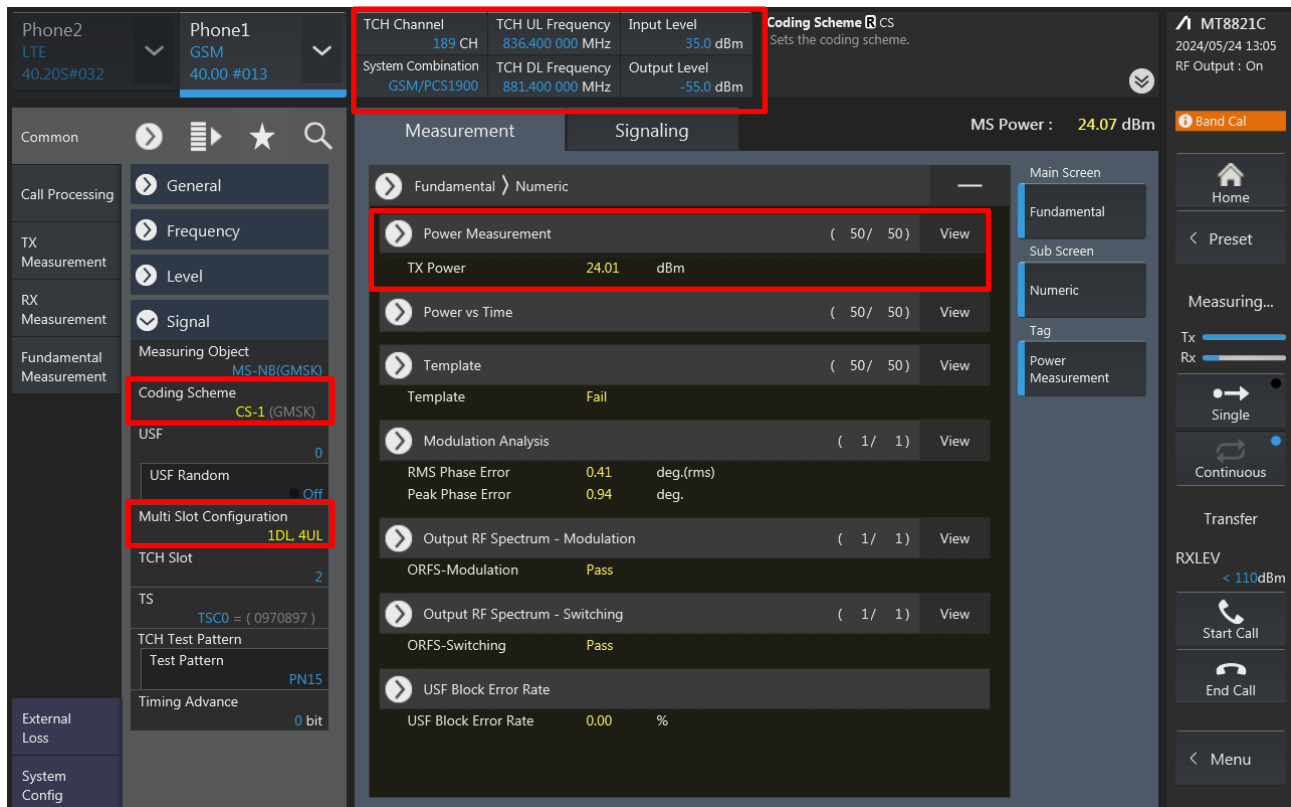


Power measurement connection diagram:

The power measurement for 2G/3G/LTE/5G FR1/UL and DL CA is to establish a connection between device and call box, and via call box to configure Bands, channel, BWs, RB size, carrier aggregation of CA, frequency channels, SCS and maximum output power. Hereunder is screenshot call box connection information for 2G/3G/LTE/5G FR1/UL and DL CA.

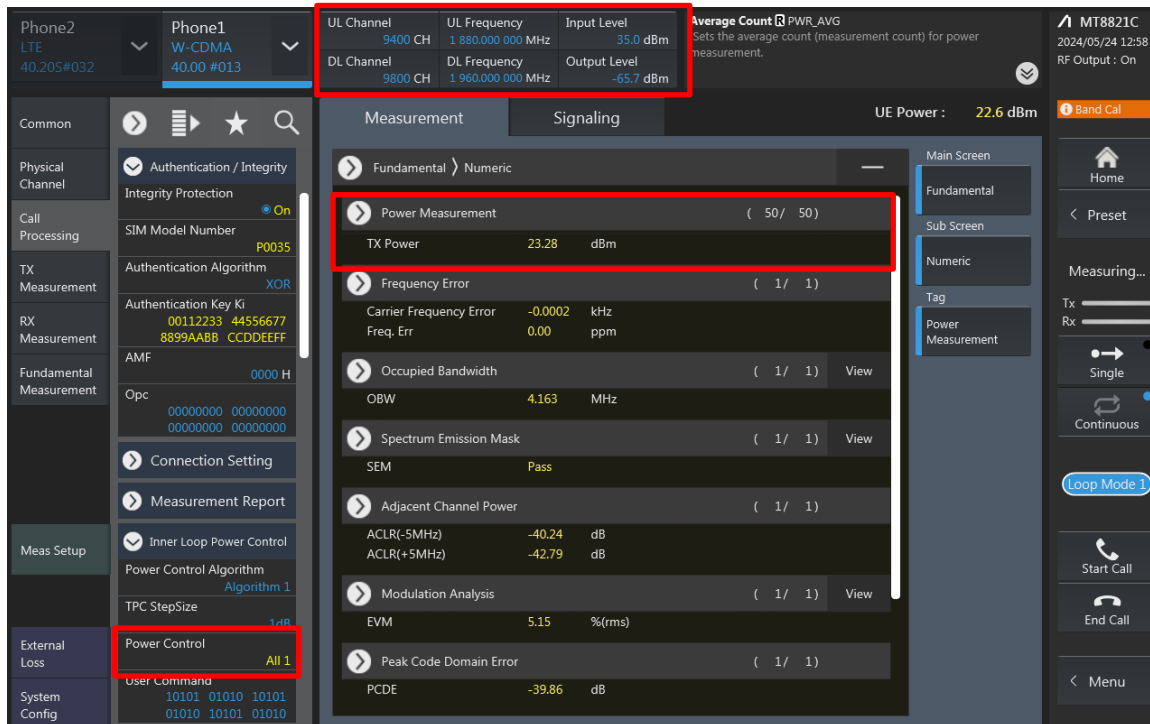
<GSM>



The screenshot displays the SPORTON LAB. software interface for GSM power measurement. The interface is divided into several sections:

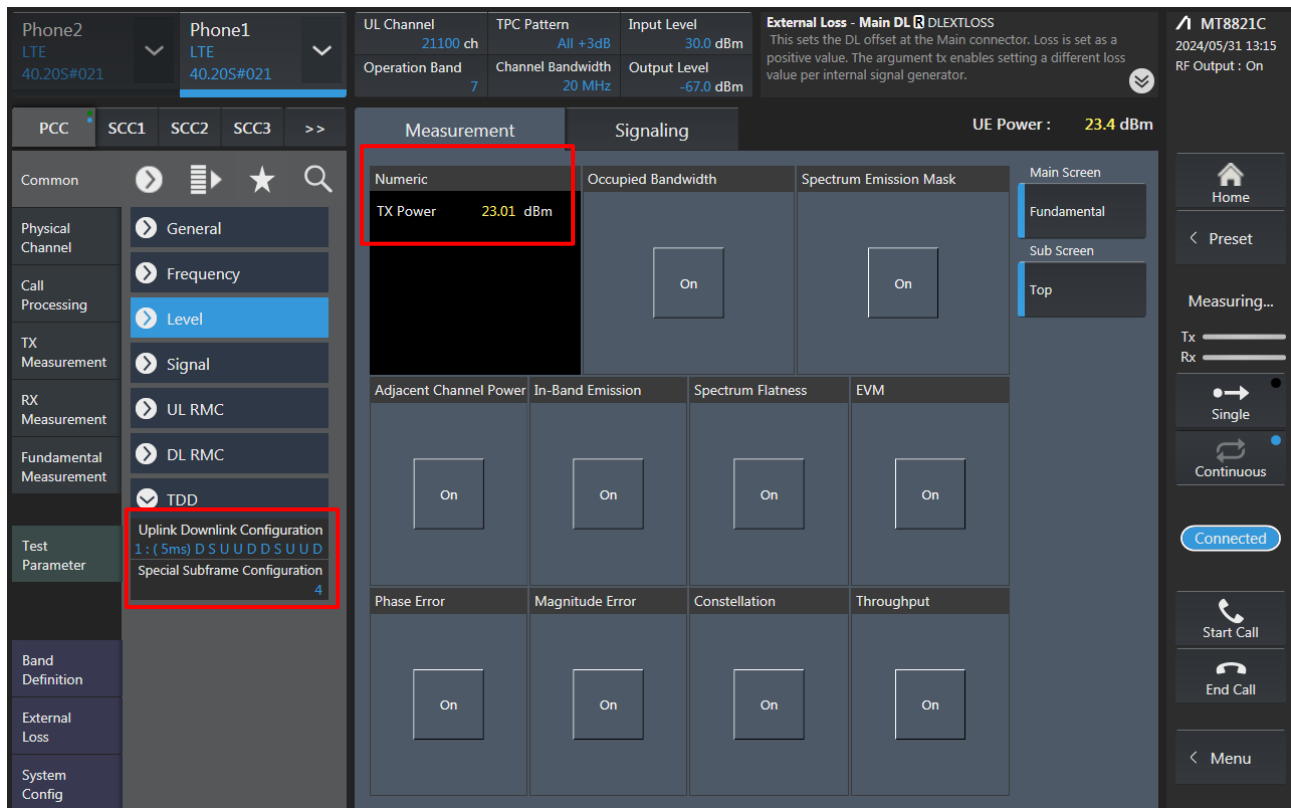
- Top Bar:** Shows Phone2 (LTE, 40.205#032) and Phone1 (GSM, 40.00 #013). It also displays TCH Channel (189 CH), TCH UL Frequency (836.400 000 MHz), Input Level (35.0 dBm), TCH DL Frequency (881.400 000 MHz), and Output Level (-55.0 dBm). The Coding Scheme is set to CS.
- Left Sidebar:** Contains navigation options like Common, Call Processing, TX Measurement, RX Measurement, Fundamental Measurement, and External Loss. The 'Fundamental Measurement' section is expanded, showing 'Coding Scheme' (CS-1 (GMSK)) and 'Multi Slot Configuration' (1DL, 4UL).
- Main Area:** Displays 'Measurement' and 'Signaling' tabs. The 'Measurement' tab is active, showing 'Fundamental' and 'Numeric' views. The 'Power Measurement' section is highlighted, showing 'TX Power' (24.01 dBm). Other measurements include 'Power vs Time', 'Template', 'Modulation Analysis', 'Output RF Spectrum - Modulation', 'Output RF Spectrum - Switching', and 'USF Block Error Rate'.
- Right Sidebar:** Shows 'Main Screen' and 'Sub Screen' options. It also displays 'MS Power' (24.07 dBm) and 'Band Cal' (Band Cal).

<WCDMA>



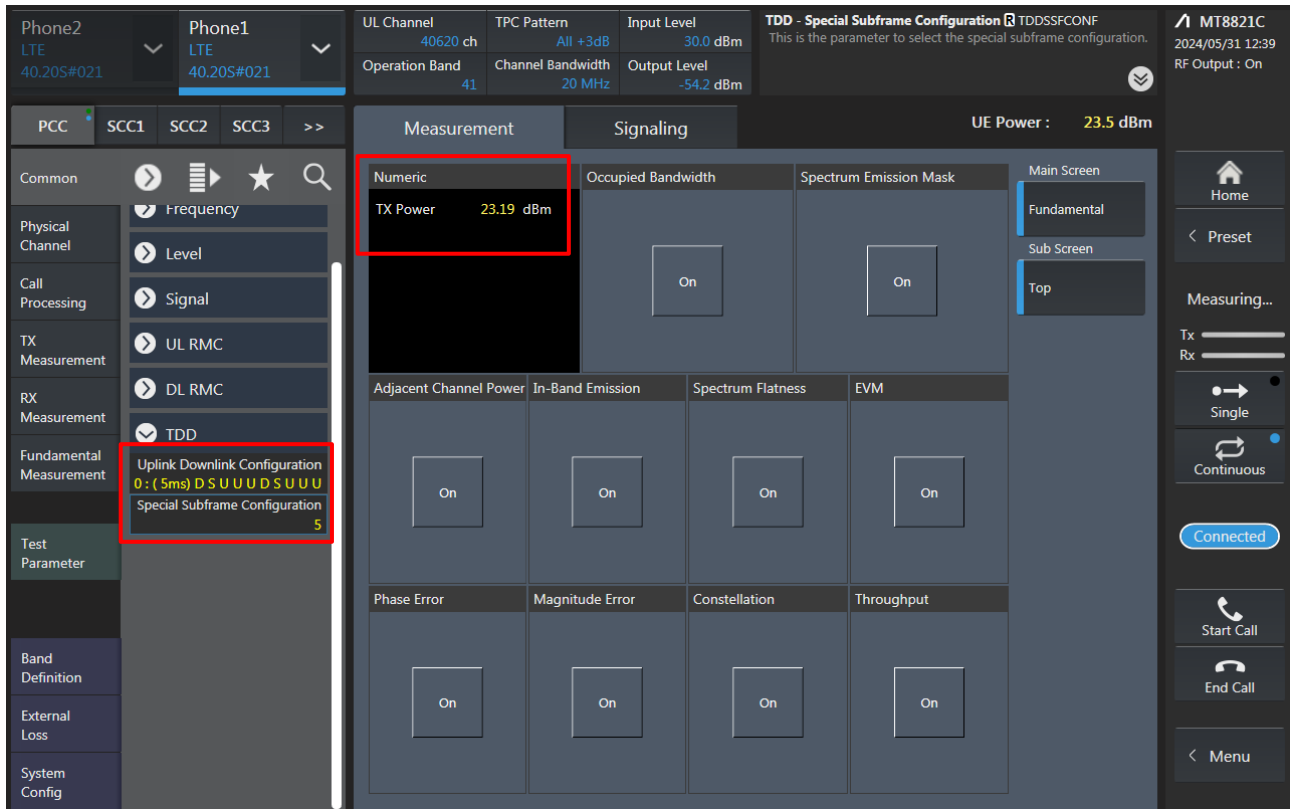
The screenshot shows the WCDMA measurement interface. The top bar displays 'Phone2 LTE 40.20S#032' and 'Phone1 W-CDMA 40.00 #013'. The 'Measurement' tab is active, showing 'Fundamental' and 'Numeric' views. The 'Power Measurement' section is highlighted with a red box, showing 'TX Power' as 23.28 dBm. The 'Occupied Bandwidth' section shows 'OBW' as 4.163 MHz. The 'Adjacent Channel Power' section shows 'ACLR(-5MHz)' as -40.24 dB and 'ACLR(+5MHz)' as -42.79 dB. The 'Modulation Analysis' section shows 'EVM' as 5.15 % (rms). The 'Peak Code Domain Error' section shows 'PCDE' as -39.86 dB. The 'UE Power' is 22.6 dBm. The 'Band Cal' button is visible on the right. The 'Meas Setup' section on the left shows 'Power Control' set to 'All 1'.

<LTE>



The screenshot shows the LTE measurement interface. The top bar displays 'Phone2 LTE 40.20S#021' and 'Phone1 LTE 40.20S#021'. The 'Measurement' tab is active, showing 'Numeric' and 'Occupied Bandwidth' views. The 'Power Measurement' section is highlighted with a red box, showing 'TX Power' as 23.01 dBm. The 'Occupied Bandwidth' section shows 'OBW' as 20 MHz. The 'Adjacent Channel Power' section shows 'ACLR(-5MHz)' as -40.24 dB and 'ACLR(+5MHz)' as -42.79 dB. The 'Modulation Analysis' section shows 'EVM' as 5.15 % (rms). The 'Peak Code Domain Error' section shows 'PCDE' as -39.86 dB. The 'UE Power' is 23.4 dBm. The 'Band Cal' button is visible on the right. The 'Meas Setup' section on the left shows 'Uplink Downlink Configuration' set to '1: (5ms) D S U U D D S U U D' and 'Special Subframe Configuration' set to '4'.

<LTE TDD Power class 3>



Phone2
LTE
40.20S#021

Phone1
LTE
40.20S#021

UL Channel
40620 ch

TPC Pattern
All +3dB

Input Level
30.0 dBm

TDD - Special Subframe Configuration
TDDSSFCNF
This is the parameter to select the special subframe configuration.

MT8821C
2024/05/31 12:39
RF Output : On

PCC SCC1 SCC2 SCC3 >>

Common

Physical Channel

Call Processing

TX Measurement

RX Measurement

Fundamental Measurement

Test Parameter

Band Definition

External Loss

System Config

Frequency

Level

Signal

UL RMC

DL RMC

TDD

Uplink Downlink Configuration
0 : (5ms) D S U U U D S U U U

Special Subframe Configuration
5

Measurement

Numeric

TX Power
23.19 dBm

Occupied Bandwidth

Spectrum Emission Mask

Main Screen

Fundamental

Sub Screen

Top

Adjacent Channel Power

In-Band Emission

Spectrum Flatness

EVM

Phase Error

Magnitude Error

Constellation

Throughput

UE Power : 23.5 dBm

Home

Preset

Measuring...

Tx

Rx

Single

Continuous

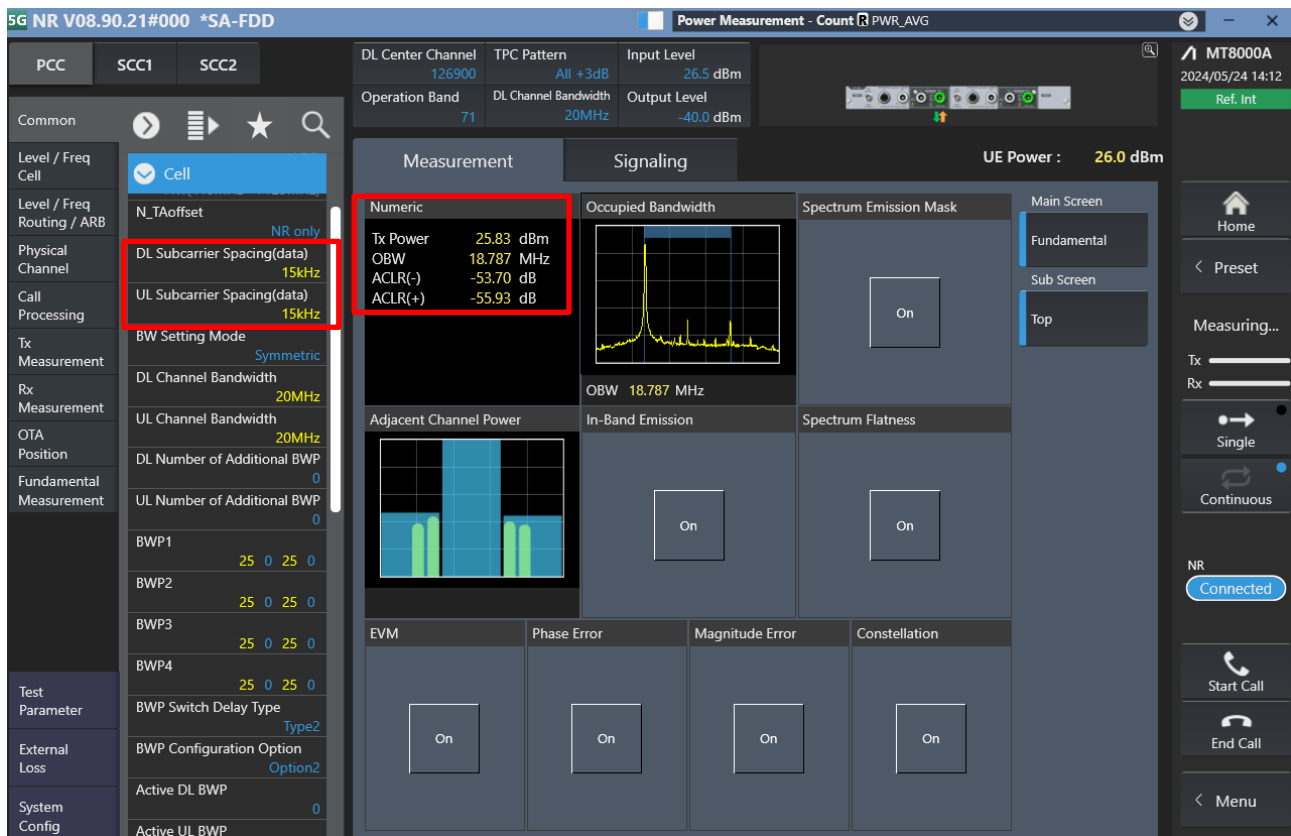
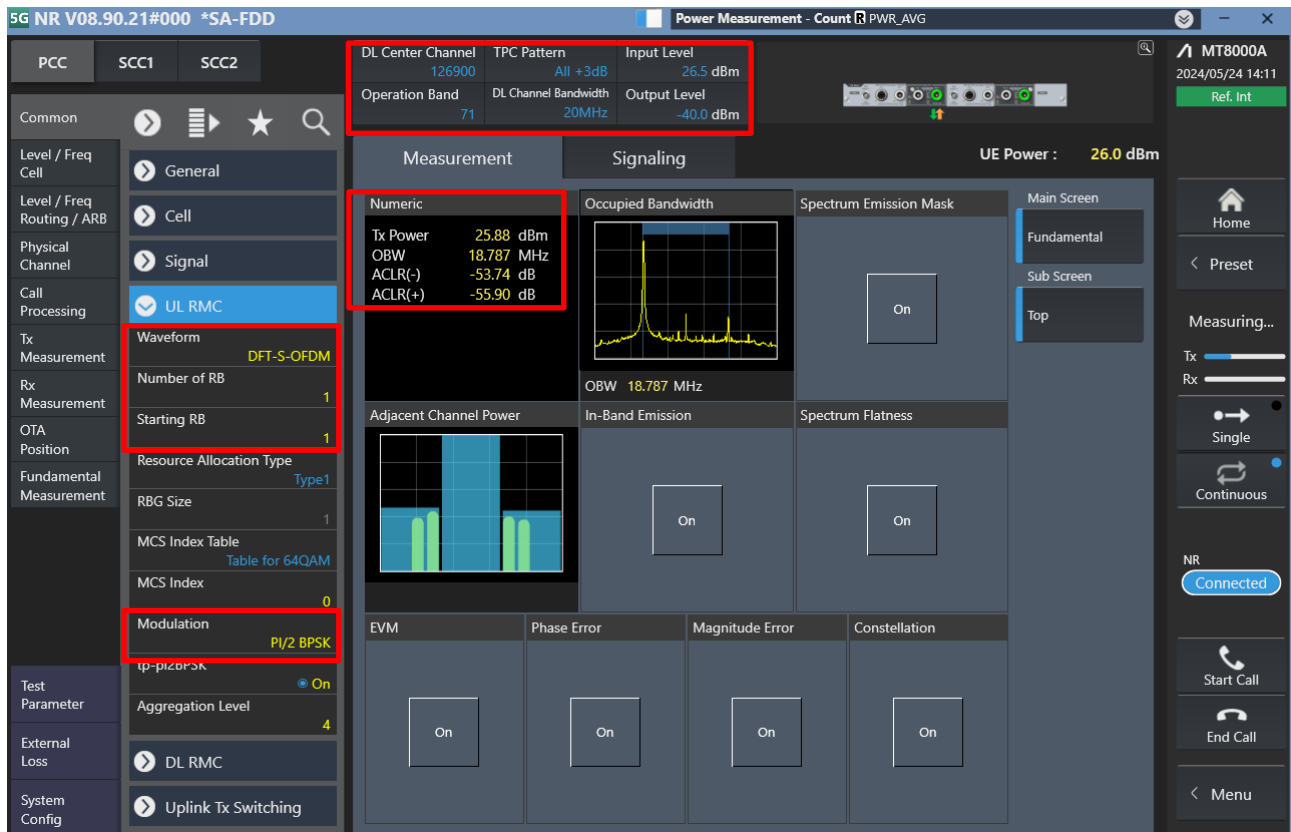
Connected

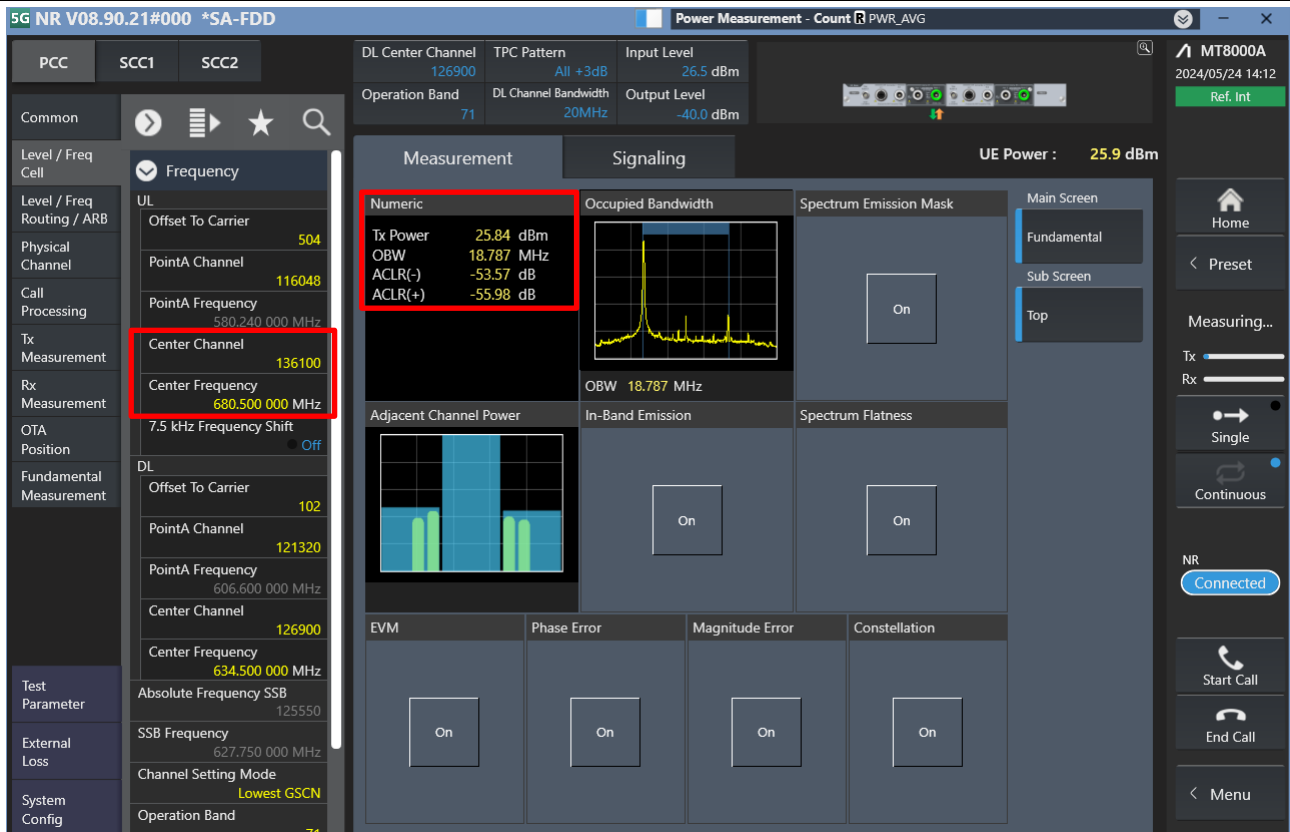
Start Call

End Call

Menu

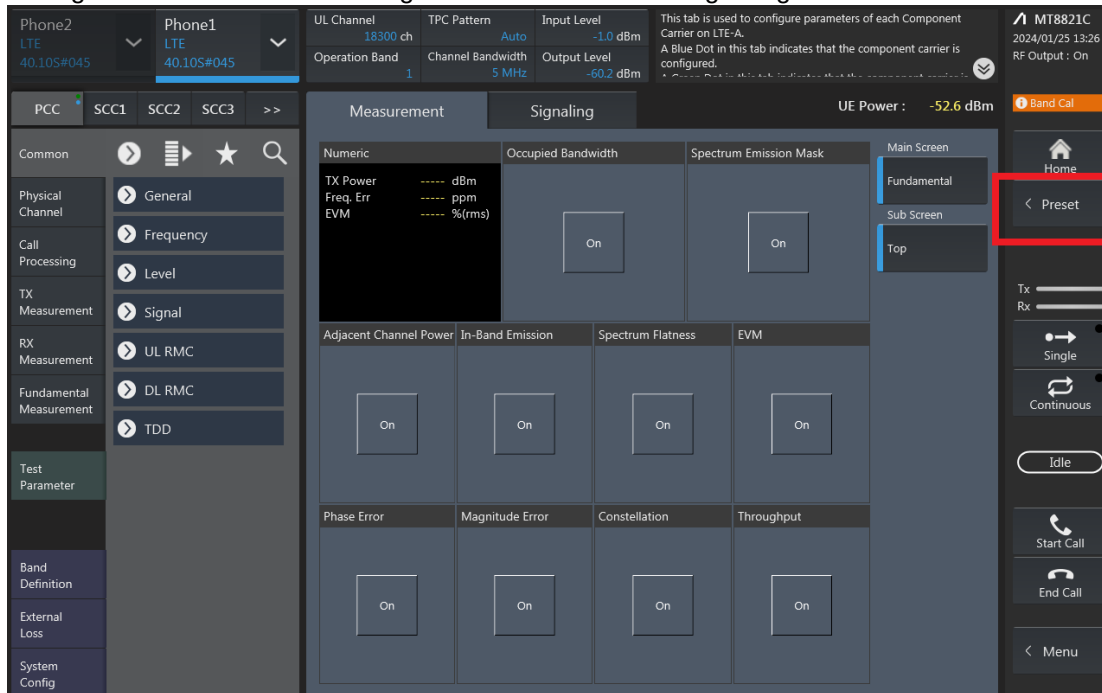
<5G NR FR1>





LTE Uplink and Downlink Carrier Aggregation configurations:

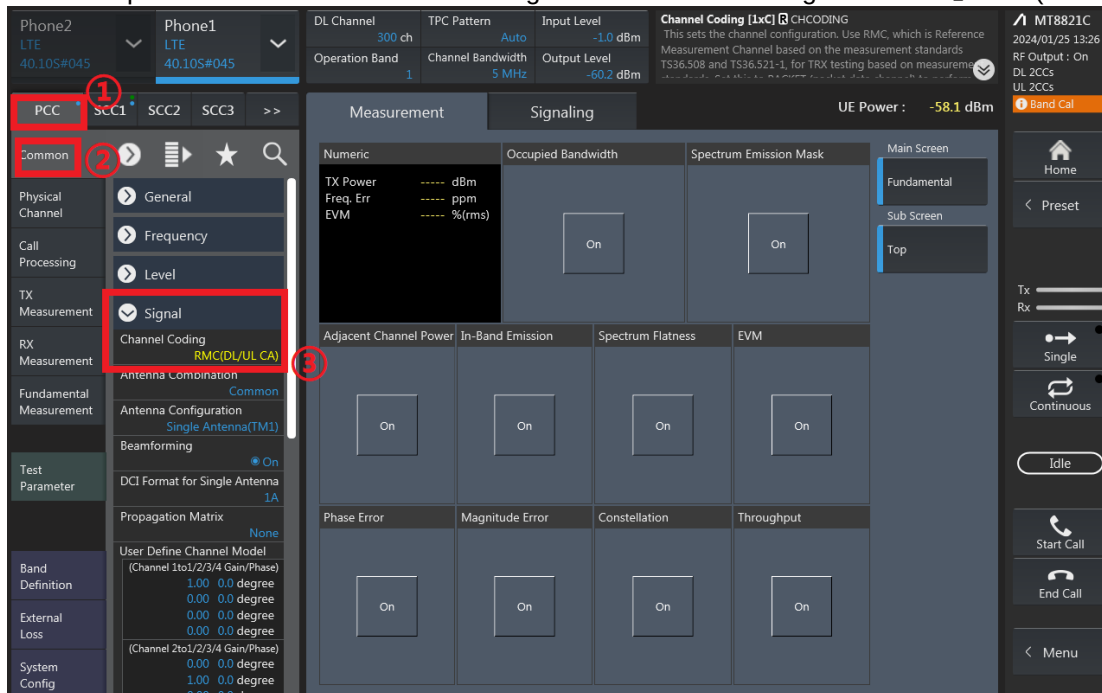
1. Change the Scenario in the Configuration of Phone1 LTE Signaling and Preset.



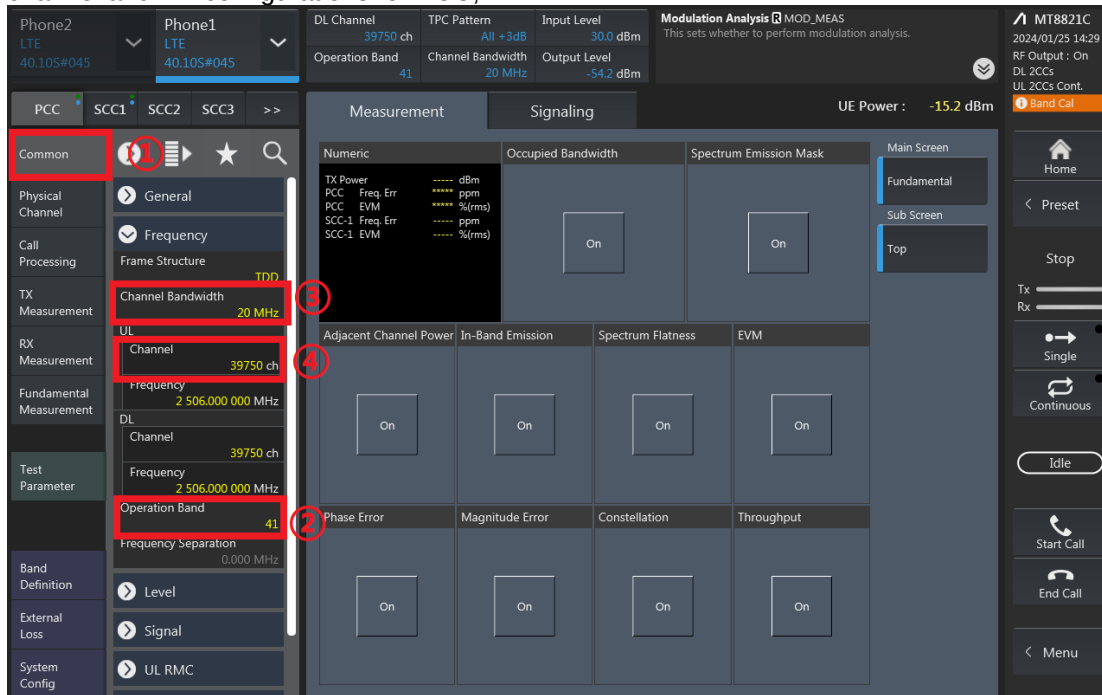
2. If Select "RMC (DL/UL CA)" for Uplink Carrier Aggregation; If Select "RMC (DL CA)" for Downlink Carrier Aggregation.

For example, Uplink Carrier Aggregation:

Detailed operation: PCC → Common → Signal → Channel Coding → Select 【RMC (DL/UL CA)】



3. PCC parameter Settings: on the screen, and then select the PCC tab and Set operating band, BW, channel and RB configurations for PCC;



Phone2 LTE 40.10S#045 Phone1 LTE 40.10S#045

DL Channel 39750 ch TPC Pattern All +3dB Input Level 30.0 dBm Modulation Analysis MOD_MEAS This sets whether to perform modulation analysis.

Operation Band 41 Channel Bandwidth 20 MHz Output Level -54.2 dBm

MT8821C 2024/01/25 14:29 RF Output : On DL 2CCs UL 2CCs Cont.

UE Power : -15.2 dBm

Measurement Signaling

Common

Physical Channel General

Call Processing Frequency

TX Measurement Channel Bandwidth 20 MHz

RX Measurement Channel 39750 ch

Fundamental Measurement Frequency 2 506.000 000 MHz

Test Parameter Channel 39750 ch Frequency 2 506.000 000 MHz Operation Band 41 Frequency Separation 0.000 MHz

Band Definition Level

External Loss Signal

System Config UL RMC

Numeric

TX Power PCC Freq. Err. dBm PCC EVM ppm SCC-1 Freq. Err. ppm SCC-1 EVM ppm

Occupied Bandwidth

Spectrum Emission Mask

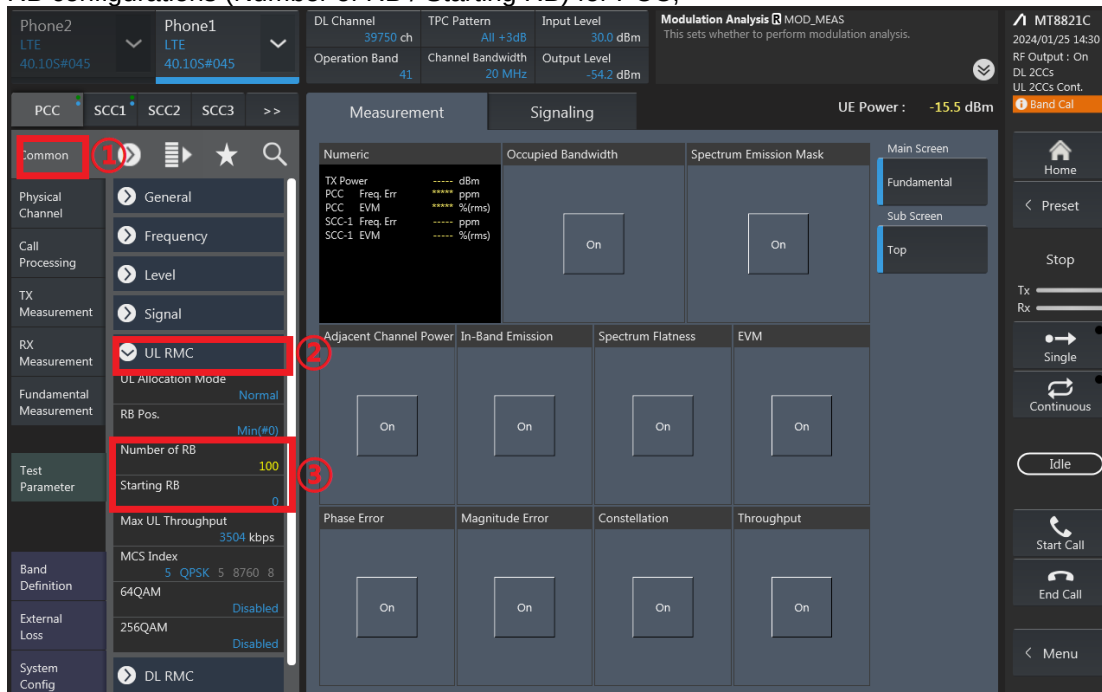
Main Screen Fundamental Sub Screen Top

Home Preset Stop Tx Rx Single Continuous Idle Start Call End Call Menu

Adjacent Channel Power In-Band Emission Spectrum Flatness EVM

Phase Error Magnitude Error Constellation Throughput

RB configurations (Number of RB / Starting RB) for PCC;



Phone2 LTE 40.10S#045 Phone1 LTE 40.10S#045

DL Channel 39750 ch TPC Pattern All +3dB Input Level 30.0 dBm Modulation Analysis MOD_MEAS This sets whether to perform modulation analysis.

Operation Band 41 Channel Bandwidth 20 MHz Output Level -54.2 dBm

MT8821C 2024/01/25 14:30 RF Output : On DL 2CCs UL 2CCs Cont.

UE Power : -15.5 dBm

Measurement Signaling

Common

Physical Channel General

Call Processing Level

TX Measurement Signal

RX Measurement UL RMC

Fundamental Measurement UL Allocation Mode Normal RB Pos. Min(#0)

Test Parameter Number of RB 100 Starting RB 0 Max UL Throughput 3504 kbps

Band Definition MCS Index 5 QPSK 5 8760 8 64QAM

External Loss 256QAM Disabled

System Config DL RMC

Numeric

TX Power PCC Freq. Err. dBm PCC EVM ppm SCC-1 Freq. Err. ppm SCC-1 EVM ppm

Occupied Bandwidth

Spectrum Emission Mask

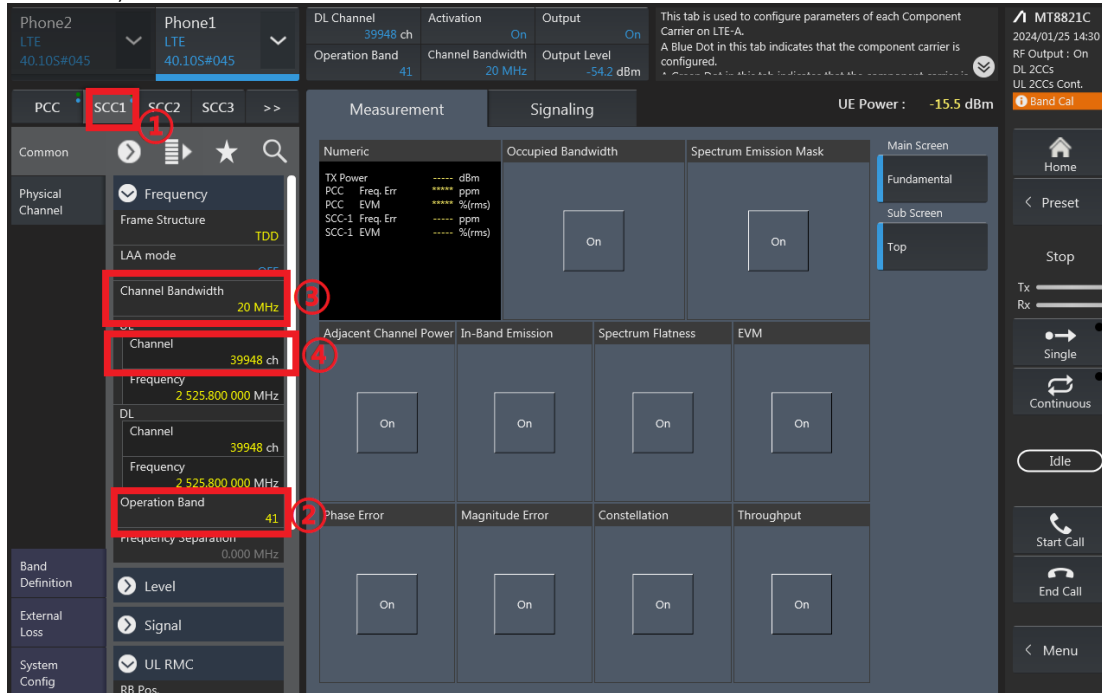
Main Screen Fundamental Sub Screen Top

Home Preset Stop Tx Rx Single Continuous Idle Start Call End Call Menu

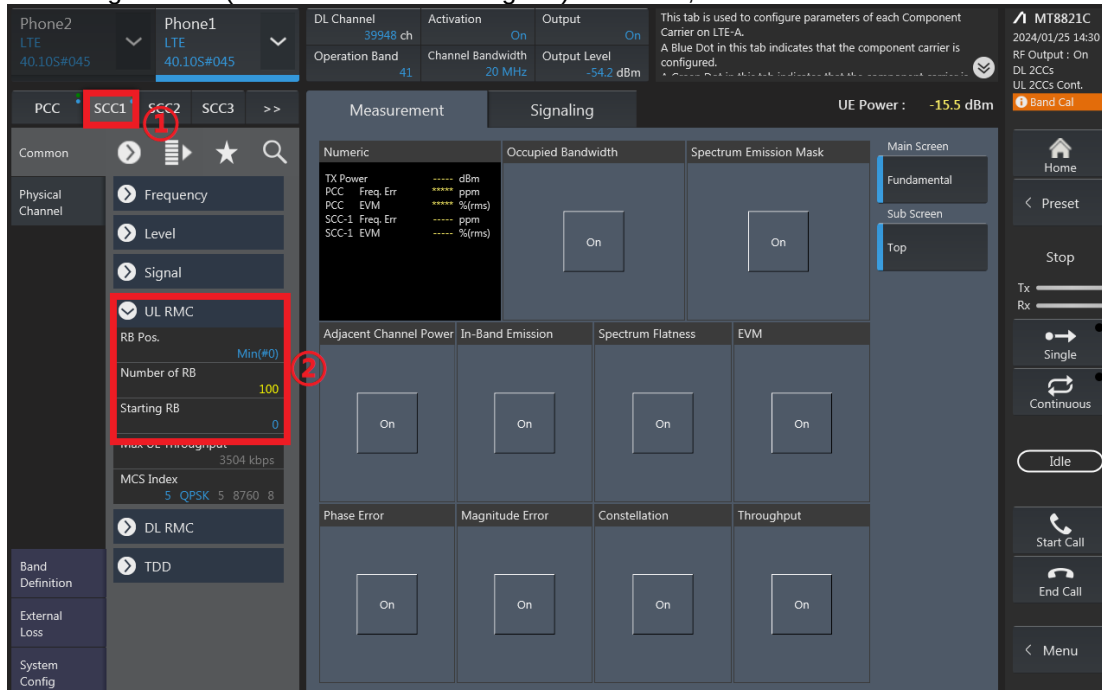
Adjacent Channel Power In-Band Emission Spectrum Flatness EVM

Phase Error Magnitude Error Constellation Throughput

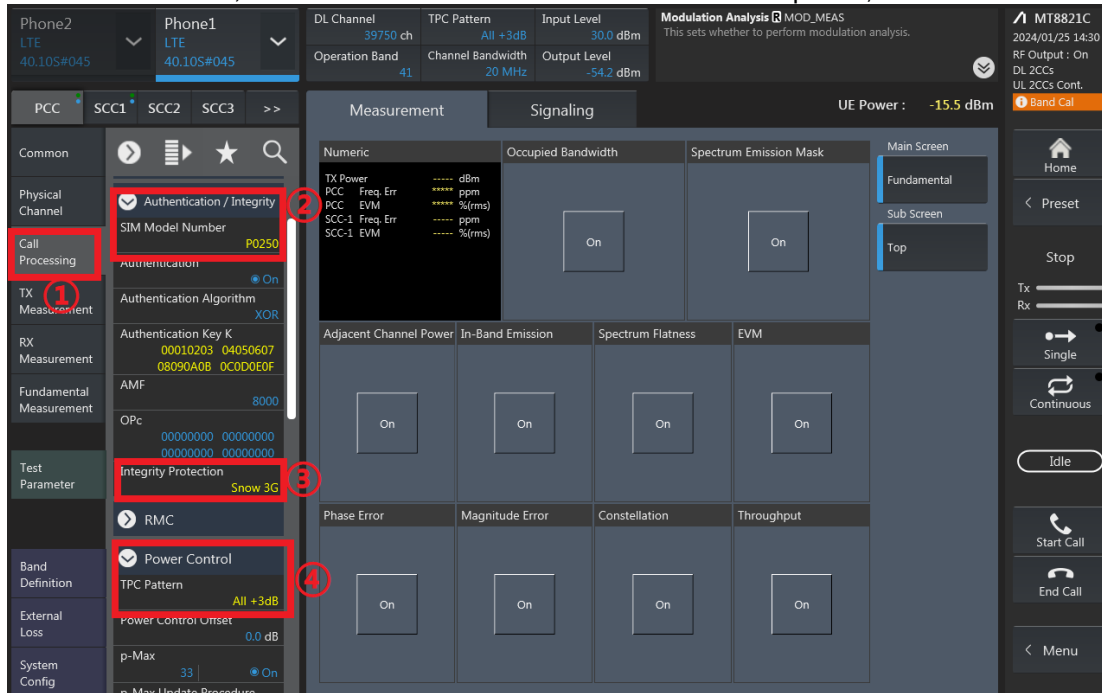
4. SCC parameter Settings: Select the SCC1 tab, Set operating band, BW, channel, and RB configurations for SCC1;



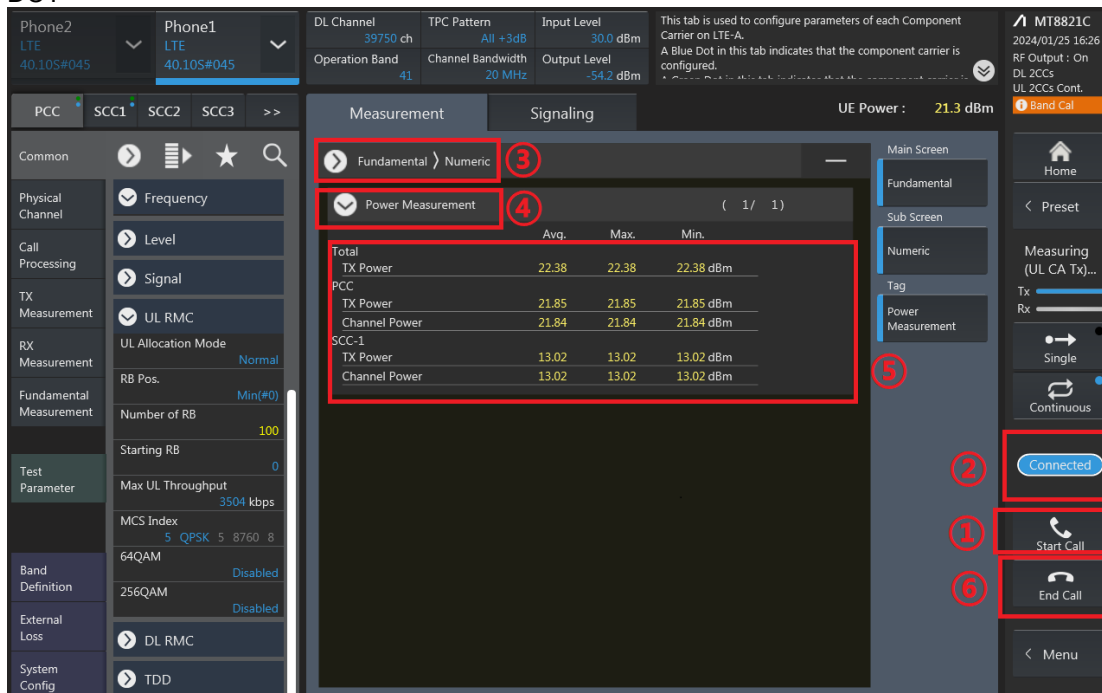
RB configurations (Number of RB / Starting RB) for SCC1;



5. Select the PCC tab, then set “SIM Model Number” and select max power;



6. Click the “Connect” button at the Right of the screen, if necessary, turn the Airplane mode on/off in the DUT



7. The inter-band ULCA test method is similar to intra-band ULCA, and DLCA test method is similar to intra-band ULCA too.

UL CA_Full Power

CA_7C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	24.25	24.70
21100	21298	QPSK	1	99	1	0	24.35	24.70
21350	21152	QPSK	1	0	1	99	24.21	24.70

CA_38C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	24.13	24.70
37901	38099	QPSK	1	99	1	0	24.25	24.70
38150	37952	QPSK	1	0	1	99	24.25	24.70

CA_7C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	23.65	24.60
21100	21298	QPSK	1	99	1	0	23.69	24.60
21350	21152	QPSK	1	0	1	99	23.59	24.60

CA_38C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	23.23	24.50
37901	38099	QPSK	1	99	1	0	23.45	24.50
38150	37952	QPSK	1	0	1	99	23.19	24.50

CA_7C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.31	24.00
21100	21298	QPSK	1	99	1	0	22.44	24.00
21350	21152	QPSK	1	0	1	99	22.29	24.00

CA_38C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	22.65	24.00
37901	38099	QPSK	1	99	1	0	22.73	24.00
38150	37952	QPSK	1	0	1	99	22.61	24.00

CA_7C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.65	23.80
21100	21298	QPSK	1	99	1	0	22.72	23.80
21350	21152	QPSK	1	0	1	99	22.63	23.80

CA_38C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	21.51	22.40
37901	38099	QPSK	1	99	1	0	21.56	22.40
38150	37952	QPSK	1	0	1	99	21.45	22.40

CA_41C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	24.09	24.70
40185	40383	QPSK	1	99	1	0	24.05	24.70
40620	40818	QPSK	1	99	1	0	24.15	24.70
41055	41253	QPSK	1	99	1	0	24.07	24.70
41490	41292	QPSK	1	0	1	99	24.03	24.70

CA_41C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	23.35	24.40
40185	40383	QPSK	1	99	1	0	23.21	24.40
40620	40818	QPSK	1	99	1	0	23.51	24.40
41055	41253	QPSK	1	99	1	0	23.11	24.40
41490	41292	QPSK	1	0	1	99	23.12	24.40

CA_41C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	22.73	24.00
40185	40383	QPSK	1	99	1	0	22.89	24.00
40620	40818	QPSK	1	99	1	0	22.97	24.00
41055	41253	QPSK	1	99	1	0	22.71	24.00
41490	41292	QPSK	1	0	1	99	22.95	24.00

CA_41C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	21.45	22.40
40185	40383	QPSK	1	99	1	0	21.35	22.40
40620	40818	QPSK	1	99	1	0	21.53	22.40
41055	41253	QPSK	1	99	1	0	21.38	22.40
41490	41292	QPSK	1	0	1	99	21.28	22.40

CA_42C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	24.03	24.70
42590	42788	QPSK	1	99	1	0	24.15	24.70
42990	42792	QPSK	1	0	1	99	24.01	24.70

CA_42C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	23.78	24.50
42590	42788	QPSK	1	99	1	0	23.89	24.50
42990	42792	QPSK	1	0	1	99	23.69	24.50

CA_42C Ant 9								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	23.81	25.00
42590	42788	QPSK	1	99	1	0	23.89	25.00
42990	42792	QPSK	1	0	1	99	23.75	25.00

CA_42C Ant 8								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	20.56	21.60
42590	42788	QPSK	1	99	1	0	20.65	21.60
42990	42792	QPSK	1	0	1	99	20.51	21.60

UL_CA_DSI 1 Power

CA_7C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	16.21	16.70
21100	21298	QPSK	1	99	1	0	16.30	16.70
21350	21152	QPSK	1	0	1	99	16.19	16.70

CA_38C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	18.65	19.20
37901	38099	QPSK	1	99	1	0	18.77	19.20
38150	37952	QPSK	1	0	1	99	18.73	19.20

CA_7C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	18.18	19.10
21100	21298	QPSK	1	99	1	0	18.22	19.10
21350	21152	QPSK	1	0	1	99	18.09	19.10

CA_38C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	18.69	20.00
37901	38099	QPSK	1	99	1	0	18.91	20.00
38150	37952	QPSK	1	0	1	99	18.61	20.00

CA_7C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.31	24.00
21100	21298	QPSK	1	99	1	0	22.44	24.00
21350	21152	QPSK	1	0	1	99	22.29	24.00

CA_38C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	22.65	24.00
37901	38099	QPSK	1	99	1	0	22.73	24.00
38150	37952	QPSK	1	0	1	99	22.61	24.00

CA_7C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	14.69	15.80
21100	21298	QPSK	1	99	1	0	14.76	15.80
21350	21152	QPSK	1	0	1	99	14.64	15.80

CA_38C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	15.53	16.40
37901	38099	QPSK	1	99	1	0	15.65	16.40
38150	37952	QPSK	1	0	1	99	15.48	16.40

CA_41C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	18.55	19.20
40185	40383	QPSK	1	99	1	0	18.59	19.20
40620	40818	QPSK	1	99	1	0	18.75	19.20
41055	41253	QPSK	1	99	1	0	18.43	19.20
41490	41292	QPSK	1	0	1	99	18.41	19.20

CA_41C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	19.31	20.40
40185	40383	QPSK	1	99	1	0	19.20	20.40
40620	40818	QPSK	1	99	1	0	19.55	20.40
41055	41253	QPSK	1	99	1	0	19.13	20.40
41490	41292	QPSK	1	0	1	99	19.08	20.40

CA_41C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	22.73	24.00
40185	40383	QPSK	1	99	1	0	22.89	24.00
40620	40818	QPSK	1	99	1	0	22.97	24.00
41055	41253	QPSK	1	99	1	0	22.71	24.00
41490	41292	QPSK	1	0	1	99	22.95	24.00

CA_41C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	15.45	16.40
40185	40383	QPSK	1	99	1	0	15.39	16.40
40620	40818	QPSK	1	99	1	0	15.59	16.40
41055	41253	QPSK	1	99	1	0	15.33	16.40
41490	41292	QPSK	1	0	1	99	15.29	16.40

CA_42C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	17.05	17.70
42590	42788	QPSK	1	99	1	0	17.25	17.70
42990	42792	QPSK	1	0	1	99	17.03	17.70

CA_42C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	18.21	19.00
42590	42788	QPSK	1	99	1	0	18.45	19.00
42990	42792	QPSK	1	0	1	99	18.15	19.00

CA_42C Ant 9								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	23.81	25.00
42590	42788	QPSK	1	99	1	0	23.89	25.00
42990	42792	QPSK	1	0	1	99	23.75	25.00

CA_42C Ant 8								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	17.13	18.10
42590	42788	QPSK	1	99	1	0	17.25	18.10
42990	42792	QPSK	1	0	1	99	17.21	18.10

UL CA_DSI 3 Power

CA_7C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	20.25	20.70
21100	21298	QPSK	1	99	1	0	20.45	20.70
21350	21152	QPSK	1	0	1	99	20.23	20.70

CA_38C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	22.56	23.20
37901	38099	QPSK	1	99	1	0	22.81	23.20
38150	37952	QPSK	1	0	1	99	22.75	23.20

CA_7C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	17.68	18.60
21100	21298	QPSK	1	99	1	0	17.78	18.60
21350	21152	QPSK	1	0	1	99	17.59	18.60

CA_38C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	19.13	20.50
37901	38099	QPSK	1	99	1	0	19.56	20.50
38150	37952	QPSK	1	0	1	99	19.11	20.50

CA_7C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	19.78	21.50
21100	21298	QPSK	1	99	1	0	19.95	21.50
21350	21152	QPSK	1	0	1	99	19.75	21.50

CA_38C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	22.65	24.00
37901	38099	QPSK	1	99	1	0	22.73	24.00
38150	37952	QPSK	1	0	1	99	22.61	24.00

CA_7C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	19.13	20.30
21100	21298	QPSK	1	99	1	0	19.25	20.30
21350	21152	QPSK	1	0	1	99	19.12	20.30

CA_38C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	20.45	21.40
37901	38099	QPSK	1	99	1	0	20.59	21.40
38150	37952	QPSK	1	0	1	99	20.49	21.40

CA_41C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	21.59	22.20
40185	40383	QPSK	1	99	1	0	21.55	22.20
40620	40818	QPSK	1	99	1	0	21.75	22.20
41055	41253	QPSK	1	99	1	0	21.45	22.20
41490	41292	QPSK	1	0	1	99	21.49	22.20

CA_41C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	19.31	20.40
40185	40383	QPSK	1	99	1	0	19.20	20.40
40620	40818	QPSK	1	99	1	0	19.55	20.40
41055	41253	QPSK	1	99	1	0	19.13	20.40
41490	41292	QPSK	1	0	1	99	19.08	20.40

CA_41C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	22.73	24.00
40185	40383	QPSK	1	99	1	0	22.89	24.00
40620	40818	QPSK	1	99	1	0	22.97	24.00
41055	41253	QPSK	1	99	1	0	22.71	24.00
41490	41292	QPSK	1	0	1	99	22.95	24.00

CA_41C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	20.49	21.40
40185	40383	QPSK	1	99	1	0	20.39	21.40
40620	40818	QPSK	1	99	1	0	20.56	21.40
41055	41253	QPSK	1	99	1	0	20.39	21.40
41490	41292	QPSK	1	0	1	99	20.28	21.40

CA_42C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	21.49	22.20
42590	42788	QPSK	1	99	1	0	21.75	22.20
42990	42792	QPSK	1	0	1	99	21.43	22.20

CA_42C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	19.75	20.50
42590	42788	QPSK	1	99	1	0	19.95	20.50
42990	42792	QPSK	1	0	1	99	19.83	20.50

CA_42C Ant 9								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	17.33	18.50
42590	42788	QPSK	1	99	1	0	17.51	18.50
42990	42792	QPSK	1	0	1	99	17.45	18.50

CA_42C Ant 8								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	20.13	21.10
42590	42788	QPSK	1	99	1	0	20.25	21.10
42990	42792	QPSK	1	0	1	99	20.11	21.10

UL CA_DSI 4 Power

CA_7C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	24.25	24.70
21100	21298	QPSK	1	99	1	0	24.35	24.70
21350	21152	QPSK	1	0	1	99	24.21	24.70

CA_38C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	24.13	24.70
37901	38099	QPSK	1	99	1	0	24.25	24.70
38150	37952	QPSK	1	0	1	99	24.25	24.70

CA_7C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	17.68	18.60
21100	21298	QPSK	1	99	1	0	17.78	18.60
21350	21152	QPSK	1	0	1	99	17.59	18.60

CA_38C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	19.13	20.50
37901	38099	QPSK	1	99	1	0	19.56	20.50
38150	37952	QPSK	1	0	1	99	19.11	20.50

CA_7C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	22.31	24.00
21100	21298	QPSK	1	99	1	0	22.44	24.00
21350	21152	QPSK	1	0	1	99	22.29	24.00

CA_38C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	22.65	24.00
37901	38099	QPSK	1	99	1	0	22.73	24.00
38150	37952	QPSK	1	0	1	99	22.61	24.00

CA_7C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	19.13	20.30
21100	21298	QPSK	1	99	1	0	19.25	20.30
21350	21152	QPSK	1	0	1	99	19.12	20.30

CA_38C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	15.53	16.40
37901	38099	QPSK	1	99	1	0	15.65	16.40
38150	37952	QPSK	1	0	1	99	15.48	16.40

CA_41C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	24.09	24.70
40185	40383	QPSK	1	99	1	0	24.05	24.70
40620	40818	QPSK	1	99	1	0	24.15	24.70
41055	41253	QPSK	1	99	1	0	24.07	24.70
41490	41292	QPSK	1	0	1	99	24.03	24.70

CA_41C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	19.31	20.40
40185	40383	QPSK	1	99	1	0	19.20	20.40
40620	40818	QPSK	1	99	1	0	19.55	20.40
41055	41253	QPSK	1	99	1	0	19.13	20.40
41490	41292	QPSK	1	0	1	99	19.08	20.40

CA_41C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	22.73	24.00
40185	40383	QPSK	1	99	1	0	22.89	24.00
40620	40818	QPSK	1	99	1	0	22.97	24.00
41055	41253	QPSK	1	99	1	0	22.71	24.00
41490	41292	QPSK	1	0	1	99	22.95	24.00

CA_41C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	20.49	21.40
40185	40383	QPSK	1	99	1	0	20.39	21.40
40620	40818	QPSK	1	99	1	0	20.56	21.40
41055	41253	QPSK	1	99	1	0	20.39	21.40
41490	41292	QPSK	1	0	1	99	20.28	21.40

CA_42C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	24.03	24.70
42590	42788	QPSK	1	99	1	0	24.15	24.70
42990	42792	QPSK	1	0	1	99	24.01	24.70

CA_42C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	18.21	19.00
42590	42788	QPSK	1	99	1	0	18.45	19.00
42990	42792	QPSK	1	0	1	99	18.15	19.00

CA_42C Ant 9								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	23.81	25.00
42590	42788	QPSK	1	99	1	0	23.89	25.00
42990	42792	QPSK	1	0	1	99	23.75	25.00

CA_42C Ant 8								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	20.13	21.10
42590	42788	QPSK	1	99	1	0	20.25	21.10
42990	42792	QPSK	1	0	1	99	20.11	21.10

UL CA_DSI 5 Power

CA_7C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	16.21	16.70
21100	21298	QPSK	1	99	1	0	16.30	16.70
21350	21152	QPSK	1	0	1	99	16.19	16.70

CA_38C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	18.65	19.20
37901	38099	QPSK	1	99	1	0	18.77	19.20
38150	37952	QPSK	1	0	1	99	18.73	19.20

CA_7C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	17.68	18.60
21100	21298	QPSK	1	99	1	0	17.78	18.60
21350	21152	QPSK	1	0	1	99	17.59	18.60

CA_38C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	18.69	20.00
37901	38099	QPSK	1	99	1	0	18.91	20.00
38150	37952	QPSK	1	0	1	99	18.61	20.00

CA_7C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	19.78	21.50
21100	21298	QPSK	1	99	1	0	19.95	21.50
21350	21152	QPSK	1	0	1	99	19.75	21.50

CA_38C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	22.65	24.00
37901	38099	QPSK	1	99	1	0	22.73	24.00
38150	37952	QPSK	1	0	1	99	22.61	24.00

CA_7C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
20850	21048	QPSK	1	99	1	0	14.69	15.80
21100	21298	QPSK	1	99	1	0	14.76	15.80
21350	21152	QPSK	1	0	1	99	14.64	15.80

CA_38C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
37850	38048	QPSK	1	99	1	0	15.53	16.40
37901	38099	QPSK	1	99	1	0	15.65	16.40
38150	37952	QPSK	1	0	1	99	15.48	16.40

CA_41C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	18.55	19.20
40185	40383	QPSK	1	99	1	0	18.59	19.20
40620	40818	QPSK	1	99	1	0	18.75	19.20
41055	41253	QPSK	1	99	1	0	18.43	19.20
41490	41292	QPSK	1	0	1	99	18.41	19.20

CA_41C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	19.31	20.40
40185	40383	QPSK	1	99	1	0	19.20	20.40
40620	40818	QPSK	1	99	1	0	19.55	20.40
41055	41253	QPSK	1	99	1	0	19.13	20.40
41490	41292	QPSK	1	0	1	99	19.08	20.40

CA_41C Ant 3								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	22.73	24.00
40185	40383	QPSK	1	99	1	0	22.89	24.00
40620	40818	QPSK	1	99	1	0	22.97	24.00
41055	41253	QPSK	1	99	1	0	22.71	24.00
41490	41292	QPSK	1	0	1	99	22.95	24.00

CA_41C Ant 6								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
39750	39948	QPSK	1	99	1	0	15.45	16.40
40185	40383	QPSK	1	99	1	0	15.39	16.40
40620	40818	QPSK	1	99	1	0	15.59	16.40
41055	41253	QPSK	1	99	1	0	15.33	16.40
41490	41292	QPSK	1	0	1	99	15.29	16.40

CA_42C Ant 4								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	17.05	17.70
42590	42788	QPSK	1	99	1	0	17.25	17.70
42990	42792	QPSK	1	0	1	99	17.03	17.70

CA_42C Ant 5								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	18.21	19.00
42590	42788	QPSK	1	99	1	0	18.45	19.00
42990	42792	QPSK	1	0	1	99	18.15	19.00

CA_42C Ant 9								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	17.33	18.50
42590	42788	QPSK	1	99	1	0	17.51	18.50
42990	42792	QPSK	1	0	1	99	17.45	18.50

CA_42C Ant 8								
Combination 20MHz+20MHz (100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset		
42190	42388	QPSK	1	99	1	0	17.13	18.10
42590	42788	QPSK	1	99	1	0	17.25	18.10
42990	42792	QPSK	1	0	1	99	17.21	18.10

DL 4X4 MIMO Power

csae	LTE bands	Modulation	BW (MHz)	Ch.	Freq. (MHz)	RB offset	LTE Rel 8 TX.power (dBm)	DL 4X4 MIMO TX.power (dBm)	Delta
1	LTE Band 2	QPSK	20M	18900	1880	1/0	23.93	23.87	0.06
2	LTE Band 4	QPSK	20M	20175	1732.5	1/0	24.89	24.72	0.17
3	LTE Band 7	QPSK	20M	21100	2535	1/0	25.03	24.92	0.11
4	LTE Band 25	QPSK	20M	26340	1880	1/0	24.02	23.88	0.14
5	LTE Band 66	QPSK	20M	132322	1745	1/0	23.95	23.82	0.13
6	LTE Band 38	QPSK	20M	38000	2595	1/0	25.11	25	0.11
7	LTE Band 41	QPSK	20M	40620	2593	1/0	25.14	25.01	0.13
8	LTE Band 42	QPSK	20M	42590	3500	1/0	24.92	24.9	0.02
9	LTE Band 48	QPSK	20M	55830	3609	1/0	23.29	23.17	0.12

2CA DL																
CA List	PCC								SCC				Power			
	LTE	BW	BW	UL	UL	Mod.	UL#	UL	DL Antenna Configuration	LTE	BW	DL	DL	DL Antenna Configuration	With CA	Without CA
	Band	Ant	Ant (MHz)	Freq. (MHz)	Channel		RB	RB Offset		Band	(MHz)	Freq. (MHz)	Channel		Tx. Power (dBm)	Tx. Power (dBm)
CA_2A-2A	Band 2	Ant 4	20M	1880	18800	QPSK	1	0	4X4 MIMO	Band 2	5M	1987.5	1175	4X4 MIMO	23.75	23.93
	Band 2	Ant 5	20M	1880	18800	QPSK	1	0	4X4 MIMO	Band 2	5M	1987.5	1175	4X4 MIMO	23.35	23.57
CA_2A-26A	Band 2	Ant 4	20M	1880	18800	QPSK	1	0	4X4 MIMO	Band 26	15M	876.5	8865		23.87	23.93
	Band 2	Ant 5	20M	1880	18800	QPSK	1	0	4X4 MIMO	Band 26	15M	876.5	8865		23.39	23.57
CA_2A-38A	Band 26	Ant 0	15M	831.5	26865	QPSK	1	0		Band 2	20M	1960	900	4X4 MIMO	25.10	25.20
	Band 2	Ant 1	15M	831.5	26865	QPSK	1	0		Band 2	20M	1960	900	4X4 MIMO	24.53	24.57
	Band 2	Ant 4	20M	1880	18800	QPSK	1	0	4X4 MIMO	Band 38	20M	2595	38000	4X4 MIMO	23.78	23.93
	Band 2	Ant 5	20M	1880	18800	QPSK	1	0	4X4 MIMO	Band 38	20M	2595	38000	4X4 MIMO	23.45	23.57
	Band 38	Ant 3	20M	2595	38000	QPSK	1	0	4X4 MIMO	Band 2	20M	1960	900	4X4 MIMO	24.05	24.11
	Band 38	Ant 4	20M	2595	38000	QPSK	1	0	4X4 MIMO	Band 2	20M	1960	900	4X4 MIMO	25.05	25.11
CA_4A-5A	Band 38	Ant 5	20M	2595	38000	QPSK	1	0	4X4 MIMO	Band 2	20M	1960	900	4X4 MIMO	24.56	24.65
	Band 38	Ant 6	20M	2595	38000	QPSK	1	0	4X4 MIMO	Band 2	20M	1960	900	4X4 MIMO	23.35	23.44
	Band 4	Ant 3	20M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 5	10M	881.5	2525		24.89	24.95
	Band 4	Ant 4	20M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 5	10M	881.5	2525		24.81	24.89
	Band 4	Ant 5	20M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 5	10M	881.5	2525		24.41	24.42
	Band 4	Ant 6	20M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 5	10M	881.5	2525		23.25	23.33
CA_4A-17A	Band 5	Ant 0	10M	836.5	20525	QPSK	1	0		Band 4	20M	2132.5	2175	4X4 MIMO	25.18	25.21
	Band 5	Ant 1	10M	836.5	20525	QPSK	1	0		Band 4	20M	2132.5	2175	4X4 MIMO	24.25	24.31
	Band 4	Ant 3	10M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 17	10M	740	5790		24.83	24.95
	Band 4	Ant 4	10M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 17	10M	740	5790		24.78	24.89
	Band 4	Ant 5	10M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 17	10M	740	5790		24.26	24.42
	Band 4	Ant 6	10M	1732.5	20175	QPSK	1	0	4X4 MIMO	Band 17	10M	740	5790		23.26	23.33
CA_7A-26A	Band 17	Ant 0	10M	710	23790	QPSK	1	0		Band 4	10M	2132.5	2175	4X4 MIMO	24.65	24.80
	Band 17	Ant 1	10M	710	23790	QPSK	1	0		Band 4	10M	2132.5	2175	4X4 MIMO	23.96	24.10
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4X4 MIMO	Band 26	15M	876.5	8865		23.78	23.87
	Band 7	Ant 4	20M	2535	21100	QPSK	1	0	4X4 MIMO	Band 26	15M	876.5	8865		24.98	25.03
	Band 7	Ant 5	20M	2535	21100	QPSK	1	0	4X4 MIMO	Band 26	15M	876.5	8865		24.65	24.72
	Band 7	Ant 6	20M	2535	21100	QPSK	1	0	4X4 MIMO	Band 26	15M	876.5	8865		22.95	23.00
CA_26A-38A	Band 26	Ant 0	15M	831.5	26865	QPSK	1	0		Band 7	20M	2655	3100	4X4 MIMO	25.11	25.20
	Band 26	Ant 1	15M	831.5	26865	QPSK	1	0		Band 7	20M	2655	3100	4X4 MIMO	24.53	24.57
CA_26A-41A	Band 26	Ant 0	15M	831.5	26865	QPSK	1	0		Band 38	20M	2595	38000	4X4 MIMO	25.15	25.20
	Band 26	Ant 1	15M	831.5	26865	QPSK	1	0		Band 38	20M	2595	38000	4X4 MIMO	24.53	24.57
CA_38C	Band 26	Ant 0	15M	831.5	26865	QPSK	1	0		Band 41	20M	2593	40620	4X4 MIMO	25.12	25.20
	Band 26	Ant 1	15M	831.5	26865	QPSK	1	0		Band 41	20M	2593	40620	4X4 MIMO	24.51	24.57
	Band 38	Ant 3	20M	2580	37850	QPSK	1	0	4X4 MIMO	Band 38	20M	2599.8	38048	4X4 MIMO	24.05	24.11
	Band 38	Ant 4	20M	2580	37850	QPSK	1	0	4X4 MIMO	Band 38	20M	2599.8	38048	4X4 MIMO	25.03	25.11
	Band 38	Ant 5	20M	2580	37850	QPSK	1	0	4X4 MIMO	Band 38	20M	2599.8	38048	4X4 MIMO	24.61	24.65
	Band 38	Ant 6	20M	2580	37850	QPSK	1	0	4X4 MIMO	Band 38	20M	2599.8	38048	4X4 MIMO	23.39	23.44
CA_41C	Band 41	Ant 3	20M	2593	40620	QPSK	1	0	4X4 MIMO	Band 41	20M	2612.8	40818	4X4 MIMO	24.05	24.10
	Band 41	Ant 4	20M	2593	40620	QPSK	1	0	4X4 MIMO	Band 41	20M	2612.8	40818	4X4 MIMO	25.07	25.14
	Band 41	Ant 5	20M	2593	40620	QPSK	1	0	4X4 MIMO	Band 41	20M	2612.8	40818	4X4 MIMO	24.38	24.42
	Band 41	Ant 6	20M	2593	40620	QPSK	1	0	4X4 MIMO	Band 41	20M	2612.8	40818	4X4 MIMO	23.45	23.51
	Band 42	Ant 4	20M	3500	42590	QPSK	1	0	4X4 MIMO	Band 42	20M	3519.8	42788	4X4 MIMO	24.85	24.92
	Band 42	Ant 5	20M	3500	42590	QPSK	1	0	4X4 MIMO	Band 42	20M	3519.8	42788	4X4 MIMO	24.69	24.79
CA_42C	Band 42	Ant 8	20M	3500	42590	QPSK	1	0	4X4 MIMO	Band 42	20M	3519.8	42788	4X4 MIMO	21.05	21.09
	Band 42	Ant 9	20M	3500	42590	QPSK	1	0	4X4 MIMO	Band 42	20M	3519.8	42788	4X4 MIMO	24.31	24.39
CA_66B	Band 66	Ant 3	15M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	5M	2164.3	66979	4X4 MIMO	24.01	24.13
	Band 66	Ant 4	15M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	5M	2164.3	66979	4X4 MIMO	23.85	23.95
	Band 66	Ant 5	15M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	5M	2164.3	66979	4X4 MIMO	23.59	23.60
	Band 66	Ant 6	15M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	5M	2164.3	66979	4X4 MIMO	23.35	23.41
	Band 66	Ant 3	20M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	20M	2164.8	66984	4X4 MIMO	24.01	24.13
	Band 66	Ant 4	20M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	20M	2164.8	66984	4X4 MIMO	23.75	23.95
CA_66C	Band 66	Ant 5	20M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	20M	2164.8	66984	4X4 MIMO	23.58	23.60
	Band 66	Ant 6	20M	1745	132322	QPSK	1	0	4X4 MIMO	Band 66	20M	2164.8	66984	4X4 MIMO	23.39	23.41

3CA DL

3CA List	PCC							SCC1					SCC2					Power			
	LTE	BW	BW	UL	UL	Mod.	UL# RB	UL RB Offset	DL Antenna Configuration	LTE	BW	DL	DL Antenna Configuration	LTE	BW	DL	DL Antenna Configuration	With CA	Without CA		
	Band	Ant	(MHz)	Freq. (MHz)	Channel					Band	(MHz)	Freq. (MHz)		Channel	Band	(MHz)		Freq. (MHz)	Channel	Tx Power (dBm)	Tx Power (dBm)
CA_2A-4A-5A	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 5	10M	881.5	2525	23.89	23.93	
	Band 2	Ant 5	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 5	10M	881.5	2525	23.51	23.57	
	Band 4	Ant 3	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 5	10M	881.5	2525	Band 2	20M	1960	900	4x4 MIMO	24.85	24.95	
	Band 4	Ant 4	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 5	10M	881.5	2525	Band 2	20M	1960	900	4x4 MIMO	24.71	24.89	
	Band 4	Ant 5	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 5	10M	881.5	2525	Band 2	20M	1960	900	4x4 MIMO	24.21	24.42	
	Band 4	Ant 6	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 5	10M	881.5	2525	Band 2	20M	1960	900	4x4 MIMO	23.15	23.33	
	Band 5	Ant 0	10M	836.5	20525	QPSK	1	0		Band 2	20M	1960	900	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	25.13	25.21
CA_2A-4A-7A	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	23.85	23.93
	Band 2	Ant 5	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	23.45	23.57
	Band 4	Ant 3	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.85	24.95
	Band 4	Ant 4	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.81	24.89
	Band 4	Ant 5	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.41	24.42
	Band 4	Ant 6	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	23.23	23.33
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	23.85	23.87
CA_2A-5A-7A	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 5	10M	881.5	2525	Band 7	20M	2655	3100	4x4 MIMO	23.86	23.93	
	Band 2	Ant 5	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 5	10M	881.5	2525	Band 7	20M	2655	3100	4x4 MIMO	23.51	23.57	
	Band 5	Ant 0	10M	836.5	20525	QPSK	1	0		Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	25.06	25.21
	Band 5	Ant 1	10M	836.5	20525	QPSK	1	0		Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.25	24.31
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 5	10M	881.5	2525	23.72	23.87	
	Band 7	Ant 4	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 5	10M	881.5	2525	24.83	25.03	
	Band 7	Ant 5	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 5	10M	881.5	2525	24.50	24.72	
CA_2A-7A-66A	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	23.87	23.93
	Band 2	Ant 5	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	23.51	23.57
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	23.86	23.87
	Band 7	Ant 4	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	24.85	25.03
	Band 7	Ant 5	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	24.56	24.72
	Band 7	Ant 6	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	22.79	23.00
	Band 66	Ant 3	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.11	24.13
CA_2A-7A-7A	Band 66	Ant 4	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	23.85	23.86
	Band 66	Ant 5	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	23.56	23.60
	Band 66	Ant 6	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	23.35	23.41
	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 7	SA	2687.5	3425	4x4 MIMO	23.87	23.93
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	SA	2687.5	3425	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	23.63	23.87
	Band 7	Ant 4	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	SA	2687.5	3425	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.86	25.03
	Band 7	Ant 5	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	SA	2687.5	3425	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.58	24.72
CA_2A-7C	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	23.91	23.93
	Band 2	Ant 5	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	23.45	23.57
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	23.86	23.87
	Band 7	Ant 4	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.90	25.03
	Band 7	Ant 5	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	24.58	24.72
	Band 7	Ant 6	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	22.78	23.00
	Band 7	Ant 6	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	Band 2	20M	1960	900	4x4 MIMO	22.78	23.00
CA_2C-66A	Band 2	Ant 4	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	23.81	23.93
	Band 2	Ant 5	20M	1880	18900	QPSK	1	0	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	Band 66	20M	2155	66886	4x4 MIMO	23.45	23.57
	Band 66	Ant 3	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 2	20M	1980	900	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	24.11	24.13
	Band 66	Ant 4	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 2	20M	1980	900	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	23.85	23.86
	Band 66	Ant 5	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 2	20M	1980	900	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	23.56	23.60
	Band 66	Ant 6	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 2	20M	1980	900	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	23.35	23.41
	Band 66	Ant 6	20M	1745	132322	QPSK	1	0	4x4 MIMO	Band 2	20M	1980	900	4x4 MIMO	Band 2	20M	1979.8	1098	4x4 MIMO	23.35	23.41
CA_4A-4A-7A	Band 4	Ant 3	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	24.86	24.95
	Band 4	Ant 4	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	24.75	24.89
	Band 4	Ant 5	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	24.38	24.42
	Band 4	Ant 6	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	23.23	23.33
	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	23.67	23.87
CA_4A-7C	Band 7	Ant 3	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	24.79	25.03
	Band 7	Ant 4	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	24.51	24.72
	Band 7	Ant 5	20M	2535	21100	QPSK	1	0	4x4 MIMO	Band 4	20M	2132.5	2175	4x4 MIMO	Band 4	SA	2152.5	2375	4x4 MIMO	22.82	23.00
	Band 4	Ant 3	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 7	20M	2655	3100	4x4 MIMO	Band 7	20M	2554.8	3298	4x4 MIMO	24.81	24.95
	Band 4	Ant 4	20M	1732.5	20175	QPSK	1	0	4x4 MIMO	Band 7	20M										