

Appendix H. – Power reduction verification

Per the May 2017 TCBC Workshop notes, demonstration of proper functioning of the power reduction mechanism is required to support the corresponding SAR Configurations.

The verification process was divided into two parts:

- 1). Evaluation of output power levels for individual triggering mechanism
- 2) Evaluation of the triggering distances for proximity-based sensors.

1. Power Reduction Verification for Main Ant

The Power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and output power was monitored. The Power measurements were conformed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Step 1 and 2 were repeated for all individual power reduction mechanism and combinations thereof. For the combination cases, one mechanism was switched to a “triggered” state at a time; powers were conformed to be within tolerance after each additional mechanism was activated.

Main Antenna Verification Summary

Mechanism(s)	Mode/Band	Device State Index		
		Un-triggered (Max Power)	Triggered (Reduced Power)	Triggered (Reduced Power)
Grip	GSM/GPRS/EDGE 1900	0	1	
Grip	PCS/EVDO BC1	0	1	
Grip	WCDMA B2	0	1	
Grip	WCDMA B4	0	1	
Grip	LTE Band 2	0	1	
Grip	LTE Band 4	0	1	
Grip	LTE Band 7	0	1	
Grip	LTE Band 25	0	1	
Grip	LTE Band 30	0	1	
Grip	LTE Band 38	0	1	
Grip	LTE Band 41(PC3)	0	1	
Grip	LTE Band 41(PC2)	0	1	
Grip	LTE Band 66	0	1	
Grip	Sub 6 Band n2	0	1	
Grip	Sub 6 Band n25	0	1	
Grip	Sub 6 Band n30	0	1	
Grip	Sub 6 Band n41(PC3)	0	1	
Grip	Sub 6 Band n41(PC2)	0	1	
Grip	Sub 6 Band n66	0	1	
Hotspot On	GSM/GPRS/EDGE 1900	0	3	
Hotspot On	PCS/EVDO BC1	0	3	
Hotspot On	WCDMA B2	0	3	
Hotspot On	WCDMA B4	0	3	
Hotspot On	LTE Band 2	0	3	
Hotspot On	LTE Band 4	0	3	
Hotspot On	LTE Band 7	0	3	
Hotspot On	LTE Band 25	0	3	
Hotspot On	LTE Band 30	0	3	
Hotspot On	LTE Band 38	0	3	
Hotspot On	LTE Band 41(PC3)	0	3	
Hotspot On	LTE Band 41(PC2)	0	3	
Hotspot On	LTE Band 48	0	3	
Hotspot On	LTE Band 66	0	3	
Hotspot On	Sub 6 Band n2	0	3	
Hotspot On	Sub 6 Band n25	0	3	
Hotspot On	Sub 6 Band n30	0	3	
Hotspot On	Sub 6 Band n41(PC3)	0	3	
Hotspot On	Sub 6 Band n41(PC2)	0	3	
Hotspot On	Sub 6 Band n66	0	3	
Hotspot On, Then Grip	GSM/GPRS/EDGE 1900	0	3	3
Hotspot On, Then Grip	PCS/EVDO BC1	0	3	3
Hotspot On, Then Grip	WCDMA B2	0	3	3
Hotspot On, Then Grip	WCDMA B4	0	3	3
Hotspot On, Then Grip	LTE Band 2	0	3	3
Hotspot On, Then Grip	LTE Band 4	0	3	3

Hotspot On, Then Grip	LTE Band 7	0	3	3
Hotspot On, Then Grip	LTE Band 25	0	3	3
Hotspot On, Then Grip	LTE Band 30	0	3	3
Hotspot On, Then Grip	LTE Band 38	0	3	3
Hotspot On, Then Grip	LTE Band 41(PC3)	0	3	3
Hotspot On, Then Grip	LTE Band 41(PC2)	0	3	3
Hotspot On, Then Grip	LTE Band 48	0	3	3
Hotspot On, Then Grip	LTE Band 66	0	3	3
Hotspot On, Then Grip	Sub 6 Band n2	0	3	3
Hotspot On, Then Grip	Sub 6 Band n25	0	3	3
Hotspot On, Then Grip	Sub 6 Band n30	0	3	3
Hotspot On, Then Grip	Sub 6 Band n41(PC3)	0	3	3
Hotspot On, Then Grip	Sub 6 Band n41(PC2)	0	3	3
Hotspot On, Then Grip	Sub 6 Band n66	0	3	3
Grip, then Hotspot On	GSM/GPRS/EDGE 1900	0	1	3
Grip, then Hotspot On	PCS/EVDO BC1	0	1	3
Grip, then Hotspot On	WCDMA B2	0	1	3
Grip, then Hotspot On	WCDMA B4	0	1	3
Grip, then Hotspot On	LTE Band 2	0	1	3
Grip, then Hotspot On	LTE Band 4	0	1	3
Grip, then Hotspot On	LTE Band 7	0	1	3
Grip, then Hotspot On	LTE Band 25	0	1	3
Grip, then Hotspot On	LTE Band 30	0	1	3
Grip, then Hotspot On	LTE Band 38	0	1	3
Grip, then Hotspot On	LTE Band 41(PC3)	0	1	3
Grip, then Hotspot On	LTE Band 41(PC2)	0	1	3
Grip, then Hotspot On	LTE Band 48	0	1	3
Grip, then Hotspot On	LTE Band 66	0	1	3
Grip, then Hotspot On	Sub 6 Band n2	0	1	3
Grip, then Hotspot On	Sub 6 Band n25	0	1	3
Grip, then Hotspot On	Sub 6 Band n30	0	1	3
Grip, then Hotspot On	Sub 6 Band n41(PC3)	0	1	3
Grip, then Hotspot On	Sub 6 Band n41(PC2)	0	1	3
Grip, then Hotspot On	Sub 6 Band n66	0	1	3

* LTE Band 40 supports MCC back off as a top priority

*Note: This device uses different Device State Indices (DSI) to configure different time averaged power levels based on certain exposure scenarios. For this device, DSI = 1 represents the case when the grip sensor is active, DSI = 2 represents the case where the device is held to ear, and DSI = 3 represents the case when hotspot mode is active, DSI = 4 represents the case when ear-jack is inserted and DSI = 0 is configured at max power when the device cannot detect the use condition .

when Hotspot Mode (DSI=3) Grip sensor (DSI=1) and Ear-jack mode(DSI=4) are triggered at the same time, DSI=3 (Hotspot) takes more higher priority.the Priority for power reduction was given in the order of hotspot (DSI=3) and earjack.(DSI=4), Grip (DSI=1).

1.1. Distance Verification Procedure

Procedures for determining proximity sensor triggering distances

(KDB 616217D04v01r02§6.2)

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02. Each applicable test position was evaluated. The distance were conformed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Step 1 and 2 were repeated for the relevant modes, as appropriate
4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

For detailed measurement conducted power results, please refer to the Section .11



Proximity Sensor Trigger Distance Assessment KDB 616217 D04§6.2 (Rear / Front / Bottom side)

LEGEND

- Direction of DUT travel for determination of power reduction triggering point
- Direction of DUT travel for determination of full power resumption triggering point

Tissue simulating liquid	Trigger distance - Rear		Trigger distance - Front		Trigger distance - Bottom	
	Moving toward phantom [mm]	Moving away from phantom [mm]	Moving toward phantom [mm]	Moving away from phantom [mm]	Moving toward phantom [mm]	Moving away from phantom [mm]
1800MHz Tissue	9	10	7	8	14	15
1900MHz Tissue	9	10	7	8	14	15
2300MHz Tissue	9	10	7	8	14	15
2600 MHz Tissue	9	10	7	8	14	15

Distance Measurement verification for Proximity sensor

Rear side – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	14[mm]	13[mm]	12[mm]	11[mm]	10[mm]	9[mm]	8[mm]	7[mm]	6[mm]	5[mm]
GSM1900 /Voice	29.74	29.7	29.78	29.8	29.71	26.69	26.74	26.71	26.61	26.71
GSM1900 /GPRS 1Tx	29.65	29.7	29.68	29.73	29.79	26.76	26.62	26.6	26.71	26.79
GSM1900 /GPRS 2Tx	29.21	29.27	29.15	29.2	29.2	24.05	24.01	23.99	24.01	23.93
GSM1900 /GPRS 3Tx	27.61	27.58	27.57	27.54	27.6	22.17	22.24	22.34	22.17	22.29
GSM1900 /GPRS 4Tx	25.2	25.16	25.3	25.32	25.32	20.72	20.69	20.79	20.87	20.68
PCS RC3/SO55	23.4	23.5	23.43	23.34	23.48	20.13	20.2	20.22	20.12	20.13
PCS EVDO Rev.0	23.4	23.43	23.29	23.26	23.4	19.73	19.67	19.72	19.81	19.75
PCS EVDO Rev.A	23.31	23.31	23.41	23.34	23.3	19.81	19.76	19.77	19.82	19.9
WCDMA B2	24.34	24.36	24.33	24.3	24.33	19.13	19.26	19.14	19.2	19.25
WCDMA B4	23.85	23.85	23.87	23.86	23.85	18.8	18.97	18.9	18.91	18.85
LTE Band 2	24.43	24.58	24.46	24.57	24.54	20.39	20.31	20.26	20.32	20.36
LTE Band 4	23.29	23.19	23.17	23.31	23.21	19.88	19.94	19.94	19.81	19.95
LTE Band 7	23.79	23.82	23.87	23.84	23.88	19.63	19.56	19.67	19.69	19.59
LTE Band 25	24.51	24.65	24.71	24.71	24.69	20.47	20.47	20.44	20.42	20.48
LTE Band 30	22.4	22.31	22.35	22.38	22.34	18.2	18.15	18.25	18.27	18.21
LTE Band 38	24.49	24.45	24.54	24.44	24.63	19.64	19.65	19.52	19.71	19.72
LTE Band 41(Class 3)	24.82	24.81	24.85	24.88	24.72	21.78	21.78	21.72	21.79	21.7
LTE Band 41(Class 2)	26.54	26.65	26.47	26.58	26.63	22.09	22.06	21.94	21.96	21.91
LTE Band 66	24.06	24	24.08	24.06	23.95	19.89	19.94	19.91	19.87	19.83
Sub 6 Band n2	23.96	24.06	24.11	23.95	24.13	18.92	18.89	18.8	18.84	18.88
Sub 6 Band n25	24.17	24.12	24.09	24.02	24.08	18.54	18.64	18.63	18.64	18.66
Sub 6 Band n30	23.08	23.13	22.96	23.02	22.98	18.14	18.14	18.34	18.31	18.3
Sub 6 Band n41(Class 3)	23.71	23.72	23.78	23.71	23.74	22.99	22.93	22.99	23.07	23.11
Sub 6 Band n41(Class 2)	25.84	25.88	25.89	25.8	25.8	23.26	23.14	23.26	23.14	23.17
Sub 6 Band n66	24.28	24.25	24.26	24.26	24.21	19.6	19.49	19.51	19.56	19.48

Rear side – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	6[mm]	7[mm]	8[mm]	9[mm]	10[mm]	11[mm]	12[mm]	13[mm]	14mm]	15[mm]
GSM1900 /Voice	26.61	26.6	26.68	26.67	26.63	29.71	29.61	29.73	29.75	29.78
GSM1900 /GPRS 1Tx	26.71	26.66	26.77	26.64	26.7	29.79	29.72	29.8	29.61	29.72
GSM1900 /GPRS 2Tx	23.91	23.96	24.05	23.98	24.04	29.32	29.3	29.21	29.17	29.22
GSM1900 /GPRS 3Tx	22.26	22.34	22.35	22.31	22.16	27.48	27.49	27.49	27.66	27.57
GSM1900 /GPRS 4Tx	20.73	20.71	20.72	20.81	20.72	25.22	25.29	25.31	25.29	25.21
PCS RC3/SO55	20.3	20.2	20.16	20.2	20.28	23.38	23.42	23.45	23.39	23.43
PCS EVDO Rev.0	19.69	19.71	19.75	19.79	19.8	23.44	23.4	23.34	23.45	23.28
PCS EVDORev.A	19.76	19.73	19.85	19.9	19.85	23.42	23.45	23.31	23.45	23.46
WCDMA B2	19.27	19.18	19.15	19.29	19.23	24.38	24.39	24.21	24.37	24.41
WCDMA B4	18.93	18.96	18.98	18.96	18.86	23.82	23.68	23.71	23.73	23.85
LTE Band 2	20.44	20.36	20.44	20.27	20.41	24.45	24.47	24.49	24.58	24.44
LTE Band 4	19.86	19.83	19.89	19.97	19.97	23.21	23.18	23.14	23.16	23.23
LTE Band 7	19.65	19.62	19.73	19.73	19.66	23.78	23.78	23.79	23.86	23.78
LTE Band 25	20.38	20.52	20.44	20.47	20.36	24.7	24.65	24.65	24.58	24.69
LTE Band 30	18.12	18.13	18.26	18.15	18.2	22.28	22.29	22.26	22.26	22.34
LTE Band 38	19.55	19.59	19.62	19.58	19.66	24.57	24.51	24.5	24.53	24.58
LTE Band 41(Class 3)	21.72	21.79	21.79	21.76	21.74	24.74	24.69	24.77	24.72	24.81
LTE Band 41(Class 2)	22.06	21.89	22.02	22.06	21.95	26.53	26.56	26.46	26.63	26.47
LTE Band 66	19.82	19.77	19.94	19.91	19.84	24.07	24.02	23.95	24.11	24.11
Sub 6 Band n2	18.87	18.8	18.92	18.78	18.92	23.96	24.08	24.12	24.09	24.09
Sub 6 Band n25	18.6	18.55	18.69	18.63	18.67	24.06	24.13	24.1	24.08	24.1
Sub 6 Band n30	18.24	18.3	18.23	18.34	18.22	23.07	23.04	23.14	23.11	23.04
Sub 6 Band n41(Class 3)	23.03	23	23.03	23.08	22.96	23.76	23.77	23.71	23.77	23.73
Sub 6 Band n41(Class 2)	23.16	23.22	23.16	23.22	23.18	25.85	25.86	25.75	25.8	25.71
Sub 6 Band n66	19.66	19.67	19.49	19.67	19.55	24.17	24.34	24.24	24.2	24.23

Based on the most conservative measured triggering distance of 9mm, additional Phablet SAR measurements were required at 8mm from rear side for the above modes

Front side – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	12[mm]	11[mm]	10[mm]	9[mm]	8[mm]	7[mm]	6[mm]	5[mm]	4[mm]	3[mm]
GSM1900 /Voice	29.71	29.8	29.63	29.67	29.63	26.7	26.77	26.64	26.74	26.72
GSM1900 /GPRS 1Tx	29.8	29.69	29.79	29.67	29.64	26.77	26.62	26.6	26.69	26.65
GSM1900 /GPRS 2Tx	29.16	29.34	29.3	29.32	29.3	24.03	23.94	23.94	23.99	23.97
GSM1900 /GPRS 3Tx	27.5	27.64	27.48	27.48	27.48	22.33	22.2	22.31	22.3	22.23
GSM1900 /GPRS 4Tx	25.15	25.33	25.3	25.31	25.17	20.77	20.73	20.8	20.79	20.72
PCS RC3/SO55	23.4	23.35	23.47	23.43	23.45	20.26	20.24	20.14	20.26	20.13
PCS EVDO Rev.0	23.37	23.3	23.3	23.4	23.33	19.78	19.64	19.75	19.67	19.63
PCS EVDO Rev.A	23.3	23.36	23.27	23.45	23.37	19.82	19.86	19.8	19.72	19.82
WCDMA B2	24.33	24.38	24.38	24.39	24.22	19.1	19.17	19.11	19.28	19.17
WCDMA B4	23.8	23.74	23.84	23.73	23.67	18.82	18.95	18.86	18.83	18.92
LTE Band 2	24.43	24.52	24.56	24.5	24.44	20.46	20.26	20.32	20.34	20.35
LTE Band 4	23.24	23.13	23.21	23.24	23.17	19.83	19.79	19.92	19.88	19.81
LTE Band 7	23.73	23.73	23.81	23.87	23.72	19.7	19.74	19.58	19.65	19.73
LTE Band 25	24.57	24.63	24.51	24.7	24.55	20.35	20.35	20.49	20.53	20.49
LTE Band 30	22.33	22.41	22.33	22.24	22.37	18.16	18.18	18.27	18.27	18.17
LTE Band 38	24.61	24.56	24.59	24.62	24.5	19.57	19.55	19.59	19.56	19.72
LTE Band 41(Class 3)	24.85	24.77	24.72	24.69	24.7	21.79	21.8	21.76	21.71	21.72
LTE Band 41(Class 2)	26.57	26.65	26.57	26.58	26.46	21.98	21.89	22.03	21.94	22
LTE Band 66	23.93	24.11	24.06	24.1	24.09	19.79	19.76	19.87	19.87	19.83
Sub 6 Band n2	24.04	23.96	23.98	24.08	24.02	18.81	18.79	18.8	18.72	18.83
Sub 6 Band n25	24.02	24.07	24.07	24.15	23.98	18.52	18.54	18.7	18.56	18.66
Sub 6 Band n30	23.06	23.1	22.97	23.15	23.13	18.2	18.15	18.21	18.32	18.2
Sub 6 Band n41(Class 3)	23.63	23.72	23.74	23.8	23.66	23.04	23.11	22.97	23.12	22.99
Sub 6 Band n41(Class 2)	25.79	25.76	25.91	25.72	25.88	23.1	23.28	23.15	23.18	23.18
Sub 6 Band n66	24.35	24.22	24.33	24.25	24.23	19.53	19.62	19.57	19.58	19.63

Front side – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	4[mm]	5[mm]	6[mm]	7[mm]	8[mm]	9[mm]	10[mm]	11[mm]	12[mm]	13[mm]
GSM1900 /Voice	26.57	26.68	26.77	26.73	26.75	29.7	29.61	29.61	29.68	29.81
GSM1900 /GPRS 1Tx	26.62	26.73	26.72	26.72	26.66	29.64	29.62	29.79	29.77	29.72
GSM1900 /GPRS 2Tx	23.94	23.92	24.1	24.04	23.93	29.17	29.31	29.27	29.24	29.19
GSM1900 /GPRS 3Tx	22.28	22.26	22.35	22.25	22.28	27.54	27.64	27.47	27.64	27.64
GSM1900 /GPRS 4Tx	20.83	20.79	20.8	20.74	20.79	25.18	25.15	25.28	25.26	25.35
PCS RC3/SO55	20.32	20.31	20.24	20.32	20.17	23.39	23.37	23.49	23.42	23.49
PCS EVDO Rev.0	19.63	19.74	19.7	19.66	19.76	23.37	23.32	23.39	23.34	23.46
PCS EVDO Rev.A	19.8	19.84	19.82	19.71	19.72	23.35	23.38	23.28	23.29	23.37
WCDMA B2	19.3	19.1	19.25	19.25	19.29	24.3	24.23	24.29	24.31	24.29
WCDMA B4	18.9	18.97	18.92	18.94	18.8	23.86	23.76	23.81	23.73	23.8
LTE Band 2	20.3	20.35	20.33	20.35	20.43	24.5	24.53	24.58	24.58	24.54
LTE Band 4	19.83	19.94	19.83	19.93	19.89	23.27	23.21	23.27	23.13	23.14
LTE Band 7	19.74	19.66	19.67	19.65	19.58	23.84	23.82	23.89	23.76	23.89
LTE Band 25	20.45	20.36	20.49	20.36	20.48	24.55	24.7	24.61	24.53	24.53
LTE Band 30	18.23	18.13	18.19	18.28	18.25	22.37	22.27	22.24	22.24	22.33
LTE Band 38	19.7	19.69	19.55	19.68	19.64	24.54	24.56	24.58	24.63	24.61
LTE Band 41(Class 3)	21.84	21.85	21.79	21.85	21.77	24.72	24.84	24.7	24.71	24.69
LTE Band 41(Class 2)	21.96	22.09	22	21.93	21.93	26.64	26.64	26.6	26.63	26.51
LTE Band 66	19.76	19.77	19.93	19.83	19.83	24.08	24.09	24.05	23.99	24.09
Sub 6 Band n2	18.89	18.74	18.76	18.79	18.83	24.05	24	24.05	24.1	24.04
Sub 6 Band n25	18.65	18.52	18.62	18.59	18.52	24.1	24.16	24.15	24.07	24.17
Sub 6 Band n30	18.2	18.21	18.27	18.19	18.2	22.96	23.1	23.08	23.13	22.99
Sub 6 Band n41(Class 3)	22.95	23.04	23.03	22.93	23.11	23.67	23.65	23.63	23.63	23.71
Sub 6 Band n41(Class 2)	23.22	23.16	23.07	23.13	23.2	25.73	25.71	25.82	25.84	25.82
Sub 6 Band n66	19.49	19.58	19.46	19.61	19.52	24.19	24.19	24.26	24.26	24.37

Based on the most conservative measured triggering distance of 7mm, additional Phablet SAR measurements were required at 6mm from Front side for the above modes

Bottom side – EUT Moving toward (trigger) to the Phantom

Mode	Distance to DUT Output power (dBm)									
	19[mm]	18[mm]	17[mm]	16[mm]	15[mm]	14[mm]	13[mm]	12[mm]	11[mm]	10[mm]
GSM1900 /Voice	29.75	29.66	29.71	29.61	29.72	26.65	26.67	26.73	26.61	26.73
GSM1900 /GPRS 1Tx	29.74	29.66	29.69	29.62	29.68	26.61	26.68	26.64	26.72	26.6
GSM1900 /GPRS 2Tx	29.17	29.15	29.21	29.32	29.32	23.95	24.05	23.93	23.96	24.05
GSM1900 /GPRS 3Tx	27.57	27.61	27.54	27.46	27.48	22.35	22.33	22.32	22.22	22.17
GSM1900 /GPRS 4Tx	25.16	25.34	25.33	25.27	25.33	20.8	20.71	20.86	20.67	20.72
PCS RC3/SO55	23.51	23.37	23.32	23.45	23.46	20.15	20.26	20.32	20.12	20.14
PCS EVDO Rev.0	23.43	23.29	23.28	23.45	23.29	19.77	19.74	19.74	19.74	19.81
PCS EVDORev.A	23.3	23.32	23.43	23.32	23.3	19.78	19.83	19.87	19.86	19.88
WCDMA B2	24.34	24.25	24.22	24.22	24.21	19.28	19.15	19.18	19.13	19.27
WCDMA B4	23.85	23.8	23.71	23.72	23.76	18.91	18.98	18.96	18.79	18.84
LTE Band 2	24.56	24.41	24.56	24.39	24.4	20.42	20.33	20.37	20.37	20.41
LTE Band 4	23.21	23.3	23.17	23.15	23.22	19.8	19.94	19.85	19.9	19.79
LTE Band 7	23.82	23.8	23.78	23.85	23.75	19.66	19.57	19.61	19.57	19.73
LTE Band 25	24.56	24.56	24.7	24.7	24.54	20.43	20.33	20.33	20.38	20.43
LTE Band 30	22.26	22.33	22.28	22.39	22.27	18.28	18.22	18.28	18.3	18.28
LTE Band 38	24.5	24.47	24.58	24.43	24.5	19.52	19.57	19.66	19.72	19.54
LTE Band 41(Class 3)	24.7	24.75	24.7	24.69	24.75	21.82	21.81	21.85	21.69	21.87
LTE Band 41(Class 2)	26.45	26.55	26.5	26.6	26.58	22.01	22.07	22	22.06	21.94
LTE Band 66	23.99	24	24.02	24.05	24.04	19.93	19.89	19.89	19.89	19.91
Sub 6 Band n2	24.15	24.11	24.09	24.01	23.96	18.86	18.84	18.92	18.73	18.75
Sub 6 Band n25	24	24.15	24.1	24.05	24.12	18.61	18.57	18.53	18.55	18.59
Sub 6 Band n30	23.01	23.14	23.09	22.98	23.05	18.24	18.32	18.26	18.33	18.2
Sub 6 Band n41(Class 3)	23.76	23.74	23.65	23.81	23.82	23.09	23.09	22.97	23.04	23.13
Sub 6 Band n41(Class 2)	25.8	25.74	25.67	25.76	25.79	23.05	22.98	23.06	23.03	23.08
Sub 6 Band n66	24.22	24.19	24.22	24.31	24.21	19.44	19.54	19.51	19.49	19.44

Bottom side – EUT Moving away (Release) from the Phantom

Mode	Distance to DUT Output power (dBm)									
	11[mm]	12[mm]	13[mm]	14[mm]	15[mm]	16[mm]	17[mm]	18[mm]	19[mm]	20[mm]
GSM1900 /Voice	26.63	26.71	26.57	26.75	26.59	29.76	29.78	29.71	29.72	29.63
GSM1900 /GPRS 1Tx	26.72	26.67	26.68	26.61	26.68	29.81	29.76	29.65	29.8	29.76
GSM1900 /GPRS 2Tx	24	23.96	24	23.98	23.92	29.25	29.28	29.25	29.3	29.27
GSM1900 /GPRS 3Tx	22.23	22.27	22.31	22.21	22.23	27.6	27.49	27.51	27.63	27.56
GSM1900 /GPRS 4Tx	20.81	20.72	20.75	20.82	20.86	25.21	25.26	25.35	25.16	25.22
PCS RC3/SO55	20.12	20.31	20.3	20.25	20.3	23.31	23.47	23.47	23.45	23.45
PCS EVDO Rev.0	19.66	19.67	19.62	19.74	19.79	23.39	23.42	23.29	23.44	23.29
PCS EVDORev.A	19.8	19.79	19.87	19.85	19.89	23.29	23.4	23.27	23.26	23.39
WCDMA B2	19.13	19.12	19.15	19.23	19.22	24.23	24.27	24.34	24.39	24.21
WCDMA B4	18.86	18.9	18.81	18.87	18.92	23.73	23.67	23.73	23.8	23.69
LTE Band 2	20.45	20.28	20.46	20.34	20.31	24.38	24.55	24.46	24.5	24.44
LTE Band 4	19.83	19.85	19.91	19.95	19.94	23.32	23.23	23.3	23.14	23.13
LTE Band 7	19.57	19.61	19.71	19.64	19.54	23.73	23.91	23.78	23.75	23.89
LTE Band 25	20.52	20.51	20.53	20.38	20.46	24.56	24.52	24.51	24.52	24.55
LTE Band 30	18.19	18.27	18.31	18.25	18.27	22.24	22.3	22.32	22.22	22.3
LTE Band 38	19.66	19.57	19.72	19.69	19.62	24.55	24.52	24.55	24.46	24.58
LTE Band 41(Class 3)	21.76	21.84	21.81	21.8	21.71	24.79	24.84	24.72	24.72	24.75
LTE Band 41(Class 2)	21.95	21.94	22.07	22.06	21.95	26.45	26.51	26.58	26.47	26.45
LTE Band 66	19.9	19.9	19.81	19.74	19.92	23.98	24.06	23.91	23.95	24.01
Sub 6 Band n2	18.87	18.8	18.78	18.85	18.76	23.98	23.96	24.08	24.11	24.11
Sub 6 Band n25	18.66	18.57	18.53	18.68	18.61	24.08	24.13	24.09	24.06	24.12
Sub 6 Band n30	18.26	18.23	18.25	18.19	18.18	23.06	23.12	23.09	23.13	23.15
Sub 6 Band n41(Class 3)	22.95	23.08	23.09	22.95	23.12	23.63	23.7	23.81	23.73	23.71
Sub 6 Band n41(Class 2)	23	23.09	23.04	23.11	23.15	25.86	25.87	25.86	25.71	25.81
Sub 6 Band n66	19.54	19.59	19.44	19.48	19.52	24.25	24.16	24.32	24.27	24.28

Based on the most conservative measured triggering distance of 14mm, additional Phablet SAR measurements were required at 13mm from Bottom side for the above modes

1.2 Proximity Sensor Coverage for SAR measurements

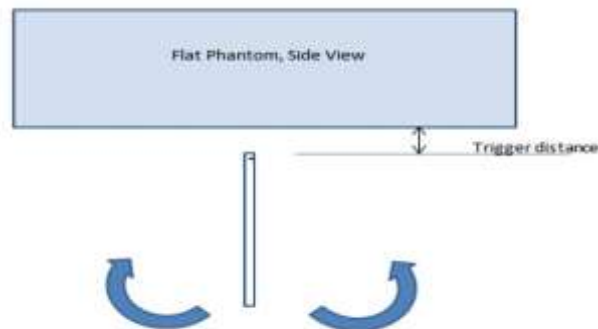
(KDB 616217 D04v01r02§6.3)

As there is no spatial offset between the antenna and the proximity sensor element, proximity sensor coverage did not need to be assessed.

1.3 Proximity Sensor Tilt Angle Assessment

(KDB 616217 D04v01r02 §6.4)

The DUT was positioned directly below the flat phantom at the minimum measured trigger distance with Bottom side parallel to the base of the flat phantom for each band. The EUT was rotated about Bottom side for angles up to $\pm 45^\circ$. If the output power increased during the rotation the DUT was moved 1mm toward the phantom and the rotation repeated. This procedure was repeated until the power remained reduced for all angles up to $\pm 45^\circ$.



Proximity sensor tilt angle assessment (Bottom side) KDB 616217 §6.4

Summary of Tablet Tilt Angle influence to Proximity Sensor Triggering (Bottom side)

Tissue	Minimum distance at which power reduction was maintained over -45°	Power reduction status										
		-45°	-40°	-30°	-20°	-10°	0°	10°	20°	30°	40°	45°
1800 MHz Tissue	14 mm	On	On	On	On	On	On	On	On	On	On	On
1900 MHz Tissue	14 mm	On	On	On	On	On	On	On	On	On	On	On
2300 MHz Tissue	14 mm	On	On	On	On	On	On	On	On	On	On	On
2600 MHz Tissue	14 mm	On	On	On	On	On	On	On	On	On	On	On

1.5 Resulting test positions for Phablet SAR measurements

Wireless technologies	Position	§6.2 Triggering Distance [mm]	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Phablet SAR [mm]
WWAN (GSM1900 /CDMA BC1 /WCDMA B2/B4 /LTEB2/B4/B7/B25 /B30/B38/B41(Class3) /B41(Class2)/B66 /SUB6 n2/n25/n30 n41(Class3)/ n41(Class2)/n66)	Rear	9	N/A	N/A	8
	Front	7	N/A	N/A	6
	Bottom	14	N/A	N/A	13

Note:FCC KDB Publication 616217 D04v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device when being used in phablet use conditions

2. Power reduction Verification for Antenna H

This device uses a power reduction mechanism for SAR compliance for operations during voice or VoIP held to ear scenarios.

When a user makes or receives a voice call or VOIP call for Antenna F the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for Antenna H (i.e. reducing output power for Head SAR compliance)

Detailed descriptions of the power reduction mechanism are included in the Main operational description document

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]	
		Un-Triggered (Max Power)	Triggered (Reduced Power)
RCV-on	LTE 48	23.70	16.72
RCV-on	NR n77 PC3	23.98	21.28
RCV-on	NR n77 PC2	26.49	21.30

3. Power reduction Verification for WLAN Ant

This device uses a power reduction mechanism for SAR compliance for WLAN operations during voice or VoIP held to ear scenarios.

When a user makes or receives a WLAN voice or WLAN VOIP call for WLAN Ant the audio of the call is sent through the Receiver at the top of the device will trigger the Power reduction for WLAN Ant (i.e. reducing output power for Head SAR compliance)

Detailed descriptions of the power reduction mechanism are included in the Main operational description document

Power Measurement Verification for WLAN

Condition For Power reduction	Wireless Technologies	Conducted Power[dBm]			
		Un-Triggered (Max Power)		Triggered (Reduced Power)	
		Ant1	Ant2	Ant1	Ant2
RCV-on	2.4GHz 802.11b (Exclude 12/13ch)	19.20	18.65	12.48	12.40
RCV-on	2.4GHz 802.11g (Exclude 12/13ch))	16.85	16.25	12.08	12.14
RCV-on	2.4GHz 802.11n (Exclude 12/13ch)	16.73	16.20	12.07	12.05
RCV-on	5GHz 802.11a (Exclude 100~144ch)	17.45	17.39	9.38	9.87
RCV-on	5GHz 802.11n 20MHz	17.28	17.39	9.15	9.45
RCV-on	5GHz 802.11n 40MHz	16.39	16.41	9.05	9.35
RCV-on	5GHz 802.11ac 20MHz	17.38	17.15	9.07	9.35
RCV-on	5GHz 802.11ac 40MHz	16.52	16.48	9.12	9.48
RCV-on	5GHz 802.11ac 80MHz	14.98	15.29	10.12	9.97

Appendix I. – Down-link CA Power Measurement / 5G NR Call Box Setup

1. LTE Down-link Carrier Aggregation Conducted Powers

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by test product implementation. For those configurations required by April 2018 TCBC Workshop notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only.

Downlink Carrier aggregation:

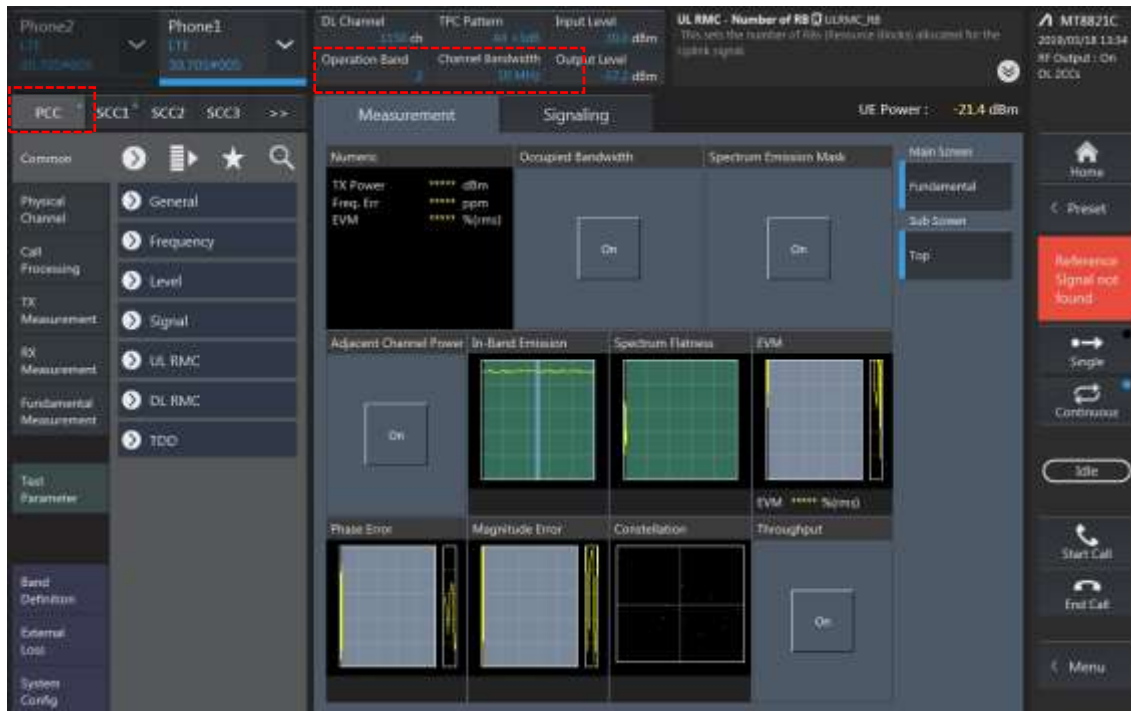
1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.
2. All control and acknowledge data is sent on uplink channels that operate identical to specifications when downlink carrier aggregation is inactive.
3. Per FCC KDB publication 941225 D05A v01r02, Section C)3)b)ii), PCC uplink channel was selected at downlink carrier aggregation combinations. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
4. For continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to multiple of 300kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521.
5. For non-continuous intra-band carrier aggregation, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
6. All selected downlink channels remained fully within the downlink transmission band of the respective component carrier.



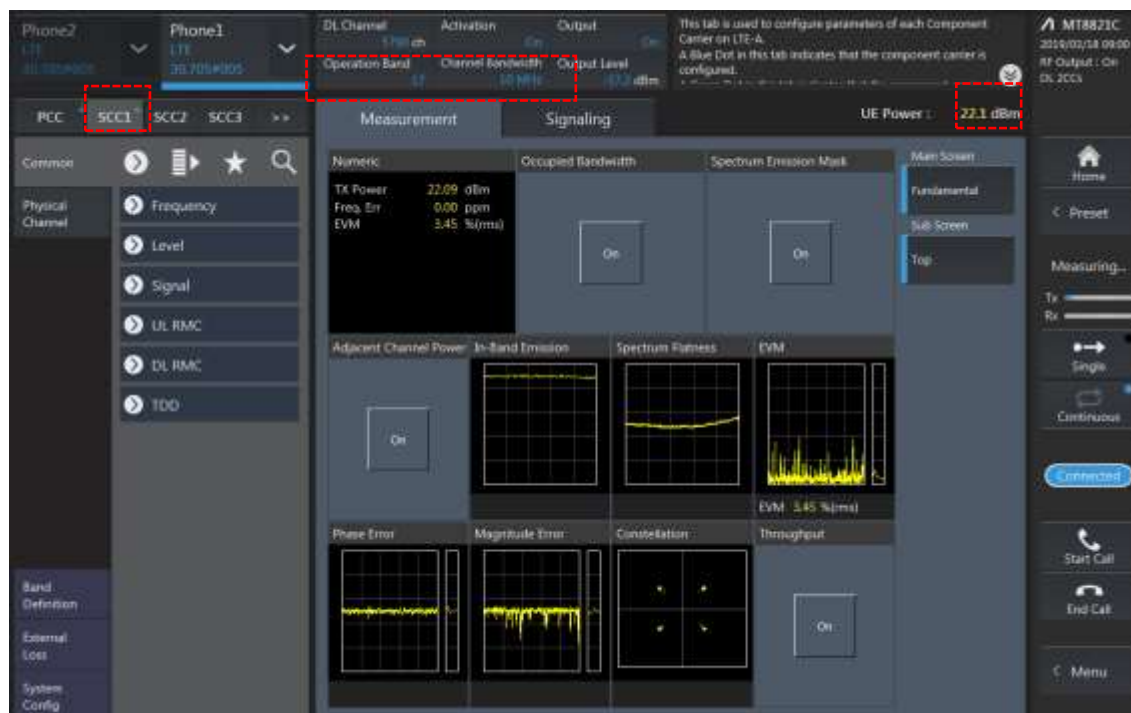
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



SCC Setting : Channel/ RB/ BW/ Modulation and call Connection

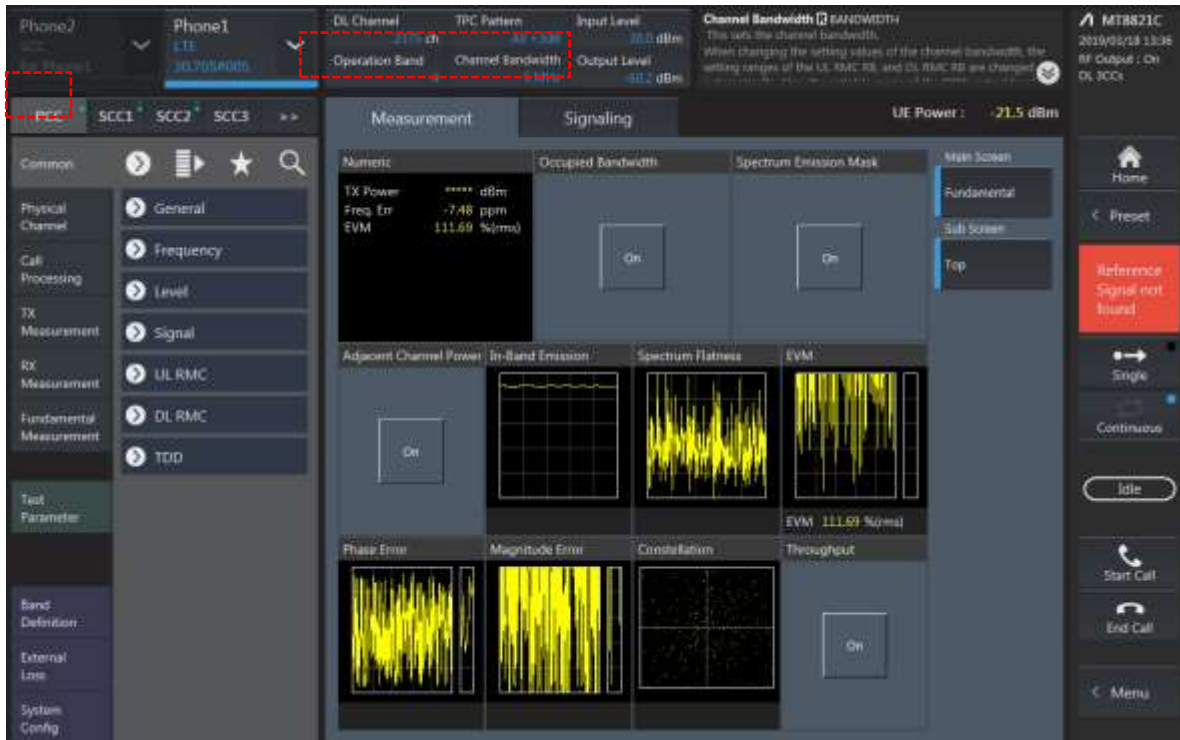


2CA Downlink Carrier aggregation Maximum conducted Powers

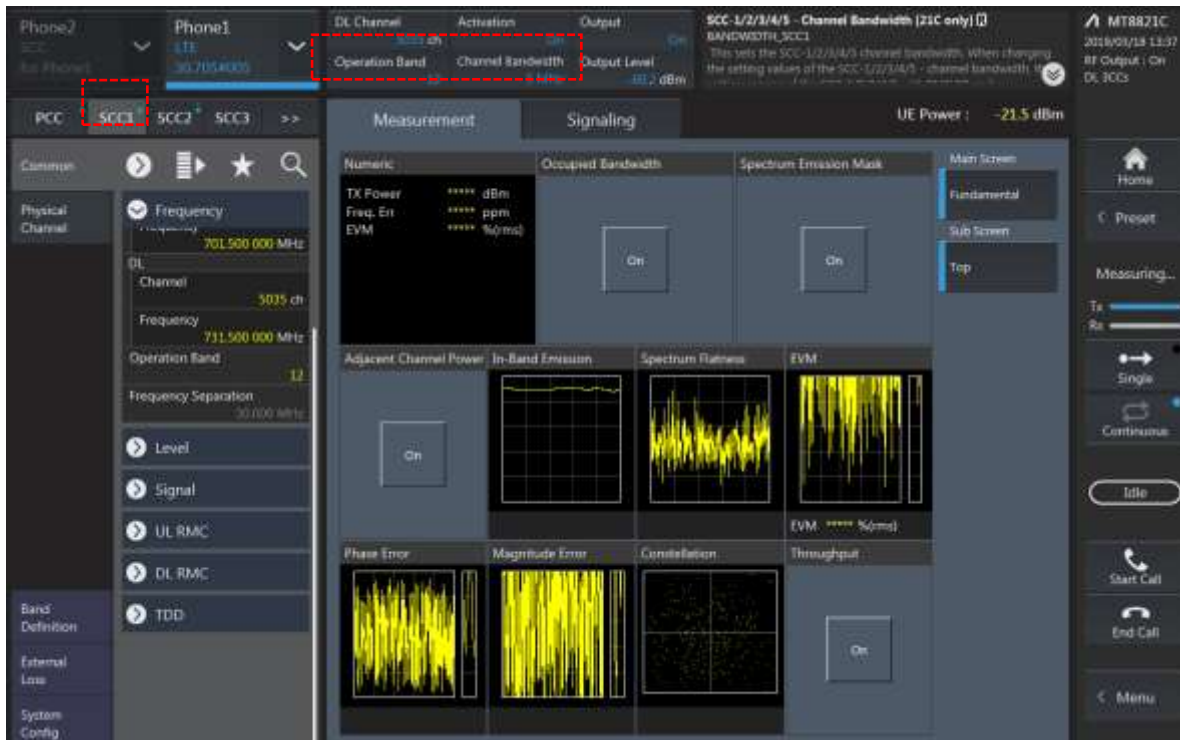
Combination	PCC									SCC				LTE Tx Power		
	Band	BW	UL Ch.	UL Freq.	DL Ch.	DL Freq.	Mod.	RB	H	Band	BW	DL Ch.	DL Freq.	Single Carrier (dBm)	Power with DL CA Enabled (dBm)	Deviation
5A-25A	5	10	20525	836.5	2525	891.5	QPSK	1	49	25	20	8365	1962.5	24.27	24.33	-0.06
5A-25A	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	5	10	2525	881.5	24.61	24.60	0.01
12A-25A	12	10	23095	707.5	5095	737.5	QPSK	1	0	25	20	8365	1962.5	23.99	24.03	-0.04
12A-25A	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	12	10	5095	737.5	24.61	24.59	0.02

LTE Down Link 3CA Call Setup

1) PCC Setting: Channel /RB/BW/Modulation



2) SCC1 Setting : Channel /RB/BW/Modulation



3) SCC2 Setting (Channel /RB/BW/Modulation)and call Connection

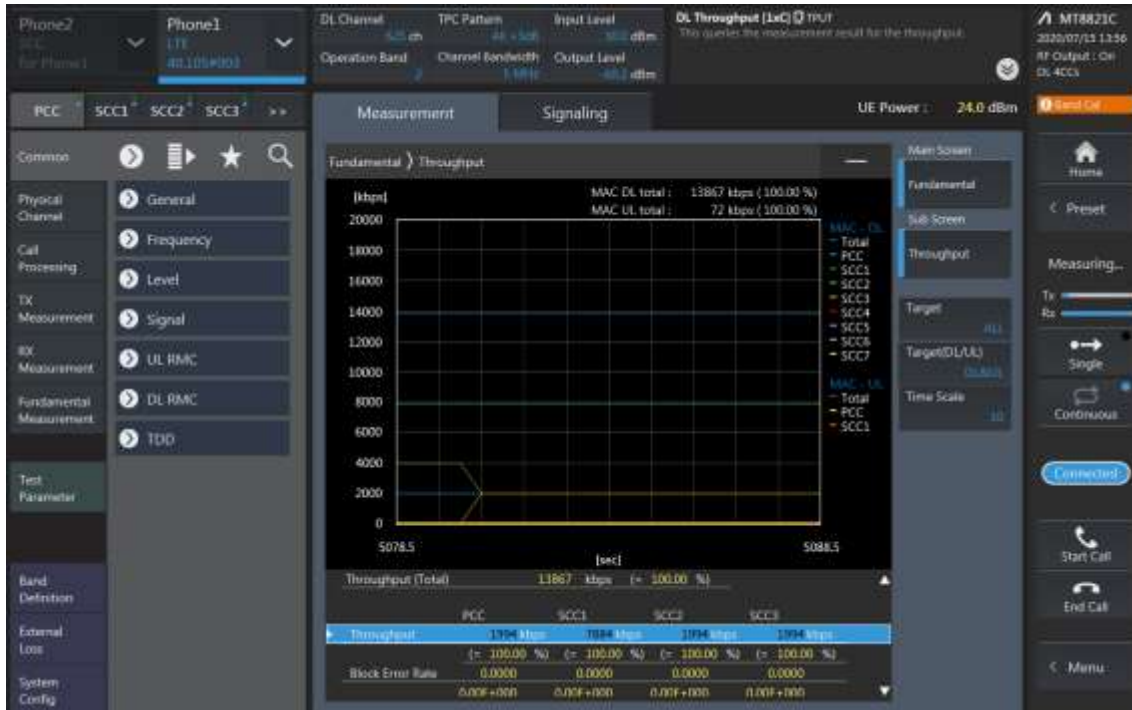


3CA Downlink Carrier aggregation Maximum conducted Powers

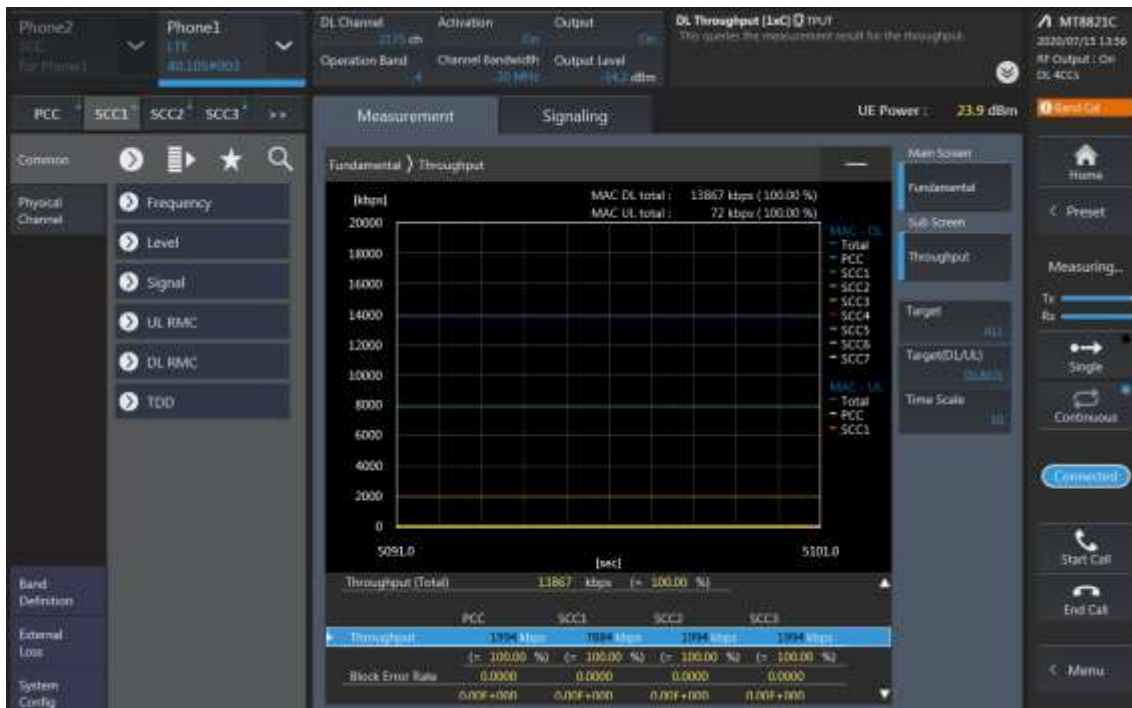
Combination	PCC									SCC				SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-4A-13A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	13	10	5230	751	24.57	24.58	-0.01
2A-4A-13A	4	10	20175	1732.5	2175	2132.5	QPSK	1	24	2	20	900	1960	13	10	5230	751	24.02	24.05	-0.03
2A-4A-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	23.89	23.98	-0.09
4A-4A-13A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	13	10	5230	751	23.96	23.93	0.03
4A-4A-13A	13	10	23230	782	5230	751	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	23.89	23.93	-0.04
4A-4A-71A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	71	20	68786	637	23.96	23.89	0.07
4A-4A-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.56	24.64	-0.08
25A-25A-26A	25	5	26665	1912.5	8665	1992.5	QPSK	1	0	25	20	8140	1940	26	5	8865	876.5	24.18	24.07	0.11
25A-25A-26A	26	10	26865	831.5	8865	876.5	QPSK	1	0	25	20	8365	1962.5	25	20	8590	1985	24.21	24.19	0.02
48A-48A-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	24.56	24.47	0.09
48C-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	24.56	24.66	-0.10
66A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	66	20	66734	2139.8	24.2	24.14	0.06

LTE Down Link 4CA Call Setup

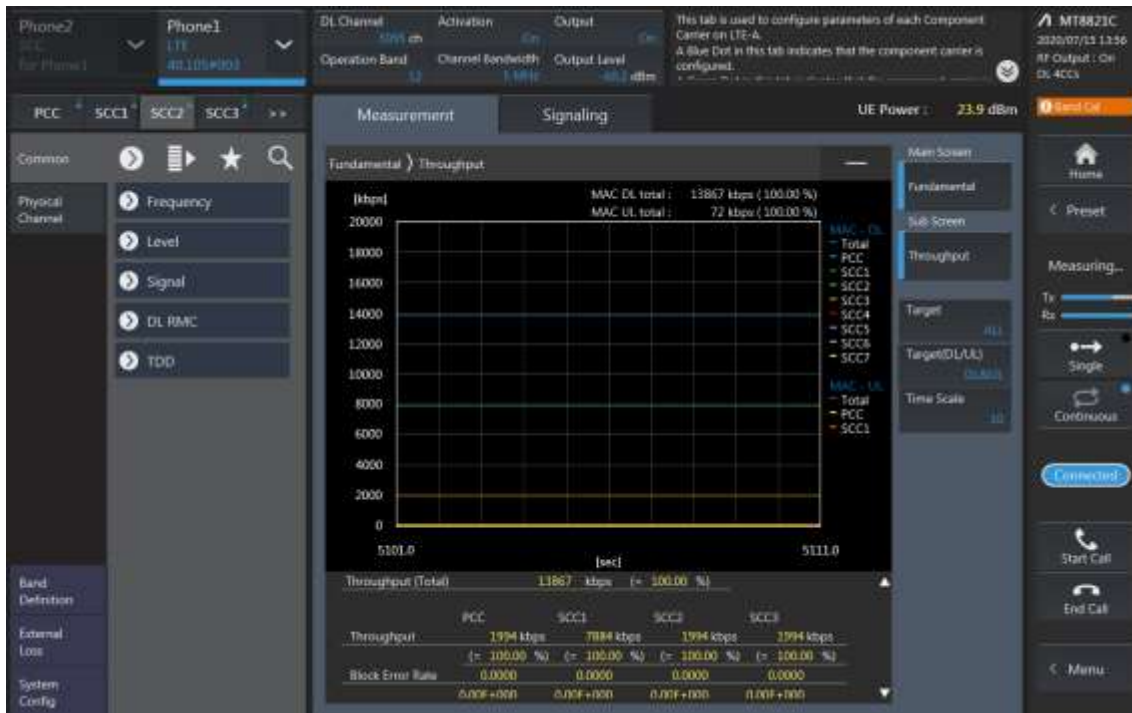
PCC Setting: Channel /RB/BW/Modulation



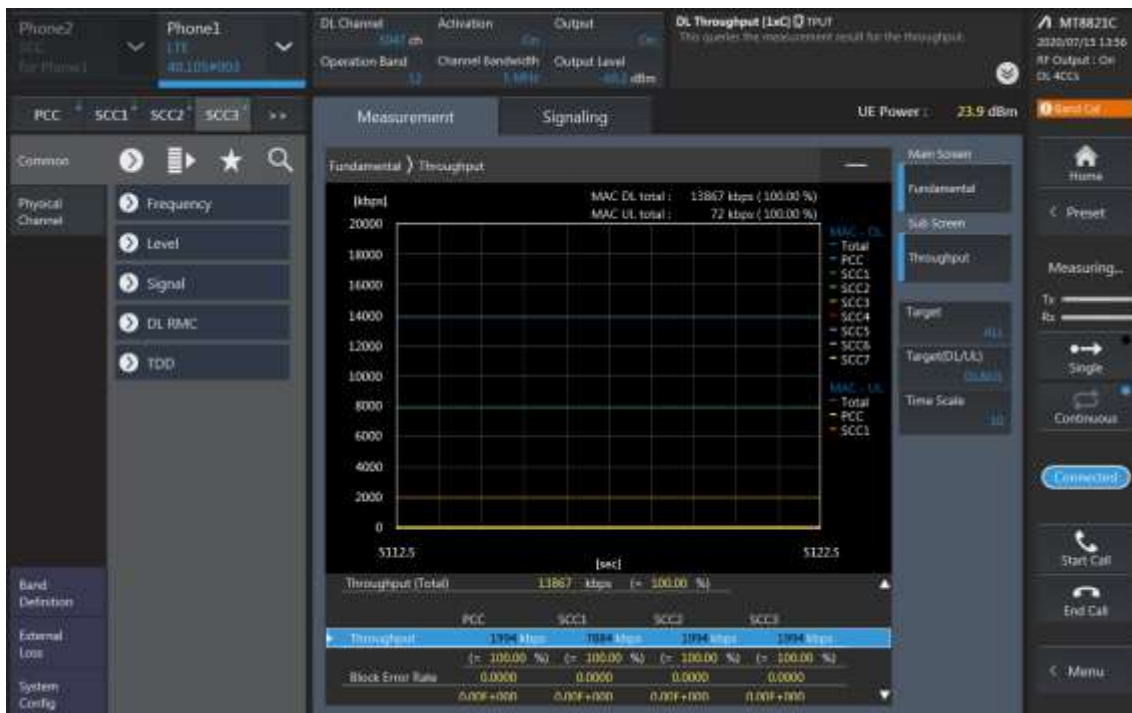
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



SCC3 Setting (Channel /RB/BW/Modulation)and call Connection

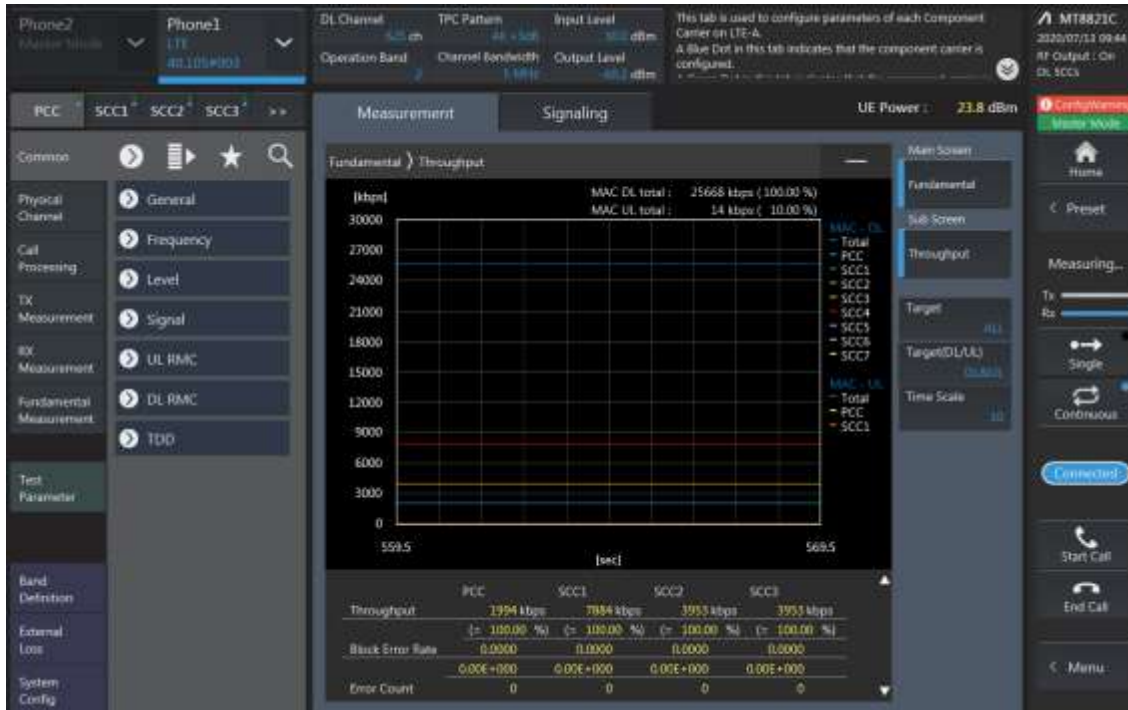


4CA Downlink Carrier aggregation Maximum conducted Powers

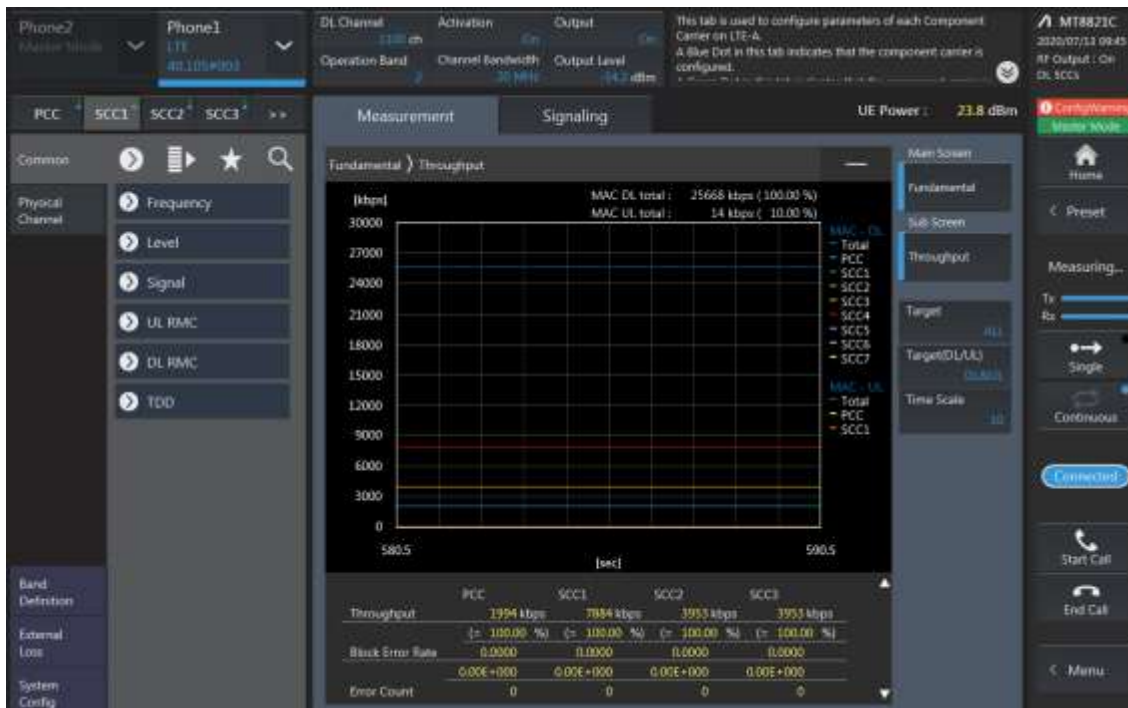
Combination	PCC									SCC				SCC				SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-2A-4A-4A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.57	24.59	-0.02
2A-2A-4A-4A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	23.96	23.97	-0.01
2A-2A-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.57	24.61	-0.04
2A-2A-4A-5A	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	23.96	23.96	0
2A-2A-4A-5A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.27	24.25	0.02
2A-2A-4A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.57	24.6	-0.03
2A-2A-4A-71A	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68786	637	23.96	24.05	-0.09
2A-2A-4A-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.56	24.66	-0.1
2A-2A-29A-30A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.57	24.63	-0.06
2A-2A-29A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	24.61	24.56	0.05
2A-2A-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.57	24.53	0.04
2A-2A-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.2	24.25	-0.05
2A-2A-66A-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.56	24.51	0.05
2A-4A-4A-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.57	24.54	0.03
2A-4A-4A-5A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	23.96	23.9	0.06
2A-4A-4A-5A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.27	24.29	-0.02
2A-4A-5B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.57	24.56	0.01
2A-4A-5B	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	23.96	24.05	-0.09
2A-4A-5B	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	5	2453	874.3	2	20	900	1960	4	20	2175	2132.5	24.27	24.22	0.05
2A-4A-12B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.57	24.5	0.07
2A-4A-12B	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	23.96	23.88	0.08
2A-12A-66C	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	24.57	24.63	-0.06
2A-12A-66C	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	23.99	23.98	0.01
2A-12A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	12	10	5095	737.5	24.2	24.26	-0.06
2A-13A-66C	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.57	24.56	0.01
2A-13A-66C	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	23.89	23.92	-0.03
2A-13A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	13	10	5230	751	24.2	24.24	-0.04
2A-66A-66A-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68786	637	24.57	24.66	-0.09
2A-66A-66A-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	71	20	68786	637	24.2	24.29	-0.09
2A-66A-66A-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.56	24.56	0
2C-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.57	24.54	0.03
2C-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.2	24.25	-0.05
2A-66C-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68786	637	24.57	24.58	-0.01
2A-66C-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	71	20	68786	637	24.2	24.3	-0.1
2A-66C-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.56	24.59	-0.03
4A-4A-5B	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	23.96	24.01	-0.05
4A-4A-5B	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	5	2453	874.3	4	20	2175	2132.5	4	10	2350	2150	24.27	24.24	0.03
4A-4A-12B	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	23.96	23.99	-0.03
5A-5A-66C	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	10	2450	874	66	20	66786	2145	66	20	66984	2164.8	24.27	24.33	-0.06
5A-5A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	5	10	2525	881.5	5	5	2425	871.5	24.2	24.2	0
12A-46D	12	10	23095	707.5	5095	737.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	23.99	23.9	0.09
25A-26A-41C	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	26	15	8865	876.5	41	20	40620	2593	41	20	40422	2573.2	24.61	24.7	-0.09
25A-26A-41C	26	10	26865	831.5	8865	876.5	QPSK	1	0	25	20	8365	1962.5	41	20	40620	2593	41	20	40422	2573.2	24.21	24.14	0.07
25A-46D	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.61	24.56	0.05
29A-30A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	22.42	22.45	-0.03
29A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	29	10	9715	722.5	30	10	9820	2355	24.2	24.27	-0.07
41E(PC 2)	41	20	40620	2593	40620	2593	QPSK	1	99	41	20	40422	2573.2	41	20	40818	2612.8	41	20	41016	2632.6	26.55	26.59	-0.04
41E(PC 3)	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40476	2578.6	41	20	40764	2607.4	41	20	40962	2627.2	25.12	25.07	0.05
48A-48A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.2	24.24	-0.04
48C-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	48	20	55990	3625	48	20	56188	3644.8	24.2	24.14	0.06

LTE Down Link 5CA Call Setup

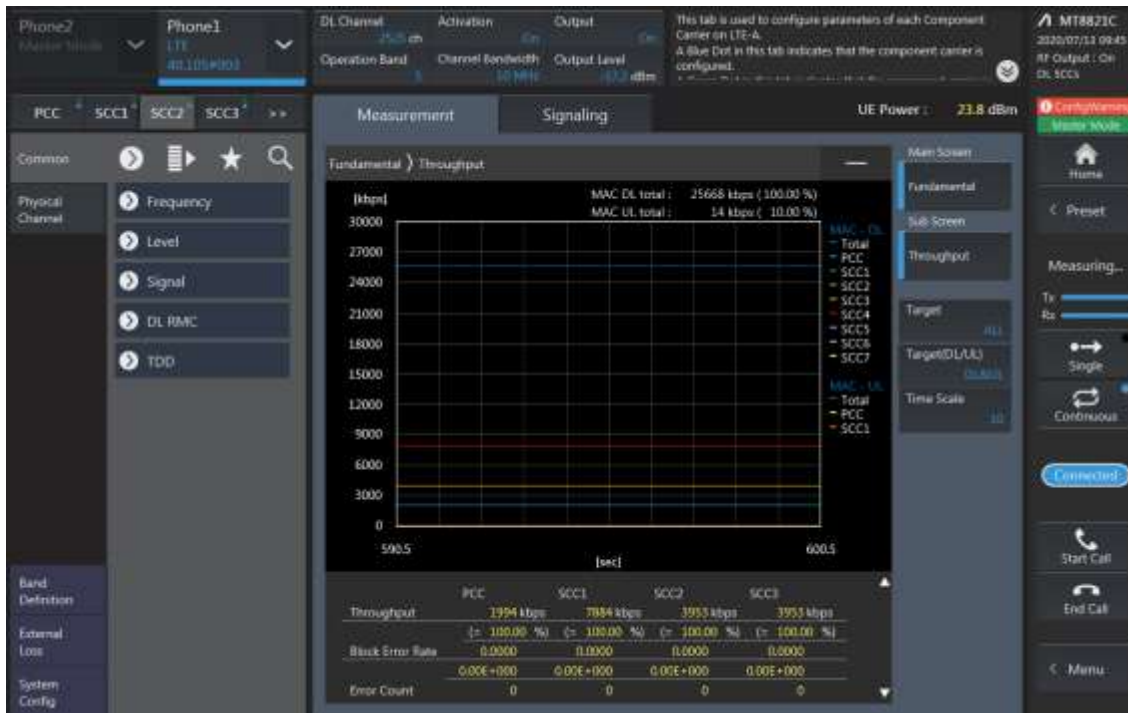
PCC Setting: Channel /RB/BW/Modulation



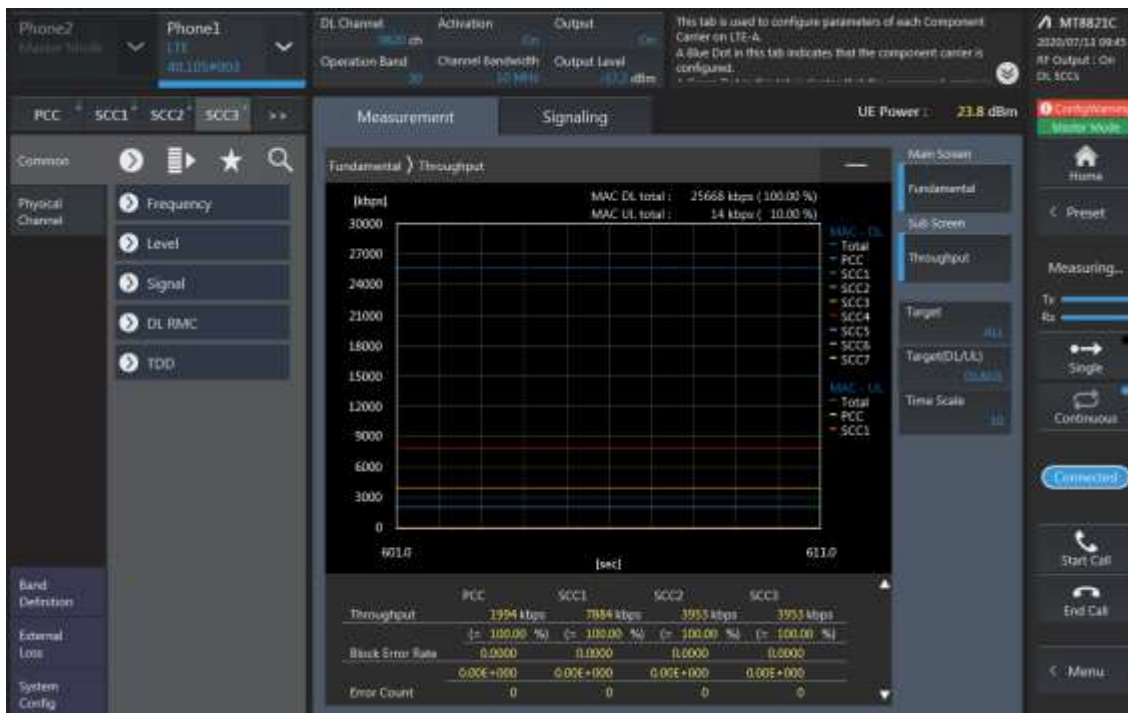
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



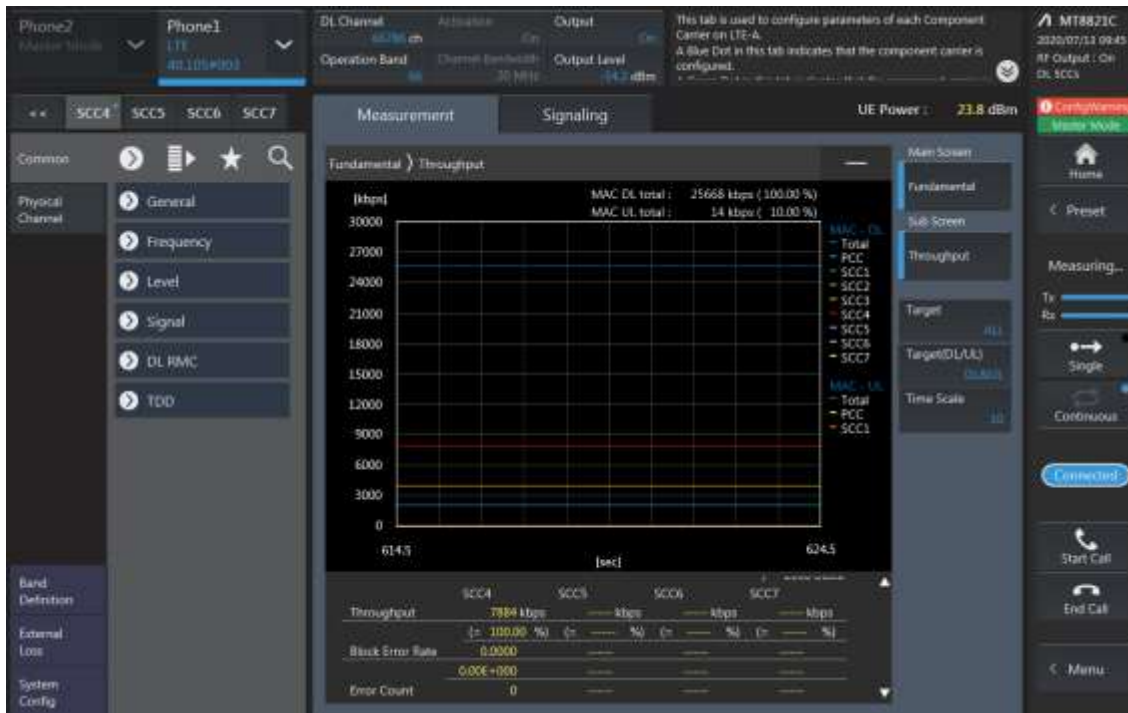
SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



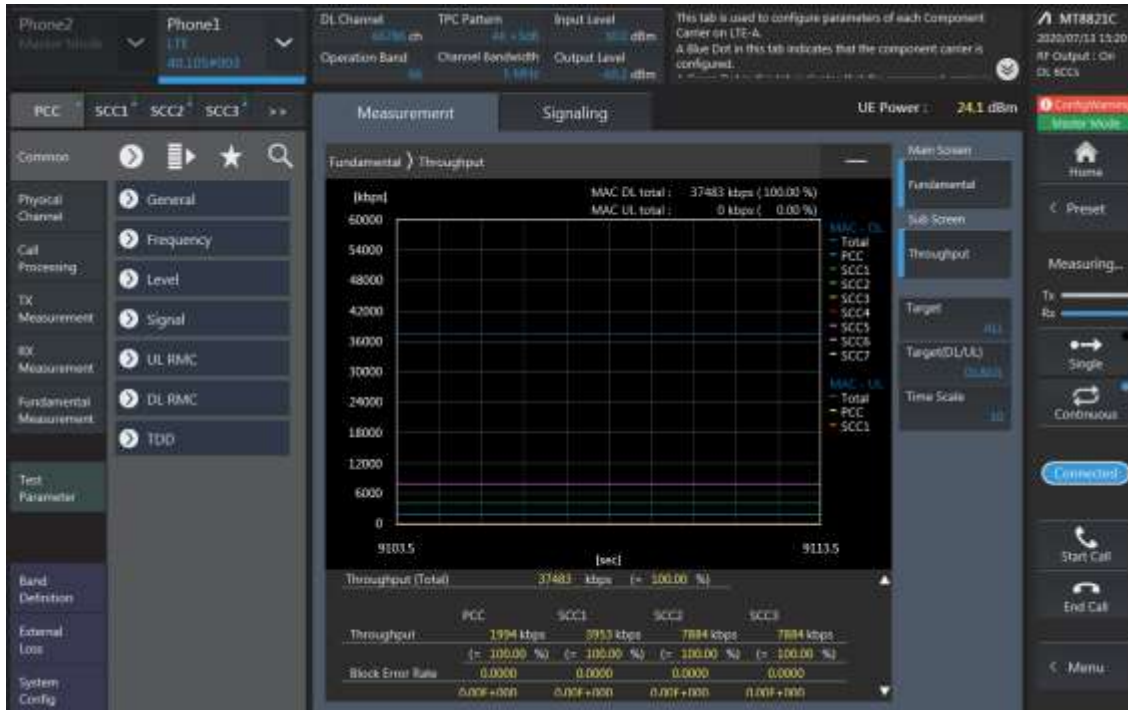
5CA Downlink Carrier aggregation Maximum conducted Powers

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-2A-5A-30A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.57	24.64	-0.07
2A-2A-5A-30A-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.27	24.22	0.05
2A-2A-5A-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.61	24.7	-0.09
2A-2A-5A-30A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.2	24.11	0.09
2A-2A-5A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.57	24.67	-0.1
2A-2A-5A-66A-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.27	24.2	0.07
2A-2A-5A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.23	-0.03
2A-2A-5A-66C	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.57	24.64	-0.07
2A-2A-5A-66C	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.27	24.27	0
2A-2A-5A-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.2	0
2A-2A-12A-30A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	24.57	24.57	0
2A-2A-12A-30A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	23.99	24.09	-0.1
2A-2A-12A-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.61	24.66	-0.05
2A-2A-12A-30A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.2	24.22	-0.02
2A-2A-12A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.57	24.5	0.07
2A-2A-12A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	23.99	23.98	0.01
2A-2A-12A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.21	-0.01
2A-2A-12B-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	24.57	24.5	0.07
2A-2A-12B-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.2	24.23	-0.03
2A-2A-13A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.57	24.61	-0.04
2A-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	23.89	23.95	-0.06
2A-2A-13A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.2	24.12	0.08
2A-2A-13A-66B	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.57	24.48	0.09
2A-2A-13A-66B	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	23.89	23.98	-0.09
2A-2A-13A-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	15	67018	2168.2	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.2	24.18	0.02
2A-2A-14A-30A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	24.57	24.59	-0.02
2A-2A-14A-30A-66A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.7	24.63	0.07
2A-2A-14A-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.61	24.53	0.08
2A-2A-14A-30A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.2	24.22	-0.02
2A-2A-14A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.57	24.64	-0.07
2A-2A-14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.7	24.72	-0.02
2A-2A-14A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.2	24.18	0.02
2A-2A-46D	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.57	24.53	0.04
2A-5A-5A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	24.57	24.54	0.03
2A-5A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	49	5	10	2450	874	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.07	24.05	0.02
2A-5A-5A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	5	5	2425	871.5	24.2	24.23	-0.03
2A-5A-30A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.57	24.52	0.05
2A-5A-30A-66A-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.27	24.37	-0.1
2A-5A-30A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.61	24.61	0
2A-5A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	30	10	9820	2355	24.2	24.16	0.04
2A-5B-30A-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	66	20	66786	2145	24.57	24.54	0.03
2A-5B-30A-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	5	2453	874.3	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	24.27	24.27	0
2A-5B-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	24.61	24.69	-0.08
2A-5B-30A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	24.2	24.13	0.07

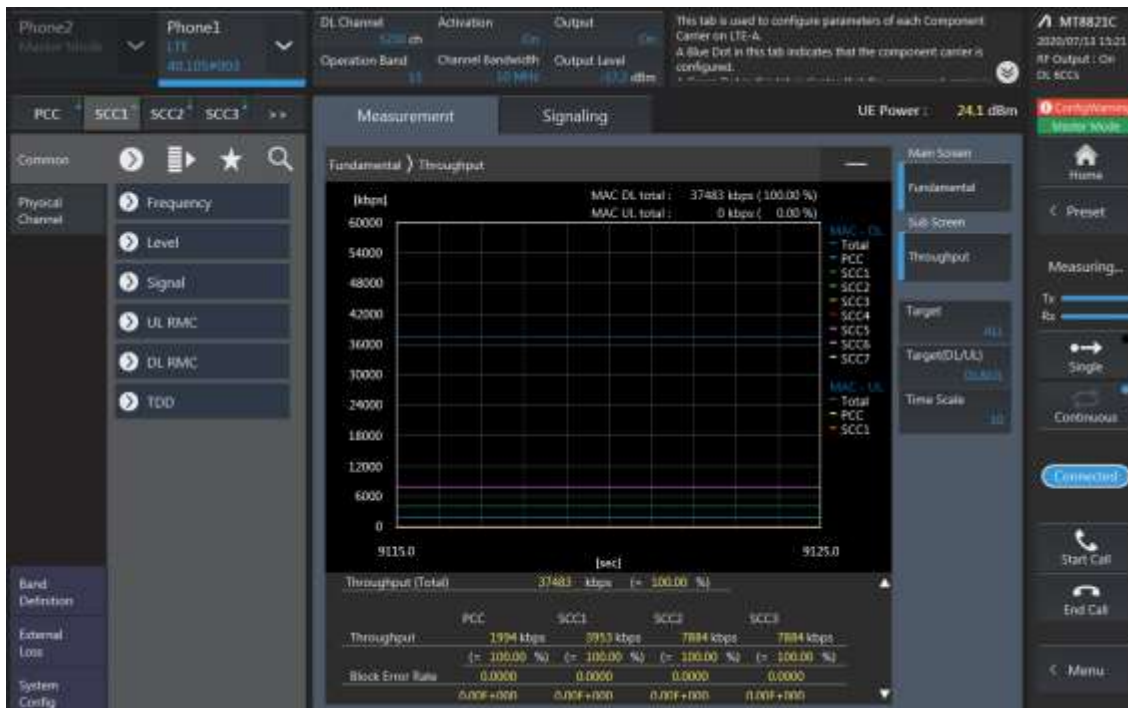
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2A-5A-48A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	24.2	24.14	0.06
2A-5A-48A-48C	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.57	24.47	0.1
2A-5A-48A-48C	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.27	24.19	0.08
2A-5A-48C-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.47	0.1
2A-5A-48C-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.27	24.33	-0.06
2A-5A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.2	24.29	-0.09
2A-5A-48D	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.57	24.47	0.1
2A-5A-48D	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.27	24.18	0.09
2A-5B-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.57	24.51	0.06
2A-5B-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.27	24.17	0.1
2A-5B-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.2	24.14	0.06
2A-5B-66C	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.57	24.67	-0.1
2A-5B-66C	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.27	24.26	0.01
2A-5B-66C	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.2	24.14	0.06
2A-12A-30A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.57	24.66	-0.09
2A-12A-30A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	23.99	24.04	-0.05
2A-12A-30A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.61	24.66	-0.05
2A-12A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.2	24.17	-0.07
2A-12B-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.57	24.62	-0.05
2A-12B-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.2	24.18	0.02
2A-13A-48A-48A-66A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.57	24.5	0.07
2A-13A-48A-48A-66A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	23.89	23.8	0.09
2A-13A-48A-48A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.2	24.13	0.07
2A-13A-48A-48C	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.57	24.57	0
2A-13A-48A-48C	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	23.89	23.91	-0.02
2A-13A-48C-66A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.49	0.08
2A-13A-48C-66A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	23.89	23.83	0.06
2A-13A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	46	20	55990	3625	48	20	56188	3644.8	24.2	24.12	0.08
2A-13A-48D	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.57	24.57	0
2A-13A-48D	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	23.89	23.81	0.08
2A-13A-66A-66B	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.57	24.48	0.09
2A-13A-66A-66B	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	23.89	23.9	-0.01
2A-13A-66A-66B	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	5	67063	2172.7	66	15	67261	2192.5	2	20	900	1960	13	10	5230	751	24.2	24.18	0.02
2A-14A-30A-66A-66A	2	10	18900	1880	900	1960	QPSK	1	24	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.57	24.55	0.02
2A-14A-30A-66A-66A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.7	24.79	-0.09
2A-14A-30A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.61	24.55	0.06
2A-14A-30A-66A-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	30	10	9820	2355	24.2	24.29	-0.09
2A-46A-46C-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.57	24.52	0.05
2A-46A-46C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.2	24.21	-0.01
2A-46A-46D	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.5	46	20	53144	5785.4	24.57	24.67	-0.1
2A-46A-46D	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53342	5805.5	46	20	53540	5825	24.57	24.53	0.04
2A-48A-48C-66A	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.57	24.51	0.06
2A-48A-48C-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.2	24.17	0.03
2A-48A-48D	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.57	24.64	-0.07
2A-48C-48C	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.57	24.48	0.09
4A-46A-46D	4	10	20175	1732.5	2175	2132.5	QPSK	1	24	46	20	50665	5537.5	46	20	53540	5825	46	20	53144	5785.4	46	20	5				

LTE Down Link 6CA Call Setup

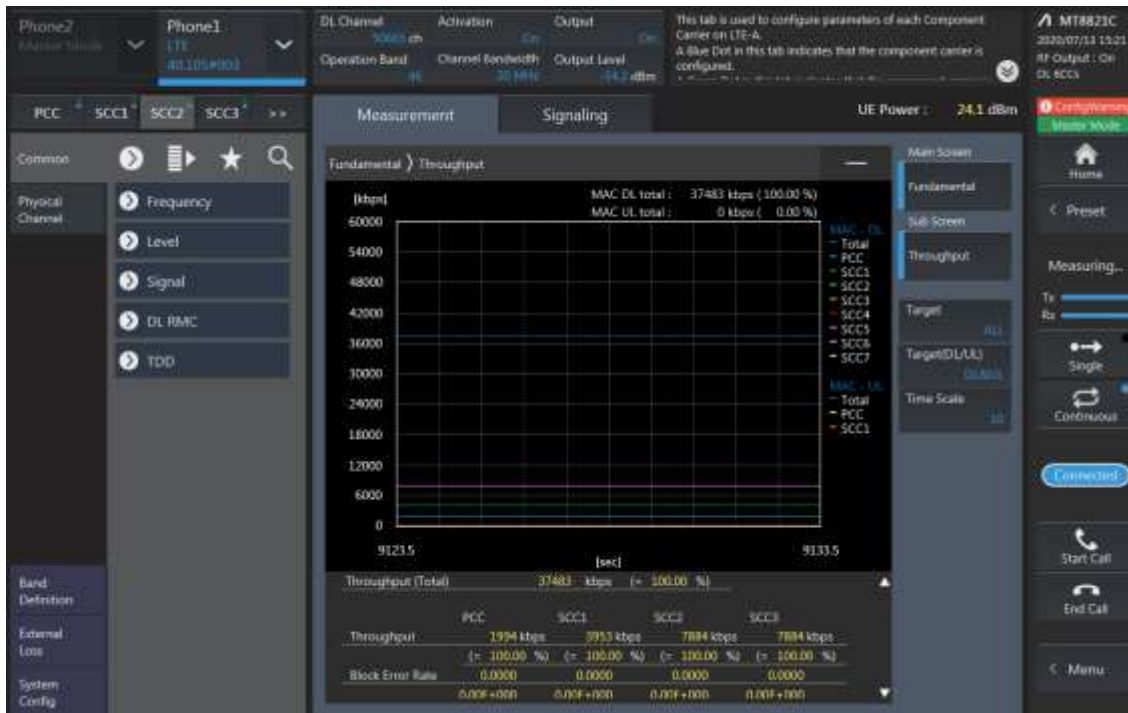
PCC Setting: Channel /RB/BW/Modulation



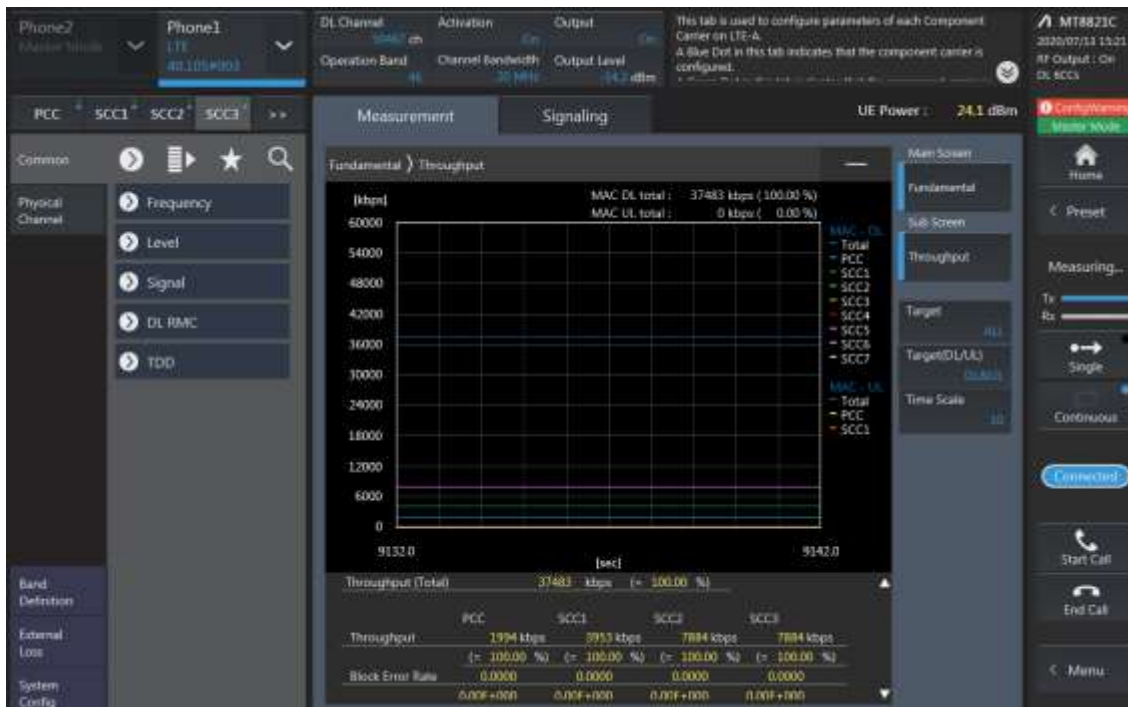
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



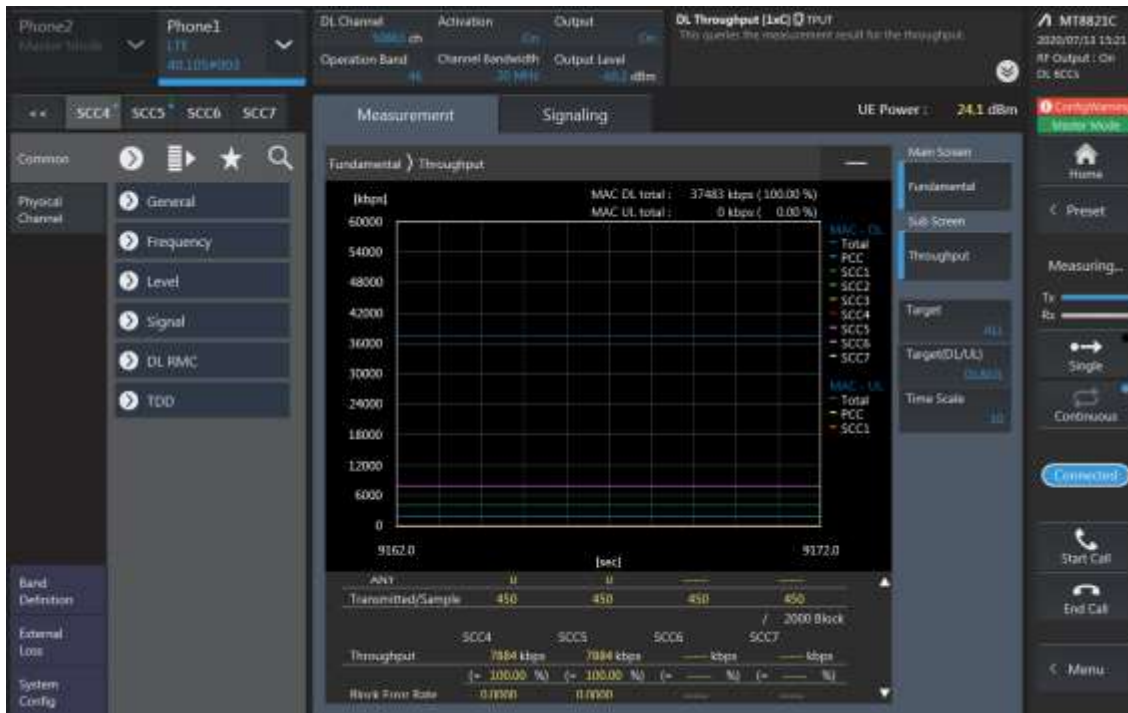
SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



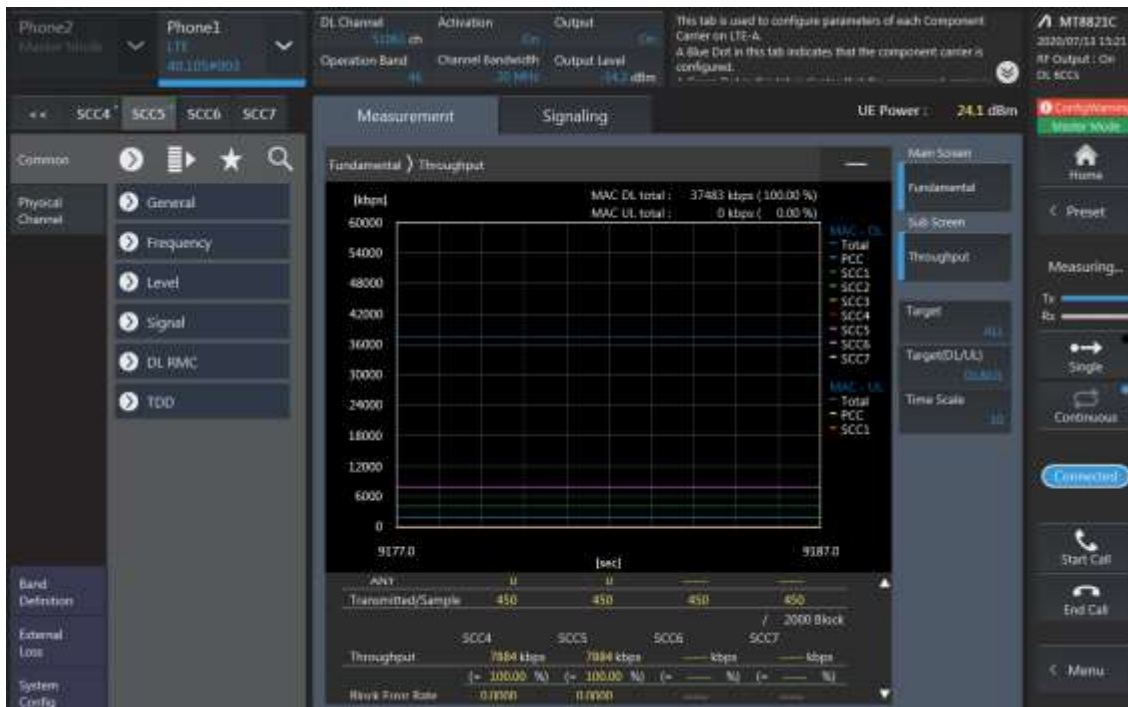
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



SCC5 Setting (Channel /RB/BW/Modulation)and call Connection

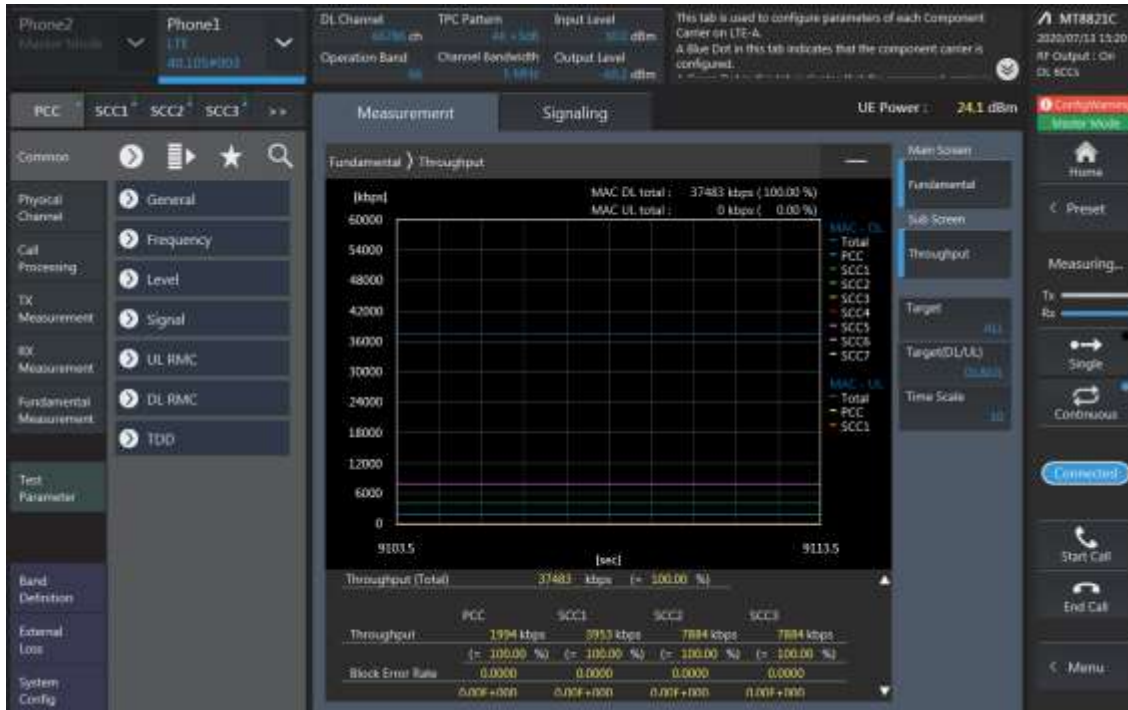


6CA Downlink Carrier aggregation Maximum conducted Powers

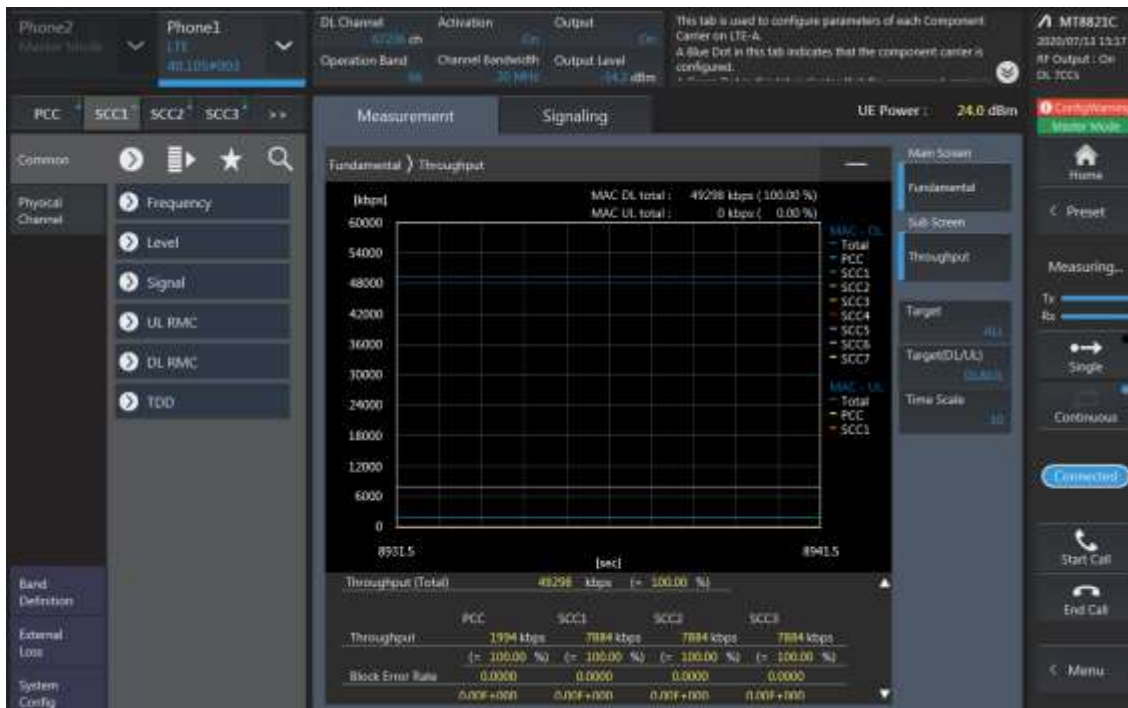
PCC									SCC				SCC				SCC				SCC				SCC				Tx Power		Deviation
Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.57	24.52	0.05
13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	23.89	23.84	0.05
2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.57	24.44	0.13
66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.12	0.08
13	10	23230	782	5230	751	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	23.89	23.77	0.12
66	5	132647	1777.5	67111	2177.5	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.17	0.03
13	10	23230	782	5230	751	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	23.89	23.88	0.01
66	5	132647	1777.5	67111	2177.5	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.11	0.09

LTE Down Link 7CA Call Setup

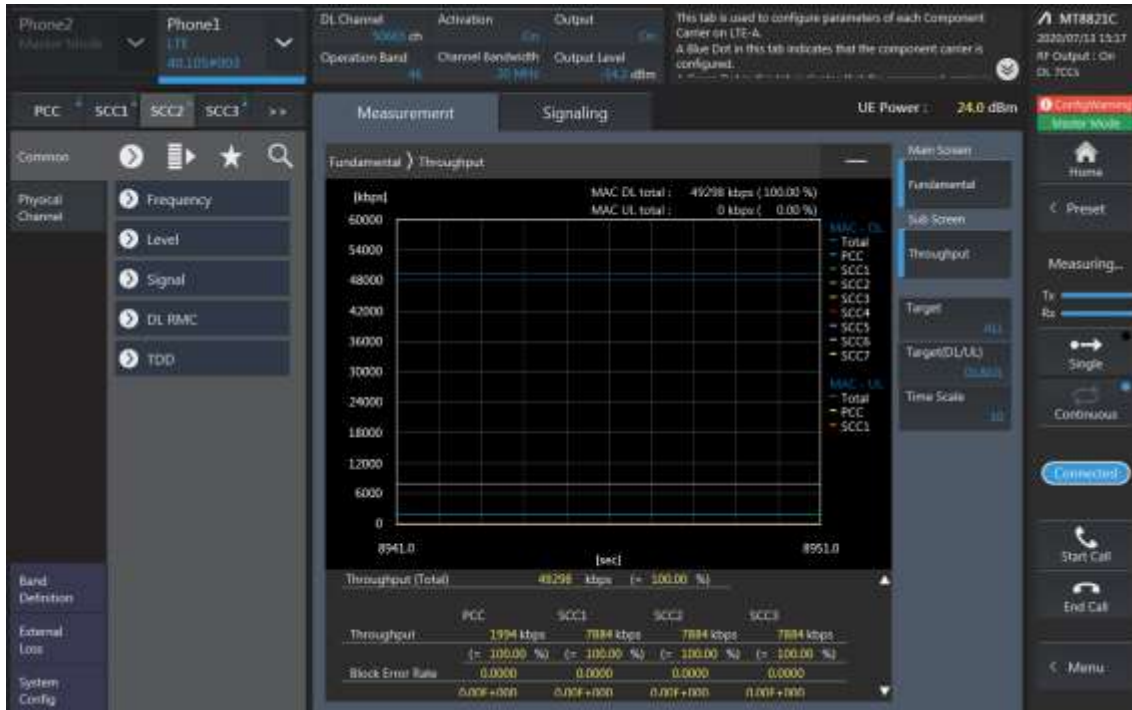
PCC Setting: Channel /RB/BW/Modulation



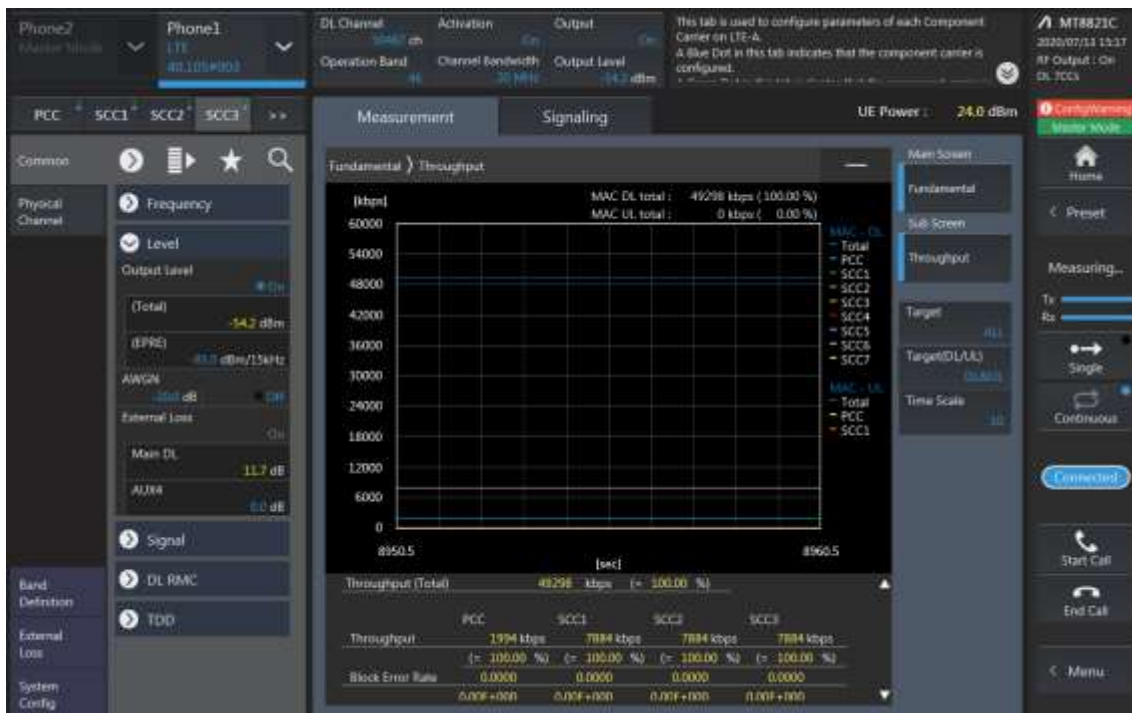
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



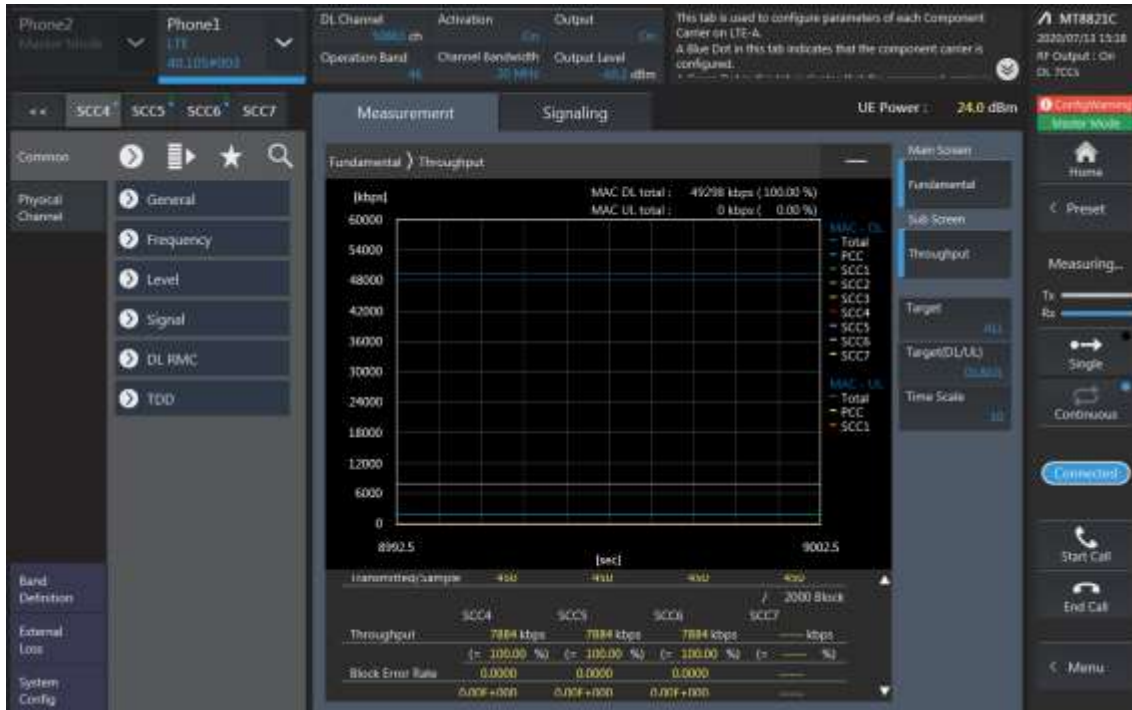
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



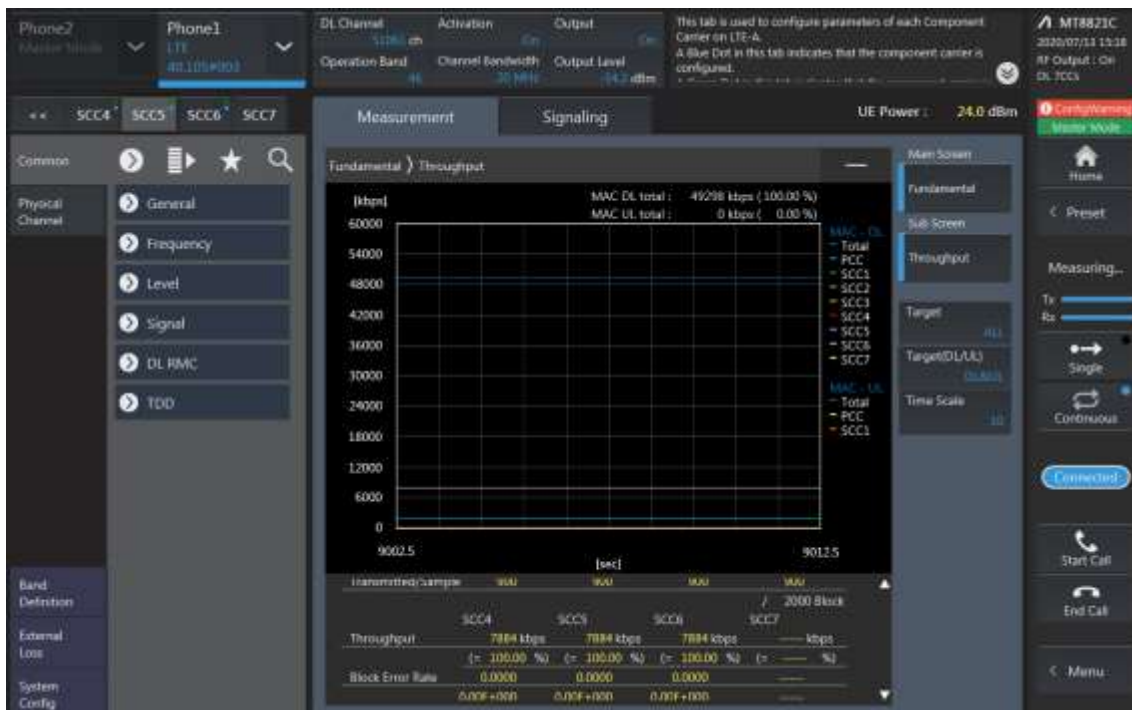
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



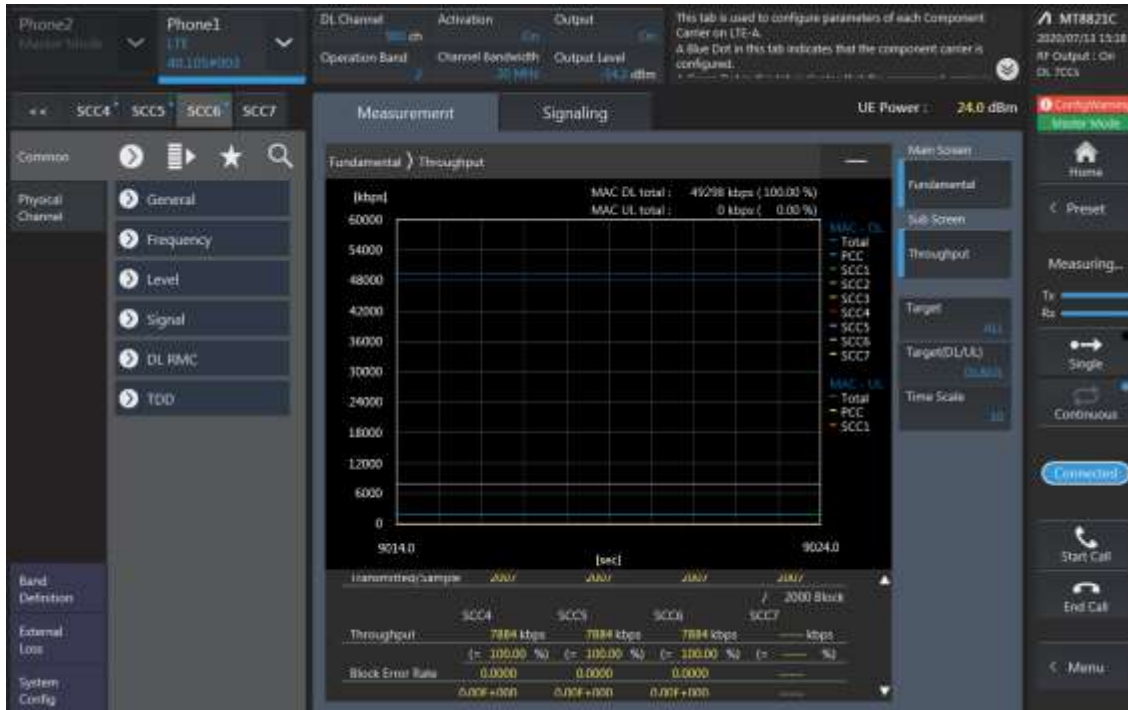
SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



SCC5 Setting (Channel /RB/BW/Modulation)and call Connection



SCC6 Setting (Channel /RB/BW/Modulation)and call Connection

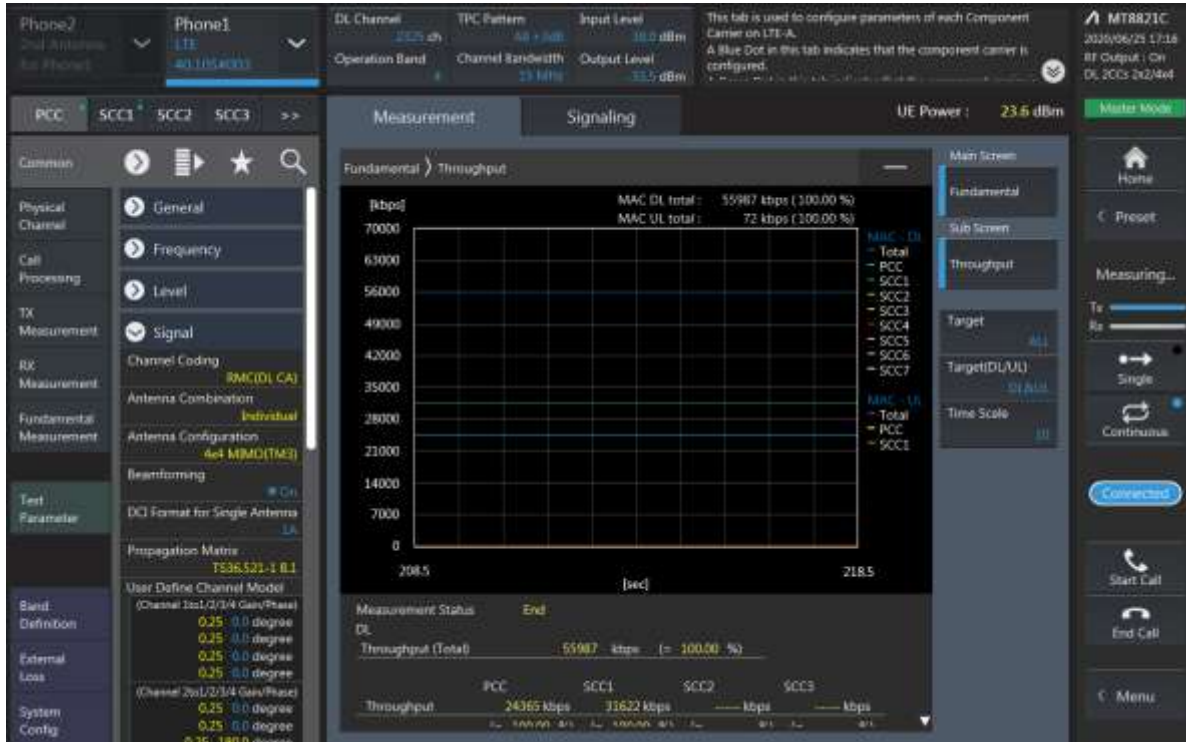


7CA Downlink Carrier aggregation Maximum conducted Powers

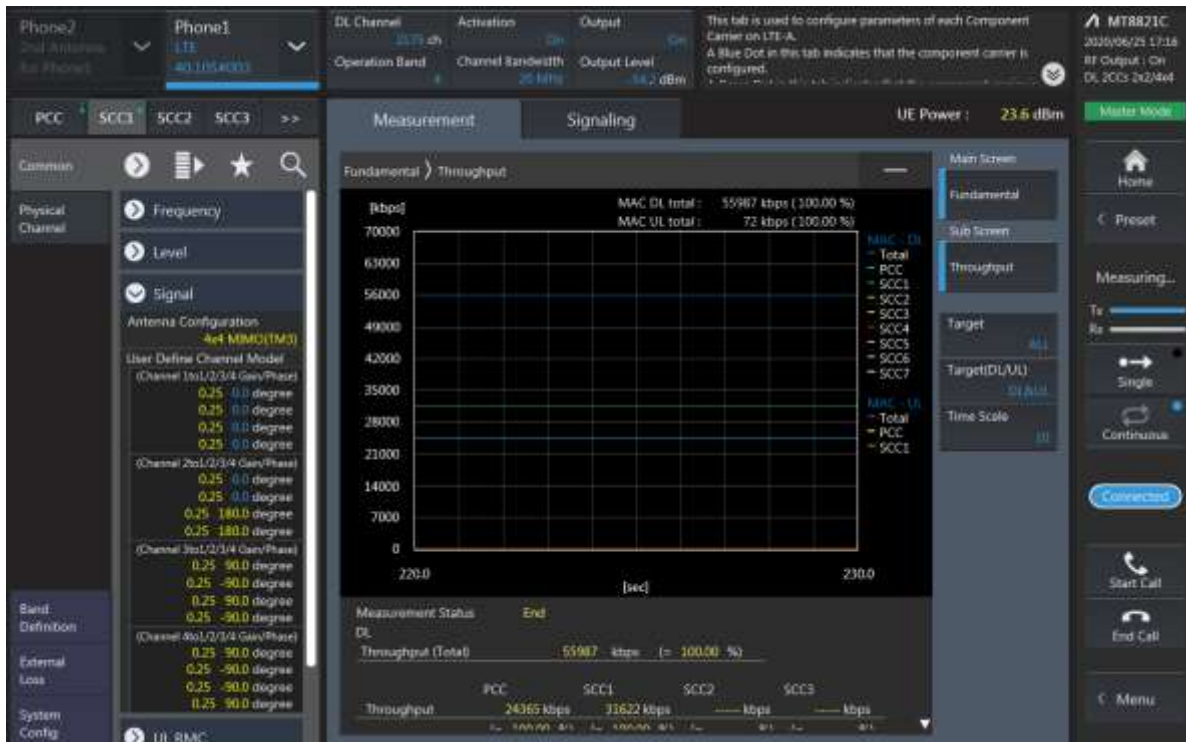
Combination	Band	BW	PCC						offset	SCC				SCC				SCC				SCC				SCC				SCC				Tx Power		Deviation
			PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB		Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Signaling Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
2A-5A-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.57	24.54	0.03
2A-5A-4B-6A-6A-6A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.27	24.21	0.06
2A-5A-4B-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66336	2120	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.2	24.15	0.05
2A-5A-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.57	24.49	0.08
2A-5A-4B-6A-6A-6A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.27	24.26	0.01
2A-5A-4B-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66336	2120	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.1	0.1
2A-13A-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	782	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.57	24.53	0.04
2A-13A-4B-6A-6A-6A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	23.89	23.81	0.08
2A-13A-4B-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66336	2120	2	20	900	1960	13	10	5230	782	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.2	24.12	0.08
2A-4C-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.57	24.49	0.08
2A-4C-4B-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.11	0.09
2A-4B-4C-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.57	0
2A-4B-4C-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	24.2	24.19	0.01
2A-4E-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	66	20	66786	2145	24.57	24.55	0.02
2A-4E-4B-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	24.2	24.14	0.06
2A-4E-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.57	24.51	0.06
2A-4E-4B-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	48	20	56188	3644.8	24.57	24.54	0.03
2A-4E-6A-6A-6A-6A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	66	20	67236	2190	24.57	24.5	0.07
2A-4E-6A-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66336	2120	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.14	0.06
5A-4E-6A-6A-6A-6A	5	10	20525	836.5	2525	891.5	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	66	20	67236	2190	24.27	24.18	0.09
5A-4E-6A-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66336	2120	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.18	0.02
4E-4B-6A-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.09	0.11
4E-4B-6A-6A-6A-6A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	48	20	56188	3644.8	24.2	24.14	0.06

LTE Down Link 2CA 4x4 MIMO Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



SCC Setting : Channel/ RB/ BW/ Modulation and call Connection

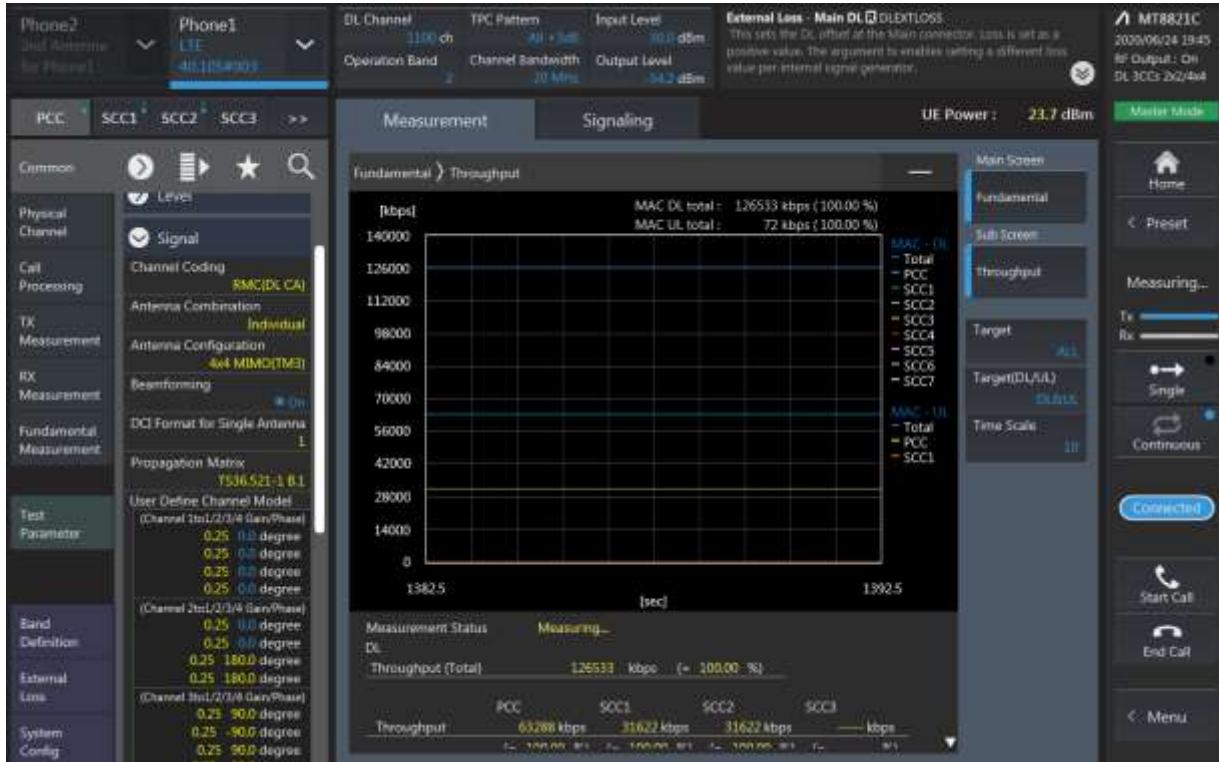


LTE Downlink 2CA 4X4 MIMO Maximum Conducted Power

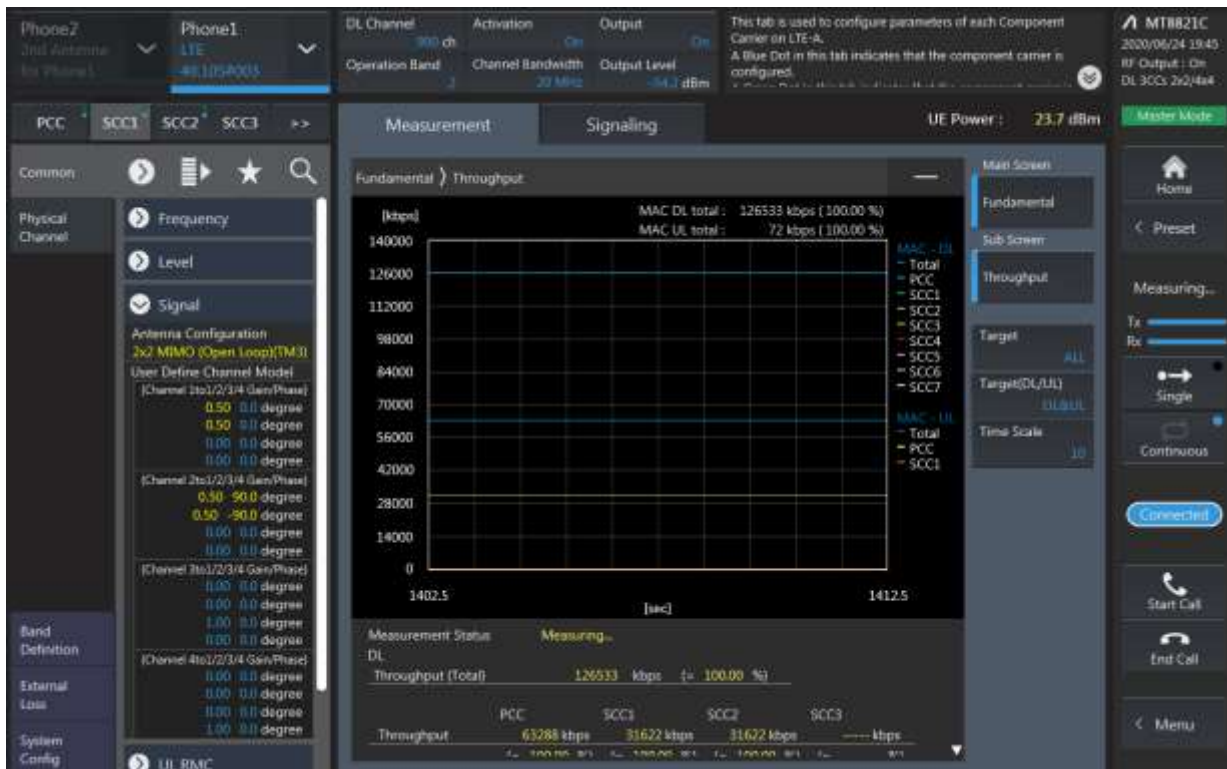
Combination	PCC									SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	
5A-[25A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	25	20	8365	1962.5	24.27	24.28	-0.01
5A-[25A]	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	5	10	2525	881.5	24.61	24.54	0.07

LTE Down Link 3CA 4x4 MIMO Call Setup

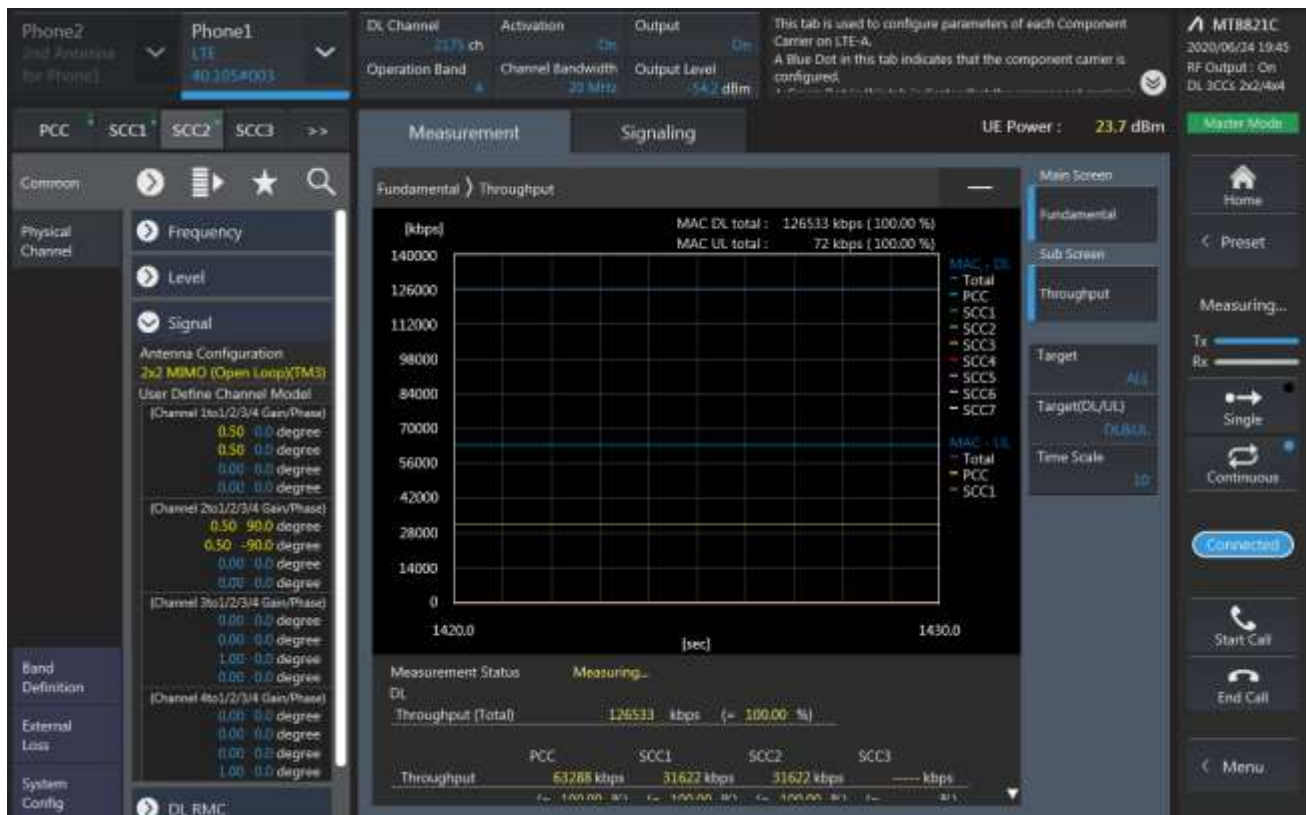
PCC Setting: Channel /RB/BW/Modulation



CC1 Setting : Channel /RB/BW/Modulation



SCC2 Setting (Channel /RB/BW/Modulation)and call Connection

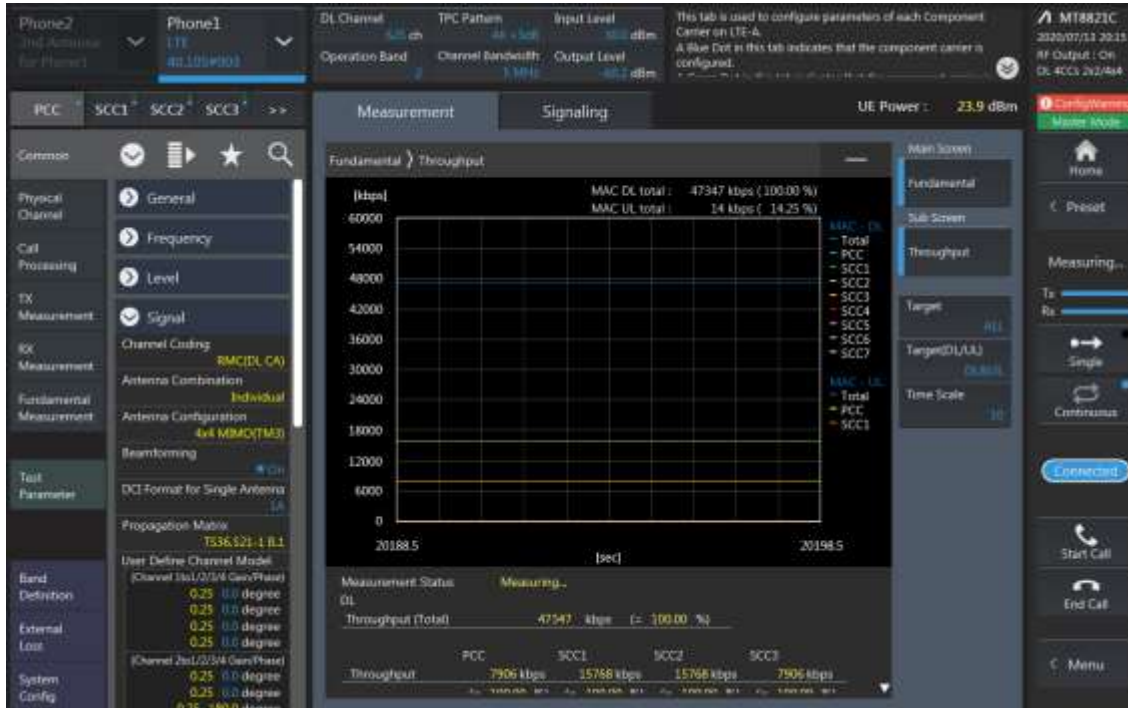


LTE Downlink 3CA 4X4 MIMO Maximum Conducted Power

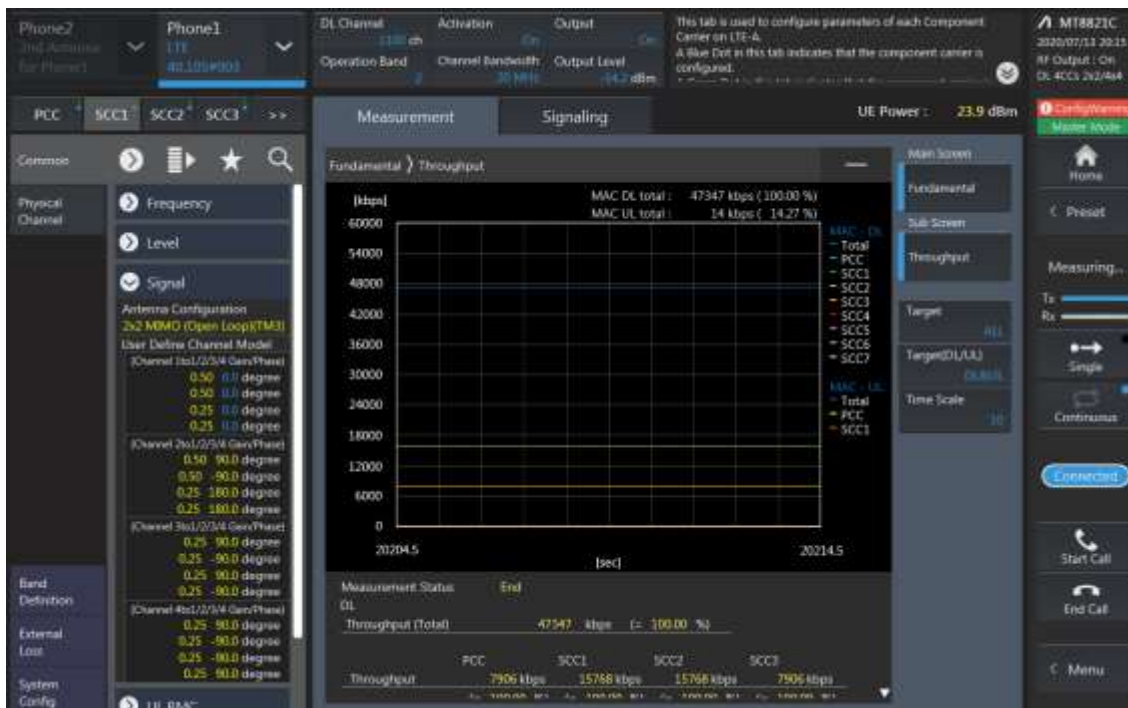
Combination	PCC									SCC				SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
[2A]-[4A]-13A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	13	10	5230	751	24.57	24.59	-0.02
[2A]-[4A]-13A	4	10	20175	1732.5	2175	2132.5	QPSK	1	24	2	20	900	1960	13	10	5230	751	23.96	24.04	-0.08
[2A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	23.89	23.96	-0.07
[4A]-[4A]-13A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	13	10	5230	751	23.96	23.86	0.10
[4A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	23.89	23.95	-0.06
[4A]-[4A]-71A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	71	20	68786	637	23.96	24.05	-0.09
[4A]-[4A]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.56	24.60	-0.04
[25A]-[25A]-26A	25	5	26665	1912.5	8665	1992.5	QPSK	1	0	25	20	8140	1940	26	5	8865	876.5	24.18	24.10	0.08
[25A]-[25A]-26A	26	10	26865	831.5	8865	876.5	QPSK	1	0	25	20	8365	1962.5	25	20	8590	1985	24.21	24.18	0.03
[48A]-[48A]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	24.56	24.51	0.05
[48C]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	24.56	24.51	0.05
[66A]-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	66	20	66734	2139.8	24.2	24.16	0.04

LTE Down Link 4CA 4x4 MIMO Call Setup

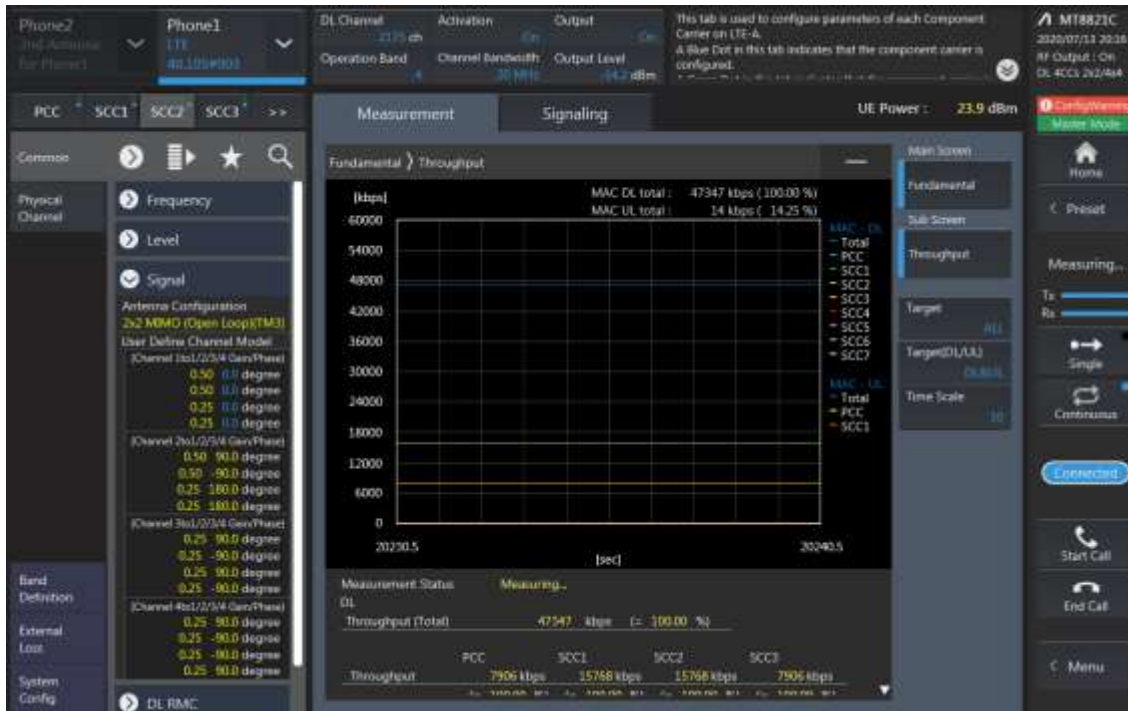
PCC Setting: Channel /RB/BW/Modulation



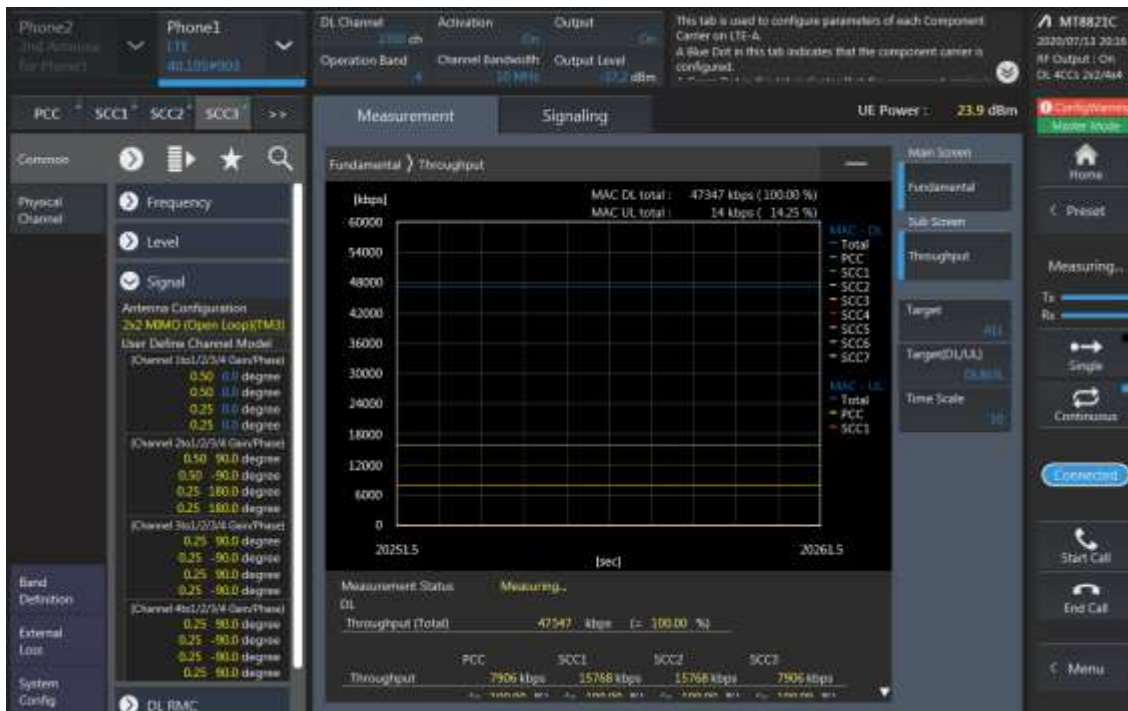
SCC1 Setting : Channel /RB/BW/Modulation



SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



SCC3 Setting (Channel /RB/BW/Modulation) and call Connection

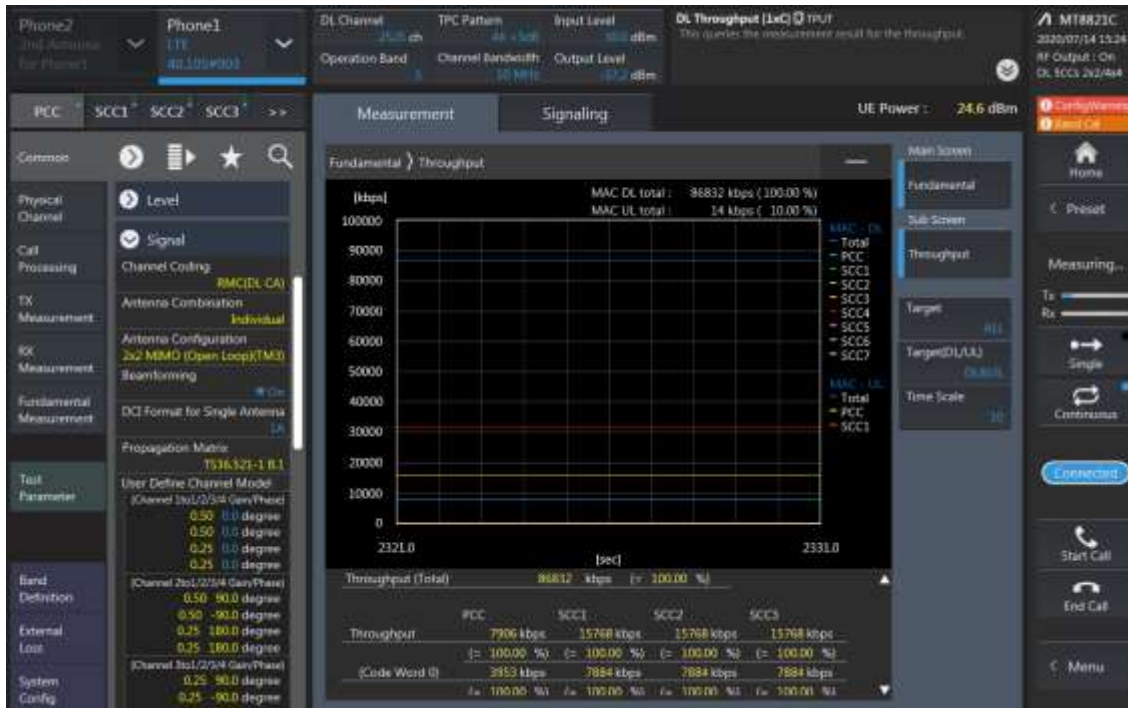


LTE Downlink 4CA 4X4 MIMO Maximum Conducted Power

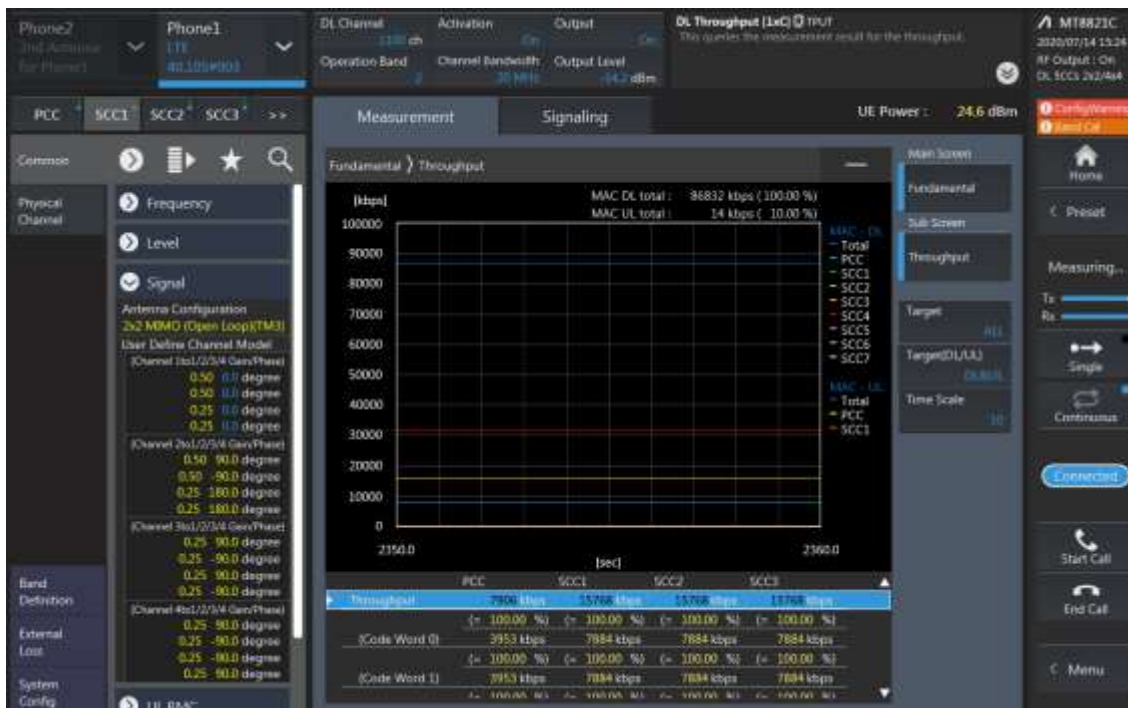
Combination	PCC									SCC				SCC				SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
[2A]-[2A]-[4A]-[4A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.57	24.43	0.14
[2A]-[2A]-[4A]-[4A]	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	23.96	23.92	0.04
[2A]-[2A]-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.57	24.45	0.12
[2A]-[2A]-[4A]-5A	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	23.96	24.06	-0.1
[2A]-[2A]-[4A]-5A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.27	24.28	-0.01
[2A]-[2A]-[4A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.57	24.5	0.07
[2A]-[2A]-[4A]-71A	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	2	20	1100	1980	71	20	68786	637	23.96	23.86	0.1
[2A]-[2A]-[4A]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.56	24.49	0.07
[2A]-[2A]-29A-30A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.57	24.5	0.07
[2A]-[2A]-29A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	24.61	24.57	0.04
[2A]-[2A]-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.57	24.51	0.06
[2A]-[2A]-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.2	24.16	0.04
[2A]-[2A]-[66A]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.56	24.47	0.09
[2A]-[4A]-[4A]-5A	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.57	24.57	0
[2A]-[4A]-[4A]-5A	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	23.96	23.99	-0.03
[2A]-[4A]-[4A]-5A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.27	24.24	0.03
[2A]-[4A]-5B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.57	24.47	0.1
[2A]-[4A]-5B	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	23.96	23.89	0.07
[2A]-[4A]-5B	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	5	2453	874.3	2	20	900	1960	4	20	2175	2132.5	24.27	24.35	-0.08
[2A]-[4A]-12B	2	10	18900	1880	900	1960	QPSK	1	24	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.57	24.67	-0.1
[2A]-[4A]-12B	4	10	20000	1715	2000	2115	QPSK	1	24	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	23.96	23.86	0.1
[2A]-12A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	24.57	24.6	-0.03
[2A]-12A-[66C]	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	23.99	23.89	0.1
[2A]-12A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	12	10	5095	737.5	24.2	24.21	-0.01
[2A]-13A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.57	24.54	0.03
[2A]-13A-[66C]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	23.89	23.82	0.07
[2A]-13A-[66C]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	13	10	5230	751	24.2	24.1	0.1
[2A]-29A-[30A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	24.57	24.49	0.08
[2A]-29A-[30A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	66	20	66786	2145	24.2	24.24	-0.04
[2A]-29A-[30A]-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.2	24.18	0.02
[2A]-[66A]-[66A]-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	67236	2190	71	20	68786	637	24.57	24.52	0.05
[2A]-[66A]-[66A]-71A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	71	20	68786	637	24.2	24.19	0.01
[2A]-[66A]-[66A]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.56	24.48	0.08
[2C]-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1044	1974.4	66	20	66786	2145	66	20	67236	2190	24.57	24.59	-0.02
[2C]-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.2	24.16	0.04
[2A]-[66C]-71A	2	10	18900	1880	900	1960	QPSK	1	24	66	20	66786	2145	66	20	66984	2164.8	71	20	68786	637	24.57	24.57	0
[2A]-[66C]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.56	24.58	-0.02
[2A]-[66C]-71A	71	5	133147	665.5	68611	619.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.56	24.47	0.09
[4A]-[4A]-5B	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	23.96	23.97	-0.01
[4A]-[4A]-5B	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	5	2453	874.3	4	20	2175	2132.5	4	10	2350	2150	24.27	24.32	-0.05
[4A]-[4A]-12B	4	10	20000	1715	2000	2115	QPSK	1	24	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	23.96	23.88	0.08
5A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	49	5	10	2450	874	66	20	66786	2145	66	20	66984	2164.8	24.07	23.97	0.1
5A-5A-[66C]	66	5	132322	1777.5	67111	2145	QPSK	1	12	66	20	66903	2156.7	5	10	2525	881.5	5	5	2425	871.5	24.2	24.16	0.04
[25A]-26A-[41C]	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	26	15	8865	876.5	41	20	40620	2593	41	20	40422	2573.2	24.21	24.22	-0.01
[25A]-26A-[41C]	26	10	26865	831.5	8865	876.5	QPSK	1	0	25	20	8365	1962.5	41	20	40620	2593	41	20	40422	2573.2	24.21	24.17	0.04
[25A]-46D	25	20	26365	1882.5	8365	1962.5	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.61	24.6	0.01
29A-[30A]-[66A]-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	22.42	22.45	-0.03
29A-[30A]-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	29	10	9715	722.5	30	10	9820	2355	24.2	24.17	0.03
[41E](PC 2)	41	20	40620	2593	40620																			

LTE Down Link 5CA 4x4 MIMO Call Setup

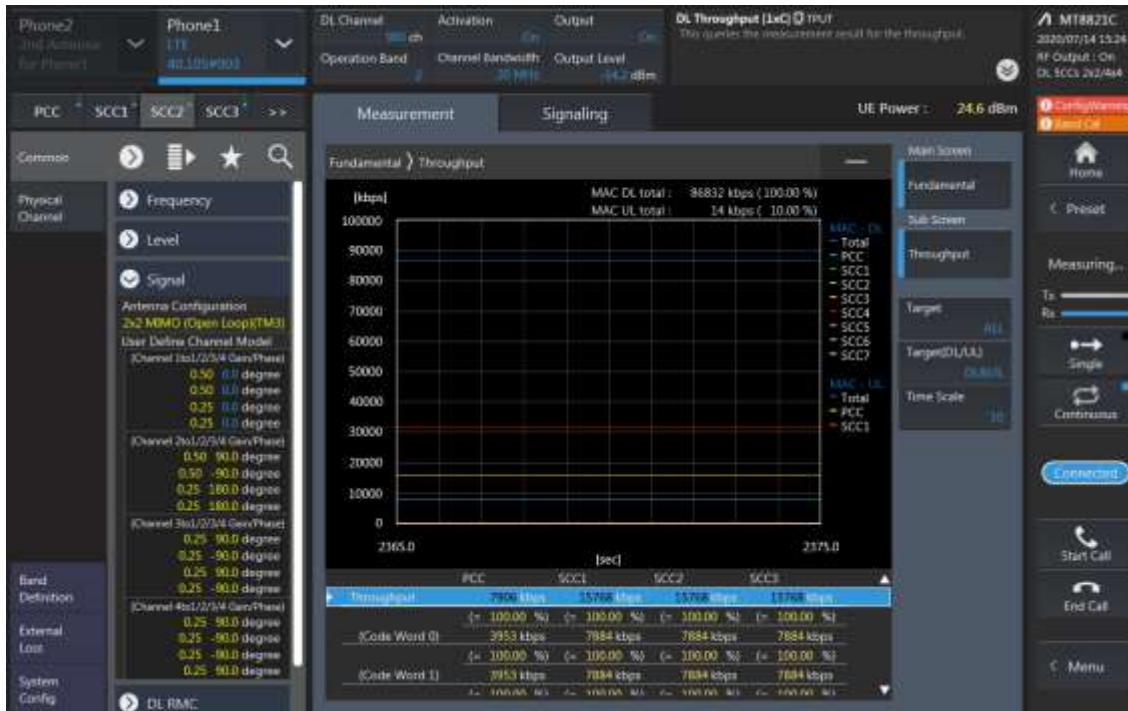
PCC Setting: Channel /RB/BW/Modulation



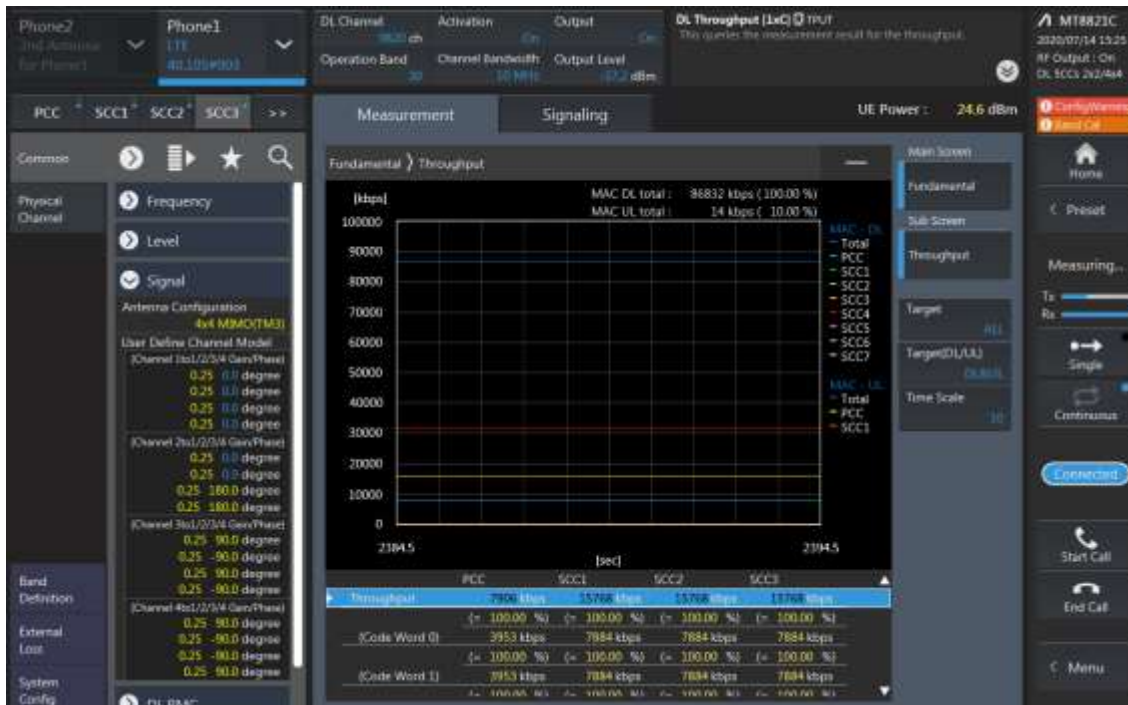
SCC1 Setting : Channel /RB/BW/Modulation



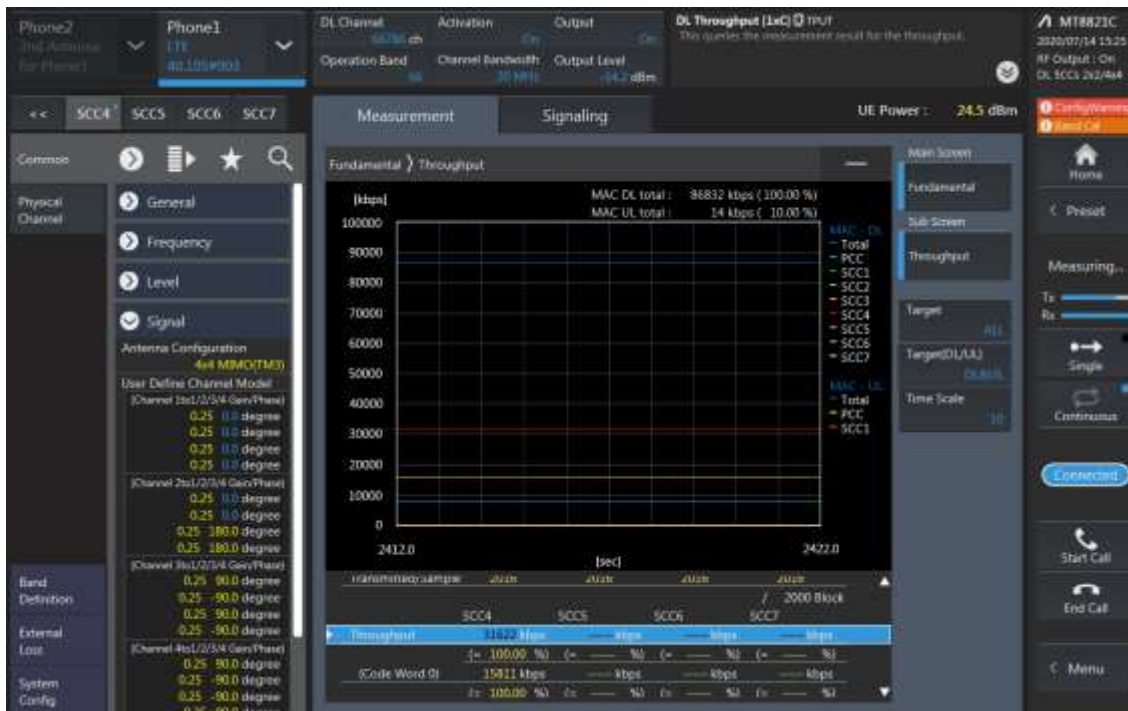
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



SCC3 Setting (Channel /RB/BW/Modulation) and call Connection



SCC4 Setting (Channel /RB/BW/Modulation) and call Connection



LTE Downlink 5CA 4X4 MIMO Maximum Conducted Power

Combination	Band	BW	PCC				Modulation	RB	offset	SCC				SCC				SCC				SCC				Tx Power		Deviation
			PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency				Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)	
[2A]-[2A]-5A-30A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.57	24.51	0.06
[2A]-[2A]-5A-30A-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.27	24.28	-0.01
[2A]-[2A]-5A-30A-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	24.61	24.67	-0.06
[2A]-[2A]-5A-30A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.2	24.21	-0.01
[2A]-[2A]-5A-30A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.57	24.67	-0.1
[2A]-[2A]-5A-30A-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.27	24.25	0.02
[2A]-[2A]-5A-30A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.15	0.05
[2A]-[2A]-5A-[66C]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	66984	2164.8	24.57	24.61	-0.04
[2A]-[2A]-5A-[66C]	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.27	24.28	-0.01
[2A]-[2A]-5A-[66C]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.2	24.13	0.07
[2A]-[2A]-12A-30A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	24.57	24.58	-0.01
[2A]-[2A]-12A-30A-[66A]	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	23.99	23.94	0.05
[2A]-[2A]-12A-30A-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	24.61	24.68	-0.07
[2A]-[2A]-12A-30A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.2	24.16	0.04
[2A]-[2A]-12A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.57	24.65	-0.08
[2A]-[2A]-12A-[66A]	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	23.99	24	-0.01
[2A]-[2A]-12A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.2	24.14	0.06
[2A]-[2A]-12B-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	12	5	5047	732.7	66	20	66786	2145	66	20	66786	2145	24.57	24.47	0.1
[2A]-[2A]-12B-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	5	5095	737.5	12	5	5047	732.7	24.2	24.13	0.07
[2A]-[2A]-13A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.57	24.48	0.09
[2A]-[2A]-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	23.89	23.86	0.03
[2A]-[2A]-13A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.2	24.26	-0.06
[2A]-[2A]-13A-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.57	24.49	0.08
[2A]-[2A]-13A-[66B]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	15	66786	2145	66	5	66879	2154.3	23.89	23.93	-0.04
[2A]-[2A]-13A-[66B]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	15	67018	2168.2	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.2	24.26	-0.06
[2A]-[2A]-14A-30A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	24.57	24.51	0.06
[2A]-[2A]-14A-30A-[66A]	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.7	24.61	0.09
[2A]-[2A]-14A-30A-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	24.61	24.55	0.06
[2A]-[2A]-14A-30A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.2	24.18	0.02
[2A]-[2A]-14A-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.57	24.53	0.04
[2A]-[2A]-14A-[66A]	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.7	24.69	0.01
[2A]-[2A]-14A-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.2	24.29	-0.09
[2A]-[2A]-46D	2	10	18900	1880	900	1960	QPSK	1	24	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.57	24.48	0.09
[2A]-5A-5A-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	24.57	24.56	0.01
[2A]-5A-5A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	49	5	10	2450	874	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.07	24.12	-0.05
[2A]-5A-5A-[66A]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	5	5	2425	871.5	24.2	24.21	-0.01
[2A]-5A-30A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.57	24.53	0.04
[2A]-5A-30A-[66A]-66A	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.27	24.28	-0.01
[2A]-5A-30A-[66A]-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.61	24.7	-0.09
[2A]-5A-30A-[66A]-66A	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	30	10	9820	2355	24.2	24.3	-0

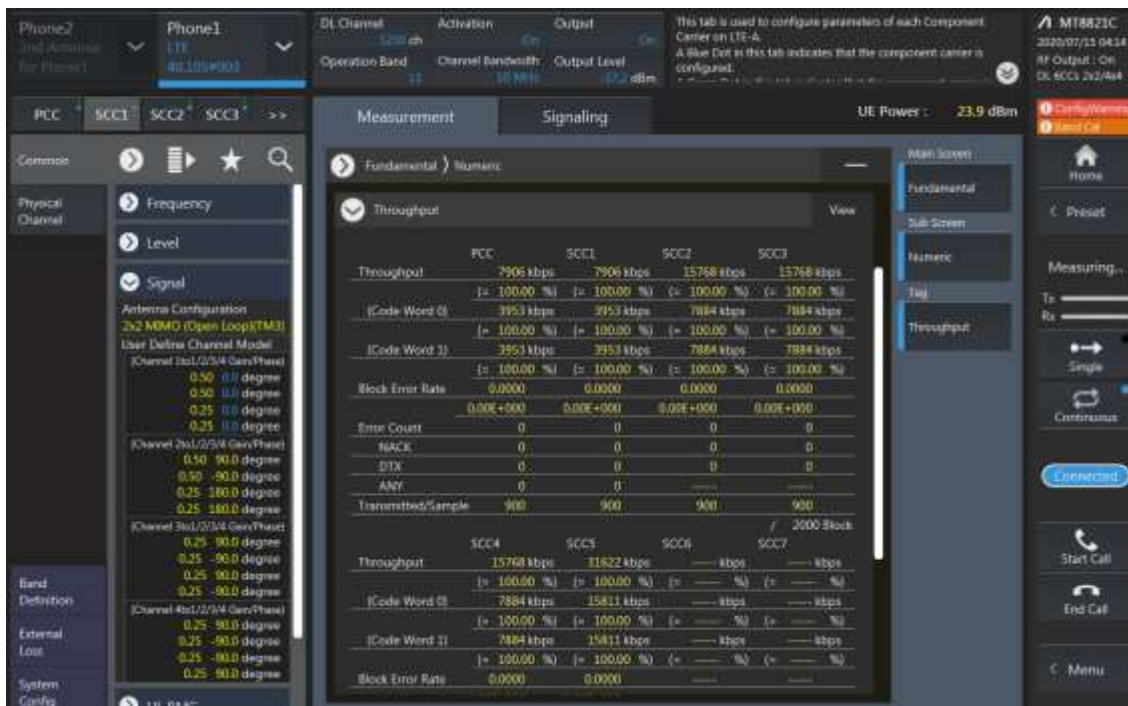
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[2A]-13A-[48D]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	23.89	23.8	0.09
[2A]-13A-[66A]-[66B]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.57	24.59	-0.02
[2A]-13A-[66A]-[66B]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	23.89	23.79	0.1
[2A]-13A-[66A]-[66B]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	66	15	66629	2129.3	2	20	900	1960	13	10	5230	751	24.2	24.18	0.02
[2A]-14A-30A-[66A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.57	24.6	-0.03
[2A]-14A-30A-[66A]-66A	14	10	23230	793	5330	763	QPSK	1	0	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.7	24.78	-0.08
[2A]-14A-30A-[66A]-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.61	24.55	0.06
[2A]-14A-30A-[66A]-66A	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	14	10	5330	763	30	10	9820	2355	24.2	24.2	0
[2A]-46A-46C-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	66	20	66786	2145	24.57	24.48	0.09
[2A]-46A-46C-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.2	24.29	-0.09
[2A]-46A-46D	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.5	46	20	53144	5785.4	24.57	24.56	0.01
[2A]-46A-46D	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53342	5805.5	46	20	53540	5825	24.57	24.5	0.07
[2A]-[48A]-[48C]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.57	24.52	0.05
[2A]-[48A]-[48C]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.2	24.15	0.05
[2A]-[48A]-[48D]	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.57	24.67	-0.1
[2A]-[48C]-[48C]	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.57	24.56	0.01
[4A]-46A-46D	4	10	20175	1732.5	2175	2132.5	QPSK	1	24	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.5	46	20	53144	5785.4	24.02	24.09	-0.07
[4A]-[48E]	4	10	20175	1732.5	2175	2132.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.02	24.12	-0.1
5B-30A-[66A]-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	5	10	2453	874.3	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.27	24.28	-0.01
5B-30A-[66A]-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.61	24.66	-0.05
5B-30A-[66A]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	24.2	24.11	0.09
5A-[48A]-[48C]-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.27	24.32	-0.05
5A-[48A]-[48C]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.2	24.2	0
5A-[48A]-[48D]	5	10	20525	836.5	2525	891.5	QPSK	1	49	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.27	24.26	0.01
5A-[48C]-[48C]	5	10	20525	836.5	2525	891.5	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.27	24.37	-0.1
5A-[48D]-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.27	24.28	-0.01
5A-[48D]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.1	0.1
5A-[48E]	5	10	20525	836.5	2525	891.5	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.27	24.3	-0.03
13A-[48A]-[48C]-[66A]	13	10	23230	782	5230	751	QPSK	1	0	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	23.89	23.86	0.03
13A-[48A]-[48C]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.2	24.16	0.04
13A-[48A]-[48D]	13	10	23230	782	5230	751	QPSK	1	0	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	23.89	23.98	-0.09
13A-[48C]-[48C]	13	10	23230	782	5230	751	QPSK	1	0	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	23.89	23.81	0.08
13A-[48C]-[66C]	13	10	23230	782	5230	751	QPSK	1	0	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	66	20	66984	2164.8	23.89	23.8	0.09
[25A]-[25A]-[41D]	25	5	26665	1912.5	8665	1992.5	QPSK	1	0	25	20	8140	1940	41	20	40422	2573.2	41	20	40620	2593	41	20	40818	2612.8	24.18	24.17	0.01
[41C]-[41D] PC2	41	20	40620	2593	40620	2593	QPSK	1	99	41	20	40422	2573.2	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	26.55	26.48	0.07
[41C]-[41D] PC3	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40476	2578.6	41	20	41094	2640.4	41	20	41292	2660.2	41	20	41490	2680	25.12	25.16	-0.04
46A-46D-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	53540	5825	46	20	53342	5805.5	46	20	53144	5785.4	24.2	24.22	-0.02
46C-46C-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53342	5805.5	46	20	53540	5825	24.2	24.2	0
[48C]-[48C]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.2	24.14	0.06
[48A]-[48C]-[66C]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	66	20	66994	2165.8	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.2	24.25	-0.05
[48A]-[48D]-[66A]	66	5	132647	177.5	67111	2177.5	QPSK	1	12	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.2	24.19	0.01
[48A]-[48E]	48	5	55265	3552.5	55265	3552.5	QPSK	1	12	48	20	56046	3630.6	48	20	56244	3650.4	48	20	56442	3670.2	48	20	56640	3690	23.93	23.92	0.01
[48C]-[48D]	48	5	55265	3552.5	55265	3552.5	QPSK	1	12	48	20	55382	3564.2	48	20	56244	3650.4	48	20	56442	3670.2	48	20	56640	3690	23.93	24.01	-0.08
[48F]	48	5	55265	3552.5	55265	3552.5	QPSK	1	12	48	20	55382	3564.2	48	20	55580	3584	48	20	55778	3603.8	48	20	55976	3623.6	23.93	23.84	0.09

LTE Down Link 6CA 4x4 MIMO Call Setup

PCC Setting: Channel /RB/BW/Modulation



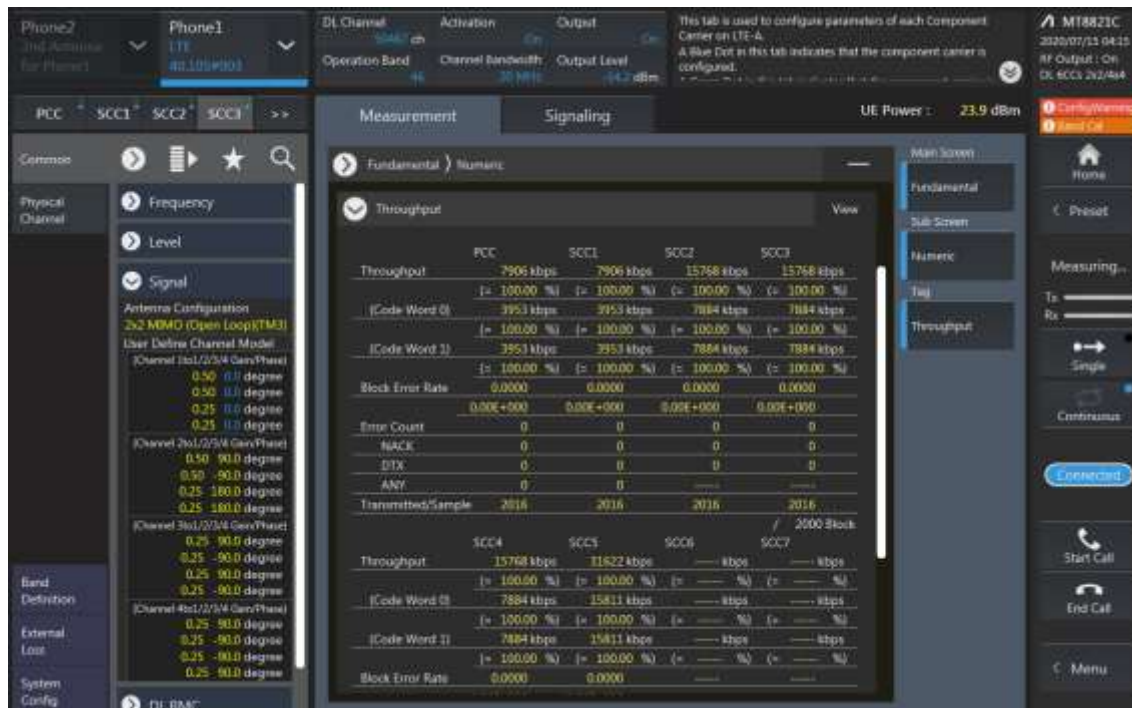
SCC1 Setting : Channel /RB/BW/Modulation



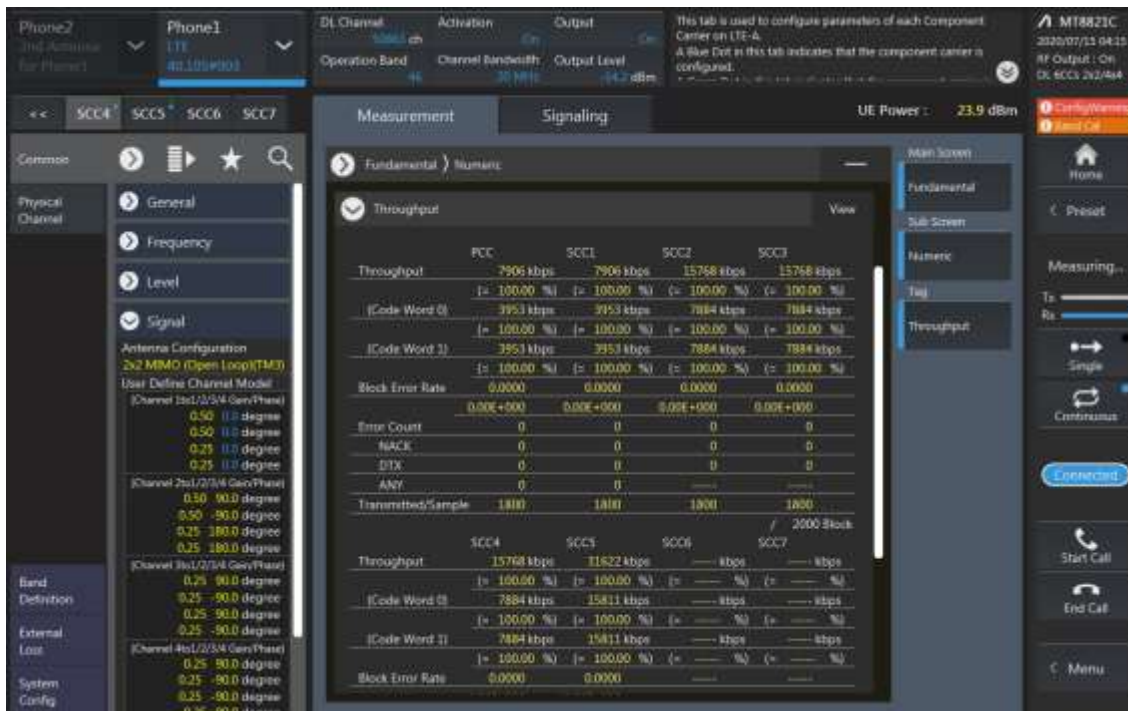
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



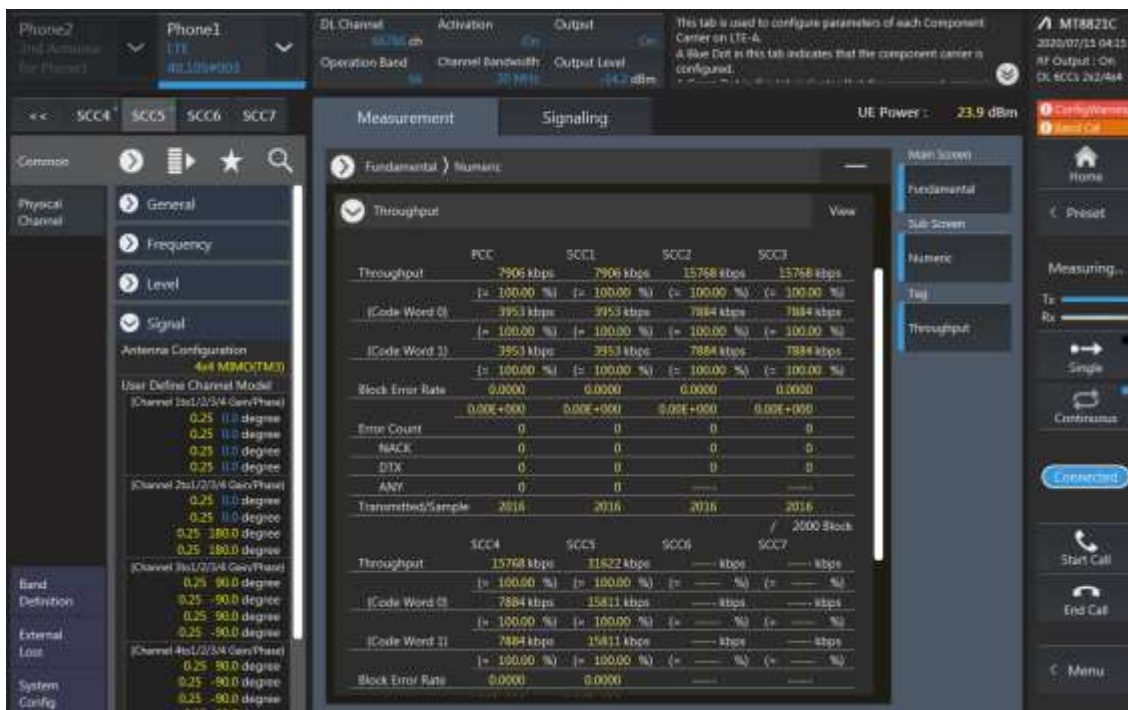
SCC3 Setting (Channel /RB/BW/Modulation) and call Connection



SCC4 Setting (Channel /RB/BW/Modulation) and call Connection



SCC6 Setting (Channel /RB/BW/Modulation) and call Connection

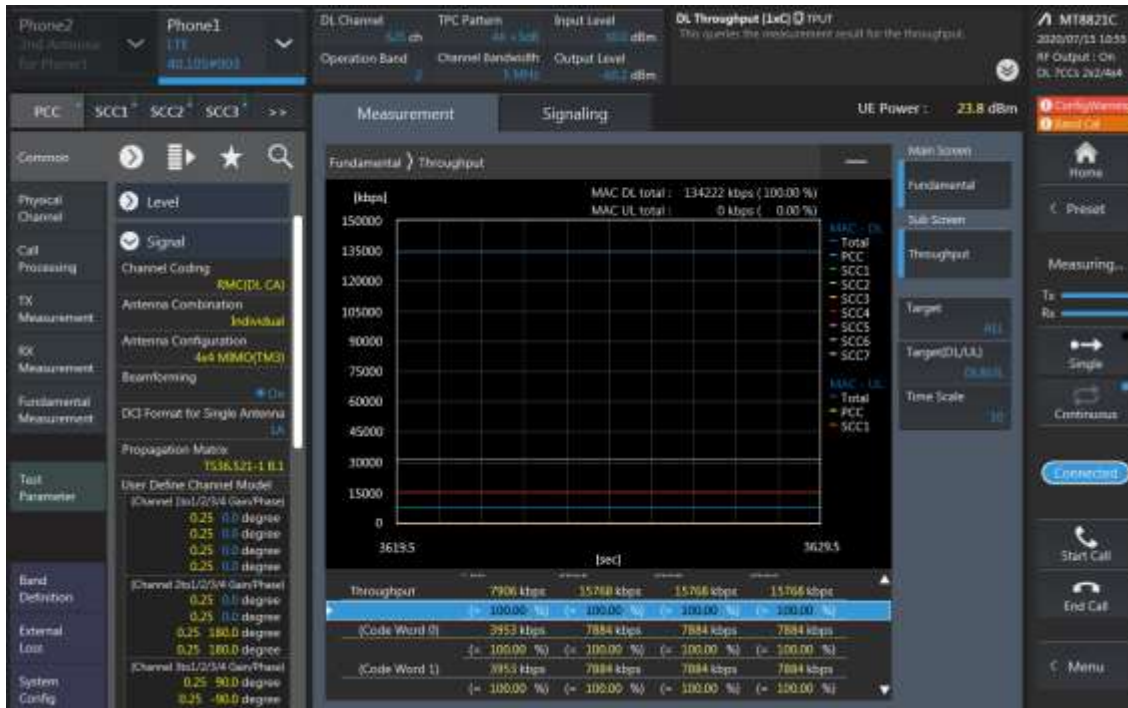


LTE Downlink 6CA 4X4 MIMO Maximum Conducted Power

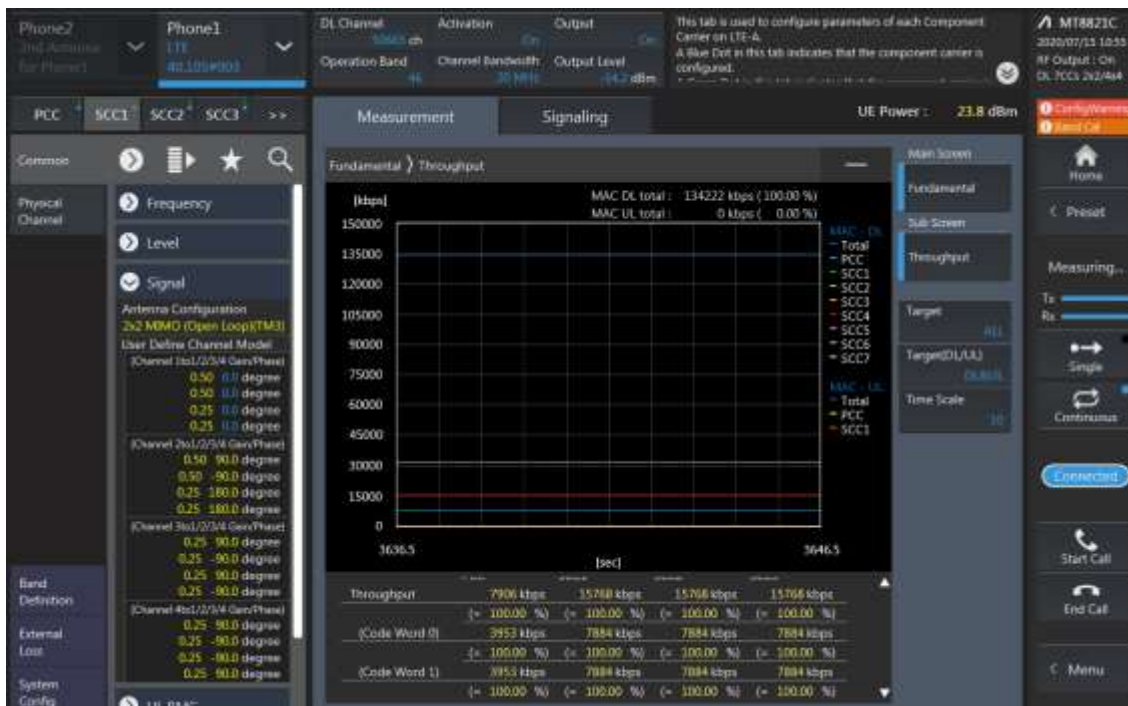
Combination	PCC									SCC				SCC				SCC				SCC				SCC				Tx Power		Deviation
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled (dBm)	
[2A]-13A-46E	2	10	18900	1880	900	1960	QPSK	1	24	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.57	24.61	-0.04
[2A]-13A-46E	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	23.89	23.85	0.04
[2A]-46A-[48D]-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.57	24.5	0.07
[2A]-46A-[48D]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.14	0.06
2A-46A-[48D]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.57	24.59	-0.02
2A-46A-[48D]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.15	0.05
[2A]-46C-[48C]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.48	0.09
[2A]-46C-[48C]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	24.2	24.19	0.01
2A-46A-[48E]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.57	24.55	0.02
[2A]-46C-[48D]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.57	24.6	-0.03
2A-[48E]-66A	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.57	24.51	0.06
2A-[48E]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.26	-0.06
[2A]-48E-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.57	24.59	-0.02
[2A]-48E-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.13	0.07
13A-46E-[66A]	13	10	23230	782	5230	751	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	23.89	23.92	-0.03
13A-46E-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.26	-0.06
13A-[48E]-66A	13	10	23230	782	5230	751	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	23.89	23.84	0.05
13A-[48E]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.1	0.1
13A-48E-[66A]	13	10	23230	782	5230	751	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	23.89	23.86	0.03
13A-48E-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.12	0.08
46A-[48E]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.27	-0.07
46C-[48D]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.28	-0.08

LTE Down Link 7CA 4x4 MIMO Call Setup

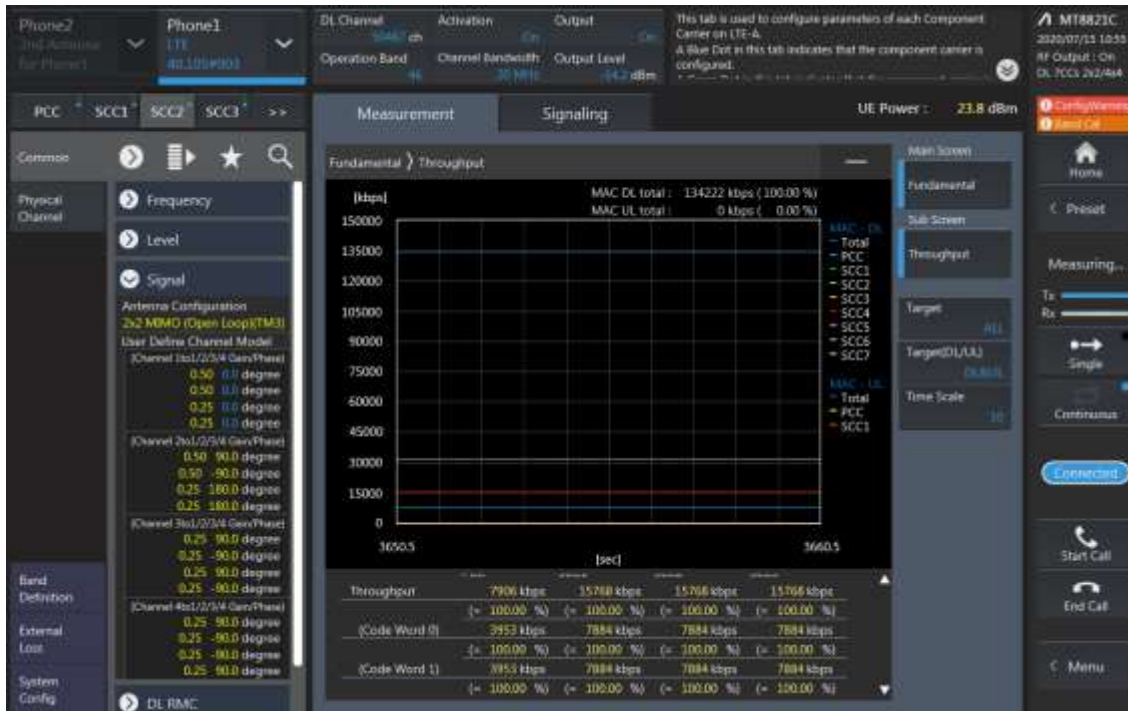
PCC Setting: Channel /RB/BW/Modulation



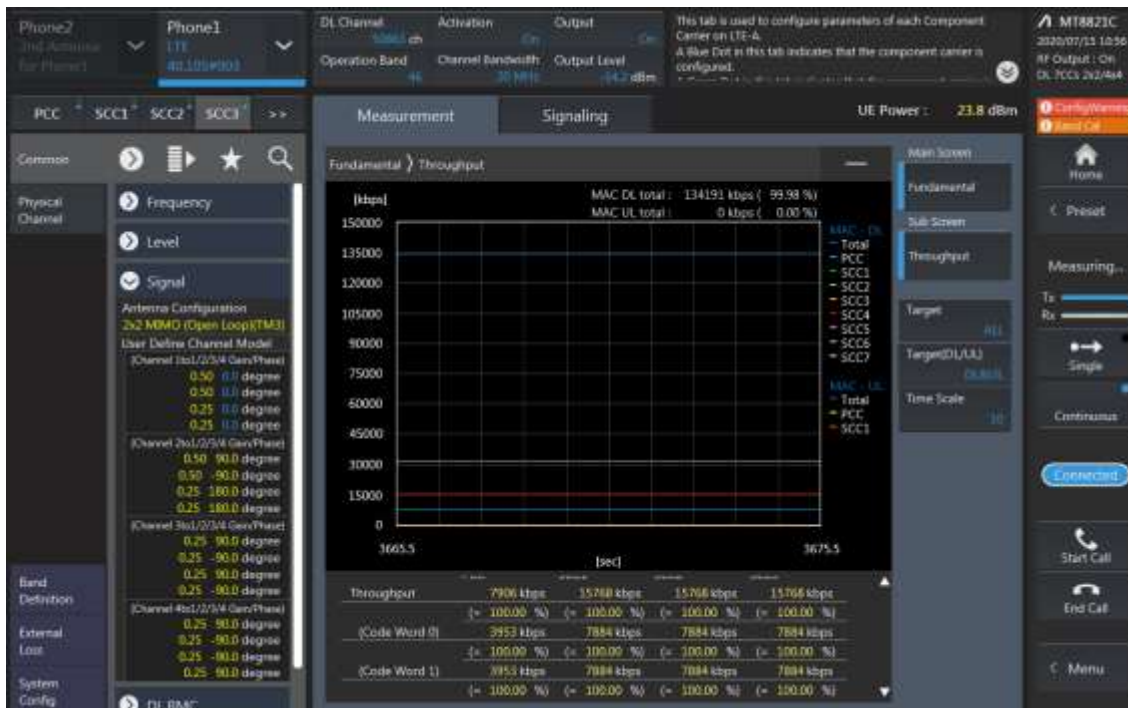
SCC1 Setting : Channel /RB/BW/Modulation



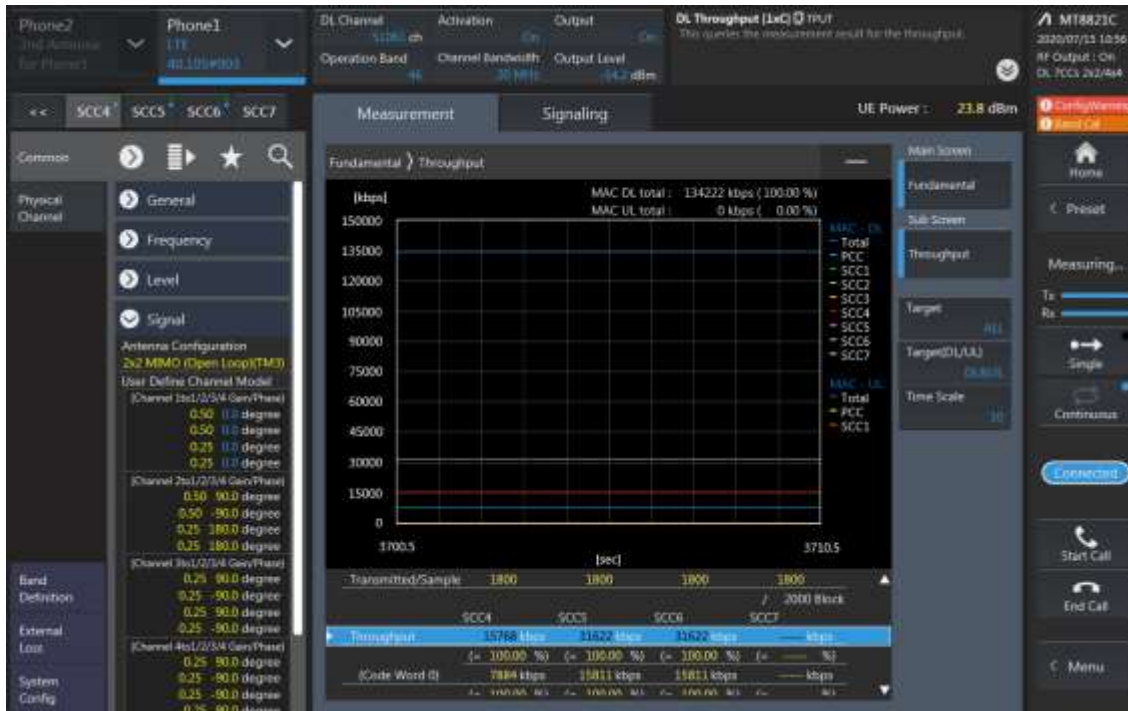
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



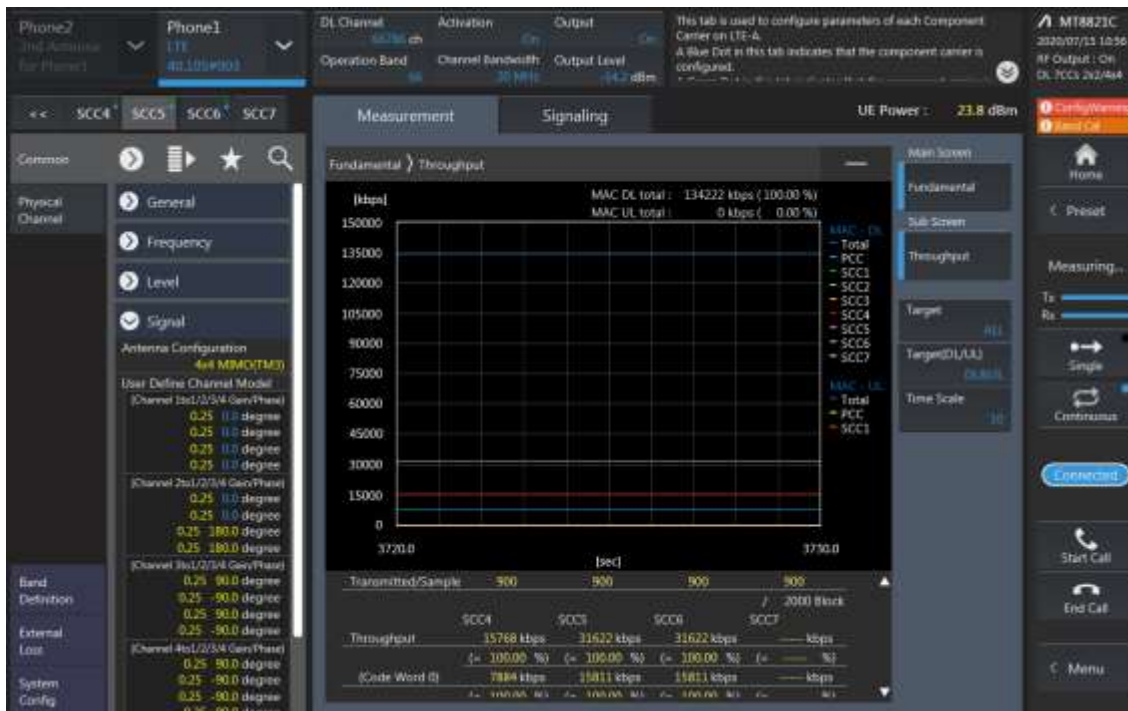
SCC3 Setting (Channel /RB/BW/Modulation) and call Connection



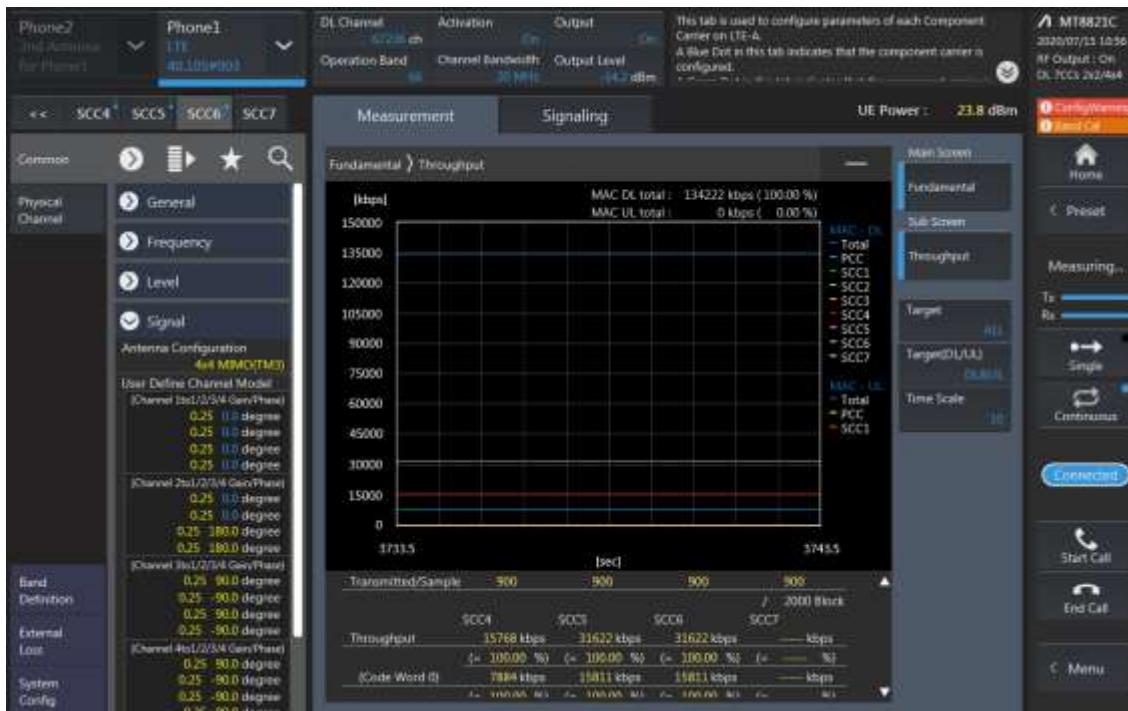
SCC4 Setting (Channel /RB/BW/Modulation) and call Connection



SCC5 Setting (Channel /RB/BW/Modulation) and call Connection



SCC6 Setting (Channel /RB/BW/Modulation) and call Connection



LTE Downlink 7CA 4X4 MIMO Maximum Conducted Power

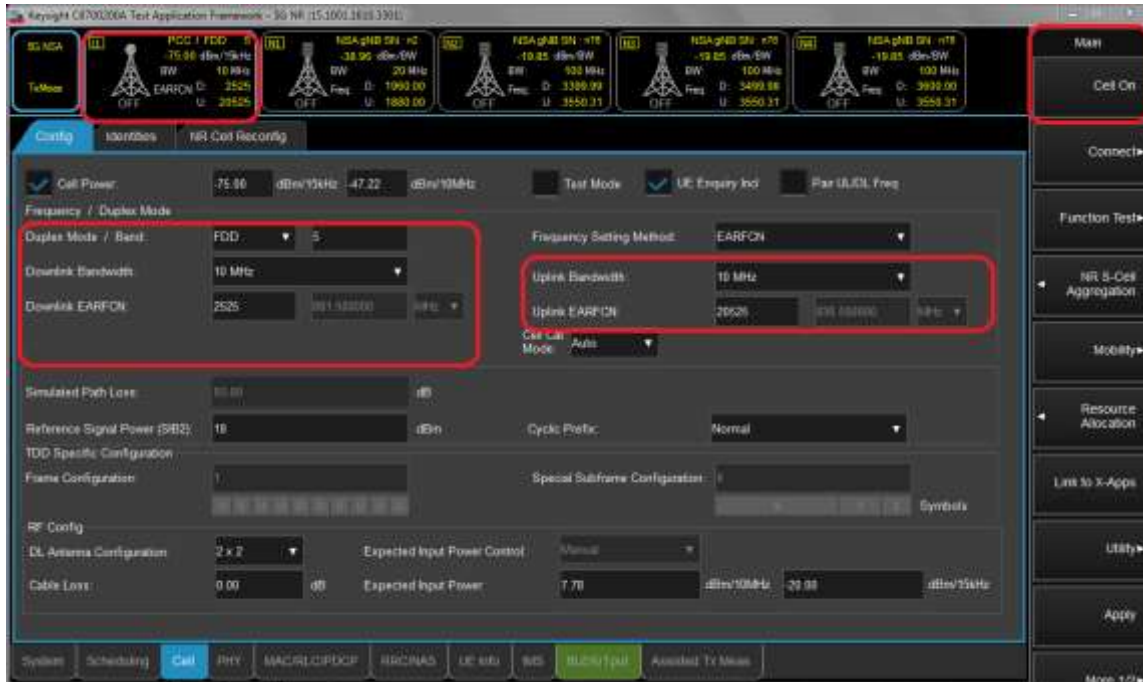
Combination	Band	BW	PCC								SCC				SCC				SCC				SCC				SCC				SCC				Tx Power		Deviation
			PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	Carrier Tx Power (dBm)	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Power (dBm)	LTE Tx Power with DL CA (dBm)		
[2A]-5A-46D-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.57	24.67	-0.1	
[2A]-5A-46D-[66A]-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.27	24.35	-0.08	
[2A]-5A-46D-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.2	24.12	0.08	
[2A]-5A-46E-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.57	24.58	-0.01	
[2A]-5A-46E-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	24.27	24.24	0.03	
[2A]-5A-46E-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.13	0.07	
[2A]-13A-46D-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	13	10	782	5230	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	24.57	24.66	-0.09	
[2A]-13A-46D-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	24	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	66	20	66786	2145	66	20	67236	2190	23.89	23.92	-0.03	
[2A]-13A-46D-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	13	10	782	5230	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.2	24.29	-0.09	
2A-46C-[48D]-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.57	24.48	0.09	
2A-46C-[48D]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.29	-0.09	
[2A]-46C-[48D]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.57	24.47	0.1	
[2A]-46C-[48D]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.2	24.3	-0.1	
[2A]-46D-[48C]-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.52	0.05	
[2A]-46D-[48C]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	24.2	24.22	-0.02	
[2A]-46D-[48C]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.6	-0.03	
[2A]-46D-[48C]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	24.2	24.28	-0.08	
2A-46D-[48C]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.57	24.61	-0.04	
2A-46D-[48C]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	48	20	55990	3625	48	20	56188	3644.8	24.2	24.12	0.08	
[2A]-46E-[48A]-66A	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	66	20	66786	2145	24.57	24.52	0.05	
[2A]-46E-[48A]-66A	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	24.2	24.13	0.07	
[2A]-46E-[48E]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.57	24.52	0.05	
[2A]-46E-[48C]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	48	20	56188	3644.8	24.57	24.47	0.1	
[2A]-46E-[66A]-[66A]	2	10	18900	1880	900	1960	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	66	20	67236	2190	24.57	24.66	-0.09	
[2A]-46E-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.21	-0.01	
5A-46E-[66A]-[66A]	5	10	20525	836.5	2525	891.5	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	66	20	66786	2145	66	20	67236	2190	24.27	24.32	-0.05	
5A-46E-[66A]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	66	20	66536	2120	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.2	24.19	0.01	
46C-48E-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.2	24.22	-0.02	
46E-[48C]-[66A]	66	5	132647	1777.5	67111	2177.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	48	20	56188	3644.8	24.2	24.26	-0.06	

2. 5G NR Call Box Setup

Procedure used to establish output Power measurement for NR Bands

Select operating band, BW and Channel.

- Click Cell on button in the right of Test application screen.
- Turn the LTE Cell On using "ON/OFF" Key.



- Turn the Airplane Mode On and then turn the Airplane mode off.
- Select All down bits for UL Power control Mode in LTE.

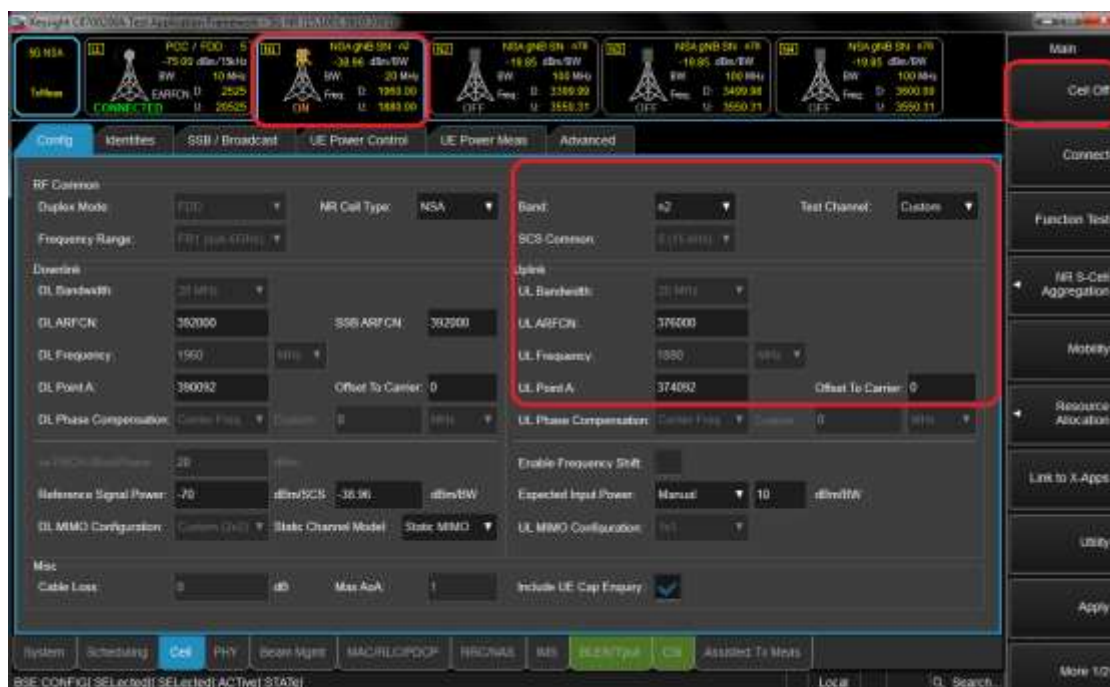


Setup for NR Band

- Select waveform for Setting NR Band (PHY->PUSCH->Enable Transform Precoder)
 - Enable : DFT-s-OFDM, Disable : CP-OFDM

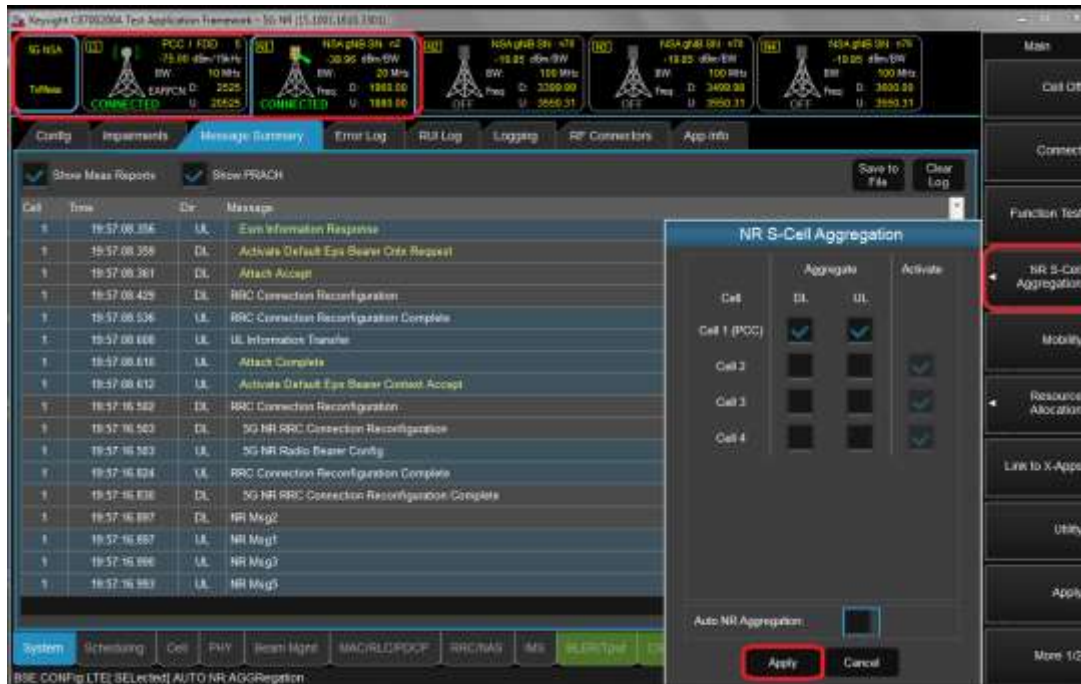


- Select operating band, BW, SCS and Channel.
- Turn the NR Cell On using "ON/OFF" Key.



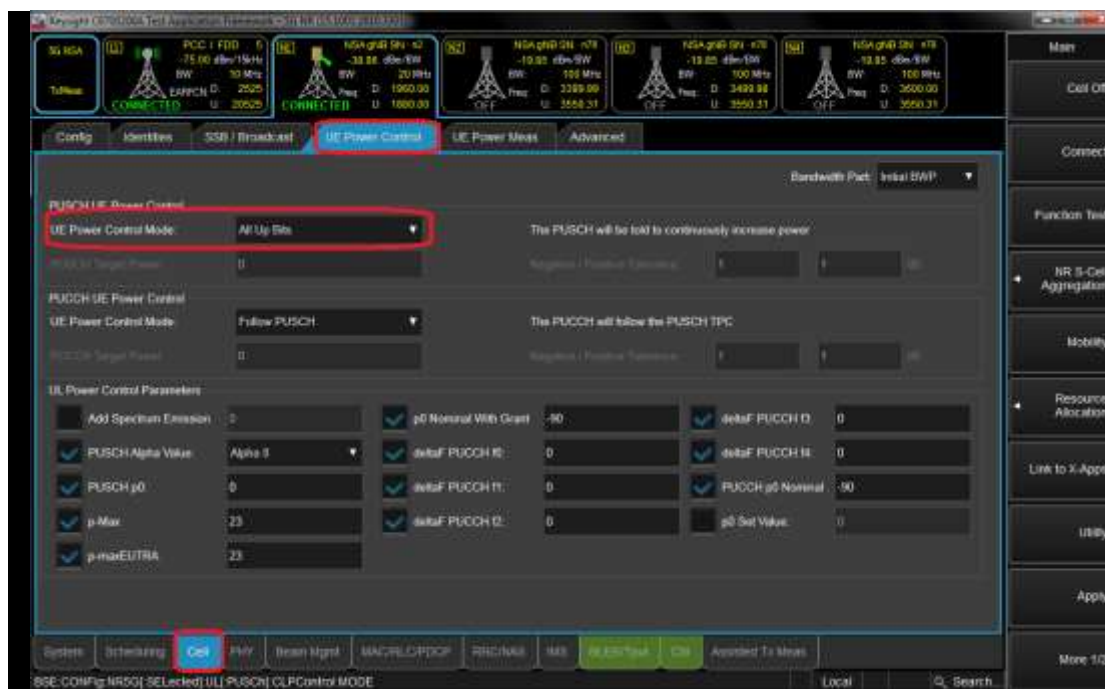
Connect NR S-Cell Aggregation

- Click NR S-Cell Aggregation
- Check the Cell 1's DL and UL box(PCC) and then Click Apply.
- Check the message summary If message shows NR Msg 5, It is connected.



Max Power setting

- Click "Cell in the bottom of screen.
- Click "UE Power control" than change UE Power control mode to All Up bits.



Selecting Start RB/Count/MCS

- Select the each test configuring (Start RB, Count, MCS).



View Tx Power

- Click "Link to X-Apps." (Please refer to Figure-7)
- Select "Channel Power".

