

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 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 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 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 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 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. Steps1 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
2600MHz 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	29.46	29.46	29.45	29.46	29.49	26.23	26.25	26.18	26.19	26.23
GSM1900 /GPRS 1Tx	29.41	29.39	29.47	29.44	29.42	26.22	26.23	26.21	26.24	26.20
GSM1900 /GPRS 2Tx	28.36	28.41	28.35	28.41	28.41	22.93	22.92	22.91	22.90	22.87
GSM1900 /GPRS 3Tx	26.71	26.65	26.64	26.65	26.66	20.86	20.88	20.90	20.90	20.90
GSM1900 /GPRS 4Tx	24.60	24.56	24.59	24.62	24.56	19.75	19.75	19.73	19.79	19.75
PCS RC3/SO55	24.03	24.03	24.07	24.06	24.06	19.98	19.96	19.97	19.97	19.97
PCS EVDO Rev.0	24.11	24.16	24.14	24.16	24.17	20.04	20.01	20.06	20.09	20.03
PCS EVDO Rev.A	24.08	24.13	24.14	24.11	24.12	20.02	20.03	20.04	20.05	20.04
WCDMA B2	23.45	23.49	23.47	23.44	23.49	18.46	18.46	18.44	18.41	18.44
WCDMA B4	23.26	23.29	23.29	23.20	23.21	18.32	18.39	18.34	18.38	18.34
LTE Band 2	24.72	24.74	24.73	24.67	24.73	20.29	20.30	20.28	20.30	20.29
LTE Band 4	24.24	24.28	24.24	24.23	24.23	20.34	20.36	20.33	20.32	20.37
LTE Band 7	23.86	23.90	23.89	23.91	23.91	19.77	19.84	19.82	19.80	19.82
LTE Band 25	24.65	24.62	24.68	24.68	24.66	20.52	20.54	20.59	20.54	20.57
LTE Band 30	22.36	22.36	22.34	22.37	22.41	18.07	18.06	18.07	18.05	18.06
LTE Band 38	24.52	24.49	24.52	24.51	24.52	18.89	18.83	18.85	18.80	18.83
LTE Band 41(Class 3)	25.08	25.11	25.10	25.12	25.08	21.97	21.97	21.98	22.00	21.96
LTE Band 41(Class 2)	25.92	25.93	25.93	25.97	25.92	22.05	22.03	22.03	22.08	22.06
LTE Band 66	24.77	24.75	24.77	24.79	24.77	19.76	19.78	19.76	19.75	19.78
Sub 6 Band n2	23.15	23.15	23.20	23.21	23.18	19.08	19.04	19.05	19.03	19.06
Sub 6 Band n25	23.39	23.38	23.35	23.35	23.40	18.12	18.14	18.10	18.11	18.13
Sub 6 Band n30	23.04	23.07	23.07	23.06	23.02	17.22	17.26	17.27	17.21	17.28
Sub 6 Band n66	23.59	23.58	23.59	23.58	23.57	19.40	19.36	19.41	19.40	19.36

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	26.19	26.25	26.22	26.22	26.25	29.45	29.46	29.48	29.51	29.47
GSM1900 /GPRS 1Tx	26.24	26.25	26.29	26.22	26.24	29.42	29.42	29.42	29.47	29.39
GSM1900 /GPRS 2Tx	22.90	22.92	22.91	22.94	22.89	28.40	28.38	28.40	28.36	28.34
GSM1900 /GPRS 3Tx	20.92	20.85	20.86	20.92	20.89	26.71	26.68	26.65	26.69	26.65
GSM1900 /GPRS 4Tx	19.77	19.78	19.78	19.77	19.80	24.56	24.57	24.55	24.61	24.54
PCS RC3/SO55	19.96	19.99	19.97	20.01	20.02	24.02	24.05	24.03	24.09	24.08
PCS EVDO Rev.0	20.04	20.07	20.07	20.07	20.03	24.10	24.18	24.15	24.15	24.18
PCS EVDO Rev.A	20.07	20.04	20.03	20.04	20.07	24.06	24.13	24.11	24.08	24.12
WCDMA B2	18.48	18.43	18.48	18.43	18.47	23.45	23.43	23.48	23.44	23.46
WCDMA B4	18.39	18.39	18.38	18.34	18.35	23.22	23.25	23.25	23.20	23.29
LTE Band 2	20.28	20.25	20.26	20.27	20.31	24.68	24.70	24.68	24.74	24.68
LTE Band 4	20.38	20.36	20.34	20.36	20.37	24.26	24.27	24.24	24.24	24.26
LTE Band 7	19.74	19.73	19.79	19.71	19.75	23.93	23.91	23.92	23.88	23.92
LTE Band 25	20.51	20.53	20.57	20.57	20.56	24.62	24.69	24.65	24.65	24.69
LTE Band 30	18.08	18.08	18.08	18.07	18.08	22.35	22.41	22.35	22.38	22.42
LTE Band 38	18.87	18.80	18.86	18.88	18.86	24.54	24.55	24.51	24.49	24.50
LTE Band 41(Class 3)	21.98	22.01	22.00	22.01	22.02	25.13	25.08	25.07	25.06	25.07
LTE Band 41(Class 2)	22.08	22.03	22.03	22.06	22.08	25.90	25.95	25.90	25.93	25.94
LTE Band 66	19.76	19.75	19.71	19.76	19.74	24.75	24.74	24.72	24.72	24.75
Sub 6 Band n2	19.09	19.09	19.00	19.03	19.06	23.20	23.21	23.22	23.21	23.17
Sub 6 Band n25	18.12	18.11	18.07	18.08	18.09	23.36	23.40	23.41	23.39	23.40
Sub 6 Band n30	17.25	17.24	17.23	17.25	17.27	23.03	23.01	23.05	23.04	23.08
Sub 6 Band n66	19.38	19.37	19.38	19.43	19.40	23.60	23.54	23.54	23.55	23.57

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	29.48	29.45	29.50	29.48	29.45	26.18	26.22	26.22	26.21	26.20
GSM1900 /GPRS 1Tx	29.46	29.44	29.41	29.43	29.43	26.26	26.24	26.25	26.23	26.24
GSM1900 /GPRS 2Tx	28.35	28.35	28.34	28.39	28.41	22.87	22.89	22.90	22.92	22.94
GSM1900 /GPRS 3Tx	26.65	26.68	26.63	26.65	26.63	20.88	20.86	20.90	20.86	20.90
GSM1900 /GPRS 4Tx	24.55	24.58	24.60	24.54	24.58	19.75	19.73	19.80	19.76	19.79
PCS RC3/SO55	24.06	24.04	24.05	24.07	24.07	20.00	19.99	20.02	19.95	19.98
PCS EVDO Rev.0	24.12	24.10	24.13	24.12	24.14	20.03	20.02	20.08	20.02	20.07
PCS EVDO Rev.A	24.14	24.11	24.11	24.08	24.13	20.03	20.03	20.02	20.06	20.07
WCDMA B2	23.49	23.43	23.46	23.48	23.42	18.44	18.47	18.46	18.44	18.46
WCDMA B4	23.20	23.26	23.20	23.23	23.23	18.32	18.38	18.38	18.35	18.36
LTE Band 2	24.73	24.72	24.71	24.74	24.73	20.26	20.31	20.27	20.26	20.28
LTE Band 4	24.25	24.27	24.26	24.25	24.29	20.33	20.31	20.37	20.32	20.34
LTE Band 7	23.91	23.89	23.90	23.93	23.88	19.72	19.74	19.77	19.70	19.71
LTE Band 25	24.65	24.66	24.65	24.65	24.67	20.57	20.57	20.52	20.52	20.56
LTE Band 30	22.38	22.40	22.40	22.39	22.41	18.12	18.06	18.09	18.10	18.08
LTE Band 38	24.49	24.49	24.51	24.48	24.52	18.87	18.89	18.89	18.88	18.84
LTE Band 41(Class 3)	25.12	25.10	25.11	25.09	25.10	22.00	22.01	21.98	21.95	21.99
LTE Band 41(Class 2)	25.96	25.97	25.93	25.95	25.94	22.09	22.06	22.02	22.03	22.01
LTE Band 66	24.74	24.72	24.73	24.75	24.73	19.76	19.77	19.75	19.75	19.73
Sub 6 Band n2	23.15	23.21	23.17	23.21	23.20	19.00	19.08	19.07	19.08	19.05
Sub 6 Band n25	23.41	23.37	23.38	23.36	23.42	18.10	18.08	18.08	18.07	18.09
Sub 6 Band n30	23.07	23.09	23.09	23.07	23.03	17.27	17.25	17.21	17.21	17.25
Sub 6 Band n66	23.55	23.59	23.55	23.57	23.59	19.38	19.41	19.40	19.42	19.37

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	26.25	26.21	26.18	26.23	26.22	29.47	29.46	29.44	29.49	29.50
GSM1900 /GPRS 1Tx	26.25	26.21	26.25	26.25	26.25	29.41	29.40	29.44	29.40	29.39
GSM1900 /GPRS 2Tx	22.94	22.91	22.95	22.88	22.94	28.42	28.40	28.37	28.41	28.41
GSM1900 /GPRS 3Tx	20.92	20.90	20.93	20.91	20.92	26.65	26.68	26.70	26.64	26.69
GSM1900 /GPRS 4Tx	19.74	19.81	19.78	19.80	19.75	24.61	24.62	24.59	24.54	24.57
PCS RC3/SO55	19.94	20.01	20.02	19.94	20.02	24.08	24.05	24.05	24.09	24.09
PCS EVDO Rev.0	20.04	20.06	20.07	20.02	20.06	24.16	24.10	24.13	24.12	24.13
PCS EVDO Rev.A	20.03	20.07	20.01	20.04	20.01	24.07	24.08	24.13	24.10	24.12
WCDMA B2	18.45	18.47	18.48	18.47	18.45	23.45	23.44	23.44	23.49	23.43
WCDMA B4	18.33	18.32	18.32	18.37	18.39	23.29	23.24	23.20	23.22	23.26
LTE Band 2	20.26	20.27	20.33	20.30	20.30	24.67	24.74	24.71	24.69	24.74
LTE Band 4	20.36	20.36	20.34	20.30	20.31	24.22	24.26	24.24	24.22	24.28
LTE Band 7	19.74	19.78	19.73	19.73	19.71	23.89	23.87	23.92	23.91	23.91
LTE Band 25	20.57	20.58	20.55	20.57	20.59	24.62	24.67	24.62	24.64	24.62
LTE Band 30	18.09	18.04	18.12	18.10	18.06	22.34	22.40	22.36	22.36	22.37
LTE Band 38	18.87	18.84	18.88	18.88	18.89	24.51	24.55	24.55	24.55	24.56
LTE Band 41(Class 3)	22.00	22.03	22.00	22.02	21.99	25.13	25.05	25.12	25.07	25.12
LTE Band 41(Class 2)	22.05	22.03	22.03	22.06	22.05	25.94	25.93	25.94	25.91	25.95
LTE Band 66	19.73	19.75	19.77	19.71	19.76	24.77	24.79	24.77	24.75	24.74
Sub 6 Band n2	19.06	19.09	19.06	19.07	19.06	23.17	23.20	23.15	23.20	23.18
Sub 6 Band n25	18.12	18.07	18.12	18.10	18.12	23.40	23.36	23.38	23.35	23.36
Sub 6 Band n30	17.21	17.26	17.21	17.26	17.21	23.06	23.08	23.04	23.02	23.05
Sub 6 Band n66	19.38	19.44	19.36	19.42	19.44	23.60	23.59	23.56	23.57	23.58

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	29.47	29.46	29.44	29.49	29.50	26.25	26.21	26.18	26.23	26.22
GSM1900 /GPRS 1Tx	29.41	29.40	29.44	29.40	29.39	26.25	26.21	26.25	26.25	26.25
GSM1900 /GPRS 2Tx	28.42	28.40	28.37	28.41	28.41	22.94	22.91	22.95	22.88	22.94
GSM1900 /GPRS 3Tx	26.65	26.68	26.70	26.64	26.69	20.92	20.90	20.93	20.91	20.92
GSM1900 /GPRS 4Tx	24.61	24.62	24.59	24.54	24.57	19.74	19.81	19.78	19.80	19.75
PCS RC3/SO55	24.08	24.05	24.05	24.09	24.09	19.94	20.01	20.02	19.94	20.02
PCS EVDO Rev.0	24.16	24.10	24.13	24.12	24.13	20.04	20.06	20.07	20.02	20.06
PCS EVDO Rev.A	24.07	24.08	24.13	24.10	24.12	20.03	20.07	20.01	20.04	20.01
WCDMA B2	23.45	23.44	23.44	23.49	23.43	18.45	18.47	18.48	18.47	18.45
WCDMA B4	23.29	23.24	23.20	23.22	23.26	18.33	18.32	18.32	18.37	18.39
LTE Band 2	24.67	24.74	24.71	24.69	24.74	20.26	20.27	20.33	20.30	20.30
LTE Band 4	24.22	24.26	24.24	24.22	24.28	20.36	20.36	20.34	20.30	20.31
LTE Band 7	23.89	23.87	23.92	23.91	23.91	19.74	19.78	19.73	19.73	19.71
LTE Band 25	24.62	24.67	24.62	24.64	24.62	20.57	20.58	20.55	20.57	20.59
LTE Band 30	22.34	22.40	22.36	22.36	22.37	18.09	18.04	18.12	18.10	18.06
LTE Band 38	24.51	24.55	24.55	24.55	24.56	18.87	18.84	18.88	18.88	18.89
LTE Band 41(Class 3)	25.13	25.05	25.12	25.07	25.12	22.00	22.03	22.00	22.02	21.99
LTE Band 41(Class 2)	25.94	25.93	25.94	25.91	25.95	22.05	22.03	22.03	22.06	22.05
LTE Band 66	24.77	24.79	24.77	24.75	24.74	19.73	19.75	19.77	19.71	19.76
Sub 6 Band n2	23.17	23.20	23.15	23.20	23.18	19.06	19.09	19.06	19.07	19.06
Sub 6 Band n25	23.40	23.36	23.38	23.35	23.36	18.12	18.07	18.12	18.10	18.12
Sub 6 Band n30	23.06	23.08	23.04	23.02	23.05	17.21	17.26	17.21	17.26	17.21
Sub 6 Band n66	23.60	23.59	23.56	23.57	23.58	19.38	19.44	19.36	19.42	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	26.25	26.21	26.18	26.23	26.22	29.47	29.46	29.44	29.49	29.50
GSM1900 /GPRS 1Tx	26.25	26.21	26.25	26.25	26.25	29.41	29.40	29.44	29.40	29.39
GSM1900 /GPRS 2Tx	22.94	22.91	22.95	22.88	22.94	28.42	28.40	28.37	28.41	28.41
GSM1900 /GPRS 3Tx	20.92	20.90	20.93	20.91	20.92	26.65	26.68	26.70	26.64	26.69
GSM1900 /GPRS 4Tx	19.74	19.81	19.78	19.80	19.75	24.61	24.62	24.59	24.54	24.57
PCS RC3/SO55	19.94	20.01	20.02	19.94	20.02	24.08	24.05	24.05	24.09	24.09
PCS EVDO Rev.0	20.04	20.06	20.07	20.02	20.06	24.16	24.10	24.13	24.12	24.13
PCS EVDO Rev.A	20.03	20.07	20.01	20.04	20.01	24.07	24.08	24.13	24.10	24.12
WCDMA B2	18.45	18.47	18.48	18.47	18.45	23.45	23.44	23.44	23.49	23.43
WCDMA B4	18.33	18.32	18.32	18.37	18.39	23.29	23.24	23.20	23.22	23.26
LTE Band 2	20.26	20.27	20.33	20.30	20.30	24.67	24.74	24.71	24.69	24.74
LTE Band 4	20.36	20.36	20.34	20.30	20.31	24.22	24.26	24.24	24.22	24.28
LTE Band 7	19.74	19.78	19.73	19.73	19.71	23.89	23.87	23.92	23.91	23.91
LTE Band 25	20.57	20.58	20.55	20.57	20.59	24.62	24.67	24.62	24.64	24.62
LTE Band 30	18.09	18.04	18.12	18.10	18.06	22.34	22.40	22.36	22.36	22.37
LTE Band 38	18.87	18.84	18.88	18.88	18.89	24.51	24.55	24.55	24.55	24.56
LTE Band 41(Class 3)	22.00	22.03	22.00	22.02	21.99	25.13	25.05	25.12	25.07	25.12
LTE Band 41(Class 2)	22.05	22.03	22.03	22.06	22.05	25.94	25.93	25.94	25.91	25.95
LTE Band 66	19.73	19.75	19.77	19.71	19.76	24.77	24.79	24.77	24.75	24.74
Sub 6 Band n2	19.06	19.09	19.06	19.07	19.06	23.17	23.20	23.15	23.20	23.18
Sub 6 Band n25	18.12	18.07	18.12	18.10	18.12	23.40	23.36	23.38	23.35	23.36
Sub 6 Band n30	17.21	17.26	17.21	17.26	17.21	23.06	23.08	23.04	23.02	23.05
Sub 6 Band n66	19.38	19.44	19.36	19.42	19.44	23.60	23.59	23.56	23.57	23.58

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

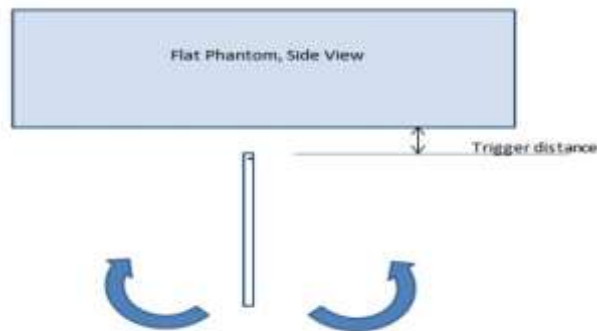
(KDB 616217 D04v01r02§6.3)

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 /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	24.42	16.45
RCV-on	NR n77	17.68	14.89

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)	19.04	18.31	12.72	12.89
RCV-on	2.4GHz 802.11g (Exclude 12/13ch))	16.93	16.23	12.86	12.78
RCV-on	2.4GHz 802.11n (Exclude 12/13ch)	16.80	15.68	12.52	12.46
RCV-on	5GHz 802.11a (Exclude 100~144ch)	17.93	17.66	10.90	10.20
RCV-on	5GHz 802.11n 20MHz	17.93	17.65	10.71	10.00
RCV-on	5GHz 802.11n 40MHz	16.86	16.68	10.80	10.27
RCV-on	5GHz 802.11ac 20MHz	16.91	16.70	10.73	10.02
RCV-on	5GHz 802.11ac 40MHz	15.84	15.84	10.79	10.28
RCV-on	5GHz 802.11ac 80MHz	14.88	14.61	10.97	10.72

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:

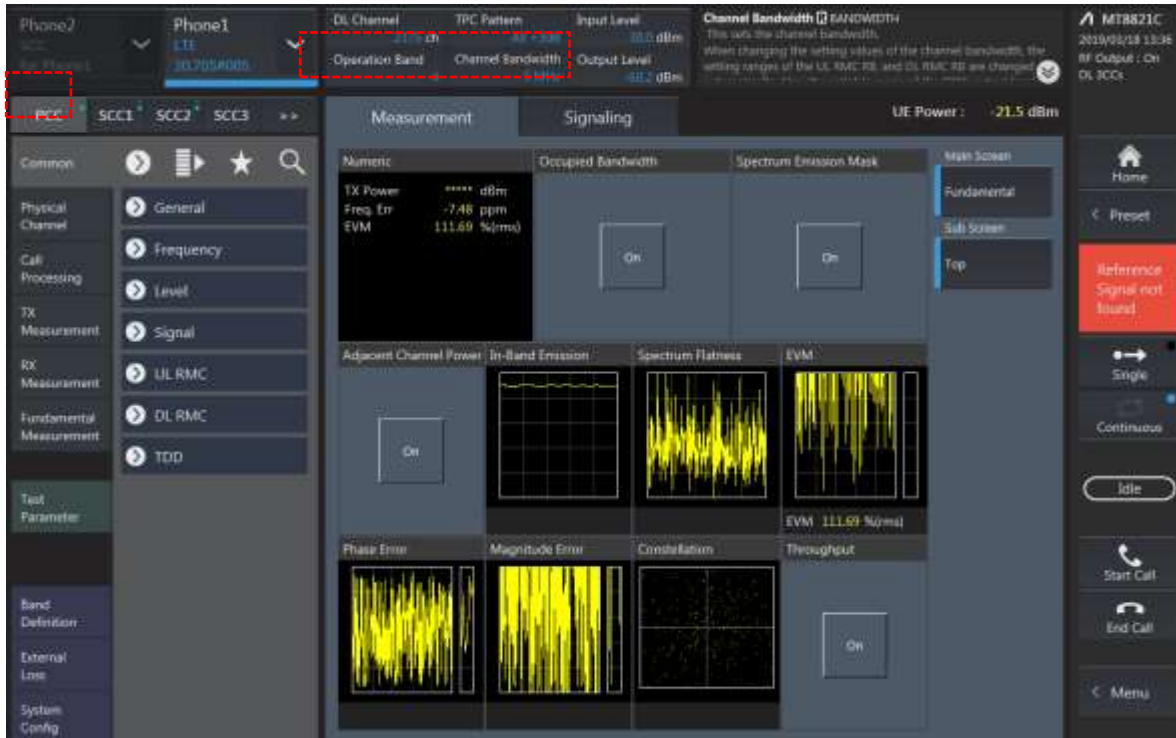
1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation 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.



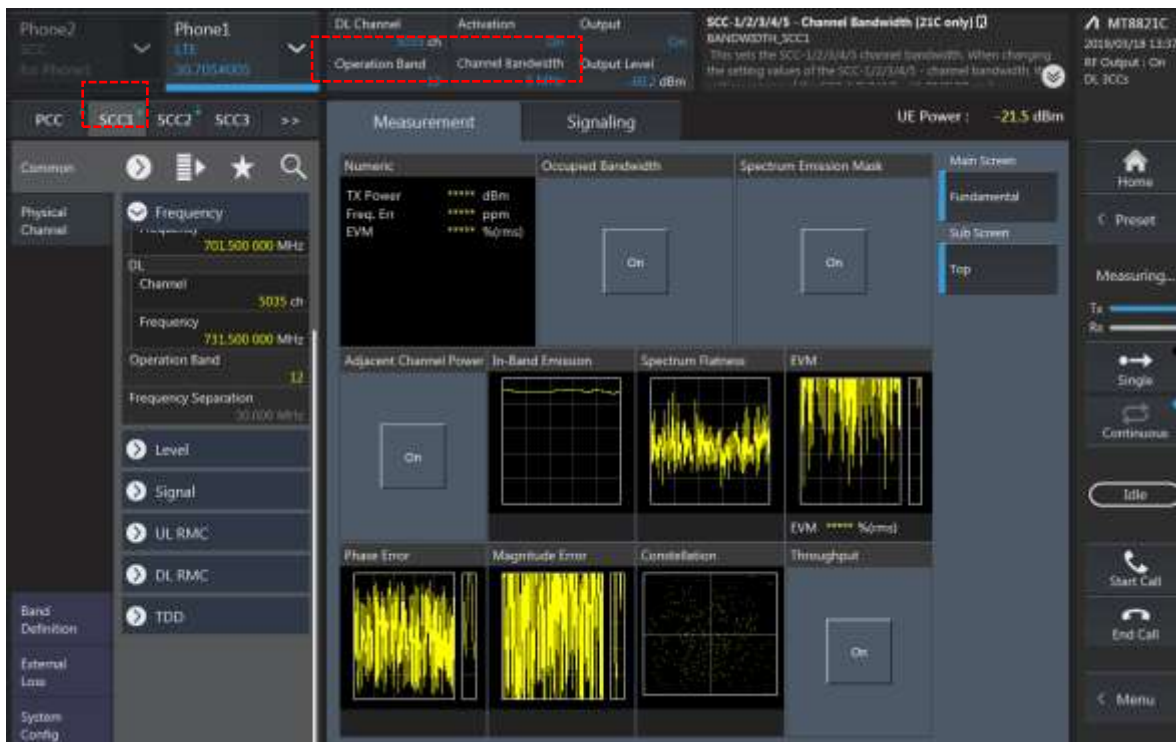
Power Measurement setup

LTE Down Link 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

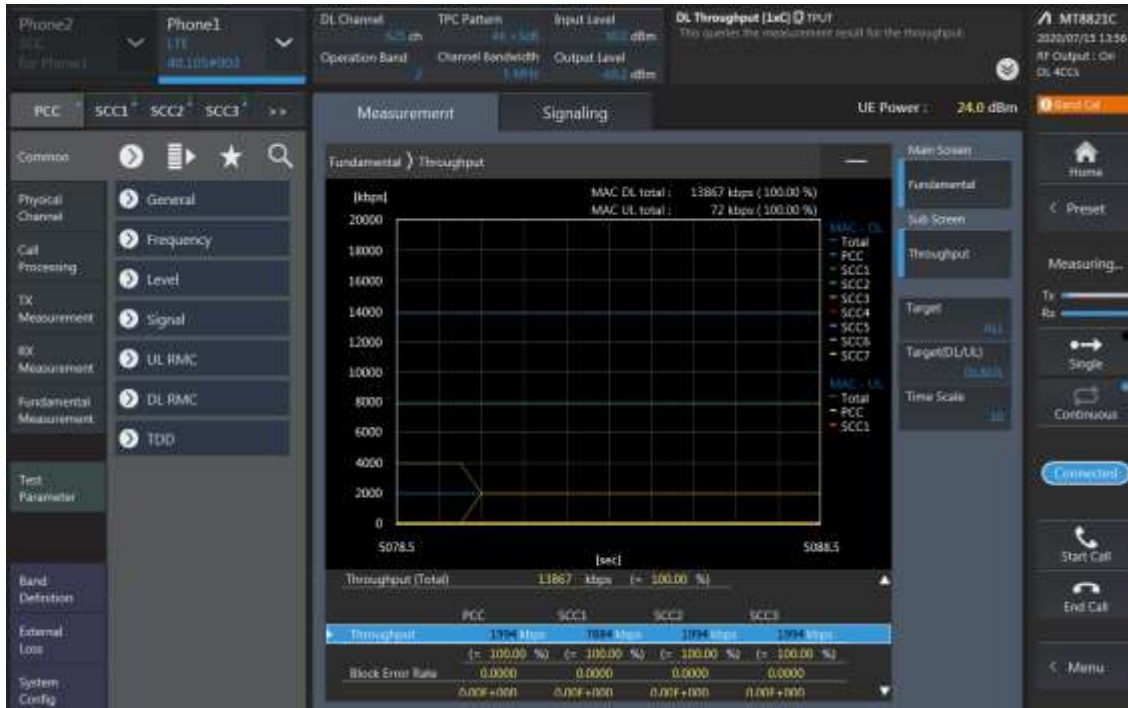


3CA Downlink Carrier aggregation Maximum conducted Powers

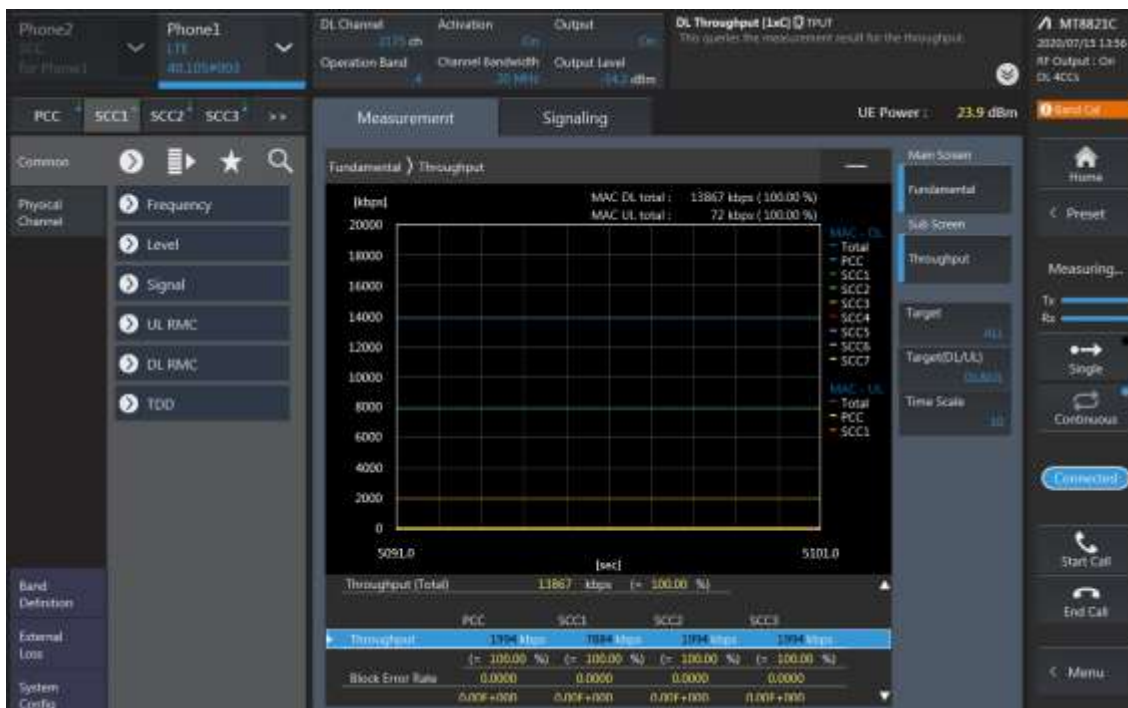
Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-4A-13A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	13	10	5230	751	24.81	24.80	0.01
2A-4A-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.44	24.40	0.04
2A-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.15	24.15	0.00
4A-4A-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.44	24.45	-0.01
4A-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.15	24.17	-0.02
4A-4A-71A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	71	20	68786	637	24.44	24.44	0.00
4A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.53	24.46	0.07
25A-25A-26A	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	26	15	8865	876.5	24.94	25.00	-0.06
25A-25A-26A	26	5	27015	846.5	9015	891.5	QPSK	1	24	25	20	8365	1962.5	25	20	8590	1985	24.26	24.19	0.07
48A-48A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	24.53	24.60	-0.07
48C-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	24.53	24.49	0.04

LTE Down Link 4CA Call Setup

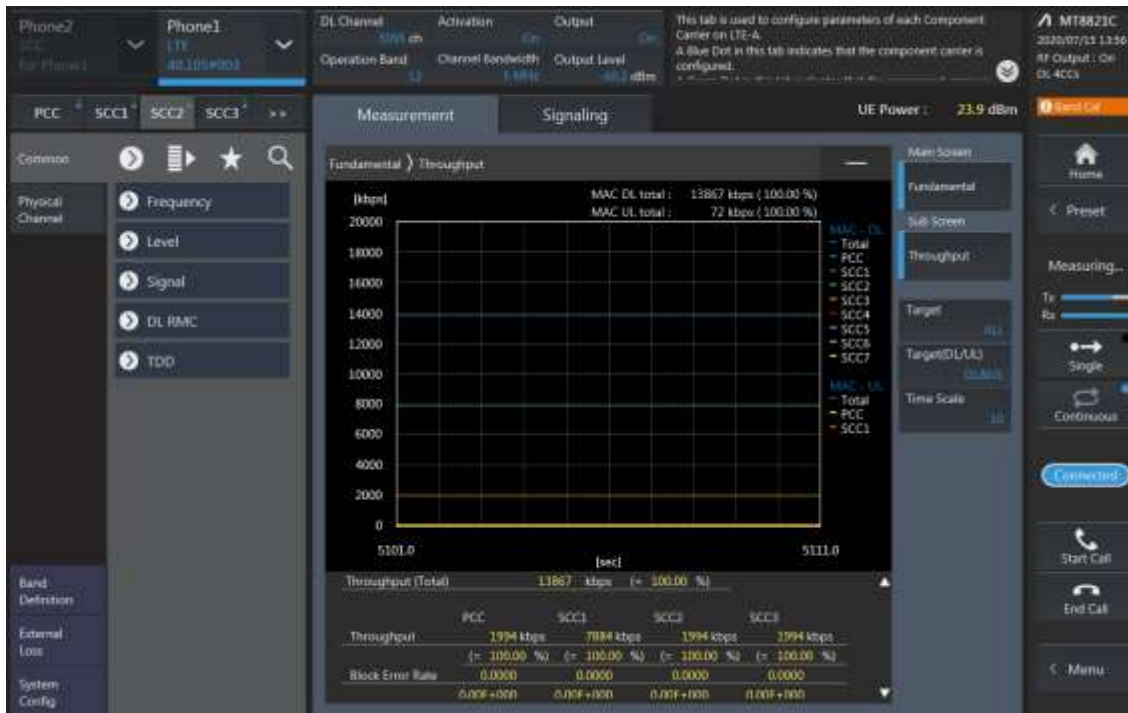
PCC Setting: Channel /RB/BW/Modulation



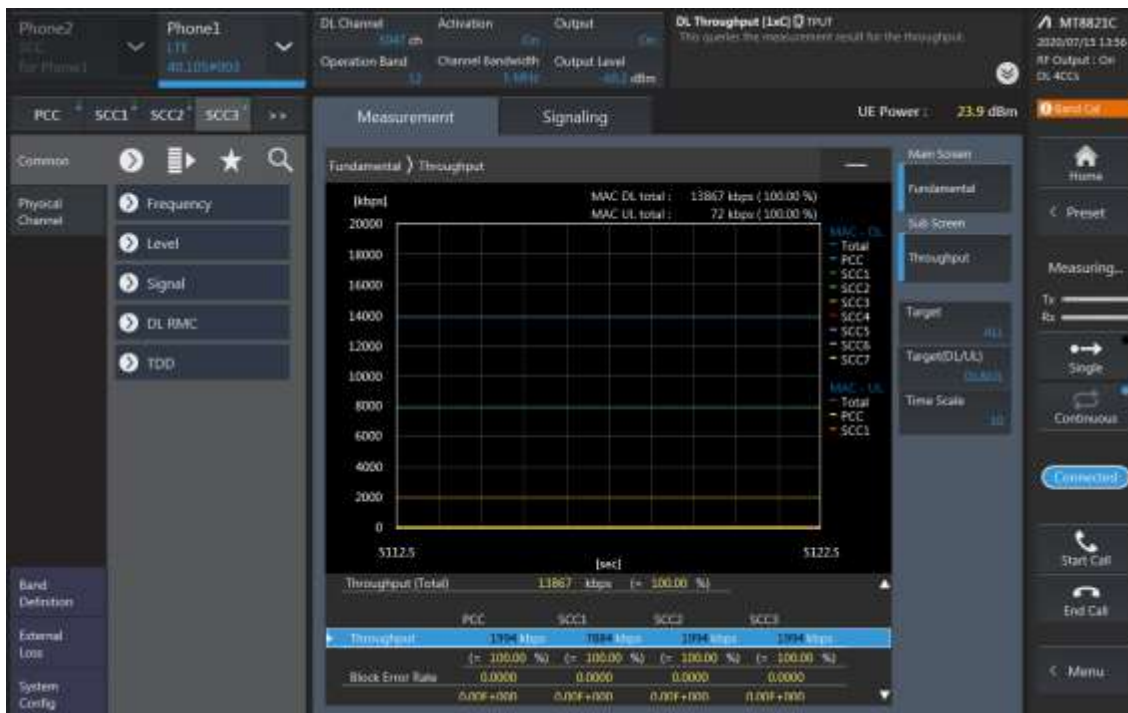
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



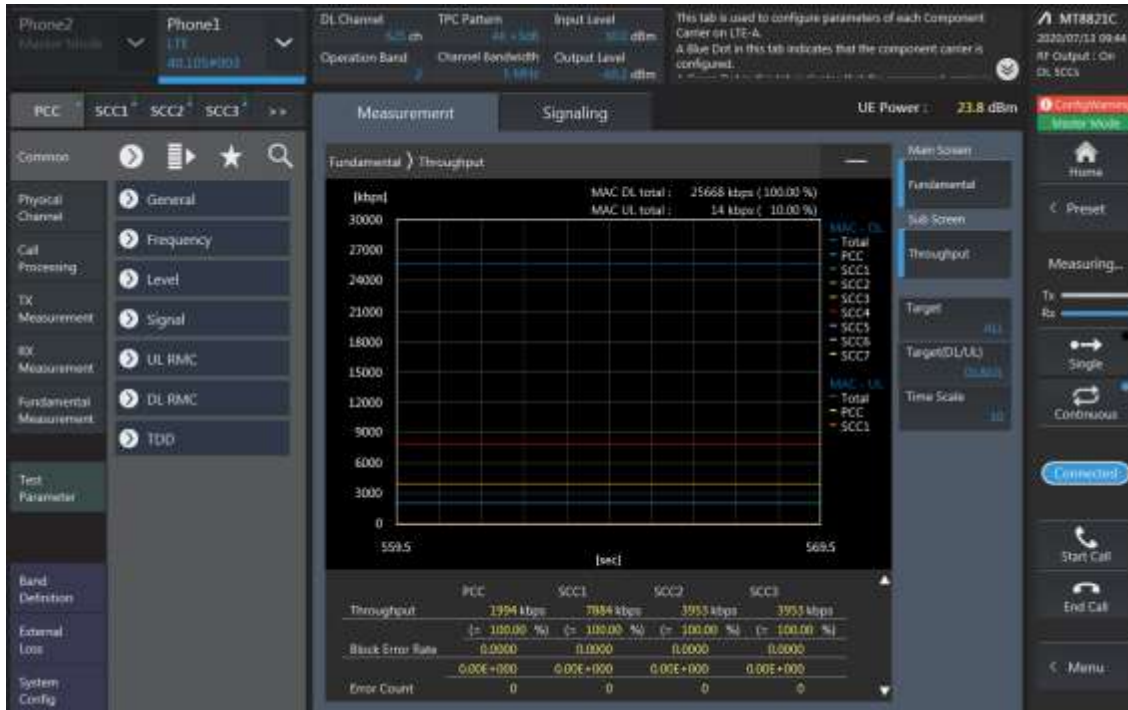
4CA Downlink Carrier aggregation Maximum conducted Powers

Combination	PCC									SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-2A-29A-30A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.81	24.88	-0.07
2A-2A-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	22.42	22.52	-0.1
2A-29A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	24.81	24.80	0.01
2A-29A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	29	10	9715	722.5	66	20	66786	2145	22.42	22.38	0.04
2A-29A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.79	24.79	0
29A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	22.42	22.41	0.01
29A-30A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	29	10	9715	722.5	30	10	9820	2355	24.79	24.72	0.07
46C-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.71	0.08
2A-2A-4A-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.73	0.08
2A-2A-4A-4A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.44	24.39	0.05
2A-2A-4A-5A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	5	10	2525	881.5	24.81	24.85	-0.04
2A-2A-4A-5A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.44	24.46	-0.02
2A-2A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.29	24.24	0.05
2A-2A-66C	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	66	20	66984	2164.8	24.81	24.71	0.1
2A-2A-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	2	20	1100	1980	24.79	24.75	0.04
2A-4A-4A-5A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	5	10	2525	881.5	24.81	24.87	-0.06
2A-4A-4A-5A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	2	20	900	1960	5	10	2525	881.5	24.44	24.52	-0.08
2A-4A-4A-5A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.29	24.19	0.1
2A-4A-5B	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	5	10	2525	881.5	5	5	2453	874.3	24.81	24.75	0.06
2A-4A-5B	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.44	24.54	-0.1
2A-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	5	2577	886.7	2	20	900	1960	4	20	2175	2132.5	24.29	24.38	-0.09
2A-13A-66C	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.81	24.75	0.06
2A-13A-66C	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.15	24.07	0.08
2A-13A-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	13	10	5230	751	24.79	24.75	0.04
4A-4A-5B	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.44	24.48	-0.04
4A-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	5	2577	886.7	4	20	2175	2132.5	4	10	2350	2150	24.29	24.39	-0.1
5A-5A-66B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2450	874	66	15	66786	2145	66	5	66879	2154.3	24.29	24.27	0.02
5A-5A-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	5	10	2525	881.5	5	5	2425	871.5	24.78	24.69	0.09
5A-5A-66C	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2450	874	66	20	66786	2145	66	20	66984	2164.8	24.29	24.33	-0.04
5A-5A-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	5	10	2525	881.5	5	5	2425	871.5	24.79	24.82	-0.03
48A-48A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.88	-0.09
48C-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	56188	3644.8	24.79	24.75	0.04
2A-2A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.81	24.74	0.07
2A-2A-4A-12A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.44	24.50	-0.06
2A-2A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.02	23.94	0.08
2A-2A-4A-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.81	24.74	0.07
2A-2A-4A-71A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.44	24.45	-0.01
2A-2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.53	24.56	-0.03
2C-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.81	24.76	0.05
2C-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.79	24.87	-0.08
2A-2A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.81	24.77	0.04
2A-2A-66A-71A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.79	24.76	0.03
2A-2A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.53	24.54	-0.01
2A-12A-66C	2	5	18900	1880	900	1960	QPSK	1	12	12	10	5095	737.5	66	20	66786	2145	66	20	66984	2164.8	24.81	24.76	0.05
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	24.02	24.00	0.02
2A-12A-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	12	10	5095	737.5	24.79	24.72	0.07
2A-66A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	66	20	67236	2190	71	20	68786	637	24.81	24.73	0.08
2A-66A-66A-71A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	71	20	68786	637	24.79	24.83	-0.04
2A-66A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.53	24.51	0.02
2A-66C-71A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	66	20	66984	2164.8	71	20	68786	637	24.81	24.73	0.08

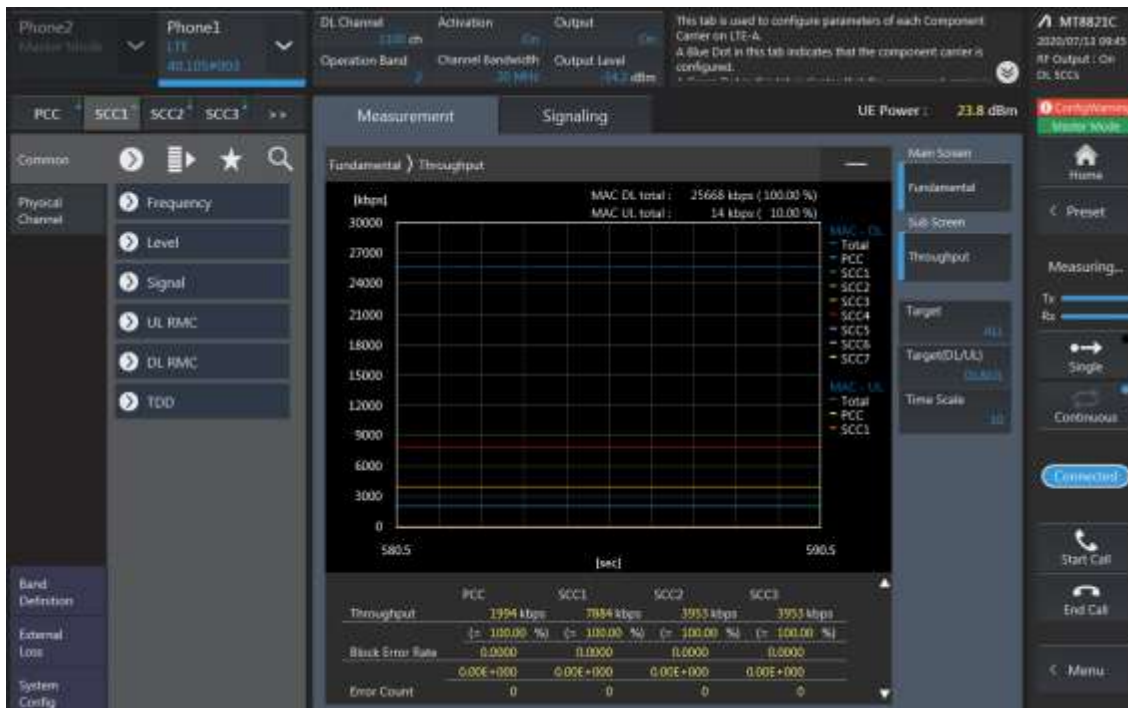
2A-66C-71A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	71	20	68786	637	24.79	24.71	0.08
2A-66C-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.53	24.62	-0.09
25A-26A-41C	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	26	15	8865	876.5	41	20	40620	2593	41	20	40422	2573.2	24.94	25.01	-0.07
25A-26A-41C	26	5	27015	846.5	9015	891.5	QPSK	1	24	25	20	8365	1962.5	41	20	40620	2593	41	20	40422	2573.2	24.26	24.29	-0.03
41A-41D	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.18	25.25	-0.07
41A-41D	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	39750	2506	25.18	25.13	0.05
41E(PC 2)	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	41160	2647	25.99	26.08	-0.09
41E(PC 3)	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	41160	2647	25.18	25.13	0.05
25A-46D	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.94	24.84	0.1
2A-4A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.81	24.88	-0.07
2A-4A-4A-12A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.44	24.45	-0.01
2A-4A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.02	23.99	0.03
2A-4A-12B	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.81	24.88	-0.07
2A-4A-12B	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.44	24.44	0
2A-4A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	4	20	2175	2132.5	24.02	23.92	0.1
4A-4A-12B	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.44	24.46	-0.02
4A-4A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	4	20	2175	2132.5	4	10	2350	2150	24.14	24.15	-0.01
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	24.02	23.99	0.03

LTE Down Link 5CA Call Setup

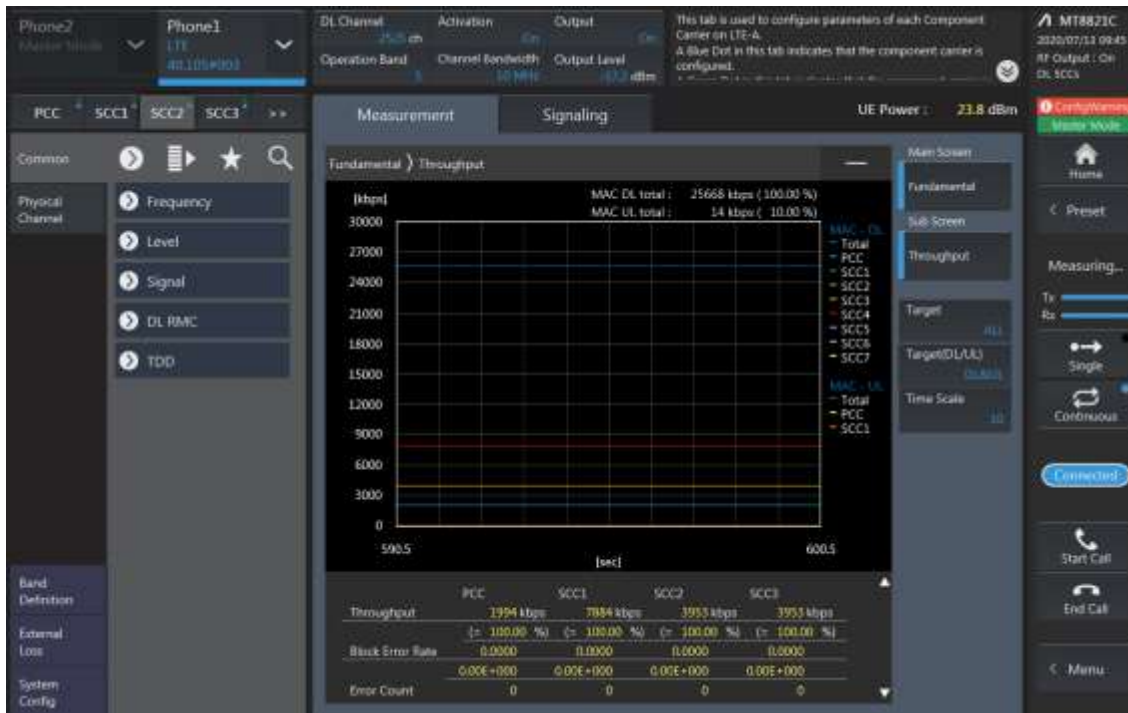
PCC Setting: Channel /RB/BW/Modulation



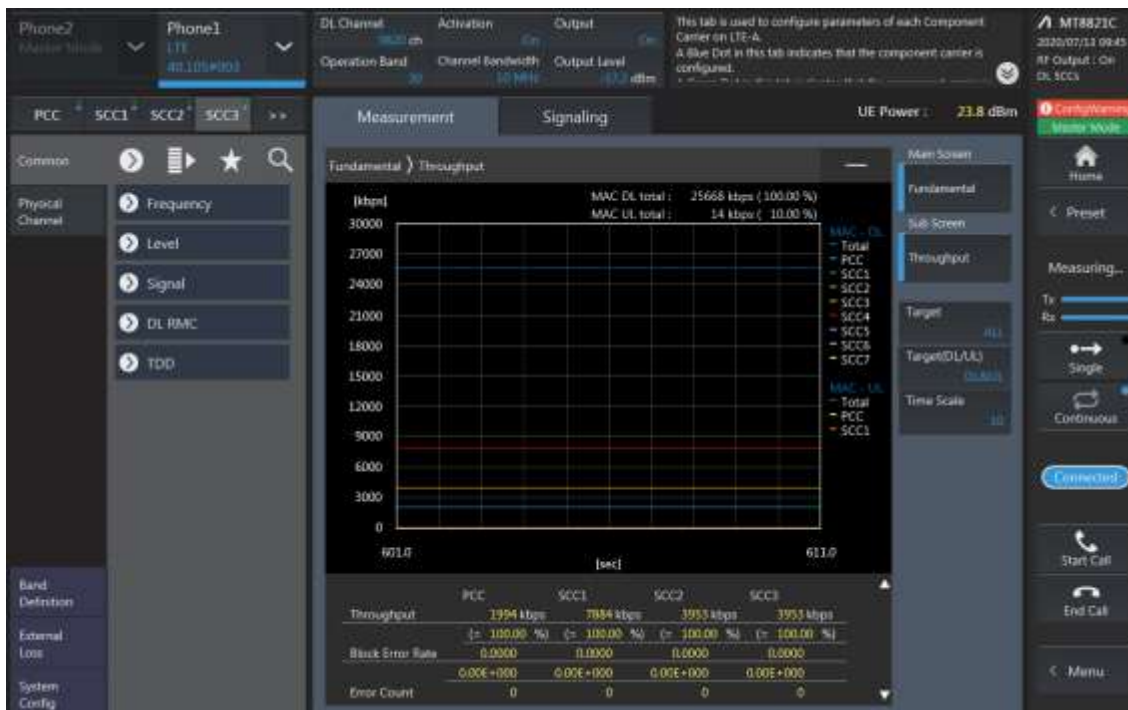
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



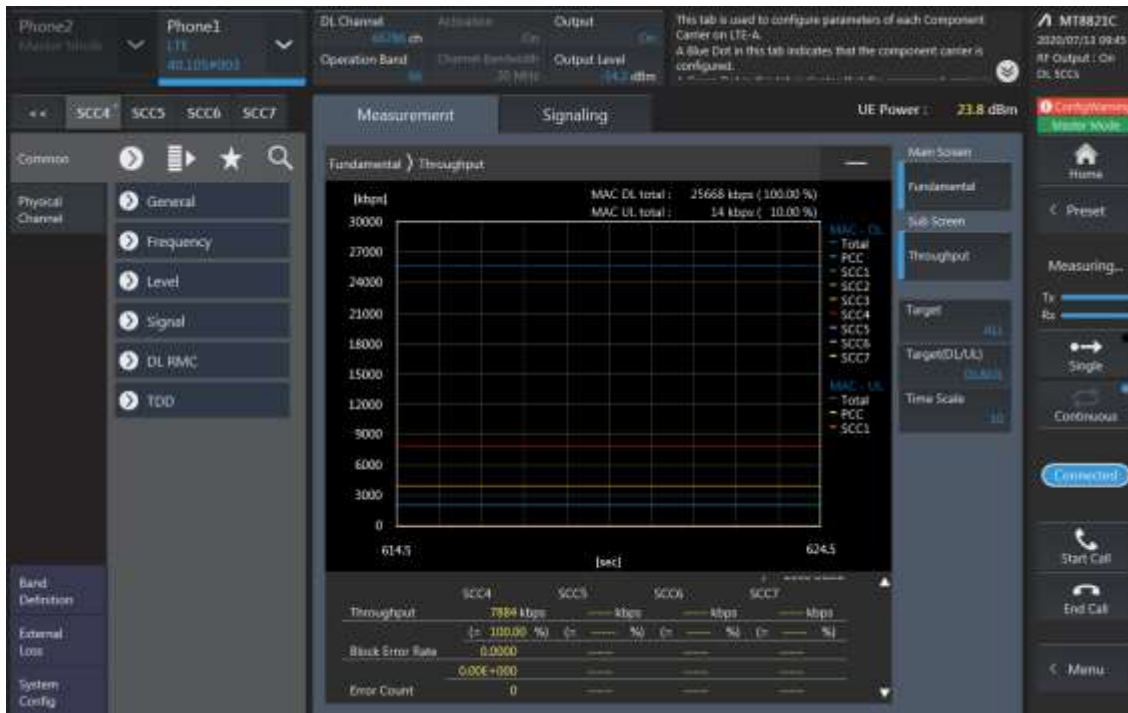
SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



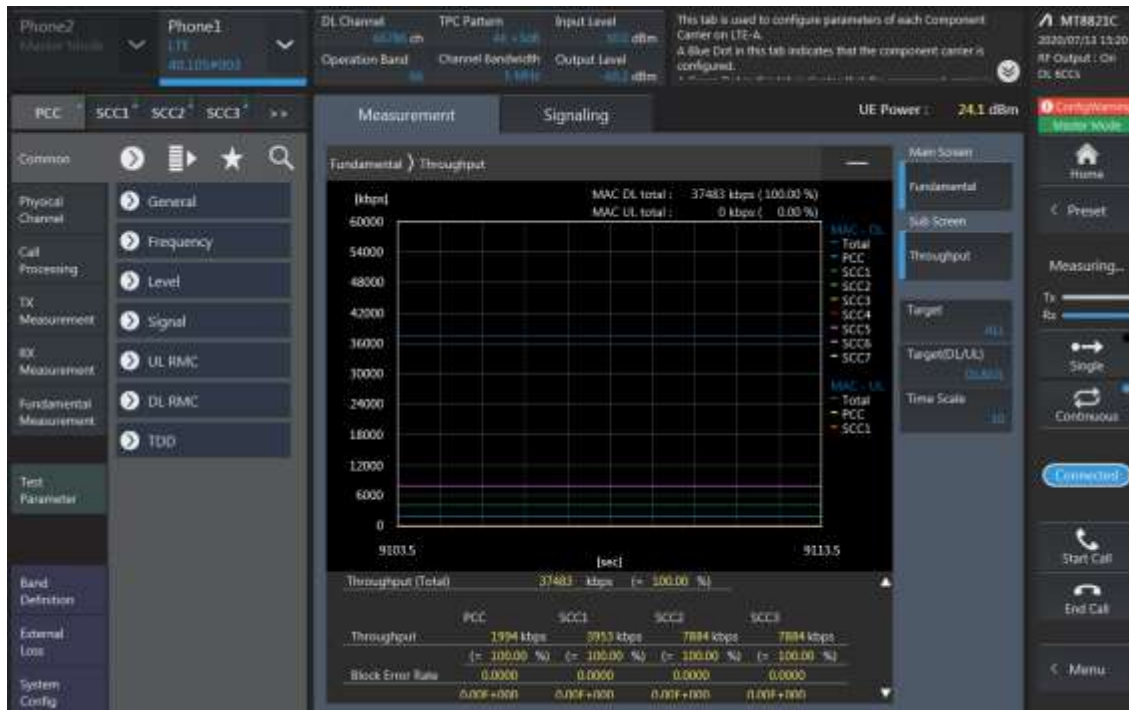
5CA Downlink Carrier aggregation Maximum conducted Powers

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
2A-2A-5A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.81	24.75	0.06
2A-2A-5A-30A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.29	24.27	0.02
2A-2A-5A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.42	22.51	-0.09
2A-2A-5A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.79	24.88	-0.09
2A-2A-5A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.75	0.06
2A-2A-5A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.29	24.19	0.1
2A-2A-5A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.79	24.87	-0.08
2A-2A-5B-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	24.81	24.77	0.04
2A-2A-5B-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	5	2577	886.7	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.29	24.25	0.04
2A-2A-5B-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	5	5	2453	874.3	24.79	24.73	0.06
2A-2A-12A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	24.81	24.79	0.02
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	24.02	24.06	-0.04
2A-2A-12A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.42	22.50	-0.08
2A-2A-12A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.79	24.87	-0.08
2A-2A-12A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.85	-0.04
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	24.02	24.08	-0.06
2A-2A-12A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.79	24.89	-0.1
2A-2A-14A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	24.81	24.77	0.04
2A-2A-14A-30A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.28	24.31	-0.03
2A-2A-14A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	22.42	22.32	0.1
2A-2A-14A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	14	10	5330	763	30	10	9820	2355	24.79	24.77	0.02
2A-2A-14A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.81	24.76	0.05
2A-2A-14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.21	0.07
2A-2A-14A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.86	-0.07
2A-2A-6D	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.81	24.84	-0.03
2A-5A-30A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.88	-0.07
2A-5A-30A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.29	24.22	0.07
2A-5A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	22.42	22.45	-0.03
2A-5A-30A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	30	10	9820	2355	24.79	24.87	-0.08
2A-5B-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	66	20	66786	2145	24.81	24.75	0.06
2A-5B-30A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	5	2577	886.7	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	24.29	24.38	-0.09
2A-5B-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	22.42	22.41	0.01
2A-5B-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	30	10	9820	2355	24.79	24.86	-0.07
2A-5B-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	67236	2190	24.81	24.91	-0.1
2A-5B-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	5	2577	886.7	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.29	24.23	0.06

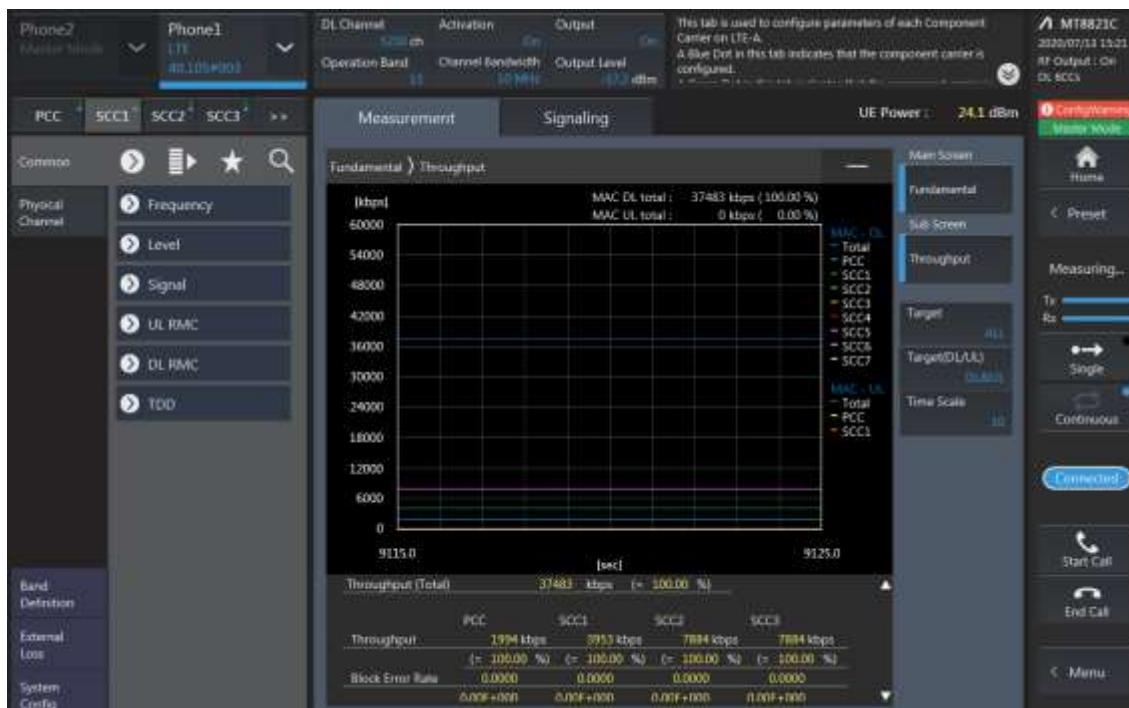
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LTE Down Link 6CA Call Setup

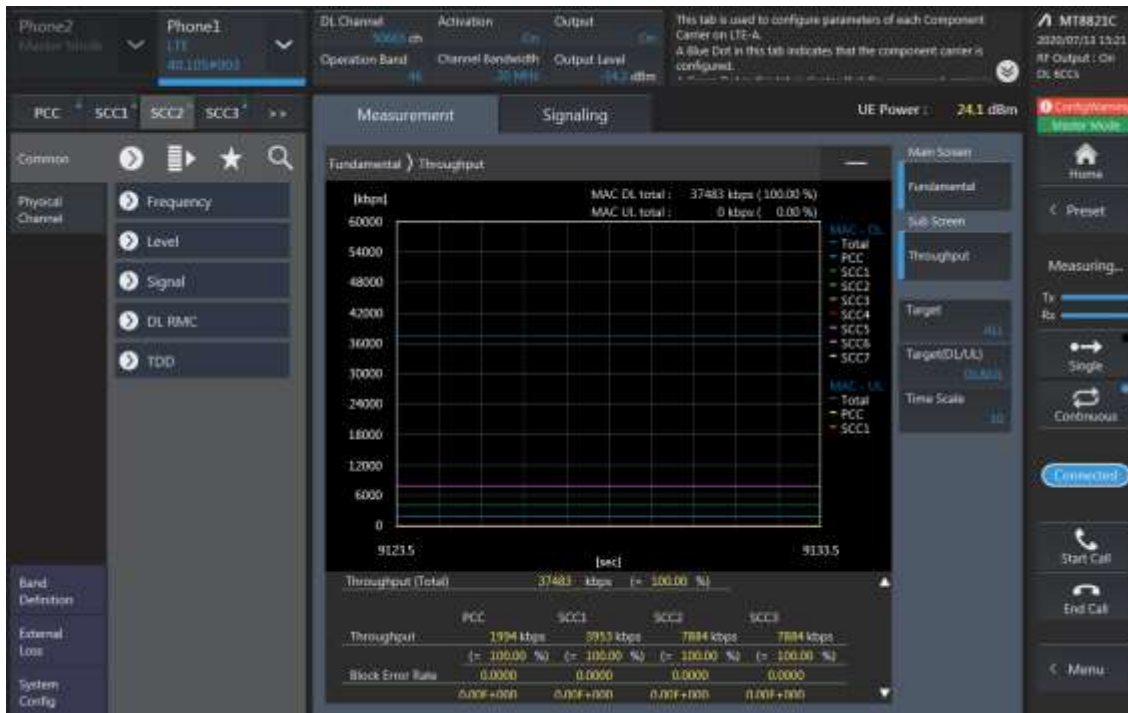
PCC Setting: Channel /RB/BW/Modulation



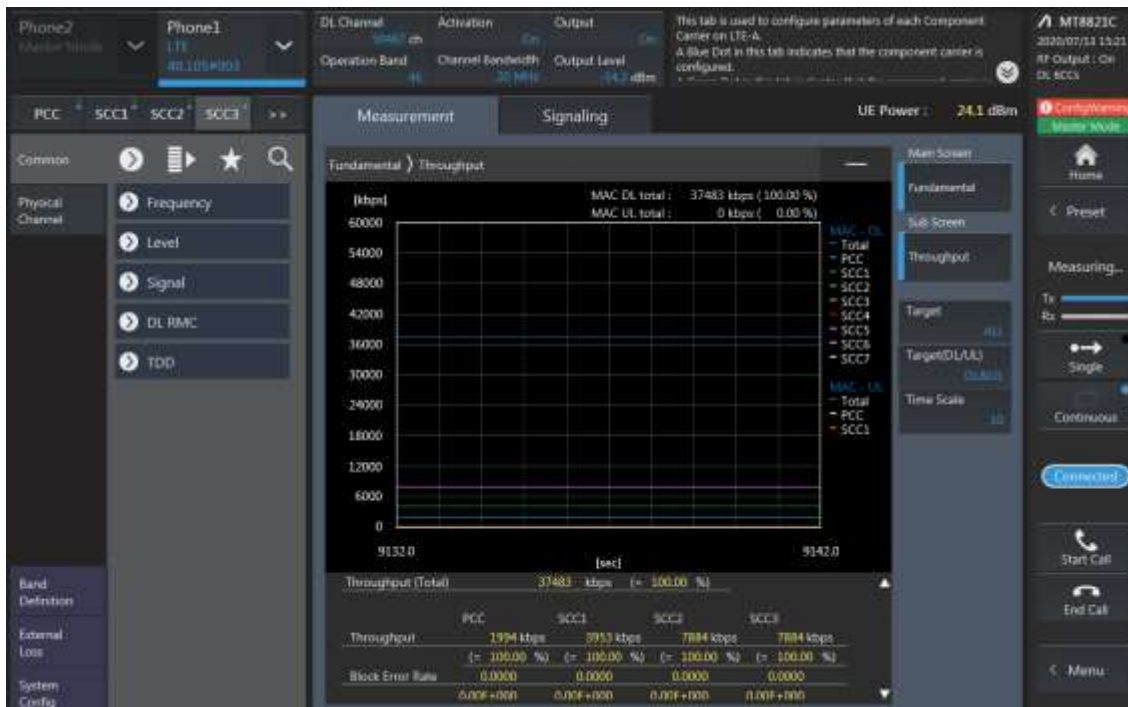
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



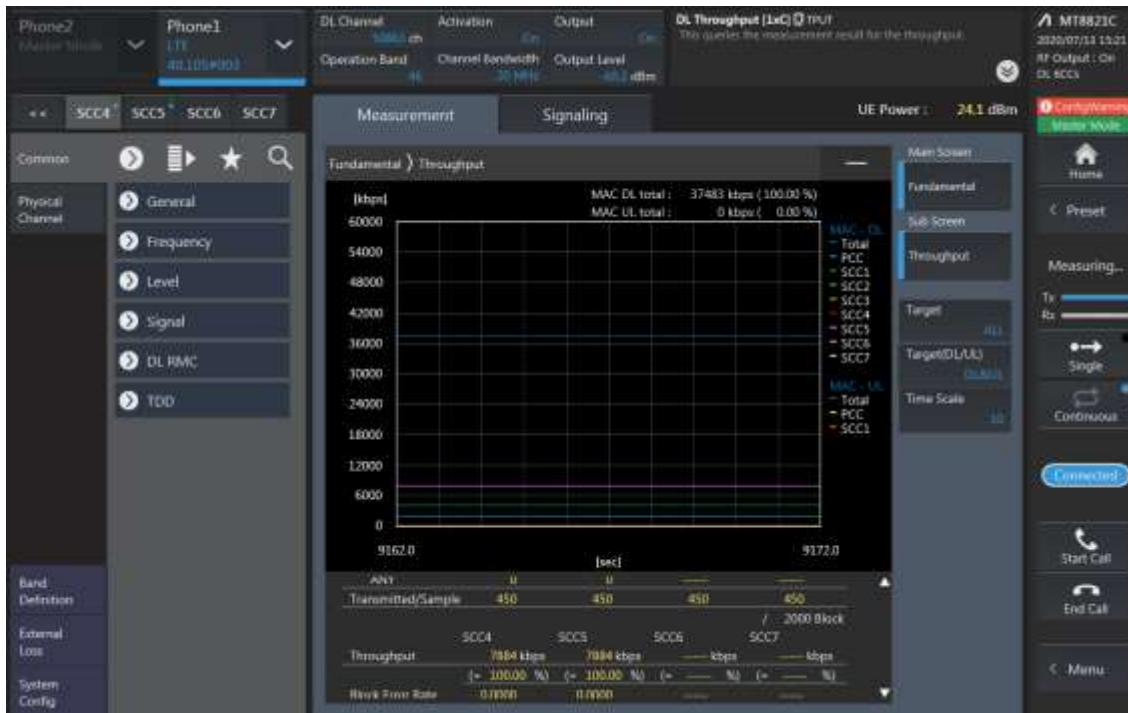
SCC2 Setting (Channel /RB/BW/Modulation)and call Connection



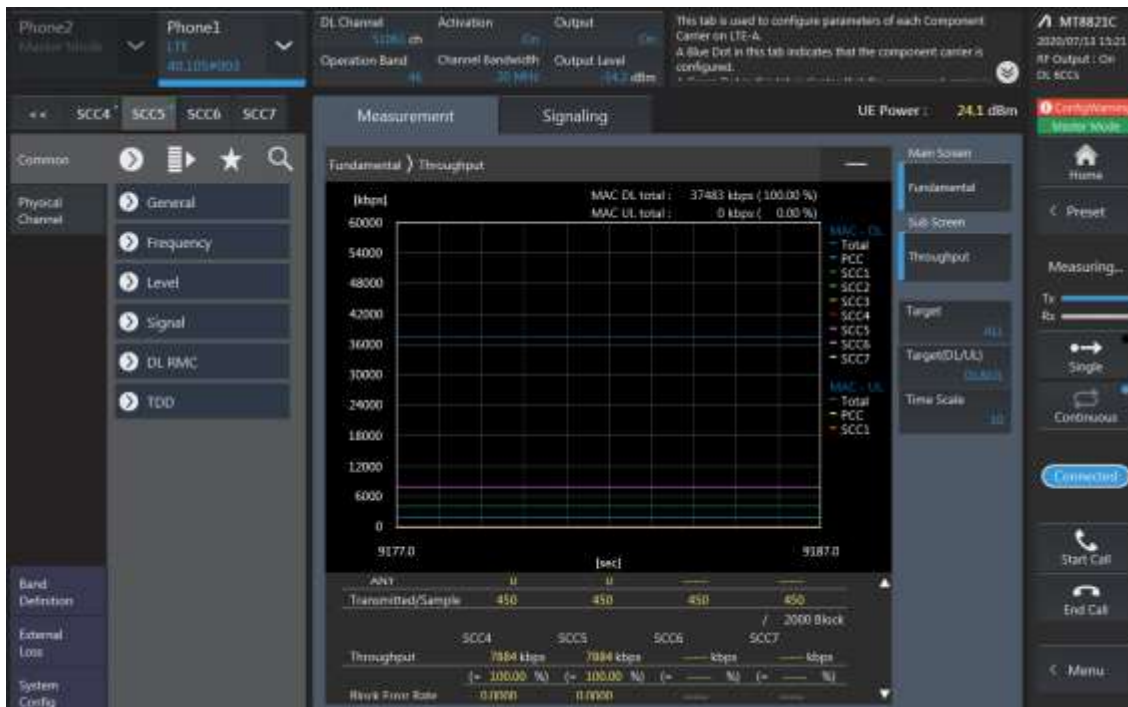
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



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



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

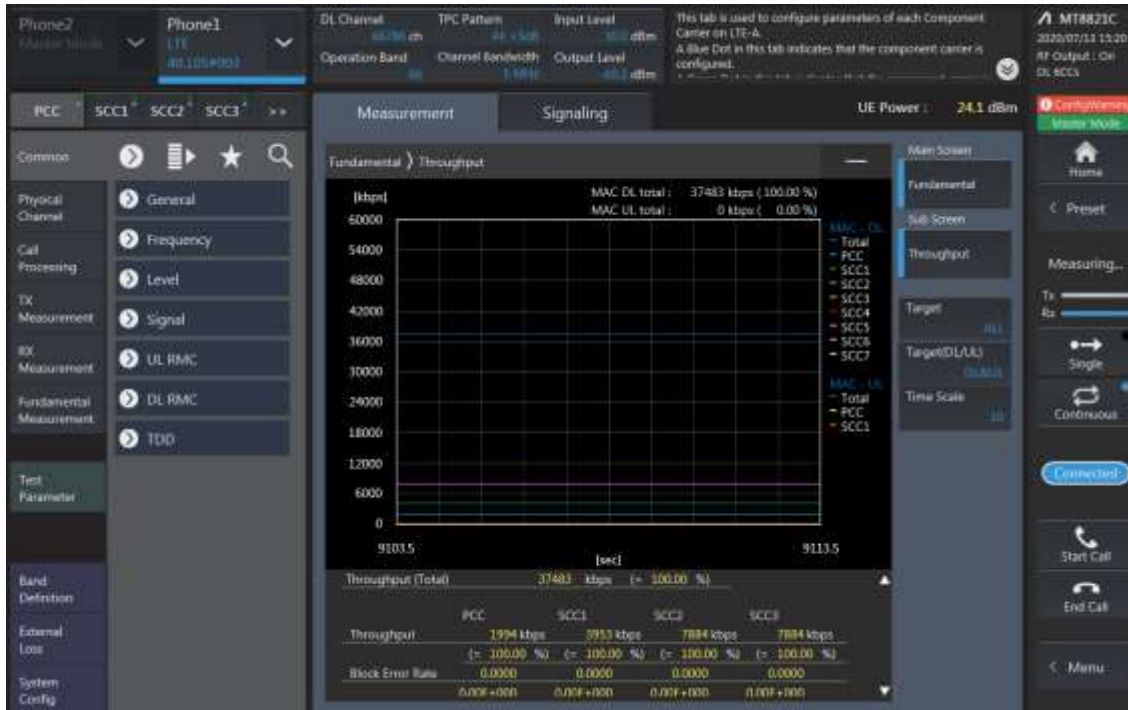


6CA Downlink Carrier aggregation Maximum conducted Powers

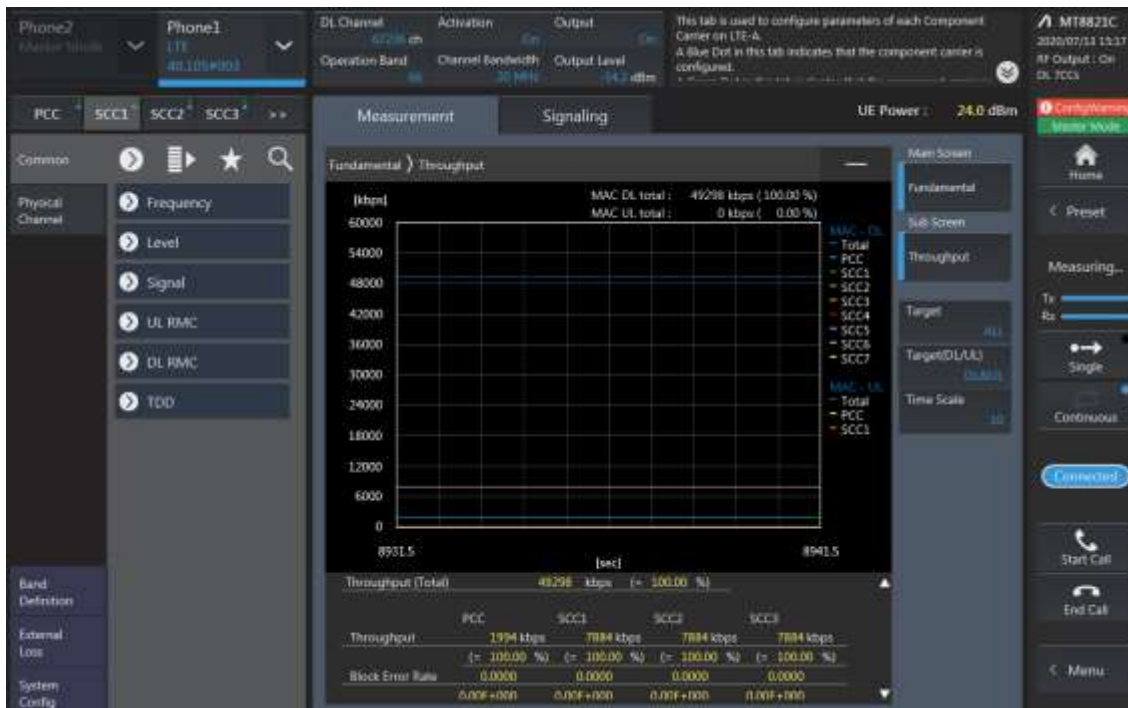
Combination	PCC								SCC				SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)	
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)		LTE Tx Power with DL CA Enabled (dBm) (2)
2A-46A-48D-66A	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.82	-0.01
2A-46A-48D-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	1100	1980	24.79	24.82	-0.03
2A-48E-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.81	24.86	-0.05
2A-48E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.70	0.09
13A-46E-66A	13	10	23230	782	5230	751	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	24.15	24.09	0.06
13A-46E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.79	24.74	0.05
2A-13A-46E	2	5	18900	1880	900	1960	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	24.81	24.73	0.08
2A-13A-46E	13	10	23230	782	5230	751	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	24.15	24.14	0.01
13A-48E-66A	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.15	24.05	0.1
13A-48E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.81	-0.02
2A-46A-48E	2	5	18900	1880	900	1960	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	24.81	24.76	0.05
2A-46C-48D	2	5	18900	1880	900	1960	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	24.81	24.84	-0.03
46A-48E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.87	-0.08

LTE Down Link 7CA Call Setup

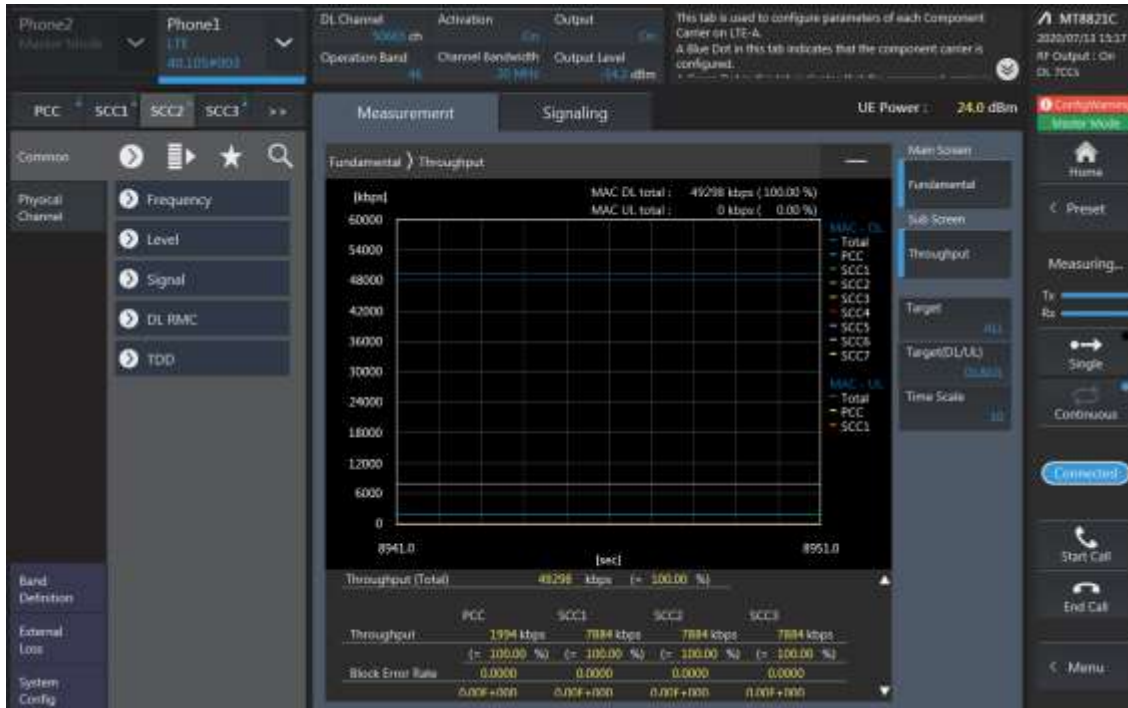
PCC Setting: Channel /RB/BW/Modulation



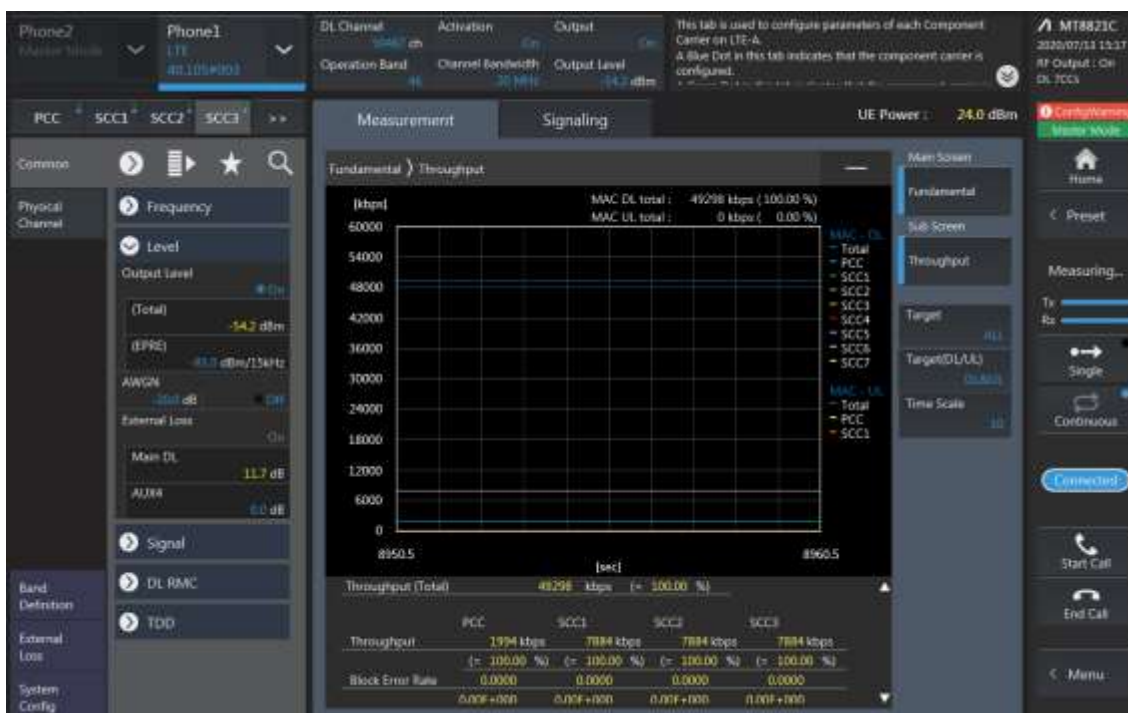
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



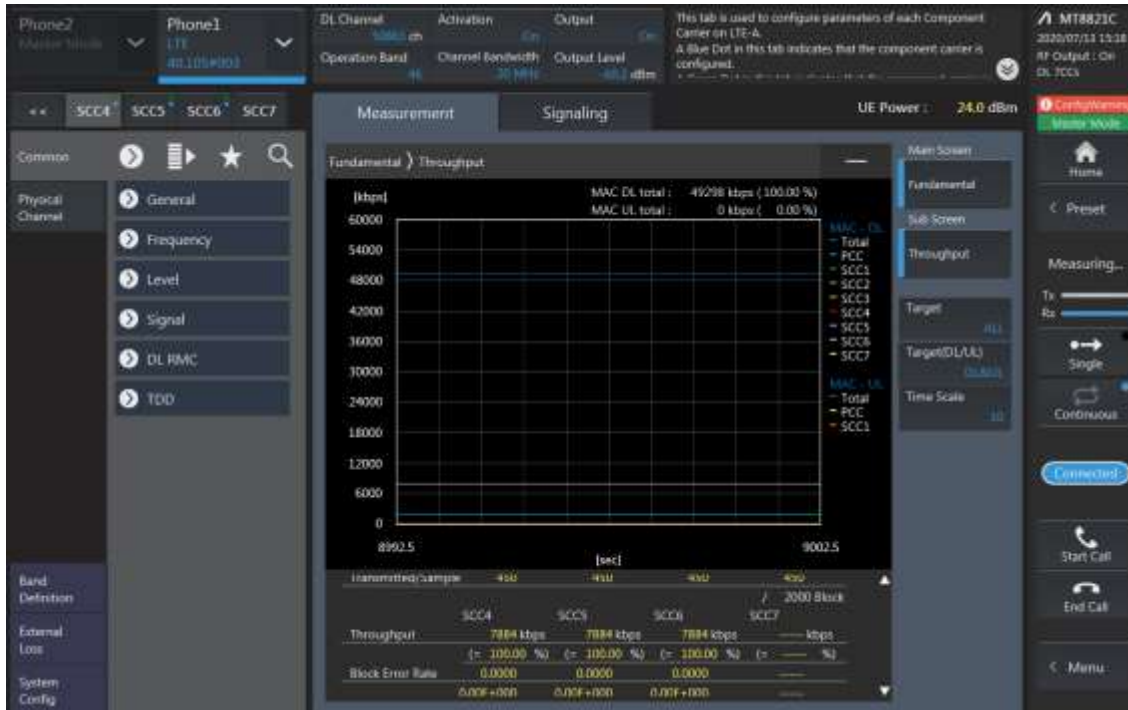
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



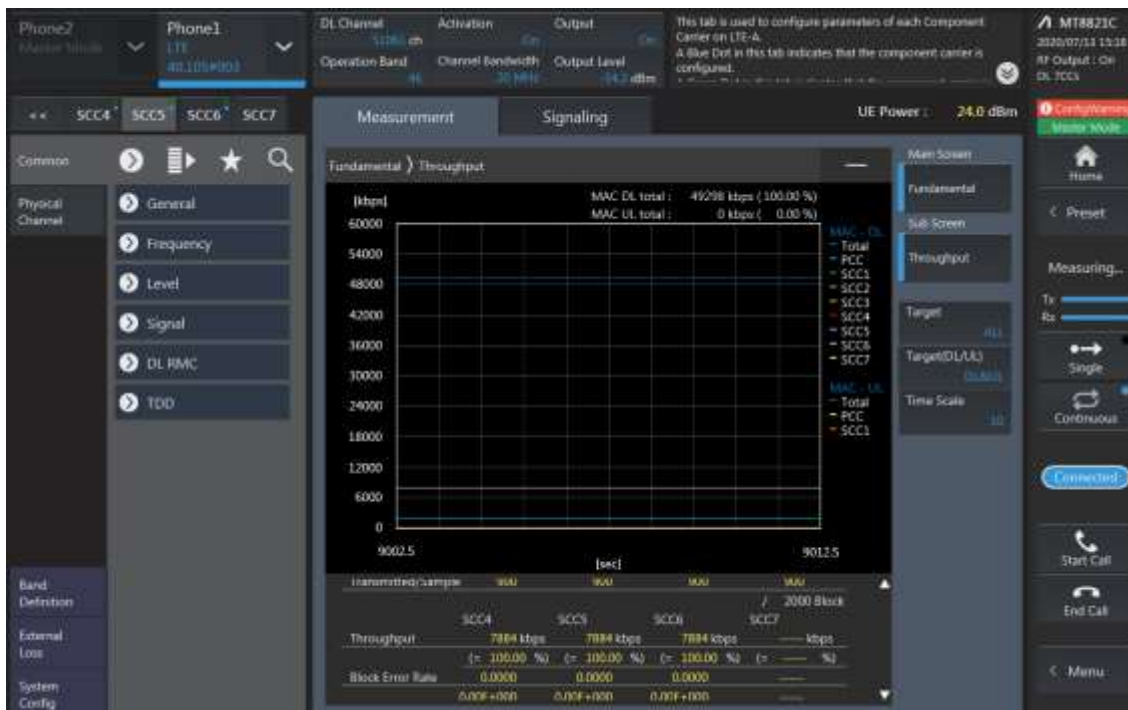
SCC3 Setting (Channel /RB/BW/Modulation)and call Connection



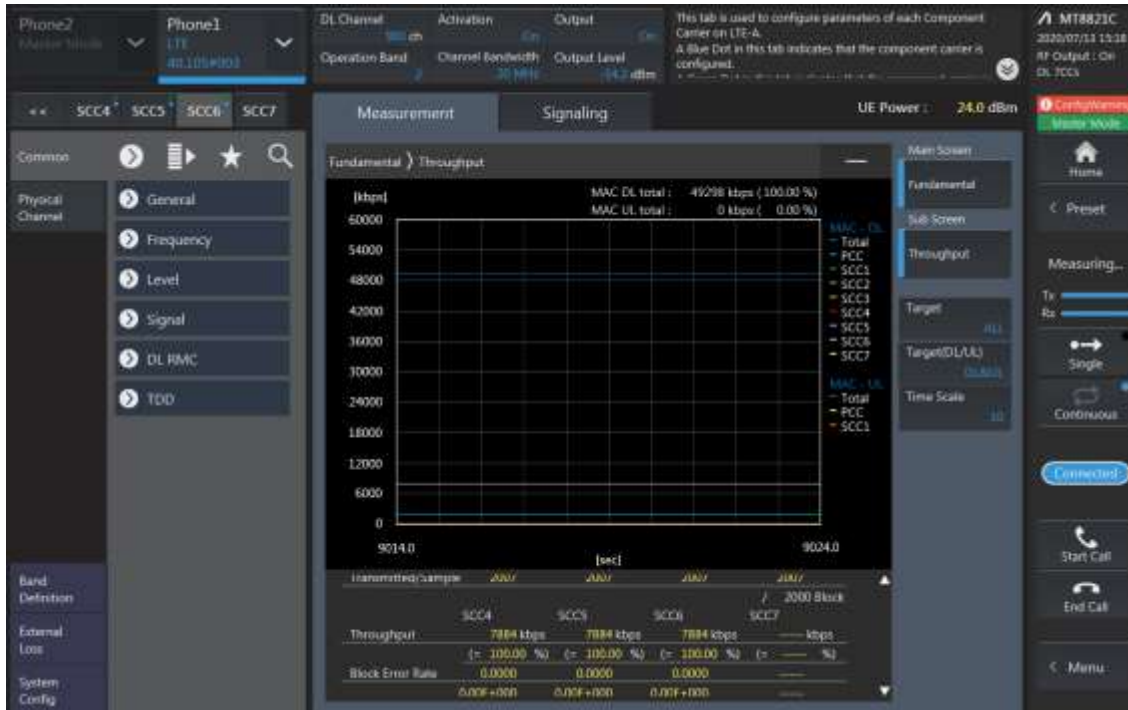
SCC4 Setting (Channel /RB/BW/Modulation)and call Connection



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



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

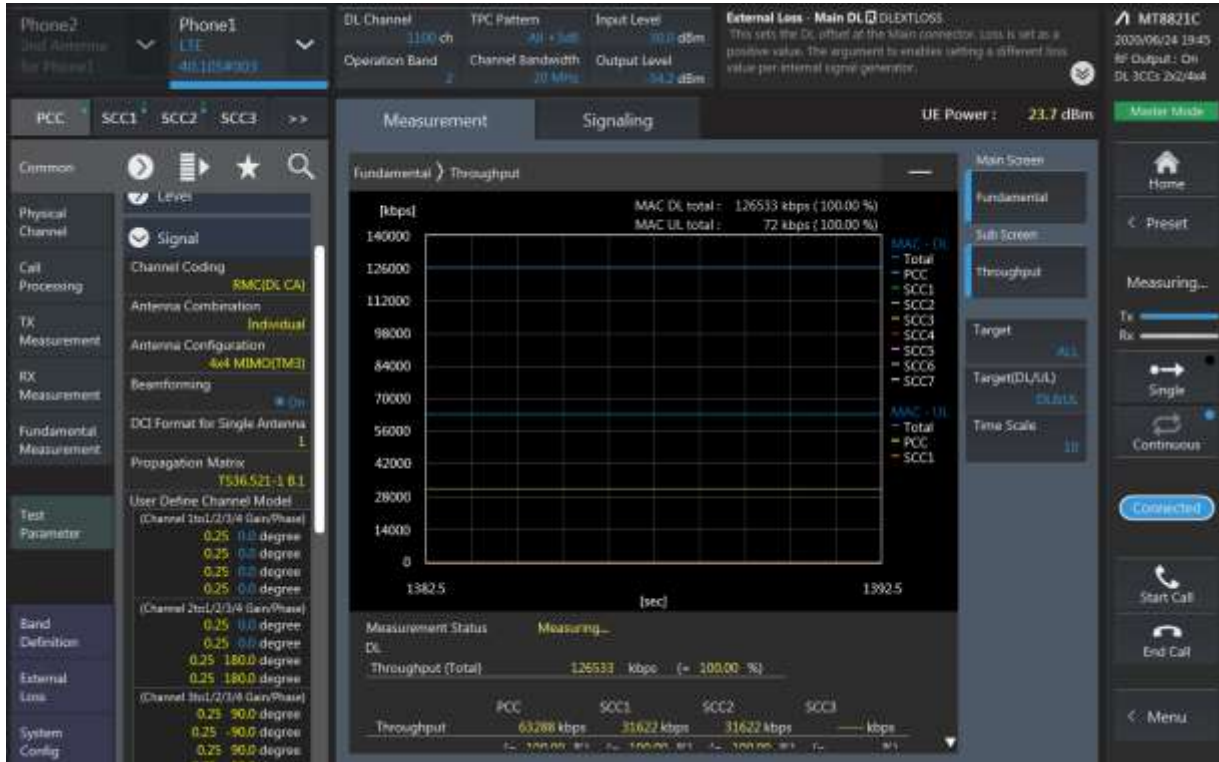


7CA Downlink Carrier aggregation Maximum conducted Powers

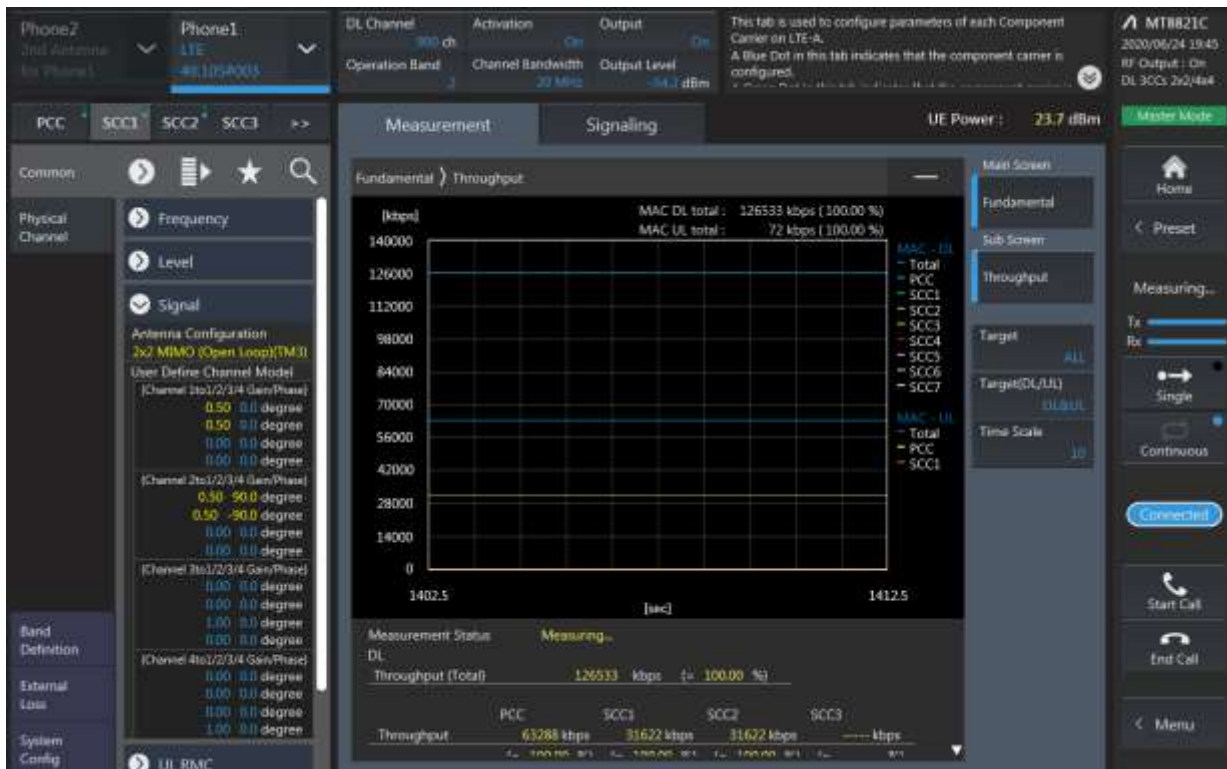
Combination	PCC								SCC				SCC				SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)	
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)					
2A-46C-48E	2	5	18900	1880	900	1960	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	24.81	24.73	0.08
2A-46D-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50269	5497.9	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.84	-0.03
2A-46D-48C-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50269	5497.9	48	20	55990	3625	48	20	56188	3644.8	2	20	900	1960	24.79	24.83	-0.04
2A-46E-48A-66A	2	5	18900	1880	900	1960	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	66	20	66786	2145	24.81	24.83	-0.02
2A-46E-48A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	48	20	55990	3625	2	20	900	1960	24.79	24.74	0.05
2A-46E-48C	2	5	18900	1880	900	1960	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	24.81	24.84	-0.03
2A-46E-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	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	24.81	24.78	0.03
2A-46E-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	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	24.79	24.77	0.02
46C-48E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	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	24.79	24.87	-0.08
46E-48C-66A	66	20	132572	1770	67036	2170	QPSK	1	0	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	24.79	24.77	0.02
2A-13A-46D-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	782	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.81	24.79	0.02
2A-13A-46D-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.15	24.10	0.05
2A-13A-46D-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	13	10	5230	782	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50269	5497.9	24.79	24.85	-0.06
2A-5A-46D-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50269	5497.9	66	20	66786	2145	66	20	67236	2190	24.81	24.73	0.08
2A-5A-46D-66A-66A	5	5	20625	846.5	2625	891.5	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	24.29	24.32	-0.03
2A-5A-46D-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	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	24.79	24.75	0.04
2A-5A-46E-66A	2	5	18900	1880	900	1960	QPSK	1	12	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	24.81	24.79	0.02
2A-5A-46E-66A	5	5	20625	846.5	2625	891.5	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	66	20	66786	2145	24.29	24.36	-0.07
2A-5A-46E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	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	24.79	24.78	0.01
5A-46E-66A-66A	5	5	20625	846.5	2625	891.5	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	24.29	24.25	0.04
5A-46E-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	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	24.79	24.84	-0.05

LTE Down Link 3CA 4x4 MIMO Call Setup

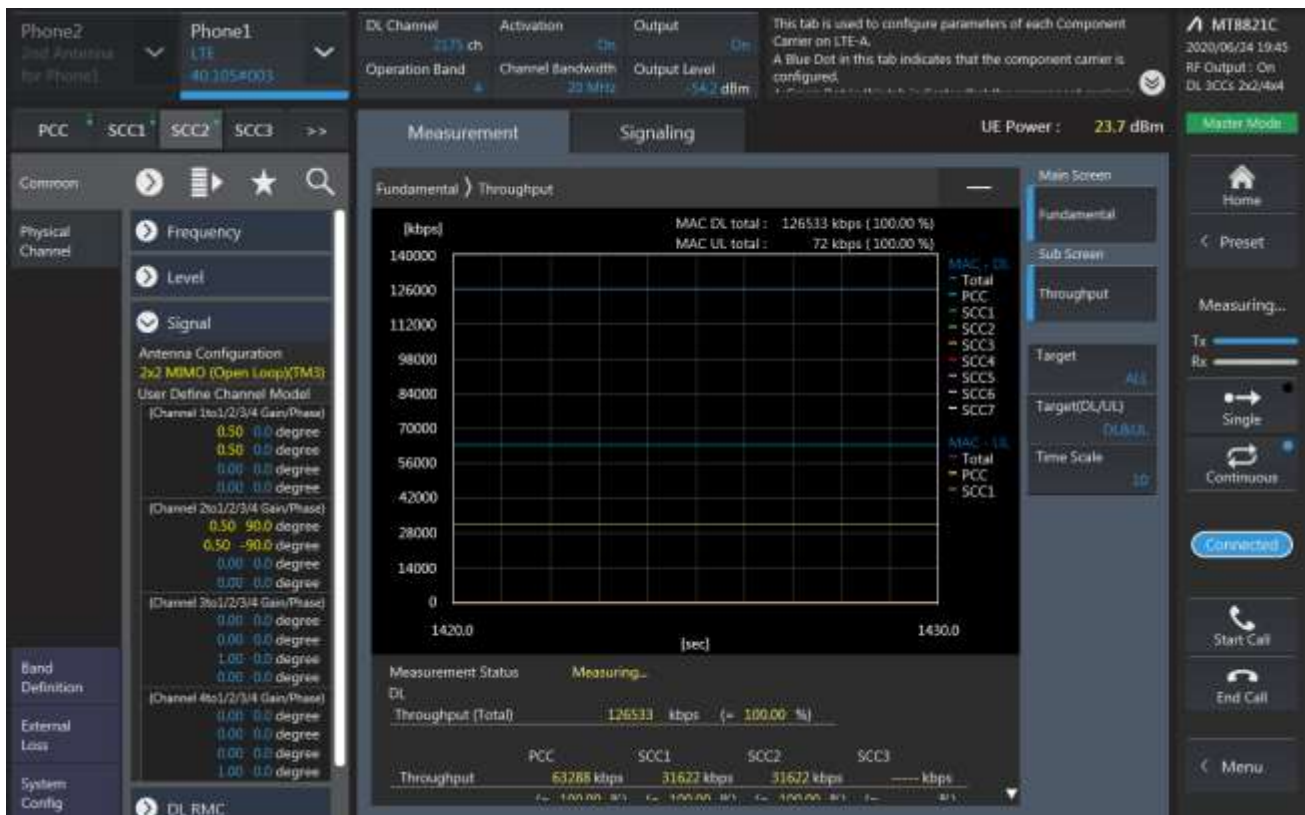
PCC Setting: Channel /RB/BW/Modulation



CC1 Setting : Channel /RB/BW/Modulation



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

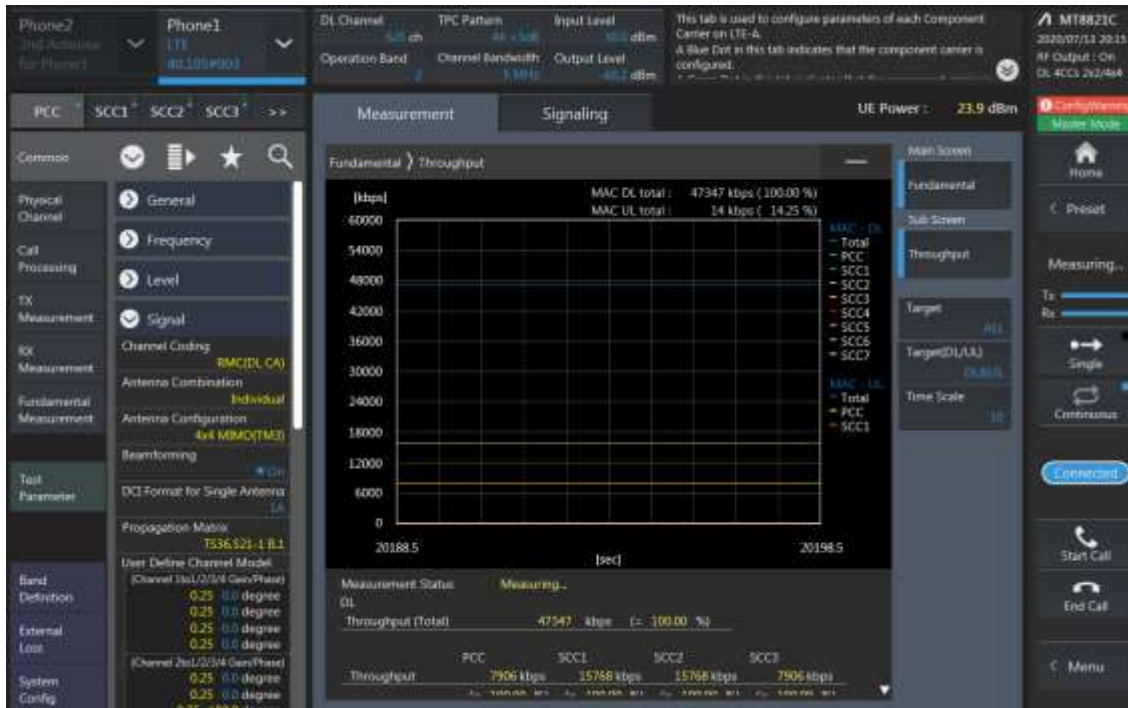


LTE Downlink 3CA 4X4 MIMO Maximum Conducted Power

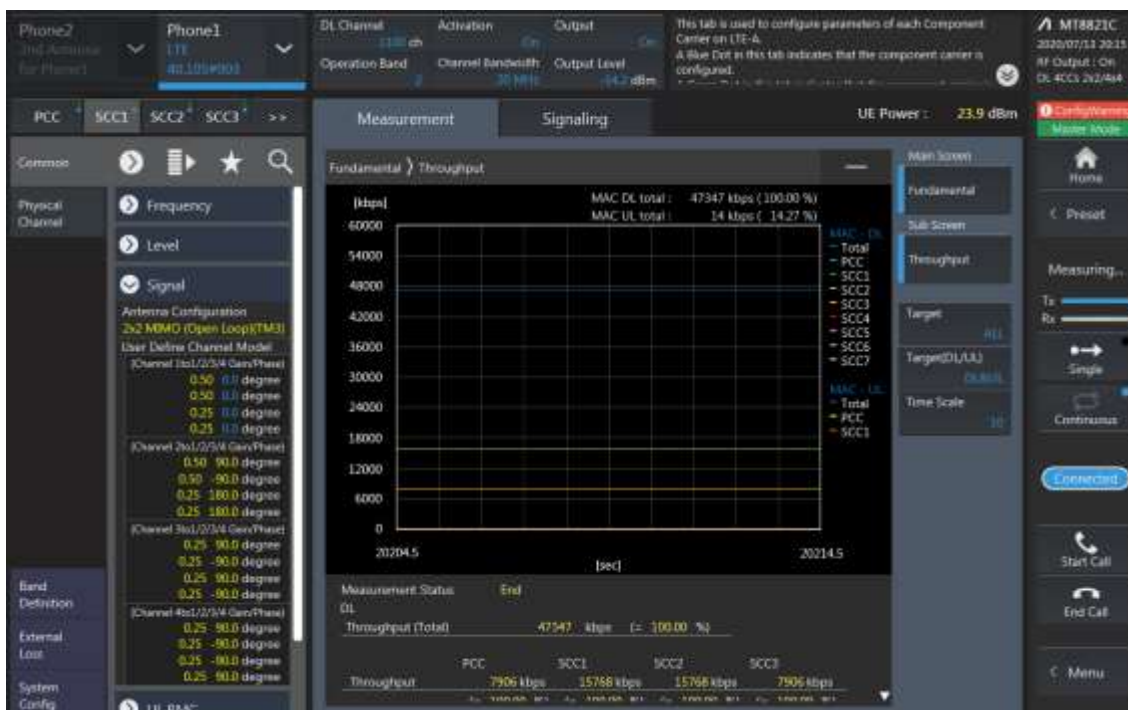
Combination	PCC									SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
[2A]-4A-13A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	13	10	5230	751	24.81	24.86	-0.05
2A-[4A]-13A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	13	10	5230	751	24.81	24.8	0.01
[2A]-[4A]-13A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	13	10	5230	751	24.81	24.64	0.17
[2A]-4A-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.44	24.51	-0.07
2A-[4A]-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.44	24.31	0.13
[2A]-[4A]-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.44	24.27	0.17
[2A]-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.15	23.99	0.16
2A-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.15	24	0.15
[2A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.15	23.98	0.17
[4A]-4A-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.44	24.34	0.10
[4A]-[4A]-13A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	13	10	5230	751	24.44	24.26	0.18
[4A]-4A-13A	13	10	23230	782	5230	751	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.15	23.99	0.16
[4A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.15	24.25	-0.10
[4A]-4A-71A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	71	20	68786	637	24.44	24.32	0.12
[4A]-[4A]-71A	4	5	19975	1712.5	2112.5	1975	QPSK	1	12	4	20	2300	2145	71	20	68786	637	24.44	24.39	0.05
[4A]-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.53	24.33	0.20
[4A]-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	4	20	2175	2132.5	4	10	2350	2150	24.53	24.63	-0.10
[25A]-25A-26A	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.94	24.87	0.07
25A-[25A]-26A	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.94	24.97	-0.03
[25A]-[25A]-26A	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.94	24.96	-0.02
[25A]-25A-26A	26	5	27015	846.5	9015	891.5	QPSK	1	24	25	20	8365	1962.5	25	20	8590	1985	24.26	24.13	0.13
25A-[25A]-26A	26	5	27015	846.5	9015	891.5	QPSK	1	24	25	20	8365	1962.5	25	20	8590	1985	24.26	24.24	0.02
[25A]-[25A]-26A	26	5	27015	846.5	9015	891.5	QPSK	1	24	25	20	8365	1962.5	25	20	8590	1985	24.26	24.23	0.03
[48A]-48A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	24.53	24.39	0.14
[48A]-[48A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	24.53	24.6	-0.07
[48C]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	24.53	24.47	0.06

LTE Down Link 4CA 4x4 MIMO Call Setup

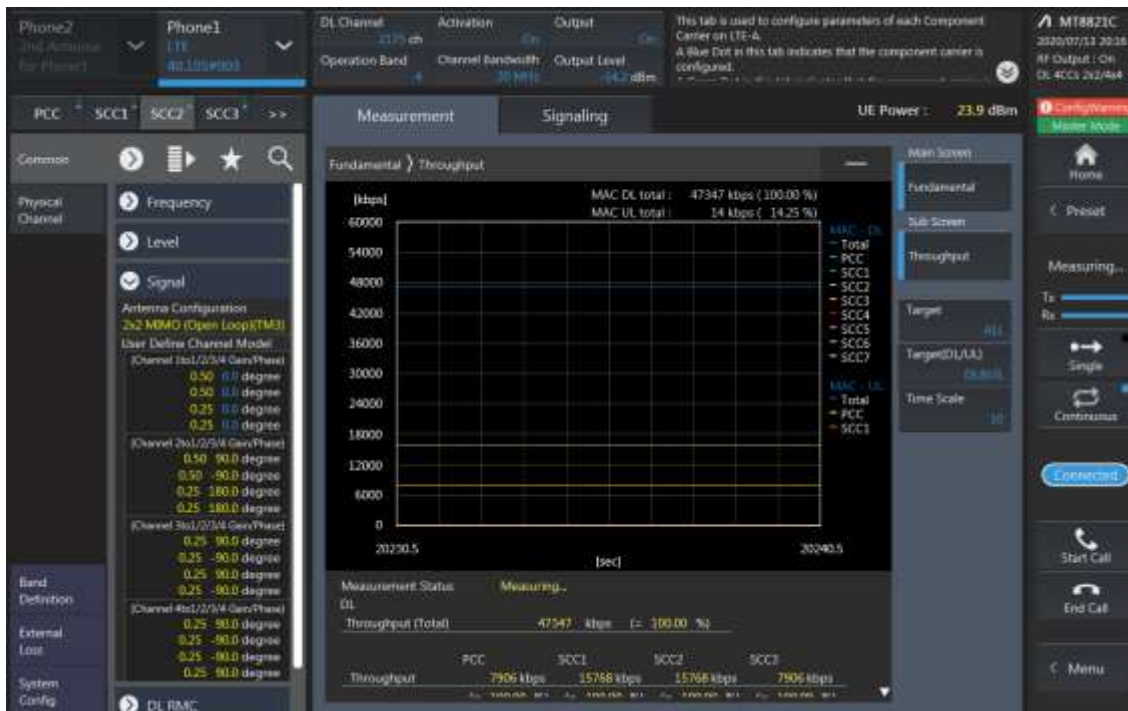
PCC Setting: Channel /RB/BW/Modulation



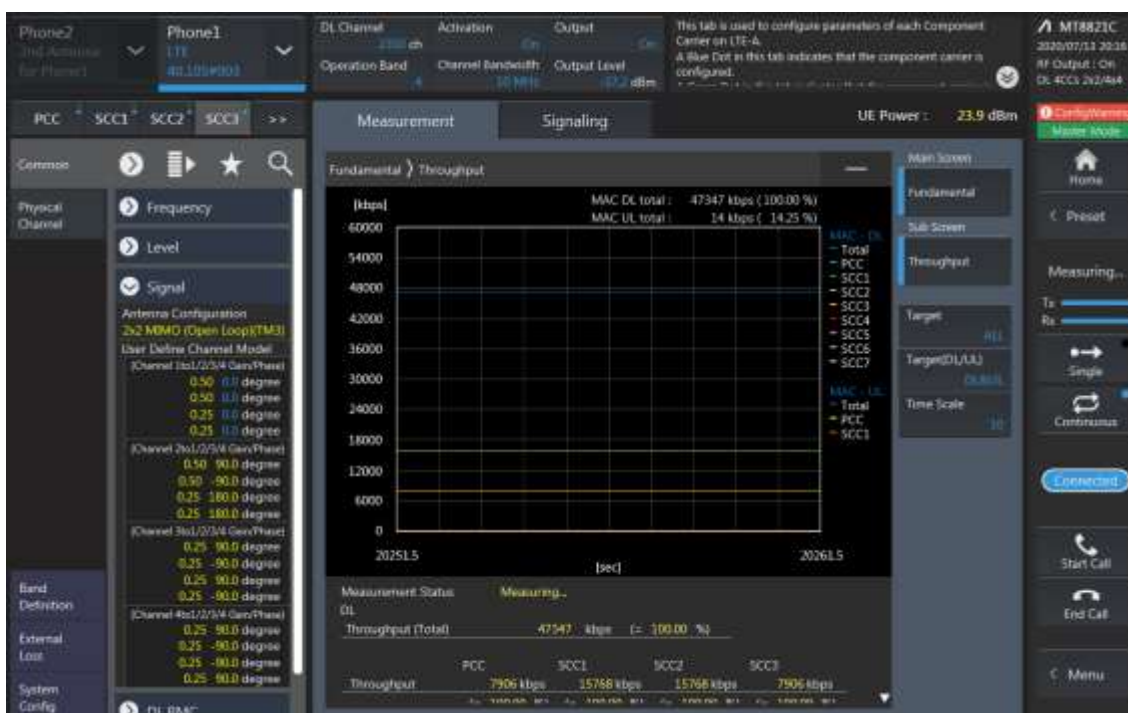
SCC1 Setting : Channel /RB/BW/Modulation



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		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
[2A]-2A-29A-30A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.81	24.72	0.09
[2A]-[2A]-29A-30A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	29	10	9715	722.5	30	10	9820	2355	24.81	24.85	-0.04
[2A]-2A-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	22.42	22.28	0.14
[2A]-[2A]-29A-30A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	29	10	9715	722.5	22.42	22.31	0.11
[2A]-29A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	24.81	24.91	-0.1
2A-29A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	24.81	24.87	-0.06
[2A]-29A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	66	20	66786	2145	24.81	24.88	-0.07
[2A]-29A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	29	10	9715	722.5	66	20	66786	2145	22.42	22.25	0.17
2A-29A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	29	10	9715	722.5	66	20	66786	2145	22.42	22.32	0.1
[2A]-29A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	29	10	9715	722.5	66	20	66786	2145	22.42	22.45	-0.03
[2A]-29A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.79	24.64	0.15
2A-29A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.79	24.63	0.16
[2A]-29A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	30	10	9820	2355	24.79	24.73	0.06
29A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	49	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	22.42	22.47	-0.05
29A-30A-[66A]-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	29	10	9715	722.5	66	20	66786	2145	66	20	67236	2190	22.42	22.35	0.07
29A-30A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	29	10	9715	722.5	30	10	9820	2355	24.79	24.87	-0.08
29A-30A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	29	10	9715	722.5	30	10	9820	2355	24.79	24.79	0
46C-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.84	-0.05
46C-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.72	0.07
46C-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	46	20	50665	5537.5	46	20	50467	5517.7	24.79	24.65	0.14
2A-2A-4A-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.77	0.04
[2A]-2A-4A-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.8	0.01
2A-2A-[4A]-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.87	-0.06
[2A]-[2A]-4A-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.64	0.17
[2A]-2A-[4A]-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.72	0.09
2A-2A-[4A]-[4A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.84	-0.03
[2A]-[2A]-[4A]-4A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.63	0.18
[2A]-2A-[4A]-[4A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.89	-0.08
[2A]-[2A]-[4A]-[4A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	4	10	2350	2150	24.81	24.81	0
2A-2A-4A-4A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.44	24.42	0.02
[2A]-2A-4A-4A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.44	24.5	-0.06
2A-2A-[4A]-4A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	2	20	1100	1980	24.44	24.45	-0.01

2A-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	4	20	2175	2132.5	24.29	24.15	0.14
[2A]-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	4	20	2175	2132.5	24.29	24.23	0.06
[2A]-13A-66C	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.81	24.68	0.13
2A-13A-[66C]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.81	24.66	0.15
[2A]-13A-[66C]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	20	66984	2164.8	24.81	24.74	0.07
[2A]-13A-66C	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.15	24.15	0
2A-13A-[66C]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.15	24.25	-0.1
[2A]-13A-[66C]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.15	24.06	0.09
[2A]-13A-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	13	10	5230	751	24.79	24.59	0.2
2A-13A-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	13	10	5230	751	24.79	24.78	0.01
[2A]-13A-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	13	10	5230	751	24.79	24.83	-0.04
[4A]-4A-5B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.44	24.35	0.09
[4A]-[4A]-5B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	5	10	2525	881.5	5	5	2453	874.3	24.44	24.25	0.19
[4A]-4A-5B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	4	20	2175	2132.5	4	10	2350	2150	24.29	24.28	0.01
[4A]-[4A]-5B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	4	20	2175	2132.5	4	10	2350	2150	24.29	24.35	-0.06
5A-5A-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2450	874	66	15	66786	2145	66	5	66879	2154.3	24.29	24.3	-0.01
5A-5A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	5	10	2525	881.5	5	5	2425	871.5	24.78	24.58	0.2
5A-5A-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2450	874	66	20	66786	2145	66	20	66984	2164.8	24.29	24.34	-0.05
5A-5A-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	5	10	2525	881.5	5	5	2425	871.5	24.79	24.75	0.04
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48A-48A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.75	0.04
[48A]-[48A]-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.77	0.02
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48A-48A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.65	0.14
[48A]-[48A]-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.6	0.19
[48A]-48A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.71	0.08
[48A]-[48A]-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	55340	3560	24.79	24.6	0.19
[48C]-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	56188	3644.8	24.79	24.82	-0.03
48C-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	56188	3644.8	24.79	24.75	0.04
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48C-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	56188	3644.8	24.79	24.68	0.11
[48C]-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	48	20	55990	3625	48	20	56188	3644.8	24.79	24.66	0.13
[2A]-2A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.81	24.84	-0.03
2A-2A-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.81	24.83	-0.02
[2A]-[2A]-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.81	24.87	-0.06
[2A]-2A-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.81	24.67	0.14
[2A]-[2A]-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	12	10	5095	737.5	24.81	24.9	-0.09
[2A]-2A-4A-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.44	24.45	-0.01
2A-2A-[4A]-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.44	24.39	0.05
[2A]-[2A]-4A-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.44	24.44	0
[2A]-2A-[4A]-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.44	24.48	-0.04
[2A]-[2A]-[4A]-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	24.44	24.37	0.07
[2A]-2A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.02	24	0.02
2A-2A-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.02	24.08	-0.06
[2A]-[2A]-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.02	23.84	0.18
[2A]-2A-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.02	23.87	0.15

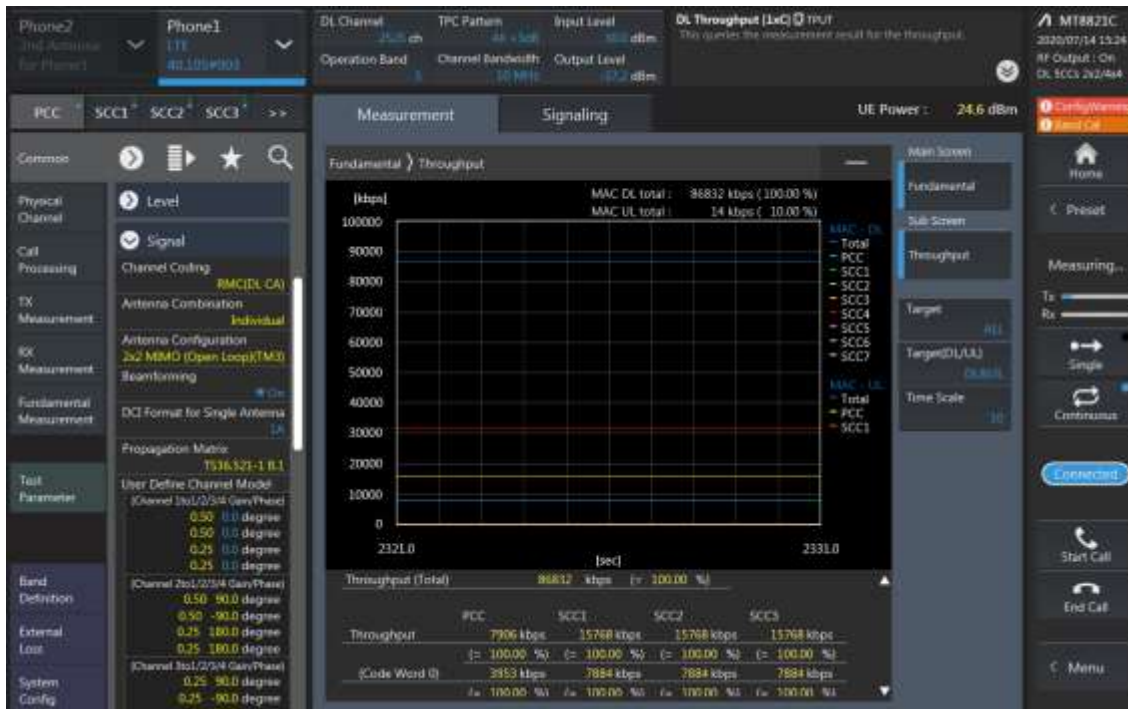
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[2A]-2A-4A-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.81	24.9	-0.09
2A-2A-[4A]-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.81	24.61	0.2
[2A]-[2A]-4A-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.81	24.66	0.15
[2A]-2A-[4A]-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.81	24.84	-0.03
[2A]-[2A]-[4A]-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	4	20	2175	2132.5	71	20	68786	637	24.81	24.66	0.15
[2A]-2A-4A-71A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.44	24.47	-0.03
2A-2A-[4A]-71A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.44	24.29	0.15
[2A]-[2A]-4A-71A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.44	24.32	0.12
[2A]-2A-[4A]-71A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.44	24.38	0.06
[2A]-[2A]-[4A]-71A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.44	24.25	0.19
[2A]-2A-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.53	24.6	-0.07
2A-2A-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.53	24.53	0
[2A]-[2A]-4A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.53	24.52	0.01
[2A]-2A-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.53	24.6	-0.07
[2A]-[2A]-[4A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	4	20	2175	2132.5	24.53	24.49	0.04
[2C]-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.81	24.79	0.02
2C-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.81	24.77	0.04
[2C]-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.81	24.91	-0.1
2C-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.81	24.69	0.12
[2C]-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1017	1971.7	66	20	66786	2145	66	20	67236	2190	24.81	24.78	0.03
[2C]-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.79	24.74	0.05
2C-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.79	24.83	-0.04
[2C]-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.79	24.88	-0.09
2C-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.79	24.88	-0.09
[2C]-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1098	1979.8	24.79	24.66	0.13
[2A]-2A-66A-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.81	24.73	0.08
2A-2A-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.81	24.69	0.12
[2A]-[2A]-66A-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.81	24.73	0.08
[2A]-2A-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.81	24.72	0.09
[2A]-[2A]-[66A]-71A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	66	20	66786	2145	71	20	68786	637	24.81	24.83	-0.02
[2A]-2A-66A-71A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.79	24.76	0.03
2A-2A-[66A]-71A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.79	24.87	-0.08
[2A]-[2A]-66A-71A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.79	24.87	-0.08
[2A]-2A-[66A]-71A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.79	24.65	0.14
[2A]-[2A]-[66A]-71A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	71	20	68786	637	24.79	24.84	-0.05
[2A]-2A-66A-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.53	24.58	-0.05
2A-2A-[66A]-71A	71	10	133297	680.5	68761	634.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	24.53	24.39	0.14

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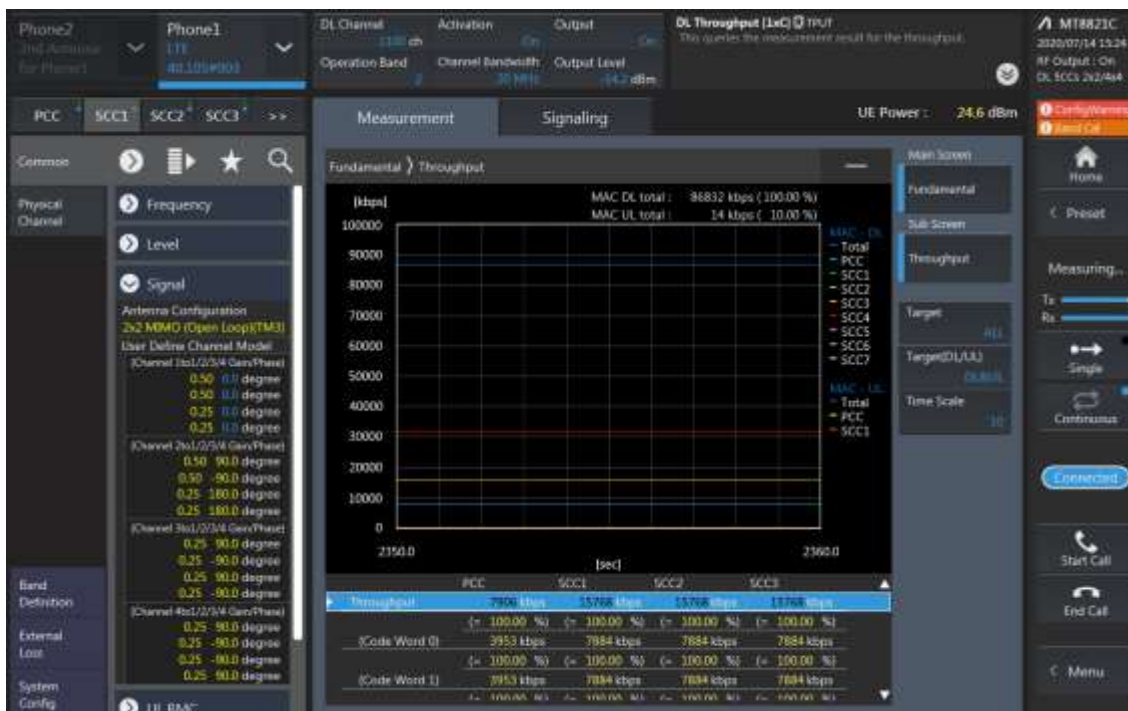
41A-[41D]	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.18	25.04	0.14
[41A]-[41D]	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.18	25.23	-0.05
[41A]-41D	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	39750	2506	25.18	25.21	-0.03
41A-[41D]	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	39750	2506	25.18	25.01	0.17
[41A]-[41D]	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	39750	2506	25.18	25	0.18
[41E] (PC 2)	41	15	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	41160	2647	25.99	25.82	0.17
[41E] (PC 3)	41	15	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	40962	2627.2	41	20	40566	2587.6	25.18	25.17	0.01
[25A]-46D	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.94	24.77	0.17
[2A]-4A-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.81	24.88	-0.07
2A-[4A]-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.81	24.87	-0.06
[2A]-[4A]-4A-12A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.81	24.73	0.08
2A-[4A]-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.81	24.68	0.13
[2A]-[4A]-[4A]-12A	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	12	10	5095	737.5	24.81	24.85	-0.04
[2A]-4A-4A-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.44	24.35	0.09
2A-[4A]-4A-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.44	24.43	0.01
[2A]-[4A]-4A-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.44	24.48	-0.04
2A-[4A]-[4A]-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.44	24.4	0.04
[2A]-[4A]-[4A]-12A	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	2	20	900	1960	12	10	5095	737.5	24.44	24.37	0.07
[2A]-4A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.02	24.05	-0.03
2A-[4A]-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.02	23.97	0.05
[2A]-[4A]-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.02	24	0.02
2A-[4A]-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.02	24.12	-0.1
[2A]-[4A]-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	4	10	2350	2150	24.02	23.91	0.11
[2A]-4A-12B	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.81	24.62	0.19
2A-[4A]-12B	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.81	24.82	-0.01
[2A]-[4A]-12B	2	5	18900	1880	900	1960	QPSK	1	12	4	20	2175	2132.5	12	5	5095	737.5	12	5	5047	732.7	24.81	24.83	-0.02
[2A]-4A-12B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.44	24.48	-0.04
2A-[4A]-12B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.44	24.24	0.2
[2A]-[4A]-12B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.44	24.46	-0.02
[2A]-4A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	4	20	2175	2132.5	24.02	24.08	-0.06
2A-[4A]-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	4	20	2175	2132.5	24.02	23.94	0.08
[2A]-[4A]-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	4	20	2175	2132.5	24.02	23.86	0.16
[4A]-4A-12B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.44	24.27	0.17
[4A]-[4A]-12B	4	5	19975	1712.5	1975	2112.5	QPSK	1	12	4	20	2300	2145	12	5	5095	737.5	12	5	5047	732.7	24.44	24.27	0.17
[4A]-4A-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	4	20	2175	2132.5	4	10	2350	2150	24.14	24.23	-0.09
[4A]-[4A]-12B	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	4	20	2175	2132.5	4	10	2350	2150	24.14	24.01	0.13

LTE Down Link 5CA 4x4 MIMO Call Setup

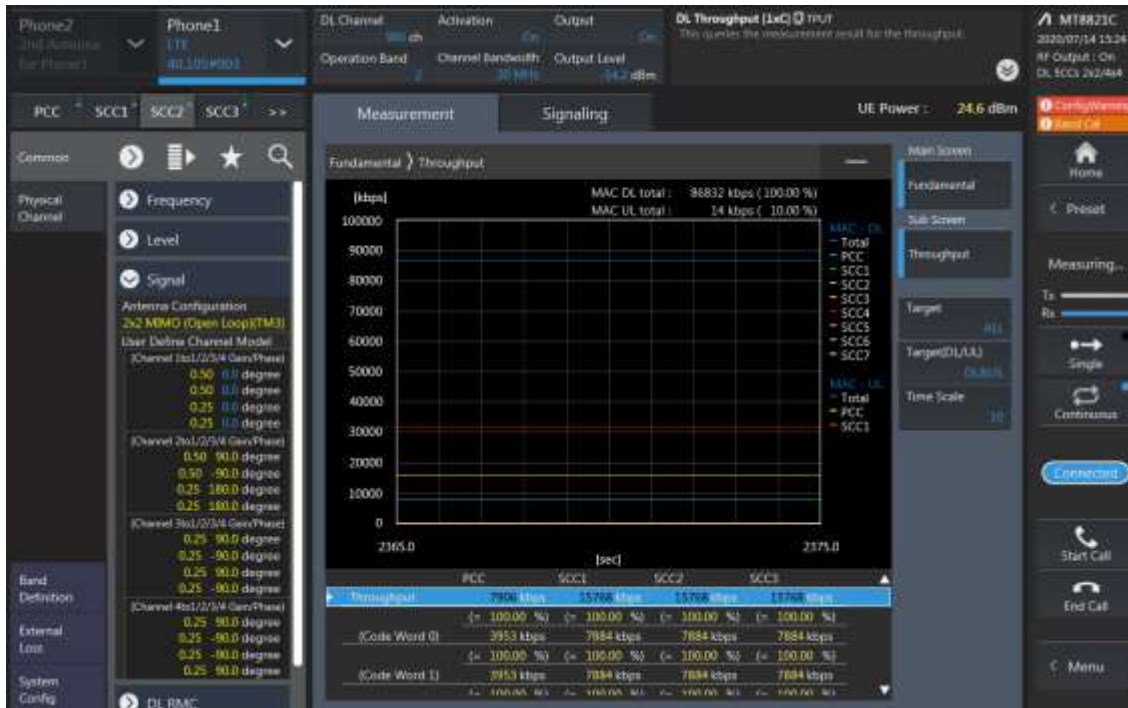
PCC Setting: Channel /RB/BW/Modulation



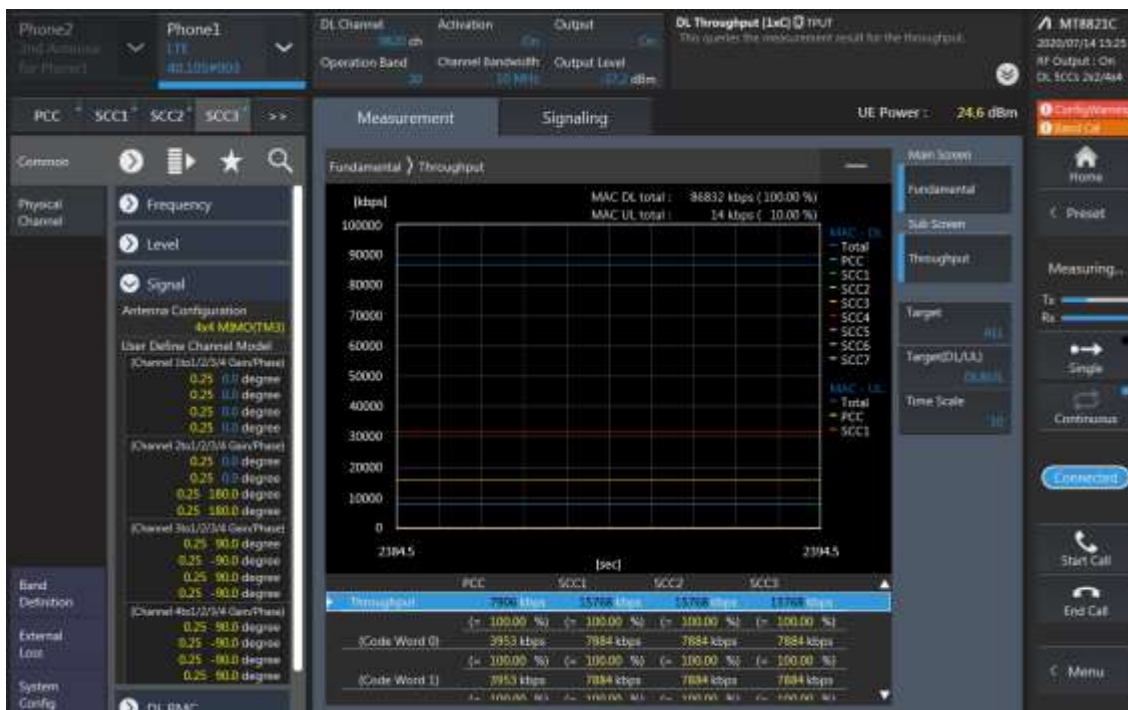
SCC1 Setting : Channel /RB/BW/Modulation



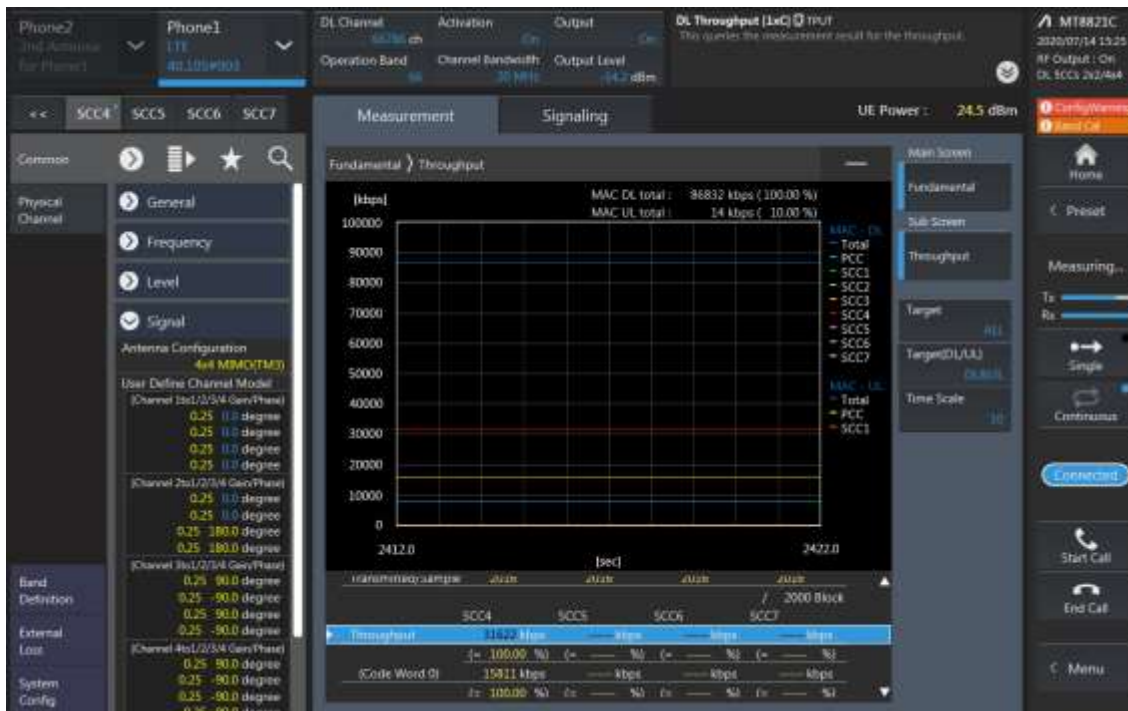
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



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



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

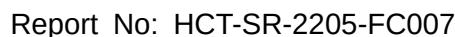


LTE Downlink 5CA 4X4 MIMO Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				SCC				Tx Power		Delta (2)-(1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
[2A]-2A-5A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.81	24.81	0
2A-2A-5A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.81	24.83	-0.02
[2A]-[2A]-5A-30A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.81	24.77	0.04
[2A]-2A-5A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.81	24.63	0.18
[2A]-[2A]-5A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	24.81	24.64	0.17
[2A]-2A-5A-30A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.29	24.24	0.05
2A-2A-5A-30A-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.29	24.21	0.08
[2A]-[2A]-5A-30A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.29	24.13	0.16
[2A]-2A-5A-30A-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.29	24.32	-0.03
[2A]-[2A]-5A-30A-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	2	20	1100	1980	30	10	9820	2355	66	20	66786	2145	24.29	24.29	0
[2A]-2A-5A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.42	22.37	0.05
2A-2A-5A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.42	22.37	0.05
[2A]-[2A]-5A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.42	22.48	-0.06
[2A]-2A-5A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.42	22.23	0.19
[2A]-[2A]-5A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	22.42	22.51	-0.09
[2A]-2A-5A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.79	24.89	-0.1
2A-2A-5A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.79	24.7	0.09
[2A]-[2A]-5A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.79	24.66	0.13
[2A]-2A-5A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.79	24.87	-0.08
[2A]-[2A]-5A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	30	10	9820	2355	24.79	24.71	0.08
[2A]-2A-5A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.72	0.09
2A-2A-5A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.91	-0.1
[2A]-[2A]-5A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.75	0.06
[2A]-2A-5A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.81	0
2A-2A-5A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.71	0.1
[2A]-[2A]-5A-	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	24.81	24.76	0.05

[2A]-[2A]-12A-30A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	24.81	24.75	0.06
[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	24.02	23.93	0.09
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	24.02	23.9	0.12
[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	24.02	23.98	0.04
[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	24.02	24	0.02
[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	24.02	23.92	0.1
[2A]-2A-12A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.42	22.33	0.09
2A-2A-12A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.42	22.52	-0.1
[2A]-[2A]-12A-30A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.42	22.39	0.03
[2A]-2A-12A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.42	22.37	0.05
[2A]-[2A]-12A-30A-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	22.42	22.51	-0.09
[2A]-2A-12A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.79	24.88	-0.09
2A-2A-12A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.79	24.66	0.13
[2A]-[2A]-12A-30A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.79	24.89	-0.1
[2A]-[2A]-12A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.79	24.76	0.03
[2A]-[2A]-12A-30A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	2	20	1100	1980	12	10	5095	737.5	30	10	9820	2355	24.79	24.85	-0.06
[2A]-2A-12A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.73	0.08
2A-2A-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.88	-0.07
[2A]-[2A]-12A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.85	-0.04
[2A]-2A-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.86	-0.05
2A-2A-12A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.63	0.18
[2A]-[2A]-12A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.71	0.1
[2A]-2A-12A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.64	0.17
[2A]-[2A]-12A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	24.81	24.73	0.08
[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	24.02	23.9	0.12
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	24.02	24.1	-0.08
[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	24.02	24.04	-0.02
[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	24.02	23.9	0.12
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	24.02	23.96	0.06
[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	24.02	24.04	-0.02
[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	24.02	24.01	0.01
[2A]-[2A]-12A-	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	24.02	23.9	0.12

[2A]-2A-14A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.81	24.81	0
2A-2A-14A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.81	24.76	0.05
[2A]-[2A]-14A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.81	24.7	0.11
[2A]-2A-14A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.81	24.81	0
[2A]-[2A]-14A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	24.81	24.9	-0.09
[2A]-2A-14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.12	0.16
2A-2A-14A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.33	-0.05
[2A]-[2A]-14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.26	0.02
[2A]-2A-14A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.22	0.06
2A-2A-14A-[66A]-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.1	0.18
[2A]-[2A]-14A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.2	0.08
[2A]-[2A]-14A-[66A]-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.11	0.17
[2A]-[2A]-14A-[66A]-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.28	24.31	-0.03
[2A]-2A-14A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.74	0.05
2A-2A-14A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.78	0.01
[2A]-[2A]-14A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.72	0.07
[2A]-2A-14A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.67	0.12
2A-2A-14A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.71	0.08
[2A]-[2A]-14A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.85	-0.06
[2A]-2A-14A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.64	0.15
[2A]-[2A]-14A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	14	10	5330	763	24.79	24.72	0.07
[2A]-[2A]-46D	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.81	24.67	0.14
[2A]-[2A]-46D	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.81	24.79	0.02
[2A]-5A-30A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.89	-0.08
2A-5A-30A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.72	0.09
[2A]-5A-30A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.91	-0.1
2A-5A-30A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.67	0.14
[2A]-5A-30A-66A-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.29	24.18	0.11
2A-5A-30A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.29	24.29	0
[2A]-5A-30A-[66A]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.29	24.14	0.15
2A-5A-30A-[66A]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.29	24.17	0.12
[2A]-5A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	22.42	22.24	0.18
2A-5A-30A-	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	5	10	2525	881.5	66	20	66786	2145	66	20	67236	2190	22.42	22.43	-0.01



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2A-5B-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.79	24.7	0.09
[2A]-5B-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.79	24.86	-0.07
[2A]-12A-30A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.63	0.18
2A-12A-30A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.79	0.02
[2A]-12A-30A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.8	0.01
2A-12A-30A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.66	0.15
[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	24.02	24.12	-0.1
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	24.02	23.86	0.16
[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	24.02	24.11	-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	24.02	24.12	-0.1
[2A]-12A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.42	22.28	0.14
2A-12A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.42	22.28	0.14
[2A]-12A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.42	22.22	0.2
2A-12A-30A-[66A]-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	12	10	5095	737.5	66	20	66786	2145	66	20	67236	2190	22.42	22.43	-0.01
[2A]-12A-30A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.79	24.85	-0.06
2A-12A-30A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.79	24.66	0.13
[2A]-12A-30A-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.79	24.78	0.01
2A-12A-30A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	10	5095	737.5	30	10	9820	2355	24.79	24.81	-0.02
[2A]-14A-30A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.79	0.02
2A-14A-30A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.89	-0.08
[2A]-14A-30A-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.91	-0.1
2A-14A-30A-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	14	10	5330	763	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.81	24.75	0.06
[2A]-14A-30A-66A-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.28	24.28	0
2A-14A-30A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.28	24.29	-0.01
[2A]-14A-30A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.28	24.23	0.05
2A-14A-30A-[66A]-[66A]	14	10	23330	793	5330	763	QPSK	1	24	2	20	900	1960	30	10	9820	2355	66	20	66786	2145	66	20	67236	2190	24.28	24.15	0.13
[2A]-14A-30A-66A-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	22.42	22.42	0
2A-14A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	22.42	22.44	-0.02
[2A]-14A-30A-[66A]-66A	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	22.42	22.41	0.01
2A-14A-30A-[66A]-[66A]	30	10	27710	2310	9820	2355	QPSK	1	49	2	20	900	1960	14	10	5330	763	66	20	66786	2145	66	20	67236	2190	22.42	22.36	0.06
[2A]-14A-30A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	14	10	5330	763	30	10	9820	2355	24.79	24.8	-0.01
2A-14A-30A-	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	14	10	5330	763	30	10	9820	2355	24.79	24.84	-0.05

[2A]-[2A]-5A-66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	2	20	1100	1980	5	10	2525	881.5	24.79	24.72	0.07
[2A]-5B-66B	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.81	24.77	0.04
2A-5B-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.81	24.88	-0.07
[2A]-5B-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	15	66786	2145	66	5	66879	2154.3	24.81	24.85	-0.04
[2A]-5B-66B	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.29	24.16	0.13
2A-5B-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.29	24.1	0.19
[2A]-5B-[66B]	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	66	15	66786	2145	66	5	66879	2154.3	24.29	24.34	-0.05
[2A]-5B-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.78	24.61	0.17
2A-5B-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.78	24.67	0.11
[2A]-5B-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.78	24.76	0.02
[2A]-5B-66C	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.81	24.79	0.02
2A-5B-[66C]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.81	24.87	-0.06
[2A]-5B-[66C]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	66	20	66786	2145	66	20	66984	2164.8	24.81	24.87	-0.06
[2A]-5B-66C	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.29	24.29	0
2A-5B-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.29	24.3	-0.01
[2A]-5B-[66C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	5	10	2553	884.3	2	20	900	1960	66	20	66786	2145	66	20	66984	2164.8	24.29	24.2	0.09
[2A]-5B-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.79	24.69	0.1
2A-5B-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.79	24.73	0.06
[2A]-5B-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	2	20	900	1960	5	10	2525	881.5	5	5	2453	874.3	24.79	24.61	0.18
[2A]-2A-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.64	0.17
2A-2A-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.75	0.06
[2A]-[2A]-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.91	-0.1
[2A]-2A-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.72	0.09
2A-2A-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.61	0.2
[2A]-[2A]-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.83	-0.02
[2A]-2A-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.82	-0.01
[2A]-[2A]-13A-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	20	66786	2145	66	20	67236	2190	24.81	24.73	0.08
[2A]-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	24.06	0.09
2A-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	24.12	0.03
[2A]-[2A]-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	24.13	0.02
[2A]-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	24.02	0.13
2A-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	23.99	0.16
[2A]-[2A]-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	24.22	-0.07
[2A]-2A-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	24.04	0.11
[2A]-[2A]-13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	2	20	1100	1980	66	20	66786	2145	66	20	67236	2190	24.15	23.99	0.16
[2A]-2A-13A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.68	0.11
2A-2A-13A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.86	-0.07
[2A]-[2A]-13A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.59	0.2
[2A]-2A-13A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.66	0.13
2A-2A-13A-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.61	0.18

[2A]-[2A]-13A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.69	0.1
[2A]-[2A]-13A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.8	-0.01
[2A]-[2A]-13A-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	2	20	1100	1980	13	10	5230	751	24.79	24.73	0.06
[2A]-13A-66A-66B	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.86	-0.05
2A-13A-[66A]-66B	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.82	-0.01
2A-13A-66A-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.66	0.15
[2A]-13A-[66A]-66B	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.66	0.15
[2A]-13A-66A-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.91	-0.1
2A-13A-[66A]-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.7	0.11
[2A]-13A-[66A]-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	66	20	66786	2145	66	15	67261	2192.5	66	5	67168	2183.2	24.81	24.87	-0.06
[2A]-13A-66A-66B	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	23.99	0.16
2A-13A-[66A]-66B	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.17	-0.02
2A-13A-66A-[66B]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.23	-0.08
[2A]-13A-[66A]-66B	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.2	-0.05
[2A]-13A-66A-[66B]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.08	0.07
2A-13A-[66A]-[66B]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.08	0.07
[2A]-13A-[66A]-[66B]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	66	20	66786	2145	66	5	67168	2183.2	66	15	67261	2192.5	24.15	24.06	0.09
[2A]-13A-66A-66B	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.74	0.05
2A-13A-[66A]-66B	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.64	0.15
2A-13A-66A-[66B]	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.69	0.1
[2A]-13A-[66A]-66B	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.81	-0.02
[2A]-13A-66A-[66B]	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.89	-0.1
2A-13A-[66A]-[66B]	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.84	-0.05
[2A]-13A-[66A]-[66B]	66	20	132572	1770	67036	2170	QPSK	1	0	66	15	66511	2117.5	66	5	66604	2126.8	2	20	900	1960	13	10	5230	751	24.79	24.82	-0.03
[2A]-13A-66A-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.79	-0.01
2A-13A-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.79	-0.01
2A-13A-66A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.87	-0.09
[2A]-13A-[66A]-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.62	0.16
[2A]-13A-66A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.72	0.06
2A-13A-[66A]-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.77	0.01
[2A]-13A-[66A]-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	66	20	66536	2120	2	20	900	1960	13	10	5230	751	24.78	24.78	0
[2A]-5A-5A-	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	5	5	2425	871.5	66	20	66786	2145	66	20	67236	2190	24.81	24.72	0.09

[illegible]

[2A]-13A-[48A]-[66A]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.15	24.24	-0.09
2A-13A-[48A]-[48A]-[66A]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.15	24.05	0.1
[2A]-13A-[48A]-[48A]-[66A]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.15	24.22	-0.07
[2A]-13A-48A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.6	0.19
2A-13A-[48A]-48A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.65	0.14
2A-13A-48A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.82	-0.03
[2A]-13A-[48A]-48A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.76	0.03
[2A]-13A-48A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.63	0.16
2A-13A-[48A]-[48A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.87	-0.08
2A-13A-[48A]-[48A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.66	0.13
[2A]-13A-[48A]-[48A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.75	0.04
[2A]-13A-[48A]-48A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.85	-0.06
2A-13A-[48A]-[48A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.76	0.03
[2A]-13A-[48A]-[48A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	55340	3560	24.79	24.62	0.17
[2A]-13A-48A-48C	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.7	0.11
2A-13A-[48A]-48C	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.79	0.02
2A-13A-48A-[48C]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.66	0.15
[2A]-13A-[48A]-48C	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.87	-0.06
[2A]-13A-48A-[48C]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.64	0.17
2A-13A-[48A]-[48C]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.69	0.12
[2A]-13A-[48A]-[48C]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.81	24.83	-0.02
[2A]-13A-48A-48C	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24.11	0.04
2A-13A-[48A]-48C	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24.05	0.1
2A-13A-48A-[48C]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24.05	0.1
[2A]-13A-[48A]-48C	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24.18	-0.03
[2A]-13A-48A-[48C]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24.08	0.07
2A-13A-[48A]-[48C]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24.13	0.02
[2A]-13A-[48A]-[48C]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.15	24	0.15
[2A]-13A-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.81	0

2A-13A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.83	-0.02
2A-13A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.7	0.11
[2A]-13A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.63	0.18
[2A]-13A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.77	0.04
2A-13A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.69	0.12
[2A]-13A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.75	0.06
[2A]-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	23.95	0.2
2A-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	24.07	0.08
2A-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	24.08	0.07
[2A]-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	24.15	0
[2A]-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	24.1	0.05
2A-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	24.04	0.11
[2A]-13A-[48C]-66A	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.15	24.1	0.05
[2A]-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.74	0.05
2A-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.84	-0.05
2A-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.82	-0.03
[2A]-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.79	0
[2A]-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.84	-0.05
2A-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.63	0.16
[2A]-13A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	24.79	24.8	-0.01
[2A]-13A-48D	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.81	24.69	0.12
2A-13A-[48D]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.81	24.81	0
[2A]-13A-[48D]	2	5	18900	1880	900	1960	QPSK	1	12	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.81	24.89	-0.08
[2A]-13A-[48D]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.15	24.05	0.1
2A-13A-[48D]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.15	24.19	-0.04
[2A]-13A-[48D]	13	10	23230	782	5230	751	QPSK	1	49	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.15	24.22	-0.07
[2A]-48A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.89	-0.08
2A-[48A]-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.82	-0.01
2A-48A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.77	0.04
2A-48A-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.77	0.04
[2A]-48A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.77	0.04
[2A]-48A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.72	0.09
[2A]-48A-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.8	0.01
2A-[48A]-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.64	0.17
2A-[48A]-48C-	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.81	24.65	0.16

[illegible]

[48C]-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.79	24.65	0.14
[48A]-[48C]-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.86	-0.08
48A-[48C]-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.84	-0.06
48A-48C-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.75	0.03
[48A]-[48C]-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.6	0.18
[48A]-48C-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.74	0.04
48A-[48C]-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.76	0.02
[48A]-[48C]-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66984	2154.3	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.78	24.86	-0.08
[48A]-48C-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.7	0.09
48A-[48C]-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.89	-0.1
48A-48C-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.86	-0.07
[48A]-[48C]-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.89	-0.1
[48A]-48C-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.68	0.11
48A-[48C]-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.68	0.11
[48A]-[48C]-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.7	0.09
[48A]-48D-66A	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.75	0.04
48A-[48D]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.66	0.13
48A-48D-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.73	0.06
[48A]-[48D]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.6	0.19
[48A]-48D-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.7	0.09
48A-[48D]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.6	0.19
[48A]-[48D]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	55990	3625	48	20	56244	3650.4	48	20	56640	3690	48	20	56442	3670.2	24.79	24.66	0.13
[48A]-48E	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	48	20	56046	3630.6	24.59	24.54	0.05
48A-[48E]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	48	20	56046	3630.6	24.59	24.61	-0.02
[48A]-[48E]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	48	20	56046	3630.6	24.59	24.58	0.01
[48A]-48E	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	55632	3589.2	48	20	55830	3609	48	20	56640	3690	24.59	24.39	0.2
48A-[48E]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	55632	3589.2	48	20	55830	3609	48	20	56640	3690	24.59	24.4	0.19
[48A]-[48E]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	55632	3589.2	48	20	55830	3609	48	20	56640	3690	24.59	24.64	-0.05
[48C]-48D	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.59	24.45	0.14
48C-[48D]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.59	24.43	0.16
[48C]-[48D]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	56640	3690	48	20	56442	3670.2	48	20	56244	3650.4	24.59	24.41	0.18
[48C]-48D	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	55632	3589.2	48	20	56640	3690	48	20	56442	3670.2	24.59	24.46	0.13
48C-[48D]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	55632	3589.2	48	20	56640	3690	48	20	56442	3670.2	24.59	24.46	0.13
[48C]-[48D]	48	10	55290	3555	55290	3555	QPSK	1	24	48	20	55434	3569.4	48	20	55632	3589.2	48	20	56640	3690	48	20	56442	3670.2	24.59	24.68	-0.09
[2A]-5A-48A-48A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.84	-0.03
2A-5A-[48A]-48A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.77	0.04
2A-5A-48A-48A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.72	0.09
[2A]-5A-[48A]-48A-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.88	-0.07
[2A]-5A-48A-48A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.66	0.15
2A-5A-[48A]-[48A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.76	0.05
2A-5A-[48A]-48A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.8	0.01
[2A]-5A-[48A]-	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	55340	3560	66	20	66786	2145	24.81	24.83	-0.02

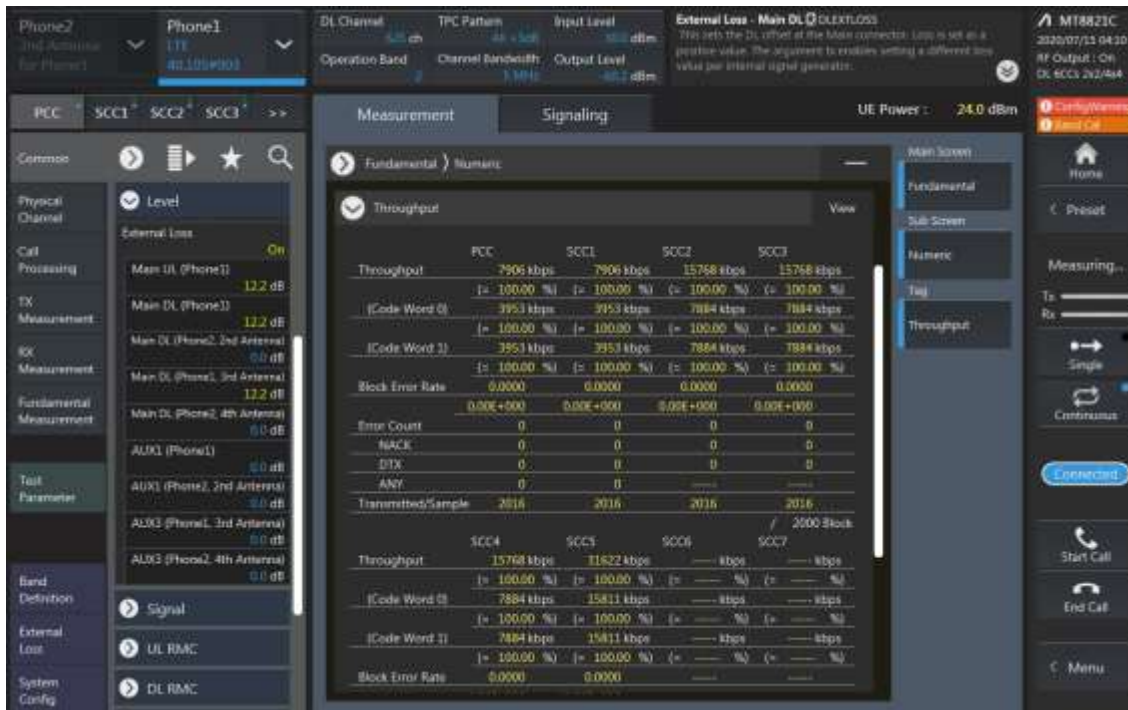
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[2A]-5A-48A-48C	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.14	0.15
2A-5A-[48A]-48C	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.37	-0.08
2A-5A-48A-[48C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.1	0.19
[2A]-5A-[48A]-48C	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.12	0.17
[2A]-5A-48A-[48C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.38	-0.09
2A-5A-[48A]-[48C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.18	0.11
[2A]-5A-[48A]-[48C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.29	24.32	-0.03
[2A]-5A-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.8	0.01
2A-5A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.75	0.06
2A-5A-48C-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.85	-0.04
[2A]-5A-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.7	0.11
[2A]-5A-48C-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.71	0.1
2A-5A-[48C]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.67	0.14
[2A]-5A-[48C]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.81	24.85	-0.04
[2A]-5A-48C-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.09	0.2
2A-5A-[48C]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.26	0.03
2A-5A-48C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.13	0.16
[2A]-5A-[48C]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.23	0.06
[2A]-5A-48C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.11	0.18
2A-5A-[48C]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.2	0.09
[2A]-5A-[48C]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	24.29	24.37	-0.08
[2A]-5A-48C-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.64	0.15
2A-5A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.78	0.01
2A-5A-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.85	-0.06
[2A]-5A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.79	0
[2A]-5A-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.75	0.04
2A-5A-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.59	0.2
[2A]-5A-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	24.79	24.81	-0.02
[2A]-5A-48D	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.81	24.68	0.13
2A-5A-[48D]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.81	24.76	0.05
[2A]-5A-[48D]	2	5	18900	1880	900	1960	QPSK	1	12	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.81	24.87	-0.06
[2A]-5A-48D	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.29	24.12	0.17
2A-5A-[48D]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.29	24.36	-0.07

[2A]-5A-[48D]	5	5	20625	846.5	2625	891.5	QPSK	1	24	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.29	24.14	0.15
5A-[48A]-48C-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.18	0.11
5A-48A-[48C]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.33	-0.04
5A-48A-48C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.21	0.08
5A-[48A]-[48C]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.15	0.14
5A-[48A]-48C-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.1	0.19
5A-48A-[48C]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.35	-0.06
5A-[48A]-[48C]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	66	20	66786	2145	24.29	24.11	0.18
5A-[48A]-48C-66A	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.72	0.07
5A-48A-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.88	-0.09
5A-48A-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.76	0.03
5A-[48A]-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.66	0.13
5A-[48A]-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.7	0.09
5A-48A-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.77	0.02
5A-[48A]-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56640	3690	48	20	56442	3670.2	24.79	24.73	0.06
5A-[48A]-48D	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.29	24.1	0.19
5A-48A-[48D]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.29	24.09	0.2
5A-[48A]-[48D]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	55340	3560	48	20	55538	3579.8	48	20	55736	3599.6	24.29	24.22	0.07
5A-[48C]-48C	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.29	24.32	-0.03
5A-[48C]-[48C]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	55340	3560	48	20	55538	3579.8	24.29	24.38	-0.09
5A-[48D]-66A	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.29	24.09	0.2
5A-48D-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.29	24.3	-0.01
5A-[48D]-[66A]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.29	24.22	0.07
5A-[48D]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.79	24.66	0.13
5A-48D-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.79	24.75	0.04
5A-[48D]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	5	10	2525	881.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	24.79	24.65	0.14
5A-[48E]	5	5	20625	846.5	2625	891.5	QPSK	1	24	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.29	24.31	-0.02
13A-[48C]-66B	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	66	15	66786	2145	66	5	66879	2154.3	24.15	24.02	0.13
13A-48C-[66B]	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	66	15	66786	2145	66	5	66879	2154.3	24.15	24.07	0.08
13A-[48C]-[66B]	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	66	15	66786	2145	66	5	66879	2154.3	24.15	23.95	0.2
13A-[48C]-66B	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	13	10	5230	751	48	20	55990	3625	48	20	55792	3605.2	24.78	24.68	0.1
13A-48C-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	13	10	5230	751	48	20	55990	3625	48	20	55792	3605.2	24.78	24.61	0.17
13A-[48C]-[66B]	66	5	132322	1745	66786	2145	QPSK	1	0	66	15	66879	2154.3	13	10	5230	751	48	20	55990	3625	48	20	55792	3605.2	24.78	24.6	0.18
13A-[48C]-66C	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	66	20	66984	2164.8	24.15	24.17	-0.02
13A-48C-[66C]	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	66	20	66984	2164.8	24.15	24.07	0.08
13A-[48C]-[66C]	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	66	20	66786	2145	66	20	66984	2164.8	24.15	24.2	-0.05
13A-[48C]-66C	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	13	10	5230	751	48	20	55990	3625	48	20	55792	3605.2	24.79	24.82	-0.03
13A-48C-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	13	10	5230	751	48	20	55990	3625	48	20	55792	3605.2	24.79	24.64	0.15
13A-[48C]-[66C]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66838	2150.2	13	10	5230	751	48	20	55990	3625	48	20	55792	3605.2	24.79	24.86	-0.07
[2A]-2A-13A-66B	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.81	24.74	0.07
2A-2A-13A-[66B]	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.81	24.7	0.11
[2A]-[2A]-13A-	2	5	18900	1880	900	1960	QPSK	1	12	2	20	1100	1980	13	10	5230	751	66	15	66786	2145	66	5	66879	2154.3	24.81	24.87	-0.06

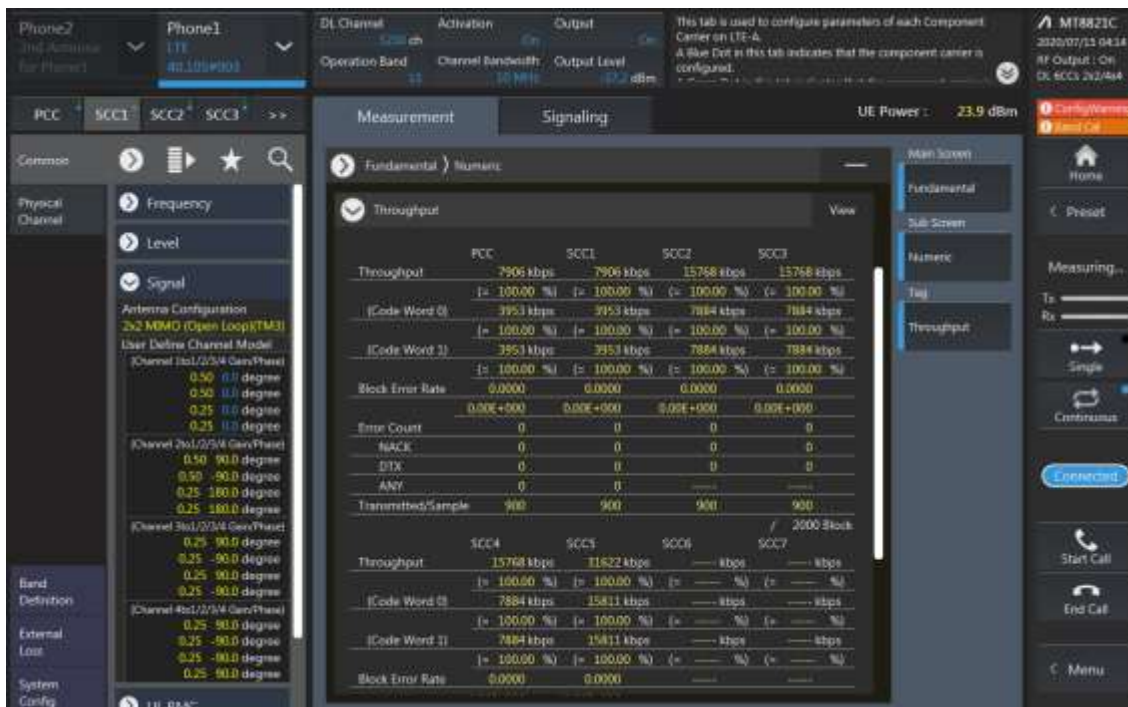
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25A-25A-[41D]	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.94	24.9	0.04
25A-[25A]-[41D]	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.94	24.97	-0.03
[25A]-25A-[41D]	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.94	24.79	0.15
[25A]-[25A]-41D	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.94	24.89	0.05
[25A]-[25A]-[41D]	25	10	26365	1882.5	8365	1962.5	QPSK	1	24	25	20	8140	1940	41	20	40620	2593	41	20	40818	2612.8	41	20	41016	2632.6	24.94	24.94	0
[41C]-41D PC2	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.99	25.9	0.09
41C-[41D] PC2	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.99	25.87	0.12
[41C]-[41D] PC2	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.99	25.89	0.1
[41C]-41D PC3	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.18	25.14	0.04
41C-[41D] PC3	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.18	25.03	0.15
[41C]-[41D] PC3	41	10	40620	2593	40620	2593	QPSK	1	24	41	20	40764	2607.4	41	20	39750	2506	41	20	39948	2525.8	41	20	40146	2545.6	25.18	25.21	-0.03
[2A]-12B-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.81	24.76	0.05
2A-12B-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.81	24.65	0.16
[2A]-12B-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.81	24.71	0.1
2A-12B-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.81	24.68	0.13
[2A]-12B-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	66	20	66786	2145	66	20	67236	2190	24.81	24.64	0.17
[2A]-12B-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.81	24.83	-0.02
2A-12B-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.81	24.63	0.18
[2A]-12B-[66A]-66A	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.81	24.72	0.09
2A-12B-[66A]-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.81	24.9	-0.09
[2A]-12B-[66A]-[66A]	12	5	23035	701.5	5035	731.5	QPSK	1	0	12	5	5083	736.3	2	20	900	1960	66	20	66786	2145	66	20	67236	2190	24.81	24.86	-0.05
[2A]-12B-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.79	24.84	-0.05
2A-12B-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.79	24.66	0.13
[2A]-12B-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.79	24.78	0.01
2A-12B-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.79	24.82	-0.03
[2A]-12B-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	66	20	66536	2120	2	20	900	1960	12	5	5095	737.5	12	5	5047	732.7	24.79	24.89	-0.1

LTE Down Link 6CA 4x4 MIMO Call Setup

PCC Setting: Channel /RB/BW/Modulation



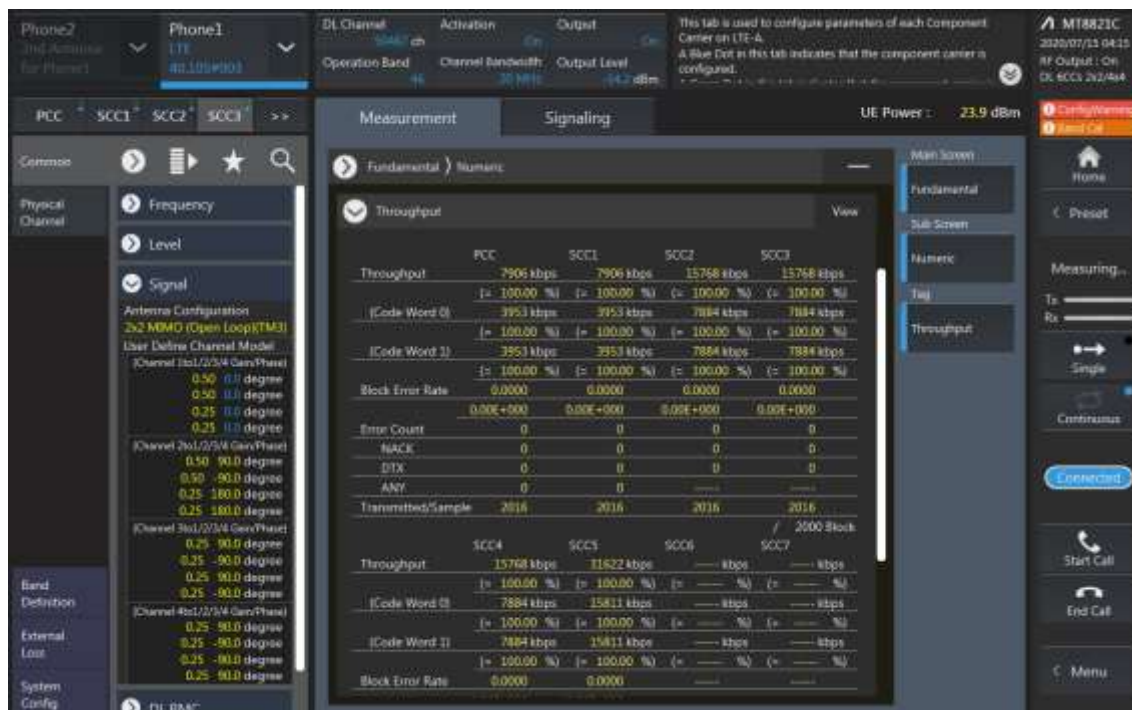
SCC1 Setting : Channel /RB/BW/Modulation



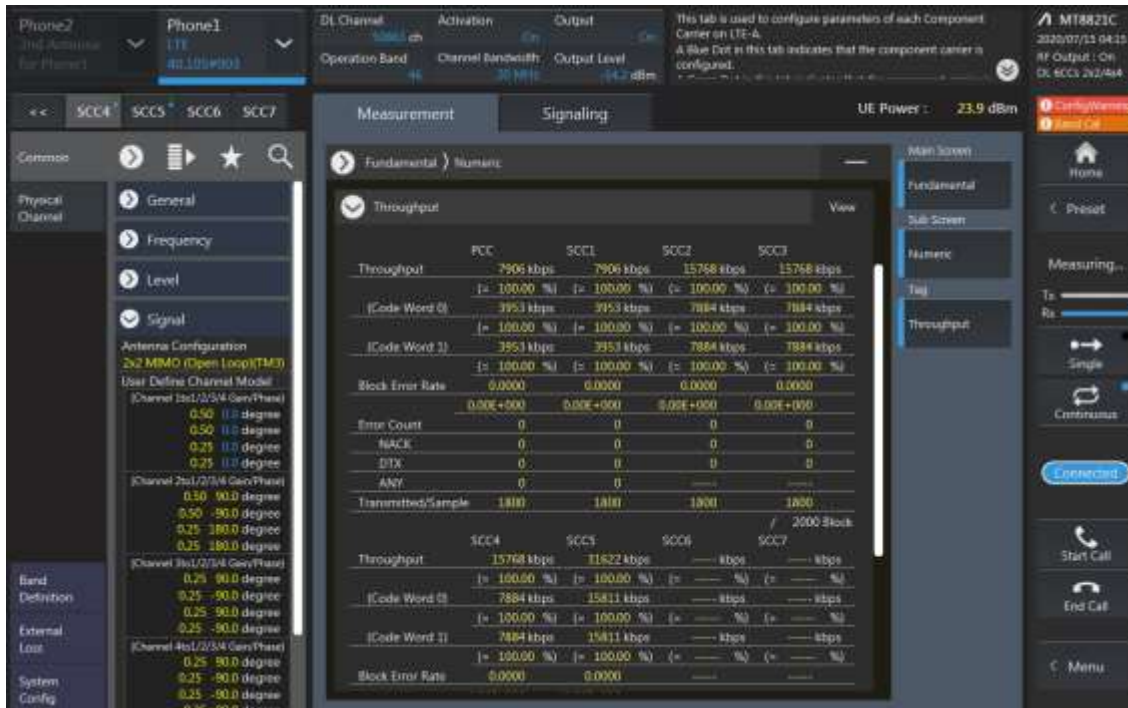
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



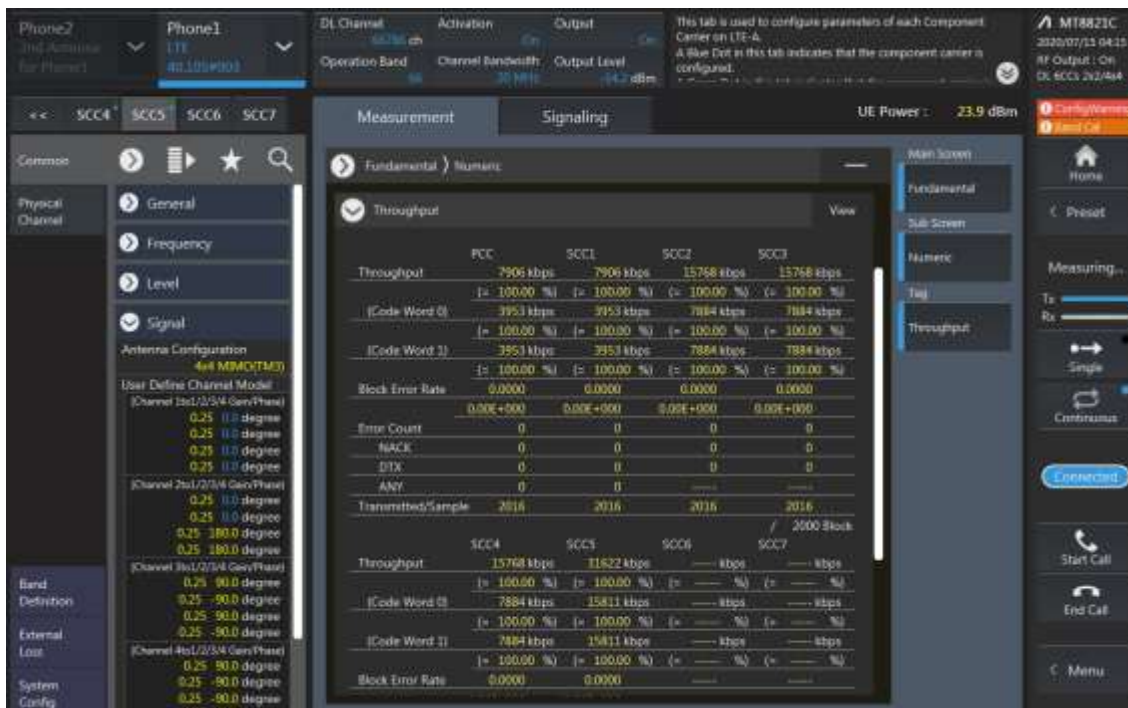
SCC3 Setting (Channel /RB/BW/Modulation) and call Connection



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



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

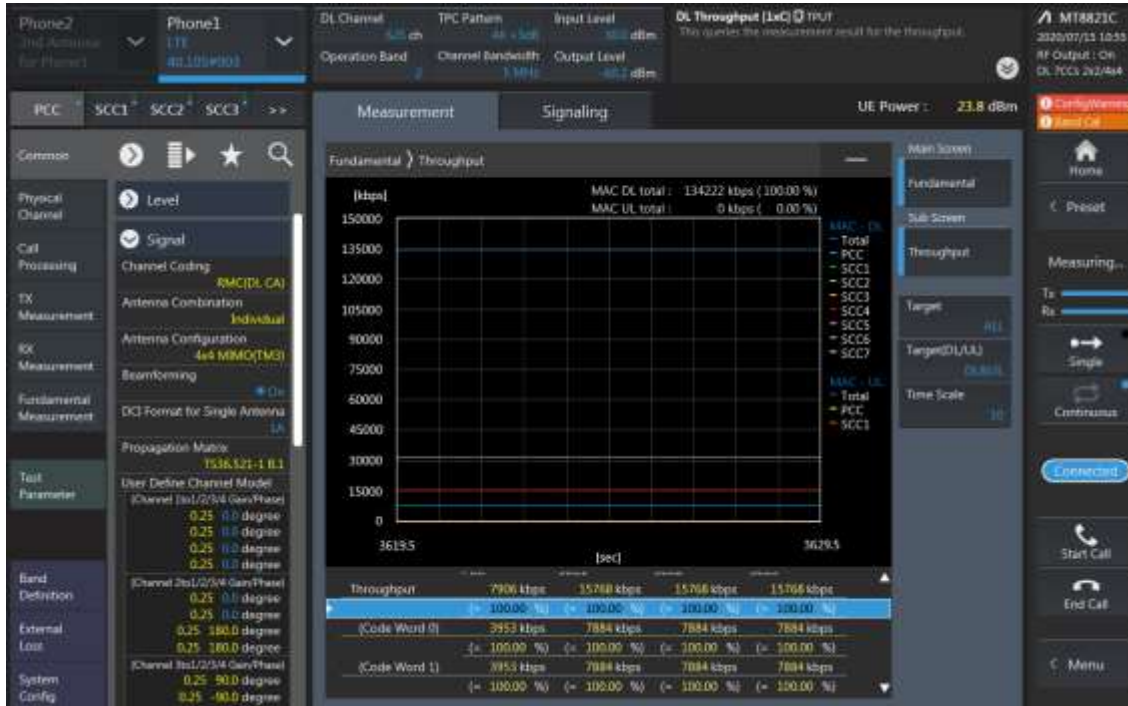


LTE Downlink 6CA 4X4 MIMO Maximum Conducted Power

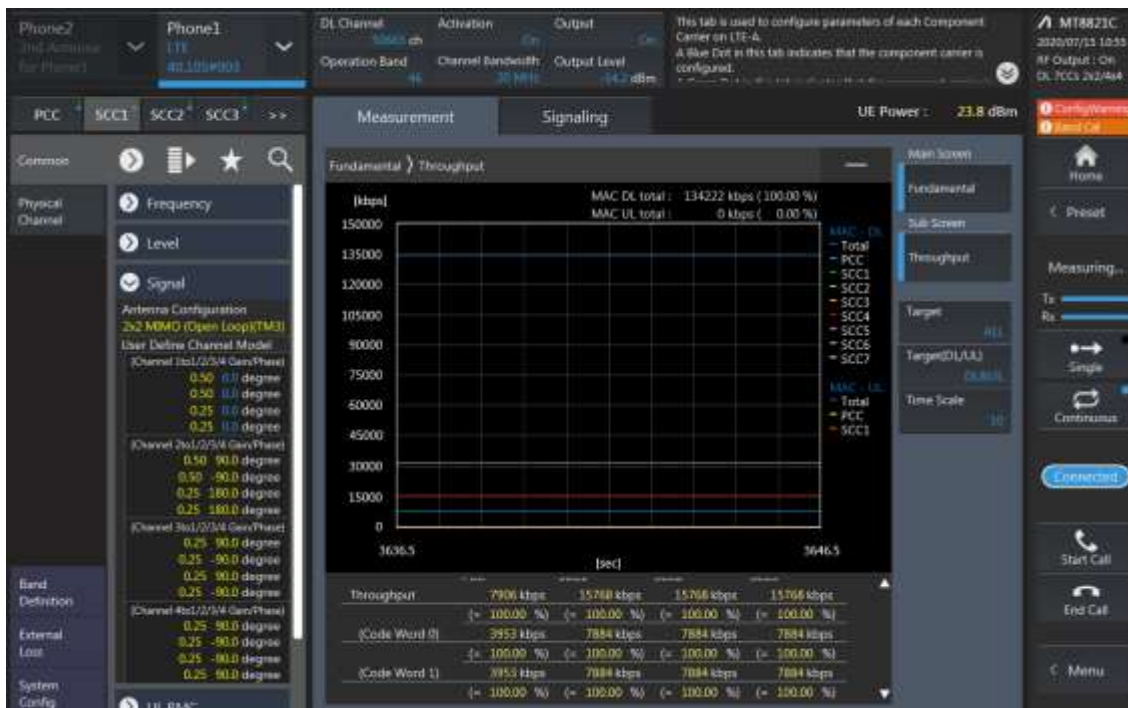
Combination	PCC									SCC				SCC				SCC				SCC				SCC				Tx Power		Delta (2)- (1)
	Band	BW	PCC UL Ch.	PCC UL Freq.	PCC DL Ch.	PCC DL Freq.	Modulation	RB	RB offset	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	Band	BW	SCC DL Ch.	SCC DL Freq.	LTE Single Carrier Tx Power (dBm) (1)	LTE Tx Power with DL CA Enabled (dBm) (2)	
[2A]-46A-48D-66A	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.69	0.12
2A-46A-[48D]-66A	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.78	0.03
2A-46A-48D-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.89	-0.08
[2A]-46A-[48D]-66A	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.86	-0.05
[2A]-46A-48D-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.81	0
2A-46A-[48D]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	66	20	66786	2145	24.81	24.74	0.07
[2A]-46A-48D-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	900	1960	24.79	24.73	0.06
2A-46A-[48D]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	900	1960	24.79	24.81	-0.02
2A-46A-48D-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	900	1960	24.79	24.83	-0.04
[2A]-46A-[48D]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	900	1960	24.79	24.64	0.15
[2A]-46A-48D-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	900	1960	24.79	24.86	-0.07
2A-46A-[48D]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	2	20	900	1960	24.79	24.83	-0.04
[2A]-48E-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.81	24.65	0.16
2A-[48E]-66A	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.81	24.66	0.15
2A-48E-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.81	24.9	-0.09
[2A]-48E-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.81	24.87	-0.06
[2A]-48E-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.82	-0.03
2A-[48E]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.71	0.08
2A-48E-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.67	0.12
[2A]-48E-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.59	0.2
13A-46E-[66A]	13	10	23230	782	5230	751	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	24.15	24.03	0.12
13A-46E-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	46	20	51061	5577.1	24.79	24.85	-0.06
[2A]-13A-46E	2	5	18900	1880	900	1960	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	24.81	24.86	-0.05
[2A]-13A-46E	13	10	23230	782	5230	751	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	24.15	24.12	0.03
13A-[48E]-66A	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.15	23.97	0.18
13A-48E-[66A]	13	10	23230	782	5230	751	QPSK	1	49	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	66	20	66786	2145	24.15	24.22	-0.07
13A-[48E]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.79	0
13A-48E-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	13	10	5230	751	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.76	0.03
[2A]-46A-48E	2	5	18900	1880	900	1960	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	24.81	24.83	-0.02
2A-46A-[48E]	2	5	18900	1880	900	1960	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	24.81	24.74	0.07
[2A]-46C-48D	2	5	18900	1880	900	1960	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	24.81	24.82	-0.01
2A-46C-[48D]	2	5	18900	1880	900	1960	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	24.81	24.79	0.02
[2A]-46C-[48D]	2	5	18900	1880	900	1960	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	24.81	24.75	0.06
46A-[48E]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.79	0
46A-48E-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50665	5537.5	48	20	55990	3625	48	20	56188	3644.8	48	20	56386	3664.6	48	20	56584	3684.4	24.79	24.71	0.08

LTE Down Link 7CA 4x4 MIMO Call Setup

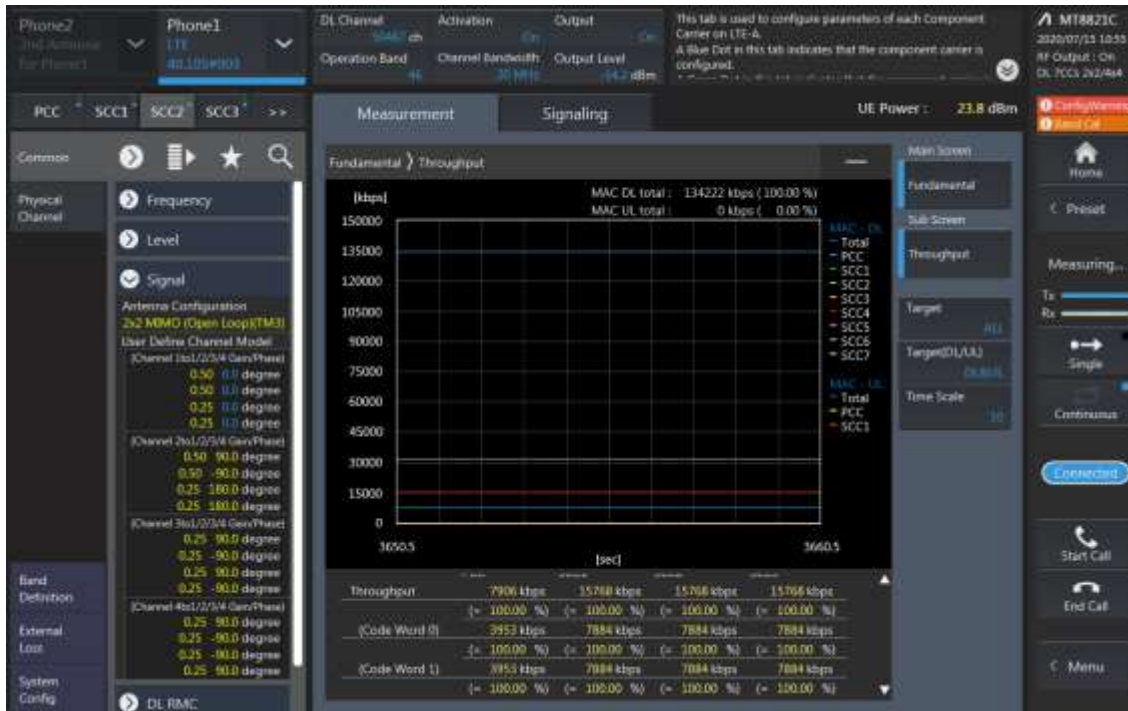
PCC Setting: Channel /RB/BW/Modulation



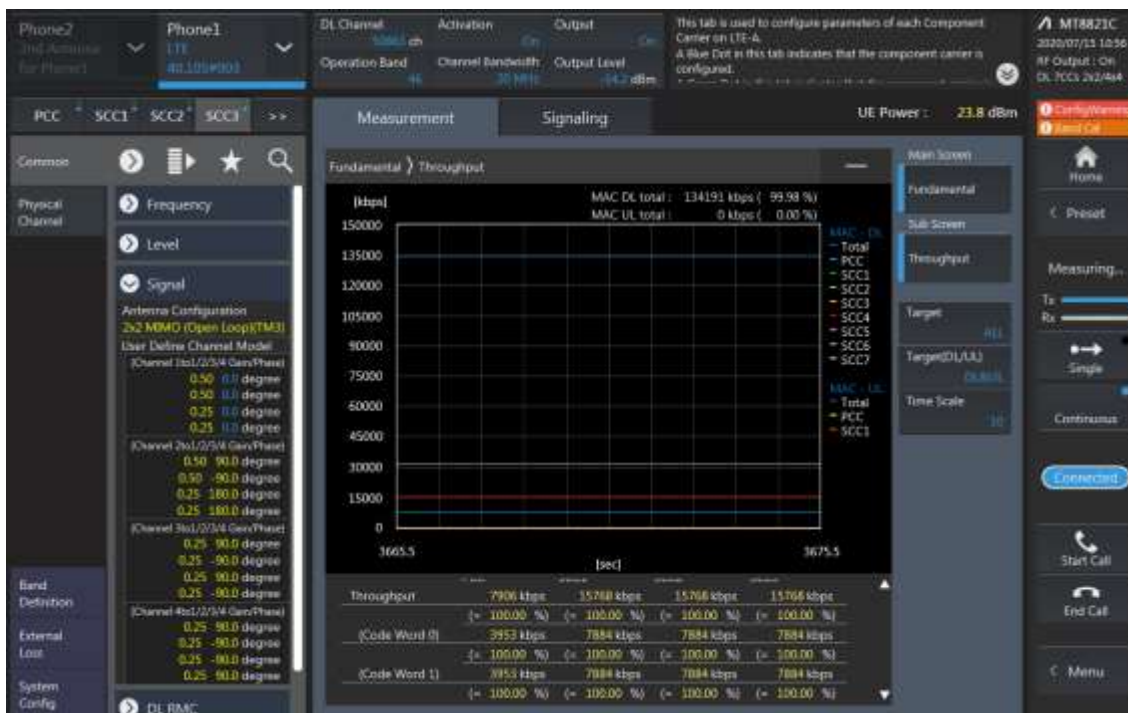
SCC1 Setting : Channel /RB/BW/Modulation



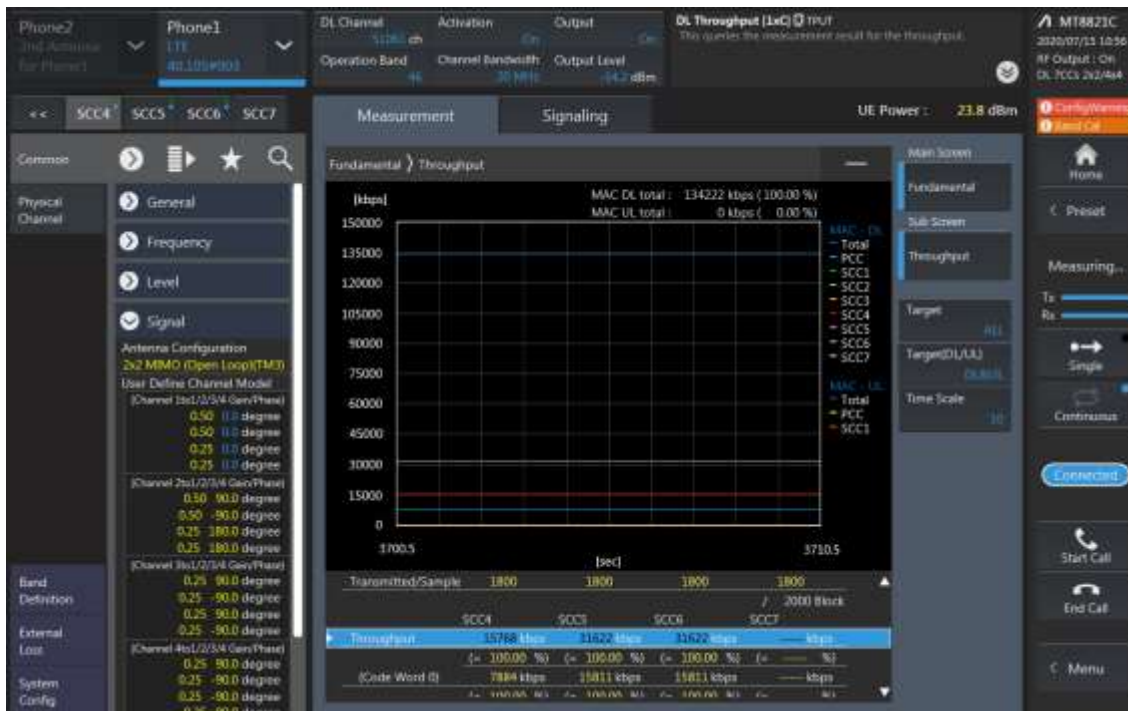
SCC2 Setting (Channel /RB/BW/Modulation) and call Connection



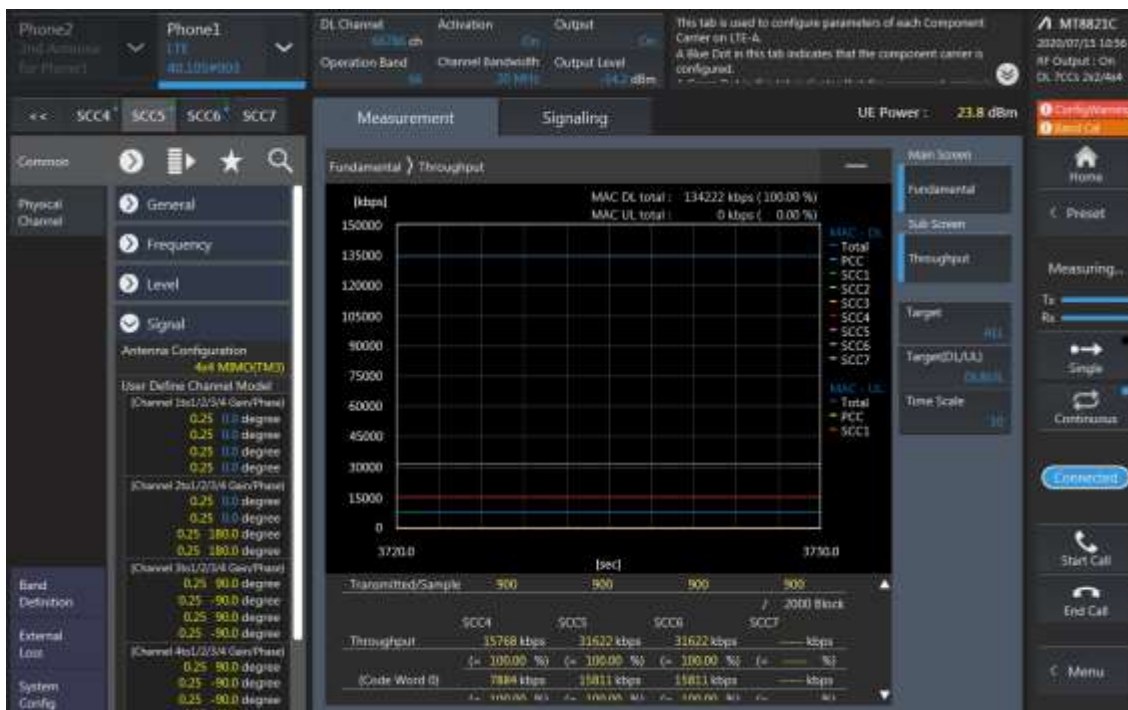
SCC3 Setting (Channel /RB/BW/Modulation) and call Connection



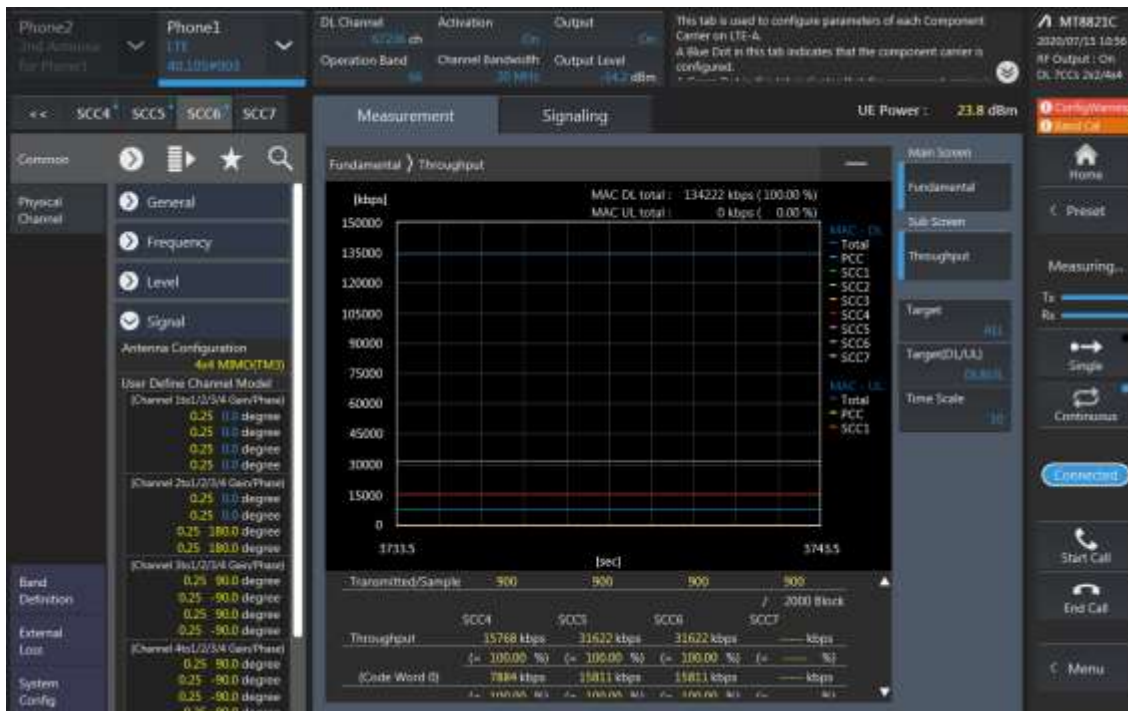
SCC4 Setting (Channel /RB/BW/Modulation) and call Connection



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

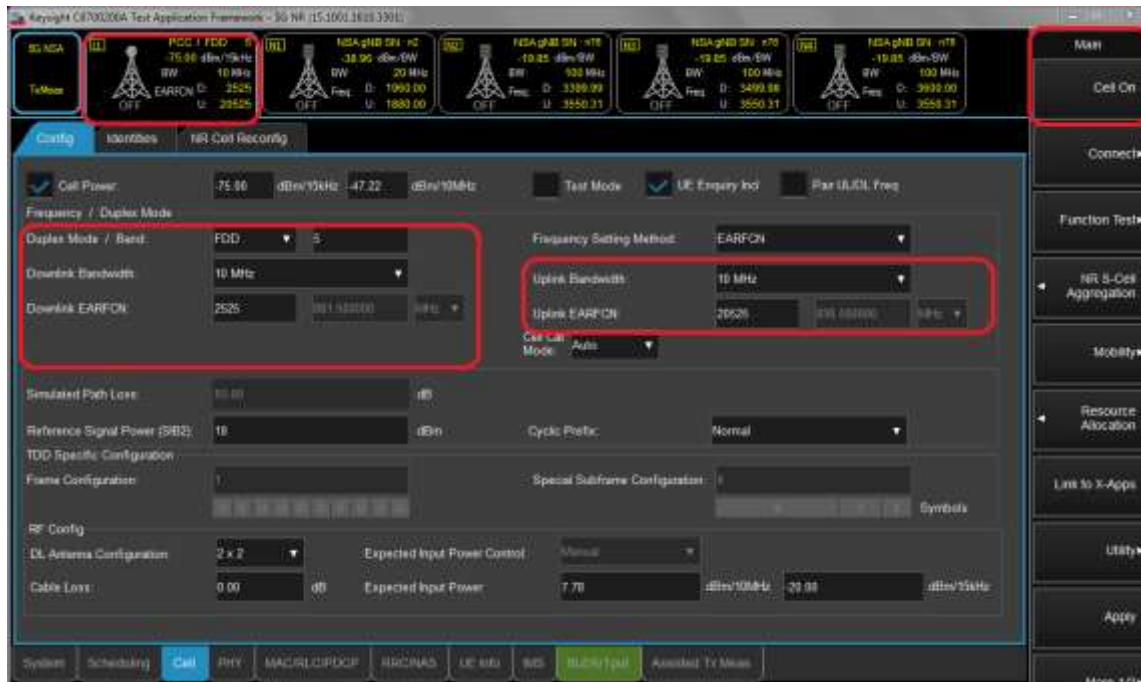
Combination	Band	BW	PCC						SCC				Tx Power		Deviation	
			PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)		LTE Tx Power with DL CA Enabled (dBm)
[2A]-46C-48E	2	5	18900	1880	900	1960	QPSK	1	12	48	20	56584	3684.4	24.81	24.84	-0.03
[2A]-46D-48C-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.70	0.11
2A-46D-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.85	-0.04
2A-46D-48C-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.87	-0.06
[2A]-46D-[48C]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.76	0.05
[2A]-46D-48C-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.62	0.19
2A-46D-[48C]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.62	0.19
[2A]-46D-48C-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.74	0.05
2A-46D-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.87	-0.08
2A-46D-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.63	0.16
[2A]-46D-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.61	0.18
[2A]-46D-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.60	0.19
2A-46D-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.76	0.03
[2A]-46E-48A-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.73	0.08
2A-46E-[48A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.65	0.16
2A-46E-48A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.82	-0.01
[2A]-46E-[48A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.71	0.1
[2A]-46E-48A-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.80	0.01
2A-46E-[48A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.73	0.08
[2A]-46E-[48A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	66786	2145	24.81	24.74	0.07
[2A]-46E-48A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.76	0.03
2A-46E-[48A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.89	-0.1
2A-46E-48A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.80	-0.01
[2A]-46E-[48A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.89	-0.1
[2A]-46E-48A-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.80	-0.01
2A-46E-[48A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.65	0.14
[2A]-46E-[48A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	2	20	900	1960	24.79	24.71	0.08
[2A]-46E-48C	2	5	18900	1880	900	1960	QPSK	1	12	48	20	56188	3644.8	24.81	24.69	0.12
2A-46E-[48C]	2	5	18900	1880	900	1960	QPSK	1	12	48	20	56188	3644.8	24.81	24.65	0.16
[2A]-46E-[48C]	2	5	18900	1880	900	1960	QPSK	1	12	48	20	56188	3644.8	24.81	24.74	0.07
[2A]-46E-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.78	0.03
2A-46E-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.89	-0.08
[2A]-46E-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.85	-0.04
2A-46E-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.91	-0.1
[2A]-46E-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.65	0.16
[2A]-46E-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	51061	5577.1	24.79	24.74	0.05
2A-46E-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	51061	5577.1	24.79	24.65	0.14
[2A]-46E-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	51061	5577.1	24.79	24.83	-0.04
2A-46E-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	51061	5577.1	24.79	24.84	-0.05
[2A]-46E-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	51061	5577.1	24.79	24.61	0.18
46C-48E-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	56584	3684.4	24.79	24.87	-0.08
46E-[48C]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	56188	3644.8	24.79	24.68	0.11
46E-48C-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	56188	3644.8	24.79	24.78	0.01
46E-[48C]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	48	20	56188	3644.8	24.79	24.88	-0.09
[2A]-13A-46D-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.86	-0.05
2A-13A-46D-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.65	0.16
[2A]-13A-46D-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.83	-0.02
2A-13A-46D-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.69	0.12
[2A]-13A-46D-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.84	-0.03
[2A]-13A-46D-66A-66A	13	10	23230	782	5230	751	QPSK	1	49	66	20	67236	2190	24.15	23.96	0.19
2A-13A-46D-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	49	66	20	67236	2190	24.15	24.07	0.08
[2A]-13A-46D-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	49	66	20	67236	2190	24.15	24.13	0.02
2A-13A-46D-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	49	66	20	67236	2190	24.15	24.03	0.12
[2A]-13A-46D-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	49	66	20	67236	2190	24.15	23.96	0.19
[2A]-13A-46D-66A-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50269	5497.9	24.79	24.62	0.17
2A-13A-46D-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50269	5497.9	24.79	24.62	0.17
[2A]-13A-46D-[66A]-66A	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50269	5497.9	24.79	24.84	-0.05
2A-13A-46D-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50269	5497.9	24.79	24.82	-0.03
[2A]-13A-46D-[66A]-[66A]	66	20	132572	1770	67036	2170	QPSK	1	0	46	20	50269	5497.9	24.79	24.83	-0.04
[2A]-5A-46D-66A-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.72	0.09
2A-5A-46D-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.62	0.19
[2A]-5A-46D-[66A]-66A	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.88	-0.07
2A-5A-46D-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.84	-0.03
[2A]-5A-46D-[66A]-[66A]	2	5	18900	1880	900	1960	QPSK	1	12	66	20	67236	2190	24.81	24.82	-0.01
[2A]-5A-46D-66A-66A																

2. 5G NR Call Box Setup

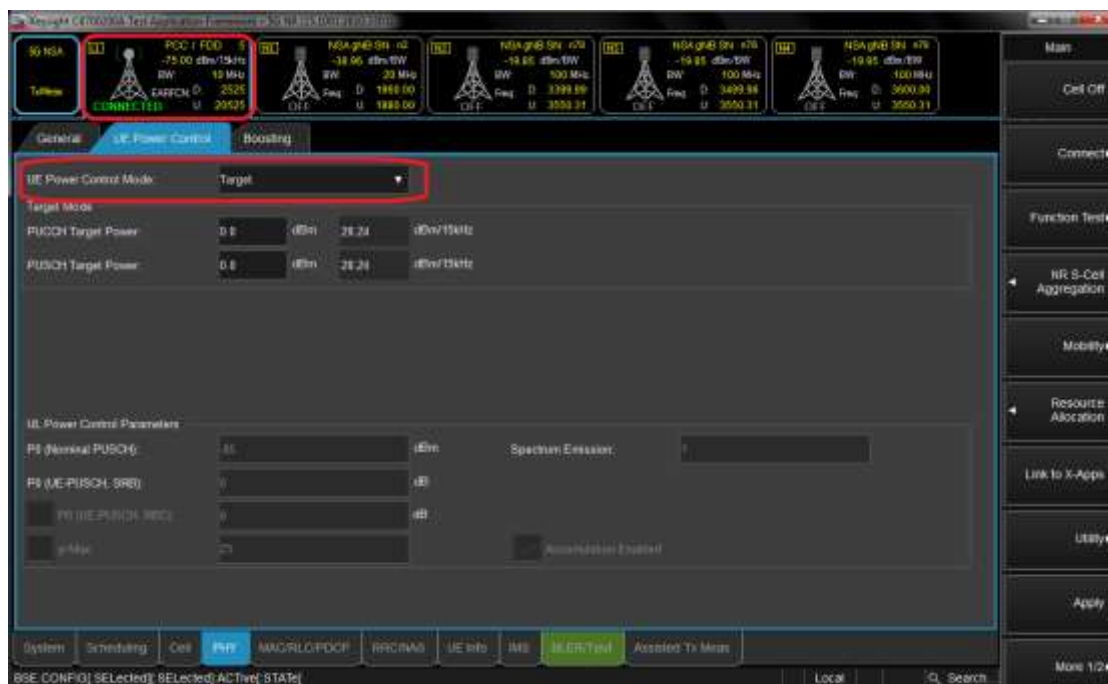
Procedure used to establish output Power measurement for NR Bands

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.

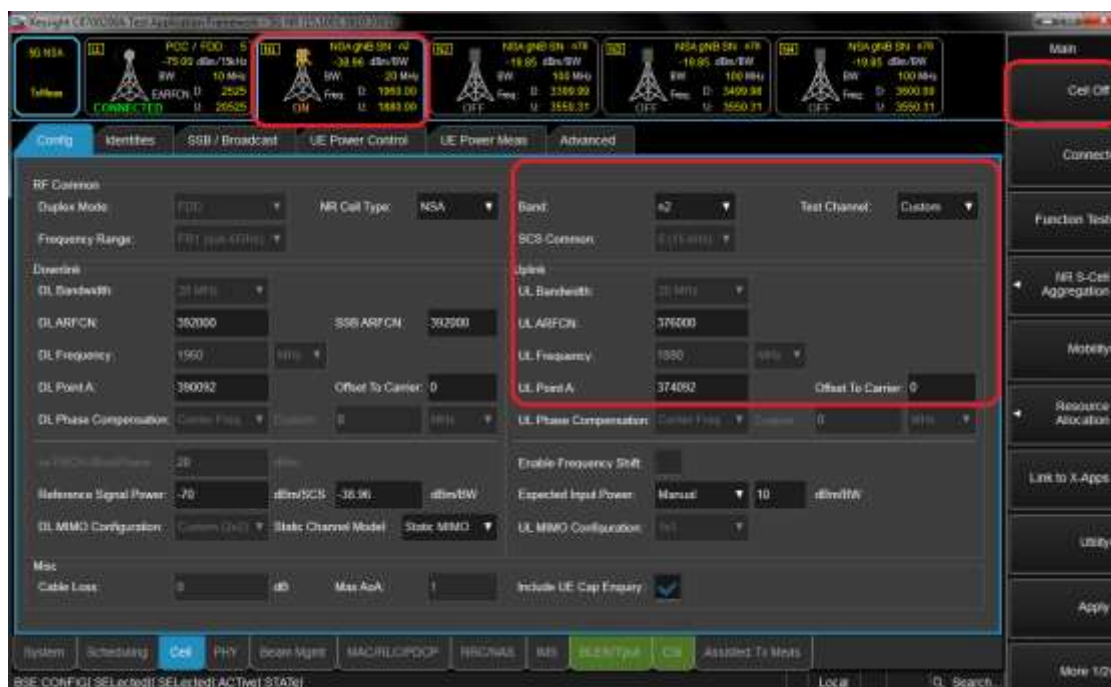


Setup for NR Band

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

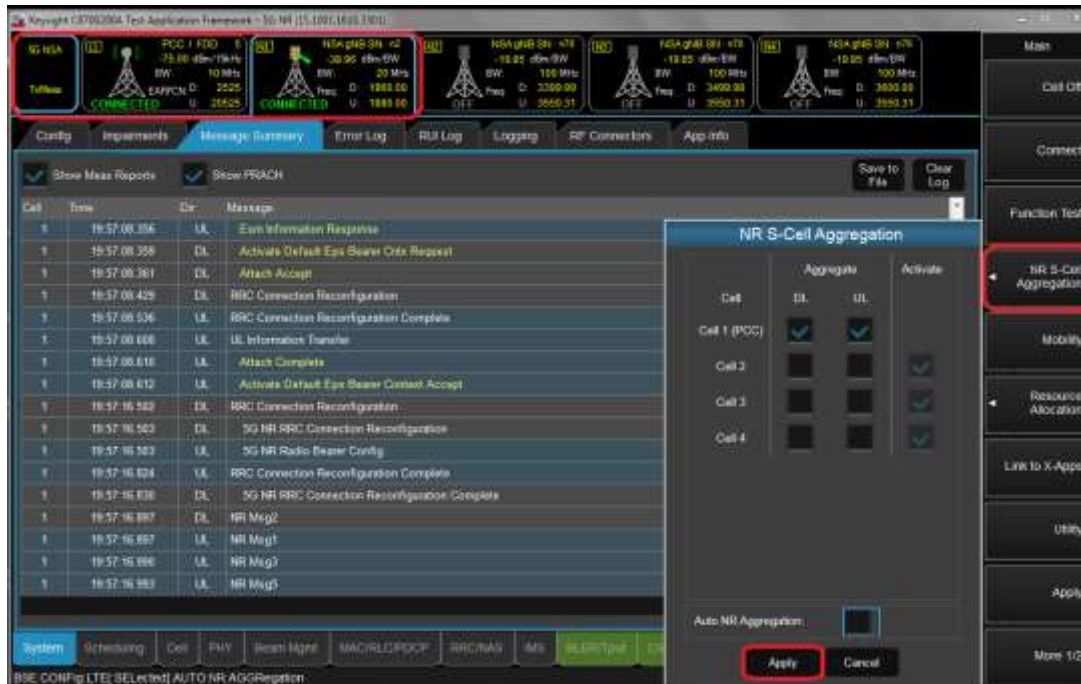


- Select operating band, BW, SCS and Channel.
- Turn the NR Cell On using "ON/OFF" Key.



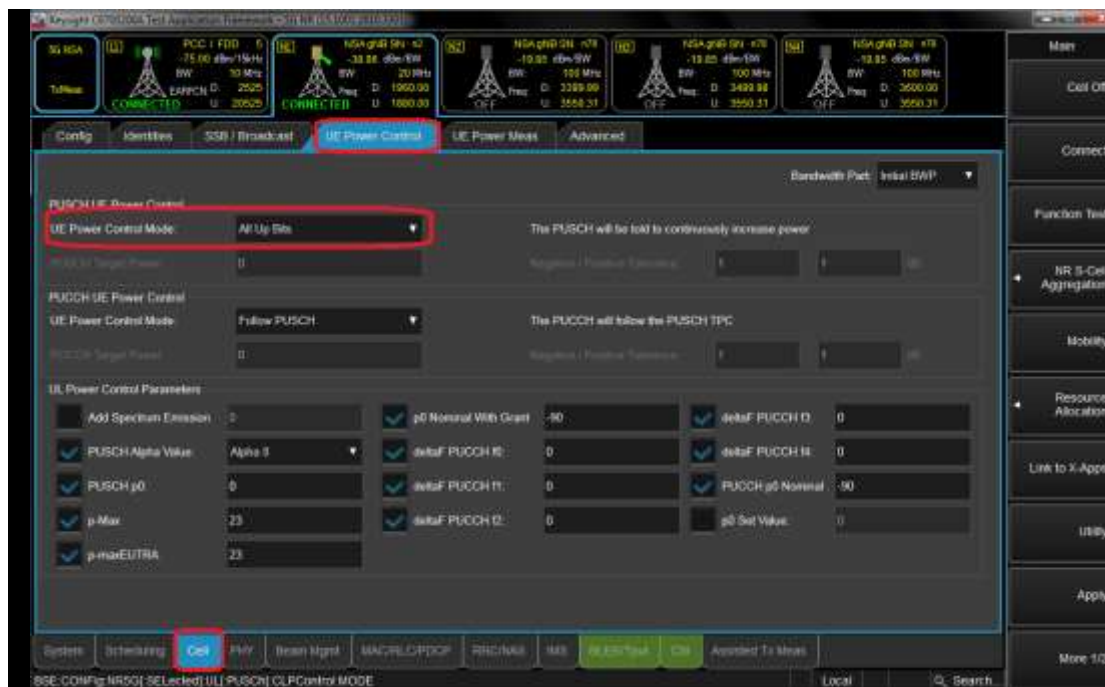
Connect NR S-Cell Aggregation

- 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".

