



# Appendix for test report



# 1Appendix\_A: Effective (Isotropic) Radiated Power Output Data

## Part I - Test Results

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	PCC Test RB	SCC Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
CA_7C	LTE/TM 1	15MHz+15MHz	LCH	1 # 0	0 # 0	23.51	25.14	33	PASS
				partial RBs # 0	0 # 0	23.59	25.22	33	PASS
				full RBs # 0	0 # 0	22.57	24.20	33	PASS
				full RBs # 0	full RBs # 0	19.62	21.25	33	PASS
			MCH	1 # 0	0 # 0	23.36	24.99	33	PASS
				partial RBs # 0	0 # 0	23.41	25.04	33	PASS
				full RBs # 0	0 # 0	22.23	23.86	33	PASS
				full RBs # 0	full RBs # 0	19.40	21.03	33	PASS
			HCH	1 # 0	0 # 0	23.24	24.87	33	PASS
				partial RBs # 0	0 # 0	23.41	25.04	33	PASS
				full RBs # 0	0 # 0	22.32	23.95	33	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	PCC Test RB	SCC Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				0					
				full RBs # 0	full RBs # 0	19.75	21.38	33	PASS
		20MHz+20MHz	LCH	1 # 0	0 # 0	23.18	24.81	33	PASS
				partial RBs # 0	0 # 0	23.44	25.07	33	PASS
				full RBs # 0	0 # 0	22.23	23.86	33	PASS
				full RBs # 0	full RBs # 0	19.48	21.11	33	PASS
			MCH	1 # 0	0 # 0	23.09	24.72	33	PASS
				partial RBs # 0	0 # 0	23.41	25.04	33	PASS
				full RBs # 0	0 # 0	22.21	23.84	33	PASS
				full RBs # 0	full RBs # 0	19.47	21.10	33	PASS
			HCH	1 # 0	0 # 0	22.91	24.54	33	PASS
				partial RBs # 0	0 # 0	23.08	24.71	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	PCC Test RB	SCC Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				full RBs # 0	0 # 0	22.21	23.84	33	PASS
				full RBs # 0	full RBs # 0	19.74	21.37	33	PASS
	LTE/TM 2	15MHz+15MHz	LCH	1 # 0	0 # 0	23.18	24.81	33	PASS
				partial RBs # 0	0 # 0	22.63	24.26	33	PASS
				full RBs # 0	0 # 0	21.47	23.10	33	PASS
				full RBs # 0	full RBs # 0	18.63	20.26	33	PASS
				1 # 0	0 # 0	22.87	24.50	33	PASS
				partial RBs # 0	0 # 0	22.45	24.08	33	PASS
				full RBs # 0	0 # 0	21.16	22.79	33	PASS
				full RBs # 0	full RBs # 0	18.71	20.34	33	PASS
			HCH	1 # 0	0 # 0	22.78	24.41	33	PASS
				partial RBs # 0	0 # 0	22.41	24.04	33	PASS

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	PCC Test RB	SCC Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				full RBs # 0	0 # 0	21.30	22.93	33	PASS
				full RBs # 0	full RBs # 0	18.75	20.38	33	PASS
		20MHz+20MHz	LCH	1 # 0	0 # 0	22.93	24.56	33	PASS
				partial RBs # 0	0 # 0	22.47	24.10	33	PASS
				full RBs # 0	0 # 0	21.17	22.80	33	PASS
				full RBs # 0	full RBs # 0	18.43	20.06	33	PASS
			MCH	1 # 0	0 # 0	22.60	24.23	33	PASS
				partial RBs # 0	0 # 0	22.39	24.02	33	PASS
				full RBs # 0	0 # 0	20.97	22.60	33	PASS
				full RBs # 0	full RBs # 0	18.40	20.03	33	PASS
			HCH	1 # 0	0 # 0	22.57	24.20	33	PASS
				partial RBs # 0	0 # 0	22.16	23.79	33	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	PCC Test RB	SCC Test RB	Measured[dBm]	EIRP [dBm]	Limit [dBm]	Verdict
				full RBs # 0	0 # 0	21.08	22.71	33	PASS
				full RBs # 0	full RBs # 0	18.69	20.32	33	PASS

Note1:

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

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

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

b, SGP = Signal Generator Level

Note2:

$$\text{SET Span} = 1.5 * \text{OBW}$$

$$\text{SET RBW} = 1\% \text{ of the OBW, not to exceed } 1\text{MHz}$$

$$\text{SET VBW} \geq 3 * \text{RBW}$$

SET Sweep time = auto - couple.

Detector: RMS



## 2Appendix\_B: Peak-to-Average Ratio

### Part I - Test Results

Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel	PCC Test RB	SCC Test RB	Measured[dBm]	Limit [dBm]	Verdict
CA_7C	LTE/TM 1	15MHz+15 MHz	LCH	1 # 0	0 # 0	3.84	13	PASS
				partial RBs # 0	0 # 0	3.97	13	PASS
				full RBs # 0	0 # 0	5.59	13	PASS
				full RBs # 0	full RBs # 0	6.52	13	PASS
			MCH	1 # 0	0 # 0	3.91	13	PASS
				partial RBs # 0	0 # 0	4.07	13	PASS
				full RBs # 0	0 # 0	5.93	13	PASS
				full RBs # 0	full RBs # 0	6.66	13	PASS
			HCH	1 # 0	0 # 0	4.37	13	PASS
				partial RBs # 0	0 # 0	4.44	13	PASS
				full RBs # 0	0 # 0	5.89	13	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel I	PCC Test RB	SCC Test RB	Measured[dBm]	Limit [dBm]	Verdict
				full RBs # 0	full RBs # 0	6.69	13	PASS
		20MHz+20 MHz	LCH	1 # 0	0 # 0	3.99	13	PASS
				partial RBs # 0	0 # 0	3.89	13	PASS
				full RBs # 0	0 # 0	5.55	13	PASS
				full RBs # 0	full RBs # 0	6.47	13	PASS
			MCH	1 # 0	0 # 0	3.95	13	PASS
				partial RBs # 0	0 # 0	3.99	13	PASS
				full RBs # 0	0 # 0	5.81	13	PASS
				full RBs # 0	full RBs # 0	6.50	13	PASS
			HCH	1 # 0	0 # 0	4.28	13	PASS
				partial RBs # 0	0 # 0	4.53	13	PASS
				full RBs # 0	0 # 0	5.77	13	PASS
				full RBs # 0	full RBs # 0	6.47	13	PASS





Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel I	PCC Test RB	SCC Test RB	Measured[dBm]	Limit [dBm]	Verdict
	LTE/TM 2	15MHz+15 MHz	LCH	1 # 0	0 # 0	4.33	13	PASS
				partial RBs # 0	0 # 0	4.87	13	PASS
				full RBs # 0	0 # 0	6.39	13	PASS
				full RBs # 0	full RBs # 0	7.20	13	PASS
			MCH	1 # 0	0 # 0	4.29	13	PASS
				partial RBs # 0	0 # 0	4.94	13	PASS
				full RBs # 0	0 # 0	6.77	13	PASS
				full RBs # 0	full RBs # 0	7.37	13	PASS
			HCH	1 # 0	0 # 0	4.64	13	PASS
				partial RBs # 0	0 # 0	5.33	13	PASS
				full RBs # 0	0 # 0	6.52	13	PASS
				full RBs # 0	full RBs # 0	7.23	13	PASS
		20MHz+20	LCH	1 # 0	0 # 0	4.47	13	PASS



Test Band(LTE)	Test Mode	Test Bandwidth	Test Channel I	PCC Test RB	SCC Test RB	Measured[dBm]	Limit [dBm]	Verdict
		MHz		partial RBs # 0	0 # 0	4.85	13	PASS
				full RBs # 0	0 # 0	6.32	13	PASS
				full RBs # 0	full RBs # 0	7.05	13	PASS
			MCH	1 # 0	0 # 0	4.41	13	PASS
				partial RBs # 0	0 # 0	4.88	13	PASS
				full RBs # 0	0 # 0	6.45	13	PASS
				full RBs # 0	full RBs # 0	7.30	13	PASS
			HCH	1 # 0	0 # 0	4.78	13	PASS
				partial RBs # 0	0 # 0	5.34	13	PASS
				full RBs # 0	0 # 0	6.65	13	PASS
				full RBs # 0	full RBs # 0	7.49	13	PASS

## 3Appendix\_C: Modulation Characteristics

### Part I - Test Plots

#### 3.1 For LTE

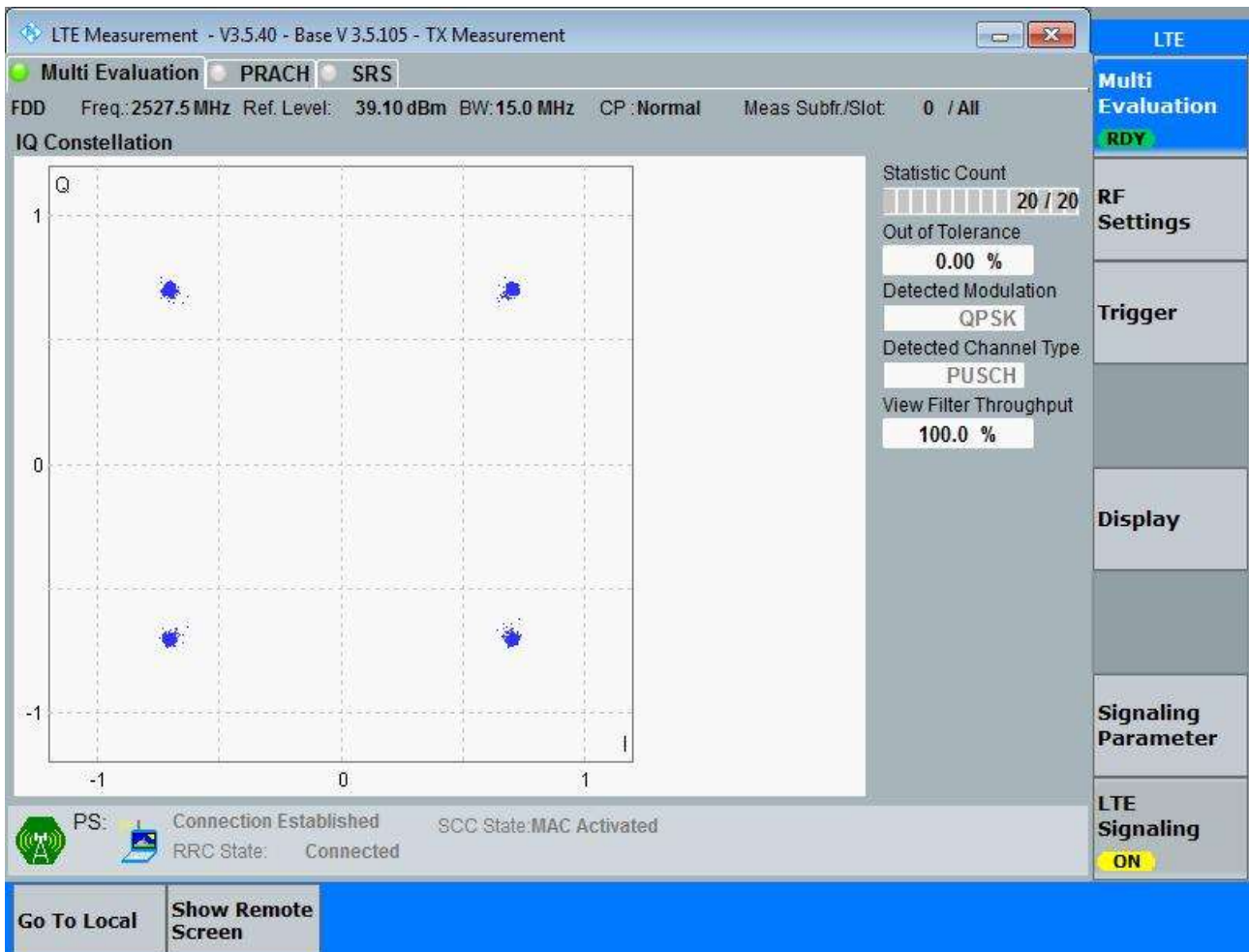
##### 3.1.1 Test Band = CA\_7C

##### 3.1.1.1 Test Mode = LTE/TM1

##### 3.1.1.1.1 Test Bandwidth = 15MHz+15MHz

##### 3.1.1.1.1.1 Test Channel = MCH

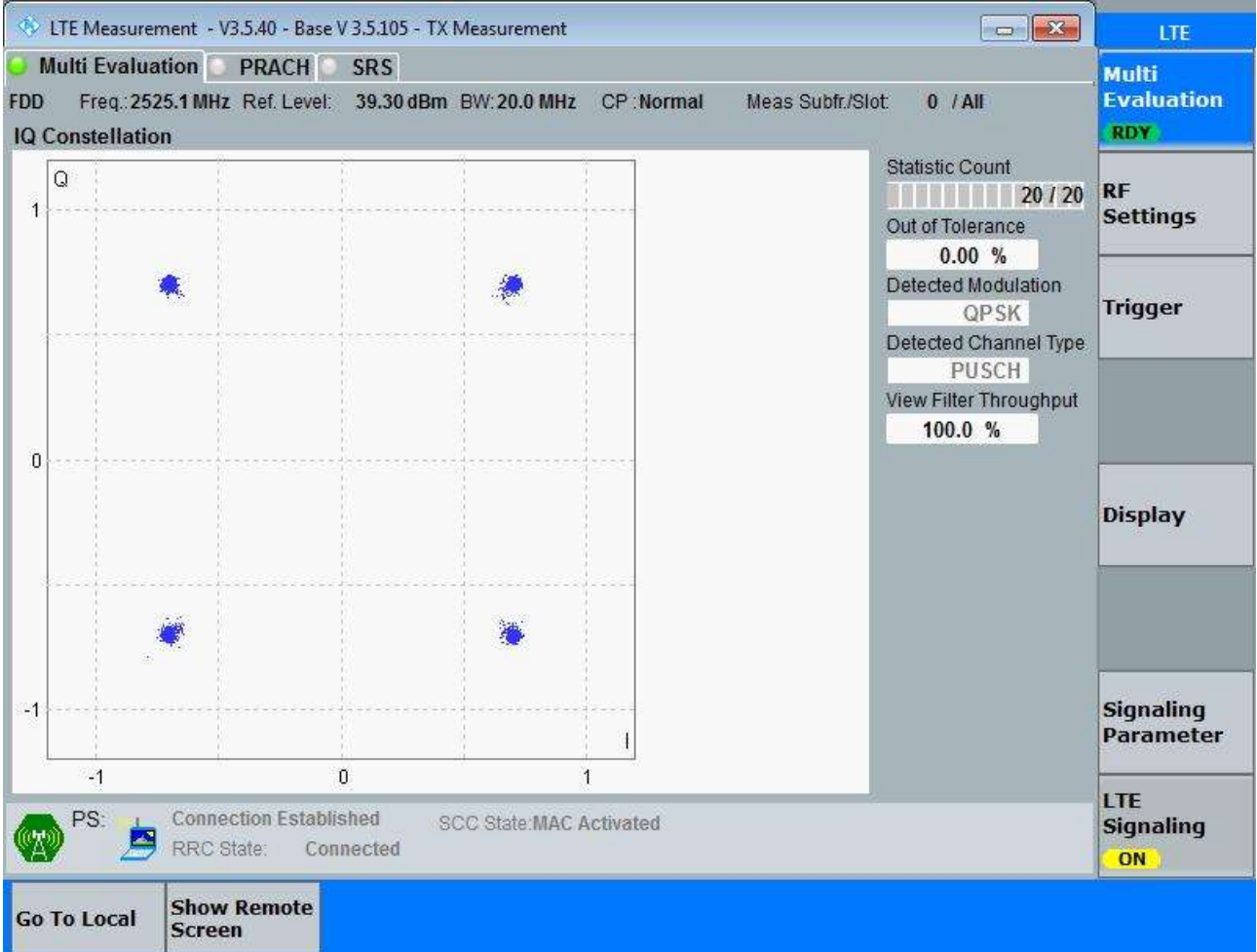
##### 3.1.1.1.1.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



### 3.1.1.1.2 Test Bandwidth = 20MHz+20MHz

#### 3.1.1.1.2.1 Test Channel = MCH

##### 3.1.1.1.2.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



The screenshot displays the LTE Measurement software interface for a TX Measurement. The main window shows an IQ Constellation plot with four distinct clusters of blue dots, indicating QPSK modulation. The axes range from -1 to 1. To the right of the plot, a statistics panel shows:
 

- Statistic Count: 20 / 20
- Out of Tolerance: 0.00 %
- Detected Modulation: QPSK
- Detected Channel Type: PUSCH
- View Filter Throughput: 100.0 %

 The bottom status bar indicates:
 

- PS: Connection Established
- RRC State: Connected
- SCC State: MAC Activated
- LTE Signaling: ON

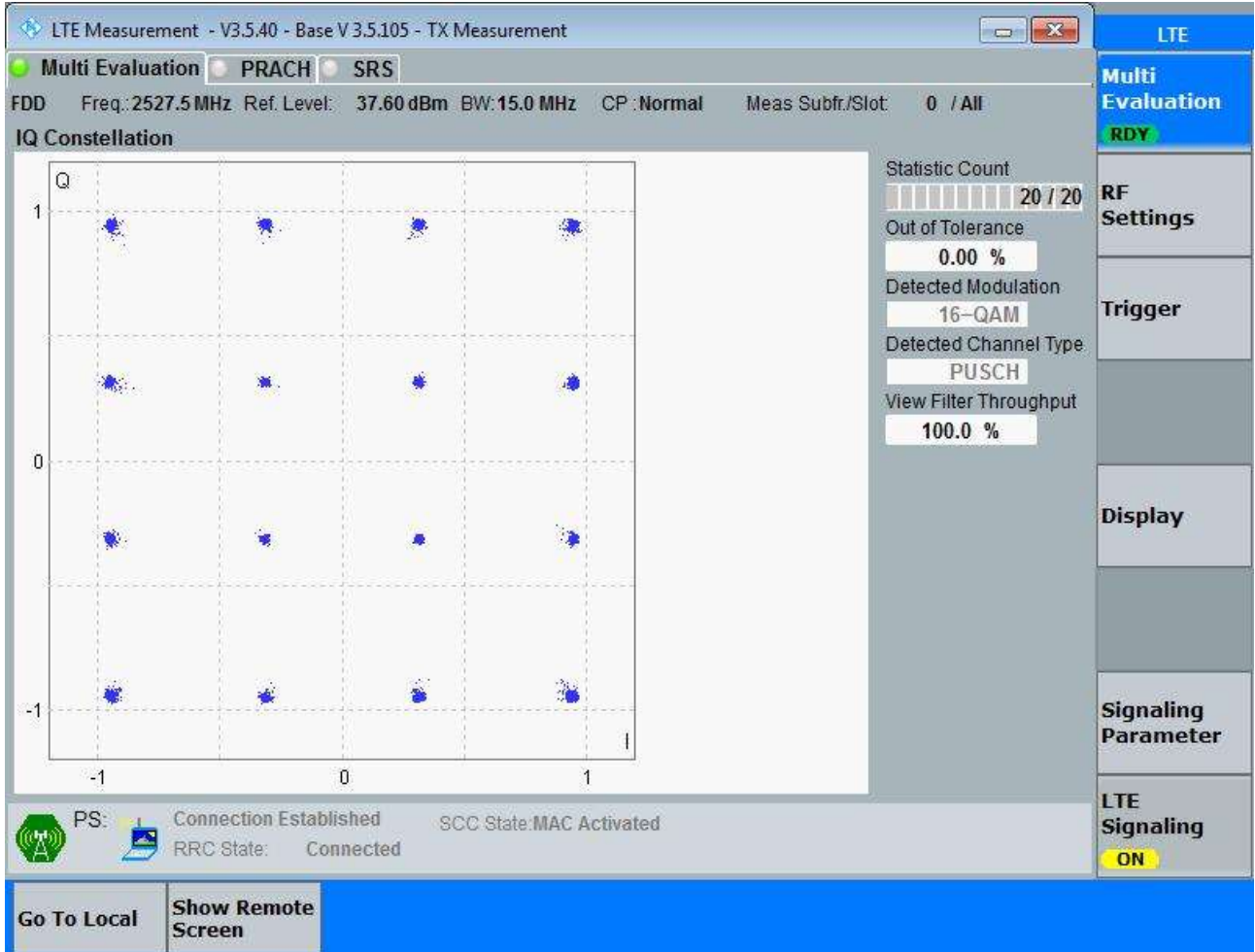
 The interface includes a sidebar on the right with buttons for Multi Evaluation, RF Settings, Trigger, Display, Signaling Parameter, and LTE Signaling. At the bottom left, there are buttons for 'Go To Local' and 'Show Remote Screen'.

### 3.1.1.2 Test Mode = LTE/TM2

#### 3.1.1.2.1 Test Bandwidth = 15MHz+15MHz

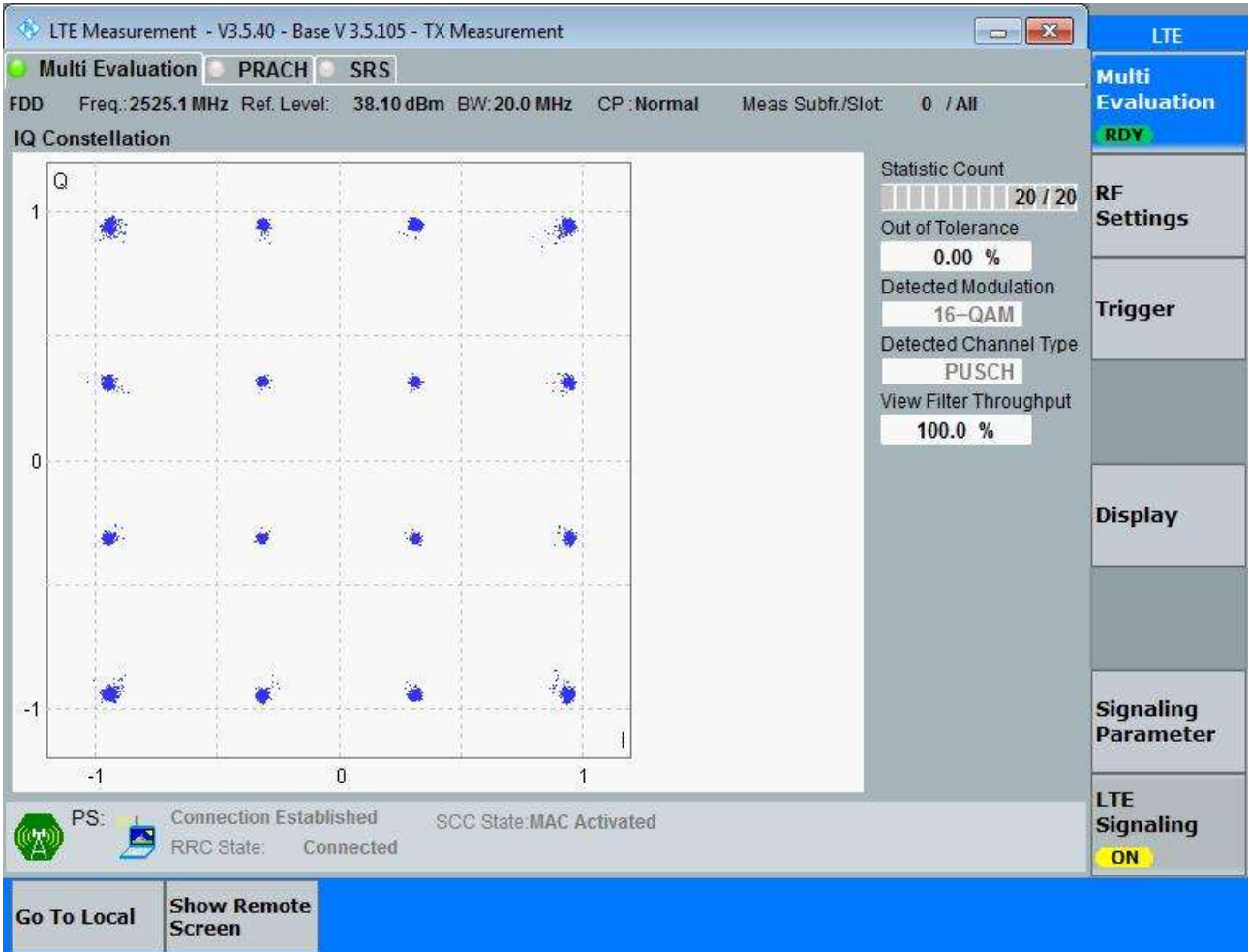
##### 3.1.1.2.1.1 Test Channel = MCH

###### 3.1.1.2.1.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



### 3.1.1.2.2 Test Bandwidth = 20MHz+20MHz

#### 3.1.1.2.2.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



The screenshot displays the LTE Measurement software interface. The main window is titled "LTE Measurement - V3.5.40 - Base V 3.5.105 - TX Measurement". It features a "Multi Evaluation" tab with sub-tabs for "PRACH" and "SRS". The interface shows the following parameters and status:

- Frequency and Power:** FDD, Freq.: 2525.1 MHz, Ref. Level: 38.10 dBm, BW: 20.0 MHz, CP: Normal, Meas Subfr./Slot: 0 / All
- IQ Constellation Plot:** A scatter plot showing the IQ constellation with axes ranging from -1 to 1. The plot displays a grid of points, indicating a 16-QAM modulation scheme.
- Statistic Count:** 20 / 20
- Out of Tolerance:** 0.00 %
- Detected Modulation:** 16-QAM
- Detected Channel Type:** PUSCH
- View Filter Throughput:** 100.0 %
- Connection Status:** PS: Connection Established, RRC State: Connected, SCC State: MAC Activated
- Buttons:** "Go To Local" and "Show Remote Screen" are visible at the bottom left.
- Right Panel:** A vertical sidebar on the right contains several sections: "LTE", "Multi Evaluation" (with a green "RDY" indicator), "RF Settings", "Trigger", "Display", "Signaling Parameter", and "LTE Signaling" (with a yellow "ON" indicator).

## 4Appendix\_D: Bandwidth

### Part I - Test Results

Test Band(LTE)	Test Mode	Test Band width	Test Channel	PCC Test RB	SCC Test RB	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
CA_7C	LTE/TM1	15MHz +15MHz	LCH	full RBs # 0	full RBs # 0	28.98	31.28	PASS
			MCH	full RBs # 0	full RBs # 0	28.99	31.20	PASS
			HCH	full RBs # 0	full RBs # 0	28.99	31.29	PASS
		20MHz +20MHz	LCH	full RBs # 0	full RBs # 0	38.48	41.55	PASS
			MCH	full RBs # 0	full RBs # 0	38.44	41.44	PASS
			HCH	full RBs # 0	full RBs # 0	38.43	41.35	PASS
	LTE/TM2	15MHz +15MHz	LCH	full RBs # 0	full RBs # 0	28.92	31.24	PASS
			MCH	full RBs # 0	full RBs # 0	29.02	31.21	PASS
			HCH	full RBs # 0	full RBs # 0	28.96	31.18	PASS
		20MHz +20MHz	LCH	full RBs # 0	full RBs # 0	38.40	41.20	PASS



Test Band(LTE)	Test Mode	Test Band width	Test Channel	PCC Test RB	SCC Test RB	Occupied Bandwidth [MHz]	Emission Bandwidth [MHz]	Verdict
		Hz	MCH	full RBs # 0	full RBs # 0	38.45	41.55	PASS
			HCH	full RBs # 0	full RBs # 0	38.36	41.28	PASS



## Part II - Test Plots

### 4.1 For LTE

#### 4.1.1 Test Band = CA\_7C

##### 4.1.1.1 Test Mode = LTE/TM1

##### 4.1.1.1.1 Test Bandwidth = 15MHz+15MHz

##### 4.1.1.1.1.1 Test Channel = LCH

##### 4.1.1.1.1.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.1.2 Test Channel = MCH

4.1.1.1.1.2.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.1.3 Test Channel = HCH

4.1.1.1.1.3.1 PCC Test RB = full RBs & SCC Test RB = full RBs





4.1.1.1.2 Test Bandwidth = 20MHz+20MHz

4.1.1.1.2.1 Test Channel = LCH

4.1.1.1.2.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 PCC Test RB = full RBs & SCC Test RB = full RBs





4.1.1.1 Test Mode = LTE/TM2

4.1.1.1.1 Test Bandwidth = 15MHz+15MHz

4.1.1.1.1.1 Test Channel = LCH

4.1.1.1.1.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs





4.1.1.1.1.2 Test Channel = MCH

4.1.1.1.1.2.1 PCC Test RB = full RBs & SCC Test RB = full RBs





4.1.1.1.1.3 Test Channel = HCH

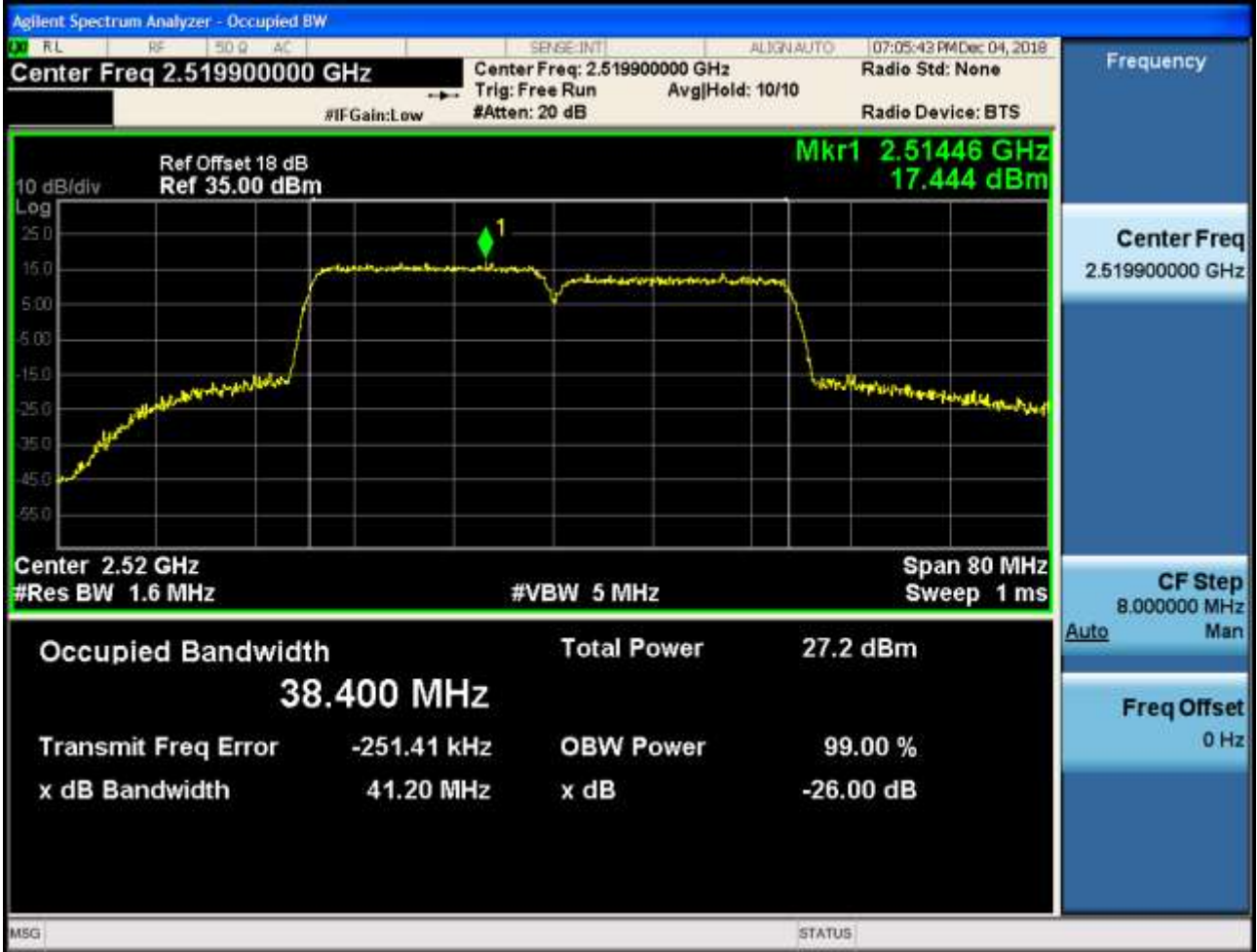
4.1.1.1.1.3.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.2 Test Bandwidth = 20MHz+20MHz

4.1.1.1.2.1 Test Channel = LCH

4.1.1.1.2.1.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.2.2 Test Channel = MCH

4.1.1.1.2.2.1 PCC Test RB = full RBs & SCC Test RB = full RBs



4.1.1.1.2.3 Test Channel = HCH

4.1.1.1.2.3.1 PCC Test RB = full RBs & SCC Test RB = full RBs



## 5Appendix\_E: Band Edges Compliance

### Part I - Test Plots

#### 5.1 For LTE

##### 5.1.1 Test Band = CA\_7C

##### 5.1.1.1 Test Mode = LTE/TM1

##### 5.1.1.1.1 Test Bandwidth = 15MHz+15MHz

##### 5.1.1.1.1.1 Test Channel = LCH

##### 5.1.1.1.1.1 PCC Test RB = 1 # 0 & SCC Test RB = 0









5.1.1.1.1.2 PCC Test RB = partial RBs #0 & SCC Test RB = 0











5.1.1.1.1.3 PCC Test RB = full RBs & SCC Test RB = 0









5.1.1.1.1.4 PCC Test RB = full RBs & SCC Test RB = full RBs









## 5.1.1.1.1.2 Test Channel = HCH

## 5.1.1.1.1.2.1 PCC Test RB = 0 &amp; SCC Test RB = 1 # max







### 5.1.1.1.2.2 PCC Test RB = 0 & SCC Test RB = partial RBs #max







5.1.1.1.2.3 PCC Test RB = 0 & SCC Test RB = full RBs









5.1.1.1.2.4 PCC Test RB = full RBs & SCC Test RB = full RBs







### 5.1.1.1.2 Test Bandwidth = 20MHz+20MHz

#### 5.1.1.1.2.1 Test Channel = LCH

##### 5.1.1.1.2.1.1 PCC Test RB = 1 # 0 & SCC Test RB = 0









5.1.1.1.2.1.2 PCC Test RB = partial RBs #0 & SCC Test RB = 0











5.1.1.1.2.1.3 PCC Test RB = full RBs & SCC Test RB = 0









5.1.1.1.2.1.4 PCC Test RB = full RBs & SCC Test RB = full RBs









### 5.1.1.1.2.2 Test Channel = HCH

#### 5.1.1.1.2.2.1 PCC Test RB = 0 & SCC Test RB = 1 # max







5.1.1.1.2.2.2 PCC Test RB = 0 & SCC Test RB = partial RBs #max







### 5.1.1.1.2.2.3 PCC Test RB = 0 & SCC Test RB = full RBs









5.1.1.1.2.2.4 PCC Test RB = full RBs & SCC Test RB = full RBs







5.1.1.2 Test Mode = LTE/TM2

5.1.1.2.1 Test Bandwidth = 15MHz+15MHz

5.1.1.2.1.1 Test Channel = LCH

5.1.1.2.1.1.1 PCC Test RB = 1 # 0 & SCC Test RB = 0









5.1.1.2.1.1.2 PCC Test RB = partial RBs #0 & SCC Test RB = 0











5.1.1.2.1.1.3 PCC Test RB = full RBs & SCC Test RB = 0









5.1.1.2.1.1.4 PCC Test RB = full RBs & SCC Test RB = full RBs





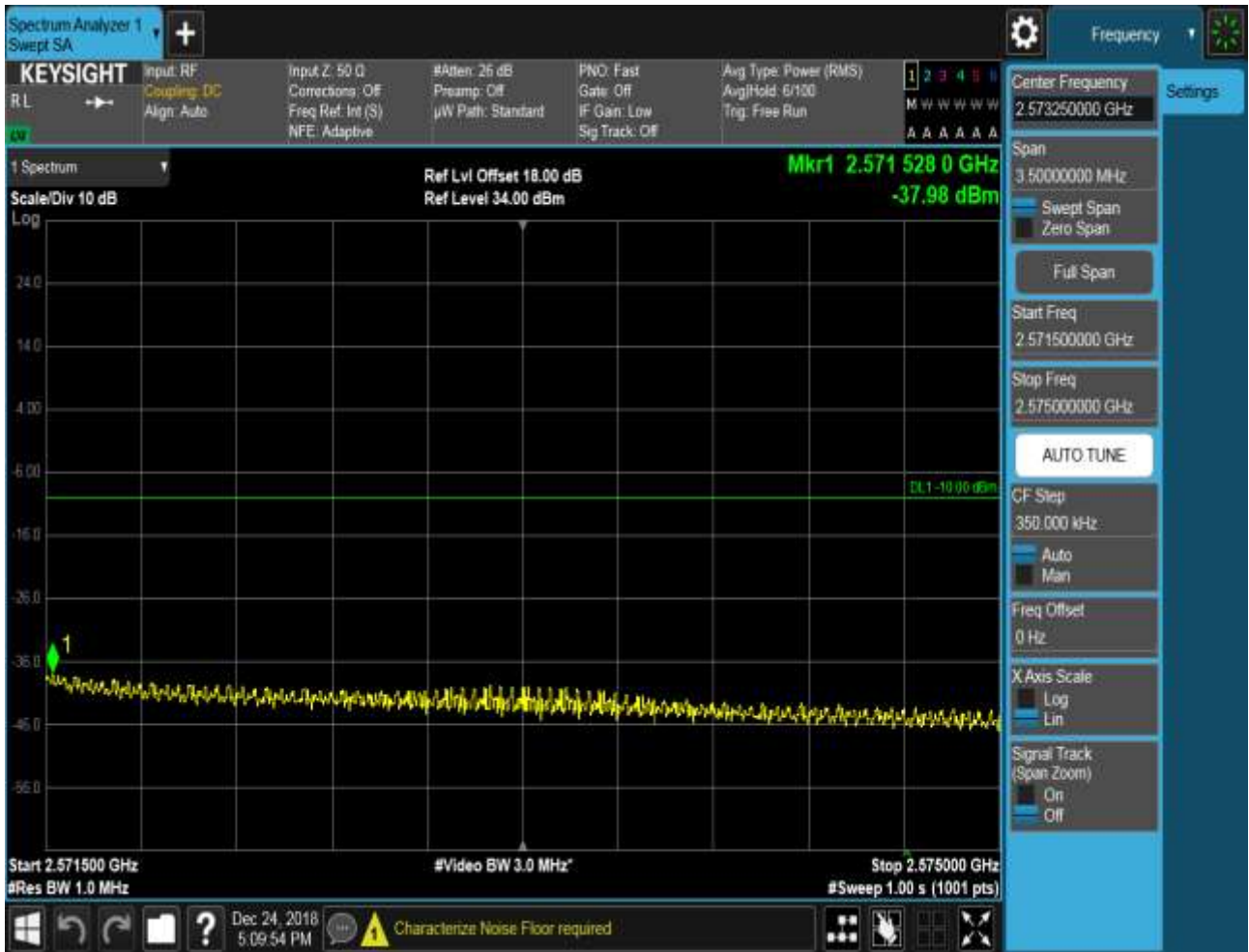




### 5.1.1.2.1.2 Test Channel = HCH

#### 5.1.1.2.1.2.1 PCC Test RB = 0 & SCC Test RB = 1 # max







5.1.1.2.1.2.2 PCC Test RB = 0 & SCC Test RB = partial RBs #max









5.1.1.2.1.2.3 PCC Test RB = 0 & SCC Test RB = full RBs









5.1.1.2.1.2.4 PCC Test RB = full RBs & SCC Test RB = full RBs





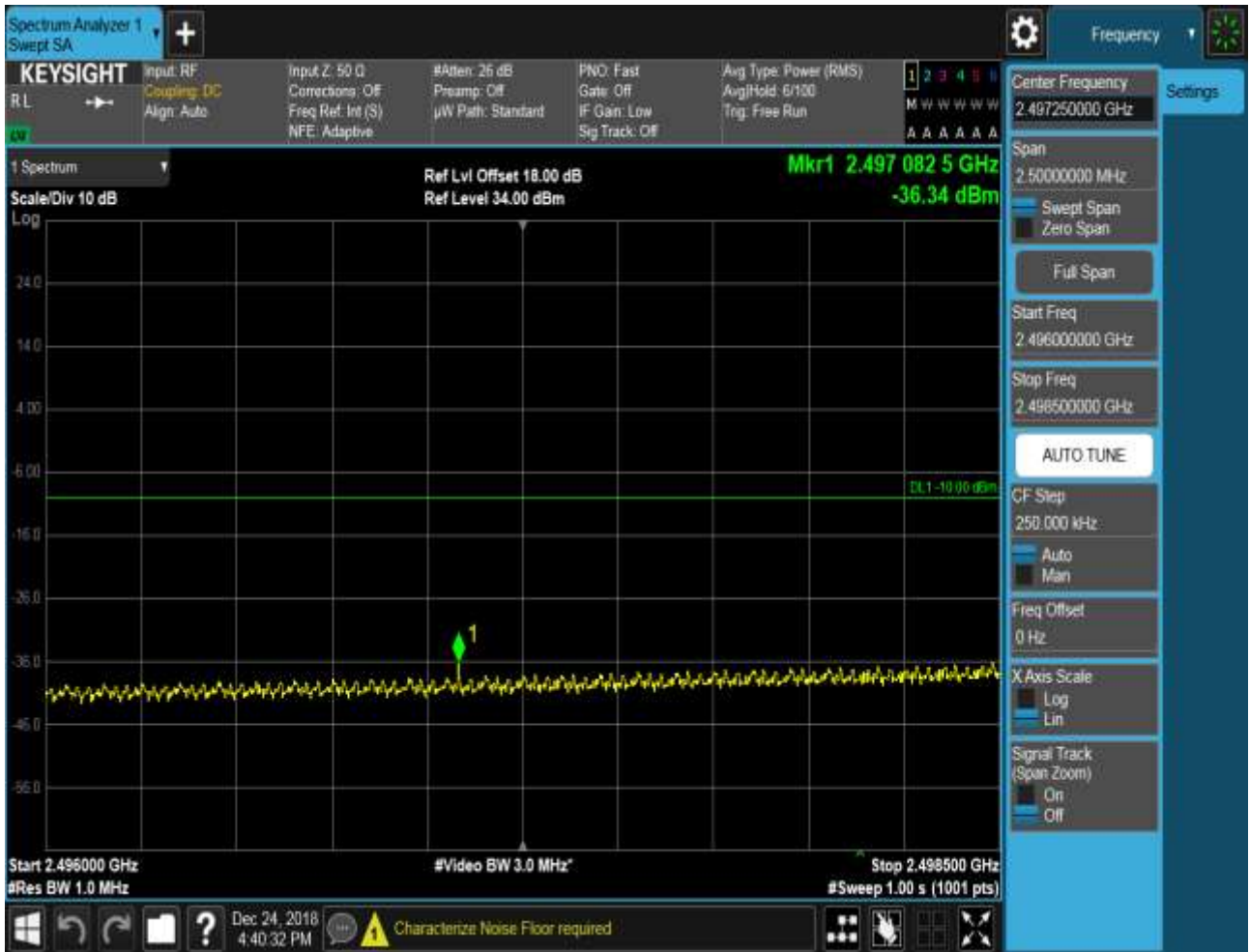


5.1.1.2.2 Test Bandwidth = 20MHz+20MHz

5.1.1.2.2.1 Test Channel = LCH

5.1.1.2.2.1.1 PCC Test RB = 1 # 0 & SCC Test RB = 0









5.1.1.2.2.1.2 PCC Test RB = partial RBs #0 & SCC Test RB = 0











5.1.1.2.2.1.3 PCC Test RB = full RBs & SCC Test RB = 0







5.1.1.2.2.1.4 PCC Test RB = full RBs & SCC Test RB = full RBs









### 5.1.1.2.2.2 Test Channel = HCH

#### 5.1.1.2.2.2.1 PCC Test RB = 0 & SCC Test RB = 1 # max







### 5.1.1.2.2.2 PCC Test RB = 0 & SCC Test RB = partial RBs #max







### 5.1.1.2.2.3 PCC Test RB = 0 & SCC Test RB = full RBs









5.1.1.2.2.4 PCC Test RB = full RBs & SCC Test RB = full RBs









## 6Appendix\_F: 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 = CA\_7C

##### 6.1.1.1 Test Mode = LTE/TM1

##### 6.1.1.1.1 Test Bandwidth = 15MHz+15MHz

##### 6.1.1.1.1.1 Test Channel = LCH

##### 6.1.1.1.1.1.1 PCC Test RB = 1 #0& SCC Test RB = 0











6.1.1.1.1.2 Test Channel = MCH

6.1.1.1.1.2.1 PCC Test RB = 1 #0& SCC Test RB = 0









6.1.1.1.1.3 Test Channel = HCH

6.1.1.1.1.3.1 PCC Test RB = 1 #0& SCC Test RB = 0









6.2.1.1.2 Test Bandwidth = 20MHz+20MHz

6.2.1.1.2.1 Test Channel = LCH

6.1.1.1.2.1.1 PCC Test RB = 1 #0& SCC Test RB = 0











