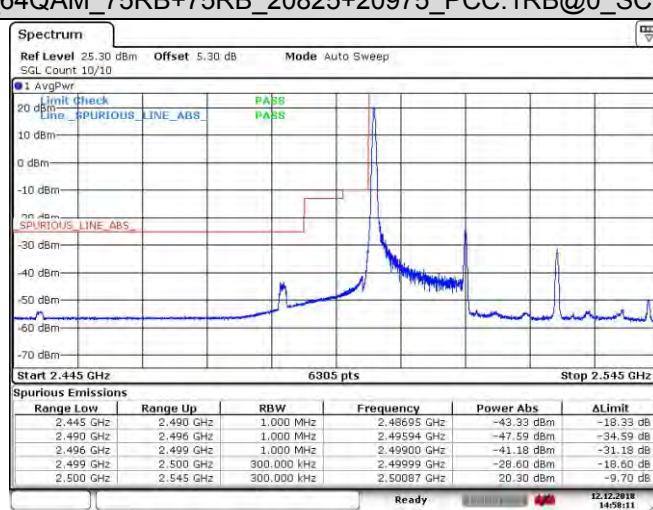




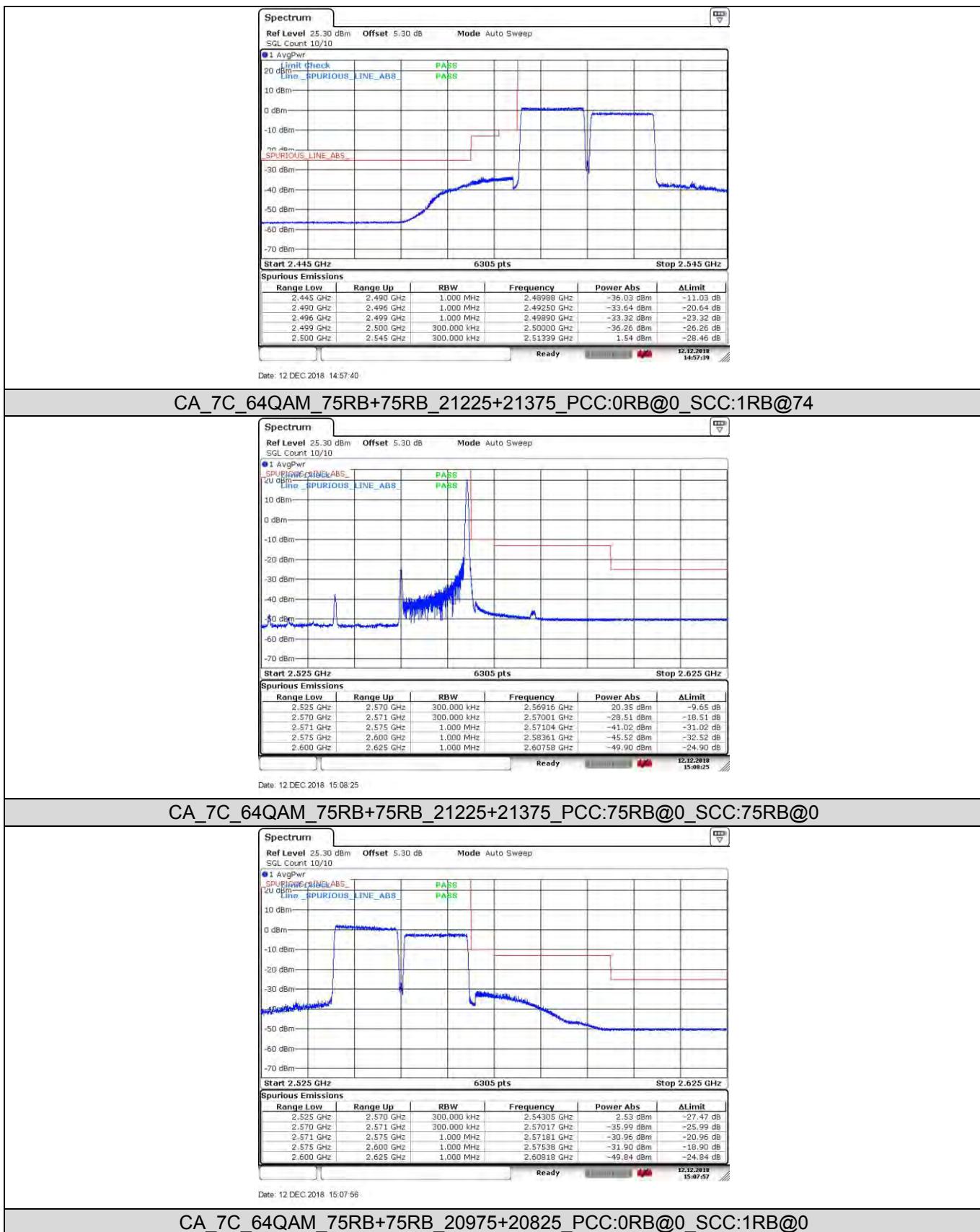
CA_7C_16QAM_75RB+75RB_21375 +21225_PCC:75RB@0_SCC:75RB@0

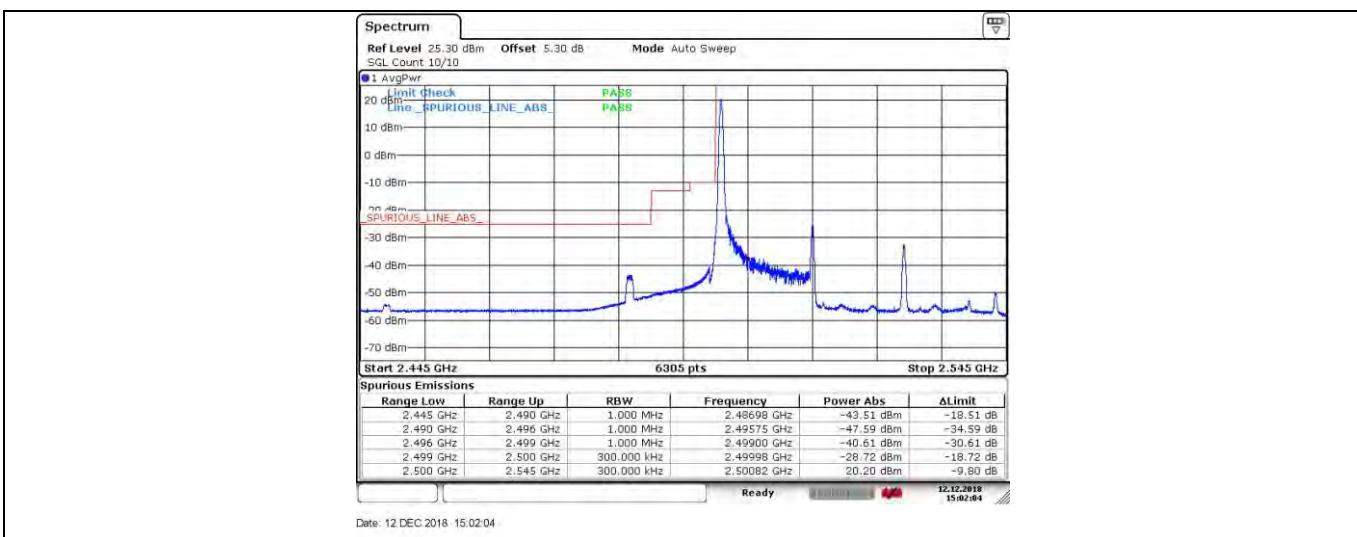
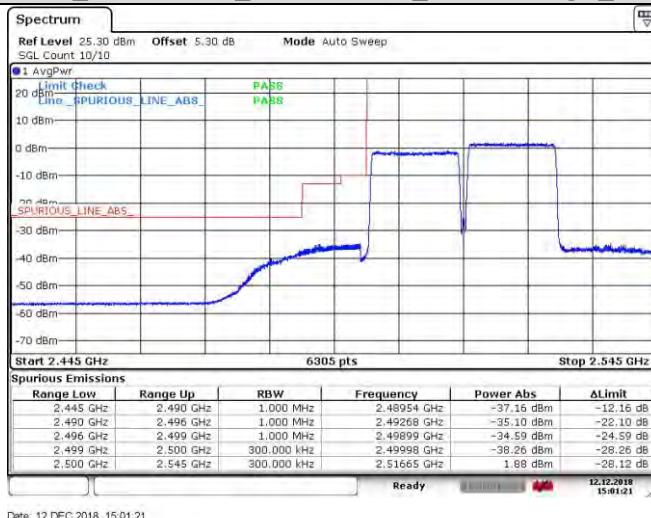
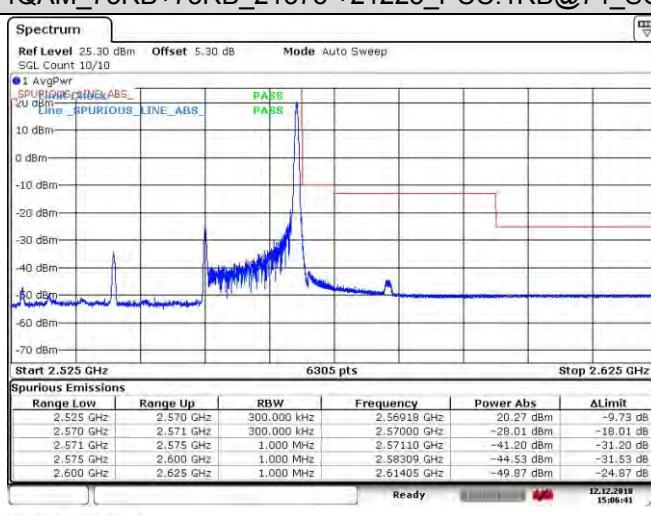


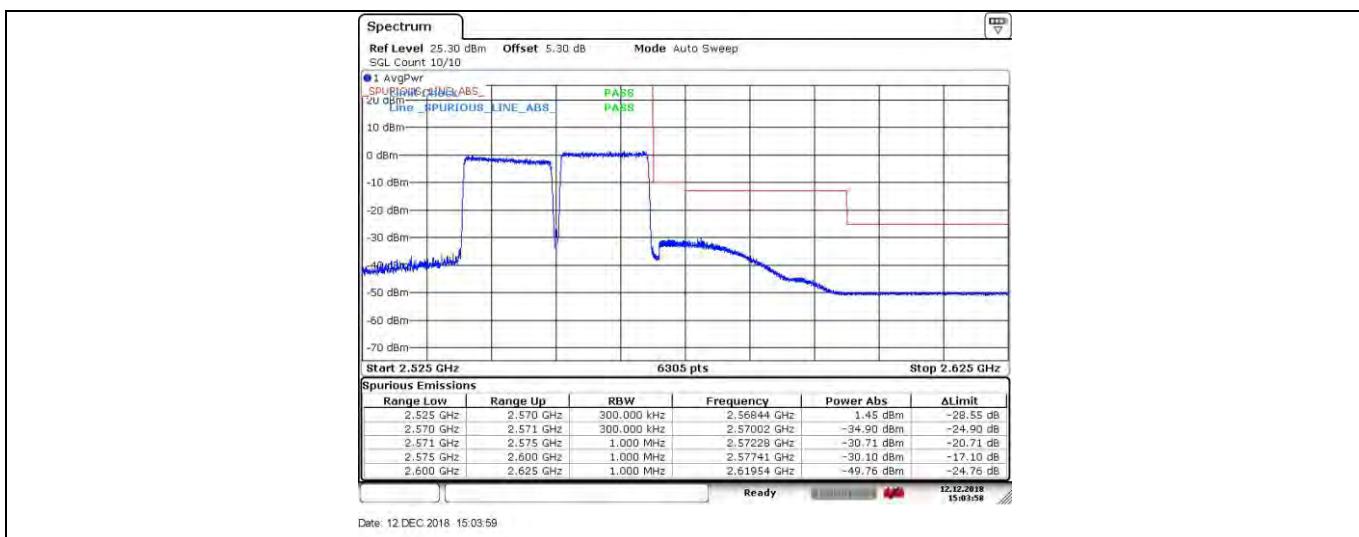
CA_7C_64QAM_75RB+75RB_20825+20975_PCC:1RB@0_SCC:0RB@0



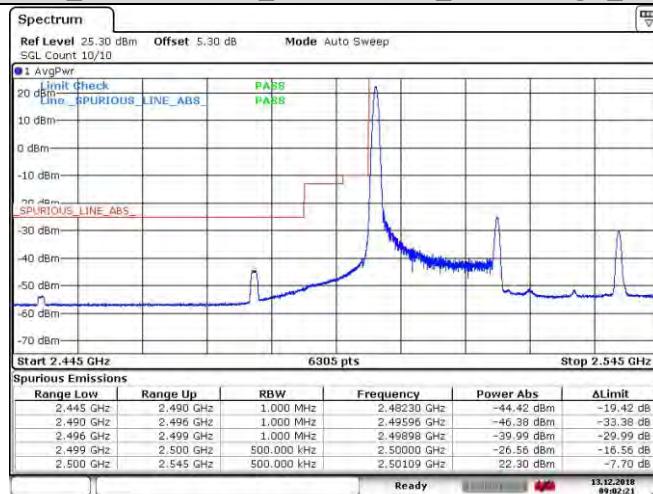
CA_7C_64QAM_75RB+75RB_20825+20975_PCC:75RB@0_SCC:75RB@0



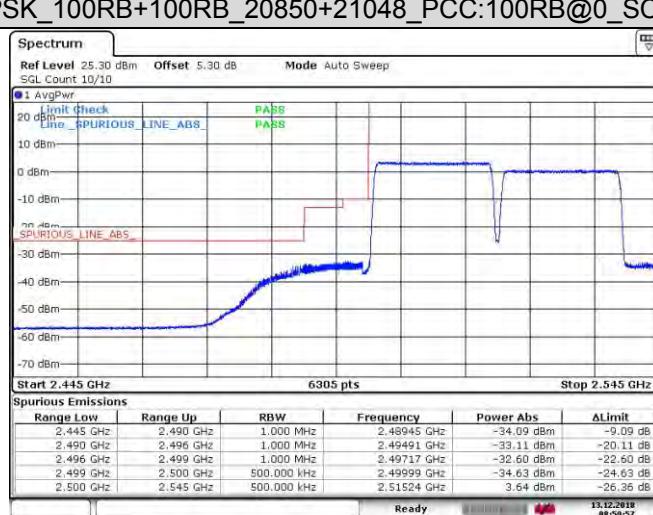
**CA_7C_64QAM_75RB+75RB_20975+20825_PCC:75RB@0_SCC:75RB@0****CA_7C_64QAM_75RB+75RB_21375 +21225_PCC:1RB@74_SCC:0RB@0****CA_7C_64QAM_75RB+75RB_21375 +21225_PCC:75RB@0_SCC:75RB@0**



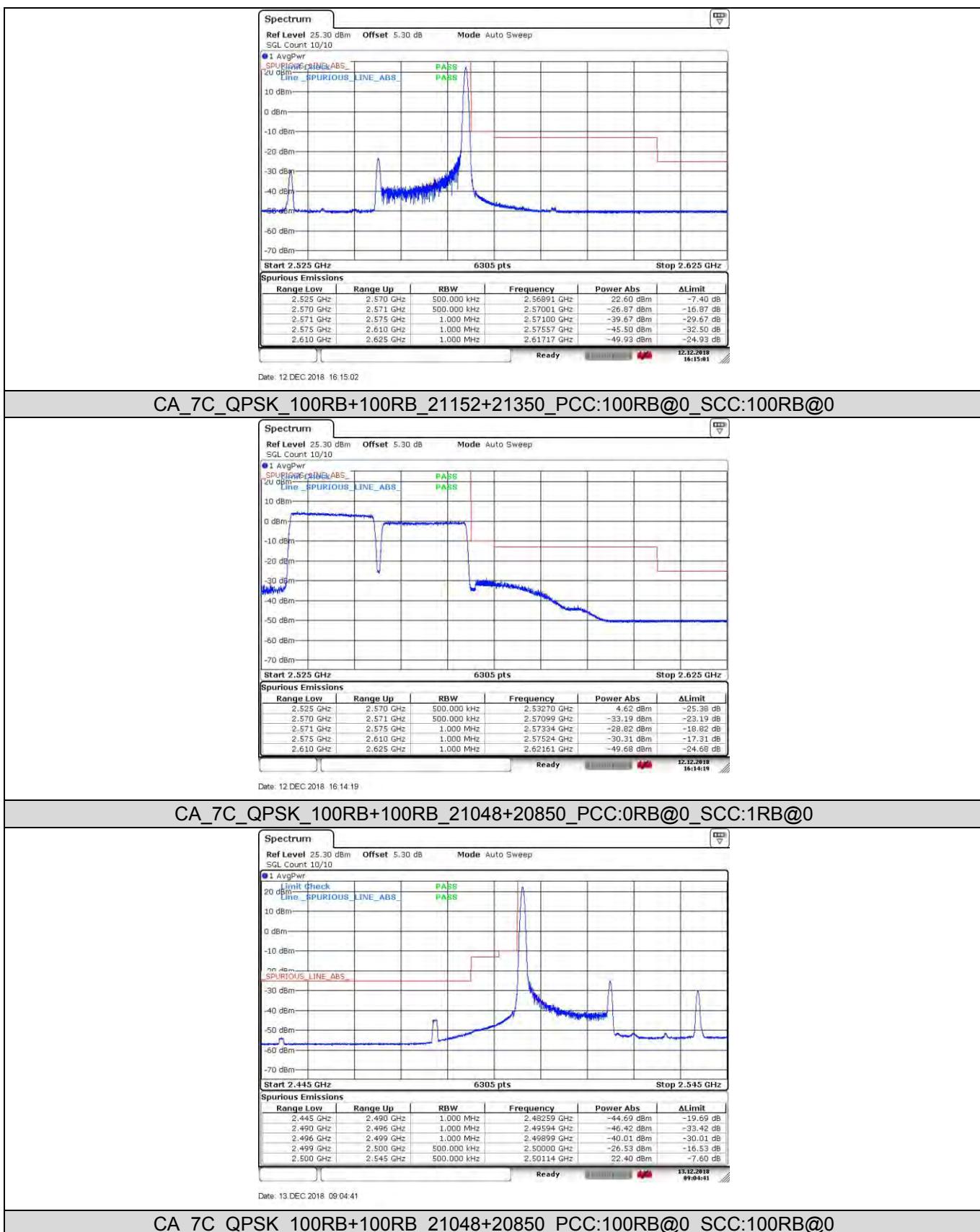
CA_7C_QPSK_100RB+100RB_20850+21048_PCC:1RB@0_SCC:0RB@0

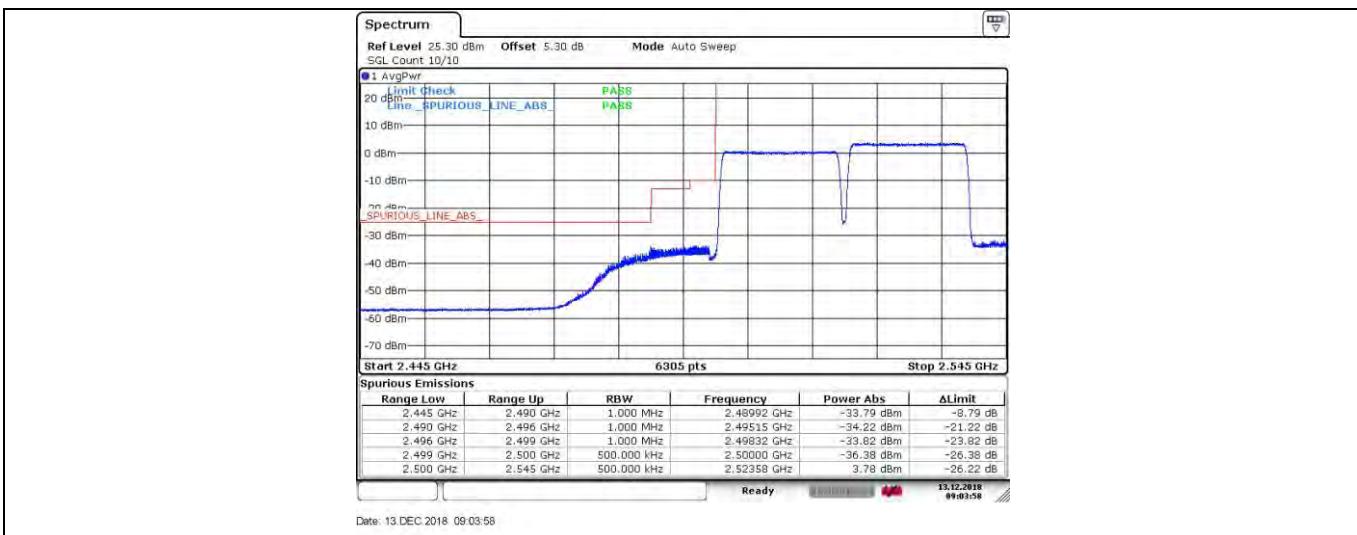


CA_7C_QPSK_100RB+100RB_20850+21048_PCC:100RB@0_SCC:100RB@0

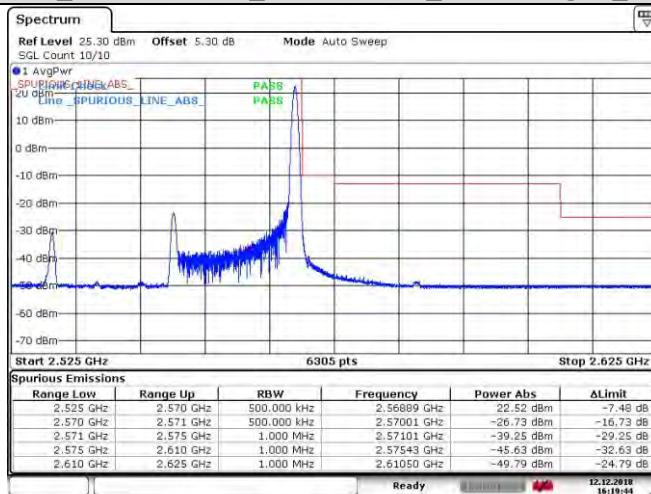


CA_7C_QPSK_100RB+100RB_21152+21350_PCC:0RB@0_SCC:1RB@99





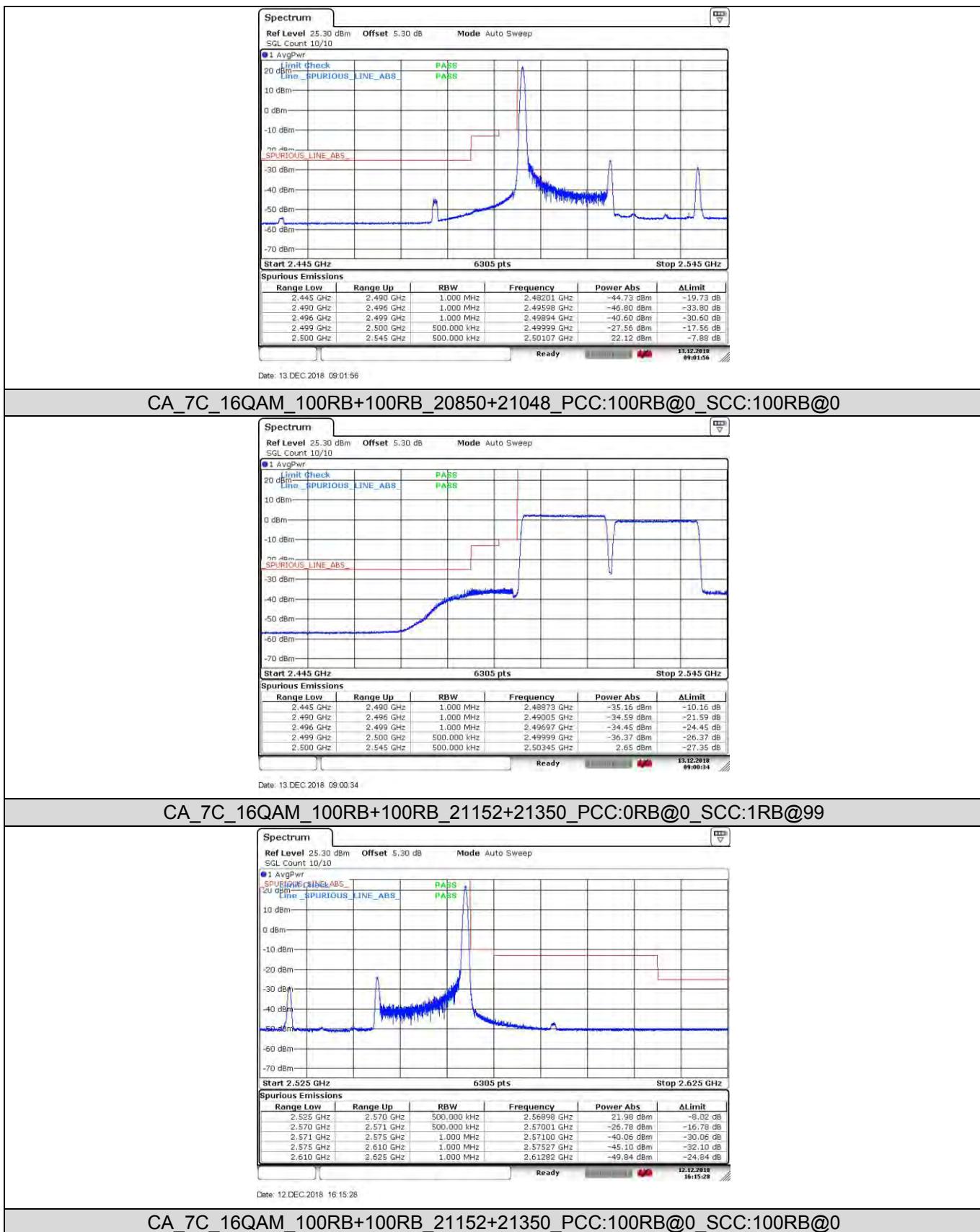
CA_7C_QPSK_100RB+100RB_21350+21152_PCC:1RB@99_SCC:0RB@0

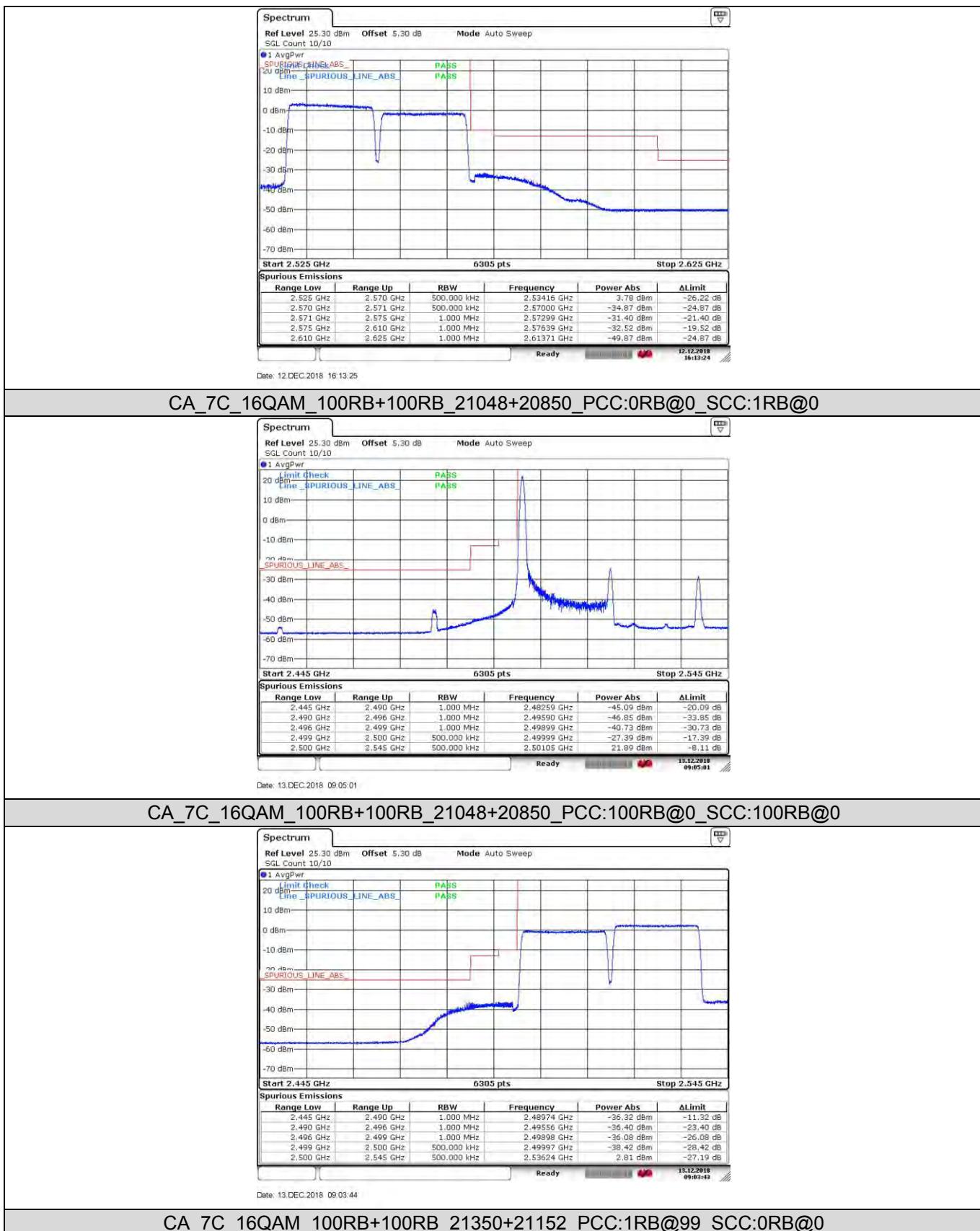


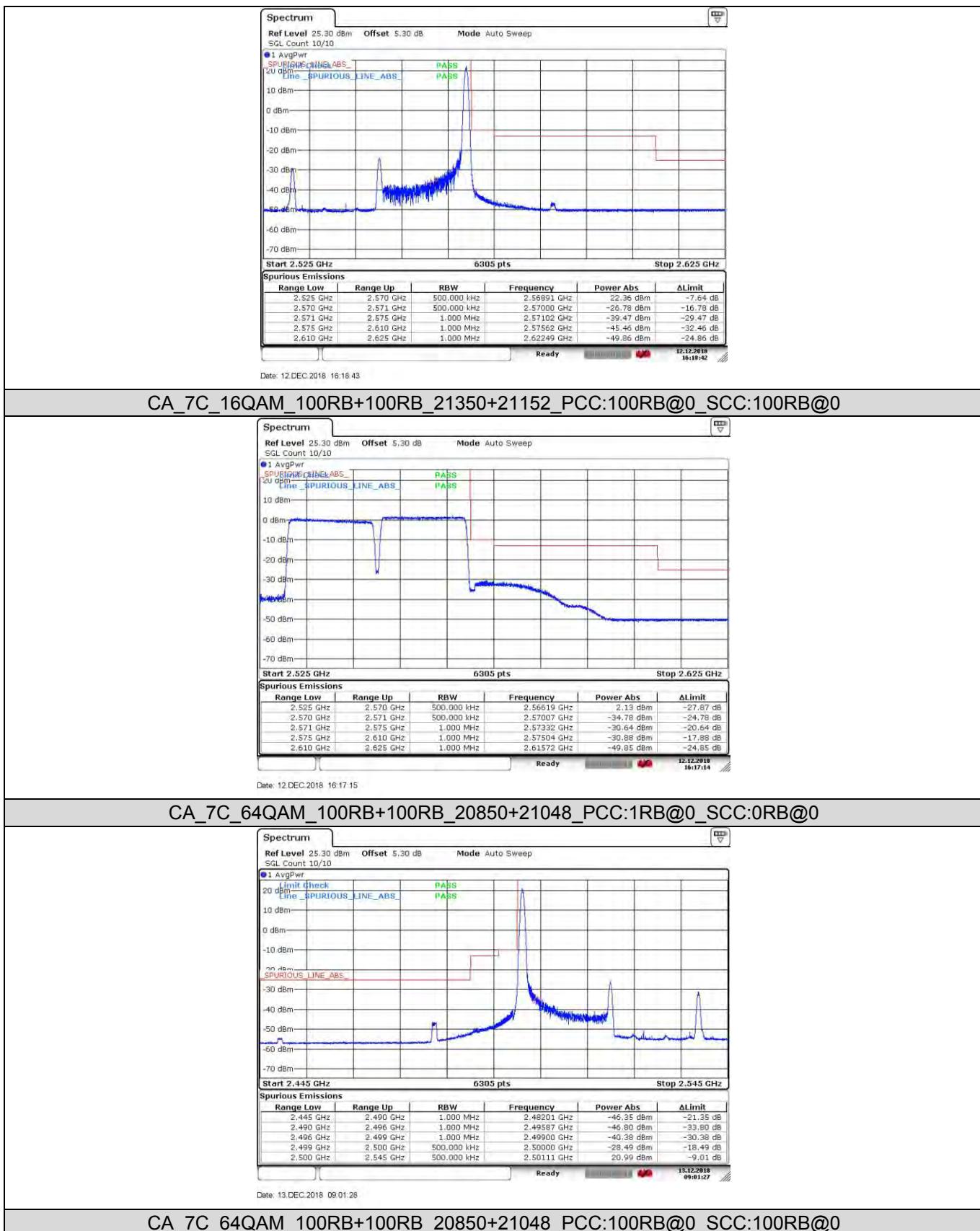
CA_7C_QPSK_100RB+100RB_21350+21152_PCC:100RB@0_SCC:100RB@0

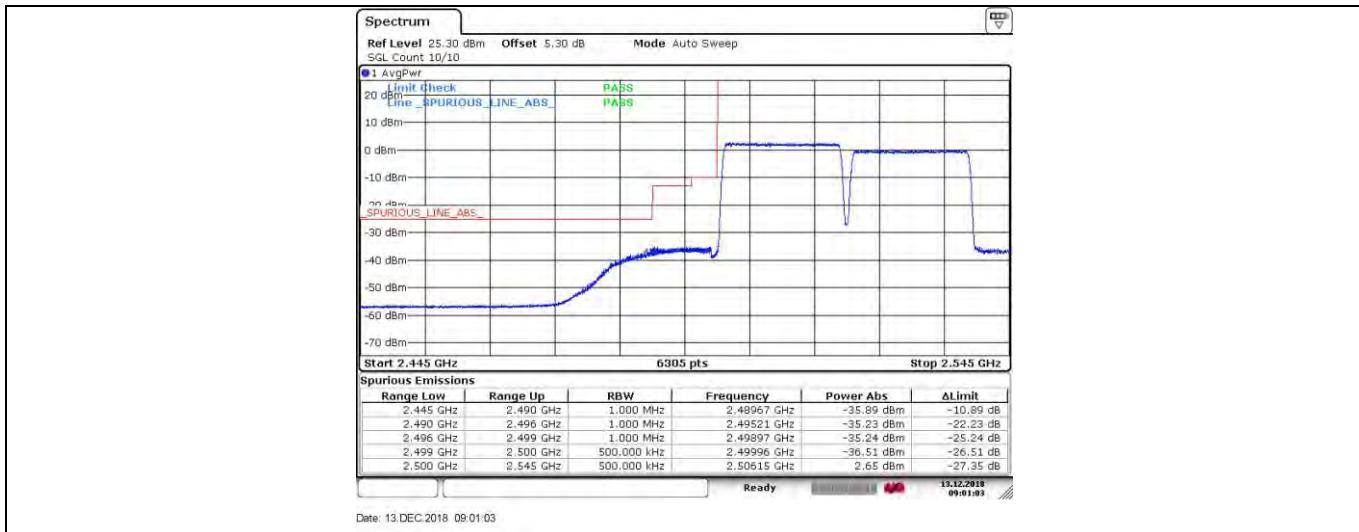
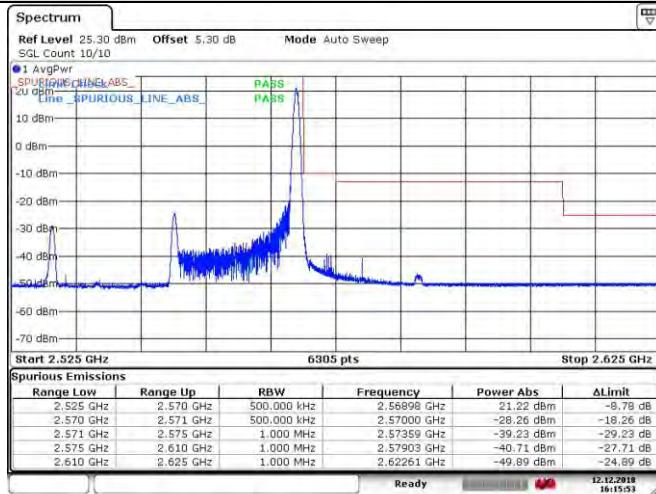
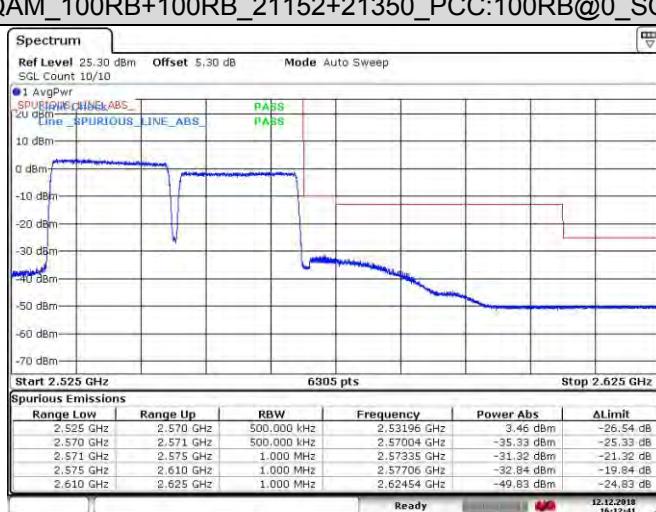


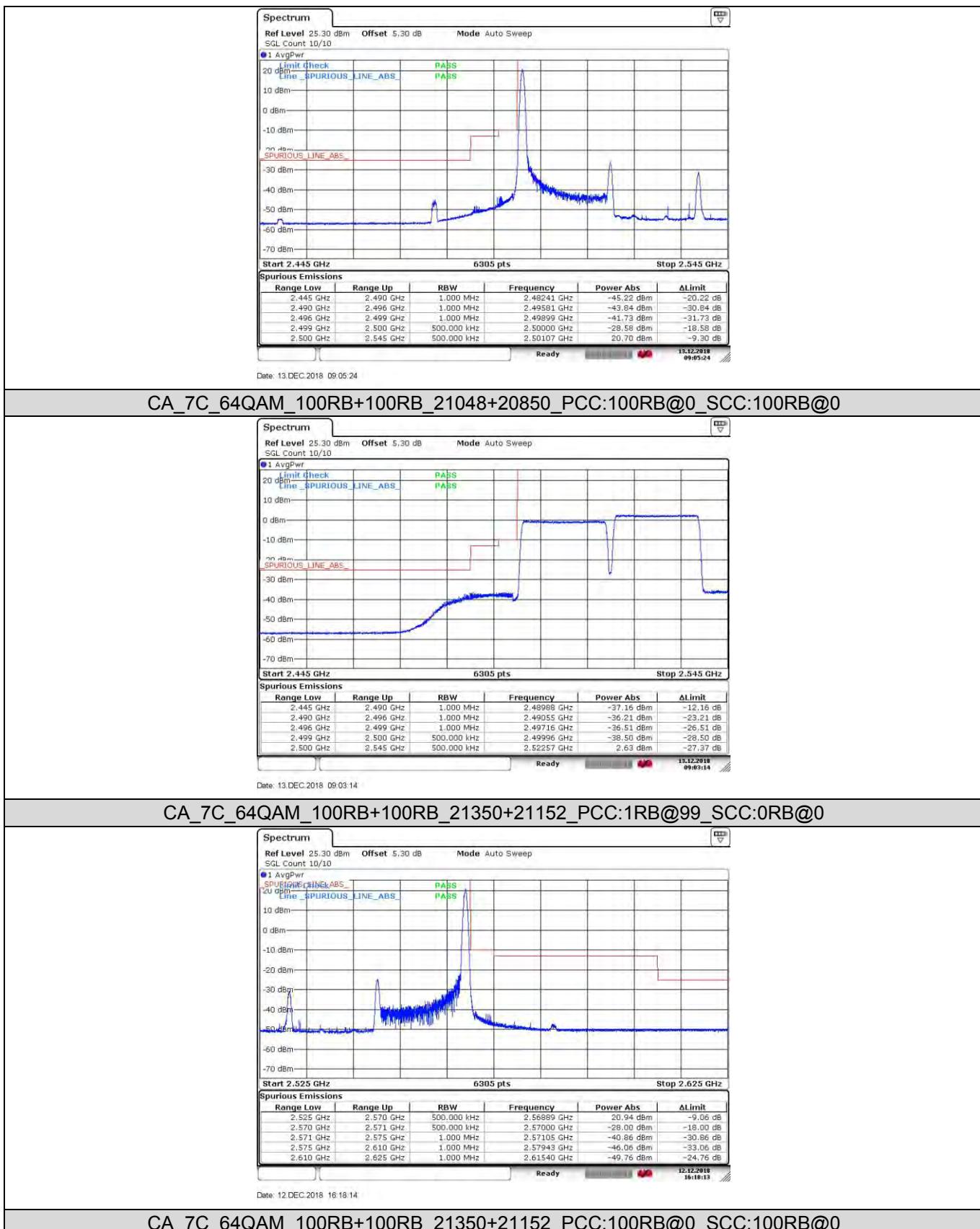
CA_7C_16QAM_100RB+100RB_20850+21048_PCC:1RB@0_SCC:0RB@0

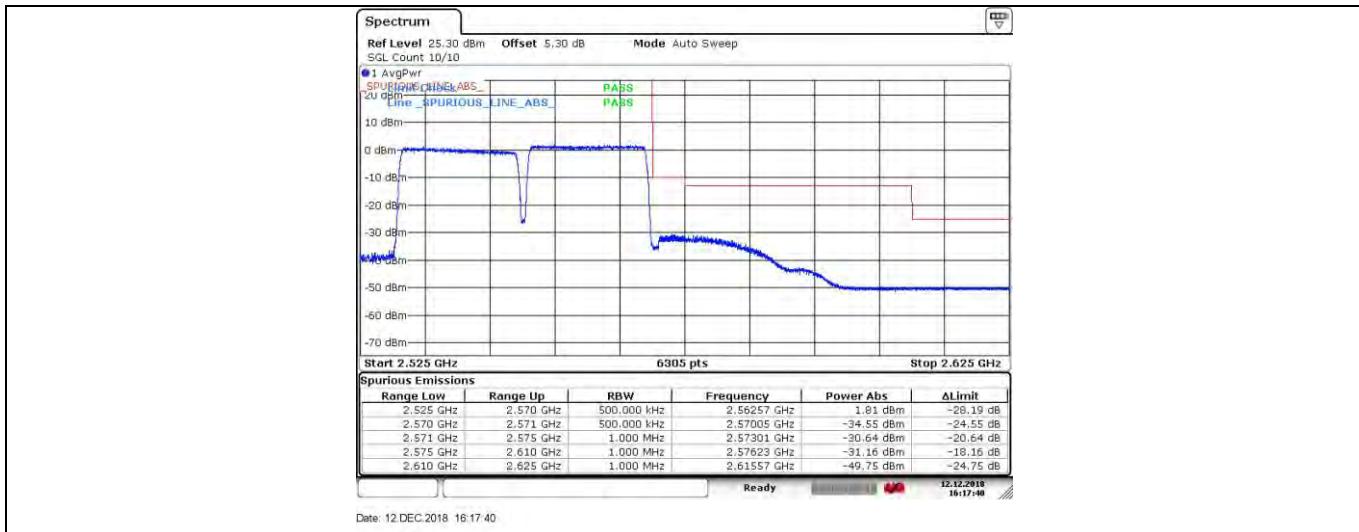






**CA_7C_64QAM_100RB+100RB_21152+21350_PCC:0RB@0_SCC:1RB@99****CA_7C_64QAM_100RB+100RB_21152+21350_PCC:100RB@0_SCC:100RB@0****CA_7C_64QAM_100RB+100RB_21048+20850_PCC:0RB@0_SCC:1RB@0**





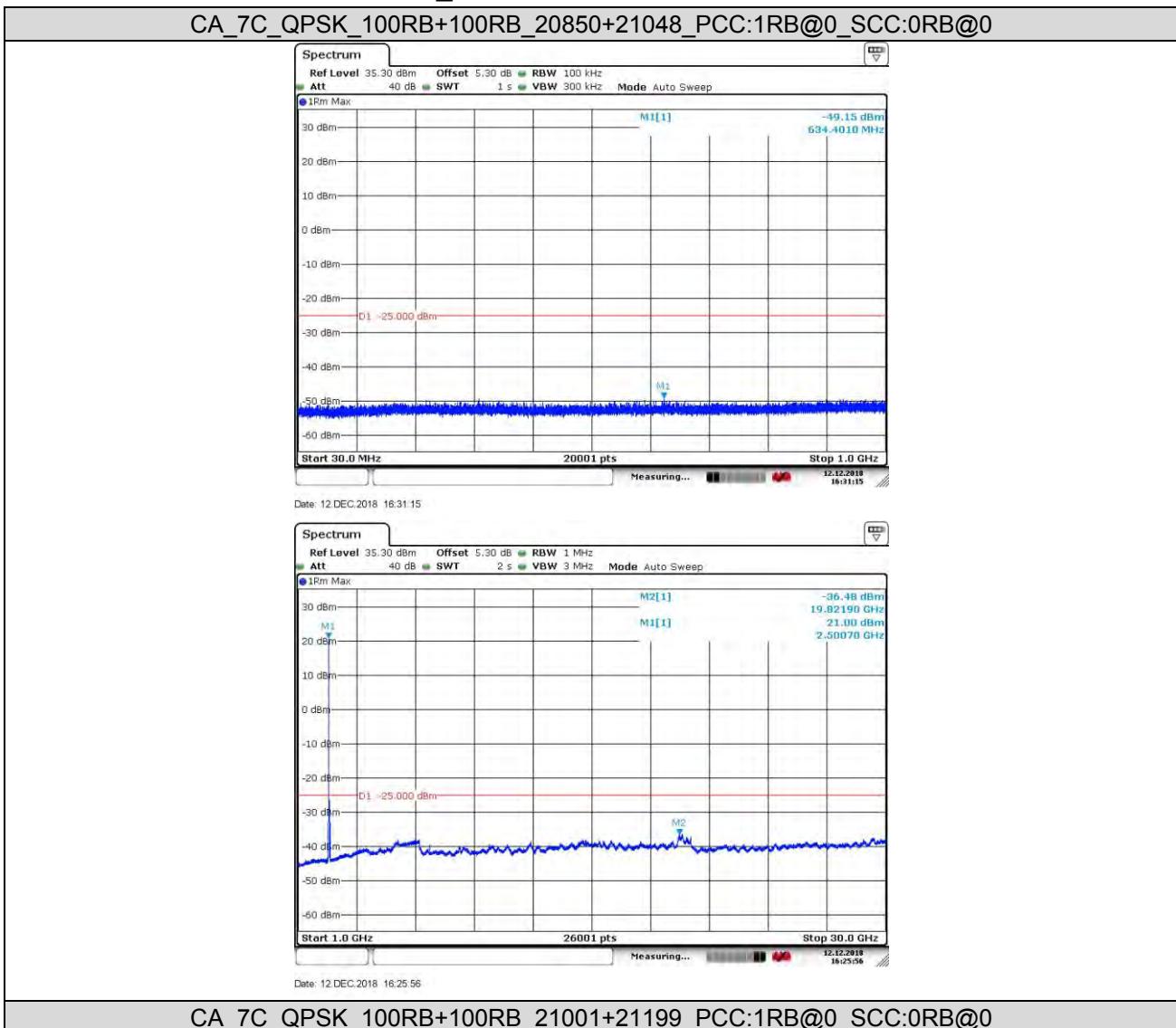
6 Spurious Emission at Antenna Terminal

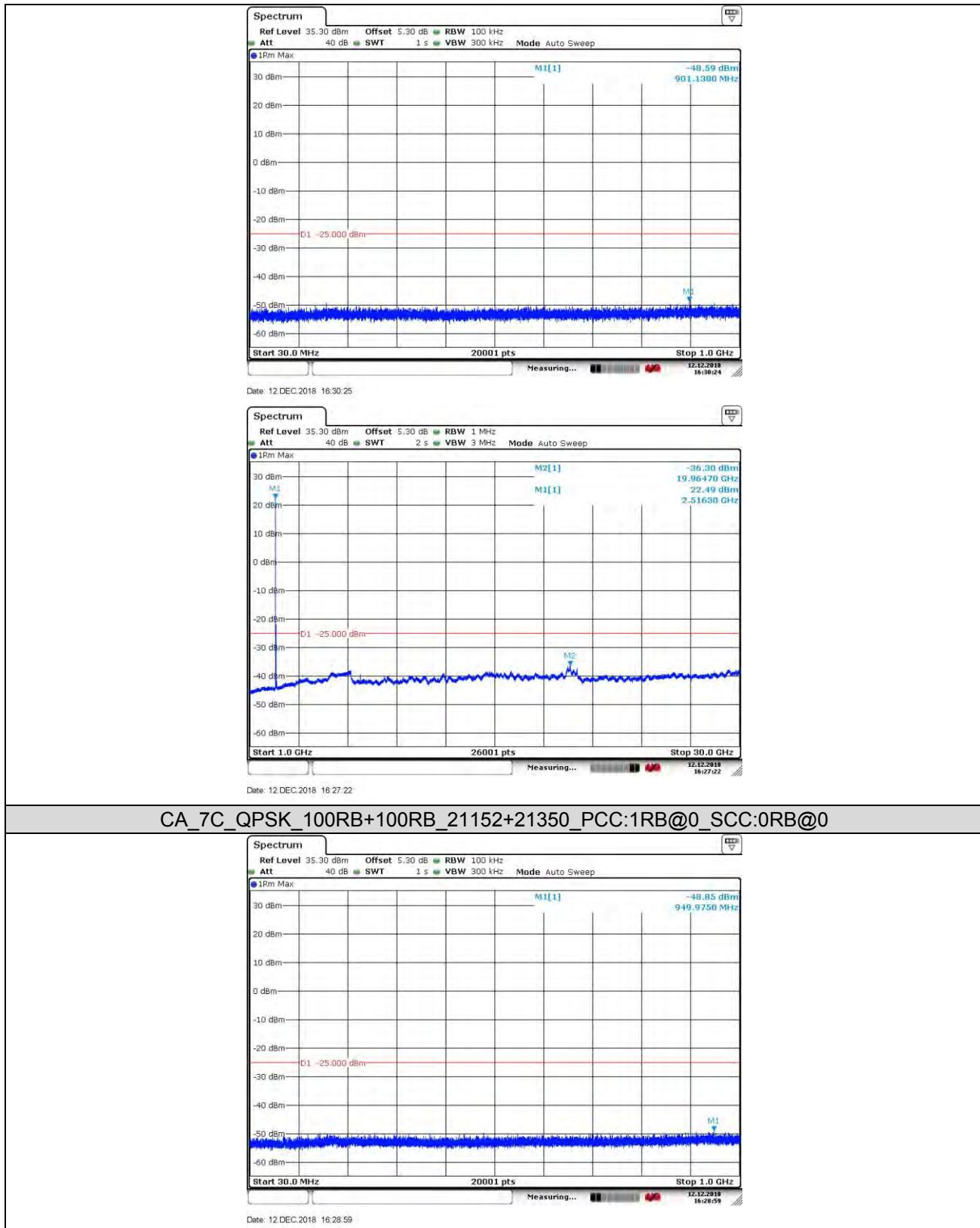
NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< \text{RBW}/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

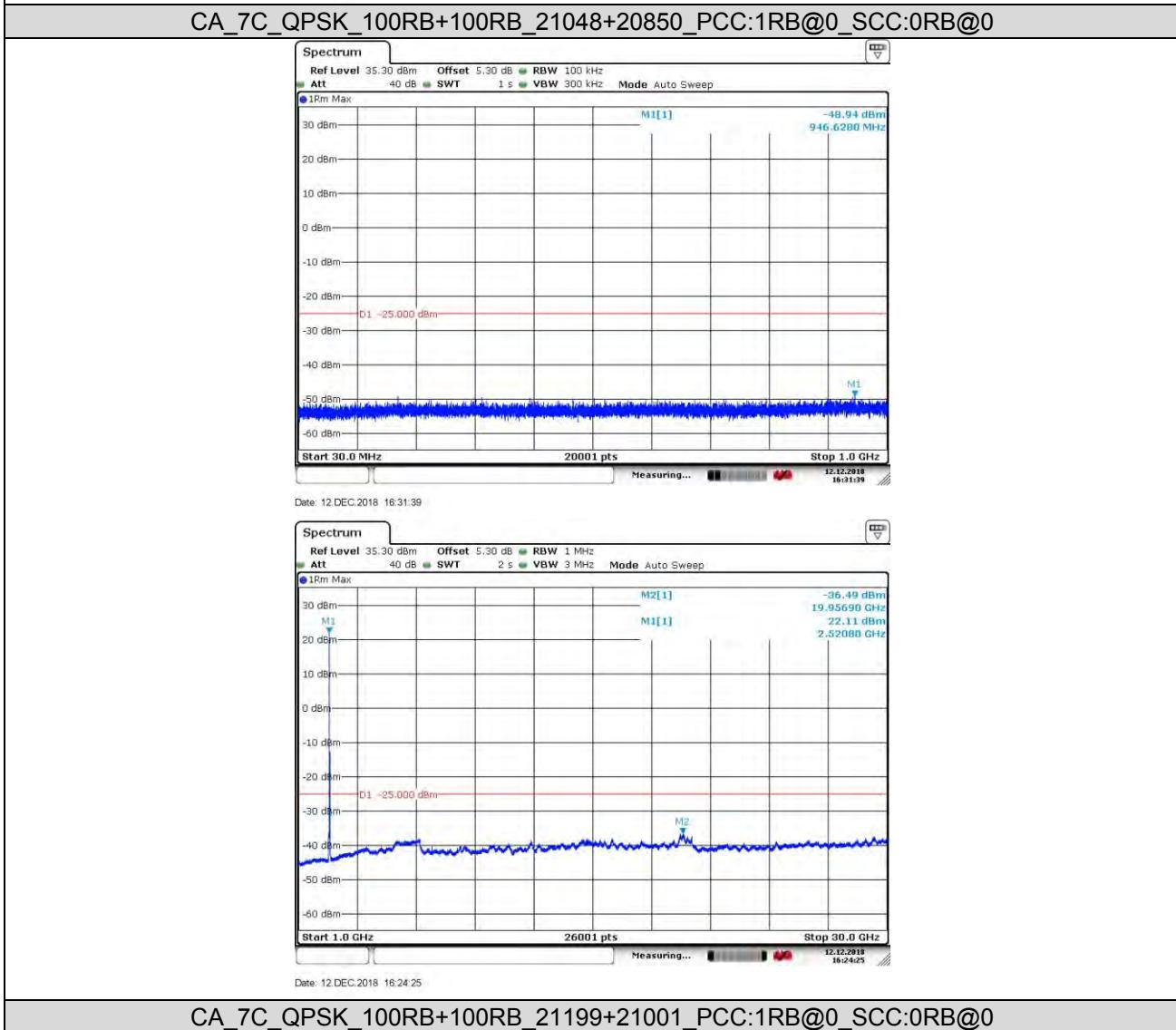
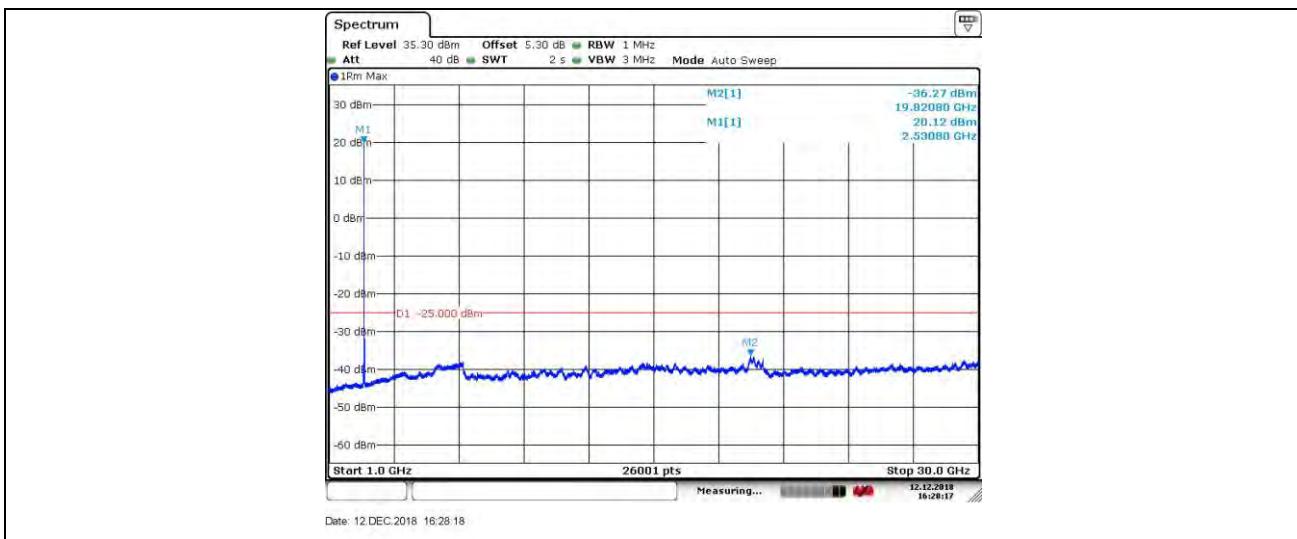
Part I - Test Plots

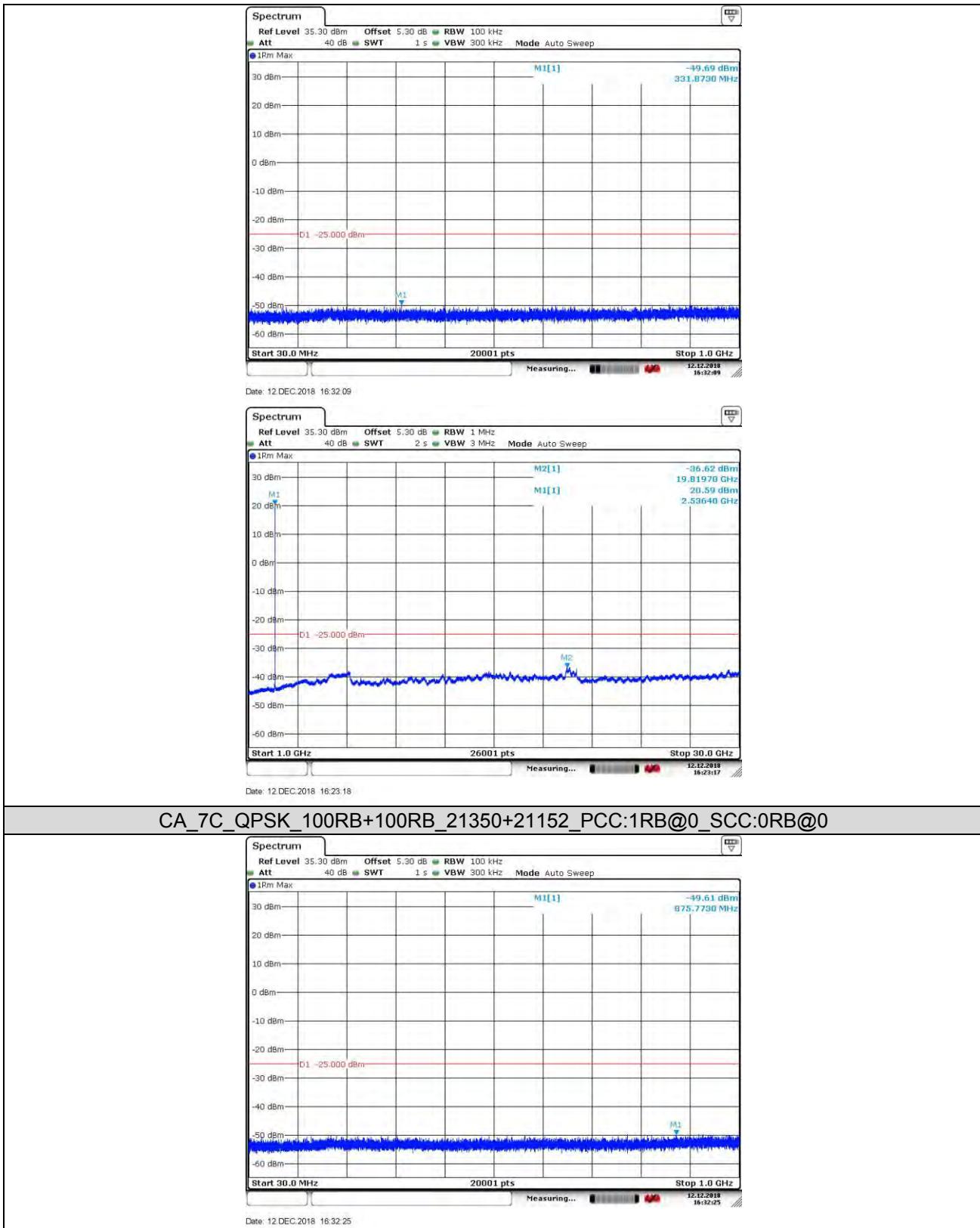
6.1 For LTE

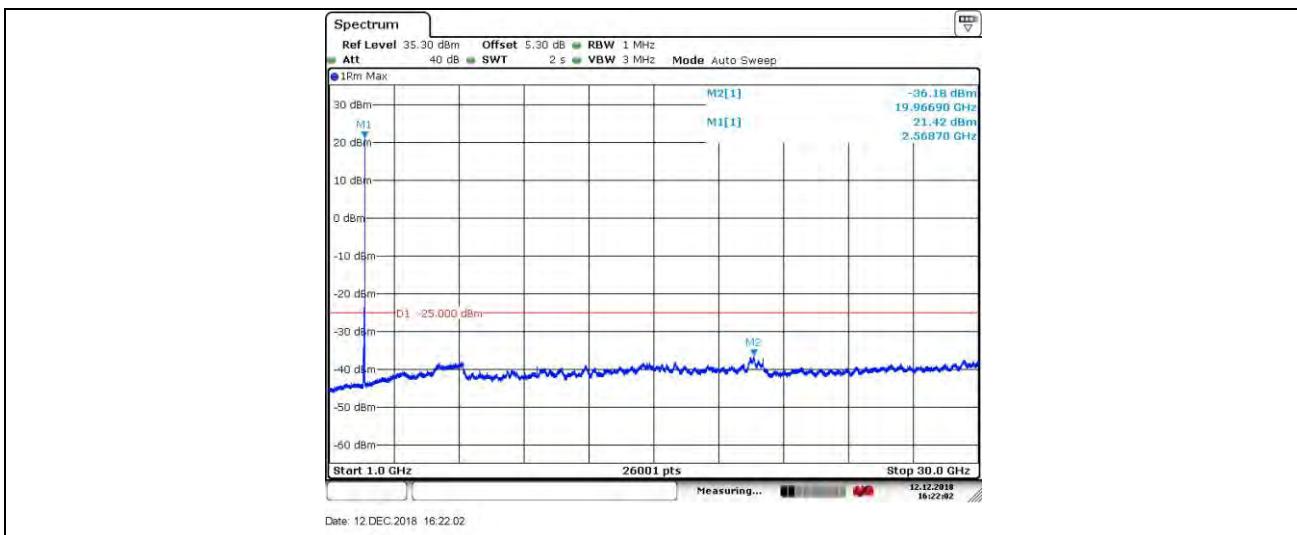
6.1.1 Test Band = LTE Band CA_7C











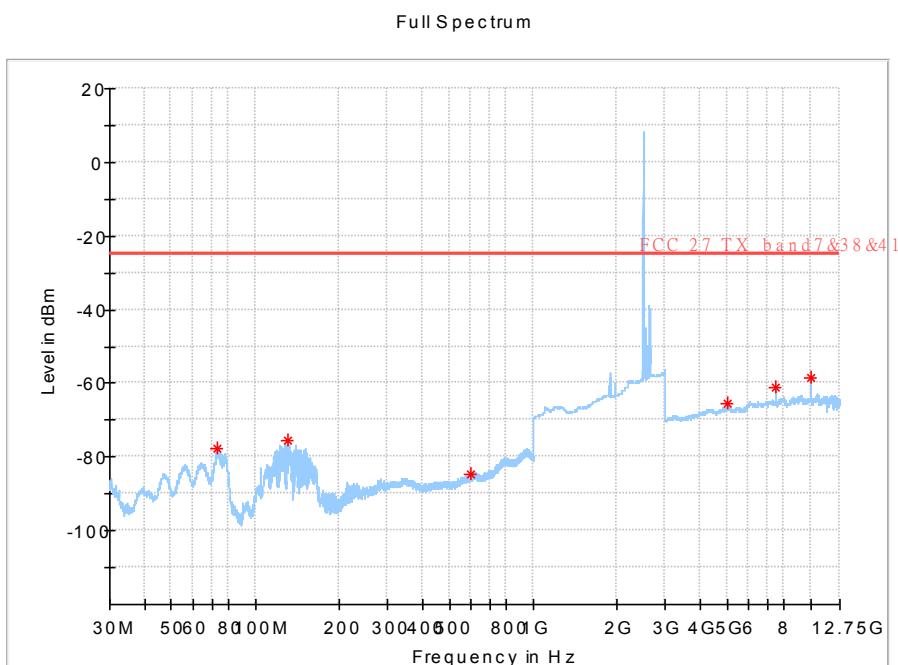
7 Field Strength of Spurious Radiation

7.1 For LTE

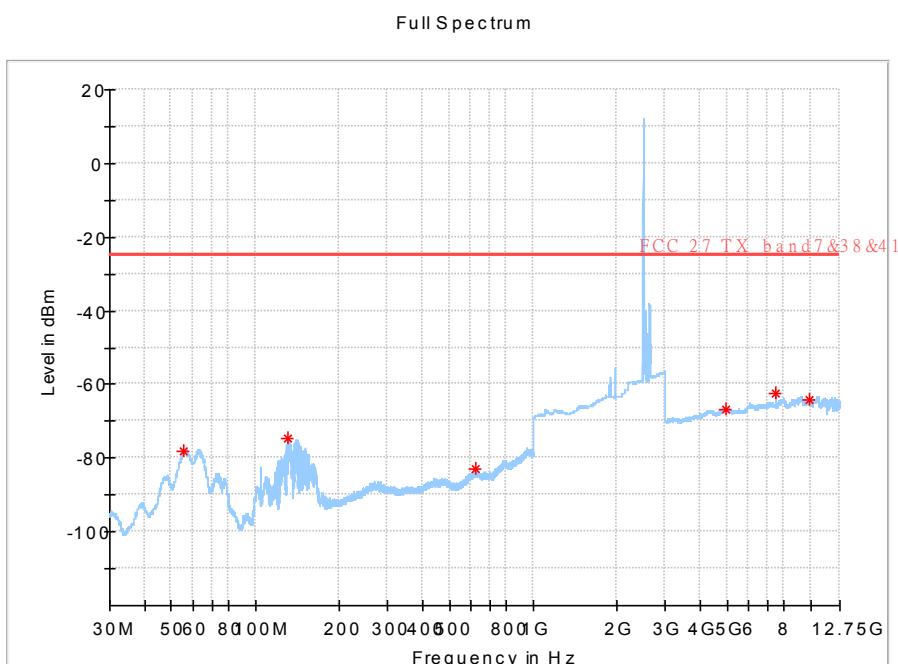
7.1.1 Test Band = LTE Band CA_7C_Main Antenna

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

7.1.1.1.1 Test Channel = LCH-Vertical

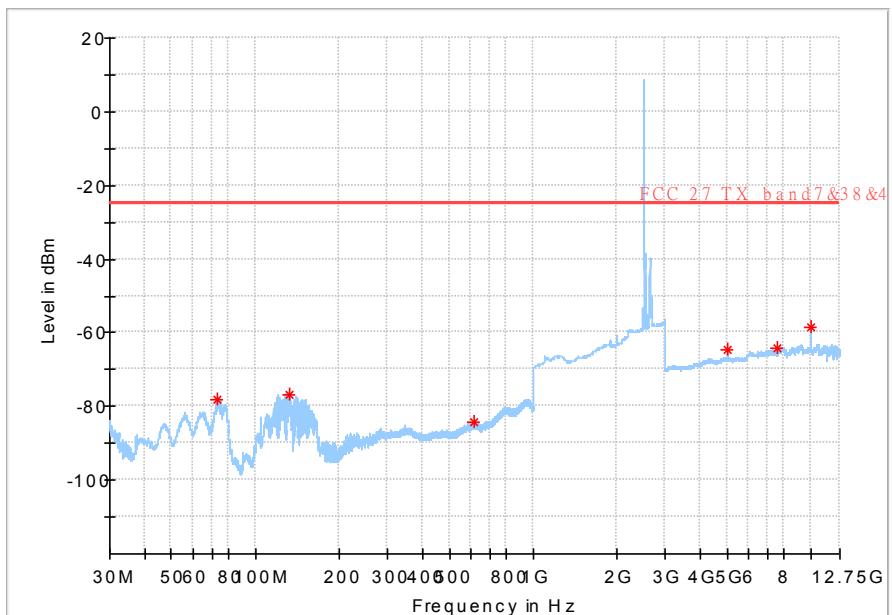


7.1.1.1.2 Test Channel = LCH-Horizontal

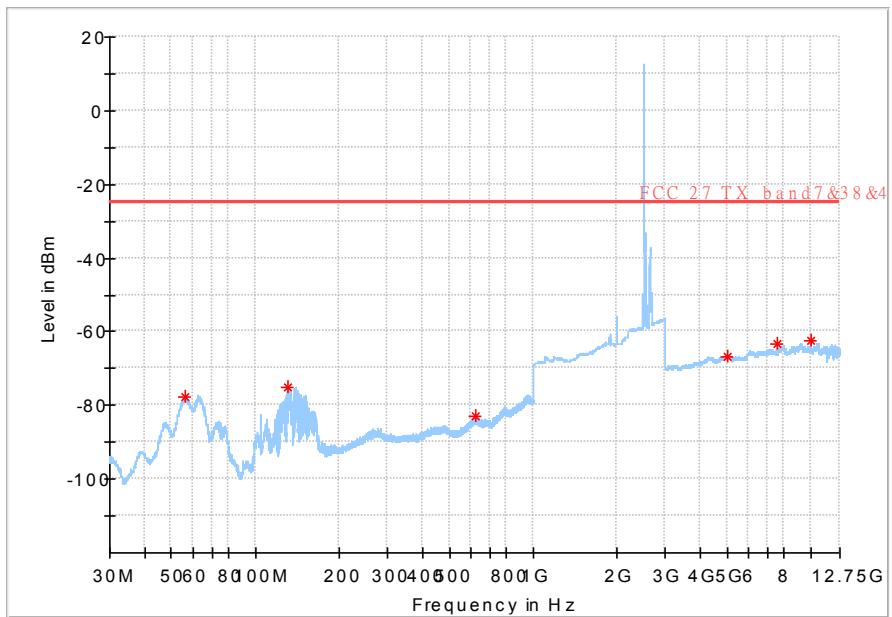


7.1.1.1.3 Test Channel = MCH-Vertical

Full Spectrum

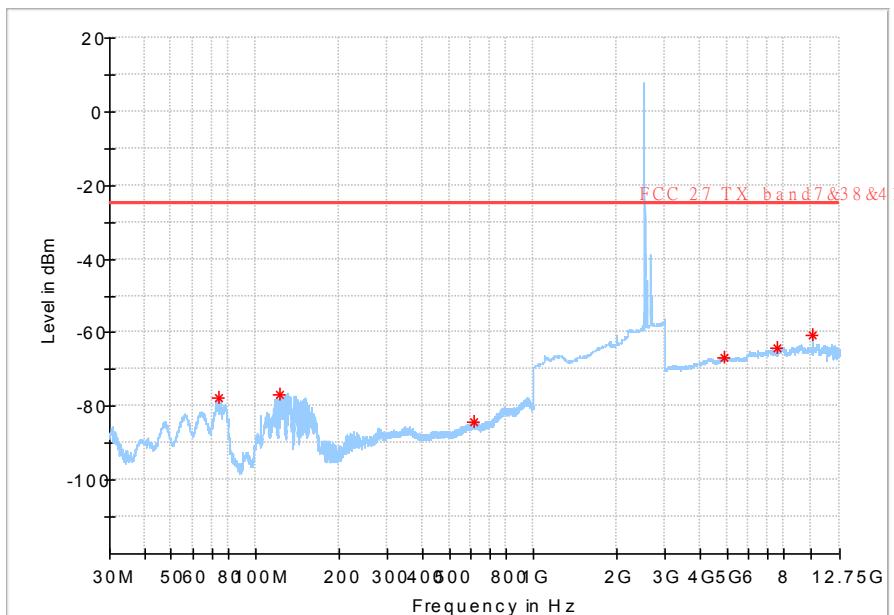
**7.1.1.1.4 Test Channel = MCH-Horizontal**

Full Spectrum

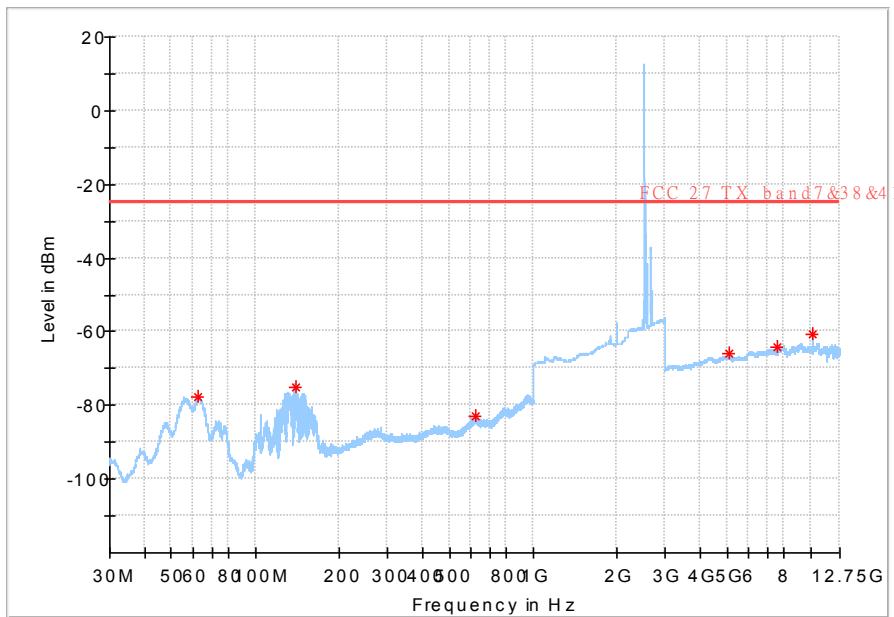


7.1.1.1.5 Test Channel = HCH-Vertical

Full Spectrum

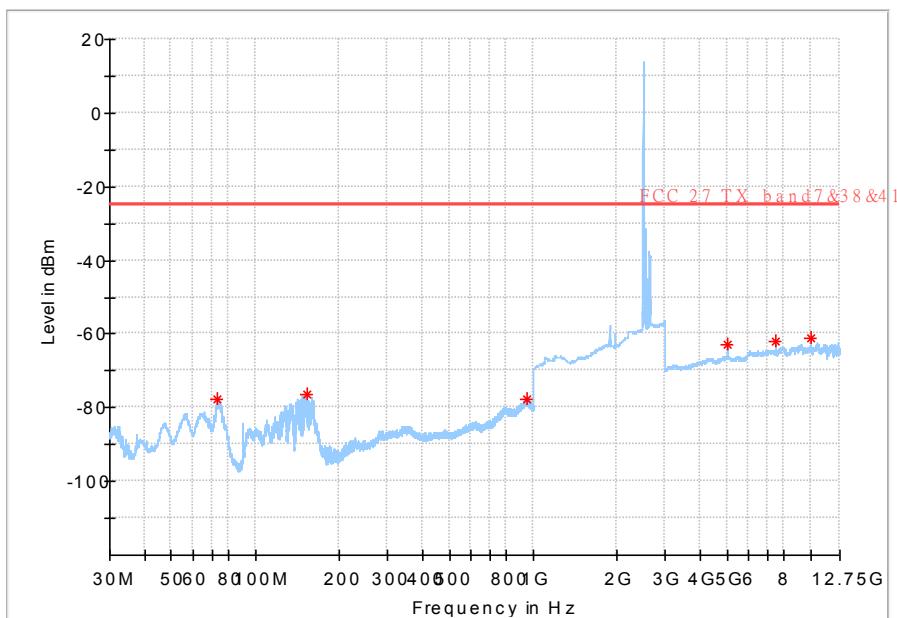
**7.1.1.1.6 Test Channel = HCH-Horizontal**

Full Spectrum

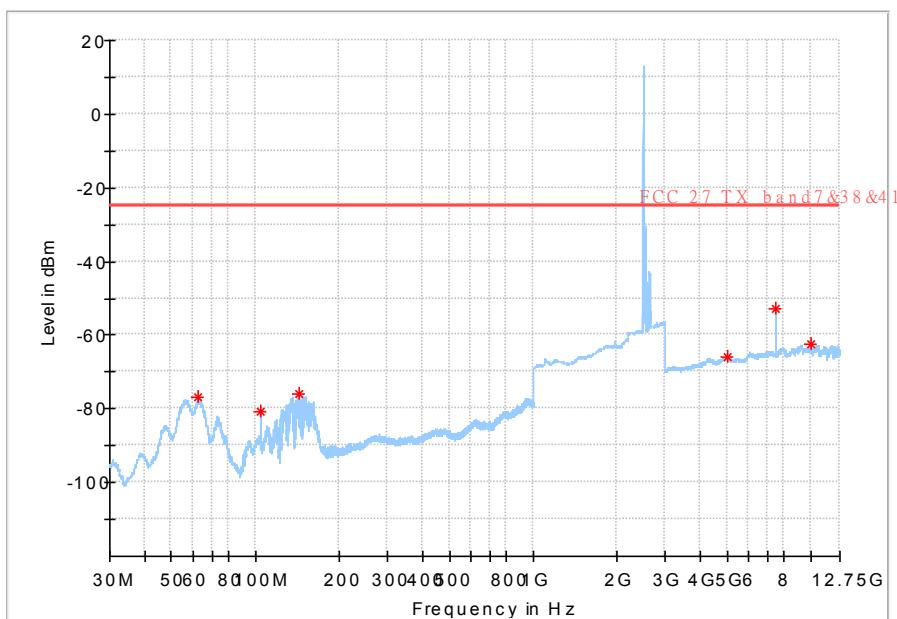


7.1.2 Test Band = LTE Band CA_7C_Secondary Antenna**7.1.2.1 Test Mode =LTE/QPSK 100RB+100RB****7.1.2.1.1 Test Channel = LCH-Vertical**

Full Spectrum

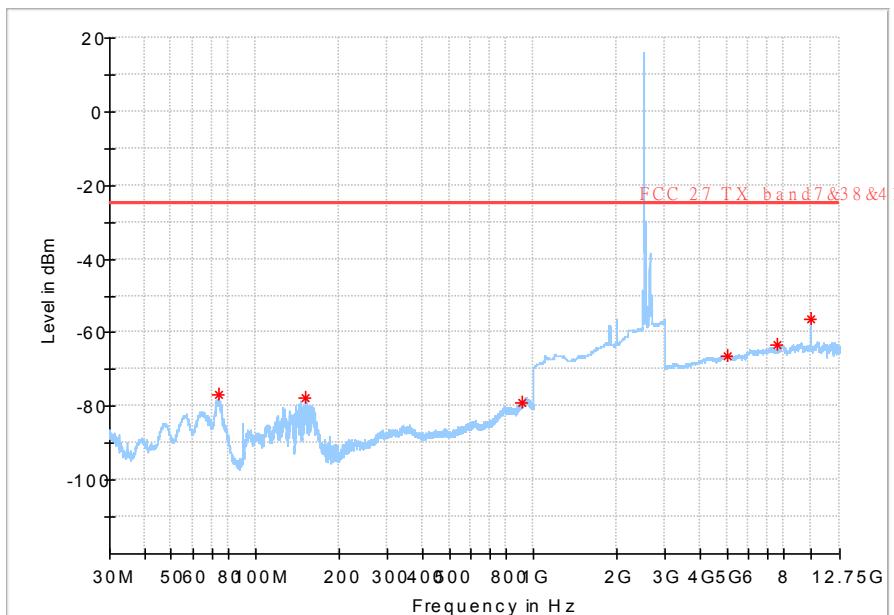
**7.1.2.1.2 Test Channel = LCH-Horizontal**

Full Spectrum

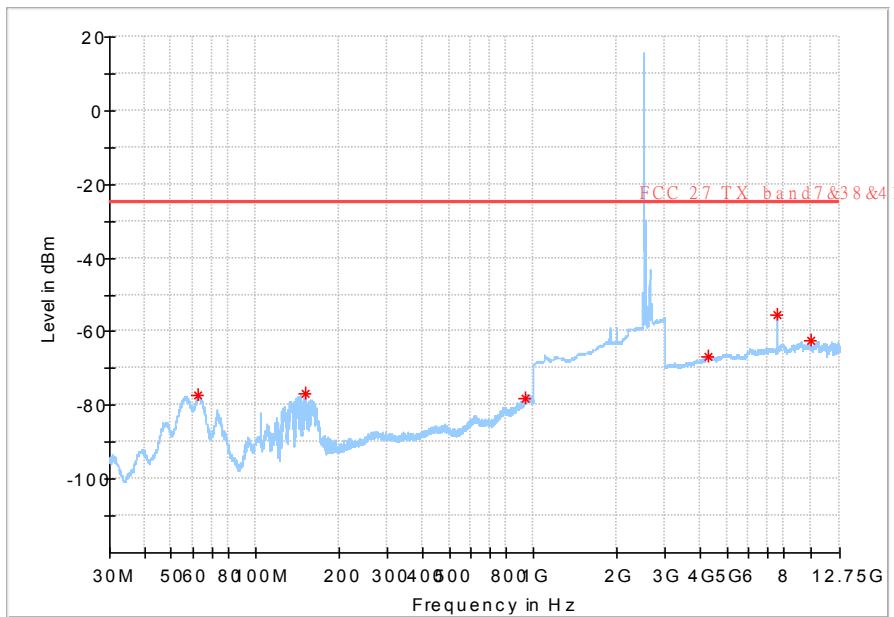


7.1.2.1.3 Test Channel = MCH-Vertical

Full Spectrum

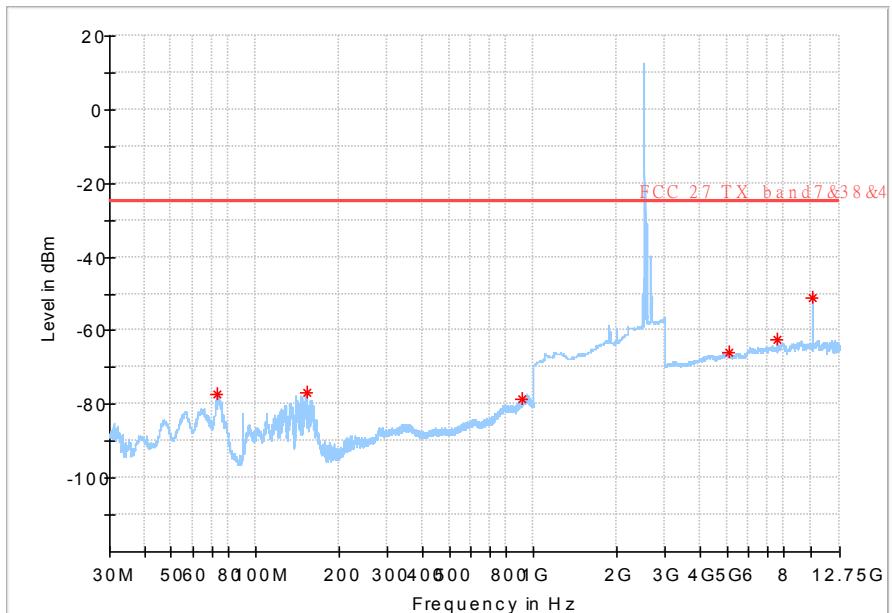
**7.1.2.1.4 Test Channel = MCH-Horizontal**

Full Spectrum

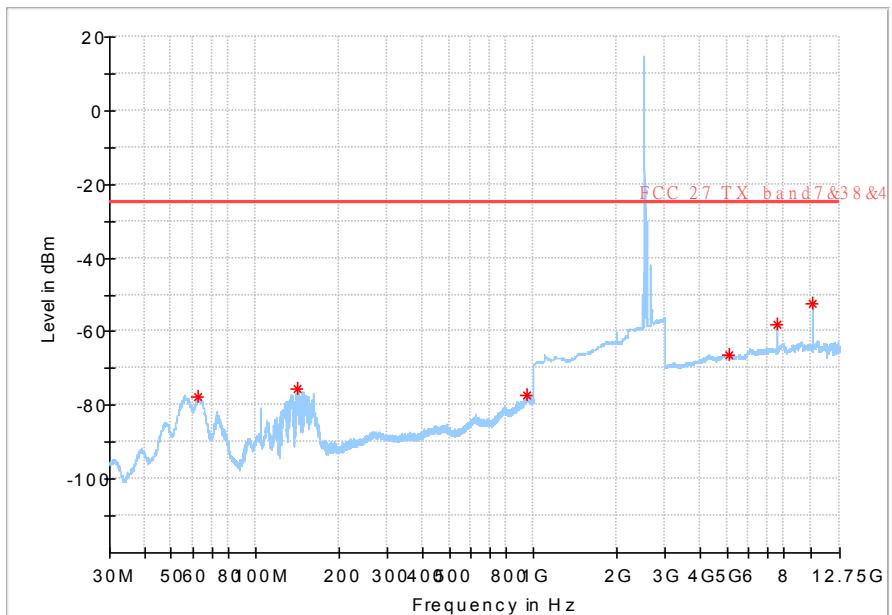


7.1.2.1.5 Test Channel = HCH-Vertical

Full Spectrum

**7.1.2.1.6 Test Channel = HCH-Horizontal**

Full Spectrum

**NOTE:**

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all combinations and all modulations, but only the worst case data presented in this report.

8 Frequency Stability

8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	RB Config	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	TN	NV	-0.64	-0.000257	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	TN	NV	9.61	0.003807	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	TN	NV	-4.75	-0.001868	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	TN	NV	-8.47	-0.003349	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	TN	NV	5.45	0.002140	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	TN	NV	3.89	0.001520	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	TN	NV	-12.15	-0.004842	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	TN	NV	-6.14	-0.002432	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	TN	NV	-15.29	-0.006020	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	TN	NV	2.39	0.000945	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	TN	NV	12.43	0.004884	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	TN	NV	6.49	0.002534	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	TN	NV	-3.66	-0.001457	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	TN	NV	12.08	0.004785	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	TN	NV	-5.89	-0.002321	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	TN	NV	-6.17	-0.002437	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	TN	NV	-1.50	-0.000591	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	TN	NV	-7.96	-0.003110	PASS

8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	RB Config	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	-30	9.57	0.003813	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	-20	-11.88	-0.004733	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	-10	8.43	0.003357	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	0	-15.29	-0.006090	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	10	12.84	0.005117	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	20	6.58	0.002622	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	30	-8.02	-0.003197	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	40	15.35	0.006117	PASS
CA_7C	QPSK	20850-21048	100RB#0/100RB#0	NV	50	13.81	0.005502	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	-30	12.68	0.005022	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	-20	10.63	0.004210	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	-10	5.94	0.002351	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	0	-8.31	-0.003291	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	10	14.38	0.005695	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	20	-15.32	-0.006068	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	30	-1.10	-0.000437	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	40	12.64	0.005004	PASS
CA_7C	QPSK	21001-21199	100RB#0/100RB#0	NV	50	8.45	0.003348	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	-30	-12.26	-0.004827	PASS



CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	-20	-8.12	-0.003195	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	-10	-10.85	-0.004270	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	0	-6.50	-0.002559	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	10	-7.24	-0.002851	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	20	-7.72	-0.003040	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	30	15.15	0.005963	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	40	8.81	0.003467	PASS
CA_7C	QPSK	21152-21350	100RB#0/100RB#0	NV	50	10.93	0.004305	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	-30	-11.34	-0.004482	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	-20	0.65	0.000255	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	-10	-3.36	-0.001329	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	0	-2.46	-0.000973	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	10	-15.90	-0.006284	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	20	2.51	0.000991	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	30	9.00	0.003559	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	40	-12.02	-0.004750	PASS
CA_7C	QPSK	21048-20850	100RB#0/100RB#0	NV	50	-15.89	-0.006280	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	-30	-11.93	-0.004688	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	-20	5.40	0.002120	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	-10	-15.43	-0.006061	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	0	-10.70	-0.004206	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	10	0.88	0.000345	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	20	4.95	0.001943	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	30	-5.24	-0.002057	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	40	0.94	0.000371	PASS
CA_7C	QPSK	21199-21001	100RB#0/100RB#0	NV	50	4.71	0.001850	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	-30	2.74	0.001072	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	-20	-8.53	-0.003333	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	-10	4.41	0.001724	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	0	-1.99	-0.000778	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	10	-4.04	-0.001577	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	20	12.23	0.004776	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	30	-13.41	-0.005239	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	40	15.33	0.005986	PASS
CA_7C	QPSK	21350-21152	100RB#0/100RB#0	NV	50	13.96	0.005455	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	-30	15.21	0.006060	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	-20	10.99	0.004380	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	-10	5.43	0.002164	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	0	0.34	0.000137	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	10	-1.16	-0.000462	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	20	12.59	0.005015	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	30	5.37	0.002139	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	40	-0.33	-0.000132	PASS
CA_7C	16QAM	20850-21048	100RB#0/100RB#0	NV	50	-2.04	-0.000812	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	-30	12.47	0.004939	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	-20	-10.42	-0.004126	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	-10	12.66	0.005015	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	0	-6.04	-0.002391	PASS



CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	10	8.94	0.003540	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	20	1.17	0.000464	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	30	-5.91	-0.002341	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	40	-1.93	-0.000765	PASS
CA_7C	16QAM	21001-21199	100RB#0/100RB#0	NV	50	-4.62	-0.001832	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	-30	8.10	0.003187	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	-20	11.38	0.004481	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	-10	-3.27	-0.001287	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	0	-4.30	-0.001691	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	10	5.80	0.002283	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	20	-15.90	-0.006259	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	30	-11.45	-0.004509	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	40	-10.80	-0.004250	PASS
CA_7C	16QAM	21152-21350	100RB#0/100RB#0	NV	50	0.80	0.000314	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	-30	13.04	0.005156	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	-20	-1.49	-0.000590	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	-10	7.21	0.002851	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	0	15.17	0.005995	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	10	-11.95	-0.004724	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	20	-3.91	-0.001544	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	30	8.43	0.003333	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	40	-11.62	-0.004593	PASS
CA_7C	16QAM	21048-20850	100RB#0/100RB#0	NV	50	-11.99	-0.004740	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	-30	-2.60	-0.001020	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	-20	-12.93	-0.005080	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	-10	-14.87	-0.005843	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	0	12.75	0.005010	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	10	12.91	0.005073	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	20	7.30	0.002868	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	30	-14.28	-0.005611	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	40	5.21	0.002047	PASS
CA_7C	16QAM	21199-21001	100RB#0/100RB#0	NV	50	12.35	0.004852	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	-30	1.48	0.000577	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	-20	-0.59	-0.000231	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	-10	-8.36	-0.003266	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	0	-10.59	-0.004136	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	10	2.26	0.000881	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	20	-1.69	-0.000658	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	30	0.10	0.000041	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	40	-14.52	-0.005670	PASS
CA_7C	16QAM	21350-21152	100RB#0/100RB#0	NV	50	1.06	0.000414	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	-30	-4.70	-0.001872	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	-20	8.31	0.003309	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	-10	8.38	0.003339	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	0	-6.68	-0.002662	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	10	-2.04	-0.000813	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	20	-4.06	-0.001617	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	30	-8.40	-0.003346	PASS



CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	40	2.17	0.000865	PASS
CA_7C	64QAM	20850-21048	100RB#0/100RB#0	NV	50	-10.52	-0.004193	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	-30	0.17	0.000067	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	-20	-4.29	-0.001700	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	-10	-11.07	-0.004383	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	0	2.60	0.001029	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	10	8.40	0.003328	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	20	-13.35	-0.005288	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	30	-13.55	-0.005367	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	40	-3.91	-0.001548	PASS
CA_7C	64QAM	21001-21199	100RB#0/100RB#0	NV	50	-0.44	-0.000176	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	-30	11.84	0.004662	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	-20	3.29	0.001295	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	-10	10.37	0.004082	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	0	14.40	0.005669	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	10	-12.10	-0.004764	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	20	-0.49	-0.000194	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	30	-6.05	-0.002380	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	40	-11.63	-0.004580	PASS
CA_7C	64QAM	21152-21350	100RB#0/100RB#0	NV	50	11.45	0.004507	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	-30	-2.85	-0.001126	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	-20	5.96	0.002356	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	-10	13.74	0.005432	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	0	2.17	0.000859	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	10	-3.34	-0.001320	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	20	-7.53	-0.002975	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	30	-5.07	-0.002005	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	40	13.23	0.005228	PASS
CA_7C	64QAM	21048-20850	100RB#0/100RB#0	NV	50	-11.59	-0.004583	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	-30	1.63	0.000640	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	-20	-8.51	-0.003345	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	-10	-5.29	-0.002080	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	0	4.08	0.001602	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	10	14.14	0.005554	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	20	4.85	0.001907	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	30	-15.17	-0.005960	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	40	-4.50	-0.001770	PASS
CA_7C	64QAM	21199-21001	100RB#0/100RB#0	NV	50	11.05	0.004342	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	-30	-14.01	-0.005472	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	-20	5.95	0.002322	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	-10	6.74	0.002635	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	0	-3.01	-0.001177	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	10	-12.04	-0.004702	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	20	-13.74	-0.005367	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	30	7.43	0.002902	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	40	-5.02	-0.001959	PASS
CA_7C	64QAM	21350-21152	100RB#0/100RB#0	NV	50	-15.91	-0.006213	PASS