

LTE B48

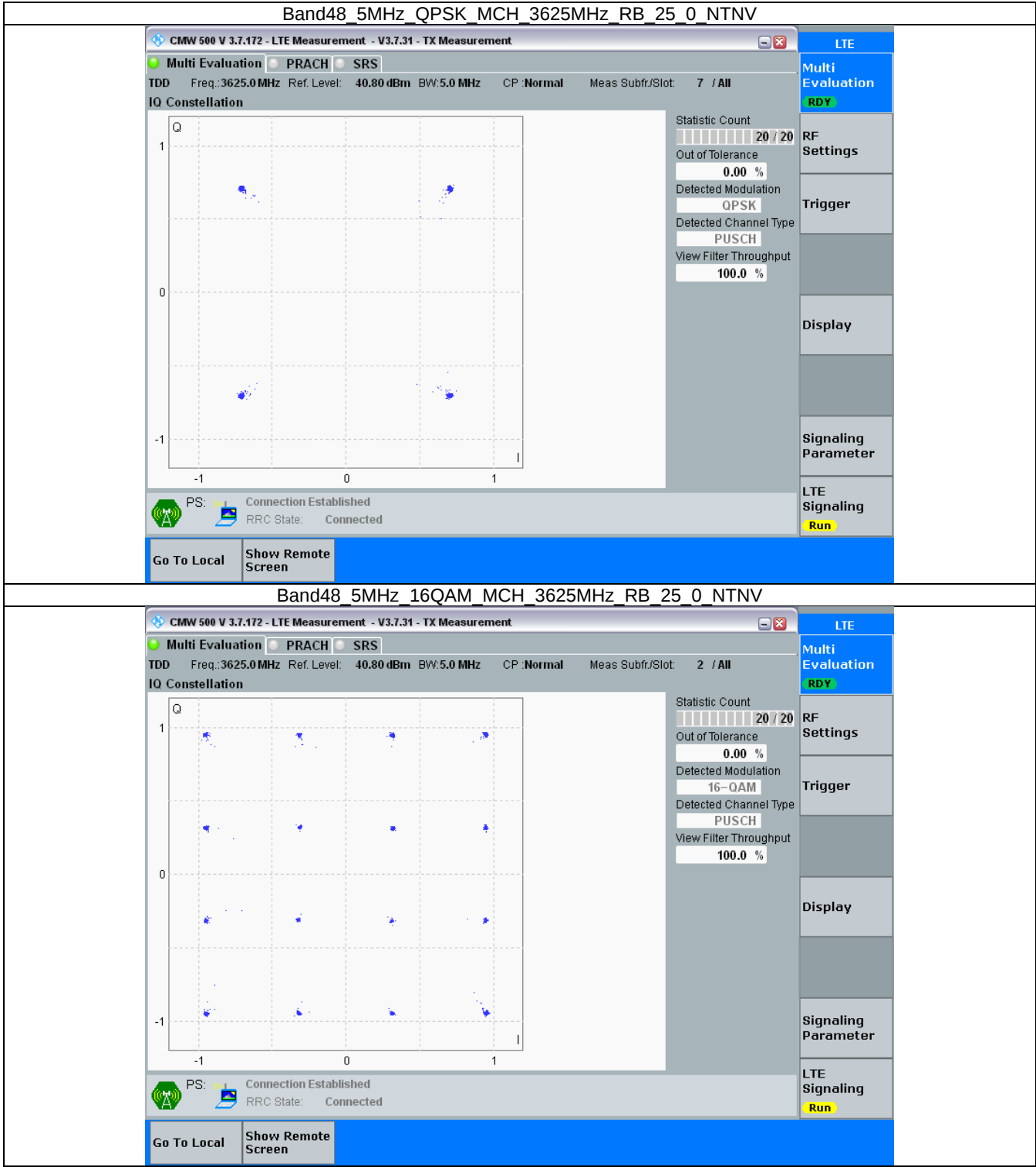
1. Modulation Characteristics

1.1 B48_5MHz

1.1.1 Test Result

Band: 48 / Bandwidth: 5MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	3625	25	0	Refer To Test Graph		Pass
16QAM	3625	25	0	Refer To Test Graph		Pass

1.1.2 Test Graph

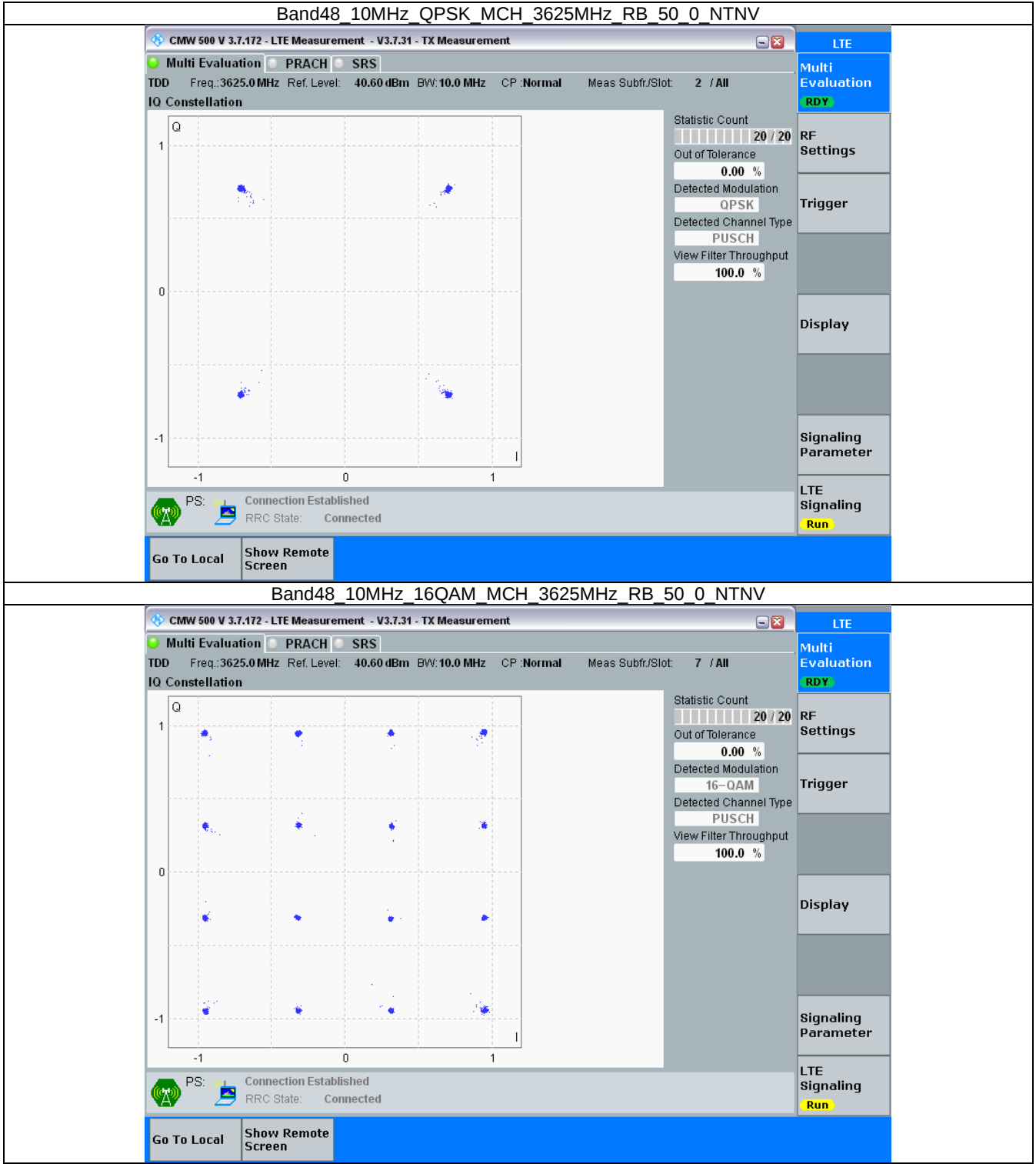


1.2 B48_10MHz

1.2.1 Test Result

Band: 48 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	3625	50	0	Refer To Test Graph		Pass
16QAM	3625	50	0	Refer To Test Graph		Pass

1.2.2 Test Graph

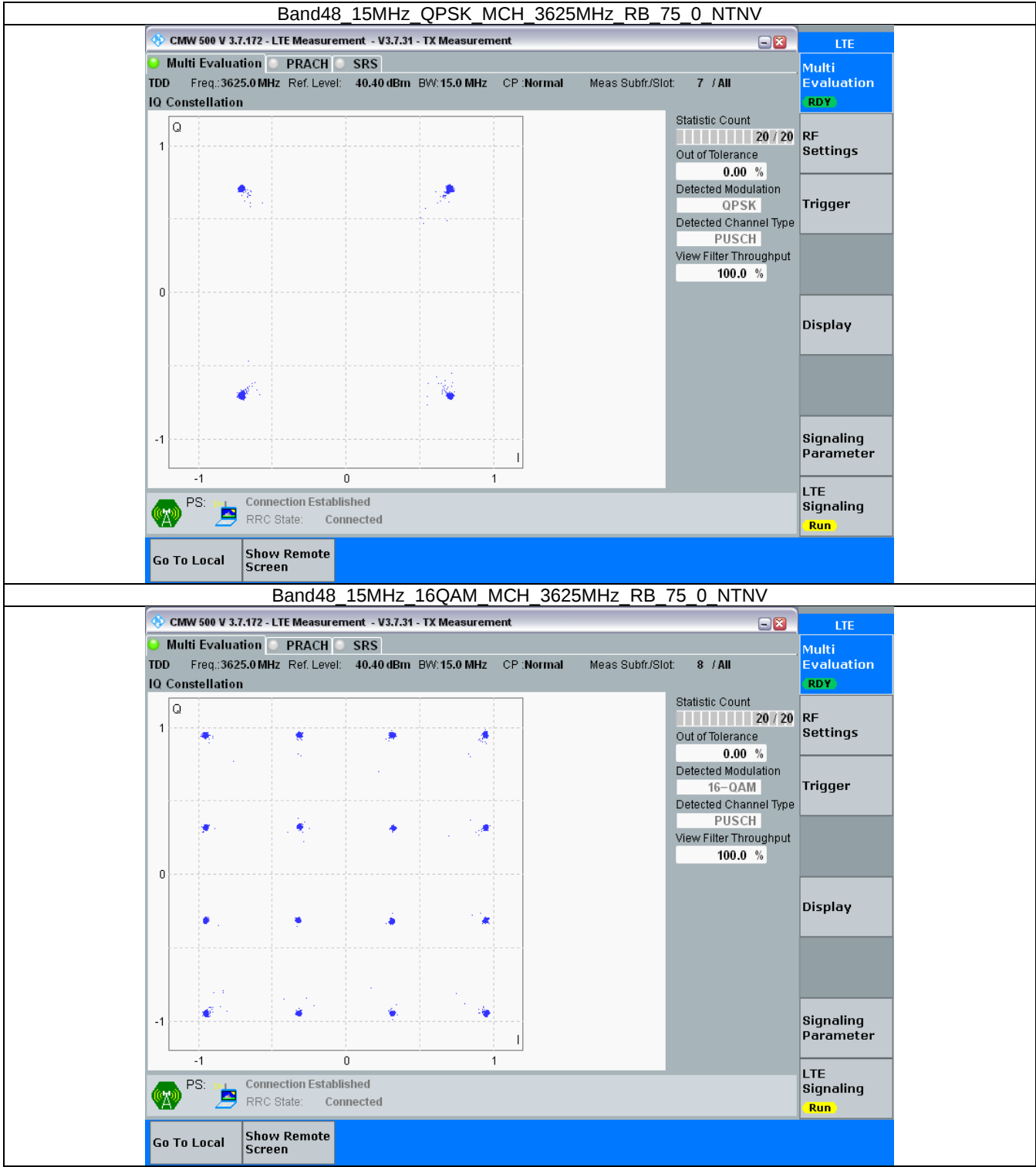


1.3 B48_15MHz

1.3.1 Test Result

Band: 48 / Bandwidth: 15MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	3625	75	0	Refer To Test Graph		Pass
16QAM	3625	75	0	Refer To Test Graph		Pass

1.3.2 Test Graph

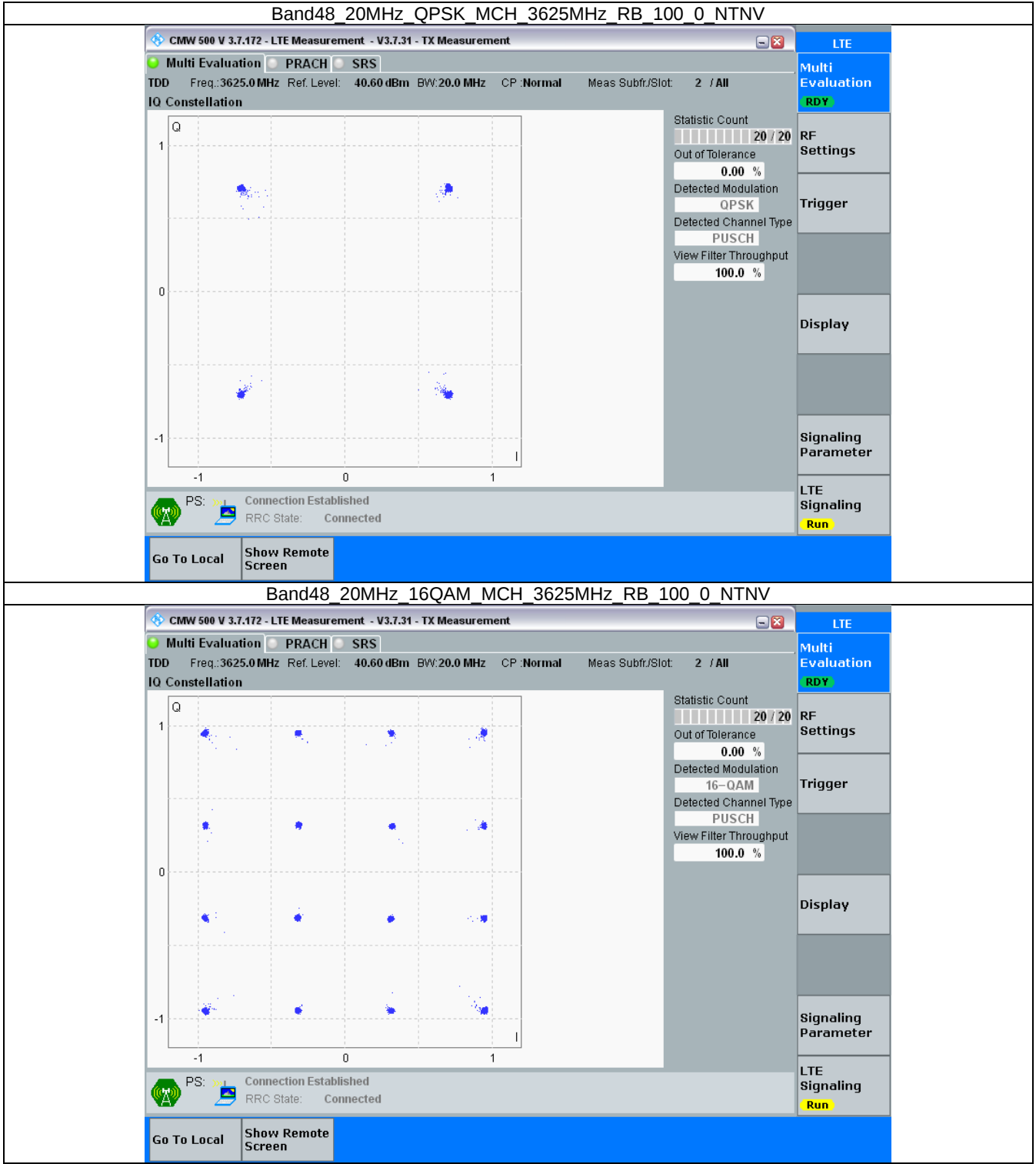


1.4 B48_20MHz

1.4.1 Test Result

Band: 48 / Bandwidth: 20MHz / NTVV						
Modulation	Frequency (MHz)	RB Allocation		Modulation Characteristics		Verdict
		Size	Offset	Result	Limit	
QPSK	3625	100	0	Refer To Test Graph		Pass
16QAM	3625	100	0	Refer To Test Graph		Pass

1.4.2 Test Graph



5G NR N48

1. Modulation Characteristics

1.1 30k_SISO_40MHz_NTNV

1.1.1 Test Result

5G NR n48 SCS=30kHz SISO 40MHz NTNv							
Modulation	Frequency (MHz)	RB Allocation	Modulation Characteristics				Verdict
			Ant1	Ant2	Sum	Limit	
DFT-s-OFDM QPSK	3624.99	Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM 16 QAM	3624.99	Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM 64 QAM	3624.99	Outer_Full	Refer To Test Graph				Pass
DFT-s-OFDM 256 QAM	3624.99	Outer_Full	Refer To Test Graph				Pass
CP-OFDM QPSK	3624.99	Outer_Full	Refer To Test Graph				Pass
CP-OFDM 16 QAM	3624.99	Outer_Full	Refer To Test Graph				Pass
CP-OFDM 64 QAM	3624.99	Outer_Full	Refer To Test Graph				Pass
CP-OFDM 256 QAM	3624.99	Outer_Full	Refer To Test Graph				Pass

1.1.2 Test Graph

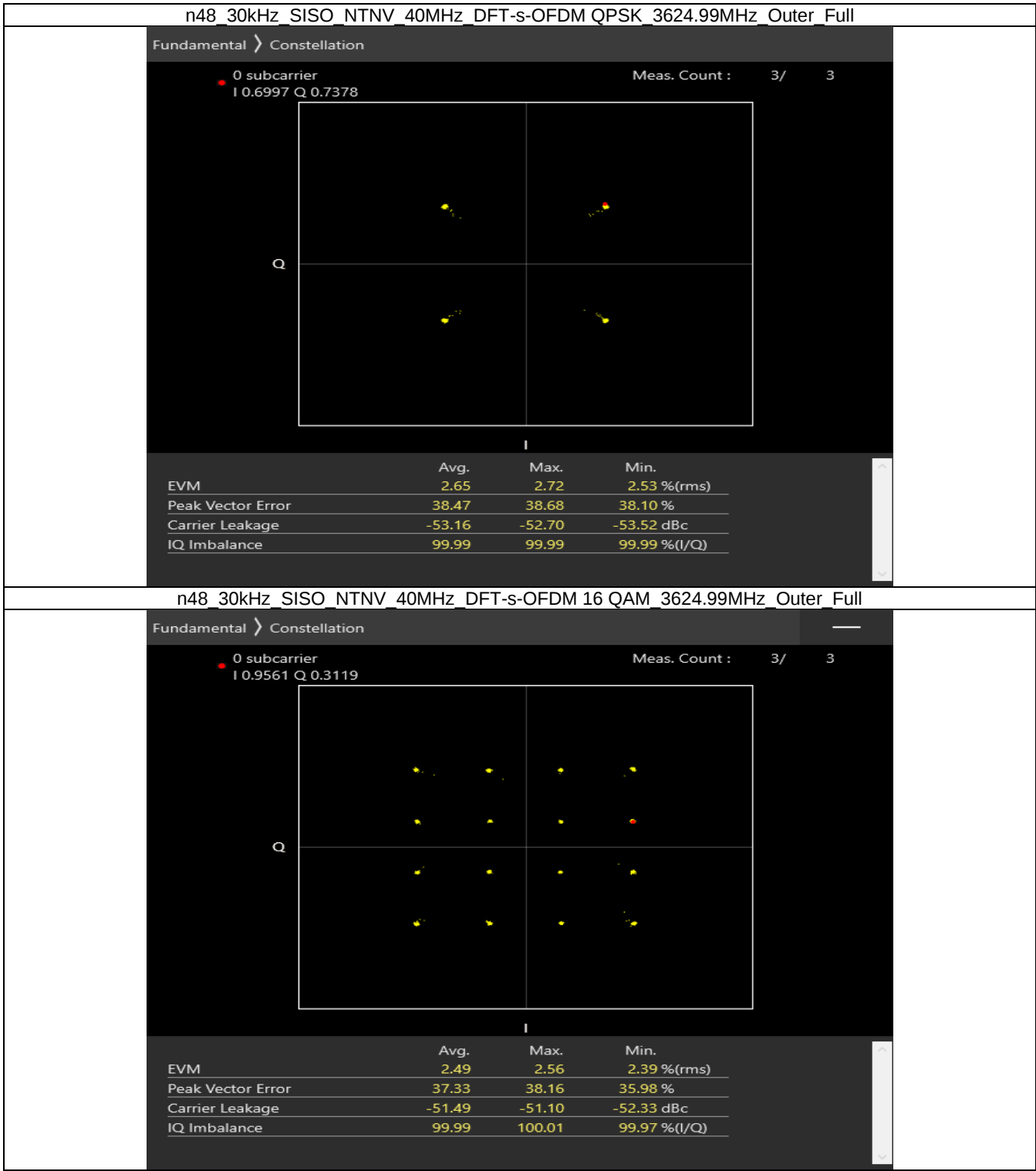


Figure 1-1-2: Test Graphs for QPSK and 16-QAM Modulations

n48 30kHz SISO NTN 40MHz DFT-s-OFDM 64 QAM 3624.99MHz Outer Full

Fundamental > Constellation

0 subcarrier
I 0.1666 Q -0.7591

Meas. Count : 3/ 3

Q

I

	Avg.	Max.	Min.
EVM	1.86	1.89	1.84 %(rms)
Peak Vector Error	18.62	19.23	17.97 %
Carrier Leakage	-51.15	-50.35	-51.82 dBc
IQ Imbalance	100.00	100.02	99.99 %(I/Q)

n48 30kHz SISO NTN 40MHz DFT-s-OFDM 256 QAM 3624.99MHz Outer Full

Fundamental > Constellation

0 subcarrier
I 0.3979 Q -0.2182

Meas. Count : 3/ 3

Q

I

	Avg.	Max.	Min.
EVM	1.72	1.73	1.72 %(rms)
Peak Vector Error	7.73	8.37	6.73 %
Carrier Leakage	-49.04	-48.94	-49.13 dBc
IQ Imbalance	99.95	99.96	99.93 %(I/Q)

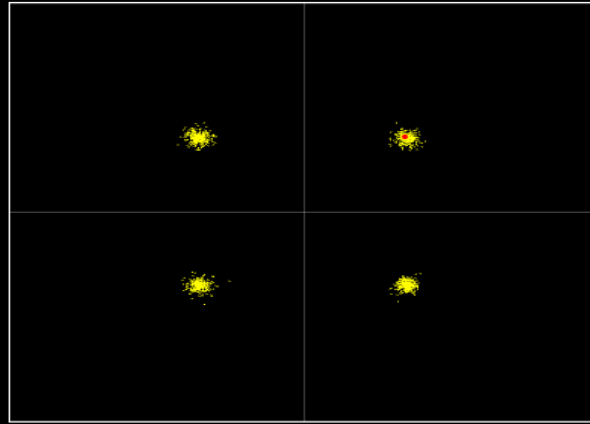
n48 30kHz SISO NTN 40MHz CP-OFDM QPSK 3624.99MHz Outer Full

Fundamental > Constellation

0 subcarrier
I 0.6931 Q 0.7172

Meas. Count : 3/ 3

Q



	Avg.	Max.	Min.
EVM	4.99	5.45	4.25 %(rms)
Peak Vector Error	20.43	22.99	17.04 %
Carrier Leakage	-50.05	-49.88	-50.18 dBc
IQ Imbalance	100.01	100.03	100.00 %(I/Q)

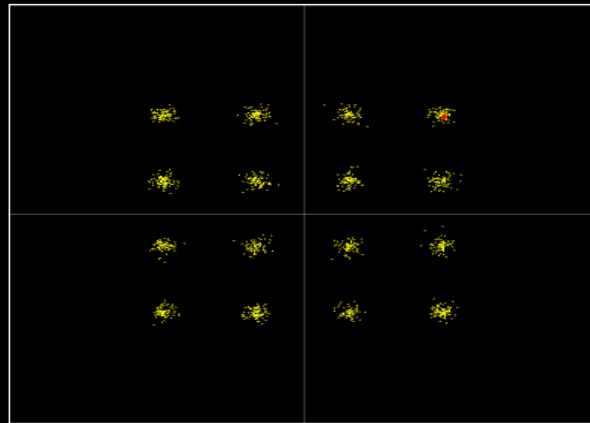
n48 30kHz SISO NTN 40MHz CP-OFDM 16 QAM 3624.99MHz Outer Full

Fundamental > Constellation

0 subcarrier
I 0.9635 Q 0.9275

Meas. Count : 3/ 3

Q



	Avg.	Max.	Min.
EVM	4.49	4.64	4.41 %(rms)
Peak Vector Error	20.16	21.24	19.48 %
Carrier Leakage	-50.25	-49.96	-50.60 dBc
IQ Imbalance	100.14	100.14	100.12 %(I/Q)

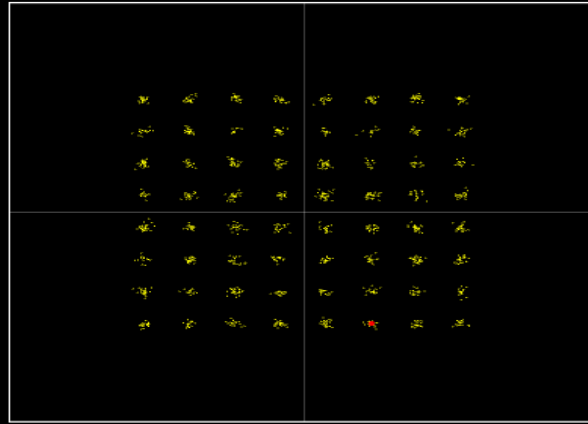
n48 30kHz SISO NTN 40MHz CP-OFDM 64 QAM 3624.99MHz Outer Full

Fundamental > Constellation

0 subcarrier
I 0.4717 Q -1.077

Meas. Count : 3/ 3

Q



	Avg.	Max.	Min.
EVM	3.74	3.86	3.68 %(rms)
Peak Vector Error	13.34	14.42	12.71 %
Carrier Leakage	-50.44	-50.25	-50.80 dBc
IQ Imbalance	100.09	100.10	100.07 %(I/Q)

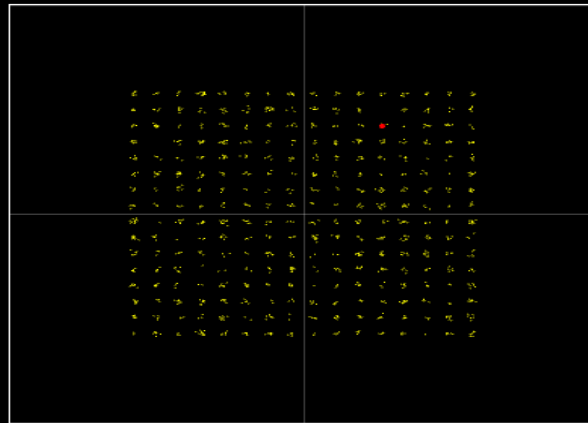
n48 30kHz SISO NTN 40MHz CP-OFDM 256 QAM 3624.99MHz Outer Full

Fundamental > Constellation

0 subcarrier
I 0.5385 Q 0.8375

Meas. Count : 3/ 3

Q



	Avg.	Max.	Min.
EVM	1.90	1.92	1.89 %(rms)
Peak Vector Error	6.51	6.72	6.27 %
Carrier Leakage	-49.07	-48.53	-49.52 dBc
IQ Imbalance	100.00	100.01	100.00 %(I/Q)

UL 48C mode

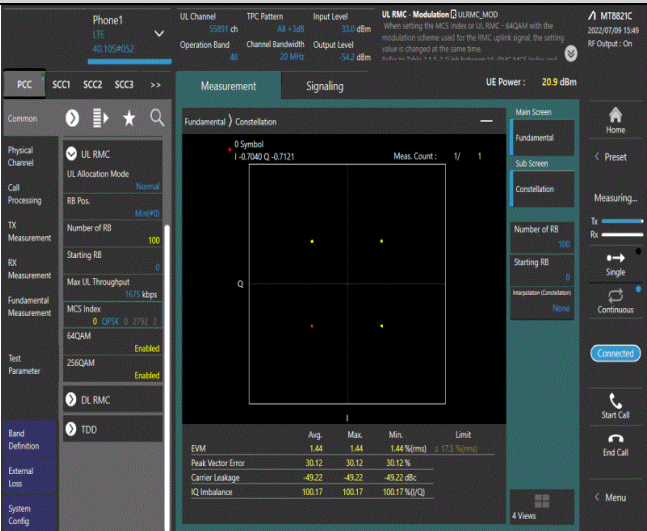
Modulation Characteristics

Test Result

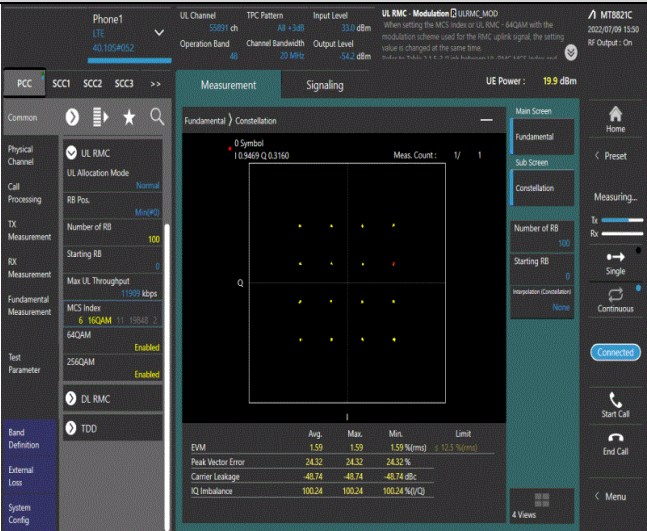
Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
48-48	20-20	QPSK	M	100RB#0- 100RB#0	PASS	PASS
48-48	20-20	16QAM	M	100RB#0- 100RB#	PASS	PASS
48-48	20-20	64QAM	M	100RB#0- 100RB#	PASS	PASS
48-48	20-20	256QAM	M	100RB#0- 100RB#	PASS	PASS

Test Graphs

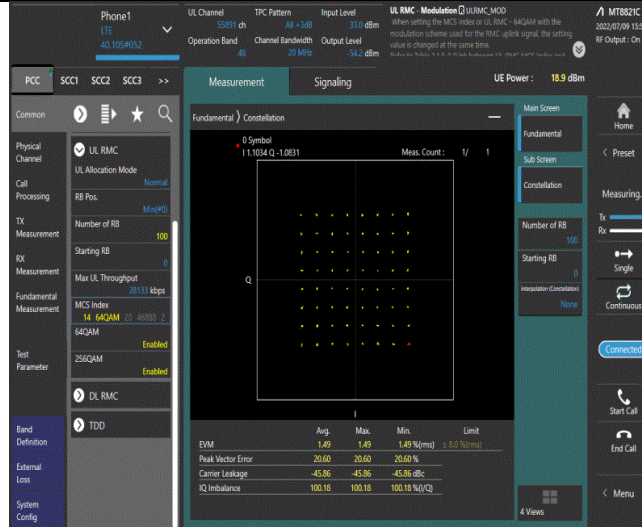
48-48-20MHz-20MHz-QPSK-100RB#0-100RB#0



48-48-20MHz-20MHz-16QAM-100RB#0-100RB#0



48-48-20MHz-20MHz-64QAM-100RB#0-100RB#0



48-48-20MHz-20MHz-256QAM--100RB#0-100RB#0

