



# Appendix B

## **E-UTRA Band CA\_2C**

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## 1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE Band CA\_2C

BAND	Test Mode PCC/SCC	Channel PCC/SCC	RB Configuration		Modulation PCC&SCC	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
			PCC	SCC					
CA_2C	100RB+25RB	18700-18817	1RB@0	0RB@0	QPSK	22.97	22.58	33.00	Pass
CA_2C	100RB+25RB	18700-18817	18RB@0	0RB@0	QPSK	21.84	21.45	33.00	Pass
CA_2C	100RB+25RB	18875-18992	1RB@0	0RB@0	QPSK	23.04	22.65	33.00	Pass
CA_2C	100RB+25RB	18875-18992	18RB@0	0RB@0	QPSK	21.92	21.53	33.00	Pass
CA_2C	100RB+25RB	19050-19167	1RB@0	0RB@0	QPSK	23.00	22.61	33.00	Pass
CA_2C	100RB+25RB	19050-19167	18RB@0	0RB@0	QPSK	21.81	21.42	33.00	Pass
CA_2C	25RB+100RB	18817-18700	1RB@0	0RB@0	QPSK	22.98	22.59	33.00	Pass
CA_2C	25RB+100RB	18817-18700	8RB@0	0RB@0	QPSK	22.95	22.56	33.00	Pass
CA_2C	25RB+100RB	18992-18875	1RB@0	0RB@0	QPSK	22.72	22.33	33.00	Pass
CA_2C	25RB+100RB	18992-18875	8RB@0	0RB@0	QPSK	22.74	22.35	33.00	Pass
CA_2C	25RB+100RB	19167-19050	1RB@0	0RB@0	QPSK	22.94	22.55	33.00	Pass
CA_2C	25RB+100RB	19167-19050	8RB@0	0RB@0	QPSK	22.95	22.56	33.00	Pass
CA_2C	100RB+100RB	18700-18898	1RB@0	0RB@0	QPSK	22.95	22.56	33.00	Pass
CA_2C	100RB+100RB	18700-18898	18RB@0	0RB@0	QPSK	22.83	22.44	33.00	Pass
CA_2C	100RB+100RB	18801-18999	1RB@0	0RB@0	QPSK	22.99	22.60	33.00	Pass
CA_2C	100RB+100RB	18801-18999	18RB@0	0RB@0	QPSK	22.84	22.45	33.00	Pass
CA_2C	100RB+100RB	18902-19100	1RB@0	0RB@0	QPSK	23.03	22.64	33.00	Pass
CA_2C	100RB+100RB	18902-19100	18RB@0	0RB@0	QPSK	22.94	22.55	33.00	Pass
CA_2C	100RB+100RB	18898-18700	1RB@0	0RB@0	QPSK	22.83	22.44	33.00	Pass
CA_2C	100RB+100RB	18898-18700	18RB@0	0RB@0	QPSK	22.89	22.50	33.00	Pass
CA_2C	100RB+100RB	18999-18801	1RB@0	0RB@0	QPSK	23.03	22.64	33.00	Pass
CA_2C	100RB+100RB	18999-18801	18RB@0	0RB@0	QPSK	23.03	22.64	33.00	Pass
CA_2C	100RB+100RB	19100-18902	1RB@0	0RB@0	QPSK	22.65	22.26	33.00	Pass
CA_2C	100RB+100RB	19100-18902	18RB@0	0RB@0	QPSK	22.56	22.17	33.00	Pass
CA_2C	100RB+25RB	18700-18817	1RB@0	0RB@0	16QAM	21.97	21.58	33.00	Pass
CA_2C	100RB+25RB	18700-18817	18RB@0	0RB@0	16QAM	20.89	20.50	33.00	Pass
CA_2C	100RB+25RB	18875-18992	1RB@0	0RB@0	16QAM	22.05	21.66	33.00	Pass
CA_2C	100RB+25RB	18875-18992	18RB@0	0RB@0	16QAM	20.91	20.52	33.00	Pass
CA_2C	100RB+25RB	19050-19167	1RB@0	0RB@0	16QAM	22.17	21.78	33.00	Pass
CA_2C	100RB+25RB	19050-19167	18RB@0	0RB@0	16QAM	20.99	20.60	33.00	Pass
CA_2C	25RB+100RB	18817-18700	1RB@0	0RB@0	16QAM	21.98	21.59	33.00	Pass
CA_2C	25RB+100RB	18817-18700	8RB@0	0RB@0	16QAM	21.99	21.60	33.00	Pass
CA_2C	25RB+100RB	18992-18875	1RB@0	0RB@0	16QAM	21.74	21.35	33.00	Pass
CA_2C	25RB+100RB	18992-18875	8RB@0	0RB@0	16QAM	21.93	21.54	33.00	Pass
CA_2C	25RB+100RB	19167-19050	1RB@0	0RB@0	16QAM	22.00	21.61	33.00	Pass
CA_2C	25RB+100RB	19167-19050	8RB@0	0RB@0	16QAM	22.09	21.70	33.00	Pass
CA_2C	100RB+100RB	18700-18898	1RB@0	0RB@0	16QAM	22.03	21.64	33.00	Pass
CA_2C	100RB+100RB	18700-18898	18RB@0	0RB@0	16QAM	21.89	21.50	33.00	Pass
CA_2C	100RB+100RB	18801-18999	1RB@0	0RB@0	16QAM	21.99	21.60	33.00	Pass
CA_2C	100RB+100RB	18801-18999	18RB@0	0RB@0	16QAM	21.96	21.57	33.00	Pass
CA_2C	100RB+100RB	18902-19100	1RB@0	0RB@0	16QAM	22.12	21.73	33.00	Pass



CA_2C	100RB+100RB	18902-19100	18RB@0	0RB@0	16QAM	22.16	21.77	33.00	Pass
CA_2C	100RB+100RB	18898-18700	1RB@0	0RB@0	16QAM	21.92	21.53	33.00	Pass
CA_2C	100RB+100RB	18898-18700	18RB@0	0RB@0	16QAM	21.81	21.42	33.00	Pass
CA_2C	100RB+100RB	18999-18801	1RB@0	0RB@0	16QAM	22.13	21.74	33.00	Pass
CA_2C	100RB+100RB	18999-18801	18RB@0	0RB@0	16QAM	22.25	21.86	33.00	Pass
CA_2C	100RB+100RB	19100-18902	1RB@0	0RB@0	16QAM	21.80	21.41	33.00	Pass
CA_2C	100RB+100RB	19100-18902	18RB@0	0RB@0	16QAM	21.54	21.15	33.00	Pass
CA_2C	100RB+25RB	18700-18817	1RB@0	0RB@0	64QAM	21.01	20.62	33.00	Pass
CA_2C	100RB+25RB	18700-18817	18RB@0	0RB@0	64QAM	19.92	19.53	33.00	Pass
CA_2C	100RB+25RB	18875-18992	1RB@0	0RB@0	64QAM	21.24	20.85	33.00	Pass
CA_2C	100RB+25RB	18875-18992	18RB@0	0RB@0	64QAM	20.09	19.70	33.00	Pass
CA_2C	100RB+25RB	19050-19167	1RB@0	0RB@0	64QAM	21.32	20.93	33.00	Pass
CA_2C	100RB+25RB	19050-19167	18RB@0	0RB@0	64QAM	20.07	19.68	33.00	Pass
CA_2C	25RB+100RB	18817-18700	1RB@0	0RB@0	64QAM	20.95	20.56	33.00	Pass
CA_2C	25RB+100RB	18817-18700	8RB@0	0RB@0	64QAM	20.92	20.53	33.00	Pass
CA_2C	25RB+100RB	18992-18875	1RB@0	0RB@0	64QAM	20.71	20.32	33.00	Pass
CA_2C	25RB+100RB	18992-18875	8RB@0	0RB@0	64QAM	21.17	20.78	33.00	Pass
CA_2C	25RB+100RB	19167-19050	1RB@0	0RB@0	64QAM	21.06	20.67	33.00	Pass
CA_2C	25RB+100RB	19167-19050	8RB@0	0RB@0	64QAM	21.22	20.83	33.00	Pass
CA_2C	100RB+100RB	18700-18898	1RB@0	0RB@0	64QAM	21.03	20.64	33.00	Pass
CA_2C	100RB+100RB	18700-18898	18RB@0	0RB@0	64QAM	20.99	20.60	33.00	Pass
CA_2C	100RB+100RB	18801-18999	1RB@0	0RB@0	64QAM	21.11	20.72	33.00	Pass
CA_2C	100RB+100RB	18801-18999	18RB@0	0RB@0	64QAM	21.17	20.78	33.00	Pass
CA_2C	100RB+100RB	18902-19100	1RB@0	0RB@0	64QAM	21.08	20.69	33.00	Pass
CA_2C	100RB+100RB	18902-19100	18RB@0	0RB@0	64QAM	21.40	21.01	33.00	Pass
CA_2C	100RB+100RB	18898-18700	1RB@0	0RB@0	64QAM	20.83	20.44	33.00	Pass
CA_2C	100RB+100RB	18898-18700	18RB@0	0RB@0	64QAM	20.72	20.33	33.00	Pass
CA_2C	100RB+100RB	18999-18801	1RB@0	0RB@0	64QAM	21.40	21.01	33.00	Pass
CA_2C	100RB+100RB	18999-18801	18RB@0	0RB@0	64QAM	21.42	21.03	33.00	Pass
CA_2C	100RB+100RB	19100-18902	1RB@0	0RB@0	64QAM	20.91	20.52	33.00	Pass
CA_2C	100RB+100RB	19100-18902	18RB@0	0RB@0	64QAM	20.81	20.42	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,

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

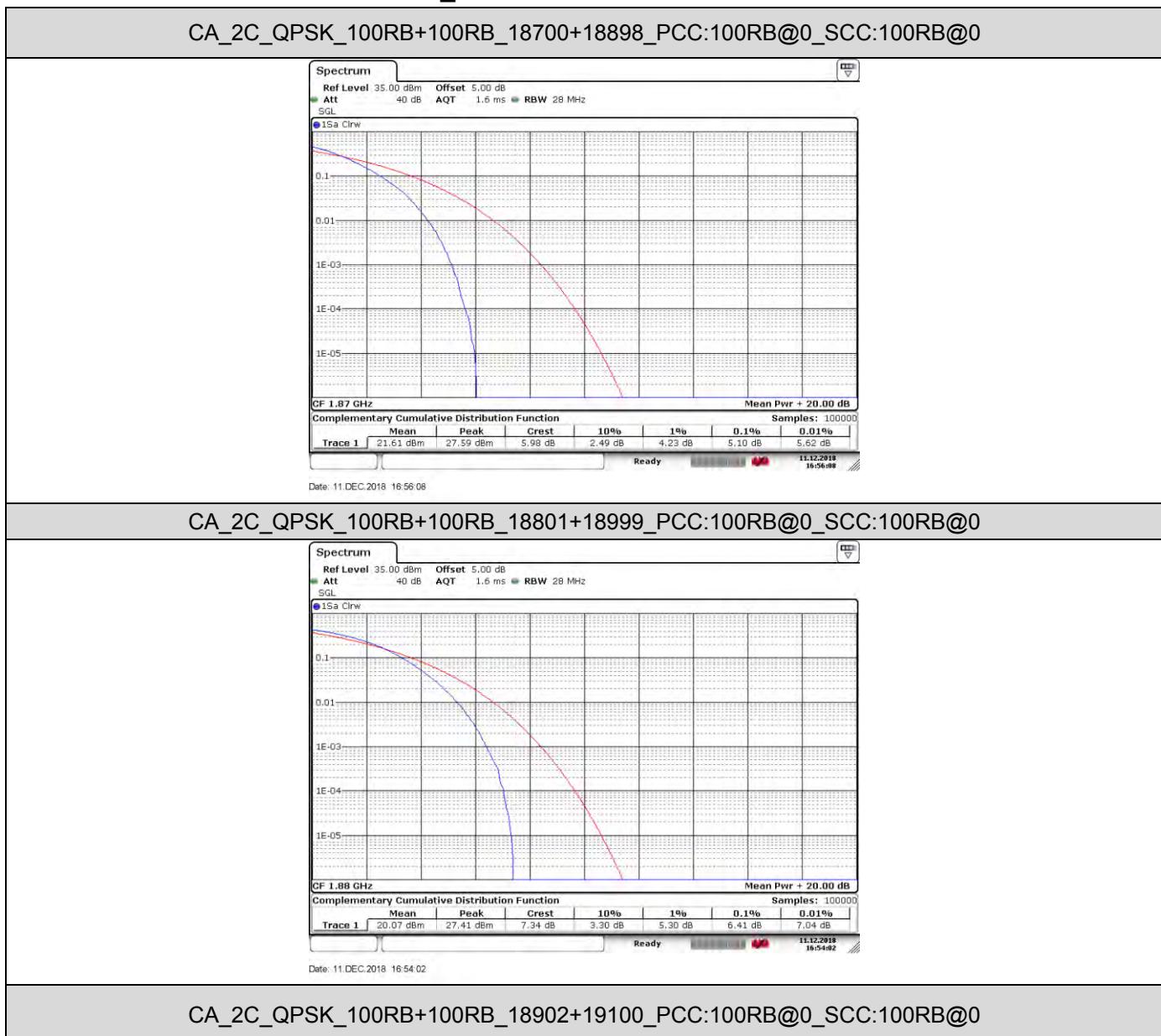
b: SGP=Signal Generator Level

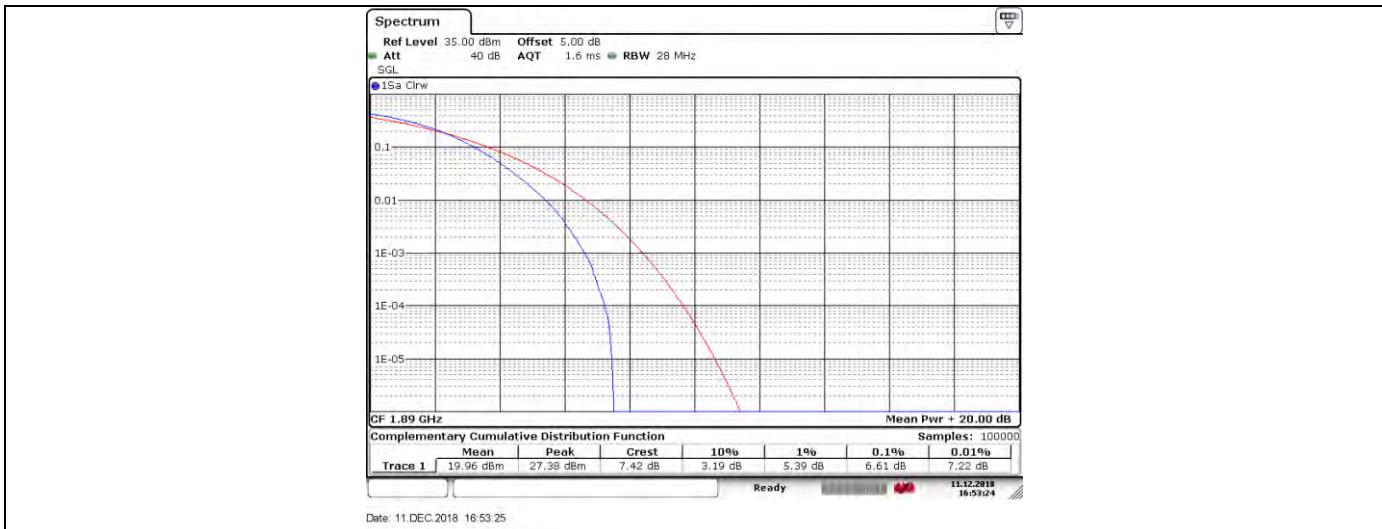


## 2 Peak-to-Average Ratio

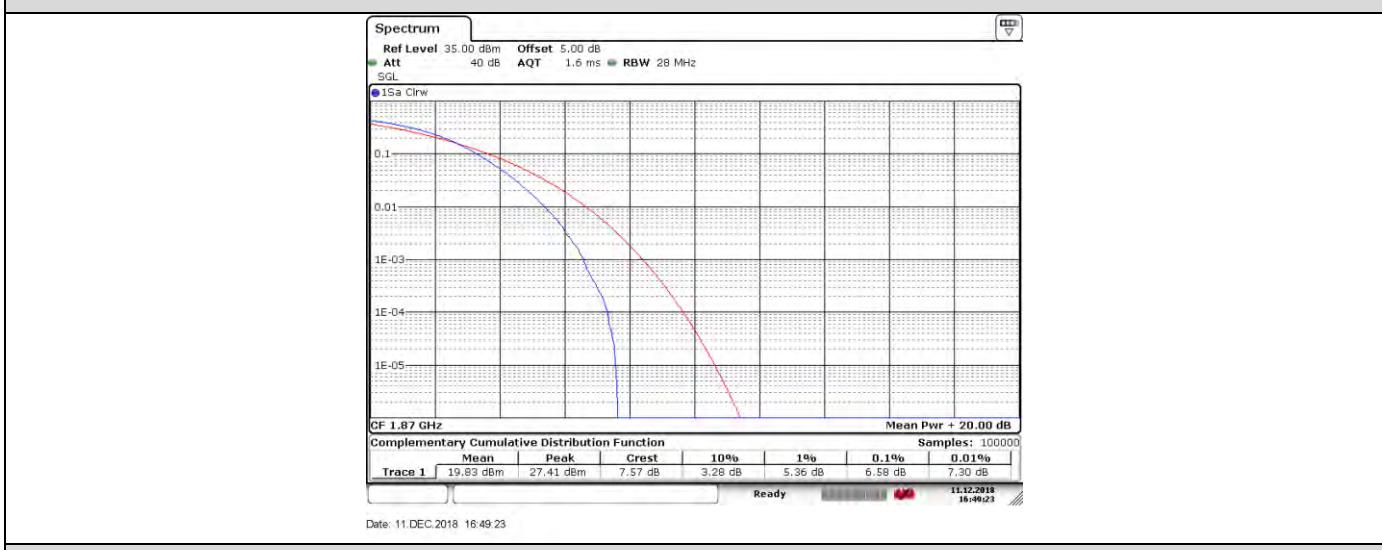
### Part I - Test Results

Test Band	Modulation	Test Mode	Test Channel	PCC RB Config	SCC RB Config	Measured [dB]	Limit [dB]	Verdict
CA_2C	QPSK	100RB+100RB	18700+18898	100RB@0	100RB@0	5.10	13	PASS
CA_2C	QPSK	100RB+100RB	18801+18999	100RB@0	100RB@0	6.41	13	PASS
CA_2C	QPSK	100RB+100RB	18902+19100	100RB@0	100RB@0	6.61	13	PASS
CA_2C	QPSK	100RB+100RB	18898+18700	100RB@0	100RB@0	6.58	13	PASS
CA_2C	QPSK	100RB+100RB	18999+18801	100RB@0	100RB@0	6.49	13	PASS
CA_2C	QPSK	100RB+100RB	19100+18902	100RB@0	100RB@0	6.52	13	PASS
CA_2C	16QAM	100RB+100RB	18700+18898	100RB@0	100RB@0	5.68	13	PASS
CA_2C	16QAM	100RB+100RB	18801+18999	100RB@0	100RB@0	7.01	13	PASS
CA_2C	16QAM	100RB+100RB	18902+19100	100RB@0	100RB@0	6.90	13	PASS
CA_2C	16QAM	100RB+100RB	18898+18700	100RB@0	100RB@0	6.96	13	PASS
CA_2C	16QAM	100RB+100RB	18999+18801	100RB@0	100RB@0	7.01	13	PASS
CA_2C	16QAM	100RB+100RB	19100+18902	100RB@0	100RB@0	7.07	13	PASS
CA_2C	64QAM	100RB+100RB	18700+18898	100RB@0	100RB@0	5.83	13	PASS
CA_2C	64QAM	100RB+100RB	18801+18999	100RB@0	100RB@0	7.01	13	PASS
CA_2C	64QAM	100RB+100RB	18902+19100	100RB@0	100RB@0	6.99	13	PASS
CA_2C	64QAM	100RB+100RB	18898+18700	100RB@0	100RB@0	7.01	13	PASS
CA_2C	64QAM	100RB+100RB	18999+18801	100RB@0	100RB@0	6.99	13	PASS
CA_2C	64QAM	100RB+100RB	19100+18902	100RB@0	100RB@0	7.10	13	PASS

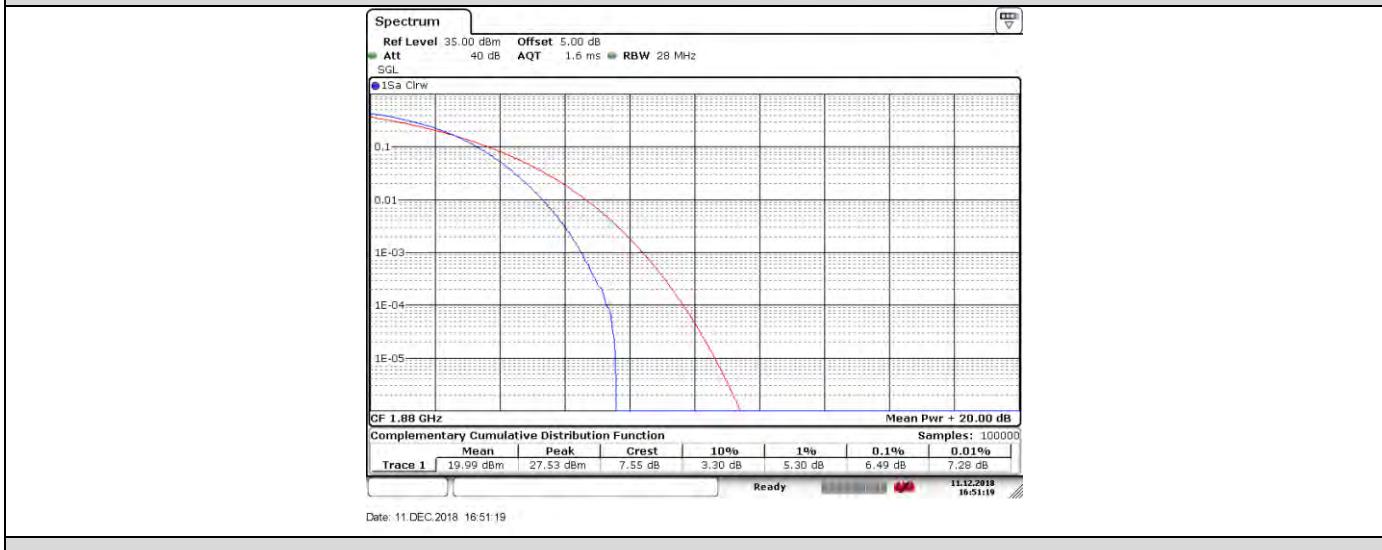
**Part II - Test Plots****2.1 For LTE****2.1.1 Test Band = LTE Band CA\_2C**



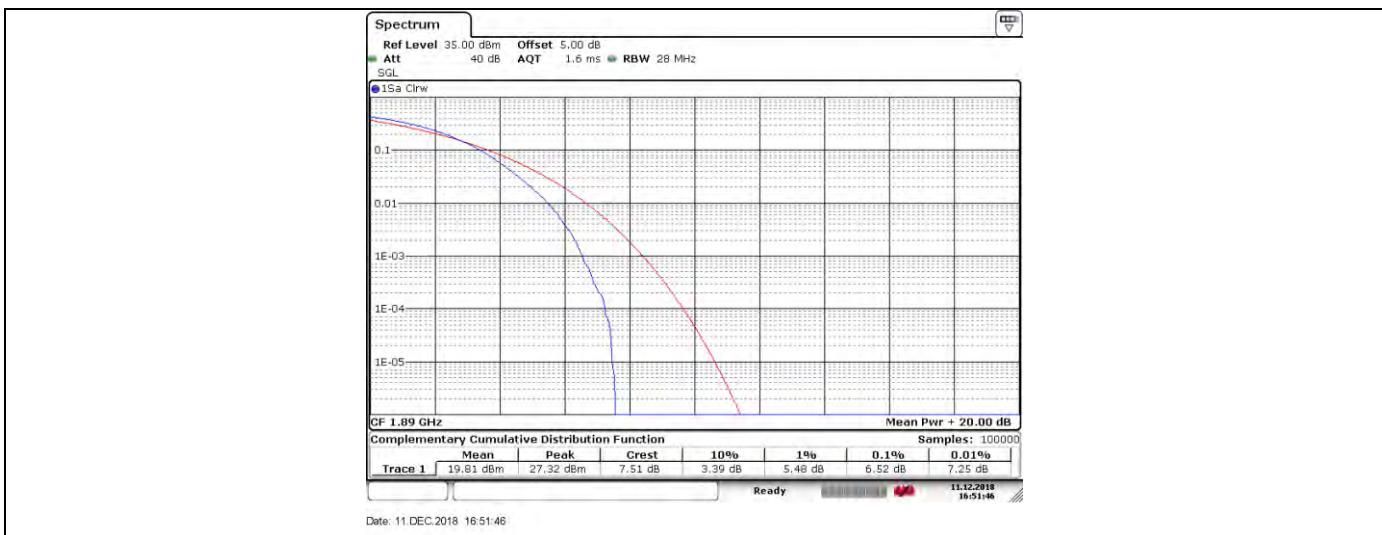
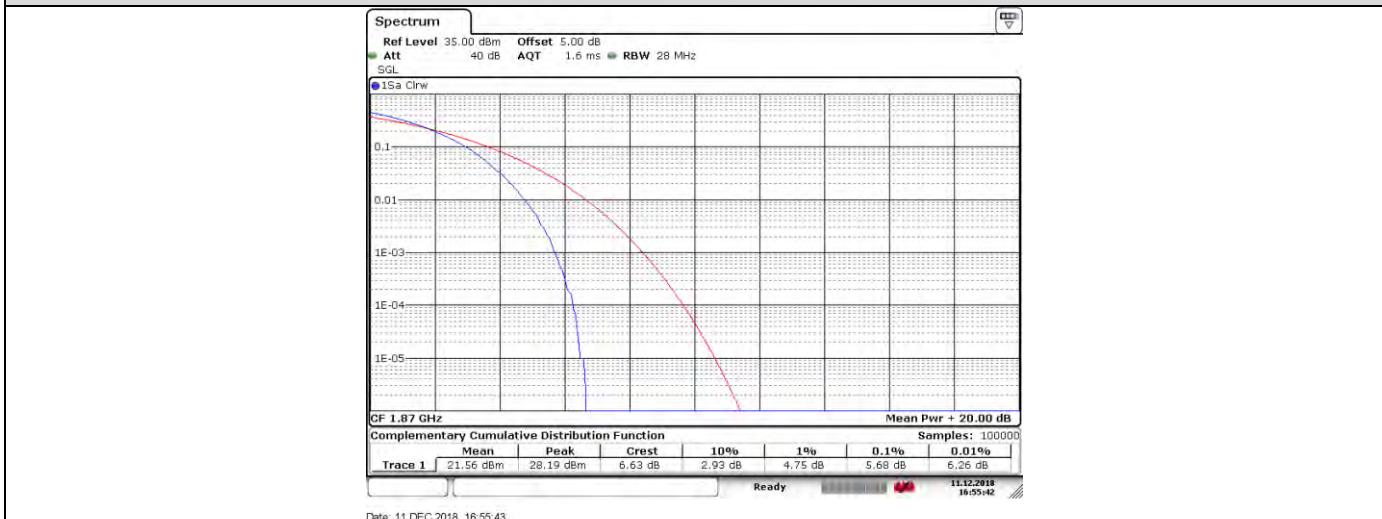
CA\_2C\_QPSK\_100RB+100RB\_18898+18700\_PCC:100RB@0\_SCC:100RB@0

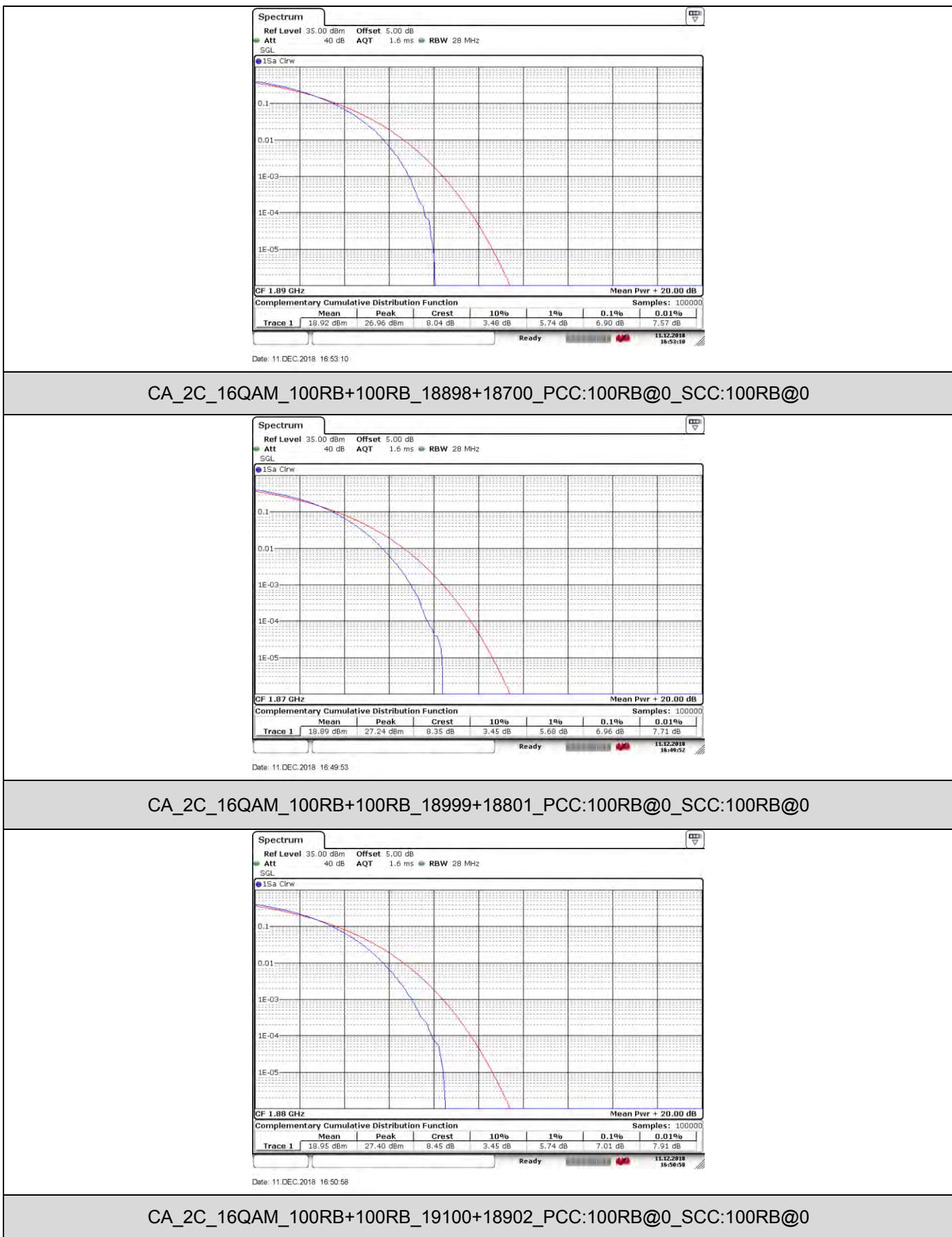


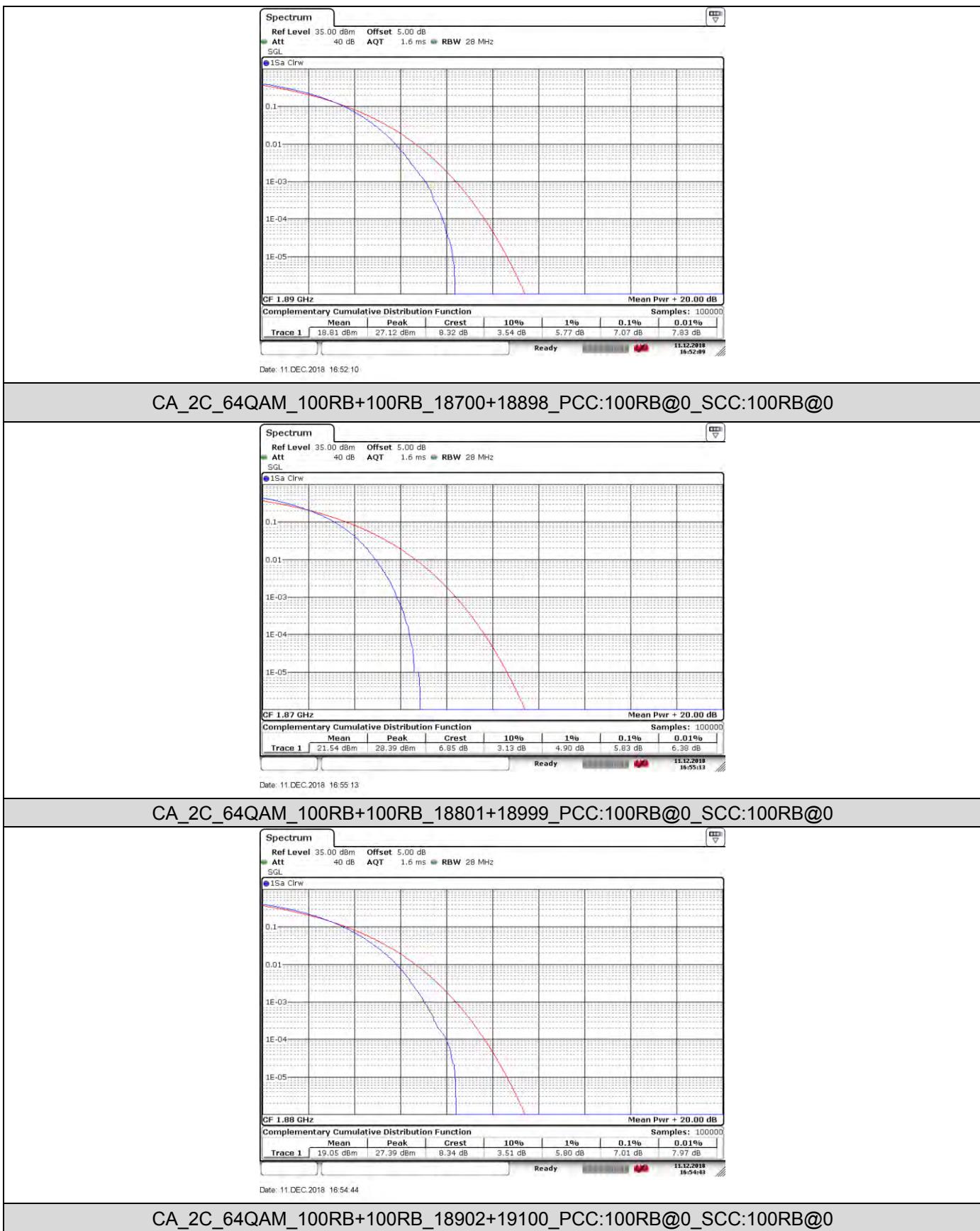
CA\_2C\_QPSK\_100RB+100RB\_18999+18801\_PCC:100RB@0\_SCC:100RB@0

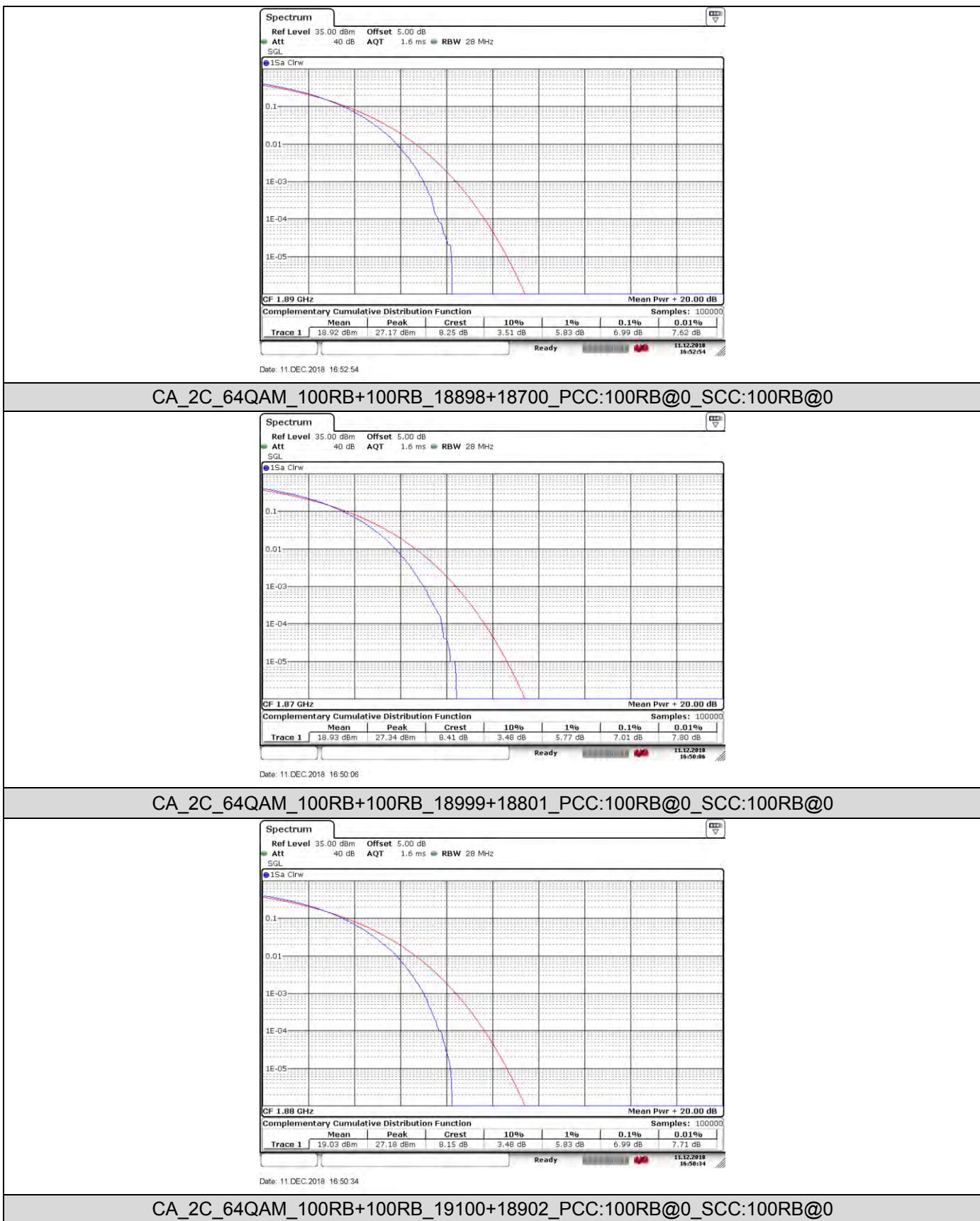


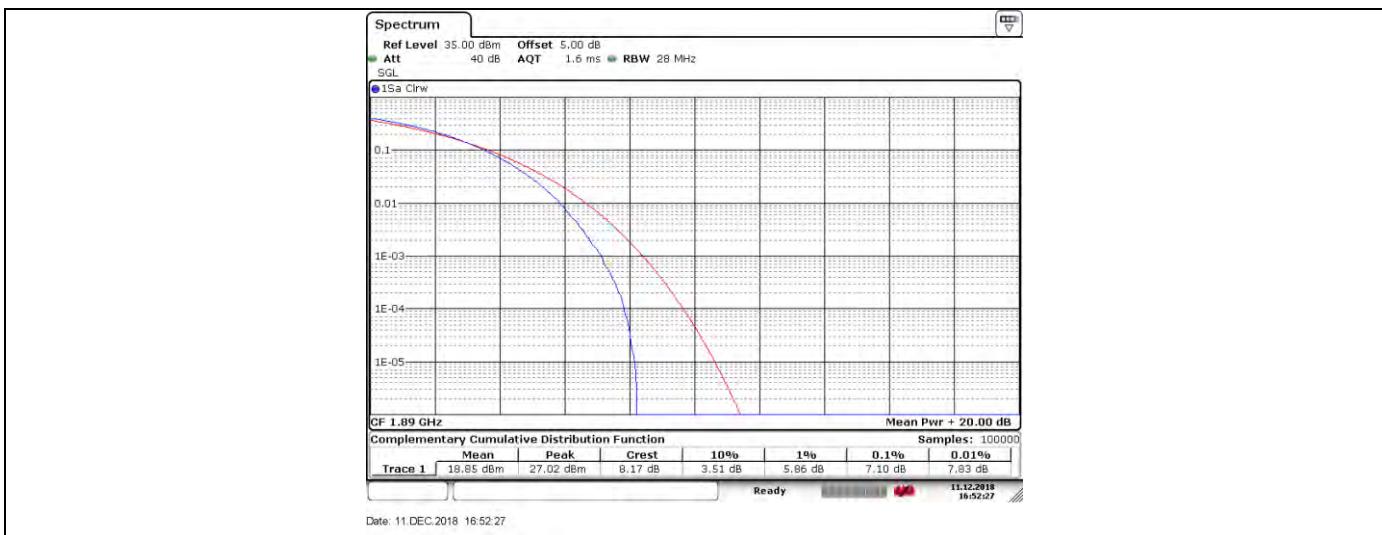
CA\_2C\_QPSK\_100RB+100RB\_19100+18902\_PCC:100RB@0\_SCC:100RB@0

**CA\_2C\_16QAM\_100RB+100RB\_18700+18898\_PCC:100RB@0\_SCC:100RB@0****CA\_2C\_16QAM\_100RB+100RB\_18801+18999\_PCC:100RB@0\_SCC:100RB@0****CA\_2C\_16QAM\_100RB+100RB\_18902+19100\_PCC:100RB@0\_SCC:100RB@0**









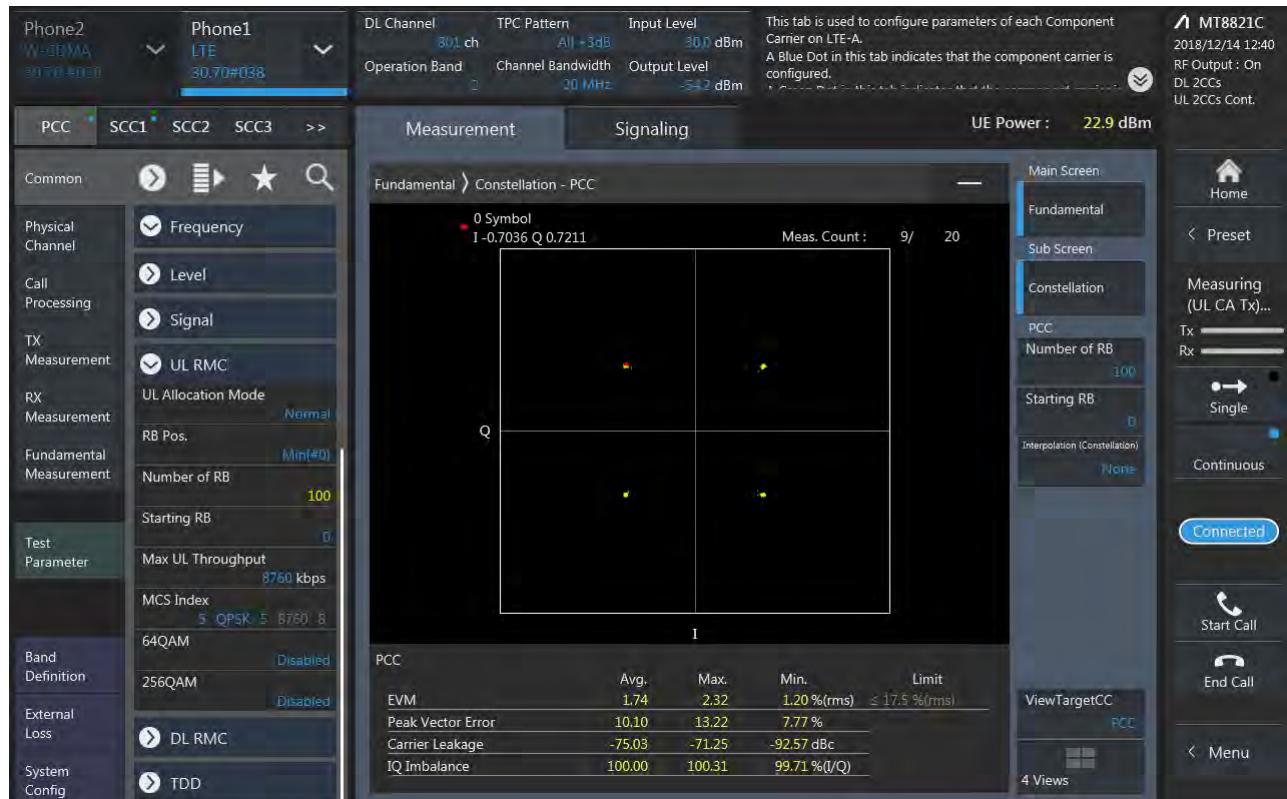
### 3 Modulation Characteristics

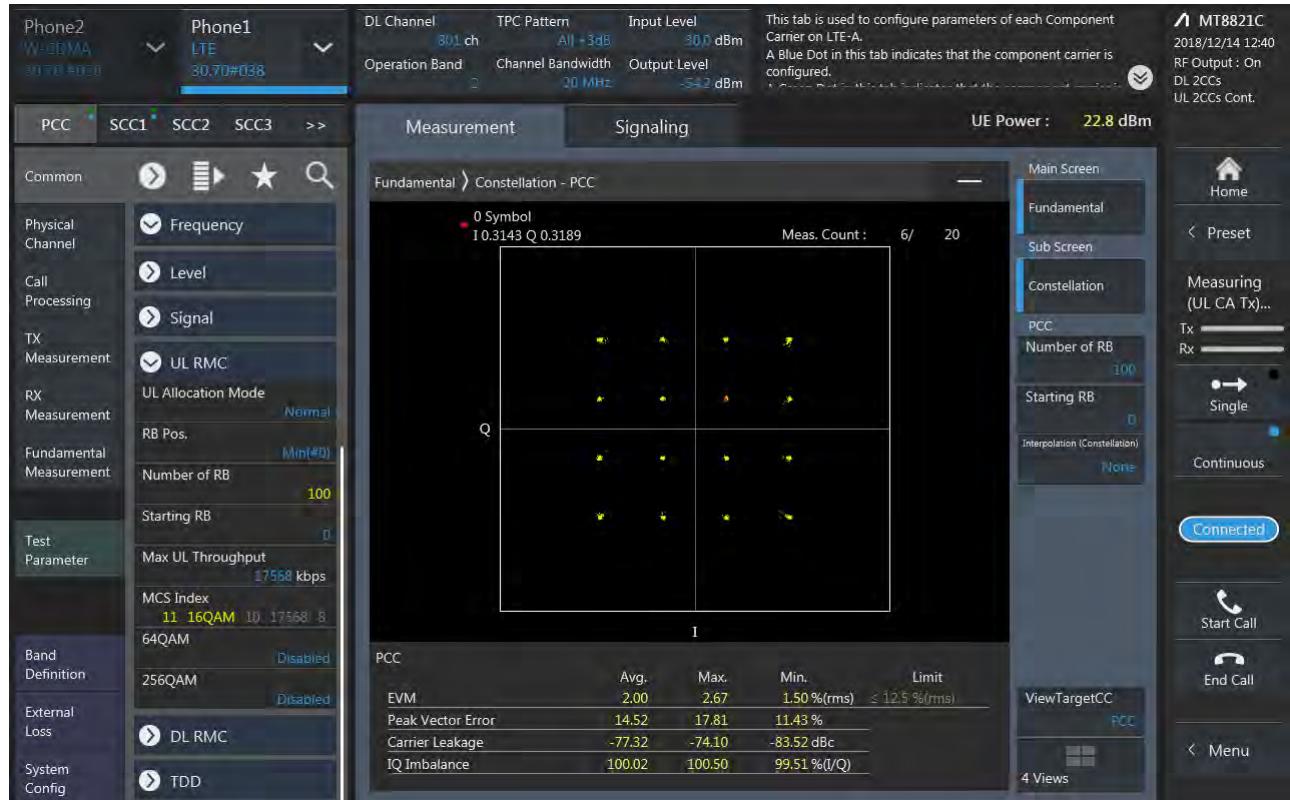
#### 3.1 For LTE

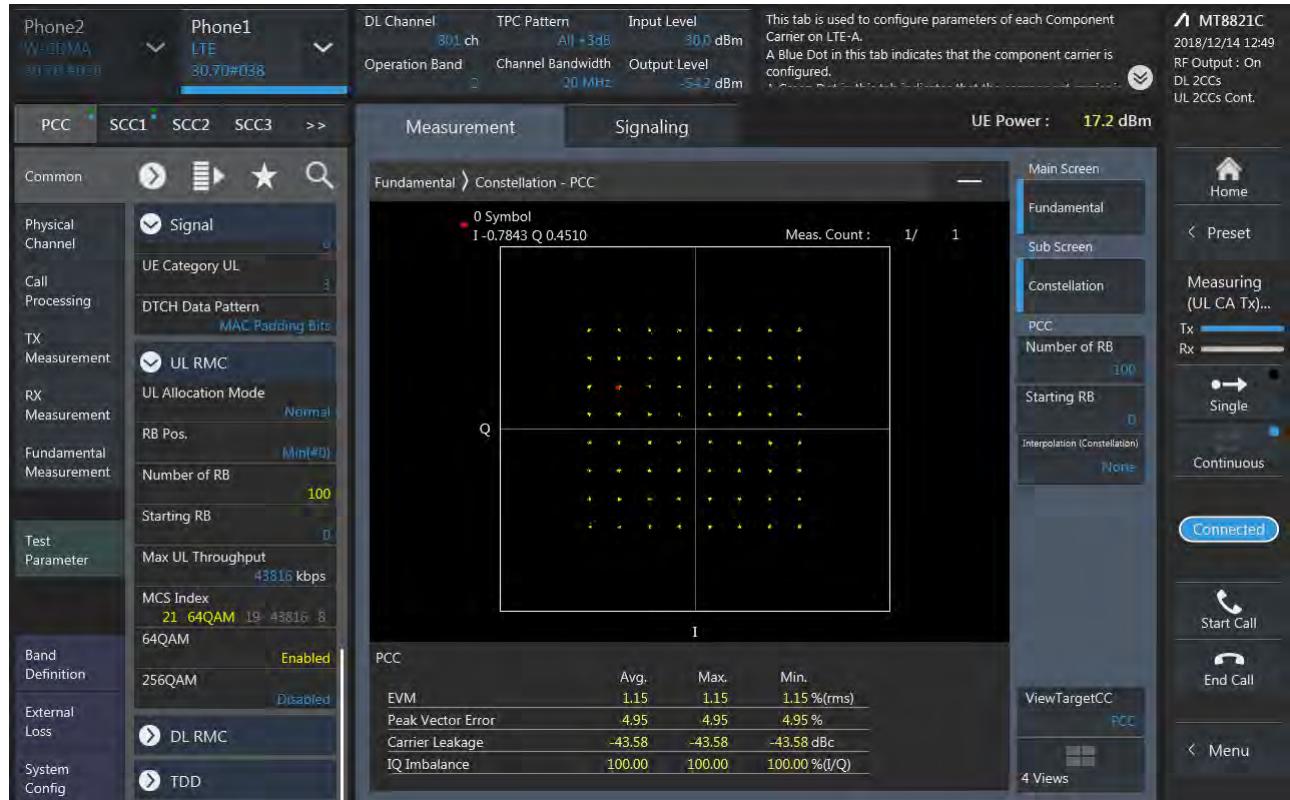
##### 3.1.1 Test Band = LTE Band CA\_2C

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

###### 3.1.1.1.1 Test Channel = 18801+18999



**3.1.1.2 Test Mode = LTE /16QAM 100RB+100RB****3.1.1.2.1 Test Channel = 18801+18999**

**3.1.1.3 Test Mode = LTE /64QAM 100RB+100RB****3.1.1.3.1 Test Channel = 18801+18999**



## 4 Bandwidth

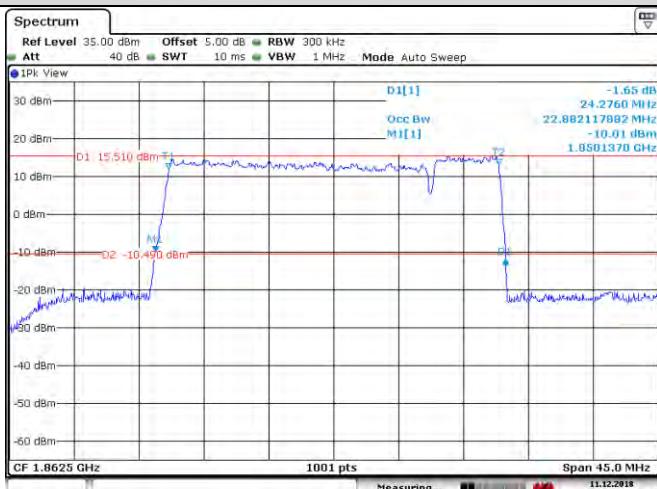
Test Band	Modulation PCC&SCC	Test Mode PCC/SCC	Test Channel PCC/SCC	PCC RB	SCC RB	OBW [MHz]	EBW [MHz]	Verdict
CA_2C	QPSK	100RB+25RB	18700+18817	100RB@0	25RB@0	22.88	24.27	PASS
CA_2C	QPSK	100RB+25RB	18875+18992	100RB@0	25RB@0	22.79	24.14	PASS
CA_2C	QPSK	100RB+25RB	19050+19167	100RB@0	25RB@0	22.93	24.28	PASS
CA_2C	QPSK	25RB+100RB	18817+18700	25RB@0	100RB@0	22.88	23.96	PASS
CA_2C	QPSK	25RB+100RB	18992+18875	25RB@0	100RB@0	22.84	23.78	PASS
CA_2C	QPSK	25RB+100RB	19167+19050	25RB@0	100RB@0	22.88	23.92	PASS
CA_2C	16QAM	100RB+25RB	18700+18817	100RB@0	25RB@0	22.82	24.19	PASS
CA_2C	16QAM	100RB+25RB	18875+18992	100RB@0	25RB@0	22.79	24.05	PASS
CA_2C	16QAM	100RB+25RB	19050+19167	100RB@0	25RB@0	22.88	24.14	PASS
CA_2C	16QAM	25RB+100RB	18817+18700	25RB@0	100RB@0	22.84	23.83	PASS
CA_2C	16QAM	25RB+100RB	18992+18875	25RB@0	100RB@0	22.79	23.78	PASS
CA_2C	16QAM	25RB+100RB	19167+19050	25RB@0	100RB@0	22.88	23.96	PASS
CA_2C	64QAM	100RB+25RB	18700+18817	100RB@0	25RB@0	22.84	24.19	PASS
CA_2C	64QAM	100RB+25RB	18875+18992	100RB@0	25RB@0	22.84	24.14	PASS
CA_2C	64QAM	100RB+25RB	19050+19167	100RB@0	25RB@0	22.88	24.19	PASS
CA_2C	64QAM	25RB+100RB	18817+18700	25RB@0	100RB@0	22.84	23.92	PASS
CA_2C	64QAM	25RB+100RB	18992+18875	25RB@0	100RB@0	22.75	23.78	PASS
CA_2C	64QAM	25RB+100RB	19167+19050	25RB@0	100RB@0	22.84	23.96	PASS
CA_2C	QPSK	100RB+100RB	18700+18898	100RB@0	100RB@0	37.64	39.74	PASS
CA_2C	QPSK	100RB+100RB	18801+18999	100RB@0	100RB@0	37.52	39.68	PASS
CA_2C	QPSK	100RB+100RB	18902+19100	100RB@0	100RB@0	37.42	39.68	PASS
CA_2C	QPSK	100RB+100RB	18898+18700	100RB@0	100RB@0	37.58	39.68	PASS
CA_2C	QPSK	100RB+100RB	18999+18801	100RB@0	100RB@0	37.52	39.74	PASS
CA_2C	QPSK	100RB+100RB	19100+18902	100RB@0	100RB@0	37.58	39.74	PASS
CA_2C	16QAM	100RB+100RB	18700+18898	100RB@0	100RB@0	37.64	39.74	PASS
CA_2C	16QAM	100RB+100RB	18801+18999	100RB@0	100RB@0	37.40	39.68	PASS
CA_2C	16QAM	100RB+100RB	18902+19100	100RB@0	100RB@0	37.46	39.62	PASS
CA_2C	16QAM	100RB+100RB	18898+18700	100RB@0	100RB@0	37.58	39.74	PASS
CA_2C	16QAM	100RB+100RB	18999+18801	100RB@0	100RB@0	37.52	39.62	PASS
CA_2C	16QAM	100RB+100RB	19100+18902	100RB@0	100RB@0	37.58	39.74	PASS
CA_2C	64QAM	100RB+100RB	18700+18898	100RB@0	100RB@0	37.64	39.74	PASS
CA_2C	64QAM	100RB+100RB	18801+18999	100RB@0	100RB@0	37.52	39.69	PASS
CA_2C	64QAM	100RB+100RB	18902+19100	100RB@0	100RB@0	37.46	39.56	PASS
CA_2C	64QAM	100RB+100RB	18898+18700	100RB@0	100RB@0	37.58	39.68	PASS
CA_2C	64QAM	100RB+100RB	18999+18801	100RB@0	100RB@0	37.52	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_2C	64QAM	100RB+100RB	19100+18902	100RB@0	100RB@0	37.52	39.80	PASS

## 4.1 For LTE

### 4.1.1 Test Band = LTE Band CA\_2C

CA\_2C\_QPSK\_100RB+25RB\_18700+18817\_PCC:100RB@0\_SCC:25RB@0



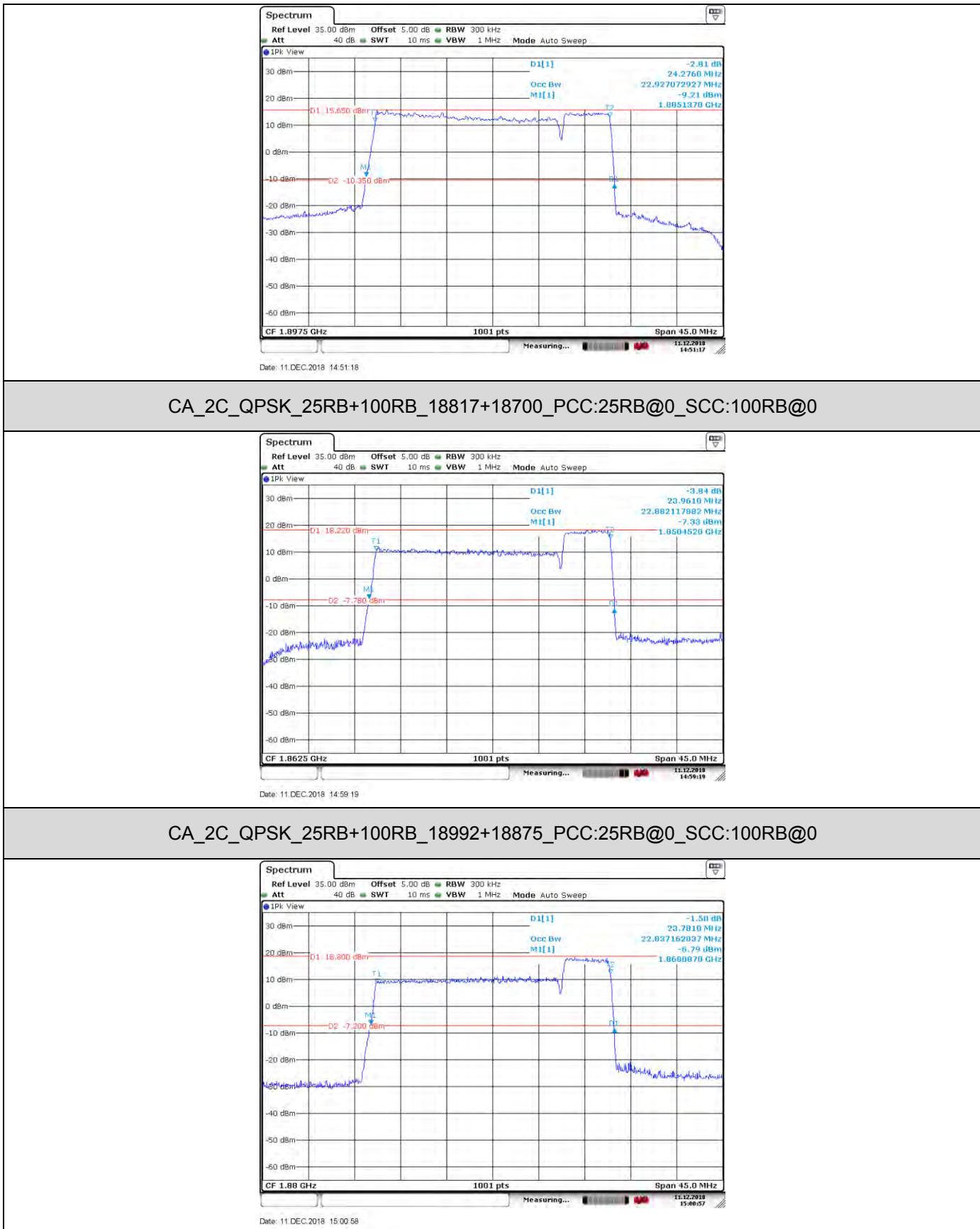
Date: 11 DEC. 2018 14:32:04

CA\_2C\_QPSK\_100RB+25RB\_18875+18992\_PCC:100RB@0\_SCC:25RB@0

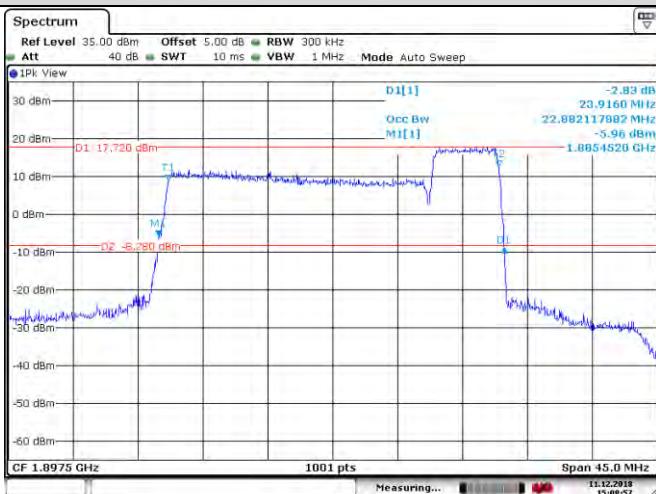


Date: 11 DEC. 2018 14:34:25

CA\_2C\_QPSK\_100RB+25RB\_19050+19167\_PCC:100RB@0\_SCC:25RB@0

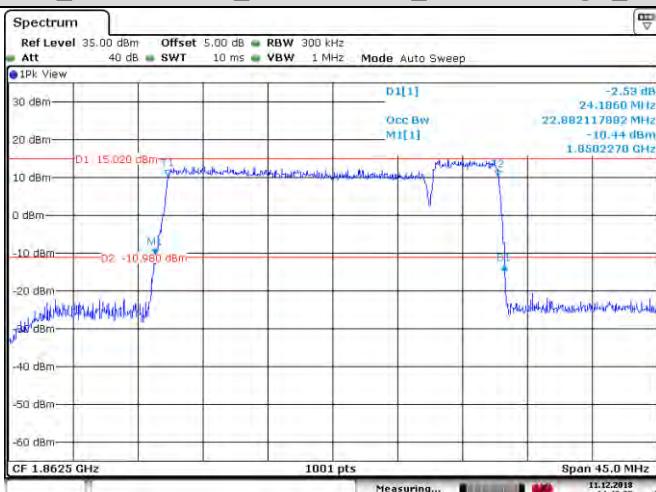


CA\_2C\_QPSK\_25RB+100RB\_19167+19050\_PCC:25RB@0\_SCC:100RB@0



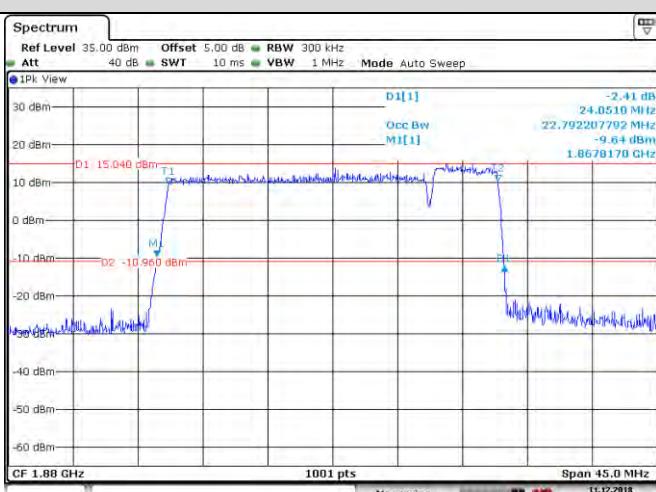
Date: 11 DEC 2018 15:08:58

CA 2C 16QAM 100RB+25RB 18700+18817 PCC:100RB@0 SCC:25RB@0

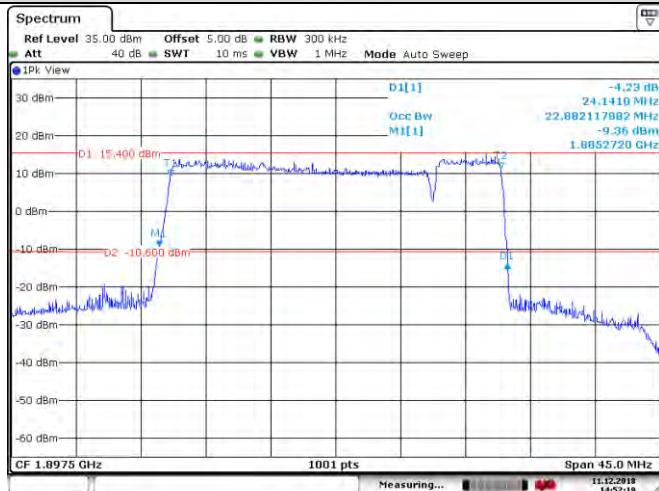
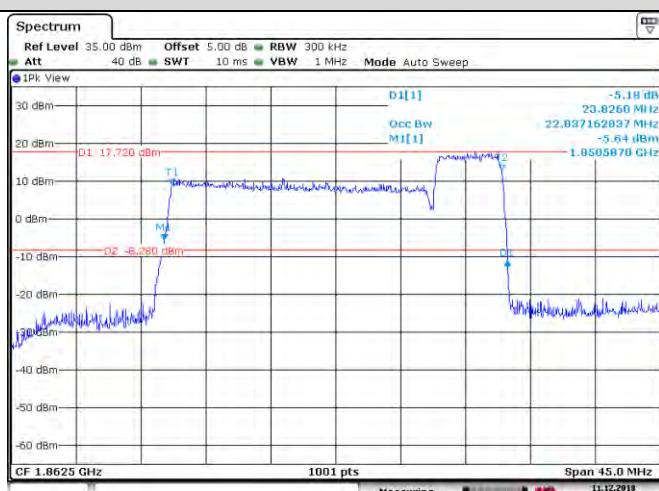


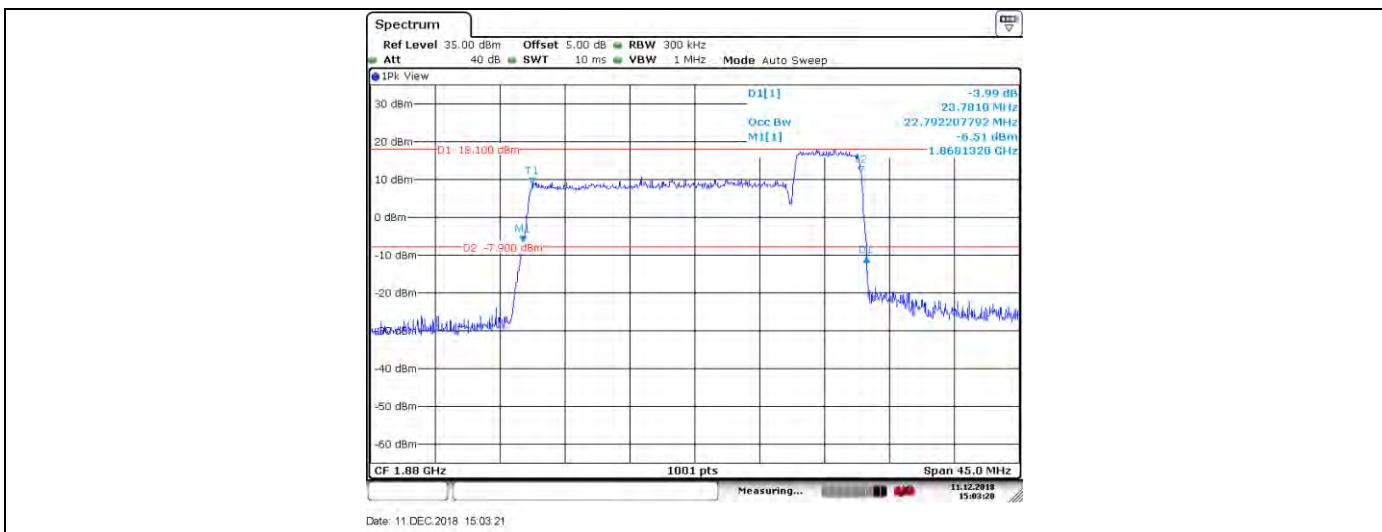
Date: 11 DEC 2018 14:42:25

CA 2C 16QAM 100RB+25RB 18875+18992 PCC:100RB@0 SCC:25RB@0

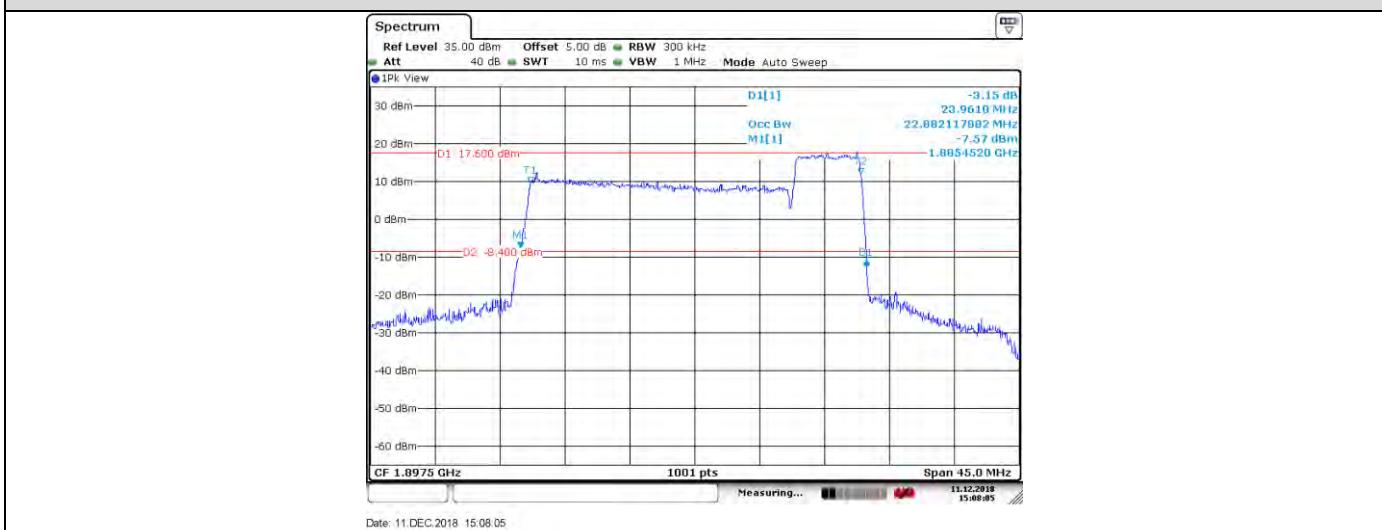


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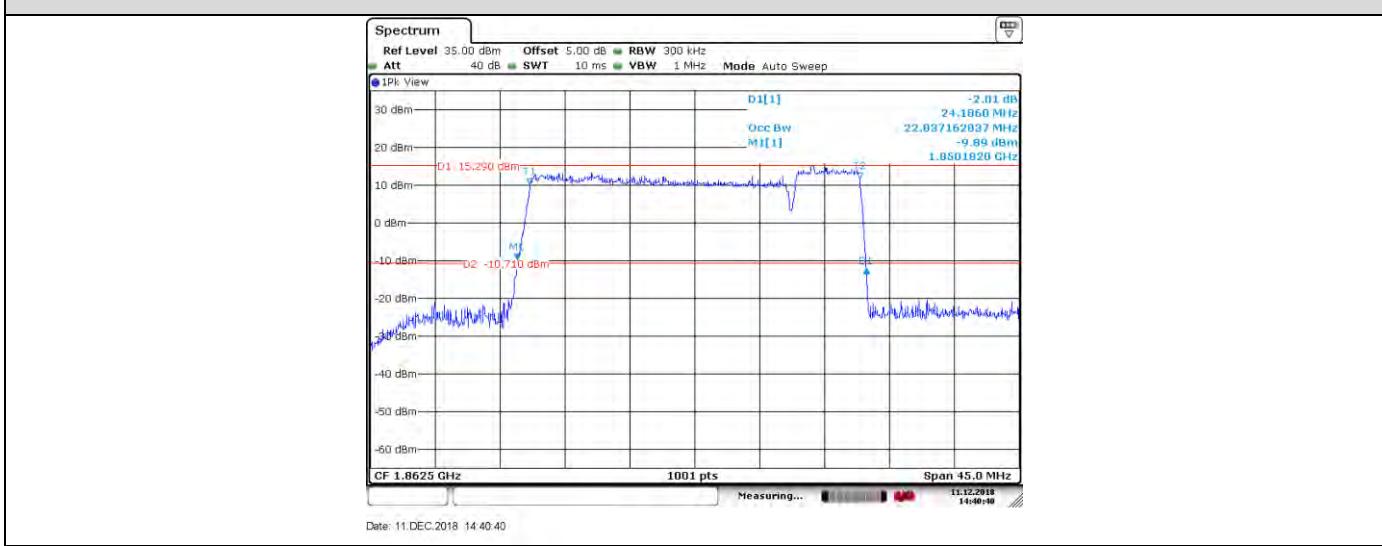
**CA\_2C\_16QAM\_100RB+25RB\_19050+19167\_PCC:100RB@0\_SCC:25RB@0****CA\_2C\_16QAM\_25RB+100RB\_18817+18700\_PCC:25RB@0\_SCC:100RB@0****CA\_2C\_16QAM\_25RB+100RB\_18992+18875\_PCC:25RB@0\_SCC:100RB@0**



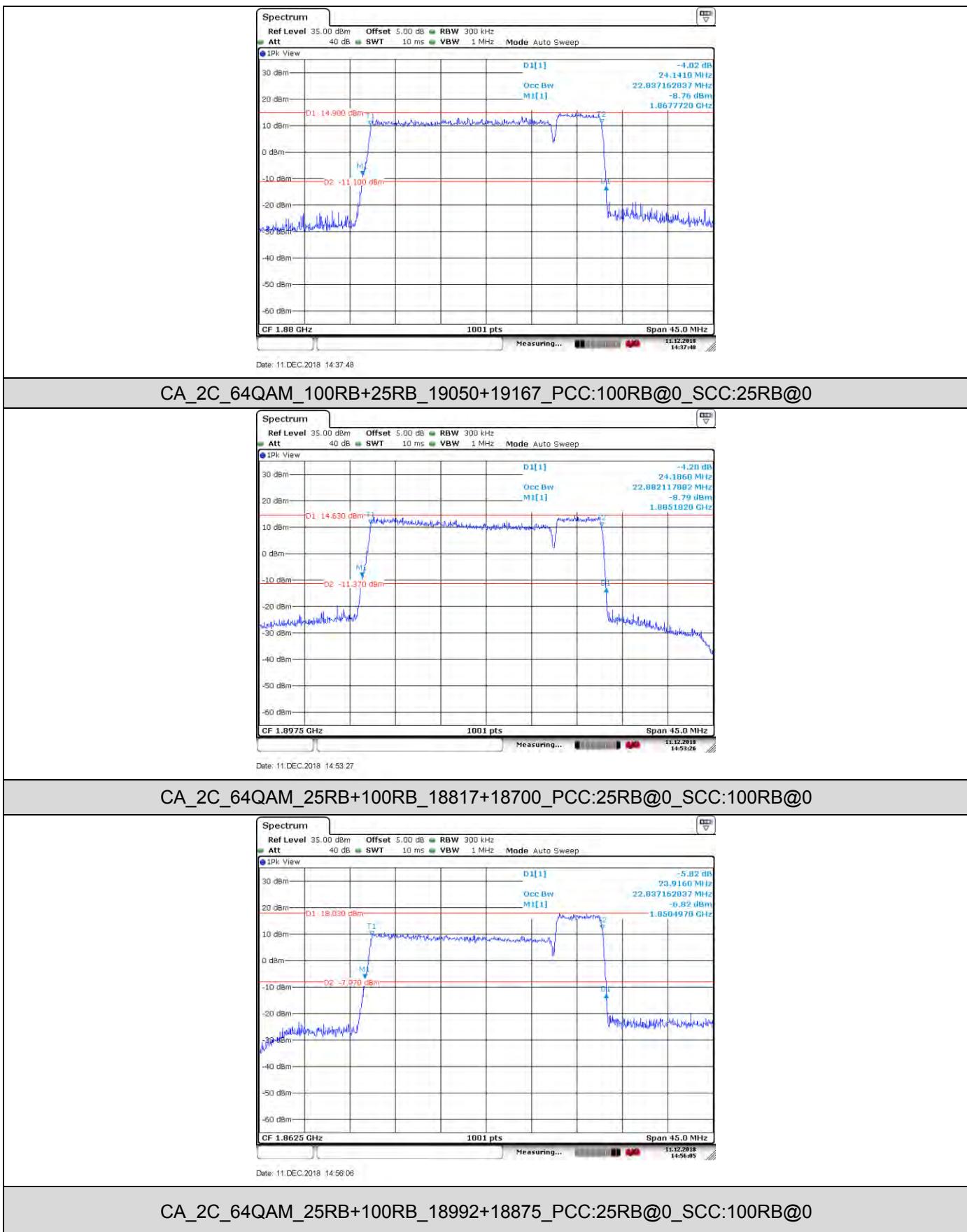
**CA\_2C\_16QAM\_25RB+100RB\_19167+19050\_PCC:25RB@0\_SCC:100RB@0**

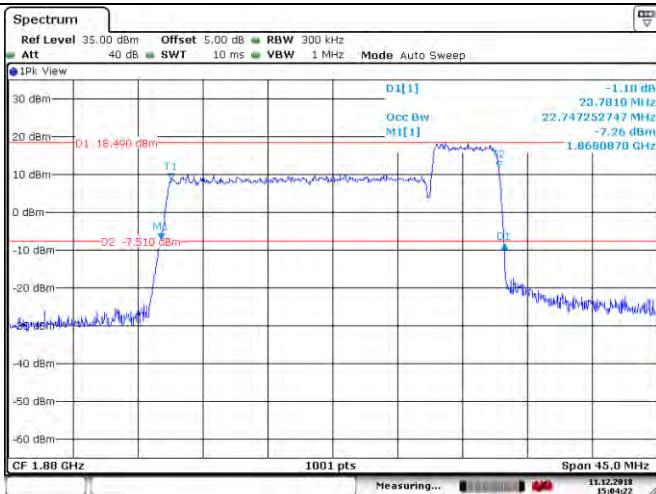


**CA\_2C\_64QAM\_100RB+25RB\_18700+18817\_PCC:100RB@0\_SCC:25RB@0**



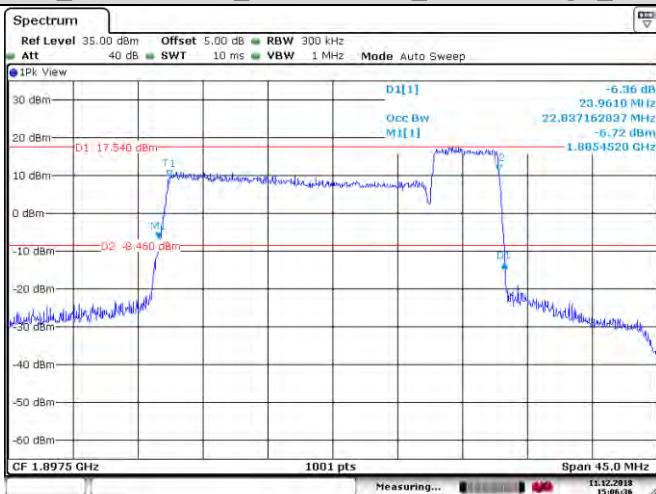
**CA\_2C\_64QAM\_100RB+25RB\_18875+18992\_PCC:100RB@0\_SCC:25RB@0**





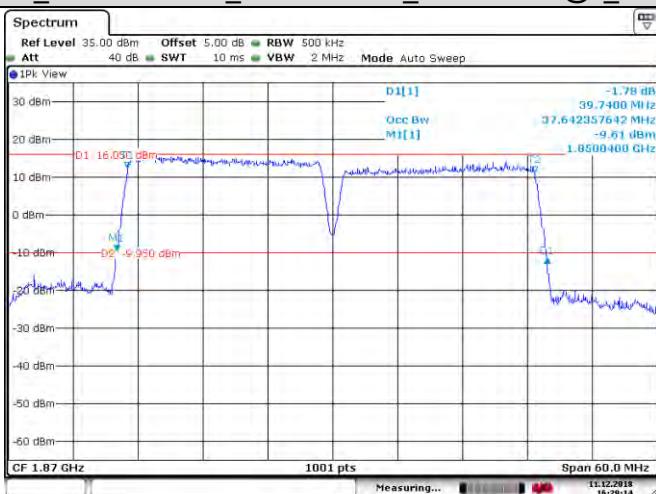
Date: 11.DEC.2018 15:04:22

CA\_2C\_64QAM\_25RB+100RB\_19167+19050\_PCC:25RB@0\_SCC:100RB@0



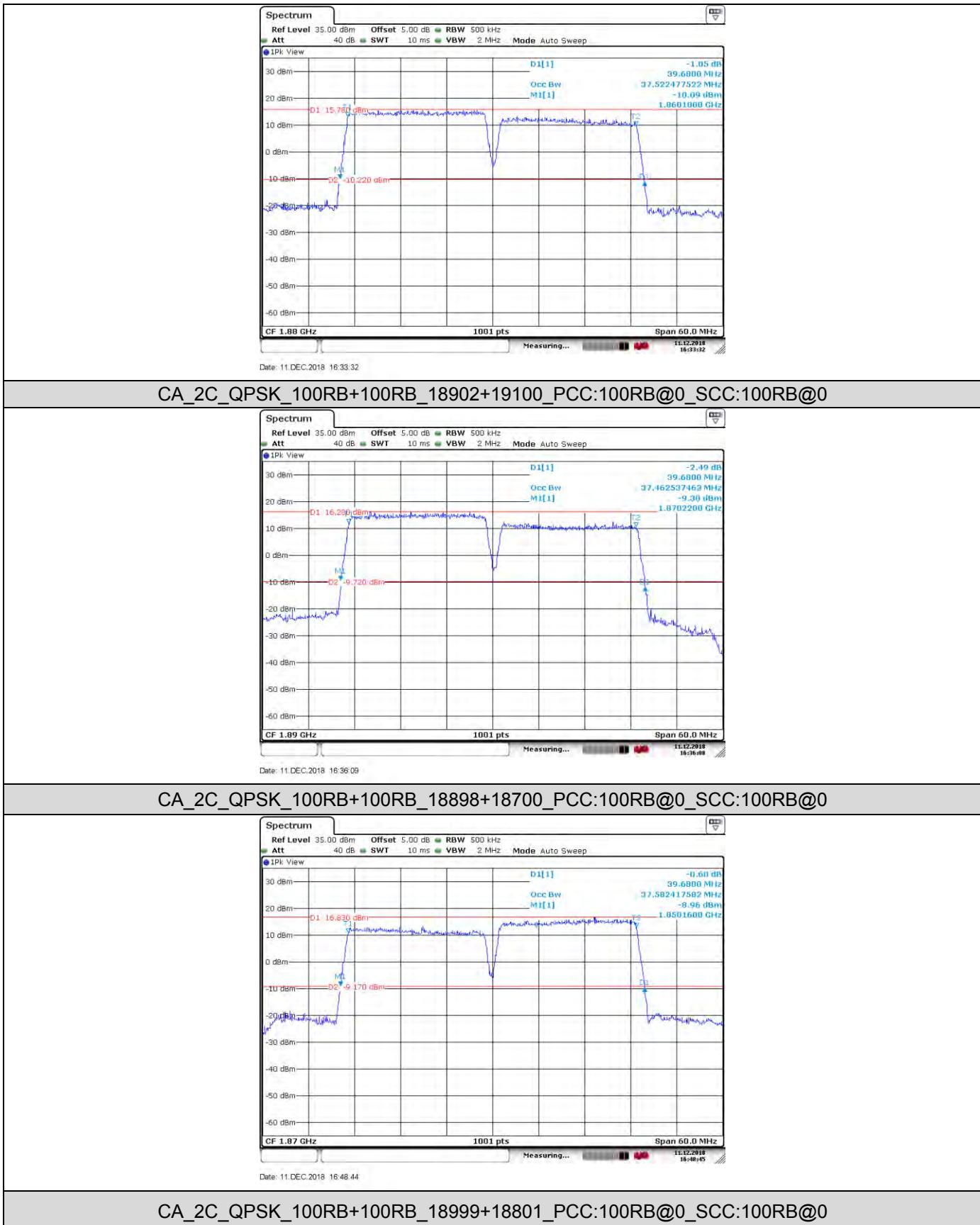
Date: 11 DEC 2018 15:06:37

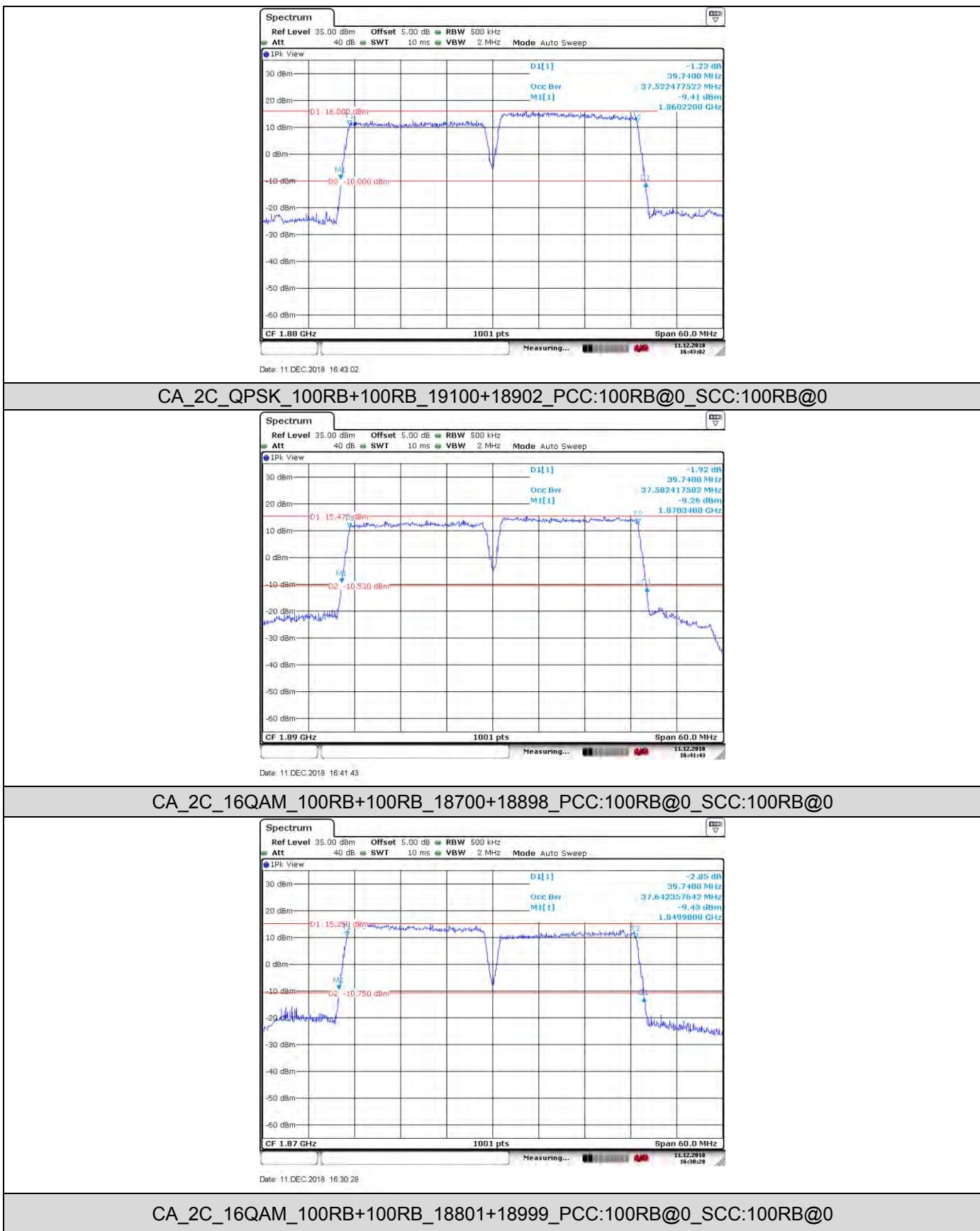
CA 2C QPSK 100RB+100RB 18700+18898 PCC:100RB@0 SCC:100RB@0

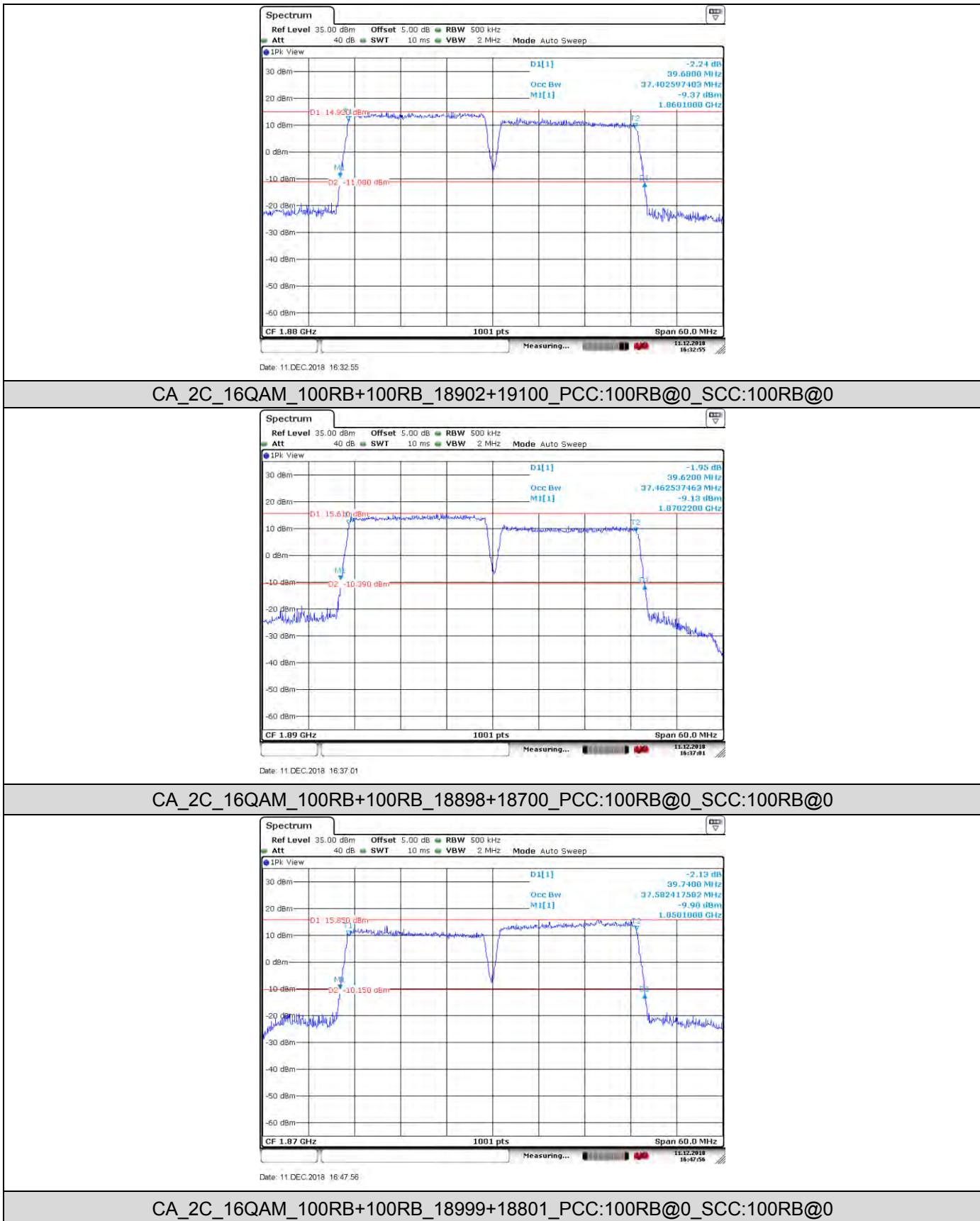


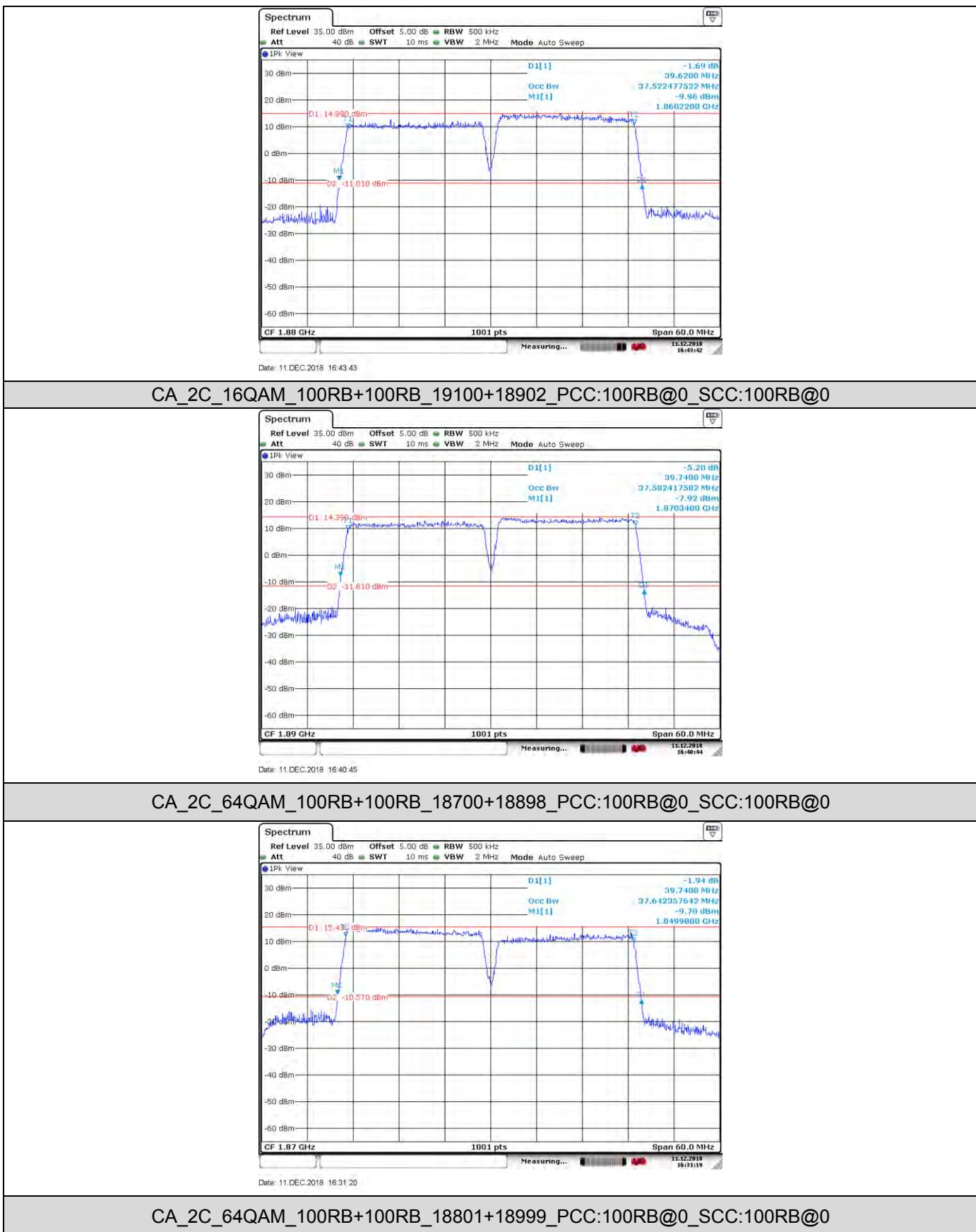
Date: 11-DEC-2018 16:29:14

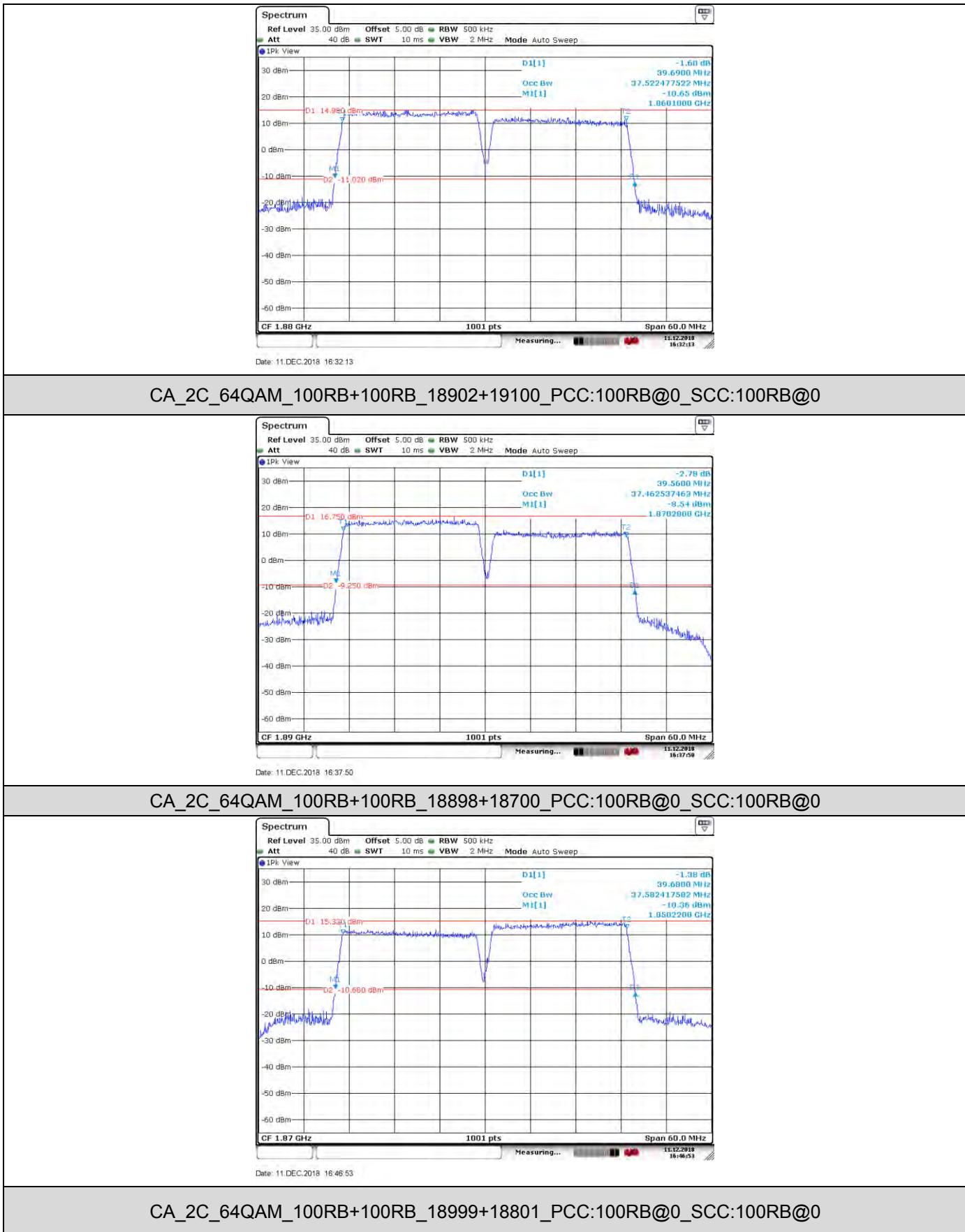
CA 2C QPSK 100RB+100RB 18801+18999 PCC:100RB@0 SCC:100RB@0

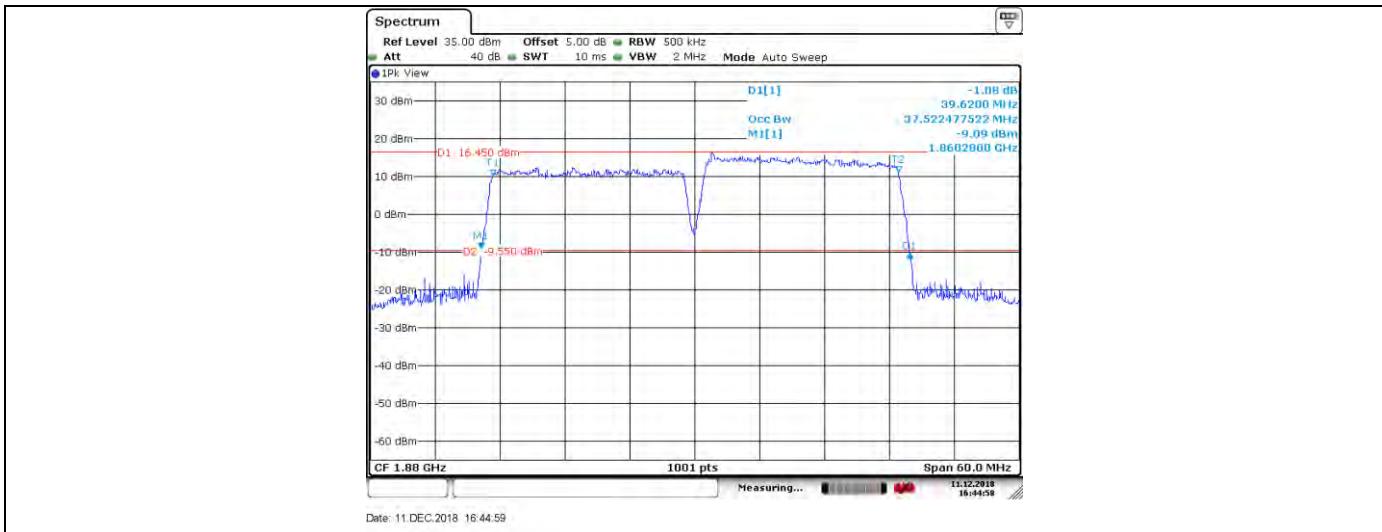




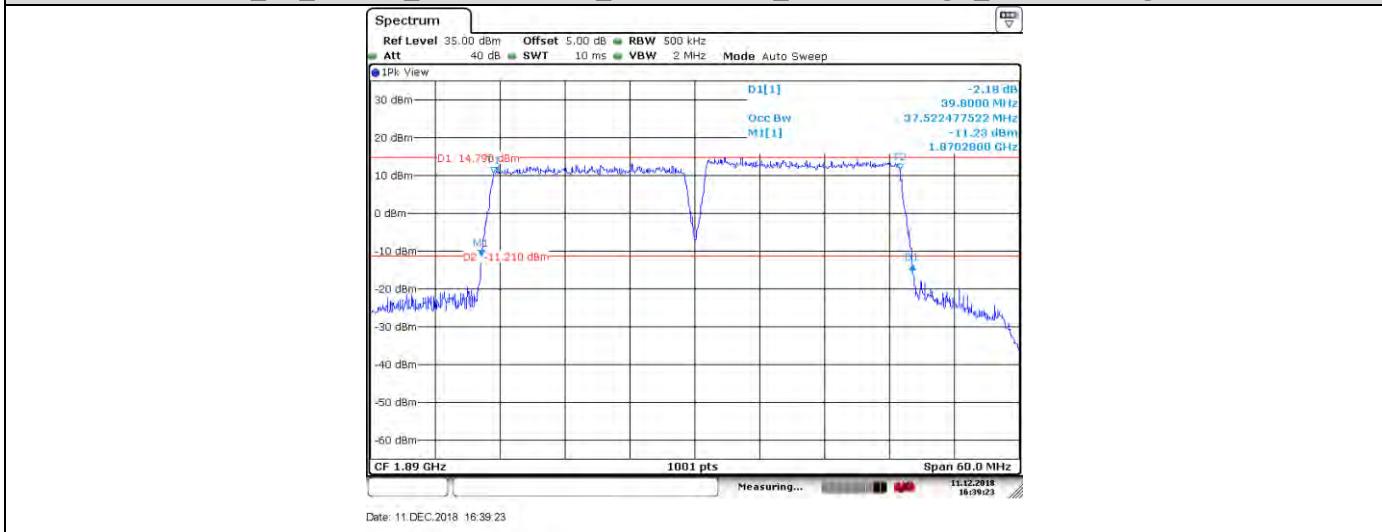








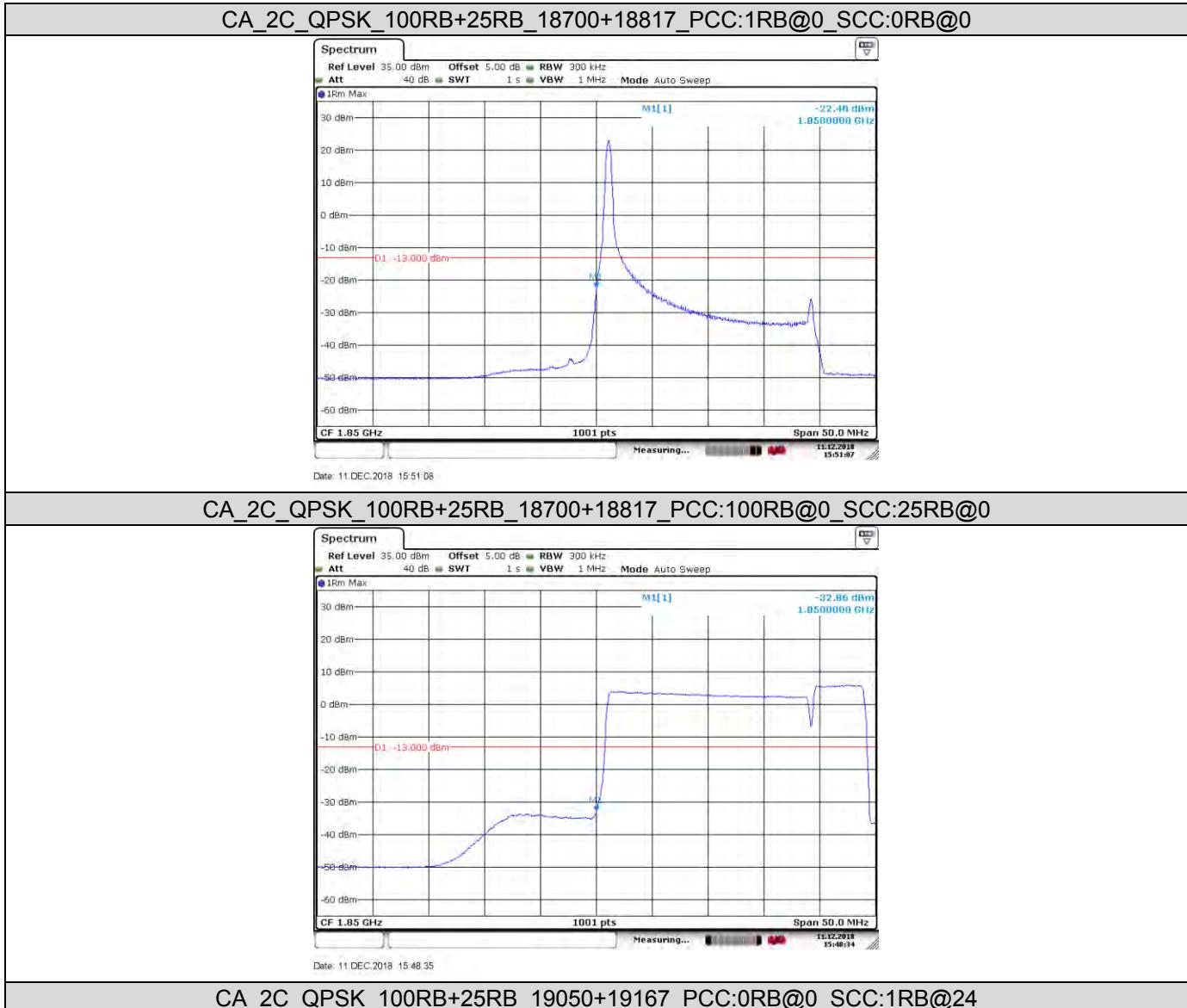
CA\_2C\_64QAM\_100RB+100RB\_19100+18902\_PCC:100RB@0\_SCC:100RB@0

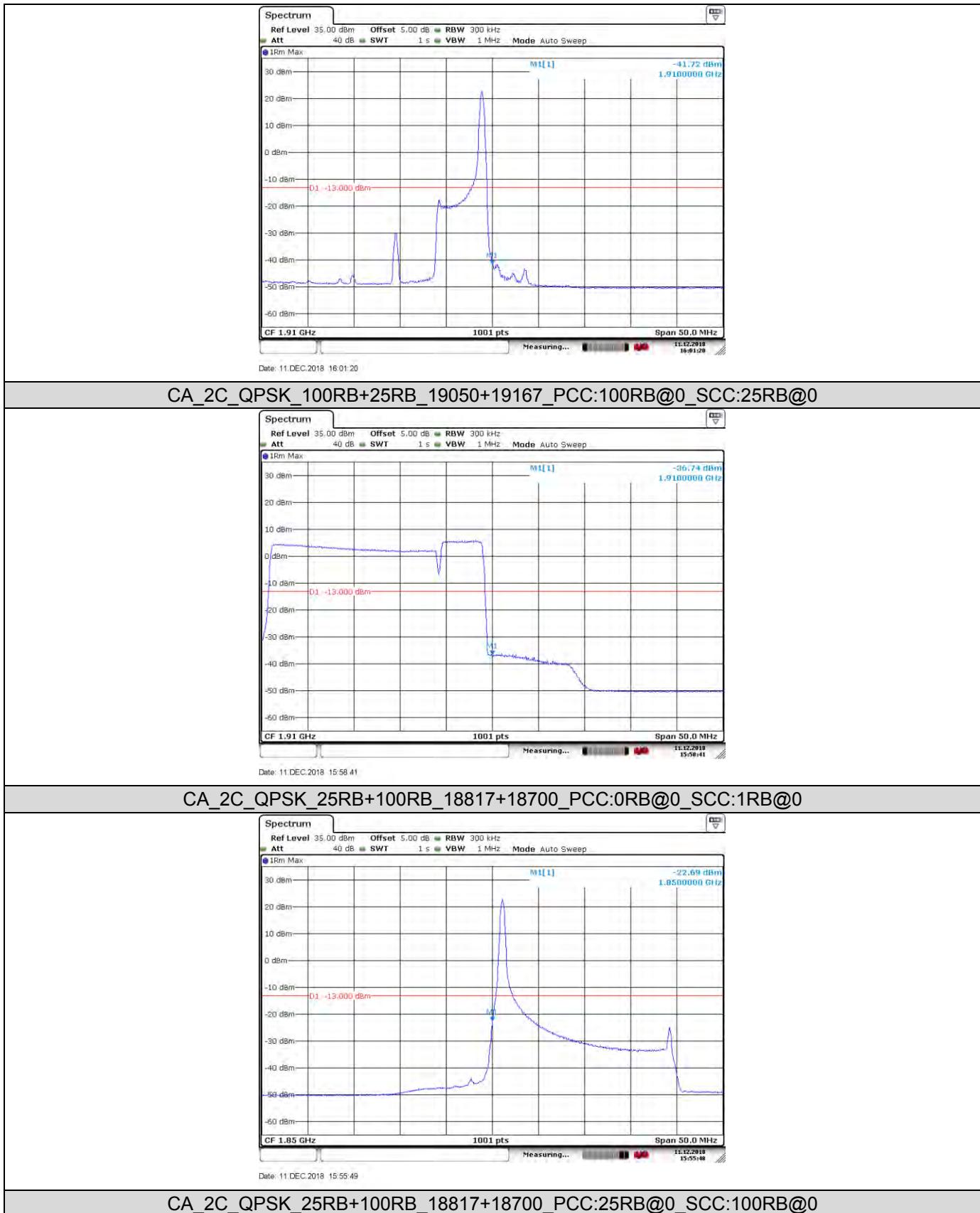


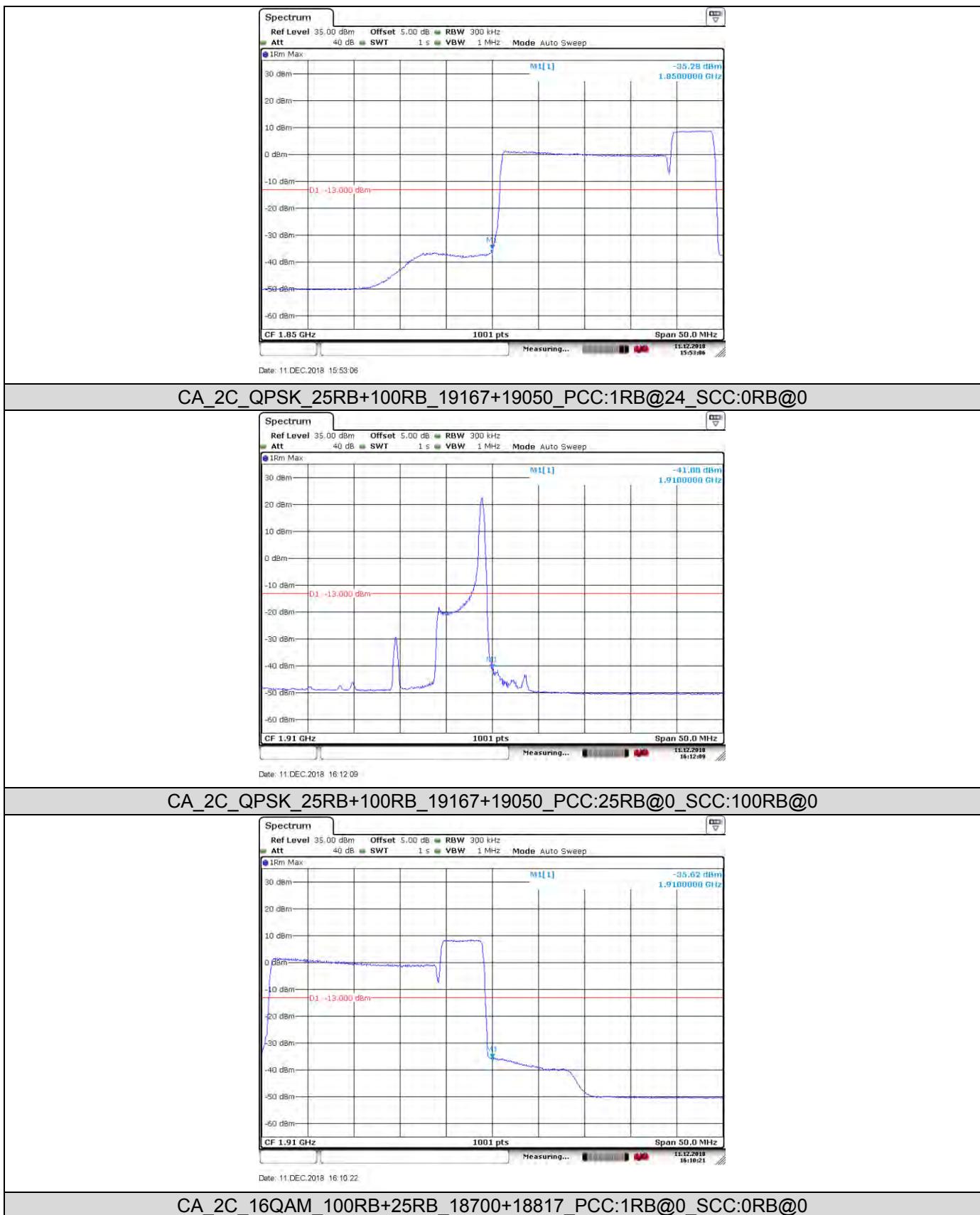
## 5 Band Edges Compliance

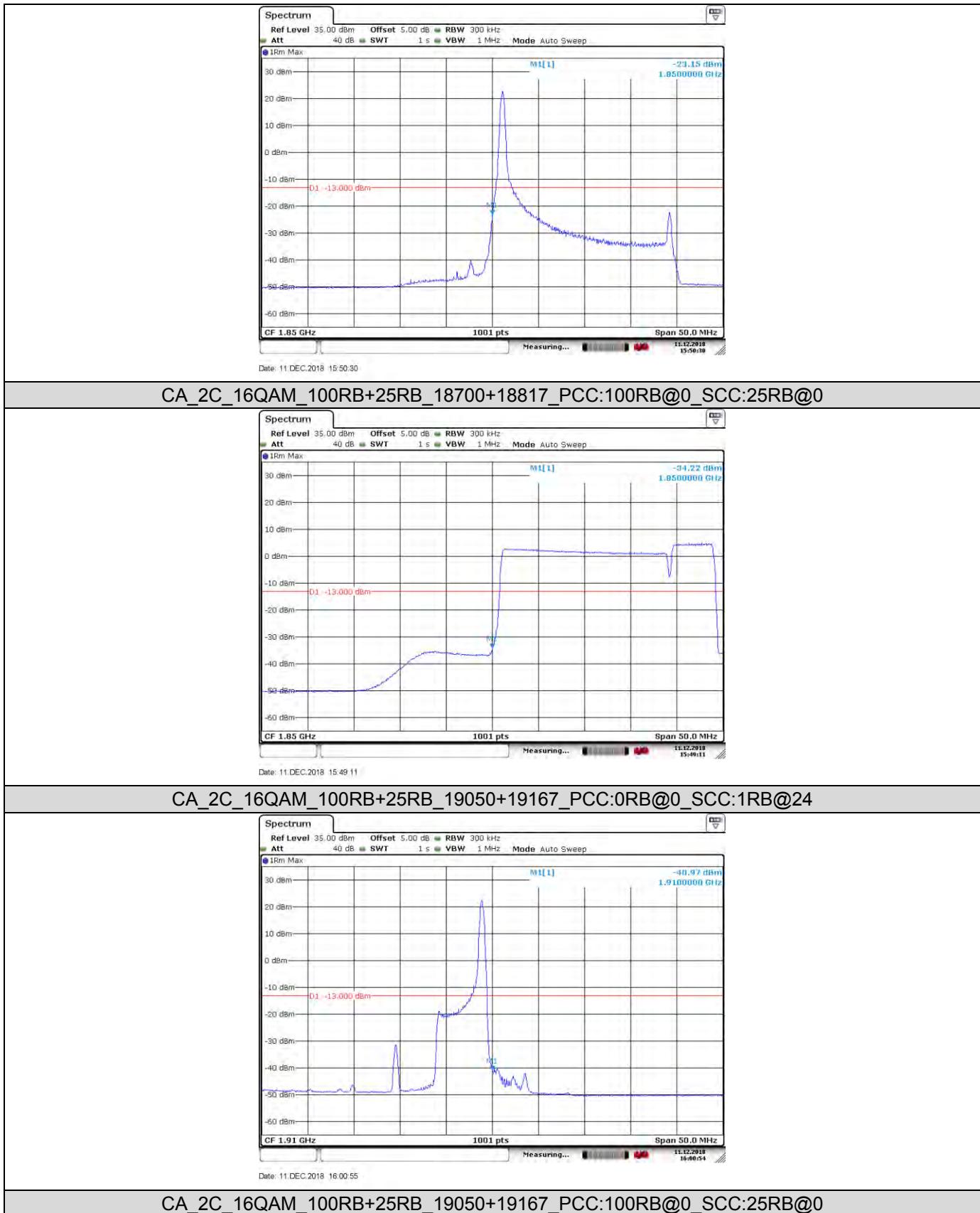
### 5.1 For LTE

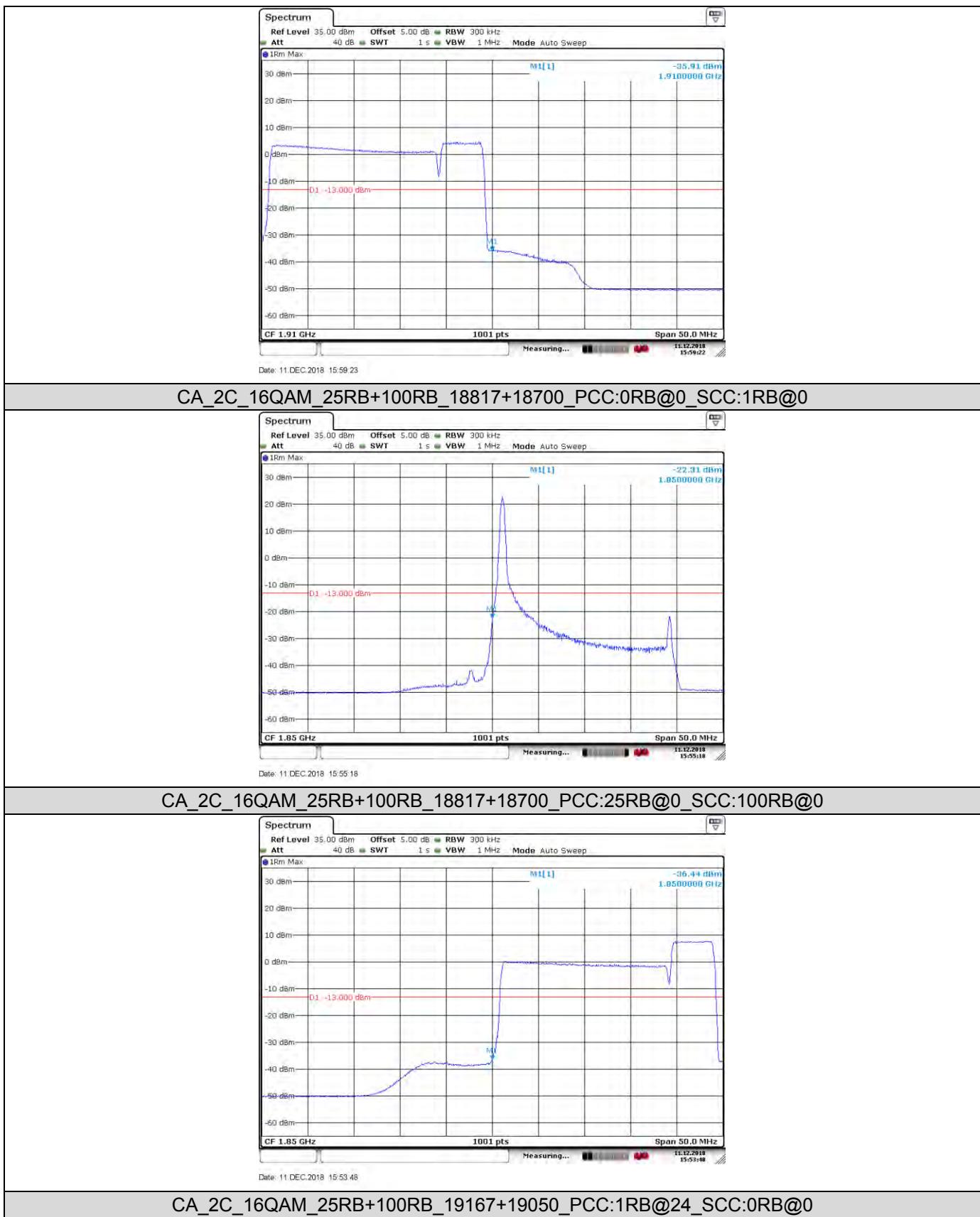
#### 5.1.1 Test Band = LTE Band CA\_2C

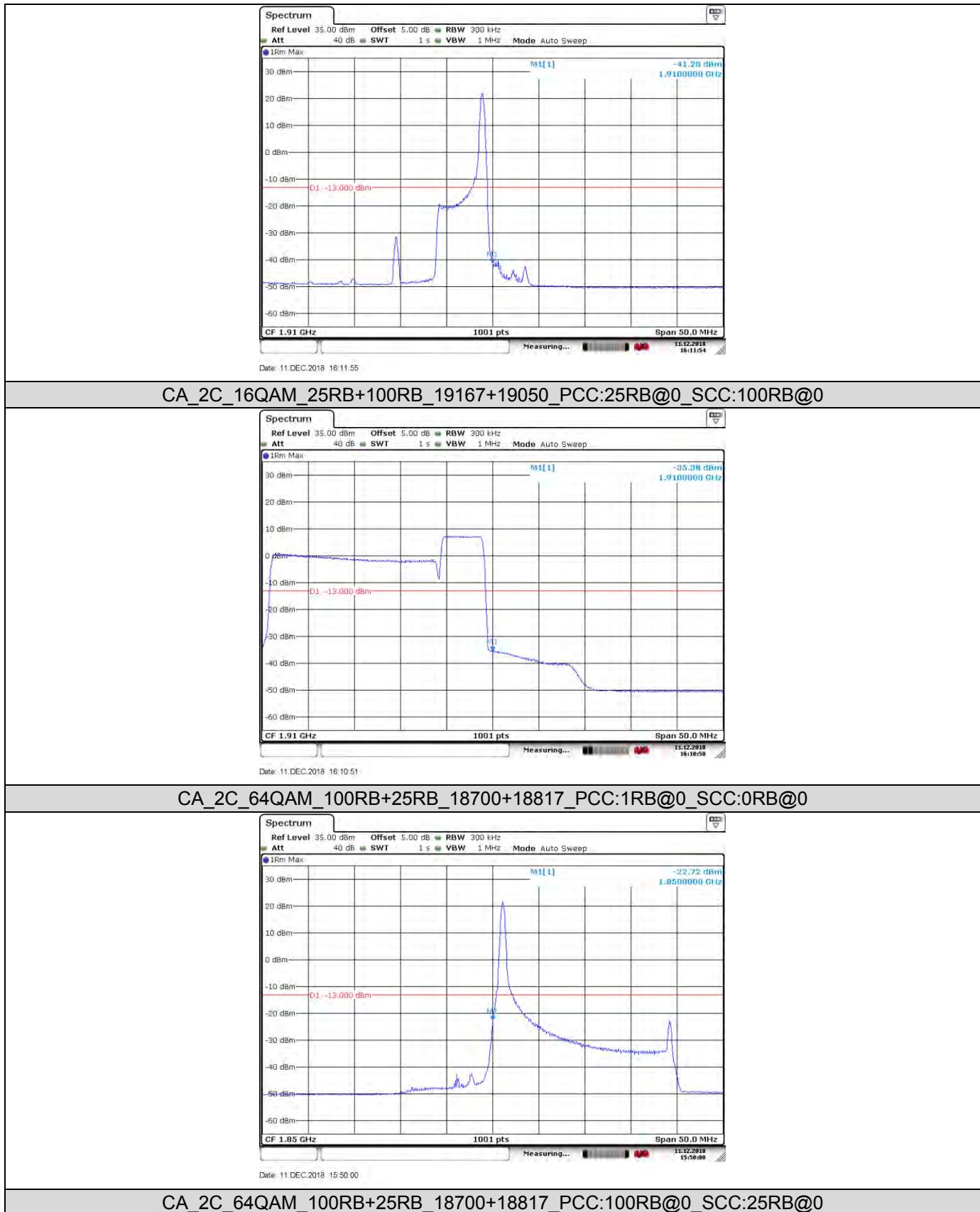


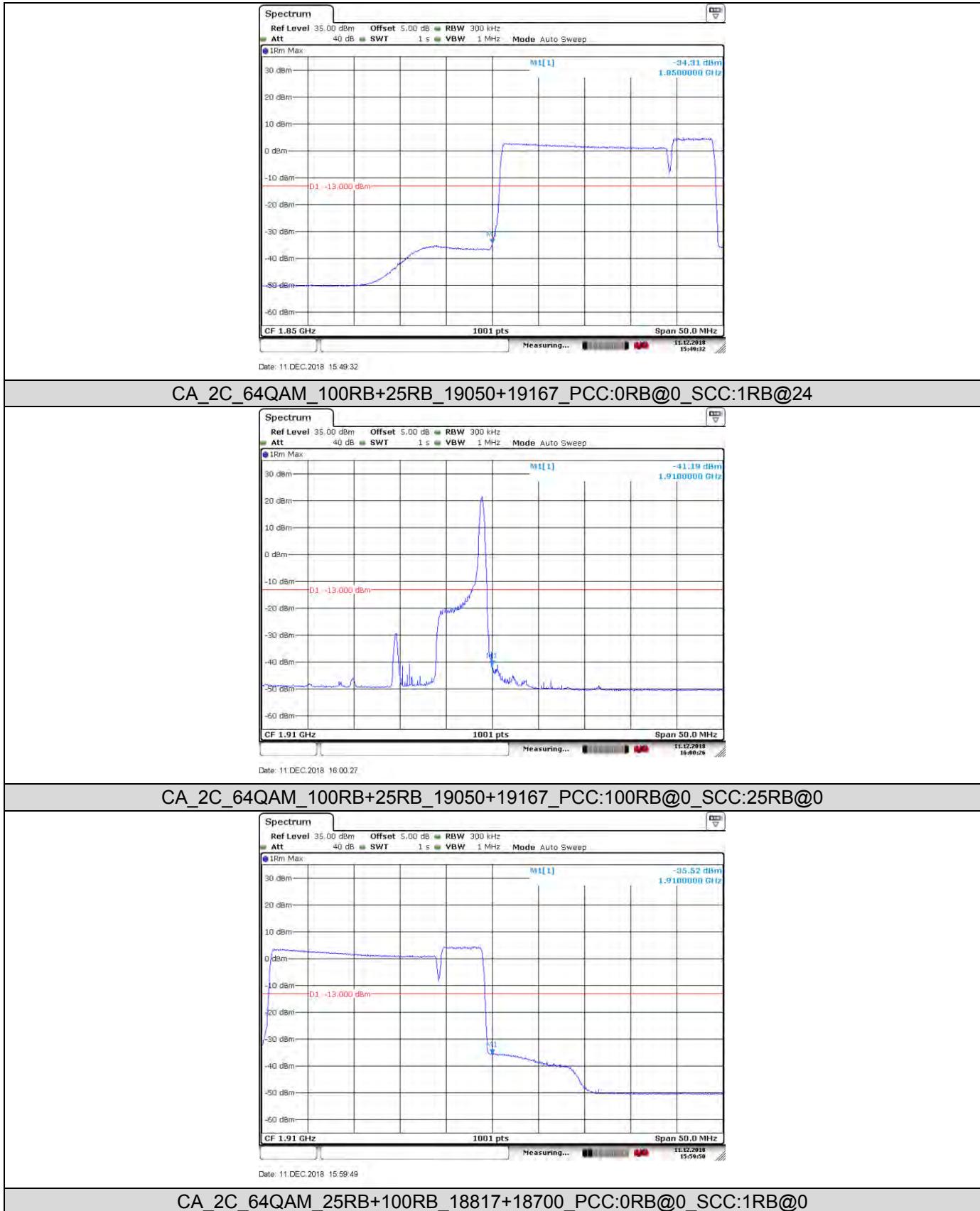


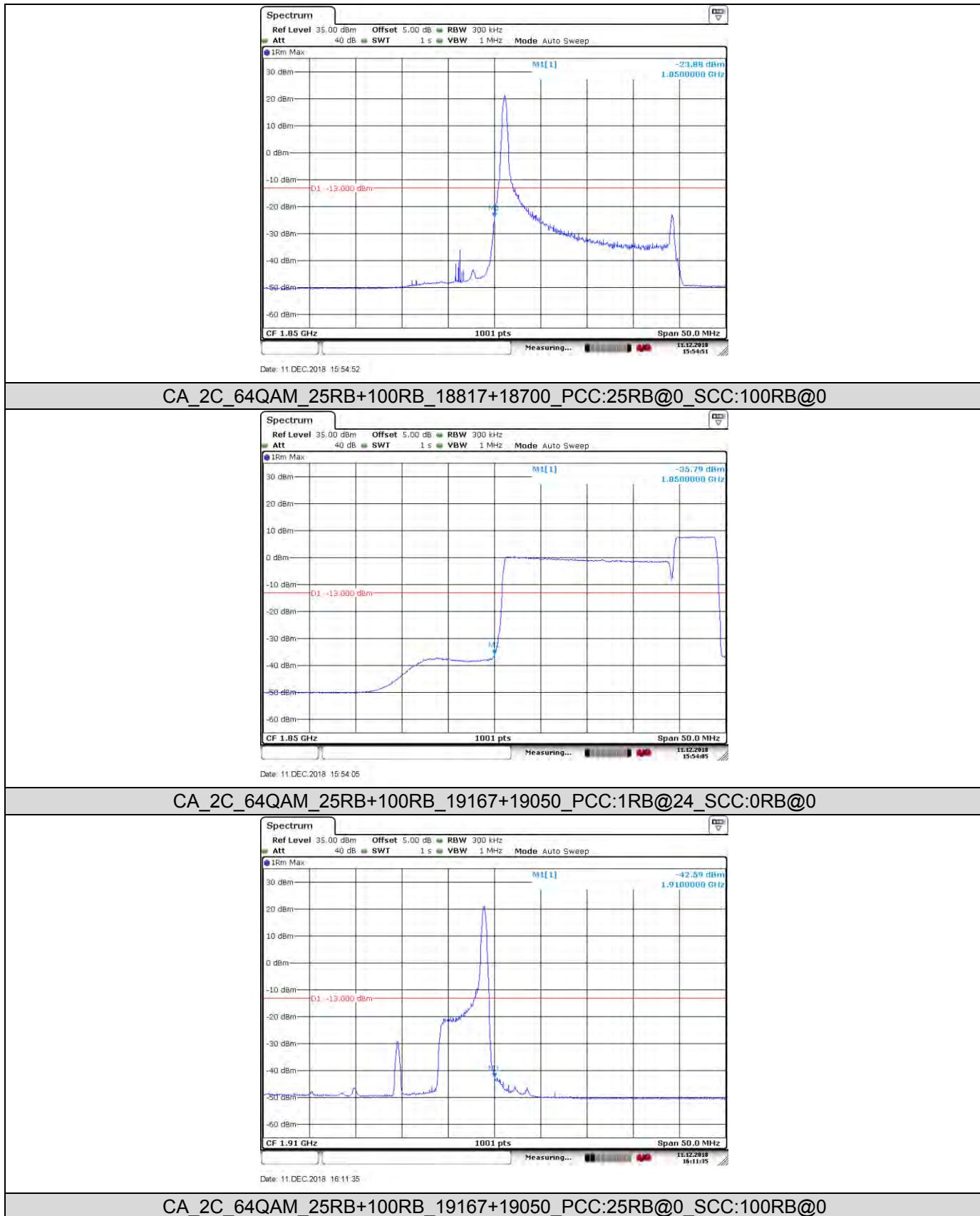


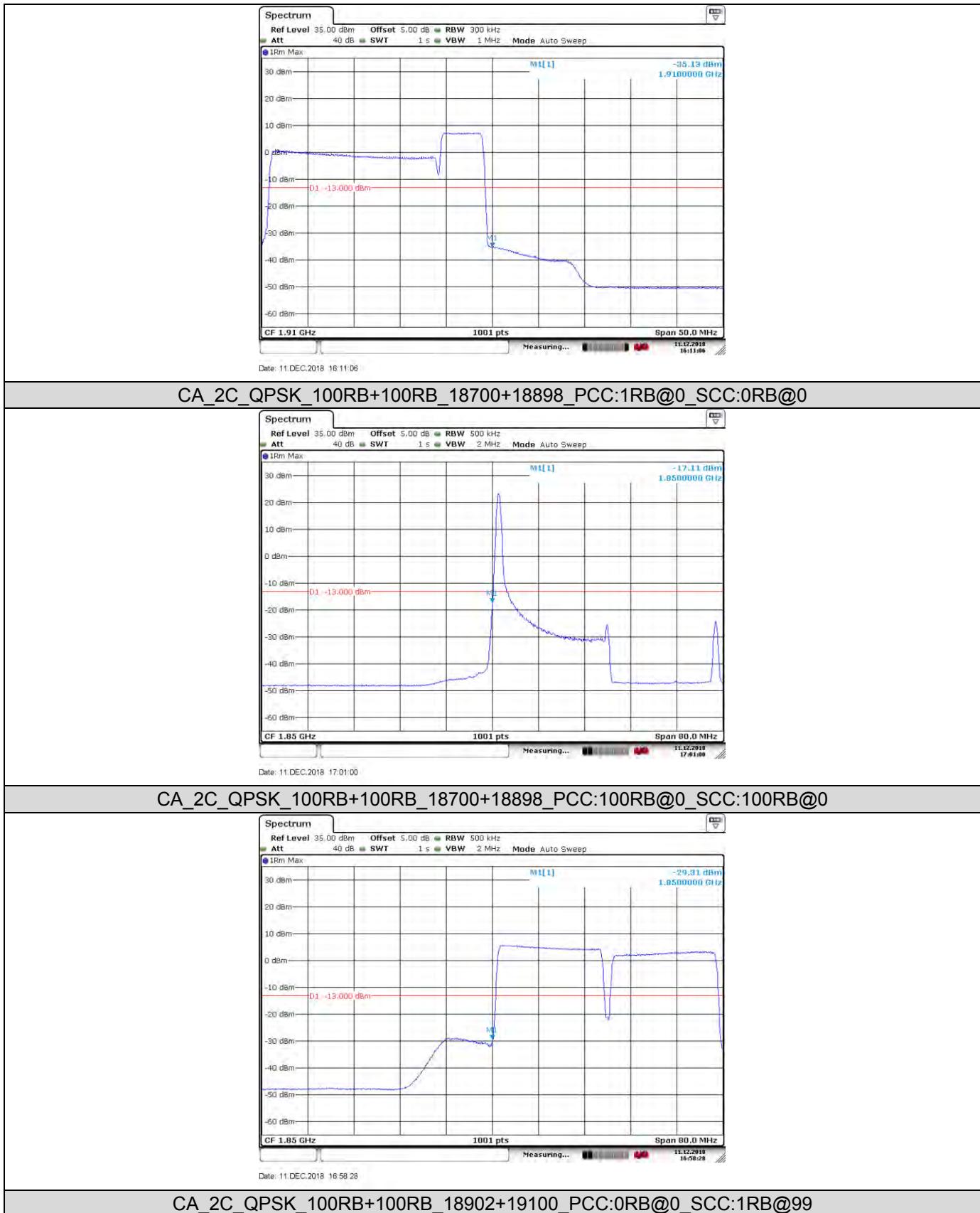


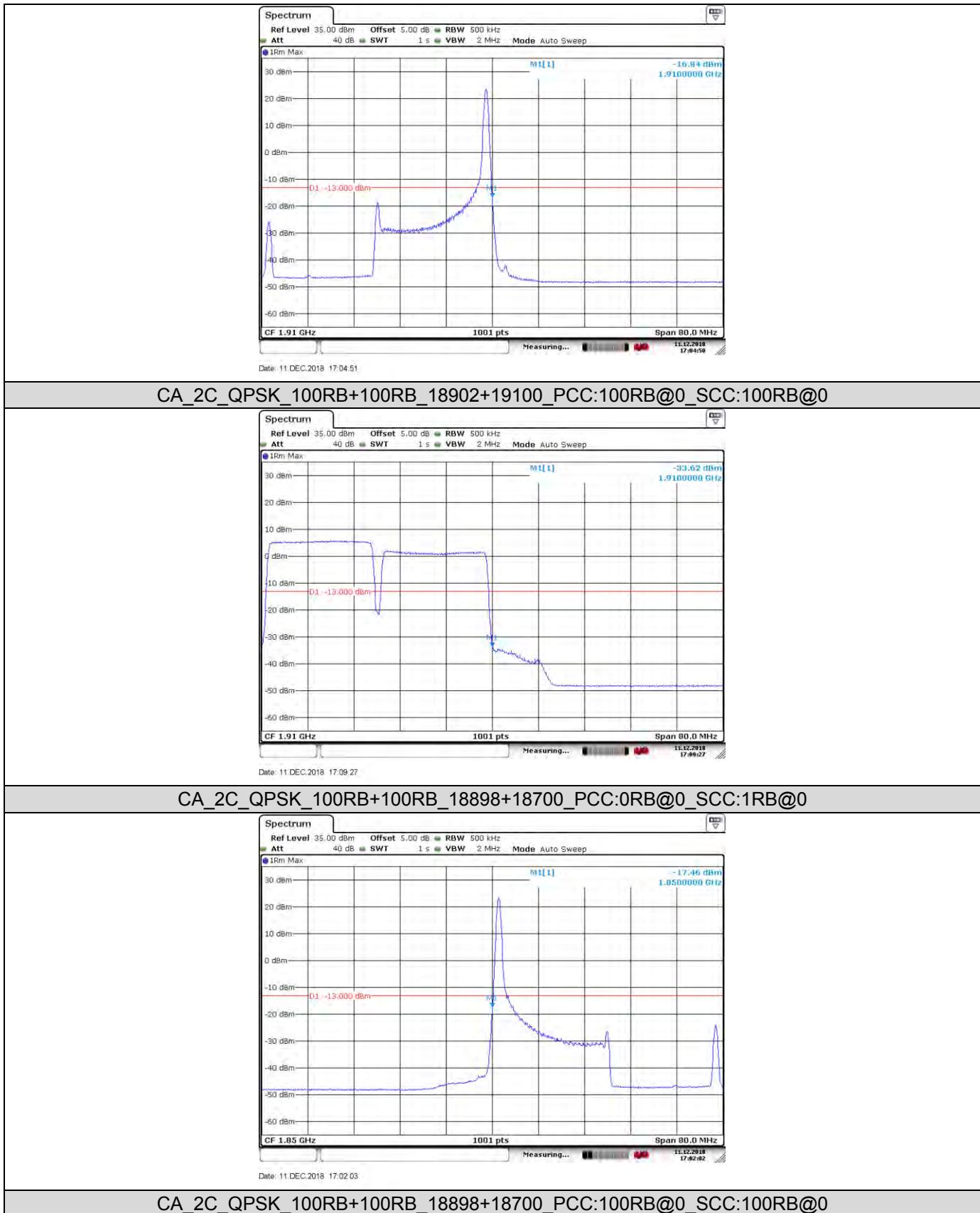


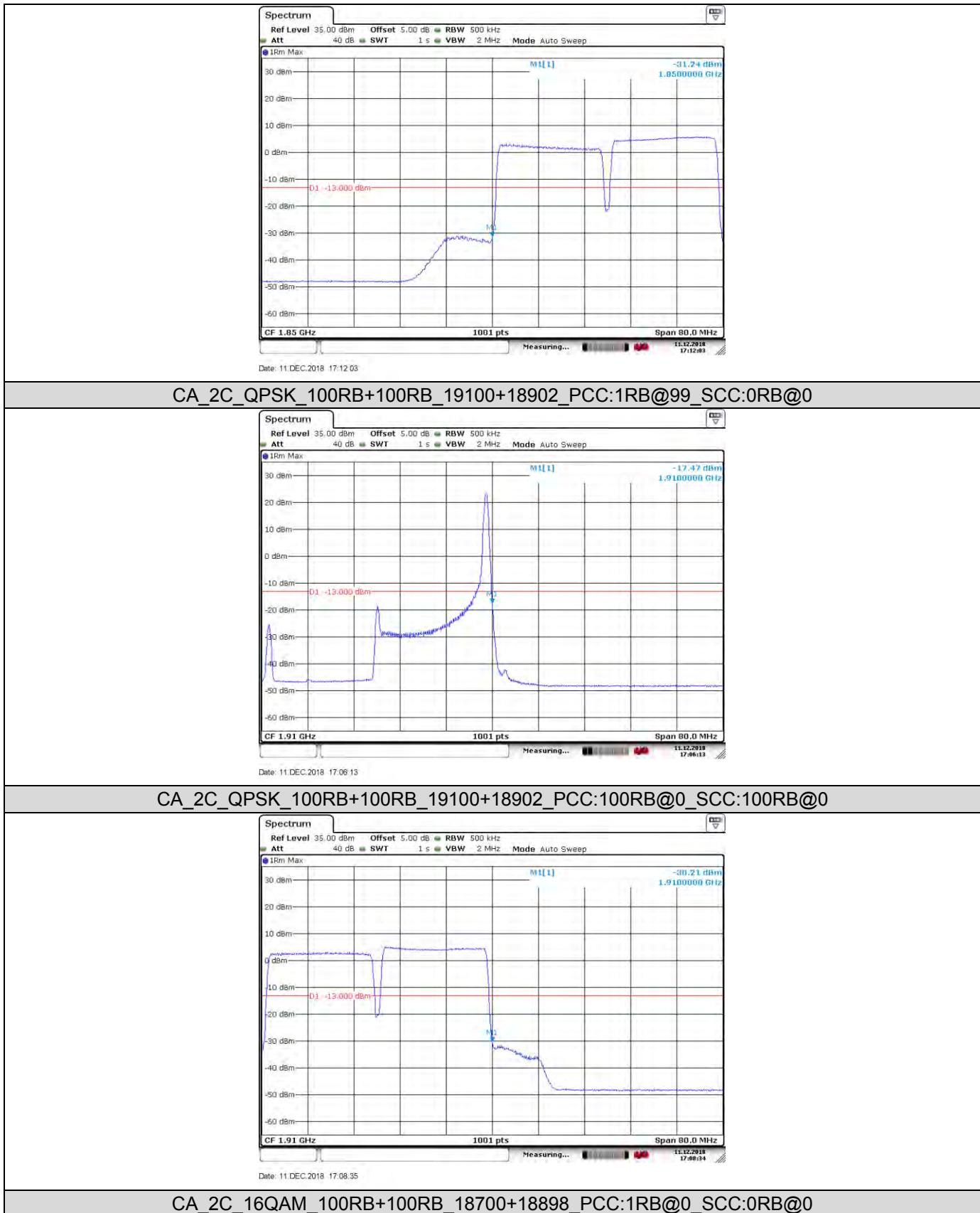


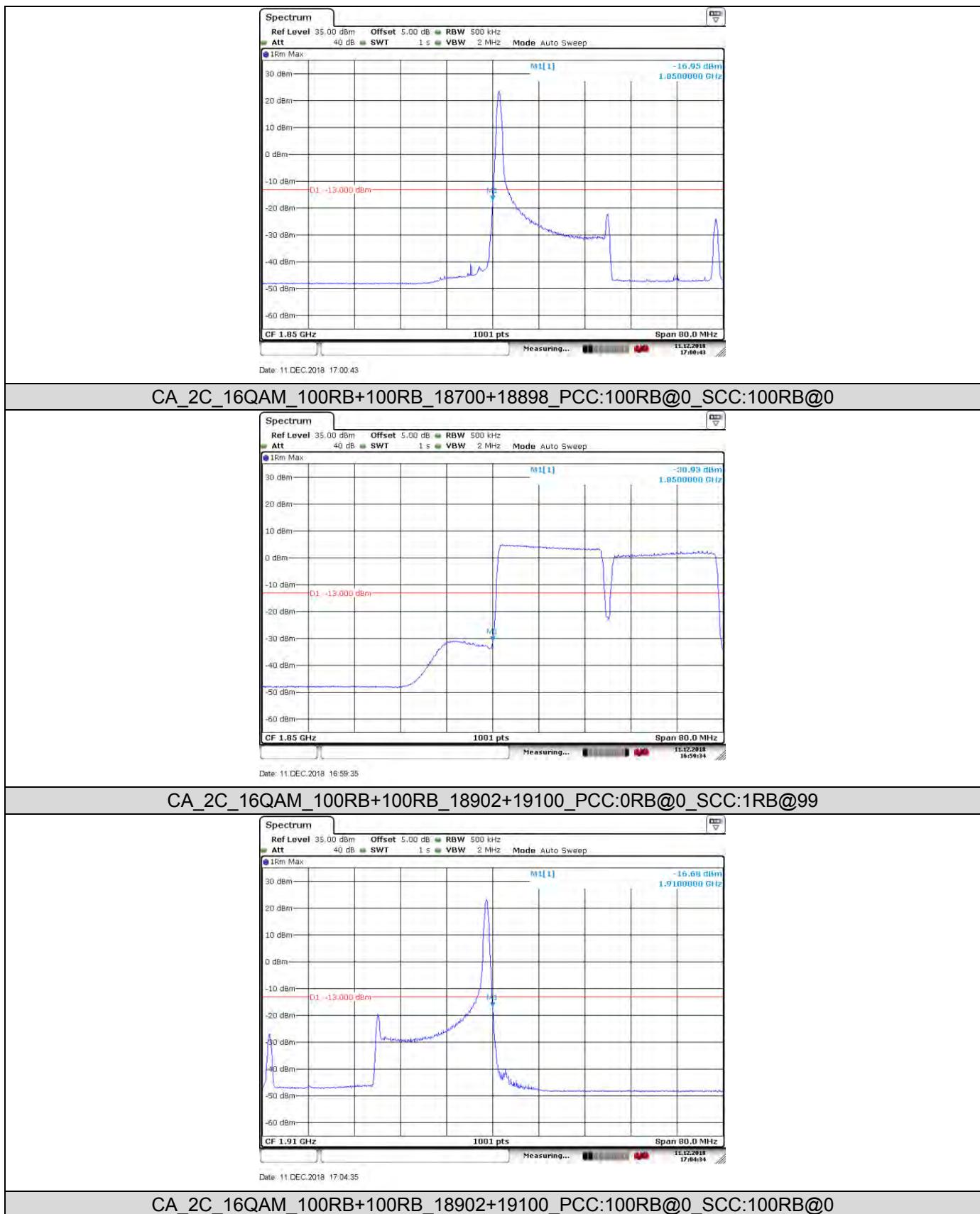


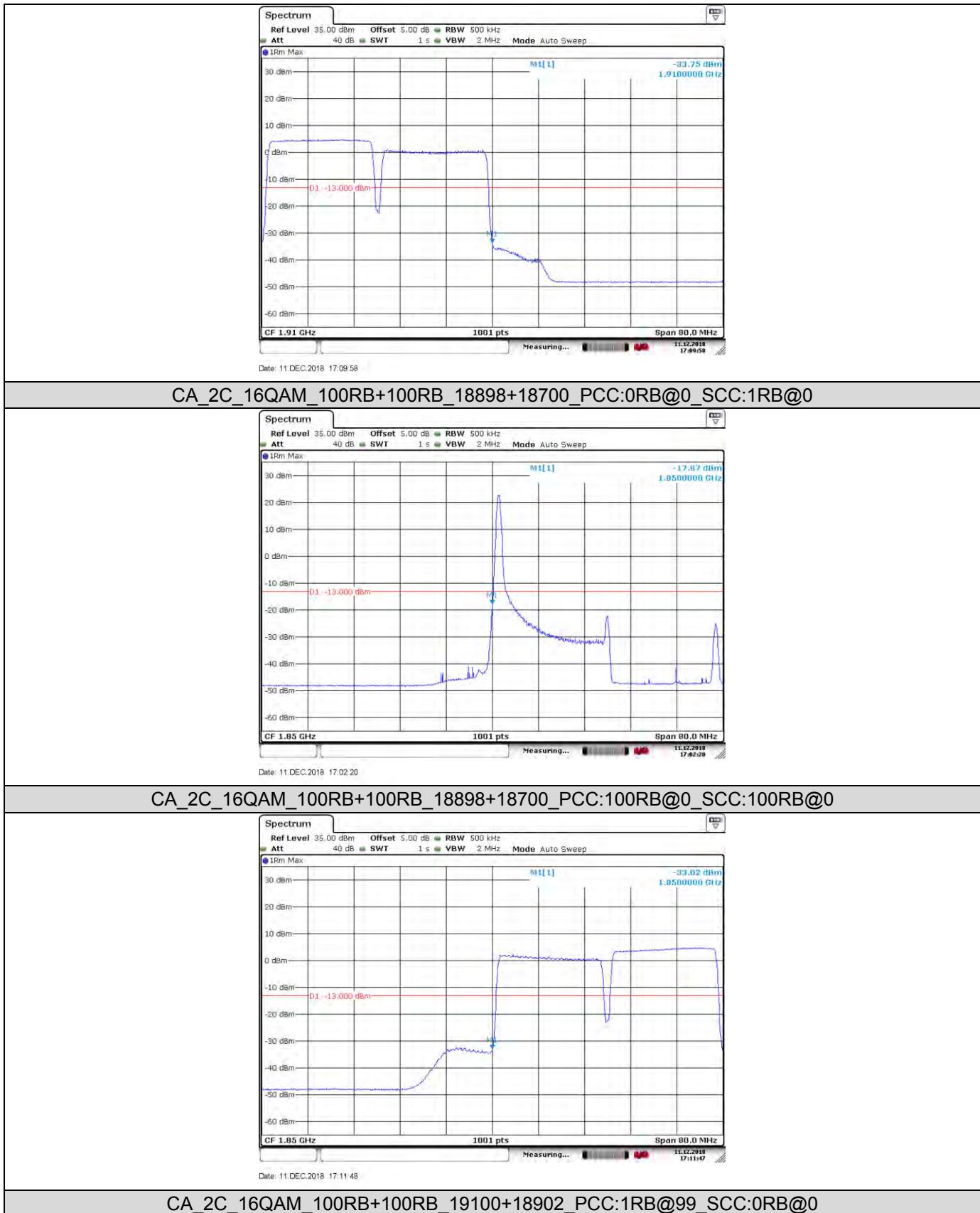


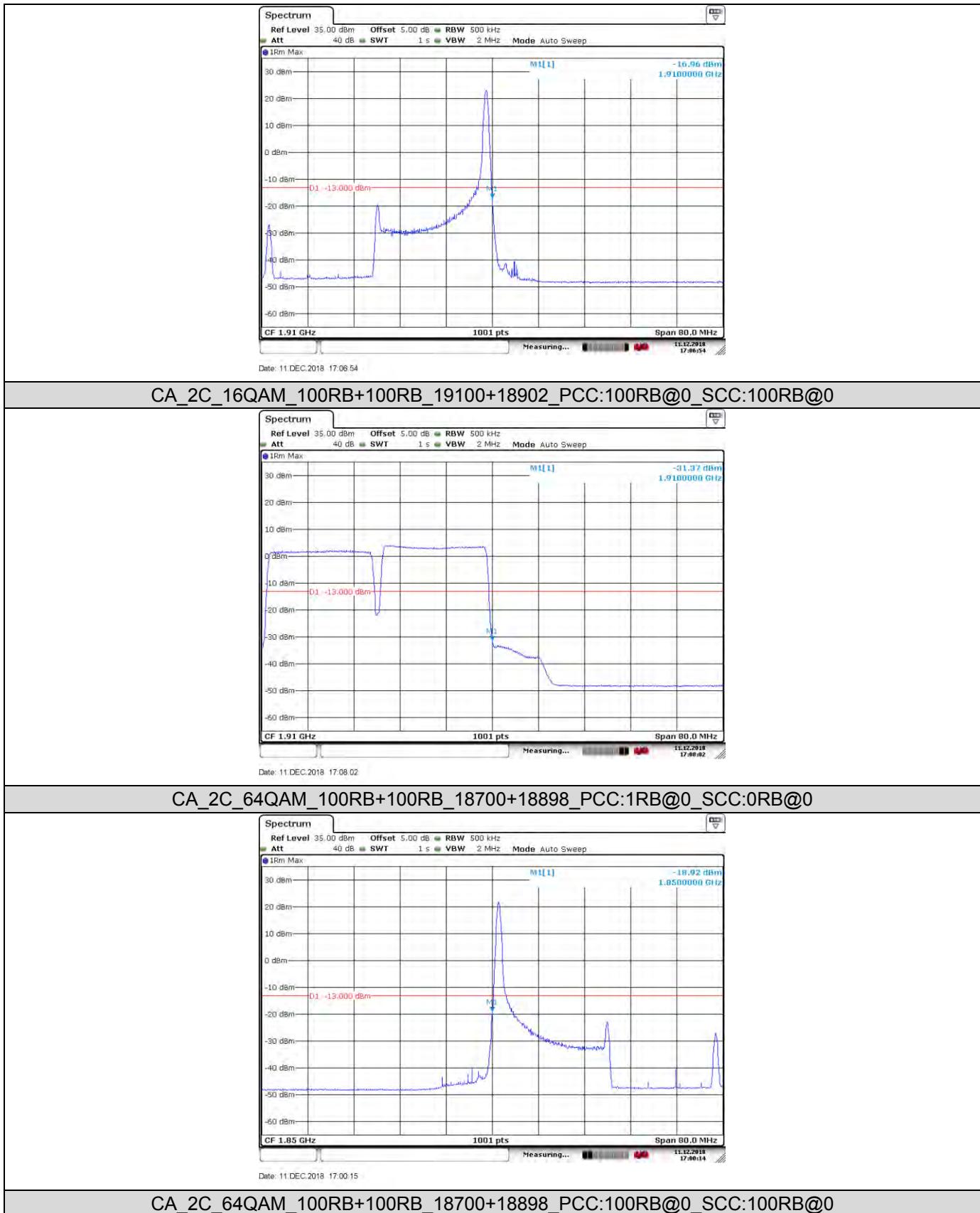


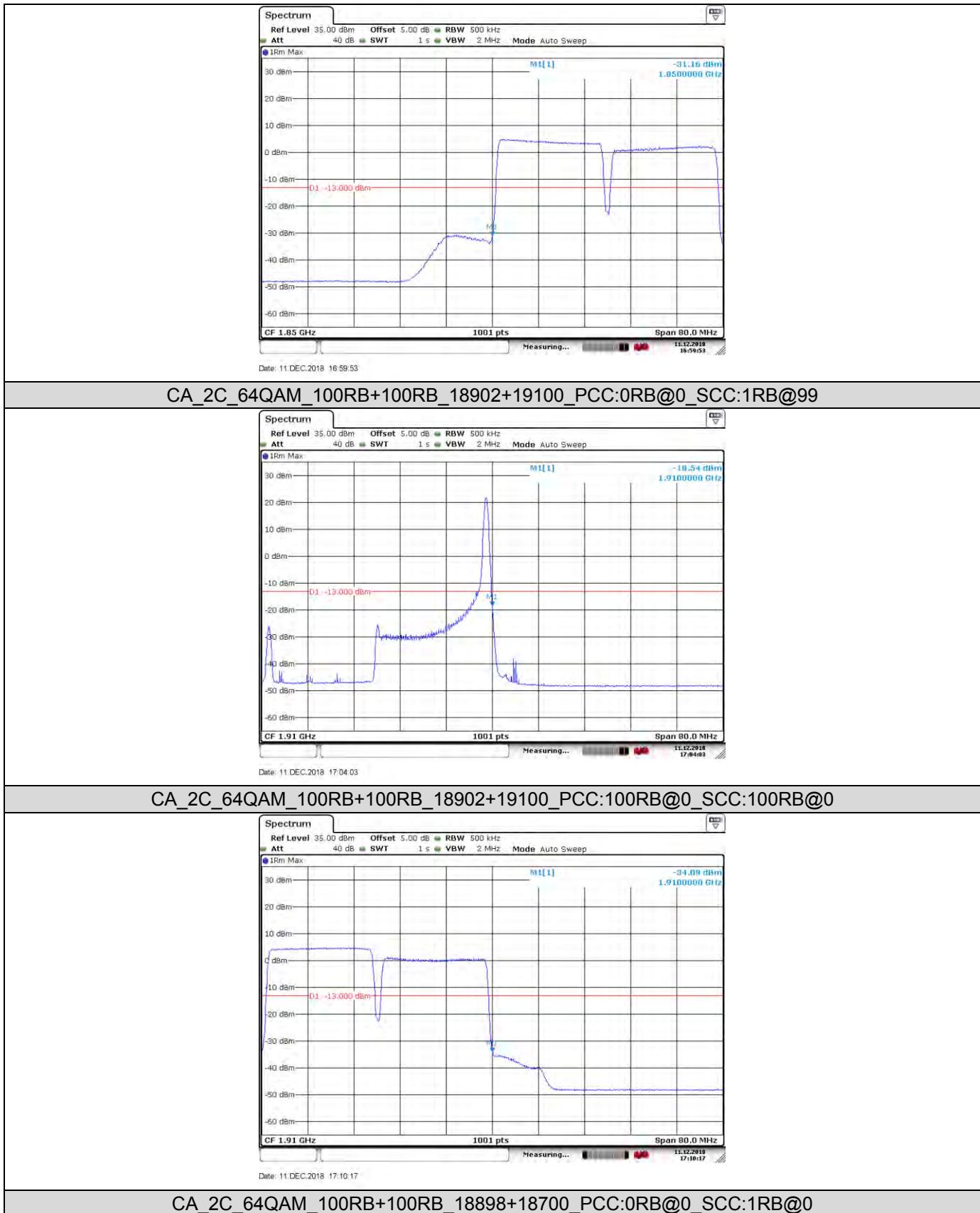


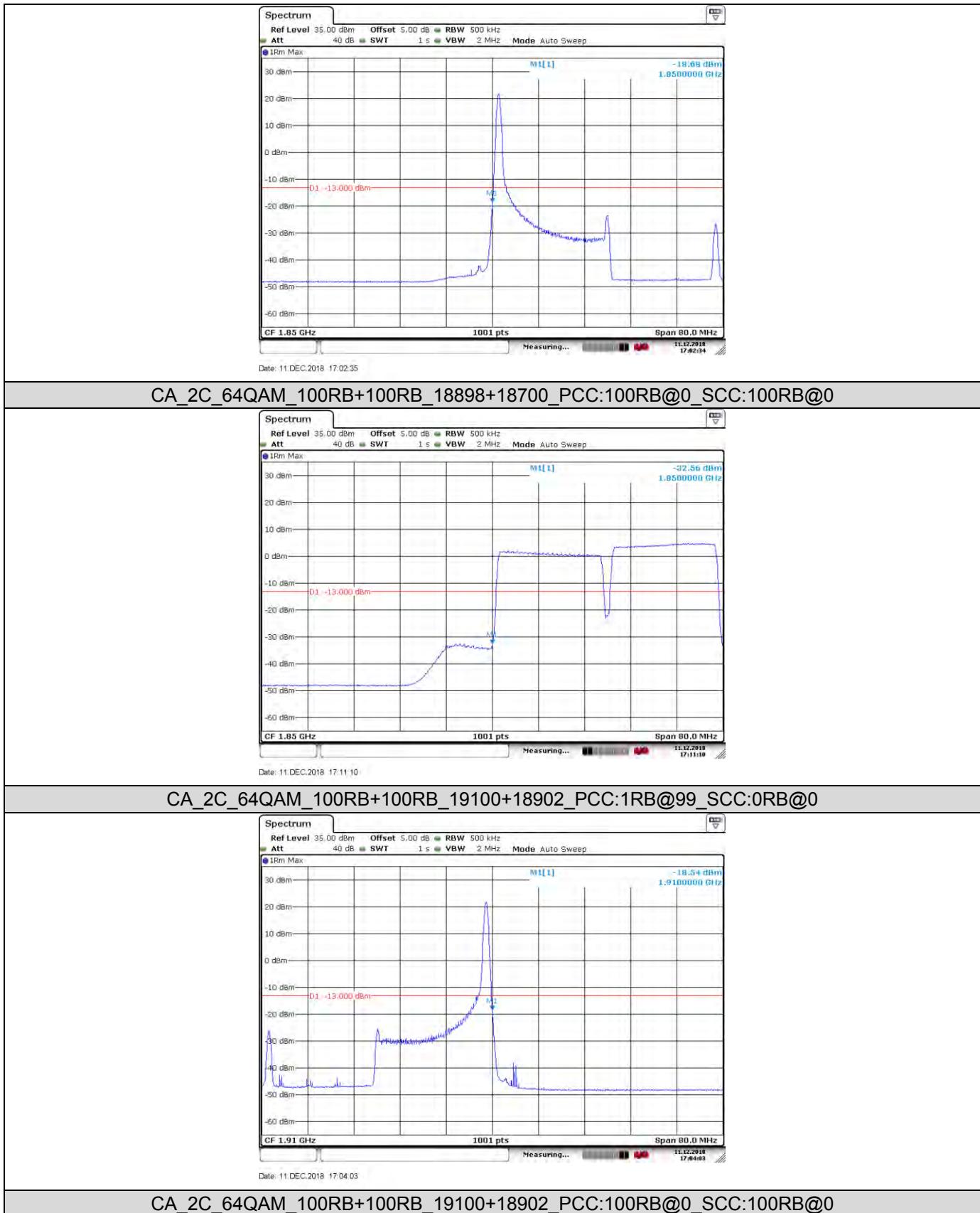


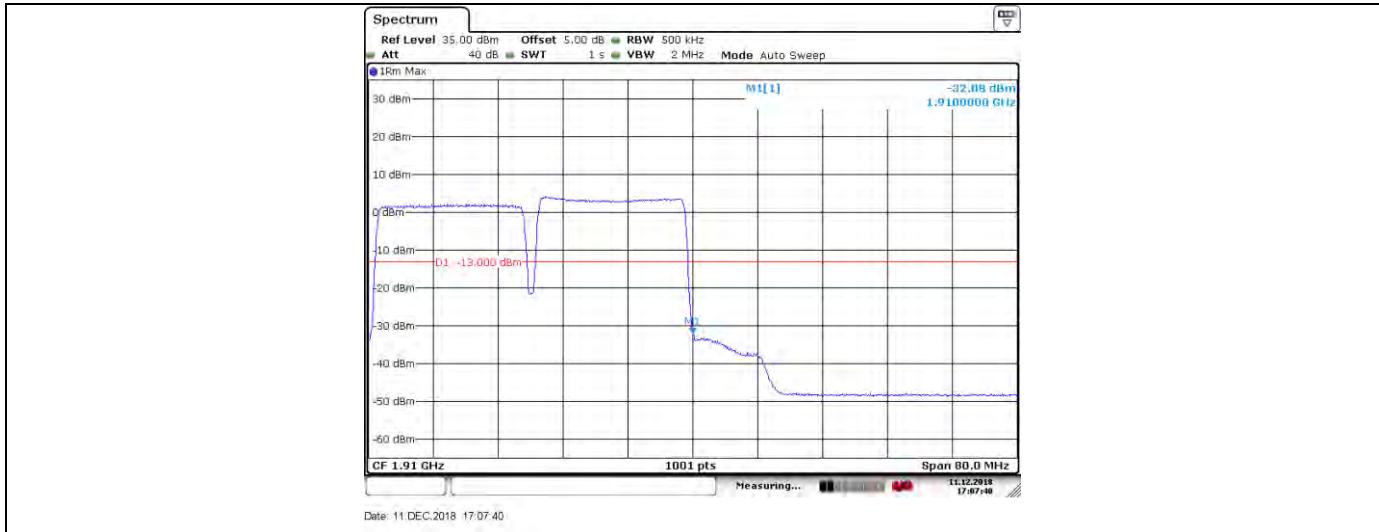












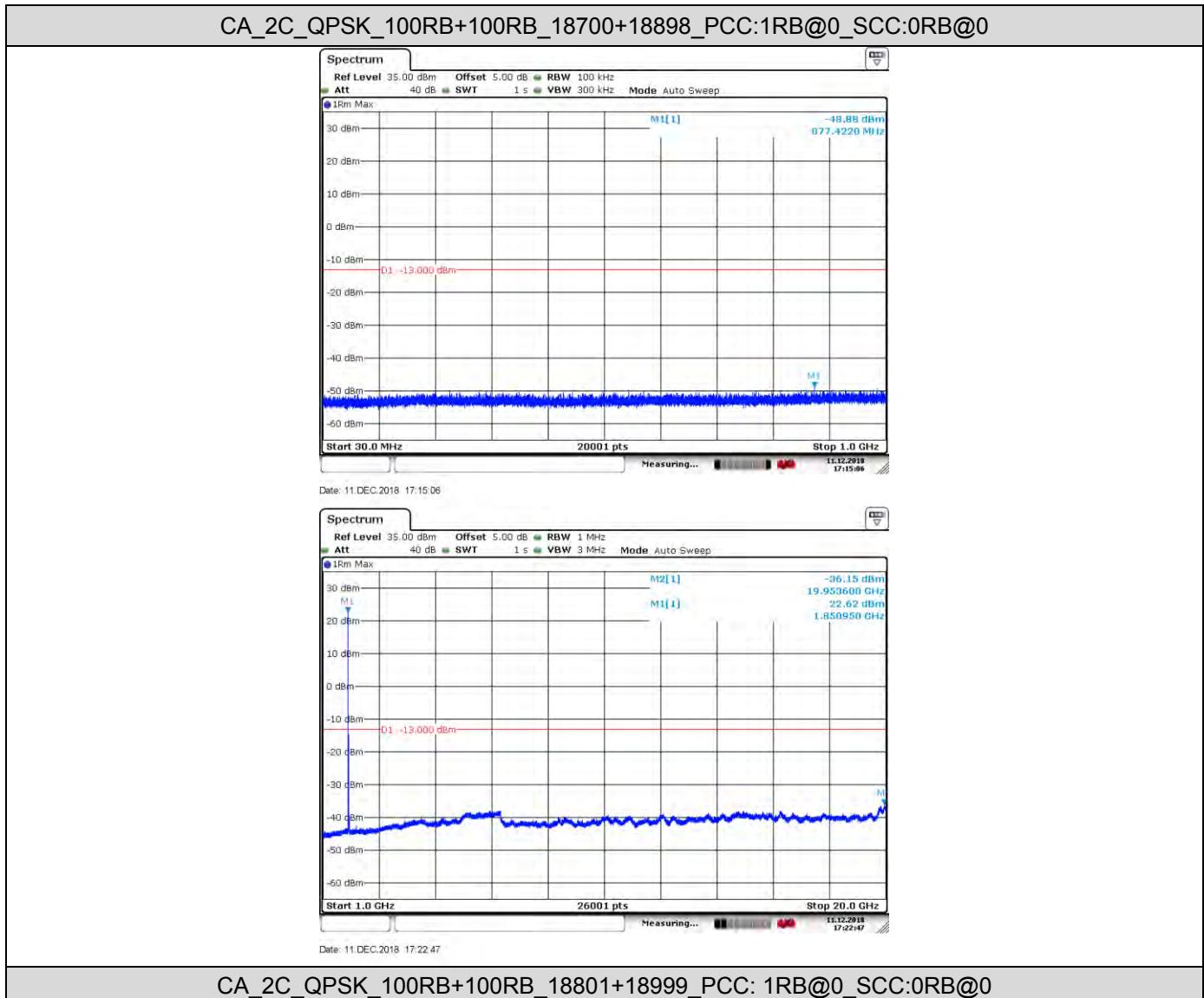
## 6 Spurious Emission at Antenna Terminal

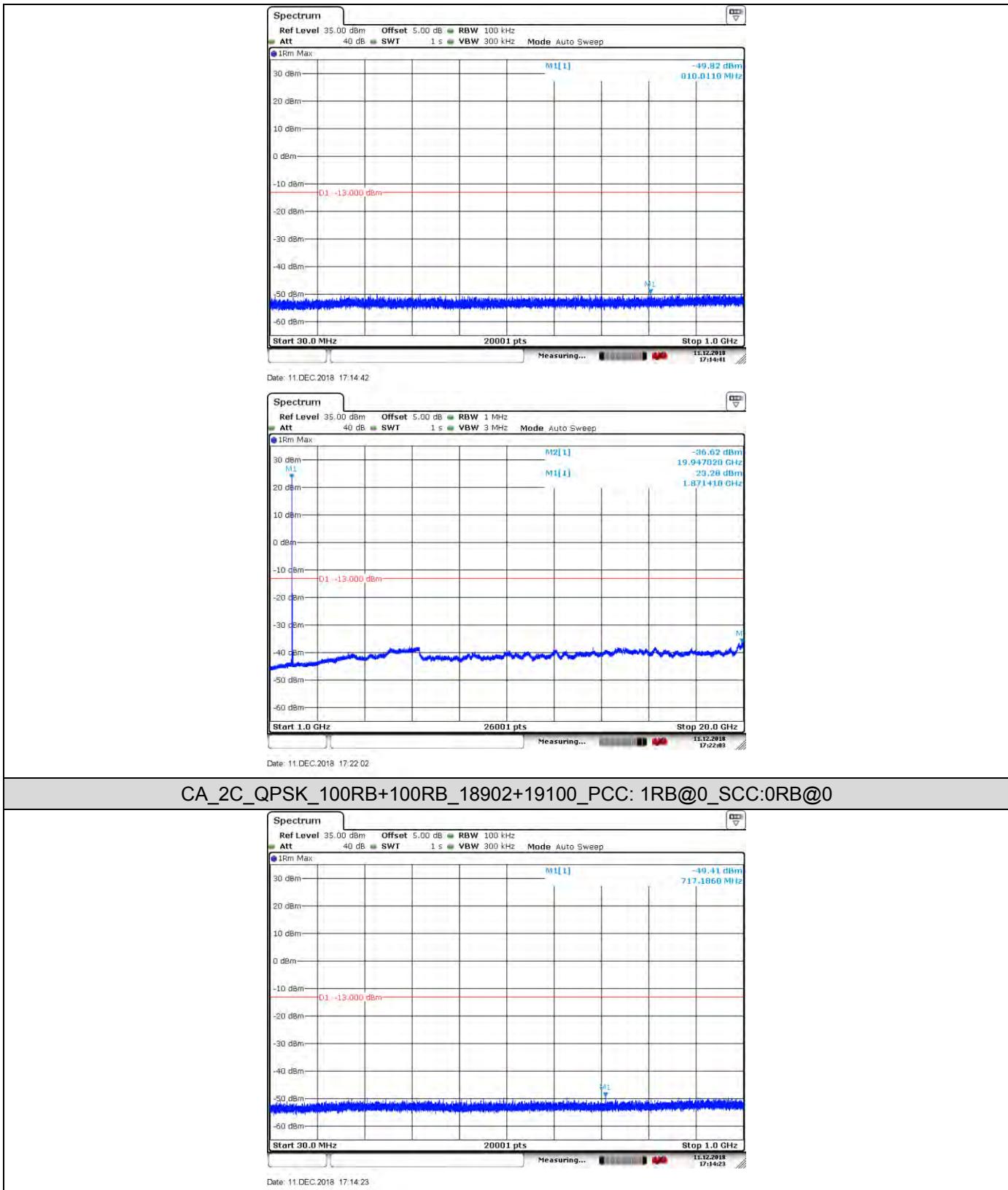
NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< \text{RBW}/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points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

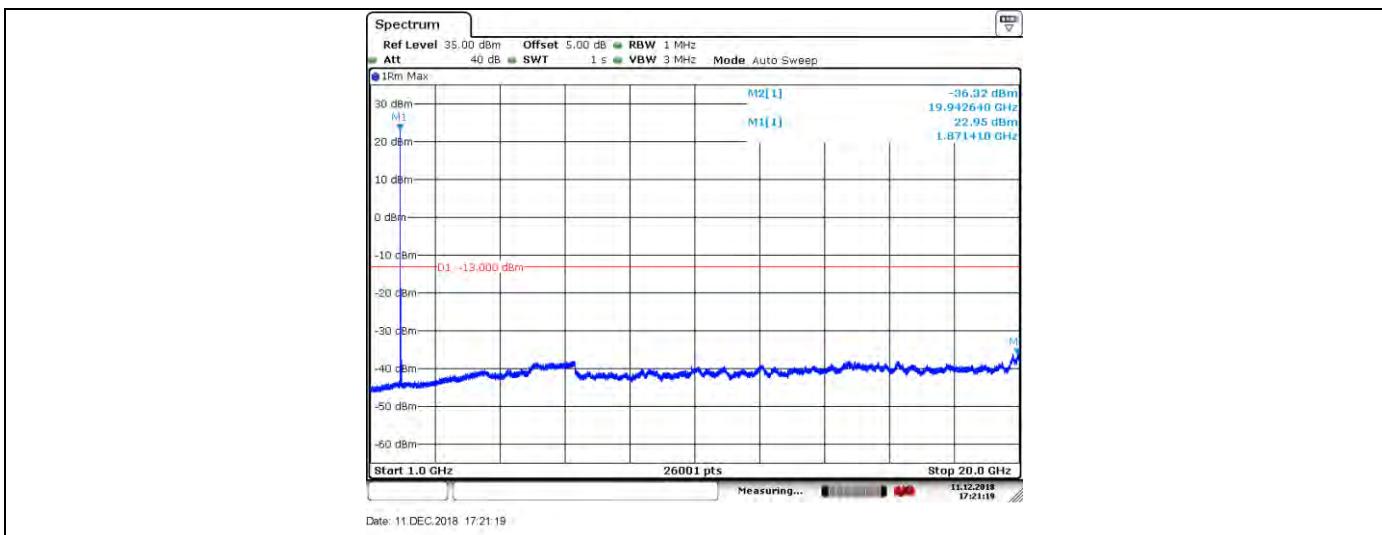
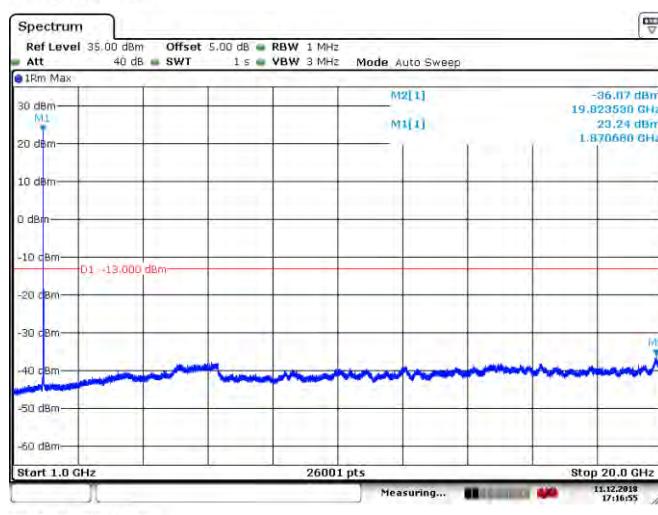
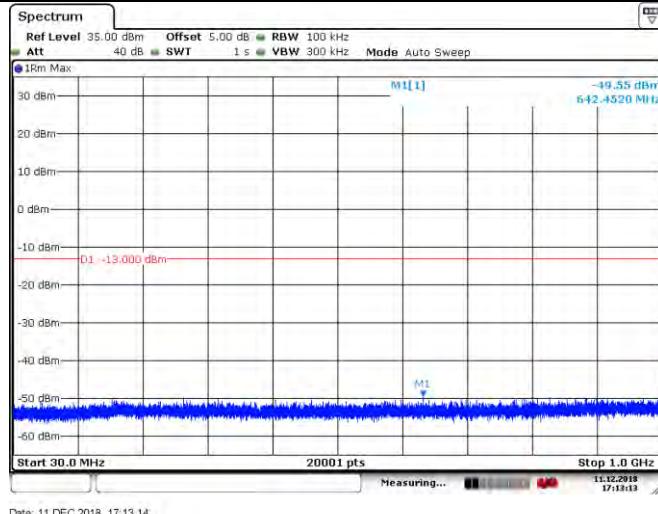
Part I - Test Plots

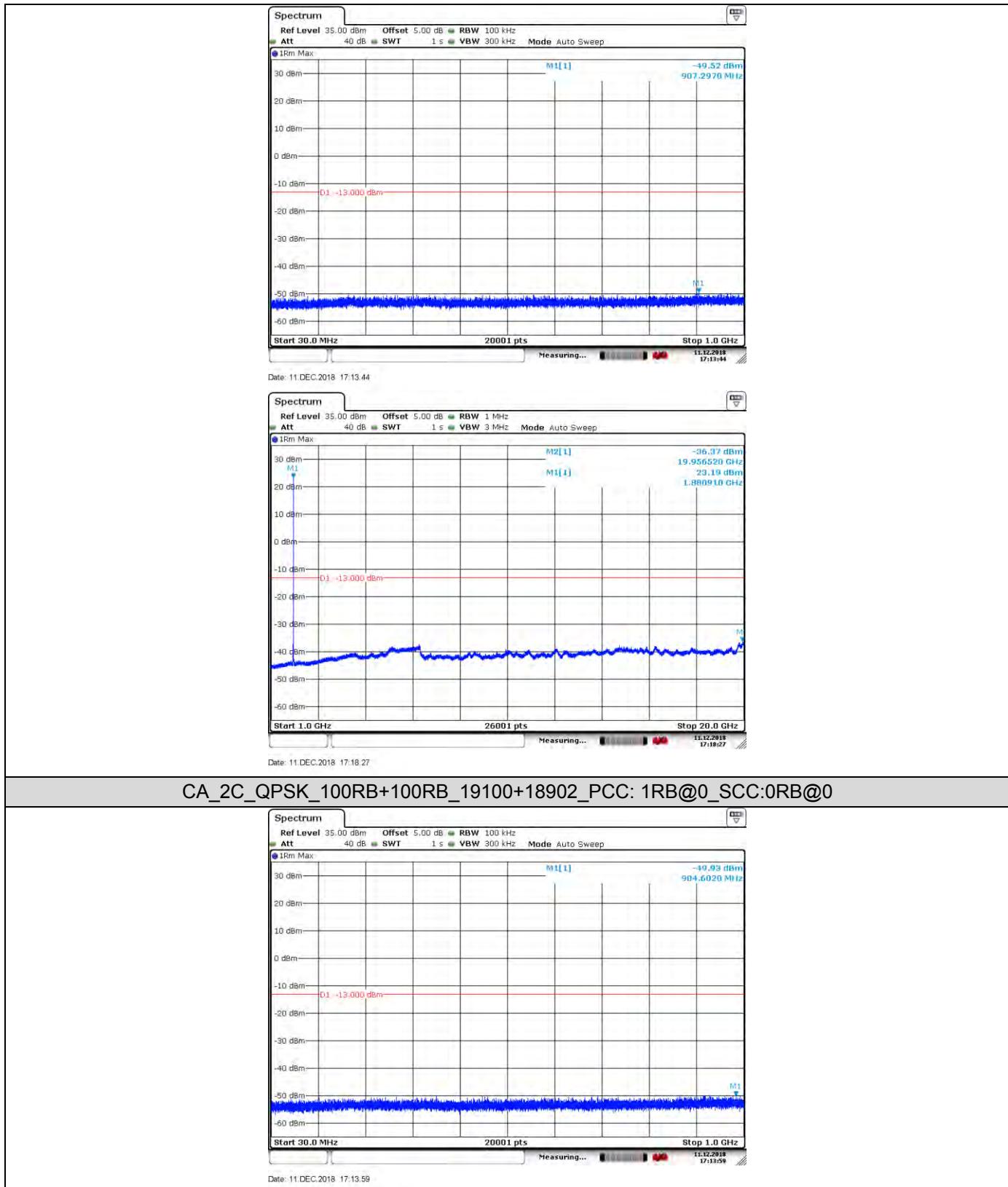
### 6.1 For LTE

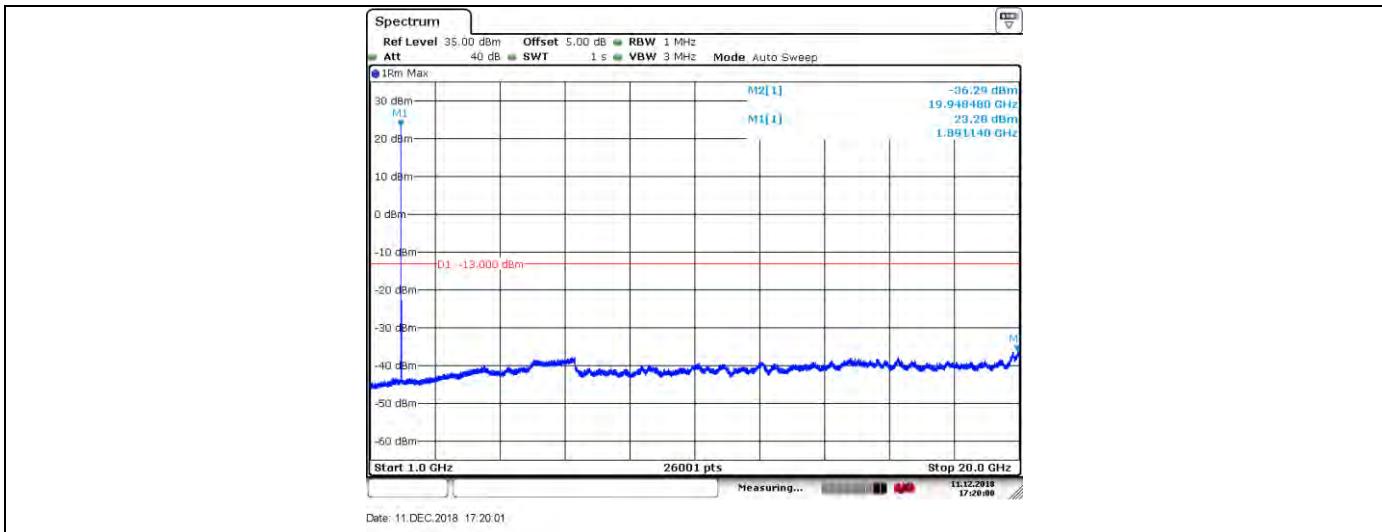
#### 6.1.1 Test Band = LTE Band CA\_2C





**CA\_2C\_QPSK\_100RB+100RB\_18898+18700\_PCC: 1RB@0\_SCC:0RB@0****CA\_2C\_QPSK\_100RB+100RB\_18999+18801\_PCC: 1RB@0\_SCC:0RB@0**





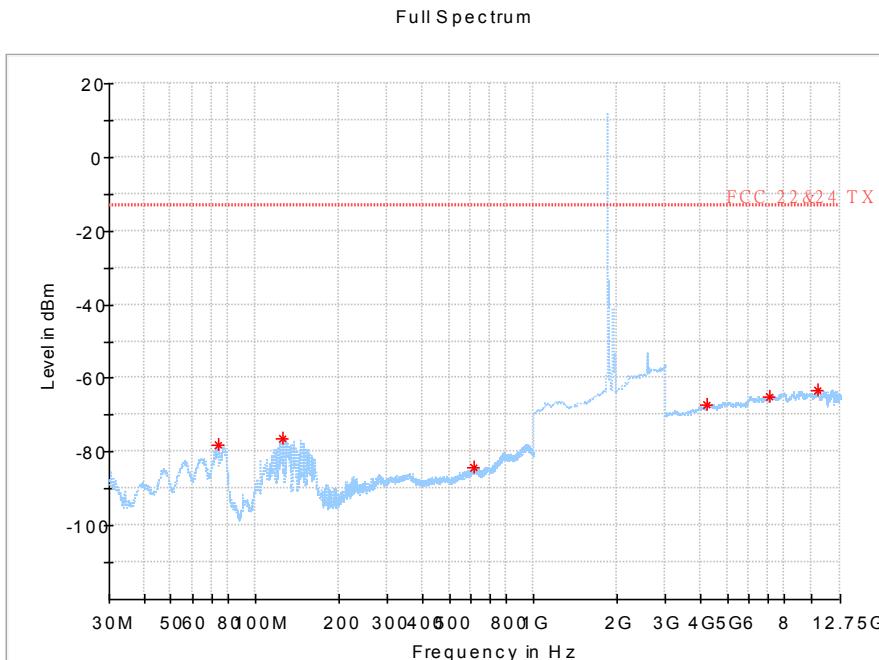
## 7 Field Strength of Spurious Radiation

### 7.1 For LTE

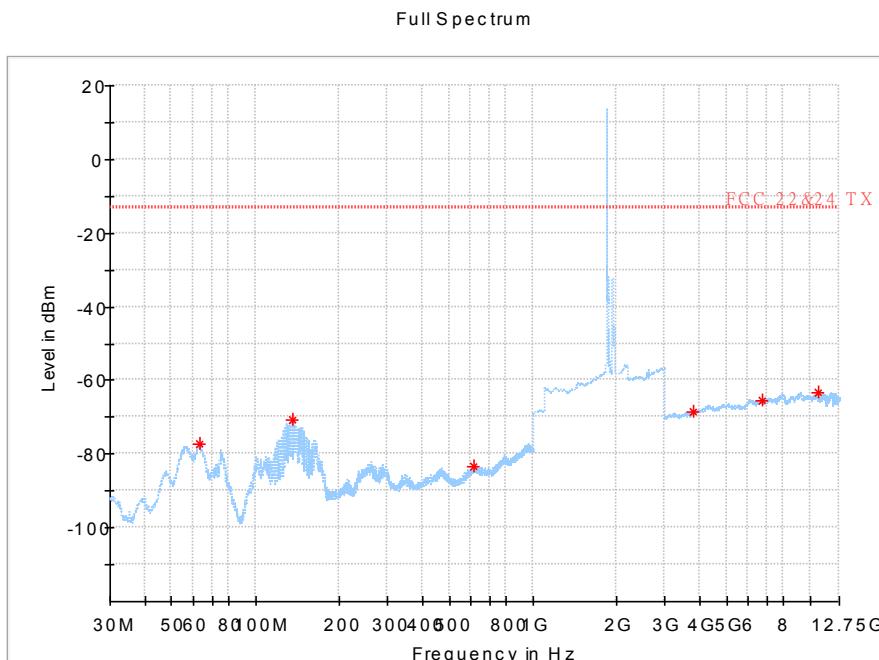
#### 7.1.1 Test Band = LTE Band CA\_2C\_Main Antenna

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

###### 7.1.1.1.1 Test Channel = LCH-Vertical

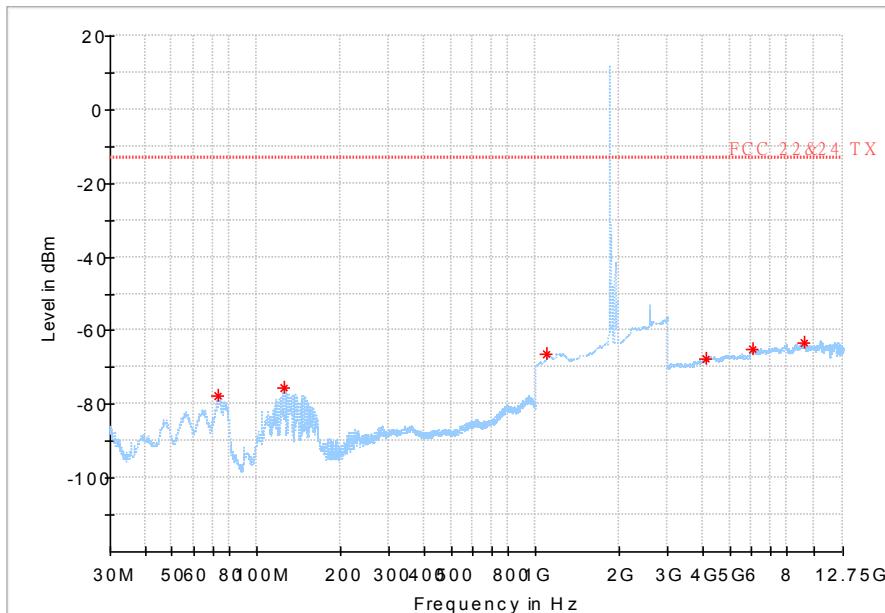


###### 7.1.1.1.1.1 Test Channel = LCH-Horizontal

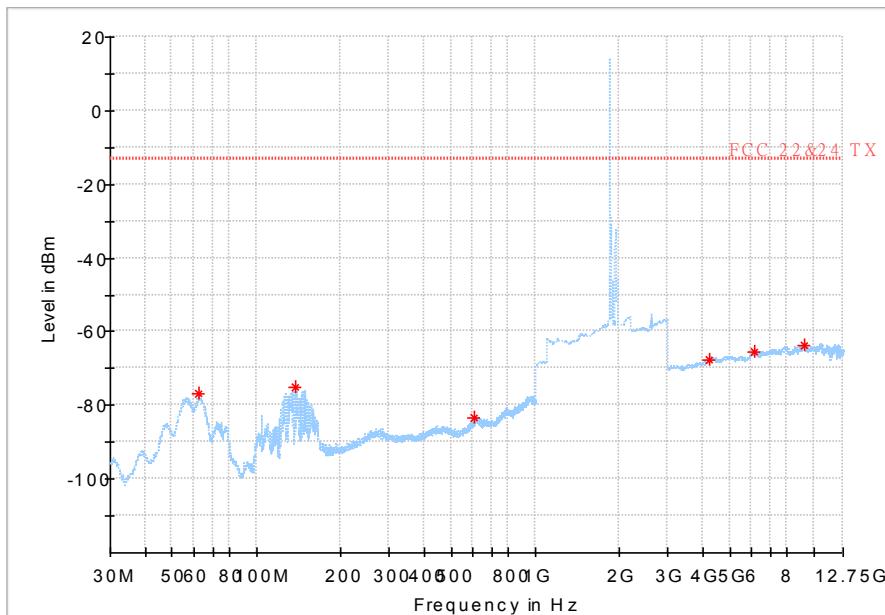


**7.1.1.1.2 Test Channel = MCH-Vertical**

Full Spectrum

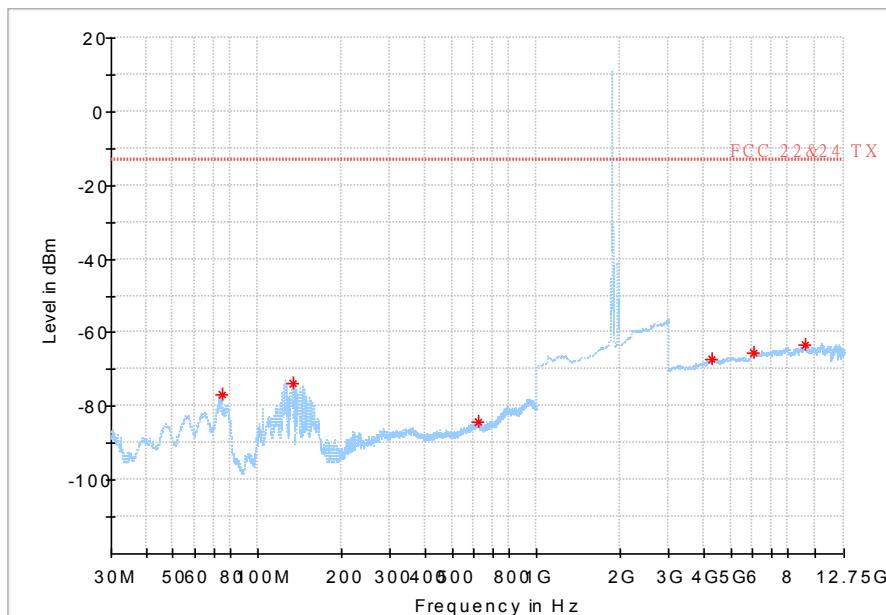
**7.1.1.1.3 Test Channel = MCH-Horizontal**

Full Spectrum

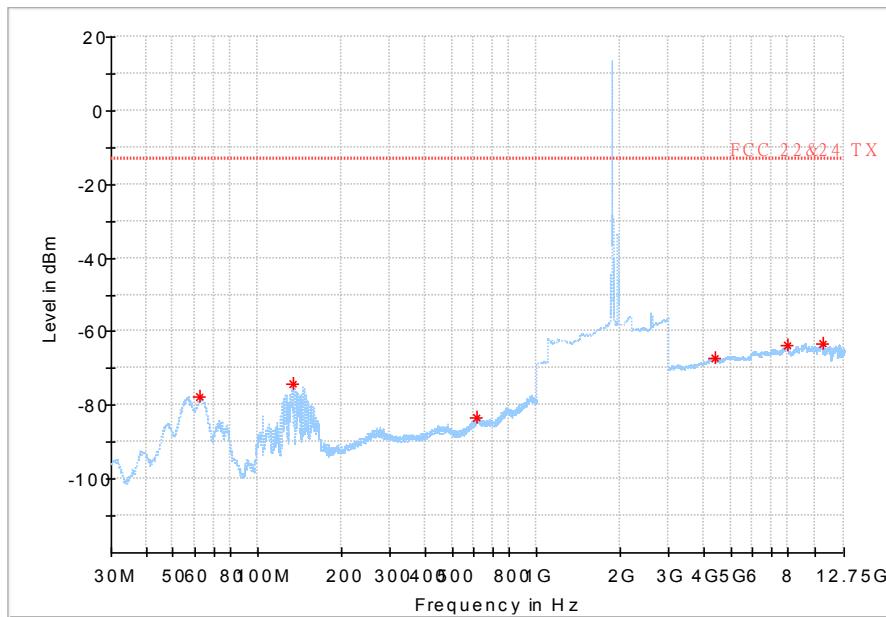


**7.1.1.1.4 Test Channel = HCH-Vertical**

Full Spectrum

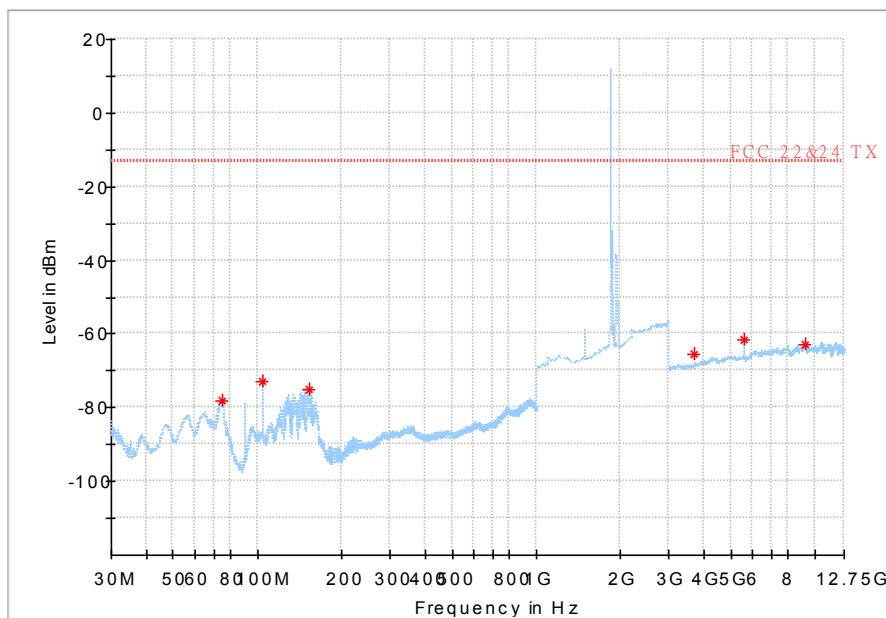
**7.1.1.1.5 Test Channel = HCH-Horizontal**

Full Spectrum

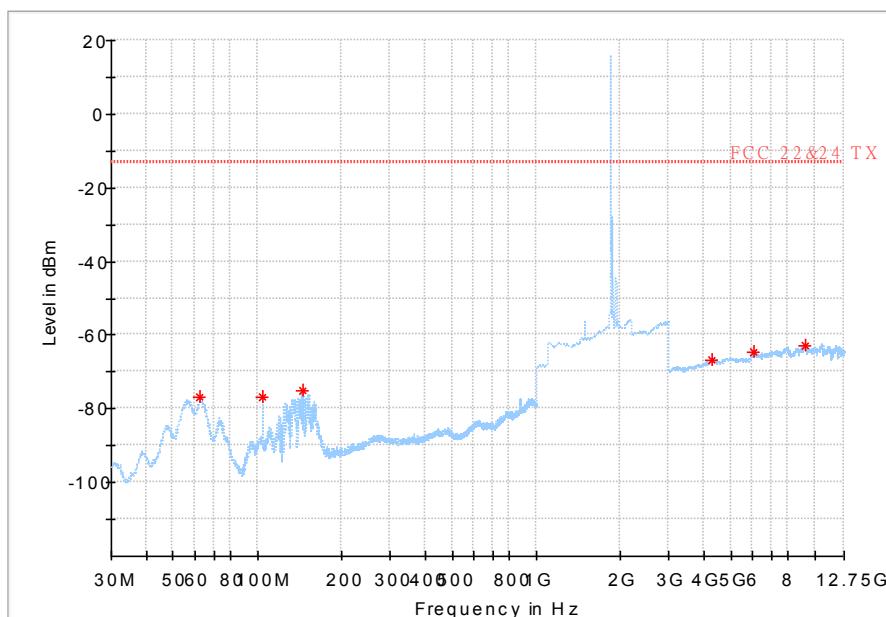


**7.1.2 Test Band = LTE Band CA\_2C\_Secondary Antenna****7.1.2.1 Test Mode =LTE/QPSK 100RB+100RB****7.1.2.1.1 Test Channel = LCH-Vertical**

Full Spectrum

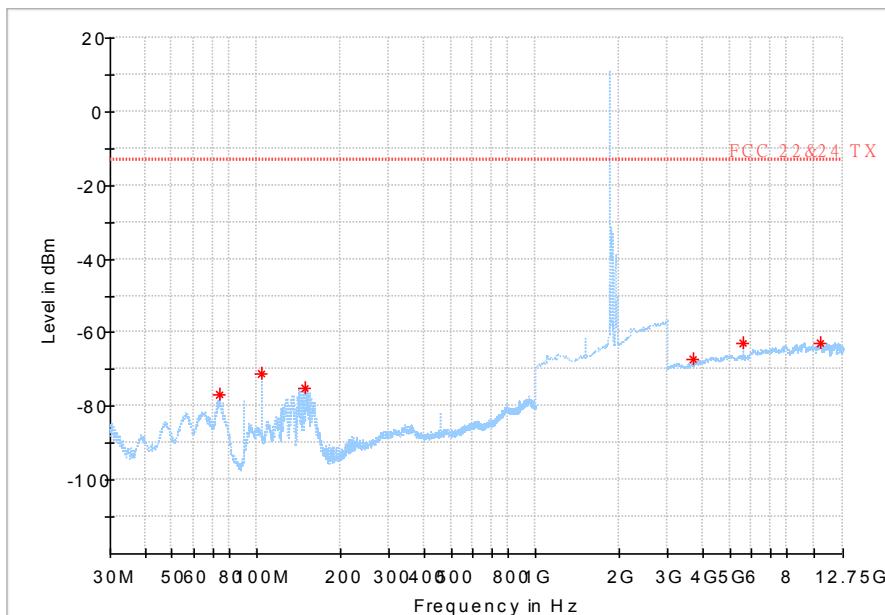
**7.1.2.1.2 Test Channel = LCH-Horizontal**

Full Spectrum

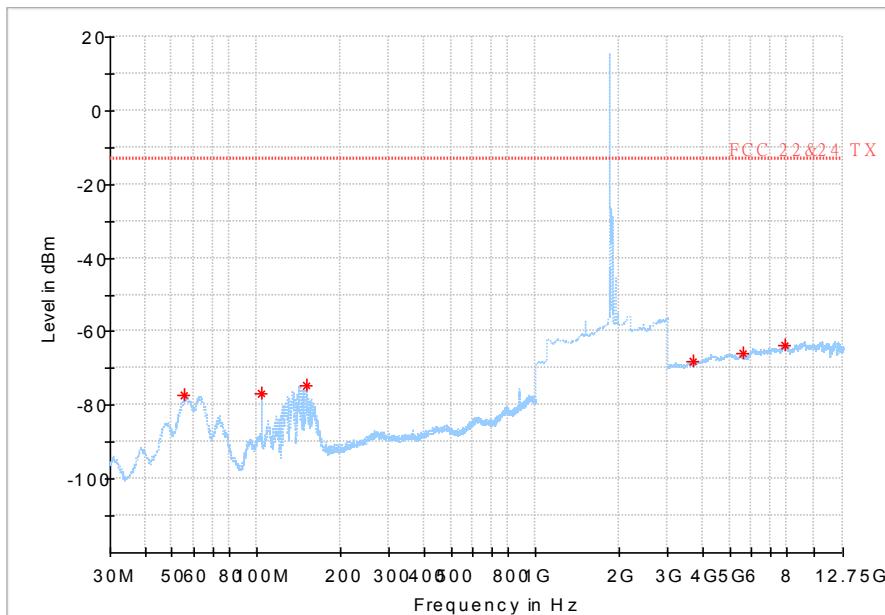


**7.1.2.1.3 Test Channel = MCH-Vertical**

Full Spectrum

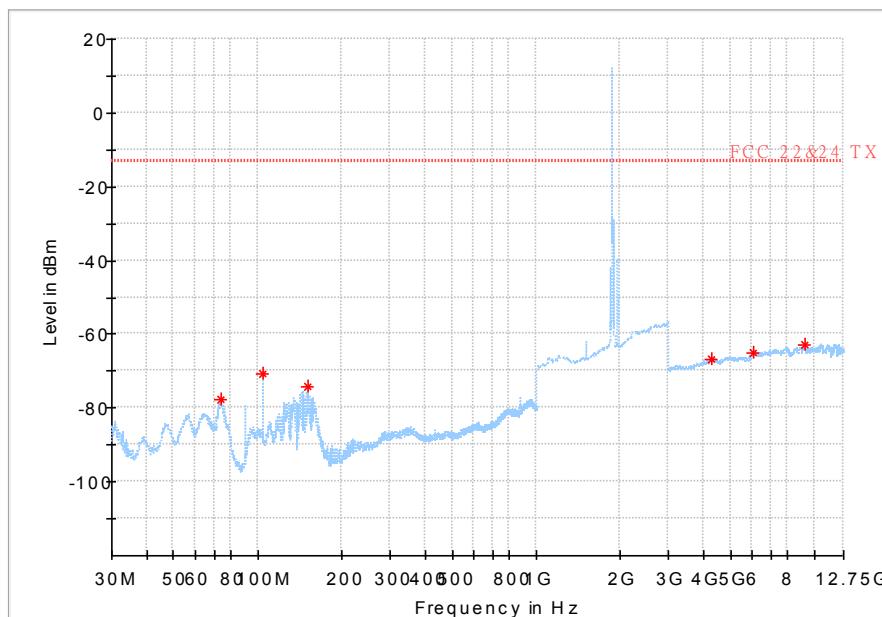
**7.1.2.1.4 Test Channel = MCH-Horizontal**

Full Spectrum

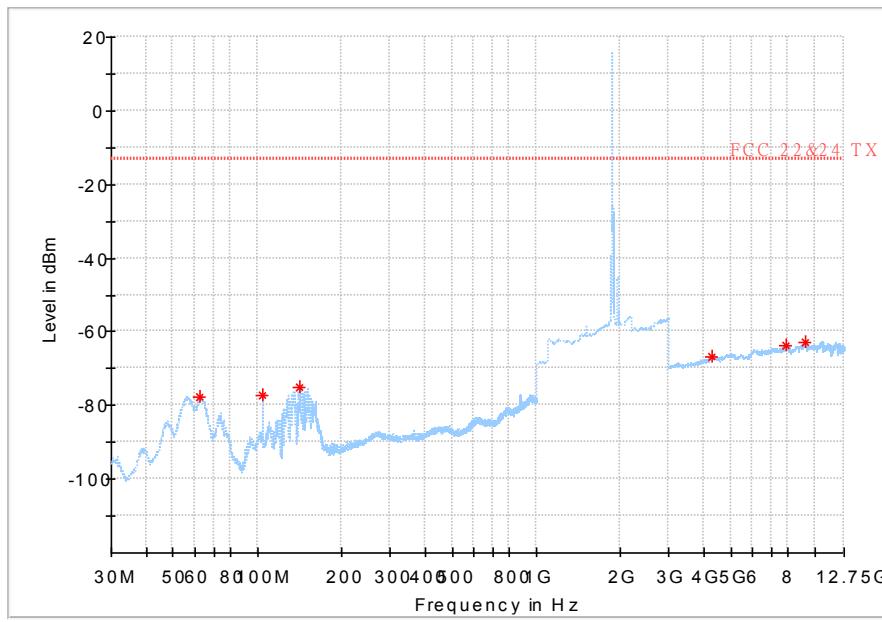


**7.1.2.1.5 Test Channel = HCH-Vertical**

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_2C	QPSK	18633-18750	100RB#0/100RB#0	TN	NV	-2.70	-0.001452	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	TN	NV	15.56	0.008319	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	TN	NV	-2.84	-0.001512	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	TN	NV	8.88	0.004722	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	TN	NV	12.66	0.006697	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	TN	NV	10.14	0.005335	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	TN	NV	-12.22	-0.006569	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	TN	NV	-1.98	-0.001058	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	TN	NV	-1.52	-0.000806	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	TN	NV	15.25	0.008114	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	TN	NV	-2.88	-0.001524	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	TN	NV	-1.64	-0.000861	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	TN	NV	15.52	0.008342	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	TN	NV	11.75	0.006283	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	TN	NV	2.59	0.001376	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	TN	NV	-2.37	-0.001259	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	TN	NV	-13.40	-0.007090	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	TN	NV	8.71	0.004584	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_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	-30	14.72	0.007914	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	-20	-2.36	-0.001267	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	-10	-0.83	-0.000444	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	0	-11.67	-0.006272	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	10	3.14	0.001689	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	20	4.57	0.002455	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	30	-8.19	-0.004406	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	40	11.27	0.006061	PASS
CA_2C	QPSK	18633-18750	100RB#0/100RB#0	NV	50	-7.18	-0.003860	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	-30	1.14	0.000609	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	-20	-7.30	-0.003901	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	-10	-0.86	-0.000460	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	0	-7.17	-0.003835	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	10	12.78	0.006837	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	20	-5.67	-0.003030	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	30	0.87	0.000467	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	40	-9.62	-0.005142	PASS
CA_2C	QPSK	18808-18925	100RB#0/100RB#0	NV	50	-5.32	-0.002846	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	-30	-11.40	-0.006063	PASS



CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	-20	1.11	0.000590	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	-10	0.74	0.000392	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	0	-10.34	-0.005501	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	10	15.84	0.008423	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	20	14.93	0.007942	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	30	14.76	0.007850	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	40	-12.40	-0.006596	PASS
CA_2C	QPSK	18983-19100	100RB#0/100RB#0	NV	50	-3.22	-0.001715	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	-30	-7.21	-0.003837	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	-20	-6.08	-0.003236	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	-10	-1.66	-0.000881	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	0	7.34	0.003902	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	10	0.20	0.000105	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	20	4.99	0.002656	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	30	-7.16	-0.003808	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	40	-5.30	-0.002822	PASS
CA_2C	QPSK	18750-18633	100RB#0/100RB#0	NV	50	-5.75	-0.003059	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	-30	14.39	0.007612	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	-20	-4.74	-0.002508	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	-10	3.37	0.001786	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	0	11.48	0.006075	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	10	-2.66	-0.001409	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	20	-4.03	-0.002133	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	30	14.68	0.007767	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	40	-10.46	-0.005536	PASS
CA_2C	QPSK	18925-18808	100RB#0/100RB#0	NV	50	-5.39	-0.002854	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	-30	-8.90	-0.004683	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	-20	-5.27	-0.002772	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	-10	-0.25	-0.000132	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	0	12.12	0.006379	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	10	9.21	0.004847	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	20	-0.49	-0.000260	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	30	-15.47	-0.008142	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	40	-13.69	-0.007206	PASS
CA_2C	QPSK	19100-18983	100RB#0/100RB#0	NV	50	-4.39	-0.002308	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	-30	-11.03	-0.005929	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	-20	-8.16	-0.004388	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	-10	6.34	0.003409	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	0	1.74	0.000934	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	10	14.17	0.007619	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	20	-3.10	-0.001665	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	30	3.10	0.001664	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	40	-2.60	-0.001396	PASS
CA_2C	16QAM	18633-18750	100RB#0/100RB#0	NV	50	-10.11	-0.005437	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	-30	5.87	0.003138	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	-20	-7.92	-0.004234	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	-10	-10.89	-0.005822	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	0	13.81	0.007383	PASS



CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	10	-9.63	-0.005147	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	20	-1.37	-0.000730	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	30	9.98	0.005337	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	40	12.08	0.006460	PASS
CA_2C	16QAM	18808-18925	100RB#0/100RB#0	NV	50	-4.73	-0.002530	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	-30	8.47	0.004507	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	-20	-5.03	-0.002673	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	-10	-11.50	-0.006117	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	0	6.07	0.003231	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	10	-12.28	-0.006533	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	20	-13.90	-0.007393	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	30	10.36	0.005511	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	40	14.57	0.007750	PASS
CA_2C	16QAM	18983-19100	100RB#0/100RB#0	NV	50	7.34	0.003902	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	-30	-5.92	-0.003151	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	-20	6.38	0.003396	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	-10	-6.07	-0.003228	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	0	4.24	0.002256	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	10	13.28	0.007062	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	20	13.52	0.007190	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	30	4.73	0.002519	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	40	-11.95	-0.006357	PASS
CA_2C	16QAM	18750-18633	100RB#0/100RB#0	NV	50	11.95	0.006355	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	-30	10.53	0.005571	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	-20	7.79	0.004122	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	-10	12.26	0.006489	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	0	1.75	0.000925	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	10	3.31	0.001753	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	20	-3.58	-0.001893	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	30	0.22	0.000115	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	40	4.49	0.002374	PASS
CA_2C	16QAM	18925-18808	100RB#0/100RB#0	NV	50	-15.71	-0.008313	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	-30	-4.93	-0.002593	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	-20	6.45	0.003393	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	-10	4.02	0.002114	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	0	-14.54	-0.007653	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	10	-10.71	-0.005636	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	20	1.49	0.000785	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	30	-9.02	-0.004745	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	40	-8.72	-0.004588	PASS
CA_2C	16QAM	19100-18983	100RB#0/100RB#0	NV	50	-2.15	-0.001129	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	-30	7.78	0.004185	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	-20	9.16	0.004927	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	-10	-14.72	-0.007914	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	0	14.27	0.007671	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	10	8.26	0.004440	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	20	7.07	0.003803	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	30	4.23	0.002275	PASS



CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	40	-3.47	-0.001863	PASS
CA_2C	64QAM	18633-18750	100RB#0/100RB#0	NV	50	-8.32	-0.004474	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	-30	7.76	0.004149	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	-20	15.59	0.008339	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	-10	5.36	0.002865	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	0	12.23	0.006541	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	10	6.55	0.003503	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	20	-6.27	-0.003351	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	30	-2.08	-0.001112	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	40	-8.51	-0.004549	PASS
CA_2C	64QAM	18808-18925	100RB#0/100RB#0	NV	50	-13.73	-0.007343	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	-30	0.38	0.000200	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	-20	7.05	0.003749	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	-10	-13.51	-0.007186	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	0	6.17	0.003281	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	10	12.31	0.006545	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	20	-15.76	-0.008380	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	30	-10.43	-0.005547	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	40	5.23	0.002781	PASS
CA_2C	64QAM	18983-19100	100RB#0/100RB#0	NV	50	2.17	0.001154	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	-30	-6.15	-0.003270	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	-20	-9.36	-0.004982	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	-10	-12.44	-0.006620	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	0	-14.85	-0.007898	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	10	12.63	0.006720	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	20	13.52	0.007191	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	30	-9.08	-0.004828	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	40	2.78	0.001481	PASS
CA_2C	64QAM	18750-18633	100RB#0/100RB#0	NV	50	6.18	0.003288	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	-30	-2.50	-0.001324	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	-20	11.44	0.006055	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	-10	13.48	0.007135	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	0	-12.60	-0.006669	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	10	-4.33	-0.002290	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	20	13.76	0.007282	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	30	-2.31	-0.001224	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	40	-4.41	-0.002335	PASS
CA_2C	64QAM	18925-18808	100RB#0/100RB#0	NV	50	-3.03	-0.001605	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	-30	12.41	0.006530	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	-20	4.16	0.002188	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	-10	-0.23	-0.000119	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	0	-5.55	-0.002919	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	10	2.46	0.001296	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	20	-2.15	-0.001131	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	30	-13.85	-0.007290	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	40	-12.97	-0.006824	PASS
CA_2C	64QAM	19100-18983	100RB#0/100RB#0	NV	50	12.79	0.006732	PASS