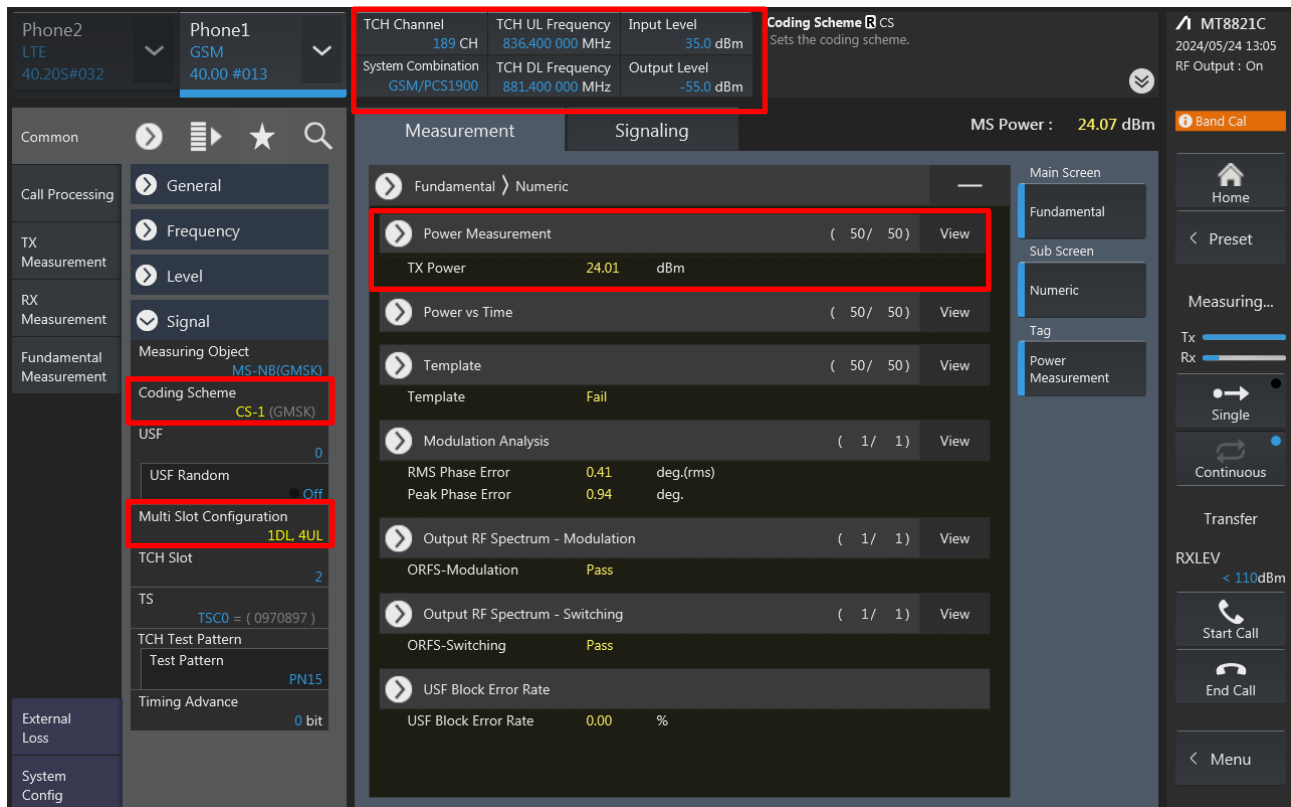


Power measurement connection diagram:

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.

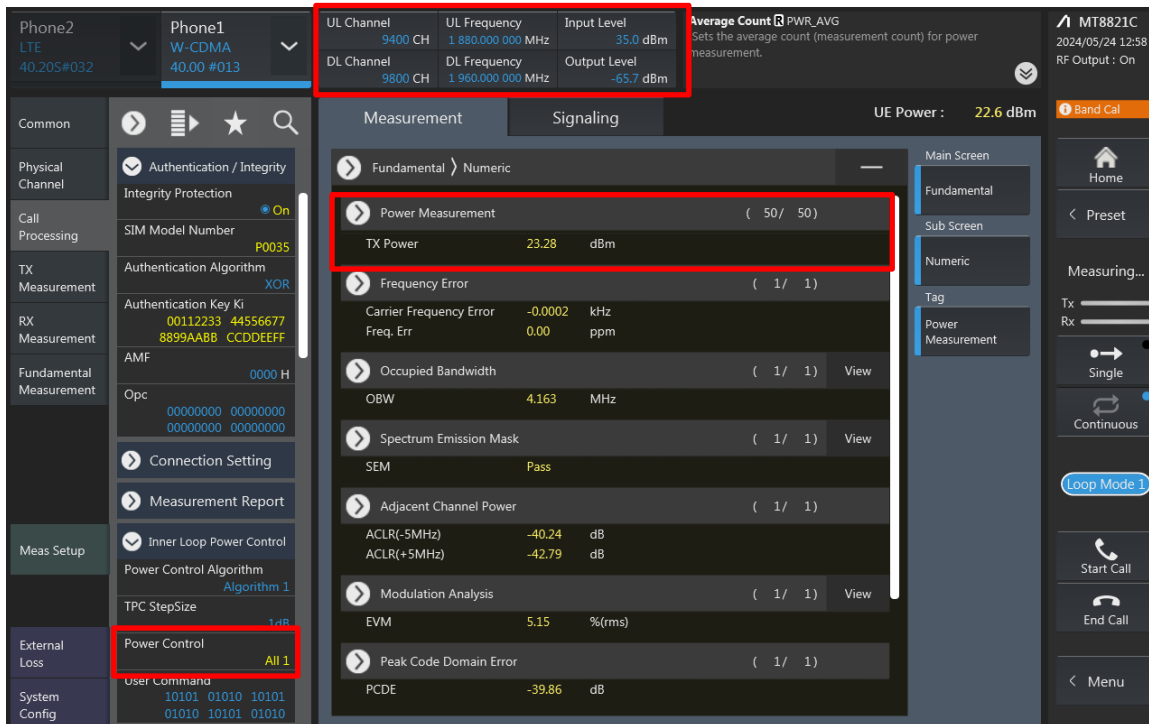
<GSM>



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

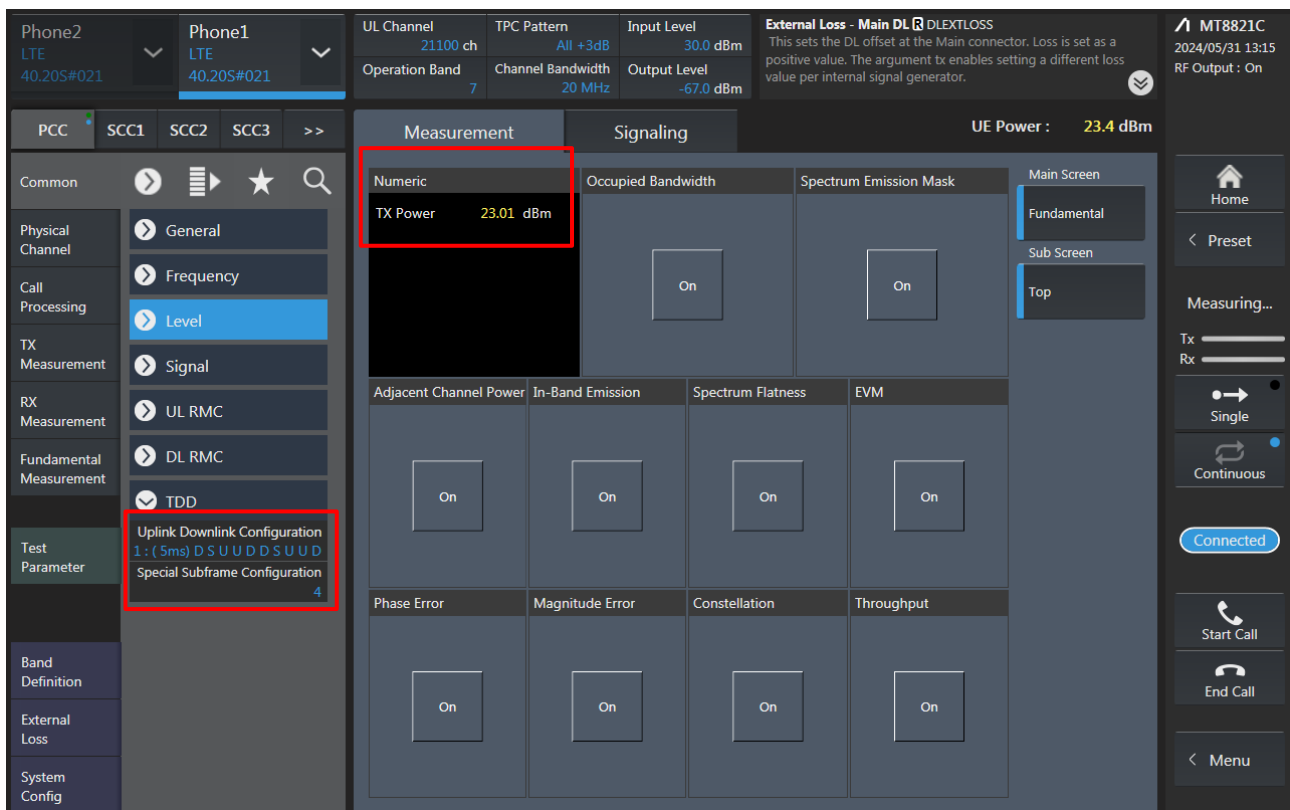
- Top Bar:** Shows Phone2 (LTE, 40.205#032) and Phone1 (GSM, 40.00 #013). The TCH Channel is 189 CH, TCH UL Frequency is 836.400 000 MHz, Input Level is 35.0 dBm, and TCH DL Frequency is 881.400 000 MHz. The Coding Scheme is CS.
- Left Sidebar:** Contains navigation options like Common, Call Processing, 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 shows 'TX Power' as 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 'MT8821C' with a timestamp of 2024/05/24 13:05 and 'RF Output : On'. It also includes a 'Band Cal' button and a 'Main Screen' section with 'Fundamental', 'Sub Screen', 'Numeric', and 'Tag' options.

<WCDMA>



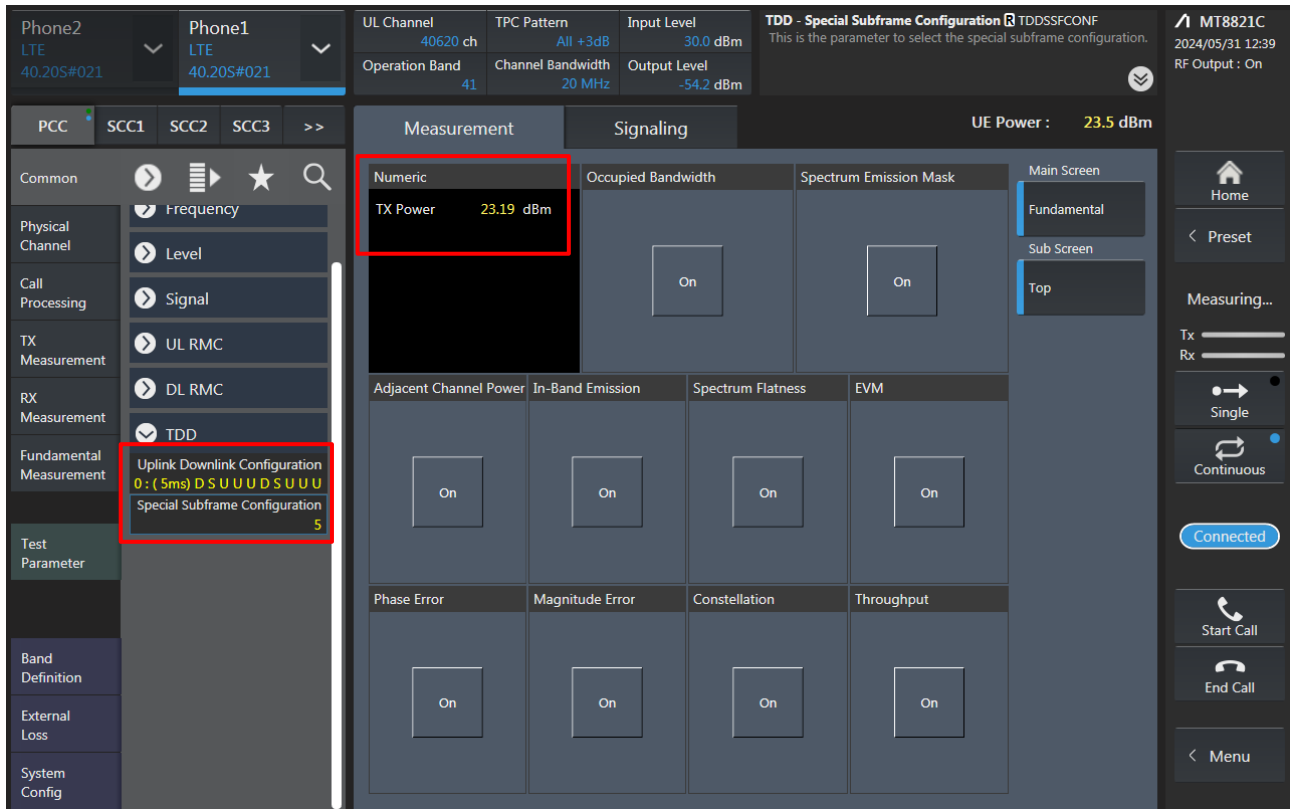
The screenshot shows the WCDMA measurement interface. The top bar displays 'Phone2 LTE 40.20S#032' and 'Phone1 W-CDMA 40.00 #013'. The 'Measurement' tab is active, showing 'Fundamental' and 'Numeric' views. The 'Power Measurement' section is highlighted with a red box, showing 'TX Power' as 23.28 dBm. 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 'Physical Channel' section shows 'Authentication / Integrity' and 'Integrity Protection' as 'On'. The 'Call Processing' section shows 'SIM Model Number' as 'P0035'. The 'TX Measurement' section shows 'Authentication Algorithm' as 'XOR'. The 'RX Measurement' section shows 'Authentication Key Ki' as '00112233 44556677 8899AABB CCDDDEFF' and 'AMF' as '0000 H'. The 'Fundamental Measurement' section shows 'Opc' as '00000000 00000000 00000000 00000000'. The 'Meas Setup' section shows 'Inner Loop Power Control' as 'On' and 'Power Control Algorithm' as 'Algorithm 1'. The 'External Loss' section shows 'Power Control' as 'All 1'. The 'System Config' section shows 'User Command' as '10101 01010 10101 01010 10101 01010 01010 01010'. The 'MT8821C' section shows '2024/05/24 12:58' and 'RF Output : On'.

<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 'TX Power' is 23.01 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 23.4 dBm. The 'Physical Channel' section shows 'General' and 'Frequency' as 'On'. The 'Call Processing' section shows 'Level' as 'On'. The 'TX Measurement' section shows 'Signal' as 'On'. The 'RX Measurement' section shows 'UL RMC' as 'On' and 'DL RMC' as 'On'. The 'Fundamental Measurement' section shows 'TDD' as 'On'. The 'Test Parameter' section shows 'Uplink Downlink Configuration 1: (5ms) D S U U D D S U U D' and 'Special Subframe Configuration' as '4'. The 'Band Definition' section shows 'Band' as '4'. The 'External Loss' section shows 'External Loss - Main DL' as 'DLEXTLOSS'. The 'System Config' section shows 'User Command' as '10101 01010 10101 01010 01010 01010 01010 01010'. The 'MT8821C' section shows '2024/05/31 13:15' and 'RF Output : On'.

<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

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

UE Power : 23.5 dBm

Measurement Signaling

Numeric TX Power 23.19 dBm

Occupied Bandwidth Spectrum Emission Mask

On On

Adjacent Channel Power In-Band Emission Spectrum Flatness EVM

On On On On

Phase Error Magnitude Error Constellation Throughput

On On On On

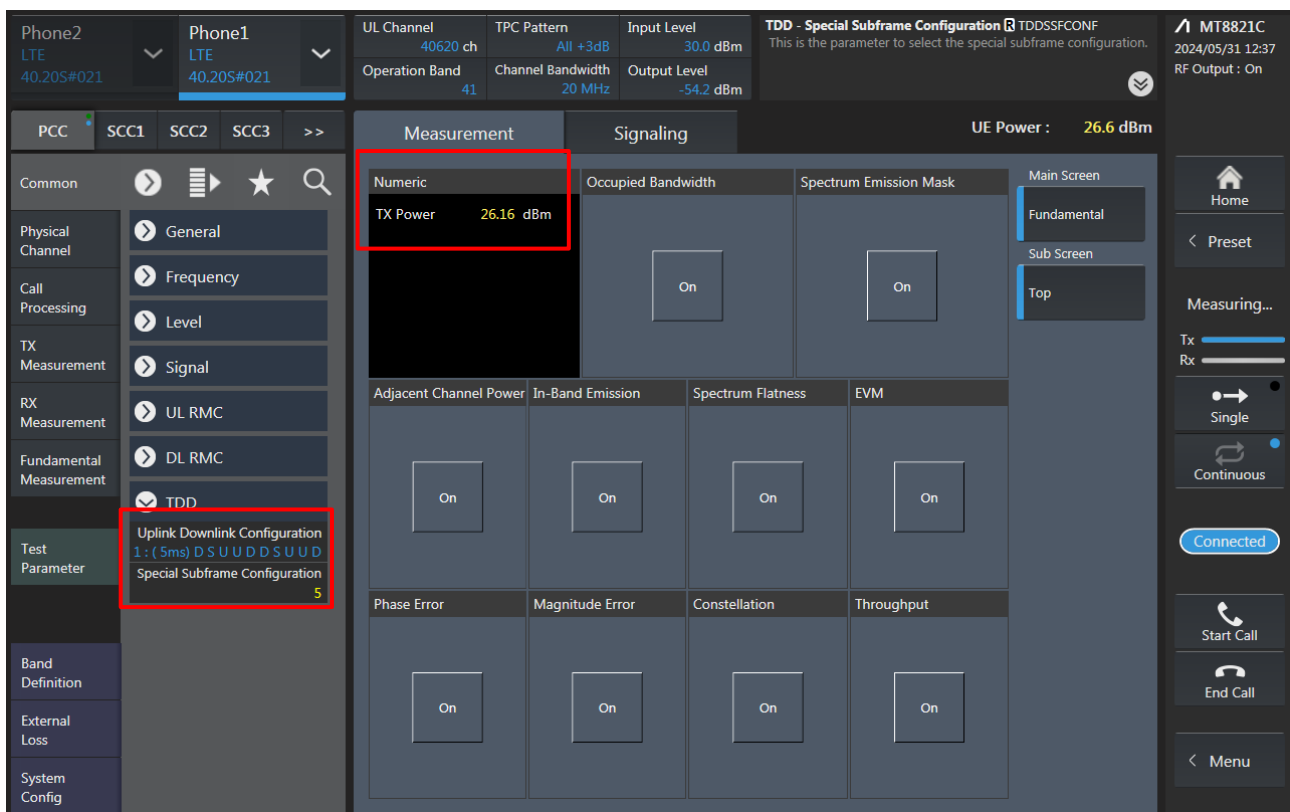
Common Frequency Level Signal UL RMC DL RMC TDD Uplink Downlink Configuration 0 : (5ms) D S U U U D S U U U Special Subframe Configuration 5

Physical Channel Call Processing TX Measurement RX Measurement Fundamental Measurement Test Parameter Band Definition External Loss System Config

Main Screen Fundamental Sub Screen Top

Home Preset Measuring... Tx Rx Single Continuous Connected Start Call End Call Menu

<LTE TDD Power class 2>



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 12:37 RF Output : On

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

UE Power : 26.6 dBm

Measurement Signaling

Numeric TX Power 26.16 dBm

Occupied Bandwidth Spectrum Emission Mask

On On

Adjacent Channel Power In-Band Emission Spectrum Flatness EVM

On On On On

Phase Error Magnitude Error Constellation Throughput

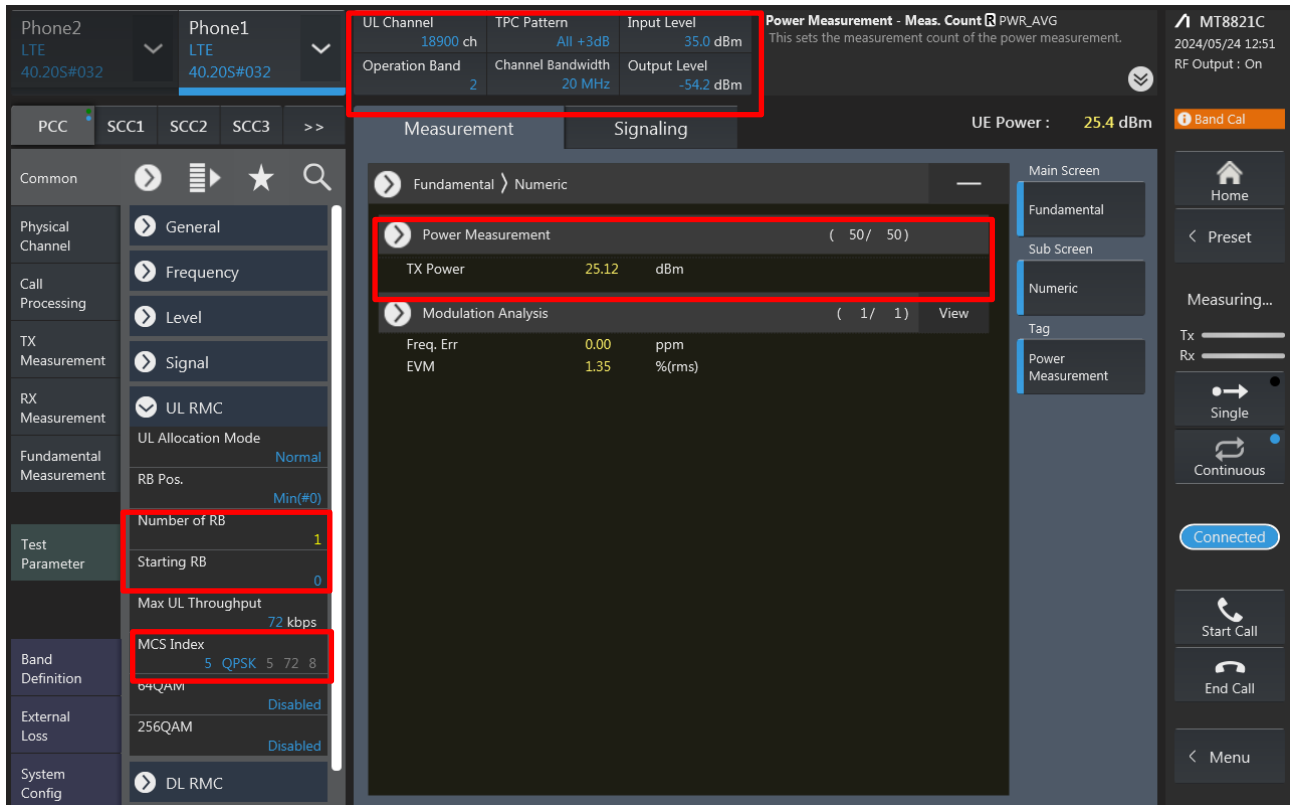
On On On On

Common General Frequency Level Signal UL RMC DL RMC TDD Uplink Downlink Configuration 1 : (5ms) D S U U U D D S U U U Special Subframe Configuration 5

Physical Channel Call Processing TX Measurement RX Measurement Fundamental Measurement Test Parameter Band Definition External Loss System Config

Main Screen Fundamental Sub Screen Top

Home Preset Measuring... Tx Rx Single Continuous Connected Start Call End Call Menu



Phone2 LTE 40.20S#032 Phone1 LTE 40.20S#032

UL Channel 18900 ch TPC Pattern All +3dB Input Level 35.0 dBm
Operation Band 2 Channel Bandwidth 20 MHz Output Level -54.2 dBm

Power Measurement - Meas. Count PWR_AVG
This sets the measurement count of the power measurement.

MT8821C 2024/05/24 12:51 RF Output : On

PCC SCC1 SCC2 SCC3 >>

Measurement Signaling

UE Power : 25.4 dBm

Common

Physical Channel

Call Processing

TX Measurement

RX Measurement

Fundamental Measurement

Test Parameter

Band Definition

External Loss

System Config

General

Frequency

Level

Signal

UL RMC

UL Allocation Mode Normal

RB Pos. Min(#0)

Number of RB 1

Starting RB 0

Max UL Throughput 72 kbps

MCS Index 5 QPSK 5 72 8

DL RMC

Fundamental

Numeric

Power Measurement (50 / 50)

TX Power 25.12 dBm

Modulation Analysis (1 / 1) View

Freq. Err 0.00 ppm

EVM 1.35 %rms

Main Screen

Fundamental

Sub Screen

Numeric

Tag

Power Measurement

Home

Preset

Measuring...

Tx

Rx

Single

Continuous

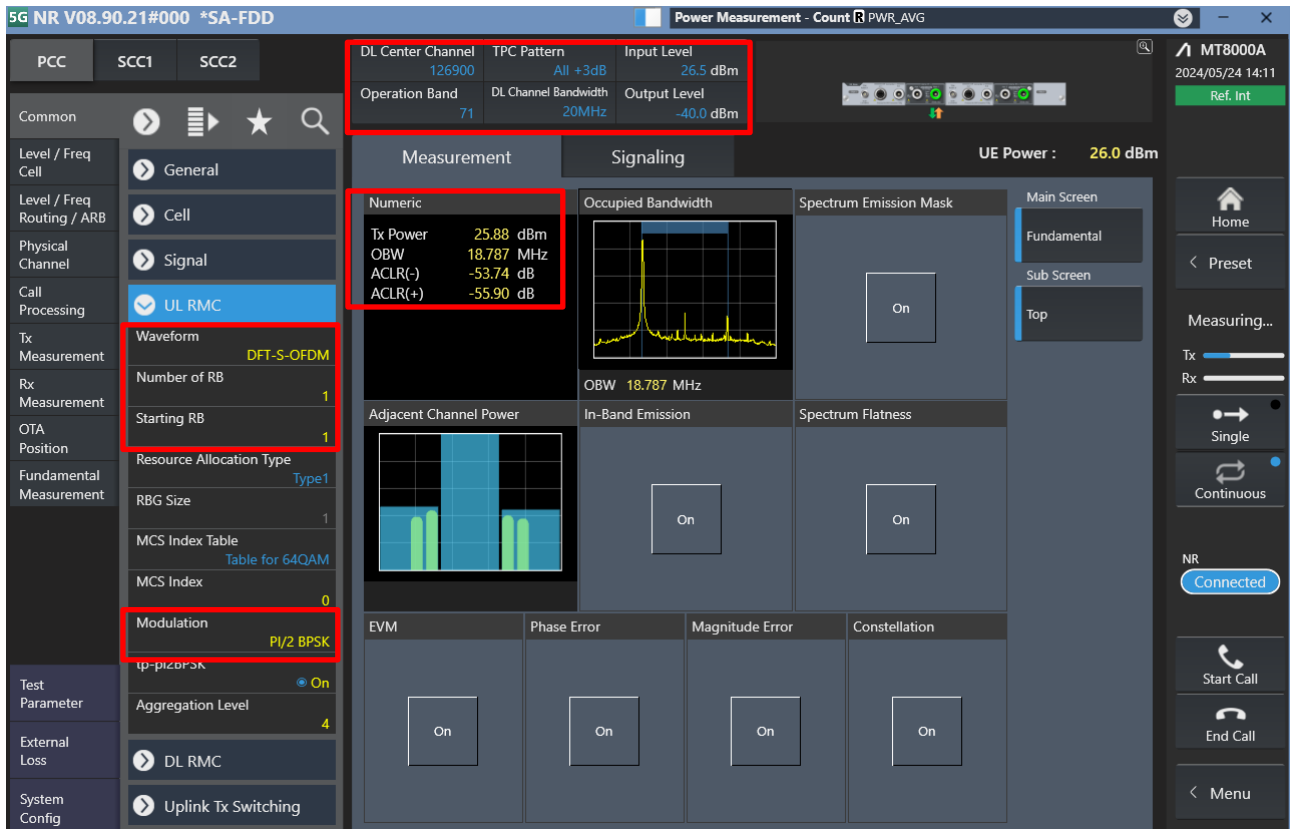
Connected

Start Call

End Call

Menu

<5G NR FR1>



5G NR V08.90.21#000 *SA-FDD

Power Measurement - Count PWR_AVG

MT8000A 2024/05/24 14:11 Ref. Int

PCC SCC1 SCC2

DL Center Channel 126900 TPC Pattern All +3dB Input Level 26.5 dBm
Operation Band 71 DL Channel Bandwidth 20MHz Output Level -40.0 dBm

UE Power : 26.0 dBm

Common

Level / Freq Cell

Level / Freq Routing / ARB

Physical Channel

Call Processing

TX Measurement

Rx Measurement

OTA Position

Fundamental Measurement

Test Parameter

External Loss

System Config

General

Cell

Signal

UL RMC

Waveform DFT-S-OFDM

Number of RB 1

Starting RB 1

Resource Allocation Type Type1

RBG Size 1

MCS Index Table Table for 64QAM

MCS Index 0

Modulation Pi/2 BPSK

Aggregation Level 4

DL RMC

Uplink Tx Switching

Measurement Signaling

Numeric

Tx Power 25.88 dBm

OBW 18.787 MHz

ACLR(-) -53.74 dB

ACLR(+) -55.90 dB

Occupied Bandwidth

OBW 18.787 MHz

Adjacent Channel Power

In-Band Emission

Spectrum Flatness

Spectrum Emission Mask

On

EVM

Phase Error

Magnitude Error

Constellation

On

On

On

On

Main Screen

Fundamental

Sub Screen

Top

Home

Preset

Measuring...

Tx

Rx

Single

Continuous

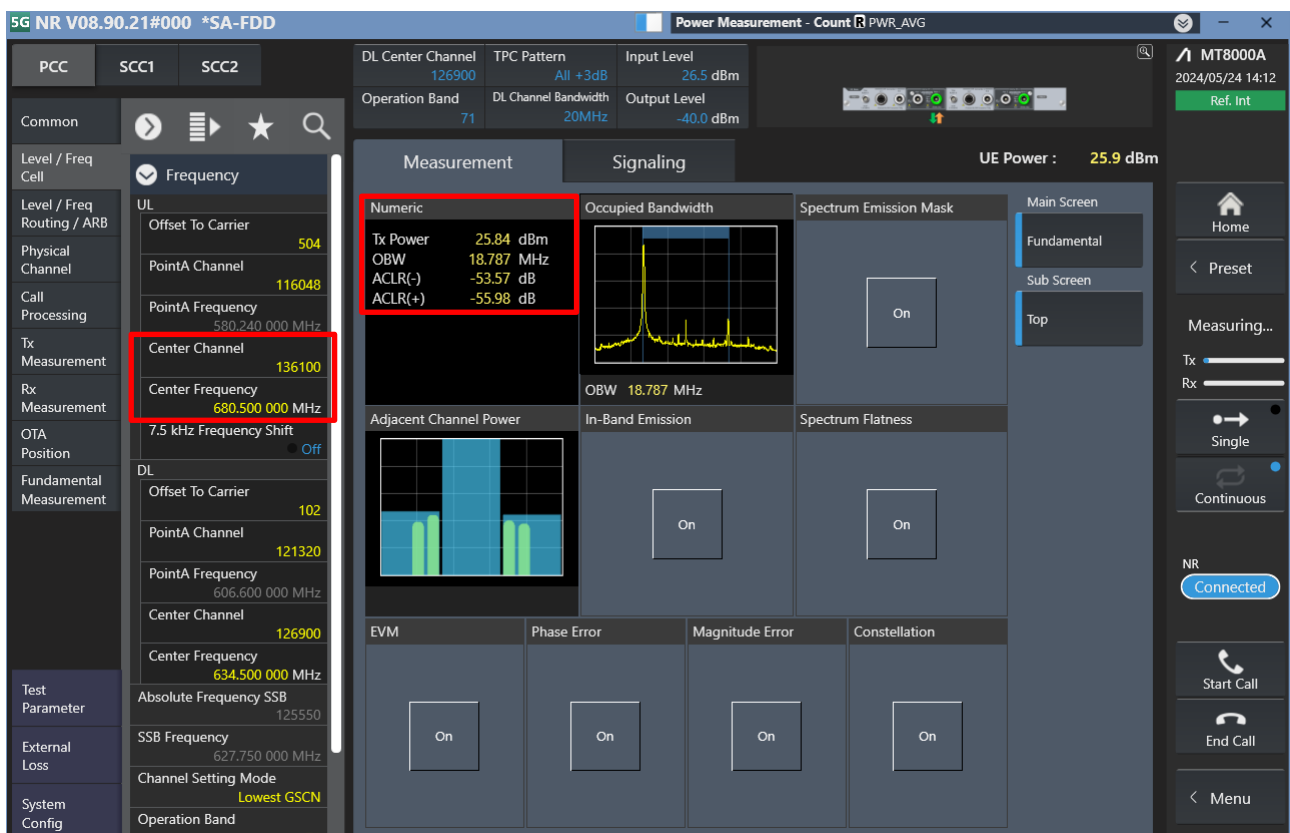
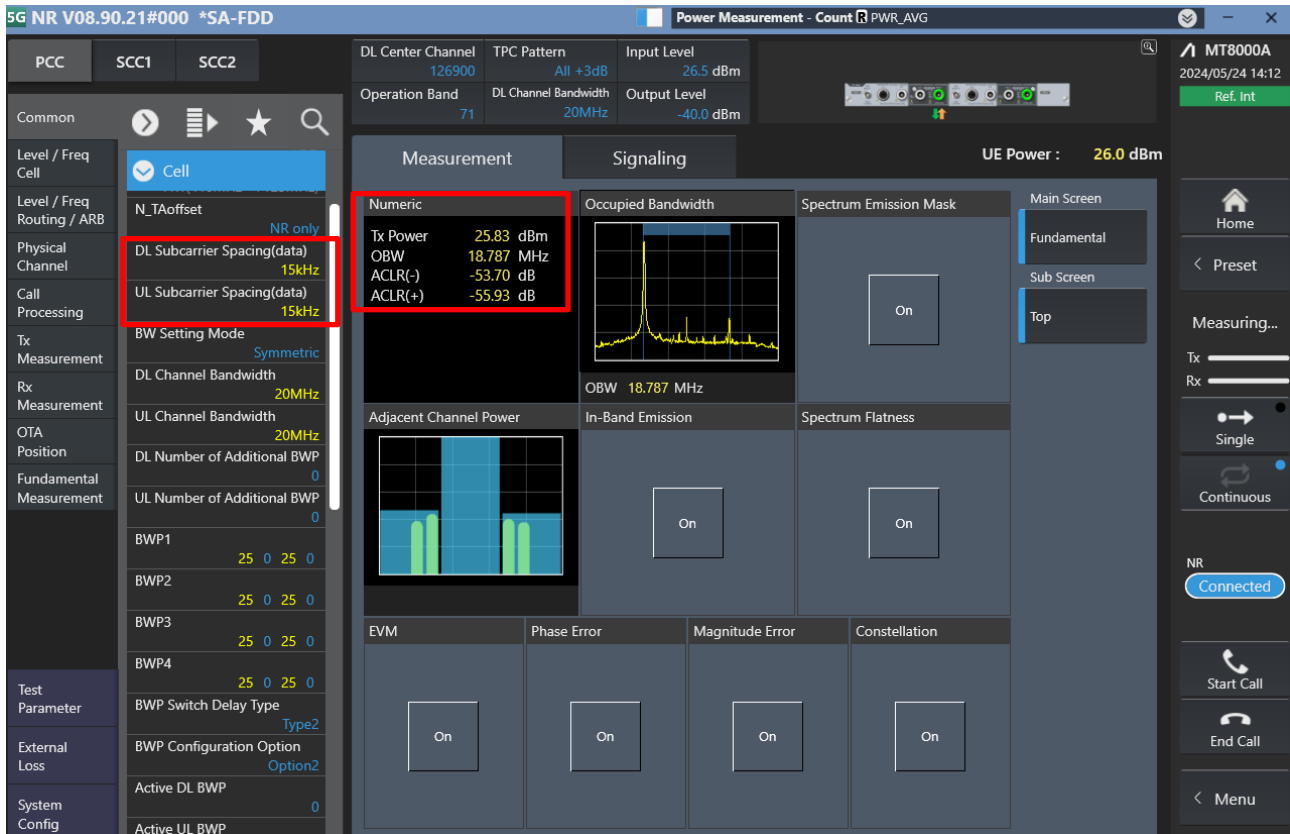
NR

Connected

Start Call

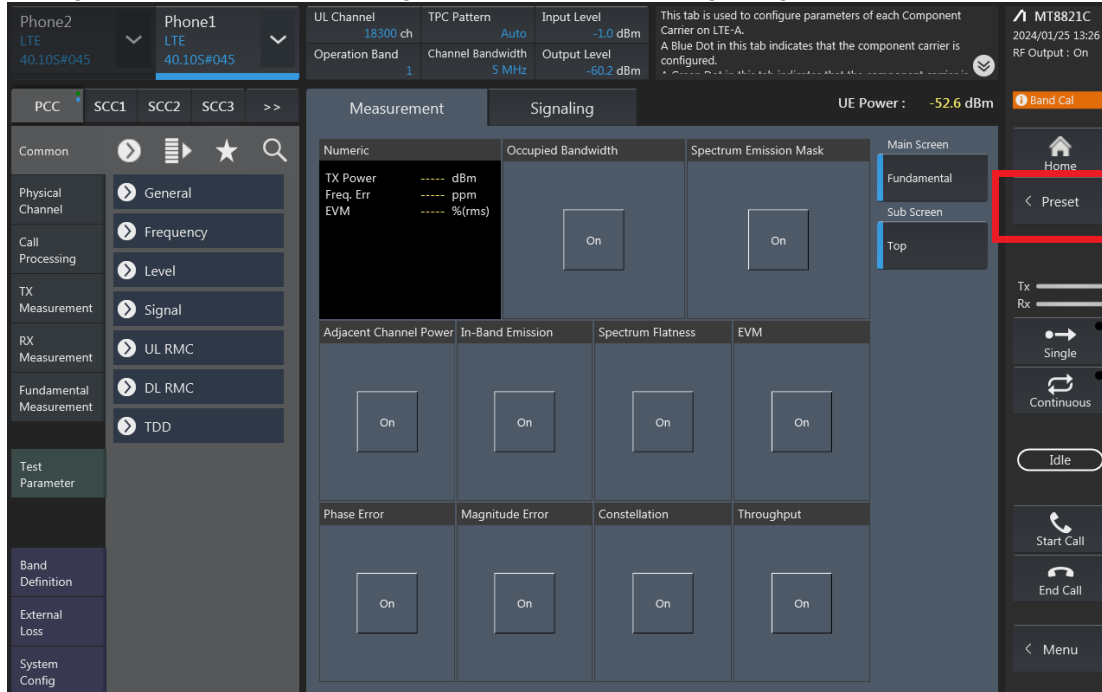
End Call

Menu



LTE Uplink and Downlink Carrier Aggregation configurations:

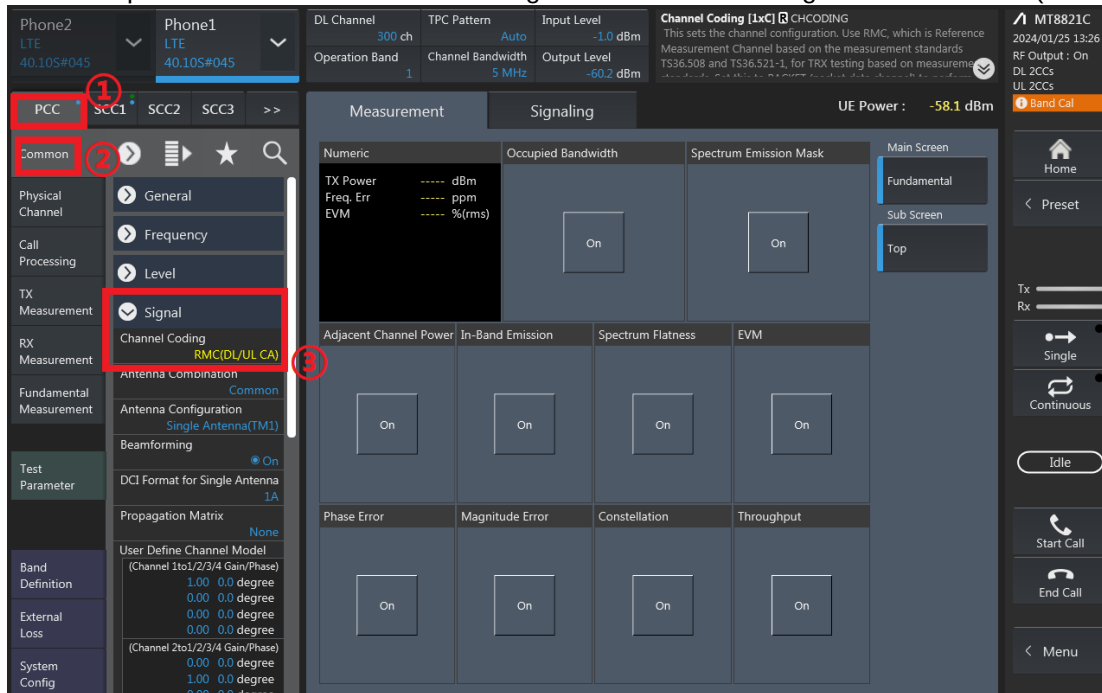
1. Change the Scenario in the Configuration of Phone1 LTE Signaling and Preset.



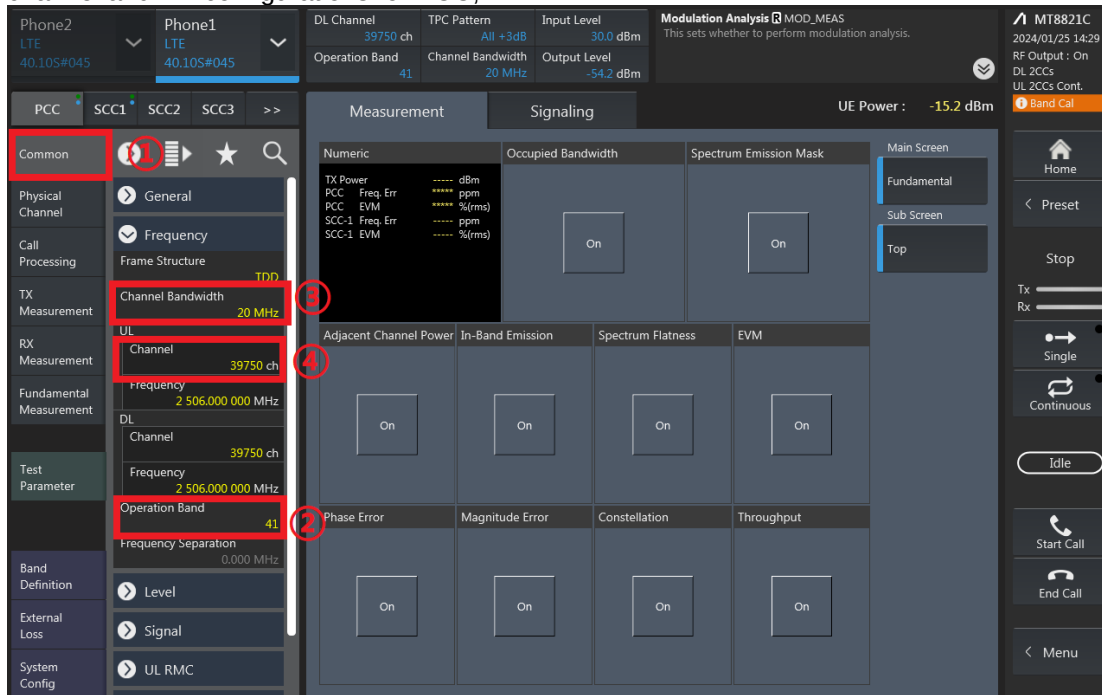
2. If Select "RMC (DL/UL CA)" for Uplink Carrier Aggregation;
If Select "RMC (DL CA)" for Downlink Carrier Aggregation.

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.

PCC SCC1 SCC2 SCC3 >>

Measurement Signaling UE Power : -15.2 dBm

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 Occupied Bandwidth Spectrum Emission Mask

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

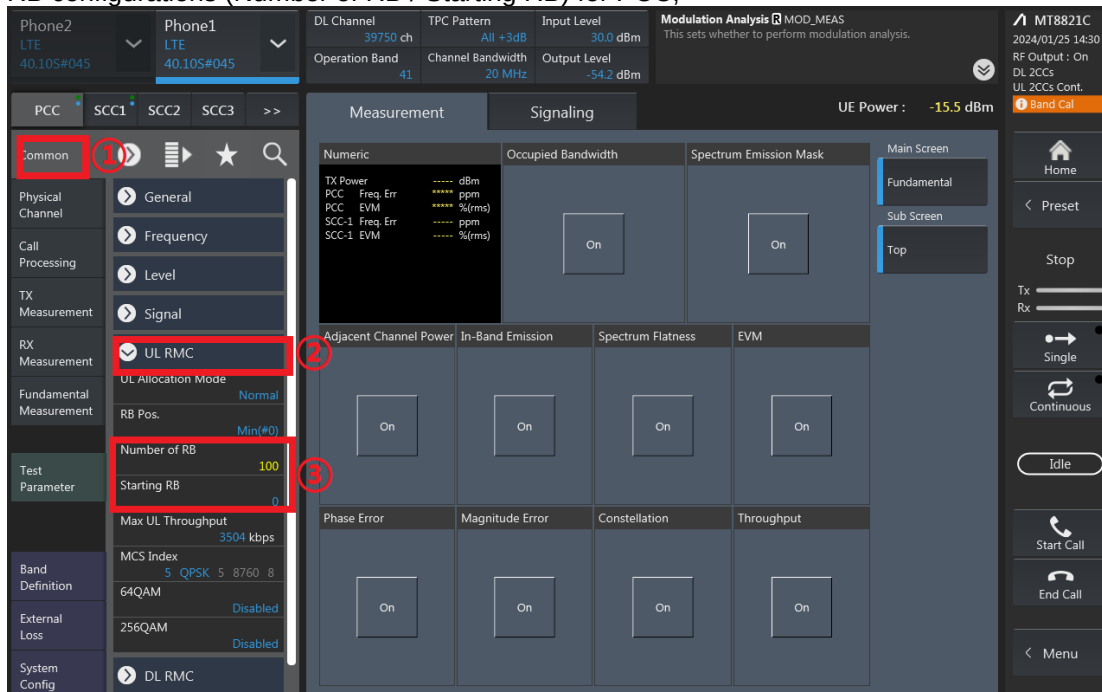
Adjacent Channel Power In-Band Emission Spectrum Flatness EVM

Phase Error Magnitude Error Constellation Throughput

Main Screen Fundamental Sub Screen Top

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

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.

PCC SCC1 SCC2 SCC3 >>

Measurement Signaling UE Power : -15.5 dBm

Common

Physical Channel General

Call Processing Frequency

TX Measurement Level

RX Measurement Signal

Fundamental Measurement UL RMC

Test Parameter UL Allocation Mode Normal RB Pos. Min(#0) Number of RB 100 Starting RB 0 Max UL Throughput 3504 kbps MCS Index 5 QPSK 5 8760 8 64QAM 256QAM Disabled Disabled

Band Definition DL RMC

Numeric Occupied Bandwidth Spectrum Emission Mask

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

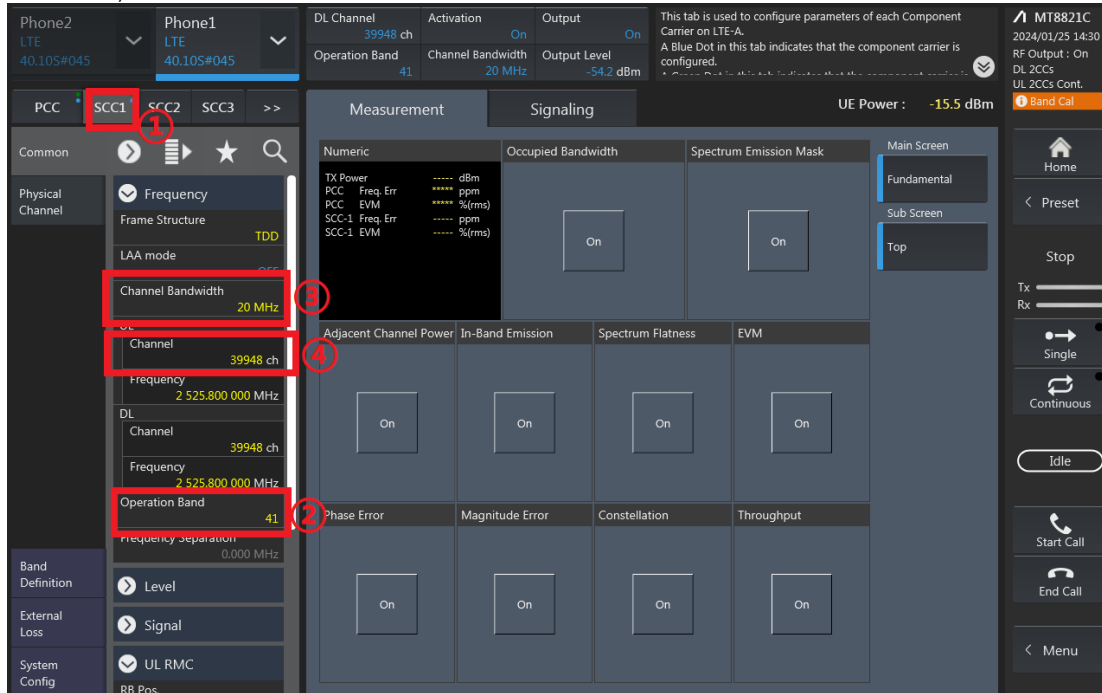
Adjacent Channel Power In-Band Emission Spectrum Flatness EVM

Phase Error Magnitude Error Constellation Throughput

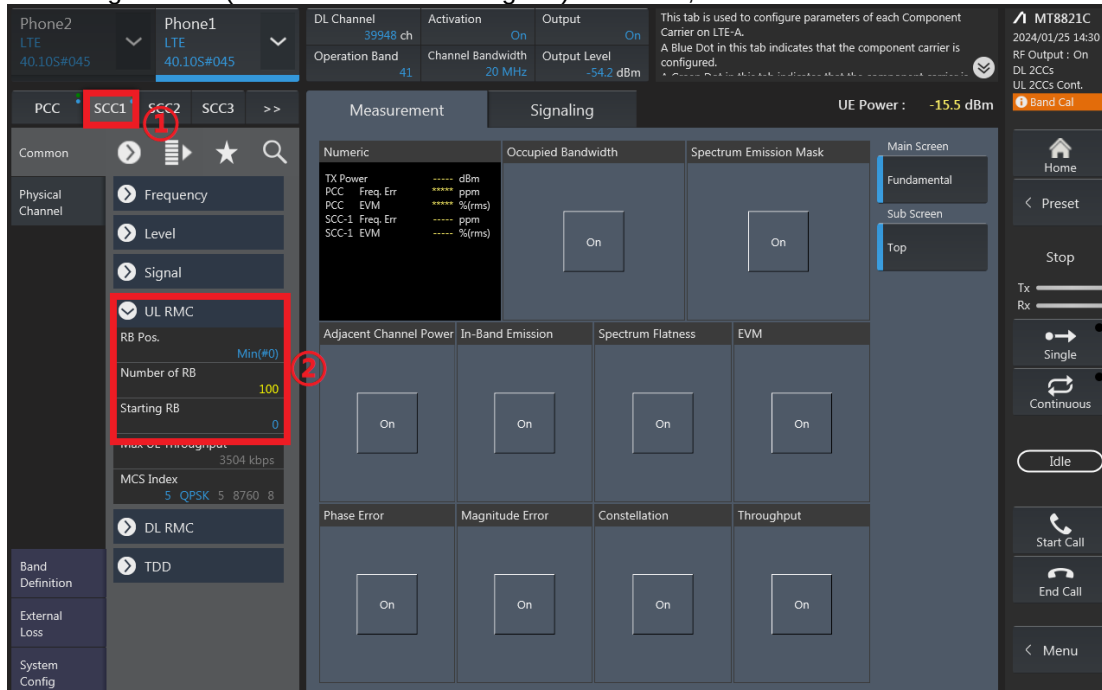
Main Screen Fundamental Sub Screen Top

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

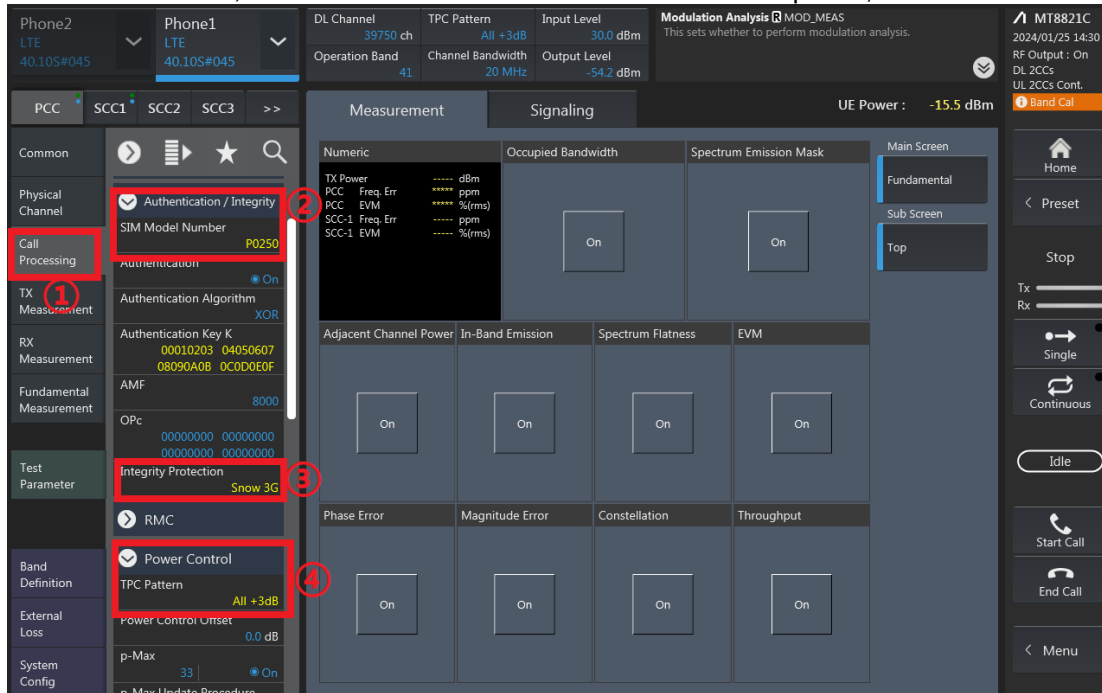
4. SCC parameter Settings: Select the SCC1 tab, Set operating band, BW, channel, and RB configurations for SCC1;



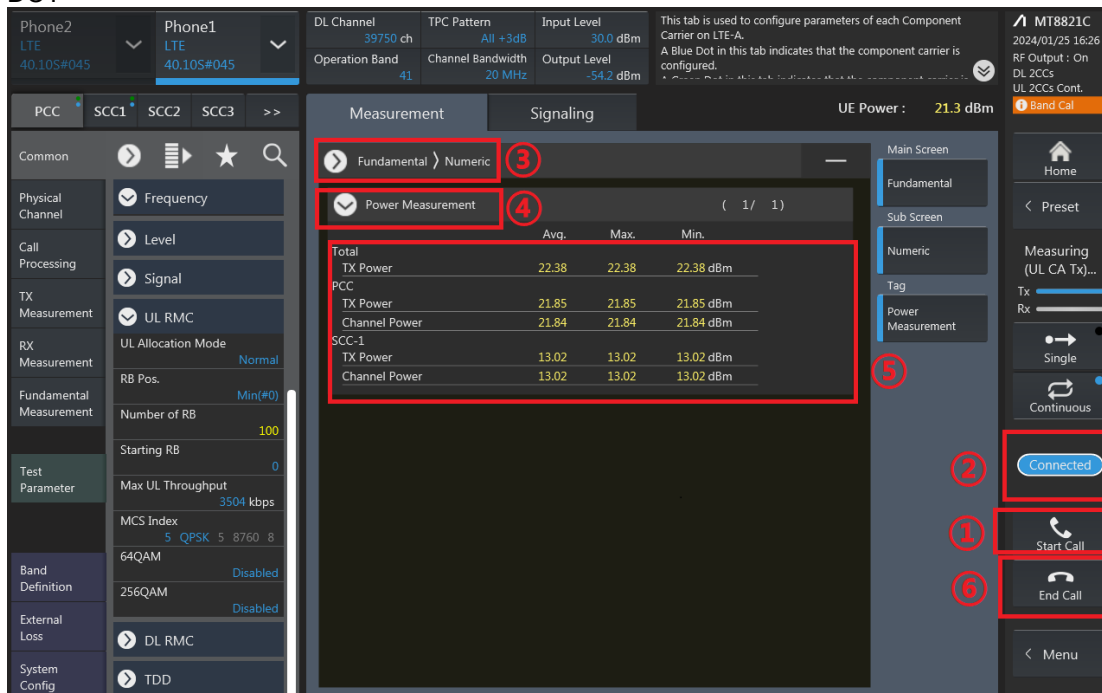
RB configurations (Number of RB / Starting RB) for SCC1;



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.

Full Power																
2CC																
Configure		CA Configuration (BCS)	PCC						SCC				Power			
			LTE Band	BW (MHz)	UL Freq. (MHz)	UL Channel	Mod.	UL# RB	UL RB Offset	LTE Band	BW (MHz)	DL Freq. (MHz)	DL Channel	With CA Tx.Power (dBm)	W/O CA Tx.Power (dBm)	
Inter-Band		CA_12A-30A	Band 12	10M	707.5	23095	QPSK	1	0	Band 30	10M	2355	9820	23.06	23.14	
		CA_12A-48A	Band 12	10M	707.5	23095	QPSK	1	0	Band 48	20M	3690	56640	22.97	23.03	
		CA_12A-66A	Band 12	10M	707.5	23095	QPSK	1	0	Band 66	20M	2155	66886	23.05	23.19	
		CA_13A-48A	Band 13	10M	782	23230	QPSK	1	0	Band 48	20M	3690	56640	22.93	23.06	
		CA_13A-66A	Band 13	10M	782	23230	QPSK	1	0	Band 66	20M	2155	66886	22.99	23.08	
		CA_14A-30A	Band 14	10M	793	23330	QPSK	1	0	Band 30	10M	2355	9820	22.93	23.04	
		CA_14A-66A	Band 14	10M	793	23330	QPSK	1	0	Band 66	20M	2155	66886	22.95	23.11	
		CA_25A-26A	Band 25	20M	1880	26340	QPSK	1	0	Band 26	15M	876.5	8865	23.17	23.23	
		CA_25A-41A	Band 25	20M	1880	26340	QPSK	1	0	Band 41	20M	2593	40620	23.22	23.29	
		CA_25A-66A	Band 25	20M	1880	26340	QPSK	1	0	Band 66	20M	2155	66886	23.03	23.14	
		CA_26A-41A	Band 26	15M	831.5	26865	QPSK	1	0	Band 41	20M	2593	40620	23.14	23.25	
		CA_2A-12A	Band 2	20M	1880	18900	QPSK	1	0	Band 12	10M	737.5	5095	23.20	23.21	
		CA_2A-13A	Band 2	20M	1880	18900	QPSK	1	0	Band 13	10M	751	5230	23.09	23.18	
		CA_2A-14A	Band 2	20M	1880	18900	QPSK	1	0	Band 14	10M	763	5330	23.13	23.19	
		CA_2A-17A	Band 2	20M	1880	18900	QPSK	1	0	Band 17	10M	740	5790	23.04	23.11	
		CA_2A-30A	Band 2	20M	1880	18900	QPSK	1	0	Band 30	10M	2355	9820	23.07	23.15	
		CA_2A-48A	Band 2	20M	1880	18900	QPSK	1	0	Band 48	20M	3690	56640	23.05	23.17	
		CA_2A-4A	Band 2	20M	1880	18900	QPSK	1	0	Band 4	20M	2132.5	2175	23.03	23.17	
		CA_2A-5A	Band 2	20M	1880	18900	QPSK	1	0	Band 5	10M	881.5	2525	23.07	23.19	
		CA_2A-66A	Band 2	20M	1880	18900	QPSK	1	0	Band 66	20M	2155	66886	23.02	23.16	
		CA_2A-71A	Band 2	20M	1880	18900	QPSK	1	0	Band 71	20M	637	68786	23.05	23.20	
		CA_2A-7A	Band 2	20M	1880	18900	QPSK	1	0	Band 7	20M	2655	3100	23.13	23.22	
		CA_30A-66A	Band 30	10M	2310	27710	QPSK	1	0	Band 66	20M	2155	66886	23.15	23.24	
		CA_41A-48A	Band 41	20M	2593	40620	QPSK	1	0	Band 48	20M	3690	56640	22.97	23.19	
		CA_48A-66A	Band 48	20M	3690	56640	QPSK	1	0	Band 66	20M	2155	66886	22.99	23.18	
		CA_4A-12A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 12	10M	737.5	5095	23.08	23.17	
		CA_4A-13A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 13	10M	751	5230	23.06	23.05	
		CA_4A-17A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 17	10M	740	5790	23.06	23.15	
		CA_4A-30A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 30	10M	2355	9820	22.97	23.09	
		CA_4A-48A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 48	20M	3690	56640	22.99	23.02	
		CA_4A-5A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 5	10M	881.5	2525	23.05	23.02	
		CA_4A-71A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 71	20M	637	68786	23.04	23.03	
		CA_4A-7A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 7	20M	2655	3100	23.06	23.06	
		CA_5A-30A	Band 5	10M	836.5	20525	QPSK	1	0	Band 30	10M	2355	9820	23.02	23.06	
		CA_5A-41A	Band 5	10M	836.5	20525	QPSK	1	0	Band 41	20M	2593	40620	23.04	23.15	
		CA_5A-48A	Band 5	10M	836.5	20525	QPSK	1	0	Band 48	20M	3690	56640	23.00	23.11	
		CA_5A-66A	Band 5	10M	836.5	20525	QPSK	1	0	Band 66	20M	2155	66886	23.05	23.14	
		CA_5A-7A	Band 5	10M	836.5	20525	QPSK	1	0	Band 7	20M	2655	3100	23.04	23.02	
		CA_66A-71A	Band 66	20M	1745	132322	QPSK	1	0	Band 71	20M	637	68786	23.02	23.04	
		CA_7A-12A	Band 7	20M	2535	21100	QPSK	1	0	Band 12	10M	737.5	5095	23.09	23.13	
		CA_7A-13A	Band 7	20M	2535	21100	QPSK	1	0	Band 13	10M	751	5230	23.08	23.17	
		CA_7A-25A	Band 7	20M	2535	21100	QPSK	1	0	Band 25	20M	1960	8340	23.07	23.20	
		CA_7A-30A	Band 7	20M	2535	21100	QPSK	1	0	Band 30	10M	2355	9820	23.17	23.17	
		CA_7A-66A	Band 7	20M	2535	21100	QPSK	1	0	Band 66	20M	2155	66886	23.13	23.16	
		CA_7A-71A	Band 7	20M	2535	21100	QPSK	1	0	Band 71	20M	637	68786	23.13	23.20	
			CA_29A-30A	Band 30	10M	2310	27710	QPSK	1	0	Band 29	10M	9715	722.5	23.05	23.24
			CA_29A-66A	Band 66	20M	1745	132322	QPSK	1	0	Band 29	10M	9715	722.5	22.98	23.04
			CA_2A-29A	Band 2	20M	1880	18900	QPSK	1	0	Band 29	10M	9715	722.5	23.12	23.17
			CA_4A-29A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 29	10M	9715	722.5	23.00	23.03
			CA_7A-29A	Band 7	20M	2535	21100	QPSK	1	0	Band 29	10M	9715	722.5	23.11	23.20
Intra-Band	Non-Contiguous	CA_25A-25A	Band 25	20M	1880	26340	QPSK	1	0	Band 25	5M	1992.5	8665	23.06	23.07	
		CA_2A-2A	Band 2	20M	1880	18900	QPSK	1	0	Band 2	5M	1932.5	625	23.09	23.18	
		CA_41A-41A	Band 41	20M	2593	40620	QPSK	1	0	Band 41	5M	2687.5	41565	23.14	23.19	
		CA_4A-4A	Band 4	20M	1732.5	20175	QPSK	1	0	Band 4	5M	2152.5	2375	23.05	23.14	
		CA_66A-66A	Band 66	20M	1745	132322	QPSK	1	0	Band 66	5M	2197.5	67311	23.09	23.12	
		CA_7A-7A	Band 7	15M	2535	21100	QPSK	1	0	Band 7	5M	2664.3	3193	23.05	23.20	
	Contiguous	CA_48A-48A	Band 48	20M	3560	55340	QPSK	1	0	Band 48	20M	3690	56640	22.95	23.03	
		CA_12B	Band 12	5M	703.8	23058	QPSK	1	0	Band 12	10M	741.00	5130	23.03	23.07	
		CA_2C	Band 2	20M	1880	18900	QPSK	1	0	Band 2	20M	1979.80	1098	23.09	23.16	
		CA_41C	Band 41	20M	2593	40620	QPSK	1	0	Band 41	20M	2612.80	40818	23.09	23.22	
		CA_48B	Band 48	15M	3607.5	55815	QPSK	1	0	Band 48	20M	3690.00	56640	22.86	22.93	
		CA_48C	Band 48	20M	3660	56340	QPSK	1	0	Band 48	20M	3679.80	56538	22.87	23.03	
		CA_5B	Band 5	10M	829	20450	QPSK	1	0	Band 5	5M	881.20	2522	22.96	23.07	
		CA_66B	Band 66	15M	1745	132322	QPSK	1	0	Band 66	5M	2164.30	66979	22.95	23.10	
		CA_66C	Band 66	20M	1745	132322	QPSK	1	0	Band 66	20M	2174.80	67084	23.00	23.09	
		CA_7B	Band 7	15M	2535	21100	QPSK	1	0	Band 7	5M	2664.30	3193	23.10	23.23	
		CA_7C	Band 7	20M	2535	21100	QPSK	1	0	Band 7	20M	2674.80	3298	23.13	23.22	

UL CA

CA_5B_Ant 0											
Combination 10MHz+10MHz (50RB+50RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
20450	20549	QPSK	1	0	0	0	1	0	FULL	22.90	24.00
20575	20476	QPSK	1	0	0	0	1	0	FULL	22.96	24.00
20600	20501	QPSK	1	0	0	0	1	0	FULL	22.92	24.00
20450	20549	QPSK	1	0	0	0	1	0	EC2	22.90	24.00
20575	20476	QPSK	1	0	0	0	1	0	EC2	22.96	24.00
20600	20501	QPSK	1	0	0	0	1	0	EC2	22.92	24.00
20450	20549	QPSK	1	0	0	0	1	0	EC3	20.97	22.00
20575	20476	QPSK	1	0	0	0	1	0	EC3	20.99	22.00
20600	20501	QPSK	1	0	0	0	1	0	EC3	20.92	22.00
20450	20549	QPSK	1	0	0	0	1	0	EC6	22.90	24.00
20575	20476	QPSK	1	0	0	0	1	0	EC6	22.96	24.00
20600	20501	QPSK	1	0	0	0	1	0	EC6	22.92	24.00
20450	20549	QPSK	1	0	0	0	1	0	EC7	20.97	22.00
20575	20476	QPSK	1	0	0	0	1	0	EC7	20.99	22.00
20600	20501	QPSK	1	0	0	0	1	0	EC7	20.92	22.00

CA_5B_Ant 4 Combination 10MHz+10MHz (50RB+50RB)											
PCC Channel	SCC Channel	Modulation	SCC				Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
20450	20549	QPSK	1	0	0	0	1	0	FULL	22.92	24.00
20575	20476	QPSK	1	0	0	0	1	0	FULL	22.96	24.00
20600	20501	QPSK	1	0	0	0	1	0	FULL	22.91	24.00
20450	20549	QPSK	1	0	0	0	1	0	ECI2	21.13	22.20
20575	20476	QPSK	1	0	0	0	1	0	ECI2	21.15	22.20
20600	20501	QPSK	1	0	0	0	1	0	ECI2	21.07	22.20
20450	20549	QPSK	1	0	0	0	1	0	ECI3	22.11	23.20
20575	20476	QPSK	1	0	0	0	1	0	ECI3	22.14	23.20
20600	20501	QPSK	1	0	0	0	1	0	ECI3	22.05	23.20
20450	20549	QPSK	1	0	0	0	1	0	ECI6	23.92	24.00
20575	20476	QPSK	1	0	0	0	1	0	ECI6	22.95	24.00
20600	20501	QPSK	1	0	0	0	1	0	ECI6	22.81	24.00
20450	20549	QPSK	1	0	0	0	1	0	ECI7	19.97	21.20
20575	20476	QPSK	1	0	0	0	1	0	ECI7	20.92	21.20
20600	20501	QPSK	1	0	0	0	1	0	ECI7	20.00	21.20

CA_66B_Ant 0											
Combination 15MHz+5MHz (75RB+25RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dbm)	Tune up Power (dbm)
			RB Size	RB offset	RB Size	RB offset					
132047	132140	QPSK	1	0	0	0	1	0	FULL	22.79	24.00
132322	132415	QPSK	1	0	0	0	1	0	FULL	22.81	24.00
132597	132504	QPSK	1	0	0	0	1	0	FULL	22.74	24.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 2	22.79	24.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 2	22.81	24.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 2	22.74	24.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 3	17.95	19.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 3	18.00	19.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 3	17.96	19.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 6	20.30	22.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 6	20.95	22.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 6	20.84	22.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 7	17.00	18.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 7	17.95	18.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 7	16.97	18.00

CA_66B_Ant 4											
Combination 15MHz+5MHz (75RB+25RB)											
PCC Channel	SCC Channel	Modulation	SCC				Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
132047	132140	QPSK	1	0	0	0	1	0	FULL	22.72	24.00
132322	132415	QPSK	1	0	0	0	1	0	FULL	22.87	24.00
132597	132504	QPSK	1	0	0	0	1	0	FULL	22.85	24.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 2	14.37	15.50
132322	132415	QPSK	1	0	0	0	1	0	ECI 2	14.47	15.50
132597	132504	QPSK	1	0	0	0	1	0	ECI 2	14.38	15.50
132047	132140	QPSK	1	0	0	0	1	0	ECI 3	15.88	17.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 3	15.91	17.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 3	15.88	17.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 6	17.22	19.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 6	18.01	19.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 6	17.91	19.00
132047	132140	QPSK	1	0	0	0	1	0	ECI 7	12.97	14.00
132322	132415	QPSK	1	0	0	0	1	0	ECI 7	12.96	14.00
132597	132504	QPSK	1	0	0	0	1	0	ECI 7	12.90	14.00

CA_86C_Ant 0													
Combination 20MHz+20MHz (100RB+100RB)													
PCC Channel	SCC Channel	Modulation	PCC				SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset	RB Size	RB offset					
132072	132270	QPSK	1	0	0	0	1	0	0	FULL	22.79	24.00	
132322	132520	QPSK	1	0	0	0	1	0	0	FULL	22.93	24.00	
132572	132374	QPSK	1	0	0	0	1	0	0	FULL	22.85	24.00	
132072	132270	QPSK	1	0	0	0	1	0	0	ECI 2	22.79	24.00	
132322	132520	QPSK	1	0	0	0	1	0	0	ECI 2	22.93	24.00	
132572	132374	QPSK	1	0	0	0	1	0	0	ECI 2	22.85	24.00	
132072	132270	QPSK	1	0	0	0	1	0	0	ECI 3	17.96	19.00	
132322	132520	QPSK	1	0	0	0	1	0	0	ECI 3	18.02	19.00	
132572	132374	QPSK	1	0	0	0	1	0	0	ECI 3	17.94	19.00	
132072	132270	QPSK	1	0	0	0	1	0	0	ECI 6	20.95	22.00	
132322	132520	QPSK	1	0	0	0	1	0	0	ECI 6	20.97	22.00	
132572	132374	QPSK	1	0	0	0	1	0	0	ECI 6	20.89	22.00	
132072	132270	QPSK	1	0	0	0	1	0	0	ECI 7	16.99	18.00	
132322	132520	QPSK	1	0	0	0	1	0	0	ECI 7	17.07	18.00	
132572	132374	QPSK	1	0	0	0	1	0	0	ECI 7	17.03	18.00	

CA_86C_Ant 4											
Combination 20MHz+20MHz (100RB+100RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
132072	132270	QPSK	1	0	0	0	1	0	FULL	22.78	24.00
132322	132520	QPSK	1	0	0	0	1	0	FULL	22.92	24.00
132572	132374	QPSK	1	0	0	0	1	0	FULL	22.80	24.00
132072	132270	QPSK	1	0	0	0	1	0	ECI2	14.40	15.50
132322	132520	QPSK	1	0	0	0	1	0	ECI2	14.49	15.50
132572	132374	QPSK	1	0	0	0	1	0	ECI2	14.48	15.50
132072	132270	QPSK	1	0	0	0	1	0	ECI3	15.86	17.00
132322	132520	QPSK	1	0	0	0	1	0	ECI3	15.95	17.00
132572	132374	QPSK	1	0	0	0	1	0	ECI3	15.81	17.00
132072	132270	QPSK	1	0	0	0	1	0	ECI6	17.50	19.00
132322	132520	QPSK	1	0	0	0	1	0	ECI6	18.04	19.00
132572	132374	QPSK	1	0	0	0	1	0	ECI6	17.95	19.00
132072	132270	QPSK	1	0	0	0	1	0	ECI7	12.94	14.00
132322	132520	QPSK	1	0	0	0	1	0	ECI7	12.98	14.00
132572	132374	QPSK	1	0	0	0	1	0	ECI7	12.97	14.00

CA_41C_Ant 1											
Combination 20MHz+20MHz (100RB+100RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
39790	39988	QPSK	1	0	0	0	1	0	FULL	22.90	24.00
39790	39948	QPSK	1	0	0	0	1	0	FULL	22.92	24.00
40185	40383	QPSK	1	0	0	0	1	0	FULL	22.92	24.00
40620	40818	QPSK	1	0	0	0	1	0	FULL	23.05	24.00
41055	41253	QPSK	1	0	0	0	1	0	FULL	22.99	24.00
41490	41292	QPSK	1	0	0	0	1	0	FULL	23.03	24.00
39790	39988	QPSK	1	0	0	0	1	0	ECI 2	22.90	24.00
39790	39948	QPSK	1	0	0	0	1	0	ECI 2	22.92	24.00
40185	40383	QPSK	1	0	0	0	1	0	ECI 2	22.92	24.00
40620	40818	QPSK	1	0	0	0	1	0	ECI 2	23.05	24.00
41055	41253	QPSK	1	0	0	0	1	0	ECI 2	22.99	24.00
41490	41292	QPSK	1	0	0	0	1	0	ECI 2	23.03	24.00
39790	39988	QPSK	1	0	0	0	1	0	ECI 3	20.06	21.40
39790	39948	QPSK	1	0	0	0	1	0	ECI 3	20.09	21.40
40185	40383	QPSK	1	0	0	0	1	0	ECI 3	20.04	21.40
40620	40818	QPSK	1	0	0	0	1	0	ECI 3	20.13	21.40
41055	41253	QPSK	1	0	0	0	1	0	ECI 3	20.06	21.40
41490	41292	QPSK	1	0	0	0	1	0	ECI 3	20.10	21.40
39790	39988	QPSK	1	0	0	0	1	0	ECI 6	22.37	23.50
39790	39948	QPSK	1	0	0	0	1	0	ECI 6	22.39	23.50
40185	40383	QPSK	1	0	0	0	1	0	ECI 6	22.36	23.50
40620	40818	QPSK	1	0	0	0	1	0	ECI 6	22.51	23.50
41055	41253	QPSK	1	0	0	0	1	0	ECI 6	22.50	23.50
41490	41292	QPSK	1	0	0	0	1	0	ECI 6	22.45	23.50
39790	39988	QPSK	1	0	0	0	1	0	ECI 7	20.10	21.40
39790	39948	QPSK	1	0	0	0	1	0	ECI 7	20.12	21.40
40185	40383	QPSK	1	0	0	0	1	0	ECI 7	20.02	21.40
40620	40818	QPSK	1	0	0	0	1	0	ECI 7	20.13	21.40
41055	41253	QPSK	1	0	0	0	1	0	ECI 7	20.10	21.40
41490	41292	QPSK	1	0	0	0	1	0	ECI 7	20.07	21.40

CA_41C_HPUE_Ant 1											
Combination 20MHz+20MHz (100RB+100RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
39790	39988	QPSK	1	0	0	0	1	0	FULL	25.77	27.00
39790	39948	QPSK	1	0	0	0	1	0	FULL	25.80	27.00
40185	40383	QPSK	1	0	0	0	1	0	FULL	25.81	27.00
40620	40818	QPSK	1	0	0	0	1	0	FULL	25.91	27.00
41055	41253	QPSK	1	0	0	0	1	0	FULL	25.76	27.00
41490	41292	QPSK	1	0	0	0	1	0	FULL	25.82	27.00
39790	39988	QPSK	1	0	0	0	1	0	ECI 2	25.77	27.00
39790	39948	QPSK	1	0	0	0	1	0	ECI 2	25.80	27.00
40185	40383	QPSK	1	0	0	0	1	0	ECI 2	25.81	27.00
40620	40818	QPSK	1	0	0	0	1	0	ECI 2	25.91	27.00
41055	41253	QPSK	1	0	0	0	1	0	ECI 2	25.76	27.00
41490	41292	QPSK	1	0	0	0	1	0	ECI 2	25.82	27.00
39790	39988	QPSK	1	0	0	0	1	0	ECI 3	21.35	23.00
39790	39948	QPSK	1	0	0	0	1	0	ECI 3	21.47	23.00
40185	40383	QPSK	1	0	0	0	1	0	ECI 3	21.34	23.00
40620	40818	QPSK	1	0	0	0	1	0	ECI 3	21.49	23.00
41055	41253	QPSK	1	0	0	0	1	0	ECI 3	21.46	23.00
41490	41292	QPSK	1	0	0	0	1	0	ECI 3	21.35	23.00
39790	39988	QPSK	1	0	0	0	1	0	ECI 6	23.74	25.50
39790	39948	QPSK	1	0	0	0	1	0	ECI 6	23.82	25.50
40185	40383	QPSK	1	0	0	0	1	0	ECI 6	23.74	25.50
40620	40818	QPSK	1	0	0	0	1	0	ECI 6	23.86	25.50
41055	41253	QPSK	1	0	0	0	1	0	ECI 6	23.76	25.50
41490	41292	QPSK	1	0	0	0	1	0	ECI 6	23.75	25.50
39790	39988	QPSK	1	0	0	0	1	0	ECI 7	21.35	23.00
39790	39948	QPSK	1	0	0	0	1	0	ECI 7	21.44	23.00
40185	40383	QPSK	1	0	0	0	1	0	ECI 7	21.47	23.00
40620	40818	QPSK	1	0	0	0	1	0	ECI 7	21.39	23.00
41055	41253	QPSK	1	0	0	0	1	0	ECI 7	21.36	23.00
41490	41292	QPSK	1	0	0	0	1	0	ECI 7	21.43	23.00

CA 48B For FCC_Ant 5 Combination 10MHz+10MHz (50RB+50RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
55230	55389	QPSK	1	0	0	0	1	0	FULL	22.39	24.00
55815	55914	QPSK	1	0	0	0	1	0	FULL	22.48	24.00
56105	56264	QPSK	1	0	0	0	1	0	FULL	22.43	24.00
56690	56891	QPSK	1	0	0	0	1	0	FULL	22.44	24.00
55230	55389	QPSK	1	0	0	0	1	0	ECI 2	15.92	17.50
55815	55914	QPSK	1	0	0	0	1	0	ECI 2	16.04	17.50
56105	56264	QPSK	1	0	0	0	1	0	ECI 2	16.03	17.50
56690	56891	QPSK	1	0	0	0	1	0	ECI 2	15.91	17.50
55230	55389	QPSK	1	0	0	0	1	0	ECI 3	15.40	17.00
55815	55914	QPSK	1	0	0	0	1	0	ECI 3	15.53	17.00
56105	56264	QPSK	1	0	0	0	1	0	ECI 3	15.46	17.00
56690	56891	QPSK	1	0	0	0	1	0	ECI 3	15.52	17.00
55230	55389	QPSK	1	0	0	0	1	0	ECI 6	21.09	22.50
55815	55914	QPSK	1	0	0	0	1	0	ECI 6	21.14	22.50
56105	56264	QPSK	1	0	0	0	1	0	ECI 6	21.06	22.50
56690	56891	QPSK	1	0	0	0	1	0	ECI 6	21.00	22.50
55230	55389	QPSK	1	0	0	0	1	0	ECI 7	14.36	16.00
55815	55914	QPSK	1	0	0	0	1	0	ECI 7	14.43	16.00
56105	56264	QPSK	1	0	0	0	1	0	ECI 7	14.36	16.00
56690	56891	QPSK	1	0	0	0	1	0	ECI 7	14.35	16.00

CA_48C For FCC_Ant 5 Combination 20MHz+20MHz (100RB+100RB)											
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Target MPR Level (dB)	Power Reduction	Measured Power (dBm)	Tune up Power (dBm)
			RB Size	RB offset	RB Size	RB offset					
55340	55538	QPSK	1	0	0	0	1	0	FULL	22.65	24.00
55630	56028	QPSK	1	0	0	0	1	0	FULL	22.74	24.00
56150	56348	QPSK	1	0	0	0	1	0	FULL	22.66	24.00
56640	56442	QPSK	1	0	0	0	1	0	FULL	22.71	24.00
55340	55538	QPSK	1	0	0	0	1	0	ECI 2	16.04	17.50
55630	56028	QPSK	1	0	0	0	1	0	ECI 2	16.12	17.50
56150	56348	QPSK	1	0	0	0	1	0	ECI 2	16.05	17.50
56640	56442	QPSK	1	0	0	0	1	0	ECI 2	16.09	17.50
55340	55538	QPSK	1	0	0	0	1	0	ECI 3	15.60	17.00
55630	56028	QPSK	1	0	0	0	1	0	ECI 3	15.68	17.00
56150	56348	QPSK	1	0	0	0	1	0	ECI 3	15.65	17.00
56640	56442	QPSK	1	0	0	0	1	0	ECI 3	15.67	17.00
55340	55538	QPSK	1	0	0	0	1	0	ECI 6	21.04	22.50
55630	56028	QPSK	1	0	0	0	1	0	ECI 6	21.15	22.50
56150	56348	QPSK	1	0	0	0	1	0	ECI 6	21.13	22.50
56640	56442	QPSK	1	0	0	0	1	0	ECI 6	21.11	22.50
55340	55538	QPSK	1	0	0	0	1	0	ECI 7	14.61	16.00
55630	56028	QPSK	1	0	0	0	1	0	ECI 7	14.72	16.00
56150	56348	QPSK	1	0	0	0	1	0	ECI 7	14.68	16.00
56640	56442	QPSK	1	0	0	0	1	0	ECI 7	14.69	16.00