

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.

1. Power Reduction Verification for Main Ant

This device utilizes a power reduction mechanism for some wireless modes and bands for SAR compliance under hotspot conditions and under some conditions when the device is being used in close proximity to the user's hand for Main Ant1

The proximity sensor applied to this product has a higher priority than the Hotspot power reduction, so these two conditions do not work simultaneously. and In both cases, powers were reduced to the same Power level.

All Hotspot SAR evaluations for this device were performed at the maximum allowed output Power when Hotspot is activated. FCC KDB Publication 616217D04v01r02 section 6 was used as a guideline for selection SAR test distances for this device when being used in phablet use conditions. For detailed measurement conducted power results, please refer to the Section .11

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.

1.1. Power Verification Procedure 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.

Power Reduction Verification for MAIN ANT1

Mechanism(s)	Mode/Band	Conducted Power (dBm)		
		Un-triggered (Max Power)	Triggered (Reduced Power)	Triggered (Reduced Power)
Grip	GSM850 /Voice	31.85	29.60	
Grip	GSM850 /GPRS 1Tx	31.88	29.59	
Grip	GSM850 /GPRS 2Tx	31.45	28.35	
Grip	GSM850 /GPRS 3Tx	29.23	26.48	
Grip	GSM850 /GPRS 4Tx	27.34	24.44	
Grip	GSM1900 /Voice	29.43	26.49	
Grip	GSM1900 /GPRS 1Tx	29.42	26.44	
Grip	GSM1900 /GPRS 2Tx	28.40	25.22	
Grip	GSM1900 /GPRS 3Tx	26.87	23.67	
Grip	GSM1900 /GPRS 4Tx	24.63	21.80	
Grip	PCS RC3/3	23.70	18.86	
Grip	PCS EVDO Rev.0	23.82	18.72	
Grip	PCS EVDO Rev.A	23.79	18.74	
Grip	WCDMA B2	23.51	18.66	
Grip	WCDMA B4	23.27	18.37	
Grip	LTE Band 2	24.30	17.99	
Grip	LTE Band 4	24.55	18.15	
Grip	LTE Band 7	22.81	19.62	
Grip	LTE Band 25	23.99	18.08	
Grip	LTE Band 30	23.58	19.63	
Grip	LTE Band 38	23.08	22.34	
Grip	LTE Band 41(Class 3)	23.74	22.42	
Grip	LTE Band 41(Class 2)	26.40	22.43	
Grip	LTE Band 66	24.65	18.42	
Grip	Sub 6 Band n2	25.23	19.02	
Grip	Sub 6 Band n25	25.12	19.24	
Grip	Sub 6 Band n41	24.09	21.44	
Grip	Sub 6 Band n66	24.87	19.34	
Hotspot On	GSM1900 /Voice	29.43	26.46	
Hotspot On	GSM1900 /GPRS 1Tx	29.42	26.45	
Hotspot On	GSM1900 /GPRS 2Tx	28.40	25.16	
Hotspot On	GSM1900 /GPRS 3Tx	26.87	23.66	
Hotspot On	GSM1900 /GPRS 4Tx	24.63	21.75	
Hotspot On	PCS RC3/3	23.70	18.81	
Hotspot On	PCS EVDO Rev.0	23.82	18.71	
Hotspot On	PCS EVDO Rev.A	23.79	18.72	
Hotspot On	WCDMA B2	23.51	18.57	
Hotspot On	WCDMA B4	23.27	18.35	
Hotspot On	LTE Band 2	24.30	18.00	
Hotspot On	LTE Band 4	24.55	18.20	
Hotspot On	LTE Band 7	22.81	19.65	
Hotspot On	LTE Band 25	23.99	18.11	
Hotspot On	LTE Band 30	23.58	19.64	
Hotspot On	LTE Band 38	23.08	22.37	
Hotspot On	LTE Band 41(Class 3)	23.74	22.38	
Hotspot On	LTE Band 41(Class 2)	26.40	22.39	
Hotspot On	LTE Band 66	24.65	18.47	

Hotspot On	Sub 6 Band n2	25.23	18.98	
Hotspot On	Sub 6 Band n25	25.12	19.22	
Hotspot On	Sub 6 Band n41	24.09	21.48	
Hotspot On	Sub 6 Band n66	24.87	19.34	
Hotspot On, Then Grip	GSM1900 /Voice	29.43	26.46	26.49
Hotspot On, Then Grip	GSM1900 /GPRS 1Tx	29.42	26.45	26.44
Hotspot On, Then Grip	GSM1900 /GPRS 2Tx	28.40	25.16	25.22
Hotspot On, Then Grip	GSM1900 /GPRS 3Tx	26.87	23.66	23.67
Hotspot On, Then Grip	GSM1900 /GPRS 4Tx	24.63	21.75	21.80
Hotspot On, Then Grip	PCS RC3/3	23.70	18.81	18.86
Hotspot On, Then Grip	PCS EVDO Rev.0	23.82	18.71	18.72
Hotspot On, Then Grip	PCS EVDO Rev.A	23.79	18.72	18.74
Hotspot On, Then Grip	WCDMA B2	23.51	18.57	18.66
Hotspot On, Then Grip	WCDMA B4	23.27	18.35	18.37
Hotspot On, Then Grip	LTE Band 2	24.30	18.00	17.99
Hotspot On, Then Grip	LTE Band 4	24.55	18.20	18.15
Hotspot On, Then Grip	LTE Band 7	22.81	19.65	19.62
Hotspot On, Then Grip	LTE Band 25	23.99	18.11	18.08
Hotspot On, Then Grip	LTE Band 30	23.58	19.64	19.63
Hotspot On, Then Grip	LTE Band 38	23.08	22.37	22.34
Hotspot On, Then Grip	LTE Band 41(Class 3)	23.74	22.38	22.42
Hotspot On, Then Grip	LTE Band 41(Class 2)	26.40	22.39	22.43
Hotspot On, Then Grip	LTE Band 66	24.65	18.47	18.42
Hotspot On, Then Grip	Sub 6 Band n2	25.23	18.98	19.02
Hotspot On, Then Grip	Sub 6 Band n25	25.12	19.22	19.24
Hotspot On, Then Grip	Sub 6 Band n41	24.09	21.48	21.44
Hotspot On, Then Grip	Sub 6 Band n66	24.87	19.34	19.34
Grip, then Hotspot On	GSM1900 /Voice	29.43	26.49	26.49
Grip, then Hotspot On	GSM1900 /GPRS 1Tx	29.42	26.44	26.44
Grip, then Hotspot On	GSM1900 /GPRS 2Tx	28.40	25.22	25.22
Grip, then Hotspot On	GSM1900 /GPRS 3Tx	26.87	23.67	23.67
Grip, then Hotspot On	GSM1900 /GPRS 4Tx	24.63	21.80	21.80
Grip, then Hotspot On	PCS RC3/3	23.70	18.86	18.86
Grip, then Hotspot On	PCS EVDO Rev.0	23.82	18.72	18.72
Grip, then Hotspot On	PCS EVDO Rev.A	23.79	18.74	18.74
Grip, then Hotspot On	WCDMA B2	23.51	18.66	18.66
Grip, then Hotspot On	WCDMA B4	23.27	18.37	18.37
Grip, then Hotspot On	LTE Band 2	24.30	17.99	17.99
Grip, then Hotspot On	LTE Band 4	24.55	18.15	18.15
Grip, then Hotspot On	LTE Band 7	22.81	19.62	19.62
Grip, then Hotspot On	LTE Band 25	23.99	18.08	18.08
Grip, then Hotspot On	LTE Band 30	23.58	19.63	19.63
Grip, then Hotspot On	LTE Band 38	23.08	22.34	22.34
Grip, then Hotspot On	LTE Band 41(Class 3)	23.74	22.42	22.42
Grip, then Hotspot On	LTE Band 41(Class 2)	26.40	22.43	22.43
Grip, then Hotspot On	LTE Band 66	24.65	18.42	18.42
Grip, then Hotspot On	Sub 6 Band n2	25.23	19.02	19.02
Grip, then Hotspot On	Sub 6 Band n25	25.12	19.24	19.24
Grip, then Hotspot On	Sub 6 Band n41	24.09	21.44	21.44
Grip, then Hotspot On	Sub 6 Band n66	24.87	19.34	19.34

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

1.2. Procedures for determining proximity sensor triggering distances

(KDB 616217 D04v01r02 §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]
850 MHz	9	10	8	9	14	15
1750 MHz	9	10	8	9	14	15
1900 MHz	9	10	8	9	14	15
2300 MHz	9	10	8	9	14	15
2600 MHz	9	10	8	9	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]
GSM850 /Voice	31.75	31.73	31.84	31.85	31.79	29.45	29.46	29.60	29.58	29.45
GSM850 /GPRS 1Tx	31.67	31.79	31.81	31.65	31.83	29.51	29.51	29.56	29.49	29.42
GSM850 /GPRS 2Tx	31.45	31.25	31.30	31.32	31.45	28.16	28.23	28.17	28.35	28.29
GSM850 /GPRS 3Tx	29.13	29.05	29.18	29.21	29.14	26.45	26.29	26.43	26.34	26.44
GSM850 /GPRS 4Tx	27.34	27.23	27.22	27.19	27.26	24.40	24.38	24.36	24.34	24.27
GSM1900 /Voice	29.31	29.24	29.25	29.34	29.43	26.40	26.45	26.48	26.42	26.36
GSM1900 /GPRS 1Tx	29.38	29.44	29.37	29.51	29.39	26.28	26.40	26.34	26.26	26.41
GSM1900 /GPRS 2Tx	28.34	28.39	28.25	28.37	28.32	25.21	25.10	25.12	25.05	25.07
GSM1900 /GPRS 3Tx	26.76	26.69	26.76	26.79	26.78	23.48	23.58	23.55	23.53	23.59
GSM1900 /GPRS 4Tx	24.56	24.53	24.56	24.54	24.47	21.75	21.68	21.64	21.75	21.64
PCS RC3/3	23.59	23.62	23.57	23.6	23.63	18.78	18.7	18.81	18.8	18.71
PCS EVDO Rev.0	23.77	23.67	23.68	23.6	23.6	18.57	18.67	18.6	18.59	18.65
PCS EVDO Rev.A	23.63	23.68	23.61	23.67	23.67	18.71	18.59	18.59	18.62	18.55
WCDMA B2	23.51	23.44	23.44	23.34	23.47	18.49	18.54	18.50	18.61	18.58
WCDMA B4	23.20	23.21	23.18	23.22	23.07	18.19	18.20	18.36	18.32	18.23
LTE Band 2	24.29	24.22	24.21	24.10	24.19	17.93	17.91	17.94	17.92	17.96
LTE Band 4	24.43	24.41	24.35	24.50	24.47	18.05	18.01	18.05	18.07	18.08
LTE Band 7	22.74	22.61	22.61	22.61	22.68	19.62	19.48	19.55	19.45	19.47
LTE Band 25	23.93	23.85	23.92	23.94	23.86	17.94	17.94	18.05	17.90	18.00
LTE Band 30	23.44	23.40	23.46	23.48	23.53	19.43	19.53	19.47	19.46	19.56
LTE Band 38	22.95	23.06	23.04	22.91	22.99	22.21	22.31	22.19	22.34	22.17
LTE Band 41(Class 3)	23.60	23.73	23.72	23.65	23.61	22.36	22.26	22.23	22.27	22.33
LTE Band 41(Class 2)	26.3	26.35	26.39	26.32	26.2	22.34	22.41	22.43	22.27	22.38
LTE Band 66	24.59	24.61	24.65	24.54	24.46	18.31	18.33	18.32	18.22	18.32
Sub 6 Band n2	25.07	25.06	25.09	25.17	25.05	18.88	18.83	18.95	18.96	18.99
Sub 6 Band n25	24.93	25.03	25.02	24.99	24.93	19.04	19.14	19.23	19.06	19.06
Sub 6 Band n41	23.97	23.90	24.09	24.01	23.94	21.35	21.31	21.30	21.33	21.31
Sub 6 Band n66	24.72	24.76	24.82	24.79	24.76	19.30	19.21	19.16	19.19	19.23

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]	14[mm]	15[mm]
GSM850 /Voice	29.53	29.47	29.49	29.59	29.48	31.84	31.80	31.65	31.74	31.71
GSM850 /GPRS 1Tx	29.59	29.49	29.52	29.51	29.54	31.77	31.85	31.85	31.80	31.82
GSM850 /GPRS 2Tx	28.33	28.23	28.32	28.25	28.27	31.44	31.38	31.38	31.33	31.25
GSM850 /GPRS 3Tx	26.28	26.34	26.42	26.32	26.48	29.17	29.09	29.05	29.21	29.16
GSM850 /GPRS 4Tx	24.28	24.34	24.33	24.40	24.39	27.29	27.16	27.32	27.34	27.33
GSM1900 /Voice	26.44	26.38	26.33	26.40	26.31	29.30	29.43	29.33	29.36	29.30
GSM1900 /GPRS 1Tx	26.27	26.41	26.36	26.42	26.24	29.39	29.37	29.44	29.52	29.35
GSM1900 /GPRS 2Tx	25.16	25.03	25.09	25.22	25.11	28.22	28.28	28.33	28.28	28.28
GSM1900 /GPRS 3Tx	23.47	23.62	23.47	23.52	23.50	26.87	26.67	26.70	26.70	26.85
GSM1900 /GPRS 4Tx	21.77	21.67	21.65	21.76	21.77	24.43	24.53	24.55	24.46	24.58
PCS RC3/3	18.73	18.66	18.85	18.67	18.74	23.68	23.54	23.57	23.66	23.64
PCS EVDO Rev.0	18.55	18.71	18.62	18.69	18.69	23.74	23.63	23.7	23.62	23.76
PCS EVDO Rev.A	18.70	18.74	18.54	18.55	18.56	23.71	23.79	23.64	23.64	23.65
WCDMA B2	18.46	18.55	18.60	18.50	18.53	23.31	23.46	23.33	23.43	23.44
WCDMA B4	18.37	18.22	18.29	18.21	18.26	23.23	23.17	23.24	23.16	23.26
LTE Band 2	17.94	17.82	17.97	17.89	17.85	24.24	24.19	24.22	24.16	24.28
LTE Band 4	17.96	18.03	18.11	18.07	18.03	24.36	24.44	24.43	24.40	24.48
LTE Band 7	19.49	19.60	19.54	19.49	19.53	22.63	22.62	22.71	22.64	22.73
LTE Band 25	17.99	18.08	17.93	17.90	17.97	23.79	23.90	23.84	23.83	23.84
LTE Band 30	19.55	19.63	19.52	19.46	19.56	23.42	23.56	23.54	23.55	23.56
LTE Band 38	22.19	22.31	22.26	22.31	22.29	22.89	22.88	22.97	23.06	22.98
LTE Band 41(Class 3)	22.36	22.24	22.36	22.28	22.28	23.54	23.69	23.72	23.66	23.64
LTE Band 41(Class 2)	22.41	22.37	22.29	22.29	22.4	26.34	26.34	26.38	26.21	26.25
LTE Band 66	18.36	18.36	18.38	18.4	18.22	24.62	24.54	24.46	24.55	24.61
Sub 6 Band n2	18.97	18.96	19.00	18.91	19.01	25.07	25.16	25.14	25.19	25.03
Sub 6 Band n25	19.09	19.13	19.06	19.14	19.06	24.92	24.93	25.11	25.03	25.10
Sub 6 Band n41	21.41	21.38	21.27	21.44	21.26	23.92	24.07	23.96	23.91	24.09
Sub 6 Band n66	19.20	19.15	19.23	19.30	19.33	24.78	24.67	24.81	24.79	24.84

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

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

Mode	Distance to DUT Output power (dBm)									
	13[mm]	12[mm]	11[mm]	10[mm]	9[mm]	8[mm]	7[mm]	6[mm]	5[mm]	4[mm]
GSM850 /Voice	31.81	31.82	31.76	31.79	31.68	29.42	29.49	29.49	29.51	29.53
GSM850 /GPRS 1Tx	31.67	31.66	31.81	31.81	31.85	29.55	29.43	29.51	29.51	29.54
GSM850 /GPRS 2Tx	31.42	31.29	31.45	31.44	31.41	28.28	28.29	28.34	28.31	28.21
GSM850 /GPRS 3Tx	29.13	29.17	29.06	29.08	29.23	26.39	26.43	26.31	26.29	26.39
GSM850 /GPRS 4Tx	27.23	27.25	27.32	27.24	27.25	24.34	24.28	24.41	24.34	24.36
GSM1900 /Voice	29.32	29.32	29.23	29.26	29.37	26.45	26.44	26.49	26.35	26.43
GSM1900 /GPRS 1Tx	29.37	29.39	29.49	29.46	29.50	26.37	26.31	26.31	26.31	26.24
GSM1900 /GPRS 2Tx	28.31	28.32	28.30	28.38	28.29	25.21	25.20	25.22	25.06	25.12
GSM1900 /GPRS 3Tx	26.85	26.71	26.72	26.67	26.81	23.49	23.63	23.66	23.61	23.60
GSM1900 /GPRS 4Tx	24.59	24.43	24.45	24.59	24.58	21.60	21.77	21.67	21.67	21.69
PCS RC3/3	23.53	23.53	23.7	23.63	23.52	18.86	18.79	18.72	18.7	18.69
PCS EVDO Rev.0	23.6	23.69	23.7	23.78	23.8	18.61	18.59	18.52	18.66	18.59
PCS EVDO Rev.A	23.70	23.72	23.73	23.74	23.66	18.63	18.66	18.69	18.70	18.60
WCDMA B2	23.45	23.36	23.51	23.33	23.34	18.61	18.55	18.60	18.51	18.52
WCDMA B4	23.14	23.18	23.12	23.25	23.19	18.29	18.24	18.30	18.37	18.23
LTE Band 2	24.20	24.19	24.26	24.17	24.13	17.99	17.85	17.96	17.92	17.81
LTE Band 4	24.47	24.52	24.43	24.43	24.51	18.03	18.01	18.12	18.01	18.08
LTE Band 7	22.64	22.69	22.65	22.70	22.67	19.53	19.61	19.48	19.46	19.58
LTE Band 25	23.89	23.96	23.84	23.91	23.80	17.99	18.01	18.03	17.97	17.88
LTE Band 30	23.51	23.51	23.41	23.55	23.49	19.54	19.50	19.63	19.63	19.44
LTE Band 38	22.88	23.06	22.94	23.04	23.05	22.24	22.32	22.23	22.20	22.14
LTE Band 41(Class 3)	23.56	23.69	23.55	23.72	23.63	22.37	22.42	22.31	22.28	22.22
LTE Band 41(Class 2)	26.24	26.25	26.2	26.36	26.37	22.38	22.26	22.38	22.35	22.33
LTE Band 66	24.65	24.47	24.58	24.56	24.57	18.41	18.39	18.42	18.33	18.39
Sub 6 Band n2	25.05	25.18	25.12	25.23	25.23	18.92	18.98	18.96	18.91	18.83
Sub 6 Band n25	25.01	25.03	25.06	24.98	24.93	19.20	19.18	19.06	19.04	19.17
Sub 6 Band n41	24.08	24.03	23.89	23.95	23.97	21.44	21.40	21.26	21.44	21.25
Sub 6 Band n66	24.67	24.72	24.80	24.76	24.67	19.14	19.22	19.31	19.28	19.34

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

Mode	Distance to DUT Output power (dBm)									
	5[mm]	6[mm]	7[mm]	8[mm]	9[mm]	10[mm]	11[mm]	12[mm]	13[mm]	14[mm]
GSM850 /Voice	29.59	29.53	29.51	29.47	29.42	31.73	31.85	31.77	31.68	31.77
GSM850 /GPRS 1Tx	29.45	29.49	29.46	29.49	29.42	31.72	31.68	31.77	31.65	31.73
GSM850 /GPRS 2Tx	28.35	28.15	28.30	28.24	28.18	31.35	31.31	31.41	31.26	31.44
GSM850 /GPRS 3Tx	26.37	26.46	26.43	26.35	26.42	29.10	29.18	29.16	29.11	29.08
GSM850 /GPRS 4Tx	24.29	24.24	24.26	24.36	24.37	27.22	27.14	27.21	27.34	27.29
GSM1900 /Voice	26.35	26.30	26.34	26.41	26.30	29.39	29.38	29.31	29.24	29.24
GSM1900 /GPRS 1Tx	26.30	26.36	26.28	26.34	26.25	29.37	29.39	29.32	29.40	29.36
GSM1900 /GPRS 2Tx	25.21	25.05	25.11	25.16	25.16	28.36	28.20	28.36	28.38	28.34
GSM1900 /GPRS 3Tx	23.49	23.49	23.47	23.53	23.57	26.75	26.82	26.83	26.86	26.83
GSM1900 /GPRS 4Tx	21.61	21.66	21.69	21.68	21.78	24.46	24.53	24.62	24.60	24.62
PCS RC3/3	18.75	18.7	18.85	18.66	18.86	23.55	23.53	23.68	23.57	23.5
PCS EVDO Rev.0	18.62	18.64	18.65	18.71	18.54	23.73	23.64	23.69	23.73	23.73
PCS EVDO Rev.A	18.64	18.63	18.61	18.74	18.54	23.60	23.70	23.67	23.79	23.74
WCDMA B2	18.66	18.55	18.60	18.54	18.61	23.36	23.34	23.47	23.47	23.45
WCDMA B4	18.23	18.33	18.17	18.19	18.27	23.12	23.22	23.27	23.24	23.21
LTE Band 2	17.84	17.88	17.95	17.85	17.87	24.25	24.29	24.20	24.27	24.19
LTE Band 4	18.06	18.02	18.15	18.10	18.06	24.46	24.43	24.45	24.52	24.37
LTE Band 7	19.59	19.44	19.48	19.58	19.55	22.75	22.64	22.70	22.74	22.68
LTE Band 25	18.07	18.00	17.94	18.05	17.98	23.82	23.94	23.85	23.90	23.80
LTE Band 30	19.58	19.56	19.63	19.50	19.58	23.44	23.39	23.39	23.52	23.54
LTE Band 38	22.29	22.14	22.22	22.14	22.23	23.08	22.98	22.89	22.90	22.96
LTE Band 41(Class 3)	22.25	22.42	22.36	22.38	22.26	23.65	23.66	23.64	23.60	23.72
LTE Band 41(Class 2)	22.41	22.26	22.36	22.43	22.39	26.34	26.36	26.32	26.34	26.23
LTE Band 66	18.41	18.32	18.28	18.24	18.31	24.54	24.54	24.6	24.48	24.52
Sub 6 Band n2	18.85	19.00	18.91	19.02	18.99	25.17	25.09	25.06	25.09	25.09
Sub 6 Band n25	19.22	19.15	19.13	19.23	19.12	24.93	25.12	25.11	25.04	24.96
Sub 6 Band n41	21.34	21.25	21.35	21.39	21.40	24.04	23.95	23.89	23.93	24.08
Sub 6 Band n66	19.23	19.27	19.28	19.25	19.19	24.81	24.80	24.71	24.87	24.79

Based on the most conservative measured triggering distance of 8mm, additional Phablet SAR measurements were required at 7mm from rear 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]	65[mm]	15[mm]	14[mm]	13[mm]	12[mm]	11[mm]	10[mm]
GSM850 /Voice	31.83	31.74	31.76	31.74	31.71	29.43	29.43	29.53	29.59	29.56
GSM850 /GPRS 1Tx	31.73	31.76	31.79	31.79	31.77	29.58	29.52	29.47	29.45	29.46
GSM850 /GPRS 2Tx	31.29	31.44	31.34	31.43	31.27	28.25	28.20	28.18	28.22	28.35
GSM850 /GPRS 3Tx	29.14	29.14	29.15	29.08	29.12	26.44	26.45	26.32	26.36	26.47
GSM850 /GPRS 4Tx	27.31	27.16	27.31	27.24	27.29	24.36	24.41	24.24	24.42	24.43
GSM1900 /Voice	29.31	29.23	29.23	29.24	29.37	26.45	26.48	26.35	26.49	26.46
GSM1900 /GPRS 1Tx	29.49	29.43	29.38	29.37	29.35	26.39	26.37	26.36	26.38	26.30
GSM1900 /GPRS 2Tx	28.35	28.39	28.35	28.31	28.36	25.05	25.22	25.09	25.19	25.11
GSM1900 /GPRS 3Tx	26.81	26.77	26.77	26.69	26.69	23.55	23.64	23.64	23.59	23.56
GSM1900 /GPRS 4Tx	24.57	24.54	24.51	24.51	24.57	21.80	21.60	21.80	21.76	21.63
PCS RC3/3	23.59	23.51	23.7	23.6	23.5	18.79	18.71	18.82	18.8	18.8
PCS EVDO Rev.0	23.73	23.79	23.67	23.69	23.68	18.65	18.55	18.6	18.58	18.58
PCS EVDO Rev.A	23.69	23.64	23.64	23.66	23.70	18.69	18.66	18.56	18.72	18.61
WCDMA B2	23.49	23.39	23.37	23.37	23.42	18.48	18.46	18.48	18.64	18.58
WCDMA B4	23.15	23.11	23.27	23.25	23.08	18.28	18.34	18.28	18.29	18.33
LTE Band 2	24.15	24.24	24.15	24.11	24.16	17.96	17.91	17.89	17.93	17.89
LTE Band 4	24.46	24.52	24.52	24.35	24.53	18.14	18.09	18.00	17.99	18.07
LTE Band 7	22.78	22.77	22.69	22.74	22.71	19.51	19.46	19.52	19.61	19.57
LTE Band 25	23.92	23.91	23.88	23.82	23.99	17.93	18.02	17.94	18.00	17.92
LTE Band 30	23.51	23.49	23.42	23.41	23.40	19.49	19.61	19.48	19.57	19.58
LTE Band 38	23.06	22.89	23.02	22.89	22.95	22.27	22.30	22.33	22.29	22.19
LTE Band 41(Class 3)	23.65	23.69	23.59	23.56	23.66	22.22	22.26	22.26	22.23	22.25
LTE Band 41(Class 2)	26.35	26.27	26.35	26.37	26.36	22.39	22.41	22.28	22.36	22.39
LTE Band 66	24.47	24.57	24.6	24.56	24.55	18.32	18.42	18.28	18.28	18.32
Sub 6 Band n2	25.05	25.23	25.17	25.15	25.17	18.93	18.84	18.82	18.98	18.99
Sub 6 Band n25	24.99	24.98	25.12	25.07	25.00	19.17	19.21	19.04	19.04	19.08
Sub 6 Band n41	23.98	24.03	23.89	23.92	24.02	21.27	21.42	21.31	21.32	21.43
Sub 6 Band n66	24.80	24.67	24.76	24.71	24.84	19.20	19.34	19.30	19.19	19.32

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]
GSM850 /Voice	29.51	29.54	29.45	29.44	29.41	31.69	31.77	31.68	31.65	31.73
GSM850 /GPRS 1Tx	29.60	29.47	29.43	29.50	29.40	31.76	31.68	31.72	31.80	31.74
GSM850 /GPRS 2Tx	28.34	28.32	28.25	28.18	28.28	31.37	31.25	31.44	31.29	31.40
GSM850 /GPRS 3Tx	26.44	26.31	26.45	26.34	26.41	29.20	29.09	29.21	29.05	29.08
GSM850 /GPRS 4Tx	24.27	24.24	24.27	24.42	24.26	27.21	27.27	27.25	27.17	27.33
GSM1900 /Voice	26.43	26.49	26.44	26.36	26.37	29.37	29.32	29.27	29.29	29.41
GSM1900 /GPRS 1Tx	26.42	26.38	26.36	26.41	26.39	29.51	29.32	29.43	29.45	29.47
GSM1900 /GPRS 2Tx	25.14	25.15	25.13	25.14	25.22	28.34	28.39	28.34	28.38	28.38
GSM1900 /GPRS 3Tx	23.58	23.65	23.62	23.59	23.51	26.71	26.80	26.83	26.81	26.70
GSM1900 /GPRS 4Tx	21.67	21.80	21.74	21.72	21.66	24.43	24.56	24.43	24.55	24.45
PCS RC3/3	18.66	18.73	18.85	18.82	18.83	23.7	23.65	23.5	23.53	23.61
PCS EVDO Rev.0	18.72	18.58	18.7	18.67	18.72	23.64	23.75	23.8	23.76	23.8
PCS EVDO Rev.A	18.65	18.69	18.68	18.64	18.57	23.63	23.77	23.68	23.61	23.79
WCDMA B2	18.51	18.57	18.52	18.55	18.63	23.31	23.40	23.47	23.41	23.31
WCDMA B4	18.29	18.37	18.31	18.21	18.25	23.25	23.27	23.20	23.13	23.26
LTE Band 2	17.81	17.85	17.79	17.97	17.91	24.11	24.29	24.13	24.24	24.14
LTE Band 4	18.10	18.02	18.08	18.05	17.95	24.55	24.44	24.53	24.50	24.40
LTE Band 7	19.54	19.55	19.61	19.44	19.60	22.65	22.77	22.71	22.61	22.76
LTE Band 25	18.04	17.99	18.02	17.91	18.08	23.86	23.86	23.83	23.95	23.92
LTE Band 30	19.58	19.56	19.62	19.50	19.55	23.48	23.41	23.42	23.47	23.55
LTE Band 38	22.23	22.27	22.20	22.32	22.15	22.88	22.98	22.92	22.93	22.88
LTE Band 41(Class 3)	22.28	22.41	22.32	22.33	22.37	23.64	23.59	23.58	23.70	23.58
LTE Band 41(Class 2)	22.26	22.41	22.35	22.24	22.25	26.21	26.36	26.33	26.28	26.35
LTE Band 66	18.4	18.29	18.26	18.41	18.24	24.55	24.59	24.59	24.58	24.5
Sub 6 Band n2	18.90	18.92	18.89	18.99	18.89	25.09	25.18	25.20	25.08	25.10
Sub 6 Band n25	19.18	19.20	19.18	19.16	19.24	24.93	24.93	25.00	25.08	25.00
Sub 6 Band n41	21.40	21.37	21.25	21.43	21.29	23.97	24.02	24.04	23.97	23.92
Sub 6 Band n66	19.18	19.19	19.34	19.14	19.24	24.84	24.67	24.75	24.79	24.72

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

1.3 Proximity Sensor Coverage for SAR measurements

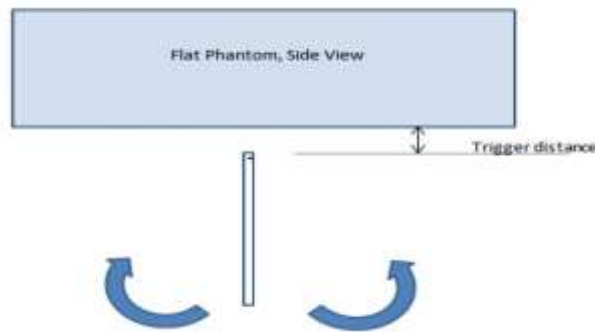
(KDB 616217 D04v01r02 §6.3)

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

1.4 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°	
850MHz	14 mm	On	On	On	On	On	On	On	On	On	On	On	On
1750 MHz	14 mm	On	On	On	On	On	On	On	On	On	On	On	On
1900 MHz	14 mm	On	On	On	On	On	On	On	On	On	On	On	On
2300 MHz	14 mm	On	On	On	On	On	On	On	On	On	On	On	On
2600 MHz	14 mm	On	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 (GSM/850/GSM1900 /CDMA BC1 /WCDMA B2/B4 /LTE B2/B4/B7/B25 /B30/B38/B41(PC3) /B41(PC2)/B66 /SUB6 n2/n25/n41/n66)	Rear	9	N/A	N/A	8
	Front	8	N/A	N/A	7
	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 WLAN/Bluetooth 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/Bluetooth Ant

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)	18.45	18.36	12.52	12.23
RCV-on	2.4GHz 802.11g (Exclude 12/13ch))	17.53	17.33	12.62	12.15
RCV-on	2.4GHz 802.11n (Exclude 12/13ch)	17.18	16.95	12.26	11.77
RCV-on	2.4GHz 802.11ax (Exclude 12/13ch)	15.01	15.57	12.13	12.53
RCV-on	5GHz 802.11a (Exclude 100~144ch)	16.55	16.66	9.58	9.06
RCV-on	5GHz 802.11n 20MHz	16.41	16.77	9.23	8.74
RCV-on	5GHz 802.11n 40MHz	15.14	15.32	9.93	9.26
RCV-on	5GHz 802.11ac 20MHz	16.24	16.77	9.22	8.73
RCV-on	5GHz 802.11ac 40MHz	15.14	15.34	9.93	9.26
RCV-on	5GHz 802.11ac 80MHz	13.42	13.57	9.90	10.18
RCV-on	5GHz 802.11ax 20MHz	14.62	14.05	9.49	9.09
RCV-on	5GHz 802.11ax 40MHz	13.19	12.52	9.90	9.31
RCV-on	5GHz 802.11ax 80MHz	12.66	12.71	9.65	9.69

RCV-on	2.4GHz Bluetooth(1Mbps) (Exclude 0~38,40~78ch)	16.64	16.62	9.48	9.39
RCV-on	2.4GHz Bluetooth(EDR) (Exclude 0~38,40~78ch)	14.60	14.56	9.06	8.86

Appendix I. – DLCA Power Measurement

1. LTE Down-link Carrier Aggregation Conducted Powers

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

Downlink Carrier aggregation:

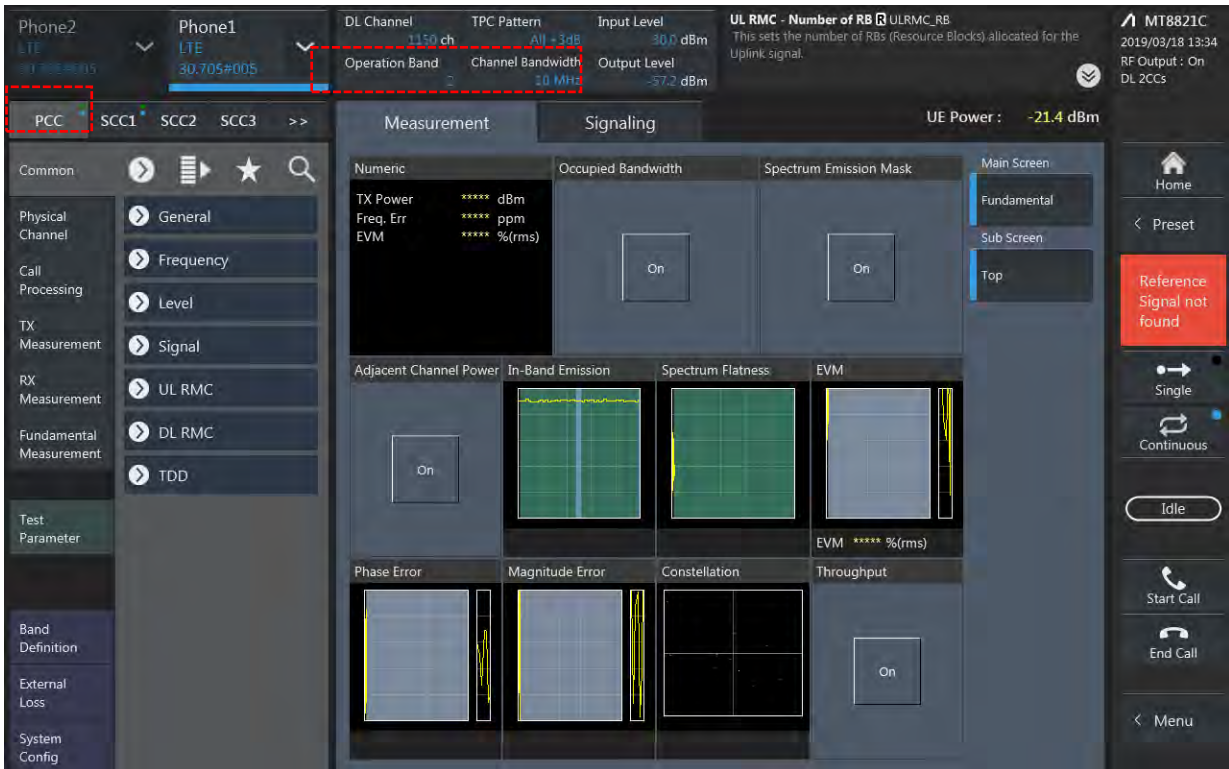
1. This device only supports downlink carrier aggregation. For every supported combination of downlink carrier aggregation, power measurements were performed with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation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



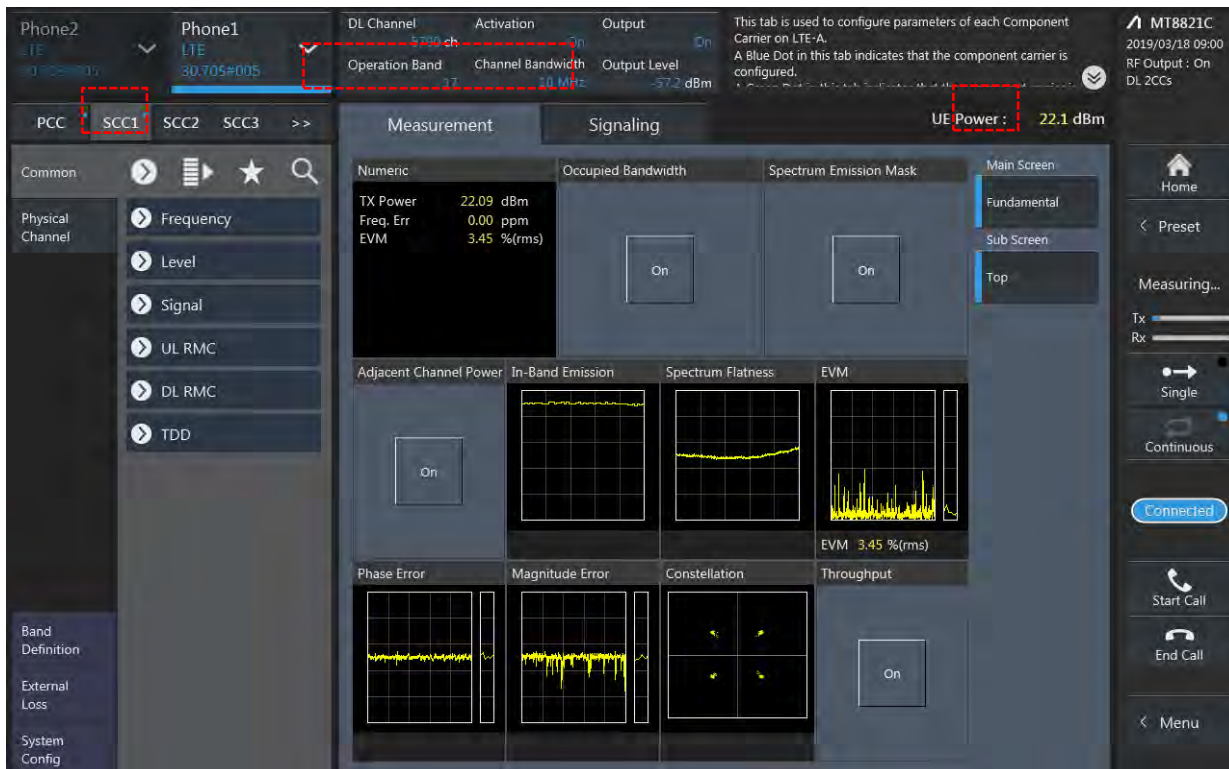
Power Measurement setup

LTE Down Link 2CA Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



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



2CA Downlink Carrier aggregation conducted Powers

LTE Downlink 2CA Maximum Conducted Power

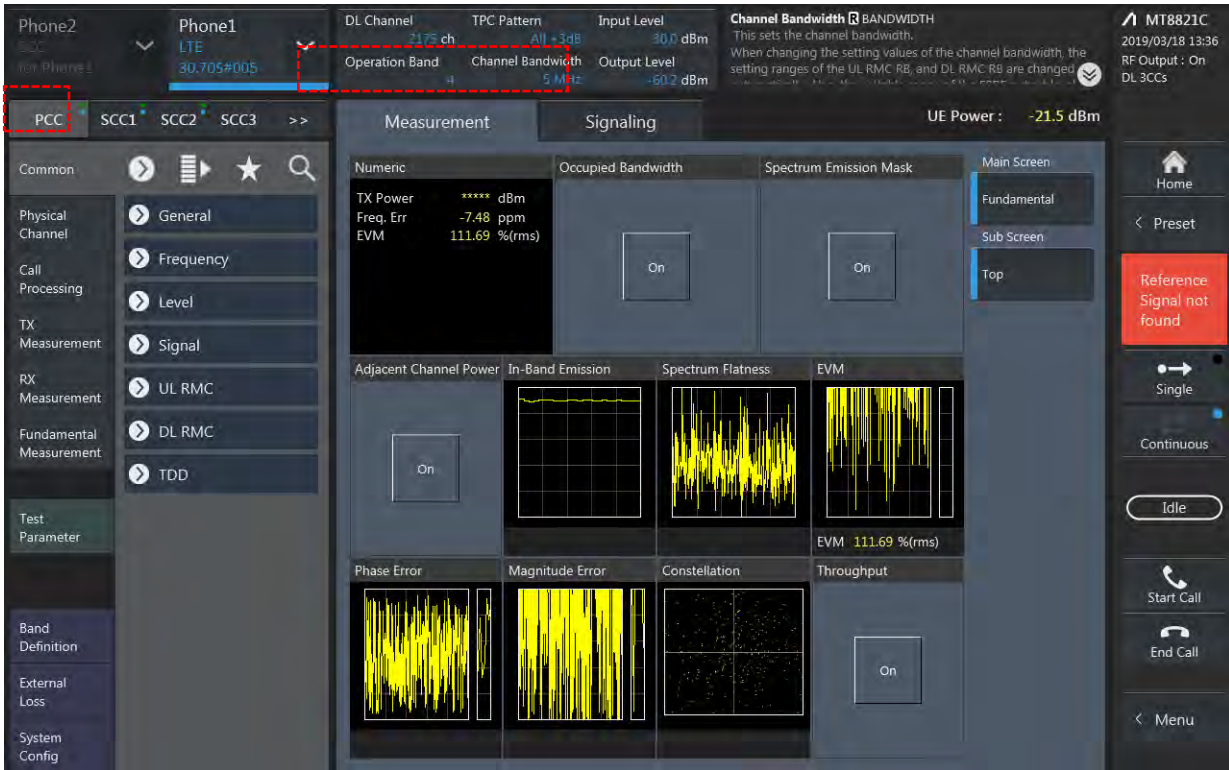
Combination (MAX)	PCC									SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2C	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	24.3	24.22
2A-2A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	24.3	24.29
2A-4A(0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	24.3	24.29
2A-4A(1)	2	10	18650	1855	650	1935	QPSK	1	24	4	10	2175	2132.5	24.16	24.13
2A-4A(0,2)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	24.8	24.73
2A-4A(1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	10	900	1960	24.8	24.77
2A-5A(0)	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	24.3	24.29
2A-5A(1)	2	10	18650	1855	650	1935	QPSK	1	24	5	10	2525	881.5	24.16	24.22
2A-5A(0)	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	24.74	24.77
2A-5A(1)	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	10	900	1960	24.74	24.68
2A-7A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	24.3	24.33
2A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	22.9	22.84
2A-12A(0,1)	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	24.3	24.33
2A-12A(2)	2	10	18650	1855	650	1935	QPSK	1	24	12	10	5095	737.5	24.16	24.21
2A-12A(0,1)	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	24.95	24.91
2A-12A(2)	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	10	900	1960	24.95	24.98
2A-13A(0)	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	24.3	24.35
2A-13A(1)	2	10	18650	1855	650	1935	QPSK	1	24	13	10	5230	751	24.16	24.22
2A-13A(0)	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	24.48	24.41
2A-13A(1)	13	10	23230	782	5230	751	QPSK	1	0	2	10	900	1960	24.48	24.4
2A-14A	2	20	19100	1900	1100	1980	QPSK	1	99	14	10	5330	763	24.3	24.27
2A-14A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	24.74	24.81
2A-29A	2	20	19100	1900	1100	1980	QPSK	1	99	29	10	9715	722.5	24.3	24.31
2A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	30	10	9820	2355	24.3	24.34
2A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	23.78	23.8
2A-66A(0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	24.3	24.35
2A-66A(1)	2	10	18650	1855	650	1935	QPSK	1	24	66	10	66786	2145	24.16	24.2
2A-66A(0,2)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	24.91	24.84
2A-66A(1)	66	5	132322	1745	66786	2145	QPSK	1	12	2	10	900	1960	24.91	24.9
2A-71A(0)	2	20	19100	1900	1100	1980	QPSK	1	99	71	20	68786	637	24.3	24.25
2A-71A(1)	2	10	18650	1855	650	1935	QPSK	1	24	71	10	68786	637	24.16	24.22
2A-71A(0)	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	25.06	25.02
2A-71A(1)	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	10	900	1960	25.06	24.99
4A-4A(0)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	24.8	24.77
4A-4A(1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	10	2000	2115	24.8	24.81

4A-5A(0,1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	5	10	2525	881.5	24.8	24.83
4A-5A(0)	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	10	2175	2132.5	24.74	24.7
4A-5A(1)	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	24.74	24.75
4A-7A(0,1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	7	20	3100	2655	24.8	24.88
4A-7A(0)	7	5	21100	2535	3100	2655	QPSK	1	12	4	10	2175	2132.5	22.9	22.92
4A-7A(1)	7	5	21100	2535	3100	2655	QPSK	1	12	4	20	2175	2132.5	22.9	22.85
4A-12A(0,1,2,3,4)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	10	5095	737.5	24.8	24.72
4A-12A(5)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	5	5095	737.5	24.8	24.75
4A-12A(0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	10	2175	2132.5	24.95	24.9
4A-12A(1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	20	2175	2132.5	24.95	24.88
4A-12A(5)	12	5	23155	713.5	5155	743.5	QPSK	1	0	4	15	2175	2132.5	24.91	24.87
4A-13A(0,1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	13	10	5230	751	24.8	24.83
4A-13A(0)	13	10	23230	782	5230	751	QPSK	1	0	4	20	2175	2132.5	24.48	24.46
4A-13A(1)	13	10	23230	782	5230	751	QPSK	1	0	4	10	2175	2132.5	24.48	24.51
4A-29A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	29	10	9715	722.5	24.8	24.77
4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	71	20	68786	637	24.8	24.81
4A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	4	20	2175	2132.5	25.06	25.11
5B	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	24.74	24.7
5A-5A(0)	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2600	889	24.74	24.7
5A-5A(1)	5	3	20415	825.5	2415	870.5	QPSK	1	14	5	5	2625	891.5	24.79	24.84
5A-7A(1)	5	5	20425	826.5	2425	871.5	QPSK	1	12	7	20	3100	2655	24.74	24.79
5A-7A(0,1)	7	5	21100	2535	3100	2655	QPSK	1	12	5	10	2525	881.5	22.9	22.87
5A-30A	5	5	20425	826.5	2425	871.5	QPSK	1	12	30	10	9820	2355	24.74	24.8
5A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	5	10	2525	881.5	23.78	23.75
5A-38A	5	5	20425	826.5	2425	871.5	QPSK	1	12	38	20	38000	2595	24.74	24.76
5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	24.74	24.72
5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	24.91	24.93
7C(0,2)	7	20	20850	2510	2850	2630	QPSK	1	49	7	20	3048	2649.8	22.8	22.79
7C(1)	7	10	20800	2505	2800	2625	QPSK	1	49	7	20	2944	2639.4	22.89	22.86
7A-7A(0)	7	5	21100	2535	3100	2655	QPSK	1	12	7	15	3375	2682.5	22.9	22.89
7A-7A(1)	7	5	21100	2535	3100	2655	QPSK	1	12	7	20	3350	2680	22.9	22.91
7A-7A(2)	7	5	21100	2535	3100	2655	QPSK	1	12	7	10	3400	2685	22.9	22.94
7A-7A(3)	7	10	20800	2505	2800	2625	QPSK	1	49	7	20	3350	2680	22.89	22.94
7A-12A	7	5	21100	2535	3100	2655	QPSK	1	12	12	10	5095	737.5	22.9	22.86
7A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	7	20	3100	2655	24.95	25.02
7A-13A	7	5	21100	2535	3100	2655	QPSK	1	12	13	10	5230	751	22.9	22.9
7A-13A	13	10	23230	782	5230	751	QPSK	1	0	7	20	3100	2655	24.48	24.45
7A-46A	7	5	21100	2535	3100	2655	QPSK	1	12	46	20	50665	5537.5	22.9	22.86
7A-66A	7	5	21100	2535	3100	2655	QPSK	1	12	66	20	66786	2145	22.9	22.91
7A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	7	20	3100	2655	24.91	24.96

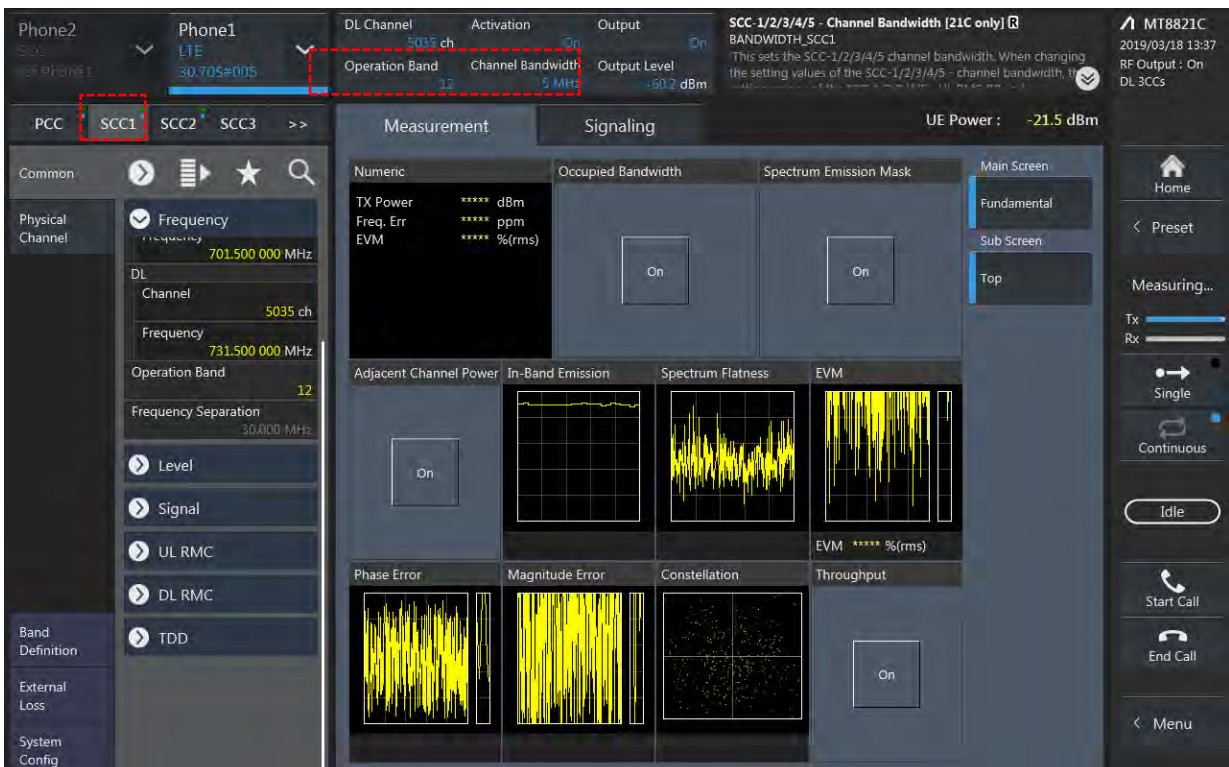
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12A-30A	12	10	23095	707.5	5095	737.5	QPSK	1	49	30	10	9820	2355	24.95	24.97
12A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	12	10	5095	737.5	23.78	23.77
12A-66A(0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	10	66786	2145	24.95	24.93
12A-66A(1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	24.95	24.98
12A-66A(5)	12	5	23155	713.5	5155	743.5	QPSK	1	0	66	15	66786	2145	24.91	24.97
12A-66A(0,1,2,3,4)	66	5	132322	1745	66786	2145	QPSK	1	12	12	10	5095	737.5	24.91	24.86
12A-66A(5)	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5095	737.5	24.91	24.93
13A-46A	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	24.48	24.41
13A-66A	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	24.48	24.51
13A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	24.91	24.98
14A-30A	14	10	23330	793	5330	763	QPSK	1	0	30	10	9820	2355	24.74	24.75
14A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	14	10	5330	763	23.78	23.81
14A-66A	14	10	23330	793	5330	763	QPSK	1	0	66	20	66786	2145	24.74	24.65
14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	14	10	5330	763	24.91	25.01
25A-25A(0)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	10	8090	1935	24.03	24.1
25A-25A(1)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	24.03	24.08
25A-26A(0)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	26	15	8865	876.5	24.03	24.02
25A-26A(1,2)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	26	10	8865	876.5	24.03	23.99
25A-26A(0)	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	20	8365	1962.5	24.8	24.78
25A-26A(1,2)	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	10	8365	1962.5	24.8	24.85
25A-41A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	41	20	40620	2593	24.03	23.98
26A-41A	26	5	26715	816.5	8715	861.5	QPSK	1	12	41	20	40620	2593	24.8	24.77
29A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	29	10	9715	722.5	23.78	23.83
29A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	29	10	9715	722.5	24.91	24.99
30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	66	20	66786	2145	23.78	23.74
30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	30	10	9820	2355	24.91	24.87
38C	38	15	37825	2577.5	37825	2577.5	QPSK	1	74	38	15	37975	2592.5	23.11	23.09
41C(0,1,2,3) PC3	41	10	40160	2547	40160	2547	QPSK	1	24	41	20	40331	2564.1	23.84	23.9
41C(0,2,3) PC2	41	10	39700	2501	39700	2501	QPSK	1	0	41	20	39844	2515.4	26.48	26.51
41C(1) PC2	41	5	40148	2545.8	40148	2545.8	QPSK	1	0	41	20	40265	2557.5	26.5	26.41
41A-41A(0,1) PC3	41	10	40160	2547	40160	2547	QPSK	1	24	41	20	41490	2680	23.84	23.86
41A-41A(0) PC2	41	10	39700	2501	39700	2501	QPSK	1	0	41	20	41490	2680	26.48	26.45
41A-41A(1) PC2	41	5	40148	2545.8	40148	2545.8	QPSK	1	0	41	20	41490	2680	26.5	26.44
46A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	24.91	24.87
46A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	46	20	50665	5537.5	25.06	24.99
66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	24.91	24.89
66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	24.91	24.99
66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	24.91	24.96
66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	71	20	68786	637	24.91	24.93
66A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	25.06	25.12

LTE Down Link 3CA Call Setup

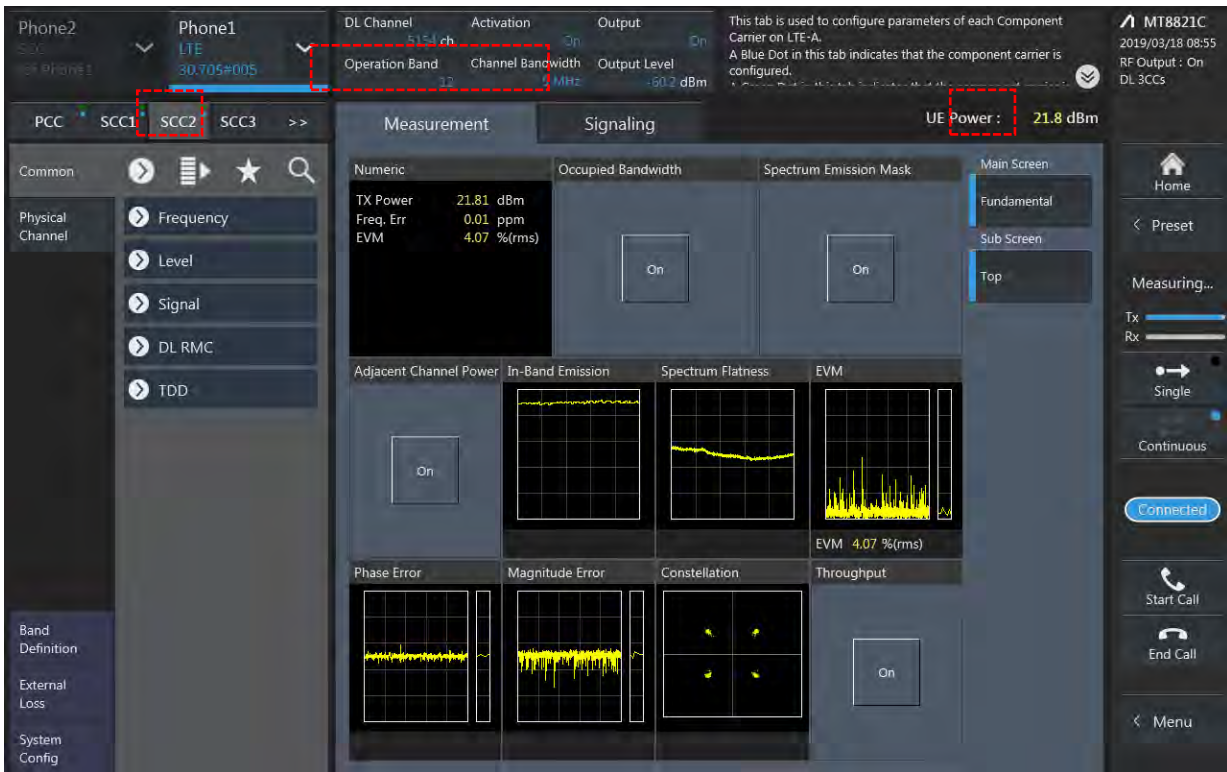
1) PCC Setting: Channel /RB/BW/Modulation



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



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



3CA Downlink Carrier aggregation conducted Powers

LTE Downlink 3CA Maximum Conducted Power

Combination	PCC									SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-2A-4A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.24
2A-2A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.75
2A-2A-5A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	24.3	24.38
2A-2A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.74	24.76
2A-2A-7A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	7	20	3100	2655	24.3	24.32
2A-2A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	2	20	1100	1980	22.9	22.85
2A-2A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	24.3	24.25
2A-2A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	24.95	24.99
2A-2A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	13	10	5230	751	24.3	24.29
2A-2A-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.48	24.42
2A-2A-14A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	14	10	5330	763	24.3	24.34
2A-2A-14A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.74	24.77
2A-2A-29A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	29	10	9715	722.5	24.3	24.37
2A-2A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	30	10	9820	2355	24.3	24.28
2A-2A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	23.78	23.75
2A-2A-46A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	24.3	24.33
2A-2A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.33
2A-2A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.86
2C-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	66	20	66786	2145	24.3	24.32
2C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1098	1979.8	24.91	24.88
2A-2A-71A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	71	20	68786	637	24.3	24.35
2A-2A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	25.06	25.03
2A-4A-4A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.36
2A-4A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.76
2A-4A-5A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	5	10	2525	881.5	24.3	24.27
2A-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.8	24.83
2A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.74	24.80
2A-4A-7A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	7	20	3100	2655	24.3	24.25
2A-4A-7A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	7	20	3100	2655	24.8	24.75
2A-4A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	22.9	22.86
2A-4A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	12	10	5095	737.5	24.3	24.34
2A-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.8	24.81
2A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.95	24.97
2A-4A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.3	24.30
2A-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.8	24.86
2A-4A-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	24.48	24.50
2A-4A-29A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	29	10	9715	722.5	24.3	24.28
2A-4A-29A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	24.8	24.78
2A-4A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	30	10	9820	2355	24.3	24.29
2A-4A-30A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	30	10	9820	2355	24.8	24.81
2A-4A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	23.78	23.81
2A-4A-71A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	71	20	68786	637	24.3	24.32
2A-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.8	24.80
2A-4A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	25.06	24.99

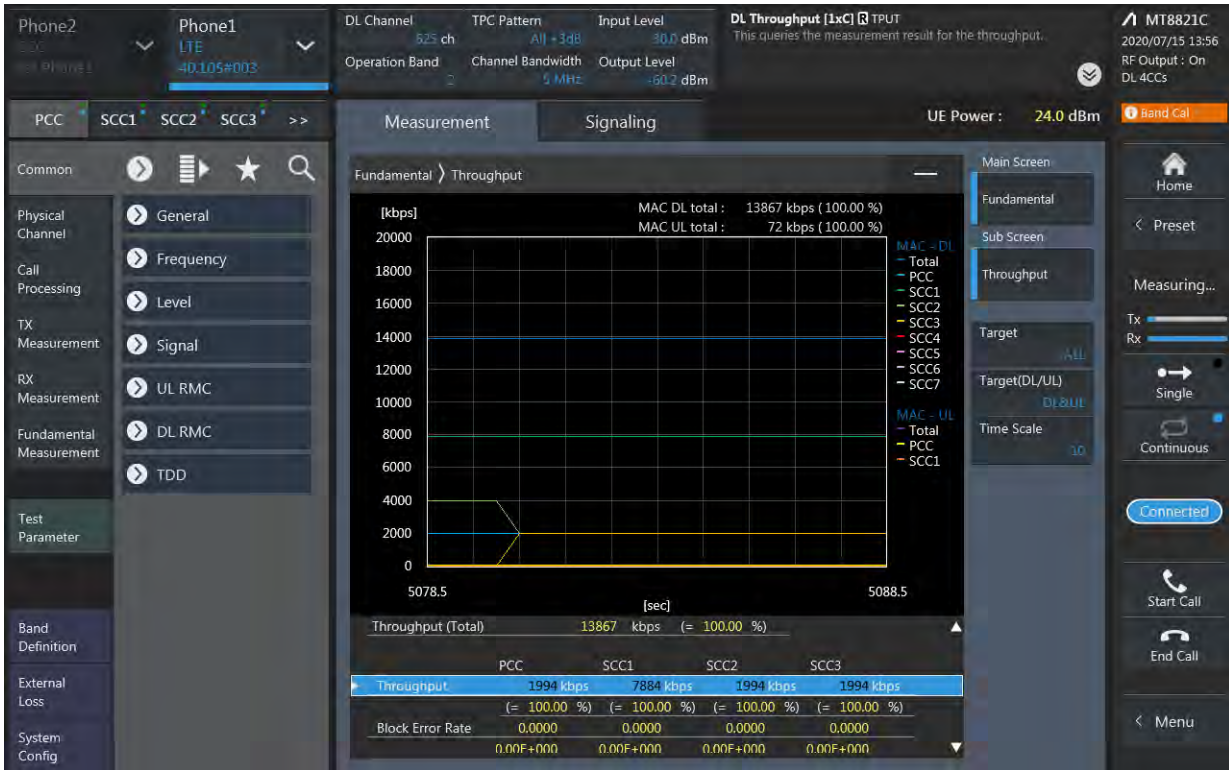
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2A-5A-7A	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	7	20	3100	2655	24.3	24.26
2A-5A-7A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	7	20	3100	2655	24.74	24.76
2A-5A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	22.9	22.86
2A-5A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	30	10	9820	2355	24.3	24.24
2A-5A-30A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	30	10	9820	2355	24.74	24.76
2A-5A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	5	10	2525	881.5	23.78	23.86
2A-5A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	24.3	24.31
2A-5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	24.74	24.72
2A-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.91	24.93
2A-7A-7A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	7	20	3350	2680	24.3	24.25
2A-7A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	7	20	3350	2680	2	20	900	1960	22.9	22.89
2A-7C	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	7	20	3298	2674.8	24.3	24.31
2A-7C	7	20	20850	2510	2850	2630	QPSK	1	49	7	20	3048	2649.8	2	20	900	1960	22.8	22.81
2A-7A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	12	10	5095	737.5	24.3	24.27
2A-7A-12A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	22.9	22.84
2A-7A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	7	20	3100	2655	24.95	24.99
2A-7A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	13	10	5230	751	24.3	24.35
2A-7A-13A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	13	10	5230	751	22.9	22.89
2A-7A-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	7	20	3100	2655	24.48	24.45
2A-7A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	66	20	66786	2145	24.3	24.35
2A-7A-66A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	66	20	66786	2145	22.9	22.91
2A-7A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	7	20	3100	2655	24.91	24.93
2A-12B	2	20	19100	1900	1100	1980	QPSK	1	99	12	5	5095	737.5	12	5	5047	732.7	24.3	24.37
2A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	2	20	900	1960	24.91	24.90
2A-12A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	30	10	9820	2355	24.3	24.26
2A-12A-30A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	30	10	9820	2355	24.95	24.93
2A-12A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	12	10	5095	737.5	23.78	23.80
2A-12A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	24.3	24.28
2A-12A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	66	20	66786	2145	24.95	25.00
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2A-14A-30A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	30	10	9820	2355	24.74	24.79
2A-14A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	14	10	5330	763	23.78	23.80
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2A-14A-66A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.74	24.80
2A-14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	14	10	5330	763	24.91	24.91
2A-29A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	29	10	9715	722.5	30	10	9820	2355	24.3	24.34
2A-29A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	29	10	9715	722.5	23.78	23.77
2A-29A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	29	10	9715	722.5	66	20	66786	2145	24.3	24.29
2A-29A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	23.93	24.90
2A-30A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	30	10	9820	2355	66	20	66786	2145	24.3	24.31
2A-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	23.78	23.80
2A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	30	10	9820	2355	24.91	24.89
2A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.28
2A-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.30
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2A-66B	2	20	19100	1900	1100	1980	QPSK	1	99	66	15	66786	2145	66	5	66879	2154.3	24.3	24.31
2A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	24.91	24.94
2A-66C	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	66984	2164.8	24.3	24.22
2A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	24.91	24.90

2A-66A-71A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	71	20	68786	637	24.3	24.30
2A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.91	24.92
2A-66A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	25.06	25.02
4A-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	5	10	2525	881.5	24.8	24.76
4A-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.74	24.77
4A-4A-7A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	7	20	3100	2655	24.8	24.83
4A-4A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	22.9	22.88
4A-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	12	10	5095	737.5	24.8	24.80
4A-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.95	24.94
4A-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	13	10	5230	751	24.8	24.76
4A-4A-13A	13	10	23230	782	5230	751	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	24.48	24.46
4A-4A-29A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	29	10	9715	722.5	24.8	24.74
4A-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	71	20	68786	637	24.8	24.82
4A-4A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	25.06	25.08
4A-5B	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	24.8	24.77
4A-5B	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	4	20	2175	2132.5	24.74	24.76
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4A-5A-30A	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	30	10	9820	2355	24.74	24.80
4A-5A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	4	20	2175	2132.5	5	10	2525	881.5	23.78	23.81
4A-7A-7A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	7	20	3100	2655	7	20	3350	2680	24.8	24.78
4A-7A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	7	20	3350	2680	4	20	2175	2132.5	22.9	22.93
4A-7C	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	7	20	3100	2655	7	20	3298	2674.8	24.8	24.85
4A-7C	7	20	20850	2510	2850	2630	QPSK	1	49	7	20	3048	2649.8	4	20	2175	2132.5	22.8	22.74
4A-7A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	7	20	3100	2655	12	10	5095	737.5	24.8	24.81
4A-7A-12A	7	5	21100	2535	3100	2655	QPSK	1	12	4	20	2175	2132.5	12	10	5095	737.5	22.9	22.93
4A-12B	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	24.8	24.77
4A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	4	20	2175	2132.5	24.91	24.89
4A-12A-30A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	24.8	24.84
4A-12A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	4	20	2175	2132.5	12	10	5095	737.5	23.78	23.73
4A-29A-30A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	24.8	24.82
4A-29A-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	4	20	2175	2132.5	29	10	9715	722.5	23.78	23.84
4A-46A-46A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.8	24.72
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5B-30A	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	30	10	9820	2355	24.74	24.78
5B-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	5	10	2525	881.5	5	5	2453	874.3	23.78	23.78
5A-5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2600	889	66	20	66786	2145	24.74	24.70
5A-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	5	2525	881.5	5	5	2425	871.5	24.91	24.86
5B-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	66	20	66786	2145	24.74	24.71
5B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	24.91	24.90
5A-7A-7A	5	5	20425	826.5	2425	871.5	QPSK	1	12	7	20	3100	2655	7	20	3350	2680	24.74	24.70
5A-7A-7A	7	5	21100	2535	3100	2655	QPSK	1	12	7	20	3350	2680	5	10	2525	881.5	22.9	22.84
5A-30A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	30	10	9820	2355	66	20	66786	2145	24.74	24.75
5A-30A-66A	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	5	10	2525	881.5	66	20	66786	2145	23.78	23.80
5A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	30	10	9820	2355	24.91	24.95
5A-66A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	67236	2190	24.74	24.69
5A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	24.91	24.87
5A-66B	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	15	66786	2145	66	5	66879	2154.3	24.74	24.80
5A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	5	10	2525	881.5	24.91	24.85
5A-66C	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	66984	2164.8	24.74	24.72
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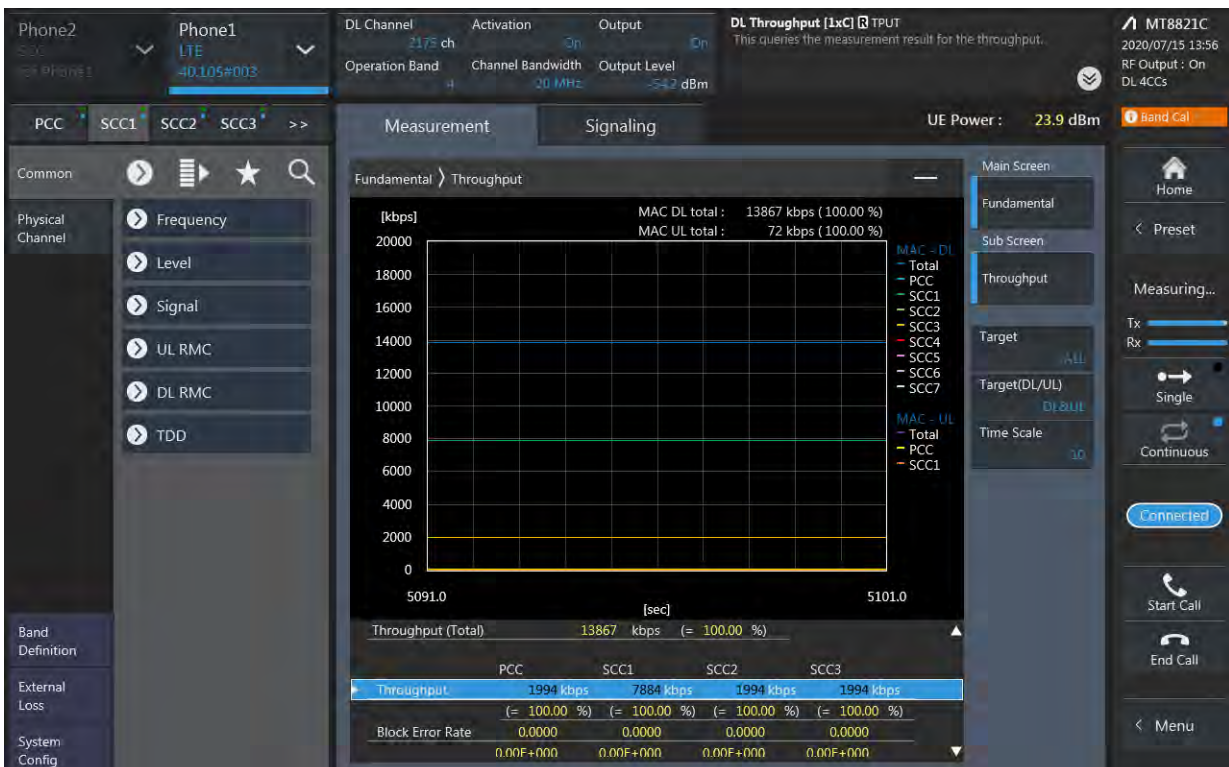
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7A-12B	7	5	21100	2535	3100	2655	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	22.9	22.90
7A-12B	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	7	20	3100	2655	24.91	24.86
7A-12A-66A	7	5	21100	2535	3100	2655	QPSK	1	12	12	10	5095	737.5	66	20	66786	2145	22.9	22.86
7A-12A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	7	20	3100	2655	12	10	5095	737.5	24.91	24.86
7A-46C	7	5	21100	2535	3100	2655	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	22.9	22.94
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7A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	7	20	3100	2655	24.91	24.99
12B-66A	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	66	20	66786	2145	24.91	24.93
12B-66A	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	24.91	24.97
12A-30A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	49	30	10	9820	2355	66	20	66786	2145	24.95	24.94
12A-30A-66A	30	5	27685	2307.5	9795	2352.5	QPSK	1	12	12	10	5095	737.5	66	20	66786	2145	23.78	23.83
12A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	12	10	5095	737.5	30	10	9820	2355	24.91	24.87
12A-66A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	66	20	67236	2190	24.95	24.90
12A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	12	10	5095	737.5	24.91	24.88
12A-66C	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	66	20	66984	2164.8	24.95	24.94
12A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	12	10	5095	737.5	24.91	24.92
13A-66A-66A	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.48	24.51
13A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	13	10	5230	751	24.91	24.95
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13A-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	13	10	5230	751	24.91	24.92
13A-66C	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	66984	2164.8	24.48	24.43
13A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	13	10	5230	751	24.91	24.95
14A-30A-66A	14	10	23330	793	5330	763	QPSK	1	0	30	10	9820	2355	66	20	66786	2145	24.74	24.74
14A-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	14	10	5330	763	66	20	66786	2145	23.78	23.84
14A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	14	10	5330	763	30	10	9820	2355	24.91	24.93
14A-66A-66A	14	10	23330	793	5330	763	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.74	24.72
14A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	14	10	5330	763	24.91	24.94
25A-25A-26A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.03	23.99
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25A-25A-41A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	41	20	40620	2593	24.03	23.99
25A-41C	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	41	20	40620	2593	41	20	40422	2573.2	24.03	24.06
26A-41C	26	5	26715	816.5	8715	861.5	QPSK	1	12	41	20	40620	2593	41	20	40422	2573.2	24.8	24.75
29A-30A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	29	10	9715	722.5	66	20	66786	2145	23.78	23.82
29A-30A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	29	10	9715	722.5	30	10	9820	2355	24.91	24.90
30A-66A-66A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	23.78	23.75
30A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	30	10	9820	2355	24.91	24.88
41A-41C PC3	41	10	40160	2547	40160	2547	QPSK	1	24	41	20	41292	2660.2	41	20	41490	2680	23.84	23.90
41A-41C PC2	41	10	39700	2501	39700	2501	QPSK	1	0	41	20	41292	2660.2	41	20	41490	2680	26.48	26.40
41D PC3	41	10	40160	2547	40160	2547	QPSK	1	24	41	20	40331	2564.1	41	20	40529	2583.9	23.84	23.84
41D PC2	41	10	39700	2501	39700	2501	QPSK	1	0	41	20	39844	2515.4	41	20	40042	2535.2	26.48	26.51
46A-46A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.91	24.88
46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.93
46A-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	24.91	24.84
46A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	46	20	50665	5537.5	24.91	24.84
66A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.91	24.84
66A-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	66	20	67236	2190	24.91	24.99
66A-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	71	20	68786	637	24.91	24.97
66A-66A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	25.06	25.11
66C-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	71	20	68786	637	24.91	24.93
66C-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	66	20	66984	2164.8	25.06	25.04

LTE Down Link 4CA Call Setup

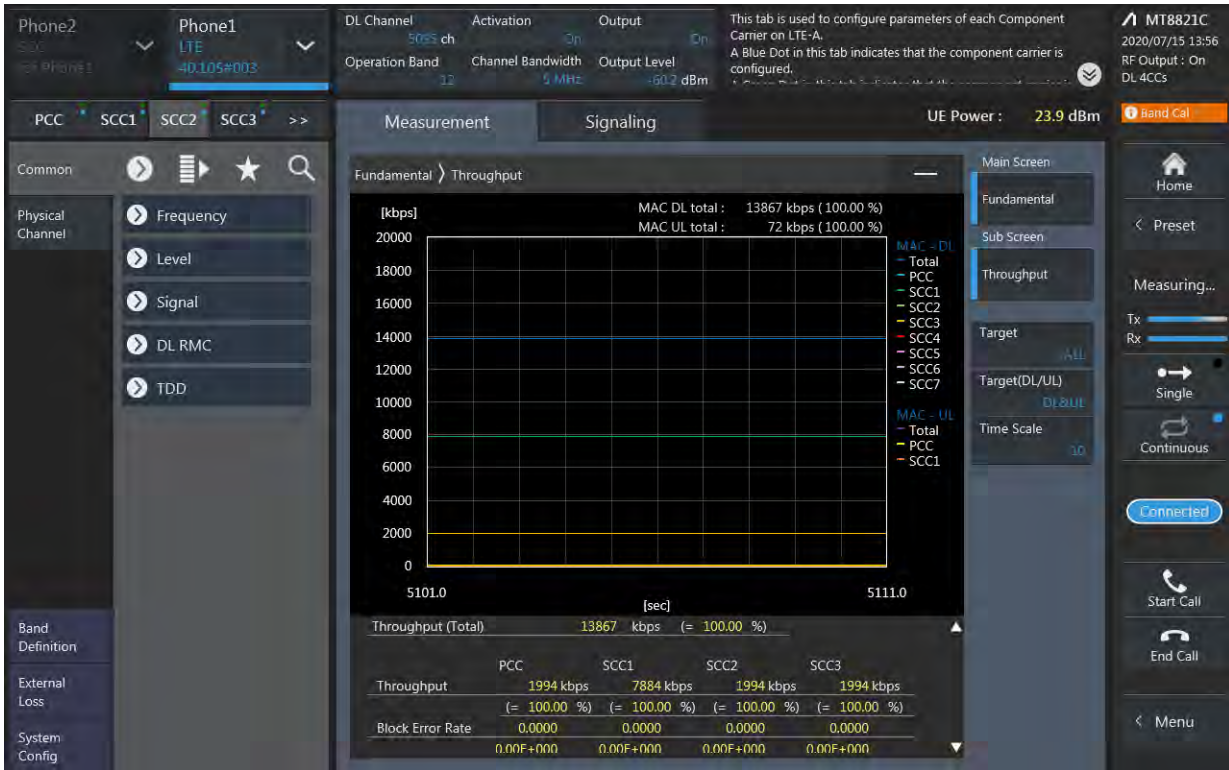
PCC Setting: Channel /RB/BW/Modulation



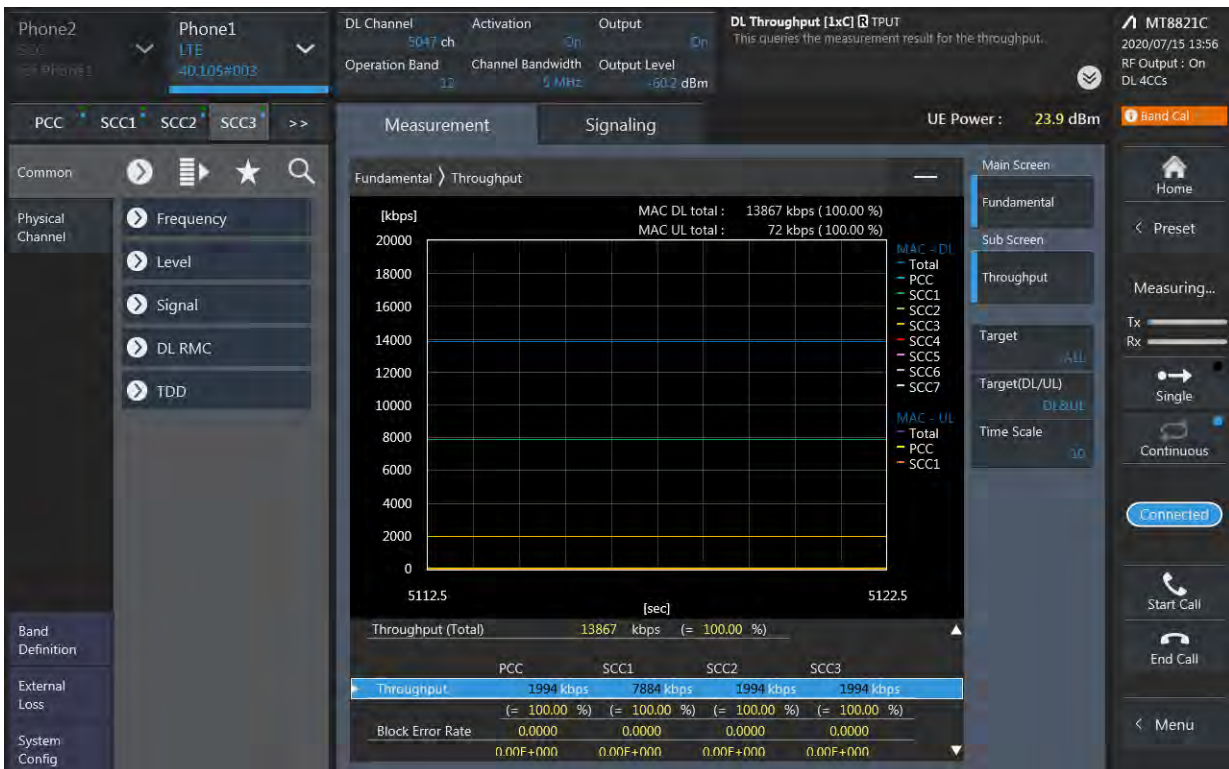
SCC1 Setting (Channel /RB/BW/Modulation)and call Connection



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



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



4CA Downlink Carrier aggregation conducted Powers

LTE Downlink 4CA Maximum Conducted Power

Combination	PCC									SCC				SCC				SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
2A-2A-12B	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	5	5095	737.5	12	5	5047	732.7	24.3	24.28
2A-2A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.26
2A-2A-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.31
2A-4A-7A-7A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	7	20	3100	2655	7	20	3350	2680	24.3	24.26
2A-4A-7C	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	7	20	3100	2655	7	20	3298	2674.8	24.3	24.19
2A-4A-7A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	7	20	3100	2655	12	10	5095	737.5	24.3	24.34
2A-4A-29A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	29	10	9715	722.5	30	10	9820	2355	24.3	24.31
2A-5A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.27
2A-5A-46C	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.74	24.70
2A-7A-12A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	12	10	5095	737.5	66	20	66786	2145	24.3	24.25
2A-7A-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	66	20	66786	2145	66	20	67236	2190	24.3	24.31
2A-13A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.35
2A-13A-46C	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.48	24.47
2A-46A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.3	24.25
2A-46D	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.3	24.34
2A-46A-46A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	47090	5180	66	20	66786	2145	24.3	24.34
2A-46A-46A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	47090	5180	24.91	24.89
2A-46C-66A	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.3	24.31
2A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.88
4A-46A-46C	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.8	24.81
4A-46D	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.8	24.77
5B-46C	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	46	20	50665	5537.5	46	20	50467	5517.7	24.74	24.71
5A-46D	5	5	20425	826.5	2425	871.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.74	24.71
5A-46C-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.74	24.71
5A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.85
7A-46D	7	5	21100	2535	3100	2655	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	22.9	22.81
12A-46D	12	10	23095	707.5	5095	737.5	QPSK	1	49	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.95	24.90
13A-46D	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.48	24.43
13A-46C-66A	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.48	24.43
13A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.48	24.42
12B-66A-66A	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	66	20	66786	2145	66	20	67236	2190	24.91	24.95
13A-66A-66C	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67038	2170.2	66	20	67236	2190	24.48	24.45
46A-46C-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.91	24.84
46C-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.85
46D-66A	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.91	24.84

LTE 4X4 MIMO Downlink Standalone Conducted Power(Per TCBC Workshop note May 2017)

SAR test exclusion for LTE DL 4x4 MIMO should be determined by

–UL power measurements with and without DL MIMO

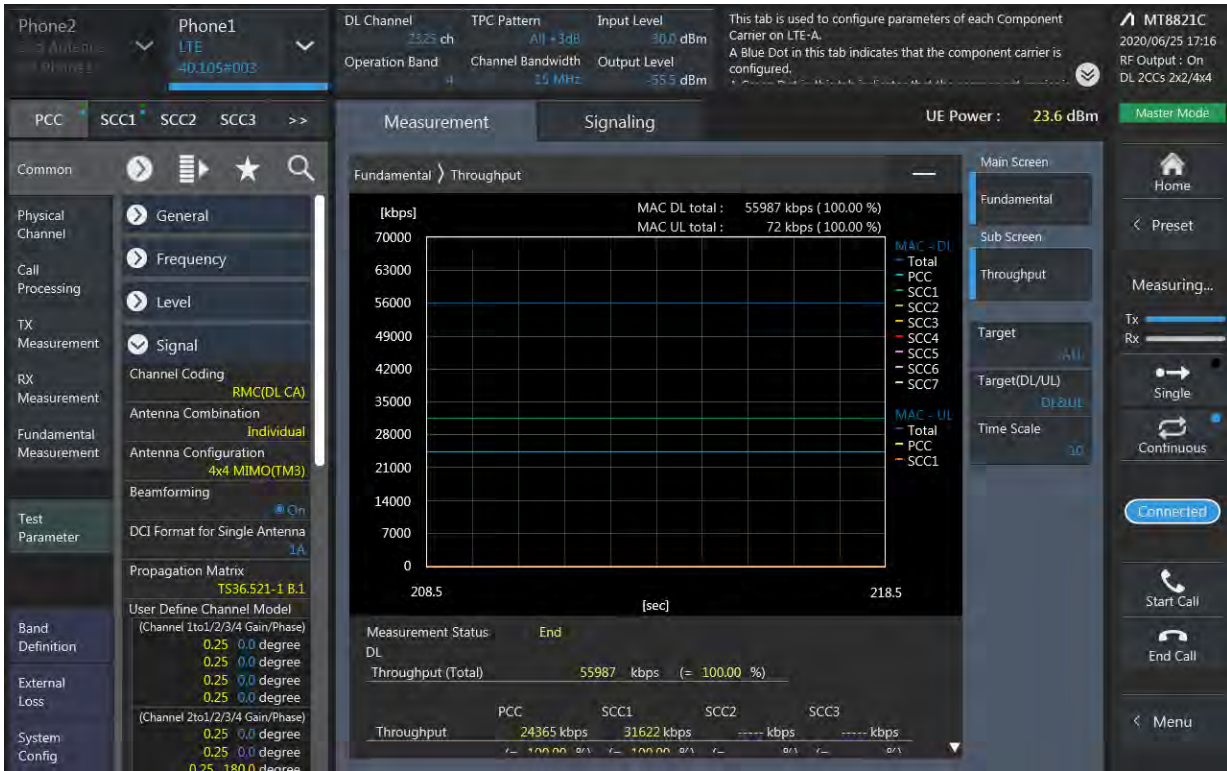
–using the highest UL output power configuration without DL MIMO to confirm that UL output with DL MIMO is < ¼ dB higher

–for DL MIMO with carrier aggregation, the same SAR test exclusion procedure should be considered

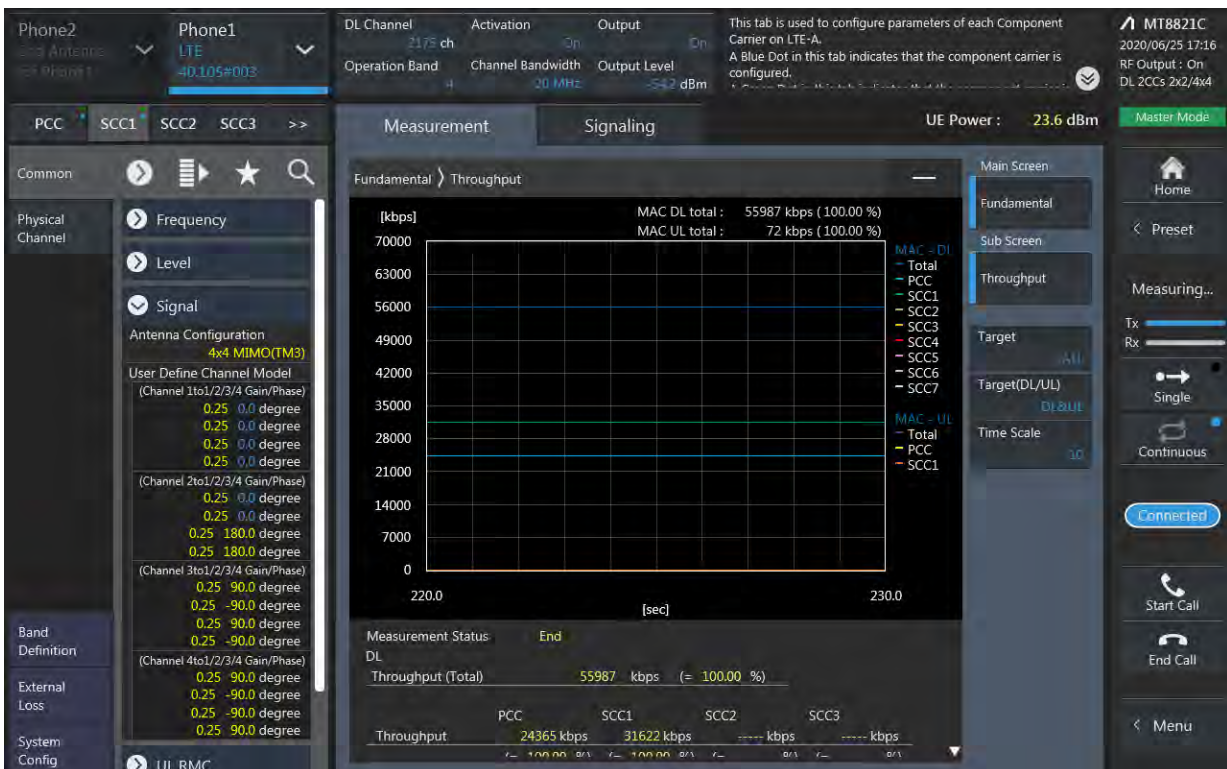
LTE Band	Bandwidth [MHz]	Channel	Frequency [MHz]	Modulation	RB Size	RB offset	RB offset 4X4 DL MIMO Tx Power [dBm]	Single Ant Tx Power[dBm]	Target Power [dBm]
2	20	19100	1900	QPSK	1	99	24.27	24.3	24
4	5	20375	1752.5	QPSK	1	12	24.8	24.8	24
25	5	26665	1912.5	QPSK	1	12	24.29	24.3	24
66	5	132322	1745	QPSK	1	12	24.92	24.91	24

LTE Down Link 2CA 4x4 MIMO Call Setup

PCC Setting : Channel/ RB/ BW/ Modulation



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



LTE Downlink 2CA 4X4 MIMO Maximum Conducted Power

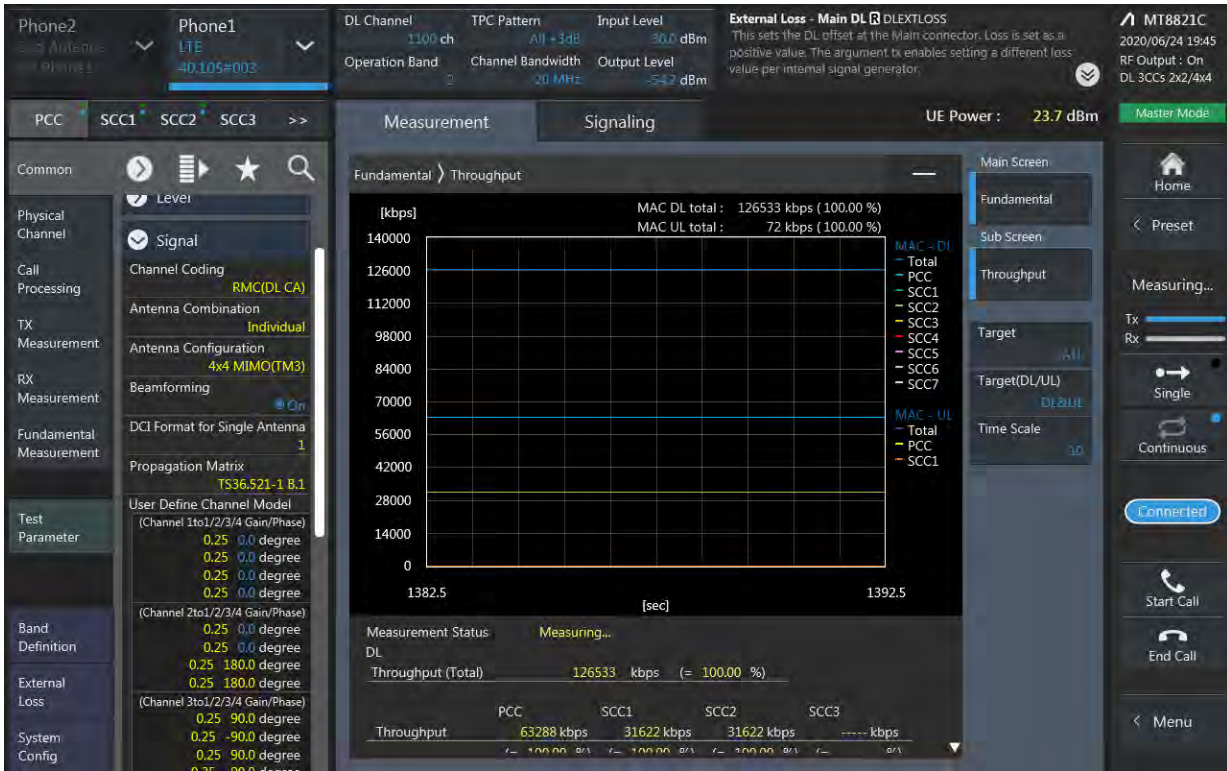
Combination	PCC									SCC				Tx Power	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
[2C]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	24.3	24.27
[2A]-2A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	24.3	24.31
2A-[2A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	24.3	24.29
[2A]-[2A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	24.3	24.25
[2A]-4A(0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	24.3	24.35
2A-[4A](0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	24.3	24.3
[2A]-[4A](0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	24.3	24.12
[2A]-4A(1)	2	10	18650	1855	650	1935	QPSK	1	24	4	10	2175	2132.5	24.16	24.13
2A-[4A](1)	2	10	18650	1855	650	1935	QPSK	1	24	4	10	2175	2132.5	24.16	24.17
[2A]-[4A](1)	2	10	18650	1855	650	1935	QPSK	1	24	4	10	2175	2132.5	24.16	24.19
[2A]-4A(0,2)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	24.8	24.77
2A-[4A](0,2)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	24.8	24.81
[2A]-[4A](0,2)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	24.8	24.75
[2A]-4A(1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	10	900	1960	24.8	24.76
2A-[4A](1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	10	900	1960	24.8	24.8
[2A]-[4A](1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	10	900	1960	24.8	24.88
[2A]-5A(0)	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	24.3	24.23
[2A]-5A(1)	2	10	18650	1855	650	1935	QPSK	1	24	5	10	2525	881.5	24.16	24.1
[2A]-5A(0)	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	20	900	1960	24.74	24.7
[2A]-5A(1)	5	5	20425	826.5	2425	871.5	QPSK	1	0	2	10	900	1960	24.74	24.76
[2A]-7A	2	20	19100	1900	1100	1980	QPSK	1	99	7	20	3100	2655	24.3	24.29
[2A]-7A	7	5	21100	2535	3100	2655	QPSK	1	12	2	20	900	1960	22.9	22.84
[2A]-12A(0,1)	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	24.3	24.24
[2A]-12A(2)	2	10	18650	1855	650	1935	QPSK	1	24	12	10	5095	737.5	24.16	24.18
[2A]-12A(0,1)	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	24.95	24.9
[2A]-12A(2)	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	10	900	1960	24.95	24.94
[2A]-13A(0)	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	24.3	24.36
[2A]-13A(1)	2	10	18650	1855	650	1935	QPSK	1	24	13	10	5230	751	24.16	24.17
[2A]-13A(0)	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	24.48	24.51
[2A]-13A(1)	13	10	23230	782	5230	751	QPSK	1	0	2	10	900	1960	24.48	24.54
[2A]-14A	2	20	19100	1900	1100	1980	QPSK	1	99	14	10	5330	763	24.3	24.28
[2A]-14A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	24.74	24.7
[2A]-29A	2	20	19100	1900	1100	1980	QPSK	1	99	29	10	9715	722.5	24.3	24.33
[2A]-30A	2	20	19100	1900	1100	1980	QPSK	1	99	30	10	9820	2355	24.3	24.34
[2A]-30A	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	2	20	900	1960	23.78	23.71

[2A]-66A(0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	24.3	24.27
2A-[66A](0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	24.3	24.23
[2A]-[66A](0,2)	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	24.3	24.25
[2A]-66A(1)	2	10	18650	1855	650	1935	QPSK	1	24	66	10	66786	2145	24.16	24.13
2A-[66A](1)	2	10	18650	1855	650	1935	QPSK	1	24	66	10	66786	2145	24.16	24.15
[2A]-[66A](1)	2	10	18650	1855	650	1935	QPSK	1	24	66	10	66786	2145	24.16	24.19
[2A]-66A(0,2)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	24.91	25
2A-[66A](0,2)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	24.91	24.94
[2A]-[66A](0,2)	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	24.91	24.92
[2A]-66A(1)	66	5	132322	1745	66786	2145	QPSK	1	12	2	10	900	1960	24.91	24.96
2A-[66A](1)	66	5	132322	1745	66786	2145	QPSK	1	12	2	10	900	1960	24.91	24.87
[2A]-[66A](1)	66	5	132322	1745	66786	2145	QPSK	1	12	2	10	900	1960	24.91	24.89
[2A]-71A(0)	2	20	19100	1900	1100	1980	QPSK	1	99	71	20	68786	637	24.3	24.26
[2A]-71A(1)	2	10	18650	1855	650	1935	QPSK	1	24	71	10	68786	637	24.16	24.12
[2A]-71A(0)	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	25.06	25.12
[2A]-71A(1)	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	10	900	1960	25.06	25.07
[4A]-4A(0)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	24.8	24.77
4A-[4A](0)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	24.8	24.79
[4A]-[4A](0)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	24.8	24.8
[4A]-4A(1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	10	2000	2115	24.8	24.75
4A-[4A](1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	10	2000	2115	24.8	24.85
[4A]-[4A](1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	10	2000	2115	24.8	24.83
[4A]-5A(0,1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	5	10	2525	881.5	24.8	24.87
[4A]-5A(0)	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	10	2175	2132.5	24.74	24.77
[4A]-5A(1)	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	24.74	24.7
[4A]-7A(0,1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	7	20	3100	2655	24.8	24.81
[4A]-7A(0)	7	5	21100	2535	3100	2655	QPSK	1	12	4	10	2175	2132.5	22.9	22.94
[4A]-7A(1)	7	5	21100	2535	3100	2655	QPSK	1	12	4	20	2175	2132.5	22.9	22.96
[4A]-12A(0,1,2,3,4)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	10	5095	737.5	24.8	24.78
[4A]-12A(5)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	5	5095	737.5	24.8	24.73
[4A]-12A(0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	10	2175	2132.5	24.95	24.96
[4A]-12A(1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	20	2175	2132.5	24.95	24.92
[4A]-12A(5)	12	5	23155	713.5	5155	743.5	QPSK	1	0	4	15	2175	2132.5	24.91	24.88
[4A]-13A(0,1)	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	13	10	5230	751	24.8	24.74
[4A]-13A(0)	13	10	23230	782	5230	751	QPSK	1	0	4	20	2175	2132.5	24.48	24.48
[4A]-13A(1)	13	10	23230	782	5230	751	QPSK	1	0	4	10	2175	2132.5	24.48	24.53

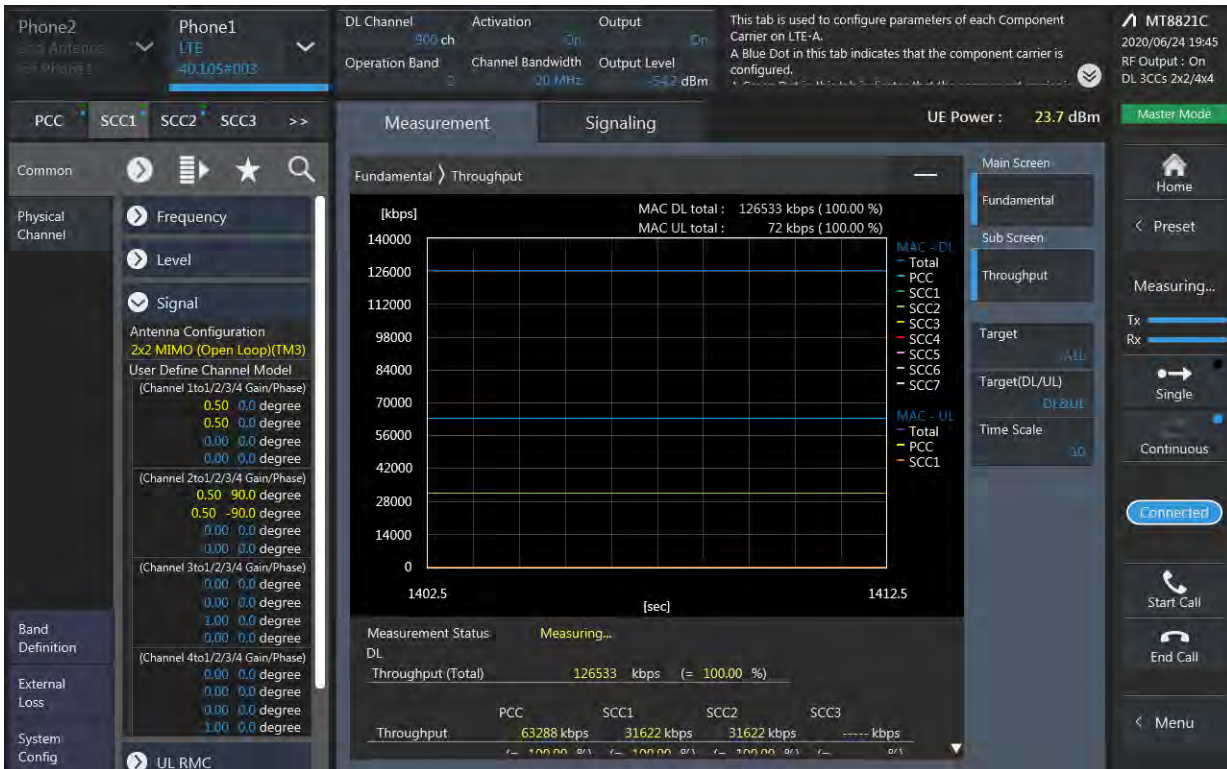
[4A]-29A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	29	10	9715	722.5	24.8	24.85
[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	71	20	68786	637	24.8	24.79
[4A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	4	20	2175	2132.5	25.06	24.99
5A-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	24.74	24.73
5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	24.91	24.9
7A-[66A]	7	5	21100	2535	3100	2655	QPSK	1	12	66	20	66786	2145	22.9	22.92
7A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	7	20	3100	2655	24.91	24.82
12A-[66A](0,3)	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	10	66786	2145	24.95	24.99
12A-[66A](1,2,4)	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	24.95	24.97
12A-[66A](5)	12	5	23155	713.5	5155	743.5	QPSK	1	0	66	15	66786	2145	24.91	24.85
12A-[66A](0,1,2,3,4)	66	5	132322	1745	66786	2145	QPSK	1	12	12	10	5095	737.5	24.91	24.93
12A-[66A](5)	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5095	737.5	24.91	24.95
13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	24.48	24.41
13A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	24.91	24.87
14A-[66A]	14	10	23330	793	5330	763	QPSK	1	0	66	20	66786	2145	24.74	24.71
14A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	14	10	5330	763	24.91	24.92
[25A]-25A(0)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	10	8090	1935	24.03	24
25A-[25A](0)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	10	8090	1935	24.03	24.06
[25A]-[25A](0)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	10	8090	1935	24.03	23.98
[25A]-25A(1)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	24.03	23.97
25A-[25A](1)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	24.03	23.99
[25A]-[25A](1)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	24.03	24.07
[25A]-26A(0)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	26	15	8865	876.5	24.03	23.98
[25A]-26A(1,2)	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	26	10	8865	876.5	24.03	23.7
[25A]-26A(0)	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	20	8365	1962.5	24.8	24.75
[25A]-26A(1,2)	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	10	8365	1962.5	24.8	24.81
[25A]-41A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	41	20	40620	2593	24.03	24.05
29A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	29	10	9715	722.5	24.91	24.84
30A-[66A]	30	5	27735	2312.5	9845	2357.5	QPSK	1	0	66	20	66786	2145	23.78	23.75
30A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	30	10	9820	2355	24.91	24.93
46A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	24.91	24.88
[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	24.91	24.98
66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	24.91	24.94
[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	24.91	24.9
[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	24.91	24.92
[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	24.91	24.89
[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	71	20	68786	637	24.91	24.96
[66A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	25.06	25.04

LTE Down Link 3CA 4x4 MIMO Call Setup

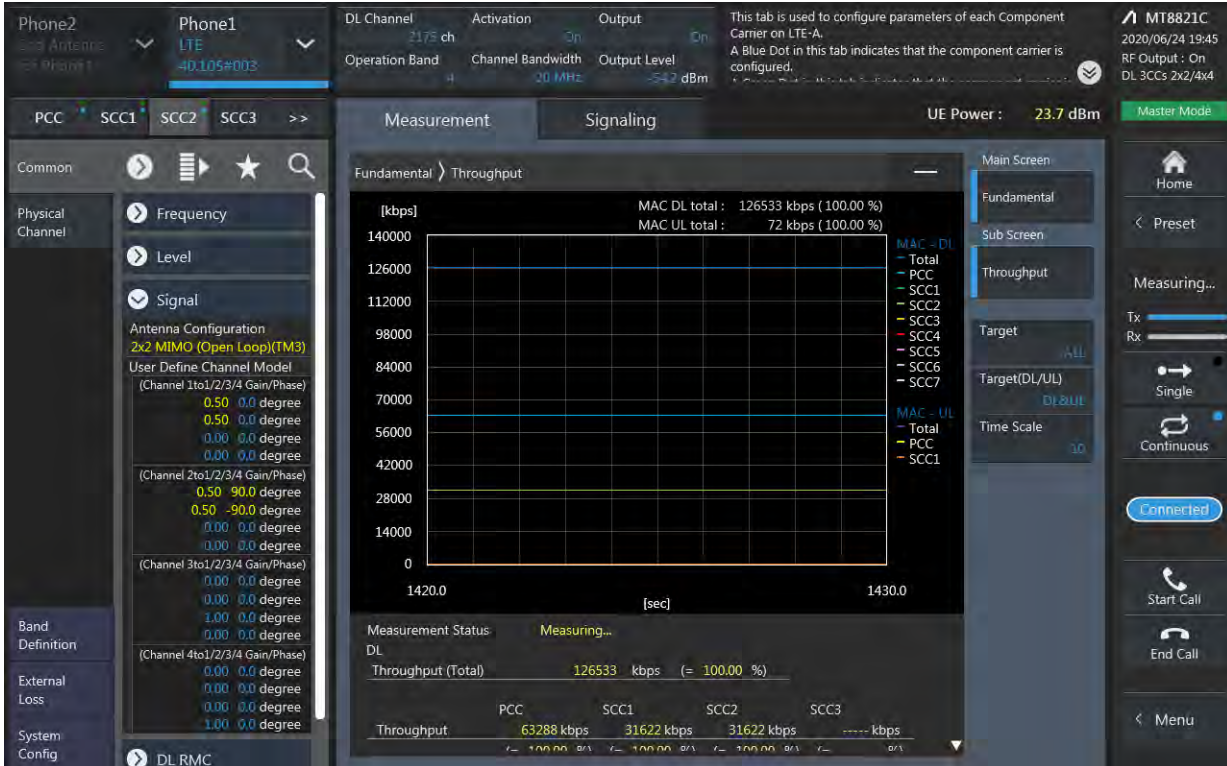
PCC Setting: Channel /RB/BW/Modulation



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	
	Band	BW	PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency	Modulation	RB	offset	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)	LTE Tx Power with DL CA Enabled(dBm)
[2A]-2A-4A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.25
2A-[2A]-4A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.26
2A-2A-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.26
[2A]-[2A]-4A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.31
2A-[2A]-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.33
[2A]-2A-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.28
[2A]-[2A]-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	4	20	2175	2132.5	24.3	24.30
[2A]-2A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.74
2A-[2A]-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.72
2A-2A-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.76
[2A]-[2A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.82
2A-[2A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.86
[2A]-2A-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.75
[2A]-[2A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.8	24.78
[2A]-2A-5A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	24.3	24.31
2A-[2A]-5A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	24.3	24.25
[2A]-[2A]-5A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	5	10	2525	881.5	24.3	24.35
[2A]-2A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.74	24.70
2A-[2A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.74	24.77
[2A]-[2A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.74	24.72
[2A]-2A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	24.3	24.33
2A-[2A]-12A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	24.3	24.31
[2A]-[2A]-12A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	10	5095	737.5	24.3	24.28
[2A]-2A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	24.95	24.90
2A-[2A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	24.95	24.99
[2A]-[2A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	2	20	1100	1980	24.95	24.95
[2A]-2A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	13	10	5230	751	24.3	24.36
2A-[2A]-13A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	13	10	5230	751	24.3	24.38
[2A]-[2A]-13A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	13	10	5230	751	24.3	24.27
[2A]-2A-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.48	24.38
2A-[2A]-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.48	24.39
[2A]-[2A]-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.48	24.41
[2A]-2A-14A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	14	10	5330	763	24.3	24.27
2A-[2A]-14A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	14	10	5330	763	24.3	24.26
[2A]-[2A]-14A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	14	10	5330	763	24.3	24.31
[2A]-2A-14A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.74	24.69
2A-[2A]-14A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.74	24.80
[2A]-[2A]-14A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	2	20	1100	1980	24.74	24.77

[2A]-2A-29A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	29	10	9715	722.5	24.3	24.33
2A-[2A]-29A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	29	10	9715	722.5	24.3	24.37
[2A]-[2A]-29A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	29	10	9715	722.5	24.3	24.28
[2A]-2A-46A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	24.3	24.25
2A-[2A]-46A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	24.3	24.31
[2A]-[2A]-46A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	24.3	24.33
[2A]-2A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.31
2A-[2A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.28
2A-2A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.25
[2A]-[2A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.33
2A-[2A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.30
[2A]-2A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.29
[2A]-[2A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	24.3	24.29
[2A]-2A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.87
2A-[2A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.90
2A-2A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.88
[2A]-[2A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.84
2A-[2A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.95
[2A]-2A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.97
[2A]-[2A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1100	1980	24.91	24.91
[2C]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	66	20	66786	2145	24.3	24.31
2C-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	66	20	66786	2145	24.3	24.29
[2C]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	902	1960.2	66	20	66786	2145	24.3	24.29
[2C]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1098	1979.8	24.91	24.87
2C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1098	1979.8	24.91	24.95
[2C]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	2	20	1098	1979.8	24.91	24.83
[2A]-2A-71A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	71	20	68786	637	24.3	24.29
2A-[2A]-71A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	71	20	68786	637	24.3	24.31
[2A]-[2A]-71A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	71	20	68786	637	24.3	24.33
[2A]-2A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	25.06	24.98
2A-[2A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	25.06	25.04
[2A]-[2A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	2	20	1100	1980	25.06	25.11
[2A]-4A-4A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.29
2A-[4A]-4A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.31
2A-4A-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.31
[2A]-[4A]-4A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.30
2A-[4A]-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.25
[2A]-4A-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.31
[2A]-[4A]-[4A]	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	4	10	2350	2150	24.3	24.29
[2A]-4A-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.75
2A-[4A]-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.81
2A-4A-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.84
[2A]-[4A]-4A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.82
2A-[4A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.80
[2A]-4A-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.79
[2A]-[4A]-[4A]	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	2	20	900	1960	24.8	24.78
[2A]-4A-5A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	5	10	2525	881.5	24.3	24.27
2A-[4A]-5A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	5	10	2525	881.5	24.3	24.35
[2A]-[4A]-5A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	5	10	2525	881.5	24.3	24.30
[2A]-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.8	24.79
2A-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.8	24.74
[2A]-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.8	24.76
[2A]-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.74	24.70
2A-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.74	24.77
[2A]-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	4	20	2175	2132.5	24.74	24.68

[2A]-4A-12A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	12	10	5095	737.5	24.3	24.38
2A-[4A]-12A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	12	10	5095	737.5	24.3	24.37
[2A]-[4A]-12A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	12	10	5095	737.5	24.3	24.31
[2A]-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.8	24.84
2A-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.8	24.80
[2A]-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.8	24.86
[2A]-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.95	24.94
2A-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.95	24.90
[2A]-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	4	20	2175	2132.5	24.95	24.88
[2A]-4A-13A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.3	24.27
2A-[4A]-13A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.3	24.30
[2A]-[4A]-13A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	13	10	5230	751	24.3	24.31
[2A]-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.8	24.74
2A-[4A]-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.8	24.79
[2A]-[4A]-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.8	24.81
[2A]-4A-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	24.48	24.45
2A-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	24.48	24.37
[2A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	24.48	24.40
[2A]-4A-29A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	29	10	9715	722.5	24.3	24.33
2A-[4A]-29A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	29	10	9715	722.5	24.3	24.28
[2A]-4A-29A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	24.8	24.76
2A-[4A]-29A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	24.8	24.82
[2A]-4A-71A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	71	20	68786	637	24.3	24.30
2A-[4A]-71A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	71	20	68786	637	24.3	24.36
[2A]-[4A]-71A	2	20	19100	1900	1100	1980	QPSK	1	99	4	20	2175	2132.5	71	20	68786	637	24.3	24.30
[2A]-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.8	24.75
2A-[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.8	24.81
[2A]-[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.8	24.86
[2A]-4A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	25.06	25.00
2A-[4A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	25.06	25.09
[2A]-[4A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	4	20	2175	2132.5	25.06	25.04
[2A]-5B	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	5	5	2453	874.3	24.3	24.33
[2A]-5B	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	2	20	900	1960	24.74	24.75
[2A]-5A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	24.3	24.28
2A-5A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	24.3	24.30
[2A]-5A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	66	20	66786	2145	24.3	24.34
[2A]-5A-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	24.74	24.72
2A-5A-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	24.74	24.70
[2A]-5A-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	66	20	66786	2145	24.74	24.76
[2A]-5A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.91	24.84
2A-5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.91	24.86
[2A]-5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	5	10	2525	881.5	24.91	24.89
[2A]-12B	2	20	19100	1900	1100	1980	QPSK	1	99	12	5	5095	737.5	12	5	5047	732.7	24.3	24.24
[2A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	2	20	900	1960	24.91	24.90
[2A]-12A-30A	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	30	10	9820	2355	24.3	24.24
[2A]-12A-30A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	30	10	9820	2355	24.95	24.90
[2A]-12A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	24.3	24.31
2A-12A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	24.3	24.29
[2A]-12A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	12	10	5095	737.5	66	20	66786	2145	24.3	24.29
[2A]-12A-66A	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	66	20	66786	2145	24.95	24.97
2A-12A-[66A]	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	66	20	66786	2145	24.95	25.01
[2A]-12A-[66A]	12	10	23095	707.5	5095	737.5	QPSK	1	49	2	20	900	1960	66	20	66786	2145	24.95	24.93
[2A]-12A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.91	24.81
2A-12A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.91	24.85
[2A]-12A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	12	10	5095	737.5	24.91	24.86

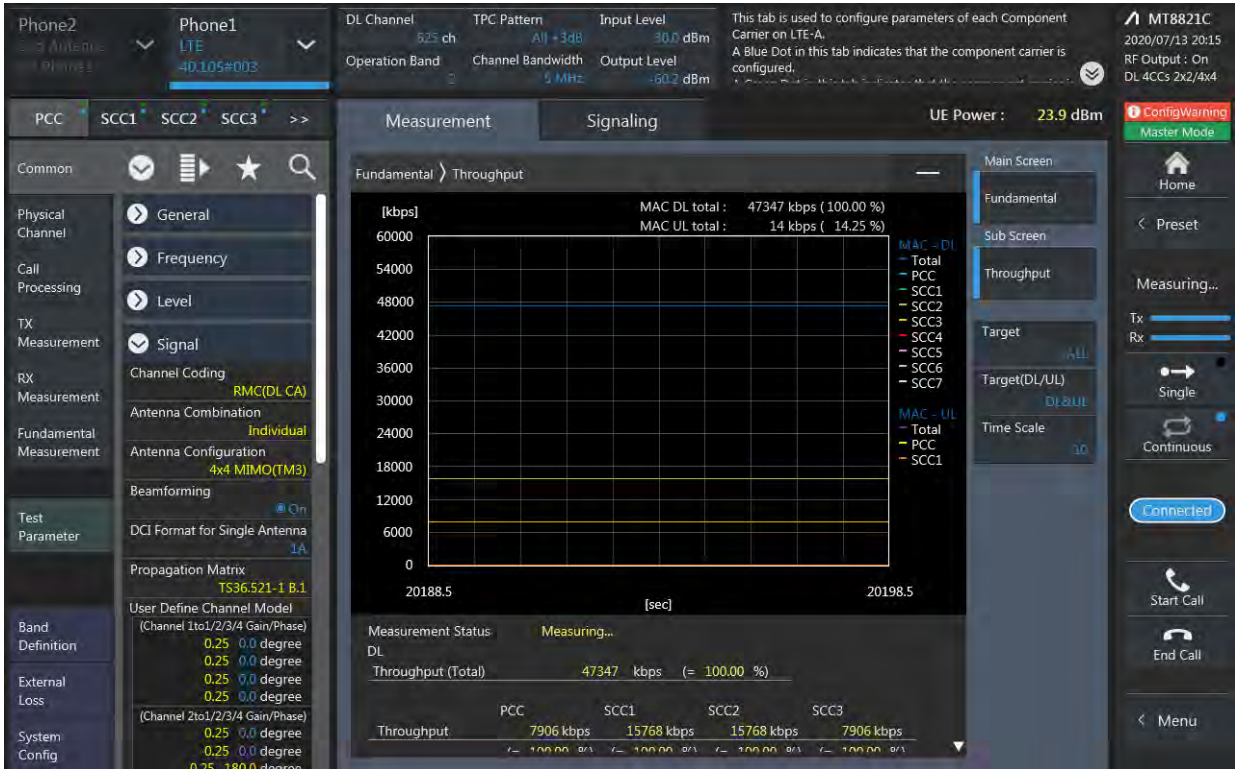
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2A-13A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	66	20	66786	2145	24.3	24.31
[2A]-13A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	66	20	66786	2145	24.3	24.24
[2A]-13A-66A	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.48	24.41
2A-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.48	24.37
[2A]-13A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.48	24.45
[2A]-13A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.91	24.83
2A-13A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.91	24.83
[2A]-13A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	13	10	5230	751	24.91	24.86
[2A]-14A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	14	10	5330	763	66	20	66786	2145	24.3	24.21
2A-14A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	14	10	5330	763	66	20	66786	2145	24.3	24.24
[2A]-14A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	14	10	5330	763	66	20	66786	2145	24.3	24.23
[2A]-14A-66A	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.74	24.68
2A-14A-[66A]	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.74	24.79
[2A]-14A-[66A]	14	10	23330	793	5330	763	QPSK	1	0	2	20	900	1960	66	20	66786	2145	24.74	24.80
[2A]-14A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	14	10	5330	763	24.91	24.88
2A-14A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	14	10	5330	763	24.91	24.90
[2A]-14A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	14	10	5330	763	24.91	24.90
2A-29A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	29	10	9715	722.5	66	20	66786	2145	24.3	24.31
[2A]-29A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	29	10	9715	722.5	66	20	66786	2145	24.3	24.29
[2A]-29A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	24.91	24.88
2A-29A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	24.91	24.84
[2A]-29A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	29	10	9715	722.5	24.91	24.86
[2A]-46C	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.22
[2A]-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.31
2A-[66A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.29
2A-66A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.25
[2A]-[66A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.26
2A-[66A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.30
[2A]-66A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.31
[2A]-[66A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	67236	2190	24.3	24.35
[2A]-66A-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.88
2A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.86
2A-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.85
[2A]-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.90
2A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.90
[2A]-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.87
[2A]-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	2	20	900	1960	24.91	24.92
[2A]-66B	2	20	19100	1900	1100	1980	QPSK	1	99	66	15	66786	2145	66	5	66879	2154.3	24.3	24.27
2A-[66B]	2	20	19100	1900	1100	1980	QPSK	1	99	66	15	66786	2145	66	5	66879	2154.3	24.3	24.26
[2A]-[66B]	2	20	19100	1900	1100	1980	QPSK	1	99	66	15	66786	2145	66	5	66879	2154.3	24.3	24.29
[2A]-66B	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	24.91	24.89
2A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	24.91	24.94
[2A]-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	2	20	900	1960	24.91	24.94
[2A]-66C	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	66984	2164.8	24.3	24.31
2A-[66C]	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	66984	2164.8	24.3	24.32
[2A]-[66C]	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	66	20	66984	2164.8	24.3	24.27
[2A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	24.91	24.89
2A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	24.91	24.94
[2A]-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	2	20	900	1960	24.91	24.95

[2A]-66A-71A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	71	20	68786	637	24.3	24.26
2A-[66A]-71A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	71	20	68786	637	24.3	24.29
[2A]-[66A]-71A	2	20	19100	1900	1100	1980	QPSK	1	99	66	20	66786	2145	71	20	68786	637	24.3	24.31
[2A]-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.91	24.95
2A-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.91	24.91
[2A]-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	2	20	900	1960	71	20	68786	637	24.91	24.98
[2A]-66A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	25.06	25.09
2A-[66A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	25.06	25.12
[2A]-[66A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	2	20	900	1960	66	20	66786	2145	25.06	25.07
[4A]-4A-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	5	10	2525	881.5	24.8	24.76
4A-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	5	10	2525	881.5	24.8	24.82
[4A]-[4A]-5A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	5	10	2525	881.5	24.8	24.80
[4A]-4A-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.74	24.68
4A-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.74	24.71
[4A]-[4A]-5A	5	5	20425	826.5	2425	871.5	QPSK	1	12	4	20	2175	2132.5	4	10	2350	2150	24.74	24.75
[4A]-4A-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	12	10	5095	737.5	24.8	24.73
4A-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	12	10	5095	737.5	24.8	24.85
[4A]-[4A]-12A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	12	10	5095	737.5	24.8	24.79
[4A]-4A-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.95	24.92
4A-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.95	24.97
[4A]-[4A]-12A	12	10	23095	707.5	5095	737.5	QPSK	1	49	4	20	2175	2132.5	4	10	2350	2150	24.95	24.93
[4A]-4A-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	13	10	5230	751	24.8	24.81
4A-[4A]-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	13	10	5230	751	24.8	24.85
[4A]-[4A]-13A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	13	10	5230	751	24.8	24.78
[4A]-4A-13A	13	10	23230	782	5230	751	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	24.48	24.42
4A-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	24.48	24.45
[4A]-[4A]-13A	13	10	23230	782	5230	751	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	24.48	24.48
[4A]-4A-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	71	20	68786	637	24.8	24.73
4A-[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	71	20	68786	637	24.8	24.76
[4A]-[4A]-71A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	4	20	2050	2120	71	20	68786	637	24.8	24.77
[4A]-4A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	25.06	25.01
4A-[4A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	25.06	24.98
[4A]-[4A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	4	20	2175	2132.5	4	10	2350	2150	25.06	24.95
[4A]-5B	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	24.8	24.78
[4A]-5B	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	4	20	2175	2132.5	24.74	24.77
[4A]-12B	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	24.8	24.77
[4A]-12B	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	4	20	2175	2132.5	24.91	24.87
[4A]-46A-46A	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.8	24.77
[4A]-46C	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	24.8	24.78
5A-5A-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2600	889	66	20	66786	2145	24.74	24.79
5A-5A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	5	2525	881.5	5	5	2425	871.5	24.91	24.93
5B-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	5	10	2497	878.7	66	20	66786	2145	24.74	24.71
5B-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	5	5	2453	874.3	24.91	24.96
5A-[66A]-66A	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	67236	2190	24.74	24.75
5A-66A-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	67236	2190	24.74	24.66
[66A]-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	67236	2190	24.74	24.69
5A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	24.91	24.95
5A-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	24.91	24.89
5A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	5	10	2525	881.5	24.91	24.87

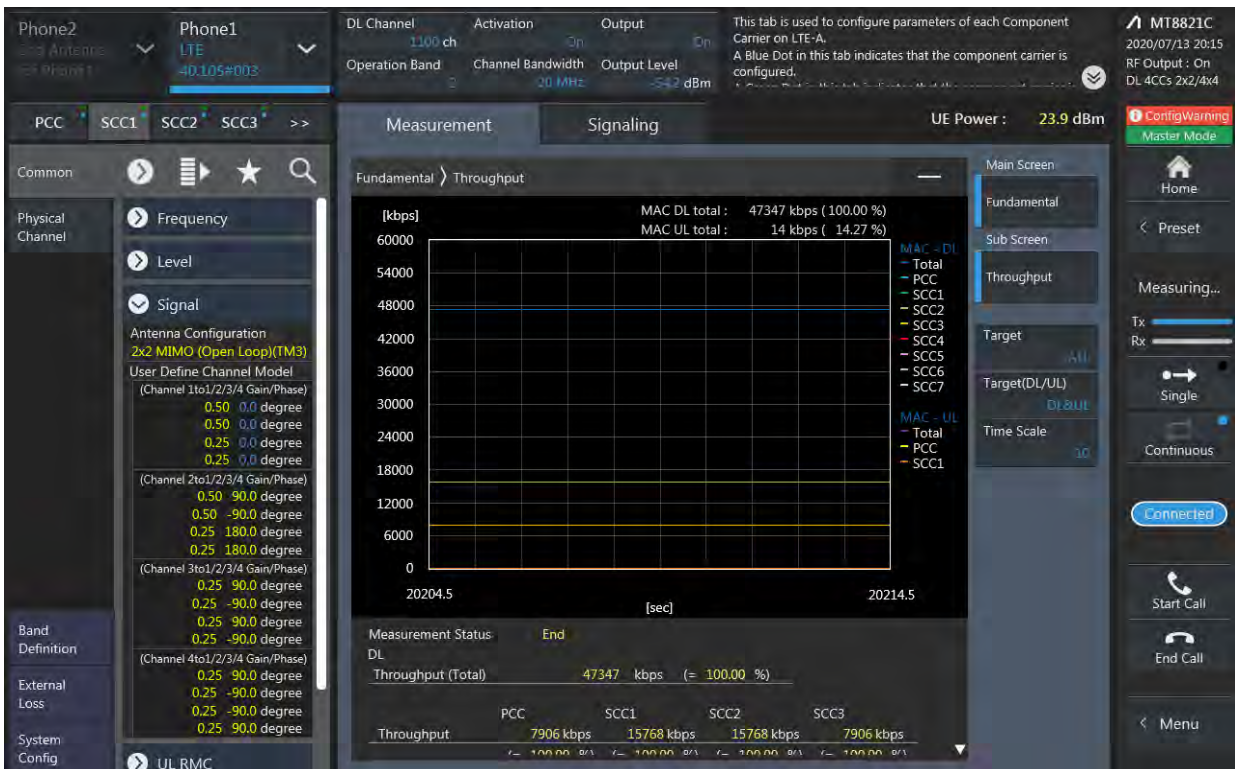
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5A-[66C]	5	5	20425	826.5	2425	871.5	QPSK	1	12	66	20	66786	2145	66	20	66984	2164.8	24.74	24.70
5A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	5	10	2525	881.5	24.91	24.88
12B-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	66	20	66786	2145	24.91	24.88
12B-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	12	5	5095	737.5	12	5	5047	732.7	24.91	24.89
12A-[66A]-66A	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	66	20	67236	2190	24.95	25.01
12A-66A-[66A]	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	66	20	67236	2190	24.95	24.97
12A-[66A]-[66A]	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	66	20	67236	2190	24.95	24.95
12A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	12	10	5095	737.5	24.91	24.84
12A-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	12	10	5095	737.5	24.91	24.82
12A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	12	10	5095	737.5	24.91	24.90
12A-[66C]	12	10	23095	707.5	5095	737.5	QPSK	1	49	66	20	66786	2145	66	20	66984	2164.8	24.95	24.82
12A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	12	10	5095	737.5	24.91	24.90
13A-[66A]-66A	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.48	24.39
13A-66A-[66A]	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.48	24.35
13A-[66A]-[66A]	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.48	24.40
13A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	13	10	5230	751	24.91	24.87
13A-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	13	10	5230	751	24.91	24.82
13A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	13	10	5230	751	24.91	24.86
13A-[66B]	13	10	23230	782	5230	751	QPSK	1	0	66	15	66786	2145	66	5	66879	2154.3	24.48	24.45
13A-[66B]	66	5	132322	1745	66786	2145	QPSK	1	12	66	15	66879	2154.3	13	10	5230	751	24.91	24.87
13A-[66C]	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	66984	2164.8	24.48	24.50
13A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	13	10	5230	751	24.91	24.84
14A-[66A]-66A	14	10	23330	793	5330	763	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.74	24.70
14A-66A-[66A]	14	10	23330	793	5330	763	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.74	24.78
14A-[66A]-[66A]	14	10	23330	793	5330	763	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	24.74	24.77
14A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	14	10	5330	763	24.91	24.84
14A-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	14	10	5330	763	24.91	24.89
14A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	14	10	5330	763	24.91	24.96
[25A]-25A-26A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.03	24.09
25A-[25A]-26A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.03	24.00
[25A]-[25A]-26A	25	5	26665	1912.5	8665	1992.5	QPSK	1	24	25	20	8140	1940	26	5	8865	876.5	24.03	24.02
[25A]-25A-26A	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	20	8365	1962.5	25	20	8590	1985	24.8	24.74
25A-[25A]-26A	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	20	8365	1962.5	25	20	8590	1985	24.8	24.70
[25A]-[25A]-26A	26	5	26715	816.5	8715	861.5	QPSK	1	12	25	20	8365	1962.5	25	20	8590	1985	24.8	24.75
46A-46A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	47090	5180	24.91	24.94
46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.90
46A-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	24.91	24.89
46A-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	24.91	24.85
46A-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	24.91	24.88
46A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	46	20	50665	5537.5	24.91	24.93
[66A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.91	24.88
66A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.91	24.93
[66A]-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67038	2170.2	66	20	67236	2190	24.91	24.90
[66A]-66C	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	66	20	67236	2190	24.91	24.95
66A-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	66	20	67236	2190	24.91	24.97
[66A]-[66C]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	66	20	67236	2190	24.91	24.94
[66A]-66A-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	71	20	68786	637	24.91	24.84
66A-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	71	20	68786	637	24.91	24.88
[66A]-[66A]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	71	20	68786	637	24.91	24.94
[66A]-66A-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	25.06	25.12
66A-[66A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	25.06	25.09
[66A]-[66A]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	66	20	67236	2190	25.06	25.09
[66C]-71A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	66903	2156.7	71	20	68786	637	24.91	24.89
[66C]-71A	71	15	133297	680.5	68761	634.5	QPSK	1	0	66	20	66786	2145	66	20	66984	2164.8	25.06	25.10

LTE Down Link 4CA 4x4 MIMO Call Setup

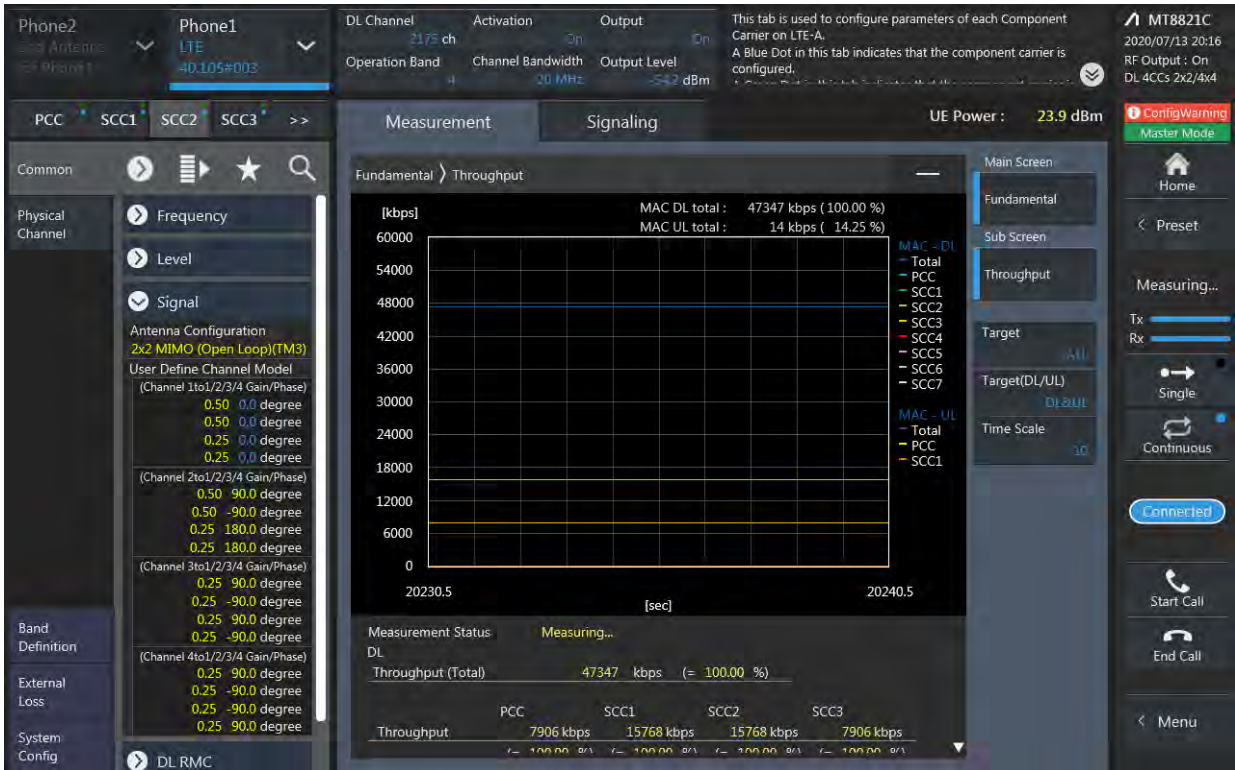
PCC Setting: Channel /RB/BW/Modulation



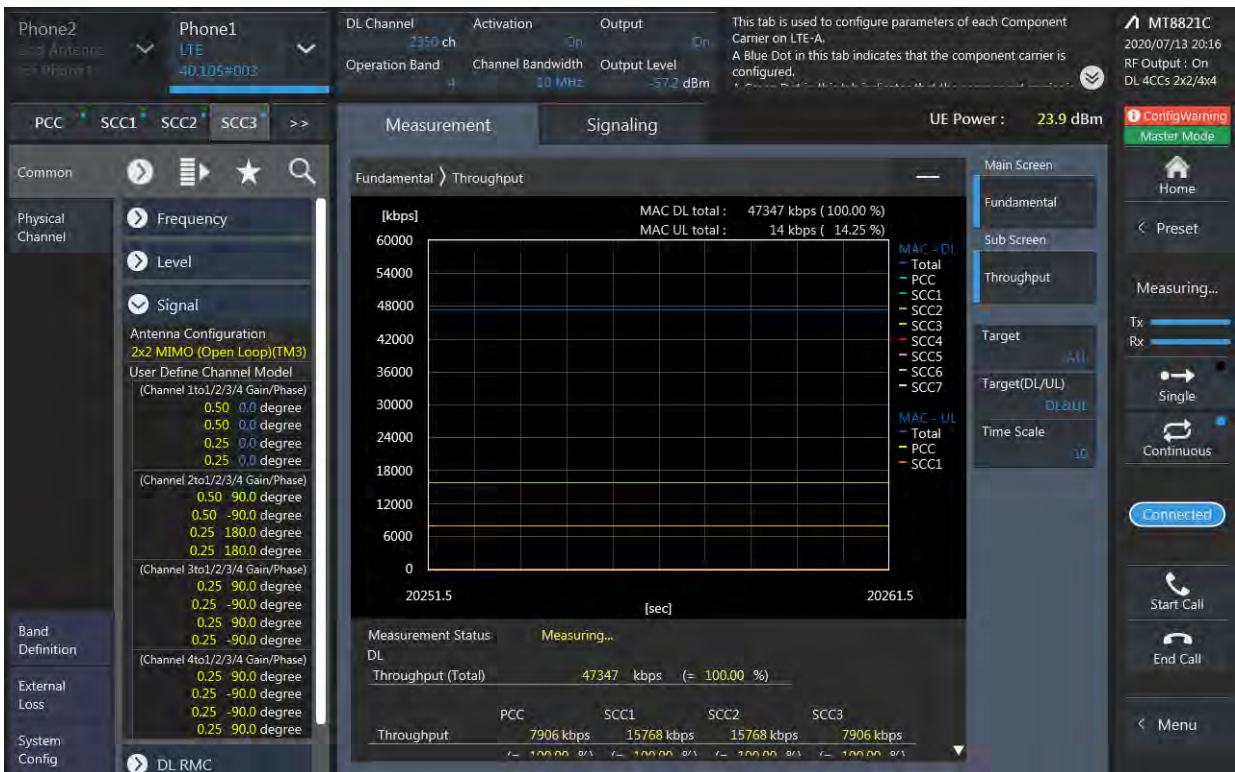
SCC1 Setting : Channel /RB/BW/Modulation



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	Band	BW	PCC					Modulation	RB	offset	SCC				SCC				Tx Power				
			PCC UL Channel	PCC UL Frequency	PCC DL Channel	PCC DL Frequency					Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	Band	BW	SCC DL Channel	SCC DL Frequency	LTE Single Carrier Tx Power (dBm)
[2A]-2A-12B	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	5	5095	737.5	12	5	5047	732.7	24.3	24.35
2A-[2A]-12B	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	5	5095	737.5	12	5	5047	732.7	24.3	24.31
[2A]-[2A]-12B	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	12	5	5095	737.5	12	5	5047	732.7	24.3	24.29
[2A]-2A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.31
2A-[2A]-46C	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.29
[2A]-[2A]-46C	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.25
[2A]-2A-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.29
2A-[2A]-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.33
2A-2A-[66A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.34
2A-2A-66A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.31
[2A]-[2A]-66A-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.35
[2A]-2A-[66A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.28
[2A]-2A-66A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.25
2A-[2A]-[66A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.27
2A-2A-[66A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.31
[2A]-[2A]-[66A]-66A	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.31
[2A]-[2A]-66A-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.35
[2A]-2A-[66A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.36
2A-[2A]-[66A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.29
[2A]-[2A]-[66A]-[66A]	2	20	19100	1900	1100	1980	QPSK	1	99	2	20	700	1940	66	20	66786	2145	66	20	67236	2190	24.3	24.20
[2A]-5A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.27
[2A]-5A-46C	5	5	20425	826.5	2425	871.5	QPSK	1	12	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.74	24.78
[2A]-13A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.3	24.25
[2A]-13A-46C	13	10	23230	782	5230	751	QPSK	1	0	2	20	900	1960	46	20	50665	5537.5	46	20	50467	5517.7	24.48	24.44
[2A]-46A-46C	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.3	24.26
[2A]-46D	2	20	19100	1900	1100	1980	QPSK	1	99	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.3	24.27
[4A]-46A-46C	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.8	24.77
[4A]-46D	4	5	20375	1752.5	2375	2152.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.8	24.81
5A-46C-[66A]	5	5	20425	826.5	2425	871.5	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.74	24.73
5A-46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	5	10	2525	881.5	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.90
12B-[66A]-66A	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	66	20	66786	2145	66	20	67236	2190	24.91	24.89
12B-66A-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	66	20	66786	2145	66	20	67236	2190	24.91	24.88
12B-[66A]-[66A]	12	5	23155	713.5	5155	743.5	QPSK	1	0	12	5	5107	738.7	66	20	66786	2145	66	20	67236	2190	24.91	24.93
13A-46C-[66A]	13	10	23230	782	5230	751	QPSK	1	0	46	20	50665	5537.5	46	20	50467	5517.7	66	20	66786	2145	24.48	24.45
13A-[66A]-66C	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67038	2170.2	66	20	67236	2190	24.48	24.45
13A-66A-[66C]	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67038	2170.2	66	20	67236	2190	24.48	24.46
13A-[66A]-[66C]	13	10	23230	782	5230	751	QPSK	1	0	66	20	66786	2145	66	20	67038	2170.2	66	20	67236	2190	24.48	24.51
13A-46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	13	10	5230	751	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.87
46A-46C-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	53540	5825	24.91	24.84
46C-[66A]-66A	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.92
46C-66A-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.88
46C-[66A]-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	66	20	67236	2190	46	20	50665	5537.5	46	20	50467	5517.7	24.91	24.86
46D-[66A]	66	5	132322	1745	66786	2145	QPSK	1	12	46	20	50665	5537.5	46	20	50467	5517.7	46	20	50863	5557.3	24.91	24.94