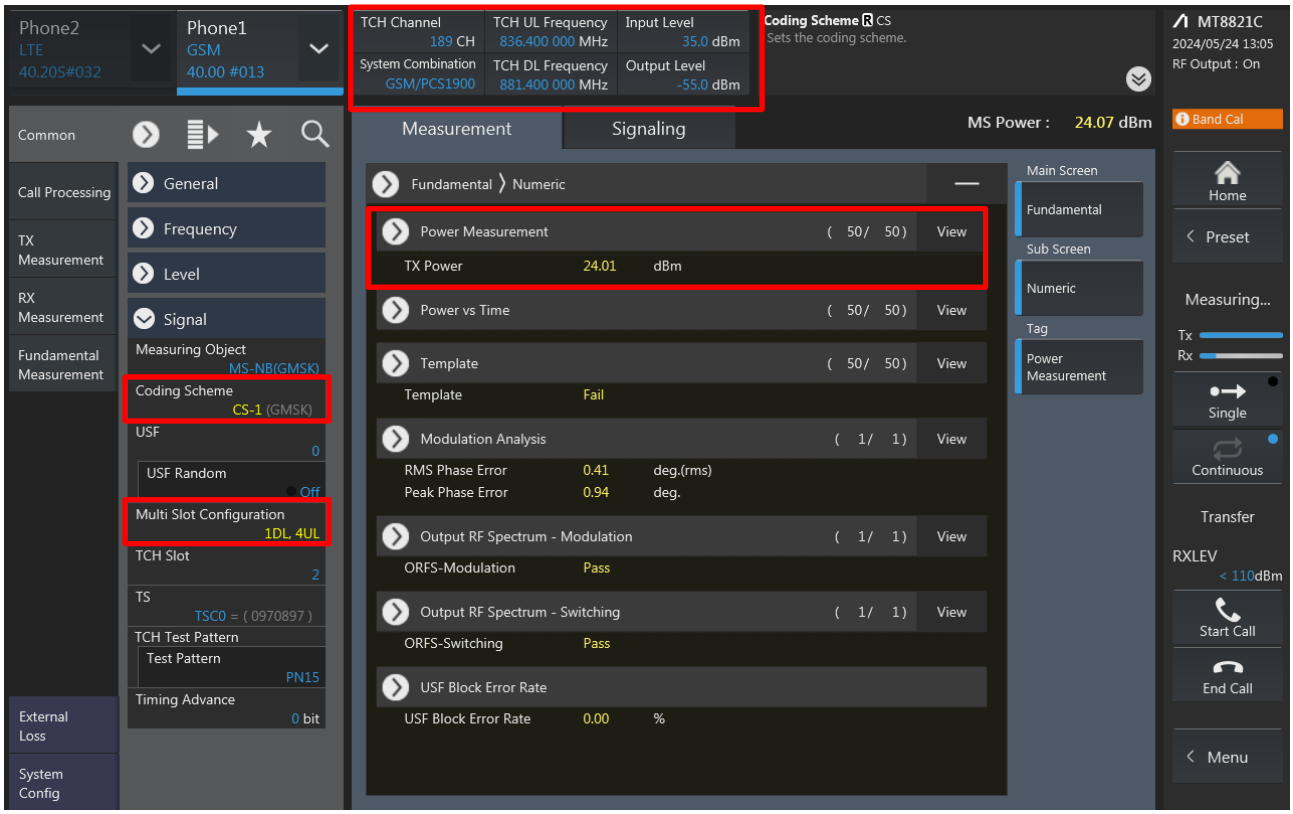
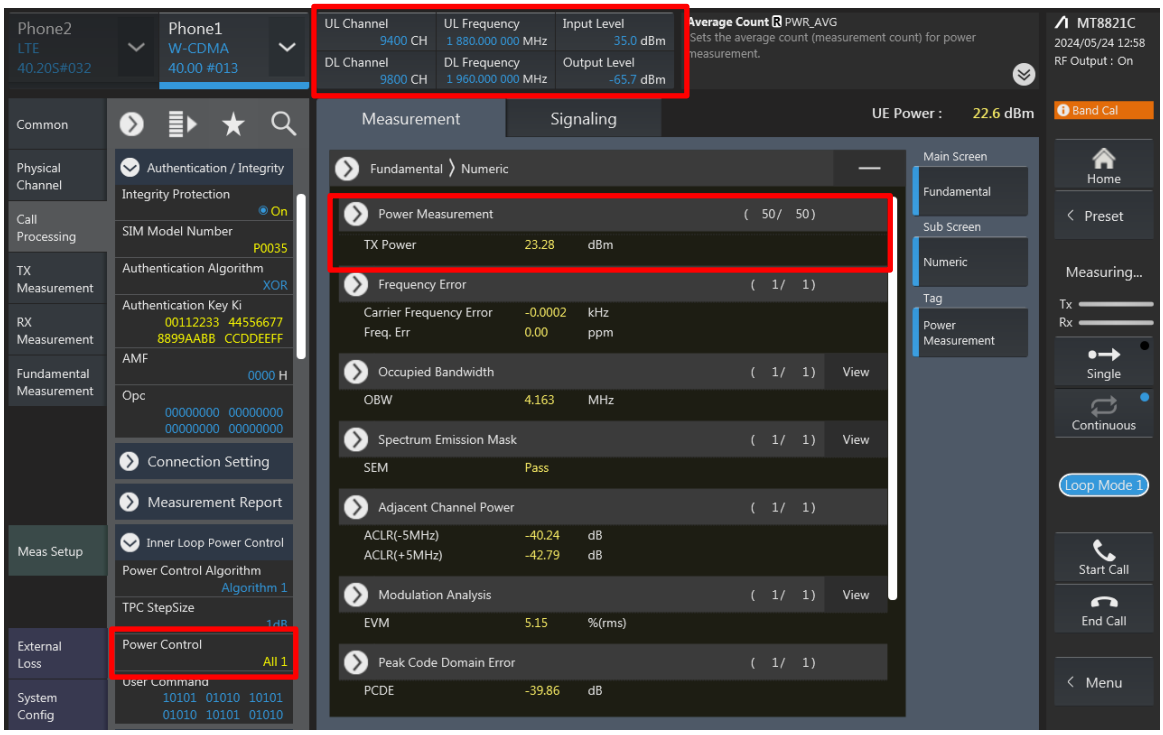
Power measurement connection diagram:

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.

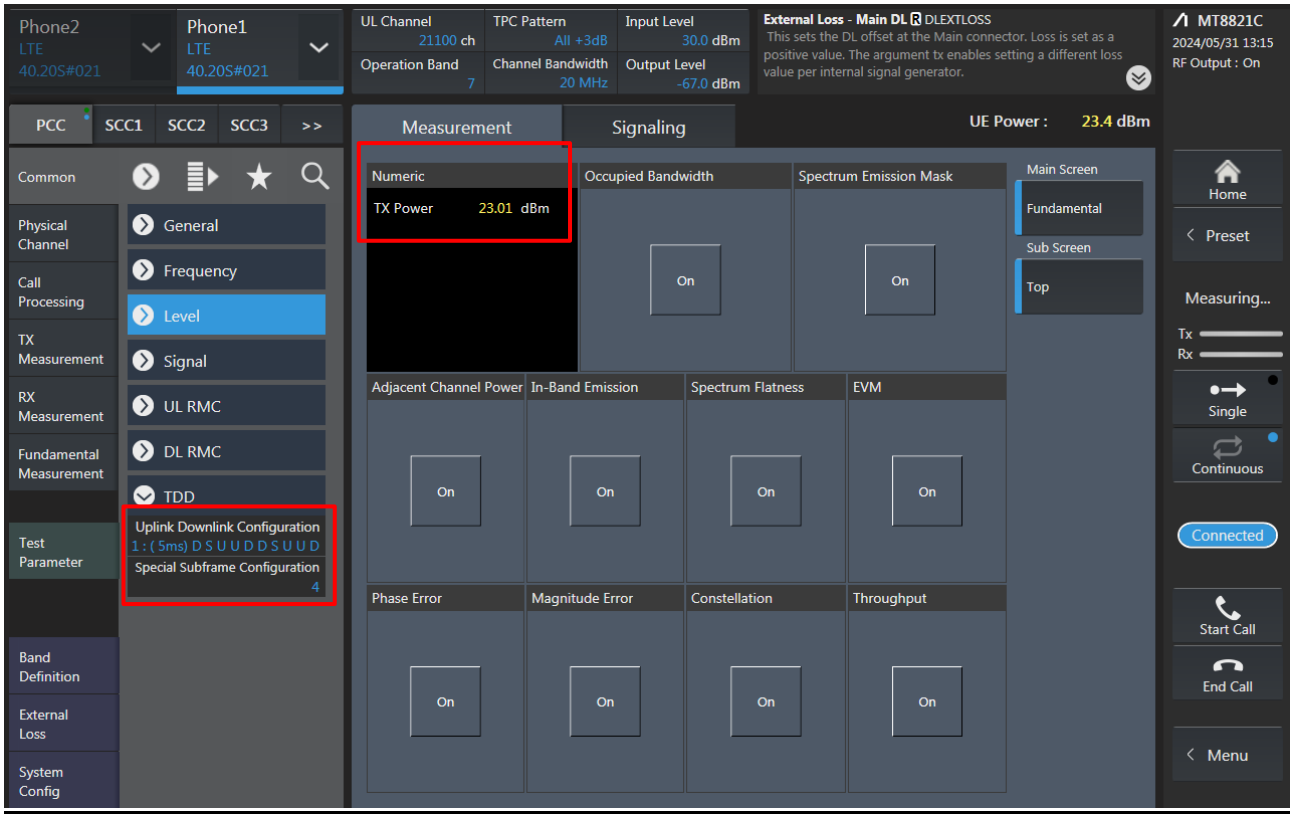
<GSM>



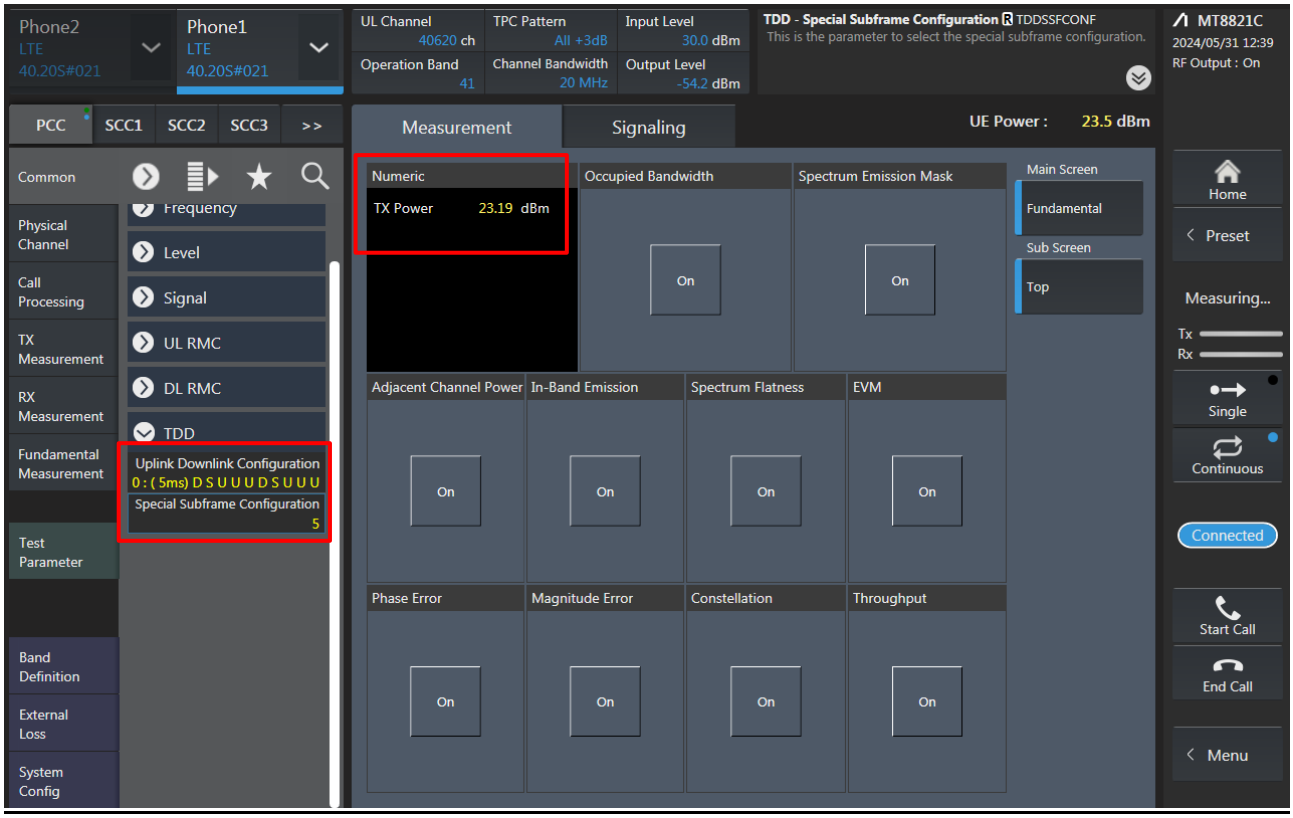
<WCDMA>


Phone2
LTE
40.20S#032
Phone1
W-CDMA
40.00 #013
UL Channel 9400 CH
UL Frequency 1 880.000 000 MHz
Input Level 35.0 dBm
DL Channel 9800 CH
DL Frequency 1 960.000 000 MHz
Output Level -65.7 dBm
Average Count PWR_AVG
Sets the average count (measurement count) for power measurement.
MT8821C
2024/05/24 12:58
RF Output : On
Measurement
Signaling
UE Power : 22.6 dBm
Band Cal
Common
Physical Channel
Call Processing
TX Measurement
RX Measurement
Fundamental Measurement
Meas Setup
External Loss
System Config
Authentication / Integrity
Integrity Protection On
SIM Model Number P0035
Authentication Algorithm XOR
Authentication Key Ki
00112233 44556677
8899AABB CCDDEEFF
AMF 0000 H
Opc
Connection Setting
Measurement Report
Inner Loop Power Control
Power Control Algorithm Algorithm 1
TPC StepSize
Power Control All 1
Fundamental Numeric
Power Measurement (50/ 50)
TX Power 23.28 dBm
Frequency Error (1/ 1)
Carrier Frequency Error -0.0002 kHz
Freq. Err 0.00 ppm
Occupied Bandwidth (1/ 1) View
OBW 4.163 MHz
Spectrum Emission Mask (1/ 1) View
SEM Pass
Adjacent Channel Power (1/ 1)
ACLR(-5MHz) -40.24 dB
ACLR(+5MHz) -42.79 dB
Modulation Analysis (1/ 1) View
EVM 5.15 %(rms)
Peak Code Domain Error (1/ 1)
PCDE -39.86 dB
Main Screen
Fundamental
Sub Screen
Numeric
Tag
Power Measurement
Home
Preset
Measuring...
Tx
Rx
Single
Continuous
Loop Mode 1
Start Call
End Call
Menu

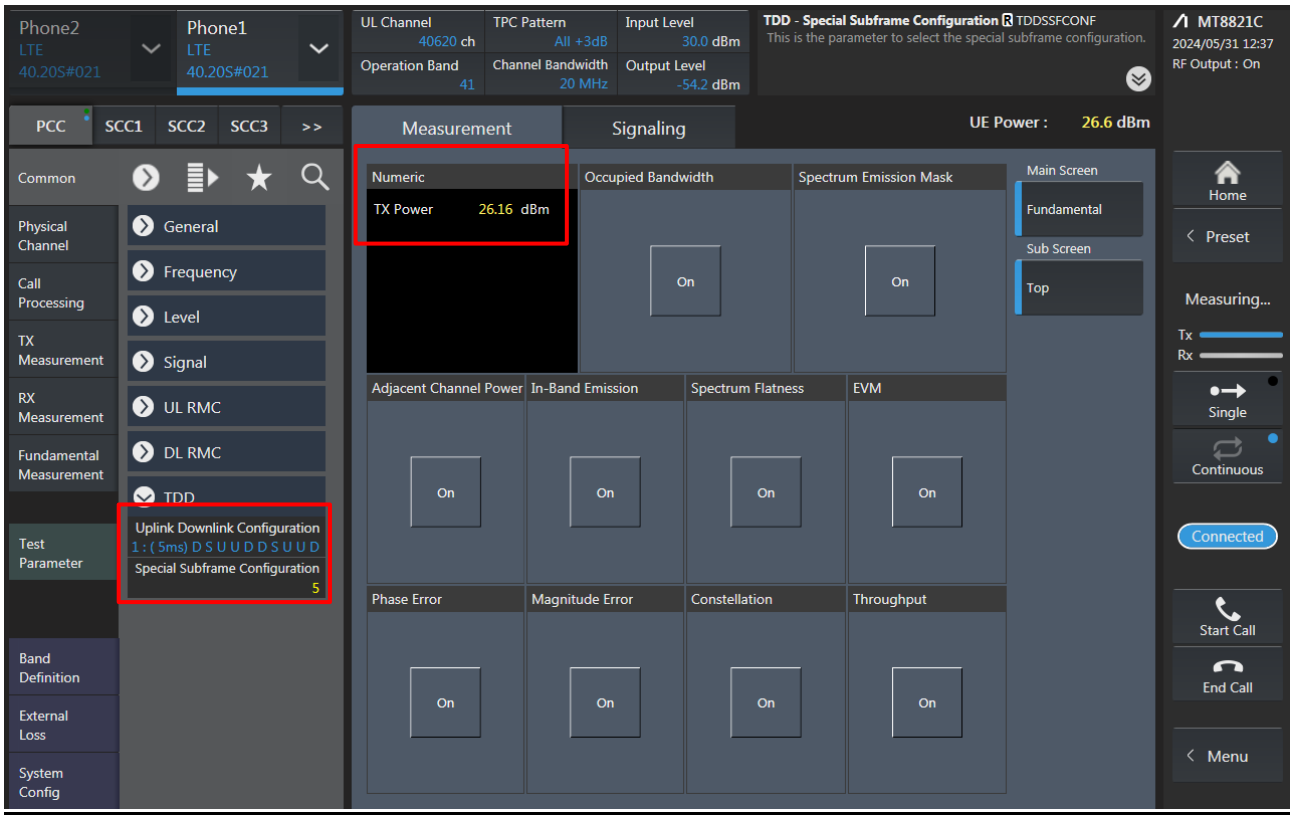
<LTE>

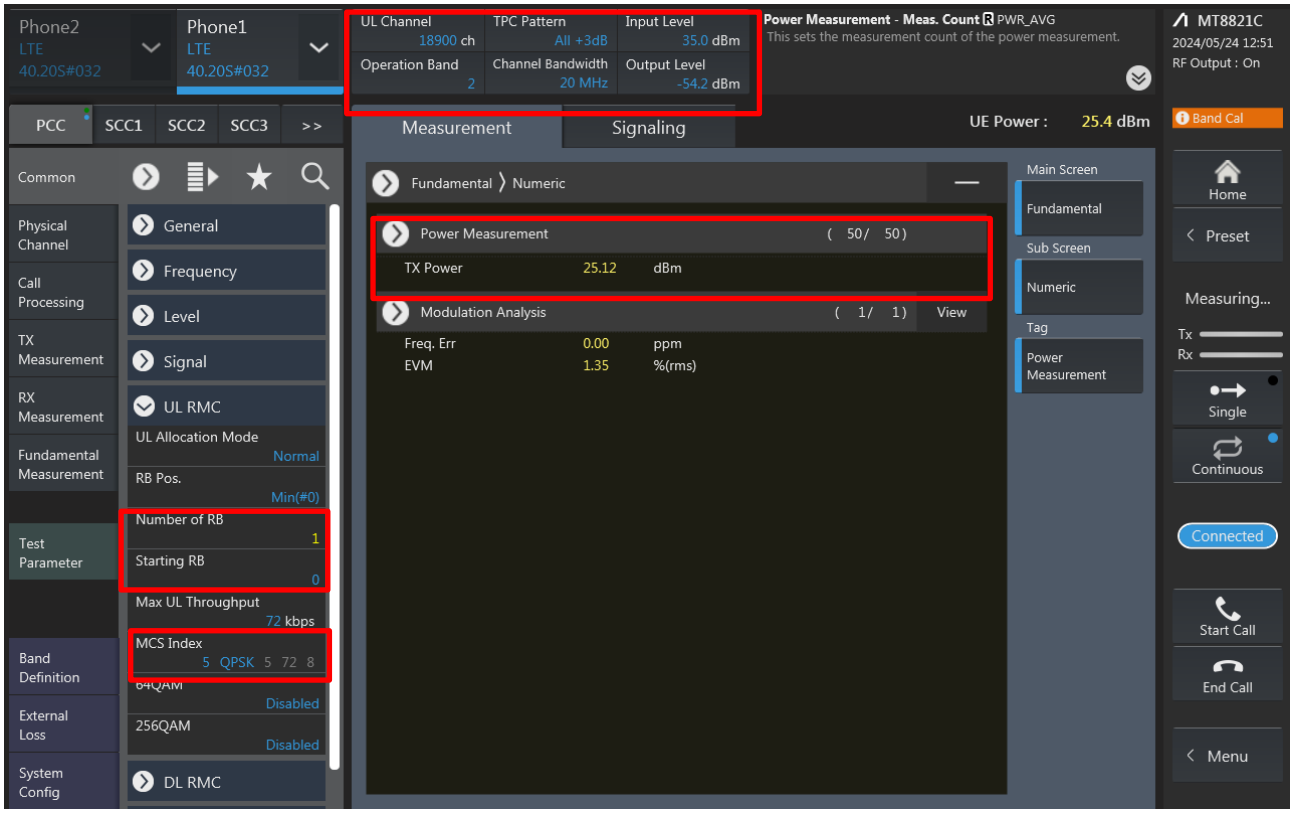

Phone2
LTE
40.20S#021
Phone1
LTE
40.20S#021
UL Channel 21100 ch
TPC Pattern All +3dB
Input Level 30.0 dBm
Operation Band 7
Channel Bandwidth 20 MHz
Output Level -67.0 dBm
External Loss - Main DL DLEXTLOSS
This sets the DL offset at the Main connector. Loss is set as a positive value. The argument tx enables setting a different loss value per internal signal generator.
MT8821C
2024/05/31 13:15
RF Output : On
PCC
SCC1
SCC2
SCC3
>>
Measurement
Signaling
UE Power : 23.4 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
DL RMC
TDD
Uplink Downlink Configuration
1 : (5ms) D S U U D D S U U D
Special Subframe Configuration
4
Numeric
TX Power 23.01 dBm
Occupied Bandwidth
Spectrum Emission Mask
Adjacent Channel Power
In-Band Emission
Spectrum Flatness
EVM
Phase Error
Magnitude Error
Constellation
Throughput
On
Main Screen
Fundamental
Sub Screen
Top
Home
Preset
Measuring...
Tx
Rx
Single
Continuous
Connected
Start Call
End Call
Menu

<LTE TDD Power class 3>

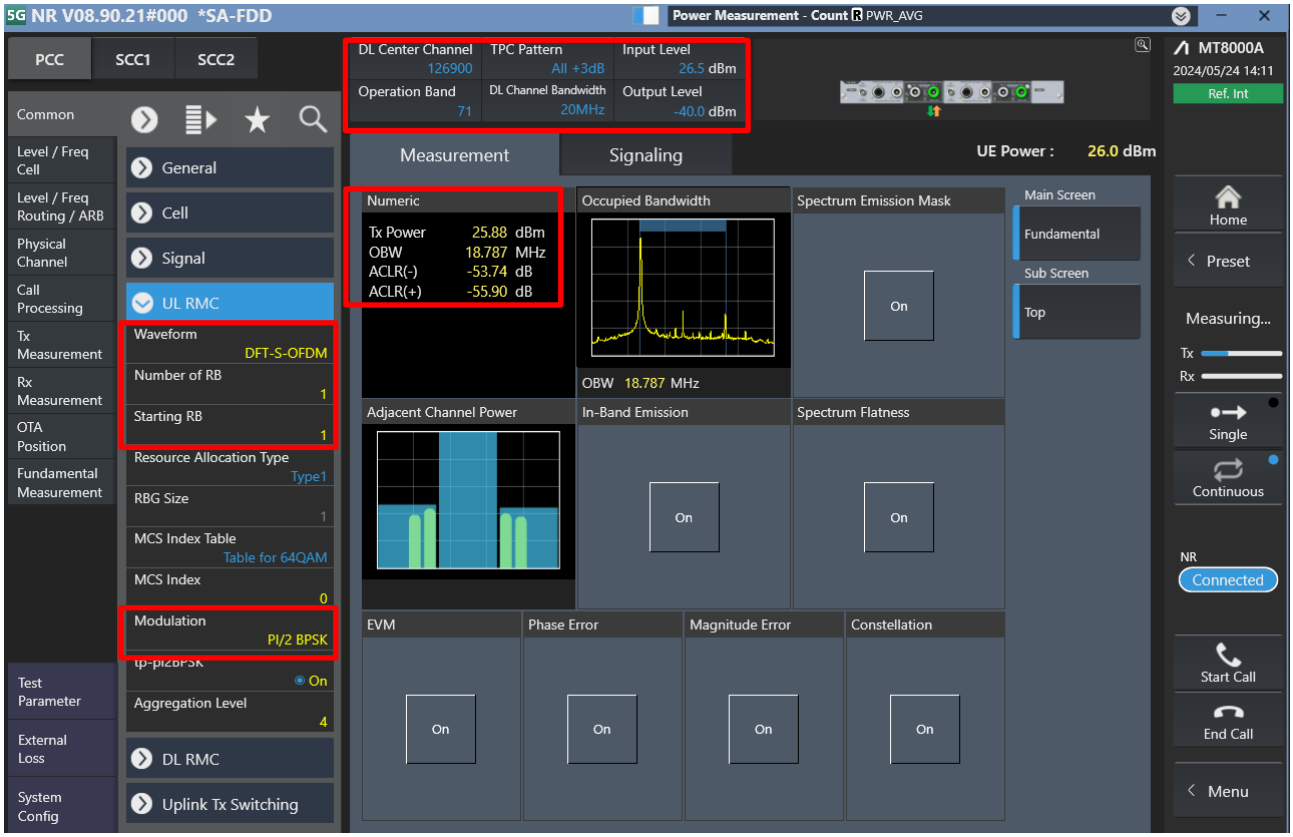


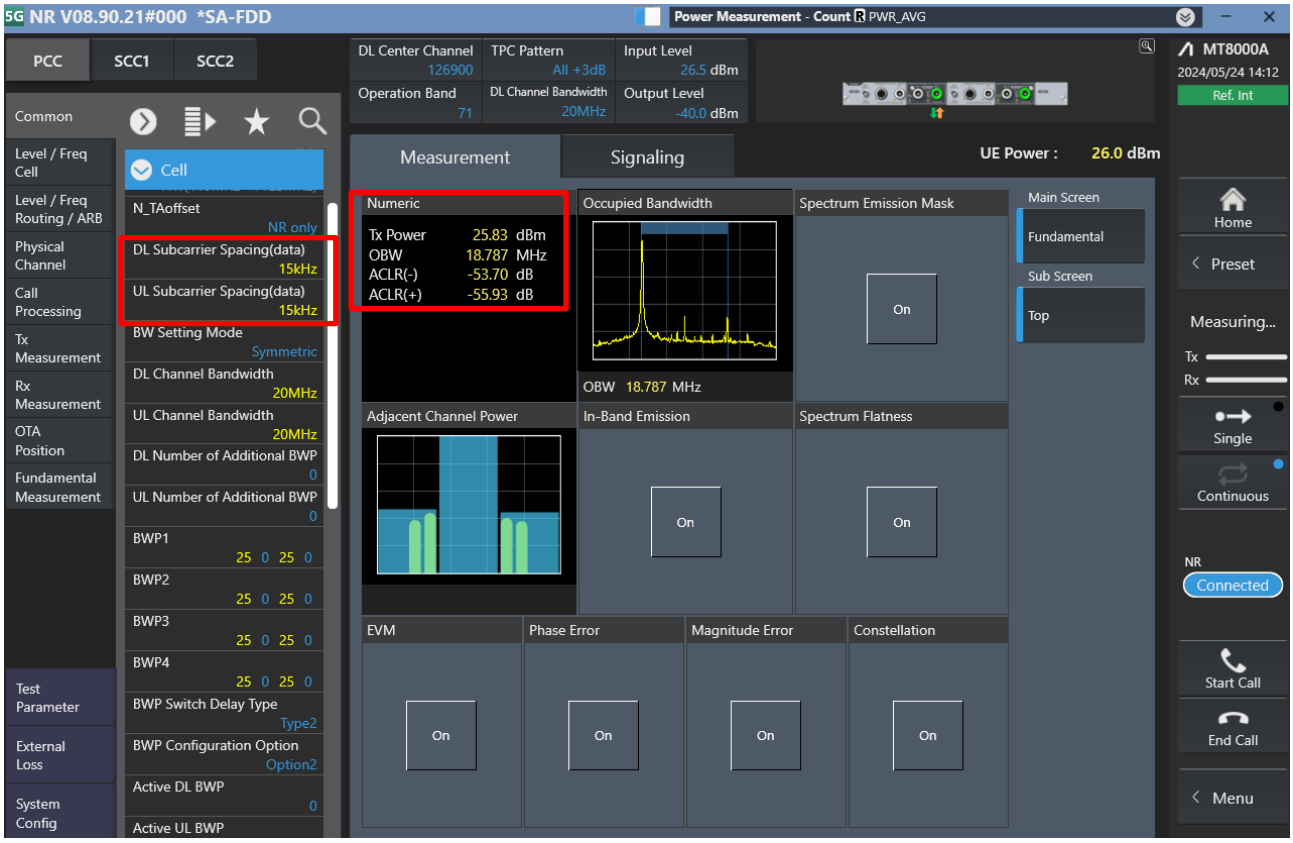
<LTE TDD Power class 2>

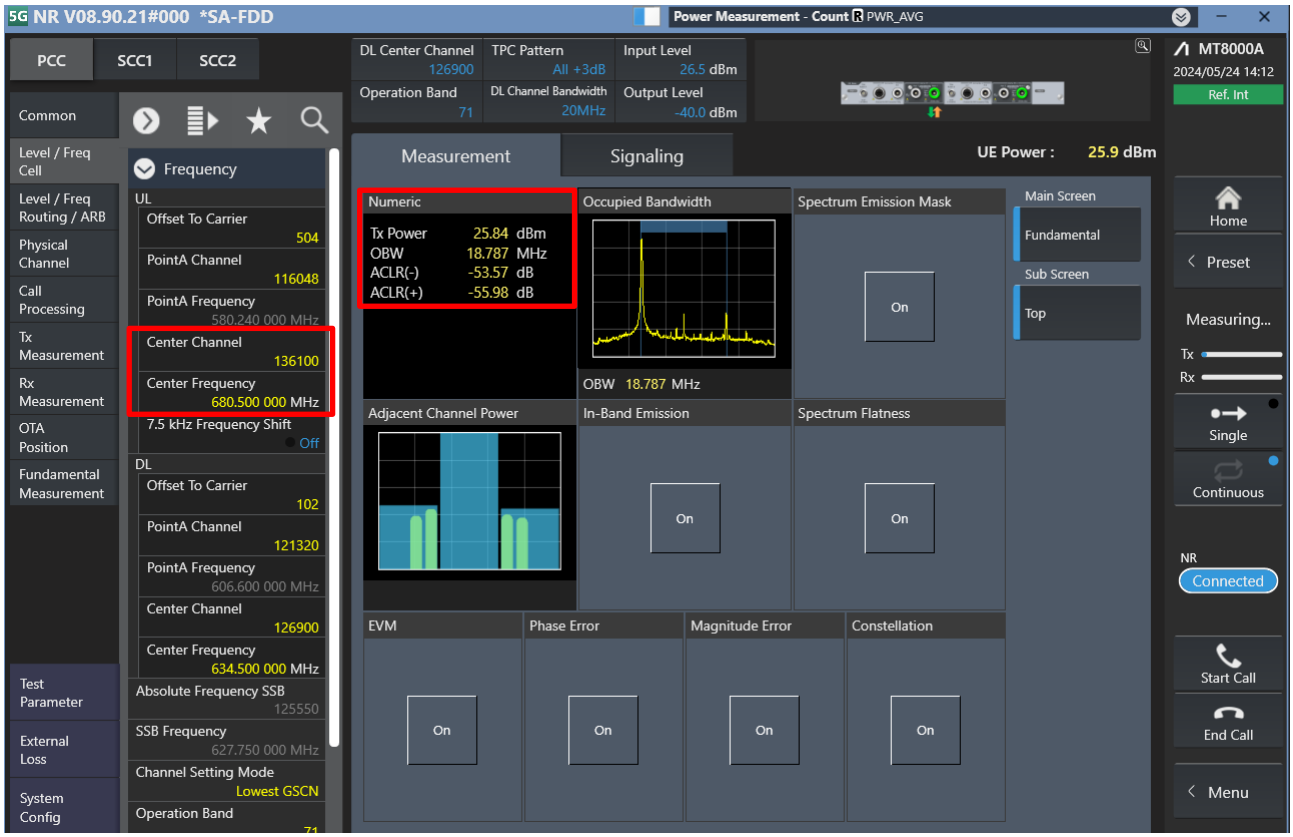



Phone2
LTE
40.20S#032
Phone1
LTE
40.20S#032
UL Channel
18900 ch
TPC Pattern
All +3dB
Input Level
35.0 dBm
Operation Band
2
Channel Bandwidth
20 MHz
Output Level
-54.2 dBm
Power Measurement - Meas. Count PWR_AVG
This sets the measurement count of the power measurement.
MT8821C
2024/05/24 12:51
RF Output : On
PCC
SCC1
SCC2
SCC3
>>
Measurement
Signaling
UE Power : 25.4 dBm
Band Cal
Common
Fundamental 〉 Numeric
Physical Channel
General
Call Processing
Frequency
TX Measurement
Level
RX Measurement
Signal
Fundamental Measurement
UL RMC
UL Allocation Mode
Normal
RB Pos.
Min(#0)
Test Parameter
Number of RB
1
Starting RB
0
Max UL Throughput
72 kbps
MCS Index
5 QPSK 5 72 8
Band Definition
64QAM
Disabled
External Loss
256QAM
Disabled
System Config
DL RMC
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

<5GNR FR1>

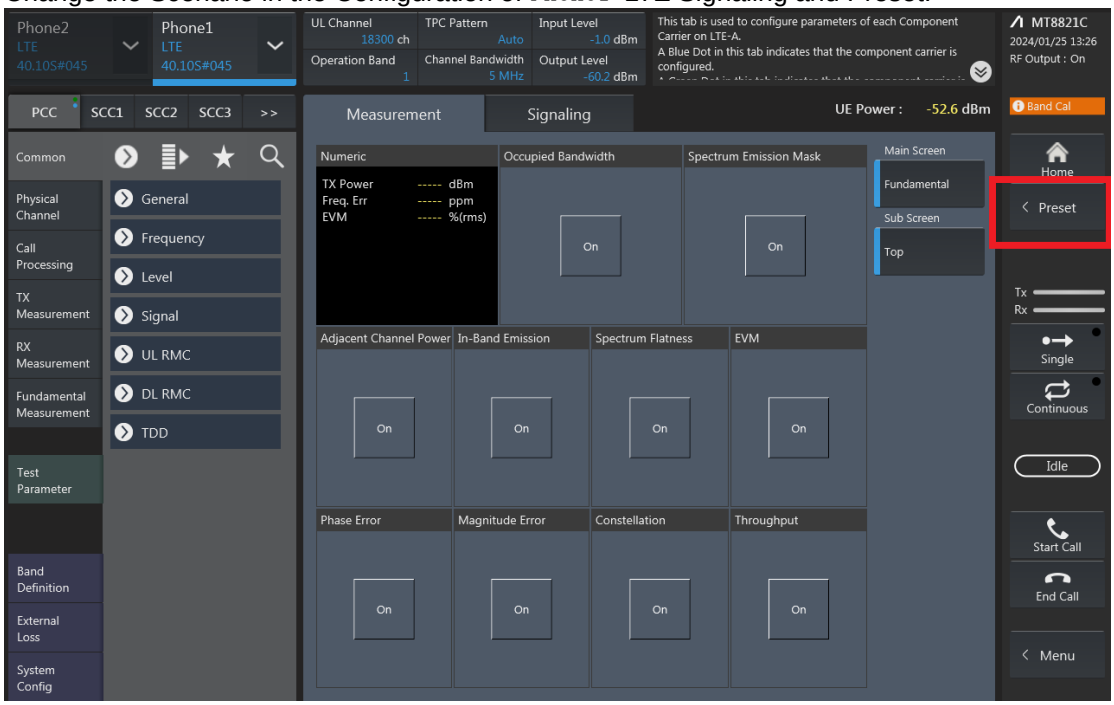

5G NR V08.90.21#000 *SA-FDD
Power Measurement - Count PWR_AVG
PCC
SCC1
SCC2
DL Center Channel
126900
TPC Pattern
All +3dB
Input Level
26.5 dBm
Operation Band
71
DL Channel Bandwidth
20MHz
Output Level
-40.0 dBm
MT8000A
2024/05/24 14:11
Ref. Int
Measurement
Signaling
UE Power : 26.0 dBm
Common
Level / Freq Cell
General
Level / Freq Routing / ARB
Cell
Physical Channel
Signal
Call Processing
UL RMC
Tx Measurement
Waveform
DFT-S-OFDM
Rx Measurement
Number of RB
1
OTA Position
Starting RB
1
Fundamental Measurement
Resource Allocation Type
Type1
RBG Size
1
MCS Index Table
Table for 64QAM
MCS Index
0
Modulation
PI/2 BPSK
Test Parameter
On
Aggregation Level
4
External Loss
DL RMC
System Config
Uplink Tx Switching
Numeric
Tx Power 25.88 dBm
OBW 18.787 MHz
ACLR(-) -53.74 dB
ACLR(+) -55.90 dB
Occupied Bandwidth
OBW 18.787 MHz
Spectrum Emission Mask
On
Adjacent Channel Power
In-Band Emission
On
Spectrum Flatness
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


5G NR V08.90.21#000 *SA-FDD
Power Measurement - Count R PWR_AVG
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
MT8000A
2024/05/24 14:12
Ref. Int
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
Cell
N_TAoffset
NR only
DL Subcarrier Spacing(data) 15kHz
UL Subcarrier Spacing(data) 15kHz
BW Setting Mode Symmetric
DL Channel Bandwidth 20MHz
UL Channel Bandwidth 20MHz
DL Number of Additional BWP 0
UL Number of Additional BWP 0
BWP1 25 0 25 0
BWP2 25 0 25 0
BWP3 25 0 25 0
BWP4 25 0 25 0
BWP Switch Delay Type Type2
BWP Configuration Option Option2
Active DL BWP 0
Active UL BWP
Measurement
Signaling
UE Power : 26.0 dBm
Numeric
Tx Power 25.83 dBm
OBW 18.787 MHz
ACLR(-) -53.70 dB
ACLR(+) -55.93 dB
Occupied Bandwidth
OBW 18.787 MHz
Spectrum Emission Mask
On
Main Screen
Fundamental
Sub Screen
Top
Adjacent Channel Power
In-Band Emission
On
Spectrum Flatness
On
EVM
Phase Error
Magnitude Error
Constellation
On
On
On
On
Home
Preset
Measuring...
Tx
Rx
Single
Continuous
NR
Connected
Start Call
End Call
Menu

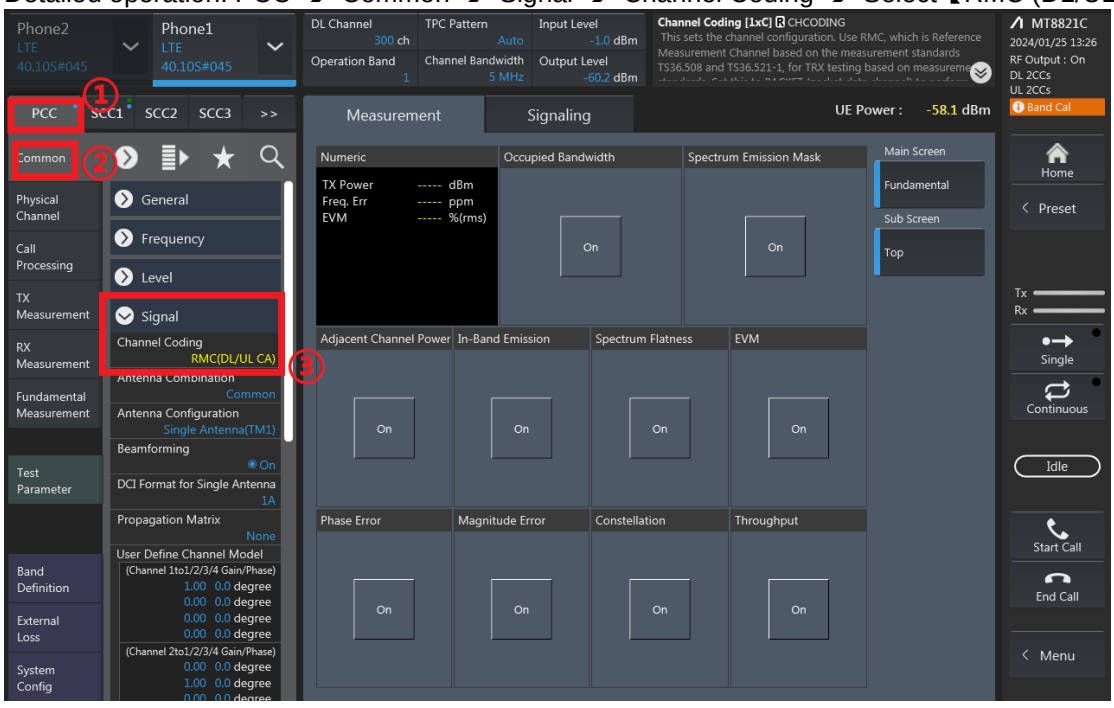

5G NR V08.90.21#000 *SA-FDD
Power Measurement - Count R PWR_AVG
PCC
SCC1
SCC2
DL Center Channel 126900
TPC Pattern All +3dB
Input Level 26.5 dBm
Operation Band 71
DL Channel Bandwidth 20MHz
Output Level -40.0 dBm
MT8000A
2024/05/24 14:12
Ref. Int
Common
Level / Freq Cell
Level / Freq Routing / ARB
Physical Channel
Call Processing
Tx Measurement
Rx Measurement
OTA Position
Fundamental Measurement
Test Parameter
External Loss
System Config
Frequency
UL
Offset To Carrier 504
PointA Channel 116048
PointA Frequency 580.240 000 MHz
Center Channel 136100
Center Frequency 680.500 000 MHz
7.5 kHz Frequency Shift Off
DL
Offset To Carrier 102
PointA Channel 121320
PointA Frequency 606.600 000 MHz
Center Channel 126900
Center Frequency 634.500 000 MHz
Absolute Frequency SSB 125550
SSB Frequency 627.750 000 MHz
Channel Setting Mode Lowest GSCN
Operation Band 71
Measurement
Signaling
UE Power : 25.9 dBm
Numeric
Tx Power 25.84 dBm
OBW 18.787 MHz
ACLR(-) -53.57 dB
ACLR(+) -55.98 dB
Occupied Bandwidth
OBW 18.787 MHz
Spectrum Emission Mask
On
Main Screen
Fundamental
Sub Screen
Top
Adjacent Channel Power
In-Band Emission
On
Spectrum Flatness
On
EVM
Phase Error
Magnitude Error
Constellation
On
On
On
On
Home
Preset
Measuring...
Tx
Rx
Single
Continuous
NR
Connected
Start Call
End Call
Menu

LTE Uplink and Downlink Carrier Aggregation configurations:

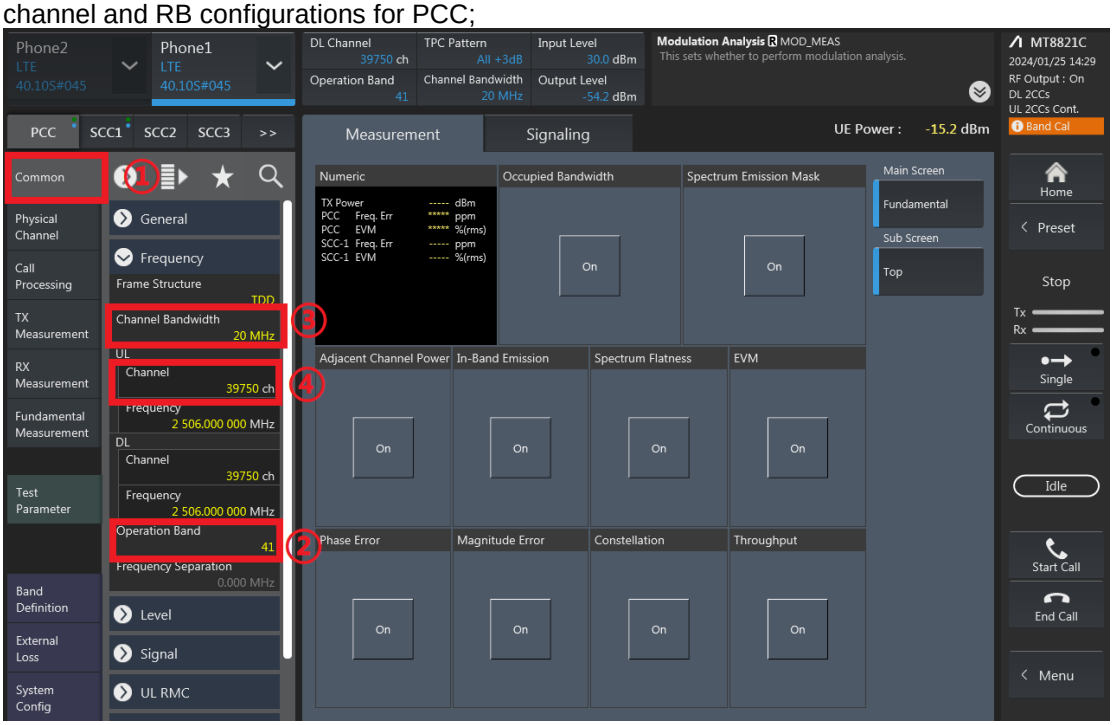
1. Change the Scenario in the Configuration of Phone1 LTE Signaling and Preset.



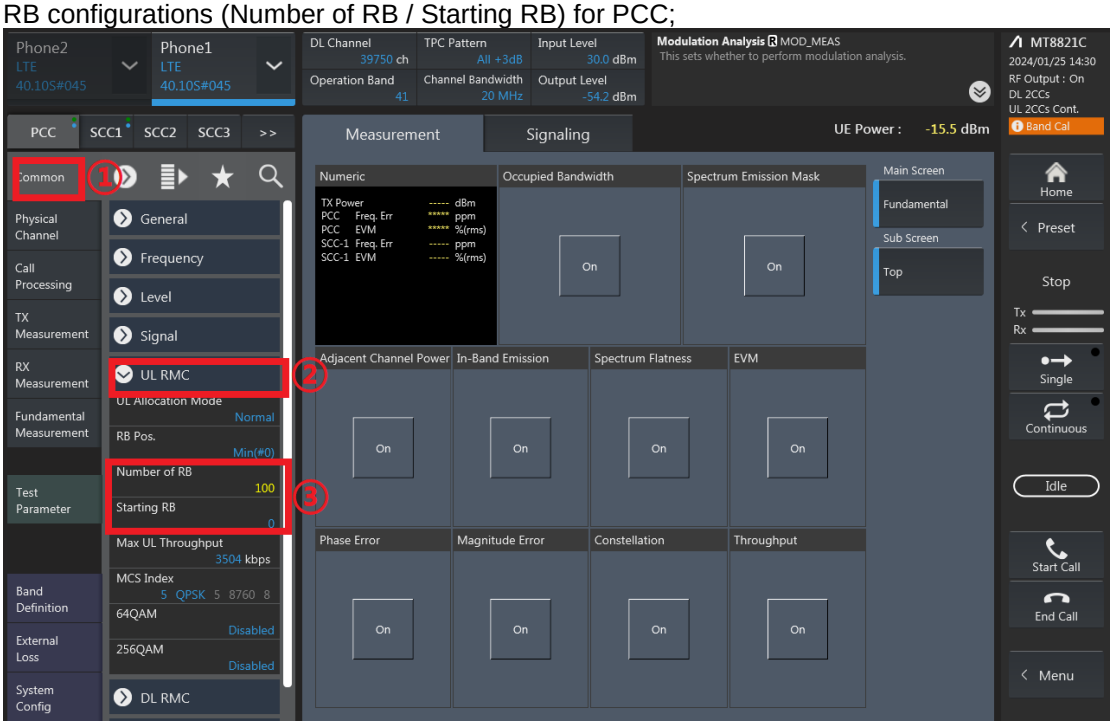
2. If Select “RMC (DL/UL CA)” for Uplink Carrier Aggregation;
If Select “RMC (DL CA)” for Downlink Carrier Aggregation.
For example, Uplink Carrier Aggregation:
Detailed operation: PCC ➔ Common ➔ Signal ➔ Channel Coding ➔ Select【RMC (DL/UL CA)】



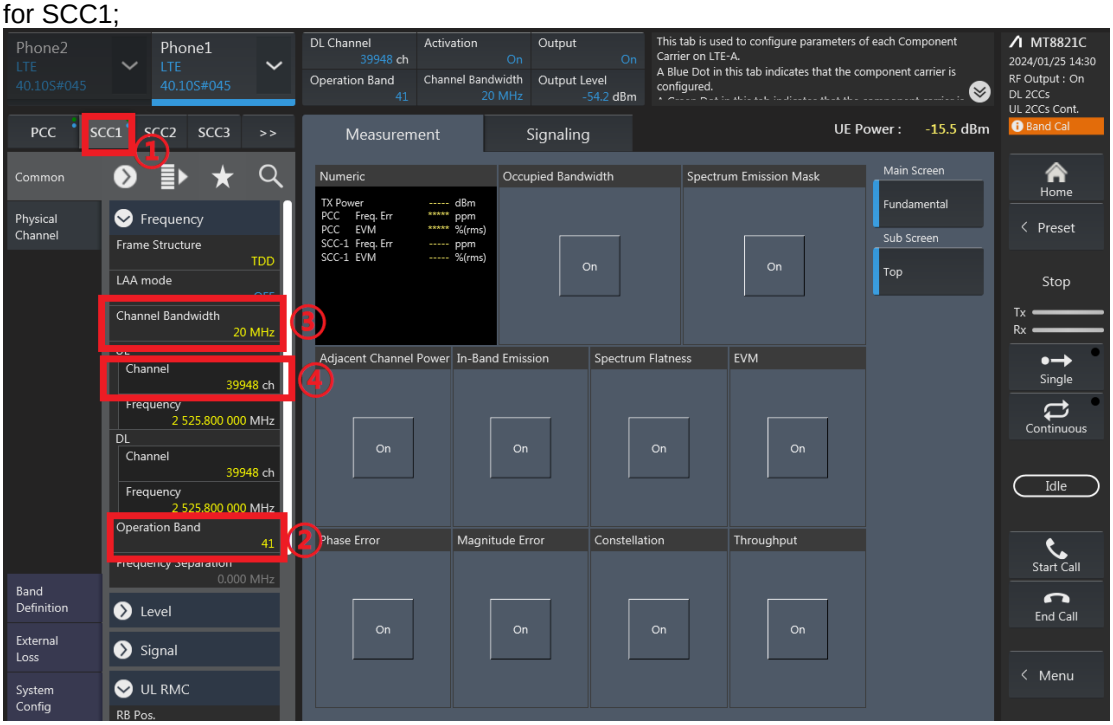
3. PCC parameter Settings: on the screen, and then select the PCC tab and Set operating band, BW, channel and RB configurations for PCC;



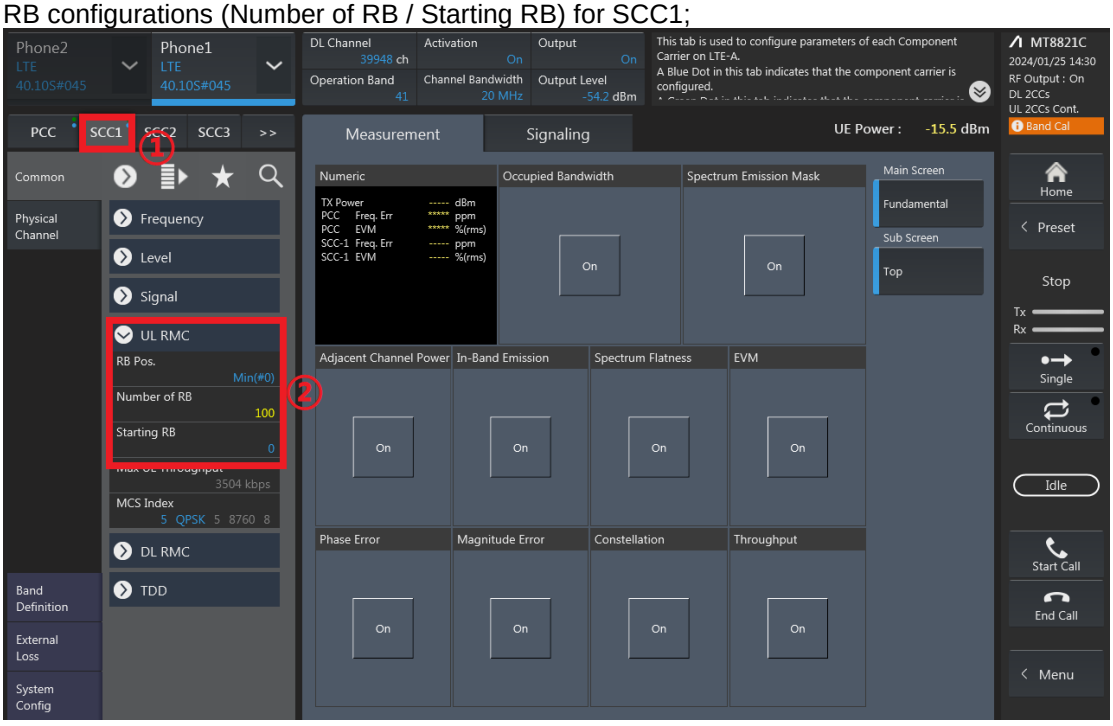
RB configurations (Number of RB / Starting RB) for PCC;



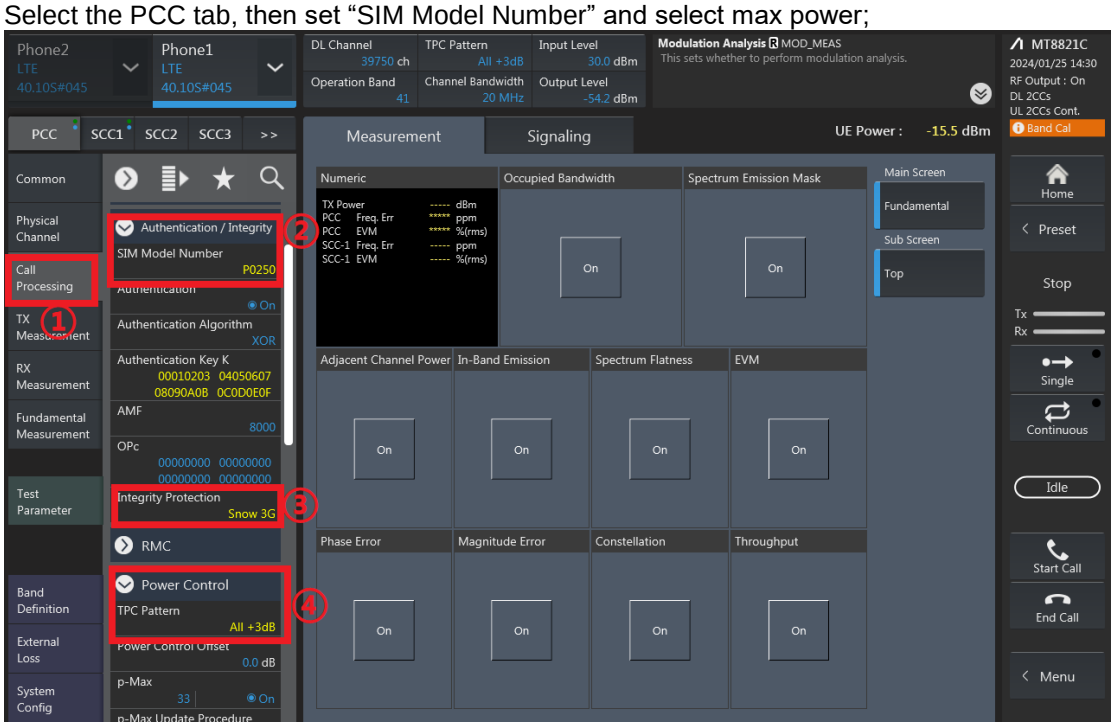
4. SCC parameter Settings: Select the SCC1 tab, Set operating band, BW, channel, and RB configurations for SCC1;



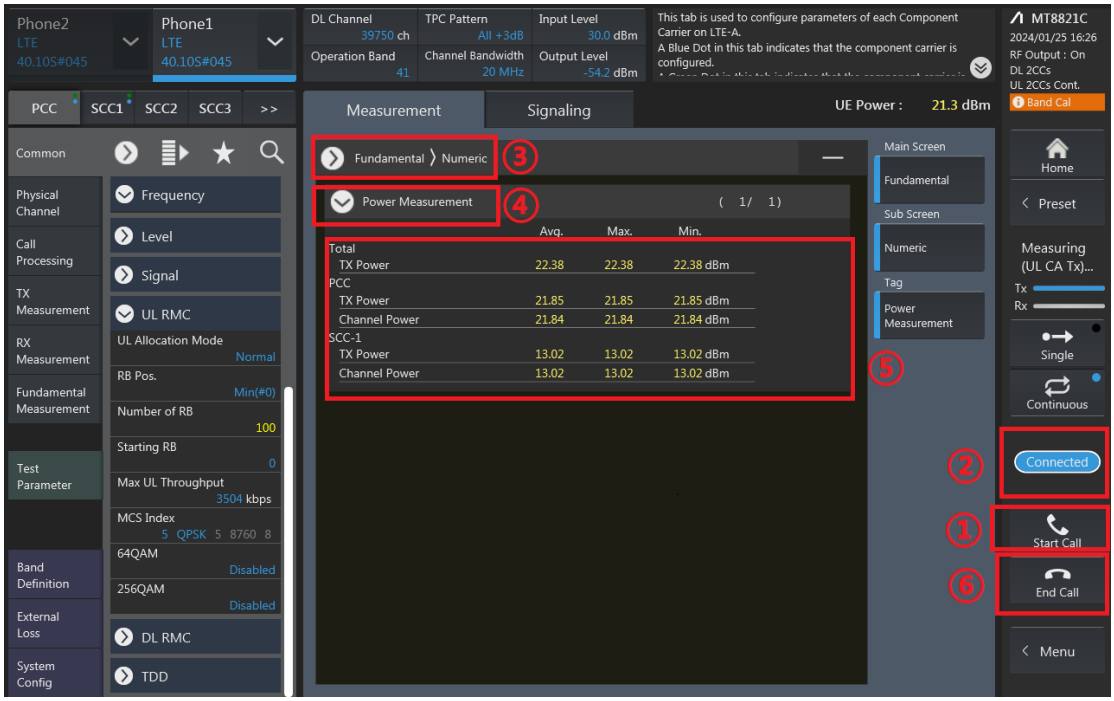
RB configurations (Number of RB / Starting RB) for SCC1;



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
		CA_48A-48A	Band 48	20M	3560	55340	QPSK	1	0	Band 48	20M	3690	56640	22.95	23.03
	Contiguous	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

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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	ECI2	22.90	24.00
20575	20476	QPSK	1	0	0	0	1	0	ECI2	22.96	24.00
20600	20501	QPSK	1	0	0	0	1	0	ECI2	22.92	24.00
20450	20549	QPSK	1	0	0	0	1	0	ECI3	20.97	22.00
20575	20476	QPSK	1	0	0	0	1	0	ECI3	20.99	22.00
20600	20501	QPSK	1	0	0	0	1	0	ECI3	20.92	22.00
20450	20549	QPSK	1	0	0	0	1	0	ECI6	22.90	24.00
20575	20476	QPSK	1	0	0	0	1	0	ECI6	22.96	24.00
20600	20501	QPSK	1	0	0	0	1	0	ECI6	22.92	24.00
20450	20549	QPSK	1	0	0	0	1	0	ECI7	20.97	22.00
20575	20476	QPSK	1	0	0	0	1	0	ECI7	20.99	22.00
20600	20501	QPSK	1	0	0	0	1	0	ECI7	20.92	22.00

CA_5B_Ant 4 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	22.92	24.00
20575	20476	QPSK	1	0	0	0	1	0	FULL	22.95	24.00
20600	20501	QPSK	1	0	0	0	1	0	FULL	22.81	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	22.06	23.20
20450	20549	QPSK	1	0	0	0	1	0	ECI6	22.92	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	20.02	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	20.90	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	20.94	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	17.05	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	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	22.72	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	17.92	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_66C_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					
132072	132270	QPSK	1	0	0	0	1	0	FULL	22.79	24.00
132322	132520	QPSK	1	0	0	0	1	0	FULL	22.93	24.00
132572	132374	QPSK	1	0	0	0	1	0	FULL	22.85	24.00
132072	132270	QPSK	1	0	0	0	1	0	ECI 2	22.79	24.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 2	22.93	24.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 2	22.85	24.00
132072	132270	QPSK	1	0	0	0	1	0	ECI 3	17.96	19.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 3	18.02	19.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 3	17.94	19.00
132072	132270	QPSK	1	0	0	0	1	0	ECI 6	20.95	22.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 6	20.97	22.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 6	20.89	22.00
132072	132270	QPSK	1	0	0	0	1	0	ECI 7	16.99	18.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 7	17.07	18.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 7	17.03	18.00

CA_66C_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	ECI 2	14.40	15.50
132322	132520	QPSK	1	0	0	0	1	0	ECI 2	14.49	15.50
132572	132374	QPSK	1	0	0	0	1	0	ECI 2	14.48	15.50
132072	132270	QPSK	1	0	0	0	1	0	ECI 3	15.86	17.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 3	15.95	17.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 3	15.81	17.00
132072	132270	QPSK	1	0	0	0	1	0	ECI 6	17.90	19.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 6	18.04	19.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 6	17.96	19.00
132072	132270	QPSK	1	0	0	0	1	0	ECI 7	12.94	14.00
132322	132520	QPSK	1	0	0	0	1	0	ECI 7	12.98	14.00
132572	132374	QPSK	1	0	0	0	1	0	ECI 7	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
39750	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
39750	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
39750	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	23.90
39750	39948	QPSK	1	0	0	0	1	0	ECI 6	22.39	23.90
40185	40383	QPSK	1	0	0	0	1	0	ECI 6	22.36	23.90
40620	40818	QPSK	1	0	0	0	1	0	ECI 6	22.51	23.90
41055	41253	QPSK	1	0	0	0	1	0	ECI 6	22.50	23.90
41490	41292	QPSK	1	0	0	0	1	0	ECI 6	22.45	23.90
39790	39988	QPSK	1	0	0	0	1	0	ECI 7	20.10	21.40
39750	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
39750	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
39750	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
39750	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	21.36	23.00
39790	39988	QPSK	1	0	0	0	1	0	ECI 6	23.74	25.50
39750	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	23.76	25.50
39790	39988	QPSK	1	0	0	0	1	0	ECI 7	21.35	23.00
39750	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					
55290	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
56165	56264	QPSK	1	0	0	0	1	0	FULL	22.43	24.00
56690	56591	QPSK	1	0	0	0	1	0	FULL	22.44	24.00
55290	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
56165	56264	QPSK	1	0	0	0	1	0	ECI 2	16.03	17.50
56690	56591	QPSK	1	0	0	0	1	0	ECI 2	15.91	17.50
55290	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
56165	56264	QPSK	1	0	0	0	1	0	ECI 3	15.46	17.00
56690	56591	QPSK	1	0	0	0	1	0	ECI 3	15.52	17.00
55290	55389	QPSK	1	0	0	0	1	0	ECI 6	21.05	22.50
55815	55914	QPSK	1	0	0	0	1	0	ECI 6	21.14	22.50
56165	56264	QPSK	1	0	0	0	1	0	ECI 6	21.06	22.50
56690	56591	QPSK	1	0	0	0	1	0	ECI 6	21.00	22.50
55290	55389	QPSK	1	0	0	0	1	0	ECI 7	14.38	16.00
55815	55914	QPSK	1	0	0	0	1	0	ECI 7	14.43	16.00
56165	56264	QPSK	1	0	0	0	1	0	ECI 7	14.36	16.00
56690	56591	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
55830	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
55830	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
55930	56028	QPSK	1	0	0	0	1	0	ECI 3	15.69	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
55830	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	16.11	22.50
55340	55538	QPSK	1	0	0	0	1	0	ECI 7	14.61	16.00
55830	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