



# Appendix B

## E-UTRA Band CA\_38C



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# 1 Effective (Isotropic) Radiated Power Output Data

## 1.1 Test Result for LTE Band CA\_38C (Down Ant)

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	22.91	21.88	33.00	PASS
CA_38C	75RB+75RB	37825+37975	16RB#0	0RB#0	QPSK	22.89	21.86	33.00	PASS
CA_38C	75RB+75RB	37925+38075	1RB#0	0RB#0	QPSK	22.73	21.70	33.00	PASS
CA_38C	75RB+75RB	37925+38075	16RB#0	0RB#0	QPSK	22.74	21.71	33.00	PASS
CA_38C	75RB+75RB	38025+38175	1RB#0	0RB#0	QPSK	22.67	21.64	33.00	PASS
CA_38C	75RB+75RB	38025+38175	16RB#0	0RB#0	QPSK	22.69	21.66	33.00	PASS
CA_38C	100RB+100RB	37850+38048	1RB#0	0RB#0	QPSK	22.65	21.62	33.00	PASS
CA_38C	100RB+100RB	37850+38048	18RB#0	0RB#0	QPSK	22.64	21.61	33.00	PASS
CA_38C	100RB+100RB	37901+38099	1RB#0	0RB#0	QPSK	22.62	21.59	33.00	PASS
CA_38C	100RB+100RB	37901+38099	18RB#0	0RB#0	QPSK	22.78	21.75	33.00	PASS
CA_38C	100RB+100RB	37952+38150	1RB#0	0RB#0	QPSK	22.80	21.77	33.00	PASS
CA_38C	100RB+100RB	37952+38150	18RB#0	0RB#0	QPSK	22.64	21.61	33.00	PASS
CA_38C	75RB+75RB	37825+37975	1RB#0	0RB#0	16QAM	22.11	21.08	33.00	PASS
CA_38C	75RB+75RB	37825+37975	16RB#0	0RB#0	16QAM	22.10	21.07	33.00	PASS
CA_38C	75RB+75RB	37925+38075	1RB#0	0RB#0	16QAM	21.97	20.94	33.00	PASS
CA_38C	75RB+75RB	37925+38075	16RB#0	0RB#0	16QAM	22.04	21.01	33.00	PASS
CA_38C	75RB+75RB	38025+38175	1RB#0	0RB#0	16QAM	21.93	20.90	33.00	PASS
CA_38C	75RB+75RB	38025+38175	16RB#0	0RB#0	16QAM	21.95	20.92	33.00	PASS
CA_38C	100RB+100RB	37850+38048	1RB#0	0RB#0	16QAM	21.92	20.89	33.00	PASS
CA_38C	100RB+100RB	37850+38048	18RB#0	0RB#0	16QAM	21.84	20.81	33.00	PASS
CA_38C	100RB+100RB	37901+38099	1RB#0	0RB#0	16QAM	21.82	20.79	33.00	PASS
CA_38C	100RB+100RB	37901+38099	18RB#0	0RB#0	16QAM	22.05	21.02	33.00	PASS
CA_38C	100RB+100RB	37952+38150	1RB#0	0RB#0	16QAM	21.99	20.96	33.00	PASS
CA_38C	100RB+100RB	37952+38150	18RB#0	0RB#0	16QAM	21.89	20.86	33.00	PASS
CA_38C	75RB+75RB	37825+37975	1RB#0	0RB#0	64QAM	21.40	20.37	33.00	PASS
CA_38C	75RB+75RB	37825+37975	16RB#0	0RB#0	64QAM	21.32	20.29	33.00	PASS
CA_38C	75RB+75RB	37925+38075	1RB#0	0RB#0	64QAM	21.24	20.21	33.00	PASS
CA_38C	75RB+75RB	37925+38075	16RB#0	0RB#0	64QAM	21.31	20.28	33.00	PASS
CA_38C	75RB+75RB	38025+38175	1RB#0	0RB#0	64QAM	21.16	20.13	33.00	PASS
CA_38C	75RB+75RB	38025+38175	16RB#0	0RB#0	64QAM	21.17	20.14	33.00	PASS
CA_38C	100RB+100RB	37850+38048	1RB#0	0RB#0	64QAM	21.13	20.10	33.00	PASS
CA_38C	100RB+100RB	37850+38048	18RB#0	0RB#0	64QAM	21.02	19.99	33.00	PASS
CA_38C	100RB+100RB	37901+38099	1RB#0	0RB#0	64QAM	21.08	20.05	33.00	PASS
CA_38C	100RB+100RB	37901+38099	18RB#0	0RB#0	64QAM	21.27	20.24	33.00	PASS
CA_38C	100RB+100RB	37952+38150	1RB#0	0RB#0	64QAM	21.25	20.22	33.00	PASS
CA_38C	100RB+100RB	37952+38150	18RB#0	0RB#0	64QAM	21.09	20.06	33.00	PASS

## 1.2 Test Result for LTE Band CA\_38C (Up Ant)

BAND	Test Mode PCC/SCC	Channel PCC/SCC	RB Configuration		Modulation PCC&SCC	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
			PCC	SCC					



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CA_38C	75RB+75RB	37825+37975	1RB#0	0RB#0	QPSK	21.88	20.90	33.00	PASS
CA_38C	75RB+75RB	37825+37975	16RB#0	0RB#0	QPSK	21.92	20.94	33.00	PASS
CA_38C	75RB+75RB	37925+38075	1RB#0	0RB#0	QPSK	21.74	20.76	33.00	PASS
CA_38C	75RB+75RB	37925+38075	16RB#0	0RB#0	QPSK	21.63	20.65	33.00	PASS
CA_38C	75RB+75RB	38025+38175	1RB#0	0RB#0	QPSK	21.63	20.65	33.00	PASS
CA_38C	75RB+75RB	38025+38175	16RB#0	0RB#0	QPSK	21.75	20.77	33.00	PASS
CA_38C	100RB+100RB	37850+38048	1RB#0	0RB#0	QPSK	21.73	20.75	33.00	PASS
CA_38C	100RB+100RB	37850+38048	18RB#0	0RB#0	QPSK	21.58	20.60	33.00	PASS
CA_38C	100RB+100RB	37901+38099	1RB#0	0RB#0	QPSK	21.61	20.63	33.00	PASS
CA_38C	100RB+100RB	37901+38099	18RB#0	0RB#0	QPSK	21.60	20.62	33.00	PASS
CA_38C	100RB+100RB	37952+38150	1RB#0	0RB#0	QPSK	21.76	20.78	33.00	PASS
CA_38C	100RB+100RB	37952+38150	18RB#0	0RB#0	QPSK	21.59	20.61	33.00	PASS
CA_38C	75RB+75RB	37825+37975	1RB#0	0RB#0	16QAM	21.13	20.15	33.00	PASS
CA_38C	75RB+75RB	37825+37975	16RB#0	0RB#0	16QAM	21.12	20.14	33.00	PASS
CA_38C	75RB+75RB	37925+38075	1RB#0	0RB#0	16QAM	21.03	20.05	33.00	PASS
CA_38C	75RB+75RB	37925+38075	16RB#0	0RB#0	16QAM	20.80	19.82	33.00	PASS
CA_38C	75RB+75RB	38025+38175	1RB#0	0RB#0	16QAM	20.89	19.91	33.00	PASS
CA_38C	75RB+75RB	38025+38175	16RB#0	0RB#0	16QAM	20.94	19.96	33.00	PASS
CA_38C	100RB+100RB	37850+38048	1RB#0	0RB#0	16QAM	20.95	19.97	33.00	PASS
CA_38C	100RB+100RB	37850+38048	18RB#0	0RB#0	16QAM	20.86	19.88	33.00	PASS
CA_38C	100RB+100RB	37901+38099	1RB#0	0RB#0	16QAM	20.85	19.87	33.00	PASS
CA_38C	100RB+100RB	37901+38099	18RB#0	0RB#0	16QAM	20.89	19.91	33.00	PASS
CA_38C	100RB+100RB	37952+38150	1RB#0	0RB#0	16QAM	21.02	20.04	33.00	PASS
CA_38C	100RB+100RB	37952+38150	18RB#0	0RB#0	16QAM	20.80	19.82	33.00	PASS
CA_38C	75RB+75RB	37825+37975	1RB#0	0RB#0	64QAM	20.35	19.37	33.00	PASS
CA_38C	75RB+75RB	37825+37975	16RB#0	0RB#0	64QAM	20.37	19.39	33.00	PASS
CA_38C	75RB+75RB	37925+38075	1RB#0	0RB#0	64QAM	20.22	19.24	33.00	PASS
CA_38C	75RB+75RB	37925+38075	16RB#0	0RB#0	64QAM	20.01	19.03	33.00	PASS
CA_38C	75RB+75RB	38025+38175	1RB#0	0RB#0	64QAM	20.11	19.13	33.00	PASS
CA_38C	75RB+75RB	38025+38175	16RB#0	0RB#0	64QAM	20.16	19.18	33.00	PASS
CA_38C	100RB+100RB	37850+38048	1RB#0	0RB#0	64QAM	20.24	19.26	33.00	PASS
CA_38C	100RB+100RB	37850+38048	18RB#0	0RB#0	64QAM	20.09	19.11	33.00	PASS
CA_38C	100RB+100RB	37901+38099	1RB#0	0RB#0	64QAM	20.04	19.06	33.00	PASS
CA_38C	100RB+100RB	37901+38099	18RB#0	0RB#0	64QAM	20.19	19.21	33.00	PASS
CA_38C	100RB+100RB	37952+38150	1RB#0	0RB#0	64QAM	20.32	19.34	33.00	PASS
CA_38C	100RB+100RB	37952+38150	18RB#0	0RB#0	64QAM	19.98	19.00	33.00	PASS

Remark:

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

$$ERP [dBm] = \text{Conducted Power [dBm]} + \text{Gain [dBd]}$$

$$EIRP [dBm] = \text{Conducted Power [dBm]} + \text{Gain [dBi]}$$



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## 2 Peak-to-Average Ratio

### Part I - Test Results

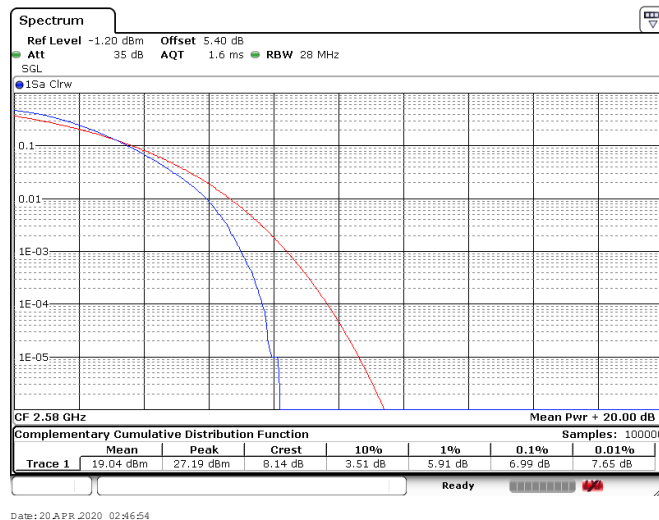
Test Band	Modulation	Test Mode	Test Channel	PCC RB Config	SCC RB Config	Measured [dB]	Limit [dB]	Verdict
CA_38C	QPSK	100RB+100RB	37850+38048	100RB#0	100RB#0	6.99	13.00	PASS
CA_38C	QPSK	100RB+100RB	37901+38099	100RB#0	100RB#0	5.97	13.00	PASS
CA_38C	QPSK	100RB+100RB	37952+38150	100RB#0	100RB#0	7.48	13.00	PASS
CA_38C	16QAM	100RB+100RB	37850+38048	100RB#0	100RB#0	6.46	13.00	PASS
CA_38C	16QAM	100RB+100RB	37901+38099	100RB#0	100RB#0	7.71	13.00	PASS
CA_38C	16QAM	100RB+100RB	37952+38150	100RB#0	100RB#0	6.64	13.00	PASS
CA_38C	64QAM	100RB+100RB	37850+38048	100RB#0	100RB#0	6.09	13.00	PASS
CA_38C	64QAM	100RB+100RB	37901+38099	100RB#0	100RB#0	7.04	13.00	PASS
CA_38C	64QAM	100RB+100RB	37952+38150	100RB#0	100RB#0	6.09	13.00	PASS

### 2.1 For LTE

#### 2.1.1 Test Band = LTE Band CA\_38C

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

##### 2.1.1.1.1 Test Channel = 37850+38048



Date: 20 APR 2020 02:46:54

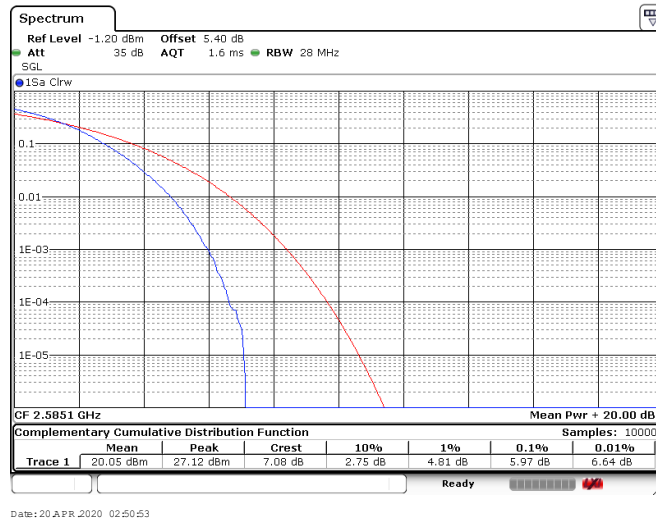


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Shenzhen Branch Testing Center EEC Laboratory

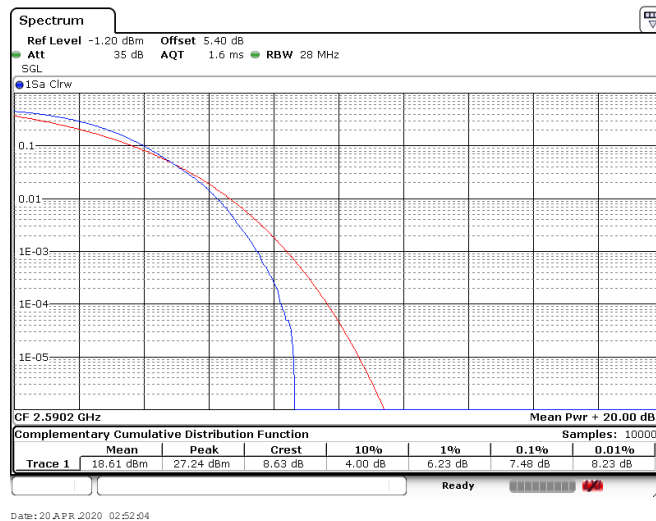
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**2.1.1.1.2 Test Channel = 37901+38099**



**2.1.1.1.3 Test Channel = 37952+38150**

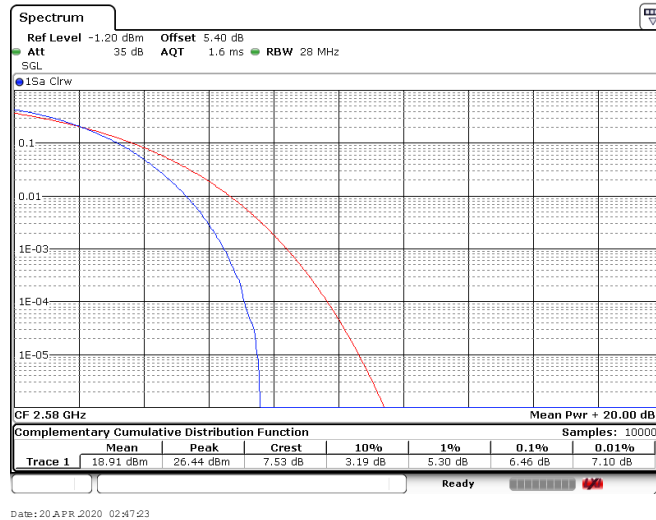


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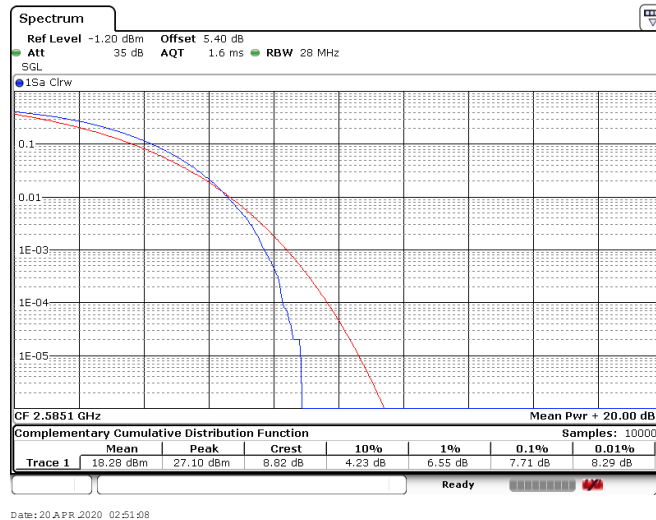
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**Test Mode = LTE /16QAM 100RB+100RB**

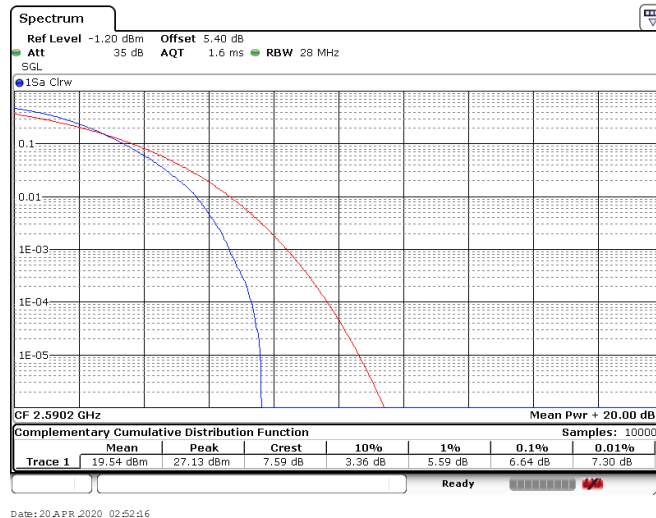
**2.1.1.1.4 Test Channel = 37850+38048**



**2.1.1.1.5 Test Channel = 37901+38099**



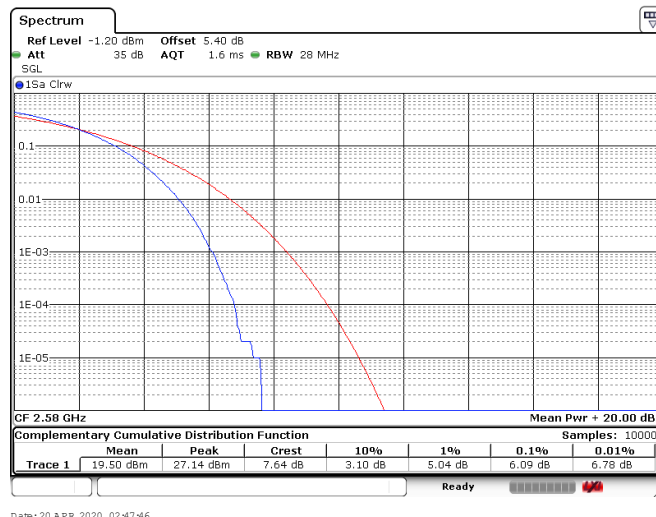
**2.1.1.1.6 Test Channel = 37952+38150**



Date: 20 APR 2020 02:52:16

**2.1.1.2 Test Mode = LTE /64QAM 100RB+100RB**

**2.1.1.2.1 Test Channel = 37850+38048**

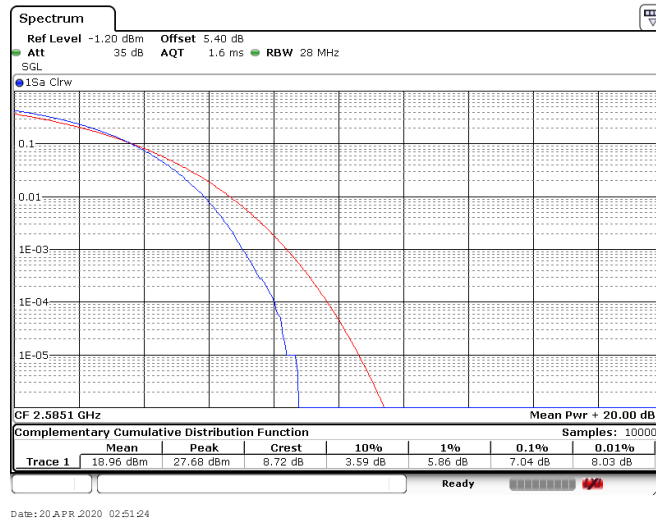


Date: 20 APR 2020 02:47:46



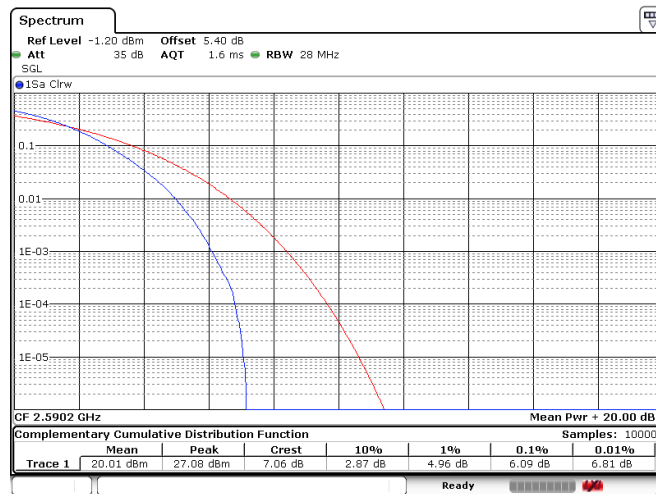


**2.1.1.2.2 Test Channel = 37901+38099**



Date: 20 APR 2020 02:51:24

**2.1.1.2.3 Test Channel = 37952+38150**



Date: 20 APR 2020 02:52:25



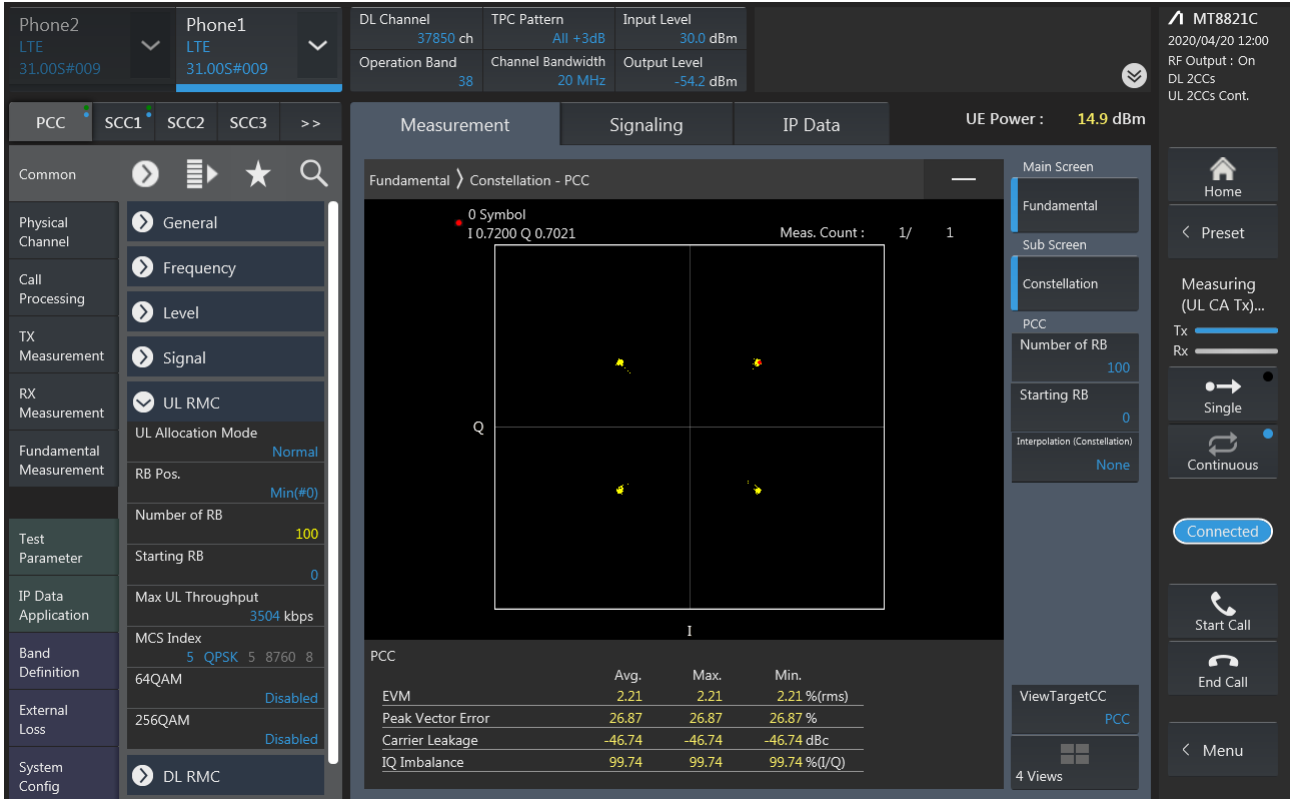
### 3 Modulation Characteristics

#### 3.1 For LTE

##### 3.1.1 Test Band = LTE Band CA\_38C

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

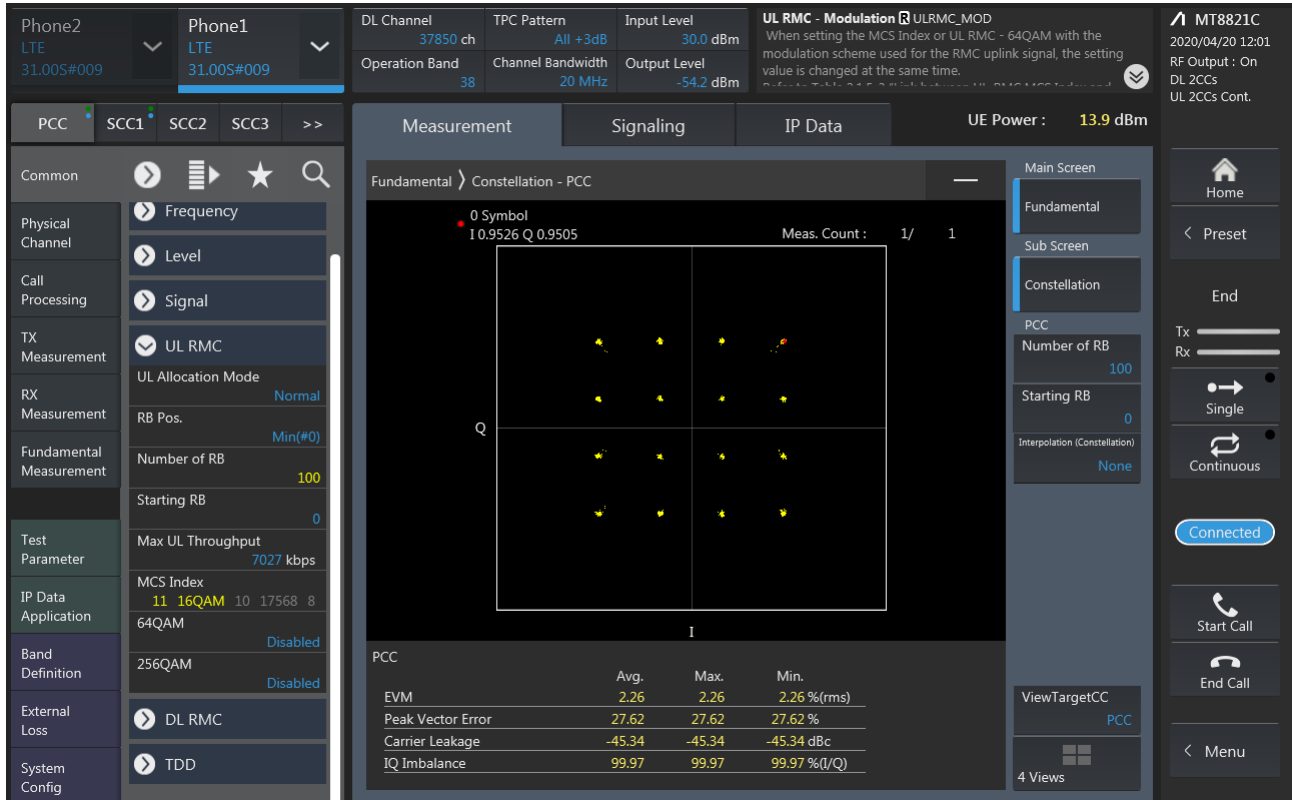
##### 3.1.1.1.1 Test Channel = 37850+38048





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

**3.1.1.2.1 Test Channel =37850+38048**





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

3.1.1.3.1 Test Channel = 37850+38048

The screenshot displays the 'Fundamental' measurement screen for a PCC channel. The constellation diagram shows a 64QAM signal with a measured error rate of 1.77% (rms). The performance metrics table is as follows:

PCC	Avg.	Max.	Min.
EVM	1.77	1.77	1.77%(rms)
Peak Vector Error	16.08	16.08	16.08%
Carrier Leakage	-44.95	-44.95	-44.95 dBc
I/Q Imbalance	100.02	100.02	100.02%(I/Q)





## 4 26dB Bandwidth and Occupied Bandwidth

Test Band	Modulation PCC&SCC	Test Mode PCC/SCC	Test Channel PCC/SCC	PCC RB	SCC RB	OBW [MHz]	EBW [MHz]	Verdict
CA_38C	QPSK	75RB+75RB	37825+37975	75RB#0	75RB#0	28.25	29.56	PASS
CA_38C	QPSK	75RB+75RB	37925+38075	75RB#0	75RB#0	28.22	29.53	PASS
CA_38C	QPSK	75RB+75RB	38025+38175	75RB#0	75RB#0	28.21	29.60	PASS
CA_38C	16QAM	75RB+75RB	37825+37975	75RB#0	75RB#0	28.22	29.60	PASS
CA_38C	16QAM	75RB+75RB	37925+38075	75RB#0	75RB#0	28.21	29.53	PASS
CA_38C	16QAM	75RB+75RB	38025+38175	75RB#0	75RB#0	28.21	29.60	PASS
CA_38C	64QAM	75RB+75RB	37825+37975	75RB#0	75RB#0	28.18	29.65	PASS
CA_38C	64QAM	75RB+75RB	37925+38075	75RB#0	75RB#0	28.18	29.53	PASS
CA_38C	64QAM	75RB+75RB	38025+38175	75RB#0	75RB#0	28.18	29.59	PASS
CA_38C	QPSK	100RB+100RB	37850+38048	100RB#0	100RB#0	37.37	39.25	PASS
CA_38C	QPSK	100RB+100RB	37901+38099	100RB#0	100RB#0	37.35	39.19	PASS
CA_38C	QPSK	100RB+100RB	37952+38150	100RB#0	100RB#0	37.39	39.27	PASS
CA_38C	16QAM	100RB+100RB	37850+38048	100RB#0	100RB#0	37.43	39.37	PASS
CA_38C	16QAM	100RB+100RB	37901+38099	100RB#0	100RB#0	37.43	39.62	PASS
CA_38C	16QAM	100RB+100RB	37952+38150	100RB#0	100RB#0	37.41	39.45	PASS
CA_38C	64QAM	100RB+100RB	37850+38048	100RB#0	100RB#0	37.35	39.37	PASS
CA_38C	64QAM	100RB+100RB	37901+38099	100RB#0	100RB#0	37.37	39.25	PASS
CA_38C	64QAM	100RB+100RB	37952+38150	100RB#0	100RB#0	37.35	39.23	PASS

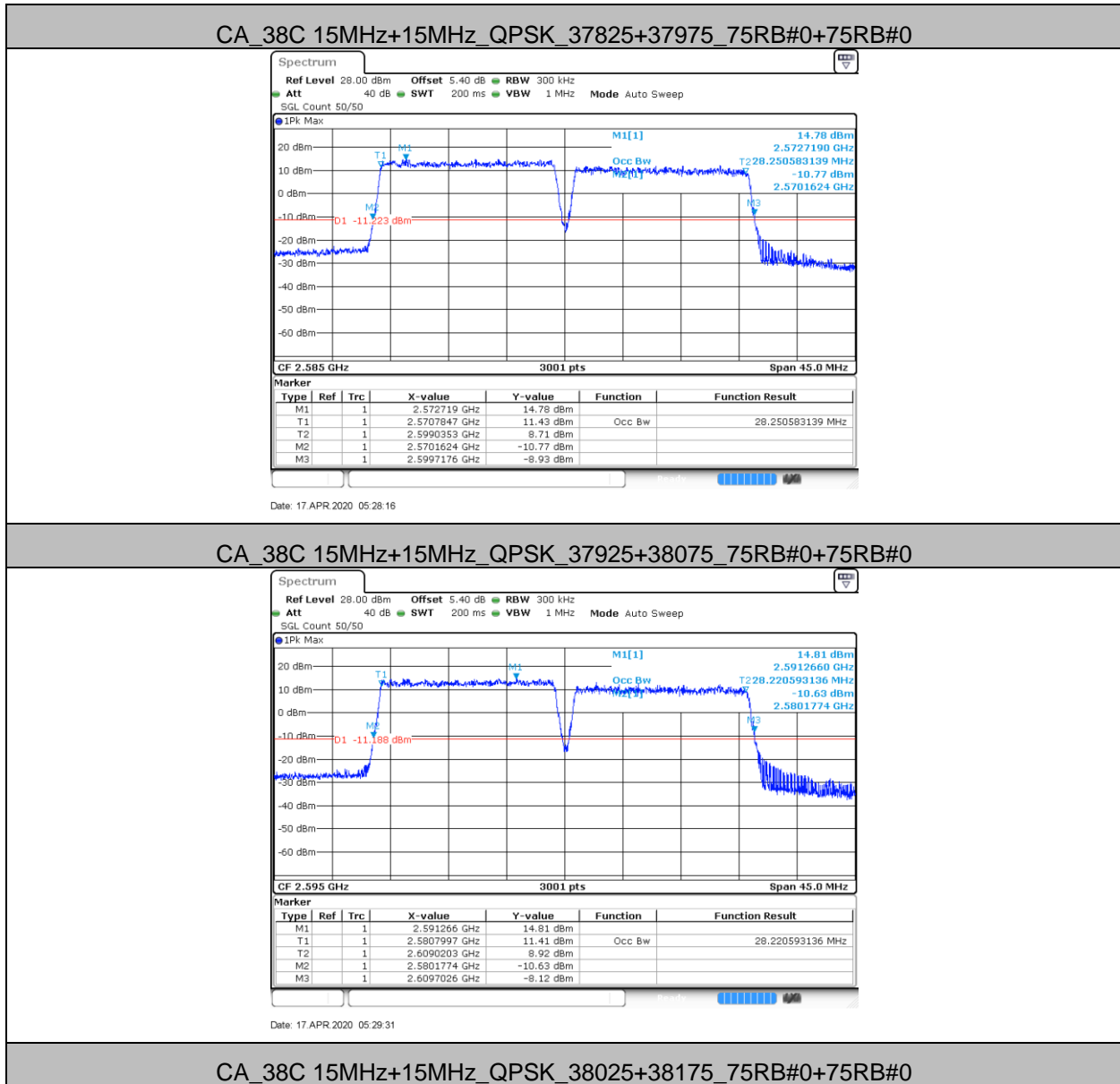


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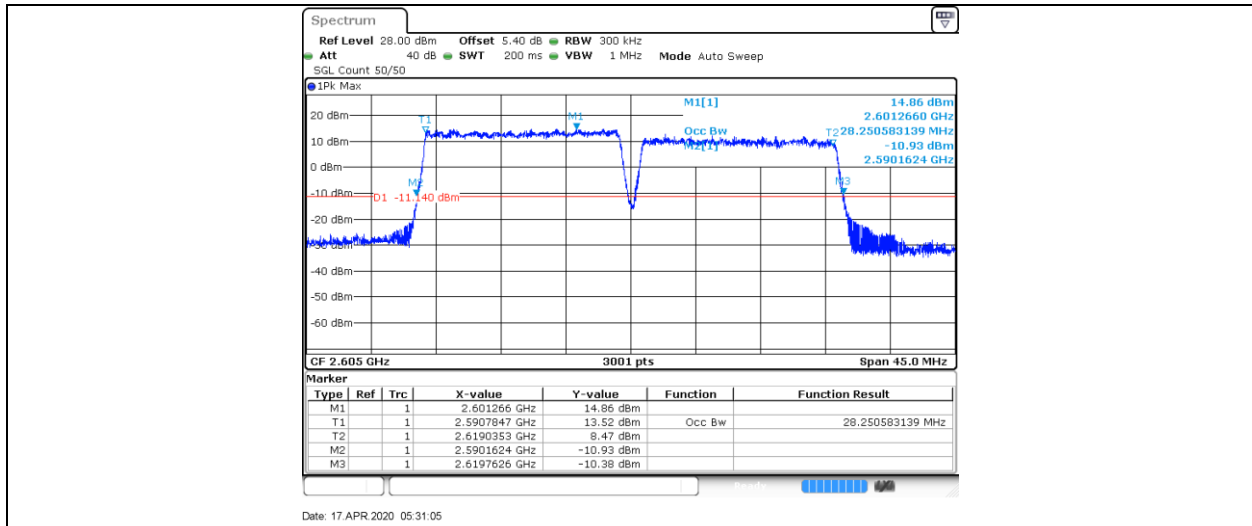
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### 4.1 For LTE

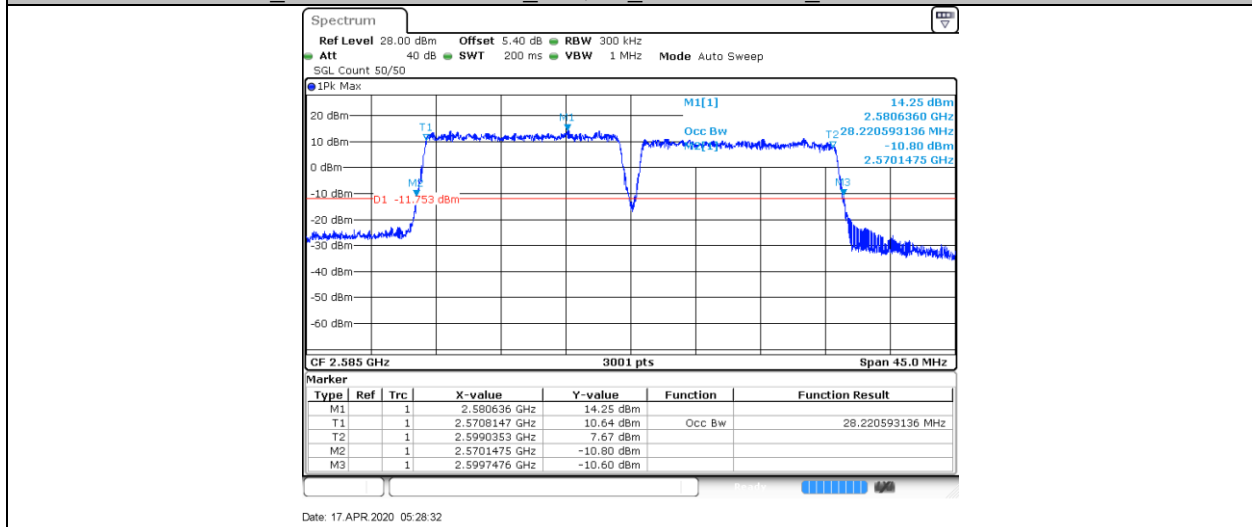
#### 4.1.1 Test Band = LTE Band CA\_38C



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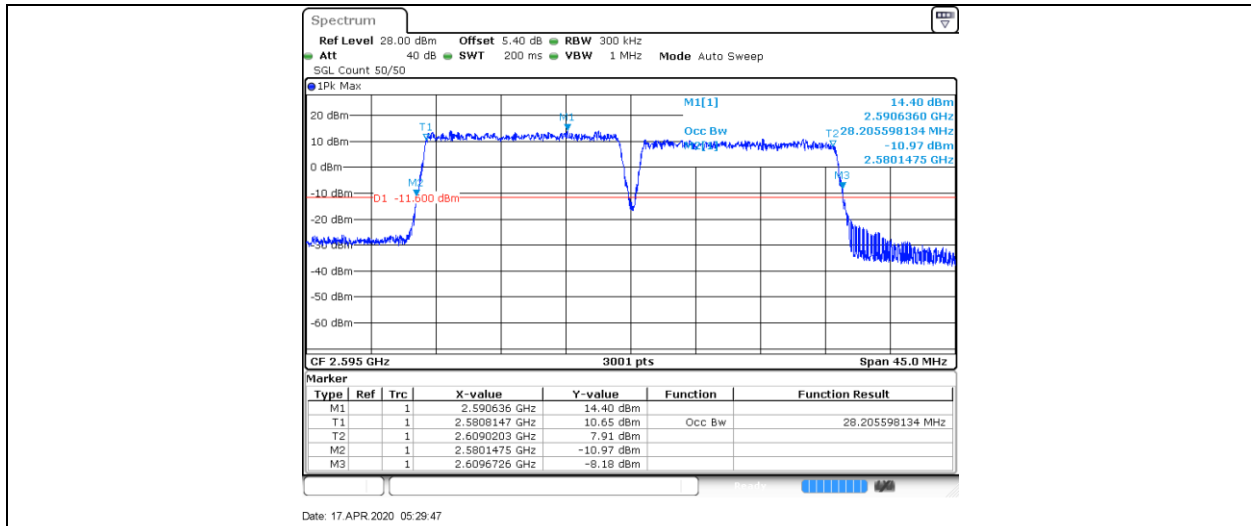


**CA\_38C 15MHz+15MHz\_16QAM\_37825+37975\_75RB#0+75RB#0**

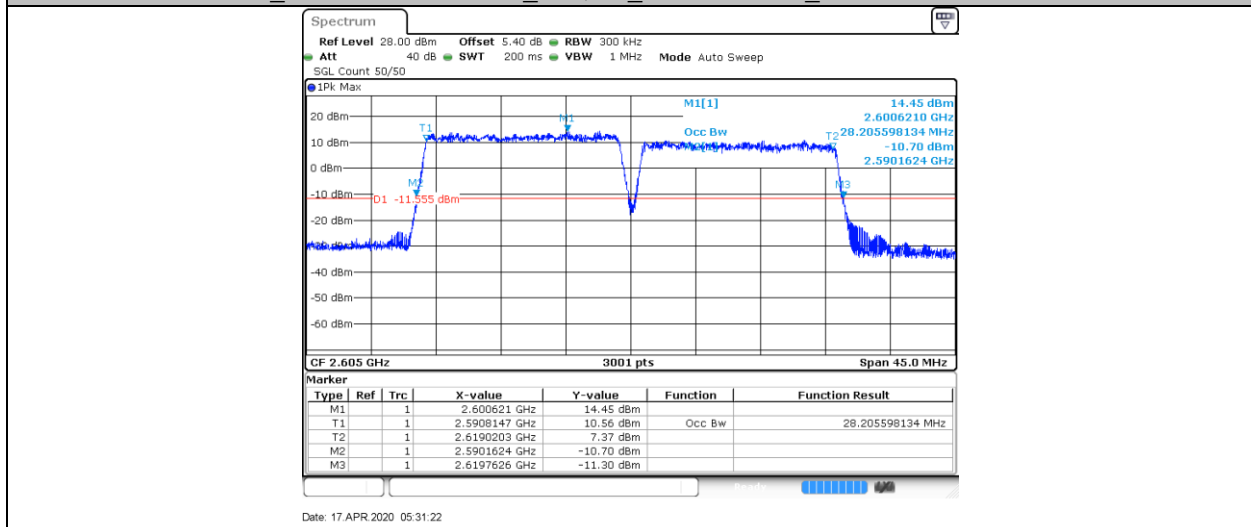


**CA\_38C 15MHz+15MHz\_16QAM\_37925+38075\_75RB#0+75RB#0**





CA\_38C 15MHz+15MHz\_16QAM\_38025+38175\_75RB#0+75RB#0

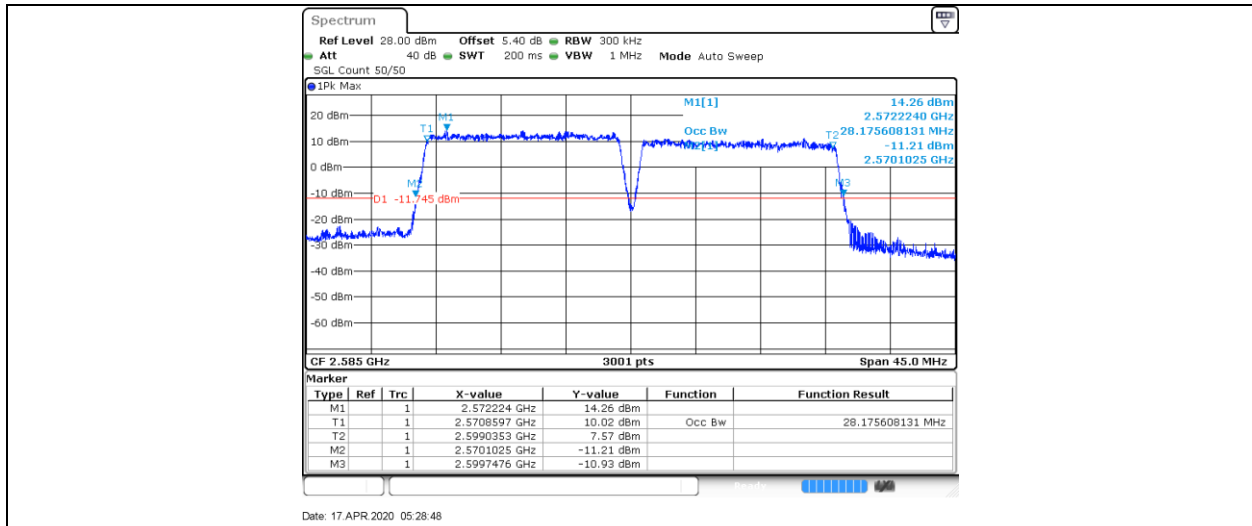


CA\_38C 15MHz+15MHz\_64QAM\_37825+37975\_75RB#0+75RB#0

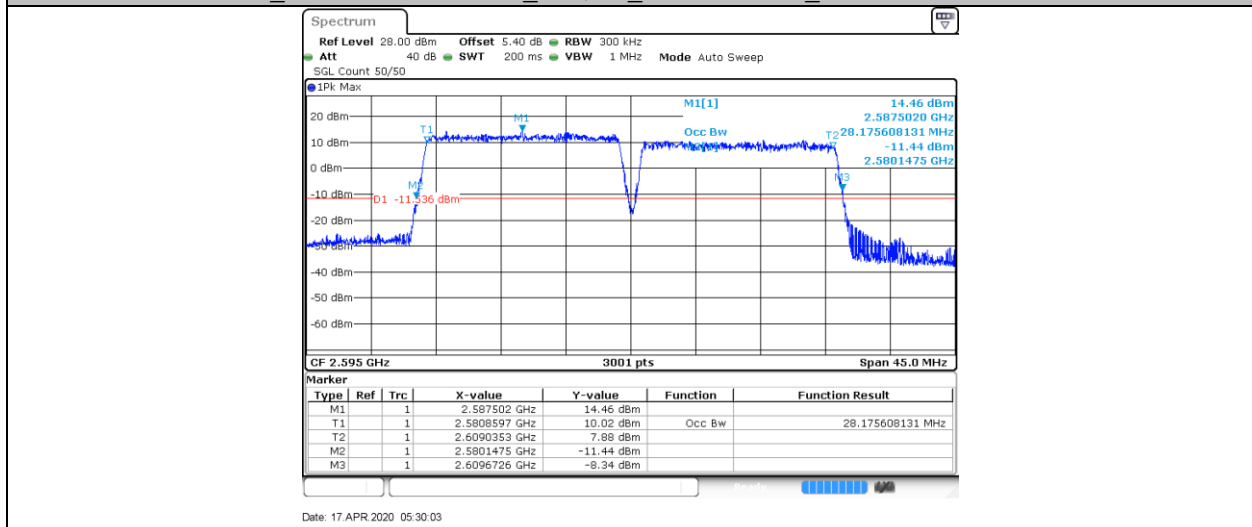


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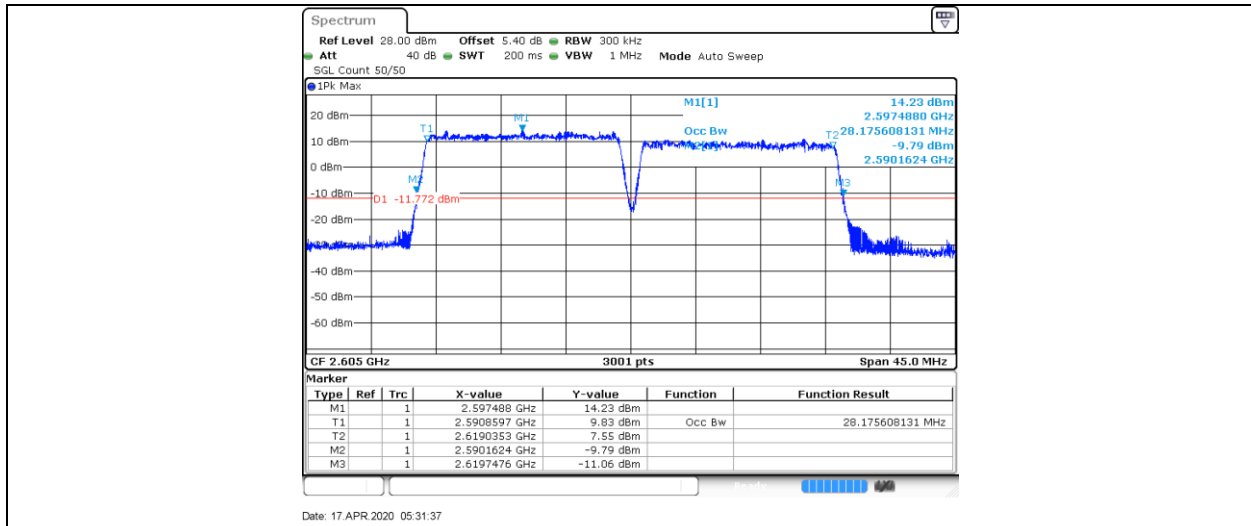


CA\_38C 15MHz+15MHz\_64QAM\_37925+38075\_75RB#0+75RB#0

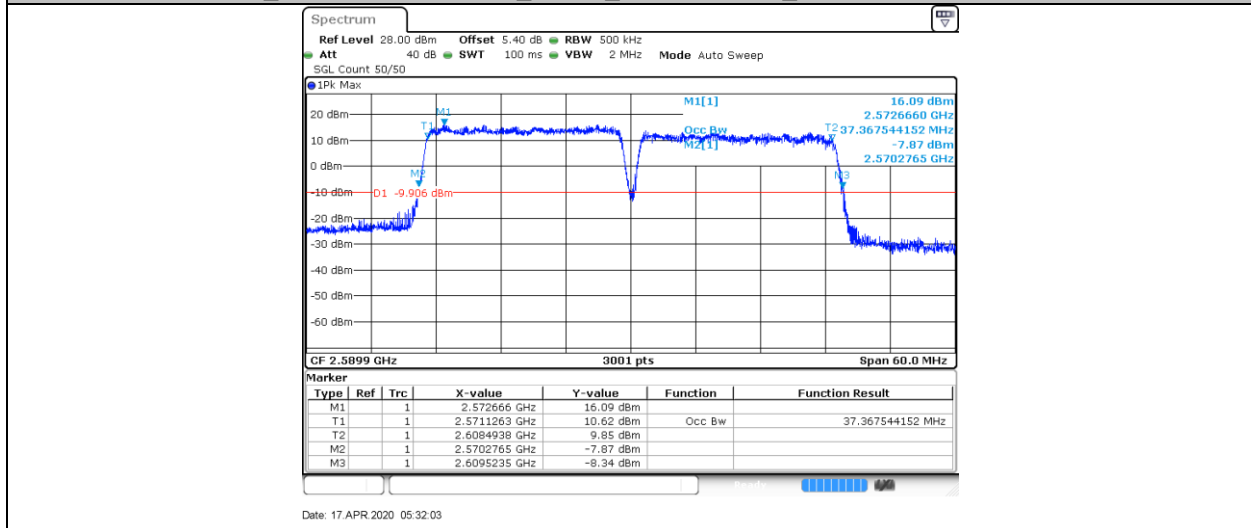


CA\_38C 15MHz+15MHz\_64QAM\_38025+38175\_75RB#0+75RB#0



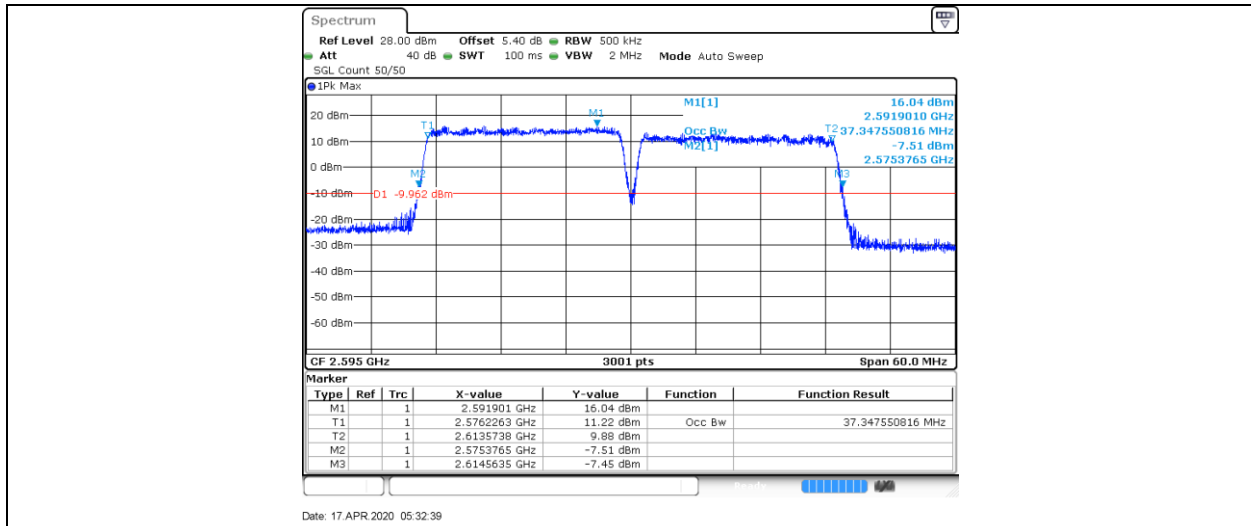


**CA\_38C 20MHz+20MHz\_QPSK\_37850+38048\_100RB#0+100RB#0**

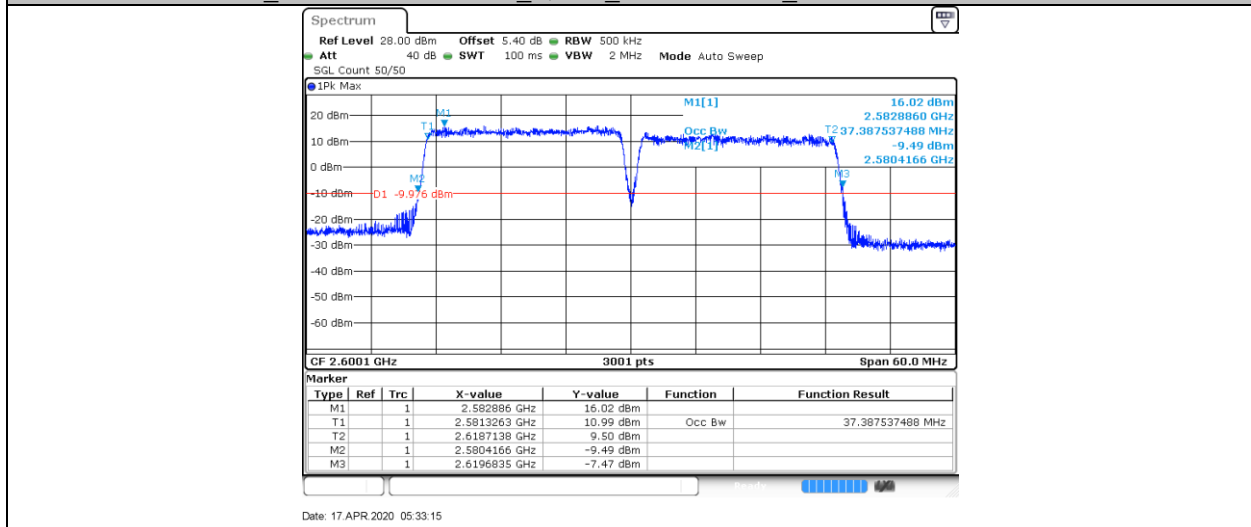


**CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_100RB#0+100RB#0**



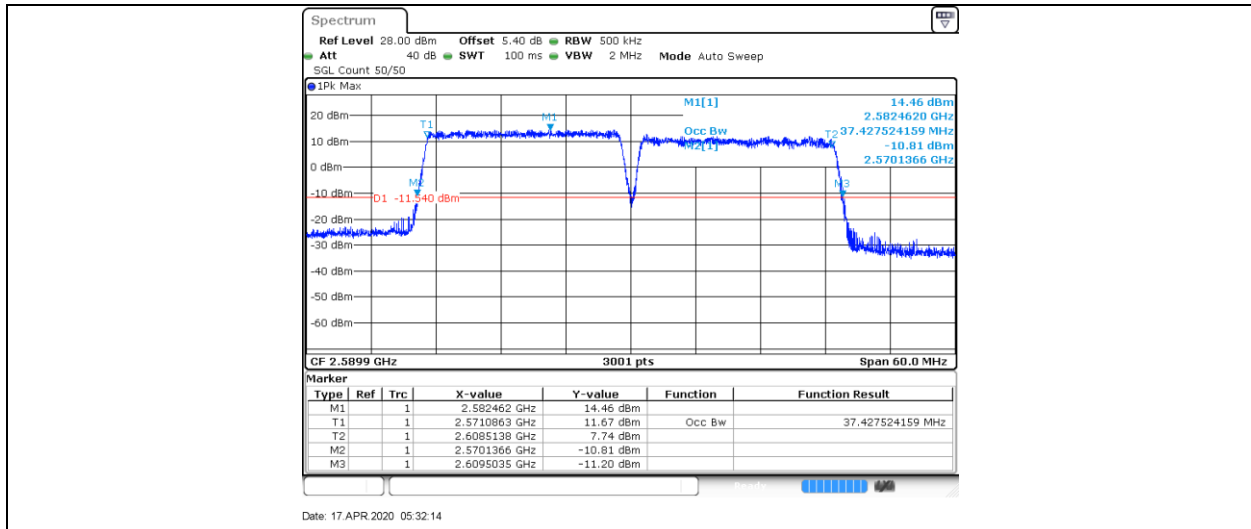


**CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_100RB#0+100RB#0**

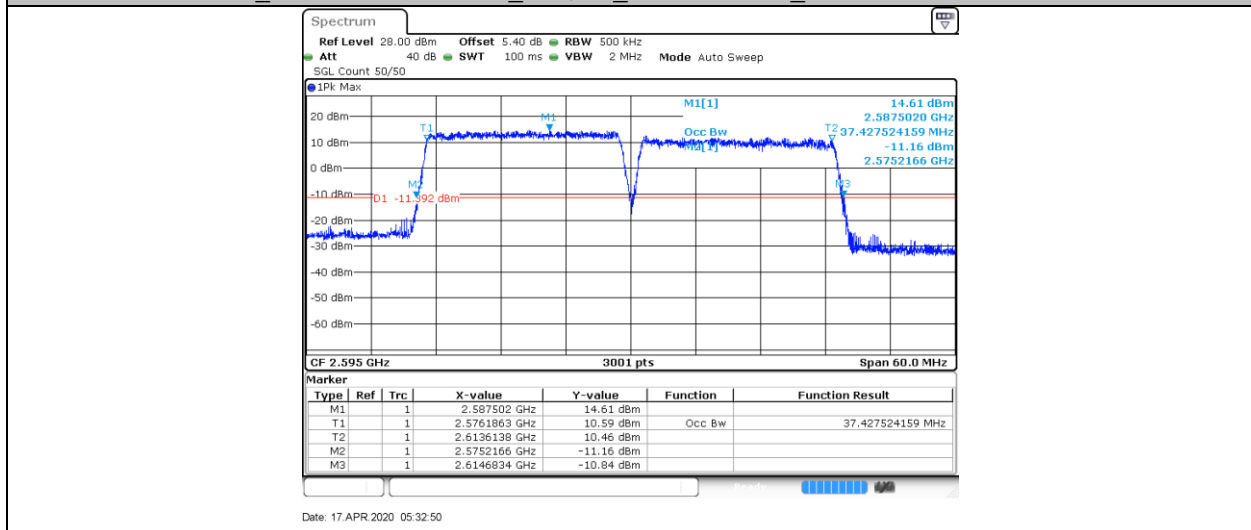


**CA\_38C 20MHz+20MHz\_16QAM\_37850+38048\_100RB#0+100RB#0**





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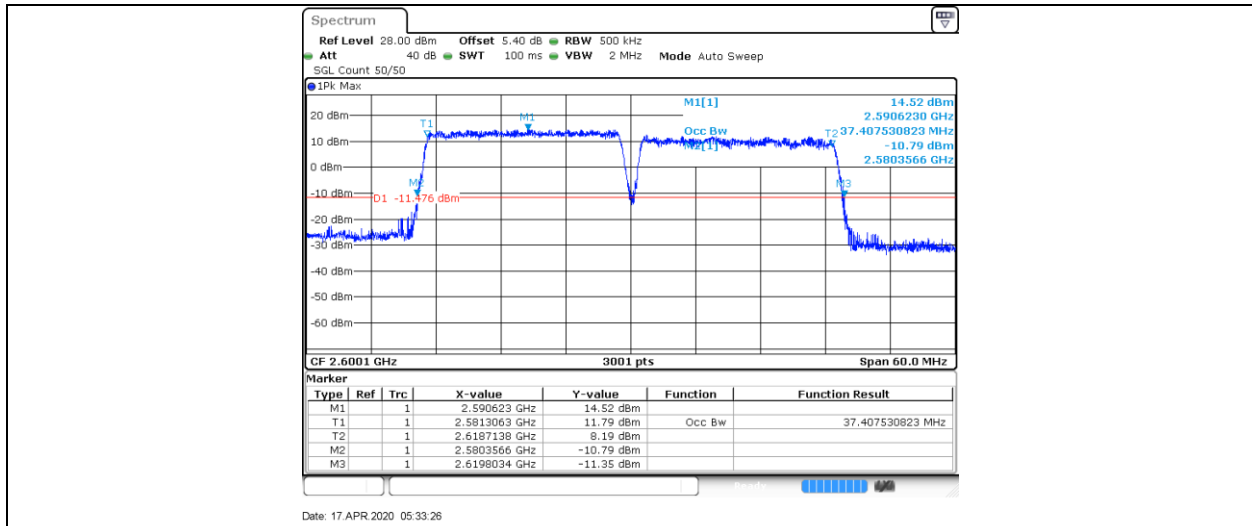


**CA\_38C 20MHz+20MHz\_16QAM\_37952+38150\_100RB#0+100RB#0**

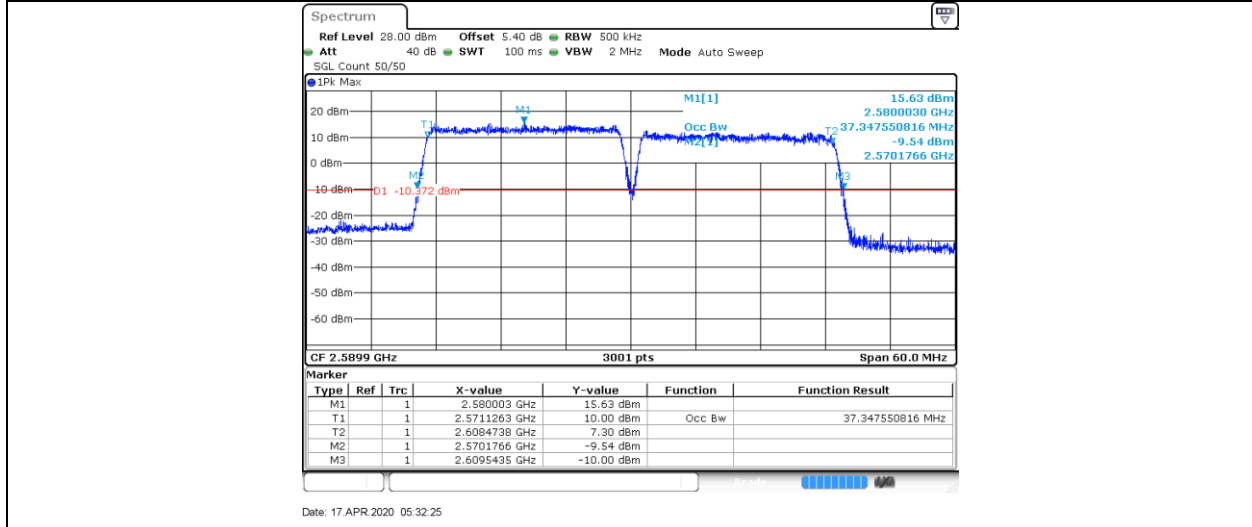


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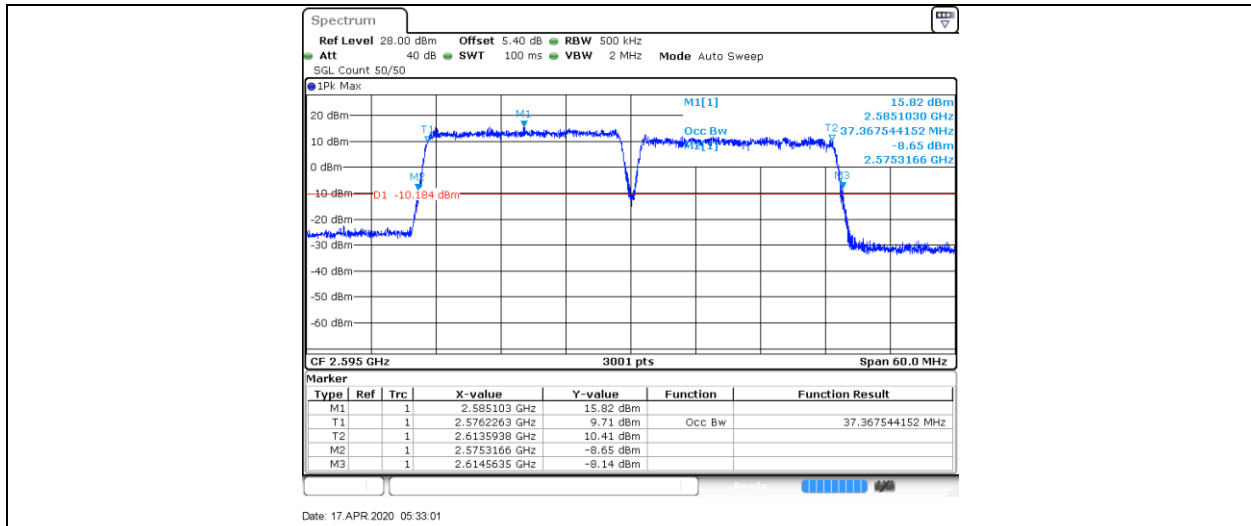


**CA\_38C 20MHz+20MHz\_64QAM\_37850+38048\_100RB#0+100RB#0**

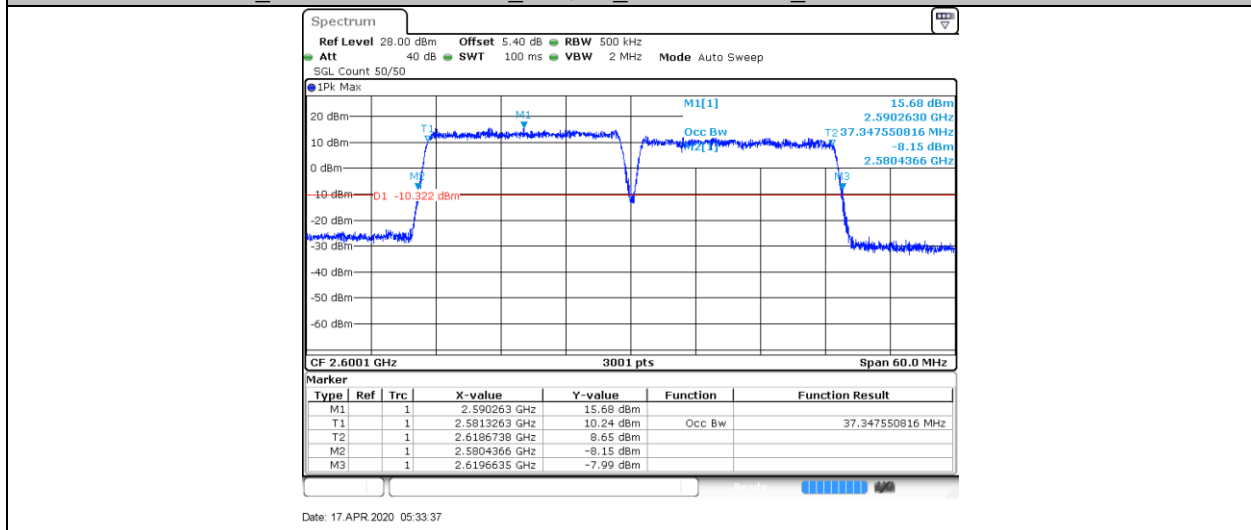


**CA\_38C 20MHz+20MHz\_64QAM\_37901+38099\_100RB#0+100RB#0**





CA\_38C 20MHz+20MHz\_64QAM\_37952+38150\_100RB#0+100RB#0

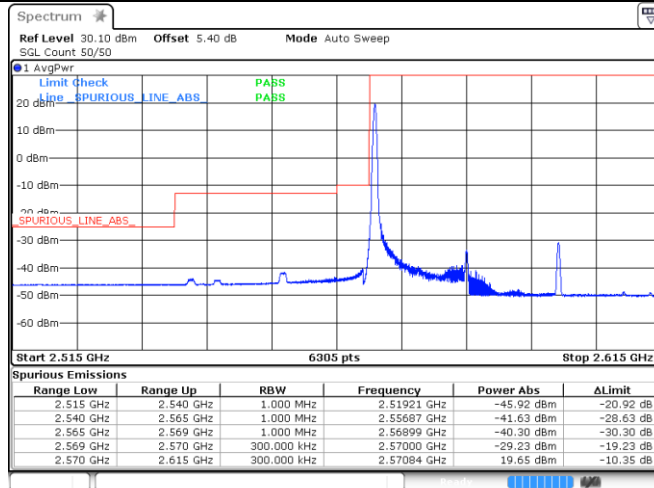


## 5 Band Edges Compliance

### 5.1 For LTE

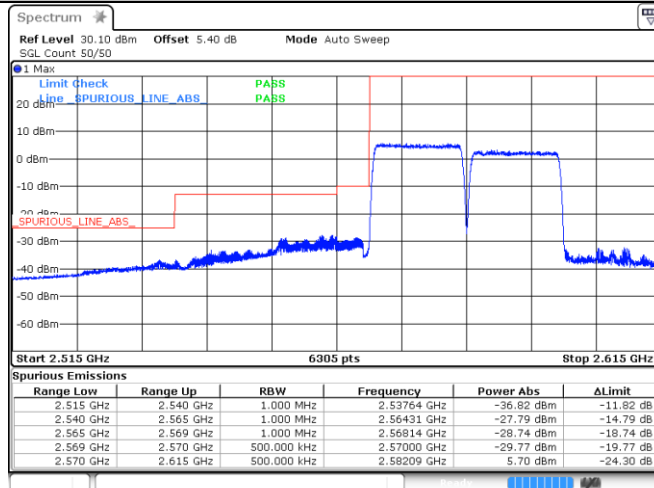
#### 5.1.1 Test Band = LTE Band CA\_38C

CA\_38C\_15MHz+15MHz\_QPSK\_37825+37975\_1RB#0+0RB#0



Date: 24 APR 2020 05:16:42

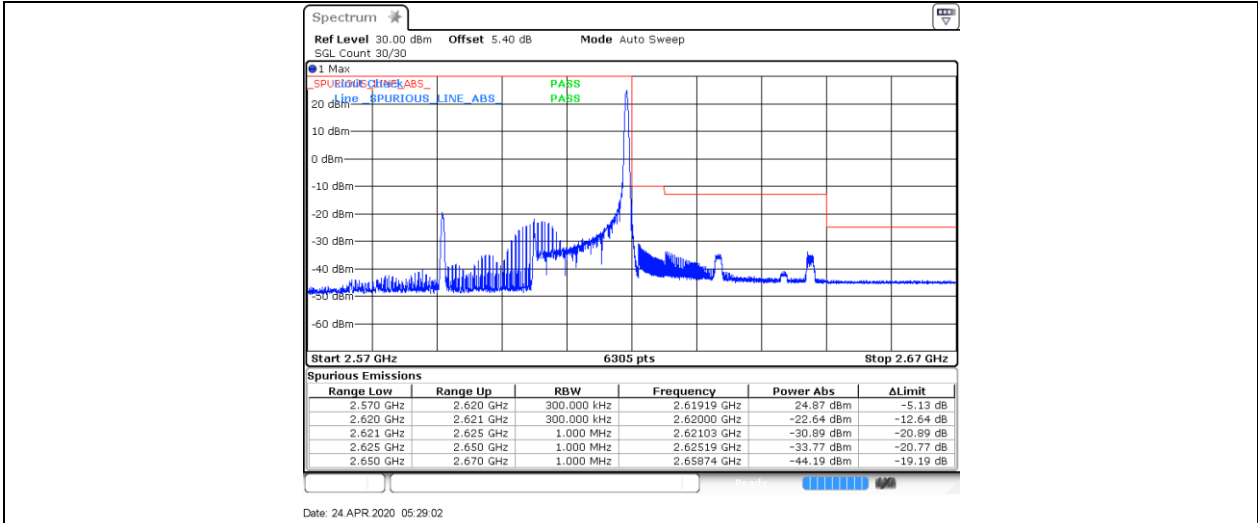
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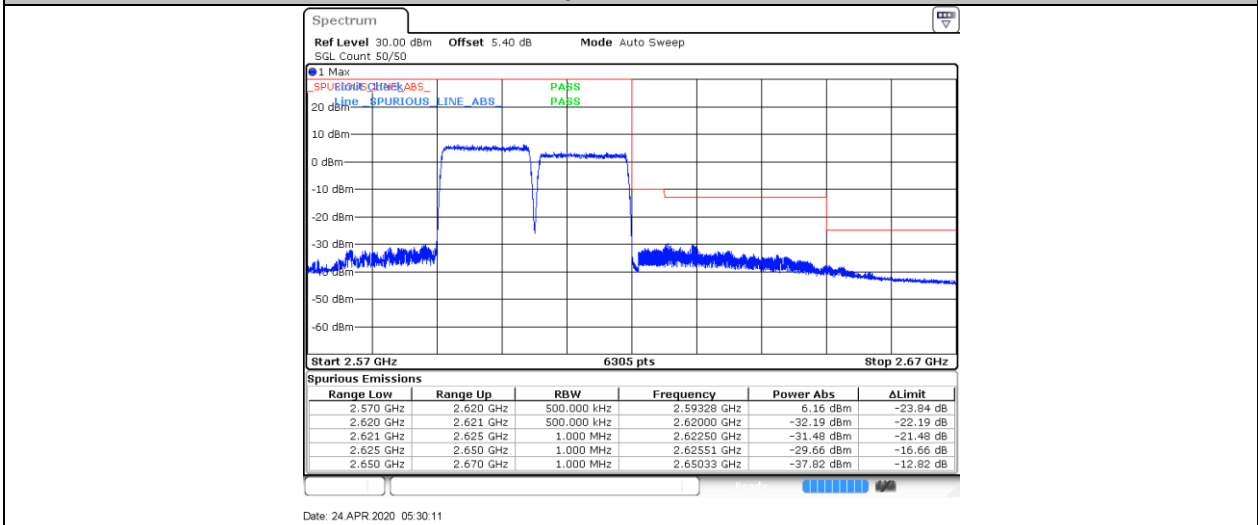
Date: 24 APR 2020 05:19:51

CA\_38C\_15MHz+15MHz\_QPSK\_38025+38175\_0RB#0+1RB#74





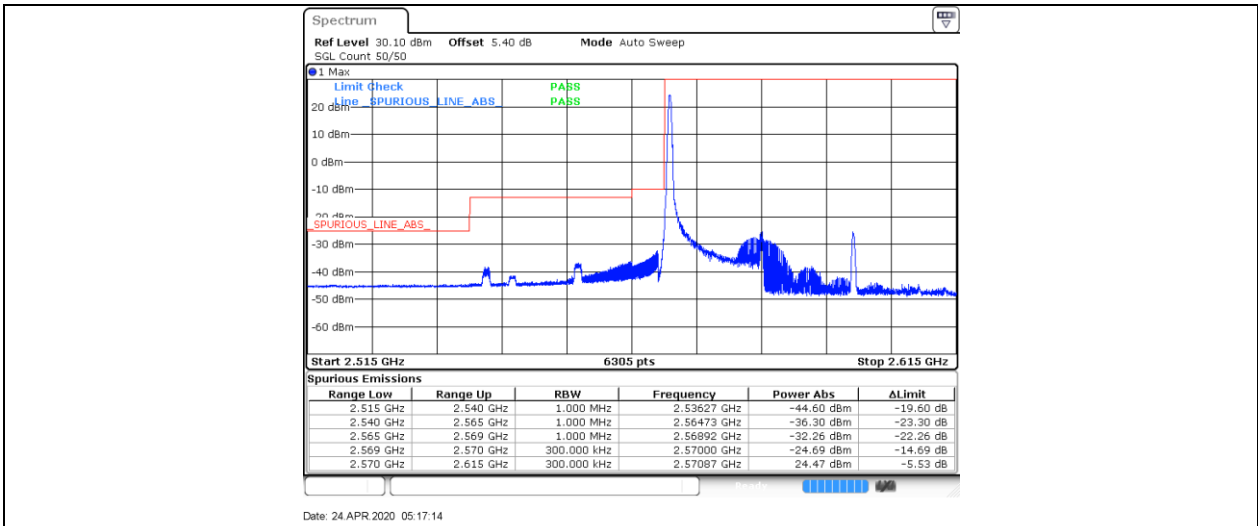
CA\_38C\_15MHz+15MHz\_QPSK\_38025+38175\_75RB#0+75RB#0



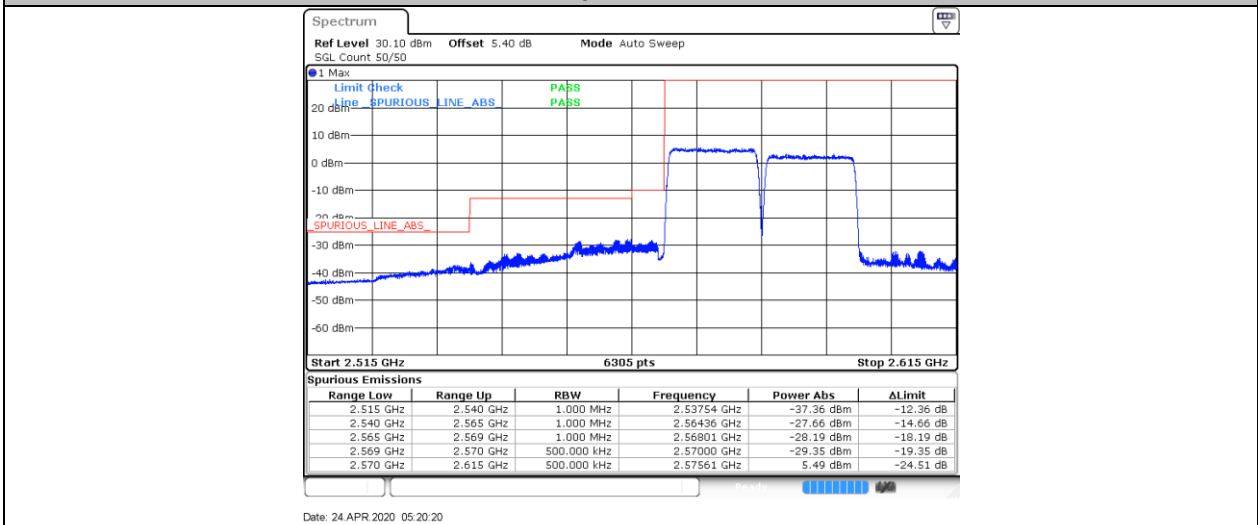
CA\_38C\_15MHz+15MHz\_16QAM\_37825+37975\_1RB#0+0RB#0





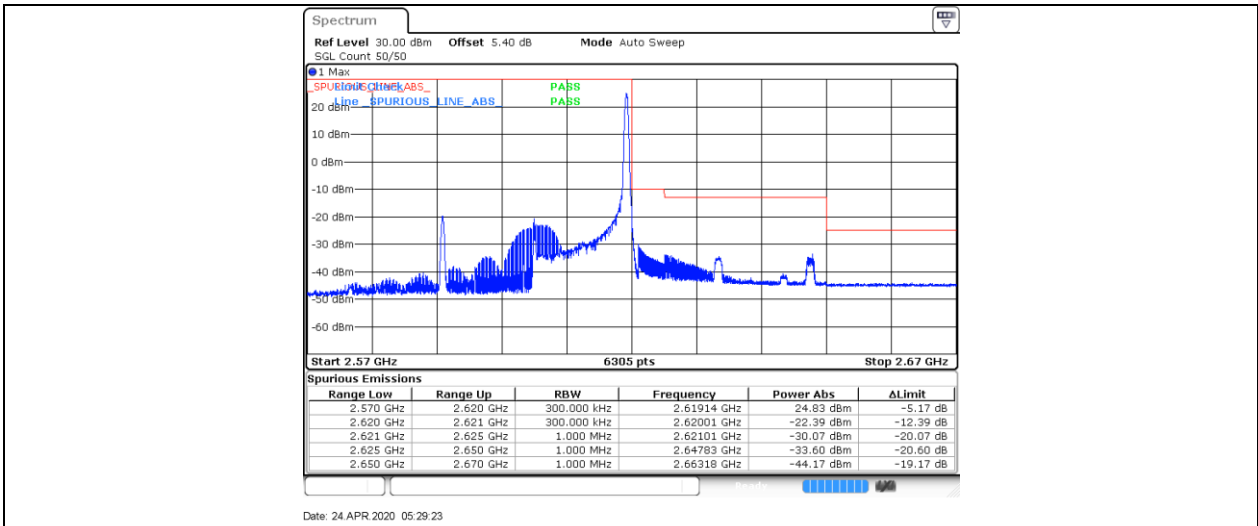


CA\_38C\_15MHz+15MHz\_16QAM\_37825+37975\_75RB#0+75RB#0

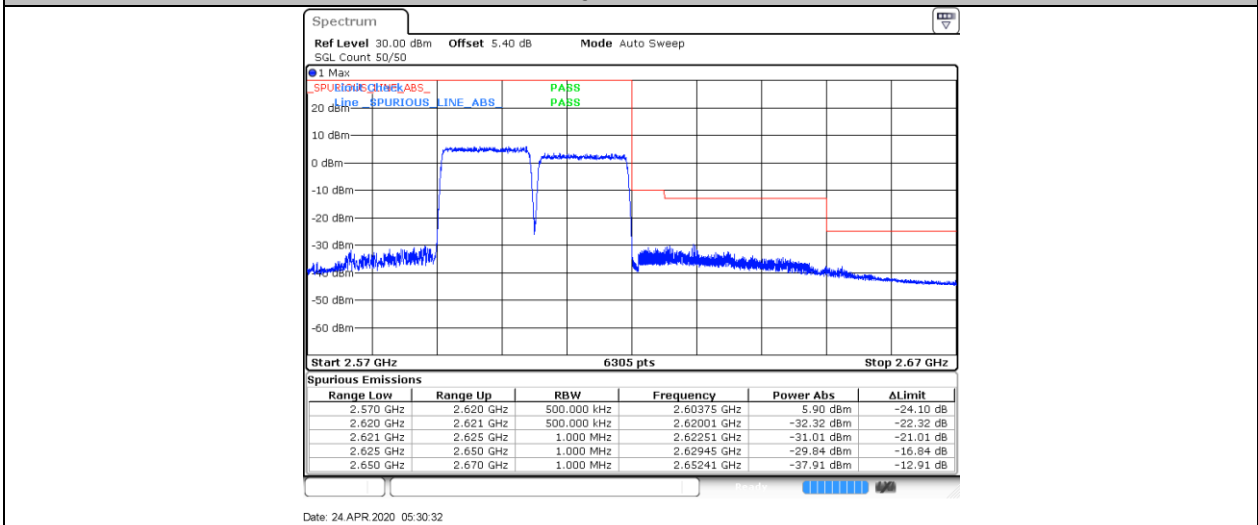


CA\_38C\_15MHz+15MHz\_16QAM\_38025+38175\_0RB#0+1RB#74



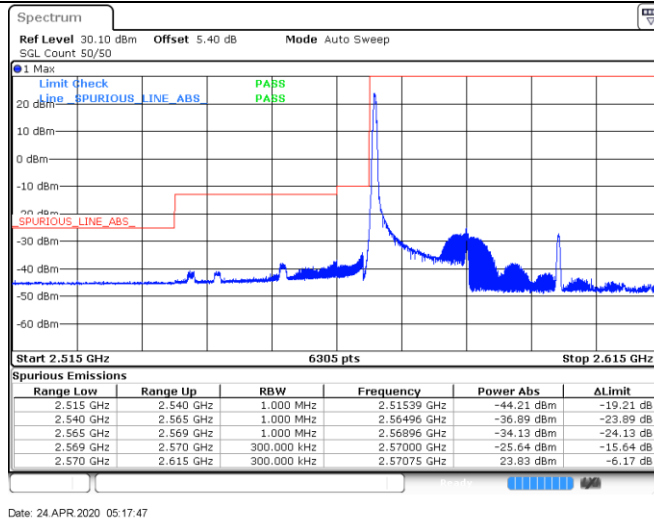


CA\_38C\_15MHz+15MHz\_16QAM\_38025+38175\_75RB#0+75RB#0



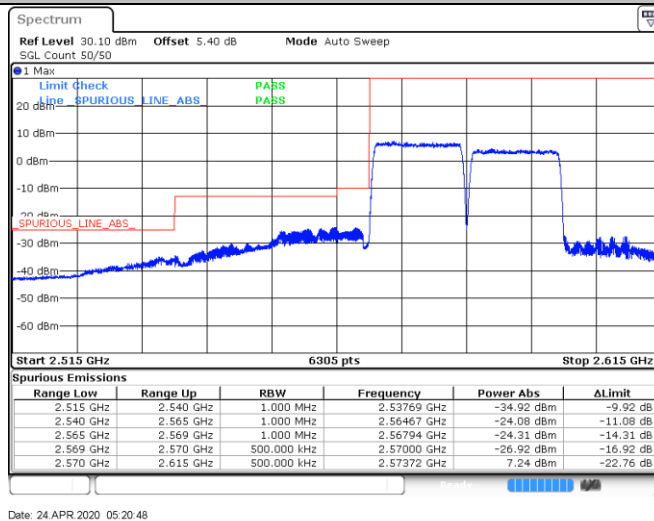
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Date: 24 APR 2020 05:17:47

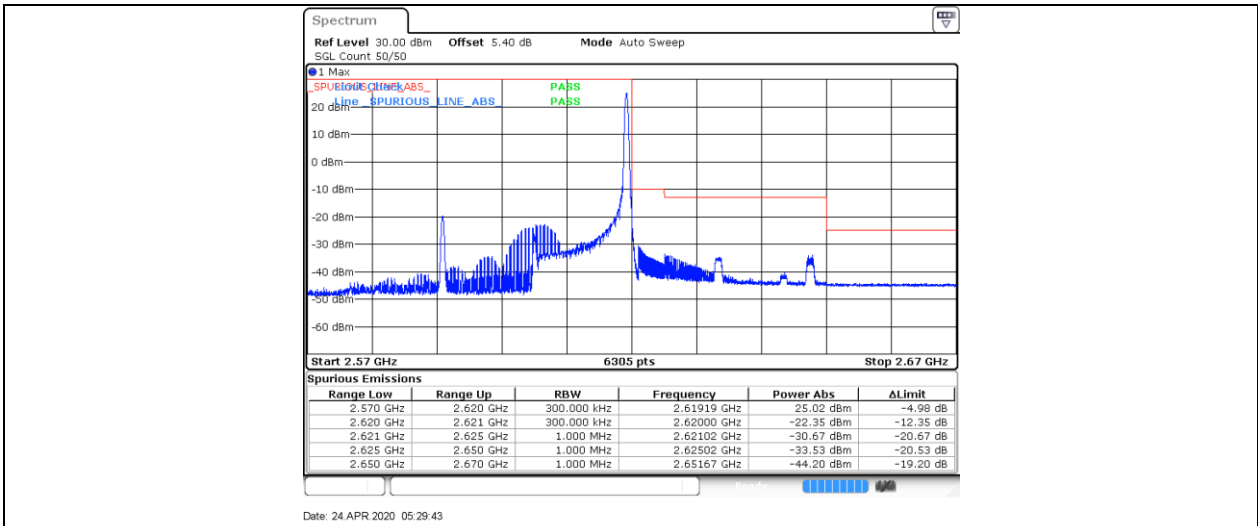
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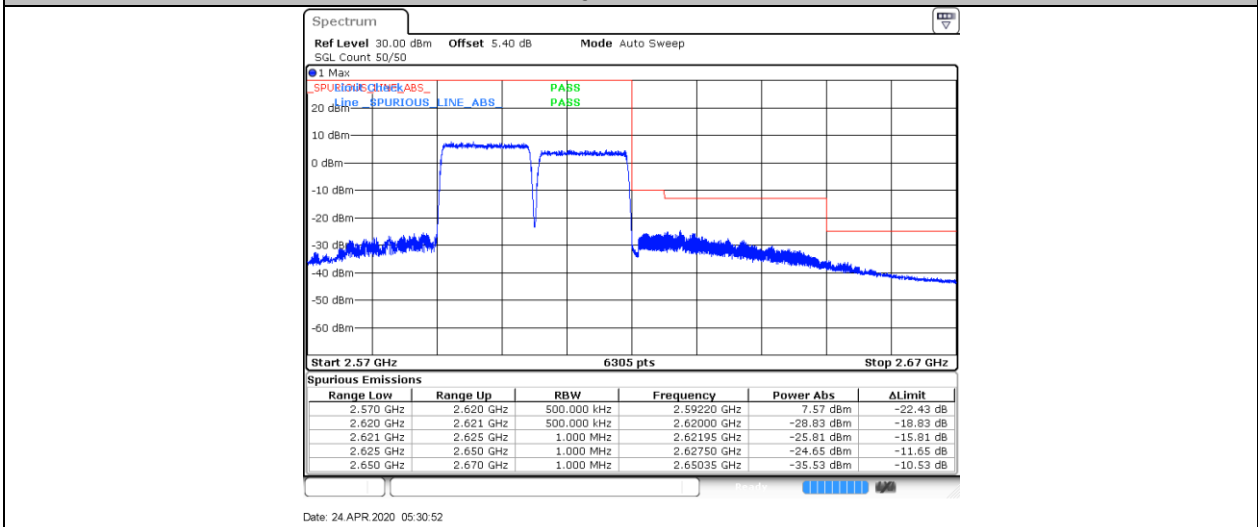
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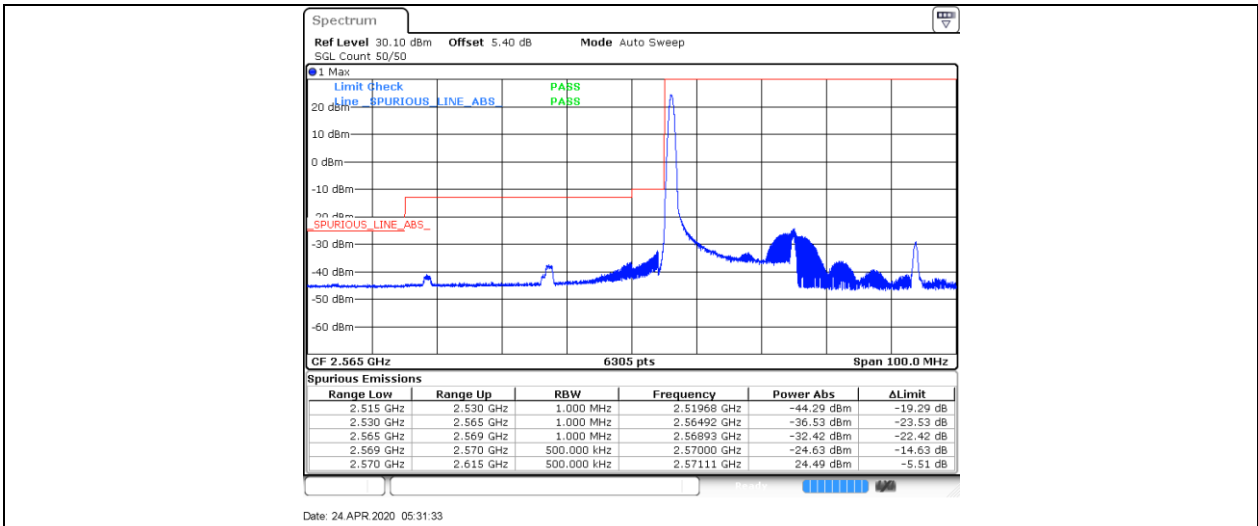


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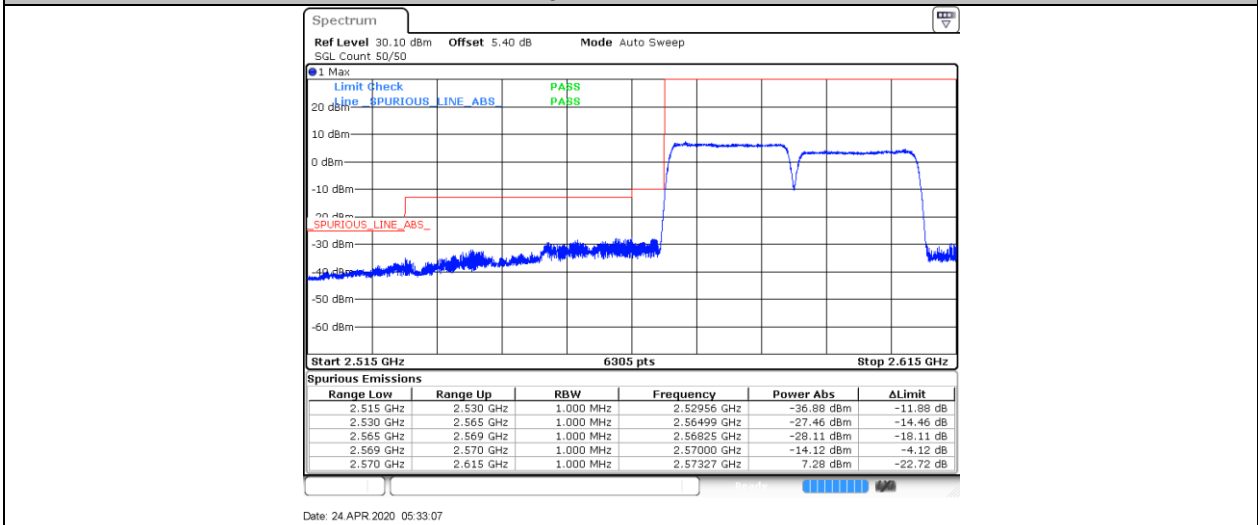


CA\_38C\_20MHz+20MHz\_QPSK\_37850+38048\_1RB#0+0RB#0



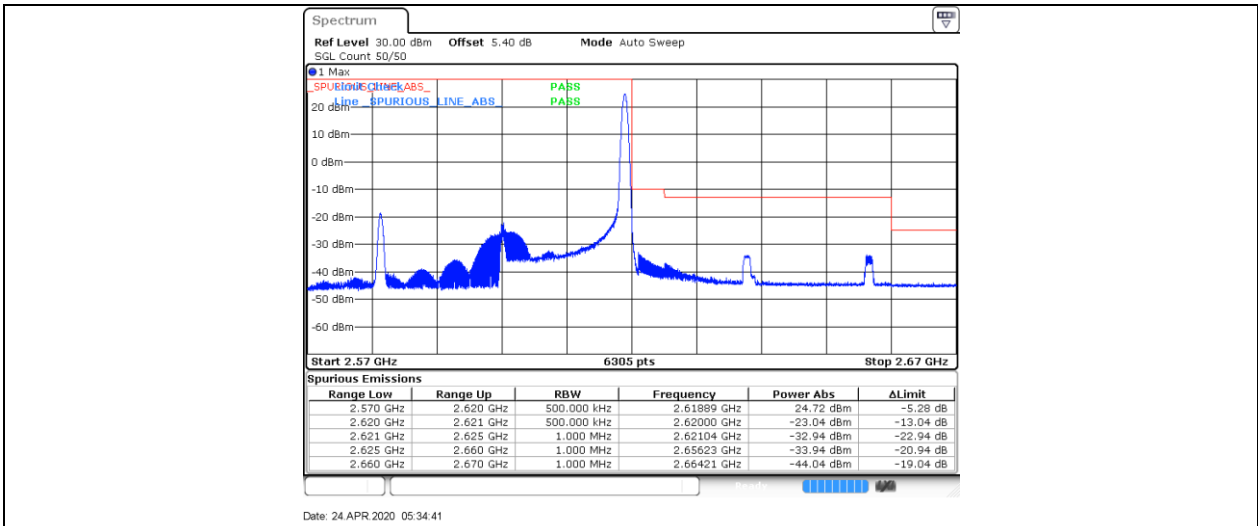


CA\_38C\_20MHz+20MHz\_QPSK\_37850+38048\_100RB#0+100RB#0

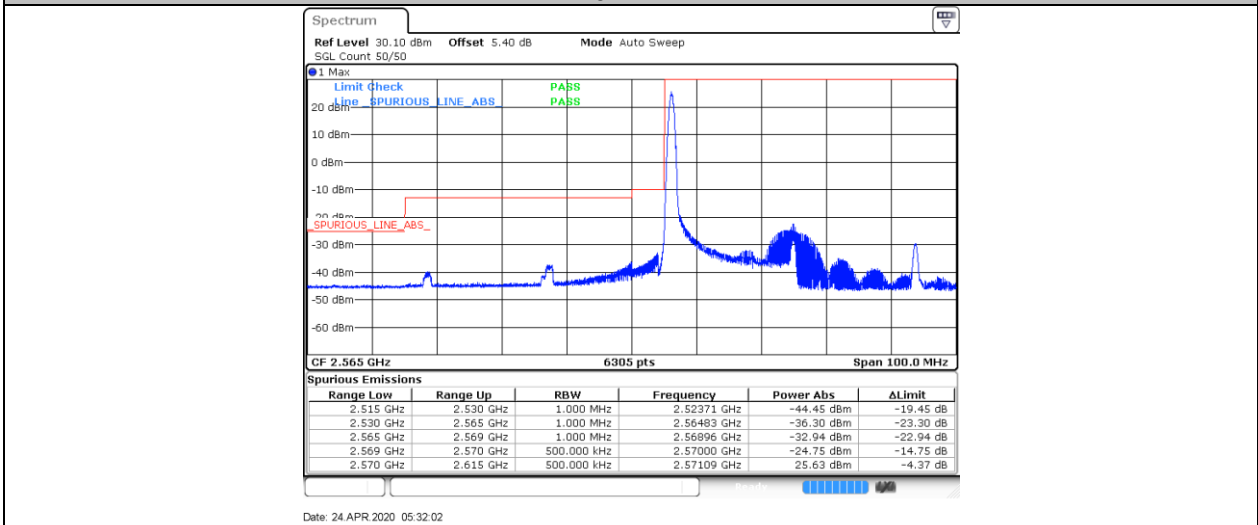


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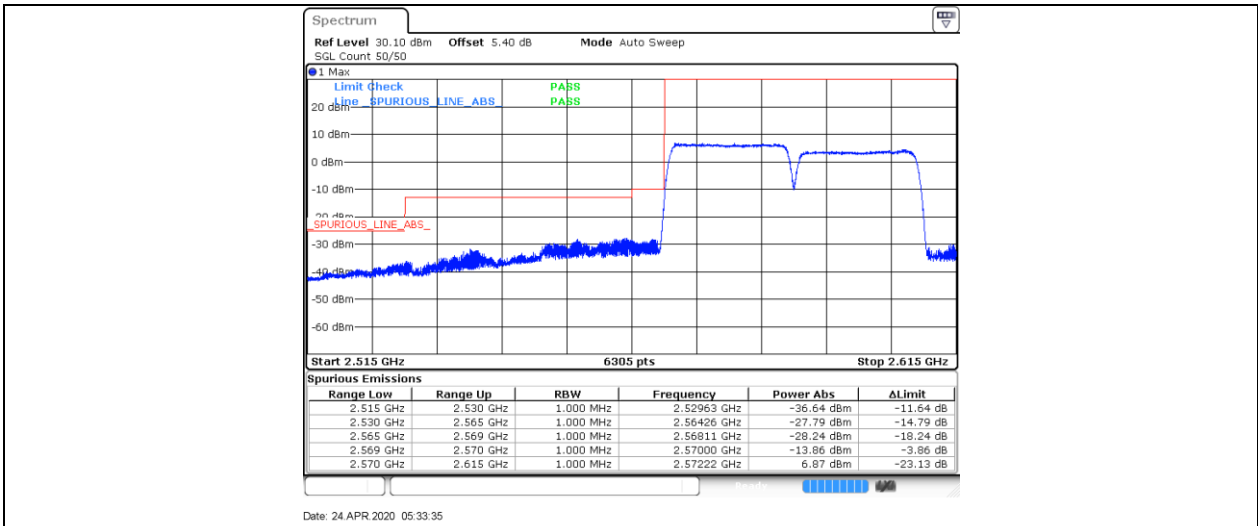


CA\_38C\_20MHz+20MHz\_16QAM\_37850+38048\_1RB#0+0RB#0

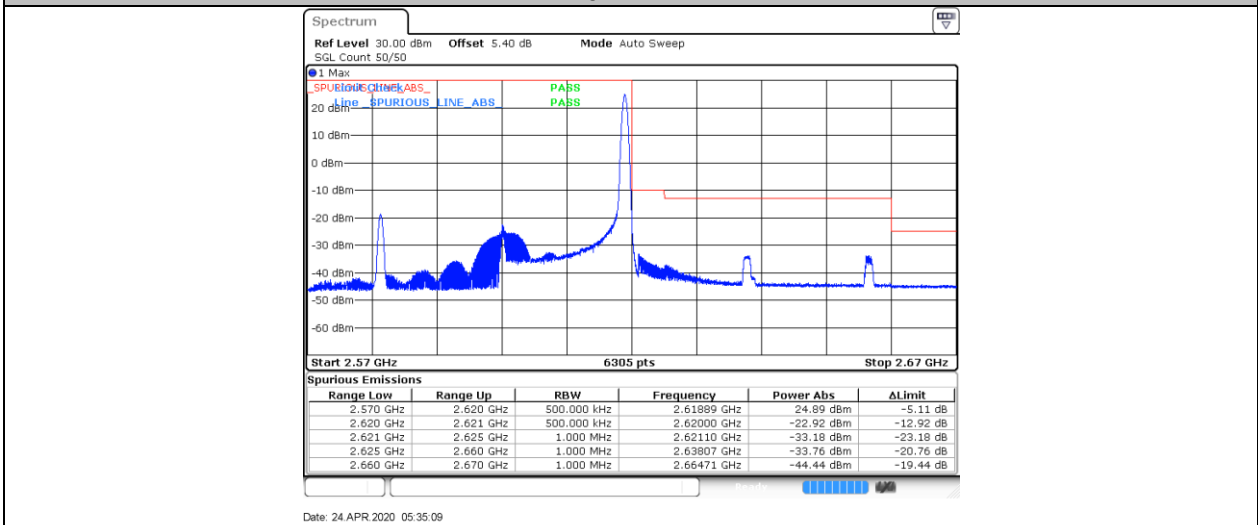


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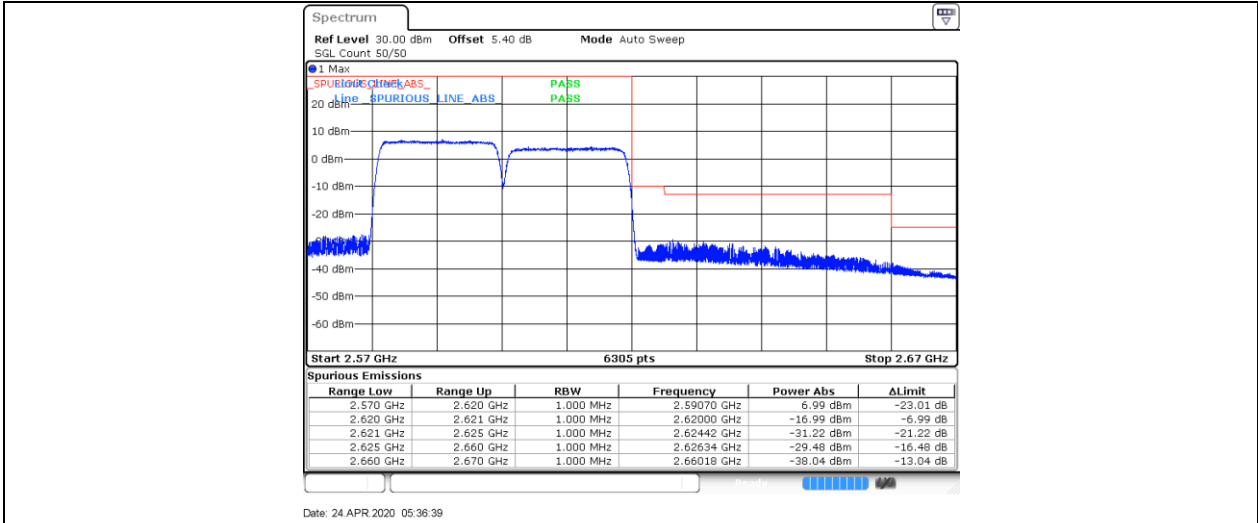


CA\_38C\_20MHz+20MHz\_16QAM\_37952+38150\_0RB#0+1RB#99

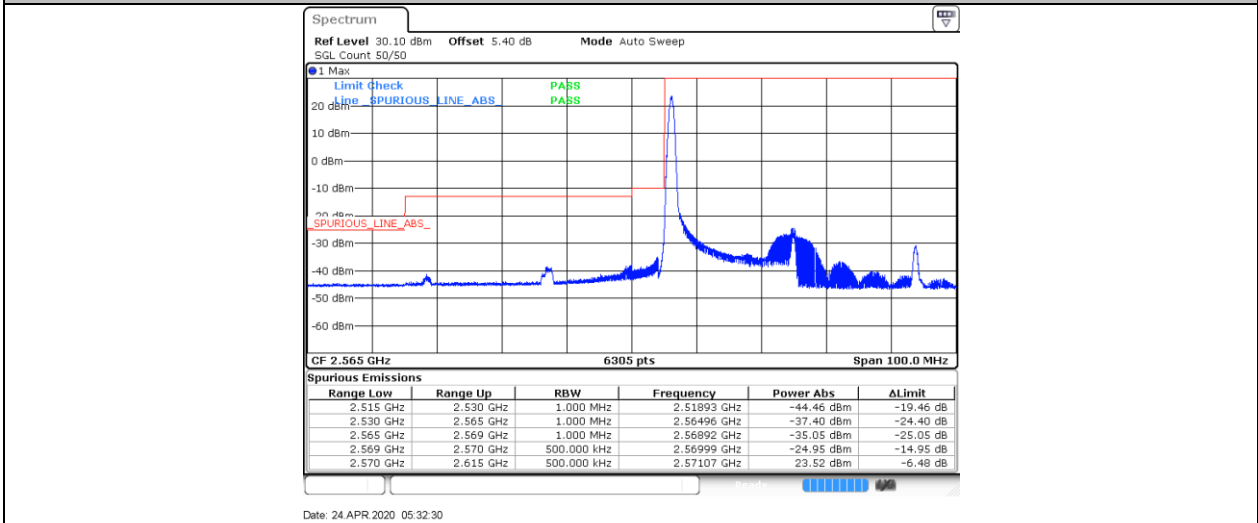


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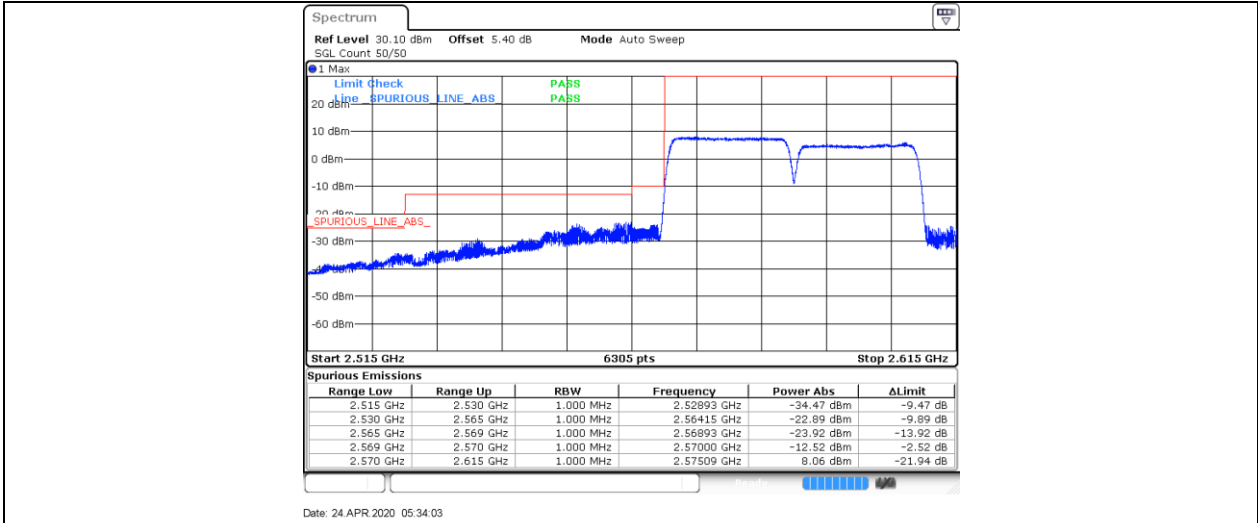
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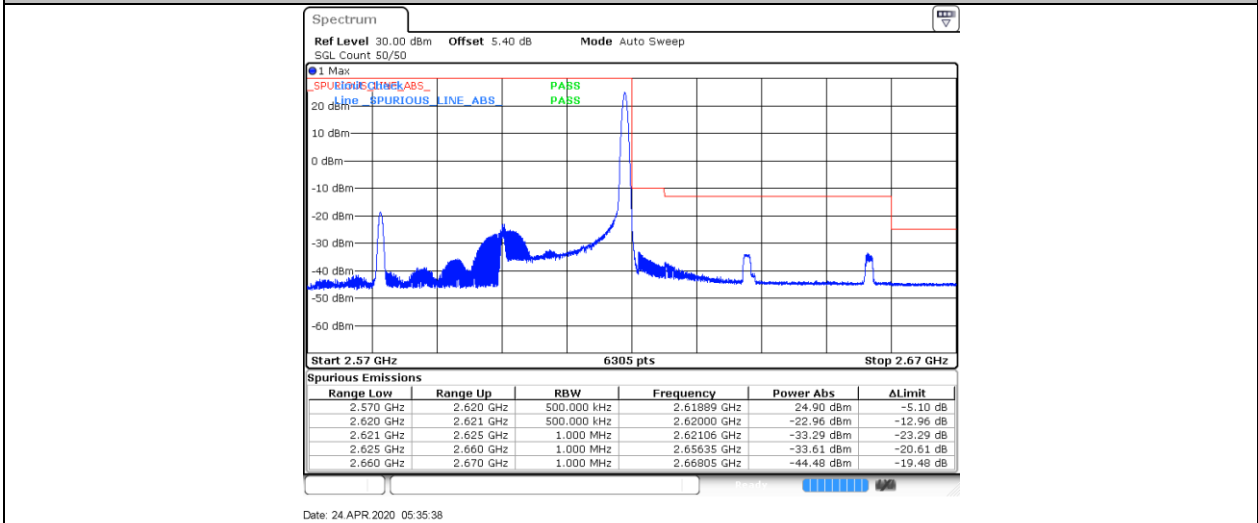
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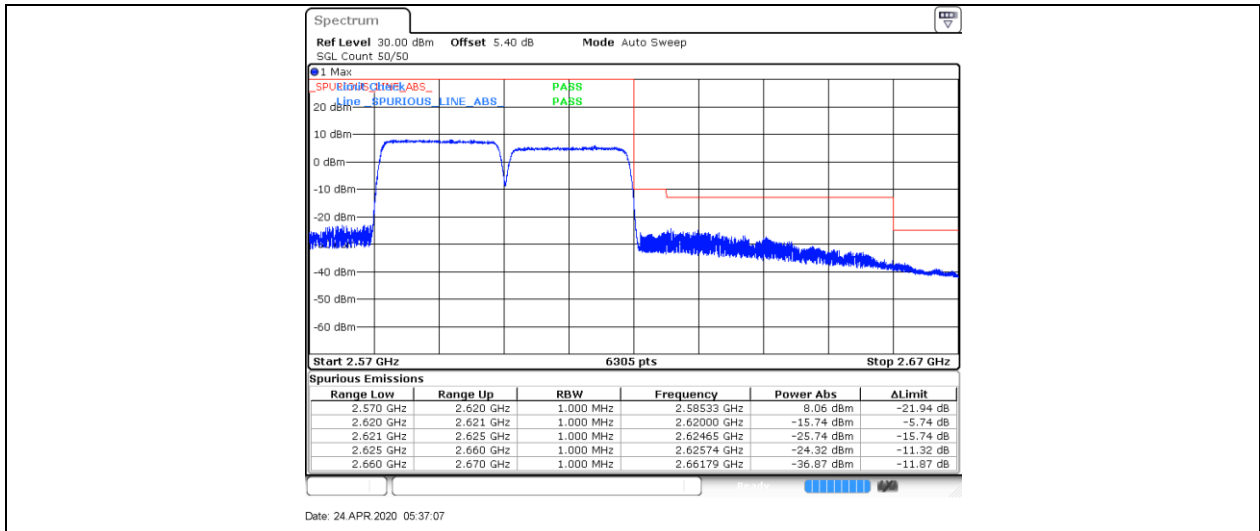


CA\_38C\_20MHz+20MHz\_64QAM\_37952+38150\_0RB#0+1RB#99



CA\_38C\_20MHz+20MHz\_64QAM\_37952+38150\_100RB#0+100RB#0





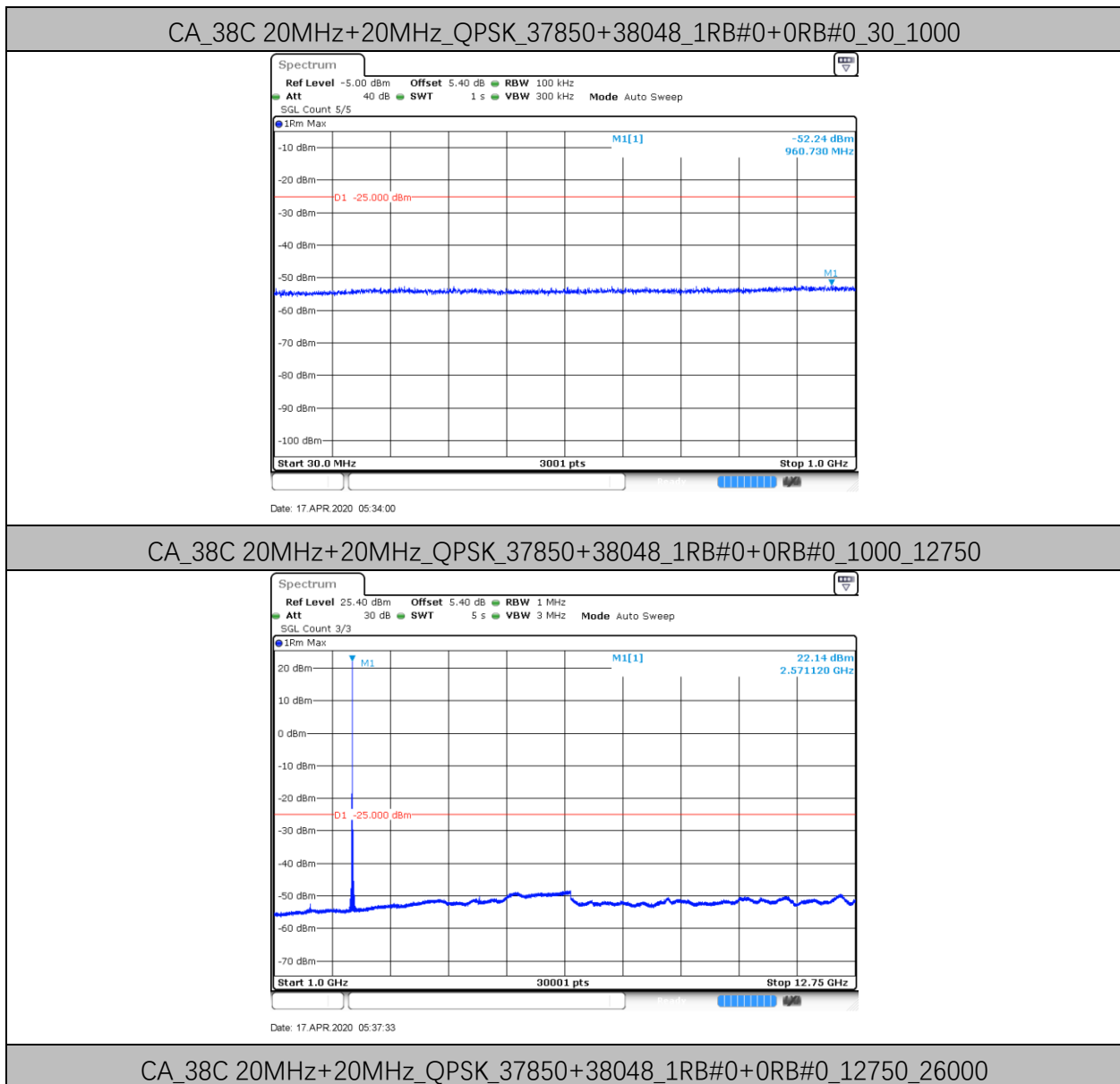
## 6 Spurious Emission at Antenna Terminal

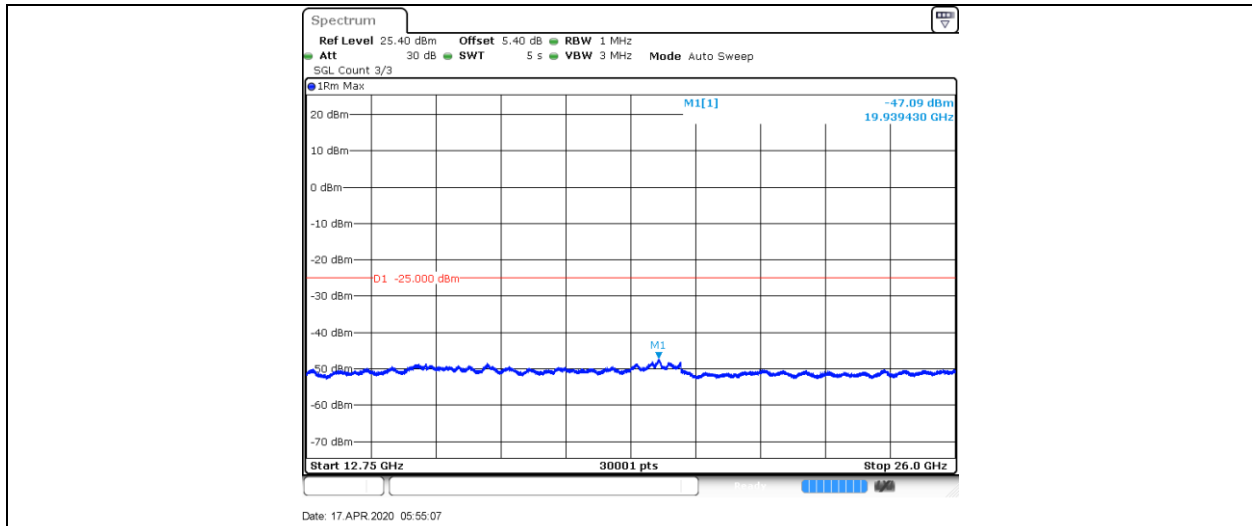
NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = 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

Part I - Test Plots

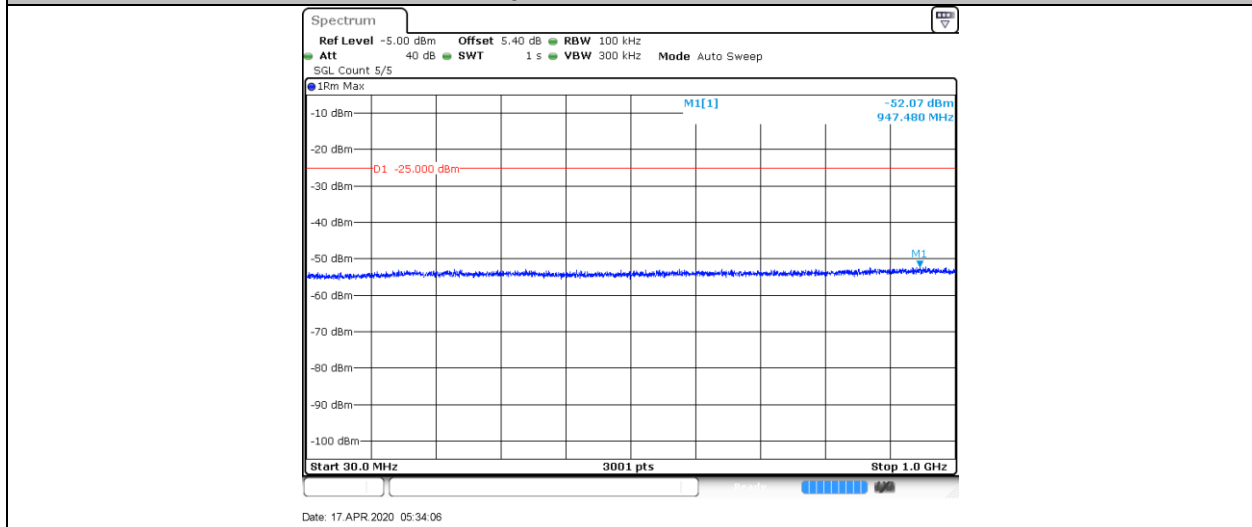
### 6.1 For LTE

#### 6.1.1 Test Band = LTE Band CA\_38C



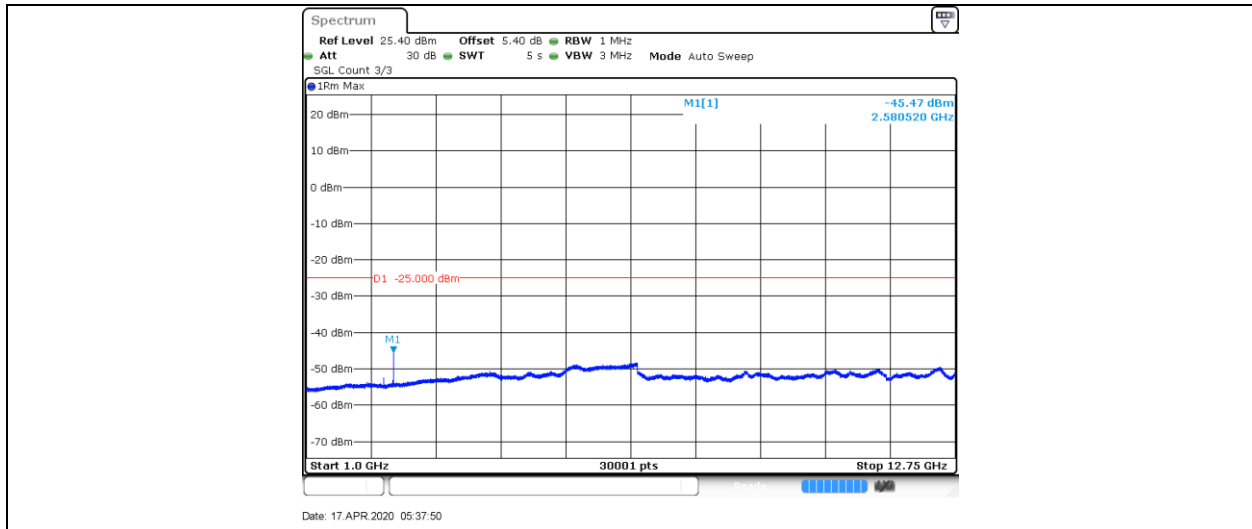


CA\_38C 20MHz+20MHz\_QPSK\_37850+38048\_ORB#0+1RB#99\_30\_1000

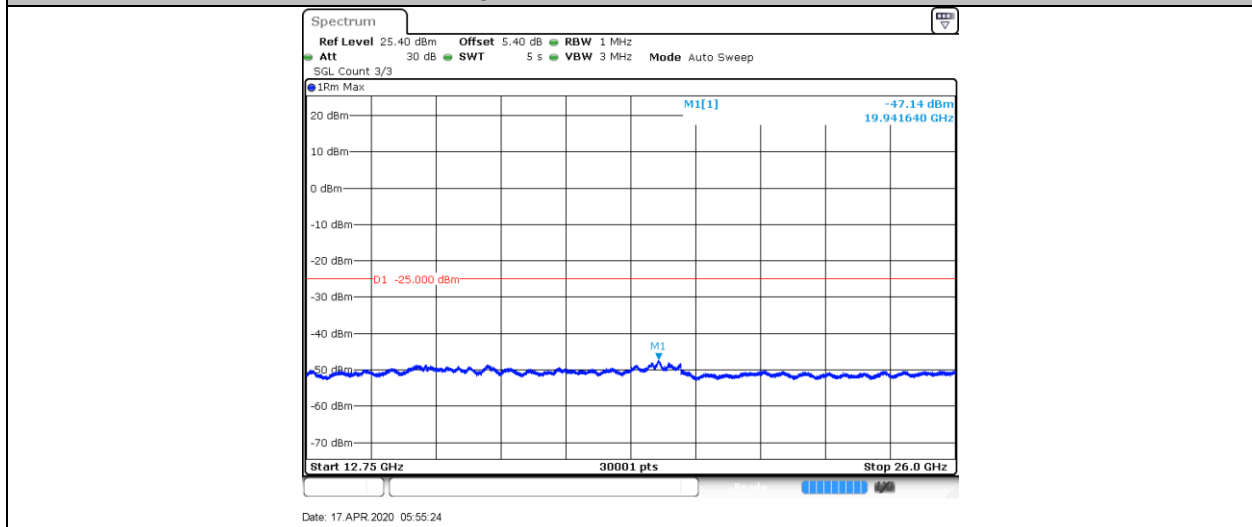


CA\_38C 20MHz+20MHz\_QPSK\_37850+38048\_ORB#0+1RB#99\_1000\_12750



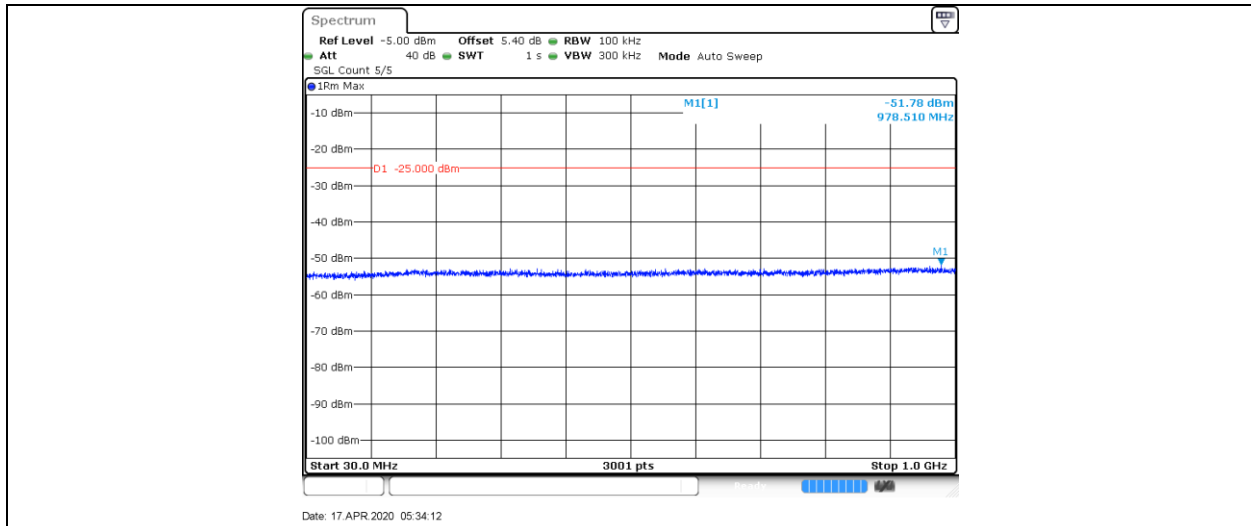


CA\_38C 20MHz+20MHz\_QPSK\_37850+38048\_ORB#0+1RB#99\_12750\_26000

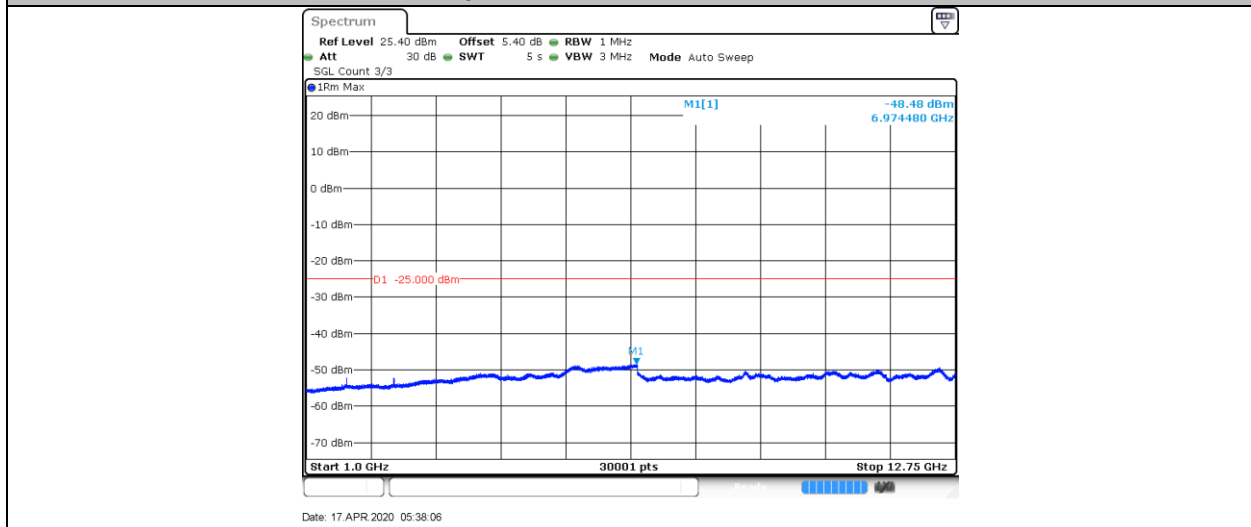


CA\_38C 20MHz+20MHz\_QPSK\_37850+38048\_100RB#0+100RB#0\_30\_1000



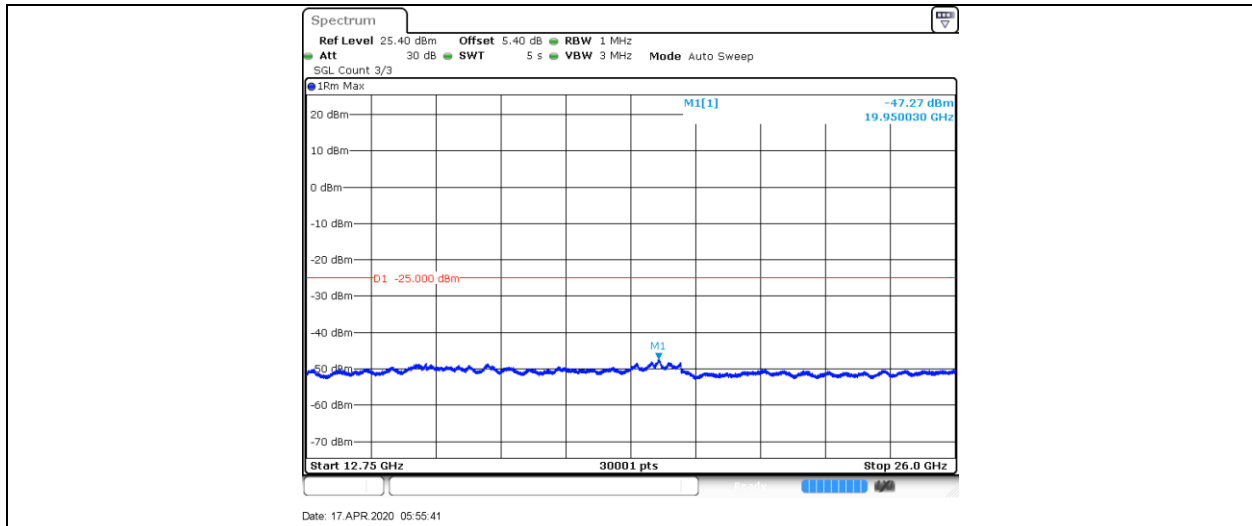


CA\_38C 20MHz+20MHz\_QPSK\_37850+38048\_100RB#0+100RB#0\_1000\_12750

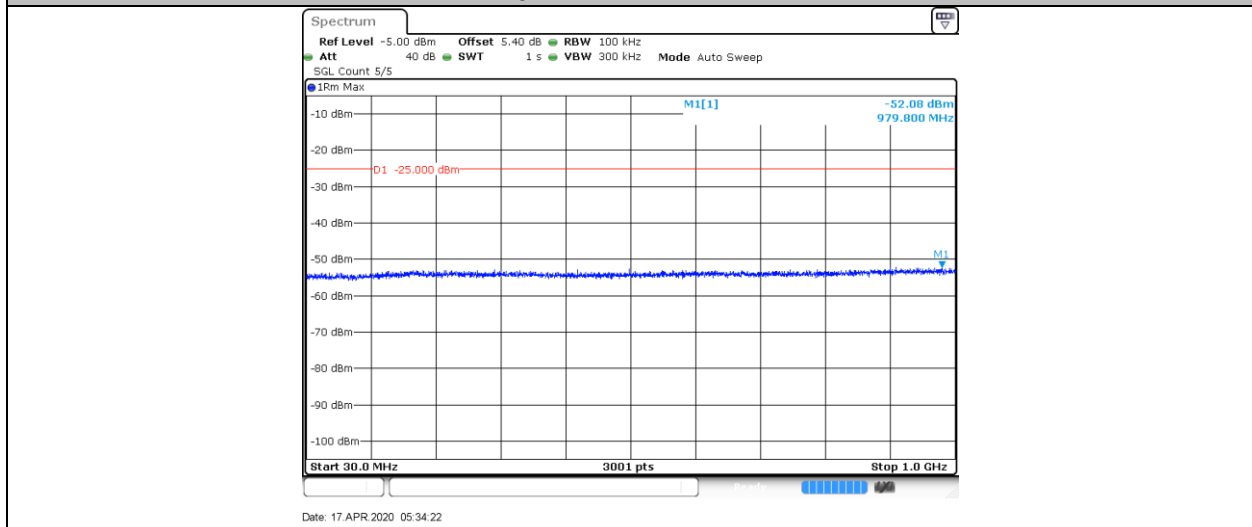


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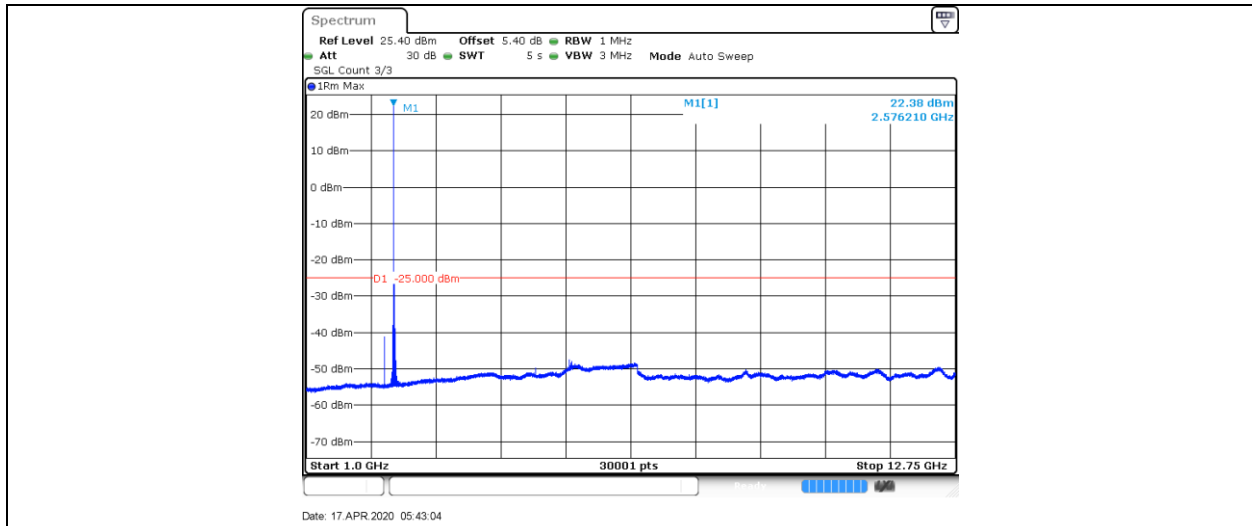


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_1RB#0+0RB#0\_30\_1000

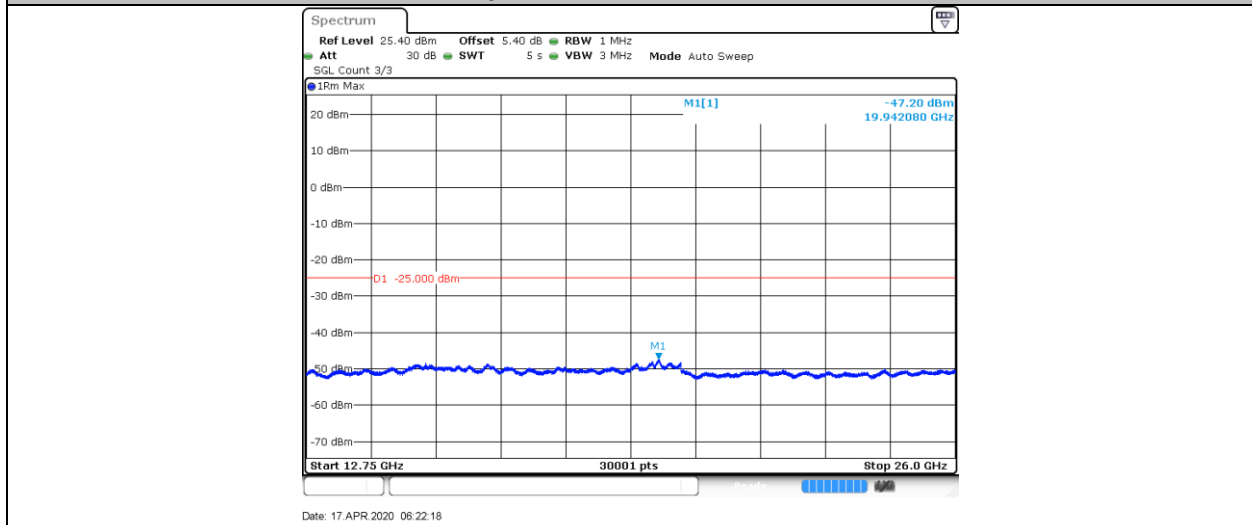


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_1RB#0+0RB#0\_1000\_12750





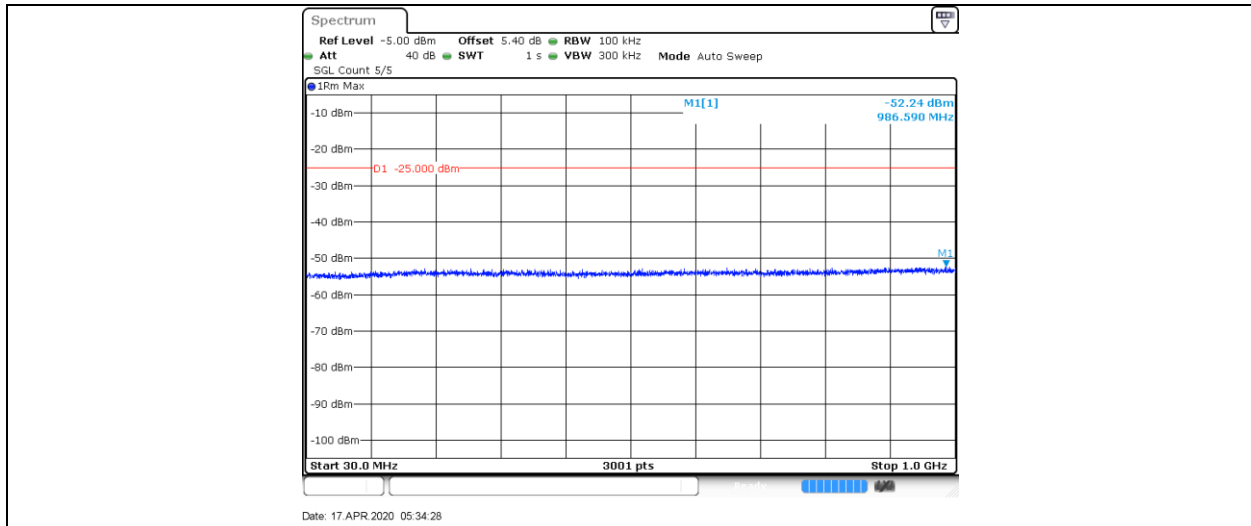
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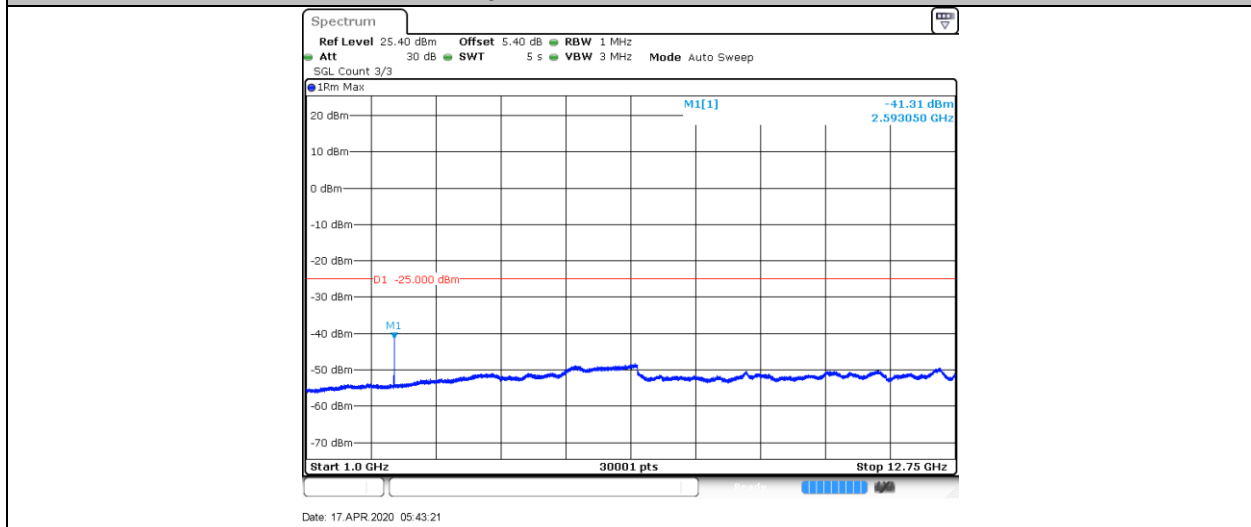
CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_0RB#0+1RB#99\_30\_1000





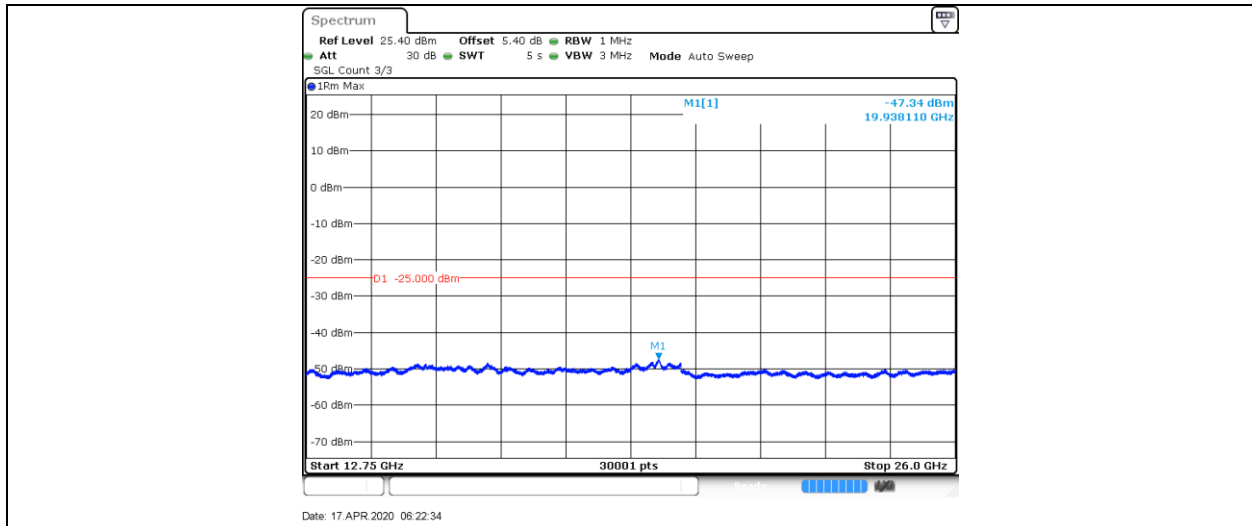


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_ORB#0+1RB#99\_1000\_12750

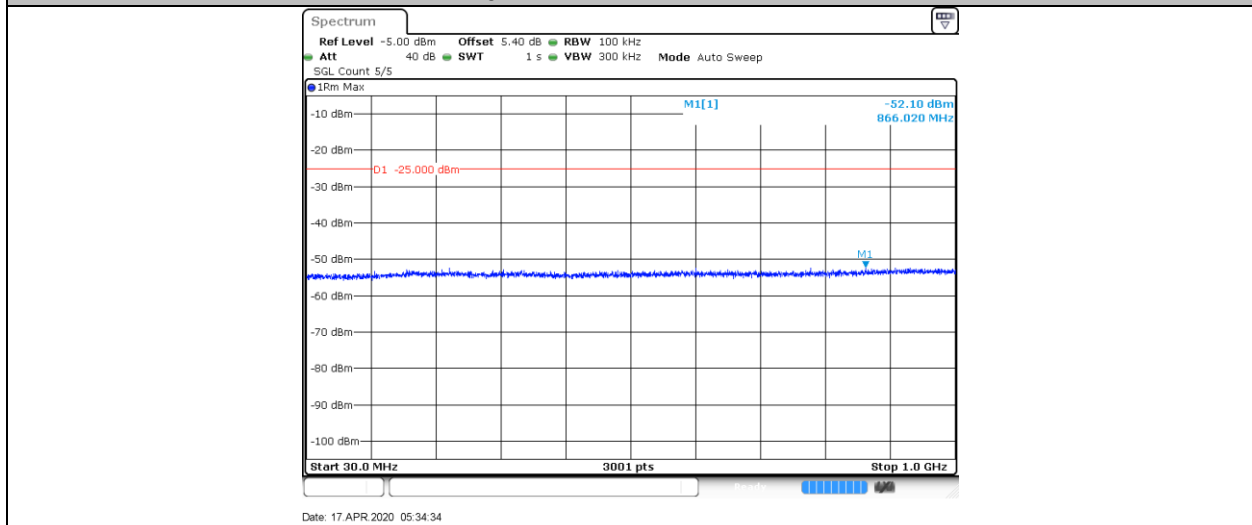


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_ORB#0+1RB#99\_12750\_26000



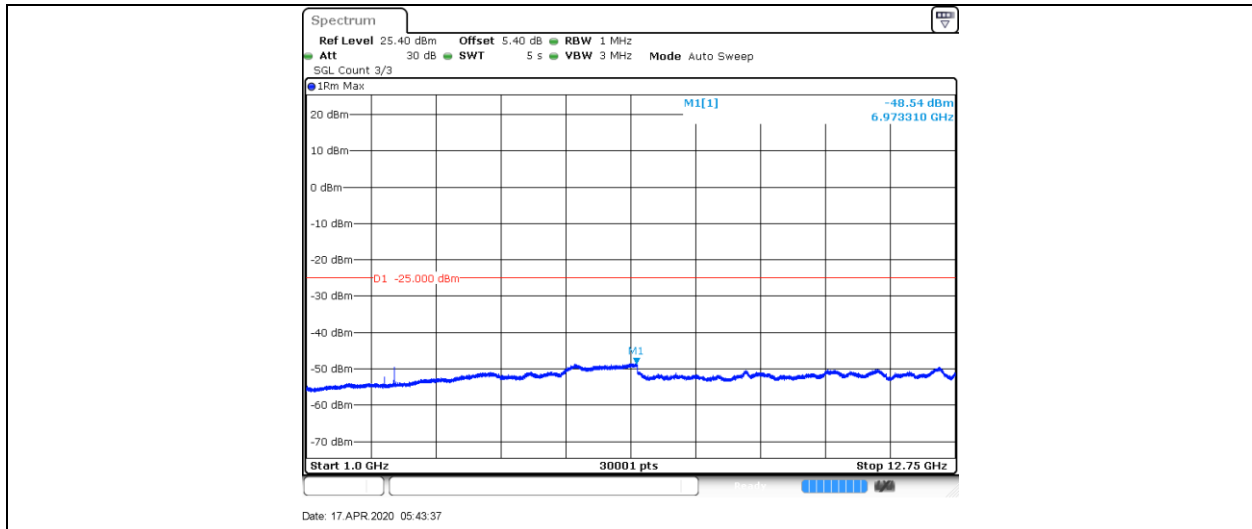


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_100RB#0+100RB#0\_30\_1000

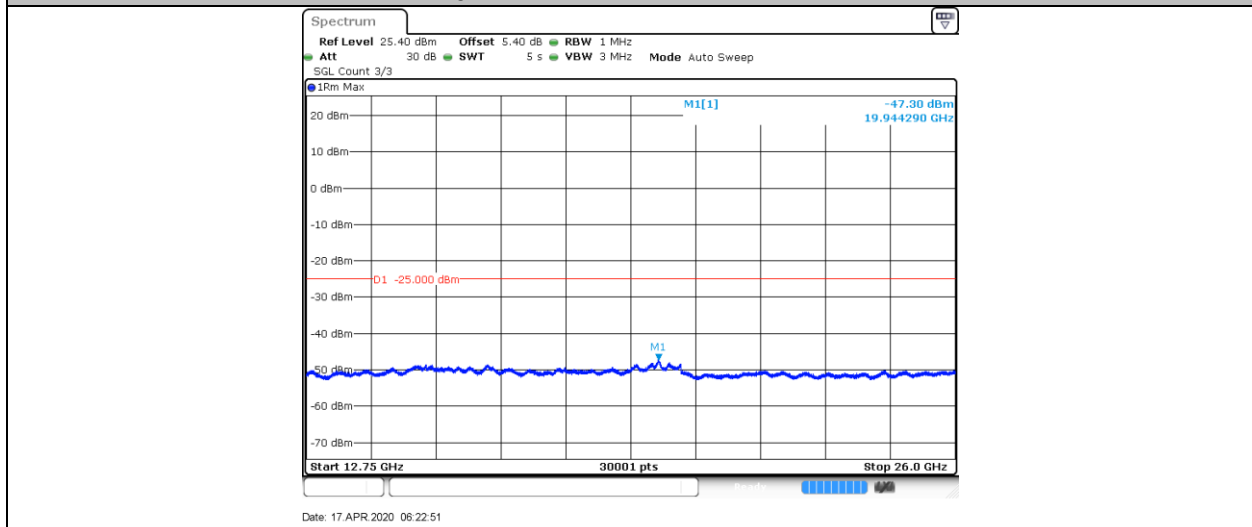


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_100RB#0+100RB#0\_1000\_12750



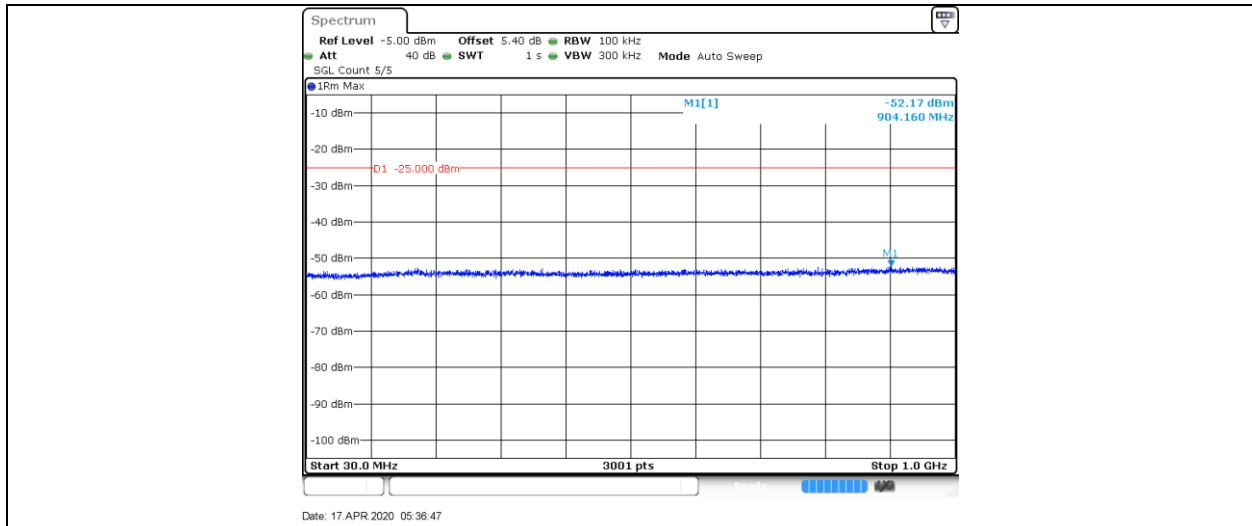


CA\_38C 20MHz+20MHz\_QPSK\_37901+38099\_100RB#0+100RB#0\_12750\_26000

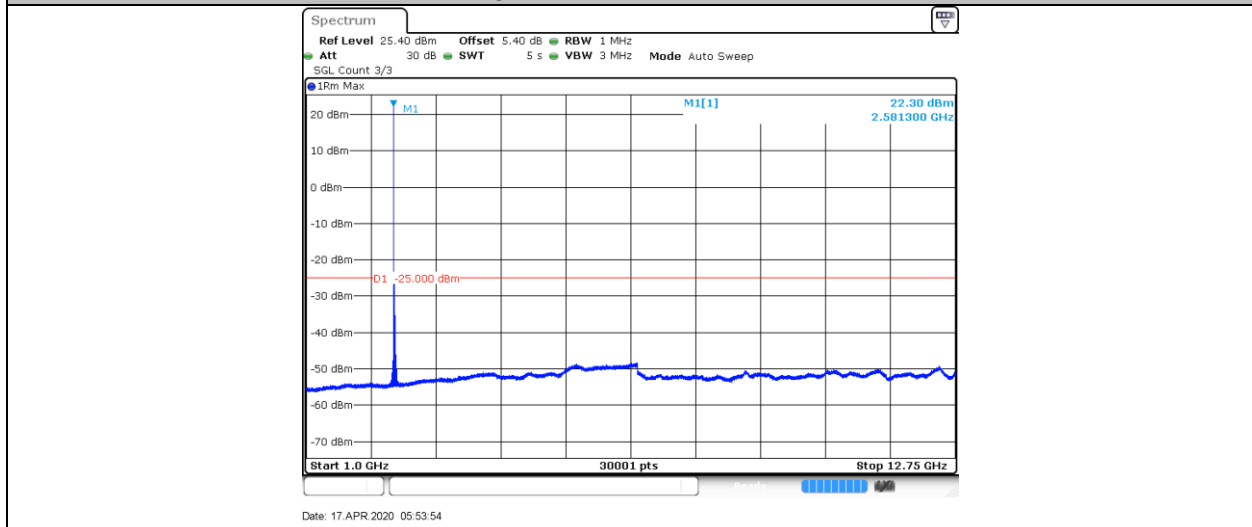


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_1RB#0+0RB#0\_30\_1000



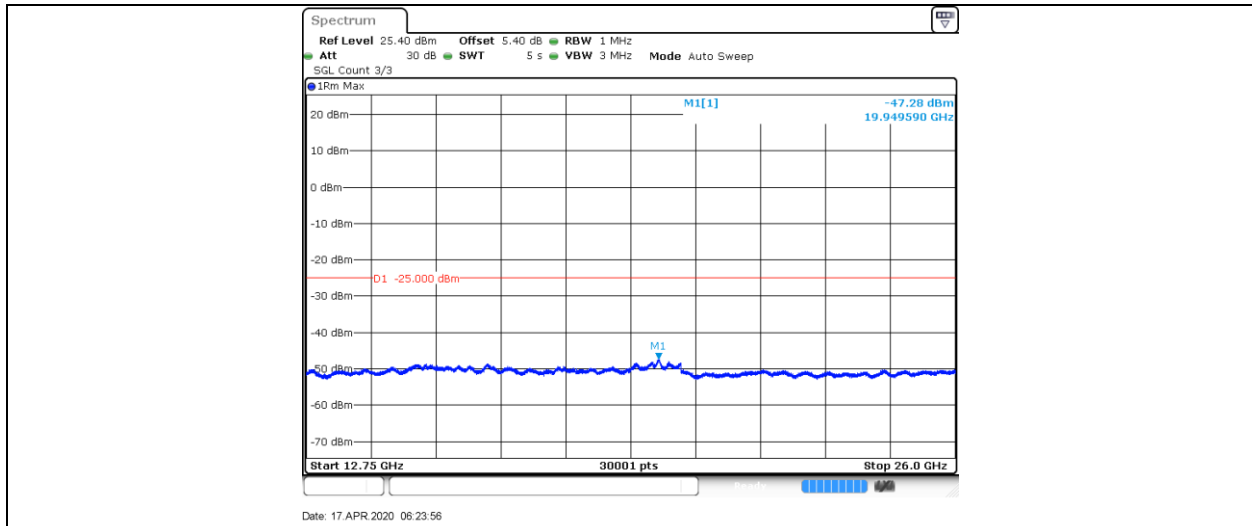


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_1RB#0+ORB#0\_1000\_12750

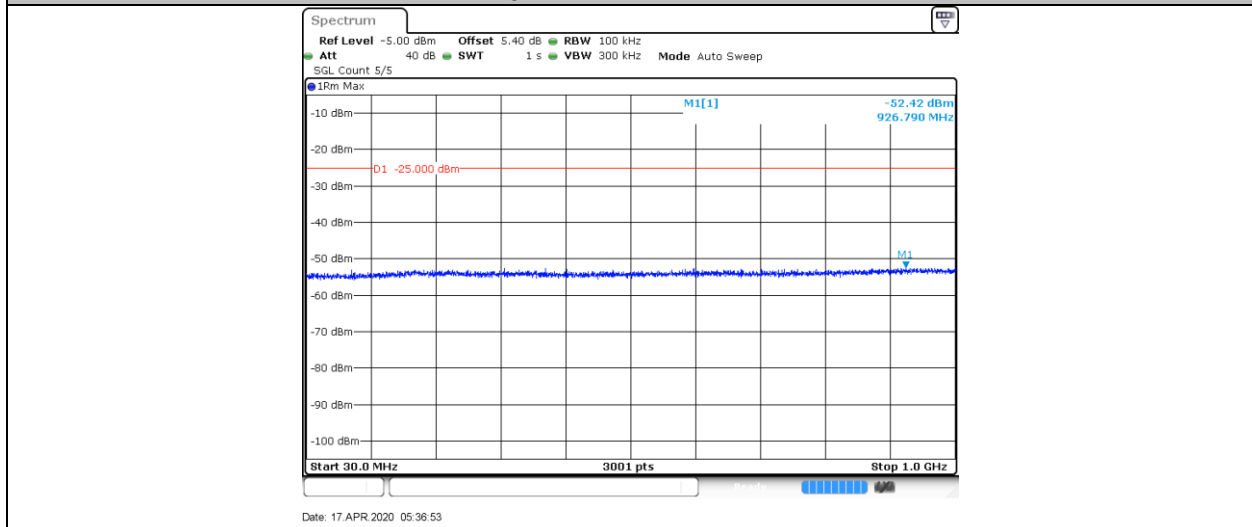


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_1RB#0+ORB#0\_12750\_26000



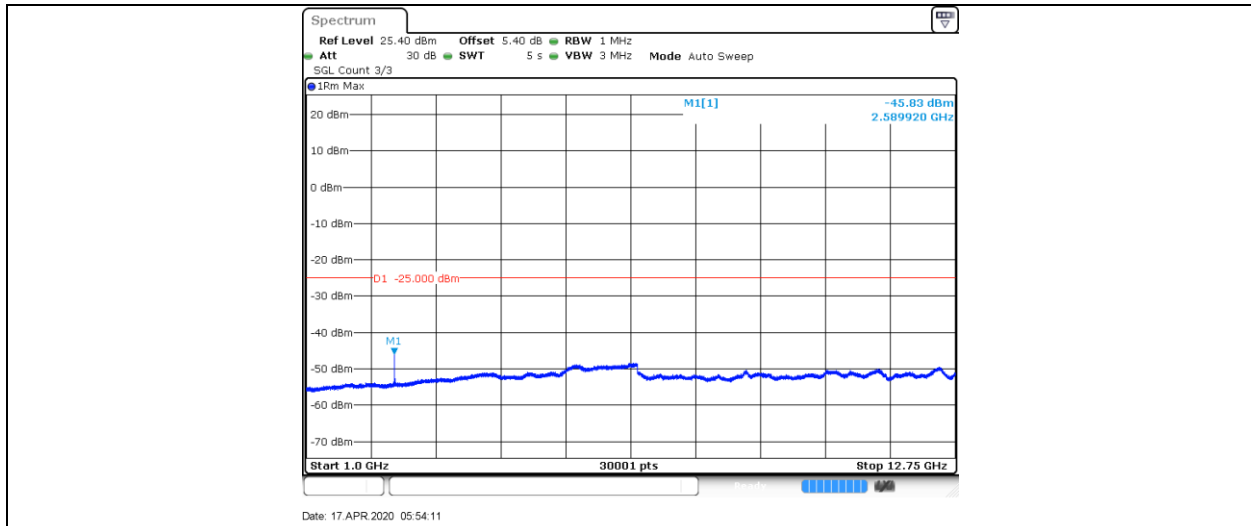


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_ORB#0+1RB#99\_30\_1000

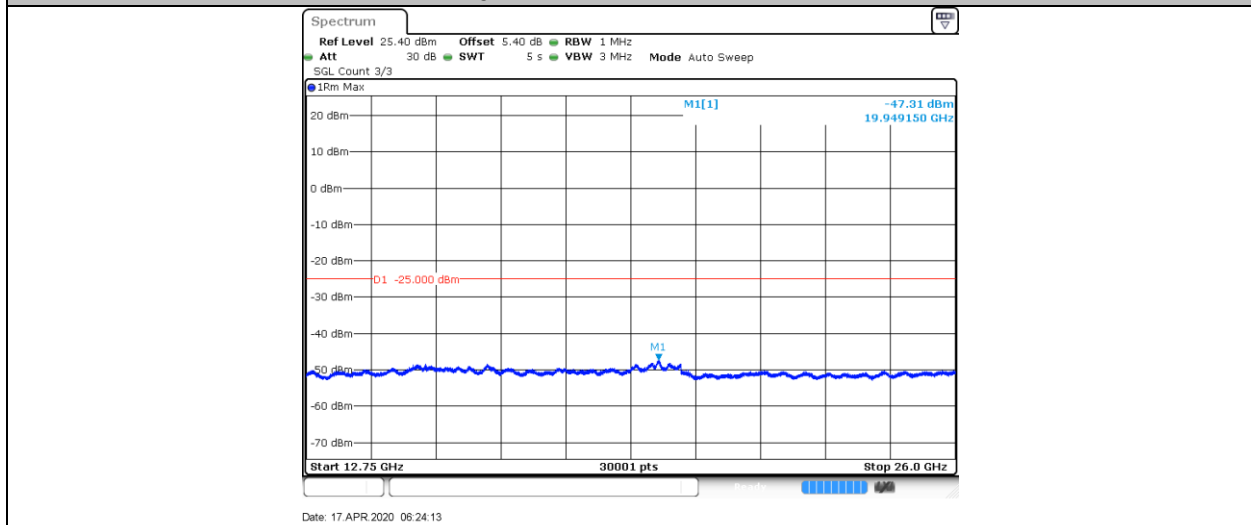


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_ORB#0+1RB#99\_1000\_12750



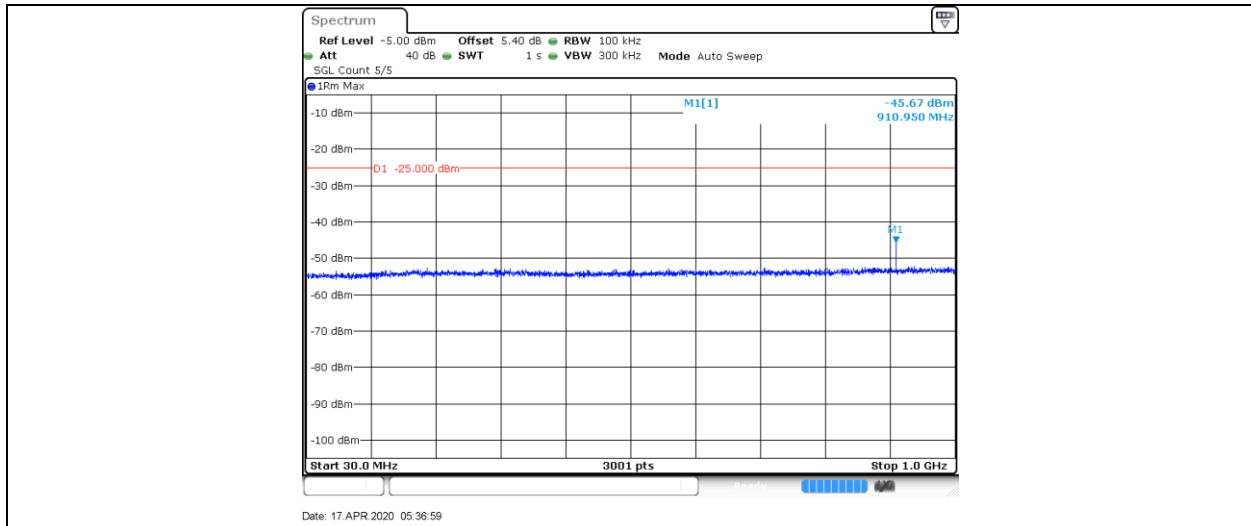


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_ORB#0+1RB#99\_12750\_26000

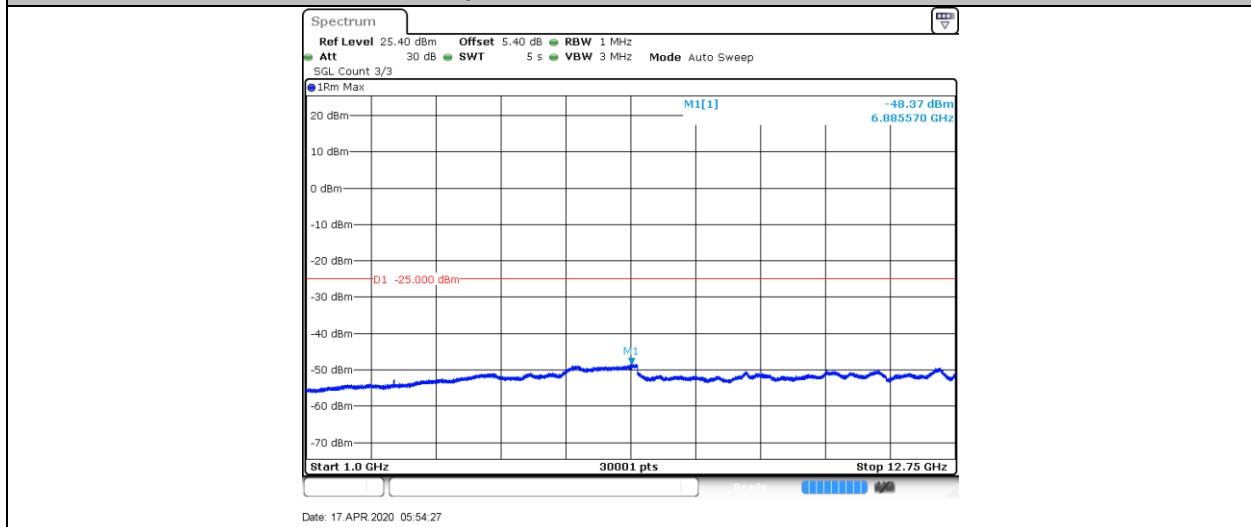


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_100RB#0+100RB#0\_30\_1000



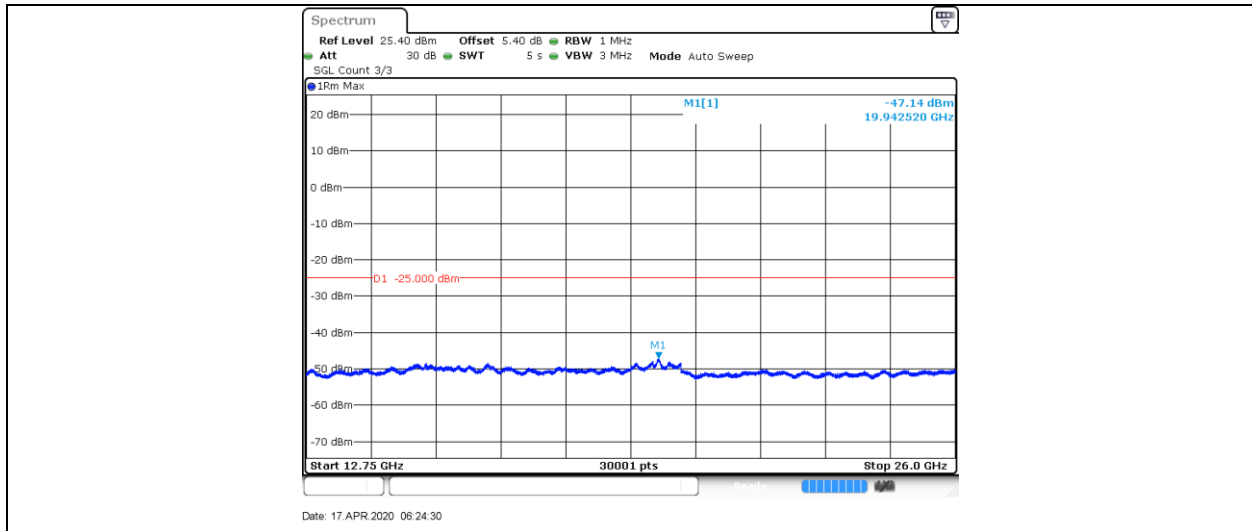


CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_100RB#0+100RB#0\_1000\_12750



CA\_38C 20MHz+20MHz\_QPSK\_37952+38150\_100RB#0+100RB#0\_12750\_26000





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## 7 Field Strength of Spurious Radiation

### 7.1 For LTE UL CA

#### 7.1.1 Test Band = LTE Band CA\_38C (Down Ant)

##### 7.1.1.1 Test Mode =LTE/QPSK

##### 7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
54.5659	-70.90	-25.00	45.90	Vertical
110.3286	-63.58	-25.00	38.58	Vertical
464.8031	-65.85	-25.00	40.85	Vertical
1790.6112	-43.65	-25.00	18.65	Vertical
7439.7221	-55.43	-25.00	30.43	Vertical
17990.0801	-39.94	-25.00	14.94	Vertical
45.3491	-62.23	-25.00	37.23	Horizontal
238.9362	-67.18	-25.00	42.18	Horizontal
658.3913	-62.51	-25.00	37.51	Horizontal
1800.6562	-42.93	-25.00	17.93	Horizontal
9323.3167	-51.67	-25.00	26.67	Horizontal
16371.7067	-43.49	-25.00	18.49	Horizontal

##### 7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
114.0204	-63.68	-25.00	38.68	Vertical
283.0042	-68.10	-25.00	43.10	Vertical
677.3860	-62.93	-25.00	37.93	Vertical
2088.3538	-41.49	-25.00	16.49	Vertical
8026.0960	-54.42	-25.00	29.42	Vertical
17991.7403	-39.40	-25.00	14.40	Vertical
44.6944	-63.89	-25.00	38.89	Horizontal
232.3444	-68.38	-25.00	43.38	Horizontal
870.3369	-59.86	-25.00	34.86	Horizontal
1786.3707	-43.40	-25.00	18.40	Horizontal
7441.5501	-55.48	-25.00	30.48	Horizontal
16392.7788	-43.52	-25.00	18.52	Horizontal



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**7.1.1.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.4773	-68.63	-25.00	43.63	Vertical
108.1518	-64.17	-25.00	39.17	Vertical
393.8207	-66.82	-25.00	41.82	Vertical
1788.8525	-43.46	-25.00	18.46	Vertical
7955.7115	-55.46	-25.00	30.46	Vertical
17997.8789	-39.44	-25.00	14.44	Vertical
47.0633	-65.17	-25.00	40.17	Horizontal
234.9408	-67.67	-25.00	42.67	Horizontal
639.7400	-62.78	-25.00	37.78	Horizontal
1803.9845	-42.97	-25.00	17.97	Horizontal
9339.9307	-52.02	-25.00	27.02	Horizontal
16392.9931	-43.40	-25.00	18.40	Horizontal

**7.1.2 Test Band = LTE Band CA\_38C (Up Ant)**

**7.1.2.1 Test Mode =LTE/QPSK**

**7.1.2.1.1 Test Channel = LCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
54.5904	-70.60	-25.00	45.60	Vertical
110.4612	-63.30	-25.00	38.30	Vertical
464.7989	-65.61	-25.00	40.61	Vertical
1790.5547	-43.67	-25.00	18.67	Vertical
7440.1875	-55.23	-25.00	30.23	Vertical
17990.4081	-40.08	-25.00	15.08	Vertical
45.7414	-62.12	-25.00	37.12	Horizontal
239.5071	-67.04	-25.00	42.04	Horizontal
659.1094	-62.14	-25.00	37.14	Horizontal
1801.0190	-42.51	-25.00	17.51	Horizontal
9323.6591	-51.18	-25.00	26.18	Horizontal
16371.7617	-43.10	-25.00	18.10	Horizontal



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**7.1.2.1.2 Test Channel = MCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
114.5874	-63.45	-25.00	38.45	Vertical
283.1954	-68.43	-25.00	43.43	Vertical
677.5008	-62.64	-25.00	37.64	Vertical
2088.7310	-41.15	-25.00	16.15	Vertical
8026.3303	-54.17	-25.00	29.17	Vertical
17991.9132	-39.27	-25.00	14.27	Vertical
44.8614	-63.43	-25.00	38.43	Horizontal
232.7351	-67.55	-25.00	42.55	Horizontal
870.6141	-59.42	-25.00	34.42	Horizontal
1786.9273	-43.02	-25.00	18.02	Horizontal
7441.6175	-55.35	-25.00	30.35	Horizontal
16392.6654	-43.11	-25.00	18.11	Horizontal

**7.1.2.1.3 Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.8855	-68.44	-25.00	43.44	Vertical
108.6289	-64.16	-25.00	39.16	Vertical
394.4028	-65.99	-25.00	40.99	Vertical
1788.8757	-43.29	-25.00	18.29	Vertical
7956.0511	-55.22	-25.00	30.22	Vertical
17998.1054	-39.34	-25.00	14.34	Vertical
47.1665	-65.11	-25.00	40.11	Horizontal
235.1035	-67.14	-25.00	42.14	Horizontal
640.0460	-62.11	-25.00	37.11	Horizontal
1803.8821	-42.77	-25.00	17.77	Horizontal
9340.0969	-51.96	-25.00	26.96	Horizontal
16393.3044	-42.95	-25.00	17.95	Horizontal

**Remark:**

- 1 According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2 The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data displayed 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_38C	QPSK	37850+38048	100RB#0/100RB#0	TN	NV	11.06	0.004286	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	TN	NV	-2.18	-0.000845	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	TN	NV	-11.58	-0.004470	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	TN	NV	-2.36	-0.000916	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	TN	NV	5.25	0.002029	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	TN	NV	-4.86	-0.001875	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	TN	NV	1.24	0.000482	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	TN	NV	-11.32	-0.004378	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	TN	NV	-12.68	-0.004894	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_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	-30	13.44	0.005208	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	-20	14.23	0.005514	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	-10	-5.94	-0.002302	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	0	9.80	0.003798	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	10	10.96	0.004247	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	20	5.78	0.002239	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	30	6.03	0.002337	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	40	-4.46	-0.001728	PASS
CA_38C	QPSK	37850+38048	100RB#0/100RB#0	NV	50	-8.02	-0.003107	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	-30	-11.12	-0.004302	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	-20	6.05	0.002342	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	-10	2.34	0.000904	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	0	-0.89	-0.000344	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	10	14.45	0.005591	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	20	9.68	0.003746	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	30	-3.04	-0.001176	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	40	-4.08	-0.001577	PASS
CA_38C	QPSK	37901+38099	100RB#0/100RB#0	NV	50	1.50	0.000581	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	-30	-0.15	-0.000057	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	-20	9.74	0.003760	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	-10	-9.59	-0.003701	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	0	8.54	0.003297	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	10	-12.31	-0.004754	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	20	-5.99	-0.002314	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	30	-7.25	-0.002799	PASS



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CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	40	8.26	0.003188	PASS
CA_38C	QPSK	37952+38150	100RB#0/100RB#0	NV	50	-0.72	-0.000278	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	-30	-14.01	-0.005431	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	-20	-8.70	-0.003372	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	-10	-12.28	-0.004761	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	0	0.39	0.000152	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	10	-12.62	-0.004893	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	20	12.61	0.004889	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	30	6.81	0.002641	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	40	15.68	0.006079	PASS
CA_38C	16QAM	37850+38048	100RB#0/100RB#0	NV	50	7.77	0.003010	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	-30	8.23	0.003185	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	-20	7.44	0.002878	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	-10	-2.34	-0.000904	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	0	14.73	0.005697	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	10	11.74	0.004541	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	20	-11.97	-0.004630	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	30	14.29	0.005527	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	40	-12.29	-0.004756	PASS
CA_38C	16QAM	37901+38099	100RB#0/100RB#0	NV	50	13.92	0.005387	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	-30	7.96	0.003072	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	-20	-8.13	-0.003140	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	-10	-12.05	-0.004652	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	0	5.69	0.002198	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	10	-0.01	-0.000004	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	20	1.61	0.000623	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	30	10.70	0.004131	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	40	0.57	0.000218	PASS
CA_38C	16QAM	37952+38150	100RB#0/100RB#0	NV	50	-13.04	-0.005034	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	-30	8.50	0.003296	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	-20	-0.18	-0.000069	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	-10	0.98	0.000381	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	0	-8.64	-0.003348	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	10	3.91	0.001516	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	20	-14.60	-0.005658	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	30	-7.66	-0.002967	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	40	10.11	0.003917	PASS
CA_38C	64QAM	37850+38048	100RB#0/100RB#0	NV	50	12.31	0.004770	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	-30	-9.09	-0.003518	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	-20	3.35	0.001296	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	-10	-10.97	-0.004244	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	0	-1.67	-0.000645	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	10	6.73	0.002604	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	20	-11.95	-0.004621	PASS



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CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	30	13.63	0.005271	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	40	0.59	0.000229	PASS
CA_38C	64QAM	37901+38099	100RB#0/100RB#0	NV	50	8.48	0.003279	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	-30	7.04	0.002719	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	-20	-4.67	-0.001801	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	-10	12.49	0.004822	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	0	-4.93	-0.001903	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	10	5.91	0.002281	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	20	-3.48	-0.001342	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	30	-2.51	-0.000969	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	40	-14.74	-0.005690	PASS
CA_38C	64QAM	37952+38150	100RB#0/100RB#0	NV	50	2.96	0.001143	PASS

The End



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